LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 9

2020

Bate Stamp Numbers
00964347 – 00966318

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976–2020

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS
ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX

VOLUME 9

2020

A. Title: (cont'd) Report – Appendix D to Final Fifth Annual Remedial Action Operation Report, LHAAP-50, Former Sump Water Tank, Longhorn Army Ammunition Plant, Karnack, Texas, June 2020
Author(s): Department of the Army
Recipient: U.S. Environmental Protection Agency and Texas Commission on Environmental Quality
Date: June 4, 2020
Bate Stamp: 00964347 – 00966318

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\Before\U111308.D
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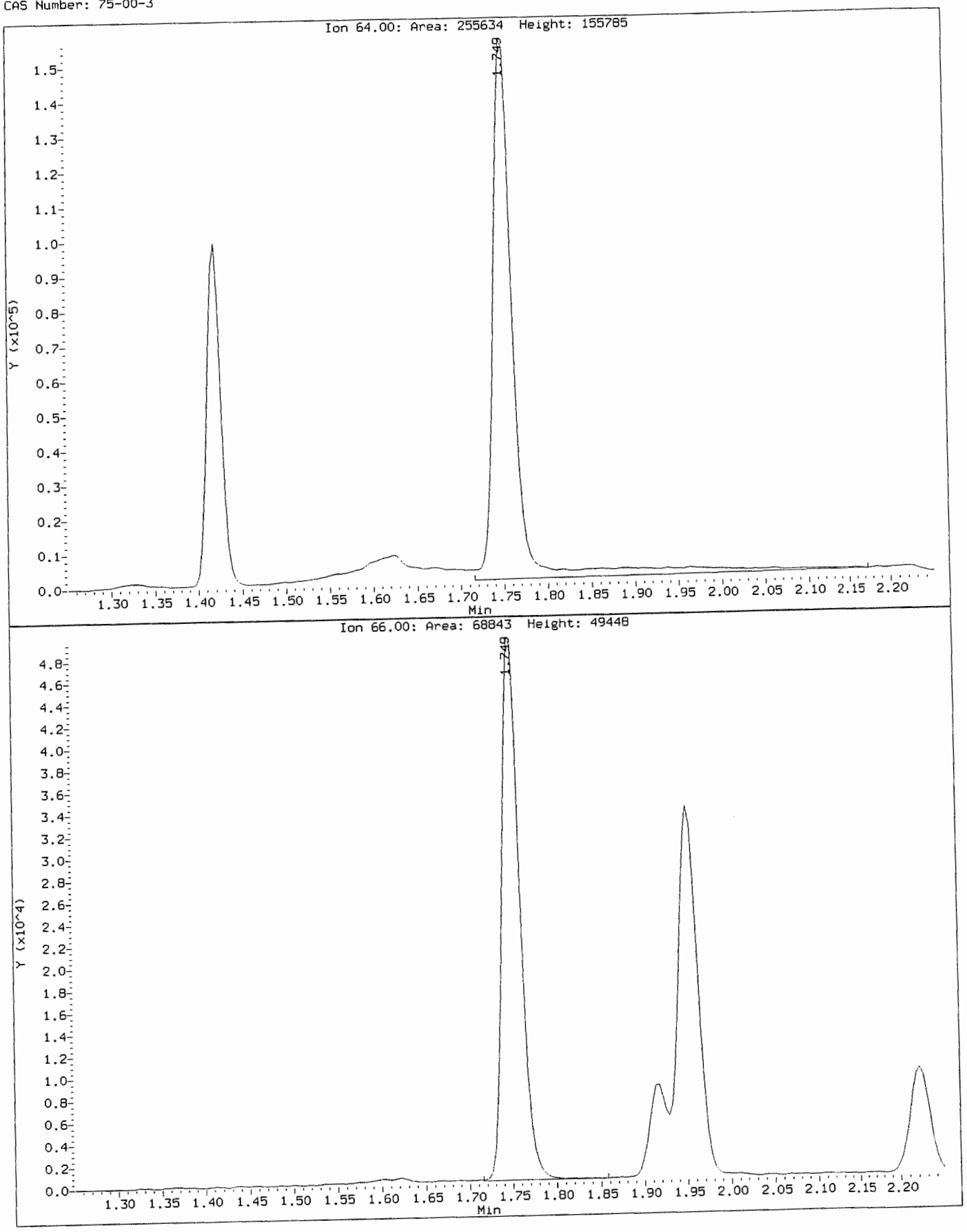
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



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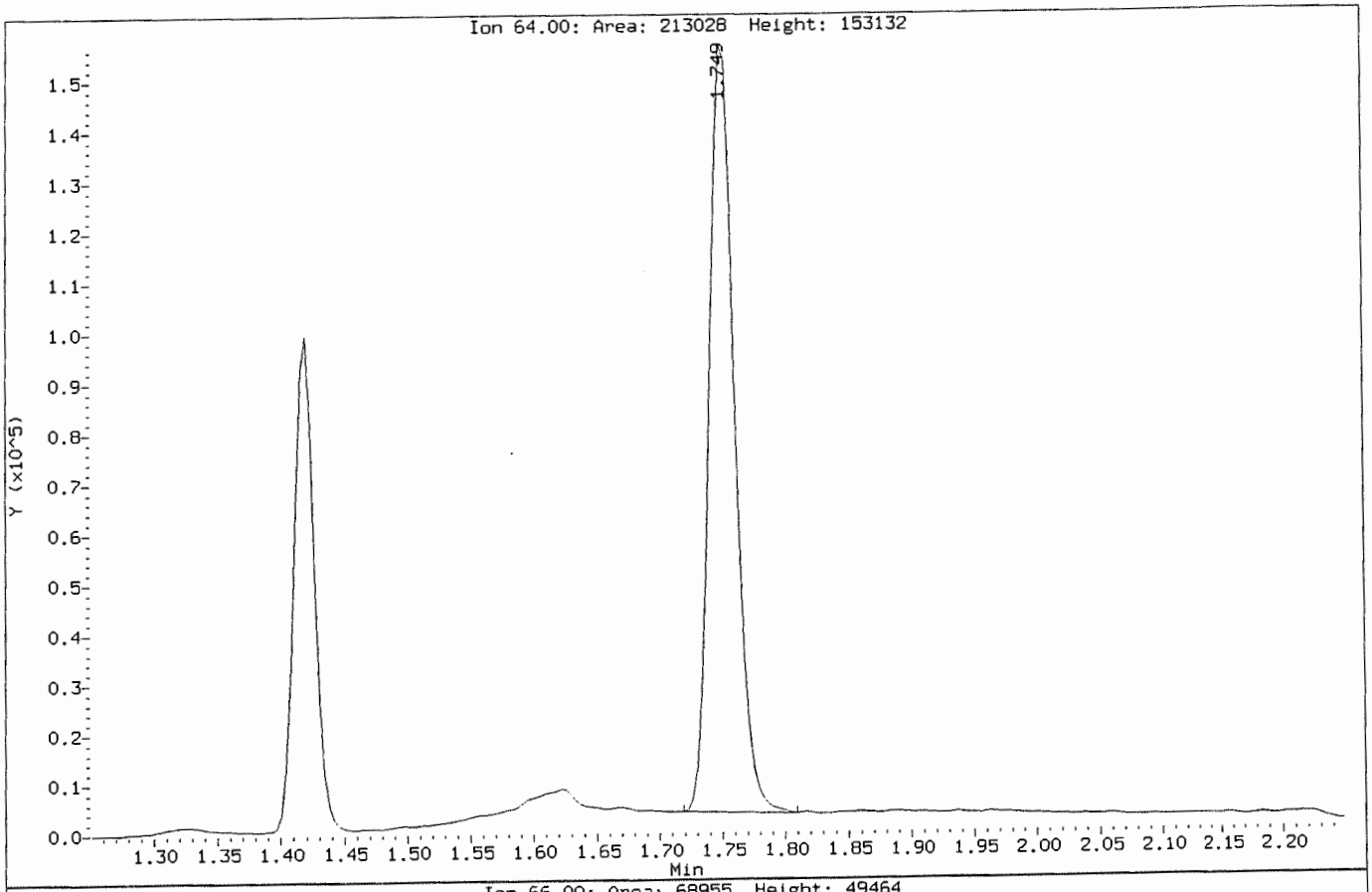
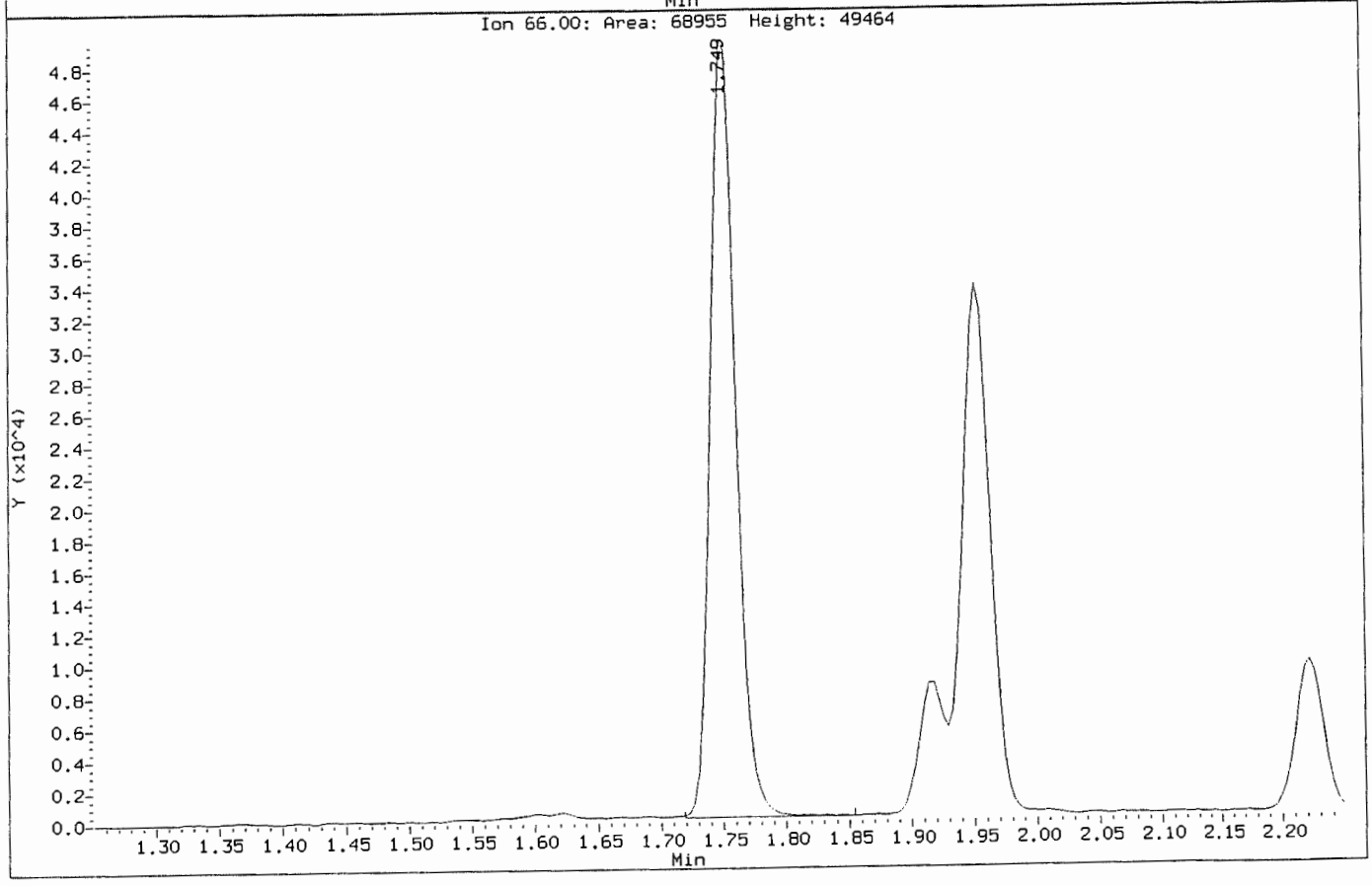
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





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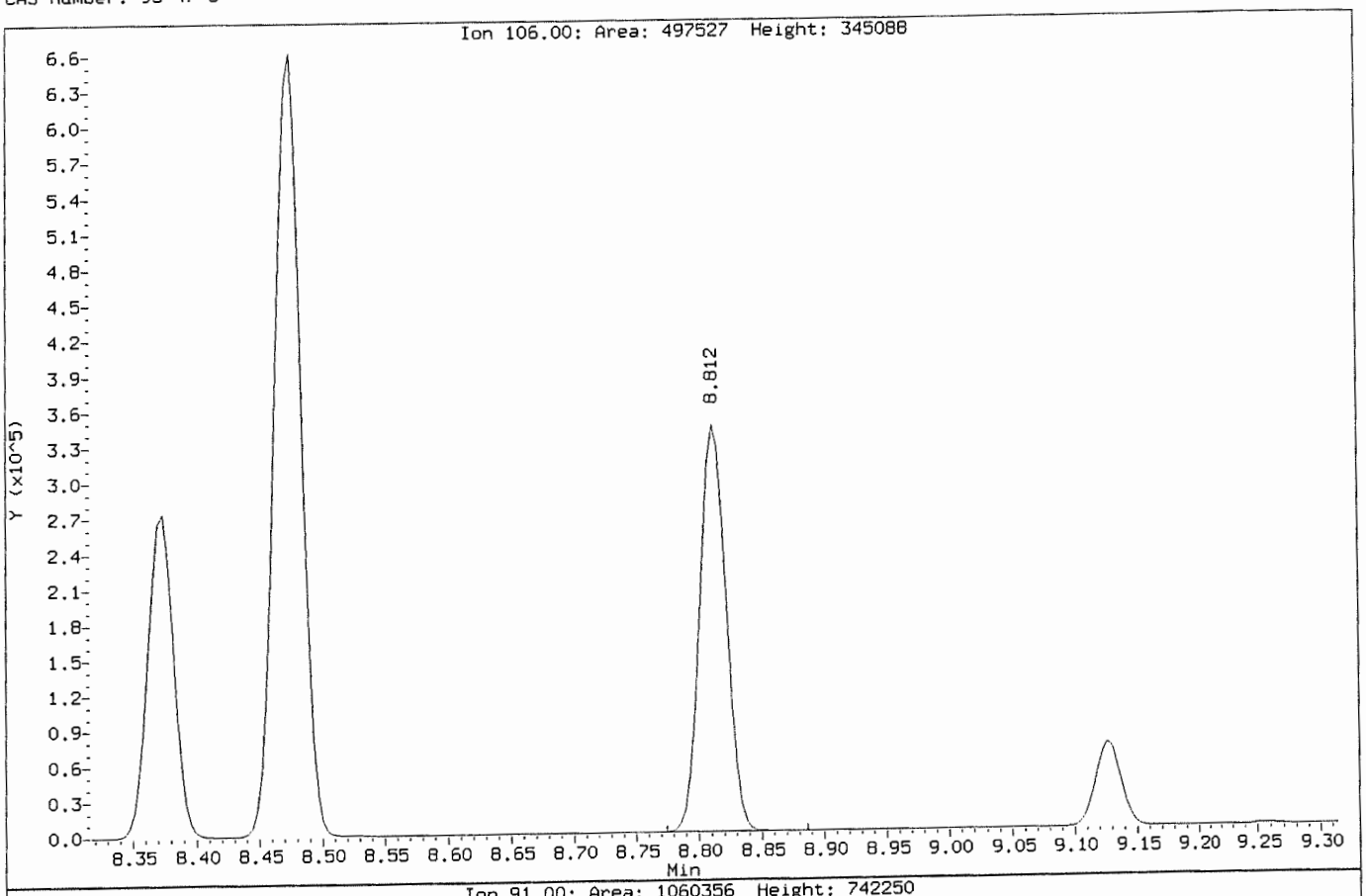
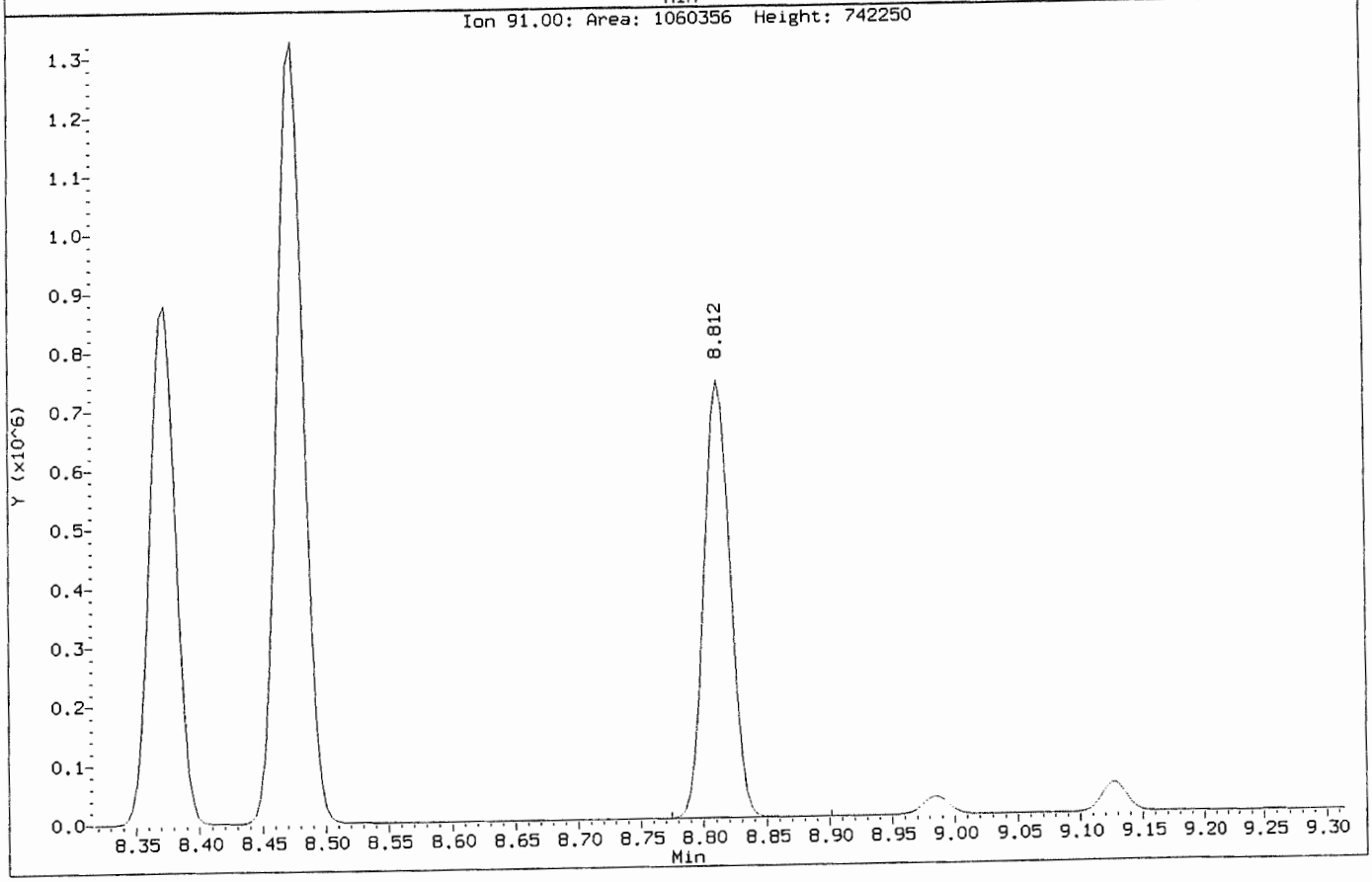
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: o-Xylene
CAS Number: 95-47-6





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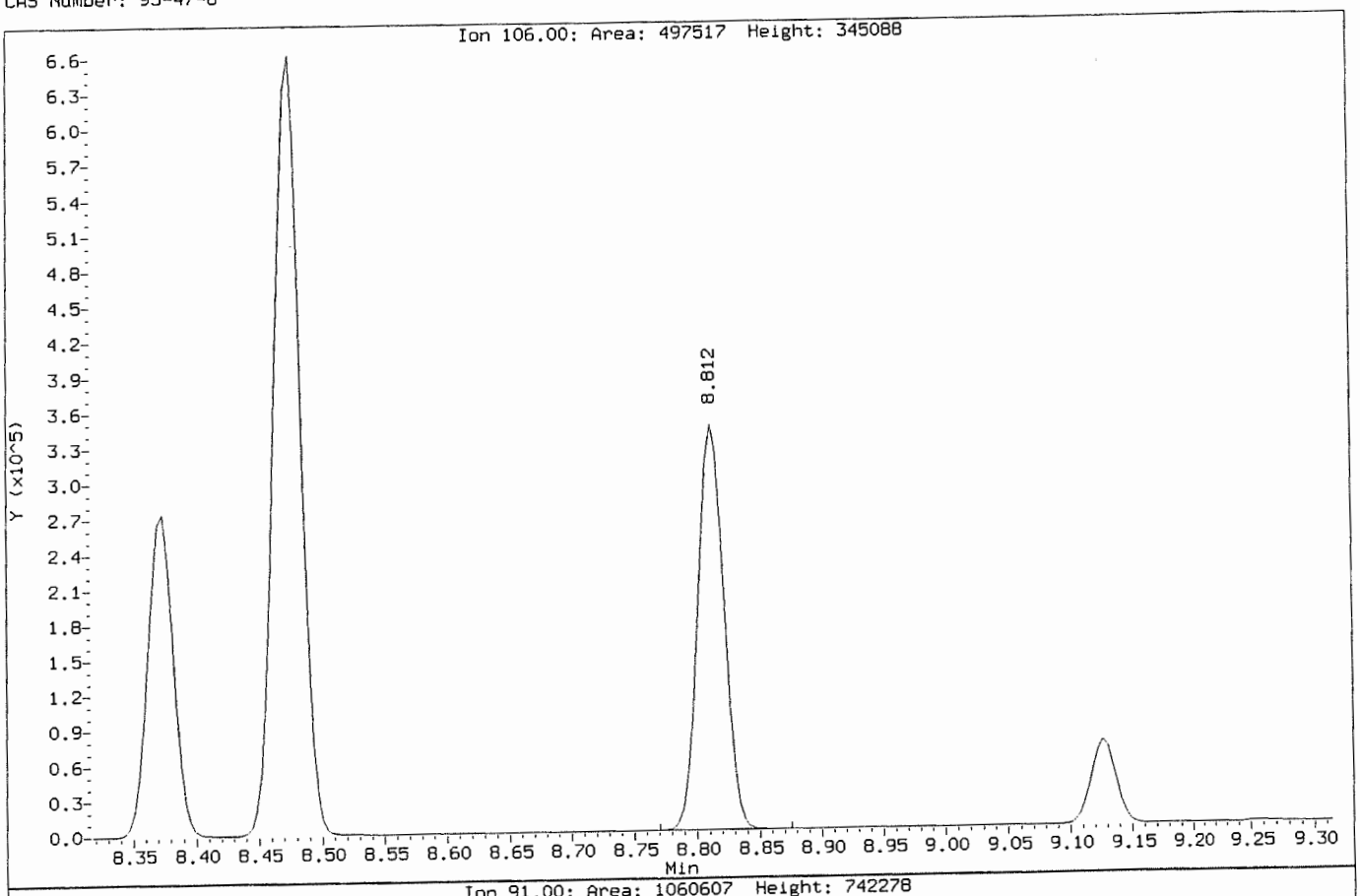
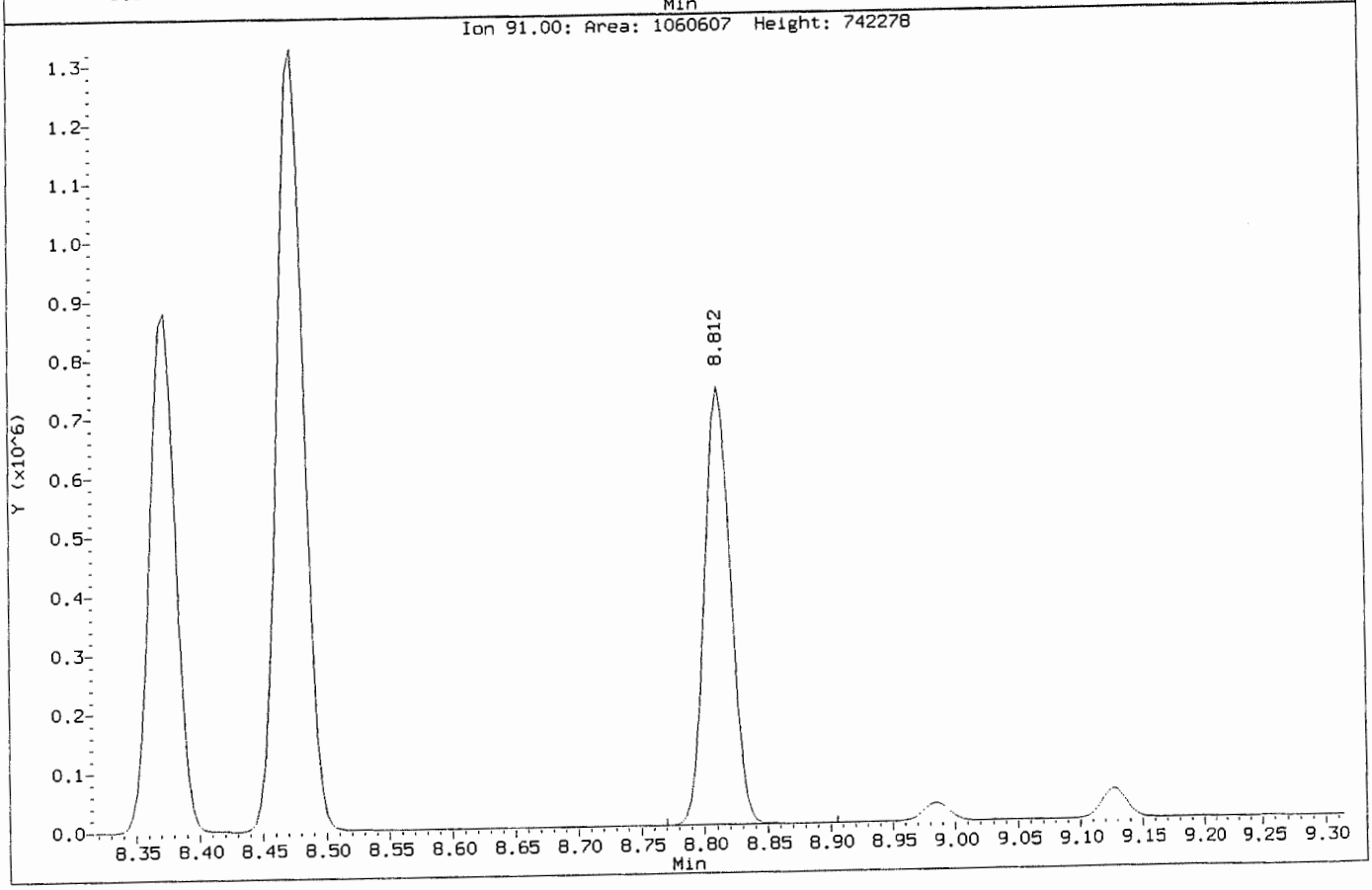
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: o-Xylene
CAS Number: 95-47-6





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Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111309.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 13-NOV-2018 14:39
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD100;VSTD100;1;8;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

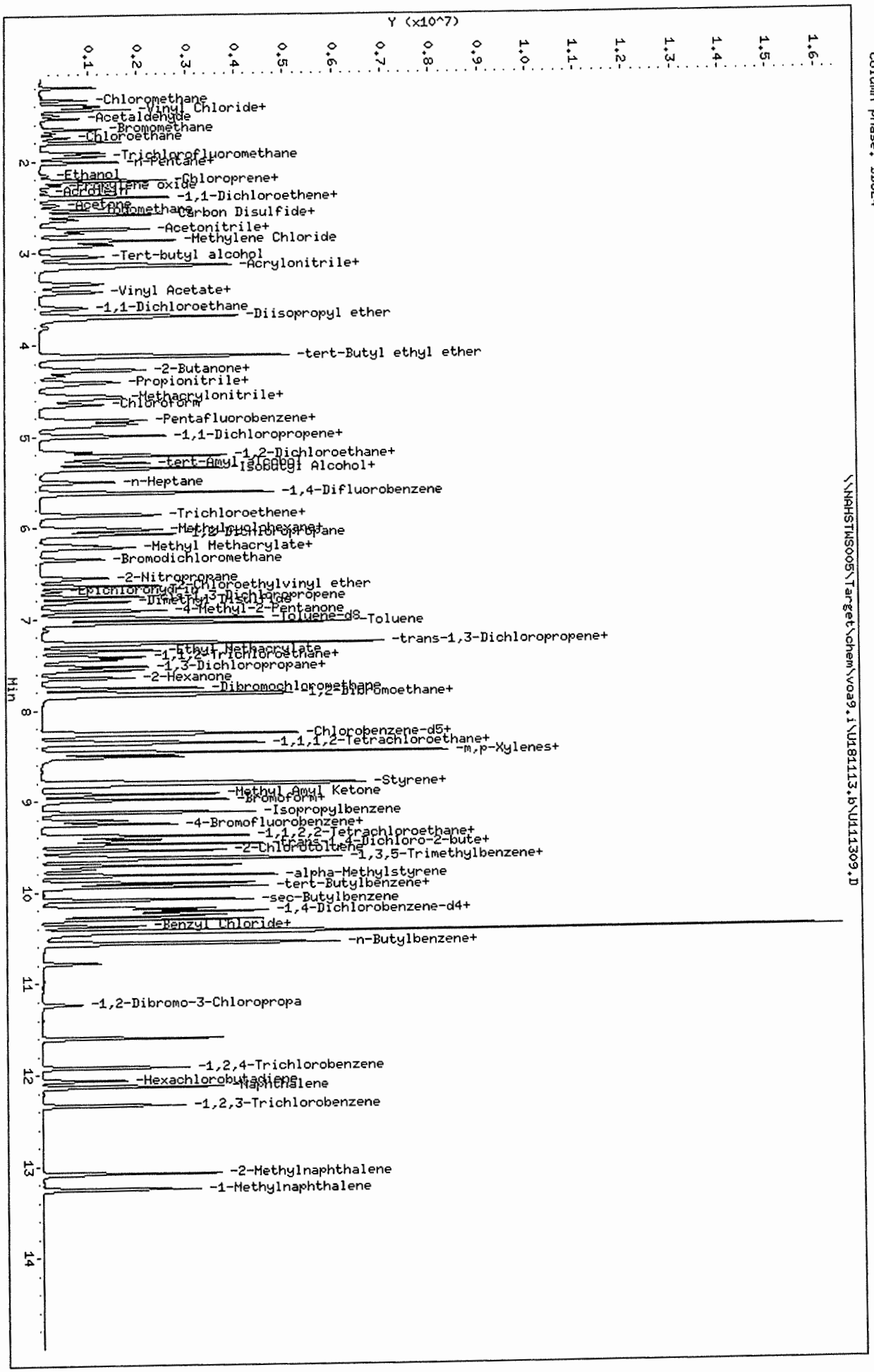
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.890	4.890	(1.000)	450542	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	856582	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	821336	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	399019	50.0000	
$ 30 Dibromofluoromethane	113	4.827	4.827	(0.987)	526814	100.000	103.01
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	696595	100.000	104.13
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	2142731	100.000	103.85
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	823996	100.000	102.55
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	547424	100.000	105.66
31 1,1,1-Trichloroethane	97	4.823	4.823	(0.986)	826811	100.000	104.47
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	905540	100.000	95.80
138 Freon TF	101	2.394	2.394	(0.490)	456374	100.000	101.11
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	496464	100.000	95.07
22 1,1-Dichloroethane	63	3.597	3.597	(0.736)	991209	100.000	96.00
11 1,1-Dichloroethene	96	2.394	2.394	(0.490)	489401	100.000	96.23
32 1,1-Dichloropropene	75	4.999	4.999	(0.889)	782616	100.000	98.92
93 1,2,3-Trichlorobenzene	180	12.339	12.339	(1.205)	769767	100.000	102.18
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1033869	100.000	104.82
90 1,2,4-Trichlorobenzene	180	11.927	11.927	(1.165)	795857	100.000	101.42
79 1,2,4-Trimethylbenzene	105	9.944	9.944	(0.971)	2240667	100.000	101.09
89 1,2-Dibromo-3-Chloropropane	155	11.237	11.237	(1.098)	149236	100.000	100.38
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	601967	100.000	99.55

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111309.D Page 2
Report Date: 24-Jan-2019 18:55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	1221135	100.000	95.83
33	1,2-Dichloroethane	62	5.250	5.250	(0.933)	845716	100.000	94.35
42	1,2-Dichloropropane	63	6.079	6.079	(1.081)	607568	100.000	99.62
75	1,3,5-Trimethylbenzene	105	9.629	9.629	(0.941)	2179527	100.000	101.66
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1206946	100.000	96.07
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	1063077	100.000	94.81
84	1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	1240019	100.000	100.95
26	2,2-Dichloropropane	77	4.268	4.268	(0.873)	666488	100.000	104.24
24	2-Butanone	43	4.332	4.332	(0.886)	626648	200.000	197.86
76	2-Chlorotoluene	91	9.550	9.550	(0.933)	1897282	100.000	97.10
52	2-Hexanone	43	7.649	7.649	(0.927)	1009723	200.000	211.48(A)
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	2209785	100.000	98.01
82	p-Isopropyltoluene	119	10.213	10.213	(0.998)	2303162	100.000	105.40
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	1416197	200.000	206.69(A)
10	Acetone	43	2.476	2.476	(0.506)	430350	200.000	212.87(A)
37	Benzene	78	5.216	5.216	(0.927)	2279526	100.000	96.27
74	Bromobenzene	156	9.385	9.385	(0.917)	640019	100.000	97.78
29	Bromochloromethane	128	4.549	4.549	(0.930)	269321	100.000	101.39
39	Bromodichloromethane	83	6.345	6.345	(1.128)	740758	100.000	104.07
66	Bromoform	173	8.984	8.984	(1.089)	383125	100.000	100.58
6	Bromomethane	94	1.655	1.655	(0.339)	367005	100.000	96.33
19	Carbon Disulfide	76	2.581	2.581	(0.528)	3169516	200.000	201.81(A)
34	Carbon Tetrachloride	117	4.991	4.991	(0.887)	664499	100.000	107.51
59	Chlorobenzene	112	8.275	8.275	(1.003)	1606902	100.000	94.79
7	Chloroethane	64	1.741	1.741	(0.356)	444513	100.000	94.55(M)
28	Chloroform	83	4.654	4.654	(0.952)	994934	100.000	95.91
3	Chloromethane	50	1.333	1.333	(0.273)	595590	100.000	98.79
27	cis-1,2-Dichloroethene	96	4.283	4.283	(0.876)	613605	100.000	96.11
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	1019257	100.000	113.72
55	Dibromochloromethane	129	7.758	7.758	(0.940)	576245	100.000	110.87
44	Dibromomethane	93	6.187	6.187	(1.100)	378115	100.000	98.92
2	Dichlorodifluoromethane	85	1.198	1.198	(0.245)	680233	100.000	101.10
61	Ethylbenzene	106	8.373	8.373	(1.015)	844002	100.000	98.46
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	270039	100.000	102.92
67	Isopropylbenzene	105	9.126	9.126	(1.106)	2535018	100.000	101.55
62	m,p-Xylenes	106	8.474	8.474	(1.027)	2096282	200.000	198.47
17	Methylene Chloride	84	2.866	2.866	(0.586)	577262	100.000	101.12
87	n-Butylbenzene	91	10.558	10.558	(1.031)	2203969	100.000	102.68
73	n-Propylbenzene	91	9.479	9.479	(0.926)	3164922	100.000	100.51
92	Naphthalene	128	12.133	12.133	(1.185)	2576616	100.000	109.04
63	o-Xylene	106	8.811	8.811	(1.068)	1070218	100.000	101.23(H)
81	sec-Butylbenzene	105	10.090	10.090	(0.986)	2704732	100.000	103.16
64	Styrene	104	8.826	8.826	(1.070)	1856392	100.000	104.02
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	1862977	100.000	101.96
56	Tetrachloroethene	164	7.526	7.526	(0.912)	415217	100.000	96.50
50	Toluene	91	7.046	7.046	(0.854)	2482746	100.000	95.21
20	trans-1,2-Dichloroethene	96	3.136	3.136	(0.641)	538852	100.000	96.67
51	trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	912116	100.000	101.29
38	Trichloroethene	130	5.861	5.861	(1.042)	566649	100.000	97.08
8	Trichlorofluoromethane	101	1.944	1.944	(0.398)	897271	100.000	99.61
5	Vinyl Chloride	62	1.411	1.411	(0.289)	744825	100.000	100.88

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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Date : 13-NOV-2018 14:39
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

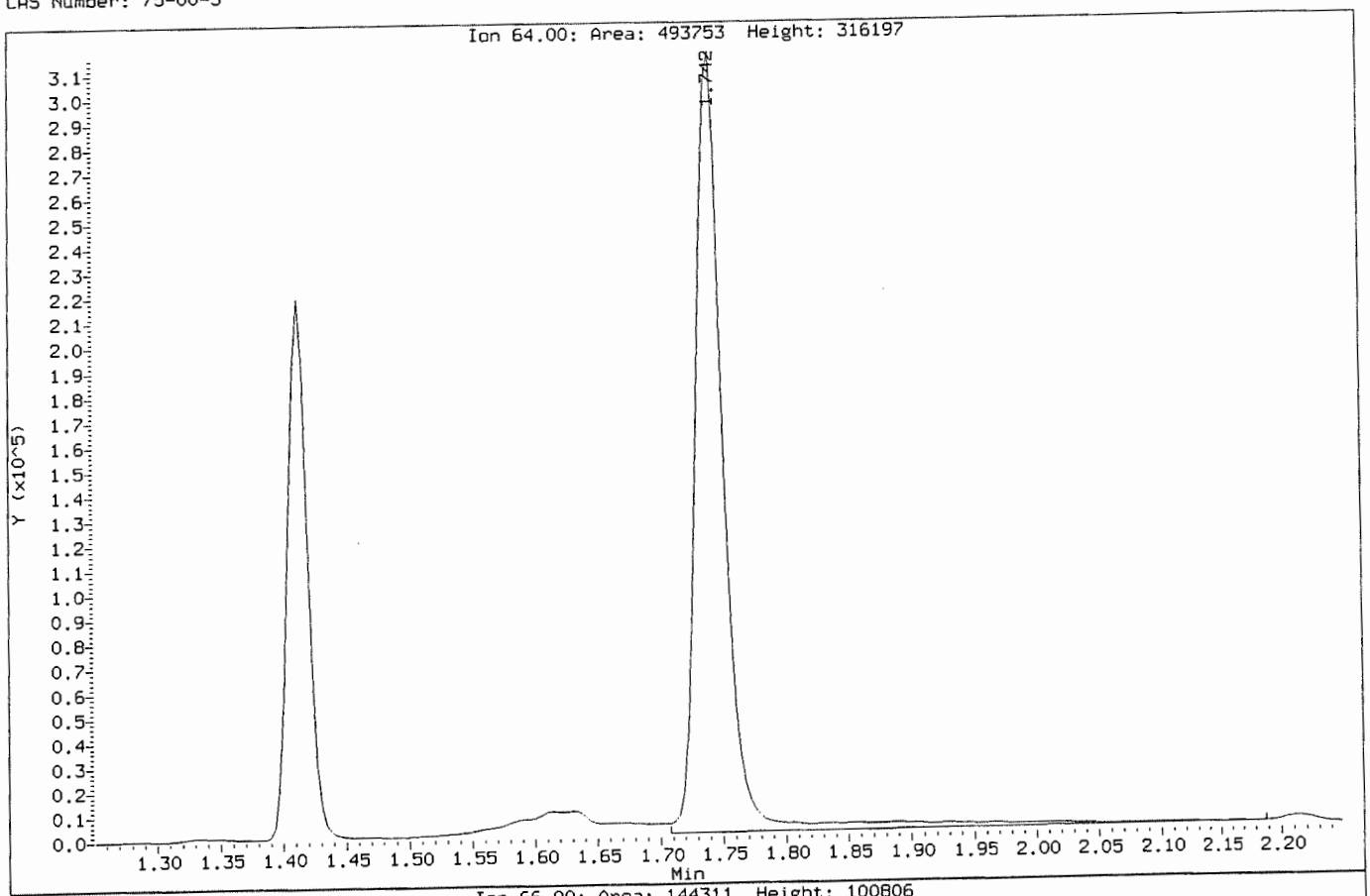
\\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111309.D

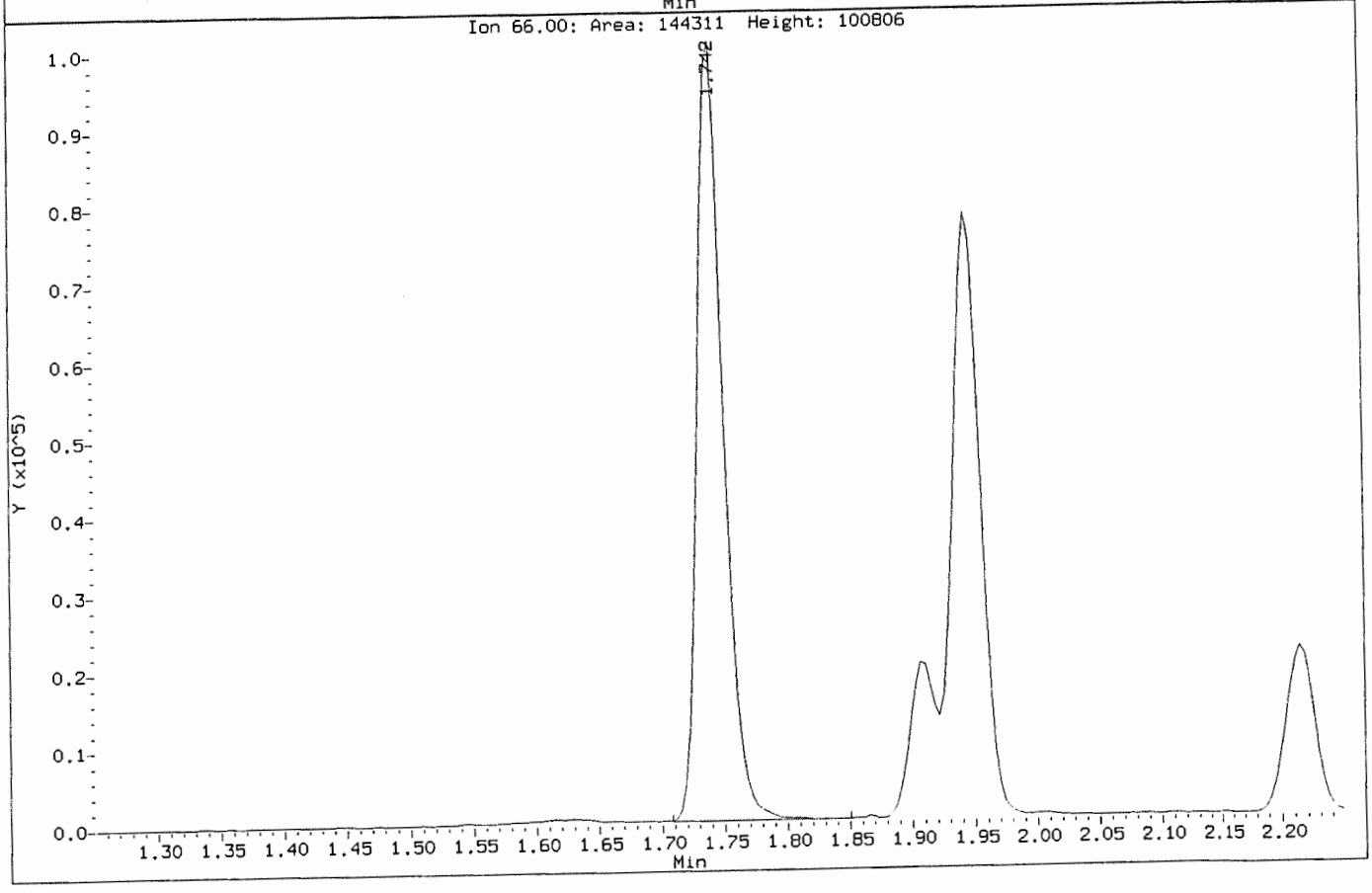
Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Page 4

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\Before\U111309.D
Injection Date: 13-NOV-2018 14:39
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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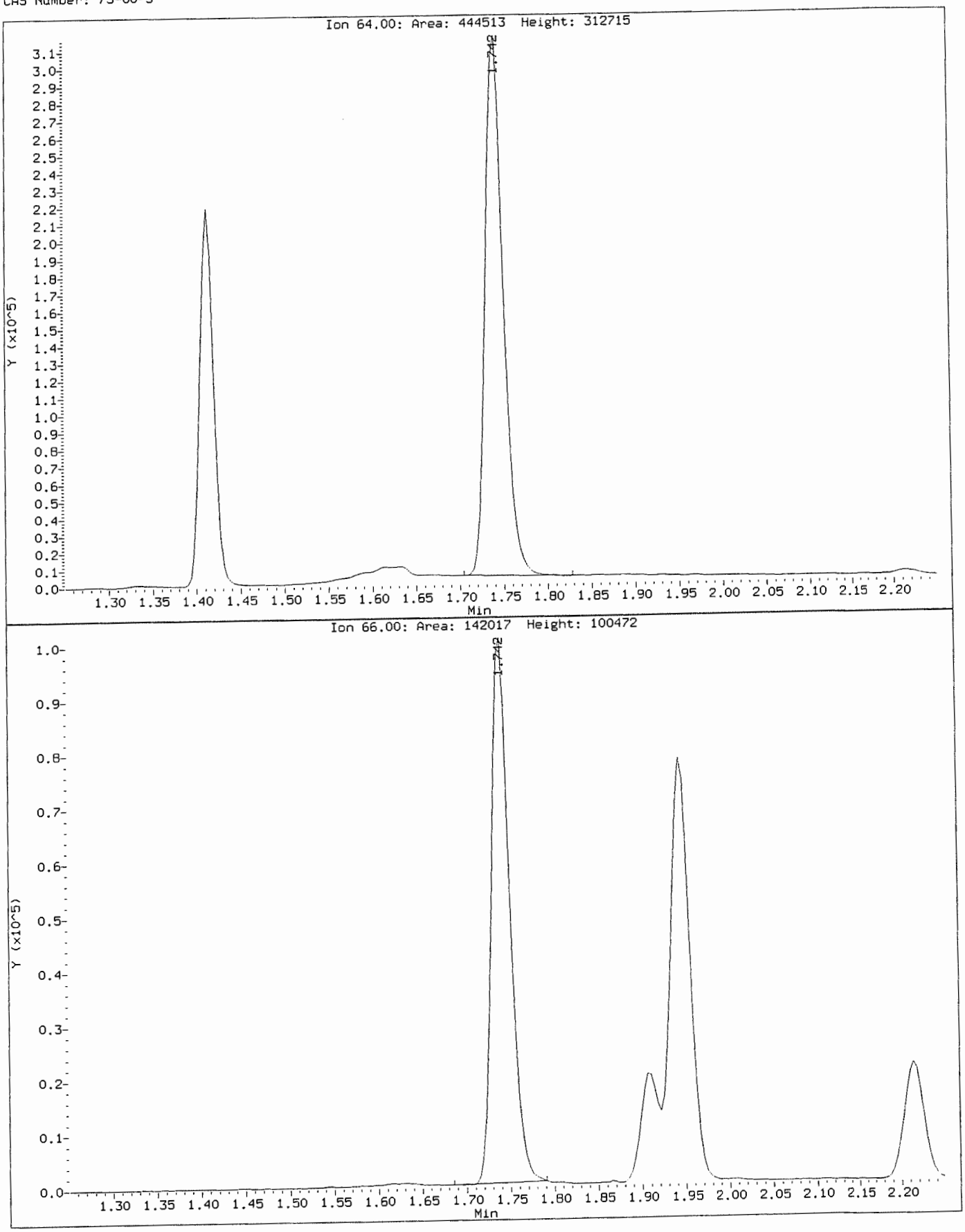
Compound: Chloroethane
CAS Number: 75-00-3



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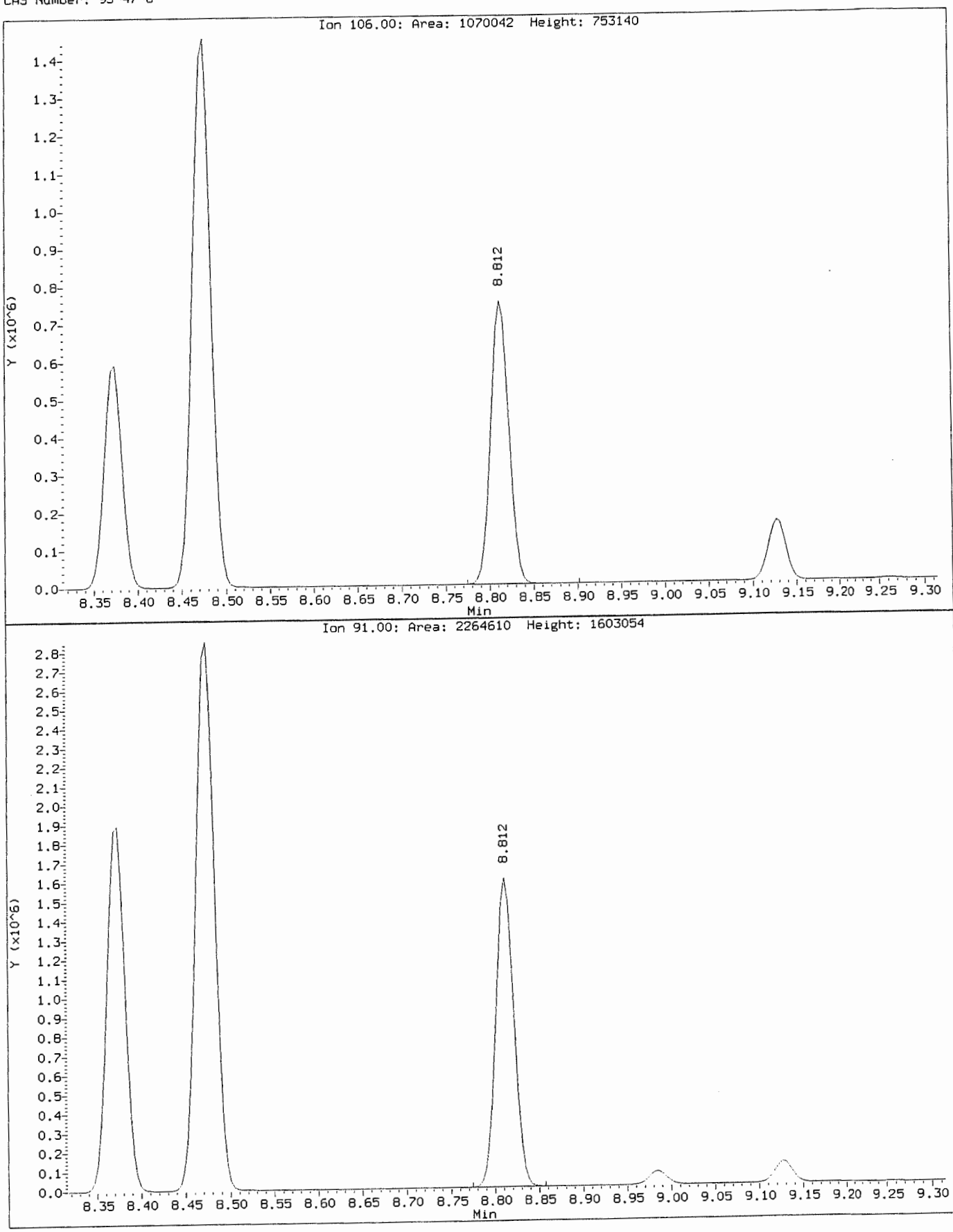
Injection Date: 13-NOV-2018 14:39
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: o-Xylene
CAS Number: 95-47-6



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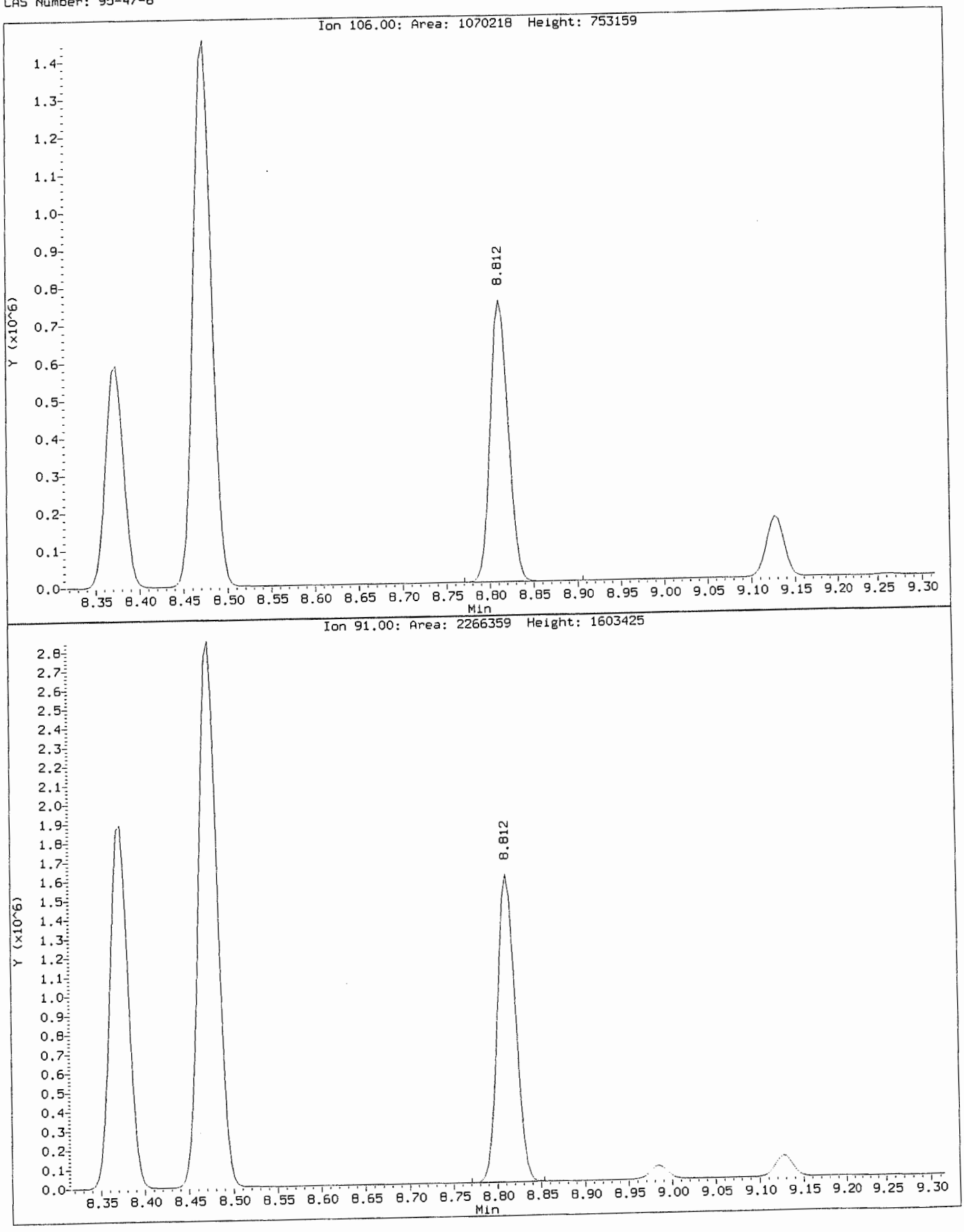
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: o-Xylene
CAS Number: 95-47-6



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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111310.D
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Operator : PC Inst ID: VOA9.i
Smp Info : VSTD150;VSTD150;1;9;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:39 Cal File: U111309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

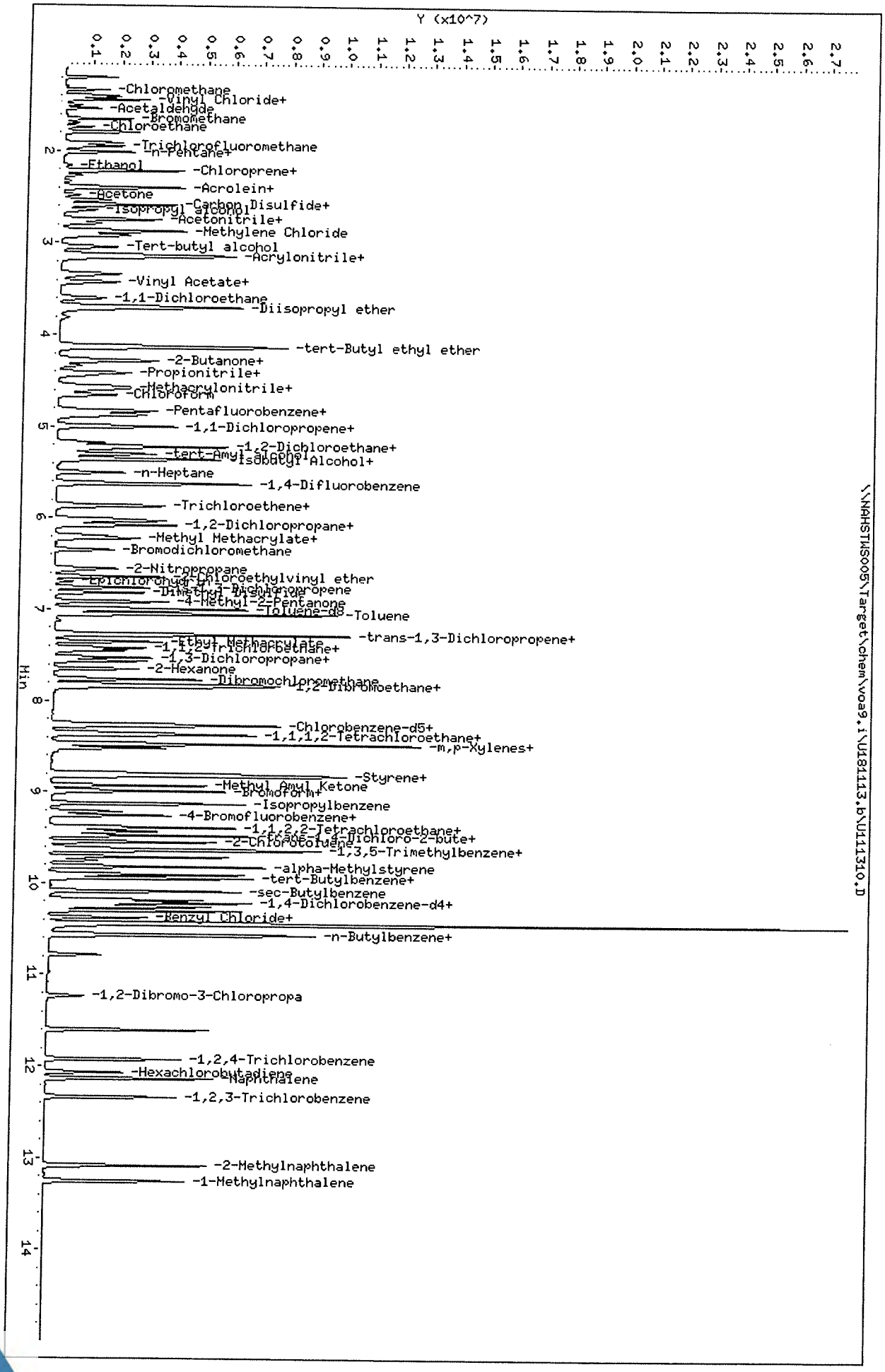
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	463456	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	890799	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	854800	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	408174	50.0000	
$ 30 Dibromofluoromethane	113	4.827	4.827	(0.986)	809097	150.000	154.42
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	1062364	150.000	155.24
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	3238162	150.000	151.57
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	1261578	150.000	151.36
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	858465	150.000	159.21
31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	1329534	150.000	163.31
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1394090	150.000	144.19
138 Freon TF	101	2.397	2.397	(0.490)	735007	150.000	158.31
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	767365	150.000	141.20
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	1566973	150.000	147.54
11 1,1-Dichloroethene	96	2.394	2.394	(0.489)	789917	150.000	150.99
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	1250083	150.000	151.94
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	1201294	150.000	155.88
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1603390	150.000	158.92
90 1,2,4-Trichlorobenzene	180	11.927	11.927	(1.165)	1246599	150.000	155.30
79 1,2,4-Trimethylbenzene	105	9.944	9.944	(0.971)	3425922	150.000	151.11
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	234820	150.000	152.68
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	923726	150.000	146.78

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	1872904	150.000	143.68
33	1,2-Dichloroethane	62	5.250	5.250	(0.933)	1302354	150.000	139.71
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	950163	150.000	149.81
75	1,3,5-Trimethylbenzene	105	9.629	9.629	(0.941)	3367895	150.000	153.56
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1864119	150.000	145.05
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	1651259	150.000	141.50
84	1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	1907496	150.000	151.83
26	2,2-Dichloropropane	77	4.272	4.272	(0.873)	1089497	150.000	165.65
24	2-Butanone	43	4.336	4.336	(0.886)	955107	300.000	293.17(A)
76	2-Chlorotoluene	91	9.550	9.550	(0.933)	2905161	150.000	145.35
52	2-Hexanone	43	7.653	7.653	(0.928)	1563288	300.000	314.60(A)
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	3405553	150.000	147.66
82	p-Isopropyltoluene	119	10.213	10.213	(0.998)	3559913	150.000	159.26
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	2161270	300.000	303.08(A)
10	Acetone	43	2.480	2.480	(0.507)	636098	300.000	307.81(A)
37	Benzene	78	5.216	5.216	(0.927)	3563563	150.000	144.72
74	Bromobenzene	156	9.385	9.385	(0.917)	991935	150.000	148.14
29	Bromochloromethane	128	4.553	4.553	(0.930)	396590	150.000	145.15
39	Bromodichloromethane	83	6.349	6.349	(1.129)	1169536	150.000	158.01
66	Bromoform	173	8.984	8.984	(1.089)	610635	150.000	152.14
6	Bromomethane	94	1.655	1.655	(0.338)	609177	150.000	154.28
19	Carbon Disulfide	76	2.585	2.585	(0.528)	5076235	300.000	314.21(A)
34	Carbon Tetrachloride	117	4.995	4.995	(0.888)	1081499	150.000	168.27
59	Chlorobenzene	112	8.275	8.275	(1.003)	2477986	150.000	140.45
7	Chloroethane	64	1.741	1.741	(0.356)	708077	150.000	146.42(M)
28	Chloroform	83	4.654	4.654	(0.951)	1558200	150.000	146.02
3	Chloromethane	50	1.337	1.337	(0.273)	963160	150.000	155.17
27	cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	965405	150.000	147.00
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	1623779	150.000	174.21
55	Dibromochloromethane	129	7.758	7.758	(0.940)	908238	150.000	167.91
44	Dibromomethane	93	6.191	6.191	(1.101)	587501	150.000	147.80
2	Dichlorodifluoromethane	85	1.202	1.202	(0.246)	1086406	150.000	156.42
61	Ethylbenzene	106	8.373	8.373	(1.015)	1325471	150.000	148.58
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	426795	150.000	149.03
67	Isopropylbenzene	105	9.126	9.126	(1.106)	3937489	150.000	151.57
62	m,p-Xylenes	106	8.474	8.474	(1.027)	3241074	300.000	294.85(A)
17	Methylene Chloride	84	2.866	2.866	(0.586)	911224	150.000	155.55
87	n-Butylbenzene	91	10.558	10.558	(1.031)	3347969	150.000	149.04
73	n-Propylbenzene	91	9.479	9.479	(0.926)	4851775	150.000	150.63
92	Naphthalene	128	12.133	12.133	(1.185)	3933835	150.000	162.75
63	o-Xylene	106	8.811	8.811	(1.068)	1663910	150.000	151.23(H)
81	sec-Butylbenzene	105	10.090	10.090	(0.986)	4188144	150.000	156.16
64	Styrene	104	8.826	8.826	(1.070)	2865534	150.000	154.28
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	2893337	150.000	154.80
56	Tetrachloroethene	164	7.526	7.526	(0.912)	658457	150.000	147.04
50	Toluene	91	7.050	7.050	(0.855)	3865080	150.000	142.41
20	trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	855722	150.000	149.25
51	trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	1439550	150.000	152.95
38	Trichloroethene	130	5.861	5.861	(1.042)	898620	150.000	148.04
8	Trichlorofluoromethane	101	1.948	1.948	(0.398)	1438631	150.000	155.26
5	Vinyl Chloride	62	1.415	1.415	(0.289)	1189386	150.000	156.33

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111310.D

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Page 4

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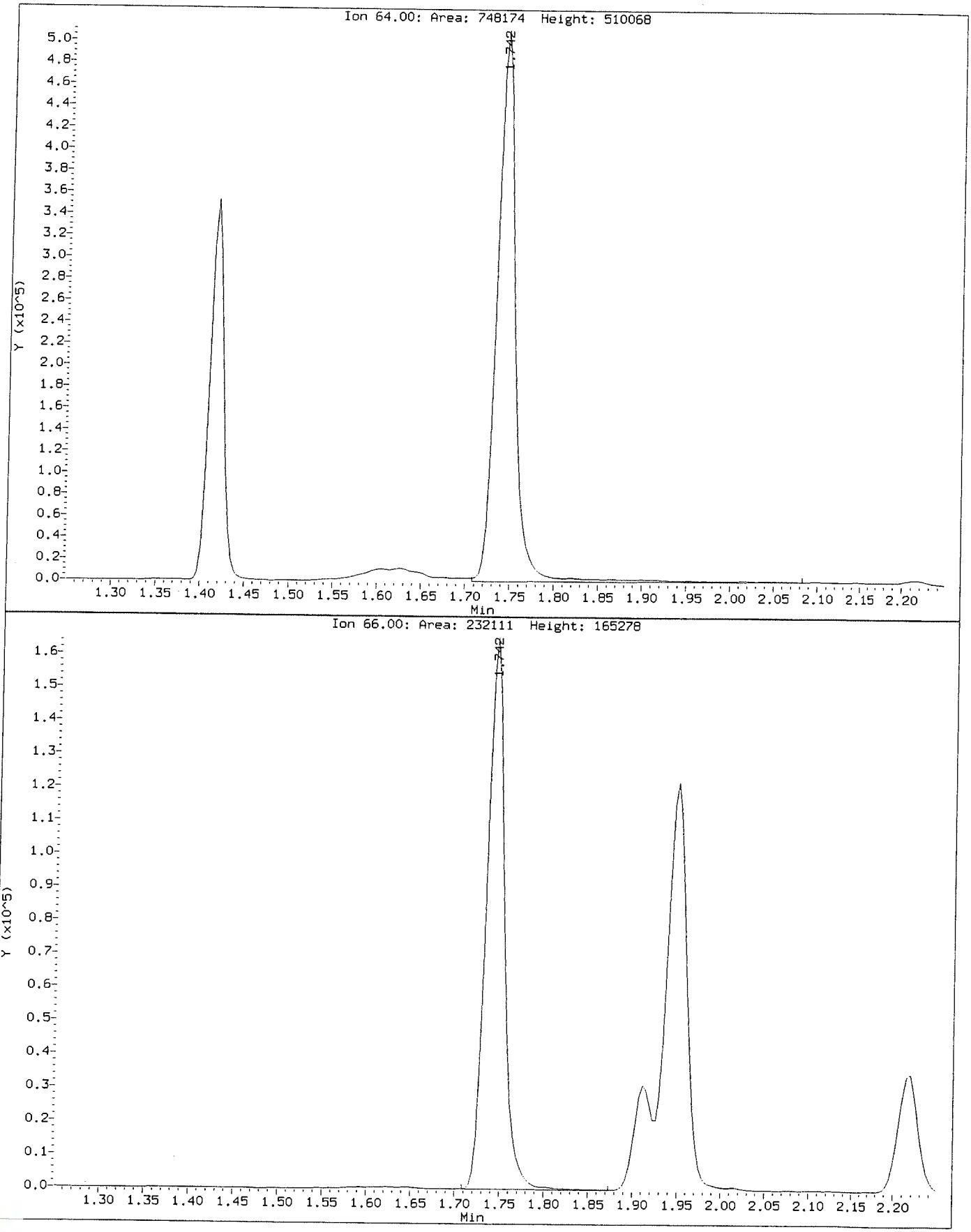
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: Chloroethane
CAS Number: 75-00-3



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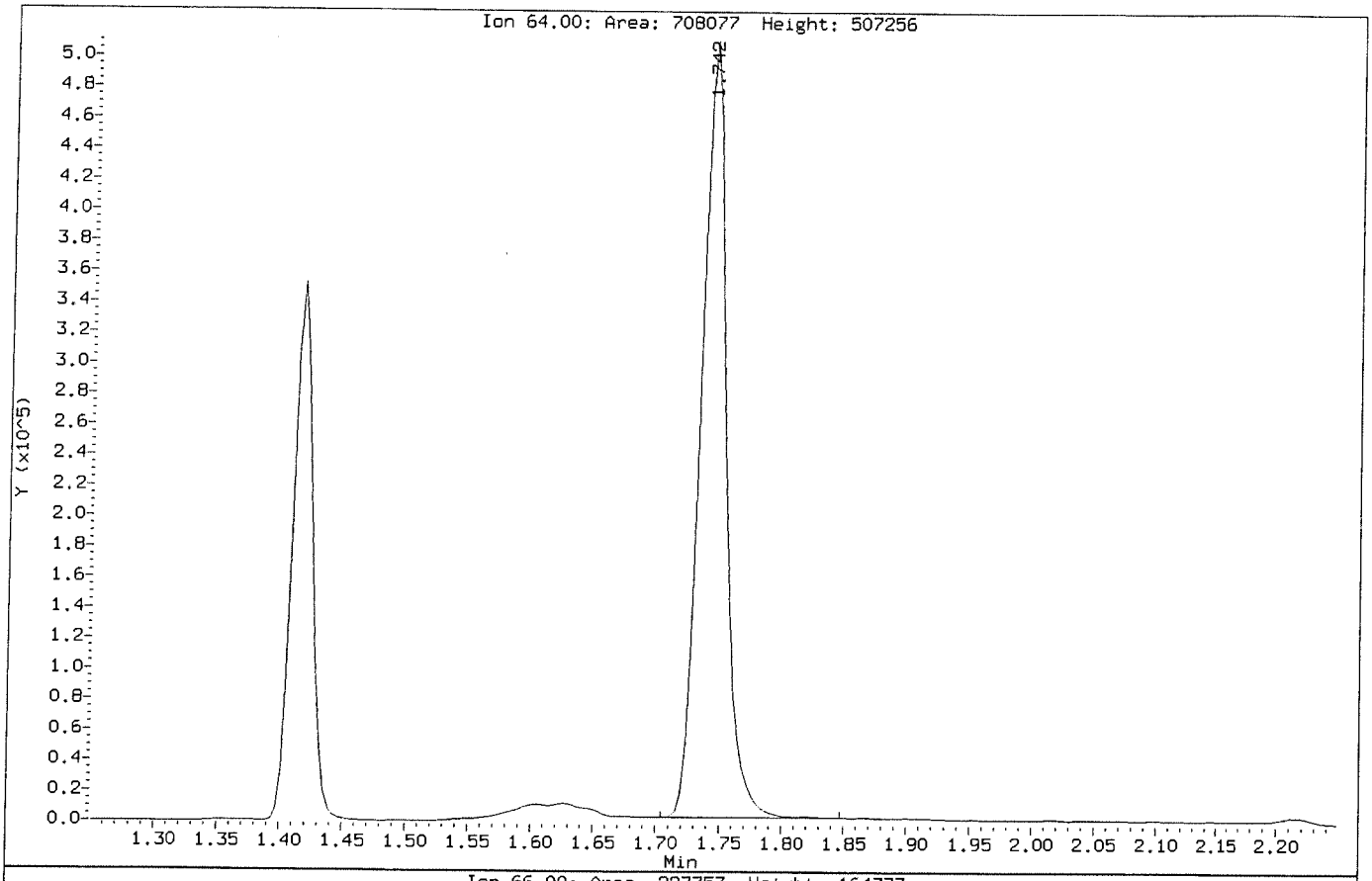
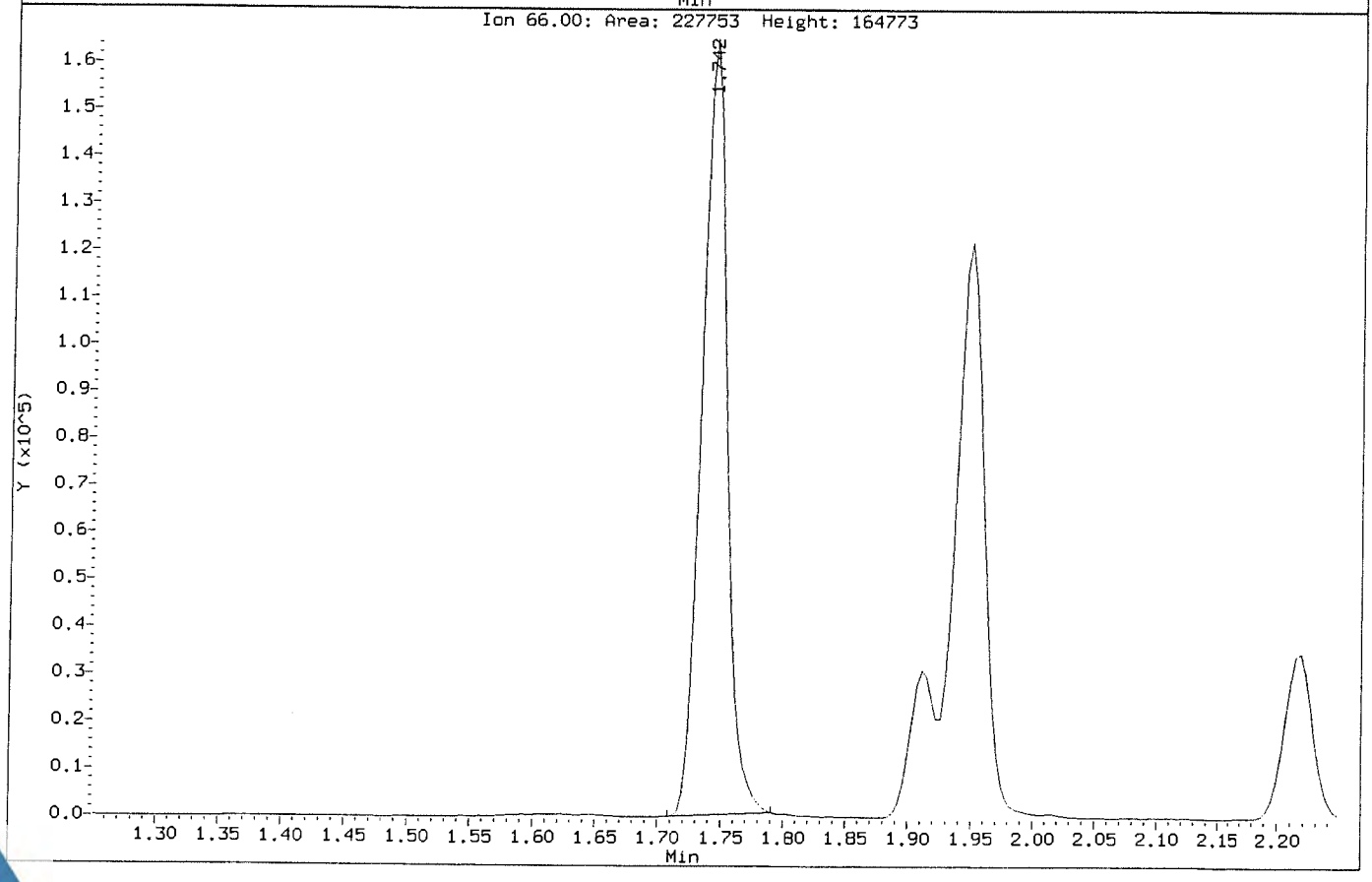
Compound: Chloroethane
CAS Number: 75-00-3





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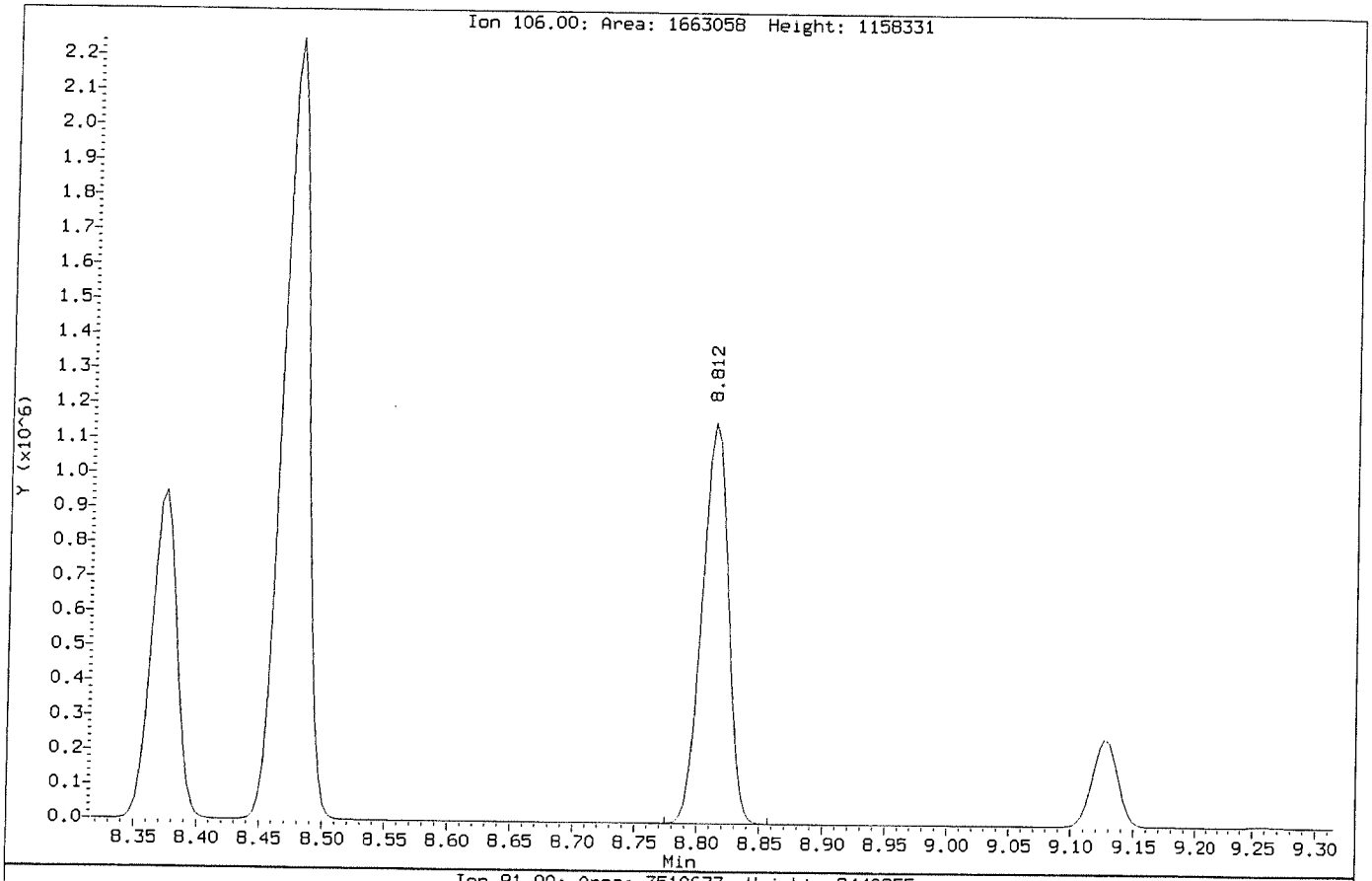
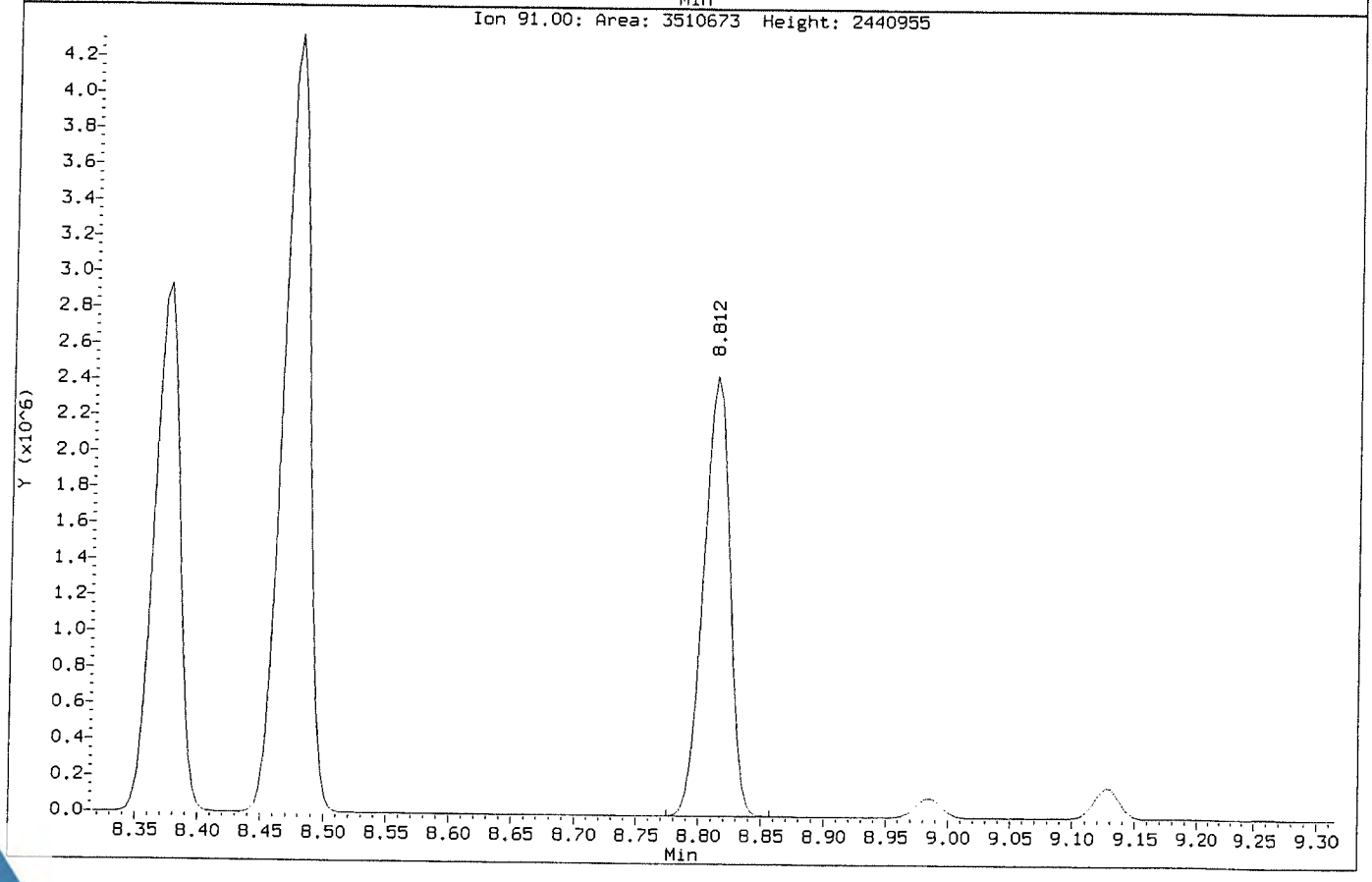
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: o-Xylene
CAS Number: 95-47-6





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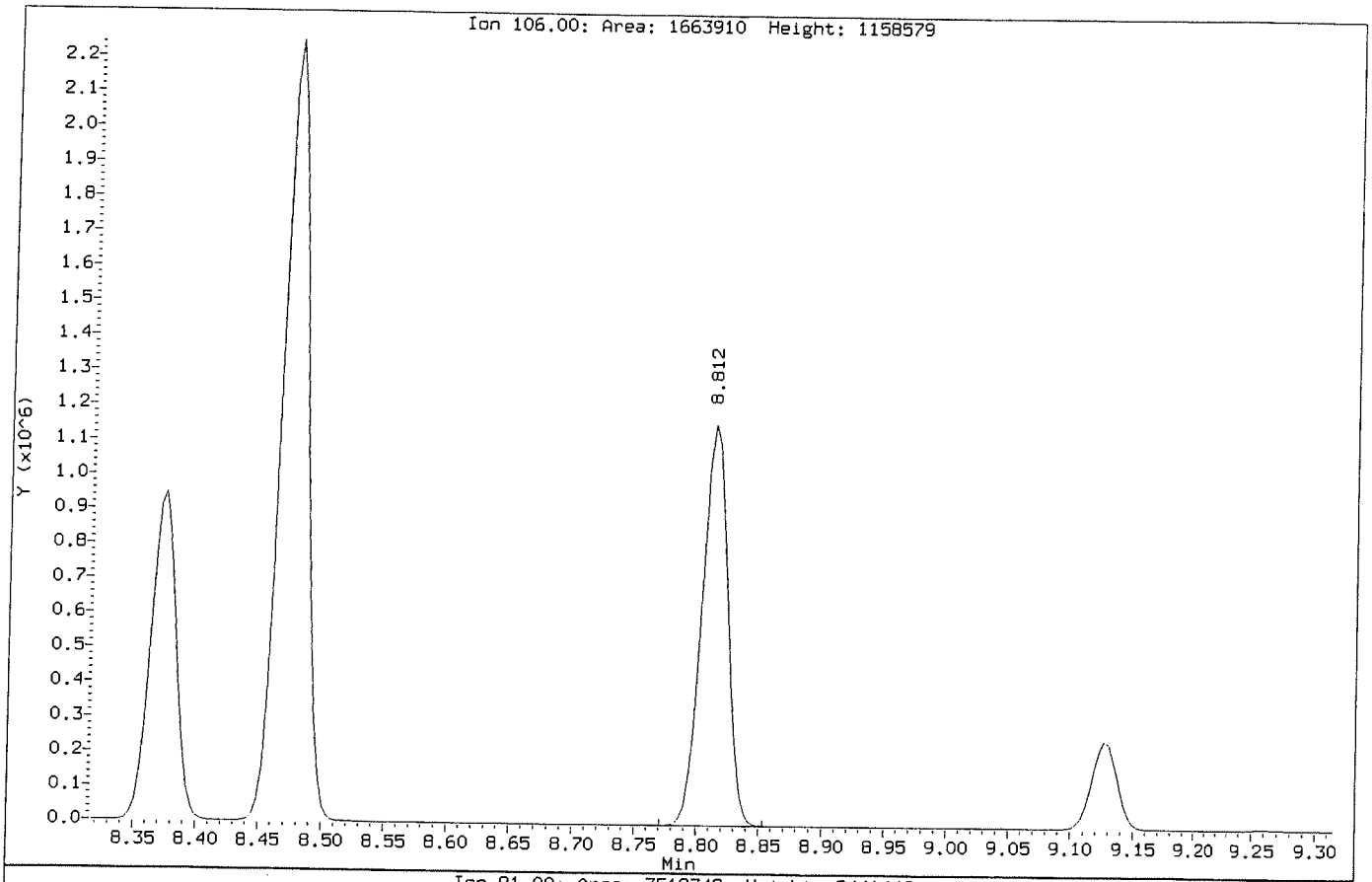
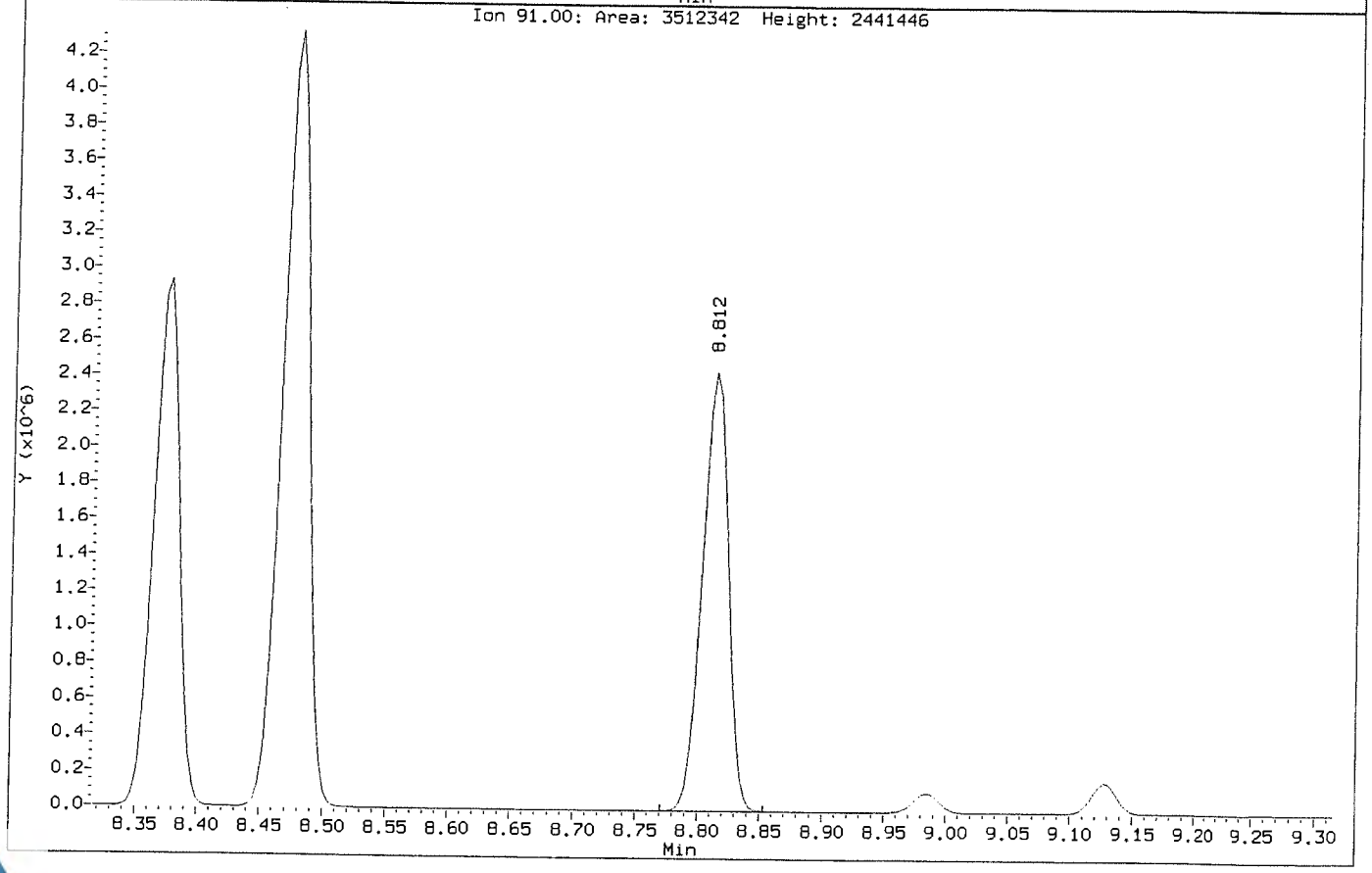
Client Sample ID: VSTD150

Compound: o-Xylene
CAS Number: 95-47-6





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Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111311.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 13-NOV-2018 15:28
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 15:04 Cal File: U111310.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

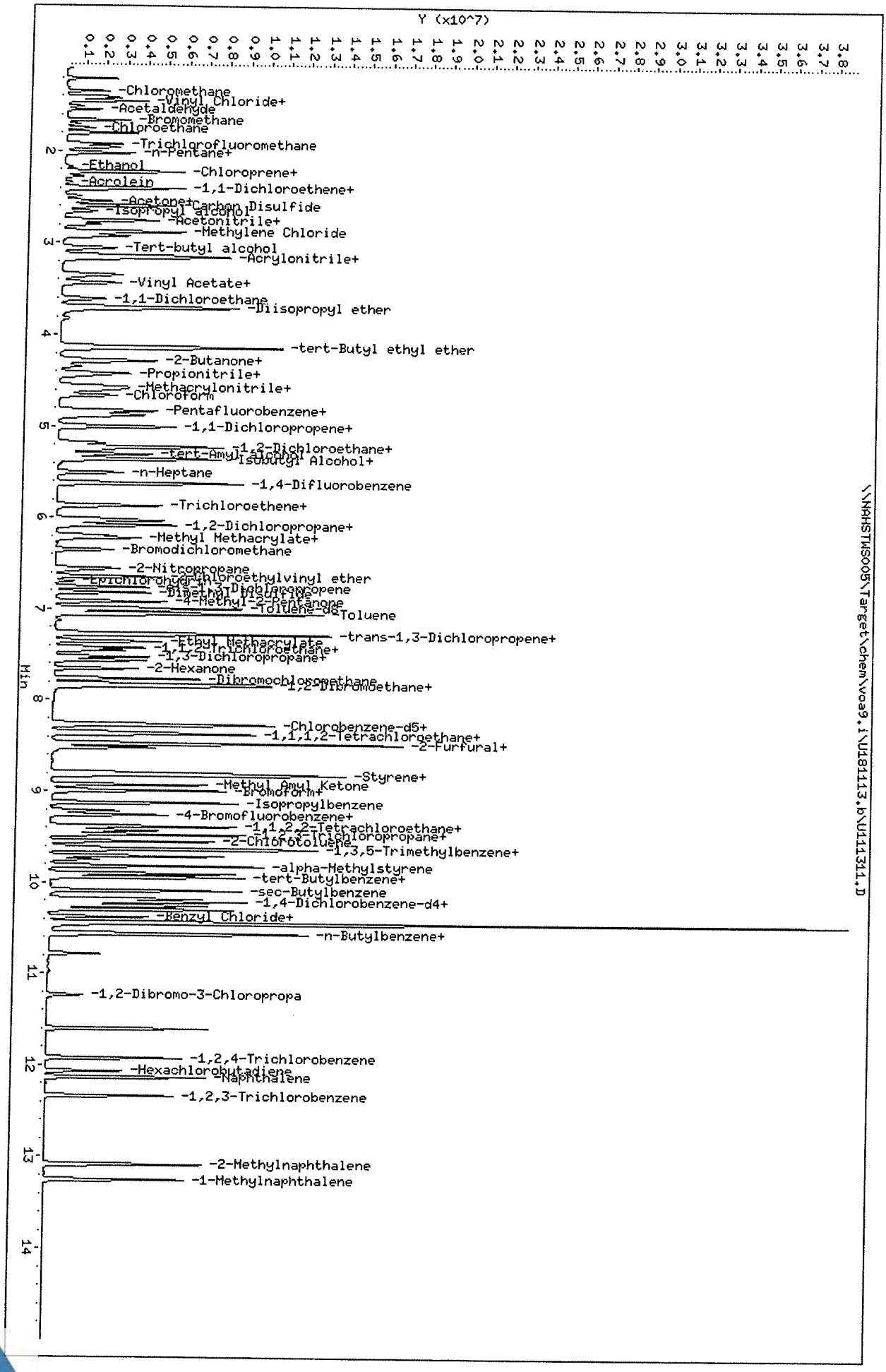
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	505644	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	946062	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.253	(1.000)	896349	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.239	10.239	(1.000)	426550	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	1112100	200.000	194.87
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	1441844	200.000	193.54
$ 48 Toluene-d8	98	6.993	6.993	(0.847)	4386438	200.000	196.29
$ 69 4-Bromofluorobenzene	95	9.261	9.261	(1.122)	1723103	200.000	197.48
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	1191494	200.000	210.73(A)
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	1824622	200.000	205.42(A)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.917)	1884161	200.000	186.48
138 Freon TF	101	2.405	2.405	(0.491)	1007022	200.000	198.80
53 1,1,2-Trichloroethane	83	7.424	7.424	(0.900)	1043779	200.000	183.16
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	2138732	200.000	184.57
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	1081090	200.000	189.41
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	1707700	200.000	195.44
93 1,2,3-Trichlorobenzene	180	12.339	12.339	(1.205)	1636643	200.000	203.23(A)
71 1,2,3-Trichloropropane	75	9.434	9.434	(0.921)	2176006	200.000	206.38(A)
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	1712716	200.000	204.18(A)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	4631542	200.000	195.48
89 1,2-Dibromo-3-Chloropropane	155	11.237	11.237	(1.097)	321770	200.000	198.50
57 1,2-Dibromoethane	107	7.855	7.855	(0.952)	1265930	200.000	191.84

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111311.D Page 2
Report Date: 24-Jan-2019 18:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	2535364	200.000	186.12
33 1,2-Dichloroethane	62	5.257	5.257	(0.934)	1770998	200.000	178.89
42 1,2-Dichloropropane	63	6.086	6.086	(1.081)	1294674	200.000	192.20
75 1,3,5-Trimethylbenzene	105	9.628	9.628	(0.940)	4535917	200.000	197.91
83 1,3-Dichlorobenzene	146	10.183	10.183	(0.995)	2548608	200.000	189.77
54 1,3-Dichloropropane	76	7.567	7.567	(0.917)	2235193	200.000	182.67
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	2606334	200.000	198.53
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	1492829	200.000	208.03(A)
24 2-Butanone	43	4.343	4.343	(0.887)	1287268	400.000	362.16(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	3934986	200.000	188.39
52 2-Hexanone	43	7.653	7.653	(0.927)	2091584	400.000	401.41(A)
77 4-Chlorotoluene	91	9.643	9.643	(0.942)	4615489	200.000	191.50
82 p-Isopropyltoluene	119	10.213	10.213	(0.997)	4810748	200.000	205.94(A)
45 4-Methyl-2-Pentanone	43	6.918	6.918	(0.838)	2944165	400.000	393.73(A)
10 Acetone	43	2.491	2.491	(0.509)	869596	400.000	386.81(A)
37 Benzene	78	5.224	5.224	(0.928)	4810692	200.000	183.96(M)
74 Bromobenzene	156	9.385	9.385	(0.917)	1358088	200.000	194.09
29 Bromochloromethane	128	4.560	4.560	(0.931)	537789	200.000	180.41
39 Bromodichloromethane	83	6.352	6.352	(1.129)	1603888	200.000	204.03(A)
66 Bromoform	173	8.987	8.987	(1.089)	844522	200.000	198.75
6 Bromomethane	94	1.662	1.662	(0.340)	794649	200.000	184.09
19 Carbon Disulfide	76	2.596	2.596	(0.530)	6896612	400.000	391.27(A)
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	1483776	200.000	217.37(A)
59 Chlorobenzene	112	8.279	8.279	(1.003)	3391468	200.000	183.32
7 Chloroethane	64	1.749	1.749	(0.357)	955282	200.000	181.06(M)
28 Chloroform	83	4.661	4.661	(0.952)	2117243	200.000	181.86
3 Chloromethane	50	1.344	1.344	(0.274)	1334230	200.000	196.96
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	1322041	200.000	184.51
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	2224591	200.000	224.72(A)
55 Dibromochloromethane	129	7.762	7.762	(0.940)	1258930	200.000	221.96(A)
44 Dibromomethane	93	6.195	6.195	(1.101)	803081	200.000	190.24
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	1483355	200.000	195.50
61 Ethylbenzene	106	8.373	8.373	(1.015)	1806514	200.000	193.12(M)
91 Hexachlorobutadiene	225	12.065	12.065	(1.178)	582613	200.000	183.44
67 Isopropylbenzene	105	9.130	9.130	(1.106)	5274717	200.000	193.63
62 m,p-Xylenes	106	8.474	8.474	(1.027)	4413064	400.000	382.86(AM)
17 Methylene Chloride	84	2.877	2.877	(0.587)	1246871	200.000	195.27
87 n-Butylbenzene	91	10.558	10.558	(1.031)	4531778	200.000	189.12
73 n-Propylbenzene	91	9.478	9.478	(0.926)	6433909	200.000	191.14
92 Naphthalene	128	12.136	12.136	(1.185)	5280797	200.000	209.07(A)
63 o-Xylene	106	8.815	8.815	(1.068)	2277275	200.000	197.39(MH)
81 sec-Butylbenzene	105	10.090	10.090	(0.985)	5603961	200.000	199.95
64 Styrene	104	8.826	8.826	(1.069)	3881020	200.000	199.27
78 tert-Butylbenzene	119	9.906	9.906	(0.967)	3887715	200.000	199.04
56 Tetrachloroethene	164	7.525	7.525	(0.912)	907758	200.000	193.32
50 Toluene	91	7.049	7.049	(0.854)	5182031	200.000	182.09
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	1173691	200.000	187.63
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	1983766	200.000	198.03
38 Trichloroethene	130	5.865	5.865	(1.042)	1238549	200.000	192.12
8 Trichlorofluoromethane	101	1.955	1.955	(0.399)	1950000	200.000	192.89
5 Vinyl Chloride	62	1.426	1.426	(0.291)	1622522	200.000	195.34

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

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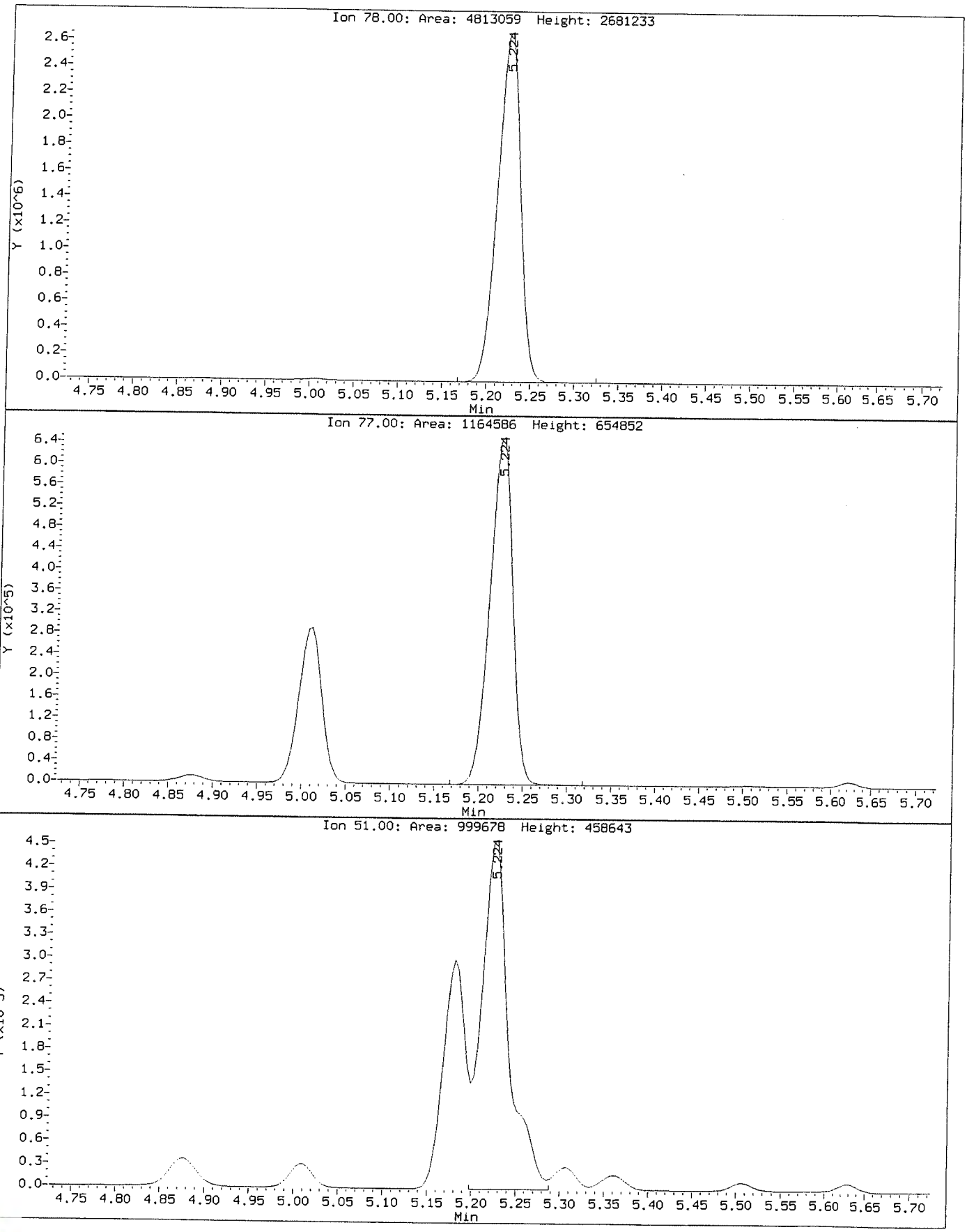
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Benzene
CAS Number: 71-43-2



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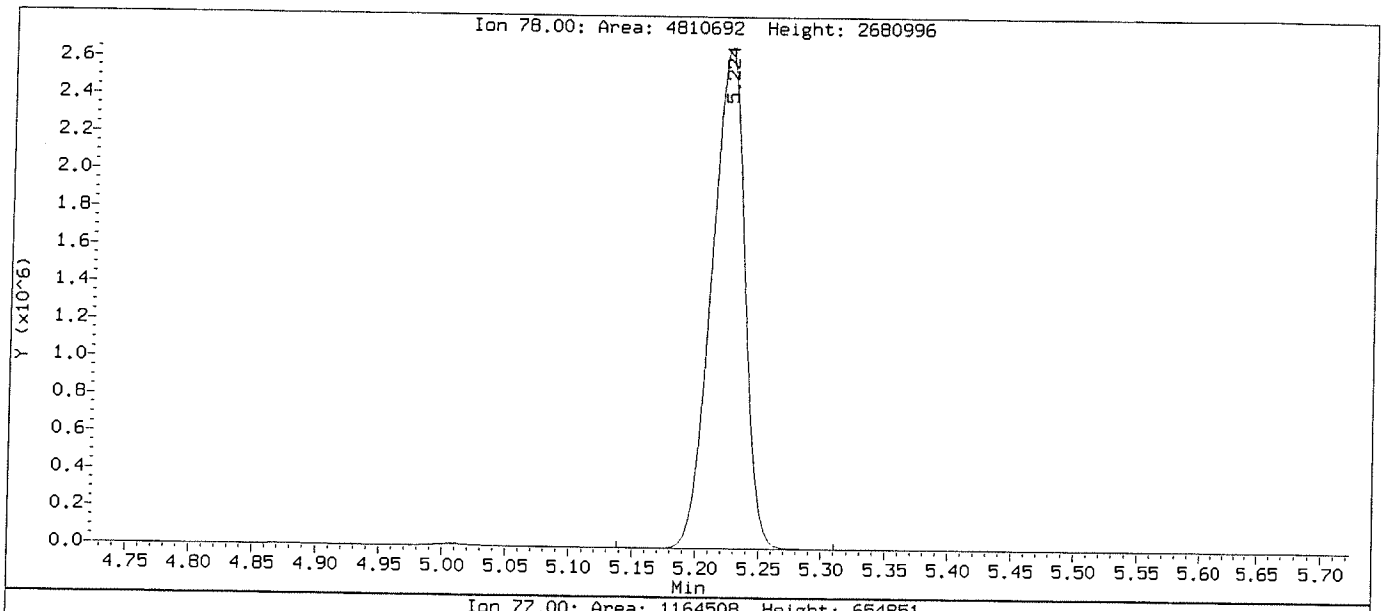
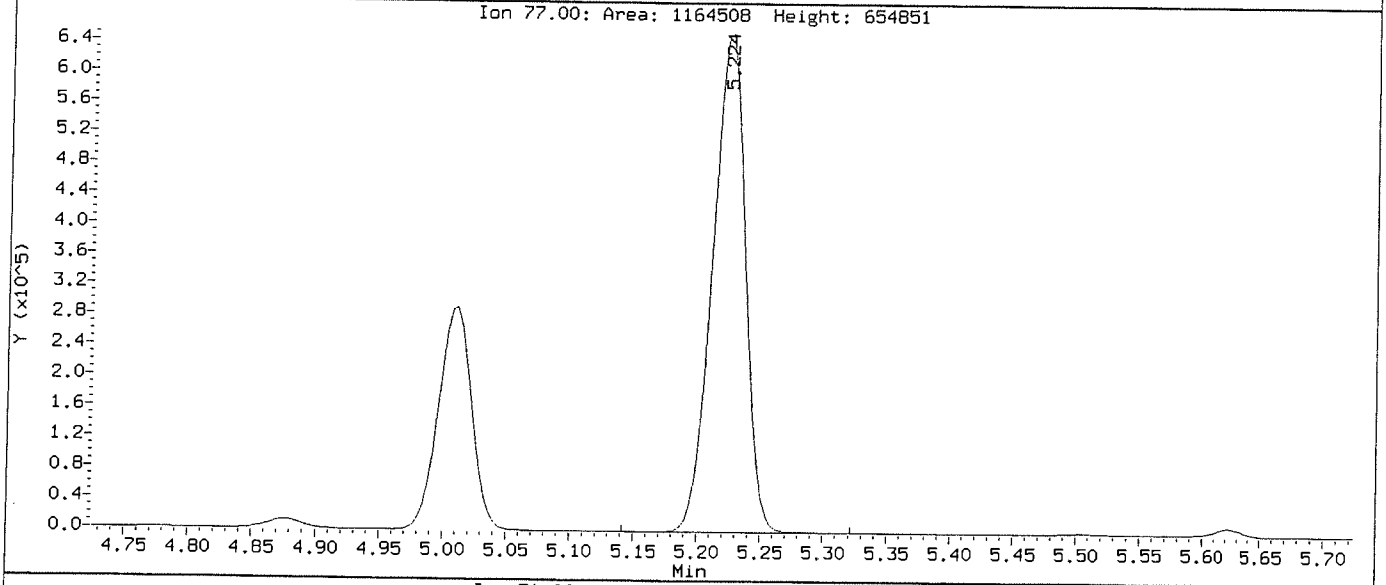
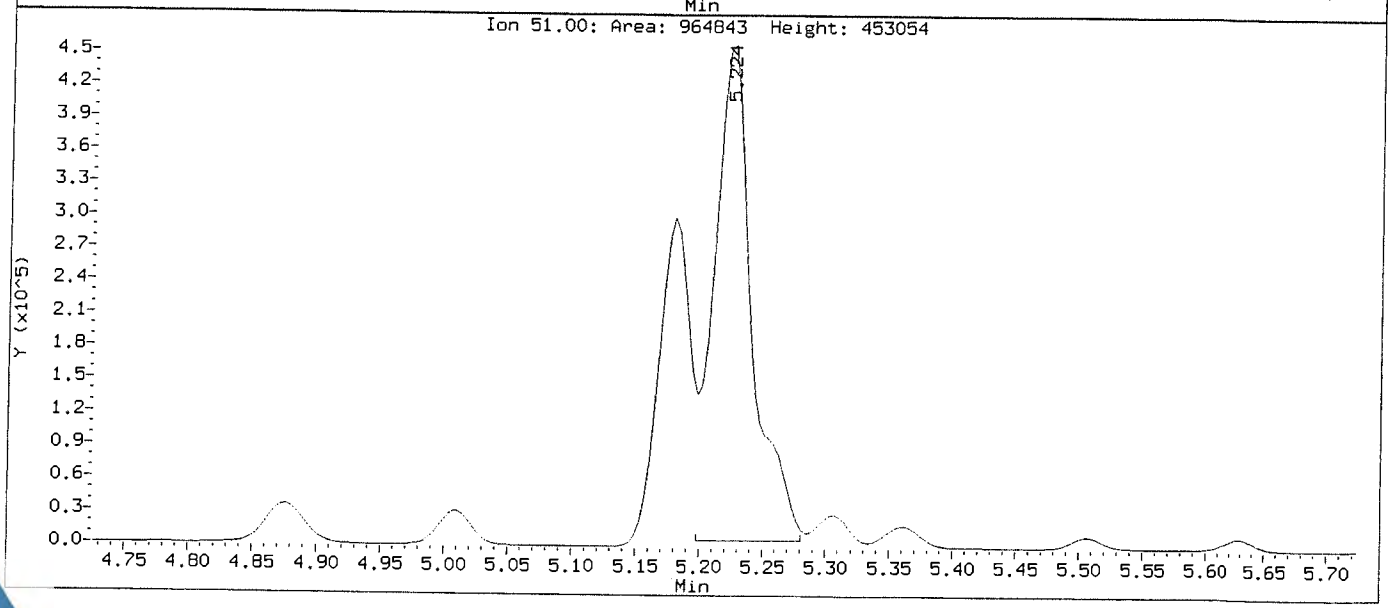
CAS Number: 71-43-2







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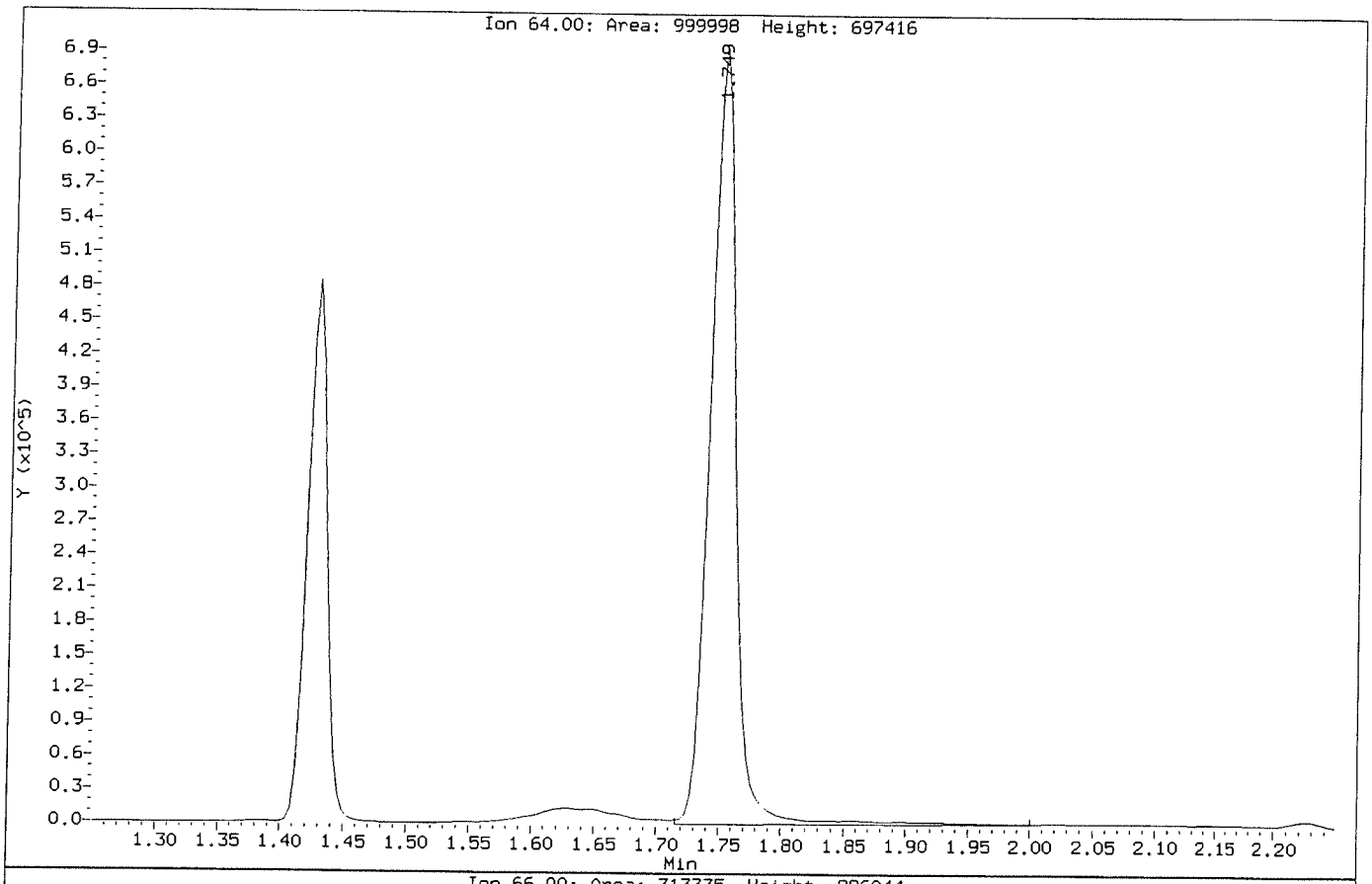
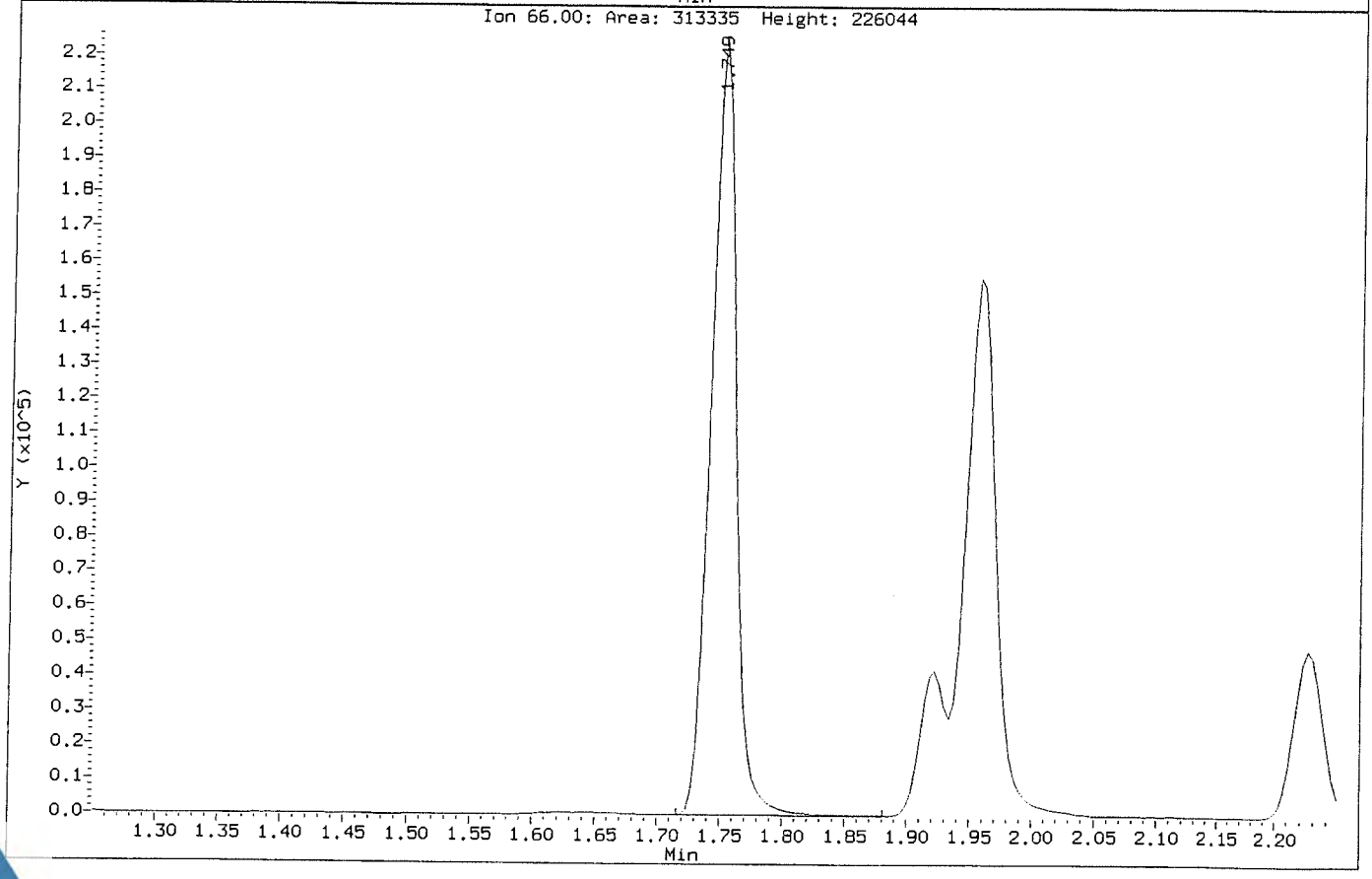
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





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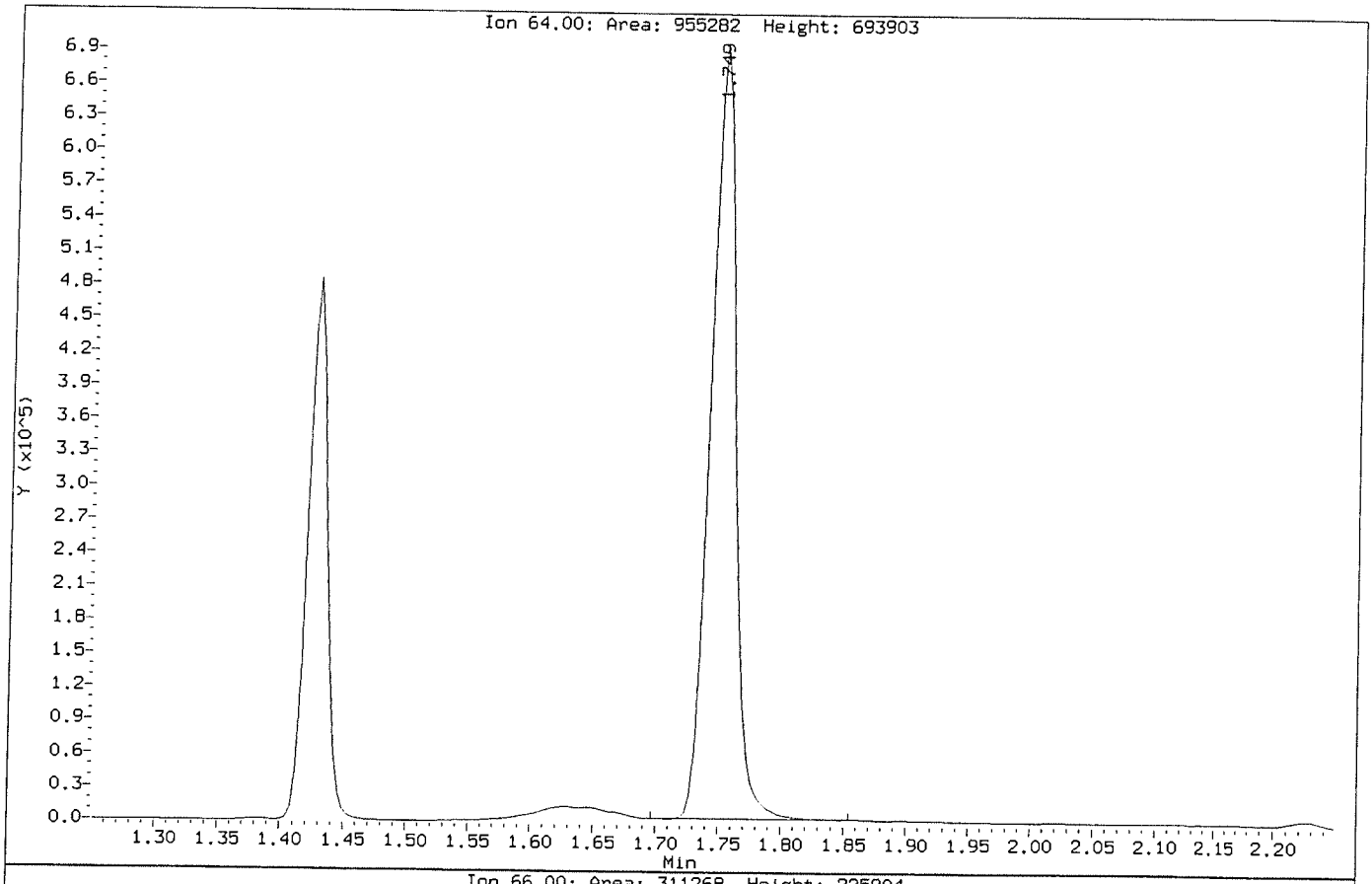
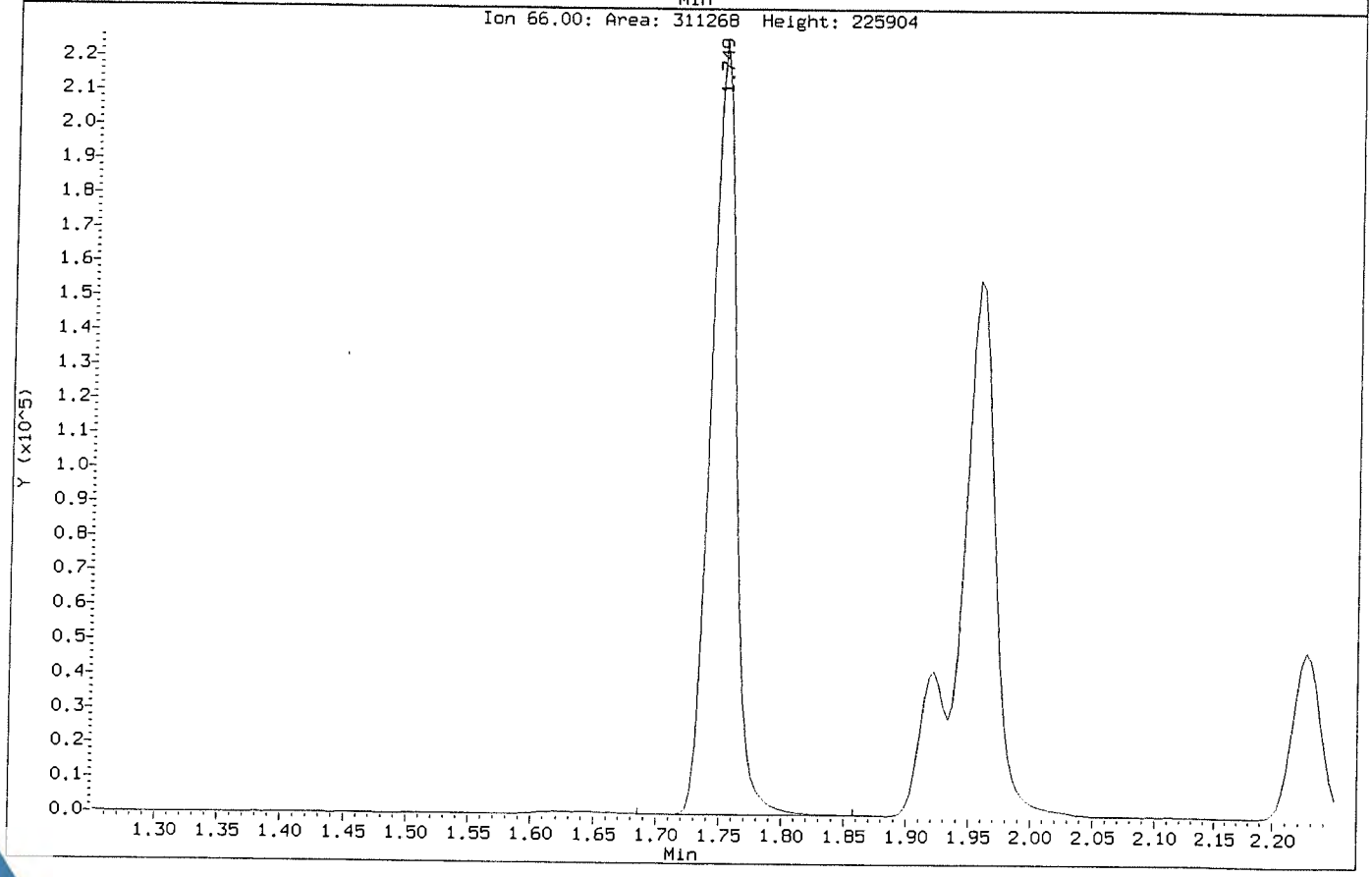
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





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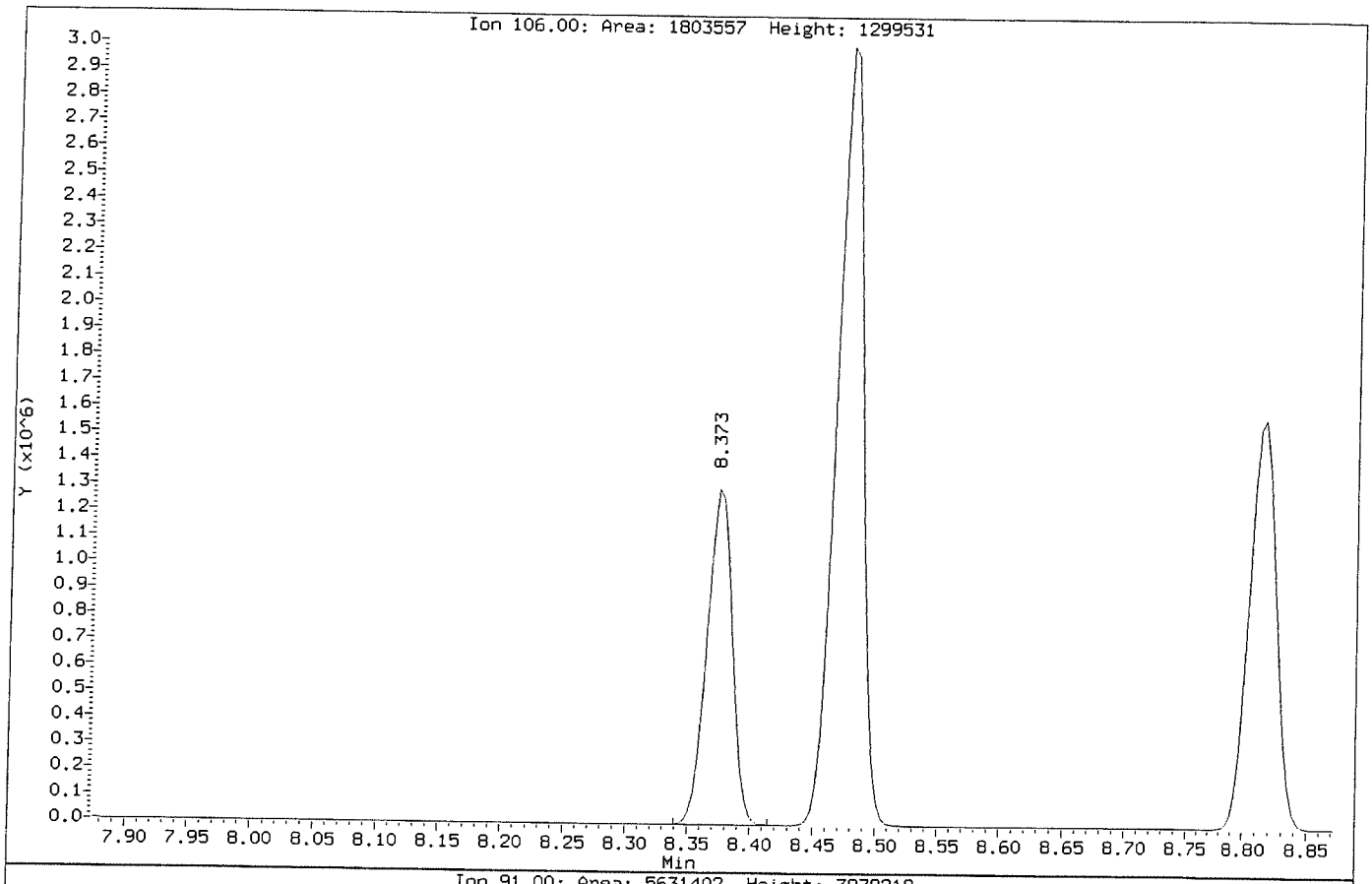
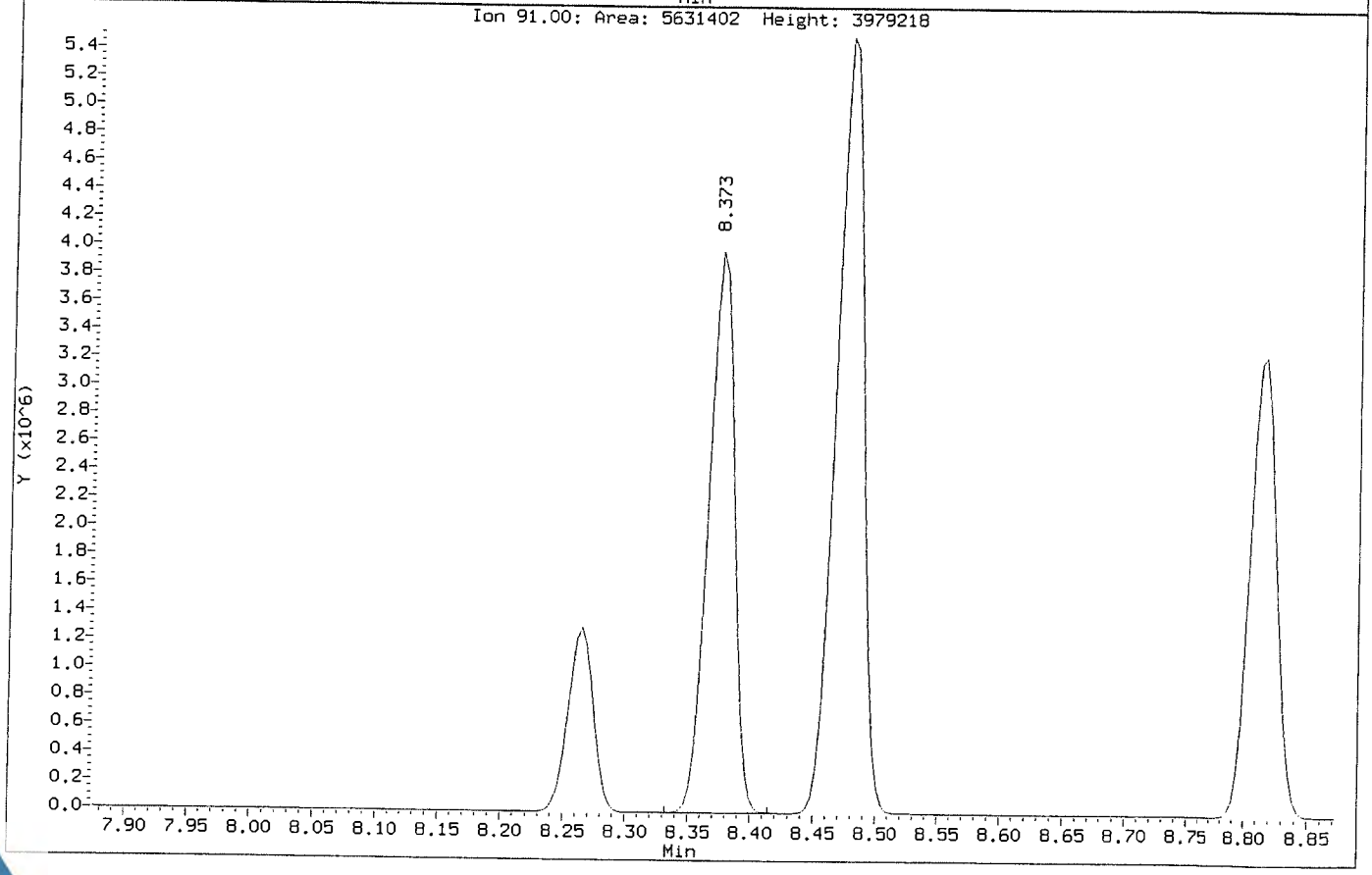
Injection Date: 13-NOV-2018 15:28
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Ethylbenzene
CAS Number: 100-41-4





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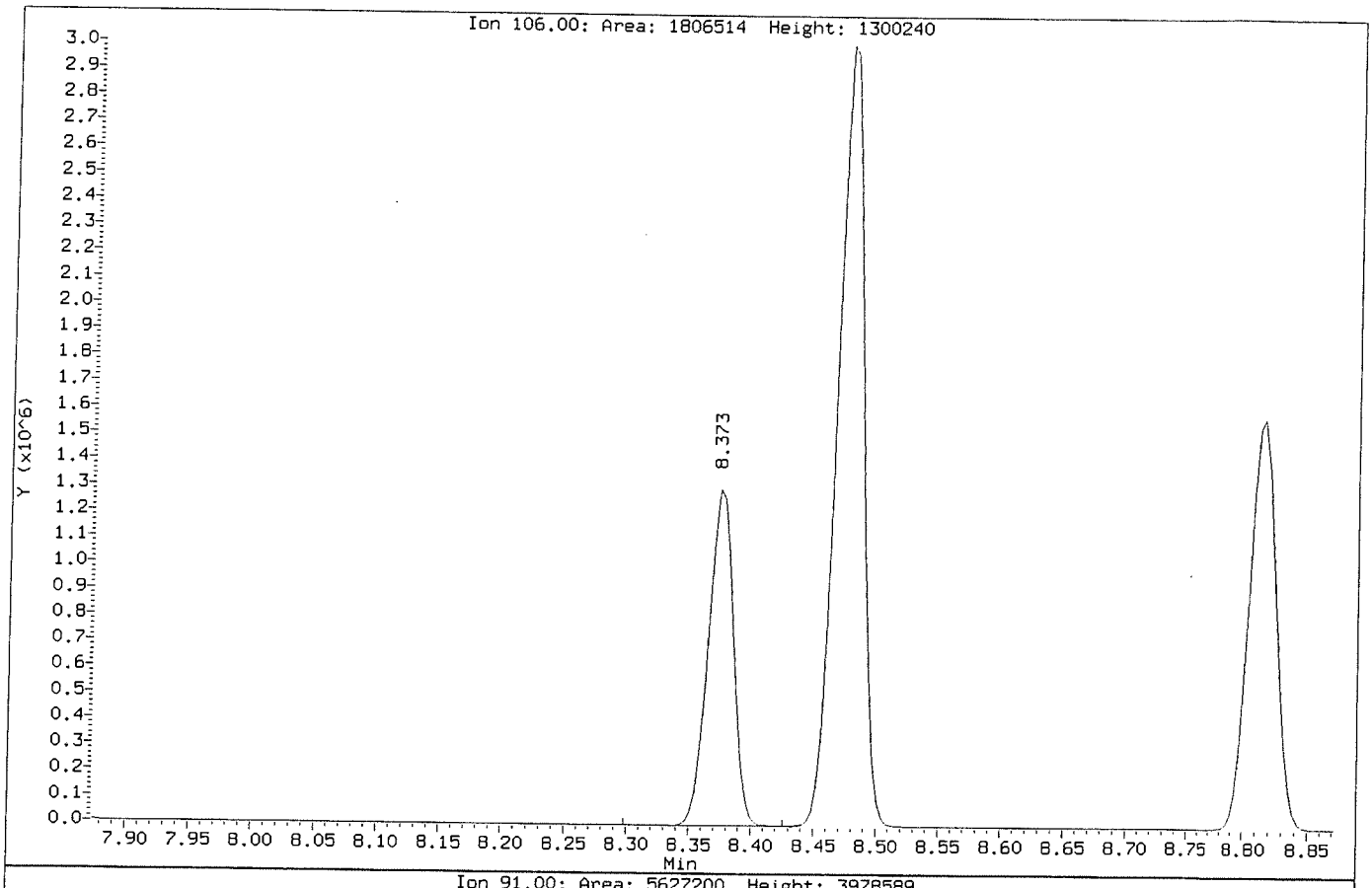
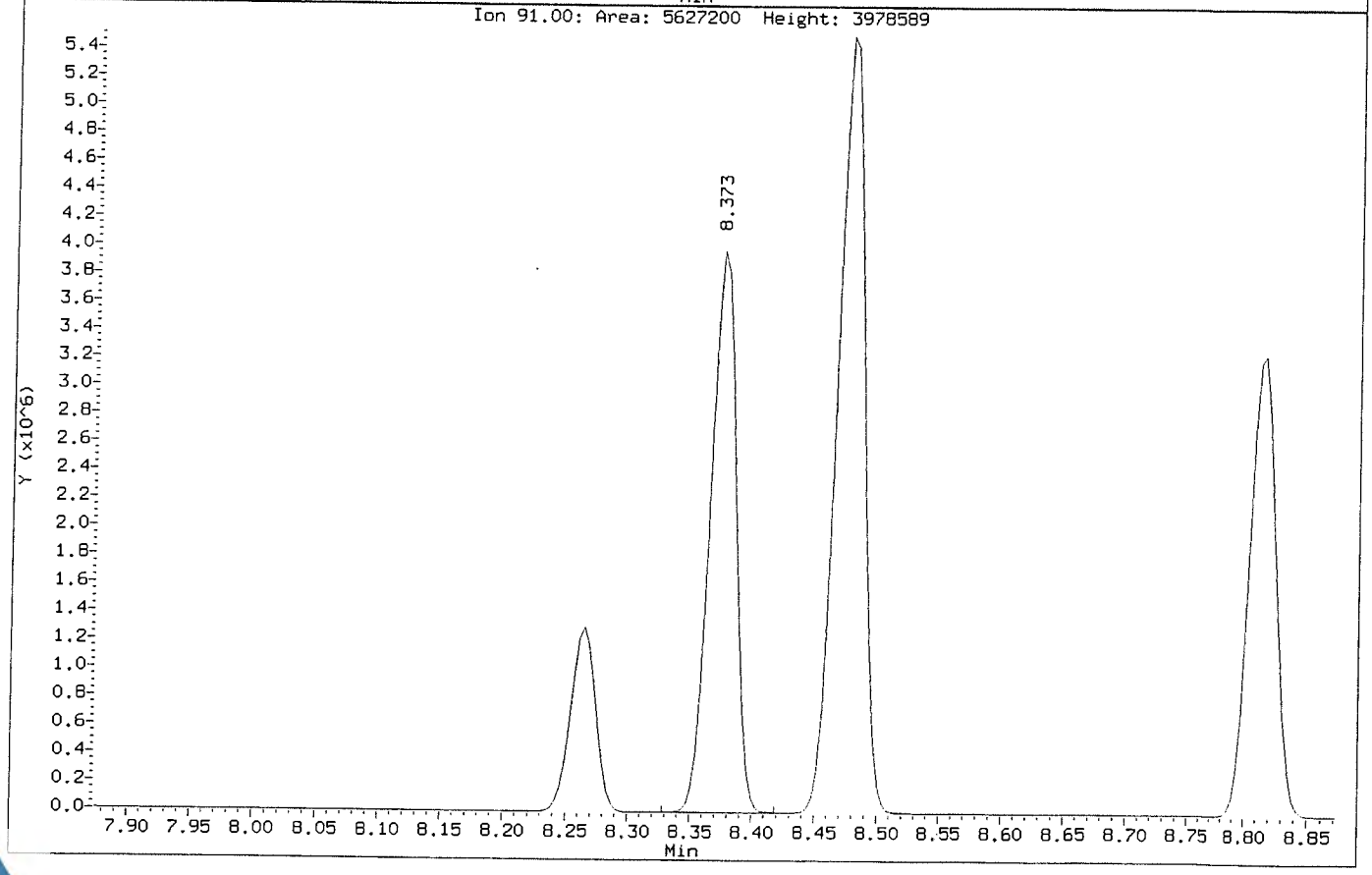
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Ethylbenzene
CAS Number: 100-41-4





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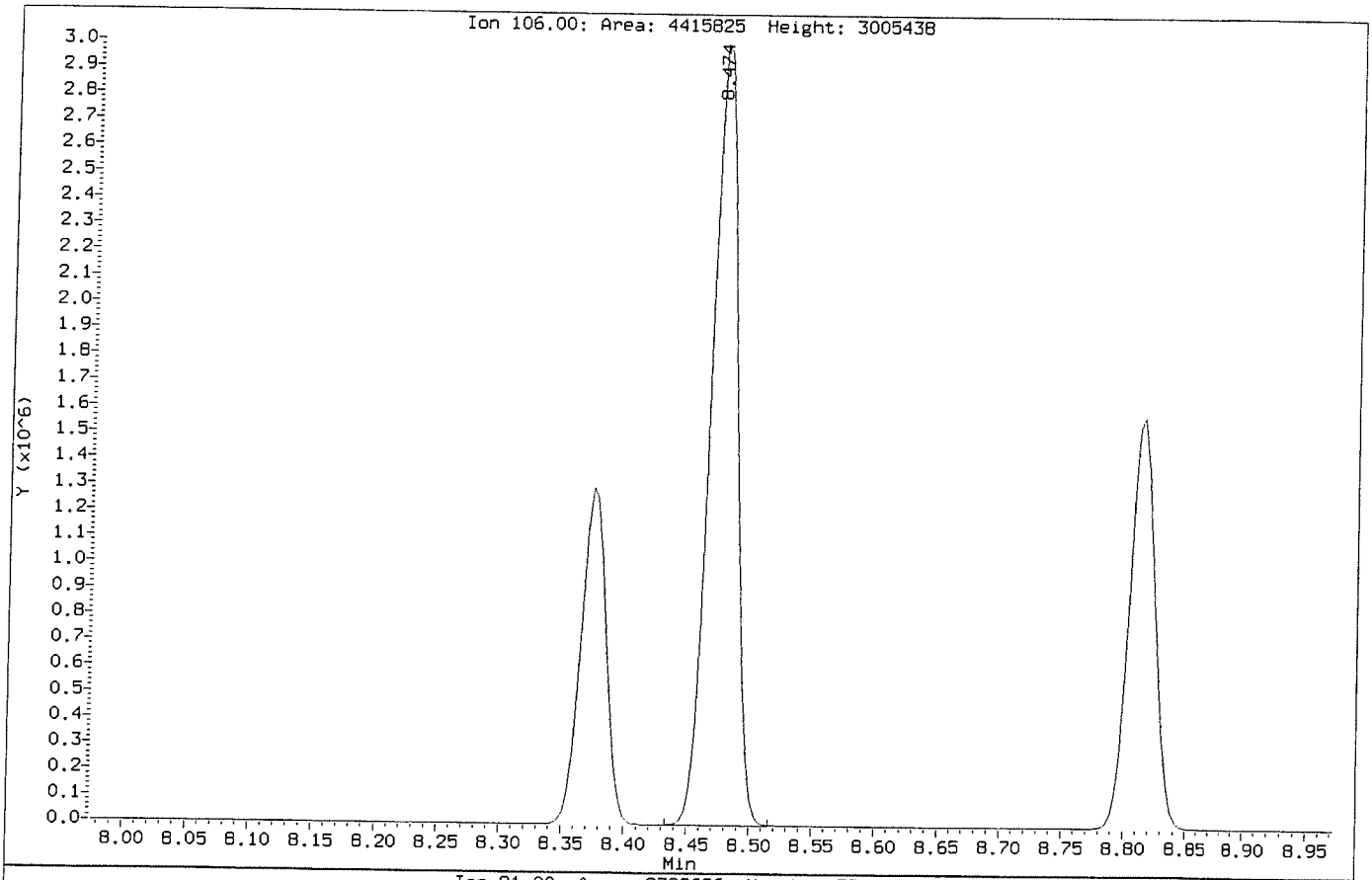
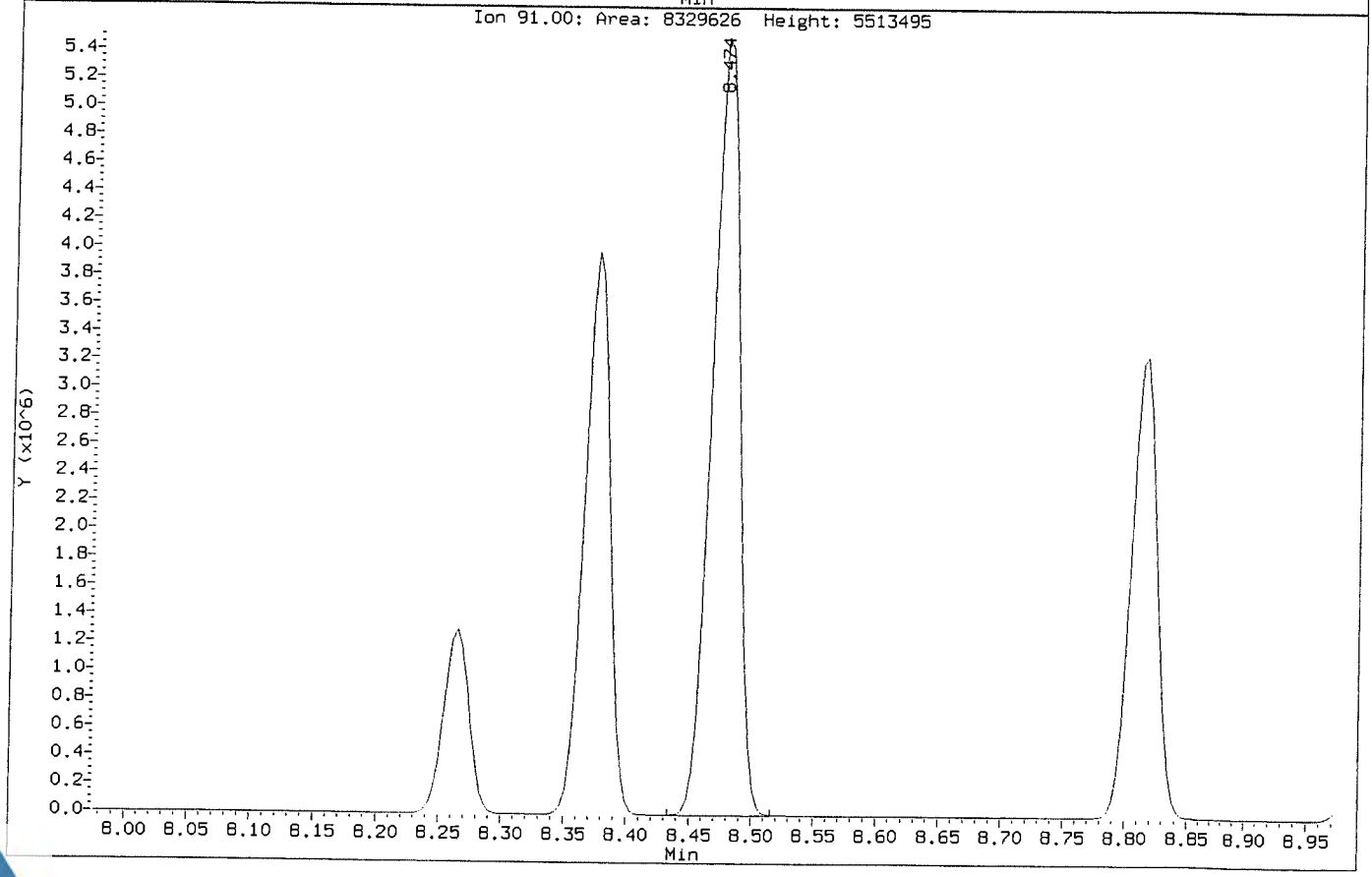
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: m,p-Xylenes
CAS Number:





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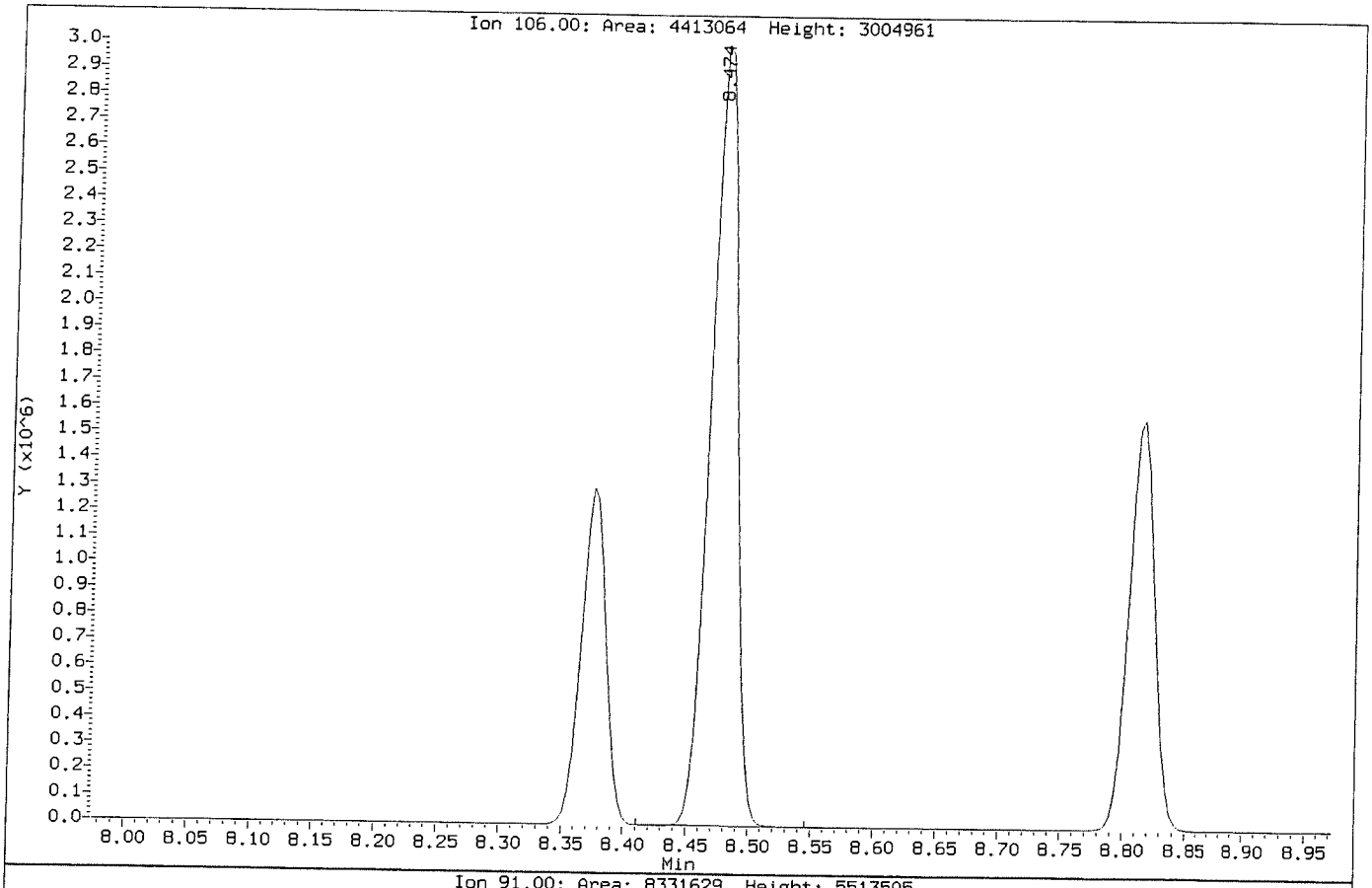
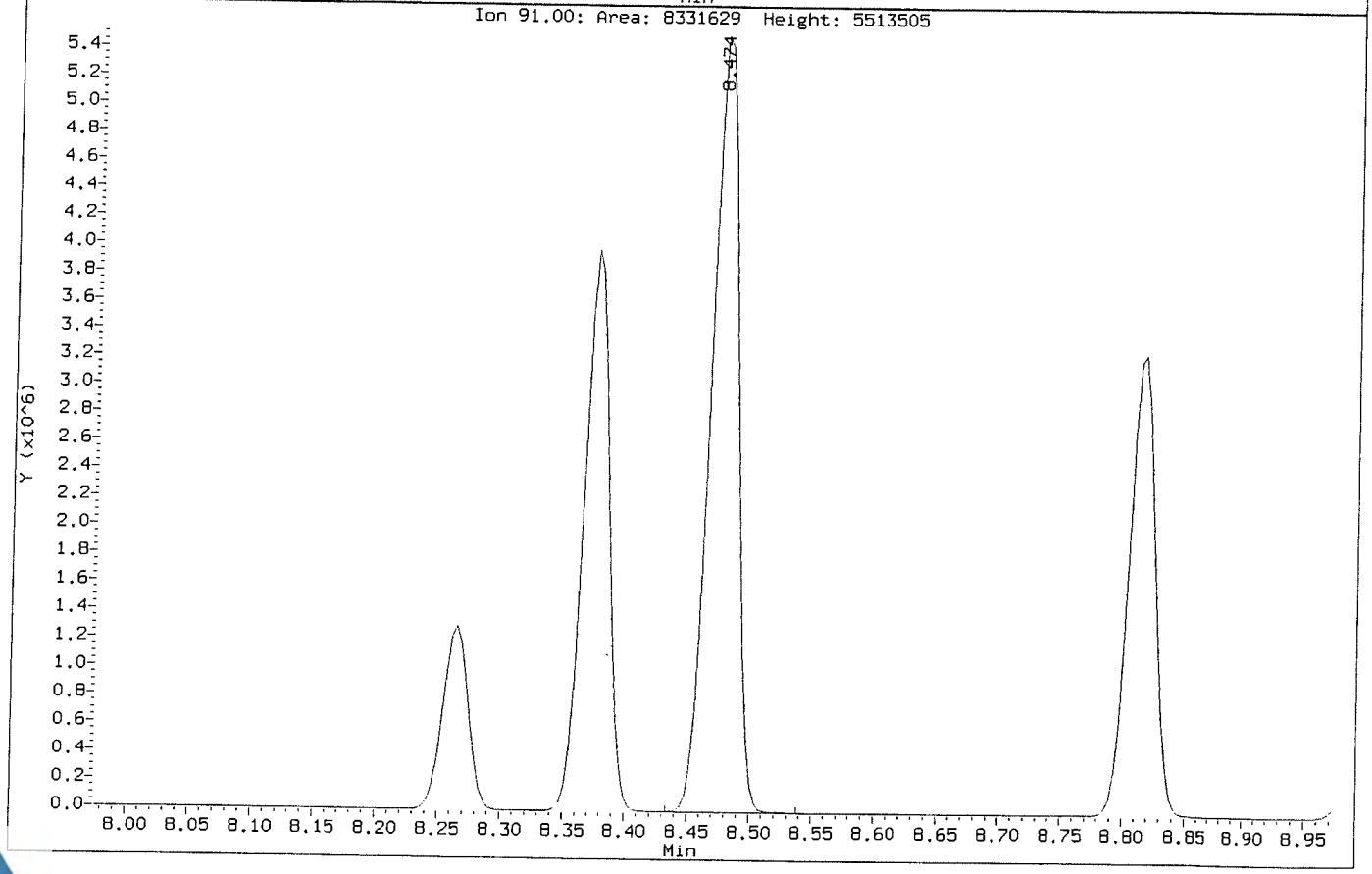
Compound: m,p-Xylenes
CAS Number:





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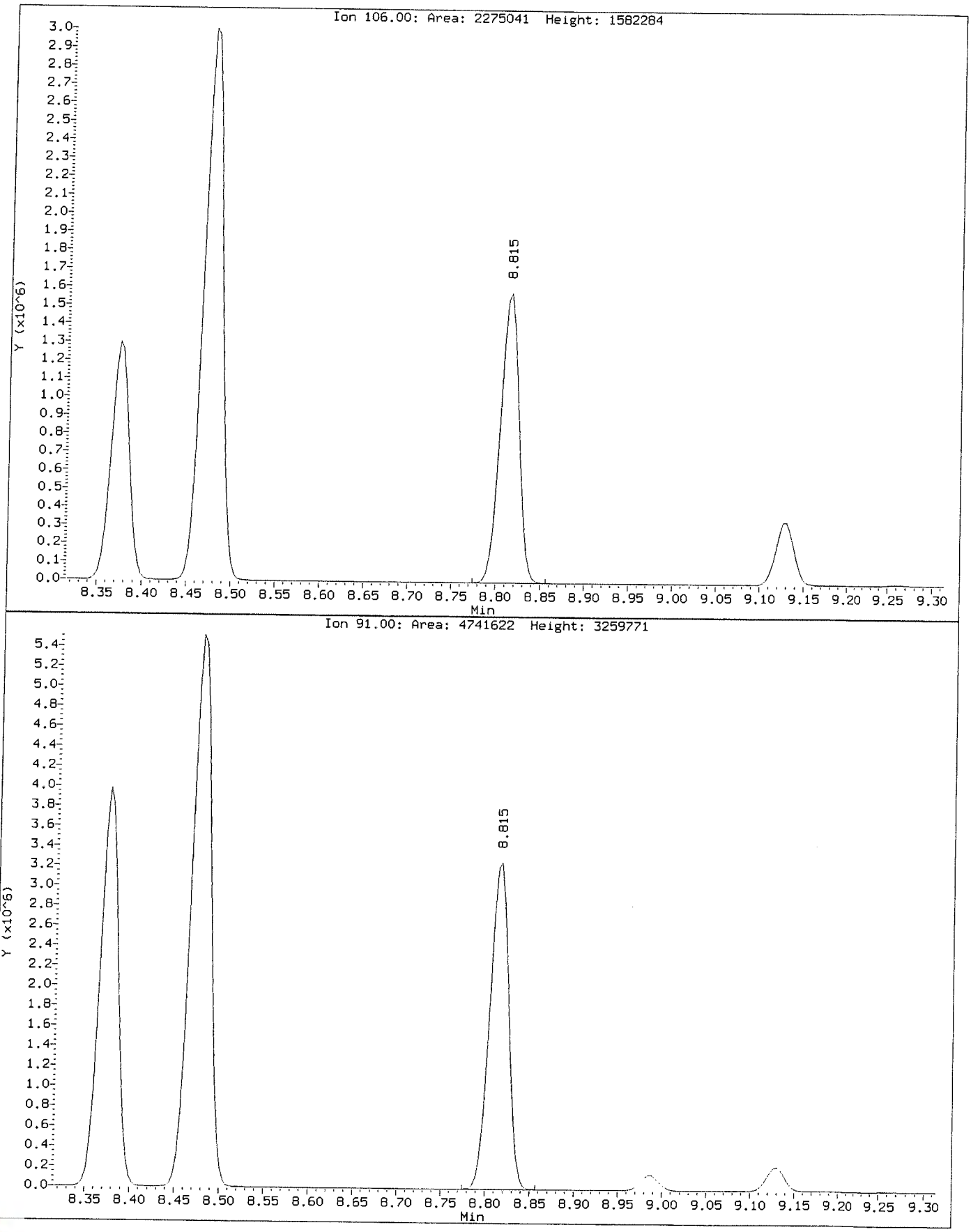
Injection Date: 13-NOV-2018 15:28
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: o-Xylene
CAS Number: 95-47-6



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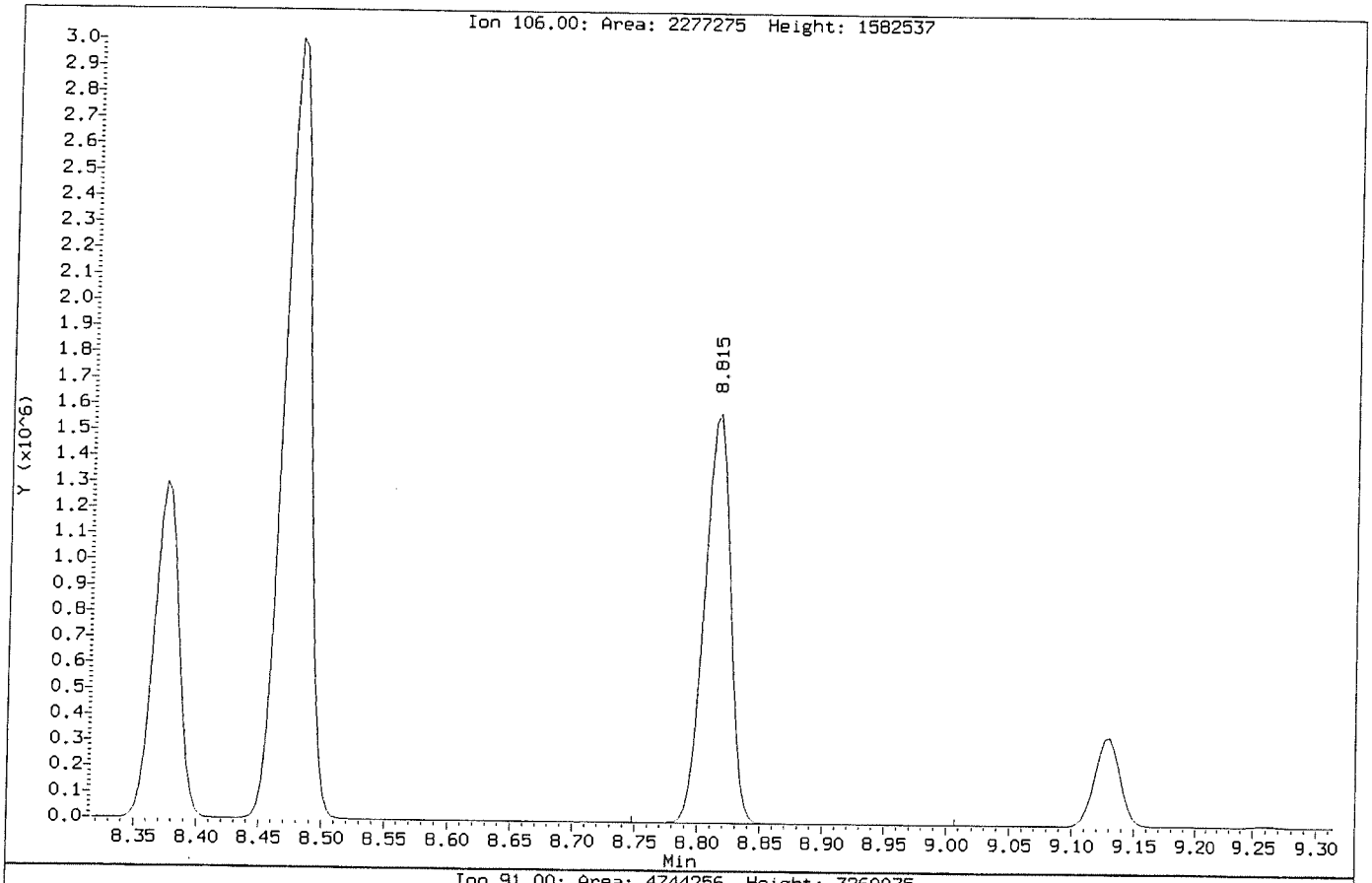
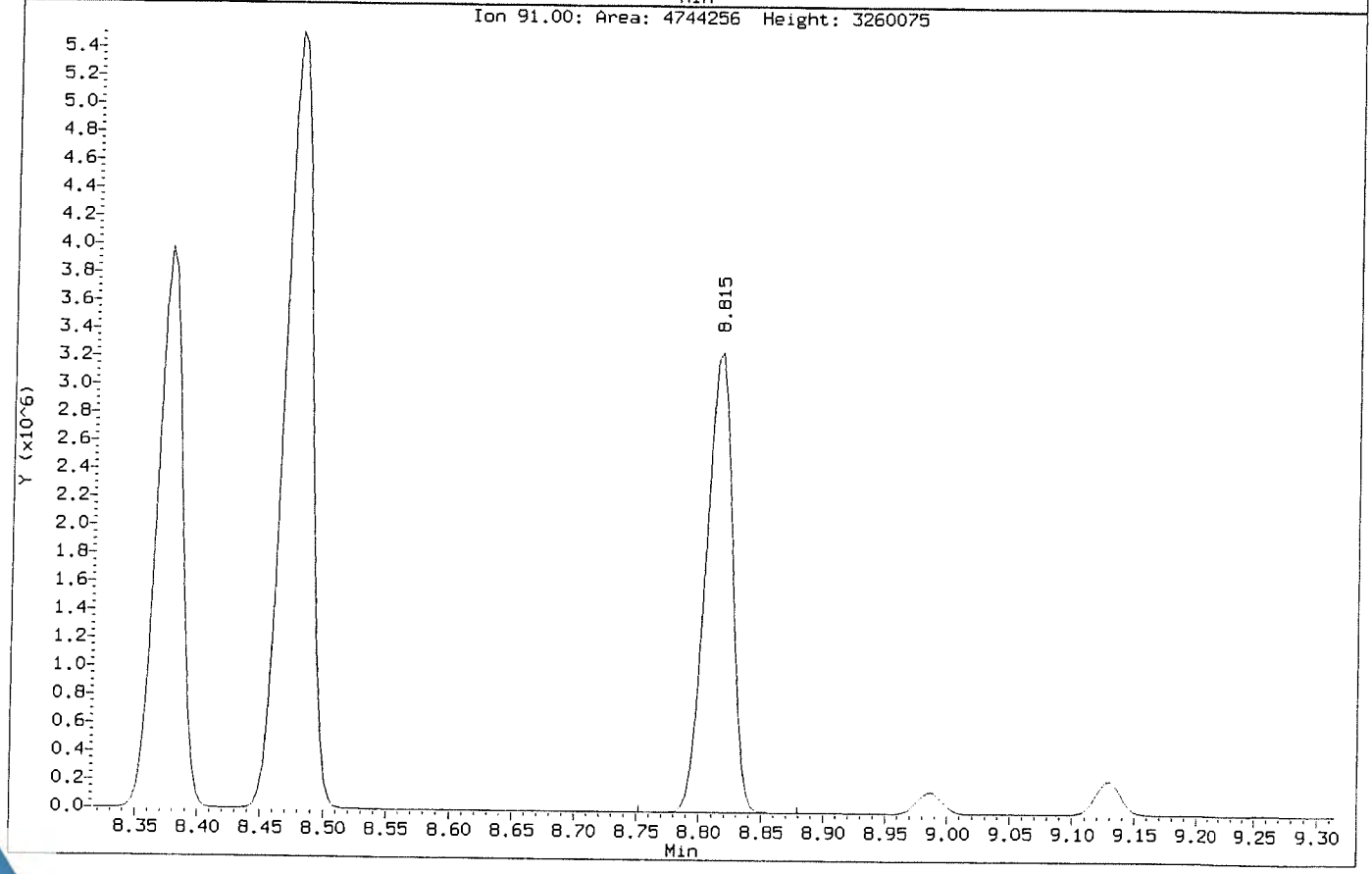
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: o-Xylene
CAS Number: 95-47-6





Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111313.D Page 1
Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111313.D
Lab Smp Id: VICV050 Client Smp ID: VICV050
Inj Date : 13-NOV-2018 16:18
Operator : PC Inst ID: VOA9.i
Smp Info : VICV050;VICV050;2;;ICV
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 15:28 Cal File: U111311.D
Als bottle: 14 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

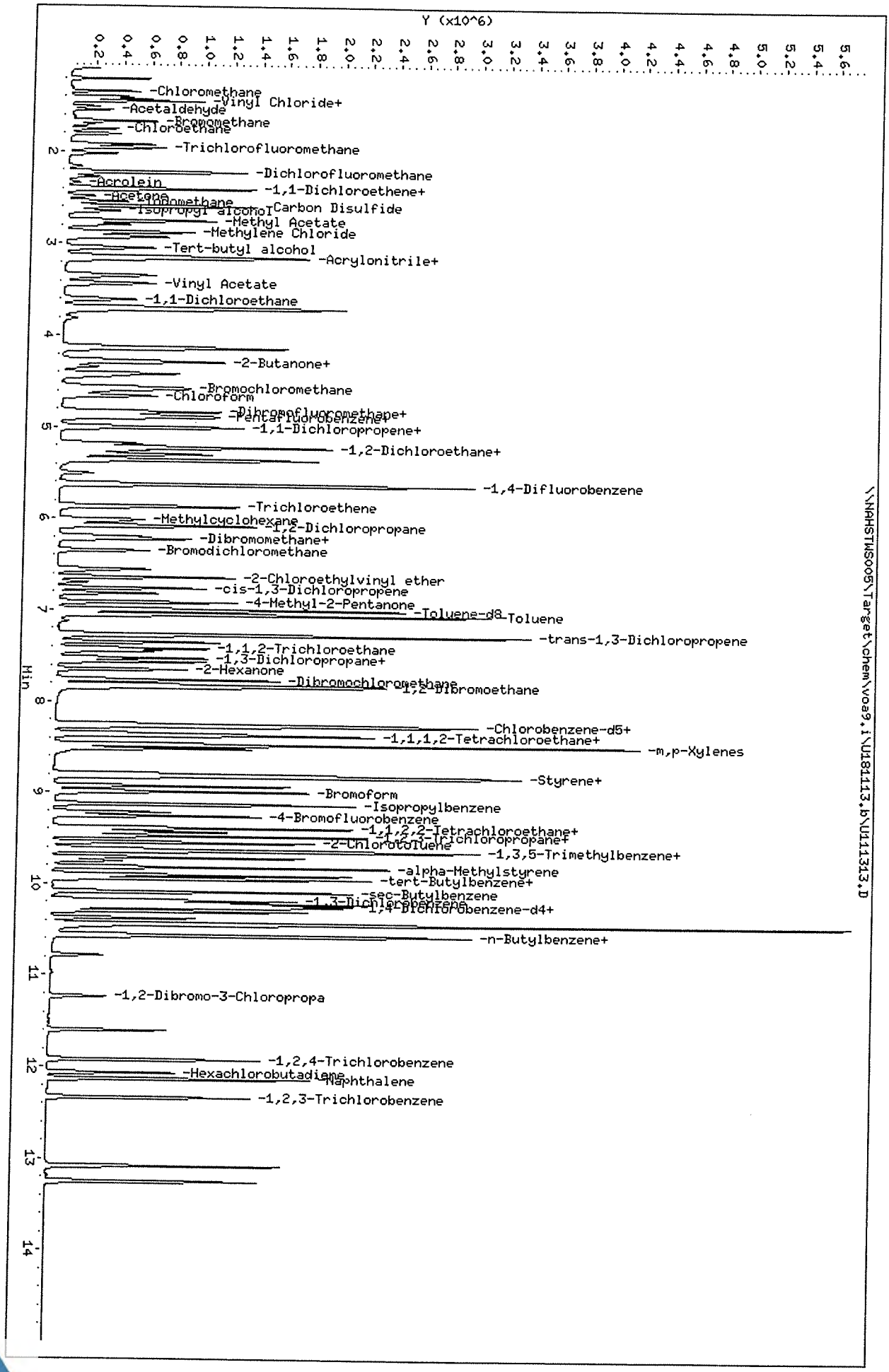
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	492069	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	927951	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.253	(1.000)	869612	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.239	(1.000)	424507	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	285495	50.4842	50.48
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	379384	51.0366	51.03
$ 48 Toluene-d8	98	6.990	6.993	(0.847)	1145021	51.5678	51.56
$ 69 4-Bromofluorobenzene	95	9.258	9.261	(1.122)	441801	51.4072	51.40
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	274179	49.9849	49.98
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	416232	48.1554	48.15
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	462139	45.9603	45.96
138 Freon TF	101	2.409	2.405	(0.492)	226905	46.0312	46.03
53 1,1,2-Trichloroethane	83	7.421	7.424	(0.899)	253396	45.8339	45.83
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	513902	45.5744	45.57
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	253613	45.6608	45.66
32 1,1-Dichloropropene	75	5.006	5.010	(0.889)	399473	46.6112	46.61
93 1,2,3-Trichlorobenzene	180	12.335	12.339	(1.205)	387107	48.3006	48.30
71 1,2,3-Trichloropropane	75	9.430	9.434	(0.921)	517101	49.2816	49.28
90 1,2,4-Trichlorobenzene	180	11.923	11.926	(1.165)	396308	47.4733	47.47
79 1,2,4-Trimethylbenzene	105	9.944	9.943	(0.971)	1125014	47.7134	47.71
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.237	(1.097)	74206	47.8284	47.82
57 1,2-Dibromoethane	107	7.852	7.855	(0.951)	310006	48.4238	48.42

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111313.D Page 2
Report Date: 24-Jan-2019 18:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	609149	44.9344	44.93
33 1,2-Dichloroethane	62	5.254	5.257	(0.933)	438739	45.1829	45.18
42 1,2-Dichloropropane	63	6.082	6.086	(1.081)	312363	47.2789	47.27
75 1,3,5-Trimethylbenzene	105	9.629	9.628	(0.941)	1087962	47.7004	47.70
83 1,3-Dichlorobenzene	146	10.180	10.183	(0.995)	608880	45.5562	45.55
54 1,3-Dichloropropane	76	7.567	7.567	(0.917)	548032	46.1653	46.16
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	631760	48.3226	48.32
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	357603	51.2102	51.21
24 2-Butanone	43	4.343	4.343	(0.887)	319364	92.3297	92.32
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	950278	45.7148	45.71
52 2-Hexanone	43	7.653	7.653	(0.927)	501801	99.2665	99.26
77 4-Chlorotoluene	91	9.640	9.643	(0.942)	1123555	46.8423	46.84
82 p-Isopropyltoluene	119	10.213	10.213	(0.998)	1142647	49.1524	49.15
45 4-Methyl-2-Pentanone	43	6.915	6.918	(0.838)	699041	96.3600	96.36
10 Acetone	43	2.487	2.491	(0.508)	216067	95.4641	95.46
37 Benzene	78	5.220	5.224	(0.927)	1188078	46.3202	46.32
74 Bromobenzene	156	9.385	9.385	(0.917)	321699	46.1973	46.19
29 Bromochloromethane	128	4.557	4.560	(0.930)	147658	50.9008	50.90
39 Bromodichloromethane	83	6.349	6.352	(1.128)	374186	48.5304	48.53
66 Bromoform	173	8.984	8.987	(1.089)	188320	47.7183	47.71(T)
6 Bromomethane	94	1.670	1.662	(0.341)	208101	50.9317	50.93
19 Carbon Disulfide	76	2.596	2.596	(0.530)	1686616	98.3287	98.32
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	330709	49.3949	49.39
59 Chlorobenzene	112	8.275	8.279	(1.003)	813973	45.3514	45.35
7 Chloroethane	64	1.756	1.749	(0.359)	230904	44.9734	44.97(M)
28 Chloroform	83	4.662	4.661	(0.952)	517425	45.6713	45.67
3 Chloromethane	50	1.344	1.344	(0.274)	306744	46.7074	46.70
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	320390	45.9503	45.95
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	516764	53.2223	53.22
55 Dibromochloromethane	129	7.758	7.762	(0.940)	286771	52.1150	52.11
44 Dibromomethane	93	6.191	6.195	(1.100)	195311	47.1700	47.16
2 Dichlorodifluoromethane	85	1.209	1.213	(0.247)	347869	47.8726	47.87
61 Ethylbenzene	106	8.373	8.373	(1.015)	424849	46.8143	46.81
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	145238	55.0778	55.07
67 Isopropylbenzene	105	9.126	9.130	(1.106)	1266469	47.9214	47.92
62 m,p-Xylenes	106	8.474	8.474	(1.027)	1058456	94.6512	94.65
17 Methylene Chloride	84	2.877	2.877	(0.587)	301983	48.0719	48.07
87 n-Butylbenzene	91	10.558	10.558	(1.031)	1100279	49.5091	49.50
73 n-Propylbenzene	91	9.475	9.478	(0.926)	1593592	47.5729	47.57
92 Naphthalene	128	12.133	12.136	(1.185)	1287047	51.2004	51.20
63 o-Xylene	106	8.811	8.815	(1.068)	530431	47.3909	47.39(H)
81 sec-Butylbenzene	105	10.086	10.090	(0.985)	1350043	48.4022	48.40
64 Styrene	104	8.826	8.826	(1.069)	941191	49.8117	49.81
78 tert-Butylbenzene	119	9.902	9.906	(0.967)	929608	47.8232	47.82
56 Tetrachloroethene	164	7.526	7.525	(0.912)	207441	45.5377	45.53
50 Toluene	91	7.050	7.049	(0.854)	1274589	46.1658	46.16
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	282235	46.3646	46.36
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	454600	47.3993	47.39
38 Trichloroethene	130	5.865	5.865	(1.042)	293292	46.3847	46.38
8 Trichlorofluoromethane	101	1.959	1.955	(0.400)	460052	46.7647	46.76
5 Vinyl Chloride	62	1.423	1.426	(0.291)	382169	47.6661	47.66

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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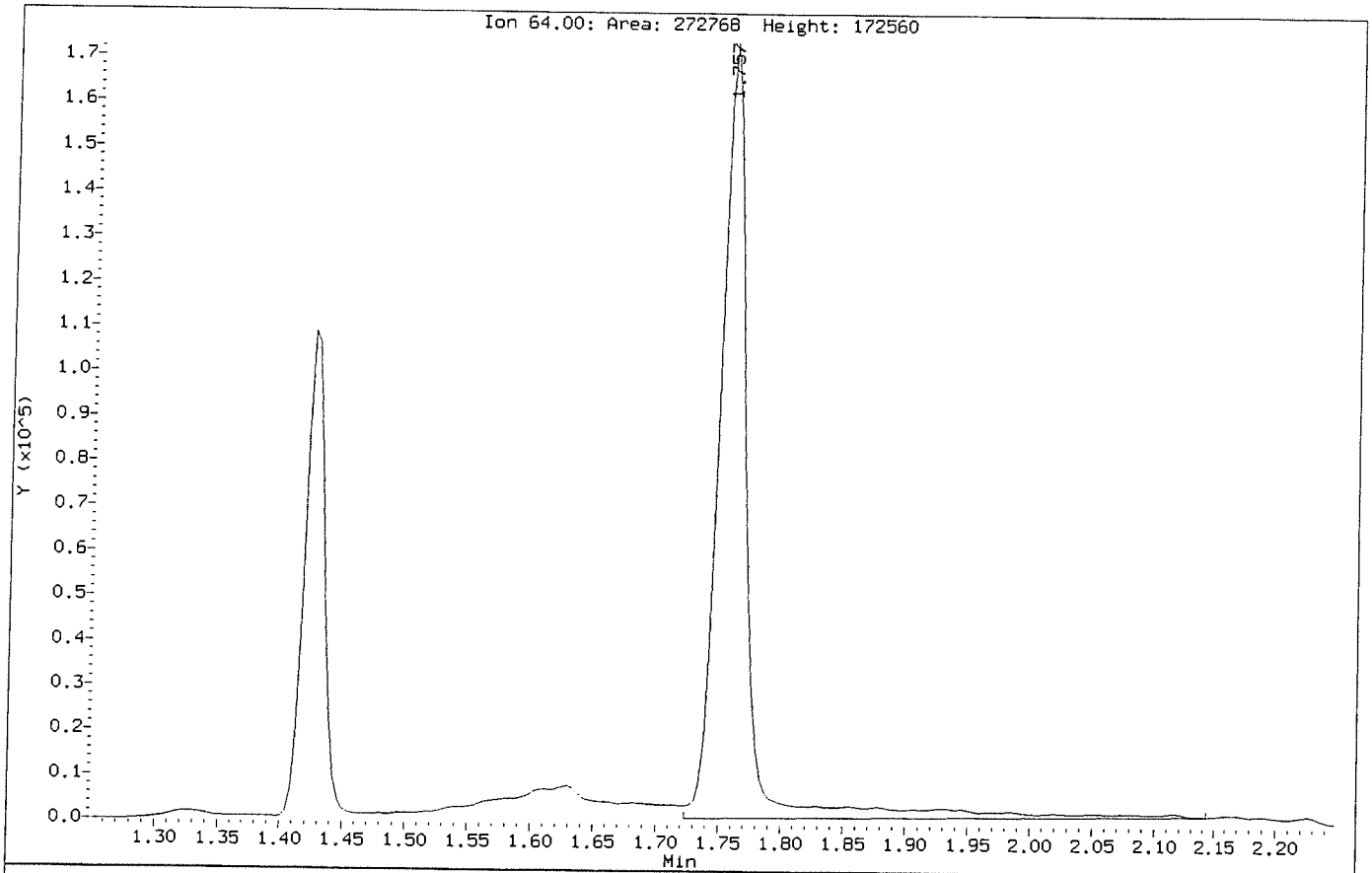
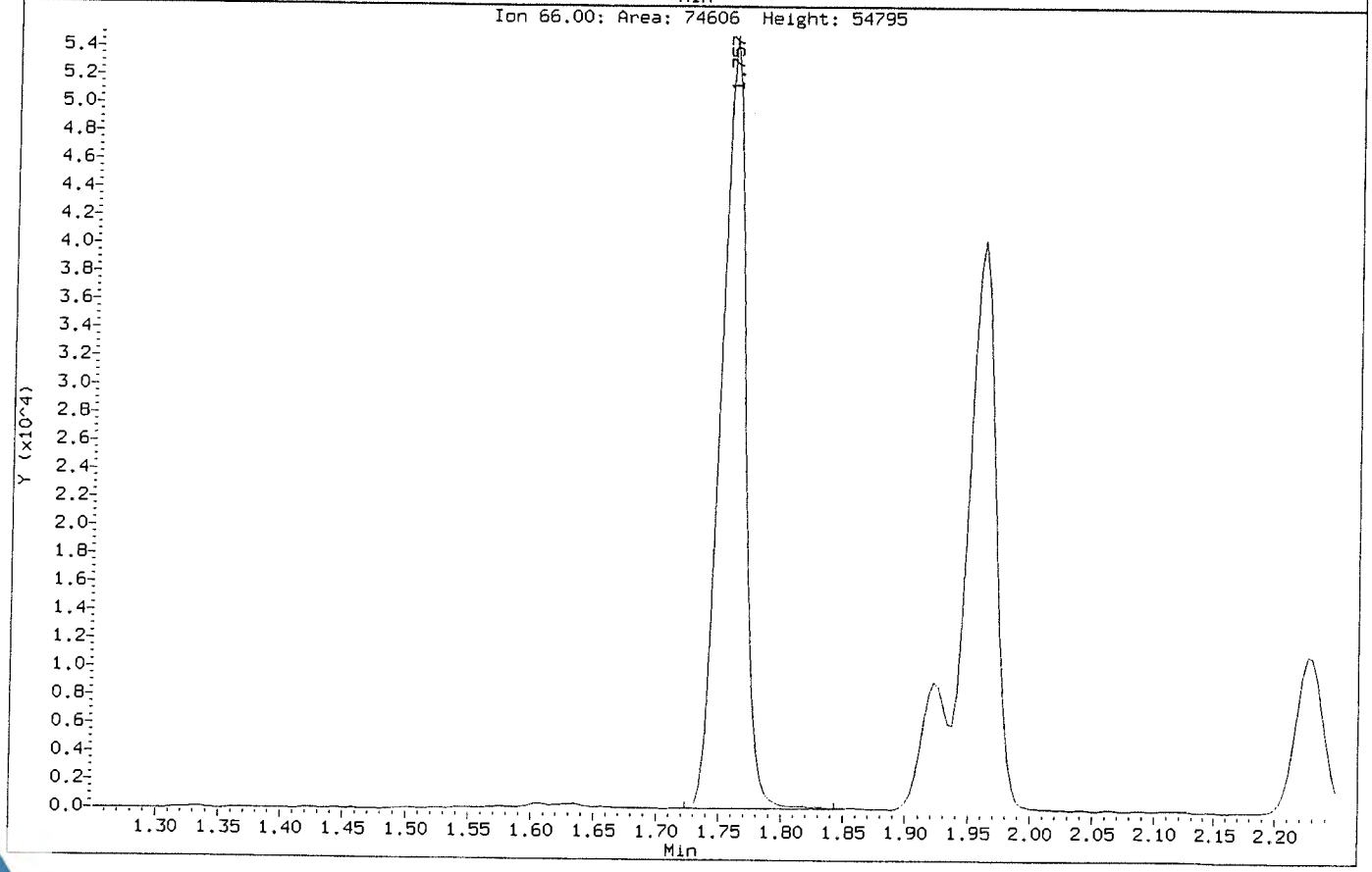
Client ID: VICV050
Sample Info: VICV050;VICV050;2;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\Before\U111313.D
Injection Date: 13-NOV-2018 16:18
Instrument: VOA9.i
Client Sample ID: VICV050

Compound: Chloroethane
CAS Number: 75-00-3





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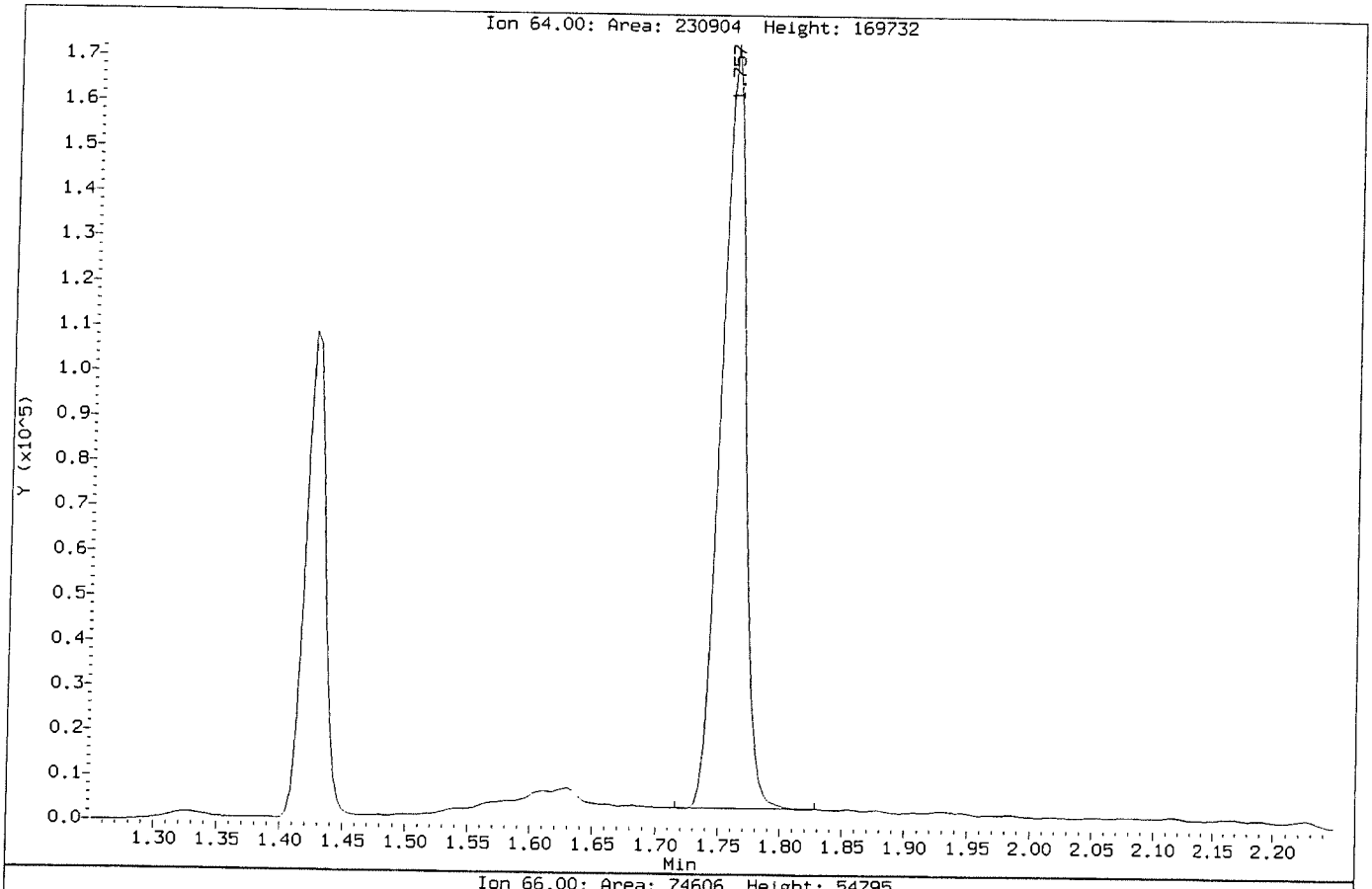
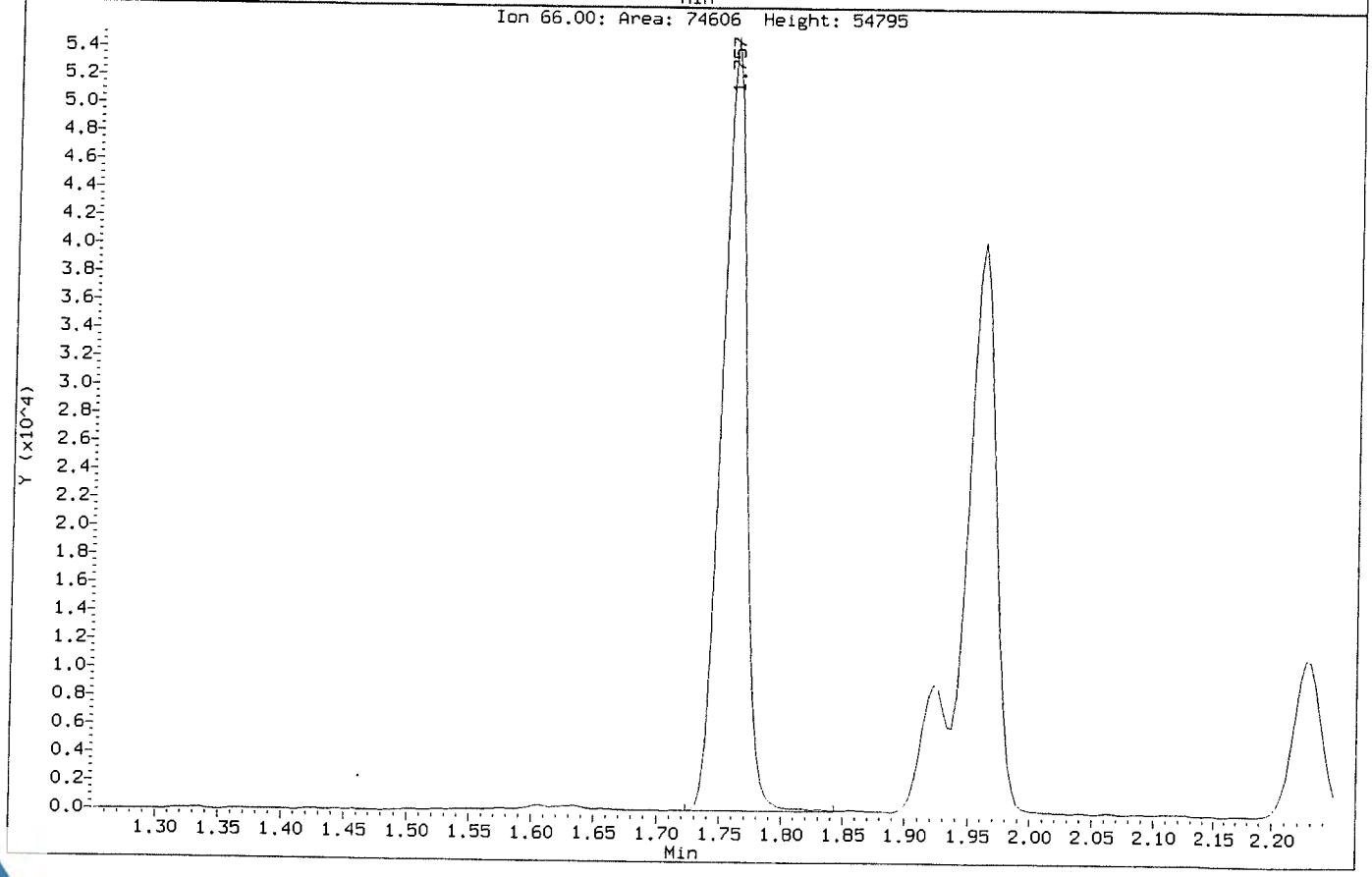
Instrument: VOA9.i
Client Sample ID: VICV050

Compound: Chloroethane
CAS Number: 75-00-3





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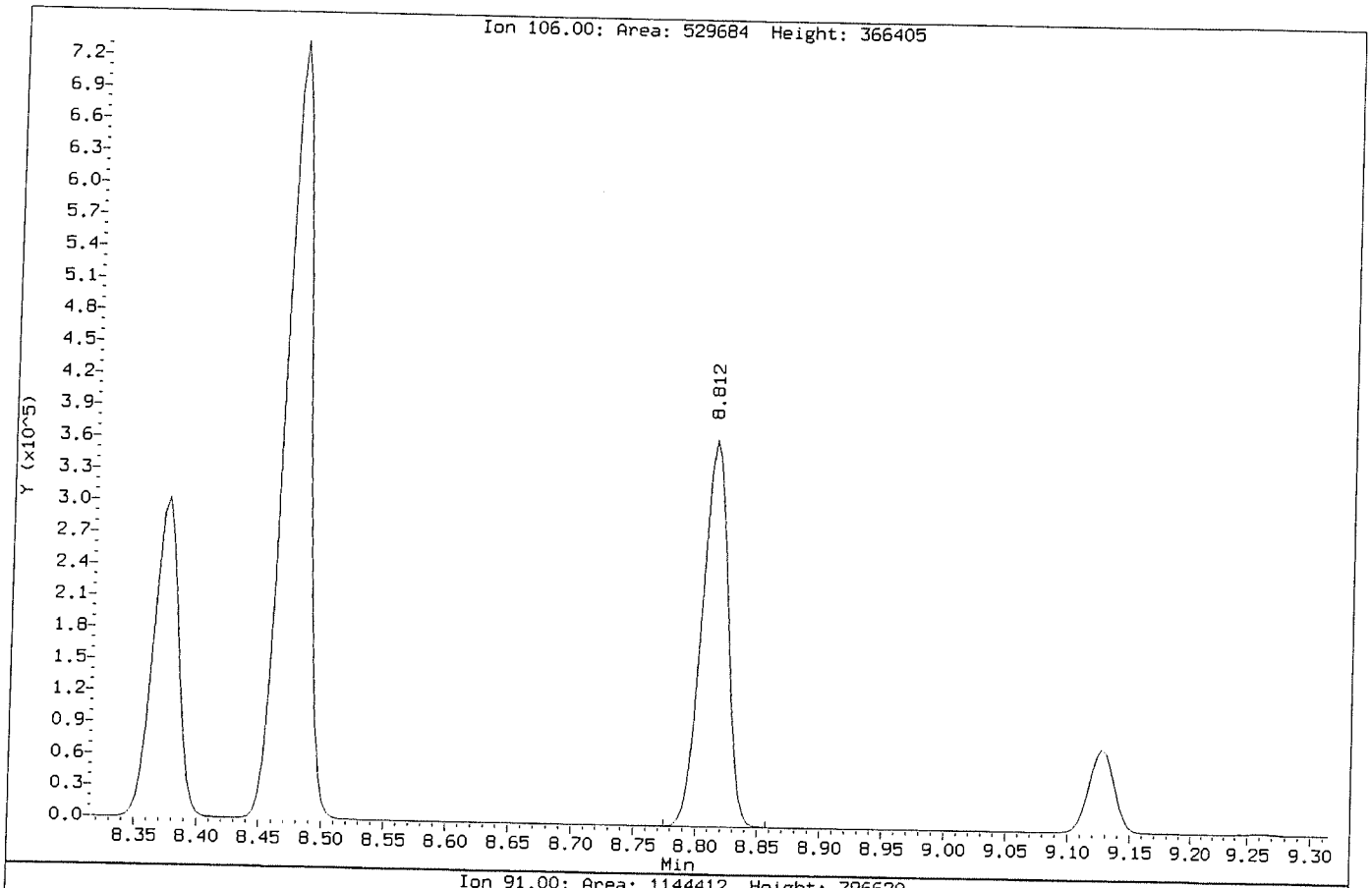
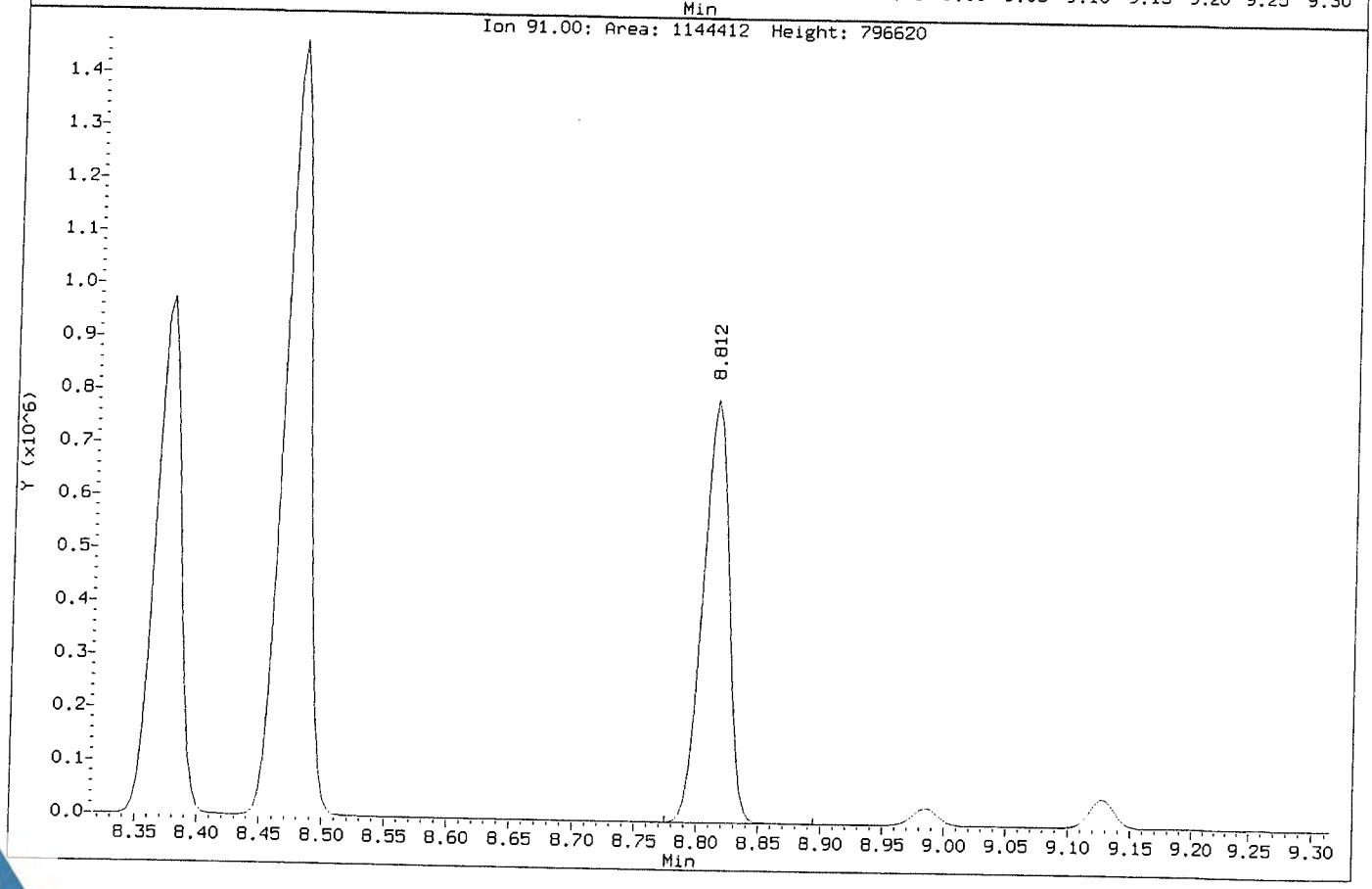
Injection Date: 13-NOV-2018 16:18
Instrument: VOA9.i
Client Sample ID: VICV050

Compound: o-Xylene
CAS Number: 95-47-6





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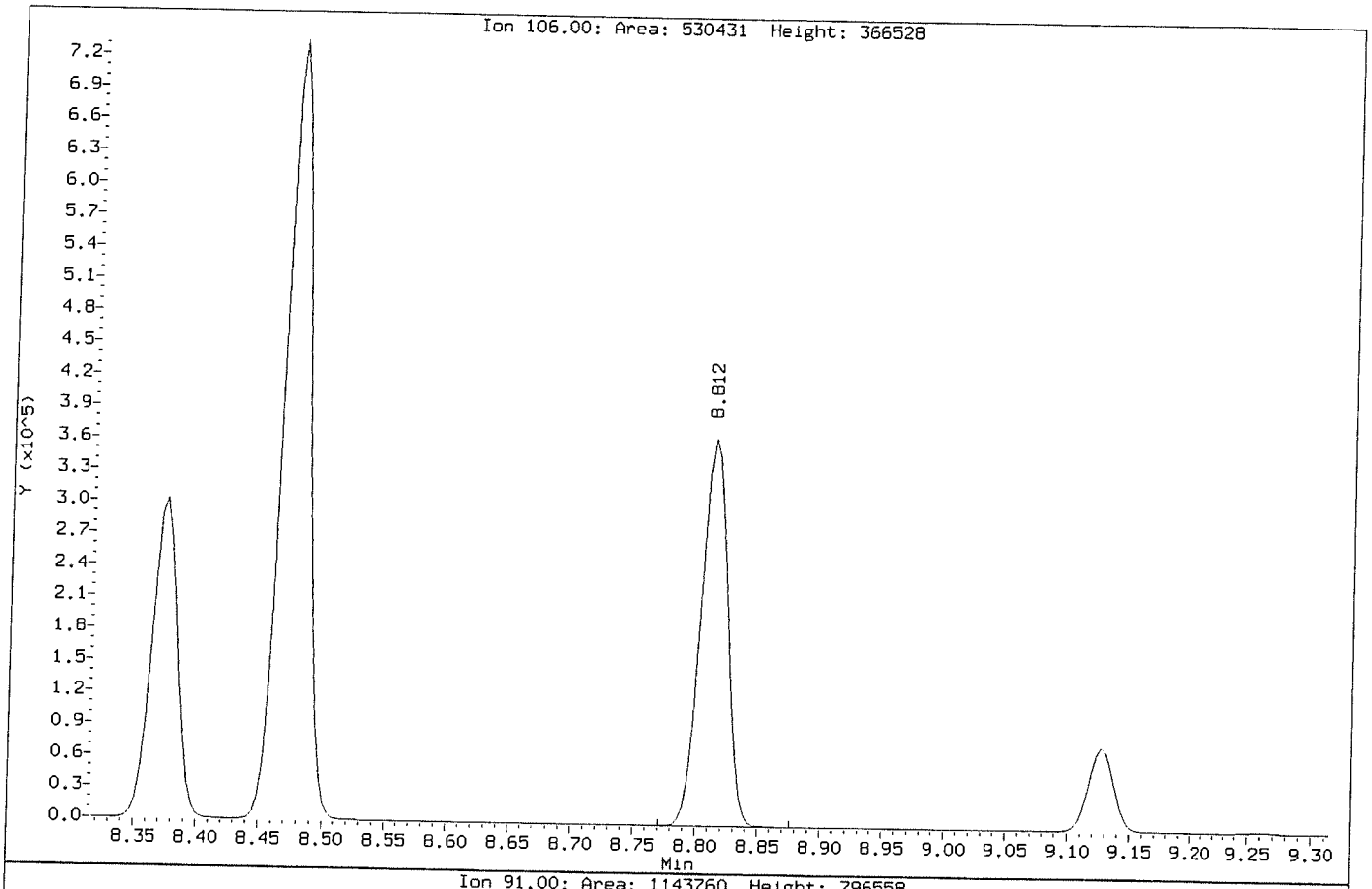
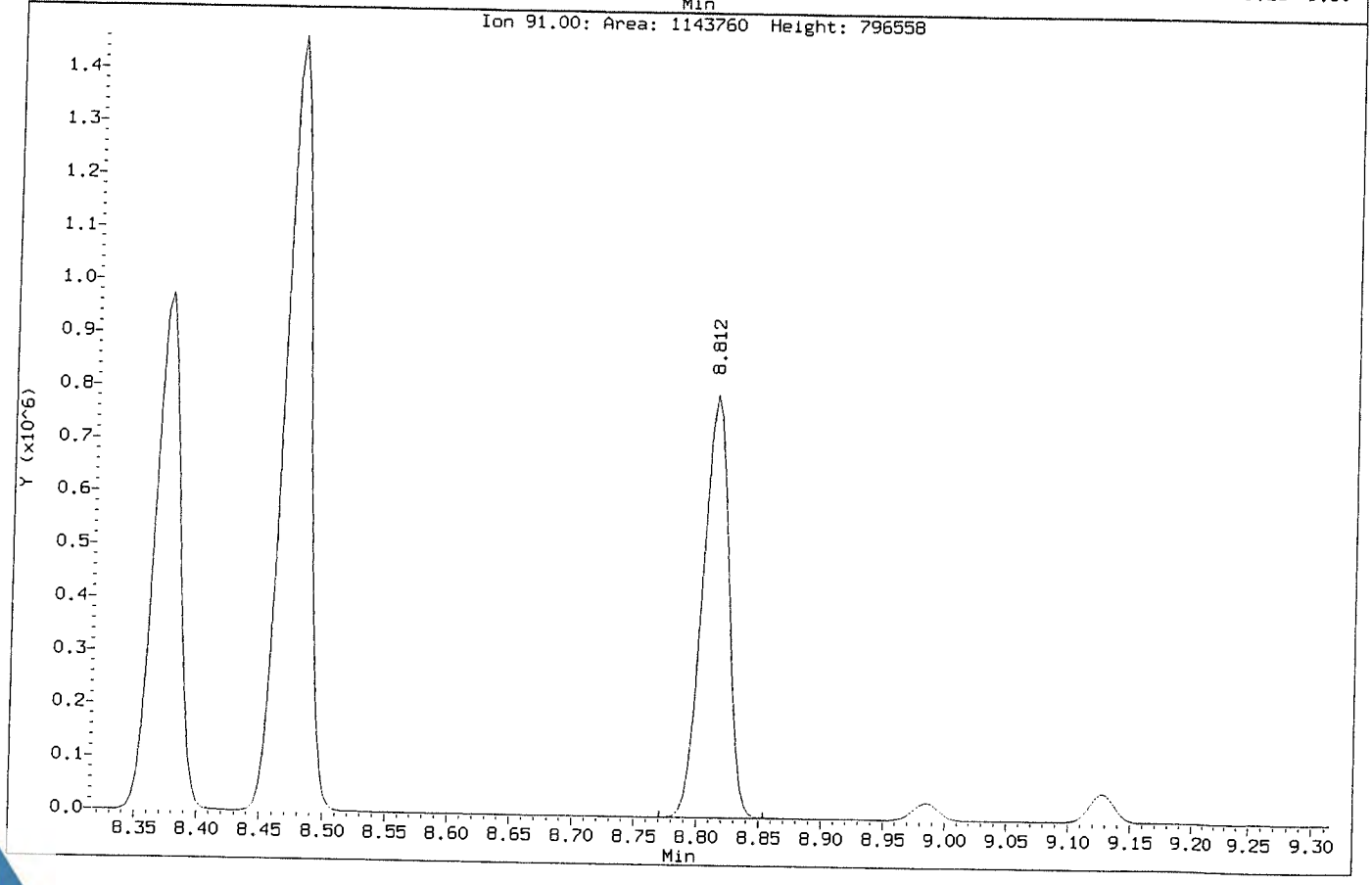
Instrument: VOA9.i
Client Sample ID: VICV050

Compound: o-Xylene
CAS Number: 95-47-6





MSVOA09 -Logbook

Batch: 33998
Date: 12-12-2018
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	12-12-2018 10:16 am	1.00	50 mL	50 mL	U121201.D	Liquid	Y	NA
	Auto tune/purged									
2	VSTD050	CCV	12-12-2018 10:41 am	1.00	50 mL	50 mL	U121202.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	VLCSW-1812012	LCS	12-12-2018 11:05 am	1.00	50 mL	50 mL	U121203.D	Liquid	Y	NA
	4 uL ICV std/50 mL DI									
4	BLANK	SAMP	12-12-2018 11:30 am	1.00	50 mL	50 mL	U121204.D	Liquid	Y	NA
	Cleanup Blk									
5	VBLKW-181212	MBLK	12-12-2018 11:55 am	1.00	50 mL	50 mL	U121205.D	Liquid	Y	NA
6	HS18111497-01	SAMP	12-12-2018 12:20 pm	1.00	50 mL	50 mL	U121206.D	Liquid	Y	<2
7	HS18111497-03	SAMP	12-12-2018 12:44 pm	1.00	50 mL	50 mL	U121207.D	Liquid	Y	<2
8	HS18111538-04	SAMP	12-12-2018 01:09 pm	1.00	50 mL	50 mL	U121208.D	Liquid	Y	<2
9	HS18111538-14	SAMP	12-12-2018 01:34 pm	1.00	50 mL	50 mL	U121209.D	Liquid	Y	<2
10	HS18111538-01	SAMP	12-12-2018 01:59 pm	1.00	50 mL	50 mL	U121210.D	Liquid	Y	<2
11	HS18111538-07	SAMP	12-12-2018 02:23 pm	1.00	50 mL	50 mL	U121211.D	Liquid	Y	<2
12	HS18111497-02	SAMP	12-12-2018 02:48 pm	1.00	50 mL	50 mL	U121212.D	Liquid	Y	<2
13	HS18111538-04MS	MS	12-12-2018 03:13 pm	1.00	50 mL	50 mL	U121213.D	Liquid	Y	<2
	3.5 uL cal std/43 mL Sample									
14	HS18111538-04MSD	MSD	12-12-2018 03:38 pm	1.00	50 mL	50 mL	U121214.D	Liquid	Y	<2
	3.5 uL cal std/43 mL Sample									
15	HS18120035-03	SAMP	12-12-2018 04:02 pm	1.00	50 mL	50 mL	U121215.D	Liquid	Y	<2
16	HS18111497-02DL	SAMP	12-12-2018 04:27 pm	50.00	1 mL	50 mL	U121216.D	Liquid	Y	<2
17	HS18120035-11	SAMP	12-12-2018 04:52 pm	25.00	2 mL	50 mL	U121217.D	Liquid	Y	<2
18	HS18111538-02	SAMP	12-12-2018 05:17 pm	1.00	50 mL	50 mL	U121218.D	Liquid	Y	<2
19	HS18111538-03	SAMP	12-12-2018 05:41 pm	1.00	50 mL	50 mL	U121219.D	Liquid	Y	<2
20	HS18111538-05	SAMP	12-12-2018 06:06 pm	1.00	50 mL	50 mL	U121220.D	Liquid	Y	<2
21	HS18111538-06	SAMP	12-12-2018 06:31 pm	1.00	50 mL	50 mL	U121221.D	Liquid	Y	<2
22	HS18111538-08	SAMP	12-12-2018 06:56 pm	1.00	50 mL	50 mL	U121222.D	Liquid	Y	<2
23	HS18111538-09	SAMP	12-12-2018 07:20 pm	1.00	50 mL	50 mL	U121223.D	Liquid	Y	<2
24	HS18111538-10	SAMP	12-12-2018 07:45 pm	1.00	50 mL	50 mL	U121224.D	Liquid	Y	<2
25	HS18111538-11	SAMP	12-12-2018 08:10 pm	1.00	50 mL	50 mL	U121225.D	Liquid	Y	<2
26	HS18111538-12	SAMP	12-12-2018 08:35 pm	1.00	50 mL	50 mL	U121226.D	Liquid	Y	<2
27	HS18111538-13	SAMP	12-12-2018 08:59 pm	1.00	50 mL	50 mL	U121227.D	Liquid	Y	<2
28	VSTD050-END	CCV	12-12-2018 09:24 pm	1.00	50 mL	50 mL	U121228.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
29	BFB	TUNE	12-12-2018 09:49 pm	1.00	50 mL	50 mL	V121201.D	Liquid	Y	NA
	Auto tune/purged									
30	VSTD050	CCV	12-12-2018 10:14 pm	1.00	50 mL	50 mL	V121202.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
31	CCB	SAMP	12-12-2018 10:38 pm	1.00	50 mL	50 mL	V121203.D	Liquid	Y	NA
	CCB									
32	VLCSW-181212	LCS	12-12-2018 11:03 pm	1.00	50 mL	50 mL	V121204.D	Liquid	Y	NA
	4 uL ICV std/50 mL DI									
33	BLK	SAMP	12-12-2018 11:28 pm	1.00	50 mL	50 mL	V121205.D	Liquid	Y	NA
34	VBLKW-181212	MBLK	12-12-2018 11:53 pm	1.00	50 mL	50 mL	V121206.D	Liquid	Y	NA
35	HS18120036-09	SAMP	12-13-2018 12:17 am	1.00	50 mL	50 mL	V121207.D	Liquid	Y	<2

MSVOA09 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
36	HS18120036-01	SAMP	12-13-2018 12:42 am	1.00	50 mL	50 mL	V121208.D	Liquid	Y	<2
37	HS18120036-01MS	MS	12-13-2018 01:07 am	1.00	50 mL	50 mL	V121209.D	Liquid	Y	<2
	3.5 uL cal std/43 mL Sample									
38	HS18120036-01MSD	MSD	12-13-2018 01:31 am	1.00	50 mL	50 mL	V121210.D	Liquid	Y	<2
	3.5 uL cal std/43 mL Sample									
39	HS18120035-01	SAMP	12-13-2018 01:56 am	5.00	10 mL	50 mL	V121211.D	Liquid	Y	<2
40	HS18120036-02	SAMP	12-13-2018 02:21 am	1.00	50 mL	50 mL	V121212.D	Liquid	Y	<2
41	HS18120036-03	SAMP	12-13-2018 02:46 am	1.00	50 mL	50 mL	V121213.D	Liquid	Y	<2
42	HS18120036-04	SAMP	12-13-2018 03:10 am	1.00	50 mL	50 mL	V121214.D	Liquid	Y	<2
43	HS18120036-05	SAMP	12-13-2018 03:35 am	1.00	50 mL	50 mL	V121215.D	Liquid	Y	<2
44	HS18120036-06	SAMP	12-13-2018 04:00 am	1.00	50 mL	50 mL	V121216.D	Liquid	Y	<2
45	HS18120036-07	SAMP	12-13-2018 04:25 am	1.00	50 mL	50 mL	V121217.D	Liquid	Y	<2
46	HS18120036-08	SAMP	12-13-2018 04:49 am	1.00	50 mL	50 mL	V121218.D	Liquid	Y	<2
47	HS18120038-01	SAMP	12-13-2018 05:14 am	1.00	50 mL	50 mL	V121219.D	Liquid	Y	<2
48	HS18120038-02	SAMP	12-13-2018 05:39 am	1.00	50 mL	50 mL	V121220.D	Liquid	Y	<2
49	HS18120038-03	SAMP	12-13-2018 06:04 am	1.00	50 mL	50 mL	V121221.D	Liquid	Y	<2
50	HS18120038-04	SAMP	12-13-2018 06:29 am	1.00	50 mL	50 mL	V121222.D	Liquid	Y	<2
51	HS18120038-05	SAMP	12-13-2018 06:53 am	1.00	50 mL	50 mL	V121223.D	Liquid	Y	<2
52	HS18120038-06	SAMP	12-13-2018 07:18 am	1.00	50 mL	50 mL	V121224.D	Liquid	Y	<2
53	HS18120038-07	SAMP	12-13-2018 07:43 am	1.00	50 mL	50 mL	V121225.D	Liquid	Y	<2
54	HS18120038-08	SAMP	12-13-2018 08:08 am	1.00	50 mL	50 mL	V121226.D	Liquid	Y	<2
55	HS18120089-02	SAMP	12-13-2018 08:32 am	1.00	50 mL	50 mL	V121227.D	Liquid	Y	<2
56	HS18120090-02	SAMP	12-13-2018 08:57 am	1.00	50 mL	50 mL	V121228.D	Liquid	Y	<2

Chemical	Value
SURR SPK ID	30502-53-03
IS ID	30502-53-04
ICV STD ID	30603-45-01
LCS/MS ID	30603-45-01
CAL STD ID	30502-55-01/02
BFB ID	30502-53-03

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18111497

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-181212	87	89	105	102	0
02	VBLKW-181212	90	87	105	98	0
03	HS18111497-0	91	87	104	98	0
04	HS18111497-0	90	87	106	99	0
05	HS18111497-0	90	88	104	99	0
06	HS18111538-0	88	90	107	103	0
07	HS18111538-0	87	89	106	102	0
08	HS18111497-0	90	87	106	99	0
09						
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-181212

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18111497

Lab File ID: U121205 Lab Sample ID: VBLKW-181212

Date Analyzed: 12/12/18 Time Analyzed: 1155

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA9

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-181212	VLCSW-1812012	U121203	1105
02	HS18111497-0	HS18111497-01	U121206	1220
03	HS18111497-0	HS18111497-03	U121207	1244
04	HS18111497-0	HS18111497-02	U121212	1448
05	HS18111538-0	HS18111538-04M	U121213	1513
06	HS18111538-0	HS18111538-04M	U121214	1538
07	HS18111497-0	HS18111497-02D	U121216	1627
08				
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18111497

Lab File ID: U121201 BFB Injection Date: 12/12/18

Instrument ID: VOA9 BFB Injection Time: 1016

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.5
75	30.0 - 60.0% of mass 95	49.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5 (0.8)1
174	Greater than 50.0% of mass 95	64.9
175	5.0 - 9.0% of mass 174	5.1 (7.8)1
176	95.0 - 101.0% of mass 174	63.1 (97.3)1
177	5.0 - 9.0% of mass 176	4.4 (7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	U121202	12/12/18	1041
02	VLCSW-181212	VLCSW-1812012	U121203	12/12/18	1105
03	VBLKW-181212	VBLKW-181212	U121205	12/12/18	1155
04	HS18111497-0	HS18111497-01	U121206	12/12/18	1220
05	HS18111497-0	HS18111497-03	U121207	12/12/18	1244
06	HS18111497-0	HS18111497-02	U121212	12/12/18	1448
07	HS18111538-0	HS18111538-04M	U121213	12/12/18	1513
08	HS18111538-0	HS18111538-04M	U121214	12/12/18	1538
09	HS18111497-0	HS18111497-02D	U121216	12/12/18	1627
10	VSTD050-END	VSTD050-END	U121228	12/12/18	2124
11					
12					
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14					
15					
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18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18111497

Instrument ID: VOA9 Calibration Date: 12/12/18 Time: 1041

Lab File ID: U121202 Init. Calib. Date(s): 11/13/18 11/13/18

Init. Calib. Times: 1123 1528

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
cis-1,3-Dichloropropene	0.5230000	0.6420480	0.6420480	0.2	-22.76	20.00	AVRG	<-
trans-1,3-Dichloropropene	51.724112	50.000000	0.5388735	0.1	-3.45	20.00	LINR	
1,3-Dichlorobenzene	1.5740000	1.7296845	1.7296845	0.6	-9.89	20.00	AVRG	
2,2-Dichloropropane	0.7100000	0.6444564	0.6444564	0.1	9.23	20.00	AVRG	
1,1-Dichloropropene	0.4620000	0.5402022	0.5402022	0.1	-16.93	20.00	AVRG	
Dibromomethane	0.2230000	0.2496295	0.2496295	0.1	-11.94	20.00	AVRG	
1,2-Dibromoethane	0.3680000	0.4215883	0.4215883	0.1	-14.56	20.00	AVRG	
trans-1,2-Dichloroethene	0.6180000	0.6581969	0.6581969	0.1	-6.50	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3150000	0.3708883	0.3708883	0.1	-17.74	20.00	AVRG	
1,1,1-Trichloroethane	0.8780000	0.9178849	0.9178849	0.1	-4.54	20.00	AVRG	
1,1,2,2-Tetrachloroethane	1.1840000	1.3211477	1.3211477	0.3	-11.58	20.00	AVRG	
Freon TF	0.5010000	0.5231505	0.5231505	0.1	-4.42	20.00	AVRG	
1,1,2-Trichloroethane	0.3180000	0.3596586	0.3596586	0.1	-13.10	20.00	AVRG	
1,1-Dichloroethane	1.1460000	1.2471075	1.2471075	0.2	-8.82	20.00	AVRG	
1,1-Dichloroethene	0.5640000	0.5876589	0.5876589	0.1	-4.19	20.00	AVRG	
Trichlorofluoromethane	1.0000000	1.0106147	1.0106147	0.1	-1.06	20.00	AVRG	
1,2,3-Trichlorobenzene	0.9440000	1.0758936	1.0758936	0.1	-13.97	20.00	AVRG	
Toluene	1.5870000	1.8296875	1.8296875	0.4	-15.29	20.00	AVRG	
1,2,4-Trichlorobenzene	0.9830000	1.1025037	1.1025037	0.2	-12.16	20.00	AVRG	
1,2,4-Trimethylbenzene	2.7770000	3.2980393	3.2980393	0.1	-18.76	20.00	AVRG	
Tetrachloroethene	0.2620000	0.2942515	0.2942515	0.2	-12.31	20.00	AVRG	
Trichloroethene	0.3410000	0.3790622	0.3790622	0.2	-11.16	20.00	AVRG	
1,2-Dichlorobenzene	1.5970000	1.7236498	1.7236498	0.4	-7.93	20.00	AVRG	
1,2-Dichloroethane	0.5230000	0.5563084	0.5563084	0.1	-6.37	20.00	AVRG	
1,2-Dichloropropane	0.3560000	0.4239848	0.4239848	0.1	-19.10	20.00	AVRG	
1,3,5-Trimethylbenzene	2.6860000	3.1759013	3.1759013	0.1	-18.24	20.00	AVRG	
1,3-Dichloropropane	0.6820000	0.7818523	0.7818523	0.1	-14.64	20.00	AVRG	
1,4-Dichlorobenzene	50.281578	50.000000	1.7587752	0.4	-0.56	20.00	LINR	
2-Butanone	0.3510000	0.3763642	0.3763642	0.1	-7.23	20.00	AVRG	
2-Chlorotoluene	2.4480000	2.8215256	2.8215256	0.1	-15.26	20.00	AVRG	
2-Hexanone	0.2910000	0.3473502	0.3473502	0.1	-19.36	20.00	AVRG	
4-Chlorotoluene	2.8250000	3.2611739	3.2611739	0.1	-15.44	20.00	AVRG	
tert-Butylbenzene	2.2890000	2.7186919	2.7186919	0.1	-18.77	20.00	AVRG	
4-Methyl-2-Pentanone	0.4170000	0.4954003	0.4954003	0.1	-18.80	20.00	AVRG	
Acetone	105.61098	100.00000	0.2633576	0.1	-5.61	20.00	LINR	
Benzene	1.3820000	1.6091938	1.6091938	0.5	-16.44	20.00	AVRG	
Bromobenzene	0.8200000	0.9057216	0.9057216	0.1	-10.45	20.00	AVRG	
Bromochloromethane	0.2950000	0.3365090	0.3365090	0.1	-14.07	20.00	AVRG	
Bromodichloromethane	0.4160000	0.4650923	0.4650923	0.2	-11.80	20.00	AVRG	
Bromoform	49.602650	50.000000	0.2334928	0.1	0.79	20.00	2RDR	
Bromomethane	43.291690	50.000000	0.3850844	0.1	13.42	20.00	LINR	
Carbon Disulfide	1.7430000	1.9191463	1.9191463	0.1	-10.10	20.00	AVRG	

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1811149

Instrument ID: VOA9 Calibration Date: 12/12/18 Time: 1041

Lab File ID: U121202 Init. Calib. Date(s): 11/13/18 11/13/18

Init. Calib. Times: 1123 1528

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Carbon Tetrachloride	0.3610000	0.4093146	0.4093146	0.1	-13.38	20.00	AVRG	
Chlorobenzene	1.0320000	1.1406544	1.1406544	0.5	-10.53	20.00	AVRG	
Chloroethane	0.5220000	0.6405564	0.6405564	0.1	-22.71	20.00	AVRG	<-
Chloroform	1.1510000	1.1922950	1.1922950	0.2	-3.59	20.00	AVRG	
Chloromethane	50.210423	50.000000	0.6883238	0.1	-0.42	20.00	LINR	
cis-1,2-Dichloroethene	0.7080000	0.7508665	0.7508665	0.1	-6.05	20.00	AVRG	
Dibromochloromethane	0.3160000	0.3783202	0.3783202	0.1	-19.72	20.00	AVRG	
Dichlorodifluoromethane	41.248906	50.000000	0.7033282	0.1	17.50	20.00	LINR	
Ethylbenzene	0.5220000	0.5956233	0.5956233	0.1	-14.10	20.00	AVRG	
Hexachlorobutadiene	46.806873	50.000000	0.3751145	0.1	6.39	20.00	2RDR	
Isopropylbenzene	1.5190000	1.7946147	1.7946147	0.1	-18.14	20.00	AVRG	
m,p-Xylenes	0.6430000	0.7478884	0.7478884	0.1	-16.31	20.00	AVRG	
Methylene Chloride	53.054980	50.000000	0.7346851	0.1	-6.11	20.00	LINR	
n-Butylbenzene	43.664509	50.000000	3.1098465	0.5	12.67	20.00	2RDR	
n-Propylbenzene	3.9460000	4.6826687	4.6826687	0.1	-18.67	20.00	AVRG	
Naphthalene	2.9610000	3.6420949	3.6420949	0.2	-23.00	20.00	AVRG	<-
o-Xylene	0.6430000	0.7603762	0.7603762	0.3	-18.25	20.00	AVRG	
sec-Butylbenzene	3.2850000	3.9493776	3.9493776	0.1	-20.22	20.00	AVRG	<-
Styrene	1.0860000	1.3089646	1.3089646	0.3	-20.53	20.00	AVRG	<-
Vinyl Chloride	49.529416	50.000000	0.9148604	0.1	0.94	20.00	LINR	
1,2,3-Trichloropropane	1.2360000	1.4214855	1.4214855	0.1	-15.01	20.00	AVRG	
p-Isopropyltoluene	2.7380000	3.3463756	3.3463756	0.1	-22.22	20.00	AVRG	<-
1,2-Dibromo-3-Chloropropane	49.343993	50.000000	0.1888654	0.05	1.31	20.00	2RDR	
1,2-Dichloroethane-d4	43.177553	50.000000	0.6604930	0.1	13.64	20.00	LINR	
Dibromofluoromethane	44.957210	50.000000	0.5182423	0.1	10.08	20.00	LINR	
Toluene-d8	52.635696	50.000000	1.3503381	0.1	-5.27	20.00	LINR	
4-Bromofluorobenzene	51.053143	50.000000	0.5081997	0.1	-2.11	20.00	LINR	

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18111497

Instrument ID: VOA9 Calibration Date: 12/12/18 Time: 2124

Lab File ID: U121228 Init. Calib. Date(s): 11/13/18 11/13/18

Init. Calib. Times: 1123 1528

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
cis-1,3-Dichloropropene	0.5230000	0.6420480	0.6420480	0.2	-22.76	50.00	AVRG
trans-1,3-Dichloropropene	51.990260	50.000000	0.5388735	0.1	-3.98	50.00	LINR
1,3-Dichlorobenzene	1.5740000	1.7296845	1.7296845	0.6	-9.89	50.00	AVRG
2,2-Dichloropropane	0.7100000	0.6444564	0.6444564	0.1	9.23	50.00	AVRG
1,1-Dichloropropene	0.4620000	0.5402022	0.5402022	0.1	-16.93	50.00	AVRG
Dibromomethane	0.2230000	0.2496295	0.2496295	0.1	-11.94	50.00	AVRG
1,2-Dibromoethane	0.3680000	0.4215883	0.4215883	0.1	-14.56	50.00	AVRG
trans-1,2-Dichloroethene	0.6180000	0.6581969	0.6581969	0.1	-6.50	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3150000	0.3708883	0.3708883	0.1	-17.74	50.00	AVRG
1,1,1-Trichloroethane	0.8780000	0.9178849	0.9178849	0.1	-4.54	50.00	AVRG
1,1,2,2-Tetrachloroethane	1.1840000	1.3211477	1.3211477	0.3	-11.58	50.00	AVRG
Freon TF	0.5010000	0.5231505	0.5231505	0.1	-4.42	50.00	AVRG
1,1,2-Trichloroethane	0.3180000	0.3596586	0.3596586	0.1	-13.10	50.00	AVRG
1,1-Dichloroethane	1.1460000	1.2471075	1.2471075	0.2	-8.82	50.00	AVRG
1,1-Dichloroethene	0.5640000	0.5876589	0.5876589	0.1	-4.19	50.00	AVRG
Trichlorofluoromethane	1.0000000	1.0106147	1.0106147	0.1	-1.06	50.00	AVRG
1,2,3-Trichlorobenzene	0.9440000	1.0758936	1.0758936	0.1	-13.97	50.00	AVRG
Toluene	1.5870000	1.8296875	1.8296875	0.4	-15.29	50.00	AVRG
1,2,4-Trichlorobenzene	0.9830000	1.1025037	1.1025037	0.2	-12.16	50.00	AVRG
1,2,4-Trimethylbenzene	2.7770000	3.2980393	3.2980393	0.1	-18.76	50.00	AVRG
Tetrachloroethene	0.2620000	0.2942515	0.2942515	0.2	-12.31	50.00	AVRG
Trichloroethene	0.3410000	0.3790622	0.3790622	0.2	-11.16	50.00	AVRG
1,2-Dichlorobenzene	1.5970000	1.7236498	1.7236498	0.4	-7.93	50.00	AVRG
1,2-Dichloroethane	0.5230000	0.5563084	0.5563084	0.1	-6.37	50.00	AVRG
1,2-Dichloropropane	0.3560000	0.4239848	0.4239848	0.1	-19.10	50.00	AVRG
1,3,5-Trimethylbenzene	2.6860000	3.1759013	3.1759013	0.1	-18.24	50.00	AVRG
1,3-Dichloropropane	0.6820000	0.7818523	0.7818523	0.1	-14.64	50.00	AVRG
1,4-Dichlorobenzene	57.115263	50.000000	1.7587752	0.4	-14.23	50.00	LINR
2-Butanone	0.3510000	0.3763642	0.3763642	0.1	-7.23	50.00	AVRG
2-Chlorotoluene	2.4480000	2.8215256	2.8215256	0.1	-15.26	50.00	AVRG
2-Hexanone	0.2910000	0.3473502	0.3473502	0.1	-19.36	50.00	AVRG
4-Chlorotoluene	2.8250000	3.2611739	3.2611739	0.1	-15.44	50.00	AVRG
tert-Butylbenzene	2.2890000	2.7186919	2.7186919	0.1	-18.77	50.00	AVRG
4-Methyl-2-Pentanone	0.4170000	0.4954003	0.4954003	0.1	-18.80	50.00	AVRG
Acetone	115.39671	100.00000	0.2633576	0.1	-15.40	50.00	LINR
Benzene	1.3820000	1.6091938	1.6091938	0.5	-16.44	50.00	AVRG
Bromobenzene	0.8200000	0.9057216	0.9057216	0.1	-10.45	50.00	AVRG
Bromochloromethane	0.2950000	0.3365090	0.3365090	0.1	-14.07	50.00	AVRG
Bromodichloromethane	0.4160000	0.4650923	0.4650923	0.2	-11.80	50.00	AVRG
Bromoform	51.329388	50.000000	0.2334928	0.1	-2.66	50.00	2RDR
Bromomethane	46.546449	50.000000	0.3850844	0.1	6.91	50.00	LINR
Carbon Disulfide	1.7430000	1.9191463	1.9191463	0.1	-10.10	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1811149

Instrument ID: VOA9 Calibration Date: 12/12/18 Time: 2124

Lab File ID: U121228 Init. Calib. Date(s): 11/13/18 11/13/18

Init. Calib. Times: 1123 1528

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Carbon Tetrachloride	0.3610000	0.4093146	0.4093146	0.1	-13.38	50.00	AVRG
Chlorobenzene	1.0320000	1.1406544	1.1406544	0.5	-10.53	50.00	AVRG
Chloroethane	0.5220000	0.6405564	0.6405564	0.1	-22.71	50.00	AVRG
Chloroform	1.1510000	1.1922950	1.1922950	0.2	-3.59	50.00	AVRG
Chloromethane	51.549828	50.000000	0.6883238	0.1	-3.10	50.00	LINR
cis-1,2-Dichloroethene	0.7080000	0.7508665	0.7508665	0.1	-6.05	50.00	AVRG
Dibromochloromethane	0.3160000	0.3783202	0.3783202	0.1	-19.72	50.00	AVRG
Dichlorodifluoromethane	47.632378	50.000000	0.7033282	0.1	4.74	50.00	LINR
Ethylbenzene	0.5220000	0.5956233	0.5956233	0.1	-14.10	50.00	AVRG
Hexachlorobutadiene	60.047228	50.000000	0.3751145	0.1	-20.09	50.00	2RDR
Isopropylbenzene	1.5190000	1.7946147	1.7946147	0.1	-18.14	50.00	AVRG
m,p-Xylenes	0.6430000	0.7478884	0.7478884	0.1	-16.31	50.00	AVRG
Methylene Chloride	57.687235	50.000000	0.7346851	0.1	-15.37	50.00	LINR
n-Butylbenzene	59.088802	50.000000	3.1098465	0.5	-18.18	50.00	2RDR
n-Propylbenzene	3.9460000	4.6826687	4.6826687	0.1	-18.67	50.00	AVRG
Naphthalene	2.9610000	3.6420949	3.6420949	0.2	-23.00	50.00	AVRG
o-Xylene	0.6430000	0.7603762	0.7603762	0.3	-18.25	50.00	AVRG
sec-Butylbenzene	3.2850000	3.9493776	3.9493776	0.1	-20.22	50.00	AVRG
Styrene	1.0860000	1.3089646	1.3089646	0.3	-20.53	50.00	AVRG
Vinyl Chloride	56.057655	50.000000	0.9148604	0.1	-12.12	50.00	LINR
1,2,3-Trichloropropane	1.2360000	1.4214855	1.4214855	0.1	-15.01	50.00	AVRG
p-Isopropyltoluene	2.7380000	3.3463756	3.3463756	0.1	-22.22	50.00	AVRG
1,2-Dibromo-3-Chloropropane	51.564794	50.000000	0.1888654	0.05	-3.13	50.00	2RDR
1,2-Dichloroethane-d4	43.467268	50.000000	0.6604930	0.1	13.06	50.00	LINR
Dibromofluoromethane	44.959666	50.000000	0.5182423	0.1	10.08	50.00	LINR
Toluene-d8	52.928743	50.000000	1.3503381	0.1	-5.86	50.00	LINR
4-Bromofluorobenzene	51.423302	50.000000	0.5081997	0.1	-2.85	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18111497

Lab File ID (Standard): U121202 Date Analyzed: 12/12/18

Instrument ID: VOA9 Time Analyzed: 1041

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 (DCB) AREA #	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DFB) AREA #	RT #
	12 HOUR STD	338996	10.24	705194	8.25	767798	5.63
	UPPER LIMIT	677992	10.74	1410388	8.75	1535596	6.13
	LOWER LIMIT	169498	9.74	352597	7.75	383899	5.13
	CLIENT SAMPLE NO.						
01	VLCSW-181212	345177	10.24	720792	8.25	786223	5.63
02	VBLKW-181212	319075	10.24	691965	8.25	761255	5.63
03	HS18111497-0	313792	10.24	687980	8.25	749208	5.63
04	HS18111497-0	319609	10.24	695650	8.25	766621	5.63
05	HS18111497-0	308782	10.24	669230	8.25	744627	5.63
06	HS18111538-0	326514	10.24	681931	8.25	744242	5.63
07	HS18111538-0	329051	10.24	687371	8.25	755452	5.63
08	HS18111497-0	317425	10.24	691858	8.25	767011	5.63
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18111497

Lab File ID (Standard): U121202 Date Analyzed: 12/12/18

Instrument ID: VOA9 Time Analyzed: 1041

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	432753	4.89				
	UPPER LIMIT	865506	5.39				
	LOWER LIMIT	216377	4.39				
	CLIENT SAMPLE NO.						
01	VLCSW-181212	446084	4.90				
02	VBLKW-181212	427189	4.89				
03	HS18111497-0	418963	4.89				
04	HS18111497-0	429766	4.89				
05	HS18111497-0	415962	4.89				
06	HS18111538-0	420102	4.90				
07	HS18111538-0	429234	4.89				
08	HS18111497-0	432064	4.90				
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121201.D

Date : 12-DEC-2018 10:16

Client ID: BFB

Instrument: VOA9.i

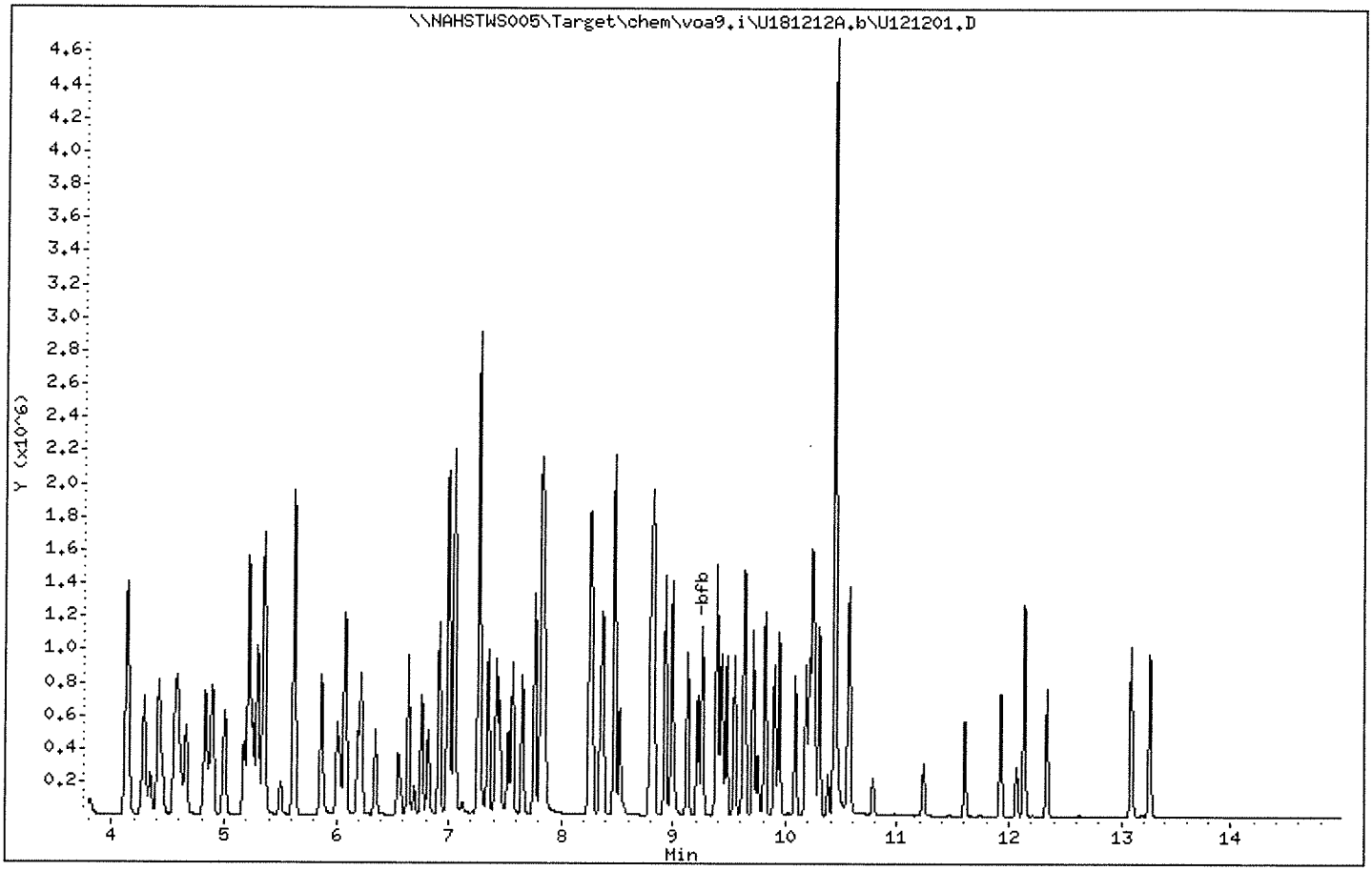
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121201.D

Date : 12-DEC-2018 10:16

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

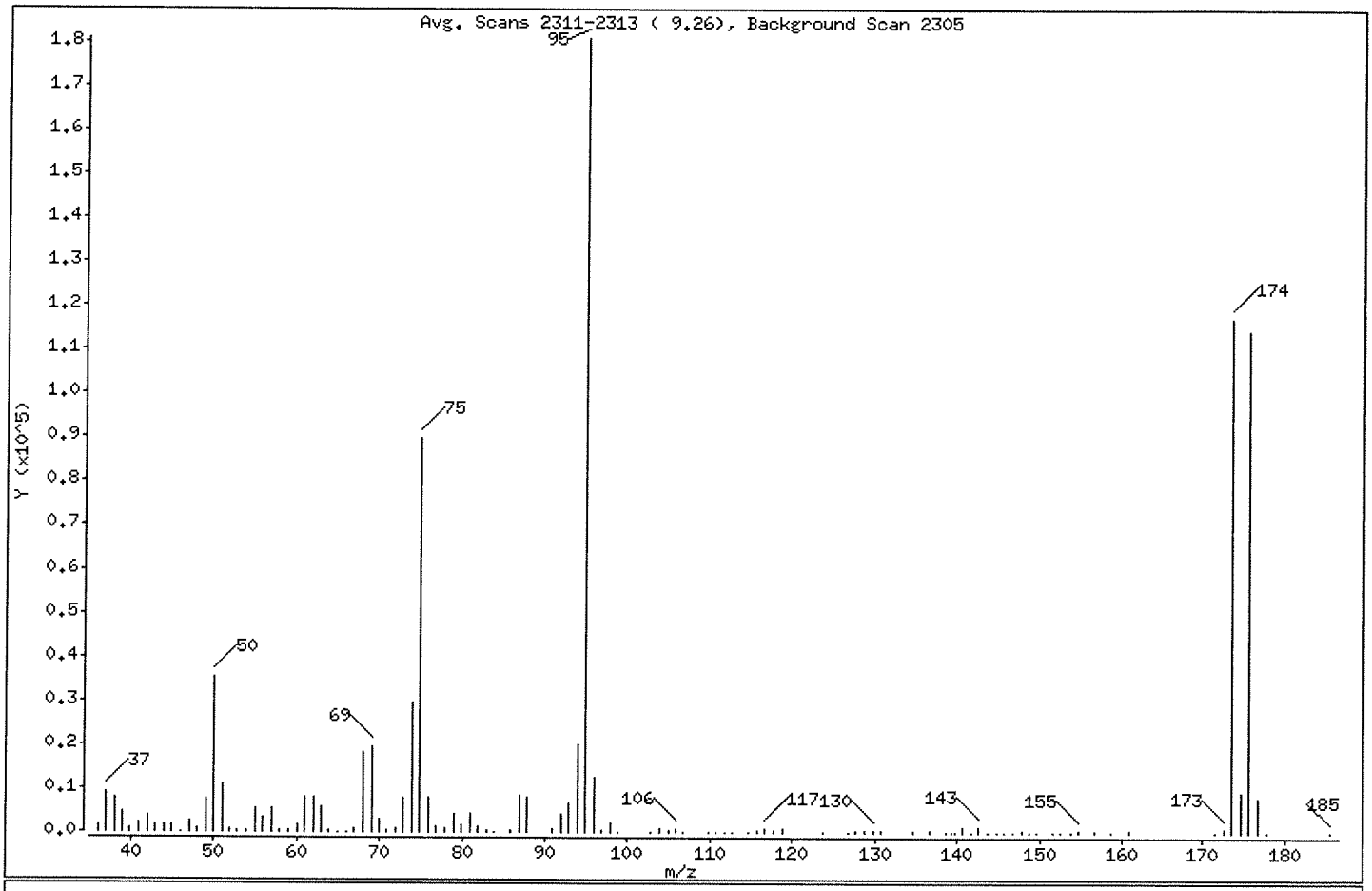
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.50
75	30.00 - 60.00% of mass 95	49.60
96	5.00 - 9.00% of mass 95	6.81
173	Less than 2.00% of mass 174	0.51 (0.78)
174	Greater than 50.00% of mass 95	64.87
175	5.00 - 9.00% of mass 174	5.06 (7.80)
176	95.00 - 101.00% of mass 174	63.12 (97.29)
177	5.00 - 9.00% of mass 176	4.41 (6.99)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121201.D

Date : 12-DEC-2018 10:16

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: U121201.D

Spectrum: Avg. Scans 2311-2313 (9.26), Background Scan 2305

Location of Maximum: 94.95

Number of points: 111

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1683	63.90	521	94.90	180672	139.40	63
37.00	9050	64.90	144	95.90	12298	139.80	67
38.00	7921	66.00	108	96.90	514	140.70	1219
39.00	4503	66.90	750	97.90	2018	141.80	196
39.90	819	67.90	18456	98.90	158	142.70	1414
41.00	2265	69.00	19672	102.80	116	143.70	63
42.00	3614	69.90	2782	103.80	701	144.70	153
43.00	1530	70.90	220	104.90	245	145.70	201
44.00	1501	71.90	982	105.80	723	146.70	62
44.90	1771	72.90	7700	106.70	136	147.80	272
46.00	148	73.90	29688	109.70	102	148.70	73
47.00	2476	74.90	89608	110.60	102	149.70	160
47.90	1034	75.90	8078	111.70	68	151.60	96
49.00	7326	76.90	1328	112.70	84	152.60	81
50.00	35240	78.00	959	114.60	143	153.80	110
51.00	10694	78.90	4135	115.70	530	154.70	344
52.00	625	79.90	1587	116.70	846	156.70	258
52.90	365	80.90	4171	117.80	515	158.70	152
54.00	475	81.80	1097	118.80	737	160.80	231
55.00	5569	82.90	604	123.70	55	171.70	177
55.90	3415	83.80	129	126.70	117	172.80	917
57.00	5533	85.90	261	127.70	493	173.70	117208
57.90	490	86.90	8258	128.80	234	174.70	9144
58.90	420	87.90	8098	129.80	512	175.70	114032
60.00	1500	90.80	646	130.70	252	176.70	7971
60.90	7941	91.90	4320	134.70	222	177.70	178
62.00	8000	92.90	6806	136.70	285	185.60	67
63.00	5722	93.90	19936	138.60	79		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121202.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 12-DEC-2018 10:41
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

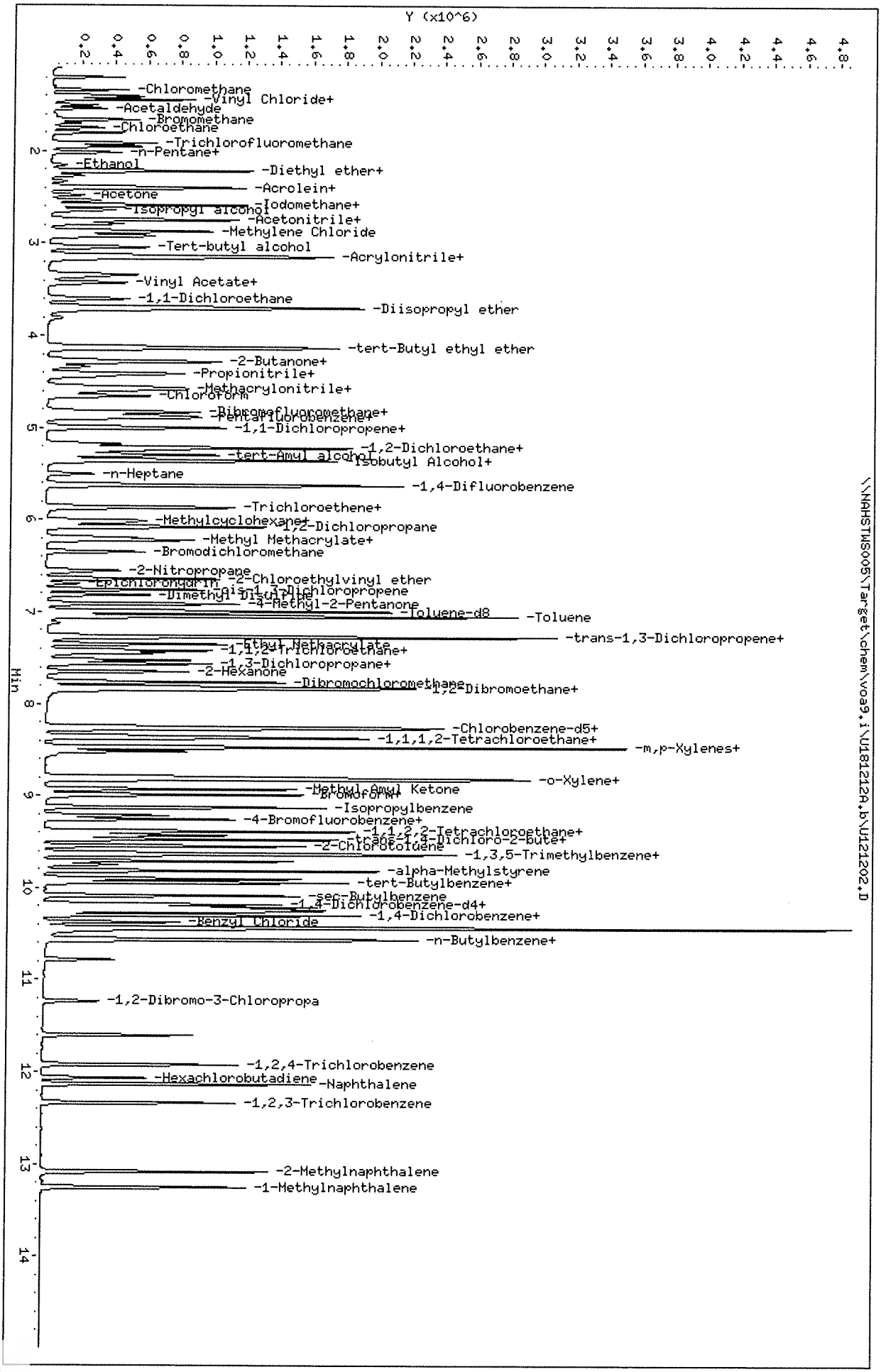
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	432753	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	767798	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	705194	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	338996	50.0000	
$ 30 Dibromofluoromethane	113	4.827	4.827	(0.986)	224259	50.0000	44.95
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	284000	50.0000	43.17
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	947143	50.0000	52.63
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	355852	50.0000	51.05
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	237979	50.0000	53.50
31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	349556	50.0000	45.98
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	425179	50.0000	52.95
138 Freon TF	101	2.397	2.397	(0.490)	177555	50.0000	40.95
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	240193	50.0000	53.57
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	493878	50.0000	49.80
11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	222300	50.0000	45.50
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	349753	50.0000	49.32
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	309814	50.0000	48.40
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	464642	50.0000	55.45
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	310591	50.0000	46.59
79 1,2,4-Trimethylbenzene	105	9.944	9.944	(0.971)	904243	50.0000	48.02
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	61191	50.0000	49.34
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	280989	50.0000	54.12

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121202.D Page 2
Report Date: 25-Jan-2019 19:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	516003	50.0000	47.66
33	1,2-Dichloroethane	62	5.250	5.250	(0.933)	401889	50.0000	50.02
42	1,2-Dichloropropane	63	6.079	6.079	(1.081)	305041	50.0000	55.80
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	851908	50.0000	46.77
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	507855	50.0000	47.58
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	514679	50.0000	53.46
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	524935	50.0000	50.28
26	2,2-Dichloropropane	77	4.272	4.272	(0.873)	311948	50.0000	50.79
24	2-Butanone	43	4.335	4.335	(0.886)	310276	100.000	101.99
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	800762	50.0000	48.23
52	2-Hexanone	43	7.649	7.649	(0.927)	467888	100.000	114.13
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	942194	50.0000	49.18
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	831105	50.0000	44.76
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	661901	100.000	112.51
10	Acetone	43	2.476	2.476	(0.506)	209323	100.000	105.61
37	Benzene	78	5.216	5.216	(0.927)	1129854	50.0000	53.23
74	Bromobenzene	156	9.381	9.381	(0.917)	283195	50.0000	50.92
29	Bromochloromethane	128	4.553	4.553	(0.930)	138224	50.0000	54.17
39	Bromodichloromethane	83	6.349	6.349	(1.129)	336498	50.0000	52.74
66	Bromoform	173	8.984	8.984	(1.089)	158945	50.0000	49.60(T)
6	Bromomethane	94	1.663	1.663	(0.340)	154497	50.0000	43.29
19	Carbon Disulfide	76	2.585	2.585	(0.528)	1484912	100.000	98.43
34	Carbon Tetrachloride	117	4.995	4.995	(0.888)	264843	50.0000	47.80
59	Chlorobenzene	112	8.275	8.275	(1.003)	730752	50.0000	50.20
7	Chloroethane	64	1.749	1.749	(0.357)	253337	50.0000	56.10
28	Chloroform	83	4.654	4.654	(0.951)	474733	50.0000	47.64
3	Chloromethane	50	1.337	1.337	(0.273)	290100	50.0000	50.21
27	cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	304528	50.0000	49.66
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	481932	50.0000	59.98
55	Dibromochloromethane	129	7.758	7.758	(0.940)	252774	50.0000	56.64
44	Dibromomethane	93	6.191	6.191	(1.101)	179185	50.0000	52.30
2	Dichlorodifluoromethane	85	1.202	1.202	(0.246)	262702	50.0000	41.24
61	Ethylbenzene	106	8.369	8.369	(1.015)	361956	50.0000	49.19
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	97644	50.0000	46.80
67	Isopropylbenzene	105	9.126	9.126	(1.106)	992795	50.0000	46.32
62	m,p-Xylenes	106	8.474	8.474	(1.027)	901910	100.000	99.44
17	Methylene Chloride	84	2.870	2.870	(0.586)	292714	50.0000	53.05
87	n-Butylbenzene	91	10.558	10.558	(1.031)	772229	50.0000	43.66
73	n-Propylbenzene	91	9.475	9.475	(0.926)	1241449	50.0000	46.40
92	Naphthalene	128	12.133	12.133	(1.185)	1112095	50.0000	55.40
63	o-Xylene	106	8.811	8.811	(1.068)	466346	50.0000	51.38
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	959898	50.0000	43.09
64	Styrene	104	8.826	8.826	(1.070)	829656	50.0000	54.14
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	679684	50.0000	43.78
56	Tetrachloroethene	164	7.526	7.526	(0.912)	172208	50.0000	46.61
50	Toluene	91	7.046	7.046	(0.854)	1149445	50.0000	51.33
20	trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	262854	50.0000	49.09
51	trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	411566	50.0000	51.72
38	Trichloroethene	130	5.861	5.861	(1.042)	260899	50.0000	49.86
8	Trichlorofluoromethane	101	1.951	1.951	(0.399)	360922	50.0000	41.71
5	Vinyl Chloride	62	1.415	1.415	(0.289)	349381	50.0000	49.52

QC Flag Legend

T - Target compound detected outside RT window.



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Date : 12-DEC-2018 10:41
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121203.D Page 1
Report Date: 25-Jan-2019 19:46

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121203.D
Lab Smp Id: VLCSW-1812012 Client Smp ID: VLCSW-181212
Inj Date : 12-DEC-2018 11:05
Operator : PC Inst ID: VOA9.i
Smp Info : VLCSW-1812012;VLCSW-181212;3;;LCS
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

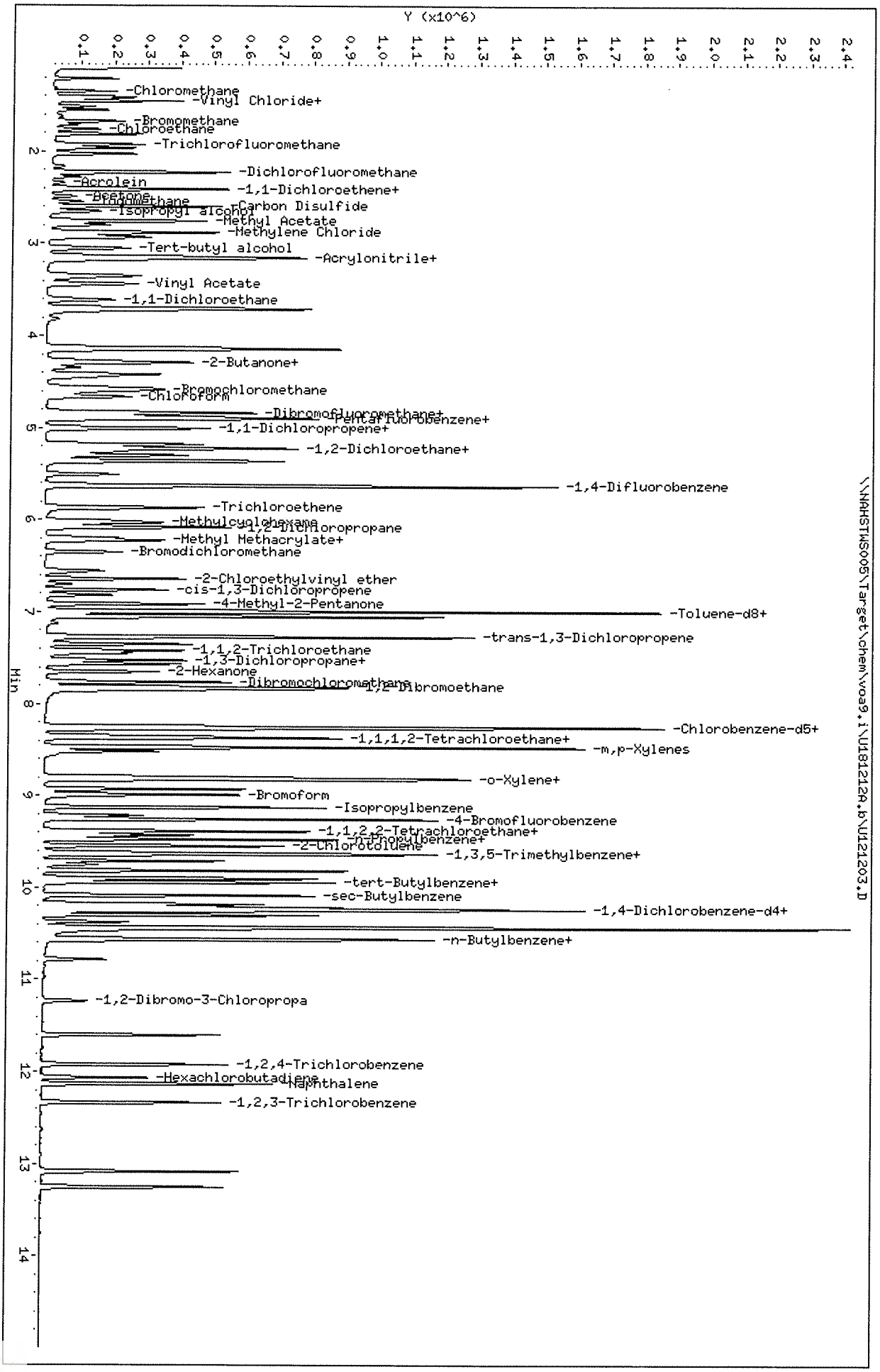
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.894	(1.000)	446084	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	786223	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	720792	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	345177	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.827	(0.987)	228014	44.3268	44.32
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	294139	43.3910	43.39
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	969271	52.7018	52.70
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	361972	50.8022	50.80
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	96710	21.2712	21.27
31 1,1,1-Trichloroethane	97	4.834	4.827	(0.987)	149846	19.1234	19.12
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	174704	21.3676	21.36
138 Freon TF	101	2.409	2.397	(0.492)	87145	19.5011	19.50
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	97489	21.2744	21.27
22 1,1-Dichloroethane	63	3.612	3.601	(0.737)	205390	20.0923	20.09
11 1,1-Dichloroethene	96	2.409	2.397	(0.492)	97923	19.4476	19.44
32 1,1-Dichloropropene	75	5.010	5.003	(0.890)	157369	21.6721	21.67
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	143604	22.0359	22.03
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	176226	20.6548	20.65
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	148559	21.8856	21.88
79 1,2,4-Trimethylbenzene	105	9.943	9.944	(0.971)	437862	22.8382	22.83
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	24105	19.8062	19.80
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	115143	21.6991	21.69

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121203.D Page 2
Report Date: 25-Jan-2019 19:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	10.569	10.570	(1.033)	230653	20.9246	20.92
33	1,2-Dichloroethane	62	5.258	5.250	(0.934)	165408	20.1050	20.10
42	1,2-Dichloropropane	63	6.082	6.079	(1.081)	125137	22.3549	22.35
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	416399	22.4523	22.45
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	230683	21.2263	21.22
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	215115	21.8623	21.86
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	238784	22.4391	22.43
26	2,2-Dichloropropane	77	4.279	4.272	(0.874)	128320	20.2702	20.27
24	2-Butanone	43	4.343	4.335	(0.887)	128399	40.9474	40.94
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	370011	21.8909	21.89
52	2-Hexanone	43	7.653	7.649	(0.928)	189751	45.2867	45.28
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	433865	22.2455	22.24
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	440276	23.2917	23.29
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	272240	45.2753	45.27
10	Acetone	43	2.487	2.476	(0.508)	87053	39.9658	39.96
37	Benzene	78	5.224	5.216	(0.928)	478117	21.9997	21.99
74	Bromobenzene	156	9.381	9.381	(0.917)	120071	21.2055	21.20
29	Bromochloromethane	128	4.560	4.553	(0.931)	56020	21.3020	21.30
39	Bromodichloromethane	83	6.348	6.349	(1.128)	133301	20.4051	20.40
66	Bromoform	173	8.984	8.984	(1.089)	59087	18.8777	18.87
6	Bromomethane	94	1.678	1.663	(0.343)	64004	18.5368	18.53
19	Carbon Disulfide	76	2.596	2.585	(0.530)	641406	41.2483	41.24
34	Carbon Tetrachloride	117	4.999	4.995	(0.888)	116459	20.5300	20.52
59	Chlorobenzene	112	8.275	8.275	(1.003)	314398	21.1337	21.13
7	Chloroethane	64	1.760	1.749	(0.359)	93722	20.1361	20.13(M)
28	Chloroform	83	4.662	4.654	(0.952)	198369	19.3143	19.31
3	Chloromethane	50	1.348	1.337	(0.275)	122820	20.7576	20.75
27	cis-1,2-Dichloroethene	96	4.290	4.283	(0.876)	125177	19.8035	19.80
46	cis-1,3-Dichloropropene	75	6.761	6.757	(1.201)	184804	22.4642	22.46
55	Dibromochloromethane	129	7.758	7.758	(0.940)	97615	21.4023	21.40
44	Dibromomethane	93	6.191	6.191	(1.100)	72906	20.7817	20.78
2	Dichlorodifluoromethane	85	1.213	1.202	(0.248)	115349	18.1451	18.14
61	Ethylbenzene	106	8.373	8.369	(1.015)	165138	21.9575	21.95
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	51500	24.8951	24.89
67	Isopropylbenzene	105	9.126	9.126	(1.106)	490680	22.4000	22.40
62	m,p-Xylenes	106	8.474	8.474	(1.027)	410710	44.3073	44.30
17	Methylene Chloride	84	2.877	2.870	(0.587)	124632	21.5026	21.50
87	n-Butylbenzene	91	10.558	10.558	(1.031)	419890	23.6836	23.68
73	n-Propylbenzene	91	9.475	9.475	(0.926)	621355	22.8121	22.81
92	Naphthalene	128	12.133	12.133	(1.185)	480963	23.5306	23.53
63	o-Xylene	106	8.811	8.811	(1.068)	207965	22.4203	22.42
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	519157	22.8907	22.89
64	Styrene	104	8.826	8.826	(1.070)	356129	22.7393	22.73
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	354166	22.4073	22.40
56	Tetrachloroethene	164	7.526	7.526	(0.912)	82599	21.8759	21.87
50	Toluene	91	7.049	7.046	(0.855)	500651	21.8777	21.87
20	trans-1,2-Dichloroethene	96	3.151	3.140	(0.643)	110189	19.9675	19.96
51	trans-1,3-Dichloropropene	75	7.263	7.259	(1.290)	153691	19.8014	19.80
38	Trichloroethene	130	5.865	5.861	(1.042)	113500	21.1860	21.18
8	Trichlorofluoromethane	101	1.962	1.951	(0.401)	165184	18.5220	18.52
5	Vinyl Chloride	62	1.426	1.415	(0.291)	150493	20.9926	20.99

QC Flag Legend

M - Compound response manually integrated.



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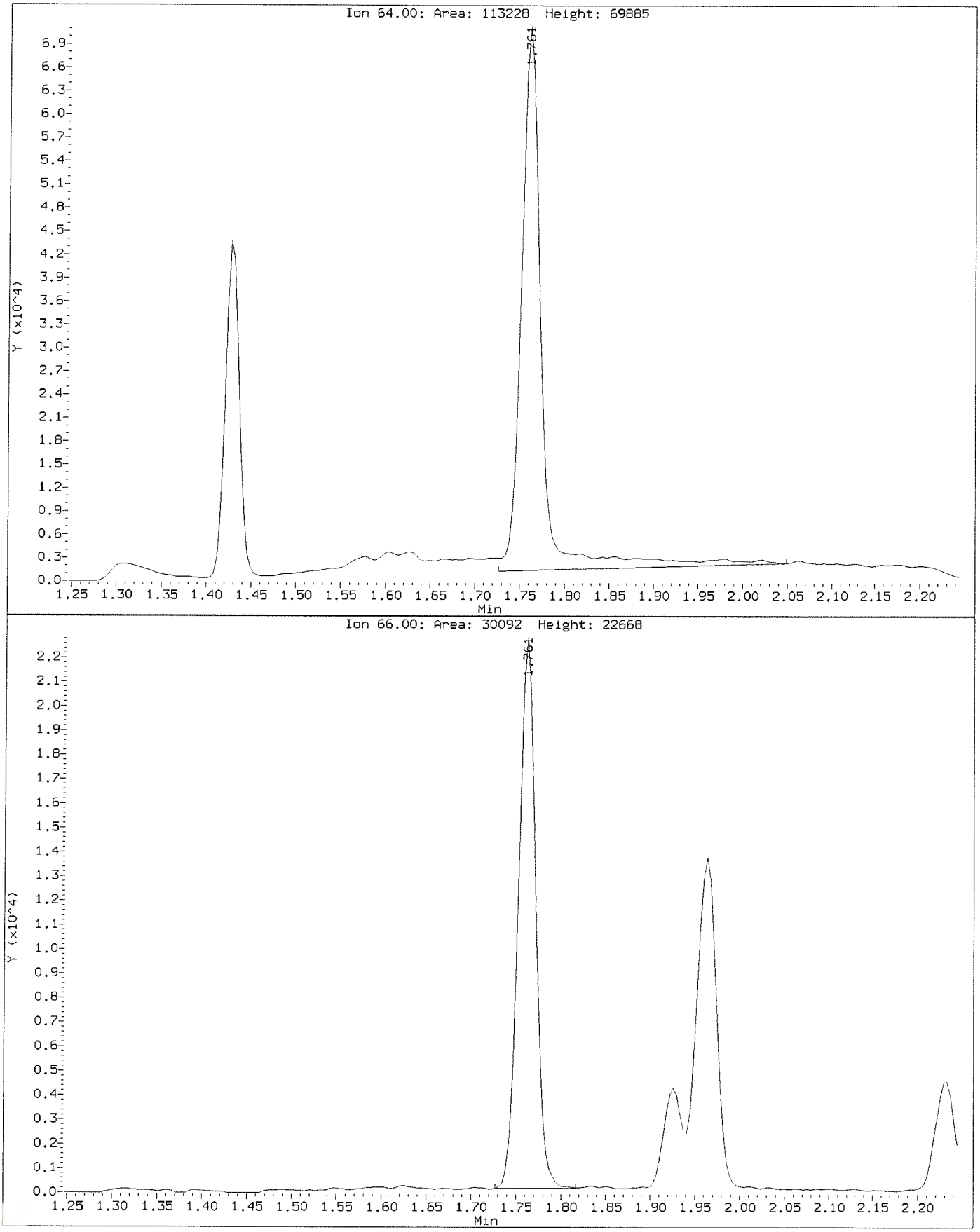
Sample Info: VLCSW-1812012;VLCSW-181212;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\Before\U121203.D
Injection Date: 12-DEC-2018 11:05
Instrument: VOA9.i
Client Sample ID: VLCSW-181212

Compound: Chloroethane
CAS Number: 75-00-3



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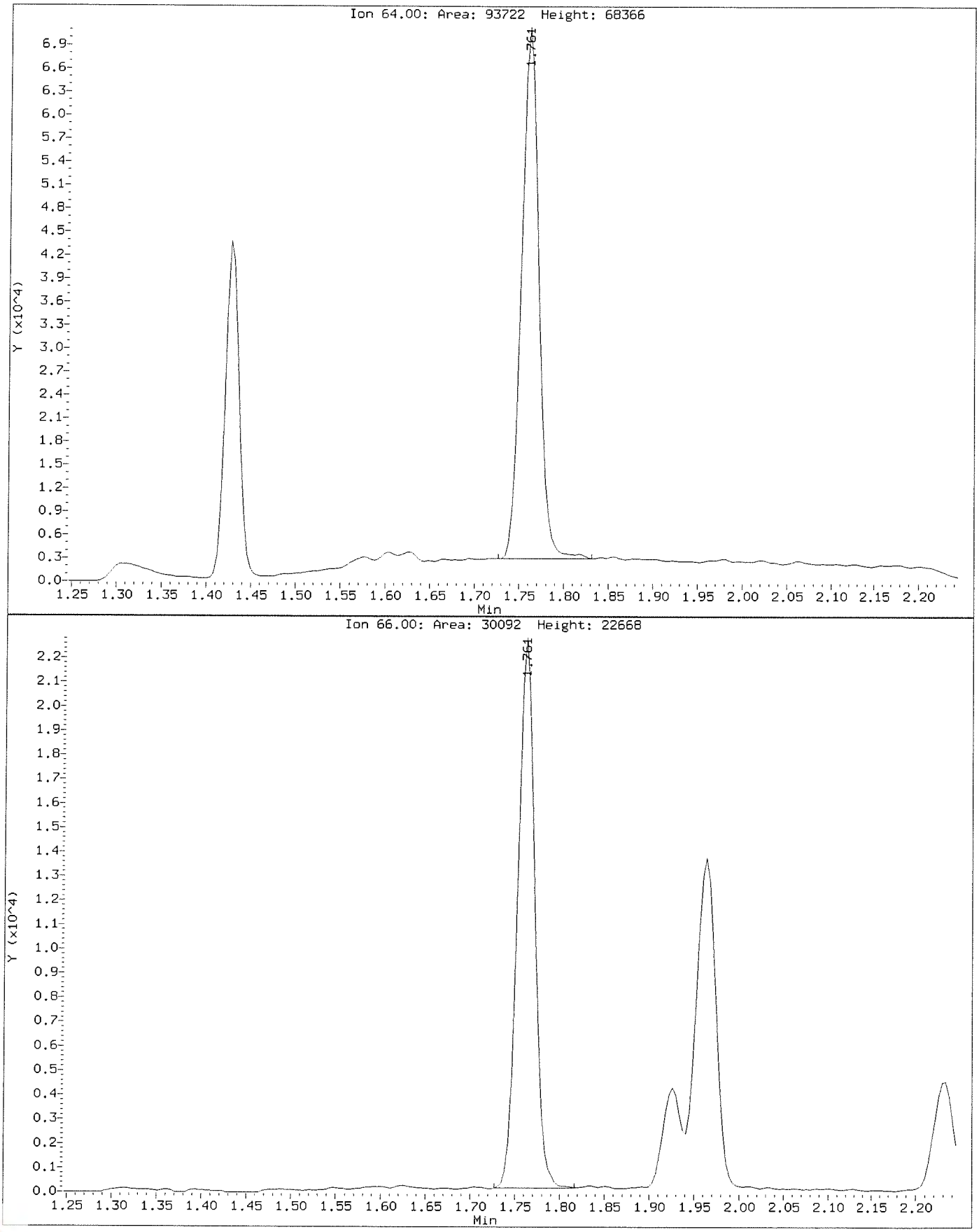
Injection Date: 12-DEC-2018 11:05
Instrument: VOA9.i
Client Sample ID: VLCSW-181212

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121205.D Page 1
Report Date: 25-Jan-2019 19:46

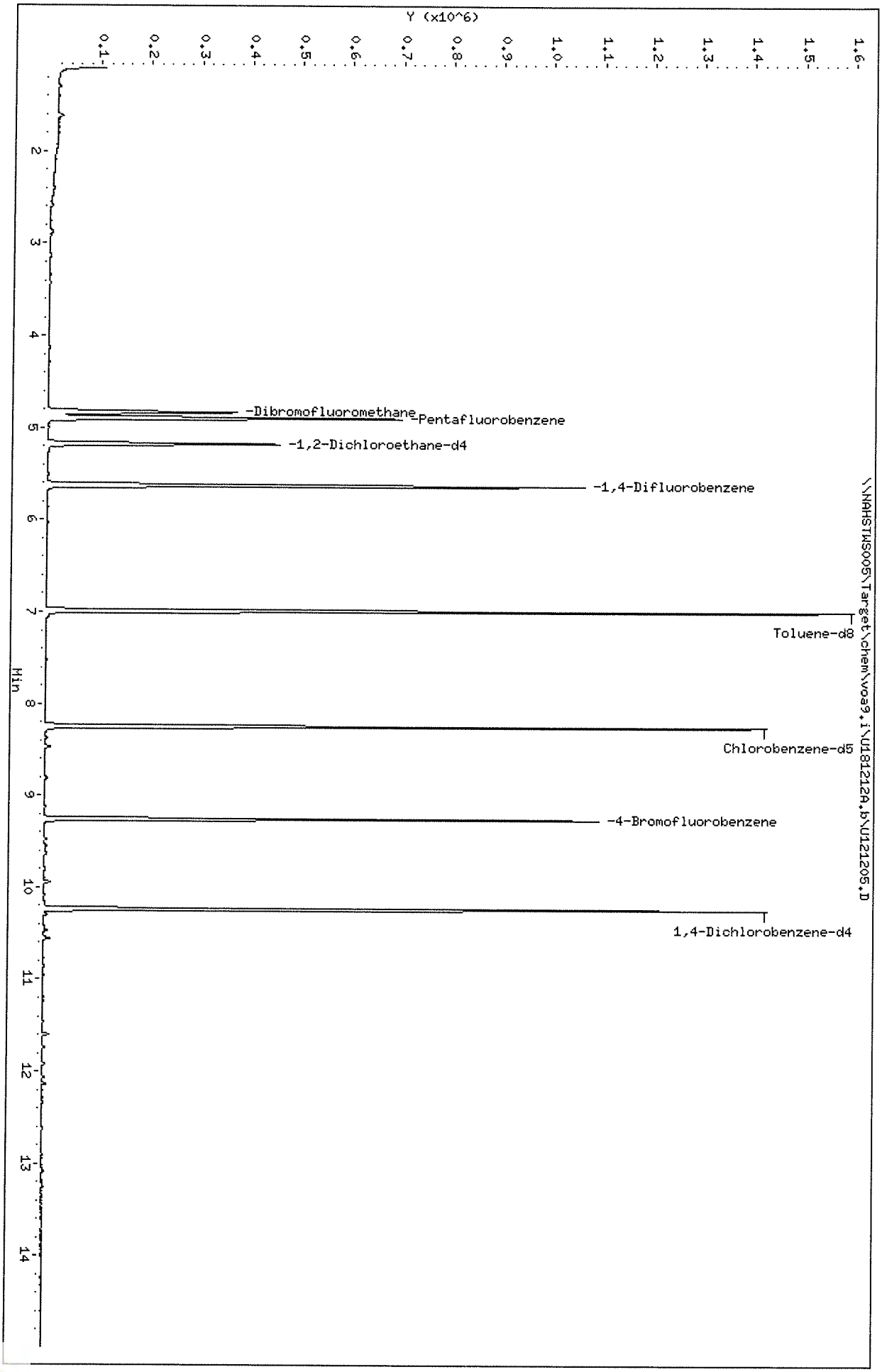
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121205.D
Lab Smp Id: VBLKW-181212 Client Smp ID: VBLKW-181212
Inj Date : 12-DEC-2018 11:55
Operator : PC Inst ID: VOA9.i
Smp Info : VBLKW-181212;VBLKW-181212;3;;BLANK
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	427189	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	761255	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	691965	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	319075	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.827	(0.987)	213440	43.3006	43.30
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	290538	44.8114	44.81
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	929316	52.6322	52.63
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	336315	49.1334	49.13



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Date : 12-DEC-2018 11:55
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Sample Info: VBLKW-181212;VBLKW-181212;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

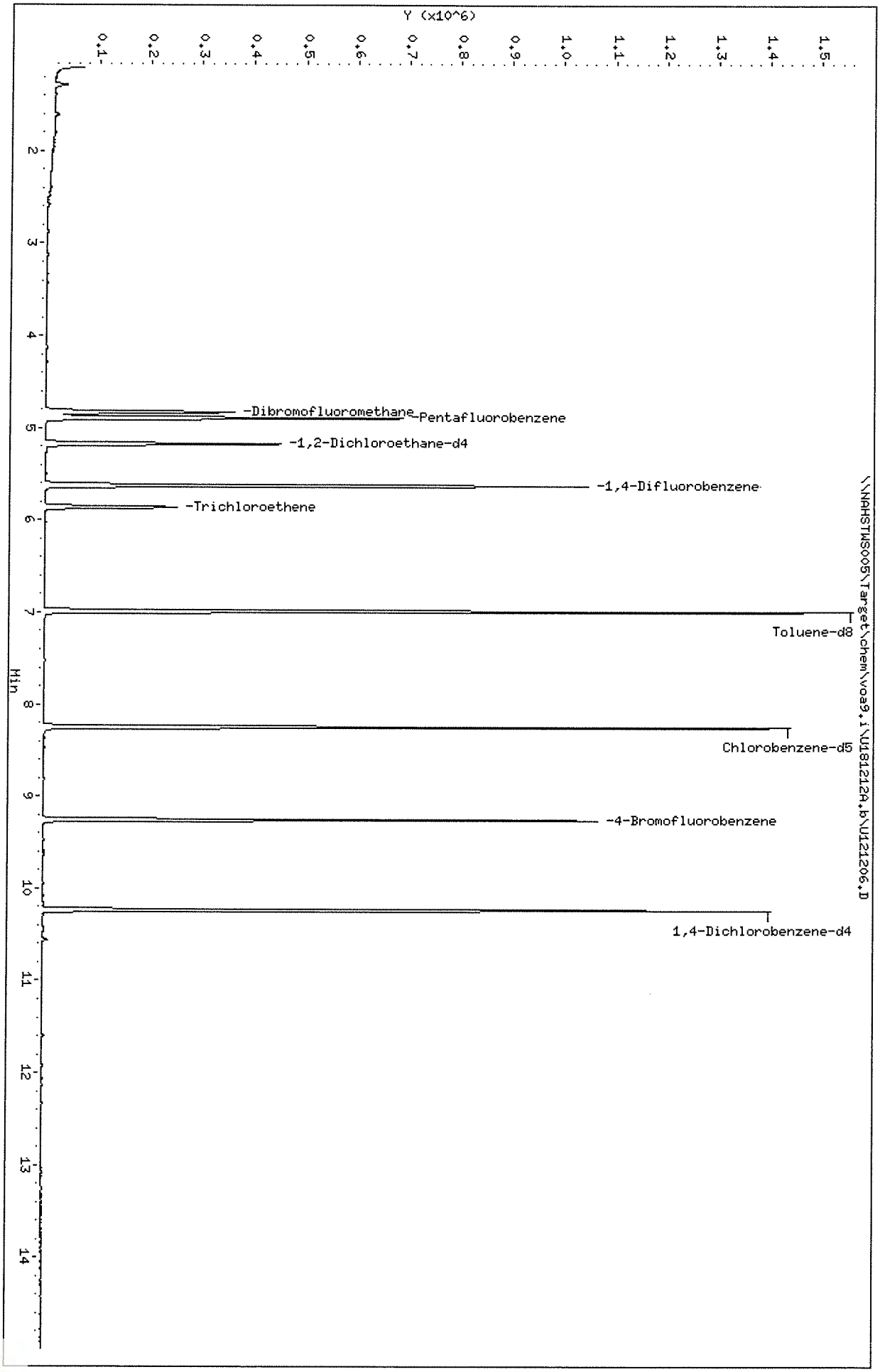
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121206.D
Lab Smp Id: HS18111497-01 Client Smp ID: HS18111497-01
Inj Date : 12-DEC-2018 12:20
Operator : PC Inst ID: VOA9.i
Smp Info : HS18111497-01;HS18111497-01;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.890	4.894	(1.000)	418963	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	749208	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	687980	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	313792	50.0000	
$ 30 Dibromofluoromethane	113	4.827	4.827	(0.987)	210703	43.5929	43.59
$ 35 1,2-Dichloroethane-d4	65	5.171	5.175	(1.057)	289179	45.5039	45.50
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	915280	52.1215	52.12
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	332522	48.8548	48.85
38 Trichloroethene	130	5.861	5.861	(1.042)	73787	14.4536	14.45



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Sample Info: HS18111497-01;HS18111497-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121206.D

Date : 12-DEC-2018 12:20

Client ID: HS18111497-01

Instrument: VOA9.i

Sample Info: HS18111497-01;HS18111497-01;;;

Purge Volume: 5.0

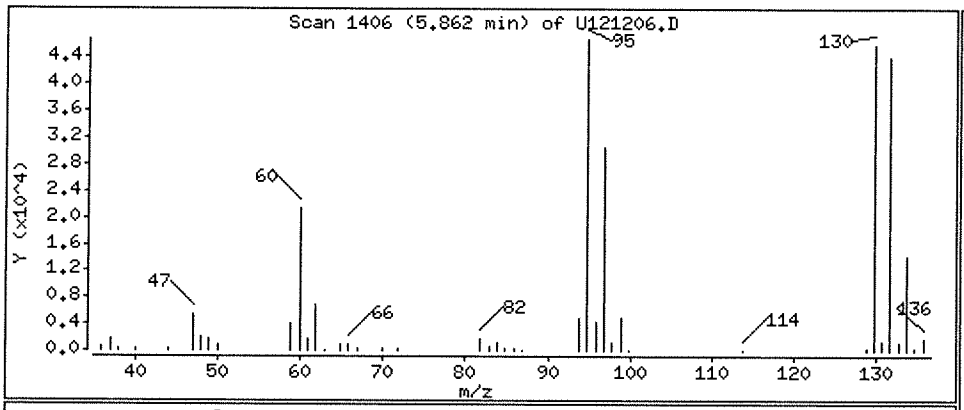
Operator: PC

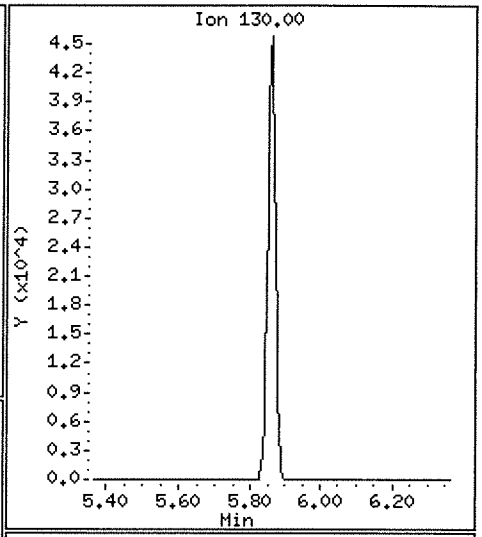
Column phase: DB624

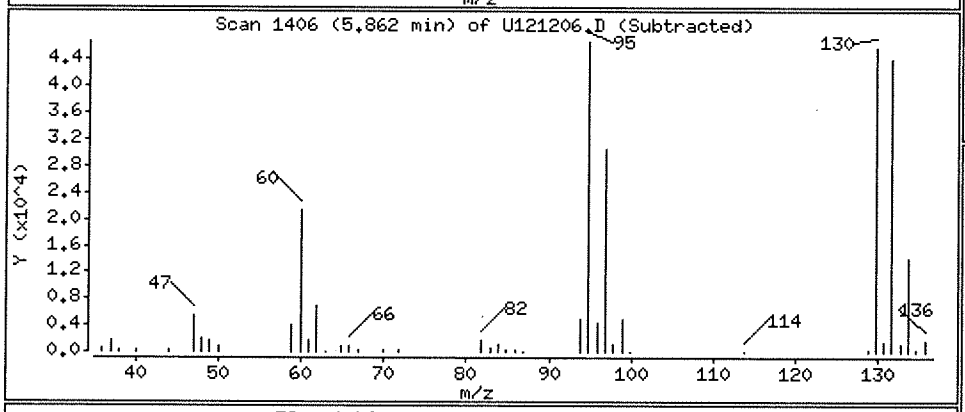
Column diameter: 0.18

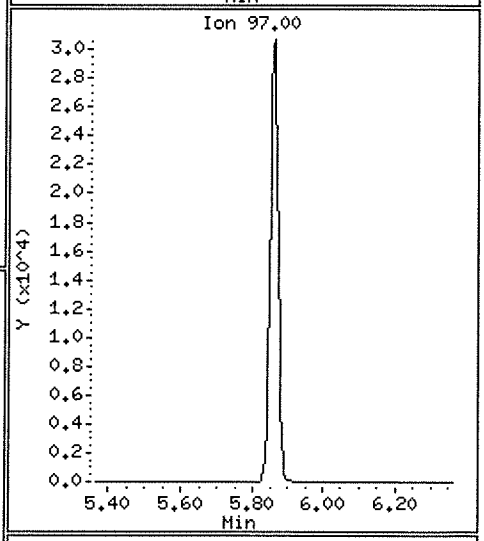
38 Trichloroethene

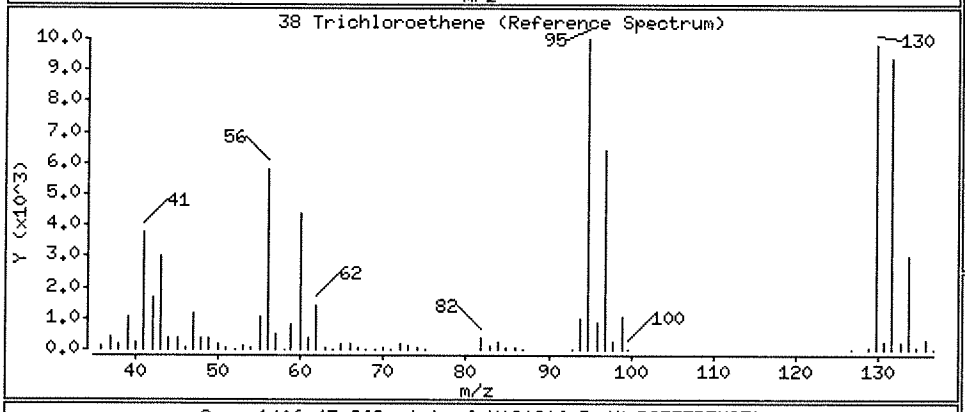
Concentration: 14.45 ug/l

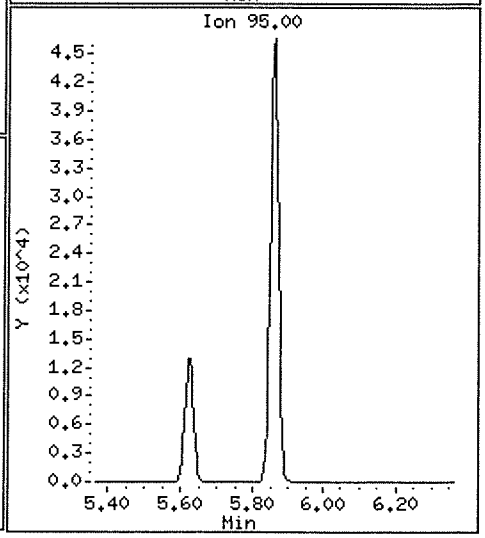


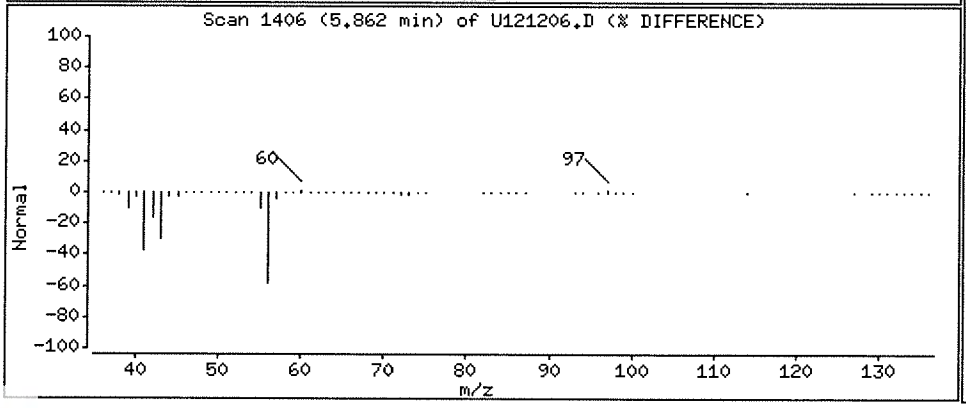












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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121207.D
Lab Smp Id: HS18111497-03 Client Smp ID: HS18111497-03
Inj Date : 12-DEC-2018 12:44
Operator : PC Inst ID: VOA9.i
Smp Info : HS18111497-03;HS18111497-03;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

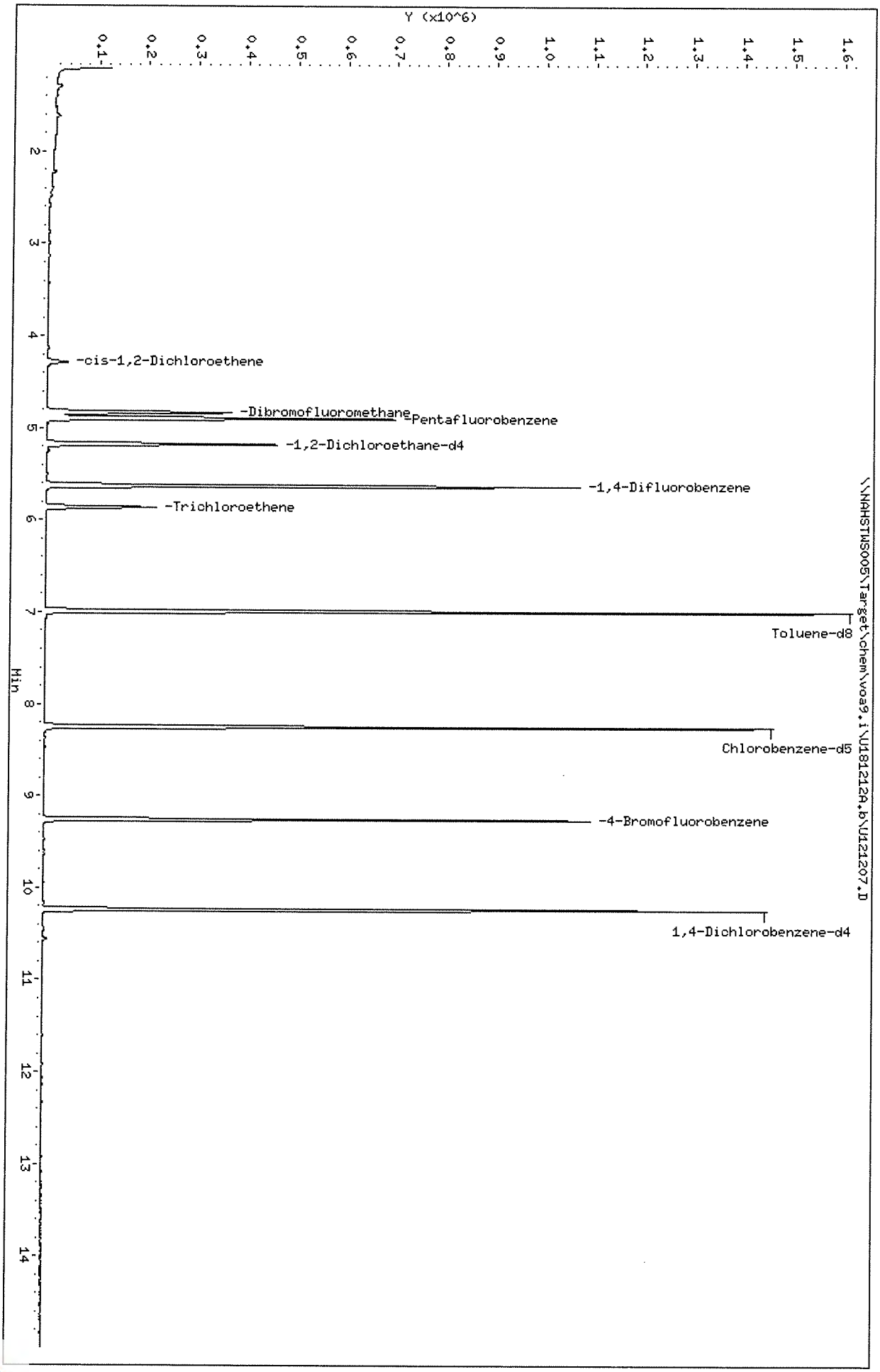
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	429766	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	766621	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	695650	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	319609	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.827	(0.986)	214902	43.3368	43.33
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	292375	44.8248	44.82
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	936894	52.7852	52.78
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	339727	49.3741	49.37
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	19271	3.16452	3.16(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	64880	12.4202	12.42

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121207.D
Date : 12-DEC-2018 12:44
Client ID: HS18111497-03
Sample Info: HS18111497-03;HS18111497-03;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121207.D

Date : 12-DEC-2018 12:44

Client ID: HS18111497-03

Instrument: VOA9.i

Sample Info: HS18111497-03;HS18111497-03;;;

Purge Volume: 5.0

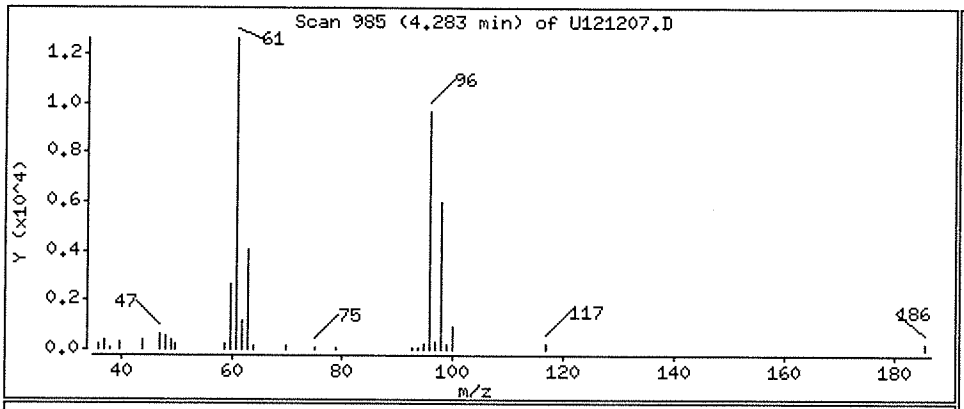
Operator: PC

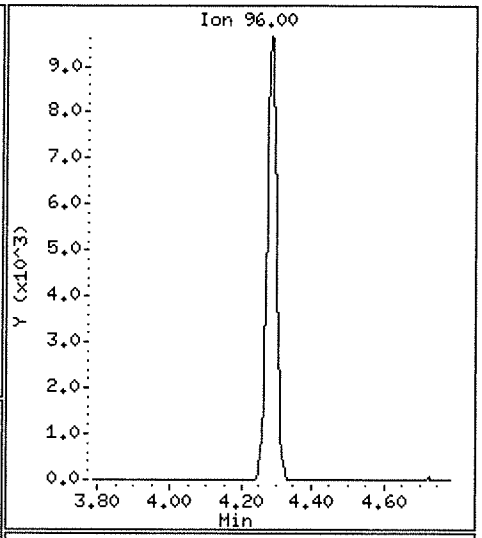
Column phase: DB624

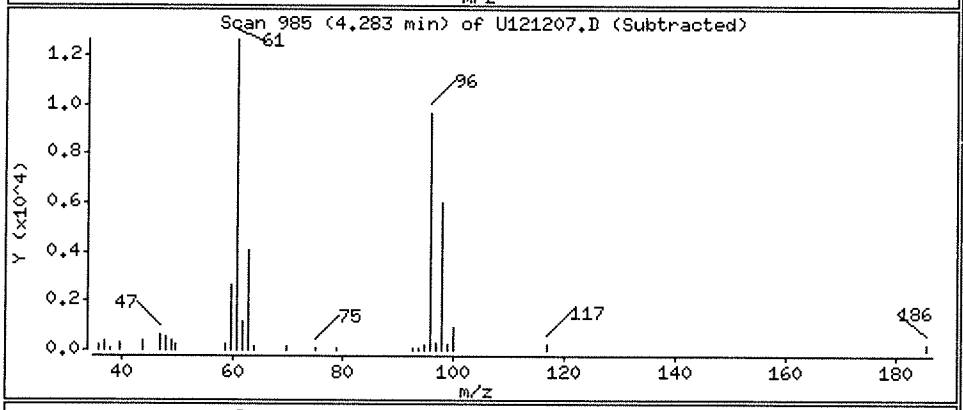
Column diameter: 0.18

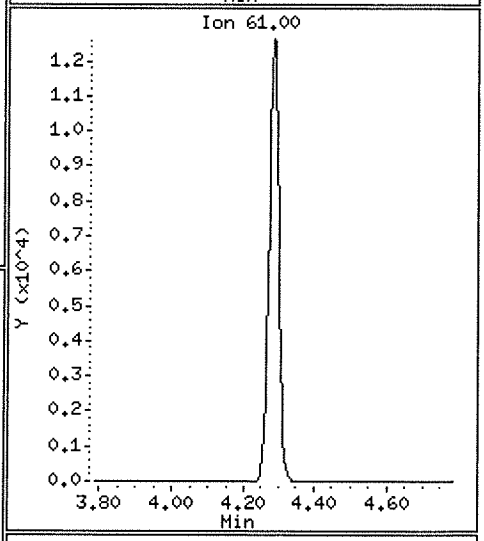
27 cis-1,2-Dichloroethene

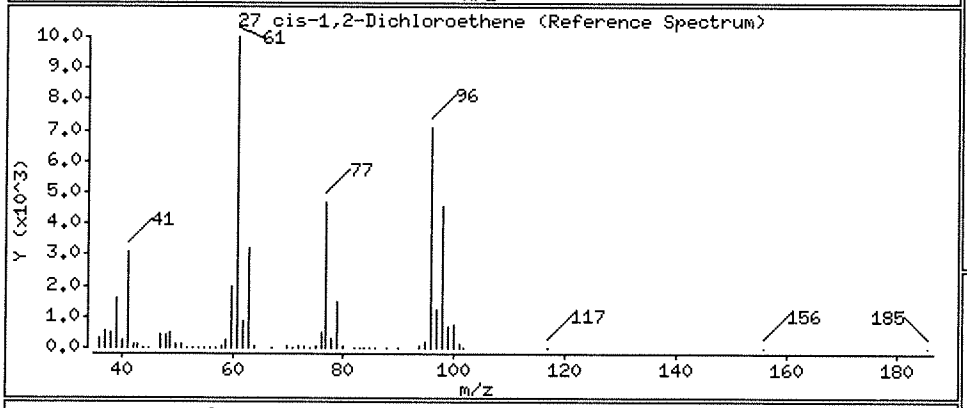
Concentration: 3.16 ug/l

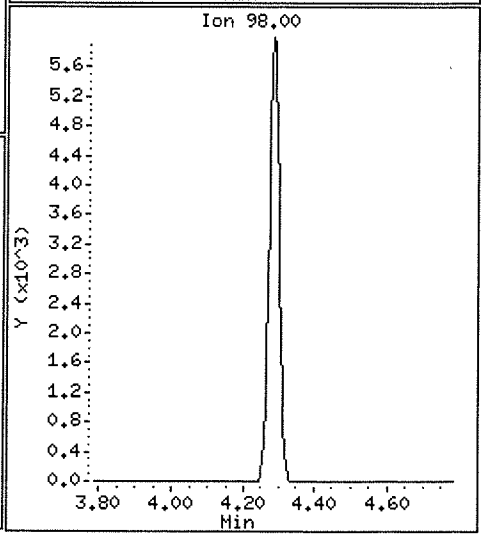


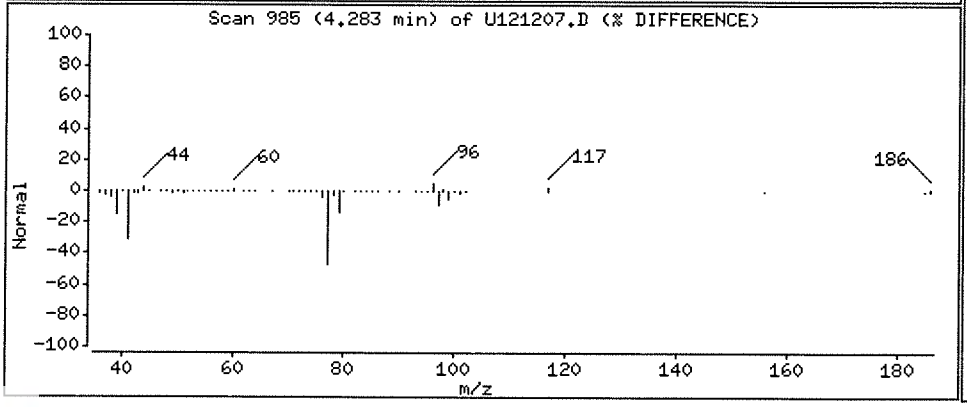












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121207.D

Date : 12-DEC-2018 12:44

Client ID: HS18111497-03

Instrument: VOA9.i

Sample Info: HS18111497-03;HS18111497-03;;;

Purge Volume: 5.0

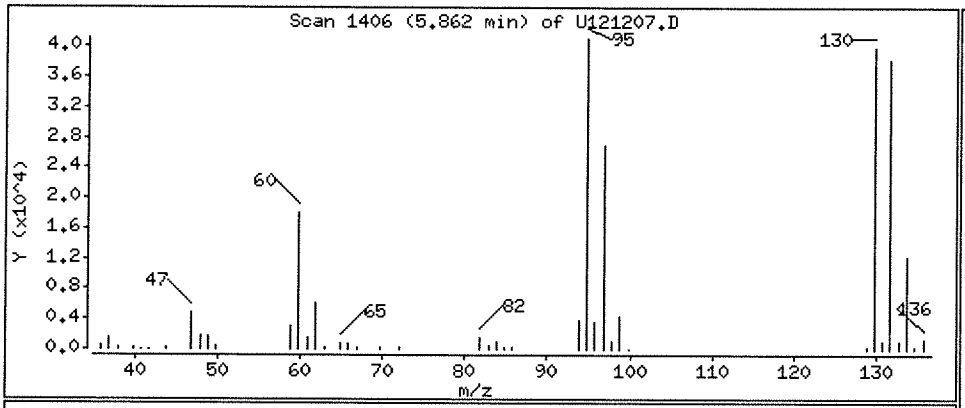
Operator: PC

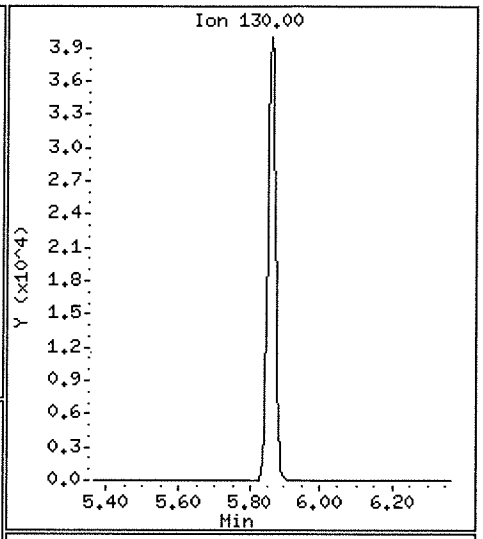
Column phase: DB624

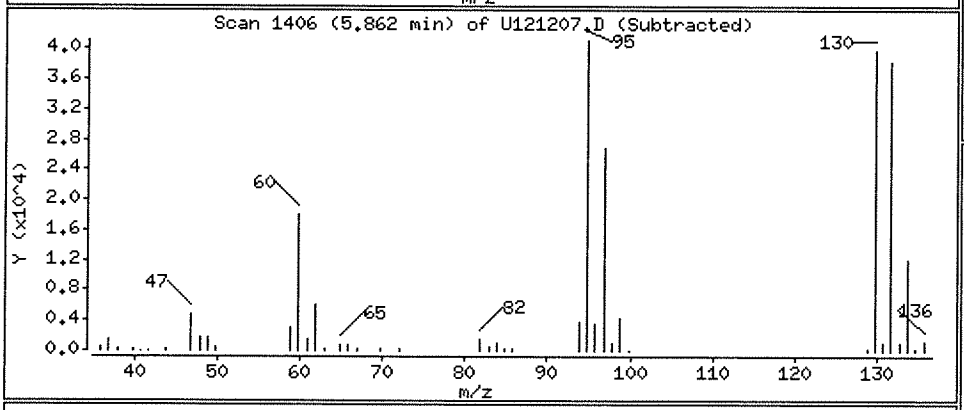
Column diameter: 0.18

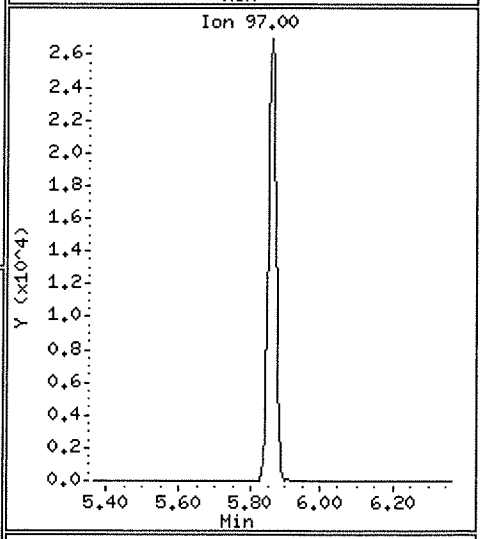
38 Trichloroethene

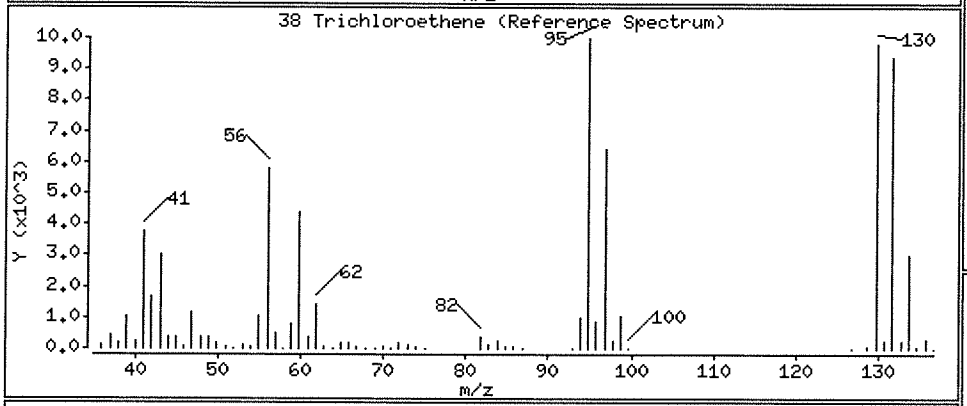
Concentration: 12.42 ug/l

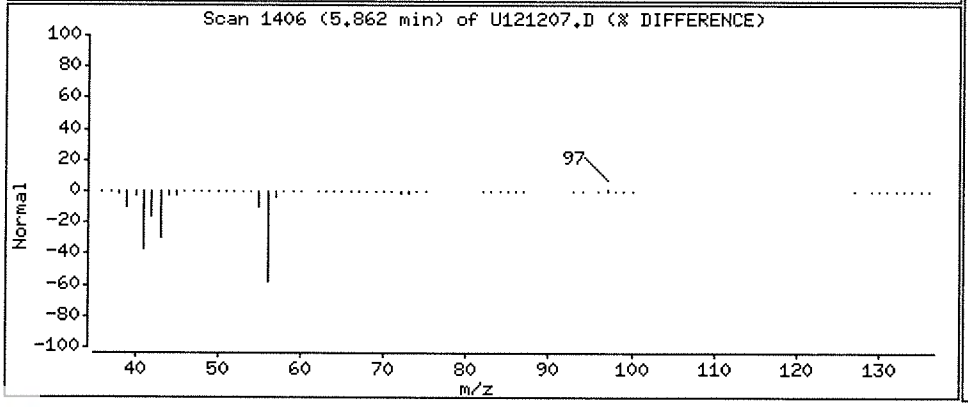


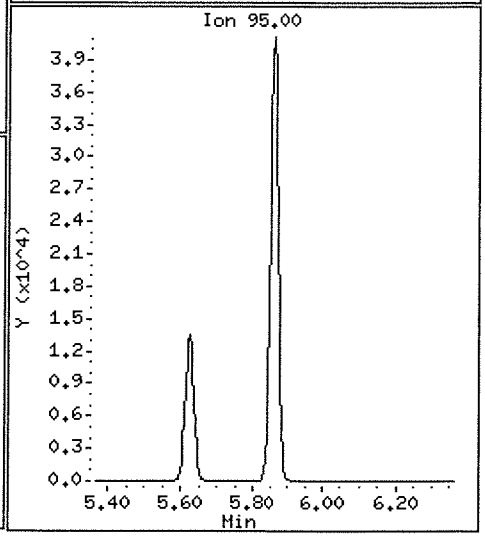












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121212.D
Lab Smp Id: HS18111497-02 Client Smp ID: HS18111497-02
Inj Date : 12-DEC-2018 14:48
Operator : PC Inst ID: VOA9.i
Smp Info : HS18111497-02;HS18111497-02;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

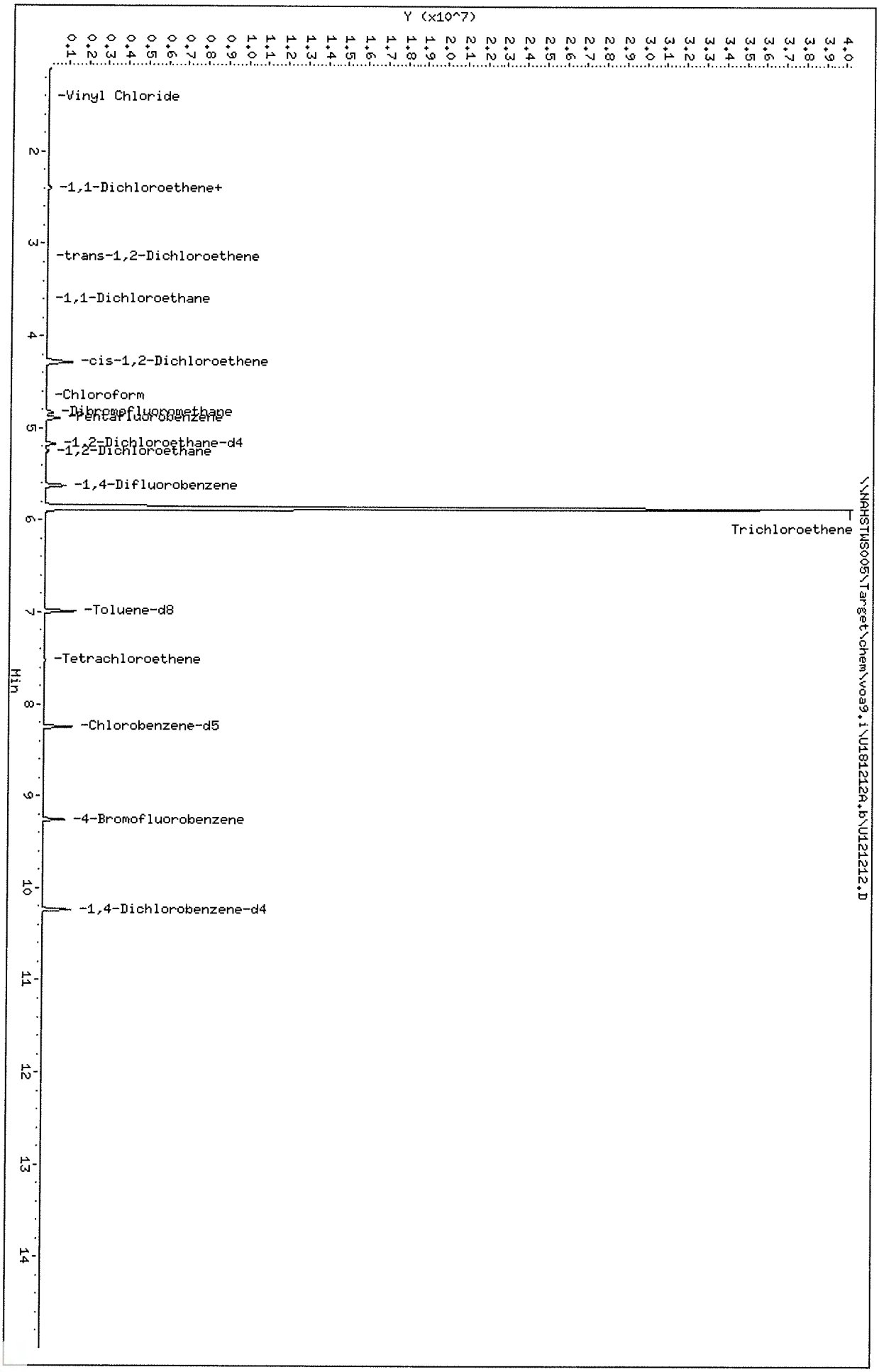
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.894	4.894	(1.000)	415962	50.0000	
*	36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	744627	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	669230	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	308782	50.0000	
$	30 Dibromofluoromethane	113	4.827	4.827	(0.986)	210607	43.8959	43.89
$	35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	285709	45.2736	45.27
$	48 Toluene-d8	98	6.990	6.990	(0.847)	893224	52.2962	52.29
$	69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	326572	49.3351	49.33
	138 Freon TF	101	2.397	2.397	(0.490)	25342	6.08165	6.08
	22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	22667	2.37797	2.37(a)
	11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	25351	5.39932	5.39
	33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	97327	12.4907	12.49
	28 Chloroform	83	4.654	4.654	(0.951)	9675	1.01023	1.01(a)
	27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	608064	103.165	103.16
	56 Tetrachloroethene	164	7.522	7.526	(0.912)	16088	4.58911	4.58(a)
	20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	4799	0.93261	0.93(a)
	38 Trichloroethene	130	5.865	5.861	(1.043)	11716285	2309.14	2309.14(A)
	5 Vinyl Chloride	62	1.415	1.415	(0.289)	5947	1.37620	1.37(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.



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Date : 12-DEC-2018 14:48
Client ID: HS18111497-02
Sample Info: HS18111497-02;HS18111497-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121212.D

Date : 12-DEC-2018 14:48

Client ID: HS18111497-02

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

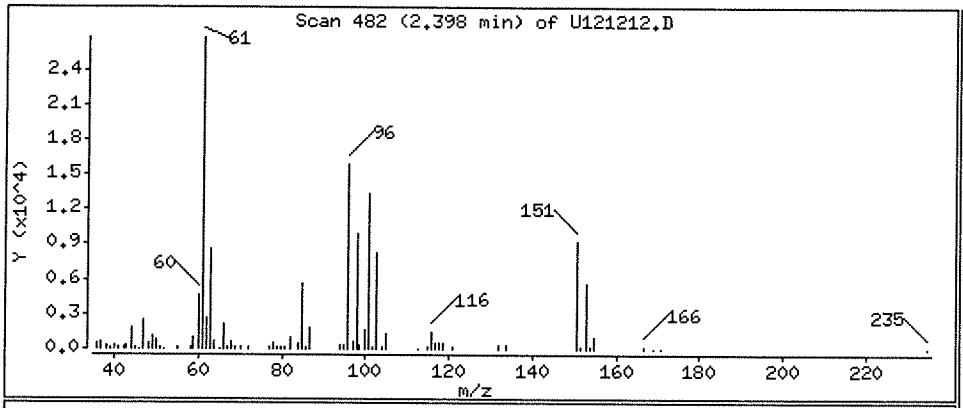
Operator: PC

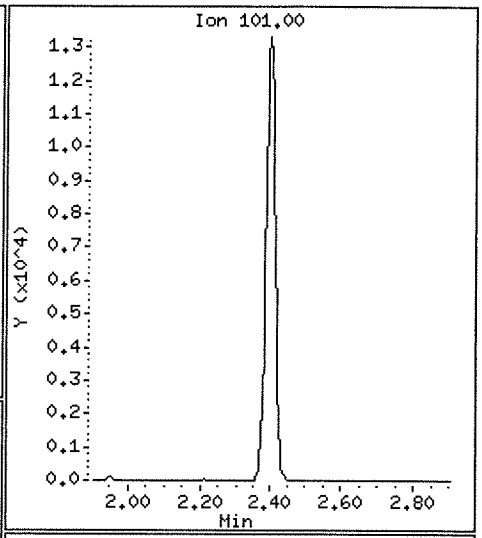
Column phase: DB624

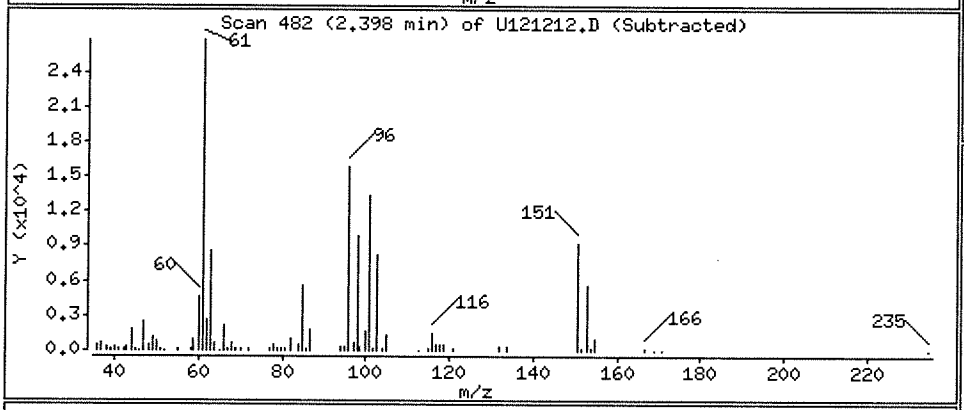
Column diameter: 0.18

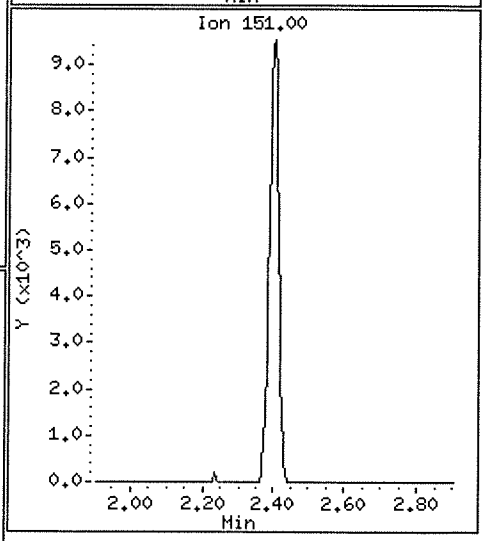
138 Freon TF

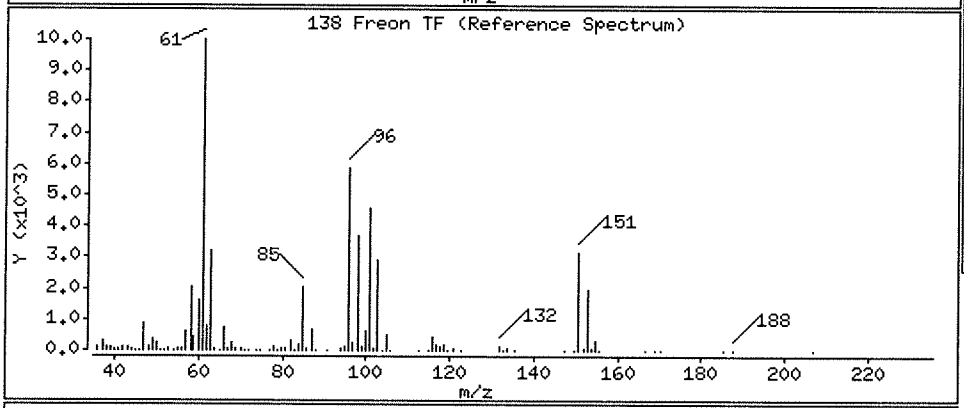
Concentration: 6.08 ug/l

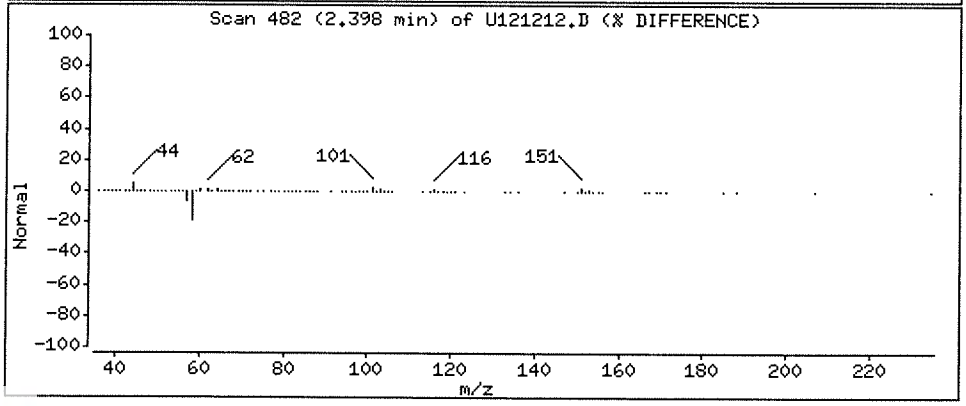












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121212.D

Date : 12-DEC-2018 14:48

Client ID: HS18111497-02

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

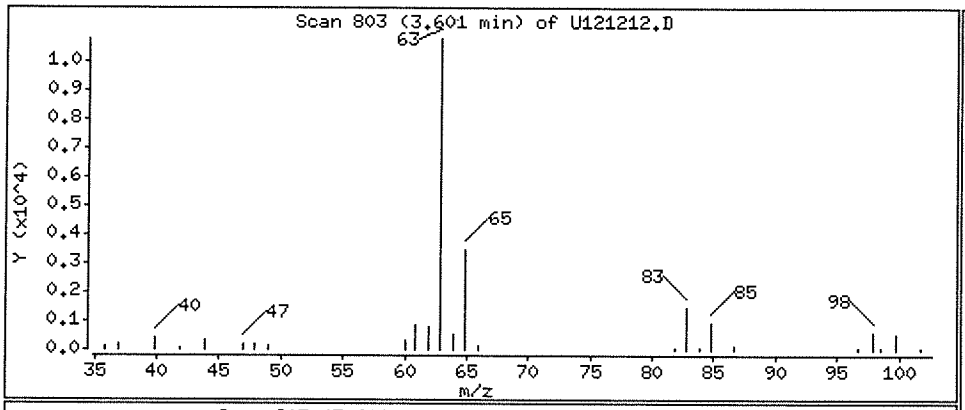
Operator: PC

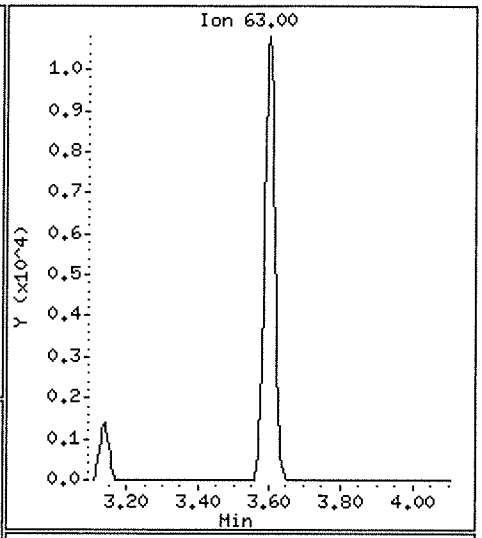
Column phase: DB624

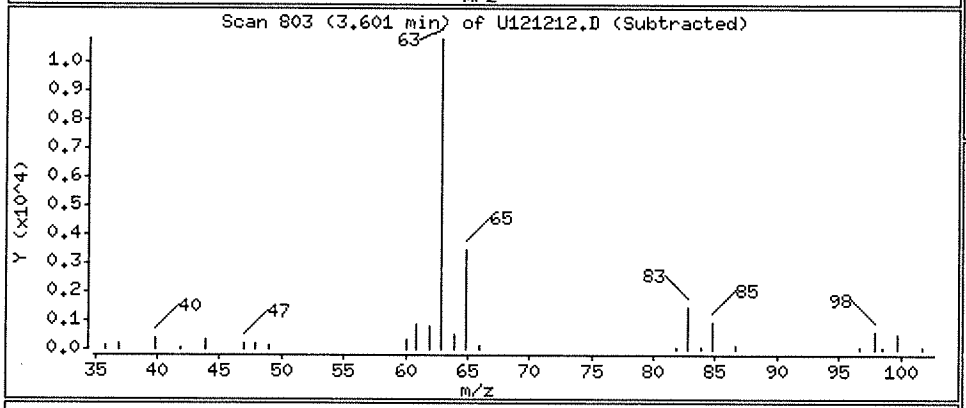
Column diameter: 0.18

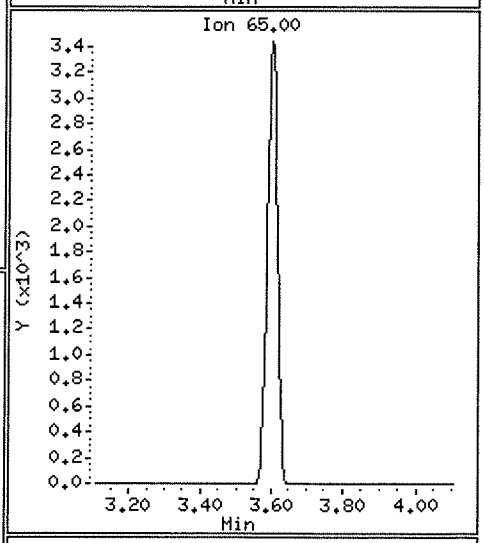
22 1,1-Dichloroethane

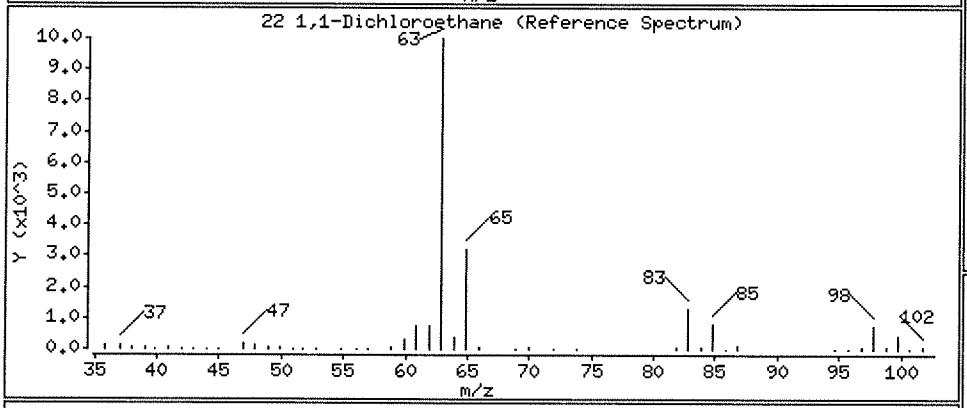
Concentration: 2.37 ug/l

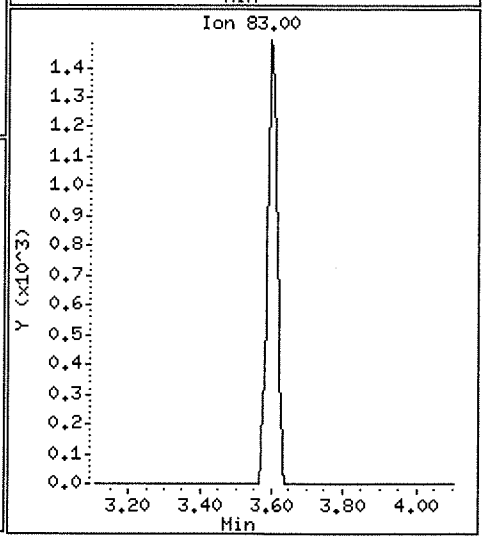


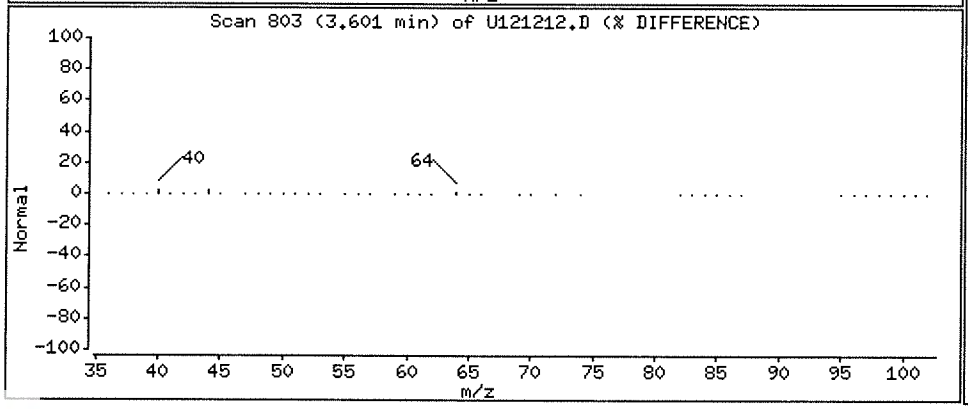












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121212.D

Date : 12-DEC-2018 14:48

Client ID: HS18111497-02

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

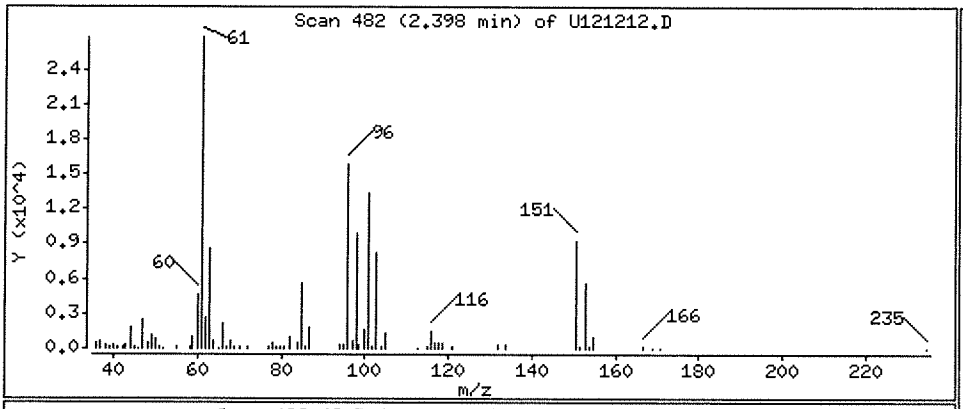
Operator: PC

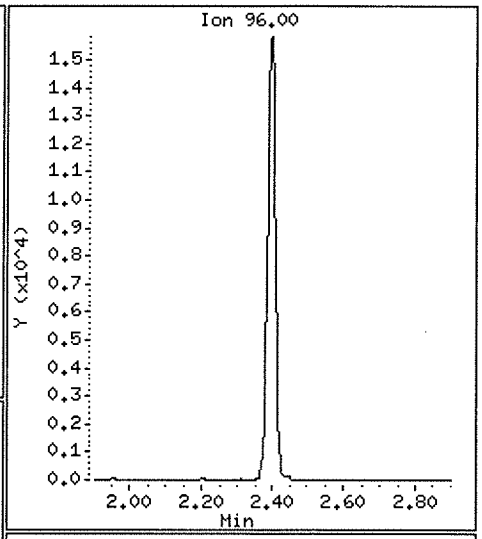
Column phase: DB624

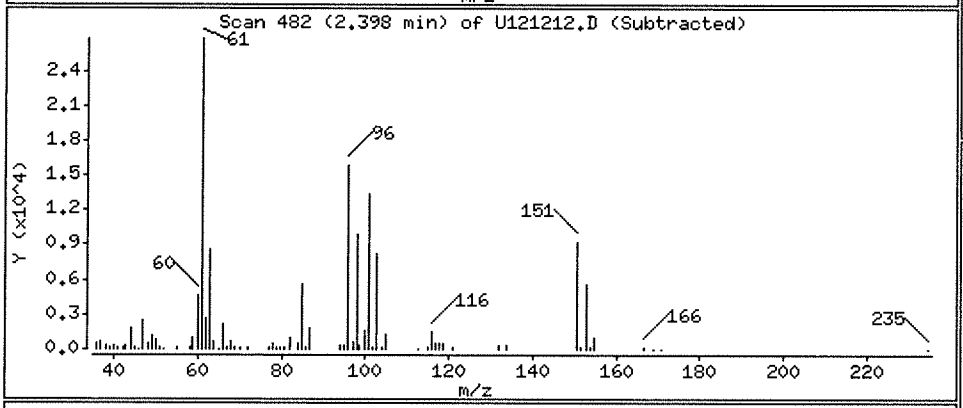
Column diameter: 0.18

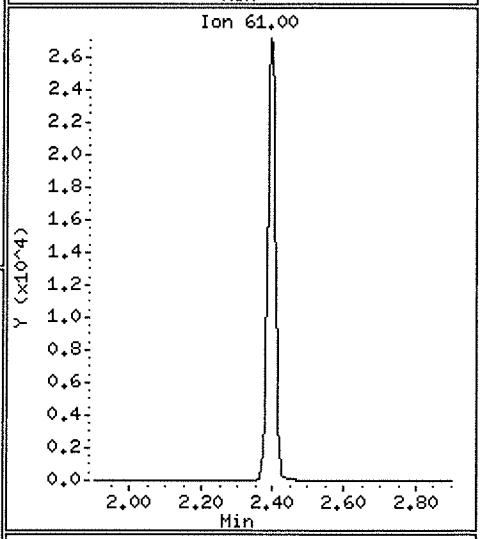
11 1,1-Dichloroethene

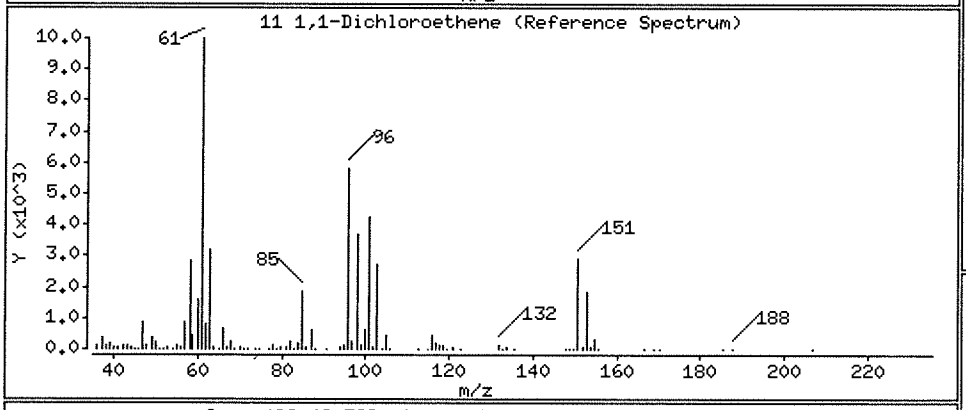
Concentration: 5.39 ug/l

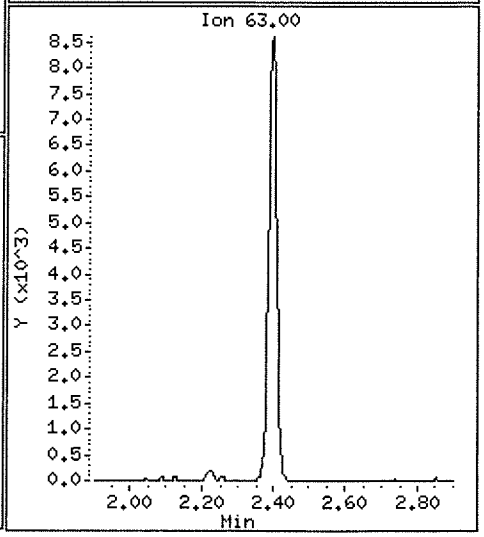


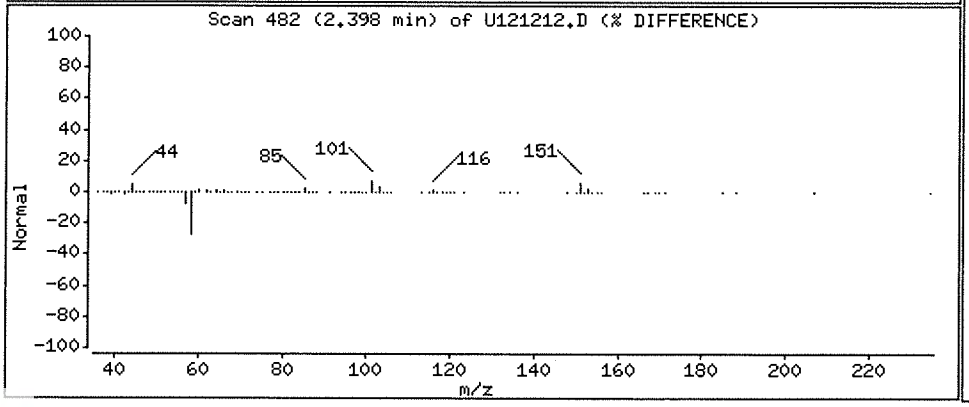












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121212.D

Date : 12-DEC-2018 14:48

Client ID: HS18111497-02

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

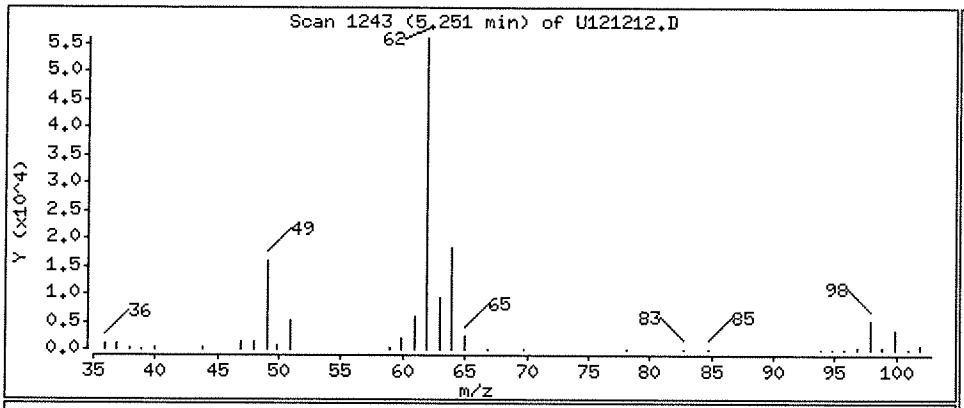
Operator: PC

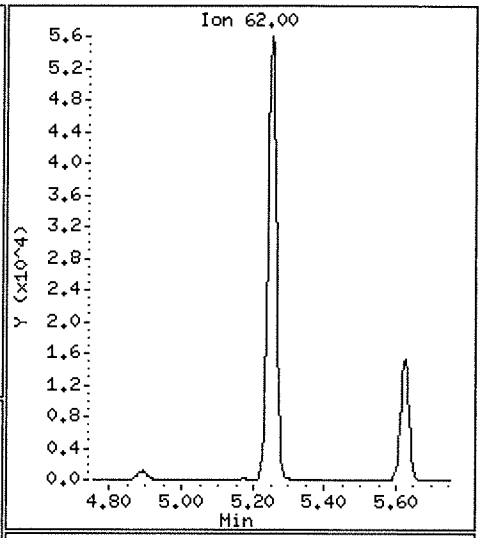
Column phase: DB624

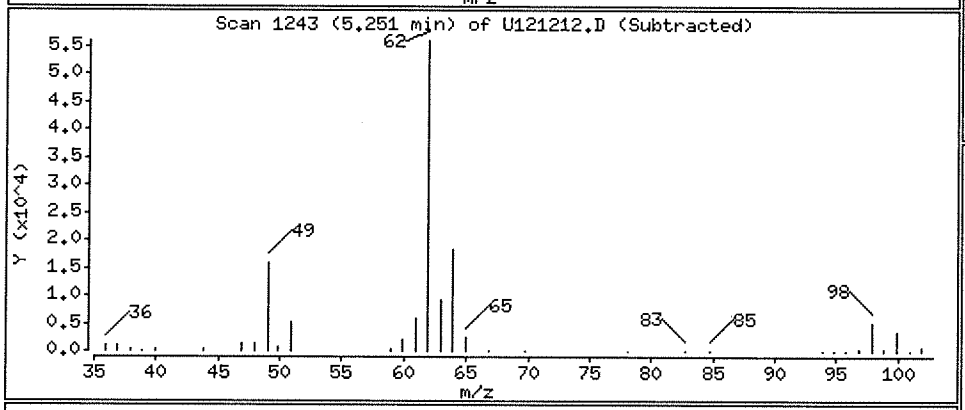
Column diameter: 0.18

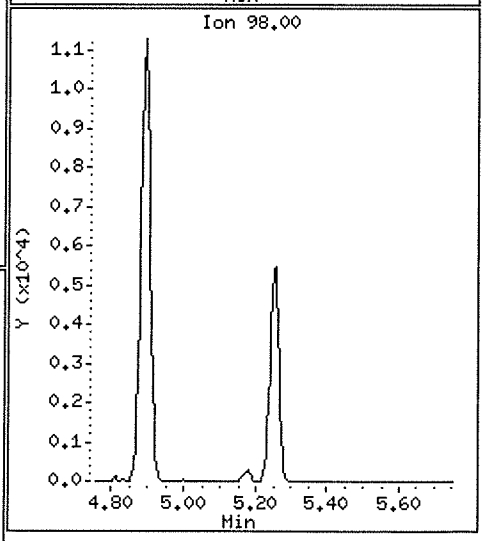
33 1,2-Dichloroethane

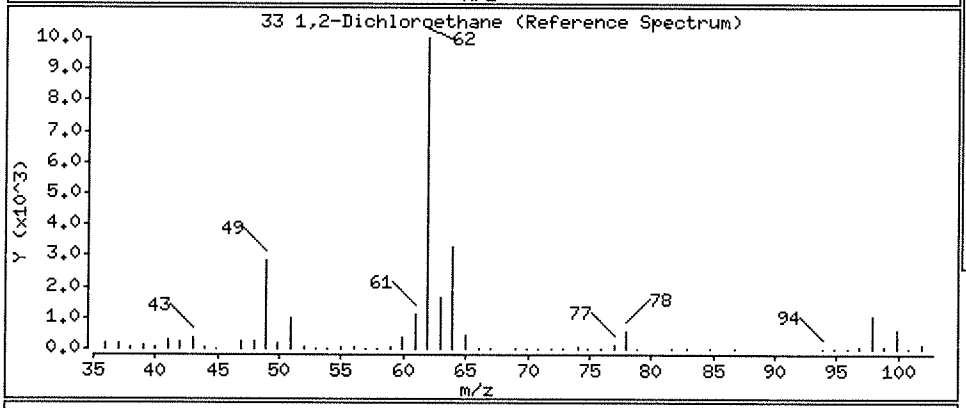
Concentration: 12.49 ug/l

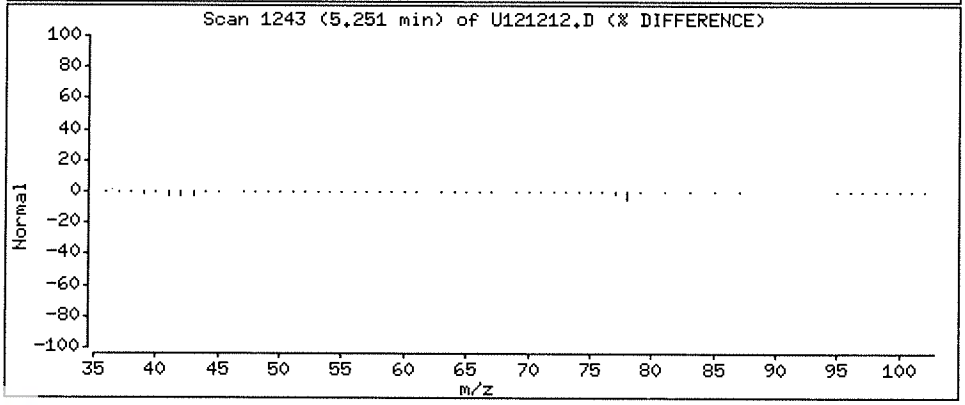












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Date : 12-DEC-2018 14:48

Client ID: HS18111497-02

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

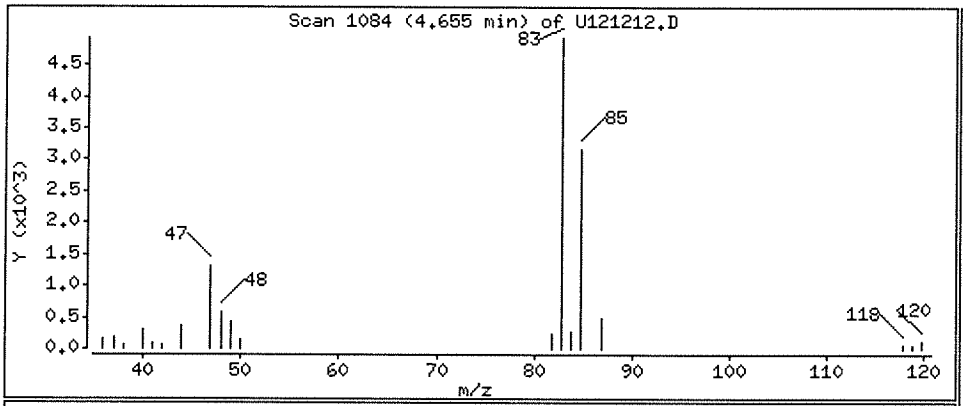
Operator: PC

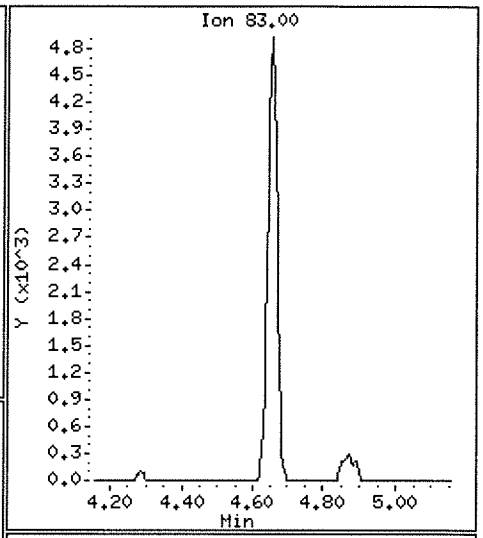
Column phase: DB624

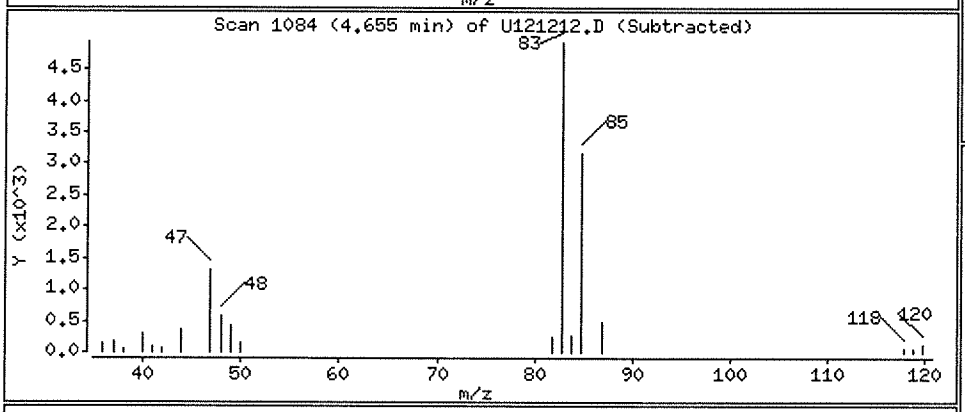
Column diameter: 0.18

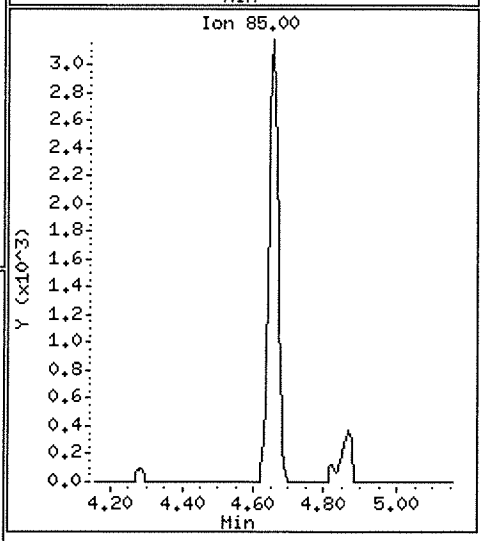
28 Chloroform

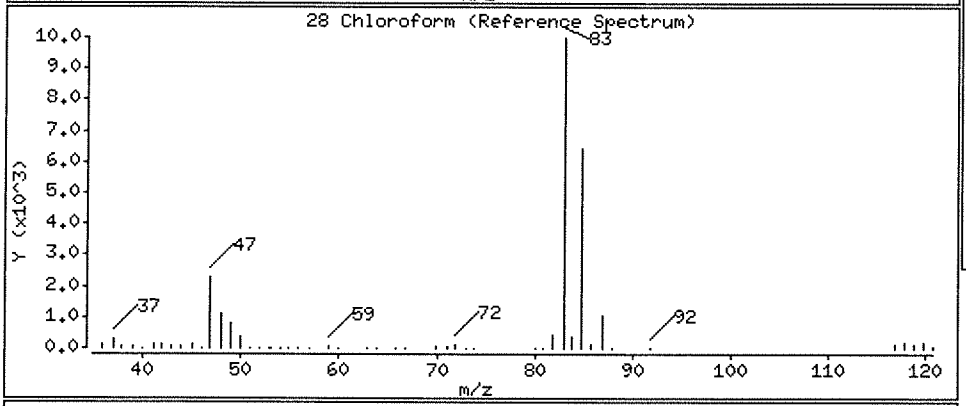
Concentration: 1.01 ug/l

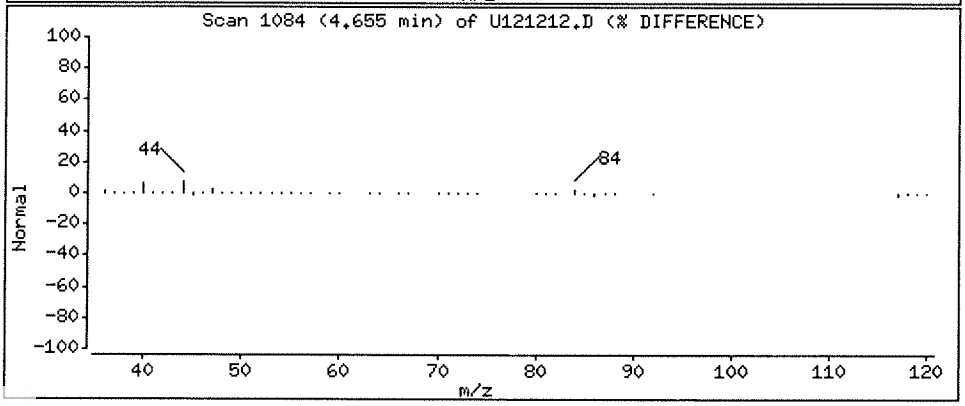












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Date : 12-DEC-2018 14:48

Client ID: HS18111497-02

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

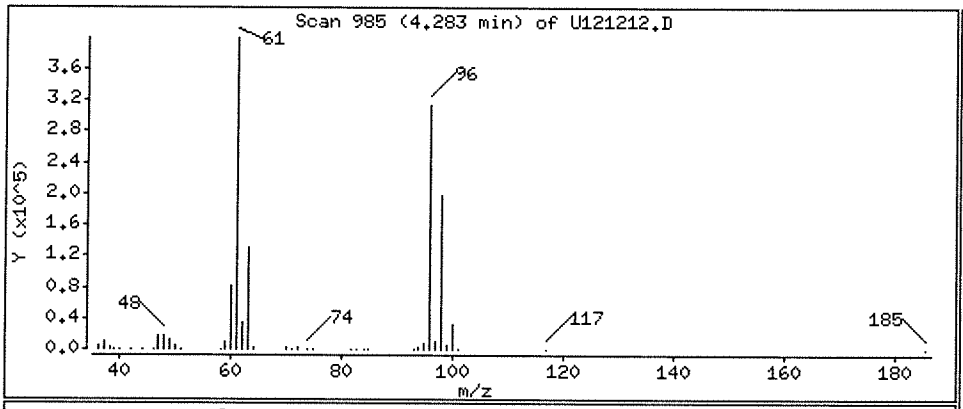
Operator: PC

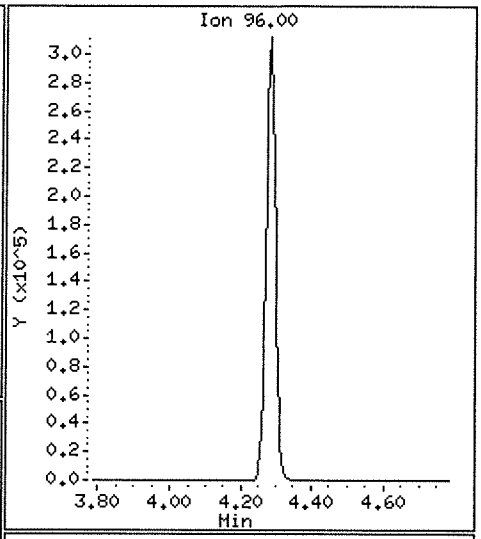
Column phase: DB624

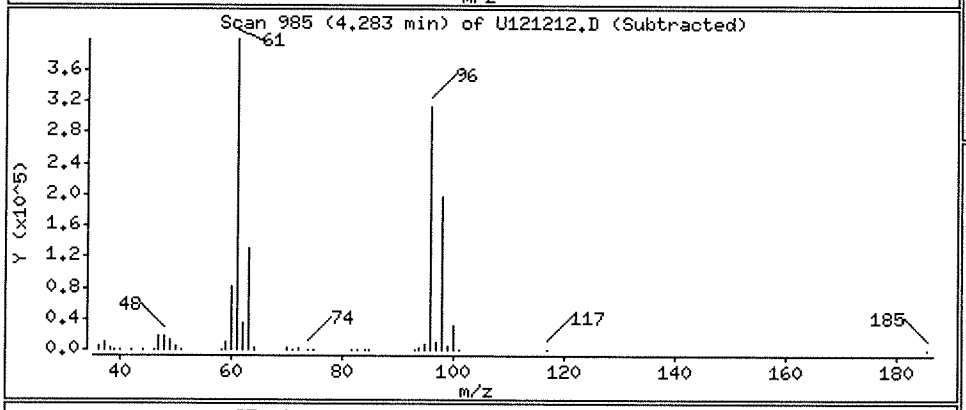
Column diameter: 0.18

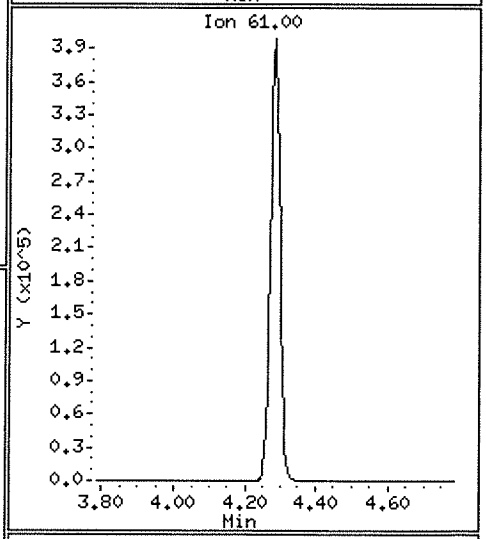
27 cis-1,2-Dichloroethene

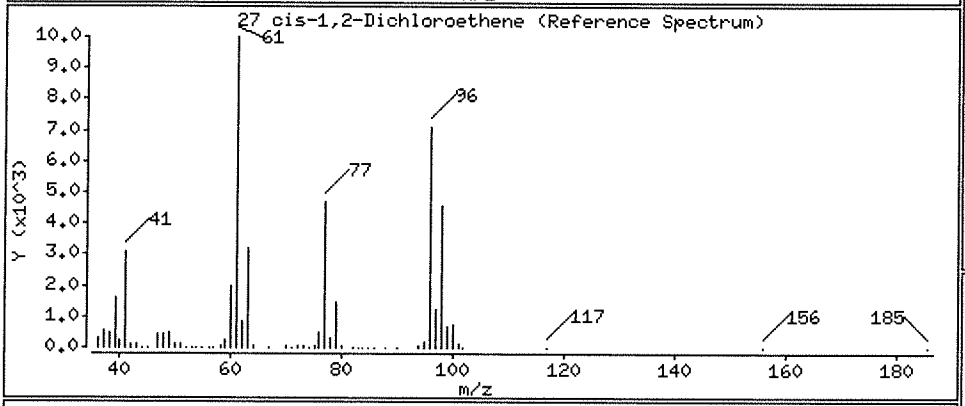
Concentration: 103.16 ug/l

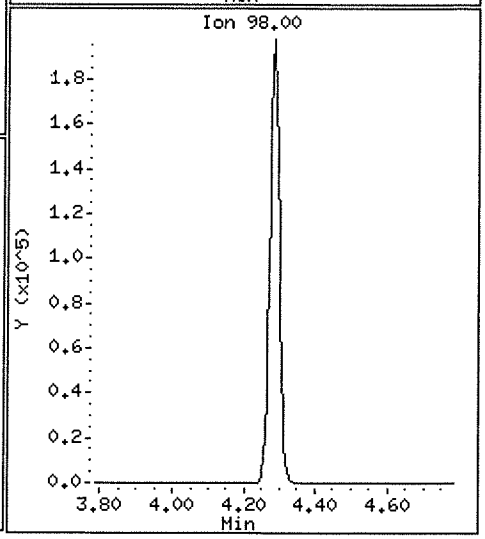


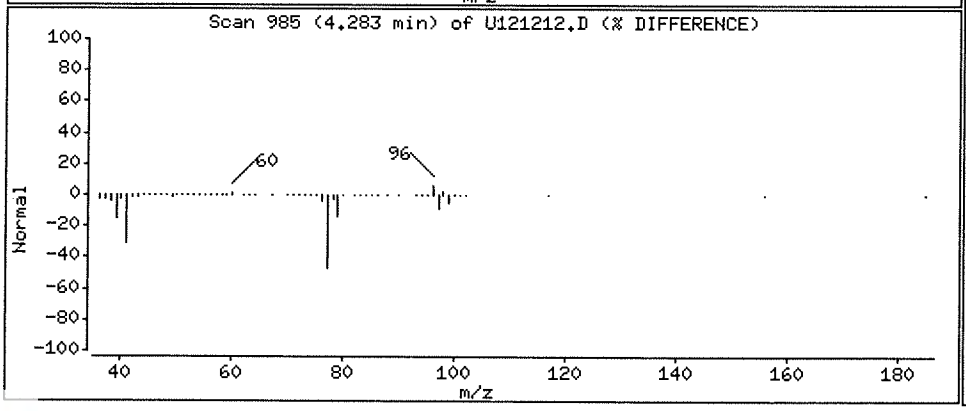












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Date : 12-DEC-2018 14:48

Client ID: HS18111497-02

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

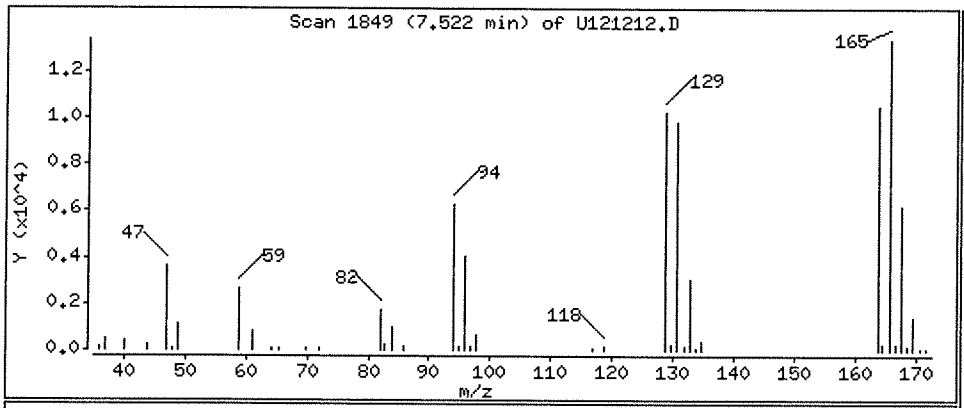
Operator: PC

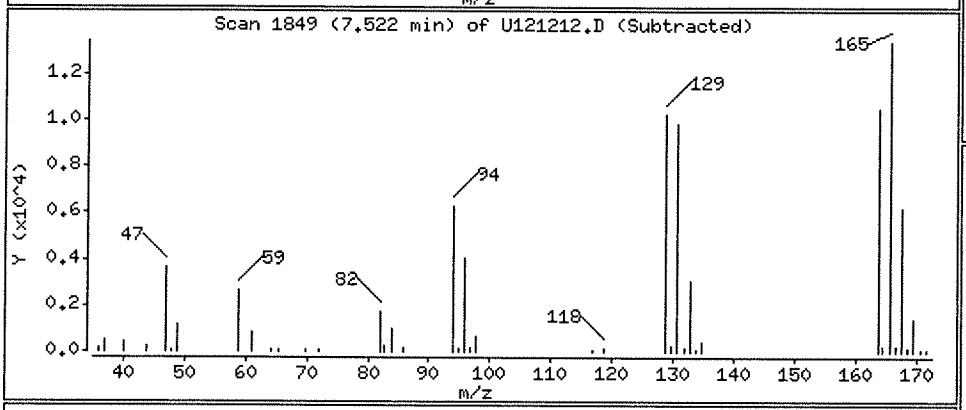
Column phase: DB624

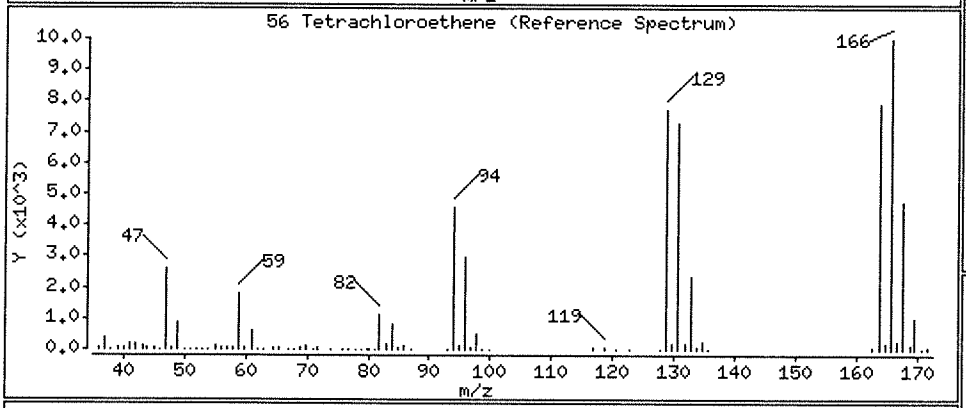
Column diameter: 0.18

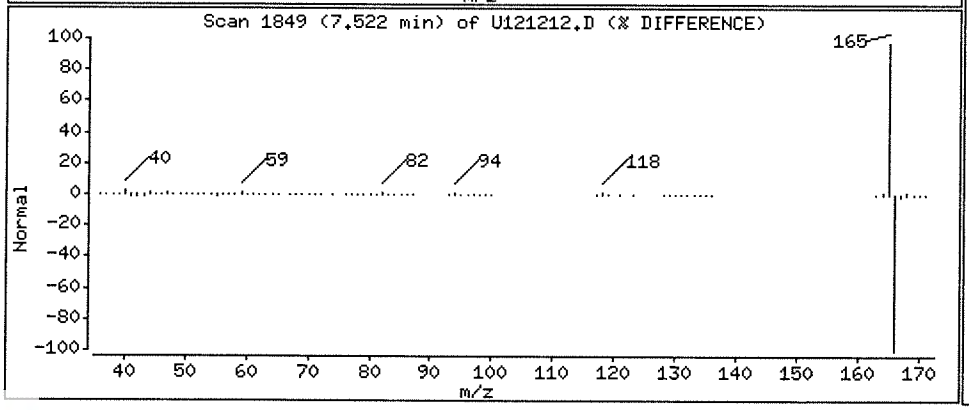
56 Tetrachloroethene

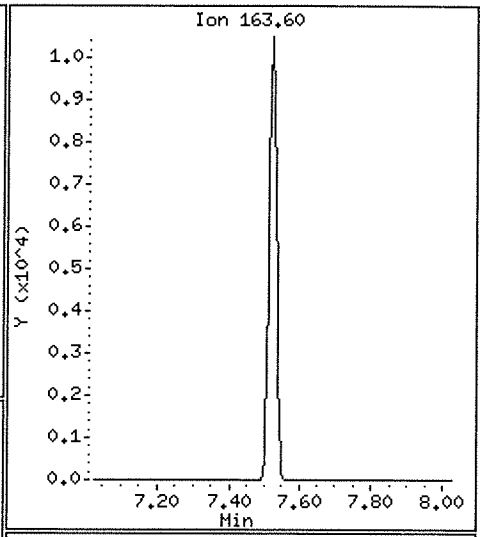
Concentration: 4.58 ug/l

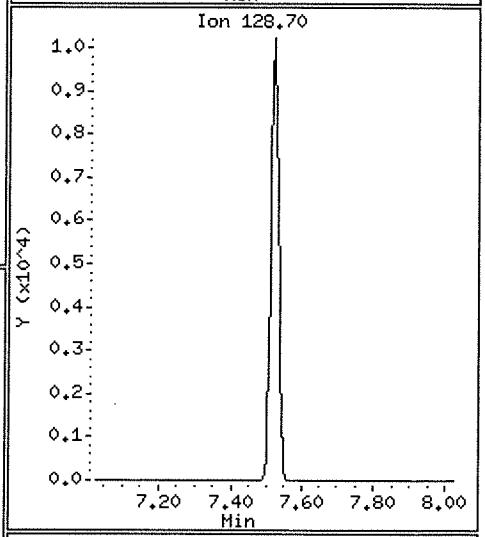


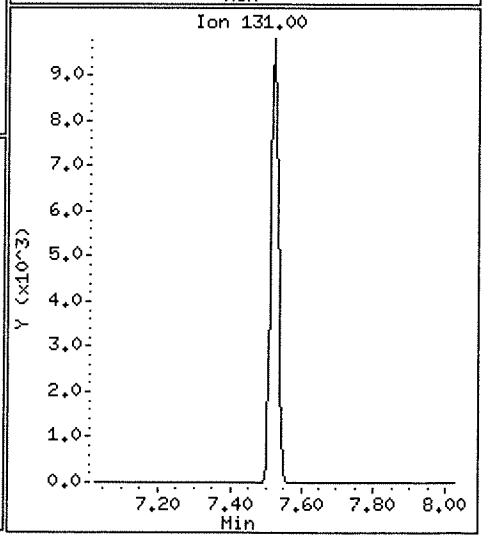












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121212.D Page 11

Date : 12-DEC-2018 14:48

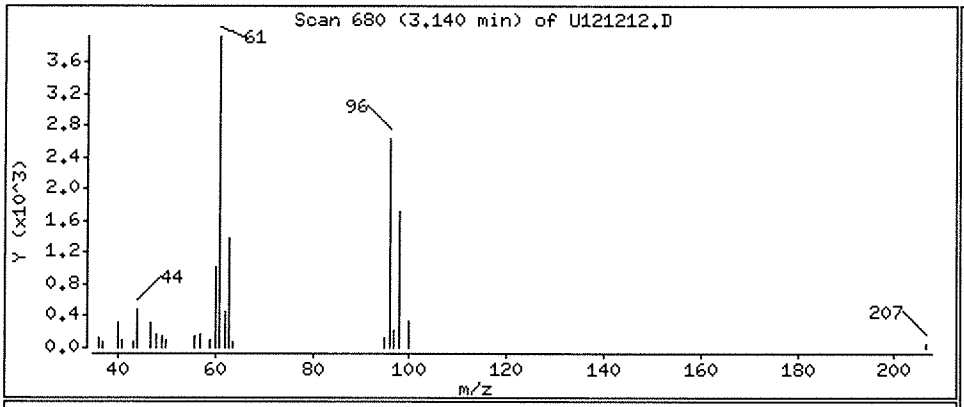
Client ID: HS18111497-02 Instrument: VOA9.i

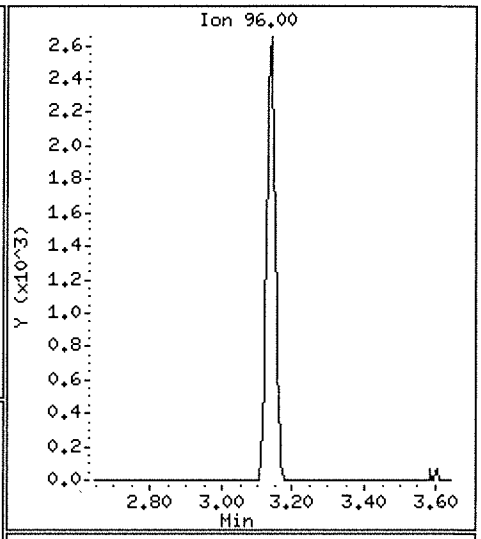
Sample Info: HS18111497-02;HS18111497-02;;;

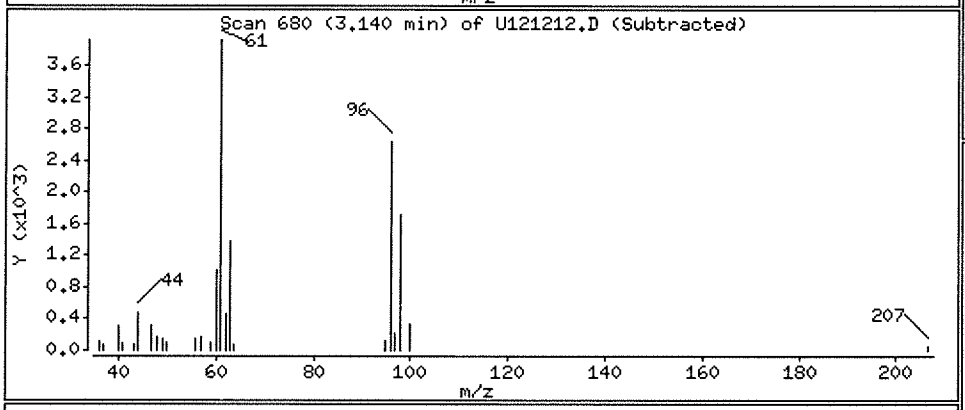
Purge Volume: 5.0 Operator: PC

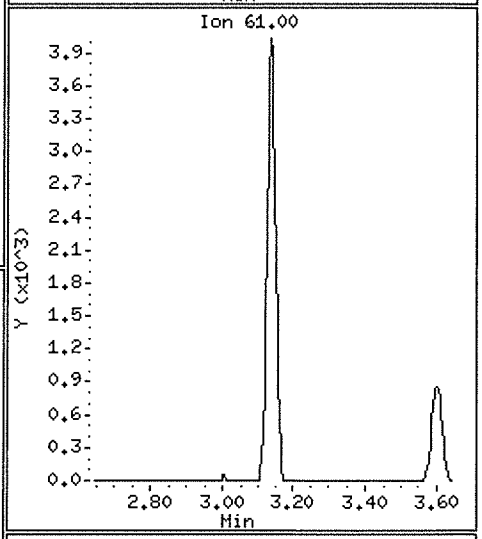
Column phase: DB624 Column diameter: 0.18

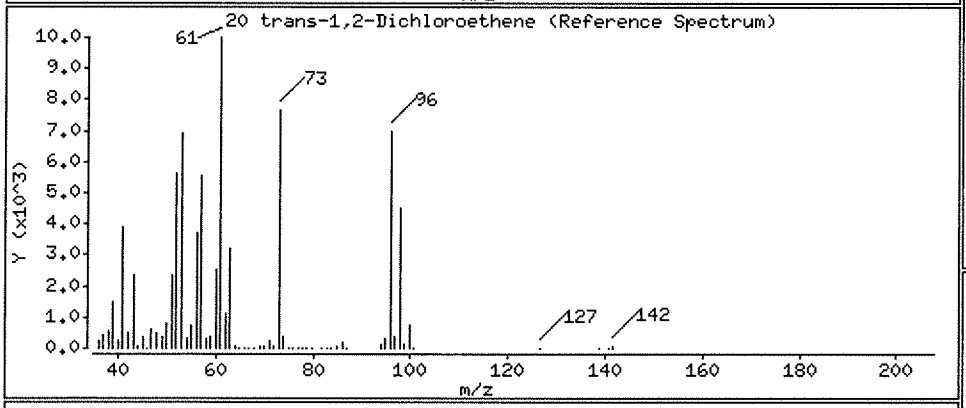
20 trans-1,2-Dichloroethene Concentration: 0.93 ug/l

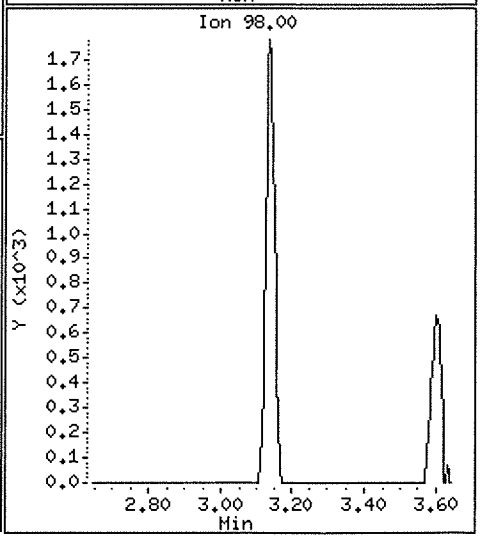


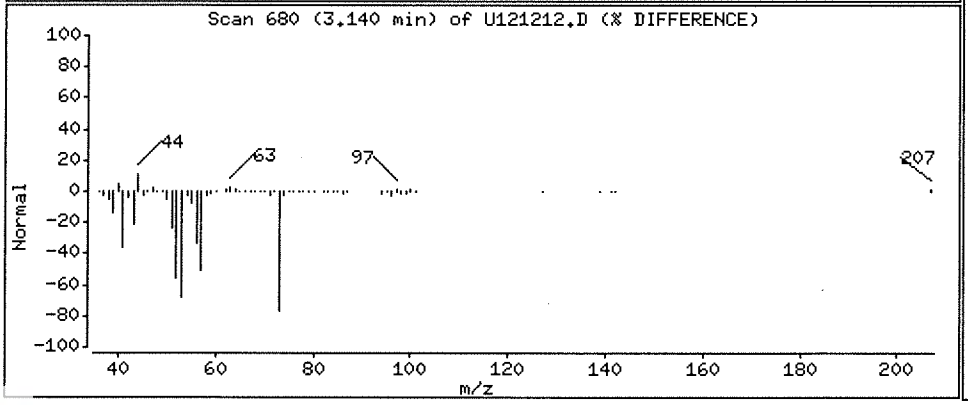












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Date : 12-DEC-2018 14:48

Client ID: HS18111497-02

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

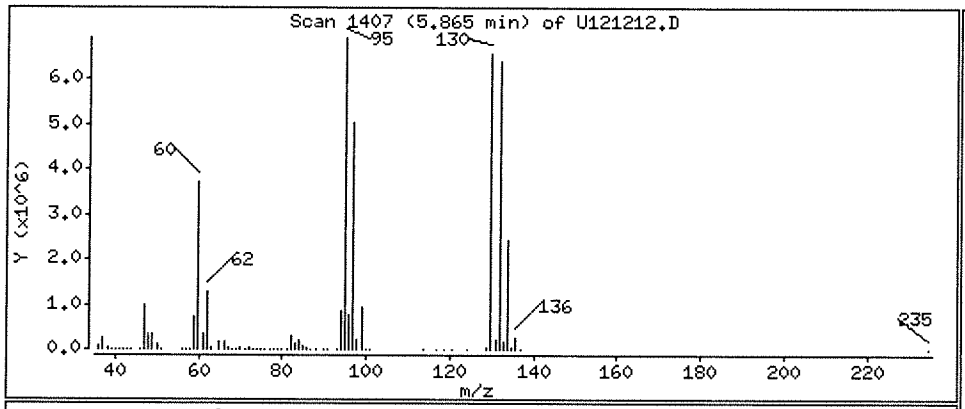
Operator: PC

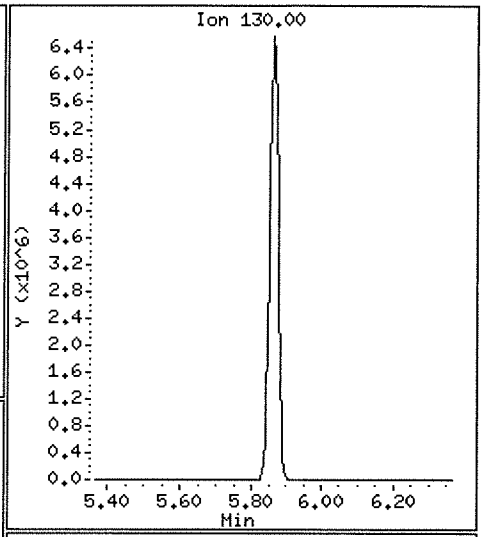
Column phase: DB624

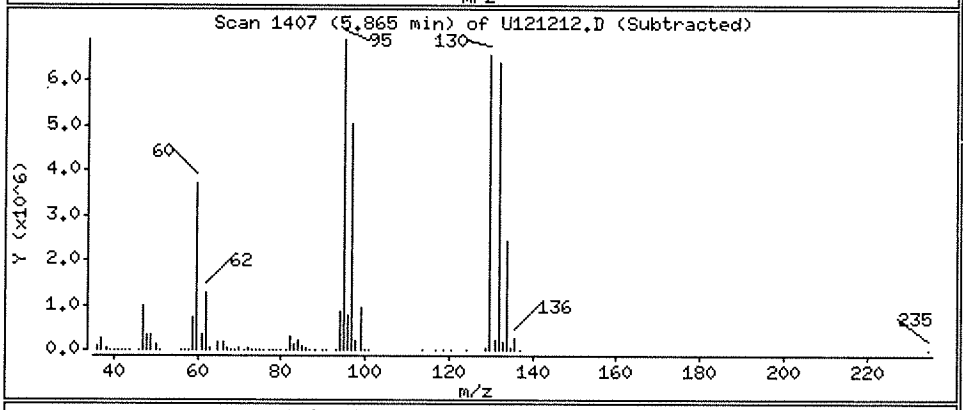
Column diameter: 0.18

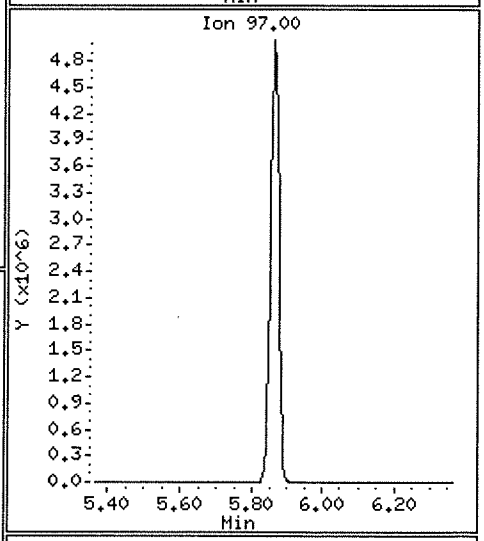
38 Trichloroethene

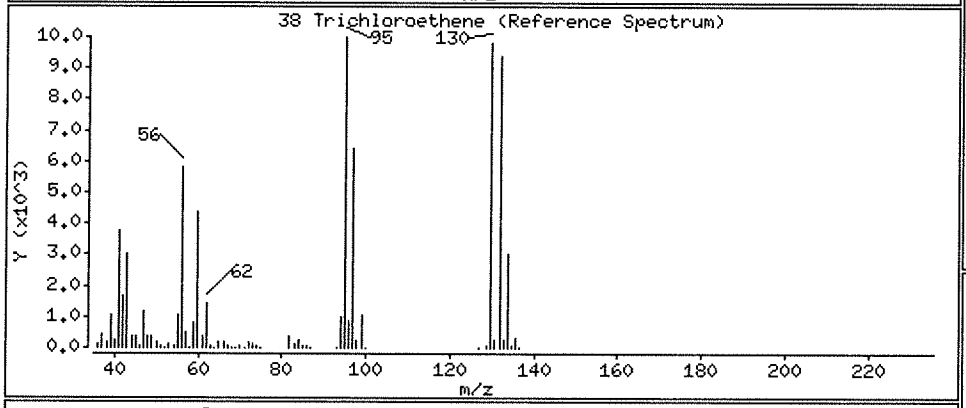
Concentration: 2309.14 ug/l

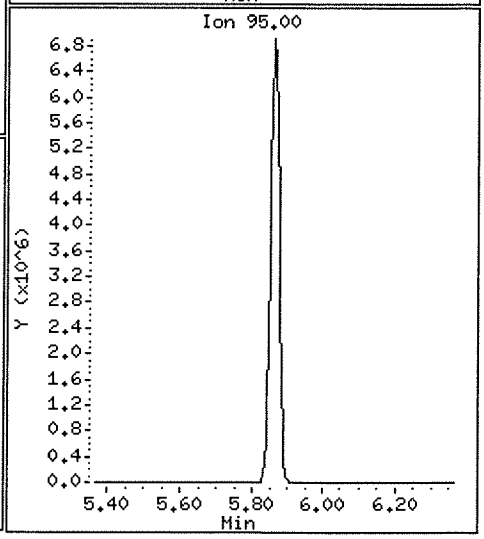


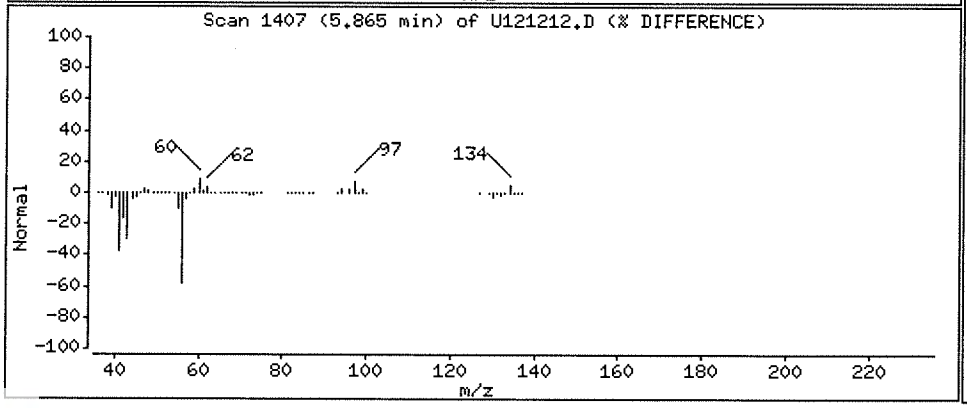












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121212.D

Date : 12-DEC-2018 14:48

Client ID: HS18111497-02

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

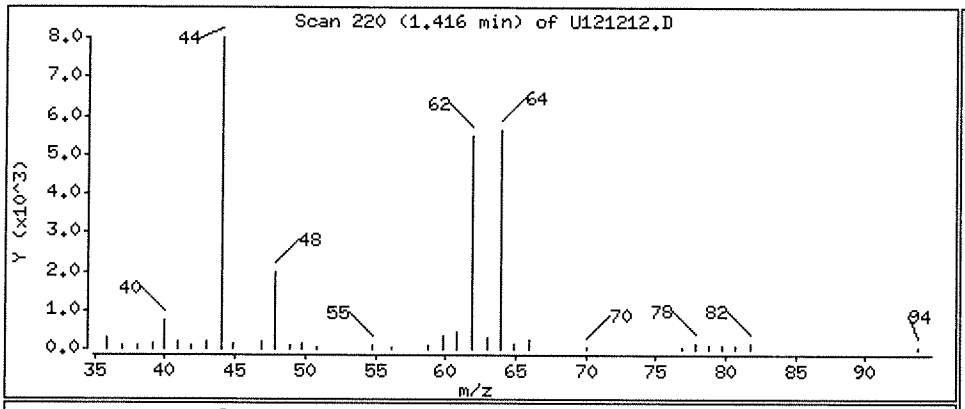
Operator: PC

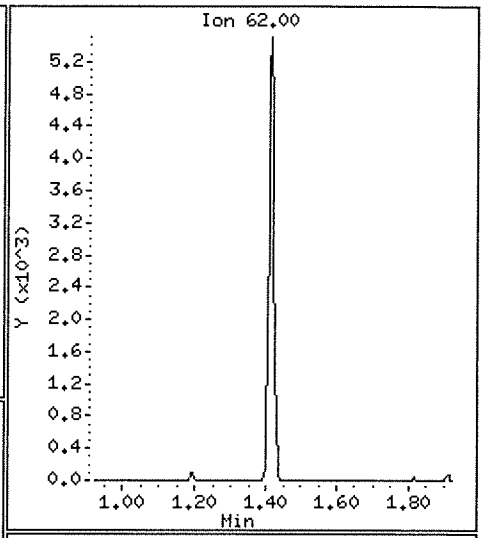
Column phase: DB624

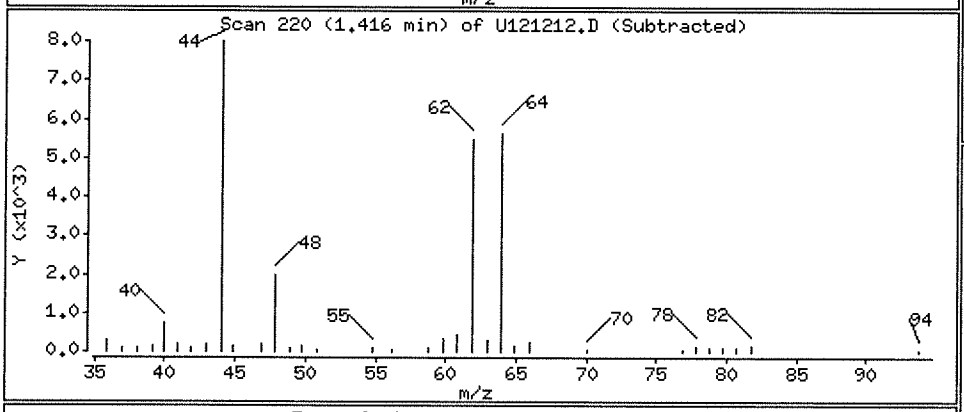
Column diameter: 0.18

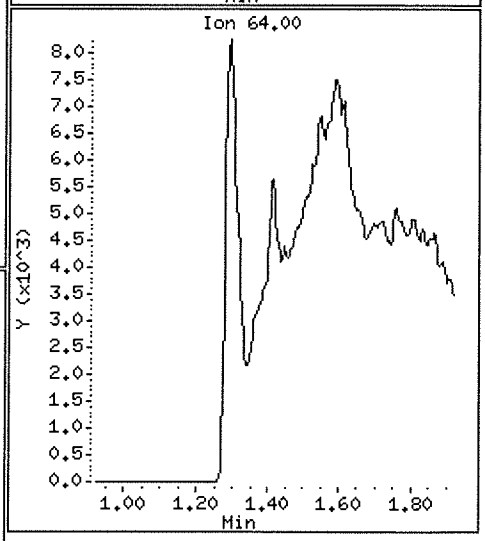
5 Vinyl Chloride

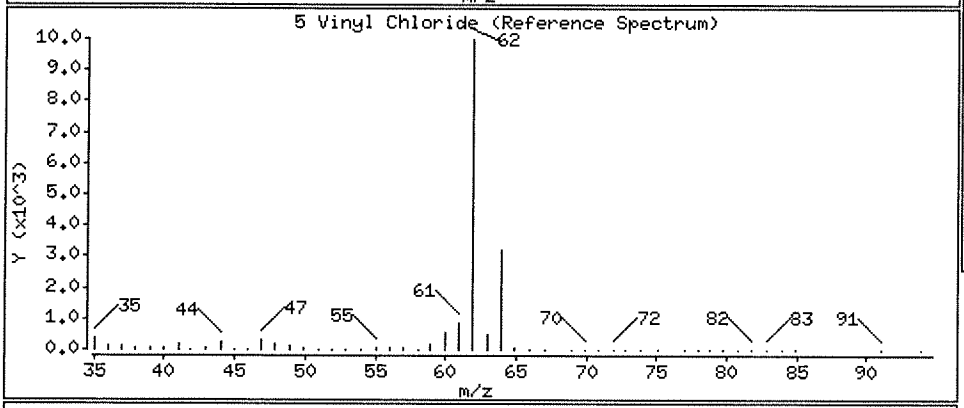
Concentration: 1.37 ug/l

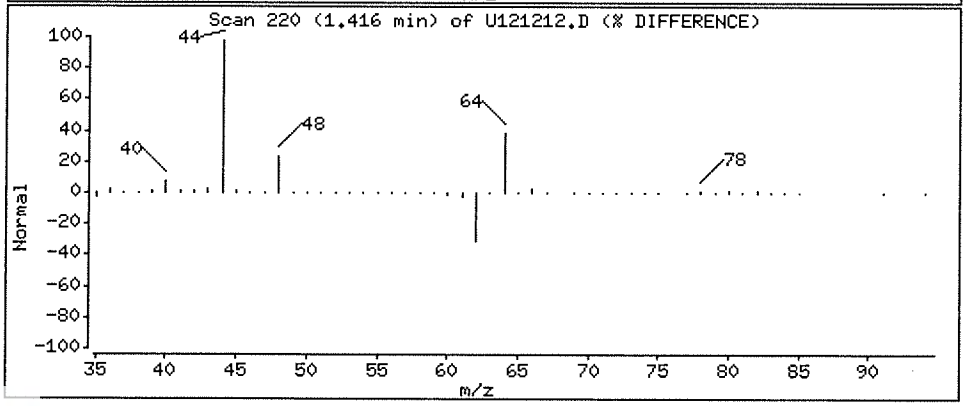












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121213.D
Lab Smp Id: HS18111538-04MS Client Smp ID: HS18111538-04MS
Inj Date : 12-DEC-2018 15:13
Operator : PC Inst ID: VOA9.i
Smp Info : HS18111538-04MS;HS18111538-04MS;3;;MS
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

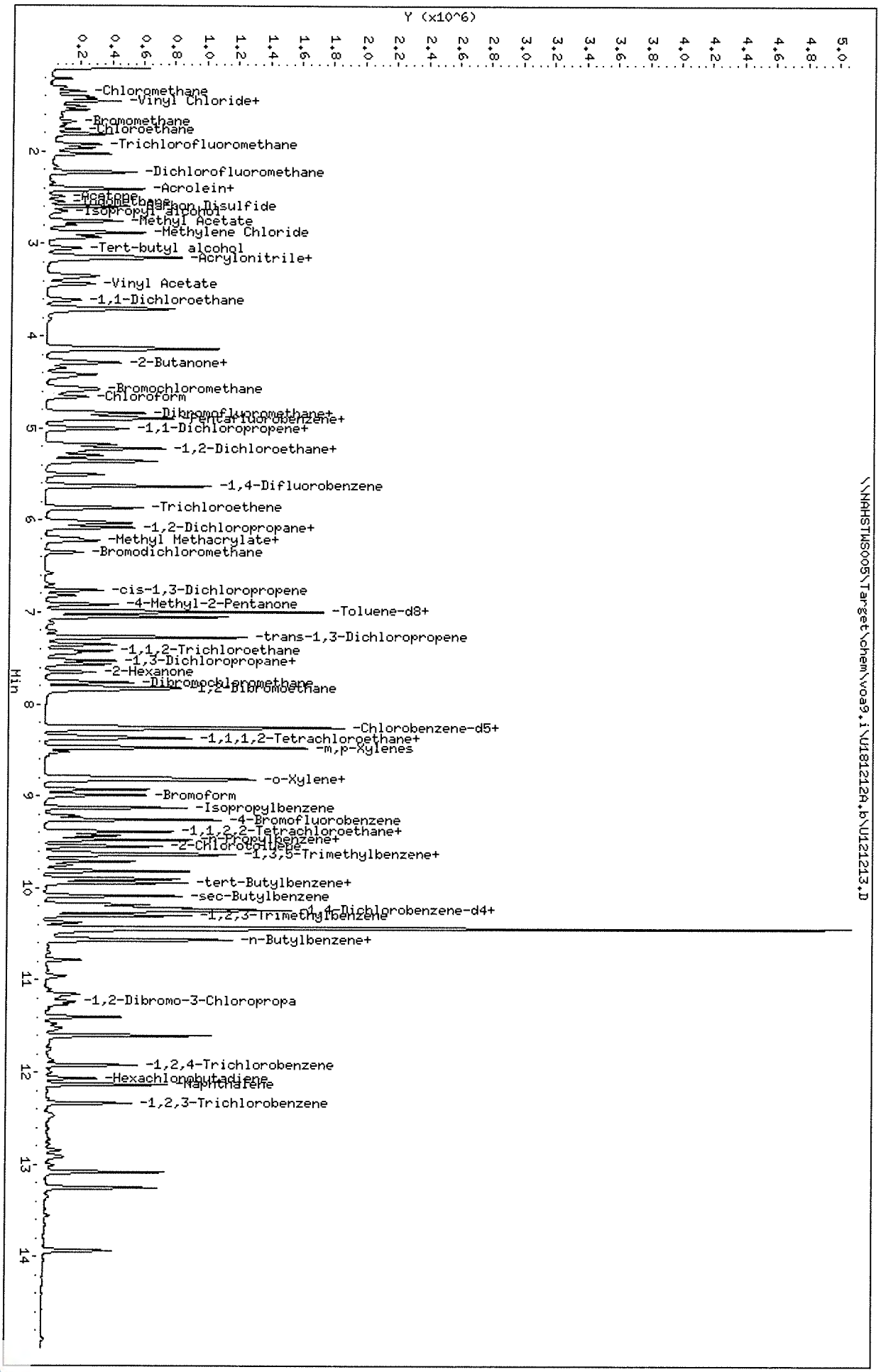
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.894	(1.000)	420102	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	744242	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.249	(1.000)	681931	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	326514	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.827	(0.987)	217253	44.8617	44.86
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	281144	44.0656	44.06
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	929104	53.4192	53.41
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	346454	51.4077	51.40
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	96509	22.4366	22.43
31 1,1,1-Trichloroethane	97	4.830	4.827	(0.986)	157319	21.3188	21.31
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	180233	23.3038	23.30
138 Freon TF	101	2.409	2.397	(0.492)	92493	21.9780	21.97
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.899)	98414	22.7002	22.70
22 1,1-Dichloroethane	63	3.612	3.601	(0.737)	209722	21.7849	21.78
11 1,1-Dichloroethene	96	2.405	2.397	(0.491)	101402	21.3840	21.38
32 1,1-Dichloropropene	75	5.006	5.003	(0.889)	167744	24.4040	24.40
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	143974	23.3555	23.35
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	184749	22.8915	22.89
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	147495	22.9709	22.97
79 1,2,4-Trimethylbenzene	105	9.943	9.944	(0.971)	450860	24.8603	24.86
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	23655	20.5066	20.50
57 1,2-Dibromoethane	107	7.852	7.852	(0.951)	113259	22.5604	22.56

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121213.D Page 2
Report Date: 25-Jan-2019 19:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	10.569	10.570	(1.033)	228950	21.9573	21.95
33	1,2-Dichloroethane	62	5.258	5.250	(0.934)	167682	21.5311	21.53
42	1,2-Dichloropropane	63	6.082	6.079	(1.081)	131889	24.8901	24.89
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	435427	24.8203	24.82
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	229411	22.3158	22.31
54	1,3-Dichloropropane	76	7.563	7.563	(0.916)	212845	22.8643	22.86
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	235330	23.3804	23.38
26	2,2-Dichloropropane	77	4.279	4.272	(0.874)	127540	21.3931	21.39
24	2-Butanone	43	4.343	4.335	(0.887)	148024	50.1255	50.12
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	381689	23.8726	23.87
52	2-Hexanone	43	7.649	7.649	(0.927)	179417	45.2605	45.26
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	439810	23.8392	23.83
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	457218	25.5705	25.57
45	4-Methyl-2-Pentanone	43	6.914	6.915	(0.838)	261824	46.0245	46.02
10	Acetone	43	2.487	2.476	(0.508)	101944	50.7756	50.77
37	Benzene	78	5.220	5.216	(0.927)	497776	24.1963	24.19
74	Bromobenzene	156	9.381	9.381	(0.917)	119292	22.2721	22.27
29	Bromochloromethane	128	4.560	4.553	(0.931)	56908	22.9780	22.97
39	Bromodichloromethane	83	6.348	6.349	(1.128)	135701	21.9442	21.94
66	Bromoform	173	8.984	8.984	(1.089)	57709	19.4482	19.44
6	Bromomethane	94	1.678	1.663	(0.343)	49660	15.6071	15.60
19	Carbon Disulfide	76	2.596	2.585	(0.530)	660323	45.0912	45.09
34	Carbon Tetrachloride	117	4.999	4.995	(0.888)	125475	23.3671	23.36
59	Chlorobenzene	112	8.275	8.275	(1.003)	320860	22.7972	22.79
7	Chloroethane	64	1.760	1.749	(0.359)	91047	20.7712	20.77(M)
28	Chloroform	83	4.661	4.654	(0.952)	202161	20.9009	20.90
3	Chloromethane	50	1.348	1.337	(0.275)	106252	19.0868	19.08
27	cis-1,2-Dichloroethene	96	4.290	4.283	(0.876)	135431	22.7509	22.75
46	cis-1,3-Dichloropropene	75	6.761	6.757	(1.201)	182207	23.3979	23.39
55	Dibromochloromethane	129	7.758	7.758	(0.940)	96292	22.3153	22.31
44	Dibromomethane	93	6.191	6.191	(1.100)	72972	21.9738	21.97
2	Dichlorodifluoromethane	85	1.213	1.202	(0.248)	74982	12.8346	12.83
61	Ethylbenzene	106	8.373	8.369	(1.015)	169345	23.8000	23.80
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	49748	25.4051	25.40
67	Isopropylbenzene	105	9.126	9.126	(1.106)	518505	25.0192	25.01
62	m,p-Xylenes	106	8.474	8.474	(1.027)	422241	48.1471	48.14
17	Methylene Chloride	84	2.877	2.870	(0.587)	123726	22.7045	22.70
87	n-Butylbenzene	91	10.558	10.558	(1.031)	439467	26.1388	26.13
73	n-Propylbenzene	91	9.475	9.475	(0.926)	650979	25.2657	25.26
92	Naphthalene	128	12.133	12.133	(1.185)	524095	27.1064	27.10
63	o-Xylene	106	8.811	8.811	(1.068)	219180	24.9760	24.97
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	547937	25.5406	25.54
64	Styrene	104	8.826	8.826	(1.069)	362281	24.4503	24.45
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	373110	24.9551	24.95
56	Tetrachloroethene	164	7.525	7.526	(0.912)	85759	24.0072	24.00
50	Toluene	91	7.049	7.046	(0.854)	517700	23.9119	23.91
20	trans-1,2-Dichloroethene	96	3.147	3.140	(0.643)	114987	22.1256	22.12
51	trans-1,3-Dichloropropene	75	7.263	7.259	(1.290)	150740	20.4633	20.46
38	Trichloroethene	130	5.865	5.861	(1.042)	157598	31.0768	31.07
8	Trichlorofluoromethane	101	1.962	1.951	(0.401)	171046	20.3655	20.36
5	Vinyl Chloride	62	1.426	1.415	(0.291)	139186	20.6253	20.62

QC Flag Legend

M - Compound response manually integrated.



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Sample Info: HS18111538-04HS;HS18111538-04HS;3;;HS
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

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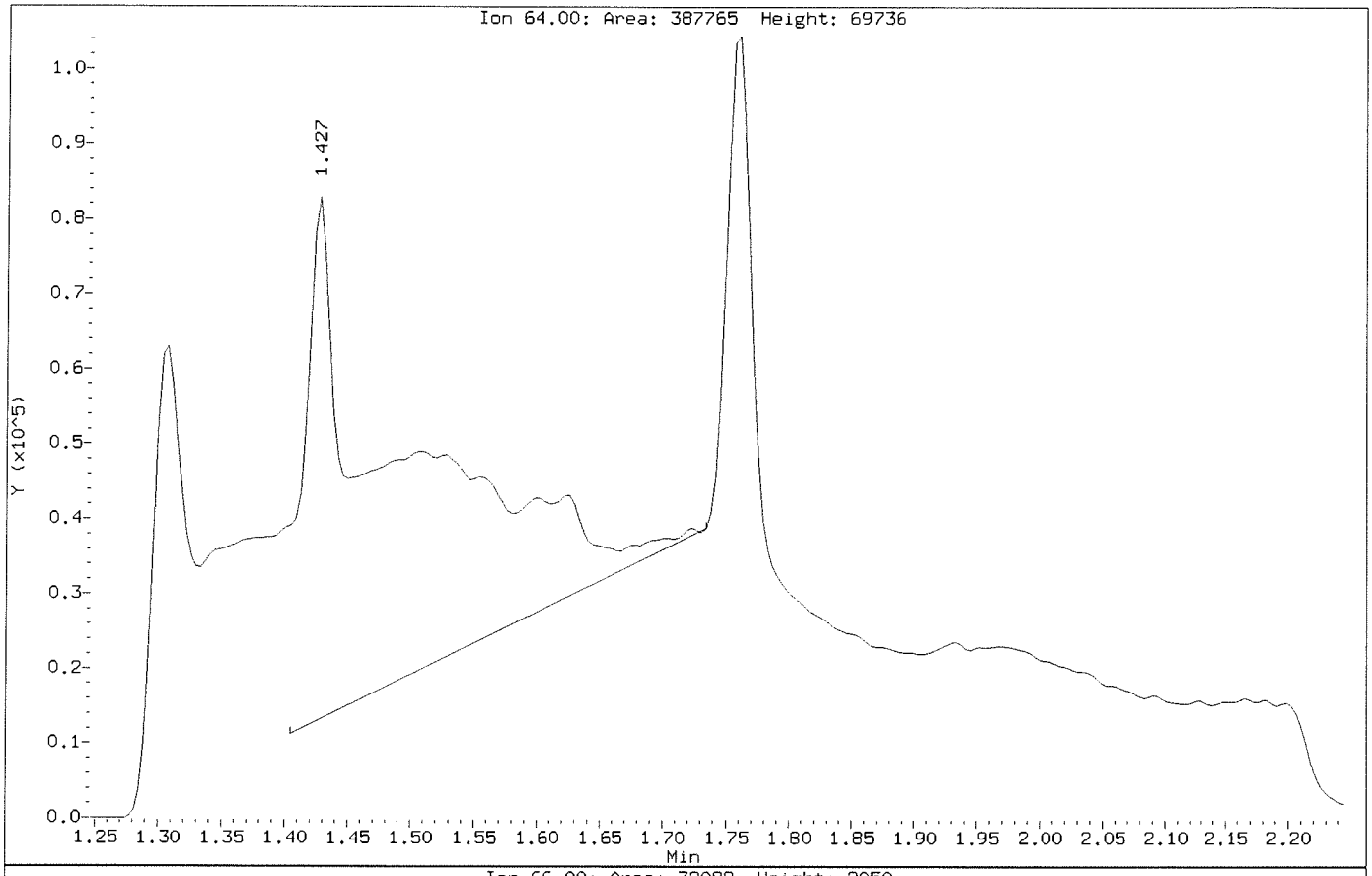
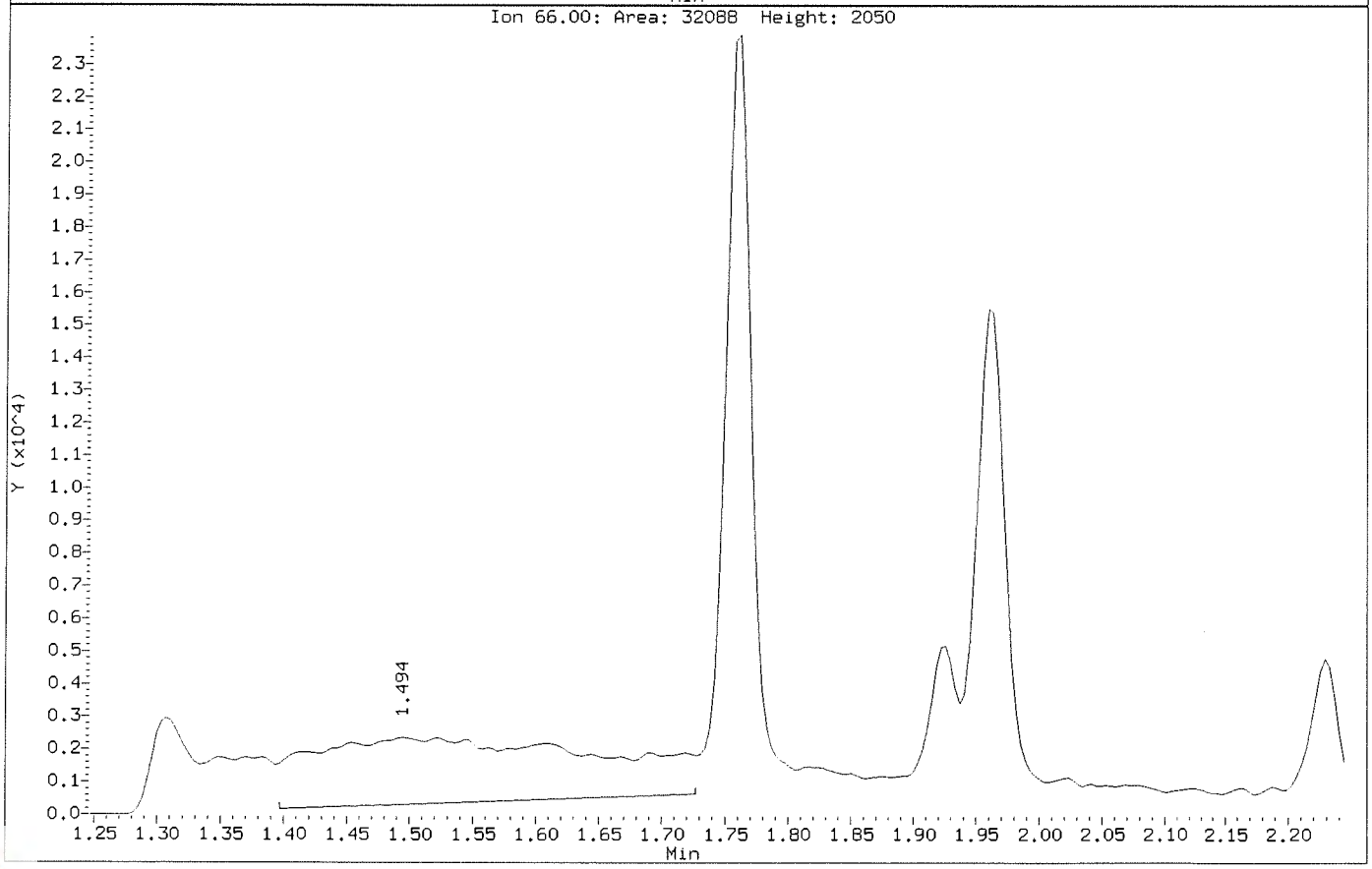
Injection Date: 12-DEC-2018 15:13
Instrument: VOA9.i
Client Sample ID: HS18111538-04MS

Compound: Chloroethane
CAS Number: 75-00-3





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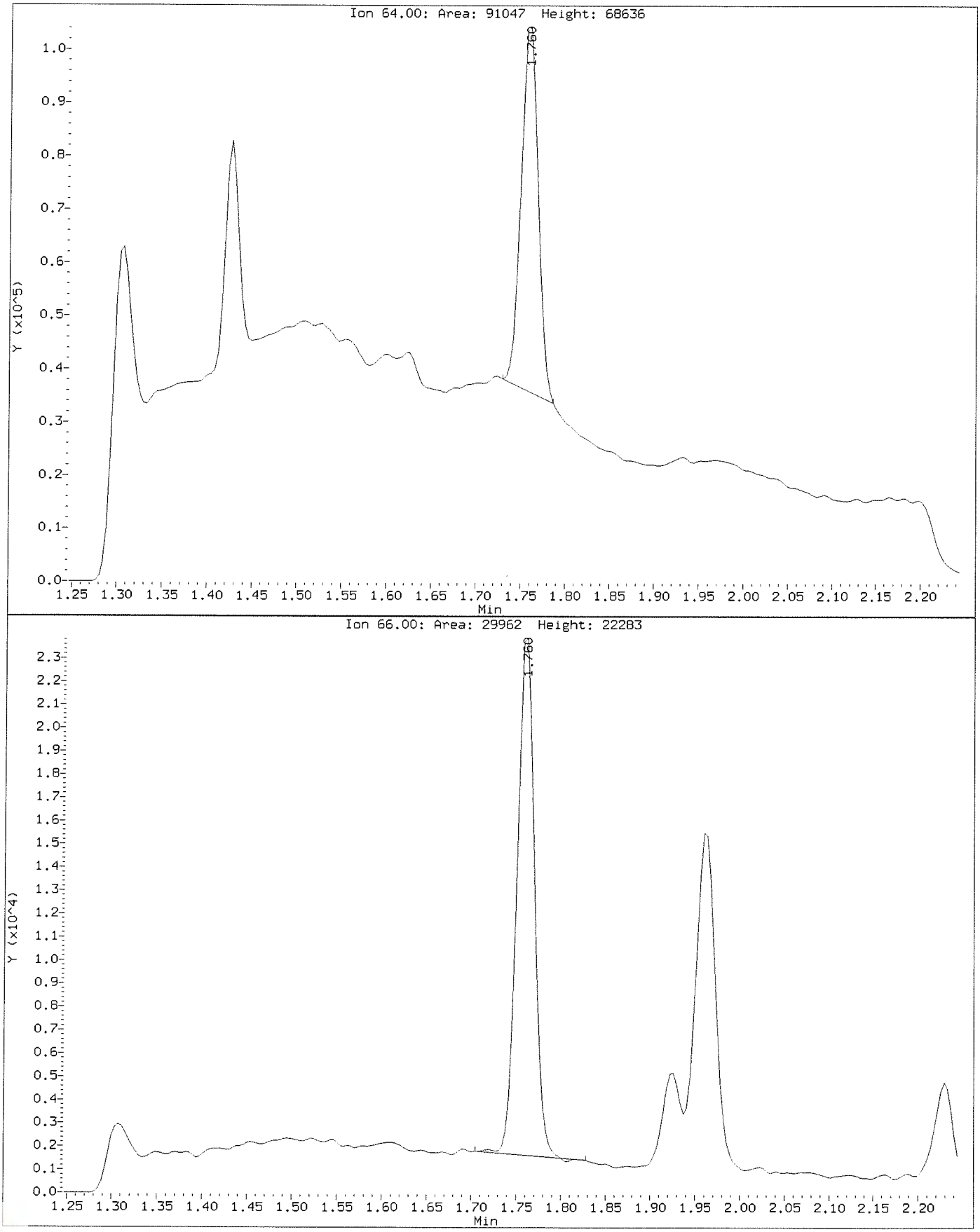
Injection Date: 12-DEC-2018 15:13
Instrument: VOA9.i
Client Sample ID: HS18111538-04MS

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121214.D Page 1
Report Date: 25-Jan-2019 19:46

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121214.D
Lab Smp Id: HS18111538-04MSD Client Smp ID: HS18111538-04MSD
Inj Date : 12-DEC-2018 15:38
Operator : PC Inst ID: VOA9.i
Smp Info : HS18111538-04MSD;HS18111538-04MSD;3;;MSD
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

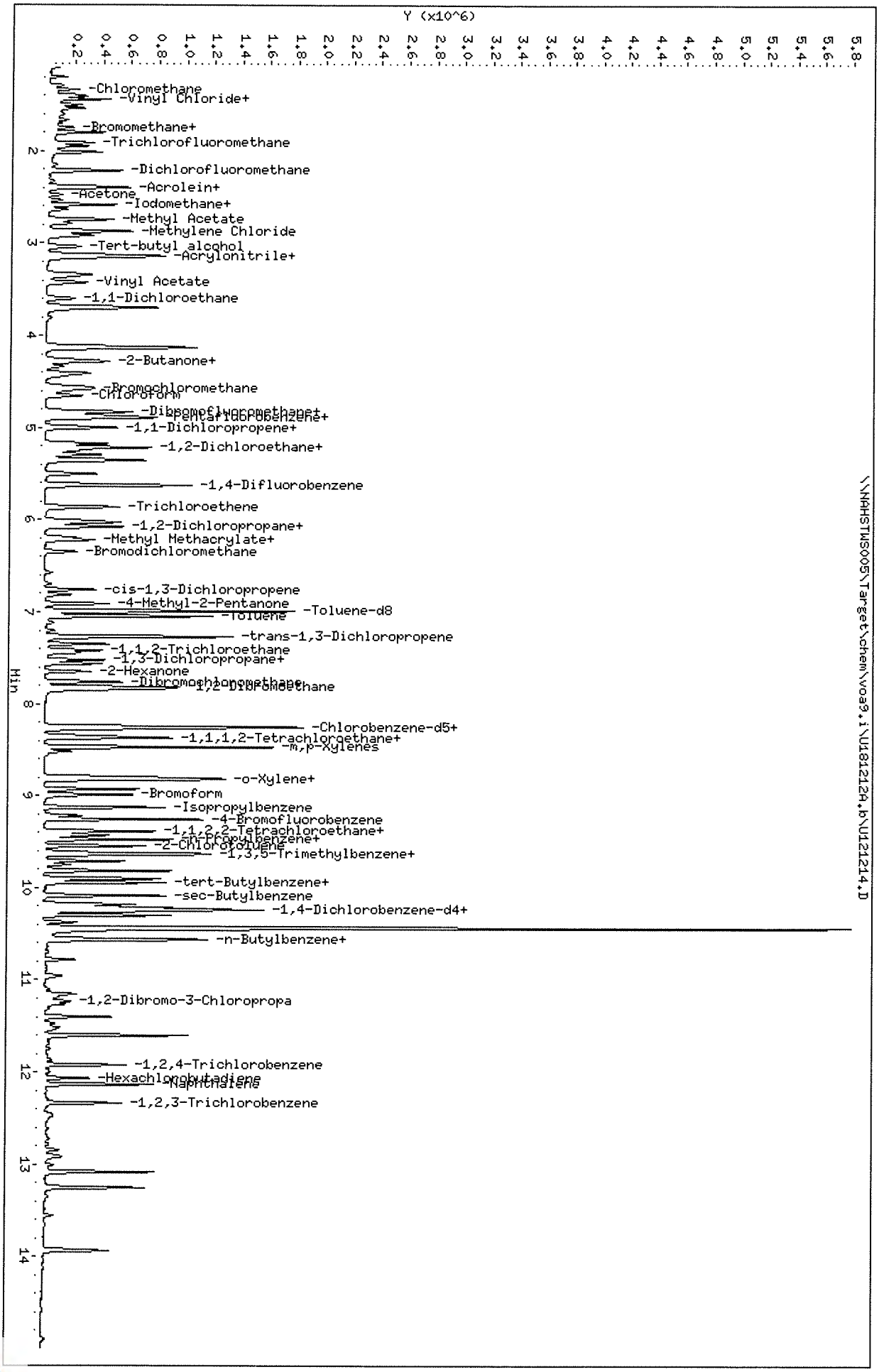
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	429234	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	755452	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	687371	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	329051	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.827	(0.986)	220587	44.5732	44.57
$ 35 1,2-Dichloroethane-d4	65	5.171	5.175	(1.057)	284336	43.5997	43.59
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	929627	53.0137	53.01
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	348316	51.2722	51.27
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	97180	22.4138	22.41
31 1,1,1-Trichloroethane	97	4.826	4.827	(0.986)	155177	20.5811	20.58
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	179627	23.0464	23.04
138 Freon TF	101	2.397	2.397	(0.490)	89847	20.8951	20.89
53 1,1,2-Trichloroethane	83	7.420	7.421	(0.900)	98532	22.5475	22.54
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	210399	21.3903	21.39
11 1,1-Dichloroethene	96	2.393	2.397	(0.489)	97791	20.1838	20.18
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	164020	23.5081	23.50
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	144212	23.2137	23.21
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	183395	22.5485	22.54
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	147913	22.8584	22.85
79 1,2,4-Trimethylbenzene	105	9.943	9.944	(0.971)	443053	24.2415	24.24
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	24407	20.9693	20.96
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	114887	22.7035	22.70

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121214.D Page 2
Report Date: 25-Jan-2019 19:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	10.569	10.570	(1.033)	227447	21.6450	21.64
33	1,2-Dichloroethane	62	5.250	5.250	(0.933)	166253	21.0308	21.03
42	1,2-Dichloropropane	63	6.078	6.079	(1.081)	131457	24.4405	24.44
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	425410	24.0623	24.06
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	229469	22.1494	22.14
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	212358	22.6315	22.63
84	1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	234523	23.1201	23.12
26	2,2-Dichloropropane	77	4.272	4.272	(0.873)	128678	21.1247	21.12
24	2-Butanone	43	4.335	4.335	(0.886)	156473	51.8593	51.85
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	374610	23.2492	23.24
52	2-Hexanone	43	7.649	7.649	(0.927)	186290	46.6224	46.62
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	434418	23.3654	23.36
82	p-Isopropyltoluene	119	10.209	10.210	(0.997)	451740	25.0693	25.06
45	4-Methyl-2-Pentanone	43	6.911	6.915	(0.838)	267662	46.6783	46.67
10	Acetone	43	2.476	2.476	(0.506)	107224	52.3995	52.39
37	Benzene	78	5.216	5.216	(0.927)	487856	23.3622	23.36
74	Bromobenzene	156	9.381	9.381	(0.917)	118740	21.9981	21.99
29	Bromochloromethane	128	4.553	4.553	(0.930)	55699	22.0114	22.01
39	Bromodichloromethane	83	6.348	6.349	(1.129)	133044	21.1953	21.19
66	Bromoform	173	8.984	8.984	(1.089)	58156	19.4440	19.44
6	Bromomethane	94	1.662	1.663	(0.340)	41917	13.2242	13.22
19	Carbon Disulfide	76	2.585	2.585	(0.528)	632068	42.2435	42.24
34	Carbon Tetrachloride	117	4.991	4.995	(0.887)	122557	22.4850	22.48
59	Chlorobenzene	112	8.275	8.275	(1.003)	316295	22.2950	22.29
7	Chloroethane	64	1.749	1.749	(0.357)	89716	20.0321	20.03(M)
28	Chloroform	83	4.654	4.654	(0.951)	199322	20.1690	20.16
3	Chloromethane	50	1.336	1.337	(0.273)	101912	17.9317	17.93
27	cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	133206	21.9010	21.90
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	181899	23.0118	23.01
55	Dibromochloromethane	129	7.758	7.758	(0.940)	96439	22.1725	22.17
44	Dibromomethane	93	6.187	6.191	(1.100)	72959	21.6439	21.64
2	Dichlorodifluoromethane	85	1.201	1.202	(0.246)	71941	12.1131	12.11
61	Ethylbenzene	106	8.369	8.369	(1.015)	168764	23.5306	23.53
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	50538	25.6027	25.60
67	Isopropylbenzene	105	9.126	9.126	(1.106)	510354	24.4310	24.43
62	m,p-Xylenes	106	8.474	8.474	(1.027)	420146	47.5290	47.52
17	Methylene Chloride	84	2.866	2.870	(0.586)	120825	21.6694	21.66
87	n-Butylbenzene	91	10.554	10.558	(1.031)	432127	25.5195	25.51
73	n-Propylbenzene	91	9.475	9.475	(0.926)	643141	24.7691	24.76
92	Naphthalene	128	12.133	12.133	(1.185)	528530	27.1250	27.12
63	o-Xylene	106	8.811	8.811	(1.068)	213231	24.1058	24.10
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	541106	25.0278	25.02
64	Styrene	104	8.826	8.826	(1.070)	357975	23.9685	23.96
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	365446	24.2540	24.25
56	Tetrachloroethene	164	7.522	7.526	(0.912)	84049	23.3423	23.34
50	Toluene	91	7.046	7.046	(0.854)	510052	23.3722	23.37
20	trans-1,2-Dichloroethene	96	3.136	3.140	(0.641)	111678	21.0317	21.03
51	trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	151359	20.2584	20.25
38	Trichloroethene	130	5.861	5.861	(1.042)	130050	25.2640	25.26
8	Trichlorofluoromethane	101	1.947	1.951	(0.398)	167976	19.5745	19.57
5	Vinyl Chloride	62	1.415	1.415	(0.289)	135437	19.6669	19.66

QC Flag Legend

M - Compound response manually integrated.



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Date : 12-DEC-2018 15:38
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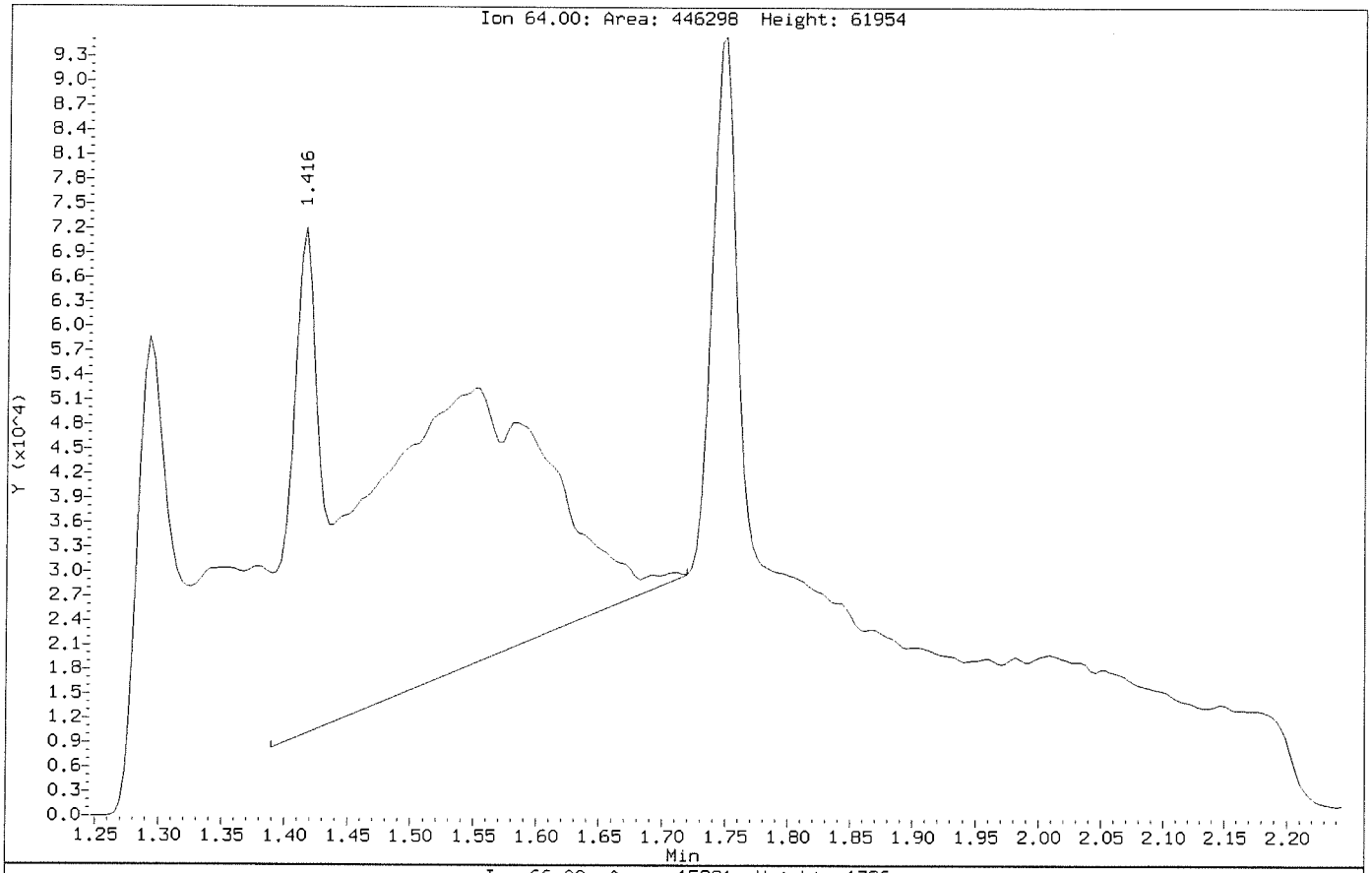
Purge Volume: 5.0
Column phase: DB624

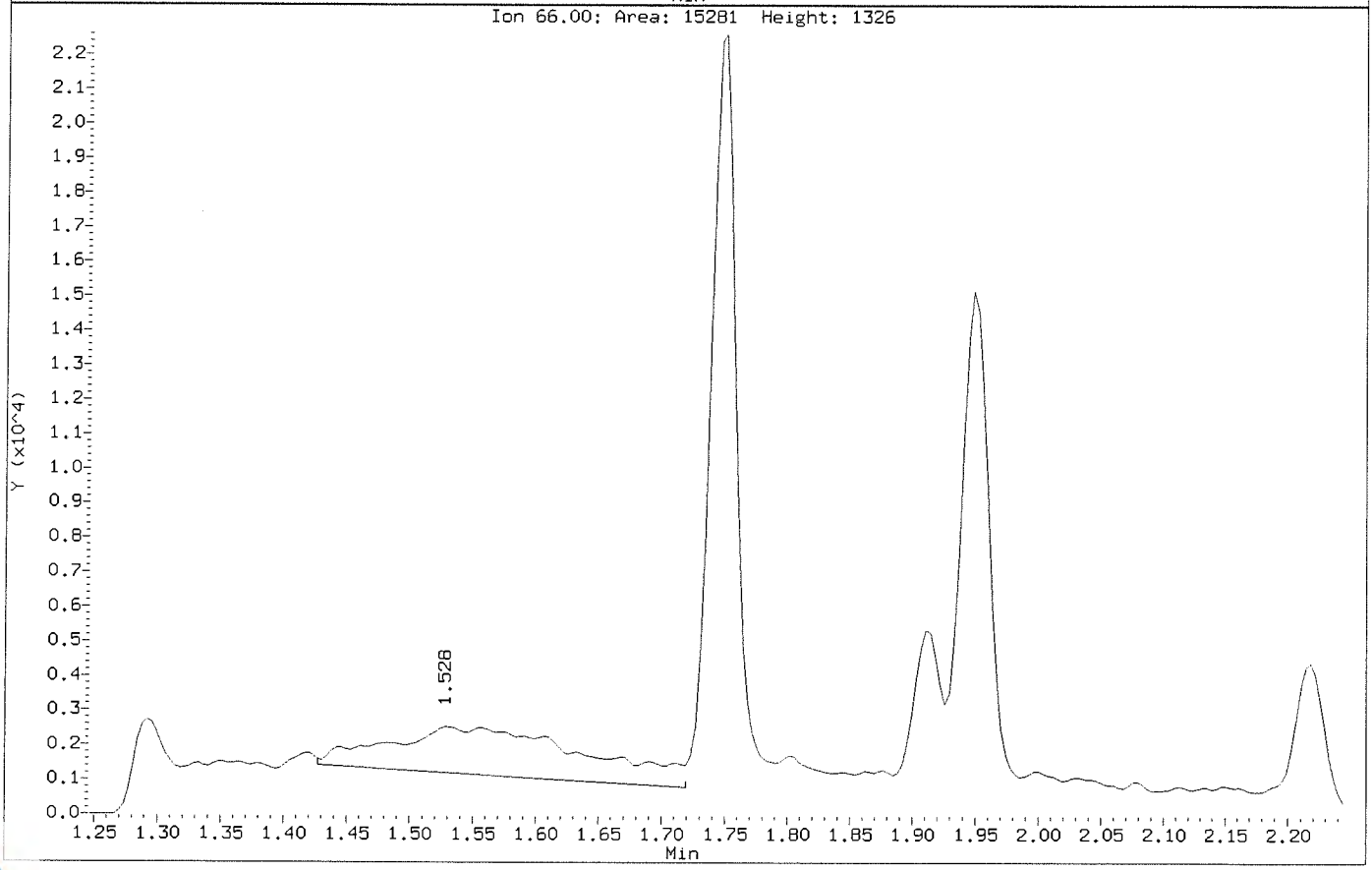
\\NAHSTWS005\Target\chem\voa9,i\U181212A,b\U121214,D

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\Before\U121214.D
Injection Date: 12-DEC-2018 15:38
Instrument: VOA9.i
Client Sample ID: HS18111538-04MSD

Compound: Chloroethane
CAS Number: 75-00-3





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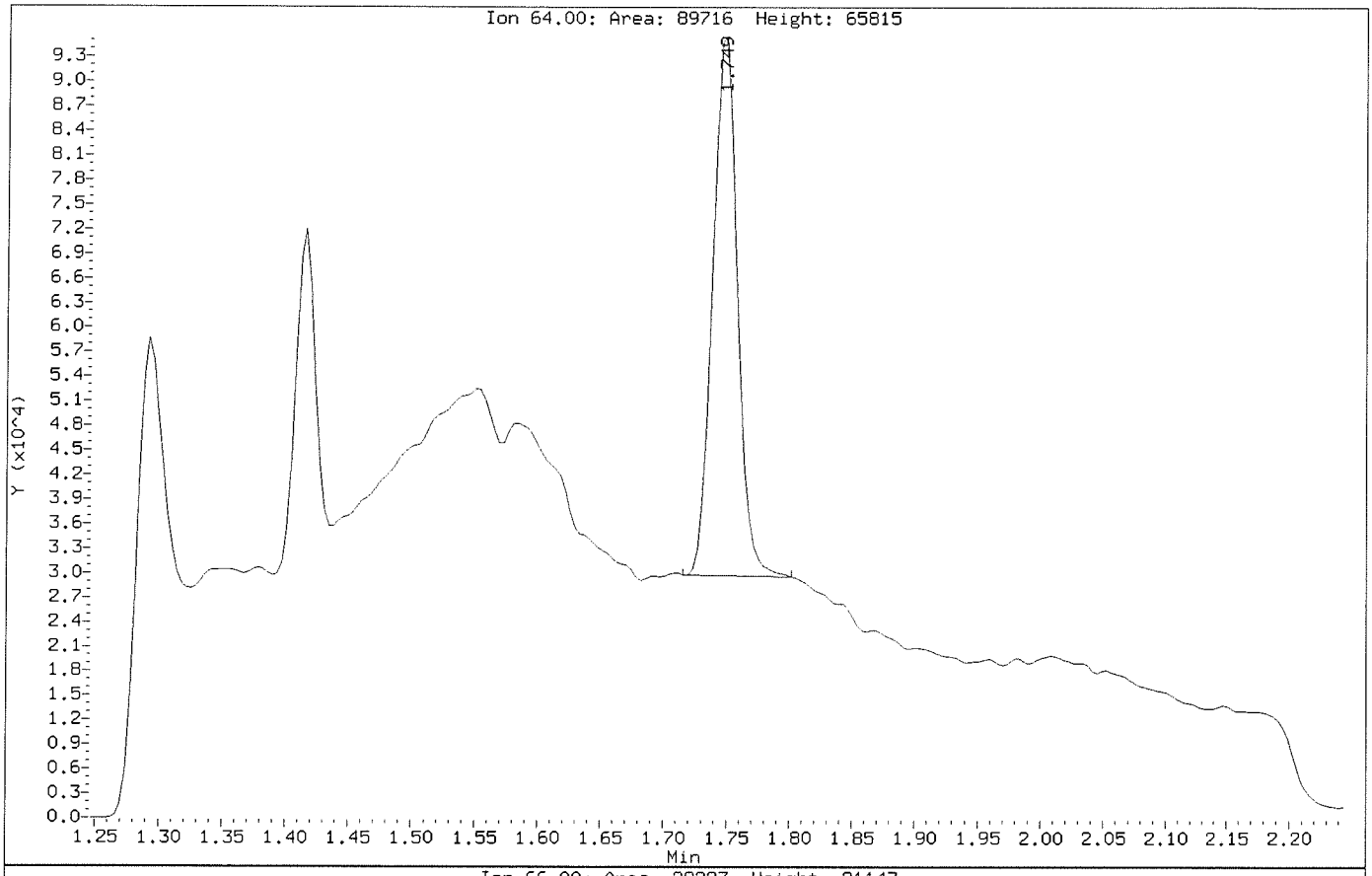
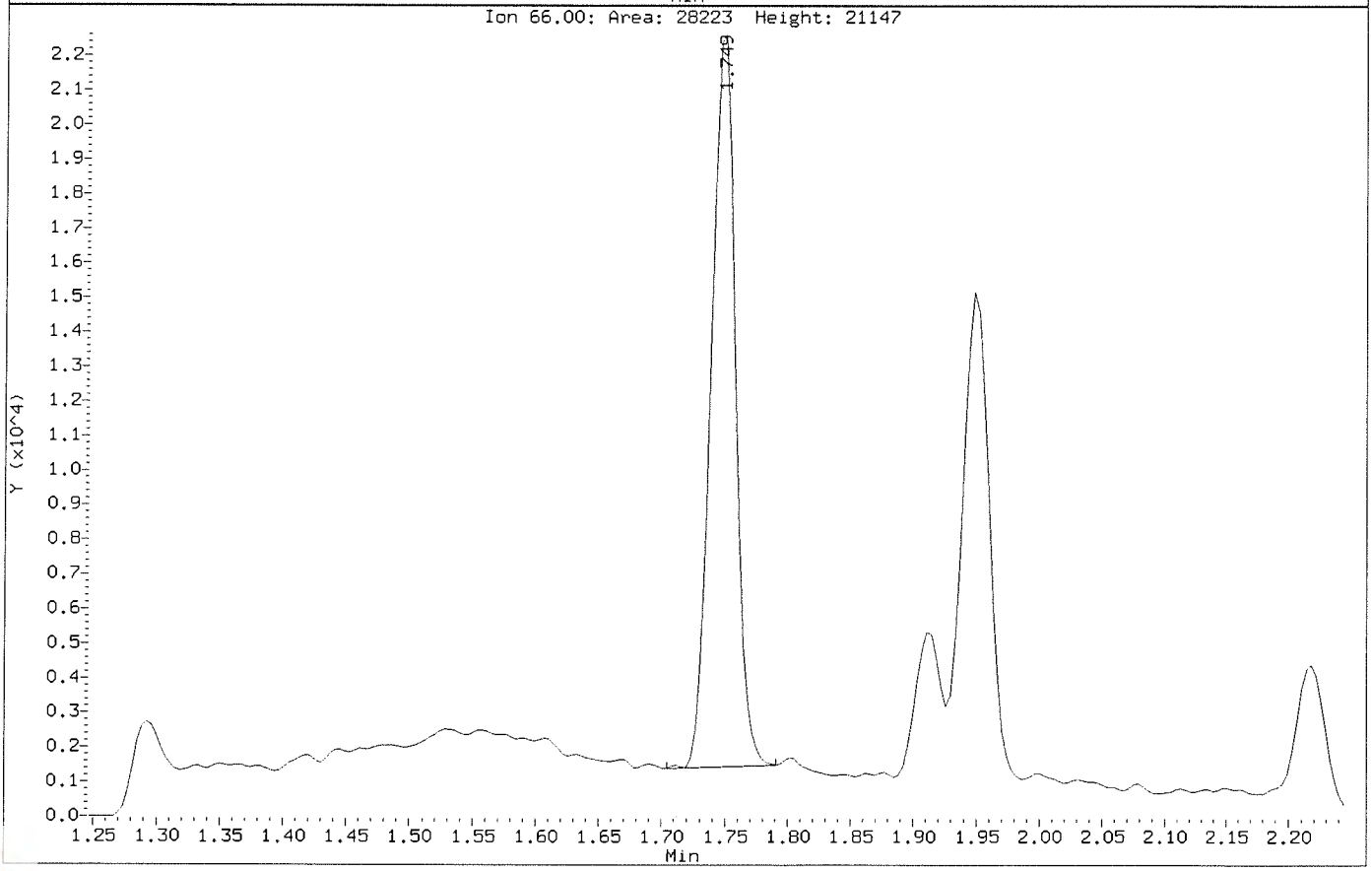
Injection Date: 12-DEC-2018 15:38
Instrument: VOA9.i
Client Sample ID: HS18111538-04MSD

Compound: Chloroethane
CAS Number: 75-00-3





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121216.D
Lab Smp Id: HS18111497-02DL Client Smp ID: HS18111497-02DL
Inj Date : 12-DEC-2018 16:27
Operator : PC Inst ID: VOA9.i
Smp Info : HS18111497-02;HS18111497-02;;;
Misc Info : 180315V9;WATER;0;50;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 15
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

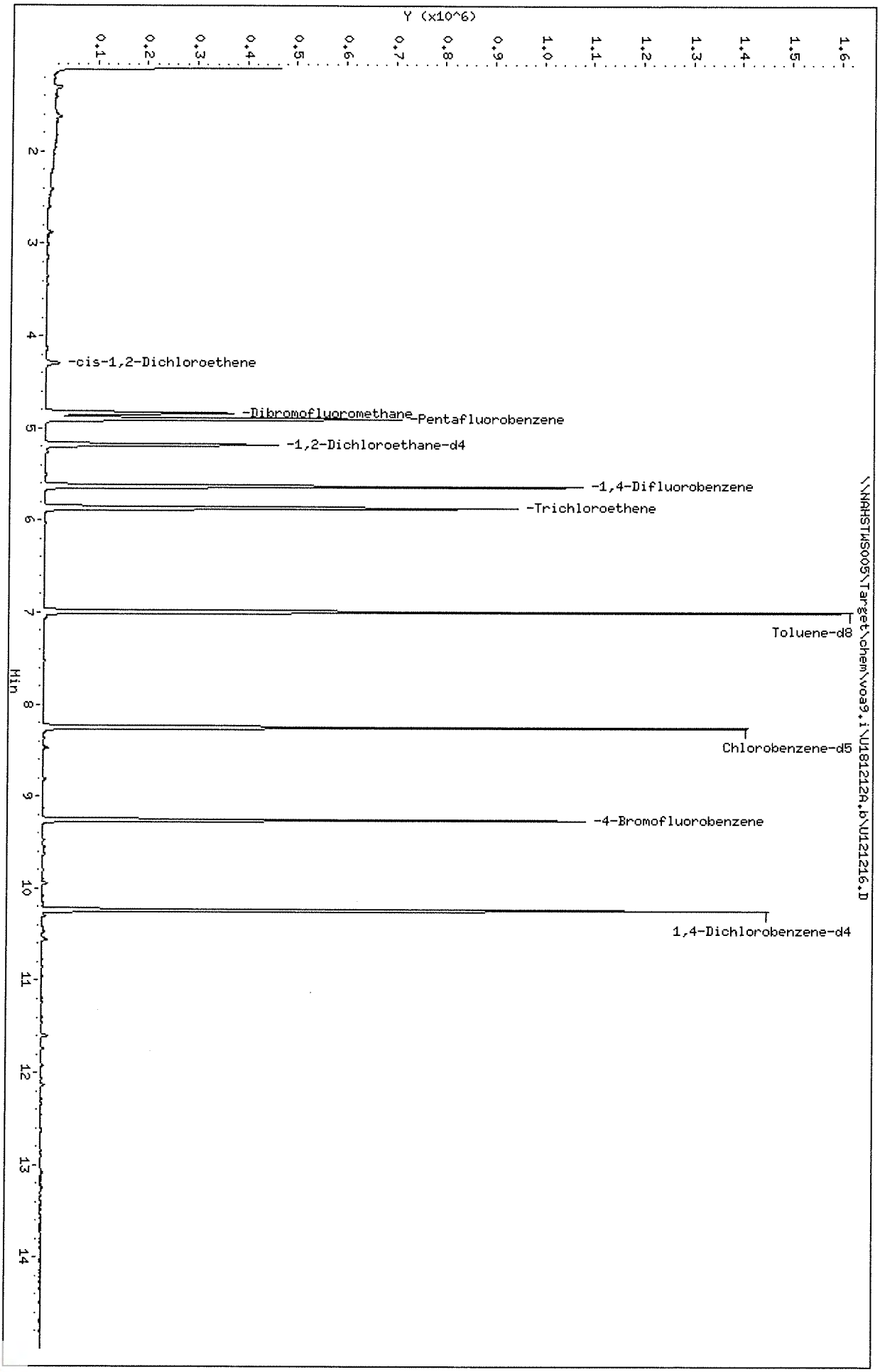
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.894	(1.000)	432064	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	767011	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.249	(1.000)	691858	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	317425	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.827	(0.987)	216591	43.4483	43.44
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	294110	44.8520	44.85
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	937843	53.1393	53.13
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	338048	49.3999	49.39
27 cis-1,2-Dichloroethene	96	4.294	4.283	(0.877)	12709	2.07586	103.79(a)
38 Trichloroethene	130	5.865	5.861	(1.042)	279386	53.4567	2672.83

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTWS005\Target\chem\voa9,i\U181212A,b\U121216,D
Date : 12-DEC-2018 16:27
Client ID: HS18111497-02DL
Sample Info: HS18111497-02;HS18111497-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121216.D

Date : 12-DEC-2018 16:27

Client ID: HS18111497-02DL

Instrument: VOA9.i

Sample Info: HS18111497-02;HS18111497-02;;;

Purge Volume: 5.0

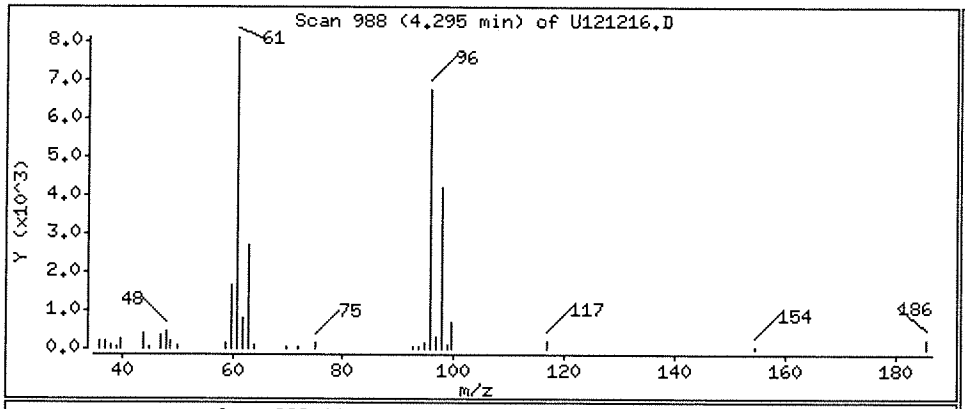
Operator: PC

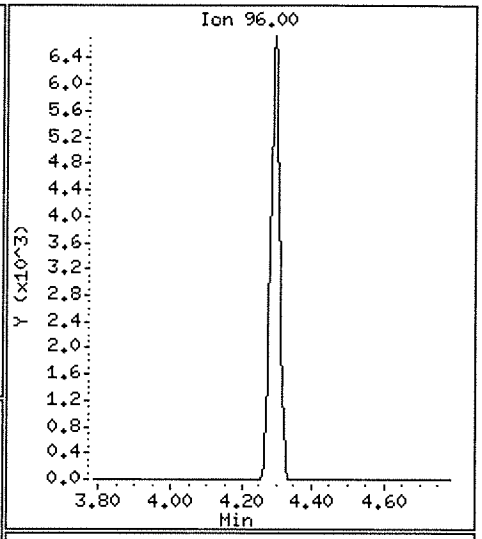
Column phase: DB624

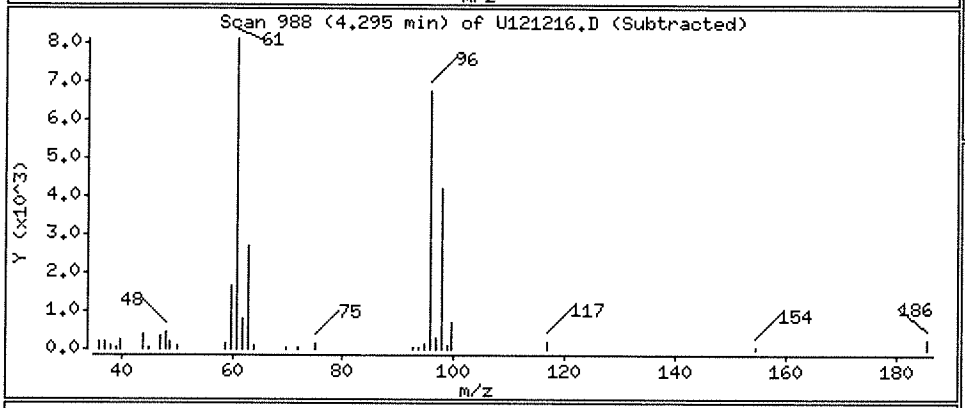
Column diameter: 0.18

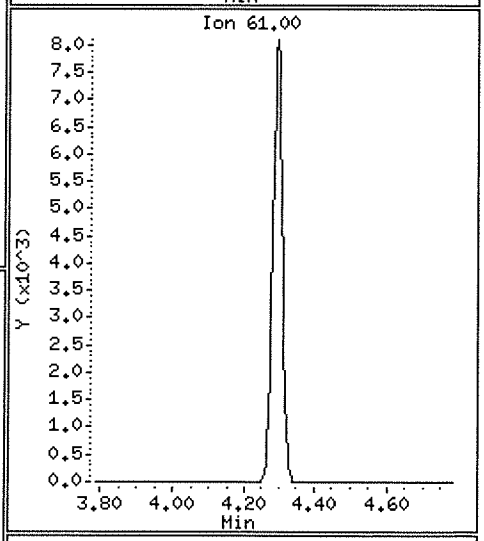
27 cis-1,2-Dichloroethene

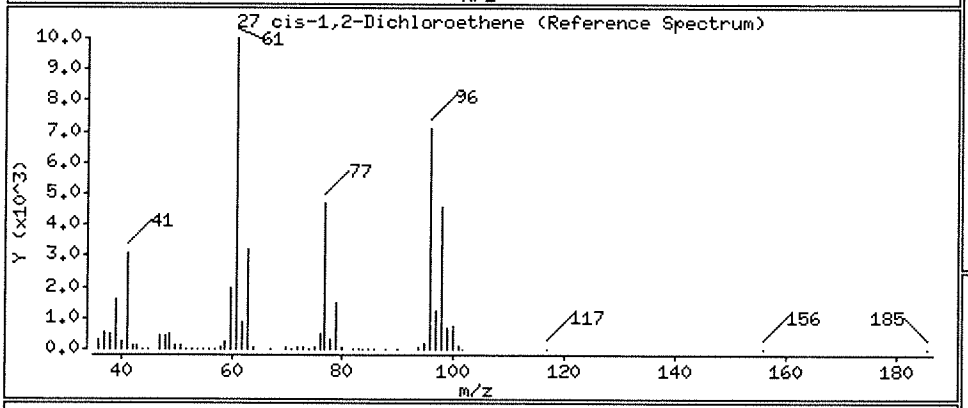
Concentration: 103.79 ug/l

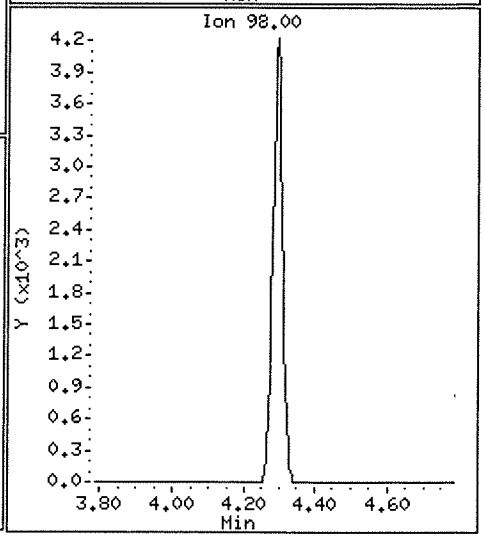


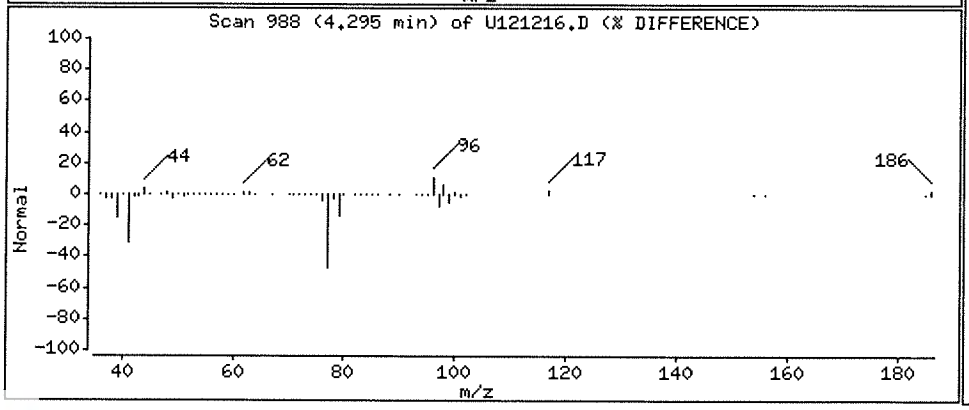












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121216.D Page 4

Date : 12-DEC-2018 16:27

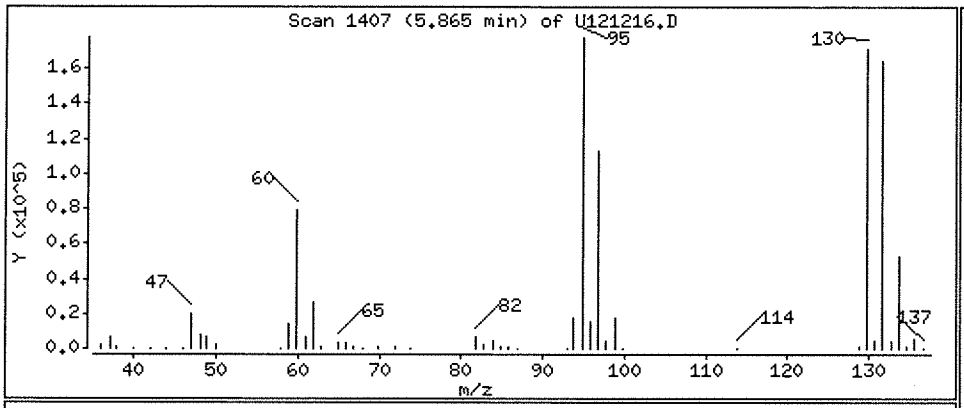
Client ID: HS18111497-02DL Instrument: VOA9.i

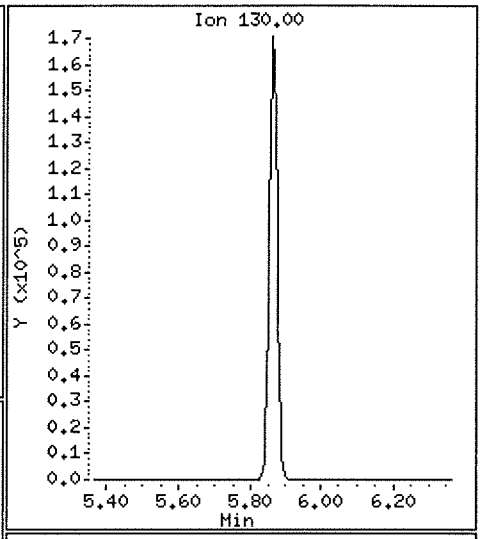
Sample Info: HS18111497-02;HS18111497-02;;;

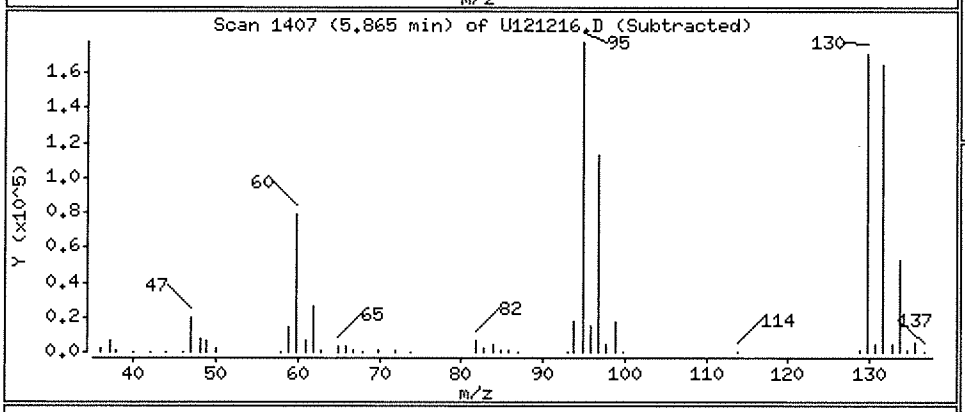
Purge Volume: 5.0 Operator: PC

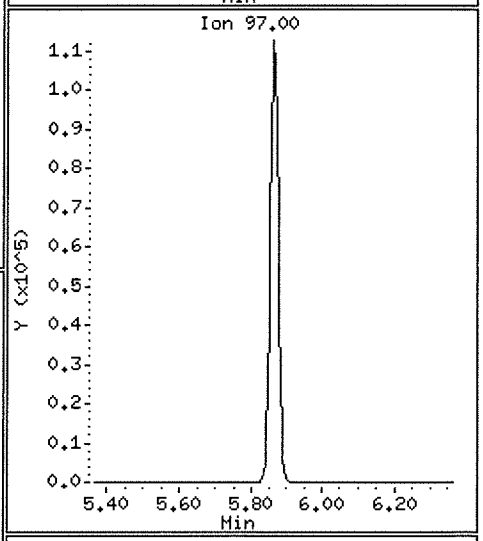
Column phase: DB624 Column diameter: 0.18

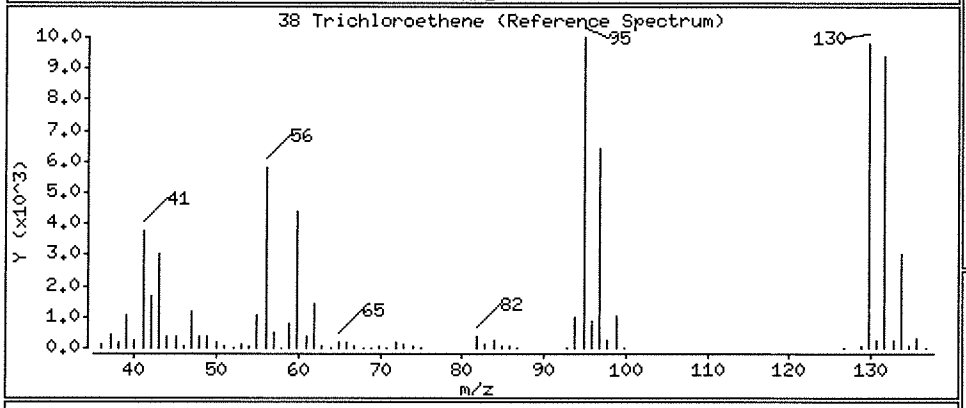
38 Trichloroethene Concentration: 2672.83 ug/l

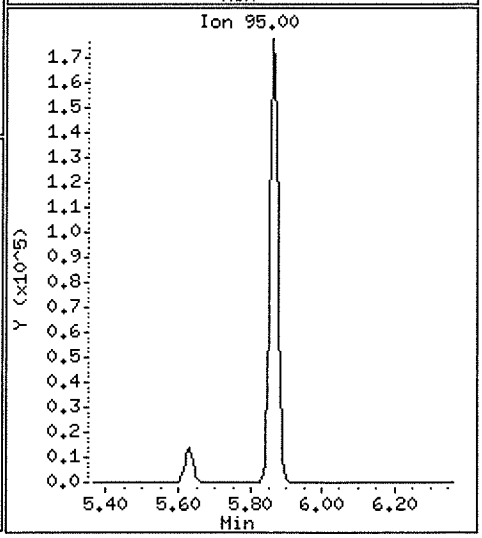


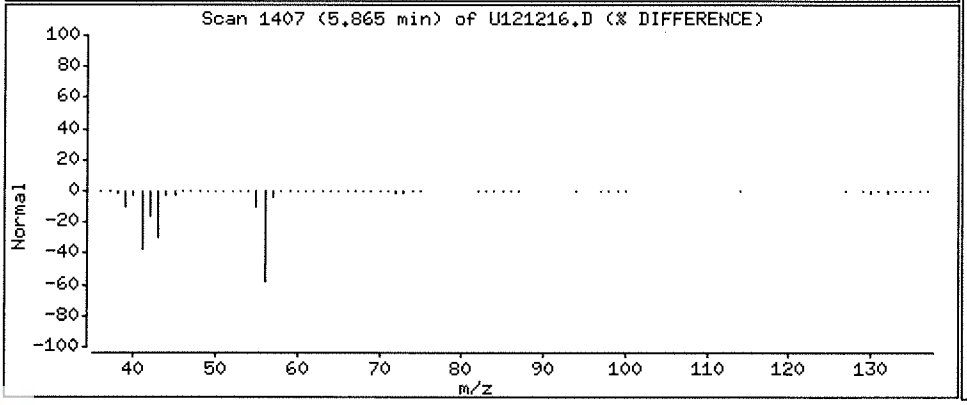












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121228.D Page 1
Report Date: 25-Jan-2019 19:46

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121228.D
Lab Smp Id: VSTD050-END Client Smp ID: VSTD050-END
Inj Date : 12-DEC-2018 21:24
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050-END;VSTD050-END;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\8260C.m
Meth Date : 25-Jan-2019 19:46 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 27 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

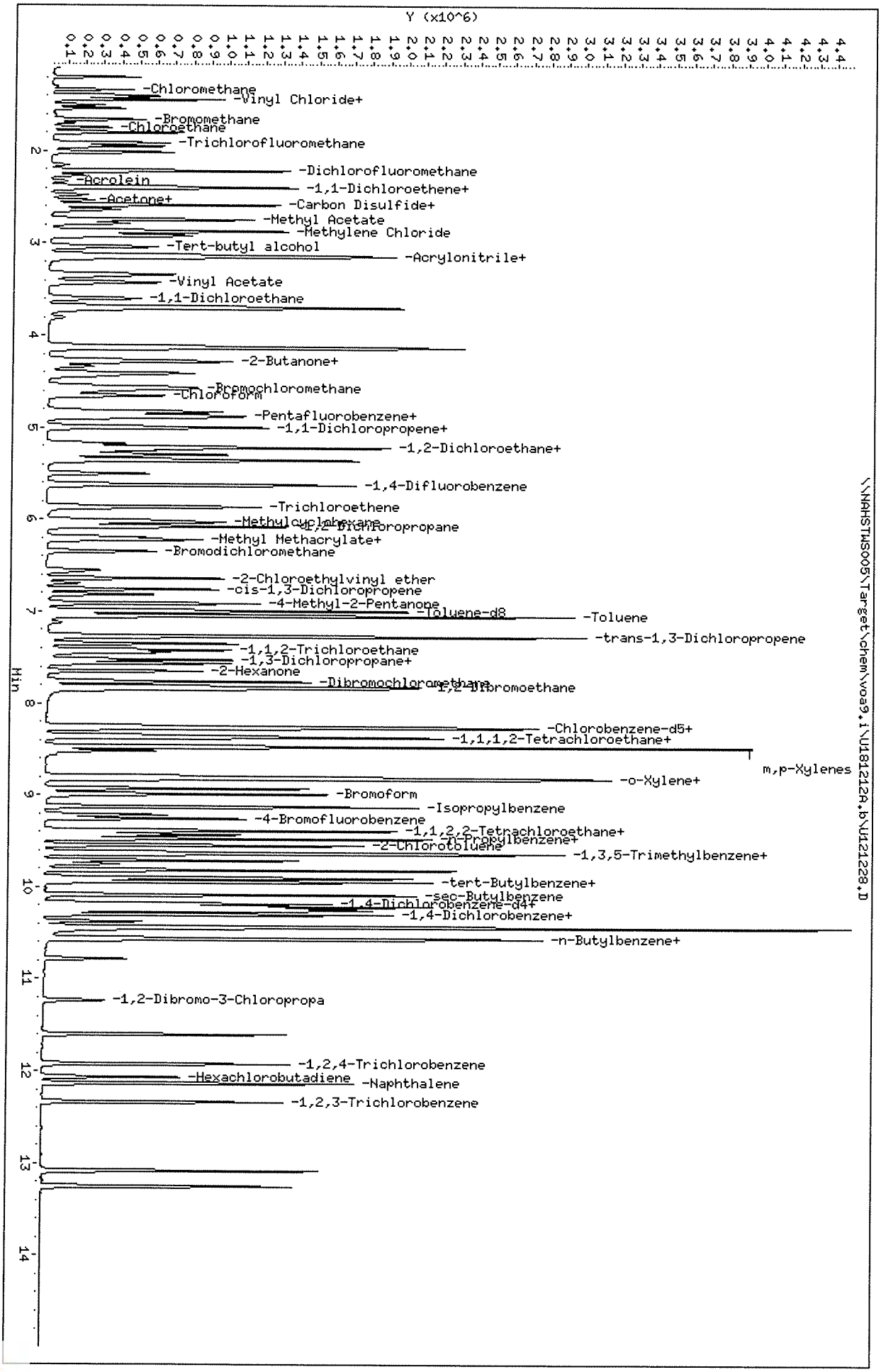
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	414613	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	736800	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	677220	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	324125	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.826	(0.986)	214870	50.0000	44.95
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	273849	50.0000	43.46
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	914476	50.0000	52.92
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	344163	50.0000	51.42
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	251173	50.0000	58.79
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	380567	50.0000	52.25
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	428217	50.0000	55.77
138 Freon TF	101	2.397	2.397	(0.490)	216905	50.0000	52.22
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	243568	50.0000	56.57
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	517067	50.0000	54.42
11 1,1-Dichloroethene	96	2.394	2.394	(0.489)	243651	50.0000	52.06
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	398021	50.0000	58.49
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	348724	50.0000	56.98
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	460739	50.0000	57.50
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	357349	50.0000	56.06
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	1068977	50.0000	59.37
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	61216	50.0000	51.56
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	285508	50.0000	57.26

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121228.D Page 2
Report Date: 25-Jan-2019 19:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	558678	50.0000	53.97
33	1,2-Dichloroethane	62	5.250	5.250	(0.933)	409888	50.0000	53.16
42	1,2-Dichloropropane	63	6.079	6.079	(1.081)	312392	50.0000	59.55
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	1029389	50.0000	59.10
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	560634	50.0000	54.93
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	529486	50.0000	57.27
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	570063	50.0000	57.11
26	2,2-Dichloropropane	77	4.272	4.272	(0.873)	267200	50.0000	45.41
24	2-Butanone	43	4.335	4.335	(0.886)	312091	100.000	107.08
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	914527	50.0000	57.62
52	2-Hexanone	43	7.649	7.649	(0.927)	470465	100.000	119.50
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	1057028	50.0000	57.71
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	1084644	50.0000	61.10
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	670990	100.000	118.76
10	Acetone	43	2.476	2.476	(0.506)	218383	100.000	115.39
37	Benzene	78	5.216	5.216	(0.927)	1185654	50.0000	58.21
74	Bromobenzene	156	9.381	9.381	(0.917)	293567	50.0000	55.21
29	Bromochloromethane	128	4.553	4.553	(0.930)	139521	50.0000	57.08
39	Bromodichloromethane	83	6.348	6.348	(1.129)	342680	50.0000	55.97
66	Bromoform	173	8.984	8.984	(1.089)	158126	50.0000	51.32(T)
6	Bromomethane	94	1.663	1.663	(0.340)	159661	50.0000	46.54
19	Carbon Disulfide	76	2.585	2.585	(0.528)	1591406	100.000	110.11
34	Carbon Tetrachloride	117	4.995	4.995	(0.888)	301583	50.0000	56.73
59	Chlorobenzene	112	8.275	8.275	(1.003)	772474	50.0000	55.26
7	Chloroethane	64	1.745	1.745	(0.357)	265583	50.0000	61.39
28	Chloroform	83	4.654	4.654	(0.951)	494341	50.0000	51.78
3	Chloromethane	50	1.336	1.336	(0.273)	285388	50.0000	51.54
27	cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	311319	50.0000	52.99
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	473061	50.0000	61.36
55	Dibromochloromethane	129	7.758	7.758	(0.940)	256206	50.0000	59.78
44	Dibromomethane	93	6.191	6.191	(1.101)	183927	50.0000	55.94
2	Dichlorodifluoromethane	85	1.202	1.202	(0.246)	291609	50.0000	47.63
61	Ethylbenzene	106	8.373	8.373	(1.015)	403368	50.0000	57.08
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	121584	50.0000	60.04
67	Isopropylbenzene	105	9.126	9.126	(1.106)	1215349	50.0000	59.05
62	m,p-Xylenes	106	8.474	8.474	(1.027)	1012970	100.000	116.30
17	Methylene Chloride	84	2.866	2.866	(0.586)	304610	50.0000	57.68
87	n-Butylbenzene	91	10.558	10.558	(1.031)	1007979	50.0000	59.08
73	n-Propylbenzene	91	9.475	9.475	(0.926)	1517770	50.0000	59.34
92	Naphthalene	128	12.133	12.133	(1.185)	1180494	50.0000	61.50
63	o-Xylene	106	8.811	8.811	(1.068)	514942	50.0000	59.08
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	1280092	50.0000	60.10
64	Styrene	104	8.826	8.826	(1.070)	886457	50.0000	60.24
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	881196	50.0000	59.37
56	Tetrachloroethene	164	7.526	7.526	(0.912)	199273	50.0000	56.17
50	Toluene	91	7.046	7.046	(0.854)	1239101	50.0000	57.63
20	trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	272897	50.0000	53.20
51	trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	397042	50.0000	51.99
38	Trichloroethene	130	5.861	5.861	(1.042)	279293	50.0000	55.63
8	Trichlorofluoromethane	101	1.947	1.947	(0.398)	419014	50.0000	50.55
5	Vinyl Chloride	62	1.415	1.415	(0.289)	379313	50.0000	56.05

QC Flag Legend

T - Target compound detected outside RT window.



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181212A.b\U121228.D
Date : 12-DEC-2018 21:24
Client ID: VSTD050-END
Sample Info: VSTD050-END;VSTD050-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

HS18111497 Longhorn Army Ammunition Plant LHAAP50

ALS WO# HS18111497

ALS Houston, US

Date: 04-Jan-19

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Instrument:ICPMS05

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		Ar
24	Magnesium	Germanium		Ar
27	Aluminum	Germanium		Ar
39	Potassium	Germanium		Ar
44	Calcium	Germanium		Ar
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
78	Selenium	Germanium		ArHe
88	Strontium	Germanium		Ar
95	Molybdenum	Germanium		Ar
105	Palladium	Germanium		Ar
107	Silver	Germanium		Ar
114	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
137	Barium	Indium		Ar
205	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

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Date: 04-Jan-19

FORM 12 - PREPARATION LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497
Start Date: 10-Dec-2018 09:30 End Date: 10-Dec-2018 13:30

Batch ID: 135380
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18111497-02	50WW13-181129	Groundwater		10	10	1
HS18111497-03	50WW14-181129	Groundwater		10	10	1
HS18120471-10MS				10	10	1
HS18120471-10MSD				10	10	1
HS18120471-10PDS				10	10	1
HS18120471-10SD				10	10	1
LCS-135380				10	10	1
LCSD-135380				10	10	1
MBLK-135380				10	10	1

ALS Houston, US

Date: 04-Jan-19

FORM 12 - PREPARATION LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497
Start Date: 10-Dec-2018 09:30 End Date: 10-Dec-2018 13:30

Batch ID: 135382
Prep Code: 3010A Diss
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18111440-01MS				10	10	1
HS18111440-01MSD				10	10	1
HS18111440-01PDS				10	10	1
HS18111440-01SD				10	10	1
HS18111497-01	50WW06-181129	Groundwater		10	10	1
HS18111497-02	50WW13-181129	Groundwater		10	10	1
HS18111497-03	50WW14-181129	Groundwater		10	10	1
LCS-135382				10	10	1
LCSD-135382				10	10	1
MBLK-135382				10	10	1
MBLKF1-135382				10	10	1

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Date: 04-Jan-19

FORM 12 - PREPARATION LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497
Start Date: 08-Dec-2018 09:30 End Date: 08-Dec-2018 13:30

Batch ID: 135368
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18111447-01MS				10	10	1
HS18111447-01MSD				10	10	1
HS18111447-01PDS				10	10	1
HS18111447-01SD				10	10	1
HS18111497-01	50WW06-181129	Groundwater		10	10	1
LCS-135368				10	10	1
MBLK-135368				10	10	1

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Date: 04-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497
Start Date: 10-Dec-2018 End Date: 11-Dec-2018

Run ID:ICPMS05_328925
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_328925_Tune	1	10-Dec-2018 00:00	ICPMS05_328925_Tune_1	
CAL BLK	1	10-Dec-2018 17:22	019CALB.d_4857059	FE MN
2/10/200	1	10-Dec-2018 17:24	020CALS.d_4857060	FE MN
5/25/500	1	10-Dec-2018 17:26	021CALS.d_4857061	FE MN
10/50/1000	1	10-Dec-2018 17:28	022CALS.d_4857062	FE MN
100/500/10K	1	10-Dec-2018 17:31	023CALS.d_4857063	FE MN
200/1000/20K	1	10-Dec-2018 17:33	024CALS.d_4857064	FE MN
ICV	1	10-Dec-2018 17:37	026_ICV.d_4857066	FE MN
LLICV2	1	10-Dec-2018 17:39	027SMPL.d_4857067	FE MN
LLICV5	1	10-Dec-2018 17:41	028LICV.d_4857068	FE MN
ICB	1	10-Dec-2018 17:43	029_ICB.d_4857069	FE MN
ICSA	1	10-Dec-2018 17:47	031ICSA.d_4857071	FE MN
ICSAB	1	10-Dec-2018 17:49	032ICSB.d_4857072	FE MN
CCV 1	1	10-Dec-2018 18:12	043_CCV.d_4857116	FE MN
CCB 1	1	10-Dec-2018 18:14	044_CCB.d_4857117	FE MN
CCV 2	1	10-Dec-2018 18:38	054_CCV.d_4857147	FE MN
CCB 2	1	10-Dec-2018 18:41	055_CCB.d_4857148	FE MN
MBLK-135380	1	10-Dec-2018 18:43	056SMPL.d_4857161	FE
LCS-135380	1	10-Dec-2018 18:45	057SMPL.d_4857162	FE
LCSD-135380	1	10-Dec-2018 18:47	058SMPL.d_4857163	FE
ZZZZZZSD	5	10-Dec-2018 18:51	060SMPL.d_4857165	FE
ZZZZZZMS	1	10-Dec-2018 18:53	061SMPL.d_4857166	FE
ZZZZZZMSD	1	10-Dec-2018 18:55	062SMPL.d_4857167	FE
ZZZZZZPDS	1	10-Dec-2018 18:57	063SMPL.d_4857168	FE
CCV 3	1	10-Dec-2018 18:59	064_CCV.d_4857169	FE MN
CCB 3	1	10-Dec-2018 19:01	065_CCB.d_4857170	FE MN
50WW13-181129	1	10-Dec-2018 19:22	075SMPL.d_4857180	FE
CCV 4	1	10-Dec-2018 19:24	076_CCV.d_4857181	FE MN
CCB 4	1	10-Dec-2018 19:26	077_CCB.d_4857182	FE MN
50WW14-181129	1	10-Dec-2018 19:28	078SMPL.d_4857183	FE
CCV 5	1	10-Dec-2018 19:49	088_CCV.d_4857193	FE MN
CCB 5	1	10-Dec-2018 19:51	089_CCB.d_4857194	FE MN
MBLKF1-135382	1	10-Dec-2018 19:59	093SMPL.d_4857201	FE MN
MBLK-135382	1	10-Dec-2018 20:01	094SMPL.d_4857202	FE MN
LCS-135382	1	10-Dec-2018 20:03	095SMPL.d_4857203	FE MN
LCSD-135382	1	10-Dec-2018 20:05	096SMPL.d_4857204	FE MN
CCV 6	1	10-Dec-2018 20:07	097_CCV.d_4857205	FE MN
CCB 6	1	10-Dec-2018 20:09	098_CCB.d_4857206	FE MN
ZZZZZZSD	5	10-Dec-2018 20:13	100SMPL.d_4857208	FE
ZZZZZZMS	1	10-Dec-2018 20:16	101SMPL.d_4857209	FE MN
ZZZZZZMSD	1	10-Dec-2018 20:18	102SMPL.d_4857210	FE MN
ZZZZZZPDS	1	10-Dec-2018 20:20	103SMPL.d_4857211	FE MN
50WW06-181129	1	10-Dec-2018 20:30	108SMPL.d_4857216	FE MN
CCV 7	1	10-Dec-2018 20:32	109_CCV.d_4857217	FE MN
CCB 7	1	10-Dec-2018 20:34	110_CCB.d_4857218	FE MN
50WW13-181129	1	10-Dec-2018 20:36	111SMPL.d_4857219	FE MN
50WW14-181129	1	10-Dec-2018 20:38	112SMPL.d_4857220	FE MN
CCV 8	1	10-Dec-2018 20:57	121_CCV.d_4857229	FE MN
CCB 8	1	10-Dec-2018 20:59	122_CCB.d_4857230	FE MN
CCV 9	1	10-Dec-2018 21:09	127_CCV.d_4857235	FE MN
CCB 9	1	10-Dec-2018 21:12	128_CCB.d_4857236	FE MN

ALS Houston, US

Date: 04-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497
Start Date: 10-Dec-2018 End Date: 11-Dec-2018

Run ID:ICPMS05_328925
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CAL BLK	1	10-Dec-2018 21:20	132CALB.d_4857240	FE MN
2/10/200	1	10-Dec-2018 21:22	133CALS.d_4857241	FE MN
5/25/500	1	10-Dec-2018 21:24	134CALS.d_4857242	FE MN
10/50/1000	1	10-Dec-2018 21:26	135CALS.d_4857243	FE MN
100/500/10K	1	10-Dec-2018 21:28	136CALS.d_4857244	FE MN
200/1000/20K	1	10-Dec-2018 21:30	137CALS.d_4857245	FE MN
ICCV 10	1	10-Dec-2018 21:32	138_ICV.d_4857246	FE MN
LLCCV2	1	10-Dec-2018 21:34	139SMPL.d_4857247	FE MN
LLCCV5	1	10-Dec-2018 21:36	140LICV.d_4857248	FE MN
ICCB 10	1	10-Dec-2018 21:38	141_ICB.d_4857249	FE MN
CCV 11	1	10-Dec-2018 21:57	150_CCV.d_4857258	FE MN
CCB 11	1	10-Dec-2018 21:59	151_CCB.d_4857259	FE MN
CCV 12	1	10-Dec-2018 22:22	162_CCV.d_4857270	FE MN
CCB 12	1	10-Dec-2018 22:24	163_CCB.d_4857271	FE MN
CCV 13	1	10-Dec-2018 22:41	171_CCV.d_4857279	FE MN
CCB 13	1	10-Dec-2018 22:43	172_CCB.d_4857280	FE MN
CCV 14	1	10-Dec-2018 23:06	183_CCV.d_4857511	FE MN
CCB 14	1	10-Dec-2018 23:08	184_CCB.d_4857512	FE MN
CCV 15	1	10-Dec-2018 23:31	195_CCV.d_4857523	FE MN
CCB 15	1	10-Dec-2018 23:33	196_CCB.d_4857524	FE MN
CCB 16	1	10-Dec-2018 23:54	206_CCB.d_4857534	FE MN
CCV 16	1	11-Dec-2018 00:02	208_CCV.d_4857536	FE MN
CCV 17	1	11-Dec-2018 00:23	218_CCV.d_4857643	FE MN
CCB 17	1	11-Dec-2018 00:25	219_CCB.d_4857644	FE MN
CCV 18	1	11-Dec-2018 00:27	220_CCV.d_4857645	FE MN
CCB 18	1	11-Dec-2018 00:29	221_CCB.d_4857646	FE MN
CCV 19	1	11-Dec-2018 00:52	232_CCV.d_4857657	FE MN
CCB 19	1	11-Dec-2018 00:54	233_CCB.d_4857658	FE MN
CCV 20	1	11-Dec-2018 01:13	242_CCV.d_4857667	FE MN
CCB 20	1	11-Dec-2018 01:15	243_CCB.d_4857668	FE MN
CCV 21	1	11-Dec-2018 01:37	254_CCV.d_4857679	FE MN
CCB 21	1	11-Dec-2018 01:39	255_CCB.d_4857680	FE MN
CCV 22	1	11-Dec-2018 01:41	256_CCV.d_4857681	FE MN
CCB 22	1	11-Dec-2018 01:43	257_CCB.d_4857682	FE MN
LLCCV5	1	11-Dec-2018 01:46	258LICV.d_4857683	FE MN
LLCCV2	1	11-Dec-2018 01:48	259SMPL.d_4857684	FE MN
ICSA	1	11-Dec-2018 01:50	260ICSA.d_4857685	FE MN
ICSAB	1	11-Dec-2018 01:52	261ICSB.d_4857686	FE MN

ALS Houston, US

Date: 04-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497
Start Date: 17-Dec-2018 End Date: 18-Dec-2018

Run ID:ICPMS05_329366
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_329366_Tune	1	17-Dec-2018 00:00	ICPMS05_329366_Tune_1	
CAL BLK	1	17-Dec-2018 12:25	007CALB.d_4868014	FE
2/10/200	1	17-Dec-2018 12:27	008CALS.d_4868015	FE
5/25/500	1	17-Dec-2018 12:29	009CALS.d_4868016	FE
10/50/1000	1	17-Dec-2018 12:31	010CALS.d_4868017	FE
100/500/10K	1	17-Dec-2018 12:33	011CALS.d_4868018	FE
200/1000/20K	1	17-Dec-2018 12:35	012CALS.d_4868019	FE
LLICV2	1	17-Dec-2018 12:41	015SMPL.d_4868022	FE
LLICV5	1	17-Dec-2018 12:43	016LICV.d_4868023	FE
ICB	1	17-Dec-2018 12:45	017_ICB.d_4868024	FE
ICV	1	17-Dec-2018 12:47	018_ICV.d_4868025	FE
ICSA	1	17-Dec-2018 12:49	019ICSA.d_4868026	FE
ICSAB	1	17-Dec-2018 12:52	020ICSB.d_4868027	FE
CCV 1	1	17-Dec-2018 13:08	028_CCV.d_4868035	FE
CCB 1	1	17-Dec-2018 13:10	029_CCB.d_4868036	FE
CCV 2	1	17-Dec-2018 13:32	040_CCV.d_4868047	FE
CCB 2	1	17-Dec-2018 13:34	041_CCB.d_4868048	FE
CAL BLK	1	17-Dec-2018 14:11	059CALB.d_4868399	FE
2/10/200	1	17-Dec-2018 14:12	060CALS.d_4868400	FE
5/25/500	1	17-Dec-2018 14:14	061CALS.d_4868401	FE
10/50/1000	1	17-Dec-2018 14:16	062CALS.d_4868402	FE
100/500/10K	1	17-Dec-2018 14:18	063CALS.d_4868403	FE
200/1000/20K	1	17-Dec-2018 14:20	064CALS.d_4868404	FE
ICCV 3	1	17-Dec-2018 14:22	065_ICV.d_4868405	FE
LLCCV2	1	17-Dec-2018 14:24	066SMPL.d_4868406	FE
LLCCV5	1	17-Dec-2018 14:26	067LICV.d_4868407	FE
ICCB 3	1	17-Dec-2018 14:28	068_ICB.d_4868408	FE
CCV 4	1	17-Dec-2018 14:49	078_CCV.d_4868418	FE
CCB 4	1	17-Dec-2018 14:51	079_CCB.d_4868419	FE
MBLK-135368	1	17-Dec-2018 14:55	081SMPL.d_4868530	FE
LCS-135368	1	17-Dec-2018 14:56	082SMPL.d_4868531	FE
ZZZZZZSD	5	17-Dec-2018 15:00	084SMPL.d_4868533	FE
ZZZZZZMS	1	17-Dec-2018 15:02	085SMPL.d_4868534	FE
ZZZZZZPDS	1	17-Dec-2018 15:06	087SMPL.d_4868536	FE
CCV 5	1	17-Dec-2018 15:12	090_CCV.d_4868539	FE
CCB 5	1	17-Dec-2018 15:14	091_CCB.d_4868540	FE
CCV 6	1	17-Dec-2018 15:36	102_CCV.d_4868704	FE
CCB 6	1	17-Dec-2018 15:38	103_CCB.d_4868705	FE
CAL BLK	1	17-Dec-2018 16:07	112CALB.d_4868838	FE
2/10/200	1	17-Dec-2018 16:09	113CALS.d_4868839	FE
5/25/500	1	17-Dec-2018 16:11	114CALS.d_4868840	FE
10/50/1000	1	17-Dec-2018 16:13	115CALS.d_4868841	FE
100/500/10K	1	17-Dec-2018 16:15	116CALS.d_4868842	FE
200/1000/20K	1	17-Dec-2018 16:17	117CALS.d_4868843	FE
ICCV 7	1	17-Dec-2018 16:19	118_ICV.d_4868844	FE
LLCCV2	1	17-Dec-2018 16:21	119SMPL.d_4868845	FE
LLCCV5	1	17-Dec-2018 16:23	120LICV.d_4868846	FE
ICCB 7	1	17-Dec-2018 16:25	121_ICB.d_4868847	FE
ZZZZZZMSD	1	17-Dec-2018 16:27	122SMPL.d_4868848	FE
CCV 8	1	17-Dec-2018 16:45	131_CCV.d_4869014	FE
CCB 8	1	17-Dec-2018 16:47	132_CCB.d_4869015	FE

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497
Start Date: 17-Dec-2018 End Date: 18-Dec-2018

Run ID:ICPMS05_329366
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
50WW06-181129	1	17-Dec-2018 17:01	139SMPL.d_4869193	FE
CCV 9	1	17-Dec-2018 17:09	143_CCV.d_4869197	FE
CCB 9	1	17-Dec-2018 17:11	144_CCB.d_4869198	FE
CCV 10	1	17-Dec-2018 17:33	155_CCV.d_4869209	FE
CCB 10	1	17-Dec-2018 17:35	156_CCB.d_4869210	FE
CCV 11	1	17-Dec-2018 17:55	163_CCV.d_4869296	FE
CCB 11	1	17-Dec-2018 17:57	164_CCB.d_4869297	FE
CAL BLK	1	17-Dec-2018 18:06	168CALB.d_4869558	FE
2/10/200	1	17-Dec-2018 18:08	169CALS.d_4869559	FE
5/25/500	1	17-Dec-2018 18:10	170CALS.d_4869560	FE
10/50/1000	1	17-Dec-2018 18:12	171CALS.d_4869561	FE
100/500/10K	1	17-Dec-2018 18:14	172CALS.d_4869562	FE
200/1000/20K	1	17-Dec-2018 18:16	173CALS.d_4869563	FE
ICCV 12	1	17-Dec-2018 18:18	174_ICV.d_4869564	FE
LLCCV2	1	17-Dec-2018 18:20	175SMPL.d_4869565	FE
LLCCV5	1	17-Dec-2018 18:22	176LICV.d_4869566	FE
ICCB 12	1	17-Dec-2018 18:24	177_ICB.d_4869567	FE
CCV 13	1	17-Dec-2018 19:05	184_CCV.d_4869589	FE
CCB 13	1	17-Dec-2018 19:07	185_CCB.d_4869590	FE
CCV 14	1	17-Dec-2018 20:15	194_CCV.d_4869599	FE
CCB 14	1	17-Dec-2018 20:17	195_CCB.d_4869600	FE
CCV 15	1	17-Dec-2018 20:53	206_CCV.d_4869634	FE
CCB 15	1	17-Dec-2018 20:55	207_CCB.d_4869635	FE
CCV 16	1	17-Dec-2018 21:17	218_CCV.d_4869646	FE
CCB 16	1	17-Dec-2018 21:19	219_CCB.d_4869647	FE
CAL BLK	1	17-Dec-2018 21:51	234CALB.d_4869653	FE
2/10/200	1	17-Dec-2018 21:53	235CALS.d_4869654	FE
5/25/500	1	17-Dec-2018 21:55	236CALS.d_4869655	FE
10/50/1000	1	17-Dec-2018 21:57	237CALS.d_4869656	FE
100/500/10K	1	17-Dec-2018 21:59	238CALS.d_4869657	FE
200/1000/20K	1	17-Dec-2018 22:01	239CALS.d_4869658	FE
ICCV 17	1	17-Dec-2018 22:03	240_ICV.d_4869659	FE
LLCCV2	1	17-Dec-2018 22:05	241SMPL.d_4869660	FE
LLCCV5	1	17-Dec-2018 22:07	242LICV.d_4869661	FE
ICCB 17	1	17-Dec-2018 22:09	243_ICB.d_4869662	FE
CCV 18	1	17-Dec-2018 22:25	251_CCV.d_4869670	FE
CCB 18	1	17-Dec-2018 22:27	252_CCB.d_4869671	FE
CCV 19	1	17-Dec-2018 22:43	260_CCV.d_4869679	FE
CCB 19	1	17-Dec-2018 22:45	261_CCB.d_4869680	FE
CCV 20	1	17-Dec-2018 23:06	272_CCV.d_4869691	FE
CCB 20	1	17-Dec-2018 23:08	273_CCB.d_4869692	FE
CCV 21	1	17-Dec-2018 23:28	283_CCV.d_4869702	FE
CCB 21	1	17-Dec-2018 23:30	284_CCB.d_4869703	FE
CCV 22	1	17-Dec-2018 23:48	293_CCV.d_4869712	FE
CCB 22	1	17-Dec-2018 23:50	294_CCB.d_4869713	FE
CCV 23	1	18-Dec-2018 00:12	305_CCV.d_4869782	FE
CCB 23	1	18-Dec-2018 00:18	308_CCB.d_4869785	FE
CCV 24	1	18-Dec-2018 00:34	316_CCV.d_4869888	FE
CCB 24	1	18-Dec-2018 00:36	317_CCB.d_4869889	FE
CCV 25	1	18-Dec-2018 00:58	328_CCV.d_4869900	FE
CCB 25	1	18-Dec-2018 01:00	329_CCB.d_4869901	FE

ALS Houston, US

Date: 04-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497
Start Date: 17-Dec-2018 End Date: 18-Dec-2018

Run ID:ICPMS05_329366
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCV 26	1	18-Dec-2018 01:22	340_CCV.d_4869912	FE
CCB 26	1	18-Dec-2018 01:24	341_CCB.d_4869913	FE
CCV 27	1	18-Dec-2018 01:41	350_CCV.d_4870066	FE
CCB 27	1	18-Dec-2018 01:43	351_CCB.d_4870067	FE
CCV 28	1	18-Dec-2018 02:05	362_CCV.d_4870078	FE
CCB 28	1	18-Dec-2018 02:07	363_CCB.d_4870079	FE
CCV 29	1	18-Dec-2018 02:27	373_CCV.d_4870089	FE
CCB 29	1	18-Dec-2018 02:29	374_CCB.d_4870090	FE
CCV 30	1	18-Dec-2018 02:51	385_CCV.d_4870100	FE
CCB 30	1	18-Dec-2018 02:53	386_CCB.d_4870101	FE
LLCCV5	1	18-Dec-2018 03:01	390LICV.d_4870105	FE
LLCCV2	1	18-Dec-2018 03:03	391SMPL.d_4870106	FE
ICSA	1	18-Dec-2018 03:05	392ICSA.d_4870107	FE
ICSAB	1	18-Dec-2018 03:07	393ICSB.d_4870108	FE

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Date: 04-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

ICV	Date: 10-Dec-2018 17:37		Seq: 4857066	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9979.052	100	90-110	
Manganese	100	98.654	99	90-110	

CCV1	Date: 10-Dec-2018 18:12		Seq: 4857116	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10112.688	101	90-110	
Manganese	100	101.137	101	90-110	

CCV2	Date: 10-Dec-2018 18:38		Seq: 4857147	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10303.453	103	90-110	
Manganese	100	103.098	103	90-110	

CCV3	Date: 10-Dec-2018 18:59		Seq: 4857169	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10011.439	100	90-110	
Manganese	100	100.033	100	90-110	

CCV4	Date: 10-Dec-2018 19:24		Seq: 4857181	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9750.742	98	90-110	
Manganese	100	99.022	99	90-110	

CCV5	Date: 10-Dec-2018 19:49		Seq: 4857193	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9889.226	99	90-110	
Manganese	100	98.406	98	90-110	

CCV6	Date: 10-Dec-2018 20:07		Seq: 4857205	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9920.947	99	90-110	
Manganese	100	98.686	99	90-110	

CCV7	Date: 10-Dec-2018 20:32		Seq: 4857217	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10029.326	100	90-110	
Manganese	100	98.597	99	90-110	

CCV8	Date: 10-Dec-2018 20:57		Seq: 4857229	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9913.873	99	90-110	
Manganese	100	97.804	98	90-110	

CCV9	Date: 10-Dec-2018 21:09		Seq: 4857235	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10059.449	101	90-110	
Manganese	100	100.52	101	90-110	

ICCV10	Date: 10-Dec-2018 21:32		Seq: 4857246	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10364.522	104	90-110	
Manganese	100	101.305	101	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

CCV11	Date: 10-Dec-2018 21:57		Seq: 4857258	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10240.425	102	90-110	
Manganese	100	102.954	103	90-110	

CCV12	Date: 10-Dec-2018 22:22		Seq: 4857270	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10153.735	102	90-110	
Manganese	100	101.083	101	90-110	

CCV13	Date: 10-Dec-2018 22:41		Seq: 4857279	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10132.344	101	90-110	
Manganese	100	101.031	101	90-110	

CCV14	Date: 10-Dec-2018 23:06		Seq: 4857511	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10062.185	101	90-110	
Manganese	100	99.843	100	90-110	

CCV15	Date: 10-Dec-2018 23:31		Seq: 4857523	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10152.363	102	90-110	
Manganese	100	100.34	100	90-110	

CCV16	Date: 11-Dec-2018 00:02		Seq: 4857536	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9829.612	98	90-110	
Manganese	100	99.111	99	90-110	

CCV17	Date: 11-Dec-2018 00:23		Seq: 4857643	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10373.839	104	90-110	
Manganese	100	104.855	105	90-110	

CCV18	Date: 11-Dec-2018 00:27		Seq: 4857645	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10078.685	101	90-110	
Manganese	100	99.51	100	90-110	

CCV19	Date: 11-Dec-2018 00:52		Seq: 4857657	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9722.227	97	90-110	
Manganese	100	98.678	99	90-110	

CCV20	Date: 11-Dec-2018 01:13		Seq: 4857667	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9746.941	98	90-110	
Manganese	100	97.977	98	90-110	

CCV21	Date: 11-Dec-2018 01:37		Seq: 4857679	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9899.631	99	90-110	
Manganese	100	99.233	99	90-110	

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Date: 04-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

CCV22 | Date: 11-Dec-2018 01:41 | Seq: 4857681 | CCV | Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Iron	10000	9954.743	100	90-110	
Manganese	100	98.904	99	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_329366
Instrument: ICPMS05
Method: SW6020

ICV	Date: 17-Dec-2018 12:47		Seq: 4868025	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10040.137	100	90-110	

CCV1	Date: 17-Dec-2018 13:08		Seq: 4868035	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9938.408	99	90-110	

CCV2	Date: 17-Dec-2018 13:32		Seq: 4868047	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9896.131	99	90-110	

ICCV3	Date: 17-Dec-2018 14:22		Seq: 4868405	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10149.901	101	90-110	

CCV4	Date: 17-Dec-2018 14:49		Seq: 4868418	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10328.35	103	90-110	

CCV5	Date: 17-Dec-2018 15:12		Seq: 4868539	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10193.269	102	90-110	

CCV6	Date: 17-Dec-2018 15:36		Seq: 4868704	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9702.053	97	90-110	

ICCV7	Date: 17-Dec-2018 16:19		Seq: 4868844	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10406.011	104	90-110	

CCV8	Date: 17-Dec-2018 16:45		Seq: 4869014	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9782.519	98	90-110	

CCV9	Date: 17-Dec-2018 17:09		Seq: 4869197	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9808.592	98	90-110	

CCV10	Date: 17-Dec-2018 17:33		Seq: 4869209	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9789.215	98	90-110	

CCV11	Date: 17-Dec-2018 17:55		Seq: 4869296	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9698.434	97	90-110	

ICCV12	Date: 17-Dec-2018 18:18		Seq: 4869564	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10364.214	104	90-110	

CCV13	Date: 17-Dec-2018 19:05		Seq: 4869589	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9670.587	97	90-110	

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Date: 04-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_329366
Instrument: ICPMS05
Method: SW6020

CCV14	Date: 17-Dec-2018 20:15		Seq: 4869599	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9879.943	99	90-110	
CCV15	Date: 17-Dec-2018 20:53		Seq: 4869634	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9870.129	99	90-110	
CCV16	Date: 17-Dec-2018 21:17		Seq: 4869646	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9844.205	98	90-110	
ICCV17	Date: 17-Dec-2018 22:03		Seq: 4869659	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10612.671	106	90-110	
CCV18	Date: 17-Dec-2018 22:25		Seq: 4869670	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10123.719	101	90-110	
CCV19	Date: 17-Dec-2018 22:43		Seq: 4869679	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10119.529	101	90-110	
CCV20	Date: 17-Dec-2018 23:06		Seq: 4869691	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9745.149	98	90-110	
CCV21	Date: 17-Dec-2018 23:28		Seq: 4869702	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10171.746	102	90-110	
CCV22	Date: 17-Dec-2018 23:48		Seq: 4869712	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10262.592	103	90-110	
CCV23	Date: 18-Dec-2018 00:12		Seq: 4869782	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10064.253	101	90-110	
CCV24	Date: 18-Dec-2018 00:34		Seq: 4869888	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9850.152	99	90-110	
CCV25	Date: 18-Dec-2018 00:58		Seq: 4869900	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10555.408	106	90-110	
CCV26	Date: 18-Dec-2018 01:22		Seq: 4869912	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10328.69	103	90-110	
CCV27	Date: 18-Dec-2018 01:41		Seq: 4870066	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10270.049	103	90-110	

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Date: 04-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_329366
Instrument: ICPMS05
Method: SW6020

CCV28	Date: 18-Dec-2018 02:05		Seq: 4870078	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10023.538	100	90-110	

CCV29	Date: 18-Dec-2018 02:27		Seq: 4870089	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9979.138	100	90-110	

CCV30	Date: 18-Dec-2018 02:51		Seq: 4870100	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9690.168	97	90-110	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

ICB	Date: 10-Dec-2018 17:43		Seq: 4857069	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB1	Date: 10-Dec-2018 18:14		Seq: 4857117	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB2	Date: 10-Dec-2018 18:41		Seq: 4857148	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
MBLK-135380	Date: 10-Dec-2018 18:43		Seq: 4857161	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB3	Date: 10-Dec-2018 19:01		Seq: 4857170	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB4	Date: 10-Dec-2018 19:26		Seq: 4857182	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB5	Date: 10-Dec-2018 19:51		Seq: 4857194	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
MBLKF1-135382	Date: 10-Dec-2018 19:59		Seq: 4857201	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	2.26	0.7	5	J	
MBLK-135382	Date: 10-Dec-2018 20:01		Seq: 4857202	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	1.521	0.7	5	J	
CCB6	Date: 10-Dec-2018 20:09		Seq: 4857206	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB7	Date: 10-Dec-2018 20:34		Seq: 4857218	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB8	Date: 10-Dec-2018 20:59		Seq: 4857230	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

CCB9	Date: 10-Dec-2018 21:12		Seq: 4857236	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	0.919	0.7	5	J	
ICCB10	Date: 10-Dec-2018 21:38		Seq: 4857249	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB11	Date: 10-Dec-2018 21:59		Seq: 4857259	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB12	Date: 10-Dec-2018 22:24		Seq: 4857271	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB13	Date: 10-Dec-2018 22:43		Seq: 4857280	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB14	Date: 10-Dec-2018 23:08		Seq: 4857512	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB15	Date: 10-Dec-2018 23:33		Seq: 4857524	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB16	Date: 10-Dec-2018 23:54		Seq: 4857534	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB17	Date: 11-Dec-2018 00:25		Seq: 4857644	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	0.795	0.7	5	J	
CCB18	Date: 11-Dec-2018 00:29		Seq: 4857646	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB19	Date: 11-Dec-2018 00:54		Seq: 4857658	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB20	Date: 11-Dec-2018 01:15		Seq: 4857668	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

CCB20	Date: 11-Dec-2018 01:15		Seq: 4857668	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Manganese	5	0.7	5	U	

CCB21	Date: 11-Dec-2018 01:39		Seq: 4857680	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	

CCB22	Date: 11-Dec-2018 01:43		Seq: 4857682	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_329366
Instrument: ICPMS05
Method: SW6020

ICB	Date: 17-Dec-2018 12:45		Seq: 4868024	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB1	Date: 17-Dec-2018 13:10		Seq: 4868036	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	34.86	12	200	J	

CCB2	Date: 17-Dec-2018 13:34		Seq: 4868048	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	37.74	12	200	J	

ICCB3	Date: 17-Dec-2018 14:28		Seq: 4868408	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB4	Date: 17-Dec-2018 14:51		Seq: 4868419	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

MBLK-135368	Date: 17-Dec-2018 14:55		Seq: 4868530	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB5	Date: 17-Dec-2018 15:14		Seq: 4868540	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB6	Date: 17-Dec-2018 15:38		Seq: 4868705	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

ICCB7	Date: 17-Dec-2018 16:25		Seq: 4868847	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB8	Date: 17-Dec-2018 16:47		Seq: 4869015	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB9	Date: 17-Dec-2018 17:11		Seq: 4869198	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB10	Date: 17-Dec-2018 17:35		Seq: 4869210	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB11	Date: 17-Dec-2018 17:57		Seq: 4869297	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

ICCB12	Date: 17-Dec-2018 18:24		Seq: 4869567	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB13	Date: 17-Dec-2018 19:07		Seq: 4869590	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_329366
Instrument: ICPMS05
Method: SW6020

CCB14	Date: 17-Dec-2018 20:17		Seq: 4869600	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB15	Date: 17-Dec-2018 20:55		Seq: 4869635	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB16	Date: 17-Dec-2018 21:19		Seq: 4869647	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
ICCB17	Date: 17-Dec-2018 22:09		Seq: 4869662	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB18	Date: 17-Dec-2018 22:27		Seq: 4869671	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB19	Date: 17-Dec-2018 22:45		Seq: 4869680	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB20	Date: 17-Dec-2018 23:08		Seq: 4869692	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB21	Date: 17-Dec-2018 23:30		Seq: 4869703	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB22	Date: 17-Dec-2018 23:50		Seq: 4869713	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB23	Date: 18-Dec-2018 00:18		Seq: 4869785	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB24	Date: 18-Dec-2018 00:36		Seq: 4869889	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB25	Date: 18-Dec-2018 01:00		Seq: 4869901	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB26	Date: 18-Dec-2018 01:24		Seq: 4869913	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB27	Date: 18-Dec-2018 01:43		Seq: 4870067	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB28	Date: 18-Dec-2018 02:07		Seq: 4870079	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

ALS Houston, US

Date: 04-Jan-19

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_329366
Instrument: ICPMS05
Method: SW6020

CCB29	Date: 18-Dec-2018 02:29		Seq: 4870090	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB30	Date: 18-Dec-2018 02:53		Seq: 4870101	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

Form 4 - ICP Interference Check Sample

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

ICSA	Date: 10-Dec-2018 17:47	Seq: 4857071	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	100000	98610	98.6	
Manganese		0.225	0	

ICSAB	Date: 10-Dec-2018 17:49	Seq: 4857072	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	110000	107700	97.9	
Manganese	100	106.5	106	

ICSA	Date: 11-Dec-2018 01:50	Seq: 4857685	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	100000	100300	100	
Manganese		-0.157	0	

ICSAB	Date: 11-Dec-2018 01:52	Seq: 4857686	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	110000	109800	99.8	
Manganese	100	106.8	107	

Form 4 - ICP Interference Check Sample

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Run ID: ICPMS05_329366
Instrument: ICPMS05
Method: SW6020

ICSA	Date: 17-Dec-2018 12:49	Seq: 4868026	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	100000	101600	102	

ICSAB	Date: 17-Dec-2018 12:52	Seq: 4868027	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	110000	114200	104	

ICSA	Date: 18-Dec-2018 03:05	Seq: 4870107	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	100000	100500	100	

ICSAB	Date: 18-Dec-2018 03:07	Seq: 4870108	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	110000	109900	99.9	

ALS Houston, US

Date: 04-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Date Analyzed: 10-Dec-2018 18:55
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Matrix Spike: HS18120471-10MS
Client Sample ID:
Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Iron	200.0	5051	5000	101	5016	5000	100	80-120	0.702	20

Matrix Spike: HS18111440-01MS
Client Sample ID:
Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Iron	1553	6274	5000	94.4	6289	5000	94.7	75-125	0.246	20
Manganese	38.51	81.37	50.00	85.7	82.02	50.00	87.0	75-125	0.785	20

ALS Houston, US

Date: 04-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Date Analyzed: 17-Dec-2018 16:27
Date Extracted: 08-Dec-2018 09:30
Units: ug/L

Matrix Spike: HS18111447-01MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Iron	2798	8660	5000	117	8411	5000	112	80-120	2.92	20

ALS Houston, US

Date: 04-Jan-19

Form 5B - Post Digest Sample Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Date Analyzed: 10-Dec-2018 18:57
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Lab Sample ID: HS18120471-10PDS
Client Sample ID:
Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Iron	0	10690	10000	107	75-125

Lab Sample ID: HS18111440-01PDS
Client Sample ID:
Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Iron	1553	11440	10000	99	75-125
Manganese	38.51	131.4	100	93	75-125

ALS Houston, US

Date: 04-Jan-19

Form 5B - Post Digest Sample Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Date Analyzed: 17-Dec-2018 15:06
Date Extracted: 08-Dec-2018 09:30
Units: ug/L

Lab Sample ID: HS18111447-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Iron	2798	15140	10000	123	75-125

ALS Houston, US

Date: 04-Jan-19

Form 7 - Laboratory Control Sample

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Date Analyzed: 10-Dec-2018 18:45
Date Extracted:
Units: ug/L

Lab Sample ID: LCS-135380 — Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Iron	5000	5152	103	80-120

Lab Sample ID: LCS-135382 — Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Iron	5000	5001	100	80-120
Manganese	50	50.62	101	80-120

ALS Houston, US

Date: 04-Jan-19

Form 7 - Laboratory Control Sample

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Date Analyzed: 17-Dec-2018 14:56
Date Extracted: 08-Dec-2018 09:30
Units: ug/L

Lab Sample ID: LCS-135368
Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Iron	5000	5467	109	80-120

ALS Houston, US

Date: 04-Jan-19

Form 8 - ICP Serial Dilutions

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Date Analyzed: 10-Dec-2018 18:51
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Lab Sample ID: HS18120471-10SD
Client Sample ID:
Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Iron	0	U	0	U	0	

Lab Sample ID: HS18111440-01SD
Client Sample ID:
Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Iron	1553		1642		6	

ALS Houston, US Date: 04-Jan-19

Form 8 - ICP Serial Dilutions

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18111497

Date Analyzed: 17-Dec-2018 15:00
Date Extracted: 08-Dec-2018 09:30
Units: ug/L

Lab Sample ID: HS18111447-01SD
Client Sample ID:

Analysis Method: SW6020

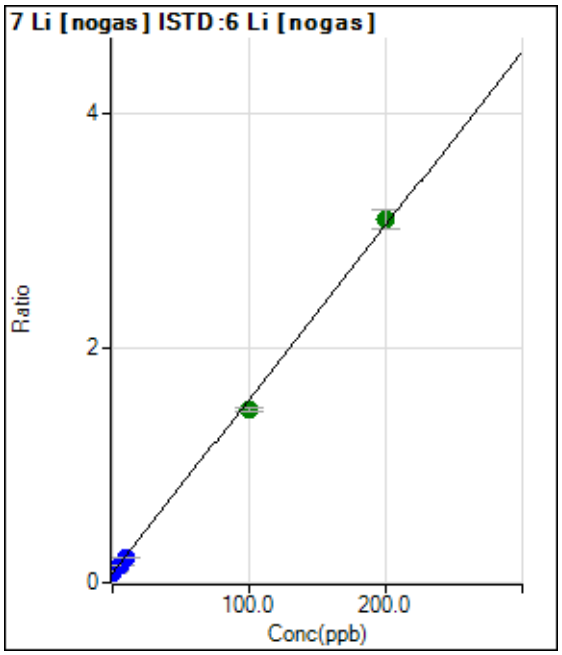
Analyte	Sample Result	C	SD Result	C	RPD	Q
Iron	2798		2915		4	

Calibration for 026_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121018B.b\
Analysis File: 121018B.batch.bin
DA Date-Time: 2018-12-10 17:46:50
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	019CALB.d	CAL BLK	2018-12-10 17:22:50
2	020CALS.d	2/10/200	2018-12-10 17:24:52
3	021CALS.d	5/25/500	2018-12-10 17:26:55
4	022CALS.d	10/50/1000	2018-12-10 17:28:58
5	023CALS.d	100/500/10K	2018-12-10 17:31:00
6	024CALS.d	200/1000/20K	2018-12-10 17:33:03
7			

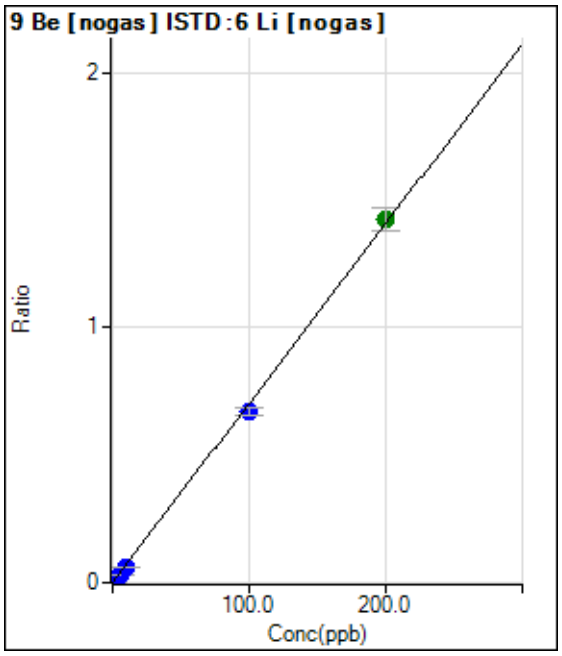
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	101659.32	0.0828	P	3.2
2	☐	2.000	1.723	132851.12	0.1083	P	4.3
3	☐	5.000	4.100	175639.00	0.1435	P	1.9
4	☐	10.000	8.613	262909.70	0.2103	P	3.7
5	☐	100.000	93.797	1681555.55	1.4711	A	2.5
6	☐	200.000	203.196	3241400.26	3.0903	A	5.2
7	☐	1.000					

y = 0.0148 * x + 0.0828
R = 0.9994
DL = 0.5437
BEC = 5.593

Weight: <None>
Min Conc: <None>

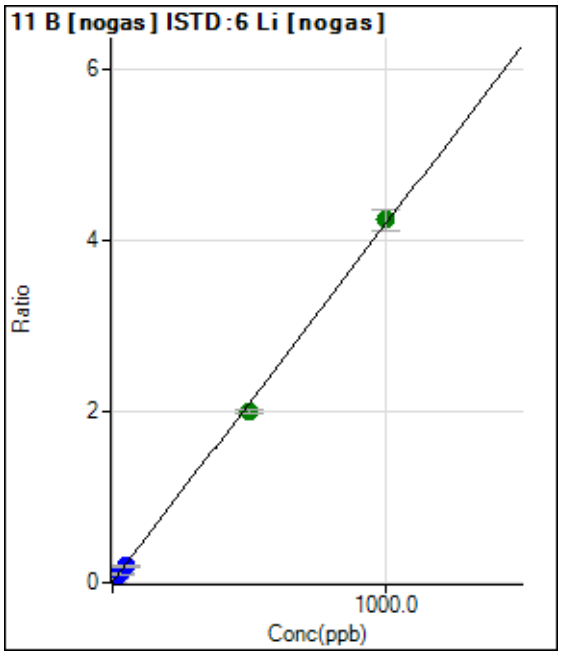


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	106.
2	☐	2.000	1.725	14892.62	0.0122	P	8.6
3	☐	5.000	4.346	37420.34	0.0306	P	2.1
4	☐	10.000	8.607	75655.29	0.0605	P	5.2
5	☐	100.000	95.676	768211.11	0.6724	P	4.0
6	☐	200.000	202.251	1490338.94	1.4215	A	6.2
7	☐	1.000					

y = 0.0070 * x + 3.0869E-005
R = 0.9997
DL = 0.01397
BEC = 0.004392

Weight: <None>
Min Conc: <None>

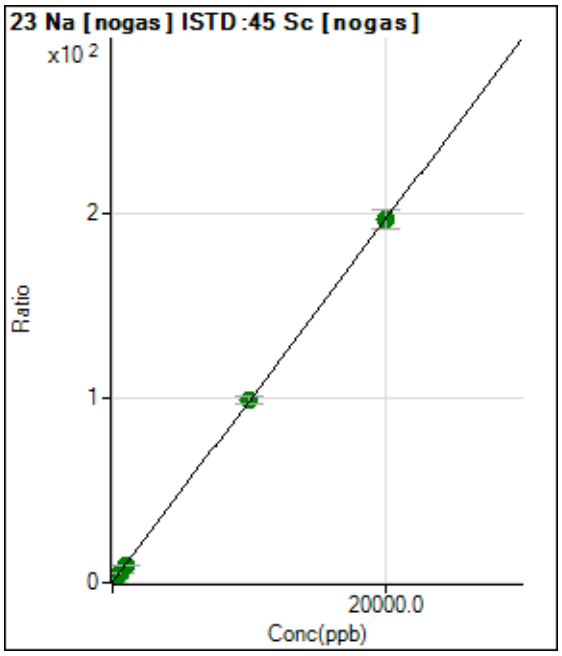
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9259.03	0.0076	P	12.0
2	☐	10.000	8.594	53374.51	0.0435	P	6.0
3	☐	25.000	22.402	123947.25	0.1013	P	3.3
4	☐	50.000	43.944	239318.10	0.1915	P	5.9
5	☐	500.000	475.868	2284042.78	1.9989	A	2.8
6	☐	1000.000	1012.448	4449103.68	4.2443	A	5.9
7	☐	5.000					

y = 0.0042 * x + 0.0076
R = 0.9996
DL = 0.652
BEC = 1.809

Weight: <None>
Min Conc: <None>

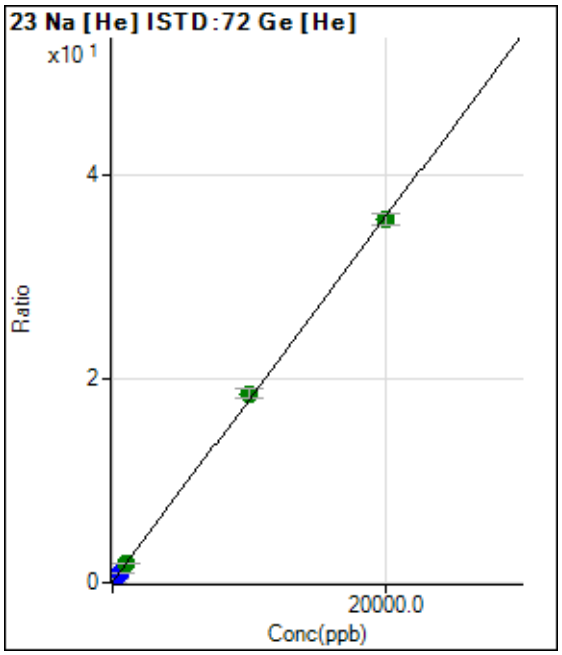


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	496567.70	0.1889	P	4.1
2	☐	200.000	192.936	5429107.28	2.0839	A	1.0
3	☐	500.000	521.172	13049242.22	5.3079	A	1.0
4	☐	1000.000	965.253	25117059.41	9.6696	A	0.7
5	☐	10000.00	10036.953	246379138.8	98.7723	A	4.7
6	☐	20000.00	19982.802	481847077.4	196.461	A	5.2
7	☐	100.000					

y = 0.0098 * x + 0.1889
R = 1.0000
DL = 2.36
BEC = 19.23

Weight: <None>
Min Conc: <None>

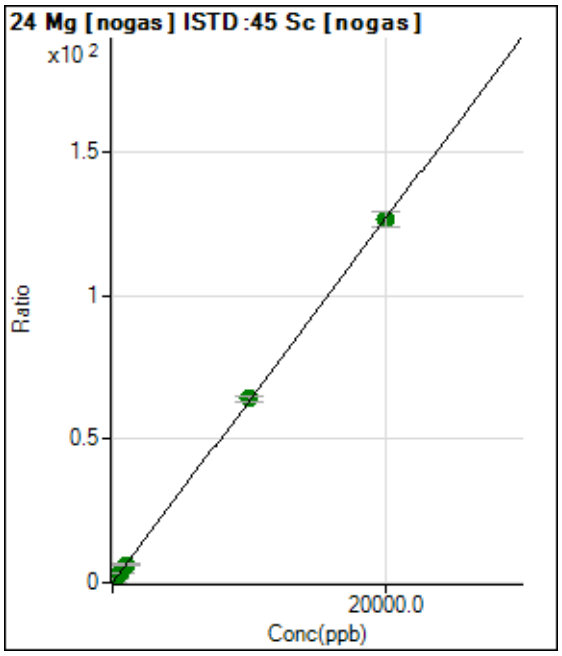
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71384.33	0.0719	P	3.2
2	☐	200.000	200.265	399017.30	0.4305	P	3.2
3	☐	500.000	501.619	892709.28	0.9701	P	2.3
4	☐	1000.000	1004.751	1730789.66	1.8709	A	3.9
5	☐	10000.00	10314.394	16078625.59	18.5402	A	4.8
6	☐	20000.00	19842.522	31690889.53	35.6006	A	3.2
7	☐	100.000					

y = 0.0018 * x + 0.0719
R = 0.9998
DL = 3.812
BEC = 40.16

Weight: <None>
Min Conc: <None>

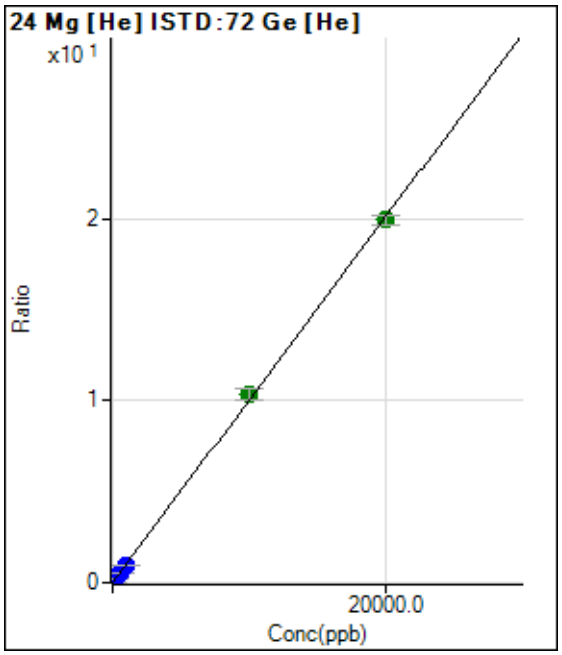


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5968.63	0.0023	P	5.2
2	☐	200.000	200.623	3317538.29	1.2732	A	2.3
3	☐	500.000	539.539	8403653.84	3.4203	A	3.9
4	☐	1000.000	993.128	16349977.45	6.2938	A	2.3
5	☐	10000.00	10118.078	159932991.0	64.1010	A	3.7
6	☐	20000.00	19940.310	309884790.2	126.325	A	4.1
7	☐	100.000					

y = 0.0063 * x + 0.0023
R = 1.0000
DL = 0.05537
BEC = 0.3582

Weight: <None>
Min Conc: <None>

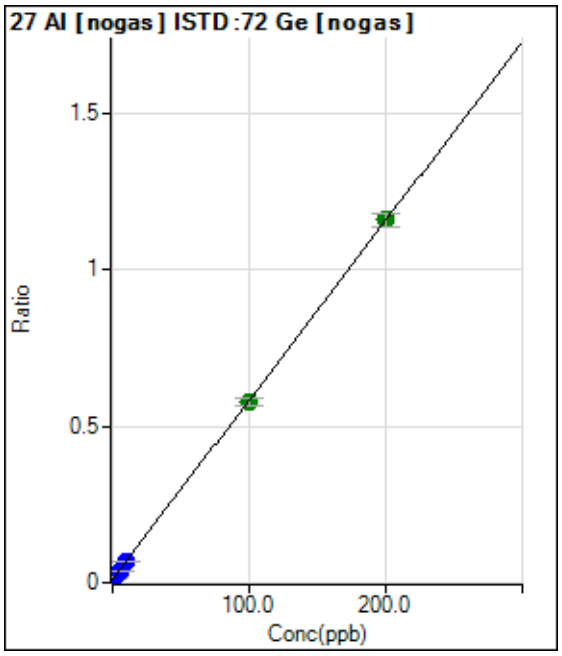
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540.02	0.0005	P	15.1
2	☐	200.000	199.096	185807.38	0.2005	P	4.5
3	☐	500.000	498.507	461122.25	0.5011	P	3.5
4	☐	1000.000	982.466	913345.19	0.9871	P	2.4
5	☐	10000.00	10301.712	8966446.53	10.3451	A	6.7
6	☐	20000.00	19850.067	17745286.40	19.9331	A	2.5
7	☐	100.000					

y = 0.0010 * x + 5.4535E-004
R = 0.9998
DL = 0.2461
BEC = 0.5431

Weight: <None>
Min Conc: <None>

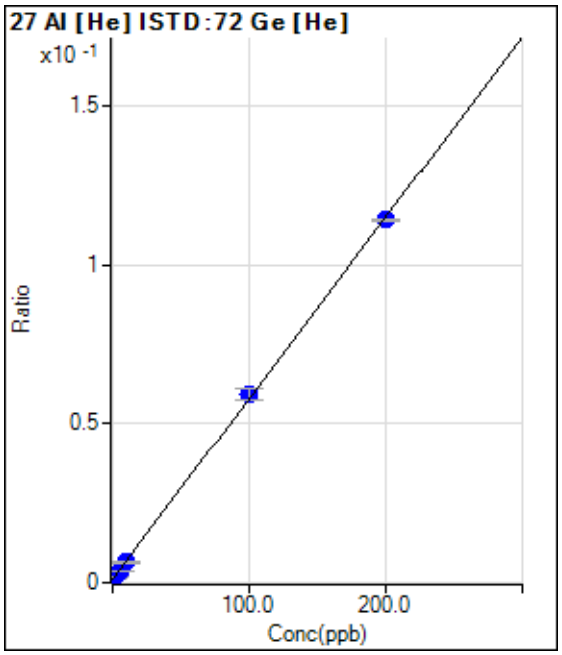


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38856.78	0.0110	P	2.3
2	☐	2.000	1.542	68910.12	0.0198	P	3.0
3	☐	5.000	4.543	127300.03	0.0370	P	0.5
4	☐	10.000	9.616	227124.10	0.0660	P	1.7
5	☐	100.000	98.883	1950181.12	0.5767	A	3.5
6	☐	200.000	200.594	3782656.30	1.1586	A	3.7
7	☐	1.000					

y = 0.0057 * x + 0.0110
R = 1.0000
DL = 0.1312
BEC = 1.918

Weight: <None>
Min Conc: <None>

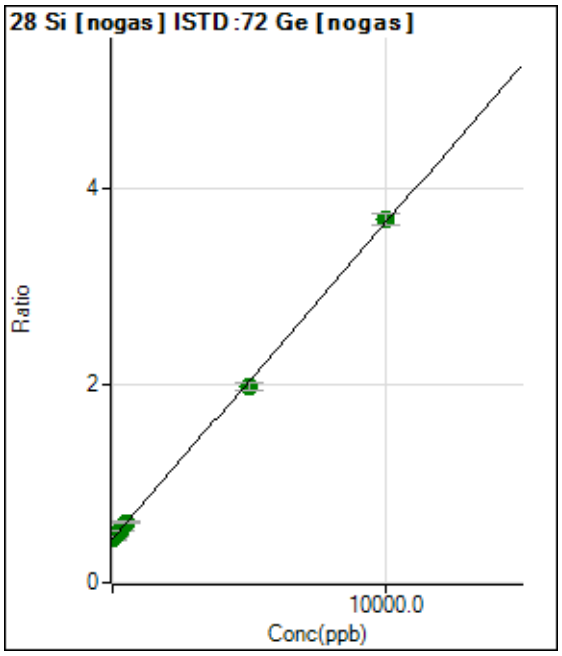
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.062	1043.38	0.0011	P	14.6
2	☐	2.000	1.734	1923.47	0.0021	P	5.1
3	☐	5.000	4.570	3390.35	0.0037	P	10.4
4	☐	10.000	9.501	6007.71	0.0065	P	4.7
5	☐	100.000	102.438	51493.98	0.0594	P	6.0
6	☐	200.000	198.819	101712.34	0.1142	P	0.5
7	☐	1.000					

y = 5.6907E-004 * x + 0.0011
R = 0.9999
DL = 0.8089
BEC = 1.913

Weight: <None>
Min Conc: <None>

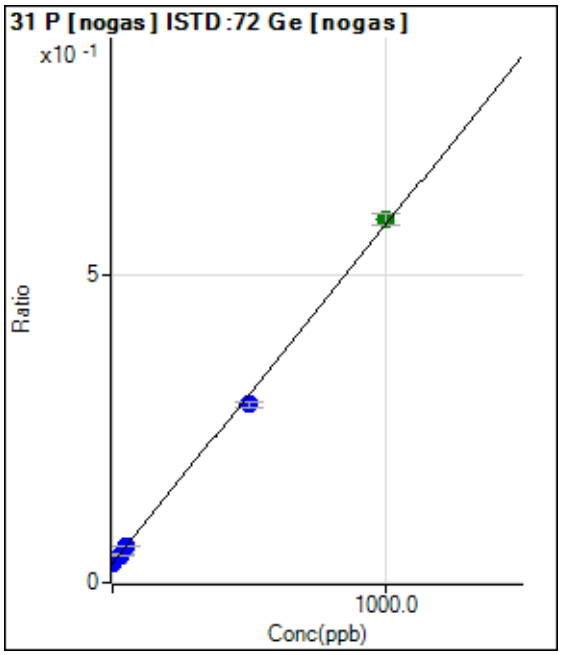


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1566587.89	0.4426	A	3.6
2	☐	100.000	85.902	1636137.16	0.4701	A	0.4
3	☐	250.000	250.694	1800665.70	0.5229	A	2.1
4	☐	500.000	518.770	2095245.12	0.6087	A	1.6
5	☐	5000.000	4818.958	6715267.81	1.9862	A	4.5
6	☐	10000.00	10089.706	11996350.66	3.6745	A	3.3
7	☐	5.000					

y = 3.2032E-004 * x + 0.4426
R = 0.9998
DL = 151.3
BEC = 1382

Weight: <None>
Min Conc: <None>

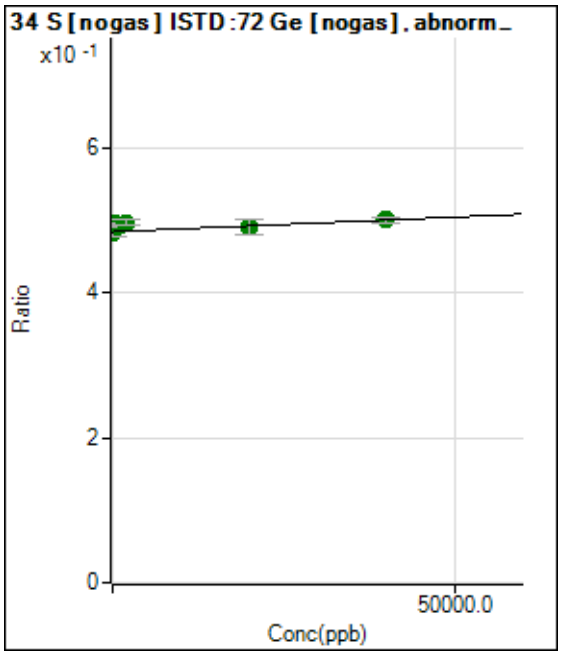
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111301.54	0.0314	P	3.2
2	☐	10.000	9.665	127861.09	0.0367	P	1.8
3	☐	25.000	25.093	155640.26	0.0452	P	1.8
4	☐	50.000	49.357	201331.02	0.0585	P	2.6
5	☐	500.000	469.771	977117.85	0.2890	P	3.3
6	☐	1000.000	1015.148	1920065.34	0.5881	A	3.2
7	☐	5.000					

y = 5.4835E-004 * x + 0.0314
R = 0.9994
DL = 5.538
BEC = 57.33

Weight: <None>
Min Conc: <None>

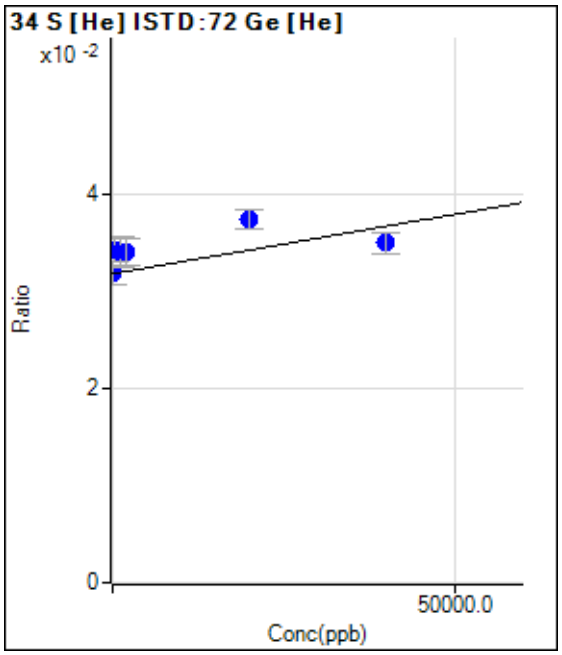


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1712092.42	0.4835	A	2.5
2	☐	400.000	27229.811	1721374.84	0.4946	A	2.2
3	☐	1000.000	23169.344	1697516.05	0.4929	A	1.1
4	☐	2000.000	31996.747	1708862.34	0.4965	A	1.8
5	☐	20000.00	14926.341	1654810.49	0.4896	A	4.0
6	☐	40000.00	40214.461	1631836.10	0.4998	A	1.4
7	☐	100.000					

y = 4.0647E-007 * x + 0.4835
R = 0.4801
DL = 9.054E+04
BEC = 1.189E+06

Weight: <None>
Min Conc: <None>

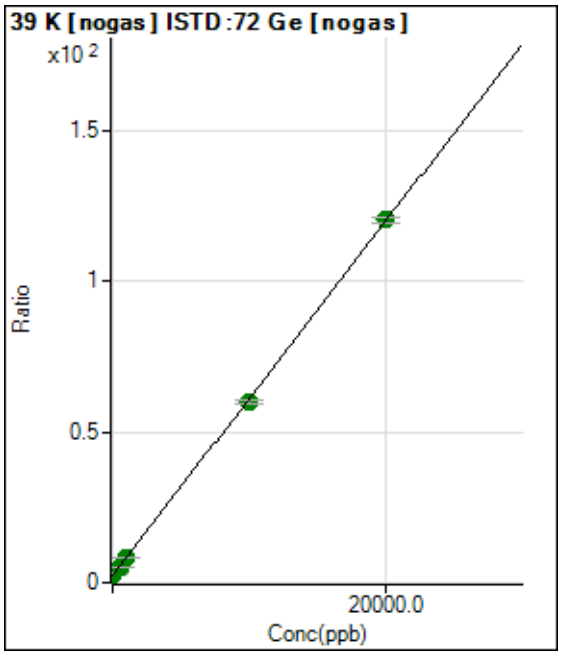
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31530.77	0.0318	P	7.5
2	☐	400.000	20314.488	31765.29	0.0343	P	7.3
3	☐	1000.000	19000.660	31364.42	0.0341	P	9.3
4	☐	2000.000	18660.291	31497.42	0.0341	P	8.2
5	☐	20000.00	45364.044	32366.64	0.0373	P	5.5
6	☐	40000.00	25835.802	31099.32	0.0349	P	6.2
7	☐	100.000					

y = 1.2207E-007 * x + 0.0318
R = 0.5366
DL = 5.863E+04
BEC = 2.604E+05

Weight: <None>
Min Conc: <None>

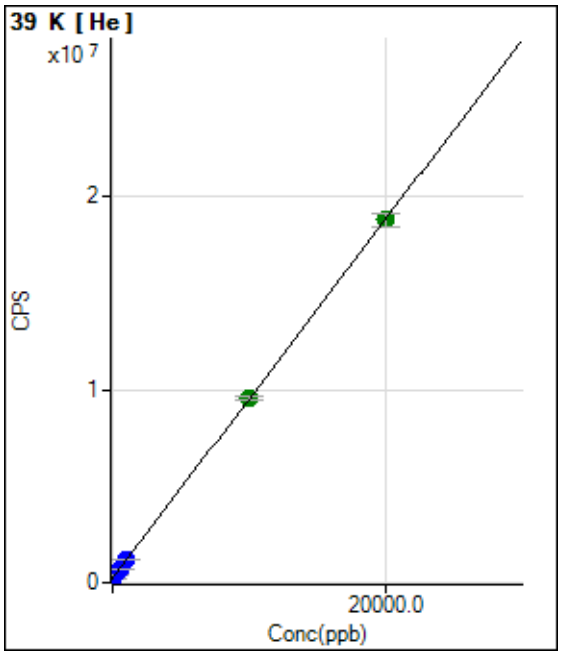


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8289091.85	2.3411	A	1.7
2	☐	200.000	201.388	12268207.83	3.5247	A	1.7
3	☐	500.000	501.091	18204673.32	5.2862	A	2.2
4	☐	1000.000	1004.186	28374235.01	8.2431	A	1.2
5	☐	10000.00	9823.483	203139275.3	60.0781	A	1.4
6	☐	20000.00	20088.008	393096833.7	120.407	A	1.5
7	☐	100.000					

y = 0.0059 * x + 2.3411
R = 0.9999
DL = 20.67
BEC = 398.3

Weight: <None>
Min Conc: <None>

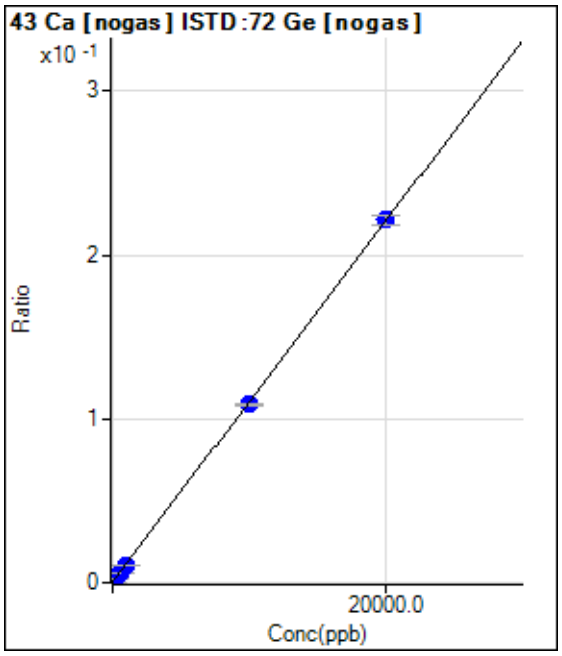
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	225828.67		P	1.4
2	☐	200.000	207.946	419262.62		P	0.7
3	☐	500.000	534.074	722630.51		P	1.8
4	☐	1000.000	1053.850	1206131.94		P	1.0
5	☐	10000.00	10051.724	9576055.48		A	1.6
6	☐	20000.00	19970.514	18802625.14		A	3.5
7	☐	100.000					

y = 930.2112 * x + 225828.6667
R = 1.0000
DL = 10.22
BEC = 242.8

Weight: <None>
Min Conc: <None>

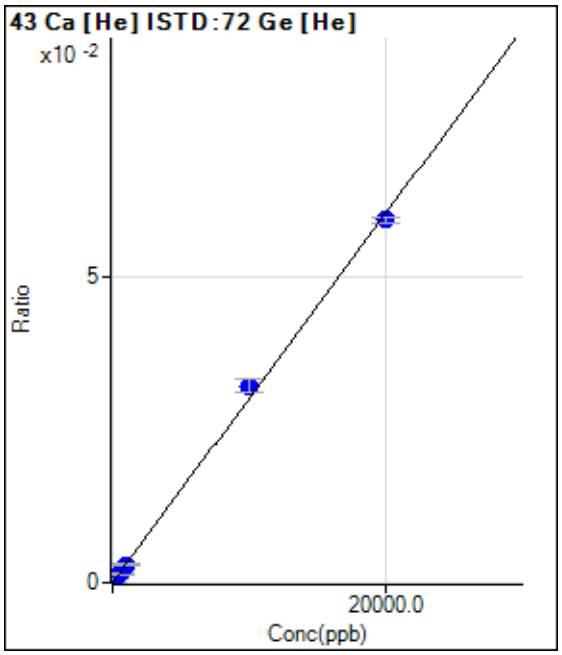


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	930.04	0.0003	P	20.8
2	☐	200.000	197.546	8492.10	0.0024	P	2.6
3	☐	500.000	479.600	19103.43	0.0055	P	2.6
4	☐	1000.000	974.876	37879.09	0.0110	P	1.9
5	☐	10000.00	9840.960	367566.24	0.1087	P	1.3
6	☐	20000.00	20081.311	723176.32	0.2215	P	2.7
7	☐	100.000					

y = 1.1018E-005 * x + 2.6329E-004
R = 1.0000
DL = 14.9
BEC = 23.9

Weight: <None>
Min Conc: <None>

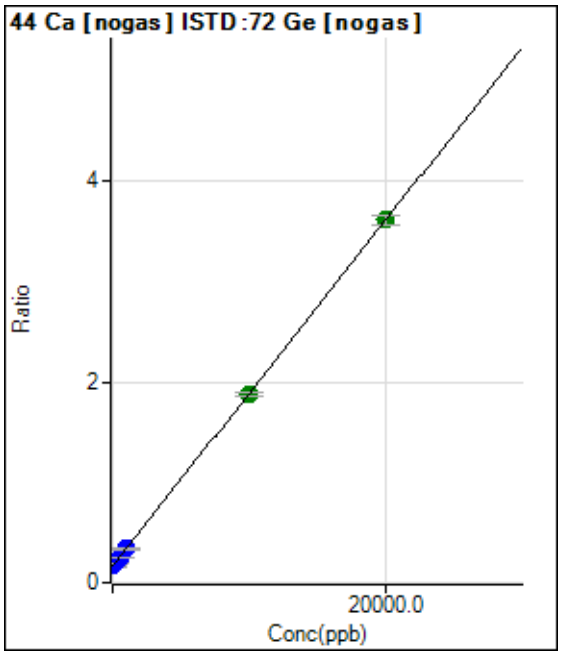
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	99.3
2	☐	200.000	222.500	630.02	0.0007	P	9.6
3	☐	500.000	468.623	1306.73	0.0014	P	8.6
4	☐	1000.000	964.898	2693.58	0.0029	P	8.6
5	☐	10000.00	10670.145	27834.44	0.0321	P	6.8
6	☐	20000.00	19667.242	52694.69	0.0592	P	1.6
7	☐	100.000					

y = 3.0089E-006 * x + 1.0202E-005
R = 0.9992
DL = 10.1
BEC = 3.391

Weight: <None>
Min Conc: <None>

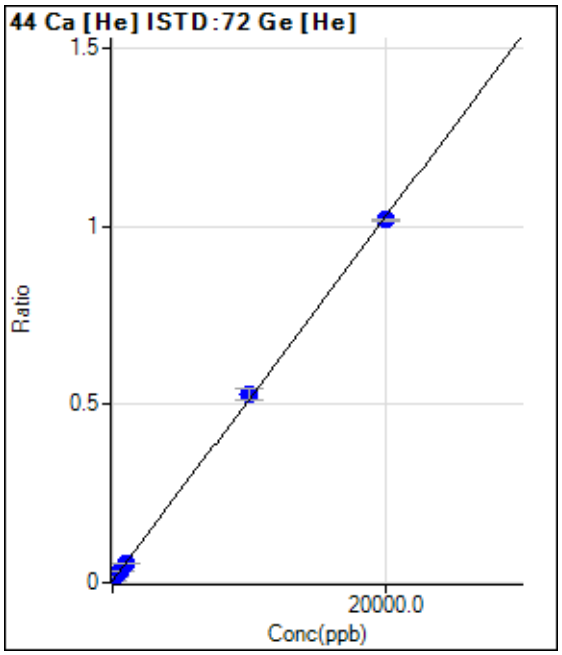


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	580985.60	0.1641	P	3.0
2	☐	200.000	208.291	696122.39	0.2000	P	0.6
3	☐	500.000	525.330	876898.19	0.2546	P	0.7
4	☐	1000.000	1015.833	1167137.07	0.3391	P	2.4
5	☐	10000.00	9959.524	6358463.24	1.8802	A	1.4
6	☐	20000.00	20018.730	11798086.08	3.6135	A	2.6
7	☐	100.000					

y = 1.7231E-004 * x + 0.1641
R = 1.0000
DL = 86.4
BEC = 952.5

Weight: <None>
Min Conc: <None>

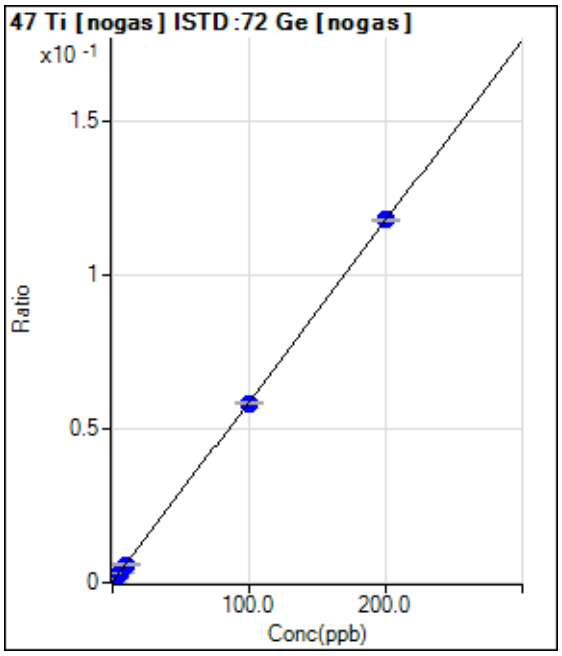
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4433.93	0.0045	P	4.1
2	☐	200.000	199.993	13618.45	0.0147	P	3.4
3	☐	500.000	512.364	28218.21	0.0307	P	4.6
4	☐	1000.000	1006.101	51741.70	0.0559	P	1.5
5	☐	10000.00	10306.201	460785.89	0.5315	P	6.2
6	☐	20000.00	19846.285	907691.37	1.0194	P	0.6
7	☐	100.000					

y = 5.1141E-005 * x + 0.0045
R = 0.9998
DL = 10.69
BEC = 87.27

Weight: <None>
Min Conc: <None>

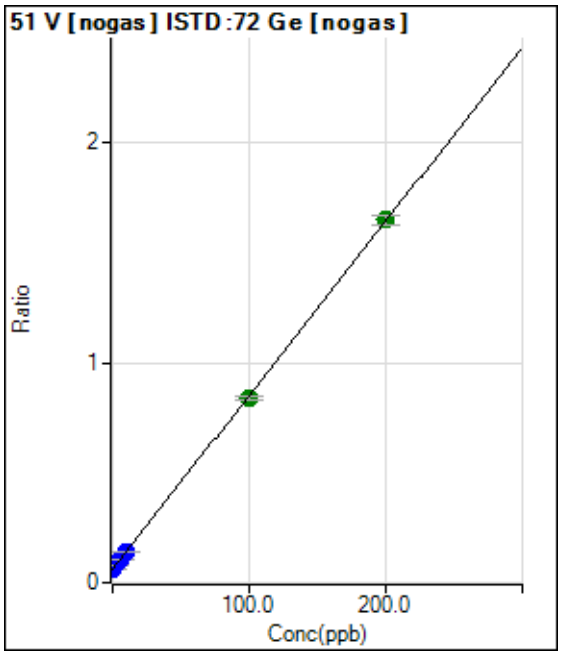


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0001	P	12.3
2	☐	2.000	1.904	4360.57	0.0013	P	4.0
3	☐	5.000	4.845	10266.33	0.0030	P	2.9
4	☐	10.000	9.701	20074.43	0.0058	P	4.2
5	☐	100.000	99.002	197202.13	0.0583	P	1.4
6	☐	200.000	200.519	385199.20	0.1180	P	0.6
7	☐	1.000					

y = 5.8771E-004 * x + 1.3361E-004
R = 1.0000
DL = 0.08392
BEC = 0.2273

Weight: <None>
Min Conc: <None>

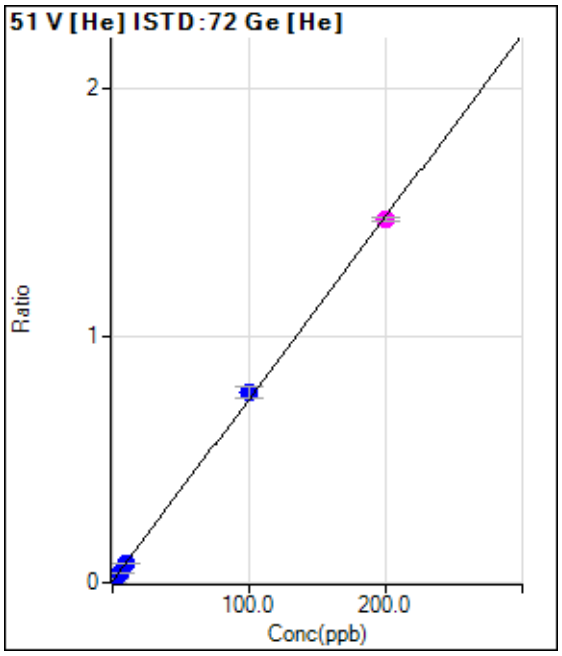
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216785.89	0.0612	P	4.4
2	☐	2.000	2.058	269703.40	0.0775	P	5.9
3	☐	5.000	5.283	354652.58	0.1030	P	1.7
4	☐	10.000	9.805	477473.47	0.1387	P	2.2
5	☐	100.000	98.235	2832910.80	0.8378	A	1.4
6	☐	200.000	200.885	5384219.13	1.6492	A	2.3
7	☐	1.000					

y = 0.0079 * x + 0.0612
R = 0.9999
DL = 1.029
BEC = 7.744

Weight: <None>
Min Conc: <None>

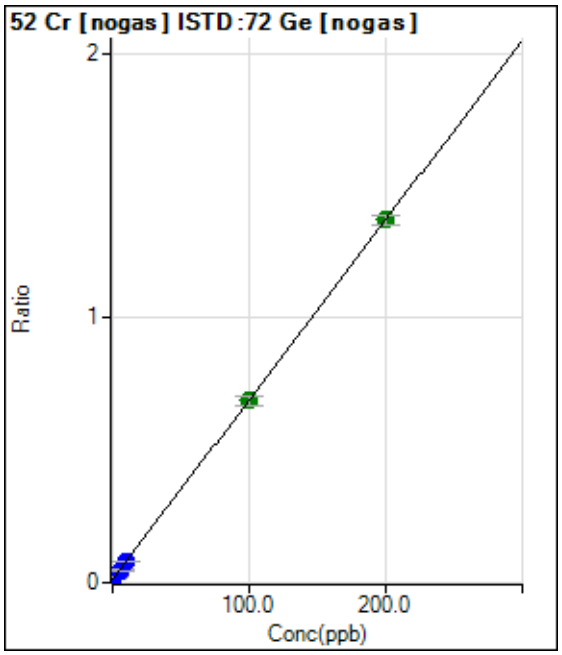


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.367	3338.97	0.0034	P	3.6
2	☐	2.000	1.607	16614.76	0.0179	P	2.3
3	☐	5.000	4.554	36498.97	0.0397	P	2.9
4	☐	10.000	9.344	69397.11	0.0750	P	2.3
5	☐	100.000	103.627	668253.94	0.7706	P	5.3
6	☐	200.000	198.234	1307510.79	1.4685	M	1.0
7	☐	1.000					

y = 0.0074 * x + 0.0061
R = 0.9997
DL = 0.04912
BEC = 0.8227

Weight: <None>
Min Conc: <None>

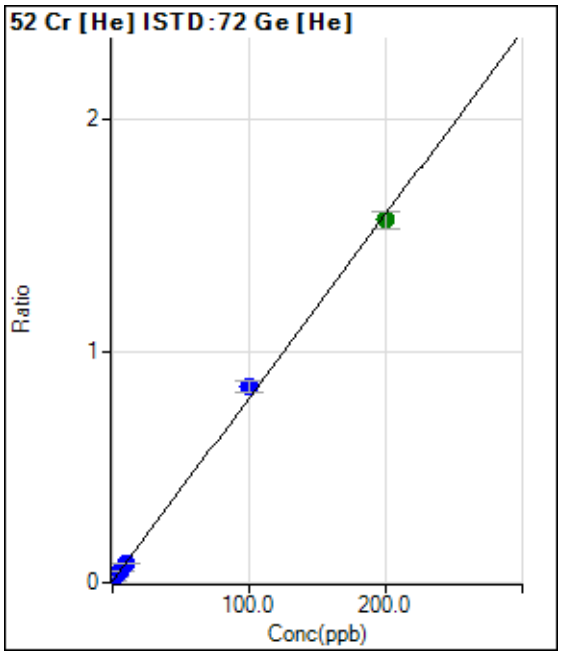
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41864.07	0.0118	P	3.7
2	☐	2.000	2.005	88517.22	0.0254	P	2.2
3	☐	5.000	5.163	161392.53	0.0469	P	4.0
4	☐	10.000	10.122	277056.74	0.0805	P	2.3
5	☐	100.000	99.696	2326480.90	0.6883	A	5.0
6	☐	200.000	200.142	4472257.23	1.3699	A	2.9
7	☐	1.000					

y = 0.0068 * x + 0.0118
R = 1.0000
DL = 0.1918
BEC = 1.743

Weight: <None>
Min Conc: <None>

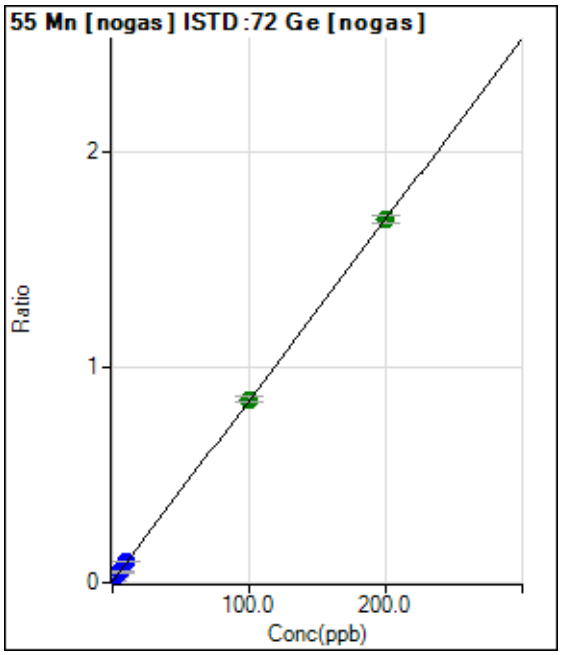


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6124.45	0.0062	P	3.2
2	☐	2.000	2.080	20985.45	0.0226	P	0.6
3	☐	5.000	5.255	43952.53	0.0478	P	3.6
4	☐	10.000	10.042	79272.94	0.0857	P	1.8
5	☐	100.000	105.945	732662.25	0.8450	P	5.7
6	☐	200.000	197.018	1393826.33	1.5660	A	4.5
7	☐	1.000					

y = 0.0079 * x + 0.0062
R = 0.9994
DL = 0.07577
BEC = 0.7793

Weight: <None>
Min Conc: <None>

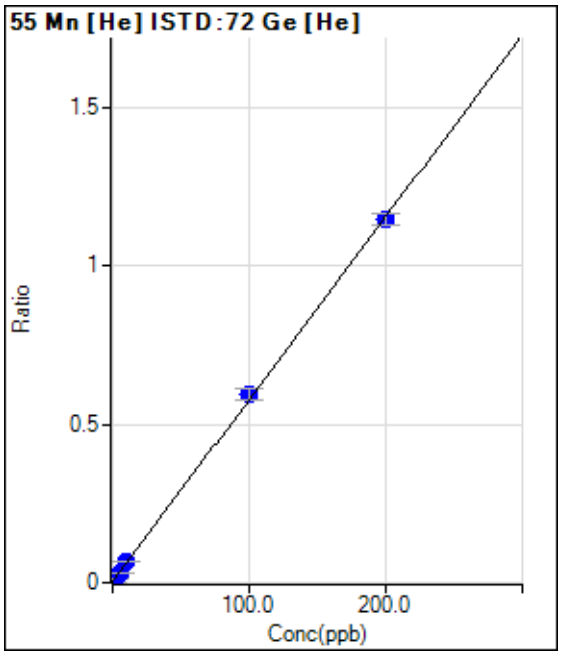
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24106.02	0.0068	P	4.1
2	☐	2.000	1.951	80626.06	0.0232	P	2.4
3	☐	5.000	5.067	169729.11	0.0493	P	2.2
4	☐	10.000	10.899	337912.31	0.0982	P	1.8
5	☐	100.000	100.476	2870602.15	0.8492	A	3.1
6	☐	200.000	199.716	5488765.13	1.6812	A	2.0
7	☐	1.000					

y = 0.0084 * x + 0.0068
R = 1.0000
DL = 0.09978
BEC = 0.8115

Weight: <None>
Min Conc: <None>

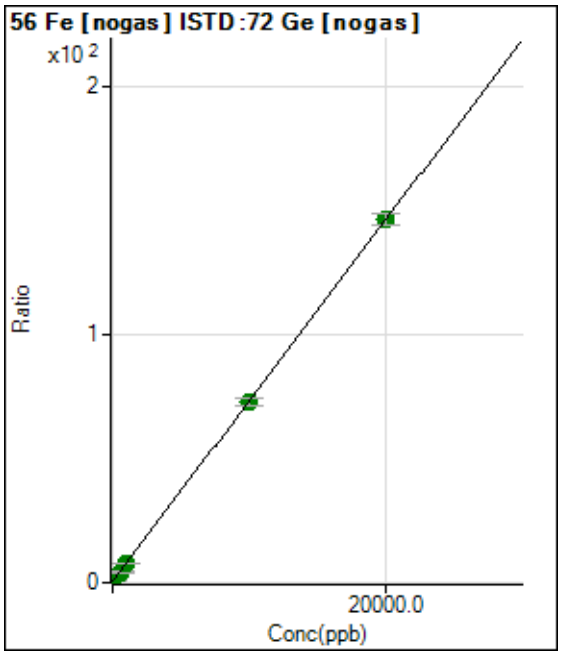


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2873.59	0.0029	P	7.6
2	☐	2.000	2.027	13481.85	0.0145	P	4.5
3	☐	5.000	5.093	29577.29	0.0322	P	6.2
4	☐	10.000	10.744	59817.49	0.0646	P	1.5
5	☐	100.000	102.911	515346.02	0.5943	P	5.2
6	☐	200.000	198.505	1018107.15	1.1437	P	3.0
7	☐	1.000					

y = 0.0057 * x + 0.0029
R = 0.9998
DL = 0.1155
BEC = 0.5037

Weight: <None>
Min Conc: <None>

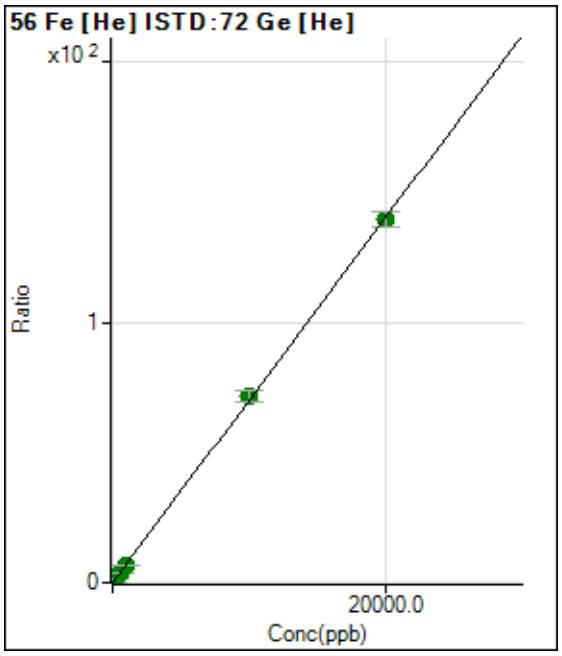
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2248066.46	0.6349	A	1.6
2	☐	200.000	192.123	7072808.49	2.0321	A	2.7
3	☐	500.000	492.005	14507447.20	4.2130	A	2.7
4	☐	1000.000	967.253	26396951.63	7.6692	A	1.3
5	☐	10000.00	9948.221	246666080.5	72.9832	A	4.7
6	☐	20000.00	20027.806	477588844.0	146.286	A	3.3
7	☐	100.000					

y = 0.0073 * x + 0.6349
R = 1.0000
DL = 4.136
BEC = 87.3

Weight: <None>
Min Conc: <None>

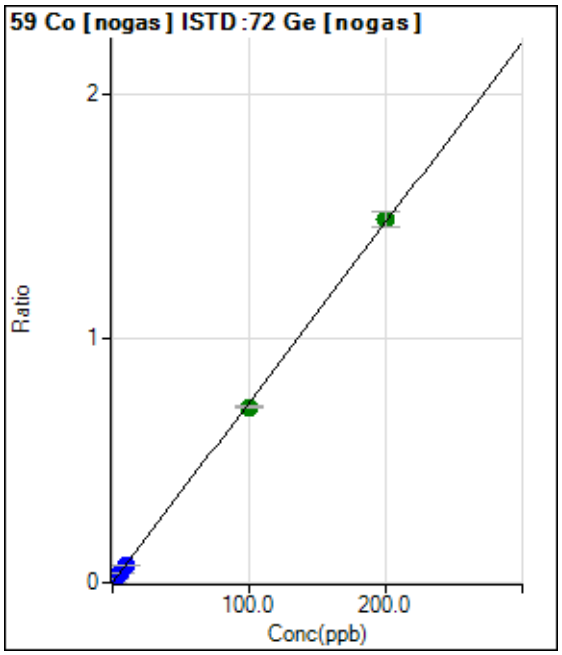


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15286.54	0.0154	P	2.8
2	☐	200.000	204.544	1344255.50	1.4503	A	4.7
3	☐	500.000	504.894	3274561.93	3.5573	A	1.8
4	☐	1000.000	970.359	6314221.16	6.8225	A	0.9
5	☐	10000.00	10239.315	62281095.74	71.8450	A	6.3
6	☐	20000.00	19881.657	124153878.1	139.486	A	4.2
7	☐	100.000					

y = 0.0070 * x + 0.0154
R = 0.9999
DL = 0.1842
BEC = 2.194

Weight: <None>
Min Conc: <None>

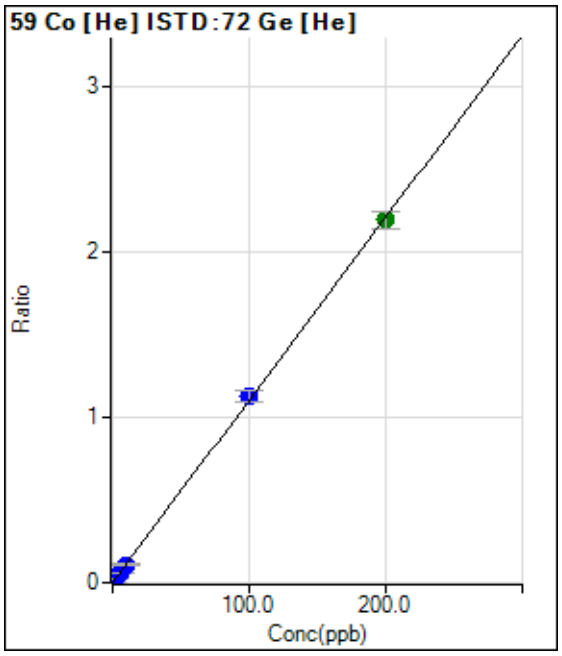
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1433.41	0.0004	P	3.3
2	☐	2.000	1.940	51194.92	0.0147	P	1.4
3	☐	5.000	4.873	125136.50	0.0363	P	2.1
4	☐	10.000	9.792	249898.70	0.0726	P	1.2
5	☐	100.000	97.264	2427126.48	0.7176	A	0.9
6	☐	200.000	201.382	4848474.09	1.4853	A	4.1
7	☐	1.000					

y = 0.0074 * x + 4.0489E-004
R = 0.9999
DL = 0.00543
BEC = 0.05491

Weight: <None>
Min Conc: <None>

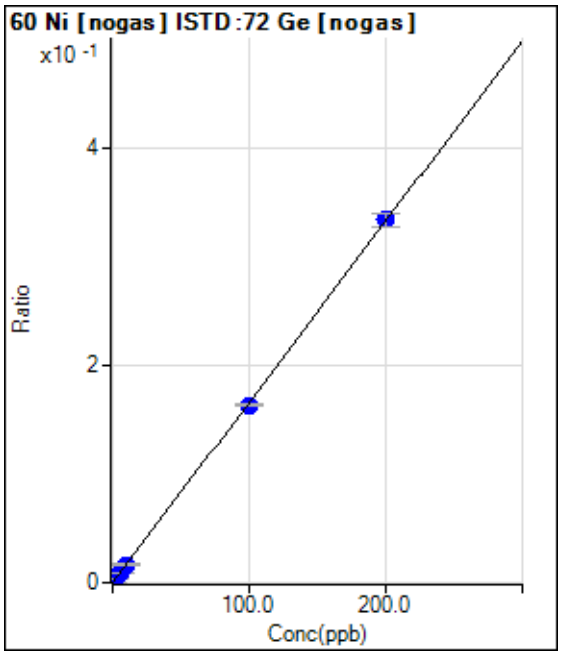


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	423.35	0.0004	P	26.3
2	☐	2.000	1.999	20798.67	0.0224	P	1.7
3	☐	5.000	5.011	51178.19	0.0556	P	5.0
4	☐	10.000	9.840	100661.12	0.1088	P	3.2
5	☐	100.000	102.431	978259.91	1.1287	P	6.7
6	☐	200.000	198.792	1949276.79	2.1900	A	4.9
7	☐	1.000					

y = 0.0110 * x + 4.2484E-004
R = 0.9999
DL = 0.03044
BEC = 0.03857

Weight: <None>
Min Conc: <None>

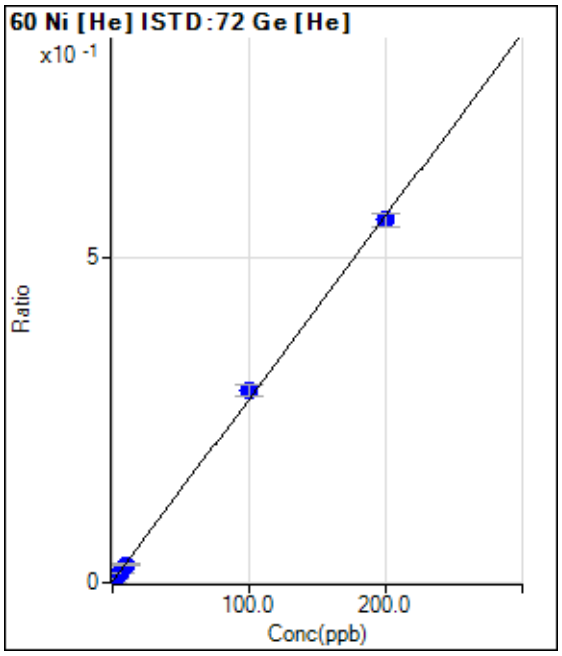
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.249	596.69	0.0002	P	19.0
2	☐	2.000	2.184	11793.95	0.0034	P	1.5
3	☐	5.000	5.304	29547.38	0.0086	P	0.4
4	☐	10.000	10.212	57633.87	0.0167	P	2.6
5	☐	100.000	98.142	551339.73	0.1630	P	1.1
6	☐	200.000	200.909	1090401.86	0.3340	P	4.0
7	☐	1.000					

y = 0.0017 * x - 2.4547E-004
R = 0.9999
DL = 0.05799
BEC = -0.1475

Weight: <None>
Min Conc: <None>

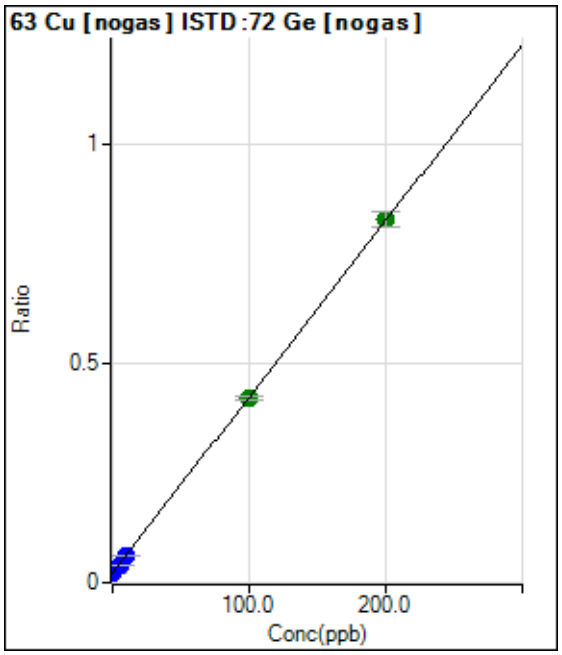


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.498	193.34	0.0002	P	17.8
2	☐	2.000	1.518	5424.22	0.0059	P	3.9
3	☐	5.000	4.423	12884.74	0.0140	P	8.4
4	☐	10.000	9.369	25798.44	0.0279	P	2.4
5	☐	100.000	104.273	255072.33	0.2942	P	5.8
6	☐	200.000	197.914	495773.16	0.5570	P	3.5
7	☐	1.000					

y = 0.0028 * x + 0.0016
R = 0.9996
DL = 0.0369
BEC = 0.5671

Weight: <None>
Min Conc: <None>

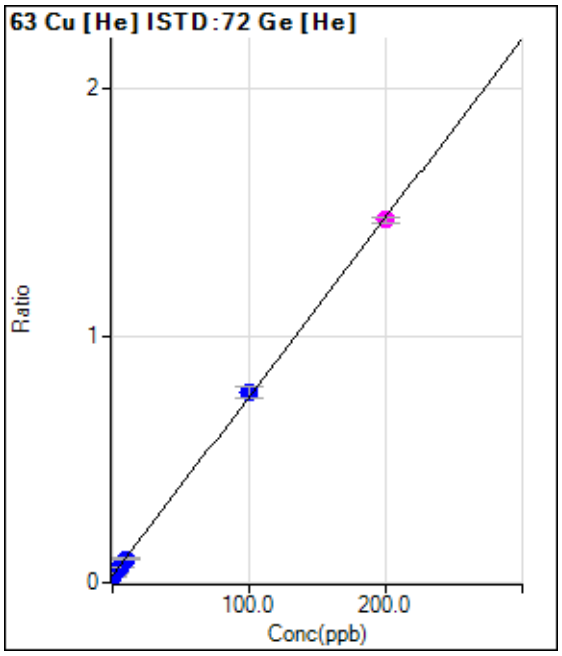
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	79347.30	0.0224	P	1.1
2	☐	2.000	1.695	101634.85	0.0292	P	2.7
3	☐	5.000	4.606	140755.62	0.0409	P	1.2
4	☐	10.000	9.672	210597.54	0.0612	P	1.3
5	☐	100.000	98.846	1415687.38	0.4187	A	2.1
6	☐	200.000	200.606	2698816.63	0.8267	A	4.3
7	☐	1.000					

y = 0.0040 * x + 0.0224
R = 1.0000
DL = 0.1865
BEC = 5.588

Weight: <None>
Min Conc: <None>

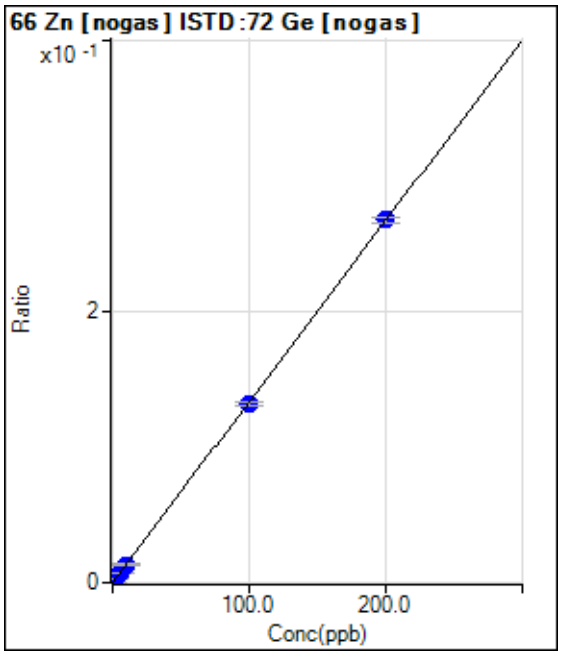


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.181	27070.20	0.0273	P	4.4
2	☐	2.000	1.744	38226.46	0.0412	P	3.5
3	☐	5.000	4.620	57158.58	0.0621	P	3.1
4	☐	10.000	9.462	89962.38	0.0973	P	5.1
5	☐	100.000	102.632	670772.77	0.7736	P	5.7
6	☐	200.000	198.723	1309729.43	1.4711	M	1.9
7	☐	1.000					

y = 0.0073 * x + 0.0286
R = 0.9999
DL = 0.4959
BEC = 3.938

Weight: <None>
Min Conc: <None>

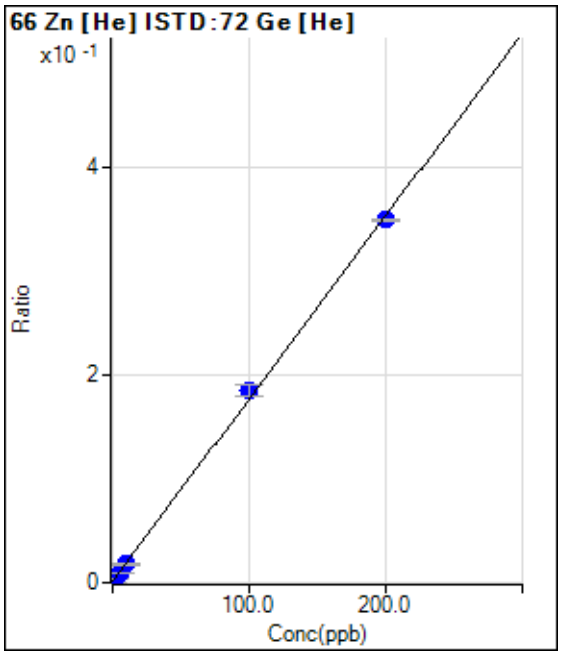
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.186	980.04	0.0003	P	2.6
2	☐	2.000	2.153	10089.61	0.0029	P	1.1
3	☐	5.000	5.208	24006.12	0.0070	P	2.7
4	☐	10.000	10.072	46312.18	0.0135	P	1.1
5	☐	100.000	98.781	445333.93	0.1317	P	1.7
6	☐	200.000	200.599	873086.21	0.2674	P	1.4
7	☐	1.000					

y = 0.0013 * x + 2.8348E-005
R = 1.0000
DL = 0.01614
BEC = 0.02127

Weight: <None>
Min Conc: <None>

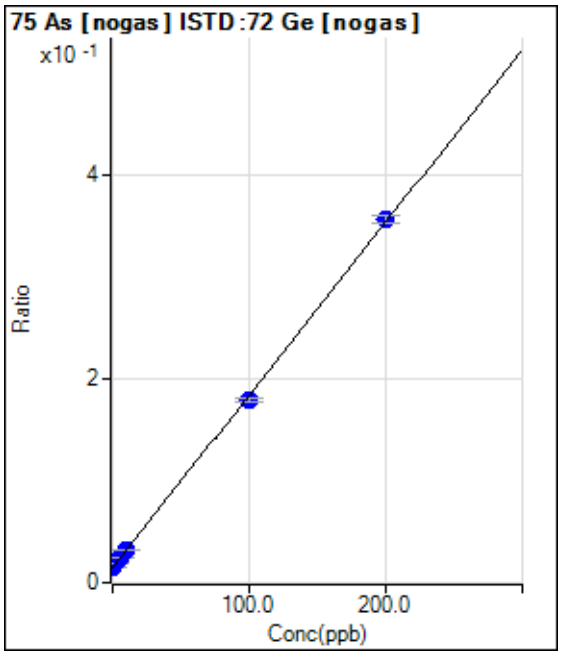


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.486	366.67	0.0004	P	16.4
2	☐	2.000	1.469	3537.08	0.0038	P	4.9
3	☐	5.000	4.490	8408.71	0.0091	P	7.6
4	☐	10.000	9.359	16400.90	0.0177	P	2.1
5	☐	100.000	104.238	160399.04	0.1850	P	5.9
6	☐	200.000	197.931	311834.25	0.3502	P	0.7
7	☐	1.000					

y = 0.0018 * x + 0.0012
R = 0.9996
DL = 0.1026
BEC = 0.6953

Weight: <None>
Min Conc: <None>

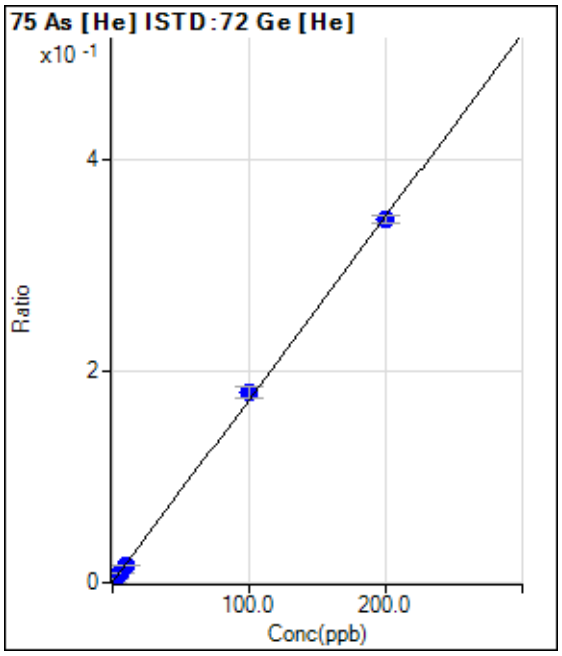
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.279	53472.21	0.0151	P	2.2
2	☐	2.000	2.227	64022.35	0.0184	P	1.3
3	☐	5.000	5.524	82536.15	0.0240	P	2.3
4	☐	10.000	10.558	111783.07	0.0325	P	1.3
5	☐	100.000	96.910	603316.46	0.1784	P	1.7
6	☐	200.000	201.501	1159609.33	0.3552	P	2.2
7	☐	1.000					

y = 0.0017 * x + 0.0146
R = 0.9998
DL = 0.5858
BEC = 8.657

Weight: <None>
Min Conc: <None>

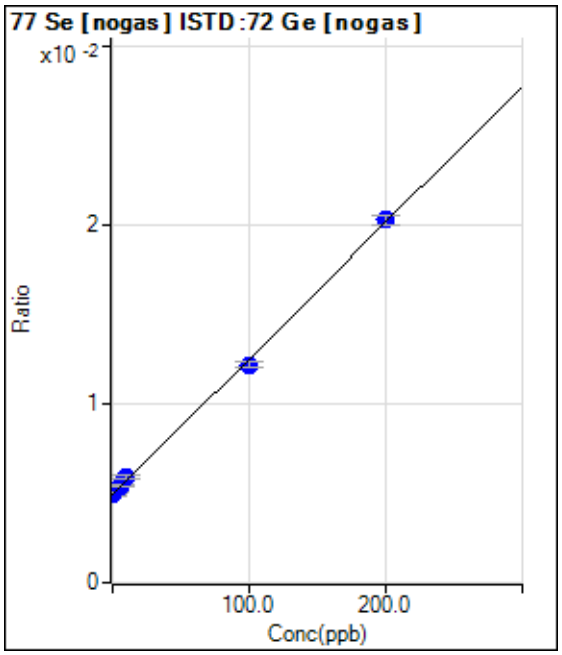


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	346.67	0.0003	P	11.4
2	☐	2.000	2.017	3559.26	0.0038	P	0.4
3	☐	5.000	4.956	8212.99	0.0089	P	2.7
4	☐	10.000	9.446	15446.57	0.0167	P	2.8
5	☐	100.000	103.622	155774.10	0.1797	P	5.7
6	☐	200.000	198.218	305661.30	0.3433	P	2.1
7	☐	1.000					

y = 0.0017 * x + 3.4917E-004
R = 0.9998
DL = 0.06872
BEC = 0.2018

Weight: <None>
Min Conc: <None>

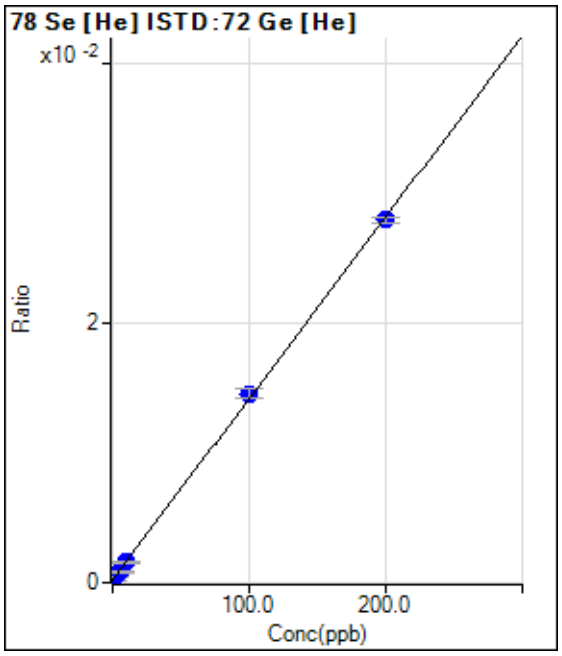
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17428.70	0.0049	P	1.5
2	☐	2.000	3.225	17985.86	0.0052	P	3.5
3	☐	5.000	6.638	18693.12	0.0054	P	1.9
4	☐	10.000	13.012	20354.97	0.0059	P	3.0
5	☐	100.000	95.677	41310.46	0.0122	P	2.1
6	☐	200.000	201.958	66343.92	0.0203	P	2.9
7	☐	1.000					

y = 7.6254E-005 * x + 0.0049
R = 0.9995
DL = 2.966
BEC = 64.55

Weight: <None>
Min Conc: <None>

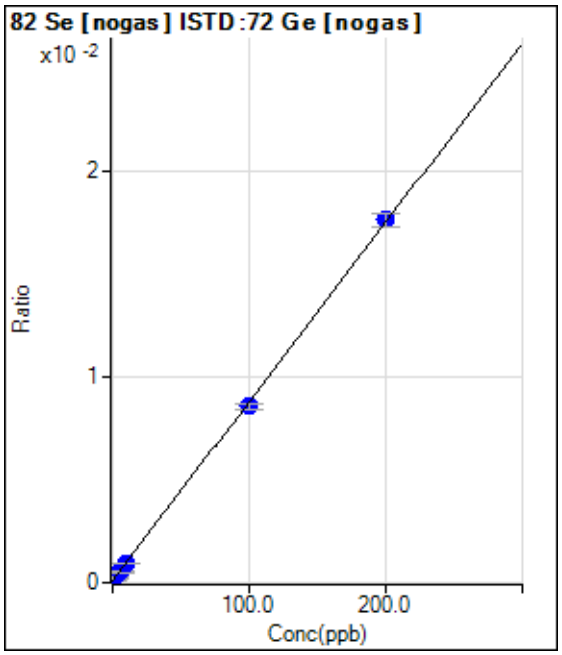


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.260	174.67	0.0002	P	13.6
2	☐	2.000	1.766	426.01	0.0005	P	3.0
3	☐	5.000	4.384	760.02	0.0008	P	3.0
4	☐	10.000	9.615	1440.06	0.0016	P	5.4
5	☐	100.000	102.917	12657.07	0.0146	P	5.7
6	☐	200.000	198.578	24908.32	0.0280	P	1.2
7	☐	1.000					

y = 1.3978E-004 * x + 2.1275E-004
R = 0.9998
DL = 0.5135
BEC = 1.522

Weight: <None>
Min Conc: <None>

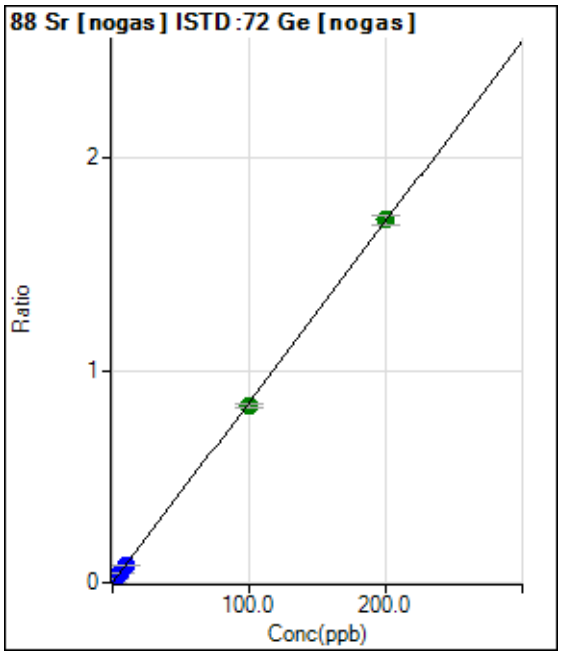
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.01	0.0001	P	6.7
2	☐	2.000	1.532	826.70	0.0002	P	5.2
3	☐	5.000	4.849	1810.12	0.0005	P	7.0
4	☐	10.000	9.303	3140.32	0.0009	P	3.8
5	☐	100.000	97.114	28880.24	0.0085	P	4.2
6	☐	200.000	201.486	57474.71	0.0176	P	3.4
7	☐	1.000					

y = 8.6861E-005 * x + 1.0442E-004
R = 0.9999
DL = 0.2413
BEC = 1.202

Weight: <None>
Min Conc: <None>

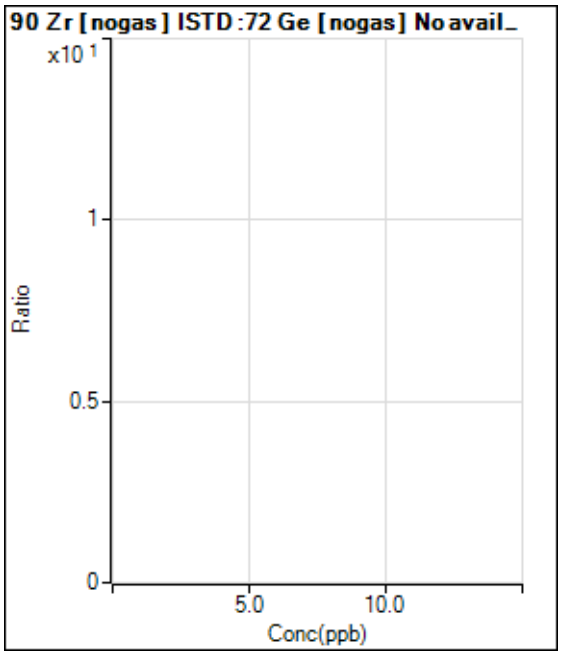


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	963.38	0.0003	P	12.8
2	☐	2.000	1.973	59318.52	0.0170	P	3.1
3	☐	5.000	4.873	143554.79	0.0417	P	3.7
4	☐	10.000	9.930	291422.84	0.0847	P	1.9
5	☐	100.000	98.296	2826180.79	0.8357	A	2.0
6	☐	200.000	200.859	5575103.46	1.7075	A	2.4
7	☐	1.000					

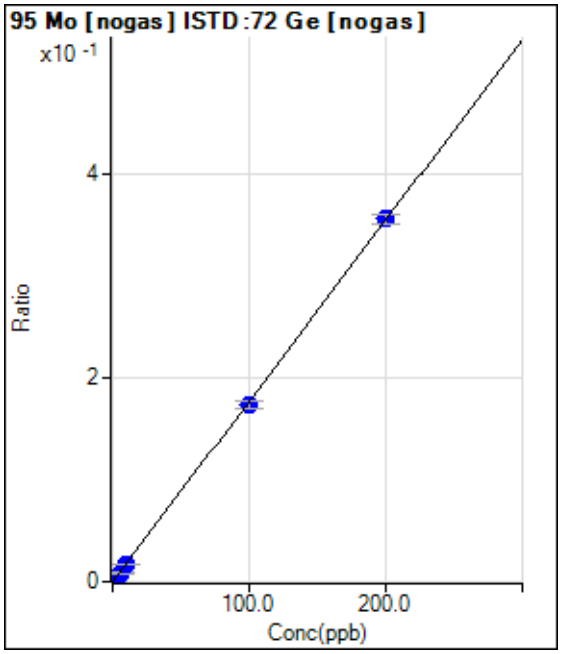
y = 0.0085 * x + 2.7157E-004
R = 0.9999
DL = 0.01228
BEC = 0.03195

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

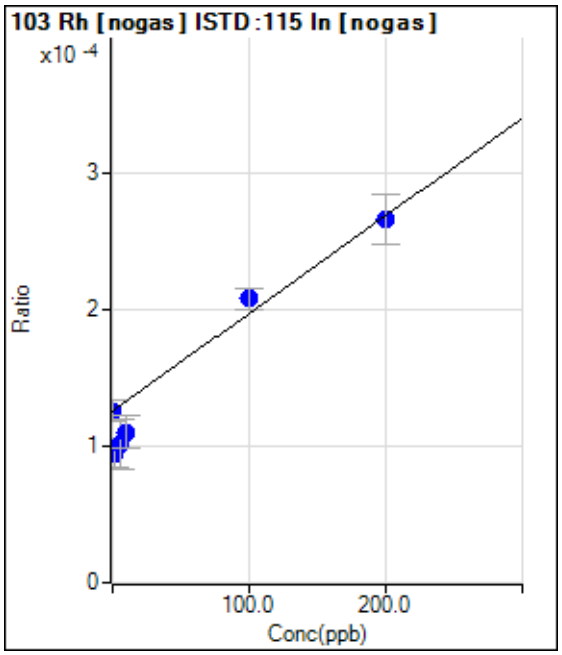


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0001	P	21.2
2	☐	2.000	1.791	11343.77	0.0033	P	1.5
3	☐	5.000	4.734	29164.11	0.0085	P	3.2
4	☐	10.000	9.682	59308.62	0.0172	P	1.0
5	☐	100.000	98.132	587620.47	0.1739	P	4.8
6	☐	200.000	200.958	1162024.02	0.3559	P	2.8
7	☐	1.000					

y = 0.0018 * x + 8.7308E-005
R = 0.9999
DL = 0.03135
BEC = 0.04931

Weight: <None>
Min Conc: <None>

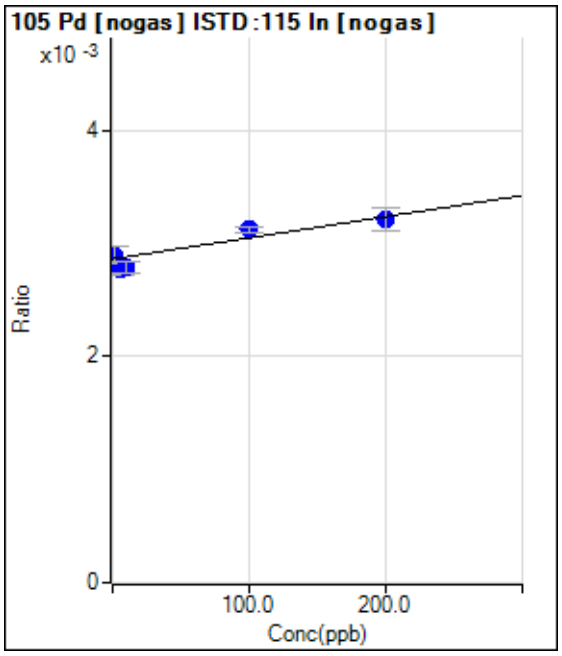
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0001	P	11.8
2	☐	2.000	-44.037	280.01	0.0001	P	22.3
3	☐	5.000	-34.948	300.01	0.0001	P	36.3
4	☐	10.000	-21.882	326.68	0.0001	P	21.1
5	☐	100.000	114.825	583.35	0.0002	P	7.3
6	☐	200.000	195.641	733.36	0.0003	P	13.7
7	☐	1.000					

y = 7.1605E-007 * x + 1.2614E-004
R = 0.9780
DL = 62.56
BEC = 176.2

Weight: <None>
Min Conc: <None>

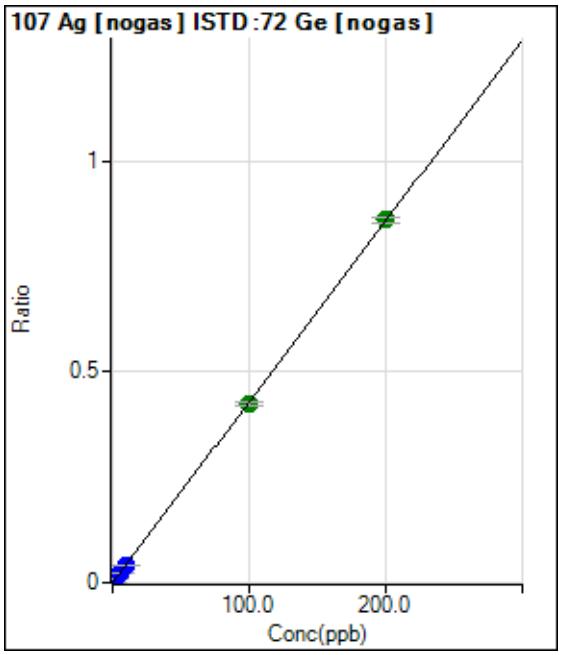


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8582.28	0.0029	P	7.7
2	☐	2.000	14.730	8552.23	0.0029	P	5.9
3	☐	5.000	-50.499	8165.33	0.0028	P	3.5
4	☐	10.000	-42.484	8235.38	0.0028	P	3.5
5	☐	100.000	139.199	8742.30	0.0031	P	1.5
6	☐	200.000	184.285	8819.01	0.0032	P	6.2
7	☐	1.000					

y = 1.8734E-006 * x + 0.0029
R = 0.9298
DL = 352.7
BEC = 1527

Weight: <None>
Min Conc: <None>

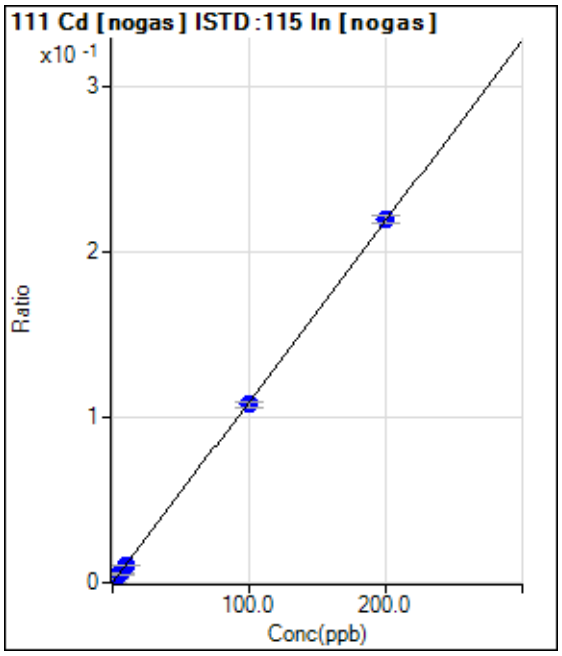
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0000	P	59.4
2	☐	2.000	1.947	29174.42	0.0084	P	3.8
3	☐	5.000	4.973	73540.92	0.0214	P	4.6
4	☐	10.000	9.911	146315.13	0.0425	P	3.5
5	☐	100.000	98.615	1430032.69	0.4228	A	2.6
6	☐	200.000	200.698	2808797.25	0.8604	A	1.7
7	☐	1.000					

y = 0.0043 * x + 3.7028E-005
R = 1.0000
DL = 0.01539
BEC = 0.008638

Weight: <None>
Min Conc: <None>

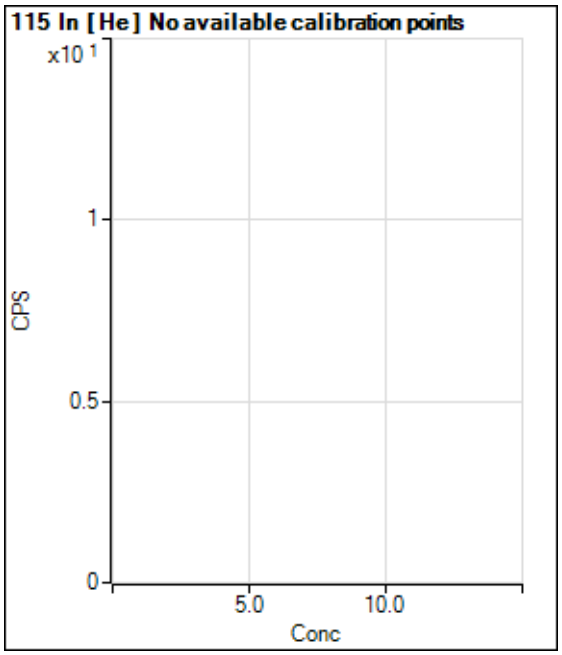


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	102.
2	☐	2.000	1.864	6047.79	0.0020	P	6.6
3	☐	5.000	4.791	15460.31	0.0052	P	2.8
4	☐	10.000	9.627	31144.45	0.0105	P	1.6
5	☐	100.000	98.762	302145.44	0.1079	P	3.0
6	☐	200.000	200.644	603088.78	0.2191	P	2.1
7	☐	1.000					

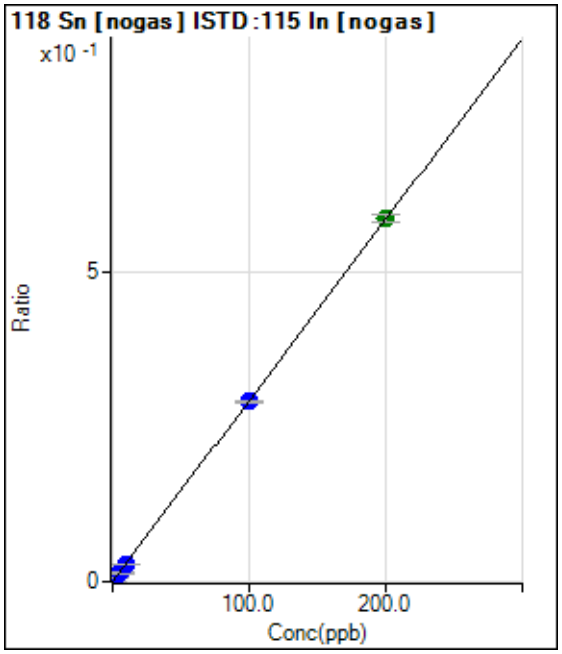
y = 0.0011 * x + 6.7945E-006
R = 1.0000
DL = 0.01908
BEC = 0.006222

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1105940.57		P	3.2
2	☐			1063093.03		P	1.7
3	☐			1070171.60		P	2.9
4	☐			1079595.73		P	1.5
5	☐			986563.25		P	6.8
6	☐			1036373.93		P	1.1
7	☐						

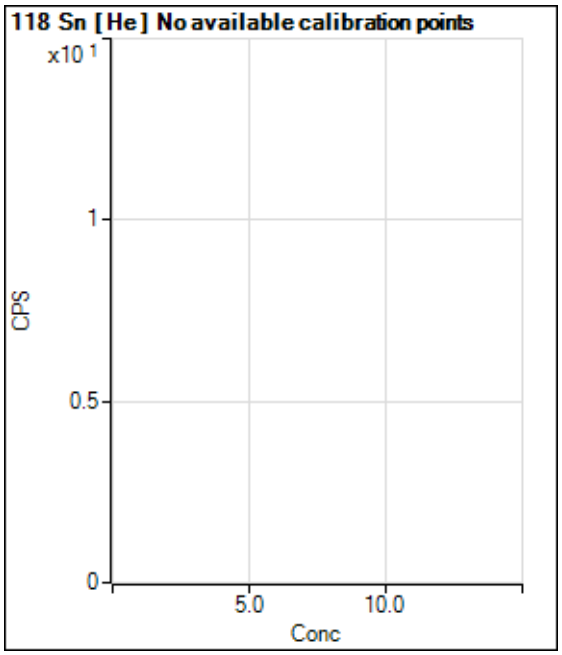


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1100.05	0.0004	P	5.1
2	☐	2.000	1.908	17629.14	0.0060	P	3.7
3	☐	5.000	4.715	41810.58	0.0142	P	3.2
4	☐	10.000	9.535	83693.11	0.0283	P	2.9
5	☐	100.000	99.254	814798.11	0.2909	P	2.1
6	☐	200.000	200.404	1616222.01	0.5870	A	2.0
7	☐	1.000					

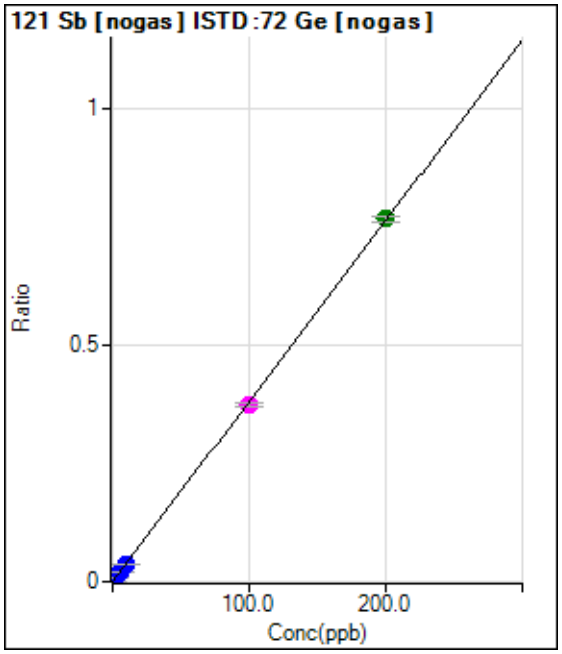
y = 0.0029 * x + 3.6619E-004
R = 1.0000
DL = 0.01931
BEC = 0.1251

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			550.01		P	19.2
2	☐			6981.50		P	0.9
3	☐			17282.11		P	3.2
4	☐			34731.43		P	1.3
5	☐			335570.25		P	1.3
6	☐			683623.89		P	1.0
7	☐						

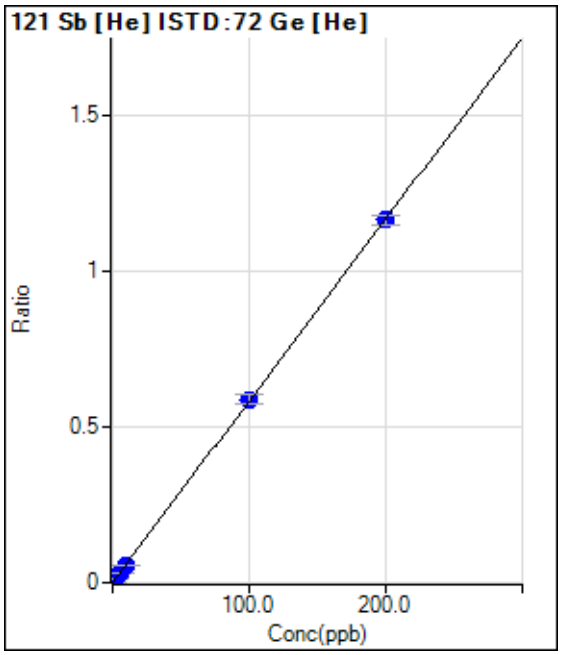


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1370.08	0.0004	P	6.8
2	☐	2.000	1.891	26393.47	0.0076	P	3.3
3	☐	5.000	4.733	63368.22	0.0184	P	1.2
4	☐	10.000	9.634	127509.91	0.0371	P	3.1
5	☐	100.000	98.015	1262749.59	0.3734	M	1.7
6	☐	200.000	201.018	2499064.91	0.7655	A	1.8
7	☐	1.000					

y = 0.0038 * x + 3.8707E-004
R = 0.9999
DL = 0.02082
BEC = 0.1017

Weight: <None>
Min Conc: <None>

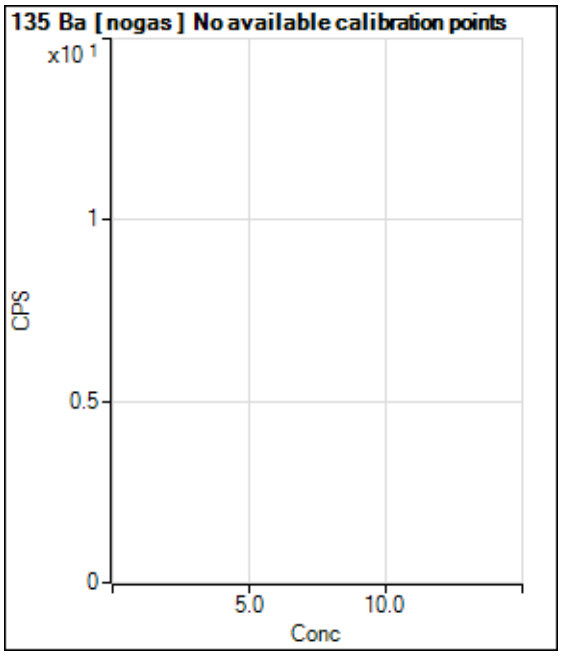
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540.02	0.0005	P	23.8
2	☐	2.000	1.798	10203.13	0.0110	P	3.4
3	☐	5.000	4.790	26169.89	0.0284	P	1.9
4	☐	10.000	9.325	50737.13	0.0548	P	0.4
5	☐	100.000	100.676	508576.65	0.5864	P	5.1
6	☐	200.000	199.703	1035074.96	1.1627	P	2.8
7	☐	1.000					

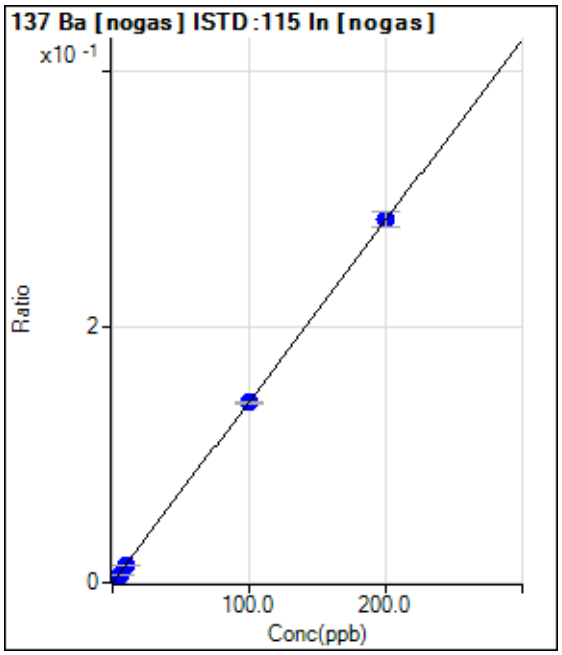
y = 0.0058 * x + 5.4525E-004
R = 1.0000
DL = 0.06697
BEC = 0.09369

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			186.67		P	11.2
2	☐			4807.42		P	4.6
3	☐			11627.39		P	3.0
4	☐			23386.29		P	1.8
5	☐			231247.66		P	2.2
6	☐			451644.94		P	1.6
7	☐						

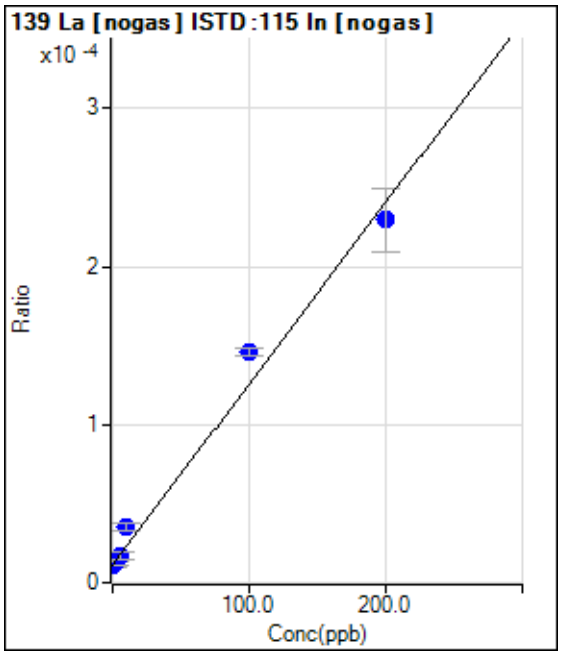
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	340.01	0.0001	P	17.4
2	☐	2.000	1.849	8085.36	0.0027	P	5.4
3	☐	5.000	4.669	19845.01	0.0067	P	1.1
4	☐	10.000	9.363	39572.60	0.0134	P	2.3
5	☐	100.000	99.389	394424.42	0.1408	P	1.2
6	☐	200.000	200.347	780655.14	0.2837	P	4.3
7	☐	1.000					

y = 0.0014 * x + 1.1263E-004
R = 1.0000
DL = 0.04153
BEC = 0.07956

Weight: <None>
Min Conc: <None>

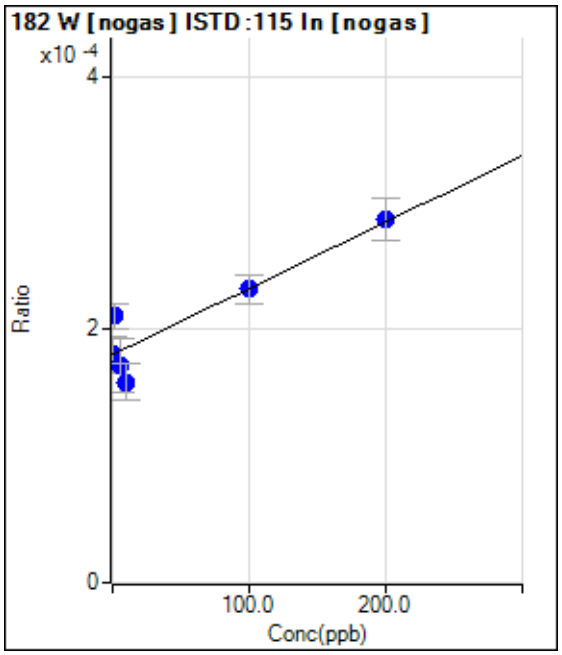


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	36.0
2	☐	2.000	1.075	36.67	0.0000	P	15.2
3	☐	5.000	5.000	50.00	0.0000	P	32.6
4	☐	10.000	20.698	103.33	0.0000	P	13.8
5	☐	100.000	117.913	410.01	0.0001	P	3.1
6	☐	200.000	190.518	633.36	0.0002	P	17.6
7	☐	1.000					

y = 1.1465E-006 * x + 1.1139E-005
R = 0.9930
DL = 10.5
BEC = 9.716

Weight: <None>
Min Conc: <None>

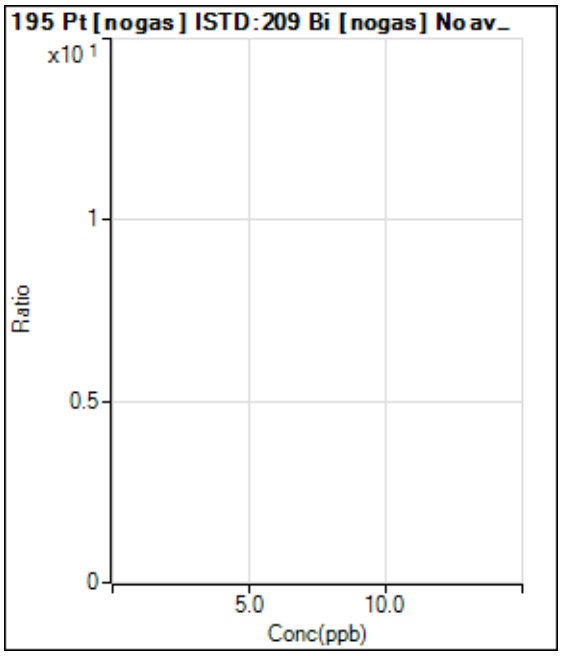
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540.02	0.0002	P	16.1
2	☐	2.000	57.768	623.35	0.0002	P	9.8
3	☐	5.000	-15.309	506.68	0.0002	P	24.9
4	☐	10.000	-40.868	470.01	0.0002	P	18.0
5	☐	100.000	98.757	650.03	0.0002	P	9.5
6	☐	200.000	203.115	790.03	0.0003	P	11.7
7	☐	1.000					

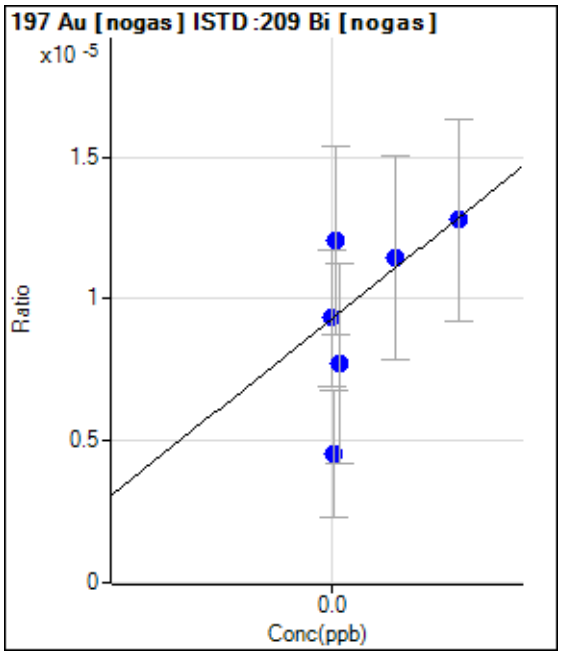
y = 5.2432E-007 * x + 1.8018E-004
R = 0.9227
DL = 166.1
BEC = 343.6

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

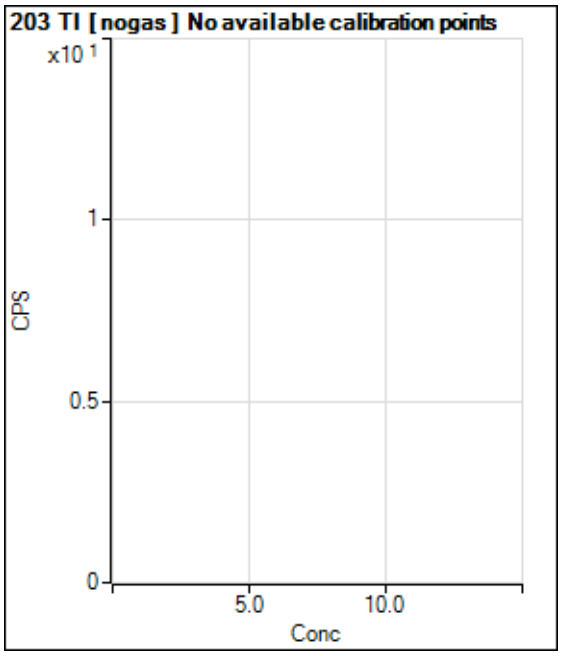
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	51.6
2	☐	2.000	-268.148	10.00	0.0000	P	98.1
3	☐	5.000	152.914	26.67	0.0000	P	55.1
4	☐	10.000	-90.160	16.67	0.0000	P	91.3
5	☐	100.000	119.361	23.33	0.0000	P	62.9
6	☐	200.000	194.331	26.67	0.0000	P	55.4
7	☐	1.000					

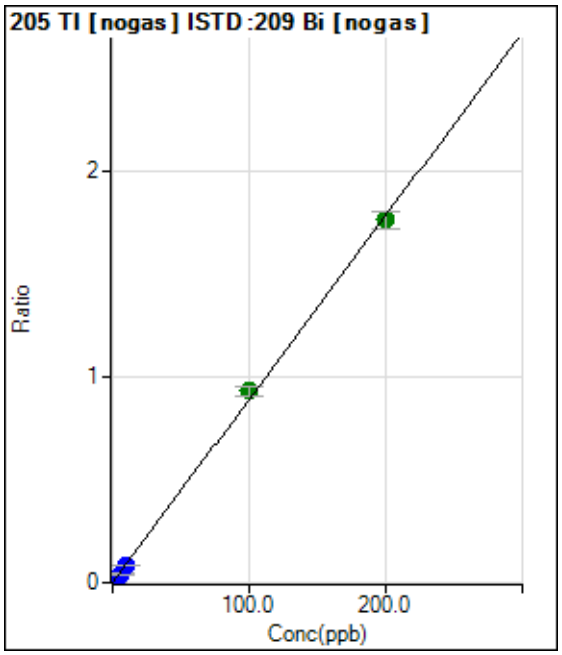
y = 1.7803E-008 * x + 9.3189E-006
R = 0.6204
DL = 810
BEC = 523.4

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			213.34		P	5.4
2	☐			15491.00		P	5.8
3	☐			38138.38		P	1.9
4	☐			78743.54		P	1.4
5	☐			781830.01		P	0.0
6	☐			1584112.69		A	3.1
7	☐						

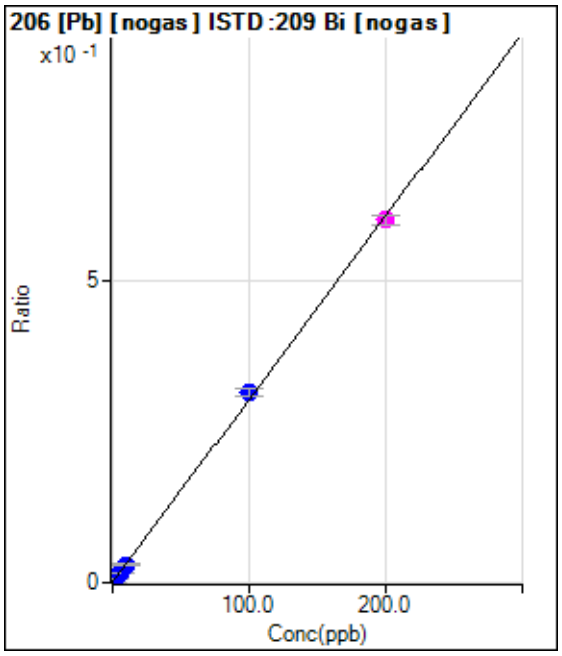
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0002	P	20.9
2	☐	2.000	1.868	36324.42	0.0168	P	6.1
3	☐	5.000	4.643	91200.87	0.0416	P	4.4
4	☐	10.000	9.647	186691.66	0.0861	P	1.5
5	☐	100.000	104.383	1878981.07	0.9302	A	4.4
6	☐	200.000	197.836	3625414.22	1.7629	A	4.6
7	☐	1.000					

y = 0.0089 * x + 1.8813E-004
R = 0.9996
DL = 0.01327
BEC = 0.02111

Weight: <None>
Min Conc: <None>

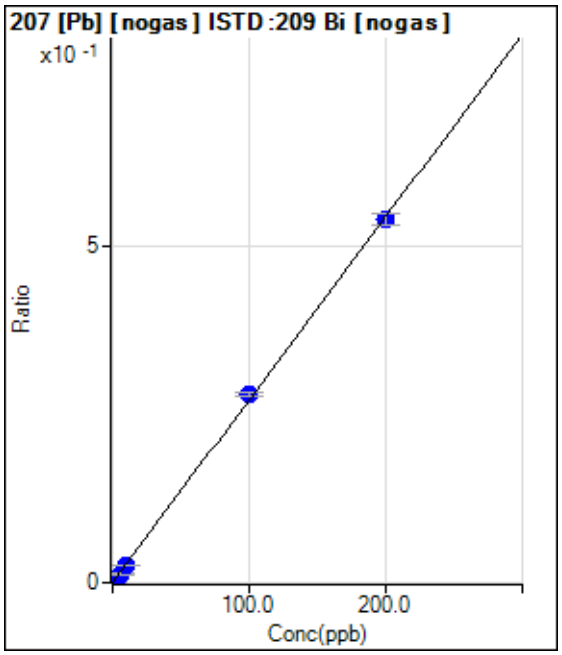


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1140.06	0.0005	P	0.2
2	☐	2.000	1.894	13525.80	0.0063	P	3.8
3	☐	5.000	4.741	32683.30	0.0149	P	1.8
4	☐	10.000	9.703	64809.98	0.0299	P	2.2
5	☐	100.000	104.001	637153.48	0.3154	P	3.4
6	☐	200.000	198.022	1234604.02	0.6000	M	2.5
7	☐	1.000					

y = 0.0030 * x + 5.2947E-004
R = 0.9997
DL = 0.0008089
BEC = 0.1749

Weight: <None>
Min Conc: <None>

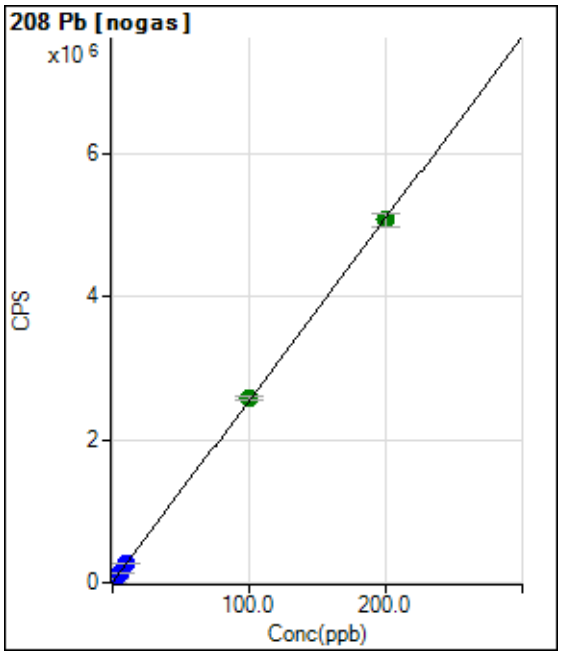
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	870.04	0.0004	P	10.7
2	☐	2.000	1.941	12214.76	0.0057	P	8.9
3	☐	5.000	4.569	28051.23	0.0128	P	5.4
4	☐	10.000	9.574	57094.08	0.0263	P	2.5
5	☐	100.000	103.058	565155.60	0.2796	P	1.6
6	☐	200.000	198.504	1107818.73	0.5383	P	3.0
7	☐	1.000					

y = 0.0027 * x + 4.0476E-004
R = 0.9998
DL = 0.04782
BEC = 0.1494

Weight: <None>
Min Conc: <None>

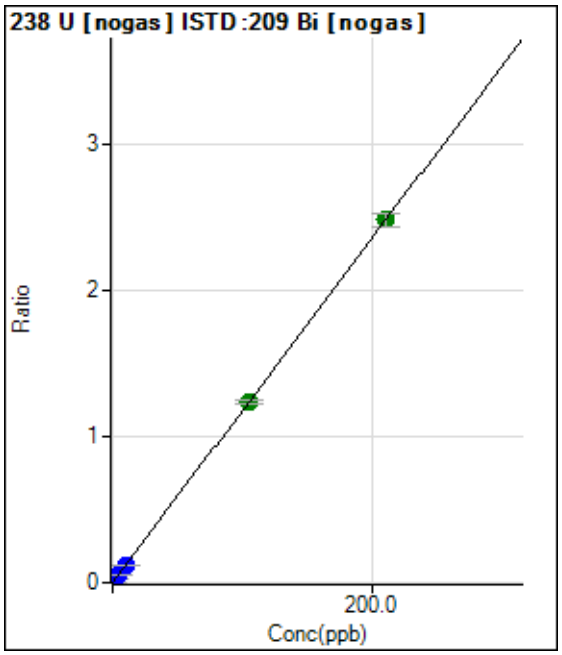


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4020.26		P	0.9
2	☐	2.000	2.011	55170.96		P	2.2
3	☐	5.000	4.990	130966.61		P	2.3
4	☐	10.000	10.022	258983.22		P	0.8
5	☐	100.000	101.565	2587797.24		A	2.3
6	☐	200.000	199.216	5072002.19		A	3.4
7	☐	1.000					

y = 25439.5808 * x + 4020.2567
R = 1.0000
DL = 0.004253
BEC = 0.158

Weight: <None>
Min Conc: <None>

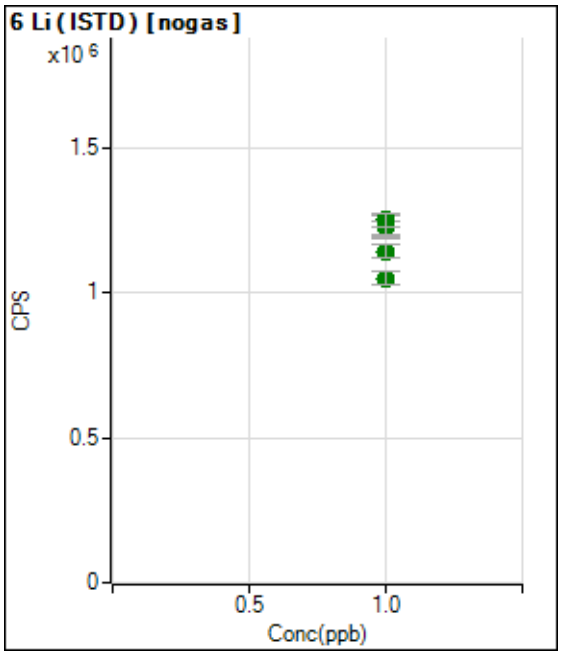
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	19.8
2	☐	2.000	1.905	48682.59	0.0225	P	0.2
3	☐	5.000	4.717	122522.07	0.0558	P	1.1
4	☐	10.000	9.602	246049.31	0.1135	P	0.6
5	☐	105.000	104.496	2497748.14	1.2352	A	2.1
6	☐	210.000	210.279	5112087.32	2.4856	A	3.7
7	☐	1.000					

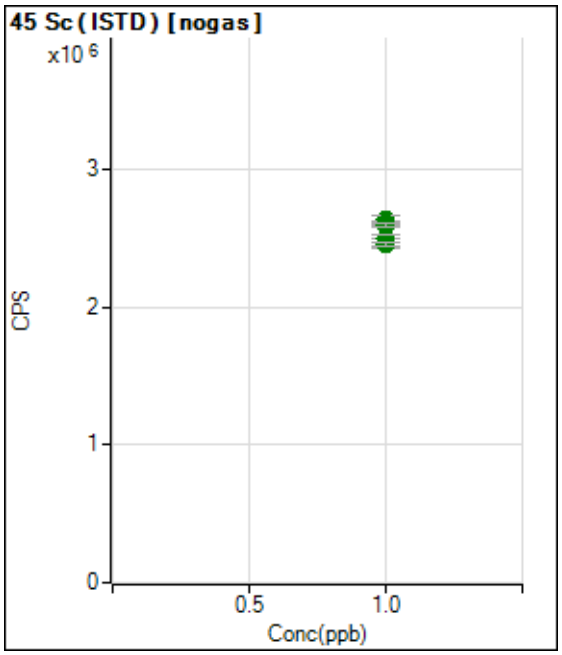
y = 0.0118 * x + 2.3211E-005
R = 1.0000
DL = 0.001164
BEC = 0.001964

Weight: <None>
Min Conc: <None>

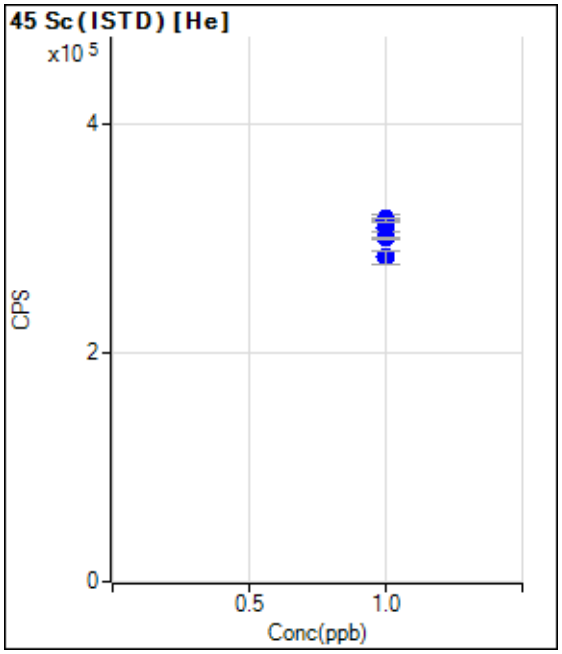


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1229805.43		A	6.8
2	☐	1.000		1228956.58		A	5.9
3	☐	1.000		1224222.27		A	3.3
4	☐	1.000		1251492.84		A	3.6
5	☐	1.000		1143511.75		A	4.1
6	☐	1.000		1050150.29		A	4.8
7	☐	1.000					

Calibration for 026_ICV.d

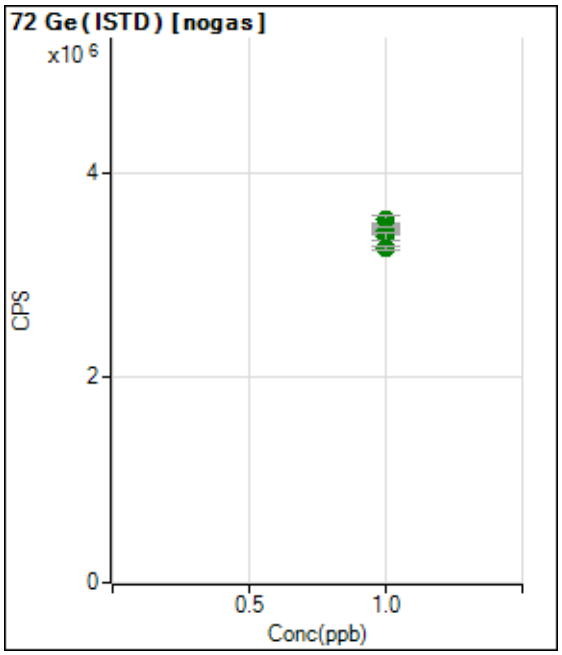


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2630545.12		A	2.6
2	☐	1.000		2605370.22		A	1.0
3	☐	1.000		2458870.33		A	3.1
4	☐	1.000		2597407.15		A	1.0
5	☐	1.000		2495971.52		A	2.3
6	☐	1.000		2453955.33		A	1.6
7	☐	1.000					

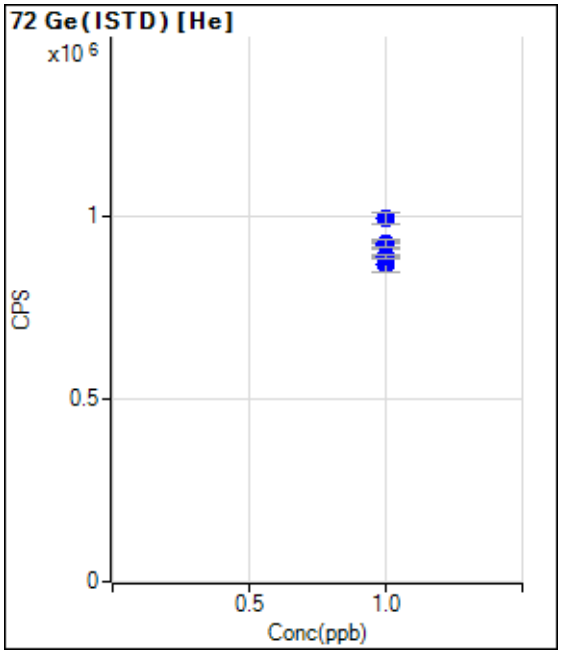


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		315265.37		P	0.5
2	☐	1.000		310299.20		P	2.7
3	☐	1.000		317425.51		P	2.1
4	☐	1.000		315967.42		P	1.0
5	☐	1.000		283754.26		P	4.0
6	☐	1.000		300464.19		P	0.6
7	☐	1.000					

Calibration for 026_ICV.d

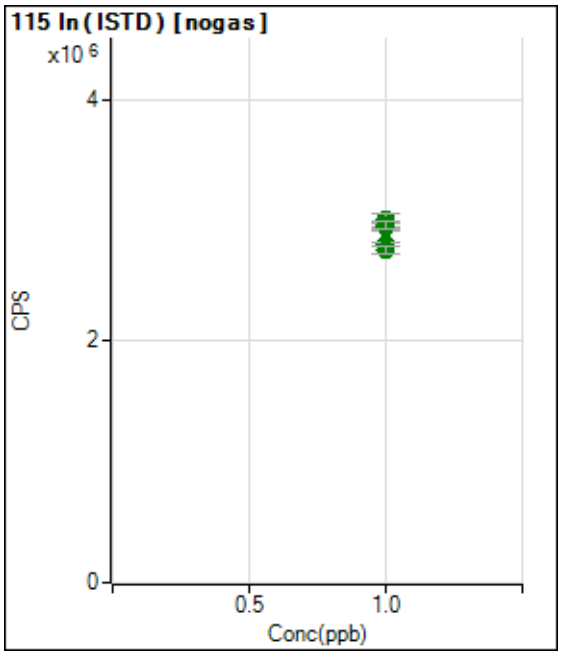


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3541557.45		A	2.2
2	☐	1.000		3480521.93		A	0.2
3	☐	1.000		3443846.51		A	0.6
4	☐	1.000		3442490.26		A	2.1
5	☐	1.000		3382029.53		A	2.5
6	☐	1.000		3264970.37		A	0.7
7	☐	1.000					

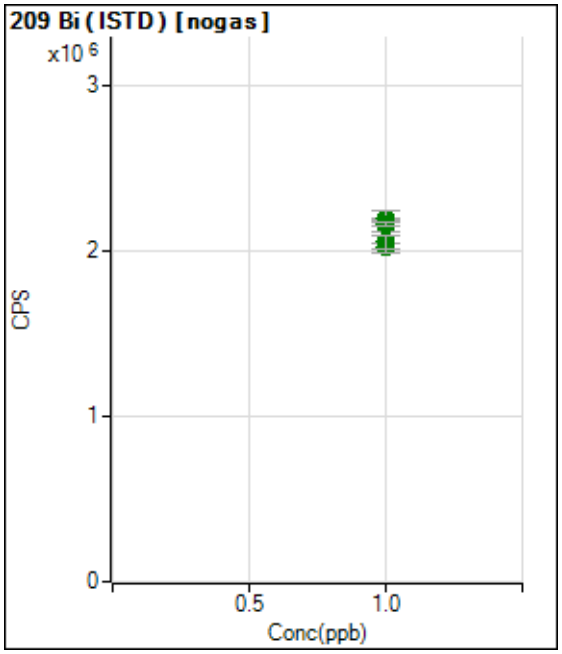


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		993327.33		P	3.1
2	☐	1.000		926943.19		P	0.3
3	☐	1.000		920502.90		P	2.4
4	☐	1.000		925552.20		P	2.2
5	☐	1.000		868492.33		P	4.5
6	☐	1.000		890447.33		P	1.5
7	☐	1.000					

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3006327.37		A	3.6
2	☐	1.000		2961941.38		A	1.3
3	☐	1.000		2952199.08		A	2.3
4	☐	1.000		2960727.31		A	1.8
5	☐	1.000		2801397.37		A	1.3
6	☐	1.000		2753059.62		A	2.1
7	☐	1.000					



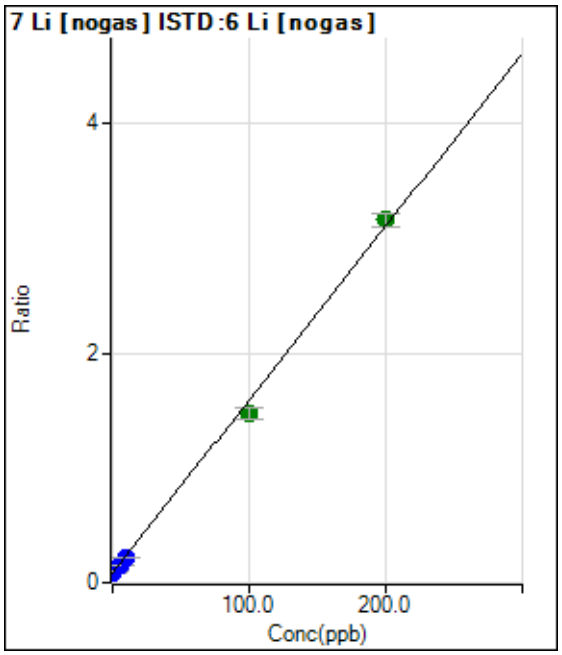
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2153139.50		A	3.0
2	☐	1.000		2160139.71		A	3.3
3	☐	1.000		2197258.67		A	4.1
4	☐	1.000		2167413.14		A	1.1
5	☐	1.000		2021585.28		A	2.9
6	☐	1.000		2058667.99		A	4.0
7	☐	1.000					

Calibration for 138_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121018B.b\
Analysis File: 121018B.batch.bin
DA Date-Time: 2018-12-10 21:33:35
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	132CALB.d	CAL BLK	2018-12-10 21:20:18
2	133CALS.d	2/10/200	2018-12-10 21:22:20
3	134CALS.d	5/25/500	2018-12-10 21:24:24
4	135CALS.d	10/50/1000	2018-12-10 21:26:28
5	136CALS.d	100/500/10K	2018-12-10 21:28:31
6	137CALS.d	200/1000/20K	2018-12-10 21:30:36
7			

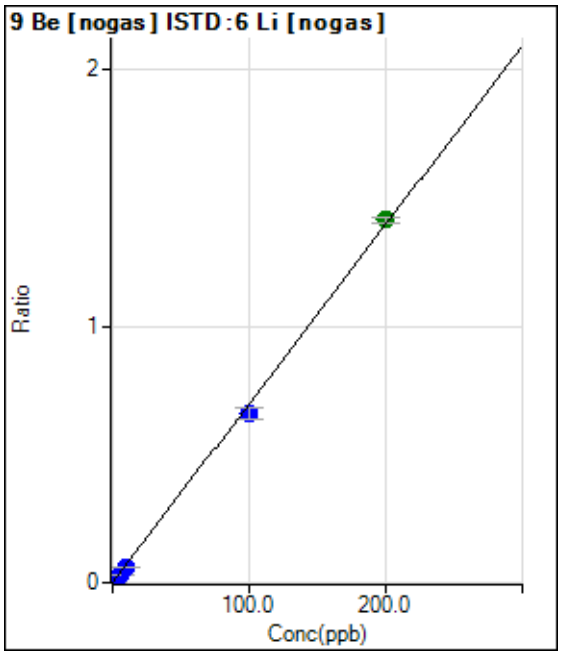
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98156.72	0.0838	P	1.2
2	☐	2.000	1.682	125243.92	0.1091	P	3.8
3	☐	5.000	4.244	171686.09	0.1478	P	3.6
4	☐	10.000	8.651	244566.01	0.2143	P	2.4
5	☐	100.000	92.479	1587240.50	1.4787	A	7.1
6	☐	200.000	203.850	3081008.60	3.1586	A	3.7
7	☐	1.000					

y = 0.0151 * x + 0.0838
R = 0.9991
DL = 0.1951
BEC = 5.555

Weight: <None>
Min Conc: <None>

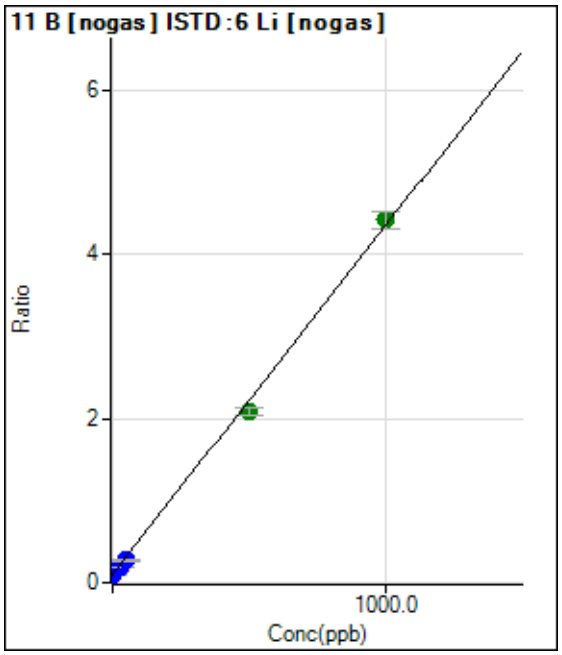


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	17.7
2	☐	2.000	1.664	13374.89	0.0117	P	2.6
3	☐	5.000	4.294	34831.82	0.0300	P	5.3
4	☐	10.000	8.426	67130.43	0.0588	P	3.0
5	☐	100.000	94.656	708918.38	0.6603	P	6.2
6	☐	200.000	202.772	1380233.05	1.4145	A	1.3
7	☐	1.000					

y = 0.0070 * x + 4.2550E-005
R = 0.9995
DL = 0.003237
BEC = 0.0061

Weight: <None>
Min Conc: <None>

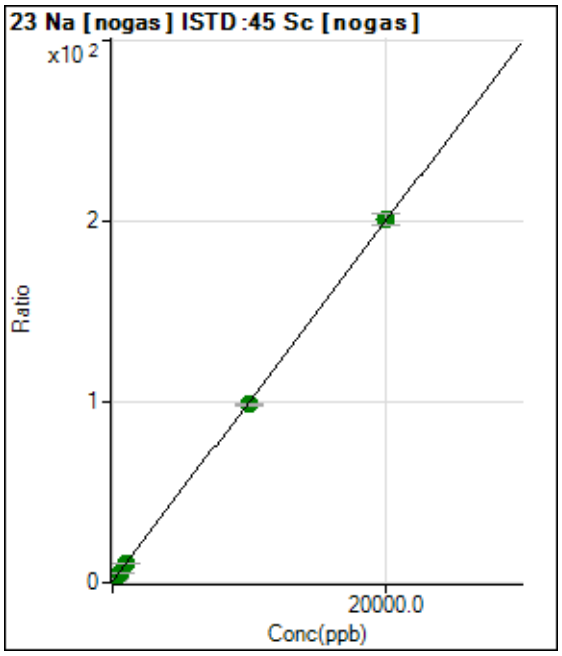
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118774.79	0.1014	P	2.1
2	☐	10.000	8.093	155757.22	0.1358	P	4.2
3	☐	25.000	19.096	211892.21	0.1825	P	4.8
4	☐	50.000	40.942	313967.17	0.2752	P	5.2
5	☐	500.000	467.793	2242263.41	2.0874	A	5.0
6	☐	1000.000	1016.723	4305823.79	4.4179	A	4.7
7	☐	5.000					

y = 0.0042 * x + 0.1014
R = 0.9993
DL = 1.526
BEC = 23.88

Weight: <None>
Min Conc: <None>

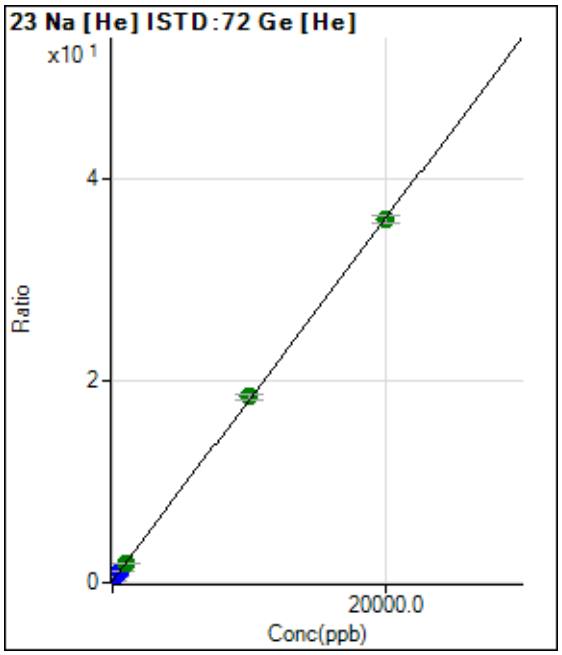


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1656557.33	0.6740	A	6.8
2	☐	200.000	190.924	6369548.58	2.5746	A	2.9
3	☐	500.000	466.835	13348913.32	5.3212	A	3.0
4	☐	1000.000	968.985	24792704.72	10.3200	A	1.3
5	☐	10000.00	9827.363	239318263.6	98.5035	A	0.8
6	☐	20000.00	20088.789	469382227.1	200.654	A	3.2
7	☐	100.000					

y = 0.0100 * x + 0.6740
R = 0.9999
DL = 13.78
BEC = 67.7

Weight: <None>
Min Conc: <None>

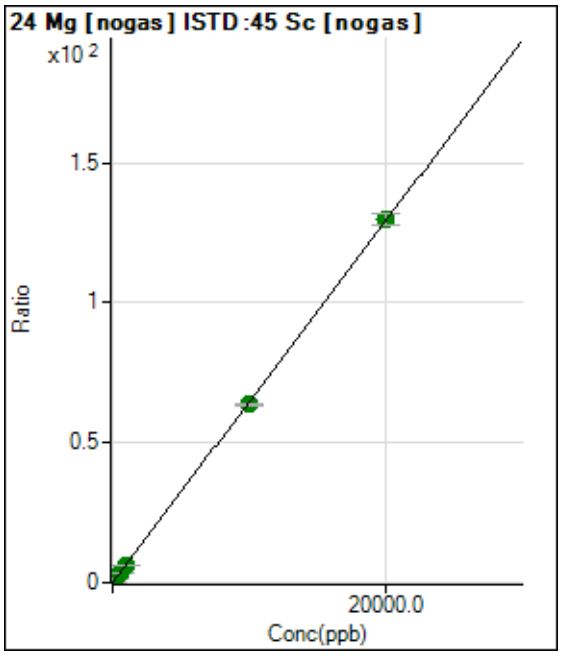
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	152546.78	0.1883	P	1.7
2	☐	200.000	202.044	443743.19	0.5514	P	2.0
3	☐	500.000	511.475	894828.50	1.1074	P	0.8
4	☐	1000.000	1001.282	1617547.37	1.9875	A	1.1
5	☐	10000.00	10146.260	14853822.28	18.4202	A	3.2
6	☐	20000.00	19926.499	28601452.90	35.9943	A	2.0
7	☐	100.000					

y = 0.0018 * x + 0.1883
R = 1.0000
DL = 5.295
BEC = 104.8

Weight: <None>
Min Conc: <None>

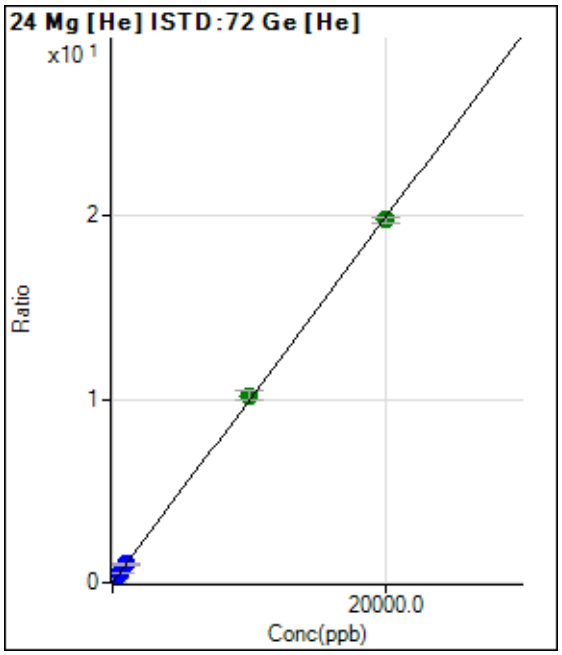


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41989.09	0.0171	P	13.7
2	☐	200.000	201.394	3260445.00	1.3179	A	1.7
3	☐	500.000	484.818	7899016.32	3.1486	A	2.4
4	☐	1000.000	982.085	15278293.05	6.3604	A	3.1
5	☐	10000.00	9858.871	154747315.9	63.6960	A	0.9
6	☐	20000.00	20071.826	303328815.1	129.661	A	3.1
7	☐	100.000					

y = 0.0065 * x + 0.0171
R = 1.0000
DL = 1.087
BEC = 2.649

Weight: <None>
Min Conc: <None>

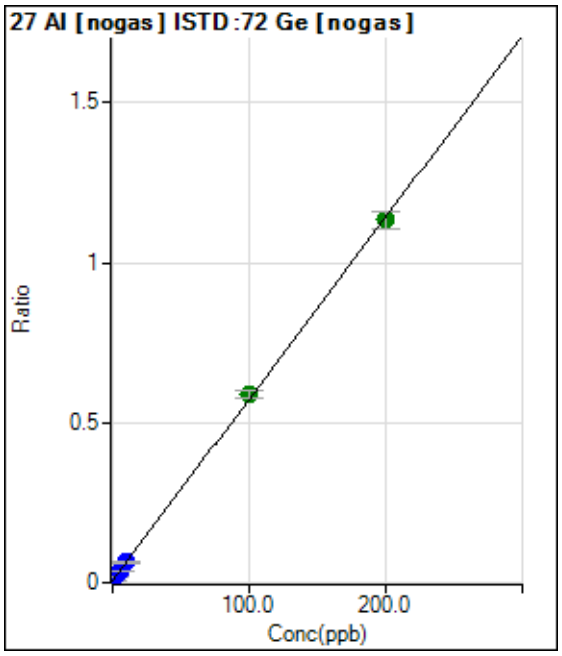
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2396.85	0.0030	P	7.2
2	☐	200.000	207.291	168330.19	0.2092	P	3.1
3	☐	500.000	522.963	422787.42	0.5232	P	0.9
4	☐	1000.000	1000.245	812312.98	0.9980	P	0.9
5	☐	10000.00	10238.506	8216398.63	10.1887	A	4.8
6	☐	20000.00	19880.088	15719288.10	19.7806	A	1.3
7	☐	100.000					

y = 9.9484E-004 * x + 0.0030
R = 0.9999
DL = 0.6443
BEC = 2.975

Weight: <None>
Min Conc: <None>

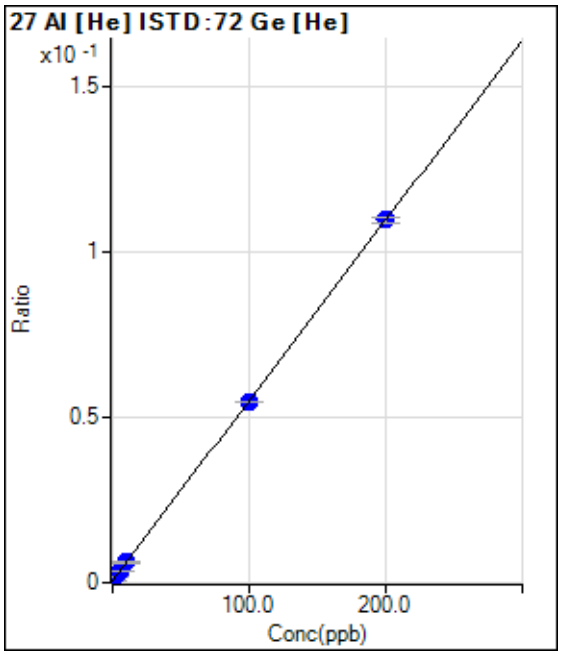


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20988.53	0.0065	P	2.5
2	☐	2.000	1.771	54394.93	0.0165	P	3.3
3	☐	5.000	4.883	112157.41	0.0342	P	2.0
4	☐	10.000	10.040	209579.00	0.0635	P	2.1
5	☐	100.000	102.676	1913956.01	0.5892	A	4.6
6	☐	200.000	198.665	3591850.57	1.1340	A	4.6
7	☐	1.000					

y = 0.0057 * x + 0.0065
R = 0.9999
DL = 0.08496
BEC = 1.144

Weight: <None>
Min Conc: <None>

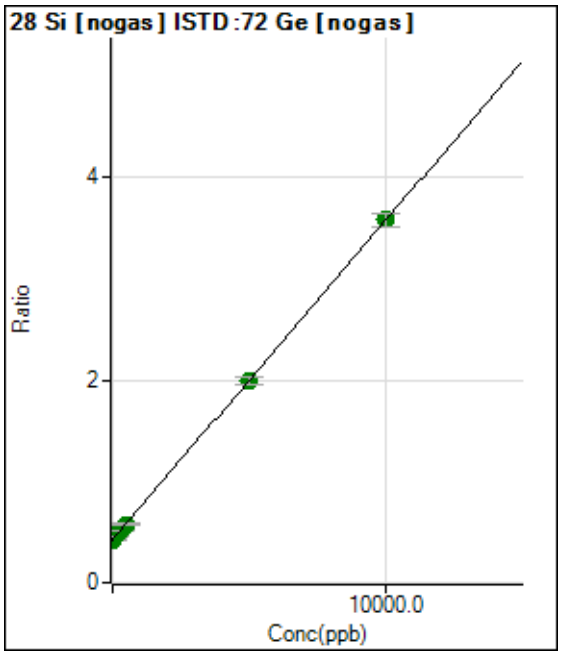
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.140	576.68	0.0007	P	6.3
2	☐	2.000	1.839	1316.74	0.0016	P	3.0
3	☐	5.000	5.200	2800.25	0.0035	P	3.5
4	☐	10.000	10.131	5000.73	0.0061	P	5.3
5	☐	100.000	99.401	44111.53	0.0547	P	0.5
6	☐	200.000	200.289	87065.98	0.1096	P	1.4
7	☐	1.000					

y = 5.4385E-004 * x + 6.3611E-004
R = 1.0000
DL = 0.2467
BEC = 1.17

Weight: <None>
Min Conc: <None>

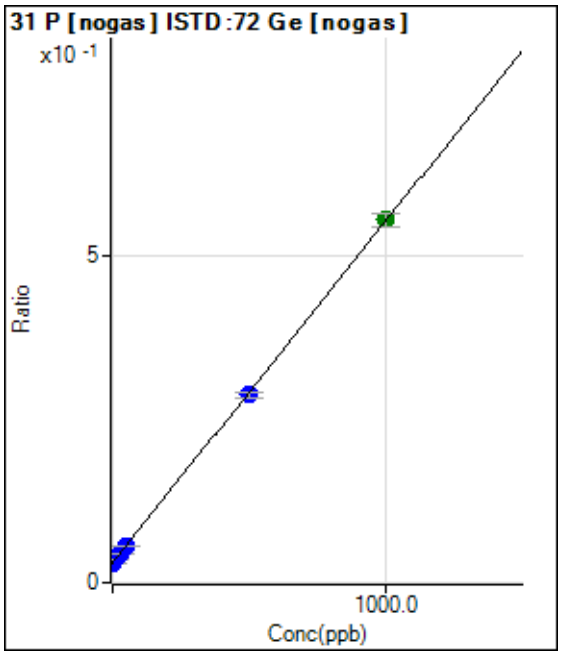


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1375550.81	0.4255	A	2.4
2	☐	100.000	113.405	1516523.26	0.4612	A	3.9
3	☐	250.000	269.773	1673936.85	0.5104	A	1.5
4	☐	500.000	480.921	1904500.91	0.5769	A	3.0
5	☐	5000.000	4965.448	6461019.07	1.9889	A	4.1
6	☐	10000.00	10017.601	11340206.91	3.5797	A	3.7
7	☐	5.000					

y = 3.1487E-004 * x + 0.4255
R = 1.0000
DL = 95.39
BEC = 1351

Weight: <None>
Min Conc: <None>

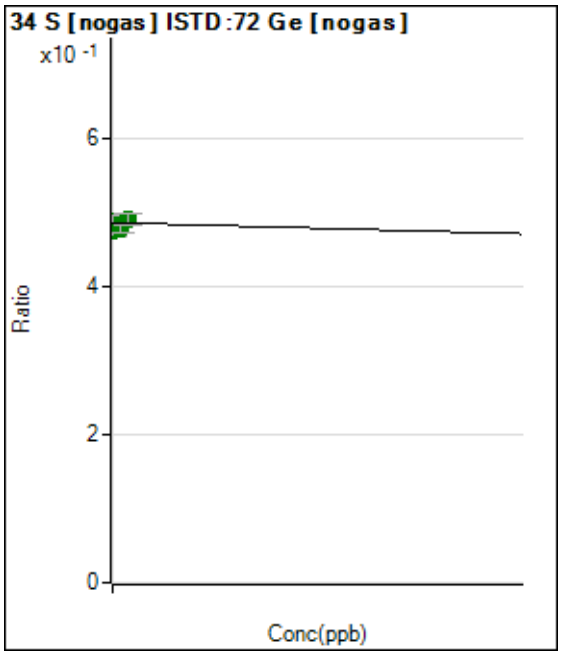
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98907.24	0.0306	P	1.9
2	☐	10.000	8.129	114597.49	0.0348	P	2.0
3	☐	25.000	24.479	142256.11	0.0434	P	1.1
4	☐	50.000	49.349	186094.81	0.0564	P	3.1
5	☐	500.000	491.726	934021.55	0.2875	P	2.9
6	☐	1000.000	1004.201	1758776.64	0.5552	A	3.8
7	☐	5.000					

y = 5.2240E-004 * x + 0.0306
R = 1.0000
DL = 3.318
BEC = 58.56

Weight: <None>
Min Conc: <None>

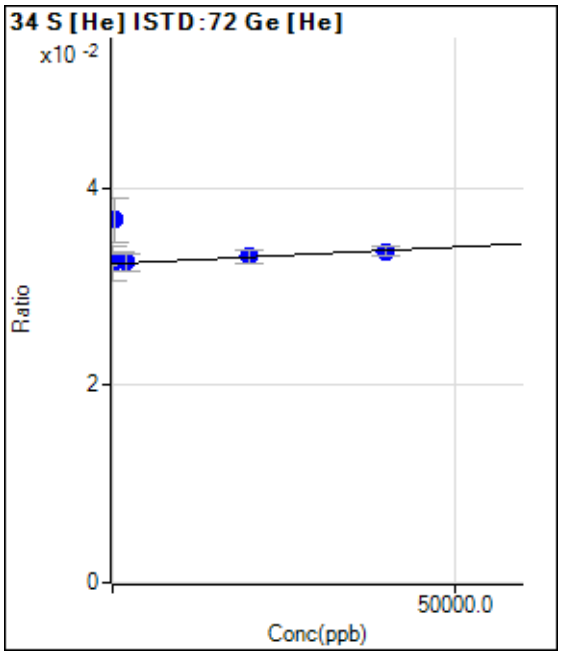


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1573283.89	0.4867	A	3.4
2	☐	400.000	790308.54	1562470.93	0.4751	A	3.4
3	☐	1000.000	-56410.764	1598252.57	0.4876	A	4.1
4	☐	2000.000	691106.86	1573214.52	0.4766	A	3.0
5	☐	20000.00	502239.99	1557745.15	0.4793	A	2.3
6	☐	40000.00	-242039.15	1553318.49	0.4903	A	3.3
7	☐	100.000					

y = -1.4708E-008 * x + 0.4867
R = 0.4453
DL = -3.408E+06
BEC = -3.309E+07

Weight: <None>
Min Conc: <None>

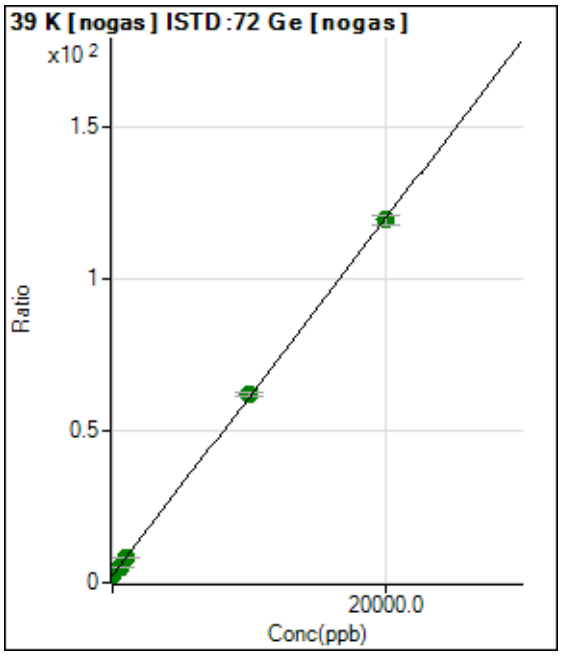
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26156.40	0.0323	P	10.8
2	☐	400.000	130572.70	29560.94	0.0367	P	12.3
3	☐	1000.000	12599.256	26456.57	0.0327	P	4.2
4	☐	2000.000	4741.813	26423.62	0.0325	P	5.7
5	☐	20000.00	21080.333	26623.27	0.0330	P	4.2
6	☐	40000.00	37731.034	26689.35	0.0336	P	3.0
7	☐	100.000					

y = 3.4043E-008 * x + 0.0323
R = -0.0448
DL = 3.084E+05
BEC = 9.488E+05

Weight: <None>
Min Conc: <None>

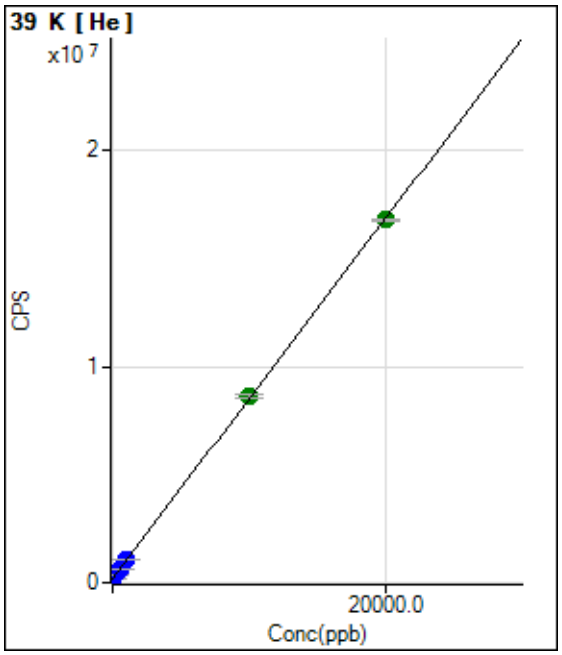


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7714377.78	2.3864	A	1.9
2	☐	200.000	196.731	11651533.07	3.5428	A	2.6
3	☐	500.000	495.507	17375545.18	5.2991	A	1.7
4	☐	1000.000	994.179	27168466.23	8.2304	A	3.2
5	☐	10000.00	10138.881	201423454.5	61.9848	A	2.0
6	☐	20000.00	19930.996	378799533.4	119.544	A	2.3
7	☐	100.000					

y = 0.0059 * x + 2.3864
R = 1.0000
DL = 23.17
BEC = 406

Weight: <None>
Min Conc: <None>

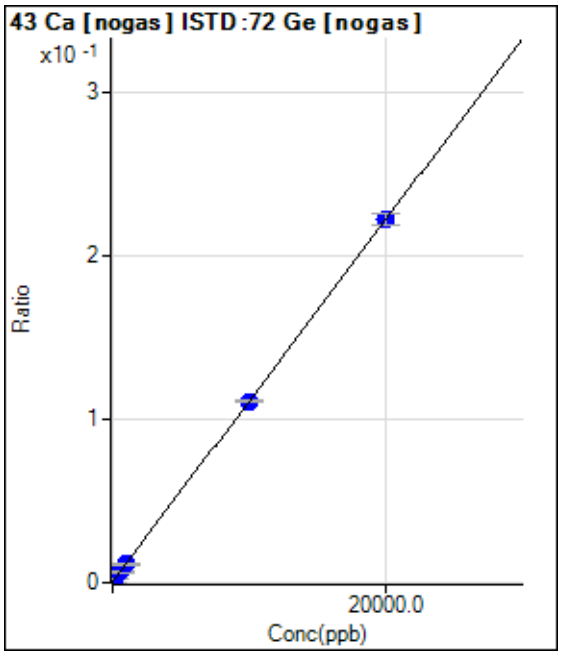
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190056.99		P	1.2
2	☐	200.000	208.759	363905.70		P	0.3
3	☐	500.000	515.669	619491.06		P	0.4
4	☐	1000.000	1051.890	1066040.59		P	1.9
5	☐	10000.00	10145.081	8638586.75		A	1.4
6	☐	20000.00	19924.386	16782508.92		A	0.8
7	☐	100.000					

y = 832.7711 * x + 190056.9933
R = 1.0000
DL = 8.388
BEC = 228.2

Weight: <None>
Min Conc: <None>

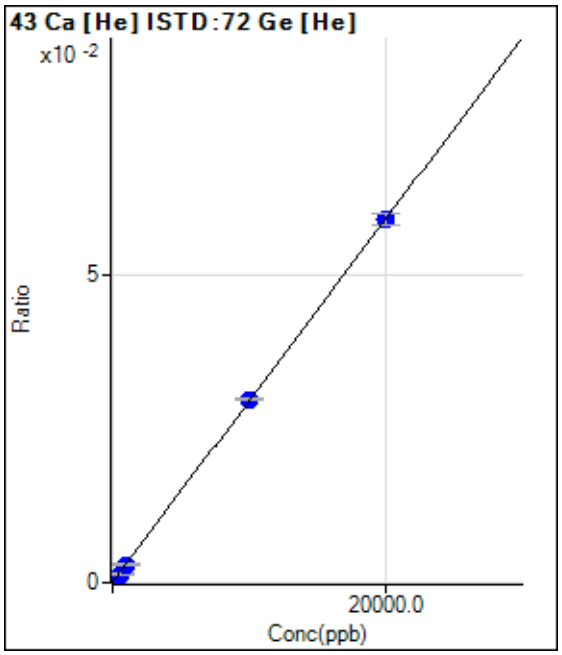


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1570.09	0.0005	P	16.7
2	☐	200.000	189.883	8498.74	0.0026	P	6.4
3	☐	500.000	551.618	21573.15	0.0066	P	23.6
4	☐	1000.000	965.871	36840.02	0.0112	P	4.2
5	☐	10000.00	9996.204	360667.22	0.1110	P	1.8
6	☐	20000.00	20002.415	702064.03	0.2216	P	3.1
7	☐	100.000					

y = 1.1054E-005 * x + 4.8595E-004
R = 1.0000
DL = 22.07
BEC = 43.96

Weight: <None>
Min Conc: <None>

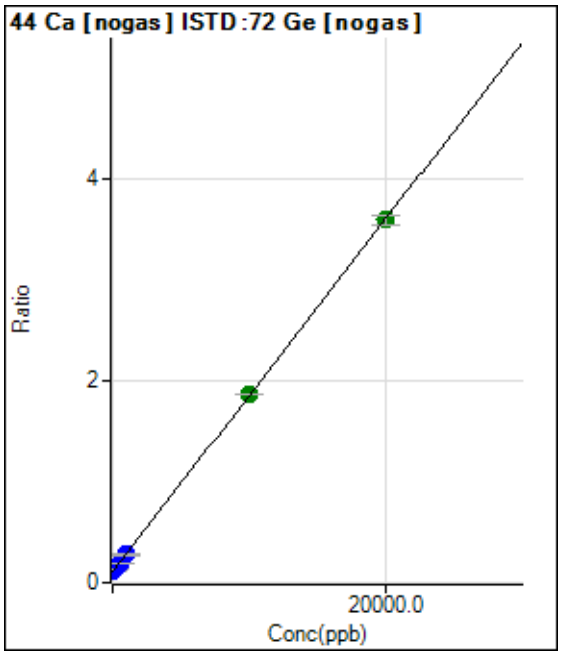
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	29.0
2	☐	200.000	190.513	520.01	0.0006	P	13.1
3	☐	500.000	438.077	1110.05	0.0014	P	18.1
4	☐	1000.000	938.198	2313.52	0.0028	P	11.9
5	☐	10000.00	10068.440	23935.69	0.0297	P	0.6
6	☐	20000.00	19970.513	46702.27	0.0588	P	3.0
7	☐	100.000					

y = 2.9390E-006 * x + 8.6499E-005
R = 1.0000
DL = 25.56
BEC = 29.43

Weight: <None>
Min Conc: <None>

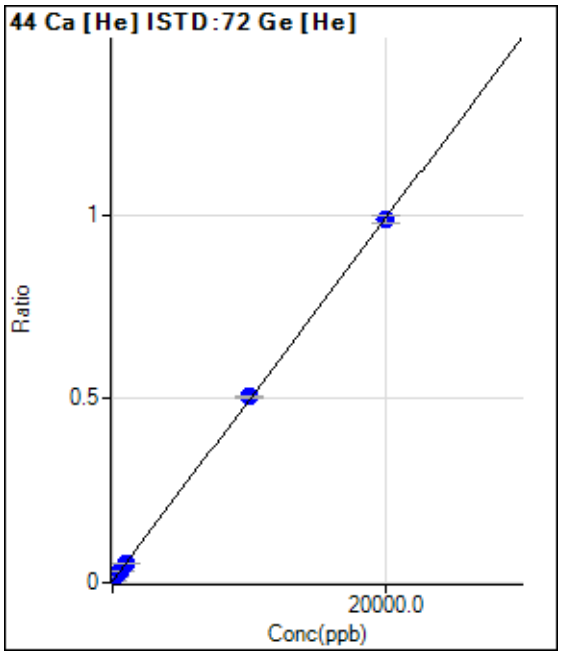


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	346445.06	0.1072	P	0.6
2	☐	200.000	195.345	464418.78	0.1412	P	2.4
3	☐	500.000	505.505	640198.75	0.1953	P	3.0
4	☐	1000.000	978.226	916610.12	0.2777	P	3.1
5	☐	10000.00	10091.250	6066129.28	1.8661	A	0.2
6	☐	20000.00	19955.373	11360076.91	3.5855	A	2.9
7	☐	100.000					

y = 1.7430E-004 * x + 0.1072
R = 1.0000
DL = 11.64
BEC = 614.8

Weight: <None>
Min Conc: <None>

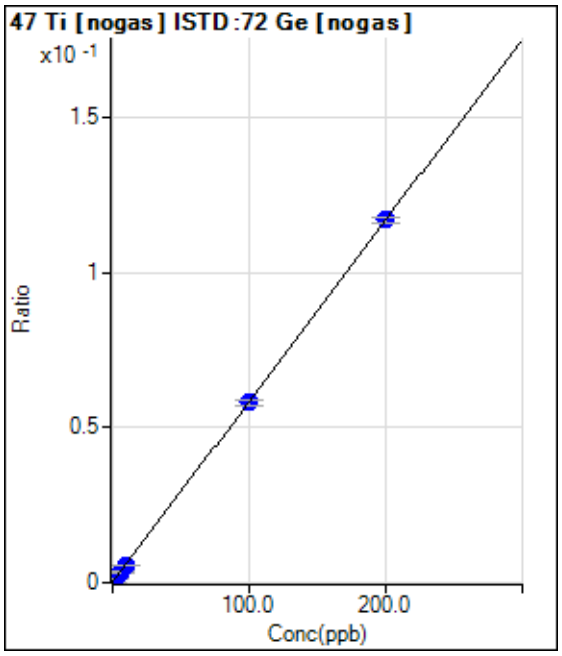
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3160.31	0.0039	P	11.7
2	☐	200.000	198.044	10993.37	0.0137	P	1.7
3	☐	500.000	515.380	23668.64	0.0293	P	1.5
4	☐	1000.000	987.876	42775.90	0.0526	P	1.5
5	☐	10000.00	10153.257	406490.05	0.5040	P	1.8
6	☐	20000.00	19923.613	782864.62	0.9852	P	2.2
7	☐	100.000					

y = 4.9255E-005 * x + 0.0039
R = 1.0000
DL = 27.77
BEC = 79.25

Weight: <None>
Min Conc: <None>

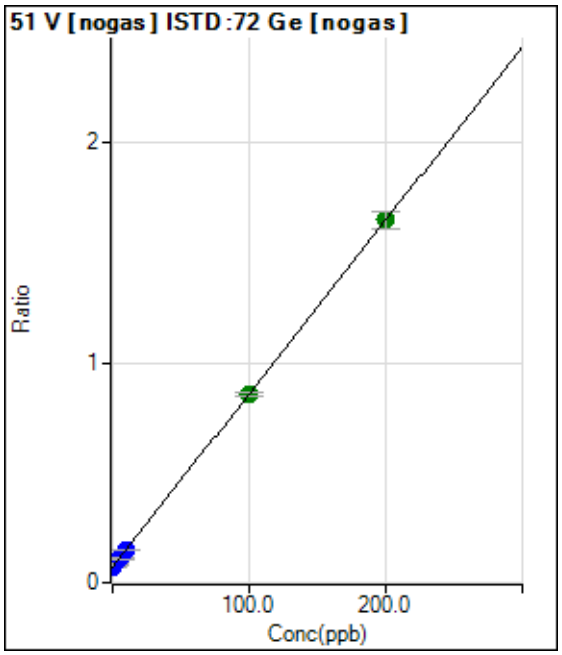


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0001	P	5.5
2	☐	2.000	1.857	4010.50	0.0012	P	3.2
3	☐	5.000	5.418	10826.85	0.0033	P	9.8
4	☐	10.000	9.230	18225.81	0.0055	P	4.2
5	☐	100.000	99.426	189010.87	0.0582	P	2.8
6	☐	200.000	200.317	370955.04	0.1171	P	1.7
7	☐	1.000					

y = 5.8369E-004 * x + 1.3506E-004
R = 1.0000
DL = 0.03851
BEC = 0.2314

Weight: <None>
Min Conc: <None>

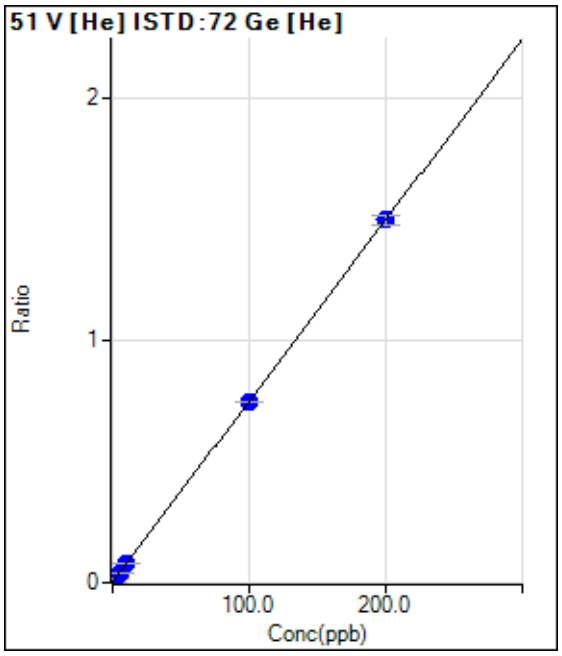
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230343.67	0.0712	P	4.4
2	☐	2.000	1.553	274563.97	0.0835	P	1.4
3	☐	5.000	4.842	358841.39	0.1094	P	2.6
4	☐	10.000	9.864	491727.11	0.1490	P	3.5
5	☐	100.000	99.444	2778562.95	0.8550	A	2.5
6	☐	200.000	200.293	5226242.95	1.6498	A	4.5
7	☐	1.000					

y = 0.0079 * x + 0.0712
R = 1.0000
DL = 1.19
BEC = 9.038

Weight: <None>
Min Conc: <None>

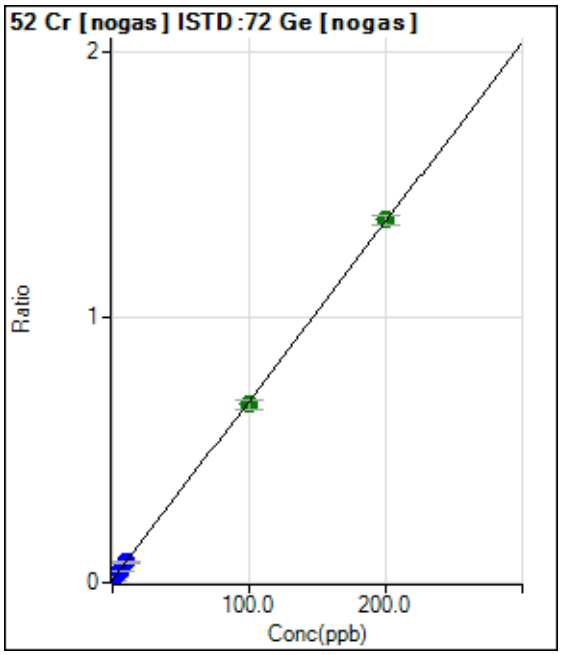


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.136	2635.53	0.0033	P	3.4
2	☐	2.000	2.092	14389.56	0.0179	P	3.6
3	☐	5.000	5.039	32246.53	0.0399	P	2.6
4	☐	10.000	9.937	62290.96	0.0765	P	1.0
5	☐	100.000	99.589	602342.56	0.7469	P	1.0
6	☐	200.000	200.207	1191175.08	1.4992	P	2.7
7	☐	1.000					

y = 0.0075 * x + 0.0022
R = 1.0000
DL = 0.0443
BEC = 0.2992

Weight: <None>
Min Conc: <None>

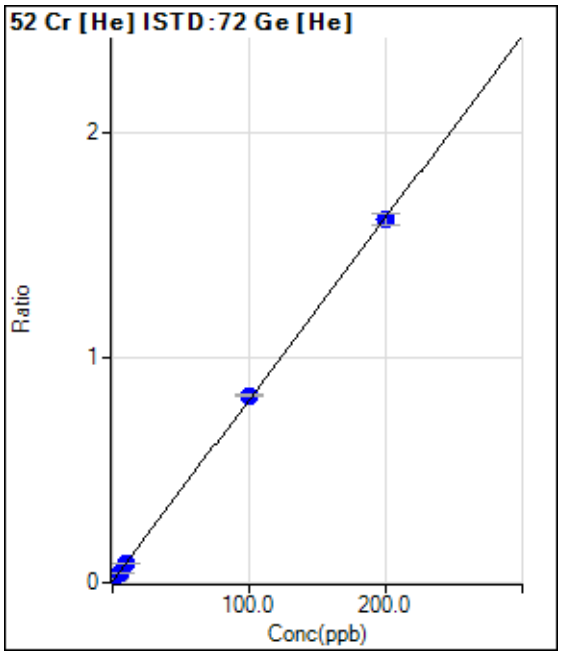
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33153.19	0.0103	P	0.5
2	☐	2.000	1.981	77756.05	0.0236	P	2.6
3	☐	5.000	5.190	148632.04	0.0453	P	1.1
4	☐	10.000	9.786	252243.59	0.0764	P	2.2
5	☐	100.000	97.917	2183332.00	0.6720	A	4.7
6	☐	200.000	201.048	4337628.69	1.3689	A	2.6
7	☐	1.000					

y = 0.0068 * x + 0.0103
R = 0.9999
DL = 0.02172
BEC = 1.517

Weight: <None>
Min Conc: <None>

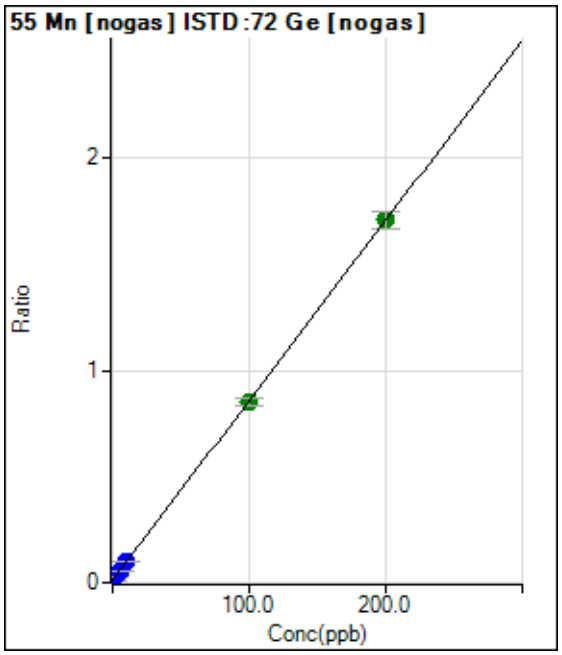


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4597.29	0.0057	P	2.7
2	☐	2.000	1.951	17258.33	0.0214	P	1.1
3	☐	5.000	4.980	37114.16	0.0459	P	0.9
4	☐	10.000	9.679	68285.71	0.0839	P	2.1
5	☐	100.000	102.358	671833.85	0.8330	P	1.0
6	☐	200.000	198.838	1281350.63	1.6127	P	3.1
7	☐	1.000					

y = 0.0081 * x + 0.0057
R = 0.9999
DL = 0.05648
BEC = 0.7023

Weight: <None>
Min Conc: <None>

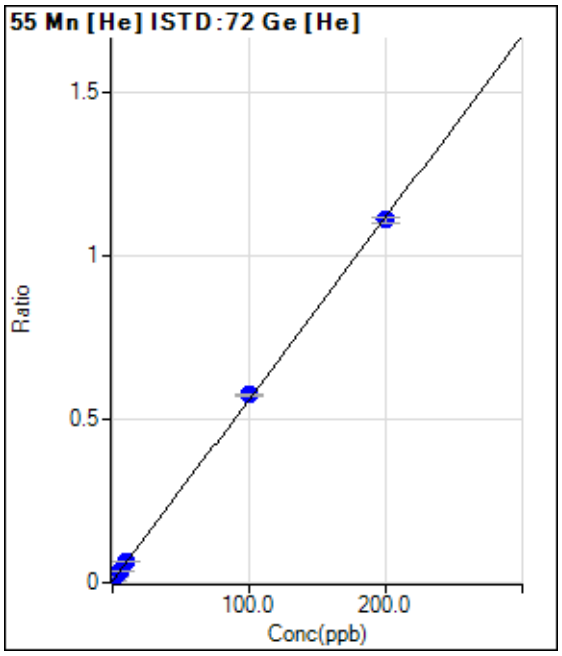
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35550.91	0.0110	P	3.3
2	☐	2.000	1.992	91652.45	0.0279	P	4.6
3	☐	5.000	4.899	172193.42	0.0525	P	1.7
4	☐	10.000	10.521	330635.85	0.1002	P	3.3
5	☐	100.000	99.265	2768286.63	0.8523	A	4.5
6	☐	200.000	200.344	5412668.04	1.7089	A	5.1
7	☐	1.000					

y = 0.0085 * x + 0.0110
R = 1.0000
DL = 0.129
BEC = 1.298

Weight: <None>
Min Conc: <None>

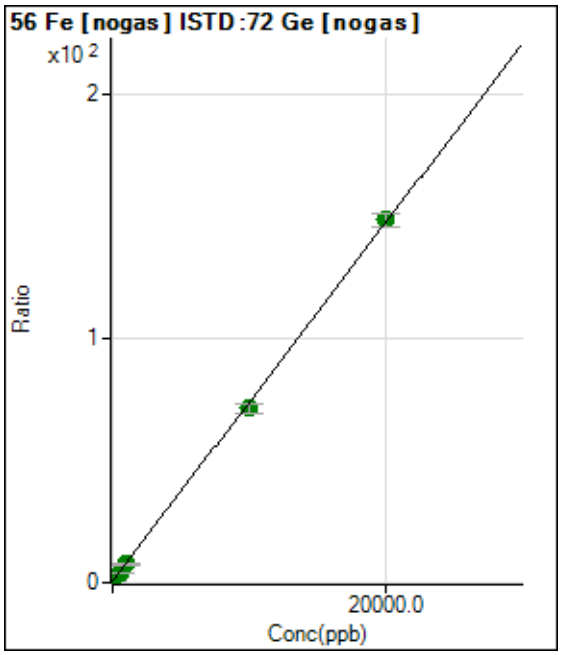


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3757.12	0.0046	P	4.4
2	☐	2.000	2.025	12791.24	0.0159	P	3.5
3	☐	5.000	5.087	26586.08	0.0329	P	3.6
4	☐	10.000	10.717	52237.31	0.0642	P	0.6
5	☐	100.000	102.739	464116.67	0.5754	P	1.0
6	☐	200.000	198.592	880471.23	1.1080	P	1.4
7	☐	1.000					

y = 0.0056 * x + 0.0046
R = 0.9999
DL = 0.1106
BEC = 0.835

Weight: <None>
Min Conc: <None>

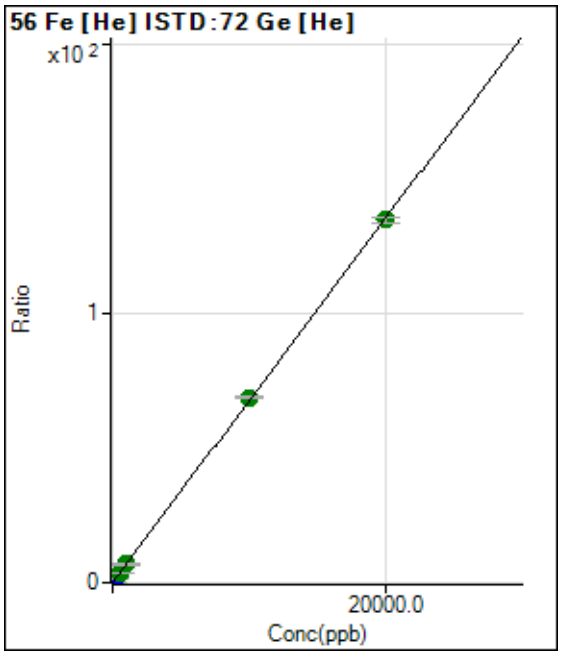
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1956414.17	0.6052	A	2.1
2	☐	200.000	193.025	6643367.08	2.0208	A	4.8
3	☐	500.000	482.743	13592323.74	4.1455	A	2.0
4	☐	1000.000	944.173	24853691.18	7.5294	A	3.5
5	☐	10000.00	9661.030	232052288.5	71.4561	A	5.6
6	☐	20000.00	20172.777	470600377.1	148.545	A	3.6
7	☐	100.000					

y = 0.0073 * x + 0.6052
R = 0.9998
DL = 5.231
BEC = 82.52

Weight: <None>
Min Conc: <None>

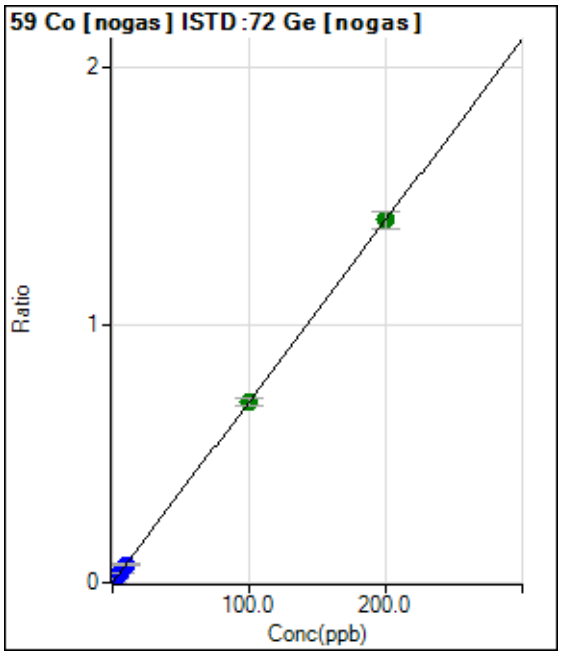


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13091.48	0.0162	P	6.5
2	☐	200.000	210.939	1161661.57	1.4434	P	1.5
3	☐	500.000	511.225	2808440.17	3.4752	A	0.6
4	☐	1000.000	1001.909	5530173.46	6.7952	A	2.2
5	☐	10000.00	10161.774	55464134.17	68.7723	A	0.9
6	☐	20000.00	19918.628	107109075.0	134.788	A	1.9
7	☐	100.000					

y = 0.0068 * x + 0.0162
R = 1.0000
DL = 0.4672
BEC = 2.388

Weight: <None>
Min Conc: <None>

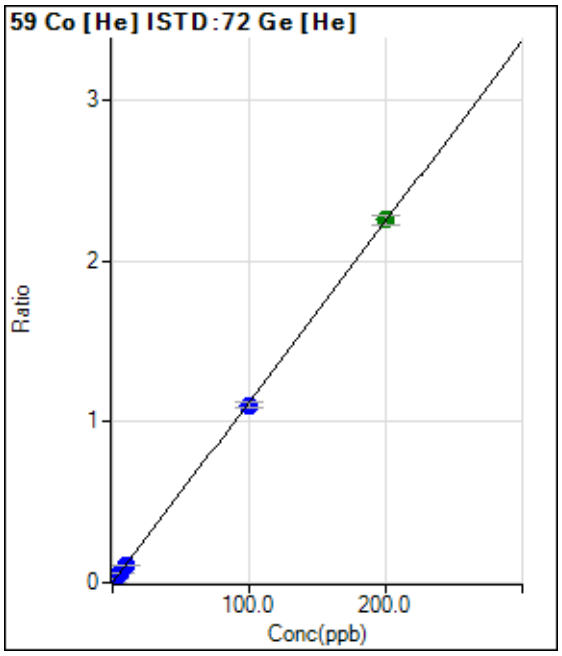
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1110.05	0.0003	P	6.1
2	☐	2.000	2.044	48424.10	0.0147	P	4.6
3	☐	5.000	5.055	117742.98	0.0359	P	2.4
4	☐	10.000	9.932	231885.11	0.0702	P	2.5
5	☐	100.000	99.550	2277158.87	0.7008	A	4.1
6	☐	200.000	200.226	4463820.66	1.4092	A	4.5
7	☐	1.000					

y = 0.0070 * x + 3.4333E-004
R = 1.0000
DL = 0.008964
BEC = 0.04879

Weight: <None>
Min Conc: <None>

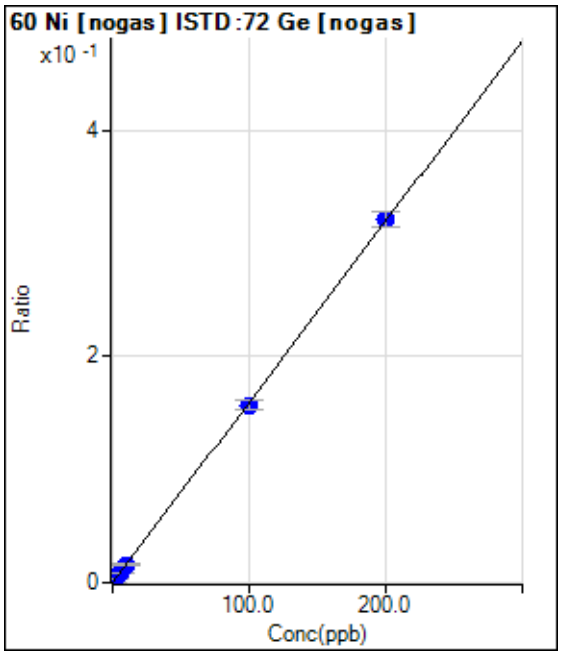


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0004	P	12.2
2	☐	2.000	2.001	18389.43	0.0228	P	1.6
3	☐	5.000	4.922	44961.91	0.0556	P	1.4
4	☐	10.000	9.653	88516.47	0.1088	P	2.3
5	☐	100.000	98.419	891454.62	1.1055	P	2.5
6	☐	200.000	200.810	1791767.06	2.2552	A	2.9
7	☐	1.000					

y = 0.0112 * x + 3.8290E-004
R = 1.0000
DL = 0.01246
BEC = 0.0341

Weight: <None>
Min Conc: <None>

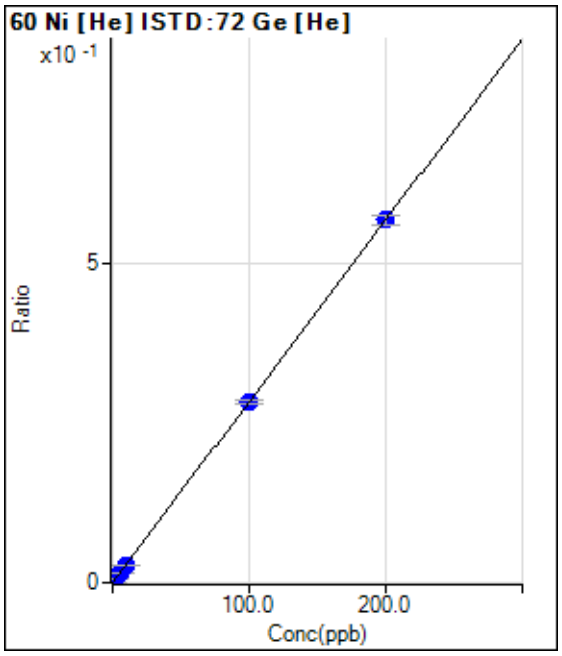
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.220	810.03	0.0003	P	4.0
2	☐	2.000	2.229	11383.69	0.0035	P	5.7
3	☐	5.000	5.275	27327.31	0.0083	P	1.1
4	☐	10.000	10.161	53317.76	0.0161	P	3.4
5	☐	100.000	98.264	510058.21	0.1570	P	5.4
6	☐	200.000	200.851	1017116.63	0.3211	P	4.4
7	☐	1.000					

y = 0.0016 * x - 1.0187E-004
R = 0.9999
DL = 0.01863
BEC = -0.0637

Weight: <None>
Min Conc: <None>

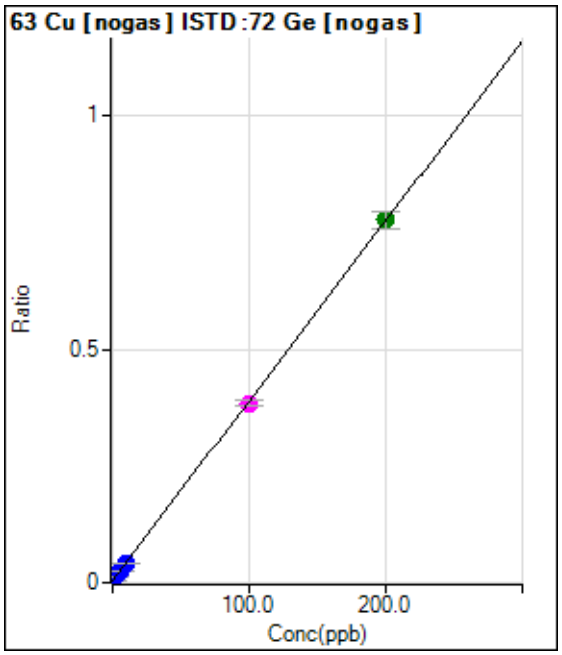


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.085	103.33	0.0001	P	55.2
2	☐	2.000	2.135	4780.69	0.0059	P	4.8
3	☐	5.000	5.093	11577.13	0.0143	P	2.5
4	☐	10.000	9.951	22871.31	0.0281	P	2.6
5	☐	100.000	99.475	227320.65	0.2819	P	2.2
6	☐	200.000	200.261	450978.10	0.5676	P	2.8
7	☐	1.000					

y = 0.0028 * x - 1.1280E-004
R = 1.0000
DL = 0.07452
BEC = -0.03979

Weight: <None>
Min Conc: <None>

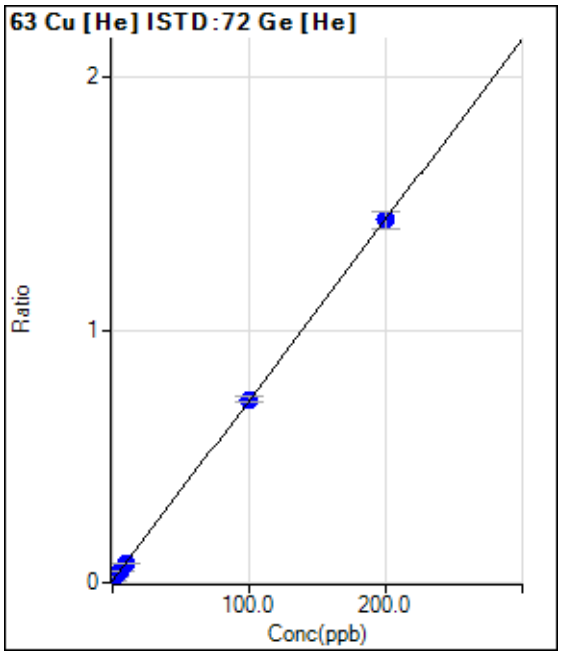
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15116.42	0.0047	P	3.0
2	☐	2.000	2.092	41894.62	0.0127	P	5.4
3	☐	5.000	5.054	79210.34	0.0242	P	0.8
4	☐	10.000	9.849	140775.25	0.0426	P	2.7
5	☐	100.000	98.695	1250823.70	0.3850	M	3.6
6	☐	200.000	200.658	2464249.44	0.7780	A	4.6
7	☐	1.000					

y = 0.0039 * x + 0.0047
R = 1.0000
DL = 0.1098
BEC = 1.213

Weight: <None>
Min Conc: <None>

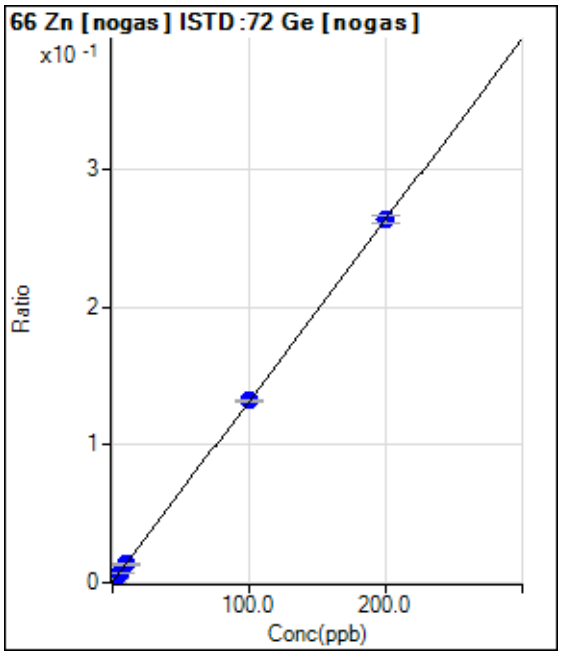


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.102	5817.66	0.0072	P	3.6
2	☐	2.000	1.968	17681.98	0.0220	P	0.9
3	☐	5.000	5.001	35247.47	0.0436	P	3.0
4	☐	10.000	9.991	64527.02	0.0793	P	1.0
5	☐	100.000	100.283	584011.19	0.7242	P	3.0
6	☐	200.000	199.859	1140341.67	1.4355	P	4.6
7	☐	1.000					

y = 0.0071 * x + 0.0079
R = 1.0000
DL = 0.1086
BEC = 1.108

Weight: <None>
Min Conc: <None>

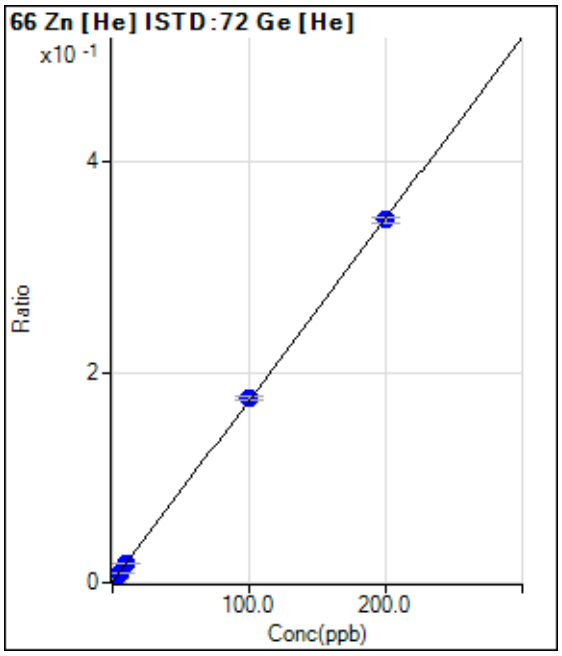
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.063	1340.07	0.0004	P	3.3
2	☐	2.000	2.104	10179.63	0.0031	P	3.5
3	☐	5.000	4.892	22157.05	0.0068	P	4.0
4	☐	10.000	9.873	43922.88	0.0133	P	2.4
5	☐	100.000	100.120	428575.06	0.1319	P	1.7
6	☐	200.000	199.948	833502.33	0.2630	P	2.2
7	☐	1.000					

y = 0.0013 * x + 3.3137E-004
R = 1.0000
DL = 0.0308
BEC = 0.2522

Weight: <None>
Min Conc: <None>

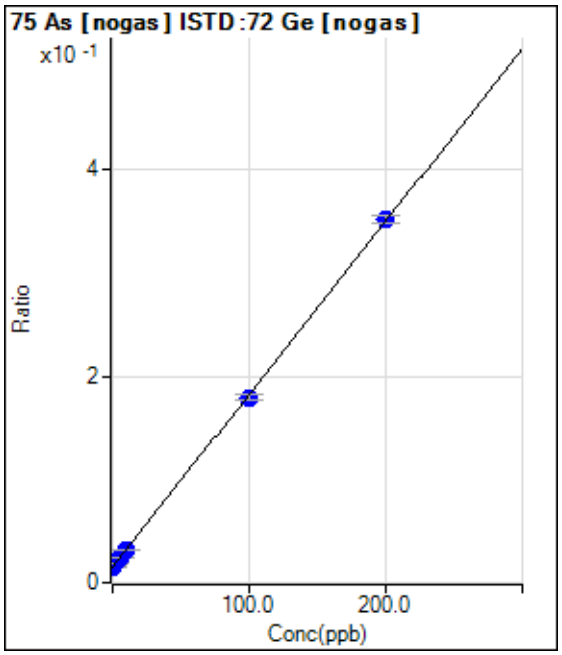


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.228	343.34	0.0004	P	40.2
2	☐	2.000	1.834	3203.67	0.0040	P	0.7
3	☐	5.000	4.738	7264.86	0.0090	P	1.8
4	☐	10.000	9.995	14699.47	0.0181	P	4.5
5	☐	100.000	101.304	141569.40	0.1755	P	1.7
6	☐	200.000	199.356	273886.48	0.3447	P	1.7
7	☐	1.000					

y = 0.0017 * x + 8.1665E-004
R = 1.0000
DL = 0.2964
BEC = 0.4735

Weight: <None>
Min Conc: <None>

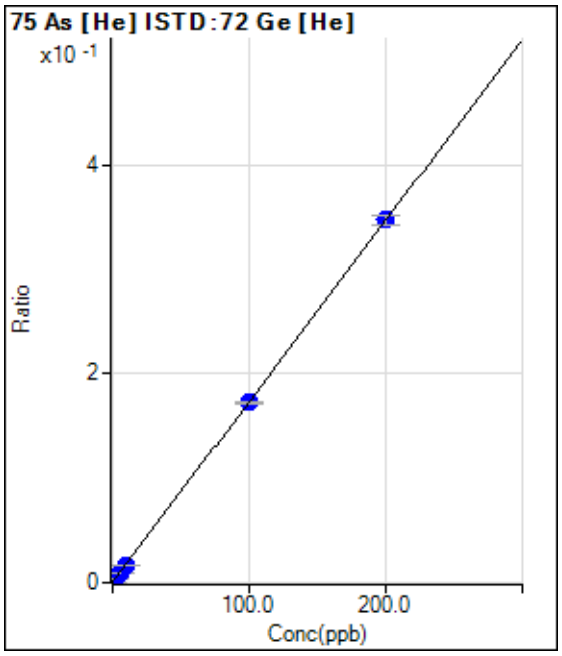
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.321	50720.91	0.0157	P	3.3
2	☐	2.000	2.197	61908.22	0.0188	P	2.9
3	☐	5.000	5.391	79254.97	0.0242	P	0.5
4	☐	10.000	10.037	105469.49	0.0319	P	3.7
5	☐	100.000	98.134	582611.05	0.1793	P	2.7
6	☐	200.000	200.919	1113067.04	0.3512	P	2.2
7	☐	1.000					

y = 0.0017 * x + 0.0151
R = 0.9999
DL = 0.9315
BEC = 9.055

Weight: <None>
Min Conc: <None>

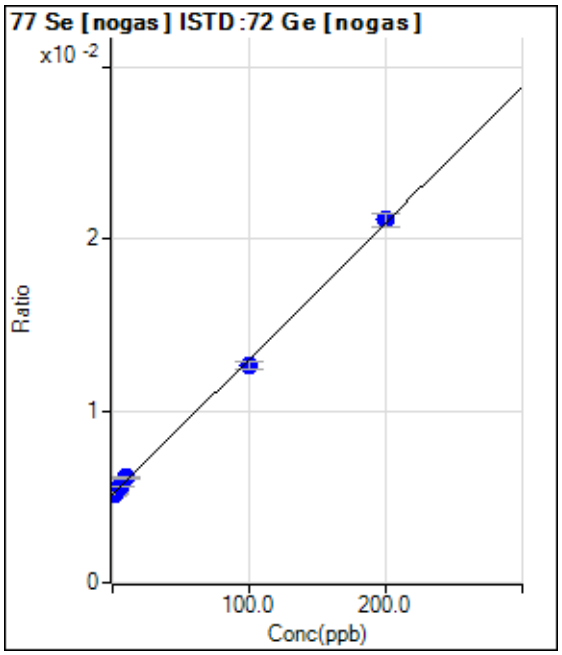


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	265.56	0.0003	P	13.7
2	☐	2.000	1.995	3045.83	0.0038	P	1.1
3	☐	5.000	4.799	6981.36	0.0086	P	3.0
4	☐	10.000	9.715	13963.15	0.0172	P	0.9
5	☐	100.000	99.238	138886.19	0.1722	P	0.9
6	☐	200.000	200.400	276043.22	0.3474	P	2.6
7	☐	1.000					

y = 0.0017 * x + 3.2805E-004
R = 1.0000
DL = 0.07791
BEC = 0.1894

Weight: <None>
Min Conc: <None>

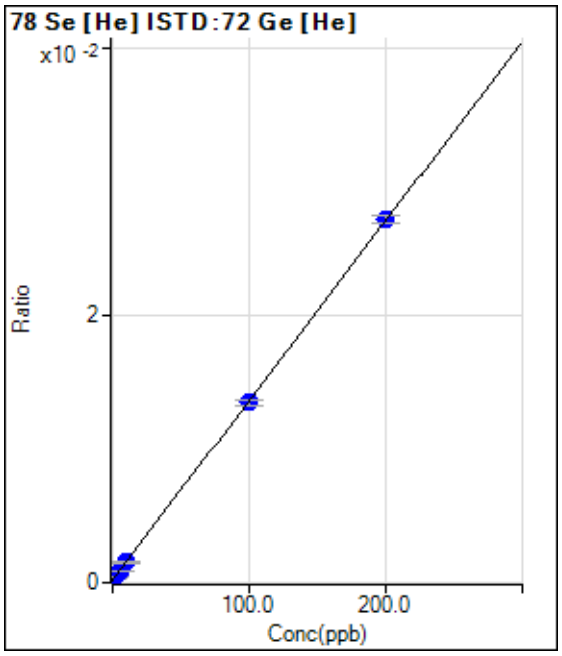
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16564.45	0.0051	P	3.3
2	☐	2.000	0.851	17071.57	0.0052	P	2.2
3	☐	5.000	5.656	18262.68	0.0056	P	1.1
4	☐	10.000	12.601	20198.10	0.0061	P	2.0
5	☐	100.000	95.337	41096.61	0.0126	P	3.7
6	☐	200.000	202.197	66812.34	0.0211	P	3.6
7	☐	1.000					

y = 7.8942E-005 * x + 0.0051
R = 0.9995
DL = 6.461
BEC = 64.89

Weight: <None>
Min Conc: <None>

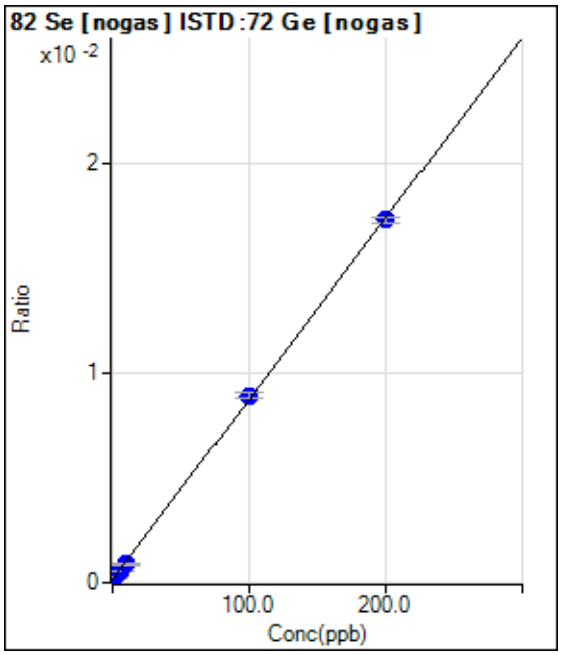


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.460	216.67	0.0003	P	7.1
2	☐	2.000	2.180	401.34	0.0005	P	9.1
3	☐	5.000	5.256	736.02	0.0009	P	3.1
4	☐	10.000	9.763	1233.38	0.0015	P	5.4
5	☐	100.000	98.673	10843.90	0.0134	P	2.9
6	☐	200.000	200.667	21560.74	0.0271	P	2.2
7	☐	1.000					

y = 1.3417E-004 * x + 2.0579E-004
R = 1.0000
DL = 0.4257
BEC = 1.534

Weight: <None>
Min Conc: <None>

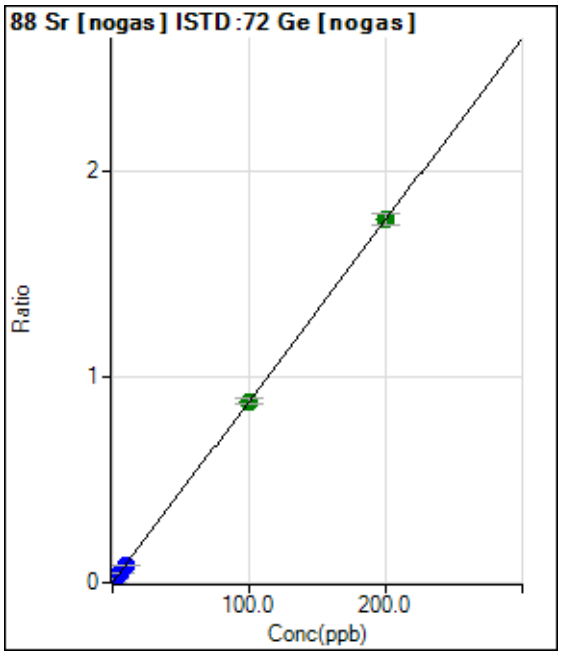
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	480.01	0.0001	P	11.9
2	☐	2.000	1.227	836.70	0.0003	P	6.9
3	☐	5.000	4.514	1760.11	0.0005	P	4.3
4	☐	10.000	8.804	2990.30	0.0009	P	9.6
5	☐	100.000	101.803	28953.40	0.0089	P	3.5
6	☐	200.000	199.178	54809.67	0.0173	P	1.8
7	☐	1.000					

y = 8.6086E-005 * x + 1.4839E-004
R = 0.9999
DL = 0.616
BEC = 1.724

Weight: <None>
Min Conc: <None>

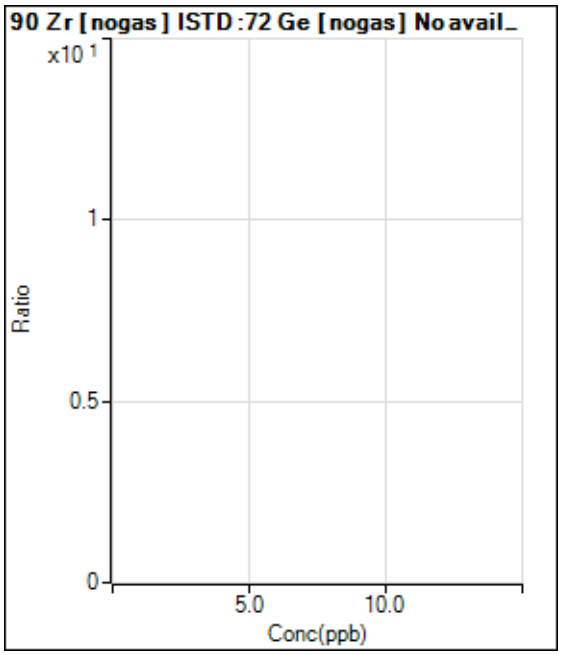


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3567.07	0.0011	P	3.8
2	☐	2.000	1.944	60017.98	0.0183	P	4.7
3	☐	5.000	4.897	145268.29	0.0443	P	2.4
4	☐	10.000	9.701	286095.07	0.0867	P	4.4
5	☐	100.000	99.968	2869077.98	0.8831	A	3.5
6	☐	200.000	200.034	5595267.00	1.7660	A	3.1
7	☐	1.000					

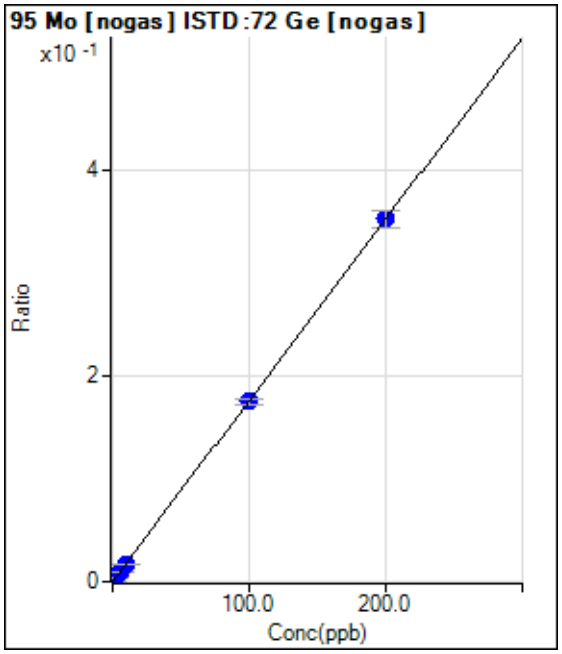
y = 0.0088 * x + 0.0011
R = 1.0000
DL = 0.01426
BEC = 0.1251

Weight: <None>
Min Conc: <None>

Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

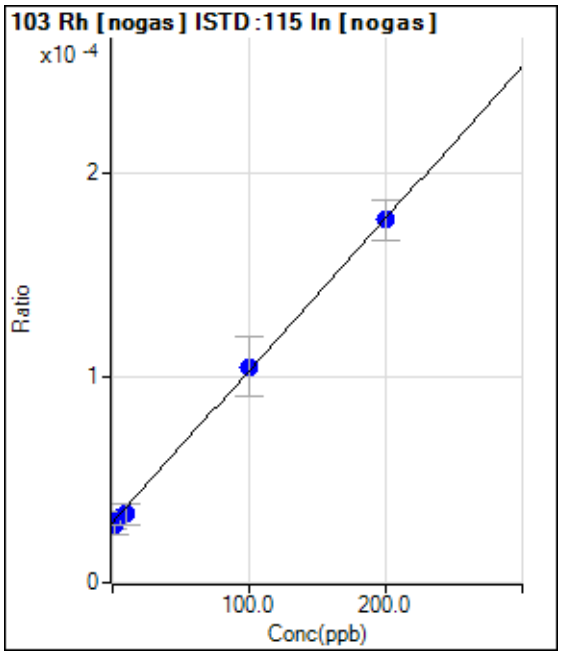


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0000	P	35.1
2	☐	2.000	1.974	11607.28	0.0035	P	3.0
3	☐	5.000	4.966	28873.67	0.0088	P	4.0
4	☐	10.000	9.652	56343.01	0.0171	P	5.8
5	☐	100.000	99.450	570258.34	0.1755	P	2.9
6	☐	200.000	200.293	1119555.63	0.3534	P	4.7
7	☐	1.000					

y = 0.0018 * x + 4.6391E-005
R = 1.0000
DL = 0.02772
BEC = 0.02629

Weight: <None>
Min Conc: <None>

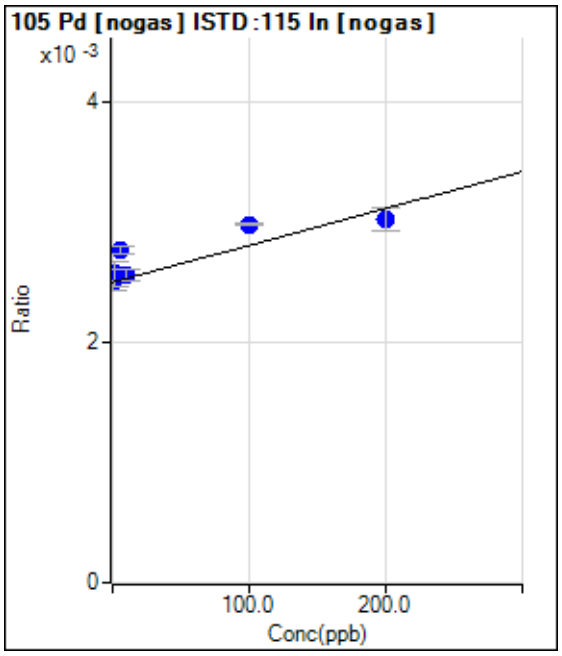
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0000	P	19.6
2	☐	2.000	-1.936	83.33	0.0000	P	32.6
3	☐	5.000	2.983	93.33	0.0000	P	19.5
4	☐	10.000	5.325	96.67	0.0000	P	33.0
5	☐	100.000	102.662	293.34	0.0001	P	27.4
6	☐	200.000	198.992	490.01	0.0002	P	10.9
7	☐	1.000					

y = 7.4138E-007 * x + 2.9371E-005
R = 0.9996
DL = 23.24
BEC = 39.62

Weight: <None>
Min Conc: <None>

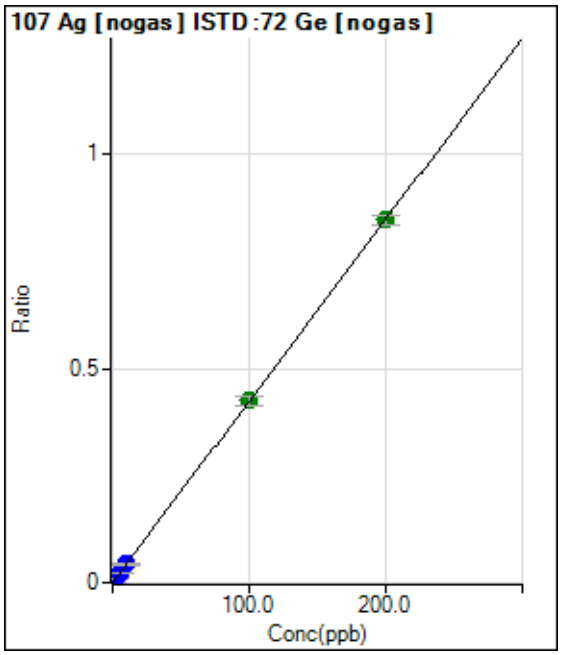


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7398.35	0.0025	P	4.9
2	☐	2.000	22.187	7688.50	0.0026	P	7.9
3	☐	5.000	86.015	8132.01	0.0028	P	2.3
4	☐	10.000	19.311	7428.35	0.0026	P	3.6
5	☐	100.000	157.048	8328.80	0.0030	P	0.9
6	☐	200.000	168.783	8358.76	0.0030	P	6.3
7	☐	1.000					

y = 3.0700E-006 * x + 0.0025
R = 0.8694
DL = 118.5
BEC = 814.1

Weight: <None>
Min Conc: <None>

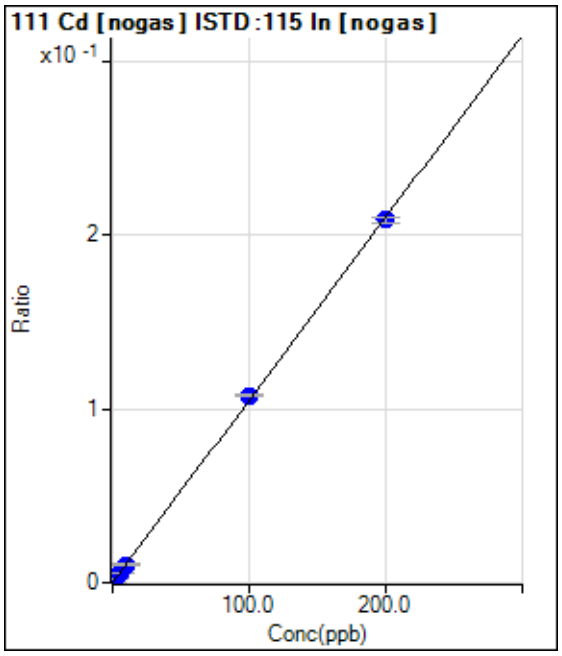
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0000	P	6.9
2	☐	2.000	2.053	28710.36	0.0087	P	3.9
3	☐	5.000	4.982	69336.39	0.0211	P	3.5
4	☐	10.000	10.148	142152.70	0.0431	P	2.6
5	☐	100.000	100.140	1379275.03	0.4247	A	4.8
6	☐	200.000	199.922	2686314.75	0.8478	A	2.5
7	☐	1.000					

y = 0.0042 * x + 2.5776E-005
R = 1.0000
DL = 0.001252
BEC = 0.006079

Weight: <None>
Min Conc: <None>

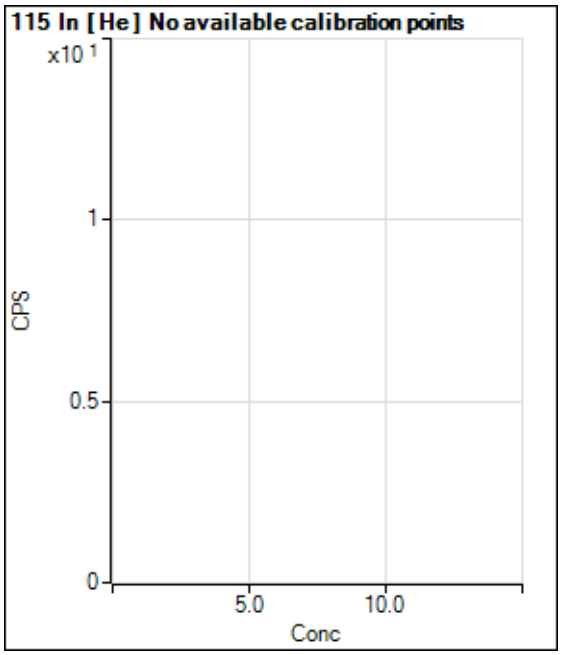


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	31.6
2	☐	2.000	1.956	6194.54	0.0021	P	2.7
3	☐	5.000	4.872	15096.74	0.0051	P	1.5
4	☐	10.000	9.908	30236.39	0.0104	P	2.3
5	☐	100.000	102.487	300914.07	0.1077	P	1.6
6	☐	200.000	198.765	578780.75	0.2089	P	1.3
7	☐	1.000					

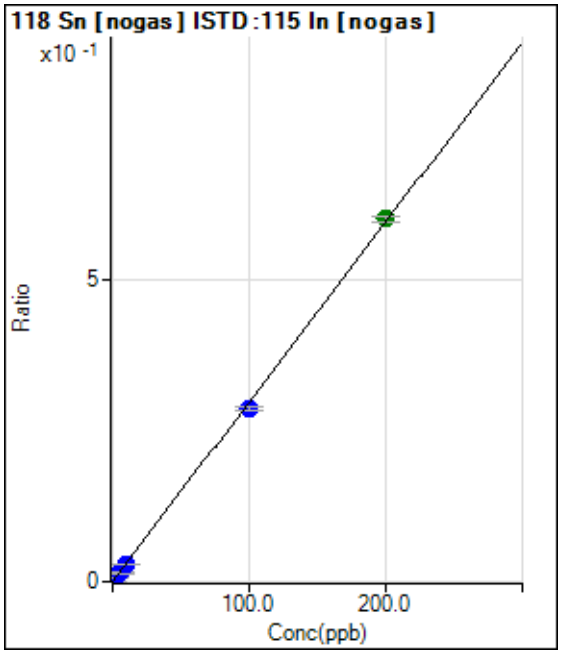
y = 0.0011 * x + 1.0098E-005
R = 0.9999
DL = 0.009118
BEC = 0.009607

Weight: <None>
Min Conc: <None>

Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			956719.59		P	3.3
2	☐			956500.06		P	3.1
3	☐			951304.14		P	2.4
4	☐			955736.62		P	1.7
5	☐			941648.28		P	3.0
6	☐			919722.86		P	1.1
7	☐						

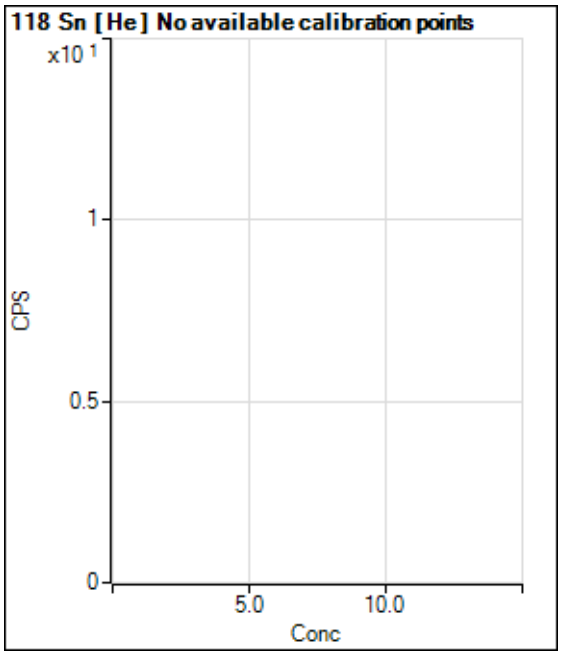


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1000.04	0.0003	P	5.7
2	☐	2.000	1.846	17505.70	0.0058	P	1.5
3	☐	5.000	4.708	42255.09	0.0144	P	4.6
4	☐	10.000	9.288	81258.71	0.0280	P	0.9
5	☐	100.000	96.229	801581.97	0.2871	P	2.2
6	☐	200.000	201.930	1667639.51	0.6020	A	1.4
7	☐	1.000					

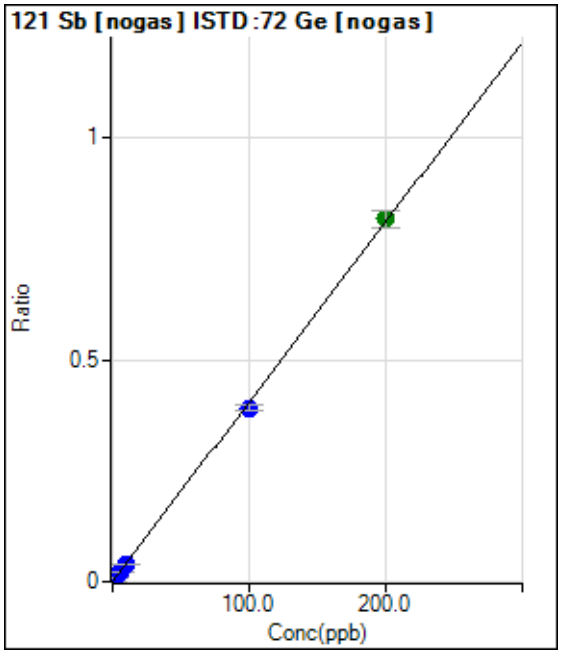
y = 0.0030 * x + 3.3793E-004
R = 0.9998
DL = 0.01956
BEC = 0.1134

Weight: <None>
Min Conc: <None>

Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			366.68		P	27.9
2	☐			6534.66		P	2.1
3	☐			15280.29		P	4.1
4	☐			30740.82		P	1.9
5	☐			304450.59		P	1.2
6	☐			612646.56		P	2.3
7	☐						

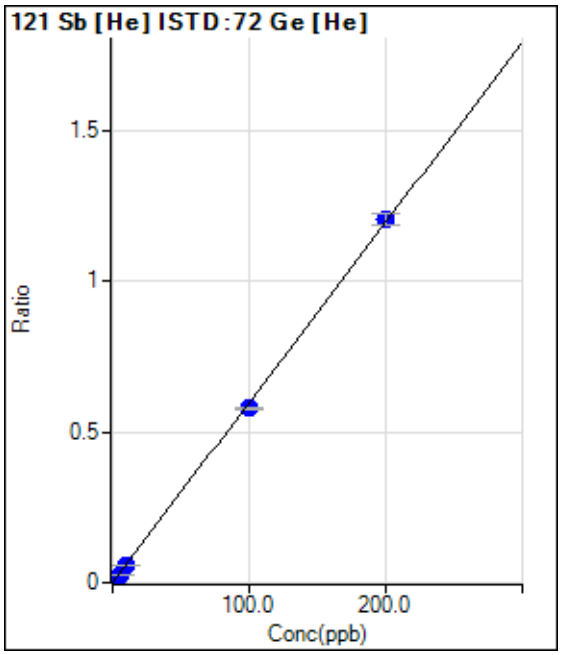


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1053.38	0.0003	P	8.9
2	☐	2.000	1.982	27475.47	0.0084	P	1.6
3	☐	5.000	4.852	65499.72	0.0200	P	0.6
4	☐	10.000	9.324	125699.88	0.0381	P	3.2
5	☐	100.000	96.480	1270308.16	0.3910	P	3.0
6	☐	200.000	201.798	2589194.80	0.8174	A	4.6
7	☐	1.000					

y = 0.0040 * x + 3.2599E-004
R = 0.9998
DL = 0.02153
BEC = 0.08051

Weight: <None>
Min Conc: <None>

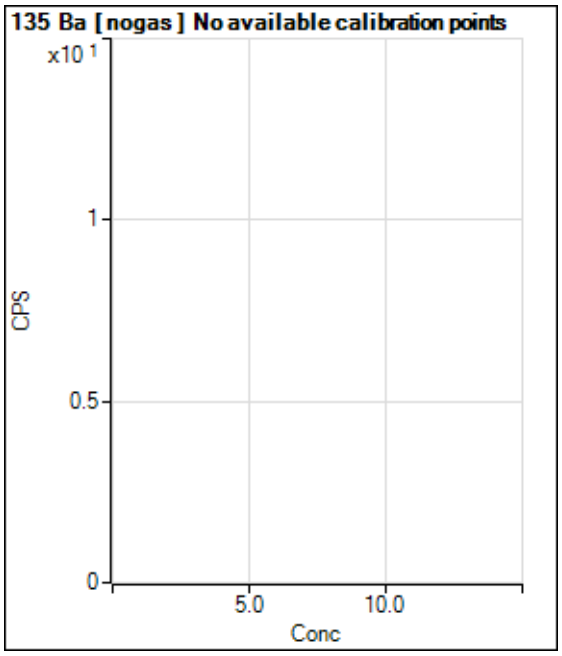
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0005	P	22.2
2	☐	2.000	1.952	9762.86	0.0121	P	4.9
3	☐	5.000	4.643	22788.32	0.0282	P	1.3
4	☐	10.000	9.338	45780.16	0.0563	P	2.4
5	☐	100.000	97.053	467969.33	0.5803	P	1.2
6	☐	200.000	201.516	956850.90	1.2043	P	3.0
7	☐	1.000					

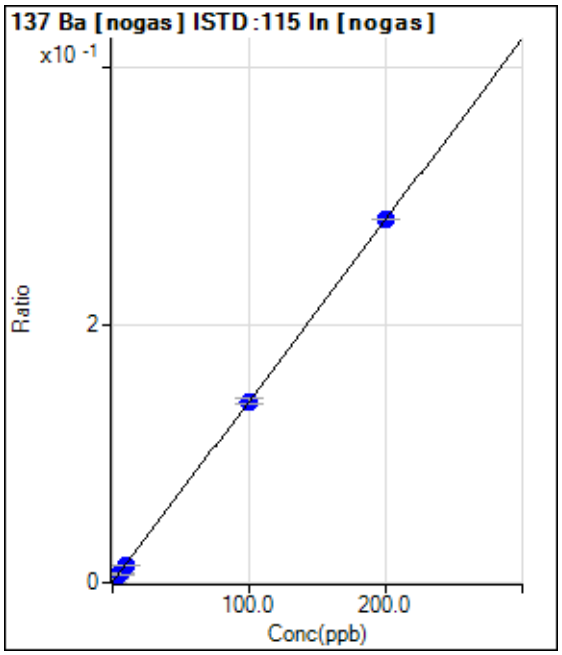
y = 0.0060 * x + 4.6865E-004
R = 0.9999
DL = 0.05224
BEC = 0.07845

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			373.34		P	5.6
2	☐			4774.10		P	8.7
3	☐			11810.87		P	4.4
4	☐			23062.40		P	2.0
5	☐			233250.56		P	0.5
6	☐			457816.31		P	0.8
7	☐						

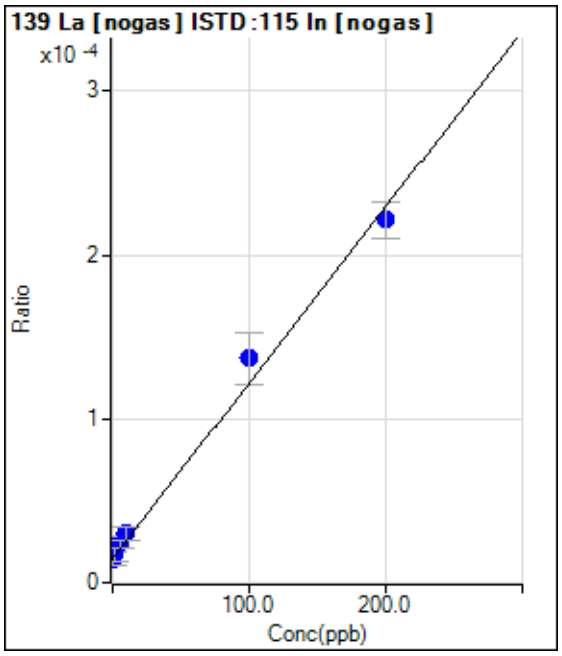
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	726.70	0.0002	P	11.4
2	☐	2.000	1.790	8285.46	0.0028	P	5.1
3	☐	5.000	4.619	19851.74	0.0067	P	4.1
4	☐	10.000	9.706	40357.97	0.0139	P	3.3
5	☐	100.000	100.065	394072.13	0.1411	P	2.8
6	☐	200.000	199.994	780755.87	0.2818	P	0.1
7	☐	1.000					

y = 0.0014 * x + 2.4552E-004
R = 1.0000
DL = 0.05938
BEC = 0.1744

Weight: <None>
Min Conc: <None>

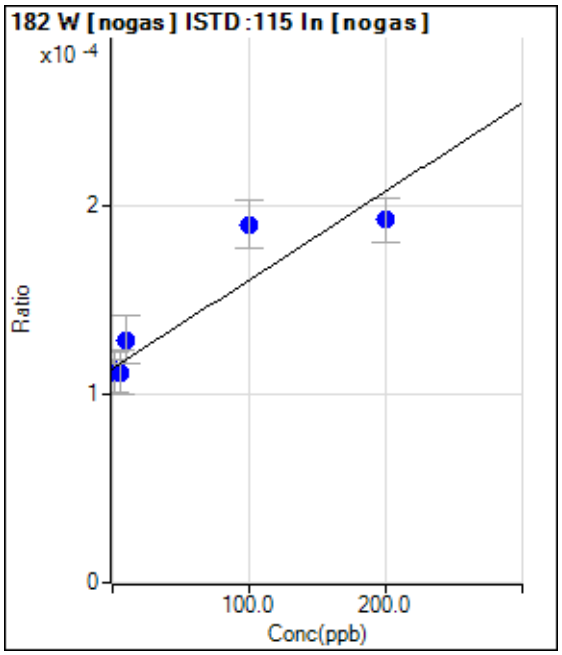


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	56.8
2	☐	2.000	3.103	53.33	0.0000	P	54.8
3	☐	5.000	9.587	73.33	0.0000	P	29.4
4	☐	10.000	14.393	86.67	0.0000	P	30.3
5	☐	100.000	113.838	380.01	0.0001	P	22.7
6	☐	200.000	192.735	613.36	0.0002	P	9.8
7	☐	1.000					

y = 1.0732E-006 * x + 1.4544E-005
R = 0.9966
DL = 23.1
BEC = 13.55

Weight: <None>
Min Conc: <None>

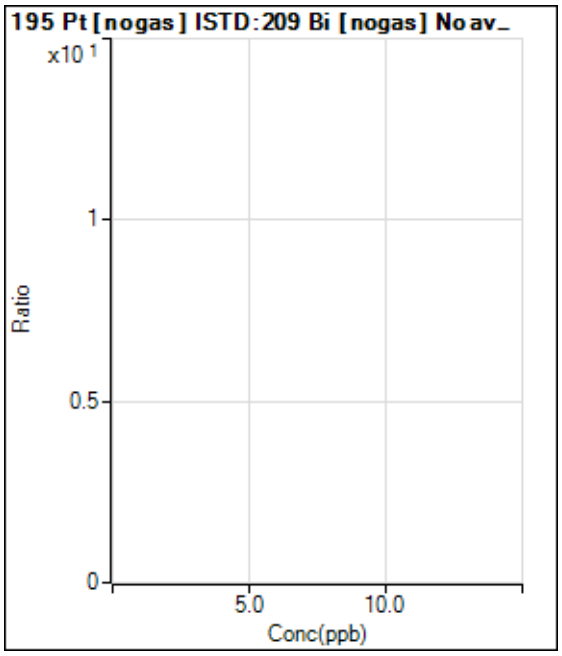
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.68	0.0001	P	7.4
2	☐	2.000	-4.719	333.34	0.0001	P	18.8
3	☐	5.000	-4.841	326.68	0.0001	P	21.4
4	☐	10.000	32.680	373.34	0.0001	P	19.0
5	☐	100.000	162.957	533.35	0.0002	P	13.9
6	☐	200.000	167.701	533.35	0.0002	P	12.5
7	☐	1.000					

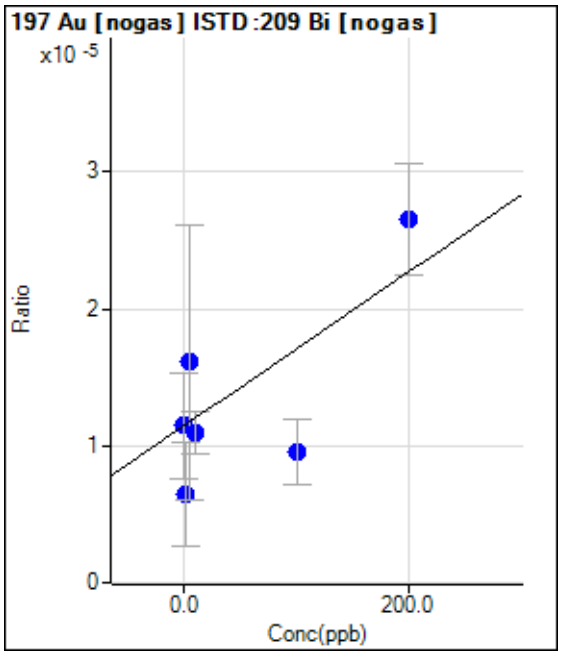
y = 4.6990E-007 * x + 1.1372E-004
R = 0.9206
DL = 53.94
BEC = 242

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

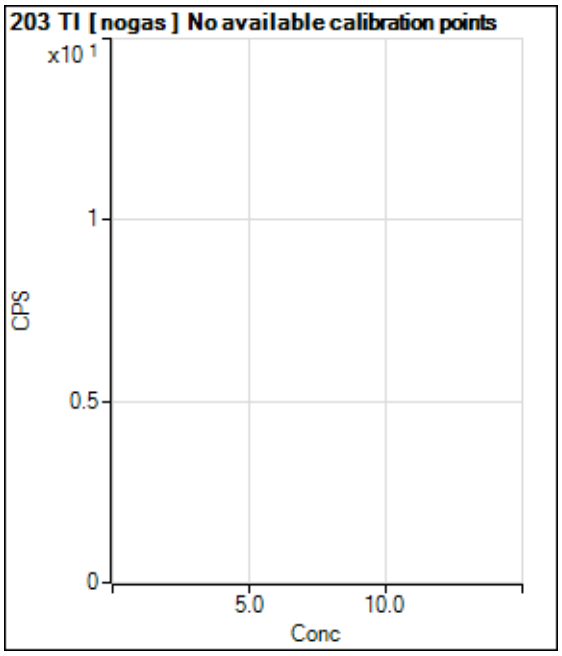
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	67.1
2	☐	2.000	-87.413	13.33	0.0000	P	116.
3	☐	5.000	82.104	33.33	0.0000	P	124.
4	☐	10.000	-8.871	23.33	0.0000	P	28.6
5	☐	100.000	-33.154	20.00	0.0000	P	50.3
6	☐	200.000	266.487	53.33	0.0000	P	30.7
7	☐	1.000					

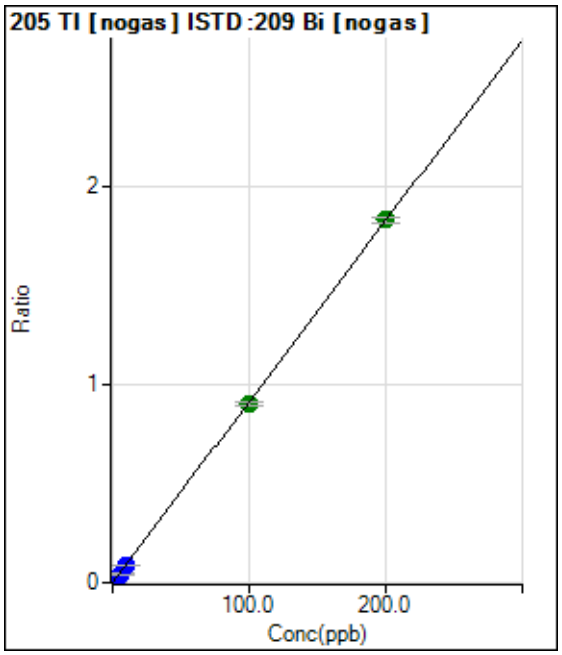
y = 5.6433E-008 * x + 1.1455E-005
R = 0.7527
DL = 408.5
BEC = 203

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			173.33		P	8.8
2	☐			16191.60		P	1.9
3	☐			38251.93		P	0.6
4	☐			77447.56		P	4.3
5	☐			783376.42		P	2.3
6	☐			1582335.03		A	1.2
7	☐						

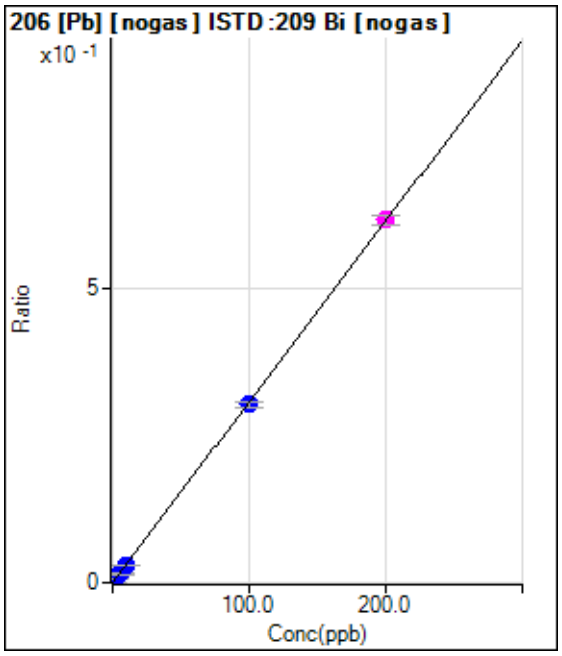
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	416.68	0.0002	P	16.0
2	☐	2.000	1.916	37503.83	0.0177	P	8.3
3	☐	5.000	4.691	92530.95	0.0430	P	5.5
4	☐	10.000	9.332	182925.71	0.0854	P	3.2
5	☐	100.000	98.858	1889793.72	0.9025	A	3.0
6	☐	200.000	200.613	3701900.05	1.8311	A	1.6
7	☐	1.000					

y = 0.0091 * x + 2.0147E-004
R = 1.0000
DL = 0.01061
BEC = 0.02208

Weight: <None>
Min Conc: <None>

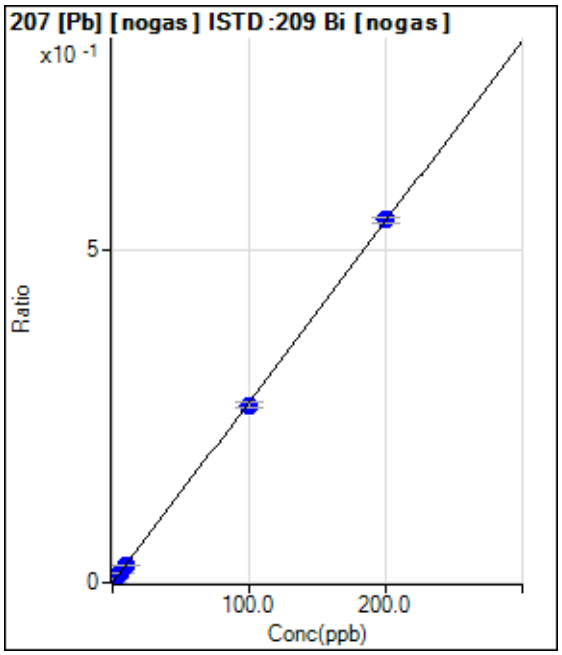


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0002	P	16.8
2	☐	2.000	1.922	12935.35	0.0061	P	4.5
3	☐	5.000	4.784	32025.35	0.0149	P	6.8
4	☐	10.000	9.419	62458.08	0.0291	P	1.1
5	☐	100.000	98.493	634317.97	0.3029	P	2.5
6	☐	200.000	200.789	1247924.38	0.6174	M	2.4
7	☐	1.000					

y = 0.0031 * x + 1.8362E-004
R = 1.0000
DL = 0.03004
BEC = 0.05974

Weight: <None>
Min Conc: <None>

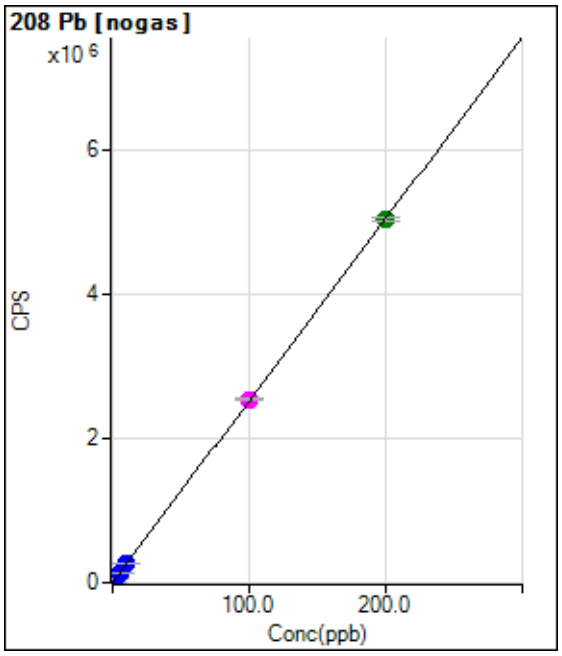
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	363.34	0.0002	P	12.9
2	☐	2.000	1.887	11264.11	0.0053	P	4.0
3	☐	5.000	4.920	29150.06	0.0135	P	3.0
4	☐	10.000	9.668	56646.48	0.0264	P	3.1
5	☐	100.000	98.313	559408.52	0.2672	P	3.4
6	☐	200.000	200.863	1103282.74	0.5457	P	1.9
7	☐	1.000					

y = 0.0027 * x + 1.7652E-004
R = 1.0000
DL = 0.02522
BEC = 0.06499

Weight: <None>
Min Conc: <None>

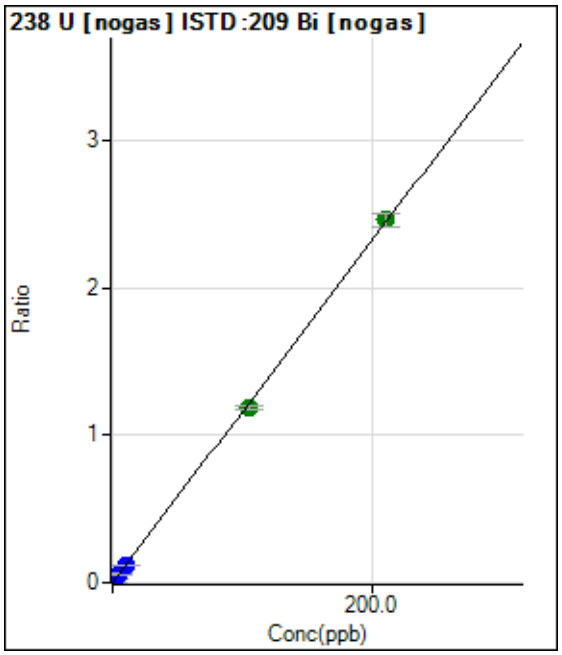


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1603.39		P	9.0
2	☐	2.000	2.018	52380.86		P	2.5
3	☐	5.000	5.173	131803.39		P	1.5
4	☐	10.000	10.154	257143.87		P	1.4
5	☐	100.000	100.904	2541098.81		M	1.1
6	☐	200.000	199.536	5023408.65		A	0.9
7	☐	1.000					

y = 25167.4391 * x + 1603.3867
R = 1.0000
DL = 0.01721
BEC = 0.06371

Weight: <None>
Min Conc: <None>

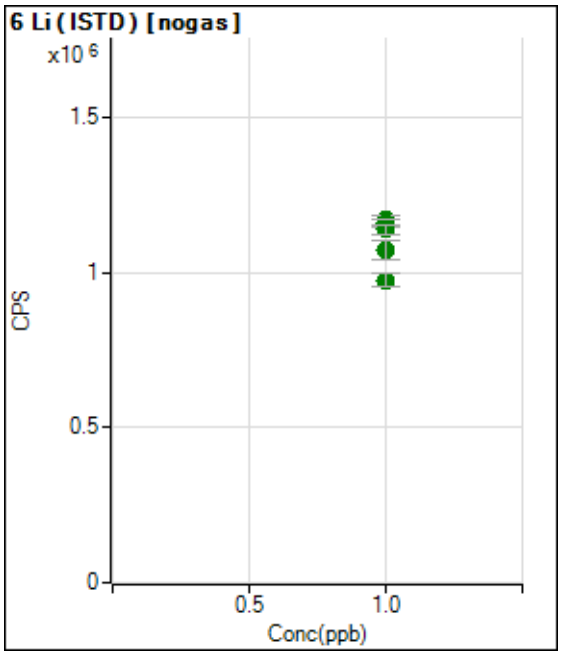
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.33	0.0001	P	40.5
2	☐	2.000	1.980	49066.10	0.0231	P	7.1
3	☐	5.000	4.958	124455.02	0.0578	P	4.3
4	☐	10.000	9.786	244273.39	0.1140	P	4.1
5	☐	105.000	101.680	2479268.45	1.1840	A	2.4
6	☐	210.000	211.671	4981291.91	2.4647	A	3.5
7	☐	1.000					

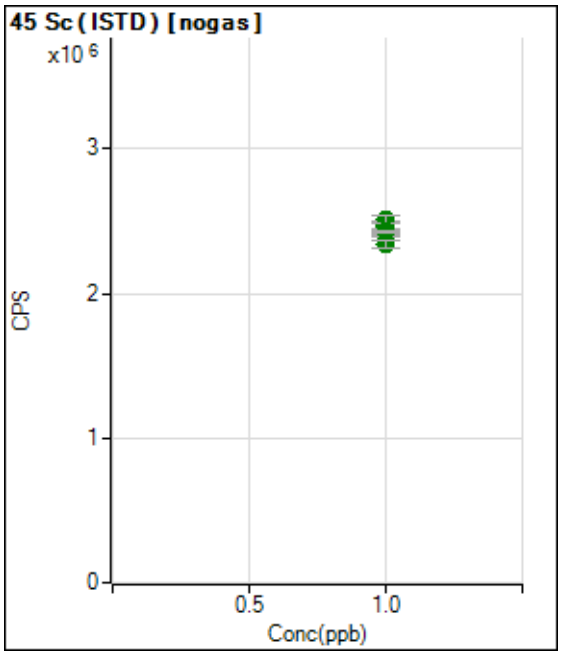
y = 0.0116 * x + 7.4099E-005
R = 0.9998
DL = 0.007735
BEC = 0.006364

Weight: <None>
Min Conc: <None>

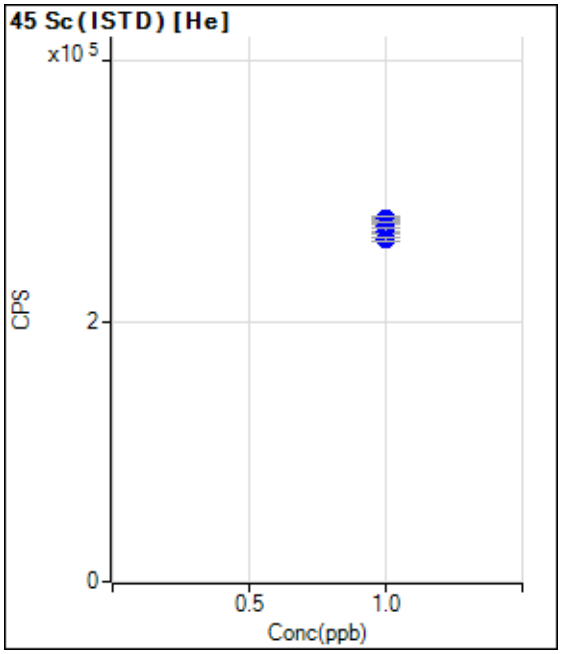


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1171765.53		A	2.4
2	☐	1.000		1148786.75		A	4.7
3	☐	1.000		1162132.92		A	2.4
4	☐	1.000		1141882.24		A	2.8
5	☐	1.000		1076082.38		A	5.7
6	☐	1.000		975979.57		A	4.5
7	☐	1.000					

Calibration for 138_ICV.d

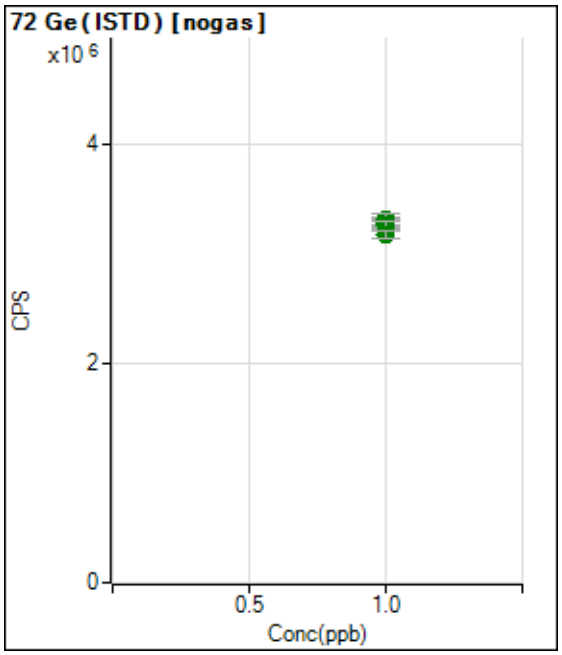


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2460984.03		A	2.9
2	☐	1.000		2474528.45		A	2.2
3	☐	1.000		2509689.91		A	2.3
4	☐	1.000		2402318.04		A	0.5
5	☐	1.000		2429523.30		A	0.7
6	☐	1.000		2340485.54		A	2.8
7	☐	1.000					

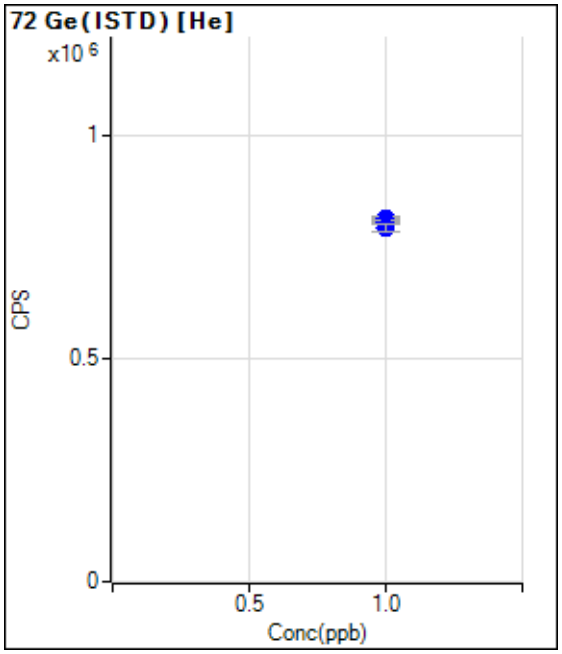


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		277146.58		P	2.1
2	☐	1.000		273300.02		P	1.5
3	☐	1.000		278924.44		P	1.0
4	☐	1.000		272958.99		P	2.7
5	☐	1.000		269519.61		P	1.9
6	☐	1.000		263024.44		P	1.0
7	☐	1.000					

Calibration for 138_ICV.d

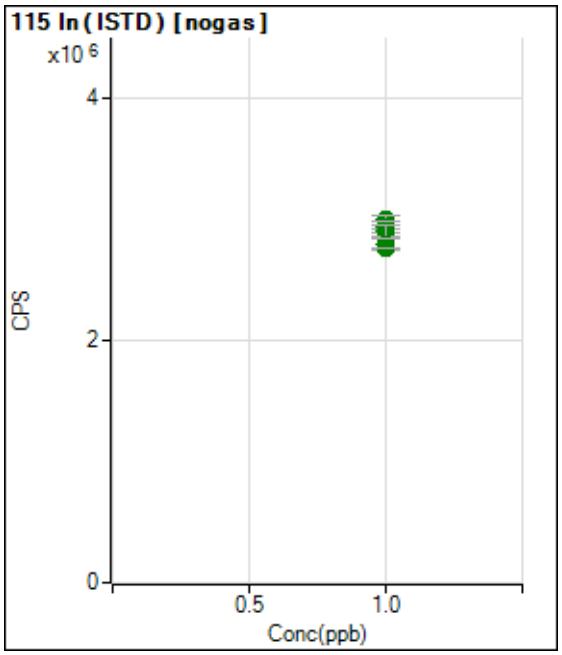


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3233064.74		A	1.0
2	☐	1.000		3290282.76		A	2.7
3	☐	1.000		3279638.60		A	1.9
4	☐	1.000		3303477.97		A	3.5
5	☐	1.000		3250742.14		A	2.7
6	☐	1.000		3169936.10		A	2.6
7	☐	1.000					

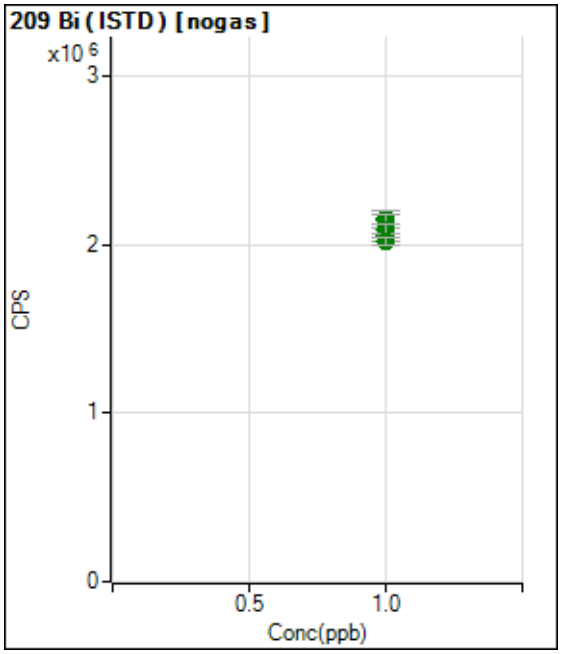


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		810035.41		P	0.7
2	☐	1.000		804888.56		P	1.1
3	☐	1.000		808101.13		P	1.4
4	☐	1.000		813899.52		P	0.9
5	☐	1.000		806514.70		P	0.8
6	☐	1.000		794814.57		P	2.0
7	☐	1.000					

Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2958353.04		A	2.4
2	☐	1.000		2997832.27		A	2.4
3	☐	1.000		2943060.26		A	3.2
4	☐	1.000		2901412.54		A	3.2
5	☐	1.000		2793850.00		A	3.5
6	☐	1.000		2770189.57		A	0.1
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2061475.33		A	3.5
2	☐	1.000		2126685.85		A	5.2
3	☐	1.000		2155140.02		A	4.8
4	☐	1.000		2144167.62		A	3.6
5	☐	1.000		2094723.46		A	2.4
6	☐	1.000		2022181.32		A	2.5
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	019CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:22:50-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	37	281.60
Na	23	1	nogas	496568	0.00
Mg	24	1	nogas	5969	0.09
Al	27	1	nogas	38857	0.00
K	39	1	nogas	8289092	0.00
Ti	47	1	nogas	473	2.69
V	51	1	nogas	216786	0.00
Cr	52	1	nogas	41864	0.00
Mn	55	1	nogas	24106	0.02
Co	59	1	nogas	1433	0.16
Ni	60	1	nogas	597	2.95
Cu	63	1	nogas	79347	0.00
Zn	66	1	nogas	980	0.21
As	75	1	nogas	53472	0.00
Sr	88	1	nogas	963	1.53
Ag	107	1	nogas	130	44.67
Cd	111	1	nogas	20	500.00
Sb	121	1	nogas	1370	0.43
Tl	205	1	nogas	403	4.53
Pb	208	1	nogas	4020	0.02
[Pb]	206	1	nogas	1140	0.28
[Pb]	207	1	nogas	870	1.00
Na	23	2	He	71384	0.00
Mg	24	2	He	540	2.25
Al	27	2	He	1043	1.16
K	39	2	He	225829	0.00
Ca	43	2	He	10	1000.00
Ca	44	2	He	4434	0.12
V	51	2	He	3339	0.04
Cr	52	2	He	6124	0.01
Mn	55	2	He	2874	0.24
Fe	56	2	He	15287	0.02
Co	59	2	He	423	6.54
Ni	60	2	He	193	10.81
Cu	63	2	He	27070	0.01
Zn	66	2	He	367	4.95
As	75	2	He	347	3.20
Se	78	2	He	175	6.09
B	11	1	nogas	9259	0.06
Si	28	1	nogas	1566588	0.00
Ca	43	1	nogas	930	2.03
Ca	44	1	nogas	580986	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2248066	0.00
Se	77	1	nogas	17429	0.01
Se	82	1	nogas	370	2.19
Mo	95	1	nogas	310	7.50
Sn	118	1	nogas	1100	0.38
Ba	137	1	nogas	340	6.06
Sb	121	2	He	540	4.16
Li	7	1	nogas	101659	0.00
P	31	1	nogas	111302	0.00
La	139	1	nogas	33	103.92

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1229805	6.80
Ge	72	1	nogas	3541557	2.22
In	115	1	nogas	3006327	3.62
Bi	209	1	nogas	2153140	3.03
Ge	72	2	He	993327	3.11

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	020CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:24:52-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	14893	0.02
Na	23	1	nogas	5429107	0.00
Mg	24	1	nogas	3317538	0.00
Al	27	1	nogas	68910	0.00
K	39	1	nogas	12268208	0.00
Ti	47	1	nogas	4361	0.09
V	51	1	nogas	269703	0.00
Cr	52	1	nogas	88517	0.00
Mn	55	1	nogas	80626	0.00
Co	59	1	nogas	51195	0.00
Ni	60	1	nogas	11794	0.01
Cu	63	1	nogas	101635	0.00
Zn	66	1	nogas	10090	0.01
As	75	1	nogas	64022	0.00
Sr	88	1	nogas	59319	0.01
Ag	107	1	nogas	29174	0.01
Cd	111	1	nogas	6048	0.10
Sb	121	1	nogas	26393	0.01
Tl	205	1	nogas	36324	0.01
Pb	208	1	nogas	55171	0.00
[Pb]	206	1	nogas	13526	0.03
[Pb]	207	1	nogas	12215	0.05
Na	23	2	He	399017	0.00
Mg	24	2	He	185807	0.00
Al	27	2	He	1923	0.27
K	39	2	He	419263	0.00
Ca	43	2	He	630	1.53
Ca	44	2	He	13618	0.03
V	51	2	He	16615	0.01
Cr	52	2	He	20985	0.00
Mn	55	2	He	13482	0.03
Fe	56	2	He	1344256	0.00
Co	59	2	He	20799	0.01
Ni	60	2	He	5424	0.07
Cu	63	2	He	38226	0.01
Zn	66	2	He	3537	0.14
As	75	2	He	3559	0.01
Se	78	2	He	426	0.69
B	11	1	nogas	53375	0.00
Si	28	1	nogas	1636137	0.00

Calibration Standard Report

Ca	43	1	nogas	8492	0.03
Ca	44	1	nogas	696122	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	7072808	0.00
Se	77	1	nogas	17986	0.02
Se	82	1	nogas	827	0.61
Mo	95	1	nogas	11344	0.01
Sn	118	1	nogas	17629	0.03
Ba	137	1	nogas	8085	0.07
Sb	121	2	He	10203	0.03
P	31	1	nogas	127861	0.00
La	139	1	nogas	37	42.94

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1228957	5.88	1229805	99.93	70	125	
Ge	72	1	nogas	3480522	0.21	3541557	98.28	70	125	
In	115	1	nogas	2961941	1.28	3006327	98.52	70	125	
Bi	209	1	nogas	2160140	3.34	2153140	100.33	70	125	
Ge	72	2	He	926943	0.28	993327	93.32	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	021CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:26:55-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	37420	0.01
Na	23	1	nogas	13049242	0.00
Mg	24	1	nogas	8403654	0.00
Al	27	1	nogas	127300	0.00
K	39	1	nogas	18204673	0.00
Ti	47	1	nogas	10266	0.03
V	51	1	nogas	354653	0.00
Cr	52	1	nogas	161393	0.00
Mn	55	1	nogas	169729	0.00
Co	59	1	nogas	125137	0.00
Ni	60	1	nogas	29547	0.00
Cu	63	1	nogas	140756	0.00
Zn	66	1	nogas	24006	0.01
As	75	1	nogas	82536	0.00
Sr	88	1	nogas	143555	0.00
Ag	107	1	nogas	73541	0.01
Cd	111	1	nogas	15460	0.00
Sb	121	1	nogas	63368	0.00
Tl	205	1	nogas	91201	0.00
Pb	208	1	nogas	130967	0.00
[Pb]	206	1	nogas	32683	0.01
[Pb]	207	1	nogas	28051	0.01
Na	23	2	He	892709	0.00
Mg	24	2	He	461122	0.00
Al	27	2	He	3390	0.24
K	39	2	He	722631	0.00
Ca	43	2	He	1307	0.62
Ca	44	2	He	28218	0.01
V	51	2	He	36499	0.00
Cr	52	2	He	43953	0.00
Mn	55	2	He	29577	0.01
Fe	56	2	He	3274562	0.00
Co	59	2	He	51178	0.01
Ni	60	2	He	12885	0.06
Cu	63	2	He	57159	0.00
Zn	66	2	He	8409	0.08
As	75	2	He	8213	0.03
Se	78	2	He	760	0.60
B	11	1	nogas	123947	0.00
Si	28	1	nogas	1800666	0.00

Calibration Standard Report

Ca	43	1	nogas	19103	0.01
Ca	44	1	nogas	876898	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	14507447	0.00
Se	77	1	nogas	18693	0.01
Se	82	1	nogas	1810	0.38
Mo	95	1	nogas	29164	0.01
Sn	118	1	nogas	41811	0.01
Ba	137	1	nogas	19845	0.01
Sb	121	2	He	26170	0.02
P	31	1	nogas	155640	0.00
La	139	1	nogas	50	69.28

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1224222	3.33	1229805	99.55	70	125	
Ge	72	1	nogas	3443847	0.56	3541557	97.24	70	125	
In	115	1	nogas	2952199	2.28	3006327	98.20	70	125	
Bi	209	1	nogas	2197259	4.09	2153140	102.05	70	125	
Ge	72	2	He	920503	2.36	993327	92.67	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	022CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:28:58-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	75655	0.00
Na	23	1	nogas	25117059	0.00
Mg	24	1	nogas	16349977	0.00
Al	27	1	nogas	227124	0.00
K	39	1	nogas	28374235	0.00
Ti	47	1	nogas	20074	0.01
V	51	1	nogas	477473	0.00
Cr	52	1	nogas	277057	0.00
Mn	55	1	nogas	337912	0.00
Co	59	1	nogas	249899	0.00
Ni	60	1	nogas	57634	0.00
Cu	63	1	nogas	210598	0.00
Zn	66	1	nogas	46312	0.00
As	75	1	nogas	111783	0.00
Sr	88	1	nogas	291423	0.00
Ag	107	1	nogas	146315	0.00
Cd	111	1	nogas	31144	0.01
Sb	121	1	nogas	127510	0.00
Tl	205	1	nogas	186692	0.00
Pb	208	1	nogas	258983	0.00
[Pb]	206	1	nogas	64810	0.00
[Pb]	207	1	nogas	57094	0.00
Na	23	2	He	1730790	0.00
Mg	24	2	He	913345	0.00
Al	27	2	He	6008	0.05
K	39	2	He	1206132	0.00
Ca	43	2	He	2694	0.25
Ca	44	2	He	51742	0.00
V	51	2	He	69397	0.00
Cr	52	2	He	79273	0.00
Mn	55	2	He	59817	0.00
Fe	56	2	He	6314221	0.00
Co	59	2	He	100661	0.00
Ni	60	2	He	25798	0.00
Cu	63	2	He	89962	0.00
Zn	66	2	He	16401	0.01
As	75	2	He	15447	0.01
Se	78	2	He	1440	0.29
B	11	1	nogas	239318	0.00
Si	28	1	nogas	2095245	0.00

Calibration Standard Report

Ca	43	1	nogas	37879	0.01
Ca	44	1	nogas	1167137	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	26396952	0.00
Se	77	1	nogas	20355	0.01
Se	82	1	nogas	3140	0.10
Mo	95	1	nogas	59309	0.00
Sn	118	1	nogas	83693	0.00
Ba	137	1	nogas	39573	0.01
Sb	121	2	He	50737	0.01
P	31	1	nogas	201331	0.00
La	139	1	nogas	103	14.31

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1251493	3.56	1229805	101.76	70	125	
Ge	72	1	nogas	3442490	2.11	3541557	97.20	70	125	
In	115	1	nogas	2960727	1.83	3006327	98.48	70	125	
Bi	209	1	nogas	2167413	1.08	2153140	100.66	70	125	
Ge	72	2	He	925552	2.24	993327	93.18	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	023CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:31:00-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	768211	0.00
Na	23	1	nogas	246379139	0.00
Mg	24	1	nogas	159932991	0.00
Al	27	1	nogas	1950181	0.00
K	39	1	nogas	203139275	0.00
Ti	47	1	nogas	197202	0.00
V	51	1	nogas	2832911	0.00
Cr	52	1	nogas	2326481	0.00
Mn	55	1	nogas	2870602	0.00
Co	59	1	nogas	2427126	0.00
Ni	60	1	nogas	551340	0.00
Cu	63	1	nogas	1415687	0.00
Zn	66	1	nogas	445334	0.00
As	75	1	nogas	603316	0.00
Sr	88	1	nogas	2826181	0.00
Ag	107	1	nogas	1430033	0.00
Cd	111	1	nogas	302145	0.00
Sb	121	1	nogas	1262750	0.00
Tl	205	1	nogas	1878981	0.00
Pb	208	1	nogas	2587797	0.00
[Pb]	206	1	nogas	637153	0.00
[Pb]	207	1	nogas	565156	0.00
Na	23	2	He	16078626	0.00
Mg	24	2	He	8966447	0.00
Al	27	2	He	51494	0.01
K	39	2	He	9576055	0.00
Ca	43	2	He	27834	0.01
Ca	44	2	He	460786	0.00
V	51	2	He	668254	0.00
Cr	52	2	He	732662	0.00
Mn	55	2	He	515346	0.00
Fe	56	2	He	62281096	0.00
Co	59	2	He	978260	0.00
Ni	60	2	He	255072	0.00
Cu	63	2	He	670773	0.00
Zn	66	2	He	160399	0.00
As	75	2	He	155774	0.00
Se	78	2	He	12657	0.01
B	11	1	nogas	2284043	0.00
Si	28	1	nogas	6715268	0.00

Calibration Standard Report

Ca	43	1	nogas	367566	0.00
Ca	44	1	nogas	6358463	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	246666081	0.00
Se	77	1	nogas	41310	0.00
Se	82	1	nogas	28880	0.02
Mo	95	1	nogas	587620	0.00
Sn	118	1	nogas	814798	0.00
Ba	137	1	nogas	394424	0.00
Sb	121	2	He	508577	0.00
P	31	1	nogas	977118	0.00
La	139	1	nogas	410	1.03

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1143512	4.14	1229805	92.98	70	125	
Ge	72	1	nogas	3382030	2.47	3541557	95.50	70	125	
In	115	1	nogas	2801397	1.27	3006327	93.18	70	125	
Bi	209	1	nogas	2021585	2.89	2153140	93.89	70	125	
Ge	72	2	He	868492	4.55	993327	87.43	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	024CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:33:03-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1490339	0.00
Na	23	1	nogas	481847077	0.00
Mg	24	1	nogas	309884790	0.00
Al	27	1	nogas	3782656	0.00
K	39	1	nogas	393096834	0.00
Ti	47	1	nogas	385199	0.00
V	51	1	nogas	5384219	0.00
Cr	52	1	nogas	4472257	0.00
Mn	55	1	nogas	5488765	0.00
Co	59	1	nogas	4848474	0.00
Ni	60	1	nogas	1090402	0.00
Cu	63	1	nogas	2698817	0.00
Zn	66	1	nogas	873086	0.00
As	75	1	nogas	1159609	0.00
Sr	88	1	nogas	5575103	0.00
Ag	107	1	nogas	2808797	0.00
Cd	111	1	nogas	603089	0.00
Sb	121	1	nogas	2499065	0.00
Tl	205	1	nogas	3625414	0.00
Pb	208	1	nogas	5072002	0.00
[Pb]	206	1	nogas	1234604	0.00
[Pb]	207	1	nogas	1107819	0.00
Na	23	2	He	31690890	0.00
Mg	24	2	He	17745286	0.00
Al	27	2	He	101712	0.00
K	39	2	He	18802625	0.00
Ca	43	2	He	52695	0.00
Ca	44	2	He	907691	0.00
V	51	2	He	1307511	0.00
Cr	52	2	He	1393826	0.00
Mn	55	2	He	1018107	0.00
Fe	56	2	He	124153878	0.00
Co	59	2	He	1949277	0.00
Ni	60	2	He	495773	0.00
Cu	63	2	He	1309729	0.00
Zn	66	2	He	311834	0.00
As	75	2	He	305661	0.00
Se	78	2	He	24908	0.01
B	11	1	nogas	4449104	0.00
Si	28	1	nogas	11996351	0.00

Calibration Standard Report

Ca	43	1	nogas	723176	0.00
Ca	44	1	nogas	11798086	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	477588844	0.00
Se	77	1	nogas	66344	0.00
Se	82	1	nogas	57475	0.01
Mo	95	1	nogas	1162024	0.00
Sn	118	1	nogas	1616222	0.00
Ba	137	1	nogas	780655	0.00
Sb	121	2	He	1035075	0.00
P	31	1	nogas	1920065	0.00
La	139	1	nogas	633	3.08

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1050150	4.76	1229805	85.39	70	125	
Ge	72	1	nogas	3264970	0.74	3541557	92.19	70	125	
In	115	1	nogas	2753060	2.13	3006327	91.58	70	125	
Bi	209	1	nogas	2058668	3.98	2153140	95.61	70	125	
Ge	72	2	He	890447	1.49	993327	89.64	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	026_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:37:12-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	98.668	5.839	764317	1.04	100	98.7	90	110	
Na	23	1	nogas	9876.874	1.475	249704689	1.30	10000	98.8	90	110	
Mg	24	1	nogas	10233.348	3.380	166505741	1.72	10000	102.3	90	110	
Al	27	1	nogas	105.006	2.951	2084627	1.19	100	105.0	90	110	
K	39	1	nogas	10117.317	6.983	210400505	3.09	10000	101.2	90	110	
Ti	47	1	nogas	97.416	6.916	195351	3.35	100	97.4	90	110	
V	51	1	nogas	96.943	6.281	2818068	2.60	100	96.9	90	110	
Cr	52	1	nogas	98.485	5.853	2315967	2.61	100	98.5	90	110	
Mn	55	1	nogas	99.374	6.617	2859443	2.67	100	99.4	90	110	
Co	59	1	nogas	99.888	8.556	2507374	4.74	100	99.9	90	110	
Ni	60	1	nogas	99.727	5.764	564200	2.48	100	99.7	90	110	
Cu	63	1	nogas	96.516	8.633	1393108	4.41	100	96.5	90	110	
Zn	66	1	nogas	99.872	5.323	453465	1.65	100	99.9	90	110	
As	75	1	nogas	96.801	4.486	607165	0.06	100	96.8	90	110	
Sr	88	1	nogas	98.272	7.452	2843829	3.79	100	98.3	90	110	
Ag	107	1	nogas	100.903	5.852	1472989	2.59	100	100.9	90	110	
Cd	111	1	nogas	102.808	1.505	315905	2.70	100	102.8	90	110	
Sb	121	1	nogas	102.071	3.290	1325033	1.22	100	102.1	90	110	
Tl	205	1	nogas	103.293	5.373	1923613	1.13	100	103.3	90	110	
Pb	208	1	nogas	101.997	0.818	2598779	0.82	100	102.0	90	110	
U	238	1	nogas	105.673	3.775	2611476	1.00	100	105.7	90	110	
[Pb]	206	1	nogas	102.686	4.118	651054	2.21	100	102.7	90	110	
[Pb]	207	1	nogas	96.564	2.401	548054	1.81	100	96.6	90	110	
Na	23	2	He	9981.526	1.115	16375441	1.53	10000	99.8	90	110	
Mg	24	2	He	10170.413	1.799	9319126	0.66	10000	101.7	90	110	
Al	27	2	He	99.957	1.029	52907	2.13	100	100.0	90	110	
K	39	2	He	10571.692	2.147	10059736	2.10	10000	105.7	90	110	
Ca	43	2	He	10196.777	0.734	28008	1.36	10000	102.0	90	110	
Ca	44	2	He	9999.154	2.979	470594	0.95	10000	100.0	90	110	
V	51	2	He	100.157	1.873	679849	2.27	100	100.2	90	110	
Cr	52	2	He	100.261	1.923	729996	1.90	100	100.3	90	110	
Mn	55	2	He	98.654	1.288	520102	2.62	100	98.7	90	110	
Fe	56	2	He	9979.052	1.788	63904574	2.74	10000	99.8	90	110	
Co	59	2	He	99.178	2.077	997362	2.75	100	99.2	90	110	
Ni	60	2	He	99.159	1.630	255354	0.94	100	99.2	90	110	
Cu	63	2	He	95.297	2.904	657188	1.11	100	95.3	90	110	
Zn	66	2	He	98.071	1.259	158908	1.86	100	98.1	90	110	
As	75	2	He	100.386	1.328	158826	0.95	100	100.4	90	110	
Se	78	2	He	99.138	1.677	12839	0.68	100	99.1	90	110	
B	11	1	nogas	518.611	5.742	2400264	0.60	500	103.7	90	110	
Si	28	1	nogas	5152.038	4.856	7129948	0.54	5000	103.0	90	110	
Ca	43	1	nogas	10200.655	6.275	383524	2.24	10000	102.0	90	110	
Ca	44	1	nogas	10268.047	7.641	6581408	3.28	10000	102.7	90	110	
Fe	56	1	nogas	10050.080	5.092	251084581	1.49	10000	100.5	90	110	
Se	77	1	nogas	79.006	7.470	37295	2.22	100	79.0	90	110	ICV Main CR1 Failed
Se	82	1	nogas	101.383	2.007	30373	2.28	100	101.4	90	110	
Mo	95	1	nogas	96.153	6.045	580020	2.51	100	96.2	90	110	
Sn	118	1	nogas	97.197	1.021	801444	1.66	100	97.2	90	110	
Ba	137	1	nogas	103.050	2.814	410692	2.89	100	103.0	90	110	
Sb	121	2	He	100.124	1.456	532191	0.65	100	100.1	90	110	
Li	7	1	nogas	107.299	4.970	1843467	4.45	100	107.3	90	110	
P	31	1	nogas	475.973	5.655	995927	1.11	500	95.2	90	110	
La	139	1	nogas	158.347	20.217	543	20.69	100	158.3	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-348.485	-43.491	7	86.60	100	-348.5	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1104772	6.21	1229805	89.83	70	125	
Ge	72	1	nogas	3410351	4.12	3541557	96.30	70	125	
In	115	1	nogas	2813400	1.81	3006327	93.58	70	125	
Bi	209	1	nogas	2092814	4.17	2153140	97.20	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	912671	2.05	993327	91.88	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	027SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:39:16-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.812	1.812	5.87	15320	0.01	2000	
Na	23	1	nogas	203.771	203.771	5.95	5555030	0.00	200000	
Mg	24	1	nogas	209.378	209.378	2.32	3371798	0.01	200000	
Al	27	1	nogas	0.950	0.950	10.92	56214	0.00	2000	
K	39	1	nogas	203.705	203.705	8.09	12121727	0.00	200000	
Ti	47	1	nogas	1.965	1.965	2.38	4414	0.04	2000	
V	51	1	nogas	-0.777	-0.777	-13.26	188743	0.00	2000	
Cr	52	1	nogas	1.919	1.919	8.28	85102	0.00	2000	
Mn	55	1	nogas	1.978	1.978	4.68	80107	0.00	2000	
Co	59	1	nogas	2.056	2.056	1.92	53324	0.00	2000	
Ni	60	1	nogas	2.302	2.302	3.25	12281	0.02	2000	
Cu	63	1	nogas	0.988	0.988	3.28	90354	0.00	2000	
Zn	66	1	nogas	2.172	2.172	2.08	10020	0.02	2000	
As	75	1	nogas	0.877	0.877	29.45	55217	0.00	2000	
Sr	88	1	nogas	1.981	1.981	4.60	58589	0.00	2000	
Ag	107	1	nogas	2.020	2.020	2.73	29795	0.01	2000	
Cd	111	1	nogas	1.902	1.902	8.37	6181	0.03	2000	
Sb	121	1	nogas	2.339	2.339	3.45	31826	0.01	2000	
Tl	205	1	nogas	2.268	2.268	7.67	43104	0.01	2000	
Pb	208	1	nogas	2.068	2.068	5.29	56640	0.00	2000	
U	238	1	nogas	2.166	2.166	3.90	54133	0.00	2000	
[Pb]	206	1	nogas	2.078	2.078	4.34	14410	0.01	2000	
[Pb]	207	1	nogas	2.000	2.000	7.80	12312	0.02	2000	
Na	23	2	He	206.374	206.374	1.92	396793	0.05	200000	
Mg	24	2	He	205.334	205.334	2.27	185855	0.11	200000	
Al	27	2	He	1.045	1.045	9.62	1513	0.07	2000	
K	39	2	He	205.610	205.610	4.00	417090	0.05	200000	
Ca	43	2	He	195.061	195.061	10.87	537	36.35	200000	
Ca	44	2	He	206.714	206.714	7.82	13508	1.53	200000	
V	51	2	He	1.500	1.500	5.39	15411	0.01	2000	
Cr	52	2	He	2.091	2.091	1.58	20422	0.01	2000	
Mn	55	2	He	2.045	2.045	5.19	13172	0.02	2000	
Fe	56	2	He	203.900	203.900	1.06	1299629	0.02	200000	
Co	59	2	He	2.010	2.010	2.15	20281	0.01	2000	
Ni	60	2	He	1.465	1.465	4.32	5127	0.03	2000	
Cu	63	2	He	1.267	1.267	4.06	33965	0.00	2000	
Zn	66	2	He	1.512	1.512	2.08	3497	0.04	2000	
As	75	2	He	2.020	2.020	3.55	3455	0.06	2000	
Se	78	2	He	1.944	1.944	22.26	435	0.45	2000	
B	11	1	nogas	24.212	24.212	5.31	130666	0.02	2000	
Si	28	1	nogas	127.935	127.935	33.05	1656655	0.01	2000	
Ca	43	1	nogas	205.298	205.298	2.54	8652	2.37	200000	

Sample Report

Ca	44	1	nogas	223.268	223.268	11.74	694058	0.03	200000	
Fe	56	1	nogas	188.693	188.693	7.75	6874122	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-6.597	-6.597	-35.99	15137	-0.04	2000	
Se	82	1	nogas	2.279	2.279	14.24	1037	0.22	2000	
Mo	95	1	nogas	2.217	2.217	9.18	13739	0.02	2000	
Sn	118	1	nogas	2.093	2.093	4.87	19271	0.01	2000	
Ba	137	1	nogas	1.928	1.928	4.17	8436	0.02	2000	
Sb	121	2	He	2.260	2.260	1.50	12315	0.02	2000	
La	139	1	nogas	5.031	5.031	210.42	50	10.06	2000	
Au	197	1	nogas	-81.620	-81.620	-182.91	17	-489.72	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1200476	1.44	1229805	97.62	70	125	
Ge	72	1	nogas	3426870	1.73	3541557	96.76	70	125	
In	115	1	nogas	2969199	2.21	3006327	98.76	70	125	
Bi	209	1	nogas	2113303	1.98	2153140	98.15	70	125	
Ge	72	2	He	898939	2.08	993327	90.50	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	028LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:41:19-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	4.498	1.691	37717	4.64	5	90.0	70	130	
Na	23	1	nogas	492.068	4.994	12628382	2.16	500	98.4	70	130	
Mg	24	1	nogas	499.715	2.011	7971194	1.93	500	99.9	70	130	
Al	27	1	nogas	3.969	1.761	115911	2.08	5	79.4	70	130	
K	39	1	nogas	494.552	3.414	18055353	1.50	500	98.9	70	130	
Ti	47	1	nogas	4.700	4.099	9963	3.66	5	94.0	70	130	
V	51	1	nogas	2.700	13.806	283964	1.75	5	54.0	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	5.029	2.500	158125	2.96	5	100.6	70	130	
Mn	55	1	nogas	5.010	1.018	167974	2.98	5	100.2	70	130	
Co	59	1	nogas	4.972	2.818	127516	1.63	5	99.4	70	130	
Ni	60	1	nogas	5.371	2.475	29898	0.66	5	107.4	70	130	
Cu	63	1	nogas	3.887	8.081	130666	1.23	5	77.7	70	130	
Zn	66	1	nogas	5.122	5.255	23595	5.97	5	102.4	70	130	
As	75	1	nogas	4.266	9.122	75127	1.19	5	85.3	70	130	
Sr	88	1	nogas	4.906	1.235	144433	2.69	5	98.1	70	130	
Ag	107	1	nogas	4.860	1.194	71823	2.61	5	97.2	70	130	
Cd	111	1	nogas	4.623	4.178	14870	2.63	5	92.5	70	130	
Sb	121	1	nogas	5.158	3.376	68860	1.12	5	103.2	70	130	
Tl	205	1	nogas	4.938	2.137	92898	2.07	5	98.8	70	130	
Pb	208	1	nogas	5.098	1.088	133707	1.06	5	102.0	70	130	
U	238	1	nogas	4.964	3.662	123355	1.72	5	99.3	70	130	
[Pb]	206	1	nogas	5.035	3.311	33154	1.60	5	100.7	70	130	
[Pb]	207	1	nogas	5.065	2.651	29701	1.12	5	101.3	70	130	
Na	23	2	He	499.259	0.350	882234	3.14	500	99.9	70	130	
Mg	24	2	He	503.232	1.341	461949	1.85	500	100.6	70	130	
Al	27	2	He	3.657	6.859	2897	7.08	5	73.1	70	130	
K	39	2	He	513.004	3.778	703031	2.56	500	102.6	70	130	
Ca	43	2	He	467.022	3.454	1293	5.80	500	93.4	70	130	
Ca	44	2	He	505.189	5.656	27651	2.32	500	101.0	70	130	
V	51	2	He	4.355	1.561	34887	2.35	5	87.1	70	130	
Cr	52	2	He	5.229	1.836	43438	1.63	5	104.6	70	130	
Mn	55	2	He	4.940	2.710	28572	3.41	5	98.8	70	130	
Fe	56	2	He	502.772	0.867	3235540	2.99	500	100.6	70	130	
Co	59	2	He	4.934	1.514	50038	4.40	5	98.7	70	130	
Ni	60	2	He	4.397	1.375	12721	2.14	5	87.9	70	130	
Cu	63	2	He	4.020	5.605	52739	0.98	5	80.4	70	130	
Zn	66	2	He	4.325	4.438	8085	5.48	5	86.5	70	130	
As	75	2	He	4.834	2.861	7955	1.16	5	96.7	70	130	
Se	78	2	He	4.809	5.000	808	3.51	5	96.2	70	130	
B	11	1	nogas	32.634	3.021	171782	4.90	25	130.5	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	251.947	17.243	1800079	1.16	25	1007.8	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	486.612	1.519	19354	1.81	500	97.3	70	130	
Ca	44	1	nogas	509.655	8.127	866604	0.67	500	101.9	70	130	
Fe	56	1	nogas	472.869	3.504	14015901	2.63	500	94.6	70	130	
Se	77	1	nogas	-3.151	-42.011	16107	1.90	5	-63.0	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.998	11.023	1857	11.87	5	100.0	70	130	
Mo	95	1	nogas	4.907	2.221	30196	2.40	5	98.1	70	130	
Sn	118	1	nogas	5.015	3.596	44263	1.97	5	100.3	70	130	
Ba	137	1	nogas	4.672	3.847	19785	1.83	5	93.4	70	130	
Sb	121	2	He	4.917	3.538	26654	6.43	5	98.3	70	130	
Li	7	1	nogas	4.635	6.267	180383	4.02	5	92.7	70	130	
P	31	1	nogas	23.627	6.422	152744	2.22	25	94.5	70	130	
La	139	1	nogas	16.852	49.876	90	33.33	5	337.0	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	266.739	254.935	30	88.19	5	5334.8	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1191731	3.57	1229805	96.90	70	125	
Ge	72	1	nogas	3441852	3.15	3541557	97.18	70	125	
In	115	1	nogas	2942833	1.94	3006327	97.89	70	125	
Bi	209	1	nogas	2102837	2.49	2153140	97.66	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	913433	3.14	993327	91.96	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	029_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:43:24-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.012	42.0	140	28.6	1	
Na	23	1	nogas	1.604	25.2	512739	0.8	100	
Mg	24	1	nogas	0.729	18.7	17245	11.7	100	
Al	27	1	nogas	-1.042	-0.4	17698	1.0	5	
K	39	1	nogas	-2.957	-166.6	8202209	0.3	100	
Ti	47	1	nogas	-0.049	-22.2	370	4.7	2.5	
V	51	1	nogas	-2.660	-6.9	141827	2.7	2.5	
Cr	52	1	nogas	-0.169	-4.5	37699	1.2	2.5	
Mn	55	1	nogas	-0.034	-100.7	22994	3.1	2.5	
Co	59	1	nogas	0.004	54.7	1523	2.7	2.5	
Ni	60	1	nogas	0.247	1.4	583	4.3	2.5	
Cu	63	1	nogas	-1.618	-7.8	56199	4.4	2.5	
Zn	66	1	nogas	0.179	11.0	943	10.7	2.5	
As	75	1	nogas	-1.422	-14.7	43165	3.1	2.5	
Sr	88	1	nogas	0.004	148.7	1077	16.9	2.5	
Ag	107	1	nogas	0.001	357.8	150	46.2	2.5	
Cd	111	1	nogas	0.013	57.0	63	36.5	1	
Sb	121	1	nogas	0.215	15.0	4254	9.1	2.5	
Tl	205	1	nogas	0.049	29.0	1343	19.0	1	
Pb	208	1	nogas	0.013	166.6	4354	12.8	2.5	
U	238	1	nogas	0.018	68.4	513	60.4	2.5	
[Pb]	206	1	nogas	-0.003	-730.7	1110	12.4	2.5	
[Pb]	207	1	nogas	0.014	89.0	947	6.0	2.5	
Na	23	2	He	4.837	17.4	73208	0.8	100	
Mg	24	2	He	0.339	39.5	807	16.9	100	
Al	27	2	He	-1.028	-15.4	457	16.4	5	
K	39	2	He	-4.636	-78.7	221516	1.5	100	
Ca	43	2	He	8.757	46.5	33	34.6	100	
Ca	44	2	He	5.297	67.9	4301	2.2	100	
V	51	2	He	-0.509	-0.9	2105	1.3	2.5	
Cr	52	2	He	0.047	98.3	5948	5.7	2.5	
Mn	55	2	He	-0.037	-145.2	2437	12.4	2.5	
Fe	56	2	He	0.505	11.4	17208	3.3	100	
Co	59	2	He	0.001	1008.8	393	19.4	2.5	
Ni	60	2	He	-0.506	-4.1	157	35.2	2.5	
Cu	63	2	He	-1.026	-17.4	19200	4.4	2.5	
Zn	66	2	He	-0.493	-9.1	323	20.6	2.5	
As	75	2	He	0.007	297.0	329	11.7	2.5	
Se	78	2	He	-0.032	-706.8	189	15.4	2.5	
B	11	1	nogas	7.327	9.2	47860	4.3	10	
Si	28	1	nogas	-36.993	-13.0	1520464	1.0	5	
Ca	43	1	nogas	-1.174	-298.3	883	15.1	100	
Ca	44	1	nogas	-8.230	-232.6	574242	0.7	100	
Fe	56	1	nogas	-11.775	-14.7	1938606	1.5	100	
Se	77	1	nogas	-13.263	-12.4	13809	4.6	2.5	
Se	82	1	nogas	-0.048	-383.2	353	14.5	2.5	

Initial Calibration Blank (ICB) Report

Mo	95	1	nogas	0.023	34.2	453	12.1	2.5	
Sn	118	1	nogas	0.827	5.3	8345	2.2	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.028	-42.8	217	21.8	2.5	
Sb	121	2	He	0.167	13.5	1380	10.5	2.5	
P	31	1	nogas	-2.717	-53.8	105687	1.3	10	
La	139	1	nogas	3.921	55.7	47	12.4	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-169.540	-242.0	13	114.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1253987	3.42	1229805	101.97	70	125	
Ge	72	1	nogas	3530177	1.40	3541557	99.68	70	125	
In	115	1	nogas	2997825	4.08	3006327	99.72	70	125	
Bi	209	1	nogas	2139649	1.88	2153140	99.37	70	125	
Ge	72	2	He	908818	1.85	993327	91.49	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	031ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:47:32-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.003	111.5	57	44.4	0	ICSA Main CR1 Failed
Na	23	1	nogas	95398.972	2.5	2282223584	1.9	0	
Mg	24	1	nogas	96047.019	3.1	1481729300	2.7	0	
Al	27	1	nogas	92432.866	3.5	1755038161	2.4	0	
K	39	1	nogas	96014.257	4.3	1879806842	0.5	0	
Ti	47	1	nogas	1930.602	3.9	3764984	1.5	0	
V	51	1	nogas	-1.535	-31.8	162740	5.2	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.820	7.4	57730	1.7	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.094	53.7	25187	1.9	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.370	5.2	10413	7.7	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.515	2.3	7555	3.2	0	ICSA Main CR1 Failed
Cu	63	1	nogas	-1.732	-6.2	51308	1.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.640	1.5	7352	2.5	0	ICSA Main CR1 Failed
As	75	1	nogas	3.506	14.0	68198	0.4	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.775	4.9	22745	1.7	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.064	17.7	1037	12.1	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.680	5.9	5087	2.9	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.241	10.5	4324	4.7	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.021	20.9	737	8.8	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.028	72.9	4724	10.9	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.040	50.0	1287	8.1	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.049	73.4	1067	19.3	0	ICSA Main CR1 Failed
Na	23	2	He	97705.063	1.6	149635031	0.7	0	
Mg	24	2	He	97691.037	1.6	83870984	0.6	0	
Al	27	2	He	93885.124	1.9	45680329	1.2	0	
K	39	2	He	97502.693	0.4	90923929	0.3	0	
Ca	43	2	He	98063.086	2.1	252275	1.4	0	
Ca	44	2	He	97842.515	2.3	4281768	1.4	0	
V	51	2	He	-0.384	-4.5	2765	2.9	0	ICSA Main CR1 Failed
Cr	52	2	He	0.410	11.2	8055	4.5	0	ICSA Main CR1 Failed
Mn	55	2	He	0.225	7.3	3580	2.7	0	ICSA Main CR1 Failed
Fe	56	2	He	98609.081	2.6	591404978	1.6	0	
Co	59	2	He	0.260	5.6	2810	4.6	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.258	-22.6	743	19.5	0	ICSA Main CR1 Failed
Cu	63	2	He	-1.818	-3.7	13155	2.8	0	ICSA Main CR1 Failed
Zn	66	2	He	-0.065	-66.2	950	5.9	0	ICSA Main CR1 Failed
As	75	2	He	0.165	12.8	542	4.8	0	ICSA Main CR1 Failed
Se	78	2	He	-0.150	-21.9	164	1.2	0	ICSA Main CR1 Failed
B	11	1	nogas	6.232	11.4	35924	5.7	0	ICSA Main CR1 Failed
Si	28	1	nogas	557.025	27.5	2058675	4.8	0	
Ca	43	1	nogas	95762.584	3.0	3502538	2.2	0	
Ca	44	1	nogas	97236.912	3.8	56134807	1.4	0	
Fe	56	1	nogas	95558.050	2.2	2308871918	2.3	0	
Se	77	1	nogas	22.991	14.4	22147	1.3	0	
Se	82	1	nogas	0.032	1068.2	357	29.4	0	ICSA Main CR1 Failed
Mo	95	1	nogas	1859.802	3.7	10926633	0.7	0	
Sn	118	1	nogas	0.095	18.7	1780	4.2	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.145	36.4	877	20.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.266	10.0	1787	6.1	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	88251.140	2.0	160729101	1.7	0	
La	139	1	nogas	42.501	71.6	163	55.2	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1069747	3.48	1229805	86.99	70	125	
Ge	72	1	nogas	3320814	3.69	3541557	93.77	70	125	
In	115	1	nogas	2766475	3.78	3006327	92.02	70	125	
Bi	209	1	nogas	1981850	1.95	2153140	92.04	70	125	
Ge	72	2	He	855083	1.21	993327	86.08	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	032ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:49:41-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	103.018	5.457	785796	1.30	100	103.0	80	120	
Na	23	1	nogas	113219.149	1.527	2569548591	1.85	100	113219.1	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	114698.268	2.253	1678442971	1.33	100	114698.3	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	90800.105	0.718	1738287334	0.88	100	90800.1	80	120	ICSB Main CR1 Failed
K	39	1	nogas	103950.648	1.961	2052150913	2.14	100	103950.6	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	1980.174	1.726	3894488	1.99	100	1980.2	80	120	ICSB Main CR1 Failed
V	51	1	nogas	104.992	2.013	2981980	2.12	100	105.0	80	120	
Cr	52	1	nogas	105.585	2.057	2436872	2.27	100	105.6	80	120	
Mn	55	1	nogas	103.596	2.001	2928992	2.18	100	103.6	80	120	
Co	59	1	nogas	105.775	2.166	2610906	1.95	100	105.8	80	120	
Ni	60	1	nogas	103.996	0.673	578151	0.89	100	104.0	80	120	
Cu	63	1	nogas	101.006	1.140	1430032	0.86	100	101.0	80	120	
Zn	66	1	nogas	105.505	2.324	470688	2.57	100	105.5	80	120	
As	75	1	nogas	108.788	0.616	664168	0.67	100	108.8	80	120	
Sr	88	1	nogas	108.231	2.491	3078802	2.24	100	108.2	80	120	
Ag	107	1	nogas	103.660	6.070	1487030	6.27	100	103.7	80	120	
Cd	111	1	nogas	104.510	1.341	318527	1.91	100	104.5	80	120	
Sb	121	1	nogas	111.838	1.997	1425485	1.76	100	111.8	80	120	
Tl	205	1	nogas	106.640	0.939	1938627	1.69	100	106.6	80	120	
Pb	208	1	nogas	106.221	2.370	2706241	2.37	100	106.2	80	120	
U	238	1	nogas	117.130	3.878	2824878	4.77	100	117.1	80	120	
[Pb]	206	1	nogas	107.808	0.251	666827	0.74	100	107.8	80	120	
[Pb]	207	1	nogas	106.609	1.466	590018	1.14	100	106.6	80	120	
Na	23	2	He	106324.052	0.576	165201531	0.87	100	106324.1	80	120	
Mg	24	2	He	104429.207	1.013	90961875	1.16	100	104429.2	80	120	ICSB Main CR1 Failed
Al	27	2	He	92930.202	0.595	45874751	1.00	100	92930.2	80	120	ICSB Main CR1 Failed
K	39	2	He	106958.169	1.605	99719519	1.60	100	106958.2	80	120	
Ca	43	2	He	106687.376	0.195	278460	0.56	100	106687.4	80	120	
Ca	44	2	He	105279.652	2.715	4673947	2.45	100	105279.7	80	120	ICSB Main CR1 Failed
V	51	2	He	106.523	1.255	686914	0.85	100	106.5	80	120	
Cr	52	2	He	108.967	0.748	753701	1.04	100	109.0	80	120	
Mn	55	2	He	106.466	0.896	533233	0.61	100	106.5	80	120	
Fe	56	2	He	107656.423	1.651	655086017	1.35	100	107656.4	80	120	
Co	59	2	He	106.324	0.765	1016206	0.36	100	106.3	80	120	
Ni	60	2	He	105.589	0.588	258391	0.31	100	105.6	80	120	
Cu	63	2	He	100.497	1.271	657593	1.57	100	100.5	80	120	
Zn	66	2	He	106.752	0.873	164321	1.25	100	106.8	80	120	
As	75	2	He	107.953	0.971	162331	0.56	100	108.0	80	120	
Se	78	2	He	108.921	1.802	13390	1.37	100	108.9	80	120	
B	11	1	nogas	521.050	5.552	2374479	1.22	100	521.0	80	120	
Si	28	1	nogas	5480.898	0.775	7355191	0.88	100	5480.9	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	102457.422	0.628	3777947	0.37	100	102457.4	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	105832.615	1.837	61565724	1.94	100	105832.6	80	120	
Fe	56	1	nogas	106158.250	1.700	2585388658	1.90	100	106158.3	80	120	
Se	77	1	nogas	133.319	1.231	50483	0.60	100	133.3	80	120	
Se	82	1	nogas	104.773	1.009	30800	1.05	100	104.8	80	120	
Mo	95	1	nogas	2015.418	2.346	11941575	2.51	100	2015.4	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	106.649	0.936	872165	0.44	100	106.6	80	120	
Ba	137	1	nogas	103.960	0.404	411001	0.92	100	104.0	80	120	
Sb	121	2	He	108.523	1.161	548297	0.95	100	108.5	80	120	
La	139	1	nogas	137.425	31.482	470	28.62	100	137.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1087240	5.06	1229805	88.41	70	125	
Ge	72	1	nogas	3345974	0.26	3541557	94.48	70	125	
In	115	1	nogas	2790649	1.12	3006327	92.83	70	125	
Bi	209	1	nogas	2039845	0.99	2153140	94.74	70	125	
Ge	72	2	He	867425	0.41	993327	87.33	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	043_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:12:17-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	98.699	6.026	836563	1.60	100	98.7	90	110	
Na	23	1	nogas	10612.936	5.564	311794049	4.60	10000	106.1	90	110	
Mg	24	1	nogas	10106.182	1.070	191235746	1.88	10000	101.1	90	110	
Al	27	1	nogas	101.846	3.266	2352698	2.57	100	101.8	90	110	
K	39	1	nogas	10115.317	1.949	244908022	1.75	10000	101.2	90	110	
Ti	47	1	nogas	100.092	3.225	233603	1.02	100	100.1	90	110	
V	51	1	nogas	108.444	3.264	3640335	3.11	100	108.4	90	110	
Cr	52	1	nogas	101.693	1.386	2782193	2.53	100	101.7	90	110	
Mn	55	1	nogas	101.739	3.079	3409243	4.84	100	101.7	90	110	
Co	59	1	nogas	100.114	1.514	2927183	0.76	100	100.1	90	110	
Ni	60	1	nogas	101.232	1.313	666764	3.03	100	101.2	90	110	
Cu	63	1	nogas	97.237	1.773	1633922	0.89	100	97.2	90	110	
Zn	66	1	nogas	102.194	1.398	540073	2.14	100	102.2	90	110	
As	75	1	nogas	105.311	2.497	763336	1.16	100	105.3	90	110	
Sr	88	1	nogas	98.975	2.828	3334944	2.27	100	99.0	90	110	
Ag	107	1	nogas	96.334	1.594	1637484	3.84	100	96.3	90	110	
Cd	111	1	nogas	99.103	4.896	355408	1.14	100	99.1	90	110	
Sb	121	1	nogas	100.819	1.191	1522712	2.87	100	100.8	90	110	
Tl	205	1	nogas	103.055	2.474	2018565	3.05	100	103.1	90	110	
Pb	208	1	nogas	108.267	2.643	2758277	2.64	100	108.3	90	110	
U	238	1	nogas	104.245	2.413	2708617	3.54	100	104.2	90	110	
[Pb]	206	1	nogas	101.080	0.931	673665	0.97	100	101.1	90	110	
[Pb]	207	1	nogas	100.656	0.367	600320	1.85	100	100.7	90	110	
Na	23	2	He	10416.228	1.585	19751790	0.46	10000	104.2	90	110	
Mg	24	2	He	10166.372	2.209	10769626	0.65	10000	101.7	90	110	
Al	27	2	He	100.628	1.527	61564	1.14	100	100.6	90	110	
K	39	2	He	12295.806	0.710	11663526	0.70	10000	123.0	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10291.193	3.164	32679	2.95	10000	102.9	90	110	
Ca	44	2	He	10133.857	2.147	551420	0.58	10000	101.3	90	110	
V	51	2	He	101.801	3.621	798544	2.09	100	101.8	90	110	
Cr	52	2	He	104.605	1.921	880213	1.10	100	104.6	90	110	
Mn	55	2	He	101.137	0.492	616354	2.01	100	101.1	90	110	
Fe	56	2	He	10112.688	2.034	74854524	0.78	10000	101.1	90	110	
Co	59	2	He	101.354	2.615	1178074	1.22	100	101.4	90	110	
Ni	60	2	He	101.713	3.102	302758	2.10	100	101.7	90	110	
Cu	63	2	He	95.674	4.335	762654	2.97	100	95.7	90	110	
Zn	66	2	He	99.802	1.961	186913	0.73	100	99.8	90	110	
As	75	2	He	101.953	2.461	186466	1.05	100	102.0	90	110	
Se	78	2	He	100.058	2.762	14978	1.26	100	100.1	90	110	
B	11	1	nogas	880.690	7.792	4451128	3.40	500	176.1	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4855.484	3.074	7917457	1.52	5000	97.1	90	110	
Ca	43	1	nogas	10338.843	3.106	452417	1.68	10000	103.4	90	110	
Ca	44	1	nogas	10173.711	4.111	7595570	1.83	10000	101.7	90	110	
Fe	56	1	nogas	10127.673	3.813	294353582	2.42	10000	101.3	90	110	
Se	77	1	nogas	133.630	6.352	59868	2.31	100	133.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.083	4.319	35205	3.28	100	101.1	90	110	
Mo	95	1	nogas	98.132	2.256	688936	0.56	100	98.1	90	110	
Sn	118	1	nogas	98.914	2.597	952638	2.30	100	98.9	90	110	
Ba	137	1	nogas	98.601	3.531	458883	1.01	100	98.6	90	110	
Sb	121	2	He	95.512	1.554	586978	0.22	100	95.5	90	110	
Li	7	1	nogas	98.578	6.355	1859371	1.46	100	98.6	90	110	
P	31	1	nogas	468.593	1.908	1143005	1.77	500	93.7	90	110	
La	139	1	nogas	115.524	21.147	470	16.06	100	115.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-181.277	-84.637	13	43.30	100	-181.3	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1208235	4.75	1229805	98.25	70	125	
Ge	72	1	nogas	3964082	2.27	3541557	111.93	70	125	
In	115	1	nogas	3287961	4.05	3006327	109.37	70	125	
Bi	209	1	nogas	2197918	1.89	2153140	102.08	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1055142	1.57	993327	106.22	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	044_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:14:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.034	46.8	343	45.2	1	
Na	23	1	nogas	182.262	3.6	6021524	3.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.989	15.4	199564	15.5	100	
Al	27	1	nogas	-0.391	-26.7	34869	6.2	5	
K	39	1	nogas	-23.471	-31.0	8792232	1.2	100	
Ti	47	1	nogas	0.026	228.9	593	22.8	2.5	
V	51	1	nogas	2.462	7.1	322058	3.1	2.5	
Cr	52	1	nogas	0.000	79206.9	47197	2.8	2.5	
Mn	55	1	nogas	0.241	8.4	35204	2.5	2.5	
Co	59	1	nogas	0.013	152.6	1990	28.0	2.5	
Ni	60	1	nogas	0.573	3.0	2827	3.9	2.5	
Cu	63	1	nogas	-4.517	-1.1	17135	3.5	2.5	
Zn	66	1	nogas	0.761	7.3	4161	6.0	2.5	
As	75	1	nogas	1.388	9.3	67769	2.6	2.5	
Sr	88	1	nogas	0.215	8.8	8382	6.6	2.5	
Ag	107	1	nogas	0.015	31.1	403	18.8	2.5	
Cd	111	1	nogas	0.019	138.0	93	101.8	1	
Sb	121	1	nogas	1.203	25.4	19799	22.7	2.5	
Tl	205	1	nogas	0.375	54.5	7966	53.7	1	
Pb	208	1	nogas	-0.018	-168.4	3557	21.9	2.5	
U	238	1	nogas	0.138	68.1	3747	69.6	2.5	
[Pb]	206	1	nogas	-0.059	-46.8	790	26.3	2.5	
[Pb]	207	1	nogas	-0.016	-181.5	817	23.9	2.5	
Na	23	2	He	201.483	3.4	440726	0.8	100	CCB Main CR1 Failed
Mg	24	2	He	9.228	2.3	9999	3.5	100	
Al	27	2	He	0.464	234.0	1364	41.8	5	
K	39	2	He	17.832	10.5	242416	0.7	100	
Ca	43	2	He	22.648	11.1	80	12.5	100	
Ca	44	2	He	8.205	39.8	4974	2.4	100	
V	51	2	He	-0.209	-8.7	4609	0.9	2.5	
Cr	52	2	He	-0.018	-291.9	6138	4.9	2.5	
Mn	55	2	He	0.127	48.8	3690	8.7	2.5	
Fe	56	2	He	3.084	12.0	37692	4.7	100	
Co	59	2	He	0.004	40.0	483	4.8	2.5	
Ni	60	2	He	-0.452	-8.6	330	33.7	2.5	
Cu	63	2	He	-3.159	-1.7	5754	3.4	2.5	
Zn	66	2	He	-0.363	-13.1	597	12.7	2.5	
As	75	2	He	0.031	89.9	411	15.0	2.5	
Se	78	2	He	-0.182	-74.1	191	9.0	2.5	
B	11	1	nogas	243.026	2.5	1300607	1.4	10	CCB Main CR1 Failed
Si	28	1	nogas	-199.223	-7.4	1511772	2.1	5	
Ca	43	1	nogas	35.124	14.5	2594	7.4	100	
Ca	44	1	nogas	-209.276	-7.4	511020	1.0	100	
Fe	56	1	nogas	25.853	21.1	3283627	4.2	100	
Se	77	1	nogas	8.991	34.5	22387	5.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.031	-895.2	407	25.2	2.5	
Mo	95	1	nogas	0.300	27.4	2464	22.8	2.5	
Sn	118	1	nogas	0.195	44.7	3177	27.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.016	119.3	460	19.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.748	8.2	4987	6.7	2.5	
P	31	1	nogas	-14.017	-7.1	94776	1.5	10	
La	139	1	nogas	15.226	62.1	97	36.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	143.796	102.4	27	21.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1270126	3.43	1229805	103.28	70	125	
Ge	72	1	nogas	3991299	1.36	3541557	112.70	70	125	
In	115	1	nogas	3389247	3.95	3006327	112.74	70	125	
Bi	209	1	nogas	2246818	2.76	2153140	104.35	70	125	
Ge	72	2	He	1019296	3.49	993327	102.61	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	054_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:38:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	99.535	2.990	751953	4.62	100	99.5	90	110	
Na	23	1	nogas	10204.938	5.628	274127273	3.19	10000	102.0	90	110	
Mg	24	1	nogas	10117.373	6.536	174968612	4.64	10000	101.2	90	110	
Al	27	1	nogas	100.871	4.277	2145487	3.72	100	100.9	90	110	
K	39	1	nogas	10317.252	5.059	229736663	4.04	10000	103.2	90	110	
Ti	47	1	nogas	100.930	2.410	216894	1.86	100	100.9	90	110	
V	51	1	nogas	105.100	3.831	3254447	3.19	100	105.1	90	110	
Cr	52	1	nogas	100.018	3.538	2518634	1.92	100	100.0	90	110	
Mn	55	1	nogas	102.569	5.651	3160295	3.34	100	102.6	90	110	
Co	59	1	nogas	99.902	3.481	2688909	3.05	100	99.9	90	110	
Ni	60	1	nogas	100.056	3.196	606322	0.91	100	100.1	90	110	
Cu	63	1	nogas	95.761	4.693	1481746	1.22	100	95.8	90	110	
Zn	66	1	nogas	101.206	3.102	492294	2.71	100	101.2	90	110	
As	75	1	nogas	100.899	2.599	675525	1.70	100	100.9	90	110	
Sr	88	1	nogas	101.531	2.498	3149284	1.76	100	101.5	90	110	
Ag	107	1	nogas	97.685	8.503	1527528	7.85	100	97.7	90	110	
Cd	111	1	nogas	99.662	4.035	338400	2.27	100	99.7	90	110	
Sb	121	1	nogas	99.746	2.598	1386372	1.73	100	99.7	90	110	
Tl	205	1	nogas	107.470	2.305	1969913	0.79	100	107.5	90	110	
Pb	208	1	nogas	103.228	0.403	2630109	0.40	100	103.2	90	110	
U	238	1	nogas	102.713	3.009	2497158	1.86	100	102.7	90	110	
[Pb]	206	1	nogas	104.686	1.565	653028	1.21	100	104.7	90	110	
[Pb]	207	1	nogas	102.523	1.189	572324	1.92	100	102.5	90	110	
Na	23	2	He	10928.148	4.886	18155069	1.57	10000	109.3	90	110	
Mg	24	2	He	10680.742	4.319	9916008	0.71	10000	106.8	90	110	
Al	27	2	He	100.949	4.405	54118	0.88	100	100.9	90	110	
K	39	2	He	10728.995	2.090	10206061	2.04	10000	107.3	90	110	
Ca	43	2	He	10248.703	3.308	28529	1.84	10000	102.5	90	110	
Ca	44	2	He	10063.225	4.197	479986	1.83	10000	100.6	90	110	
V	51	2	He	103.652	3.509	712747	1.29	100	103.7	90	110	
Cr	52	2	He	107.145	4.891	789825	0.72	100	107.1	90	110	
Mn	55	2	He	103.098	4.097	550528	1.75	100	103.1	90	110	
Fe	56	2	He	10303.453	4.228	66838951	0.55	10000	103.0	90	110	
Co	59	2	He	105.392	3.943	1073794	1.60	100	105.4	90	110	
Ni	60	2	He	106.634	3.039	278221	1.70	100	106.6	90	110	
Cu	63	2	He	102.531	2.955	714804	1.61	100	102.5	90	110	
Zn	66	2	He	104.977	2.654	172322	1.83	100	105.0	90	110	
As	75	2	He	103.150	2.977	165401	1.54	100	103.2	90	110	
Se	78	2	He	99.524	4.231	13059	1.69	100	99.5	90	110	
B	11	1	nogas	595.236	4.410	2683543	3.19	500	119.0	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4707.352	2.833	7115951	1.87	5000	94.1	90	110	
Ca	43	1	nogas	10110.884	3.260	407290	1.31	10000	101.1	90	110	
Ca	44	1	nogas	9919.443	3.564	6832624	0.88	10000	99.2	90	110	
Fe	56	1	nogas	10080.888	3.943	269715589	2.26	10000	100.8	90	110	
Se	77	1	nogas	112.114	6.262	49130	1.79	100	112.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.437	4.618	32506	1.05	100	101.4	90	110	
Mo	95	1	nogas	99.394	3.078	642284	0.87	100	99.4	90	110	
Sn	118	1	nogas	99.294	4.330	904904	3.37	100	99.3	90	110	
Ba	137	1	nogas	95.425	2.045	420448	1.05	100	95.4	90	110	
Sb	121	2	He	99.383	5.266	535214	3.16	100	99.4	90	110	
Li	7	1	nogas	100.516	6.948	1685240	2.04	100	100.5	90	110	
P	31	1	nogas	470.125	2.873	1055287	2.62	500	94.0	90	110	
La	139	1	nogas	101.300	13.107	397	14.33	100	101.3	90	110	
Au	197	1	nogas	-73.774	-758.335	17	124.90	100	-73.8	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1076119	6.90	1229805	87.50	70	125	
Ge	72	1	nogas	3650290	3.77	3541557	103.07	70	125	
In	115	1	nogas	3111071	2.92	3006327	103.48	70	125	
Bi	209	1	nogas	2057298	1.52	2153140	95.55	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	925692	4.47	993327	93.19	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	055_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:41:09-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.014	60.8	150	46.7	1	
Na	23	1	nogas	43.079	9.1	1769505	5.3	100	
Mg	24	1	nogas	2.768	6.9	57266	5.4	100	
Al	27	1	nogas	-0.570	-7.6	28802	6.5	5	
K	39	1	nogas	-4.501	-189.5	8631865	1.4	100	
Ti	47	1	nogas	-0.026	-134.1	443	20.3	2.5	
V	51	1	nogas	1.435	31.5	270483	3.2	2.5	
Cr	52	1	nogas	-0.128	-28.9	40899	4.1	2.5	
Mn	55	1	nogas	0.203	7.9	31754	4.9	2.5	
Co	59	1	nogas	0.004	262.6	1620	18.8	2.5	
Ni	60	1	nogas	0.325	11.2	1097	18.5	2.5	
Cu	63	1	nogas	-3.257	-5.8	34800	4.7	2.5	
Zn	66	1	nogas	0.466	10.5	2424	9.3	2.5	
As	75	1	nogas	0.089	433.1	55097	1.1	2.5	
Sr	88	1	nogas	0.071	11.3	3277	10.3	2.5	
Ag	107	1	nogas	0.015	31.6	373	22.3	2.5	
Cd	111	1	nogas	0.007	91.0	47	49.5	1	
Sb	121	1	nogas	1.045	21.7	16325	21.8	2.5	
Tl	205	1	nogas	0.607	51.6	12112	53.7	1	
Pb	208	1	nogas	-0.022	-136.3	3467	21.8	2.5	
U	238	1	nogas	0.115	68.6	3007	71.4	2.5	
[Pb]	206	1	nogas	-0.054	-46.2	783	25.0	2.5	
[Pb]	207	1	nogas	0.003	1511.1	887	32.7	2.5	
Na	23	2	He	58.622	6.9	172614	1.7	100	
Mg	24	2	He	2.812	5.5	3294	7.8	100	
Al	27	2	He	-0.712	-44.9	663	24.1	5	
K	39	2	He	7.328	55.6	232645	1.6	100	
Ca	43	2	He	13.755	47.4	50	34.6	100	
Ca	44	2	He	-1.211	-413.1	4297	5.6	100	
V	51	2	He	-0.289	-7.9	3842	1.8	2.5	
Cr	52	2	He	0.000	-2746.5	6024	3.5	2.5	
Mn	55	2	He	-0.009	-673.0	2770	11.0	2.5	
Fe	56	2	He	2.656	10.2	33187	1.7	100	
Co	59	2	He	0.009	98.6	507	14.5	2.5	
Ni	60	2	He	-0.486	-4.1	223	27.0	2.5	
Cu	63	2	He	-2.007	-4.3	13675	1.1	2.5	
Zn	66	2	He	-0.254	-26.8	757	12.6	2.5	
As	75	2	He	0.024	70.9	381	9.4	2.5	
Se	78	2	He	-0.058	-262.0	199	6.8	2.5	
B	11	1	nogas	61.920	1.1	311105	3.1	10	CCB Main CR1 Failed
Si	28	1	nogas	27.360	1780.2	1671379	30.9	5	CCB Main CR1 Failed
Ca	43	1	nogas	22.113	25.6	1887	9.3	100	
Ca	44	1	nogas	-202.805	-12.0	481585	0.3	100	
Fe	56	1	nogas	10.395	77.4	2651645	9.4	100	
Se	77	1	nogas	-0.781	-430.4	18123	2.9	2.5	
Se	82	1	nogas	0.138	115.1	433	9.3	2.5	
Mo	95	1	nogas	0.239	37.7	1907	32.5	2.5	
Sn	118	1	nogas	0.378	9.3	4684	8.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.028	76.9	483	20.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.617	2.1	4041	3.4	2.5	
P	31	1	nogas	-8.689	-11.1	99467	1.7	10	
La	139	1	nogas	12.272	81.6	80	45.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-249.832	-189.7	10	173.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1166516	2.63	1229805	94.85	70	125	
Ge	72	1	nogas	3730988	3.36	3541557	105.35	70	125	
In	115	1	nogas	3175444	1.84	3006327	105.63	70	125	
Bi	209	1	nogas	2133314	4.23	2153140	99.08	70	125	
Ge	72	2	He	976948	4.17	993327	98.35	70	125	

Sample Report

Sample Table

Sample Name	MBLK-135380
Data File Name	056SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:43:14-06:00
Sample Type	Sample
Dilution	1
Comment	TW B135380
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.000	0.000	-372.64	33	0.00	2000	
Na	23	1	nogas	32.891	32.891	2.75	1503818	0.00	200000	
Mg	24	1	nogas	23.465	23.465	1.12	443293	0.01	200000	
Al	27	1	nogas	6.346	6.346	2.70	180734	0.00	2000	
K	39	1	nogas	-12.496	-12.496	-61.74	8668321	0.00	200000	
Ti	47	1	nogas	-0.046	-0.046	-62.35	407	-0.01	2000	
V	51	1	nogas	1.522	1.522	15.95	280008	0.00	2000	
Cr	52	1	nogas	-0.031	-0.031	-130.43	44413	0.00	2000	
Mn	55	1	nogas	0.189	0.189	24.64	32092	0.00	2000	
Co	59	1	nogas	-0.023	-0.023	-12.63	887	0.00	2000	
Ni	60	1	nogas	0.381	0.381	9.83	1480	0.03	2000	
Cu	63	1	nogas	-2.908	-2.908	-7.02	41019	-0.01	2000	
Zn	66	1	nogas	0.404	0.404	8.38	2163	0.02	2000	
As	75	1	nogas	0.224	0.224	187.51	57360	0.00	2000	
Sr	88	1	nogas	0.047	0.047	11.78	2550	0.00	2000	
Ag	107	1	nogas	-0.001	-0.001	-116.75	117	0.00	2000	
Cd	111	1	nogas	-0.001	-0.001	-912.49	20	0.00	2000	
Sb	121	1	nogas	0.131	0.131	10.15	3394	0.00	2000	
Tl	205	1	nogas	0.055	0.055	16.19	1547	0.00	2000	
Pb	208	1	nogas	-0.039	-0.039	-42.17	3027	0.00	2000	
U	238	1	nogas	0.008	0.008	37.12	270	0.00	2000	
[Pb]	206	1	nogas	-0.068	-0.068	-17.00	733	-0.01	2000	
[Pb]	207	1	nogas	-0.045	-0.045	-18.88	640	-0.01	2000	
Na	23	2	He	49.802	49.802	2.96	158394	0.03	200000	
Mg	24	2	He	24.136	24.136	2.97	24376	0.10	200000	
Al	27	2	He	6.477	6.477	13.42	4701	0.14	2000	
K	39	2	He	10.726	10.726	22.33	235806	0.00	200000	
Ca	43	2	He	11.257	11.257	17.50	43	25.98	200000	
Ca	44	2	He	-7.388	-7.388	-17.85	4017	-0.18	200000	
V	51	2	He	-0.261	-0.261	-3.20	4077	-0.01	2000	
Cr	52	2	He	0.213	0.213	13.40	7725	0.00	2000	
Mn	55	2	He	0.232	0.232	7.41	4157	0.01	2000	
Fe	56	2	He	4.855	4.855	15.00	48577	0.01	200000	
Co	59	2	He	-0.020	-0.020	-25.95	203	-0.01	2000	
Ni	60	2	He	-0.439	-0.439	-3.02	353	-0.12	2000	
Cu	63	2	He	-1.702	-1.702	-1.23	15960	-0.01	2000	
Zn	66	2	He	-0.397	-0.397	-6.95	517	-0.08	2000	
As	75	2	He	0.040	0.040	49.42	411	0.01	2000	
Se	78	2	He	-0.223	-0.223	-25.56	179	-0.12	2000	
B	11	1	nogas	53.477	53.477	1.95	280743	0.02	2000	
Si	28	1	nogas	704.137	704.137	7.26	2553696	0.03	2000	
Ca	43	1	nogas	20.518	20.518	10.60	1873	1.10	200000	

Sample Report

Ca	44	1	nogas	-223.551	-223.551	-9.15	480012	-0.05	200000	
Fe	56	1	nogas	0.135	0.135	1181.21	2430742	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	0.434	0.434	761.98	18933	0.00	2000	
Se	82	1	nogas	-0.083	-0.083	-346.31	370	-0.02	2000	
Mo	95	1	nogas	0.038	0.038	57.61	593	0.01	2000	
Sn	118	1	nogas	0.128	0.128	14.64	2490	0.01	2000	
Ba	137	1	nogas	-0.015	-0.015	-104.23	307	0.00	2000	
Sb	121	2	He	0.127	0.127	20.06	1260	0.01	2000	
La	139	1	nogas	4.967	4.967	105.93	57	8.77	2000	
Au	197	1	nogas	-100.796	-100.796	-397.91	17	-604.78	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1213560	0.40	1229805	98.68	70	125	
Ge	72	1	nogas	3824298	3.38	3541557	107.98	70	125	
In	115	1	nogas	3361190	1.53	3006327	111.80	70	125	
Bi	209	1	nogas	2269364	6.29	2153140	105.40	70	125	
Ge	72	2	He	983470	1.77	993327	99.01	70	125	

Sample Report

Sample Table

Sample Name	LCS-135850
Data File Name	057SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:45:18-06:00
Sample Type	Sample
Dilution	1
Comment	TW B135380
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	49.011	49.011	4.20	387662	0.01	2000	
Na	23	1	nogas	4941.382	4941.382	3.11	143831916	0.00	200000	
Mg	24	1	nogas	4946.377	4946.377	3.53	92500865	0.01	200000	
Al	27	1	nogas	101.909	101.909	1.71	2323526	0.00	2000	
K	39	1	nogas	4998.581	4998.581	2.63	124057794	0.00	200000	
Ti	47	1	nogas	143.682	143.682	1.78	330777	0.04	2000	
V	51	1	nogas	49.386	49.386	6.55	1765004	0.00	2000	
Cr	52	1	nogas	48.576	48.576	1.75	1335388	0.00	2000	
Mn	55	1	nogas	50.963	50.963	8.32	1695868	0.00	2000	
Co	59	1	nogas	47.352	47.352	6.69	1365850	0.00	2000	
Ni	60	1	nogas	47.689	47.689	3.93	309241	0.02	2000	
Cu	63	1	nogas	44.633	44.633	2.64	787445	0.01	2000	
Zn	66	1	nogas	49.776	49.776	1.05	259667	0.02	2000	
As	75	1	nogas	46.202	46.202	2.89	362569	0.01	2000	
Sr	88	1	nogas	94.463	94.463	1.59	3141350	0.00	2000	
Ag	107	1	nogas	48.986	48.986	2.23	821350	0.01	2000	
Cd	111	1	nogas	48.551	48.551	1.32	177852	0.03	2000	
Sb	121	1	nogas	49.297	49.297	2.11	735340	0.01	2000	
Tl	205	1	nogas	47.479	47.479	2.35	935622	0.01	2000	
Pb	208	1	nogas	52.758	52.758	1.94	1346154	0.00	2000	
U	238	1	nogas	95.513	95.513	5.79	2495023	0.00	2000	
[Pb]	206	1	nogas	50.069	50.069	1.74	336282	0.01	2000	
[Pb]	207	1	nogas	49.469	49.469	1.44	297239	0.02	2000	
Na	23	2	He	5319.873	5319.873	2.88	9173951	0.06	200000	
Mg	24	2	He	5152.252	5152.252	2.92	4945287	0.10	200000	
Al	27	2	He	101.550	101.550	0.74	56257	0.18	2000	
K	39	2	He	5591.979	5591.979	2.55	5427550	0.10	200000	
Ca	43	2	He	5242.535	5242.535	0.20	15083	34.76	200000	
Ca	44	2	He	5122.846	5122.846	1.53	254661	2.01	200000	
V	51	2	He	50.144	50.144	1.63	359206	0.01	2000	
Cr	52	2	He	52.842	52.842	1.74	405745	0.01	2000	
Mn	55	2	He	51.134	51.134	1.05	283594	0.02	2000	
Fe	56	2	He	5152.094	5152.094	1.50	34551692	0.01	200000	
Co	59	2	He	51.769	51.769	0.84	545287	0.01	2000	
Ni	60	2	He	51.077	51.077	1.43	138500	0.04	2000	
Cu	63	2	He	49.949	49.949	0.13	373773	0.01	2000	
Zn	66	2	He	50.409	50.409	2.08	86096	0.06	2000	
As	75	2	He	50.366	50.366	1.26	83624	0.06	2000	
Se	78	2	He	50.467	50.467	1.13	6945	0.73	2000	
B	11	1	nogas	556.968	556.968	3.73	2631849	0.02	2000	
Si	28	1	nogas	5200.740	5200.740	4.70	8243106	0.06	2000	>LDR
Ca	43	1	nogas	5071.538	5071.538	2.18	219580	2.31	200000	
Ca	44	1	nogas	4959.523	4959.523	3.18	3983408	0.12	200000	
Fe	56	1	nogas	4906.389	4906.389	4.24	141969032	0.00	200000	
Se	77	1	nogas	34.637	34.637	7.88	29574	0.12	2000	
Se	82	1	nogas	49.092	49.092	4.28	17078	0.29	2000	

Sample Report

Mo	95	1	nogas	45.827	45.827	3.84	317587	0.01	2000	
Sn	118	1	nogas	91.797	91.797	4.22	902204	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	46.205	46.205	3.90	219673	0.02	2000	
Sb	121	2	He	48.708	48.708	1.36	271417	0.02	2000	
La	139	1	nogas	50.879	50.879	21.43	233	21.80	2000	
Au	197	1	nogas	-182.541	-182.541	-161.76	13	-1369.06	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1126677	4.30	1229805	91.61	70	125	
Ge	72	1	nogas	3912173	2.73	3541557	110.46	70	125	
In	115	1	nogas	3354195	1.93	3006327	111.57	70	125	
Bi	209	1	nogas	2211204	1.54	2153140	102.70	70	125	
Ge	72	2	He	955542	2.25	993327	96.20	70	125	

Sample Report

Sample Table

Sample Name	LCSD-135380
Data File Name	058SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:47:19-06:00
Sample Type	Sample
Dilution	1
Comment	TW B135380
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	50.992	50.992	1.95	384364	0.01	2000	
Na	23	1	nogas	4973.122	4973.122	0.95	142347291	0.00	200000	
Mg	24	1	nogas	5106.731	5106.731	2.38	93888835	0.01	200000	
Al	27	1	nogas	107.545	107.545	0.19	2405481	0.00	2000	
K	39	1	nogas	5092.320	5092.320	5.00	123802524	0.00	200000	
Ti	47	1	nogas	143.661	143.661	3.83	324486	0.04	2000	
V	51	1	nogas	51.244	51.244	5.17	1789254	0.00	2000	
Cr	52	1	nogas	50.081	50.081	3.30	1350712	0.00	2000	
Mn	55	1	nogas	51.980	51.980	6.03	1697449	0.00	2000	
Co	59	1	nogas	51.136	51.136	4.52	1448427	0.00	2000	
Ni	60	1	nogas	49.131	49.131	4.37	312688	0.02	2000	
Cu	63	1	nogas	45.221	45.221	2.71	782058	0.01	2000	
Zn	66	1	nogas	50.120	50.120	1.67	256684	0.02	2000	
As	75	1	nogas	47.826	47.826	2.97	366428	0.01	2000	
Sr	88	1	nogas	97.923	97.923	1.71	3197833	0.00	2000	
Ag	107	1	nogas	49.771	49.771	2.28	819166	0.01	2000	
Cd	111	1	nogas	48.643	48.643	1.51	178885	0.03	2000	
Sb	121	1	nogas	50.672	50.672	4.00	741620	0.01	2000	
Tl	205	1	nogas	46.279	46.279	3.61	952530	0.00	2000	
Pb	208	1	nogas	54.470	54.470	1.06	1389705	0.00	2000	
U	238	1	nogas	91.292	91.292	5.05	2490654	0.00	2000	
[Pb]	206	1	nogas	48.981	48.981	1.11	343816	0.01	2000	
[Pb]	207	1	nogas	48.405	48.405	3.52	303761	0.02	2000	
Na	23	2	He	5315.258	5315.258	0.90	9338517	0.06	200000	
Mg	24	2	He	5080.308	5080.308	2.11	4970173	0.10	200000	
Al	27	2	He	101.768	101.768	0.74	57464	0.18	2000	
K	39	2	He	5663.134	5663.134	5.00	5493739	0.10	200000	
Ca	43	2	He	5235.109	5235.109	3.76	15360	34.08	200000	
Ca	44	2	He	5029.478	5029.478	0.42	254851	1.97	200000	
V	51	2	He	49.591	49.591	0.87	362179	0.01	2000	
Cr	52	2	He	50.976	50.976	0.75	399074	0.01	2000	
Mn	55	2	He	49.708	49.708	1.34	280986	0.02	2000	
Fe	56	2	He	5070.993	5070.993	2.77	34647884	0.01	200000	
Co	59	2	He	50.754	50.754	1.13	544787	0.01	2000	
Ni	60	2	He	50.102	50.102	0.48	138472	0.04	2000	
Cu	63	2	He	49.177	49.177	0.93	375466	0.01	2000	
Zn	66	2	He	50.582	50.582	2.69	88008	0.06	2000	
As	75	2	He	49.780	49.780	0.98	84251	0.06	2000	
Se	78	2	He	47.028	47.028	2.62	6607	0.71	2000	
B	11	1	nogas	583.850	583.850	2.62	2628092	0.02	2000	
Si	28	1	nogas	5343.288	5343.288	3.49	8268536	0.06	2000	>LDR
Ca	43	1	nogas	5047.487	5047.487	4.08	214388	2.35	200000	
Ca	44	1	nogas	4880.407	4880.407	4.42	3856656	0.13	200000	
Fe	56	1	nogas	5297.331	5297.331	3.20	150285670	0.00	200000	
Se	77	1	nogas	39.128	39.128	15.40	30322	0.13	2000	
Se	82	1	nogas	49.252	49.252	5.42	16811	0.29	2000	

Sample Report

Mo	95	1	nogas	47.135	47.135	4.53	320571	0.01	2000	
Sn	118	1	nogas	92.919	92.919	3.33	916737	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	45.939	45.939	1.75	219340	0.02	2000	
Sb	121	2	He	48.986	48.986	0.84	278151	0.02	2000	
La	139	1	nogas	40.494	40.494	18.52	193	20.94	2000	
Au	197	1	nogas	-195.395	-195.395	-79.99	13	-1465.46	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1072716	2.27	1229805	87.23	70	125	
Ge	72	1	nogas	3840762	3.72	3541557	108.45	70	125	
In	115	1	nogas	3368065	2.97	3006327	112.03	70	125	
Bi	209	1	nogas	2311013	3.85	2153140	107.33	70	125	
Ge	72	2	He	973975	2.88	993327	98.05	70	125	

Sample Report

Sample Table

Sample Name	HS18120471-10SD
Data File Name	060SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:51:25-06:00
Sample Type	Sample
Dilution	5
Comment	TW B135380
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.008	0.039	47.04	97	0.01	2000	
Na	23	1	nogas	38.943	194.713	4.71	1630689	0.00	200000	
Mg	24	1	nogas	8.579	42.895	1.78	161585	0.01	200000	
Al	27	1	nogas	2.635	13.177	5.46	98745	0.00	2000	
K	39	1	nogas	-4.928	-24.640	-40.59	8763366	0.00	200000	
Ti	47	1	nogas	0.060	0.300	28.14	640	0.01	2000	
V	51	1	nogas	2.738	13.690	12.16	313994	0.00	2000	
Cr	52	1	nogas	-0.052	-0.260	-29.19	43488	0.00	2000	
Mn	55	1	nogas	1.120	5.602	1.66	61389	0.00	2000	
Co	59	1	nogas	-0.008	-0.038	-58.98	1323	0.00	2000	
Ni	60	1	nogas	0.355	1.776	6.05	1310	0.03	2000	
Cu	63	1	nogas	-1.555	-7.774	-10.91	61268	0.00	2000	
Zn	66	1	nogas	1.265	6.327	0.66	6501	0.02	2000	
As	75	1	nogas	1.175	5.874	10.09	62975	0.00	2000	
Sr	88	1	nogas	0.098	0.488	15.06	4174	0.00	2000	
Ag	107	1	nogas	0.003	0.014	53.61	187	0.00	2000	
Cd	111	1	nogas	0.012	0.059	48.98	63	0.02	2000	
Sb	121	1	nogas	0.070	0.350	1.17	2477	0.00	2000	
Tl	205	1	nogas	0.236	1.181	11.71	5011	0.00	2000	
Pb	208	1	nogas	-0.051	-0.254	-12.95	2730	0.00	2000	
U	238	1	nogas	0.041	0.207	17.32	1123	0.00	2000	
[Pb]	206	1	nogas	-0.071	-0.355	-18.96	687	-0.01	2000	
[Pb]	207	1	nogas	-0.048	-0.239	-32.60	600	-0.01	2000	
Na	23	2	He	57.553	287.766	4.60	164749	0.03	200000	
Mg	24	2	He	8.624	43.119	2.77	8675	0.10	200000	
Al	27	2	He	2.766	13.832	17.10	2504	0.11	2000	
K	39	2	He	14.572	72.859	13.00	239384	0.01	200000	
Ca	43	2	He	29.518	147.590	4.21	93	31.63	200000	
Ca	44	2	He	14.950	74.750	32.44	4921	0.30	200000	
V	51	2	He	-0.203	-1.013	-7.37	4308	0.00	2000	
Cr	52	2	He	0.149	0.747	13.51	6928	0.00	2000	
Mn	55	2	He	1.070	5.352	3.78	8519	0.01	2000	
Fe	56	2	He	2.481	12.403	6.94	30873	0.01	200000	
Co	59	2	He	0.007	0.034	118.39	470	0.00	2000	
Ni	60	2	He	-0.416	-2.082	-7.89	400	-0.10	2000	
Cu	63	2	He	-0.401	-2.005	-9.05	24186	0.00	2000	
Zn	66	2	He	0.555	2.776	20.22	2073	0.03	2000	
As	75	2	He	0.038	0.189	83.75	391	0.01	2000	
Se	78	2	He	-0.114	-0.570	-58.08	185	-0.06	2000	
B	11	1	nogas	51.487	257.436	1.46	251669	0.02	2000	
Si	28	1	nogas	-44.034	-220.169	-25.76	1624086	0.00	2000	
Ca	43	1	nogas	39.549	197.747	6.71	2650	1.49	200000	

Sample Report

Ca	44	1	nogas	-207.608	-1038.042	-0.54	486444	-0.04	200000	
Fe	56	1	nogas	-3.282	-16.408	-56.87	2315991	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	6.885	34.427	25.43	20642	0.03	2000	
Se	82	1	nogas	-0.037	-0.186	-204.96	383	-0.01	2000	
Mo	95	1	nogas	0.083	0.414	4.58	887	0.01	2000	
Sn	118	1	nogas	0.301	1.504	7.92	4021	0.01	2000	
Ba	137	1	nogas	0.030	0.151	67.75	500	0.01	2000	
Sb	121	2	He	0.086	0.432	19.42	987	0.01	2000	
La	139	1	nogas	13.476	67.381	114.43	87	15.55	2000	
Au	197	1	nogas	-93.427	-467.133	-321.41	17	-560.56	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1128350	1.52	1229805	91.75	70	125	
Ge	72	1	nogas	3790236	1.16	3541557	107.02	70	125	
In	115	1	nogas	3223248	2.83	3006327	107.22	70	125	
Bi	209	1	nogas	2182741	2.21	2153140	101.37	70	125	
Ge	72	2	He	942164	3.09	993327	94.85	70	125	

Sample Report

Sample Table

Sample Name	HS18120471-10MS
Data File Name	061SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:53:28-06:00
Sample Type	Sample
Dilution	1
Comment	TW B135380
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	49.984	49.984	4.08	388603	0.01	2000	
Na	23	1	nogas	4929.702	4929.702	7.52	145389449	0.00	200000	
Mg	24	1	nogas	4900.265	4900.265	5.07	92932742	0.01	200000	
Al	27	1	nogas	107.181	107.181	0.61	2348960	0.00	2000	
K	39	1	nogas	5342.808	5342.808	1.48	126965720	0.00	200000	
Ti	47	1	nogas	151.533	151.533	3.11	335575	0.05	2000	
V	51	1	nogas	52.304	52.304	6.88	1785914	0.00	2000	
Cr	52	1	nogas	52.058	52.058	4.48	1373391	0.00	2000	
Mn	55	1	nogas	52.481	52.481	4.54	1681174	0.00	2000	
Co	59	1	nogas	52.756	52.756	3.00	1465204	0.00	2000	
Ni	60	1	nogas	50.854	50.854	2.46	317454	0.02	2000	
Cu	63	1	nogas	48.817	48.817	2.62	820757	0.01	2000	
Zn	66	1	nogas	52.726	52.726	1.77	264569	0.02	2000	
As	75	1	nogas	49.012	49.012	2.14	366720	0.01	2000	
Sr	88	1	nogas	101.591	101.591	1.55	3249860	0.00	2000	
Ag	107	1	nogas	51.923	51.923	3.09	837744	0.01	2000	
Cd	111	1	nogas	50.044	50.044	1.01	177535	0.03	2000	
Sb	121	1	nogas	53.057	53.057	3.11	761105	0.01	2000	
Tl	205	1	nogas	48.575	48.575	2.10	978912	0.00	2000	
Pb	208	1	nogas	54.673	54.673	3.42	1394889	0.00	2000	
U	238	1	nogas	99.173	99.173	4.80	2650219	0.00	2000	
[Pb]	206	1	nogas	49.746	49.746	0.93	341692	0.01	2000	
[Pb]	207	1	nogas	49.923	49.923	3.07	306744	0.02	2000	
Na	23	2	He	5331.709	5331.709	2.31	9425026	0.06	200000	
Mg	24	2	He	5185.685	5185.685	2.10	5104513	0.10	200000	
Al	27	2	He	101.958	101.958	1.90	57926	0.18	2000	
K	39	2	He	5682.299	5682.299	1.59	5511567	0.10	200000	
Ca	43	2	He	5217.463	5217.463	2.14	15400	33.88	200000	
Ca	44	2	He	5117.061	5117.061	1.08	260950	1.96	200000	
V	51	2	He	49.589	49.589	2.30	364614	0.01	2000	
Cr	52	2	He	52.135	52.135	3.08	410525	0.01	2000	
Mn	55	2	He	50.290	50.290	0.40	286145	0.02	2000	
Fe	56	2	He	5050.922	5050.922	1.99	34751042	0.01	200000	
Co	59	2	He	51.025	51.025	1.97	551535	0.01	2000	
Ni	60	2	He	50.853	50.853	1.79	141492	0.04	2000	
Cu	63	2	He	49.349	49.349	0.60	379166	0.01	2000	
Zn	66	2	He	50.710	50.710	0.98	88842	0.06	2000	
As	75	2	He	50.388	50.388	2.18	85826	0.06	2000	
Se	78	2	He	48.159	48.159	3.29	6809	0.71	2000	
B	11	1	nogas	573.422	573.422	3.90	2662764	0.02	2000	
Si	28	1	nogas	5590.625	5590.625	2.56	8402368	0.07	2000	>LDR
Ca	43	1	nogas	5375.512	5375.512	1.39	223842	2.40	200000	
Ca	44	1	nogas	5238.224	5238.224	3.74	4012707	0.13	200000	
Fe	56	1	nogas	5272.557	5272.557	2.51	146653316	0.00	200000	
Se	77	1	nogas	44.370	44.370	3.83	31254	0.14	2000	
Se	82	1	nogas	52.980	52.980	6.29	17699	0.30	2000	

Sample Report

Mo	95	1	nogas	49.998	49.998	0.66	333463	0.01	2000	
Sn	118	1	nogas	96.855	96.855	1.78	921882	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	49.191	49.191	2.32	226580	0.02	2000	
Sb	121	2	He	48.122	48.122	0.83	275048	0.02	2000	
La	139	1	nogas	44.758	44.758	26.54	203	22.01	2000	
Au	197	1	nogas	-192.267	-192.267	-74.40	13	-1442.00	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1106516	1.32	1229805	89.97	70	125	
Ge	72	1	nogas	3763010	1.51	3541557	106.25	70	125	
In	115	1	nogas	3248004	1.67	3006327	108.04	70	125	
Bi	209	1	nogas	2260815	0.61	2153140	105.00	70	125	
Ge	72	2	He	980282	2.67	993327	98.69	70	125	

Sample Report

Sample Table

Sample Name	HS18120471-10MSD
Data File Name	062SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:55:28-06:00
Sample Type	Sample
Dilution	1
Comment	TW B135380
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	50.040	50.040	1.21	376231	0.01	2000	
Na	23	1	nogas	4860.699	4860.699	1.28	140291241	0.00	200000	
Mg	24	1	nogas	4857.387	4857.387	4.33	90030865	0.01	200000	
Al	27	1	nogas	103.051	103.051	4.72	2292578	0.00	2000	
K	39	1	nogas	5008.062	5008.062	3.09	121326415	0.00	200000	
Ti	47	1	nogas	140.512	140.512	2.68	315832	0.04	2000	
V	51	1	nogas	50.025	50.025	0.41	1744752	0.00	2000	
Cr	52	1	nogas	48.170	48.170	3.54	1293062	0.00	2000	
Mn	55	1	nogas	51.321	51.321	1.87	1670162	0.00	2000	
Co	59	1	nogas	48.724	48.724	4.06	1373710	0.00	2000	
Ni	60	1	nogas	48.376	48.376	3.72	306342	0.02	2000	
Cu	63	1	nogas	46.125	46.125	2.99	791721	0.01	2000	
Zn	66	1	nogas	50.643	50.643	1.83	257936	0.02	2000	
As	75	1	nogas	46.627	46.627	3.42	356765	0.01	2000	
Sr	88	1	nogas	98.638	98.638	3.29	3201922	0.00	2000	
Ag	107	1	nogas	49.665	49.665	3.54	813117	0.01	2000	
Cd	111	1	nogas	48.713	48.713	1.88	174319	0.03	2000	
Sb	121	1	nogas	49.932	49.932	2.16	727210	0.01	2000	
Tl	205	1	nogas	47.440	47.440	5.06	955207	0.00	2000	
Pb	208	1	nogas	52.171	52.171	2.25	1331238	0.00	2000	
U	238	1	nogas	96.881	96.881	7.13	2585838	0.00	2000	
[Pb]	206	1	nogas	48.407	48.407	6.15	332092	0.01	2000	
[Pb]	207	1	nogas	47.478	47.478	7.92	291204	0.02	2000	
Na	23	2	He	5140.831	5140.831	3.68	8999272	0.06	200000	
Mg	24	2	He	5039.948	5039.948	4.08	4910906	0.10	200000	
Al	27	2	He	100.293	100.293	2.19	56414	0.18	2000	
K	39	2	He	5507.465	5507.465	1.76	5348934	0.10	200000	
Ca	43	2	He	4923.635	4923.635	2.96	14382	34.23	200000	
Ca	44	2	He	4936.681	4936.681	1.49	249243	1.98	200000	
V	51	2	He	48.796	48.796	1.67	355149	0.01	2000	
Cr	52	2	He	50.962	50.962	0.68	397425	0.01	2000	
Mn	55	2	He	50.296	50.296	1.39	283271	0.02	2000	
Fe	56	2	He	5015.590	5015.590	1.93	34143492	0.01	200000	
Co	59	2	He	49.682	49.682	1.52	531295	0.01	2000	
Ni	60	2	He	48.910	48.910	1.37	134717	0.04	2000	
Cu	63	2	He	47.917	47.917	1.31	365158	0.01	2000	
Zn	66	2	He	49.862	49.862	0.61	86487	0.06	2000	
As	75	2	He	48.350	48.350	1.08	81502	0.06	2000	
Se	78	2	He	47.344	47.344	3.10	6628	0.71	2000	
B	11	1	nogas	587.524	587.524	3.28	2637040	0.02	2000	
Si	28	1	nogas	5329.904	5329.904	4.17	8209063	0.06	2000	>LDR
Ca	43	1	nogas	5087.335	5087.335	2.70	215028	2.37	200000	
Ca	44	1	nogas	4786.475	4786.475	2.81	3776039	0.13	200000	
Fe	56	1	nogas	4976.916	4976.916	3.43	140627670	0.00	200000	
Se	77	1	nogas	37.139	37.139	8.65	29604	0.13	2000	
Se	82	1	nogas	48.881	48.881	4.74	16604	0.29	2000	

Sample Report

Mo	95	1	nogas	46.335	46.335	4.13	313540	0.01	2000	
Sn	118	1	nogas	92.643	92.643	2.03	889639	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	46.210	46.210	1.64	214707	0.02	2000	
Sb	121	2	He	47.768	47.768	0.99	270220	0.02	2000	
La	139	1	nogas	39.111	39.111	11.36	183	21.33	2000	
Au	197	1	nogas	-359.420	-359.420	-39.66	7	-5391.31	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1069931	2.73	1229805	87.00	70	125	
Ge	72	1	nogas	3820372	2.96	3541557	107.87	70	125	
In	115	1	nogas	3276440	0.86	3006327	108.98	70	125	
Bi	209	1	nogas	2262856	5.32	2153140	105.10	70	125	
Ge	72	2	He	970267	2.37	993327	97.68	70	125	

Sample Report

Sample Table

Sample Name	HS18120471-10PDS
Data File Name	063SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:57:29-06:00
Sample Type	Sample
Dilution	1
Comment	TW B135380
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	100.933	100.933	2.12	781753	0.01	2000	
Na	23	1	nogas	10335.665	10335.665	4.18	287647956	0.00	200000	
Mg	24	1	nogas	10347.076	10347.076	4.49	185380567	0.01	200000	
Al	27	1	nogas	105.254	105.254	0.92	2325511	0.00	2000	
K	39	1	nogas	10640.830	10640.830	4.02	245879480	0.00	200000	
Ti	47	1	nogas	98.099	98.099	2.49	219069	0.04	2000	
V	51	1	nogas	100.877	100.877	4.59	3254578	0.00	2000	
Cr	52	1	nogas	101.751	101.751	3.17	2661862	0.00	2000	
Mn	55	1	nogas	102.948	102.948	5.01	3295723	0.00	2000	
Co	59	1	nogas	98.413	98.413	3.71	2751713	0.00	2000	
Ni	60	1	nogas	101.074	101.074	2.63	636602	0.02	2000	
Cu	63	1	nogas	98.917	98.917	2.72	1590044	0.01	2000	
Zn	66	1	nogas	106.840	106.840	2.75	540439	0.02	2000	
As	75	1	nogas	98.758	98.758	2.79	688278	0.01	2000	
Sr	88	1	nogas	0.185	0.185	11.63	6988	0.00	2000	
Ag	107	1	nogas	103.258	103.258	2.37	1678312	0.01	2000	
Cd	111	1	nogas	103.249	103.249	3.40	361504	0.03	2000	
Sb	121	1	nogas	97.077	97.077	4.87	1401417	0.01	2000	
Tl	205	1	nogas	105.601	105.601	0.72	2042965	0.01	2000	
Pb	208	1	nogas	108.431	108.431	1.68	2762449	0.00	2000	
U	238	1	nogas	0.272	0.272	66.55	7132	0.00	2000	
[Pb]	206	1	nogas	105.054	105.054	1.40	691372	0.02	2000	
[Pb]	207	1	nogas	102.819	102.819	4.34	605030	0.02	2000	
Na	23	2	He	11209.120	11209.120	3.75	19575156	0.06	200000	
Mg	24	2	He	10791.576	10791.576	3.32	10531519	0.10	200000	
Al	27	2	He	107.318	107.318	2.40	60413	0.18	2000	
K	39	2	He	11902.353	11902.353	1.73	11297531	0.11	200000	
Ca	43	2	He	10254.955	10254.955	1.28	30008	34.17	200000	
Ca	44	2	He	10317.358	10317.358	1.22	517300	1.99	200000	
V	51	2	He	106.341	106.341	0.90	768488	0.01	2000	
Cr	52	2	He	107.956	107.956	3.35	836699	0.01	2000	
Mn	55	2	He	104.418	104.418	2.27	586027	0.02	2000	
Fe	56	2	He	10686.914	10686.914	1.26	72884922	0.01	200000	
Co	59	2	He	108.463	108.463	1.08	1161663	0.01	2000	
Ni	60	2	He	109.098	109.098	0.78	299147	0.04	2000	
Cu	63	2	He	106.536	106.536	1.02	779480	0.01	2000	
Zn	66	2	He	107.810	107.810	1.91	185928	0.06	2000	
As	75	2	He	106.126	106.126	1.60	178827	0.06	2000	
Se	78	2	He	104.768	104.768	3.48	14438	0.73	2000	
B	11	1	nogas	50.594	50.594	0.32	241698	0.02	2000	
Si	28	1	nogas	705.944	705.944	10.10	2534524	0.03	2000	
Ca	43	1	nogas	10604.825	10604.825	3.06	443889	2.39	200000	
Ca	44	1	nogas	10414.212	10414.212	3.22	7424413	0.14	200000	
Fe	56	1	nogas	10496.717	10496.717	3.73	291727907	0.00	200000	

Sample Report

Se	77	1	nogas	83.786	83.786	2.91	42891	0.20	2000	
Se	82	1	nogas	107.072	107.072	0.88	35669	0.30	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	97.940	97.940	4.93	657500	0.01	2000	
Sn	118	1	nogas	0.526	0.526	21.67	6158	0.01	2000	
Ba	137	1	nogas	98.530	98.530	5.32	447262	0.02	2000	
Sb	121	2	He	96.801	96.801	0.82	548189	0.02	2000	
La	139	1	nogas	99.709	99.709	14.82	403	24.72	2000	
Au	197	1	nogas	1.014	1.014	45891.83	20	5.07	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1102250	2.68	1229805	89.63	70	125	
Ge	72	1	nogas	3793488	3.99	3541557	107.11	70	125	
In	115	1	nogas	3210183	5.98	3006327	106.78	70	125	
Bi	209	1	nogas	2170858	3.76	2153140	100.82	70	125	
Ge	72	2	He	972116	1.50	993327	97.86	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	064_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:59:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	96.447	2.613	711333	2.10	100	96.4	90	110	
Na	23	1	nogas	9830.502	4.799	268990906	2.32	10000	98.3	90	110	
Mg	24	1	nogas	9708.229	1.229	171122775	1.94	10000	97.1	90	110	
Al	27	1	nogas	99.708	3.875	2139983	3.83	100	99.7	90	110	
K	39	1	nogas	10197.318	5.430	229027513	2.09	10000	102.0	90	110	
Ti	47	1	nogas	105.583	9.025	229336	12.09	100	105.6	90	110	
V	51	1	nogas	100.429	4.385	3145497	0.61	100	100.4	90	110	
Cr	52	1	nogas	99.149	3.990	2518554	1.45	100	99.1	90	110	
Mn	55	1	nogas	104.918	4.966	3260070	1.53	100	104.9	90	110	
Co	59	1	nogas	99.362	7.036	2694741	3.66	100	99.4	90	110	
Ni	60	1	nogas	98.363	6.039	600884	2.90	100	98.4	90	110	
Cu	63	1	nogas	94.437	9.684	1473663	5.82	100	94.4	90	110	
Zn	66	1	nogas	101.139	5.209	495936	2.23	100	101.1	90	110	
As	75	1	nogas	97.235	2.492	658674	2.04	100	97.2	90	110	
Sr	88	1	nogas	100.175	4.930	3132364	1.43	100	100.2	90	110	
Ag	107	1	nogas	99.446	8.966	1566640	5.74	100	99.4	90	110	
Cd	111	1	nogas	100.100	1.038	337329	1.88	100	100.1	90	110	
Sb	121	1	nogas	101.431	1.446	1422895	3.97	100	101.4	90	110	
Tl	205	1	nogas	101.482	2.091	1965777	1.88	100	101.5	90	110	
Pb	208	1	nogas	105.599	1.133	2690420	1.13	100	105.6	90	110	
U	238	1	nogas	101.250	6.938	2598587	3.99	100	101.3	90	110	
[Pb]	206	1	nogas	102.130	2.252	673276	2.78	100	102.1	90	110	
[Pb]	207	1	nogas	99.629	1.195	587818	3.19	100	99.6	90	110	
Na	23	2	He	10403.092	2.393	17746824	3.17	10000	104.0	90	110	
Mg	24	2	He	10038.200	1.377	9565854	1.50	10000	100.4	90	110	
Al	27	2	He	97.496	1.307	53686	1.98	100	97.5	90	110	
K	39	2	He	10726.960	0.740	10204167	0.72	10000	107.3	90	110	
Ca	43	2	He	9985.284	2.699	28522	3.07	10000	99.9	90	110	
Ca	44	2	He	9857.986	1.095	482667	1.66	10000	98.6	90	110	
V	51	2	He	100.361	0.875	708380	1.44	100	100.4	90	110	
Cr	52	2	He	104.120	1.476	788180	2.24	100	104.1	90	110	
Mn	55	2	He	100.033	1.447	548306	1.99	100	100.0	90	110	
Fe	56	2	He	10011.439	1.699	66666181	2.41	10000	100.1	90	110	
Co	59	2	He	101.169	1.049	1057912	1.73	100	101.2	90	110	
Ni	60	2	He	99.437	0.680	266310	1.45	100	99.4	90	110	
Cu	63	2	He	97.903	1.534	701567	2.27	100	97.9	90	110	
Zn	66	2	He	101.690	0.687	171295	1.23	100	101.7	90	110	
As	75	2	He	100.248	2.018	164953	2.56	100	100.2	90	110	
Se	78	2	He	96.431	2.731	12995	3.45	100	96.4	90	110	
B	11	1	nogas	568.948	2.072	2506174	0.59	500	113.8	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4541.493	4.895	6979678	0.56	5000	90.8	90	110	
Ca	43	1	nogas	10054.829	4.024	408517	1.68	10000	100.5	90	110	
Ca	44	1	nogas	9836.513	6.685	6836833	3.71	10000	98.4	90	110	
Fe	56	1	nogas	10048.500	4.742	271105081	1.13	10000	100.5	90	110	
Se	77	1	nogas	88.529	4.161	42954	1.27	100	88.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.769	3.083	31311	0.58	100	96.8	90	110	
Mo	95	1	nogas	99.007	4.820	645201	2.47	100	99.0	90	110	
Sn	118	1	nogas	97.386	0.672	880856	2.54	100	97.4	90	110	
Ba	137	1	nogas	100.883	2.357	440941	1.76	100	100.9	90	110	
Sb	121	2	He	98.029	1.486	541930	2.24	100	98.0	90	110	
Li	7	1	nogas	97.721	7.875	1604256	6.74	100	97.7	90	110	
P	31	1	nogas	462.284	5.231	1047965	1.27	500	92.5	90	110	
La	139	1	nogas	125.882	3.067	480	5.51	100	125.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-7.027	-3725.153	20	50.00	100	-7.0	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1049527	1.52	1229805	85.34	70	125	
Ge	72	1	nogas	3682061	3.63	3541557	103.97	70	125	
In	115	1	nogas	3086214	2.85	3006327	102.66	70	125	
Bi	209	1	nogas	2174348	3.13	2153140	100.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	948960	0.79	993327	95.53	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	065_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:01:41-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.043	28.0	383	26.3	1	
Na	23	1	nogas	27.159	14.8	1236893	4.0	100	
Mg	24	1	nogas	5.785	41.4	105141	35.4	100	
Al	27	1	nogas	-0.608	-17.5	27364	7.5	5	
K	39	1	nogas	2.413	607.3	8599292	1.7	100	
Ti	47	1	nogas	0.045	123.0	587	23.6	2.5	
V	51	1	nogas	-0.798	-30.5	200468	1.1	2.5	
Cr	52	1	nogas	-0.209	-64.8	37989	7.8	2.5	
Mn	55	1	nogas	0.172	36.3	30105	4.5	2.5	
Co	59	1	nogas	0.040	14.9	2554	5.6	2.5	
Ni	60	1	nogas	0.321	15.4	1057	29.3	2.5	
Cu	63	1	nogas	-2.097	-6.9	51088	1.3	2.5	
Zn	66	1	nogas	0.470	9.5	2387	6.4	2.5	
As	75	1	nogas	-1.159	-12.9	46279	1.5	2.5	
Sr	88	1	nogas	0.083	24.4	3567	15.7	2.5	
Ag	107	1	nogas	0.041	50.2	770	40.0	2.5	
Cd	111	1	nogas	0.030	40.9	130	35.3	1	
Sb	121	1	nogas	1.753	20.7	25763	18.8	2.5	
Tl	205	1	nogas	0.722	38.5	14751	42.4	1	
Pb	208	1	nogas	0.003	1422.7	4094	25.5	2.5	
U	238	1	nogas	0.166	65.1	4461	69.7	2.5	
[Pb]	206	1	nogas	-0.015	-178.9	1073	21.6	2.5	
[Pb]	207	1	nogas	0.004	582.8	920	21.0	2.5	
Na	23	2	He	40.129	2.0	136293	1.2	100	
Mg	24	2	He	3.401	8.3	3754	6.6	100	
Al	27	2	He	-0.751	-2.3	627	0.9	5	
K	39	2	He	8.521	43.8	233755	1.5	100	
Ca	43	2	He	12.933	62.0	47	49.5	100	
Ca	44	2	He	0.243	2329.9	4244	6.8	100	
V	51	2	He	-0.387	-1.5	3050	2.0	2.5	
Cr	52	2	He	-0.015	-176.1	5741	4.1	2.5	
Mn	55	2	He	0.003	874.6	2760	4.5	2.5	
Fe	56	2	He	4.005	6.0	41226	3.9	100	
Co	59	2	He	0.023	2.0	640	1.6	2.5	
Ni	60	2	He	-0.448	-7.2	317	25.3	2.5	
Cu	63	2	He	-1.212	-4.8	18760	2.0	2.5	
Zn	66	2	He	-0.303	-8.7	657	8.4	2.5	
As	75	2	He	0.016	68.7	358	3.8	2.5	
Se	78	2	He	-0.029	-873.9	198	17.8	2.5	
B	11	1	nogas	42.625	2.3	215160	2.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-237.020	-14.1	1338815	1.3	5	
Ca	43	1	nogas	39.627	12.1	2554	5.0	100	
Ca	44	1	nogas	-208.748	-16.4	467725	1.3	100	
Fe	56	1	nogas	0.415	3006.2	2327541	12.9	100	
Se	77	1	nogas	-11.910	-6.5	14666	4.0	2.5	
Se	82	1	nogas	0.008	1297.8	383	5.4	2.5	
Mo	95	1	nogas	0.355	29.9	2610	25.0	2.5	
Sn	118	1	nogas	0.375	25.5	4751	20.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.031	53.9	507	16.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.148	2.5	6848	0.5	2.5	
P	31	1	nogas	-2.900	-52.9	109009	3.0	10	
La	139	1	nogas	11.715	57.2	80	33.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-100.092	-139.3	17	34.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1157608	3.64	1229805	94.13	70	125	
Ge	72	1	nogas	3653766	3.43	3541557	103.17	70	125	
In	115	1	nogas	3240555	2.29	3006327	107.79	70	125	
Bi	209	1	nogas	2200471	5.45	2153140	102.20	70	125	
Ge	72	2	He	948155	1.90	993327	95.45	70	125	

Sample Report

Sample Table

Sample Name	HS18111497-02
Data File Name	075SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:22:19-06:00
Sample Type	Sample
Dilution	1
Comment	TW B135380
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.012	0.012	69.01	110	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	52835.049	52835.049	3.33	905252354	0.01	200000	
Al	27	1	nogas	5.466	5.466	1.17	141354	0.00	2000	
K	39	1	nogas	1188.874	1188.874	0.13	31212494	0.00	200000	
Ti	47	1	nogas	2.114	2.114	7.48	4604	0.05	2000	
V	51	1	nogas	1.766	1.766	30.38	251485	0.00	2000	
Cr	52	1	nogas	-0.190	-0.190	-10.59	35257	0.00	2000	
Mn	55	1	nogas	89.765	89.765	2.52	2540546	0.00	2000	
Co	59	1	nogas	1.742	1.742	1.25	44327	0.00	2000	
Ni	60	1	nogas	5.882	5.882	1.28	31925	0.02	2000	
Cu	63	1	nogas	-2.828	-2.828	-1.94	37031	-0.01	2000	
Zn	66	1	nogas	6.493	6.493	1.79	29053	0.02	2000	
As	75	1	nogas	5.134	5.134	6.28	77979	0.01	2000	
Sr	88	1	nogas	1478.116	1478.116	3.94	42026307	0.00	2000	
Ag	107	1	nogas	0.000	0.000	2219.90	127	0.00	2000	
Cd	111	1	nogas	0.047	0.047	18.62	167	0.03	2000	
Sb	121	1	nogas	0.026	0.026	38.56	1623	0.00	2000	
Tl	205	1	nogas	0.009	0.009	44.20	547	0.00	2000	
Pb	208	1	nogas	-0.083	-0.083	-13.09	1913	0.00	2000	
U	238	1	nogas	6.607	6.607	6.16	159627	0.00	2000	
[Pb]	206	1	nogas	-0.094	-0.094	-12.53	497	-0.02	2000	
[Pb]	207	1	nogas	-0.083	-0.083	-16.42	367	-0.02	2000	
Na	23	2	He	315845.165	315845.165	3.05	471921033	0.07	200000	>LDR
Mg	24	2	He	58026.734	58026.734	1.77	48617978	0.12	200000	
Al	27	2	He	5.122	5.122	6.14	3340	0.15	2000	
K	39	2	He	1095.815	1095.815	2.02	1245168	0.09	200000	
Ca	43	2	He	113757.101	113757.101	0.27	285634	39.83	200000	
Ca	44	2	He	110226.780	110226.780	1.28	4707185	2.34	200000	
V	51	2	He	0.020	0.020	115.89	5189	0.00	2000	
Cr	52	2	He	0.107	0.107	10.26	5854	0.00	2000	
Mn	55	2	He	86.987	86.987	1.13	419576	0.02	2000	
Fe	56	2	He	167.971	167.971	0.72	996111	0.02	200000	
Co	59	2	He	1.656	1.656	1.85	15570	0.01	2000	
Ni	60	2	He	3.235	3.235	2.61	8902	0.04	2000	
Cu	63	2	He	-2.665	-2.665	-1.87	7708	-0.03	2000	
Zn	66	2	He	4.753	4.753	9.25	8015	0.06	2000	
As	75	2	He	0.775	0.775	7.26	1410	0.05	2000	
Se	78	2	He	0.065	0.065	285.84	185	0.04	2000	
B	11	1	nogas	80.661	80.661	4.30	327024	0.02	2000	
Si	28	1	nogas	228042.472	228042.472	3.20	245878916	0.09	2000	>LDR
Ca	43	1	nogas	115152.818	115152.818	1.11	4245669	2.71	200000	
Ca	44	1	nogas	115990.410	115990.410	1.80	67411974	0.17	200000	
Fe	56	1	nogas	158.649	158.649	1.40	5984316	0.00	200000	
Se	77	1	nogas	27.282	27.282	17.16	23429	0.12	2000	
Se	82	1	nogas	1.702	1.702	19.68	843	0.20	2000	

Sample Report

Mo	95	1	nogas	0.407	0.407	15.71	2704	0.02	2000	
Sn	118	1	nogas	0.006	0.006	32.16	1107	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	31.717	31.717	0.66	130136	0.02	2000	
Sb	121	2	He	0.034	0.034	12.60	620	0.01	2000	
La	139	1	nogas	44.623	44.623	18.58	180	24.79	2000	
Au	197	1	nogas	-257.480	-257.480	-102.71	10	-2574.80	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	948928	5.03	1229805	77.16	70	125	
Ge	72	1	nogas	3345875	0.91	3541557	94.47	70	125	
In	115	1	nogas	2891072	2.26	3006327	96.17	70	125	
Bi	209	1	nogas	2047433	5.04	2153140	95.09	70	125	
Ge	72	2	He	834468	1.37	993327	84.01	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	076_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:24:22-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	96.467	5.984	667801	2.48	100	96.5	90	110	
Na	23	1	nogas	9641.679	3.300	248021406	1.41	10000	96.4	90	110	
Mg	24	1	nogas	9750.660	2.934	161471124	1.24	10000	97.5	90	110	
Al	27	1	nogas	100.363	1.654	2000731	3.12	100	100.4	90	110	
K	39	1	nogas	9983.520	1.784	208568967	1.63	10000	99.8	90	110	
Ti	47	1	nogas	97.494	1.552	196393	3.84	100	97.5	90	110	
V	51	1	nogas	99.182	2.870	2889372	2.96	100	99.2	90	110	
Cr	52	1	nogas	98.976	1.634	2335998	1.27	100	99.0	90	110	
Mn	55	1	nogas	100.934	4.774	2914883	3.63	100	100.9	90	110	
Co	59	1	nogas	96.952	4.905	2443559	2.57	100	97.0	90	110	
Ni	60	1	nogas	96.410	3.393	547286	1.09	100	96.4	90	110	
Cu	63	1	nogas	92.670	4.239	1346057	1.57	100	92.7	90	110	
Zn	66	1	nogas	99.910	1.109	455375	2.08	100	99.9	90	110	
As	75	1	nogas	95.880	3.354	603797	1.80	100	95.9	90	110	
Sr	88	1	nogas	101.417	3.026	2946839	1.87	100	101.4	90	110	
Ag	107	1	nogas	97.795	6.281	1431883	3.84	100	97.8	90	110	
Cd	111	1	nogas	97.687	1.372	311134	1.58	100	97.7	90	110	
Sb	121	1	nogas	102.180	0.926	1330855	2.38	100	102.2	90	110	
Tl	205	1	nogas	99.632	6.627	1856577	4.65	100	99.6	90	110	
Pb	208	1	nogas	99.265	0.951	2529288	0.95	100	99.3	90	110	
U	238	1	nogas	99.226	3.510	2453348	1.26	100	99.2	90	110	
[Pb]	206	1	nogas	97.579	3.505	618985	0.23	100	97.6	90	110	
[Pb]	207	1	nogas	96.048	3.194	545213	0.13	100	96.0	90	110	
Na	23	2	He	10513.356	0.228	16217431	2.02	10000	105.1	90	110	
Mg	24	2	He	10116.296	0.652	8718622	2.11	10000	101.2	90	110	
Al	27	2	He	94.982	3.300	47303	1.30	100	95.0	90	110	
K	39	2	He	9600.644	1.485	9156455	1.45	10000	96.0	90	110	
Ca	43	2	He	9839.086	4.909	25401	3.24	10000	98.4	90	110	
Ca	44	2	He	9719.325	2.128	430298	0.31	10000	97.2	90	110	
V	51	2	He	101.740	1.140	649277	1.07	100	101.7	90	110	
Cr	52	2	He	105.198	1.576	719948	0.73	100	105.2	90	110	
Mn	55	2	He	99.022	2.870	490691	0.95	100	99.0	90	110	
Fe	56	2	He	9750.742	4.136	58684817	2.10	10000	97.5	90	110	
Co	59	2	He	100.946	3.165	954232	1.41	100	100.9	90	110	
Ni	60	2	He	101.154	1.688	244921	0.68	100	101.2	90	110	
Cu	63	2	He	99.548	2.269	644503	0.43	100	99.5	90	110	
Zn	66	2	He	100.659	1.270	153350	2.15	100	100.7	90	110	
As	75	2	He	99.439	2.117	147931	0.49	100	99.4	90	110	
Se	78	2	He	95.616	0.415	11652	1.80	100	95.6	90	110	
B	11	1	nogas	533.568	4.904	2207009	0.37	500	106.7	90	110	
Si	28	1	nogas	4570.225	3.496	6515177	0.44	5000	91.4	90	110	
Ca	43	1	nogas	10108.696	0.169	381677	2.50	10000	101.1	90	110	
Ca	44	1	nogas	10026.710	2.324	6466804	2.55	10000	100.3	90	110	
Fe	56	1	nogas	9975.508	2.572	250132439	2.23	10000	99.8	90	110	
Se	77	1	nogas	91.993	6.098	40786	1.11	100	92.0	90	110	
Se	82	1	nogas	98.472	1.691	29598	2.70	100	98.5	90	110	
Mo	95	1	nogas	97.285	0.874	589257	2.73	100	97.3	90	110	
Sn	118	1	nogas	99.220	2.344	847902	0.28	100	99.2	90	110	
Ba	137	1	nogas	96.327	3.060	397874	0.64	100	96.3	90	110	
Sb	121	2	He	97.273	1.303	486285	2.13	100	97.3	90	110	
Li	7	1	nogas	96.273	1.971	1486691	2.86	100	96.3	90	110	
P	31	1	nogas	441.821	1.756	935529	1.00	500	88.4	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	85.766	28.964	320	27.06	100	85.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-437.277	-34.133	3	173.21	100	-437.3	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	986637	4.75	1229805	80.23	70	125	
Ge	72	1	nogas	3418839	2.45	3541557	96.53	70	125	
In	115	1	nogas	2916822	2.46	3006327	97.02	70	125	
Bi	209	1	nogas	2093223	3.33	2153140	97.22	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	858242	2.13	993327	86.40	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	077_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:26:27-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.034	28.3	297	25.5	1	
Na	23	1	nogas	46.691	1.4	1725961	1.4	100	
Mg	24	1	nogas	7.376	24.0	130423	21.7	100	
Al	27	1	nogas	-0.469	-11.7	28619	2.6	5	
K	39	1	nogas	-11.180	-36.8	7853599	1.1	100	
Ti	47	1	nogas	0.030	181.0	523	22.1	2.5	
V	51	1	nogas	-0.506	-31.4	197500	2.3	2.5	
Cr	52	1	nogas	-0.274	-15.4	34416	4.8	2.5	
Mn	55	1	nogas	0.264	18.1	31100	3.2	2.5	
Co	59	1	nogas	0.040	50.8	2434	23.8	2.5	
Ni	60	1	nogas	0.332	8.1	1060	16.5	2.5	
Cu	63	1	nogas	-3.248	-4.5	32362	4.3	2.5	
Zn	66	1	nogas	0.523	11.2	2504	11.5	2.5	
As	75	1	nogas	-1.192	-27.2	43529	2.4	2.5	
Sr	88	1	nogas	0.213	1.7	7185	2.9	2.5	
Ag	107	1	nogas	0.031	11.7	587	9.8	2.5	
Cd	111	1	nogas	0.033	33.4	133	28.4	1	
Sb	121	1	nogas	1.102	21.6	15851	21.6	2.5	
Tl	205	1	nogas	0.516	45.0	10424	47.8	1	
Pb	208	1	nogas	-0.027	-104.6	3337	21.4	2.5	
U	238	1	nogas	0.138	48.9	3597	52.8	2.5	
[Pb]	206	1	nogas	-0.048	-25.7	827	14.4	2.5	
[Pb]	207	1	nogas	-0.033	-96.0	683	32.2	2.5	
Na	23	2	He	66.652	3.6	165414	3.4	100	
Mg	24	2	He	5.987	8.7	5674	9.1	100	
Al	27	2	He	-0.510	-57.5	690	20.5	5	
K	39	2	He	-18.862	-13.7	208283	1.2	100	
Ca	43	2	He	50.268	33.7	140	32.7	100	
Ca	44	2	He	59.770	109.5	6482	43.3	100	
V	51	2	He	-0.403	-2.7	2678	1.9	2.5	
Cr	52	2	He	0.029	208.5	5538	8.2	2.5	
Mn	55	2	He	0.083	48.0	2917	6.6	2.5	
Fe	56	2	He	3.842	9.0	36607	5.3	100	
Co	59	2	He	0.029	21.0	643	9.1	2.5	
Ni	60	2	He	-0.433	-1.1	327	4.7	2.5	
Cu	63	2	He	-1.926	-1.3	12631	2.5	2.5	
Zn	66	2	He	-0.322	-15.5	570	14.4	2.5	
As	75	2	He	0.033	29.8	351	5.4	2.5	
Se	78	2	He	0.071	164.8	193	8.4	2.5	
B	11	1	nogas	36.396	5.5	173518	0.8	10	CCB Main CR1 Failed
Si	28	1	nogas	-179.069	-8.8	1329543	1.1	5	
Ca	43	1	nogas	31.739	6.6	2117	5.4	100	
Ca	44	1	nogas	-231.383	-4.1	428825	0.8	100	
Fe	56	1	nogas	10.103	48.4	2446727	6.9	100	
Se	77	1	nogas	-12.319	-23.5	13739	4.0	2.5	
Se	82	1	nogas	0.142	100.2	403	11.7	2.5	
Mo	95	1	nogas	0.273	44.3	1980	39.7	2.5	
Sn	118	1	nogas	0.271	35.3	3574	25.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.031	59.5	483	17.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.696	10.4	3974	9.3	2.5	
P	31	1	nogas	-10.143	-10.0	89296	1.4	10	
La	139	1	nogas	24.192	28.0	120	22.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-13.158	-3919.0	20	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1087537	5.82	1229805	88.43	70	125	
Ge	72	1	nogas	3452021	2.05	3541557	97.47	70	125	
In	115	1	nogas	3078939	2.01	3006327	102.42	70	125	
Bi	209	1	nogas	2148541	5.49	2153140	99.79	70	125	
Ge	72	2	He	864775	1.33	993327	87.06	70	125	

Sample Report

Sample Table

Sample Name	HS18111497-03
Data File Name	078SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:28:31-06:00
Sample Type	Sample
Dilution	1
Comment	TW B135380
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.030	0.030	11.88	247	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	62876.932	62876.932	3.20	1056492557	0.01	200000	
Al	27	1	nogas	5.353	5.353	1.90	140438	0.00	2000	
K	39	1	nogas	2318.897	2318.897	2.10	53914628	0.00	200000	
Ti	47	1	nogas	1.575	1.575	9.89	3577	0.04	2000	
V	51	1	nogas	-0.683	-0.683	-63.51	188378	0.00	2000	
Cr	52	1	nogas	-0.187	-0.187	-5.16	35651	0.00	2000	
Mn	55	1	nogas	476.574	476.574	3.05	13512141	0.00	2000	
Co	59	1	nogas	3.579	3.579	4.44	90442	0.00	2000	
Ni	60	1	nogas	5.700	5.700	2.81	31183	0.02	2000	
Cu	63	1	nogas	-2.754	-2.754	-3.14	38347	-0.01	2000	
Zn	66	1	nogas	5.254	5.254	2.15	23742	0.02	2000	
As	75	1	nogas	7.291	7.291	4.87	90992	0.01	2000	
Sr	88	1	nogas	2391.833	2391.833	0.63	68639242	0.00	2000	>LDR
Ag	107	1	nogas	0.009	0.009	29.08	257	0.00	2000	
Cd	111	1	nogas	0.012	0.012	53.69	57	0.02	2000	
Sb	121	1	nogas	0.168	0.168	17.19	3460	0.00	2000	
Tl	205	1	nogas	0.051	0.051	20.13	1363	0.00	2000	
Pb	208	1	nogas	-0.068	-0.068	-6.67	2290	0.00	2000	
U	238	1	nogas	0.415	0.415	2.00	10407	0.00	2000	
[Pb]	206	1	nogas	-0.088	-0.088	-10.66	557	-0.02	2000	
[Pb]	207	1	nogas	-0.056	-0.056	-5.17	533	-0.01	2000	
Na	23	2	He	263680.284	263680.284	0.58	404777847	0.07	200000	>LDR
Mg	24	2	He	66173.344	66173.344	3.25	56939729	0.12	200000	
Al	27	2	He	4.694	4.694	7.07	3220	0.15	2000	
K	39	2	He	2247.972	2247.972	2.13	2316918	0.10	200000	
Ca	43	2	He	134108.179	134108.179	1.91	345848	38.78	200000	
Ca	44	2	He	129471.359	129471.359	1.46	5678760	2.28	200000	
V	51	2	He	-0.383	-0.383	-5.08	2780	-0.01	2000	
Cr	52	2	He	0.060	0.060	34.17	5691	0.00	2000	
Mn	55	2	He	458.982	458.982	1.75	2264438	0.02	2000	
Fe	56	2	He	8703.967	8703.967	1.62	52345794	0.02	200000	
Co	59	2	He	3.477	3.477	5.18	33174	0.01	2000	
Ni	60	2	He	2.848	2.848	5.73	8212	0.03	2000	
Cu	63	2	He	-2.605	-2.605	-2.01	8299	-0.03	2000	
Zn	66	2	He	3.503	3.503	4.10	6341	0.06	2000	
As	75	2	He	2.441	2.441	3.24	3918	0.06	2000	
Se	78	2	He	0.117	0.117	256.16	196	0.06	2000	
B	11	1	nogas	65.996	65.996	2.39	289456	0.02	2000	
Si	28	1	nogas	173680.324	173680.324	1.88	189311244	0.09	2000	>LDR
Ca	43	1	nogas	133317.032	133317.032	4.01	4958727	2.69	200000	
Ca	44	1	nogas	134302.096	134302.096	1.34	78682467	0.17	200000	
Fe	56	1	nogas	8675.154	8675.154	3.09	215121680	0.00	200000	
Se	77	1	nogas	30.346	30.346	15.63	24427	0.12	2000	
Se	82	1	nogas	1.901	1.901	7.76	910	0.21	2000	

Sample Report

Mo	95	1	nogas	0.934	0.934	8.79	5881	0.02	2000	
Sn	118	1	nogas	0.049	0.049	25.61	1477	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	47.804	47.804	1.80	196640	0.02	2000	
Sb	121	2	He	0.165	0.165	15.14	1287	0.01	2000	
La	139	1	nogas	83.390	83.390	25.36	310	26.90	2000	
Au	197	1	nogas	-262.498	-262.498	-98.37	10	-2624.98	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1020287	0.92	1229805	82.96	70	125	
Ge	72	1	nogas	3376424	1.24	3541557	95.34	70	125	
In	115	1	nogas	2901545	1.92	3006327	96.51	70	125	
Bi	209	1	nogas	2112410	2.89	2153140	98.11	70	125	
Ge	72	2	He	857287	2.58	993327	86.30	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	088_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:49:12-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.098	3.813	668684	1.19	100	94.1	90	110	
Na	23	1	nogas	9849.023	4.662	242054489	0.48	10000	98.5	90	110	
Mg	24	1	nogas	9808.621	4.385	155212645	1.97	10000	98.1	90	110	
Al	27	1	nogas	99.950	2.216	1954363	2.41	100	99.9	90	110	
K	39	1	nogas	9975.245	2.558	204401821	0.62	10000	99.8	90	110	
Ti	47	1	nogas	96.007	0.926	189660	1.79	100	96.0	90	110	
V	51	1	nogas	98.833	2.849	2825196	2.96	100	98.8	90	110	
Cr	52	1	nogas	98.577	1.191	2283042	2.79	100	98.6	90	110	
Mn	55	1	nogas	100.926	2.942	2861495	4.80	100	100.9	90	110	
Co	59	1	nogas	97.209	1.141	2405021	2.07	100	97.2	90	110	
Ni	60	1	nogas	95.972	1.770	534719	2.99	100	96.0	90	110	
Cu	63	1	nogas	91.457	5.514	1304864	5.45	100	91.5	90	110	
Zn	66	1	nogas	99.632	2.021	445382	1.14	100	99.6	90	110	
As	75	1	nogas	95.563	1.241	590662	1.53	100	95.6	90	110	
Sr	88	1	nogas	102.395	1.344	2920008	3.20	100	102.4	90	110	
Ag	107	1	nogas	98.981	2.067	1422631	0.29	100	99.0	90	110	
Cd	111	1	nogas	97.044	2.815	306947	1.41	100	97.0	90	110	
Sb	121	1	nogas	101.608	2.352	1298202	3.07	100	101.6	90	110	
Tl	205	1	nogas	99.175	1.781	1827507	0.95	100	99.2	90	110	
Pb	208	1	nogas	97.235	1.262	2477648	1.26	100	97.2	90	110	
U	238	1	nogas	99.698	5.566	2437635	6.31	100	99.7	90	110	
[Pb]	206	1	nogas	98.830	2.209	619728	1.40	100	98.8	90	110	
[Pb]	207	1	nogas	96.528	1.680	541672	1.60	100	96.5	90	110	
Na	23	2	He	10239.174	1.778	15389426	1.69	10000	102.4	90	110	
Mg	24	2	He	10065.434	1.929	8451005	1.34	10000	100.7	90	110	
Al	27	2	He	96.720	2.675	46925	1.56	100	96.7	90	110	
K	39	2	He	9230.846	0.584	8812466	0.57	10000	92.3	90	110	
Ca	43	2	He	9952.515	2.744	25044	1.76	10000	99.5	90	110	
Ca	44	2	He	9818.406	0.572	423583	0.85	10000	98.2	90	110	
V	51	2	He	102.373	1.160	636557	1.02	100	102.4	90	110	
Cr	52	2	He	104.258	0.748	695343	1.04	100	104.3	90	110	
Mn	55	2	He	98.406	2.771	475197	1.47	100	98.4	90	110	
Fe	56	2	He	9889.226	3.273	58006177	1.99	10000	98.9	90	110	
Co	59	2	He	102.921	1.906	948153	0.99	100	102.9	90	110	
Ni	60	2	He	102.133	1.786	240948	1.05	100	102.1	90	110	
Cu	63	2	He	98.412	1.416	621187	1.05	100	98.4	90	110	
Zn	66	2	He	101.026	0.686	149951	0.82	100	101.0	90	110	
As	75	2	He	100.254	2.229	145329	1.52	100	100.3	90	110	
Se	78	2	He	94.661	1.366	11241	0.73	100	94.7	90	110	
B	11	1	nogas	518.112	5.579	2199096	2.92	500	103.6	90	110	
Si	28	1	nogas	4562.572	3.082	6384660	2.51	5000	91.3	90	110	
Ca	43	1	nogas	10020.910	2.059	371063	1.29	10000	100.2	90	110	
Ca	44	1	nogas	9757.850	2.279	6187698	1.63	10000	97.6	90	110	
Fe	56	1	nogas	9998.715	1.692	246000847	2.91	10000	100.0	90	110	
Se	77	1	nogas	85.498	5.659	38354	1.46	100	85.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.323	1.123	28700	2.28	100	97.3	90	110	
Mo	95	1	nogas	98.683	0.881	586231	1.16	100	98.7	90	110	
Sn	118	1	nogas	96.842	2.732	822040	1.20	100	96.8	90	110	
Ba	137	1	nogas	96.348	4.483	395280	3.08	100	96.3	90	110	
Sb	121	2	He	98.739	2.328	480863	1.35	100	98.7	90	110	
Li	7	1	nogas	99.478	1.720	1573003	1.26	100	99.5	90	110	
P	31	1	nogas	453.905	0.501	940064	1.55	500	90.8	90	110	
La	139	1	nogas	106.611	8.094	387	9.08	100	106.6	90	110	
Au	197	1	nogas	-71.235	-217.668	17	34.64	100	-71.2	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1011744	2.61	1229805	82.27	70	125	
Ge	72	1	nogas	3353519	1.86	3541557	94.69	70	125	
In	115	1	nogas	2897871	3.50	3006327	96.39	70	125	
Bi	209	1	nogas	2067903	0.84	2153140	96.04	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	836188	1.31	993327	84.18	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	089_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:51:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.041	28.7	340	26.5	1	
Na	23	1	nogas	26.975	3.7	1142520	1.4	100	
Mg	24	1	nogas	4.750	27.1	81329	23.9	100	
Al	27	1	nogas	-0.524	-32.1	26963	12.9	5	
K	39	1	nogas	1.449	316.1	7939518	0.5	100	
Ti	47	1	nogas	0.060	144.9	570	29.5	2.5	
V	51	1	nogas	-1.155	-24.0	176021	4.4	2.5	
Cr	52	1	nogas	-0.307	-22.7	32920	5.2	2.5	
Mn	55	1	nogas	0.218	15.7	29170	3.0	2.5	
Co	59	1	nogas	0.034	43.5	2224	16.5	2.5	
Ni	60	1	nogas	0.309	6.0	910	11.4	2.5	
Cu	63	1	nogas	-3.487	-2.9	28462	4.1	2.5	
Zn	66	1	nogas	0.486	5.5	2284	5.8	2.5	
As	75	1	nogas	-1.409	-14.7	41391	2.4	2.5	
Sr	88	1	nogas	0.141	8.9	4977	6.6	2.5	
Ag	107	1	nogas	0.024	12.9	473	10.0	2.5	
Cd	111	1	nogas	0.031	21.6	123	18.7	1	
Sb	121	1	nogas	1.076	23.2	15147	21.3	2.5	
Tl	205	1	nogas	0.524	43.3	10414	46.0	1	
Pb	208	1	nogas	-0.034	-63.0	3150	17.4	2.5	
U	238	1	nogas	0.124	53.3	3207	56.8	2.5	
[Pb]	206	1	nogas	-0.048	-39.1	817	19.0	2.5	
[Pb]	207	1	nogas	-0.018	-196.7	757	29.1	2.5	
Na	23	2	He	37.587	5.2	117989	2.9	100	
Mg	24	2	He	3.934	3.9	3810	3.4	100	
Al	27	2	He	-0.531	-16.5	667	6.9	5	
K	39	2	He	-20.036	-1.9	207191	0.2	100	
Ca	43	2	He	43.685	9.7	120	8.3	100	
Ca	44	2	He	5.007	57.5	4000	3.9	100	
V	51	2	He	-0.436	-1.6	2418	1.4	2.5	
Cr	52	2	He	-0.016	-694.3	5124	15.2	2.5	
Mn	55	2	He	0.010	244.4	2504	4.5	2.5	
Fe	56	2	He	3.292	8.7	32616	5.4	100	
Co	59	2	He	0.022	43.3	567	15.0	2.5	
Ni	60	2	He	-0.447	-4.6	287	17.6	2.5	
Cu	63	2	He	-2.203	-4.1	10680	5.8	2.5	
Zn	66	2	He	-0.296	-20.4	597	14.6	2.5	
As	75	2	He	0.000	-6286.6	296	11.7	2.5	
Se	78	2	He	0.093	60.2	191	4.2	2.5	
B	11	1	nogas	25.862	1.4	122180	3.0	10	CCB Main CR1 Failed
Si	28	1	nogas	-155.758	-3.2	1326960	0.9	5	
Ca	43	1	nogas	28.281	16.4	1943	9.5	100	
Ca	44	1	nogas	-233.139	-3.1	418816	0.3	100	
Fe	56	1	nogas	4.133	159.6	2246998	7.2	100	
Se	77	1	nogas	-13.549	-7.0	13142	2.4	2.5	
Se	82	1	nogas	-0.032	-933.1	343	24.8	2.5	
Mo	95	1	nogas	0.224	45.5	1633	37.2	2.5	
Sn	118	1	nogas	0.206	22.2	2924	13.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.024	45.6	443	10.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.685	8.2	3844	7.7	2.5	
P	31	1	nogas	-6.609	-9.7	93986	1.8	10	
La	139	1	nogas	6.650	50.2	57	20.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	254.776	271.3	30	88.2	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1055027	1.85	1229805	85.79	70	125	
Ge	72	1	nogas	3379263	0.82	3541557	95.42	70	125	
In	115	1	nogas	3020267	0.73	3006327	100.46	70	125	
Bi	209	1	nogas	2117873	4.86	2153140	98.36	70	125	
Ge	72	2	He	847531	0.83	993327	85.32	70	125	

Sample Report

Sample Table

Sample Name	MBLKF1-135382
Data File Name	093SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:59:33-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.002	0.002	114.60	53	0.00	2000	
Na	23	1	nogas	30.232	30.232	5.40	1237170	0.00	200000	
Mg	24	1	nogas	18.418	18.418	5.70	302850	0.01	200000	
Al	27	1	nogas	4.482	4.482	5.43	122750	0.00	2000	
K	39	1	nogas	11.236	11.236	92.08	8069587	0.00	200000	
Ti	47	1	nogas	-0.050	-0.050	-35.25	350	-0.01	2000	
V	51	1	nogas	-1.088	-1.088	-28.72	176324	0.00	2000	
Cr	52	1	nogas	-0.193	-0.193	-26.07	35260	0.00	2000	
Mn	55	1	nogas	2.340	2.340	3.81	88575	0.00	2000	
Co	59	1	nogas	-0.021	-0.021	-22.30	847	0.00	2000	
Ni	60	1	nogas	0.299	0.299	3.75	843	0.04	2000	
Cu	63	1	nogas	-3.557	-3.557	-5.47	27261	-0.01	2000	
Zn	66	1	nogas	0.730	0.730	11.81	3357	0.02	2000	
As	75	1	nogas	-1.514	-1.514	-7.89	40475	0.00	2000	
Sr	88	1	nogas	0.093	0.093	5.55	3550	0.00	2000	
Ag	107	1	nogas	-0.003	-0.003	-105.19	83	0.00	2000	
Cd	111	1	nogas	0.002	0.002	174.15	27	0.01	2000	
Sb	121	1	nogas	0.010	0.010	149.31	1420	0.00	2000	
Tl	205	1	nogas	0.004	0.004	93.79	470	0.00	2000	
Pb	208	1	nogas	-0.076	-0.076	-21.90	2093	0.00	2000	
U	238	1	nogas	0.003	0.003	50.55	120	0.00	2000	
[Pb]	206	1	nogas	-0.088	-0.088	-6.29	563	-0.02	2000	
[Pb]	207	1	nogas	-0.074	-0.074	-22.56	437	-0.02	2000	
Na	23	2	He	45.002	45.002	4.79	129509	0.03	200000	
Mg	24	2	He	18.889	18.889	9.36	16561	0.11	200000	
Al	27	2	He	4.752	4.752	11.02	3224	0.15	2000	
K	39	2	He	-14.957	-14.957	-5.75	211916	-0.01	200000	
Ca	43	2	He	25.454	25.454	38.71	73	34.71	200000	
Ca	44	2	He	4.307	4.307	111.69	3980	0.11	200000	
V	51	2	He	-0.434	-0.434	-5.25	2433	-0.02	2000	
Cr	52	2	He	0.100	0.100	51.50	5908	0.00	2000	
Mn	55	2	He	2.260	2.260	2.97	13492	0.02	2000	
Fe	56	2	He	1.697	1.697	6.17	23178	0.01	200000	
Co	59	2	He	-0.017	-0.017	-43.05	197	-0.01	2000	
Ni	60	2	He	-0.433	-0.433	-9.99	317	-0.14	2000	
Cu	63	2	He	-2.267	-2.267	-2.09	10300	-0.02	2000	
Zn	66	2	He	0.050	0.050	174.63	1113	0.00	2000	
As	75	2	He	-0.017	-0.017	-128.25	271	-0.01	2000	
Se	78	2	He	0.271	0.271	78.11	213	0.13	2000	
B	11	1	nogas	18.550	18.550	9.64	96629	0.02	2000	
Si	28	1	nogas	837.009	837.009	12.21	2381632	0.04	2000	
Ca	43	1	nogas	24.167	24.167	26.38	1773	1.36	200000	

Sample Report

Ca	44	1	nogas	-208.518	-208.518	-7.75	429748	-0.05	200000	
Fe	56	1	nogas	-2.744	-2.744	-137.50	2060769	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-14.453	-14.453	-1.57	12811	-0.11	2000	
Se	82	1	nogas	0.063	0.063	727.82	367	0.02	2000	
Mo	95	1	nogas	-0.016	-0.016	-25.37	197	-0.01	2000	
Sn	118	1	nogas	0.047	0.047	22.28	1503	0.00	2000	
Ba	137	1	nogas	0.046	0.046	32.17	530	0.01	2000	
Sb	121	2	He	0.021	0.021	123.52	563	0.00	2000	
La	139	1	nogas	4.886	4.886	116.41	50	9.77	2000	
Au	197	1	nogas	5.558	5.558	5008.52	20	27.79	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1138532	6.45	1229805	92.58	70	125	
Ge	72	1	nogas	3353735	2.47	3541557	94.70	70	125	
In	115	1	nogas	2985157	3.32	3006327	99.30	70	125	
Bi	209	1	nogas	2133461	6.25	2153140	99.09	70	125	
Ge	72	2	He	849697	3.16	993327	85.54	70	125	

Sample Report

Sample Table

Sample Name	MBLK-135382
Data File Name	094SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:01:38-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.000	0.000	-3010.98	33	0.00	2000	
Na	23	1	nogas	23.223	23.223	9.09	1090000	0.00	200000	
Mg	24	1	nogas	18.732	18.732	1.08	316381	0.01	200000	
Al	27	1	nogas	4.270	4.270	5.04	121198	0.00	2000	
K	39	1	nogas	-3.120	-3.120	-190.86	7951441	0.00	200000	
Ti	47	1	nogas	0.005	0.005	965.17	467	0.00	2000	
V	51	1	nogas	-1.535	-1.535	-13.87	168038	0.00	2000	
Cr	52	1	nogas	-0.393	-0.393	-12.65	31357	0.00	2000	
Mn	55	1	nogas	1.491	1.491	2.55	66072	0.00	2000	
Co	59	1	nogas	-0.028	-0.028	-10.97	690	0.00	2000	
Ni	60	1	nogas	0.288	0.288	10.40	800	0.04	2000	
Cu	63	1	nogas	-3.766	-3.766	-1.69	25011	-0.02	2000	
Zn	66	1	nogas	0.388	0.388	5.31	1867	0.02	2000	
As	75	1	nogas	-1.744	-1.744	-13.10	40001	0.00	2000	
Sr	88	1	nogas	0.083	0.083	9.59	3357	0.00	2000	
Ag	107	1	nogas	-0.004	-0.004	-22.21	73	0.00	2000	
Cd	111	1	nogas	0.003	0.003	98.82	30	0.01	2000	
Sb	121	1	nogas	-0.004	-0.004	-60.78	1273	0.00	2000	
Tl	205	1	nogas	-0.002	-0.002	-78.34	360	0.00	2000	
Pb	208	1	nogas	-0.073	-0.073	-13.94	2153	0.00	2000	
U	238	1	nogas	0.003	0.003	26.00	137	0.00	2000	
[Pb]	206	1	nogas	-0.090	-0.090	-24.49	550	-0.02	2000	
[Pb]	207	1	nogas	-0.066	-0.066	-7.47	480	-0.01	2000	
Na	23	2	He	37.108	37.108	6.65	115296	0.03	200000	
Mg	24	2	He	18.936	18.936	6.18	16294	0.12	200000	
Al	27	2	He	4.484	4.484	13.72	3040	0.15	2000	
K	39	2	He	-18.921	-18.921	-4.24	208228	-0.01	200000	
Ca	43	2	He	22.287	22.287	112.71	63	35.19	200000	
Ca	44	2	He	-4.158	-4.158	-112.60	3547	-0.12	200000	
V	51	2	He	-0.446	-0.446	-1.03	2315	-0.02	2000	
Cr	52	2	He	0.006	0.006	869.02	5181	0.00	2000	
Mn	55	2	He	1.521	1.521	9.56	9689	0.02	2000	
Fe	56	2	He	1.176	1.176	17.96	19687	0.01	200000	
Co	59	2	He	-0.021	-0.021	-28.82	163	-0.01	2000	
Ni	60	2	He	-0.456	-0.456	-1.92	260	-0.18	2000	
Cu	63	2	He	-2.381	-2.381	-5.90	9409	-0.03	2000	
Zn	66	2	He	-0.332	-0.332	-22.93	533	-0.06	2000	
As	75	2	He	-0.022	-0.022	-62.73	259	-0.01	2000	
Se	78	2	He	0.135	0.135	158.46	193	0.07	2000	
B	11	1	nogas	16.620	16.620	3.41	84493	0.02	2000	
Si	28	1	nogas	683.487	683.487	4.51	2264505	0.03	2000	
Ca	43	1	nogas	16.765	16.765	13.89	1533	1.09	200000	
Ca	44	1	nogas	-225.486	-225.486	-11.40	428773	-0.05	200000	
Fe	56	1	nogas	-7.368	-7.368	-4.28	1989974	0.00	200000	

Sample Report

Se	77	1	nogas	-17.044	-17.044	-6.28	12401	-0.14	2000	
Se	82	1	nogas	-0.137	-0.137	-96.95	317	-0.04	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	-0.018	-0.018	-24.48	190	-0.01	2000	
Sn	118	1	nogas	0.025	0.025	41.25	1313	0.00	2000	
Ba	137	1	nogas	-0.014	-0.014	-63.81	277	-0.01	2000	
Sb	121	2	He	-0.009	-0.009	-119.17	410	0.00	2000	
La	139	1	nogas	1.902	1.902	296.72	40	4.75	2000	
Au	197	1	nogas	-155.100	-155.100	-283.58	13	-1163.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1095891	2.73	1229805	89.11	70	125	
Ge	72	1	nogas	3423393	0.52	3541557	96.66	70	125	
In	115	1	nogas	2986352	1.73	3006327	99.34	70	125	
Bi	209	1	nogas	2133351	6.82	2153140	99.08	70	125	
Ge	72	2	He	833848	2.75	993327	83.94	70	125	

Sample Report

Sample Table

Sample Name	LCS-135382
Data File Name	095SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:03:42-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	47.699	47.699	2.87	351641	0.01	2000	
Na	23	1	nogas	4974.632	4974.632	4.82	127574207	0.00	200000	
Mg	24	1	nogas	4954.696	4954.696	4.03	81649677	0.01	200000	
Al	27	1	nogas	103.270	103.270	1.64	2024905	0.01	2000	
K	39	1	nogas	5286.586	5286.586	3.36	112423232	0.00	200000	
Ti	47	1	nogas	144.458	144.458	2.97	286100	0.05	2000	
V	51	1	nogas	48.205	48.205	1.31	1488118	0.00	2000	
Cr	52	1	nogas	49.532	49.532	1.57	1170649	0.00	2000	
Mn	55	1	nogas	53.817	53.817	1.12	1541033	0.00	2000	
Co	59	1	nogas	48.949	48.949	2.81	1215784	0.00	2000	
Ni	60	1	nogas	49.264	49.264	3.01	274971	0.02	2000	
Cu	63	1	nogas	44.991	44.991	1.41	682351	0.01	2000	
Zn	66	1	nogas	51.159	51.159	0.56	229551	0.02	2000	
As	75	1	nogas	46.089	46.089	1.56	311326	0.01	2000	
Sr	88	1	nogas	101.284	101.284	4.36	2897508	0.00	2000	
Ag	107	1	nogas	50.635	50.635	1.48	730431	0.01	2000	
Cd	111	1	nogas	47.938	47.938	5.36	158685	0.03	2000	
Sb	121	1	nogas	51.213	51.213	2.43	657133	0.01	2000	
Tl	205	1	nogas	48.249	48.249	3.25	896194	0.01	2000	
Pb	208	1	nogas	49.329	49.329	2.10	1258926	0.00	2000	
U	238	1	nogas	94.115	94.115	3.82	2317818	0.00	2000	
[Pb]	206	1	nogas	49.857	49.857	3.86	315565	0.02	2000	
[Pb]	207	1	nogas	48.458	48.458	3.26	274410	0.02	2000	
Na	23	2	He	5170.099	5170.099	3.61	7959716	0.06	200000	
Mg	24	2	He	5108.818	5108.818	2.34	4378239	0.12	200000	
Al	27	2	He	97.128	97.128	1.63	48091	0.20	2000	
K	39	2	He	4867.770	4867.770	3.51	4753883	0.10	200000	
Ca	43	2	He	5232.965	5232.965	2.27	13448	38.91	200000	
Ca	44	2	He	5003.463	5003.463	1.23	222141	2.25	200000	
V	51	2	He	49.526	49.526	2.29	316889	0.02	2000	
Cr	52	2	He	51.327	51.327	2.16	351975	0.01	2000	
Mn	55	2	He	50.622	50.622	2.31	250670	0.02	2000	
Fe	56	2	He	5000.984	5000.984	2.46	29942622	0.02	200000	
Co	59	2	He	50.628	50.628	2.32	476120	0.01	2000	
Ni	60	2	He	50.268	50.268	2.47	121704	0.04	2000	
Cu	63	2	He	47.692	47.692	1.97	319748	0.01	2000	
Zn	66	2	He	50.664	50.664	2.82	77257	0.07	2000	
As	75	2	He	49.438	49.438	2.59	73277	0.07	2000	
Se	78	2	He	47.992	47.992	2.69	5904	0.81	2000	
B	11	1	nogas	501.847	501.847	2.99	2210758	0.02	2000	
Si	28	1	nogas	5395.549	5395.549	2.74	7304141	0.07	2000	>LDR
Ca	43	1	nogas	5229.314	5229.314	1.07	194742	2.69	200000	
Ca	44	1	nogas	5140.113	5140.113	2.98	3532171	0.15	200000	
Fe	56	1	nogas	5140.911	5140.911	3.07	127934645	0.00	200000	

Sample Report

Se	77	1	nogas	28.511	28.511	9.34	23876	0.12	2000	
Se	82	1	nogas	50.236	50.236	1.08	15033	0.33	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	49.061	49.061	3.00	292593	0.02	2000	
Sn	118	1	nogas	91.301	91.301	3.44	811476	0.01	2000	
Ba	137	1	nogas	46.181	46.181	4.60	198522	0.02	2000	
Sb	121	2	He	49.609	49.609	2.37	246768	0.02	2000	
La	139	1	nogas	33.450	33.450	10.36	150	22.30	2000	
Au	197	1	nogas	-77.395	-77.395	-523.88	17	-464.37	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1049167	1.52	1229805	85.31	70	125	
Ge	72	1	nogas	3364657	0.13	3541557	95.01	70	125	
In	115	1	nogas	3034205	3.22	3006327	100.93	70	125	
Bi	209	1	nogas	2084356	1.79	2153140	96.81	70	125	
Ge	72	2	He	853375	1.87	993327	85.91	70	125	

Sample Report

Sample Table

Sample Name	LCSD-135382
Data File Name	096SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:05:42-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	46.924	46.924	6.29	344552	0.01	2000	
Na	23	1	nogas	4765.929	4765.929	0.64	120610282	0.00	200000	
Mg	24	1	nogas	4876.339	4876.339	4.48	79269081	0.01	200000	
Al	27	1	nogas	103.856	103.856	2.56	2067429	0.01	2000	
K	39	1	nogas	5007.095	5007.095	2.30	108529136	0.00	200000	
Ti	47	1	nogas	140.309	140.309	0.95	282166	0.05	2000	
V	51	1	nogas	47.794	47.794	3.20	1500007	0.00	2000	
Cr	52	1	nogas	47.881	47.881	2.00	1150446	0.00	2000	
Mn	55	1	nogas	50.056	50.056	2.82	1457094	0.00	2000	
Co	59	1	nogas	47.054	47.054	1.86	1186639	0.00	2000	
Ni	60	1	nogas	48.073	48.073	3.19	272393	0.02	2000	
Cu	63	1	nogas	43.722	43.722	2.83	675448	0.01	2000	
Zn	66	1	nogas	49.867	49.867	2.24	227191	0.02	2000	
As	75	1	nogas	44.716	44.716	1.71	308165	0.01	2000	
Sr	88	1	nogas	96.728	96.728	2.48	2809540	0.00	2000	
Ag	107	1	nogas	49.673	49.673	1.75	727616	0.01	2000	
Cd	111	1	nogas	48.529	48.529	3.29	156658	0.03	2000	
Sb	121	1	nogas	50.951	50.951	1.84	663850	0.01	2000	
Tl	205	1	nogas	47.682	47.682	6.30	881966	0.01	2000	
Pb	208	1	nogas	48.267	48.267	1.17	1231924	0.00	2000	
U	238	1	nogas	95.698	95.698	4.69	2348817	0.00	2000	
[Pb]	206	1	nogas	49.086	49.086	5.86	309567	0.02	2000	
[Pb]	207	1	nogas	47.655	47.655	5.08	268886	0.02	2000	
Na	23	2	He	5276.148	5276.148	1.64	8021540	0.07	200000	
Mg	24	2	He	5124.078	5124.078	4.31	4336171	0.12	200000	
Al	27	2	He	99.846	99.846	2.96	48803	0.20	2000	
K	39	2	He	4736.858	4736.858	1.58	4632107	0.10	200000	
Ca	43	2	He	4764.740	4764.740	2.79	12087	39.42	200000	
Ca	44	2	He	4920.630	4920.630	1.86	215799	2.28	200000	
V	51	2	He	48.906	48.906	0.08	309136	0.02	2000	
Cr	52	2	He	50.235	50.235	0.87	340325	0.01	2000	
Mn	55	2	He	50.482	50.482	1.19	246896	0.02	2000	
Fe	56	2	He	5082.093	5082.093	1.32	30055327	0.02	200000	
Co	59	2	He	51.064	51.064	2.23	474278	0.01	2000	
Ni	60	2	He	50.711	50.711	1.67	121242	0.04	2000	
Cu	63	2	He	47.204	47.204	1.30	312795	0.02	2000	
Zn	66	2	He	49.309	49.309	0.91	74291	0.07	2000	
As	75	2	He	49.059	49.059	1.36	71825	0.07	2000	
Se	78	2	He	46.953	46.953	3.59	5710	0.82	2000	
B	11	1	nogas	496.377	496.377	6.17	2177919	0.02	2000	
Si	28	1	nogas	5262.520	5262.520	1.20	7271146	0.07	2000	>LDR
Ca	43	1	nogas	5019.671	5019.671	3.92	189827	2.64	200000	
Ca	44	1	nogas	4776.470	4776.470	3.89	3371955	0.14	200000	
Fe	56	1	nogas	4912.829	4912.829	1.42	124237390	0.00	200000	
Se	77	1	nogas	25.684	25.684	14.03	23502	0.11	2000	
Se	82	1	nogas	48.635	48.635	1.01	14790	0.33	2000	

Sample Report

Mo	95	1	nogas	46.296	46.296	3.90	280334	0.02	2000	
Sn	118	1	nogas	93.578	93.578	4.36	810450	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	46.831	46.831	6.73	196100	0.02	2000	
Sb	121	2	He	49.812	49.812	1.87	244750	0.02	2000	
La	139	1	nogas	25.501	25.501	24.69	120	21.25	2000	
Au	197	1	nogas	-261.060	-261.060	-97.56	10	-2610.60	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1046368	3.90	1229805	85.08	70	125	
Ge	72	1	nogas	3416360	0.64	3541557	96.46	70	125	
In	115	1	nogas	2958123	3.98	3006327	98.40	70	125	
Bi	209	1	nogas	2079628	5.38	2153140	96.59	70	125	
Ge	72	2	He	842652	0.87	993327	84.83	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	097_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:07:42-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.864	2.522	660318	0.72	100	94.9	90	110	
Na	23	1	nogas	10120.066	4.104	236684514	6.02	10000	101.2	90	110	
Mg	24	1	nogas	10087.715	3.981	151717245	0.86	10000	100.9	90	110	
Al	27	1	nogas	97.407	3.713	1852741	3.13	100	97.4	90	110	
K	39	1	nogas	9872.360	1.082	196910596	3.65	10000	98.7	90	110	
Ti	47	1	nogas	97.193	3.004	186657	2.00	100	97.2	90	110	
V	51	1	nogas	99.416	3.954	2761116	1.53	100	99.4	90	110	
Cr	52	1	nogas	100.162	4.587	2253716	2.82	100	100.2	90	110	
Mn	55	1	nogas	100.624	3.469	2771903	0.14	100	100.6	90	110	
Co	59	1	nogas	97.050	2.169	2334597	1.98	100	97.1	90	110	
Ni	60	1	nogas	94.207	2.347	510224	1.10	100	94.2	90	110	
Cu	63	1	nogas	91.088	5.808	1263547	4.61	100	91.1	90	110	
Zn	66	1	nogas	98.807	0.792	429651	2.71	100	98.8	90	110	
As	75	1	nogas	95.645	2.619	574723	1.20	100	95.6	90	110	
Sr	88	1	nogas	101.520	3.426	2814554	3.59	100	101.5	90	110	
Ag	107	1	nogas	97.846	3.493	1367175	0.15	100	97.8	90	110	
Cd	111	1	nogas	96.268	0.948	296618	0.40	100	96.3	90	110	
Sb	121	1	nogas	100.335	1.676	1246519	2.17	100	100.3	90	110	
Tl	205	1	nogas	100.235	8.035	1799760	4.85	100	100.2	90	110	
Pb	208	1	nogas	95.893	1.350	2443494	1.35	100	95.9	90	110	
U	238	1	nogas	97.967	4.419	2335178	2.45	100	98.0	90	110	
[Pb]	206	1	nogas	97.765	6.614	597568	3.50	100	97.8	90	110	
[Pb]	207	1	nogas	98.611	3.384	539685	1.33	100	98.6	90	110	
Na	23	2	He	10227.032	0.982	14747178	1.80	10000	102.3	90	110	
Mg	24	2	He	10146.477	3.152	8171736	2.33	10000	101.5	90	110	
Al	27	2	He	96.971	2.521	45131	1.35	100	97.0	90	110	
K	39	2	He	9105.387	0.598	8695762	0.58	10000	91.1	90	110	
Ca	43	2	He	9832.954	2.036	23739	1.63	10000	98.3	90	110	
Ca	44	2	He	9802.504	0.233	405718	1.39	10000	98.0	90	110	
V	51	2	He	102.105	2.081	609003	0.69	100	102.1	90	110	
Cr	52	2	He	103.865	1.566	664499	0.18	100	103.9	90	110	
Mn	55	2	He	98.686	2.583	457177	1.65	100	98.7	90	110	
Fe	56	2	He	9920.947	2.078	55833303	1.51	10000	99.2	90	110	
Co	59	2	He	102.717	2.128	907744	0.97	100	102.7	90	110	
Ni	60	2	He	103.151	1.688	233434	0.32	100	103.2	90	110	
Cu	63	2	He	99.080	2.695	599716	1.26	100	99.1	90	110	
Zn	66	2	He	99.770	3.306	142044	2.07	100	99.8	90	110	
As	75	2	He	100.787	1.781	140162	1.39	100	100.8	90	110	
Se	78	2	He	94.656	1.596	10785	2.35	100	94.7	90	110	
B	11	1	nogas	509.825	3.477	2120084	1.49	500	102.0	90	110	
Si	28	1	nogas	4480.946	5.469	6119998	1.44	5000	89.6	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9712.607	2.350	349812	2.75	10000	97.1	90	110	
Ca	44	1	nogas	9615.344	3.364	5936003	1.65	10000	96.2	90	110	
Fe	56	1	nogas	9853.206	4.352	235597305	1.78	10000	98.5	90	110	
Se	77	1	nogas	83.984	8.154	36924	4.05	100	84.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.499	7.663	27361	5.41	100	95.5	90	110	
Mo	95	1	nogas	99.236	2.840	573476	4.41	100	99.2	90	110	
Sn	118	1	nogas	96.672	1.214	799400	1.14	100	96.7	90	110	
Ba	137	1	nogas	96.784	3.479	386813	2.92	100	96.8	90	110	
Sb	121	2	He	98.877	0.541	462044	1.74	100	98.9	90	110	
Li	7	1	nogas	96.781	0.459	1501313	2.79	100	96.8	90	110	
P	31	1	nogas	447.957	2.863	903279	1.06	500	89.6	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	102.601	2.898	363	3.18	100	102.6	90	110	
Au	197	1	nogas	39.870	1224.713	20	86.60	100	39.9	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	990879	3.11	1229805	80.57	70	125	
Ge	72	1	nogas	3261943	3.43	3541557	92.10	70	125	
In	115	1	nogas	2821323	0.59	3006327	93.85	70	125	
Bi	209	1	nogas	2018111	3.12	2153140	93.73	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	802175	1.38	993327	80.76	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	098_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:09:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.047	15.5	370	15.0	1	
Na	23	1	nogas	18.760	4.7	888798	4.3	100	
Mg	24	1	nogas	5.050	24.9	81464	22.3	100	
Al	27	1	nogas	-0.679	-7.6	22984	2.0	5	
K	39	1	nogas	6.745	178.0	7718225	0.7	100	
Ti	47	1	nogas	0.066	128.8	557	26.7	2.5	
V	51	1	nogas	-1.930	-5.0	149085	3.3	2.5	
Cr	52	1	nogas	-0.333	-24.6	30996	3.6	2.5	
Mn	55	1	nogas	0.173	25.4	26766	2.3	2.5	
Co	59	1	nogas	0.042	41.6	2314	16.0	2.5	
Ni	60	1	nogas	0.313	1.8	893	1.3	2.5	
Cu	63	1	nogas	-3.532	-0.5	26733	2.9	2.5	
Zn	66	1	nogas	0.410	1.9	1867	4.0	2.5	
As	75	1	nogas	-1.708	-9.9	38093	3.5	2.5	
Sr	88	1	nogas	0.102	7.0	3690	3.6	2.5	
Ag	107	1	nogas	0.035	6.1	600	2.9	2.5	
Cd	111	1	nogas	0.034	51.8	127	43.5	1	
Sb	121	1	nogas	1.080	27.8	14527	23.2	2.5	
Tl	205	1	nogas	0.681	37.6	12966	40.4	1	
Pb	208	1	nogas	-0.027	-100.9	3344	20.4	2.5	
U	238	1	nogas	0.173	60.2	4304	63.7	2.5	
[Pb]	206	1	nogas	-0.042	-82.1	833	30.1	2.5	
[Pb]	207	1	nogas	-0.006	-148.8	797	9.8	2.5	
Na	23	2	He	30.846	4.1	104679	1.5	100	
Mg	24	2	He	3.958	12.7	3720	10.7	100	
Al	27	2	He	-0.589	-35.7	620	15.4	5	
K	39	2	He	-27.894	-9.9	199881	1.3	100	
Ca	43	2	He	30.216	33.1	83	30.2	100	
Ca	44	2	He	3.999	103.1	3844	4.9	100	
V	51	2	He	-0.449	-1.9	2267	1.9	2.5	
Cr	52	2	He	-0.009	-873.1	5021	10.2	2.5	
Mn	55	2	He	-0.002	-227.6	2374	0.9	2.5	
Fe	56	2	He	3.738	7.7	34269	5.3	100	
Co	59	2	He	0.036	32.0	677	15.7	2.5	
Ni	60	2	He	-0.479	-4.2	203	23.2	2.5	
Cu	63	2	He	-2.283	-0.9	9889	0.8	2.5	
Zn	66	2	He	-0.317	-9.4	550	8.3	2.5	
As	75	2	He	-0.017	-142.6	263	12.8	2.5	
Se	78	2	He	0.048	260.4	181	7.9	2.5	
B	11	1	nogas	27.158	4.3	125002	3.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-63.908	-73.9	1368306	1.5	5	
Ca	43	1	nogas	23.900	16.1	1707	7.0	100	
Ca	44	1	nogas	-180.780	-13.3	431062	1.0	100	
Fe	56	1	nogas	0.376	2695.7	2064519	9.3	100	
Se	77	1	nogas	-14.657	-14.1	12344	6.0	2.5	
Se	82	1	nogas	0.327	67.0	430	12.3	2.5	
Mo	95	1	nogas	0.287	52.4	1920	42.7	2.5	
Sn	118	1	nogas	0.359	21.0	4074	16.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.051	29.9	530	11.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.652	4.7	3574	3.8	2.5	
P	31	1	nogas	-3.363	-57.3	95935	2.3	10	
La	139	1	nogas	13.405	51.6	77	32.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-343.992	-45.2	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1031367	1.55	1229805	83.86	70	125	
Ge	72	1	nogas	3243368	2.23	3541557	91.58	70	125	
In	115	1	nogas	2873569	3.34	3006327	95.58	70	125	
Bi	209	1	nogas	2053010	4.19	2153140	95.35	70	125	
Ge	72	2	He	823380	0.47	993327	82.89	70	125	

Sample Report

Sample Table

Sample Name	HS18111440-01SD
Data File Name	100SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:13:56-06:00
Sample Type	Sample
Dilution	5
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.018	0.089	36.25	170	0.01	2000	
Na	23	1	nogas	12491.798	62458.989	4.17	298660507	0.00	200000	
Mg	24	1	nogas	550.884	2754.420	1.41	8493254	0.01	200000	
Al	27	1	nogas	142.066	710.329	3.18	2709563	0.01	2000	
K	39	1	nogas	87.724	438.618	10.78	9397756	0.00	200000	
Ti	47	1	nogas	3.605	18.024	3.41	7408	0.05	2000	
V	51	1	nogas	0.753	3.765	48.46	220891	0.00	2000	
Cr	52	1	nogas	0.222	1.108	22.73	43849	0.00	2000	
Mn	55	1	nogas	9.924	49.619	4.26	296001	0.00	2000	
Co	59	1	nogas	0.266	1.328	8.24	7772	0.00	2000	
Ni	60	1	nogas	1.007	5.035	6.24	4701	0.02	2000	
Cu	63	1	nogas	-3.698	-18.489	-3.88	24907	-0.01	2000	
Zn	66	1	nogas	1.991	9.953	2.40	8822	0.02	2000	
As	75	1	nogas	0.412	2.060	69.79	50413	0.00	2000	
Sr	88	1	nogas	34.916	174.582	3.63	977013	0.00	2000	
Ag	107	1	nogas	0.002	0.010	111.43	150	0.00	2000	
Cd	111	1	nogas	0.010	0.049	61.60	50	0.02	2000	
Sb	121	1	nogas	0.189	0.944	6.50	3637	0.01	2000	
Tl	205	1	nogas	0.055	0.273	13.29	1353	0.00	2000	
Pb	208	1	nogas	0.112	0.562	3.11	6881	0.00	2000	
U	238	1	nogas	0.050	0.251	3.49	1237	0.00	2000	
[Pb]	206	1	nogas	0.128	0.639	20.40	1837	0.01	2000	
[Pb]	207	1	nogas	0.108	0.542	7.39	1400	0.01	2000	
Na	23	2	He	12733.075	63665.377	2.21	18880526	0.07	200000	
Mg	24	2	He	545.529	2727.645	2.09	452674	0.12	200000	
Al	27	2	He	140.946	704.731	3.95	67116	0.21	2000	
K	39	2	He	51.338	256.690	0.88	273584	0.02	200000	
Ca	43	2	He	1488.614	7443.072	2.52	3707	40.16	200000	
Ca	44	2	He	1341.620	6708.100	2.92	60328	2.22	200000	
V	51	2	He	0.212	1.059	7.51	6300	0.00	2000	
Cr	52	2	He	0.468	2.340	13.52	8152	0.01	2000	
Mn	55	2	He	9.387	46.935	2.77	46923	0.02	2000	
Fe	56	2	He	328.469	1642.346	3.72	1914988	0.02	200000	
Co	59	2	He	0.295	1.476	6.43	3037	0.01	2000	
Ni	60	2	He	0.096	0.482	56.79	1537	0.01	2000	
Cu	63	2	He	-2.364	-11.818	-1.45	9436	-0.03	2000	
Zn	66	2	He	1.240	6.198	10.59	2817	0.04	2000	
As	75	2	He	0.293	1.464	3.39	707	0.04	2000	
Se	78	2	He	0.180	0.902	109.45	197	0.09	2000	
B	11	1	nogas	27.101	135.505	5.16	131075	0.02	2000	
Si	28	1	nogas	57028.653	285143.263	2.51	61545757	0.09	2000	>LDR
Ca	43	1	nogas	1390.757	6953.787	7.94	51231	2.71	200000	
Ca	44	1	nogas	1244.030	6220.148	4.81	1244911	0.10	200000	
Fe	56	1	nogas	305.961	1529.806	3.88	9407010	0.00	200000	

Sample Report

Se	77	1	nogas	-2.327	-11.633	-74.32	15610	-0.01	2000	
Se	82	1	nogas	0.431	2.154	5.44	467	0.09	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.184	0.920	4.21	1360	0.01	2000	
Sn	118	1	nogas	0.122	0.609	17.90	2070	0.01	2000	
Ba	137	1	nogas	11.105	55.526	1.78	45427	0.02	2000	
Sb	121	2	He	0.174	0.871	11.79	1287	0.01	2000	
La	139	1	nogas	1525.763	7628.815	2.16	5054	30.19	2000	
Au	197	1	nogas	-54.161	-270.804	-609.64	17	-324.96	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1084495	2.98	1229805	88.18	70	125	
Ge	72	1	nogas	3290696	2.28	3541557	92.92	70	125	
In	115	1	nogas	2869992	2.77	3006327	95.47	70	125	
Bi	209	1	nogas	2004244	1.00	2153140	93.08	70	125	
Ge	72	2	He	825701	1.49	993327	83.12	70	125	

Sample Report

Sample Table

Sample Name	HS18111440-01MS
Data File Name	101SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:16:02-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	50.112	50.112	2.28	349505	0.01	2000	
Na	23	1	nogas	58498.145	58498.145	3.95	1540927234	0.00	200000	
Mg	24	1	nogas	7096.463	7096.463	2.50	120572082	0.01	200000	
Al	27	1	nogas	834.165	834.165	4.75	15996525	0.01	2000	
K	39	1	nogas	5256.191	5256.191	1.02	111203623	0.00	200000	
Ti	47	1	nogas	153.613	153.613	2.96	302439	0.05	2000	
V	51	1	nogas	50.113	50.113	2.27	1530477	0.00	2000	
Cr	52	1	nogas	48.969	48.969	2.69	1151228	0.00	2000	
Mn	55	1	nogas	82.866	82.866	3.76	2346393	0.00	2000	
Co	59	1	nogas	48.898	48.898	5.01	1206967	0.00	2000	
Ni	60	1	nogas	51.196	51.196	3.94	284066	0.02	2000	
Cu	63	1	nogas	44.464	44.464	3.08	671367	0.01	2000	
Zn	66	1	nogas	55.195	55.195	3.09	246243	0.02	2000	
As	75	1	nogas	48.147	48.147	3.71	321129	0.01	2000	
Sr	88	1	nogas	260.262	260.262	3.71	7399482	0.00	2000	
Ag	107	1	nogas	48.312	48.312	2.87	692897	0.01	2000	
Cd	111	1	nogas	47.503	47.503	0.28	152024	0.03	2000	
Sb	121	1	nogas	51.259	51.259	3.14	653914	0.01	2000	
Tl	205	1	nogas	48.120	48.120	5.06	896953	0.01	2000	
Pb	208	1	nogas	50.375	50.375	1.43	1285531	0.00	2000	
U	238	1	nogas	96.857	96.857	4.02	2395104	0.00	2000	
[Pb]	206	1	nogas	51.091	51.091	3.16	324595	0.02	2000	
[Pb]	207	1	nogas	50.244	50.244	3.51	285551	0.02	2000	
Na	23	2	He	65031.762	65031.762	1.77	98111009	0.07	200000	
Mg	24	2	He	7563.644	7563.644	1.16	6396276	0.12	200000	
Al	27	2	He	825.544	825.544	3.57	396478	0.21	2000	
K	39	2	He	4926.667	4926.667	0.94	4808670	0.10	200000	
Ca	43	2	He	11745.845	11745.845	4.25	29764	39.46	200000	
Ca	44	2	He	11271.728	11271.728	1.90	489158	2.30	200000	
V	51	2	He	51.075	51.075	1.18	322426	0.02	2000	
Cr	52	2	He	51.194	51.194	2.37	346502	0.01	2000	
Mn	55	2	He	81.374	81.374	1.08	396240	0.02	2000	
Fe	56	2	He	6273.884	6273.884	0.99	37075034	0.02	200000	
Co	59	2	He	51.099	51.099	1.72	474304	0.01	2000	
Ni	60	2	He	51.701	51.701	2.09	123507	0.04	2000	
Cu	63	2	He	47.153	47.153	1.95	312296	0.02	2000	
Zn	66	2	He	53.499	53.499	1.28	80464	0.07	2000	
As	75	2	He	50.174	50.174	0.59	73406	0.07	2000	
Se	78	2	He	45.407	45.407	2.23	5524	0.82	2000	
B	11	1	nogas	571.637	571.637	1.15	2381096	0.02	2000	
Si	28	1	nogas	276290.466	276290.466	2.52	297535622	0.09	2000	>LDR
Ca	43	1	nogas	11573.147	11573.147	2.88	427407	2.71	200000	
Ca	44	1	nogas	11641.943	11641.943	2.88	7259249	0.16	200000	
Fe	56	1	nogas	6232.382	6232.382	5.58	153668949	0.00	200000	

Sample Report

Se	77	1	nogas	41.279	41.279	8.85	26990	0.15	2000	
Se	82	1	nogas	47.709	47.709	1.13	14216	0.34	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	47.332	47.332	3.41	280619	0.02	2000	
Sn	118	1	nogas	89.701	89.701	2.91	770441	0.01	2000	
Ba	137	1	nogas	99.352	99.352	1.44	412416	0.02	2000	
Sb	121	2	He	48.612	48.612	1.52	238701	0.02	2000	
La	139	1	nogas	7008.716	7008.716	1.46	23577	29.73	2000	>LDR
Au	197	1	nogas	199.312	199.312	396.47	27	747.42	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	992272	0.58	1229805	80.69	70	125	
Ge	72	1	nogas	3346594	2.48	3541557	94.49	70	125	
In	115	1	nogas	2930165	0.67	3006327	97.47	70	125	
Bi	209	1	nogas	2092353	2.17	2153140	97.18	70	125	
Ge	72	2	He	842140	0.86	993327	84.78	70	125	

Sample Report

Sample Table

Sample Name	HS18111440-01MSD
Data File Name	102SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:18:05-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	47.343	47.343	3.44	355054	0.01	2000	
Na	23	1	nogas	61429.984	61429.984	4.04	1627259336	0.00	200000	
Mg	24	1	nogas	7073.555	7073.555	0.32	120877961	0.01	200000	
Al	27	1	nogas	786.296	786.296	1.63	15514019	0.01	2000	
K	39	1	nogas	5385.379	5385.379	2.21	116938615	0.00	200000	
Ti	47	1	nogas	154.279	154.279	1.26	312404	0.05	2000	
V	51	1	nogas	52.238	52.238	1.28	1631357	0.00	2000	
Cr	52	1	nogas	50.213	50.213	1.86	1212833	0.00	2000	
Mn	55	1	nogas	82.635	82.635	1.96	2406957	0.00	2000	
Co	59	1	nogas	48.829	48.829	2.73	1239946	0.00	2000	
Ni	60	1	nogas	50.158	50.158	1.13	286260	0.02	2000	
Cu	63	1	nogas	44.360	44.360	2.59	688993	0.01	2000	
Zn	66	1	nogas	55.260	55.260	2.00	253537	0.02	2000	
As	75	1	nogas	50.171	50.171	0.40	342069	0.01	2000	
Sr	88	1	nogas	264.387	264.387	3.29	7732083	0.00	2000	
Ag	107	1	nogas	49.175	49.175	2.95	725367	0.01	2000	
Cd	111	1	nogas	48.502	48.502	1.35	161319	0.03	2000	
Sb	121	1	nogas	51.104	51.104	1.29	670536	0.01	2000	
Tl	205	1	nogas	48.155	48.155	6.36	930260	0.01	2000	
Pb	208	1	nogas	52.078	52.078	1.96	1328853	0.00	2000	
U	238	1	nogas	102.502	102.502	2.76	2630455	0.00	2000	
[Pb]	206	1	nogas	50.044	50.044	6.65	329457	0.02	2000	
[Pb]	207	1	nogas	49.416	49.416	6.16	291103	0.02	2000	
Na	23	2	He	68411.732	68411.732	0.84	102035612	0.07	200000	
Mg	24	2	He	7993.318	7993.318	2.10	6682034	0.12	200000	
Al	27	2	He	817.637	817.637	0.92	388255	0.21	2000	
K	39	2	He	5004.310	5004.310	1.17	4880894	0.10	200000	
Ca	43	2	He	12274.397	12274.397	4.76	30749	39.92	200000	
Ca	44	2	He	12028.358	12028.358	0.78	515811	2.33	200000	
V	51	2	He	53.557	53.557	1.41	333961	0.02	2000	
Cr	52	2	He	54.821	54.821	2.11	366453	0.01	2000	
Mn	55	2	He	82.015	82.015	2.11	394780	0.02	2000	
Fe	56	2	He	6289.311	6289.311	0.14	36742885	0.02	200000	
Co	59	2	He	52.020	52.020	0.56	477351	0.01	2000	
Ni	60	2	He	54.424	54.424	0.20	128465	0.04	2000	
Cu	63	2	He	50.061	50.061	0.47	326316	0.02	2000	
Zn	66	2	He	55.847	55.847	2.46	82984	0.07	2000	
As	75	2	He	52.653	52.653	1.04	76136	0.07	2000	
Se	78	2	He	49.599	49.599	2.16	5949	0.83	2000	
B	11	1	nogas	547.760	547.760	4.80	2452211	0.02	2000	
Si	28	1	nogas	284304.455	284304.455	1.49	314809069	0.09	2000	>LDR
Ca	43	1	nogas	11799.008	11799.008	0.64	448156	2.63	200000	
Ca	44	1	nogas	11811.759	11811.759	1.52	7566480	0.16	200000	
Fe	56	1	nogas	6251.367	6251.367	2.18	158590320	0.00	200000	

Sample Report

Se	77	1	nogas	43.975	43.975	3.06	28469	0.15	2000	
Se	82	1	nogas	49.211	49.211	2.99	15066	0.33	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	47.917	47.917	4.54	292171	0.02	2000	
Sn	118	1	nogas	91.418	91.418	1.84	815966	0.01	2000	
Ba	137	1	nogas	100.172	100.172	3.47	432044	0.02	2000	
Sb	121	2	He	50.678	50.678	0.78	245988	0.02	2000	
La	139	1	nogas	7145.695	7145.695	2.67	24982	28.60	2000	>LDR
Au	197	1	nogas	260.445	260.445	112.56	30	868.15	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1068504	6.48	1229805	86.88	70	125	
Ge	72	1	nogas	3440397	0.78	3541557	97.14	70	125	
In	115	1	nogas	3045795	2.52	3006327	101.31	70	125	
Bi	209	1	nogas	2171056	4.28	2153140	100.83	70	125	
Ge	72	2	He	832500	0.59	993327	83.81	70	125	

Sample Report

Sample Table

Sample Name	HS18111440-01PDS
Data File Name	103SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:20:08-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	96.245	96.245	2.71	706029	0.01	2000	
Na	23	1	nogas	63998.755	63998.755	5.54	1632931737	0.00	200000	
Mg	24	1	nogas	12087.066	12087.066	4.30	198951334	0.01	200000	
Al	27	1	nogas	727.606	727.606	1.13	14264068	0.01	2000	
K	39	1	nogas	10179.926	10179.926	4.23	212379592	0.00	200000	
Ti	47	1	nogas	109.686	109.686	3.94	220690	0.05	2000	
V	51	1	nogas	100.193	100.193	0.70	2916059	0.00	2000	
Cr	52	1	nogas	96.870	96.870	1.38	2286920	0.00	2000	
Mn	55	1	nogas	129.918	129.918	2.31	3745393	0.00	2000	
Co	59	1	nogas	94.211	94.211	2.38	2375441	0.00	2000	
Ni	60	1	nogas	94.537	94.537	3.62	536565	0.02	2000	
Cu	63	1	nogas	89.596	89.596	3.62	1303798	0.01	2000	
Zn	66	1	nogas	104.685	104.685	1.85	476934	0.02	2000	
As	75	1	nogas	97.721	97.721	3.00	614280	0.02	2000	
Sr	88	1	nogas	157.983	157.983	1.64	4589619	0.00	2000	
Ag	107	1	nogas	98.694	98.694	2.66	1445579	0.01	2000	
Cd	111	1	nogas	99.672	99.672	1.23	319936	0.03	2000	
Sb	121	1	nogas	94.308	94.308	3.22	1227578	0.01	2000	
Tl	205	1	nogas	101.045	101.045	1.98	1912959	0.01	2000	
Pb	208	1	nogas	101.850	101.850	2.22	2595043	0.00	2000	
U	238	1	nogas	0.448	0.448	36.78	11365	0.00	2000	
[Pb]	206	1	nogas	98.667	98.667	2.91	635455	0.02	2000	
[Pb]	207	1	nogas	98.021	98.021	2.52	564800	0.02	2000	
Na	23	2	He	68198.715	68198.715	2.82	101679568	0.07	200000	
Mg	24	2	He	12590.069	12590.069	1.33	10522701	0.12	200000	
Al	27	2	He	743.982	743.982	4.58	353278	0.21	2000	
K	39	2	He	9741.899	9741.899	0.49	9287853	0.10	200000	
Ca	43	2	He	16514.960	16514.960	2.44	41373	39.92	200000	
Ca	44	2	He	16230.439	16230.439	1.98	694515	2.34	200000	
V	51	2	He	104.665	104.665	0.42	647766	0.02	2000	
Cr	52	2	He	105.032	105.032	1.15	697243	0.02	2000	
Mn	55	2	He	131.377	131.377	3.37	630689	0.02	2000	
Fe	56	2	He	11443.976	11443.976	2.93	66820229	0.02	200000	
Co	59	2	He	102.351	102.351	0.59	938709	0.01	2000	
Ni	60	2	He	105.128	105.128	1.38	246851	0.04	2000	
Cu	63	2	He	102.085	102.085	1.81	640517	0.02	2000	
Zn	66	2	He	107.703	107.703	1.72	159053	0.07	2000	
As	75	2	He	104.080	104.080	0.95	150193	0.07	2000	
Se	78	2	He	99.023	99.023	0.74	11698	0.85	2000	
B	11	1	nogas	65.214	65.214	3.58	292728	0.02	2000	
Si	28	1	nogas	264232.105	264232.105	2.63	290761916	0.09	2000	>LDR
Ca	43	1	nogas	15895.784	15895.784	3.24	599221	2.65	200000	
Ca	44	1	nogas	16072.068	16072.068	2.64	10022570	0.16	200000	
Fe	56	1	nogas	11088.503	11088.503	1.48	277740806	0.00	200000	

Sample Report

Se	77	1	nogas	87.732	87.732	5.81	39670	0.22	2000	
Se	82	1	nogas	97.439	97.439	2.21	29277	0.33	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	96.101	96.101	1.67	581808	0.02	2000	
Sn	118	1	nogas	0.515	0.515	18.09	5508	0.01	2000	
Ba	137	1	nogas	149.442	149.442	2.65	622021	0.02	2000	
Sb	121	2	He	98.279	98.279	3.12	476408	0.02	2000	
La	139	1	nogas	6880.575	6880.575	5.38	23209	29.65	2000	>LDR
Au	197	1	nogas	-81.701	-81.701	-191.04	17	-490.20	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1044214	2.96	1229805	84.91	70	125	
Ge	72	1	nogas	3417851	2.07	3541557	96.51	70	125	
In	115	1	nogas	2939130	1.10	3006327	97.76	70	125	
Bi	209	1	nogas	2124061	2.59	2153140	98.65	70	125	
Ge	72	2	He	832388	1.31	993327	83.80	70	125	

Sample Report

Sample Table

Sample Name	HS18111497-01
Data File Name	108SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:30:30-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.069	0.069	6.46	600	0.01	2000	
Na	23	1	nogas	9517.845	9517.845	2.75	248886597	0.00	200000	
Mg	24	1	nogas	1059.287	1059.287	1.30	17834124	0.01	200000	
Al	27	1	nogas	8.711	8.711	3.00	213403	0.00	2000	
K	39	1	nogas	330.666	330.666	3.91	15032828	0.00	200000	
Ti	47	1	nogas	0.741	0.741	19.09	1997	0.04	2000	
V	51	1	nogas	3.850	3.850	8.10	321574	0.00	2000	
Cr	52	1	nogas	1.152	1.152	7.12	68915	0.00	2000	
Mn	55	1	nogas	24.195	24.195	1.42	735603	0.00	2000	
Co	59	1	nogas	0.299	0.299	3.90	9159	0.00	2000	
Ni	60	1	nogas	1.596	1.596	3.75	8455	0.02	2000	
Cu	63	1	nogas	-4.422	-4.422	-1.66	16394	-0.03	2000	
Zn	66	1	nogas	3.396	3.396	2.27	15984	0.02	2000	
As	75	1	nogas	1.211	1.211	32.28	58514	0.00	2000	
Sr	88	1	nogas	142.322	142.322	1.17	4245211	0.00	2000	
Ag	107	1	nogas	-0.001	-0.001	-125.69	113	0.00	2000	
Cd	111	1	nogas	0.030	0.030	72.58	123	0.02	2000	
Sb	121	1	nogas	0.152	0.152	13.53	3394	0.00	2000	
Tl	205	1	nogas	0.012	0.012	65.99	667	0.00	2000	
Pb	208	1	nogas	-0.079	-0.079	-4.13	2003	0.00	2000	
U	238	1	nogas	0.158	0.158	29.12	4267	0.00	2000	
[Pb]	206	1	nogas	-0.099	-0.099	-5.96	520	-0.02	2000	
[Pb]	207	1	nogas	-0.083	-0.083	-12.31	407	-0.02	2000	
Na	23	2	He	9690.585	9690.585	0.26	15281296	0.06	200000	
Mg	24	2	He	1051.865	1051.865	0.91	926871	0.11	200000	
Al	27	2	He	9.350	9.350	9.61	5621	0.17	2000	
K	39	2	He	323.126	323.126	0.85	526404	0.06	200000	
Ca	43	2	He	29823.212	29823.212	1.56	78712	37.89	200000	
Ca	44	2	He	29250.568	29250.568	4.73	1315872	2.22	200000	
V	51	2	He	1.308	1.308	3.42	13788	0.01	2000	
Cr	52	2	He	1.413	1.413	2.55	15220	0.01	2000	
Mn	55	2	He	23.772	23.772	3.95	122361	0.02	2000	
Fe	56	2	He	10.354	10.354	0.38	77204	0.01	200000	
Co	59	2	He	0.262	0.262	9.68	2904	0.01	2000	
Ni	60	2	He	0.668	0.668	14.35	3040	0.02	2000	
Cu	63	2	He	-2.896	-2.896	-0.61	6638	-0.04	2000	
Zn	66	2	He	2.556	2.556	7.26	5027	0.05	2000	
As	75	2	He	0.346	0.346	4.05	831	0.04	2000	
Se	78	2	He	0.164	0.164	75.79	207	0.08	2000	
B	11	1	nogas	26.926	26.926	4.18	139743	0.02	2000	
Si	28	1	nogas	82677.363	82677.363	1.03	94481372	0.09	2000	>LDR
Ca	43	1	nogas	30505.208	30505.208	2.08	1180108	2.58	200000	
Ca	44	1	nogas	30721.517	30721.517	3.28	19149901	0.16	200000	
Fe	56	1	nogas	-1.240	-1.240	-49.11	2196037	0.00	200000	
Se	77	1	nogas	3.622	3.622	26.81	18239	0.02	2000	
Se	82	1	nogas	0.459	0.459	50.34	507	0.09	2000	

Sample Report

Mo	95	1	nogas	1.524	1.524	4.41	9773	0.02	2000	
Sn	118	1	nogas	0.011	0.011	86.34	1250	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	25.307	25.307	4.96	112984	0.02	2000	
Sb	121	2	He	0.170	0.170	17.01	1347	0.01	2000	
La	139	1	nogas	633.685	633.685	9.64	2324	27.27	2000	
Au	197	1	nogas	-188.220	-188.220	-154.29	13	-1411.65	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1162965	2.67	1229805	94.56	70	125	
Ge	72	1	nogas	3508807	0.77	3541557	99.08	70	125	
In	115	1	nogas	3147597	3.94	3006327	104.70	70	125	
Bi	209	1	nogas	2248930	1.76	2153140	104.45	70	125	
Ge	72	2	He	877062	0.17	993327	88.30	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	109_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:32:35-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	97.258	3.093	705423	2.00	100	97.3	90	110	
Na	23	1	nogas	10284.823	1.339	250654556	0.97	10000	102.8	90	110	
Mg	24	1	nogas	10345.633	4.032	162266920	2.16	10000	103.5	90	110	
Al	27	1	nogas	107.333	2.538	2053027	4.09	100	107.3	90	110	
K	39	1	nogas	10326.573	5.033	206861975	2.96	10000	103.3	90	110	
Ti	47	1	nogas	100.826	2.614	194981	2.05	100	100.8	90	110	
V	51	1	nogas	103.892	2.217	2897139	0.24	100	103.9	90	110	
Cr	52	1	nogas	99.869	3.797	2263187	2.36	100	99.9	90	110	
Mn	55	1	nogas	101.880	4.889	2825477	3.02	100	101.9	90	110	
Co	59	1	nogas	100.851	3.283	2442539	2.49	100	100.9	90	110	
Ni	60	1	nogas	100.571	2.160	548566	1.46	100	100.6	90	110	
Cu	63	1	nogas	93.657	6.315	1305993	4.80	100	93.7	90	110	
Zn	66	1	nogas	101.748	0.467	445497	2.40	100	101.7	90	110	
As	75	1	nogas	99.446	2.907	599768	0.88	100	99.4	90	110	
Sr	88	1	nogas	106.665	4.655	2976528	3.31	100	106.7	90	110	
Ag	107	1	nogas	100.209	5.608	1409776	4.03	100	100.2	90	110	
Cd	111	1	nogas	94.772	2.731	309848	2.22	100	94.8	90	110	
Sb	121	1	nogas	108.137	6.162	1351716	4.33	100	108.1	90	110	
Tl	205	1	nogas	100.419	2.694	1909550	4.79	100	100.4	90	110	
Pb	208	1	nogas	103.303	4.741	2632004	4.73	100	103.3	90	110	
U	238	1	nogas	103.343	3.094	2604366	0.60	100	103.3	90	110	
[Pb]	206	1	nogas	101.313	1.720	655236	1.59	100	101.3	90	110	
[Pb]	207	1	nogas	100.130	1.696	579688	3.81	100	100.1	90	110	
Na	23	2	He	10517.554	3.234	15822541	2.36	10000	105.2	90	110	
Mg	24	2	He	10138.375	1.722	8522250	0.86	10000	101.4	90	110	
Al	27	2	He	98.695	1.674	47934	2.52	100	98.7	90	110	
K	39	2	He	9373.680	1.298	8945331	1.27	10000	93.7	90	110	
Ca	43	2	He	9935.931	3.207	25040	4.05	10000	99.4	90	110	
Ca	44	2	He	9789.361	1.136	422850	1.49	10000	97.9	90	110	
V	51	2	He	102.068	1.519	635393	0.72	100	102.1	90	110	
Cr	52	2	He	104.132	0.434	695331	0.73	100	104.1	90	110	
Mn	55	2	He	98.597	1.396	476742	0.62	100	98.6	90	110	
Fe	56	2	He	10029.326	1.563	58910224	1.49	10000	100.3	90	110	
Co	59	2	He	103.153	1.192	951461	0.43	100	103.2	90	110	
Ni	60	2	He	102.911	1.398	243070	0.95	100	102.9	90	110	
Cu	63	2	He	98.005	1.838	619426	1.11	100	98.0	90	110	
Zn	66	2	He	100.549	1.896	149413	1.08	100	100.5	90	110	
As	75	2	He	101.152	0.861	146825	1.71	100	101.2	90	110	
Se	78	2	He	97.822	2.503	11624	2.01	100	97.8	90	110	
B	11	1	nogas	536.201	0.314	2323936	1.40	500	107.2	90	110	
Si	28	1	nogas	4933.993	0.826	6643236	2.19	5000	98.7	90	110	
Ca	43	1	nogas	10252.944	3.509	371661	1.94	10000	102.5	90	110	
Ca	44	1	nogas	10159.877	2.887	6285447	0.99	10000	101.6	90	110	
Fe	56	1	nogas	9920.854	1.536	238966889	1.07	10000	99.2	90	110	
Se	77	1	nogas	104.621	5.244	42343	1.59	100	104.6	90	110	
Se	82	1	nogas	100.212	5.979	28907	4.32	100	100.2	90	110	
Mo	95	1	nogas	101.640	1.972	591166	1.14	100	101.6	90	110	
Sn	118	1	nogas	96.621	2.269	847698	0.56	100	96.6	90	110	
Ba	137	1	nogas	96.396	2.395	408832	1.67	100	96.4	90	110	
Sb	121	2	He	100.501	1.168	490057	0.30	100	100.5	90	110	
Li	7	1	nogas	95.967	2.152	1551722	2.74	100	96.0	90	110	
P	31	1	nogas	472.684	0.965	954298	1.56	500	94.5	90	110	
La	139	1	nogas	110.643	6.759	413	7.39	100	110.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	436.736	87.224	37	41.66	100	436.7	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1032226	1.30	1229805	83.93	70	125	
Ge	72	1	nogas	3283762	1.94	3541557	92.72	70	125	
In	115	1	nogas	2994114	1.75	3006327	99.59	70	125	
Bi	209	1	nogas	2133336	3.10	2153140	99.08	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	837154	0.88	993327	84.28	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	110_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:34:40-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.051	19.1	463	21.6	1	
Na	23	1	nogas	40.546	6.0	1496793	2.0	100	
Mg	24	1	nogas	7.830	23.4	131927	20.4	100	
Al	27	1	nogas	-0.649	-6.1	24623	2.5	5	
K	39	1	nogas	4.403	147.5	8025481	1.5	100	
Ti	47	1	nogas	0.022	159.8	497	14.1	2.5	
V	51	1	nogas	0.576	66.4	223018	4.8	2.5	
Cr	52	1	nogas	-0.223	-33.4	34973	4.7	2.5	
Mn	55	1	nogas	0.156	17.1	27487	2.0	2.5	
Co	59	1	nogas	0.039	52.8	2344	22.5	2.5	
Ni	60	1	nogas	0.331	5.5	1037	10.3	2.5	
Cu	63	1	nogas	-4.091	-1.3	20351	3.6	2.5	
Zn	66	1	nogas	0.474	5.5	2240	5.0	2.5	
As	75	1	nogas	-0.072	-387.8	49187	2.1	2.5	
Sr	88	1	nogas	0.166	9.8	5701	8.2	2.5	
Ag	107	1	nogas	0.039	25.7	690	21.1	2.5	
Cd	111	1	nogas	0.043	29.6	163	24.7	1	
Sb	121	1	nogas	1.116	23.1	15721	21.3	2.5	
Tl	205	1	nogas	0.577	52.9	11832	51.6	1	
Pb	208	1	nogas	-0.017	-217.1	3587	26.2	2.5	
U	238	1	nogas	0.160	67.9	4241	67.8	2.5	
[Pb]	206	1	nogas	-0.041	-109.2	900	32.9	2.5	
[Pb]	207	1	nogas	-0.016	-286.8	800	35.3	2.5	
Na	23	2	He	50.139	4.4	139300	1.1	100	
Mg	24	2	He	6.841	3.4	6391	4.6	100	
Al	27	2	He	-0.493	-44.7	697	16.6	5	
K	39	2	He	-23.637	-12.7	203842	1.4	100	
Ca	43	2	He	28.761	43.0	83	38.6	100	
Ca	44	2	He	-4.433	-278.8	3644	12.8	100	
V	51	2	He	-0.360	-1.9	2943	3.4	2.5	
Cr	52	2	He	-0.068	-43.2	4851	5.2	2.5	
Mn	55	2	He	-0.008	-269.9	2454	4.5	2.5	
Fe	56	2	He	4.034	7.1	37632	2.9	100	
Co	59	2	He	0.034	27.9	687	12.6	2.5	
Ni	60	2	He	-0.454	-1.5	273	7.6	2.5	
Cu	63	2	He	-2.746	-2.4	7465	7.4	2.5	
Zn	66	2	He	-0.299	-13.7	603	12.2	2.5	
As	75	2	He	0.046	37.1	370	8.6	2.5	
Se	78	2	He	-0.077	-122.2	174	5.3	2.5	
B	11	1	nogas	17.401	1.2	95028	3.8	10	CCB Main CR1 Failed
Si	28	1	nogas	-118.144	-17.4	1372195	0.8	5	
Ca	43	1	nogas	21.766	42.1	1707	20.6	100	
Ca	44	1	nogas	-259.640	-3.6	404749	0.7	100	
Fe	56	1	nogas	6.025	168.7	2301580	11.2	100	
Se	77	1	nogas	-3.780	-26.4	15710	1.2	2.5	
Se	82	1	nogas	0.380	63.3	467	16.2	2.5	
Mo	95	1	nogas	0.246	32.9	1773	27.8	2.5	
Sn	118	1	nogas	0.254	24.0	3384	16.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.065	24.3	623	9.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.716	7.5	4057	4.6	2.5	
P	31	1	nogas	-3.511	-27.1	100049	0.7	10	
La	139	1	nogas	18.812	65.0	100	43.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-180.898	-220.0	13	114.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1182414	4.55	1229805	96.15	70	125	
Ge	72	1	nogas	3390805	1.15	3541557	95.74	70	125	
In	115	1	nogas	3045852	1.99	3006327	101.31	70	125	
Bi	209	1	nogas	2220064	2.27	2153140	103.11	70	125	
Ge	72	2	He	861816	2.05	993327	86.76	70	125	

Sample Report

Sample Table

Sample Name	HS18111497-02
Data File Name	111SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:36:44-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.036	0.036	8.65	287	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	57336.294	57336.294	2.76	952660921	0.01	200000	
Al	27	1	nogas	5.670	5.670	3.63	148893	0.00	2000	
K	39	1	nogas	1180.805	1180.805	5.06	31812669	0.00	200000	
Ti	47	1	nogas	2.285	2.285	3.41	5064	0.05	2000	
V	51	1	nogas	0.965	0.965	27.92	236252	0.00	2000	
Cr	52	1	nogas	-0.141	-0.141	-11.32	37278	0.00	2000	
Mn	55	1	nogas	90.040	90.040	0.38	2612619	0.00	2000	
Co	59	1	nogas	1.736	1.736	4.08	45266	0.00	2000	
Ni	60	1	nogas	6.313	6.313	3.26	35167	0.02	2000	
Cu	63	1	nogas	-3.213	-3.213	-3.01	32636	-0.01	2000	
Zn	66	1	nogas	2.910	2.910	3.01	13398	0.02	2000	
As	75	1	nogas	6.489	6.489	2.11	87787	0.01	2000	
Sr	88	1	nogas	1473.538	1473.538	3.00	42939294	0.00	2000	
Ag	107	1	nogas	0.012	0.012	25.75	307	0.00	2000	
Cd	111	1	nogas	0.049	0.049	5.15	180	0.03	2000	
Sb	121	1	nogas	0.244	0.244	18.23	4507	0.01	2000	
Tl	205	1	nogas	0.052	0.052	30.29	1347	0.00	2000	
Pb	208	1	nogas	-0.068	-0.068	-14.76	2290	0.00	2000	
U	238	1	nogas	6.983	6.983	7.64	171515	0.00	2000	
[Pb]	206	1	nogas	-0.094	-0.094	-14.97	507	-0.02	2000	
[Pb]	207	1	nogas	-0.058	-0.058	-30.19	510	-0.01	2000	
Na	23	2	He	320998.034	320998.034	3.73	479129686	0.07	200000	>LDR
Mg	24	2	He	59723.223	59723.223	2.99	49991871	0.12	200000	
Al	27	2	He	5.872	5.872	12.29	3690	0.16	2000	
K	39	2	He	1147.281	1147.281	3.17	1293042	0.09	200000	
Ca	43	2	He	117455.122	117455.122	0.29	294677	39.86	200000	
Ca	44	2	He	113098.560	113098.560	0.88	4826214	2.34	200000	
V	51	2	He	0.004	0.004	529.65	5088	0.00	2000	
Cr	52	2	He	0.046	0.046	110.08	5444	0.00	2000	
Mn	55	2	He	89.608	89.608	0.49	431784	0.02	2000	
Fe	56	2	He	174.161	174.161	1.76	1031376	0.02	200000	
Co	59	2	He	1.722	1.722	3.02	16167	0.01	2000	
Ni	60	2	He	3.384	3.384	3.11	9242	0.04	2000	
Cu	63	2	He	-3.032	-3.032	-1.21	5484	-0.06	2000	
Zn	66	2	He	1.700	1.700	3.33	3520	0.05	2000	
As	75	2	He	0.860	0.860	2.78	1532	0.06	2000	
Se	78	2	He	0.061	0.061	291.41	185	0.03	2000	
B	11	1	nogas	55.122	55.122	2.68	240601	0.02	2000	
Si	28	1	nogas	232640.781	232640.781	2.88	257125603	0.09	2000	>LDR
Ca	43	1	nogas	111919.117	111919.117	3.45	4228194	2.65	200000	
Ca	44	1	nogas	112331.334	112331.334	2.97	66927691	0.17	200000	
Fe	56	1	nogas	151.804	151.804	6.64	5959928	0.00	200000	
Se	77	1	nogas	36.495	36.495	12.50	26440	0.14	2000	
Se	82	1	nogas	1.477	1.477	23.77	800	0.18	2000	

Sample Report

Mo	95	1	nogas	0.283	0.283	11.93	2017	0.01	2000	
Sn	118	1	nogas	0.054	0.054	13.63	1563	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	33.824	33.824	0.77	143315	0.02	2000	
Sb	121	2	He	0.214	0.214	16.81	1493	0.01	2000	
La	139	1	nogas	44.031	44.031	24.74	183	24.02	2000	
Au	197	1	nogas	-78.519	-78.519	-174.53	17	-471.11	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1010442	2.90	1229805	82.16	70	125	
Ge	72	1	nogas	3429879	2.59	3541557	96.85	70	125	
In	115	1	nogas	2985689	2.66	3006327	99.31	70	125	
Bi	209	1	nogas	2082229	5.12	2153140	96.71	70	125	
Ge	72	2	He	833819	1.51	993327	83.94	70	125	

Sample Report

Sample Table

Sample Name	HS18111497-03
Data File Name	112SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:38:47-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.024	0.024	19.02	203	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	62434.313	62434.313	0.26	1089572058	0.01	200000	
Al	27	1	nogas	5.389	5.389	6.23	146033	0.00	2000	
K	39	1	nogas	2228.868	2228.868	5.67	53913189	0.00	200000	
Ti	47	1	nogas	1.687	1.687	4.15	3934	0.04	2000	
V	51	1	nogas	-0.397	-0.397	-71.36	202857	0.00	2000	
Cr	52	1	nogas	-0.210	-0.210	-22.66	36401	0.00	2000	
Mn	55	1	nogas	459.109	459.109	4.73	13466021	0.00	2000	
Co	59	1	nogas	3.519	3.519	3.70	92044	0.00	2000	
Ni	60	1	nogas	5.602	5.602	3.56	31707	0.02	2000	
Cu	63	1	nogas	-4.012	-4.012	-1.85	22060	-0.02	2000	
Zn	66	1	nogas	5.029	5.029	4.55	23512	0.02	2000	
As	75	1	nogas	6.208	6.208	10.27	87736	0.01	2000	
Sr	88	1	nogas	2363.876	2363.876	5.48	70144149	0.00	2000	>LDR
Ag	107	1	nogas	0.003	0.003	81.06	173	0.00	2000	
Cd	111	1	nogas	0.012	0.012	49.24	60	0.02	2000	
Sb	121	1	nogas	0.099	0.099	20.87	2664	0.00	2000	
Tl	205	1	nogas	0.024	0.024	24.31	833	0.00	2000	
Pb	208	1	nogas	-0.089	-0.089	-13.89	1763	-0.01	2000	
U	238	1	nogas	0.485	0.485	3.94	12065	0.00	2000	
[Pb]	206	1	nogas	-0.096	-0.096	-1.17	503	-0.02	2000	
[Pb]	207	1	nogas	-0.087	-0.087	-26.18	363	-0.02	2000	
Na	23	2	He	262184.600	262184.600	0.36	403207821	0.07	200000	>LDR
Mg	24	2	He	65657.369	65657.369	0.20	56619772	0.12	200000	
Al	27	2	He	5.763	5.763	9.20	3750	0.15	2000	
K	39	2	He	2176.332	2176.332	3.05	2250277	0.10	200000	
Ca	43	2	He	132697.620	132697.620	1.74	342863	38.70	200000	
Ca	44	2	He	127124.379	127124.379	2.13	5586882	2.28	200000	
V	51	2	He	-0.410	-0.410	-4.27	2614	-0.02	2000	
Cr	52	2	He	-0.080	-0.080	-86.02	4754	0.00	2000	
Mn	55	2	He	471.587	471.587	2.32	2329785	0.02	2000	
Fe	56	2	He	8612.417	8612.417	0.64	51896694	0.02	200000	
Co	59	2	He	3.480	3.480	0.68	33281	0.01	2000	
Ni	60	2	He	2.868	2.868	1.42	8279	0.03	2000	
Cu	63	2	He	-3.384	-3.384	-1.10	3457	-0.10	2000	
Zn	66	2	He	4.037	4.037	1.83	7165	0.06	2000	
As	75	2	He	2.383	2.383	3.49	3840	0.06	2000	
Se	78	2	He	0.272	0.272	21.08	215	0.13	2000	
B	11	1	nogas	51.842	51.842	10.05	230876	0.02	2000	
Si	28	1	nogas	174478.890	174478.890	4.43	196724317	0.09	2000	>LDR
Ca	43	1	nogas	129219.151	129219.151	6.24	4969864	2.60	200000	
Ca	44	1	nogas	128671.178	128671.178	4.19	78001657	0.16	200000	
Fe	56	1	nogas	8253.816	8253.816	4.67	211825201	0.00	200000	
Se	77	1	nogas	23.621	23.621	21.42	23469	0.10	2000	
Se	82	1	nogas	1.732	1.732	17.84	893	0.19	2000	

Sample Report

Mo	95	1	nogas	0.865	0.865	6.79	5658	0.02	2000	
Sn	118	1	nogas	-0.001	-0.001	-494.33	1107	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	46.671	46.671	2.29	202478	0.02	2000	
Sb	121	2	He	0.089	0.089	43.54	913	0.01	2000	
La	139	1	nogas	87.255	87.255	20.27	340	25.66	2000	
Au	197	1	nogas	356.154	356.154	147.36	33	1068.46	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1033938	8.35	1229805	84.07	70	125	
Ge	72	1	nogas	3496843	4.75	3541557	98.74	70	125	
In	115	1	nogas	3060798	3.38	3006327	101.81	70	125	
Bi	209	1	nogas	2099031	7.29	2153140	97.49	70	125	
Ge	72	2	He	858771	0.86	993327	86.45	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	121_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:57:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	96.453	2.139	715199	0.55	100	96.5	90	110	
Na	23	1	nogas	10959.459	4.109	259099772	2.10	10000	109.6	90	110	
Mg	24	1	nogas	10082.589	3.415	153486933	0.38	10000	100.8	90	110	
Al	27	1	nogas	97.953	1.554	1906094	2.66	100	98.0	90	110	
K	39	1	nogas	10093.231	2.546	205640150	1.42	10000	100.9	90	110	
Ti	47	1	nogas	96.795	0.602	190201	1.80	100	96.8	90	110	
V	51	1	nogas	102.897	1.021	2917663	2.49	100	102.9	90	110	
Cr	52	1	nogas	95.066	2.436	2190587	0.84	100	95.1	90	110	
Mn	55	1	nogas	97.625	2.658	2752072	0.93	100	97.6	90	110	
Co	59	1	nogas	94.673	2.760	2329114	1.02	100	94.7	90	110	
Ni	60	1	nogas	95.365	3.235	528257	1.48	100	95.4	90	110	
Cu	63	1	nogas	89.147	2.479	1266744	1.29	100	89.1	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	100.225	1.547	445702	1.67	100	100.2	90	110	
As	75	1	nogas	101.433	1.770	620556	0.93	100	101.4	90	110	
Sr	88	1	nogas	102.907	1.590	2917942	0.32	100	102.9	90	110	
Ag	107	1	nogas	97.884	3.598	1399197	2.10	100	97.9	90	110	
Cd	111	1	nogas	96.665	1.819	306423	0.59	100	96.7	90	110	
Sb	121	1	nogas	101.729	3.210	1292383	1.95	100	101.7	90	110	
Tl	205	1	nogas	100.844	6.376	1893917	5.69	100	100.8	90	110	
Pb	208	1	nogas	100.427	1.197	2558847	1.19	100	100.4	90	110	
U	238	1	nogas	105.152	1.953	2619777	0.82	100	105.2	90	110	
[Pb]	206	1	nogas	100.622	4.226	643101	3.34	100	100.6	90	110	
[Pb]	207	1	nogas	98.526	2.645	563488	1.31	100	98.5	90	110	
Na	23	2	He	10574.949	2.044	15523230	1.22	10000	105.7	90	110	
Mg	24	2	He	9796.298	3.257	8033579	2.09	10000	98.0	90	110	
Al	27	2	He	97.392	3.461	46153	2.84	100	97.4	90	110	
K	39	2	He	9102.344	0.228	8692931	0.22	10000	91.0	90	110	
Ca	43	2	He	10026.309	3.919	24643	2.85	10000	100.3	90	110	
Ca	44	2	He	9916.817	2.325	417845	1.49	10000	99.2	90	110	
V	51	2	He	99.013	0.740	601604	1.12	100	99.0	90	110	
Cr	52	2	He	100.570	1.375	655414	1.57	100	100.6	90	110	
Mn	55	2	He	97.804	2.990	461429	2.62	100	97.8	90	110	
Fe	56	2	He	9913.873	3.298	56808189	2.42	10000	99.1	90	110	
Co	59	2	He	100.473	3.001	904148	2.26	100	100.5	90	110	
Ni	60	2	He	100.744	1.485	232192	0.33	100	100.7	90	110	
Cu	63	2	He	94.674	2.699	584595	1.70	100	94.7	90	110	
Zn	66	2	He	96.363	1.045	139764	0.74	100	96.4	90	110	
As	75	2	He	101.008	2.005	143034	1.39	100	101.0	90	110	
Se	78	2	He	97.073	1.727	11256	1.34	100	97.1	90	110	
B	11	1	nogas	560.097	1.327	2481446	2.52	500	112.0	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4905.002	2.853	6715519	0.98	5000	98.1	90	110	
Ca	43	1	nogas	10018.531	2.178	369020	1.83	10000	100.2	90	110	
Ca	44	1	nogas	9919.917	2.336	6248565	2.40	10000	99.2	90	110	
Fe	56	1	nogas	9545.600	1.446	233678547	2.22	10000	95.5	90	110	
Se	77	1	nogas	126.312	2.845	48545	2.40	100	126.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.721	1.831	28366	0.12	100	96.7	90	110	
Mo	95	1	nogas	98.106	2.136	579666	1.69	100	98.1	90	110	
Sn	118	1	nogas	96.399	0.585	820184	0.68	100	96.4	90	110	
Ba	137	1	nogas	97.285	1.830	400074	1.32	100	97.3	90	110	
Sb	121	2	He	99.552	3.239	473603	2.63	100	99.6	90	110	
Li	7	1	nogas	97.965	5.098	1616512	2.96	100	98.0	90	110	
P	31	1	nogas	453.271	2.050	933747	0.51	500	90.7	90	110	
La	139	1	nogas	223.997	71.570	777	68.67	100	224.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	188.562	297.953	27	78.06	100	188.6	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1055374	2.49	1229805	85.82	70	125	
Ge	72	1	nogas	3335671	1.79	3541557	94.19	70	125	
In	115	1	nogas	2902955	1.26	3006327	96.56	70	125	
Bi	209	1	nogas	2108148	1.71	2153140	97.91	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	816833	1.18	993327	82.23	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	122_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:59:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.046	34.2	423	32.2	1	
Na	23	1	nogas	230.614	6.9	6308068	1.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	12.014	20.8	200523	14.6	100	
Al	27	1	nogas	-0.594	-16.8	26028	5.4	5	
K	39	1	nogas	3.041	330.0	8111079	1.0	100	
Ti	47	1	nogas	0.005	978.1	470	22.2	2.5	
V	51	1	nogas	2.990	8.5	291764	0.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.046	-187.3	39576	2.9	2.5	
Mn	55	1	nogas	0.206	33.3	29307	4.5	2.5	
Co	59	1	nogas	0.043	49.6	2477	19.6	2.5	
Ni	60	1	nogas	0.556	8.3	2337	12.4	2.5	
Cu	63	1	nogas	-4.973	-0.5	8482	4.8	2.5	
Zn	66	1	nogas	0.569	7.5	2707	8.1	2.5	
As	75	1	nogas	2.472	11.9	64675	1.5	2.5	
Sr	88	1	nogas	0.303	15.1	9776	11.5	2.5	
Ag	107	1	nogas	0.028	30.4	543	21.6	2.5	
Cd	111	1	nogas	0.040	40.8	153	35.9	1	
Sb	121	1	nogas	1.022	24.3	14663	20.0	2.5	
Tl	205	1	nogas	0.542	52.0	11298	51.7	1	
Pb	208	1	nogas	-0.021	-142.0	3477	22.2	2.5	
U	238	1	nogas	0.165	64.5	4438	65.2	2.5	
[Pb]	206	1	nogas	-0.035	-133.7	953	35.0	2.5	
[Pb]	207	1	nogas	-0.020	-23.9	787	6.3	2.5	
Na	23	2	He	249.835	1.6	434100	0.4	100	CCB Main CR1 Failed
Mg	24	2	He	10.930	6.9	9626	5.1	100	
Al	27	2	He	-0.602	-20.6	623	8.8	5	
K	39	2	He	-25.860	-7.2	201773	0.9	100	
Ca	43	2	He	36.284	27.5	100	26.5	100	
Ca	44	2	He	24.610	28.0	4784	6.3	100	
V	51	2	He	-0.255	-4.2	3502	3.1	2.5	
Cr	52	2	He	-0.016	-373.5	5051	5.8	2.5	
Mn	55	2	He	-0.027	-172.7	2287	8.1	2.5	
Fe	56	2	He	4.347	2.3	38377	3.3	100	
Co	59	2	He	0.038	34.5	707	15.5	2.5	
Ni	60	2	He	-0.467	-5.0	237	24.4	2.5	
Cu	63	2	He	-3.486	-1.5	2740	10.6	2.5	
Zn	66	2	He	-0.254	-27.0	650	14.8	2.5	
As	75	2	He	0.073	5.6	398	3.2	2.5	
Se	78	2	He	0.353	87.9	219	17.3	2.5	
B	11	1	nogas	45.279	2.4	235203	3.1	10	CCB Main CR1 Failed
Si	28	1	nogas	-40.857	-55.9	1476874	0.9	5	
Ca	43	1	nogas	52.811	11.3	2904	5.5	100	
Ca	44	1	nogas	-294.188	-8.4	389920	1.7	100	
Fe	56	1	nogas	15.654	70.3	2571482	8.5	100	
Se	77	1	nogas	14.569	9.7	20745	1.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.013	554.9	363	7.9	2.5	
Mo	95	1	nogas	0.252	40.9	1823	31.8	2.5	
Sn	118	1	nogas	0.256	14.6	3417	11.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.043	13.5	533	5.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.601	9.5	3384	9.3	2.5	
P	31	1	nogas	-9.374	-20.4	90395	2.1	10	
La	139	1	nogas	14.909	46.3	87	29.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-20.525	-68.5	20	0.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1193515	1.01	1229805	97.05	70	125	
Ge	72	1	nogas	3439553	2.22	3541557	97.12	70	125	
In	115	1	nogas	3063882	1.13	3006327	101.91	70	125	
Bi	209	1	nogas	2234904	2.75	2153140	103.80	70	125	
Ge	72	2	He	836160	1.81	993327	84.18	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	127_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:09:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.883	5.414	687543	0.49	100	94.9	90	110	
Na	23	1	nogas	10503.197	2.018	238904322	1.67	10000	105.0	90	110	
Mg	24	1	nogas	10293.178	4.718	150650120	1.96	10000	102.9	90	110	
Al	27	1	nogas	101.831	4.205	1854474	2.77	100	101.8	90	110	
K	39	1	nogas	10230.289	1.924	195206696	0.47	10000	102.3	90	110	
Ti	47	1	nogas	100.040	3.791	184094	1.87	100	100.0	90	110	
V	51	1	nogas	105.300	4.081	2792038	2.58	100	105.3	90	110	
Cr	52	1	nogas	102.194	5.032	2202992	3.13	100	102.2	90	110	
Mn	55	1	nogas	107.865	4.687	2846480	3.22	100	107.9	90	110	
Co	59	1	nogas	100.062	4.691	2305954	2.79	100	100.1	90	110	
Ni	60	1	nogas	98.381	3.315	510648	1.42	100	98.4	90	110	
Cu	63	1	nogas	92.061	2.132	1223550	1.67	100	92.1	90	110	
Zn	66	1	nogas	99.601	1.191	415065	2.23	100	99.6	90	110	
As	75	1	nogas	100.044	2.084	574104	0.99	100	100.0	90	110	
Sr	88	1	nogas	103.765	3.027	2757468	3.55	100	103.8	90	110	
Ag	107	1	nogas	103.561	5.684	1387018	4.81	100	103.6	90	110	
Cd	111	1	nogas	96.918	1.842	296614	2.73	100	96.9	90	110	
Sb	121	1	nogas	106.833	3.003	1271661	1.60	100	106.8	90	110	
Tl	205	1	nogas	102.854	0.884	1853401	1.37	100	102.9	90	110	
Pb	208	1	nogas	97.739	0.623	2490452	0.62	100	97.7	90	110	
U	238	1	nogas	103.663	2.372	2477424	2.03	100	103.7	90	110	
[Pb]	206	1	nogas	102.225	1.849	626787	1.55	100	102.2	90	110	
[Pb]	207	1	nogas	100.063	1.838	549008	1.80	100	100.1	90	110	
Na	23	2	He	10189.196	2.943	14149079	2.98	10000	101.9	90	110	
Mg	24	2	He	9906.923	2.000	7685222	2.00	10000	99.1	90	110	
Al	27	2	He	96.196	1.994	43133	2.51	100	96.2	90	110	
K	39	2	He	8632.386	0.189	8255772	0.18	10000	86.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10029.144	1.104	23318	0.57	10000	100.3	90	110	
Ca	44	2	He	9805.633	2.061	390804	1.49	10000	98.1	90	110	
V	51	2	He	100.422	1.919	576957	1.46	100	100.4	90	110	
Cr	52	2	He	102.747	1.737	633140	1.40	100	102.7	90	110	
Mn	55	2	He	100.520	1.319	448486	1.22	100	100.5	90	110	
Fe	56	2	He	10059.449	1.328	54525074	1.36	10000	100.6	90	110	
Co	59	2	He	101.639	1.688	865129	1.54	100	101.6	90	110	
Ni	60	2	He	101.388	1.972	220999	1.59	100	101.4	90	110	
Cu	63	2	He	95.362	2.949	556762	2.27	100	95.4	90	110	
Zn	66	2	He	98.239	1.766	134732	1.18	100	98.2	90	110	
As	75	2	He	99.630	0.643	133443	0.07	100	99.6	90	110	
Se	78	2	He	94.225	1.434	10338	1.13	100	94.2	90	110	
B	11	1	nogas	514.622	5.677	2227925	1.21	500	102.9	90	110	
Si	28	1	nogas	4830.276	2.276	6217884	0.52	5000	96.6	90	110	
Ca	43	1	nogas	10195.923	3.584	351776	1.66	10000	102.0	90	110	
Ca	44	1	nogas	9876.418	3.162	5829775	0.92	10000	98.8	90	110	
Fe	56	1	nogas	10335.634	3.272	236820189	1.22	10000	103.4	90	110	
Se	77	1	nogas	104.834	0.905	40368	1.72	100	104.8	90	110	
Se	82	1	nogas	98.354	3.524	27040	5.43	100	98.4	90	110	
Mo	95	1	nogas	100.797	2.261	558000	1.11	100	100.8	90	110	
Sn	118	1	nogas	97.685	4.133	801779	0.59	100	97.7	90	110	
Ba	137	1	nogas	98.296	4.967	389906	1.40	100	98.3	90	110	
Sb	121	2	He	100.715	2.417	453163	1.90	100	100.7	90	110	
Li	7	1	nogas	99.910	4.405	1610694	1.65	100	99.9	90	110	
P	31	1	nogas	466.250	2.542	897140	1.20	500	93.3	90	110	
La	139	1	nogas	86.252	27.522	307	21.71	100	86.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-153.291	-209.130	13	86.60	100	-153.3	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1033109	5.68	1229805	84.01	70	125	
Ge	72	1	nogas	3125617	2.02	3541557	88.26	70	125	
In	115	1	nogas	2803726	4.39	3006327	93.26	70	125	
Bi	209	1	nogas	2021944	0.49	2153140	93.91	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	772499	0.58	993327	77.77	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	128_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:12:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.050	46.1	413	34.9	1	
Na	23	1	nogas	94.466	5.8	2664505	2.4	100	
Mg	24	1	nogas	8.110	20.3	127729	17.1	100	
Al	27	1	nogas	-0.613	-11.3	23839	5.3	5	
K	39	1	nogas	8.253	56.0	7625610	0.4	100	
Ti	47	1	nogas	0.030	66.6	483	7.8	2.5	
V	51	1	nogas	1.164	18.9	224774	3.5	2.5	
Cr	52	1	nogas	-0.206	-34.6	33280	5.2	2.5	
Mn	55	1	nogas	1.145	4.5	52344	1.7	2.5	
Co	59	1	nogas	0.051	42.9	2500	20.4	2.5	
Ni	60	1	nogas	0.381	3.7	1240	6.5	2.5	
Cu	63	1	nogas	-4.662	-1.3	11844	6.0	2.5	
Zn	66	1	nogas	0.519	5.8	2300	5.8	2.5	
As	75	1	nogas	0.887	43.7	51463	3.1	2.5	
Sr	88	1	nogas	0.192	4.9	6061	3.2	2.5	
Ag	107	1	nogas	0.032	23.3	557	18.0	2.5	
Cd	111	1	nogas	0.056	23.8	193	20.9	1	
Sb	121	1	nogas	1.038	26.2	13856	24.3	2.5	
Tl	205	1	nogas	0.558	50.9	10771	49.5	1	
Pb	208	1	nogas	-0.020	-141.6	3504	20.9	2.5	
U	238	1	nogas	0.170	58.6	4234	58.3	2.5	
[Pb]	206	1	nogas	-0.036	-86.7	877	22.9	2.5	
[Pb]	207	1	nogas	-0.021	-148.6	727	24.2	2.5	
Na	23	2	He	114.942	2.4	217177	0.5	100	CCB Main CR1 Failed
Mg	24	2	He	6.997	4.7	5921	4.3	100	
Al	27	2	He	-0.586	-28.7	590	11.7	5	
K	39	2	He	-36.940	-0.2	191466	0.0	100	
Ca	43	2	He	29.106	32.5	77	30.1	100	
Ca	44	2	He	5.517	89.0	3710	4.5	100	
V	51	2	He	-0.355	-6.6	2697	4.2	2.5	
Cr	52	2	He	-0.017	-251.2	4724	6.7	2.5	
Mn	55	2	He	0.919	5.8	6395	3.6	2.5	
Fe	56	2	He	4.875	10.2	38765	5.9	100	
Co	59	2	He	0.040	15.0	677	8.9	2.5	
Ni	60	2	He	-0.444	-3.9	270	14.8	2.5	
Cu	63	2	He	-3.149	-1.0	4481	5.2	2.5	
Zn	66	2	He	-0.264	-25.5	593	14.3	2.5	
As	75	2	He	0.031	133.4	314	16.3	2.5	
Se	78	2	He	0.316	99.3	201	16.0	2.5	
B	11	1	nogas	32.827	10.6	159291	3.0	10	CCB Main CR1 Failed
Si	28	1	nogas	6.937	383.0	1419309	0.8	5	CCB Main CR1 Failed
Ca	43	1	nogas	32.993	3.1	2000	1.0	100	
Ca	44	1	nogas	-297.313	-1.9	360253	1.0	100	
Fe	56	1	nogas	10.356	70.5	2266876	7.8	100	
Se	77	1	nogas	3.308	93.2	16508	3.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.421	28.0	450	8.0	2.5	
Mo	95	1	nogas	0.255	39.9	1720	33.7	2.5	
Sn	118	1	nogas	0.247	26.3	3104	18.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.076	44.0	627	19.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.624	13.7	3267	12.1	2.5	
P	31	1	nogas	-4.244	-6.3	92893	0.6	10	
La	139	1	nogas	115.380	148.7	407	137.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-73.336	-215.3	17	34.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1104108	7.03	1229805	89.78	70	125	
Ge	72	1	nogas	3191404	1.11	3541557	90.11	70	125	
In	115	1	nogas	2848650	2.84	3006327	94.76	70	125	
Bi	209	1	nogas	2082868	0.93	2153140	96.74	70	125	
Ge	72	2	He	782135	1.35	993327	78.74	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	132CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:20:18-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	50	40.00
Na	23	1	nogas	1656557	0.00
Mg	24	1	nogas	41989	0.03
Al	27	1	nogas	20989	0.01
K	39	1	nogas	7714378	0.00
Ti	47	1	nogas	437	1.32
V	51	1	nogas	230344	0.00
Cr	52	1	nogas	33153	0.00
Mn	55	1	nogas	35551	0.01
Co	59	1	nogas	1110	0.57
Ni	60	1	nogas	810	0.40
Cu	63	1	nogas	15116	0.03
Zn	66	1	nogas	1340	0.28
As	75	1	nogas	50721	0.01
Sr	88	1	nogas	3567	0.10
Ag	107	1	nogas	83	8.31
Cd	111	1	nogas	30	111.11
Sb	121	1	nogas	1053	0.76
Tl	205	1	nogas	417	4.62
Pb	208	1	nogas	1603	0.56
[Pb]	206	1	nogas	380	5.41
[Pb]	207	1	nogas	363	3.15
Na	23	2	He	152547	0.00
Mg	24	2	He	2397	0.28
Al	27	2	He	577	1.06
K	39	2	He	190057	0.00
Ca	43	2	He	70	40.82
Ca	44	2	He	3160	0.35
V	51	2	He	2636	0.11
Cr	52	2	He	4597	0.05
Mn	55	2	He	3757	0.10
Fe	56	2	He	13091	0.05
Co	59	2	He	310	3.75
Ni	60	2	He	103	53.25
Cu	63	2	He	5818	0.06
Zn	66	2	He	343	11.58
As	75	2	He	266	4.92
Se	78	2	He	217	3.23
B	11	1	nogas	118775	0.00
Si	28	1	nogas	1375551	0.00
Ca	43	1	nogas	1570	1.04
Ca	44	1	nogas	346445	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	1956414	0.00
Se	77	1	nogas	16564	0.03
Se	82	1	nogas	480	2.64
Mo	95	1	nogas	150	23.52
Sn	118	1	nogas	1000	0.70
Ba	137	1	nogas	727	1.70
Sb	121	2	He	380	6.04
Li	7	1	nogas	98157	0.00
P	31	1	nogas	98907	0.00
La	139	1	nogas	43	134.02

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1171766	2.42
Ge	72	1	nogas	3233065	0.97
In	115	1	nogas	2958353	2.40
Bi	209	1	nogas	2061475	3.55
Ge	72	2	He	810035	0.70

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	133CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:22:20-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	13375	0.02
Na	23	1	nogas	6369549	0.00
Mg	24	1	nogas	3260445	0.00
Al	27	1	nogas	54395	0.00
K	39	1	nogas	11651533	0.00
Ti	47	1	nogas	4010	0.08
V	51	1	nogas	274564	0.00
Cr	52	1	nogas	77756	0.00
Mn	55	1	nogas	91652	0.00
Co	59	1	nogas	48424	0.00
Ni	60	1	nogas	11384	0.04
Cu	63	1	nogas	41895	0.01
Zn	66	1	nogas	10180	0.02
As	75	1	nogas	61908	0.00
Sr	88	1	nogas	60018	0.00
Ag	107	1	nogas	28710	0.00
Cd	111	1	nogas	6195	0.05
Sb	121	1	nogas	27475	0.01
Tl	205	1	nogas	37504	0.01
Pb	208	1	nogas	52381	0.00
[Pb]	206	1	nogas	12935	0.02
[Pb]	207	1	nogas	11264	0.03
Na	23	2	He	443743	0.00
Mg	24	2	He	168330	0.00
Al	27	2	He	1317	0.15
K	39	2	He	363906	0.00
Ca	43	2	He	520	2.43
Ca	44	2	He	10993	0.02
V	51	2	He	14390	0.02
Cr	52	2	He	17258	0.01
Mn	55	2	He	12791	0.03
Fe	56	2	He	1161662	0.00
Co	59	2	He	18389	0.01
Ni	60	2	He	4781	0.11
Cu	63	2	He	17682	0.00
Zn	66	2	He	3204	0.05
As	75	2	He	3046	0.07
Se	78	2	He	401	2.52
B	11	1	nogas	155757	0.00
Si	28	1	nogas	1516523	0.00

Calibration Standard Report

Ca	43	1	nogas	8499	0.06
Ca	44	1	nogas	464419	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	6643367	0.00
Se	77	1	nogas	17072	0.01
Se	82	1	nogas	837	1.15
Mo	95	1	nogas	11607	0.03
Sn	118	1	nogas	17506	0.02
Ba	137	1	nogas	8285	0.04
Sb	121	2	He	9763	0.04
P	31	1	nogas	114597	0.00
La	139	1	nogas	53	101.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1148787	4.67	1171766	98.04	70	125	
Ge	72	1	nogas	3290283	2.66	3233065	101.77	70	125	
In	115	1	nogas	2997832	2.44	2958353	101.33	70	125	
Bi	209	1	nogas	2126686	5.16	2061475	103.16	70	125	
Ge	72	2	He	804889	1.09	810035	99.36	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	134CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:24:24-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	34832	0.01
Na	23	1	nogas	13348913	0.00
Mg	24	1	nogas	7899016	0.00
Al	27	1	nogas	112157	0.00
K	39	1	nogas	17375545	0.00
Ti	47	1	nogas	10827	0.11
V	51	1	nogas	358841	0.00
Cr	52	1	nogas	148632	0.00
Mn	55	1	nogas	172193	0.00
Co	59	1	nogas	117743	0.00
Ni	60	1	nogas	27327	0.00
Cu	63	1	nogas	79210	0.00
Zn	66	1	nogas	22157	0.01
As	75	1	nogas	79255	0.00
Sr	88	1	nogas	145268	0.00
Ag	107	1	nogas	69336	0.00
Cd	111	1	nogas	15097	0.01
Sb	121	1	nogas	65500	0.00
Tl	205	1	nogas	92531	0.00
Pb	208	1	nogas	131803	0.00
[Pb]	206	1	nogas	32025	0.01
[Pb]	207	1	nogas	29150	0.01
Na	23	2	He	894829	0.00
Mg	24	2	He	422787	0.00
Al	27	2	He	2800	0.18
K	39	2	He	619491	0.00
Ca	43	2	He	1110	1.62
Ca	44	2	He	23669	0.01
V	51	2	He	32247	0.00
Cr	52	2	He	37114	0.01
Mn	55	2	He	26586	0.01
Fe	56	2	He	2808440	0.00
Co	59	2	He	44962	0.00
Ni	60	2	He	11577	0.03
Cu	63	2	He	35247	0.00
Zn	66	2	He	7265	0.04
As	75	2	He	6981	0.04
Se	78	2	He	736	0.30
B	11	1	nogas	211892	0.00
Si	28	1	nogas	1673937	0.00

Calibration Standard Report

Ca	43	1	nogas	21573	0.11
Ca	44	1	nogas	640199	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	13592324	0.00
Se	77	1	nogas	18263	0.01
Se	82	1	nogas	1760	0.14
Mo	95	1	nogas	28874	0.01
Sn	118	1	nogas	42255	0.01
Ba	137	1	nogas	19852	0.01
Sb	121	2	He	22788	0.00
P	31	1	nogas	142256	0.00
La	139	1	nogas	73	42.94

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1162133	2.42	1171766	99.18	70	125	
Ge	72	1	nogas	3279639	1.90	3233065	101.44	70	125	
In	115	1	nogas	2943060	3.20	2958353	99.48	70	125	
Bi	209	1	nogas	2155140	4.78	2061475	104.54	70	125	
Ge	72	2	He	808101	1.44	810035	99.76	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	135CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:26:28-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	67130	0.00
Na	23	1	nogas	24792705	0.00
Mg	24	1	nogas	15278293	0.00
Al	27	1	nogas	209579	0.00
K	39	1	nogas	27168466	0.00
Ti	47	1	nogas	18226	0.00
V	51	1	nogas	491727	0.00
Cr	52	1	nogas	252244	0.00
Mn	55	1	nogas	330636	0.00
Co	59	1	nogas	231885	0.00
Ni	60	1	nogas	53318	0.01
Cu	63	1	nogas	140775	0.00
Zn	66	1	nogas	43923	0.00
As	75	1	nogas	105469	0.00
Sr	88	1	nogas	286095	0.00
Ag	107	1	nogas	142153	0.00
Cd	111	1	nogas	30236	0.01
Sb	121	1	nogas	125700	0.00
Tl	205	1	nogas	182926	0.00
Pb	208	1	nogas	257144	0.00
[Pb]	206	1	nogas	62458	0.00
[Pb]	207	1	nogas	56646	0.00
Na	23	2	He	1617547	0.00
Mg	24	2	He	812313	0.00
Al	27	2	He	5001	0.09
K	39	2	He	1066041	0.00
Ca	43	2	He	2314	0.49
Ca	44	2	He	42776	0.00
V	51	2	He	62291	0.00
Cr	52	2	He	68286	0.00
Mn	55	2	He	52237	0.00
Fe	56	2	He	5530173	0.00
Co	59	2	He	88516	0.00
Ni	60	2	He	22871	0.01
Cu	63	2	He	64527	0.00
Zn	66	2	He	14699	0.04
As	75	2	He	13963	0.01
Se	78	2	He	1233	0.39
B	11	1	nogas	313967	0.00
Si	28	1	nogas	1904501	0.00

Calibration Standard Report

Ca	43	1	nogas	36840	0.00
Ca	44	1	nogas	916610	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	24853691	0.00
Se	77	1	nogas	20198	0.01
Se	82	1	nogas	2990	0.27
Mo	95	1	nogas	56343	0.01
Sn	118	1	nogas	81259	0.00
Ba	137	1	nogas	40358	0.01
Sb	121	2	He	45780	0.00
P	31	1	nogas	186095	0.00
La	139	1	nogas	87	33.51

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1141882	2.78	1171766	97.45	70	125	
Ge	72	1	nogas	3303478	3.55	3233065	102.18	70	125	
In	115	1	nogas	2901413	3.19	2958353	98.08	70	125	
Bi	209	1	nogas	2144168	3.55	2061475	104.01	70	125	
Ge	72	2	He	813900	0.93	810035	100.48	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	136CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:28:31-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	708918	0.00
Na	23	1	nogas	239318264	0.00
Mg	24	1	nogas	154747316	0.00
Al	27	1	nogas	1913956	0.00
K	39	1	nogas	201423455	0.00
Ti	47	1	nogas	189011	0.00
V	51	1	nogas	2778563	0.00
Cr	52	1	nogas	2183332	0.00
Mn	55	1	nogas	2768287	0.00
Co	59	1	nogas	2277159	0.00
Ni	60	1	nogas	510058	0.00
Cu	63	1	nogas	1250824	0.00
Zn	66	1	nogas	428575	0.00
As	75	1	nogas	582611	0.00
Sr	88	1	nogas	2869078	0.00
Ag	107	1	nogas	1379275	0.00
Cd	111	1	nogas	300914	0.00
Sb	121	1	nogas	1270308	0.00
Tl	205	1	nogas	1889794	0.00
Pb	208	1	nogas	2541099	0.00
[Pb]	206	1	nogas	634318	0.00
[Pb]	207	1	nogas	559409	0.00
Na	23	2	He	14853822	0.00
Mg	24	2	He	8216399	0.00
Al	27	2	He	44112	0.00
K	39	2	He	8638587	0.00
Ca	43	2	He	23936	0.00
Ca	44	2	He	406490	0.00
V	51	2	He	602343	0.00
Cr	52	2	He	671834	0.00
Mn	55	2	He	464117	0.00
Fe	56	2	He	55464134	0.00
Co	59	2	He	891455	0.00
Ni	60	2	He	227321	0.00
Cu	63	2	He	584011	0.00
Zn	66	2	He	141569	0.00
As	75	2	He	138886	0.00
Se	78	2	He	10844	0.03
B	11	1	nogas	2242263	0.00
Si	28	1	nogas	6461019	0.00

Calibration Standard Report

Ca	43	1	nogas	360667	0.00
Ca	44	1	nogas	6066129	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	232052289	0.00
Se	77	1	nogas	41097	0.01
Se	82	1	nogas	28953	0.00
Mo	95	1	nogas	570258	0.00
Sn	118	1	nogas	801582	0.00
Ba	137	1	nogas	394072	0.00
Sb	121	2	He	467969	0.00
P	31	1	nogas	934022	0.00
La	139	1	nogas	380	4.99

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1076082	5.70	1171766	91.83	70	125	
Ge	72	1	nogas	3250742	2.71	3233065	100.55	70	125	
In	115	1	nogas	2793850	3.47	2958353	94.44	70	125	
Bi	209	1	nogas	2094723	2.41	2061475	101.61	70	125	
Ge	72	2	He	806515	0.80	810035	99.57	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	137CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:30:36-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1380233	0.00
Na	23	1	nogas	469382227	0.00
Mg	24	1	nogas	303328815	0.00
Al	27	1	nogas	3591851	0.00
K	39	1	nogas	378799533	0.00
Ti	47	1	nogas	370955	0.00
V	51	1	nogas	5226243	0.00
Cr	52	1	nogas	4337629	0.00
Mn	55	1	nogas	5412668	0.00
Co	59	1	nogas	4463821	0.00
Ni	60	1	nogas	1017117	0.00
Cu	63	1	nogas	2464249	0.00
Zn	66	1	nogas	833502	0.00
As	75	1	nogas	1113067	0.00
Sr	88	1	nogas	5595267	0.00
Ag	107	1	nogas	2686315	0.00
Cd	111	1	nogas	578781	0.00
Sb	121	1	nogas	2589195	0.00
Tl	205	1	nogas	3701900	0.00
Pb	208	1	nogas	5023409	0.00
[Pb]	206	1	nogas	1247924	0.00
[Pb]	207	1	nogas	1103283	0.00
Na	23	2	He	28601453	0.00
Mg	24	2	He	15719288	0.00
Al	27	2	He	87066	0.00
K	39	2	He	16782509	0.00
Ca	43	2	He	46702	0.00
Ca	44	2	He	782865	0.00
V	51	2	He	1191175	0.00
Cr	52	2	He	1281351	0.00
Mn	55	2	He	880471	0.00
Fe	56	2	He	107109075	0.00
Co	59	2	He	1791767	0.00
Ni	60	2	He	450978	0.00
Cu	63	2	He	1140342	0.00
Zn	66	2	He	273886	0.00
As	75	2	He	276043	0.00
Se	78	2	He	21561	0.01
B	11	1	nogas	4305824	0.00
Si	28	1	nogas	11340207	0.00

Calibration Standard Report

Ca	43	1	nogas	702064	0.00
Ca	44	1	nogas	11360077	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	470600377	0.00
Se	77	1	nogas	66812	0.00
Se	82	1	nogas	54810	0.00
Mo	95	1	nogas	1119556	0.00
Sn	118	1	nogas	1667640	0.00
Ba	137	1	nogas	780756	0.00
Sb	121	2	He	956851	0.00
P	31	1	nogas	1758777	0.00
La	139	1	nogas	613	1.62

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	975980	4.46	1171766	83.29	70	125	
Ge	72	1	nogas	3169936	2.57	3233065	98.05	70	125	
In	115	1	nogas	2770190	0.14	2958353	93.64	70	125	
Bi	209	1	nogas	2022181	2.47	2061475	98.09	70	125	
Ge	72	2	He	794815	1.98	810035	98.12	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	138_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:32:42-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	97.438	0.729	699995	0.97	100	97.4	90	110	
Na	23	1	nogas	9988.377	2.167	245334747	0.65	10000	99.9	90	110	
Mg	24	1	nogas	9938.051	2.893	157344954	1.45	10000	99.4	90	110	
Al	27	1	nogas	103.918	1.585	1906100	0.78	100	103.9	90	110	
K	39	1	nogas	10526.700	0.892	205447805	0.21	10000	105.3	90	110	
Ti	47	1	nogas	101.236	2.141	189344	2.21	100	101.2	90	110	
V	51	1	nogas	99.140	1.264	2725907	1.92	100	99.1	90	110	
Cr	52	1	nogas	101.264	0.479	2220685	1.26	100	101.3	90	110	
Mn	55	1	nogas	100.661	4.909	2762592	4.91	100	100.7	90	110	
Co	59	1	nogas	103.765	1.460	2335581	2.24	100	103.8	90	110	
Ni	60	1	nogas	102.878	0.863	525681	1.65	100	102.9	90	110	
Cu	63	1	nogas	100.263	1.038	1250305	1.55	100	100.3	90	110	
Zn	66	1	nogas	100.623	1.323	423737	1.77	100	100.6	90	110	
As	75	1	nogas	99.897	0.982	582669	0.76	100	99.9	90	110	
Sr	88	1	nogas	98.817	1.104	2791110	1.81	100	98.8	90	110	
Ag	107	1	nogas	106.276	1.627	1440872	1.92	100	106.3	90	110	
Cd	111	1	nogas	103.925	1.459	306987	0.39	100	103.9	90	110	
Sb	121	1	nogas	103.053	2.414	1334974	2.00	100	103.1	90	110	
Tl	205	1	nogas	101.969	1.609	1971832	1.89	100	102.0	90	110	
Pb	208	1	nogas	102.511	2.583	2581537	2.58	100	102.5	90	110	
U	238	1	nogas	104.054	3.218	2566553	3.12	100	104.1	90	110	
[Pb]	206	1	nogas	101.152	0.768	659000	1.00	100	101.2	90	110	
[Pb]	207	1	nogas	96.992	0.800	558410	0.90	100	97.0	90	110	
Na	23	2	He	10087.057	0.683	14898063	0.50	10000	100.9	90	110	
Mg	24	2	He	10221.451	1.095	8274930	1.49	10000	102.2	90	110	
Al	27	2	He	102.291	2.116	45775	2.51	100	102.3	90	110	
K	39	2	He	10447.143	2.553	8890135	2.50	10000	104.5	90	110	
Ca	43	2	He	10214.093	1.684	24493	2.25	10000	102.1	90	110	
Ca	44	2	He	10342.728	2.421	417557	1.72	10000	103.4	90	110	
V	51	2	He	98.953	1.044	603696	0.49	100	99.0	90	110	
Cr	52	2	He	98.692	0.563	653524	1.04	100	98.7	90	110	
Mn	55	2	He	101.305	1.677	461639	1.85	100	101.3	90	110	
Fe	56	2	He	10364.522	2.744	57059781	2.54	10000	103.6	90	110	
Co	59	2	He	97.825	1.781	893843	1.51	100	97.8	90	110	
Ni	60	2	He	98.593	1.411	227296	1.94	100	98.6	90	110	
Cu	63	2	He	99.499	0.628	584626	1.30	100	99.5	90	110	
Zn	66	2	He	101.394	1.077	142931	0.88	100	101.4	90	110	
As	75	2	He	99.759	0.815	140823	0.27	100	99.8	90	110	
Se	78	2	He	99.530	0.753	11031	1.32	100	99.5	90	110	
B	11	1	nogas	502.526	1.389	2301317	0.47	500	100.5	90	110	
Si	28	1	nogas	5352.194	2.072	6747588	1.08	5000	107.0	90	110	
Ca	43	1	nogas	10466.918	0.821	371450	0.75	10000	104.7	90	110	
Ca	44	1	nogas	10590.543	2.495	6243783	1.97	10000	105.9	90	110	
Fe	56	1	nogas	10064.944	3.235	237897030	2.86	10000	100.6	90	110	
Se	77	1	nogas	81.358	3.883	36911	2.50	100	81.4	90	110	ICV Main CR1 Failed
Se	82	1	nogas	102.278	4.761	28616	3.90	100	102.3	90	110	
Mo	95	1	nogas	98.496	0.807	555738	1.07	100	98.5	90	110	
Sn	118	1	nogas	95.250	0.506	798518	1.31	100	95.2	90	110	
Ba	137	1	nogas	101.629	1.749	402782	0.50	100	101.6	90	110	
Sb	121	2	He	100.567	1.493	489105	1.13	100	100.6	90	110	
Li	7	1	nogas	106.443	3.503	1739938	4.00	100	106.4	90	110	
P	31	1	nogas	511.297	1.340	951690	0.48	500	102.3	90	110	
La	139	1	nogas	151.090	1.628	497	3.08	100	151.1	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-63.299	-276.050	17	124.90	100	-63.3	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1029828	1.11	1171766	87.89	70	125	
Ge	72	1	nogas	3197054	0.79	3233065	98.89	70	125	
In	115	1	nogas	2810505	1.77	2958353	95.00	70	125	
Bi	209	1	nogas	2118262	0.28	2061475	102.75	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	813508	0.69	810035	100.43	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	139SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:34:46-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	132CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.771	1.771	4.64	13892	0.01	2000	
Na	23	1	nogas	183.391	183.391	6.76	6023329	0.00	200000	
Mg	24	1	nogas	204.609	204.609	5.43	3225413	0.01	200000	
Al	27	1	nogas	1.808	1.808	2.12	55489	0.00	2000	
K	39	1	nogas	181.876	181.876	2.92	11442276	0.00	200000	
Ti	47	1	nogas	1.932	1.932	3.16	4181	0.05	2000	
V	51	1	nogas	0.003	0.003	10094.18	235942	0.00	2000	
Cr	52	1	nogas	1.928	1.928	6.12	77091	0.00	2000	
Mn	55	1	nogas	1.657	1.657	3.76	82909	0.00	2000	
Co	59	1	nogas	2.037	2.037	1.54	48604	0.00	2000	
Ni	60	1	nogas	2.131	2.131	2.64	10947	0.02	2000	
Cu	63	1	nogas	1.939	1.939	1.37	40234	0.00	2000	
Zn	66	1	nogas	2.100	2.100	1.67	10236	0.02	2000	
As	75	1	nogas	1.134	1.134	24.70	56447	0.00	2000	
Sr	88	1	nogas	1.941	1.941	3.12	60345	0.00	2000	
Ag	107	1	nogas	1.971	1.971	1.37	27759	0.01	2000	
Cd	111	1	nogas	1.889	1.889	6.78	5801	0.03	2000	
Sb	121	1	nogas	2.255	2.255	1.14	31312	0.01	2000	
Tl	205	1	nogas	2.388	2.388	8.57	47443	0.01	2000	
Pb	208	1	nogas	2.134	2.134	0.95	55311	0.00	2000	
U	238	1	nogas	2.111	2.111	1.91	53130	0.00	2000	
[Pb]	206	1	nogas	2.047	2.047	3.53	13946	0.01	2000	
[Pb]	207	1	nogas	2.033	2.033	4.24	12275	0.02	2000	
Na	23	2	He	177.240	177.240	2.64	415544	0.04	200000	
Mg	24	2	He	198.949	198.949	2.09	164718	0.12	200000	
Al	27	2	He	1.828	1.828	4.92	1337	0.14	2000	
K	39	2	He	207.420	207.420	0.09	362790	0.06	200000	
Ca	43	2	He	171.985	171.985	29.88	487	35.34	200000	
Ca	44	2	He	193.697	193.697	2.09	11023	1.76	200000	
V	51	2	He	2.011	2.011	1.14	14165	0.01	2000	
Cr	52	2	He	2.062	2.062	11.11	18309	0.01	2000	
Mn	55	2	He	1.686	1.686	8.55	11480	0.01	2000	
Fe	56	2	He	208.916	208.916	1.70	1172233	0.02	200000	
Co	59	2	He	2.002	2.002	1.89	18743	0.01	2000	
Ni	60	2	He	2.101	2.101	2.64	4791	0.04	2000	
Cu	63	2	He	1.858	1.858	1.26	17372	0.01	2000	
Zn	66	2	He	1.605	1.605	9.79	2940	0.05	2000	
As	75	2	He	1.911	1.911	7.39	2984	0.06	2000	
Se	78	2	He	2.291	2.291	5.21	421	0.54	2000	
B	11	1	nogas	16.422	16.422	9.71	191735	0.01	2000	
Si	28	1	nogas	112.656	112.656	32.12	1526204	0.01	2000	
Ca	43	1	nogas	188.155	188.155	8.42	8492	2.22	200000	

Sample Report

Ca	44	1	nogas	184.272	184.272	6.37	461171	0.04	200000	
Fe	56	1	nogas	187.789	187.789	4.51	6563454	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-6.173	-6.173	-38.63	15347	-0.04	2000	
Se	82	1	nogas	1.482	1.482	15.21	913	0.16	2000	
Mo	95	1	nogas	2.271	2.271	11.62	13412	0.02	2000	
Sn	118	1	nogas	2.192	2.192	7.20	19962	0.01	2000	
Ba	137	1	nogas	1.870	1.870	9.12	8366	0.02	2000	
Sb	121	2	He	2.303	2.303	4.32	11661	0.02	2000	
La	139	1	nogas	6.636	6.636	64.65	63	10.48	2000	
Au	197	1	nogas	17.858	17.858	988.47	27	66.97	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1121388	3.06	1171766	95.70	70	125	
Ge	72	1	nogas	3311616	1.42	3233065	102.43	70	125	
In	115	1	nogas	2911810	4.41	2958353	98.43	70	125	
Bi	209	1	nogas	2154941	2.58	2061475	104.53	70	125	
Ge	72	2	He	820041	1.62	810035	101.24	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	140LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:36:51-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	4.265	7.820	33570	2.49	5	85.3	70	130	
Na	23	1	nogas	470.946	4.980	12863929	2.06	500	94.2	70	130	
Mg	24	1	nogas	501.487	3.597	7812636	1.05	500	100.3	70	130	
Al	27	1	nogas	4.982	2.960	112189	1.32	5	99.6	70	130	
K	39	1	nogas	512.584	2.044	17424367	0.59	500	102.5	70	130	
Ti	47	1	nogas	4.873	7.315	9609	5.84	5	97.5	70	130	
V	51	1	nogas	3.271	18.003	312942	3.52	5	65.4	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.941	4.645	140823	2.73	5	98.8	70	130	
Mn	55	1	nogas	4.779	2.501	166196	1.71	5	95.6	70	130	
Co	59	1	nogas	5.188	1.944	118911	1.15	5	103.8	70	130	
Ni	60	1	nogas	5.316	1.775	27104	0.90	5	106.3	70	130	
Cu	63	1	nogas	5.129	2.290	78872	0.75	5	102.6	70	130	
Zn	66	1	nogas	5.009	2.794	22307	1.82	5	100.2	70	130	
As	75	1	nogas	4.447	5.939	72885	0.77	5	88.9	70	130	
Sr	88	1	nogas	4.968	0.912	145012	1.28	5	99.4	70	130	
Ag	107	1	nogas	5.119	2.428	70133	2.02	5	102.4	70	130	
Cd	111	1	nogas	4.841	3.665	14957	3.53	5	96.8	70	130	
Sb	121	1	nogas	5.065	0.770	67240	1.96	5	101.3	70	130	
Tl	205	1	nogas	4.870	2.966	93261	2.10	5	97.4	70	130	
Pb	208	1	nogas	5.049	0.630	128669	0.62	5	101.0	70	130	
U	238	1	nogas	4.965	3.393	120903	1.56	5	99.3	70	130	
[Pb]	206	1	nogas	4.934	5.460	32055	4.33	5	98.7	70	130	
[Pb]	207	1	nogas	5.043	2.586	28983	1.09	5	100.9	70	130	
Na	23	2	He	467.496	2.630	843270	0.83	500	93.5	70	130	
Mg	24	2	He	492.286	3.198	403987	1.94	500	98.5	70	130	
Al	27	2	He	4.686	8.142	2610	5.18	5	93.7	70	130	
K	39	2	He	519.302	0.806	622516	0.56	500	103.9	70	130	
Ca	43	2	He	453.210	0.311	1163	1.31	500	90.6	70	130	
Ca	44	2	He	474.049	1.514	22350	1.35	500	94.8	70	130	
V	51	2	He	4.885	3.661	31783	2.20	5	97.7	70	130	
Cr	52	2	He	4.695	4.557	35778	4.52	5	93.9	70	130	
Mn	55	2	He	4.676	2.032	25114	2.87	5	93.5	70	130	
Fe	56	2	He	520.890	2.181	2903399	1.46	500	104.2	70	130	
Co	59	2	He	4.995	1.161	46305	0.26	5	99.9	70	130	
Ni	60	2	He	5.073	5.985	11697	4.79	5	101.5	70	130	
Cu	63	2	He	4.864	2.257	34983	1.71	5	97.3	70	130	
Zn	66	2	He	4.549	9.508	7105	8.63	5	91.0	70	130	
As	75	2	He	4.843	3.598	7146	2.21	5	96.9	70	130	
Se	78	2	He	5.325	6.064	755	4.86	5	106.5	70	130	
B	11	1	nogas	23.499	14.558	226685	2.02	25	94.0	70	130	
Si	28	1	nogas	297.914	15.264	1675577	1.50	25	1191.7	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	490.212	2.410	19053	1.00	500	98.0	70	130	
Ca	44	1	nogas	502.667	2.481	628552	0.54	500	100.5	70	130	
Fe	56	1	nogas	481.556	1.025	13349975	0.76	500	96.3	70	130	
Se	77	1	nogas	-1.134	-227.864	16237	2.90	5	-22.7	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.797	13.552	1810	8.77	5	95.9	70	130	
Mo	95	1	nogas	5.041	2.370	28850	2.21	5	100.8	70	130	
Sn	118	1	nogas	4.677	3.266	41864	0.39	5	93.5	70	130	
Ba	137	1	nogas	4.736	4.726	20272	2.12	5	94.7	70	130	
Sb	121	2	He	4.983	2.429	24798	2.27	5	99.7	70	130	
Li	7	1	nogas	4.365	9.600	168841	3.23	5	87.3	70	130	
P	31	1	nogas	27.616	6.316	145272	0.91	25	110.5	70	130	
La	139	1	nogas	0.093	11515.726	43	81.04	5	1.9	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	-145.673	-34.076	7	86.60	5	-2913.5	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1129836	5.43	1171766	96.42	70	125	
Ge	72	1	nogas	3227352	1.30	3233065	99.82	70	125	
In	115	1	nogas	2934755	3.00	2958353	99.20	70	125	
Bi	209	1	nogas	2089612	2.41	2061475	101.36	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	820154	1.34	810035	101.25	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	141_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:38:55-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.012	30.7	143	21.3	1	
Na	23	1	nogas	-23.075	-12.3	1070804	2.4	100	
Mg	24	1	nogas	-0.593	-47.9	32066	14.4	100	
Al	27	1	nogas	-0.256	-25.9	16701	5.6	5	
K	39	1	nogas	-15.278	-95.9	7614174	0.6	100	
Ti	47	1	nogas	-0.077	-51.1	297	21.9	2.5	
V	51	1	nogas	-2.202	-3.5	178737	2.9	2.5	
Cr	52	1	nogas	-0.114	-34.5	31450	3.2	2.5	
Mn	55	1	nogas	-0.325	-12.4	27320	1.2	2.5	
Co	59	1	nogas	0.018	65.8	1550	13.9	2.5	
Ni	60	1	nogas	0.167	14.5	547	23.2	2.5	
Cu	63	1	nogas	-0.065	-19.8	14673	2.9	2.5	
Zn	66	1	nogas	-0.034	-45.2	950	4.6	2.5	
As	75	1	nogas	-1.271	-24.2	43171	0.2	2.5	
Sr	88	1	nogas	-0.037	-23.7	2580	6.5	2.5	
Ag	107	1	nogas	0.010	8.2	233	8.9	2.5	
Cd	111	1	nogas	-0.003	-111.5	20	50.0	1	
Sb	121	1	nogas	0.128	14.8	2790	5.6	2.5	
Tl	205	1	nogas	0.064	33.6	1687	25.7	1	
Pb	208	1	nogas	0.038	27.1	2560	10.1	2.5	
U	238	1	nogas	0.018	78.2	610	58.5	2.5	
[Pb]	206	1	nogas	0.041	18.0	667	7.7	2.5	
[Pb]	207	1	nogas	0.027	25.4	537	7.8	2.5	
Na	23	2	He	-29.613	-6.8	109559	2.1	100	
Mg	24	2	He	-0.475	-76.5	2020	16.1	100	
Al	27	2	He	-0.163	-76.5	443	10.7	5	
K	39	2	He	4.871	52.5	194114	1.1	100	
Ca	43	2	He	-16.866	-42.6	30	57.7	100	
Ca	44	2	He	-5.999	-76.8	2927	7.3	100	
V	51	2	He	0.075	30.8	2266	3.7	2.5	
Cr	52	2	He	-0.008	-281.2	4547	1.0	2.5	
Mn	55	2	He	-0.380	-10.9	2047	6.5	2.5	
Fe	56	2	He	0.615	13.5	16471	0.4	100	
Co	59	2	He	0.013	5.8	427	1.4	2.5	
Ni	60	2	He	0.092	27.0	120	50.0	2.5	
Cu	63	2	He	-0.111	-59.0	5771	4.6	2.5	
Zn	66	2	He	-0.279	-12.2	273	20.1	2.5	
As	75	2	He	0.014	64.0	287	7.3	2.5	
Se	78	2	He	-0.115	-194.8	154	13.6	2.5	
B	11	1	nogas	-0.032	-758.0	115463	0.7	10	
Si	28	1	nogas	5.400	1101.6	1416206	1.5	5	ICB Main CR1 Failed
Ca	43	1	nogas	-9.606	-41.7	1257	8.0	100	
Ca	44	1	nogas	-7.975	-214.0	350768	1.6	100	
Fe	56	1	nogas	-5.743	-68.1	1866287	1.8	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-12.595	-17.0	13709	7.1	2.5	
Se	82	1	nogas	-0.489	-30.6	353	14.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.043	34.8	403	17.6	2.5	
Sn	118	1	nogas	0.912	8.5	8882	5.7	5	
Ba	137	1	nogas	-0.107	-6.9	277	12.7	2.5	
Sb	121	2	He	0.131	4.3	1017	2.0	2.5	
P	31	1	nogas	-0.597	-430.2	100388	1.7	10	
La	139	1	nogas	2.507	230.5	50	34.6	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-92.685	-137.0	13	114.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1140366	1.63	1171766	97.32	70	125	
Ge	72	1	nogas	3318721	3.95	3233065	102.65	70	125	
In	115	1	nogas	2909978	2.00	2958353	98.36	70	125	
Bi	209	1	nogas	2148885	0.82	2061475	104.24	70	125	
Ge	72	2	He	811091	2.80	810035	100.13	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	150_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:57:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	95.145	1.191	668950	1.80	100	95.1	90	110	
Na	23	1	nogas	9986.877	4.742	234375314	4.25	10000	99.9	90	110	
Mg	24	1	nogas	9801.065	1.766	148295445	1.60	10000	98.0	90	110	
Al	27	1	nogas	103.992	3.205	1855741	1.21	100	104.0	90	110	
K	39	1	nogas	9949.552	2.624	189464425	4.54	10000	99.5	90	110	
Ti	47	1	nogas	99.641	3.029	181326	1.99	100	99.6	90	110	
V	51	1	nogas	96.665	0.539	2592181	2.33	100	96.7	90	110	
Cr	52	1	nogas	95.950	2.958	2049453	3.55	100	95.9	90	110	
Mn	55	1	nogas	96.771	0.966	2586409	3.06	100	96.8	90	110	
Co	59	1	nogas	102.012	1.183	2234178	1.03	100	102.0	90	110	
Ni	60	1	nogas	101.216	1.965	503201	0.99	100	101.2	90	110	
Cu	63	1	nogas	99.786	2.913	1210623	1.07	100	99.8	90	110	
Zn	66	1	nogas	101.510	1.644	415923	0.48	100	101.5	90	110	
As	75	1	nogas	98.243	0.813	558430	1.39	100	98.2	90	110	
Sr	88	1	nogas	99.807	3.576	2742291	2.09	100	99.8	90	110	
Ag	107	1	nogas	101.320	1.667	1336604	0.70	100	101.3	90	110	
Cd	111	1	nogas	100.107	1.367	296167	2.09	100	100.1	90	110	
Sb	121	1	nogas	101.953	1.828	1285270	1.49	100	102.0	90	110	
Tl	205	1	nogas	97.201	1.511	1859453	0.65	100	97.2	90	110	
Pb	208	1	nogas	99.631	2.008	2509052	2.01	100	99.6	90	110	
U	238	1	nogas	99.746	2.750	2433958	2.31	100	99.7	90	110	
[Pb]	206	1	nogas	96.667	0.870	623134	1.84	100	96.7	90	110	
[Pb]	207	1	nogas	96.829	1.032	551592	2.08	100	96.8	90	110	
Na	23	2	He	10137.511	0.831	13937705	1.31	10000	101.4	90	110	
Mg	24	2	He	10122.552	1.195	7628839	1.91	10000	101.2	90	110	
Al	27	2	He	104.003	7.763	43334	8.54	100	104.0	90	110	
K	39	2	He	9436.293	2.670	8048328	2.61	10000	94.4	90	110	
Ca	43	2	He	10282.768	3.528	22948	2.75	10000	102.8	90	110	
Ca	44	2	He	10076.270	3.581	378694	2.06	10000	100.8	90	110	
V	51	2	He	98.400	1.498	558831	0.91	100	98.4	90	110	
Cr	52	2	He	100.969	0.648	622288	0.90	100	101.0	90	110	
Mn	55	2	He	102.954	1.856	436619	0.68	100	103.0	90	110	
Fe	56	2	He	10240.425	2.912	52476631	2.27	10000	102.4	90	110	
Co	59	2	He	98.316	2.675	836154	1.71	100	98.3	90	110	
Ni	60	2	He	99.485	3.604	213429	2.09	100	99.5	90	110	
Cu	63	2	He	100.134	3.034	547511	1.50	100	100.1	90	110	
Zn	66	2	He	101.559	2.274	133279	2.71	100	101.6	90	110	
As	75	2	He	98.384	2.046	129273	0.54	100	98.4	90	110	
Se	78	2	He	98.735	3.535	10186	2.76	100	98.7	90	110	
B	11	1	nogas	486.990	3.535	2185333	2.23	500	97.4	90	110	
Si	28	1	nogas	5050.085	3.630	6269021	0.79	5000	101.0	90	110	
Ca	43	1	nogas	10093.415	1.049	348679	2.45	10000	100.9	90	110	
Ca	44	1	nogas	10097.997	2.987	5810321	3.69	10000	101.0	90	110	
Fe	56	1	nogas	9683.304	2.242	222781847	0.96	10000	96.8	90	110	
Se	77	1	nogas	91.761	2.921	38474	2.22	100	91.8	90	110	
Se	82	1	nogas	98.746	3.331	26904	2.55	100	98.7	90	110	
Mo	95	1	nogas	104.401	1.932	573167	1.28	100	104.4	90	110	
Sn	118	1	nogas	95.172	0.954	799080	2.42	100	95.2	90	110	
Ba	137	1	nogas	97.811	2.710	388239	2.43	100	97.8	90	110	
Sb	121	2	He	100.322	4.726	454030	3.21	100	100.3	90	110	
Li	7	1	nogas	95.302	2.785	1533851	4.56	100	95.3	90	110	
P	31	1	nogas	485.132	0.841	883662	1.38	500	97.0	90	110	
La	139	1	nogas	111.984	20.946	380	20.55	100	112.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-6.374	-2741.415	23	89.21	100	-6.4	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1007928	2.09	1171766	86.02	70	125	
Ge	72	1	nogas	3111524	2.14	3233065	96.24	70	125	
In	115	1	nogas	2814689	2.39	2958353	95.14	70	125	
Bi	209	1	nogas	2095772	1.08	2061475	101.66	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	757331	1.48	810035	93.49	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	151_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T21:59:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.066	32.0	517	30.6	1	
Na	23	1	nogas	-1.498	-248.7	1471668	6.4	100	
Mg	24	1	nogas	6.171	29.1	126895	18.7	100	
Al	27	1	nogas	0.115	64.2	21790	5.5	5	
K	39	1	nogas	5.917	401.9	7376519	2.9	100	
Ti	47	1	nogas	0.020	97.6	447	3.4	2.5	
V	51	1	nogas	-1.832	-5.0	173537	8.2	2.5	
Cr	52	1	nogas	-0.083	-119.7	29537	5.2	2.5	
Mn	55	1	nogas	-0.284	-20.9	26192	6.3	2.5	
Co	59	1	nogas	0.068	20.0	2500	4.5	2.5	
Ni	60	1	nogas	0.257	9.7	947	15.1	2.5	
Cu	63	1	nogas	0.080	83.7	15190	3.6	2.5	
Zn	66	1	nogas	0.294	12.9	2187	5.3	2.5	
As	75	1	nogas	-0.645	-64.5	42894	4.6	2.5	
Sr	88	1	nogas	0.065	25.9	5127	10.4	2.5	
Ag	107	1	nogas	0.070	18.5	977	9.2	2.5	
Cd	111	1	nogas	0.082	48.2	260	40.7	1	
Sb	121	1	nogas	1.272	25.1	16618	21.0	2.5	
Tl	205	1	nogas	0.681	53.1	13053	52.2	1	
Pb	208	1	nogas	0.084	26.1	3707	14.8	2.5	
U	238	1	nogas	0.166	58.9	4084	57.7	2.5	
[Pb]	206	1	nogas	0.088	31.6	920	17.8	2.5	
[Pb]	207	1	nogas	0.075	37.7	773	18.9	2.5	
Na	23	2	He	-4.243	-85.1	128557	4.9	100	
Mg	24	2	He	4.334	2.8	5181	7.8	100	
Al	27	2	He	0.017	1397.0	463	25.9	5	
K	39	2	He	-13.583	-78.4	178745	5.0	100	
Ca	43	2	He	-10.572	-80.1	40	50.0	100	
Ca	44	2	He	14.629	87.4	3274	7.9	100	
V	51	2	He	0.119	11.3	2226	8.4	2.5	
Cr	52	2	He	0.006	286.6	4074	5.6	2.5	
Mn	55	2	He	-0.282	-18.4	2180	4.1	2.5	
Fe	56	2	He	5.310	6.8	37175	11.6	100	
Co	59	2	He	0.063	34.6	780	24.7	2.5	
Ni	60	2	He	0.139	4.9	200	0.0	2.5	
Cu	63	2	He	0.051	102.6	5891	6.4	2.5	
Zn	66	2	He	-0.097	-23.4	463	13.2	2.5	
As	75	2	He	0.055	26.8	301	2.3	2.5	
Se	78	2	He	0.467	46.2	192	17.3	2.5	
B	11	1	nogas	9.255	20.8	144016	2.4	10	
Si	28	1	nogas	115.756	119.9	1404861	3.7	5	CCB Main CR1 Failed
Ca	43	1	nogas	5.150	69.1	1653	4.2	100	
Ca	44	1	nogas	32.787	152.7	343496	1.1	100	
Fe	56	1	nogas	2.854	391.7	1905466	10.8	100	
Se	77	1	nogas	-8.278	-25.1	13639	6.3	2.5	
Se	82	1	nogas	-0.352	-90.9	357	15.4	2.5	
Mo	95	1	nogas	0.966	16.2	5324	13.3	2.5	
Sn	118	1	nogas	0.282	39.4	3197	25.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.013	-137.3	620	10.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.875	6.9	4064	11.8	2.5	
P	31	1	nogas	-1.133	-145.3	91558	5.7	10	
La	139	1	nogas	11.618	50.1	73	20.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-174.324	-28.5	3	173.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1025417	4.74	1171766	87.51	70	125	
Ge	72	1	nogas	3056551	8.50	3233065	94.54	70	125	
In	115	1	nogas	2724134	4.75	2958353	92.08	70	125	
Bi	209	1	nogas	2037955	5.77	2061475	98.86	70	125	
Ge	72	2	He	712315	7.13	810035	87.94	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	162_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T22:22:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.178	7.271	677060	1.69	100	94.2	90	110	
Na	23	1	nogas	10299.714	1.921	234210539	1.37	10000	103.0	90	110	
Mg	24	1	nogas	10234.097	3.267	150021612	1.82	10000	102.3	90	110	
Al	27	1	nogas	103.346	3.017	1795334	1.15	100	103.3	90	110	
K	39	1	nogas	10272.614	2.488	190069846	1.72	10000	102.7	90	110	
Ti	47	1	nogas	99.308	1.072	175953	1.78	100	99.3	90	110	
V	51	1	nogas	101.113	1.490	2628898	1.18	100	101.1	90	110	
Cr	52	1	nogas	101.678	5.984	2110602	4.15	100	101.7	90	110	
Mn	55	1	nogas	102.748	2.962	2670173	2.64	100	102.7	90	110	
Co	59	1	nogas	103.411	3.006	2205277	4.34	100	103.4	90	110	
Ni	60	1	nogas	103.206	2.287	499419	0.74	100	103.2	90	110	
Cu	63	1	nogas	101.287	1.938	1196093	0.74	100	101.3	90	110	
Zn	66	1	nogas	100.633	0.312	401432	1.66	100	100.6	90	110	
As	75	1	nogas	99.906	0.975	551975	1.01	100	99.9	90	110	
Sr	88	1	nogas	100.046	4.425	2675322	2.64	100	100.0	90	110	
Ag	107	1	nogas	101.433	1.768	1302472	0.53	100	101.4	90	110	
Cd	111	1	nogas	100.253	2.282	285173	4.28	100	100.3	90	110	
Sb	121	1	nogas	100.201	2.020	1229470	0.46	100	100.2	90	110	
Tl	205	1	nogas	99.196	1.812	1815608	1.78	100	99.2	90	110	
Pb	208	1	nogas	98.884	1.908	2490267	1.91	100	98.9	90	110	
U	238	1	nogas	105.323	4.706	2457897	2.85	100	105.3	90	110	
[Pb]	206	1	nogas	101.276	2.158	624593	2.80	100	101.3	90	110	
[Pb]	207	1	nogas	100.022	1.275	545132	2.39	100	100.0	90	110	
Na	23	2	He	10088.780	3.070	14236746	0.59	10000	100.9	90	110	
Mg	24	2	He	10024.802	2.330	7754968	0.89	10000	100.2	90	110	
Al	27	2	He	103.627	1.710	44309	1.24	100	103.6	90	110	
K	39	2	He	9628.457	1.405	8208357	1.37	10000	96.3	90	110	
Ca	43	2	He	9882.517	2.785	22644	0.89	10000	98.8	90	110	
Ca	44	2	He	10090.599	2.971	389342	0.44	10000	100.9	90	110	
V	51	2	He	97.002	1.987	565594	1.28	100	97.0	90	110	
Cr	52	2	He	98.351	1.809	622378	0.80	100	98.4	90	110	
Mn	55	2	He	101.083	2.799	440120	0.36	100	101.1	90	110	
Fe	56	2	He	10153.735	3.322	53410099	1.31	10000	101.5	90	110	
Co	59	2	He	96.814	3.756	845115	1.24	100	96.8	90	110	
Ni	60	2	He	97.344	4.230	214365	1.95	100	97.3	90	110	
Cu	63	2	He	97.065	3.161	545057	1.33	100	97.1	90	110	
Zn	66	2	He	98.767	2.057	133071	1.44	100	98.8	90	110	
As	75	2	He	97.507	1.686	131553	1.30	100	97.5	90	110	
Se	78	2	He	96.627	2.766	10238	1.19	100	96.6	90	110	
B	11	1	nogas	495.039	5.621	2272066	0.73	500	99.0	90	110	
Si	28	1	nogas	5198.939	1.393	6245824	1.34	5000	104.0	90	110	
Ca	43	1	nogas	10081.013	1.185	338921	0.76	10000	100.8	90	110	
Ca	44	1	nogas	10166.942	2.183	5690222	0.33	10000	101.7	90	110	
Fe	56	1	nogas	9945.528	3.942	222634605	2.35	10000	99.5	90	110	
Se	77	1	nogas	94.653	2.692	38147	2.93	100	94.7	90	110	
Se	82	1	nogas	99.141	2.642	26289	0.99	100	99.1	90	110	
Mo	95	1	nogas	102.247	1.830	546414	1.30	100	102.2	90	110	
Sn	118	1	nogas	96.310	3.568	776773	1.31	100	96.3	90	110	
Ba	137	1	nogas	99.197	3.331	378334	1.47	100	99.2	90	110	
Sb	121	2	He	97.804	2.862	454519	1.01	100	97.8	90	110	
Li	7	1	nogas	94.932	7.811	1561964	1.92	100	94.9	90	110	
P	31	1	nogas	506.697	1.628	894169	0.47	500	101.3	90	110	
La	139	1	nogas	103.849	24.880	343	26.27	100	103.8	90	110	
Au	197	1	nogas	30.976	582.239	27	78.06	100	31.0	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1033427	5.78	1171766	88.19	70	125	
Ge	72	1	nogas	3028634	1.90	3233065	93.68	70	125	
In	115	1	nogas	2706701	4.62	2958353	91.49	70	125	
Bi	209	1	nogas	2005241	1.82	2061475	97.27	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	777636	2.48	810035	96.00	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	163_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T22:24:42-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.049	35.6	417	33.1	1	
Na	23	1	nogas	30.835	7.3	2246289	1.6	100	
Mg	24	1	nogas	5.116	28.9	114981	19.7	100	
Al	27	1	nogas	0.192	24.0	23081	2.5	5	
K	39	1	nogas	9.641	69.5	7439469	0.6	100	
Ti	47	1	nogas	-0.006	-227.2	400	7.5	2.5	
V	51	1	nogas	-1.810	-13.7	173526	4.4	2.5	
Cr	52	1	nogas	-0.020	-389.4	30813	4.4	2.5	
Mn	55	1	nogas	-0.222	-12.6	27764	1.8	2.5	
Co	59	1	nogas	0.071	19.9	2557	11.0	2.5	
Ni	60	1	nogas	0.287	7.9	1090	11.1	2.5	
Cu	63	1	nogas	-0.234	-23.0	11490	6.5	2.5	
Zn	66	1	nogas	0.230	7.2	1930	3.2	2.5	
As	75	1	nogas	-0.474	-30.5	43723	2.7	2.5	
Sr	88	1	nogas	0.035	39.5	4287	7.9	2.5	
Ag	107	1	nogas	0.051	24.9	730	21.4	2.5	
Cd	111	1	nogas	0.051	48.0	173	38.4	1	
Sb	121	1	nogas	0.883	24.7	11868	21.7	2.5	
Tl	205	1	nogas	0.556	48.1	10758	48.8	1	
Pb	208	1	nogas	0.071	20.8	3394	11.0	2.5	
U	238	1	nogas	0.152	54.5	3764	55.2	2.5	
[Pb]	206	1	nogas	0.080	34.7	870	21.1	2.5	
[Pb]	207	1	nogas	0.069	15.1	740	8.9	2.5	
Na	23	2	He	21.202	10.4	174381	0.6	100	
Mg	24	2	He	3.139	9.4	4684	4.1	100	
Al	27	2	He	0.185	96.9	567	11.7	5	
K	39	2	He	-4.463	-78.4	186341	1.6	100	
Ca	43	2	He	-1.423	-211.4	63	9.1	100	
Ca	44	2	He	-0.652	-641.2	2984	6.8	100	
V	51	2	He	0.133	20.8	2490	5.1	2.5	
Cr	52	2	He	0.022	156.6	4514	6.7	2.5	
Mn	55	2	He	-0.251	-20.3	2497	8.2	2.5	
Fe	56	2	He	5.083	7.6	38925	4.2	100	
Co	59	2	He	0.044	12.8	673	8.7	2.5	
Ni	60	2	He	0.167	5.7	277	7.5	2.5	
Cu	63	2	He	-0.269	-15.3	4614	3.7	2.5	
Zn	66	2	He	-0.032	-144.4	587	10.0	2.5	
As	75	2	He	0.041	72.4	307	11.3	2.5	
Se	78	2	He	0.219	73.7	181	11.0	2.5	
B	11	1	nogas	16.768	4.6	186333	3.2	10	CCB Main CR1 Failed
Si	28	1	nogas	154.672	26.6	1443948	1.9	5	CCB Main CR1 Failed
Ca	43	1	nogas	6.848	29.6	1710	3.1	100	
Ca	44	1	nogas	22.638	31.4	338344	0.4	100	
Fe	56	1	nogas	3.638	223.1	1923368	8.6	100	
Se	77	1	nogas	-5.360	-44.3	14313	4.3	2.5	
Se	82	1	nogas	-0.058	-499.7	437	17.5	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.282	27.2	1653	24.0	2.5	
Sn	118	1	nogas	0.262	25.3	3050	15.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.003	-1230.5	660	18.4	2.5	
Sb	121	2	He	0.558	12.7	2930	11.7	2.5	
P	31	1	nogas	0.507	262.8	93965	1.3	10	
La	139	1	nogas	19.456	30.9	97	15.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	30.851	444.4	27	57.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1079580	2.17	1171766	92.13	70	125	
Ge	72	1	nogas	3045493	1.00	3233065	94.20	70	125	
In	115	1	nogas	2738002	2.91	2958353	92.55	70	125	
Bi	209	1	nogas	2027203	3.11	2061475	98.34	70	125	
Ge	72	2	He	770274	1.84	810035	95.09	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	171_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T22:41:25-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.847	4.040	669799	2.38	100	94.8	90	110	
Na	23	1	nogas	10342.700	6.449	233945897	3.18	10000	103.4	90	110	
Mg	24	1	nogas	9987.701	5.594	145693257	2.43	10000	99.9	90	110	
Al	27	1	nogas	105.445	2.742	1892475	4.66	100	105.4	90	110	
K	39	1	nogas	9975.401	2.628	190786296	1.04	10000	99.8	90	110	
Ti	47	1	nogas	97.203	1.005	177880	2.97	100	97.2	90	110	
V	51	1	nogas	101.110	0.891	2714847	1.98	100	101.1	90	110	
Cr	52	1	nogas	99.202	2.642	2127923	0.68	100	99.2	90	110	
Mn	55	1	nogas	99.236	2.643	2663688	0.72	100	99.2	90	110	
Co	59	1	nogas	102.374	3.708	2252766	1.65	100	102.4	90	110	
Ni	60	1	nogas	99.344	2.019	496401	0.55	100	99.3	90	110	
Cu	63	1	nogas	96.651	3.187	1178991	1.09	100	96.7	90	110	
Zn	66	1	nogas	98.405	1.729	405295	0.68	100	98.4	90	110	
As	75	1	nogas	98.334	0.707	561790	1.80	100	98.3	90	110	
Sr	88	1	nogas	100.149	2.525	2766247	1.71	100	100.1	90	110	
Ag	107	1	nogas	99.434	3.766	1318044	1.76	100	99.4	90	110	
Cd	111	1	nogas	100.258	1.254	293972	1.34	100	100.3	90	110	
Sb	121	1	nogas	98.201	1.747	1244355	1.48	100	98.2	90	110	
Tl	205	1	nogas	97.714	3.871	1811496	2.45	100	97.7	90	110	
Pb	208	1	nogas	98.618	1.298	2483573	1.30	100	98.6	90	110	
U	238	1	nogas	104.444	5.914	2468886	3.76	100	104.4	90	110	
[Pb]	206	1	nogas	99.272	4.270	619996	2.55	100	99.3	90	110	
[Pb]	207	1	nogas	99.141	4.163	547126	1.95	100	99.1	90	110	
Na	23	2	He	10332.458	0.706	14350725	1.41	10000	103.3	90	110	
Mg	24	2	He	9884.567	0.464	7526681	1.22	10000	98.8	90	110	
Al	27	2	He	101.228	2.046	42615	2.82	100	101.2	90	110	
K	39	2	He	9445.282	0.803	8055814	0.78	10000	94.5	90	110	
Ca	43	2	He	10138.935	1.770	22868	2.17	10000	101.4	90	110	
Ca	44	2	He	10143.766	1.139	385270	0.88	10000	101.4	90	110	
V	51	2	He	99.291	0.535	569785	1.31	100	99.3	90	110	
Cr	52	2	He	98.386	0.994	612813	1.70	100	98.4	90	110	
Mn	55	2	He	101.031	0.097	433034	0.86	100	101.0	90	110	
Fe	56	2	He	10132.344	0.849	52468788	1.04	10000	101.3	90	110	
Co	59	2	He	98.629	2.350	847687	2.67	100	98.6	90	110	
Ni	60	2	He	99.645	2.544	216055	2.58	100	99.6	90	110	
Cu	63	2	He	100.713	1.336	556460	0.64	100	100.7	90	110	
Zn	66	2	He	99.657	1.512	132137	0.82	100	99.7	90	110	
As	75	2	He	99.667	1.991	132329	1.76	100	99.7	90	110	
Se	78	2	He	99.032	1.644	10324	1.13	100	99.0	90	110	
B	11	1	nogas	477.536	5.095	2154319	2.11	500	95.5	90	110	
Si	28	1	nogas	5085.829	3.589	6336431	1.03	5000	101.7	90	110	
Ca	43	1	nogas	9807.787	0.835	340567	1.92	10000	98.1	90	110	
Ca	44	1	nogas	9822.155	2.165	5687970	0.96	10000	98.2	90	110	
Fe	56	1	nogas	9739.144	2.625	225186980	0.84	10000	97.4	90	110	
Se	77	1	nogas	92.041	7.293	38721	2.39	100	92.0	90	110	
Se	82	1	nogas	98.132	4.179	26874	3.07	100	98.1	90	110	
Mo	95	1	nogas	100.594	2.747	555017	1.01	100	100.6	90	110	
Sn	118	1	nogas	96.932	1.281	806619	2.33	100	96.9	90	110	
Ba	137	1	nogas	98.757	3.228	388517	2.86	100	98.8	90	110	
Sb	121	2	He	98.896	0.811	452415	1.04	100	98.9	90	110	
Li	7	1	nogas	98.660	1.449	1591996	2.36	100	98.7	90	110	
P	31	1	nogas	489.098	3.297	894382	0.79	500	97.8	90	110	
La	139	1	nogas	87.638	9.522	303	10.60	100	87.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	0.797	6523.070	23	24.74	100	0.8	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1013037	3.45	1171766	86.45	70	125	
Ge	72	1	nogas	3127476	2.19	3233065	96.73	70	125	
In	115	1	nogas	2789868	2.49	2958353	94.30	70	125	
Bi	209	1	nogas	2031780	2.28	2061475	98.56	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	765158	0.81	810035	94.46	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	172_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T22:43:29-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.059	17.3	500	16.4	1	
Na	23	1	nogas	9.637	15.7	1790454	0.5	100	
Mg	24	1	nogas	5.128	23.9	116722	14.8	100	
Al	27	1	nogas	0.147	28.8	23021	1.8	5	
K	39	1	nogas	6.413	113.2	7620339	1.1	100	
Ti	47	1	nogas	0.036	140.2	490	17.7	2.5	
V	51	1	nogas	-1.438	-30.8	188273	5.5	2.5	
Cr	52	1	nogas	-0.066	-47.9	30843	1.8	2.5	
Mn	55	1	nogas	-0.288	-2.3	26900	1.2	2.5	
Co	59	1	nogas	0.067	5.6	2567	4.3	2.5	
Ni	60	1	nogas	0.258	16.9	977	22.5	2.5	
Cu	63	1	nogas	0.044	59.7	15226	2.4	2.5	
Zn	66	1	nogas	0.304	9.5	2300	6.8	2.5	
As	75	1	nogas	-0.362	-50.5	45728	3.1	2.5	
Sr	88	1	nogas	0.067	21.6	5314	7.5	2.5	
Ag	107	1	nogas	0.047	13.3	707	10.6	2.5	
Cd	111	1	nogas	0.050	18.6	177	14.2	1	
Sb	121	1	nogas	0.857	26.0	11938	23.8	2.5	
Tl	205	1	nogas	0.781	48.3	15486	50.0	1	
Pb	208	1	nogas	0.075	40.3	3500	21.9	2.5	
U	238	1	nogas	0.146	53.3	3764	54.0	2.5	
[Pb]	206	1	nogas	0.086	47.4	940	31.4	2.5	
[Pb]	207	1	nogas	0.084	30.2	847	19.8	2.5	
Na	23	2	He	5.680	18.5	155003	1.6	100	
Mg	24	2	He	3.932	17.4	5364	10.1	100	
Al	27	2	He	0.182	126.5	573	16.6	5	
K	39	2	He	3.355	19.9	192851	0.3	100	
Ca	43	2	He	15.828	96.3	103	31.1	100	
Ca	44	2	He	2.898	115.3	3160	5.5	100	
V	51	2	He	0.134	16.6	2526	3.7	2.5	
Cr	52	2	He	0.012	280.1	4507	3.8	2.5	
Mn	55	2	He	-0.291	-7.4	2357	2.2	2.5	
Fe	56	2	He	5.258	7.9	40361	3.5	100	
Co	59	2	He	0.059	20.6	813	10.7	2.5	
Ni	60	2	He	0.159	6.2	263	7.9	2.5	
Cu	63	2	He	-0.130	-33.5	5451	4.7	2.5	
Zn	66	2	He	-0.008	-1512.5	630	26.4	2.5	
As	75	2	He	0.043	69.9	314	14.7	2.5	
Se	78	2	He	0.287	30.2	191	3.2	2.5	
B	11	1	nogas	8.920	16.2	154140	2.9	10	
Si	28	1	nogas	141.193	18.9	1477333	0.8	5	CCB Main CR1 Failed
Ca	43	1	nogas	9.907	56.9	1870	8.9	100	
Ca	44	1	nogas	-0.013	-55968.6	336872	0.8	100	
Fe	56	1	nogas	4.031	182.3	1995271	8.2	100	
Se	77	1	nogas	-4.849	-40.6	14900	3.0	2.5	
Se	82	1	nogas	-0.035	-694.9	457	13.2	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.353	20.0	2103	18.5	2.5	
Sn	118	1	nogas	0.585	24.4	5914	18.8	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.045	46.2	880	9.0	2.5	
Sb	121	2	He	0.563	6.2	2990	2.9	2.5	
P	31	1	nogas	0.056	1022.0	96277	1.4	10	
La	139	1	nogas	11.764	183.8	77	83.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	17.985	1163.3	27	94.4	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1107536	3.13	1171766	94.52	70	125	
Ge	72	1	nogas	3144094	1.61	3233065	97.25	70	125	
In	115	1	nogas	2846886	1.58	2958353	96.23	70	125	
Bi	209	1	nogas	2090052	4.29	2061475	101.39	70	125	
Ge	72	2	He	780823	2.45	810035	96.39	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	183_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T23:06:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	92.905	3.317	709941	0.10	100	92.9	90	110	
Na	23	1	nogas	9838.130	1.061	240551180	1.39	10000	98.4	90	110	
Mg	24	1	nogas	9576.027	2.324	150929749	2.72	10000	95.8	90	110	
Al	27	1	nogas	97.662	2.684	1835934	4.19	100	97.7	90	110	
K	39	1	nogas	9896.578	2.781	198210996	2.77	10000	99.0	90	110	
Ti	47	1	nogas	97.679	1.936	187019	0.31	100	97.7	90	110	
V	51	1	nogas	96.970	1.911	2734683	2.38	100	97.0	90	110	
Cr	52	1	nogas	97.356	3.880	2186366	2.81	100	97.4	90	110	
Mn	55	1	nogas	96.230	2.155	2704824	0.56	100	96.2	90	110	
Co	59	1	nogas	102.817	0.769	2369206	1.89	100	102.8	90	110	
Ni	60	1	nogas	99.839	1.079	522224	1.21	100	99.8	90	110	
Cu	63	1	nogas	97.227	1.903	1241494	0.26	100	97.2	90	110	
Zn	66	1	nogas	98.600	0.798	425085	0.92	100	98.6	90	110	
As	75	1	nogas	96.448	0.608	577643	1.11	100	96.4	90	110	
Sr	88	1	nogas	97.994	1.029	2833917	2.50	100	98.0	90	110	
Ag	107	1	nogas	99.691	4.988	1383670	5.08	100	99.7	90	110	
Cd	111	1	nogas	98.573	3.229	302892	1.91	100	98.6	90	110	
Sb	121	1	nogas	98.257	1.125	1303462	2.68	100	98.3	90	110	
Tl	205	1	nogas	99.395	2.753	1891703	1.35	100	99.4	90	110	
Pb	208	1	nogas	102.760	2.976	2587808	2.97	100	102.8	90	110	
U	238	1	nogas	103.008	1.957	2500922	0.53	100	103.0	90	110	
[Pb]	206	1	nogas	100.292	3.271	643046	1.75	100	100.3	90	110	
[Pb]	207	1	nogas	100.241	4.077	567936	2.72	100	100.2	90	110	
Na	23	2	He	9950.161	0.882	14937930	0.77	10000	99.5	90	110	
Mg	24	2	He	9924.521	1.758	8165949	2.18	10000	99.2	90	110	
Al	27	2	He	99.997	2.053	45492	2.51	100	100.0	90	110	
K	39	2	He	10268.160	1.121	8741084	1.10	10000	102.7	90	110	
Ca	43	2	He	9803.686	2.180	23896	2.65	10000	98.0	90	110	
Ca	44	2	He	9883.166	1.528	405736	2.23	10000	98.8	90	110	
V	51	2	He	98.336	2.048	609710	1.40	100	98.3	90	110	
Cr	52	2	He	98.246	2.997	661126	2.32	100	98.2	90	110	
Mn	55	2	He	99.843	1.781	462422	1.15	100	99.8	90	110	
Fe	56	2	He	10062.185	0.497	56304424	1.20	10000	100.6	90	110	
Co	59	2	He	97.405	1.584	904644	2.28	100	97.4	90	110	
Ni	60	2	He	99.148	1.618	232315	2.32	100	99.1	90	110	
Cu	63	2	He	98.665	1.437	589235	1.68	100	98.7	90	110	
Zn	66	2	He	99.300	1.420	142276	1.05	100	99.3	90	110	
As	75	2	He	99.960	0.622	143417	1.07	100	100.0	90	110	
Se	78	2	He	101.073	2.791	11381	2.10	100	101.1	90	110	
B	11	1	nogas	456.268	2.437	2233477	1.33	500	91.3	90	110	
Si	28	1	nogas	4964.232	1.598	6508045	0.37	5000	99.3	90	110	
Ca	43	1	nogas	9910.259	1.501	360106	0.32	10000	99.1	90	110	
Ca	44	1	nogas	9915.994	3.279	6006115	1.49	10000	99.2	90	110	
Fe	56	1	nogas	9563.794	1.273	231523014	0.37	10000	95.6	90	110	
Se	77	1	nogas	83.797	3.703	38411	0.77	100	83.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.642	2.778	28850	4.03	100	100.6	90	110	
Mo	95	1	nogas	100.173	0.591	578663	1.79	100	100.2	90	110	
Sn	118	1	nogas	94.723	2.213	826106	1.90	100	94.7	90	110	
Ba	137	1	nogas	97.646	3.833	402503	0.80	100	97.6	90	110	
Sb	121	2	He	98.225	0.243	485546	0.75	100	98.2	90	110	
Li	7	1	nogas	97.838	4.270	1708032	0.67	100	97.8	90	110	
P	31	1	nogas	487.339	0.898	933413	1.49	500	97.5	90	110	
La	139	1	nogas	116.594	27.850	407	22.04	100	116.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	21.068	1206.990	27	114.56	100	21.1	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1096195	3.31	1171766	93.55	70	125	
Ge	72	1	nogas	3273180	1.62	3233065	101.24	70	125	
In	115	1	nogas	2925384	4.16	2958353	98.89	70	125	
Bi	209	1	nogas	2085444	1.63	2061475	101.16	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	826791	0.72	810035	102.07	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	184_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T23:08:24-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.072	27.0	647	21.9	1	
Na	23	1	nogas	7.470	29.3	1851405	3.1	100	
Mg	24	1	nogas	3.942	37.6	105320	22.7	100	
Al	27	1	nogas	-0.080	-49.4	20445	1.5	5	
K	39	1	nogas	-1.718	-753.2	8044221	1.1	100	
Ti	47	1	nogas	0.090	65.0	633	16.4	2.5	
V	51	1	nogas	-2.308	-9.8	179551	1.4	2.5	
Cr	52	1	nogas	0.062	197.4	36099	5.1	2.5	
Mn	55	1	nogas	-0.237	-30.1	30409	3.7	2.5	
Co	59	1	nogas	0.066	34.6	2740	18.2	2.5	
Ni	60	1	nogas	0.249	9.7	1003	13.8	2.5	
Cu	63	1	nogas	0.083	23.6	16918	1.8	2.5	
Zn	66	1	nogas	0.176	26.5	1900	8.1	2.5	
As	75	1	nogas	-0.881	-38.0	46283	2.1	2.5	
Sr	88	1	nogas	0.022	126.2	4374	16.7	2.5	
Ag	107	1	nogas	0.048	19.9	777	15.7	2.5	
Cd	111	1	nogas	0.054	35.4	200	27.8	1	
Sb	121	1	nogas	1.217	25.5	17730	21.9	2.5	
Tl	205	1	nogas	0.705	37.9	15162	40.6	1	
Pb	208	1	nogas	0.072	35.3	3414	18.7	2.5	
U	238	1	nogas	0.136	48.6	3804	50.2	2.5	
[Pb]	206	1	nogas	0.065	45.8	873	27.9	2.5	
[Pb]	207	1	nogas	0.051	15.3	717	10.3	2.5	
Na	23	2	He	0.662	496.6	153357	1.8	100	
Mg	24	2	He	2.294	32.3	4237	12.7	100	
Al	27	2	He	-0.018	-159.0	507	2.3	5	
K	39	2	He	10.906	28.4	199140	1.3	100	
Ca	43	2	He	2.874	348.3	77	30.1	100	
Ca	44	2	He	-5.027	-122.5	2957	7.0	100	
V	51	2	He	0.116	9.5	2514	4.0	2.5	
Cr	52	2	He	0.066	34.3	5027	3.2	2.5	
Mn	55	2	He	-0.202	-10.2	2847	4.5	2.5	
Fe	56	2	He	4.641	2.3	38497	2.6	100	
Co	59	2	He	0.051	17.3	777	11.0	2.5	
Ni	60	2	He	0.150	27.3	253	37.5	2.5	
Cu	63	2	He	-0.056	-63.5	6081	3.5	2.5	
Zn	66	2	He	-0.089	-113.5	537	26.5	2.5	
As	75	2	He	0.052	44.6	338	8.4	2.5	
Se	78	2	He	0.372	76.3	207	13.8	2.5	
B	11	1	nogas	-0.426	-399.9	119024	4.1	10	
Si	28	1	nogas	97.199	41.0	1544126	0.7	5	CCB Main CR1 Failed
Ca	43	1	nogas	3.372	89.2	1770	3.5	100	
Ca	44	1	nogas	-35.499	-60.8	341758	0.6	100	
Fe	56	1	nogas	-2.129	-393.6	1994185	8.7	100	
Se	77	1	nogas	-7.319	-2.7	15393	2.8	2.5	
Se	82	1	nogas	-0.328	-34.7	407	7.5	2.5	
Mo	95	1	nogas	0.305	41.3	1970	36.6	2.5	
Sn	118	1	nogas	0.349	29.2	4124	20.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.047	-43.6	537	14.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.883	1.6	4647	0.1	2.5	
P	31	1	nogas	5.694	45.6	113615	1.3	10	
La	139	1	nogas	10.341	79.4	77	32.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-123.122	-64.6	10	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1196915	3.07	1171766	102.15	70	125	
Ge	72	1	nogas	3387392	3.17	3233065	104.77	70	125	
In	115	1	nogas	2999763	2.18	2958353	101.40	70	125	
Bi	209	1	nogas	2263409	3.76	2061475	109.80	70	125	
Ge	72	2	He	809386	1.34	810035	99.92	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	195_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T23:31:22-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	98.145	3.285	759827	1.62	100	98.1	90	110	
Na	23	1	nogas	9896.205	3.990	258337689	1.42	10000	99.0	90	110	
Mg	24	1	nogas	9770.217	5.908	164298908	1.12	10000	97.7	90	110	
Al	27	1	nogas	99.408	5.422	2023636	2.77	100	99.4	90	110	
K	39	1	nogas	9778.360	3.346	212383088	1.49	10000	97.8	90	110	
Ti	47	1	nogas	96.545	2.887	200404	1.10	100	96.5	90	110	
V	51	1	nogas	96.015	1.631	2938135	1.55	100	96.0	90	110	
Cr	52	1	nogas	97.396	1.954	2371825	0.79	100	97.4	90	110	
Mn	55	1	nogas	96.945	2.308	2954171	0.77	100	96.9	90	110	
Co	59	1	nogas	102.296	4.605	2554149	2.13	100	102.3	90	110	
Ni	60	1	nogas	97.703	2.506	553982	0.20	100	97.7	90	110	
Cu	63	1	nogas	95.128	3.691	1317043	1.33	100	95.1	90	110	
Zn	66	1	nogas	97.573	2.583	456052	1.78	100	97.6	90	110	
As	75	1	nogas	96.158	2.418	624513	1.43	100	96.2	90	110	
Sr	88	1	nogas	96.164	3.772	3014087	2.55	100	96.2	90	110	
Ag	107	1	nogas	97.630	1.717	1469108	1.09	100	97.6	90	110	
Cd	111	1	nogas	99.805	3.220	324954	3.36	100	99.8	90	110	
Sb	121	1	nogas	97.368	2.834	1399939	1.37	100	97.4	90	110	
Tl	205	1	nogas	95.893	3.401	1984203	2.53	100	95.9	90	110	
Pb	208	1	nogas	109.504	0.919	2757551	0.92	100	109.5	90	110	
U	238	1	nogas	103.380	3.854	2728169	2.07	100	103.4	90	110	
[Pb]	206	1	nogas	97.273	2.142	678280	2.38	100	97.3	90	110	
[Pb]	207	1	nogas	97.310	2.377	599524	1.52	100	97.3	90	110	
Na	23	2	He	9823.545	2.560	15718255	2.18	10000	98.2	90	110	
Mg	24	2	He	9793.081	0.234	8586868	0.40	10000	97.9	90	110	
Al	27	2	He	99.658	2.040	48312	1.40	100	99.7	90	110	
K	39	2	He	11105.898	1.115	9438728	1.09	10000	111.1	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9951.290	3.620	25848	3.95	10000	99.5	90	110	
Ca	44	2	He	9976.902	0.289	436431	0.65	10000	99.8	90	110	
V	51	2	He	98.378	1.284	650070	0.66	100	98.4	90	110	
Cr	52	2	He	98.667	0.221	707657	0.82	100	98.7	90	110	
Mn	55	2	He	100.340	1.059	495255	0.61	100	100.3	90	110	
Fe	56	2	He	10152.363	1.854	60535724	1.27	10000	101.5	90	110	
Co	59	2	He	98.004	1.702	969869	1.08	100	98.0	90	110	
Ni	60	2	He	99.007	2.283	247187	1.76	100	99.0	90	110	
Cu	63	2	He	98.333	1.390	625821	0.76	100	98.3	90	110	
Zn	66	2	He	98.786	0.735	150845	0.28	100	98.8	90	110	
As	75	2	He	99.637	0.351	152344	0.45	100	99.6	90	110	
Se	78	2	He	103.219	0.904	12384	1.45	100	103.2	90	110	
B	11	1	nogas	467.993	2.975	2317603	1.14	500	93.6	90	110	
Si	28	1	nogas	4916.391	5.598	6999542	1.88	5000	98.3	90	110	
Ca	43	1	nogas	9741.677	2.254	383807	0.90	10000	97.4	90	110	
Ca	44	1	nogas	9666.065	2.972	6357559	0.69	10000	96.7	90	110	
Fe	56	1	nogas	9497.481	1.151	249358056	2.52	10000	95.0	90	110	
Se	77	1	nogas	76.966	1.274	39744	2.13	100	77.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.039	2.559	30172	2.80	100	97.0	90	110	
Mo	95	1	nogas	98.277	2.022	615417	0.72	100	98.3	90	110	
Sn	118	1	nogas	96.240	3.082	889074	2.56	100	96.2	90	110	
Ba	137	1	nogas	97.733	4.599	426686	1.10	100	97.7	90	110	
Sb	121	2	He	97.154	1.647	511777	1.04	100	97.2	90	110	
Li	7	1	nogas	98.101	4.020	1735071	2.27	100	98.1	90	110	
P	31	1	nogas	493.648	3.484	1023399	1.01	500	98.7	90	110	
La	139	1	nogas	121.306	15.077	447	8.48	100	121.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	187.874	3.749	50	0.00	100	187.9	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1110184	1.71	1171766	94.74	70	125	
Ge	72	1	nogas	3549444	2.60	3233065	109.79	70	125	
In	115	1	nogas	3100416	5.59	2958353	104.80	70	125	
Bi	209	1	nogas	2267301	1.78	2061475	109.98	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	881115	0.61	810035	108.77	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	196_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T23:33:27-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.070	31.9	623	27.3	1	
Na	23	1	nogas	5.430	37.0	1790450	3.3	100	
Mg	24	1	nogas	5.483	32.5	129178	22.2	100	
Al	27	1	nogas	0.140	17.1	24072	1.7	5	
K	39	1	nogas	26.883	26.1	8408513	0.6	100	
Ti	47	1	nogas	0.058	68.8	557	12.2	2.5	
V	51	1	nogas	-2.195	-15.0	178175	3.5	2.5	
Cr	52	1	nogas	0.164	35.2	37548	2.3	2.5	
Mn	55	1	nogas	-0.094	-46.9	33708	2.8	2.5	
Co	59	1	nogas	0.086	34.1	3120	21.1	2.5	
Ni	60	1	nogas	0.278	12.1	1130	15.4	2.5	
Cu	63	1	nogas	0.140	20.9	17235	3.2	2.5	
Zn	66	1	nogas	0.294	22.9	2370	11.0	2.5	
As	75	1	nogas	-0.706	-7.8	46162	1.0	2.5	
Sr	88	1	nogas	0.055	38.7	5248	10.9	2.5	
Ag	107	1	nogas	0.056	17.7	867	15.0	2.5	
Cd	111	1	nogas	0.059	61.3	217	50.6	1	
Sb	121	1	nogas	1.044	26.8	15024	24.2	2.5	
Tl	205	1	nogas	0.724	51.6	15546	49.2	1	
Pb	208	1	nogas	0.087	30.3	3797	17.5	2.5	
U	238	1	nogas	0.143	43.6	3961	40.9	2.5	
[Pb]	206	1	nogas	0.080	16.8	980	9.2	2.5	
[Pb]	207	1	nogas	0.065	74.0	807	36.1	2.5	
Na	23	2	He	-10.720	-25.7	147434	1.3	100	
Mg	24	2	He	2.729	14.6	4947	6.1	100	
Al	27	2	He	0.173	32.1	637	3.6	5	
K	39	2	He	22.200	5.1	208545	0.4	100	
Ca	43	2	He	-7.394	-75.7	57	27.0	100	
Ca	44	2	He	-4.903	-186.0	3190	10.6	100	
V	51	2	He	0.099	4.9	2598	1.1	2.5	
Cr	52	2	He	0.019	349.8	5087	9.6	2.5	
Mn	55	2	He	-0.191	-5.2	3120	3.1	2.5	
Fe	56	2	He	4.948	10.0	43268	5.0	100	
Co	59	2	He	0.047	39.5	793	22.4	2.5	
Ni	60	2	He	0.146	21.2	263	29.5	2.5	
Cu	63	2	He	-0.143	-19.5	6011	1.3	2.5	
Zn	66	2	He	-0.061	-40.1	620	4.3	2.5	
As	75	2	He	0.051	97.6	363	20.7	2.5	
Se	78	2	He	0.096	206.2	191	11.5	2.5	
B	11	1	nogas	-6.198	-13.2	88554	3.2	10	
Si	28	1	nogas	117.121	56.9	1527691	3.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	9.660	33.0	1960	7.2	100	
Ca	44	1	nogas	-14.543	-119.9	345705	1.5	100	
Fe	56	1	nogas	4.661	121.4	2112445	5.7	100	
Se	77	1	nogas	-9.606	-19.1	14423	3.1	2.5	
Se	82	1	nogas	0.105	94.0	520	3.8	2.5	
Mo	95	1	nogas	0.277	45.4	1763	41.0	2.5	
Sn	118	1	nogas	0.300	21.5	3720	14.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.010	-612.3	697	34.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.688	8.1	3991	5.9	2.5	
P	31	1	nogas	12.282	17.3	122288	1.5	10	CCB Main CR1 Failed
La	139	1	nogas	15.146	100.3	93	53.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-150.948	-59.7	7	173.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1180096	2.60	1171766	100.71	70	125	
Ge	72	1	nogas	3305257	1.59	3233065	102.23	70	125	
In	115	1	nogas	3024791	2.16	2958353	102.25	70	125	
Bi	209	1	nogas	2289681	1.03	2061475	111.07	70	125	
Ge	72	2	He	872311	1.79	810035	107.69	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	206_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T23:54:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.067	51.6	630	44.5	1	
Na	23	1	nogas	-23.391	-13.8	1164603	4.9	100	
Mg	24	1	nogas	4.884	41.6	128116	24.7	100	
Al	27	1	nogas	-0.018	-205.7	22404	1.9	5	
K	39	1	nogas	-2.278	-877.4	8314310	0.8	100	
Ti	47	1	nogas	0.050	15.4	577	6.6	2.5	
V	51	1	nogas	-2.575	-7.8	178774	6.2	2.5	
Cr	52	1	nogas	0.018	633.3	36346	4.7	2.5	
Mn	55	1	nogas	-0.213	-21.3	32208	0.4	2.5	
Co	59	1	nogas	0.072	40.1	2960	19.8	2.5	
Ni	60	1	nogas	0.235	9.9	957	10.7	2.5	
Cu	63	1	nogas	0.049	70.9	17065	6.0	2.5	
Zn	66	1	nogas	0.205	20.1	2103	5.2	2.5	
As	75	1	nogas	-1.293	-17.4	45524	1.7	2.5	
Sr	88	1	nogas	0.017	155.1	4364	14.1	2.5	
Ag	107	1	nogas	0.050	17.5	837	11.5	2.5	
Cd	111	1	nogas	0.060	51.1	230	42.8	1	
Sb	121	1	nogas	0.972	28.5	14840	22.3	2.5	
Tl	205	1	nogas	0.660	46.3	14611	45.7	1	
Pb	208	1	nogas	0.082	44.0	3677	24.8	2.5	
U	238	1	nogas	0.130	54.8	3717	53.1	2.5	
[Pb]	206	1	nogas	0.068	33.9	920	19.2	2.5	
[Pb]	207	1	nogas	0.063	58.7	817	30.0	2.5	
Na	23	2	He	-35.691	-7.2	110018	1.5	100	
Mg	24	2	He	2.574	7.2	4891	1.8	100	
Al	27	2	He	-0.126	-86.4	503	11.6	5	
K	39	2	He	20.607	5.7	207218	0.5	100	
Ca	43	2	He	1.295	300.5	80	12.5	100	
Ca	44	2	He	-10.178	-33.6	3014	3.6	100	
V	51	2	He	0.094	10.7	2602	1.5	2.5	
Cr	52	2	He	0.028	213.6	5227	6.2	2.5	
Mn	55	2	He	-0.237	-10.0	2944	1.7	2.5	
Fe	56	2	He	4.693	5.2	42482	5.5	100	
Co	59	2	He	0.050	28.3	833	15.2	2.5	
Ni	60	2	He	0.122	6.5	207	10.1	2.5	
Cu	63	2	He	-0.185	-10.1	5838	3.4	2.5	
Zn	66	2	He	-0.092	-13.2	583	5.2	2.5	
As	75	2	He	0.048	77.3	363	13.9	2.5	
Se	78	2	He	0.209	35.9	207	6.4	2.5	
B	11	1	nogas	-10.720	-8.6	68991	3.3	10	
Si	28	1	nogas	4.521	1715.7	1495478	1.5	5	
Ca	43	1	nogas	0.115	2520.6	1707	3.7	100	
Ca	44	1	nogas	-66.204	-42.8	335010	1.2	100	
Fe	56	1	nogas	0.038	24259.8	2117724	7.1	100	
Se	77	1	nogas	-11.355	-5.4	14830	4.8	2.5	
Se	82	1	nogas	-0.390	-73.4	403	22.2	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.279	44.9	1870	37.3	2.5	
Sn	118	1	nogas	0.267	33.8	3570	23.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.015	-152.1	707	14.2	2.5	
Sb	121	2	He	0.598	5.0	3580	4.6	2.5	
P	31	1	nogas	10.349	27.7	126163	0.4	10	CCB Main CR1 Failed
La	139	1	nogas	1.154	410.5	50	34.6	2.5	
Au	197	1	nogas	-0.843	-5350.2	27	21.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1237108	5.17	1171766	105.58	70	125	
Ge	72	1	nogas	3509032	4.62	3233065	108.54	70	125	
In	115	1	nogas	3153382	2.18	2958353	106.59	70	125	
Bi	209	1	nogas	2340428	1.42	2061475	113.53	70	125	
Ge	72	2	He	886277	2.21	810035	109.41	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	208_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T00:02:39-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	91.289	3.533	752632	0.97	100	91.3	90	110	
Na	23	1	nogas	10139.757	7.373	256520931	2.36	10000	101.4	90	110	
Mg	24	1	nogas	9839.533	9.513	160278474	1.40	10000	98.4	90	110	
Al	27	1	nogas	100.122	6.890	2084019	7.04	100	100.1	90	110	
K	39	1	nogas	9781.373	2.920	217104738	2.10	10000	97.8	90	110	
Ti	47	1	nogas	95.942	1.108	203552	1.75	100	95.9	90	110	
V	51	1	nogas	90.626	6.320	2847499	5.21	100	90.6	90	110	
Cr	52	1	nogas	91.469	5.261	2278200	4.83	100	91.5	90	110	
Mn	55	1	nogas	94.524	3.575	2944122	2.85	100	94.5	90	110	
Co	59	1	nogas	98.702	4.767	2519218	4.45	100	98.7	90	110	
Ni	60	1	nogas	96.778	0.655	560805	0.91	100	96.8	90	110	
Cu	63	1	nogas	96.258	1.710	1362156	2.49	100	96.3	90	110	
Zn	66	1	nogas	97.143	1.863	463987	1.87	100	97.1	90	110	
As	75	1	nogas	94.447	2.005	627755	1.35	100	94.4	90	110	
Sr	88	1	nogas	94.594	0.838	3030315	1.21	100	94.6	90	110	
Ag	107	1	nogas	94.957	4.013	1459878	3.45	100	95.0	90	110	
Cd	111	1	nogas	101.890	0.691	331716	1.13	100	101.9	90	110	
Sb	121	1	nogas	100.487	3.180	1476461	3.10	100	100.5	90	110	
Tl	205	1	nogas	95.498	5.221	1983565	4.20	100	95.5	90	110	
Pb	208	1	nogas	108.173	0.593	2724030	0.59	100	108.2	90	110	
U	238	1	nogas	104.538	3.159	2771252	4.14	100	104.5	90	110	
[Pb]	206	1	nogas	98.543	0.331	689842	0.99	100	98.5	90	110	
[Pb]	207	1	nogas	97.085	0.939	600636	2.00	100	97.1	90	110	
Na	23	2	He	9616.876	2.742	15732919	2.06	10000	96.2	90	110	
Mg	24	2	He	9803.993	3.149	8786793	2.57	10000	98.0	90	110	
Al	27	2	He	102.768	1.378	50916	1.71	100	102.8	90	110	
K	39	2	He	10989.336	2.012	9341658	1.97	10000	109.9	90	110	
Ca	43	2	He	9895.416	1.926	26272	1.39	10000	99.0	90	110	
Ca	44	2	He	9931.023	1.847	444086	1.41	10000	99.3	90	110	
V	51	2	He	96.596	1.254	652568	1.19	100	96.6	90	110	
Cr	52	2	He	97.745	1.846	716650	1.39	100	97.7	90	110	
Mn	55	2	He	99.111	1.337	500124	0.60	100	99.1	90	110	
Fe	56	2	He	9829.612	1.909	59916171	1.29	10000	98.3	90	110	
Co	59	2	He	95.121	2.544	962337	2.38	100	95.1	90	110	
Ni	60	2	He	96.926	1.760	247385	1.43	100	96.9	90	110	
Cu	63	2	He	97.890	1.450	636909	1.00	100	97.9	90	110	
Zn	66	2	He	100.497	0.926	156862	0.76	100	100.5	90	110	
As	75	2	He	98.417	0.400	153835	0.78	100	98.4	90	110	
Se	78	2	He	100.390	1.097	12318	1.11	100	100.4	90	110	
B	11	1	nogas	446.841	2.287	2363392	3.63	500	89.4	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4696.105	2.648	6903535	1.18	5000	93.9	90	110	
Ca	43	1	nogas	9540.466	2.537	384111	1.81	10000	95.4	90	110	
Ca	44	1	nogas	9534.556	4.047	6413521	3.20	10000	95.3	90	110	
Fe	56	1	nogas	9340.308	3.931	250509989	2.96	10000	93.4	90	110	
Se	77	1	nogas	75.190	3.611	40094	1.83	100	75.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.488	4.851	30960	3.95	100	97.5	90	110	
Mo	95	1	nogas	96.977	1.024	620556	0.59	100	97.0	90	110	
Sn	118	1	nogas	96.654	0.427	892907	0.50	100	96.7	90	110	
Ba	137	1	nogas	97.956	1.991	427869	1.23	100	98.0	90	110	
Sb	121	2	He	96.308	2.253	518611	1.75	100	96.3	90	110	
Li	7	1	nogas	95.534	2.096	1803897	4.89	100	95.5	90	110	
P	31	1	nogas	483.118	2.280	1025943	1.23	500	96.6	90	110	
La	139	1	nogas	92.617	33.011	353	29.46	100	92.6	90	110	
Au	197	1	nogas	-48.196	-319.192	20	100.00	100	-48.2	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1182604	2.91	1171766	100.92	70	125	
Ge	72	1	nogas	3625992	0.96	3233065	112.15	70	125	
In	115	1	nogas	3097029	0.92	2958353	104.69	70	125	
Bi	209	1	nogas	2276123	1.06	2061475	110.41	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	900735	0.73	810035	111.20	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	218_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T00:23:17-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	96.283	5.166	779490	3.69	100	96.3	90	110	
Na	23	1	nogas	10027.597	2.694	264950373	0.85	10000	100.3	90	110	
Mg	24	1	nogas	9959.523	4.274	169593370	1.70	10000	99.6	90	110	
Al	27	1	nogas	102.925	4.600	2080150	1.97	100	102.9	90	110	
K	39	1	nogas	10657.078	2.115	229193188	2.77	10000	106.6	90	110	
Ti	47	1	nogas	100.807	1.210	207840	1.90	100	100.8	90	110	
V	51	1	nogas	102.325	1.819	3094147	3.85	100	102.3	90	110	
Cr	52	1	nogas	102.125	3.331	2468289	3.48	100	102.1	90	110	
Mn	55	1	nogas	102.871	1.133	3111474	2.30	100	102.9	90	110	
Co	59	1	nogas	103.762	3.001	2573545	1.42	100	103.8	90	110	
Ni	60	1	nogas	102.660	3.849	577913	0.99	100	102.7	90	110	
Cu	63	1	nogas	101.327	0.860	1393204	3.80	100	101.3	90	110	
Zn	66	1	nogas	101.649	0.362	471926	2.76	100	101.6	90	110	
As	75	1	nogas	101.407	1.610	651172	1.54	100	101.4	90	110	
Sr	88	1	nogas	100.874	4.460	3138735	2.20	100	100.9	90	110	
Ag	107	1	nogas	103.504	3.689	1546080	0.68	100	103.5	90	110	
Cd	111	1	nogas	102.253	1.114	329453	1.17	100	102.3	90	110	
Sb	121	1	nogas	104.743	3.930	1495368	2.88	100	104.7	90	110	
Tl	205	1	nogas	96.902	5.970	2065558	1.26	100	96.9	90	110	
Pb	208	1	nogas	112.171	2.926	2824650	2.92	100	112.2	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	102.227	4.616	2783393	5.48	100	102.2	90	110	
[Pb]	206	1	nogas	96.146	5.812	690554	1.60	100	96.1	90	110	
[Pb]	207	1	nogas	97.791	5.649	620797	2.68	100	97.8	90	110	
Na	23	2	He	10187.379	1.423	16121514	1.79	10000	101.9	90	110	
Mg	24	2	He	10213.699	2.347	8860315	2.73	10000	102.1	90	110	
Al	27	2	He	101.889	0.800	48857	0.93	100	101.9	90	110	
K	39	2	He	11441.069	1.769	9717848	1.73	10000	114.4	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10419.838	2.540	26769	2.40	10000	104.2	90	110	
Ca	44	2	He	10415.786	1.543	450618	1.87	10000	104.2	90	110	
V	51	2	He	100.781	1.947	658777	1.61	100	100.8	90	110	
Cr	52	2	He	101.228	1.223	718105	1.08	100	101.2	90	110	
Mn	55	2	He	104.855	0.408	511835	0.37	100	104.9	90	110	
Fe	56	2	He	10373.839	1.099	61196679	0.74	10000	103.7	90	110	
Co	59	2	He	101.000	1.396	988856	1.11	100	101.0	90	110	
Ni	60	2	He	103.941	0.841	256750	0.59	100	103.9	90	110	
Cu	63	2	He	102.668	1.498	646138	1.40	100	102.7	90	110	
Zn	66	2	He	102.762	1.519	155218	1.88	100	102.8	90	110	
As	75	2	He	102.891	0.794	155624	0.44	100	102.9	90	110	
Se	78	2	He	104.322	0.662	12380	0.55	100	104.3	90	110	
B	11	1	nogas	464.305	2.579	2405915	1.05	500	92.9	90	110	
Si	28	1	nogas	5418.429	4.922	7507971	1.03	5000	108.4	90	110	
Ca	43	1	nogas	10253.317	2.564	401098	2.21	10000	102.5	90	110	
Ca	44	1	nogas	10193.265	2.611	6637961	1.64	10000	101.9	90	110	
Fe	56	1	nogas	9956.528	0.425	259502847	2.61	10000	99.6	90	110	
Se	77	1	nogas	97.646	3.572	45210	1.01	100	97.6	90	110	
Se	82	1	nogas	102.829	3.734	31705	1.24	100	102.8	90	110	
Mo	95	1	nogas	101.418	2.773	630633	1.67	100	101.4	90	110	
Sn	118	1	nogas	99.107	0.899	906109	1.22	100	99.1	90	110	
Ba	137	1	nogas	101.196	1.732	437438	0.91	100	101.2	90	110	
Sb	121	2	He	102.241	1.599	532816	1.53	100	102.2	90	110	
Li	7	1	nogas	96.323	2.033	1783906	0.39	100	96.3	90	110	
P	31	1	nogas	527.009	3.488	1077678	1.09	500	105.4	90	110	
La	139	1	nogas	136.366	27.542	493	25.18	100	136.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-2.001	-4106.545	27	43.30	100	-2.0	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1161104	1.57	1171766	99.09	70	125	
Ge	72	1	nogas	3525021	3.00	3233065	109.03	70	125	
In	115	1	nogas	3065391	2.02	2958353	103.62	70	125	
Bi	209	1	nogas	2339423	4.77	2061475	113.48	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	871683	0.38	810035	107.61	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	219_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T00:25:20-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.078	3.3	757	5.3	1	
Na	23	1	nogas	8.289	73.0	2078181	6.1	100	
Mg	24	1	nogas	33.908	13.5	648219	10.6	100	
Al	27	1	nogas	-0.025	-141.5	23585	2.6	5	
K	39	1	nogas	91.231	32.0	10843941	1.9	100	
Ti	47	1	nogas	0.059	87.2	627	14.7	2.5	
V	51	1	nogas	-0.632	-66.7	245880	2.5	2.5	
Cr	52	1	nogas	0.068	97.3	39776	2.1	2.5	
Mn	55	1	nogas	0.975	18.6	71417	4.0	2.5	
Co	59	1	nogas	0.111	26.8	4157	14.5	2.5	
Ni	60	1	nogas	0.427	3.9	2153	0.7	2.5	
Cu	63	1	nogas	-0.119	-11.4	15674	5.1	2.5	
Zn	66	1	nogas	0.275	11.8	2570	6.0	2.5	
As	75	1	nogas	0.043	568.0	56538	3.6	2.5	
Sr	88	1	nogas	0.316	15.4	14406	7.0	2.5	
Ag	107	1	nogas	0.075	24.9	1267	21.1	2.5	
Cd	111	1	nogas	0.073	18.4	290	15.0	1	
Sb	121	1	nogas	1.267	21.4	20169	16.1	2.5	
Tl	205	1	nogas	0.759	47.2	16980	43.9	1	
Pb	208	1	nogas	0.097	22.5	4050	13.6	2.5	
U	238	1	nogas	0.152	40.9	4397	37.3	2.5	
[Pb]	206	1	nogas	0.082	29.9	1040	15.3	2.5	
[Pb]	207	1	nogas	0.067	46.9	853	21.8	2.5	
Na	23	2	He	-11.283	-23.6	156438	1.6	100	
Mg	24	2	He	28.197	2.3	28869	1.2	100	
Al	27	2	He	0.000	96450.4	593	21.1	5	
K	39	2	He	133.316	1.8	301078	0.7	100	CCB Main CR1 Failed
Ca	43	2	He	43.542	44.9	200	27.8	100	
Ca	44	2	He	24.129	38.0	4737	7.6	100	
V	51	2	He	0.196	5.0	3448	0.6	2.5	
Cr	52	2	He	0.011	113.5	5368	2.2	2.5	
Mn	55	2	He	0.795	7.4	8432	4.1	2.5	
Fe	56	2	He	6.992	6.2	59075	3.7	100	
Co	59	2	He	0.078	14.0	1170	9.2	2.5	
Ni	60	2	He	0.258	8.9	577	11.5	2.5	
Cu	63	2	He	-0.263	-10.5	5621	4.3	2.5	
Zn	66	2	He	-0.057	-94.8	670	14.2	2.5	
As	75	2	He	0.096	11.8	460	3.3	2.5	
Se	78	2	He	0.072	223.1	201	10.6	2.5	
B	11	1	nogas	-8.006	-7.2	87194	2.3	10	
Si	28	1	nogas	10.225	615.2	1591244	1.0	5	CCB Main CR1 Failed
Ca	43	1	nogas	38.469	14.7	3384	6.6	100	
Ca	44	1	nogas	-73.524	-45.8	350011	2.3	100	
Fe	56	1	nogas	5.836	115.1	2403172	3.6	100	
Se	77	1	nogas	-4.217	-97.3	17776	4.8	2.5	
Se	82	1	nogas	-0.056	-211.2	533	7.8	2.5	
Mo	95	1	nogas	0.367	30.7	2557	25.0	2.5	
Sn	118	1	nogas	0.293	28.7	4061	19.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.003	-314.0	810	4.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.850	10.2	5157	8.2	2.5	
P	31	1	nogas	10.059	35.3	133035	1.5	10	CCB Main CR1 Failed
La	139	1	nogas	2.114	321.7	57	44.4	2.5	
Au	197	1	nogas	-53.656	-281.8	20	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1294101	2.42	1171766	110.44	70	125	
Ge	72	1	nogas	3715996	3.90	3233065	114.94	70	125	
In	115	1	nogas	3361493	1.48	2958353	113.63	70	125	
Bi	209	1	nogas	2395128	1.90	2061475	116.19	70	125	
Ge	72	2	He	931073	1.39	810035	114.94	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	220_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T00:27:23-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.133	3.482	764444	1.44	100	94.1	90	110	
Na	23	1	nogas	9722.091	4.057	262542573	1.62	10000	97.2	90	110	
Mg	24	1	nogas	9735.550	4.139	169433283	0.71	10000	97.4	90	110	
Al	27	1	nogas	98.958	2.075	2082894	1.62	100	99.0	90	110	
K	39	1	nogas	9808.657	0.890	220163105	1.36	10000	98.1	90	110	
Ti	47	1	nogas	98.115	2.796	210499	3.36	100	98.1	90	110	
V	51	1	nogas	97.982	2.177	3092569	1.88	100	98.0	90	110	
Cr	52	1	nogas	97.372	3.050	2450225	2.79	100	97.4	90	110	
Mn	55	1	nogas	98.158	1.718	3090293	0.83	100	98.2	90	110	
Co	59	1	nogas	100.767	1.023	2601209	1.71	100	100.8	90	110	
Ni	60	1	nogas	97.722	1.623	572694	2.49	100	97.7	90	110	
Cu	63	1	nogas	96.758	1.864	1384522	2.63	100	96.8	90	110	
Zn	66	1	nogas	98.491	1.602	475715	2.04	100	98.5	90	110	
As	75	1	nogas	97.873	0.595	655853	0.72	100	97.9	90	110	
Sr	88	1	nogas	97.724	1.943	3165252	1.10	100	97.7	90	110	
Ag	107	1	nogas	100.548	1.520	1563572	2.39	100	100.5	90	110	
Cd	111	1	nogas	99.458	1.495	340073	2.54	100	99.5	90	110	
Sb	121	1	nogas	98.704	2.912	1466641	3.08	100	98.7	90	110	
Tl	205	1	nogas	96.968	4.530	2089169	2.74	100	97.0	90	110	
Pb	208	1	nogas	112.387	1.410	2830087	1.41	100	112.4	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	102.906	4.305	2828586	3.35	100	102.9	90	110	
[Pb]	206	1	nogas	95.030	3.570	689890	1.70	100	95.0	90	110	
[Pb]	207	1	nogas	95.092	2.322	610151	1.00	100	95.1	90	110	
Na	23	2	He	9678.230	2.608	15862979	1.65	10000	96.8	90	110	
Mg	24	2	He	9806.402	2.104	8806090	0.63	10000	98.1	90	110	
Al	27	2	He	98.494	2.846	48907	1.31	100	98.5	90	110	
K	39	2	He	11167.787	1.886	9490267	1.85	10000	111.7	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9946.807	1.832	26459	0.57	10000	99.5	90	110	
Ca	44	2	He	9931.163	2.834	444899	1.37	10000	99.3	90	110	
V	51	2	He	98.183	1.047	664551	0.69	100	98.2	90	110	
Cr	52	2	He	96.947	2.838	712128	1.32	100	96.9	90	110	
Mn	55	2	He	99.510	2.776	503033	1.27	100	99.5	90	110	
Fe	56	2	He	10078.685	2.880	61546896	1.48	10000	100.8	90	110	
Co	59	2	He	97.160	2.600	984779	1.54	100	97.2	90	110	
Ni	60	2	He	99.397	3.770	254144	2.65	100	99.4	90	110	
Cu	63	2	He	98.557	3.536	642329	2.16	100	98.6	90	110	
Zn	66	2	He	100.120	2.227	156567	1.04	100	100.1	90	110	
As	75	2	He	99.023	1.658	155071	0.66	100	99.0	90	110	
Se	78	2	He	99.784	1.942	12267	1.11	100	99.8	90	110	
B	11	1	nogas	453.040	7.002	2354582	2.04	500	90.6	90	110	
Si	28	1	nogas	4783.361	2.578	7081805	1.21	5000	95.7	90	110	
Ca	43	1	nogas	9753.157	0.671	397093	1.12	10000	97.5	90	110	
Ca	44	1	nogas	9742.767	2.225	6620220	2.78	10000	97.4	90	110	
Fe	56	1	nogas	9519.412	1.112	258186872	0.83	10000	95.2	90	110	
Se	77	1	nogas	87.082	1.115	43987	0.31	100	87.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.509	1.825	31007	1.98	100	96.5	90	110	
Mo	95	1	nogas	98.308	0.753	636158	1.10	100	98.3	90	110	
Sn	118	1	nogas	94.535	1.244	917585	3.94	100	94.5	90	110	
Ba	137	1	nogas	96.142	2.601	440969	0.76	100	96.1	90	110	
Sb	121	2	He	98.514	2.378	531494	1.35	100	98.5	90	110	
Li	7	1	nogas	94.838	2.634	1763823	3.74	100	94.8	90	110	
P	31	1	nogas	493.067	1.058	1056576	0.13	500	98.6	90	110	
La	139	1	nogas	95.189	10.976	380	11.47	100	95.2	90	110	
Au	197	1	nogas	25.652	1080.245	30	120.19	100	25.7	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1165442	5.00	1171766	99.46	70	125	
Ge	72	1	nogas	3666674	0.87	3233065	113.41	70	125	
In	115	1	nogas	3253086	2.78	2958353	109.96	70	125	
Bi	209	1	nogas	2361399	1.91	2061475	114.55	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	902562	1.49	810035	111.42	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	221_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T00:29:27-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.090	11.6	817	8.3	1	
Na	23	1	nogas	-11.343	-17.0	1514133	3.5	100	
Mg	24	1	nogas	21.713	17.1	424647	15.2	100	
Al	27	1	nogas	0.004	659.0	23188	2.9	5	
K	39	1	nogas	48.652	12.6	9513922	1.6	100	
Ti	47	1	nogas	0.075	19.7	637	4.0	2.5	
V	51	1	nogas	-1.070	-25.7	223519	2.5	2.5	
Cr	52	1	nogas	0.108	51.0	39091	3.0	2.5	
Mn	55	1	nogas	0.501	5.8	54266	1.9	2.5	
Co	59	1	nogas	0.107	12.0	3900	8.3	2.5	
Ni	60	1	nogas	0.382	9.9	1810	11.8	2.5	
Cu	63	1	nogas	0.030	121.5	17051	2.3	2.5	
Zn	66	1	nogas	0.271	23.6	2447	11.4	2.5	
As	75	1	nogas	-0.130	-363.0	53138	4.4	2.5	
Sr	88	1	nogas	0.196	16.2	10103	10.4	2.5	
Ag	107	1	nogas	0.078	17.0	1263	16.2	2.5	
Cd	111	1	nogas	0.096	27.9	360	25.5	1	
Sb	121	1	nogas	1.087	21.1	16849	20.2	2.5	
Tl	205	1	nogas	0.716	47.7	15916	45.2	1	
Pb	208	1	nogas	0.106	23.5	4277	14.7	2.5	
U	238	1	nogas	0.158	42.9	4531	40.1	2.5	
[Pb]	206	1	nogas	0.090	35.9	1090	20.8	2.5	
[Pb]	207	1	nogas	0.069	53.0	860	26.2	2.5	
Na	23	2	He	-27.484	-7.6	127878	1.8	100	
Mg	24	2	He	17.036	6.5	18319	4.7	100	
Al	27	2	He	0.075	254.2	623	15.4	5	
K	39	2	He	77.523	2.3	254616	0.6	100	
Ca	43	2	He	13.579	124.8	117	40.5	100	
Ca	44	2	He	6.625	38.4	3894	3.4	100	
V	51	2	He	0.167	10.2	3210	2.7	2.5	
Cr	52	2	He	0.012	335.4	5311	5.7	2.5	
Mn	55	2	He	0.326	25.9	5934	6.5	2.5	
Fe	56	2	He	7.230	8.6	59874	5.5	100	
Co	59	2	He	0.088	17.3	1260	13.3	2.5	
Ni	60	2	He	0.219	7.4	467	10.1	2.5	
Cu	63	2	He	-0.125	-13.1	6461	2.4	2.5	
Zn	66	2	He	-0.074	-106.8	633	19.7	2.5	
As	75	2	He	0.087	63.2	440	19.1	2.5	
Se	78	2	He	0.054	560.7	196	18.6	2.5	
B	11	1	nogas	-8.360	-1.1	80241	3.2	10	
Si	28	1	nogas	-14.785	-70.9	1498213	0.6	5	
Ca	43	1	nogas	31.748	46.0	2980	19.5	100	
Ca	44	1	nogas	-73.124	-10.9	336114	1.5	100	
Fe	56	1	nogas	6.511	95.6	2325083	7.5	100	
Se	77	1	nogas	-5.895	-19.6	16578	1.0	2.5	
Se	82	1	nogas	-0.441	-56.4	393	19.7	2.5	
Mo	95	1	nogas	0.319	18.2	2167	17.2	2.5	
Sn	118	1	nogas	0.302	22.1	4004	15.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.012	217.0	850	13.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.693	7.3	4241	5.7	2.5	
P	31	1	nogas	10.777	7.3	128952	0.4	10	CCB Main CR1 Failed
La	139	1	nogas	13.285	66.1	93	32.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-153.139	-56.4	7	173.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1217401	2.67	1171766	103.89	70	125	
Ge	72	1	nogas	3560142	0.92	3233065	110.12	70	125	
In	115	1	nogas	3238876	1.29	2958353	109.48	70	125	
Bi	209	1	nogas	2370337	1.12	2061475	114.98	70	125	
Ge	72	2	He	920480	1.03	810035	113.63	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	232_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T00:52:30-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	91.987	2.874	752329	0.79	100	92.0	90	110	
Na	23	1	nogas	9931.300	3.723	257547639	2.93	10000	99.3	90	110	
Mg	24	1	nogas	9808.005	2.700	163950099	0.75	10000	98.1	90	110	
Al	27	1	nogas	102.198	0.478	2046366	3.65	100	102.2	90	110	
K	39	1	nogas	10061.621	4.052	214487046	0.41	10000	100.6	90	110	
Ti	47	1	nogas	98.783	1.904	201581	2.54	100	98.8	90	110	
V	51	1	nogas	100.512	4.364	3010298	2.70	100	100.5	90	110	
Cr	52	1	nogas	96.947	3.113	2320026	0.81	100	96.9	90	110	
Mn	55	1	nogas	95.771	6.282	2866115	2.78	100	95.8	90	110	
Co	59	1	nogas	99.696	6.220	2445607	3.55	100	99.7	90	110	
Ni	60	1	nogas	100.713	3.969	561087	1.21	100	100.7	90	110	
Cu	63	1	nogas	95.244	7.787	1294765	4.67	100	95.2	90	110	
Zn	66	1	nogas	98.496	3.064	452357	0.60	100	98.5	90	110	
As	75	1	nogas	101.804	2.468	646719	1.63	100	101.8	90	110	
Sr	88	1	nogas	97.246	3.706	2995909	3.13	100	97.2	90	110	
Ag	107	1	nogas	97.095	6.251	1434491	2.79	100	97.1	90	110	
Cd	111	1	nogas	99.431	2.940	318332	2.18	100	99.4	90	110	
Sb	121	1	nogas	97.911	1.815	1383804	1.79	100	97.9	90	110	
Tl	205	1	nogas	97.850	1.846	2010177	2.72	100	97.9	90	110	
Pb	208	1	nogas	109.045	1.523	2745975	1.52	100	109.0	90	110	
U	238	1	nogas	107.079	2.665	2806202	3.71	100	107.1	90	110	
[Pb]	206	1	nogas	99.918	0.831	691617	2.62	100	99.9	90	110	
[Pb]	207	1	nogas	99.378	0.794	607757	1.04	100	99.4	90	110	
Na	23	2	He	9981.512	0.396	15932810	0.74	10000	99.8	90	110	
Mg	24	2	He	9712.212	1.415	8496823	1.85	10000	97.1	90	110	
Al	27	2	He	98.952	1.754	47871	2.34	100	99.0	90	110	
K	39	2	He	10857.288	1.325	9231693	1.30	10000	108.6	90	110	
Ca	43	2	He	10110.759	2.769	26202	3.36	10000	101.1	90	110	
Ca	44	2	He	9903.513	0.072	432254	0.68	10000	99.0	90	110	
V	51	2	He	97.976	1.238	645944	0.75	100	98.0	90	110	
Cr	52	2	He	97.042	2.349	694419	1.76	100	97.0	90	110	
Mn	55	2	He	98.678	1.672	485989	1.05	100	98.7	90	110	
Fe	56	2	He	9722.227	2.005	57846396	2.50	10000	97.2	90	110	
Co	59	2	He	96.312	1.941	951027	2.16	100	96.3	90	110	
Ni	60	2	He	97.244	0.986	242240	0.68	100	97.2	90	110	
Cu	63	2	He	96.955	1.026	615775	1.32	100	97.0	90	110	
Zn	66	2	He	98.212	0.346	149631	0.27	100	98.2	90	110	
As	75	2	He	99.027	0.830	151063	0.51	100	99.0	90	110	
Se	78	2	He	99.851	1.086	11958	0.86	100	99.9	90	110	
B	11	1	nogas	473.833	2.973	2477781	2.53	500	94.8	90	110	
Si	28	1	nogas	5121.190	2.304	7108412	2.49	5000	102.4	90	110	
Ca	43	1	nogas	10060.493	4.388	389337	1.58	10000	100.6	90	110	
Ca	44	1	nogas	9986.305	5.764	6438845	1.91	10000	99.9	90	110	
Fe	56	1	nogas	9678.845	2.740	249612089	0.89	10000	96.8	90	110	
Se	77	1	nogas	103.887	4.500	46460	1.71	100	103.9	90	110	
Se	82	1	nogas	101.289	2.903	30920	0.74	100	101.3	90	110	
Mo	95	1	nogas	100.414	2.732	618189	3.70	100	100.4	90	110	
Sn	118	1	nogas	97.427	3.444	884917	1.22	100	97.4	90	110	
Ba	137	1	nogas	100.305	3.254	430814	1.44	100	100.3	90	110	
Sb	121	2	He	97.347	2.201	511638	2.13	100	97.3	90	110	
Li	7	1	nogas	94.146	3.123	1763601	3.17	100	94.1	90	110	
P	31	1	nogas	505.040	3.158	1026680	1.77	500	101.0	90	110	
La	139	1	nogas	124.653	12.098	453	15.02	100	124.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-19.373	-229.365	23	24.74	100	-19.4	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1172845	2.12	1171766	100.09	70	125	
Ge	72	1	nogas	3489100	3.58	3233065	107.92	70	125	
In	115	1	nogas	3048154	4.62	2958353	103.04	70	125	
Bi	209	1	nogas	2250347	1.80	2061475	109.16	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	879094	0.61	810035	108.53	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	233_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T00:54:33-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.082	30.5	780	22.5	1	
Na	23	1	nogas	30.568	5.1	2662793	1.2	100	
Mg	24	1	nogas	10.940	11.7	238606	7.1	100	
Al	27	1	nogas	0.032	16.5	23622	1.9	5	
K	39	1	nogas	23.581	39.5	8938071	0.5	100	
Ti	47	1	nogas	0.035	47.2	550	7.9	2.5	
V	51	1	nogas	1.355	54.5	289756	5.3	2.5	
Cr	52	1	nogas	0.236	7.9	41958	1.0	2.5	
Mn	55	1	nogas	-0.094	-32.9	36122	1.8	2.5	
Co	59	1	nogas	0.100	12.9	3704	10.4	2.5	
Ni	60	1	nogas	0.341	4.8	1573	6.8	2.5	
Cu	63	1	nogas	-0.131	-53.7	14753	4.7	2.5	
Zn	66	1	nogas	0.266	10.3	2414	7.1	2.5	
As	75	1	nogas	1.580	36.1	62952	3.6	2.5	
Sr	88	1	nogas	0.101	20.7	7068	8.2	2.5	
Ag	107	1	nogas	0.057	11.9	947	12.3	2.5	
Cd	111	1	nogas	0.097	45.1	360	36.7	1	
Sb	121	1	nogas	0.993	21.0	15424	21.3	2.5	
Tl	205	1	nogas	0.754	50.2	17151	49.2	1	
Pb	208	1	nogas	0.101	35.9	4144	22.0	2.5	
U	238	1	nogas	0.177	55.3	5181	53.9	2.5	
[Pb]	206	1	nogas	0.082	48.0	1053	28.2	2.5	
[Pb]	207	1	nogas	0.076	30.2	927	16.8	2.5	
Na	23	2	He	26.219	7.6	205028	0.2	100	
Mg	24	2	He	12.164	4.8	13118	4.4	100	
Al	27	2	He	0.145	83.7	623	10.4	5	
K	39	2	He	55.674	6.4	236420	1.2	100	
Ca	43	2	He	-7.278	-33.4	57	10.2	100	
Ca	44	2	He	-4.123	-107.0	3224	6.7	100	
V	51	2	He	0.291	8.5	3843	2.7	2.5	
Cr	52	2	He	0.059	3.8	5358	1.6	2.5	
Mn	55	2	He	-0.139	-11.7	3367	1.2	2.5	
Fe	56	2	He	5.973	8.0	49246	4.3	100	
Co	59	2	He	0.085	26.3	1167	19.6	2.5	
Ni	60	2	He	0.182	6.7	350	7.6	2.5	
Cu	63	2	He	-0.314	-13.2	4941	6.2	2.5	
Zn	66	2	He	-0.075	-112.9	600	22.0	2.5	
As	75	2	He	0.085	36.8	413	10.1	2.5	
Se	78	2	He	0.183	6.9	201	2.1	2.5	
B	11	1	nogas	2.330	147.7	141678	6.6	10	
Si	28	1	nogas	28.793	252.4	1538100	4.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	20.842	28.4	2534	7.4	100	
Ca	44	1	nogas	-122.697	-8.8	303619	0.5	100	
Fe	56	1	nogas	14.881	35.0	2530797	7.1	100	
Se	77	1	nogas	6.925	48.1	20061	2.8	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.323	-74.7	427	16.5	2.5	
Mo	95	1	nogas	0.336	46.6	2274	45.0	2.5	
Sn	118	1	nogas	0.305	24.8	4024	13.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.043	73.7	990	11.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.579	15.1	3424	14.1	2.5	
P	31	1	nogas	4.860	14.3	117300	0.9	10	
La	139	1	nogas	5.755	214.9	67	60.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	66.062	170.3	37	41.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1280951	7.13	1171766	109.32	70	125	
Ge	72	1	nogas	3540785	1.85	3233065	109.52	70	125	
In	115	1	nogas	3249571	5.17	2958353	109.84	70	125	
Bi	209	1	nogas	2417001	0.46	2061475	117.25	70	125	
Ge	72	2	He	870924	1.47	810035	107.52	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	242_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:13:03-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	102.024	1.949	725892	1.01	100	102.0	90	110	
Na	23	1	nogas	10004.515	2.965	265310431	1.61	10000	100.0	90	110	
Mg	24	1	nogas	9786.170	2.946	167299512	1.62	10000	97.9	90	110	
Al	27	1	nogas	99.707	3.591	2053234	3.12	100	99.7	90	110	
K	39	1	nogas	10013.417	0.689	219741105	1.03	10000	100.1	90	110	
Ti	47	1	nogas	99.027	3.144	207846	2.91	100	99.0	90	110	
V	51	1	nogas	100.616	1.136	3100652	1.43	100	100.6	90	110	
Cr	52	1	nogas	98.004	1.626	2412811	1.14	100	98.0	90	110	
Mn	55	1	nogas	97.165	3.083	2993885	3.16	100	97.2	90	110	
Co	59	1	nogas	99.318	1.397	2508626	1.90	100	99.3	90	110	
Ni	60	1	nogas	99.302	0.797	569389	1.31	100	99.3	90	110	
Cu	63	1	nogas	97.243	1.416	1361238	1.01	100	97.2	90	110	
Zn	66	1	nogas	99.178	0.734	468707	1.20	100	99.2	90	110	
As	75	1	nogas	98.641	1.041	646356	1.21	100	98.6	90	110	
Sr	88	1	nogas	101.395	5.880	3213001	5.35	100	101.4	90	110	
Ag	107	1	nogas	101.800	1.489	1548816	1.59	100	101.8	90	110	
Cd	111	1	nogas	101.934	3.846	331948	0.33	100	101.9	90	110	
Sb	121	1	nogas	102.495	2.258	1490059	1.98	100	102.5	90	110	
Tl	205	1	nogas	99.294	0.443	2021255	0.68	100	99.3	90	110	
Pb	208	1	nogas	109.415	1.910	2755311	1.91	100	109.4	90	110	
U	238	1	nogas	103.382	3.515	2684280	3.29	100	103.4	90	110	
[Pb]	206	1	nogas	99.995	2.196	685811	2.41	100	100.0	90	110	
[Pb]	207	1	nogas	100.190	2.093	607224	2.29	100	100.2	90	110	
Na	23	2	He	10094.779	1.450	16003968	2.45	10000	100.9	90	110	
Mg	24	2	He	9876.854	2.572	8582750	3.25	10000	98.8	90	110	
Al	27	2	He	96.907	1.046	46571	1.38	100	96.9	90	110	
K	39	2	He	10593.351	1.856	9011893	1.82	10000	105.9	90	110	
Ca	43	2	He	9671.940	3.293	24887	1.45	10000	96.7	90	110	
Ca	44	2	He	9718.049	2.539	421266	1.32	10000	97.2	90	110	
V	51	2	He	97.351	1.329	637461	0.75	100	97.4	90	110	
Cr	52	2	He	97.795	1.334	695031	0.69	100	97.8	90	110	
Mn	55	2	He	97.977	1.740	479272	0.72	100	98.0	90	110	
Fe	56	2	He	9746.941	1.329	57594536	1.34	10000	97.5	90	110	
Co	59	2	He	97.092	3.511	951914	2.02	100	97.1	90	110	
Ni	60	2	He	99.856	2.907	247014	1.63	100	99.9	90	110	
Cu	63	2	He	99.729	3.793	628666	2.09	100	99.7	90	110	
Zn	66	2	He	99.910	2.087	151149	0.08	100	99.9	90	110	
As	75	2	He	97.756	1.458	148106	0.56	100	97.8	90	110	
Se	78	2	He	98.562	3.664	11723	2.48	100	98.6	90	110	
B	11	1	nogas	669.332	3.182	3001017	0.81	500	133.9	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4913.337	2.949	7076413	1.84	5000	98.3	90	110	
Ca	43	1	nogas	9963.644	1.449	396878	1.18	10000	99.6	90	110	
Ca	44	1	nogas	9755.292	2.510	6484659	2.11	10000	97.6	90	110	
Fe	56	1	nogas	9440.985	2.008	250571922	1.96	10000	94.4	90	110	
Se	77	1	nogas	95.331	4.228	45373	2.00	100	95.3	90	110	
Se	82	1	nogas	99.863	3.488	31374	3.33	100	99.9	90	110	
Mo	95	1	nogas	97.456	1.462	617038	0.95	100	97.5	90	110	
Sn	118	1	nogas	97.471	3.417	900806	0.37	100	97.5	90	110	
Ba	137	1	nogas	101.001	2.331	441511	2.07	100	101.0	90	110	
Sb	121	2	He	96.756	2.262	505002	0.76	100	96.8	90	110	
Li	7	1	nogas	96.185	1.984	1566070	4.30	100	96.2	90	110	
P	31	1	nogas	477.863	1.447	1005346	0.82	500	95.6	90	110	
La	139	1	nogas	115.726	14.313	430	12.95	100	115.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-44.154	-179.558	20	50.00	100	-44.2	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1020278	2.88	1171766	87.07	70	125	
Ge	72	1	nogas	3587727	0.51	3233065	110.97	70	125	
In	115	1	nogas	3100722	3.61	2958353	104.81	70	125	
Bi	209	1	nogas	2229901	0.31	2061475	108.17	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	873220	2.03	810035	107.80	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	243_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:15:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.075	18.7	627	15.1	1	
Na	23	1	nogas	85.023	10.5	4018580	3.5	100	
Mg	24	1	nogas	10.139	26.3	217783	18.2	100	
Al	27	1	nogas	-0.005	-606.8	23318	3.3	5	
K	39	1	nogas	-13.472	-29.0	8319407	0.5	100	
Ti	47	1	nogas	0.043	122.5	577	19.0	2.5	
V	51	1	nogas	0.209	199.4	262752	3.9	2.5	
Cr	52	1	nogas	0.042	59.4	38002	1.3	2.5	
Mn	55	1	nogas	-0.237	-11.2	32415	1.7	2.5	
Co	59	1	nogas	0.061	12.0	2777	7.4	2.5	
Ni	60	1	nogas	0.462	3.4	2297	4.8	2.5	
Cu	63	1	nogas	-0.338	-5.3	12158	2.5	2.5	
Zn	66	1	nogas	0.502	12.6	3574	8.5	2.5	
As	75	1	nogas	0.358	110.8	56768	3.3	2.5	
Sr	88	1	nogas	0.167	14.9	9309	9.1	2.5	
Ag	107	1	nogas	0.056	33.1	947	30.6	2.5	
Cd	111	1	nogas	0.044	13.9	180	9.6	1	
Sb	121	1	nogas	1.274	14.8	19788	14.6	2.5	
Tl	205	1	nogas	0.764	46.2	16991	44.6	1	
Pb	208	1	nogas	0.067	46.1	3294	23.7	2.5	
U	238	1	nogas	0.138	52.5	3991	49.9	2.5	
[Pb]	206	1	nogas	0.063	68.3	893	34.8	2.5	
[Pb]	207	1	nogas	0.041	42.7	683	16.3	2.5	
Na	23	2	He	76.666	1.4	283688	1.3	100	
Mg	24	2	He	8.965	9.8	10326	5.8	100	
Al	27	2	He	-0.037	-420.1	537	15.5	5	
K	39	2	He	24.184	12.7	210197	1.2	100	
Ca	43	2	He	1.859	913.4	80	54.5	100	
Ca	44	2	He	-4.094	-88.5	3220	4.9	100	
V	51	2	He	0.177	6.5	3100	2.9	2.5	
Cr	52	2	He	0.016	102.4	5054	3.0	2.5	
Mn	55	2	He	-0.222	-29.3	2957	8.8	2.5	
Fe	56	2	He	5.013	4.2	43558	1.9	100	
Co	59	2	He	0.048	32.4	807	19.8	2.5	
Ni	60	2	He	0.171	3.2	323	4.7	2.5	
Cu	63	2	He	-0.432	-4.2	4201	3.6	2.5	
Zn	66	2	He	-0.053	-59.0	630	5.7	2.5	
As	75	2	He	0.080	20.9	406	5.0	2.5	
Se	78	2	He	0.253	49.1	209	8.2	2.5	
B	11	1	nogas	98.632	7.9	573741	2.2	10	CCB Main CR1 Failed
Si	28	1	nogas	-67.556	-57.2	1457523	2.6	5	
Ca	43	1	nogas	76.032	5.2	4784	4.1	100	
Ca	44	1	nogas	-112.556	-1.0	315669	0.7	100	
Fe	56	1	nogas	3.929	112.9	2286615	5.7	100	
Se	77	1	nogas	0.291	1545.9	18550	6.4	2.5	
Se	82	1	nogas	-0.383	-47.5	417	14.5	2.5	
Mo	95	1	nogas	0.359	35.0	2457	33.4	2.5	
Sn	118	1	nogas	0.257	29.2	3534	15.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.015	-234.8	720	20.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.877	3.4	4964	2.2	2.5	
P	31	1	nogas	-1.168	-95.7	108110	1.0	10	
La	139	1	nogas	11.675	63.2	87	26.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-153.294	-28.1	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1104958	4.07	1171766	94.30	70	125	
Ge	72	1	nogas	3606069	0.93	3233065	111.54	70	125	
In	115	1	nogas	3221972	4.13	2958353	108.91	70	125	
Bi	209	1	nogas	2367875	1.10	2061475	114.86	70	125	
Ge	72	2	He	870009	1.87	810035	107.40	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	254_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:37:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	92.786	1.796	793890	2.36	100	92.8	90	110	
Na	23	1	nogas	9619.936	1.878	284311648	1.59	10000	96.2	90	110	
Mg	24	1	nogas	9574.556	2.536	182357196	1.91	10000	95.7	90	110	
Al	27	1	nogas	98.098	2.054	2246181	2.18	100	98.1	90	110	
K	39	1	nogas	9778.312	3.005	238724155	2.45	10000	97.8	90	110	
Ti	47	1	nogas	97.860	1.754	228349	2.35	100	97.9	90	110	
V	51	1	nogas	99.382	2.998	3407662	2.68	100	99.4	90	110	
Cr	52	1	nogas	95.339	0.725	2610318	0.69	100	95.3	90	110	
Mn	55	1	nogas	95.641	2.884	3276142	2.50	100	95.6	90	110	
Co	59	1	nogas	99.957	0.488	2806355	0.80	100	100.0	90	110	
Ni	60	1	nogas	97.978	0.104	624462	0.52	100	98.0	90	110	
Cu	63	1	nogas	94.573	2.276	1472117	2.16	100	94.6	90	110	
Zn	66	1	nogas	97.483	1.900	512092	1.70	100	97.5	90	110	
As	75	1	nogas	98.178	3.008	715334	2.42	100	98.2	90	110	
Sr	88	1	nogas	96.786	0.900	3410136	1.49	100	96.8	90	110	
Ag	107	1	nogas	98.284	2.130	1662082	1.81	100	98.3	90	110	
Cd	111	1	nogas	98.427	0.781	369294	3.76	100	98.4	90	110	
Sb	121	1	nogas	96.815	2.064	1564545	1.50	100	96.8	90	110	
Tl	205	1	nogas	97.876	3.058	2220834	1.21	100	97.9	90	110	
Pb	208	1	nogas	119.290	0.460	3003823	0.46	100	119.3	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	101.436	5.938	2934927	4.26	100	101.4	90	110	
[Pb]	206	1	nogas	98.779	2.678	755169	0.84	100	98.8	90	110	
[Pb]	207	1	nogas	98.610	3.198	666152	1.36	100	98.6	90	110	
Na	23	2	He	9890.632	1.373	17244147	2.05	10000	98.9	90	110	
Mg	24	2	He	9592.861	0.339	9164899	0.81	10000	95.9	90	110	
Al	27	2	He	94.595	1.026	50003	1.79	100	94.6	90	110	
K	39	2	He	11607.027	1.057	9856053	1.04	10000	116.1	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9671.331	1.439	27370	1.10	10000	96.7	90	110	
Ca	44	2	He	9882.518	1.080	471036	0.32	10000	98.8	90	110	
V	51	2	He	98.251	1.826	707418	1.89	100	98.3	90	110	
Cr	52	2	He	98.191	0.469	767360	1.16	100	98.2	90	110	
Mn	55	2	He	99.233	1.446	533732	1.50	100	99.2	90	110	
Fe	56	2	He	9899.631	0.807	64319024	0.32	10000	99.0	90	110	
Co	59	2	He	97.326	0.758	1049500	0.78	100	97.3	90	110	
Ni	60	2	He	99.283	1.008	270091	0.57	100	99.3	90	110	
Cu	63	2	He	97.777	1.179	678067	0.66	100	97.8	90	110	
Zn	66	2	He	100.133	1.024	166600	1.77	100	100.1	90	110	
As	75	2	He	98.908	1.033	164773	0.65	100	98.9	90	110	
Se	78	2	He	97.809	1.635	12796	1.40	100	97.8	90	110	
B	11	1	nogas	591.585	4.261	3203473	2.67	500	118.3	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4590.880	1.650	7462001	1.83	5000	91.8	90	110	
Ca	43	1	nogas	9776.573	0.784	432926	0.88	10000	97.8	90	110	
Ca	44	1	nogas	9566.997	1.003	7077944	1.56	10000	95.7	90	110	
Fe	56	1	nogas	9443.498	3.806	278577098	3.35	10000	94.4	90	110	
Se	77	1	nogas	102.907	4.181	52827	2.76	100	102.9	90	110	
Se	82	1	nogas	99.626	0.636	34794	0.00	100	99.6	90	110	
Mo	95	1	nogas	97.440	1.245	685832	1.73	100	97.4	90	110	
Sn	118	1	nogas	94.259	2.057	1003141	2.09	100	94.3	90	110	
Ba	137	1	nogas	95.827	2.339	482177	1.24	100	95.8	90	110	
Sb	121	2	He	96.335	1.431	552964	1.75	100	96.3	90	110	
Li	7	1	nogas	103.919	3.277	2025448	3.89	100	103.9	90	110	
P	31	1	nogas	468.633	1.426	1098319	1.19	500	93.7	90	110	
La	139	1	nogas	104.766	7.040	453	7.75	100	104.8	90	110	
Au	197	1	nogas	-38.691	-412.991	23	98.97	100	-38.7	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1226490	1.61	1171766	104.67	70	125	
Ge	72	1	nogas	3988047	0.62	3233065	123.35	70	125	
In	115	1	nogas	3569030	3.49	2958353	120.64	70	125	
Bi	209	1	nogas	2486520	1.88	2061475	120.62	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	960044	0.79	810035	118.52	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	255_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:39:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.059	37.0	570	35.0	1	
Na	23	1	nogas	82.670	17.3	4282269	4.8	100	
Mg	24	1	nogas	9.080	26.4	215850	15.3	100	
Al	27	1	nogas	-0.020	-293.7	26209	5.5	5	
K	39	1	nogas	-30.933	-23.8	9055825	1.0	100	
Ti	47	1	nogas	1.713	158.1	4645	139.1	2.5	
V	51	1	nogas	1.501	27.0	341254	4.1	2.5	
Cr	52	1	nogas	0.120	29.7	45463	1.5	2.5	
Mn	55	1	nogas	0.028	113.9	46161	1.5	2.5	
Co	59	1	nogas	0.060	14.5	3130	7.4	2.5	
Ni	60	1	nogas	0.529	8.3	3054	8.7	2.5	
Cu	63	1	nogas	-0.191	-11.3	16177	2.8	2.5	
Zn	66	1	nogas	0.479	13.1	3944	7.9	2.5	
As	75	1	nogas	0.976	31.3	68943	3.3	2.5	
Sr	88	1	nogas	0.187	4.2	11304	2.3	2.5	
Ag	107	1	nogas	0.049	22.2	957	19.3	2.5	
Cd	111	1	nogas	0.058	39.9	253	33.6	1	
Sb	121	1	nogas	0.897	26.1	16245	23.3	2.5	
Tl	205	1	nogas	0.735	48.6	18353	47.9	1	
Pb	208	1	nogas	0.079	37.7	3594	20.9	2.5	
U	238	1	nogas	0.158	61.7	5074	59.8	2.5	
[Pb]	206	1	nogas	0.059	30.9	967	15.1	2.5	
[Pb]	207	1	nogas	0.042	54.8	767	22.4	2.5	
Na	23	2	He	72.652	4.8	308085	0.9	100	
Mg	24	2	He	7.624	4.0	10186	1.5	100	
Al	27	2	He	-0.042	-307.5	593	13.1	5	
K	39	2	He	39.213	5.2	222712	0.8	100	
Ca	43	2	He	15.163	11.2	127	4.6	100	
Ca	44	2	He	-16.732	-17.3	2977	6.1	100	
V	51	2	He	0.264	10.1	4068	4.0	2.5	
Cr	52	2	He	-0.008	-134.1	5421	3.2	2.5	
Mn	55	2	He	0.082	33.0	4924	3.6	2.5	
Fe	56	2	He	4.850	2.2	47334	3.0	100	
Co	59	2	He	0.037	15.6	770	8.1	2.5	
Ni	60	2	He	0.160	11.0	330	13.2	2.5	
Cu	63	2	He	-0.322	-6.9	5421	4.2	2.5	
Zn	66	2	He	-0.023	-373.1	750	17.3	2.5	
As	75	2	He	0.067	16.3	430	5.4	2.5	
Se	78	2	He	-0.067	-615.4	190	27.5	2.5	
B	11	1	nogas	103.302	4.0	670112	2.6	10	CCB Main CR1 Failed
Si	28	1	nogas	-230.217	-3.3	1450322	1.4	5	
Ca	43	1	nogas	94.148	6.5	6271	4.0	100	
Ca	44	1	nogas	-175.647	-4.9	314423	1.0	100	
Fe	56	1	nogas	6.655	127.9	2685715	8.9	100	
Se	77	1	nogas	6.389	39.0	23118	3.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.630	-36.1	387	20.7	2.5	
Mo	95	1	nogas	0.356	40.2	2764	36.9	2.5	
Sn	118	1	nogas	0.272	30.5	4101	20.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.017	-110.4	790	12.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.543	3.1	3590	3.2	2.5	
P	31	1	nogas	-3.314	-25.0	118565	0.8	10	
La	139	1	nogas	7.364	66.8	80	21.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-113.370	-68.5	13	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1241620	3.26	1171766	105.96	70	125	
Ge	72	1	nogas	4108358	1.02	3233065	127.07	70	125	ISTD Failed
In	115	1	nogas	3573576	1.97	2958353	120.80	70	125	
Bi	209	1	nogas	2644695	1.99	2061475	128.29	70	125	ISTD Failed
Ge	72	2	He	966318	1.60	810035	119.29	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	256_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:41:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	96.838	4.003	743961	4.86	100	96.8	90	110	
Na	23	1	nogas	9684.649	4.497	267003381	3.54	10000	96.8	90	110	
Mg	24	1	nogas	9656.405	6.246	171569341	5.28	10000	96.6	90	110	
Al	27	1	nogas	98.506	4.304	2125784	6.55	100	98.5	90	110	
K	39	1	nogas	9820.236	0.485	226021280	6.00	10000	98.2	90	110	
Ti	47	1	nogas	97.450	3.160	214263	5.34	100	97.4	90	110	
V	51	1	nogas	100.865	3.966	3255201	5.70	100	100.9	90	110	
Cr	52	1	nogas	96.601	3.099	2495014	8.19	100	96.6	90	110	
Mn	55	1	nogas	97.558	2.224	3147723	4.09	100	97.6	90	110	
Co	59	1	nogas	98.207	4.646	2595556	3.17	100	98.2	90	110	
Ni	60	1	nogas	97.695	3.008	586363	2.98	100	97.7	90	110	
Cu	63	1	nogas	93.960	4.826	1376498	1.27	100	94.0	90	110	
Zn	66	1	nogas	96.229	2.812	476146	3.47	100	96.2	90	110	
As	75	1	nogas	99.296	1.753	681151	4.68	100	99.3	90	110	
Sr	88	1	nogas	97.241	5.731	3222903	0.86	100	97.2	90	110	
Ag	107	1	nogas	99.934	3.208	1591507	2.98	100	99.9	90	110	
Cd	111	1	nogas	99.228	1.759	347942	3.67	100	99.2	90	110	
Sb	121	1	nogas	96.931	4.170	1475793	5.24	100	96.9	90	110	
Tl	205	1	nogas	96.123	5.658	2117096	2.39	100	96.1	90	110	
Pb	208	1	nogas	115.995	4.316	2920895	4.31	100	116.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	100.156	3.515	2816467	3.80	100	100.2	90	110	
[Pb]	206	1	nogas	97.815	3.798	726294	2.61	100	97.8	90	110	
[Pb]	207	1	nogas	98.572	1.795	647479	5.28	100	98.6	90	110	
Na	23	2	He	9825.205	3.564	15675542	0.83	10000	98.3	90	110	
Mg	24	2	He	9672.650	0.395	8464283	4.06	10000	96.7	90	110	
Al	27	2	He	96.952	3.615	46939	6.28	100	97.0	90	110	
K	39	2	He	10671.591	5.928	9077049	5.80	10000	106.7	90	110	
Ca	43	2	He	9850.020	1.761	25541	5.45	10000	98.5	90	110	
Ca	44	2	He	9781.222	3.697	427112	5.77	10000	97.8	90	110	
V	51	2	He	97.426	1.940	642693	5.26	100	97.4	90	110	
Cr	52	2	He	96.643	2.832	692151	6.18	100	96.6	90	110	
Mn	55	2	He	98.904	3.985	487704	7.71	100	98.9	90	110	
Fe	56	2	He	9954.743	4.563	59280926	7.60	10000	99.5	90	110	
Co	59	2	He	97.181	3.624	959844	5.46	100	97.2	90	110	
Ni	60	2	He	98.253	4.257	244672	3.95	100	98.3	90	110	
Cu	63	2	He	99.292	3.102	630529	4.71	100	99.3	90	110	
Zn	66	2	He	99.240	0.974	151206	3.41	100	99.2	90	110	
As	75	2	He	97.743	3.300	149167	5.55	100	97.7	90	110	
Se	78	2	He	95.998	3.524	11517	7.39	100	96.0	90	110	
B	11	1	nogas	586.959	7.489	2851251	3.09	500	117.4	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4677.262	3.859	7131930	4.61	5000	93.5	90	110	
Ca	43	1	nogas	9904.277	3.060	413006	3.13	10000	99.0	90	110	
Ca	44	1	nogas	9543.968	4.833	6645987	1.52	10000	95.4	90	110	
Fe	56	1	nogas	9540.750	1.241	265236298	4.79	10000	95.4	90	110	
Se	77	1	nogas	103.516	2.581	49995	6.64	100	103.5	90	110	
Se	82	1	nogas	100.209	3.245	32954	2.98	100	100.2	90	110	
Mo	95	1	nogas	97.552	5.941	645921	2.23	100	97.6	90	110	
Sn	118	1	nogas	95.826	4.430	953214	4.56	100	95.8	90	110	
Ba	137	1	nogas	95.363	0.855	448661	2.78	100	95.4	90	110	
Sb	121	2	He	97.430	2.063	512283	4.93	100	97.4	90	110	
Li	7	1	nogas	103.111	5.060	1804975	5.39	100	103.1	90	110	
P	31	1	nogas	473.048	2.051	1043642	4.71	500	94.6	90	110	
La	139	1	nogas	102.949	8.403	417	6.04	100	102.9	90	110	
Au	197	1	nogas	-155.832	-26.207	7	86.60	100	-155.8	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1103083	7.64	1171766	94.14	70	125	
Ge	72	1	nogas	3760109	6.04	3233065	116.30	70	125	
In	115	1	nogas	3335107	2.28	2958353	112.74	70	125	
Bi	209	1	nogas	2418001	6.25	2061475	117.29	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	879401	4.29	810035	108.56	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	257_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:43:58-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.061	20.6	600	10.9	1	
Na	23	1	nogas	56.790	12.0	3591299	3.2	100	
Mg	24	1	nogas	7.733	23.6	194028	15.5	100	
Al	27	1	nogas	-0.012	-365.4	26115	3.0	5	
K	39	1	nogas	-27.472	-12.5	9047246	0.8	100	
Ti	47	1	nogas	0.029	152.7	617	16.2	2.5	
V	51	1	nogas	1.778	17.0	346641	3.1	2.5	
Cr	52	1	nogas	0.071	36.9	43655	1.2	2.5	
Mn	55	1	nogas	0.013	193.5	45158	1.1	2.5	
Co	59	1	nogas	0.050	24.8	2830	12.5	2.5	
Ni	60	1	nogas	0.430	5.2	2384	5.5	2.5	
Cu	63	1	nogas	-0.134	-40.5	16915	5.1	2.5	
Zn	66	1	nogas	0.391	6.5	3437	3.1	2.5	
As	75	1	nogas	1.066	34.0	68850	3.7	2.5	
Sr	88	1	nogas	0.153	17.0	9966	9.1	2.5	
Ag	107	1	nogas	0.053	13.6	1023	11.7	2.5	
Cd	111	1	nogas	0.056	33.8	250	28.0	1	
Sb	121	1	nogas	0.938	24.9	16755	22.3	2.5	
Tl	205	1	nogas	0.661	45.1	16663	44.0	1	
Pb	208	1	nogas	0.065	27.5	3234	13.9	2.5	
U	238	1	nogas	0.127	52.6	4161	50.7	2.5	
[Pb]	206	1	nogas	0.046	43.9	867	19.5	2.5	
[Pb]	207	1	nogas	0.042	24.9	773	7.8	2.5	
Na	23	2	He	44.784	3.1	259948	1.0	100	
Mg	24	2	He	5.678	2.1	8325	2.2	100	
Al	27	2	He	-0.028	-425.7	600	8.7	5	
K	39	2	He	37.480	1.5	221269	0.2	100	
Ca	43	2	He	-6.010	-166.4	67	43.3	100	
Ca	44	2	He	-13.468	-20.6	3134	4.6	100	
V	51	2	He	0.269	6.3	4106	3.9	2.5	
Cr	52	2	He	-0.020	-113.8	5328	2.2	2.5	
Mn	55	2	He	0.036	51.6	4681	3.3	2.5	
Fe	56	2	He	4.358	5.1	44133	2.8	100	
Co	59	2	He	0.045	19.8	860	10.1	2.5	
Ni	60	2	He	0.160	4.5	330	5.2	2.5	
Cu	63	2	He	-0.219	-7.7	6138	2.1	2.5	
Zn	66	2	He	-0.136	-14.6	563	5.1	2.5	
As	75	2	He	0.069	33.8	433	10.0	2.5	
Se	78	2	He	-0.081	-184.1	189	11.6	2.5	
B	11	1	nogas	67.648	12.5	502348	0.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-213.356	-15.4	1457114	3.0	5	
Ca	43	1	nogas	83.176	3.3	5714	1.3	100	
Ca	44	1	nogas	-177.123	-4.4	310183	0.9	100	
Fe	56	1	nogas	2.036	338.4	2521178	7.7	100	
Se	77	1	nogas	3.935	77.6	22090	4.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.724	-32.0	350	22.9	2.5	
Mo	95	1	nogas	0.283	39.7	2217	35.9	2.5	
Sn	118	1	nogas	0.219	30.0	3600	18.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.024	-150.6	770	22.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.580	7.1	3804	6.9	2.5	
P	31	1	nogas	-1.030	-62.1	122218	1.0	10	
La	139	1	nogas	4.387	104.7	70	24.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-71.246	-89.8	20	50.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1299409	8.41	1171766	110.89	70	125	
Ge	72	1	nogas	4066536	0.92	3233065	125.78	70	125	ISTD Failed
In	115	1	nogas	3642715	1.23	2958353	123.13	70	125	
Bi	209	1	nogas	2673338	2.04	2061475	129.68	70	125	ISTD Failed
Ge	72	2	He	967118	1.58	810035	119.39	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	258LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:46:01-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	4.589	9.228	40303	4.18	5	91.8	70	130	
Na	23	1	nogas	501.735	4.012	17022063	1.43	500	100.3	70	130	
Mg	24	1	nogas	491.697	2.725	9595167	4.37	500	98.3	70	130	
Al	27	1	nogas	4.640	2.686	133084	2.15	5	92.8	70	130	
K	39	1	nogas	463.085	7.276	20701210	0.87	500	92.6	70	130	
Ti	47	1	nogas	4.799	3.229	11904	2.77	5	96.0	70	130	
V	51	1	nogas	6.407	5.322	493553	2.87	5	128.1	70	130	
Cr	52	1	nogas	4.918	2.695	176306	1.32	5	98.4	70	130	
Mn	55	1	nogas	4.730	7.569	206934	3.04	5	94.6	70	130	
Co	59	1	nogas	5.038	4.734	145031	1.70	5	100.8	70	130	
Ni	60	1	nogas	5.304	3.450	33965	1.72	5	106.1	70	130	
Cu	63	1	nogas	4.759	3.732	93276	0.29	5	95.2	70	130	
Zn	66	1	nogas	5.177	2.417	28916	1.95	5	103.5	70	130	
As	75	1	nogas	5.983	8.623	101953	0.84	5	119.7	70	130	
Sr	88	1	nogas	4.974	4.122	182321	1.89	5	99.5	70	130	
Ag	107	1	nogas	4.974	4.330	85581	2.00	5	99.5	70	130	
Cd	111	1	nogas	4.815	2.649	18480	2.44	5	96.3	70	130	
Sb	121	1	nogas	5.102	1.868	85077	1.25	5	102.0	70	130	
Tl	205	1	nogas	4.872	5.194	115974	0.91	5	97.4	70	130	
Pb	208	1	nogas	6.237	1.565	158572	1.55	5	124.7	70	130	
U	238	1	nogas	4.932	6.739	149223	1.19	5	98.6	70	130	
[Pb]	206	1	nogas	4.865	6.778	39278	1.53	5	97.3	70	130	
[Pb]	207	1	nogas	4.925	7.118	35172	2.80	5	98.5	70	130	
Na	23	2	He	507.742	1.335	1084091	1.24	500	101.5	70	130	
Mg	24	2	He	491.209	0.686	484211	0.54	500	98.2	70	130	
Al	27	2	He	4.984	9.283	3297	8.04	5	99.7	70	130	
K	39	2	He	651.000	1.234	732191	0.91	500	130.2	70	130	LLICV Main CR1 Failed
Ca	43	2	He	473.744	8.526	1457	8.30	500	94.7	70	130	
Ca	44	2	He	441.042	1.066	25241	1.28	500	88.2	70	130	
V	51	2	He	5.023	1.696	39190	1.58	5	100.5	70	130	
Cr	52	2	He	4.746	0.880	43371	0.67	5	94.9	70	130	
Mn	55	2	He	4.632	2.215	29918	2.43	5	92.6	70	130	
Fe	56	2	He	502.871	2.093	3367285	2.55	500	100.6	70	130	
Co	59	2	He	4.862	1.671	54147	2.22	5	97.2	70	130	
Ni	60	2	He	5.071	2.600	14046	2.11	5	101.4	70	130	
Cu	63	2	He	4.626	3.357	40331	2.22	5	92.5	70	130	
Zn	66	2	He	4.739	9.178	8852	7.97	5	94.8	70	130	
As	75	2	He	4.894	1.884	8672	2.04	5	97.9	70	130	
Se	78	2	He	4.474	8.384	794	6.71	5	89.5	70	130	
B	11	1	nogas	80.320	11.596	556293	3.44	25	321.3	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	43.042	56.050	1780193	2.42	25	172.2	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	560.147	3.771	27063	0.88	500	112.0	70	130	
Ca	44	1	nogas	308.291	8.145	652164	0.96	500	61.7	70	130	LLICV Main CR1 Failed
Fe	56	1	nogas	468.635	7.508	16373194	3.94	500	93.7	70	130	
Se	77	1	nogas	9.863	15.583	23929	3.29	5	197.3	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.221	6.537	2073	1.55	5	84.4	70	130	
Mo	95	1	nogas	4.925	3.338	35409	1.21	5	98.5	70	130	
Sn	118	1	nogas	4.789	3.383	53212	2.15	5	95.8	70	130	
Ba	137	1	nogas	4.667	2.335	24838	1.07	5	93.3	70	130	
Sb	121	2	He	4.792	4.901	28660	5.35	5	95.8	70	130	
Li	7	1	nogas	10.399	8.817	302963	0.65	5	208.0	70	130	LLICV Main CR1 Failed
P	31	1	nogas	24.181	10.416	175193	0.05	25	96.7	70	130	
La	139	1	nogas	3.509	47.648	67	8.66	5	70.2	70	130	
Au	197	1	nogas	51.122	229.212	37	41.66	5	1022.4	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1261761	5.72	1171766	107.68	70	125	
Ge	72	1	nogas	4055496	3.05	3233065	125.44	70	125	ISTD Failed
In	115	1	nogas	3644026	1.22	2958353	123.18	70	125	
Bi	209	1	nogas	2601427	5.65	2061475	126.19	70	125	ISTD Failed

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	984911	0.56	810035	121.59	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	259SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:48:05-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	132CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.780	1.780	7.15	15857	0.01	2000	
Na	23	1	nogas	206.462	206.462	2.20	8178375	0.00	200000	
Mg	24	1	nogas	203.364	203.364	3.05	3987138	0.01	200000	
Al	27	1	nogas	1.755	1.755	8.48	66899	0.00	2000	
K	39	1	nogas	180.349	180.349	8.57	14019148	0.00	200000	
Ti	47	1	nogas	1.975	1.975	4.41	5237	0.04	2000	
V	51	1	nogas	3.677	3.677	10.83	407713	0.00	2000	
Cr	52	1	nogas	2.049	2.049	6.92	98012	0.00	2000	
Mn	55	1	nogas	1.764	1.764	4.42	105559	0.00	2000	
Co	59	1	nogas	2.068	2.068	1.72	60607	0.00	2000	
Ni	60	1	nogas	2.368	2.368	2.25	14993	0.02	2000	
Cu	63	1	nogas	1.818	1.818	4.86	47525	0.00	2000	
Zn	66	1	nogas	2.077	2.077	7.15	12444	0.02	2000	
As	75	1	nogas	2.958	2.958	9.15	81766	0.00	2000	
Sr	88	1	nogas	2.032	2.032	3.74	77394	0.00	2000	
Ag	107	1	nogas	2.102	2.102	4.51	36348	0.01	2000	
Cd	111	1	nogas	1.896	1.896	5.53	7362	0.03	2000	
Sb	121	1	nogas	2.097	2.097	4.62	35854	0.01	2000	
Tl	205	1	nogas	1.944	1.944	3.56	46989	0.00	2000	
Pb	208	1	nogas	2.512	2.512	0.73	64832	0.00	2000	
U	238	1	nogas	1.952	1.952	0.77	59697	0.00	2000	
[Pb]	206	1	nogas	1.964	1.964	4.12	16272	0.01	2000	
[Pb]	207	1	nogas	1.961	1.961	6.30	14393	0.01	2000	
Na	23	2	He	197.631	197.631	1.86	541513	0.04	200000	
Mg	24	2	He	199.651	199.651	0.98	200837	0.10	200000	
Al	27	2	He	1.746	1.746	3.14	1580	0.11	2000	
K	39	2	He	285.442	285.442	0.33	427765	0.07	200000	
Ca	43	2	He	189.992	189.992	19.66	643	29.53	200000	
Ca	44	2	He	179.855	179.855	3.10	12714	1.41	200000	
V	51	2	He	2.184	2.184	1.13	18501	0.01	2000	
Cr	52	2	He	1.787	1.787	2.90	20045	0.01	2000	
Mn	55	2	He	1.812	1.812	7.75	14646	0.01	2000	
Fe	56	2	He	195.956	195.956	2.43	1337122	0.01	200000	
Co	59	2	He	1.918	1.918	3.44	21843	0.01	2000	
Ni	60	2	He	2.149	2.149	6.84	5961	0.04	2000	
Cu	63	2	He	1.672	1.672	6.33	19778	0.01	2000	
Zn	66	2	He	1.815	1.815	4.28	3934	0.05	2000	
As	75	2	He	1.908	1.908	2.13	3620	0.05	2000	
Se	78	2	He	1.808	1.808	9.45	447	0.40	2000	
B	11	1	nogas	59.612	59.612	8.23	451408	0.01	2000	
Si	28	1	nogas	-126.870	-126.870	-34.91	1567992	-0.01	2000	
Ca	43	1	nogas	282.938	282.938	3.24	14707	1.92	200000	
Ca	44	1	nogas	13.307	13.307	113.58	445344	0.00	200000	
Fe	56	1	nogas	187.265	187.265	4.68	8047015	0.00	200000	

Sample Report

Se	77	1	nogas	5.260	5.260	40.95	22524	0.02	2000	
Se	82	1	nogas	1.460	1.460	35.49	1113	0.13	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.967	1.967	2.56	14309	0.01	2000	
Sn	118	1	nogas	1.887	1.887	3.25	21907	0.01	2000	
Ba	137	1	nogas	1.857	1.857	3.11	10510	0.02	2000	
Sb	121	2	He	2.024	2.024	2.03	12511	0.02	2000	
La	139	1	nogas	1.611	1.611	402.79	60	2.68	2000	
Au	197	1	nogas	-22.202	-22.202	-356.49	27	-83.26	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1275158	3.69	1171766	108.82	70	125	
Ge	72	1	nogas	4069770	2.96	3233065	125.88	70	125	ISTD Failed
In	115	1	nogas	3674762	1.19	2958353	124.22	70	125	
Bi	209	1	nogas	2617752	2.35	2061475	126.98	70	125	ISTD Failed
Ge	72	2	He	996381	1.20	810035	123.00	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	260ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:50:11-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.003	178.0	73	51.6	0	ICSA Main CR1 Failed
Na	23	1	nogas	97369.000	3.9	2800552129	3.4	0	
Mg	24	1	nogas	95712.912	1.3	1785455640	2.5	0	
Al	27	1	nogas	93385.081	4.4	2106294155	0.4	0	
K	39	1	nogas	97335.947	6.9	2281618251	2.1	0	
Ti	47	1	nogas	1951.882	7.3	4524255	2.5	0	
V	51	1	nogas	0.268	298.2	291202	5.1	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.894	17.1	64719	1.5	0	ICSA Main CR1 Failed
Mn	55	1	nogas	-0.305	-29.8	33377	4.9	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.411	6.1	12861	0.7	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.590	4.6	9699	1.6	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.420	9.6	25027	2.3	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.901	3.0	11250	2.1	0	ICSA Main CR1 Failed
As	75	1	nogas	3.610	22.4	84150	1.9	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.803	10.7	32560	8.6	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.059	10.9	1087	5.1	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.863	0.5	6721	4.5	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.232	7.0	5034	2.5	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.044	39.5	1490	25.5	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.074	9.9	3474	5.3	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.048	8.5	820	2.4	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.043	12.2	727	3.5	0	ICSA Main CR1 Failed
Na	23	2	He	97981.037	2.3	166567398	1.5	0	
Mg	24	2	He	97117.199	3.9	91300342	3.0	0	
Al	27	2	He	93342.694	1.9	47977431	1.3	0	
K	39	2	He	114743.746	1.0	95745329	1.0	0	
Ca	43	2	He	95373.433	0.5	265018	0.8	0	
Ca	44	2	He	96646.872	1.8	4502556	0.9	0	
V	51	2	He	0.177	3.9	3364	2.1	0	ICSA Main CR1 Failed
Cr	52	2	He	0.194	7.8	6848	0.9	0	ICSA Main CR1 Failed
Mn	55	2	He	-0.157	-16.1	3560	3.7	0	ICSA Main CR1 Failed
Fe	56	2	He	100332.252	2.5	641658110	2.6	0	
Co	59	2	He	0.261	0.7	3127	1.3	0	ICSA Main CR1 Failed
Ni	60	2	He	0.344	11.8	813	12.4	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.365	-14.6	5014	7.5	0	ICSA Main CR1 Failed
Zn	66	2	He	0.211	57.8	1117	18.5	0	ICSA Main CR1 Failed
As	75	2	He	0.119	16.3	506	7.3	0	ICSA Main CR1 Failed
Se	78	2	He	0.054	241.5	201	8.1	0	ICSA Main CR1 Failed
B	11	1	nogas	45.389	3.0	359125	0.8	0	
Si	28	1	nogas	243.540	36.5	1995040	0.8	0	
Ca	43	1	nogas	97229.770	3.5	4274724	1.7	0	
Ca	44	1	nogas	97493.968	3.2	67989066	1.8	0	
Fe	56	1	nogas	95635.347	4.3	2790294262	2.4	0	
Se	77	1	nogas	23.128	32.4	27578	3.7	0	
Se	82	1	nogas	-0.634	-60.8	370	32.8	0	ICSA Main CR1 Failed
Mo	95	1	nogas	1911.729	5.3	13404042	2.4	0	
Sn	118	1	nogas	0.091	37.5	2070	12.6	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.119	33.6	1413	16.3	0	ICSA Main CR1 Failed
Sb	121	2	He	0.242	2.0	1810	0.6	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	92844.168	6.3	192765257	1.5	0	
La	139	1	nogas	44.722	4.6	213	2.7	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1221334	1.49	1171766	104.23	70	125	
Ge	72	1	nogas	3979676	4.70	3233065	123.09	70	125	
In	115	1	nogas	3414393	4.74	2958353	115.42	70	125	
Bi	209	1	nogas	2477747	1.98	2061475	120.19	70	125	
Ge	72	2	He	945180	0.98	810035	116.68	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	261ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-11T01:52:19-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	132CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	108.380	1.704	848545	0.53	100	108.4	80	120	
Na	23	1	nogas	105661.204	2.922	3015503267	1.10	100	105661.2	80	120	
Mg	24	1	nogas	106518.615	3.629	1970925244	1.08	100	106518.6	80	120	
Al	27	1	nogas	93450.228	3.840	2075126956	1.64	100	93450.2	80	120	ICSB Main CR1 Failed
K	39	1	nogas	109913.407	3.833	2537295857	1.64	100	109913.4	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2109.133	0.807	4819824	2.05	100	2109.1	80	120	ICSB Main CR1 Failed
V	51	1	nogas	107.679	3.455	3599506	0.86	100	107.7	80	120	
Cr	52	1	nogas	105.919	1.153	2843113	3.76	100	105.9	80	120	
Mn	55	1	nogas	104.935	3.128	3524219	3.22	100	104.9	80	120	
Co	59	1	nogas	107.231	2.579	2954269	1.27	100	107.2	80	120	
Ni	60	1	nogas	105.790	1.749	661772	1.21	100	105.8	80	120	
Cu	63	1	nogas	104.266	2.972	1591250	3.26	100	104.3	80	120	
Zn	66	1	nogas	108.750	2.586	560477	1.08	100	108.7	80	120	
As	75	1	nogas	109.817	2.691	778200	0.37	100	109.8	80	120	
Sr	88	1	nogas	106.493	2.992	3681141	0.70	100	106.5	80	120	
Ag	107	1	nogas	103.861	3.280	1723662	2.20	100	103.9	80	120	
Cd	111	1	nogas	112.821	1.948	392262	1.30	100	112.8	80	120	
Sb	121	1	nogas	107.715	2.958	1708075	1.29	100	107.7	80	120	
Tl	205	1	nogas	104.044	4.721	2300523	5.54	100	104.0	80	120	
Pb	208	1	nogas	129.514	0.804	3261135	0.80	100	129.5	80	120	ICSB Main CR1 Failed
U	238	1	nogas	113.390	1.842	3196870	0.67	100	113.4	80	120	
[Pb]	206	1	nogas	108.487	1.017	807942	1.46	100	108.5	80	120	
[Pb]	207	1	nogas	108.958	1.379	717015	1.02	100	109.0	80	120	
Na	23	2	He	106098.753	1.373	181702617	1.71	100	106098.8	80	120	
Mg	24	2	He	103852.459	1.814	98360735	0.45	100	103852.5	80	120	ICSB Main CR1 Failed
Al	27	2	He	91613.570	2.291	47435379	1.92	100	91613.6	80	120	ICSB Main CR1 Failed
K	39	2	He	126463.654	0.726	105505328	0.73	100	126463.7	80	120	
Ca	43	2	He	103849.167	2.869	290631	1.77	100	103849.2	80	120	
Ca	44	2	He	103159.067	4.300	4840746	3.72	100	103159.1	80	120	ICSB Main CR1 Failed
V	51	2	He	105.943	1.749	756260	0.33	100	105.9	80	120	
Cr	52	2	He	106.017	1.577	821167	0.64	100	106.0	80	120	
Mn	55	2	He	106.751	1.215	569230	3.01	100	106.8	80	120	
Fe	56	2	He	109818.907	2.818	707587723	3.55	100	109818.9	80	120	
Co	59	2	He	103.509	3.314	1107145	4.06	100	103.5	80	120	
Ni	60	2	He	104.108	2.451	280873	2.01	100	104.1	80	120	
Cu	63	2	He	104.131	4.402	715456	2.92	100	104.1	80	120	
Zn	66	2	He	108.051	2.693	178208	2.33	100	108.1	80	120	
As	75	2	He	108.618	1.363	179419	0.43	100	108.6	80	120	
Se	78	2	He	107.953	0.889	13987	1.26	100	108.0	80	120	
B	11	1	nogas	586.779	1.475	2909768	0.62	100	586.8	80	120	
Si	28	1	nogas	5401.616	4.215	8320391	1.62	100	5401.6	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	108089.874	3.447	4677215	1.37	100	108089.9	80	120	
Ca	44	1	nogas	107927.342	1.425	74054672	1.38	100	107927.3	80	120	
Fe	56	1	nogas	108702.975	1.169	3123015403	1.89	100	108703.0	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	119.051	2.344	56835	1.26	100	119.1	80	120	
Se	82	1	nogas	111.954	1.607	38304	1.40	100	112.0	80	120	
Mo	95	1	nogas	2068.824	2.247	14285598	0.54	100	2068.8	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	108.596	1.845	1071270	0.65	100	108.6	80	120	
Ba	137	1	nogas	110.359	1.782	514851	2.51	100	110.4	80	120	
Sb	121	2	He	108.695	2.292	618619	1.45	100	108.7	80	120	
La	139	1	nogas	160.960	10.953	620	11.17	100	161.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1122479	1.33	1171766	95.79	70	125	
Ge	72	1	nogas	3915209	2.71	3233065	121.10	70	125	
In	115	1	nogas	3307980	1.50	2958353	111.82	70	125	
Bi	209	1	nogas	2421591	1.34	2061475	117.47	70	125	
Ge	72	2	He	952202	1.80	810035	117.55	70	125	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\121018B.b
Report Comment
Instrument Name G3281A JP11080910

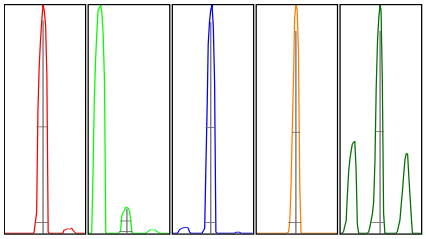
[nogas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		16595				NaN	-	
24		38290				NaN	-	
59		46234				NaN	-	
115		28041				NaN	-	
208		20209				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	0.37	5.00				
24	0.56	5.00				
59	0.80	5.00				
115	1.51	5.00				
208	1.71	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	16647	16597	16654	16572	16503
24	38476	38129	38064	38229	38553
59	46623	46531	46065	46247	45706
115	28025	27627	28754	27901	27900
208	20020	20210	20331	19780	20704

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	4605.49	8.95	8.9 - 9.1		0.37	0.473	0.750	
24	10713.44	23.95	23.9 - 24.1		0.37	0.458	0.750	
59	13838.50	58.95	58.9 - 59.1		0.34	0.442	0.750	
115	9219.73	115.00	114.9 - 115.1		0.29	0.449	0.750	
208	6251.17	208.00	207.9 - 208.1		0.30	0.508	0.750	

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 168.5 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.36 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	15.0 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-58 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		332				NaN	-	
24		2381				NaN	-	
59		18960				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	4.90	5.00				
24	1.82	5.00				
59	0.62	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	310	354	340	327	333
24	2411	2312	2389	2422	2369
59	19110	19016	18952	18792	18933

Integration Time [sec] 0.1

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	91.40	8.95	8.9 - 9.1		0.37	0.483	0.750	
24	654.00	23.95	23.9 - 24.1		0.38	0.446	0.750	
59	5805.22	58.95	58.9 - 59.1		0.32	0.439	0.750	

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 100.6 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.36 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	2.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-70 V		

Cell Parameters

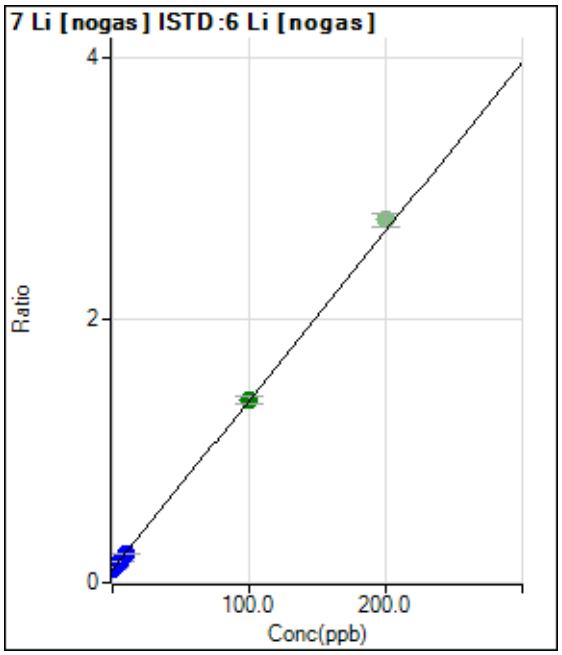
OctP Bias	-18.0 V	He Flow	4.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration for 014_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121718A.b\
Analysis File: 121718A.batch.bin
DA Date-Time: 2018-12-18 00:15:50
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	007CALB.d	CAL BLK	2018-12-17 12:25:53
2	008CALS.d	2/10/200	2018-12-17 12:27:53
3	009CALS.d	5/25/500	2018-12-17 12:29:51
4	010CALS.d	10/50/1000	2018-12-17 12:31:50
5	011CALS.d	100/500/10K	2018-12-17 12:33:48
6	012CALS.d	200/1000/20K	2018-12-17 12:35:48
7			

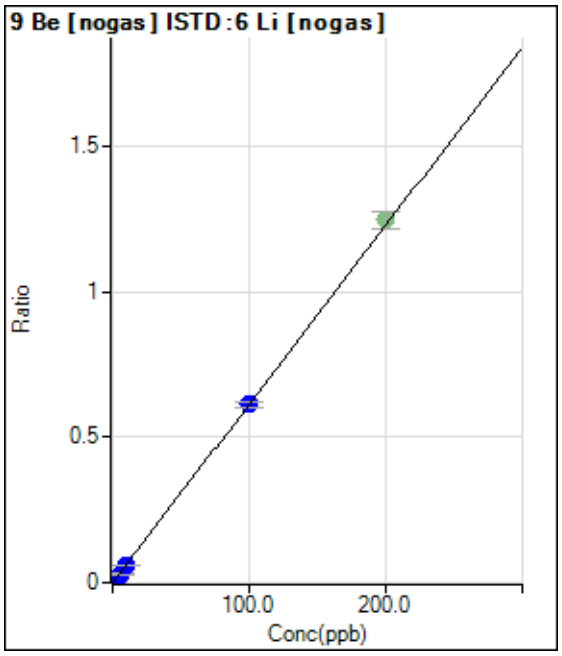
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	156391.39	0.0987	P	2.9
2	☐	2.000	1.894	191282.83	0.1231	P	2.3
3	☐	5.000	4.809	250434.68	0.1606	P	3.5
4	☐	10.000	9.488	340750.50	0.2208	P	2.3
5	☐	100.000	100.063	2045732.47	1.3872	A	4.2
6	☑	200.000		3821022.86	2.7609	A	3.8
7	☐	1.000					

y = 0.0129 * x + 0.0987
R = 1.0000
DL = 0.6581
BEC = 7.662

Weight: <None>
Min Conc: <None>

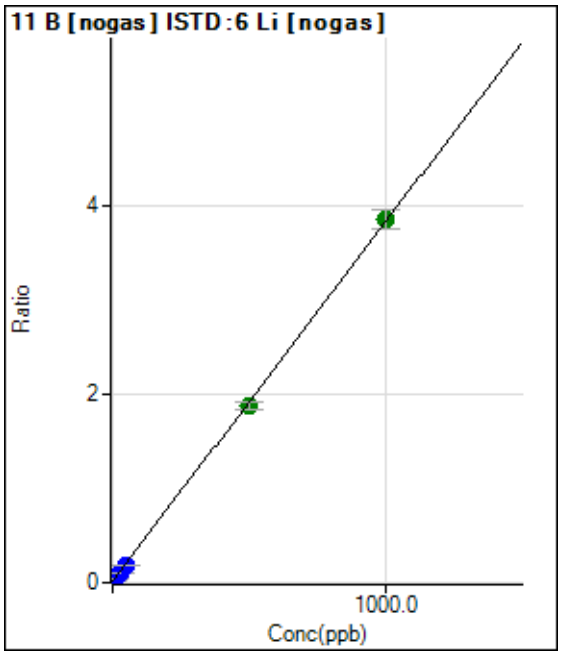


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	58.3
2	☐	2.000	1.941	18589.24	0.0120	P	5.4
3	☐	5.000	4.789	45921.77	0.0294	P	4.0
4	☐	10.000	9.338	88539.83	0.0574	P	3.1
5	☐	100.000	100.078	906671.86	0.6146	P	3.0
6	☑	200.000		1726835.91	1.2484	A	5.1
7	☐	1.000					

y = 0.0061 * x + 4.2304E-005
R = 1.0000
DL = 0.01205
BEC = 0.006889

Weight: <None>
Min Conc: <None>

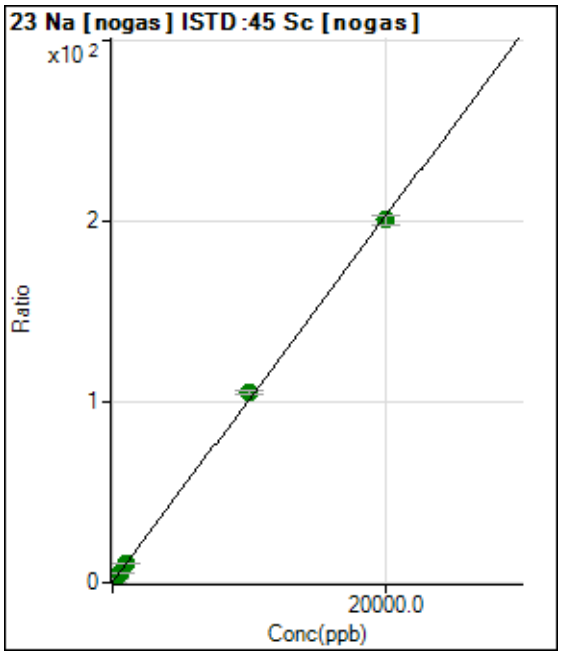
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21322.09	0.0135	P	3.4
2	☐	10.000	9.420	76626.41	0.0493	P	2.4
3	☐	25.000	23.789	162152.24	0.1040	P	3.8
4	☐	50.000	45.711	289204.30	0.1874	P	1.8
5	☐	500.000	489.141	2765122.88	1.8749	A	3.9
6	☐	1000.000	1005.680	5311616.59	3.8406	A	5.3
7	☐	5.000					

y = 0.0038 * x + 0.0135
R = 0.9999
DL = 0.3615
BEC = 3.535

Weight: <None>
Min Conc: <None>

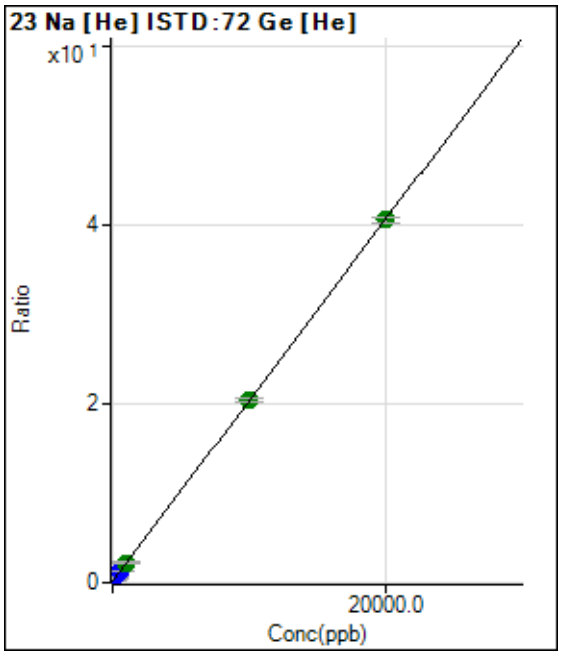


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	762316.08	0.2837	P	2.1
2	☐	200.000	201.072	6233373.97	2.3199	A	1.9
3	☐	500.000	523.943	14846824.29	5.5895	A	2.3
4	☐	1000.000	1002.476	27599522.49	10.4355	A	2.2
5	☐	10000.00	10377.750	274039797.7	105.375	A	1.1
6	☐	20000.00	19810.392	530038845.1	200.897	A	2.5
7	☐	100.000					

y = 0.0101 * x + 0.2837
R = 0.9997
DL = 1.801
BEC = 28.02

Weight: <None>
Min Conc: <None>

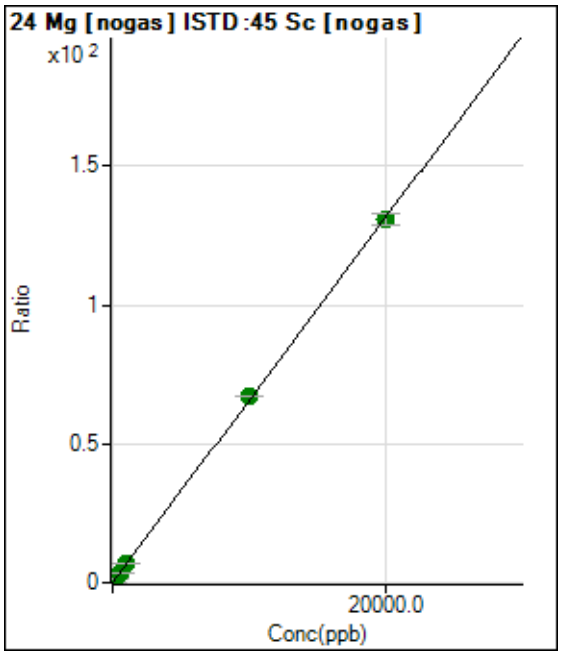
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110389.19	0.1298	P	1.1
2	☐	200.000	203.384	467368.72	0.5415	P	1.8
3	☐	500.000	543.554	1033743.24	1.2300	P	2.1
4	☐	1000.000	1048.193	1917682.00	2.2515	A	1.5
5	☐	10000.00	10021.360	17756781.40	20.4140	A	1.9
6	☐	20000.00	19985.787	34489996.99	40.5829	A	1.6
7	☐	100.000					

y = 0.0020 * x + 0.1298
R = 1.0000
DL = 2.097
BEC = 64.14

Weight: <None>
Min Conc: <None>

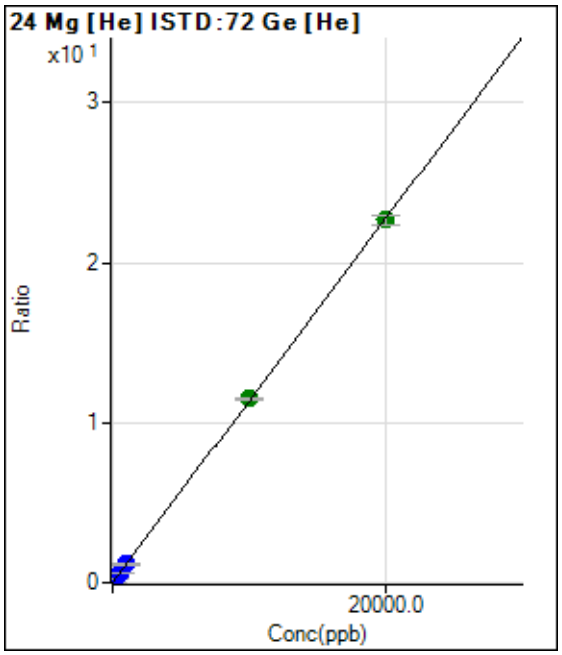


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56828.12	0.0211	P	7.9
2	☐	200.000	205.259	3682558.29	1.3702	A	1.4
3	☐	500.000	544.794	9567195.00	3.6017	A	0.7
4	☐	1000.000	1020.199	17788770.71	6.7262	A	2.4
5	☐	10000.00	10225.165	174856241.4	67.2240	A	0.9
6	☐	20000.00	19885.235	344833707.7	130.712	A	3.1
7	☐	100.000					

y = 0.0066 * x + 0.0211
R = 0.9999
DL = 0.7647
BEC = 3.218

Weight: <None>
Min Conc: <None>

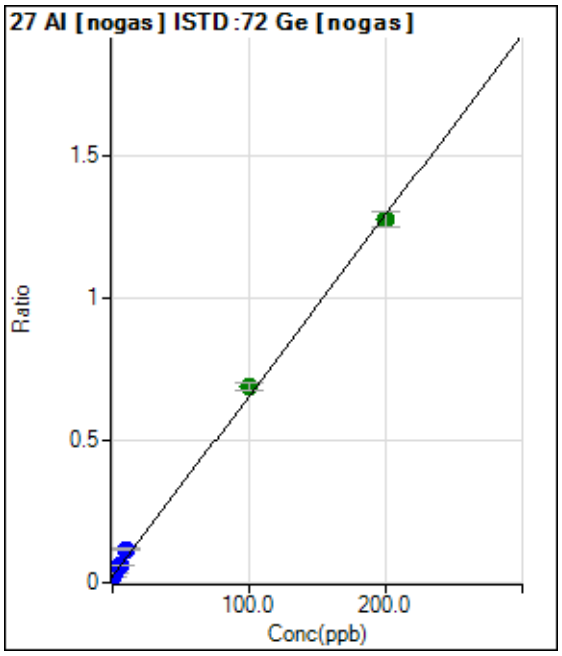
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3500.38	0.0041	P	4.6
2	☐	200.000	203.990	203635.94	0.2359	P	1.0
3	☐	500.000	538.524	517856.74	0.6161	P	0.8
4	☐	1000.000	1001.391	972745.51	1.1421	P	1.8
5	☐	10000.00	10104.733	9991633.81	11.4869	A	1.0
6	☐	20000.00	19946.561	19265332.63	22.6710	A	2.9
7	☐	100.000					

y = 0.0011 * x + 0.0041
R = 1.0000
DL = 0.4962
BEC = 3.623

Weight: <None>
Min Conc: <None>

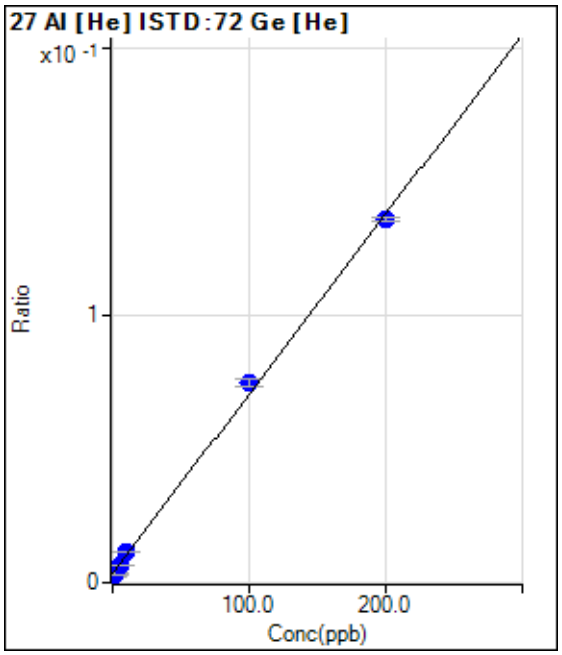


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73422.41	0.0220	P	1.2
2	☐	2.000	1.372	101260.47	0.0307	P	1.2
3	☐	5.000	6.233	208479.70	0.0615	P	3.0
4	☐	10.000	15.061	385142.76	0.1174	P	1.0
5	☐	100.000	104.719	2372537.67	0.6852	A	4.2
6	☐	200.000	197.363	4185629.83	1.2719	A	4.2
7	☐	1.000					

y = 0.0063 * x + 0.0220
R = 0.9994
DL = 0.1261
BEC = 3.473

Weight: <None>
Min Conc: <None>

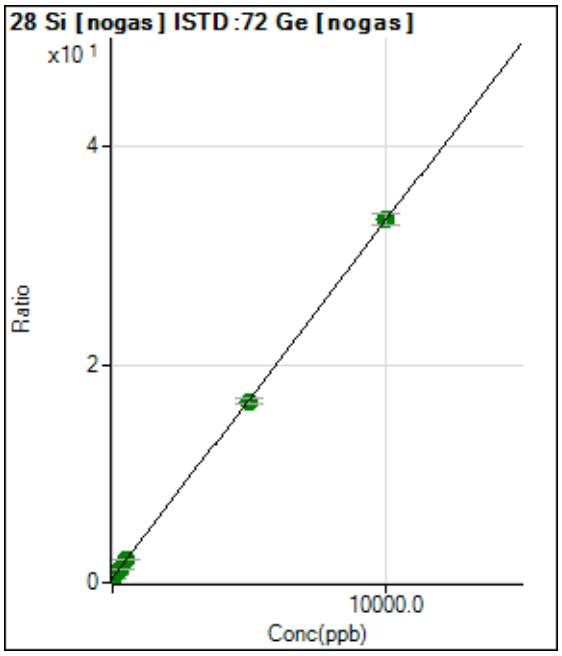
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.899	1836.79	0.0022	P	5.3
2	☐	2.000	-0.350	2763.59	0.0032	P	3.7
3	☐	5.000	4.270	5297.50	0.0063	P	3.9
4	☐	10.000	12.035	9812.69	0.0115	P	2.6
5	☐	100.000	106.006	64917.74	0.0746	P	3.4
6	☐	200.000	196.937	115343.00	0.1357	P	1.1
7	☐	1.000					

y = 6.7166E-004 * x + 0.0034
R = 0.9991
DL = 0.5151
BEC = 5.116

Weight: <None>
Min Conc: <None>

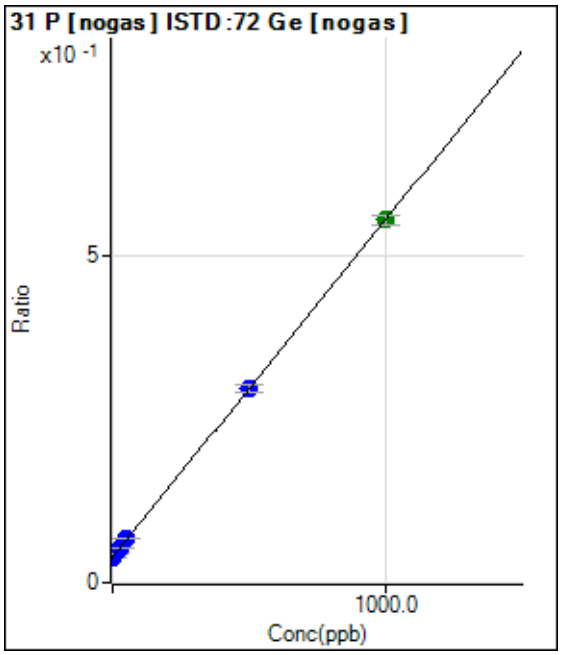


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1419764.09	0.4255	A	2.0
2	☐	100.000	108.434	2575473.35	0.7806	A	1.6
3	☐	250.000	255.668	4282528.79	1.2627	A	2.5
4	☐	500.000	513.868	6917729.27	2.1082	A	0.8
5	☐	5000.000	4941.538	57506245.81	16.6069	A	3.5
6	☐	10000.00	10028.312	109472578.3	33.2639	A	3.3
7	☐	5.000					

y = 0.0033 * x + 0.4255
R = 1.0000
DL = 7.682
BEC = 129.9

Weight: <None>
Min Conc: <None>

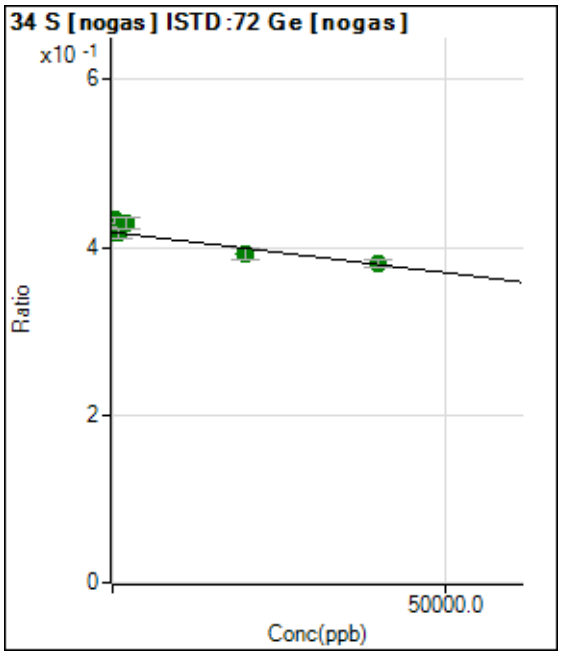
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130052.70	0.0390	P	1.5
2	☐	10.000	9.863	145372.57	0.0440	P	0.5
3	☐	25.000	27.001	179339.98	0.0529	P	1.9
4	☐	50.000	54.640	220142.57	0.0671	P	1.7
5	☐	500.000	500.708	1027538.99	0.2967	P	3.5
6	☐	1000.000	999.365	1821547.11	0.5535	A	2.6
7	☐	5.000					

y = 5.1481E-004 * x + 0.0390
R = 1.0000
DL = 3.375
BEC = 75.7

Weight: <None>
Min Conc: <None>

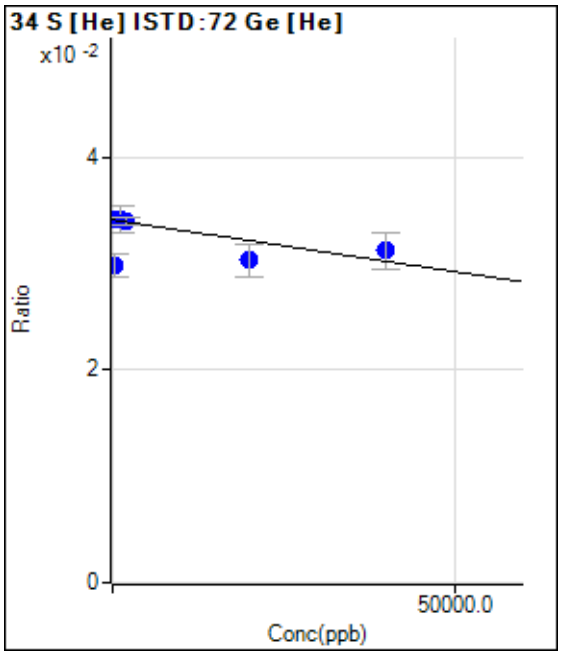


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1395320.60	0.4182	A	1.7
2	☐	400.000	-15102.24	1428036.10	0.4328	A	1.7
3	☐	1000.000	767.615	1415606.09	0.4174	A	3.1
4	☐	2000.000	-11710.15	1408697.20	0.4295	A	3.4
5	☐	20000.00	25788.899	1361835.77	0.3932	A	3.6
6	☐	40000.00	37951.891	1255441.59	0.3815	A	2.5
7	☐	100.000					

y = -9.6704E-007 * x + 0.4182
R = -0.9303
DL = -2.231E+04
BEC = -4.324E+05

Weight: <None>
Min Conc: <None>

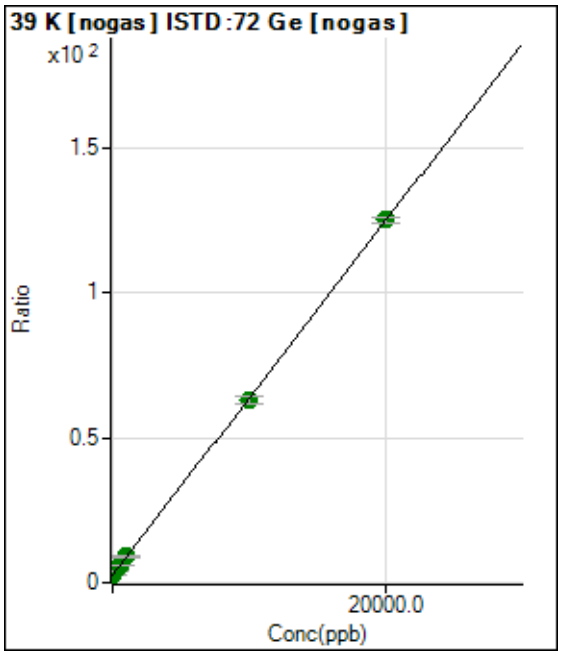
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28993.90	0.0341	P	0.8
2	☐	400.000	43348.440	25789.21	0.0299	P	7.3
3	☐	1000.000	169.853	28659.68	0.0341	P	7.4
4	☐	2000.000	1805.235	28893.99	0.0339	P	1.9
5	☐	20000.00	39071.903	26357.13	0.0303	P	10.4
6	☐	40000.00	30065.056	26488.93	0.0312	P	10.9
7	☐	100.000					

y = -9.7049E-008 * x + 0.0341
R = -0.4719
DL = -8418
BEC = -3.514E+05

Weight: <None>
Min Conc: <None>

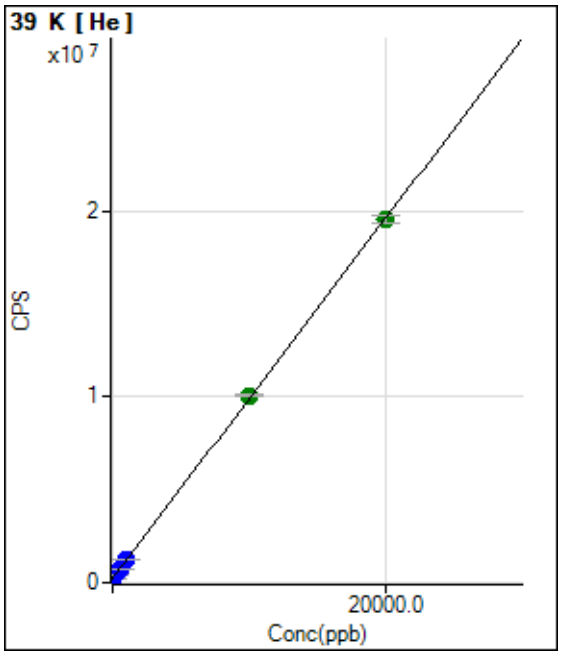


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8696756.96	2.6063	A	1.8
2	☐	200.000	217.045	12972130.50	3.9315	A	1.5
3	☐	500.000	517.362	19556925.96	5.7651	A	1.1
4	☐	1000.000	1047.754	29529982.95	9.0035	A	3.8
5	☐	10000.00	9872.581	217747429.8	62.8844	A	3.6
6	☐	20000.00	20060.717	411744950.8	125.089	A	1.7
7	☐	100.000					

y = 0.0061 * x + 2.6063
R = 1.0000
DL = 23.63
BEC = 426.9

Weight: <None>
Min Conc: <None>

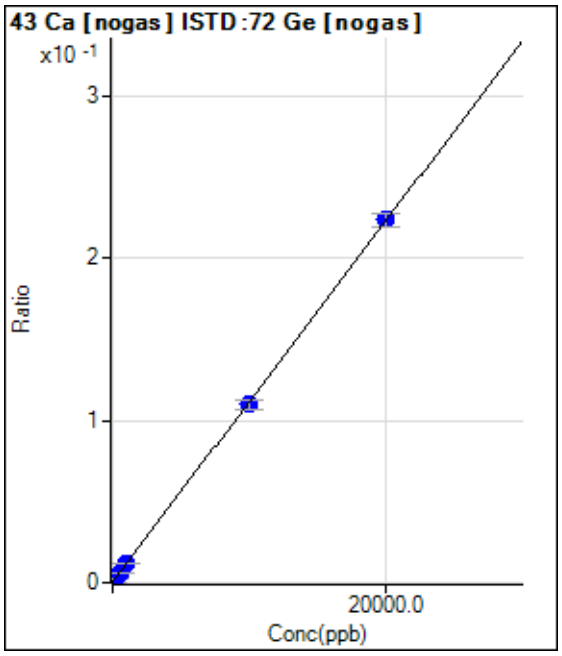
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	225869.93		P	1.0
2	☐	200.000	203.999	423518.79		P	0.6
3	☐	500.000	523.842	733405.19		P	0.3
4	☐	1000.000	1011.196	1205588.52		P	0.6
5	☐	10000.00	10152.072	10061916.52		A	1.1
6	☐	20000.00	19922.768	19528459.71		A	2.0
7	☐	100.000					

y = 968.8709 * x + 225869.9267
R = 1.0000
DL = 6.936
BEC = 233.1

Weight: <None>
Min Conc: <None>

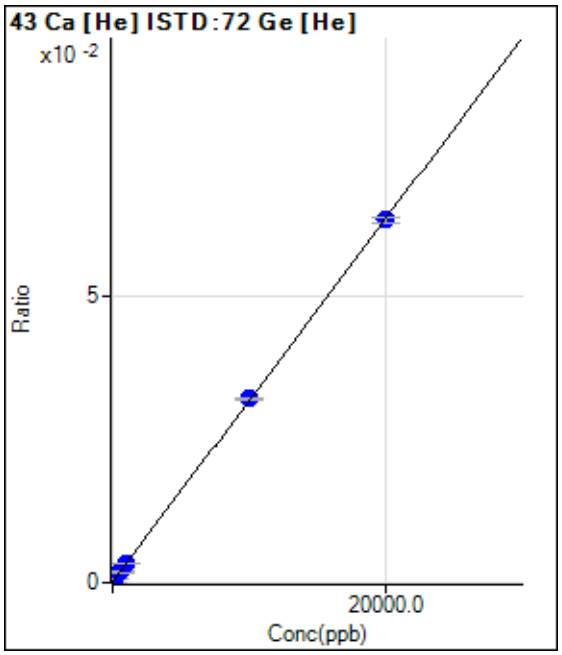


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1740.11	0.0005	P	3.3
2	☐	200.000	198.010	8985.66	0.0027	P	1.9
3	☐	500.000	518.301	21315.77	0.0063	P	2.8
4	☐	1000.000	1040.684	39672.51	0.0121	P	2.7
5	☐	10000.00	9841.454	380675.18	0.1100	P	4.8
6	☐	20000.00	20076.801	736334.21	0.2238	P	3.5
7	☐	100.000					

y = 1.1120E-005 * x + 5.2152E-004
R = 1.0000
DL = 4.698
BEC = 46.9

Weight: <None>
Min Conc: <None>

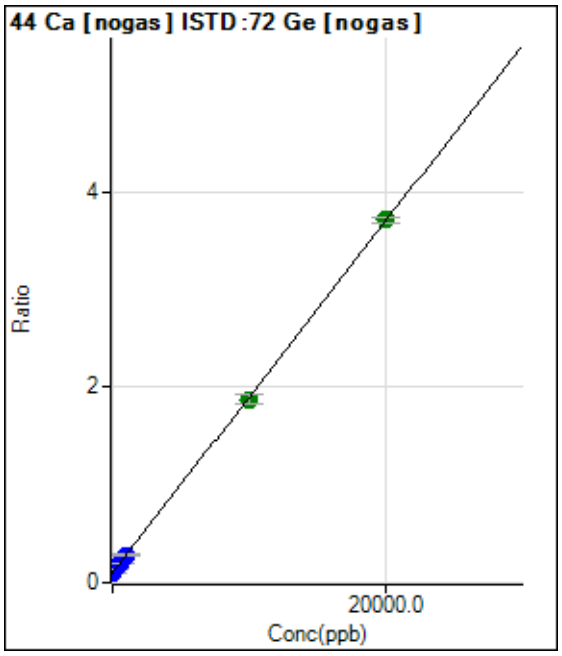
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	36.9
2	☐	200.000	191.193	630.02	0.0007	P	2.8
3	☐	500.000	551.035	1570.09	0.0019	P	10.3
4	☐	1000.000	987.579	2766.91	0.0032	P	2.6
5	☐	10000.00	10085.294	27847.78	0.0320	P	1.9
6	☐	20000.00	19956.786	53744.59	0.0632	P	1.3
7	☐	100.000					

y = 3.1623E-006 * x + 1.2522E-004
R = 1.0000
DL = 43.87
BEC = 39.6

Weight: <None>
Min Conc: <None>

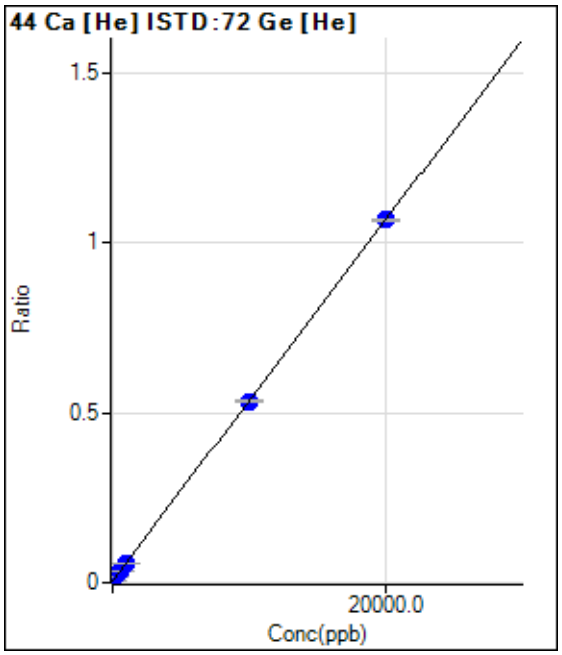


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	342946.32	0.1028	P	1.8
2	☐	200.000	193.283	453773.29	0.1375	P	1.2
3	☐	500.000	486.713	645428.96	0.1903	P	1.1
4	☐	1000.000	1005.241	929862.41	0.2835	P	3.1
5	☐	10000.00	9845.208	6482902.82	1.8726	A	5.0
6	☐	20000.00	20077.533	12219390.23	3.7120	A	1.6
7	☐	100.000					

y = 1.7977E-004 * x + 0.1028
R = 1.0000
DL = 31.28
BEC = 571.7

Weight: <None>
Min Conc: <None>

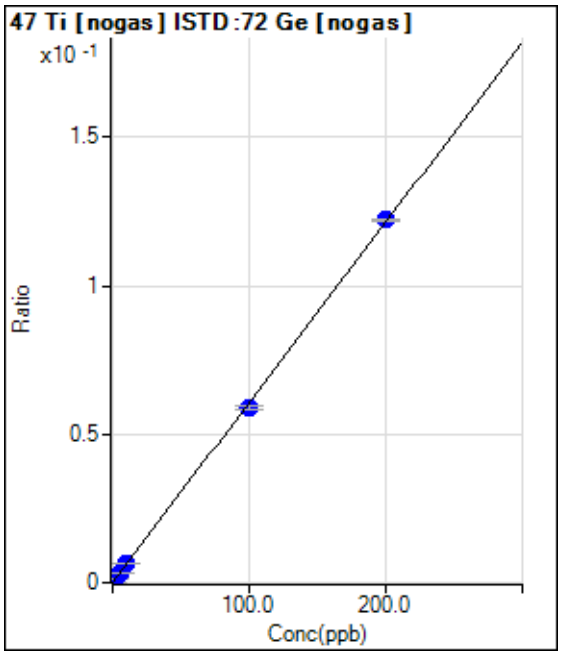
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3857.13	0.0045	P	6.3
2	☐	200.000	185.837	12424.29	0.0144	P	1.3
3	☐	500.000	541.739	27961.19	0.0333	P	2.8
4	☐	1000.000	1014.873	49722.83	0.0584	P	2.7
5	☐	10000.00	9971.996	464069.58	0.5336	P	1.7
6	☐	20000.00	20012.357	906143.82	1.0662	P	0.2
7	☐	100.000					

y = 5.3051E-005 * x + 0.0045
R = 1.0000
DL = 16.2
BEC = 85.49

Weight: <None>
Min Conc: <None>

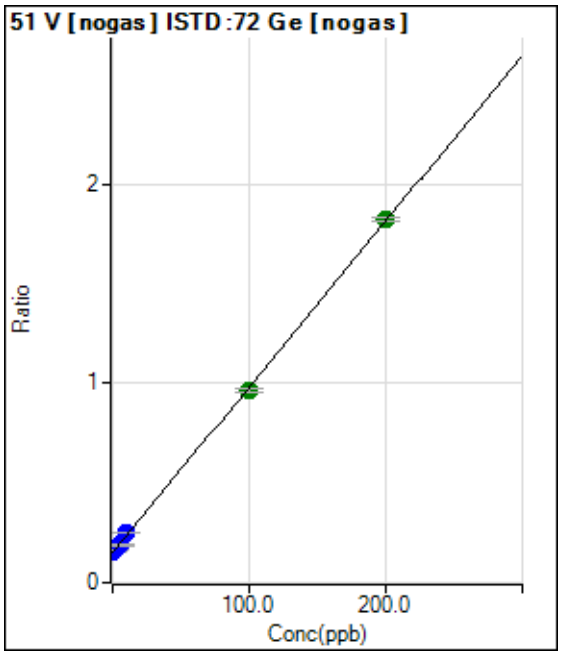


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	350.01	0.0001	P	31.4
2	☐	2.000	2.013	4373.92	0.0013	P	3.2
3	☐	5.000	5.326	11310.28	0.0033	P	2.6
4	☐	10.000	10.194	20631.71	0.0063	P	3.9
5	☐	100.000	97.110	204318.45	0.0590	P	1.3
6	☐	200.000	201.427	402494.93	0.1222	P	0.6
7	☐	1.000					

y = 6.0629E-004 * x + 1.0530E-004
R = 0.9998
DL = 0.1634
BEC = 0.1737

Weight: <None>
Min Conc: <None>

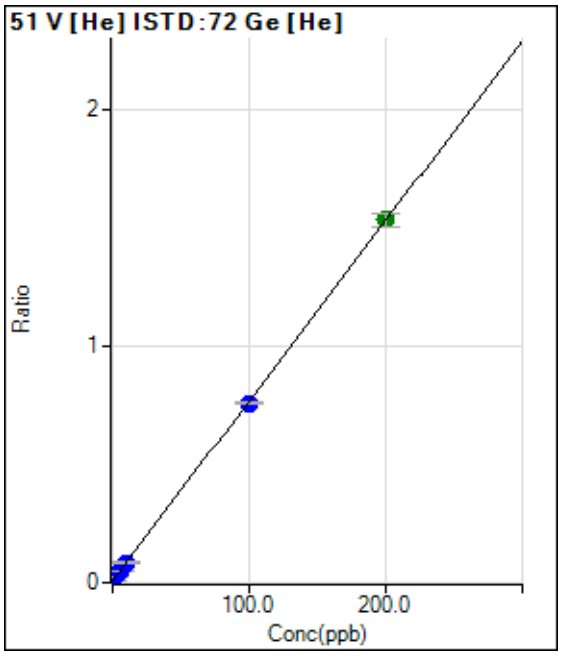
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	504335.28	0.1511	P	1.8
2	☐	2.000	1.612	542860.31	0.1645	P	1.0
3	☐	5.000	4.734	645976.45	0.1905	P	3.4
4	☐	10.000	12.105	826094.62	0.2518	P	3.1
5	☐	100.000	98.182	3353143.04	0.9680	A	1.7
6	☐	200.000	200.814	5997958.21	1.8220	A	1.1
7	☐	1.000					

y = 0.0083 * x + 0.1511
R = 0.9999
DL = 1.002
BEC = 18.16

Weight: <None>
Min Conc: <None>

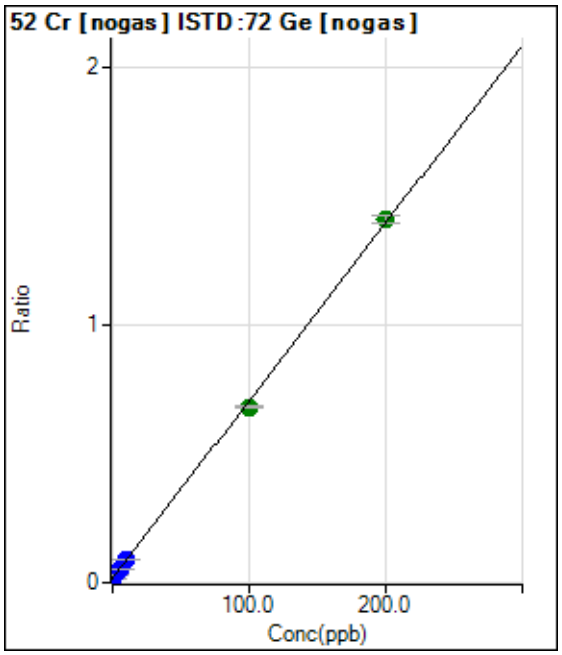


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.122	7874.34	0.0093	P	0.5
2	☐	2.000	2.077	20852.98	0.0242	P	1.5
3	☐	5.000	5.317	41047.67	0.0488	P	1.7
4	☐	10.000	10.108	72689.63	0.0853	P	1.9
5	☐	100.000	98.781	661893.46	0.7609	P	0.2
6	☐	200.000	200.595	1305757.13	1.5366	A	3.8
7	☐	1.000					

y = 0.0076 * x + 0.0083
R = 1.0000
DL = 0.0185
BEC = 1.094

Weight: <None>
Min Conc: <None>

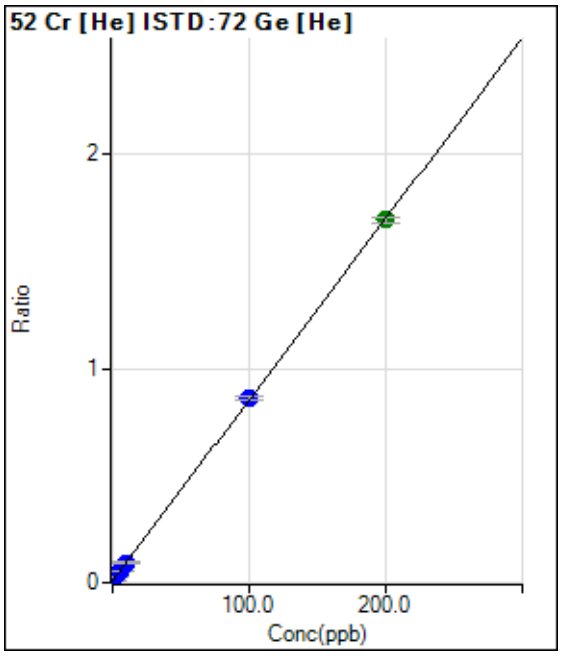
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57198.21	0.0171	P	1.4
2	☐	2.000	2.066	103591.01	0.0314	P	0.5
3	☐	5.000	5.198	179723.46	0.0530	P	3.5
4	☐	10.000	10.386	291290.46	0.0888	P	1.6
5	☐	100.000	96.269	2359926.32	0.6812	A	0.9
6	☐	200.000	201.841	4638851.81	1.4094	A	2.2
7	☐	1.000					

y = 0.0069 * x + 0.0171
R = 0.9997
DL = 0.1045
BEC = 2.485

Weight: <None>
Min Conc: <None>

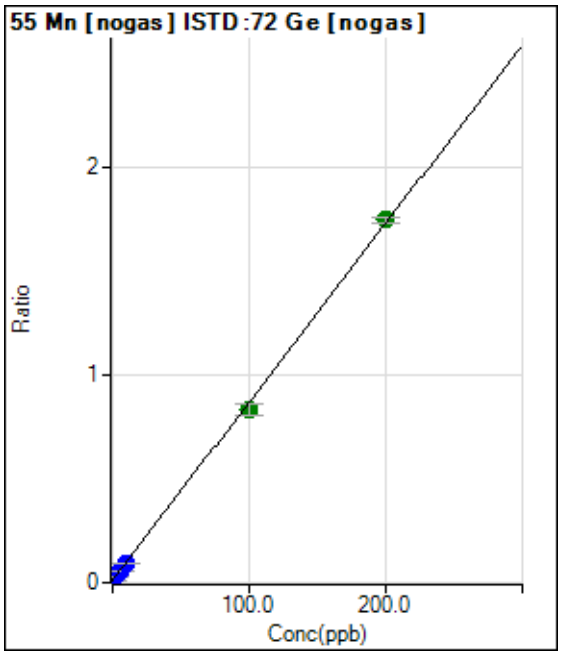


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7221.50	0.0085	P	1.3
2	☐	2.000	2.056	22323.67	0.0259	P	1.8
3	☐	5.000	5.468	45960.69	0.0547	P	0.7
4	☐	10.000	10.150	80253.24	0.0942	P	2.7
5	☐	100.000	100.986	749285.72	0.8615	P	1.7
6	☐	200.000	199.487	1439274.04	1.6935	A	1.4
7	☐	1.000					

y = 0.0084 * x + 0.0085
R = 1.0000
DL = 0.04038
BEC = 1.005

Weight: <None>
Min Conc: <None>

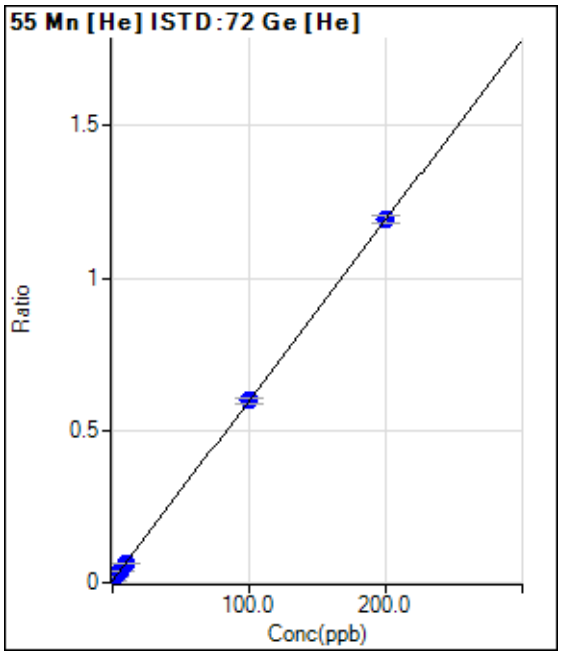
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37975.98	0.0114	P	5.5
2	☐	2.000	1.660	84560.23	0.0256	P	3.4
3	☐	5.000	4.992	183940.92	0.0542	P	2.8
4	☐	10.000	9.680	309936.89	0.0945	P	1.6
5	☐	100.000	95.832	2886428.40	0.8339	A	5.9
6	☐	200.000	202.103	5747497.41	1.7460	A	1.5
7	☐	1.000					

y = 0.0086 * x + 0.0114
R = 0.9997
DL = 0.2171
BEC = 1.327

Weight: <None>
Min Conc: <None>

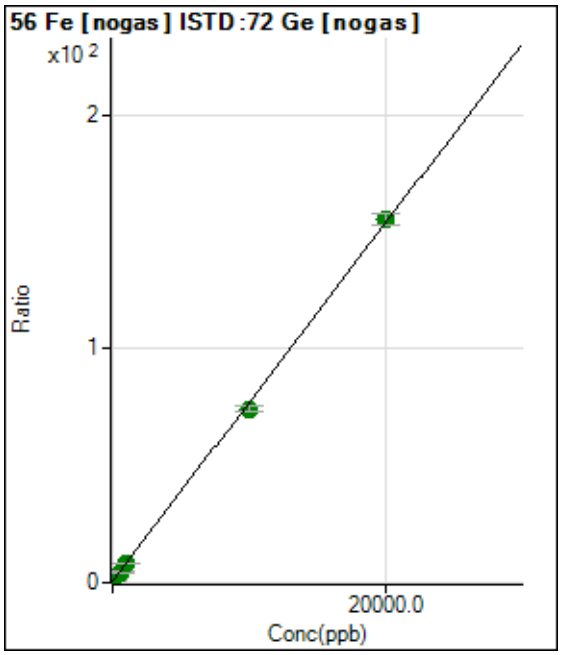


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5647.62	0.0066	P	4.9
2	☐	2.000	1.749	14665.96	0.0170	P	2.6
3	☐	5.000	5.366	32271.67	0.0384	P	3.3
4	☐	10.000	9.994	56048.47	0.0658	P	0.7
5	☐	100.000	99.827	519723.21	0.5976	P	3.2
6	☐	200.000	200.080	1012197.46	1.1911	P	2.2
7	☐	1.000					

y = 0.0059 * x + 0.0066
R = 1.0000
DL = 0.1659
BEC = 1.122

Weight: <None>
Min Conc: <None>

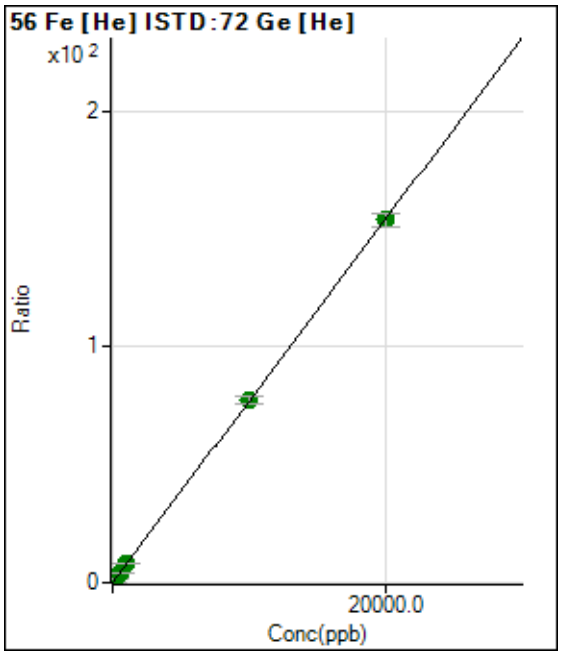
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1905609.94	0.5712	A	3.7
2	☐	200.000	207.288	7124585.05	2.1598	A	4.1
3	☐	500.000	509.428	15175846.17	4.4754	A	3.6
4	☐	1000.000	1003.444	27097429.77	8.2615	A	3.5
5	☐	10000.00	9638.419	257780564.0	74.4393	A	3.3
6	☐	20000.00	20180.310	510822128.0	155.231	A	3.3
7	☐	100.000					

y = 0.0077 * x + 0.5712
R = 0.9998
DL = 8.357
BEC = 74.53

Weight: <None>
Min Conc: <None>

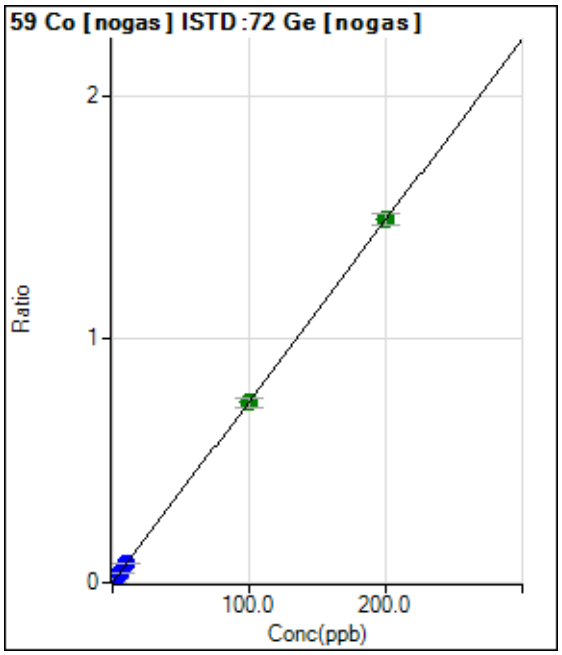


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16392.33	0.0193	P	10.4
2	☐	200.000	207.352	1394334.82	1.6156	A	3.1
3	☐	500.000	546.820	3553620.47	4.2291	A	3.1
4	☐	1000.000	1027.178	6752043.86	7.9272	A	0.5
5	☐	10000.00	10067.479	67419450.66	77.5257	A	3.5
6	☐	20000.00	19963.658	130627131.3	153.713	A	4.0
7	☐	100.000					

y = 0.0077 * x + 0.0193
R = 1.0000
DL = 0.7805
BEC = 2.506

Weight: <None>
Min Conc: <None>

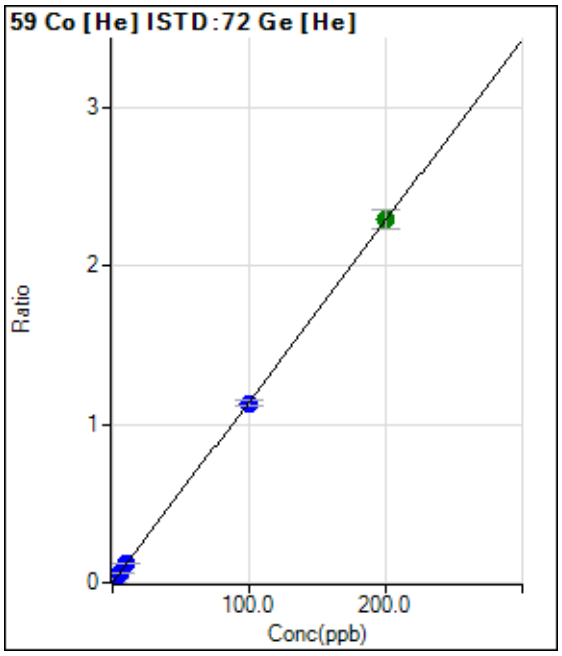
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2620.22	0.0008	P	9.2
2	☐	2.000	2.092	53979.53	0.0164	P	2.9
3	☐	5.000	5.362	138028.52	0.0407	P	3.7
4	☐	10.000	10.601	261478.72	0.0797	P	1.8
5	☐	100.000	99.490	2566486.84	0.7414	A	5.4
6	☐	200.000	200.215	4907214.30	1.4912	A	3.2
7	☐	1.000					

y = 0.0074 * x + 7.8493E-004
R = 1.0000
DL = 0.02916
BEC = 0.1054

Weight: <None>
Min Conc: <None>

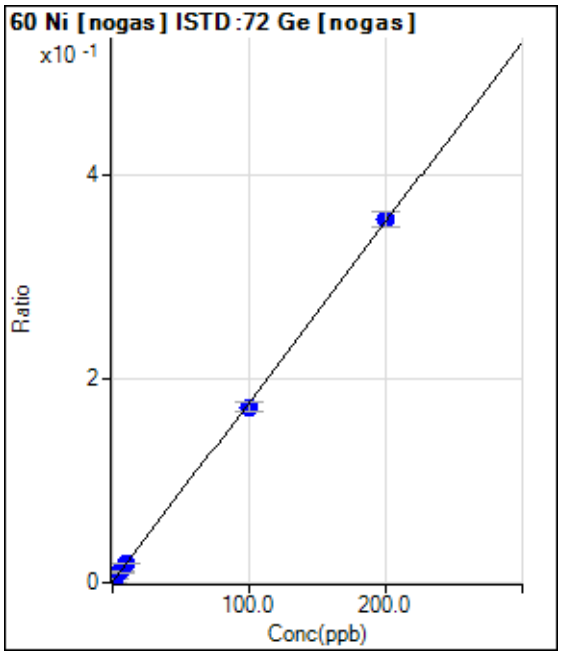


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	873.37	0.0010	P	27.0
2	☐	2.000	1.957	20191.30	0.0234	P	4.1
3	☐	5.000	5.291	51689.46	0.0615	P	1.9
4	☐	10.000	10.356	101697.24	0.1194	P	1.6
5	☐	100.000	99.210	987083.95	1.1349	P	2.3
6	☐	200.000	200.370	1947192.58	2.2911	A	5.5
7	☐	1.000					

y = 0.0114 * x + 0.0010
R = 1.0000
DL = 0.07293
BEC = 0.09004

Weight: <None>
Min Conc: <None>

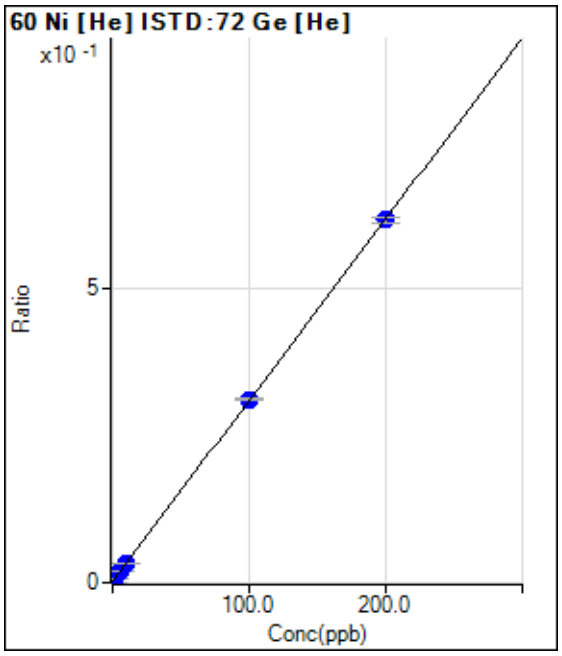
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.004	1823.45	0.0005	P	12.3
2	☐	2.000	2.231	14782.81	0.0045	P	4.6
3	☐	5.000	5.604	35410.88	0.0104	P	4.4
4	☐	10.000	10.524	62797.73	0.0191	P	1.4
5	☐	100.000	97.362	597585.99	0.1726	P	5.2
6	☐	200.000	201.275	1172196.44	0.3563	P	4.2
7	☐	1.000					

y = 0.0018 * x + 5.3873E-004
R = 0.9999
DL = 0.1137
BEC = 0.3048

Weight: <None>
Min Conc: <None>

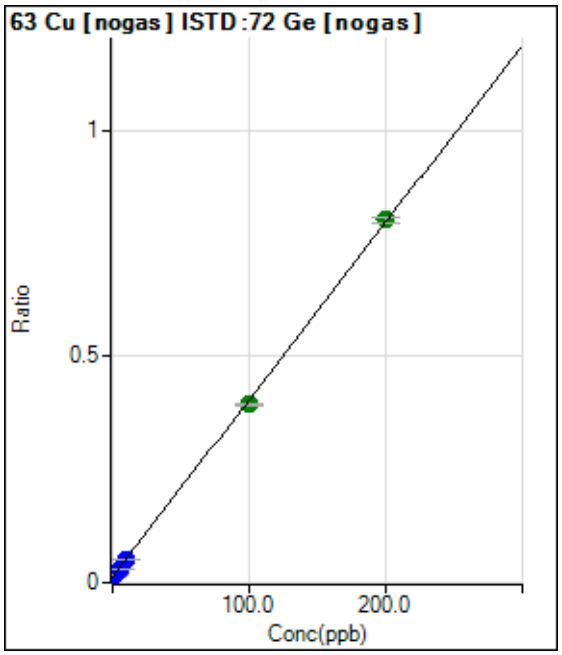


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.305	743.36	0.0009	P	10.4
2	☐	2.000	1.687	6057.76	0.0070	P	4.8
3	☐	5.000	5.319	15316.65	0.0182	P	1.2
4	☐	10.000	9.965	27721.13	0.0325	P	0.5
5	☐	100.000	100.676	271608.96	0.3123	P	1.4
6	☐	200.000	199.659	524786.76	0.6175	P	1.4
7	☐	1.000					

y = 0.0031 * x + 0.0018
R = 1.0000
DL = 0.08893
BEC = 0.5891

Weight: <None>
Min Conc: <None>

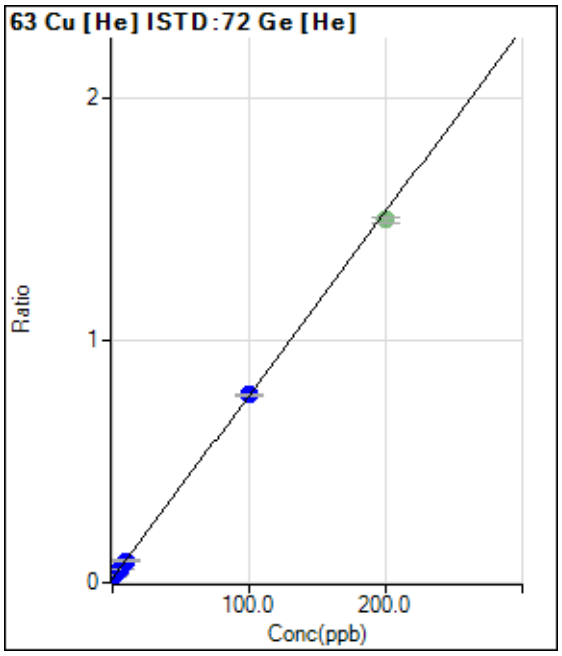
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44066.20	0.0132	P	3.0
2	☐	2.000	1.254	59776.90	0.0181	P	1.2
3	☐	5.000	4.329	102276.08	0.0302	P	1.0
4	☐	10.000	9.852	169800.72	0.0518	P	2.6
5	☐	100.000	97.070	1361771.70	0.3931	A	0.8
6	☐	200.000	201.496	2639209.08	0.8017	A	1.8
7	☐	1.000					

y = 0.0039 * x + 0.0132
R = 0.9999
DL = 0.3003
BEC = 3.375

Weight: <None>
Min Conc: <None>

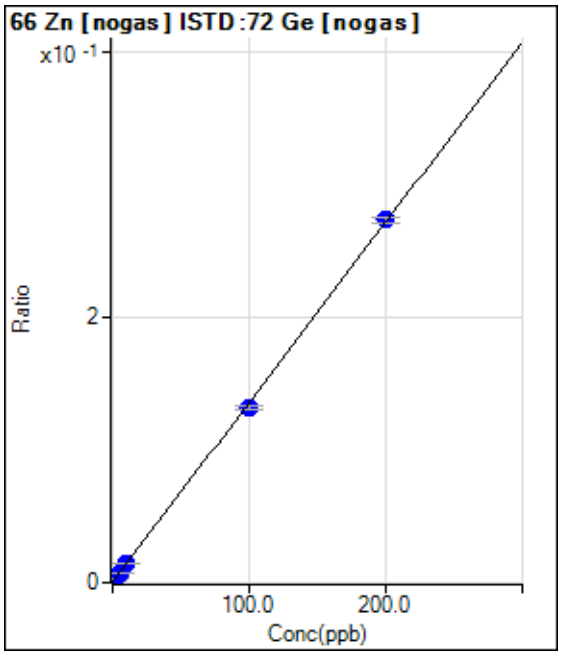


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.458	17074.76	0.0201	P	1.2
2	☐	2.000	1.663	25200.79	0.0292	P	2.6
3	☐	5.000	5.085	46281.76	0.0551	P	2.6
4	☐	10.000	9.768	77074.38	0.0905	P	2.2
5	☐	100.000	100.026	672491.92	0.7731	P	0.9
6	☑	200.000		1271490.69	1.4960	A	1.4
7	☐	1.000					

y = 0.0076 * x + 0.0166
R = 1.0000
DL = 0.09515
BEC = 2.197

Weight: <None>
Min Conc: <None>

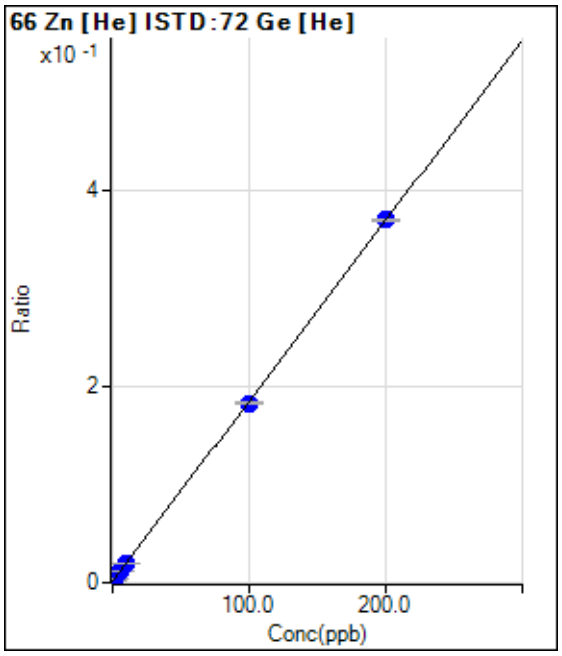
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.482	3307.01	0.0010	P	8.9
2	☐	2.000	2.137	10656.58	0.0032	P	2.1
3	☐	5.000	5.608	26903.44	0.0079	P	0.6
4	☐	10.000	10.213	46459.20	0.0142	P	2.5
5	☐	100.000	97.174	456875.31	0.1319	P	1.7
6	☐	200.000	201.386	898616.76	0.2730	P	1.3
7	☐	1.000					

y = 0.0014 * x + 3.3720E-004
R = 0.9998
DL = 0.1961
BEC = 0.2491

Weight: <None>
Min Conc: <None>

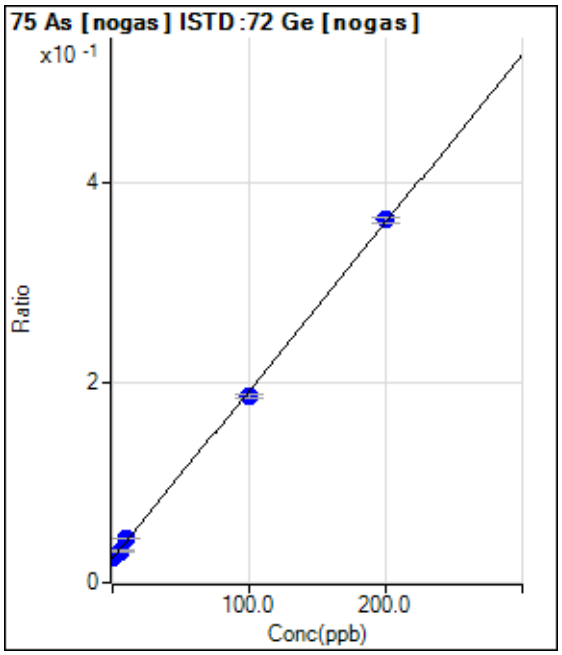


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.115	1043.37	0.0012	P	2.7
2	☐	2.000	1.952	3980.48	0.0046	P	0.8
3	☐	5.000	5.434	9269.14	0.0110	P	3.2
4	☐	10.000	10.117	16737.84	0.0197	P	4.0
5	☐	100.000	98.795	159198.92	0.1830	P	1.4
6	☐	200.000	200.586	314864.94	0.3705	P	0.9
7	☐	1.000					

y = 0.0018 * x + 0.0010
R = 1.0000
DL = 0.05415
BEC = 0.551

Weight: <None>
Min Conc: <None>

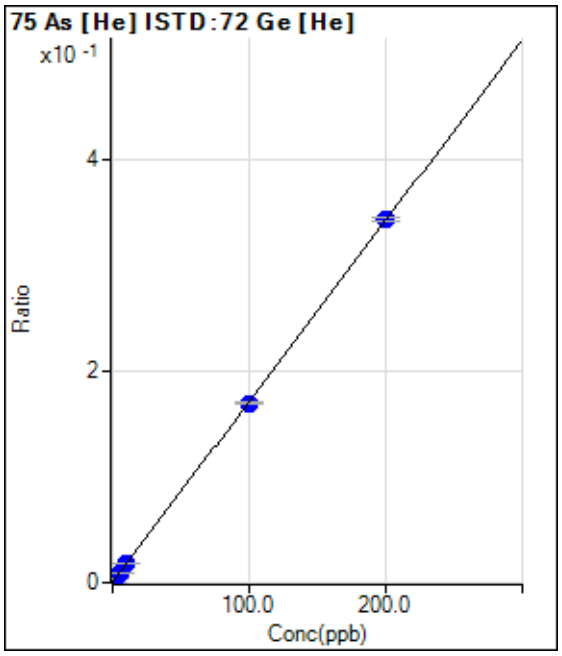
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.453	83232.49	0.0249	P	2.5
2	☐	2.000	2.132	91646.39	0.0278	P	0.2
3	☐	5.000	4.466	107514.73	0.0317	P	2.0
4	☐	10.000	11.694	143879.27	0.0439	P	1.9
5	☐	100.000	96.654	646875.41	0.1868	P	2.6
6	☐	200.000	201.600	1195989.05	0.3633	P	1.7
7	☐	1.000					

y = 0.0017 * x + 0.0242
R = 0.9997
DL = 1.127
BEC = 14.38

Weight: <None>
Min Conc: <None>

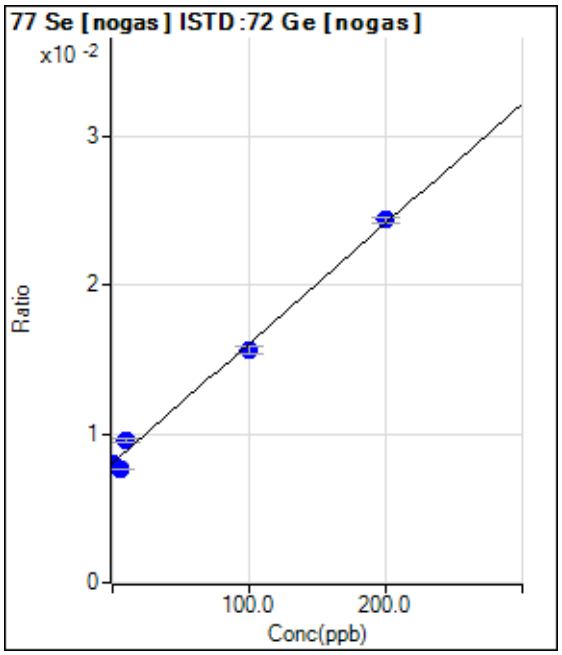


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	521.12	0.0006	P	9.4
2	☐	2.000	1.955	3415.89	0.0040	P	4.1
3	☐	5.000	5.019	7727.22	0.0092	P	4.2
4	☐	10.000	9.897	14938.38	0.0175	P	0.4
5	☐	100.000	99.104	147946.01	0.1701	P	0.6
6	☐	200.000	200.453	291832.67	0.3434	P	1.1
7	☐	1.000					

y = 0.0017 * x + 6.1318E-004
R = 1.0000
DL = 0.1012
BEC = 0.3586

Weight: <None>
Min Conc: <None>

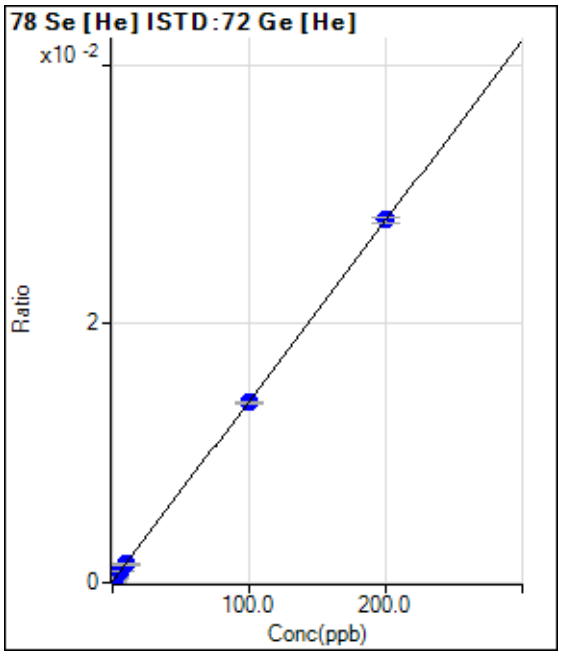
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26783.34	0.0080	P	1.5
2	☐	2.000	-1.969	25955.42	0.0079	P	3.6
3	☐	5.000	-4.712	25945.46	0.0076	P	0.5
4	☐	10.000	19.090	31367.27	0.0096	P	2.4
5	☐	100.000	93.878	53946.84	0.0156	P	3.2
6	☐	200.000	202.889	80142.27	0.0243	P	1.7
7	☐	1.000					

y = 8.0438E-005 * x + 0.0080
R = 0.9968
DL = 4.624
BEC = 99.78

Weight: <None>
Min Conc: <None>

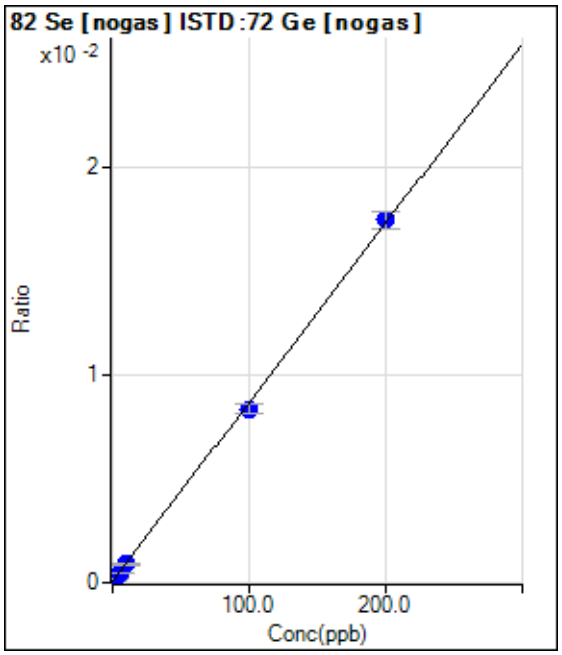


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.043	72.67	0.0001	P	39.3
2	☐	2.000	1.968	316.00	0.0004	P	10.2
3	☐	5.000	5.910	768.69	0.0009	P	8.4
4	☐	10.000	9.595	1217.38	0.0014	P	3.5
5	☐	100.000	99.145	12102.71	0.0139	P	1.5
6	☐	200.000	200.425	23825.54	0.0280	P	1.7
7	☐	1.000					

y = 1.3942E-004 * x + 9.1573E-005
R = 1.0000
DL = 0.7246
BEC = 0.6568

Weight: <None>
Min Conc: <None>

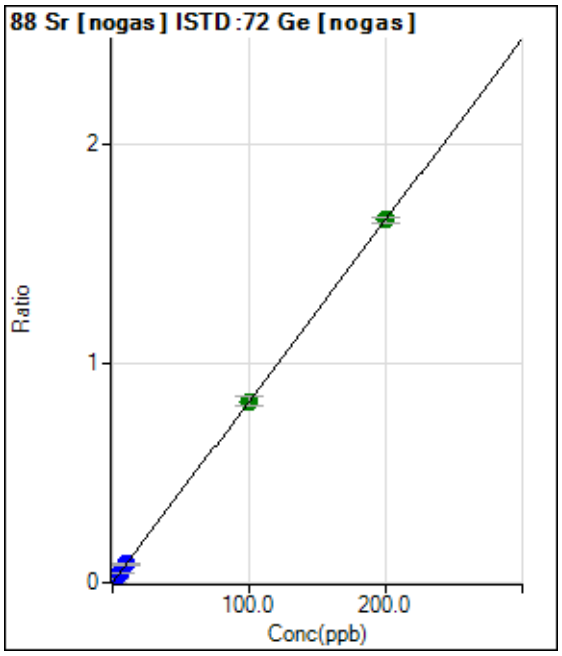
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	253.34	0.0001	P	28.7
2	☐	2.000	1.710	736.69	0.0002	P	13.3
3	☐	5.000	4.774	1653.44	0.0005	P	3.4
4	☐	10.000	9.418	2913.62	0.0009	P	8.5
5	☐	100.000	96.156	28920.10	0.0084	P	5.3
6	☐	200.000	201.960	57454.75	0.0175	P	4.5
7	☐	1.000					

y = 8.6090E-005 * x + 7.6163E-005
R = 0.9997
DL = 0.7605
BEC = 0.8847

Weight: <None>
Min Conc: <None>

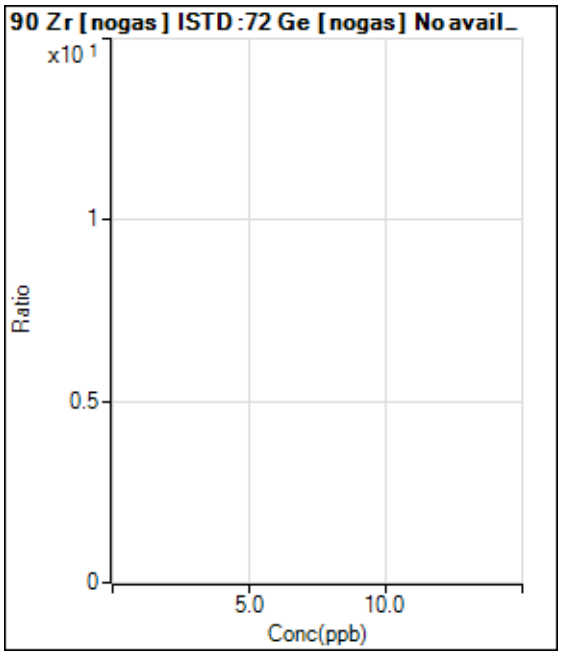


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2013.48	0.0006	P	3.3
2	☐	2.000	2.062	58301.78	0.0177	P	3.2
3	☐	5.000	5.092	145072.54	0.0428	P	2.5
4	☐	10.000	10.062	275203.65	0.0839	P	2.4
5	☐	100.000	99.843	2863296.73	0.8271	A	5.4
6	☐	200.000	200.072	5453217.63	1.6568	A	1.9
7	☐	1.000					

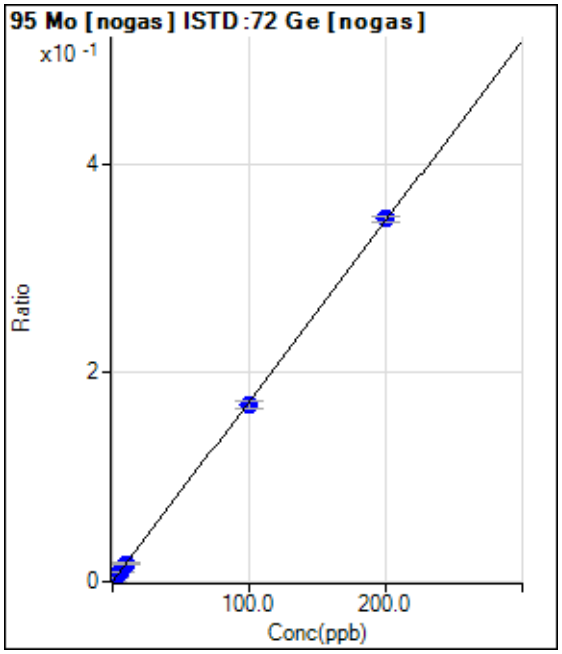
y = 0.0083 * x + 6.0302E-004
R = 1.0000
DL = 0.00713
BEC = 0.07285

Weight: <None>
Min Conc: <None>

Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

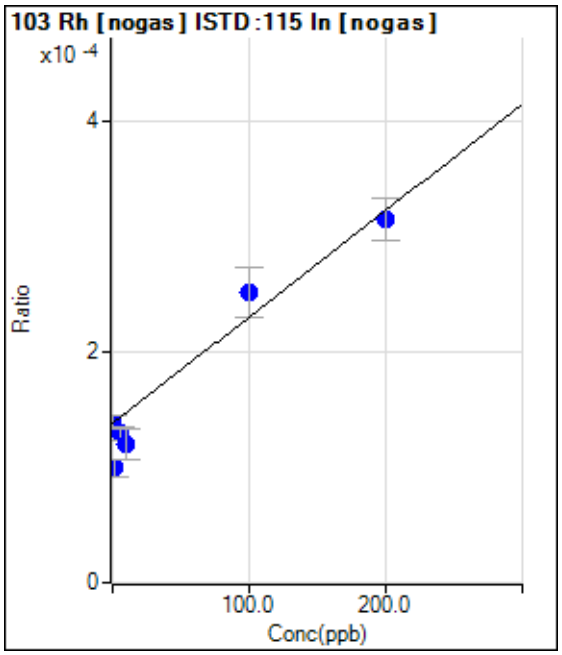


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0001	P	9.5
2	☐	2.000	2.065	12067.58	0.0037	P	2.0
3	☐	5.000	5.197	30740.09	0.0091	P	2.8
4	☐	10.000	10.008	56988.16	0.0174	P	2.0
5	☐	100.000	97.845	585237.53	0.1690	P	4.5
6	☐	200.000	201.071	1143174.98	0.3473	P	1.5
7	☐	1.000					

y = 0.0017 * x + 9.0969E-005
R = 0.9999
DL = 0.01504
BEC = 0.05268

Weight: <None>
Min Conc: <None>

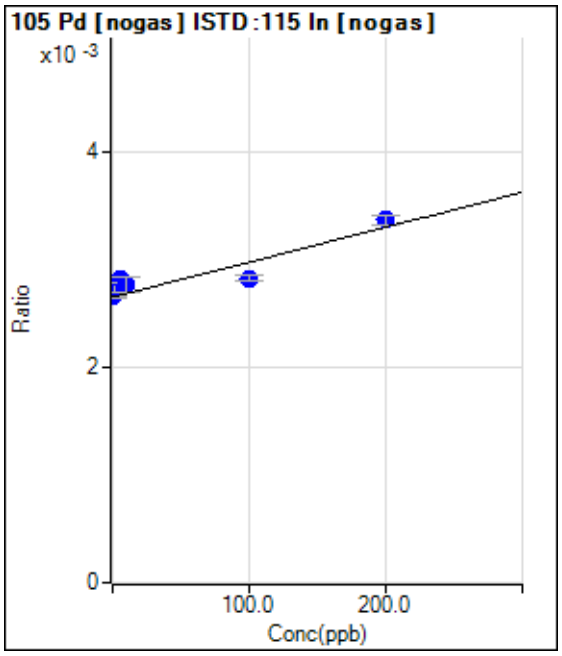
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406.68	0.0001	P	8.6
2	☐	2.000	-41.943	296.67	0.0001	P	15.2
3	☐	5.000	-9.552	376.68	0.0001	P	8.6
4	☐	10.000	-19.240	353.34	0.0001	P	22.2
5	☐	100.000	122.433	736.70	0.0003	P	17.5
6	☐	200.000	191.049	863.37	0.0003	P	11.7
7	☐	1.000					

y = 9.2159E-007 * x + 1.3808E-004
R = 0.9746
DL = 38.8
BEC = 149.8

Weight: <None>
Min Conc: <None>

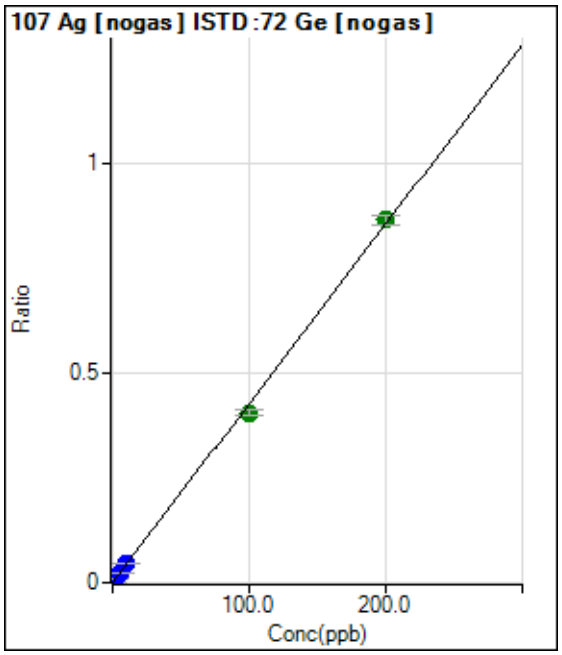


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7821.86	0.0027	P	1.3
2	☐	2.000	31.592	8222.08	0.0028	P	4.2
3	☐	5.000	50.184	8205.37	0.0028	P	2.0
4	☐	10.000	34.150	8135.35	0.0028	P	5.3
5	☐	100.000	53.474	8308.76	0.0028	P	1.9
6	☐	200.000	220.630	9269.29	0.0034	P	2.9
7	☐	1.000					

y = 3.2508E-006 * x + 0.0027
R = 0.9197
DL = 31.16
BEC = 817

Weight: <None>
Min Conc: <None>

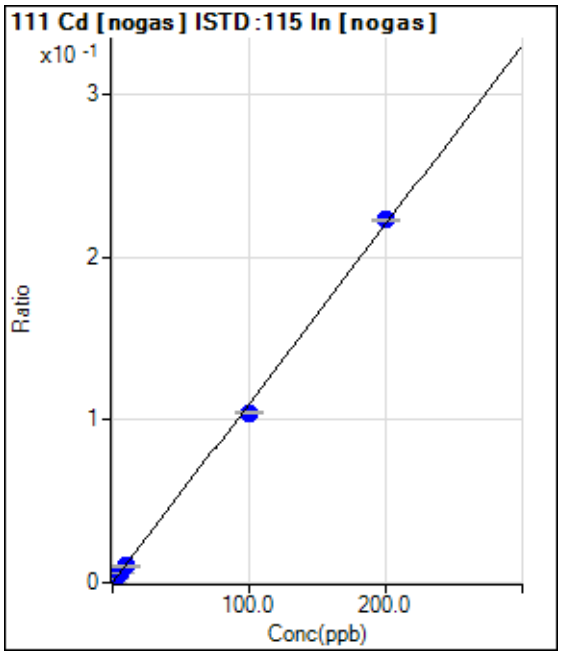
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.33	0.0000	P	26.3
2	☐	2.000	2.147	30363.08	0.0092	P	2.7
3	☐	5.000	5.271	76385.38	0.0225	P	4.8
4	☐	10.000	10.383	145419.07	0.0443	P	2.4
5	☐	100.000	94.963	1402881.12	0.4051	A	2.3
6	☐	200.000	202.491	2842191.31	0.8636	A	2.8
7	☐	1.000					

y = 0.0043 * x + 4.6102E-005
R = 0.9995
DL = 0.008541
BEC = 0.01081

Weight: <None>
Min Conc: <None>

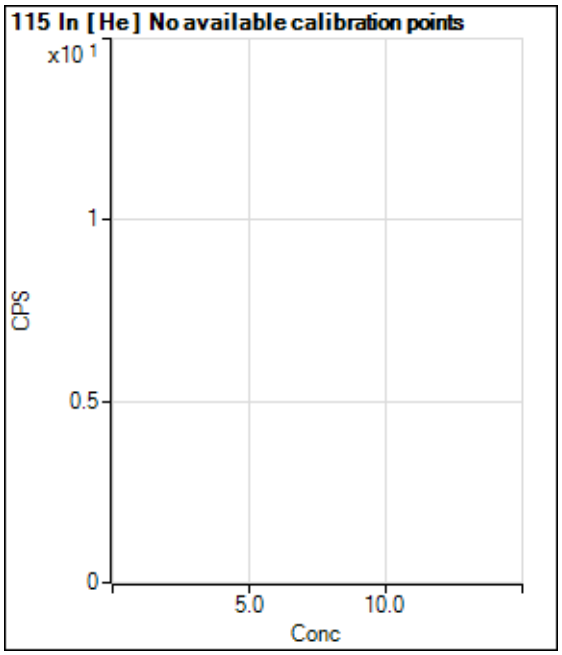


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	66.4
2	☐	2.000	1.964	6474.64	0.0022	P	2.2
3	☐	5.000	4.897	15713.86	0.0054	P	1.3
4	☐	10.000	9.136	29585.36	0.0101	P	5.2
5	☐	100.000	94.980	306831.22	0.1045	P	1.2
6	☐	200.000	202.556	612307.22	0.2228	P	0.3
7	☐	1.000					

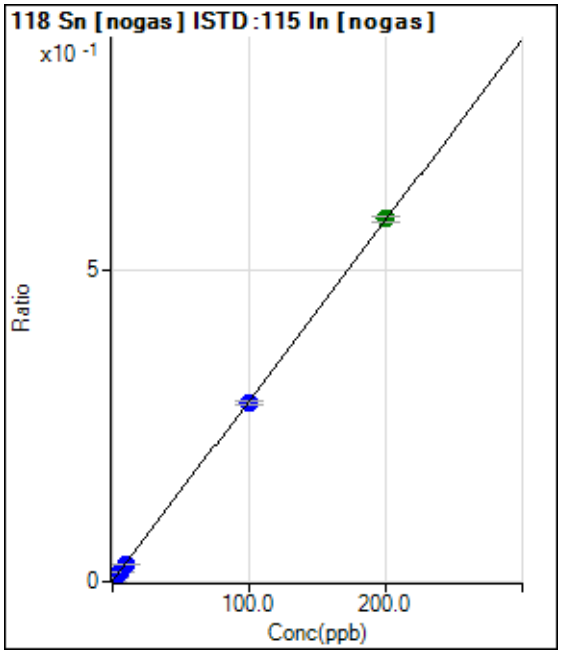
y = 0.0011 * x + 1.3598E-005
R = 0.9996
DL = 0.02461
BEC = 0.01236

Weight: <None>
Min Conc: <None>

Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1025497.11		P	0.7
2	☐			1026647.41		P	0.7
3	☐			1026198.86		P	1.7
4	☐			1027072.88		P	0.8
5	☐			1005760.00		P	1.2
6	☐			989359.18		P	2.0
7	☐						

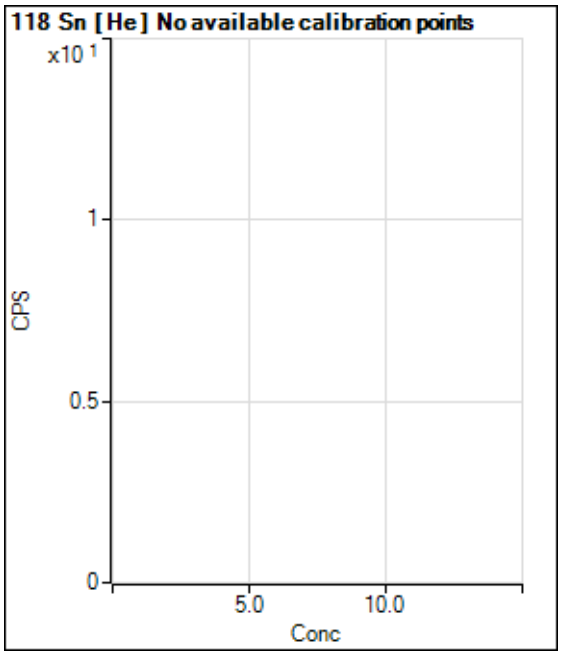


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1833.46	0.0006	P	5.0
2	☐	2.000	1.831	17622.44	0.0059	P	3.1
3	☐	5.000	4.957	43491.34	0.0150	P	3.2
4	☐	10.000	9.586	83369.92	0.0283	P	2.5
5	☐	100.000	98.615	838993.24	0.2857	P	2.2
6	☐	200.000	200.716	1596039.61	0.5808	A	1.7
7	☐	1.000					

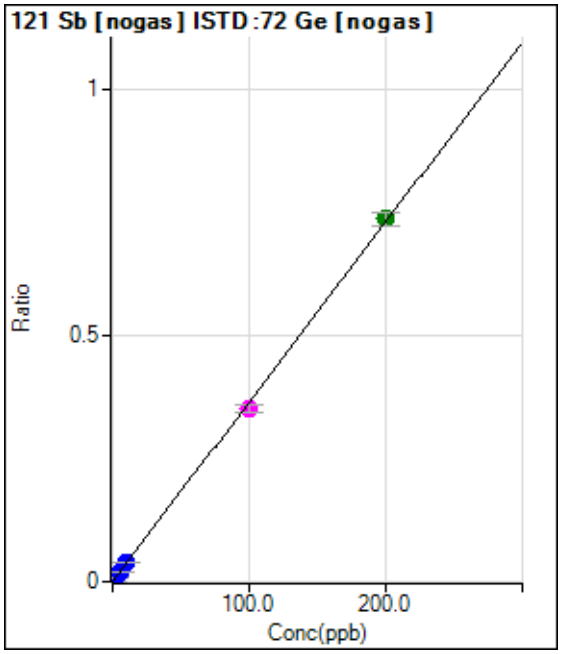
y = 0.0029 * x + 6.2261E-004
R = 1.0000
DL = 0.0322
BEC = 0.2154

Weight: <None>
Min Conc: <None>

Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			616.69		P	8.0
2	☐			6968.15		P	1.7
3	☐			17081.85		P	1.6
4	☐			31972.87		P	1.4
5	☐			318336.10		P	1.0
6	☐			640414.83		P	0.7
7	☐						

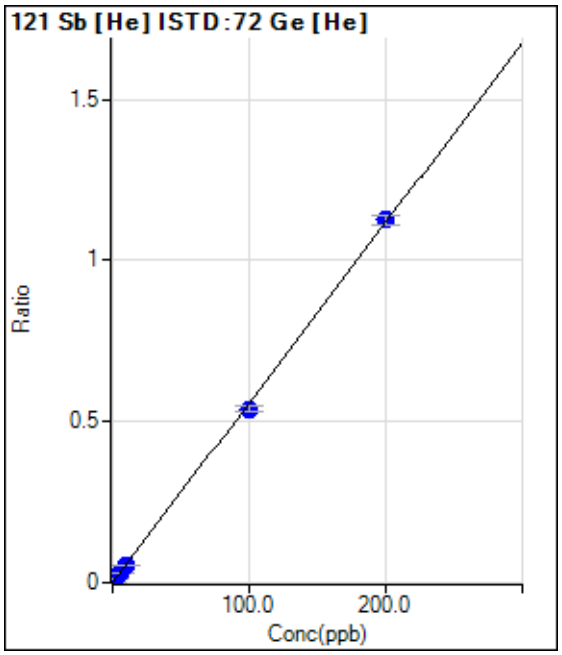


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	383.34	0.0001	P	21.7
2	☐	2.000	2.143	26223.43	0.0080	P	5.3
3	☐	5.000	5.046	62990.52	0.0186	P	1.9
4	☐	10.000	10.487	126201.07	0.0385	P	2.0
5	☐	100.000	96.282	1219273.58	0.3522	M	5.3
6	☐	200.000	201.832	2429107.83	0.7382	A	3.5
7	☐	1.000					

y = 0.0037 * x + 1.1519E-004
R = 0.9997
DL = 0.02054
BEC = 0.0315

Weight: <None>
Min Conc: <None>

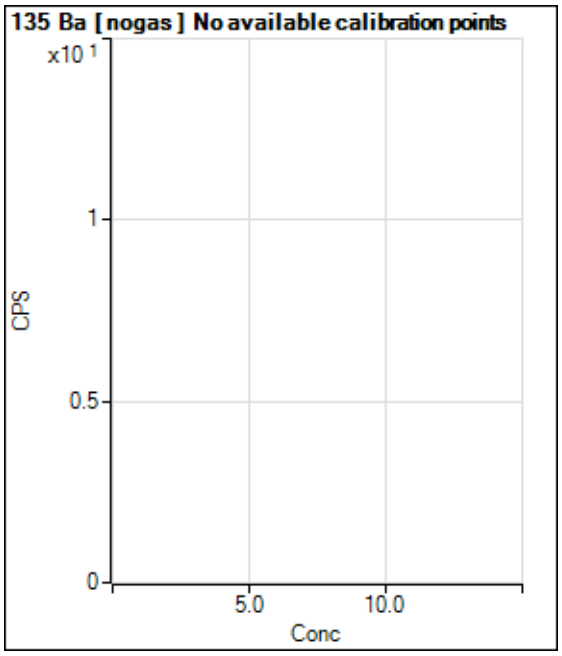
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0002	P	6.1
2	☐	2.000	1.964	9609.48	0.0111	P	6.0
3	☐	5.000	4.859	22935.33	0.0273	P	3.2
4	☐	10.000	9.846	46943.33	0.0551	P	1.2
5	☐	100.000	96.657	469181.32	0.5395	P	2.4
6	☐	200.000	201.683	956437.36	1.1254	P	2.4
7	☐	1.000					

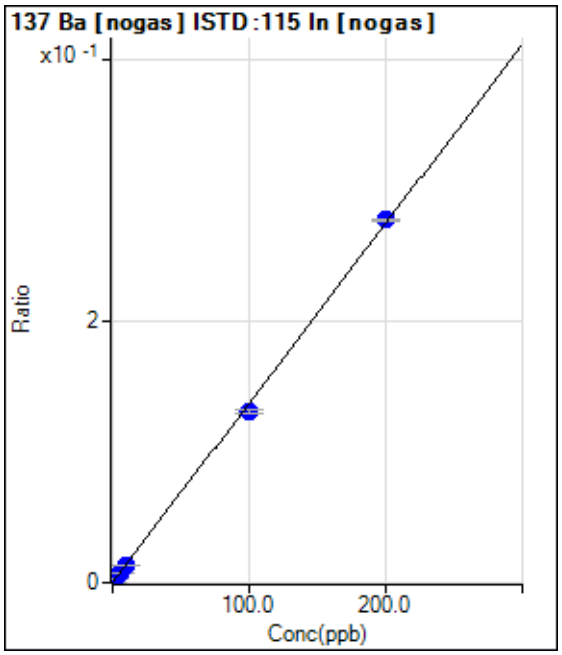
y = 0.0056 * x + 1.7638E-004
R = 0.9998
DL = 0.005788
BEC = 0.03161

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			223.34		P	15.7
2	☐			4694.05		P	4.7
3	☐			11547.39		P	2.1
4	☐			22414.82		P	4.3
5	☐			225139.94		P	0.8
6	☐			443237.16		P	0.6
7	☐						

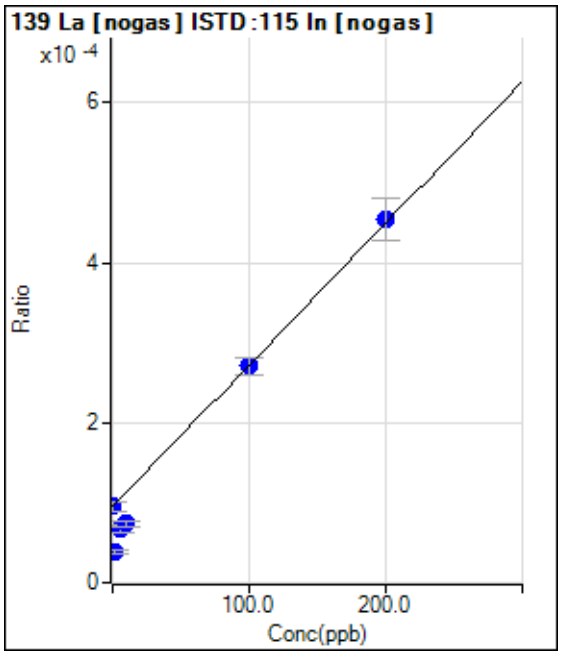
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0001	P	10.0
2	☐	2.000	1.909	8162.06	0.0027	P	1.5
3	☐	5.000	4.936	20055.23	0.0069	P	2.0
4	☐	10.000	9.426	38359.88	0.0131	P	7.2
5	☐	100.000	95.738	385949.07	0.1314	P	2.5
6	☐	200.000	202.162	762369.57	0.2774	P	0.2
7	☐	1.000					

y = 0.0014 * x + 1.2227E-004
R = 0.9997
DL = 0.02675
BEC = 0.08914

Weight: <None>
Min Conc: <None>

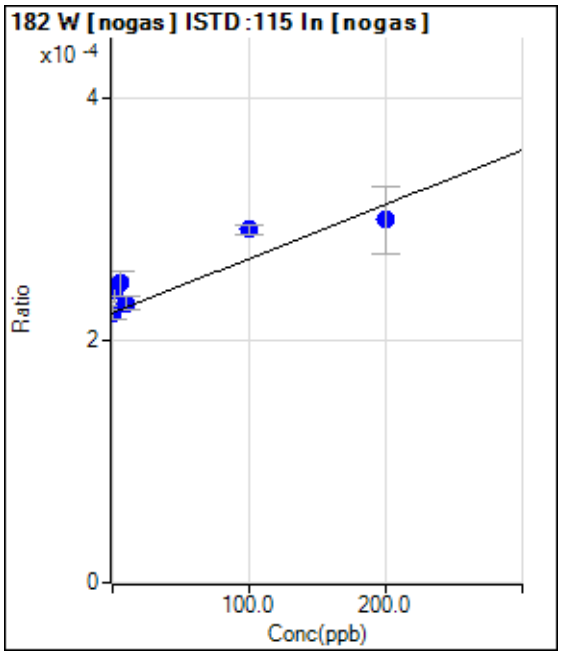


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	280.01	0.0001	P	12.8
2	☐	2.000	-32.168	113.33	0.0000	P	10.1
3	☐	5.000	-15.578	196.67	0.0001	P	13.4
4	☐	10.000	-12.130	216.67	0.0001	P	7.7
5	☐	100.000	99.367	796.70	0.0003	P	8.0
6	☐	200.000	202.279	1246.73	0.0005	P	11.7
7	☐	1.000					

y = 1.7727E-006 * x + 9.5069E-005
R = 0.9921
DL = 20.62
BEC = 53.63

Weight: <None>
Min Conc: <None>

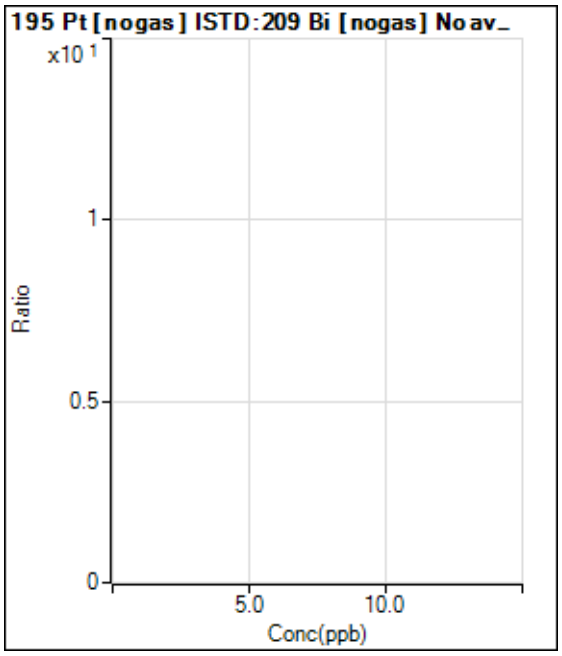
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	656.69	0.0002	P	5.0
2	☐	2.000	42.368	720.03	0.0002	P	8.2
3	☐	5.000	54.122	720.03	0.0002	P	8.4
4	☐	10.000	17.603	680.02	0.0002	P	5.1
5	☐	100.000	153.435	856.71	0.0003	P	2.8
6	☐	200.000	171.271	823.37	0.0003	P	18.5
7	☐	1.000					

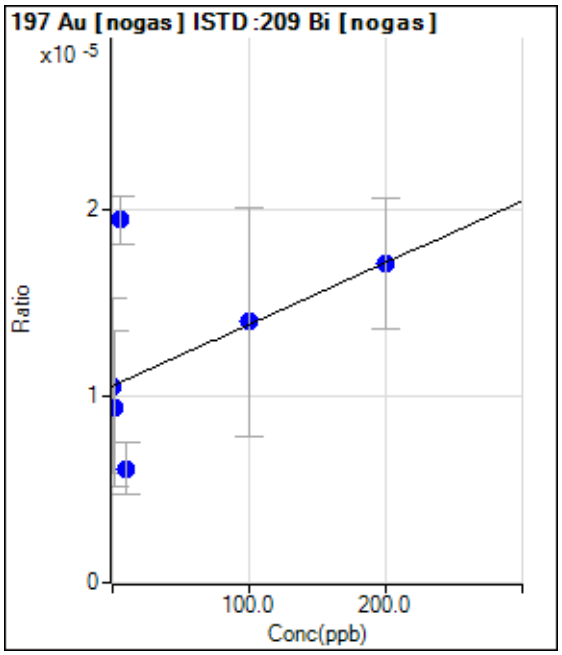
y = 4.4762E-007 * x + 2.2300E-004
R = 0.9178
DL = 74.2
BEC = 498.2

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

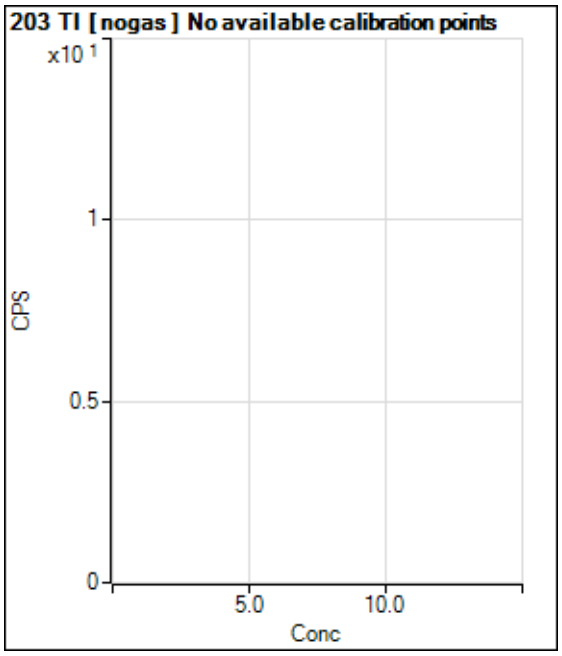
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	89.5
2	☐	2.000	-36.140	20.00	0.0000	P	89.4
3	☐	5.000	269.161	43.33	0.0000	P	13.6
4	☐	10.000	-134.369	13.33	0.0000	P	45.4
5	☐	100.000	104.141	30.00	0.0000	P	87.5
6	☐	200.000	198.925	36.67	0.0000	P	41.4
7	☐	1.000					

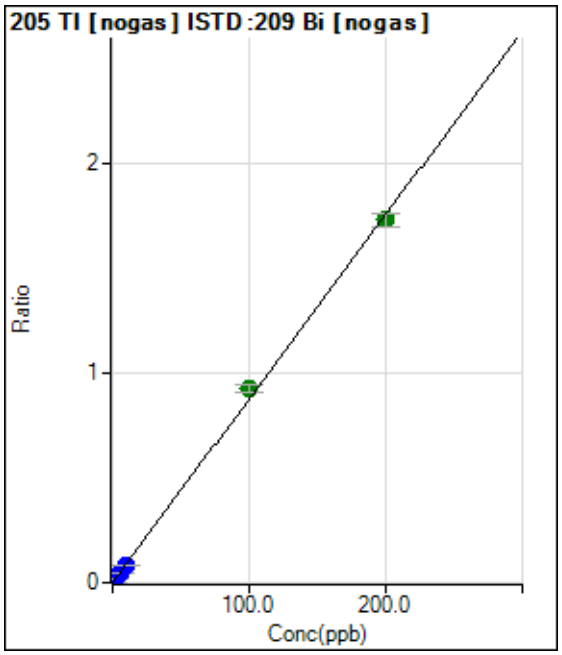
y = 3.3063E-008 * x + 1.0545E-005
R = 0.4659
DL = 856.1
BEC = 318.9

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			323.34		P	17.6
2	☐			16355.06		P	0.3
3	☐			41647.05		P	1.2
4	☐			79581.84		P	2.0
5	☐			806286.21		P	1.4
6	☐			1556970.24		A	2.1
7	☐						

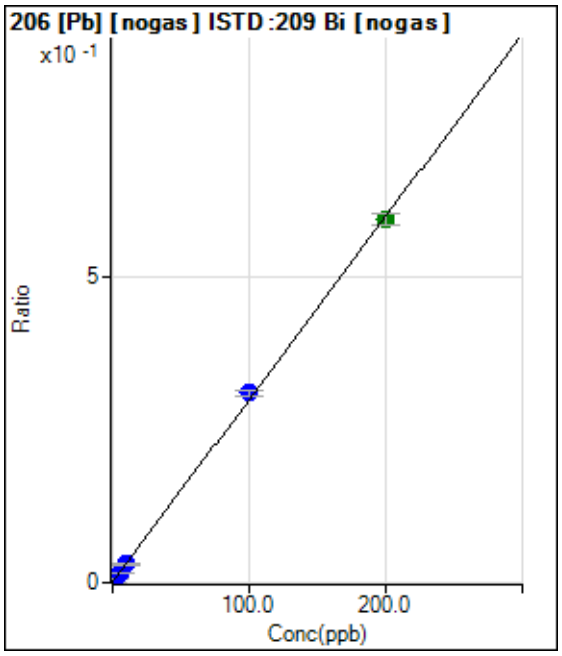
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	936.70	0.0004	P	8.7
2	☐	2.000	2.036	39789.00	0.0183	P	4.5
3	☐	5.000	5.001	98873.48	0.0444	P	1.6
4	☐	10.000	9.627	186744.61	0.0850	P	2.8
5	☐	100.000	105.376	1982430.86	0.9262	A	4.3
6	☐	200.000	197.330	3703546.09	1.7341	A	3.7
7	☐	1.000					

y = 0.0088 * x + 4.2228E-004
R = 0.9995
DL = 0.01261
BEC = 0.04807

Weight: <None>
Min Conc: <None>

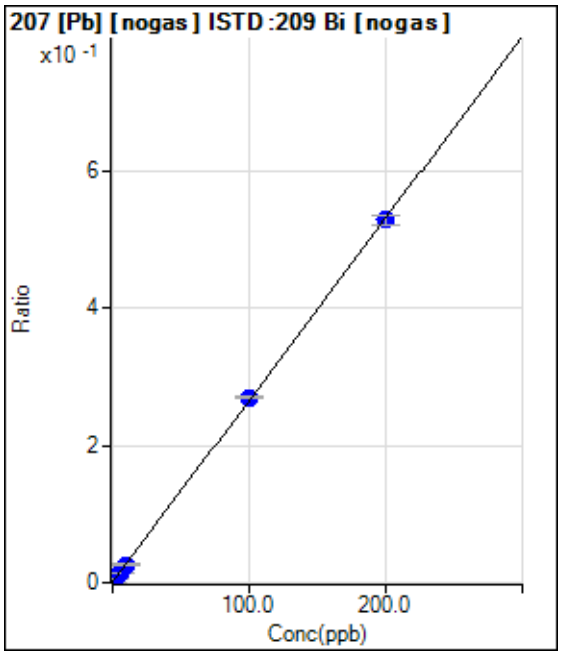


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1976.82	0.0009	P	12.5
2	☐	2.000	2.017	14993.78	0.0069	P	5.6
3	☐	5.000	5.043	35455.56	0.0159	P	3.4
4	☐	10.000	9.792	66021.51	0.0301	P	2.1
5	☐	100.000	103.407	661155.56	0.3089	P	3.2
6	☐	200.000	198.306	1263348.76	0.5915	A	3.1
7	☐	1.000					

y = 0.0030 * x + 8.9176E-004
R = 0.9998
DL = 0.1123
BEC = 0.2994

Weight: <None>
Min Conc: <None>

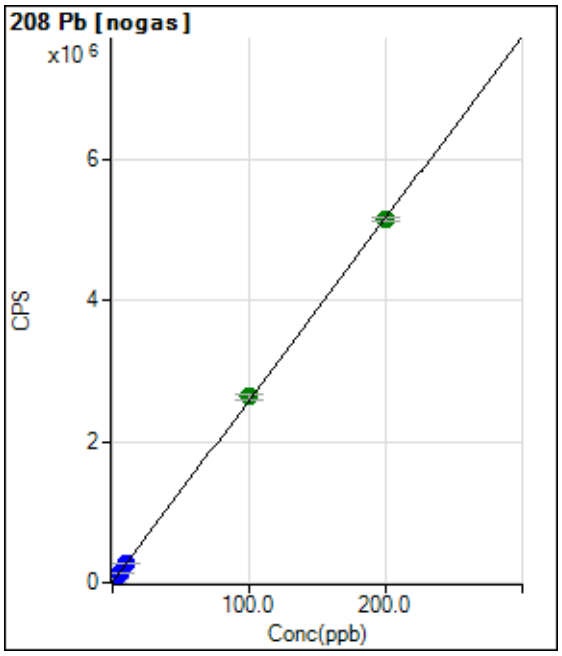
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1600.10	0.0007	P	0.4
2	☐	2.000	1.989	13025.45	0.0060	P	4.1
3	☐	5.000	5.046	31410.53	0.0141	P	3.9
4	☐	10.000	9.711	58134.39	0.0265	P	2.6
5	☐	100.000	101.596	578190.12	0.2700	P	1.2
6	☐	200.000	199.215	1129521.83	0.5288	P	2.4
7	☐	1.000					

y = 0.0027 * x + 7.2160E-004
R = 1.0000
DL = 0.003462
BEC = 0.2722

Weight: <None>
Min Conc: <None>

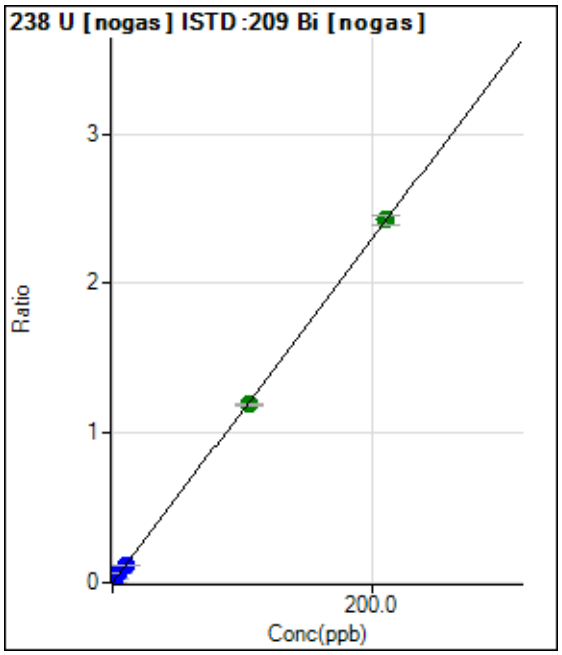


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7807.55		P	5.0
2	☐	2.000	2.017	59827.30		P	2.8
3	☐	5.000	5.297	144401.22		P	1.2
4	☐	10.000	10.008	265862.44		P	1.2
5	☐	100.000	101.834	2633567.12		A	3.4
6	☐	200.000	199.075	5140897.84		A	1.0
7	☐	1.000					

y = 25784.7069 * x + 7807.5467
R = 0.9999
DL = 0.0457
BEC = 0.3028

Weight: <None>
Min Conc: <None>

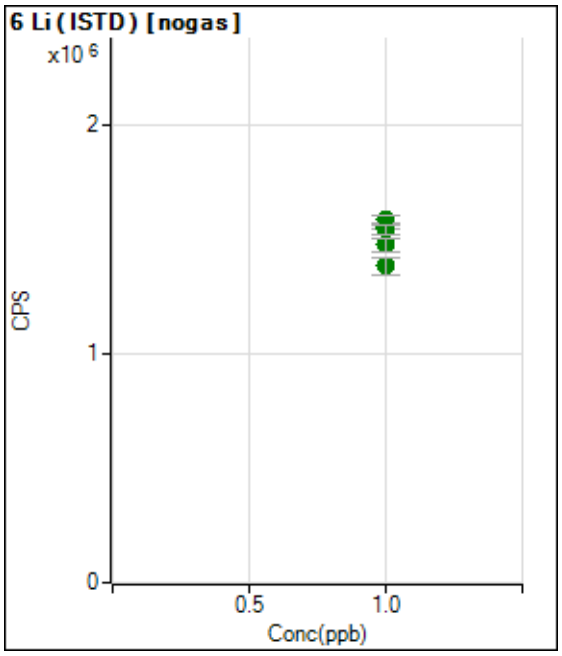
Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	920.05	0.0004	P	11.1
2	☐	2.000	2.101	53451.15	0.0246	P	4.3
3	☐	5.000	5.339	137863.44	0.0618	P	1.2
4	☐	10.000	10.196	258592.66	0.1177	P	2.0
5	☐	105.000	103.530	2550997.83	1.1914	A	0.7
6	☐	210.000	210.717	5178878.26	2.4244	A	2.5
7	☐	1.000					

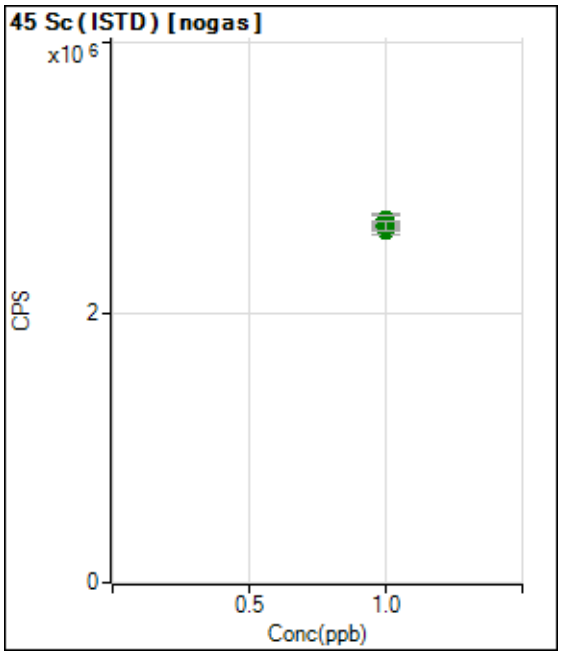
y = 0.0115 * x + 4.1515E-004
R = 1.0000
DL = 0.01206
BEC = 0.03609

Weight: <None>
Min Conc: <None>

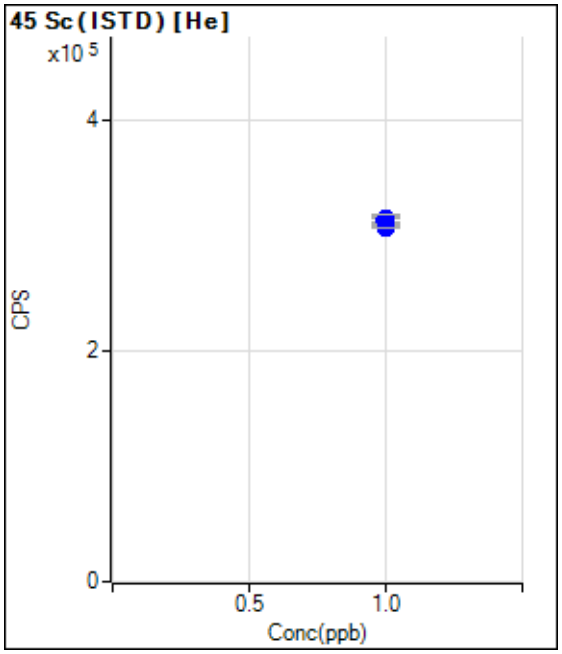


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1585711.82		A	2.1
2	☐	1.000		1554556.04		A	0.8
3	☐	1.000		1559964.44		A	1.4
4	☐	1.000		1543551.46		A	2.4
5	☐	1.000		1476299.55		A	4.2
6	☐	1.000		1385623.50		A	5.3
7	☐	1.000					

Calibration for 014_ICV.d

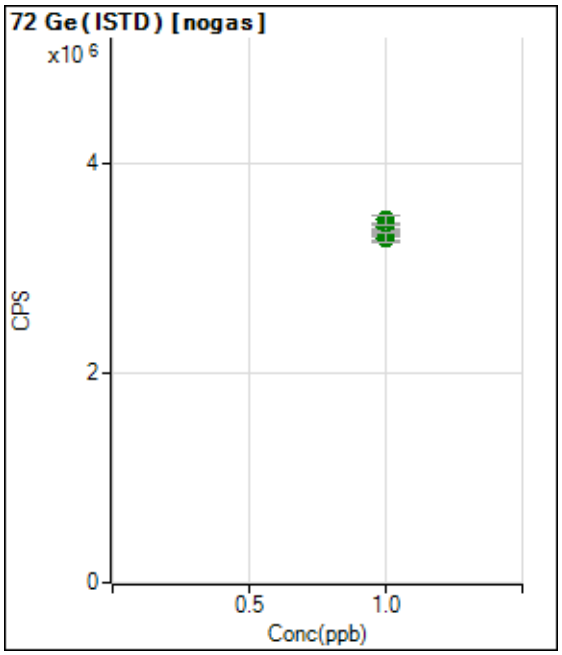


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2688406.47		A	3.8
2	☐	1.000		2687601.94		A	2.2
3	☐	1.000		2656333.82		A	0.4
4	☐	1.000		2645685.79		A	2.5
5	☐	1.000		2600945.06		A	2.0
6	☐	1.000		2639557.20		A	2.8
7	☐	1.000					

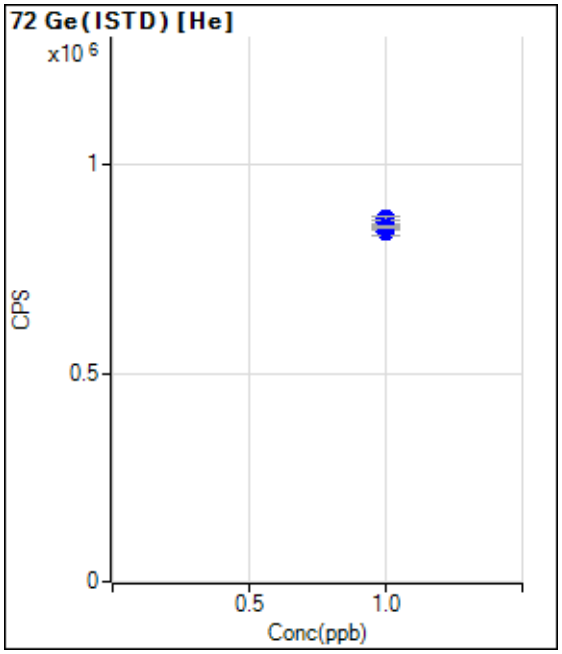


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		312825.94		P	2.1
2	☐	1.000		314276.81		P	1.4
3	☐	1.000		311939.78		P	1.5
4	☐	1.000		314499.55		P	2.3
5	☐	1.000		309837.37		P	0.6
6	☐	1.000		306836.40		P	0.3
7	☐	1.000					

Calibration for 014_ICV.d

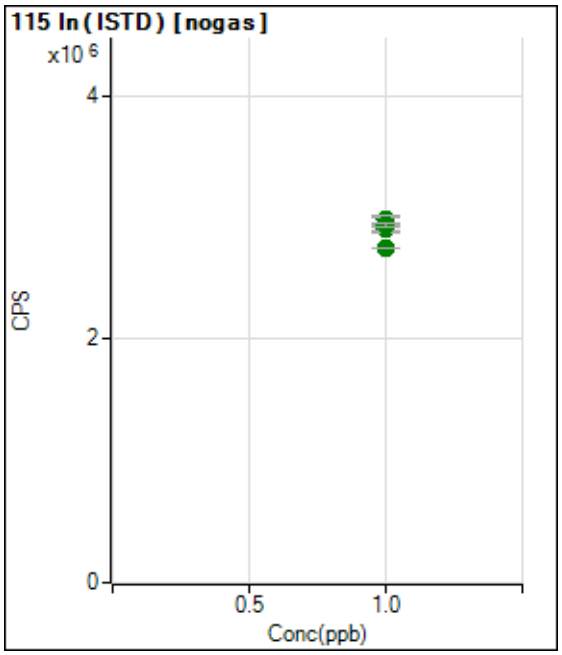


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3337600.89		A	2.0
2	☐	1.000		3300062.87		A	1.6
3	☐	1.000		3392671.30		A	2.1
4	☐	1.000		3281464.12		A	2.0
5	☐	1.000		3464802.55		A	2.6
6	☐	1.000		3292677.45		A	2.9
7	☐	1.000					

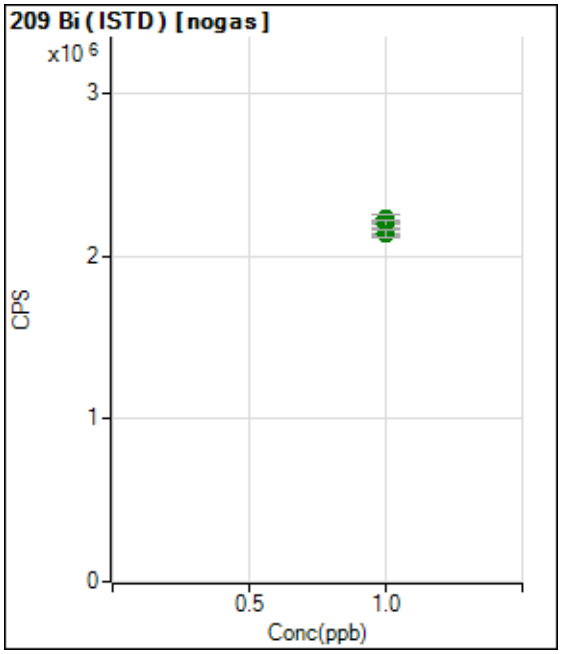


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		850275.43		P	1.3
2	☐	1.000		863194.99		P	1.1
3	☐	1.000		840658.92		P	2.3
4	☐	1.000		851763.22		P	0.3
5	☐	1.000		869869.47		P	1.2
6	☐	1.000		849875.19		P	0.6
7	☐	1.000					

Calibration for 014_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2945133.14		A	0.4
2	☐	1.000		2979122.30		A	2.3
3	☐	1.000		2910121.60		A	2.1
4	☐	1.000		2943799.76		A	3.8
5	☐	1.000		2936727.49		A	1.4
6	☐	1.000		2747907.38		A	0.2
7	☐	1.000					



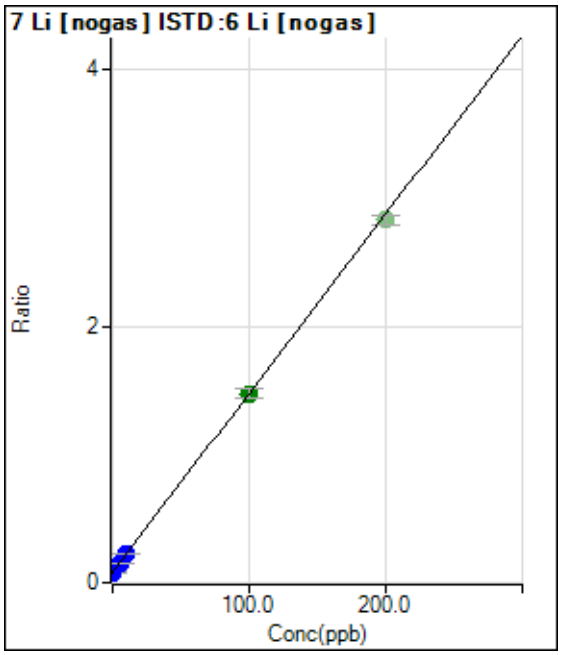
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2217405.07		A	0.8
2	☐	1.000		2175020.80		A	2.8
3	☐	1.000		2229572.93		A	2.3
4	☐	1.000		2197364.86		A	2.0
5	☐	1.000		2141340.49		A	1.6
6	☐	1.000		2136757.41		A	1.9
7	☐	1.000					

Calibration for 065_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121718A.b\
Analysis File: 121718A.batch.bin
DA Date-Time: 2018-12-18 00:15:50
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	059CALB.d	CAL BLK	2018-12-17 14:11:01
2	060CALS.d	2/10/200	2018-12-17 14:12:59
3	061CALS.d	5/25/500	2018-12-17 14:14:58
4	062CALS.d	10/50/1000	2018-12-17 14:16:56
5	063CALS.d	100/500/10K	2018-12-17 14:18:53
6	064CALS.d	200/1000/20K	2018-12-17 14:20:52
7			

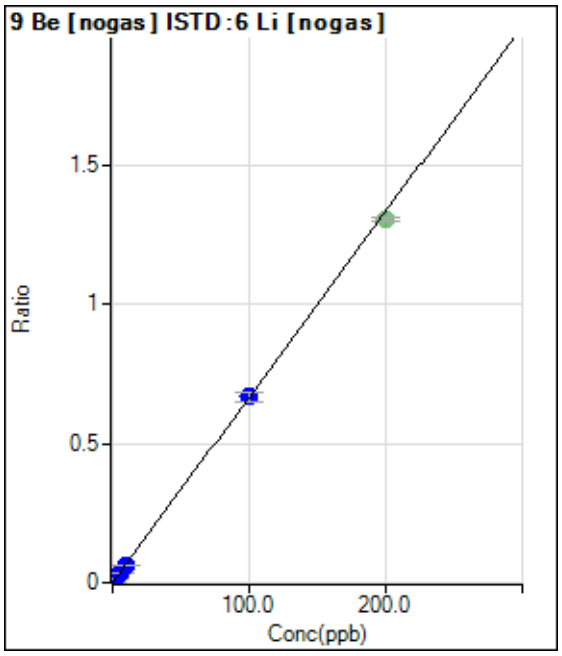
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	91357.79	0.0821	P	3.3
2	☐	2.000	2.323	120662.77	0.1145	P	1.4
3	☐	5.000	5.124	165523.61	0.1536	P	1.9
4	☐	10.000	10.068	232624.60	0.2225	P	3.6
5	☐	100.000	99.981	1483786.80	1.4762	A	4.8
6	☑	200.000		2810567.14	2.8280	A	2.4
7	☐	1.000					

y = 0.0139 * x + 0.0821
R = 1.0000
DL = 0.5841
BEC = 5.889

Weight: <None>
Min Conc: <None>

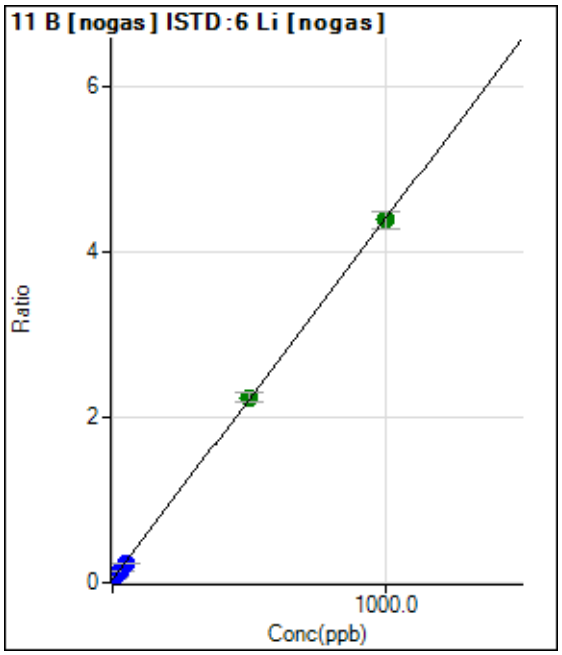


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	80.1
2	☐	2.000	1.820	12834.61	0.0122	P	6.8
3	☐	5.000	4.831	34795.50	0.0323	P	2.6
4	☐	10.000	9.475	66137.86	0.0633	P	0.8
5	☐	100.000	100.065	670503.40	0.6675	P	4.9
6	☑	200.000		1296750.87	1.3049	A	0.9
7	☐	1.000					

y = 0.0067 * x + 6.3075E-005
R = 1.0000
DL = 0.02271
BEC = 0.009457

Weight: <None>
Min Conc: <None>

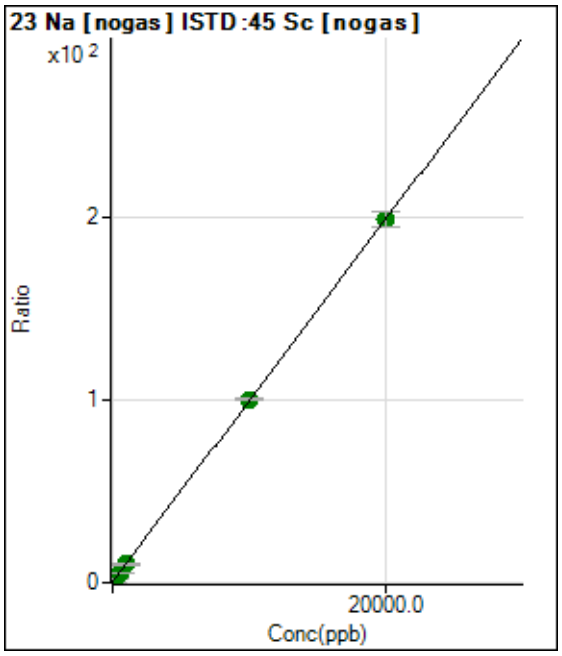
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40299.69	0.0362	P	3.8
2	☐	10.000	9.312	80894.13	0.0769	P	4.6
3	☐	25.000	23.401	149089.21	0.1384	P	2.9
4	☐	50.000	46.858	251518.90	0.2407	P	2.6
5	☐	500.000	504.994	2249775.91	2.2401	A	5.7
6	☐	1000.000	997.707	4359306.19	4.3904	A	5.1
7	☐	5.000					

y = 0.0044 * x + 0.0362
R = 1.0000
DL = 0.9446
BEC = 8.301

Weight: <None>
Min Conc: <None>

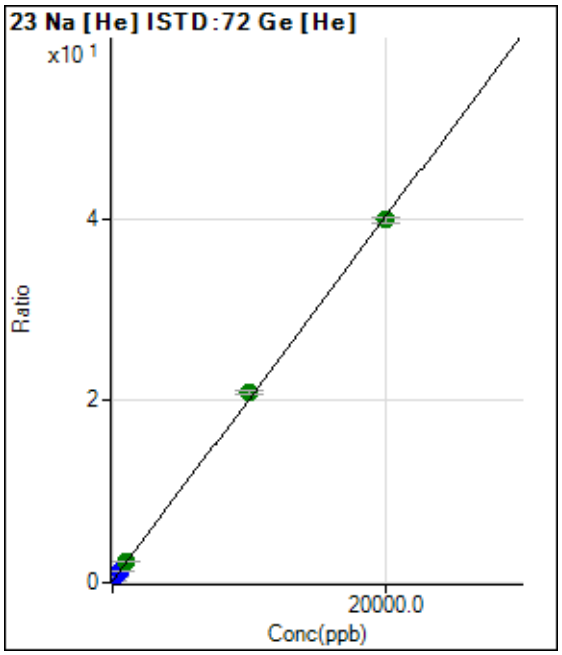


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1091986.06	0.4137	M	4.9
2	☐	200.000	195.380	6289841.55	2.3476	A	3.7
3	☐	500.000	510.801	14475799.80	5.4696	A	0.9
4	☐	1000.000	972.179	26429673.51	10.0364	A	2.0
5	☐	10000.00	10047.718	260161197.4	99.8668	A	1.0
6	☐	20000.00	19977.308	502648111.2	198.150	A	4.2
7	☐	100.000					

y = 0.0099 * x + 0.4137
R = 1.0000
DL = 6.154
BEC = 41.79

Weight: <None>
Min Conc: <None>

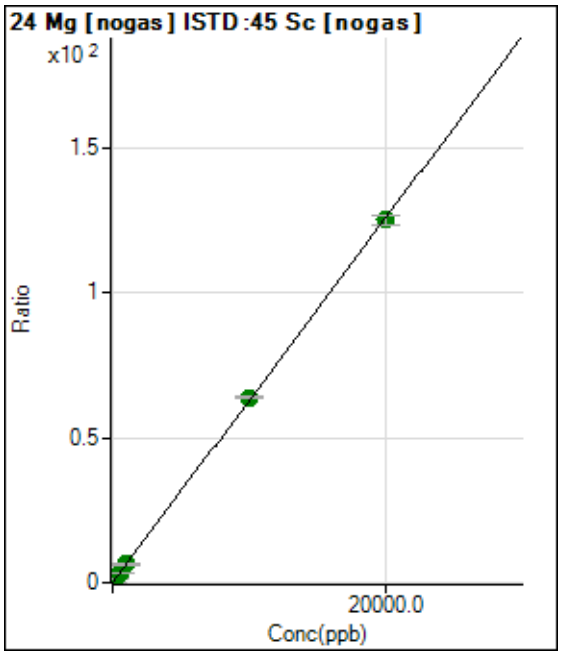
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	148478.29	0.1648	P	3.3
2	☐	200.000	211.534	522033.81	0.5883	P	0.8
3	☐	500.000	520.717	1091050.71	1.2072	P	2.2
4	☐	1000.000	1046.446	2016259.40	2.2595	A	1.8
5	☐	10000.00	10338.892	17689833.90	20.8606	A	2.2
6	☐	20000.00	19827.598	34052332.00	39.8546	A	1.6
7	☐	100.000					

y = 0.0020 * x + 0.1648
R = 0.9998
DL = 8.117
BEC = 82.34

Weight: <None>
Min Conc: <None>

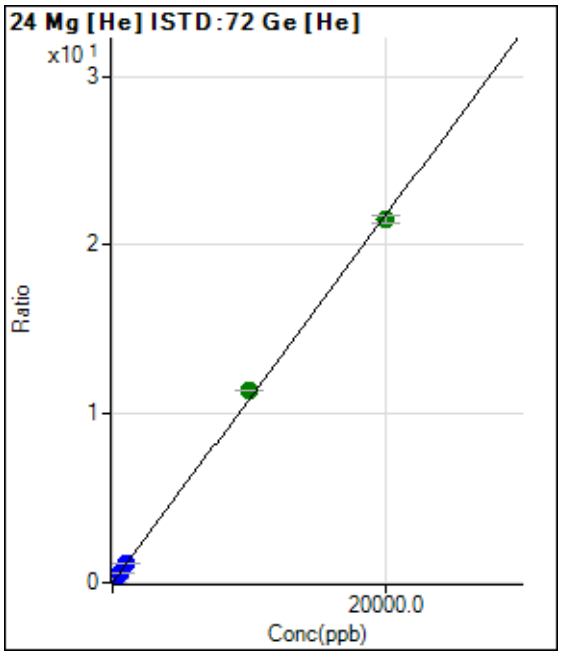


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	67969.08	0.0258	P	3.5
2	☐	200.000	206.373	3539152.29	1.3208	A	3.0
3	☐	500.000	527.250	8825423.90	3.3345	A	1.0
4	☐	1000.000	1014.379	16827168.60	6.3914	A	3.6
5	☐	10000.00	10176.830	166441541.2	63.8899	A	0.9
6	☐	20000.00	19910.121	317073007.0	124.970	A	2.4
7	☐	100.000					

y = 0.0063 * x + 0.0258
R = 0.9999
DL = 0.4276
BEC = 4.104

Weight: <None>
Min Conc: <None>

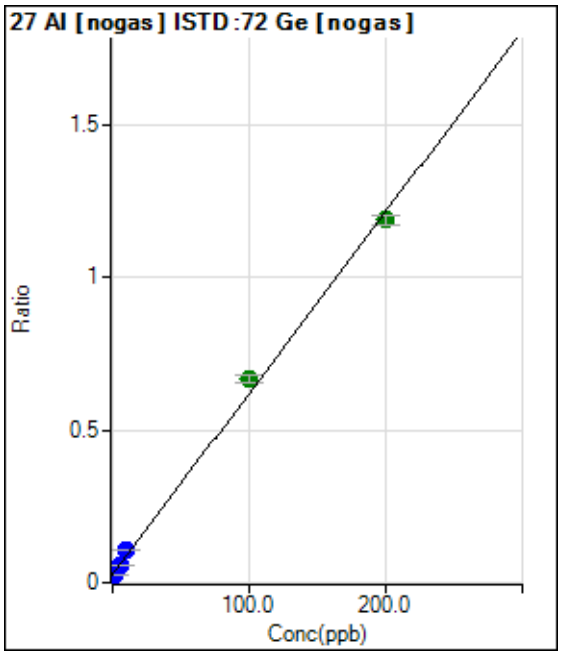
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4383.92	0.0049	P	5.4
2	☐	200.000	209.658	206579.55	0.2328	P	1.2
3	☐	500.000	520.987	516327.61	0.5713	P	2.1
4	☐	1000.000	1002.581	977045.53	1.0948	P	1.0
5	☐	10000.00	10476.125	9661659.44	11.3940	A	0.9
6	☐	20000.00	19761.187	18354026.81	21.4882	A	2.0
7	☐	100.000					

y = 0.0011 * x + 0.0049
R = 0.9996
DL = 0.722
BEC = 4.478

Weight: <None>
Min Conc: <None>

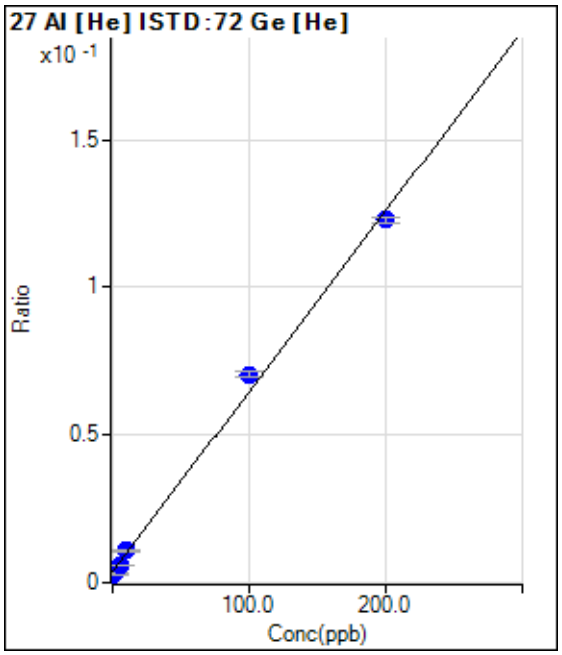


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90581.25	0.0269	P	2.9
2	☐	2.000	0.108	95712.67	0.0275	P	3.1
3	☐	5.000	4.948	197475.35	0.0562	P	3.8
4	☐	10.000	13.490	363068.04	0.1070	P	1.0
5	☐	100.000	108.298	2279289.97	0.6699	A	3.4
6	☐	200.000	195.697	3881593.90	1.1888	A	2.9
7	☐	1.000					

y = 0.0059 * x + 0.0269
R = 0.9985
DL = 0.4001
BEC = 4.524

Weight: <None>
Min Conc: <None>

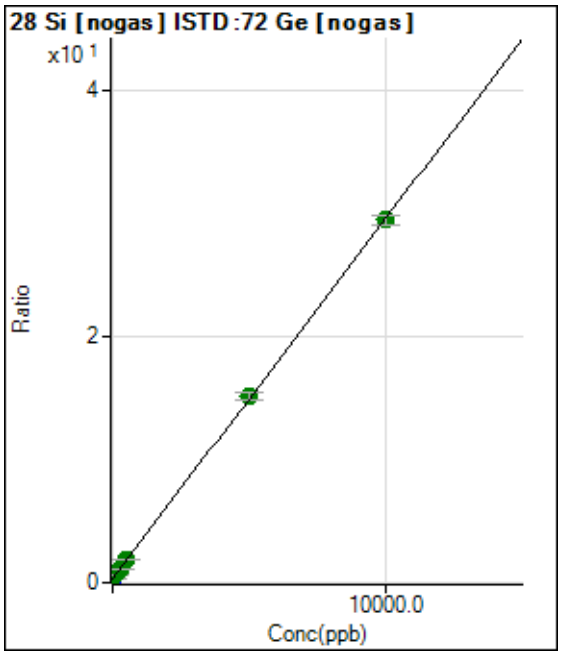
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.903	2313.52	0.0026	P	4.9
2	☐	2.000	-1.167	2676.90	0.0030	P	6.0
3	☐	5.000	3.732	5430.86	0.0060	P	1.7
4	☐	10.000	11.537	9612.58	0.0108	P	3.6
5	☐	100.000	109.629	59898.33	0.0706	P	2.2
6	☐	200.000	195.172	104952.74	0.1229	P	1.8
7	☐	1.000					

y = 6.1036E-004 * x + 0.0037
R = 0.9980
DL = 0.6159
BEC = 6.11

Weight: <None>
Min Conc: <None>

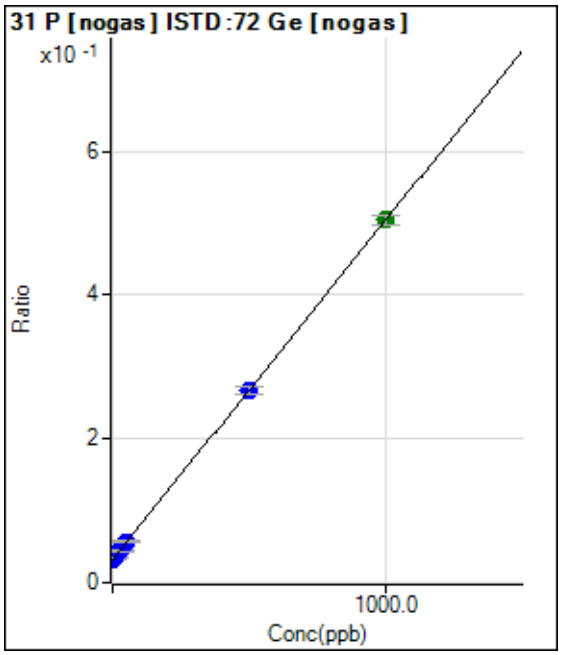


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1073779.25	0.3185	P	1.9
2	☐	100.000	109.487	2223320.75	0.6389	A	1.6
3	☐	250.000	268.422	3877752.86	1.1041	A	2.1
4	☐	500.000	519.669	6243411.58	1.8396	A	0.9
5	☐	5000.000	5050.087	51371814.24	15.1003	A	4.1
6	☐	10000.00	9973.418	96361791.90	29.5111	A	2.6
7	☐	5.000					

y = 0.0029 * x + 0.3185
R = 1.0000
DL = 6.222
BEC = 108.8

Weight: <None>
Min Conc: <None>

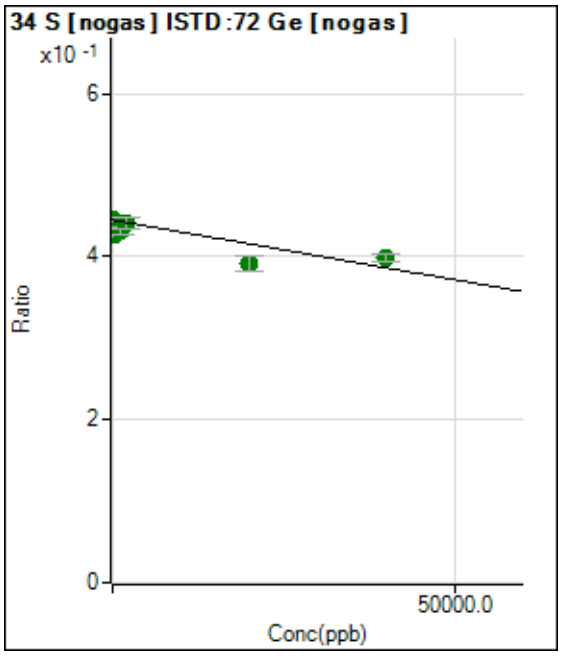
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	107862.43	0.0320	P	2.7
2	☐	10.000	6.584	122138.57	0.0351	P	1.9
3	☐	25.000	26.294	155940.79	0.0444	P	2.7
4	☐	50.000	53.626	194487.46	0.0573	P	1.9
5	☐	500.000	497.519	907933.92	0.2669	P	3.9
6	☐	1000.000	1001.061	1647625.18	0.5046	A	2.5
7	☐	5.000					

y = 4.7211E-004 * x + 0.0320
R = 1.0000
DL = 5.421
BEC = 67.76

Weight: <None>
Min Conc: <None>

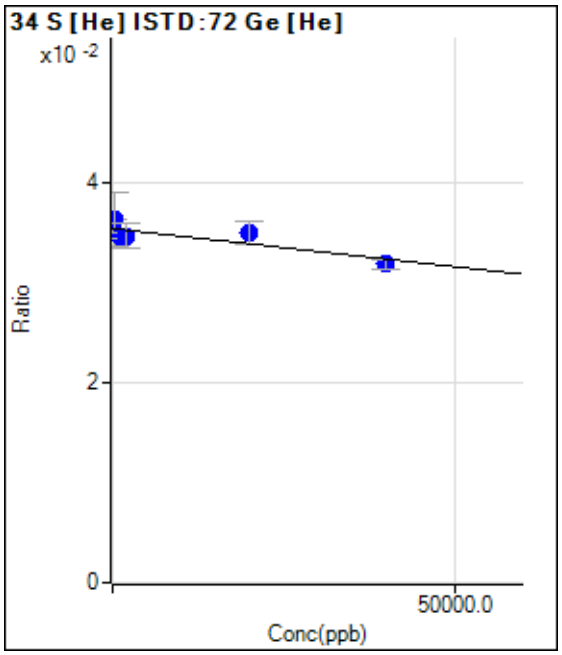


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1501250.91	0.4452	A	1.2
2	☐	400.000	12001.357	1488134.54	0.4276	A	1.1
3	☐	1000.000	9011.107	1517256.09	0.4320	A	2.1
4	☐	2000.000	2351.651	1498780.73	0.4417	A	3.1
5	☐	20000.00	36553.205	1332291.89	0.3916	A	4.3
6	☐	40000.00	31389.524	1303611.62	0.3992	A	2.0
7	☐	100.000					

y = -1.4652E-006 * x + 0.4452
R = -0.8350
DL = -1.081E+04
BEC = -3.038E+05

Weight: <None>
Min Conc: <None>

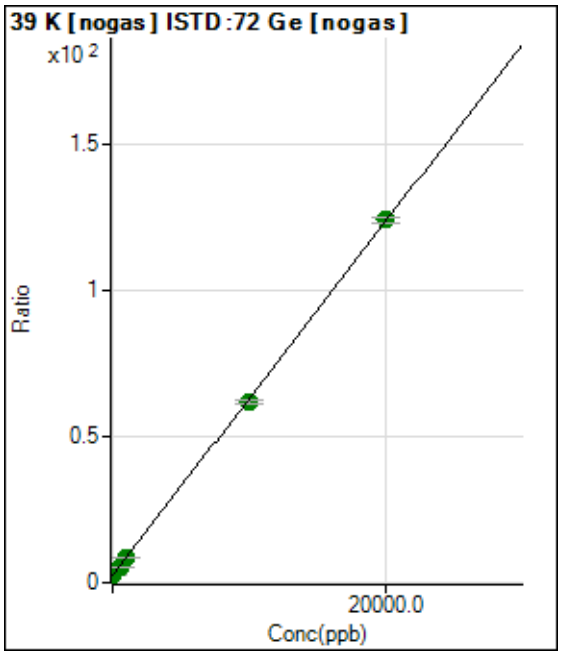
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31866.34	0.0354	P	5.3
2	☐	400.000	-11327.61	32134.59	0.0362	P	14.8
3	☐	1000.000	9308.780	31331.71	0.0347	P	1.3
4	☐	2000.000	9391.950	30897.27	0.0347	P	6.8
5	☐	20000.00	5161.266	29661.33	0.0350	P	6.2
6	☐	40000.00	46959.326	27157.56	0.0318	P	2.8
7	☐	100.000					

y = -7.6043E-008 * x + 0.0354
R = -0.8541
DL = -7.353E+04
BEC = -4.651E+05

Weight: <None>
Min Conc: <None>

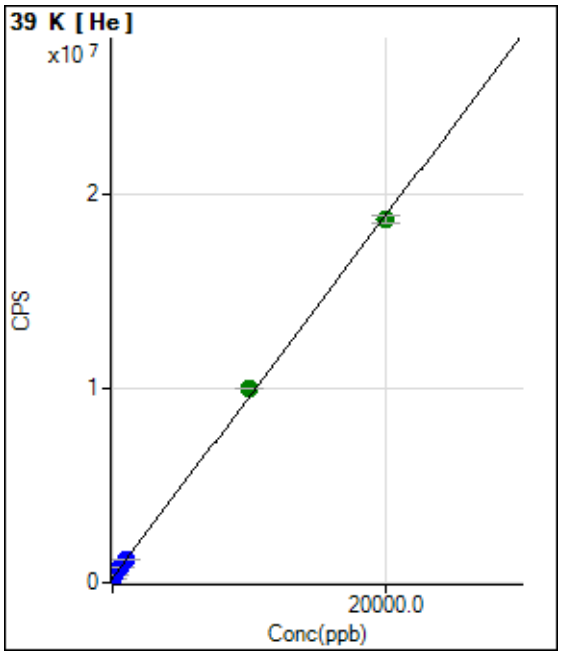


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8588530.92	2.5473	A	2.3
2	☐	200.000	186.626	12795002.11	3.6770	A	1.3
3	☐	500.000	494.235	19454337.41	5.5391	A	1.8
4	☐	1000.000	1015.381	29502246.49	8.6938	A	1.8
5	☐	10000.00	9815.233	210855221.3	61.9622	A	2.8
6	☐	20000.00	20091.892	405485059.0	124.170	A	1.5
7	☐	100.000					

y = 0.0061 * x + 2.5473
R = 0.9999
DL = 29.39
BEC = 420.8

Weight: <None>
Min Conc: <None>

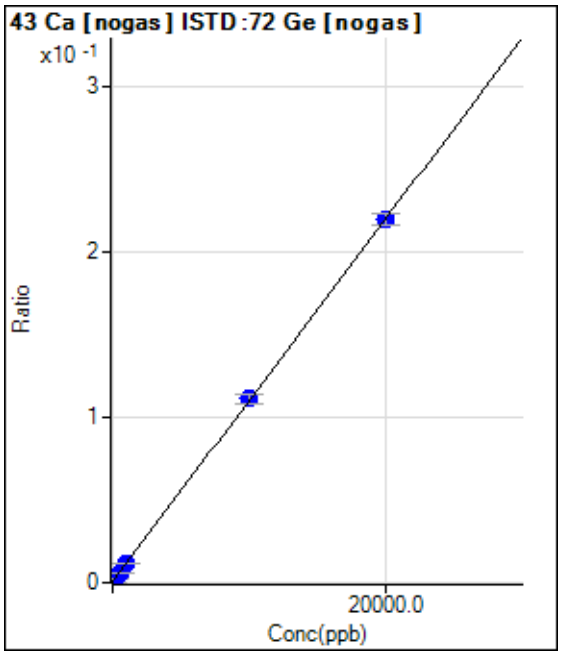
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243707.63		P	1.0
2	☐	200.000	213.149	442771.97		P	0.1
3	☐	500.000	549.676	757060.51		P	0.5
4	☐	1000.000	1039.085	1214129.23		P	0.7
5	☐	10000.00	10460.057	10012553.39		A	0.1
6	☐	20000.00	19766.644	18704152.22		A	2.1
7	☐	100.000					

y = 933.9190 * x + 243707.6333
R = 0.9996
DL = 7.849
BEC = 261

Weight: <None>
Min Conc: <None>

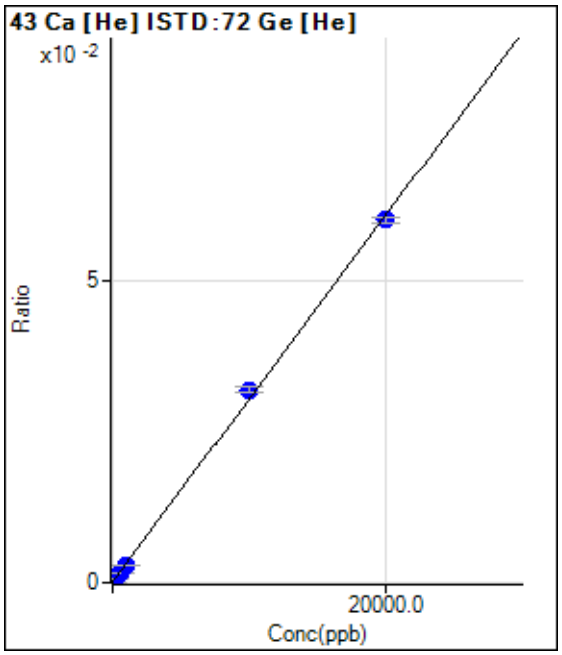


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1893.46	0.0006	P	1.2
2	☐	200.000	181.180	8858.94	0.0025	P	2.8
3	☐	500.000	509.105	21559.48	0.0061	P	4.2
4	☐	1000.000	1012.291	39532.50	0.0117	P	3.1
5	☐	10000.00	10079.064	377506.75	0.1110	P	4.2
6	☐	20000.00	19959.814	715737.72	0.2192	P	3.3
7	☐	100.000					

y = 1.0954E-005 * x + 5.6140E-004
R = 1.0000
DL = 1.826
BEC = 51.25

Weight: <None>
Min Conc: <None>

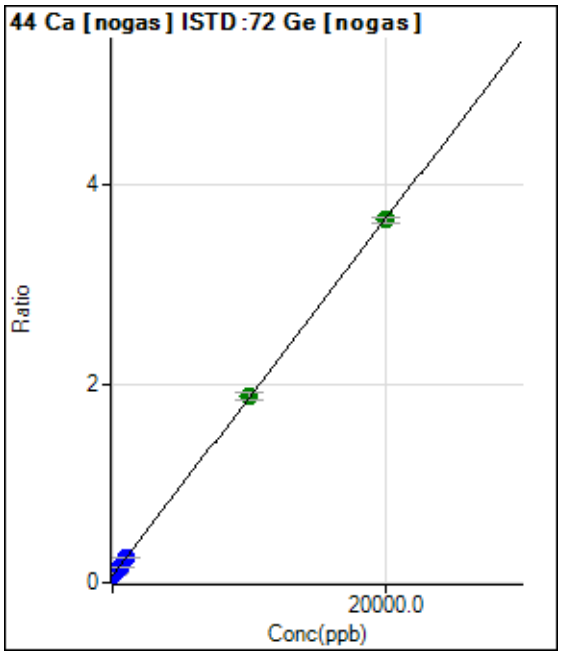
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	60.0
2	☐	200.000	190.241	616.69	0.0007	P	13.7
3	☐	500.000	470.720	1396.75	0.0015	P	8.4
4	☐	1000.000	925.664	2610.22	0.0029	P	4.3
5	☐	10000.00	10474.495	27026.56	0.0319	P	2.9
6	☐	20000.00	19767.299	51284.09	0.0600	P	1.7
7	☐	100.000					

y = 3.0314E-006 * x + 1.1860E-004
R = 0.9996
DL = 70.45
BEC = 39.12

Weight: <None>
Min Conc: <None>

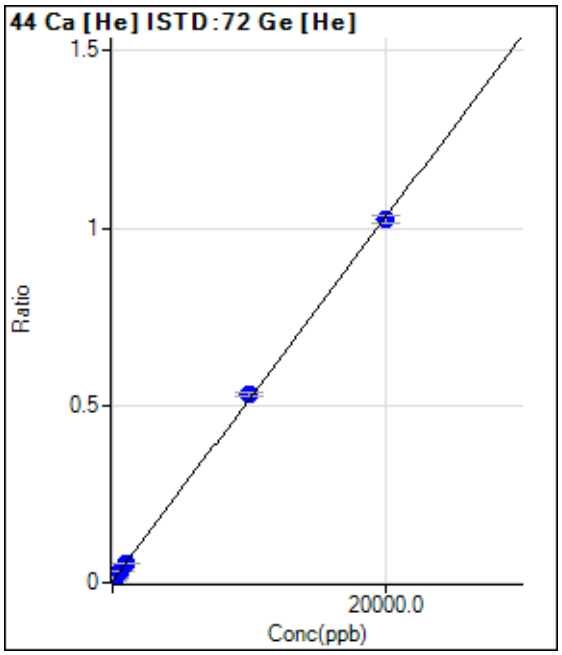


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	234983.34	0.0697	P	1.5
2	☐	200.000	173.916	351109.44	0.1009	P	0.8
3	☐	500.000	474.995	544210.15	0.1549	P	1.1
4	☐	1000.000	991.510	840259.83	0.2476	P	3.2
5	☐	10000.00	10094.970	6400615.53	1.8813	A	3.9
6	☐	20000.00	19953.825	11921098.99	3.6506	A	1.6
7	☐	100.000					

y = 1.7946E-004 * x + 0.0697
R = 1.0000
DL = 17.56
BEC = 388.3

Weight: <None>
Min Conc: <None>

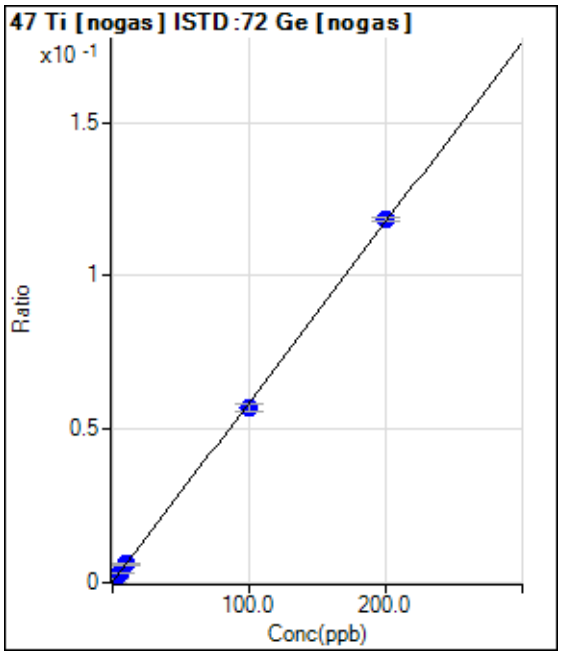
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3617.07	0.0040	P	4.1
2	☐	200.000	184.542	11964.01	0.0135	P	1.9
3	☐	500.000	524.845	27974.75	0.0309	P	2.8
4	☐	1000.000	997.020	49211.94	0.0552	P	4.0
5	☐	10000.00	10268.443	450189.86	0.5309	P	2.4
6	☐	20000.00	19865.461	874030.02	1.0233	P	2.1
7	☐	100.000					

y = 5.1309E-005 * x + 0.0040
R = 0.9999
DL = 9.7
BEC = 78.22

Weight: <None>
Min Conc: <None>

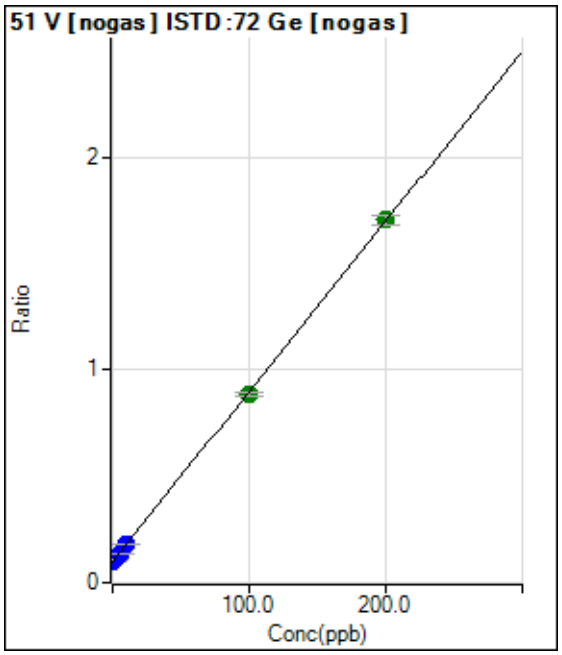


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	413.35	0.0001	P	25.3
2	☐	2.000	2.000	4510.62	0.0013	P	3.0
3	☐	5.000	5.145	11033.45	0.0031	P	1.0
4	☐	10.000	10.000	20324.84	0.0060	P	2.4
5	☐	100.000	97.336	194683.18	0.0572	P	4.5
6	☐	200.000	201.328	386242.93	0.1182	P	0.9
7	☐	1.000					

y = 5.8670E-004 * x + 1.2272E-004
R = 0.9999
DL = 0.1585
BEC = 0.2092

Weight: <None>
Min Conc: <None>

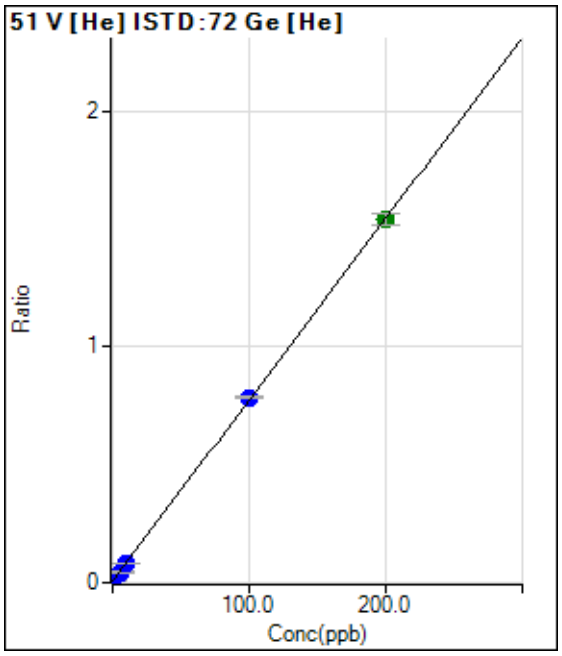
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	335282.35	0.0995	P	3.5
2	☐	2.000	1.572	389742.83	0.1120	P	2.9
3	☐	5.000	4.450	474194.57	0.1350	P	1.8
4	☐	10.000	10.232	614995.47	0.1812	P	1.4
5	☐	100.000	98.229	3009247.20	0.8842	A	2.4
6	☐	200.000	200.892	5568419.52	1.7043	A	2.5
7	☐	1.000					

y = 0.0080 * x + 0.0995
R = 0.9999
DL = 1.297
BEC = 12.45

Weight: <None>
Min Conc: <None>

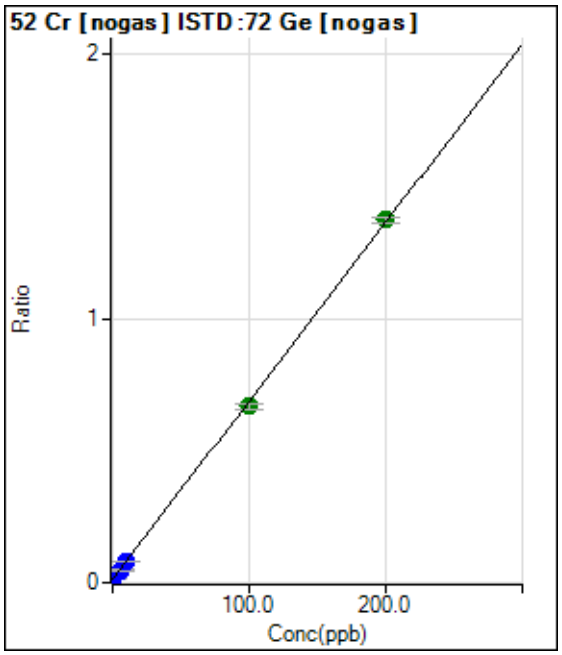


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.110	5140.05	0.0057	P	1.9
2	☐	2.000	1.872	18580.58	0.0209	P	0.8
3	☐	5.000	4.946	40273.36	0.0446	P	2.0
4	☐	10.000	9.631	71881.17	0.0806	P	1.8
5	☐	100.000	101.277	665436.12	0.7848	P	0.6
6	☐	200.000	199.382	1314854.33	1.5386	A	3.0
7	☐	1.000					

y = 0.0077 * x + 0.0066
R = 1.0000
DL = 0.04294
BEC = 0.8525

Weight: <None>
Min Conc: <None>

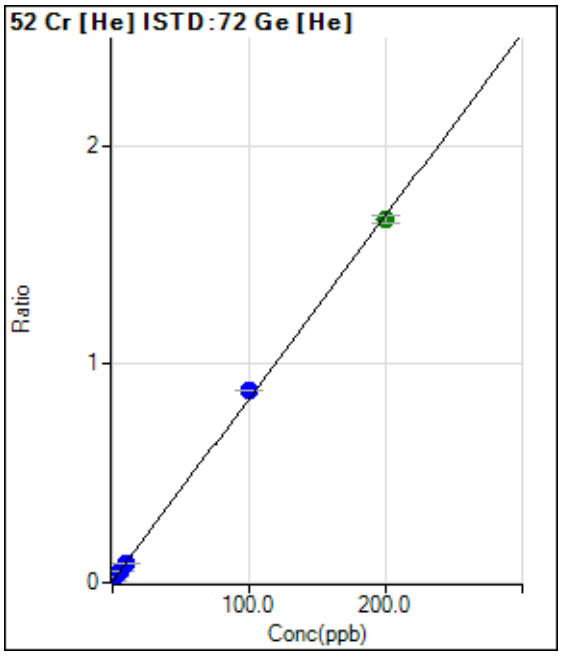
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43063.67	0.0128	P	0.8
2	☐	2.000	1.958	90426.93	0.0260	P	0.9
3	☐	5.000	5.037	164195.18	0.0468	P	2.7
4	☐	10.000	10.265	278416.52	0.0820	P	2.2
5	☐	100.000	96.871	2267960.28	0.6665	A	2.7
6	☐	200.000	201.551	4484299.72	1.3729	A	1.5
7	☐	1.000					

y = 0.0067 * x + 0.0128
R = 0.9998
DL = 0.04399
BEC = 1.892

Weight: <None>
Min Conc: <None>

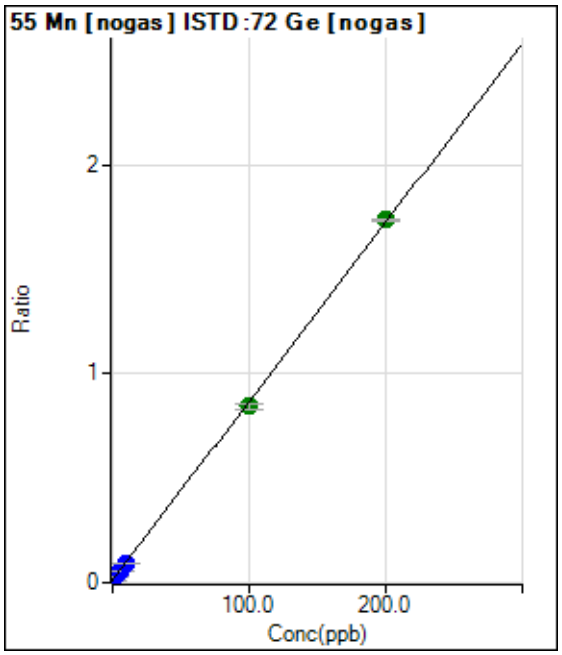


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6227.79	0.0069	P	7.4
2	☐	2.000	2.308	23248.93	0.0262	P	12.5
3	☐	5.000	5.281	46154.58	0.0511	P	1.4
4	☐	10.000	10.007	80805.86	0.0906	P	1.7
5	☐	100.000	104.522	746703.12	0.8806	P	0.4
6	☐	200.000	197.728	1417613.11	1.6597	A	2.1
7	☐	1.000					

y = 0.0084 * x + 0.0069
R = 0.9996
DL = 0.1828
BEC = 0.8272

Weight: <None>
Min Conc: <None>

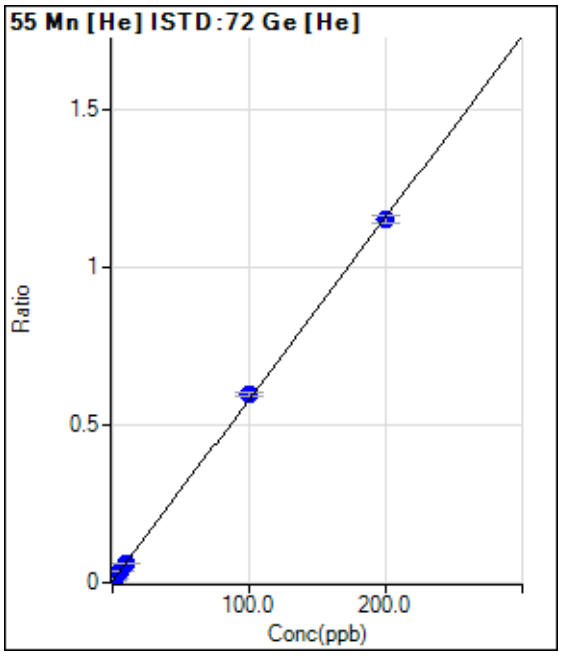
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41106.04	0.0122	P	1.5
2	☐	2.000	1.601	90063.61	0.0259	P	1.8
3	☐	5.000	5.030	193814.03	0.0552	P	3.6
4	☐	10.000	9.644	321171.31	0.0947	P	2.9
5	☐	100.000	97.045	2865239.33	0.8419	A	2.5
6	☐	200.000	201.499	5667499.08	1.7350	A	0.9
7	☐	1.000					

y = 0.0086 * x + 0.0122
R = 0.9999
DL = 0.06245
BEC = 1.426

Weight: <None>
Min Conc: <None>

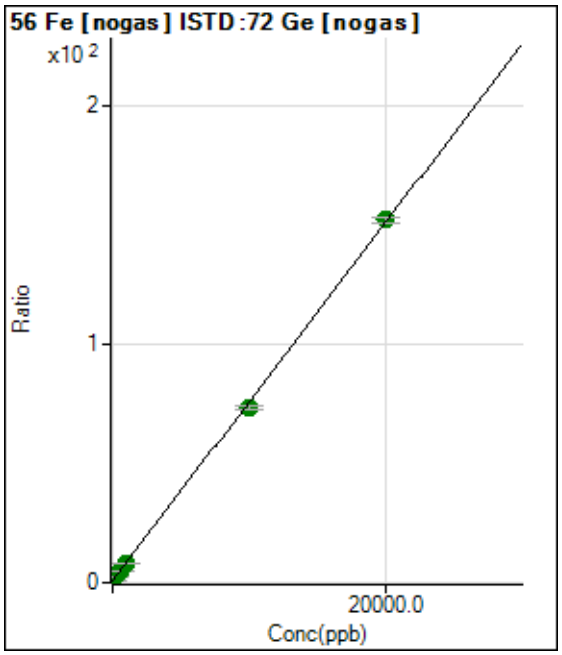


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4523.95	0.0050	P	9.1
2	☐	2.000	1.709	13211.58	0.0149	P	1.9
3	☐	5.000	4.998	30622.40	0.0339	P	0.2
4	☐	10.000	9.443	53106.56	0.0595	P	2.6
5	☐	100.000	102.647	506598.24	0.5974	P	2.0
6	☐	200.000	198.707	983901.52	1.1518	P	2.3
7	☐	1.000					

y = 0.0058 * x + 0.0050
R = 0.9999
DL = 0.2371
BEC = 0.8708

Weight: <None>
Min Conc: <None>

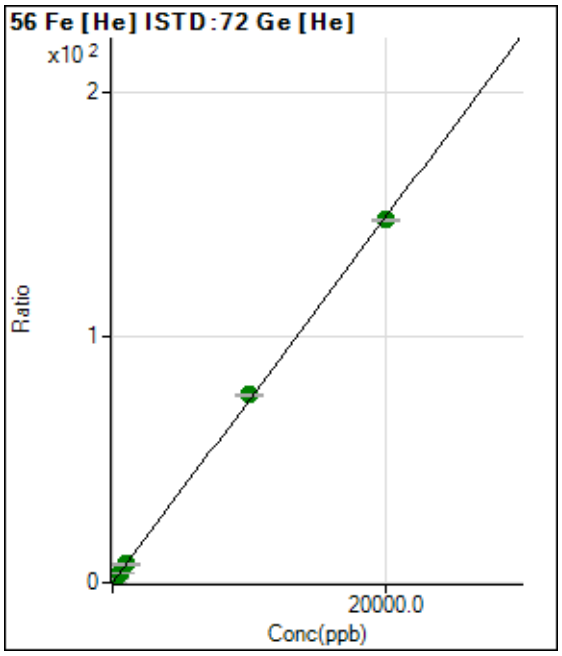
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2831591.60	0.8398	A	1.8
2	☐	200.000	196.217	8058684.04	2.3157	A	0.1
3	☐	500.000	508.177	16374029.53	4.6624	A	2.3
4	☐	1000.000	993.971	28223206.88	8.3165	A	1.3
5	☐	10000.00	9690.830	250949772.2	73.7354	A	2.4
6	☐	20000.00	20154.720	497840761.1	152.446	A	1.5
7	☐	100.000					

y = 0.0075 * x + 0.8398
R = 0.9998
DL = 5.958
BEC = 111.6

Weight: <None>
Min Conc: <None>

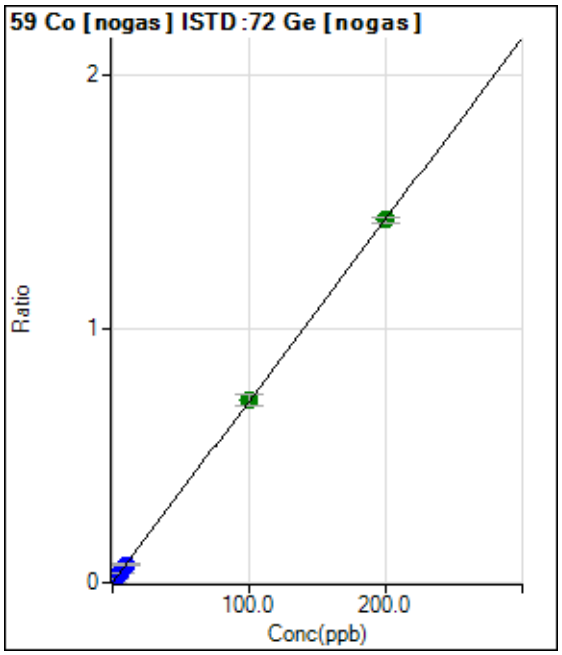


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24416.38	0.0271	P	3.8
2	☐	200.000	210.663	1415843.99	1.5954	A	2.0
3	☐	500.000	520.575	3527671.93	3.9027	A	1.5
4	☐	1000.000	1005.188	6699822.19	7.5105	A	3.8
5	☐	10000.00	10270.007	64854615.70	76.4850	A	1.3
6	☐	20000.00	19864.116	126357701.4	147.911	A	0.8
7	☐	100.000					

y = 0.0074 * x + 0.0271
R = 0.9999
DL = 0.4197
BEC = 3.641

Weight: <None>
Min Conc: <None>

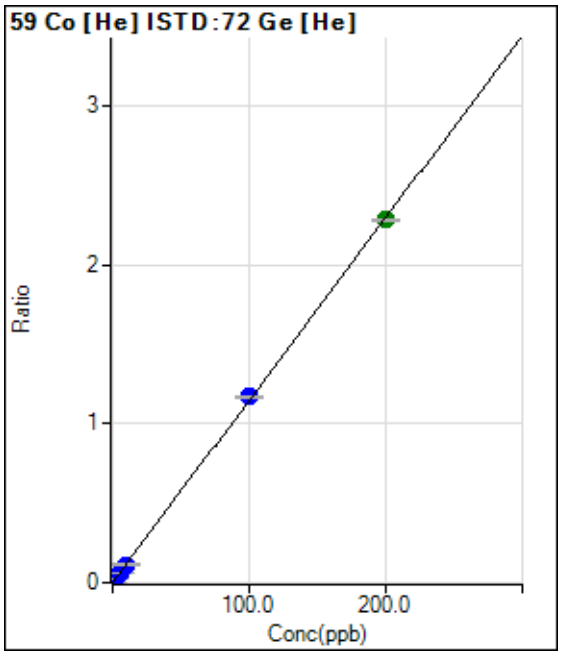
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1216.73	0.0004	P	17.4
2	☐	2.000	2.038	51934.34	0.0149	P	2.2
3	☐	5.000	5.166	130890.50	0.0373	P	3.0
4	☐	10.000	9.981	243194.83	0.0717	P	3.4
5	☐	100.000	100.614	2445708.97	0.7193	A	6.8
6	☐	200.000	199.690	4661032.74	1.4273	A	1.4
7	☐	1.000					

y = 0.0071 * x + 3.6045E-004
R = 1.0000
DL = 0.02629
BEC = 0.05044

Weight: <None>
Min Conc: <None>

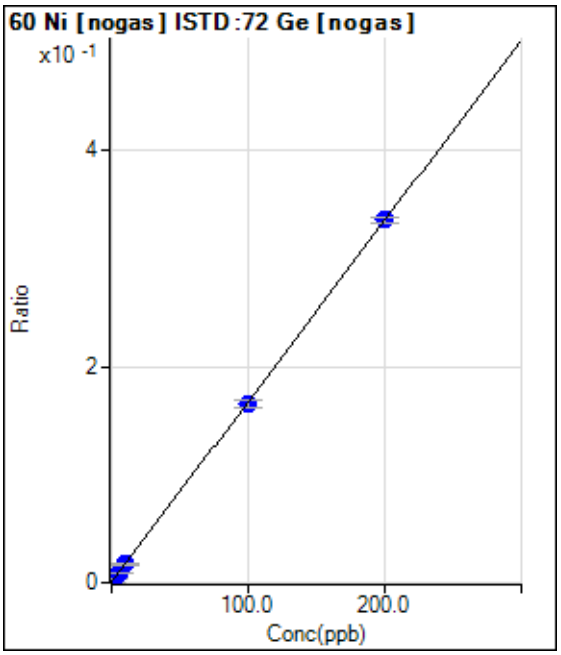


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	426.68	0.0005	P	12.6
2	☐	2.000	2.080	21569.60	0.0243	P	1.9
3	☐	5.000	5.012	52341.42	0.0579	P	2.5
4	☐	10.000	9.832	100936.01	0.1132	P	3.6
5	☐	100.000	102.004	991618.27	1.1694	P	1.1
6	☐	200.000	199.005	1948647.26	2.2810	A	0.5
7	☐	1.000					

y = 0.0115 * x + 4.7336E-004
R = 0.9999
DL = 0.01558
BEC = 0.04131

Weight: <None>
Min Conc: <None>

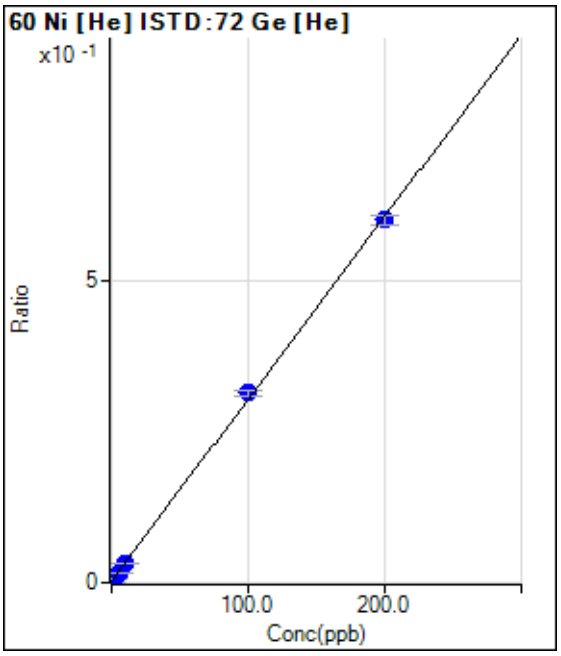
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.029	1603.42	0.0005	P	6.6
2	☐	2.000	2.147	13982.26	0.0040	P	0.7
3	☐	5.000	5.354	32939.98	0.0094	P	4.6
4	☐	10.000	10.057	58507.13	0.0172	P	5.6
5	☐	100.000	98.852	564036.24	0.1658	P	3.8
6	☐	200.000	200.561	1097013.84	0.3359	P	1.8
7	☐	1.000					

y = 0.0017 * x + 4.2665E-004
R = 1.0000
DL = 0.05654
BEC = 0.255

Weight: <None>
Min Conc: <None>

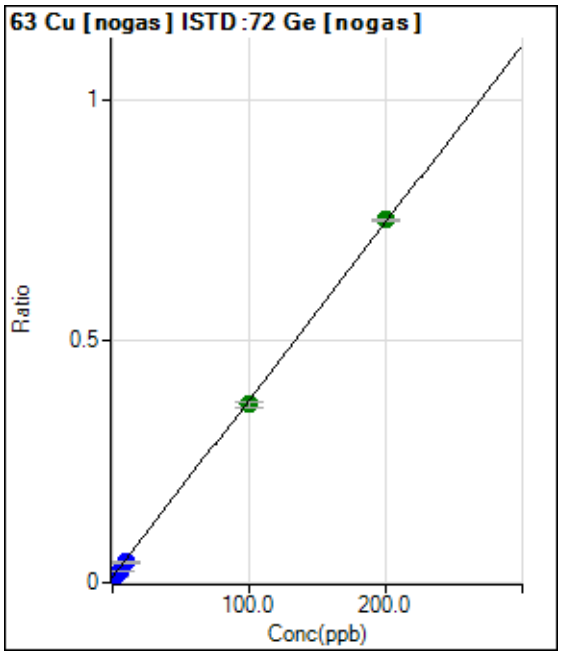


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.570	673.36	0.0007	P	4.8
2	☐	2.000	1.678	6694.66	0.0075	P	2.9
3	☐	5.000	4.820	15399.95	0.0170	P	3.4
4	☐	10.000	9.410	27577.77	0.0309	P	2.5
5	☐	100.000	103.250	266719.15	0.3145	P	2.9
6	☐	200.000	198.412	514327.92	0.6021	P	2.6
7	☐	1.000					

y = 0.0030 * x + 0.0025
R = 0.9998
DL = 0.03549
BEC = 0.8177

Weight: <None>
Min Conc: <None>

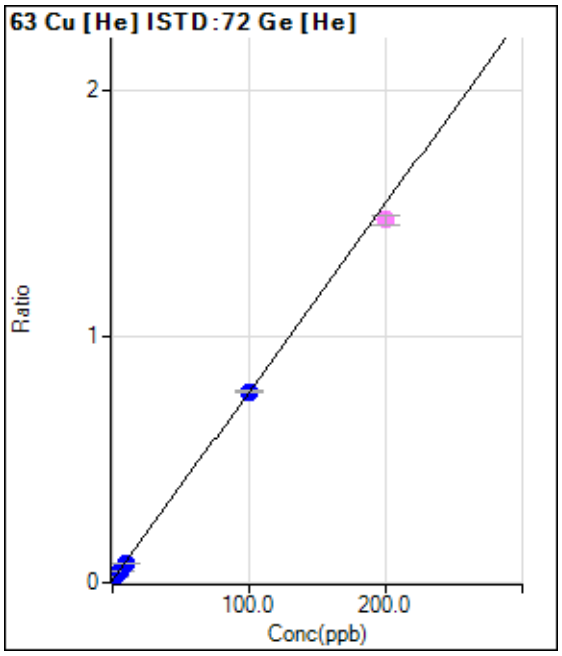
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38744.37	0.0115	P	3.1
2	☐	2.000	0.012	40137.49	0.0115	P	2.9
3	☐	5.000	3.275	82505.24	0.0235	P	5.1
4	☐	10.000	8.262	141831.79	0.0418	P	3.4
5	☐	100.000	97.316	1253884.43	0.3685	A	3.7
6	☐	200.000	201.492	2451547.15	0.7506	A	0.6
7	☐	1.000					

y = 0.0037 * x + 0.0115
R = 0.9999
DL = 0.2924
BEC = 3.132

Weight: <None>
Min Conc: <None>

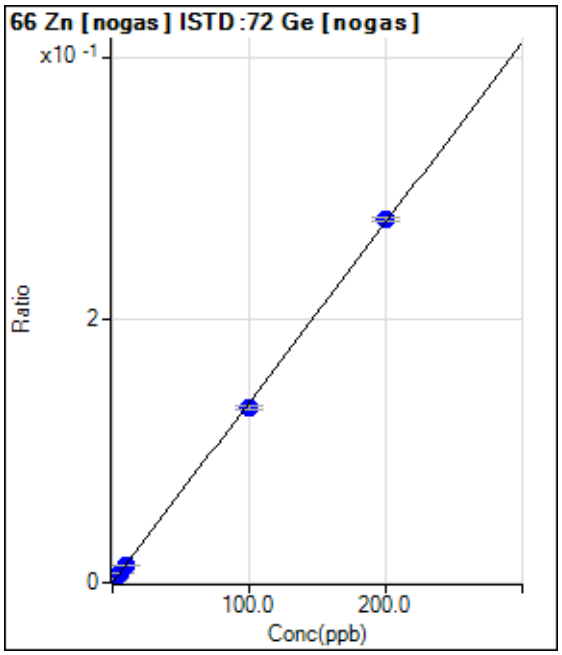


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	1.361	18235.84	0.0202	P	3.0
2	☐	2.000	1.549	19246.93	0.0217	P	1.8
3	☐	5.000	4.787	41958.06	0.0464	P	3.5
4	☐	10.000	9.204	71559.77	0.0802	P	1.4
5	☐	100.000	100.099	657054.34	0.7748	P	1.6
6	☑	200.000		1257285.90	1.4721	M	2.4
7	☐	1.000					

y = 0.0076 * x + 0.0098
R = 0.9998
DL = 0.2351
BEC = 1.288

Weight: <None>
Min Conc: <None>

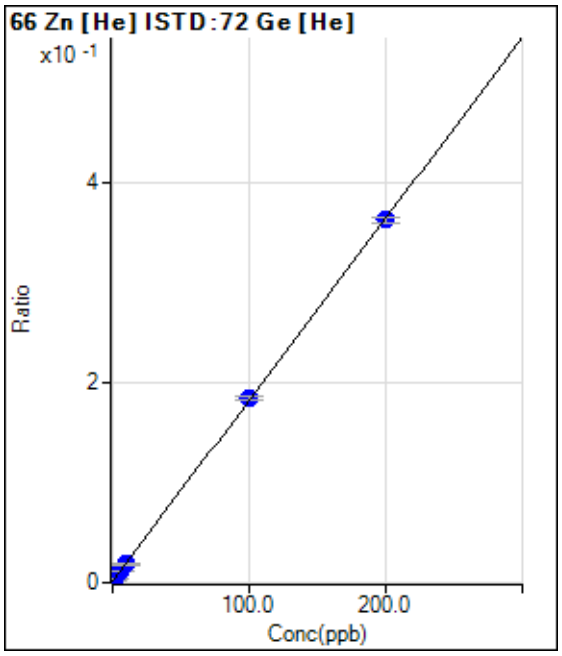
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.684	3327.05	0.0010	P	2.6
2	☐	2.000	2.319	11233.57	0.0032	P	2.3
3	☐	5.000	5.579	27030.38	0.0077	P	4.4
4	☐	10.000	9.867	46095.26	0.0136	P	1.7
5	☐	100.000	97.123	453433.34	0.1332	P	1.8
6	☐	200.000	201.427	902140.92	0.2762	P	1.2
7	☐	1.000					

y = 0.0014 * x + 4.8790E-005
R = 0.9998
DL = 0.05695
BEC = 0.03558

Weight: <None>
Min Conc: <None>

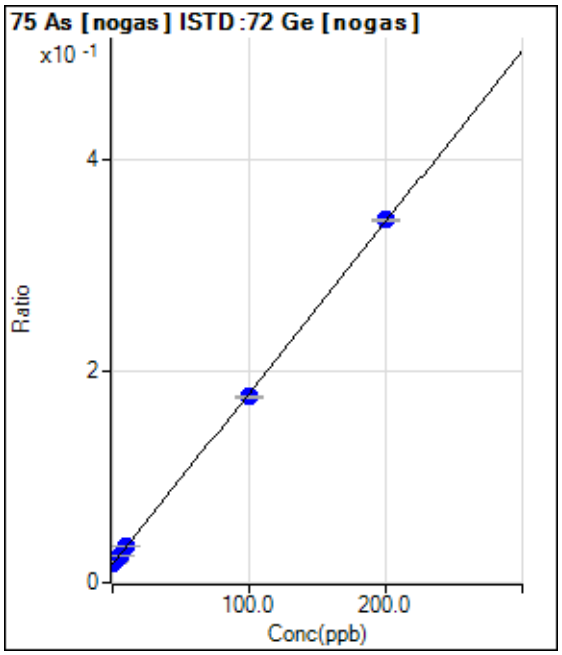


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.094	970.04	0.0011	P	16.6
2	☐	2.000	1.722	3883.80	0.0044	P	1.5
3	☐	5.000	5.271	9786.06	0.0108	P	0.6
4	☐	10.000	9.423	16387.52	0.0184	P	2.4
5	☐	100.000	101.305	157109.85	0.1853	P	1.5
6	☐	200.000	199.372	310422.86	0.3634	P	1.7
7	☐	1.000					

y = 0.0018 * x + 0.0012
R = 1.0000
DL = 0.296
BEC = 0.6872

Weight: <None>
Min Conc: <None>

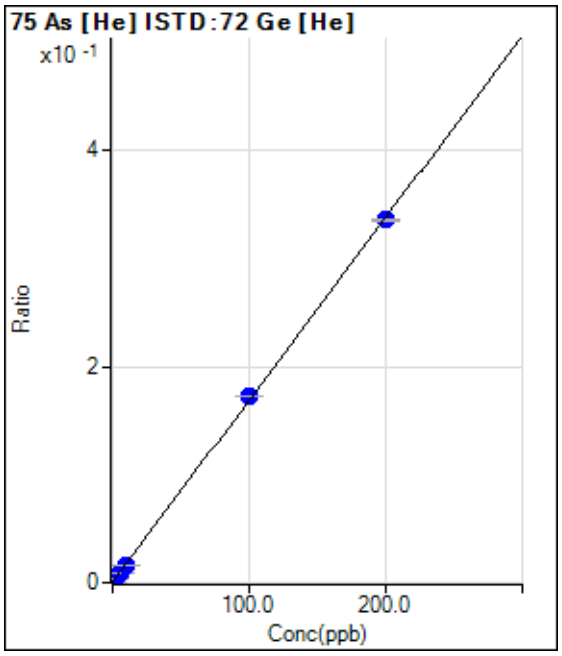
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.792	62915.12	0.0187	P	5.1
2	☐	2.000	1.914	71268.52	0.0205	P	1.2
3	☐	5.000	4.748	88031.49	0.0251	P	2.3
4	☐	10.000	10.727	117868.01	0.0347	P	2.3
5	☐	100.000	97.696	597255.84	0.1754	P	0.4
6	☐	200.000	201.123	1119395.87	0.3427	P	0.7
7	☐	1.000					

y = 0.0016 * x + 0.0174
R = 0.9999
DL = 1.776
BEC = 10.75

Weight: <None>
Min Conc: <None>

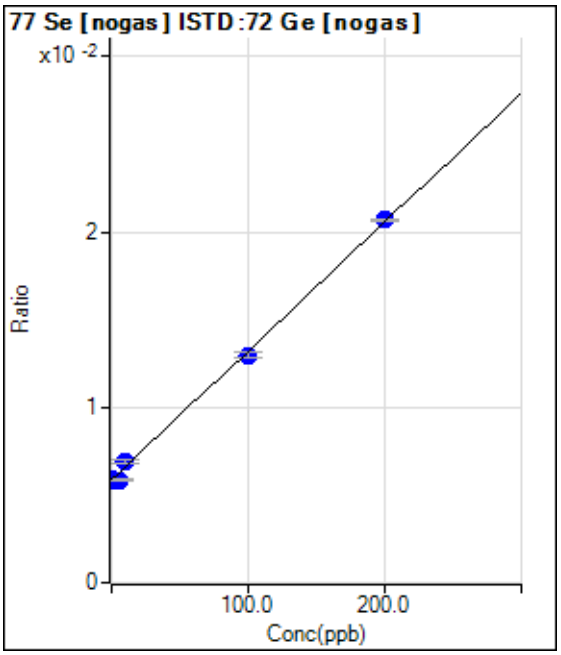


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	430.01	0.0005	P	6.2
2	☐	2.000	2.061	3507.02	0.0040	P	2.0
3	☐	5.000	5.138	8263.02	0.0091	P	0.8
4	☐	10.000	9.674	14982.87	0.0168	P	1.0
5	☐	100.000	102.153	146447.35	0.1727	P	0.1
6	☐	200.000	198.936	286926.29	0.3359	P	0.7
7	☐	1.000					

y = 0.0017 * x + 4.7750E-004
R = 0.9999
DL = 0.05278
BEC = 0.2832

Weight: <None>
Min Conc: <None>

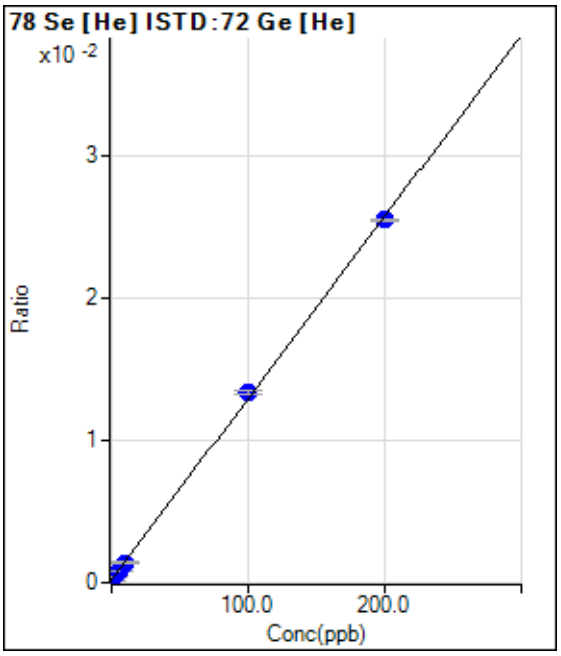
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19794.28	0.0059	P	3.5
2	☐	2.000	-1.132	20141.34	0.0058	P	2.2
3	☐	5.000	-0.124	20595.19	0.0059	P	1.1
4	☐	10.000	14.308	23485.36	0.0069	P	4.0
5	☐	100.000	96.713	44170.60	0.0130	P	2.2
6	☐	200.000	201.588	67551.60	0.0207	P	0.4
7	☐	1.000					

y = 7.3473E-005 * x + 0.0059
R = 0.9991
DL = 8.321
BEC = 79.92

Weight: <None>
Min Conc: <None>

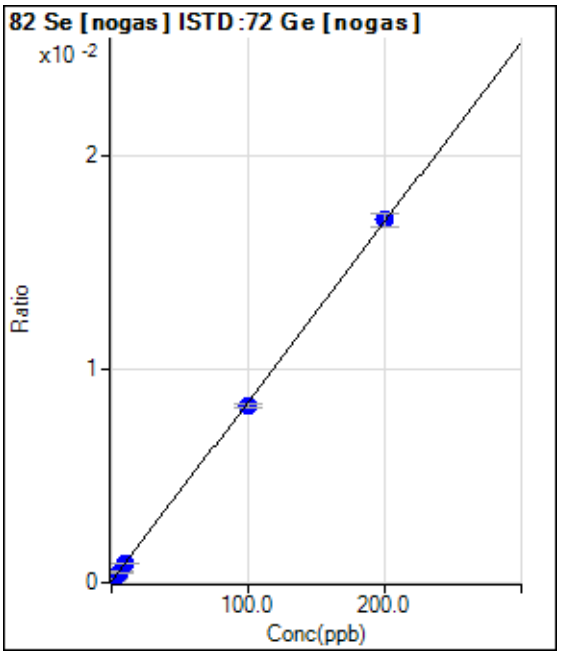


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.512	115.33	0.0001	P	7.5
2	☐	2.000	1.599	353.34	0.0004	P	10.8
3	☐	5.000	4.714	720.02	0.0008	P	1.6
4	☐	10.000	9.385	1243.38	0.0014	P	6.0
5	☐	100.000	103.544	11394.25	0.0134	P	1.8
6	☐	200.000	198.270	21829.74	0.0256	P	0.4
7	☐	1.000					

y = 1.2790E-004 * x + 1.9363E-004
R = 0.9998
DL = 0.224
BEC = 1.514

Weight: <None>
Min Conc: <None>

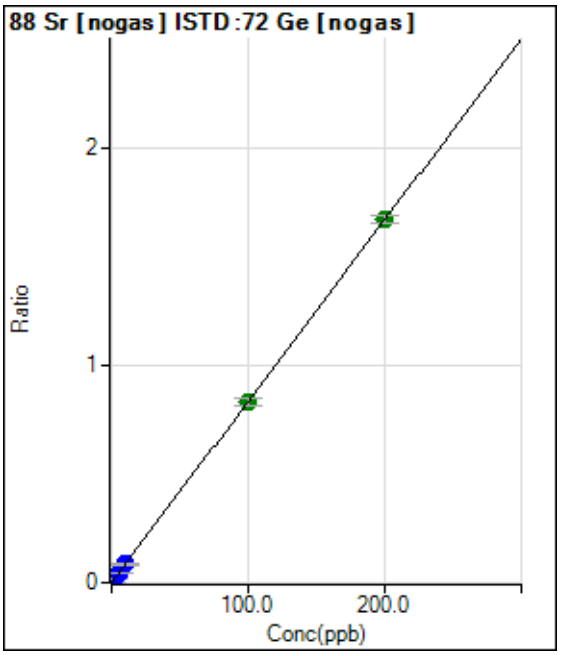
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.00	0.0001	P	22.6
2	☐	2.000	1.668	683.35	0.0002	P	16.3
3	☐	5.000	5.180	1726.78	0.0005	P	6.1
4	☐	10.000	9.850	3000.29	0.0009	P	6.6
5	☐	100.000	97.737	28162.38	0.0083	P	3.0
6	☐	200.000	201.138	55405.59	0.0170	P	4.0
7	☐	1.000					

y = 8.4099E-005 * x + 5.6225E-005
R = 0.9999
DL = 0.4532
BEC = 0.6686

Weight: <None>
Min Conc: <None>

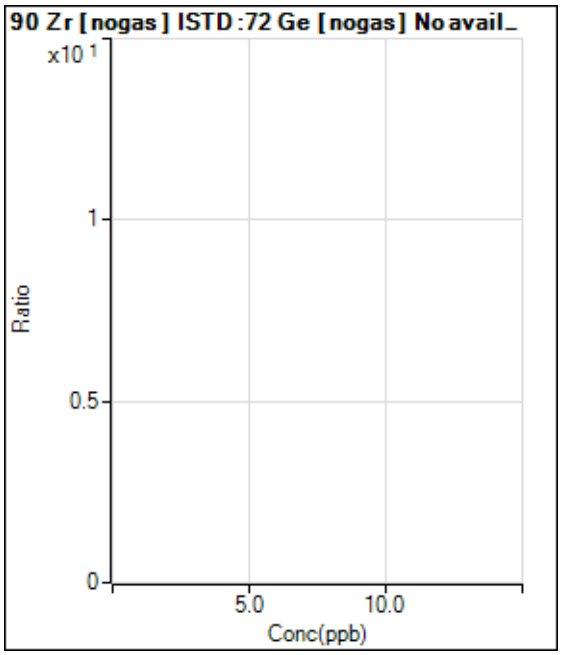


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2663.57	0.0008	P	13.5
2	☐	2.000	1.987	60422.43	0.0174	P	1.5
3	☐	5.000	5.000	149199.28	0.0425	P	4.7
4	☐	10.000	10.028	286421.50	0.0844	P	3.9
5	☐	100.000	99.692	2830956.94	0.8323	A	5.1
6	☐	200.000	200.153	5453646.17	1.6702	A	2.0
7	☐	1.000					

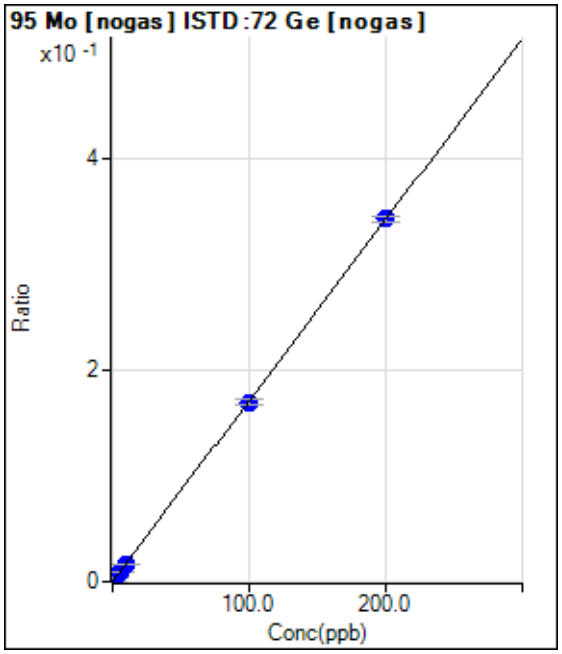
y = 0.0083 * x + 7.9088E-004
R = 1.0000
DL = 0.03852
BEC = 0.09482

Weight: <None>
Min Conc: <None>

Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

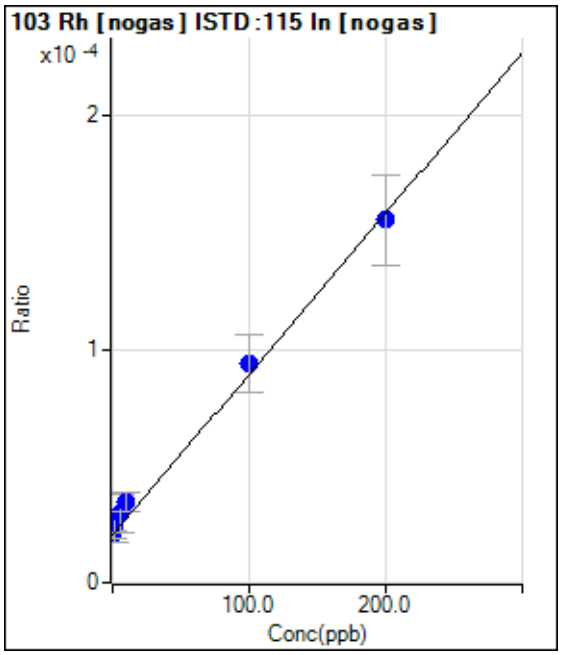


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0001	P	5.9
2	☐	2.000	1.968	12020.94	0.0035	P	0.5
3	☐	5.000	4.937	29948.98	0.0085	P	2.0
4	☐	10.000	9.721	56653.99	0.0167	P	3.9
5	☐	100.000	99.093	576329.24	0.1694	P	2.7
6	☐	200.000	200.469	1118494.07	0.3425	P	1.7
7	☐	1.000					

y = 0.0017 * x + 9.2952E-005
R = 1.0000
DL = 0.00959
BEC = 0.05442

Weight: <None>
Min Conc: <None>

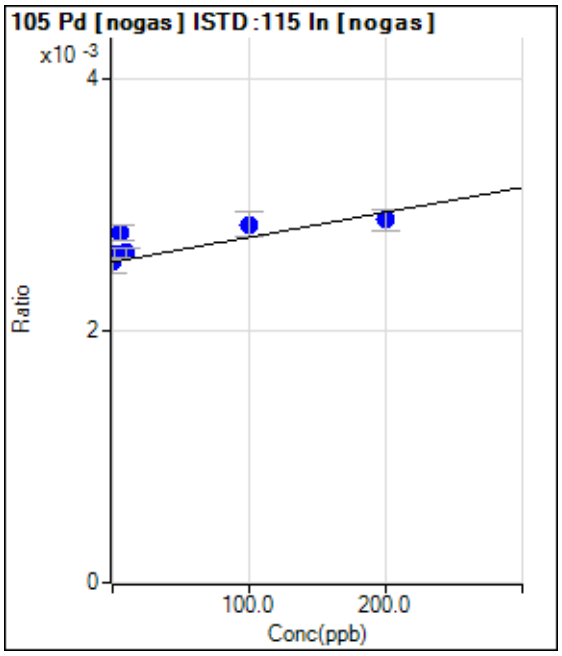
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	16.2
2	☐	2.000	5.887	73.33	0.0000	P	56.2
3	☐	5.000	13.445	90.00	0.0000	P	55.8
4	☐	10.000	20.571	103.33	0.0000	P	23.1
5	☐	100.000	106.564	266.67	0.0001	P	25.6
6	☐	200.000	195.939	440.02	0.0002	P	25.0
7	☐	1.000					

y = 6.8888E-007 * x + 2.0454E-005
R = 0.9984
DL = 14.39
BEC = 29.69

Weight: <None>
Min Conc: <None>

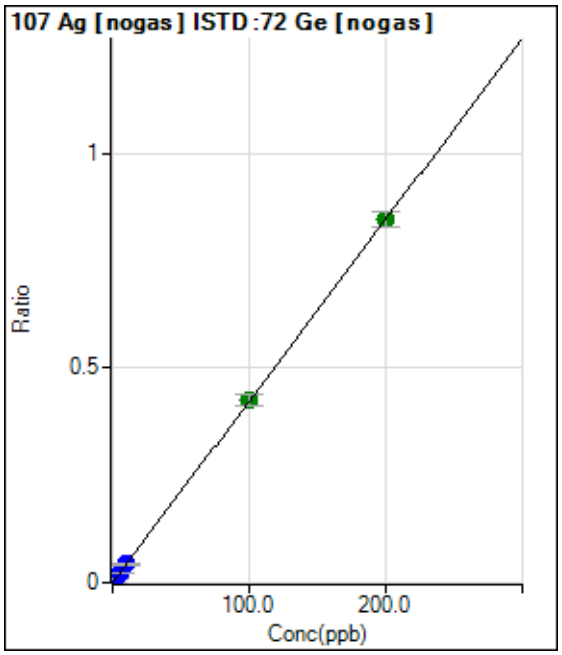


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7845.22	0.0025	P	6.9
2	☐	2.000	30.664	7771.85	0.0026	P	3.5
3	☐	5.000	120.848	8368.77	0.0028	P	4.3
4	☐	10.000	37.624	7791.85	0.0026	P	3.4
5	☐	100.000	152.436	8078.64	0.0028	P	7.0
6	☐	200.000	169.218	8135.34	0.0029	P	5.9
7	☐	1.000					

y = 1.9760E-006 * x + 0.0025
R = 0.7956
DL = 265.6
BEC = 1287

Weight: <None>
Min Conc: <None>

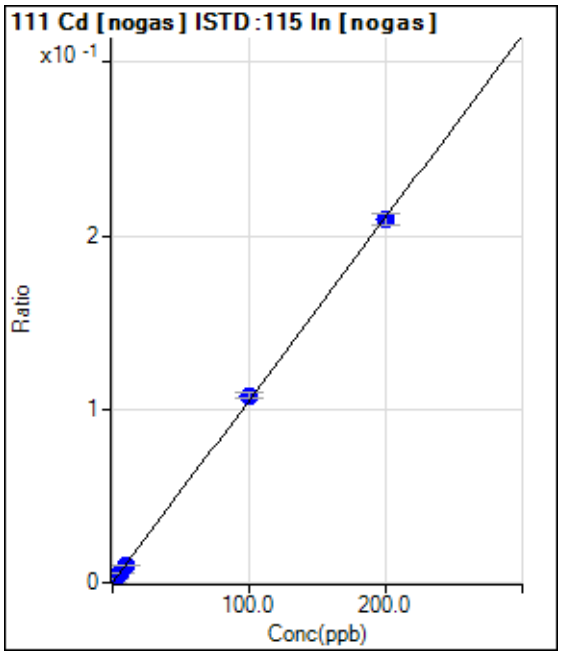
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	156.67	0.0000	P	24.8
2	☐	2.000	2.044	30206.20	0.0087	P	0.9
3	☐	5.000	5.171	76878.49	0.0219	P	3.6
4	☐	10.000	10.108	145064.52	0.0428	P	4.1
5	☐	100.000	100.197	1439644.51	0.4233	A	6.3
6	☐	200.000	199.891	2758736.31	0.8445	A	4.3
7	☐	1.000					

y = 0.0042 * x + 4.6510E-005
R = 1.0000
DL = 0.00819
BEC = 0.01101

Weight: <None>
Min Conc: <None>

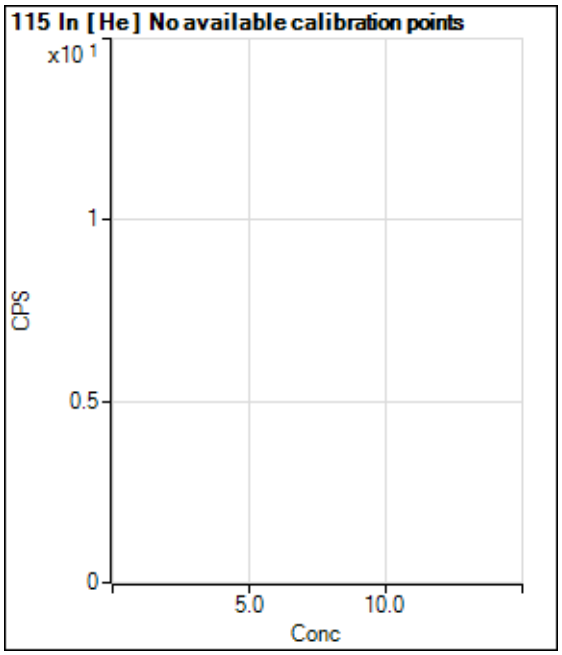


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	90.5
2	☐	2.000	1.933	6091.16	0.0020	P	7.2
3	☐	5.000	4.942	15670.54	0.0052	P	1.5
4	☐	10.000	9.569	30012.63	0.0101	P	5.4
5	☐	100.000	102.540	306810.54	0.1079	P	2.5
6	☐	200.000	198.754	591323.25	0.2092	P	3.3
7	☐	1.000					

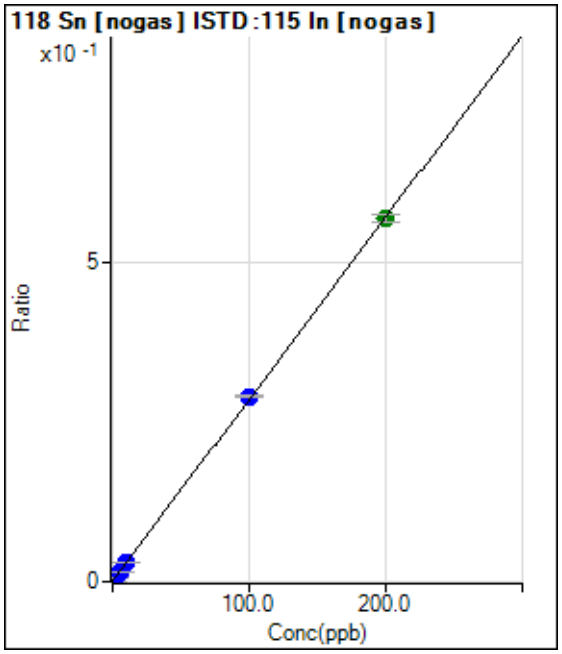
y = 0.0011 * x + 5.3858E-006
R = 0.9999
DL = 0.0139
BEC = 0.005116

Weight: <None>
Min Conc: <None>

Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			993802.11		P	1.1
2	☐			972357.16		P	0.9
3	☐			1000611.14		P	1.6
4	☐			1016412.46		P	1.4
5	☐			969988.32		P	2.6
6	☐			949774.08		P	2.5
7	☐						

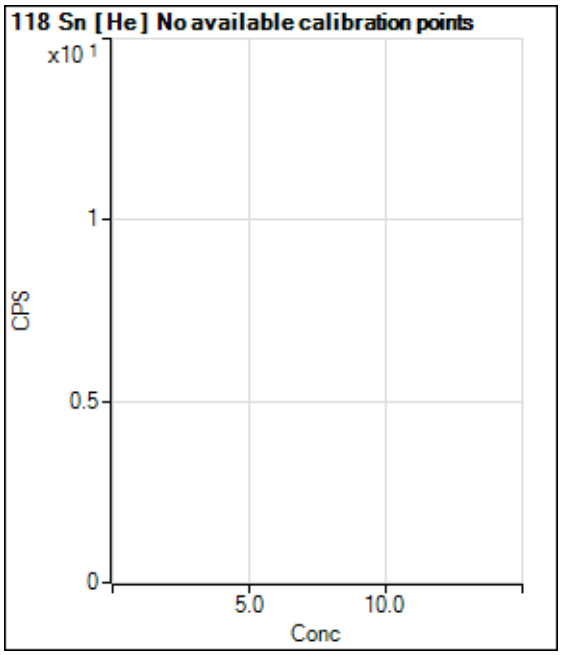


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1976.81	0.0006	P	2.2
2	☐	2.000	1.956	18510.06	0.0062	P	3.8
3	☐	5.000	4.903	43848.50	0.0146	P	2.0
4	☐	10.000	9.873	85499.07	0.0287	P	0.1
5	☐	100.000	101.430	821210.17	0.2890	P	1.2
6	☐	200.000	199.294	1603150.60	0.5671	A	2.2
7	☐	1.000					

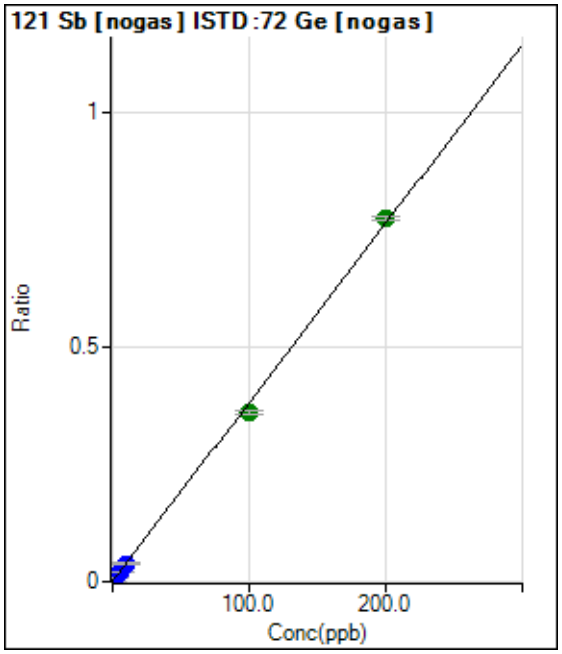
y = 0.0028 * x + 6.4018E-004
R = 1.0000
DL = 0.01517
BEC = 0.2252

Weight: <None>
Min Conc: <None>

Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			733.36		P	4.4
2	☐			6754.73		P	3.5
3	☐			17352.16		P	7.0
4	☐			32714.32		P	2.3
5	☐			319120.33		P	0.7
6	☐			637002.56		P	1.3
7	☐						

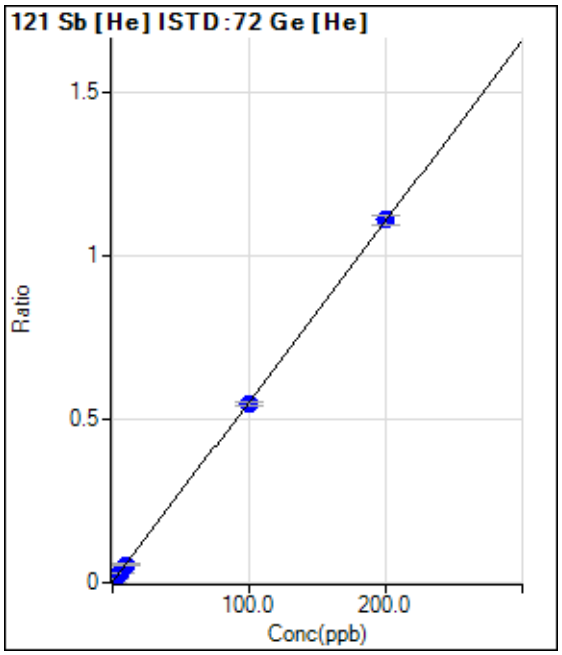


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2493.55	0.0007	P	8.0
2	☐	2.000	1.938	28303.32	0.0081	P	4.0
3	☐	5.000	4.732	66031.49	0.0188	P	1.2
4	☐	10.000	9.964	131577.20	0.0388	P	1.2
5	☐	100.000	94.616	1231422.95	0.3619	A	2.9
6	☐	200.000	202.701	2529037.10	0.7744	A	1.1
7	☐	1.000					

y = 0.0038 * x + 7.4000E-004
R = 0.9995
DL = 0.04641
BEC = 0.1939

Weight: <None>
Min Conc: <None>

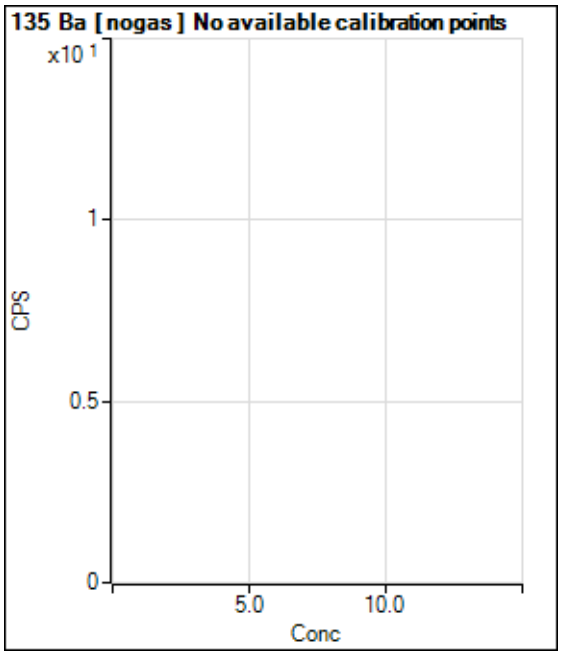
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	886.70	0.0010	P	11.4
2	☐	2.000	1.983	10586.68	0.0119	P	2.9
3	☐	5.000	4.878	25228.50	0.0279	P	1.6
4	☐	10.000	9.782	49045.84	0.0550	P	3.9
5	☐	100.000	98.652	462479.32	0.5454	P	1.6
6	☐	200.000	200.688	946833.40	1.1085	P	2.7
7	☐	1.000					

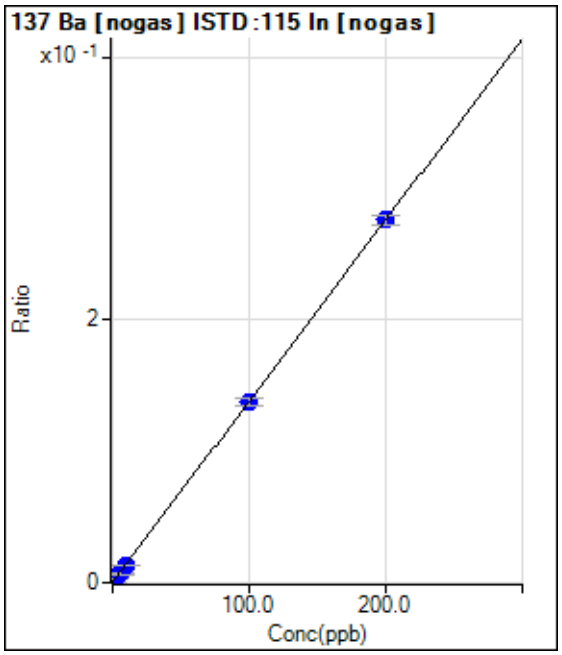
y = 0.0055 * x + 9.8525E-004
R = 1.0000
DL = 0.06087
BEC = 0.1785

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			443.35		P	10.2
2	☐			4417.32		P	3.5
3	☐			11660.75		P	5.8
4	☐			22718.58		P	3.1
5	☐			229847.94		P	1.3
6	☐			448017.24		P	0.4
7	☐						

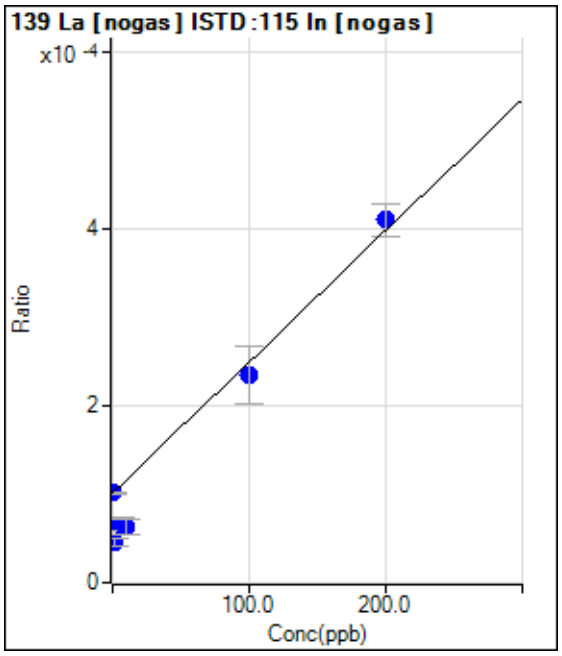
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	743.36	0.0002	P	6.0
2	☐	2.000	1.785	8062.03	0.0027	P	5.0
3	☐	5.000	4.639	19955.11	0.0066	P	1.8
4	☐	10.000	9.392	39258.90	0.0132	P	4.3
5	☐	100.000	99.743	391263.78	0.1377	P	3.9
6	☐	200.000	200.170	780393.53	0.2761	P	2.4
7	☐	1.000					

y = 0.0014 * x + 2.4092E-004
R = 1.0000
DL = 0.03122
BEC = 0.1748

Weight: <None>
Min Conc: <None>

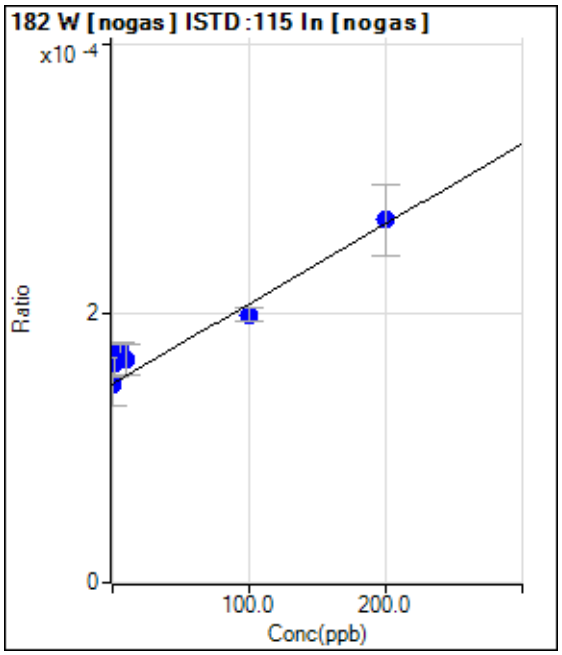


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0001	P	1.6
2	☐	2.000	-37.451	136.67	0.0000	P	15.8
3	☐	5.000	-23.595	200.01	0.0001	P	25.7
4	☐	10.000	-25.427	190.00	0.0001	P	26.6
5	☐	100.000	89.666	666.69	0.0002	P	27.6
6	☐	200.000	208.048	1160.06	0.0004	P	8.8
7	☐	1.000					

y = 1.4866E-006 * x + 1.0147E-004
R = 0.9892
DL = 3.367
BEC = 68.26

Weight: <None>
Min Conc: <None>

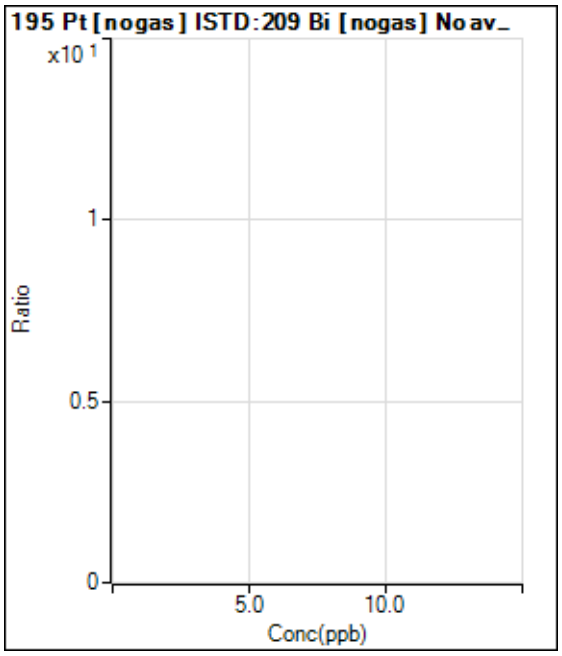
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	456.68	0.0001	P	21.4
2	☐	2.000	25.209	486.68	0.0002	P	12.7
3	☐	5.000	41.843	520.02	0.0002	P	6.3
4	☐	10.000	29.798	493.35	0.0002	P	13.9
5	☐	100.000	86.308	566.68	0.0002	P	4.6
6	☐	200.000	204.703	763.36	0.0003	P	19.7
7	☐	1.000					

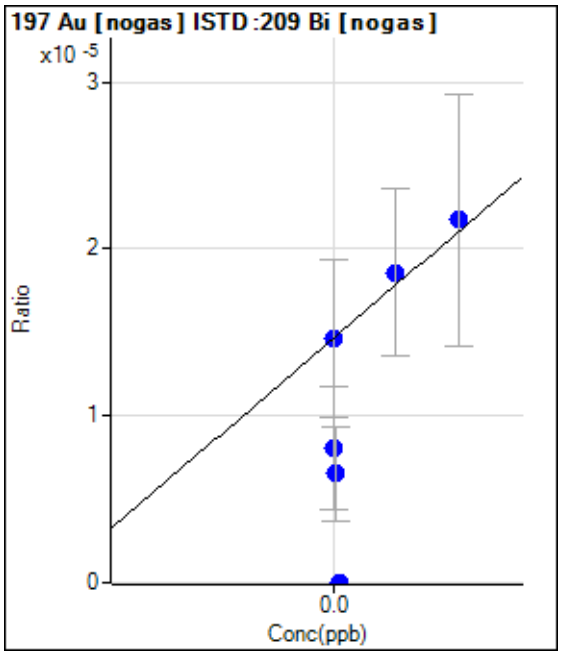
y = 5.9533E-007 * x + 1.4802E-004
R = 0.9772
DL = 159.5
BEC = 248.6

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

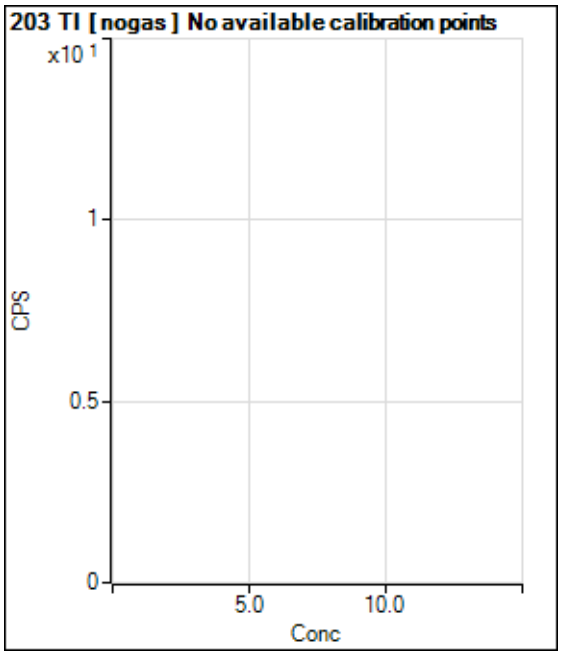
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	64.6
2	☐	2.000	-203.285	16.67	0.0000	P	92.6
3	☐	5.000	-249.946	13.33	0.0000	P	86.6
4	☐	10.000	-452.699	0.00	0.0000	P	
5	☐	100.000	122.903	36.67	0.0000	P	54.4
6	☐	200.000	220.110	43.33	0.0000	P	69.5
7	☐	1.000					

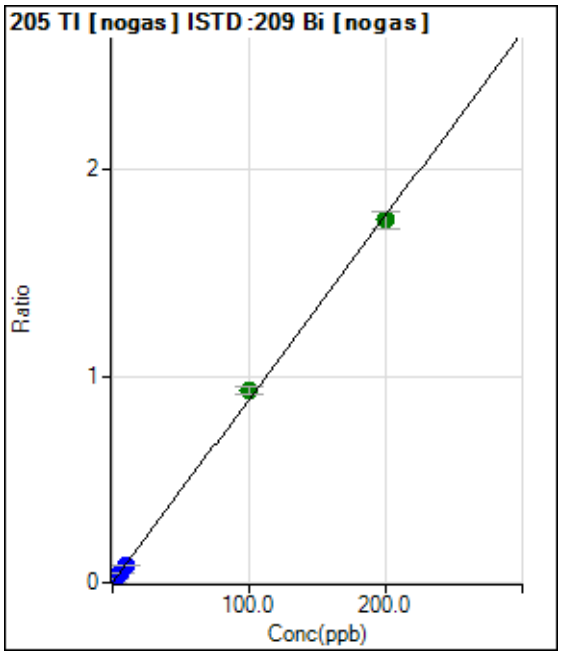
y = 3.2313E-008 * x + 1.4628E-005
R = 0.7734
DL = 877.6
BEC = 452.7

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			293.34		P	39.5
2	☐			15047.22		P	2.9
3	☐			38970.40		P	2.0
4	☐			75830.22		P	2.3
5	☐			750461.65		P	1.8
6	☐			1443936.44		A	2.4
7	☐						

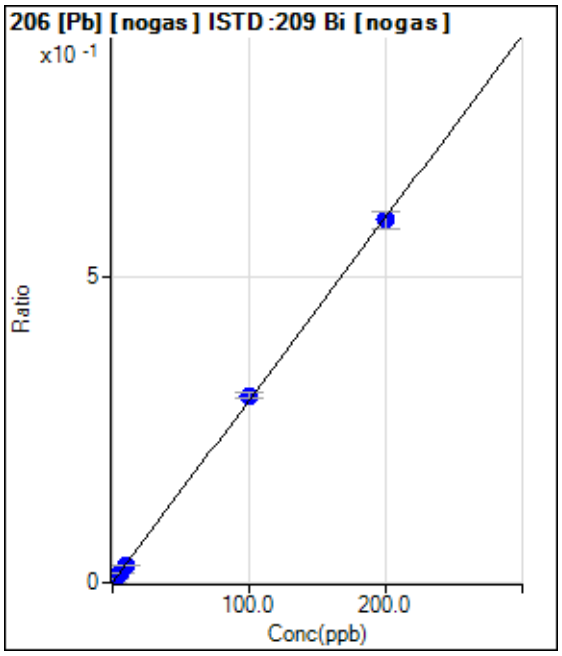
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	700.03	0.0003	P	14.9
2	☐	2.000	1.890	35589.59	0.0171	P	2.8
3	☐	5.000	5.110	94134.35	0.0457	P	2.3
4	☐	10.000	9.544	175727.13	0.0851	P	4.0
5	☐	100.000	104.640	1815300.03	0.9291	A	3.8
6	☐	200.000	197.701	3482412.03	1.7550	A	4.6
7	☐	1.000					

y = 0.0089 * x + 3.4631E-004
R = 0.9996
DL = 0.01744
BEC = 0.03902

Weight: <None>
Min Conc: <None>

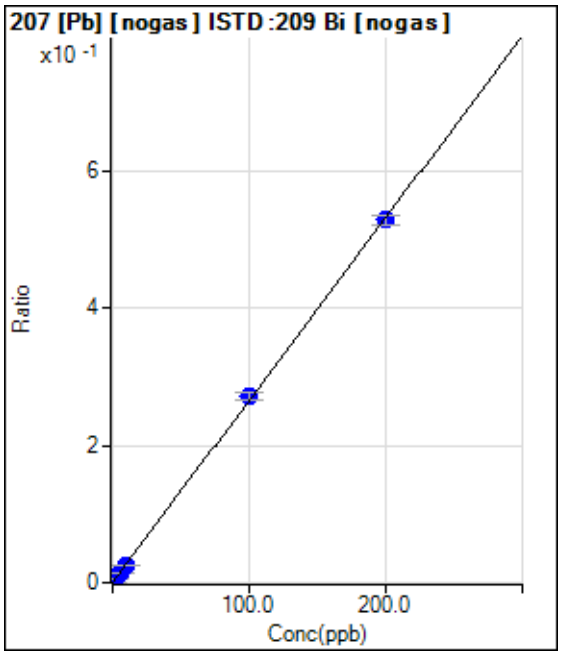


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.35	0.0002	P	26.6
2	☐	2.000	2.019	13035.52	0.0063	P	3.8
3	☐	5.000	5.139	32102.21	0.0156	P	3.5
4	☐	10.000	9.716	60422.90	0.0292	P	4.3
5	☐	100.000	102.516	598618.37	0.3062	P	3.4
6	☐	200.000	198.752	1177648.68	0.5935	P	4.5
7	☐	1.000					

y = 0.0030 * x + 2.4475E-004
R = 0.9999
DL = 0.06556
BEC = 0.082

Weight: <None>
Min Conc: <None>

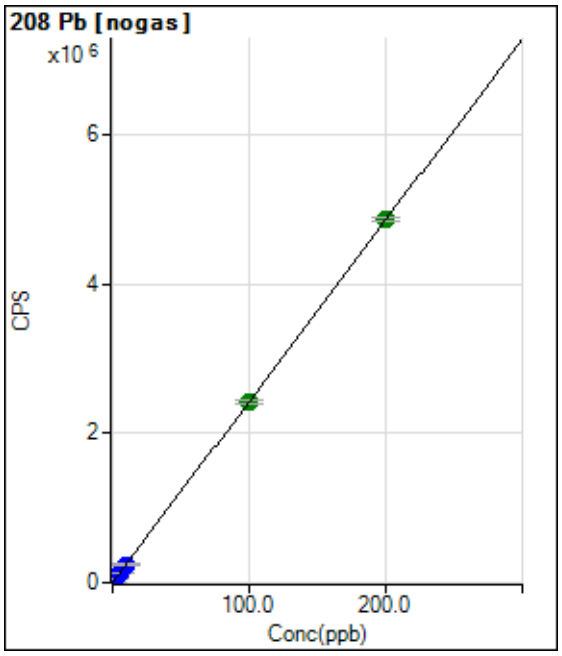
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.35	0.0002	P	7.1
2	☐	2.000	1.980	11394.21	0.0055	P	1.5
3	☐	5.000	5.056	28104.56	0.0136	P	2.6
4	☐	10.000	9.504	52576.00	0.0254	P	4.6
5	☐	100.000	102.000	529457.09	0.2709	P	4.0
6	☐	200.000	199.024	1048775.22	0.5284	P	3.0
7	☐	1.000					

y = 0.0027 * x + 2.2400E-004
R = 0.9999
DL = 0.01803
BEC = 0.0844

Weight: <None>
Min Conc: <None>

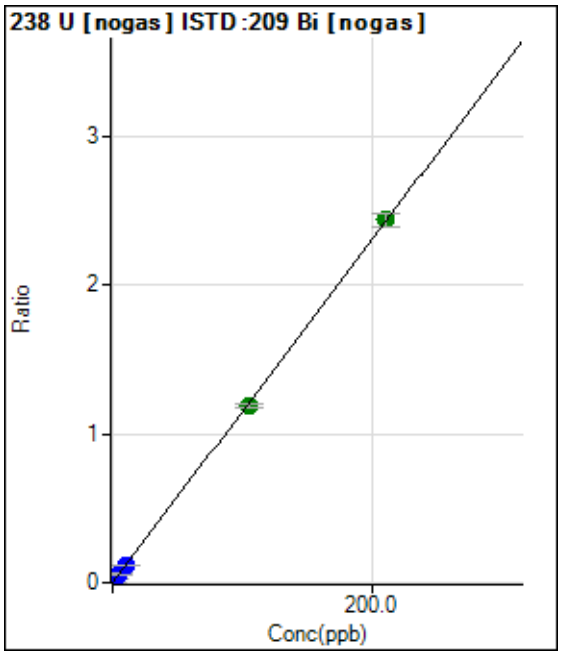


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1853.41		P	10.6
2	☐	2.000	2.071	52050.35		P	0.4
3	☐	5.000	5.252	129153.91		P	0.5
4	☐	10.000	9.979	243743.49		P	1.4
5	☐	100.000	99.434	2412103.59		A	2.5
6	☐	200.000	200.277	4856529.54		A	1.2
7	☐	1.000					

y = 24239.7822 * x + 1853.4067
R = 1.0000
DL = 0.02433
BEC = 0.07646

Weight: <None>
Min Conc: <None>

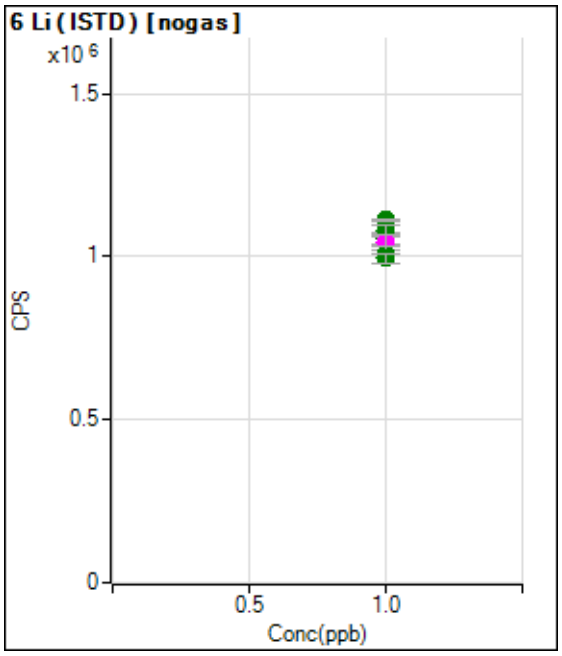
Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	726.69	0.0004	P	17.9
2	☐	2.000	1.963	47923.24	0.0230	P	3.9
3	☐	5.000	4.969	119061.25	0.0578	P	2.1
4	☐	10.000	9.523	228345.88	0.1104	P	0.3
5	☐	105.000	102.912	2325170.23	1.1899	A	2.3
6	☐	210.000	211.068	4842610.97	2.4401	A	3.6
7	☐	1.000					

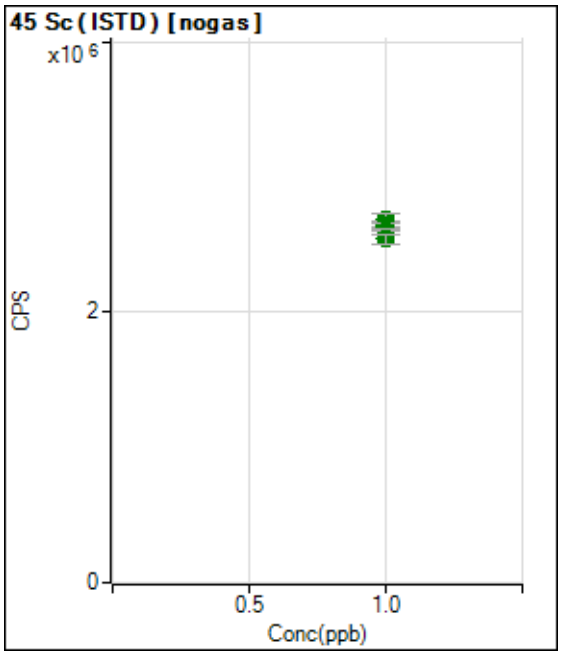
y = 0.0116 * x + 3.5990E-004
R = 0.9999
DL = 0.01675
BEC = 0.03114

Weight: <None>
Min Conc: <None>

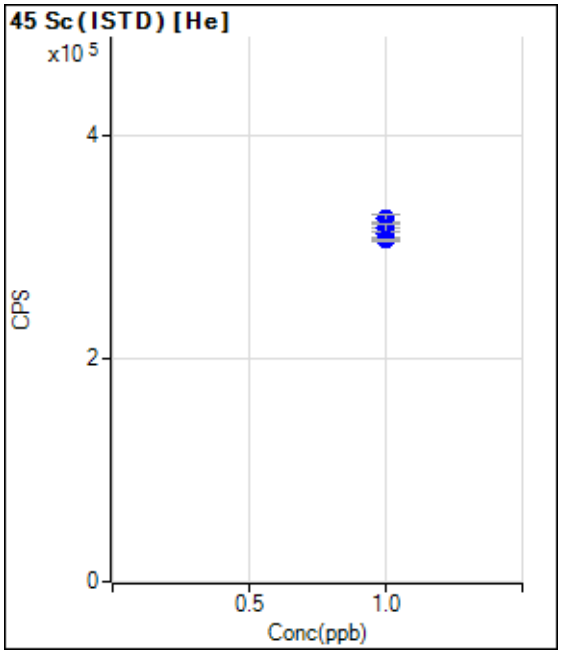


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1112547.27		A	0.6
2	☐	1.000		1053524.08		A	3.5
3	☐	1.000		1078235.35		A	3.2
4	☐	1.000		1045605.42		M	4.3
5	☐	1.000		1006205.19		A	5.1
6	☐	1.000		993949.85		A	3.1
7	☐	1.000					

Calibration for 065_ICV.d

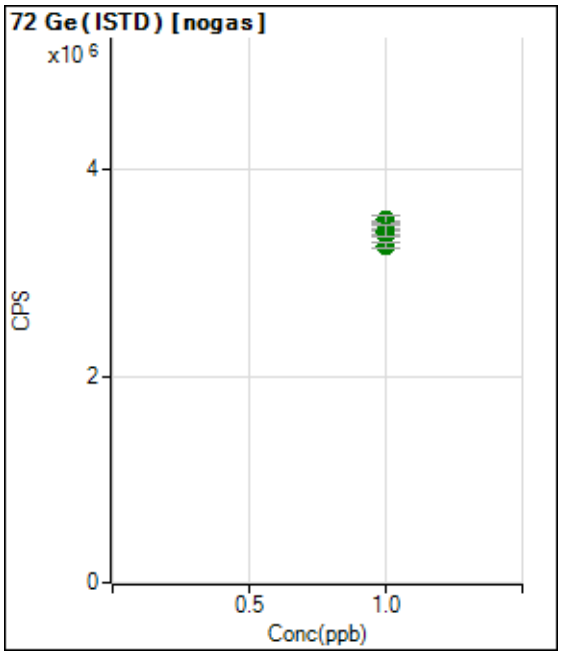


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2640609.91		A	2.1
2	☐	1.000		2681336.21		A	3.5
3	☐	1.000		2646533.24		A	1.1
4	☐	1.000		2634121.84		A	2.2
5	☐	1.000		2605182.04		A	0.6
6	☐	1.000		2538152.36		A	2.4
7	☐	1.000					

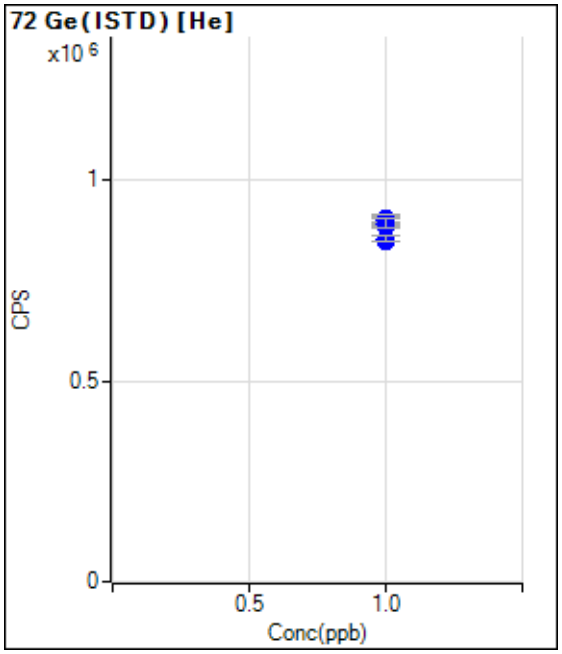


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		312496.45		P	2.8
2	☐	1.000		311030.99		P	1.6
3	☐	1.000		324937.04		P	2.0
4	☐	1.000		316719.81		P	1.9
5	☐	1.000		306558.90		P	1.1
6	☐	1.000		305707.86		P	0.2
7	☐	1.000					

Calibration for 065_ICV.d

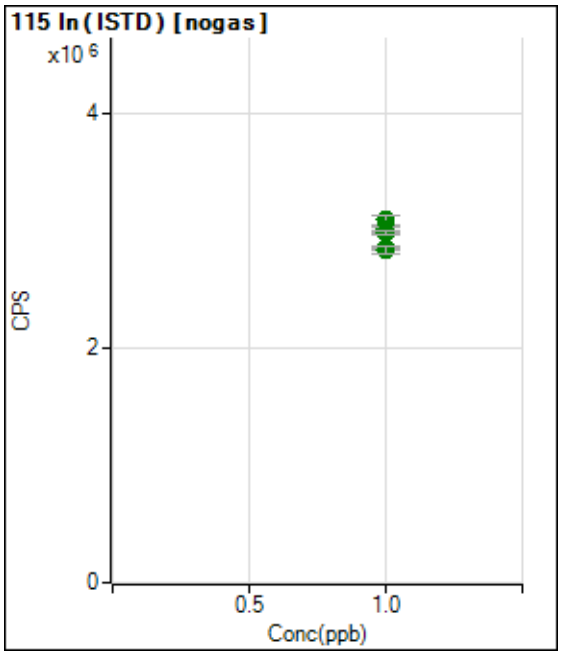


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3372490.78		A	1.7
2	☐	1.000		3479966.30		A	0.8
3	☐	1.000		3513038.28		A	2.2
4	☐	1.000		3394183.49		A	1.9
5	☐	1.000		3404846.10		A	3.1
6	☐	1.000		3266151.62		A	1.9
7	☐	1.000					

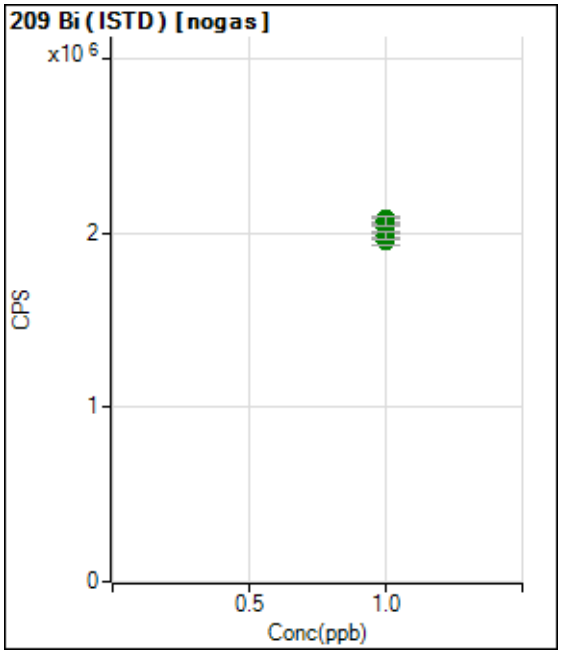


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		901117.64		P	1.8
2	☐	1.000		887419.23		P	0.6
3	☐	1.000		904067.90		P	1.9
4	☐	1.000		892564.10		P	2.6
5	☐	1.000		847955.28		P	0.4
6	☐	1.000		854308.27		P	1.7
7	☐	1.000					

Calibration for 065_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3088645.41		A	2.5
2	☐	1.000		2986184.15		A	0.6
3	☐	1.000		3008735.04		A	1.8
4	☐	1.000		2978529.94		A	1.3
5	☐	1.000		2842047.70		A	0.7
6	☐	1.000		2827681.06		A	2.4
7	☐	1.000					



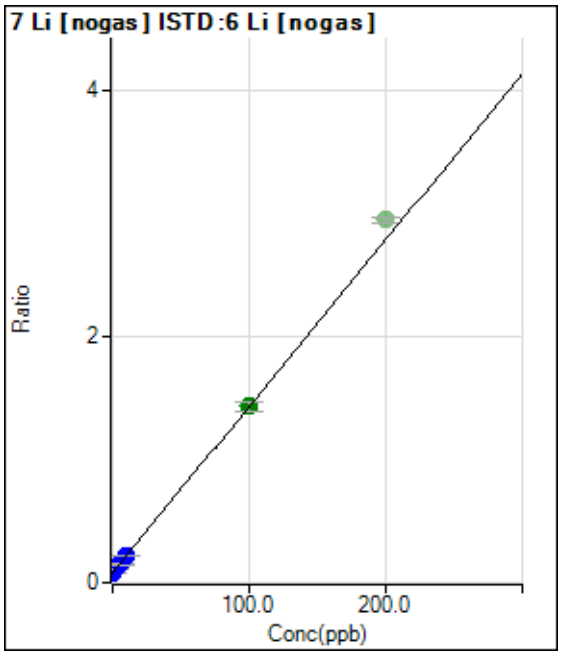
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2025844.71		A	2.9
2	☐	1.000		2079414.60		A	1.9
3	☐	1.000		2060599.50		A	2.2
4	☐	1.000		2067587.11		A	3.0
5	☐	1.000		1954724.55		A	2.4
6	☐	1.000		1985437.83		A	2.0
7	☐	1.000					

Calibration for 118_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121718A.b\
Analysis File: 121718A.batch.bin
DA Date-Time: 2018-12-18 00:15:51
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	112CALB.d	CAL BLK	2018-12-17 16:07:33
2	113CALS.d	2/10/200	2018-12-17 16:09:34
3	114CALS.d	5/25/500	2018-12-17 16:11:33
4	115CALS.d	10/50/1000	2018-12-17 16:13:34
5	116CALS.d	100/500/10K	2018-12-17 16:15:32
6	117CALS.d	200/1000/20K	2018-12-17 16:17:31
7			

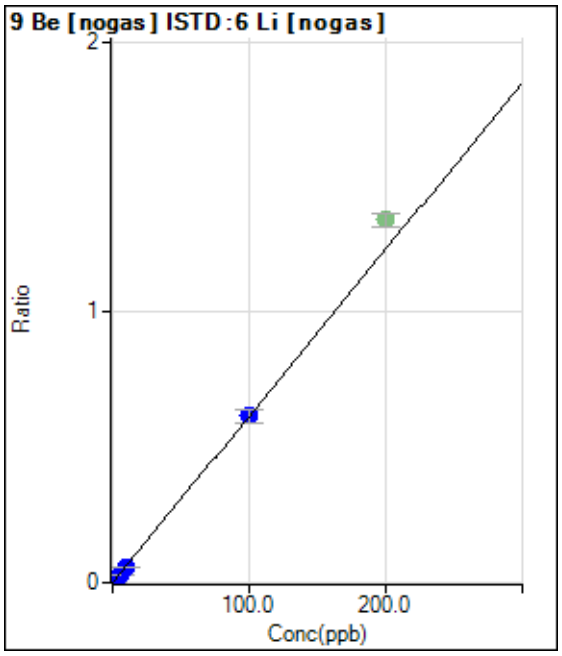
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	101188.23	0.0824	P	5.3
2	☐	2.000	1.964	133765.65	0.1089	P	3.8
3	☐	5.000	5.108	187266.44	0.1514	P	4.0
4	☐	10.000	9.742	263322.24	0.2141	P	2.3
5	☐	100.000	100.021	1678198.67	1.4344	A	5.1
6	☑	200.000		3036683.18	2.9499	A	1.7
7	☐	1.000					

y = 0.0135 * x + 0.0824
R = 1.0000
DL = 0.9635
BEC = 6.094

Weight: <None>
Min Conc: <None>

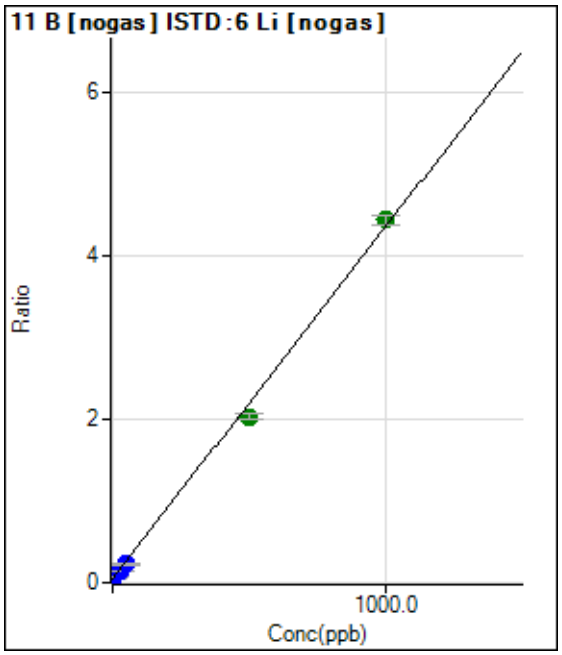


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0001	P	55.7
2	☐	2.000	1.908	14539.06	0.0118	P	7.0
3	☐	5.000	4.776	36498.55	0.0295	P	4.2
4	☐	10.000	9.344	70911.33	0.0577	P	2.3
5	☐	100.000	100.079	720353.35	0.6166	P	8.1
6	☑	200.000		1381456.52	1.3415	A	3.7
7	☐	1.000					

y = 0.0062 * x + 9.3814E-005
R = 1.0000
DL = 0.02544
BEC = 0.01523

Weight: <None>
Min Conc: <None>

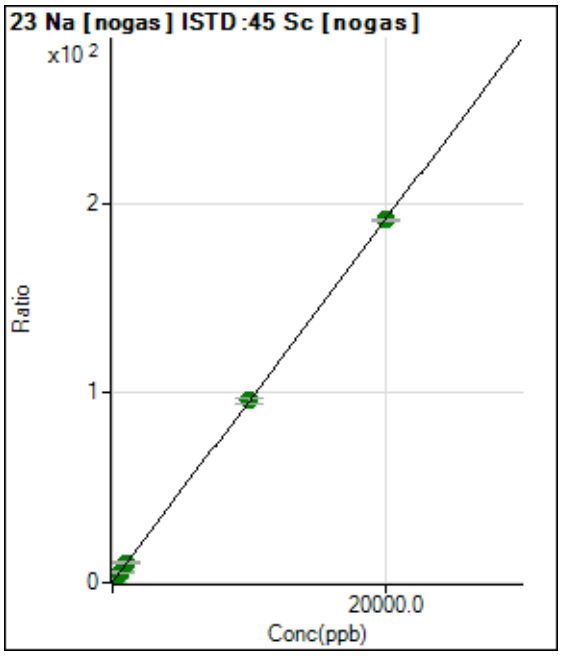
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	59472.70	0.0485	P	8.7
2	☐	10.000	7.973	101759.76	0.0829	P	4.2
3	☐	25.000	21.309	173236.90	0.1403	P	8.9
4	☐	50.000	41.401	279072.92	0.2270	P	4.2
5	☐	500.000	461.106	2383406.84	2.0365	A	3.9
6	☐	1000.000	1019.990	4576440.76	4.4460	A	2.8
7	☐	5.000					

y = 0.0043 * x + 0.0485
R = 0.9990
DL = 2.926
BEC = 11.24

Weight: <None>
Min Conc: <None>

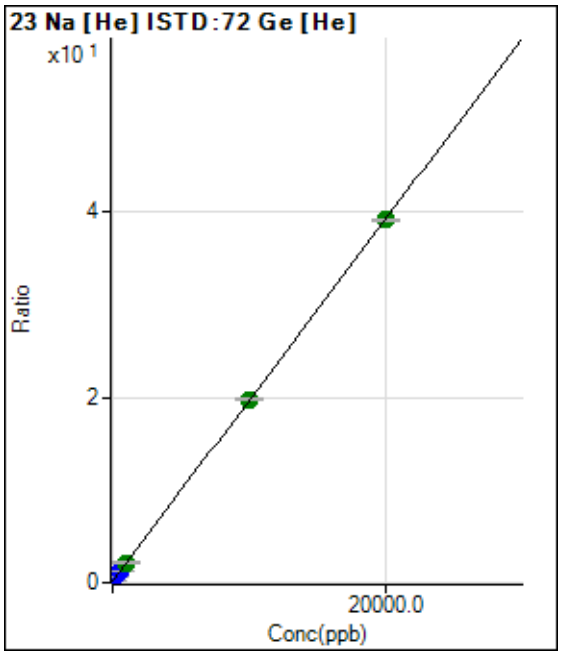


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	839040.35	0.3118	P	1.8
2	☐	200.000	216.587	6230215.24	2.3787	A	5.1
3	☐	500.000	542.860	14535496.16	5.4925	A	3.1
4	☐	1000.000	1046.077	26850444.87	10.2948	A	7.0
5	☐	10000.00	10009.651	256025355.7	95.8365	A	2.5
6	☐	20000.00	19991.633	495579927.7	191.097	A	0.6
7	☐	100.000					

y = 0.0095 * x + 0.3118
R = 1.0000
DL = 1.807
BEC = 32.67

Weight: <None>
Min Conc: <None>

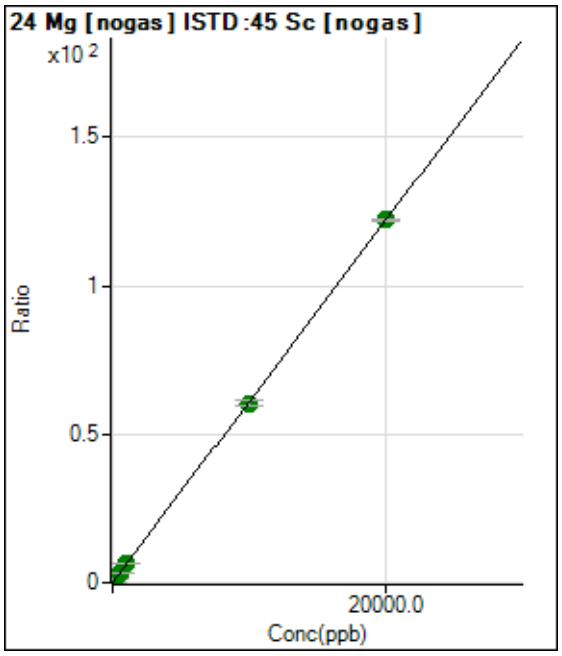
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	115444.61	0.1324	P	1.5
2	☐	200.000	200.846	464705.22	0.5248	P	0.6
3	☐	500.000	520.203	1020306.37	1.1487	P	1.0
4	☐	1000.000	1038.170	1902924.87	2.1606	A	1.7
5	☐	10000.00	10062.052	16928955.58	19.7899	A	1.2
6	☐	20000.00	19966.552	33182870.34	39.1396	A	0.7
7	☐	100.000					

y = 0.0020 * x + 0.1324
R = 1.0000
DL = 3.012
BEC = 67.78

Weight: <None>
Min Conc: <None>

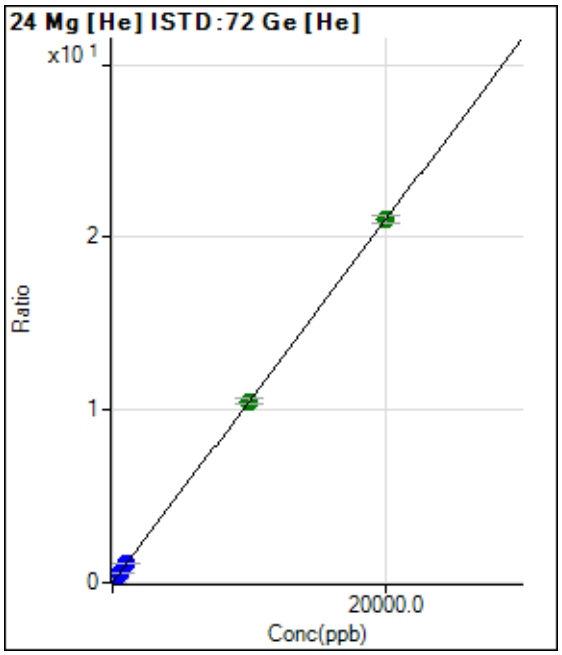


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	84936.65	0.0316	P	2.6
2	☐	200.000	213.965	3501425.08	1.3362	A	3.1
3	☐	500.000	553.519	9015190.31	3.4065	A	2.3
4	☐	1000.000	1065.732	17024757.15	6.5297	A	7.9
5	☐	10000.00	9912.816	161526920.2	60.4734	A	3.4
6	☐	20000.00	20038.828	316938073.7	122.215	A	0.9
7	☐	100.000					

y = 0.0061 * x + 0.0316
R = 1.0000
DL = 0.4009
BEC = 5.175

Weight: <None>
Min Conc: <None>

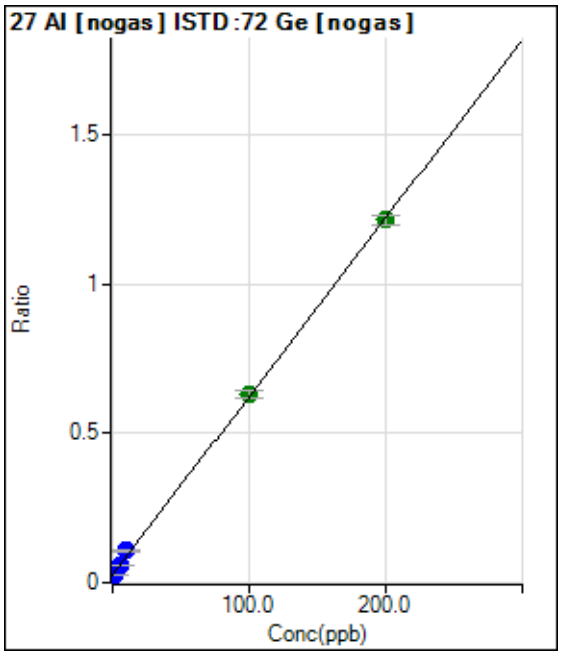
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5062.40	0.0058	P	2.5
2	☐	200.000	205.539	196317.50	0.2217	P	1.4
3	☐	500.000	531.408	500998.00	0.5640	P	0.8
4	☐	1000.000	1012.445	941626.58	1.0693	P	0.8
5	☐	10000.00	9993.750	8983881.53	10.5035	A	2.7
6	☐	20000.00	20001.662	17814055.57	21.0160	A	2.0
7	☐	100.000					

y = 0.0011 * x + 0.0058
R = 1.0000
DL = 0.4219
BEC = 5.529

Weight: <None>
Min Conc: <None>

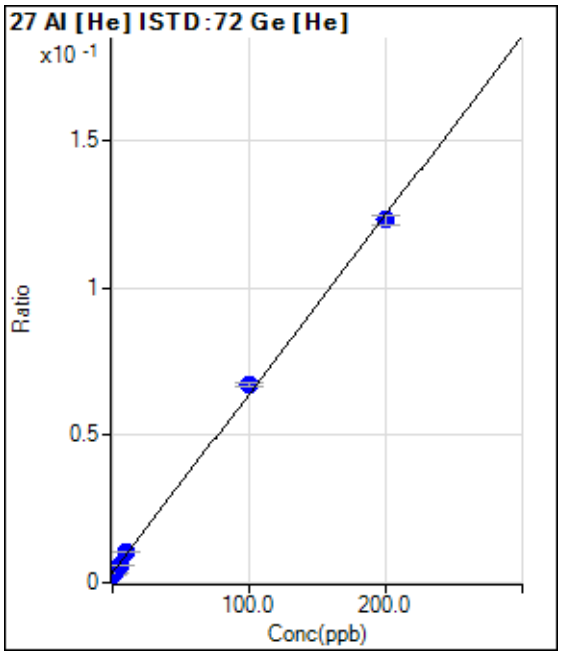


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93611.74	0.0265	P	2.0
2	☐	2.000	0.388	99401.07	0.0288	P	0.9
3	☐	5.000	5.148	200210.73	0.0573	P	1.0
4	☐	10.000	13.482	371757.87	0.1071	P	6.5
5	☐	100.000	101.516	2209862.62	0.6337	A	3.8
6	☐	200.000	199.080	4155278.48	1.2172	A	2.8
7	☐	1.000					

y = 0.0060 * x + 0.0265
R = 0.9998
DL = 0.2608
BEC = 4.429

Weight: <None>
Min Conc: <None>

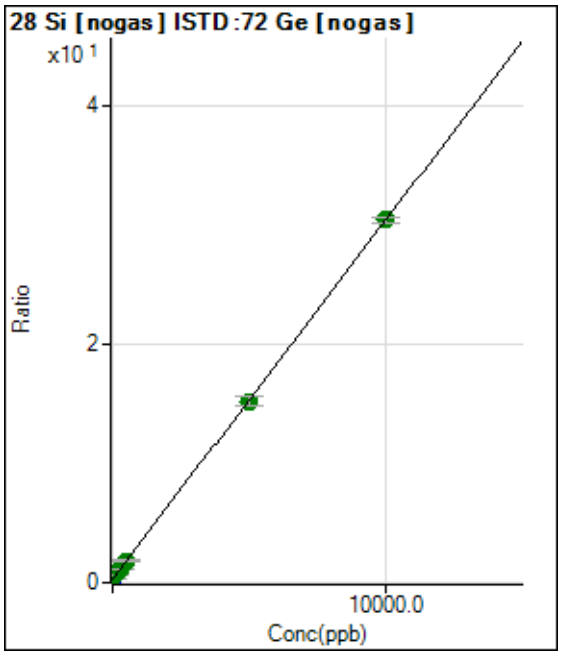
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.955	2456.87	0.0028	P	12.5
2	☐	2.000	-0.460	2760.24	0.0031	P	5.3
3	☐	5.000	3.872	5100.80	0.0057	P	5.6
4	☐	10.000	11.917	9355.77	0.0106	P	2.2
5	☐	100.000	105.336	57554.45	0.0673	P	1.3
6	☐	200.000	197.289	104306.78	0.1231	P	2.6
7	☐	1.000					

y = 6.0651E-004 * x + 0.0034
R = 0.9993
DL = 1.737
BEC = 5.6

Weight: <None>
Min Conc: <None>

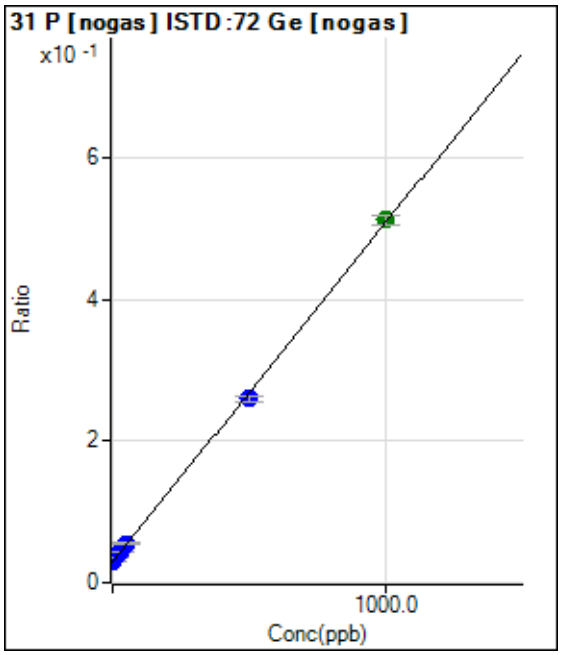


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1042798.58	0.2951	P	1.8
2	☐	100.000	119.317	2255303.93	0.6538	A	1.2
3	☐	250.000	273.793	3908017.34	1.1181	A	0.9
4	☐	500.000	515.409	6404495.32	1.8444	A	4.4
5	☐	5000.000	4966.146	53028217.54	15.2226	A	5.6
6	☐	10000.00	10015.369	103771501.7	30.3998	A	1.9
7	☐	5.000					

y = 0.0030 * x + 0.2951
R = 1.0000
DL = 5.189
BEC = 98.18

Weight: <None>
Min Conc: <None>

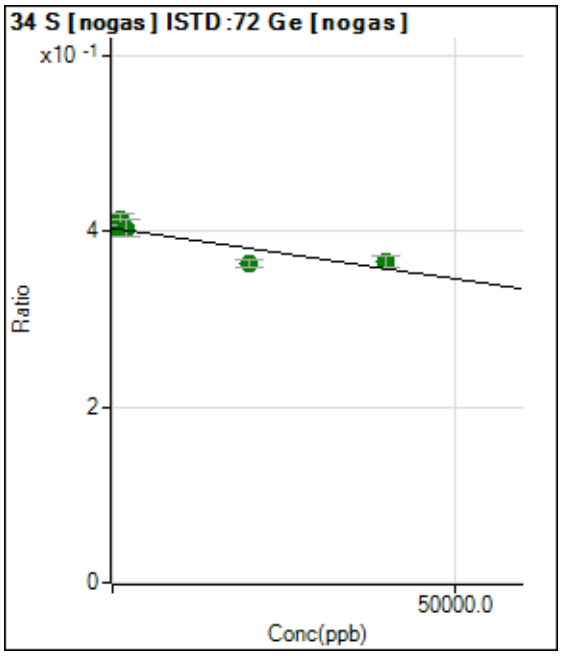
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103739.31	0.0294	P	1.8
2	☐	10.000	10.963	119404.80	0.0346	P	1.6
3	☐	25.000	29.400	151824.17	0.0435	P	4.3
4	☐	50.000	53.690	191368.23	0.0551	P	4.0
5	☐	500.000	481.577	907183.32	0.2603	P	3.1
6	☐	1000.000	1008.907	1752391.64	0.5132	A	3.0
7	☐	5.000					

y = 4.7959E-004 * x + 0.0294
R = 0.9997
DL = 3.287
BEC = 61.21

Weight: <None>
Min Conc: <None>

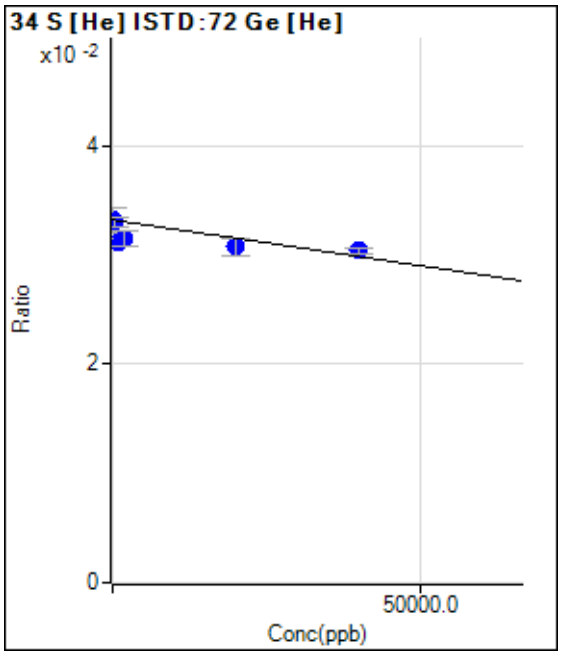


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1426194.92	0.4035	A	0.2
2	☐	400.000	-7396.145	1421435.65	0.4121	A	1.1
3	☐	1000.000	-8111.873	1442837.69	0.4129	A	3.2
4	☐	2000.000	646.774	1398499.02	0.4028	A	4.9
5	☐	20000.00	34889.409	1267432.71	0.3633	A	2.4
6	☐	40000.00	32928.715	1247769.04	0.3656	A	3.6
7	☐	100.000					

y = -1.1520E-006 * x + 0.4035
R = -0.8947
DL = -2215
BEC = -3.503E+05

Weight: <None>
Min Conc: <None>

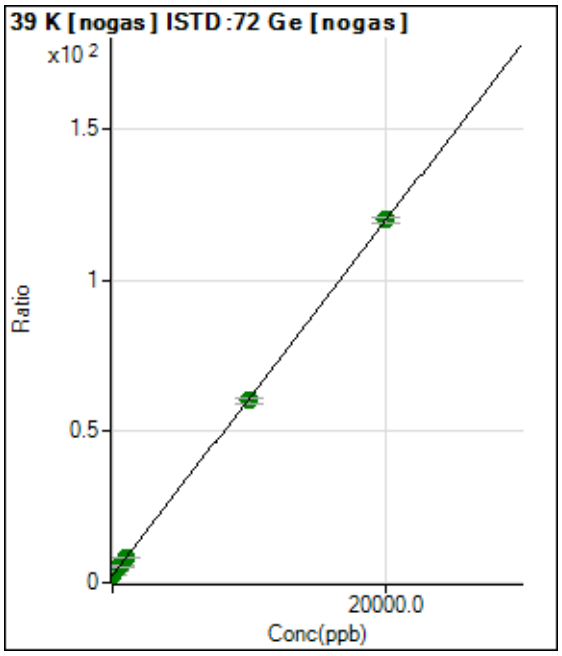
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28960.49	0.0332	P	6.7
2	☐	400.000	2406.452	29227.72	0.0330	P	2.6
3	☐	1000.000	24298.779	27692.69	0.0312	P	2.1
4	☐	2000.000	20199.870	27758.44	0.0315	P	4.2
5	☐	20000.00	29445.048	26289.02	0.0307	P	4.8
6	☐	40000.00	33764.949	25755.09	0.0304	P	1.2
7	☐	100.000					

y = -8.4013E-008 * x + 0.0332
R = -0.7318
DL = -7.889E+04
BEC = -3.953E+05

Weight: <None>
Min Conc: <None>

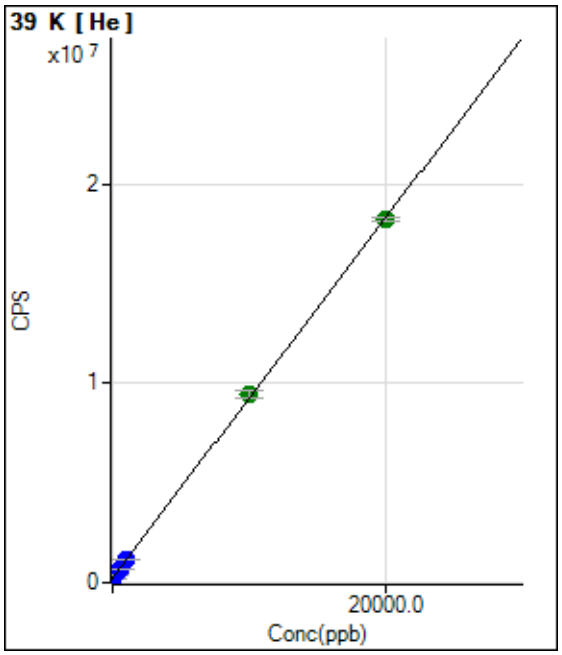


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8370268.42	2.3687	A	1.4
2	☐	200.000	216.683	12557971.37	3.6407	A	1.9
3	☐	500.000	531.542	19178895.74	5.4890	A	3.3
4	☐	1000.000	1009.948	28818096.48	8.2974	A	3.7
5	☐	10000.00	9881.696	210416617.2	60.3772	A	2.9
6	☐	20000.00	20057.699	410016000.8	120.113	A	1.3
7	☐	100.000					

y = 0.0059 * x + 2.3687
R = 1.0000
DL = 16.95
BEC = 403.5

Weight: <None>
Min Conc: <None>

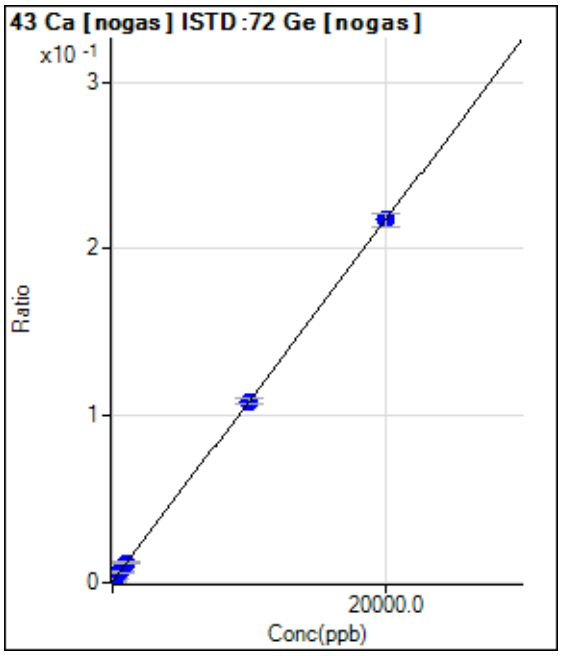
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	215744.62		P	0.3
2	☐	200.000	210.810	406366.66		P	0.9
3	☐	500.000	548.071	711330.69		P	0.8
4	☐	1000.000	1022.250	1140101.73		P	0.5
5	☐	10000.00	10211.781	9449620.69		A	3.5
6	☐	20000.00	19891.687	18202555.56		A	1.0
7	☐	100.000					

y = 904.2376 * x + 215744.6200
R = 0.9999
DL = 2.043
BEC = 238.6

Weight: <None>
Min Conc: <None>

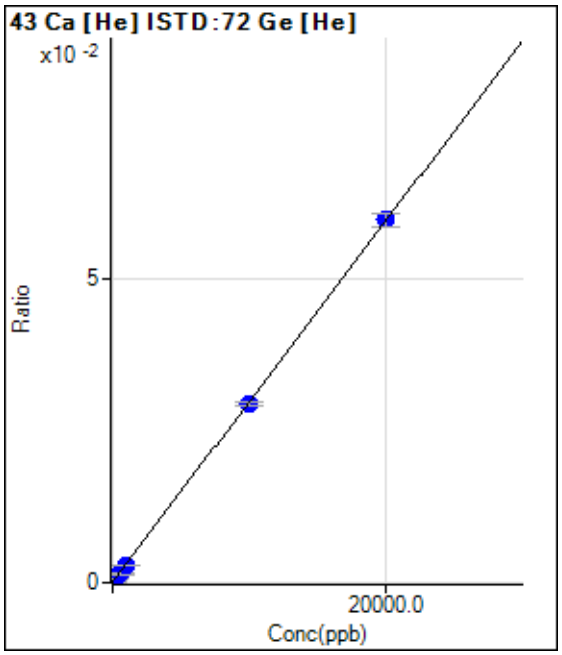


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2046.81	0.0006	P	10.3
2	☐	200.000	198.080	9402.50	0.0027	P	4.0
3	☐	500.000	538.822	22417.05	0.0064	P	3.2
4	☐	1000.000	1050.230	41536.71	0.0120	P	3.2
5	☐	10000.00	9972.939	378439.99	0.1086	P	3.3
6	☐	20000.00	20010.068	741620.66	0.2173	P	4.1
7	☐	100.000					

y = 1.0832E-005 * x + 5.7916E-004
R = 1.0000
DL = 16.56
BEC = 53.47

Weight: <None>
Min Conc: <None>

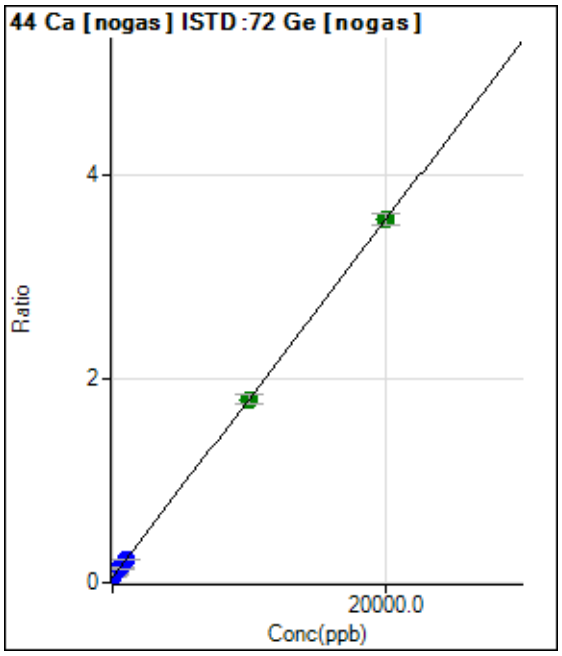
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.67	0.0001	P	51.5
2	☐	200.000	180.020	600.02	0.0007	P	8.7
3	☐	500.000	437.686	1280.06	0.0014	P	11.5
4	☐	1000.000	909.428	2496.87	0.0028	P	2.4
5	☐	10000.00	9842.244	25023.60	0.0292	P	2.0
6	☐	20000.00	20085.164	50458.39	0.0595	P	3.6
7	☐	100.000					

y = 2.9570E-006 * x + 1.4570E-004
R = 1.0000
DL = 76.14
BEC = 49.27

Weight: <None>
Min Conc: <None>

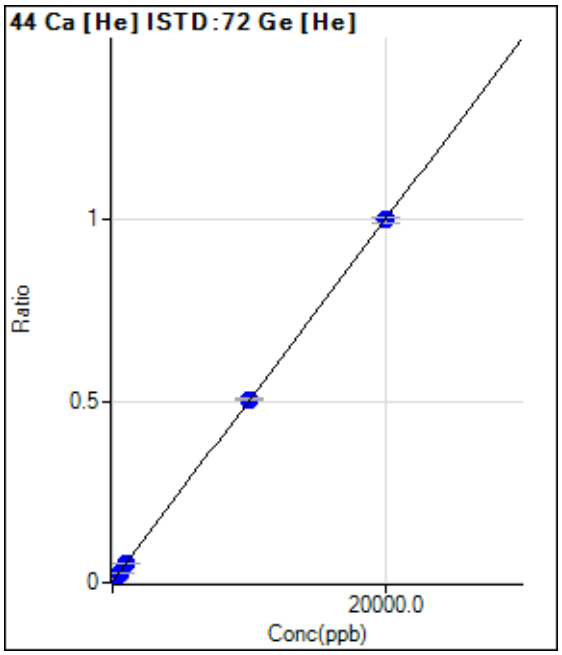


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	174578.03	0.0494	P	1.6
2	☐	200.000	213.458	299320.37	0.0868	P	5.9
3	☐	500.000	524.687	494009.26	0.1413	P	0.4
4	☐	1000.000	1025.436	795665.98	0.2291	P	3.0
5	☐	10000.00	9983.445	6265992.83	1.7985	A	4.3
6	☐	20000.00	20006.254	12130385.65	3.5544	A	3.2
7	☐	100.000					

y = 1.7520E-004 * x + 0.0494
R = 1.0000
DL = 13.15
BEC = 282

Weight: <None>
Min Conc: <None>

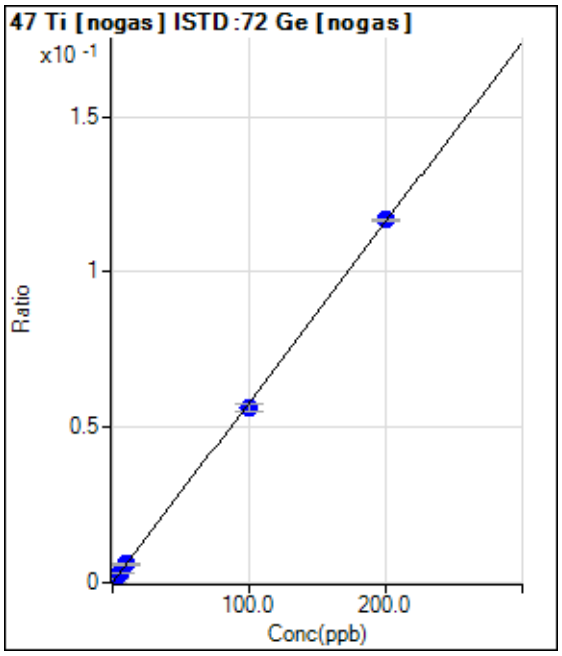
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2850.26	0.0033	P	7.7
2	☐	200.000	193.546	11446.99	0.0129	P	0.9
3	☐	500.000	515.019	25731.42	0.0290	P	0.7
4	☐	1000.000	996.155	46648.52	0.0530	P	1.6
5	☐	10000.00	10061.366	432252.82	0.5053	P	0.6
6	☐	20000.00	19969.198	847403.06	0.9997	P	1.8
7	☐	100.000					

y = 4.9898E-005 * x + 0.0033
R = 1.0000
DL = 15.21
BEC = 65.51

Weight: <None>
Min Conc: <None>

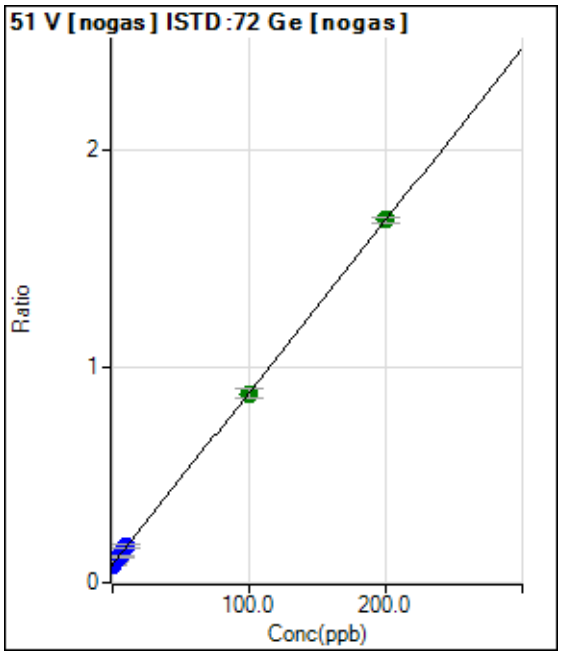


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0001	P	6.4
2	☐	2.000	2.041	4390.61	0.0013	P	9.1
3	☐	5.000	5.024	10489.79	0.0030	P	3.2
4	☐	10.000	10.011	20468.19	0.0059	P	3.7
5	☐	100.000	97.429	197199.16	0.0566	P	4.2
6	☐	200.000	201.284	398735.39	0.1168	P	0.8
7	☐	1.000					

y = 5.7987E-004 * x + 8.8659E-005
R = 0.9999
DL = 0.02948
BEC = 0.1529

Weight: <None>
Min Conc: <None>

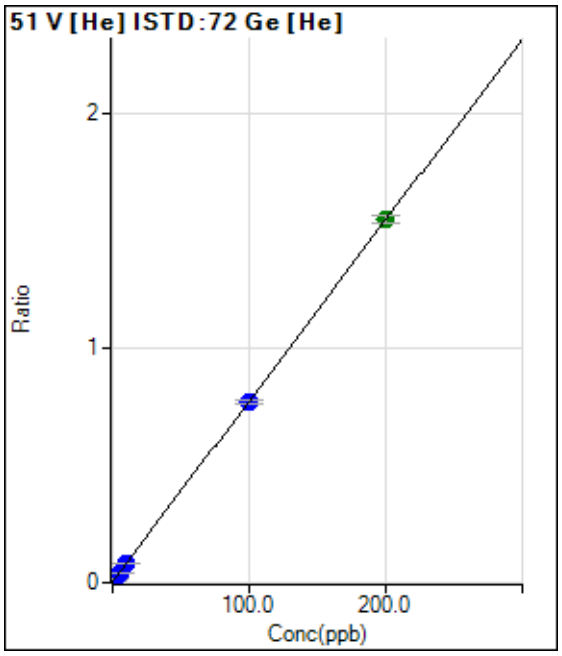
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	298398.50	0.0845	P	4.3
2	☐	2.000	1.896	343402.87	0.0995	P	1.0
3	☐	5.000	4.546	421515.87	0.1206	P	3.7
4	☐	10.000	10.789	590818.98	0.1703	P	7.3
5	☐	100.000	99.393	3048818.43	0.8752	A	5.0
6	☐	200.000	200.276	5726594.27	1.6778	A	1.9
7	☐	1.000					

y = 0.0080 * x + 0.0845
R = 1.0000
DL = 1.365
BEC = 10.62

Weight: <None>
Min Conc: <None>

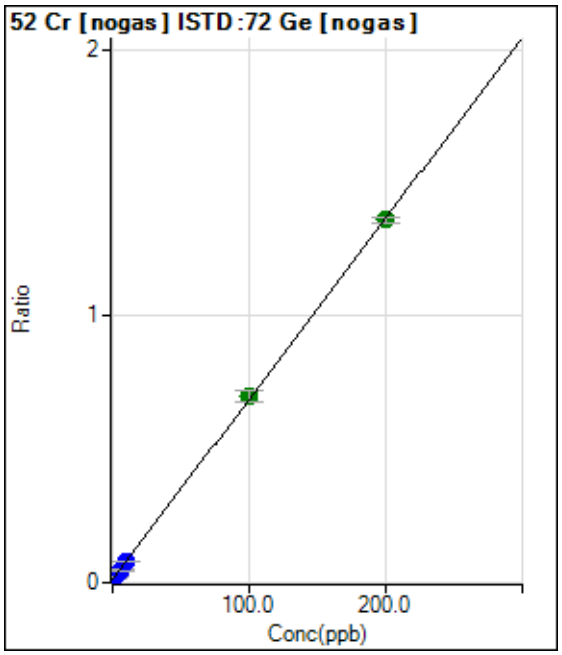


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.166	4168.47	0.0048	P	5.4
2	☐	2.000	2.099	17410.18	0.0197	P	1.7
3	☐	5.000	5.087	37895.73	0.0427	P	0.9
4	☐	10.000	9.838	69759.85	0.0792	P	1.9
5	☐	100.000	99.609	658864.48	0.7703	P	1.6
6	☐	200.000	200.201	1309379.50	1.5446	A	2.1
7	☐	1.000					

y = 0.0077 * x + 0.0035
R = 1.0000
DL = 0.1004
BEC = 0.4551

Weight: <None>
Min Conc: <None>

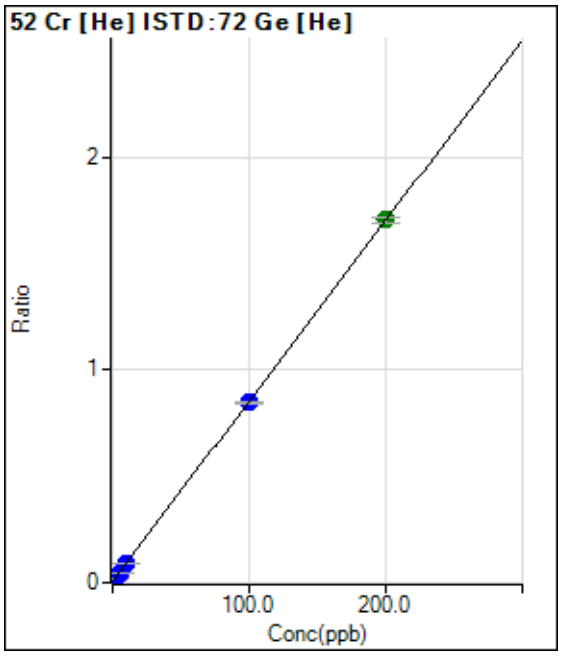
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40628.16	0.0115	P	1.5
2	☐	2.000	2.020	86850.01	0.0252	P	3.2
3	☐	5.000	5.175	162688.47	0.0466	P	3.6
4	☐	10.000	10.056	276461.19	0.0796	P	4.7
5	☐	100.000	101.494	2434944.02	0.6991	A	5.9
6	☐	200.000	199.245	4646681.60	1.3613	A	1.8
7	☐	1.000					

y = 0.0068 * x + 0.0115
R = 1.0000
DL = 0.07393
BEC = 1.697

Weight: <None>
Min Conc: <None>

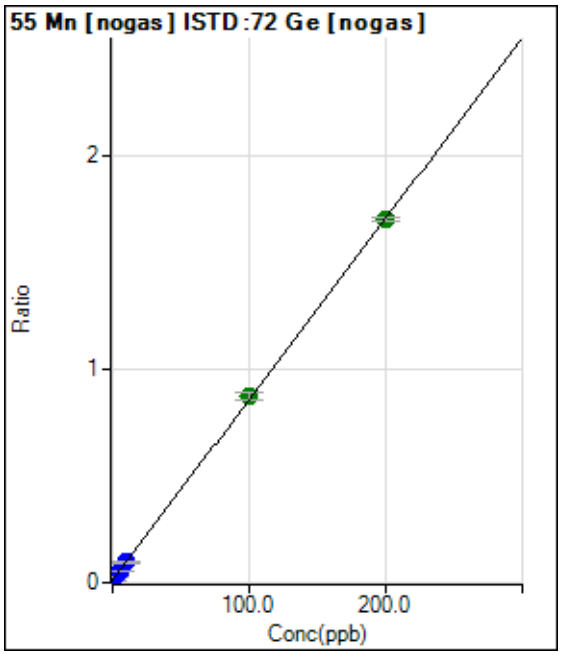


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5834.33	0.0067	P	4.8
2	☐	2.000	1.853	19830.87	0.0224	P	1.8
3	☐	5.000	4.934	43070.49	0.0485	P	1.2
4	☐	10.000	9.646	77830.04	0.0884	P	1.9
5	☐	100.000	99.169	724211.97	0.8466	P	1.2
6	☐	200.000	200.436	1445221.91	1.7044	A	1.4
7	☐	1.000					

y = 0.0085 * x + 0.0067
R = 1.0000
DL = 0.1143
BEC = 0.7904

Weight: <None>
Min Conc: <None>

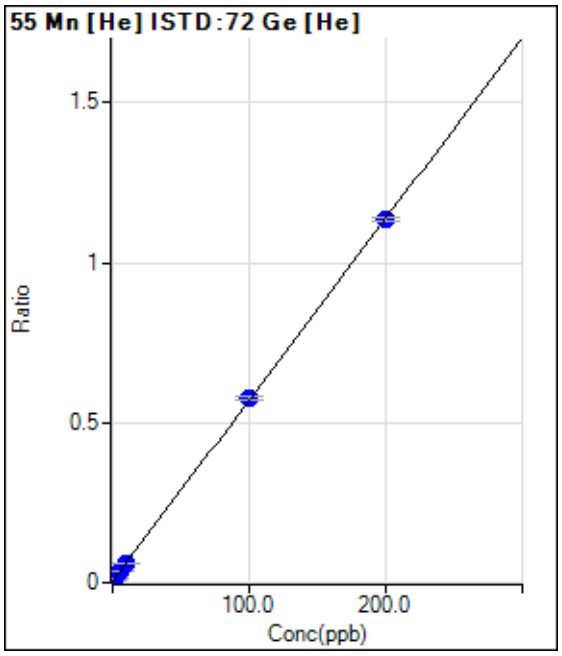
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41663.90	0.0118	P	2.1
2	☐	2.000	1.842	94400.69	0.0274	P	3.9
3	☐	5.000	5.250	196447.78	0.0562	P	2.3
4	☐	10.000	9.984	334126.25	0.0963	P	5.5
5	☐	100.000	101.357	3028926.20	0.8693	A	4.1
6	☐	200.000	199.318	5796306.16	1.6981	A	1.2
7	☐	1.000					

y = 0.0085 * x + 0.0118
R = 1.0000
DL = 0.08716
BEC = 1.394

Weight: <None>
Min Conc: <None>

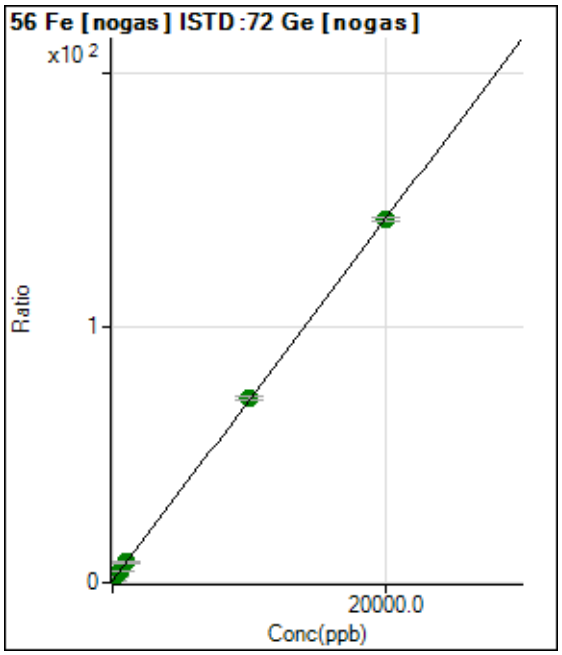


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4200.54	0.0048	P	4.8
2	☐	2.000	1.687	12714.58	0.0144	P	3.3
3	☐	5.000	5.132	30068.07	0.0338	P	1.4
4	☐	10.000	9.477	51438.56	0.0584	P	3.0
5	☐	100.000	101.141	493549.07	0.5770	P	1.3
6	☐	200.000	199.455	960616.42	1.1331	P	1.0
7	☐	1.000					

y = 0.0057 * x + 0.0048
R = 1.0000
DL = 0.1217
BEC = 0.8515

Weight: <None>
Min Conc: <None>

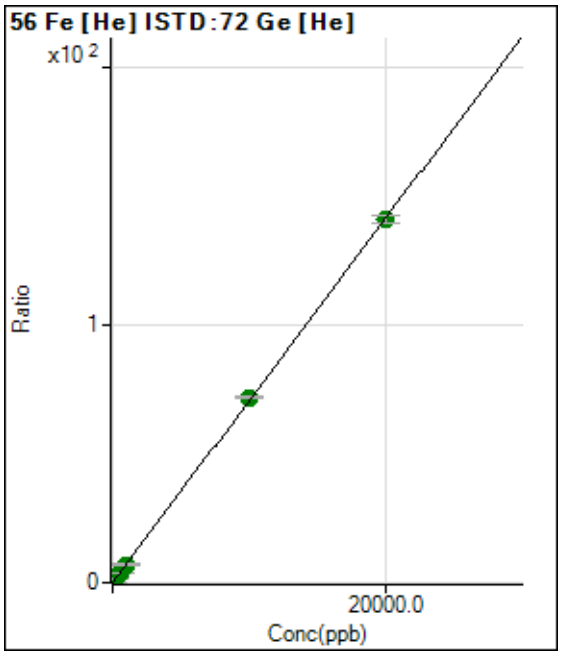
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2379531.76	0.6732	A	0.9
2	☐	200.000	211.768	7503215.27	2.1754	A	3.4
3	☐	500.000	541.272	15774798.79	4.5129	A	1.7
4	☐	1000.000	1022.035	27501268.32	7.9233	A	5.7
5	☐	10000.00	10082.393	251673555.6	72.1950	A	1.8
6	☐	20000.00	19956.552	485536627.5	142.239	A	1.2
7	☐	100.000					

y = 0.0071 * x + 0.6732
R = 1.0000
DL = 2.507
BEC = 94.9

Weight: <None>
Min Conc: <None>

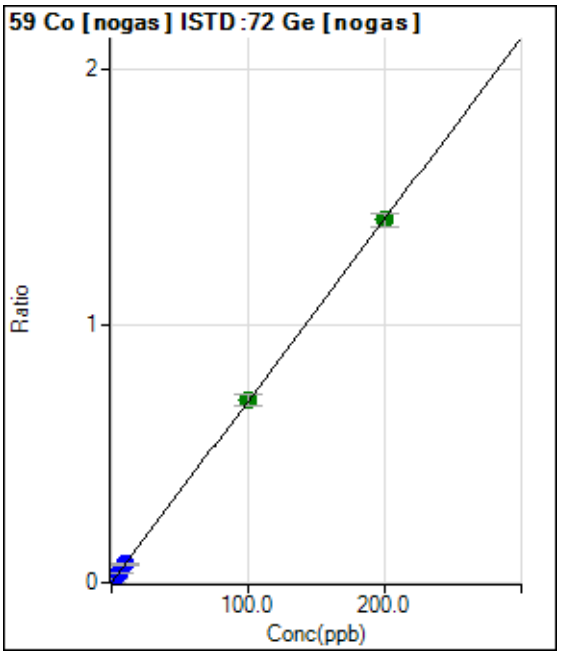


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27650.93	0.0317	P	1.4
2	☐	200.000	208.419	1332785.66	1.5053	A	1.8
3	☐	500.000	516.613	3272430.89	3.6842	A	1.0
4	☐	1000.000	994.418	6217699.07	7.0624	A	2.3
5	☐	10000.00	10142.316	61367430.75	71.7391	A	1.1
6	☐	20000.00	19928.622	119456661.5	140.929	A	2.1
7	☐	100.000					

y = 0.0071 * x + 0.0317
R = 1.0000
DL = 0.1834
BEC = 4.486

Weight: <None>
Min Conc: <None>

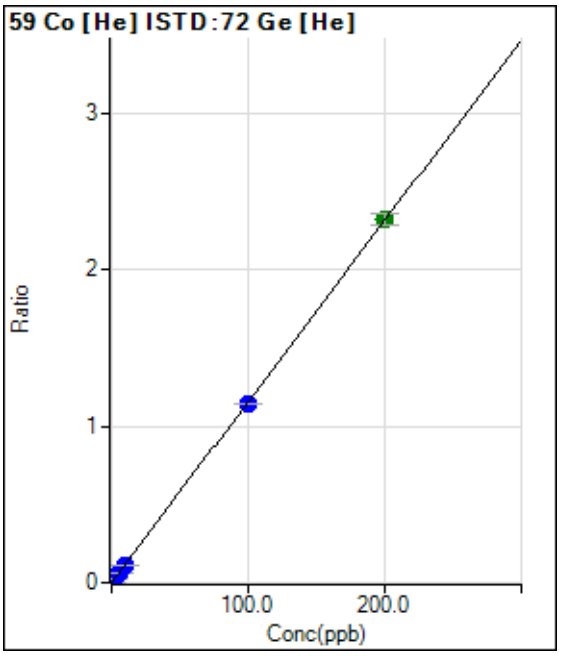
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1293.40	0.0004	P	15.4
2	☐	2.000	2.101	52448.78	0.0152	P	2.8
3	☐	5.000	5.319	132572.62	0.0379	P	2.0
4	☐	10.000	10.158	250344.22	0.0721	P	5.0
5	☐	100.000	100.598	2475581.11	0.7108	A	6.4
6	☐	200.000	199.684	4813864.62	1.4106	A	3.6
7	☐	1.000					

y = 0.0071 * x + 3.6535E-004
R = 1.0000
DL = 0.02394
BEC = 0.05173

Weight: <None>
Min Conc: <None>

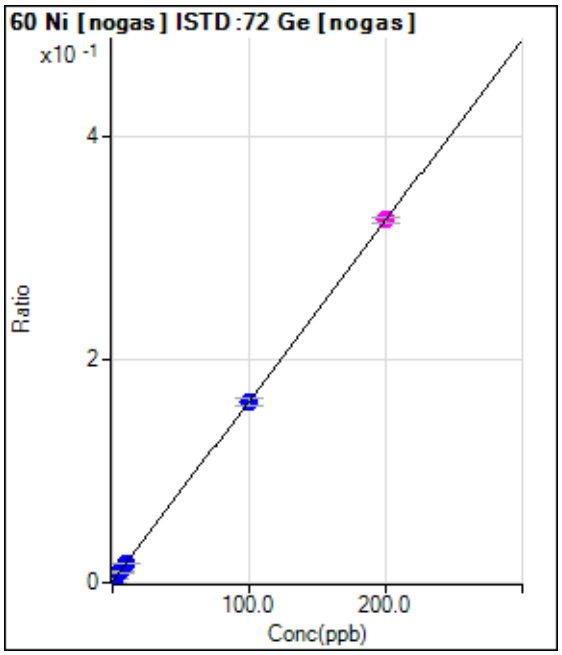


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	463.35	0.0005	P	17.1
2	☐	2.000	2.053	21462.71	0.0242	P	2.7
3	☐	5.000	5.060	52388.42	0.0590	P	3.6
4	☐	10.000	9.697	99093.21	0.1125	P	0.7
5	☐	100.000	98.871	977365.84	1.1425	P	0.5
6	☐	200.000	200.578	1964981.79	2.3173	A	3.0
7	☐	1.000					

y = 0.0116 * x + 5.3201E-004
R = 1.0000
DL = 0.02368
BEC = 0.04606

Weight: <None>
Min Conc: <None>

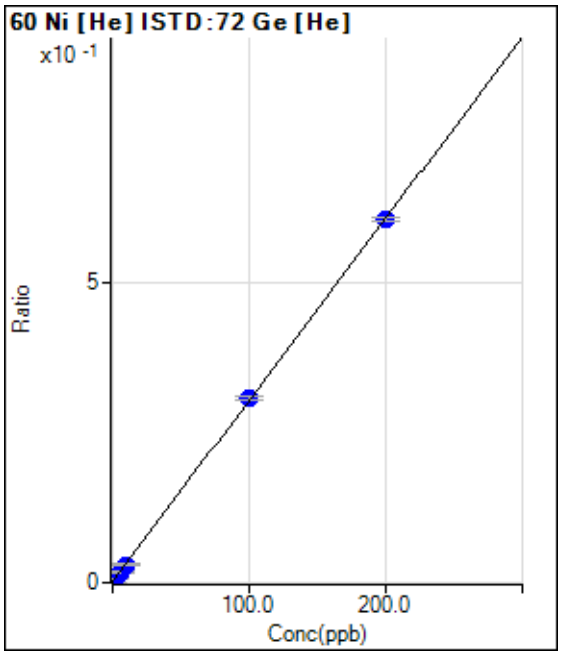
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.257	1730.11	0.0005	P	13.6
2	☐	2.000	1.983	14202.33	0.0041	P	2.9
3	☐	5.000	5.390	33671.38	0.0096	P	3.2
4	☐	10.000	10.241	60711.01	0.0175	P	5.3
5	☐	100.000	99.328	563513.25	0.1617	P	4.2
6	☐	200.000	200.314	1110240.61	0.3253	M	1.5
7	☐	1.000					

y = 0.0016 * x + 9.0573E-004
R = 1.0000
DL = 0.1237
BEC = 0.5594

Weight: <None>
Min Conc: <None>

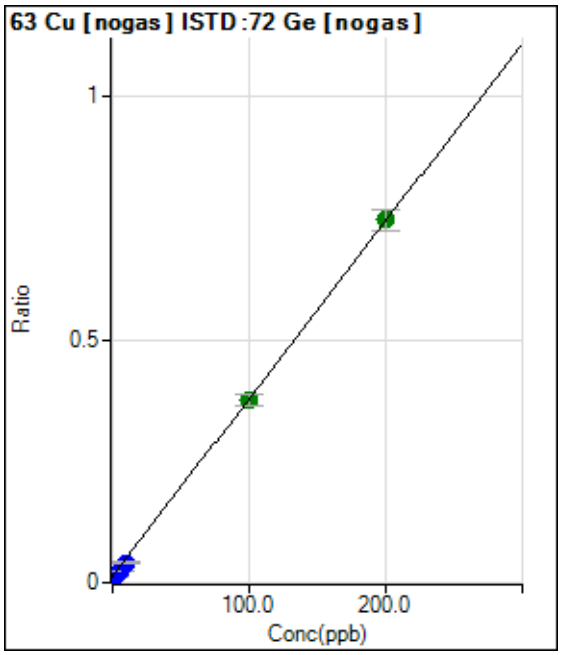


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.242	716.70	0.0008	P	8.0
2	☐	2.000	1.778	6147.81	0.0069	P	6.1
3	☐	5.000	5.228	15456.72	0.0174	P	4.5
4	☐	10.000	9.524	26793.20	0.0304	P	1.7
5	☐	100.000	101.382	264169.05	0.3088	P	2.2
6	☐	200.000	199.329	513507.16	0.6057	P	0.9
7	☐	1.000					

y = 0.0030 * x + 0.0016
R = 1.0000
DL = 0.0649
BEC = 0.513

Weight: <None>
Min Conc: <None>

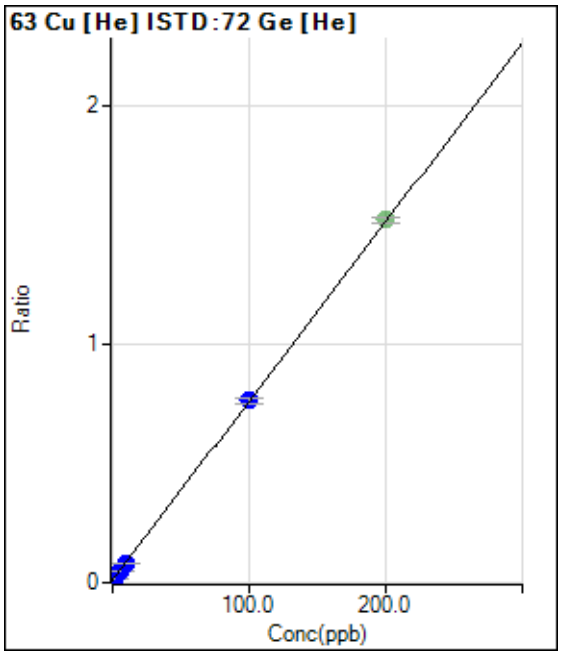
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48912.12	0.0138	P	2.3
2	☐	2.000	-0.795	37735.76	0.0109	P	1.3
3	☐	5.000	2.492	80185.21	0.0229	P	2.4
4	☐	10.000	7.419	142161.74	0.0409	P	4.5
5	☐	100.000	98.907	1306444.98	0.3751	A	6.2
6	☐	200.000	200.766	2549114.75	0.7472	A	5.5
7	☐	1.000					

y = 0.0037 * x + 0.0138
R = 0.9999
DL = 0.2584
BEC = 3.79

Weight: <None>
Min Conc: <None>

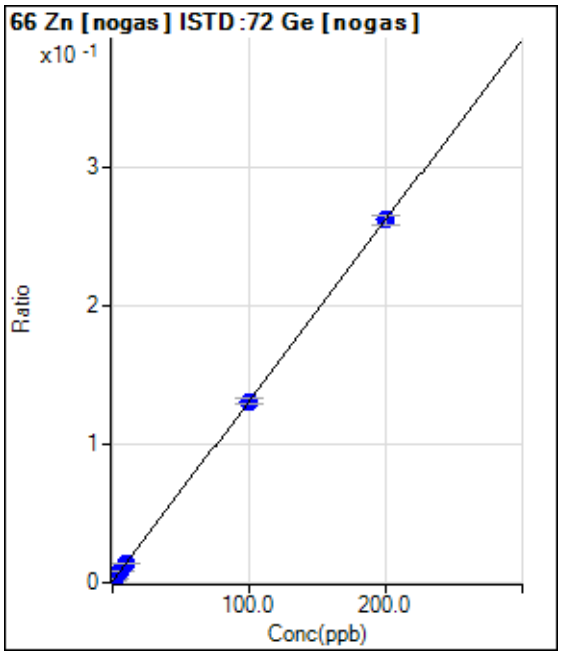


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	2.267	24106.04	0.0277	P	4.8
2	☐	2.000	1.110	16807.87	0.0190	P	4.3
3	☐	5.000	4.588	40017.27	0.0451	P	2.4
4	☐	10.000	8.886	68039.39	0.0773	P	1.8
5	☐	100.000	100.150	651304.85	0.7614	P	2.4
6	☑	200.000		1288086.52	1.5190	A	1.5
7	☐	1.000					

y = 0.0075 * x + 0.0107
R = 0.9995
DL = 0.5309
BEC = 1.423

Weight: <None>
Min Conc: <None>

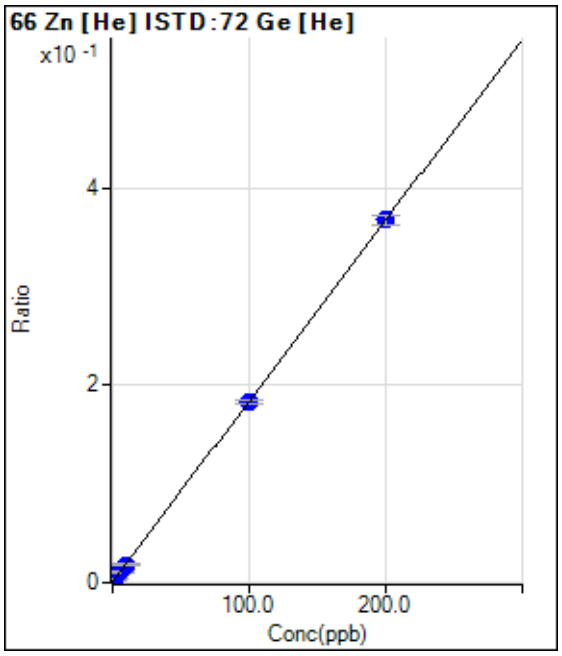
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.009	3240.33	0.0009	P	6.1
2	☐	2.000	1.888	11713.95	0.0034	P	3.4
3	☐	5.000	5.384	27831.37	0.0080	P	2.8
4	☐	10.000	9.861	48013.77	0.0138	P	1.6
5	☐	100.000	99.752	457400.41	0.1313	P	3.5
6	☐	200.000	200.122	895576.81	0.2624	P	2.7
7	☐	1.000					

y = 0.0013 * x + 9.2866E-004
R = 1.0000
DL = 0.1286
BEC = 0.7107

Weight: <None>
Min Conc: <None>

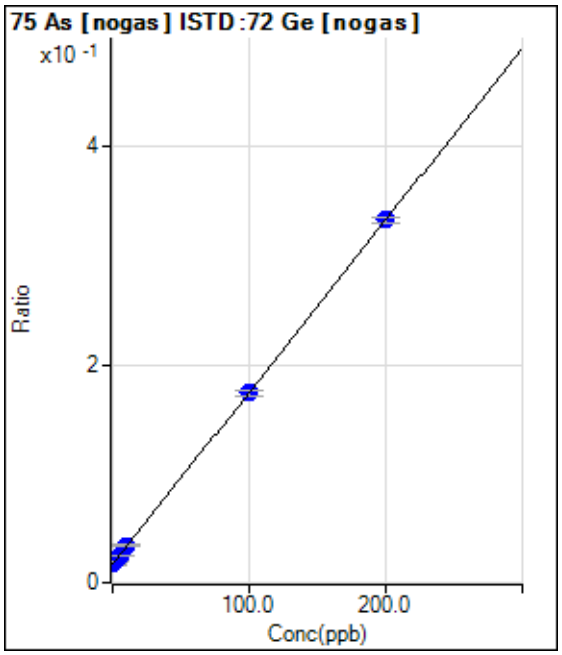


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.321	1183.39	0.0014	P	6.7
2	☐	2.000	2.000	3920.48	0.0044	P	7.1
3	☐	5.000	5.436	9522.60	0.0107	P	3.2
4	☐	10.000	9.524	16027.19	0.0182	P	3.4
5	☐	100.000	99.412	156305.04	0.1827	P	1.5
6	☐	200.000	200.307	311420.12	0.3674	P	2.4
7	☐	1.000					

y = 0.0018 * x + 7.6848E-004
R = 1.0000
DL = 0.1482
BEC = 0.4198

Weight: <None>
Min Conc: <None>

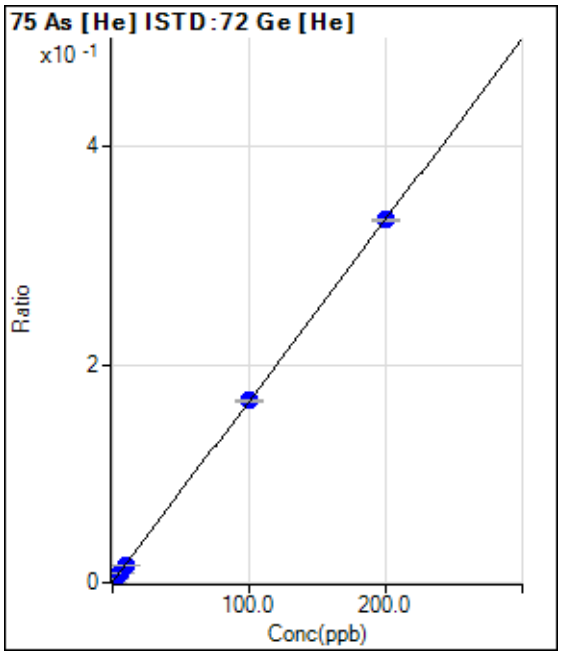
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.068	59824.71	0.0169	P	3.7
2	☐	2.000	1.898	68374.42	0.0198	P	2.6
3	☐	5.000	4.589	84086.25	0.0241	P	1.5
4	☐	10.000	10.713	117036.00	0.0337	P	5.5
5	☐	100.000	99.513	605530.38	0.1737	P	2.9
6	☐	200.000	200.219	1135121.18	0.3326	P	1.5
7	☐	1.000					

y = 0.0016 * x + 0.0168
R = 1.0000
DL = 1.202
BEC = 10.67

Weight: <None>
Min Conc: <None>

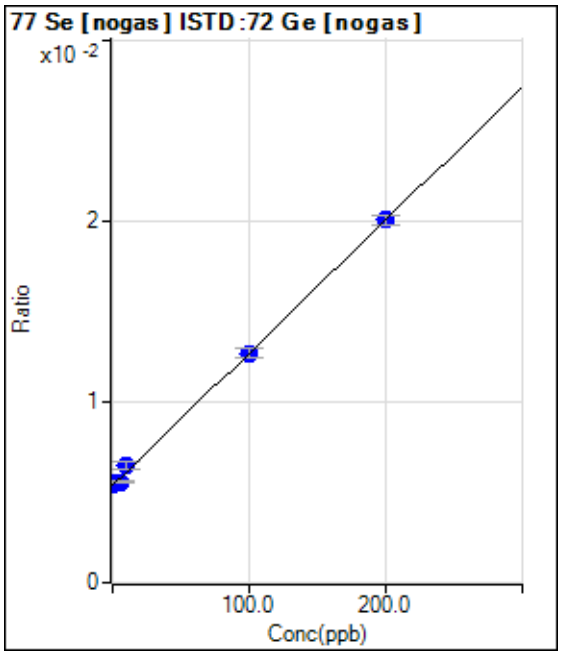


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	397.78	0.0005	P	8.9
2	☐	2.000	1.919	3231.41	0.0036	P	4.8
3	☐	5.000	4.965	7746.12	0.0087	P	1.6
4	☐	10.000	9.522	14356.79	0.0163	P	1.5
5	☐	100.000	100.290	143185.53	0.1674	P	0.9
6	☐	200.000	199.880	282435.60	0.3332	P	0.8
7	☐	1.000					

y = 0.0017 * x + 4.5605E-004
R = 1.0000
DL = 0.07297
BEC = 0.274

Weight: <None>
Min Conc: <None>

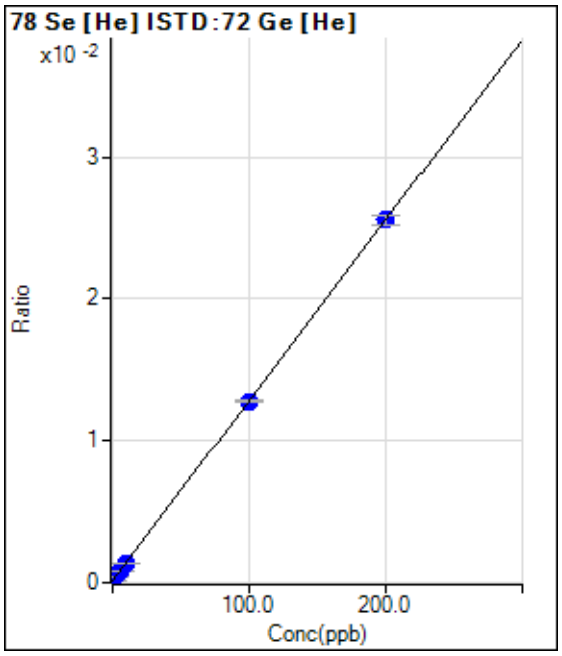
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19013.52	0.0054	P	4.8
2	☐	2.000	2.436	19183.66	0.0056	P	1.3
3	☐	5.000	2.529	19457.26	0.0056	P	2.0
4	☐	10.000	14.645	22410.71	0.0065	P	6.8
5	☐	100.000	99.732	44284.09	0.0127	P	4.5
6	☐	200.000	199.959	68522.31	0.0201	P	2.7
7	☐	1.000					

y = 7.3496E-005 * x + 0.0054
R = 0.9996
DL = 10.62
BEC = 73.22

Weight: <None>
Min Conc: <None>

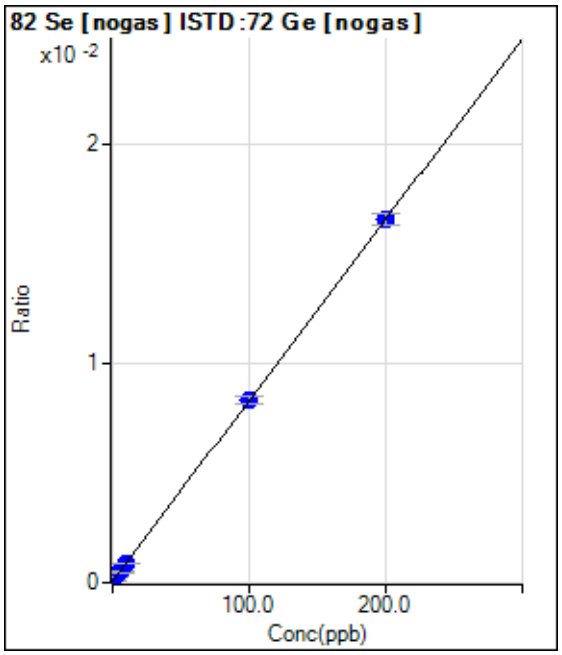


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.199	148.67	0.0002	P	13.7
2	☐	2.000	2.211	377.34	0.0004	P	6.1
3	☐	5.000	5.220	718.02	0.0008	P	4.4
4	☐	10.000	9.555	1196.71	0.0014	P	1.9
5	☐	100.000	99.602	10946.64	0.0128	P	1.1
6	☐	200.000	200.214	21679.53	0.0256	P	2.8
7	☐	1.000					

y = 1.2702E-004 * x + 1.4545E-004
R = 1.0000
DL = 0.553
BEC = 1.145

Weight: <None>
Min Conc: <None>

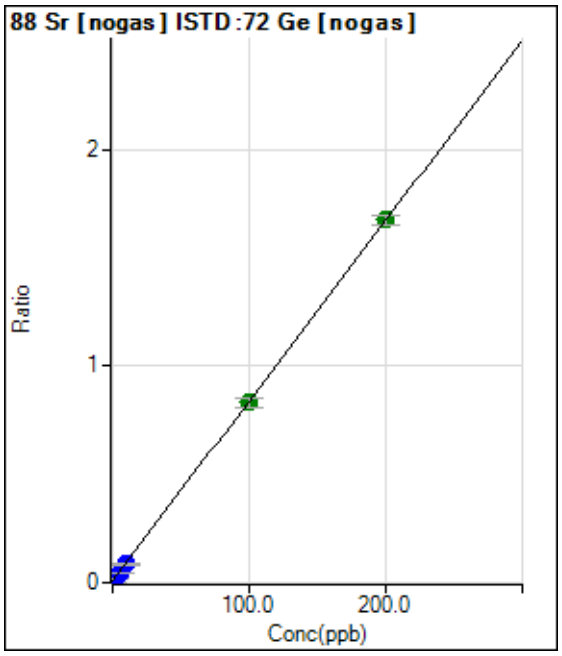
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	220.00	0.0001	P	25.5
2	☐	2.000	2.048	796.70	0.0002	P	3.5
3	☐	5.000	5.295	1743.44	0.0005	P	7.1
4	☐	10.000	9.728	2996.96	0.0009	P	5.3
5	☐	100.000	100.126	28940.12	0.0083	P	4.0
6	☐	200.000	199.943	56388.25	0.0165	P	3.3
7	☐	1.000					

y = 8.2325E-005 * x + 6.2382E-005
R = 1.0000
DL = 0.5791
BEC = 0.7578

Weight: <None>
Min Conc: <None>

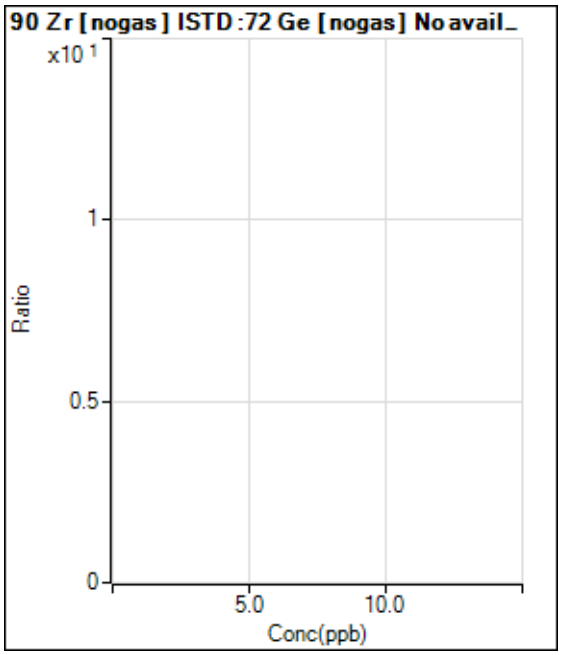


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30106.18	0.0084	P	156.
2	☐	2.000	1.200	63346.03	0.0184	P	1.1
3	☐	5.000	4.514	160396.61	0.0459	P	2.7
4	☐	10.000	9.397	300125.89	0.0865	P	5.5
5	☐	100.000	99.154	2898587.25	0.8321	A	5.3
6	☐	200.000	200.473	5712863.66	1.6738	A	2.4
7	☐	1.000					

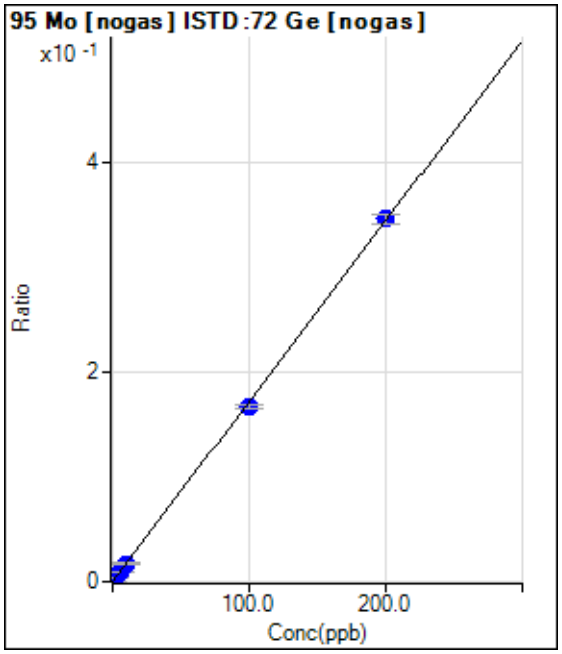
y = 0.0083 * x + 0.0084
R = 1.0000
DL = 4.742
BEC = 1.01

Weight: <None>
Min Conc: <None>

Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

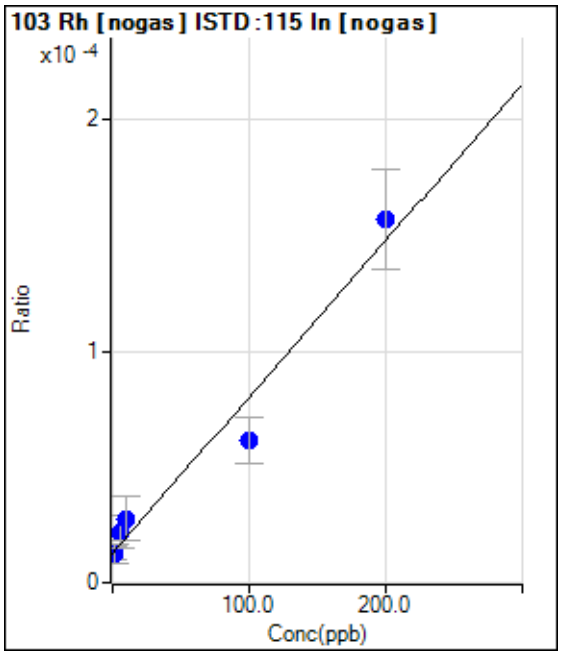


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.34	0.0001	P	22.7
2	☐	2.000	1.994	12174.36	0.0035	P	3.1
3	☐	5.000	5.242	31858.72	0.0091	P	1.9
4	☐	10.000	9.919	59570.07	0.0172	P	5.7
5	☐	100.000	97.444	584521.34	0.1677	P	2.1
6	☐	200.000	201.276	1181878.13	0.3463	P	2.5
7	☐	1.000					

y = 0.0017 * x + 9.9811E-005
R = 0.9999
DL = 0.0395
BEC = 0.05803

Weight: <None>
Min Conc: <None>

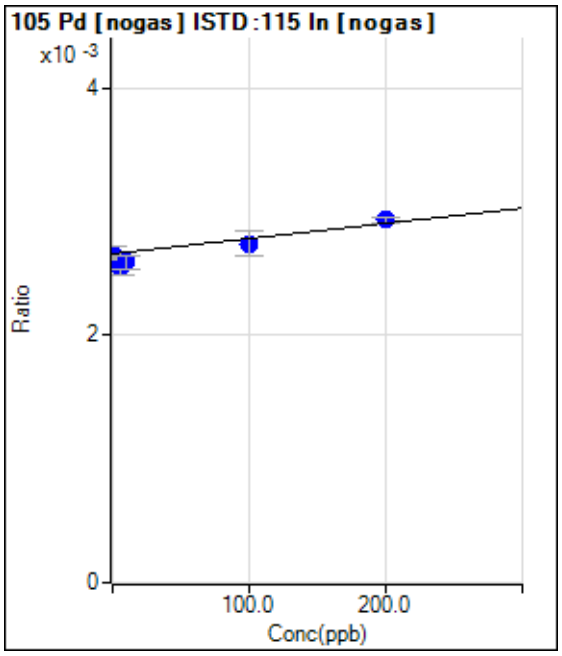
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	48.4
2	☐	2.000	-0.016	40.00	0.0000	P	66.2
3	☐	5.000	13.681	70.00	0.0000	P	66.3
4	☐	10.000	22.250	86.67	0.0000	P	67.8
5	☐	100.000	71.871	196.67	0.0001	P	32.0
6	☐	200.000	213.255	466.68	0.0002	P	27.6
7	☐	1.000					

y = 6.7589E-007 * x + 1.2724E-005
R = 0.9824
DL = 27.33
BEC = 18.83

Weight: <None>
Min Conc: <None>

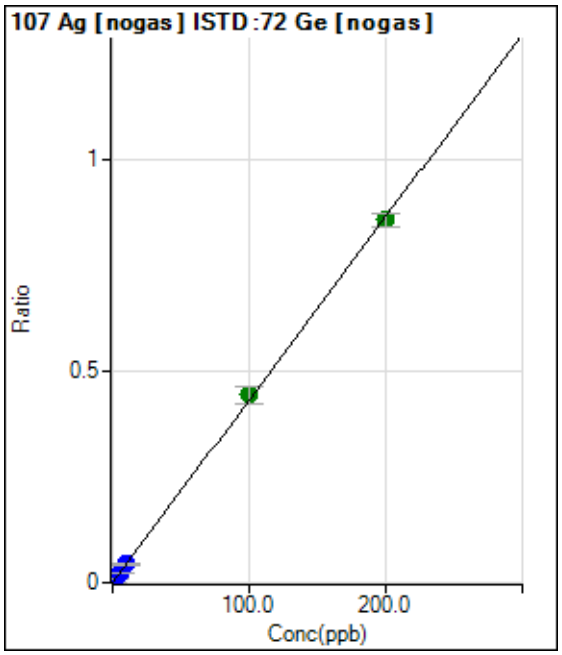


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8305.40	0.0027	P	4.7
2	☐	2.000	-12.103	8355.43	0.0026	P	1.0
3	☐	5.000	-89.196	8152.01	0.0025	P	4.9
4	☐	10.000	-56.002	8078.72	0.0026	P	4.1
5	☐	100.000	67.325	8772.36	0.0027	P	6.9
6	☐	200.000	222.133	8732.35	0.0029	P	1.8
7	☐	1.000					

y = 1.2275E-006 * x + 0.0027
R = 0.9469
DL = 304.1
BEC = 2166

Weight: <None>
Min Conc: <None>

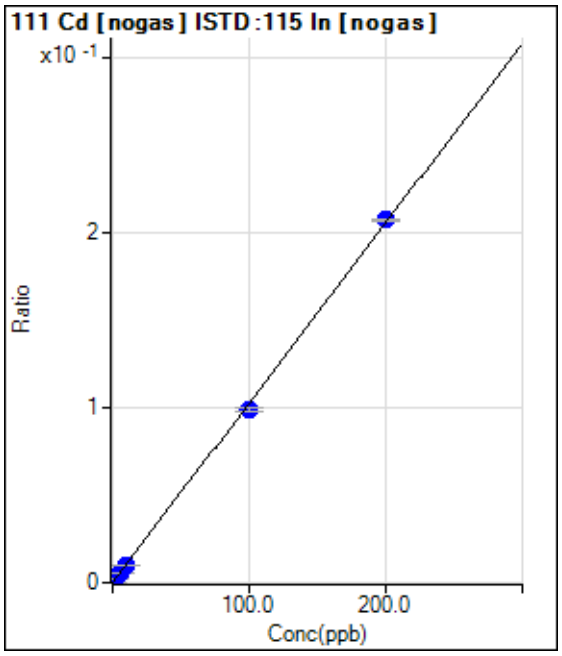
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	173.33	0.0000	P	24.9
2	☐	2.000	2.109	31548.55	0.0091	P	3.4
3	☐	5.000	5.261	79459.03	0.0227	P	3.9
4	☐	10.000	10.045	150720.94	0.0434	P	2.3
5	☐	100.000	103.010	1546581.23	0.4443	A	9.3
6	☐	200.000	198.485	2921316.42	0.8561	A	3.9
7	☐	1.000					

y = 0.0043 * x + 4.9160E-005
R = 0.9998
DL = 0.008503
BEC = 0.0114

Weight: <None>
Min Conc: <None>

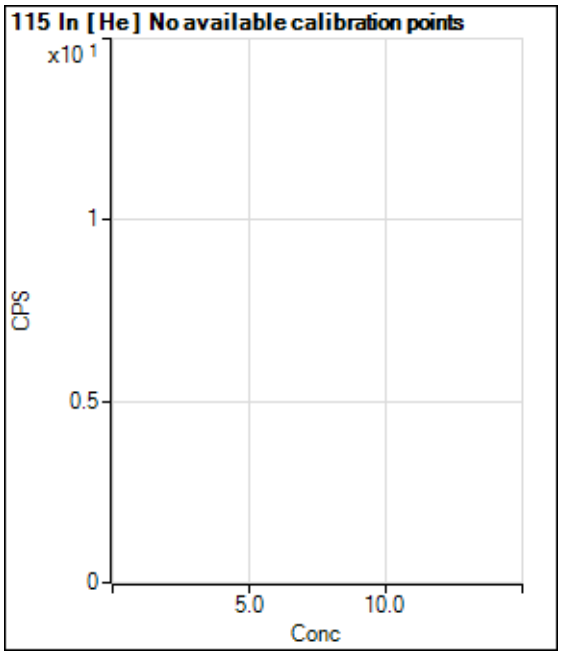


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	29.1
2	☐	2.000	2.082	6814.76	0.0022	P	4.2
3	☐	5.000	5.127	16891.66	0.0053	P	3.8
4	☐	10.000	9.683	31054.34	0.0100	P	5.5
5	☐	100.000	96.312	316515.53	0.0989	P	2.7
6	☐	200.000	201.856	617747.06	0.2073	P	0.9
7	☐	1.000					

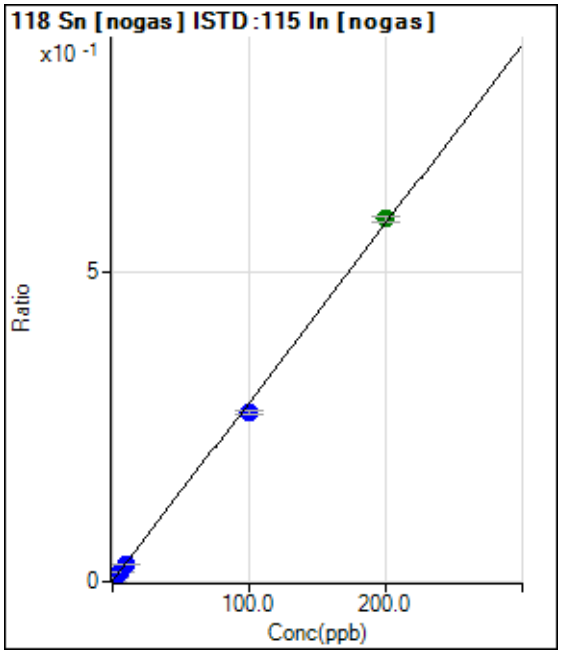
y = 0.0010 * x + 1.9212E-005
R = 0.9998
DL = 0.01635
BEC = 0.01871

Weight: <None>
Min Conc: <None>

Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			999999.92		P	3.0
2	☐			1009625.36		P	2.4
3	☐			1012135.05		P	0.3
4	☐			999217.39		P	1.3
5	☐			971240.08		P	1.6
6	☐			972341.45		P	0.7
7	☐						

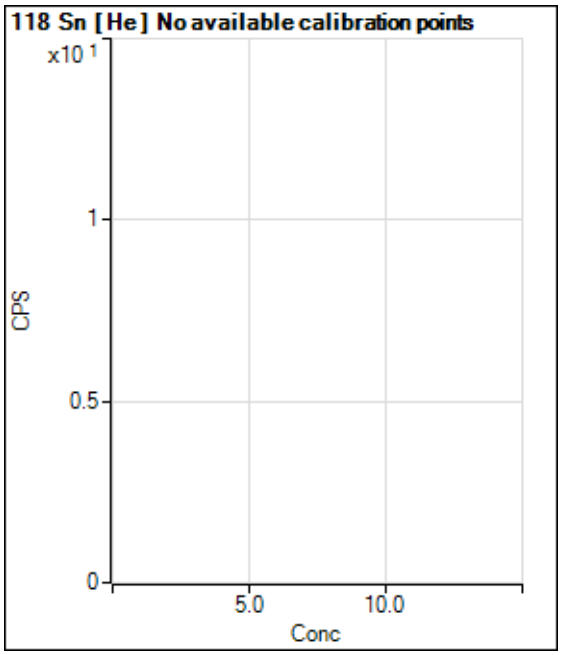


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2676.92	0.0009	P	10.4
2	☐	2.000	1.846	19564.47	0.0062	P	1.4
3	☐	5.000	4.863	47662.74	0.0149	P	1.5
4	☐	10.000	9.777	90772.53	0.0291	P	2.4
5	☐	100.000	94.653	878042.90	0.2744	P	2.7
6	☐	200.000	202.690	1747877.99	0.5865	A	1.3
7	☐	1.000					

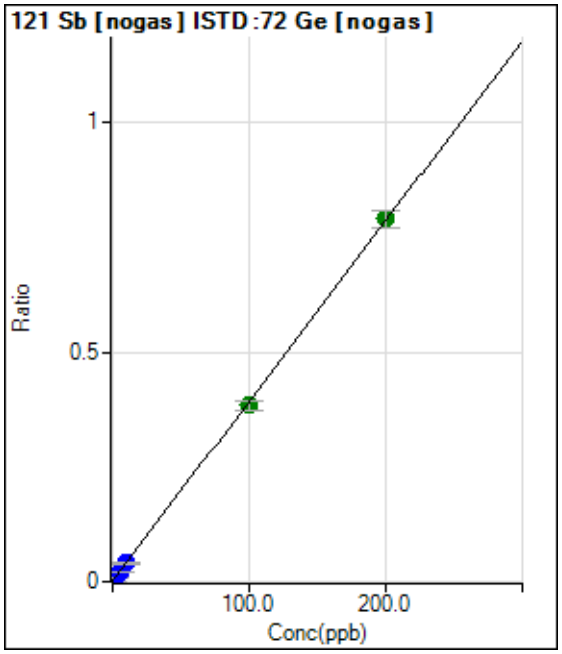
y = 0.0029 * x + 8.5637E-004
R = 0.9995
DL = 0.09289
BEC = 0.2964

Weight: <None>
Min Conc: <None>

Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1083.41		P	12.6
2	☐			6848.08		P	4.9
3	☐			17932.81		P	0.6
4	☐			32964.76		P	3.9
5	☐			323756.22		P	1.0
6	☐			654597.52		P	0.7
7	☐						

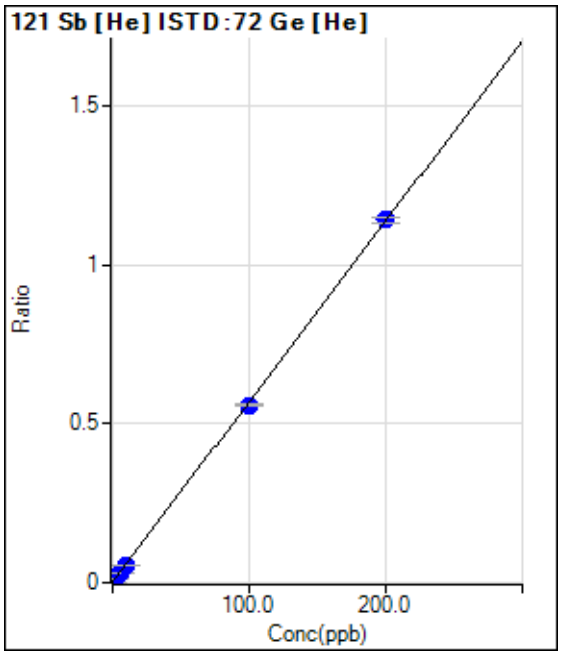


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3993.86	0.0011	P	6.7
2	☐	2.000	2.029	31345.28	0.0091	P	2.2
3	☐	5.000	4.992	72353.17	0.0207	P	2.8
4	☐	10.000	10.053	140807.97	0.0405	P	4.1
5	☐	100.000	97.524	1336111.36	0.3835	A	4.7
6	☐	200.000	201.235	2696152.61	0.7902	A	4.5
7	☐	1.000					

y = 0.0039 * x + 0.0011
R = 0.9999
DL = 0.05812
BEC = 0.2881

Weight: <None>
Min Conc: <None>

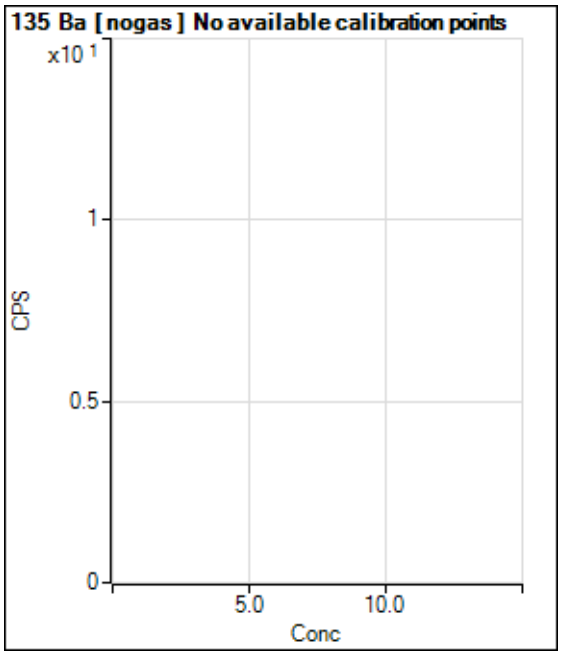
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1433.42	0.0016	P	16.1
2	☐	2.000	1.864	10826.85	0.0122	P	2.8
3	☐	5.000	4.883	26079.74	0.0294	P	4.2
4	☐	10.000	9.595	49406.59	0.0561	P	4.4
5	☐	100.000	98.284	478769.25	0.5597	P	1.4
6	☐	200.000	200.883	968286.68	1.1423	P	1.4
7	☐	1.000					

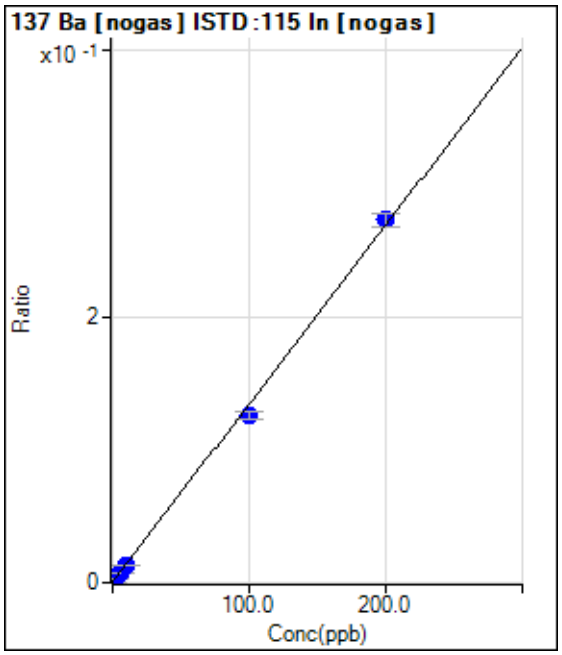
y = 0.0057 * x + 0.0016
R = 0.9999
DL = 0.1399
BEC = 0.2893

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			830.03		P	11.0
2	☐			5234.21		P	1.2
3	☐			13015.09		P	2.8
4	☐			23653.08		P	1.4
5	☐			239629.60		P	2.1
6	☐			477413.57		P	2.4
7	☐						

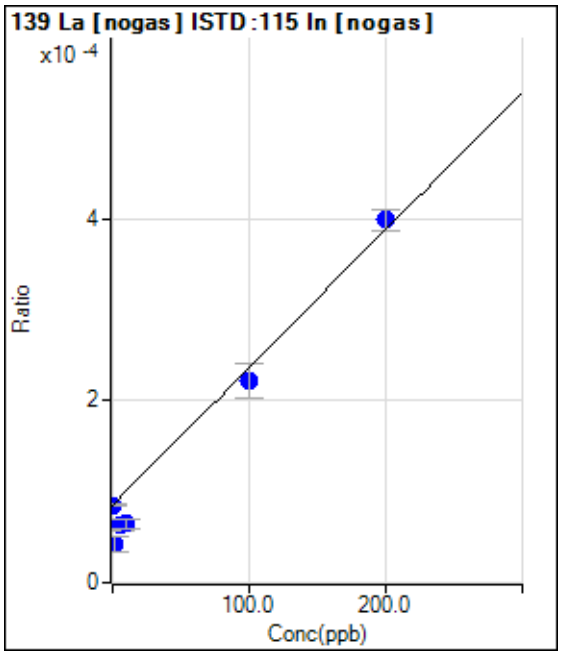
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1243.40	0.0004	P	12.3
2	☐	2.000	1.834	9032.54	0.0029	P	1.9
3	☐	5.000	4.696	21403.64	0.0067	P	4.0
4	☐	10.000	9.539	41132.82	0.0132	P	2.1
5	☐	100.000	93.638	403192.87	0.1260	P	4.4
6	☐	200.000	203.213	812671.53	0.2729	P	4.0
7	☐	1.000					

y = 0.0013 * x + 3.9782E-004
R = 0.9993
DL = 0.1092
BEC = 0.2966

Weight: <None>
Min Conc: <None>

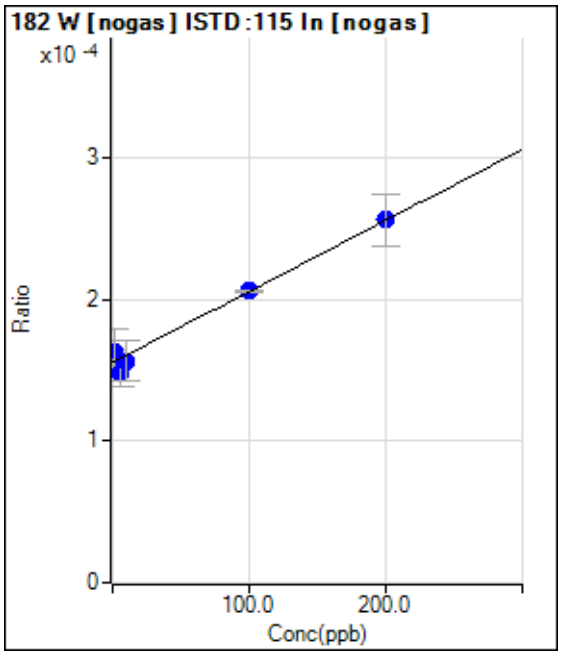


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	266.68	0.0001	P	2.7
2	☐	2.000	-28.407	133.33	0.0000	P	42.3
3	☐	5.000	-14.387	203.34	0.0001	P	20.2
4	☐	10.000	-13.363	203.33	0.0001	P	16.2
5	☐	100.000	90.168	710.03	0.0002	P	17.9
6	☐	200.000	206.873	1186.72	0.0004	P	5.5
7	☐	1.000					

y = 1.5138E-006 * x + 8.5357E-005
R = 0.9936
DL = 4.612
BEC = 56.39

Weight: <None>
Min Conc: <None>

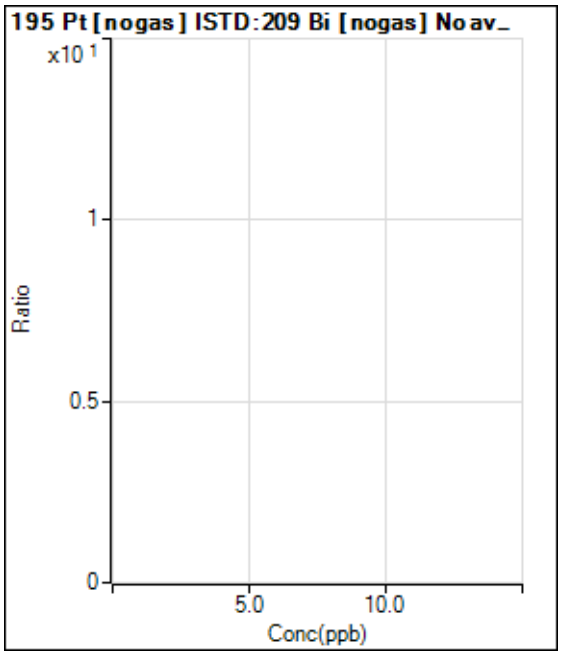
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	486.68	0.0002	P	11.9
2	☐	2.000	15.954	516.68	0.0002	P	19.0
3	☐	5.000	-15.572	473.35	0.0001	P	13.3
4	☐	10.000	2.254	490.02	0.0002	P	18.2
5	☐	100.000	100.373	660.02	0.0002	P	0.9
6	☐	200.000	200.576	766.70	0.0003	P	14.2
7	☐	1.000					

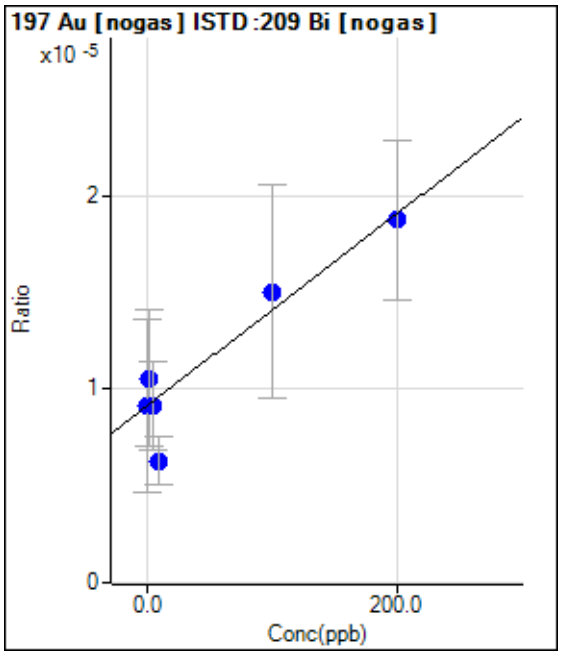
y = 5.0257E-007 * x + 1.5576E-004
R = 0.9910
DL = 110.2
BEC = 309.9

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

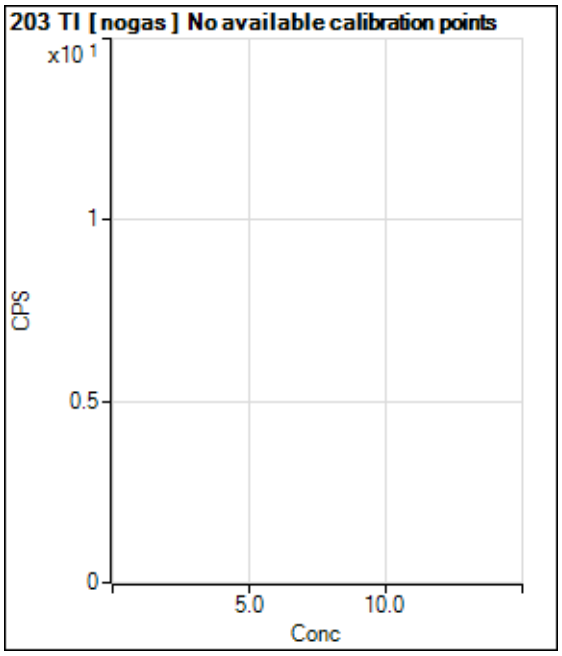
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	98.4
2	☐	2.000	29.161	23.33	0.0000	P	66.2
3	☐	5.000	0.706	20.00	0.0000	P	49.8
4	☐	10.000	-56.979	13.33	0.0000	P	39.7
5	☐	100.000	119.210	33.33	0.0000	P	73.1
6	☐	200.000	193.580	40.00	0.0000	P	43.7
7	☐	1.000					

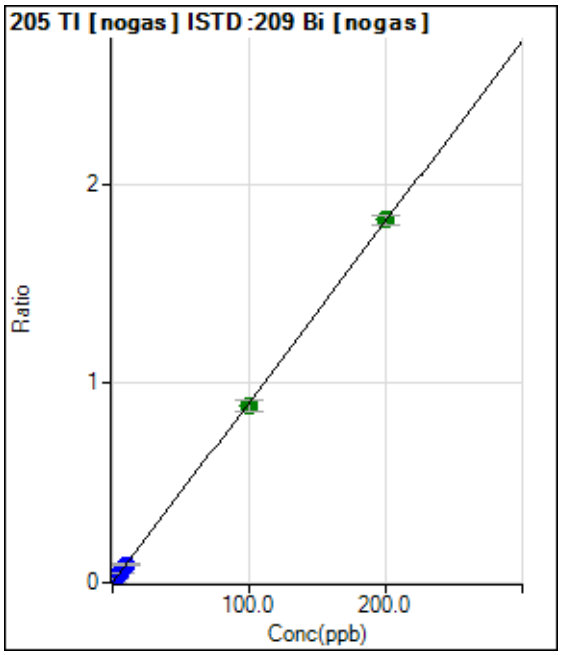
y = 4.9817E-008 * x + 9.1269E-006
R = 0.9337
DL = 540.6
BEC = 183.2

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			400.01		P	15.6
2	☐			16688.73		P	3.6
3	☐			42716.17		P	2.0
4	☐			79692.16		P	1.2
5	☐			817133.11		P	2.9
6	☐			1725988.15		A	0.9
7	☐						

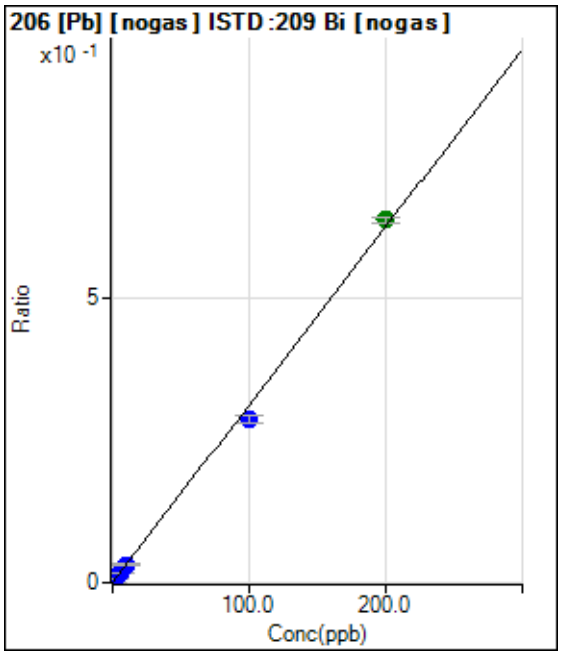
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	766.70	0.0004	P	9.9
2	☐	2.000	1.927	39508.64	0.0178	P	3.7
3	☐	5.000	5.190	103539.08	0.0473	P	1.7
4	☐	10.000	10.026	191376.10	0.0911	P	5.2
5	☐	100.000	98.052	1996943.30	0.8881	A	5.7
6	☐	200.000	200.968	3883501.92	1.8199	A	2.5
7	☐	1.000					

y = 0.0091 * x + 3.5169E-004
R = 0.9999
DL = 0.01153
BEC = 0.03884

Weight: <None>
Min Conc: <None>

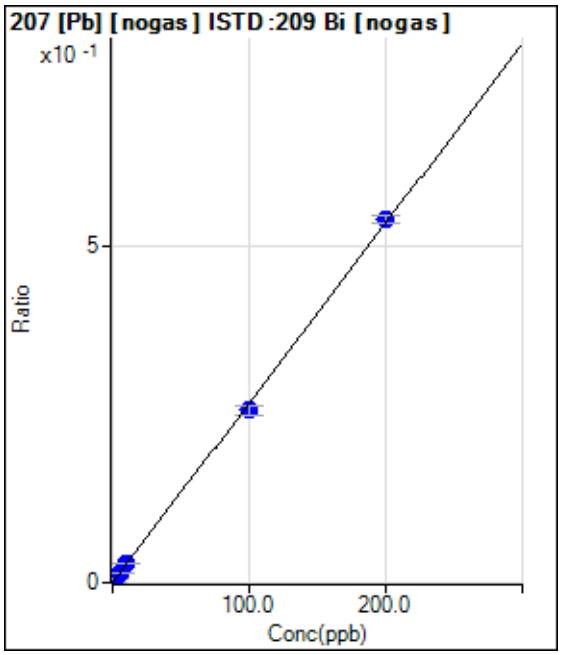


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	456.68	0.0002	P	19.8
2	☐	2.000	1.917	13719.33	0.0062	P	2.1
3	☐	5.000	5.219	36027.07	0.0165	P	2.5
4	☐	10.000	10.150	66860.81	0.0318	P	5.6
5	☐	100.000	91.821	643868.23	0.2863	P	4.6
6	☐	200.000	204.078	1357593.16	0.6361	A	1.5
7	☐	1.000					

y = 0.0031 * x + 2.0974E-004
R = 0.9988
DL = 0.04006
BEC = 0.06732

Weight: <None>
Min Conc: <None>

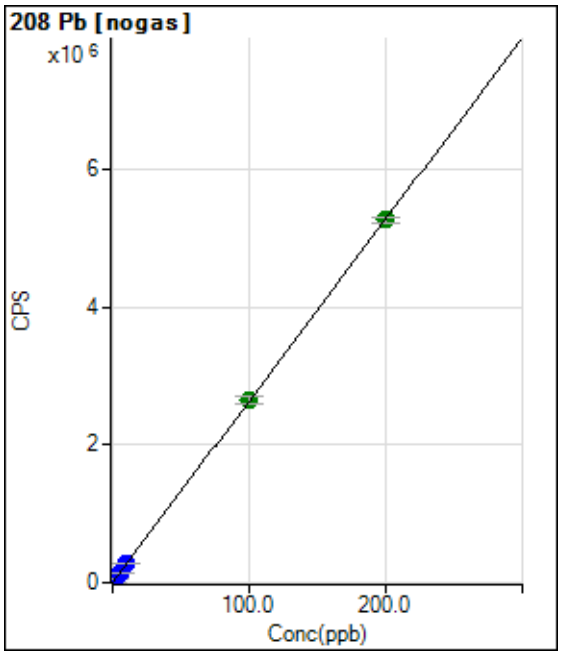
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	376.68	0.0002	P	2.3
2	☐	2.000	2.009	12271.48	0.0055	P	3.4
3	☐	5.000	5.271	31090.35	0.0142	P	3.4
4	☐	10.000	10.542	59374.89	0.0283	P	3.0
5	☐	100.000	95.931	575049.56	0.2558	P	5.3
6	☐	200.000	202.001	1148895.32	0.5384	P	2.3
7	☐	1.000					

y = 0.0027 * x + 1.7248E-004
R = 0.9997
DL = 0.004563
BEC = 0.06474

Weight: <None>
Min Conc: <None>

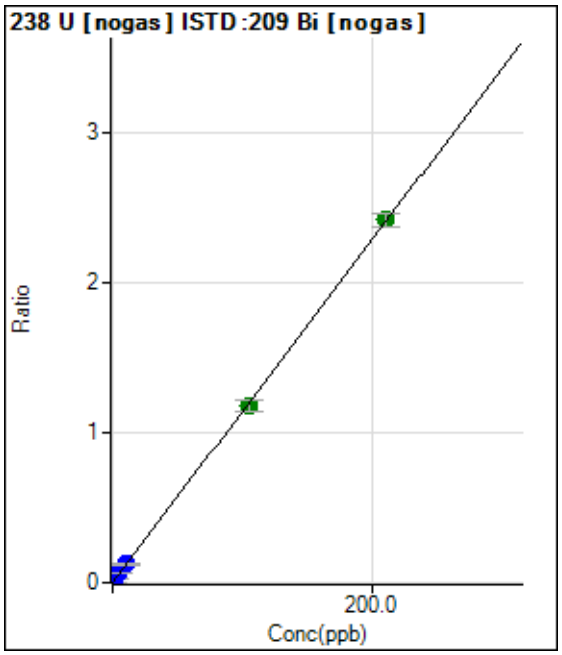


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1850.07		P	1.1
2	☐	2.000	2.047	55872.02		P	4.6
3	☐	5.000	5.286	141367.68		P	2.0
4	☐	10.000	10.068	267574.06		P	1.1
5	☐	100.000	100.551	2655799.38		A	4.1
6	☐	200.000	199.713	5273095.10		A	1.5
7	☐	1.000					

y = 26394.0396 * x + 1850.0733
R = 1.0000
DL = 0.002273
BEC = 0.07009

Weight: <None>
Min Conc: <None>

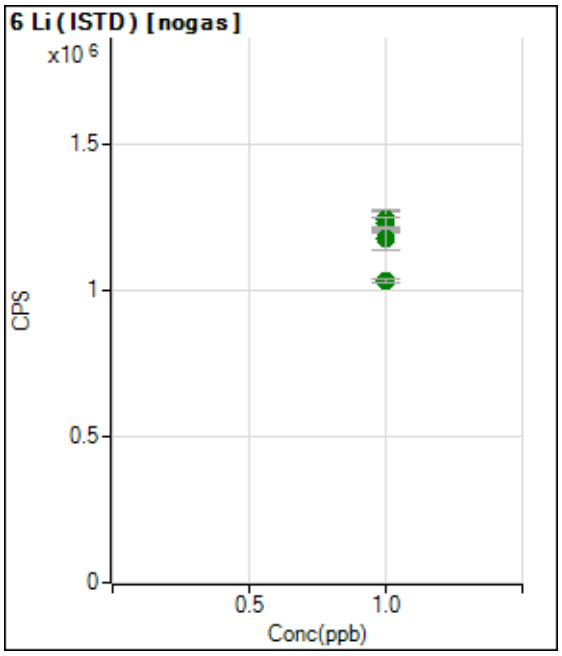
Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	900.04	0.0004	P	12.1
2	☐	2.000	2.079	53715.54	0.0242	P	0.6
3	☐	5.000	5.311	133769.70	0.0612	P	2.7
4	☐	10.000	10.631	256152.70	0.1220	P	6.9
5	☐	105.000	102.616	2639025.90	1.1744	A	6.9
6	☐	210.000	211.154	5154829.40	2.4160	A	3.6
7	☐	1.000					

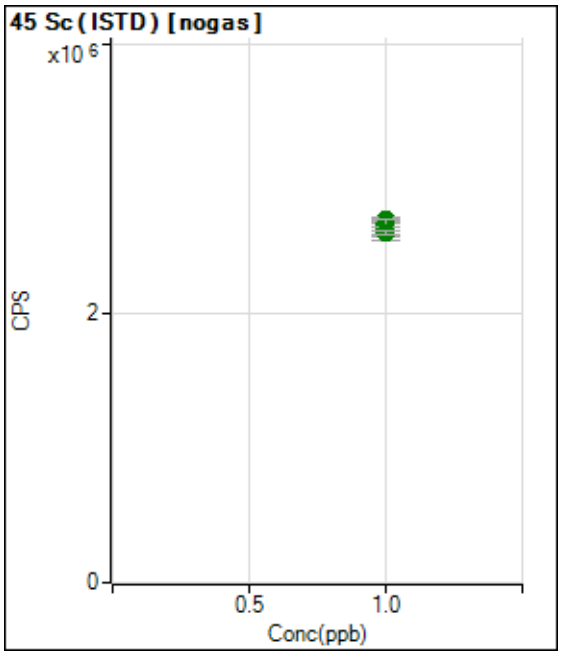
y = 0.0114 * x + 4.1305E-004
R = 0.9999
DL = 0.01314
BEC = 0.03611

Weight: <None>
Min Conc: <None>

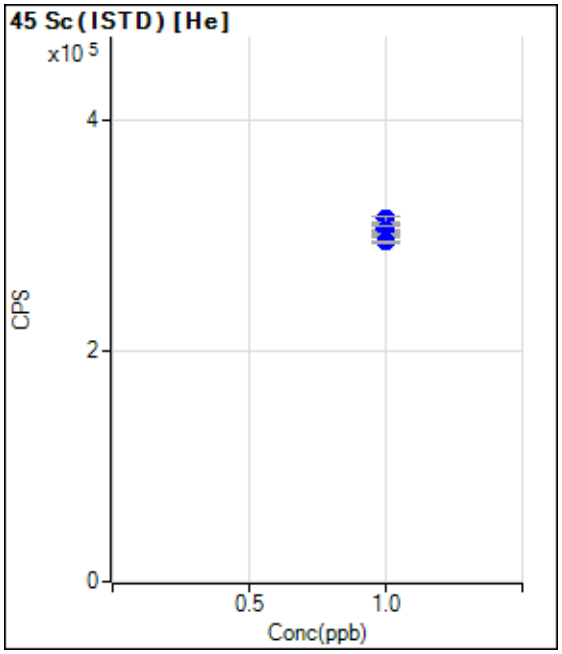


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1230826.14		A	5.8
2	☐	1.000		1228994.43		A	2.8
3	☐	1.000		1238575.62		A	5.9
4	☐	1.000		1230260.97		A	2.3
5	☐	1.000		1172282.43		A	6.3
6	☐	1.000		1029506.08		A	1.3
7	☐	1.000					

Calibration for 118_ICV.d

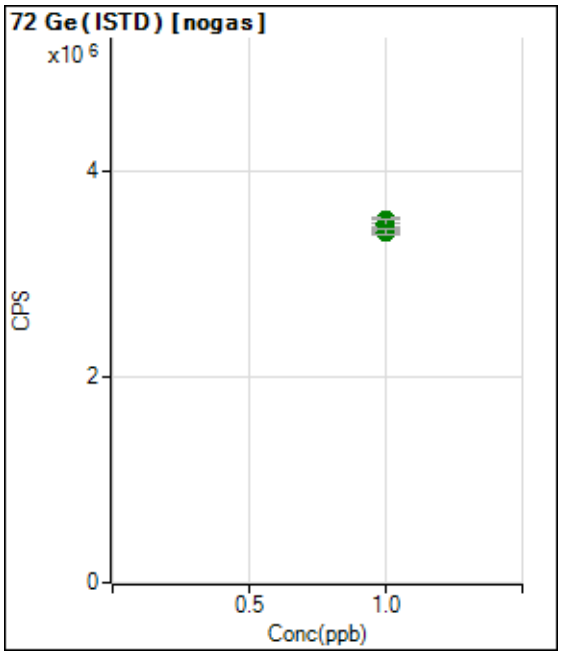


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2691303.19		A	1.5
2	☐	1.000		2622693.55		A	4.2
3	☐	1.000		2647393.09		A	2.5
4	☐	1.000		2614293.03		A	5.3
5	☐	1.000		2672276.52		A	2.1
6	☐	1.000		2593316.94		A	0.8
7	☐	1.000					

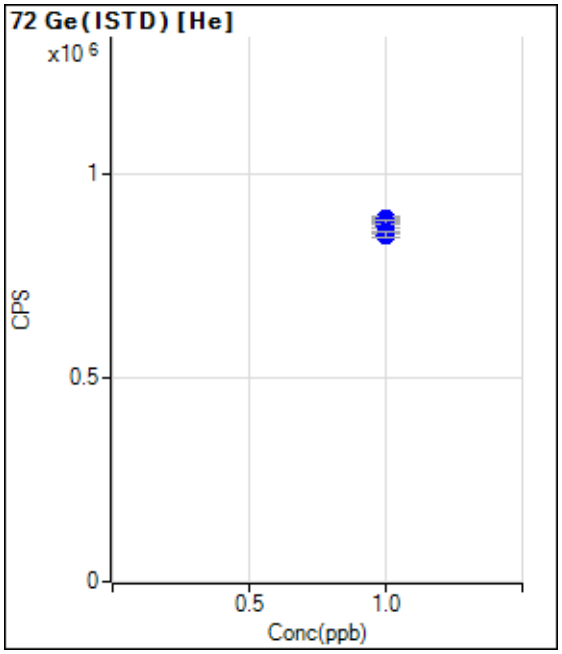


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		301201.92		P	1.4
2	☐	1.000		307215.82		P	1.3
3	☐	1.000		314362.36		P	1.7
4	☐	1.000		304545.28		P	2.5
5	☐	1.000		300099.73		P	0.5
6	☐	1.000		294276.15		P	0.3
7	☐	1.000					

Calibration for 118_ICV.d

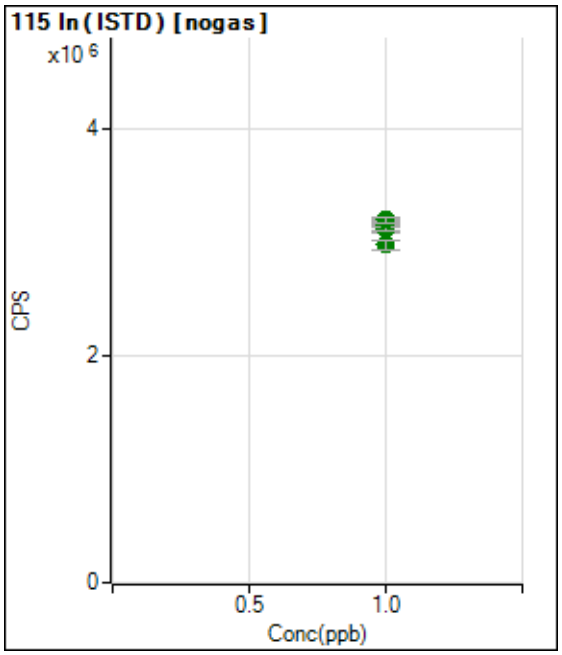


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3534266.20		A	1.6
2	☐	1.000		3449841.51		A	1.1
3	☐	1.000		3495661.30		A	2.1
4	☐	1.000		3476705.47		A	4.3
5	☐	1.000		3486816.30		A	2.8
6	☐	1.000		3413924.95		A	1.7
7	☐	1.000					

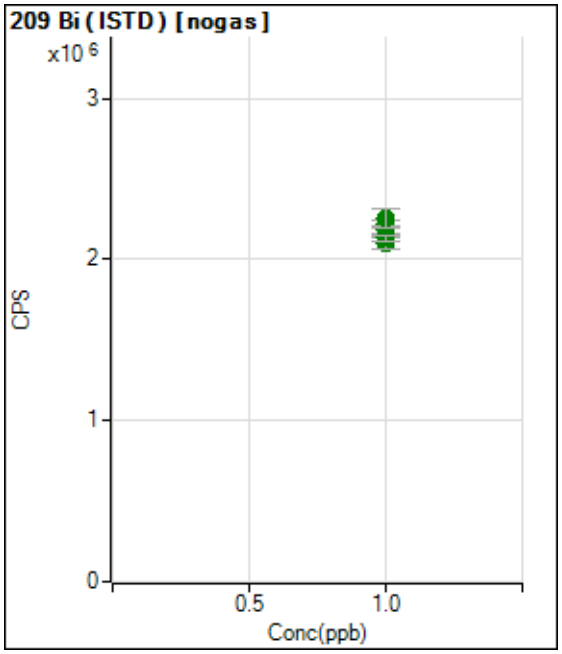


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		871720.93		P	1.0
2	☐	1.000		885526.08		P	1.2
3	☐	1.000		888286.91		P	1.3
4	☐	1.000		880588.16		P	1.4
5	☐	1.000		855438.35		P	0.7
6	☐	1.000		847825.69		P	1.6
7	☐	1.000					

Calibration for 118_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3124879.67		A	1.9
2	☐	1.000		3160673.45		A	1.8
3	☐	1.000		3197497.88		A	0.9
4	☐	1.000		3118799.76		A	1.2
5	☐	1.000		3200901.31		A	1.4
6	☐	1.000		2979956.02		A	3.0
7	☐	1.000					



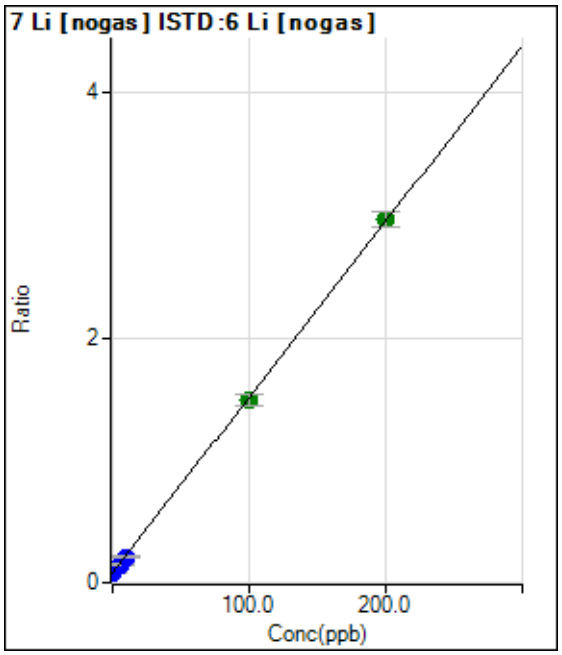
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2183511.58		A	2.6
2	☐	1.000		2219894.29		A	2.3
3	☐	1.000		2187454.03		A	2.5
4	☐	1.000		2102487.26		A	3.7
5	☐	1.000		2252579.29		A	5.3
6	☐	1.000		2134468.72		A	1.7
7	☐	1.000					

Calibration for 174_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121718A.b\
Analysis File: 121718A.batch.bin
DA Date-Time: 2018-12-18 00:15:51
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	168CALB.d	CAL BLK	2018-12-17 18:06:19
2	169CALS.d	2/10/200	2018-12-17 18:08:16
3	170CALS.d	5/25/500	2018-12-17 18:10:14
4	171CALS.d	10/50/1000	2018-12-17 18:12:13
5	172CALS.d	100/500/10K	2018-12-17 18:14:10
6	173CALS.d	200/1000/20K	2018-12-17 18:16:10
7			

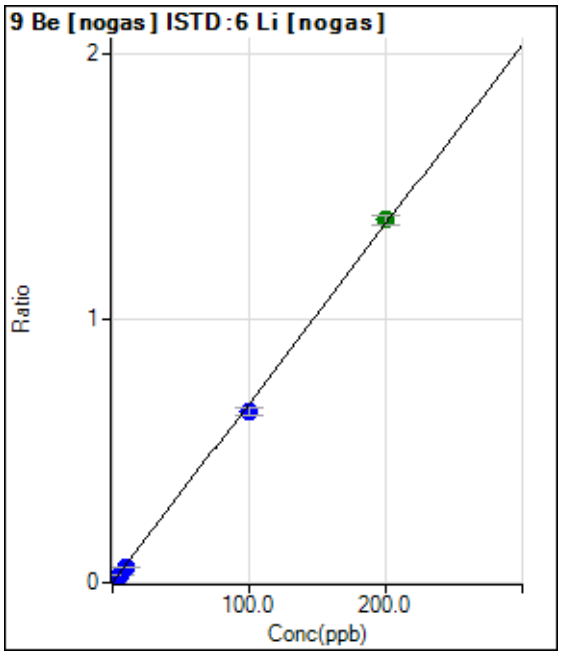
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120102.22	0.0808	P	3.9
2	☐	2.000	1.913	156474.92	0.1082	P	5.3
3	☐	5.000	4.706	215774.63	0.1483	P	5.3
4	☐	10.000	9.043	305756.04	0.2106	P	3.4
5	☐	100.000	98.305	1962832.78	1.4917	A	5.4
6	☐	200.000	200.904	3580649.32	2.9642	A	4.2
7	☐	1.000					

y = 0.0144 * x + 0.0808
R = 0.9999
DL = 0.6662
BEC = 5.628

Weight: <None>
Min Conc: <None>

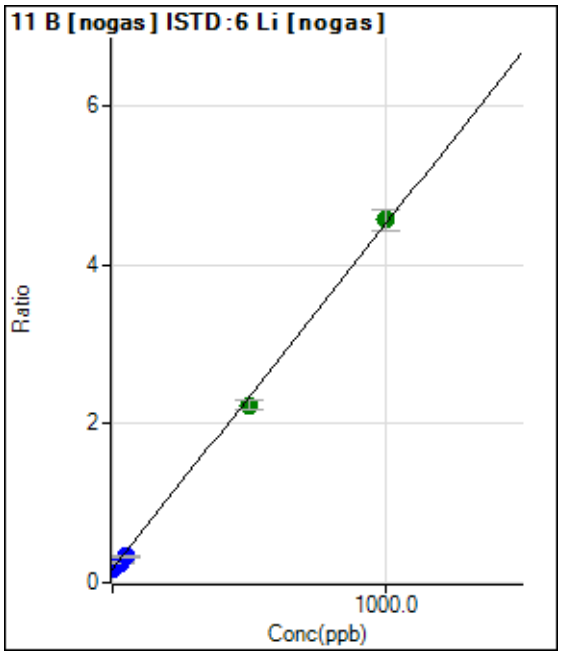


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0000	P	41.3
2	☐	2.000	1.730	17051.15	0.0118	P	4.8
3	☐	5.000	4.444	43957.60	0.0302	P	6.0
4	☐	10.000	8.456	83350.69	0.0575	P	6.3
5	☐	100.000	95.388	852459.75	0.6476	P	3.8
6	☐	200.000	202.400	1660853.47	1.3742	A	2.6
7	☐	1.000					

y = 0.0068 * x + 4.9185E-005
R = 0.9996
DL = 0.008968
BEC = 0.007245

Weight: <None>
Min Conc: <None>

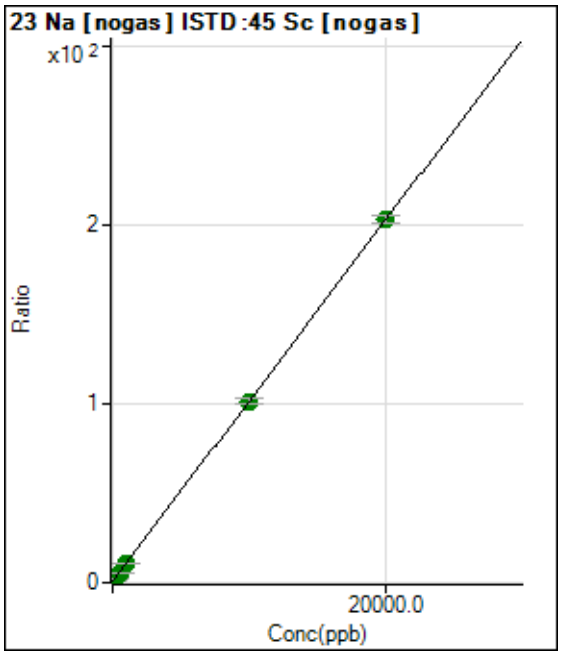
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	257516.59	0.1731	P	0.6
2	☐	10.000	6.653	292303.95	0.2020	P	1.8
3	☐	25.000	18.361	367501.72	0.2528	P	7.5
4	☐	50.000	36.627	481333.40	0.3321	P	7.5
5	☐	500.000	475.753	2944166.31	2.2378	A	5.3
6	☐	1000.000	1012.991	5517239.29	4.5692	A	5.6
7	☐	5.000					

y = 0.0043 * x + 0.1731
R = 0.9996
DL = 0.7499
BEC = 39.9

Weight: <None>
Min Conc: <None>

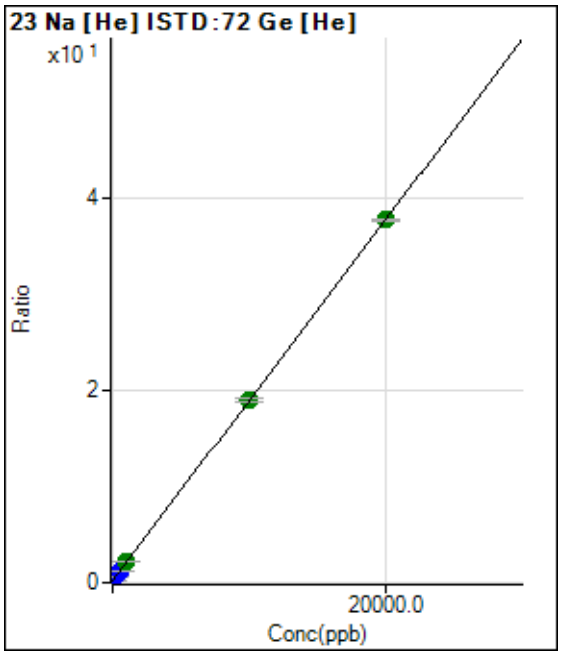


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1799510.33	0.6064	A	4.5
2	☐	200.000	195.816	7626753.82	2.5829	A	6.3
3	☐	500.000	507.860	16946315.48	5.7326	A	5.6
4	☐	1000.000	997.104	31541403.83	10.6709	A	5.7
5	☐	10000.00	9964.171	295873839.9	101.181	A	3.1
6	☐	20000.00	20017.905	580230779.6	202.660	A	2.1
7	☐	100.000					

y = 0.0101 * x + 0.6064
R = 1.0000
DL = 8.115
BEC = 60.08

Weight: <None>
Min Conc: <None>

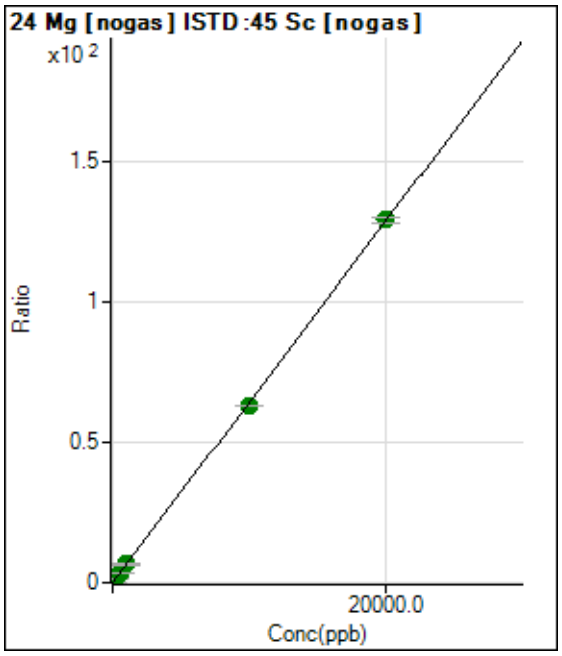
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	174515.99	0.1749	P	0.7
2	☐	200.000	204.437	546545.12	0.5586	P	0.6
3	☐	500.000	532.296	1139704.44	1.1740	P	1.2
4	☐	1000.000	1049.217	2081552.05	2.1442	A	1.8
5	☐	10000.00	9998.456	18485778.06	18.9412	A	2.3
6	☐	20000.00	19997.459	36059942.79	37.7086	A	0.7
7	☐	100.000					

y = 0.0019 * x + 0.1749
R = 1.0000
DL = 1.862
BEC = 93.17

Weight: <None>
Min Conc: <None>

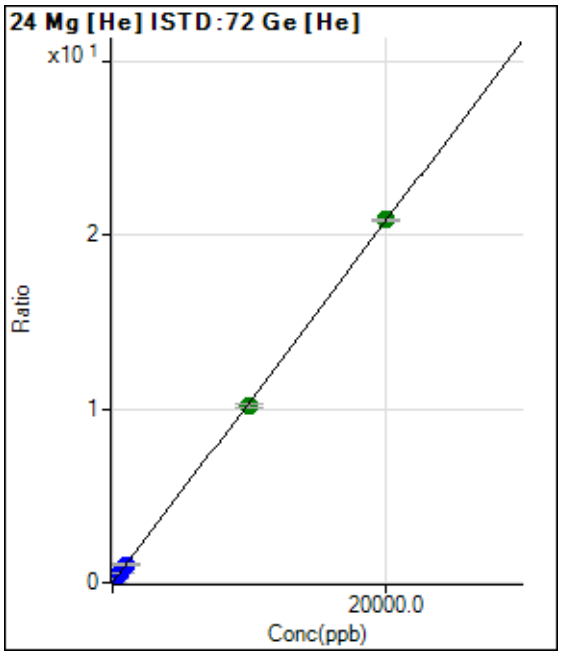


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73220.79	0.0247	P	5.7
2	☐	200.000	204.356	3947830.56	1.3368	A	4.7
3	☐	500.000	529.042	10117050.23	3.4215	A	4.4
4	☐	1000.000	1023.491	19500292.10	6.5962	A	5.0
5	☐	10000.00	9800.555	184117945.7	62.9514	A	0.6
6	☐	20000.00	20097.778	369543174.9	129.067	A	1.8
7	☐	100.000					

y = 0.0064 * x + 0.0247
R = 0.9999
DL = 0.6528
BEC = 3.843

Weight: <None>
Min Conc: <None>

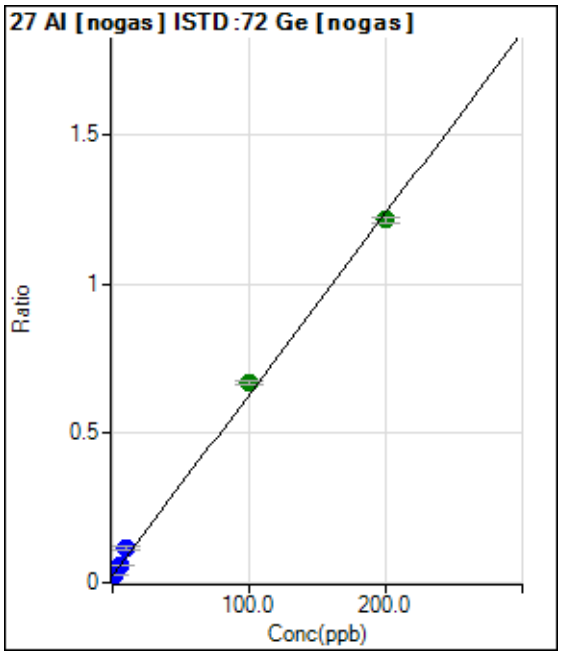
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4067.17	0.0041	P	4.8
2	☐	200.000	205.070	212382.05	0.2171	P	1.1
3	☐	500.000	532.563	540975.28	0.5572	P	0.6
4	☐	1000.000	1002.359	1014522.95	1.0452	P	2.8
5	☐	10000.00	9801.065	9939195.06	10.1842	A	2.3
6	☐	20000.00	20098.485	19967548.03	20.8800	A	0.4
7	☐	100.000					

y = 0.0010 * x + 0.0041
R = 0.9999
DL = 0.5654
BEC = 3.924

Weight: <None>
Min Conc: <None>

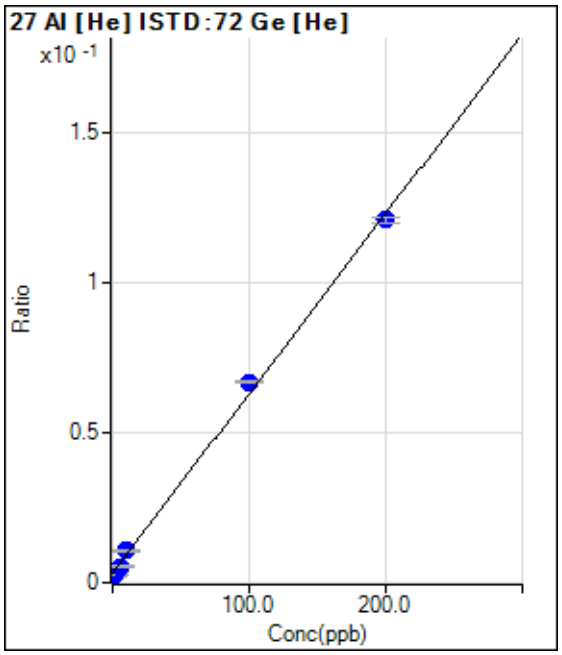


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93534.21	0.0236	P	2.4
2	☐	2.000	0.659	109201.29	0.0276	P	5.1
3	☐	5.000	5.451	227196.43	0.0567	P	1.7
4	☐	10.000	14.988	460840.20	0.1147	P	9.0
5	☐	100.000	106.805	2647387.62	0.6727	A	1.8
6	☐	200.000	196.350	4739577.95	1.2169	A	1.7
7	☐	1.000					

y = 0.0061 * x + 0.0236
R = 0.9989
DL = 0.2741
BEC = 3.886

Weight: <None>
Min Conc: <None>

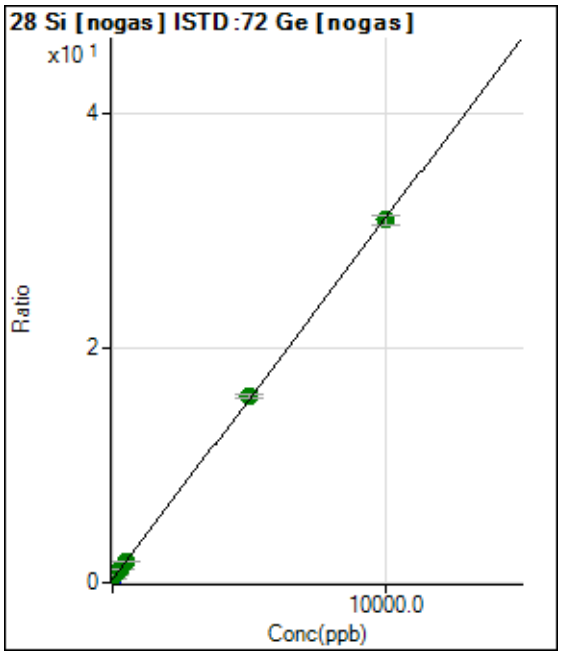
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.523	2240.17	0.0022	P	13.5
2	☐	2.000	-0.926	2543.55	0.0026	P	8.9
3	☐	5.000	3.751	5240.79	0.0054	P	8.5
4	☐	10.000	12.506	10326.31	0.0106	P	4.3
5	☐	100.000	106.514	65292.52	0.0669	P	1.3
6	☐	200.000	196.678	115557.90	0.1208	P	1.7
7	☐	1.000					

y = 5.9842E-004 * x + 0.0032
R = 0.9989
DL = 1.521
BEC = 5.27

Weight: <None>
Min Conc: <None>

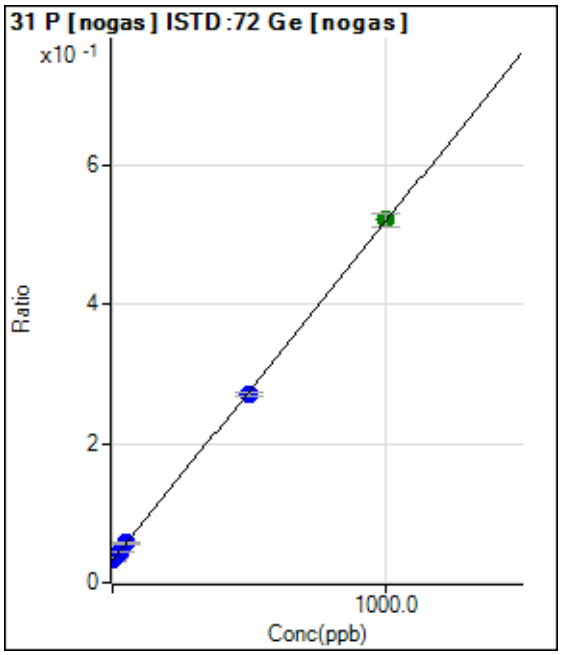


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1054962.98	0.2665	P	4.6
2	☐	100.000	113.211	2434262.10	0.6154	A	3.3
3	☐	250.000	269.546	4393432.12	1.0973	A	1.0
4	☐	500.000	514.256	7432021.97	1.8515	A	1.6
5	☐	5000.000	5082.940	62708894.06	15.9331	A	1.4
6	☐	10000.00	9957.196	120547578.2	30.9565	A	2.6
7	☐	5.000					

y = 0.0031 * x + 0.2665
R = 1.0000
DL = 12.04
BEC = 86.47

Weight: <None>
Min Conc: <None>

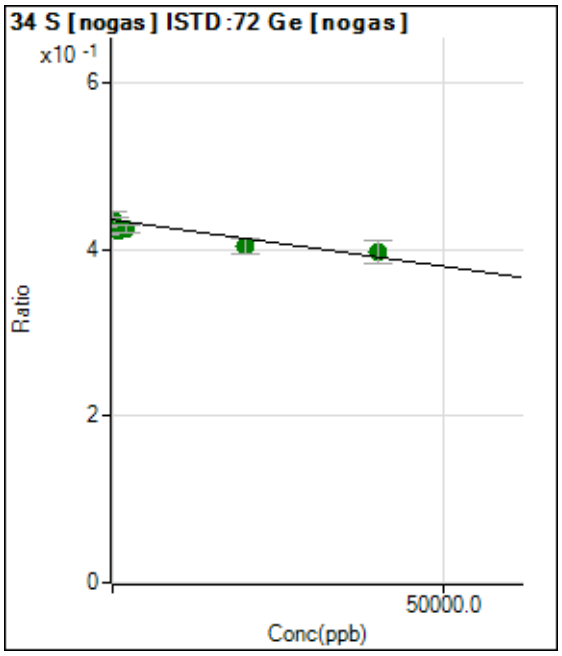
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126009.40	0.0318	P	5.1
2	☐	10.000	9.201	143629.96	0.0363	P	3.5
3	☐	25.000	26.809	179738.18	0.0449	P	0.9
4	☐	50.000	52.145	229566.21	0.0572	P	3.3
5	☐	500.000	489.798	1063804.75	0.2704	P	2.5
6	☐	1000.000	1004.957	2029478.25	0.5212	A	4.0
7	☐	5.000					

y = 4.8697E-004 * x + 0.0318
R = 0.9999
DL = 9.914
BEC = 65.38

Weight: <None>
Min Conc: <None>

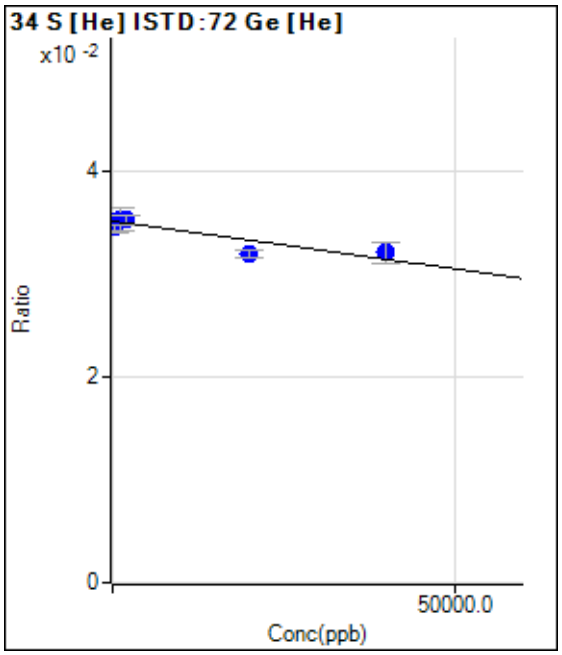


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1725827.58	0.4359	A	4.3
2	☐	400.000	5169.744	1700670.68	0.4301	A	4.6
3	☐	1000.000	11885.037	1691997.18	0.4226	A	2.0
4	☐	2000.000	9765.852	1705166.77	0.4250	A	2.0
5	☐	20000.00	28301.834	1590279.89	0.4043	A	4.8
6	☐	40000.00	35140.967	1543405.89	0.3966	A	6.8
7	☐	100.000					

y = -1.1169E-006 * x + 0.4359
R = -0.9378
DL = -5.001E+04
BEC = -3.903E+05

Weight: <None>
Min Conc: <None>

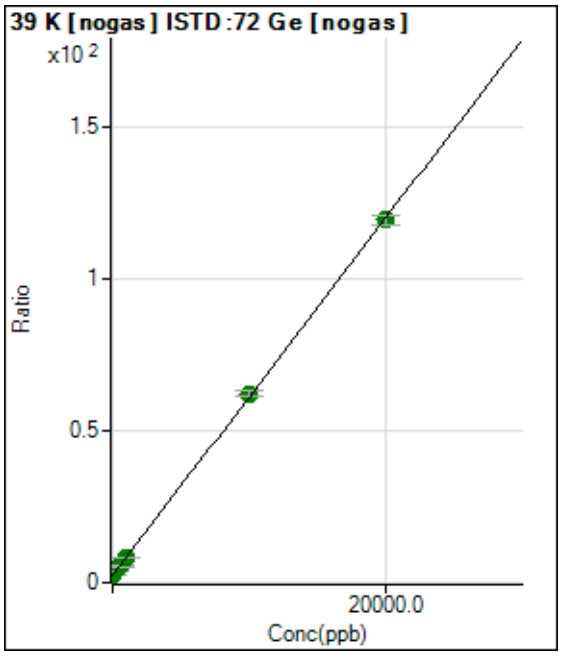
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35072.25	0.0351	P	2.2
2	☐	400.000	5723.562	33869.33	0.0346	P	3.8
3	☐	1000.000	-1226.984	34236.65	0.0353	P	6.3
4	☐	2000.000	-953.801	34219.55	0.0352	P	2.6
5	☐	20000.00	34016.834	31232.22	0.0320	P	2.1
6	☐	40000.00	33141.712	30663.63	0.0321	P	6.3
7	☐	100.000					

y = -9.2636E-008 * x + 0.0351
R = -0.9018
DL = -2.453E+04
BEC = -3.794E+05

Weight: <None>
Min Conc: <None>

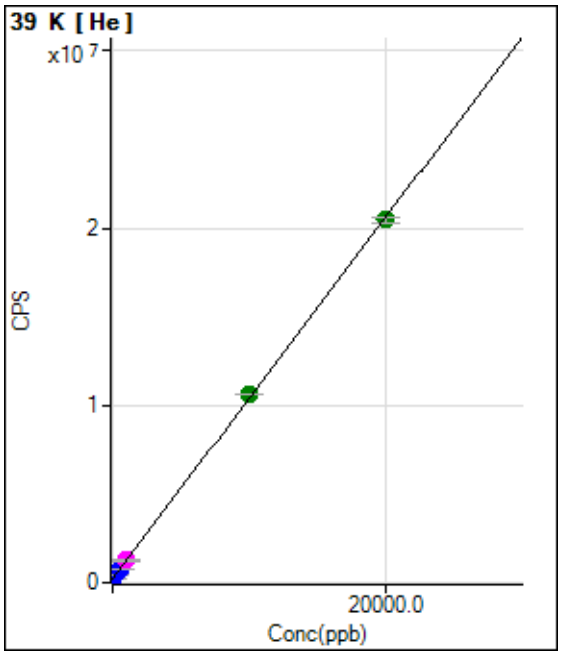


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9249781.98	2.3366	A	4.6
2	☐	200.000	206.627	14039415.42	3.5498	A	3.2
3	☐	500.000	518.868	21552886.42	5.3831	A	1.1
4	☐	1000.000	993.803	32790247.61	8.1717	A	1.2
5	☐	10000.00	10181.218	244386355.4	62.1149	A	3.2
6	☐	20000.00	19909.163	464295227.0	119.231	A	2.4
7	☐	100.000					

y = 0.0059 * x + 2.3366
R = 0.9999
DL = 54.51
BEC = 398

Weight: <None>
Min Conc: <None>

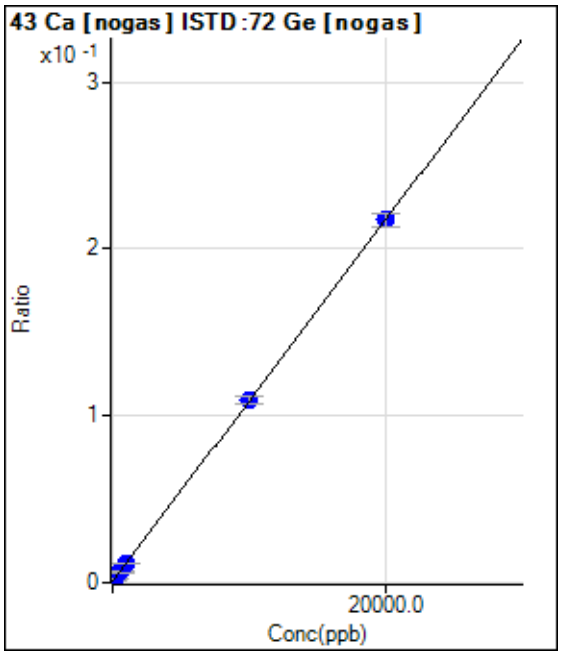
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	228220.58		P	0.4
2	☐	200.000	199.588	431404.43		P	1.0
3	☐	500.000	519.955	757544.18		P	0.2
4	☐	1000.000	1019.848	1266444.67		M	3.3
5	☐	10000.00	10239.840	10652570.67		A	0.3
6	☐	20000.00	19878.593	20465002.61		A	1.3
7	☐	100.000					

y = 1018.0188 * x + 228220.5767
R = 0.9999
DL = 3.02
BEC = 224.2

Weight: <None>
Min Conc: <None>

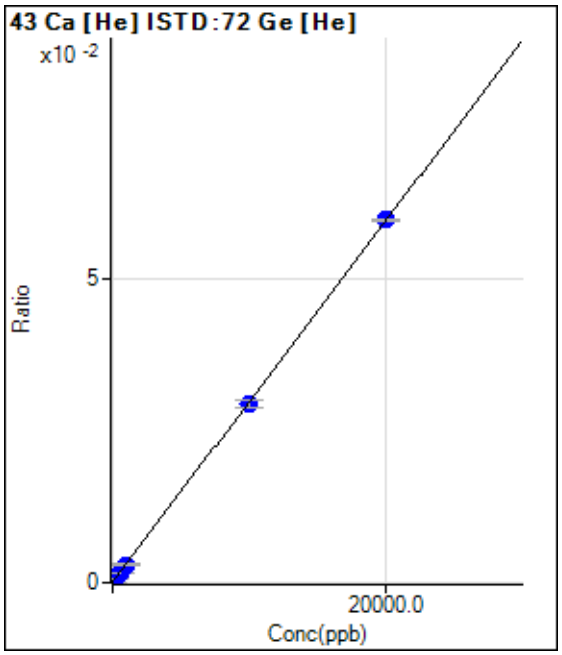


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2543.56	0.0006	P	7.4
2	☐	200.000	194.479	10879.98	0.0028	P	1.7
3	☐	500.000	531.943	25651.36	0.0064	P	3.1
4	☐	1000.000	993.269	45790.20	0.0114	P	1.8
5	☐	10000.00	9995.400	428812.48	0.1090	P	4.2
6	☐	20000.00	20001.893	846484.00	0.2174	P	3.9
7	☐	100.000					

y = 1.0838E-005 * x + 6.4222E-004
R = 1.0000
DL = 13.08
BEC = 59.25

Weight: <None>
Min Conc: <None>

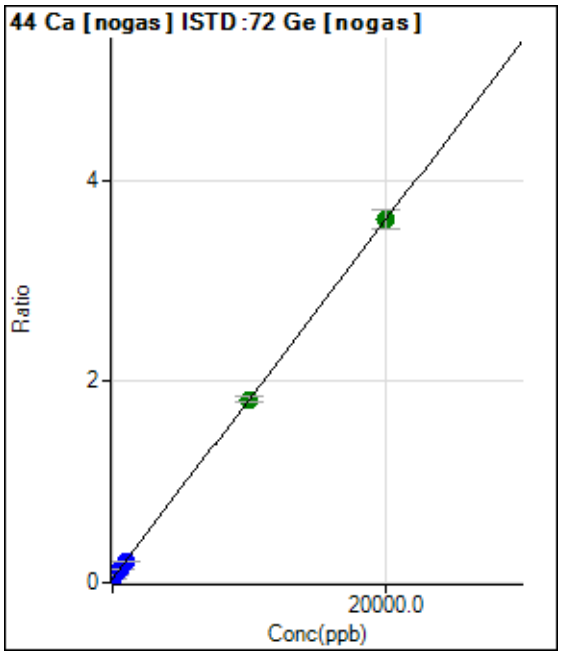
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	16.3
2	☐	200.000	193.716	653.36	0.0007	P	5.4
3	☐	500.000	499.136	1526.75	0.0016	P	1.7
4	☐	1000.000	970.372	2883.61	0.0030	P	2.3
5	☐	10000.00	9867.219	28632.32	0.0293	P	3.5
6	☐	20000.00	20067.956	56957.23	0.0596	P	0.8
7	☐	100.000					

y = 2.9633E-006 * x + 9.3524E-005
R = 1.0000
DL = 15.47
BEC = 31.56

Weight: <None>
Min Conc: <None>

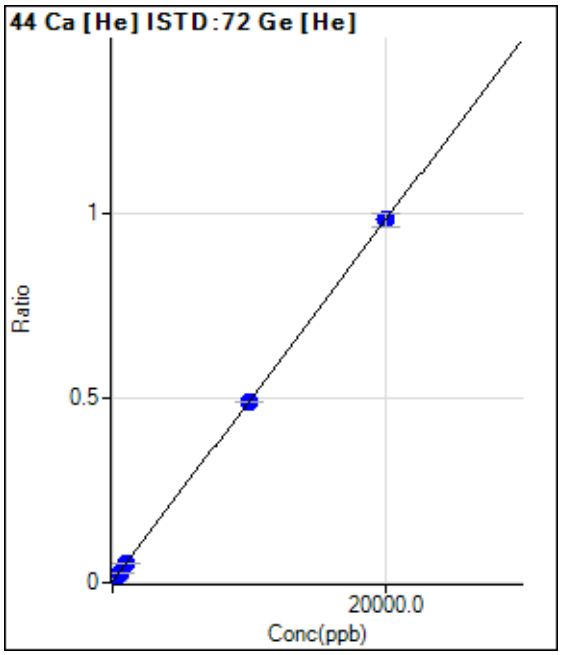


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	164333.01	0.0415	P	4.0
2	☐	200.000	188.186	296656.52	0.0750	P	3.2
3	☐	500.000	507.251	527756.23	0.1318	P	0.8
4	☐	1000.000	975.122	863134.47	0.2151	P	1.5
5	☐	10000.00	9968.108	7145107.60	1.8160	A	3.2
6	☐	20000.00	20017.127	14030562.71	3.6050	A	5.5
7	☐	100.000					

y = 1.7802E-004 * x + 0.0415
R = 1.0000
DL = 27.94
BEC = 233.2

Weight: <None>
Min Conc: <None>

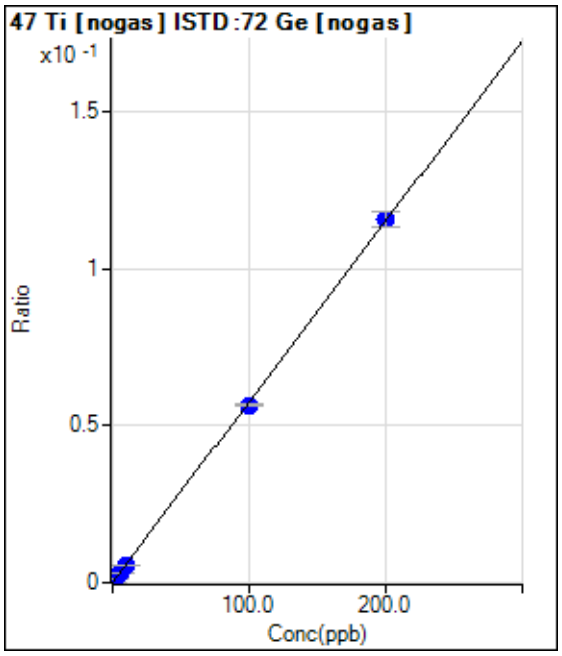
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2656.90	0.0027	P	1.9
2	☐	200.000	201.266	12250.81	0.0125	P	1.6
3	☐	500.000	514.668	27053.31	0.0279	P	1.8
4	☐	1000.000	1023.403	51240.67	0.0528	P	2.4
5	☐	10000.00	9950.114	478167.01	0.4899	P	1.0
6	☐	20000.00	20023.393	940066.73	0.9832	P	3.7
7	☐	100.000					

y = 4.8971E-005 * x + 0.0027
R = 1.0000
DL = 3.077
BEC = 54.37

Weight: <None>
Min Conc: <None>

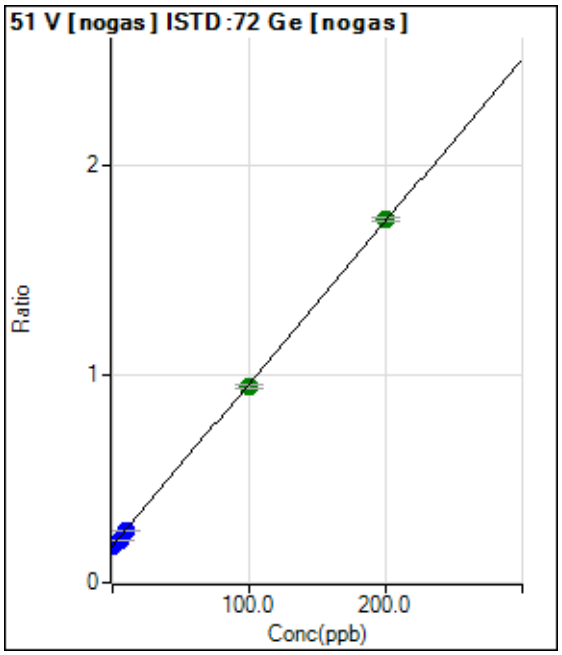


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0001	P	5.9
2	☐	2.000	2.098	5127.44	0.0013	P	8.1
3	☐	5.000	5.091	12087.42	0.0030	P	2.6
4	☐	10.000	9.725	22814.36	0.0057	P	2.1
5	☐	100.000	98.283	222825.09	0.0566	P	1.7
6	☐	200.000	200.869	450093.29	0.1156	P	4.1
7	☐	1.000					

y = 5.7515E-004 * x + 9.0775E-005
R = 0.9999
DL = 0.02797
BEC = 0.1578

Weight: <None>
Min Conc: <None>

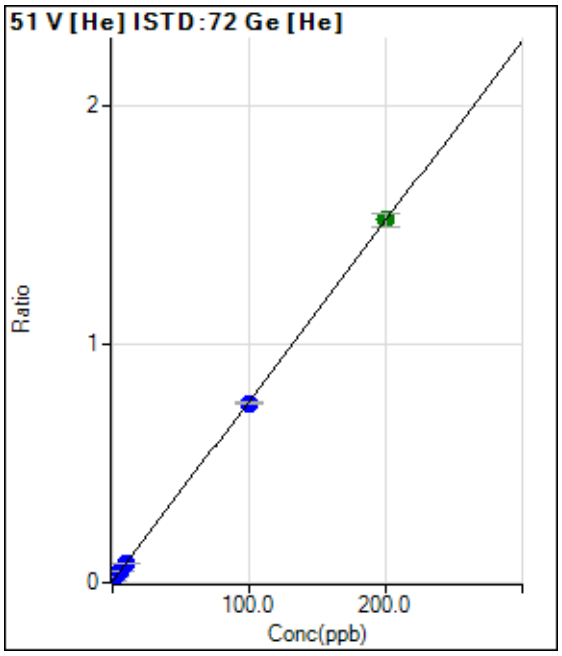
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	704288.30	0.1778	P	2.3
2	☐	2.000	1.361	744800.78	0.1884	P	4.2
3	☐	5.000	3.364	816579.53	0.2039	P	0.2
4	☐	10.000	9.466	1008695.50	0.2514	P	1.6
5	☐	100.000	98.475	3713126.65	0.9436	A	2.1
6	☐	200.000	200.836	6776409.79	1.7396	A	1.1
7	☐	1.000					

y = 0.0078 * x + 0.1778
R = 1.0000
DL = 1.567
BEC = 22.86

Weight: <None>
Min Conc: <None>

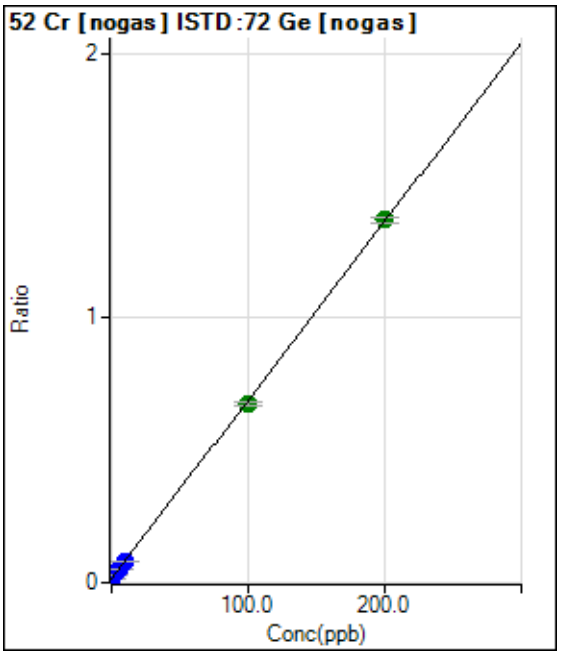


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.240	8323.87	0.0083	P	0.9
2	☐	2.000	2.172	22417.45	0.0229	P	3.2
3	☐	5.000	5.230	44658.60	0.0460	P	1.5
4	☐	10.000	9.965	79352.48	0.0817	P	1.8
5	☐	100.000	98.798	734198.50	0.7522	P	0.7
6	☐	200.000	200.595	1453837.46	1.5206	A	3.7
7	☐	1.000					

y = 0.0075 * x + 0.0065
R = 1.0000
DL = 0.02977
BEC = 0.8646

Weight: <None>
Min Conc: <None>

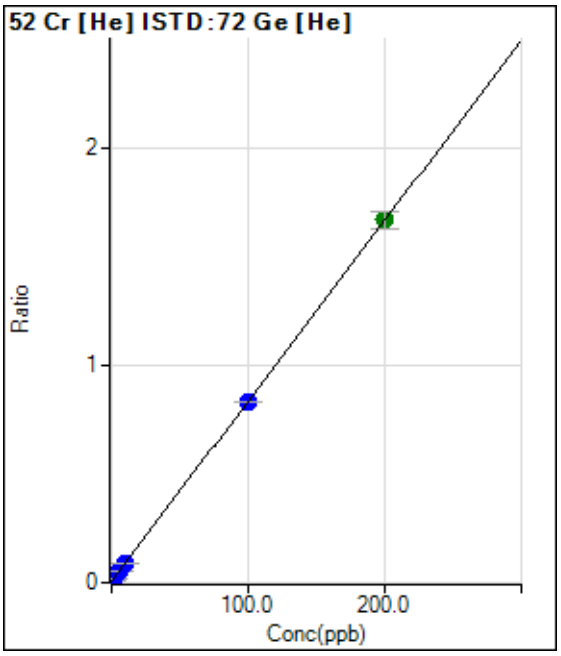
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60210.90	0.0152	P	3.5
2	☐	2.000	2.002	113519.38	0.0287	P	4.2
3	☐	5.000	4.904	193285.26	0.0483	P	0.3
4	☐	10.000	9.885	328416.95	0.0819	P	2.5
5	☐	100.000	98.026	2662329.54	0.6762	A	2.7
6	☐	200.000	200.995	5338111.80	1.3706	A	1.4
7	☐	1.000					

y = 0.0067 * x + 0.0152
R = 0.9999
DL = 0.2385
BEC = 2.255

Weight: <None>
Min Conc: <None>

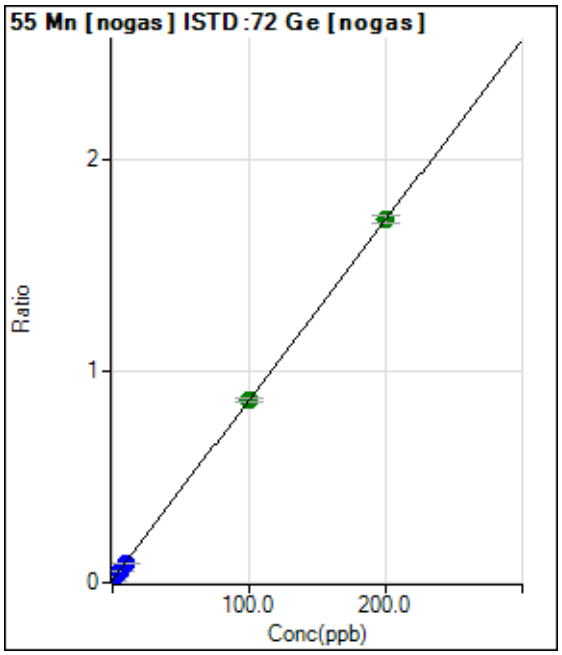


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6041.08	0.0061	P	4.0
2	☐	2.000	1.859	21028.93	0.0215	P	1.4
3	☐	5.000	5.278	48427.22	0.0499	P	2.5
4	☐	10.000	9.925	85868.45	0.0885	P	4.7
5	☐	100.000	99.231	810214.83	0.8301	P	0.4
6	☐	200.000	200.383	1596650.34	1.6701	A	4.7
7	☐	1.000					

y = 0.0083 * x + 0.0061
R = 1.0000
DL = 0.0885
BEC = 0.7292

Weight: <None>
Min Conc: <None>

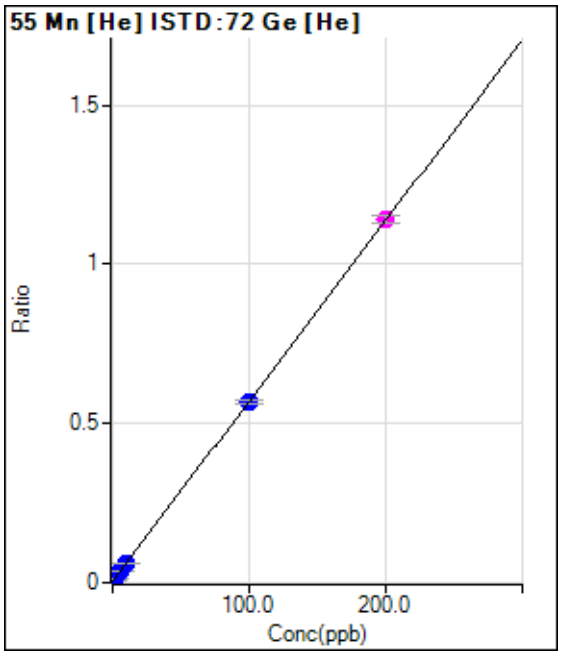
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44937.90	0.0113	P	1.8
2	☐	2.000	1.754	103989.31	0.0263	P	3.0
3	☐	5.000	5.050	217667.29	0.0544	P	2.1
4	☐	10.000	9.471	369174.60	0.0920	P	3.7
5	☐	100.000	100.098	3401275.99	0.8642	A	1.4
6	☐	200.000	199.979	6680616.77	1.7152	A	2.1
7	☐	1.000					

y = 0.0085 * x + 0.0113
R = 1.0000
DL = 0.07026
BEC = 1.331

Weight: <None>
Min Conc: <None>

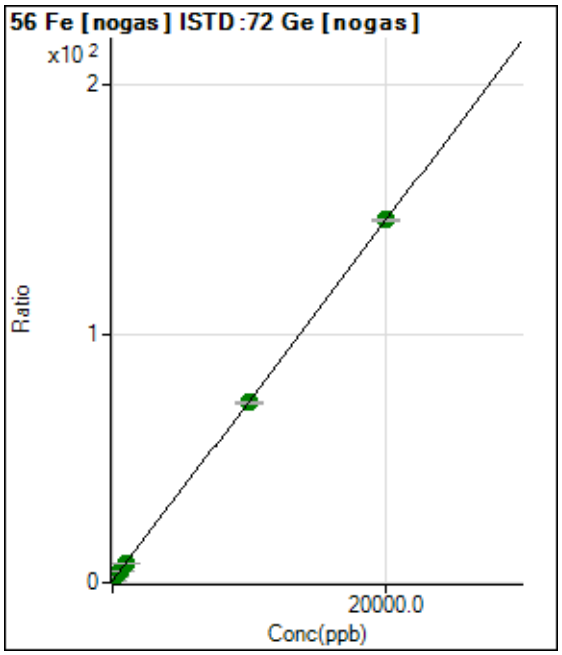


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4413.94	0.0044	P	2.9
2	☐	2.000	1.781	14192.34	0.0145	P	6.5
3	☐	5.000	5.230	33063.10	0.0341	P	3.2
4	☐	10.000	9.707	57690.42	0.0594	P	1.7
5	☐	100.000	99.371	553809.70	0.5675	P	2.5
6	☐	200.000	200.326	1089644.83	1.1395	M	2.2
7	☐	1.000					

y = 0.0057 * x + 0.0044
R = 1.0000
DL = 0.06808
BEC = 0.7804

Weight: <None>
Min Conc: <None>

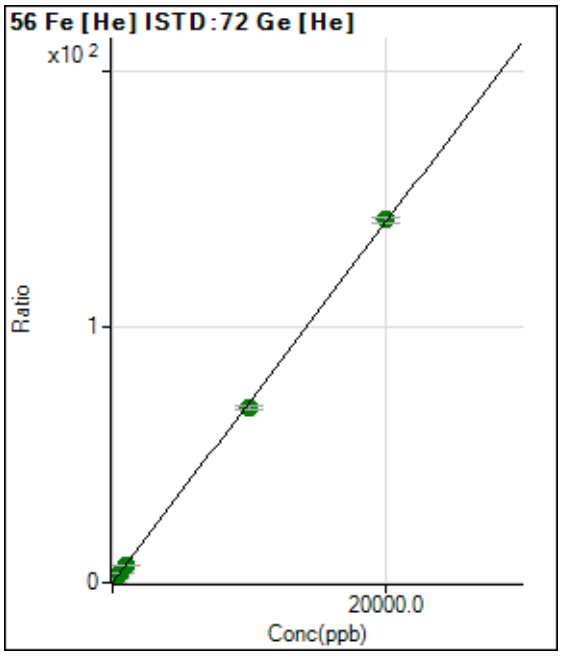
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2701284.30	0.6824	A	4.6
2	☐	200.000	202.250	8498365.55	2.1479	A	1.0
3	☐	500.000	520.777	17837406.13	4.4559	A	3.6
4	☐	1000.000	991.935	31577138.21	7.8698	A	1.4
5	☐	10000.00	9900.614	285006214.7	72.4213	A	1.7
6	☐	20000.00	20049.554	568658579.3	145.959	A	0.6
7	☐	100.000					

y = 0.0072 * x + 0.6824
R = 1.0000
DL = 12.98
BEC = 94.17

Weight: <None>
Min Conc: <None>

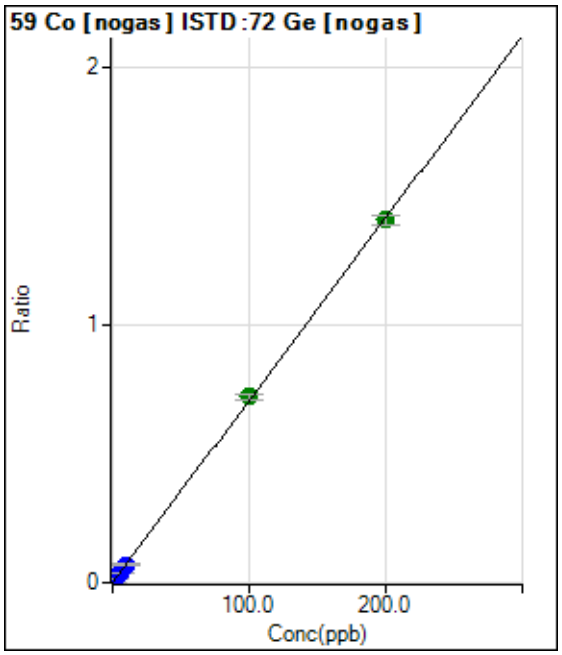


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23688.74	0.0237	P	1.7
2	☐	200.000	206.044	1445321.54	1.4774	A	3.1
3	☐	500.000	519.928	3584058.18	3.6918	A	0.5
4	☐	1000.000	997.312	6853475.11	7.0598	A	2.0
5	☐	10000.00	9722.811	66967455.67	68.6181	A	1.8
6	☐	20000.00	20138.170	135879417.9	142.098	A	1.5
7	☐	100.000					

y = 0.0071 * x + 0.0237
R = 0.9999
DL = 0.171
BEC = 3.365

Weight: <None>
Min Conc: <None>

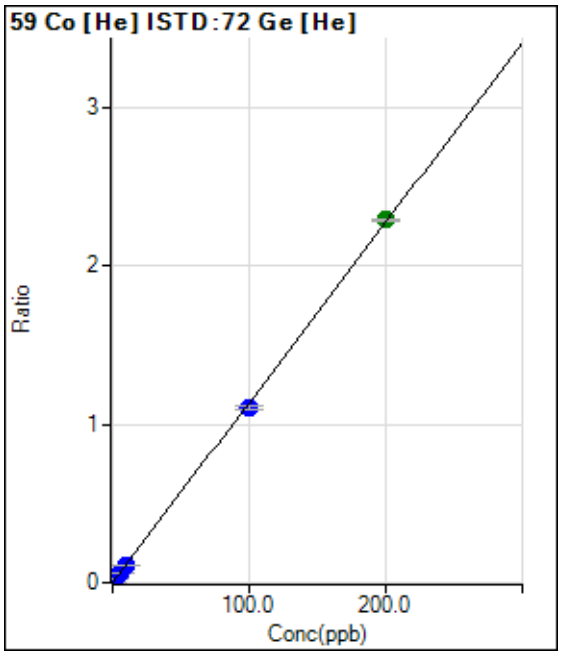
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	880.04	0.0002	P	14.6
2	☐	2.000	2.050	58292.62	0.0147	P	5.3
3	☐	5.000	5.221	148941.50	0.0372	P	2.6
4	☐	10.000	9.984	284716.41	0.0710	P	3.1
5	☐	100.000	101.902	2841719.43	0.7221	A	2.4
6	☐	200.000	199.044	5491844.71	1.4102	A	2.5
7	☐	1.000					

y = 0.0071 * x + 2.2172E-004
R = 0.9999
DL = 0.01374
BEC = 0.0313

Weight: <None>
Min Conc: <None>

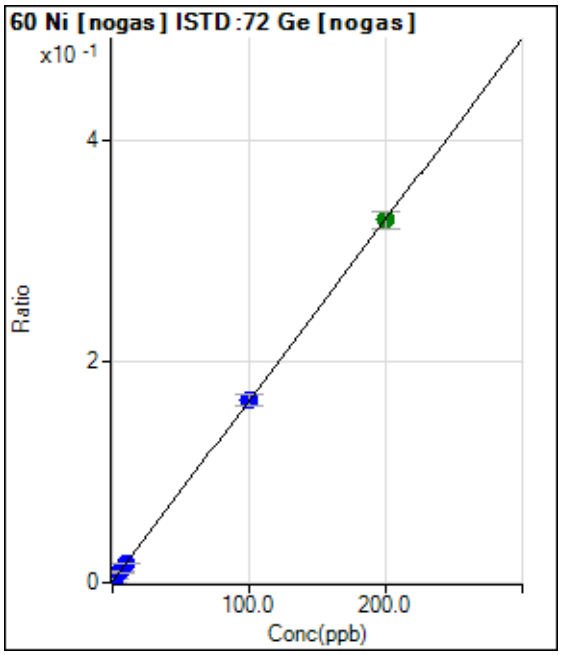


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	253.34	0.0003	P	4.5
2	☐	2.000	2.034	22854.55	0.0234	P	3.3
3	☐	5.000	5.133	56878.38	0.0586	P	3.5
4	☐	10.000	9.977	110346.93	0.1136	P	2.5
5	☐	100.000	96.846	1074310.22	1.1009	P	2.2
6	☐	200.000	201.575	2190937.16	2.2910	A	0.8
7	☐	1.000					

y = 0.0114 * x + 2.5388E-004
R = 0.9998
DL = 0.003004
BEC = 0.02234

Weight: <None>
Min Conc: <None>

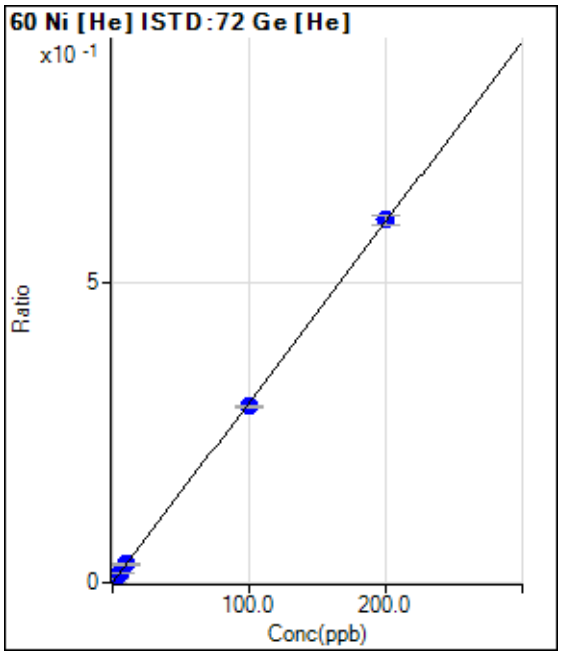
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.282	2323.52	0.0006	P	8.2
2	☐	2.000	1.921	16561.09	0.0042	P	5.7
3	☐	5.000	5.234	38443.85	0.0096	P	1.6
4	☐	10.000	9.949	69444.67	0.0173	P	2.9
5	☐	100.000	100.361	649535.52	0.1651	P	5.5
6	☐	200.000	199.817	1275662.77	0.3277	A	5.0
7	☐	1.000					

y = 0.0016 * x + 0.0010
R = 1.0000
DL = 0.08847
BEC = 0.6403

Weight: <None>
Min Conc: <None>

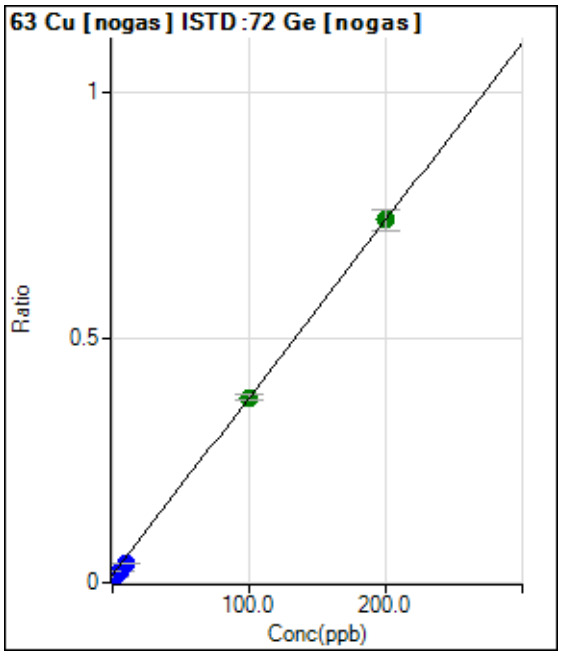


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.180	786.69	0.0008	P	6.7
2	☐	2.000	2.207	6718.00	0.0069	P	3.6
3	☐	5.000	5.528	16340.82	0.0168	P	3.6
4	☐	10.000	10.185	29891.13	0.0308	P	4.2
5	☐	100.000	97.851	286726.16	0.2938	P	1.3
6	☐	200.000	201.050	576901.50	0.6033	P	2.4
7	☐	1.000					

y = 0.0030 * x + 2.4887E-004
R = 0.9999
DL = 0.05289
BEC = 0.08296

Weight: <None>
Min Conc: <None>

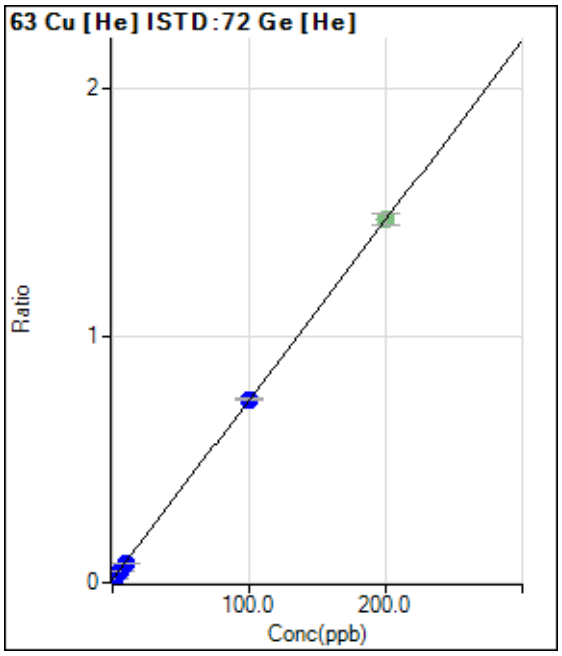
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63219.42	0.0160	P	2.0
2	☐	2.000	-1.558	40808.99	0.0103	P	3.1
3	☐	5.000	1.781	89742.63	0.0224	P	2.2
4	☐	10.000	6.683	161152.55	0.0402	P	1.8
5	☐	100.000	100.207	1491185.91	0.3789	A	2.3
6	☐	200.000	200.178	2884278.29	0.7410	A	5.8
7	☐	1.000					

y = 0.0036 * x + 0.0160
R = 0.9998
DL = 0.2646
BEC = 4.406

Weight: <None>
Min Conc: <None>

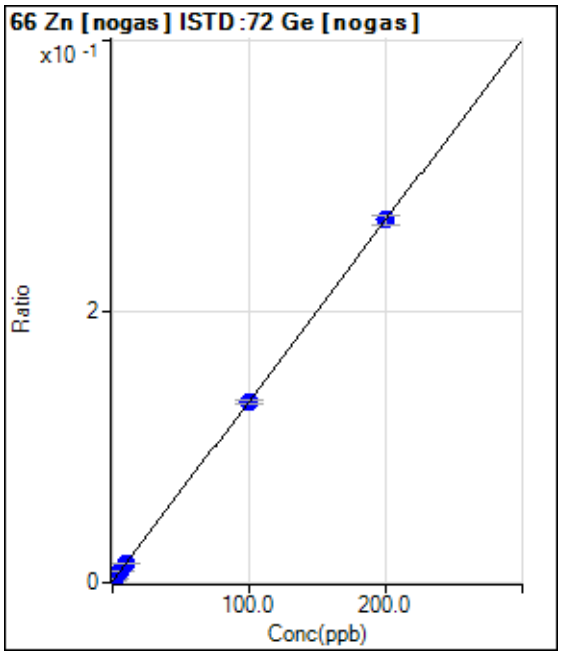


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	2.488	30188.42	0.0303	P	2.4
2	☐	2.000	0.977	18846.55	0.0193	P	1.9
3	☐	5.000	4.302	42181.95	0.0435	P	2.3
4	☐	10.000	9.087	75966.95	0.0783	P	2.2
5	☐	100.000	100.147	722900.27	0.7406	P	1.1
6	☑	200.000		1404368.78	1.4687	A	3.1
7	☐	1.000					

y = 0.0073 * x + 0.0122
R = 0.9994
DL = 0.2986
BEC = 1.672

Weight: <None>
Min Conc: <None>

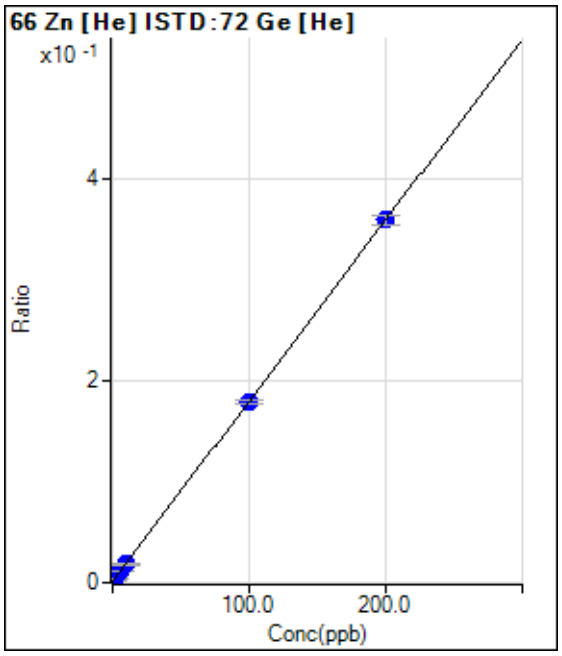
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.173	4133.86	0.0010	P	6.3
2	☐	2.000	1.999	13758.69	0.0035	P	3.4
3	☐	5.000	5.353	31841.27	0.0080	P	2.2
4	☐	10.000	9.731	55343.73	0.0138	P	0.8
5	☐	100.000	99.479	525339.59	0.1335	P	3.1
6	☐	200.000	200.265	1043240.17	0.2679	P	2.8
7	☐	1.000					

y = 0.0013 * x + 8.1139E-004
R = 1.0000
DL = 0.1485
BEC = 0.6083

Weight: <None>
Min Conc: <None>

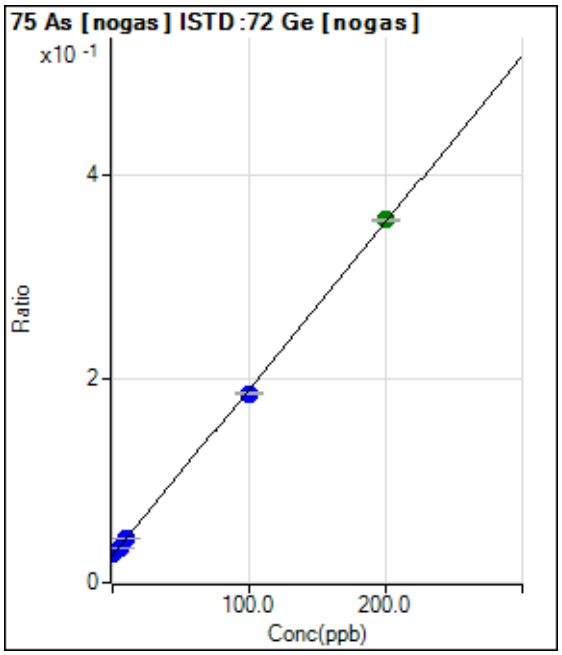


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.245	1383.41	0.0014	P	8.2
2	☐	2.000	1.920	4290.56	0.0044	P	6.2
3	☐	5.000	5.471	10433.10	0.0107	P	2.8
4	☐	10.000	9.604	17618.69	0.0181	P	1.4
5	☐	100.000	99.503	174850.54	0.1792	P	1.2
6	☐	200.000	200.257	343840.70	0.3596	P	2.3
7	☐	1.000					

y = 0.0018 * x + 9.4827E-004
R = 1.0000
DL = 0.1901
BEC = 0.5295

Weight: <None>
Min Conc: <None>

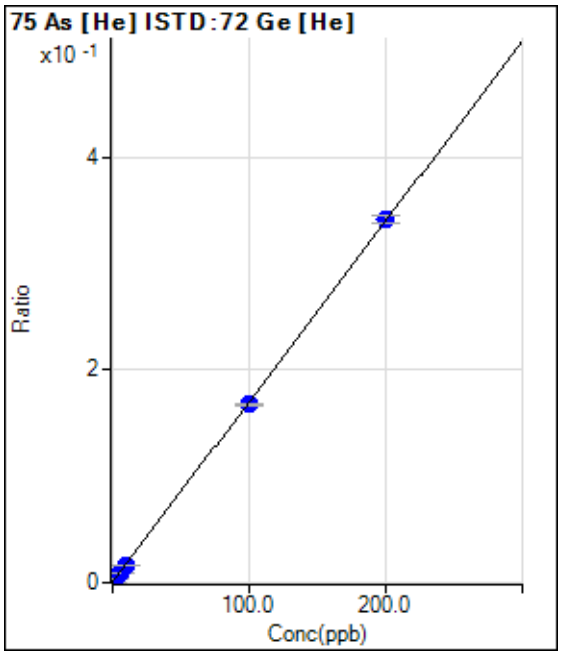
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	1.041	112051.52	0.0283	P	3.0
2	☐	2.000	2.640	122226.70	0.0309	P	4.8
3	☐	5.000	4.574	136458.86	0.0341	P	2.0
4	☐	10.000	10.245	174017.70	0.0434	P	2.6
5	☐	100.000	97.018	729994.91	0.1855	P	0.9
6	☐	200.000	201.483	1389069.20	0.3566	A	0.3
7	☐	1.000					

y = 0.0016 * x + 0.0266
R = 0.9998
DL = 1.559
BEC = 16.23

Weight: <None>
Min Conc: <None>

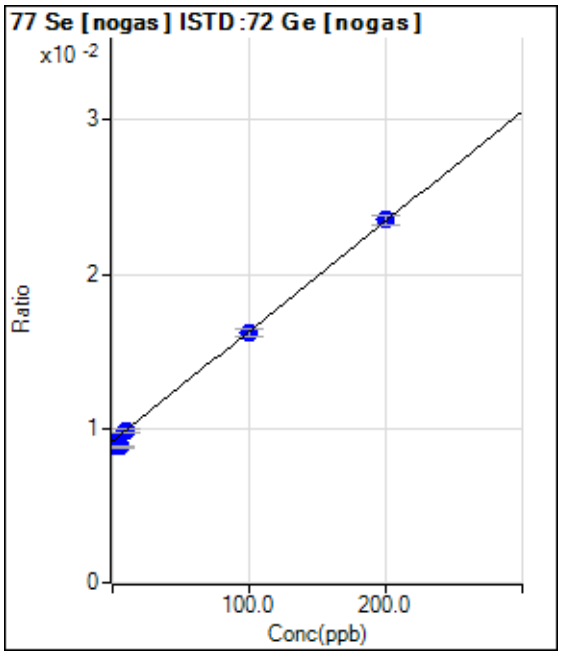


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	593.34	0.0006	P	4.2
2	☐	2.000	1.940	3801.53	0.0039	P	1.9
3	☐	5.000	5.030	8861.07	0.0091	P	2.8
4	☐	10.000	9.531	16270.61	0.0168	P	2.0
5	☐	100.000	98.599	163820.81	0.1678	P	0.9
6	☐	200.000	200.724	326140.13	0.3411	P	2.2
7	☐	1.000					

y = 0.0017 * x + 5.9452E-004
R = 1.0000
DL = 0.04417
BEC = 0.3505

Weight: <None>
Min Conc: <None>

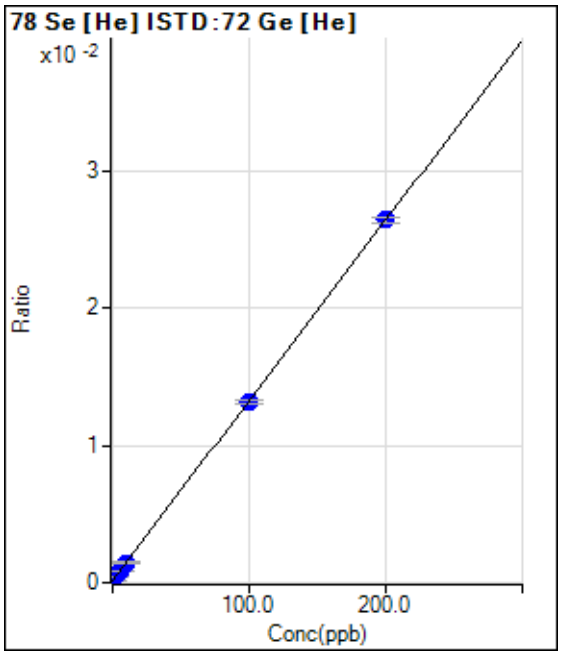
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36373.16	0.0092	P	2.9
2	☐	2.000	-4.339	35107.47	0.0089	P	1.9
3	☐	5.000	-5.392	35237.82	0.0088	P	1.6
4	☐	10.000	9.012	39432.99	0.0098	P	2.0
5	☐	100.000	98.577	63788.12	0.0162	P	3.6
6	☐	200.000	201.084	91602.87	0.0235	P	2.4
7	☐	1.000					

y = 7.1301E-005 * x + 0.0092
R = 0.9990
DL = 11.28
BEC = 128.8

Weight: <None>
Min Conc: <None>

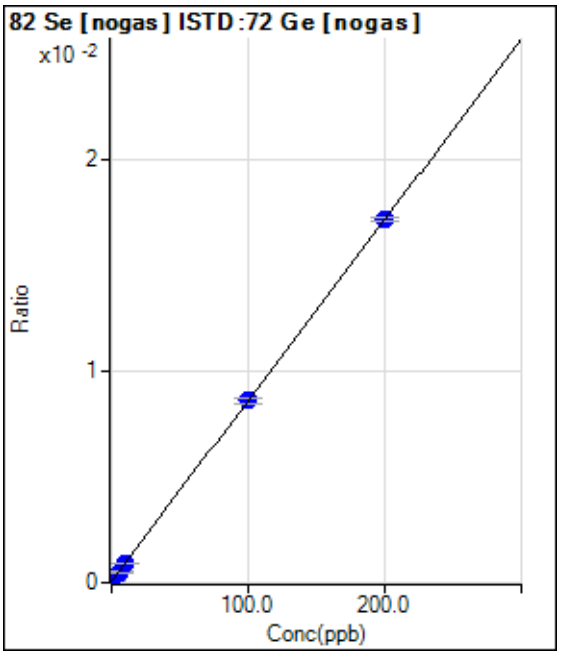


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.059	163.33	0.0002	P	16.9
2	☐	2.000	2.010	410.68	0.0004	P	4.8
3	☐	5.000	5.299	826.02	0.0009	P	4.4
4	☐	10.000	9.930	1415.39	0.0015	P	4.5
5	☐	100.000	99.411	12875.23	0.0132	P	2.0
6	☐	200.000	200.290	25260.12	0.0264	P	1.6
7	☐	1.000					

y = 1.3111E-004 * x + 1.5602E-004
R = 1.0000
DL = 0.6321
BEC = 1.19

Weight: <None>
Min Conc: <None>

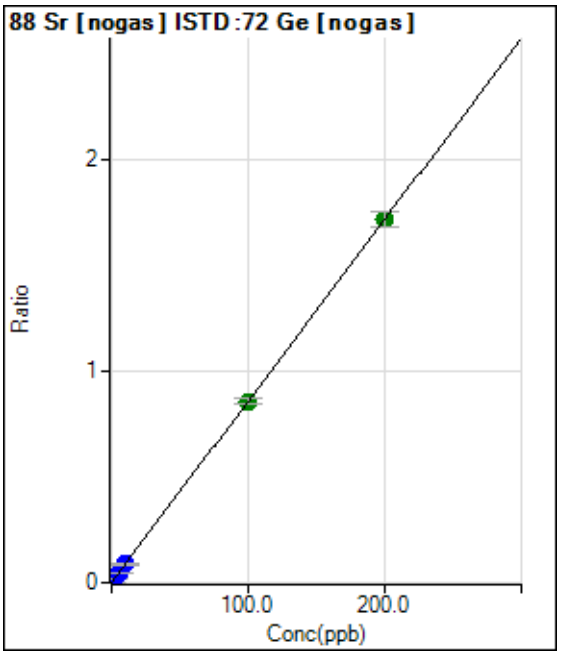
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	276.67	0.0001	P	33.1
2	☐	2.000	2.084	976.71	0.0002	P	13.3
3	☐	5.000	4.813	1920.13	0.0005	P	15.4
4	☐	10.000	9.912	3670.43	0.0009	P	2.5
5	☐	100.000	100.004	33828.58	0.0086	P	3.4
6	☐	200.000	200.006	66713.09	0.0171	P	1.1
7	☐	1.000					

y = 8.5287E-005 * x + 6.9353E-005
R = 1.0000
DL = 0.8081
BEC = 0.8132

Weight: <None>
Min Conc: <None>

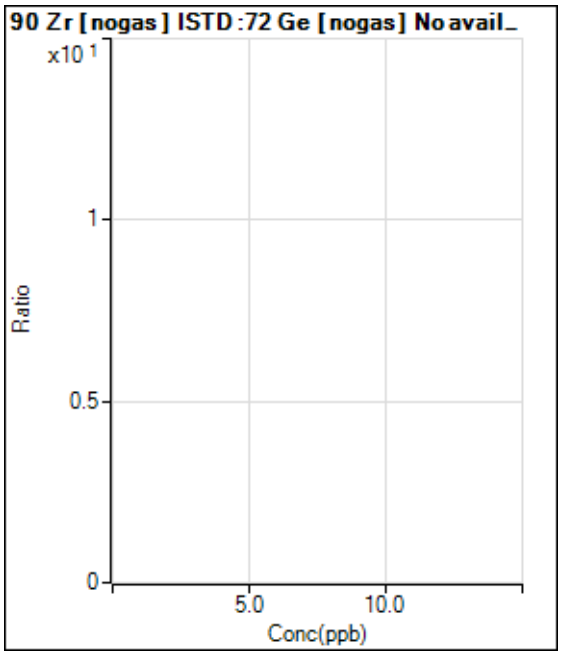


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3723.76	0.0009	P	1.4
2	☐	2.000	2.034	72573.72	0.0183	P	1.1
3	☐	5.000	5.096	178335.61	0.0445	P	3.1
4	☐	10.000	9.981	346433.04	0.0863	P	1.4
5	☐	100.000	100.069	3372792.55	0.8571	A	3.0
6	☐	200.000	199.964	6664654.48	1.7118	A	4.1
7	☐	1.000					

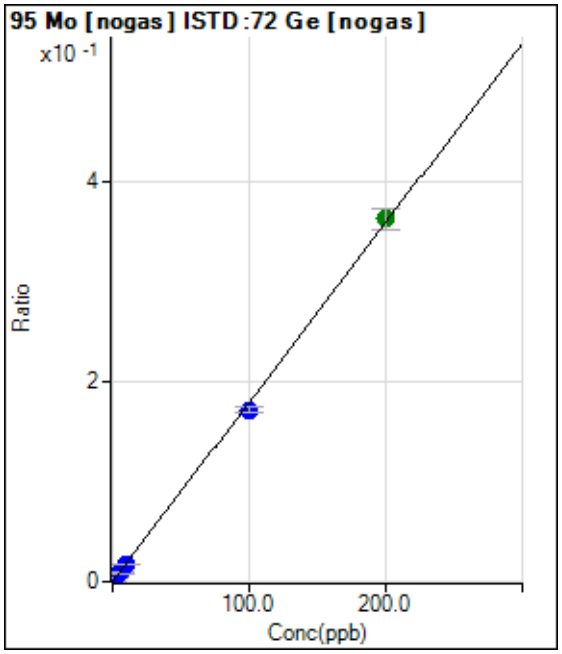
y = 0.0086 * x + 9.3951E-004
R = 1.0000
DL = 0.004682
BEC = 0.1098

Weight: <None>
Min Conc: <None>

Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

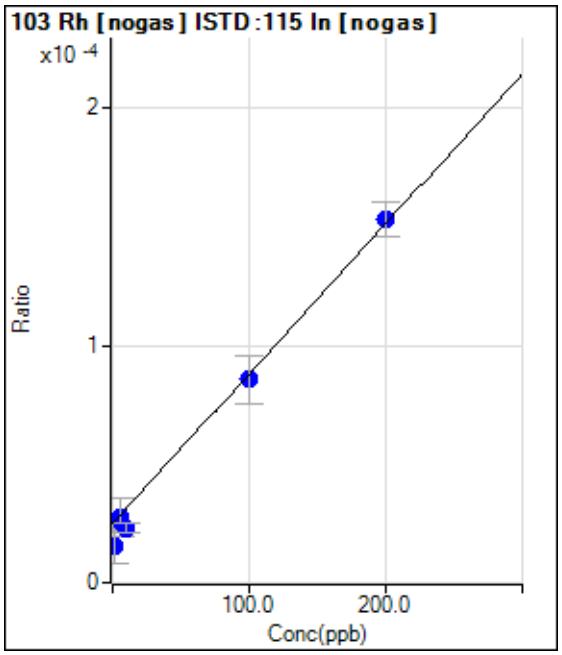


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	263.34	0.0001	P	14.8
2	☐	2.000	1.946	14035.67	0.0035	P	4.8
3	☐	5.000	4.798	34654.04	0.0087	P	2.8
4	☐	10.000	9.401	67792.90	0.0169	P	0.6
5	☐	100.000	95.541	673100.67	0.1711	P	3.2
6	☐	200.000	202.265	1409267.22	0.3621	A	5.5
7	☐	1.000					

y = 0.0018 * x + 6.6218E-005
R = 0.9997
DL = 0.01639
BEC = 0.037

Weight: <None>
Min Conc: <None>

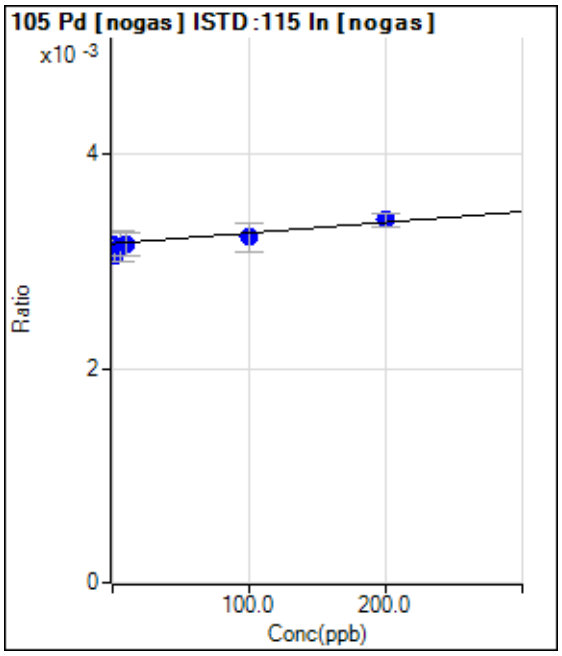
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0000	P	19.2
2	☐	2.000	-15.368	56.67	0.0000	P	88.3
3	☐	5.000	4.293	100.00	0.0000	P	61.0
4	☐	10.000	-2.948	83.33	0.0000	P	15.4
5	☐	100.000	96.442	306.68	0.0001	P	23.6
6	☐	200.000	202.618	533.35	0.0002	P	9.5
7	☐	1.000					

y = 6.3137E-007 * x + 2.4855E-005
R = 0.9968
DL = 22.71
BEC = 39.37

Weight: <None>
Min Conc: <None>

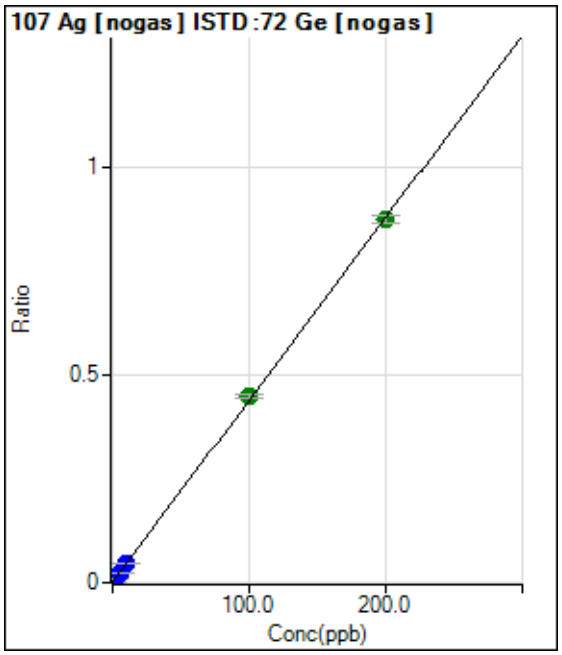


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11430.61	0.0032	P	1.8
2	☐	2.000	-105.686	11317.15	0.0031	P	4.3
3	☐	5.000	-18.676	11487.30	0.0031	P	9.2
4	☐	10.000	-6.409	11410.52	0.0032	P	6.5
5	☐	100.000	61.417	11527.28	0.0032	P	8.2
6	☐	200.000	221.781	11840.85	0.0034	P	3.5
7	☐	1.000					

y = 9.9805E-007 * x + 0.0032
R = 0.9352
DL = 169.9
BEC = 3174

Weight: <None>
Min Conc: <None>

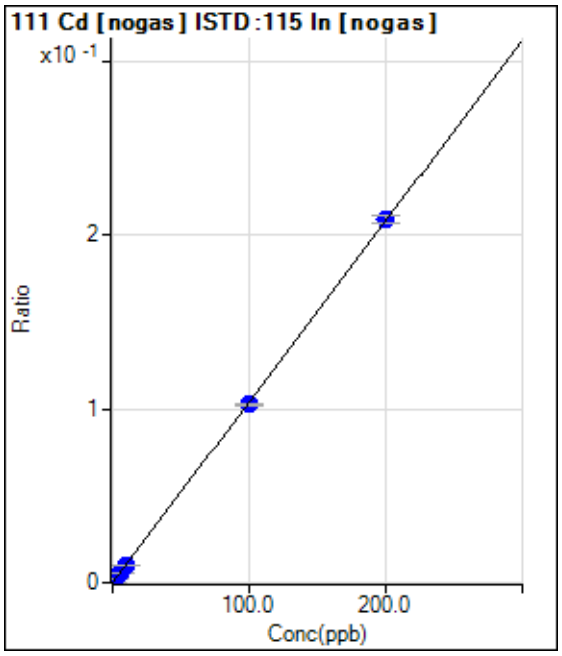
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3510.40	0.0009	P	4.7
2	☐	2.000	2.001	38195.16	0.0097	P	2.4
3	☐	5.000	5.094	92944.82	0.0232	P	2.1
4	☐	10.000	10.057	180379.01	0.0450	P	2.1
5	☐	100.000	102.102	1764470.70	0.4483	A	1.4
6	☐	200.000	198.944	3399048.39	0.8727	A	2.2
7	☐	1.000					

y = 0.0044 * x + 8.8680E-004
R = 0.9999
DL = 0.02864
BEC = 0.2024

Weight: <None>
Min Conc: <None>

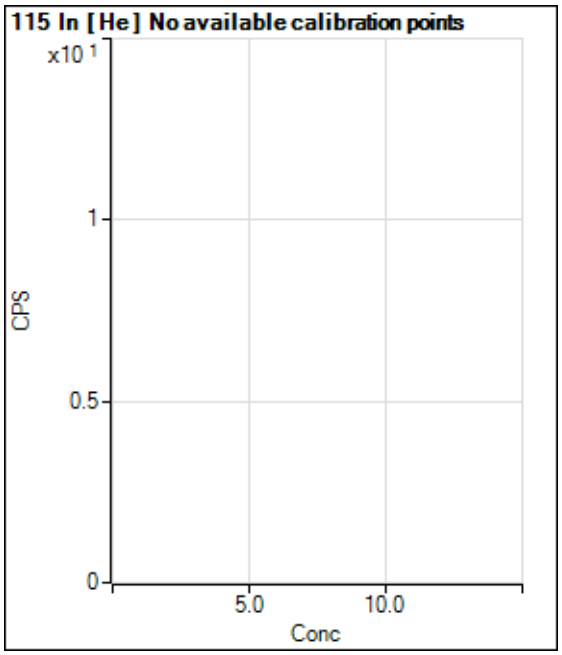


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	73.7
2	☐	2.000	1.914	7404.97	0.0020	P	3.5
3	☐	5.000	4.910	18696.88	0.0051	P	2.0
4	☐	10.000	9.796	36862.27	0.0102	P	1.7
5	☐	100.000	98.574	366175.46	0.1025	P	1.2
6	☐	200.000	200.726	728800.38	0.2088	P	2.2
7	☐	1.000					

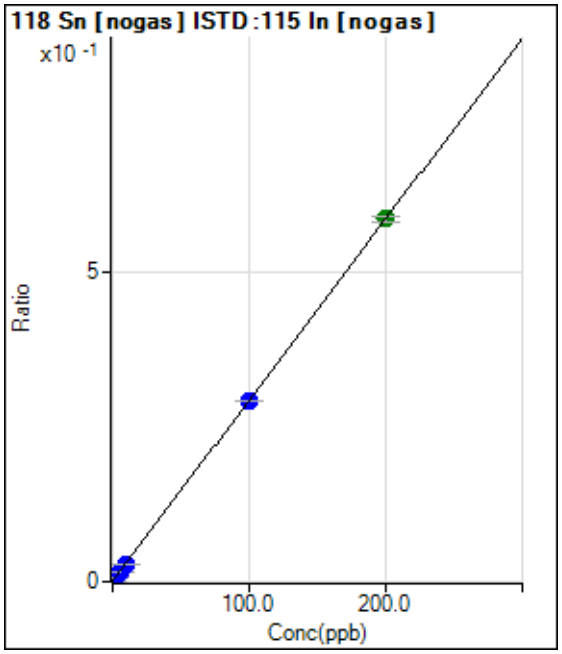
y = 0.0010 * x + 1.4036E-005
R = 1.0000
DL = 0.02985
BEC = 0.0135

Weight: <None>
Min Conc: <None>

Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1141045.48		P	0.5
2	☐			1152263.73		M	2.9
3	☐			1138364.19		P	2.0
4	☐			1151139.82		P	0.8
5	☐			1128653.99		P	1.8
6	☐			1103511.09		P	3.6
7	☐						

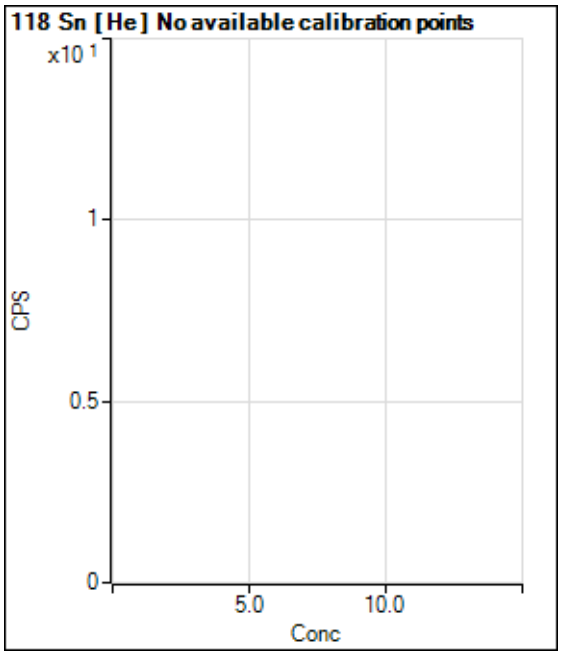


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2977.04	0.0008	P	16.3
2	☐	2.000	1.730	21677.07	0.0059	P	2.2
3	☐	5.000	4.700	53030.53	0.0145	P	1.4
4	☐	10.000	9.429	102232.41	0.0283	P	2.2
5	☐	100.000	99.559	1039099.93	0.2909	P	0.7
6	☐	200.000	200.259	2040066.95	0.5843	A	1.7
7	☐	1.000					

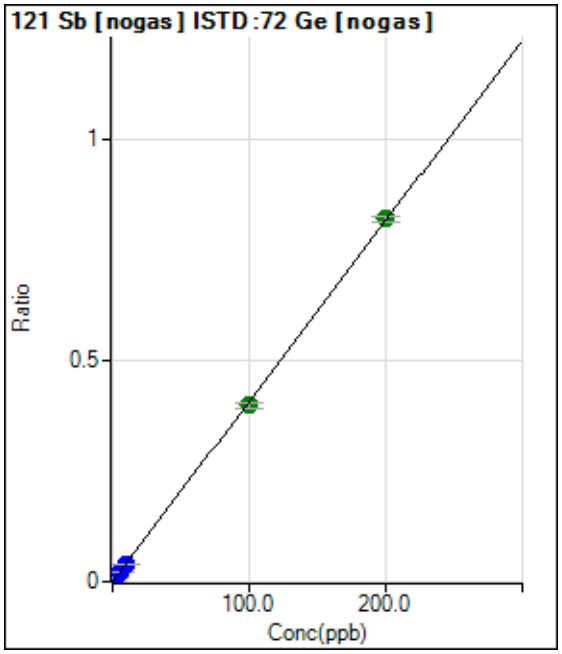
y = 0.0029 * x + 8.2797E-004
R = 1.0000
DL = 0.1387
BEC = 0.2842

Weight: <None>
Min Conc: <None>

Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1076.72		P	11.2
2	☐			8028.63		P	5.0
3	☐			20151.81		P	1.6
4	☐			38025.15		P	0.4
5	☐			373993.91		P	1.1
6	☐			733689.57		P	2.7
7	☐						

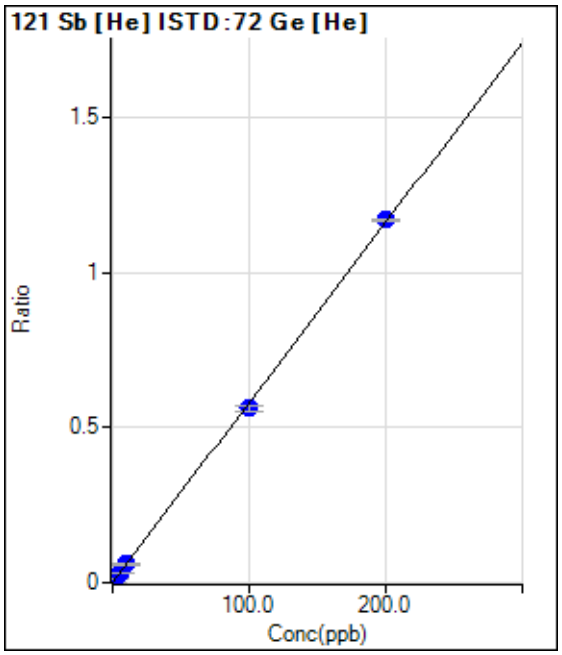


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2156.83	0.0005	P	4.8
2	☐	2.000	1.995	34320.80	0.0087	P	3.6
3	☐	5.000	4.811	80696.49	0.0202	P	4.3
4	☐	10.000	9.659	160172.89	0.0399	P	1.6
5	☐	100.000	97.605	1568190.08	0.3985	A	2.9
6	☐	200.000	201.219	3197438.49	0.8209	A	1.8
7	☐	1.000					

y = 0.0041 * x + 5.4459E-004
R = 0.9999
DL = 0.01912
BEC = 0.1336

Weight: <None>
Min Conc: <None>

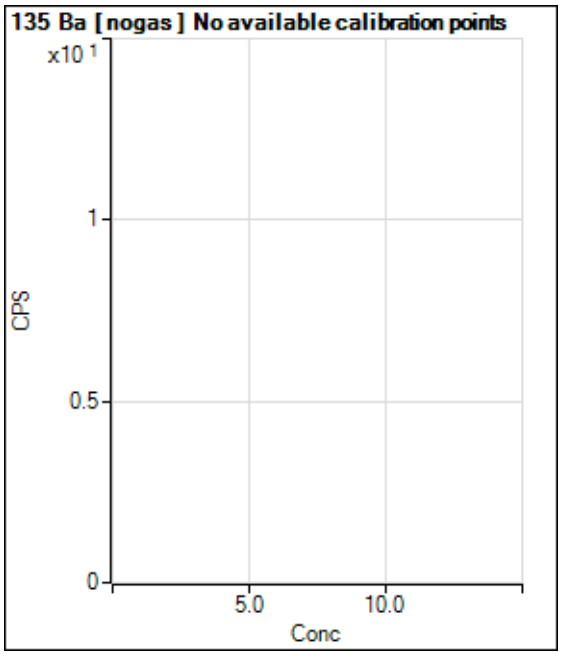
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	773.36	0.0008	P	7.9
2	☐	2.000	1.988	12034.34	0.0123	P	2.7
3	☐	5.000	5.072	29294.74	0.0302	P	0.9
4	☐	10.000	10.131	57755.55	0.0595	P	3.0
5	☐	100.000	96.746	548002.14	0.5616	P	3.1
6	☐	200.000	201.619	1118378.81	1.1695	P	0.5
7	☐	1.000					

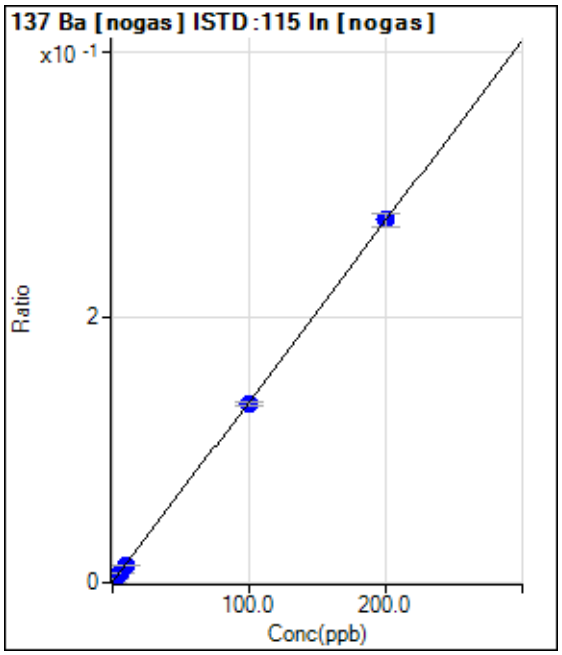
y = 0.0058 * x + 7.7501E-004
R = 0.9998
DL = 0.03159
BEC = 0.1337

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			840.04		P	3.2
2	☐			6374.62		P	2.8
3	☐			14696.53		P	5.3
4	☐			28607.38		P	1.5
5	☐			282196.74		P	4.1
6	☐			560840.42		P	1.9
7	☐						

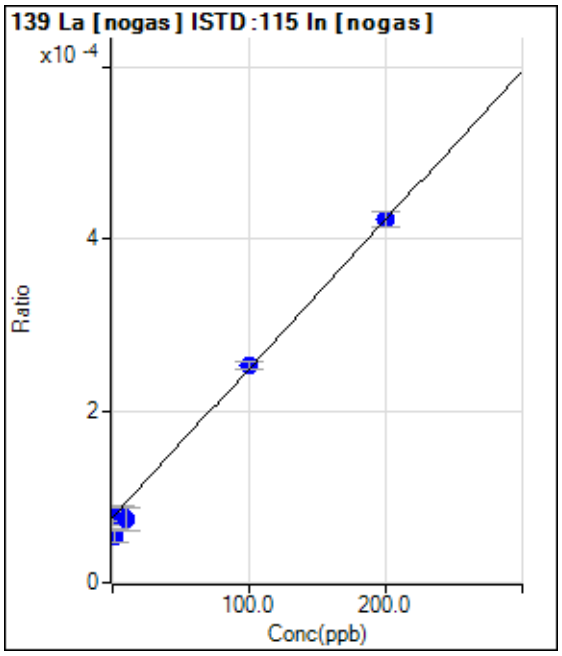
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1460.09	0.0004	P	6.1
2	☐	2.000	1.762	10336.58	0.0028	P	7.9
3	☐	5.000	4.917	25906.60	0.0071	P	5.3
4	☐	10.000	9.511	48218.08	0.0133	P	2.8
5	☐	100.000	98.810	481583.39	0.1348	P	2.0
6	☐	200.000	200.624	954043.04	0.2733	P	3.9
7	☐	1.000					

y = 0.0014 * x + 4.0464E-004
R = 1.0000
DL = 0.05409
BEC = 0.2974

Weight: <None>
Min Conc: <None>

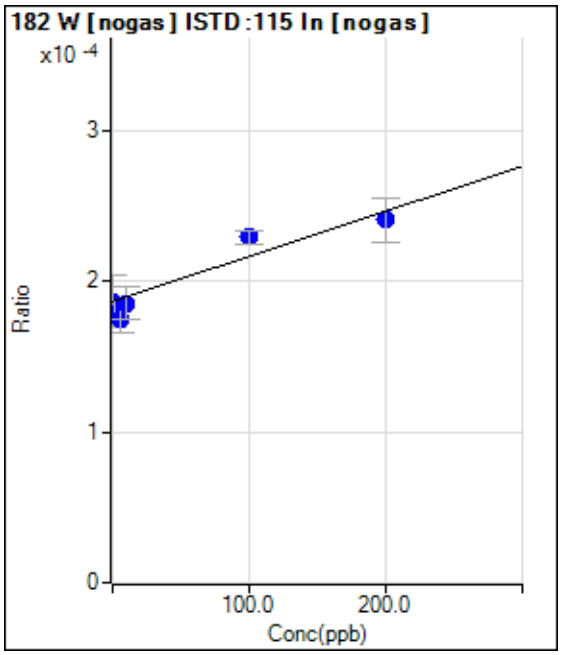


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0001	P	22.7
2	☐	2.000	-12.653	200.00	0.0001	P	29.7
3	☐	5.000	2.539	293.34	0.0001	P	20.3
4	☐	10.000	-1.571	263.34	0.0001	P	36.5
5	☐	100.000	101.977	903.38	0.0003	P	3.5
6	☐	200.000	199.798	1476.75	0.0004	P	4.3
7	☐	1.000					

y = 1.7343E-006 * x + 7.6106E-005
R = 0.9976
DL = 29.95
BEC = 43.88

Weight: <None>
Min Conc: <None>

Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	673.36	0.0002	P	18.8
2	☐	2.000	-15.930	673.36	0.0002	P	5.7
3	☐	5.000	-38.003	640.02	0.0002	P	11.2
4	☐	10.000	-3.643	670.02	0.0002	P	11.6
5	☐	100.000	142.453	820.03	0.0002	P	4.1
6	☐	200.000	180.710	843.37	0.0002	P	11.9
7	☐	1.000					

y = 2.9995E-007 * x + 1.8683E-004

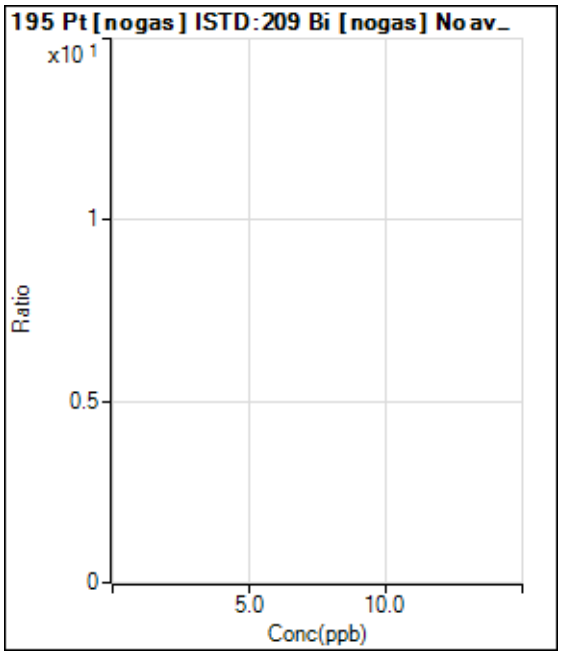
R = 0.9538

DL = 350.8

BEC = 622.9

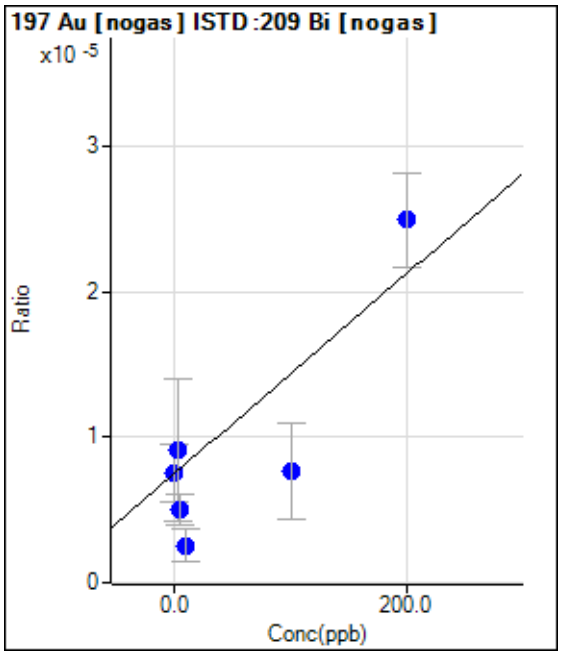
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

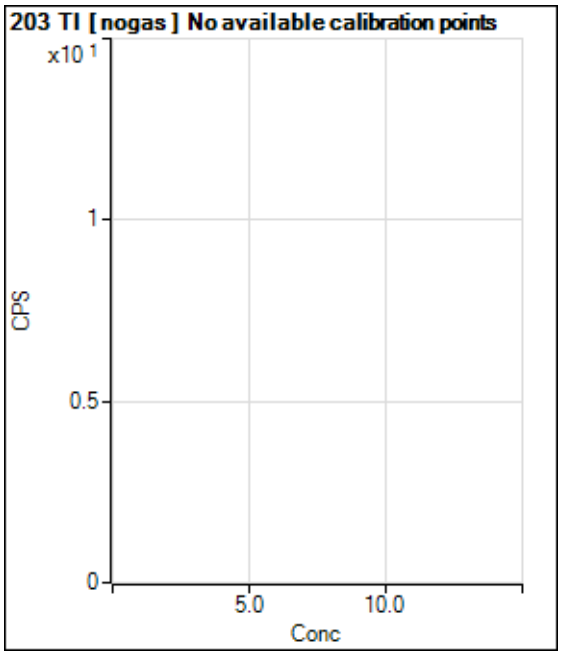
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	51.5
2	☐	2.000	22.988	23.33	0.0000	P	107.
3	☐	5.000	-37.059	13.33	0.0000	P	42.0
4	☐	10.000	-72.526	6.67	0.0000	P	86.7
5	☐	100.000	1.796	20.00	0.0000	P	85.2
6	☐	200.000	254.070	63.33	0.0000	P	26.3
7	☐	1.000					

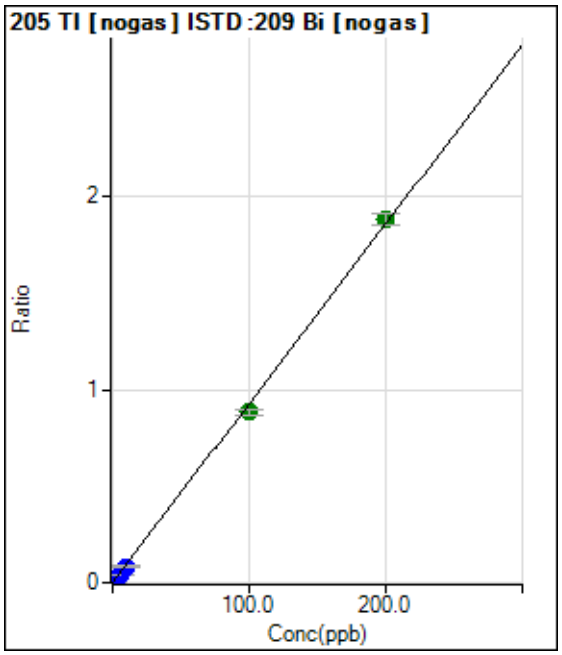
y = 6.8656E-008 * x + 7.5378E-006
R = 0.8713
DL = 169.7
BEC = 109.8

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			376.68		P	8.1
2	☐			17923.54		P	5.9
3	☐			48292.08		P	1.0
4	☐			94217.27		P	2.8
5	☐			946311.63		P	2.7
6	☐			1996624.29		A	3.0
7	☐						

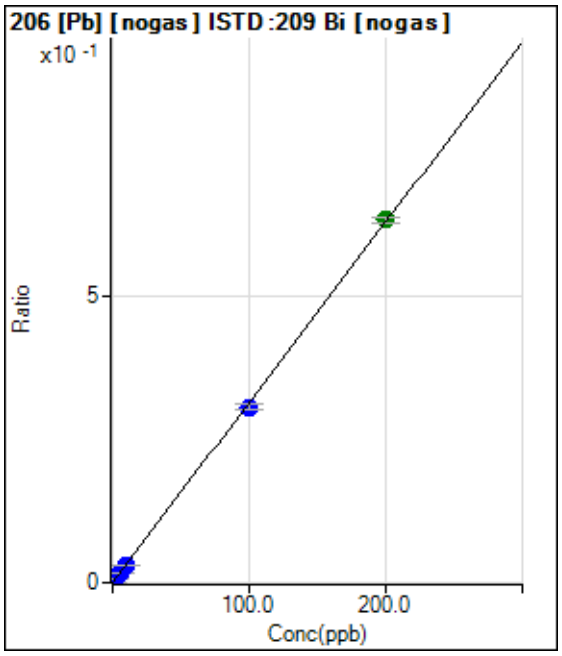
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1273.40	0.0005	P	17.1
2	☐	2.000	1.699	42395.83	0.0162	P	5.2
3	☐	5.000	4.665	116368.77	0.0437	P	1.5
4	☐	10.000	8.939	218246.83	0.0833	P	3.4
5	☐	100.000	95.172	2285412.72	0.8827	A	3.0
6	☐	200.000	202.478	4775290.97	1.8774	A	3.1
7	☐	1.000					

y = 0.0093 * x + 4.7607E-004
R = 0.9996
DL = 0.02635
BEC = 0.05136

Weight: <None>
Min Conc: <None>

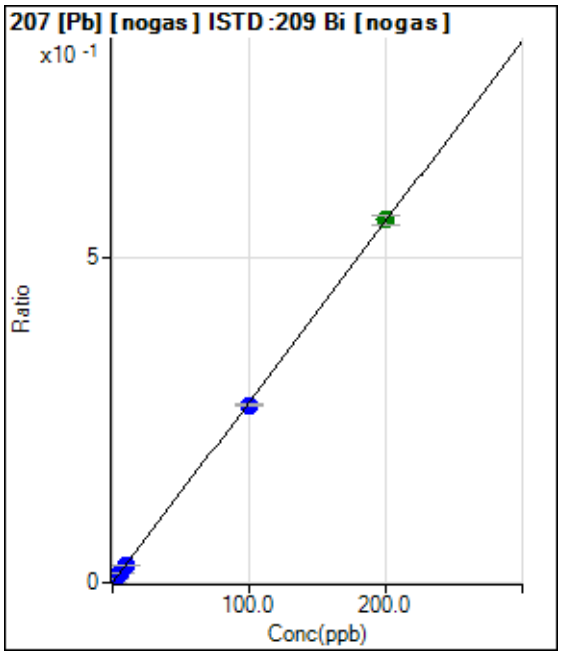


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	276.68	0.0001	P	9.8
2	☐	2.000	1.992	16585.39	0.0064	P	10.1
3	☐	5.000	4.974	41841.03	0.0157	P	3.2
4	☐	10.000	9.466	78141.77	0.0298	P	1.4
5	☐	100.000	97.342	791863.90	0.3058	P	2.9
6	☐	200.000	201.356	1609249.77	0.6325	A	1.8
7	☐	1.000					

y = 0.0031 * x + 1.0355E-004
R = 0.9999
DL = 0.009731
BEC = 0.03297

Weight: <None>
Min Conc: <None>

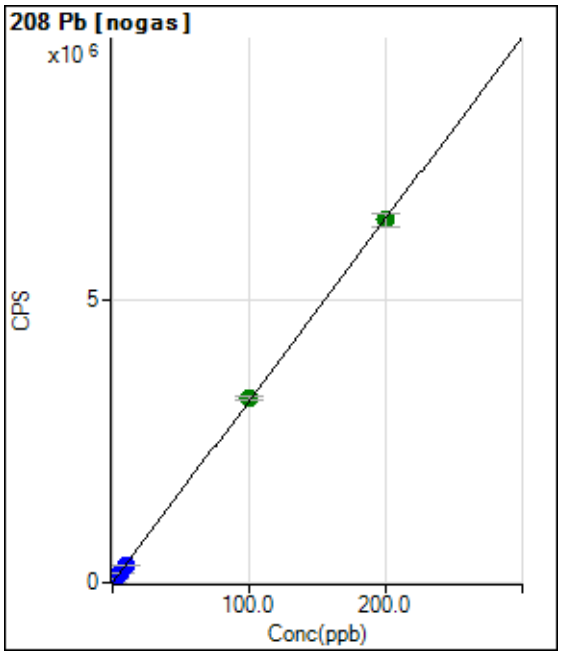
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0001	P	15.8
2	☐	2.000	2.016	14883.70	0.0057	P	5.7
3	☐	5.000	4.943	36772.19	0.0138	P	6.1
4	☐	10.000	9.469	69113.82	0.0264	P	0.5
5	☐	100.000	98.353	707253.95	0.2731	P	1.4
6	☐	200.000	200.851	1419260.03	0.5575	A	3.0
7	☐	1.000					

y = 0.0028 * x + 1.0251E-004
R = 1.0000
DL = 0.01752
BEC = 0.03694

Weight: <None>
Min Conc: <None>

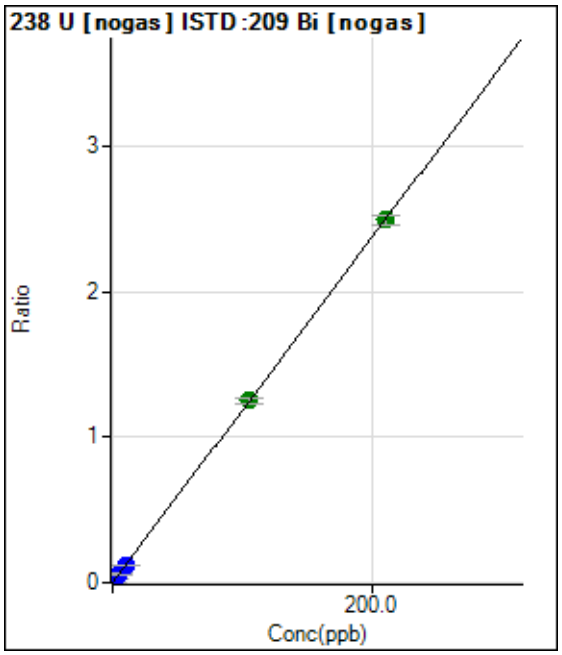


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1203.38		P	3.9
2	☐	2.000	2.025	66370.23		P	1.1
3	☐	5.000	5.179	167852.57		P	1.3
4	☐	10.000	9.821	317211.97		P	1.6
5	☐	100.000	101.119	3254972.77		A	2.0
6	☐	200.000	199.445	6418890.16		A	3.4
7	☐	1.000					

y = 32177.7406 * x + 1203.3800
R = 1.0000
DL = 0.004407
BEC = 0.0374

Weight: <None>
Min Conc: <None>

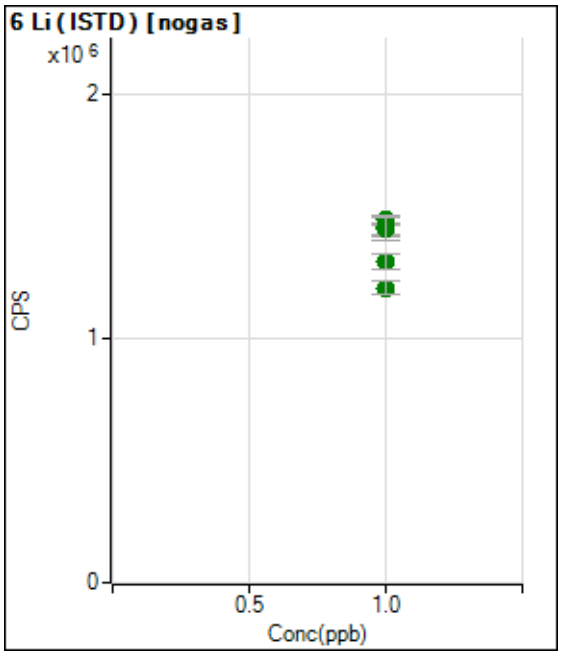
Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1030.05	0.0004	P	8.6
2	☐	2.000	2.007	63487.72	0.0243	P	1.3
3	☐	5.000	4.954	157960.66	0.0593	P	1.3
4	☐	10.000	9.858	308245.00	0.1177	P	3.7
5	☐	105.000	105.478	3251180.89	1.2558	A	3.3
6	☐	210.000	209.769	6356211.57	2.4971	A	2.4
7	☐	1.000					

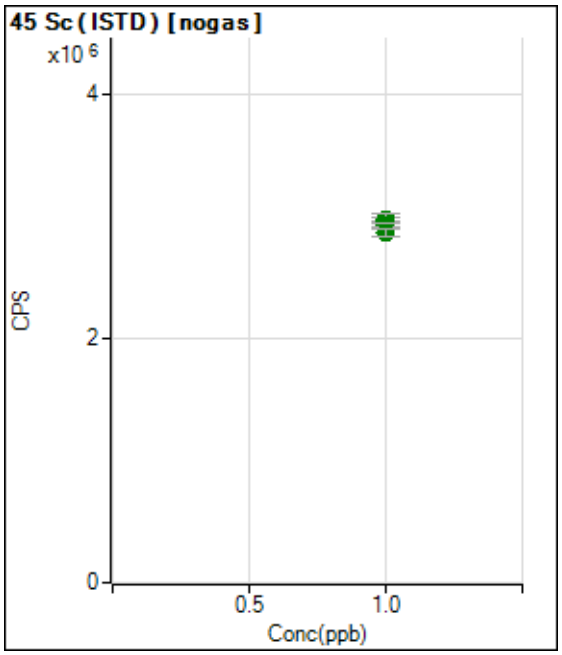
y = 0.0119 * x + 3.8607E-004
R = 1.0000
DL = 0.008386
BEC = 0.03244

Weight: <None>
Min Conc: <None>

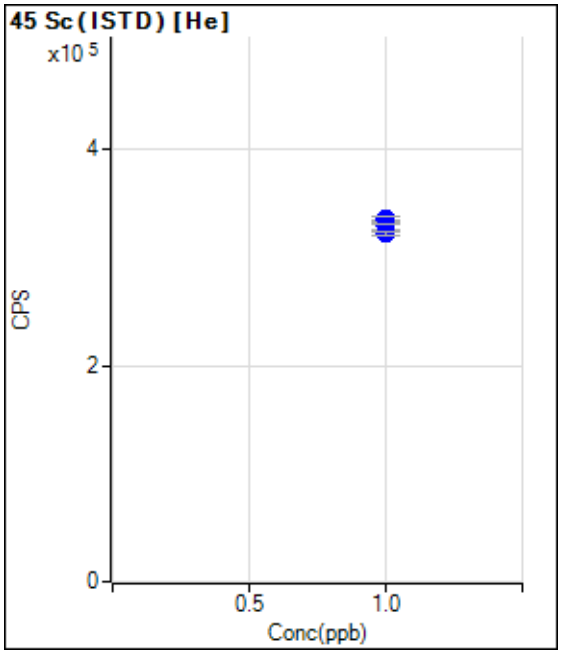


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1487435.55		A	1.6
2	☐	1.000		1447299.09		A	3.0
3	☐	1.000		1457845.10		A	5.8
4	☐	1.000		1454320.01		A	6.8
5	☐	1.000		1317755.45		A	4.5
6	☐	1.000		1209541.89		A	4.7
7	☐	1.000					

Calibration for 174_ICV.d

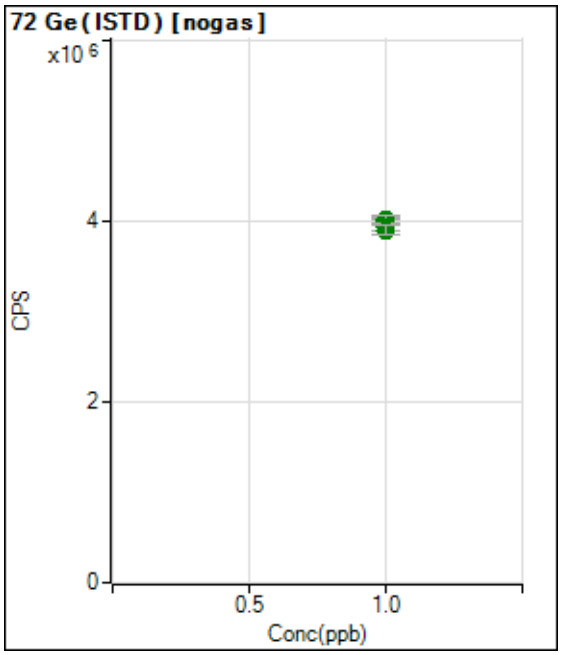


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2968243.40		A	1.1
2	☐	1.000		2955642.45		A	2.6
3	☐	1.000		2960009.96		A	3.8
4	☐	1.000		2960445.16		A	4.2
5	☐	1.000		2924876.83		A	1.1
6	☐	1.000		2863772.67		A	1.9
7	☐	1.000					

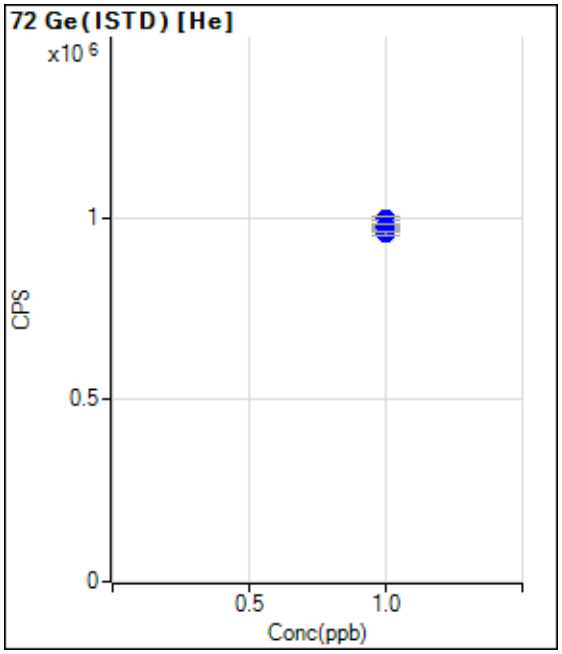


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		335475.45		P	1.8
2	☐	1.000		335997.29		P	0.9
3	☐	1.000		332247.10		P	0.9
4	☐	1.000		334811.14		P	2.2
5	☐	1.000		328583.59		P	1.7
6	☐	1.000		322570.56		P	1.3
7	☐	1.000					

Calibration for 174_ICV.d

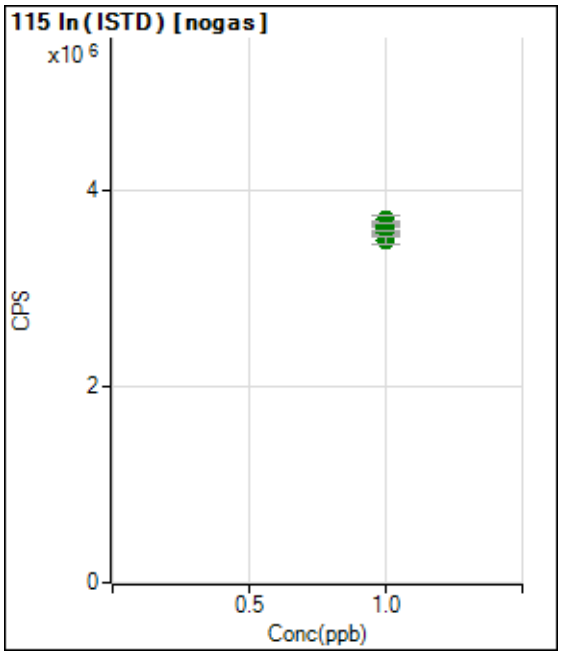


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3963361.19		A	3.9
2	☐	1.000		3957455.88		A	2.9
3	☐	1.000		4004125.46		A	1.1
4	☐	1.000		4013117.65		A	2.0
5	☐	1.000		3936384.42		A	2.3
6	☐	1.000		3895724.32		A	2.7
7	☐	1.000					

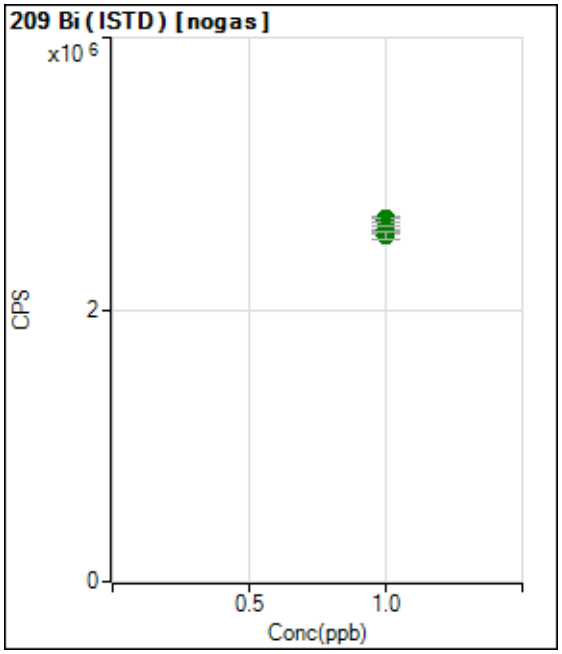


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		997887.85		P	1.2
2	☐	1.000		978464.54		P	1.3
3	☐	1.000		970802.28		P	0.4
4	☐	1.000		970971.49		P	1.9
5	☐	1.000		976061.47		P	1.2
6	☐	1.000		956319.28		P	1.0
7	☐	1.000					

Calibration for 174_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3607912.43		A	3.5
2	☐	1.000		3695045.32		A	2.6
3	☐	1.000		3652253.88		A	1.8
4	☐	1.000		3614041.61		A	2.9
5	☐	1.000		3571942.23		A	1.2
6	☐	1.000		3492304.11		A	2.4
7	☐	1.000					



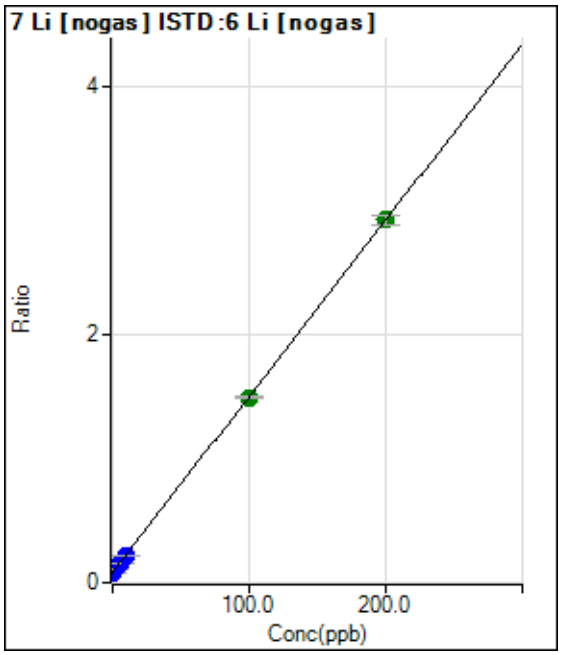
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2670039.96		A	1.8
2	☐	1.000		2616162.57		A	4.6
3	☐	1.000		2661621.52		A	1.2
4	☐	1.000		2619882.41		A	2.2
5	☐	1.000		2590103.24		A	2.1
6	☐	1.000		2544620.64		A	2.1
7	☐	1.000					

Calibration for 240_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121718A.b\
Analysis File: 121718A.batch.bin
DA Date-Time: 2018-12-18 00:15:51
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	234CALB.d	CAL BLK	2018-12-17 21:51:19
2	235CALS.d	2/10/200	2018-12-17 21:53:18
3	236CALS.d	5/25/500	2018-12-17 21:55:17
4	237CALS.d	10/50/1000	2018-12-17 21:57:17
5	238CALS.d	100/500/10K	2018-12-17 21:59:17
6	239CALS.d	200/1000/20K	2018-12-17 22:01:18
7			

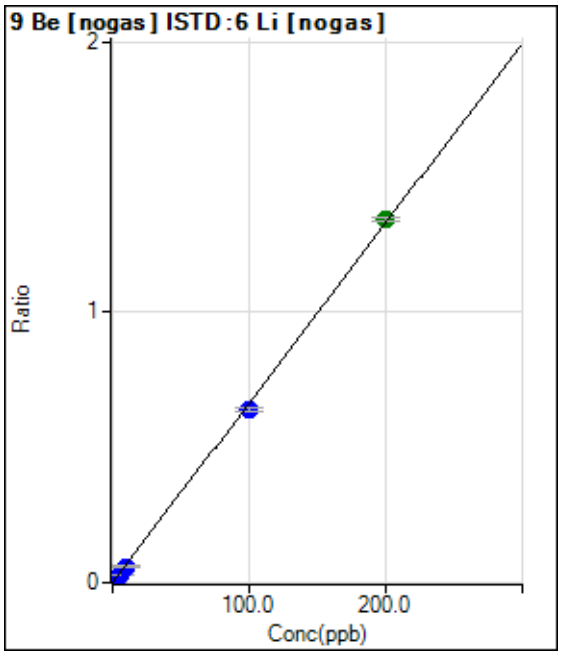
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	125028.02	0.0823	P	2.9
2	☐	2.000	1.639	164928.32	0.1055	P	3.1
3	☐	5.000	4.754	227459.06	0.1497	P	2.7
4	☐	10.000	9.479	322489.28	0.2166	P	3.3
5	☐	100.000	99.578	2061558.77	1.4935	A	1.9
6	☐	200.000	200.247	3962115.15	2.9202	A	2.5
7	☐	1.000					

y = 0.0142 * x + 0.0823
R = 1.0000
DL = 0.5051
BEC = 5.808

Weight: <None>
Min Conc: <None>

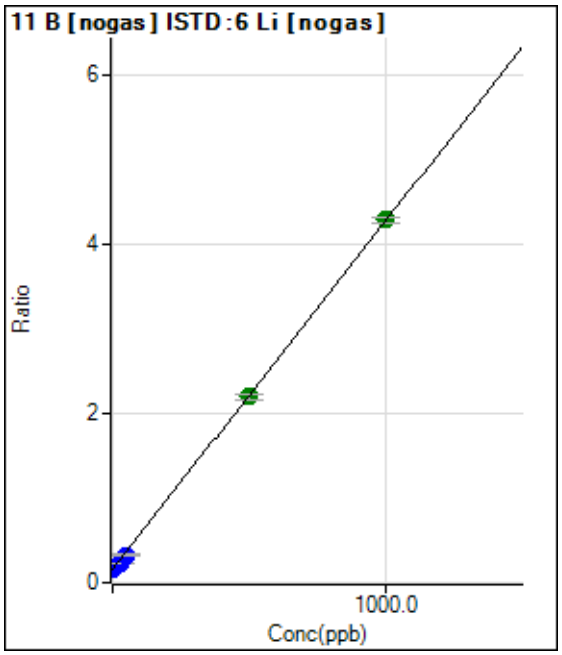


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	19.8
2	☐	2.000	1.760	18339.01	0.0117	P	4.6
3	☐	5.000	4.402	44498.75	0.0293	P	3.0
4	☐	10.000	8.944	88493.59	0.0595	P	5.3
5	☐	100.000	96.388	884036.78	0.6405	P	2.4
6	☐	200.000	201.876	1819263.04	1.3414	A	1.2
7	☐	1.000					

y = 0.0066 * x + 4.1790E-005
R = 0.9998
DL = 0.003734
BEC = 0.006289

Weight: <None>
Min Conc: <None>

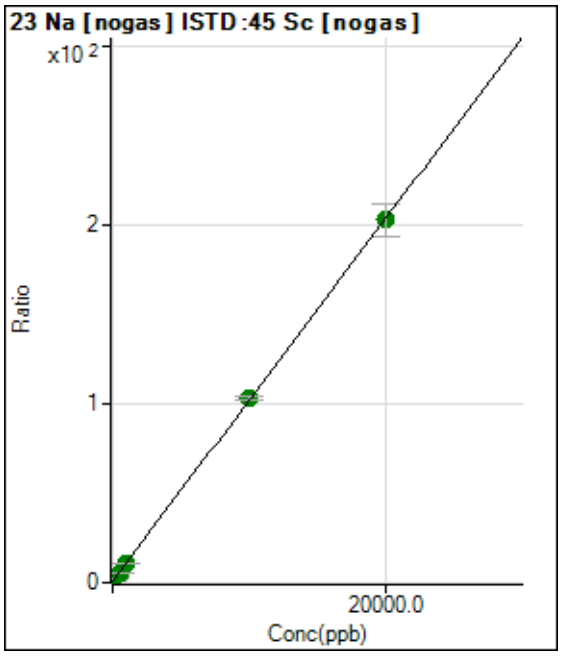
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	241143.34	0.1588	P	3.4
2	☐	10.000	4.860	279328.93	0.1788	P	4.7
3	☐	25.000	17.161	348305.14	0.2294	P	4.9
4	☐	50.000	40.801	486032.86	0.3266	P	4.8
5	☐	500.000	494.603	3027811.42	2.1927	A	2.5
6	☐	1000.000	1003.406	5810884.29	4.2849	A	1.8
7	☐	5.000					

y = 0.0041 * x + 0.1588
R = 1.0000
DL = 3.882
BEC = 38.62

Weight: <None>
Min Conc: <None>

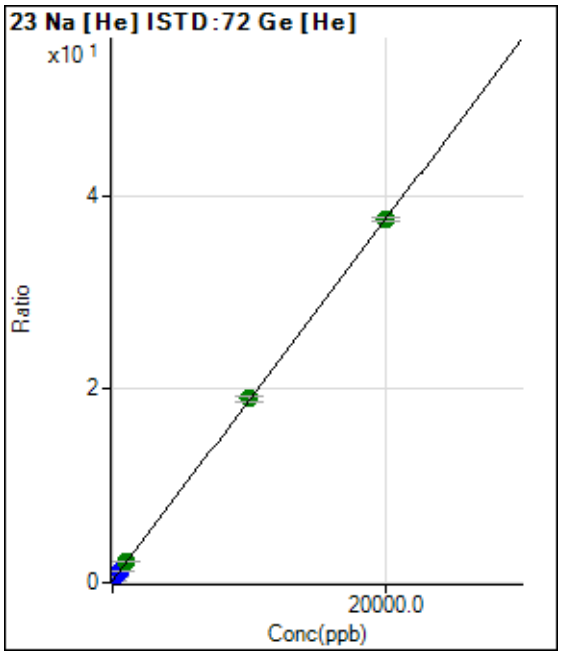


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2300484.10	0.7608	A	4.1
2	☐	200.000	190.946	8263508.52	2.6964	A	6.3
3	☐	500.000	492.553	17379292.58	5.7537	A	0.8
4	☐	1000.000	996.341	32128119.47	10.8604	A	2.2
5	☐	10000.00	10122.641	305780056.8	103.370	A	1.6
6	☐	20000.00	19939.139	594584796.6	202.876	A	9.0
7	☐	100.000					

y = 0.0101 * x + 0.7608
R = 1.0000
DL = 9.201
BEC = 75.06

Weight: <None>
Min Conc: <None>

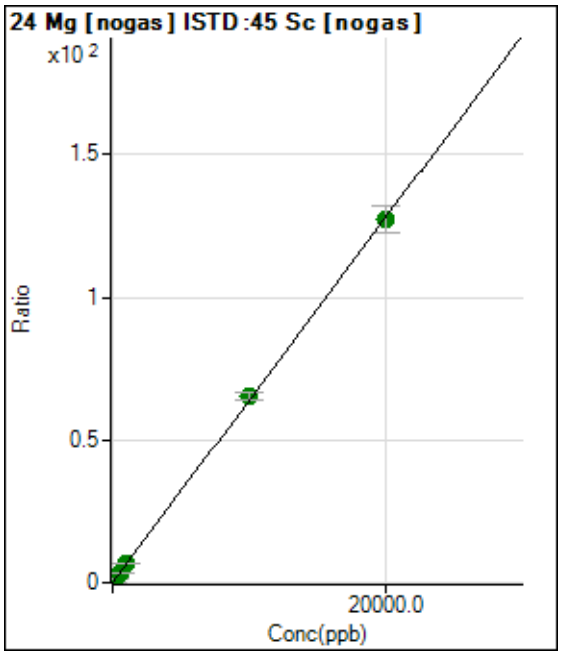
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	194057.75	0.1958	P	2.6
2	☐	200.000	204.461	563650.40	0.5778	P	2.9
3	☐	500.000	506.426	1132789.07	1.1420	P	2.7
4	☐	1000.000	1020.411	2074794.92	2.1024	A	1.0
5	☐	10000.00	10062.067	18558342.22	18.9961	A	2.6
6	☐	20000.00	19967.741	36694860.29	37.5041	A	0.9
7	☐	100.000					

y = 0.0019 * x + 0.1958
R = 1.0000
DL = 8.15
BEC = 104.8

Weight: <None>
Min Conc: <None>

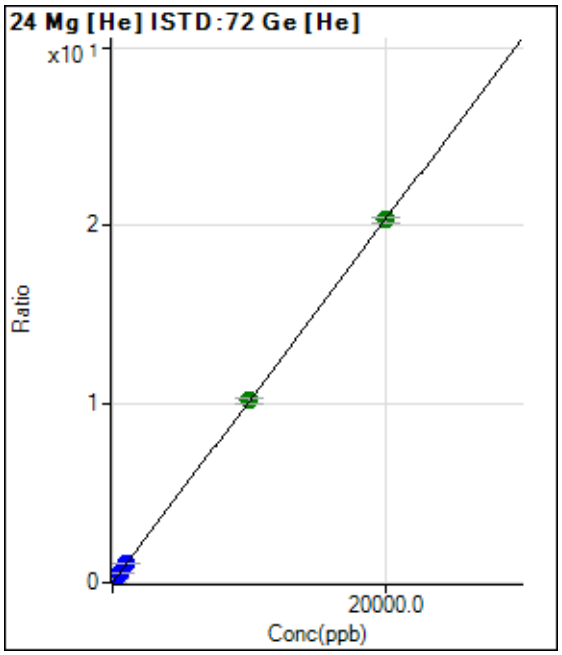


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	79246.50	0.0262	P	10.5
2	☐	200.000	200.264	4004865.72	1.3060	A	4.7
3	☐	500.000	519.613	10107611.42	3.3468	A	2.4
4	☐	1000.000	1047.451	19881441.07	6.7200	A	2.0
5	☐	10000.00	10223.375	193200954.3	65.3594	A	3.9
6	☐	20000.00	19885.447	372815891.6	127.105	A	7.4
7	☐	100.000					

y = 0.0064 * x + 0.0262
R = 0.9999
DL = 1.29
BEC = 4.099

Weight: <None>
Min Conc: <None>

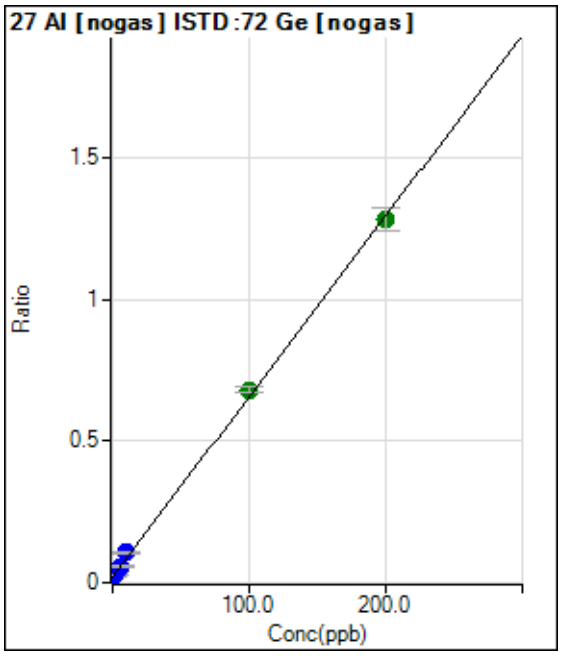
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4323.89	0.0044	P	3.4
2	☐	200.000	208.996	211664.50	0.2170	P	2.5
3	☐	500.000	525.764	534862.20	0.5393	P	2.9
4	☐	1000.000	1016.495	1024696.99	1.0385	P	0.9
5	☐	10000.00	10025.245	9968020.68	10.2039	A	3.5
6	☐	20000.00	19985.819	19899972.62	20.3376	A	1.3
7	☐	100.000					

y = 0.0010 * x + 0.0044
R = 1.0000
DL = 0.4405
BEC = 4.286

Weight: <None>
Min Conc: <None>

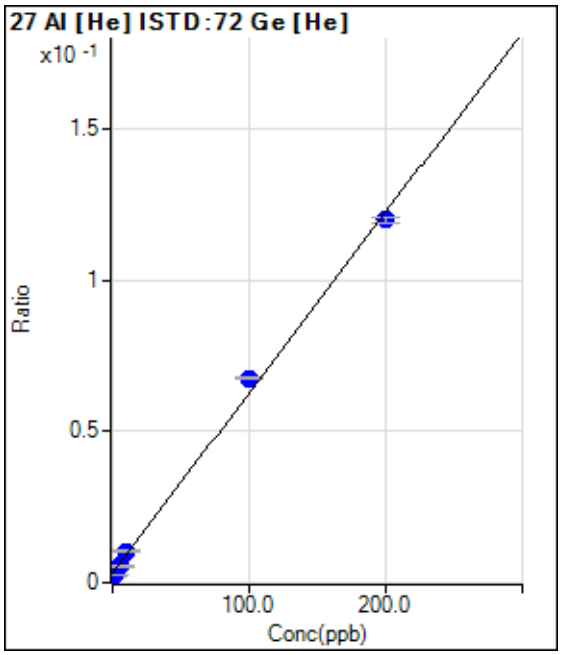


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	79992.72	0.0198	P	4.9
2	☐	2.000	1.297	115609.37	0.0281	P	2.5
3	☐	5.000	5.885	230014.00	0.0573	P	2.9
4	☐	10.000	13.553	431227.94	0.1062	P	2.7
5	☐	100.000	103.871	2740958.92	0.6815	A	3.3
6	☐	200.000	197.872	4989631.91	1.2804	A	6.4
7	☐	1.000					

y = 0.0064 * x + 0.0198
R = 0.9996
DL = 0.4563
BEC = 3.11

Weight: <None>
Min Conc: <None>

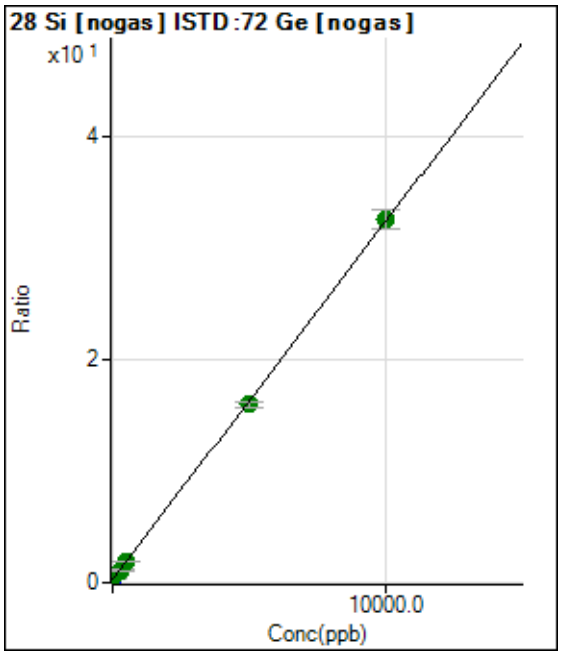
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.962	2016.81	0.0020	P	9.5
2	☐	2.000	-0.760	2686.90	0.0028	P	4.6
3	☐	5.000	3.807	5434.19	0.0055	P	4.5
4	☐	10.000	11.994	10222.88	0.0104	P	4.5
5	☐	100.000	107.926	66065.34	0.0676	P	0.7
6	☐	200.000	195.995	117559.05	0.1202	P	1.5
7	☐	1.000					

y = 5.9670E-004 * x + 0.0032
R = 0.9986
DL = 0.9698
BEC = 5.377

Weight: <None>
Min Conc: <None>

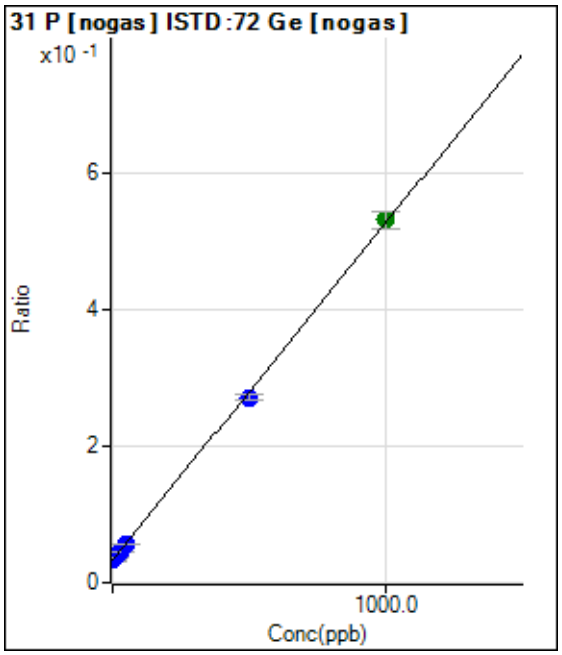


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1087616.60	0.2693	P	3.1
2	☐	100.000	108.680	2543270.43	0.6175	A	2.3
3	☐	250.000	263.569	4471047.02	1.1138	A	1.1
4	☐	500.000	496.509	7555663.22	1.8602	A	1.0
5	☐	5000.000	4896.588	64186900.71	15.9588	A	2.8
6	☐	10000.00	10051.455	126575664.7	32.4758	A	5.4
7	☐	5.000					

y = 0.0032 * x + 0.2693
R = 0.9999
DL = 7.838
BEC = 84.04

Weight: <None>
Min Conc: <None>

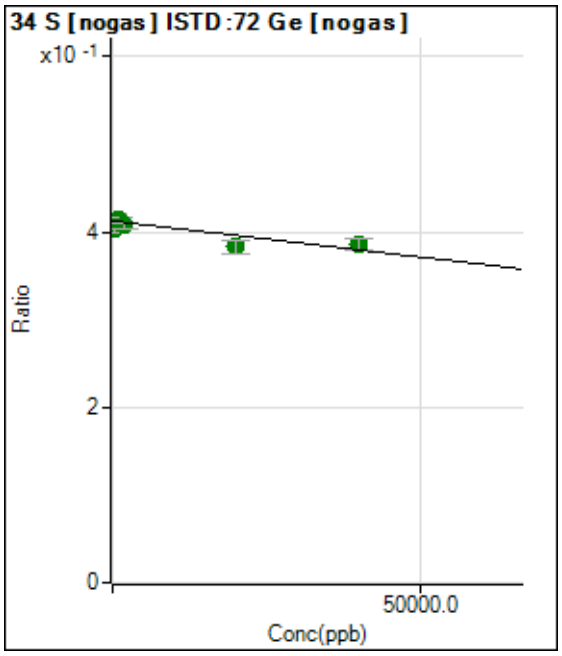
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133047.14	0.0330	P	5.3
2	☐	10.000	6.937	149781.48	0.0364	P	2.0
3	☐	25.000	25.732	183187.49	0.0456	P	0.5
4	☐	50.000	47.591	229082.13	0.0564	P	1.3
5	☐	500.000	481.367	1086548.50	0.2702	P	3.1
6	☐	1000.000	1009.449	2067778.09	0.5304	A	4.5
7	☐	5.000					

y = 4.9281E-004 * x + 0.0330
R = 0.9998
DL = 10.63
BEC = 66.87

Weight: <None>
Min Conc: <None>

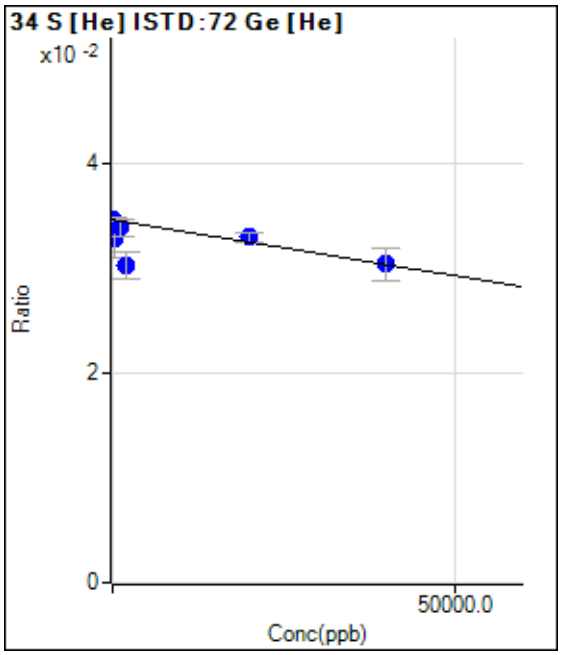


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1666128.49	0.4126	A	3.8
2	☐	400.000	10094.462	1664668.20	0.4042	A	2.2
3	☐	1000.000	-1374.641	1660553.81	0.4137	A	1.7
4	☐	2000.000	6488.513	1653918.98	0.4072	A	1.7
5	☐	20000.00	35748.686	1540447.98	0.3831	A	4.3
6	☐	40000.00	31863.653	1506521.26	0.3863	A	3.2
7	☐	100.000					

y = -8.2393E-007 * x + 0.4126
R = -0.8590
DL = -5.775E+04
BEC = -5.007E+05

Weight: <None>
Min Conc: <None>

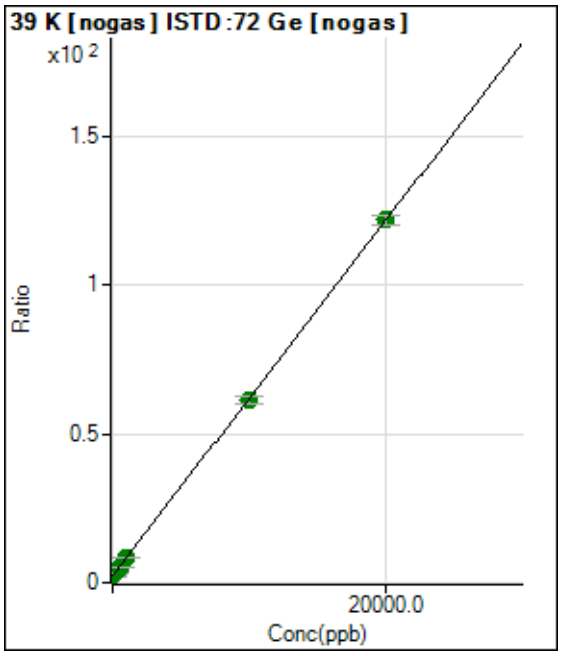
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34237.67	0.0345	P	1.8
2	☐	400.000	17325.905	31865.68	0.0327	P	10.8
3	☐	1000.000	7160.606	33501.57	0.0338	P	4.4
4	☐	2000.000	40747.281	29829.64	0.0302	P	8.6
5	☐	20000.00	15641.000	32132.71	0.0329	P	3.1
6	☐	40000.00	39918.862	29662.38	0.0303	P	9.9
7	☐	100.000					

y = -1.0604E-007 * x + 0.0345
R = -0.5296
DL = -1.751E+04
BEC = -3.257E+05

Weight: <None>
Min Conc: <None>

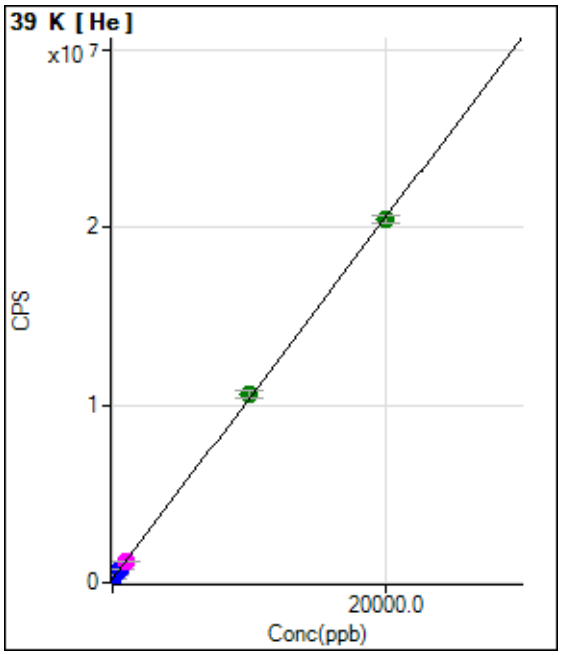


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9211936.40	2.2806	A	3.0
2	☐	200.000	189.027	14033169.06	3.4079	A	2.8
3	☐	500.000	512.162	21417268.71	5.3350	A	1.1
4	☐	1000.000	992.419	33299740.33	8.1992	A	2.6
5	☐	10000.00	9905.810	246646230.5	61.3571	A	5.0
6	☐	20000.00	20047.280	475180560.6	121.838	A	2.9
7	☐	100.000					

y = 0.0060 * x + 2.2806
R = 1.0000
DL = 34.1
BEC = 382.4

Weight: <None>
Min Conc: <None>

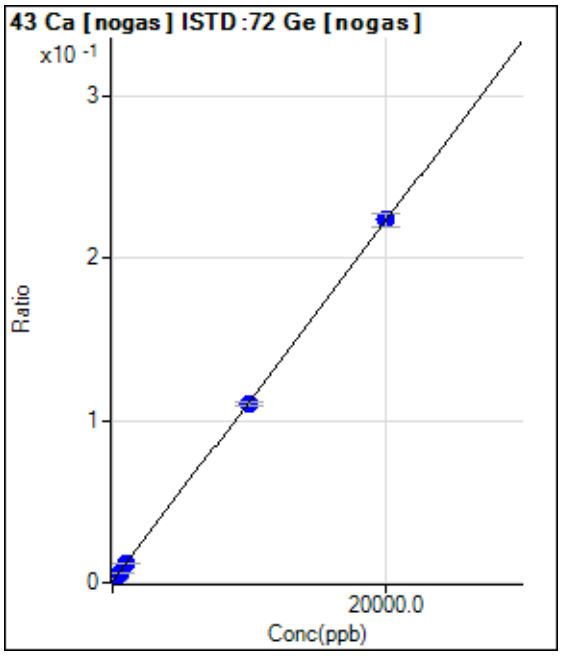
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	219063.28		P	0.6
2	☐	200.000	196.603	419053.85		P	0.5
3	☐	500.000	513.418	741328.69		P	0.4
4	☐	1000.000	995.283	1231496.07		M	1.0
5	☐	10000.00	10232.571	10627955.88		A	3.9
6	☐	20000.00	19883.649	20445335.95		A	2.1
7	☐	100.000					

y = 1017.2314 * x + 219063.2767
R = 0.9999
DL = 3.652
BEC = 215.4

Weight: <None>
Min Conc: <None>

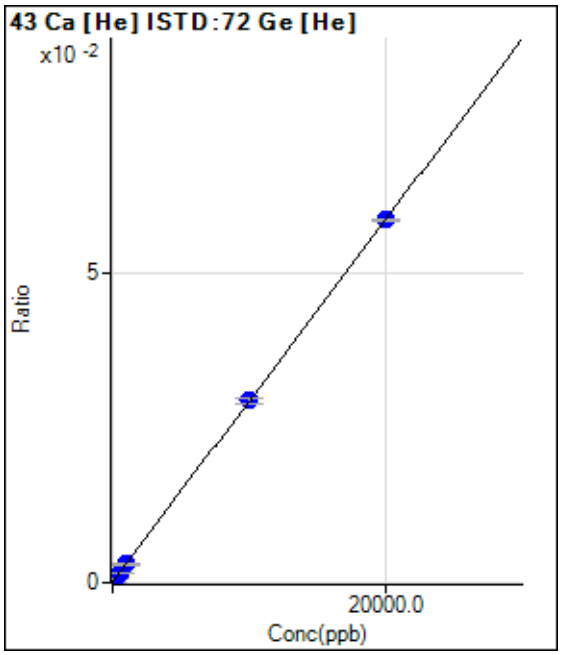


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2790.26	0.0007	P	2.1
2	☐	200.000	180.348	11096.82	0.0027	P	2.0
3	☐	500.000	495.092	24856.87	0.0062	P	1.4
4	☐	1000.000	979.987	47039.44	0.0116	P	1.5
5	☐	10000.00	9837.282	442477.88	0.1100	P	2.5
6	☐	20000.00	20082.679	872862.44	0.2239	P	3.7
7	☐	100.000					

y = 1.1113E-005 * x + 6.9046E-004
R = 1.0000
DL = 3.961
BEC = 62.13

Weight: <None>
Min Conc: <None>

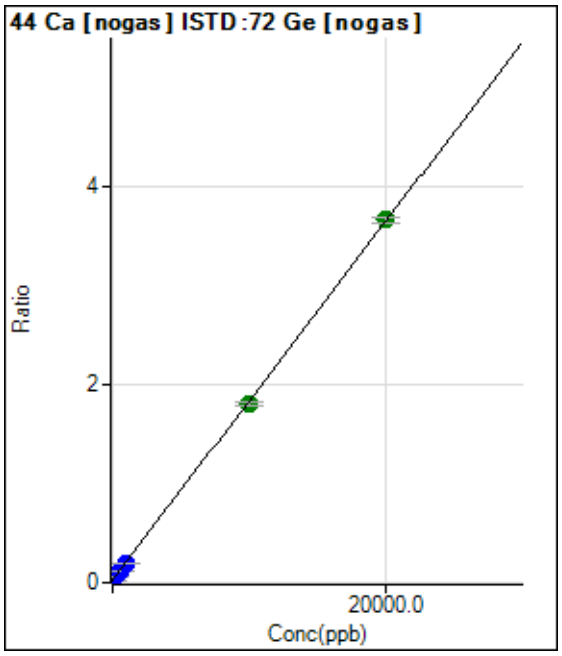
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0001	P	8.1
2	☐	200.000	211.685	696.69	0.0007	P	10.3
3	☐	500.000	491.381	1520.09	0.0015	P	9.8
4	☐	1000.000	982.840	2923.62	0.0030	P	3.3
5	☐	10000.00	10003.889	28602.18	0.0293	P	2.8
6	☐	20000.00	19999.012	57161.04	0.0584	P	0.7
7	☐	100.000					

y = 2.9164E-006 * x + 9.7629E-005
R = 1.0000
DL = 8.166
BEC = 33.48

Weight: <None>
Min Conc: <None>

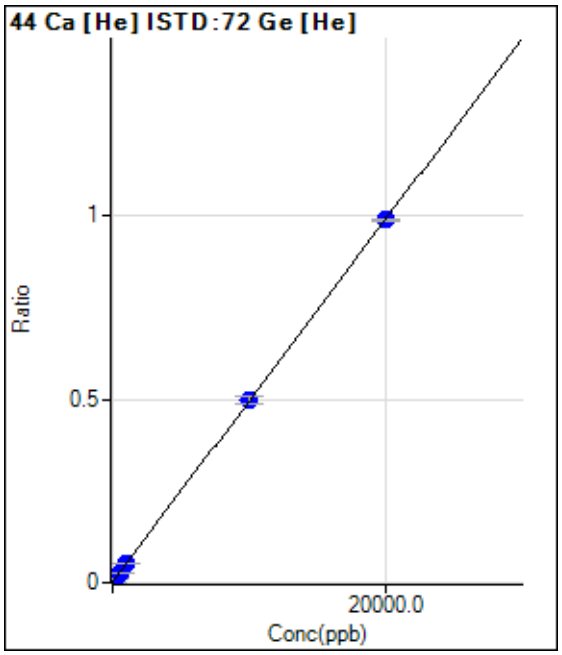


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	112545.72	0.0279	P	5.1
2	☐	200.000	177.174	246806.64	0.0599	P	1.1
3	☐	500.000	489.592	467404.76	0.1164	P	0.8
4	☐	1000.000	958.593	817547.10	0.2013	P	1.4
5	☐	10000.00	9802.041	7245596.35	1.8010	A	2.0
6	☐	20000.00	20101.538	14295208.95	3.6640	A	1.4
7	☐	100.000					

y = 1.8089E-004 * x + 0.0279
R = 0.9999
DL = 23.52
BEC = 154.1

Weight: <None>
Min Conc: <None>

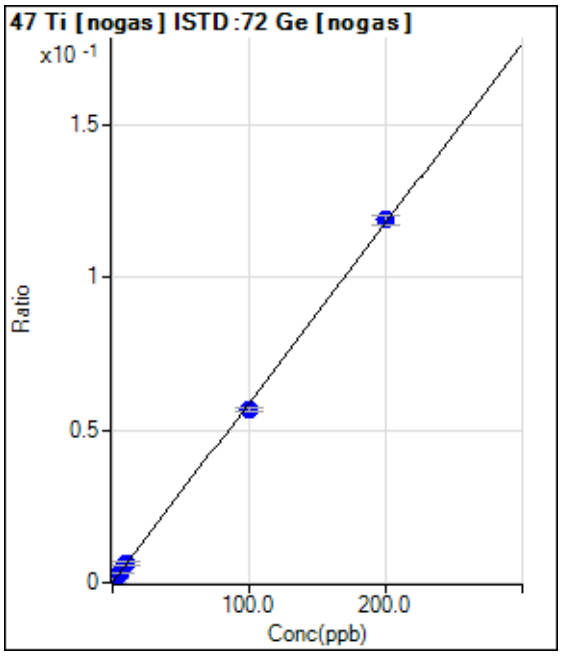
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1870.12	0.0019	P	13.0
2	☐	200.000	194.311	11203.51	0.0115	P	6.0
3	☐	500.000	519.873	27353.72	0.0276	P	3.7
4	☐	1000.000	1004.783	50859.45	0.0515	P	1.3
5	☐	10000.00	10032.920	486277.86	0.4978	P	4.1
6	☐	20000.00	19982.861	968173.40	0.9895	P	0.7
7	☐	100.000					

y = 4.9424E-005 * x + 0.0019
R = 1.0000
DL = 14.9
BEC = 38.18

Weight: <None>
Min Conc: <None>

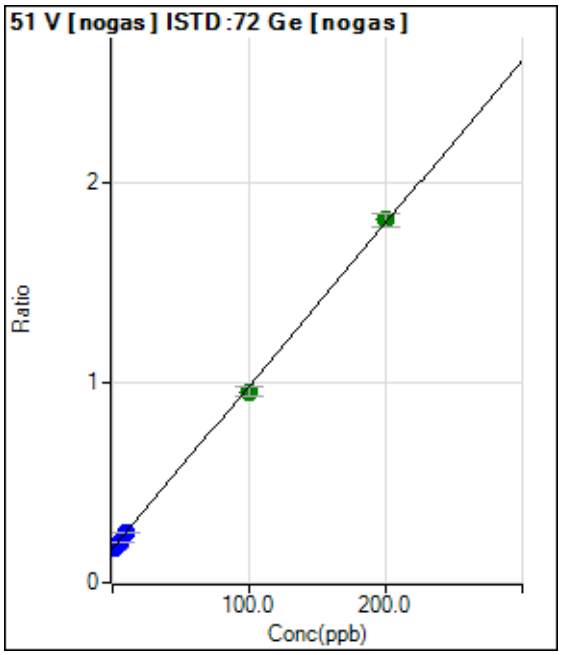


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	346.68	0.0001	P	24.4
2	☐	2.000	1.847	4837.37	0.0012	P	2.0
3	☐	5.000	5.220	12687.83	0.0032	P	2.8
4	☐	10.000	10.535	25565.09	0.0063	P	12.8
5	☐	100.000	96.243	228305.48	0.0568	P	3.2
6	☐	200.000	201.848	464022.60	0.1190	P	2.4
7	☐	1.000					

y = 5.8897E-004 * x + 8.6068E-005
R = 0.9997
DL = 0.107
BEC = 0.1461

Weight: <None>
Min Conc: <None>

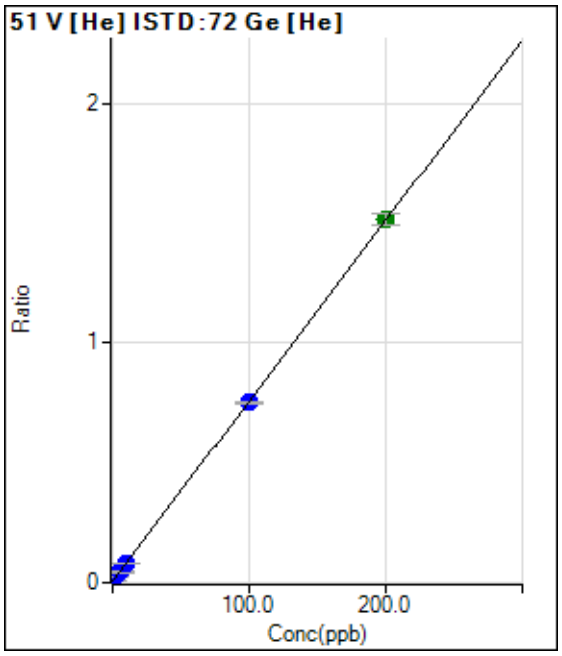
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	686217.90	0.1699	P	3.4
2	☐	2.000	0.542	717852.51	0.1743	P	1.3
3	☐	5.000	3.543	797641.11	0.1987	P	1.4
4	☐	10.000	9.508	1003762.10	0.2471	P	0.6
5	☐	100.000	96.292	3828235.89	0.9522	A	4.7
6	☐	200.000	201.929	7058810.05	1.8103	A	3.7
7	☐	1.000					

y = 0.0081 * x + 0.1699
R = 0.9998
DL = 2.164
BEC = 20.91

Weight: <None>
Min Conc: <None>

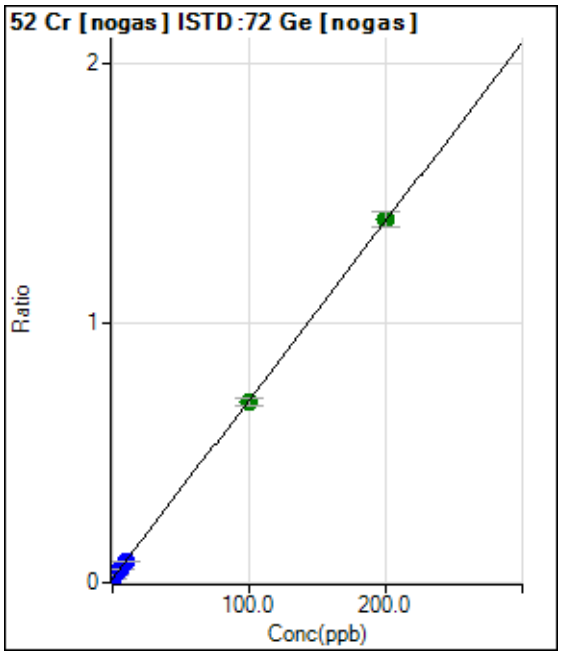


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.205	7512.86	0.0076	P	2.2
2	☐	2.000	2.125	21481.70	0.0220	P	3.1
3	☐	5.000	5.096	44012.36	0.0444	P	1.4
4	☐	10.000	9.951	79784.40	0.0809	P	2.5
5	☐	100.000	99.250	735267.41	0.7525	P	1.2
6	☐	200.000	200.374	1480618.33	1.5130	A	3.2
7	☐	1.000					

y = 0.0075 * x + 0.0060
R = 1.0000
DL = 0.06617
BEC = 0.8033

Weight: <None>
Min Conc: <None>

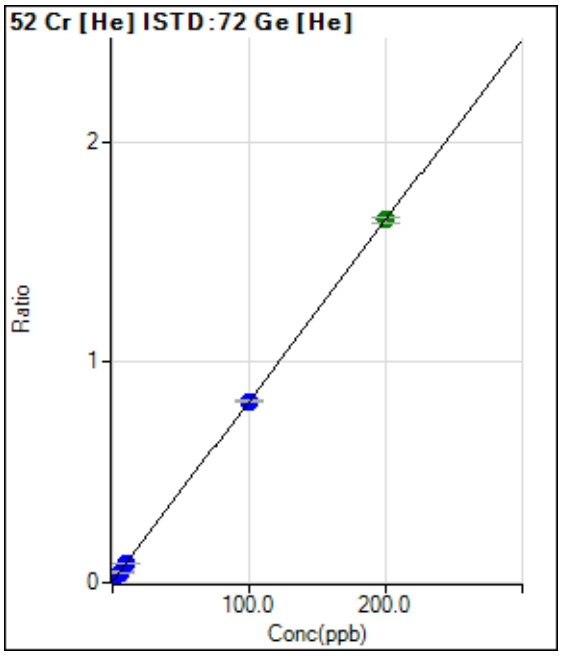
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	59672.45	0.0148	P	3.0
2	☐	2.000	1.895	114498.82	0.0278	P	2.7
3	☐	5.000	5.014	197730.51	0.0493	P	0.7
4	☐	10.000	9.556	326884.33	0.0805	P	2.5
5	☐	100.000	98.650	2787152.46	0.6932	A	4.0
6	☐	200.000	200.698	5438489.71	1.3950	A	4.2
7	☐	1.000					

y = 0.0069 * x + 0.0148
R = 1.0000
DL = 0.1924
BEC = 2.148

Weight: <None>
Min Conc: <None>

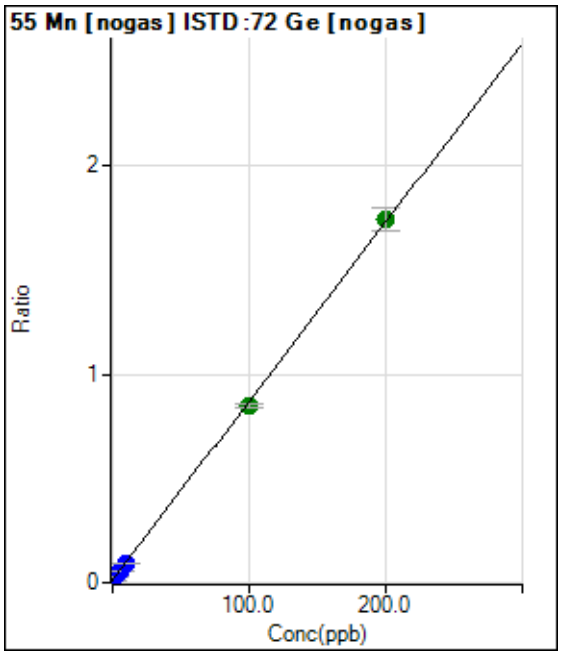


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5684.30	0.0057	P	1.3
2	☐	2.000	2.029	21829.90	0.0224	P	1.9
3	☐	5.000	5.105	47213.87	0.0476	P	4.1
4	☐	10.000	9.674	83936.40	0.0851	P	2.1
5	☐	100.000	99.695	804715.17	0.8235	P	1.5
6	☐	200.000	200.166	1612078.78	1.6476	A	1.6
7	☐	1.000					

y = 0.0082 * x + 0.0057
R = 1.0000
DL = 0.02751
BEC = 0.6989

Weight: <None>
Min Conc: <None>

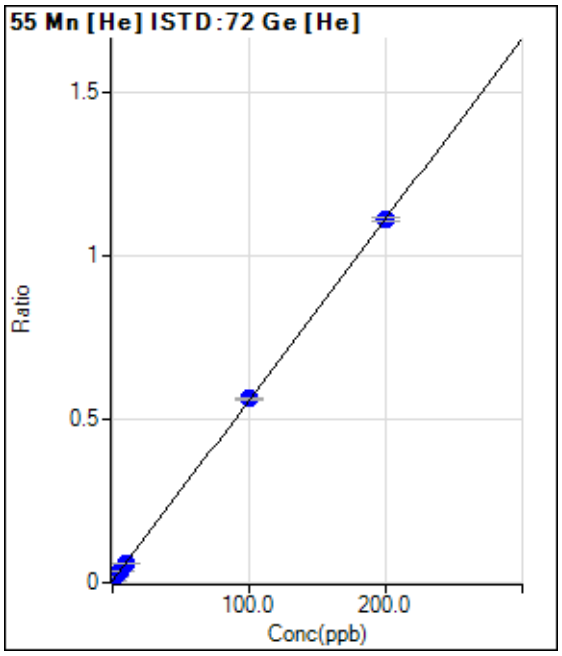
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49810.39	0.0123	P	2.9
2	☐	2.000	1.637	108651.54	0.0264	P	2.1
3	☐	5.000	5.094	225038.73	0.0561	P	0.6
4	☐	10.000	9.390	377404.40	0.0929	P	0.9
5	☐	100.000	97.314	3409413.28	0.8476	A	2.6
6	☐	200.000	201.375	6782927.61	1.7408	A	6.4
7	☐	1.000					

y = 0.0086 * x + 0.0123
R = 0.9999
DL = 0.123
BEC = 1.437

Weight: <None>
Min Conc: <None>

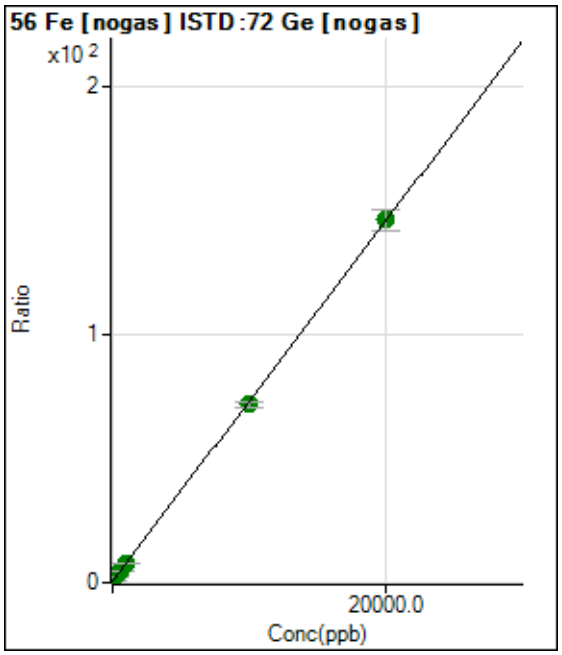


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5164.13	0.0052	P	3.9
2	☐	2.000	1.770	14639.39	0.0150	P	3.9
3	☐	5.000	4.996	32605.72	0.0329	P	2.5
4	☐	10.000	9.599	57566.40	0.0584	P	3.3
5	☐	100.000	100.851	550723.66	0.5636	P	1.2
6	☐	200.000	199.597	1086342.22	1.1103	P	1.2
7	☐	1.000					

y = 0.0055 * x + 0.0052
R = 1.0000
DL = 0.1111
BEC = 0.9413

Weight: <None>
Min Conc: <None>

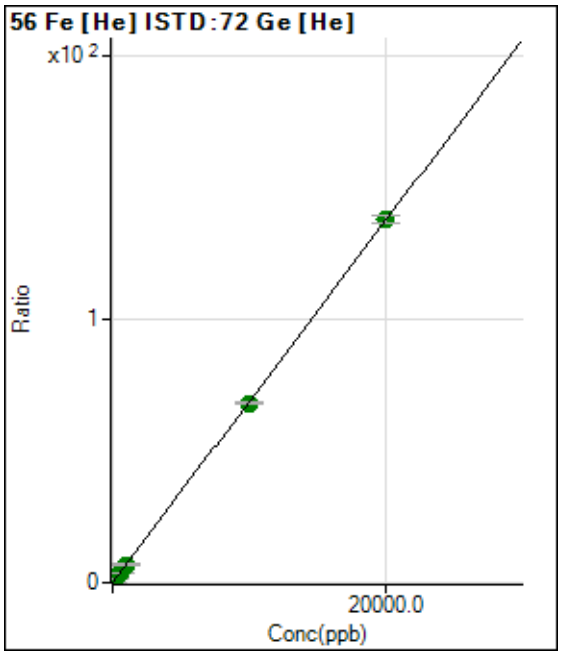
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2482007.09	0.6143	A	1.8
2	☐	200.000	198.366	8447570.24	2.0514	A	2.6
3	☐	500.000	508.205	17246172.78	4.2961	A	0.5
4	☐	1000.000	972.128	31101311.11	7.6571	A	0.5
5	☐	10000.00	9851.061	289482039.8	71.9831	A	3.2
6	☐	20000.00	20075.674	569149146.0	146.058	A	6.1
7	☐	100.000					

y = 0.0072 * x + 0.6143
R = 1.0000
DL = 4.496
BEC = 84.79

Weight: <None>
Min Conc: <None>

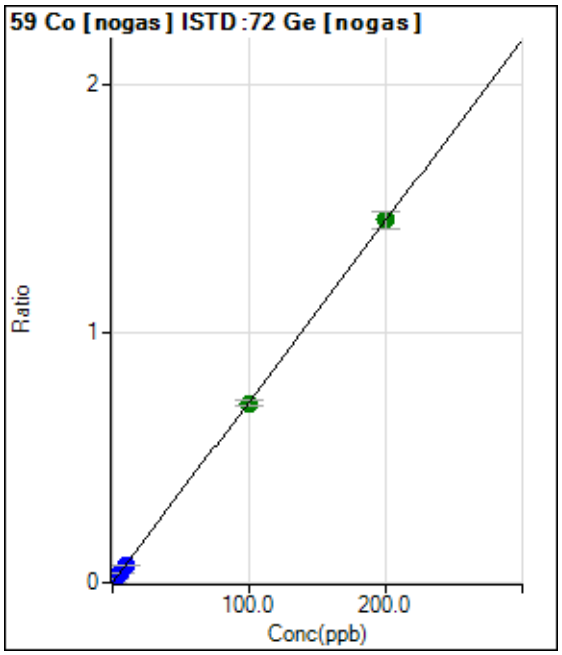


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20067.70	0.0202	P	1.7
2	☐	200.000	217.744	1479457.53	1.5168	A	2.9
3	☐	500.000	513.247	3518815.68	3.5477	A	3.2
4	☐	1000.000	1002.179	6814597.81	6.9081	A	3.6
5	☐	10000.00	9894.809	66470789.01	68.0257	A	1.1
6	☐	20000.00	20051.978	134849491.3	137.834	A	2.0
7	☐	100.000					

y = 0.0069 * x + 0.0202
R = 1.0000
DL = 0.1534
BEC = 2.946

Weight: <None>
Min Conc: <None>

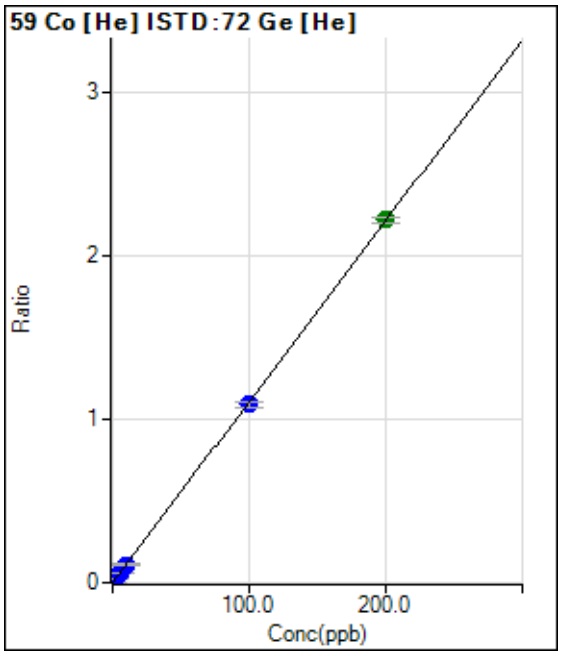
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	996.71	0.0002	P	10.3
2	☐	2.000	1.968	59921.21	0.0145	P	1.7
3	☐	5.000	5.128	150556.07	0.0375	P	2.5
4	☐	10.000	9.770	289370.50	0.0712	P	2.6
5	☐	100.000	99.198	2899748.60	0.7211	A	3.2
6	☐	200.000	200.410	5677775.96	1.4565	A	4.9
7	☐	1.000					

y = 0.0073 * x + 2.4711E-004
R = 1.0000
DL = 0.01054
BEC = 0.03401

Weight: <None>
Min Conc: <None>

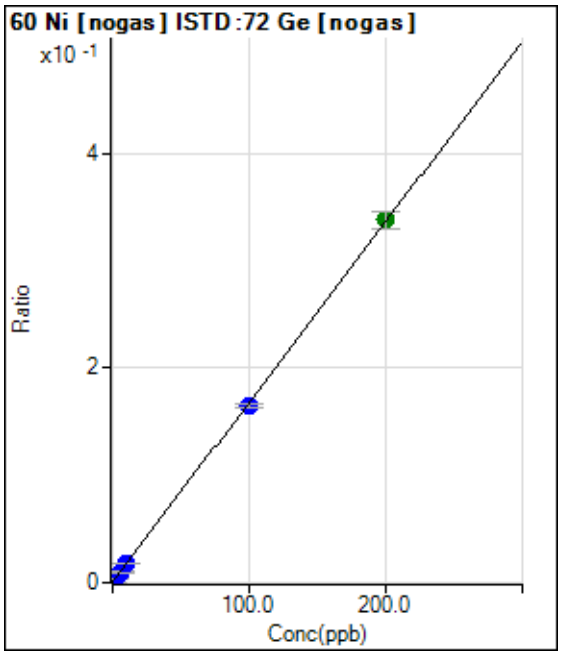


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0003	P	40.9
2	☐	2.000	2.103	22944.57	0.0235	P	5.0
3	☐	5.000	5.211	57366.56	0.0579	P	4.5
4	☐	10.000	9.984	109082.13	0.1106	P	3.1
5	☐	100.000	98.686	1064887.95	1.0900	P	2.8
6	☐	200.000	200.651	2168117.26	2.2160	A	1.9
7	☐	1.000					

y = 0.0110 * x + 3.0580E-004
R = 1.0000
DL = 0.03397
BEC = 0.02769

Weight: <None>
Min Conc: <None>

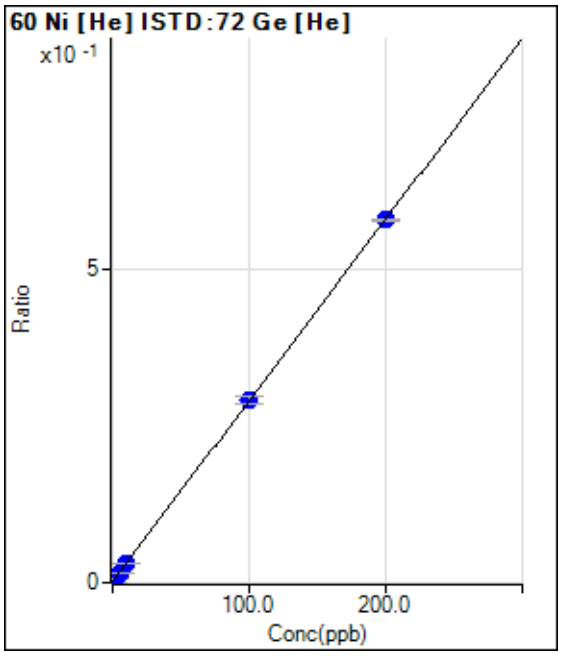
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.122	2440.20	0.0006	P	3.9
2	☐	2.000	2.195	16824.61	0.0041	P	3.4
3	☐	5.000	5.623	39526.22	0.0098	P	1.6
4	☐	10.000	10.226	71389.06	0.0176	P	1.3
5	☐	100.000	97.726	661940.02	0.1646	P	2.4
6	☐	200.000	201.108	1318437.04	0.3382	A	4.4
7	☐	1.000					

y = 0.0017 * x + 3.9974E-004
R = 0.9999
DL = 0.04217
BEC = 0.238

Weight: <None>
Min Conc: <None>

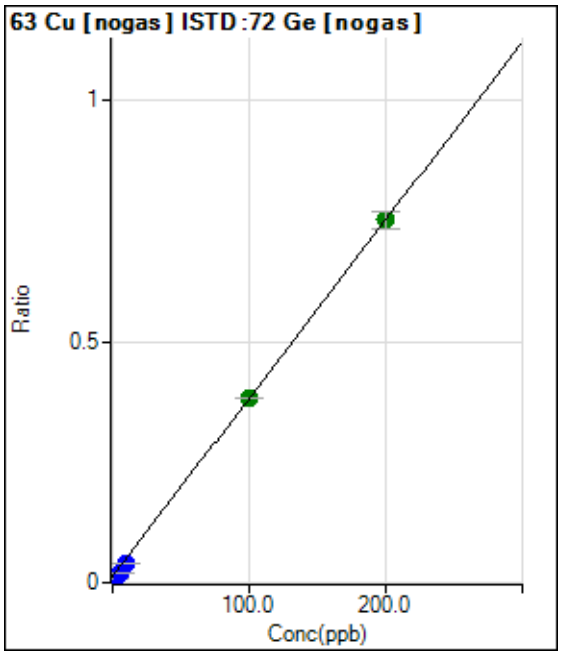


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.358	573.35	0.0006	P	14.0
2	☐	2.000	1.856	6798.01	0.0070	P	7.9
3	☐	5.000	5.131	16290.75	0.0164	P	3.5
4	☐	10.000	10.196	30635.73	0.0311	P	2.7
5	☐	100.000	100.373	284668.31	0.2914	P	3.4
6	☐	200.000	199.802	566048.70	0.5785	P	0.4
7	☐	1.000					

y = 0.0029 * x + 0.0016
R = 1.0000
DL = 0.08416
BEC = 0.5583

Weight: <None>
Min Conc: <None>

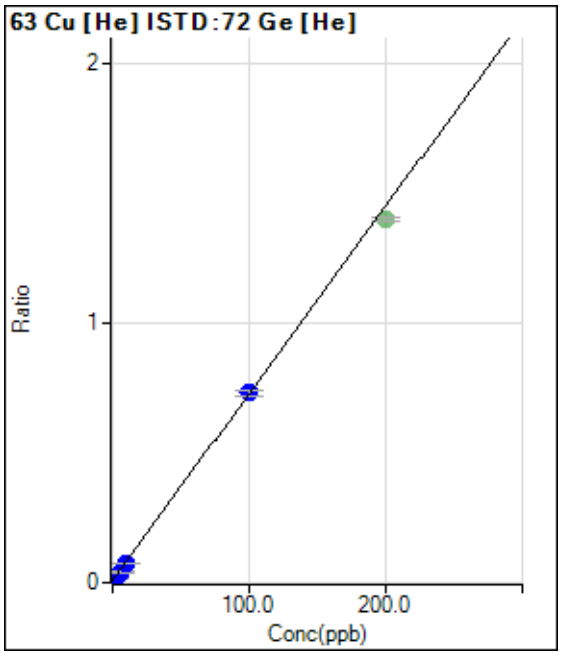
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	52455.15	0.0130	P	4.9
2	☐	2.000	-1.026	37889.33	0.0092	P	2.5
3	☐	5.000	2.350	87005.98	0.0217	P	0.4
4	☐	10.000	7.296	162272.43	0.0400	P	0.7
5	☐	100.000	100.232	1543110.34	0.3834	A	0.7
6	☐	200.000	200.116	2933028.29	0.7525	A	4.9
7	☐	1.000					

y = 0.0037 * x + 0.0130
R = 0.9999
DL = 0.5142
BEC = 3.516

Weight: <None>
Min Conc: <None>

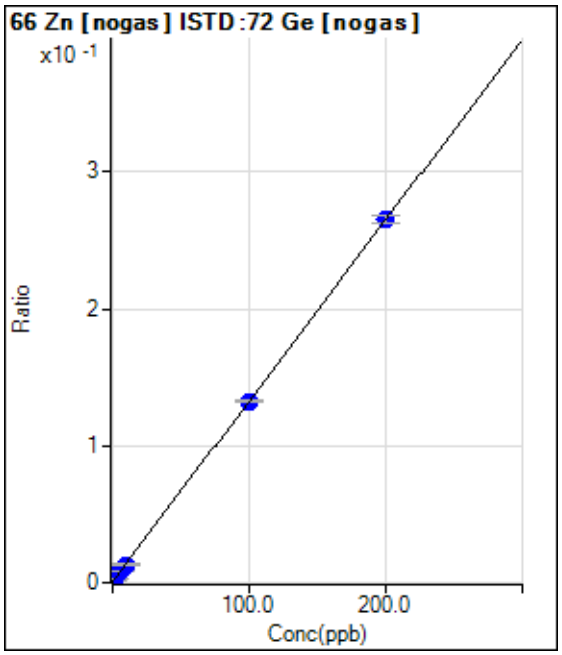


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	2.036	22941.27	0.0231	P	2.1
2	☐	2.000	1.174	16510.93	0.0169	P	0.9
3	☐	5.000	4.441	40147.60	0.0405	P	2.4
4	☐	10.000	9.227	73962.79	0.0750	P	2.1
5	☐	100.000	100.122	713313.14	0.7302	P	2.9
6	☑	200.000		1368316.96	1.3985	A	1.0
7	☐	1.000					

y = 0.0072 * x + 0.0085
R = 0.9996
DL = 0.2062
BEC = 1.174

Weight: <None>
Min Conc: <None>

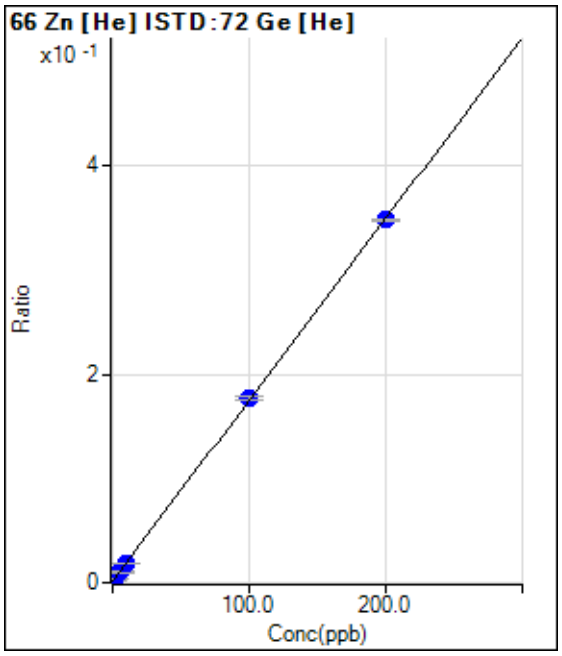
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.258	4073.85	0.0010	P	3.3
2	☐	2.000	1.977	13505.18	0.0033	P	3.5
3	☐	5.000	5.453	31584.16	0.0079	P	0.5
4	☐	10.000	9.505	53689.26	0.0132	P	3.7
5	☐	100.000	99.585	531713.78	0.1321	P	1.0
6	☐	200.000	200.221	1033735.42	0.2650	P	2.0
7	☐	1.000					

y = 0.0013 * x + 6.6809E-004
R = 1.0000
DL = 0.0762
BEC = 0.506

Weight: <None>
Min Conc: <None>

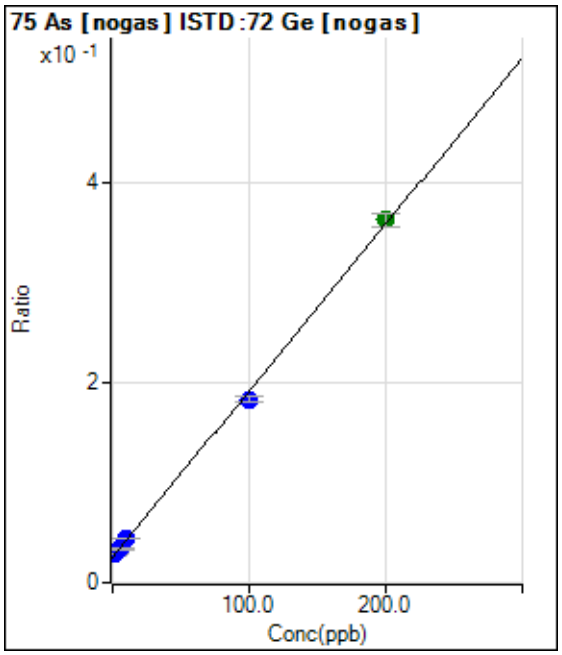


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.105	1210.06	0.0012	P	11.8
2	☐	2.000	1.699	4260.55	0.0044	P	7.6
3	☐	5.000	5.059	10126.27	0.0102	P	1.2
4	☐	10.000	9.821	18235.93	0.0185	P	5.9
5	☐	100.000	101.032	173118.41	0.1772	P	1.7
6	☐	200.000	199.494	340968.19	0.3485	P	0.7
7	☐	1.000					

y = 0.0017 * x + 0.0014
R = 1.0000
DL = 0.2481
BEC = 0.808

Weight: <None>
Min Conc: <None>

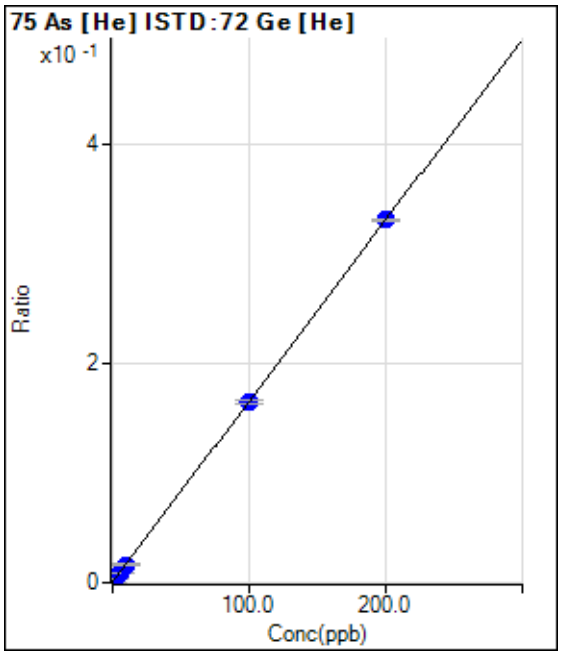
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	1.485	112777.38	0.0279	P	3.3
2	☐	2.000	2.421	121407.38	0.0295	P	1.4
3	☐	5.000	4.990	135515.53	0.0338	P	1.7
4	☐	10.000	10.881	176982.25	0.0436	P	0.9
5	☐	100.000	94.542	735811.00	0.1830	P	3.1
6	☐	200.000	202.681	1415860.19	0.3631	A	4.0
7	☐	1.000					

y = 0.0017 * x + 0.0254
R = 0.9994
DL = 1.664
BEC = 15.27

Weight: <None>
Min Conc: <None>

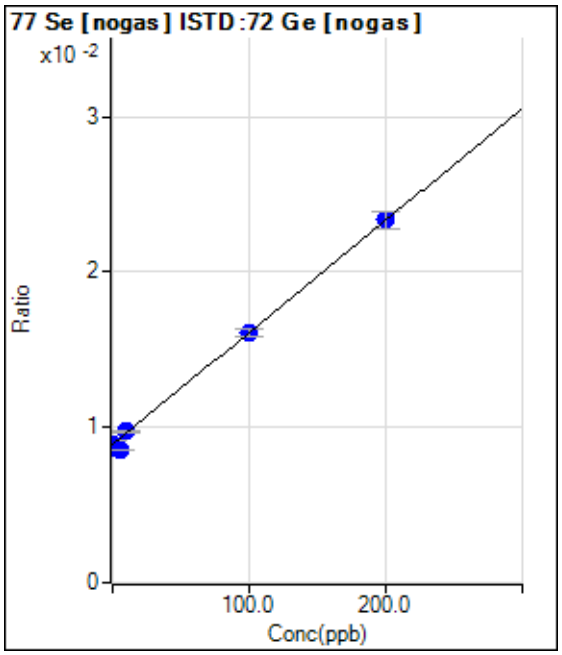


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.34	0.0005	P	13.5
2	☐	2.000	1.995	3701.50	0.0038	P	0.9
3	☐	5.000	4.979	8653.18	0.0087	P	1.4
4	☐	10.000	9.739	16358.48	0.0166	P	2.7
5	☐	100.000	99.496	161037.04	0.1648	P	2.2
6	☐	200.000	200.265	324099.78	0.3312	P	0.2
7	☐	1.000					

y = 0.0017 * x + 4.9859E-004
R = 1.0000
DL = 0.1222
BEC = 0.3019

Weight: <None>
Min Conc: <None>

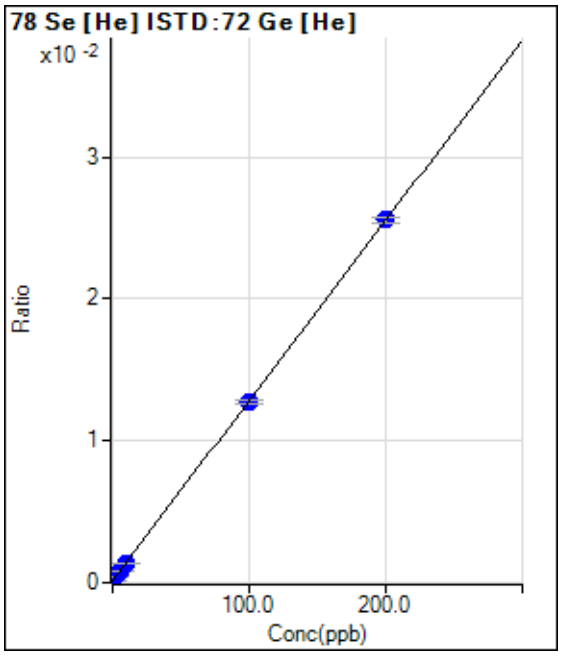
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35969.14	0.0089	P	5.0
2	☐	2.000	-2.819	35848.89	0.0087	P	2.6
3	☐	5.000	-5.296	34229.10	0.0085	P	1.0
4	☐	10.000	11.371	39513.08	0.0097	P	1.6
5	☐	100.000	99.761	64731.35	0.0161	P	3.6
6	☐	200.000	200.356	91006.26	0.0233	P	4.7
7	☐	1.000					

y = 7.2064E-005 * x + 0.0089
R = 0.9988
DL = 18.68
BEC = 123.6

Weight: <None>
Min Conc: <None>

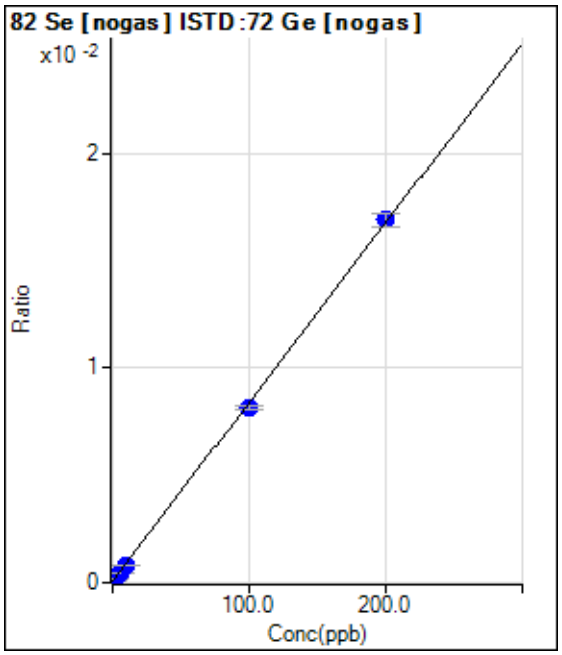


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.106	136.67	0.0001	P	5.1
2	☐	2.000	2.131	386.01	0.0004	P	15.1
3	☐	5.000	5.395	802.69	0.0008	P	7.6
4	☐	10.000	9.700	1336.72	0.0014	P	7.6
5	☐	100.000	99.329	12440.93	0.0127	P	2.8
6	☐	200.000	200.340	25005.76	0.0256	P	1.5
7	☐	1.000					

y = 1.2696E-004 * x + 1.2432E-004
R = 1.0000
DL = 0.1647
BEC = 0.9792

Weight: <None>
Min Conc: <None>

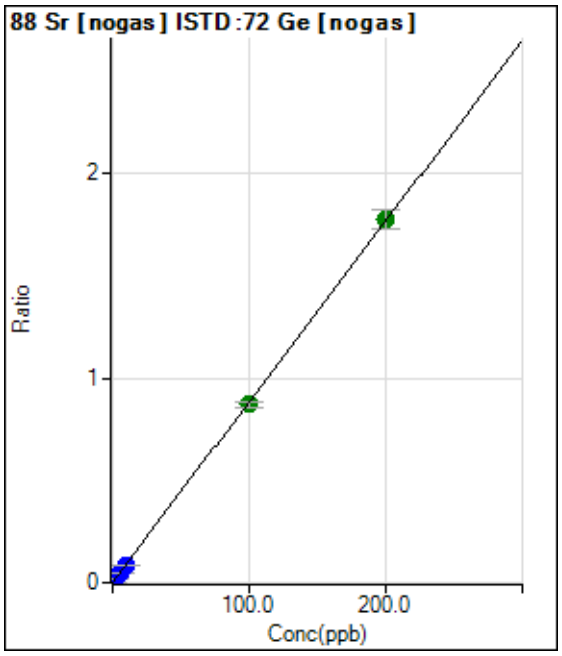
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243.34	0.0001	P	14.0
2	☐	2.000	1.667	820.03	0.0002	P	10.8
3	☐	5.000	4.581	1776.79	0.0004	P	11.6
4	☐	10.000	9.071	3317.02	0.0008	P	6.3
5	☐	100.000	96.561	32676.54	0.0081	P	2.4
6	☐	200.000	201.780	65879.80	0.0169	P	3.9
7	☐	1.000					

y = 8.3438E-005 * x + 6.0053E-005
R = 0.9998
DL = 0.3022
BEC = 0.7197

Weight: <None>
Min Conc: <None>

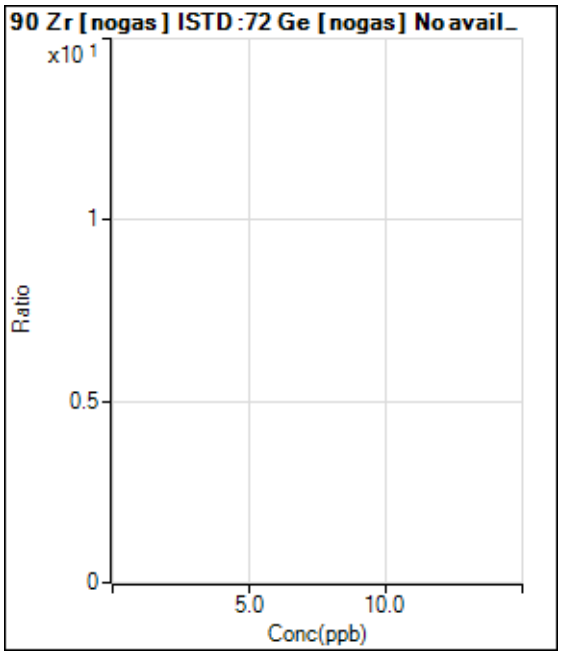


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4927.41	0.0012	P	5.1
2	☐	2.000	1.950	75966.95	0.0184	P	3.3
3	☐	5.000	5.040	183693.88	0.0458	P	2.0
4	☐	10.000	9.722	353930.73	0.0871	P	1.2
5	☐	100.000	98.537	3508815.88	0.8721	A	3.1
6	☐	200.000	200.745	6919750.31	1.7754	A	5.3
7	☐	1.000					

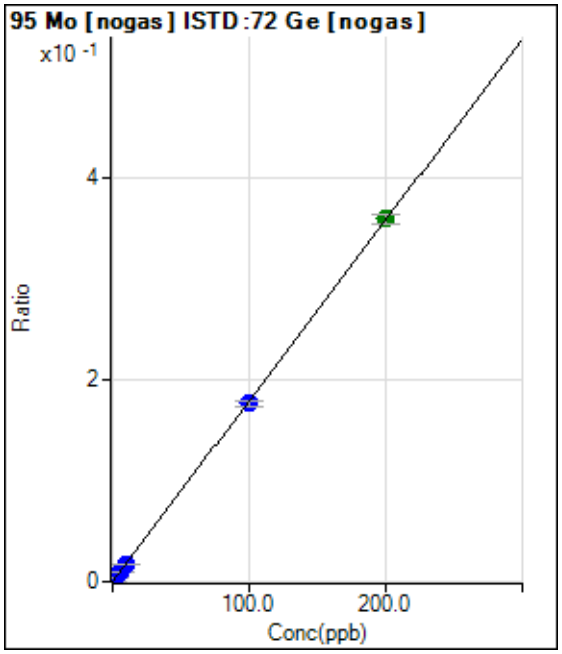
y = 0.0088 * x + 0.0012
R = 1.0000
DL = 0.02127
BEC = 0.138

Weight: <None>
Min Conc: <None>

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

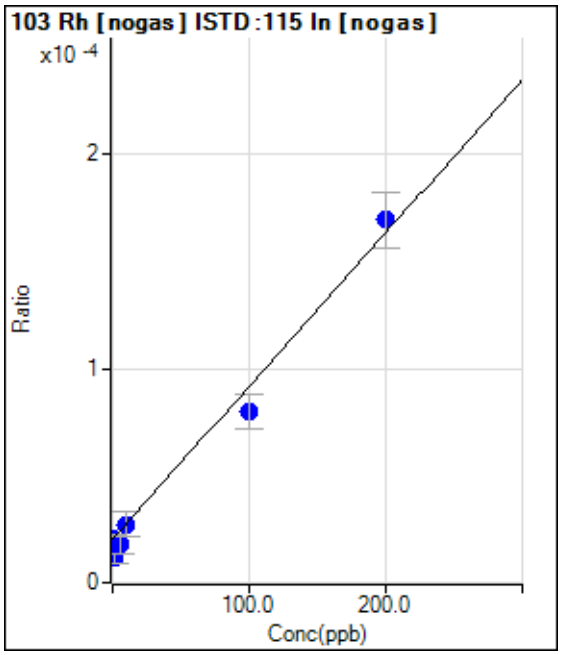


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	256.67	0.0001	P	10.3
2	☐	2.000	1.870	14042.45	0.0034	P	5.7
3	☐	5.000	4.931	35662.78	0.0089	P	0.5
4	☐	10.000	9.358	68247.56	0.0168	P	2.0
5	☐	100.000	98.595	709442.31	0.1764	P	3.2
6	☐	200.000	200.737	1401303.00	0.3591	A	2.7
7	☐	1.000					

y = 0.0018 * x + 6.3487E-005
R = 1.0000
DL = 0.01094
BEC = 0.0355

Weight: <None>
Min Conc: <None>

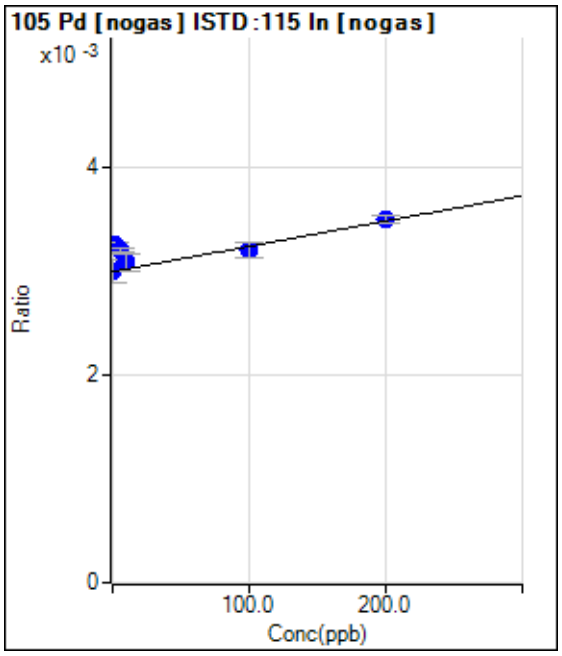
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	20.3
2	☐	2.000	-12.171	43.33	0.0000	P	36.8
3	☐	5.000	-3.678	66.67	0.0000	P	47.2
4	☐	10.000	9.649	103.33	0.0000	P	44.2
5	☐	100.000	83.761	293.34	0.0001	P	20.6
6	☐	200.000	208.496	596.69	0.0002	P	15.7
7	☐	1.000					

y = 7.1466E-007 * x + 2.0226E-005
R = 0.9950
DL = 17.27
BEC = 28.3

Weight: <None>
Min Conc: <None>

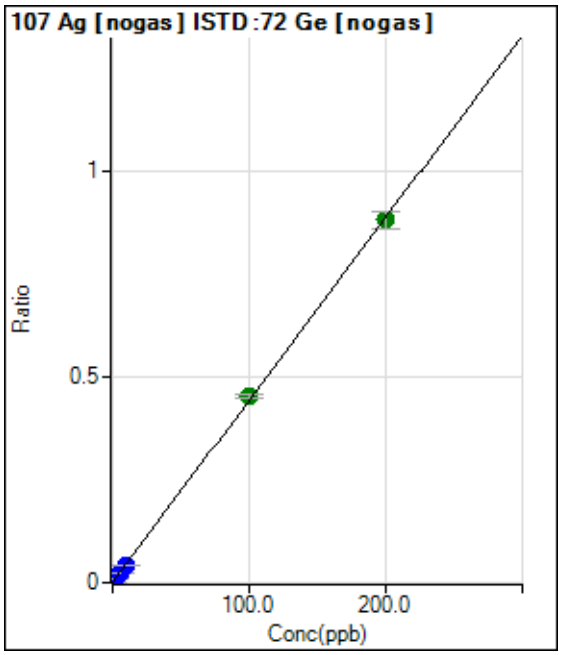


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11373.92	0.0030	P	7.2
2	☐	2.000	107.207	12301.11	0.0033	P	0.8
3	☐	5.000	86.347	12084.34	0.0032	P	1.5
4	☐	10.000	38.466	11800.79	0.0031	P	5.5
5	☐	100.000	82.749	11767.41	0.0032	P	4.8
6	☐	200.000	204.116	12314.49	0.0035	P	2.2
7	☐	1.000					

y = 2.4444E-006 * x + 0.0030
R = 0.8014
DL = 264.6
BEC = 1227

Weight: <None>
Min Conc: <None>

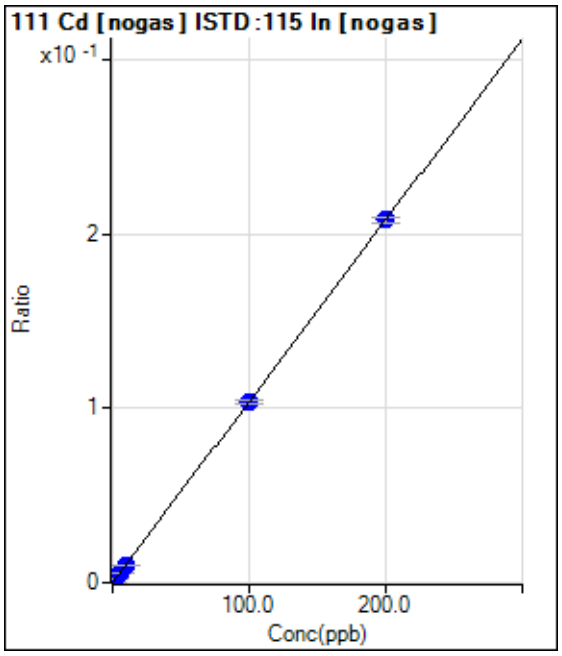
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2333.52	0.0006	P	16.6
2	☐	2.000	1.983	38529.19	0.0094	P	5.1
3	☐	5.000	5.118	93316.01	0.0232	P	0.4
4	☐	10.000	9.769	178051.87	0.0438	P	2.0
5	☐	100.000	102.218	1823215.18	0.4533	A	2.5
6	☐	200.000	198.900	3435731.72	0.8814	A	4.9
7	☐	1.000					

y = 0.0044 * x + 5.7881E-004
R = 0.9999
DL = 0.06525
BEC = 0.1307

Weight: <None>
Min Conc: <None>

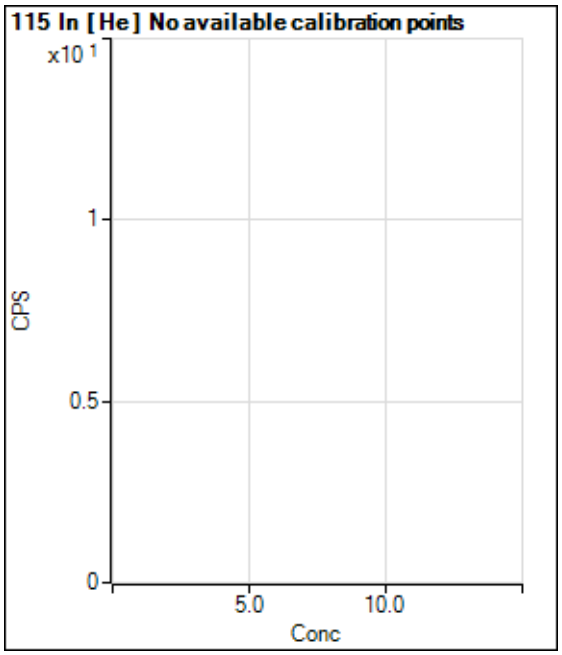


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	86.6
2	☐	2.000	1.980	7771.81	0.0021	P	11.0
3	☐	5.000	4.894	19143.96	0.0051	P	2.9
4	☐	10.000	9.601	38078.32	0.0100	P	2.7
5	☐	100.000	99.578	379853.54	0.1035	P	1.8
6	☐	200.000	200.234	732016.40	0.2080	P	1.8
7	☐	1.000					

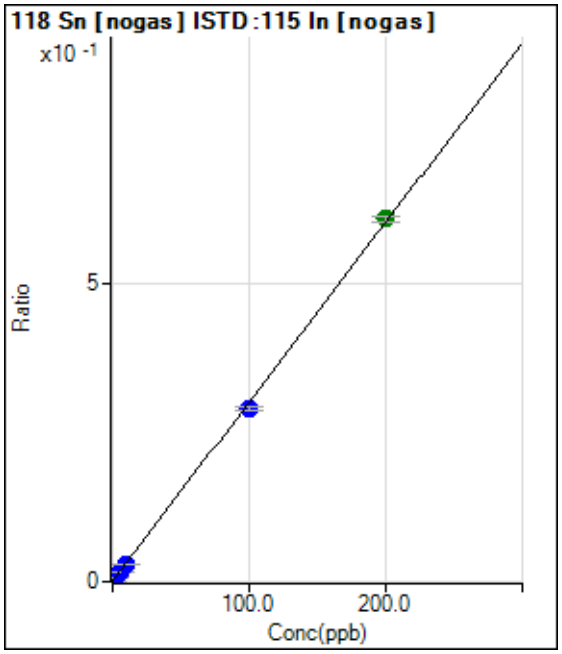
y = 0.0010 * x + 5.1948E-006
R = 1.0000
DL = 0.01299
BEC = 0.005001

Weight: <None>
Min Conc: <None>

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1219624.21		M	2.2
2	☐			1181639.87		P	2.9
3	☐			1181574.30		P	1.1
4	☐			1170515.41		P	1.4
5	☐			1146647.68		P	3.5
6	☐			1126874.69		P	2.2
7	☐						

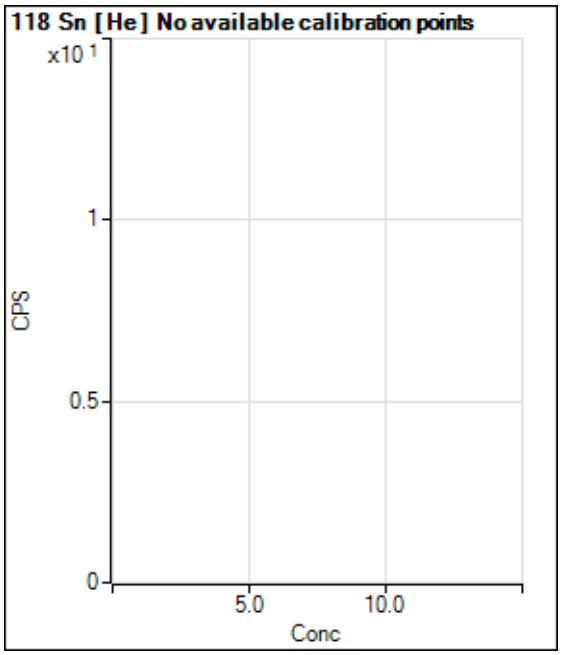


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3207.01	0.0008	P	9.9
2	☐	2.000	1.710	22621.60	0.0060	P	4.1
3	☐	5.000	4.637	55738.89	0.0148	P	1.9
4	☐	10.000	9.057	107349.23	0.0281	P	3.1
5	☐	100.000	95.902	1063775.22	0.2897	P	2.2
6	☐	200.000	202.108	2145483.40	0.6097	A	1.7
7	☐	1.000					

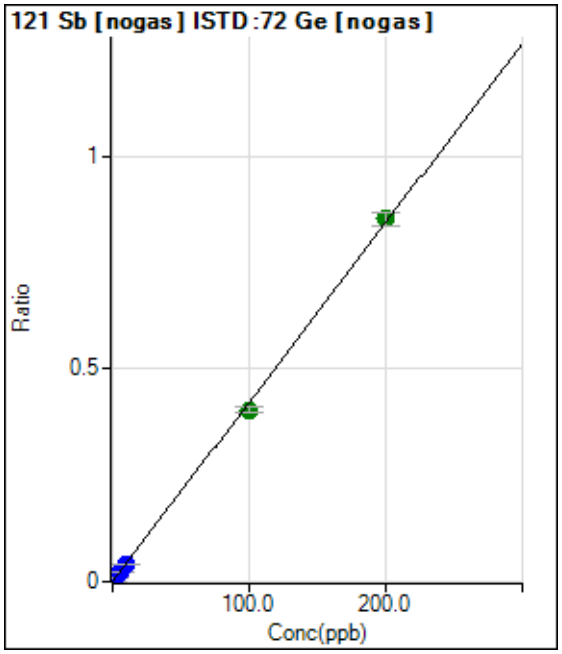
y = 0.0030 * x + 8.4638E-004
R = 0.9997
DL = 0.08382
BEC = 0.281

Weight: <None>
Min Conc: <None>

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1270.07		P	16.3
2	☐			8302.10		P	4.6
3	☐			20111.89		P	0.7
4	☐			38131.96		P	3.8
5	☐			379957.79		P	1.4
6	☐			762425.77		P	1.2
7	☐						

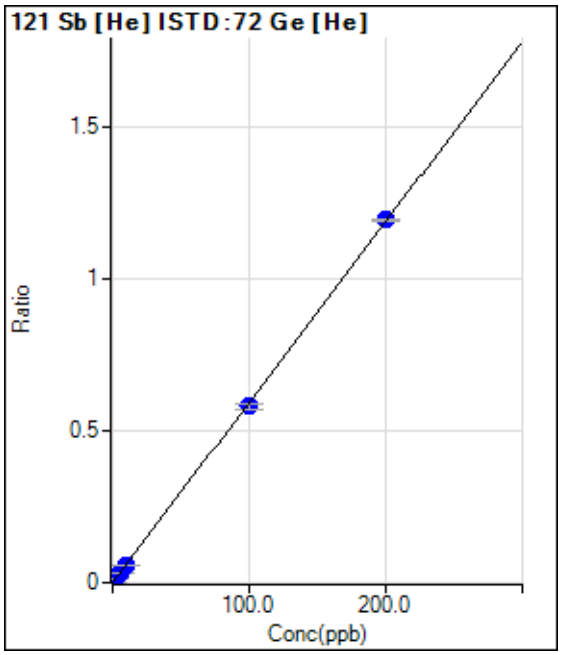


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1253.40	0.0003	P	7.7
2	☐	2.000	1.911	34464.41	0.0084	P	3.6
3	☐	5.000	4.853	83388.93	0.0208	P	1.9
4	☐	10.000	9.593	165559.51	0.0408	P	1.6
5	☐	100.000	95.484	1620348.67	0.4029	A	3.3
6	☐	200.000	202.283	3326866.10	0.8532	A	3.8
7	☐	1.000					

y = 0.0042 * x + 3.1004E-004
R = 0.9996
DL = 0.01698
BEC = 0.07353

Weight: <None>
Min Conc: <None>

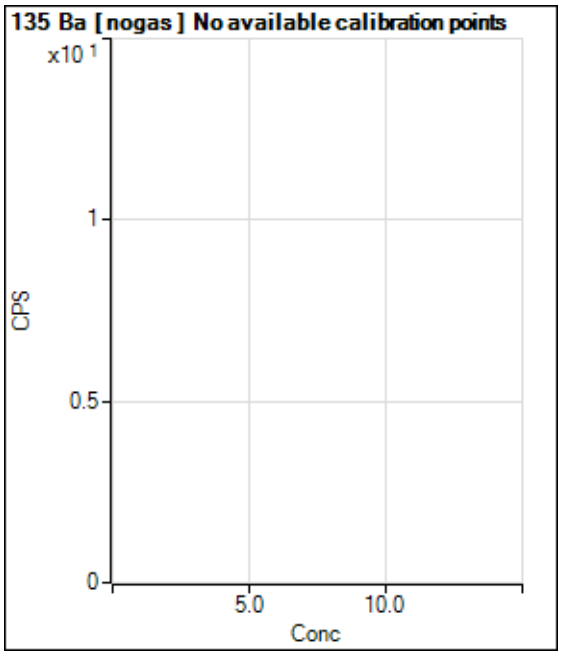
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0005	P	14.5
2	☐	2.000	1.972	11864.19	0.0122	P	0.7
3	☐	5.000	4.989	29795.63	0.0300	P	2.4
4	☐	10.000	9.766	57558.19	0.0583	P	3.4
5	☐	100.000	97.614	565461.72	0.5789	P	3.3
6	☐	200.000	201.205	1166995.14	1.1927	P	0.4
7	☐	1.000					

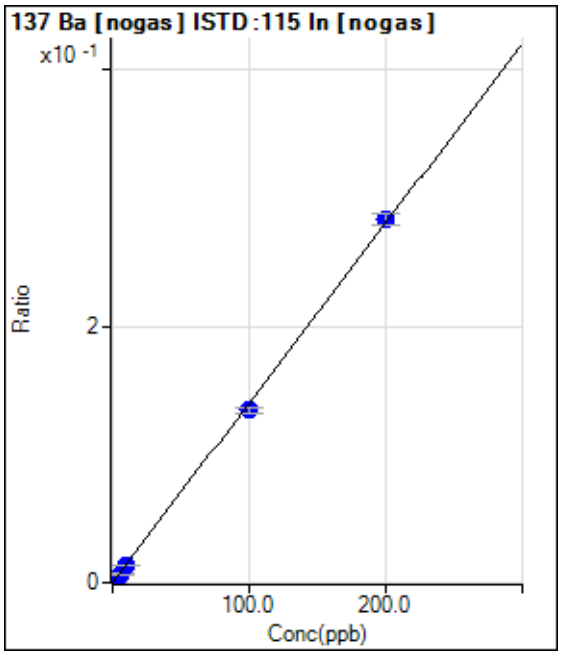
y = 0.0059 * x + 4.7694E-004
R = 0.9999
DL = 0.03503
BEC = 0.08049

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			570.02		P	21.3
2	☐			6104.50		P	5.0
3	☐			14783.12		P	1.9
4	☐			29709.10		P	2.2
5	☐			288738.07		P	0.3
6	☐			587301.49		P	1.4
7	☐						

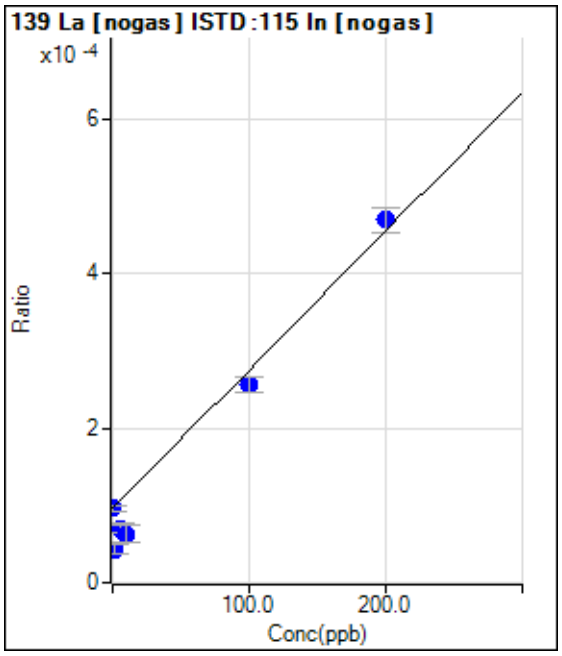
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	966.72	0.0003	P	11.8
2	☐	2.000	2.008	11564.01	0.0031	P	4.8
3	☐	5.000	4.610	25238.76	0.0067	P	3.5
4	☐	10.000	9.259	50447.44	0.0132	P	0.5
5	☐	100.000	96.190	495335.63	0.1349	P	3.4
6	☐	200.000	201.952	995943.00	0.2830	P	3.1
7	☐	1.000					

y = 0.0014 * x + 2.5507E-004
R = 0.9998
DL = 0.06462
BEC = 0.1822

Weight: <None>
Min Conc: <None>

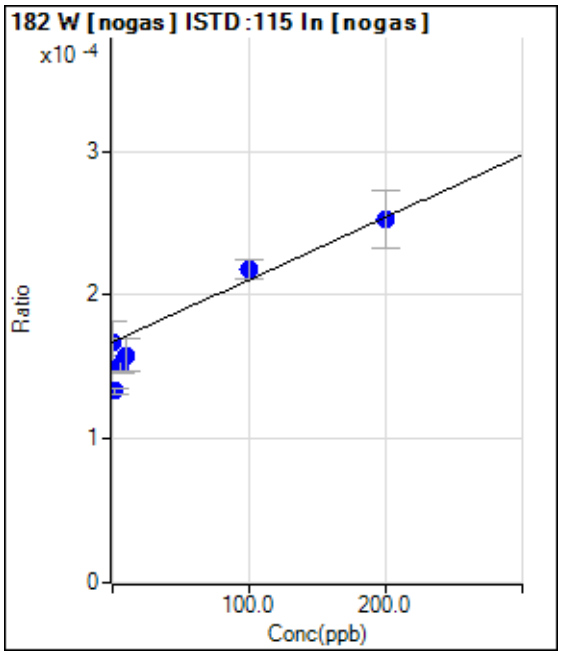


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	363.34	0.0001	P	9.2
2	☐	2.000	-29.165	163.33	0.0000	P	27.1
3	☐	5.000	-13.957	266.67	0.0001	P	19.6
4	☐	10.000	-18.302	240.01	0.0001	P	37.1
5	☐	100.000	88.707	936.71	0.0003	P	7.6
6	☐	200.000	207.847	1650.11	0.0005	P	6.6
7	☐	1.000					

y = 1.7967E-006 * x + 9.5817E-005
R = 0.9925
DL = 14.7
BEC = 53.33

Weight: <None>
Min Conc: <None>

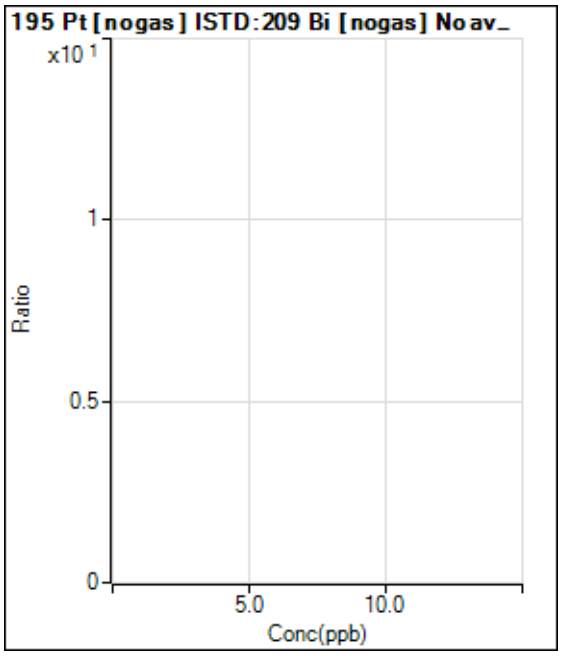
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	636.69	0.0002	P	16.8
2	☐	2.000	-78.020	503.35	0.0001	P	3.0
3	☐	5.000	-36.370	570.02	0.0002	P	8.3
4	☐	10.000	-21.068	603.35	0.0002	P	14.7
5	☐	100.000	115.602	800.03	0.0002	P	5.9
6	☐	200.000	195.587	890.04	0.0003	P	15.9
7	☐	1.000					

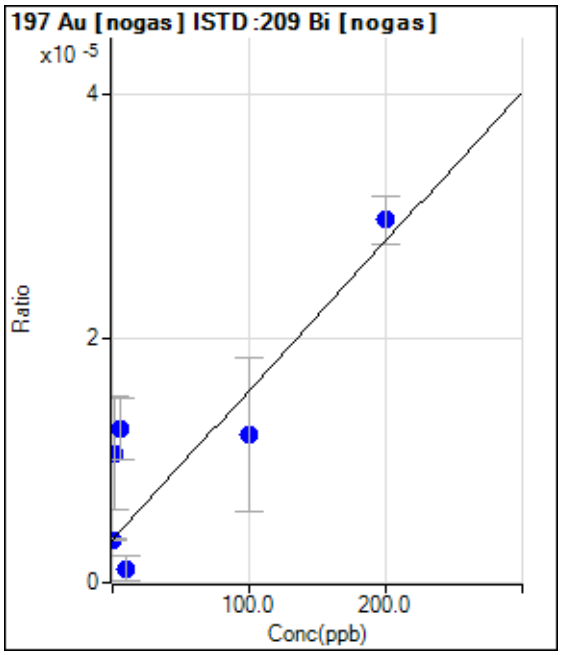
y = 4.3433E-007 * x + 1.6735E-004
R = 0.9591
DL = 194.6
BEC = 385.3

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

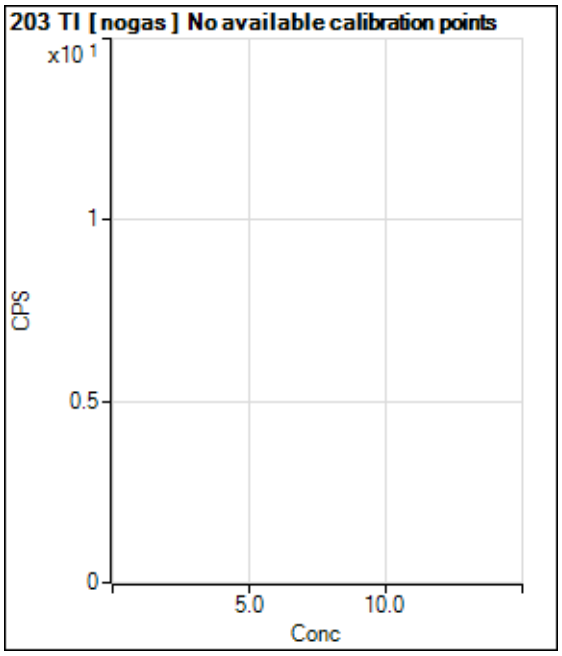
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	3.5
2	☐	2.000	57.876	30.00	0.0000	P	88.0
3	☐	5.000	73.956	36.67	0.0000	P	40.8
4	☐	10.000	-19.175	3.33	0.0000	P	173.
5	☐	100.000	70.122	33.33	0.0000	P	104.
6	☐	200.000	214.115	80.00	0.0000	P	13.0
7	☐	1.000					

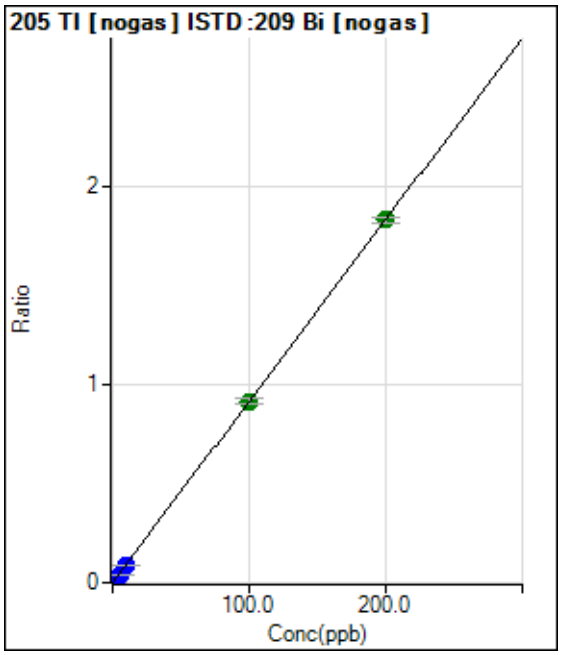
y = 1.2225E-007 * x + 3.5217E-006
R = 0.8695
DL = 3.051
BEC = 28.81

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			226.67		P	16.7
2	☐			20423.09		P	3.4
3	☐			51769.17		P	1.8
4	☐			103756.36		P	3.5
5	☐			1036421.55		P	1.8
6	☐			2131271.95		A	3.8
7	☐						

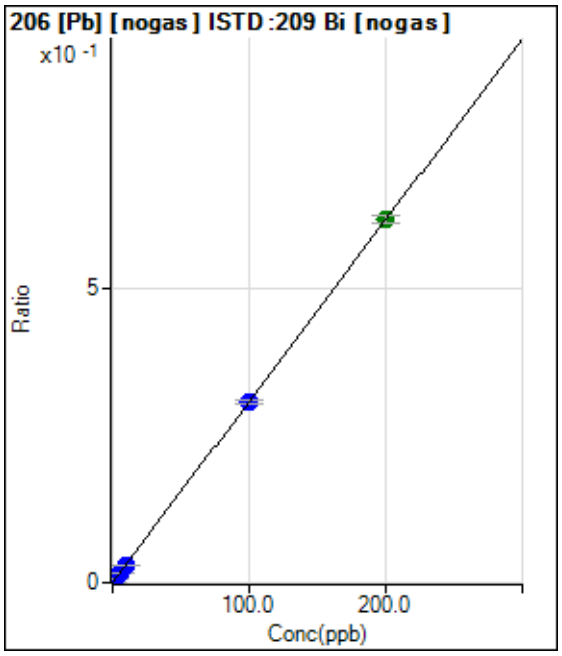
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.35	0.0002	P	26.2
2	☐	2.000	1.881	49673.29	0.0174	P	0.8
3	☐	5.000	4.585	122690.95	0.0422	P	3.4
4	☐	10.000	9.285	243252.85	0.0852	P	3.1
5	☐	100.000	100.115	2545128.82	0.9176	A	2.4
6	☐	200.000	199.990	4939472.22	1.8328	A	1.5
7	☐	1.000					

y = 0.0092 * x + 1.5948E-004
R = 1.0000
DL = 0.0137
BEC = 0.0174

Weight: <None>
Min Conc: <None>

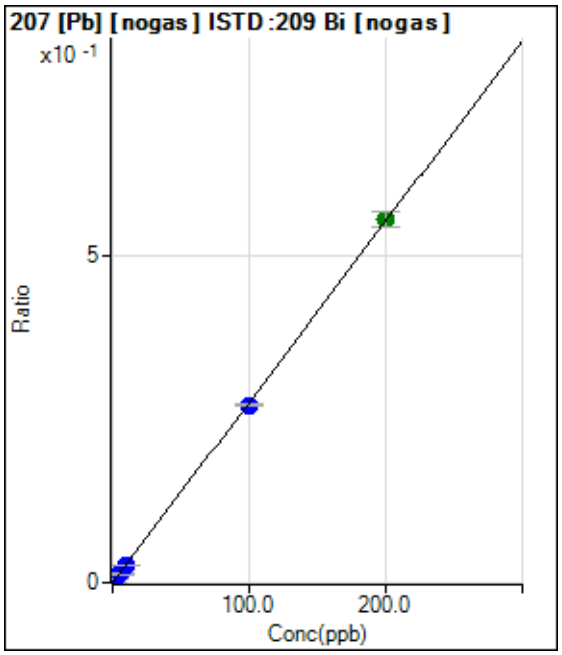


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	306.68	0.0001	P	12.6
2	☐	2.000	2.018	18083.71	0.0063	P	5.1
3	☐	5.000	4.831	43682.77	0.0150	P	2.9
4	☐	10.000	9.513	84070.48	0.0295	P	1.6
5	☐	100.000	99.708	853811.97	0.3078	P	1.5
6	☐	200.000	200.174	1664940.03	0.6178	A	2.0
7	☐	1.000					

y = 0.0031 * x + 1.0800E-004
R = 1.0000
DL = 0.01323
BEC = 0.035

Weight: <None>
Min Conc: <None>

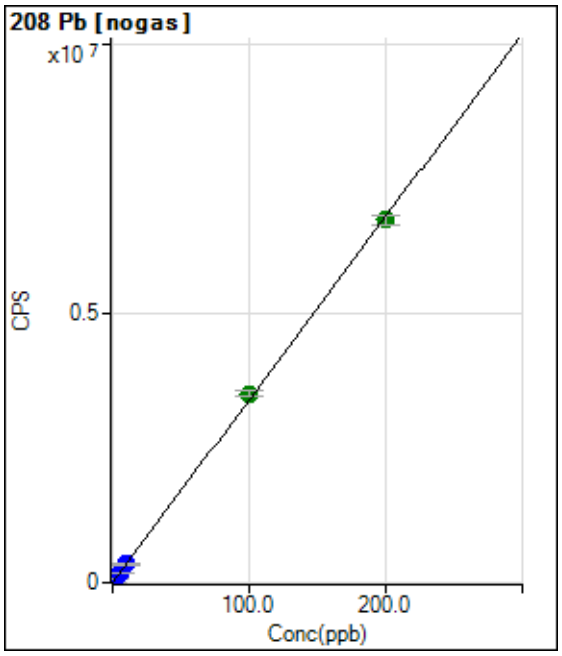
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0001	P	24.4
2	☐	2.000	1.939	15554.38	0.0054	P	2.2
3	☐	5.000	4.782	38676.35	0.0133	P	3.0
4	☐	10.000	9.493	75033.61	0.0263	P	3.0
5	☐	100.000	98.161	751848.89	0.2710	P	1.0
6	☐	200.000	200.951	1494873.57	0.5546	A	4.3
7	☐	1.000					

y = 0.0028 * x + 9.6538E-005
R = 0.9999
DL = 0.02565
BEC = 0.03498

Weight: <None>
Min Conc: <None>

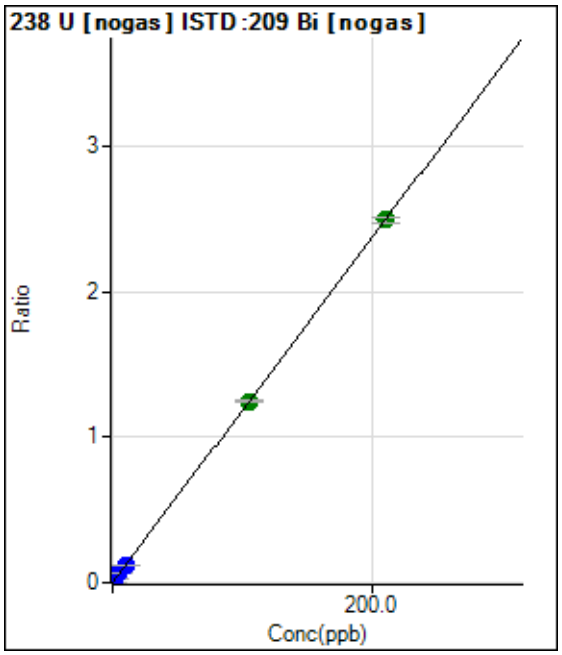


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1150.04		P	6.3
2	☐	2.000	2.076	71552.67		P	1.3
3	☐	5.000	5.218	178113.42		P	2.3
4	☐	10.000	10.046	341816.58		P	2.2
5	☐	100.000	103.283	3503578.28		A	2.8
6	☐	200.000	198.350	6727411.36		A	2.5
7	☐	1.000					

y = 33911.0570 * x + 1150.0367
R = 0.9998
DL = 0.00638
BEC = 0.03391

Weight: <None>
Min Conc: <None>

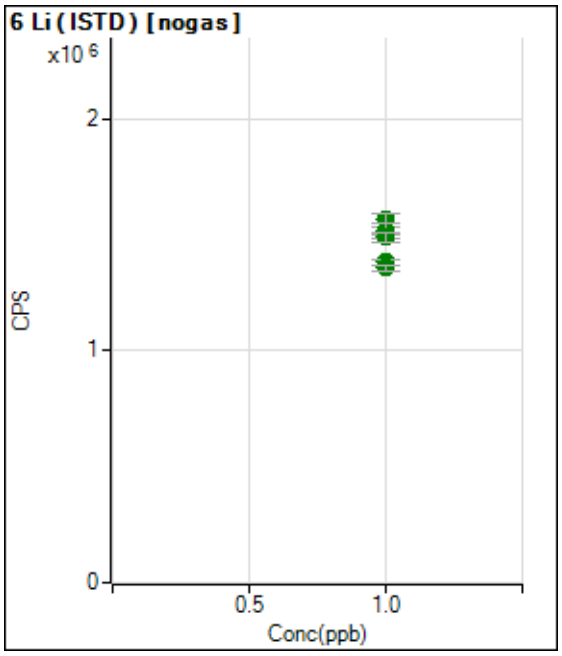
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1130.06	0.0004	P	11.0
2	☐	2.000	2.002	69184.86	0.0242	P	1.0
3	☐	5.000	5.005	174442.71	0.0599	P	0.8
4	☐	10.000	9.845	335416.63	0.1175	P	1.2
5	☐	105.000	105.095	3470285.57	1.2510	A	2.0
6	☐	210.000	209.960	6733788.03	2.4988	A	1.7
7	☐	1.000					

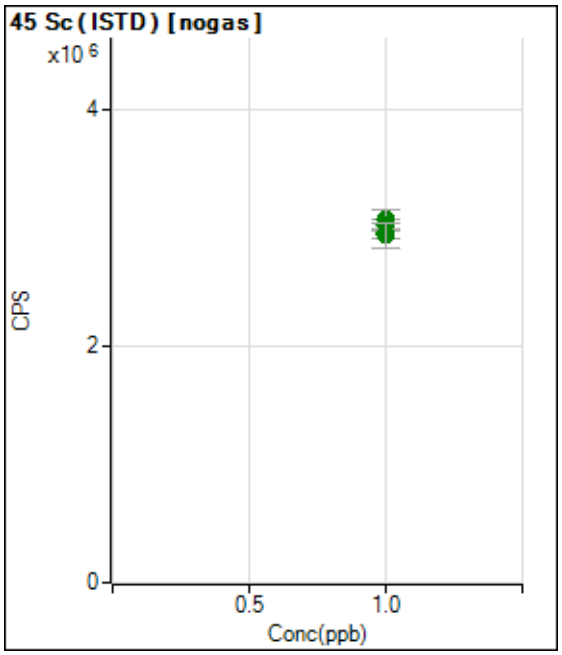
y = 0.0119 * x + 3.9744E-004
R = 1.0000
DL = 0.01106
BEC = 0.0334

Weight: <None>
Min Conc: <None>

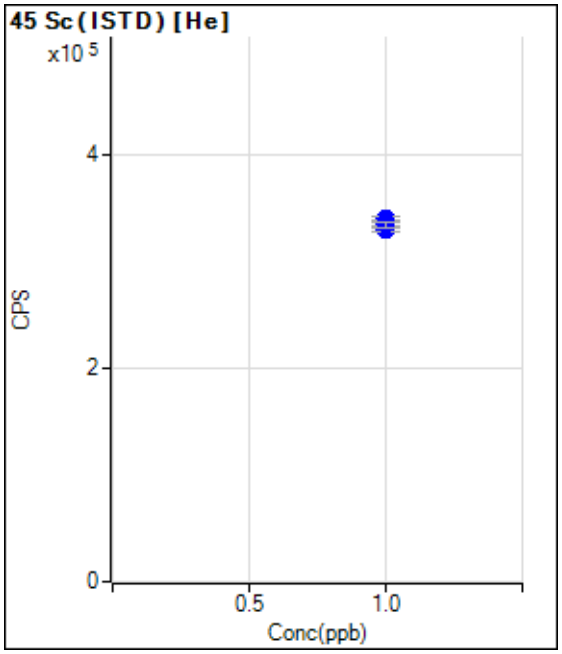


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1519169.34		A	2.1
2	☐	1.000		1563907.52		A	3.9
3	☐	1.000		1520655.16		A	4.3
4	☐	1.000		1489577.06		A	3.1
5	☐	1.000		1380702.10		A	2.1
6	☐	1.000		1356427.94		A	1.9
7	☐	1.000					

Calibration for 240_ICV.d

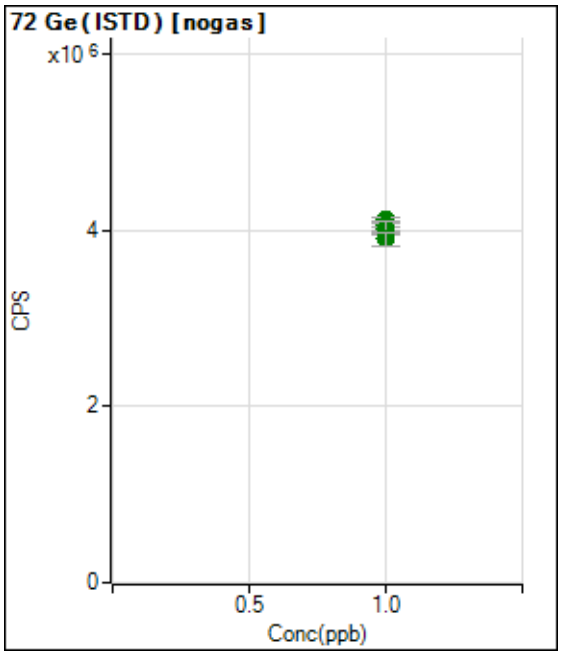


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3026042.46		A	3.4
2	☐	1.000		3071316.62		A	5.2
3	☐	1.000		3020829.85		A	1.6
4	☐	1.000		2959131.41		A	2.8
5	☐	1.000		2957926.62		A	2.6
6	☐	1.000		2943083.71		A	7.0
7	☐	1.000					

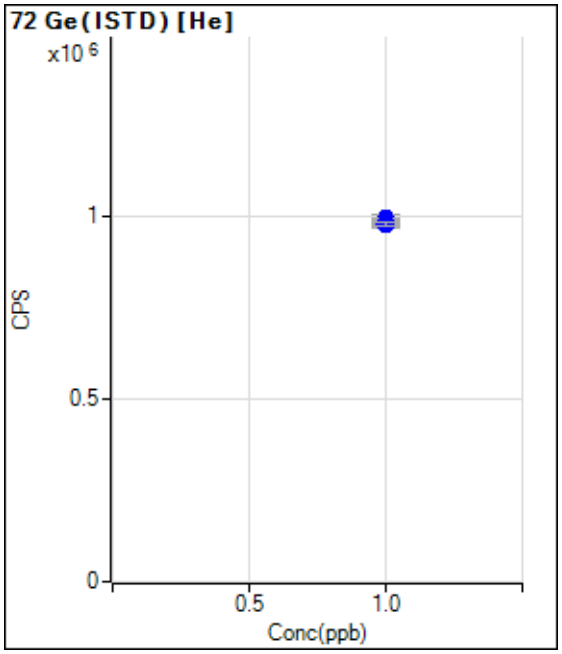


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		340456.81		P	1.6
2	☐	1.000		335278.52		P	1.1
3	☐	1.000		334698.35		P	1.4
4	☐	1.000		336550.48		P	1.3
5	☐	1.000		331098.32		P	1.3
6	☐	1.000		334866.06		P	1.8
7	☐	1.000					

Calibration for 240_ICV.d

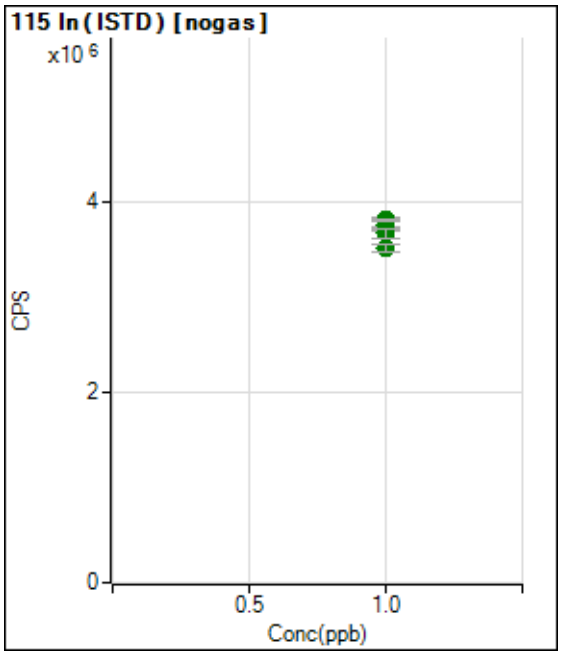


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4041585.98		A	2.9
2	☐	1.000		4119134.10		A	1.8
3	☐	1.000		4014479.00		A	1.1
4	☐	1.000		4061616.61		A	0.9
5	☐	1.000		4024511.81		A	3.5
6	☐	1.000		3902713.59		A	3.8
7	☐	1.000					

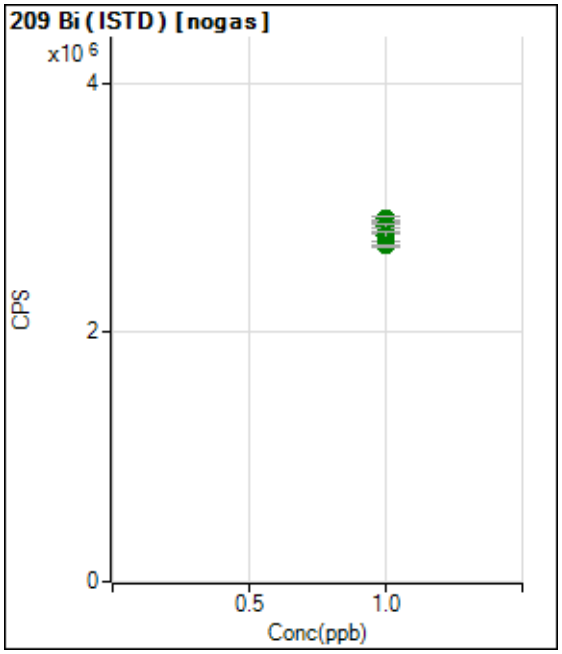


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		991377.51		P	2.3
2	☐	1.000		975788.84		P	2.0
3	☐	1.000		992238.32		P	2.1
4	☐	1.000		986764.41		P	1.8
5	☐	1.000		977273.84		P	2.0
6	☐	1.000		978460.92		P	0.9
7	☐	1.000					

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3794836.61		A	2.5
2	☐	1.000		3771668.24		A	1.5
3	☐	1.000		3763572.41		A	2.8
4	☐	1.000		3816013.30		A	0.6
5	☐	1.000		3673050.84		A	3.0
6	☐	1.000		3519924.95		A	2.2
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2841860.06		A	3.5
2	☐	1.000		2856117.56		A	1.7
3	☐	1.000		2909773.91		A	1.1
4	☐	1.000		2853500.48		A	0.7
5	☐	1.000		2774923.08		A	2.8
6	☐	1.000		2694915.79		A	0.5
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	007CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:25:53-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	67	85.18
Na	23	1	nogas	762316	0.00
Mg	24	1	nogas	56828	0.01
Al	27	1	nogas	73422	0.00
K	39	1	nogas	8696757	0.00
Ti	47	1	nogas	350	8.52
V	51	1	nogas	504335	0.00
Cr	52	1	nogas	57198	0.00
Mn	55	1	nogas	37976	0.01
Co	59	1	nogas	2620	0.37
Ni	60	1	nogas	1823	0.64
Cu	63	1	nogas	44066	0.00
Zn	66	1	nogas	3307	0.30
As	75	1	nogas	83232	0.00
Sr	88	1	nogas	2013	0.26
Ag	107	1	nogas	153	16.10
Cd	111	1	nogas	40	165.36
Sb	121	1	nogas	383	5.20
Tl	205	1	nogas	937	1.00
Pb	208	1	nogas	7808	0.06
[Pb]	206	1	nogas	1977	0.62
[Pb]	207	1	nogas	1600	0.07
Na	23	2	He	110389	0.00
Mg	24	2	He	3500	0.13
Al	27	2	He	1837	0.22
K	39	2	He	225870	0.00
Ca	43	2	He	107	35.52
Ca	44	2	He	3857	0.18
V	51	2	He	7874	0.02
Cr	52	2	He	7222	0.04
Mn	55	2	He	5648	0.09
Fe	56	2	He	16392	0.06
Co	59	2	He	873	3.00
Ni	60	2	He	743	1.28
Cu	63	2	He	17075	0.01
Zn	66	2	He	1043	0.14
As	75	2	He	521	1.66
Se	78	2	He	73	53.07
B	11	1	nogas	21322	0.01
Si	28	1	nogas	1419764	0.00
Ca	43	1	nogas	1740	0.14
Ca	44	1	nogas	342946	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	1905610	0.00
Se	77	1	nogas	26783	0.00
Se	82	1	nogas	253	10.61
Mo	95	1	nogas	303	2.73
Sn	118	1	nogas	1833	0.25
Ba	137	1	nogas	360	2.67
Sb	121	2	He	150	4.44
Li	7	1	nogas	156391	0.00
P	31	1	nogas	130053	0.00
La	139	1	nogas	280	4.60

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1585712	2.10
Ge	72	1	nogas	3337601	2.01
In	115	1	nogas	2945133	0.41
Bi	209	1	nogas	2217405	0.75
Ge	72	2	He	850275	1.25

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	008CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:27:53-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	18589	0.03
Na	23	1	nogas	6233374	0.00
Mg	24	1	nogas	3682558	0.00
Al	27	1	nogas	101260	0.00
K	39	1	nogas	12972130	0.00
Ti	47	1	nogas	4374	0.07
V	51	1	nogas	542860	0.00
Cr	52	1	nogas	103591	0.00
Mn	55	1	nogas	84560	0.00
Co	59	1	nogas	53980	0.00
Ni	60	1	nogas	14783	0.03
Cu	63	1	nogas	59777	0.00
Zn	66	1	nogas	10657	0.00
As	75	1	nogas	91646	0.00
Sr	88	1	nogas	58302	0.00
Ag	107	1	nogas	30363	0.00
Cd	111	1	nogas	6475	0.04
Sb	121	1	nogas	26223	0.01
Tl	205	1	nogas	39789	0.01
Pb	208	1	nogas	59827	0.00
[Pb]	206	1	nogas	14994	0.03
[Pb]	207	1	nogas	13025	0.01
Na	23	2	He	467369	0.00
Mg	24	2	He	203636	0.00
Al	27	2	He	2764	0.14
K	39	2	He	423519	0.00
Ca	43	2	He	630	0.50
Ca	44	2	He	12424	0.01
V	51	2	He	20853	0.01
Cr	52	2	He	22324	0.01
Mn	55	2	He	14666	0.01
Fe	56	2	He	1394335	0.00
Co	59	2	He	20191	0.02
Ni	60	2	He	6058	0.07
Cu	63	2	He	25201	0.01
Zn	66	2	He	3980	0.04
As	75	2	He	3416	0.14
Se	78	2	He	316	3.42
B	11	1	nogas	76626	0.00
Si	28	1	nogas	2575473	0.00

Calibration Standard Report

Ca	43	1	nogas	8986	0.01
Ca	44	1	nogas	453773	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	7124585	0.00
Se	77	1	nogas	25955	0.01
Se	82	1	nogas	737	1.67
Mo	95	1	nogas	12068	0.03
Sn	118	1	nogas	17622	0.02
Ba	137	1	nogas	8162	0.02
Sb	121	2	He	9609	0.06
P	31	1	nogas	145373	0.00
La	139	1	nogas	113	8.99

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1554556	0.80	1585712	98.04	70	125	
Ge	72	1	nogas	3300063	1.64	3337601	98.88	70	125	
In	115	1	nogas	2979122	2.32	2945133	101.15	70	125	
Bi	209	1	nogas	2175021	2.79	2217405	98.09	70	125	
Ge	72	2	He	863195	1.08	850275	101.52	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	009CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:29:51-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	45922	0.01
Na	23	1	nogas	14846824	0.00
Mg	24	1	nogas	9567195	0.00
Al	27	1	nogas	208480	0.00
K	39	1	nogas	19556926	0.00
Ti	47	1	nogas	11310	0.02
V	51	1	nogas	645976	0.00
Cr	52	1	nogas	179723	0.00
Mn	55	1	nogas	183941	0.00
Co	59	1	nogas	138029	0.00
Ni	60	1	nogas	35411	0.01
Cu	63	1	nogas	102276	0.00
Zn	66	1	nogas	26903	0.01
As	75	1	nogas	107515	0.00
Sr	88	1	nogas	145073	0.00
Ag	107	1	nogas	76385	0.00
Cd	111	1	nogas	15714	0.01
Sb	121	1	nogas	62991	0.00
Tl	205	1	nogas	98873	0.00
Pb	208	1	nogas	144401	0.00
[Pb]	206	1	nogas	35456	0.00
[Pb]	207	1	nogas	31411	0.01
Na	23	2	He	1033743	0.00
Mg	24	2	He	517857	0.00
Al	27	2	He	5297	0.05
K	39	2	He	733405	0.00
Ca	43	2	He	1570	0.68
Ca	44	2	He	27961	0.00
V	51	2	He	41048	0.00
Cr	52	2	He	45961	0.00
Mn	55	2	He	32272	0.00
Fe	56	2	He	3553620	0.00
Co	59	2	He	51689	0.00
Ni	60	2	He	15317	0.02
Cu	63	2	He	46282	0.00
Zn	66	2	He	9269	0.05
As	75	2	He	7727	0.04
Se	78	2	He	769	0.80
B	11	1	nogas	162152	0.00
Si	28	1	nogas	4282529	0.00

Calibration Standard Report

Ca	43	1	nogas	21316	0.01
Ca	44	1	nogas	645429	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	15175846	0.00
Se	77	1	nogas	25945	0.01
Se	82	1	nogas	1653	0.33
Mo	95	1	nogas	30740	0.00
Sn	118	1	nogas	43491	0.00
Ba	137	1	nogas	20055	0.00
Sb	121	2	He	22935	0.01
P	31	1	nogas	179340	0.00
La	139	1	nogas	197	7.90

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1559964	1.40	1585712	98.38	70	125	
Ge	72	1	nogas	3392671	2.11	3337601	101.65	70	125	
In	115	1	nogas	2910122	2.11	2945133	98.81	70	125	
Bi	209	1	nogas	2229573	2.31	2217405	100.55	70	125	
Ge	72	2	He	840659	2.33	850275	98.87	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	010CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:31:50-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	88540	0.00
Na	23	1	nogas	27599522	0.00
Mg	24	1	nogas	17788771	0.00
Al	27	1	nogas	385143	0.00
K	39	1	nogas	29529983	0.00
Ti	47	1	nogas	20632	0.02
V	51	1	nogas	826095	0.00
Cr	52	1	nogas	291290	0.00
Mn	55	1	nogas	309937	0.00
Co	59	1	nogas	261479	0.00
Ni	60	1	nogas	62798	0.00
Cu	63	1	nogas	169801	0.00
Zn	66	1	nogas	46459	0.00
As	75	1	nogas	143879	0.00
Sr	88	1	nogas	275204	0.00
Ag	107	1	nogas	145419	0.00
Cd	111	1	nogas	29585	0.01
Sb	121	1	nogas	126201	0.00
Tl	205	1	nogas	186745	0.00
Pb	208	1	nogas	265862	0.00
[Pb]	206	1	nogas	66022	0.00
[Pb]	207	1	nogas	58134	0.00
Na	23	2	He	1917682	0.00
Mg	24	2	He	972746	0.00
Al	27	2	He	9813	0.03
K	39	2	He	1205589	0.00
Ca	43	2	He	2767	0.11
Ca	44	2	He	49723	0.01
V	51	2	He	72690	0.00
Cr	52	2	He	80253	0.00
Mn	55	2	He	56048	0.00
Fe	56	2	He	6752044	0.00
Co	59	2	He	101697	0.00
Ni	60	2	He	27721	0.00
Cu	63	2	He	77074	0.00
Zn	66	2	He	16738	0.02
As	75	2	He	14938	0.00
Se	78	2	He	1217	0.27
B	11	1	nogas	289204	0.00
Si	28	1	nogas	6917729	0.00

Calibration Standard Report

Ca	43	1	nogas	39673	0.00
Ca	44	1	nogas	929862	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	27097430	0.00
Se	77	1	nogas	31367	0.00
Se	82	1	nogas	2914	0.36
Mo	95	1	nogas	56988	0.00
Sn	118	1	nogas	83370	0.00
Ba	137	1	nogas	38360	0.01
Sb	121	2	He	46943	0.00
P	31	1	nogas	220143	0.00
La	139	1	nogas	217	4.43

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1543551	2.38	1585712	97.34	70	125	
Ge	72	1	nogas	3281464	1.98	3337601	98.32	70	125	
In	115	1	nogas	2943800	3.80	2945133	99.95	70	125	
Bi	209	1	nogas	2197365	1.97	2217405	99.10	70	125	
Ge	72	2	He	851763	0.31	850275	100.17	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	011CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:33:48-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	906672	0.00
Na	23	1	nogas	274039798	0.00
Mg	24	1	nogas	174856241	0.00
Al	27	1	nogas	2372538	0.00
K	39	1	nogas	217747430	0.00
Ti	47	1	nogas	204318	0.00
V	51	1	nogas	3353143	0.00
Cr	52	1	nogas	2359926	0.00
Mn	55	1	nogas	2886428	0.00
Co	59	1	nogas	2566487	0.00
Ni	60	1	nogas	597586	0.00
Cu	63	1	nogas	1361772	0.00
Zn	66	1	nogas	456875	0.00
As	75	1	nogas	646875	0.00
Sr	88	1	nogas	2863297	0.00
Ag	107	1	nogas	1402881	0.00
Cd	111	1	nogas	306831	0.00
Sb	121	1	nogas	1219274	0.00
Tl	205	1	nogas	1982431	0.00
Pb	208	1	nogas	2633567	0.00
[Pb]	206	1	nogas	661156	0.00
[Pb]	207	1	nogas	578190	0.00
Na	23	2	He	17756781	0.00
Mg	24	2	He	9991634	0.00
Al	27	2	He	64918	0.00
K	39	2	He	10061917	0.00
Ca	43	2	He	27848	0.00
Ca	44	2	He	464070	0.00
V	51	2	He	661893	0.00
Cr	52	2	He	749286	0.00
Mn	55	2	He	519723	0.00
Fe	56	2	He	67419451	0.00
Co	59	2	He	987084	0.00
Ni	60	2	He	271609	0.00
Cu	63	2	He	672492	0.00
Zn	66	2	He	159199	0.00
As	75	2	He	147946	0.00
Se	78	2	He	12103	0.00
B	11	1	nogas	2765123	0.00
Si	28	1	nogas	57506246	0.00

Calibration Standard Report

Ca	43	1	nogas	380675	0.00
Ca	44	1	nogas	6482903	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	257780564	0.00
Se	77	1	nogas	53947	0.00
Se	82	1	nogas	28920	0.01
Mo	95	1	nogas	585238	0.00
Sn	118	1	nogas	838993	0.00
Ba	137	1	nogas	385949	0.00
Sb	121	2	He	469181	0.00
P	31	1	nogas	1027539	0.00
La	139	1	nogas	797	1.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1476300	4.16	1585712	93.10	70	125	
Ge	72	1	nogas	3464803	2.59	3337601	103.81	70	125	
In	115	1	nogas	2936727	1.40	2945133	99.71	70	125	
Bi	209	1	nogas	2141340	1.60	2217405	96.57	70	125	
Ge	72	2	He	869869	1.16	850275	102.30	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:35:48-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1726836	0.00
Na	23	1	nogas	530038845	0.00
Mg	24	1	nogas	344833708	0.00
Al	27	1	nogas	4185630	0.00
K	39	1	nogas	411744951	0.00
Ti	47	1	nogas	402495	0.00
V	51	1	nogas	5997958	0.00
Cr	52	1	nogas	4638852	0.00
Mn	55	1	nogas	5747497	0.00
Co	59	1	nogas	4907214	0.00
Ni	60	1	nogas	1172196	0.00
Cu	63	1	nogas	2639209	0.00
Zn	66	1	nogas	898617	0.00
As	75	1	nogas	1195989	0.00
Sr	88	1	nogas	5453218	0.00
Ag	107	1	nogas	2842191	0.00
Cd	111	1	nogas	612307	0.00
Sb	121	1	nogas	2429108	0.00
Tl	205	1	nogas	3703546	0.00
Pb	208	1	nogas	5140898	0.00
[Pb]	206	1	nogas	1263349	0.00
[Pb]	207	1	nogas	1129522	0.00
Na	23	2	He	34489997	0.00
Mg	24	2	He	19265333	0.00
Al	27	2	He	115343	0.00
K	39	2	He	19528460	0.00
Ca	43	2	He	53745	0.00
Ca	44	2	He	906144	0.00
V	51	2	He	1305757	0.00
Cr	52	2	He	1439274	0.00
Mn	55	2	He	1012197	0.00
Fe	56	2	He	130627131	0.00
Co	59	2	He	1947193	0.00
Ni	60	2	He	524787	0.00
Cu	63	2	He	1271491	0.00
Zn	66	2	He	314865	0.00
As	75	2	He	291833	0.00
Se	78	2	He	23826	0.01
B	11	1	nogas	5311617	0.00
Si	28	1	nogas	109472578	0.00

Calibration Standard Report

Ca	43	1	nogas	736334	0.00
Ca	44	1	nogas	12219390	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	510822128	0.00
Se	77	1	nogas	80142	0.00
Se	82	1	nogas	57455	0.00
Mo	95	1	nogas	1143175	0.00
Sn	118	1	nogas	1596040	0.00
Ba	137	1	nogas	762370	0.00
Sb	121	2	He	956437	0.00
P	31	1	nogas	1821547	0.00
La	139	1	nogas	1247	0.95

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1385623	5.34	1585712	87.38	70	125	
Ge	72	1	nogas	3292677	2.88	3337601	98.65	70	125	
In	115	1	nogas	2747907	0.17	2945133	93.30	70	125	
Bi	209	1	nogas	2136757	1.88	2217405	96.36	70	125	
Ge	72	2	He	849875	0.65	850275	99.95	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	015SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:41:50-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.909	1.909	3.98	17842	0.01	2000	
Na	23	1	nogas	207.582	207.582	2.43	6304853	0.00	200000	
Mg	24	1	nogas	212.351	212.351	2.91	3744082	0.01	200000	
Al	27	1	nogas	1.175	1.175	14.71	100086	0.00	2000	
K	39	1	nogas	220.207	220.207	11.60	13431316	0.00	200000	
Ti	47	1	nogas	2.126	2.126	8.01	4737	0.04	2000	
V	51	1	nogas	-5.711	-5.711	-6.67	352361	0.00	2000	
Cr	52	1	nogas	1.702	1.702	10.08	98186	0.00	2000	
Mn	55	1	nogas	1.634	1.634	6.38	86398	0.00	2000	
Co	59	1	nogas	2.092	2.092	4.22	55631	0.00	2000	
Ni	60	1	nogas	2.160	2.160	2.80	14816	0.01	2000	
Cu	63	1	nogas	1.349	1.349	12.94	62850	0.00	2000	
Zn	66	1	nogas	2.213	2.213	4.18	11334	0.02	2000	
As	75	1	nogas	-0.553	-0.553	-78.97	79098	0.00	2000	
Sr	88	1	nogas	2.013	2.013	4.50	58686	0.00	2000	
Ag	107	1	nogas	2.025	2.025	5.31	29508	0.01	2000	
Cd	111	1	nogas	1.884	1.884	4.72	6261	0.03	2000	
Sb	121	1	nogas	2.621	2.621	3.98	32981	0.01	2000	
Tl	205	1	nogas	1.998	1.998	3.64	39695	0.01	2000	
Pb	208	1	nogas	2.009	2.009	2.37	59620	0.00	2000	
U	238	1	nogas	2.190	2.190	4.54	56534	0.00	2000	
[Pb]	206	1	nogas	1.948	1.948	2.06	14784	0.01	2000	
[Pb]	207	1	nogas	1.965	1.965	3.13	13099	0.01	2000	
Na	23	2	He	202.104	202.104	1.94	476000	0.04	200000	
Mg	24	2	He	200.412	200.412	2.15	204786	0.10	200000	
Al	27	2	He	-0.784	-0.784	-18.96	2570	-0.03	2000	
K	39	2	He	221.370	221.370	0.40	440349	0.05	200000	
Ca	43	2	He	202.389	202.389	22.11	677	29.91	200000	
Ca	44	2	He	195.810	195.810	2.22	13181	1.49	200000	
V	51	2	He	1.679	1.679	0.97	18663	0.01	2000	
Cr	52	2	He	1.920	1.920	2.76	21826	0.01	2000	
Mn	55	2	He	1.720	1.720	3.63	14863	0.01	2000	
Fe	56	2	He	209.124	209.124	1.08	1439110	0.01	200000	
Co	59	2	He	1.972	1.972	1.34	20822	0.01	2000	
Ni	60	2	He	1.819	1.819	10.67	6558	0.03	2000	
Cu	63	2	He	1.491	1.491	2.89	26392	0.01	2000	
Zn	66	2	He	1.837	1.837	10.67	3887	0.05	2000	
As	75	2	He	2.043	2.043	4.04	3628	0.06	2000	
Se	78	2	He	2.056	2.056	8.99	334	0.62	2000	
B	11	1	nogas	22.535	22.535	5.69	147569	0.02	2000	
Si	28	1	nogas	111.649	111.649	5.73	2690217	0.00	2000	
Ca	43	1	nogas	197.433	197.433	5.39	9239	2.14	200000	

Sample Report

Ca	44	1	nogas	181.970	181.970	12.14	460721	0.04	200000	
Fe	56	1	nogas	199.650	199.650	7.77	7140585	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-17.904	-17.904	-4.41	22408	-0.08	2000	
Se	82	1	nogas	1.544	1.544	32.46	710	0.22	2000	
Mo	95	1	nogas	2.404	2.404	10.00	14399	0.02	2000	
Sn	118	1	nogas	2.064	2.064	4.68	19771	0.01	2000	
Ba	137	1	nogas	1.863	1.863	1.69	8042	0.02	2000	
Sb	121	2	He	2.457	2.457	3.72	12264	0.02	2000	
La	139	1	nogas	-41.765	-41.765	-9.97	63	-65.94	2000	
Au	197	1	nogas	43.822	43.822	948.81	27	164.33	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1518181	3.27	1585712	95.74	70	125	
Ge	72	1	nogas	3402862	3.64	3337601	101.96	70	125	
In	115	1	nogas	3002600	1.76	2945133	101.95	70	125	
Bi	209	1	nogas	2208771	1.22	2217405	99.61	70	125	
Ge	72	2	He	883343	0.94	850275	103.89	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	016LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:43:51-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	5.047	4.020	46554	3.14	5	100.9	70	130	
Na	23	1	nogas	514.691	2.579	14805832	1.77	500	102.9	70	130	
Mg	24	1	nogas	537.704	4.392	9576148	3.48	500	107.5	70	130	
Al	27	1	nogas	6.127	3.283	203393	2.68	5	122.5	70	130	
K	39	1	nogas	554.999	2.544	20051990	0.85	500	111.0	70	130	
Ti	47	1	nogas	5.275	2.147	11050	1.54	5	105.5	70	130	
V	51	1	nogas	0.142	351.637	509435	3.15	5	2.8	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	5.211	2.660	177574	1.90	5	104.2	70	130	
Mn	55	1	nogas	5.068	1.873	183578	0.81	5	101.4	70	130	
Co	59	1	nogas	5.359	0.715	136061	0.35	5	107.2	70	130	
Ni	60	1	nogas	5.711	2.462	35571	2.99	5	114.2	70	130	
Cu	63	1	nogas	4.745	2.432	106305	1.98	5	94.9	70	130	
Zn	66	1	nogas	5.814	0.269	27454	0.93	5	116.3	70	130	
As	75	1	nogas	3.523	5.643	100719	1.13	5	70.5	70	130	
Sr	88	1	nogas	5.334	2.346	149687	1.65	5	106.7	70	130	
Ag	107	1	nogas	5.477	1.383	78287	1.54	5	109.5	70	130	
Cd	111	1	nogas	4.930	2.566	15711	3.94	5	98.6	70	130	
Sb	121	1	nogas	5.722	2.341	70389	2.56	5	114.4	70	130	
Tl	205	1	nogas	5.281	1.913	102797	1.03	5	105.6	70	130	
Pb	208	1	nogas	5.222	0.713	142454	0.67	5	104.4	70	130	
U	238	1	nogas	5.316	2.160	135169	1.59	5	106.3	70	130	
[Pb]	206	1	nogas	5.118	1.811	35422	1.17	5	102.4	70	130	
[Pb]	207	1	nogas	5.052	3.021	30983	2.12	5	101.0	70	130	
Na	23	2	He	528.081	3.574	1047345	2.03	500	105.6	70	130	
Mg	24	2	He	524.007	4.835	523770	3.30	500	104.8	70	130	
Al	27	2	He	4.258	18.694	5498	6.69	5	85.2	70	130	
K	39	2	He	549.385	1.455	758153	1.02	500	109.9	70	130	
Ca	43	2	He	520.297	4.075	1547	1.98	500	104.1	70	130	
Ca	44	2	He	530.488	4.048	28549	1.66	500	106.1	70	130	
V	51	2	He	4.932	3.117	40114	0.76	5	98.6	70	130	
Cr	52	2	He	5.317	3.858	46654	1.41	5	106.3	70	130	
Mn	55	2	He	5.219	1.823	32803	0.55	5	104.4	70	130	
Fe	56	2	He	535.158	1.544	3617062	0.41	500	107.0	70	130	
Co	59	2	He	5.287	3.734	53689	2.20	5	105.7	70	130	
Ni	60	2	He	5.374	0.907	16071	1.03	5	107.5	70	130	
Cu	63	2	He	4.608	6.496	46295	2.84	5	92.2	70	130	
Zn	66	2	He	5.368	6.206	9526	5.10	5	107.4	70	130	
As	75	2	He	5.188	3.571	8287	2.09	5	103.8	70	130	
Se	78	2	He	5.086	5.074	699	2.70	5	101.7	70	130	
B	11	1	nogas	33.588	1.801	207655	1.49	25	134.4	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	263.119	3.451	4305670	2.89	25	1052.5	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	540.018	1.518	21833	2.07	500	108.0	70	130	
Ca	44	1	nogas	519.679	2.160	656254	0.42	500	103.9	70	130	
Fe	56	1	nogas	513.692	2.166	15078753	1.53	500	102.7	70	130	
Se	77	1	nogas	-10.819	-19.565	23936	2.12	5	-216.4	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.134	5.671	1733	5.48	5	102.7	70	130	
Mo	95	1	nogas	5.335	2.552	31118	2.00	5	106.7	70	130	
Sn	118	1	nogas	5.138	2.896	44691	1.60	5	102.8	70	130	
Ba	137	1	nogas	5.022	6.100	20232	1.80	5	100.4	70	130	
Sb	121	2	He	5.371	0.148	26343	1.70	5	107.4	70	130	
Li	7	1	nogas	4.811	6.224	240959	1.47	5	96.2	70	130	
P	31	1	nogas	25.808	4.413	174799	0.93	25	103.2	70	130	
La	139	1	nogas	-21.067	-22.337	167	13.86	5	-421.3	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	2.778	2934.266	23	24.74	5	55.6	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1500416	1.02	1585712	94.62	70	125	
Ge	72	1	nogas	3345021	0.68	3337601	100.22	70	125	
In	115	1	nogas	2890461	4.37	2945133	98.14	70	125	
Bi	209	1	nogas	2195728	0.89	2217405	99.02	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	873994	1.84	850275	102.79	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	017_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:45:53-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.006	102.7	123	49.5	1	
Na	23	1	nogas	-3.348	-13.2	679523	1.6	100	
Mg	24	1	nogas	2.296	350.3	99809	146.4	100	
Al	27	1	nogas	-0.633	-352.7	60917	79.3	5	
K	39	1	nogas	9.856	24.8	8995143	0.3	100	
Ti	47	1	nogas	0.029	124.9	413	17.2	2.5	
V	51	1	nogas	-3.508	-1.4	411257	0.4	2.5	
Cr	52	1	nogas	-0.349	-22.6	49703	3.5	2.5	
Mn	55	1	nogas	-0.636	-2.7	20004	3.1	2.5	
Co	59	1	nogas	-0.038	-6.2	1683	3.5	2.5	
Ni	60	1	nogas	-0.147	-5.0	943	5.4	2.5	
Cu	63	1	nogas	-1.215	-4.5	28516	2.1	1	
Zn	66	1	nogas	-0.058	-41.0	873	12.0	2.5	
As	75	1	nogas	-0.871	-36.5	76631	1.6	2.5	
Sr	88	1	nogas	-0.026	-13.3	1310	7.7	2.5	
Ag	107	1	nogas	0.005	45.0	230	15.1	2.5	
Cd	111	1	nogas	0.000	-2384.3	40	66.1	1	
Sb	121	1	nogas	0.290	5.4	3967	5.1	2.5	
Tl	205	1	nogas	0.002	272.4	963	12.0	1	
Pb	208	1	nogas	-0.129	-4.0	4480	3.0	2.5	
U	238	1	nogas	-0.015	-22.9	520	15.7	2.5	
[Pb]	206	1	nogas	-0.111	-7.9	1233	4.9	2.5	
[Pb]	207	1	nogas	-0.116	-4.2	907	1.3	2.5	
Na	23	2	He	-6.186	-16.4	104429	1.9	100	
Mg	24	2	He	-2.546	-6.3	1090	15.0	100	
Al	27	2	He	-3.678	-3.0	860	7.0	5	
K	39	2	He	8.245	6.6	233859	0.2	100	
Ca	43	2	He	-11.101	-147.9	80	57.3	100	
Ca	44	2	He	-25.682	-22.9	2824	9.3	100	
V	51	2	He	-0.079	-33.5	6883	2.6	2.5	
Cr	52	2	He	-0.183	-26.7	6184	6.0	2.5	
Mn	55	2	He	-0.684	-2.6	2310	3.4	2.5	
Fe	56	2	He	-0.447	-5.4	14109	1.7	100	
Co	59	2	He	-0.027	-33.7	647	14.9	2.5	
Ni	60	2	He	-0.432	-3.8	430	10.7	2.5	
Cu	63	2	He	-0.975	-6.7	10313	4.2	1	
Zn	66	2	He	-0.427	-8.5	203	30.1	2.5	
As	75	2	He	-0.027	-150.7	504	13.0	2.5	
Se	78	2	He	0.095	118.9	93	15.8	1	
B	11	1	nogas	6.005	1.5	53930	2.0	10	

Initial Calibration Blank (ICB) Report

Si	28	1	nogas	0.229	1371.8	1437896	2.6	5	
Ca	43	1	nogas	-21.400	-8.0	957	7.1	100	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ca	44	1	nogas	-47.487	-15.7	317896	0.9	100	
Fe	56	1	nogas	-6.400	-33.0	1761369	3.2	100	
Se	77	1	nogas	-8.340	-29.8	24810	2.1	2.5	
Se	82	1	nogas	-0.024	-622.3	250	18.3	1	
Mo	95	1	nogas	0.004	513.8	333	40.7	2.5	
Sn	118	1	nogas	-0.100	-26.1	1000	23.4	5	
Ba	137	1	nogas	-0.058	-20.8	130	40.7	2.5	
Sb	121	2	He	0.272	6.1	1510	5.8	2.5	
P	31	1	nogas	-7.544	-13.3	118360	0.9	10	
La	139	1	nogas	-44.842	-5.1	47	24.7	2.5	
Au	197	1	nogas	-181.184	-2.2	10	0.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1506837	1.96	1585712	95.03	70	125	
Ge	72	1	nogas	3373470	0.76	3337601	101.07	70	125	
In	115	1	nogas	3002671	2.25	2945133	101.95	70	125	
Bi	209	1	nogas	2196984	2.93	2217405	99.08	70	125	
Ge	72	2	He	890208	0.79	850275	104.70	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	018_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:47:55-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	102.491	4.985	894228	1.97	100	102.5	90	110	
Na	23	1	nogas	9776.674	3.629	271069489	0.36	10000	97.8	90	110	
Mg	24	1	nogas	10018.391	4.451	179779629	0.47	10000	100.2	90	110	
Al	27	1	nogas	106.807	3.548	2382358	3.04	100	106.8	90	110	
K	39	1	nogas	10092.414	2.962	219111497	3.13	10000	100.9	90	110	
Ti	47	1	nogas	99.050	2.443	205198	1.54	100	99.1	90	110	
V	51	1	nogas	96.306	5.523	3248313	3.85	100	96.3	90	110	
Cr	52	1	nogas	99.600	3.825	2401815	2.96	100	99.6	90	110	
Mn	55	1	nogas	99.291	0.801	2945999	0.62	100	99.3	90	110	
Co	59	1	nogas	100.867	2.089	2563910	0.99	100	100.9	90	110	
Ni	60	1	nogas	99.566	2.598	602068	1.50	100	99.6	90	110	
Cu	63	1	nogas	99.939	2.312	1379187	1.99	100	99.9	90	110	
Zn	66	1	nogas	99.019	1.379	458413	0.58	100	99.0	90	110	
As	75	1	nogas	97.912	1.431	644359	0.22	100	97.9	90	110	
Sr	88	1	nogas	99.462	1.128	2810705	0.98	100	99.5	90	110	
Ag	107	1	nogas	100.425	0.228	1461290	1.01	100	100.4	90	110	
Cd	111	1	nogas	96.325	3.052	304722	0.69	100	96.3	90	110	
Sb	121	1	nogas	97.629	2.172	1218374	2.16	100	97.6	90	110	
Tl	205	1	nogas	99.014	5.878	1905895	4.30	100	99.0	90	110	
Pb	208	1	nogas	102.505	1.554	2650868	1.55	100	102.5	90	110	
U	238	1	nogas	104.803	1.559	2643819	4.20	100	104.8	90	110	
[Pb]	206	1	nogas	99.227	5.832	649009	3.70	100	99.2	90	110	
[Pb]	207	1	nogas	99.799	4.443	580897	2.14	100	99.8	90	110	
Na	23	2	He	10041.303	2.190	17772199	1.10	10000	100.4	90	110	
Mg	24	2	He	9947.304	2.078	9825517	1.28	10000	99.5	90	110	
Al	27	2	He	105.952	1.811	64821	0.84	100	106.0	90	110	
K	39	2	He	10327.753	0.431	10232129	0.42	10000	103.3	90	110	
Ca	43	2	He	10528.230	2.381	29043	2.88	10000	105.3	90	110	
Ca	44	2	He	10161.624	1.774	472411	2.05	10000	101.6	90	110	
V	51	2	He	99.547	1.339	666253	0.57	100	99.5	90	110	
Cr	52	2	He	100.475	2.854	744759	2.13	100	100.5	90	110	
Mn	55	2	He	101.251	1.696	526575	0.70	100	101.3	90	110	
Fe	56	2	He	10040.137	1.642	67181416	1.08	10000	100.4	90	110	
Co	59	2	He	98.739	0.443	981571	0.71	100	98.7	90	110	
Ni	60	2	He	99.475	1.100	268142	1.29	100	99.5	90	110	
Cu	63	2	He	102.135	1.342	674582	1.05	100	102.1	90	110	
Zn	66	2	He	100.395	1.076	161574	0.40	100	100.4	90	110	
As	75	2	He	99.123	0.985	147827	0.75	100	99.1	90	110	
Se	78	2	He	99.202	1.966	12097	1.03	100	99.2	90	110	
B	11	1	nogas	513.460	5.876	2732271	2.31	500	102.7	90	110	
Si	28	1	nogas	4939.370	0.414	56628499	0.73	5000	98.8	90	110	
Ca	43	1	nogas	10195.881	2.045	388523	1.20	10000	102.0	90	110	
Ca	44	1	nogas	10225.743	1.907	6621196	1.39	10000	102.3	90	110	
Fe	56	1	nogas	9861.691	0.989	259771064	0.62	10000	98.6	90	110	
Se	77	1	nogas	86.030	3.306	50985	0.79	100	86.0	90	110	ICV Main CR1 Failed
Se	82	1	nogas	96.760	0.877	28676	0.44	100	96.8	90	110	
Mo	95	1	nogas	99.949	1.922	588993	0.86	100	99.9	90	110	
Sn	118	1	nogas	98.152	1.789	817874	1.62	100	98.2	90	110	
Ba	137	1	nogas	98.930	2.786	390602	0.90	100	98.9	90	110	
Sb	121	2	He	95.756	2.006	464367	1.02	100	95.8	90	110	
Li	7	1	nogas	103.615	5.289	2035749	0.99	100	103.6	90	110	
P	31	1	nogas	512.874	1.028	1033639	0.42	500	102.6	90	110	
La	139	1	nogas	89.519	24.576	730	15.25	100	89.5	90	110	ICV Main CR1 Failed
Au	197	1	nogas	186.556	154.310	37	56.77	100	186.6	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1422553	4.02	1585712	89.71	70	125	
Ge	72	1	nogas	3411488	1.09	3337601	102.21	70	125	
In	115	1	nogas	2877474	3.43	2945133	97.70	70	125	
Bi	209	1	nogas	2191545	2.64	2217405	98.83	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	869007	1.08	850275	102.20	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	019ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:49:57-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.021	19.5	250	12.0	0	ICSA Main CR1 Failed
Na	23	1	nogas	104780.031	0.1	2621825592	0.9	0	
Mg	24	1	nogas	104304.830	2.6	1693653505	3.3	0	
Al	27	1	nogas	92520.013	2.8	1874213412	0.9	0	
K	39	1	nogas	104319.281	2.8	2045574512	0.9	0	
Ti	47	1	nogas	2059.768	3.3	3994241	0.6	0	
V	51	1	nogas	-5.671	-9.3	332336	2.4	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.808	24.2	72602	2.9	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.385	12.2	47000	2.6	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.459	2.1	13432	2.0	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.384	8.0	9543	3.5	0	ICSA Main CR1 Failed
Cu	63	1	nogas	-0.178	-102.6	39990	2.0	0	ICSA Main CR1 Failed
Zn	66	1	nogas	2.051	4.2	9956	1.5	0	ICSA Main CR1 Failed
As	75	1	nogas	2.404	13.9	90306	1.8	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.842	5.3	24207	1.2	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.028	28.9	533	18.5	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.935	13.8	5624	14.7	0	ICSA Main CR1 Failed
Sb	121	1	nogas	2.631	25.5	30979	21.4	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.050	38.3	1713	20.1	0	ICSA Main CR1 Failed
Pb	208	1	nogas	-0.061	-38.5	6224	9.8	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	-0.027	-98.2	1617	10.1	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	-0.040	-101.6	1233	18.9	0	ICSA Main CR1 Failed
Na	23	2	He	104478.369	2.3	174381744	1.2	0	
Mg	24	2	He	103425.719	1.0	96869102	0.3	0	
Al	27	2	He	88328.130	1.7	48901849	2.0	0	
K	39	2	He	100198.264	0.9	97305049	0.9	0	
Ca	43	2	He	98653.765	0.6	257253	1.6	0	
Ca	44	2	He	102009.965	5.3	4464980	5.9	0	
V	51	2	He	-0.188	-4.2	5692	1.9	0	ICSA Main CR1 Failed
Cr	52	2	He	0.141	84.3	7975	9.3	0	ICSA Main CR1 Failed
Mn	55	2	He	0.356	8.3	7211	2.0	0	ICSA Main CR1 Failed
Fe	56	2	He	101630.846	1.6	644872324	1.4	0	
Co	59	2	He	0.261	6.0	3310	3.4	0	ICSA Main CR1 Failed
Ni	60	2	He	0.009	1234.1	1520	18.2	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.839	-2.5	10380	1.5	0	ICSA Main CR1 Failed
Zn	66	2	He	0.458	39.1	1530	16.7	0	ICSA Main CR1 Failed
As	75	2	He	0.109	16.7	659	2.9	0	ICSA Main CR1 Failed
Se	78	2	He	0.423	24.0	124	8.5	0	ICSA Main CR1 Failed
B	11	1	nogas	8.317	13.0	64157	5.9	0	ICSA Main CR1 Failed
Si	28	1	nogas	66.155	6.7	2054067	1.5	0	
Ca	43	1	nogas	96020.262	2.7	3417081	1.2	0	
Ca	44	1	nogas	103961.946	4.4	60083489	1.0	0	
Fe	56	1	nogas	102150.043	4.0	2506293656	3.8	0	
Se	77	1	nogas	11.123	44.6	28523	0.9	0	
Se	82	1	nogas	0.046	217.8	257	11.9	0	ICSA Main CR1 Failed
Mo	95	1	nogas	1991.510	4.3	10995414	1.1	0	
Sn	118	1	nogas	0.285	17.5	3797	11.1	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.143	12.7	837	8.4	0	ICSA Main CR1 Failed
Sb	121	2	He	1.891	6.3	8842	6.5	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	100222.800	5.3	165070154	2.4	0	
La	139	1	nogas	1.441	1231.6	257	33.1	0	ICSA Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1448229	3.56	1585712	91.33	70	125	
Ge	72	1	nogas	3200707	3.66	3337601	95.90	70	125	
In	115	1	nogas	2622690	1.19	2945133	89.05	70	125	
Bi	209	1	nogas	1996244	1.81	2217405	90.03	70	125	
Ge	72	2	He	824228	1.08	850275	96.94	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	020ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T12:52:04-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	110.954	2.955	963238	1.23	100	111.0	80	120	
Na	23	1	nogas	110857.608	3.529	2874148598	1.01	100	110857.6	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	112162.199	4.760	1886375975	1.93	100	112162.2	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	90256.236	6.059	1829739386	2.08	100	90256.2	80	120	ICSB Main CR1 Failed
K	39	1	nogas	115947.083	3.382	2276284118	1.89	100	115947.1	80	120	
Ti	47	1	nogas	2146.076	3.636	4168022	0.58	100	2146.1	80	120	
V	51	1	nogas	109.805	3.534	3411046	1.16	100	109.8	80	120	
Cr	52	1	nogas	115.665	3.159	2611151	1.97	100	115.7	80	120	
Mn	55	1	nogas	113.048	4.529	3144905	3.48	100	113.0	80	120	
Co	59	1	nogas	117.083	3.829	2794175	0.45	100	117.1	80	120	
Ni	60	1	nogas	116.652	6.336	661638	2.35	100	116.7	80	120	
Cu	63	1	nogas	112.710	6.302	1454151	2.24	100	112.7	80	120	
Zn	66	1	nogas	117.072	4.385	508653	1.27	100	117.1	80	120	
As	75	1	nogas	116.192	3.547	703642	0.99	100	116.2	80	120	
Sr	88	1	nogas	117.618	3.930	3120572	1.74	100	117.6	80	120	
Ag	107	1	nogas	107.810	3.440	1473257	2.44	100	107.8	80	120	
Cd	111	1	nogas	115.476	0.661	336996	1.28	100	115.5	80	120	
Sb	121	1	nogas	119.882	3.543	1404710	0.92	100	119.9	80	120	
Tl	205	1	nogas	120.078	3.090	2041612	2.51	100	120.1	80	120	ICSB Main CR1 Failed
Pb	208	1	nogas	108.142	0.471	2796211	0.47	100	108.1	80	120	
U	238	1	nogas	129.055	0.990	2873347	1.84	100	129.1	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	121.262	2.333	700407	2.19	100	121.3	80	120	ICSB Main CR1 Failed
[Pb]	207	1	nogas	118.646	0.951	609865	1.21	100	118.6	80	120	
Na	23	2	He	115205.245	0.538	193406210	0.89	100	115205.2	80	120	
Mg	24	2	He	112453.088	0.769	105930968	0.52	100	112453.1	80	120	
Al	27	2	He	86623.415	2.153	48225301	0.86	100	86623.4	80	120	ICSB Main CR1 Failed
K	39	2	He	111138.328	0.393	107904558	0.39	100	111138.3	80	120	
Ca	43	2	He	110687.582	0.832	290253	0.65	100	110687.6	80	120	ICSB Main CR1 Failed
Ca	44	2	He	112405.092	1.657	4946721	1.37	100	112405.1	80	120	
V	51	2	He	116.597	1.960	743206	1.29	100	116.6	80	120	
Cr	52	2	He	116.897	0.699	825596	1.90	100	116.9	80	120	
Mn	55	2	He	116.594	0.864	577681	1.72	100	116.6	80	120	
Fe	56	2	He	114241.945	2.187	728987616	1.12	100	114241.9	80	120	ICSB Main CR1 Failed
Co	59	2	He	115.912	1.830	1098931	0.85	100	115.9	80	120	
Ni	60	2	He	114.112	2.286	293159	1.11	100	114.1	80	120	
Cu	63	2	He	113.532	0.933	713574	0.84	100	113.5	80	120	
Zn	66	2	He	116.171	0.703	178236	1.64	100	116.2	80	120	
As	75	2	He	116.473	0.901	165609	0.67	100	116.5	80	120	
Se	78	2	He	117.622	2.427	13668	1.19	100	117.6	80	120	
B	11	1	nogas	547.685	4.325	2898320	0.63	100	547.7	80	120	
Si	28	1	nogas	5873.080	6.140	62925766	2.28	100	5873.1	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	107169.984	6.962	3815465	2.99	100	107170.0	80	120	
Ca	44	1	nogas	115798.860	6.090	66961391	2.01	100	115798.9	80	120	
Fe	56	1	nogas	113482.612	3.225	2787950062	1.01	100	113482.6	80	120	
Se	77	1	nogas	115.306	9.259	55401	1.76	100	115.3	80	120	
Se	82	1	nogas	117.840	3.893	32740	1.72	100	117.8	80	120	
Mo	95	1	nogas	2131.767	2.827	11794765	2.33	100	2131.8	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	117.967	2.603	906095	1.71	100	118.0	80	120	
Ba	137	1	nogas	119.338	2.943	434480	1.76	100	119.3	80	120	
Sb	121	2	He	116.333	0.515	538223	1.59	100	116.3	80	120	
La	139	1	nogas	83.865	7.746	647	5.43	100	83.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1414669	3.67	1585712	89.21	70	125	
Ge	72	1	nogas	3206327	4.20	3337601	96.07	70	125	
In	115	1	nogas	2652755	1.22	2945133	90.07	70	125	
Bi	209	1	nogas	1934777	0.91	2217405	87.25	70	125	
Ge	72	2	He	828977	1.29	850275	97.50	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	028_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T13:08:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	102.920	1.825	848521	0.69	100	102.9	90	110	
Na	23	1	nogas	10160.177	1.444	276141031	1.39	10000	101.6	90	110	
Mg	24	1	nogas	10054.488	2.127	176900716	0.83	10000	100.5	90	110	
Al	27	1	nogas	94.941	1.126	2142933	0.32	100	94.9	90	110	
K	39	1	nogas	10008.736	2.415	219053413	1.57	10000	100.1	90	110	
Ti	47	1	nogas	98.402	3.022	205473	2.49	100	98.4	90	110	
V	51	1	nogas	94.533	3.344	3223608	2.02	100	94.5	90	110	
Cr	52	1	nogas	96.765	0.852	2354012	1.13	100	96.8	90	110	
Mn	55	1	nogas	99.798	1.333	2984458	1.96	100	99.8	90	110	
Co	59	1	nogas	101.649	6.502	2605334	7.21	100	101.6	90	110	
Ni	60	1	nogas	103.288	1.851	629615	2.65	100	103.3	90	110	
Cu	63	1	nogas	99.277	3.865	1381462	4.35	100	99.3	90	110	
Zn	66	1	nogas	103.826	2.794	484372	1.94	100	103.8	90	110	
As	75	1	nogas	97.398	1.515	646482	0.53	100	97.4	90	110	
Sr	88	1	nogas	101.247	2.040	2884152	2.85	100	101.2	90	110	
Ag	107	1	nogas	99.449	3.171	1458495	3.24	100	99.4	90	110	
Cd	111	1	nogas	95.035	3.370	306405	1.88	100	95.0	90	110	
Sb	121	1	nogas	102.866	4.527	1294128	5.19	100	102.9	90	110	
Tl	205	1	nogas	98.095	4.253	1850475	3.17	100	98.1	90	110	
Pb	208	1	nogas	99.797	1.406	2581033	1.40	100	99.8	90	110	
U	238	1	nogas	103.429	1.633	2554987	1.04	100	103.4	90	110	
[Pb]	206	1	nogas	100.309	2.657	643085	0.96	100	100.3	90	110	
[Pb]	207	1	nogas	99.860	2.086	569748	1.61	100	99.9	90	110	
Na	23	2	He	10124.650	0.460	18151294	0.28	10000	101.2	90	110	
Mg	24	2	He	10069.061	1.890	10074540	1.89	10000	100.7	90	110	
Al	27	2	He	91.606	2.671	57180	2.66	100	91.6	90	110	
K	39	2	He	10766.492	1.456	10657211	1.43	10000	107.7	90	110	
Ca	43	2	He	10212.750	0.701	28536	0.60	10000	102.1	90	110	
Ca	44	2	He	10017.634	0.728	471742	0.58	10000	100.2	90	110	
V	51	2	He	101.547	0.681	688269	0.63	100	101.5	90	110	
Cr	52	2	He	102.149	0.831	766865	0.74	100	102.1	90	110	
Mn	55	2	He	101.263	1.276	533446	1.19	100	101.3	90	110	
Fe	56	2	He	9938.408	1.567	67358956	1.47	10000	99.4	90	110	
Co	59	2	He	102.234	1.600	1029325	1.44	100	102.2	90	110	
Ni	60	2	He	107.321	0.422	292883	0.27	100	107.3	90	110	
Cu	63	2	He	102.878	0.831	688127	0.97	100	102.9	90	110	
Zn	66	2	He	103.512	2.110	168713	2.20	100	103.5	90	110	
As	75	2	He	102.519	0.932	154840	0.90	100	102.5	90	110	
Se	78	2	He	98.517	2.158	12170	2.18	100	98.5	90	110	
B	11	1	nogas	522.214	0.387	2626869	2.20	500	104.4	90	110	
Si	28	1	nogas	4937.923	3.354	57057476	3.15	5000	98.8	90	110	
Ca	43	1	nogas	10169.550	0.660	390628	0.92	10000	101.7	90	110	
Ca	44	1	nogas	9812.370	2.298	6418104	1.94	10000	98.1	90	110	
Fe	56	1	nogas	9908.542	2.902	263050364	2.61	10000	99.1	90	110	
Se	77	1	nogas	81.355	6.376	50092	2.24	100	81.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.461	1.339	29701	0.56	100	99.5	90	110	
Mo	95	1	nogas	101.145	1.475	600790	1.22	100	101.1	90	110	
Sn	118	1	nogas	100.912	2.868	856749	1.37	100	100.9	90	110	
Ba	137	1	nogas	97.285	1.459	391526	0.35	100	97.3	90	110	
Sb	121	2	He	97.922	2.049	481012	1.90	100	97.9	90	110	
Li	7	1	nogas	104.744	3.150	1943419	2.77	100	104.7	90	110	
P	31	1	nogas	495.678	2.846	1011341	2.16	500	99.1	90	110	
La	139	1	nogas	64.432	6.653	613	2.49	100	64.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	9.521	2270.511	23	65.47	100	9.5	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1342908	2.36	1585712	84.69	70	125	
Ge	72	1	nogas	3438390	0.83	3337601	103.02	70	125	
In	115	1	nogas	2931629	1.52	2945133	99.54	70	125	
Bi	209	1	nogas	2146948	1.73	2217405	96.82	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	880150	0.19	850275	103.51	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	029_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T13:10:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.014	52.5	183	35.5	1	
Na	23	1	nogas	40.237	6.9	1904301	3.3	100	
Mg	24	1	nogas	35.079	3.3	693446	1.7	100	
Al	27	1	nogas	29.172	3.6	725752	2.4	5	CCB Main CR1 Failed
K	39	1	nogas	11.372	131.3	9390603	0.4	100	
Ti	47	1	nogas	0.734	8.3	1930	3.9	2.5	
V	51	1	nogas	-0.411	-134.2	518329	0.1	2.5	
Cr	52	1	nogas	-0.334	-26.6	52057	1.6	2.5	
Mn	55	1	nogas	0.105	42.1	43134	0.1	2.5	
Co	59	1	nogas	-0.045	-20.3	1587	12.2	2.5	
Ni	60	1	nogas	-0.066	-31.9	1483	12.1	2.5	
Cu	63	1	nogas	-2.087	-3.5	17682	2.7	2	
Zn	66	1	nogas	0.637	10.6	4204	4.7	2.5	
As	75	1	nogas	0.738	77.0	89231	1.6	2.5	
Sr	88	1	nogas	0.012	73.8	2454	7.6	2.5	
Ag	107	1	nogas	0.017	35.0	420	24.9	2.5	
Cd	111	1	nogas	0.012	68.4	80	33.1	1	
Sb	121	1	nogas	2.187	22.2	28377	19.2	2.5	
Tl	205	1	nogas	0.053	37.2	1910	18.7	1	
Pb	208	1	nogas	-0.161	-3.1	3660	3.5	2.5	
U	238	1	nogas	0.099	67.2	3357	48.6	2.5	
[Pb]	206	1	nogas	-0.139	-7.0	1033	5.5	2.5	
[Pb]	207	1	nogas	-0.140	-5.6	760	6.0	2.5	
Na	23	2	He	39.664	4.8	190134	1.4	100	
Mg	24	2	He	35.643	0.7	40380	0.4	100	
Al	27	2	He	26.533	1.7	19237	1.2	5	CCB Main CR1 Failed
K	39	2	He	43.269	3.5	267792	0.5	100	
Ca	43	2	He	34.922	50.0	213	23.6	100	
Ca	44	2	He	21.927	6.7	5157	1.9	100	
V	51	2	He	0.053	26.2	7908	1.8	2.5	
Cr	52	2	He	-0.150	-21.7	6541	4.4	2.5	
Mn	55	2	He	-0.123	-21.7	5354	2.2	2.5	
Fe	56	2	He	34.863	1.0	260345	0.5	100	
Co	59	2	He	-0.035	-19.5	570	12.3	2.5	
Ni	60	2	He	-0.379	-9.9	587	17.2	2.5	
Cu	63	2	He	-1.585	-3.8	6395	6.8	2	
Zn	66	2	He	0.321	21.9	1453	7.7	2.5	
As	75	2	He	0.015	120.5	579	5.4	2.5	
Se	78	2	He	0.215	38.8	110	9.4	2	
B	11	1	nogas	6.322	2.5	53378	2.2	10	
Si	28	1	nogas	-11.023	-55.4	1366058	2.2	5	
Ca	43	1	nogas	31.013	21.3	3040	7.4	100	
Ca	44	1	nogas	-105.729	-12.6	294029	0.7	100	
Fe	56	1	nogas	31.936	8.6	2864160	1.4	100	
Se	77	1	nogas	3.883	89.5	29271	2.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.113	-51.8	233	8.9	2	
Mo	95	1	nogas	0.945	9.5	6041	6.2	2.5	
Sn	118	1	nogas	0.097	29.3	2720	8.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.011	338.0	413	36.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.539	10.5	7929	10.1	2.5	
P	31	1	nogas	10.761	19.4	156248	1.0	10	CCB Main CR1 Failed
La	139	1	nogas	1.231	65.4	293	2.0	2.5	
Au	197	1	nogas	-225.221	-36.0	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1443826	1.27	1585712	91.05	70	125	
Ge	72	1	nogas	3512007	3.15	3337601	105.23	70	125	
In	115	1	nogas	3016202	0.50	2945133	102.41	70	125	
Bi	209	1	nogas	2160445	0.78	2217405	97.43	70	125	
Ge	72	2	He	904969	0.58	850275	106.43	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	040_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T13:32:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	109.110	6.414	727584	1.44	100	109.1	90	110	
Na	23	1	nogas	9785.064	5.578	259331306	0.47	10000	97.9	90	110	
Mg	24	1	nogas	9883.183	5.864	169547416	0.76	10000	98.8	90	110	
Al	27	1	nogas	93.754	1.301	2006101	3.30	100	93.8	90	110	
K	39	1	nogas	10241.133	3.305	212086771	1.65	10000	102.4	90	110	
Ti	47	1	nogas	99.922	5.131	197524	2.47	100	99.9	90	110	
V	51	1	nogas	116.293	6.607	3640855	3.04	100	116.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	103.017	5.844	2368433	3.01	100	103.0	90	110	
Mn	55	1	nogas	104.976	1.485	2971514	1.18	100	105.0	90	110	
Co	59	1	nogas	100.089	1.455	2430276	3.77	100	100.1	90	110	
Ni	60	1	nogas	103.185	4.268	595433	1.65	100	103.2	90	110	
Cu	63	1	nogas	98.058	4.744	1292274	2.85	100	98.1	90	110	
Zn	66	1	nogas	104.716	4.125	462580	1.44	100	104.7	90	110	
As	75	1	nogas	104.505	2.709	651227	0.28	100	104.5	90	110	
Sr	88	1	nogas	104.491	1.743	2818895	0.91	100	104.5	90	110	
Ag	107	1	nogas	100.773	3.325	1400716	5.24	100	100.8	90	110	
Cd	111	1	nogas	96.764	3.826	308041	1.16	100	96.8	90	110	
Sb	121	1	nogas	102.310	3.090	1218620	0.78	100	102.3	90	110	
Tl	205	1	nogas	105.345	6.310	1799940	2.45	100	105.3	90	110	
Pb	208	1	nogas	92.645	2.591	2396644	2.58	100	92.6	90	110	
U	238	1	nogas	107.003	2.031	2396613	2.61	100	107.0	90	110	
[Pb]	206	1	nogas	102.295	4.743	594246	1.72	100	102.3	90	110	
[Pb]	207	1	nogas	101.131	3.746	523002	2.86	100	101.1	90	110	
Na	23	2	He	10448.674	3.266	18253093	2.66	10000	104.5	90	110	
Mg	24	2	He	10182.559	3.314	9928528	2.25	10000	101.8	90	110	
Al	27	2	He	90.535	0.550	55120	1.59	100	90.5	90	110	
K	39	2	He	10164.301	1.563	10073765	1.53	10000	101.6	90	110	
Ca	43	2	He	10193.122	2.031	27758	0.76	10000	101.9	90	110	
Ca	44	2	He	9849.203	1.762	452111	0.54	10000	98.5	90	110	
V	51	2	He	101.563	2.462	670870	1.18	100	101.6	90	110	
Cr	52	2	He	103.994	2.191	760832	1.93	100	104.0	90	110	
Mn	55	2	He	102.294	1.290	525251	2.09	100	102.3	90	110	
Fe	56	2	He	9896.131	2.585	65368839	1.65	10000	99.0	90	110	
Co	59	2	He	101.622	2.515	997138	0.99	100	101.6	90	110	
Ni	60	2	He	105.872	1.698	281620	0.36	100	105.9	90	110	
Cu	63	2	He	101.123	1.486	659526	0.91	100	101.1	90	110	
Zn	66	2	He	103.566	1.825	164523	1.32	100	103.6	90	110	
As	75	2	He	99.818	1.291	146964	1.24	100	99.8	90	110	
Se	78	2	He	95.305	1.939	11477	0.80	100	95.3	90	110	
B	11	1	nogas	566.517	6.564	2304394	4.34	500	113.3	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4893.126	4.184	53548121	1.85	5000	97.9	90	110	
Ca	43	1	nogas	10214.782	4.130	371549	2.90	10000	102.1	90	110	
Ca	44	1	nogas	10198.534	6.964	6300900	4.40	10000	102.0	90	110	
Fe	56	1	nogas	10279.394	3.712	258336806	1.03	10000	102.8	90	110	
Se	77	1	nogas	127.551	7.195	59531	1.66	100	127.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.012	2.634	28286	1.41	100	100.0	90	110	
Mo	95	1	nogas	100.420	4.485	564740	2.01	100	100.4	90	110	
Sn	118	1	nogas	99.506	4.894	834043	2.64	100	99.5	90	110	
Ba	137	1	nogas	94.617	2.364	376026	0.81	100	94.6	90	110	
Sb	121	2	He	97.620	1.188	467400	0.55	100	97.6	90	110	
Li	7	1	nogas	112.967	3.363	1688954	2.94	100	113.0	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	490.635	4.159	949255	1.63	500	98.1	90	110	
La	139	1	nogas	61.036	31.765	587	14.29	100	61.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-160.349	-98.259	10	100.00	100	-160.3	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1088343	5.34	1585712	68.63	70	125	ISTD Failed
Ge	72	1	nogas	3257691	2.63	3337601	97.61	70	125	
In	115	1	nogas	2895888	3.16	2945133	98.33	70	125	
Bi	209	1	nogas	1947286	4.21	2217405	87.82	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	857967	1.57	850275	100.90	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	041_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T13:34:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.025	66.0	223	53.8	1	
Na	23	1	nogas	49.774	13.5	2128739	3.9	100	
Mg	24	1	nogas	38.134	8.3	734689	3.3	100	
Al	27	1	nogas	30.527	2.1	735782	1.8	5	CCB Main CR1 Failed
K	39	1	nogas	21.985	59.5	9362146	1.1	100	
Ti	47	1	nogas	0.777	18.3	1970	14.9	2.5	
V	51	1	nogas	6.652	19.8	704906	2.2	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.349	-22.8	50328	0.8	2.5	
Mn	55	1	nogas	0.099	74.9	41787	2.5	2.5	
Co	59	1	nogas	-0.047	-16.9	1500	16.8	2.5	
Ni	60	1	nogas	-0.064	-66.0	1457	17.6	2.5	
Cu	63	1	nogas	-2.328	-3.5	13985	4.1	2	
Zn	66	1	nogas	0.587	6.7	3870	5.8	2.5	
As	75	1	nogas	3.493	22.2	102654	0.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.065	17.8	3897	5.2	2.5	
Ag	107	1	nogas	0.016	37.0	390	24.5	2.5	
Cd	111	1	nogas	0.022	17.1	113	10.2	1	
Sb	121	1	nogas	2.173	16.5	27670	20.0	2.5	
Tl	205	1	nogas	0.044	38.7	1630	19.9	1	
Pb	208	1	nogas	-0.181	-11.0	3130	16.4	2.5	
U	238	1	nogas	0.118	53.0	3567	42.0	2.5	
[Pb]	206	1	nogas	-0.173	-4.6	757	8.0	2.5	
[Pb]	207	1	nogas	-0.150	-14.3	650	18.9	2.5	
Na	23	2	He	58.049	1.6	220245	0.6	100	
Mg	24	2	He	37.599	1.3	41720	2.2	100	
Al	27	2	He	27.537	1.3	19530	0.1	5	CCB Main CR1 Failed
K	39	2	He	57.342	4.2	281427	0.8	100	
Ca	43	2	He	37.415	40.7	217	19.2	100	
Ca	44	2	He	27.140	9.6	5321	2.0	100	
V	51	2	He	0.490	4.6	10746	1.5	2.5	
Cr	52	2	He	-0.182	-31.0	6191	6.3	2.5	
Mn	55	2	He	-0.159	-29.9	5077	4.1	2.5	
Fe	56	2	He	37.738	4.0	275833	2.5	100	
Co	59	2	He	-0.034	-27.8	567	17.7	2.5	
Ni	60	2	He	-0.373	-9.8	593	16.2	2.5	
Cu	63	2	He	-1.684	-2.8	5634	5.3	2	
Zn	66	2	He	0.237	24.4	1293	8.5	2.5	
As	75	2	He	0.030	41.9	592	2.3	2.5	
Se	78	2	He	0.202	43.2	107	11.3	2	
B	11	1	nogas	7.325	7.3	45922	3.9	10	
Si	28	1	nogas	-15.126	-30.3	1284008	1.5	5	
Ca	43	1	nogas	39.693	22.3	3284	6.6	100	
Ca	44	1	nogas	-134.169	-9.3	268704	1.0	100	
Fe	56	1	nogas	59.299	8.7	3502815	0.3	100	
Se	77	1	nogas	21.661	32.9	33347	2.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.101	-151.4	230	17.4	2	
Mo	95	1	nogas	0.942	3.1	5868	1.0	2.5	
Sn	118	1	nogas	0.137	36.3	3020	13.7	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.058	30.3	600	14.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.414	2.0	7182	2.0	2.5	
P	31	1	nogas	11.498	26.0	153333	0.7	10	CCB Main CR1 Failed
La	139	1	nogas	6.672	150.1	317	15.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-318.930	0.0	0	#DIV/0!	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1129302	4.18	1585712	71.22	70	125	
Ge	72	1	nogas	3418472	3.66	3337601	102.42	70	125	
In	115	1	nogas	2966452	2.91	2945133	100.72	70	125	
Bi	209	1	nogas	2002609	2.68	2217405	90.31	70	125	
Ge	72	2	He	890553	1.21	850275	104.74	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	059CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:11:01-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	70	113.63
Na	23	1	nogas	1091986	0.00
Mg	24	1	nogas	67969	0.00
Al	27	1	nogas	90581	0.00
K	39	1	nogas	8588531	0.00
Ti	47	1	nogas	413	5.89
V	51	1	nogas	335282	0.00
Cr	52	1	nogas	43064	0.00
Mn	55	1	nogas	41106	0.00
Co	59	1	nogas	1217	1.48
Ni	60	1	nogas	1603	0.31
Cu	63	1	nogas	38744	0.01
Zn	66	1	nogas	3327	0.10
As	75	1	nogas	62915	0.01
Sr	88	1	nogas	2664	0.45
Ag	107	1	nogas	157	15.42
Cd	111	1	nogas	17	549.91
Sb	121	1	nogas	2494	0.26
Tl	205	1	nogas	700	1.87
Pb	208	1	nogas	1853	0.57
[Pb]	206	1	nogas	493	4.90
[Pb]	207	1	nogas	453	1.22
Na	23	2	He	148478	0.00
Mg	24	2	He	4384	0.08
Al	27	2	He	2314	0.21
K	39	2	He	243708	0.00
Ca	43	2	He	107	55.82
Ca	44	2	He	3617	0.14
V	51	2	He	5140	0.02
Cr	52	2	He	6228	0.11
Mn	55	2	He	4524	0.16
Fe	56	2	He	24416	0.01
Co	59	2	He	427	3.03
Ni	60	2	He	673	0.84
Cu	63	2	He	18236	0.01
Zn	66	2	He	970	1.59
As	75	2	He	430	1.10
Se	78	2	He	115	5.28
B	11	1	nogas	40300	0.01
Si	28	1	nogas	1073779	0.00
Ca	43	1	nogas	1893	0.14
Ca	44	1	nogas	234983	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2831592	0.00
Se	77	1	nogas	19794	0.01
Se	82	1	nogas	190	12.70
Mo	95	1	nogas	313	1.56
Sn	118	1	nogas	1977	0.10
Ba	137	1	nogas	743	0.46
Sb	121	2	He	887	1.10
Li	7	1	nogas	91358	0.00
P	31	1	nogas	107862	0.00
La	139	1	nogas	313	0.59

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1112547	0.59
Ge	72	1	nogas	3372491	1.70
In	115	1	nogas	3088645	2.53
Bi	209	1	nogas	2025845	2.87
Ge	72	2	He	901118	1.79

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	060CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:12:59-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	12835	0.03
Na	23	1	nogas	6289842	0.00
Mg	24	1	nogas	3539152	0.00
Al	27	1	nogas	95713	0.00
K	39	1	nogas	12795002	0.00
Ti	47	1	nogas	4511	0.08
V	51	1	nogas	389743	0.00
Cr	52	1	nogas	90427	0.00
Mn	55	1	nogas	90064	0.00
Co	59	1	nogas	51934	0.00
Ni	60	1	nogas	13982	0.00
Cu	63	1	nogas	40137	0.01
Zn	66	1	nogas	11234	0.01
As	75	1	nogas	71269	0.00
Sr	88	1	nogas	60422	0.00
Ag	107	1	nogas	30206	0.00
Cd	111	1	nogas	6091	0.11
Sb	121	1	nogas	28303	0.01
Tl	205	1	nogas	35590	0.01
Pb	208	1	nogas	52050	0.00
[Pb]	206	1	nogas	13036	0.02
[Pb]	207	1	nogas	11394	0.03
Na	23	2	He	522034	0.00
Mg	24	2	He	206580	0.00
Al	27	2	He	2677	0.23
K	39	2	He	442772	0.00
Ca	43	2	He	617	2.13
Ca	44	2	He	11964	0.02
V	51	2	He	18581	0.01
Cr	52	2	He	23249	0.05
Mn	55	2	He	13212	0.01
Fe	56	2	He	1415844	0.00
Co	59	2	He	21570	0.01
Ni	60	2	He	6695	0.05
Cu	63	2	He	19247	0.01
Zn	66	2	He	3884	0.03
As	75	2	He	3507	0.04
Se	78	2	He	353	3.02
B	11	1	nogas	80894	0.00
Si	28	1	nogas	2223321	0.00

Calibration Standard Report

Ca	43	1	nogas	8859	0.02
Ca	44	1	nogas	351109	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8058684	0.00
Se	77	1	nogas	20141	0.01
Se	82	1	nogas	683	2.29
Mo	95	1	nogas	12021	0.01
Sn	118	1	nogas	18510	0.02
Ba	137	1	nogas	8062	0.06
Sb	121	2	He	10587	0.03
P	31	1	nogas	122139	0.00
La	139	1	nogas	137	11.15

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1053524	3.45	1112547	94.69	70	125	
Ge	72	1	nogas	3479966	0.78	3372491	103.19	70	125	
In	115	1	nogas	2986184	0.64	3088645	96.68	70	125	
Bi	209	1	nogas	2079415	1.87	2025845	102.64	70	125	
Ge	72	2	He	887419	0.58	901118	98.48	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	061CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:14:58-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	34796	0.01
Na	23	1	nogas	14475800	0.00
Mg	24	1	nogas	8825424	0.00
Al	27	1	nogas	197475	0.00
K	39	1	nogas	19454337	0.00
Ti	47	1	nogas	11033	0.01
V	51	1	nogas	474195	0.00
Cr	52	1	nogas	164195	0.00
Mn	55	1	nogas	193814	0.00
Co	59	1	nogas	130890	0.00
Ni	60	1	nogas	32940	0.01
Cu	63	1	nogas	82505	0.00
Zn	66	1	nogas	27030	0.01
As	75	1	nogas	88031	0.00
Sr	88	1	nogas	149199	0.00
Ag	107	1	nogas	76878	0.00
Cd	111	1	nogas	15671	0.02
Sb	121	1	nogas	66031	0.00
Tl	205	1	nogas	94134	0.00
Pb	208	1	nogas	129154	0.00
[Pb]	206	1	nogas	32102	0.01
[Pb]	207	1	nogas	28105	0.00
Na	23	2	He	1091051	0.00
Mg	24	2	He	516328	0.00
Al	27	2	He	5431	0.05
K	39	2	He	757061	0.00
Ca	43	2	He	1397	0.58
Ca	44	2	He	27975	0.01
V	51	2	He	40273	0.00
Cr	52	2	He	46155	0.00
Mn	55	2	He	30622	0.01
Fe	56	2	He	3527672	0.00
Co	59	2	He	52341	0.00
Ni	60	2	He	15400	0.01
Cu	63	2	He	41958	0.00
Zn	66	2	He	9786	0.03
As	75	2	He	8263	0.02
Se	78	2	He	720	0.10
B	11	1	nogas	149089	0.00
Si	28	1	nogas	3877753	0.00

Calibration Standard Report

Ca	43	1	nogas	21559	0.02
Ca	44	1	nogas	544210	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	16374030	0.00
Se	77	1	nogas	20595	0.01
Se	82	1	nogas	1727	0.27
Mo	95	1	nogas	29949	0.01
Sn	118	1	nogas	43849	0.00
Ba	137	1	nogas	19955	0.01
Sb	121	2	He	25228	0.01
P	31	1	nogas	155941	0.00
La	139	1	nogas	200	13.23

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1078235	3.19	1112547	96.92	70	125	
Ge	72	1	nogas	3513038	2.21	3372491	104.17	70	125	
In	115	1	nogas	3008735	1.84	3088645	97.41	70	125	
Bi	209	1	nogas	2060600	2.16	2025845	101.72	70	125	
Ge	72	2	He	904068	1.95	901118	100.33	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	062CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:16:56-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	66138	0.01
Na	23	1	nogas	26429674	0.00
Mg	24	1	nogas	16827169	0.00
Al	27	1	nogas	363068	0.00
K	39	1	nogas	29502246	0.00
Ti	47	1	nogas	20325	0.00
V	51	1	nogas	614995	0.00
Cr	52	1	nogas	278417	0.00
Mn	55	1	nogas	321171	0.00
Co	59	1	nogas	243195	0.00
Ni	60	1	nogas	58507	0.01
Cu	63	1	nogas	141832	0.00
Zn	66	1	nogas	46095	0.01
As	75	1	nogas	117868	0.00
Sr	88	1	nogas	286422	0.00
Ag	107	1	nogas	145065	0.00
Cd	111	1	nogas	30013	0.02
Sb	121	1	nogas	131577	0.00
Tl	205	1	nogas	175727	0.00
Pb	208	1	nogas	243743	0.00
[Pb]	206	1	nogas	60423	0.00
[Pb]	207	1	nogas	52576	0.01
Na	23	2	He	2016259	0.00
Mg	24	2	He	977046	0.00
Al	27	2	He	9613	0.04
K	39	2	He	1214129	0.00
Ca	43	2	He	2610	0.18
Ca	44	2	He	49212	0.00
V	51	2	He	71881	0.00
Cr	52	2	He	80806	0.00
Mn	55	2	He	53107	0.00
Fe	56	2	He	6699822	0.00
Co	59	2	He	100936	0.00
Ni	60	2	He	27578	0.00
Cu	63	2	He	71560	0.00
Zn	66	2	He	16388	0.01
As	75	2	He	14983	0.02
Se	78	2	He	1243	0.39
B	11	1	nogas	251519	0.00
Si	28	1	nogas	6243412	0.00

Calibration Standard Report

Ca	43	1	nogas	39533	0.01
Ca	44	1	nogas	840260	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	28223207	0.00
Se	77	1	nogas	23485	0.01
Se	82	1	nogas	3000	0.17
Mo	95	1	nogas	56654	0.00
Sn	118	1	nogas	85499	0.00
Ba	137	1	nogas	39259	0.01
Sb	121	2	He	49046	0.01
P	31	1	nogas	194487	0.00
La	139	1	nogas	190	14.66

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1045605	4.31	1112547	93.98	70	125	
Ge	72	1	nogas	3394183	1.92	3372491	100.64	70	125	
In	115	1	nogas	2978530	1.28	3088645	96.43	70	125	
Bi	209	1	nogas	2067587	3.00	2025845	102.06	70	125	
Ge	72	2	He	892564	2.58	901118	99.05	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	063CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:18:53-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	670503	0.00
Na	23	1	nogas	260161197	0.00
Mg	24	1	nogas	166441541	0.00
Al	27	1	nogas	2279290	0.00
K	39	1	nogas	210855221	0.00
Ti	47	1	nogas	194683	0.00
V	51	1	nogas	3009247	0.00
Cr	52	1	nogas	2267960	0.00
Mn	55	1	nogas	2865239	0.00
Co	59	1	nogas	2445709	0.00
Ni	60	1	nogas	564036	0.00
Cu	63	1	nogas	1253884	0.00
Zn	66	1	nogas	453433	0.00
As	75	1	nogas	597256	0.00
Sr	88	1	nogas	2830957	0.00
Ag	107	1	nogas	1439645	0.00
Cd	111	1	nogas	306811	0.00
Sb	121	1	nogas	1231423	0.00
Tl	205	1	nogas	1815300	0.00
Pb	208	1	nogas	2412104	0.00
[Pb]	206	1	nogas	598618	0.00
[Pb]	207	1	nogas	529457	0.00
Na	23	2	He	17689834	0.00
Mg	24	2	He	9661659	0.00
Al	27	2	He	59898	0.00
K	39	2	He	10012553	0.00
Ca	43	2	He	27027	0.01
Ca	44	2	He	450190	0.00
V	51	2	He	665436	0.00
Cr	52	2	He	746703	0.00
Mn	55	2	He	506598	0.00
Fe	56	2	He	64854616	0.00
Co	59	2	He	991618	0.00
Ni	60	2	He	266719	0.00
Cu	63	2	He	657054	0.00
Zn	66	2	He	157110	0.00
As	75	2	He	146447	0.00
Se	78	2	He	11394	0.02
B	11	1	nogas	2249776	0.00
Si	28	1	nogas	51371814	0.00

Calibration Standard Report

Ca	43	1	nogas	377507	0.00
Ca	44	1	nogas	6400616	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	250949772	0.00
Se	77	1	nogas	44171	0.00
Se	82	1	nogas	28162	0.01
Mo	95	1	nogas	576329	0.00
Sn	118	1	nogas	821210	0.00
Ba	137	1	nogas	391264	0.00
Sb	121	2	He	462479	0.00
P	31	1	nogas	907934	0.00
La	139	1	nogas	667	4.08

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1006205	5.11	1112547	90.44	70	125	
Ge	72	1	nogas	3404846	3.10	3372491	100.96	70	125	
In	115	1	nogas	2842048	0.69	3088645	92.02	70	125	
Bi	209	1	nogas	1954725	2.36	2025845	96.49	70	125	
Ge	72	2	He	847955	0.39	901118	94.10	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	064CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:20:52-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1296751	0.00
Na	23	1	nogas	502648111	0.00
Mg	24	1	nogas	317073007	0.00
Al	27	1	nogas	3881594	0.00
K	39	1	nogas	405485059	0.00
Ti	47	1	nogas	386243	0.00
V	51	1	nogas	5568420	0.00
Cr	52	1	nogas	4484300	0.00
Mn	55	1	nogas	5667499	0.00
Co	59	1	nogas	4661033	0.00
Ni	60	1	nogas	1097014	0.00
Cu	63	1	nogas	2451547	0.00
Zn	66	1	nogas	902141	0.00
As	75	1	nogas	1119396	0.00
Sr	88	1	nogas	5453646	0.00
Ag	107	1	nogas	2758736	0.00
Cd	111	1	nogas	591323	0.00
Sb	121	1	nogas	2529037	0.00
Tl	205	1	nogas	3482412	0.00
Pb	208	1	nogas	4856530	0.00
[Pb]	206	1	nogas	1177649	0.00
[Pb]	207	1	nogas	1048775	0.00
Na	23	2	He	34052332	0.00
Mg	24	2	He	18354027	0.00
Al	27	2	He	104953	0.00
K	39	2	He	18704152	0.00
Ca	43	2	He	51284	0.00
Ca	44	2	He	874030	0.00
V	51	2	He	1314854	0.00
Cr	52	2	He	1417613	0.00
Mn	55	2	He	983902	0.00
Fe	56	2	He	126357701	0.00
Co	59	2	He	1948647	0.00
Ni	60	2	He	514328	0.00
Cu	63	2	He	1257286	0.00
Zn	66	2	He	310423	0.00
As	75	2	He	286926	0.00
Se	78	2	He	21830	0.01
B	11	1	nogas	4359306	0.00
Si	28	1	nogas	96361792	0.00

Calibration Standard Report

Ca	43	1	nogas	715738	0.00
Ca	44	1	nogas	11921099	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	497840761	0.00
Se	77	1	nogas	67552	0.00
Se	82	1	nogas	55406	0.00
Mo	95	1	nogas	1118494	0.00
Sn	118	1	nogas	1603151	0.00
Ba	137	1	nogas	780394	0.00
Sb	121	2	He	946833	0.00
P	31	1	nogas	1647625	0.00
La	139	1	nogas	1160	0.59

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	993950	3.08	1112547	89.34	70	125	
Ge	72	1	nogas	3266152	1.95	3372491	96.85	70	125	
In	115	1	nogas	2827681	2.42	3088645	91.55	70	125	
Bi	209	1	nogas	1985438	2.00	2025845	98.01	70	125	
Ge	72	2	He	854308	1.68	901118	94.81	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	065_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:22:50-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	107.098	6.442	707239	1.42	100	107.1	90	110	
Na	23	1	nogas	10553.564	7.062	271342964	3.70	10000	105.5	90	110	
Mg	24	1	nogas	10718.307	4.103	174212666	1.03	10000	107.2	90	110	
Al	27	1	nogas	94.934	2.773	2024097	2.47	100	94.9	90	110	
K	39	1	nogas	10590.654	0.614	228489697	1.77	10000	105.9	90	110	
Ti	47	1	nogas	96.898	3.016	195234	1.49	100	96.9	90	110	
V	51	1	nogas	97.835	3.004	3019459	1.82	100	97.8	90	110	
Cr	52	1	nogas	100.333	2.915	2364289	2.49	100	100.3	90	110	
Mn	55	1	nogas	104.708	2.833	3109742	1.17	100	104.7	90	110	
Co	59	1	nogas	101.837	2.895	2495175	2.26	100	101.8	90	110	
Ni	60	1	nogas	96.875	2.010	556851	0.94	100	96.9	90	110	
Cu	63	1	nogas	99.763	3.170	1293442	1.46	100	99.8	90	110	
Zn	66	1	nogas	96.855	2.186	455282	0.58	100	96.9	90	110	
As	75	1	nogas	100.298	0.950	615732	1.10	100	100.3	90	110	
Sr	88	1	nogas	102.228	1.286	2925048	0.59	100	102.2	90	110	
Ag	107	1	nogas	97.918	3.040	1417794	1.90	100	97.9	90	110	
Cd	111	1	nogas	100.551	2.304	315784	0.74	100	100.6	90	110	
Sb	121	1	nogas	104.877	1.857	1374355	0.30	100	104.9	90	110	
Tl	205	1	nogas	110.168	6.498	1979767	5.18	100	110.2	90	110	ICV Main CR1 Failed
Pb	208	1	nogas	104.259	1.120	2529076	1.12	100	104.3	90	110	
U	238	1	nogas	102.486	0.852	2399982	2.21	100	102.5	90	110	
[Pb]	206	1	nogas	108.410	6.394	655297	4.45	100	108.4	90	110	
[Pb]	207	1	nogas	101.569	4.254	546086	2.20	100	101.6	90	110	
Na	23	2	He	10460.031	3.674	18708216	3.03	10000	104.6	90	110	
Mg	24	2	He	10388.070	2.445	10016603	1.86	10000	103.9	90	110	
Al	27	2	He	91.088	3.604	52593	2.77	100	91.1	90	110	
K	39	2	He	10840.227	2.270	10367602	2.22	10000	108.4	90	110	
Ca	43	2	He	10471.213	0.923	28248	0.48	10000	104.7	90	110	
Ca	44	2	He	10168.613	0.781	466157	0.81	10000	101.7	90	110	
V	51	2	He	101.065	1.210	694345	1.12	100	101.1	90	110	
Cr	52	2	He	101.764	3.004	760277	2.68	100	101.8	90	110	
Mn	55	2	He	104.034	2.402	536772	1.89	100	104.0	90	110	
Fe	56	2	He	10149.901	1.854	67018661	1.45	10000	101.5	90	110	
Co	59	2	He	100.406	2.013	1020569	1.58	100	100.4	90	110	
Ni	60	2	He	97.308	2.009	262930	1.58	100	97.3	90	110	
Cu	63	2	He	100.350	3.709	666524	3.01	100	100.4	90	110	
Zn	66	2	He	99.095	2.026	160704	1.39	100	99.1	90	110	
As	75	2	He	101.652	1.728	152370	1.15	100	101.7	90	110	
Se	78	2	He	102.284	2.349	11770	2.14	100	102.3	90	110	
B	11	1	nogas	535.130	6.254	2389803	1.31	500	107.0	90	110	
Si	28	1	nogas	597.245	2.957	7084210	3.06	5000	11.9	90	110	ICV Main CR1 Failed
Ca	43	1	nogas	10286.925	1.673	388120	0.12	10000	102.9	90	110	
Ca	44	1	nogas	10140.143	1.331	6476384	1.73	10000	101.4	90	110	
Fe	56	1	nogas	10357.445	2.732	269893039	2.06	10000	103.6	90	110	
Se	77	1	nogas	84.470	3.424	41394	0.69	100	84.5	90	110	ICV Main CR1 Failed
Se	82	1	nogas	101.113	2.849	29334	1.72	100	101.1	90	110	
Mo	95	1	nogas	100.054	2.060	586108	2.01	100	100.1	90	110	
Sn	118	1	nogas	96.530	1.901	820778	2.85	100	96.5	90	110	
Ba	137	1	nogas	98.294	3.501	404733	0.75	100	98.3	90	110	
Sb	121	2	He	104.840	3.472	513787	2.94	100	104.8	90	110	
Li	7	1	nogas	115.212	7.462	1682916	6.03	100	115.2	90	110	ICV Main CR1 Failed
P	31	1	nogas	550.230	1.562	1000039	1.61	500	110.0	90	110	ICV Main CR1 Failed
La	139	1	nogas	90.383	10.301	703	4.57	100	90.4	90	110	
Au	197	1	nogas	-349.574	-25.548	7	86.60	100	-349.6	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1010603	7.15	1112547	90.84	70	125	
Ge	72	1	nogas	3427867	1.63	3372491	101.64	70	125	
In	115	1	nogas	2984748	3.02	3088645	96.64	70	125	
Bi	209	1	nogas	2025313	2.11	2025845	99.97	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	886650	0.64	901118	98.39	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	066SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:24:52-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	059CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.944	1.944	2.17	14482	0.01	2000	
Na	23	1	nogas	193.283	193.283	3.45	6225156	0.00	200000	
Mg	24	1	nogas	205.705	205.705	5.39	3520402	0.01	200000	
Al	27	1	nogas	0.186	0.186	95.83	96516	0.00	2000	
K	39	1	nogas	189.391	189.391	8.78	12748728	0.00	200000	
Ti	47	1	nogas	2.054	2.054	10.48	4577	0.04	2000	
V	51	1	nogas	-1.835	-1.835	-8.55	292749	0.00	2000	
Cr	52	1	nogas	1.862	1.862	3.32	87470	0.00	2000	
Mn	55	1	nogas	1.629	1.629	4.24	90166	0.00	2000	
Co	59	1	nogas	2.078	2.078	1.99	52502	0.00	2000	
Ni	60	1	nogas	2.256	2.256	2.27	14506	0.02	2000	
Cu	63	1	nogas	-0.084	-0.084	-107.61	38594	0.00	2000	
Zn	66	1	nogas	2.281	2.281	4.15	10960	0.02	2000	
As	75	1	nogas	1.524	1.524	25.60	68498	0.00	2000	
Sr	88	1	nogas	2.044	2.044	2.53	61586	0.00	2000	
Ag	107	1	nogas	2.097	2.097	6.31	30724	0.01	2000	
Cd	111	1	nogas	1.970	1.970	4.86	6525	0.03	2000	
Sb	121	1	nogas	2.611	2.611	2.85	36943	0.01	2000	
Tl	205	1	nogas	2.033	2.033	2.11	39655	0.01	2000	
Pb	208	1	nogas	2.180	2.180	2.42	54697	0.00	2000	
U	238	1	nogas	2.106	2.106	3.44	53281	0.00	2000	
[Pb]	206	1	nogas	2.093	2.093	3.17	14000	0.01	2000	
[Pb]	207	1	nogas	2.013	2.013	2.83	12001	0.02	2000	
Na	23	2	He	196.914	196.914	1.94	494381	0.04	200000	
Mg	24	2	He	206.156	206.156	2.46	202519	0.10	200000	
Al	27	2	He	-1.891	-1.891	-19.52	2277	-0.08	2000	
K	39	2	He	197.667	197.667	1.60	428313	0.05	200000	
Ca	43	2	He	147.371	147.371	11.52	500	29.47	200000	
Ca	44	2	He	182.745	182.745	7.91	11844	1.54	200000	
V	51	2	He	1.702	1.702	2.22	17362	0.01	2000	
Cr	52	2	He	1.950	1.950	2.72	20532	0.01	2000	
Mn	55	2	He	1.753	1.753	6.87	13395	0.01	2000	
Fe	56	2	He	212.809	212.809	1.51	1425146	0.01	200000	
Co	59	2	He	2.065	2.065	2.07	21349	0.01	2000	
Ni	60	2	He	1.578	1.578	6.25	6405	0.02	2000	
Cu	63	2	He	0.879	0.879	14.08	18299	0.00	2000	
Zn	66	2	He	1.529	1.529	14.25	3560	0.04	2000	
As	75	2	He	2.106	2.106	4.93	3563	0.06	2000	
Se	78	2	He	1.804	1.804	8.65	375	0.48	2000	
B	11	1	nogas	22.864	22.864	8.38	153716	0.01	2000	
Si	28	1	nogas	118.990	118.990	6.47	2301179	0.01	2000	
Ca	43	1	nogas	185.837	185.837	6.54	8962	2.07	200000	
Ca	44	1	nogas	166.851	166.851	7.34	343900	0.05	200000	
Fe	56	1	nogas	179.788	179.788	4.33	7566935	0.00	200000	

Sample Report

Se	77	1	nogas	-4.479	-4.479	-62.02	19127	-0.02	2000	
Se	82	1	nogas	2.145	2.145	5.32	817	0.26	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	2.252	2.252	0.32	13605	0.02	2000	
Sn	118	1	nogas	2.100	2.100	3.91	20763	0.01	2000	
Ba	137	1	nogas	1.748	1.748	4.43	8315	0.02	2000	
Sb	121	2	He	2.513	2.513	3.73	13138	0.02	2000	
La	139	1	nogas	-39.666	-39.666	-7.17	133	-29.75	2000	
Au	197	1	nogas	-165.654	-165.654	-230.01	20	-828.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1131357	2.98	1112547	101.69	70	125	
Ge	72	1	nogas	3452890	2.43	3372491	102.38	70	125	
In	115	1	nogas	3140099	1.79	3088645	101.67	70	125	
Bi	209	1	nogas	2156231	1.11	2025845	106.44	70	125	
Ge	72	2	He	884447	0.57	901118	98.15	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	067LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:26:50-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	4.674	4.527	35901	1.81	5	93.5	70	130	
Na	23	1	nogas	522.320	5.031	14885911	1.20	500	104.5	70	130	
Mg	24	1	nogas	553.725	5.230	9331660	1.93	500	110.7	70	130	
Al	27	1	nogas	5.090	1.255	198137	0.57	5	101.8	70	130	
K	39	1	nogas	499.219	4.671	19328033	1.42	500	99.8	70	130	
Ti	47	1	nogas	5.116	3.031	10847	3.94	5	102.3	70	130	
V	51	1	nogas	1.429	13.834	384811	0.82	5	28.6	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	5.019	1.802	161889	0.66	5	100.4	70	130	
Mn	55	1	nogas	5.086	3.406	193232	2.42	5	101.7	70	130	
Co	59	1	nogas	5.228	0.765	130923	0.37	5	104.6	70	130	
Ni	60	1	nogas	5.467	2.477	33227	2.52	5	109.3	70	130	
Cu	63	1	nogas	3.247	8.696	81203	3.65	5	64.9	70	130	LLICV Main CR1 Failed
Zn	66	1	nogas	5.756	0.868	27565	1.41	5	115.1	70	130	
As	75	1	nogas	4.276	5.882	84347	1.30	5	85.5	70	130	
Sr	88	1	nogas	5.077	1.902	149727	1.27	5	101.5	70	130	
Ag	107	1	nogas	5.263	1.719	77339	2.13	5	105.3	70	130	
Cd	111	1	nogas	4.917	2.890	15817	1.50	5	98.3	70	130	
Sb	121	1	nogas	5.252	3.674	72129	2.61	5	105.0	70	130	
Tl	205	1	nogas	4.762	6.188	91210	3.64	5	95.2	70	130	
Pb	208	1	nogas	5.368	0.729	131965	0.72	5	107.4	70	130	
U	238	1	nogas	5.141	3.397	128036	1.29	5	102.8	70	130	
[Pb]	206	1	nogas	4.901	6.069	31838	3.43	5	98.0	70	130	
[Pb]	207	1	nogas	4.947	1.418	28606	1.49	5	98.9	70	130	
Na	23	2	He	516.906	0.341	1061951	0.60	500	103.4	70	130	
Mg	24	2	He	529.444	1.364	513881	1.60	500	105.9	70	130	
Al	27	2	He	3.185	6.443	5022	2.55	5	63.7	70	130	LLICV Main CR1 Failed
K	39	2	He	530.299	1.019	738964	0.68	500	106.1	70	130	
Ca	43	2	He	507.566	6.397	1467	5.30	500	101.5	70	130	
Ca	44	2	He	506.195	4.936	26549	4.65	500	101.2	70	130	
V	51	2	He	4.791	1.994	38387	1.01	5	95.8	70	130	
Cr	52	2	He	5.203	3.577	44614	2.51	5	104.1	70	130	
Mn	55	2	He	5.132	1.195	30669	1.51	5	102.6	70	130	
Fe	56	2	He	521.694	0.602	3462363	0.54	500	104.3	70	130	
Co	59	2	He	5.224	1.336	53421	1.82	5	104.5	70	130	
Ni	60	2	He	4.876	0.916	15233	0.14	5	97.5	70	130	
Cu	63	2	He	4.236	3.853	40164	2.59	5	84.7	70	130	
Zn	66	2	He	5.266	3.919	9573	2.81	5	105.3	70	130	
As	75	2	He	5.088	0.929	8017	1.54	5	101.8	70	130	
Se	78	2	He	4.768	3.669	711	3.38	5	95.4	70	130	
B	11	1	nogas	30.846	4.297	197788	1.56	25	123.4	70	130	
Si	28	1	nogas	272.138	4.431	3869656	2.36	25	1088.6	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	523.717	4.623	21860	3.98	500	104.7	70	130	
Ca	44	1	nogas	485.728	1.803	544449	1.07	500	97.1	70	130	
Fe	56	1	nogas	509.567	2.961	16217139	1.39	500	101.9	70	130	
Se	77	1	nogas	-3.367	-62.533	19521	2.43	5	-67.3	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.130	6.191	1693	6.48	5	102.6	70	130	
Mo	95	1	nogas	5.051	3.898	30263	2.75	5	101.0	70	130	
Sn	118	1	nogas	5.023	2.167	45550	2.37	5	100.5	70	130	
Ba	137	1	nogas	4.693	2.240	20486	3.67	5	93.9	70	130	
Sb	121	2	He	5.160	2.718	26080	2.44	5	103.2	70	130	
Li	7	1	nogas	4.965	0.948	174118	4.22	5	99.3	70	130	
P	31	1	nogas	24.103	7.029	150538	1.92	25	96.4	70	130	
La	139	1	nogas	-16.737	-70.330	233	21.57	5	-334.7	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	-116.947	-63.020	23	24.74	5	-2338.9	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1150628	4.49	1112547	103.42	70	125	
Ge	72	1	nogas	3471148	1.12	3372491	102.93	70	125	
In	115	1	nogas	3053432	1.51	3088645	98.86	70	125	
Bi	209	1	nogas	2142735	2.62	2025845	105.77	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	885304	0.69	901118	98.25	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	068_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:28:50-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.001	636.5	83	60.4	1	
Na	23	1	nogas	-8.010	-25.0	902153	5.7	100	
Mg	24	1	nogas	-2.977	-2.1	19079	5.8	100	
Al	27	1	nogas	-3.166	-2.7	27247	4.6	5	
K	39	1	nogas	-6.662	-134.7	8477182	0.5	100	
Ti	47	1	nogas	0.083	162.0	580	46.0	2.5	
V	51	1	nogas	-2.776	-19.6	261249	4.4	2.5	
Cr	52	1	nogas	-0.208	-16.7	38433	1.2	2.5	
Mn	55	1	nogas	-0.556	-4.5	25161	2.3	2.5	
Co	59	1	nogas	0.004	127.7	1323	8.7	2.5	
Ni	60	1	nogas	-0.066	-37.9	1067	11.9	2.5	
Cu	63	1	nogas	-2.350	-1.0	9699	2.9	1	
Zn	66	1	nogas	0.260	20.5	1370	17.2	2.5	
As	75	1	nogas	0.117	431.3	59407	3.2	2.5	
Sr	88	1	nogas	-0.048	-20.4	1313	20.5	2.5	
Ag	107	1	nogas	0.003	51.0	200	10.0	2.5	
Cd	111	1	nogas	0.004	146.8	30	66.7	1	
Sb	121	1	nogas	0.182	16.3	4851	8.5	2.5	
Tl	205	1	nogas	0.015	113.1	967	29.9	1	
Pb	208	1	nogas	0.000	249513534910598000.0	1853	10.8	2.5	
U	238	1	nogas	-0.010	-102.5	497	46.5	2.5	
[Pb]	206	1	nogas	-0.007	-52.7	453	5.6	2.5	
[Pb]	207	1	nogas	-0.009	-146.4	407	16.4	2.5	
Na	23	2	He	-7.388	-43.3	132683	2.4	100	
Mg	24	2	He	-3.106	-2.6	1320	7.5	100	
Al	27	2	He	-4.663	-3.4	780	8.9	5	
K	39	2	He	-12.292	-18.8	232228	0.9	100	
Ca	43	2	He	-20.666	-70.7	50	80.0	100	
Ca	44	2	He	-21.218	-11.7	2587	3.7	100	
V	51	2	He	-0.224	-13.3	4274	3.7	2.5	
Cr	52	2	He	0.036	114.0	6385	3.8	2.5	
Mn	55	2	He	-0.478	-2.3	2003	1.4	2.5	
Fe	56	2	He	-0.615	-14.7	19924	2.8	100	
Co	59	2	He	-0.002	-286.0	400	10.9	2.5	
Ni	60	2	He	-0.643	-4.3	467	13.9	2.5	
Cu	63	2	He	-1.346	-2.2	3840	3.2	1	
Zn	66	2	He	-0.417	-3.9	433	4.8	2.5	
As	75	2	He	0.016	124.5	447	8.4	2.5	
Se	78	2	He	-0.474	-48.6	118	23.9	1	
B	11	1	nogas	4.603	11.3	67704	3.3	10	
Si	28	1	nogas	11.537	40.5	1191638	5.0	5	ICB Main CR1 Failed
Ca	43	1	nogas	-23.171	-5.1	1040	3.5	100	
Ca	44	1	nogas	-35.783	-15.6	213945	0.1	100	
Fe	56	1	nogas	-8.975	-34.4	2611143	1.4	100	
Se	77	1	nogas	-1.074	-347.4	19584	3.5	2.5	
Se	82	1	nogas	0.000	-292586.6	190	32.0	1	
Mo	95	1	nogas	-0.003	-444.2	300	21.9	2.5	
Sn	118	1	nogas	-0.086	-23.4	1207	13.4	5	
Ba	137	1	nogas	-0.130	-10.7	190	29.3	2.5	
Sb	121	2	He	0.216	14.3	1927	9.1	2.5	
P	31	1	nogas	1.231	166.3	110139	2.1	10	
La	139	1	nogas	-60.918	-4.2	33	34.6	2.5	
Au	197	1	nogas	-200.187	-156.5	17	124.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Initial Calibration Blank (ICB) Report

Li	6	1	nogas	1198609	0.80	1112547	107.74	70	125	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	3382253	1.68	3372491	100.29	70	125	
In	115	1	nogas	3056653	2.72	3088645	98.96	70	125	
Bi	209	1	nogas	2030522	1.21	2025845	100.23	70	125	
Ge	72	2	He	884781	1.96	901118	98.19	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	078_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:49:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	93.039	2.499	751147	2.09	100	93.0	90	110	
Na	23	1	nogas	10025.933	3.910	265151664	2.98	10000	100.3	90	110	
Mg	24	1	nogas	9972.383	2.851	166586962	1.40	10000	99.7	90	110	
Al	27	1	nogas	96.427	6.350	2008188	2.37	100	96.4	90	110	
K	39	1	nogas	10348.264	4.714	218483913	1.05	10000	103.5	90	110	
Ti	47	1	nogas	101.209	3.095	199503	1.34	100	101.2	90	110	
V	51	1	nogas	104.911	5.056	3142581	1.92	100	104.9	90	110	
Cr	52	1	nogas	102.858	5.368	2368811	1.98	100	102.9	90	110	
Mn	55	1	nogas	103.328	4.341	3002394	1.90	100	103.3	90	110	
Co	59	1	nogas	104.192	5.010	2496194	1.43	100	104.2	90	110	
Ni	60	1	nogas	108.849	4.526	611689	0.99	100	108.8	90	110	
Cu	63	1	nogas	106.181	2.913	1344558	1.25	100	106.2	90	110	
Zn	66	1	nogas	102.616	2.346	472000	1.85	100	102.6	90	110	
As	75	1	nogas	104.704	2.687	626283	1.44	100	104.7	90	110	
Sr	88	1	nogas	101.912	4.876	2851174	1.14	100	101.9	90	110	
Ag	107	1	nogas	106.626	3.971	1510810	3.72	100	106.6	90	110	
Cd	111	1	nogas	99.854	2.126	313951	1.51	100	99.9	90	110	
Sb	121	1	nogas	100.344	5.349	1285773	1.66	100	100.3	90	110	
Tl	205	1	nogas	100.520	0.719	1892824	1.03	100	100.5	90	110	
Pb	208	1	nogas	108.165	0.735	2623758	0.73	100	108.2	90	110	
U	238	1	nogas	103.099	0.481	2528143	0.61	100	103.1	90	110	
[Pb]	206	1	nogas	100.184	1.961	634746	2.42	100	100.2	90	110	
[Pb]	207	1	nogas	100.219	2.619	564608	3.07	100	100.2	90	110	
Na	23	2	He	10329.000	1.927	17926317	1.29	10000	103.3	90	110	
Mg	24	2	He	10388.330	1.762	9719045	1.70	10000	103.9	90	110	
Al	27	2	He	115.435	32.110	63749	29.93	100	115.4	90	110	CCV Main CR1-2 Failed
K	39	2	He	10182.198	0.743	9753055	0.72	10000	101.8	90	110	
Ca	43	2	He	10275.473	2.690	26896	2.63	10000	102.8	90	110	
Ca	44	2	He	9979.947	2.033	443982	2.69	10000	99.8	90	110	
V	51	2	He	100.142	2.232	667511	1.72	100	100.1	90	110	
Cr	52	2	He	102.507	2.533	742924	1.84	100	102.5	90	110	
Mn	55	2	He	104.583	1.957	523496	1.29	100	104.6	90	110	
Fe	56	2	He	10328.350	1.853	66162407	1.18	10000	103.3	90	110	
Co	59	2	He	102.027	1.040	1006150	0.37	100	102.0	90	110	
Ni	60	2	He	106.258	0.730	278383	1.12	100	106.3	90	110	
Cu	63	2	He	103.539	2.286	666853	1.57	100	103.5	90	110	
Zn	66	2	He	102.733	1.389	161604	0.83	100	102.7	90	110	
As	75	2	He	101.712	1.101	147919	0.45	100	101.7	90	110	
Se	78	2	He	103.449	1.544	11548	1.12	100	103.4	90	110	
B	11	1	nogas	447.836	1.626	2430859	0.81	500	89.6	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5307.556	3.709	53159386	2.62	5000	106.2	90	110	
Ca	43	1	nogas	10330.787	3.270	381284	0.95	10000	103.3	90	110	
Ca	44	1	nogas	10123.827	2.257	6328288	3.39	10000	101.2	90	110	
Fe	56	1	nogas	10344.706	6.178	263503531	2.38	10000	103.4	90	110	
Se	77	1	nogas	123.527	4.606	50119	1.13	100	123.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.107	2.296	29271	2.46	100	103.1	90	110	
Mo	95	1	nogas	101.784	4.220	583099	1.62	100	101.8	90	110	
Sn	118	1	nogas	101.961	1.278	867599	1.00	100	102.0	90	110	
Ba	137	1	nogas	96.920	1.855	399694	2.50	100	96.9	90	110	
Sb	121	2	He	101.738	3.123	483746	2.53	100	101.7	90	110	
Li	7	1	nogas	99.345	2.572	1775949	1.75	100	99.3	90	110	
P	31	1	nogas	534.198	3.540	952799	0.68	500	106.8	90	110	
La	139	1	nogas	84.968	39.846	680	21.66	100	85.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-306.781	-82.383	10	173.21	100	-306.8	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1210589	1.88	1112547	108.81	70	125	
Ge	72	1	nogas	3355369	3.81	3372491	99.49	70	125	
In	115	1	nogas	2986988	0.65	3088645	96.71	70	125	
Bi	209	1	nogas	2120766	0.47	2025845	104.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	860225	0.68	901118	95.46	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	079_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:51:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.026	43.3	283	28.7	1	
Na	23	1	nogas	-5.029	-27.4	984748	4.0	100	
Mg	24	1	nogas	0.268	111.8	74226	6.8	100	
Al	27	1	nogas	-2.948	-0.9	32048	2.0	5	
K	39	1	nogas	-13.853	-37.4	8437728	0.1	100	
Ti	47	1	nogas	0.017	340.8	453	24.4	2.5	
V	51	1	nogas	1.874	9.7	392019	2.5	2.5	
Cr	52	1	nogas	-0.012	-403.9	43468	1.2	2.5	
Mn	55	1	nogas	-0.630	-5.5	23315	3.7	2.5	
Co	59	1	nogas	0.014	51.2	1583	10.2	2.5	
Ni	60	1	nogas	-0.047	-15.9	1190	2.2	2.5	
Cu	63	1	nogas	-2.472	-0.3	8292	0.7	2	
Zn	66	1	nogas	0.149	27.8	867	22.2	2.5	
As	75	1	nogas	3.488	5.1	78870	0.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	-0.020	-48.5	2123	12.1	2.5	
Ag	107	1	nogas	0.025	21.0	523	16.0	2.5	
Cd	111	1	nogas	0.021	82.7	87	66.6	1	
Sb	121	1	nogas	1.944	23.4	27903	20.0	2.5	
Tl	205	1	nogas	0.142	46.4	3540	32.0	1	
Pb	208	1	nogas	0.020	125.3	2347	26.3	2.5	
U	238	1	nogas	0.096	62.8	3224	42.8	2.5	
[Pb]	206	1	nogas	0.006	484.7	580	29.9	2.5	
[Pb]	207	1	nogas	0.011	379.0	553	37.3	2.5	
Na	23	2	He	-8.033	-10.4	128239	2.4	100	
Mg	24	2	He	-0.295	-73.4	3917	2.9	100	
Al	27	2	He	-4.609	-7.1	787	19.3	5	
K	39	2	He	-21.387	-13.9	223734	1.2	100	
Ca	43	2	He	-19.917	-100.6	50	103.9	100	
Ca	44	2	He	-22.393	-9.2	2470	5.3	100	
V	51	2	He	-0.010	-293.9	5581	1.2	2.5	
Cr	52	2	He	-0.045	-158.5	5628	6.7	2.5	
Mn	55	2	He	-0.507	-2.7	1810	6.3	2.5	
Fe	56	2	He	1.418	22.8	32455	6.0	100	
Co	59	2	He	0.021	31.2	617	12.2	2.5	
Ni	60	2	He	-0.650	-9.1	437	35.6	2.5	
Cu	63	2	He	-1.427	-2.4	3230	7.7	2	
Zn	66	2	He	-0.508	-5.0	280	12.9	2.5	
As	75	2	He	0.073	77.0	517	13.0	2.5	
Se	78	2	He	-0.485	-11.3	113	2.7	2	
B	11	1	nogas	7.925	17.0	86512	4.5	10	
Si	28	1	nogas	15.219	21.6	1243212	1.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	-19.152	-21.8	1203	12.0	100	
Ca	44	1	nogas	-53.817	-14.6	205593	1.0	100	
Fe	56	1	nogas	-16.902	-25.0	2440498	3.6	100	
Se	77	1	nogas	22.495	5.3	25775	1.8	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.154	204.9	237	37.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.238	49.1	1703	38.8	2.5	
Sn	118	1	nogas	0.086	75.3	2744	19.3	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.089	-5.5	367	4.2	2.5	
Sb	121	2	He	1.344	4.0	7242	2.0	2.5	
P	31	1	nogas	-5.709	-11.6	100361	2.3	10	
La	139	1	nogas	-52.366	-8.9	73	28.4	2.5	
Au	197	1	nogas	63.542	364.7	37	41.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1218865	3.90	1112547	109.56	70	125	
Ge	72	1	nogas	3425577	1.41	3372491	101.57	70	125	
In	115	1	nogas	3109412	1.66	3088645	100.67	70	125	
Bi	209	1	nogas	2222128	4.17	2025845	109.69	70	125	
Ge	72	2	He	862245	3.02	901118	95.69	70	125	

Sample Report

Sample Table

Sample Name	MBLK-135368
Data File Name	081SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:55:00-06:00
Sample Type	Sample
Dilution	1
Comment	B135368 TW
ISTD Ref FileName	059CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.006	0.006	32.07	137	0.00	2000	
Na	23	1	nogas	62.831	62.831	2.79	2843018	0.00	200000	
Mg	24	1	nogas	19.314	19.314	3.96	403324	0.00	200000	
Al	27	1	nogas	2.696	2.696	9.23	152119	0.00	2000	
K	39	1	nogas	0.437	0.437	1667.99	9049979	0.00	200000	
Ti	47	1	nogas	-0.030	-0.030	-69.41	373	-0.01	2000	
V	51	1	nogas	3.666	3.666	17.20	456866	0.00	2000	
Cr	52	1	nogas	0.191	0.191	14.92	49914	0.00	2000	
Mn	55	1	nogas	13.508	13.508	1.17	453214	0.00	2000	
Co	59	1	nogas	-0.023	-0.023	-14.82	687	0.00	2000	
Ni	60	1	nogas	-0.025	-0.025	-132.66	1363	0.00	2000	
Cu	63	1	nogas	-2.619	-2.619	-2.08	6678	-0.04	2000	
Zn	66	1	nogas	0.459	0.459	9.83	2404	0.02	2000	
As	75	1	nogas	3.696	3.696	9.53	82908	0.00	2000	
Sr	88	1	nogas	-0.048	-0.048	-12.80	1387	0.00	2000	
Ag	107	1	nogas	0.002	0.002	167.01	193	0.00	2000	
Cd	111	1	nogas	0.009	0.009	18.80	47	0.02	2000	
Sb	121	1	nogas	0.085	0.085	5.93	3780	0.00	2000	
Tl	205	1	nogas	0.003	0.003	204.94	860	0.00	2000	
Pb	208	1	nogas	0.004	0.004	105.64	1960	0.00	2000	
U	238	1	nogas	-0.021	-0.021	-6.69	273	-0.01	2000	
[Pb]	206	1	nogas	-0.007	-0.007	-181.82	513	0.00	2000	
[Pb]	207	1	nogas	-0.022	-0.022	-17.44	380	-0.01	2000	
Na	23	2	He	62.388	62.388	5.96	255071	0.02	200000	
Mg	24	2	He	20.334	20.334	5.28	23742	0.09	200000	
Al	27	2	He	0.680	0.680	86.37	3647	0.02	2000	
K	39	2	He	6.330	6.330	27.54	249619	0.00	200000	
Ca	43	2	He	-12.997	-12.997	-53.19	70	-18.57	200000	
Ca	44	2	He	-30.115	-30.115	-24.95	2173	-1.39	200000	
V	51	2	He	0.104	0.104	16.06	6472	0.00	2000	
Cr	52	2	He	0.100	0.100	69.42	6821	0.00	2000	
Mn	55	2	He	14.090	14.090	1.53	76060	0.02	2000	
Fe	56	2	He	2.300	2.300	0.99	38948	0.01	200000	
Co	59	2	He	-0.021	-0.021	-17.19	203	-0.01	2000	
Ni	60	2	He	-0.576	-0.576	-2.37	643	-0.09	2000	
Cu	63	2	He	-1.564	-1.564	-1.77	2410	-0.06	2000	
Zn	66	2	He	-0.194	-0.194	-22.60	790	-0.02	2000	
As	75	2	He	0.050	0.050	57.44	494	0.01	2000	
Se	78	2	He	-0.275	-0.275	-58.66	139	-0.20	2000	
B	11	1	nogas	1.588	1.588	21.44	56875	0.00	2000	
Si	28	1	nogas	111.443	111.443	3.73	2287933	0.00	2000	
Ca	43	1	nogas	-22.886	-22.886	-5.54	1103	-2.07	200000	

Sample Report

Ca	44	1	nogas	-82.930	-82.930	-11.33	194477	-0.04	200000	
Fe	56	1	nogas	-13.832	-13.832	-9.74	2611548	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	24.705	24.705	17.37	27274	0.09	2000	
Se	82	1	nogas	-0.033	-0.033	-749.37	190	-0.02	2000	
Mo	95	1	nogas	0.026	0.026	23.78	487	0.01	2000	
Sn	118	1	nogas	-0.019	-0.019	-36.70	1790	0.00	2000	
Ba	137	1	nogas	-0.105	-0.105	-18.78	293	-0.04	2000	
Sb	121	2	He	0.100	0.100	20.40	1350	0.01	2000	
La	139	1	nogas	-56.538	-56.538	-8.06	53	-106.01	2000	
Au	197	1	nogas	-184.213	-184.213	-123.17	20	-921.06	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1316600	3.09	1112547	118.34	70	125	
Ge	72	1	nogas	3549772	1.83	3372491	105.26	70	125	
In	115	1	nogas	3060648	0.32	3088645	99.09	70	125	
Bi	209	1	nogas	2278504	2.11	2025845	112.47	70	125	
Ge	72	2	He	880784	2.52	901118	97.74	70	125	

Sample Report

Sample Table

Sample Name	LCS-135368
Data File Name	082SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T14:56:59-06:00
Sample Type	Sample
Dilution	1
Comment	B135368 TW
ISTD Ref FileName	059CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	50.081	50.081	0.09	400225	0.01	2000	
Na	23	1	nogas	5386.887	5386.887	2.44	144056612	0.00	200000	
Mg	24	1	nogas	5516.497	5516.497	3.19	92876406	0.01	200000	
Al	27	1	nogas	107.797	107.797	1.53	2302750	0.00	2000	
K	39	1	nogas	5441.846	5441.846	1.42	122536269	0.00	200000	
Ti	47	1	nogas	148.561	148.561	3.26	301311	0.05	2000	
V	51	1	nogas	54.400	54.400	3.44	1843749	0.00	2000	
Cr	52	1	nogas	50.860	50.860	4.27	1228733	0.00	2000	
Mn	55	1	nogas	55.395	55.395	1.75	1677994	0.00	2000	
Co	59	1	nogas	54.124	54.124	1.60	1336598	0.00	2000	
Ni	60	1	nogas	51.246	51.246	0.38	297508	0.02	2000	
Cu	63	1	nogas	51.985	51.985	0.88	698279	0.01	2000	
Zn	66	1	nogas	50.237	50.237	1.36	238050	0.02	2000	
As	75	1	nogas	52.911	52.911	0.57	355606	0.01	2000	
Sr	88	1	nogas	105.852	105.852	1.90	3051217	0.00	2000	
Ag	107	1	nogas	52.417	52.417	1.65	764763	0.01	2000	
Cd	111	1	nogas	50.862	50.862	1.81	164613	0.03	2000	
Sb	121	1	nogas	52.425	52.425	1.20	693433	0.01	2000	
Tl	205	1	nogas	49.174	49.174	5.43	938311	0.01	2000	
Pb	208	1	nogas	55.014	55.014	0.72	1335370	0.00	2000	
U	238	1	nogas	101.594	101.594	3.50	2525758	0.00	2000	
[Pb]	206	1	nogas	52.158	52.158	5.57	334965	0.02	2000	
[Pb]	207	1	nogas	50.906	50.906	4.50	290787	0.02	2000	
Na	23	2	He	5515.892	5515.892	2.56	9756481	0.06	200000	
Mg	24	2	He	5744.514	5744.514	1.60	5441676	0.11	200000	
Al	27	2	He	103.170	103.170	3.17	58073	0.18	2000	
K	39	2	He	5660.763	5660.763	2.00	5530402	0.10	200000	
Ca	43	2	He	5650.402	5650.402	2.27	15016	37.63	200000	
Ca	44	2	He	5441.429	5441.429	2.76	246573	2.21	200000	
V	51	2	He	51.164	51.164	0.90	347986	0.01	2000	
Cr	52	2	He	53.773	53.773	2.17	397345	0.01	2000	
Mn	55	2	He	54.261	54.261	1.66	277030	0.02	2000	
Fe	56	2	He	5467.410	5467.410	1.27	35463634	0.02	200000	
Co	59	2	He	53.311	53.311	2.66	532351	0.01	2000	
Ni	60	2	He	51.930	51.930	1.04	138801	0.04	2000	
Cu	63	2	He	52.826	52.826	0.50	350464	0.02	2000	
Zn	66	2	He	51.573	51.573	1.31	82656	0.06	2000	
As	75	2	He	52.316	52.316	2.47	77211	0.07	2000	
Se	78	2	He	53.888	53.888	2.53	6170	0.87	2000	
B	11	1	nogas	458.437	458.437	1.27	2461318	0.02	2000	
Si	28	1	nogas	650.085	650.085	2.64	7669442	0.01	2000	
Ca	43	1	nogas	5403.822	5403.822	2.14	206310	2.62	200000	
Ca	44	1	nogas	5249.111	5249.111	3.09	3492905	0.15	200000	
Fe	56	1	nogas	5353.902	5353.902	3.72	141918891	0.00	200000	
Se	77	1	nogas	62.860	62.860	3.57	36226	0.17	2000	
Se	82	1	nogas	50.928	50.928	3.16	14980	0.34	2000	

Sample Report

Mo	95	1	nogas	53.221	53.221	1.64	314205	0.02	2000	
Sn	118	1	nogas	97.697	97.697	0.86	855831	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	50.136	50.136	2.19	213122	0.02	2000	
Sb	121	2	He	53.024	53.024	1.09	255619	0.02	2000	
La	139	1	nogas	-21.706	-21.706	-81.80	213	-10.17	2000	
Au	197	1	nogas	-212.711	-212.711	-39.39	17	-1276.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1197972	2.81	1112547	107.68	70	125	
Ge	72	1	nogas	3453379	1.81	3372491	102.40	70	125	
In	115	1	nogas	3074528	1.30	3088645	99.54	70	125	
Bi	209	1	nogas	2151153	3.80	2025845	106.19	70	125	
Ge	72	2	He	870661	0.31	901118	96.62	70	125	

Sample Report

Sample Table

Sample Name	HS18111447-01SD
Data File Name	084SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T15:00:54-06:00
Sample Type	Sample
Dilution	5
Comment	B135368 TW
ISTD Ref FileName	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.009	0.046	86.26	157	0.01	2000	
Na	23	1	nogas	11405.612	57028.062	6.14	299141407	0.00	200000	
Mg	24	1	nogas	4892.039	24460.197	7.91	81045693	0.01	200000	
Al	27	1	nogas	31.132	155.662	3.09	726309	0.00	2000	
K	39	1	nogas	162.579	812.894	1.18	12116546	0.00	200000	
Ti	47	1	nogas	0.748	3.740	19.00	1927	0.04	2000	
V	51	1	nogas	10.966	54.832	3.12	641782	0.00	2000	
Cr	52	1	nogas	10.771	53.857	3.52	293164	0.00	2000	
Mn	55	1	nogas	26.859	134.297	1.27	829739	0.00	2000	
Co	59	1	nogas	1.101	5.503	3.90	28222	0.00	2000	
Ni	60	1	nogas	42.783	213.915	1.71	246997	0.02	2000	
Cu	63	1	nogas	-1.507	-7.535	-7.24	20448	-0.01	2000	
Zn	66	1	nogas	0.915	4.574	0.77	4471	0.02	2000	
As	75	1	nogas	7.249	36.245	5.63	99869	0.01	2000	
Sr	88	1	nogas	43.838	219.188	4.22	1257217	0.00	2000	
Ag	107	1	nogas	-0.001	-0.004	-256.95	147	0.00	2000	
Cd	111	1	nogas	0.027	0.135	36.80	100	0.03	2000	
Sb	121	1	nogas	0.080	0.398	22.69	3580	0.00	2000	
Tl	205	1	nogas	0.076	0.380	13.87	2210	0.00	2000	
Pb	208	1	nogas	0.041	0.203	29.41	2837	0.00	2000	
U	238	1	nogas	0.367	1.835	1.49	9960	0.00	2000	
[Pb]	206	1	nogas	0.033	0.165	58.35	743	0.00	2000	
[Pb]	207	1	nogas	0.033	0.167	62.91	677	0.00	2000	
Na	23	2	He	11649.404	58247.021	3.76	20132997	0.06	200000	
Mg	24	2	He	4957.090	24785.450	4.18	4624208	0.11	200000	
Al	27	2	He	28.445	142.225	3.28	18083	0.16	2000	
K	39	2	He	164.327	821.636	1.88	397176	0.04	200000	
Ca	43	2	He	16724.337	83621.685	2.69	43575	38.38	200000	
Ca	44	2	He	16830.380	84151.900	0.54	743897	2.26	200000	
V	51	2	He	1.383	6.915	2.82	14728	0.01	2000	
Cr	52	2	He	10.060	50.301	2.36	78036	0.01	2000	
Mn	55	2	He	28.098	140.492	1.33	143350	0.02	2000	
Fe	56	2	He	582.904	2914.522	1.78	3743981	0.02	200000	
Co	59	2	He	1.061	5.305	4.52	10830	0.01	2000	
Ni	60	2	He	42.883	214.417	1.07	113244	0.04	2000	
Cu	63	2	He	-0.546	-2.731	-3.92	8762	-0.01	2000	
Zn	66	2	He	0.282	1.410	43.01	1510	0.02	2000	
As	75	2	He	0.200	1.002	16.10	699	0.03	2000	
Se	78	2	He	-0.432	-2.161	-22.44	119	-0.36	2000	
B	11	1	nogas	10.726	53.628	3.27	105436	0.01	2000	
Si	28	1	nogas	3865.257	19326.285	0.85	39909748	0.01	2000	>LDR
Ca	43	1	nogas	17095.732	85478.662	0.98	644423	2.65	200000	
Ca	44	1	nogas	16909.728	84548.639	2.35	10649817	0.16	200000	
Fe	56	1	nogas	548.762	2743.811	2.06	17045181	0.00	200000	

Sample Report

Se	77	1	nogas	46.038	230.190	6.10	31748	0.15	2000	
Se	82	1	nogas	0.152	0.760	155.78	237	0.06	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.451	2.257	27.21	2961	0.02	2000	
Sn	118	1	nogas	0.037	0.183	39.98	2207	0.00	2000	
Ba	137	1	nogas	92.594	462.971	4.12	378917	0.02	2000	
Sb	121	2	He	0.077	0.386	42.62	1210	0.01	2000	
La	139	1	nogas	820.874	4104.368	8.79	3927	20.90	2000	
Au	197	1	nogas	-166.717	-833.585	-1.42	20	-833.59	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1263457	0.70	1112547	113.56	70	125	
Ge	72	1	nogas	3431058	0.77	3372491	101.74	70	125	
In	115	1	nogas	2966498	3.11	3088645	96.05	70	125	
Bi	209	1	nogas	2164412	0.83	2025845	106.84	70	125	
Ge	72	2	He	857449	0.69	901118	95.15	70	125	

Sample Report

Sample Table

Sample Name	HS18111447-01MS
Data File Name	085SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T15:02:54-06:00
Sample Type	Sample
Dilution	1
Comment	B135368 TW
ISTD Ref FileName	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	49.057	49.057	2.42	398452	0.01	2000	
Na	23	1	nogas	59685.754	59685.754	2.85	1628594436	0.00	200000	
Mg	24	1	nogas	28460.642	28460.642	5.02	491729744	0.01	200000	
Al	27	1	nogas	648.599	648.599	4.34	13127345	0.00	2000	
K	39	1	nogas	6081.196	6081.196	3.08	133250974	0.00	200000	
Ti	47	1	nogas	151.934	151.934	1.45	302155	0.05	2000	
V	51	1	nogas	62.900	62.900	4.79	2037500	0.00	2000	
Cr	52	1	nogas	206.829	206.829	2.56	4768009	0.00	2000	
Mn	55	1	nogas	186.003	186.003	0.54	5424891	0.00	2000	
Co	59	1	nogas	58.280	58.280	1.40	1410924	0.00	2000	
Ni	60	1	nogas	255.171	255.171	0.33	1446428	0.02	2000	
Cu	63	1	nogas	53.684	53.684	0.93	705581	0.01	2000	
Zn	66	1	nogas	53.841	53.841	0.56	250069	0.02	2000	
As	75	1	nogas	57.585	57.585	0.92	374190	0.02	2000	
Sr	88	1	nogas	322.022	322.022	1.75	9094477	0.00	2000	
Ag	107	1	nogas	51.467	51.467	1.39	736186	0.01	2000	
Cd	111	1	nogas	50.294	50.294	2.56	160408	0.03	2000	
Sb	121	1	nogas	51.435	51.435	2.28	667043	0.01	2000	
Tl	205	1	nogas	44.939	44.939	3.03	863766	0.01	2000	
Pb	208	1	nogas	53.266	53.266	2.25	1293012	0.00	2000	
U	238	1	nogas	107.533	107.533	1.02	2690166	0.00	2000	
[Pb]	206	1	nogas	48.932	48.932	2.16	316541	0.02	2000	
[Pb]	207	1	nogas	48.800	48.800	2.70	280703	0.02	2000	
Na	23	2	He	62270.333	62270.333	0.68	108167815	0.06	200000	
Mg	24	2	He	28812.271	28812.271	1.88	27146330	0.11	200000	
Al	27	2	He	659.263	659.263	1.55	351915	0.19	2000	
K	39	2	He	6386.088	6386.088	1.98	6207797	0.10	200000	
Ca	43	2	He	89228.673	89228.673	1.05	234496	38.05	200000	
Ca	44	2	He	90864.471	90864.471	0.54	4043775	2.25	200000	
V	51	2	He	56.199	56.199	1.22	379899	0.01	2000	
Cr	52	2	He	208.105	208.105	1.25	1513447	0.01	2000	
Mn	55	2	He	188.872	188.872	0.40	949001	0.02	2000	
Fe	56	2	He	8659.794	8659.794	1.93	55887986	0.02	200000	
Co	59	2	He	56.180	56.180	2.15	558279	0.01	2000	
Ni	60	2	He	263.883	263.883	2.55	693187	0.04	2000	
Cu	63	2	He	54.424	54.424	1.69	358986	0.02	2000	
Zn	66	2	He	55.085	55.085	0.62	87800	0.06	2000	
As	75	2	He	51.934	51.934	1.51	76287	0.07	2000	
Se	78	2	He	53.067	53.067	3.06	6051	0.88	2000	
B	11	1	nogas	473.822	473.822	5.39	2583685	0.02	2000	
Si	28	1	nogas	21234.467	21234.467	5.32	211465837	0.01	2000	>LDR
Ca	43	1	nogas	85527.861	85527.861	2.62	3173091	2.70	200000	
Ca	44	1	nogas	89341.006	89341.006	2.22	54509144	0.16	200000	
Fe	56	1	nogas	8629.812	8629.812	0.78	222596347	0.00	200000	
Se	77	1	nogas	85.436	85.436	3.35	41123	0.21	2000	
Se	82	1	nogas	51.900	51.900	2.01	14966	0.35	2000	

Sample Report

Mo	95	1	nogas	54.712	54.712	2.16	316652	0.02	2000	
Sn	118	1	nogas	93.322	93.322	0.51	805908	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	470.930	470.930	1.37	1967138	0.02	2000	
Sb	121	2	He	51.696	51.696	2.33	248056	0.02	2000	
La	139	1	nogas	5173.325	5173.325	3.12	23613	21.91	2000	>LDR
Au	197	1	nogas	-357.168	-357.168	-23.16	7	-5357.51	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1217947	2.01	1112547	109.47	70	125	
Ge	72	1	nogas	3385216	0.70	3372491	100.38	70	125	
In	115	1	nogas	3030506	1.86	3088645	98.12	70	125	
Bi	209	1	nogas	2163624	0.32	2025845	106.80	70	125	
Ge	72	2	He	866630	1.04	901118	96.17	70	125	

Sample Report

Sample Table

Sample Name	HS18111447-01PDS
Data File Name	087SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T15:06:55-06:00
Sample Type	Sample
Dilution	1
Comment	B135368 TW
ISTD Ref FileName	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	111.027	111.027	4.12	903032	0.01	2000	
Na	23	1	nogas	67120.883	67120.883	1.16	1809267240	0.00	200000	
Mg	24	1	nogas	35649.317	35649.317	3.58	608775264	0.01	200000	
Al	27	1	nogas	387.437	387.437	5.08	8034680	0.00	2000	
K	39	1	nogas	12586.021	12586.021	0.37	271852681	0.00	200000	
Ti	47	1	nogas	116.565	116.565	3.54	236513	0.05	2000	
V	51	1	nogas	124.659	124.659	2.17	3782269	0.00	2000	
Cr	52	1	nogas	218.107	218.107	0.70	5125898	0.00	2000	
Mn	55	1	nogas	252.650	252.650	2.48	7501914	0.00	2000	
Co	59	1	nogas	119.867	119.867	3.61	2958088	0.00	2000	
Ni	60	1	nogas	312.099	312.099	1.75	1803964	0.02	2000	
Cu	63	1	nogas	115.814	115.814	3.12	1506445	0.01	2000	
Zn	66	1	nogas	112.074	112.074	1.28	530713	0.02	2000	
As	75	1	nogas	120.755	120.755	2.42	734437	0.02	2000	
Sr	88	1	nogas	210.730	210.730	1.68	6070810	0.00	2000	
Ag	107	1	nogas	109.091	109.091	0.77	1591533	0.01	2000	
Cd	111	1	nogas	116.395	116.395	2.27	361540	0.03	2000	
Sb	121	1	nogas	109.233	109.233	5.09	1441647	0.01	2000	
Tl	205	1	nogas	119.886	119.886	3.94	2207646	0.01	2000	
Pb	208	1	nogas	123.065	123.065	2.31	2984927	0.00	2000	
U	238	1	nogas	2.039	2.039	6.05	49625	0.00	2000	
[Pb]	206	1	nogas	118.465	118.465	2.47	734420	0.02	2000	
[Pb]	207	1	nogas	118.143	118.143	2.06	651203	0.02	2000	
Na	23	2	He	69100.260	69100.260	2.55	117407748	0.06	200000	
Mg	24	2	He	35790.868	35790.868	3.53	32990760	0.11	200000	
Al	27	2	He	397.752	397.752	3.36	208963	0.19	2000	
K	39	2	He	12963.448	12963.448	1.78	12350519	0.10	200000	
Ca	43	2	He	97471.242	97471.242	3.37	250579	38.90	200000	
Ca	44	2	He	99278.316	99278.316	2.62	4322077	2.30	200000	
V	51	2	He	123.104	123.104	3.96	807330	0.02	2000	
Cr	52	2	He	221.299	221.299	5.91	1573304	0.01	2000	
Mn	55	2	He	253.361	253.361	2.74	1243906	0.02	2000	
Fe	56	2	He	15135.768	15135.768	3.09	95548485	0.02	200000	
Co	59	2	He	121.456	121.456	2.66	1180437	0.01	2000	
Ni	60	2	He	325.434	325.434	3.74	835797	0.04	2000	
Cu	63	2	He	120.779	120.779	4.54	764500	0.02	2000	
Zn	66	2	He	118.121	118.121	3.82	182952	0.06	2000	
As	75	2	He	120.790	120.790	3.66	173034	0.07	2000	
Se	78	2	He	121.636	121.636	3.33	13352	0.91	2000	
B	11	1	nogas	46.988	46.988	3.57	296541	0.02	2000	
Si	28	1	nogas	19966.063	19966.063	1.68	202869790	0.01	2000	>LDR
Ca	43	1	nogas	88683.361	88683.361	2.40	3355733	2.64	200000	
Ca	44	1	nogas	95838.883	95838.883	5.23	59608797	0.16	200000	
Fe	56	1	nogas	14928.467	14928.467	1.26	390619367	0.00	200000	
Se	77	1	nogas	140.446	140.446	2.95	55903	0.25	2000	
Se	82	1	nogas	114.570	114.570	2.65	33458	0.34	2000	

Sample Report

Mo	95	1	nogas	117.536	117.536	1.42	693483	0.02	2000	
Sn	118	1	nogas	0.425	0.425	21.54	5464	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	550.852	550.852	3.99	2240279	0.02	2000	
Sb	121	2	He	113.936	113.936	3.47	533825	0.02	2000	
La	139	1	nogas	4855.828	4855.828	2.06	21607	22.47	2000	>LDR
Au	197	1	nogas	-302.027	-302.027	-49.74	10	-3020.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1220691	4.50	1112547	109.72	70	125	
Ge	72	1	nogas	3452811	0.81	3372491	102.38	70	125	
In	115	1	nogas	2951310	1.84	3088645	95.55	70	125	
Bi	209	1	nogas	2074821	2.04	2025845	102.42	70	125	
Ge	72	2	He	848131	2.32	901118	94.12	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	090_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T15:12:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	91.060	5.682	753723	0.77	100	91.1	90	110	
Na	23	1	nogas	10456.493	6.270	266124189	2.71	10000	104.6	90	110	
Mg	24	1	nogas	10533.340	5.910	169361345	1.84	10000	105.3	90	110	
Al	27	1	nogas	97.847	5.766	2086294	2.76	100	97.8	90	110	
K	39	1	nogas	10134.365	2.559	219457963	2.27	10000	101.3	90	110	
Ti	47	1	nogas	100.167	1.780	202270	1.34	100	100.2	90	110	
V	51	1	nogas	103.942	1.239	3195181	3.72	100	103.9	90	110	
Cr	52	1	nogas	95.805	4.550	2266828	7.06	100	95.8	90	110	
Mn	55	1	nogas	99.927	1.034	2976991	2.24	100	99.9	90	110	
Co	59	1	nogas	103.824	3.380	2549160	2.76	100	103.8	90	110	
Ni	60	1	nogas	105.247	4.207	605925	2.09	100	105.2	90	110	
Cu	63	1	nogas	102.624	4.367	1331887	1.69	100	102.6	90	110	
Zn	66	1	nogas	102.666	3.099	483563	1.52	100	102.7	90	110	
As	75	1	nogas	104.100	2.205	638079	0.73	100	104.1	90	110	
Sr	88	1	nogas	101.504	1.834	2910451	1.23	100	101.5	90	110	
Ag	107	1	nogas	103.131	2.846	1496333	0.82	100	103.1	90	110	
Cd	111	1	nogas	103.665	3.284	323059	1.26	100	103.7	90	110	
Sb	121	1	nogas	98.399	6.170	1291459	3.64	100	98.4	90	110	
Tl	205	1	nogas	99.847	5.188	1880297	4.70	100	99.8	90	110	
Pb	208	1	nogas	104.499	3.673	2534888	3.67	100	104.5	90	110	
U	238	1	nogas	104.077	4.192	2552950	4.49	100	104.1	90	110	
[Pb]	206	1	nogas	103.818	2.801	657895	3.04	100	103.8	90	110	
[Pb]	207	1	nogas	101.495	2.477	571946	3.08	100	101.5	90	110	
Na	23	2	He	10150.398	1.875	17775091	2.03	10000	101.5	90	110	
Mg	24	2	He	10363.653	1.472	9782084	2.22	10000	103.6	90	110	
Al	27	2	He	94.077	1.994	53058	0.67	100	94.1	90	110	
K	39	2	He	10516.843	2.271	10065588	2.22	10000	105.2	90	110	
Ca	43	2	He	10093.045	4.913	26643	3.58	10000	100.9	90	110	
Ca	44	2	He	9997.166	2.840	448520	1.64	10000	100.0	90	110	
V	51	2	He	100.245	1.730	674040	0.56	100	100.2	90	110	
Cr	52	2	He	102.414	1.333	748959	2.47	100	102.4	90	110	
Mn	55	2	He	102.149	0.727	515949	1.08	100	102.1	90	110	
Fe	56	2	He	10193.269	1.402	65872259	0.77	10000	101.9	90	110	
Co	59	2	He	100.712	0.954	1001918	0.60	100	100.7	90	110	
Ni	60	2	He	106.929	1.205	282570	0.53	100	106.9	90	110	
Cu	63	2	He	102.943	3.394	668806	1.95	100	102.9	90	110	
Zn	66	2	He	104.021	2.919	165027	1.54	100	104.0	90	110	
As	75	2	He	100.704	1.834	147732	0.44	100	100.7	90	110	
Se	78	2	He	101.753	3.597	11458	2.16	100	101.8	90	110	
B	11	1	nogas	455.763	3.267	2541302	6.90	500	91.2	90	110	
Si	28	1	nogas	5270.706	4.363	54060419	2.12	5000	105.4	90	110	
Ca	43	1	nogas	10097.125	3.011	381725	0.29	10000	101.0	90	110	
Ca	44	1	nogas	10039.971	3.467	6425790	0.65	10000	100.4	90	110	
Fe	56	1	nogas	10187.124	1.829	266069648	0.92	10000	101.9	90	110	
Se	77	1	nogas	133.227	3.101	53786	1.34	100	133.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.109	4.131	29394	3.35	100	101.1	90	110	
Mo	95	1	nogas	101.796	3.107	597393	0.68	100	101.8	90	110	
Sn	118	1	nogas	103.887	2.812	876177	0.71	100	103.9	90	110	
Ba	137	1	nogas	98.603	3.658	402960	1.78	100	98.6	90	110	
Sb	121	2	He	101.663	0.729	487721	1.53	100	101.7	90	110	
Li	7	1	nogas	99.909	3.373	1833382	4.93	100	99.9	90	110	
P	31	1	nogas	526.998	2.322	964362	1.05	500	105.4	90	110	
La	139	1	nogas	66.713	37.496	593	17.22	100	66.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-14.541	-1024.864	30	33.33	100	-14.5	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1243739	6.06	1112547	111.79	70	125	
Ge	72	1	nogas	3435655	2.68	3372491	101.87	70	125	
In	115	1	nogas	2961773	2.14	3088645	95.89	70	125	
Bi	209	1	nogas	2121370	1.25	2025845	104.72	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	867821	1.40	901118	96.30	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	091_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T15:14:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.028	22.2	327	13.8	1	
Na	23	1	nogas	-3.956	-49.6	1032603	5.2	100	
Mg	24	1	nogas	1.505	62.9	96970	16.3	100	
Al	27	1	nogas	-2.910	-0.5	33146	2.2	5	
K	39	1	nogas	-16.790	-71.5	8454806	1.6	100	
Ti	47	1	nogas	0.059	70.0	543	13.8	2.5	
V	51	1	nogas	5.006	4.0	482256	2.5	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.110	38.2	46719	1.7	2.5	
Mn	55	1	nogas	-0.608	-2.4	24173	0.2	2.5	
Co	59	1	nogas	0.023	70.5	1800	20.2	2.5	
Ni	60	1	nogas	-0.024	-71.5	1333	6.0	2.5	
Cu	63	1	nogas	-2.493	-0.5	8105	3.4	2	
Zn	66	1	nogas	0.150	11.6	880	9.3	2.5	
As	75	1	nogas	5.209	1.8	89247	1.0	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	-0.004	-257.6	2620	9.7	2.5	
Ag	107	1	nogas	0.028	21.0	563	13.6	2.5	
Cd	111	1	nogas	0.026	16.4	103	14.8	1	
Sb	121	1	nogas	1.927	23.8	27923	20.0	2.5	
Tl	205	1	nogas	0.147	39.7	3721	33.4	1	
Pb	208	1	nogas	0.024	69.5	2443	16.8	2.5	
U	238	1	nogas	0.109	64.0	3654	52.4	2.5	
[Pb]	206	1	nogas	0.009	227.7	610	22.5	2.5	
[Pb]	207	1	nogas	0.008	210.6	553	20.6	2.5	
Na	23	2	He	-11.157	-2.7	125370	1.8	100	
Mg	24	2	He	0.191	90.2	4467	5.5	100	
Al	27	2	He	-4.751	-2.6	730	9.9	5	
K	39	2	He	-24.511	-7.4	220817	0.8	100	
Ca	43	2	He	-12.705	-110.6	70	51.5	100	
Ca	44	2	He	-19.021	-19.1	2670	4.1	100	
V	51	2	He	0.155	7.8	6813	2.6	2.5	
Cr	52	2	He	-0.038	-187.1	5801	7.1	2.5	
Mn	55	2	He	-0.527	-5.5	1747	9.1	2.5	
Fe	56	2	He	1.877	12.7	36156	5.7	100	
Co	59	2	He	0.015	41.6	567	10.0	2.5	
Ni	60	2	He	-0.638	-2.9	477	10.6	2.5	
Cu	63	2	He	-1.468	-1.0	3030	4.6	2	
Zn	66	2	He	-0.543	-4.5	230	15.1	2.5	
As	75	2	He	0.112	14.2	586	2.0	2.5	
Se	78	2	He	-0.452	-44.3	119	17.8	2	
B	11	1	nogas	5.297	4.2	78206	4.4	10	
Si	28	1	nogas	14.302	82.8	1244957	8.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	-15.577	-23.4	1350	8.9	100	
Ca	44	1	nogas	-73.933	-5.1	195080	0.4	100	
Fe	56	1	nogas	-20.255	-17.0	2376199	2.2	100	
Se	77	1	nogas	32.123	4.2	28469	2.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.119	-70.3	160	16.5	2	
Mo	95	1	nogas	0.275	49.3	1940	39.4	2.5	
Sn	118	1	nogas	0.077	91.2	2727	20.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.062	-44.9	493	24.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.265	7.5	7015	8.5	2.5	
P	31	1	nogas	-4.703	-35.2	102918	1.0	10	
La	139	1	nogas	-46.265	-23.9	103	47.7	2.5	
Au	197	1	nogas	-228.892	-89.3	17	91.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1313099	3.72	1112547	118.03	70	125	
Ge	72	1	nogas	3458073	1.61	3372491	102.54	70	125	
In	115	1	nogas	3185535	2.34	3088645	103.14	70	125	
Bi	209	1	nogas	2247058	4.27	2025845	110.92	70	125	
Ge	72	2	He	879855	2.06	901118	97.64	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	102_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T15:36:57-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	91.636	6.002	698612	1.16	100	91.6	90	110	
Na	23	1	nogas	10130.347	6.043	258412714	2.15	10000	101.3	90	110	
Mg	24	1	nogas	10165.496	3.907	163882529	0.40	10000	101.7	90	110	
Al	27	1	nogas	90.589	2.272	1945490	0.76	100	90.6	90	110	
K	39	1	nogas	9748.201	0.903	212098434	1.68	10000	97.5	90	110	
Ti	47	1	nogas	97.232	0.792	196989	1.98	100	97.2	90	110	
V	51	1	nogas	102.893	2.246	3175496	3.37	100	102.9	90	110	
Cr	52	1	nogas	97.796	1.219	2317903	1.94	100	97.8	90	110	
Mn	55	1	nogas	101.740	1.435	3039166	1.55	100	101.7	90	110	
Co	59	1	nogas	101.517	1.331	2500906	2.51	100	101.5	90	110	
Ni	60	1	nogas	101.441	1.346	586091	0.82	100	101.4	90	110	
Cu	63	1	nogas	99.285	1.379	1294354	0.32	100	99.3	90	110	
Zn	66	1	nogas	101.101	0.760	477788	1.34	100	101.1	90	110	
As	75	1	nogas	97.269	0.528	602076	1.49	100	97.3	90	110	
Sr	88	1	nogas	106.404	2.675	3059835	1.42	100	106.4	90	110	
Ag	107	1	nogas	101.754	2.142	1481066	0.90	100	101.8	90	110	
Cd	111	1	nogas	99.808	2.592	321148	2.56	100	99.8	90	110	
Sb	121	1	nogas	100.111	2.450	1319371	3.86	100	100.1	90	110	
Tl	205	1	nogas	108.053	4.407	2066781	3.91	100	108.1	90	110	
Pb	208	1	nogas	110.794	2.166	2687476	2.16	100	110.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	105.452	1.103	2627516	2.46	100	105.5	90	110	
[Pb]	206	1	nogas	105.793	1.863	680856	1.14	100	105.8	90	110	
[Pb]	207	1	nogas	102.493	1.910	586596	2.14	100	102.5	90	110	
Na	23	2	He	9508.803	1.856	16458622	0.88	10000	95.1	90	110	
Mg	24	2	He	9842.597	1.769	9178320	2.05	10000	98.4	90	110	
Al	27	2	He	88.099	2.547	49291	1.31	100	88.1	90	110	CCV Main CR1-2 Failed
K	39	2	He	9873.373	1.197	9464638	1.17	10000	98.7	90	110	
Ca	43	2	He	9863.459	1.720	25738	2.32	10000	98.6	90	110	
Ca	44	2	He	9730.441	2.894	431401	1.70	10000	97.3	90	110	
V	51	2	He	97.312	1.168	646654	0.13	100	97.3	90	110	
Cr	52	2	He	97.977	2.036	707991	1.26	100	98.0	90	110	
Mn	55	2	He	96.939	2.041	483924	1.36	100	96.9	90	110	
Fe	56	2	He	9702.053	2.427	61939527	1.22	10000	97.0	90	110	
Co	59	2	He	98.275	0.849	965934	0.41	100	98.3	90	110	
Ni	60	2	He	102.811	0.728	268511	0.55	100	102.8	90	110	
Cu	63	2	He	100.298	1.909	644195	0.74	100	100.3	90	110	
Zn	66	2	He	101.389	1.150	158980	1.30	100	101.4	90	110	
As	75	2	He	97.729	1.775	141660	0.53	100	97.7	90	110	
Se	78	2	He	97.827	0.837	10893	1.13	100	97.8	90	110	
B	11	1	nogas	451.911	4.462	2317721	2.73	500	90.4	90	110	
Si	28	1	nogas	4963.725	1.524	51151778	0.62	5000	99.3	90	110	
Ca	43	1	nogas	10179.748	1.652	386129	1.73	10000	101.8	90	110	
Ca	44	1	nogas	10019.756	1.201	6435489	1.55	10000	100.2	90	110	
Fe	56	1	nogas	10028.145	2.397	262746381	0.99	10000	100.3	90	110	
Se	77	1	nogas	98.788	2.745	45243	2.50	100	98.8	90	110	
Se	82	1	nogas	100.292	2.236	29251	1.38	100	100.3	90	110	
Mo	95	1	nogas	102.343	0.857	602620	0.75	100	102.3	90	110	
Sn	118	1	nogas	103.647	3.287	902252	1.44	100	103.6	90	110	
Ba	137	1	nogas	98.986	3.820	417564	2.43	100	99.0	90	110	
Sb	121	2	He	99.349	0.481	470904	1.25	100	99.3	90	110	
Li	7	1	nogas	98.386	6.934	1661501	1.60	100	98.4	90	110	
P	31	1	nogas	487.423	1.717	902998	0.79	500	97.5	90	110	
La	139	1	nogas	64.681	25.426	603	11.04	100	64.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-212.577	-40.183	17	34.64	100	-212.6	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1146017	6.77	1112547	103.01	70	125	
Ge	72	1	nogas	3445601	1.46	3372491	102.17	70	125	
In	115	1	nogas	3058832	4.60	3088645	99.03	70	125	
Bi	209	1	nogas	2154738	1.35	2025845	106.36	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	857382	1.23	901118	95.15	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	103_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T15:38:57-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	059CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.047	20.6	460	16.4	1	
Na	23	1	nogas	15.248	25.4	1496982	4.2	100	
Mg	24	1	nogas	6.116	25.4	169807	12.5	100	
Al	27	1	nogas	-2.993	-2.2	31473	2.0	5	
K	39	1	nogas	-38.797	-26.8	8006521	0.7	100	
Ti	47	1	nogas	0.013	407.3	450	21.4	2.5	
V	51	1	nogas	2.649	10.0	417868	3.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.123	-44.1	41350	1.3	2.5	
Mn	55	1	nogas	-0.497	-10.5	27487	4.6	2.5	
Co	59	1	nogas	0.046	26.6	2384	10.1	2.5	
Ni	60	1	nogas	-0.007	-323.5	1437	6.2	2.5	
Cu	63	1	nogas	-2.428	-0.1	8952	2.4	2	
Zn	66	1	nogas	0.268	6.8	1440	5.2	2.5	
As	75	1	nogas	1.730	21.1	69887	2.5	2.5	
Sr	88	1	nogas	0.372	16.4	13445	10.7	2.5	
Ag	107	1	nogas	0.041	17.5	760	11.7	2.5	
Cd	111	1	nogas	0.049	38.7	180	33.3	1	
Sb	121	1	nogas	1.645	28.2	24208	22.7	2.5	
Tl	205	1	nogas	0.146	43.3	3707	33.2	1	
Pb	208	1	nogas	0.040	50.6	2823	17.4	2.5	
U	238	1	nogas	0.128	55.8	4154	44.3	2.5	
[Pb]	206	1	nogas	0.031	62.4	763	16.6	2.5	
[Pb]	207	1	nogas	0.006	373.6	547	26.7	2.5	
Na	23	2	He	0.780	256.9	142793	1.2	100	
Mg	24	2	He	2.761	13.5	6751	3.6	100	
Al	27	2	He	-0.634	-1027.6	2924	120.8	5	
K	39	2	He	-38.220	-11.2	208013	1.9	100	
Ca	43	2	He	41.691	20.0	210	8.3	100	
Ca	44	2	He	44.252	24.8	5388	6.8	100	
V	51	2	He	-0.016	-216.0	5512	1.7	2.5	
Cr	52	2	He	-0.100	-8.3	5217	2.7	2.5	
Mn	55	2	He	-0.480	-6.2	1933	5.8	2.5	
Fe	56	2	He	2.606	18.3	39887	6.2	100	
Co	59	2	He	0.024	6.6	647	3.6	2.5	
Ni	60	2	He	-0.632	-4.4	480	12.7	2.5	
Cu	63	2	He	-1.397	-1.6	3404	4.2	2	
Zn	66	2	He	-0.511	-6.5	273	16.5	2.5	
As	75	2	He	0.019	446.3	436	25.7	2.5	
Se	78	2	He	-0.282	-12.6	135	5.2	2	
B	11	1	nogas	13.456	5.3	115945	2.8	10	CCB Main CR1 Failed
Si	28	1	nogas	-3.378	-123.3	1068163	1.4	5	
Ca	43	1	nogas	76.477	19.0	4837	8.9	100	
Ca	44	1	nogas	-5.129	-398.1	237993	2.8	100	
Fe	56	1	nogas	-9.067	-73.5	2669831	4.0	100	
Se	77	1	nogas	7.182	27.0	22164	2.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.144	78.8	237	13.6	2	
Mo	95	1	nogas	0.263	44.0	1867	34.1	2.5	
Sn	118	1	nogas	0.102	69.4	2917	19.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.069	345.8	1055	97.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.103	7.7	6068	6.3	2.5	
P	31	1	nogas	-11.967	-11.3	91209	1.2	10	
La	139	1	nogas	-55.330	-8.4	60	33.3	2.5	
Au	197	1	nogas	-178.204	-78.0	20	50.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1214743	2.74	1112547	109.19	70	125	
Ge	72	1	nogas	3463867	2.48	3372491	102.71	70	125	
In	115	1	nogas	3144309	2.91	3088645	101.80	70	125	
Bi	209	1	nogas	2265944	2.25	2025845	111.85	70	125	
Ge	72	2	He	858485	2.55	901118	95.27	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	112CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:07:33-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	113	46.93
Na	23	1	nogas	839040	0.00
Mg	24	1	nogas	84937	0.00
Al	27	1	nogas	93612	0.00
K	39	1	nogas	8370268	0.00
Ti	47	1	nogas	313	2.12
V	51	1	nogas	298399	0.00
Cr	52	1	nogas	40628	0.00
Mn	55	1	nogas	41664	0.00
Co	59	1	nogas	1293	1.32
Ni	60	1	nogas	1730	0.74
Cu	63	1	nogas	48912	0.00
Zn	66	1	nogas	3240	0.14
As	75	1	nogas	59825	0.01
Sr	88	1	nogas	30106	0.52
Ag	107	1	nogas	173	13.45
Cd	111	1	nogas	60	48.11
Sb	121	1	nogas	3994	0.19
Tl	205	1	nogas	767	0.97
Pb	208	1	nogas	1850	0.06
[Pb]	206	1	nogas	457	3.85
[Pb]	207	1	nogas	377	1.08
Na	23	2	He	115445	0.00
Mg	24	2	He	5062	0.05
Al	27	2	He	2457	0.52
K	39	2	He	215745	0.00
Ca	43	2	He	127	40.07
Ca	44	2	He	2850	0.30
V	51	2	He	4168	0.12
Cr	52	2	He	5834	0.07
Mn	55	2	He	4201	0.14
Fe	56	2	He	27651	0.01
Co	59	2	He	463	3.53
Ni	60	2	He	717	1.25
Cu	63	2	He	24106	0.02
Zn	66	2	He	1183	0.65
As	75	2	He	398	2.50
Se	78	2	He	149	8.70
B	11	1	nogas	59473	0.01
Si	28	1	nogas	1042799	0.00
Ca	43	1	nogas	2047	0.51
Ca	44	1	nogas	174578	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2379532	0.00
Se	77	1	nogas	19014	0.02
Se	82	1	nogas	220	10.93
Mo	95	1	nogas	353	6.67
Sn	118	1	nogas	2677	0.41
Ba	137	1	nogas	1243	1.01
Sb	121	2	He	1433	1.18
Li	7	1	nogas	101188	0.00
P	31	1	nogas	103739	0.00
La	139	1	nogas	267	0.81

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1230826	5.77
Ge	72	1	nogas	3534266	1.63
In	115	1	nogas	3124880	1.88
Bi	209	1	nogas	2183512	2.59
Ge	72	2	He	871721	1.02

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	113CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:09:34-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	14539	0.03
Na	23	1	nogas	6230215	0.00
Mg	24	1	nogas	3501425	0.00
Al	27	1	nogas	99401	0.00
K	39	1	nogas	12557971	0.00
Ti	47	1	nogas	4391	0.22
V	51	1	nogas	343403	0.00
Cr	52	1	nogas	86850	0.00
Mn	55	1	nogas	94401	0.00
Co	59	1	nogas	52449	0.00
Ni	60	1	nogas	14202	0.02
Cu	63	1	nogas	37736	0.01
Zn	66	1	nogas	11714	0.02
As	75	1	nogas	68374	0.01
Sr	88	1	nogas	63346	0.00
Ag	107	1	nogas	31549	0.01
Cd	111	1	nogas	6815	0.04
Sb	121	1	nogas	31345	0.01
Tl	205	1	nogas	39509	0.01
Pb	208	1	nogas	55872	0.01
[Pb]	206	1	nogas	13719	0.01
[Pb]	207	1	nogas	12271	0.04
Na	23	2	He	464705	0.00
Mg	24	2	He	196317	0.00
Al	27	2	He	2760	0.19
K	39	2	He	406367	0.00
Ca	43	2	He	600	1.27
Ca	44	2	He	11447	0.02
V	51	2	He	17410	0.00
Cr	52	2	He	19831	0.02
Mn	55	2	He	12715	0.03
Fe	56	2	He	1332786	0.00
Co	59	2	He	21463	0.01
Ni	60	2	He	6148	0.08
Cu	63	2	He	16808	0.02
Zn	66	2	He	3920	0.15
As	75	2	He	3231	0.14
Se	78	2	He	377	1.41
B	11	1	nogas	101760	0.00
Si	28	1	nogas	2255304	0.00

Calibration Standard Report

Ca	43	1	nogas	9403	0.05
Ca	44	1	nogas	299320	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	7503215	0.00
Se	77	1	nogas	19184	0.01
Se	82	1	nogas	797	0.40
Mo	95	1	nogas	12174	0.02
Sn	118	1	nogas	19564	0.00
Ba	137	1	nogas	9033	0.03
Sb	121	2	He	10827	0.01
P	31	1	nogas	119405	0.00
La	139	1	nogas	133	30.98

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1228994	2.82	1230826	99.85	70	125	
Ge	72	1	nogas	3449842	1.11	3534266	97.61	70	125	
In	115	1	nogas	3160673	1.81	3124880	101.15	70	125	
Bi	209	1	nogas	2219894	2.26	2183512	101.67	70	125	
Ge	72	2	He	885526	1.19	871721	101.58	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	114CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:11:33-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	36499	0.01
Na	23	1	nogas	14535496	0.00
Mg	24	1	nogas	9015190	0.00
Al	27	1	nogas	200211	0.00
K	39	1	nogas	19178896	0.00
Ti	47	1	nogas	10490	0.01
V	51	1	nogas	421516	0.00
Cr	52	1	nogas	162688	0.00
Mn	55	1	nogas	196448	0.00
Co	59	1	nogas	132573	0.00
Ni	60	1	nogas	33671	0.01
Cu	63	1	nogas	80185	0.00
Zn	66	1	nogas	27831	0.01
As	75	1	nogas	84086	0.00
Sr	88	1	nogas	160397	0.00
Ag	107	1	nogas	79459	0.00
Cd	111	1	nogas	16892	0.02
Sb	121	1	nogas	72353	0.00
Tl	205	1	nogas	103539	0.00
Pb	208	1	nogas	141368	0.00
[Pb]	206	1	nogas	36027	0.01
[Pb]	207	1	nogas	31090	0.01
Na	23	2	He	1020306	0.00
Mg	24	2	He	500998	0.00
Al	27	2	He	5101	0.08
K	39	2	He	711331	0.00
Ca	43	2	He	1280	0.98
Ca	44	2	He	25731	0.01
V	51	2	He	37896	0.00
Cr	52	2	He	43070	0.01
Mn	55	2	He	30068	0.01
Fe	56	2	He	3272431	0.00
Co	59	2	He	52388	0.01
Ni	60	2	He	15457	0.03
Cu	63	2	He	40017	0.00
Zn	66	2	He	9523	0.05
As	75	2	He	7746	0.02
Se	78	2	He	718	0.53
B	11	1	nogas	173237	0.00
Si	28	1	nogas	3908017	0.00

Calibration Standard Report

Ca	43	1	nogas	22417	0.01
Ca	44	1	nogas	494009	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	15774799	0.00
Se	77	1	nogas	19457	0.01
Se	82	1	nogas	1743	0.52
Mo	95	1	nogas	31859	0.00
Sn	118	1	nogas	47663	0.00
Ba	137	1	nogas	21404	0.02
Sb	121	2	He	26080	0.01
P	31	1	nogas	151824	0.00
La	139	1	nogas	203	10.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1238576	5.88	1230826	100.63	70	125	
Ge	72	1	nogas	3495661	2.12	3534266	98.91	70	125	
In	115	1	nogas	3197498	0.88	3124880	102.32	70	125	
Bi	209	1	nogas	2187454	2.49	2183512	100.18	70	125	
Ge	72	2	He	888287	1.33	871721	101.90	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	115CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:13:34-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	70911	0.00
Na	23	1	nogas	26850445	0.00
Mg	24	1	nogas	17024757	0.00
Al	27	1	nogas	371758	0.00
K	39	1	nogas	28818096	0.00
Ti	47	1	nogas	20468	0.00
V	51	1	nogas	590819	0.00
Cr	52	1	nogas	276461	0.00
Mn	55	1	nogas	334126	0.00
Co	59	1	nogas	250344	0.00
Ni	60	1	nogas	60711	0.00
Cu	63	1	nogas	142162	0.00
Zn	66	1	nogas	48014	0.01
As	75	1	nogas	117036	0.00
Sr	88	1	nogas	300126	0.00
Ag	107	1	nogas	150721	0.00
Cd	111	1	nogas	31054	0.01
Sb	121	1	nogas	140808	0.00
Tl	205	1	nogas	191376	0.00
Pb	208	1	nogas	267574	0.00
[Pb]	206	1	nogas	66861	0.01
[Pb]	207	1	nogas	59375	0.00
Na	23	2	He	1902925	0.00
Mg	24	2	He	941627	0.00
Al	27	2	He	9356	0.03
K	39	2	He	1140102	0.00
Ca	43	2	He	2497	0.15
Ca	44	2	He	46649	0.00
V	51	2	He	69760	0.00
Cr	52	2	He	77830	0.00
Mn	55	2	He	51439	0.00
Fe	56	2	He	6217699	0.00
Co	59	2	He	99093	0.00
Ni	60	2	He	26793	0.01
Cu	63	2	He	68039	0.00
Zn	66	2	He	16027	0.02
As	75	2	He	14357	0.01
Se	78	2	He	1197	0.09
B	11	1	nogas	279073	0.00
Si	28	1	nogas	6404495	0.00

Calibration Standard Report

Ca	43	1	nogas	41537	0.01
Ca	44	1	nogas	795666	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	27501268	0.00
Se	77	1	nogas	22411	0.01
Se	82	1	nogas	2997	0.08
Mo	95	1	nogas	59570	0.00
Sn	118	1	nogas	90773	0.00
Ba	137	1	nogas	41133	0.00
Sb	121	2	He	49407	0.01
P	31	1	nogas	191368	0.00
La	139	1	nogas	203	8.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1230261	2.34	1230826	99.95	70	125	
Ge	72	1	nogas	3476705	4.35	3534266	98.37	70	125	
In	115	1	nogas	3118800	1.20	3124880	99.81	70	125	
Bi	209	1	nogas	2102487	3.66	2183512	96.29	70	125	
Ge	72	2	He	880588	1.43	871721	101.02	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	116CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:15:32-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	720353	0.00
Na	23	1	nogas	256025356	0.00
Mg	24	1	nogas	161526920	0.00
Al	27	1	nogas	2209863	0.00
K	39	1	nogas	210416617	0.00
Ti	47	1	nogas	197199	0.00
V	51	1	nogas	3048818	0.00
Cr	52	1	nogas	2434944	0.00
Mn	55	1	nogas	3028926	0.00
Co	59	1	nogas	2475581	0.00
Ni	60	1	nogas	563513	0.00
Cu	63	1	nogas	1306445	0.00
Zn	66	1	nogas	457400	0.00
As	75	1	nogas	605530	0.00
Sr	88	1	nogas	2898587	0.00
Ag	107	1	nogas	1546581	0.00
Cd	111	1	nogas	316516	0.00
Sb	121	1	nogas	1336111	0.00
Tl	205	1	nogas	1996943	0.00
Pb	208	1	nogas	2655799	0.00
[Pb]	206	1	nogas	643868	0.00
[Pb]	207	1	nogas	575050	0.00
Na	23	2	He	16928956	0.00
Mg	24	2	He	8983882	0.00
Al	27	2	He	57554	0.00
K	39	2	He	9449621	0.00
Ca	43	2	He	25024	0.01
Ca	44	2	He	432253	0.00
V	51	2	He	658864	0.00
Cr	52	2	He	724212	0.00
Mn	55	2	He	493549	0.00
Fe	56	2	He	61367431	0.00
Co	59	2	He	977366	0.00
Ni	60	2	He	264169	0.00
Cu	63	2	He	651305	0.00
Zn	66	2	He	156305	0.00
As	75	2	He	143186	0.00
Se	78	2	He	10947	0.00
B	11	1	nogas	2383407	0.00
Si	28	1	nogas	53028218	0.00

Calibration Standard Report

Ca	43	1	nogas	378440	0.00
Ca	44	1	nogas	6265993	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	251673556	0.00
Se	77	1	nogas	44284	0.00
Se	82	1	nogas	28940	0.01
Mo	95	1	nogas	584521	0.00
Sn	118	1	nogas	878043	0.00
Ba	137	1	nogas	403193	0.00
Sb	121	2	He	478769	0.00
P	31	1	nogas	907183	0.00
La	139	1	nogas	710	2.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1172282	6.29	1230826	95.24	70	125	
Ge	72	1	nogas	3486816	2.81	3534266	98.66	70	125	
In	115	1	nogas	3200901	1.39	3124880	102.43	70	125	
Bi	209	1	nogas	2252579	5.29	2183512	103.16	70	125	
Ge	72	2	He	855438	0.74	871721	98.13	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	117CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:17:31-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1381457	0.00
Na	23	1	nogas	495579928	0.00
Mg	24	1	nogas	316938074	0.00
Al	27	1	nogas	4155278	0.00
K	39	1	nogas	410016001	0.00
Ti	47	1	nogas	398735	0.00
V	51	1	nogas	5726594	0.00
Cr	52	1	nogas	4646682	0.00
Mn	55	1	nogas	5796306	0.00
Co	59	1	nogas	4813865	0.00
Ni	60	1	nogas	1110241	0.00
Cu	63	1	nogas	2549115	0.00
Zn	66	1	nogas	895577	0.00
As	75	1	nogas	1135121	0.00
Sr	88	1	nogas	5712864	0.00
Ag	107	1	nogas	2921316	0.00
Cd	111	1	nogas	617747	0.00
Sb	121	1	nogas	2696153	0.00
Tl	205	1	nogas	3883502	0.00
Pb	208	1	nogas	5273095	0.00
[Pb]	206	1	nogas	1357593	0.00
[Pb]	207	1	nogas	1148895	0.00
Na	23	2	He	33182870	0.00
Mg	24	2	He	17814056	0.00
Al	27	2	He	104307	0.00
K	39	2	He	18202556	0.00
Ca	43	2	He	50458	0.00
Ca	44	2	He	847403	0.00
V	51	2	He	1309379	0.00
Cr	52	2	He	1445222	0.00
Mn	55	2	He	960616	0.00
Fe	56	2	He	119456662	0.00
Co	59	2	He	1964982	0.00
Ni	60	2	He	513507	0.00
Cu	63	2	He	1288087	0.00
Zn	66	2	He	311420	0.00
As	75	2	He	282436	0.00
Se	78	2	He	21680	0.01
B	11	1	nogas	4576441	0.00
Si	28	1	nogas	103771502	0.00

Calibration Standard Report

Ca	43	1	nogas	741621	0.00
Ca	44	1	nogas	12130386	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	485536628	0.00
Se	77	1	nogas	68522	0.00
Se	82	1	nogas	56388	0.00
Mo	95	1	nogas	1181878	0.00
Sn	118	1	nogas	1747878	0.00
Ba	137	1	nogas	812672	0.00
Sb	121	2	He	968287	0.00
P	31	1	nogas	1752392	0.00
La	139	1	nogas	1187	0.35

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1029506	1.26	1230826	83.64	70	125	
Ge	72	1	nogas	3413925	1.73	3534266	96.60	70	125	
In	115	1	nogas	2979956	3.05	3124880	95.36	70	125	
Bi	209	1	nogas	2134469	1.75	2183512	97.75	70	125	
Ge	72	2	He	847826	1.65	871721	97.26	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	118_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:19:30-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	100.136	5.009	746282	2.50	100	100.1	90	110	
Na	23	1	nogas	11021.586	0.928	275327898	2.09	10000	110.2	90	110	ICV Main CR1 Failed
Mg	24	1	nogas	10822.365	1.972	172267991	1.10	10000	108.2	90	110	
Al	27	1	nogas	96.004	6.293	2072030	3.11	100	96.0	90	110	
K	39	1	nogas	10781.372	3.641	226607355	1.44	10000	107.8	90	110	
Ti	47	1	nogas	98.186	3.078	196832	1.77	100	98.2	90	110	
V	51	1	nogas	101.433	4.366	3076106	0.99	100	101.4	90	110	
Cr	52	1	nogas	103.080	1.452	2450754	1.57	100	103.1	90	110	
Mn	55	1	nogas	106.250	1.395	3145538	3.89	100	106.2	90	110	
Co	59	1	nogas	102.541	1.613	2501510	1.48	100	102.5	90	110	
Ni	60	1	nogas	101.182	1.868	568733	1.26	100	101.2	90	110	
Cu	63	1	nogas	101.710	5.759	1330929	6.45	100	101.7	90	110	
Zn	66	1	nogas	102.419	1.275	465249	1.91	100	102.4	90	110	
As	75	1	nogas	101.810	2.734	612248	0.52	100	101.8	90	110	
Sr	88	1	nogas	104.128	0.363	3016478	3.04	100	104.1	90	110	
Ag	107	1	nogas	101.979	2.468	1518441	1.36	100	102.0	90	110	
Cd	111	1	nogas	103.289	1.071	325554	0.74	100	103.3	90	110	
Sb	121	1	nogas	107.066	3.659	1453841	4.97	100	107.1	90	110	
Tl	205	1	nogas	108.036	4.344	2096176	4.44	100	108.0	90	110	
Pb	208	1	nogas	104.735	1.395	2766242	1.39	100	104.7	90	110	
U	238	1	nogas	109.205	2.395	2677255	2.77	100	109.2	90	110	
[Pb]	206	1	nogas	105.286	4.377	702970	3.42	100	105.3	90	110	
[Pb]	207	1	nogas	102.926	3.834	587610	2.28	100	102.9	90	110	
Na	23	2	He	10350.243	2.212	17688051	2.92	10000	103.5	90	110	
Mg	24	2	He	10344.270	1.400	9446574	0.75	10000	103.4	90	110	
Al	27	2	He	95.755	5.888	53420	5.69	100	95.8	90	110	
K	39	2	He	10759.973	1.109	9945317	1.08	10000	107.6	90	110	
Ca	43	2	He	10352.062	2.366	26723	1.06	10000	103.5	90	110	
Ca	44	2	He	10314.949	1.108	450077	0.52	10000	103.1	90	110	
V	51	2	He	99.934	1.553	671451	0.46	100	99.9	90	110	
Cr	52	2	He	100.467	1.807	745178	0.60	100	100.5	90	110	
Mn	55	2	He	106.049	2.668	525414	1.55	100	106.0	90	110	
Fe	56	2	He	10406.011	2.983	63945674	1.74	10000	104.1	90	110	
Co	59	2	He	99.820	0.406	1002432	1.76	100	99.8	90	110	
Ni	60	2	He	97.969	1.075	259376	0.59	100	98.0	90	110	
Cu	63	2	He	99.186	0.335	658331	1.12	100	99.2	90	110	
Zn	66	2	He	97.444	1.095	155651	0.31	100	97.4	90	110	
As	75	2	He	102.217	0.387	148245	0.99	100	102.2	90	110	
Se	78	2	He	102.383	1.211	11427	0.83	100	102.4	90	110	
B	11	1	nogas	523.957	5.067	2606983	3.29	500	104.8	90	110	
Si	28	1	nogas	606.103	5.305	7304923	2.29	5000	12.1	90	110	ICV Main CR1 Failed
Ca	43	1	nogas	10665.323	4.648	400589	1.67	10000	106.7	90	110	
Ca	44	1	nogas	10598.368	4.053	6578030	1.27	10000	106.0	90	110	
Fe	56	1	nogas	10590.406	2.887	261629331	0.86	10000	105.9	90	110	
Se	77	1	nogas	87.526	8.301	40769	2.69	100	87.5	90	110	ICV Main CR1 Failed
Se	82	1	nogas	105.128	3.137	30089	1.73	100	105.1	90	110	
Mo	95	1	nogas	101.929	3.088	605415	0.15	100	101.9	90	110	
Sn	118	1	nogas	95.504	1.598	849575	0.54	100	95.5	90	110	
Ba	137	1	nogas	103.096	2.280	425527	0.93	100	103.1	90	110	
Sb	121	2	He	105.151	0.888	520302	2.12	100	105.2	90	110	
Li	7	1	nogas	107.521	4.006	1815176	3.16	100	107.5	90	110	
P	31	1	nogas	540.037	4.262	995126	1.53	500	108.0	90	110	
La	139	1	nogas	112.818	40.582	787	27.63	100	112.8	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-27.100	-198.884	17	34.64	100	-27.1	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1130591	2.71	1230826	91.86	70	125	
Ge	72	1	nogas	3453536	3.01	3534266	97.72	70	125	
In	115	1	nogas	3069439	1.36	3124880	98.23	70	125	
Bi	209	1	nogas	2142320	1.72	2183512	98.11	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	869012	1.38	871721	99.69	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	119SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:21:30-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	112CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.876	1.876	4.97	14562	0.01	2000	
Na	23	1	nogas	211.810	211.810	4.19	6305338	0.00	200000	
Mg	24	1	nogas	210.931	210.931	5.53	3559315	0.01	200000	
Al	27	1	nogas	0.329	0.329	16.75	99562	0.00	2000	
K	39	1	nogas	205.104	205.104	3.07	12498346	0.00	200000	
Ti	47	1	nogas	2.145	2.145	7.19	4661	0.05	2000	
V	51	1	nogas	0.391	0.391	112.14	306296	0.00	2000	
Cr	52	1	nogas	1.877	1.877	2.93	84693	0.00	2000	
Mn	55	1	nogas	1.724	1.724	0.23	92263	0.00	2000	
Co	59	1	nogas	2.080	2.080	0.36	52659	0.00	2000	
Ni	60	1	nogas	1.994	1.994	4.92	14459	0.01	2000	
Cu	63	1	nogas	-0.995	-0.995	-8.56	35705	0.00	2000	
Zn	66	1	nogas	1.978	1.978	1.98	12294	0.02	2000	
As	75	1	nogas	1.436	1.436	9.03	66776	0.00	2000	
Sr	88	1	nogas	1.168	1.168	1.52	63312	0.00	2000	
Ag	107	1	nogas	2.134	2.134	1.27	32367	0.01	2000	
Cd	111	1	nogas	2.051	2.051	5.18	6778	0.03	2000	
Sb	121	1	nogas	2.393	2.393	2.92	36776	0.01	2000	
Tl	205	1	nogas	2.171	2.171	2.29	45775	0.00	2000	
Pb	208	1	nogas	2.163	2.163	0.52	58940	0.00	2000	
U	238	1	nogas	2.173	2.173	5.55	57796	0.00	2000	
[Pb]	206	1	nogas	1.936	1.936	0.31	14283	0.01	2000	
[Pb]	207	1	nogas	2.090	2.090	4.83	13132	0.02	2000	
Na	23	2	He	200.796	200.796	0.20	463302	0.04	200000	
Mg	24	2	He	204.558	204.558	1.10	194867	0.10	200000	
Al	27	2	He	-0.891	-0.891	-56.98	2520	-0.04	2000	
K	39	2	He	208.500	208.500	1.13	404278	0.05	200000	
Ca	43	2	He	163.787	163.787	13.93	557	29.42	200000	
Ca	44	2	He	186.550	186.550	3.23	11103	1.68	200000	
V	51	2	He	2.044	2.044	2.98	16982	0.01	2000	
Cr	52	2	He	1.991	1.991	2.98	20802	0.01	2000	
Mn	55	2	He	1.749	1.749	4.72	12988	0.01	2000	
Fe	56	2	He	213.132	213.132	1.80	1358419	0.02	200000	
Co	59	2	He	2.035	2.035	3.26	21223	0.01	2000	
Ni	60	2	He	1.718	1.718	3.09	5971	0.03	2000	
Cu	63	2	He	1.250	1.250	2.32	17208	0.01	2000	
Zn	66	2	He	2.017	2.017	6.32	3937	0.05	2000	
As	75	2	He	1.958	1.958	4.82	3280	0.06	2000	
Se	78	2	He	2.154	2.154	9.14	370	0.58	2000	
B	11	1	nogas	25.939	25.939	10.84	189160	0.01	2000	
Si	28	1	nogas	126.473	126.473	2.93	2362192	0.01	2000	
Ca	43	1	nogas	185.769	185.769	10.46	9072	2.05	200000	

Sample Report

Ca	44	1	nogas	195.196	195.196	1.55	292477	0.07	200000	
Fe	56	1	nogas	196.044	196.044	2.11	7220371	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-3.900	-3.900	-52.85	17822	-0.02	2000	
Se	82	1	nogas	2.341	2.341	23.62	893	0.26	2000	
Mo	95	1	nogas	2.351	2.351	3.33	14499	0.02	2000	
Sn	118	1	nogas	2.024	2.024	2.42	21383	0.01	2000	
Ba	137	1	nogas	1.876	1.876	3.21	9296	0.02	2000	
Sb	121	2	He	2.421	2.421	5.89	13585	0.02	2000	
La	139	1	nogas	-17.649	-17.649	-70.52	187	-9.45	2000	
Au	197	1	nogas	-66.619	-66.619	-73.46	13	-499.65	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1251202	4.11	1230826	101.66	70	125	
Ge	72	1	nogas	3498566	1.33	3534266	98.99	70	125	
In	115	1	nogas	3189640	0.95	3124880	102.07	70	125	
Bi	209	1	nogas	2288182	1.57	2183512	104.79	70	125	
Ge	72	2	He	882967	1.00	871721	101.29	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	120LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:23:30-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	5.001	1.743	38295	2.67	5	100.0	70	130	
Na	23	1	nogas	548.734	3.155	14392638	2.27	500	109.7	70	130	
Mg	24	1	nogas	557.191	0.827	8895694	0.95	500	111.4	70	130	
Al	27	1	nogas	5.255	5.655	201051	1.21	5	105.1	70	130	
K	39	1	nogas	526.332	6.196	18944295	1.27	500	105.3	70	130	
Ti	47	1	nogas	5.381	1.500	11147	3.92	5	107.6	70	130	
V	51	1	nogas	3.740	11.263	396489	1.55	5	74.8	70	130	
Cr	52	1	nogas	5.218	6.365	162556	2.23	5	104.4	70	130	
Mn	55	1	nogas	5.293	4.528	196332	1.55	5	105.9	70	130	
Co	59	1	nogas	5.380	1.795	133191	2.21	5	107.6	70	130	
Ni	60	1	nogas	5.363	3.269	33287	2.16	5	107.3	70	130	
Cu	63	1	nogas	2.448	2.949	79107	1.89	5	49.0	70	130	LLICV Main CR1 Failed
Zn	66	1	nogas	5.414	3.908	27798	5.20	5	108.3	70	130	
As	75	1	nogas	4.732	5.698	84311	0.93	5	94.6	70	130	
Sr	88	1	nogas	4.567	2.402	160875	2.08	5	91.3	70	130	
Ag	107	1	nogas	5.215	4.428	78223	1.91	5	104.3	70	130	
Cd	111	1	nogas	5.078	3.653	16681	1.66	5	101.6	70	130	
Sb	121	1	nogas	5.238	1.311	75259	3.76	5	104.8	70	130	
Tl	205	1	nogas	4.990	4.507	101615	2.37	5	99.8	70	130	
Pb	208	1	nogas	5.316	0.618	142151	0.61	5	106.3	70	130	
U	238	1	nogas	5.363	1.170	137916	1.68	5	107.3	70	130	
[Pb]	206	1	nogas	4.979	2.930	35102	0.72	5	99.6	70	130	
[Pb]	207	1	nogas	5.138	1.226	30953	2.20	5	102.8	70	130	
Na	23	2	He	509.263	1.509	996788	0.62	500	101.9	70	130	
Mg	24	2	He	527.849	1.137	495405	0.82	500	105.6	70	130	
Al	27	2	He	3.954	21.641	5121	7.82	5	79.1	70	130	
K	39	2	He	534.291	2.039	698871	1.41	500	106.9	70	130	
Ca	43	2	He	502.510	5.009	1443	5.89	500	100.5	70	130	
Ca	44	2	He	493.112	4.119	24640	2.09	500	98.6	70	130	
V	51	2	He	5.041	3.640	37401	1.73	5	100.8	70	130	
Cr	52	2	He	5.169	2.438	44624	0.66	5	103.4	70	130	
Mn	55	2	He	5.236	0.278	30452	1.41	5	104.7	70	130	
Fe	56	2	He	523.973	2.560	3303140	0.94	500	104.8	70	130	
Co	59	2	He	4.972	1.741	51252	0.96	5	99.4	70	130	
Ni	60	2	He	5.203	2.221	15317	0.40	5	104.1	70	130	
Cu	63	2	He	4.466	3.092	38661	1.66	5	89.3	70	130	
Zn	66	2	He	5.283	4.311	9229	3.69	5	105.7	70	130	
As	75	2	He	5.010	4.037	7775	2.24	5	100.2	70	130	
Se	78	2	He	5.090	4.863	701	5.58	5	101.8	70	130	
B	11	1	nogas	31.846	5.140	230147	2.30	25	127.4	70	130	
Si	28	1	nogas	278.930	4.648	3934241	1.46	25	1115.7	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	526.641	5.135	21803	1.99	500	105.3	70	130	
Ca	44	1	nogas	518.108	3.724	486591	0.94	500	103.6	70	130	
Fe	56	1	nogas	541.595	3.323	15672147	0.55	500	108.3	70	130	
Se	77	1	nogas	1.281	97.364	19010	1.81	5	25.6	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.737	6.053	1570	4.18	5	94.7	70	130	
Mo	95	1	nogas	5.222	3.678	31515	1.48	5	104.4	70	130	
Sn	118	1	nogas	5.213	4.439	50744	2.22	5	104.3	70	130	
Ba	137	1	nogas	4.984	3.267	22576	0.47	5	99.7	70	130	
Sb	121	2	He	5.094	2.064	27025	0.61	5	101.9	70	130	
Li	7	1	nogas	5.276	6.107	190462	2.82	5	105.5	70	130	
P	31	1	nogas	29.099	10.874	150326	1.10	25	116.4	70	130	
La	139	1	nogas	-16.319	-28.028	193	10.77	5	-326.4	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	-122.527	-42.892	7	86.60	5	-2450.5	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1239603	3.20	1230826	100.71	70	125	
Ge	72	1	nogas	3472691	2.61	3534266	98.26	70	125	
In	115	1	nogas	3189709	3.10	3124880	102.07	70	125	
Bi	209	1	nogas	2233285	2.21	2183512	102.28	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	884318	1.65	871721	101.45	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	121_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:25:29-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.005	127.6	157	38.5	1	
Na	23	1	nogas	-3.484	-17.8	730346	1.1	100	
Mg	24	1	nogas	-3.391	-4.7	28525	9.1	100	
Al	27	1	nogas	-3.062	-0.5	27590	4.0	5	
K	39	1	nogas	2.358	342.0	8033309	1.2	100	
Ti	47	1	nogas	0.021	62.6	340	10.2	2.5	
V	51	1	nogas	-0.446	-69.8	272786	1.5	2.5	
Cr	52	1	nogas	-0.048	-117.3	37662	0.2	2.5	
Mn	55	1	nogas	-0.506	-3.2	25331	1.3	2.5	
Co	59	1	nogas	0.007	106.9	1393	9.8	2.5	
Ni	60	1	nogas	-0.393	-0.3	907	3.5	2.5	
Cu	63	1	nogas	-3.222	-0.8	6991	1.7	1	
Zn	66	1	nogas	-0.429	-1.3	1243	3.8	2.5	
As	75	1	nogas	0.216	339.9	57822	3.9	2.5	
Sr	88	1	nogas	-0.949	-0.2	1733	4.8	2.5	
Ag	107	1	nogas	0.002	246.7	193	33.7	2.5	
Cd	111	1	nogas	0.000	-1751.4	57	27.0	1	
Sb	121	1	nogas	0.053	23.4	4507	3.0	2.5	
Tl	205	1	nogas	0.035	54.3	1420	26.9	1	
Pb	208	1	nogas	-0.013	-45.9	1510	10.3	2.5	
U	238	1	nogas	-0.012	-49.4	587	24.8	2.5	
[Pb]	206	1	nogas	-0.016	-76.0	337	25.3	2.5	
[Pb]	207	1	nogas	-0.004	-362.9	340	25.6	2.5	
Na	23	2	He	-2.028	-56.0	102371	2.2	100	
Mg	24	2	He	-3.813	-1.9	1437	5.0	100	
Al	27	2	He	-4.517	-2.7	523	11.2	5	
K	39	2	He	-14.017	-27.4	203070	1.7	100	
Ca	43	2	He	-32.270	-34.9	40	66.1	100	
Ca	44	2	He	-20.841	-15.6	1777	8.2	100	
V	51	2	He	0.150	5.2	3709	1.1	2.5	
Cr	52	2	He	-0.046	-45.3	5027	3.1	2.5	
Mn	55	2	He	-0.503	-6.6	1570	9.0	2.5	
Fe	56	2	He	-1.265	-11.3	18142	4.0	100	
Co	59	2	He	0.002	50.1	440	2.3	2.5	
Ni	60	2	He	-0.363	-7.2	363	18.3	2.5	
Cu	63	2	He	-0.861	-3.6	2850	7.2	1	
Zn	66	2	He	-0.184	-23.2	343	17.6	2.5	
As	75	2	He	0.014	255.2	382	12.7	2.5	
Se	78	2	He	0.285	137.2	145	27.0	1	
B	11	1	nogas	7.391	14.2	97815	1.2	10	
Si	28	1	nogas	6.052	45.0	1056252	0.8	5	ICB Main CR1 Failed
Ca	43	1	nogas	-24.481	-12.3	1060	11.8	100	
Ca	44	1	nogas	-21.425	-33.4	153903	1.1	100	
Fe	56	1	nogas	-3.096	-29.7	2196516	2.7	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	1.750	221.2	18566	2.3	2.5	
Se	82	1	nogas	-0.014	-937.0	207	18.3	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.008	407.1	383	48.1	2.5	
Sn	118	1	nogas	-0.150	-13.2	1273	14.5	5	
Ba	137	1	nogas	-0.196	-8.9	407	19.9	2.5	
Sb	121	2	He	0.039	10.2	1483	0.8	2.5	
P	31	1	nogas	2.788	34.3	103508	1.8	10	
La	139	1	nogas	-40.365	-12.8	73	34.3	2.5	
Au	197	1	nogas	38.799	284.6	23	49.5	2.5	ICB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1219849	5.38	1230826	99.11	70	125	
Ge	72	1	nogas	3373195	3.15	3534266	95.44	70	125	
In	115	1	nogas	3012757	2.45	3124880	96.41	70	125	
Bi	209	1	nogas	2112913	1.24	2183512	96.77	70	125	
Ge	72	2	He	796868	1.02	871721	91.41	70	125	

Sample Report

Sample Table

Sample Name	HS18111447-01MSD
Data File Name	122SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:27:28-06:00
Sample Type	Sample
Dilution	1
Comment	B135368 TW
ISTD Ref FileName	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	55.286	55.286	1.81	392151	0.01	2000	
Na	23	1	nogas	62654.943	62654.943	4.01	1651228937	0.00	200000	
Mg	24	1	nogas	28060.331	28060.331	2.79	472364161	0.01	200000	
Al	27	1	nogas	668.780	668.780	1.75	14120646	0.00	2000	
K	39	1	nogas	6108.623	6108.623	2.44	134050724	0.00	200000	
Ti	47	1	nogas	151.632	151.632	0.19	308673	0.05	2000	
V	51	1	nogas	56.631	56.631	2.23	1876149	0.00	2000	
Cr	52	1	nogas	210.389	210.389	3.65	5037608	0.00	2000	
Mn	55	1	nogas	186.986	186.986	1.70	5588646	0.00	2000	
Co	59	1	nogas	55.554	55.554	3.20	1377134	0.00	2000	
Ni	60	1	nogas	260.194	260.194	2.52	1480282	0.02	2000	
Cu	63	1	nogas	53.551	53.551	2.85	734314	0.01	2000	
Zn	66	1	nogas	55.140	55.140	1.98	255887	0.02	2000	
As	75	1	nogas	53.305	53.305	1.61	353747	0.02	2000	
Sr	88	1	nogas	314.076	314.076	0.63	9179498	0.00	2000	
Ag	107	1	nogas	50.425	50.425	3.62	762546	0.01	2000	
Cd	111	1	nogas	52.003	52.003	1.99	161397	0.03	2000	
Sb	121	1	nogas	51.386	51.386	1.58	710436	0.01	2000	
Tl	205	1	nogas	47.328	47.328	3.47	929574	0.01	2000	
Pb	208	1	nogas	51.943	51.943	1.08	1372828	0.00	2000	
U	238	1	nogas	109.726	109.726	2.83	2721881	0.00	2000	
[Pb]	206	1	nogas	50.593	50.593	1.65	342203	0.01	2000	
[Pb]	207	1	nogas	51.804	51.804	1.33	299623	0.02	2000	
Na	23	2	He	61314.865	61314.865	0.60	104364622	0.06	200000	
Mg	24	2	He	28464.401	28464.401	0.32	26027571	0.11	200000	
Al	27	2	He	644.666	644.666	0.85	343229	0.19	2000	
K	39	2	He	6415.432	6415.432	1.36	6016820	0.11	200000	
Ca	43	2	He	88869.060	88869.060	1.20	228846	38.83	200000	
Ca	44	2	He	89056.111	89056.111	2.11	3870346	2.30	200000	
V	51	2	He	55.527	55.527	1.27	375023	0.01	2000	
Cr	52	2	He	213.373	213.373	3.27	1578246	0.01	2000	
Mn	55	2	He	188.248	188.248	2.17	930843	0.02	2000	
Fe	56	2	He	8410.555	8410.555	2.08	51772211	0.02	200000	
Co	59	2	He	53.852	53.852	2.81	541700	0.01	2000	
Ni	60	2	He	253.945	253.945	2.37	671115	0.04	2000	
Cu	63	2	He	52.497	52.497	1.71	353052	0.01	2000	
Zn	66	2	He	53.357	53.357	0.62	85667	0.06	2000	
As	75	2	He	51.908	51.908	0.98	75589	0.07	2000	
Se	78	2	He	50.269	50.269	0.68	5684	0.88	2000	
B	11	1	nogas	536.222	536.222	2.18	2717296	0.02	2000	
Si	28	1	nogas	20648.937	20648.937	1.50	218670830	0.01	2000	>LDR
Ca	43	1	nogas	88494.218	88494.218	4.30	3362196	2.63	200000	
Ca	44	1	nogas	90468.018	90468.018	3.95	55738148	0.16	200000	
Fe	56	1	nogas	8499.954	8499.954	3.21	213808267	0.00	200000	

Sample Report

Se	77	1	nogas	54.705	54.705	1.67	32970	0.17	2000	
Se	82	1	nogas	50.490	50.490	3.55	14796	0.34	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	52.993	52.993	1.04	319958	0.02	2000	
Sn	118	1	nogas	95.290	95.290	1.07	834627	0.01	2000	
Ba	137	1	nogas	540.261	540.261	2.95	2190206	0.02	2000	
Sb	121	2	He	50.661	50.661	0.82	251804	0.02	2000	
La	139	1	nogas	5423.418	5423.418	6.69	25055	21.65	2000	>LDR
Au	197	1	nogas	-58.758	-58.758	-183.45	13	-440.69	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1151173	0.45	1230826	93.53	70	125	
Ge	72	1	nogas	3507038	1.77	3534266	99.23	70	125	
In	115	1	nogas	3022004	1.48	3124880	96.71	70	125	
Bi	209	1	nogas	2168314	1.68	2183512	99.30	70	125	
Ge	72	2	He	870344	1.49	871721	99.84	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	131_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:45:27-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	97.223	3.057	732281	0.93	100	97.2	90	110	
Na	23	1	nogas	10879.440	7.852	266643381	3.11	10000	108.8	90	110	
Mg	24	1	nogas	10407.401	4.119	162747149	0.67	10000	104.1	90	110	
Al	27	1	nogas	95.402	7.365	2071035	2.65	100	95.4	90	110	
K	39	1	nogas	9989.900	4.172	211848359	2.50	10000	99.9	90	110	
Ti	47	1	nogas	99.868	2.861	201416	1.61	100	99.9	90	110	
V	51	1	nogas	101.665	4.604	3101205	1.83	100	101.7	90	110	
Cr	52	1	nogas	98.099	1.966	2348986	3.48	100	98.1	90	110	
Mn	55	1	nogas	101.714	4.343	3028511	2.25	100	101.7	90	110	
Co	59	1	nogas	100.256	1.725	2462177	4.66	100	100.3	90	110	
Ni	60	1	nogas	105.644	2.326	597333	2.62	100	105.6	90	110	
Cu	63	1	nogas	101.310	3.106	1333706	4.08	100	101.3	90	110	
Zn	66	1	nogas	104.406	4.107	476806	1.05	100	104.4	90	110	
As	75	1	nogas	101.139	3.472	612231	1.27	100	101.1	90	110	
Sr	88	1	nogas	103.450	3.411	3013785	2.70	100	103.4	90	110	
Ag	107	1	nogas	104.806	1.639	1571227	4.73	100	104.8	90	110	
Cd	111	1	nogas	101.386	1.563	325359	1.40	100	101.4	90	110	
Sb	121	1	nogas	103.978	3.709	1419404	1.06	100	104.0	90	110	
Tl	205	1	nogas	97.280	4.265	1989445	5.47	100	97.3	90	110	
Pb	208	1	nogas	107.111	1.359	2828936	1.36	100	107.1	90	110	
U	238	1	nogas	112.159	5.091	2897459	5.68	100	112.2	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	99.609	3.576	700612	0.68	100	99.6	90	110	
[Pb]	207	1	nogas	103.580	4.684	622806	1.39	100	103.6	90	110	
Na	23	2	He	9771.664	2.265	16660330	1.86	10000	97.7	90	110	
Mg	24	2	He	9824.504	3.209	8949416	3.00	10000	98.2	90	110	
Al	27	2	He	88.742	4.007	49592	3.54	100	88.7	90	110	CCV Main CR1-2 Failed
K	39	2	He	10020.717	1.944	9276854	1.90	10000	100.2	90	110	
Ca	43	2	He	9902.977	0.377	25508	0.32	10000	99.0	90	110	
Ca	44	2	He	9882.414	1.864	430262	2.20	10000	98.8	90	110	
V	51	2	He	97.606	0.670	654256	0.25	100	97.6	90	110	
Cr	52	2	He	96.809	0.707	716494	0.39	100	96.8	90	110	
Mn	55	2	He	99.597	1.189	492537	1.51	100	99.6	90	110	
Fe	56	2	He	9782.519	1.921	59978549	2.33	10000	97.8	90	110	
Co	59	2	He	96.562	0.750	967168	0.60	100	96.6	90	110	
Ni	60	2	He	102.928	1.327	271744	0.91	100	102.9	90	110	
Cu	63	2	He	97.505	1.872	645627	1.44	100	97.5	90	110	
Zn	66	2	He	100.193	0.423	159622	0.30	100	100.2	90	110	
As	75	2	He	99.172	1.537	143475	1.75	100	99.2	90	110	
Se	78	2	He	97.552	2.110	10867	2.26	100	97.6	90	110	
B	11	1	nogas	464.827	6.634	2506989	2.48	500	93.0	90	110	
Si	28	1	nogas	5041.072	4.672	53620358	0.90	5000	100.8	90	110	
Ca	43	1	nogas	10201.808	3.726	385715	2.29	10000	102.0	90	110	
Ca	44	1	nogas	10379.467	5.278	6482405	1.15	10000	103.8	90	110	
Fe	56	1	nogas	10051.990	6.798	249686806	2.33	10000	100.5	90	110	
Se	77	1	nogas	110.971	8.454	46981	1.02	100	111.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.108	4.846	29117	3.53	100	101.1	90	110	
Mo	95	1	nogas	102.042	3.299	609746	1.05	100	102.0	90	110	
Sn	118	1	nogas	101.630	3.318	920299	2.92	100	101.6	90	110	
Ba	137	1	nogas	102.870	2.447	432372	2.53	100	102.9	90	110	
Sb	121	2	He	98.226	1.537	484823	1.22	100	98.2	90	110	
Li	7	1	nogas	99.678	2.283	1748468	2.58	100	99.7	90	110	
P	31	1	nogas	489.519	4.818	916997	2.22	500	97.9	90	110	
La	139	1	nogas	96.508	32.199	723	20.38	100	96.5	90	110	
Au	197	1	nogas	51.891	179.896	27	43.30	100	51.9	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1223495	3.92	1230826	99.40	70	125	
Ge	72	1	nogas	3475518	4.27	3534266	98.34	70	125	
In	115	1	nogas	3124992	0.56	3124880	100.00	70	125	
Bi	209	1	nogas	2257756	3.43	2183512	103.40	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	866756	0.42	871721	99.43	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	132_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T16:47:26-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.024	46.8	320	26.7	1	
Na	23	1	nogas	29.564	2.4	1571742	2.7	100	
Mg	24	1	nogas	1.210	60.7	103170	13.6	100	
Al	27	1	nogas	-2.924	-0.1	32415	1.4	5	
K	39	1	nogas	-20.977	-31.9	8082306	0.7	100	
Ti	47	1	nogas	0.047	27.8	417	7.3	2.5	
V	51	1	nogas	2.874	5.9	386387	2.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.016	-102.9	41005	0.4	2.5	
Mn	55	1	nogas	-0.619	-1.9	23572	1.0	2.5	
Co	59	1	nogas	0.017	10.0	1737	2.2	2.5	
Ni	60	1	nogas	-0.332	-16.0	1323	22.3	2.5	
Cu	63	1	nogas	-3.259	-0.7	6988	5.5	2	
Zn	66	1	nogas	-0.418	-1.5	1377	2.6	2.5	
As	75	1	nogas	1.517	17.9	69168	2.2	2.5	
Sr	88	1	nogas	-0.742	-2.7	8032	6.5	2.5	
Ag	107	1	nogas	0.022	23.6	517	14.8	2.5	
Cd	111	1	nogas	0.017	1.4	120	0.0	1	
Sb	121	1	nogas	1.240	29.5	21531	22.9	2.5	
Tl	205	1	nogas	0.170	61.3	4384	49.9	1	
Pb	208	1	nogas	0.014	113.0	2223	19.0	2.5	
U	238	1	nogas	0.107	54.6	3784	40.7	2.5	
[Pb]	206	1	nogas	0.005	370.2	520	24.1	2.5	
[Pb]	207	1	nogas	0.007	204.8	443	19.7	2.5	
Na	23	2	He	17.116	7.6	145684	1.6	100	
Mg	24	2	He	0.982	257.3	6002	38.4	100	
Al	27	2	He	-4.067	-1.7	817	4.3	5	
K	39	2	He	-11.174	-10.2	205640	0.5	100	
Ca	43	2	He	0.765	1733.4	130	26.6	100	
Ca	44	2	He	12.184	56.4	3404	8.2	100	
V	51	2	He	0.283	3.5	4987	0.8	2.5	
Cr	52	2	He	-0.064	-65.4	5404	5.2	2.5	
Mn	55	2	He	-0.548	-3.4	1510	6.1	2.5	
Fe	56	2	He	0.459	42.3	30709	3.7	100	
Co	59	2	He	0.000	-2301.5	463	18.4	2.5	
Ni	60	2	He	-0.359	-7.0	410	17.1	2.5	
Cu	63	2	He	-0.924	-4.2	2724	8.9	2	
Zn	66	2	He	-0.262	-12.5	253	20.3	2.5	
As	75	2	He	0.048	89.1	470	13.0	2.5	
Se	78	2	He	0.061	177.4	135	9.7	2	
B	11	1	nogas	12.590	14.6	137190	4.8	10	CCB Main CR1 Failed
Si	28	1	nogas	1.132	268.8	1074328	2.0	5	
Ca	43	1	nogas	34.470	18.1	3427	6.0	100	
Ca	44	1	nogas	3.469	250.0	179989	1.9	100	
Fe	56	1	nogas	6.161	75.4	2579867	3.5	100	
Se	77	1	nogas	10.518	20.4	22157	3.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.209	80.4	287	17.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.229	47.9	1770	37.2	2.5	
Sn	118	1	nogas	-0.023	-189.5	2587	15.7	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.182	-31.7	503	49.7	2.5	
Sb	121	2	He	0.776	4.2	5314	2.9	2.5	
P	31	1	nogas	-6.954	-5.9	93671	0.6	10	
La	139	1	nogas	-40.968	-10.0	77	27.2	2.5	
Au	197	1	nogas	47.263	378.2	27	78.1	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1337228	3.58	1230826	108.64	70	125	
Ge	72	1	nogas	3599770	1.14	3534266	101.85	70	125	
In	115	1	nogas	3281454	0.65	3124880	105.01	70	125	
Bi	209	1	nogas	2317674	0.57	2183512	106.14	70	125	
Ge	72	2	He	878347	0.64	871721	100.76	70	125	

Sample Report

Sample Table

Sample Name	HS18111497-01
Data File Name	139SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T17:01:22-06:00
Sample Type	Sample
Dilution	1
Comment	B135368 TW
ISTD Ref FileName	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.056	0.056	5.38	577	0.01	2000	
Na	23	1	nogas	10110.730	10110.730	1.18	264933123	0.00	200000	
Mg	24	1	nogas	1107.783	1107.783	5.11	18552074	0.01	200000	
Al	27	1	nogas	4.580	4.580	4.22	194419	0.00	2000	
K	39	1	nogas	332.535	332.535	1.27	15589728	0.00	200000	
Ti	47	1	nogas	0.838	0.838	3.73	2073	0.04	2000	
V	51	1	nogas	4.549	4.549	18.52	435302	0.00	2000	
Cr	52	1	nogas	1.339	1.339	4.41	74215	0.00	2000	
Mn	55	1	nogas	24.620	24.620	3.27	793940	0.00	2000	
Co	59	1	nogas	0.312	0.312	5.85	9272	0.00	2000	
Ni	60	1	nogas	0.963	0.963	4.02	8896	0.01	2000	
Cu	63	1	nogas	-3.015	-3.015	-0.39	10206	-0.03	2000	
Zn	66	1	nogas	1.936	1.936	3.84	12474	0.02	2000	
As	75	1	nogas	1.210	1.210	23.64	67582	0.00	2000	
Sr	88	1	nogas	150.780	150.780	1.02	4550270	0.00	2000	
Ag	107	1	nogas	-0.005	-0.005	-31.00	97	-0.01	2000	
Cd	111	1	nogas	0.014	0.014	41.28	113	0.01	2000	
Sb	121	1	nogas	-0.133	-0.133	-18.82	2200	-0.01	2000	
Tl	205	1	nogas	-0.020	-0.020	-4.21	413	0.00	2000	
Pb	208	1	nogas	-0.017	-0.017	-22.79	1393	0.00	2000	
U	238	1	nogas	0.134	0.134	95.18	4693	0.00	2000	
[Pb]	206	1	nogas	-0.017	-0.017	-27.32	370	0.00	2000	
[Pb]	207	1	nogas	-0.021	-0.021	-49.93	277	-0.01	2000	
Na	23	2	He	9593.532	9593.532	3.89	17001004	0.06	200000	
Mg	24	2	He	1070.868	1070.868	2.16	1018558	0.11	200000	
Al	27	2	He	2.824	2.824	17.84	4604	0.06	2000	
K	39	2	He	353.891	353.891	1.40	535746	0.07	200000	
Ca	43	2	He	30338.842	30338.842	0.79	80959	37.47	200000	
Ca	44	2	He	32154.041	32154.041	2.88	1448210	2.22	200000	
V	51	2	He	1.823	1.823	1.61	15801	0.01	2000	
Cr	52	2	He	1.296	1.296	3.30	15924	0.01	2000	
Mn	55	2	He	24.327	24.327	2.02	128317	0.02	2000	
Fe	56	2	He	7.942	7.942	1.51	79166	0.01	200000	
Co	59	2	He	0.258	0.258	6.78	3167	0.01	2000	
Ni	60	2	He	0.735	0.735	9.11	3407	0.02	2000	
Cu	63	2	He	-0.738	-0.738	-3.13	4054	-0.02	2000	
Zn	66	2	He	2.042	2.042	13.71	4061	0.05	2000	
As	75	2	He	0.236	0.236	11.09	766	0.03	2000	
Se	78	2	He	0.100	0.100	208.42	143	0.07	2000	
B	11	1	nogas	16.258	16.258	8.15	154965	0.01	2000	
Si	28	1	nogas	8953.905	8953.905	1.95	98172505	0.01	2000	>LDR
Ca	43	1	nogas	31768.696	31768.696	1.74	1243751	2.55	200000	
Ca	44	1	nogas	31113.801	31113.801	1.57	19845932	0.16	200000	
Fe	56	1	nogas	-0.767	-0.767	-221.96	2409623	0.00	200000	

Sample Report

Se	77	1	nogas	5.950	5.950	69.70	20989	0.03	2000	
Se	82	1	nogas	0.151	0.151	23.79	270	0.06	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.524	1.524	5.15	9820	0.02	2000	
Sn	118	1	nogas	-0.192	-0.192	-13.89	1003	-0.02	2000	
Ba	137	1	nogas	26.348	26.348	1.27	119265	0.02	2000	
Sb	121	2	He	-0.134	-0.134	-16.57	797	-0.02	2000	
La	139	1	nogas	423.224	423.224	7.65	2424	17.46	2000	
Au	197	1	nogas	17.262	17.262	796.70	23	73.98	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1308455	3.98	1230826	106.31	70	125	
Ge	72	1	nogas	3608242	1.00	3534266	102.09	70	125	
In	115	1	nogas	3337775	0.51	3124880	106.81	70	125	
Bi	209	1	nogas	2376599	3.79	2183512	108.84	70	125	
Ge	72	2	He	900996	1.20	871721	103.36	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	143_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T17:09:28-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	99.253	5.667	772352	2.06	100	99.3	90	110	
Na	23	1	nogas	10411.973	2.410	268312056	2.42	10000	104.1	90	110	
Mg	24	1	nogas	10297.675	3.163	169053783	1.21	10000	103.0	90	110	
Al	27	1	nogas	96.425	6.094	2140426	2.11	100	96.4	90	110	
K	39	1	nogas	10246.184	3.673	221970438	1.22	10000	102.5	90	110	
Ti	47	1	nogas	99.468	4.592	205050	1.25	100	99.5	90	110	
V	51	1	nogas	103.639	4.276	3227334	2.00	100	103.6	90	110	
Cr	52	1	nogas	100.440	3.263	2456997	1.05	100	100.4	90	110	
Mn	55	1	nogas	104.763	2.824	3190292	3.34	100	104.8	90	110	
Co	59	1	nogas	104.925	5.034	2631273	1.25	100	104.9	90	110	
Ni	60	1	nogas	108.456	6.208	626294	2.26	100	108.5	90	110	
Cu	63	1	nogas	98.429	2.608	1327644	6.30	100	98.4	90	110	
Zn	66	1	nogas	105.596	3.483	493225	2.07	100	105.6	90	110	
As	75	1	nogas	106.272	4.561	654620	0.41	100	106.3	90	110	
Sr	88	1	nogas	105.332	0.829	3139000	3.37	100	105.3	90	110	
Ag	107	1	nogas	105.325	3.763	1615648	7.14	100	105.3	90	110	
Cd	111	1	nogas	104.833	1.425	341169	2.78	100	104.8	90	110	
Sb	121	1	nogas	97.191	1.463	1358095	3.73	100	97.2	90	110	
Tl	205	1	nogas	100.542	4.459	2107674	6.18	100	100.5	90	110	
Pb	208	1	nogas	109.517	3.170	2892459	3.17	100	109.5	90	110	
U	238	1	nogas	109.889	3.575	2907454	0.64	100	109.9	90	110	
[Pb]	206	1	nogas	99.754	2.435	719255	1.29	100	99.8	90	110	
[Pb]	207	1	nogas	102.638	2.911	632777	1.64	100	102.6	90	110	
Na	23	2	He	9719.486	0.668	17168839	0.80	10000	97.2	90	110	
Mg	24	2	He	9728.363	1.694	9180984	1.78	10000	97.3	90	110	
Al	27	2	He	89.776	2.292	51938	1.77	100	89.8	90	110	CCV Main CR1-2 Failed
K	39	2	He	10531.731	1.140	9738932	1.11	10000	105.3	90	110	
Ca	43	2	He	11784.231	25.415	31428	25.44	10000	117.8	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9736.758	1.635	439199	1.91	10000	97.4	90	110	
V	51	2	He	97.775	1.736	678955	1.72	100	97.8	90	110	
Cr	52	2	He	97.334	0.897	746246	0.76	100	97.3	90	110	
Mn	55	2	He	99.921	1.009	511878	1.04	100	99.9	90	110	
Fe	56	2	He	9808.592	1.821	62297779	1.93	10000	98.1	90	110	
Co	59	2	He	96.114	0.325	997295	0.32	100	96.1	90	110	
Ni	60	2	He	99.556	1.623	272345	1.60	100	99.6	90	110	
Cu	63	2	He	95.845	1.577	657628	1.43	100	95.8	90	110	
Zn	66	2	He	100.282	0.308	165508	0.38	100	100.3	90	110	
As	75	2	He	99.422	0.816	149001	0.35	100	99.4	90	110	
Se	78	2	He	98.822	2.839	11401	2.33	100	98.8	90	110	
B	11	1	nogas	464.040	5.749	2588193	2.01	500	92.8	90	110	
Si	28	1	nogas	5249.207	4.253	57061869	1.49	5000	105.0	90	110	
Ca	43	1	nogas	10253.425	5.886	396160	2.42	10000	102.5	90	110	
Ca	44	1	nogas	10363.028	7.470	6615259	3.45	10000	103.6	90	110	
Fe	56	1	nogas	10517.844	3.000	267332631	1.17	10000	105.2	90	110	
Se	77	1	nogas	124.819	6.380	51670	0.61	100	124.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.532	5.891	30172	1.83	100	102.5	90	110	
Mo	95	1	nogas	103.446	5.505	631727	1.50	100	103.4	90	110	
Sn	118	1	nogas	105.279	3.639	966765	4.30	100	105.3	90	110	
Ba	137	1	nogas	104.352	5.194	444304	1.38	100	104.4	90	110	
Sb	121	2	He	100.388	0.681	513288	0.45	100	100.4	90	110	
Li	7	1	nogas	99.603	4.858	1805303	2.24	100	99.6	90	110	
P	31	1	nogas	506.930	4.642	967257	0.37	500	101.4	90	110	
La	139	1	nogas	603.443	145.889	3070	131.48	100	603.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	166.630	96.915	40	43.30	100	166.6	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1264840	3.73	1230826	102.76	70	125	
Ge	72	1	nogas	3553837	4.05	3534266	100.55	70	125	
In	115	1	nogas	3170274	4.16	3124880	101.45	70	125	
Bi	209	1	nogas	2314004	3.74	2183512	105.98	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	897920	0.47	871721	103.01	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	144_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T17:11:29-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.058	12.5	600	10.1	1	
Na	23	1	nogas	15.119	28.7	1301411	7.5	100	
Mg	24	1	nogas	11.992	22.4	298720	14.7	100	
Al	27	1	nogas	-2.922	-2.4	33543	3.3	5	
K	39	1	nogas	-16.408	-44.1	8456252	0.4	100	
Ti	47	1	nogas	0.024	142.8	380	17.3	2.5	
V	51	1	nogas	4.229	12.6	439520	3.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.121	45.3	45857	4.0	2.5	
Mn	55	1	nogas	-0.520	-6.6	27501	4.2	2.5	
Co	59	1	nogas	0.039	41.5	2374	18.3	2.5	
Ni	60	1	nogas	-0.332	-6.0	1370	8.4	2.5	
Cu	63	1	nogas	-3.233	-0.6	7575	4.1	2	
Zn	66	1	nogas	-0.469	-8.6	1177	17.2	2.5	
As	75	1	nogas	3.179	17.7	81261	3.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	-0.604	-8.7	12581	13.4	2.5	
Ag	107	1	nogas	0.048	14.4	957	12.0	2.5	
Cd	111	1	nogas	0.039	47.0	200	32.8	1	
Sb	121	1	nogas	1.149	28.4	20997	23.6	2.5	
Tl	205	1	nogas	0.215	54.3	5524	44.7	1	
Pb	208	1	nogas	0.051	54.0	3184	22.6	2.5	
U	238	1	nogas	0.119	57.4	4281	42.8	2.5	
[Pb]	206	1	nogas	0.034	69.3	760	21.7	2.5	
[Pb]	207	1	nogas	0.055	84.6	767	37.5	2.5	
Na	23	2	He	-0.523	-381.5	119636	1.0	100	
Mg	24	2	He	7.590	9.8	12544	4.3	100	
Al	27	2	He	-3.937	-5.8	917	11.5	5	
K	39	2	He	-4.980	-39.3	211242	0.8	100	
Ca	43	2	He	-3.490	-40.1	123	4.7	100	
Ca	44	2	He	5.701	85.7	3237	7.6	100	
V	51	2	He	0.352	6.1	5656	1.2	2.5	
Cr	52	2	He	-0.124	-7.1	5137	1.7	2.5	
Mn	55	2	He	-0.521	-6.1	1700	9.1	2.5	
Fe	56	2	He	5.078	11.1	61553	4.5	100	
Co	59	2	He	0.010	58.6	593	12.0	2.5	
Ni	60	2	He	-0.349	-4.1	453	8.4	2.5	
Cu	63	2	He	-0.947	-1.6	2664	1.7	2	
Zn	66	2	He	-0.240	-2.9	300	5.8	2.5	
As	75	2	He	0.034	75.7	467	10.0	2.5	
Se	78	2	He	0.139	273.0	148	27.3	2	
B	11	1	nogas	10.876	7.3	127092	3.2	10	CCB Main CR1 Failed
Si	28	1	nogas	19.940	17.1	1321493	3.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	21.647	64.7	3030	19.4	100	
Ca	44	1	nogas	-17.339	-53.5	172522	2.2	100	
Fe	56	1	nogas	4.022	94.8	2612328	4.7	100	
Se	77	1	nogas	20.246	17.1	25558	2.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.058	40.7	250	4.0	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.242	53.3	1923	44.1	2.5	
Sn	118	1	nogas	-0.010	-622.0	2787	21.8	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.038	-68.8	1163	10.4	2.5	
Sb	121	2	He	0.738	3.0	5311	0.9	2.5	
P	31	1	nogas	-3.333	-70.7	103277	2.3	10	
La	139	1	nogas	-43.316	-9.0	67	31.2	2.5	
Au	197	1	nogas	38.528	333.2	27	57.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1332900	1.90	1230826	108.29	70	125	
Ge	72	1	nogas	3722279	1.97	3534266	105.32	70	125	
In	115	1	nogas	3359572	1.85	3124880	107.51	70	125	
Bi	209	1	nogas	2415819	1.77	2183512	110.64	70	125	
Ge	72	2	He	910845	2.33	871721	104.49	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	155_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T17:33:34-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	100.213	1.210	863935	0.91	100	100.2	90	110	
Na	23	1	nogas	11121.552	6.153	313467549	1.52	10000	111.2	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10407.366	3.781	187110338	1.44	10000	104.1	90	110	
Al	27	1	nogas	96.706	1.790	2457535	2.29	100	96.7	90	110	
K	39	1	nogas	10068.002	2.321	249710856	1.80	10000	100.7	90	110	
Ti	47	1	nogas	97.361	1.160	229732	1.90	100	97.4	90	110	
V	51	1	nogas	108.851	2.655	3861089	2.32	100	108.9	90	110	
Cr	52	1	nogas	102.894	2.329	2878412	1.81	100	102.9	90	110	
Mn	55	1	nogas	102.577	2.495	3573150	1.95	100	102.6	90	110	
Co	59	1	nogas	98.518	1.359	2828160	1.61	100	98.5	90	110	
Ni	60	1	nogas	105.273	0.444	696184	0.91	100	105.3	90	110	
Cu	63	1	nogas	99.383	2.181	1530810	1.44	100	99.4	90	110	
Zn	66	1	nogas	103.364	1.453	552401	0.76	100	103.4	90	110	
As	75	1	nogas	107.333	1.688	755947	1.58	100	107.3	90	110	
Sr	88	1	nogas	100.618	2.666	3429736	2.37	100	100.6	90	110	
Ag	107	1	nogas	103.035	0.448	1805515	0.99	100	103.0	90	110	
Cd	111	1	nogas	101.470	0.908	368838	1.03	100	101.5	90	110	
Sb	121	1	nogas	96.346	1.903	1539261	1.91	100	96.3	90	110	
Tl	205	1	nogas	101.069	4.602	2302708	4.32	100	101.1	90	110	
Pb	208	1	nogas	120.609	0.894	3185214	0.89	100	120.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	110.324	1.921	3176191	2.19	100	110.3	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	99.729	2.408	782167	2.13	100	99.7	90	110	
[Pb]	207	1	nogas	102.372	1.738	686560	1.48	100	102.4	90	110	
Na	23	2	He	10256.498	0.493	20132368	0.78	10000	102.6	90	110	
Mg	24	2	He	9760.259	1.374	10238775	1.06	10000	97.6	90	110	
Al	27	2	He	92.383	1.496	59320	1.87	100	92.4	90	110	
K	39	2	He	11833.127	2.224	10915703	2.18	10000	118.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9752.831	2.726	28929	2.33	10000	97.5	90	110	
Ca	44	2	He	9892.874	0.773	495997	1.33	10000	98.9	90	110	
V	51	2	He	97.465	1.627	752345	1.51	100	97.5	90	110	
Cr	52	2	He	96.077	2.578	818815	1.70	100	96.1	90	110	
Mn	55	2	He	99.164	1.700	564715	1.35	100	99.2	90	110	
Fe	56	2	He	9789.215	0.413	69116219	1.21	10000	97.9	90	110	
Co	59	2	He	95.808	1.188	1105079	1.19	100	95.8	90	110	
Ni	60	2	He	101.073	0.792	307335	0.96	100	101.1	90	110	
Cu	63	2	He	94.342	0.979	719777	1.69	100	94.3	90	110	
Zn	66	2	He	98.884	2.213	181407	1.35	100	98.9	90	110	
As	75	2	He	100.113	1.296	166774	0.46	100	100.1	90	110	
Se	78	2	He	102.899	3.001	13189	2.15	100	102.9	90	110	
B	11	1	nogas	648.616	3.873	3979391	1.78	500	129.7	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5195.445	1.541	64645467	2.01	5000	103.9	90	110	
Ca	43	1	nogas	9843.007	0.899	435502	1.59	10000	98.4	90	110	
Ca	44	1	nogas	9943.384	2.201	7277987	2.36	10000	99.4	90	110	
Fe	56	1	nogas	10299.773	2.734	299529973	2.16	10000	103.0	90	110	
Se	77	1	nogas	149.008	2.375	66347	0.95	100	149.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.166	1.677	34086	1.10	100	101.2	90	110	
Mo	95	1	nogas	99.442	1.465	695272	2.02	100	99.4	90	110	
Sn	118	1	nogas	101.782	0.978	1044034	0.74	100	101.8	90	110	
Ba	137	1	nogas	101.912	2.043	485182	1.98	100	101.9	90	110	
Sb	121	2	He	98.301	2.909	558717	2.52	100	98.3	90	110	
Li	7	1	nogas	100.813	4.764	2021151	2.47	100	100.8	90	110	
P	31	1	nogas	495.818	0.769	1085281	0.61	500	99.2	90	110	
La	139	1	nogas	104.897	18.082	863	10.51	100	104.9	90	110	
Au	197	1	nogas	216.112	148.183	50	80.00	100	216.1	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1399527	2.11	1230826	113.71	70	125	
Ge	72	1	nogas	4062570	0.77	3534266	114.95	70	125	
In	115	1	nogas	3539807	1.42	3124880	113.28	70	125	
Bi	209	1	nogas	2515630	0.28	2183512	115.21	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	998157	0.88	871721	114.50	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	156_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T17:35:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.021	46.6	323	25.8	1	
Na	23	1	nogas	311.310	1.5	9687567	1.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	0.839	19.3	108190	0.5	100	
Al	27	1	nogas	-2.641	-2.8	43317	3.6	5	
K	39	1	nogas	-4.990	-133.5	9474682	0.3	100	
Ti	47	1	nogas	0.034	43.4	440	9.9	2.5	
V	51	1	nogas	11.000	3.3	696797	3.5	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.441	7.4	58666	2.2	2.5	
Mn	55	1	nogas	-0.509	-7.6	30295	3.8	2.5	
Co	59	1	nogas	0.012	50.7	1830	7.9	2.5	
Ni	60	1	nogas	0.296	8.0	5611	1.2	2.5	
Cu	63	1	nogas	-3.245	-0.6	8059	1.6	2	
Zn	66	1	nogas	-0.009	-299.3	3710	2.2	2.5	
As	75	1	nogas	8.110	1.9	119949	1.1	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	-0.777	-2.2	7865	9.1	2.5	
Ag	107	1	nogas	0.583	18.6	10363	16.5	2.5	
Cd	111	1	nogas	0.011	53.7	113	22.2	1	
Sb	121	1	nogas	1.270	26.7	24682	20.1	2.5	
Tl	205	1	nogas	0.228	7.9	6628	4.9	1	
Pb	208	1	nogas	0.020	88.3	2380	19.7	2.5	
U	238	1	nogas	0.090	80.8	3917	54.3	2.5	
[Pb]	206	1	nogas	0.009	300.9	650	32.7	2.5	
[Pb]	207	1	nogas	0.006	189.4	520	15.3	2.5	
Na	23	2	He	294.353	1.7	704989	0.4	100	CCB Main CR1 Failed
Mg	24	2	He	0.540	42.7	6354	4.8	100	
Al	27	2	He	-3.827	-9.5	1073	21.4	5	
K	39	2	He	23.742	7.8	237213	0.7	100	
Ca	43	2	He	-9.657	-89.5	117	21.6	100	
Ca	44	2	He	-9.670	-14.2	2777	3.3	100	
V	51	2	He	0.658	1.5	8543	1.9	2.5	
Cr	52	2	He	-0.156	-13.5	5358	3.7	2.5	
Mn	55	2	He	-0.426	-6.4	2400	7.3	2.5	
Fe	56	2	He	1.518	3.8	42305	1.2	100	
Co	59	2	He	-0.001	-217.5	520	3.8	2.5	
Ni	60	2	He	-0.352	-6.2	487	13.4	2.5	
Cu	63	2	He	-1.043	-0.6	2200	3.2	2	
Zn	66	2	He	-0.263	-10.5	287	16.5	2.5	
As	75	2	He	0.141	20.5	688	7.1	2.5	
Se	78	2	He	0.384	66.5	193	15.9	2	
B	11	1	nogas	130.699	6.0	883242	3.3	10	CCB Main CR1 Failed
Si	28	1	nogas	10.871	12.7	1327948	2.7	5	CCB Main CR1 Failed
Ca	43	1	nogas	14.296	9.2	2974	3.1	100	
Ca	44	1	nogas	-26.069	-16.2	181600	1.1	100	
Fe	56	1	nogas	-0.765	-340.0	2704678	2.4	100	
Se	77	1	nogas	56.524	5.4	38618	1.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.643	15.2	467	5.4	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.206	48.1	1830	36.0	2.5	
Sn	118	1	nogas	-0.047	-140.2	2640	26.0	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.180	-12.3	577	20.7	2.5	
Sb	121	2	He	0.814	6.9	6241	4.6	2.5	
P	31	1	nogas	-1.856	-34.3	115309	1.2	10	
La	139	1	nogas	-43.194	-5.9	73	20.8	2.5	
Au	197	1	nogas	9.791	1110.2	27	57.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1444543	2.42	1230826	117.36	70	125	
Ge	72	1	nogas	4050959	1.92	3534266	114.62	70	125	
In	115	1	nogas	3665316	1.95	3124880	117.29	70	125	
Bi	209	1	nogas	2748040	3.31	2183512	125.85	70	125	ISTD Failed
Ge	72	2	He	996576	1.10	871721	114.32	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	163_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T17:55:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	107.138	1.668	837765	0.61	100	107.1	90	110	
Na	23	1	nogas	10534.856	5.856	295549315	0.50	10000	105.3	90	110	
Mg	24	1	nogas	10255.483	5.950	183365892	2.34	10000	102.6	90	110	
Al	27	1	nogas	94.891	2.439	2360450	0.11	100	94.9	90	110	
K	39	1	nogas	10095.927	1.700	244941180	0.67	10000	101.0	90	110	
Ti	47	1	nogas	98.444	2.821	227224	2.74	100	98.4	90	110	
V	51	1	nogas	106.983	3.457	3717495	1.82	100	107.0	90	110	
Cr	52	1	nogas	100.269	3.046	2745162	2.32	100	100.3	90	110	
Mn	55	1	nogas	100.366	2.934	3420641	0.68	100	100.4	90	110	
Co	59	1	nogas	99.676	2.817	2798534	0.59	100	99.7	90	110	
Ni	60	1	nogas	103.684	3.100	670646	0.91	100	103.7	90	110	
Cu	63	1	nogas	101.365	1.536	1526418	0.87	100	101.4	90	110	
Zn	66	1	nogas	104.127	1.702	544473	2.52	100	104.1	90	110	
As	75	1	nogas	105.612	1.660	728724	0.76	100	105.6	90	110	
Sr	88	1	nogas	102.555	3.321	3418319	1.05	100	102.6	90	110	
Ag	107	1	nogas	103.206	5.053	1768256	3.00	100	103.2	90	110	
Cd	111	1	nogas	98.903	0.631	366537	2.05	100	98.9	90	110	
Sb	121	1	nogas	101.370	5.345	1583173	3.13	100	101.4	90	110	
Tl	205	1	nogas	101.974	2.606	2347956	1.25	100	102.0	90	110	
Pb	208	1	nogas	121.165	2.489	3199889	2.49	100	121.2	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.821	2.673	3049310	0.52	100	104.8	90	110	
[Pb]	206	1	nogas	99.556	1.629	789188	1.48	100	99.6	90	110	
[Pb]	207	1	nogas	102.637	1.286	695767	1.88	100	102.6	90	110	
Na	23	2	He	9650.651	1.870	18645561	0.74	10000	96.5	90	110	
Mg	24	2	He	9648.492	0.537	9960243	1.25	10000	96.5	90	110	
Al	27	2	He	88.629	3.422	56117	1.72	100	88.6	90	110	CCV Main CR1-2 Failed
K	39	2	He	11295.757	0.845	10429793	0.83	10000	113.0	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9822.498	2.639	28666	1.38	10000	98.2	90	110	
Ca	44	2	He	9730.503	2.279	480054	1.87	10000	97.3	90	110	
V	51	2	He	95.903	0.264	728547	1.41	100	95.9	90	110	
Cr	52	2	He	95.164	0.875	798211	0.81	100	95.2	90	110	
Mn	55	2	He	97.819	1.715	548172	0.47	100	97.8	90	110	
Fe	56	2	He	9698.434	1.076	67374922	0.67	10000	97.0	90	110	
Co	59	2	He	95.275	1.264	1081367	1.51	100	95.3	90	110	
Ni	60	2	He	101.633	0.235	304100	1.38	100	101.6	90	110	
Cu	63	2	He	96.686	1.754	725554	1.74	100	96.7	90	110	
Zn	66	2	He	101.440	1.225	183156	2.79	100	101.4	90	110	
As	75	2	He	98.843	1.217	162031	0.61	100	98.8	90	110	
Se	78	2	He	99.426	2.820	12546	2.25	100	99.4	90	110	
B	11	1	nogas	567.824	1.948	3168541	0.19	500	113.6	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5104.163	3.324	62137704	2.25	5000	102.1	90	110	
Ca	43	1	nogas	9840.100	3.037	425850	2.28	10000	98.4	90	110	
Ca	44	1	nogas	10052.702	2.155	7195556	1.61	10000	100.5	90	110	
Fe	56	1	nogas	9964.772	2.013	283576448	0.28	10000	99.6	90	110	
Se	77	1	nogas	132.655	2.443	60133	1.11	100	132.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.923	1.853	34249	1.61	100	103.9	90	110	
Mo	95	1	nogas	99.536	0.683	680897	2.30	100	99.5	90	110	
Sn	118	1	nogas	99.344	3.189	1038616	1.29	100	99.3	90	110	
Ba	137	1	nogas	99.039	2.769	480595	0.93	100	99.0	90	110	
Sb	121	2	He	99.561	1.194	556939	2.64	100	99.6	90	110	
Li	7	1	nogas	106.715	2.990	1935466	2.73	100	106.7	90	110	
P	31	1	nogas	497.083	3.069	1063906	0.76	500	99.4	90	110	
La	139	1	nogas	100.601	10.978	857	4.72	100	100.6	90	110	
Au	197	1	nogas	236.890	47.817	53	28.64	100	236.9	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1269482	2.02	1230826	103.14	70	125	
Ge	72	1	nogas	3975050	2.28	3534266	112.47	70	125	
In	115	1	nogas	3609158	2.65	3124880	115.50	70	125	
Bi	209	1	nogas	2543355	3.09	2183512	116.48	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	982237	1.60	871721	112.68	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	164_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T17:57:38-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	112CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.028	48.2	373	28.1	1	
Na	23	1	nogas	47.562	3.4	2268462	0.5	100	
Mg	24	1	nogas	-1.507	-45.1	66259	18.2	100	
Al	27	1	nogas	-2.867	-0.9	37718	2.4	5	
K	39	1	nogas	-17.260	-35.6	9152586	0.3	100	
Ti	47	1	nogas	0.033	142.9	437	26.7	2.5	
V	51	1	nogas	7.824	10.8	592040	3.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.222	30.2	52477	3.5	2.5	
Mn	55	1	nogas	-0.603	-1.0	27013	2.3	2.5	
Co	59	1	nogas	0.013	59.8	1837	13.4	2.5	
Ni	60	1	nogas	-0.232	-10.5	2140	6.0	2.5	
Cu	63	1	nogas	-3.295	-1.0	7288	5.4	2	
Zn	66	1	nogas	-0.327	-9.6	2023	8.2	2.5	
As	75	1	nogas	4.897	14.2	99061	3.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	-0.905	-0.9	3550	9.2	2.5	
Ag	107	1	nogas	0.533	15.5	9489	16.7	2.5	
Cd	111	1	nogas	0.010	163.7	107	56.5	1	
Sb	121	1	nogas	1.154	20.4	22859	17.8	2.5	
Tl	205	1	nogas	0.420	6.2	11131	6.0	1	
Pb	208	1	nogas	0.022	89.0	2423	21.1	2.5	
U	238	1	nogas	0.089	78.4	3884	58.9	2.5	
[Pb]	206	1	nogas	0.000	15570.3	567	29.2	2.5	
[Pb]	207	1	nogas	0.011	207.3	540	31.6	2.5	
Na	23	2	He	42.726	2.2	210773	1.3	100	
Mg	24	2	He	-2.386	-10.1	3224	8.3	100	
Al	27	2	He	-4.074	-0.8	903	1.7	5	
K	39	2	He	14.770	8.5	229100	0.5	100	
Ca	43	2	He	-26.231	-52.7	67	60.6	100	
Ca	44	2	He	-22.327	-7.0	2103	3.9	100	
V	51	2	He	0.587	0.5	7833	0.8	2.5	
Cr	52	2	He	-0.120	-11.1	5544	1.5	2.5	
Mn	55	2	He	-0.510	-3.7	1887	5.2	2.5	
Fe	56	2	He	0.760	18.0	36216	3.1	100	
Co	59	2	He	0.006	128.2	583	13.9	2.5	
Ni	60	2	He	-0.356	-3.9	463	8.2	2.5	
Cu	63	2	He	-1.001	-1.9	2464	6.2	2	
Zn	66	2	He	-0.272	-15.4	263	28.0	2.5	
As	75	2	He	0.108	16.7	621	4.6	2.5	
Se	78	2	He	0.371	12.4	188	2.8	2	
B	11	1	nogas	56.682	8.0	412992	2.3	10	CCB Main CR1 Failed
Si	28	1	nogas	-7.003	-23.9	1106263	0.5	5	
Ca	43	1	nogas	-8.295	-55.3	1973	8.7	100	
Ca	44	1	nogas	-57.256	-9.9	158921	1.0	100	
Fe	56	1	nogas	-7.502	-27.5	2503769	4.0	100	
Se	77	1	nogas	34.755	12.9	32025	2.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.216	49.2	323	9.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.229	42.4	2003	35.6	2.5	
Sn	118	1	nogas	-0.044	-91.1	2654	15.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.209	-5.3	427	12.9	2.5	
Sb	121	2	He	0.739	12.3	5701	9.4	2.5	
P	31	1	nogas	-1.861	-52.5	114913	1.4	10	
La	139	1	nogas	-41.849	-4.8	80	12.5	2.5	
Au	197	1	nogas	-10.005	-1087.0	23	65.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1413670	5.90	1230826	114.86	70	125	
Ge	72	1	nogas	4037372	1.59	3534266	114.24	70	125	
In	115	1	nogas	3639048	1.20	3124880	116.45	70	125	
Bi	209	1	nogas	2682003	3.31	2183512	122.83	70	125	
Ge	72	2	He	976257	0.66	871721	111.99	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	168CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:06:19-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	73	56.81
Na	23	1	nogas	1799510	0.00
Mg	24	1	nogas	73221	0.01
Al	27	1	nogas	93534	0.00
K	39	1	nogas	9249782	0.00
Ti	47	1	nogas	360	2.31
V	51	1	nogas	704288	0.00
Cr	52	1	nogas	60211	0.00
Mn	55	1	nogas	44938	0.00
Co	59	1	nogas	880	1.91
Ni	60	1	nogas	2324	0.40
Cu	63	1	nogas	63219	0.00
Zn	66	1	nogas	4134	0.21
As	75	1	nogas	112052	0.00
Sr	88	1	nogas	3724	0.12
Ag	107	1	nogas	3510	0.02
Cd	111	1	nogas	50	144.22
Sb	121	1	nogas	2157	0.19
Tl	205	1	nogas	1273	1.48
Pb	208	1	nogas	1203	0.33
[Pb]	206	1	nogas	277	3.99
[Pb]	207	1	nogas	273	5.41
Na	23	2	He	174516	0.00
Mg	24	2	He	4067	0.12
Al	27	2	He	2240	0.66
K	39	2	He	228221	0.00
Ca	43	2	He	93	17.54
Ca	44	2	He	2657	0.07
V	51	2	He	8324	0.02
Cr	52	2	He	6041	0.05
Mn	55	2	He	4414	0.09
Fe	56	2	He	23689	0.00
Co	59	2	He	253	1.80
Ni	60	2	He	787	0.89
Cu	63	2	He	30188	0.00
Zn	66	2	He	1383	0.52
As	75	2	He	593	0.81
Se	78	2	He	163	9.90
B	11	1	nogas	257517	0.00
Si	28	1	nogas	1054963	0.00
Ca	43	1	nogas	2544	0.28
Ca	44	1	nogas	164333	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2701284	0.00
Se	77	1	nogas	36373	0.00
Se	82	1	nogas	277	13.09
Mo	95	1	nogas	263	6.82
Sn	118	1	nogas	2977	0.45
Ba	137	1	nogas	1460	0.49
Sb	121	2	He	773	1.02
Li	7	1	nogas	120102	0.00
P	31	1	nogas	126009	0.00
La	139	1	nogas	273	7.37

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1487436	1.62
Ge	72	1	nogas	3963361	3.93
In	115	1	nogas	3607912	3.46
Bi	209	1	nogas	2670040	1.83
Ge	72	2	He	997888	1.19

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	169CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:08:16-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	17051	0.01
Na	23	1	nogas	7626754	0.00
Mg	24	1	nogas	3947831	0.00
Al	27	1	nogas	109201	0.00
K	39	1	nogas	14039415	0.00
Ti	47	1	nogas	5127	0.10
V	51	1	nogas	744801	0.00
Cr	52	1	nogas	113519	0.00
Mn	55	1	nogas	103989	0.00
Co	59	1	nogas	58293	0.00
Ni	60	1	nogas	16561	0.03
Cu	63	1	nogas	40809	0.01
Zn	66	1	nogas	13759	0.03
As	75	1	nogas	122227	0.00
Sr	88	1	nogas	72574	0.00
Ag	107	1	nogas	38195	0.00
Cd	111	1	nogas	7405	0.04
Sb	121	1	nogas	34321	0.00
Tl	205	1	nogas	42396	0.00
Pb	208	1	nogas	66370	0.00
[Pb]	206	1	nogas	16585	0.03
[Pb]	207	1	nogas	14884	0.01
Na	23	2	He	546545	0.00
Mg	24	2	He	212382	0.00
Al	27	2	He	2544	0.35
K	39	2	He	431404	0.00
Ca	43	2	He	653	0.95
Ca	44	2	He	12251	0.02
V	51	2	He	22417	0.01
Cr	52	2	He	21029	0.00
Mn	55	2	He	14192	0.04
Fe	56	2	He	1445322	0.00
Co	59	2	He	22855	0.01
Ni	60	2	He	6718	0.04
Cu	63	2	He	18847	0.01
Zn	66	2	He	4291	0.13
As	75	2	He	3802	0.08
Se	78	2	He	411	1.41
B	11	1	nogas	292304	0.00
Si	28	1	nogas	2434262	0.00

Calibration Standard Report

Ca	43	1	nogas	10880	0.02
Ca	44	1	nogas	296657	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8498366	0.00
Se	77	1	nogas	35107	0.00
Se	82	1	nogas	977	1.27
Mo	95	1	nogas	14036	0.02
Sn	118	1	nogas	21677	0.01
Ba	137	1	nogas	10337	0.05
Sb	121	2	He	12034	0.02
P	31	1	nogas	143630	0.00
La	139	1	nogas	200	15.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1447299	3.03	1487436	97.30	70	125	
Ge	72	1	nogas	3957456	2.93	3963361	99.85	70	125	
In	115	1	nogas	3695045	2.63	3607912	102.42	70	125	
Bi	209	1	nogas	2616163	4.56	2670040	97.98	70	125	
Ge	72	2	He	978465	1.34	997888	98.05	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	170CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:10:14-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	43958	0.00
Na	23	1	nogas	16946315	0.00
Mg	24	1	nogas	10117050	0.00
Al	27	1	nogas	227196	0.00
K	39	1	nogas	21552886	0.00
Ti	47	1	nogas	12087	0.02
V	51	1	nogas	816580	0.00
Cr	52	1	nogas	193285	0.00
Mn	55	1	nogas	217667	0.00
Co	59	1	nogas	148941	0.00
Ni	60	1	nogas	38444	0.00
Cu	63	1	nogas	89743	0.00
Zn	66	1	nogas	31841	0.01
As	75	1	nogas	136459	0.00
Sr	88	1	nogas	178336	0.00
Ag	107	1	nogas	92945	0.00
Cd	111	1	nogas	18697	0.01
Sb	121	1	nogas	80696	0.00
Tl	205	1	nogas	116369	0.00
Pb	208	1	nogas	167853	0.00
[Pb]	206	1	nogas	41841	0.01
[Pb]	207	1	nogas	36772	0.01
Na	23	2	He	1139704	0.00
Mg	24	2	He	540975	0.00
Al	27	2	He	5241	0.16
K	39	2	He	757544	0.00
Ca	43	2	He	1527	0.13
Ca	44	2	He	27053	0.01
V	51	2	He	44659	0.00
Cr	52	2	He	48427	0.01
Mn	55	2	He	33063	0.01
Fe	56	2	He	3584058	0.00
Co	59	2	He	56878	0.01
Ni	60	2	He	16341	0.02
Cu	63	2	He	42182	0.00
Zn	66	2	He	10433	0.03
As	75	2	He	8861	0.03
Se	78	2	He	826	0.57
B	11	1	nogas	367502	0.00
Si	28	1	nogas	4393432	0.00

Calibration Standard Report

Ca	43	1	nogas	25651	0.01
Ca	44	1	nogas	527756	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	17837406	0.00
Se	77	1	nogas	35238	0.01
Se	82	1	nogas	1920	0.78
Mo	95	1	nogas	34654	0.01
Sn	118	1	nogas	53031	0.00
Ba	137	1	nogas	25907	0.02
Sb	121	2	He	29295	0.00
P	31	1	nogas	179738	0.00
La	139	1	nogas	293	6.40

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1457845	5.83	1487436	98.01	70	125	
Ge	72	1	nogas	4004125	1.07	3963361	101.03	70	125	
In	115	1	nogas	3652254	1.79	3607912	101.23	70	125	
Bi	209	1	nogas	2661622	1.22	2670040	99.68	70	125	
Ge	72	2	He	970802	0.36	997888	97.29	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	171CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:12:13-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	83351	0.00
Na	23	1	nogas	31541404	0.00
Mg	24	1	nogas	19500292	0.00
Al	27	1	nogas	460840	0.00
K	39	1	nogas	32790248	0.00
Ti	47	1	nogas	22814	0.01
V	51	1	nogas	1008695	0.00
Cr	52	1	nogas	328417	0.00
Mn	55	1	nogas	369175	0.00
Co	59	1	nogas	284716	0.00
Ni	60	1	nogas	69445	0.00
Cu	63	1	nogas	161153	0.00
Zn	66	1	nogas	55344	0.00
As	75	1	nogas	174018	0.00
Sr	88	1	nogas	346433	0.00
Ag	107	1	nogas	180379	0.00
Cd	111	1	nogas	36862	0.01
Sb	121	1	nogas	160173	0.00
Tl	205	1	nogas	218247	0.00
Pb	208	1	nogas	317212	0.00
[Pb]	206	1	nogas	78142	0.00
[Pb]	207	1	nogas	69114	0.00
Na	23	2	He	2081552	0.00
Mg	24	2	He	1014523	0.00
Al	27	2	He	10326	0.04
K	39	2	He	1266445	0.00
Ca	43	2	He	2884	0.14
Ca	44	2	He	51241	0.00
V	51	2	He	79352	0.00
Cr	52	2	He	85868	0.00
Mn	55	2	He	57690	0.00
Fe	56	2	He	6853475	0.00
Co	59	2	He	110347	0.00
Ni	60	2	He	29891	0.01
Cu	63	2	He	75967	0.00
Zn	66	2	He	17619	0.00
As	75	2	He	16271	0.00
Se	78	2	He	1415	0.31
B	11	1	nogas	481333	0.00
Si	28	1	nogas	7432022	0.00

Calibration Standard Report

Ca	43	1	nogas	45790	0.01
Ca	44	1	nogas	863134	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	31577138	0.00
Se	77	1	nogas	39433	0.01
Se	82	1	nogas	3670	0.07
Mo	95	1	nogas	67793	0.00
Sn	118	1	nogas	102232	0.00
Ba	137	1	nogas	48218	0.01
Sb	121	2	He	57756	0.00
P	31	1	nogas	229566	0.00
La	139	1	nogas	263	13.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1454320	6.76	1487436	97.77	70	125	
Ge	72	1	nogas	4013118	1.96	3963361	101.26	70	125	
In	115	1	nogas	3614042	2.90	3607912	100.17	70	125	
Bi	209	1	nogas	2619882	2.19	2670040	98.12	70	125	
Ge	72	2	He	970971	1.93	997888	97.30	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	172CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:14:10-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	852460	0.00
Na	23	1	nogas	295873840	0.00
Mg	24	1	nogas	184117946	0.00
Al	27	1	nogas	2647388	0.00
K	39	1	nogas	244386355	0.00
Ti	47	1	nogas	222825	0.00
V	51	1	nogas	3713127	0.00
Cr	52	1	nogas	2662330	0.00
Mn	55	1	nogas	3401276	0.00
Co	59	1	nogas	2841719	0.00
Ni	60	1	nogas	649536	0.00
Cu	63	1	nogas	1491186	0.00
Zn	66	1	nogas	525340	0.00
As	75	1	nogas	729995	0.00
Sr	88	1	nogas	3372793	0.00
Ag	107	1	nogas	1764471	0.00
Cd	111	1	nogas	366175	0.00
Sb	121	1	nogas	1568190	0.00
Tl	205	1	nogas	2285413	0.00
Pb	208	1	nogas	3254973	0.00
[Pb]	206	1	nogas	791864	0.00
[Pb]	207	1	nogas	707254	0.00
Na	23	2	He	18485778	0.00
Mg	24	2	He	9939195	0.00
Al	27	2	He	65293	0.00
K	39	2	He	10652571	0.00
Ca	43	2	He	28632	0.01
Ca	44	2	He	478167	0.00
V	51	2	He	734199	0.00
Cr	52	2	He	810215	0.00
Mn	55	2	He	553810	0.00
Fe	56	2	He	66967456	0.00
Co	59	2	He	1074310	0.00
Ni	60	2	He	286726	0.00
Cu	63	2	He	722900	0.00
Zn	66	2	He	174851	0.00
As	75	2	He	163821	0.00
Se	78	2	He	12875	0.02
B	11	1	nogas	2944166	0.00
Si	28	1	nogas	62708894	0.00

Calibration Standard Report

Ca	43	1	nogas	428812	0.00
Ca	44	1	nogas	7145108	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	285006215	0.00
Se	77	1	nogas	63788	0.00
Se	82	1	nogas	33829	0.00
Mo	95	1	nogas	673101	0.00
Sn	118	1	nogas	1039100	0.00
Ba	137	1	nogas	481583	0.00
Sb	121	2	He	548002	0.00
P	31	1	nogas	1063805	0.00
La	139	1	nogas	903	0.28

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1317755	4.52	1487436	88.59	70	125	
Ge	72	1	nogas	3936384	2.35	3963361	99.32	70	125	
In	115	1	nogas	3571942	1.20	3607912	99.00	70	125	
Bi	209	1	nogas	2590103	2.07	2670040	97.01	70	125	
Ge	72	2	He	976061	1.22	997888	97.81	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	173CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:16:10-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1660853	0.00
Na	23	1	nogas	580230780	0.00
Mg	24	1	nogas	369543175	0.00
Al	27	1	nogas	4739578	0.00
K	39	1	nogas	464295227	0.00
Ti	47	1	nogas	450093	0.00
V	51	1	nogas	6776410	0.00
Cr	52	1	nogas	5338112	0.00
Mn	55	1	nogas	6680617	0.00
Co	59	1	nogas	5491845	0.00
Ni	60	1	nogas	1275663	0.00
Cu	63	1	nogas	2884278	0.00
Zn	66	1	nogas	1043240	0.00
As	75	1	nogas	1389069	0.00
Sr	88	1	nogas	6664654	0.00
Ag	107	1	nogas	3399048	0.00
Cd	111	1	nogas	728800	0.00
Sb	121	1	nogas	3197438	0.00
Tl	205	1	nogas	4775291	0.00
Pb	208	1	nogas	6418890	0.00
[Pb]	206	1	nogas	1609250	0.00
[Pb]	207	1	nogas	1419260	0.00
Na	23	2	He	36059943	0.00
Mg	24	2	He	19967548	0.00
Al	27	2	He	115558	0.00
K	39	2	He	20465003	0.00
Ca	43	2	He	56957	0.00
Ca	44	2	He	940067	0.00
V	51	2	He	1453837	0.00
Cr	52	2	He	1596650	0.00
Mn	55	2	He	1089645	0.00
Fe	56	2	He	135879418	0.00
Co	59	2	He	2190937	0.00
Ni	60	2	He	576902	0.00
Cu	63	2	He	1404369	0.00
Zn	66	2	He	343841	0.00
As	75	2	He	326140	0.00
Se	78	2	He	25260	0.00
B	11	1	nogas	5517239	0.00
Si	28	1	nogas	120547578	0.00

Calibration Standard Report

Ca	43	1	nogas	846484	0.00
Ca	44	1	nogas	14030563	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	568658579	0.00
Se	77	1	nogas	91603	0.00
Se	82	1	nogas	66713	0.00
Mo	95	1	nogas	1409267	0.00
Sn	118	1	nogas	2040067	0.00
Ba	137	1	nogas	954043	0.00
Sb	121	2	He	1118379	0.00
P	31	1	nogas	2029478	0.00
La	139	1	nogas	1477	0.43

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1209542	4.71	1487436	81.32	70	125	
Ge	72	1	nogas	3895724	2.67	3963361	98.29	70	125	
In	115	1	nogas	3492304	2.44	3607912	96.80	70	125	
Bi	209	1	nogas	2544621	2.12	2670040	95.30	70	125	
Ge	72	2	He	956319	1.00	997888	95.83	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	174_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:18:05-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	95.786	1.806	875718	1.79	100	95.8	90	110	
Na	23	1	nogas	10190.972	4.662	308533132	1.95	10000	101.9	90	110	
Mg	24	1	nogas	10351.946	2.959	198332750	1.01	10000	103.5	90	110	
Al	27	1	nogas	94.310	0.820	2379529	0.54	100	94.3	90	110	
K	39	1	nogas	10477.597	1.333	254601914	0.63	10000	104.8	90	110	
Ti	47	1	nogas	98.436	0.662	226105	0.34	100	98.4	90	110	
V	51	1	nogas	95.434	1.111	3668237	1.30	100	95.4	90	110	
Cr	52	1	nogas	101.298	1.971	2784035	1.04	100	101.3	90	110	
Mn	55	1	nogas	105.085	1.263	3615073	0.50	100	105.1	90	110	
Co	59	1	nogas	102.903	1.019	2907558	1.12	100	102.9	90	110	
Ni	60	1	nogas	99.044	1.867	649688	1.04	100	99.0	90	110	
Cu	63	1	nogas	101.467	2.093	1528907	1.06	100	101.5	90	110	
Zn	66	1	nogas	99.711	1.431	533498	0.66	100	99.7	90	110	
As	75	1	nogas	95.483	1.101	729502	0.11	100	95.5	90	110	
Sr	88	1	nogas	101.086	1.545	3452281	1.29	100	101.1	90	110	
Ag	107	1	nogas	103.240	1.280	1807518	0.78	100	103.2	90	110	
Cd	111	1	nogas	103.512	1.464	388801	1.23	100	103.5	90	110	
Sb	121	1	nogas	104.273	4.692	1696734	3.85	100	104.3	90	110	
Tl	205	1	nogas	105.267	1.704	2572100	1.00	100	105.3	90	110	
Pb	208	1	nogas	103.794	1.047	3341054	1.05	100	103.8	90	110	
U	238	1	nogas	103.658	3.151	3250872	1.82	100	103.7	90	110	
[Pb]	206	1	nogas	101.963	0.829	844007	1.03	100	102.0	90	110	
[Pb]	207	1	nogas	96.422	1.305	705334	1.41	100	96.4	90	110	
Na	23	2	He	10483.000	1.141	19447961	1.55	10000	104.8	90	110	
Mg	24	2	He	10359.139	1.899	10545771	2.32	10000	103.6	90	110	
Al	27	2	He	90.762	1.661	56298	1.21	100	90.8	90	110	
K	39	2	He	10705.452	1.261	11126572	1.24	10000	107.1	90	110	
Ca	43	2	He	10447.114	1.281	30422	1.62	10000	104.5	90	110	
Ca	44	2	He	10465.504	1.555	504682	1.15	10000	104.7	90	110	
V	51	2	He	101.770	0.614	758928	0.29	100	101.8	90	110	
Cr	52	2	He	100.952	1.677	827266	2.11	100	101.0	90	110	
Mn	55	2	He	104.636	2.204	585220	2.51	100	104.6	90	110	
Fe	56	2	He	10364.214	2.633	71664276	3.17	10000	103.6	90	110	
Co	59	2	He	100.292	0.687	1116855	0.73	100	100.3	90	110	
Ni	60	2	He	96.465	1.826	283710	1.19	100	96.5	90	110	
Cu	63	2	He	98.874	1.709	717107	1.05	100	98.9	90	110	
Zn	66	2	He	100.132	1.703	176607	1.23	100	100.1	90	110	
As	75	2	He	101.425	0.984	169128	0.53	100	101.4	90	110	
Se	78	2	He	101.045	2.396	13131	1.76	100	101.0	90	110	
B	11	1	nogas	481.545	1.812	3047961	3.42	500	96.3	90	110	
Si	28	1	nogas	598.773	2.925	8420329	1.59	5000	12.0	90	110	ICV Main CR1 Failed
Ca	43	1	nogas	10586.066	2.271	460007	1.56	10000	105.9	90	110	
Ca	44	1	nogas	10454.121	2.009	7585481	1.04	10000	104.5	90	110	
Fe	56	1	nogas	10213.521	1.912	297795382	1.45	10000	102.1	90	110	
Se	77	1	nogas	63.456	2.920	54659	0.66	100	63.5	90	110	ICV Main CR1 Failed
Se	82	1	nogas	103.055	1.062	35325	1.81	100	103.1	90	110	
Mo	95	1	nogas	96.462	1.555	688729	1.91	100	96.5	90	110	
Sn	118	1	nogas	94.577	1.578	998090	0.62	100	94.6	90	110	
Ba	137	1	nogas	102.485	0.771	505005	1.33	100	102.5	90	110	
Sb	121	2	He	104.013	0.204	591430	0.43	100	104.0	90	110	
Li	7	1	nogas	106.642	2.186	2169482	1.10	100	106.6	90	110	
P	31	1	nogas	531.843	1.431	1159580	0.67	500	106.4	90	110	
La	139	1	nogas	126.362	7.062	1067	6.24	100	126.4	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-53.726	-180.747	10	173.21	100	-53.7	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1346974	3.12	1487436	90.56	70	125	
Ge	72	1	nogas	3987476	0.97	3963361	100.61	70	125	
In	115	1	nogas	3611577	0.99	3607912	100.10	70	125	
Bi	209	1	nogas	2634983	1.78	2670040	98.69	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	979688	0.63	997888	98.18	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	175SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:20:05-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	168CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.748	1.748	3.86	17108	0.01	2000	
Na	23	1	nogas	186.662	186.662	4.18	7386214	0.00	200000	
Mg	24	1	nogas	204.457	204.457	3.91	3966831	0.01	200000	
Al	27	1	nogas	0.746	0.746	8.80	111491	0.00	2000	
K	39	1	nogas	211.855	211.855	8.58	14179036	0.00	200000	
Ti	47	1	nogas	2.003	2.003	4.30	4921	0.04	2000	
V	51	1	nogas	-4.840	-4.840	-4.70	555262	0.00	2000	
Cr	52	1	nogas	1.654	1.654	6.28	104397	0.00	2000	
Mn	55	1	nogas	1.735	1.735	3.28	103479	0.00	2000	
Co	59	1	nogas	2.173	2.173	2.05	61841	0.00	2000	
Ni	60	1	nogas	1.898	1.898	2.65	16441	0.01	2000	
Cu	63	1	nogas	-1.513	-1.513	-3.84	41507	0.00	2000	
Zn	66	1	nogas	2.121	2.121	6.60	14413	0.01	2000	
As	75	1	nogas	-0.650	-0.650	-7.07	101112	0.00	2000	
Sr	88	1	nogas	2.049	2.049	3.93	73146	0.00	2000	
Ag	107	1	nogas	2.307	2.307	5.74	43534	0.01	2000	
Cd	111	1	nogas	2.103	2.103	3.51	8069	0.03	2000	
Sb	121	1	nogas	2.388	2.388	4.19	40711	0.01	2000	
Tl	205	1	nogas	2.440	2.440	6.87	62320	0.00	2000	
Pb	208	1	nogas	2.101	2.101	2.23	68818	0.00	2000	
U	238	1	nogas	2.142	2.142	3.89	69831	0.00	2000	
[Pb]	206	1	nogas	1.937	1.937	5.98	16682	0.01	2000	
[Pb]	207	1	nogas	2.005	2.005	2.49	15294	0.01	2000	
Na	23	2	He	190.502	190.502	3.17	522824	0.04	200000	
Mg	24	2	He	207.009	207.009	0.44	215145	0.10	200000	
Al	27	2	He	-0.846	-0.846	-19.76	2600	-0.03	2000	
K	39	2	He	207.210	207.210	1.05	439164	0.05	200000	
Ca	43	2	He	199.880	199.880	14.87	673	29.68	200000	
Ca	44	2	He	196.012	196.012	3.81	12041	1.63	200000	
V	51	2	He	1.950	1.950	0.24	20859	0.01	2000	
Cr	52	2	He	2.021	2.021	5.77	22427	0.01	2000	
Mn	55	2	He	1.792	1.792	1.02	14312	0.01	2000	
Fe	56	2	He	214.982	214.982	0.77	1512692	0.01	200000	
Co	59	2	He	2.035	2.035	3.18	22955	0.01	2000	
Ni	60	2	He	2.334	2.334	3.91	7118	0.03	2000	
Cu	63	2	He	0.932	0.932	7.15	18493	0.01	2000	
Zn	66	2	He	2.045	2.045	1.32	4527	0.05	2000	
As	75	2	He	1.934	1.934	5.41	3806	0.05	2000	
Se	78	2	He	2.176	2.176	9.13	433	0.50	2000	
B	11	1	nogas	7.154	7.154	33.19	293030	0.00	2000	
Si	28	1	nogas	124.879	124.879	3.81	2580515	0.00	2000	
Ca	43	1	nogas	192.787	192.787	5.74	10817	1.78	200000	

Sample Report

Ca	44	1	nogas	188.571	188.571	3.01	297383	0.06	200000	
Fe	56	1	nogas	196.243	196.243	5.20	8333018	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-25.447	-25.447	-5.63	29200	-0.09	2000	
Se	82	1	nogas	2.072	2.072	17.85	977	0.21	2000	
Mo	95	1	nogas	2.267	2.267	7.00	16321	0.01	2000	
Sn	118	1	nogas	2.004	2.004	4.98	24441	0.01	2000	
Ba	137	1	nogas	1.938	1.938	3.42	11147	0.02	2000	
Sb	121	2	He	2.346	2.346	5.28	14113	0.02	2000	
La	139	1	nogas	-11.391	-11.391	-38.31	207	-5.51	2000	
Au	197	1	nogas	16.309	16.309	384.99	23	69.90	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1436434	3.15	1487436	96.57	70	125	
Ge	72	1	nogas	3961783	2.20	3963361	99.96	70	125	
In	115	1	nogas	3665919	0.54	3607912	101.61	70	125	
Bi	209	1	nogas	2698895	3.64	2670040	101.08	70	125	
Ge	72	2	He	981978	0.21	997888	98.41	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	176LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:22:05-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	4.433	5.223	43480	3.61	5	88.7	70	130	
Na	23	1	nogas	481.363	0.691	16302156	0.08	500	96.3	70	130	
Mg	24	1	nogas	519.820	1.398	10029940	1.67	500	104.0	70	130	
Al	27	1	nogas	5.206	4.212	223646	0.75	5	104.1	70	130	
K	39	1	nogas	515.150	2.874	21705394	1.59	500	103.0	70	130	
Ti	47	1	nogas	5.084	6.688	12198	4.93	5	101.7	70	130	
V	51	1	nogas	-2.150	-26.421	651924	1.54	5	-43.0	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.667	3.508	188930	0.70	5	93.3	70	130	
Mn	55	1	nogas	4.978	3.033	217592	0.73	5	99.6	70	130	
Co	59	1	nogas	5.123	0.694	147825	1.26	5	102.5	70	130	
Ni	60	1	nogas	5.071	2.164	37793	1.34	5	101.4	70	130	
Cu	63	1	nogas	1.726	0.352	89934	1.78	5	34.5	70	130	LLICV Main CR1 Failed
Zn	66	1	nogas	5.370	4.586	32272	2.61	5	107.4	70	130	
As	75	1	nogas	1.904	10.854	120260	0.56	5	38.1	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.164	0.269	182687	1.94	5	103.3	70	130	
Ag	107	1	nogas	5.072	2.485	93568	1.22	5	101.4	70	130	
Cd	111	1	nogas	4.844	2.919	18487	0.83	5	96.9	70	130	
Sb	121	1	nogas	5.025	2.363	85164	3.67	5	100.5	70	130	
Tl	205	1	nogas	4.883	3.970	122777	1.47	5	97.7	70	130	
Pb	208	1	nogas	5.152	0.844	166987	0.84	5	103.0	70	130	
U	238	1	nogas	5.040	2.434	162150	2.68	5	100.8	70	130	
[Pb]	206	1	nogas	4.894	6.895	41503	2.65	5	97.9	70	130	
[Pb]	207	1	nogas	4.829	6.464	36224	2.20	5	96.6	70	130	
Na	23	2	He	507.355	2.196	1102442	1.89	500	101.5	70	130	
Mg	24	2	He	519.445	1.587	531696	1.54	500	103.9	70	130	
Al	27	2	He	3.872	10.282	5351	4.31	5	77.4	70	130	
K	39	2	He	520.650	1.622	758252	1.13	500	104.1	70	130	
Ca	43	2	He	517.060	2.485	1590	2.27	500	103.4	70	130	
Ca	44	2	He	527.590	2.456	27874	2.18	500	105.5	70	130	
V	51	2	He	4.975	0.961	43113	0.75	5	99.5	70	130	
Cr	52	2	He	5.049	0.239	46933	0.12	5	101.0	70	130	
Mn	55	2	He	4.963	2.875	31831	2.41	5	99.3	70	130	
Fe	56	2	He	522.523	0.959	3628800	0.88	500	104.5	70	130	
Co	59	2	He	5.126	3.319	57226	3.31	5	102.5	70	130	
Ni	60	2	He	5.535	0.526	16484	0.52	5	110.7	70	130	
Cu	63	2	He	4.176	2.382	41524	1.72	5	83.5	70	130	
Zn	66	2	He	5.269	6.937	10156	6.21	5	105.4	70	130	
As	75	2	He	4.992	5.628	8864	5.35	5	99.8	70	130	
Se	78	2	He	5.283	6.951	830	5.60	5	105.7	70	130	
B	11	1	nogas	13.625	6.964	335131	0.26	25	54.5	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	267.065	4.770	4410151	1.95	25	1068.3	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	505.017	0.891	24760	0.93	500	101.0	70	130	
Ca	44	1	nogas	490.310	1.995	521393	0.36	500	98.1	70	130	
Fe	56	1	nogas	489.483	0.987	17122311	1.24	500	97.9	70	130	
Se	77	1	nogas	-27.391	-2.868	29277	1.87	5	-547.8	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.797	6.360	1937	5.02	5	95.9	70	130	
Mo	95	1	nogas	4.901	4.913	35766	3.25	5	98.0	70	130	
Sn	118	1	nogas	4.832	4.076	54539	1.73	5	96.6	70	130	
Ba	137	1	nogas	4.659	4.120	24675	2.17	5	93.2	70	130	
Sb	121	2	He	5.219	1.142	30350	1.04	5	104.4	70	130	
Li	7	1	nogas	4.764	9.050	215164	3.09	5	95.3	70	130	
P	31	1	nogas	26.160	9.206	180434	1.38	25	104.6	70	130	
La	139	1	nogas	3.834	149.900	303	13.72	5	76.7	70	130	
Au	197	1	nogas	16.295	170.719	23	24.74	5	325.9	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1443146	1.67	1487436	97.02	70	125	
Ge	72	1	nogas	4048939	1.68	3963361	102.16	70	125	
In	115	1	nogas	3661044	2.40	3607912	101.47	70	125	
Bi	209	1	nogas	2687076	4.16	2670040	100.64	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	978080	0.09	997888	98.02	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	177_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T18:24:03-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.008	56.9	147	32.2	1	
Na	23	1	nogas	-18.968	-9.2	1225144	2.1	100	
Mg	24	1	nogas	-2.449	-3.2	26490	9.3	100	
Al	27	1	nogas	-2.590	-0.6	31797	1.4	5	
K	39	1	nogas	-10.704	-79.1	9183610	0.2	100	
Ti	47	1	nogas	-0.011	-155.9	340	10.6	2.5	
V	51	1	nogas	-5.947	-4.0	531335	2.1	2.5	
Cr	52	1	nogas	-0.311	-6.7	52949	1.4	2.5	
Mn	55	1	nogas	-0.552	-6.1	26806	2.3	2.5	
Co	59	1	nogas	0.015	14.9	1337	2.6	2.5	
Ni	60	1	nogas	-0.438	-3.4	1337	5.7	2.5	
Cu	63	1	nogas	-3.879	-0.7	7712	5.7	1	
Zn	66	1	nogas	-0.271	-3.6	1817	2.1	2.5	
As	75	1	nogas	-2.249	-11.7	92517	1.0	2.5	
Sr	88	1	nogas	-0.038	-10.4	2490	7.2	2.5	
Ag	107	1	nogas	0.007	153.7	3714	6.9	2.5	
Cd	111	1	nogas	-0.007	-85.9	27	78.1	1	
Sb	121	1	nogas	0.110	11.6	4004	2.8	2.5	
Tl	205	1	nogas	0.185	8.3	5881	6.0	1	
Pb	208	1	nogas	-0.001	-292.5	1157	11.8	2.5	
U	238	1	nogas	-0.009	-47.0	740	18.2	2.5	
[Pb]	206	1	nogas	-0.002	-263.6	263	14.4	2.5	
[Pb]	207	1	nogas	0.001	752.6	280	12.4	2.5	
Na	23	2	He	-20.287	-8.5	132067	1.0	100	
Mg	24	2	He	-2.271	-7.8	1657	9.3	100	
Al	27	2	He	-3.758	-9.1	873	22.3	5	
K	39	2	He	-2.422	-123.3	225755	1.3	100	
Ca	43	2	He	-12.937	-86.8	53	60.3	100	
Ca	44	2	He	-15.765	-14.4	1827	7.4	100	
V	51	2	He	0.059	68.9	6727	2.8	2.5	
Cr	52	2	He	-0.042	-216.0	5511	12.7	2.5	
Mn	55	2	He	-0.528	-1.4	1383	1.8	2.5	
Fe	56	2	He	-0.345	-36.5	20572	3.2	100	
Co	59	2	He	0.019	40.3	453	18.5	2.5	
Ni	60	2	He	0.067	39.3	433	16.4	2.5	
Cu	63	2	He	-1.218	-2.9	3067	9.0	1	
Zn	66	2	He	-0.286	-21.2	420	24.2	2.5	
As	75	2	He	-0.008	-166.1	561	2.5	2.5	
Se	78	2	He	0.144	162.6	169	16.2	1	
B	11	1	nogas	-9.773	-5.2	185076	0.7	10	
Si	28	1	nogas	6.157	135.4	1151834	6.6	5	ICB Main CR1 Failed
Ca	43	1	nogas	-28.827	-7.0	1333	8.4	100	
Ca	44	1	nogas	-33.656	-12.2	143447	0.7	100	
Fe	56	1	nogas	-10.708	-30.4	2441998	1.6	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-26.125	-6.7	29584	3.6	2.5	
Se	82	1	nogas	-0.135	-51.2	233	8.9	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.029	35.2	477	13.6	2.5	
Sn	118	1	nogas	-0.157	-12.0	1373	15.1	5	
Ba	137	1	nogas	-0.148	-1.0	753	2.0	2.5	
Sb	121	2	He	0.113	47.6	1380	20.6	2.5	
P	31	1	nogas	1.960	51.9	132454	1.2	10	
La	139	1	nogas	-37.190	-13.1	43	74.2	2.5	
Au	197	1	nogas	-19.323	-163.7	17	34.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1416102	2.37	1487436	95.20	70	125	
Ge	72	1	nogas	4040311	2.33	3963361	101.94	70	125	
In	115	1	nogas	3706804	1.96	3607912	102.74	70	125	
Bi	209	1	nogas	2686141	0.59	2670040	100.60	70	125	
Ge	72	2	He	965645	1.57	997888	96.77	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	184_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T19:05:55-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	92.794	2.335	869070	1.39	100	92.8	90	110	
Na	23	1	nogas	10216.709	1.669	300774740	3.05	10000	102.2	90	110	
Mg	24	1	nogas	9895.412	2.859	184225667	1.72	10000	99.0	90	110	
Al	27	1	nogas	95.328	0.760	2366466	0.72	100	95.3	90	110	
K	39	1	nogas	10143.308	1.655	242904939	1.35	10000	101.4	90	110	
Ti	47	1	nogas	100.316	2.621	226811	2.91	100	100.3	90	110	
V	51	1	nogas	96.825	2.089	3652841	1.32	100	96.8	90	110	
Cr	52	1	nogas	100.445	2.062	2717738	1.17	100	100.4	90	110	
Mn	55	1	nogas	100.521	1.242	3405760	0.98	100	100.5	90	110	
Co	59	1	nogas	100.406	2.716	2791940	1.36	100	100.4	90	110	
Ni	60	1	nogas	105.477	4.778	680554	3.34	100	105.5	90	110	
Cu	63	1	nogas	101.368	3.693	1503233	2.09	100	101.4	90	110	
Zn	66	1	nogas	101.349	2.491	533647	1.34	100	101.3	90	110	
As	75	1	nogas	95.105	1.225	715622	0.50	100	95.1	90	110	
Sr	88	1	nogas	102.300	2.763	3438354	1.62	100	102.3	90	110	
Ag	107	1	nogas	103.844	2.193	1789327	0.75	100	103.8	90	110	
Cd	111	1	nogas	100.273	1.786	371897	1.76	100	100.3	90	110	
Sb	121	1	nogas	96.646	2.296	1548247	0.99	100	96.6	90	110	
Tl	205	1	nogas	95.182	3.740	2386121	0.47	100	95.2	90	110	
Pb	208	1	nogas	103.799	2.374	3341220	2.37	100	103.8	90	110	
U	238	1	nogas	102.471	1.842	3299946	3.42	100	102.5	90	110	
[Pb]	206	1	nogas	94.392	3.158	801809	2.30	100	94.4	90	110	
[Pb]	207	1	nogas	95.685	1.776	718544	3.18	100	95.7	90	110	
Na	23	2	He	9895.432	2.010	18241474	1.08	10000	99.0	90	110	
Mg	24	2	He	9796.823	1.772	9905198	1.12	10000	98.0	90	110	
Al	27	2	He	89.868	2.898	55391	1.63	100	89.9	90	110	CCV Main CR1-2 Failed
K	39	2	He	10019.781	1.217	10428547	1.19	10000	100.2	90	110	
Ca	43	2	He	9819.602	2.095	28409	2.56	10000	98.2	90	110	
Ca	44	2	He	9884.427	1.445	473587	0.63	10000	98.8	90	110	
V	51	2	He	97.575	1.533	722969	0.72	100	97.6	90	110	
Cr	52	2	He	96.305	2.431	783999	1.32	100	96.3	90	110	
Mn	55	2	He	98.851	3.433	549236	2.30	100	98.9	90	110	
Fe	56	2	He	9670.587	2.964	66401897	2.01	10000	96.7	90	110	
Co	59	2	He	96.745	2.475	1069973	1.50	100	96.7	90	110	
Ni	60	2	He	102.956	3.944	300707	3.06	100	103.0	90	110	
Cu	63	2	He	98.388	2.377	708832	1.91	100	98.4	90	110	
Zn	66	2	He	102.219	0.363	179067	0.87	100	102.2	90	110	
As	75	2	He	96.568	0.930	159973	0.43	100	96.6	90	110	
Se	78	2	He	97.137	2.919	12543	1.98	100	97.1	90	110	
B	11	1	nogas	438.657	6.669	2862034	2.58	500	87.7	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5123.722	0.274	63030732	1.42	5000	102.5	90	110	
Ca	43	1	nogas	10052.562	0.626	430135	0.88	10000	100.5	90	110	
Ca	44	1	nogas	10047.642	1.078	7183413	1.62	10000	100.5	90	110	
Fe	56	1	nogas	9902.765	1.924	284266215	0.69	10000	99.0	90	110	
Se	77	1	nogas	79.433	11.796	58253	3.21	100	79.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.069	4.038	33758	2.68	100	100.1	90	110	
Mo	95	1	nogas	96.850	2.980	680515	2.20	100	96.9	90	110	
Sn	118	1	nogas	100.749	2.833	1049491	1.39	100	100.7	90	110	
Ba	137	1	nogas	99.052	2.795	482000	3.11	100	99.1	90	110	
Sb	121	2	He	98.223	1.334	554852	2.29	100	98.2	90	110	
Li	7	1	nogas	97.855	1.230	2050411	4.81	100	97.9	90	110	
P	31	1	nogas	494.103	1.739	1069221	0.73	500	98.8	90	110	
La	139	1	nogas	99.534	20.026	890	17.30	100	99.5	90	110	
Au	197	1	nogas	86.059	141.915	37	62.98	100	86.1	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1380185	3.69	1487436	92.79	70	125	
Ge	72	1	nogas	3925008	1.43	3963361	99.03	70	125	
In	115	1	nogas	3567439	3.52	3607912	98.88	70	125	
Bi	209	1	nogas	2705565	4.04	2670040	101.33	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	973121	1.11	997888	97.52	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	185_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T19:07:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.026	29.6	350	24.4	1	
Na	23	1	nogas	-1.797	-67.3	1761895	0.8	100	
Mg	24	1	nogas	0.007	11880.2	73859	19.2	100	
Al	27	1	nogas	-2.245	-6.9	39574	11.7	5	
K	39	1	nogas	-5.194	-198.9	9139390	0.1	100	
Ti	47	1	nogas	0.046	85.2	463	16.8	2.5	
V	51	1	nogas	-4.722	-1.6	559232	2.3	2.5	
Cr	52	1	nogas	-0.237	-17.0	53952	2.4	2.5	
Mn	55	1	nogas	-0.448	-5.5	29818	0.5	2.5	
Co	59	1	nogas	0.040	3.6	2010	3.0	2.5	
Ni	60	1	nogas	-0.338	-3.3	1957	1.1	2.5	
Cu	63	1	nogas	-3.993	-0.4	5931	3.4	2	
Zn	66	1	nogas	-0.149	-10.2	2427	3.1	2.5	
As	75	1	nogas	-1.362	-4.8	96582	2.9	2.5	
Sr	88	1	nogas	-0.007	-207.3	3490	10.7	2.5	
Ag	107	1	nogas	0.080	77.1	4887	19.1	2.5	
Cd	111	1	nogas	0.025	29.0	150	17.6	1	
Sb	121	1	nogas	1.142	27.0	20533	21.4	2.5	
Tl	205	1	nogas	0.400	31.2	11361	27.1	1	
Pb	208	1	nogas	0.057	30.2	3050	18.3	2.5	
U	238	1	nogas	0.106	70.0	4458	52.8	2.5	
[Pb]	206	1	nogas	0.056	41.5	753	25.1	2.5	
[Pb]	207	1	nogas	0.050	37.9	653	20.9	2.5	
Na	23	2	He	-3.767	-20.0	163414	1.1	100	
Mg	24	2	He	-0.457	-39.5	3507	5.3	100	
Al	27	2	He	-3.680	-2.9	927	6.6	5	
K	39	2	He	-7.207	-20.7	220883	0.7	100	
Ca	43	2	He	-9.609	-126.5	63	55.5	100	
Ca	44	2	He	-16.132	-12.2	1823	5.0	100	
V	51	2	He	0.107	18.9	7145	2.2	2.5	
Cr	52	2	He	-0.056	-49.7	5448	3.8	2.5	
Mn	55	2	He	-0.384	-10.0	2190	9.6	2.5	
Fe	56	2	He	1.985	3.4	36760	1.3	100	
Co	59	2	He	0.024	25.9	510	13.6	2.5	
Ni	60	2	He	0.077	29.6	467	14.3	2.5	
Cu	63	2	He	-1.389	-0.9	1883	4.3	2	
Zn	66	2	He	-0.323	-12.5	360	19.4	2.5	
As	75	2	He	-0.023	-180.7	541	12.8	2.5	
Se	78	2	He	-0.031	-147.1	148	3.6	2	
B	11	1	nogas	-19.084	-2.6	139236	3.5	10	
Si	28	1	nogas	4.778	66.4	1114385	0.9	5	
Ca	43	1	nogas	-24.509	-20.0	1490	11.9	100	
Ca	44	1	nogas	-30.256	-14.1	143163	0.7	100	
Fe	56	1	nogas	-8.040	-73.3	2471610	4.2	100	
Se	77	1	nogas	-20.097	-21.1	30729	4.4	2.5	
Se	82	1	nogas	-0.064	-102.4	253	9.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.240	40.6	1957	32.4	2.5	
Sn	118	1	nogas	-0.027	-286.1	2804	27.7	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.173	-10.6	633	12.8	2.5	
Sb	121	2	He	0.736	2.2	4907	2.2	2.5	
P	31	1	nogas	-2.934	-77.4	120500	2.2	10	
La	139	1	nogas	-30.009	-9.6	90	19.2	2.5	
Au	197	1	nogas	34.421	395.5	27	94.4	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1541307	1.20	1487436	103.62	70	125	
Ge	72	1	nogas	3964991	2.72	3963361	100.04	70	125	
In	115	1	nogas	3748717	2.62	3607912	103.90	70	125	
Bi	209	1	nogas	2714792	1.35	2670040	101.68	70	125	
Ge	72	2	He	973808	0.34	997888	97.59	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	194_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T20:15:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	92.188	0.890	857221	0.76	100	92.2	90	110	
Na	23	1	nogas	9694.584	1.803	287697048	1.02	10000	96.9	90	110	
Mg	24	1	nogas	9944.128	0.240	186656783	1.19	10000	99.4	90	110	
Al	27	1	nogas	95.746	1.200	2359439	3.68	100	95.7	90	110	
K	39	1	nogas	10145.407	4.439	241001897	1.81	10000	101.5	90	110	
Ti	47	1	nogas	100.467	1.459	225420	1.24	100	100.5	90	110	
V	51	1	nogas	96.564	2.470	3617124	0.90	100	96.6	90	110	
Cr	52	1	nogas	101.014	3.028	2712575	3.22	100	101.0	90	110	
Mn	55	1	nogas	100.507	2.873	3379566	2.66	100	100.5	90	110	
Co	59	1	nogas	99.742	3.254	2752099	0.68	100	99.7	90	110	
Ni	60	1	nogas	105.314	2.382	674502	0.28	100	105.3	90	110	
Cu	63	1	nogas	102.318	3.382	1505541	2.71	100	102.3	90	110	
Zn	66	1	nogas	102.983	2.068	538189	2.14	100	103.0	90	110	
As	75	1	nogas	96.476	1.293	719013	1.64	100	96.5	90	110	
Sr	88	1	nogas	101.170	2.978	3374339	0.63	100	101.2	90	110	
Ag	107	1	nogas	105.137	2.680	1797769	0.93	100	105.1	90	110	
Cd	111	1	nogas	100.019	1.235	373786	1.12	100	100.0	90	110	
Sb	121	1	nogas	104.486	4.612	1660625	3.12	100	104.5	90	110	
Tl	205	1	nogas	95.348	2.878	2424706	0.86	100	95.3	90	110	
Pb	208	1	nogas	104.576	1.281	3366209	1.28	100	104.6	90	110	
U	238	1	nogas	104.679	2.843	3417055	0.81	100	104.7	90	110	
[Pb]	206	1	nogas	93.650	1.604	806851	0.45	100	93.6	90	110	
[Pb]	207	1	nogas	95.240	0.531	725234	1.56	100	95.2	90	110	
Na	23	2	He	9904.864	1.192	18195215	1.33	10000	99.0	90	110	
Mg	24	2	He	9742.548	2.310	9815185	1.98	10000	97.4	90	110	
Al	27	2	He	91.483	2.346	56137	1.97	100	91.5	90	110	
K	39	2	He	10019.942	1.432	10428710	1.40	10000	100.2	90	110	
Ca	43	2	He	10023.931	0.792	28893	1.33	10000	100.2	90	110	
Ca	44	2	He	10102.491	1.476	482272	1.50	10000	101.0	90	110	
V	51	2	He	96.786	0.815	714638	0.24	100	96.8	90	110	
Cr	52	2	He	96.877	1.647	785949	2.18	100	96.9	90	110	
Mn	55	2	He	100.658	0.109	557315	0.55	100	100.7	90	110	
Fe	56	2	He	9879.943	1.384	67604054	0.88	10000	98.8	90	110	
Co	59	2	He	97.231	2.148	1071579	1.78	100	97.2	90	110	
Ni	60	2	He	103.264	1.669	300575	1.37	100	103.3	90	110	
Cu	63	2	He	98.333	0.826	705969	1.26	100	98.3	90	110	
Zn	66	2	He	101.961	1.221	177985	1.79	100	102.0	90	110	
As	75	2	He	99.214	2.376	163745	1.91	100	99.2	90	110	
Se	78	2	He	97.648	0.152	12565	0.69	100	97.6	90	110	
B	11	1	nogas	432.514	3.431	2807745	3.15	500	86.5	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5158.729	1.549	62981626	2.71	5000	103.2	90	110	
Ca	43	1	nogas	10194.643	3.667	432764	2.30	10000	101.9	90	110	
Ca	44	1	nogas	10143.040	3.665	7193428	2.53	10000	101.4	90	110	
Fe	56	1	nogas	9922.943	2.056	282727748	2.25	10000	99.2	90	110	
Se	77	1	nogas	82.060	6.154	58551	0.34	100	82.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.143	3.031	33535	2.49	100	100.1	90	110	
Mo	95	1	nogas	99.348	0.906	693036	2.71	100	99.3	90	110	
Sn	118	1	nogas	100.408	2.247	1054031	1.26	100	100.4	90	110	
Ba	137	1	nogas	100.203	3.231	491119	0.98	100	100.2	90	110	
Sb	121	2	He	101.301	0.344	570108	0.63	100	101.3	90	110	
Li	7	1	nogas	96.195	1.335	2001424	1.13	100	96.2	90	110	
P	31	1	nogas	502.729	2.005	1077513	1.24	500	100.5	90	110	
La	139	1	nogas	103.754	3.977	920	2.88	100	103.8	90	110	
Au	197	1	nogas	137.560	118.071	47	65.47	100	137.6	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1369555	0.16	1487436	92.07	70	125	
Ge	72	1	nogas	3896002	2.65	3963361	98.30	70	125	
In	115	1	nogas	3593818	2.31	3607912	99.61	70	125	
Bi	209	1	nogas	2742857	2.05	2670040	102.73	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	969605	0.57	997888	97.17	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	195_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T20:17:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.055	41.6	623	33.4	1	
Na	23	1	nogas	-22.806	-4.2	1118294	1.7	100	
Mg	24	1	nogas	1.869	28.4	108903	7.5	100	
Al	27	1	nogas	-2.302	-4.6	38748	4.3	5	
K	39	1	nogas	-4.886	-297.1	9297534	0.5	100	
Ti	47	1	nogas	0.049	133.1	477	28.5	2.5	
V	51	1	nogas	-6.487	-4.6	513127	1.4	2.5	
Cr	52	1	nogas	-0.371	-8.2	51211	1.9	2.5	
Mn	55	1	nogas	-0.334	-14.0	34212	1.7	2.5	
Co	59	1	nogas	0.048	12.9	2254	4.6	2.5	
Ni	60	1	nogas	-0.415	-2.5	1487	3.4	2.5	
Cu	63	1	nogas	-3.944	-0.5	6751	4.3	2	
Zn	66	1	nogas	-0.276	-10.5	1790	11.6	2.5	
As	75	1	nogas	-2.326	-20.7	91770	0.8	2.5	
Sr	88	1	nogas	0.010	33.9	4114	1.0	2.5	
Ag	107	1	nogas	0.184	28.9	6811	10.7	2.5	
Cd	111	1	nogas	0.022	64.3	137	40.3	1	
Sb	121	1	nogas	1.313	23.2	23683	17.8	2.5	
Tl	205	1	nogas	0.419	30.1	12128	24.2	1	
Pb	208	1	nogas	0.056	14.9	2993	8.9	2.5	
U	238	1	nogas	0.101	63.6	4401	45.4	2.5	
[Pb]	206	1	nogas	0.055	26.7	767	13.2	2.5	
[Pb]	207	1	nogas	0.046	26.6	643	11.7	2.5	
Na	23	2	He	-30.508	-1.6	114357	1.7	100	
Mg	24	2	He	1.839	6.3	5821	3.1	100	
Al	27	2	He	-1.563	-224.9	2186	96.8	5	
K	39	2	He	-0.541	-567.3	227670	1.4	100	
Ca	43	2	He	-1.487	-123.1	87	6.7	100	
Ca	44	2	He	-10.391	-21.1	2093	4.2	100	
V	51	2	He	0.044	46.8	6667	0.7	2.5	
Cr	52	2	He	-0.031	-134.1	5631	4.0	2.5	
Mn	55	2	He	-0.197	-10.8	3214	1.7	2.5	
Fe	56	2	He	3.479	5.5	46970	4.7	100	
Co	59	2	He	0.038	12.5	663	7.6	2.5	
Ni	60	2	He	0.081	27.1	477	11.9	2.5	
Cu	63	2	He	-1.319	-3.7	2367	12.7	2	
Zn	66	2	He	-0.240	-27.6	503	21.8	2.5	
As	75	2	He	-0.018	-230.6	549	12.6	2.5	
Se	78	2	He	-0.111	-170.7	137	16.0	2	
B	11	1	nogas	-18.440	-10.1	139034	4.0	10	
Si	28	1	nogas	19.961	34.0	1320727	3.1	5	CCB Main CR1 Failed
Ca	43	1	nogas	-19.767	-12.4	1727	8.4	100	
Ca	44	1	nogas	-56.134	-6.9	126993	1.0	100	
Fe	56	1	nogas	-10.483	-47.9	2441791	2.8	100	
Se	77	1	nogas	-24.132	-2.2	30092	3.6	2.5	
Se	82	1	nogas	0.120	301.7	320	38.4	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.351	31.3	2787	25.0	2.5	
Sn	118	1	nogas	0.033	125.5	3400	12.2	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.154	-3.9	720	5.0	2.5	
Sb	121	2	He	1.009	0.7	6441	2.7	2.5	
P	31	1	nogas	-2.458	-118.6	123406	1.5	10	
La	139	1	nogas	-33.986	-11.3	63	39.7	2.5	
Au	197	1	nogas	-3.988	-1401.9	20	50.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1497456	5.05	1487436	100.67	70	125	
Ge	72	1	nogas	4031657	3.16	3963361	101.72	70	125	
In	115	1	nogas	3683224	1.70	3607912	102.09	70	125	
Bi	209	1	nogas	2791458	4.06	2670040	104.55	70	125	
Ge	72	2	He	972370	2.09	997888	97.44	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	206_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T20:53:22-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	93.494	4.766	867875	1.10	100	93.5	90	110	
Na	23	1	nogas	10060.381	1.251	294723448	2.53	10000	100.6	90	110	
Mg	24	1	nogas	10030.053	2.441	185832896	2.06	10000	100.3	90	110	
Al	27	1	nogas	95.846	1.933	2274593	2.58	100	95.8	90	110	
K	39	1	nogas	10454.992	5.199	238939355	1.85	10000	104.5	90	110	
Ti	47	1	nogas	101.281	3.330	218893	2.69	100	101.3	90	110	
V	51	1	nogas	99.819	1.894	3581467	3.91	100	99.8	90	110	
Cr	52	1	nogas	99.603	1.531	2577503	2.09	100	99.6	90	110	
Mn	55	1	nogas	100.085	2.265	3241988	1.34	100	100.1	90	110	
Co	59	1	nogas	100.413	5.619	2667865	2.75	100	100.4	90	110	
Ni	60	1	nogas	106.688	3.060	658171	1.30	100	106.7	90	110	
Cu	63	1	nogas	103.518	5.933	1466043	4.11	100	103.5	90	110	
Zn	66	1	nogas	103.509	2.668	521010	1.45	100	103.5	90	110	
As	75	1	nogas	97.377	3.212	698034	1.25	100	97.4	90	110	
Sr	88	1	nogas	100.119	3.610	3216752	1.59	100	100.1	90	110	
Ag	107	1	nogas	104.797	5.001	1725711	2.95	100	104.8	90	110	
Cd	111	1	nogas	98.542	1.036	354311	2.51	100	98.5	90	110	
Sb	121	1	nogas	98.774	6.298	1511612	3.43	100	98.8	90	110	
Tl	205	1	nogas	96.516	1.596	2258641	1.79	100	96.5	90	110	
Pb	208	1	nogas	98.180	1.759	3160408	1.76	100	98.2	90	110	
U	238	1	nogas	105.394	3.271	3166256	3.73	100	105.4	90	110	
[Pb]	206	1	nogas	98.136	2.777	777793	1.75	100	98.1	90	110	
[Pb]	207	1	nogas	98.762	2.792	691725	1.83	100	98.8	90	110	
Na	23	2	He	10231.807	3.487	18451746	2.41	10000	102.3	90	110	
Mg	24	2	He	9873.206	1.543	9769899	1.26	10000	98.7	90	110	
Al	27	2	He	94.667	1.069	56952	0.60	100	94.7	90	110	
K	39	2	He	9999.679	1.511	10408082	1.48	10000	100.0	90	110	
Ca	43	2	He	9867.185	1.837	27938	2.54	10000	98.7	90	110	
Ca	44	2	He	10179.043	2.124	477219	1.49	10000	101.8	90	110	
V	51	2	He	96.702	0.531	701327	0.60	100	96.7	90	110	
Cr	52	2	He	97.227	1.956	774652	1.66	100	97.2	90	110	
Mn	55	2	He	101.675	2.070	552855	1.75	100	101.7	90	110	
Fe	56	2	He	9870.129	2.278	66340591	2.61	10000	98.7	90	110	
Co	59	2	He	96.387	2.203	1043283	1.08	100	96.4	90	110	
Ni	60	2	He	101.459	2.423	290043	1.60	100	101.5	90	110	
Cu	63	2	He	97.217	1.095	685701	1.93	100	97.2	90	110	
Zn	66	2	He	100.615	1.054	172530	2.15	100	100.6	90	110	
As	75	2	He	96.211	2.045	155973	0.96	100	96.2	90	110	
Se	78	2	He	97.664	1.295	12345	2.36	100	97.7	90	110	
B	11	1	nogas	424.163	8.268	2751505	3.71	500	84.8	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5160.421	2.916	60670549	1.36	5000	103.2	90	110	
Ca	43	1	nogas	10266.359	4.394	419685	0.97	10000	102.7	90	110	
Ca	44	1	nogas	10148.997	4.659	6931318	1.77	10000	101.5	90	110	
Fe	56	1	nogas	10021.967	2.701	275001681	1.29	10000	100.2	90	110	
Se	77	1	nogas	97.625	4.600	60584	2.40	100	97.6	90	110	
Se	82	1	nogas	99.614	2.857	32132	0.98	100	99.6	90	110	
Mo	95	1	nogas	98.687	3.390	662824	1.00	100	98.7	90	110	
Sn	118	1	nogas	99.564	2.049	1005576	2.38	100	99.6	90	110	
Ba	137	1	nogas	99.292	3.680	468110	1.38	100	99.3	90	110	
Sb	121	2	He	100.873	1.139	557570	0.44	100	100.9	90	110	
Li	7	1	nogas	98.634	4.805	2046384	2.67	100	98.6	90	110	
P	31	1	nogas	506.332	2.985	1044455	0.76	500	101.3	90	110	
La	139	1	nogas	108.572	27.635	917	21.66	100	108.6	90	110	
Au	197	1	nogas	100.755	214.007	37	103.25	100	100.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1369685	5.77	1487436	92.08	70	125	
Ge	72	1	nogas	3753808	3.36	3963361	94.71	70	125	
In	115	1	nogas	3457859	3.57	3607912	95.84	70	125	
Bi	209	1	nogas	2523175	1.12	2670040	94.50	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	952373	1.13	997888	95.44	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	207_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T20:55:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.039	22.7	453	20.5	1	
Na	23	1	nogas	82.332	6.5	4148212	1.4	100	
Mg	24	1	nogas	0.853	23.9	87014	2.5	100	
Al	27	1	nogas	-2.268	-4.0	38212	5.5	5	
K	39	1	nogas	-7.315	-11.0	8915675	0.1	100	
Ti	47	1	nogas	0.058	26.5	483	7.3	2.5	
V	51	1	nogas	-3.385	-24.6	588698	4.2	2.5	
Cr	52	1	nogas	-0.280	-6.2	51772	1.0	2.5	
Mn	55	1	nogas	-0.454	-4.4	29043	2.3	2.5	
Co	59	1	nogas	0.038	9.6	1907	5.4	2.5	
Ni	60	1	nogas	-0.050	-83.8	3750	7.2	2.5	
Cu	63	1	nogas	-3.998	-0.2	5748	1.9	2	
Zn	66	1	nogas	-0.224	-10.9	1990	6.4	2.5	
As	75	1	nogas	-0.053	-823.1	103013	2.7	2.5	
Sr	88	1	nogas	0.066	12.8	5858	4.7	2.5	
Ag	107	1	nogas	0.353	9.5	9456	6.1	2.5	
Cd	111	1	nogas	0.020	35.0	123	20.4	1	
Sb	121	1	nogas	0.908	23.1	16508	20.2	2.5	
Tl	205	1	nogas	0.231	44.2	6955	36.0	1	
Pb	208	1	nogas	0.050	42.3	2810	24.2	2.5	
U	238	1	nogas	0.099	67.4	4151	50.8	2.5	
[Pb]	206	1	nogas	0.054	36.7	727	23.1	2.5	
[Pb]	207	1	nogas	0.037	56.2	543	26.1	2.5	
Na	23	2	He	82.107	4.6	313190	0.7	100	
Mg	24	2	He	0.698	16.2	4571	1.2	100	
Al	27	2	He	-3.572	-6.1	967	11.5	5	
K	39	2	He	-8.847	-27.5	219214	1.1	100	
Ca	43	2	He	-13.801	-52.0	50	40.0	100	
Ca	44	2	He	-19.333	-18.4	1633	9.9	100	
V	51	2	He	0.102	45.3	6944	4.4	2.5	
Cr	52	2	He	-0.044	-17.8	5414	0.3	2.5	
Mn	55	2	He	-0.387	-11.1	2120	10.0	2.5	
Fe	56	2	He	2.413	10.2	38808	3.4	100	
Co	59	2	He	0.033	10.4	600	6.7	2.5	
Ni	60	2	He	0.072	29.3	443	12.4	2.5	
Cu	63	2	He	-1.457	-1.2	1367	7.7	2	
Zn	66	2	He	-0.283	-4.5	420	6.3	2.5	
As	75	2	He	-0.007	-446.7	556	10.3	2.5	
Se	78	2	He	0.076	355.0	158	21.1	2	
B	11	1	nogas	-25.119	-1.4	91672	2.8	10	
Si	28	1	nogas	26.316	9.7	1351230	2.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	-27.524	-19.9	1337	17.2	100	
Ca	44	1	nogas	-69.867	-2.6	112994	1.2	100	
Fe	56	1	nogas	-6.890	-29.5	2458328	2.3	100	
Se	77	1	nogas	-7.988	-43.2	33484	2.8	2.5	
Se	82	1	nogas	-0.119	-91.1	230	15.7	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.222	35.5	1800	30.5	2.5	
Sn	118	1	nogas	-0.006	-1144.8	2887	23.3	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.150	-12.8	713	12.1	2.5	
Sb	121	2	He	0.600	5.5	4051	3.2	2.5	
P	31	1	nogas	-1.250	-47.5	121383	1.0	10	
La	139	1	nogas	-27.136	-18.5	103	29.6	2.5	
Au	197	1	nogas	-19.232	-154.2	17	34.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1429411	1.51	1487436	96.10	70	125	
Ge	72	1	nogas	3887096	0.11	3963361	98.08	70	125	
In	115	1	nogas	3559885	1.03	3607912	98.67	70	125	
Bi	209	1	nogas	2665724	2.88	2670040	99.84	70	125	
Ge	72	2	He	952181	1.43	997888	95.42	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	218_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T21:17:07-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	90.646	0.931	927106	2.67	100	90.6	90	110	
Na	23	1	nogas	10093.270	2.945	308577974	1.50	10000	100.9	90	110	
Mg	24	1	nogas	10070.678	1.908	194793459	1.17	10000	100.7	90	110	
Al	27	1	nogas	95.693	5.459	2407302	3.81	100	95.7	90	110	
K	39	1	nogas	10437.965	3.941	253074397	0.70	10000	104.4	90	110	
Ti	47	1	nogas	101.768	2.123	233274	1.43	100	101.8	90	110	
V	51	1	nogas	101.400	2.193	3846693	3.40	100	101.4	90	110	
Cr	52	1	nogas	103.487	3.011	2836940	1.35	100	103.5	90	110	
Mn	55	1	nogas	100.269	4.476	3443260	2.32	100	100.3	90	110	
Co	59	1	nogas	102.026	5.060	2876475	4.38	100	102.0	90	110	
Ni	60	1	nogas	106.067	4.310	693831	1.99	100	106.1	90	110	
Cu	63	1	nogas	100.635	3.238	1513784	1.89	100	100.6	90	110	
Zn	66	1	nogas	101.289	3.557	540644	0.44	100	101.3	90	110	
As	75	1	nogas	96.843	3.195	736791	0.35	100	96.8	90	110	
Sr	88	1	nogas	102.051	5.243	3475940	2.25	100	102.1	90	110	
Ag	107	1	nogas	104.028	4.341	1817333	3.36	100	104.0	90	110	
Cd	111	1	nogas	99.105	0.772	373948	0.75	100	99.1	90	110	
Sb	121	1	nogas	98.952	2.778	1607158	1.04	100	99.0	90	110	
Tl	205	1	nogas	97.226	3.994	2421486	2.84	100	97.2	90	110	
Pb	208	1	nogas	103.964	1.327	3346545	1.33	100	104.0	90	110	
U	238	1	nogas	104.727	2.413	3348634	1.55	100	104.7	90	110	
[Pb]	206	1	nogas	97.213	3.624	820148	2.33	100	97.2	90	110	
[Pb]	207	1	nogas	97.064	1.065	723872	1.53	100	97.1	90	110	
Na	23	2	He	10344.509	1.263	19282758	0.40	10000	103.4	90	110	
Mg	24	2	He	9877.227	1.099	10102399	0.99	10000	98.8	90	110	
Al	27	2	He	93.982	1.996	58457	0.73	100	94.0	90	110	
K	39	2	He	10314.352	1.377	10728425	1.35	10000	103.1	90	110	
Ca	43	2	He	9989.692	3.623	29223	2.33	10000	99.9	90	110	
Ca	44	2	He	10107.339	1.871	489777	0.40	10000	101.1	90	110	
V	51	2	He	98.283	1.739	736554	0.26	100	98.3	90	110	
Cr	52	2	He	97.382	0.261	802030	1.62	100	97.4	90	110	
Mn	55	2	He	100.397	0.858	564316	0.76	100	100.4	90	110	
Fe	56	2	He	9844.205	2.069	68381229	1.54	10000	98.4	90	110	
Co	59	2	He	96.941	3.253	1084399	1.86	100	96.9	90	110	
Ni	60	2	He	102.502	3.254	302825	1.73	100	102.5	90	110	
Cu	63	2	He	98.343	1.520	716694	0.37	100	98.3	90	110	
Zn	66	2	He	101.363	0.698	179647	2.07	100	101.4	90	110	
As	75	2	He	94.882	2.034	158997	1.16	100	94.9	90	110	
Se	78	2	He	97.913	3.803	12788	3.01	100	97.9	90	110	
B	11	1	nogas	408.308	1.479	2929431	1.37	500	81.7	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5232.743	3.064	65230031	1.55	5000	104.7	90	110	
Ca	43	1	nogas	10093.341	2.642	437923	2.95	10000	100.9	90	110	
Ca	44	1	nogas	10035.474	2.895	7273044	0.82	10000	100.4	90	110	
Fe	56	1	nogas	9921.176	2.910	288730748	1.06	10000	99.2	90	110	
Se	77	1	nogas	97.632	5.856	64240	1.14	100	97.6	90	110	
Se	82	1	nogas	98.548	3.502	33715	2.02	100	98.5	90	110	
Mo	95	1	nogas	97.229	5.184	692420	3.09	100	97.2	90	110	
Sn	118	1	nogas	99.601	0.971	1055762	0.34	100	99.6	90	110	
Ba	137	1	nogas	100.829	2.259	499056	1.53	100	100.8	90	110	
Sb	121	2	He	99.638	1.954	569204	0.41	100	99.6	90	110	
Li	7	1	nogas	93.473	2.416	2142961	4.15	100	93.5	90	110	
P	31	1	nogas	506.682	3.370	1108304	0.85	500	101.3	90	110	
La	139	1	nogas	104.110	28.316	930	19.02	100	104.1	90	110	
Au	197	1	nogas	34.471	84.555	27	21.65	100	34.5	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1506292	2.07	1487436	101.27	70	125	
Ge	72	1	nogas	3980817	3.03	3963361	100.44	70	125	
In	115	1	nogas	3627972	0.99	3607912	100.56	70	125	
Bi	209	1	nogas	2686286	1.86	2670040	100.61	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	984406	1.57	997888	98.65	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	219_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T21:19:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	168CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.037	23.5	473	21.2	1	
Na	23	1	nogas	146.043	2.2	6287035	2.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	1.856	44.9	110306	12.0	100	
Al	27	1	nogas	-2.311	-2.3	39458	2.4	5	
K	39	1	nogas	-11.283	-63.0	9362477	0.7	100	
Ti	47	1	nogas	0.063	51.7	523	15.6	2.5	
V	51	1	nogas	-4.823	-10.4	578465	2.6	2.5	
Cr	52	1	nogas	-0.272	-18.2	55155	3.6	2.5	
Mn	55	1	nogas	-0.457	-6.9	30719	2.5	2.5	
Co	59	1	nogas	0.038	24.6	2037	12.4	2.5	
Ni	60	1	nogas	-0.086	-42.8	3734	6.4	2.5	
Cu	63	1	nogas	-3.999	-0.2	6078	2.8	2	
Zn	66	1	nogas	-0.240	-9.6	2027	7.4	2.5	
As	75	1	nogas	-0.965	-35.5	103158	3.5	2.5	
Sr	88	1	nogas	0.308	8.3	14746	6.9	2.5	
Ag	107	1	nogas	0.063	32.3	4787	6.7	2.5	
Cd	111	1	nogas	0.018	58.3	120	33.3	1	
Sb	121	1	nogas	0.936	28.6	17967	24.5	2.5	
Tl	205	1	nogas	0.275	47.8	8800	41.5	1	
Pb	208	1	nogas	0.043	37.8	2600	20.3	2.5	
U	238	1	nogas	0.122	67.2	5338	54.4	2.5	
[Pb]	206	1	nogas	0.035	15.7	617	9.4	2.5	
[Pb]	207	1	nogas	0.035	54.6	583	27.9	2.5	
Na	23	2	He	151.539	2.1	460330	0.2	100	CCB Main CR1 Failed
Mg	24	2	He	1.716	16.4	5871	4.4	100	
Al	27	2	He	-3.609	-8.3	997	18.3	5	
K	39	2	He	-5.434	-48.2	222688	1.2	100	
Ca	43	2	He	-2.377	-218.9	87	17.6	100	
Ca	44	2	He	-12.874	-19.5	2037	6.0	100	
V	51	2	He	0.043	75.6	6862	2.5	2.5	
Cr	52	2	He	-0.042	-70.8	5718	3.6	2.5	
Mn	55	2	He	-0.377	-9.1	2290	7.5	2.5	
Fe	56	2	He	2.577	7.5	42025	4.0	100	
Co	59	2	He	0.028	20.2	570	12.3	2.5	
Ni	60	2	He	0.099	18.2	547	9.2	2.5	
Cu	63	2	He	-1.417	-1.3	1733	8.2	2	
Zn	66	2	He	-0.262	-7.8	480	7.5	2.5	
As	75	2	He	-0.047	-7.3	517	0.0	2.5	
Se	78	2	He	0.057	190.5	164	9.5	2	
B	11	1	nogas	-26.316	-3.5	92466	5.1	10	
Si	28	1	nogas	16.505	3.7	1308932	0.9	5	CCB Main CR1 Failed
Ca	43	1	nogas	-20.055	-26.0	1753	14.0	100	
Ca	44	1	nogas	-76.905	-1.9	114715	0.6	100	
Fe	56	1	nogas	-6.315	-74.6	2625014	4.9	100	
Se	77	1	nogas	-16.834	-26.2	32934	4.8	2.5	
Se	82	1	nogas	-0.244	-36.0	200	15.0	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.252	52.2	2130	45.1	2.5	
Sn	118	1	nogas	-0.011	-455.2	2924	17.0	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.138	-23.4	800	21.4	2.5	
Sb	121	2	He	0.607	4.8	4301	3.5	2.5	
P	31	1	nogas	-0.313	-270.5	130661	0.3	10	
La	139	1	nogas	-31.412	-16.8	80	43.3	2.5	
Au	197	1	nogas	-76.591	-37.5	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1570868	4.53	1487436	105.61	70	125	
Ge	72	1	nogas	4124389	1.22	3963361	104.06	70	125	
In	115	1	nogas	3682698	1.58	3607912	102.07	70	125	
Bi	209	1	nogas	2901133	1.60	2670040	108.66	70	125	
Ge	72	2	He	1002327	1.12	997888	100.44	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	234CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T21:51:19-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	63	28.79
Na	23	1	nogas	2300484	0.00
Mg	24	1	nogas	79247	0.01
Al	27	1	nogas	79993	0.00
K	39	1	nogas	9211936	0.00
Ti	47	1	nogas	347	6.46
V	51	1	nogas	686218	0.00
Cr	52	1	nogas	59672	0.00
Mn	55	1	nogas	49810	0.00
Co	59	1	nogas	997	0.73
Ni	60	1	nogas	2440	0.07
Cu	63	1	nogas	52455	0.00
Zn	66	1	nogas	4074	0.04
As	75	1	nogas	112777	0.00
Sr	88	1	nogas	4927	0.10
Ag	107	1	nogas	2334	0.63
Cd	111	1	nogas	20	433.01
Sb	121	1	nogas	1253	0.70
Tl	205	1	nogas	453	5.95
Pb	208	1	nogas	1150	0.55
[Pb]	206	1	nogas	307	4.03
[Pb]	207	1	nogas	273	8.07
Na	23	2	He	194058	0.00
Mg	24	2	He	4324	0.12
Al	27	2	He	2017	0.36
K	39	2	He	219063	0.00
Ca	43	2	He	97	6.18
Ca	44	2	He	1870	0.68
V	51	2	He	7513	0.02
Cr	52	2	He	5684	0.06
Mn	55	2	He	5164	0.04
Fe	56	2	He	20068	0.01
Co	59	2	He	303	13.50
Ni	60	2	He	573	2.32
Cu	63	2	He	22941	0.01
Zn	66	2	He	1210	0.79
As	75	2	He	493	2.30
Se	78	2	He	137	5.06
B	11	1	nogas	241143	0.00
Si	28	1	nogas	1087617	0.00
Ca	43	1	nogas	2790	0.11
Ca	44	1	nogas	112546	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2482007	0.00
Se	77	1	nogas	35969	0.01
Se	82	1	nogas	243	6.83
Mo	95	1	nogas	257	4.38
Sn	118	1	nogas	3207	0.24
Ba	137	1	nogas	967	1.08
Sb	121	2	He	473	3.29
Li	7	1	nogas	125028	0.00
P	31	1	nogas	133047	0.00
La	139	1	nogas	363	2.31

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1519169	2.14
Ge	72	1	nogas	4041586	2.92
In	115	1	nogas	3794837	2.52
Bi	209	1	nogas	2841860	3.50
Ge	72	2	He	991378	2.35

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	235CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T21:53:18-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	18339	0.01
Na	23	1	nogas	8263509	0.00
Mg	24	1	nogas	4004866	0.00
Al	27	1	nogas	115609	0.00
K	39	1	nogas	14033169	0.00
Ti	47	1	nogas	4837	0.08
V	51	1	nogas	717853	0.00
Cr	52	1	nogas	114499	0.00
Mn	55	1	nogas	108652	0.00
Co	59	1	nogas	59921	0.00
Ni	60	1	nogas	16825	0.01
Cu	63	1	nogas	37889	0.00
Zn	66	1	nogas	13505	0.03
As	75	1	nogas	121407	0.00
Sr	88	1	nogas	75967	0.00
Ag	107	1	nogas	38529	0.01
Cd	111	1	nogas	7772	0.13
Sb	121	1	nogas	34464	0.01
Tl	205	1	nogas	49673	0.00
Pb	208	1	nogas	71553	0.00
[Pb]	206	1	nogas	18084	0.02
[Pb]	207	1	nogas	15554	0.01
Na	23	2	He	563650	0.00
Mg	24	2	He	211665	0.00
Al	27	2	He	2687	0.13
K	39	2	He	419054	0.00
Ca	43	2	He	697	1.17
Ca	44	2	He	11204	0.03
V	51	2	He	21482	0.01
Cr	52	2	He	21830	0.01
Mn	55	2	He	14639	0.01
Fe	56	2	He	1479458	0.00
Co	59	2	He	22945	0.01
Ni	60	2	He	6798	0.11
Cu	63	2	He	16511	0.01
Zn	66	2	He	4261	0.22
As	75	2	He	3702	0.03
Se	78	2	He	386	4.34
B	11	1	nogas	279329	0.00
Si	28	1	nogas	2543270	0.00

Calibration Standard Report

Ca	43	1	nogas	11097	0.00
Ca	44	1	nogas	246807	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8447570	0.00
Se	77	1	nogas	35849	0.00
Se	82	1	nogas	820	1.32
Mo	95	1	nogas	14042	0.05
Sn	118	1	nogas	22622	0.02
Ba	137	1	nogas	11564	0.03
Sb	121	2	He	11864	0.01
P	31	1	nogas	149781	0.00
La	139	1	nogas	163	15.61

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1563908	3.86	1519169	102.94	70	125	
Ge	72	1	nogas	4119134	1.78	4041586	101.92	70	125	
In	115	1	nogas	3771668	1.49	3794837	99.39	70	125	
Bi	209	1	nogas	2856118	1.73	2841860	100.50	70	125	
Ge	72	2	He	975789	2.04	991378	98.43	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	236CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T21:55:17-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	44499	0.00
Na	23	1	nogas	17379293	0.00
Mg	24	1	nogas	10107611	0.00
Al	27	1	nogas	230014	0.00
K	39	1	nogas	21417269	0.00
Ti	47	1	nogas	12688	0.02
V	51	1	nogas	797641	0.00
Cr	52	1	nogas	197731	0.00
Mn	55	1	nogas	225039	0.00
Co	59	1	nogas	150556	0.00
Ni	60	1	nogas	39526	0.01
Cu	63	1	nogas	87006	0.00
Zn	66	1	nogas	31584	0.00
As	75	1	nogas	135516	0.00
Sr	88	1	nogas	183694	0.00
Ag	107	1	nogas	93316	0.00
Cd	111	1	nogas	19144	0.01
Sb	121	1	nogas	83389	0.00
Tl	205	1	nogas	122691	0.00
Pb	208	1	nogas	178113	0.00
[Pb]	206	1	nogas	43683	0.01
[Pb]	207	1	nogas	38676	0.01
Na	23	2	He	1132789	0.00
Mg	24	2	He	534862	0.00
Al	27	2	He	5434	0.04
K	39	2	He	741329	0.00
Ca	43	2	He	1520	0.74
Ca	44	2	He	27354	0.01
V	51	2	He	44012	0.00
Cr	52	2	He	47214	0.00
Mn	55	2	He	32606	0.00
Fe	56	2	He	3518816	0.00
Co	59	2	He	57367	0.00
Ni	60	2	He	16291	0.01
Cu	63	2	He	40148	0.00
Zn	66	2	He	10126	0.02
As	75	2	He	8653	0.02
Se	78	2	He	803	0.90
B	11	1	nogas	348305	0.00
Si	28	1	nogas	4471047	0.00

Calibration Standard Report

Ca	43	1	nogas	24857	0.00
Ca	44	1	nogas	467405	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	17246173	0.00
Se	77	1	nogas	34229	0.00
Se	82	1	nogas	1777	0.71
Mo	95	1	nogas	35663	0.00
Sn	118	1	nogas	55739	0.00
Ba	137	1	nogas	25239	0.00
Sb	121	2	He	29796	0.00
P	31	1	nogas	183187	0.00
La	139	1	nogas	267	7.75

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1520655	4.34	1519169	100.10	70	125	
Ge	72	1	nogas	4014479	1.07	4041586	99.33	70	125	
In	115	1	nogas	3763572	2.78	3794837	99.18	70	125	
Bi	209	1	nogas	2909774	1.15	2841860	102.39	70	125	
Ge	72	2	He	992238	2.10	991378	100.09	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	237CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T21:57:17-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	88494	0.00
Na	23	1	nogas	32128119	0.00
Mg	24	1	nogas	19881441	0.00
Al	27	1	nogas	431228	0.00
K	39	1	nogas	33299740	0.00
Ti	47	1	nogas	25565	0.05
V	51	1	nogas	1003762	0.00
Cr	52	1	nogas	326884	0.00
Mn	55	1	nogas	377404	0.00
Co	59	1	nogas	289371	0.00
Ni	60	1	nogas	71389	0.00
Cu	63	1	nogas	162272	0.00
Zn	66	1	nogas	53689	0.01
As	75	1	nogas	176982	0.00
Sr	88	1	nogas	353931	0.00
Ag	107	1	nogas	178052	0.00
Cd	111	1	nogas	38078	0.01
Sb	121	1	nogas	165560	0.00
Tl	205	1	nogas	243253	0.00
Pb	208	1	nogas	341817	0.00
[Pb]	206	1	nogas	84070	0.00
[Pb]	207	1	nogas	75034	0.00
Na	23	2	He	2074795	0.00
Mg	24	2	He	1024697	0.00
Al	27	2	He	10223	0.03
K	39	2	He	1231496	0.00
Ca	43	2	He	2924	0.06
Ca	44	2	He	50859	0.00
V	51	2	He	79784	0.00
Cr	52	2	He	83936	0.00
Mn	55	2	He	57566	0.00
Fe	56	2	He	6814598	0.00
Co	59	2	He	109082	0.00
Ni	60	2	He	30636	0.01
Cu	63	2	He	73963	0.00
Zn	66	2	He	18236	0.02
As	75	2	He	16358	0.01
Se	78	2	He	1337	0.46
B	11	1	nogas	486033	0.00
Si	28	1	nogas	7555663	0.00

Calibration Standard Report

Ca	43	1	nogas	47039	0.00
Ca	44	1	nogas	817547	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	31101311	0.00
Se	77	1	nogas	39513	0.01
Se	82	1	nogas	3317	0.17
Mo	95	1	nogas	68248	0.00
Sn	118	1	nogas	107349	0.00
Ba	137	1	nogas	50447	0.00
Sb	121	2	He	57558	0.00
P	31	1	nogas	229082	0.00
La	139	1	nogas	240	15.43

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1489577	3.11	1519169	98.05	70	125	
Ge	72	1	nogas	4061617	0.95	4041586	100.50	70	125	
In	115	1	nogas	3816013	0.63	3794837	100.56	70	125	
Bi	209	1	nogas	2853500	0.74	2841860	100.41	70	125	
Ge	72	2	He	986764	1.77	991378	99.53	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	238CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T21:59:17-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	884037	0.00
Na	23	1	nogas	305780057	0.00
Mg	24	1	nogas	193200954	0.00
Al	27	1	nogas	2740959	0.00
K	39	1	nogas	246646231	0.00
Ti	47	1	nogas	228305	0.00
V	51	1	nogas	3828236	0.00
Cr	52	1	nogas	2787152	0.00
Mn	55	1	nogas	3409413	0.00
Co	59	1	nogas	2899749	0.00
Ni	60	1	nogas	661940	0.00
Cu	63	1	nogas	1543110	0.00
Zn	66	1	nogas	531714	0.00
As	75	1	nogas	735811	0.00
Sr	88	1	nogas	3508816	0.00
Ag	107	1	nogas	1823215	0.00
Cd	111	1	nogas	379854	0.00
Sb	121	1	nogas	1620349	0.00
Tl	205	1	nogas	2545129	0.00
Pb	208	1	nogas	3503578	0.00
[Pb]	206	1	nogas	853812	0.00
[Pb]	207	1	nogas	751849	0.00
Na	23	2	He	18558342	0.00
Mg	24	2	He	9968021	0.00
Al	27	2	He	66065	0.00
K	39	2	He	10627956	0.00
Ca	43	2	He	28602	0.01
Ca	44	2	He	486278	0.00
V	51	2	He	735267	0.00
Cr	52	2	He	804715	0.00
Mn	55	2	He	550724	0.00
Fe	56	2	He	66470789	0.00
Co	59	2	He	1064888	0.00
Ni	60	2	He	284668	0.00
Cu	63	2	He	713313	0.00
Zn	66	2	He	173118	0.00
As	75	2	He	161037	0.00
Se	78	2	He	12441	0.01
B	11	1	nogas	3027811	0.00
Si	28	1	nogas	64186901	0.00

Calibration Standard Report

Ca	43	1	nogas	442478	0.00
Ca	44	1	nogas	7245596	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	289482040	0.00
Se	77	1	nogas	64731	0.00
Se	82	1	nogas	32677	0.02
Mo	95	1	nogas	709442	0.00
Sn	118	1	nogas	1063775	0.00
Ba	137	1	nogas	495336	0.00
Sb	121	2	He	565462	0.00
P	31	1	nogas	1086548	0.00
La	139	1	nogas	937	0.74

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1380702	2.12	1519169	90.89	70	125	
Ge	72	1	nogas	4024512	3.46	4041586	99.58	70	125	
In	115	1	nogas	3673051	2.97	3794837	96.79	70	125	
Bi	209	1	nogas	2774923	2.84	2841860	97.64	70	125	
Ge	72	2	He	977274	1.98	991378	98.58	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	239CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T22:01:18-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1819263	0.00
Na	23	1	nogas	594584797	0.00
Mg	24	1	nogas	372815892	0.00
Al	27	1	nogas	4989632	0.00
K	39	1	nogas	475180561	0.00
Ti	47	1	nogas	464023	0.00
V	51	1	nogas	7058810	0.00
Cr	52	1	nogas	5438490	0.00
Mn	55	1	nogas	6782928	0.00
Co	59	1	nogas	5677776	0.00
Ni	60	1	nogas	1318437	0.00
Cu	63	1	nogas	2933028	0.00
Zn	66	1	nogas	1033735	0.00
As	75	1	nogas	1415860	0.00
Sr	88	1	nogas	6919750	0.00
Ag	107	1	nogas	3435732	0.00
Cd	111	1	nogas	732016	0.00
Sb	121	1	nogas	3326866	0.00
Tl	205	1	nogas	4939472	0.00
Pb	208	1	nogas	6727411	0.00
[Pb]	206	1	nogas	1664940	0.00
[Pb]	207	1	nogas	1494874	0.00
Na	23	2	He	36694860	0.00
Mg	24	2	He	19899973	0.00
Al	27	2	He	117559	0.00
K	39	2	He	20445336	0.00
Ca	43	2	He	57161	0.00
Ca	44	2	He	968173	0.00
V	51	2	He	1480618	0.00
Cr	52	2	He	1612079	0.00
Mn	55	2	He	1086342	0.00
Fe	56	2	He	134849491	0.00
Co	59	2	He	2168117	0.00
Ni	60	2	He	566049	0.00
Cu	63	2	He	1368317	0.00
Zn	66	2	He	340968	0.00
As	75	2	He	324100	0.00
Se	78	2	He	25006	0.00
B	11	1	nogas	5810884	0.00
Si	28	1	nogas	126575665	0.00

Calibration Standard Report

Ca	43	1	nogas	872862	0.00
Ca	44	1	nogas	14295209	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	569149146	0.00
Se	77	1	nogas	91006	0.00
Se	82	1	nogas	65880	0.00
Mo	95	1	nogas	1401303	0.00
Sn	118	1	nogas	2145483	0.00
Ba	137	1	nogas	995943	0.00
Sb	121	2	He	1166995	0.00
P	31	1	nogas	2067778	0.00
La	139	1	nogas	1650	0.26

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1356428	1.90	1519169	89.29	70	125	
Ge	72	1	nogas	3902714	3.76	4041586	96.56	70	125	
In	115	1	nogas	3519925	2.24	3794837	92.76	70	125	
Bi	209	1	nogas	2694916	0.54	2841860	94.83	70	125	
Ge	72	2	He	978461	0.94	991378	98.70	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	240_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T22:03:17-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	100.978	4.131	933800	2.38	100	101.0	90	110	
Na	23	1	nogas	10452.081	1.999	323681799	1.49	10000	104.5	90	110	
Mg	24	1	nogas	10452.976	5.153	202624717	3.57	10000	104.5	90	110	
Al	27	1	nogas	91.992	3.653	2455414	3.44	100	92.0	90	110	
K	39	1	nogas	10401.388	1.081	260641306	0.52	10000	104.0	90	110	
Ti	47	1	nogas	95.906	1.400	229260	0.26	100	95.9	90	110	
V	51	1	nogas	89.409	2.053	3632093	1.01	100	89.4	90	110	ICV Main CR1 Failed
Cr	52	1	nogas	96.893	3.828	2759703	2.59	100	96.9	90	110	
Mn	55	1	nogas	102.092	2.186	3601050	1.15	100	102.1	90	110	
Co	59	1	nogas	101.075	1.378	2977422	0.34	100	101.1	90	110	
Ni	60	1	nogas	98.598	2.105	672755	1.00	100	98.6	90	110	
Cu	63	1	nogas	102.829	4.304	1592171	3.00	100	102.8	90	110	
Zn	66	1	nogas	98.667	2.816	530561	1.71	100	98.7	90	110	
As	75	1	nogas	94.542	0.936	741493	0.35	100	94.5	90	110	
Sr	88	1	nogas	99.459	3.065	3567627	3.34	100	99.5	90	110	
Ag	107	1	nogas	102.647	0.756	1844699	0.55	100	102.6	90	110	
Cd	111	1	nogas	101.265	1.565	387973	1.61	100	101.3	90	110	
Sb	121	1	nogas	100.389	1.267	1716736	1.00	100	100.4	90	110	
Tl	205	1	nogas	104.013	6.017	2683238	3.38	100	104.0	90	110	
Pb	208	1	nogas	104.996	2.154	3561663	2.15	100	105.0	90	110	
U	238	1	nogas	101.503	6.630	3400963	4.54	100	101.5	90	110	
[Pb]	206	1	nogas	103.629	3.802	900704	1.19	100	103.6	90	110	
[Pb]	207	1	nogas	97.448	0.989	757856	1.62	100	97.4	90	110	
Na	23	2	He	10546.359	2.130	19745116	1.78	10000	105.5	90	110	
Mg	24	2	He	10486.008	1.798	10589256	1.53	10000	104.9	90	110	
Al	27	2	He	91.844	4.585	57548	3.56	100	91.8	90	110	
K	39	2	He	10987.101	1.865	11395487	1.83	10000	109.9	90	110	
Ca	43	2	He	10343.449	2.094	30025	1.31	10000	103.4	90	110	
Ca	44	2	He	10366.857	1.850	510241	1.55	10000	103.7	90	110	
V	51	2	He	101.105	2.127	760400	1.34	100	101.1	90	110	
Cr	52	2	He	100.444	1.516	823119	0.93	100	100.4	90	110	
Mn	55	2	He	106.139	1.221	588242	0.60	100	106.1	90	110	
Fe	56	2	He	10612.671	0.272	72392087	0.60	10000	106.1	90	110	
Co	59	2	He	102.178	0.528	1119872	1.25	100	102.2	90	110	
Ni	60	2	He	99.725	1.778	287271	1.01	100	99.7	90	110	
Cu	63	2	He	103.565	3.870	728978	3.03	100	103.6	90	110	
Zn	66	2	He	102.058	2.860	177554	2.13	100	102.1	90	110	
As	75	2	He	102.582	1.499	168585	1.37	100	102.6	90	110	
Se	78	2	He	101.322	1.852	12886	1.36	100	101.3	90	110	
B	11	1	nogas	527.225	5.270	3238318	3.82	500	105.4	90	110	
Si	28	1	nogas	592.004	1.761	8779718	2.16	5000	11.8	90	110	ICV Main CR1 Failed
Ca	43	1	nogas	10479.902	1.011	474790	1.02	10000	104.8	90	110	
Ca	44	1	nogas	10214.149	1.271	7601151	1.35	10000	102.1	90	110	
Fe	56	1	nogas	10122.150	1.764	299690098	1.60	10000	101.2	90	110	
Se	77	1	nogas	66.982	4.402	55662	0.41	100	67.0	90	110	ICV Main CR1 Failed
Se	82	1	nogas	101.523	3.031	34577	3.30	100	101.5	90	110	
Mo	95	1	nogas	98.697	3.012	715677	2.97	100	98.7	90	110	
Sn	118	1	nogas	91.755	2.303	1022249	0.72	100	91.8	90	110	
Ba	137	1	nogas	101.912	3.000	527177	2.69	100	101.9	90	110	
Sb	121	2	He	103.036	0.943	606220	0.69	100	103.0	90	110	
Li	7	1	nogas	109.169	1.234	2268447	0.84	100	109.2	90	110	
P	31	1	nogas	524.045	1.191	1180165	0.22	500	104.8	90	110	
La	139	1	nogas	110.643	2.461	1087	3.23	100	110.6	90	110	ICV Main CR1 Failed
Au	197	1	nogas	39.071	112.941	23	65.47	100	39.1	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1392343	1.74	1519169	91.65	70	125	
Ge	72	1	nogas	4053015	1.15	4041586	100.28	70	125	
In	115	1	nogas	3688809	2.86	3794837	97.21	70	125	
Bi	209	1	nogas	2817636	2.59	2841860	99.15	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	992234	0.78	991378	100.09	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	241SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T22:05:18-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	234CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.786	1.786	3.04	18826	0.01	2000	
Na	23	1	nogas	250.650	250.650	3.29	10256407	0.00	200000	
Mg	24	1	nogas	205.147	205.147	2.45	4154701	0.00	200000	
Al	27	1	nogas	1.292	1.292	2.21	115103	0.00	2000	
K	39	1	nogas	191.182	191.182	4.79	14037981	0.00	200000	
Ti	47	1	nogas	2.031	2.031	3.70	5261	0.04	2000	
V	51	1	nogas	-4.467	-4.467	-3.97	548282	0.00	2000	
Cr	52	1	nogas	1.575	1.575	3.50	105094	0.00	2000	
Mn	55	1	nogas	1.556	1.556	5.25	105413	0.00	2000	
Co	59	1	nogas	2.014	2.014	2.46	61072	0.00	2000	
Ni	60	1	nogas	2.233	2.233	2.32	17031	0.01	2000	
Cu	63	1	nogas	-0.884	-0.884	-5.18	39907	0.00	2000	
Zn	66	1	nogas	2.060	2.060	5.84	13899	0.01	2000	
As	75	1	nogas	-0.503	-0.503	-44.81	100984	0.00	2000	
Sr	88	1	nogas	2.007	2.007	2.77	77785	0.00	2000	
Ag	107	1	nogas	2.173	2.173	3.53	41873	0.01	2000	
Cd	111	1	nogas	2.142	2.142	6.07	8442	0.03	2000	
Sb	121	1	nogas	2.208	2.208	1.78	39485	0.01	2000	
Tl	205	1	nogas	2.417	2.417	7.91	63485	0.00	2000	
Pb	208	1	nogas	2.105	2.105	1.45	72548	0.00	2000	
U	238	1	nogas	2.199	2.199	0.90	75527	0.00	2000	
[Pb]	206	1	nogas	2.001	2.001	4.90	17853	0.01	2000	
[Pb]	207	1	nogas	1.985	1.985	6.09	15845	0.01	2000	
Na	23	2	He	250.282	250.282	2.26	667117	0.04	200000	
Mg	24	2	He	206.496	206.496	2.18	215623	0.10	200000	
Al	27	2	He	-0.885	-0.885	-35.78	2694	-0.03	2000	
K	39	2	He	206.094	206.094	1.40	428708	0.05	200000	
Ca	43	2	He	193.751	193.751	7.91	667	29.06	200000	
Ca	44	2	He	201.646	201.646	4.94	11924	1.69	200000	
V	51	2	He	1.897	1.897	4.90	20416	0.01	2000	
Cr	52	2	He	1.935	1.935	4.40	21716	0.01	2000	
Mn	55	2	He	1.651	1.651	8.86	14426	0.01	2000	
Fe	56	2	He	211.108	211.108	1.19	1479369	0.01	200000	
Co	59	2	He	2.086	2.086	4.65	23459	0.01	2000	
Ni	60	2	He	1.840	1.840	7.61	6961	0.03	2000	
Cu	63	2	He	0.868	0.868	6.65	18042	0.00	2000	
Zn	66	2	He	1.725	1.725	15.22	4434	0.04	2000	
As	75	2	He	1.977	1.977	4.52	3784	0.05	2000	
Se	78	2	He	2.102	2.102	3.40	393	0.53	2000	
B	11	1	nogas	7.096	7.096	18.26	297264	0.00	2000	
Si	28	1	nogas	116.426	116.426	1.75	2636097	0.00	2000	
Ca	43	1	nogas	180.744	180.744	3.49	11077	1.63	200000	

Sample Report

Ca	44	1	nogas	191.555	191.555	0.06	256606	0.07	200000	
Fe	56	1	nogas	194.458	194.458	0.54	8302897	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-25.035	-25.035	-10.39	29157	-0.09	2000	
Se	82	1	nogas	2.043	2.043	12.96	947	0.22	2000	
Mo	95	1	nogas	2.333	2.333	2.03	17385	0.01	2000	
Sn	118	1	nogas	2.170	2.170	15.68	27924	0.01	2000	
Ba	137	1	nogas	2.040	2.040	9.38	11761	0.02	2000	
Sb	121	2	He	2.127	2.127	5.32	13155	0.02	2000	
La	139	1	nogas	-29.774	-29.774	-6.80	160	-18.61	2000	
Au	197	1	nogas	9.768	9.768	459.09	13	73.26	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1581224	1.32	1519169	104.08	70	125	
Ge	72	1	nogas	4104115	0.87	4041586	101.55	70	125	
In	115	1	nogas	3785741	2.61	3794837	99.76	70	125	
Bi	209	1	nogas	2843049	2.57	2841860	100.04	70	125	
Ge	72	2	He	1005623	1.27	991378	101.44	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	242LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T22:07:25-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	4.594	3.652	46193	2.86	5	91.9	70	130	
Na	23	1	nogas	510.751	12.101	18273151	3.35	500	102.2	70	130	
Mg	24	1	nogas	505.119	7.224	10029668	0.36	500	101.0	70	130	
Al	27	1	nogas	5.921	2.848	234087	0.41	5	118.4	70	130	
K	39	1	nogas	501.880	3.512	21458027	0.45	500	100.4	70	130	
Ti	47	1	nogas	4.915	3.283	12127	1.25	5	98.3	70	130	
V	51	1	nogas	-1.528	-40.092	640683	1.51	5	-30.6	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.634	1.845	189830	2.27	5	92.7	70	130	
Mn	55	1	nogas	5.002	2.682	224906	2.62	5	100.0	70	130	
Co	59	1	nogas	5.073	1.550	150997	0.79	5	101.5	70	130	
Ni	60	1	nogas	5.367	4.535	38297	2.67	5	107.3	70	130	
Cu	63	1	nogas	2.363	3.309	88393	0.78	5	47.3	70	130	LLICV Main CR1 Failed
Zn	66	1	nogas	5.541	3.127	32496	3.93	5	110.8	70	130	
As	75	1	nogas	2.195	32.306	118385	2.67	5	43.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.109	4.069	188656	2.53	5	102.2	70	130	
Ag	107	1	nogas	5.156	1.285	95300	3.19	5	103.1	70	130	
Cd	111	1	nogas	4.926	4.436	19431	3.21	5	98.5	70	130	
Sb	121	1	nogas	4.948	4.400	86129	2.77	5	99.0	70	130	
Tl	205	1	nogas	4.982	5.234	131456	2.07	5	99.6	70	130	
Pb	208	1	nogas	5.244	1.989	178965	1.98	5	104.9	70	130	
U	238	1	nogas	4.964	0.902	170824	3.01	5	99.3	70	130	
[Pb]	206	1	nogas	4.988	5.401	44468	2.03	5	99.8	70	130	
[Pb]	207	1	nogas	4.916	6.237	39198	3.65	5	98.3	70	130	
Na	23	2	He	520.884	2.682	1185370	1.67	500	104.2	70	130	
Mg	24	2	He	510.989	1.908	531553	1.30	500	102.2	70	130	
Al	27	2	He	3.683	7.136	5481	2.24	5	73.7	70	130	
K	39	2	He	524.037	0.196	752131	0.14	500	104.8	70	130	
Ca	43	2	He	505.192	12.628	1593	12.24	500	101.0	70	130	
Ca	44	2	He	491.598	1.157	26552	1.50	500	98.3	70	130	
V	51	2	He	4.778	2.594	42560	1.38	5	95.6	70	130	
Cr	52	2	He	4.886	1.267	46449	0.57	5	97.7	70	130	
Mn	55	2	He	5.079	3.386	33795	2.19	5	101.6	70	130	
Fe	56	2	He	523.691	1.512	3670320	1.65	500	104.7	70	130	
Co	59	2	He	5.147	1.568	57938	1.20	5	102.9	70	130	
Ni	60	2	He	5.097	0.774	16558	1.26	5	101.9	70	130	
Cu	63	2	He	4.115	1.433	41183	1.36	5	82.3	70	130	
Zn	66	2	He	5.133	3.315	10480	2.07	5	102.7	70	130	
As	75	2	He	4.840	0.692	8611	0.20	5	96.8	70	130	
Se	78	2	He	5.471	11.756	830	9.43	5	109.4	70	130	
B	11	1	nogas	16.122	4.641	340291	1.99	25	64.5	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	261.244	1.094	4502219	1.21	25	1045.0	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	495.640	4.607	25214	2.32	500	99.1	70	130	
Ca	44	1	nogas	496.580	4.517	478895	2.73	500	99.3	70	130	
Fe	56	1	nogas	503.521	2.011	17342909	0.50	500	100.7	70	130	
Se	77	1	nogas	-24.278	-14.741	29124	2.40	5	-485.6	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.558	10.128	1793	10.04	5	91.2	70	130	
Mo	95	1	nogas	5.058	5.989	37049	3.95	5	101.2	70	130	
Sn	118	1	nogas	4.604	0.549	55840	2.24	5	92.1	70	130	
Ba	137	1	nogas	4.657	3.206	25709	2.35	5	93.1	70	130	
Sb	121	2	He	5.148	4.413	31425	5.18	5	103.0	70	130	
Li	7	1	nogas	5.266	7.617	237195	2.88	5	105.3	70	130	
P	31	1	nogas	26.318	2.346	186886	1.47	25	105.3	70	130	
La	139	1	nogas	-8.471	-102.091	307	21.22	5	-169.4	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	45.960	140.958	27	86.60	5	919.2	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1511642	0.80	1519169	99.50	70	125	
Ge	72	1	nogas	4069907	1.97	4041586	100.70	70	125	
In	115	1	nogas	3794956	2.11	3794837	100.00	70	125	
Bi	209	1	nogas	2872686	3.35	2841860	101.08	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1014053	0.85	991378	102.29	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	243_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T22:09:24-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.014	14.6	197	12.8	1	
Na	23	1	nogas	-3.608	-45.8	2168443	2.2	100	
Mg	24	1	nogas	-0.747	-447.9	63631	98.7	100	
Al	27	1	nogas	-1.878	-2.2	32772	0.5	5	
K	39	1	nogas	-16.390	-74.5	9118349	0.2	100	
Ti	47	1	nogas	0.005	622.6	373	23.4	2.5	
V	51	1	nogas	-5.773	-9.9	513917	3.4	2.5	
Cr	52	1	nogas	-0.335	-22.4	52066	1.2	2.5	
Mn	55	1	nogas	-0.640	-4.3	28569	0.8	2.5	
Co	59	1	nogas	0.036	123.8	2146	66.5	2.5	
Ni	60	1	nogas	-0.016	-93.5	1553	4.1	2.5	
Cu	63	1	nogas	-3.129	-0.2	5964	3.0	1	
Zn	66	1	nogas	-0.226	-9.9	1543	5.6	2.5	
As	75	1	nogas	-1.992	-22.5	92430	1.3	2.5	
Sr	88	1	nogas	-0.032	-27.9	3914	9.1	2.5	
Ag	107	1	nogas	0.037	37.5	3110	7.9	2.5	
Cd	111	1	nogas	0.012	36.9	67	22.9	1	
Sb	121	1	nogas	0.067	18.1	2474	5.3	2.5	
Tl	205	1	nogas	0.091	22.8	2794	21.3	1	
Pb	208	1	nogas	0.000	-878.4	1133	12.9	2.5	
U	238	1	nogas	-0.006	-175.2	903	44.2	2.5	
[Pb]	206	1	nogas	-0.003	-51.3	277	4.2	2.5	
[Pb]	207	1	nogas	0.000	1780.8	273	18.0	2.5	
Na	23	2	He	-6.904	-25.1	180197	1.5	100	
Mg	24	2	He	-2.597	-6.1	1693	10.1	100	
Al	27	2	He	-0.273	-2333.4	3028	125.7	5	
K	39	2	He	-3.869	-76.0	215128	1.4	100	
Ca	43	2	He	-12.641	-119.3	60	72.7	100	
Ca	44	2	He	-12.575	-35.8	1247	17.3	100	
V	51	2	He	0.041	53.2	6256	1.5	2.5	
Cr	52	2	He	-0.020	-186.9	5481	4.9	2.5	
Mn	55	2	He	-0.616	-1.2	1773	1.3	2.5	
Fe	56	2	He	0.029	256.4	20141	2.8	100	
Co	59	2	He	0.011	28.8	423	8.3	2.5	
Ni	60	2	He	-0.380	-10.4	507	21.7	2.5	
Cu	63	2	He	-1.399	-2.0	2087	9.2	1	
Zn	66	2	He	-0.524	-7.1	487	12.4	2.5	
As	75	2	He	0.012	254.8	511	9.5	2.5	
Se	78	2	He	0.331	22.4	164	6.8	1	
B	11	1	nogas	-9.016	-28.8	179187	2.9	10	
Si	28	1	nogas	11.839	31.7	1283354	2.5	5	ICB Main CR1 Failed
Ca	43	1	nogas	-25.804	-5.9	1687	3.6	100	
Ca	44	1	nogas	-23.732	-22.0	98491	0.7	100	
Fe	56	1	nogas	-10.080	-23.0	2261162	0.4	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-23.426	-2.2	30179	2.9	2.5	
Se	82	1	nogas	-0.033	-619.6	240	30.0	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.028	59.2	470	23.0	2.5	
Sn	118	1	nogas	-0.157	-7.6	1437	11.7	5	
Ba	137	1	nogas	0.035	79.2	1170	15.1	2.5	
Sb	121	2	He	0.078	37.5	927	17.6	2.5	
P	31	1	nogas	0.775	320.6	139255	2.1	10	
La	139	1	nogas	-45.064	-5.5	57	27.0	2.5	
Au	197	1	nogas	58.250	97.3	30	66.7	2.5	ICB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1477262	6.13	1519169	97.24	70	125	
Ge	72	1	nogas	4180397	3.35	4041586	103.43	70	125	
In	115	1	nogas	3839668	3.41	3794837	101.18	70	125	
Bi	209	1	nogas	2804220	2.22	2841860	98.68	70	125	
Ge	72	2	He	985170	1.14	991378	99.37	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	251_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T22:25:17-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	92.283	3.912	892852	1.29	100	92.3	90	110	
Na	23	1	nogas	9697.903	3.768	297515315	1.63	10000	97.0	90	110	
Mg	24	1	nogas	9880.542	1.890	189789333	2.17	10000	98.8	90	110	
Al	27	1	nogas	92.465	1.052	2425516	1.44	100	92.5	90	110	
K	39	1	nogas	10184.524	1.829	251035156	1.85	10000	101.8	90	110	
Ti	47	1	nogas	97.827	0.394	229874	1.64	100	97.8	90	110	
V	51	1	nogas	95.234	0.638	3759247	2.32	100	95.2	90	110	
Cr	52	1	nogas	99.304	0.551	2779502	2.06	100	99.3	90	110	
Mn	55	1	nogas	102.080	1.897	3539104	1.16	100	102.1	90	110	
Co	59	1	nogas	97.340	1.684	2818239	0.31	100	97.3	90	110	
Ni	60	1	nogas	101.836	1.605	682930	0.81	100	101.8	90	110	
Cu	63	1	nogas	99.941	1.118	1523199	2.92	100	99.9	90	110	
Zn	66	1	nogas	102.884	1.410	543861	3.00	100	102.9	90	110	
As	75	1	nogas	94.543	1.422	728789	0.85	100	94.5	90	110	
Sr	88	1	nogas	97.402	0.540	3434549	2.47	100	97.4	90	110	
Ag	107	1	nogas	101.308	2.114	1789294	1.06	100	101.3	90	110	
Cd	111	1	nogas	98.619	3.935	378916	0.50	100	98.6	90	110	
Sb	121	1	nogas	96.891	1.167	1628689	1.63	100	96.9	90	110	
Tl	205	1	nogas	97.661	5.479	2474404	4.72	100	97.7	90	110	
Pb	208	1	nogas	100.565	0.104	3411425	0.10	100	100.6	90	110	
U	238	1	nogas	105.477	2.429	3471204	1.47	100	105.5	90	110	
[Pb]	206	1	nogas	97.715	1.909	833975	0.96	100	97.7	90	110	
[Pb]	207	1	nogas	96.565	1.353	737106	0.90	100	96.6	90	110	
Na	23	2	He	10059.382	1.306	18519440	1.29	10000	100.6	90	110	
Mg	24	2	He	10042.056	1.420	9966738	0.81	10000	100.4	90	110	
Al	27	2	He	90.314	3.396	55669	2.01	100	90.3	90	110	
K	39	2	He	10084.589	0.580	10477424	0.57	10000	100.8	90	110	
Ca	43	2	He	10040.855	1.488	28649	0.54	10000	100.4	90	110	
Ca	44	2	He	10034.693	1.692	485467	1.37	10000	100.3	90	110	
V	51	2	He	98.375	2.035	727324	1.35	100	98.4	90	110	
Cr	52	2	He	99.480	1.847	801229	0.71	100	99.5	90	110	
Mn	55	2	He	102.218	1.188	557014	1.72	100	102.2	90	110	
Fe	56	2	He	10123.719	2.047	67876862	2.64	10000	101.2	90	110	
Co	59	2	He	99.747	0.500	1074465	1.44	100	99.7	90	110	
Ni	60	2	He	106.732	2.606	302041	1.60	100	106.7	90	110	
Cu	63	2	He	102.357	2.812	727626	1.42	100	102.4	90	110	
Zn	66	2	He	104.495	2.520	178630	1.14	100	104.5	90	110	
As	75	2	He	98.245	1.327	158697	0.13	100	98.2	90	110	
Se	78	2	He	100.226	2.099	12528	1.15	100	100.2	90	110	
B	11	1	nogas	559.477	5.259	3580148	1.96	500	111.9	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4942.737	1.550	64159076	1.46	5000	98.9	90	110	
Ca	43	1	nogas	9857.996	1.419	439124	1.32	10000	98.6	90	110	
Ca	44	1	nogas	9868.791	1.895	7221293	0.60	10000	98.7	90	110	
Fe	56	1	nogas	10065.096	3.166	292863415	2.12	10000	100.7	90	110	
Se	77	1	nogas	89.716	4.694	61249	3.05	100	89.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.500	3.525	32967	1.78	100	98.5	90	110	
Mo	95	1	nogas	98.378	1.202	701262	2.51	100	98.4	90	110	
Sn	118	1	nogas	95.873	3.969	1071386	2.21	100	95.9	90	110	
Ba	137	1	nogas	95.560	1.347	496121	2.17	100	95.6	90	110	
Sb	121	2	He	98.783	0.709	571318	2.07	100	98.8	90	110	
Li	7	1	nogas	97.341	2.569	2129074	1.31	100	97.3	90	110	
P	31	1	nogas	484.517	2.165	1082271	0.44	500	96.9	90	110	
La	139	1	nogas	90.837	19.854	957	9.93	100	90.8	90	110	
Au	197	1	nogas	60.120	50.455	30	33.33	100	60.1	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1457183	3.23	1519169	95.92	70	125	
Ge	72	1	nogas	3983947	2.00	4041586	98.57	70	125	
In	115	1	nogas	3701674	3.42	3794837	97.55	70	125	
Bi	209	1	nogas	2765254	0.98	2841860	97.30	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	975229	1.37	991378	98.37	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	252_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T22:27:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.044	27.4	517	23.3	1	
Na	23	1	nogas	-3.585	-34.9	2165950	0.9	100	
Mg	24	1	nogas	0.990	51.3	97100	7.4	100	
Al	27	1	nogas	-1.867	-2.3	32144	2.4	5	
K	39	1	nogas	-3.409	-231.0	9179804	1.0	100	
Ti	47	1	nogas	0.061	31.4	497	10.3	2.5	
V	51	1	nogas	-1.956	-11.6	625603	2.3	2.5	
Cr	52	1	nogas	-0.119	-30.5	56703	2.8	2.5	
Mn	55	1	nogas	0.677	296.9	73219	94.1	2.5	
Co	59	1	nogas	0.041	29.2	2210	14.8	2.5	
Ni	60	1	nogas	0.023	65.7	1783	5.1	2.5	
Cu	63	1	nogas	-3.147	-0.6	5538	4.8	2	
Zn	66	1	nogas	-0.249	-15.1	1377	13.5	2.5	
As	75	1	nogas	0.194	107.0	104669	2.0	2.5	
Sr	88	1	nogas	0.013	34.7	5438	2.6	2.5	
Ag	107	1	nogas	0.135	22.3	4771	10.2	2.5	
Cd	111	1	nogas	0.030	21.1	137	18.4	1	
Sb	121	1	nogas	0.900	25.7	16642	22.7	2.5	
Tl	205	1	nogas	0.316	47.7	8700	46.4	1	
Pb	208	1	nogas	0.037	62.6	2393	32.5	2.5	
U	238	1	nogas	0.105	78.0	4688	60.4	2.5	
[Pb]	206	1	nogas	0.038	53.2	643	28.8	2.5	
[Pb]	207	1	nogas	0.023	66.4	457	27.4	2.5	
Na	23	2	He	-4.421	-7.5	186804	1.3	100	
Mg	24	2	He	-0.100	-92.1	4241	1.8	100	
Al	27	2	He	-4.199	-3.2	700	12.2	5	
K	39	2	He	-4.723	-36.3	214259	0.8	100	
Ca	43	2	He	-14.006	-36.0	57	27.0	100	
Ca	44	2	He	-5.201	-29.3	1623	4.5	100	
V	51	2	He	0.162	5.5	7228	1.4	2.5	
Cr	52	2	He	0.004	513.1	5741	3.8	2.5	
Mn	55	2	He	-0.483	-3.8	2527	3.2	2.5	
Fe	56	2	He	2.725	5.3	38818	2.9	100	
Co	59	2	He	0.028	54.6	610	26.8	2.5	
Ni	60	2	He	-0.391	-2.7	480	7.5	2.5	
Cu	63	2	He	-0.903	-1.3	1947	4.7	2	
Zn	66	2	He	-0.605	-12.6	353	38.6	2.5	
As	75	2	He	0.027	205.6	541	17.4	2.5	
Se	78	2	He	0.481	50.2	185	16.6	2	
B	11	1	nogas	63.089	5.5	646190	0.9	10	CCB Main CR1 Failed
Si	28	1	nogas	21.250	9.2	1370171	0.9	5	CCB Main CR1 Failed
Ca	43	1	nogas	23.155	15.6	3850	4.9	100	
Ca	44	1	nogas	-13.090	-16.8	103595	0.5	100	
Fe	56	1	nogas	1.901	406.0	2549633	7.8	100	
Se	77	1	nogas	-9.539	-26.9	33398	3.3	2.5	
Se	82	1	nogas	0.116	146.1	283	20.4	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.228	53.1	1910	44.9	2.5	
Sn	118	1	nogas	-0.033	-178.5	2824	21.3	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.036	-56.6	773	11.0	2.5	
Sb	121	2	He	0.581	8.5	3907	8.6	2.5	
P	31	1	nogas	-2.654	-37.2	128530	1.0	10	
La	139	1	nogas	-40.180	-14.1	90	44.4	2.5	
Au	197	1	nogas	47.411	150.9	27	94.4	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1546279	3.65	1519169	101.78	70	125	
Ge	72	1	nogas	4062007	1.09	4041586	100.51	70	125	
In	115	1	nogas	3802710	3.16	3794837	100.21	70	125	
Bi	209	1	nogas	2842608	1.21	2841860	100.03	70	125	
Ge	72	2	He	995943	1.19	991378	100.46	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	260_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T22:43:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	92.957	4.645	833937	1.20	100	93.0	90	110	
Na	23	1	nogas	10280.899	4.858	301465190	2.71	10000	102.8	90	110	
Mg	24	1	nogas	10118.656	2.334	185859325	1.57	10000	101.2	90	110	
Al	27	1	nogas	97.704	1.081	2508878	1.34	100	97.7	90	110	
K	39	1	nogas	10268.186	1.145	248112831	0.84	10000	102.7	90	110	
Ti	47	1	nogas	97.351	1.184	224302	0.84	100	97.4	90	110	
V	51	1	nogas	87.695	1.894	3446653	1.85	100	87.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	96.835	0.930	2659014	1.23	100	96.8	90	110	
Mn	55	1	nogas	98.242	0.661	3342083	0.54	100	98.2	90	110	
Co	59	1	nogas	99.374	0.717	2821661	1.05	100	99.4	90	110	
Ni	60	1	nogas	102.357	1.695	673183	2.04	100	102.4	90	110	
Cu	63	1	nogas	101.196	2.184	1511436	2.13	100	101.2	90	110	
Zn	66	1	nogas	100.880	0.777	522874	1.08	100	100.9	90	110	
As	75	1	nogas	90.308	1.677	687120	1.32	100	90.3	90	110	
Sr	88	1	nogas	100.406	1.621	3471170	1.96	100	100.4	90	110	
Ag	107	1	nogas	106.147	3.411	1838446	3.20	100	106.1	90	110	
Cd	111	1	nogas	99.923	1.307	374525	1.18	100	99.9	90	110	
Sb	121	1	nogas	101.950	1.342	1680390	1.38	100	101.9	90	110	
Tl	205	1	nogas	98.681	0.797	2400887	1.23	100	98.7	90	110	
Pb	208	1	nogas	98.503	1.335	3341491	1.33	100	98.5	90	110	
U	238	1	nogas	107.321	2.566	3391586	3.48	100	107.3	90	110	
[Pb]	206	1	nogas	99.813	1.187	817870	1.43	100	99.8	90	110	
[Pb]	207	1	nogas	98.313	2.343	720406	2.04	100	98.3	90	110	
Na	23	2	He	10466.176	2.043	18802449	1.27	10000	104.7	90	110	
Mg	24	2	He	10017.608	2.468	9705883	1.42	10000	100.2	90	110	
Al	27	2	He	99.490	1.043	59574	1.15	100	99.5	90	110	
K	39	2	He	9795.061	0.647	10182907	0.63	10000	98.0	90	110	
Ca	43	2	He	10202.455	2.499	28419	2.10	10000	102.0	90	110	
Ca	44	2	He	10102.819	0.905	477169	0.51	10000	101.0	90	110	
V	51	2	He	99.632	1.616	719091	0.82	100	99.6	90	110	
Cr	52	2	He	100.348	1.559	789060	1.17	100	100.3	90	110	
Mn	55	2	He	101.693	2.531	541069	3.06	100	101.7	90	110	
Fe	56	2	He	10119.529	2.288	66240882	2.87	10000	101.2	90	110	
Co	59	2	He	102.731	2.505	1080153	1.45	100	102.7	90	110	
Ni	60	2	He	106.227	2.598	293488	1.41	100	106.2	90	110	
Cu	63	2	He	101.804	3.252	706563	2.03	100	101.8	90	110	
Zn	66	2	He	102.126	2.715	170470	1.51	100	102.1	90	110	
As	75	2	He	99.703	1.649	157225	0.83	100	99.7	90	110	
Se	78	2	He	99.147	2.341	12101	1.46	100	99.1	90	110	
B	11	1	nogas	490.518	5.508	2937325	1.79	500	98.1	90	110	
Si	28	1	nogas	4862.695	0.668	61914237	0.58	5000	97.3	90	110	
Ca	43	1	nogas	10166.969	1.312	444026	1.15	10000	101.7	90	110	
Ca	44	1	nogas	10062.325	1.779	7218956	1.86	10000	100.6	90	110	
Fe	56	1	nogas	9916.721	1.228	283048865	1.53	10000	99.2	90	110	
Se	77	1	nogas	63.236	9.043	52599	3.20	100	63.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.454	1.416	32650	1.50	100	99.5	90	110	
Mo	95	1	nogas	99.173	1.553	693146	1.90	100	99.2	90	110	
Sn	118	1	nogas	96.190	1.122	1048464	1.36	100	96.2	90	110	
Ba	137	1	nogas	98.609	1.704	499050	0.75	100	98.6	90	110	
Sb	121	2	He	101.428	1.150	572620	1.19	100	101.4	90	110	
Li	7	1	nogas	95.962	5.091	1947176	1.72	100	96.0	90	110	
P	31	1	nogas	474.770	0.580	1042656	0.36	500	95.0	90	110	
La	139	1	nogas	91.494	15.993	940	12.08	100	91.5	90	110	
Au	197	1	nogas	53.059	64.518	27	43.30	100	53.1	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1351828	4.34	1519169	88.98	70	125	
Ge	72	1	nogas	3906252	0.35	4041586	96.65	70	125	
In	115	1	nogas	3608453	2.29	3794837	95.09	70	125	
Bi	209	1	nogas	2654653	1.33	2841860	93.41	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	952094	1.21	991378	96.04	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	261_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T22:45:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.062	21.2	647	18.6	1	
Na	23	1	nogas	73.663	1.1	4507591	0.8	100	
Mg	24	1	nogas	1.292	31.0	102963	6.2	100	
Al	27	1	nogas	-1.903	-1.1	31343	1.5	5	
K	39	1	nogas	-17.965	-56.9	8856093	1.3	100	
Ti	47	1	nogas	0.054	59.1	480	14.6	2.5	
V	51	1	nogas	-8.687	-3.3	404709	0.9	2.5	
Cr	52	1	nogas	-0.535	-8.1	45192	1.1	2.5	
Mn	55	1	nogas	-0.651	-1.7	27494	3.0	2.5	
Co	59	1	nogas	0.041	7.4	2224	2.9	2.5	
Ni	60	1	nogas	0.218	24.7	3120	10.3	2.5	
Cu	63	1	nogas	-3.091	-0.1	6395	1.9	2	
Zn	66	1	nogas	0.040	80.9	2940	7.4	2.5	
As	75	1	nogas	-4.246	-1.4	74873	1.4	2.5	
Sr	88	1	nogas	0.003	202.8	5077	4.0	2.5	
Ag	107	1	nogas	0.153	26.5	5117	13.0	2.5	
Cd	111	1	nogas	0.045	27.8	190	22.9	1	
Sb	121	1	nogas	1.408	15.8	25429	14.0	2.5	
Tl	205	1	nogas	0.388	55.5	10294	52.4	1	
Pb	208	1	nogas	0.049	38.4	2827	22.8	2.5	
U	238	1	nogas	0.109	82.1	4711	62.2	2.5	
[Pb]	206	1	nogas	0.047	53.0	707	29.8	2.5	
[Pb]	207	1	nogas	0.057	40.5	703	24.3	2.5	
Na	23	2	He	80.172	1.7	335502	1.2	100	
Mg	24	2	He	1.004	11.8	5224	2.2	100	
Al	27	2	He	-4.174	-2.5	697	9.2	5	
K	39	2	He	-9.381	-23.0	209520	1.0	100	
Ca	43	2	He	-5.277	-350.8	80	66.1	100	
Ca	44	2	He	-7.893	-34.8	1453	9.2	100	
V	51	2	He	-0.094	-33.8	5181	4.1	2.5	
Cr	52	2	He	-0.039	-78.0	5254	4.2	2.5	
Mn	55	2	He	-0.588	-5.6	1900	9.7	2.5	
Fe	56	2	He	4.042	2.7	46619	1.8	100	
Co	59	2	He	0.041	9.9	740	6.2	2.5	
Ni	60	2	He	-0.353	-5.9	577	9.9	2.5	
Cu	63	2	He	-0.892	-1.8	1973	5.6	2	
Zn	66	2	He	-0.575	-2.2	393	5.3	2.5	
As	75	2	He	-0.013	-351.7	463	15.1	2.5	
Se	78	2	He	0.297	47.6	157	11.5	2	
B	11	1	nogas	15.281	12.2	316934	1.6	10	CCB Main CR1 Failed
Si	28	1	nogas	2.352	68.7	1127990	0.3	5	
Ca	43	1	nogas	-12.584	-16.9	2244	3.3	100	
Ca	44	1	nogas	-6.421	-33.6	108861	0.4	100	
Fe	56	1	nogas	-8.818	-64.6	2241901	6.2	100	
Se	77	1	nogas	-41.221	-14.6	24200	7.4	2.5	
Se	82	1	nogas	-0.003	-3211.7	243	14.4	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.312	42.4	2527	36.7	2.5	
Sn	118	1	nogas	-0.017	-314.8	2917	17.7	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.042	-24.7	723	7.1	2.5	
Sb	121	2	He	1.105	4.5	6818	3.8	2.5	
P	31	1	nogas	-8.391	-10.7	117446	1.6	10	
La	139	1	nogas	-39.697	-4.8	90	11.1	2.5	
Au	197	1	nogas	30.042	98.9	20	50.0	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1430538	1.92	1519169	94.17	70	125	
Ge	72	1	nogas	4075864	1.59	4041586	100.85	70	125	
In	115	1	nogas	3683441	3.15	3794837	97.06	70	125	
Bi	209	1	nogas	2781177	1.41	2841860	97.86	70	125	
Ge	72	2	He	970712	0.49	991378	97.92	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	272_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T23:06:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	91.478	5.284	871521	0.94	100	91.5	90	110	
Na	23	1	nogas	9865.341	5.233	303261207	0.41	10000	98.7	90	110	
Mg	24	1	nogas	9905.883	3.538	190733875	2.57	10000	99.1	90	110	
Al	27	1	nogas	99.381	1.181	2672728	1.32	100	99.4	90	110	
K	39	1	nogas	10017.867	4.142	253789006	2.00	10000	100.2	90	110	
Ti	47	1	nogas	97.314	0.735	235008	2.62	100	97.3	90	110	
V	51	1	nogas	94.266	1.762	3829980	1.03	100	94.3	90	110	
Cr	52	1	nogas	101.364	0.694	2914315	2.38	100	101.4	90	110	
Mn	55	1	nogas	102.338	1.170	3647042	3.06	100	102.3	90	110	
Co	59	1	nogas	96.576	3.366	2872596	1.32	100	96.6	90	110	
Ni	60	1	nogas	100.132	3.128	689930	1.60	100	100.1	90	110	
Cu	63	1	nogas	100.332	1.971	1571431	4.06	100	100.3	90	110	
Zn	66	1	nogas	100.926	0.436	548252	2.33	100	100.9	90	110	
As	75	1	nogas	91.977	2.093	731346	0.60	100	92.0	90	110	
Sr	88	1	nogas	98.387	0.742	3564725	2.13	100	98.4	90	110	
Ag	107	1	nogas	106.407	1.263	1931277	1.12	100	106.4	90	110	
Cd	111	1	nogas	98.875	1.158	392753	0.82	100	98.9	90	110	
Sb	121	1	nogas	96.460	0.965	1666327	2.19	100	96.5	90	110	
Tl	205	1	nogas	97.853	2.538	2487144	2.59	100	97.9	90	110	
Pb	208	1	nogas	103.190	1.287	3500434	1.29	100	103.2	90	110	
U	238	1	nogas	107.046	0.928	3533717	1.69	100	107.0	90	110	
[Pb]	206	1	nogas	98.691	1.102	844801	0.81	100	98.7	90	110	
[Pb]	207	1	nogas	98.362	0.857	753067	1.63	100	98.4	90	110	
Na	23	2	He	9986.793	0.417	19000084	1.41	10000	99.9	90	110	
Mg	24	2	He	9825.366	1.119	10077865	2.19	10000	98.3	90	110	
Al	27	2	He	98.244	2.056	62303	2.16	100	98.2	90	110	
K	39	2	He	10213.415	0.072	10608470	0.07	10000	102.1	90	110	
Ca	43	2	He	9792.677	1.270	28876	1.70	10000	97.9	90	110	
Ca	44	2	He	9767.457	0.591	488366	1.67	10000	97.7	90	110	
V	51	2	He	97.352	1.362	743809	1.02	100	97.4	90	110	
Cr	52	2	He	98.273	1.490	818090	2.41	100	98.3	90	110	
Mn	55	2	He	98.827	1.032	556656	1.99	100	98.8	90	110	
Fe	56	2	He	9745.149	2.505	67519614	3.43	10000	97.5	90	110	
Co	59	2	He	98.239	1.218	1093351	0.92	100	98.2	90	110	
Ni	60	2	He	102.507	1.873	299820	1.17	100	102.5	90	110	
Cu	63	2	He	99.217	2.520	729062	1.40	100	99.2	90	110	
Zn	66	2	He	102.168	2.149	180502	1.07	100	102.2	90	110	
As	75	2	He	97.497	0.888	162738	0.26	100	97.5	90	110	
Se	78	2	He	98.556	1.826	12732	0.97	100	98.6	90	110	
B	11	1	nogas	460.050	5.486	2940550	2.19	500	92.0	90	110	
Si	28	1	nogas	4976.419	1.648	66391044	3.40	5000	99.5	90	110	
Ca	43	1	nogas	9820.901	2.014	449519	1.29	10000	98.2	90	110	
Ca	44	1	nogas	9681.553	3.726	7281800	3.20	10000	96.8	90	110	
Fe	56	1	nogas	10010.852	2.306	299373032	1.97	10000	100.1	90	110	
Se	77	1	nogas	71.412	3.126	57531	1.64	100	71.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.398	4.067	34523	2.42	100	100.4	90	110	
Mo	95	1	nogas	96.437	1.187	706298	1.39	100	96.4	90	110	
Sn	118	1	nogas	93.789	1.664	1083472	1.51	100	93.8	90	110	
Ba	137	1	nogas	96.649	0.601	518447	0.79	100	96.6	90	110	
Sb	121	2	He	95.888	1.411	573026	2.31	100	95.9	90	110	
Li	7	1	nogas	95.100	6.388	2051037	4.58	100	95.1	90	110	
P	31	1	nogas	475.025	1.970	1093060	1.30	500	95.0	90	110	
La	139	1	nogas	91.776	17.397	997	10.82	100	91.8	90	110	
Au	197	1	nogas	69.372	87.926	33	62.45	100	69.4	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1436839	6.13	1519169	94.58	70	125	
Ge	72	1	nogas	4094030	2.30	4041586	101.30	70	125	
In	115	1	nogas	3823594	0.34	3794837	100.76	70	125	
Bi	209	1	nogas	2773232	0.77	2841860	97.59	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1007651	1.08	991378	101.64	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	273_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T23:08:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.049	31.1	543	24.0	1	
Na	23	1	nogas	9.102	29.3	2644504	2.1	100	
Mg	24	1	nogas	0.467	120.8	90198	7.8	100	
Al	27	1	nogas	-1.650	-5.1	37833	8.2	5	
K	39	1	nogas	-12.299	-89.1	8969131	0.7	100	
Ti	47	1	nogas	0.039	26.8	443	2.6	2.5	
V	51	1	nogas	-6.452	-0.5	477636	3.1	2.5	
Cr	52	1	nogas	-0.428	-15.1	48076	2.0	2.5	
Mn	55	1	nogas	-0.674	-3.0	26599	1.6	2.5	
Co	59	1	nogas	0.041	30.2	2207	13.3	2.5	
Ni	60	1	nogas	0.081	37.3	2177	8.0	2.5	
Cu	63	1	nogas	-3.065	-0.7	6771	2.2	2	
Zn	66	1	nogas	-0.150	-40.9	1903	14.2	2.5	
As	75	1	nogas	-3.024	-6.4	82942	1.7	2.5	
Sr	88	1	nogas	0.033	18.4	6134	6.2	2.5	
Ag	107	1	nogas	0.124	27.0	4567	10.1	2.5	
Cd	111	1	nogas	0.033	12.8	153	13.6	1	
Sb	121	1	nogas	0.953	24.2	17506	19.2	2.5	
Tl	205	1	nogas	0.360	53.9	9824	49.6	1	
Pb	208	1	nogas	0.041	33.9	2553	18.6	2.5	
U	238	1	nogas	0.110	66.2	4864	49.0	2.5	
[Pb]	206	1	nogas	0.045	51.0	703	26.4	2.5	
[Pb]	207	1	nogas	0.037	58.0	567	28.0	2.5	
Na	23	2	He	15.144	16.7	221198	0.5	100	
Mg	24	2	He	0.688	59.8	4991	6.9	100	
Al	27	2	He	-3.654	-6.5	1013	12.4	5	
K	39	2	He	-4.299	-60.6	214690	1.2	100	
Ca	43	2	He	-10.197	-82.7	67	34.6	100	
Ca	44	2	He	-3.717	-53.2	1683	8.1	100	
V	51	2	He	0.008	623.0	6017	4.6	2.5	
Cr	52	2	He	-0.001	-1112.2	5651	2.6	2.5	
Mn	55	2	He	-0.630	-1.0	1700	3.1	2.5	
Fe	56	2	He	4.146	1.6	48120	2.3	100	
Co	59	2	He	0.037	18.8	700	8.9	2.5	
Ni	60	2	He	-0.362	-16.7	557	29.0	2.5	
Cu	63	2	He	-0.852	-0.2	2287	3.1	2	
Zn	66	2	He	-0.568	-14.9	413	37.5	2.5	
As	75	2	He	-0.031	-98.6	441	10.0	2.5	
Se	78	2	He	0.305	49.8	161	9.7	2	
B	11	1	nogas	-2.322	-97.7	221242	2.3	10	
Si	28	1	nogas	25.918	31.1	1430396	4.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	-18.453	-13.7	1973	6.3	100	
Ca	44	1	nogas	-11.388	-27.2	104922	2.0	100	
Fe	56	1	nogas	1.370	648.6	2533502	8.1	100	
Se	77	1	nogas	-32.746	-8.7	26630	5.1	2.5	
Se	82	1	nogas	-0.091	-207.6	213	29.8	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.262	52.4	2140	43.0	2.5	
Sn	118	1	nogas	0.008	595.3	3370	12.3	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.035	-97.3	807	26.7	2.5	
Sb	121	2	He	0.647	9.9	4257	9.9	2.5	
P	31	1	nogas	-7.508	-24.8	118891	2.8	10	
La	139	1	nogas	-35.724	-7.1	123	16.9	2.5	
Au	197	1	nogas	9.524	470.3	13	114.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1484701	3.98	1519169	97.73	70	125	
Ge	72	1	nogas	4066082	3.29	4041586	100.61	70	125	
In	115	1	nogas	3889250	3.82	3794837	102.49	70	125	
Bi	209	1	nogas	2866016	3.50	2841860	100.85	70	125	
Ge	72	2	He	987324	2.56	991378	99.59	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	283_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T23:28:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	90.235	1.102	835206	0.45	100	90.2	90	110	
Na	23	1	nogas	9698.063	4.702	293585007	1.04	10000	97.0	90	110	
Mg	24	1	nogas	9819.242	5.333	186003596	1.40	10000	98.2	90	110	
Al	27	1	nogas	103.282	1.302	2733667	0.48	100	103.3	90	110	
K	39	1	nogas	9681.136	3.261	242008172	1.46	10000	96.8	90	110	
Ti	47	1	nogas	96.075	1.503	228568	1.10	100	96.1	90	110	
V	51	1	nogas	88.736	2.681	3592486	1.40	100	88.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	95.743	0.554	2715588	2.07	100	95.7	90	110	
Mn	55	1	nogas	99.121	1.294	3481167	0.70	100	99.1	90	110	
Co	59	1	nogas	93.559	1.888	2743004	1.85	100	93.6	90	110	
Ni	60	1	nogas	96.150	1.965	653037	2.20	100	96.2	90	110	
Cu	63	1	nogas	97.257	6.885	1502149	6.91	100	97.3	90	110	
Zn	66	1	nogas	99.983	1.773	535070	1.06	100	100.0	90	110	
As	75	1	nogas	89.146	1.710	701684	1.52	100	89.1	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	99.104	4.712	3536984	4.07	100	99.1	90	110	
Ag	107	1	nogas	102.753	2.990	1837870	3.28	100	102.8	90	110	
Cd	111	1	nogas	100.173	1.840	379438	1.66	100	100.2	90	110	
Sb	121	1	nogas	94.427	2.580	1607290	3.07	100	94.4	90	110	
Tl	205	1	nogas	94.613	5.531	2397136	1.99	100	94.6	90	110	
Pb	208	1	nogas	99.047	2.744	3359934	2.74	100	99.0	90	110	
U	238	1	nogas	105.266	1.619	3468886	4.48	100	105.3	90	110	
[Pb]	206	1	nogas	94.675	4.440	808106	1.01	100	94.7	90	110	
[Pb]	207	1	nogas	94.814	2.439	724131	1.55	100	94.8	90	110	
Na	23	2	He	9977.041	1.692	17940907	1.36	10000	99.8	90	110	
Mg	24	2	He	10091.898	1.222	9783284	1.22	10000	100.9	90	110	
Al	27	2	He	104.248	2.248	62303	2.15	100	104.2	90	110	
K	39	2	He	9852.316	1.763	10241149	1.72	10000	98.5	90	110	
Ca	43	2	He	10491.776	2.592	29240	3.30	10000	104.9	90	110	
Ca	44	2	He	10117.141	0.478	478059	0.79	10000	101.2	90	110	
V	51	2	He	100.496	3.014	725485	1.80	100	100.5	90	110	
Cr	52	2	He	99.730	3.469	784437	2.43	100	99.7	90	110	
Mn	55	2	He	101.642	0.989	540967	0.83	100	101.6	90	110	
Fe	56	2	He	10171.746	1.195	66603427	1.10	10000	101.7	90	110	
Co	59	2	He	102.786	2.586	1081394	2.88	100	102.8	90	110	
Ni	60	2	He	105.580	1.845	291879	1.81	100	105.6	90	110	
Cu	63	2	He	101.690	3.074	706093	1.91	100	101.7	90	110	
Zn	66	2	He	102.977	2.417	171971	1.98	100	103.0	90	110	
As	75	2	He	99.913	2.128	157615	1.10	100	99.9	90	110	
Se	78	2	He	100.688	3.290	12291	2.08	100	100.7	90	110	
B	11	1	nogas	453.777	1.716	2820691	2.21	500	90.8	90	110	
Si	28	1	nogas	4770.806	1.410	62750116	2.41	5000	95.4	90	110	
Ca	43	1	nogas	9695.986	3.134	437432	3.69	10000	97.0	90	110	
Ca	44	1	nogas	9747.241	1.976	7223959	1.97	10000	97.5	90	110	
Fe	56	1	nogas	9749.744	3.066	287300765	1.31	10000	97.5	90	110	
Se	77	1	nogas	63.916	12.062	54505	3.93	100	63.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.885	3.510	33177	2.47	100	97.9	90	110	
Mo	95	1	nogas	96.405	3.084	695530	1.40	100	96.4	90	110	
Sn	118	1	nogas	95.063	3.188	1046874	1.16	100	95.1	90	110	
Ba	137	1	nogas	99.082	1.286	506899	2.74	100	99.1	90	110	
Sb	121	2	He	99.080	2.369	559541	1.42	100	99.1	90	110	
Li	7	1	nogas	94.798	2.038	1985906	1.23	100	94.8	90	110	
P	31	1	nogas	459.812	2.539	1046813	1.85	500	92.0	90	110	
La	139	1	nogas	184.060	33.831	1547	22.61	100	184.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	118.341	20.245	50	20.00	100	118.3	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1393040	1.20	1519169	91.70	70	125	
Ge	72	1	nogas	4033782	1.76	4041586	99.81	70	125	
In	115	1	nogas	3647396	3.26	3794837	96.11	70	125	
Bi	209	1	nogas	2768262	3.88	2841860	97.41	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	952496	1.22	991378	96.08	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	284_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T23:30:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.061	9.7	653	10.2	1	
Na	23	1	nogas	-5.779	-110.1	2087391	5.8	100	
Mg	24	1	nogas	2.968	25.1	134233	7.6	100	
Al	27	1	nogas	-0.944	-25.0	54388	10.1	5	
K	39	1	nogas	-2.387	-334.7	8939010	1.2	100	
Ti	47	1	nogas	0.209	86.7	830	52.7	2.5	
V	51	1	nogas	-6.157	-4.7	472888	2.7	2.5	
Cr	52	1	nogas	-0.380	-16.9	47972	3.6	2.5	
Mn	55	1	nogas	-0.686	-2.4	25398	1.8	2.5	
Co	59	1	nogas	0.050	4.1	2397	3.4	2.5	
Ni	60	1	nogas	0.063	83.4	1990	16.3	2.5	
Cu	63	1	nogas	-3.054	-1.2	6718	6.9	2	
Zn	66	1	nogas	-0.098	-16.9	2123	3.8	2.5	
As	75	1	nogas	-2.835	-5.6	81736	1.7	2.5	
Sr	88	1	nogas	0.082	25.6	7685	9.5	2.5	
Ag	107	1	nogas	0.105	28.3	4107	11.4	2.5	
Cd	111	1	nogas	0.050	16.4	213	19.5	1	
Sb	121	1	nogas	1.059	19.5	18811	17.1	2.5	
Tl	205	1	nogas	0.464	43.8	12045	42.8	1	
Pb	208	1	nogas	0.047	28.9	2757	16.9	2.5	
U	238	1	nogas	0.119	66.7	4961	52.8	2.5	
[Pb]	206	1	nogas	0.044	34.6	663	20.6	2.5	
[Pb]	207	1	nogas	0.050	23.4	640	12.2	2.5	
Na	23	2	He	-9.112	-22.2	170046	0.6	100	
Mg	24	2	He	2.042	19.3	6121	5.4	100	
Al	27	2	He	-3.369	-7.0	1140	12.7	5	
K	39	2	He	-7.722	-53.5	211208	2.0	100	
Ca	43	2	He	3.781	59.1	103	5.6	100	
Ca	44	2	He	6.735	51.8	2110	6.1	100	
V	51	2	He	-0.001	-4483.3	5736	3.6	2.5	
Cr	52	2	He	-0.051	-92.1	5051	6.1	2.5	
Mn	55	2	He	-0.636	-3.8	1607	7.7	2.5	
Fe	56	2	He	4.784	6.9	50523	3.6	100	
Co	59	2	He	0.040	20.1	707	12.8	2.5	
Ni	60	2	He	-0.367	-8.6	527	17.1	2.5	
Cu	63	2	He	-0.819	-2.8	2430	7.4	2	
Zn	66	2	He	-0.529	-7.9	460	13.2	2.5	
As	75	2	He	0.038	79.4	534	10.9	2.5	
Se	78	2	He	0.304	85.9	155	21.9	2	
B	11	1	nogas	-7.836	-19.2	185778	2.7	10	
Si	28	1	nogas	27.397	15.9	1408539	4.1	5	CCB Main CR1 Failed
Ca	43	1	nogas	-8.212	-74.7	2364	11.2	100	
Ca	44	1	nogas	-3.895	-125.0	107151	2.1	100	
Fe	56	1	nogas	1.013	406.4	2451402	3.8	100	
Se	77	1	nogas	-29.565	-8.6	26743	4.2	2.5	
Se	82	1	nogas	0.200	100.6	303	23.4	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.306	22.9	2407	19.3	2.5	
Sn	118	1	nogas	0.017	441.8	3340	23.3	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.010	167.6	1003	5.8	2.5	
Sb	121	2	He	0.713	10.9	4477	11.5	2.5	
P	31	1	nogas	-9.695	-11.4	111138	1.8	10	
La	139	1	nogas	-30.758	-40.0	150	52.1	2.5	
Au	197	1	nogas	41.485	85.5	23	49.5	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1469193	3.99	1519169	96.71	70	125	
Ge	72	1	nogas	3944935	1.54	4041586	97.61	70	125	
In	115	1	nogas	3733105	4.48	3794837	98.37	70	125	
Bi	209	1	nogas	2731454	2.49	2841860	96.12	70	125	
Ge	72	2	He	951342	2.21	991378	95.96	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	293_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T23:48:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.141	3.066	835024	2.73	100	94.1	90	110	
Na	23	1	nogas	9772.891	1.499	288992981	3.51	10000	97.7	90	110	
Mg	24	1	nogas	9820.127	0.908	181734046	2.74	10000	98.2	90	110	
Al	27	1	nogas	100.004	2.987	2555573	0.32	100	100.0	90	110	
K	39	1	nogas	9902.793	2.997	238761547	4.13	10000	99.0	90	110	
Ti	47	1	nogas	97.824	1.836	224605	3.55	100	97.8	90	110	
V	51	1	nogas	88.999	1.408	3475214	2.53	100	89.0	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.026	4.113	2679452	1.41	100	98.0	90	110	
Mn	55	1	nogas	97.802	3.386	3313716	1.53	100	97.8	90	110	
Co	59	1	nogas	94.984	1.693	2686811	1.93	100	95.0	90	110	
Ni	60	1	nogas	97.167	2.086	636667	2.02	100	97.2	90	110	
Cu	63	1	nogas	97.763	2.435	1456099	1.06	100	97.8	90	110	
Zn	66	1	nogas	100.092	1.634	516874	2.30	100	100.1	90	110	
As	75	1	nogas	88.907	1.300	675481	1.90	100	88.9	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	100.795	0.571	3472360	3.22	100	100.8	90	110	
Ag	107	1	nogas	104.433	3.525	1801264	0.62	100	104.4	90	110	
Cd	111	1	nogas	99.690	3.391	370519	0.47	100	99.7	90	110	
Sb	121	1	nogas	97.009	1.540	1592998	1.97	100	97.0	90	110	
Tl	205	1	nogas	99.186	4.386	2413674	1.33	100	99.2	90	110	
Pb	208	1	nogas	98.825	1.373	3352400	1.37	100	98.8	90	110	
U	238	1	nogas	104.397	2.146	3301097	1.56	100	104.4	90	110	
[Pb]	206	1	nogas	100.332	5.947	822027	2.92	100	100.3	90	110	
[Pb]	207	1	nogas	99.174	4.134	726939	0.58	100	99.2	90	110	
Na	23	2	He	10349.260	1.326	18370351	1.19	10000	103.5	90	110	
Mg	24	2	He	10211.275	1.585	9774224	0.85	10000	102.1	90	110	
Al	27	2	He	102.442	1.701	60504	0.89	100	102.4	90	110	
K	39	2	He	9715.803	1.047	10102284	1.02	10000	97.2	90	110	
Ca	43	2	He	10353.802	1.744	28489	0.99	10000	103.5	90	110	
Ca	44	2	He	10055.729	2.682	469152	1.96	10000	100.6	90	110	
V	51	2	He	101.162	1.064	721236	1.09	100	101.2	90	110	
Cr	52	2	He	101.993	2.050	792159	1.44	100	102.0	90	110	
Mn	55	2	He	104.420	3.240	548617	2.88	100	104.4	90	110	
Fe	56	2	He	10262.592	4.621	66344814	4.03	10000	102.6	90	110	
Co	59	2	He	101.860	3.608	1058023	3.01	100	101.9	90	110	
Ni	60	2	He	105.083	2.656	286836	1.89	100	105.1	90	110	
Cu	63	2	He	101.204	0.884	694060	0.19	100	101.2	90	110	
Zn	66	2	He	104.188	1.784	171796	1.21	100	104.2	90	110	
As	75	2	He	100.039	0.829	155848	0.17	100	100.0	90	110	
Se	78	2	He	100.750	3.713	12146	3.44	100	100.8	90	110	
B	11	1	nogas	474.431	3.434	2815431	0.87	500	94.9	90	110	
Si	28	1	nogas	4791.577	1.173	60797674	2.03	5000	95.8	90	110	
Ca	43	1	nogas	9727.624	2.797	423339	2.72	10000	97.3	90	110	
Ca	44	1	nogas	9818.704	1.154	7020828	2.29	10000	98.2	90	110	
Fe	56	1	nogas	9967.617	3.496	283287173	0.56	10000	99.7	90	110	
Se	77	1	nogas	62.518	4.286	52198	1.82	100	62.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.751	1.620	33271	1.61	100	101.8	90	110	
Mo	95	1	nogas	100.666	2.409	700762	0.97	100	100.7	90	110	
Sn	118	1	nogas	96.444	3.755	1042777	3.66	100	96.4	90	110	
Ba	137	1	nogas	96.706	3.626	485366	1.17	100	96.7	90	110	
Sb	121	2	He	101.518	2.152	566152	1.76	100	101.5	90	110	
Li	7	1	nogas	98.023	4.754	1964041	3.98	100	98.0	90	110	
P	31	1	nogas	472.345	1.998	1033986	1.21	500	94.5	90	110	
La	139	1	nogas	109.243	5.533	1047	7.30	100	109.2	90	110	
Au	197	1	nogas	96.125	89.707	40	66.14	100	96.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1335293	2.85	1519169	87.90	70	125	
Ge	72	1	nogas	3892490	2.95	4041586	96.31	70	125	
In	115	1	nogas	3580728	3.91	3794837	94.36	70	125	
Bi	209	1	nogas	2657864	3.62	2841860	93.53	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	940522	0.76	991378	94.87	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	294_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-17T23:50:35-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.079	35.5	810	28.3	1	
Na	23	1	nogas	-12.877	-13.2	1812672	2.2	100	
Mg	24	1	nogas	2.042	49.5	112693	14.7	100	
Al	27	1	nogas	-1.703	-3.0	35288	6.9	5	
K	39	1	nogas	-3.897	-400.0	8870844	0.6	100	
Ti	47	1	nogas	0.070	39.6	500	12.5	2.5	
V	51	1	nogas	-8.010	-2.9	412214	3.1	2.5	
Cr	52	1	nogas	-0.452	-15.8	45837	2.4	2.5	
Mn	55	1	nogas	-0.732	-2.9	23779	2.9	2.5	
Co	59	1	nogas	0.064	9.5	2787	6.7	2.5	
Ni	60	1	nogas	0.040	104.0	1833	12.4	2.5	
Cu	63	1	nogas	-3.085	-0.9	6251	4.3	2	
Zn	66	1	nogas	-0.179	-19.4	1693	6.7	2.5	
As	75	1	nogas	-3.769	-12.3	75316	0.2	2.5	
Sr	88	1	nogas	0.023	57.9	5574	4.3	2.5	
Ag	107	1	nogas	0.110	20.4	4184	5.5	2.5	
Cd	111	1	nogas	0.054	41.1	223	36.2	1	
Sb	121	1	nogas	1.076	20.2	18981	15.3	2.5	
Tl	205	1	nogas	0.495	45.7	12569	41.1	1	
Pb	208	1	nogas	0.042	28.4	2573	15.7	2.5	
U	238	1	nogas	0.137	57.9	5425	43.4	2.5	
[Pb]	206	1	nogas	0.037	35.6	597	15.6	2.5	
[Pb]	207	1	nogas	0.049	62.6	623	33.4	2.5	
Na	23	2	He	-14.365	-6.1	157699	1.0	100	
Mg	24	2	He	0.849	27.5	4874	3.4	100	
Al	27	2	He	-3.950	-4.1	793	9.6	5	
K	39	2	He	-9.520	-12.0	209379	0.6	100	
Ca	43	2	He	-4.069	-241.7	80	33.1	100	
Ca	44	2	He	-6.109	-13.6	1480	4.4	100	
V	51	2	He	-0.063	-9.1	5198	1.4	2.5	
Cr	52	2	He	-0.014	-196.3	5244	4.1	2.5	
Mn	55	2	He	-0.650	-4.6	1507	10.6	2.5	
Fe	56	2	He	4.127	5.8	45353	1.6	100	
Co	59	2	He	0.053	16.5	827	9.2	2.5	
Ni	60	2	He	-0.395	-8.2	440	21.7	2.5	
Cu	63	2	He	-0.863	-3.7	2090	8.7	2	
Zn	66	2	He	-0.592	-5.4	350	13.1	2.5	
As	75	2	He	-0.023	-157.0	429	11.9	2.5	
Se	78	2	He	0.580	24.6	185	8.1	2	
B	11	1	nogas	-8.521	-28.7	178973	3.6	10	
Si	28	1	nogas	25.972	13.9	1385528	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	-22.540	-10.5	1733	9.7	100	
Ca	44	1	nogas	-19.392	-22.8	95774	0.8	100	
Fe	56	1	nogas	-5.003	-151.6	2269120	6.2	100	
Se	77	1	nogas	-38.286	-5.2	24183	3.5	2.5	
Se	82	1	nogas	0.033	315.4	247	13.0	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.334	41.6	2580	34.3	2.5	
Sn	118	1	nogas	0.081	86.2	4004	18.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.020	-43.9	837	4.8	2.5	
Sb	121	2	He	0.816	7.1	4954	5.5	2.5	
P	31	1	nogas	-6.837	-33.1	116265	0.7	10	
La	139	1	nogas	-44.742	-4.2	57	20.4	2.5	
Au	197	1	nogas	2.123	1473.7	10	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1449963	5.27	1519169	95.44	70	125	
Ge	72	1	nogas	3933826	3.81	4041586	97.33	70	125	
In	115	1	nogas	3679548	1.42	3794837	96.96	70	125	
Bi	209	1	nogas	2702999	3.20	2841860	95.11	70	125	
Ge	72	2	He	933325	1.83	991378	94.14	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	305_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T00:12:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.691	2.202	850056	0.36	100	94.7	90	110	
Na	23	1	nogas	9897.668	5.247	289691956	1.30	10000	99.0	90	110	
Mg	24	1	nogas	10048.638	4.668	184148354	2.05	10000	100.5	90	110	
Al	27	1	nogas	99.643	1.387	2519792	2.70	100	99.6	90	110	
K	39	1	nogas	9941.015	2.511	236902730	0.63	10000	99.4	90	110	
Ti	47	1	nogas	97.212	0.893	220747	3.17	100	97.2	90	110	
V	51	1	nogas	94.646	0.341	3613653	2.35	100	94.6	90	110	
Cr	52	1	nogas	99.407	1.239	2688311	2.69	100	99.4	90	110	
Mn	55	1	nogas	101.163	4.197	3388620	3.32	100	101.2	90	110	
Co	59	1	nogas	99.269	1.387	2778027	3.58	100	99.3	90	110	
Ni	60	1	nogas	99.133	1.117	642380	1.15	100	99.1	90	110	
Cu	63	1	nogas	98.253	2.965	1447137	2.27	100	98.3	90	110	
Zn	66	1	nogas	100.689	0.849	514214	1.70	100	100.7	90	110	
As	75	1	nogas	93.671	4.803	698249	2.11	100	93.7	90	110	
Sr	88	1	nogas	99.141	0.744	3377033	1.66	100	99.1	90	110	
Ag	107	1	nogas	101.669	4.064	1734417	2.31	100	101.7	90	110	
Cd	111	1	nogas	98.269	3.471	358402	2.30	100	98.3	90	110	
Sb	121	1	nogas	95.799	2.414	1555777	2.42	100	95.8	90	110	
Tl	205	1	nogas	97.142	3.316	2371929	0.72	100	97.1	90	110	
Pb	208	1	nogas	97.440	2.900	3305441	2.90	100	97.4	90	110	
U	238	1	nogas	103.869	4.093	3293231	1.09	100	103.9	90	110	
[Pb]	206	1	nogas	98.375	1.727	809404	2.78	100	98.4	90	110	
[Pb]	207	1	nogas	97.817	2.679	719630	2.52	100	97.8	90	110	
Na	23	2	He	9803.004	2.526	17468586	0.85	10000	98.0	90	110	
Mg	24	2	He	9698.653	3.252	9314334	1.46	10000	97.0	90	110	
Al	27	2	He	101.809	5.199	60329	2.66	100	101.8	90	110	
K	39	2	He	9795.103	1.445	10182949	1.41	10000	98.0	90	110	
Ca	43	2	He	10130.010	2.423	27971	1.40	10000	101.3	90	110	
Ca	44	2	He	9888.815	2.229	462989	0.08	10000	98.9	90	110	
V	51	2	He	98.286	3.774	703096	1.70	100	98.3	90	110	
Cr	52	2	He	97.632	0.875	761276	1.53	100	97.6	90	110	
Mn	55	2	He	101.148	0.529	533549	2.01	100	101.1	90	110	
Fe	56	2	He	10064.253	1.113	65305759	1.68	10000	100.6	90	110	
Co	59	2	He	100.583	2.410	1048371	0.35	100	100.6	90	110	
Ni	60	2	He	102.716	2.518	281368	0.37	100	102.7	90	110	
Cu	63	2	He	99.431	2.254	684361	1.02	100	99.4	90	110	
Zn	66	2	He	101.126	1.505	167378	1.31	100	101.1	90	110	
As	75	2	He	98.939	3.914	154631	2.14	100	98.9	90	110	
Se	78	2	He	98.303	3.915	11891	1.57	100	98.3	90	110	
B	11	1	nogas	457.260	3.357	2754393	0.94	500	91.5	90	110	
Si	28	1	nogas	4886.820	2.473	61296487	2.23	5000	97.7	90	110	
Ca	43	1	nogas	9910.946	1.102	426541	1.44	10000	99.1	90	110	
Ca	44	1	nogas	9819.155	1.223	6943200	1.46	10000	98.2	90	110	
Fe	56	1	nogas	9993.952	5.289	280876915	3.55	10000	99.9	90	110	
Se	77	1	nogas	91.221	3.764	59581	1.22	100	91.2	90	110	
Se	82	1	nogas	98.738	1.796	31935	0.94	100	98.7	90	110	
Mo	95	1	nogas	100.084	1.077	689340	2.99	100	100.1	90	110	
Sn	118	1	nogas	96.601	4.299	1024419	2.82	100	96.6	90	110	
Ba	137	1	nogas	100.021	4.837	492475	3.23	100	100.0	90	110	
Sb	121	2	He	97.280	0.727	544504	1.58	100	97.3	90	110	
Li	7	1	nogas	97.861	1.815	1985418	2.71	100	97.9	90	110	
P	31	1	nogas	471.170	1.491	1020419	0.96	500	94.2	90	110	
La	139	1	nogas	87.265	5.435	887	1.30	100	87.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	103.602	61.227	43	48.04	100	103.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1351400	2.20	1519169	88.96	70	125	
Ge	72	1	nogas	3849246	2.27	4041586	95.24	70	125	
In	115	1	nogas	3513422	4.13	3794837	92.58	70	125	
Bi	209	1	nogas	2666531	4.11	2841860	93.83	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	943970	2.27	991378	95.22	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	308_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T00:18:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.018	32.8	233	24.4	1	
Na	23	1	nogas	-13.899	-6.3	1829400	2.1	100	
Mg	24	1	nogas	-1.797	-7.2	43391	4.2	100	
Al	27	1	nogas	-1.956	-0.2	28939	1.5	5	
K	39	1	nogas	-0.510	-1985.3	8964879	1.4	100	
Ti	47	1	nogas	0.036	88.9	423	18.9	2.5	
V	51	1	nogas	-4.197	-7.1	534583	1.7	2.5	
Cr	52	1	nogas	-0.255	-19.2	51254	2.8	2.5	
Mn	55	1	nogas	-0.723	-2.9	24099	1.9	2.5	
Co	59	1	nogas	0.023	32.6	1627	13.9	2.5	
Ni	60	1	nogas	0.062	161.2	1988	33.8	2.5	
Cu	63	1	nogas	-3.178	-0.9	4907	8.2	2	
Zn	66	1	nogas	-0.254	-6.1	1310	5.8	2.5	
As	75	1	nogas	-1.196	-22.7	92330	2.3	2.5	
Sr	88	1	nogas	-0.018	-19.9	4187	3.3	2.5	
Ag	107	1	nogas	-0.013	-94.0	2057	8.6	2.5	
Cd	111	1	nogas	0.010	48.7	60	33.3	1	
Sb	121	1	nogas	0.160	9.0	3870	4.7	2.5	
Tl	205	1	nogas	0.034	18.3	1300	10.6	1	
Pb	208	1	nogas	-0.007	-71.5	923	17.5	2.5	
U	238	1	nogas	-0.012	-36.3	707	18.8	2.5	
[Pb]	206	1	nogas	-0.011	-55.8	207	22.9	2.5	
[Pb]	207	1	nogas	-0.004	-138.0	233	17.8	2.5	
Na	23	2	He	-14.881	-5.1	161933	1.0	100	
Mg	24	2	He	-1.707	-12.0	2527	6.7	100	
Al	27	2	He	-4.155	-2.8	703	10.7	5	
K	39	2	He	-5.372	-18.3	213599	0.5	100	
Ca	43	2	He	-16.848	-25.4	47	24.7	100	
Ca	44	2	He	-10.809	-25.5	1303	9.3	100	
V	51	2	He	0.020	43.9	5966	2.3	2.5	
Cr	52	2	He	-0.082	-28.7	4877	3.4	2.5	
Mn	55	2	He	-0.694	-0.9	1320	3.5	2.5	
Fe	56	2	He	0.459	16.2	22551	1.8	100	
Co	59	2	He	0.018	40.8	487	16.0	2.5	
Ni	60	2	He	-0.424	-2.6	373	9.4	2.5	
Cu	63	2	He	-0.908	-2.7	1847	10.6	2	
Zn	66	2	He	-0.626	-10.7	307	38.2	2.5	
As	75	2	He	-0.004	-366.8	473	4.2	2.5	
Se	78	2	He	0.332	70.4	161	19.1	2	
B	11	1	nogas	-20.551	-5.5	105979	2.4	10	
Si	28	1	nogas	22.534	10.2	1344153	0.8	5	CCB Main CR1 Failed
Ca	43	1	nogas	-31.013	-11.7	1360	10.3	100	
Ca	44	1	nogas	-26.625	-7.4	90773	1.1	100	
Fe	56	1	nogas	-7.839	-9.8	2194763	0.6	100	
Se	77	1	nogas	-20.752	-11.8	29187	3.2	2.5	
Se	82	1	nogas	-0.112	-66.0	200	13.2	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.019	83.6	383	28.6	2.5	
Sn	118	1	nogas	-0.170	-8.5	1253	12.0	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.080	-24.4	537	17.6	2.5	
Sb	121	2	He	0.116	22.4	1123	12.8	2.5	
P	31	1	nogas	-4.543	-22.5	120907	0.7	10	
La	139	1	nogas	-43.860	-11.4	63	50.8	2.5	
Au	197	1	nogas	31.023	98.0	20	50.0	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1428753	4.19	1519169	94.05	70	125	
Ge	72	1	nogas	3937139	1.42	4041586	97.42	70	125	
In	115	1	nogas	3746320	1.89	3794837	98.72	70	125	
Bi	209	1	nogas	2747080	1.69	2841860	96.66	70	125	
Ge	72	2	He	963819	1.25	991378	97.22	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	316_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T00:34:15-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	98.097	2.755	876288	1.50	100	98.1	90	110	
Na	23	1	nogas	11640.119	4.930	370889792	1.84	10000	116.4	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10003.714	2.947	199866275	2.54	10000	100.0	90	110	
Al	27	1	nogas	103.479	2.540	2745889	0.46	100	103.5	90	110	
K	39	1	nogas	10497.534	3.771	262342381	1.73	10000	105.0	90	110	
Ti	47	1	nogas	100.487	2.727	239678	1.60	100	100.5	90	110	
V	51	1	nogas	101.941	0.505	4037014	1.75	100	101.9	90	110	
Cr	52	1	nogas	98.845	2.351	2808549	0.59	100	98.8	90	110	
Mn	55	1	nogas	99.220	1.039	3494671	1.96	100	99.2	90	110	
Co	59	1	nogas	97.027	1.036	2853080	2.62	100	97.0	90	110	
Ni	60	1	nogas	103.764	0.931	706598	1.78	100	103.8	90	110	
Cu	63	1	nogas	99.644	2.430	1541584	1.53	100	99.6	90	110	
Zn	66	1	nogas	98.006	1.783	525976	0.46	100	98.0	90	110	
As	75	1	nogas	99.685	2.673	774505	0.54	100	99.7	90	110	
Sr	88	1	nogas	100.873	2.030	3610530	1.85	100	100.9	90	110	
Ag	107	1	nogas	96.863	3.326	1737551	3.88	100	96.9	90	110	
Cd	111	1	nogas	98.877	1.738	359833	2.19	100	98.9	90	110	
Sb	121	1	nogas	91.165	1.353	1556053	1.97	100	91.2	90	110	
Tl	205	1	nogas	98.877	4.022	2157907	2.86	100	98.9	90	110	
Pb	208	1	nogas	87.689	2.803	2974780	2.80	100	87.7	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	102.071	0.901	2893826	1.02	100	102.1	90	110	
[Pb]	206	1	nogas	98.994	4.694	727511	3.00	100	99.0	90	110	
[Pb]	207	1	nogas	98.902	4.277	650077	2.82	100	98.9	90	110	
Na	23	2	He	11491.155	1.248	22516528	1.31	10000	114.9	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10067.554	1.609	10648938	1.52	10000	100.7	90	110	
Al	27	2	He	105.600	4.911	68815	4.56	100	105.6	90	110	
K	39	2	He	11138.258	1.121	11549250	1.10	10000	111.4	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10677.117	0.319	32462	0.57	10000	106.8	90	110	
Ca	44	2	He	10276.613	0.171	529811	0.54	10000	102.8	90	110	
V	51	2	He	98.064	0.971	772728	0.59	100	98.1	90	110	
Cr	52	2	He	96.595	1.936	829361	1.87	100	96.6	90	110	
Mn	55	2	He	101.825	2.652	591344	2.83	100	101.8	90	110	
Fe	56	2	He	9850.152	4.491	70381719	4.76	10000	98.5	90	110	
Co	59	2	He	97.528	0.736	1119557	1.11	100	97.5	90	110	
Ni	60	2	He	100.279	0.881	302565	0.61	100	100.3	90	110	
Cu	63	2	He	95.572	1.555	724728	1.19	100	95.6	90	110	
Zn	66	2	He	98.026	0.686	178698	0.31	100	98.0	90	110	
As	75	2	He	96.455	0.783	166060	0.44	100	96.5	90	110	
Se	78	2	He	96.841	0.801	12906	0.42	100	96.8	90	110	
B	11	1	nogas	497.689	4.292	2963832	1.37	500	99.5	90	110	
Si	28	1	nogas	5049.956	1.509	66528991	0.64	5000	101.0	90	110	
Ca	43	1	nogas	10432.475	1.499	471656	0.71	10000	104.3	90	110	
Ca	44	1	nogas	10231.644	1.744	7597563	0.35	10000	102.3	90	110	
Fe	56	1	nogas	9902.462	2.579	292590015	1.04	10000	99.0	90	110	
Se	77	1	nogas	137.232	3.946	76018	0.94	100	137.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.694	1.410	33552	2.14	100	98.7	90	110	
Mo	95	1	nogas	95.920	1.544	694083	0.74	100	95.9	90	110	
Sn	118	1	nogas	97.371	2.650	1030254	1.98	100	97.4	90	110	
Ba	137	1	nogas	96.238	4.563	472611	0.78	100	96.2	90	110	
Sb	121	2	He	93.138	0.081	574018	0.43	100	93.1	90	110	
Li	7	1	nogas	99.679	3.513	2009659	2.34	100	99.7	90	110	
P	31	1	nogas	485.918	1.054	1101812	1.22	500	97.2	90	110	
La	139	1	nogas	86.227	10.877	880	10.23	100	86.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	153.989	32.916	53	28.64	100	154.0	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1345066	3.35	1519169	88.54	70	125	
Ge	72	1	nogas	4045080	2.04	4041586	100.09	70	125	
In	115	1	nogas	3504416	3.77	3794837	92.35	70	125	
Bi	209	1	nogas	2382079	1.83	2841860	83.82	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1039245	0.38	991378	104.83	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	317_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T00:36:15-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.308	136.6	3229	133.2	1	
Na	23	1	nogas	503.200	5.6	18323575	1.7	100	CCB Main CR1 Failed
Mg	24	1	nogas	14.585	8.9	373075	3.6	100	
Al	27	1	nogas	-1.869	-1.3	32158	2.5	5	
K	39	1	nogas	15.572	39.8	9652466	0.5	100	
Ti	47	1	nogas	0.075	46.2	530	15.4	2.5	
V	51	1	nogas	-1.359	-30.3	646090	2.4	2.5	
Cr	52	1	nogas	-0.084	-34.2	57723	0.3	2.5	
Mn	55	1	nogas	-0.657	-1.7	27224	0.5	2.5	
Co	59	1	nogas	0.063	11.8	2867	7.0	2.5	
Ni	60	1	nogas	3.447	1.0	25174	1.2	2.5	CCB Main CR1 Failed
Cu	63	1	nogas	-2.001	-7.7	22763	9.7	2	
Zn	66	1	nogas	0.161	15.9	3580	4.7	2.5	
As	75	1	nogas	4.169	12.0	131729	2.4	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.552	3.7	24797	2.0	2.5	
Ag	107	1	nogas	0.041	45.4	3090	10.9	2.5	
Cd	111	1	nogas	0.057	33.7	243	28.0	1	
Sb	121	1	nogas	1.055	19.5	19333	17.7	2.5	
Tl	205	1	nogas	0.494	43.8	12105	40.5	1	
Pb	208	1	nogas	0.051	42.7	2893	25.7	2.5	
U	238	1	nogas	0.125	65.0	4851	49.4	2.5	
[Pb]	206	1	nogas	0.056	49.4	730	28.5	2.5	
[Pb]	207	1	nogas	0.054	53.0	637	30.6	2.5	
Na	23	2	He	501.419	3.0	1157355	2.8	100	CCB Main CR1 Failed
Mg	24	2	He	12.698	4.2	17655	3.4	100	
Al	27	2	He	-3.383	-40.8	1217	69.6	5	
K	39	2	He	18.015	21.5	237389	1.7	100	
Ca	43	2	He	14.593	102.5	143	31.5	100	
Ca	44	2	He	31.471	68.0	3515	30.4	100	
V	51	2	He	0.239	25.4	8007	5.6	2.5	
Cr	52	2	He	-0.009	-156.8	5781	2.2	2.5	
Mn	55	2	He	-0.660	-2.3	1593	5.1	2.5	
Fe	56	2	He	4.279	3.0	50733	2.0	100	
Co	59	2	He	0.030	5.7	650	2.7	2.5	
Ni	60	2	He	-0.389	-3.3	500	7.2	2.5	
Cu	63	2	He	-0.942	-2.0	1707	8.0	2	
Zn	66	2	He	-0.620	-2.8	333	9.6	2.5	
As	75	2	He	0.056	10.0	604	1.7	2.5	
Se	78	2	He	0.574	60.5	201	22.0	2	
B	11	1	nogas	-11.390	-20.9	174522	4.2	10	
Si	28	1	nogas	47.756	7.5	1717208	1.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	-4.888	-61.5	2587	4.9	100	
Ca	44	1	nogas	22.085	30.4	129584	2.7	100	
Fe	56	1	nogas	4.594	112.4	2633399	5.4	100	
Se	77	1	nogas	17.075	10.8	41240	2.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.022	-294.2	237	8.8	2	
Mo	95	1	nogas	0.352	27.3	2820	24.6	2.5	
Sn	118	1	nogas	0.002	2864.3	3214	18.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.039	-25.6	760	5.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.742	5.2	4977	4.3	2.5	
P	31	1	nogas	8.589	212.9	151030	23.3	10	
La	139	1	nogas	-44.438	-7.3	60	33.3	2.5	
Au	197	1	nogas	87.047	57.0	37	41.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1563577	6.14	1519169	102.92	70	125	
Ge	72	1	nogas	4067314	1.15	4041586	100.64	70	125	
In	115	1	nogas	3783109	3.08	3794837	99.69	70	125	
Bi	209	1	nogas	2597810	1.82	2841860	91.41	70	125	
Ge	72	2	He	1021721	0.34	991378	103.06	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	328_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T00:58:07-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	97.677	1.893	881835	3.75	100	97.7	90	110	
Na	23	1	nogas	9766.919	4.411	303836298	2.47	10000	97.7	90	110	
Mg	24	1	nogas	9845.681	5.406	191636825	2.38	10000	98.5	90	110	
Al	27	1	nogas	97.133	4.896	2663671	3.60	100	97.1	90	110	
K	39	1	nogas	9657.291	1.886	249934006	4.16	10000	96.6	90	110	
Ti	47	1	nogas	96.147	0.958	236725	3.64	100	96.1	90	110	
V	51	1	nogas	88.665	1.753	3714409	1.93	100	88.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	96.791	0.804	2839884	3.42	100	96.8	90	110	
Mn	55	1	nogas	100.322	2.624	3644073	2.34	100	100.3	90	110	
Co	59	1	nogas	93.864	1.085	2847581	3.14	100	93.9	90	110	
Ni	60	1	nogas	95.435	0.974	670680	3.01	100	95.4	90	110	
Cu	63	1	nogas	95.603	0.848	1528947	3.99	100	95.6	90	110	
Zn	66	1	nogas	99.130	0.201	549014	3.07	100	99.1	90	110	
As	75	1	nogas	88.746	1.550	723178	2.47	100	88.7	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	97.825	1.776	3612224	1.53	100	97.8	90	110	
Ag	107	1	nogas	101.429	4.829	1875715	3.06	100	101.4	90	110	
Cd	111	1	nogas	101.200	2.870	396561	2.96	100	101.2	90	110	
Sb	121	1	nogas	91.909	2.886	1617844	1.26	100	91.9	90	110	
Tl	205	1	nogas	101.557	3.014	2595910	3.37	100	101.6	90	110	
Pb	208	1	nogas	104.030	1.970	3528931	1.97	100	104.0	90	110	
U	238	1	nogas	106.822	0.831	3546700	2.76	100	106.8	90	110	
[Pb]	206	1	nogas	101.537	5.133	873755	4.05	100	101.5	90	110	
[Pb]	207	1	nogas	99.705	2.920	767448	1.78	100	99.7	90	110	
Na	23	2	He	10215.726	0.866	18466335	0.33	10000	102.2	90	110	
Mg	24	2	He	10064.854	1.568	9811369	2.28	10000	100.6	90	110	
Al	27	2	He	102.415	2.377	61607	3.30	100	102.4	90	110	
K	39	2	He	10008.110	0.979	10399628	0.96	10000	100.1	90	110	
Ca	43	2	He	10284.316	1.182	28819	2.12	10000	102.8	90	110	
Ca	44	2	He	10313.830	1.213	490036	2.24	10000	103.1	90	110	
V	51	2	He	100.651	1.114	730713	1.13	100	100.7	90	110	
Cr	52	2	He	103.096	0.570	815385	1.58	100	103.1	90	110	
Mn	55	2	He	110.436	1.163	590542	0.55	100	110.4	90	110	CCV Main CR1-2 Failed
Fe	56	2	He	10555.408	2.136	69486024	1.16	10000	105.6	90	110	
Co	59	2	He	104.342	2.792	1103537	1.80	100	104.3	90	110	
Ni	60	2	He	105.456	1.267	293120	0.41	100	105.5	90	110	
Cu	63	2	He	101.994	1.704	712297	2.72	100	102.0	90	110	
Zn	66	2	He	103.574	1.761	173944	2.79	100	103.6	90	110	
As	75	2	He	101.947	0.327	161720	1.17	100	101.9	90	110	
Se	78	2	He	103.007	2.459	12643	2.59	100	103.0	90	110	
B	11	1	nogas	458.256	1.078	2775056	1.26	500	91.7	90	110	
Si	28	1	nogas	4794.521	4.041	65190491	1.32	5000	95.9	90	110	
Ca	43	1	nogas	9739.658	2.965	454439	2.66	10000	97.4	90	110	
Ca	44	1	nogas	9777.853	0.949	7497483	2.68	10000	97.8	90	110	
Fe	56	1	nogas	9681.902	0.959	295297640	2.89	10000	96.8	90	110	
Se	77	1	nogas	59.528	6.211	55093	4.37	100	59.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.970	3.088	33999	0.85	100	97.0	90	110	
Mo	95	1	nogas	95.833	2.181	715326	1.14	100	95.8	90	110	
Sn	118	1	nogas	93.704	1.555	1068176	3.41	100	93.7	90	110	
Ba	137	1	nogas	99.761	2.399	527879	2.58	100	99.8	90	110	
Sb	121	2	He	103.240	0.355	586310	1.31	100	103.2	90	110	
Li	7	1	nogas	102.012	7.333	2077171	8.67	100	102.0	90	110	
P	31	1	nogas	457.136	2.758	1077325	1.72	500	91.4	90	110	
La	139	1	nogas	96.156	21.172	1017	16.76	100	96.2	90	110	
Au	197	1	nogas	88.428	31.937	40	25.00	100	88.4	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1358340	1.95	1519169	89.41	70	125	
Ge	72	1	nogas	4173798	3.24	4041586	103.27	70	125	
In	115	1	nogas	3774740	4.83	3794837	99.47	70	125	
Bi	209	1	nogas	2789835	3.40	2841860	98.17	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	957695	1.03	991378	96.60	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	329_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T01:00:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.054	36.5	593	31.3	1	
Na	23	1	nogas	55.470	6.0	3901194	1.2	100	
Mg	24	1	nogas	6.131	26.6	192414	13.9	100	
Al	27	1	nogas	-0.993	-161.7	54977	71.7	5	
K	39	1	nogas	-11.974	-134.4	9173008	0.6	100	
Ti	47	1	nogas	0.046	32.5	470	4.3	2.5	
V	51	1	nogas	-7.639	-0.1	448254	3.9	2.5	
Cr	52	1	nogas	-0.418	-16.0	49429	2.0	2.5	
Mn	55	1	nogas	0.122	55.8	55553	0.5	2.5	
Co	59	1	nogas	0.047	28.6	2424	12.5	2.5	
Ni	60	1	nogas	0.123	9.4	2520	0.8	2.5	
Cu	63	1	nogas	-3.169	-2.0	5297	13.8	2	
Zn	66	1	nogas	-0.136	-5.7	2033	5.2	2.5	
As	75	1	nogas	-3.533	-5.0	81267	2.5	2.5	
Sr	88	1	nogas	0.127	13.8	9726	2.8	2.5	
Ag	107	1	nogas	0.010	150.4	2590	7.1	2.5	
Cd	111	1	nogas	0.034	44.7	157	38.5	1	
Sb	121	1	nogas	0.942	25.8	17696	19.8	2.5	
Tl	205	1	nogas	0.504	49.5	13640	50.4	1	
Pb	208	1	nogas	0.051	39.7	2890	23.9	2.5	
U	238	1	nogas	0.146	67.4	6092	57.6	2.5	
[Pb]	206	1	nogas	0.050	32.6	743	20.2	2.5	
[Pb]	207	1	nogas	0.050	43.1	670	28.5	2.5	
Na	23	2	He	59.705	0.9	297942	0.6	100	
Mg	24	2	He	4.799	1.4	8959	0.7	100	
Al	27	2	He	-4.149	-3.1	710	10.6	5	
K	39	2	He	-4.014	-63.5	214980	1.2	100	
Ca	43	2	He	-6.367	-168.7	77	39.8	100	
Ca	44	2	He	1.411	126.3	1897	4.3	100	
V	51	2	He	-0.061	-19.3	5410	1.6	2.5	
Cr	52	2	He	-0.026	-193.3	5351	7.6	2.5	
Mn	55	2	He	0.266	10.9	6481	2.2	2.5	
Fe	56	2	He	5.525	9.3	56435	6.2	100	
Co	59	2	He	0.036	25.8	687	14.9	2.5	
Ni	60	2	He	-0.378	-10.9	503	22.9	2.5	
Cu	63	2	He	-0.915	-1.9	1810	6.8	2	
Zn	66	2	He	-0.571	-11.5	400	27.8	2.5	
As	75	2	He	-0.024	-29.5	446	2.6	2.5	
Se	78	2	He	0.191	96.9	144	15.8	2	
B	11	1	nogas	-19.996	-7.8	113642	6.7	10	
Si	28	1	nogas	22.605	22.0	1418681	0.7	5	CCB Main CR1 Failed
Ca	43	1	nogas	-19.817	-37.2	1947	13.7	100	
Ca	44	1	nogas	-22.116	-28.3	99121	1.2	100	
Fe	56	1	nogas	2.894	352.7	2632734	7.6	100	
Se	77	1	nogas	-36.742	-6.3	26005	1.4	2.5	
Se	82	1	nogas	0.014	1102.9	253	17.8	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.310	67.2	2527	56.0	2.5	
Sn	118	1	nogas	-0.011	-645.4	3100	22.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.028	147.3	1120	15.5	2.5	
Sb	121	2	He	0.602	6.4	3920	5.9	2.5	
P	31	1	nogas	-2.582	-72.5	131601	1.9	10	
La	139	1	nogas	-41.818	-7.7	80	33.1	2.5	
Au	197	1	nogas	38.248	41.0	23	24.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1485380	1.80	1519169	97.78	70	125	
Ge	72	1	nogas	4156863	3.88	4041586	102.85	70	125	
In	115	1	nogas	3833741	4.72	3794837	101.03	70	125	
Bi	209	1	nogas	2842939	4.29	2841860	100.04	70	125	
Ge	72	2	He	969297	0.26	991378	97.77	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	340_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T01:22:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	98.390	3.995	892166	1.65	100	98.4	90	110	
Na	23	1	nogas	10455.153	3.740	315210932	2.23	10000	104.6	90	110	
Mg	24	1	nogas	10104.846	1.088	190870604	2.81	10000	101.0	90	110	
Al	27	1	nogas	102.515	1.561	2666703	0.71	100	102.5	90	110	
K	39	1	nogas	10301.276	2.288	252499664	1.61	10000	103.0	90	110	
Ti	47	1	nogas	101.528	3.072	237297	2.33	100	101.5	90	110	
V	51	1	nogas	101.190	2.000	3931001	0.71	100	101.2	90	110	
Cr	52	1	nogas	100.802	2.240	2805631	1.47	100	100.8	90	110	
Mn	55	1	nogas	100.977	3.356	3483123	2.12	100	101.0	90	110	
Co	59	1	nogas	99.631	1.193	2870191	1.27	100	99.6	90	110	
Ni	60	1	nogas	100.164	1.361	668358	1.06	100	100.2	90	110	
Cu	63	1	nogas	98.184	2.921	1489276	2.41	100	98.2	90	110	
Zn	66	1	nogas	99.339	1.632	522404	1.02	100	99.3	90	110	
As	75	1	nogas	97.811	0.662	746727	1.32	100	97.8	90	110	
Sr	88	1	nogas	101.718	2.925	3567080	1.98	100	101.7	90	110	
Ag	107	1	nogas	103.587	0.883	1820553	1.72	100	103.6	90	110	
Cd	111	1	nogas	102.274	2.732	373643	2.44	100	102.3	90	110	
Sb	121	1	nogas	97.458	0.536	1629852	0.77	100	97.5	90	110	
Tl	205	1	nogas	97.724	0.964	2536615	1.06	100	97.7	90	110	
Pb	208	1	nogas	101.842	1.180	3454720	1.18	100	101.8	90	110	
U	238	1	nogas	103.480	3.373	3487665	2.29	100	103.5	90	110	
[Pb]	206	1	nogas	96.389	1.619	842592	0.71	100	96.4	90	110	
[Pb]	207	1	nogas	95.963	1.466	750230	0.72	100	96.0	90	110	
Na	23	2	He	9937.986	4.876	19064072	1.38	10000	99.4	90	110	
Mg	24	2	He	9848.757	5.440	10183162	2.04	10000	98.5	90	110	
Al	27	2	He	107.017	5.313	68196	5.63	100	107.0	90	110	
K	39	2	He	10410.688	2.964	10809142	2.90	10000	104.1	90	110	
Ca	43	2	He	9795.181	6.655	29106	2.49	10000	98.0	90	110	
Ca	44	2	He	9941.741	3.478	501314	1.25	10000	99.4	90	110	
V	51	2	He	97.415	4.450	750639	2.14	100	97.4	90	110	
Cr	52	2	He	97.974	2.976	822722	1.72	100	98.0	90	110	
Mn	55	2	He	102.577	3.410	582560	1.62	100	102.6	90	110	
Fe	56	2	He	10328.690	3.802	72169952	2.19	10000	103.3	90	110	
Co	59	2	He	100.253	5.003	1125256	3.13	100	100.3	90	110	
Ni	60	2	He	101.032	6.338	297913	3.02	100	101.0	90	110	
Cu	63	2	He	99.660	6.862	738117	3.19	100	99.7	90	110	
Zn	66	2	He	102.126	4.672	181964	1.75	100	102.1	90	110	
As	75	2	He	97.444	3.088	164089	1.87	100	97.4	90	110	
Se	78	2	He	98.694	4.980	12856	1.36	100	98.7	90	110	
B	11	1	nogas	475.276	5.462	2882567	1.02	500	95.1	90	110	
Si	28	1	nogas	5011.573	1.531	64705607	1.04	5000	100.2	90	110	
Ca	43	1	nogas	10061.926	1.419	445887	1.53	10000	100.6	90	110	
Ca	44	1	nogas	10056.001	1.567	7320765	2.67	10000	100.6	90	110	
Fe	56	1	nogas	10083.586	1.020	291954232	0.59	10000	100.8	90	110	
Se	77	1	nogas	112.553	3.307	67451	1.71	100	112.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.258	0.562	34056	1.70	100	102.3	90	110	
Mo	95	1	nogas	99.823	2.309	707815	2.05	100	99.8	90	110	
Sn	118	1	nogas	99.200	4.662	1053351	2.62	100	99.2	90	110	
Ba	137	1	nogas	104.636	6.434	515493	1.31	100	104.6	90	110	
Sb	121	2	He	99.020	3.866	596800	2.23	100	99.0	90	110	
Li	7	1	nogas	100.169	2.416	2051174	4.11	100	100.2	90	110	
P	31	1	nogas	490.900	1.502	1089321	0.59	500	98.2	90	110	
La	139	1	nogas	109.822	25.271	1027	12.56	100	109.8	90	110	
Au	197	1	nogas	105.438	67.065	47	53.93	100	105.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1366548	5.41	1519169	89.95	70	125	
Ge	72	1	nogas	3963413	1.23	4041586	98.07	70	125	
In	115	1	nogas	3519785	5.09	3794837	92.75	70	125	
Bi	209	1	nogas	2832488	2.03	2841860	99.67	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1017378	4.44	991378	102.62	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	341_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T01:24:01-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.057	26.1	660	25.0	1	
Na	23	1	nogas	14.836	8.6	2798883	1.5	100	
Mg	24	1	nogas	3.822	18.4	155464	8.7	100	
Al	27	1	nogas	-1.951	-0.9	30679	2.8	5	
K	39	1	nogas	-8.821	-80.3	9258709	0.6	100	
Ti	47	1	nogas	0.038	55.8	450	10.2	2.5	
V	51	1	nogas	-3.124	-5.1	600613	1.4	2.5	
Cr	52	1	nogas	-0.197	-11.2	55770	1.6	2.5	
Mn	55	1	nogas	-0.482	-6.8	34048	2.2	2.5	
Co	59	1	nogas	0.041	29.1	2254	14.9	2.5	
Ni	60	1	nogas	0.039	18.3	1937	3.9	2.5	
Cu	63	1	nogas	-3.101	-0.6	6371	4.6	2	
Zn	66	1	nogas	-0.211	-8.5	1620	6.1	2.5	
As	75	1	nogas	-0.910	-17.7	99457	2.1	2.5	
Sr	88	1	nogas	0.091	8.5	8399	2.3	2.5	
Ag	107	1	nogas	-0.013	-28.7	2167	3.8	2.5	
Cd	111	1	nogas	0.033	34.1	153	29.4	1	
Sb	121	1	nogas	0.877	23.3	16638	20.3	2.5	
Tl	205	1	nogas	0.475	54.2	12753	52.4	1	
Pb	208	1	nogas	0.041	34.9	2557	19.2	2.5	
U	238	1	nogas	0.132	72.5	5555	58.0	2.5	
[Pb]	206	1	nogas	0.043	46.7	677	25.9	2.5	
[Pb]	207	1	nogas	0.041	24.9	590	13.5	2.5	
Na	23	2	He	13.145	13.0	218747	0.5	100	
Mg	24	2	He	3.372	21.6	7728	8.5	100	
Al	27	2	He	-4.280	-4.6	650	18.1	5	
K	39	2	He	-6.542	-24.0	212409	0.8	100	
Ca	43	2	He	-3.545	-146.6	87	17.6	100	
Ca	44	2	He	-3.721	-58.1	1690	5.2	100	
V	51	2	He	0.110	6.4	6821	1.8	2.5	
Cr	52	2	He	-0.048	-58.4	5301	3.2	2.5	
Mn	55	2	He	-0.368	-13.8	3154	9.0	2.5	
Fe	56	2	He	3.805	3.3	46054	1.1	100	
Co	59	2	He	0.040	21.3	737	11.3	2.5	
Ni	60	2	He	-0.373	-5.8	530	11.8	2.5	
Cu	63	2	He	-0.844	-1.2	2357	2.9	2	
Zn	66	2	He	-0.572	-2.6	407	5.1	2.5	
As	75	2	He	0.029	137.8	542	11.0	2.5	
Se	78	2	He	0.295	35.7	161	9.2	2	
B	11	1	nogas	-22.180	-2.1	106615	3.4	10	
Si	28	1	nogas	23.472	16.9	1431518	3.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	-27.705	-3.0	1590	2.5	100	
Ca	44	1	nogas	-35.748	-0.5	88977	1.3	100	
Fe	56	1	nogas	1.409	489.5	2593969	6.8	100	
Se	77	1	nogas	-17.447	-11.3	31801	2.7	2.5	
Se	82	1	nogas	-0.134	-27.2	203	7.5	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.278	47.8	2324	41.1	2.5	
Sn	118	1	nogas	-0.035	-173.6	2847	22.8	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.278	18.2	2480	8.3	2.5	
Sb	121	2	He	0.567	7.0	3804	4.9	2.5	
P	31	1	nogas	-1.689	-26.6	133497	1.1	10	
La	139	1	nogas	-42.183	-11.1	77	39.8	2.5	
Au	197	1	nogas	0.131	76.3	10	0.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1577519	3.32	1519169	103.84	70	125	
Ge	72	1	nogas	4156369	1.40	4041586	102.84	70	125	
In	115	1	nogas	3854642	2.83	3794837	101.58	70	125	
Bi	209	1	nogas	2826685	0.34	2841860	99.47	70	125	
Ge	72	2	He	992686	1.19	991378	100.13	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	350_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T01:41:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	96.314	3.059	893051	2.23	100	96.3	90	110	
Na	23	1	nogas	10028.619	8.101	312935424	2.36	10000	100.3	90	110	
Mg	24	1	nogas	10067.516	4.241	196964884	2.60	10000	100.7	90	110	
Al	27	1	nogas	97.156	1.510	2674675	1.80	100	97.2	90	110	
K	39	1	nogas	9977.740	3.826	258591772	0.77	10000	99.8	90	110	
Ti	47	1	nogas	98.127	1.001	242396	2.62	100	98.1	90	110	
V	51	1	nogas	92.094	2.866	3844402	2.94	100	92.1	90	110	
Cr	52	1	nogas	96.663	0.549	2846188	3.25	100	96.7	90	110	
Mn	55	1	nogas	99.906	2.132	3641796	1.05	100	99.9	90	110	
Co	59	1	nogas	94.723	2.633	2882388	0.77	100	94.7	90	110	
Ni	60	1	nogas	97.239	4.421	685232	2.27	100	97.2	90	110	
Cu	63	1	nogas	97.796	4.349	1566668	1.29	100	97.8	90	110	
Zn	66	1	nogas	100.431	0.663	558077	2.35	100	100.4	90	110	
As	75	1	nogas	91.641	2.705	745746	1.38	100	91.6	90	110	
Sr	88	1	nogas	97.397	5.397	3606455	2.49	100	97.4	90	110	
Ag	107	1	nogas	100.940	3.445	1873487	0.98	100	100.9	90	110	
Cd	111	1	nogas	101.372	2.581	389685	2.58	100	101.4	90	110	
Sb	121	1	nogas	98.633	4.507	1742020	3.04	100	98.6	90	110	
Tl	205	1	nogas	97.914	1.360	2591311	1.99	100	97.9	90	110	
Pb	208	1	nogas	105.386	2.398	3574910	2.40	100	105.4	90	110	
U	238	1	nogas	104.446	3.627	3589670	3.66	100	104.4	90	110	
[Pb]	206	1	nogas	97.388	2.250	868075	2.84	100	97.4	90	110	
[Pb]	207	1	nogas	97.474	2.512	777049	3.17	100	97.5	90	110	
Na	23	2	He	9901.565	2.196	18683398	1.31	10000	99.0	90	110	
Mg	24	2	He	9733.315	2.174	9900100	1.28	10000	97.3	90	110	
Al	27	2	He	100.974	0.698	63426	1.55	100	101.0	90	110	
K	39	2	He	10213.499	1.808	10608556	1.77	10000	102.1	90	110	
Ca	43	2	He	10096.879	3.843	29520	2.90	10000	101.0	90	110	
Ca	44	2	He	10028.413	0.909	497242	0.83	10000	100.3	90	110	
V	51	2	He	98.964	0.764	749887	0.55	100	99.0	90	110	
Cr	52	2	He	97.996	1.224	809039	0.66	100	98.0	90	110	
Mn	55	2	He	102.901	2.171	574604	1.97	100	102.9	90	110	
Fe	56	2	He	10270.049	1.648	70565287	1.88	10000	102.7	90	110	
Co	59	2	He	103.023	0.009	1137304	0.95	100	103.0	90	110	
Ni	60	2	He	104.721	0.918	303790	0.80	100	104.7	90	110	
Cu	63	2	He	99.984	2.289	728693	1.52	100	100.0	90	110	
Zn	66	2	He	101.963	2.100	178688	1.64	100	102.0	90	110	
As	75	2	He	99.071	1.999	164002	1.09	100	99.1	90	110	
Se	78	2	He	101.116	0.877	12955	1.45	100	101.1	90	110	
B	11	1	nogas	466.515	2.130	2898692	1.31	500	93.3	90	110	
Si	28	1	nogas	4831.655	1.162	65956167	2.03	5000	96.6	90	110	
Ca	43	1	nogas	9937.318	4.780	465034	2.69	10000	99.4	90	110	
Ca	44	1	nogas	9697.164	3.684	7460194	2.87	10000	97.0	90	110	
Fe	56	1	nogas	9888.988	2.168	302519398	1.19	10000	98.9	90	110	
Se	77	1	nogas	68.658	8.319	58009	2.26	100	68.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.562	3.349	34673	0.83	100	98.6	90	110	
Mo	95	1	nogas	96.900	2.084	726051	2.97	100	96.9	90	110	
Sn	118	1	nogas	97.134	2.098	1085720	1.40	100	97.1	90	110	
Ba	137	1	nogas	102.846	1.532	533815	1.42	100	102.8	90	110	
Sb	121	2	He	102.859	1.698	609545	0.97	100	102.9	90	110	
Li	7	1	nogas	98.885	3.932	2069844	1.54	100	98.9	90	110	
P	31	1	nogas	468.389	3.378	1104155	0.59	500	93.7	90	110	
La	139	1	nogas	106.628	26.350	1063	17.48	100	106.6	90	110	
Au	197	1	nogas	46.602	92.033	27	57.28	100	46.6	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1396015	2.96	1519169	91.89	70	125	
Ge	72	1	nogas	4188358	3.00	4041586	103.63	70	125	
In	115	1	nogas	3700347	1.09	3794837	97.51	70	125	
Bi	209	1	nogas	2887402	0.65	2841860	101.60	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	999447	0.96	991378	100.81	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	351_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T01:43:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.075	17.2	813	21.0	1	
Na	23	1	nogas	0.085	6973.1	2380552	5.3	100	
Mg	24	1	nogas	2.377	37.1	129196	10.7	100	
Al	27	1	nogas	-1.942	-2.9	31209	1.1	5	
K	39	1	nogas	-9.519	-204.0	9330852	1.2	100	
Ti	47	1	nogas	0.267	107.0	1021	68.9	2.5	
V	51	1	nogas	-6.134	-8.2	504155	3.3	2.5	
Cr	52	1	nogas	-0.347	-34.7	51950	1.0	2.5	
Mn	55	1	nogas	-0.559	-6.7	31617	1.8	2.5	
Co	59	1	nogas	0.058	29.6	2794	13.0	2.5	
Ni	60	1	nogas	0.032	66.4	1907	7.5	2.5	
Cu	63	1	nogas	-3.107	-1.0	6338	3.0	2	
Zn	66	1	nogas	-0.248	-10.0	1427	3.9	2.5	
As	75	1	nogas	-2.422	-29.6	89817	1.2	2.5	
Sr	88	1	nogas	0.066	18.1	7555	2.4	2.5	
Ag	107	1	nogas	0.005	326.5	2517	6.7	2.5	
Cd	111	1	nogas	0.054	43.3	243	39.9	1	
Sb	121	1	nogas	1.048	22.3	19725	15.0	2.5	
Tl	205	1	nogas	0.512	38.7	14234	42.6	1	
Pb	208	1	nogas	0.043	35.9	2597	20.0	2.5	
U	238	1	nogas	0.119	63.1	5328	54.8	2.5	
[Pb]	206	1	nogas	0.041	47.1	680	28.4	2.5	
[Pb]	207	1	nogas	0.034	19.8	550	11.4	2.5	
Na	23	2	He	0.020	15771.7	199749	4.4	100	
Mg	24	2	He	1.672	13.6	6178	2.3	100	
Al	27	2	He	-3.671	-17.7	1037	37.6	5	
K	39	2	He	-2.151	-73.4	216876	0.7	100	
Ca	43	2	He	-5.505	-121.2	83	25.0	100	
Ca	44	2	He	-4.668	-47.3	1690	8.1	100	
V	51	2	He	-0.018	-109.5	6023	1.0	2.5	
Cr	52	2	He	-0.048	-16.0	5448	2.5	2.5	
Mn	55	2	He	-0.487	-3.9	2567	4.7	2.5	
Fe	56	2	He	4.251	8.6	50403	3.6	100	
Co	59	2	He	0.051	6.6	883	5.8	2.5	
Ni	60	2	He	-0.387	-1.7	503	3.0	2.5	
Cu	63	2	He	-0.864	-1.5	2277	2.8	2	
Zn	66	2	He	-0.556	-7.2	447	16.8	2.5	
As	75	2	He	-0.027	-82.6	463	7.6	2.5	
Se	78	2	He	0.355	12.0	173	2.9	2	
B	11	1	nogas	-17.856	-6.0	127342	4.1	10	
Si	28	1	nogas	27.801	30.6	1502090	1.7	5	CCB Main CR1 Failed
Ca	43	1	nogas	-27.506	-8.8	1613	1.6	100	
Ca	44	1	nogas	-38.014	-18.5	88073	0.4	100	
Fe	56	1	nogas	-1.985	-404.8	2513415	4.6	100	
Se	77	1	nogas	-31.088	-10.9	27995	2.8	2.5	
Se	82	1	nogas	-0.247	-75.1	163	33.7	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.309	45.2	2554	34.8	2.5	
Sn	118	1	nogas	0.020	212.4	3587	14.3	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.067	31.9	1380	8.8	2.5	
Sb	121	2	He	0.788	11.5	5244	9.8	2.5	
P	31	1	nogas	-2.902	-108.3	132275	1.1	10	
La	139	1	nogas	-45.806	-3.7	53	21.7	2.5	
Au	197	1	nogas	64.581	90.6	33	62.4	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1493245	5.29	1519169	98.29	70	125	
Ge	72	1	nogas	4204374	5.94	4041586	104.03	70	125	
In	115	1	nogas	3953518	1.88	3794837	104.18	70	125	
Bi	209	1	nogas	2896732	5.18	2841860	101.93	70	125	
Ge	72	2	He	1019586	1.54	991378	102.85	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	362_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T02:05:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	103.474	3.776	892529	1.78	100	103.5	90	110	
Na	23	1	nogas	11513.856	5.116	374684367	0.71	10000	115.1	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10119.481	3.265	206491005	2.50	10000	101.2	90	110	
Al	27	1	nogas	107.334	3.187	2813996	3.61	100	107.3	90	110	
K	39	1	nogas	10812.796	1.958	267008773	2.34	10000	108.1	90	110	
Ti	47	1	nogas	104.528	0.901	246538	1.24	100	104.5	90	110	
V	51	1	nogas	115.134	1.712	4419948	1.93	100	115.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	103.893	3.142	2916060	2.92	100	103.9	90	110	
Mn	55	1	nogas	105.771	0.612	3679824	0.56	100	105.8	90	110	
Co	59	1	nogas	103.377	1.905	3004834	1.81	100	103.4	90	110	
Ni	60	1	nogas	107.816	0.238	725803	0.74	100	107.8	90	110	
Cu	63	1	nogas	101.355	0.531	1549671	0.83	100	101.4	90	110	
Zn	66	1	nogas	102.460	0.882	543621	1.18	100	102.5	90	110	
As	75	1	nogas	108.727	0.924	826169	1.23	100	108.7	90	110	
Sr	88	1	nogas	108.328	3.056	3833470	3.15	100	108.3	90	110	
Ag	107	1	nogas	99.933	2.556	1771980	2.13	100	99.9	90	110	
Cd	111	1	nogas	100.218	2.724	367977	0.81	100	100.2	90	110	
Sb	121	1	nogas	94.337	1.898	1591834	1.58	100	94.3	90	110	
Tl	205	1	nogas	99.917	2.243	2145749	0.46	100	99.9	90	110	
Pb	208	1	nogas	86.990	1.933	2951060	1.93	100	87.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	103.920	0.874	2899202	2.06	100	103.9	90	110	
[Pb]	206	1	nogas	101.008	4.503	730369	2.70	100	101.0	90	110	
[Pb]	207	1	nogas	99.120	3.197	641068	1.17	100	99.1	90	110	
Na	23	2	He	11704.274	1.630	23101998	0.30	10000	117.0	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10436.543	1.530	11122156	0.75	10000	104.4	90	110	
Al	27	2	He	109.841	4.024	71974	2.87	100	109.8	90	110	
K	39	2	He	11700.000	0.609	12120671	0.60	10000	117.0	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10728.645	1.721	32869	2.66	10000	107.3	90	110	
Ca	44	2	He	10771.597	1.258	559411	0.40	10000	107.7	90	110	
V	51	2	He	101.738	2.159	807415	0.55	100	101.7	90	110	
Cr	52	2	He	98.580	1.990	852621	1.13	100	98.6	90	110	
Mn	55	2	He	104.320	2.914	610136	1.35	100	104.3	90	110	
Fe	56	2	He	10023.538	2.342	72145881	0.93	10000	100.2	90	110	
Co	59	2	He	98.962	3.475	1144265	1.90	100	99.0	90	110	
Ni	60	2	He	100.101	2.592	304269	1.09	100	100.1	90	110	
Cu	63	2	He	95.703	1.659	731195	1.06	100	95.7	90	110	
Zn	66	2	He	98.993	1.601	181814	1.48	100	99.0	90	110	
As	75	2	He	98.870	2.466	171466	0.88	100	98.9	90	110	
Se	78	2	He	100.244	2.144	13455	1.32	100	100.2	90	110	
B	11	1	nogas	729.880	7.324	4097445	1.81	500	146.0	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5256.405	1.611	68425264	1.13	5000	105.1	90	110	
Ca	43	1	nogas	11124.908	1.367	497163	1.87	10000	111.2	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	10934.883	2.053	8021408	2.12	10000	109.3	90	110	
Fe	56	1	nogas	10331.759	0.041	301782757	0.49	10000	103.3	90	110	
Se	77	1	nogas	191.244	2.136	90738	1.70	100	191.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.564	2.075	34797	2.41	100	103.6	90	110	
Mo	95	1	nogas	100.214	1.715	717044	2.10	100	100.2	90	110	
Sn	118	1	nogas	97.992	1.680	1046540	2.06	100	98.0	90	110	
Ba	137	1	nogas	96.771	2.595	479835	0.86	100	96.8	90	110	
Sb	121	2	He	92.178	4.119	572202	2.50	100	92.2	90	110	
Li	7	1	nogas	107.383	4.821	2081813	1.80	100	107.4	90	110	
P	31	1	nogas	507.412	1.251	1131777	1.62	500	101.5	90	110	
La	139	1	nogas	83.630	8.890	870	5.97	100	83.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	122.326	42.701	43	35.25	100	122.3	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1299767	5.25	1519169	85.56	70	125	
Ge	72	1	nogas	3998949	0.52	4041586	98.95	70	125	
In	115	1	nogas	3536376	3.29	3794837	93.19	70	125	
Bi	209	1	nogas	2343833	1.99	2841860	82.48	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1047208	1.65	991378	105.63	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	363_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T02:07:57-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.081	18.2	963	21.6	1	
Na	23	1	nogas	433.864	7.3	17684122	2.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	15.138	5.7	422069	5.6	100	
Al	27	1	nogas	0.426	825.6	106606	106.9	5	
K	39	1	nogas	-11.422	-193.0	9840861	3.1	100	
Ti	47	1	nogas	0.147	74.3	787	46.8	2.5	
V	51	1	nogas	4.945	34.7	933960	2.4	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.070	235.5	67814	2.8	2.5	
Mn	55	1	nogas	-0.688	-2.1	28721	10.5	2.5	
Co	59	1	nogas	0.061	2.9	3079	9.9	2.5	
Ni	60	1	nogas	3.328	7.3	26629	2.6	2.5	CCB Main CR1 Failed
Cu	63	1	nogas	-2.043	-3.6	24220	4.1	2	
Zn	66	1	nogas	0.027	198.8	3127	6.0	2.5	
As	75	1	nogas	7.476	28.8	168215	1.0	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	1.077	16.6	47514	6.5	2.5	
Ag	107	1	nogas	0.180	4.0	6154	11.6	2.5	
Cd	111	1	nogas	0.048	33.8	223	35.9	1	
Sb	121	1	nogas	0.706	21.0	14844	28.4	2.5	
Tl	205	1	nogas	0.438	45.0	11528	53.8	1	
Pb	208	1	nogas	0.046	43.3	2723	25.0	2.5	
U	238	1	nogas	0.127	57.8	5291	57.7	2.5	
[Pb]	206	1	nogas	0.045	15.6	657	8.9	2.5	
[Pb]	207	1	nogas	0.037	61.8	543	43.5	2.5	
Na	23	2	He	550.364	1.3	1235635	1.7	100	CCB Main CR1 Failed
Mg	24	2	He	18.064	1.2	22951	0.9	100	
Al	27	2	He	-3.915	-5.9	880	15.4	5	
K	39	2	He	17.473	4.0	236838	0.3	100	
Ca	43	2	He	23.107	43.4	167	18.3	100	
Ca	44	2	He	23.366	24.6	3070	9.2	100	
V	51	2	He	0.510	3.4	9967	0.7	2.5	
Cr	52	2	He	-0.004	-1224.1	5748	7.2	2.5	
Mn	55	2	He	-0.538	-8.3	2257	11.7	2.5	
Fe	56	2	He	4.480	8.4	51523	5.6	100	
Co	59	2	He	0.034	10.5	683	5.9	2.5	
Ni	60	2	He	-0.395	-2.8	477	7.4	2.5	
Cu	63	2	He	-0.918	-1.7	1863	6.2	2	
Zn	66	2	He	-0.574	-2.7	410	6.5	2.5	
As	75	2	He	0.080	69.2	637	14.1	2.5	
Se	78	2	He	0.524	39.2	193	13.9	2	
B	11	1	nogas	103.831	6.4	970048	4.0	10	CCB Main CR1 Failed
Si	28	1	nogas	42.886	9.4	1816763	10.9	5	CCB Main CR1 Failed
Ca	43	1	nogas	83.468	8.3	7212	7.7	100	
Ca	44	1	nogas	15.998	78.0	136741	1.9	100	
Fe	56	1	nogas	9.746	20.4	3061556	11.4	100	
Se	77	1	nogas	41.154	26.2	52794	2.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.245	48.9	357	4.3	2	
Mo	95	1	nogas	0.286	44.3	2630	49.1	2.5	
Sn	118	1	nogas	-0.010	-255.0	3287	18.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.008	64.3	1067	7.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.470	5.7	3294	5.5	2.5	
P	31	1	nogas	-9.211	-47.3	126252	1.5	10	
La	139	1	nogas	-46.725	-12.0	50	91.7	2.5	
Au	197	1	nogas	43.649	53.3	23	24.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1660412	8.54	1519169	109.30	70	125	
Ge	72	1	nogas	4464299	9.27	4041586	110.46	70	125	
In	115	1	nogas	4002939	9.40	3794837	105.48	70	125	
Bi	209	1	nogas	2682233	11.57	2841860	94.38	70	125	
Ge	72	2	He	1009345	0.65	991378	101.81	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	373_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T02:27:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.137	0.889	923754	1.98	100	94.1	90	110	
Na	23	1	nogas	10088.149	5.317	338111499	4.23	10000	100.9	90	110	
Mg	24	1	nogas	10065.841	1.671	211305480	2.54	10000	100.7	90	110	
Al	27	1	nogas	99.161	0.645	2845982	0.42	100	99.2	90	110	
K	39	1	nogas	10184.037	2.665	275245231	2.15	10000	101.8	90	110	
Ti	47	1	nogas	97.846	0.892	252101	0.67	100	97.8	90	110	
V	51	1	nogas	96.739	1.096	4174974	0.85	100	96.7	90	110	
Cr	52	1	nogas	98.901	0.264	3035486	0.78	100	98.9	90	110	
Mn	55	1	nogas	99.426	1.867	3781460	1.26	100	99.4	90	110	
Co	59	1	nogas	98.249	1.553	3119538	1.51	100	98.2	90	110	
Ni	60	1	nogas	99.168	0.464	729370	0.84	100	99.2	90	110	
Cu	63	1	nogas	99.312	2.071	1659731	1.97	100	99.3	90	110	
Zn	66	1	nogas	99.095	0.984	574384	0.60	100	99.1	90	110	
As	75	1	nogas	93.447	1.400	791273	1.86	100	93.4	90	110	
Sr	88	1	nogas	99.713	1.120	3854844	1.47	100	99.7	90	110	
Ag	107	1	nogas	101.528	0.471	1966650	1.15	100	101.5	90	110	
Cd	111	1	nogas	100.633	2.978	412020	2.73	100	100.6	90	110	
Sb	121	1	nogas	98.126	2.153	1808510	1.50	100	98.1	90	110	
Tl	205	1	nogas	94.923	3.753	2664370	2.65	100	94.9	90	110	
Pb	208	1	nogas	110.839	3.213	3759832	3.21	100	110.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	102.615	2.612	3740868	1.21	100	102.6	90	110	
[Pb]	206	1	nogas	97.024	1.431	917514	2.31	100	97.0	90	110	
[Pb]	207	1	nogas	97.092	2.293	821272	3.70	100	97.1	90	110	
Na	23	2	He	9899.584	0.847	19683753	0.77	10000	99.0	90	110	
Mg	24	2	He	9653.626	0.792	10346893	0.72	10000	96.5	90	110	
Al	27	2	He	99.148	1.075	65677	0.96	100	99.1	90	110	
K	39	2	He	10635.816	0.835	11038150	0.82	10000	106.4	90	110	
Ca	43	2	He	9876.817	3.383	30435	3.42	10000	98.8	90	110	
Ca	44	2	He	9756.346	1.066	509761	1.05	10000	97.6	90	110	
V	51	2	He	97.213	0.917	776258	0.93	100	97.2	90	110	
Cr	52	2	He	98.070	2.342	853121	2.37	100	98.1	90	110	
Mn	55	2	He	101.043	1.296	594612	1.30	100	101.0	90	110	
Fe	56	2	He	9979.138	1.711	72243977	1.73	10000	99.8	90	110	
Co	59	2	He	100.068	1.058	1163932	1.04	100	100.1	90	110	
Ni	60	2	He	101.557	1.604	310470	1.55	100	101.6	90	110	
Cu	63	2	He	98.802	1.967	758881	1.89	100	98.8	90	110	
Zn	66	2	He	100.058	1.785	184795	1.70	100	100.1	90	110	
As	75	2	He	98.016	0.540	170980	0.47	100	98.0	90	110	
Se	78	2	He	97.494	0.747	13165	0.75	100	97.5	90	110	
B	11	1	nogas	517.176	2.432	3374240	0.97	500	103.4	90	110	
Si	28	1	nogas	4835.365	0.672	68852202	0.30	5000	96.7	90	110	
Ca	43	1	nogas	10063.828	0.177	491538	0.77	10000	100.6	90	110	
Ca	44	1	nogas	10229.597	0.486	8204614	0.44	10000	102.3	90	110	
Fe	56	1	nogas	10032.633	1.085	320167790	0.51	10000	100.3	90	110	
Se	77	1	nogas	87.492	7.467	66465	3.86	100	87.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.883	1.766	36664	1.09	100	99.9	90	110	
Mo	95	1	nogas	97.892	1.199	765049	0.71	100	97.9	90	110	
Sn	118	1	nogas	98.212	5.093	1168315	0.47	100	98.2	90	110	
Ba	137	1	nogas	100.383	5.935	554423	2.24	100	100.4	90	110	
Sb	121	2	He	98.647	1.687	616005	1.64	100	98.6	90	110	
Li	7	1	nogas	100.245	5.040	2219532	5.07	100	100.2	90	110	
P	31	1	nogas	460.261	1.420	1134663	0.35	500	92.1	90	110	
La	139	1	nogas	106.253	14.889	1133	13.51	100	106.3	90	110	
Au	197	1	nogas	42.113	95.902	27	57.28	100	42.1	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1476991	2.88	1519169	97.22	70	125	
Ge	72	1	nogas	4368245	0.89	4041586	108.08	70	125	
In	115	1	nogas	3944564	5.10	3794837	103.95	70	125	
Bi	209	1	nogas	3063462	1.56	2841860	107.80	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1053035	0.08	991378	106.22	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	374_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T02:29:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.053	10.2	647	9.1	1	
Na	23	1	nogas	172.787	2.5	8238801	2.2	100	CCB Main CR1 Failed
Mg	24	1	nogas	3.616	7.3	161683	3.5	100	
Al	27	1	nogas	-1.967	-1.3	32472	2.0	5	
K	39	1	nogas	-25.822	-5.9	9486985	0.1	100	
Ti	47	1	nogas	0.058	41.9	537	11.8	2.5	
V	51	1	nogas	-1.885	-22.1	689540	1.9	2.5	
Cr	52	1	nogas	-0.169	-16.3	60723	1.4	2.5	
Mn	55	1	nogas	-0.759	-2.6	25945	3.0	2.5	
Co	59	1	nogas	0.049	22.7	2690	13.2	2.5	
Ni	60	1	nogas	0.253	14.4	3677	7.2	2.5	
Cu	63	1	nogas	-3.101	-1.1	6841	7.8	2	
Zn	66	1	nogas	-0.096	-43.5	2414	10.0	2.5	
As	75	1	nogas	-0.168	-169.3	112263	2.1	2.5	
Sr	88	1	nogas	0.313	4.8	17796	3.6	2.5	
Ag	107	1	nogas	0.019	22.2	2960	2.7	2.5	
Cd	111	1	nogas	0.035	28.4	173	24.0	1	
Sb	121	1	nogas	0.739	22.3	15284	20.1	2.5	
Tl	205	1	nogas	0.412	56.9	12383	52.9	1	
Pb	208	1	nogas	0.048	48.7	2787	28.6	2.5	
U	238	1	nogas	0.110	63.6	5388	47.0	2.5	
[Pb]	206	1	nogas	0.034	54.7	673	26.2	2.5	
[Pb]	207	1	nogas	0.025	91.8	527	36.8	2.5	
Na	23	2	He	183.586	2.8	584948	0.7	100	CCB Main CR1 Failed
Mg	24	2	He	4.757	29.0	10012	17.5	100	
Al	27	2	He	-0.289	-2324.6	3357	133.5	5	
K	39	2	He	-7.042	-47.2	211900	1.6	100	
Ca	43	2	He	0.147	8767.1	107	39.0	100	
Ca	44	2	He	8.338	7.3	2497	2.9	100	
V	51	2	He	0.116	36.2	7500	2.3	2.5	
Cr	52	2	He	-0.079	-13.7	5518	2.3	2.5	
Mn	55	2	He	-0.695	-2.7	1483	7.9	2.5	
Fe	56	2	He	3.348	3.9	46970	3.2	100	
Co	59	2	He	0.036	35.8	770	22.5	2.5	
Ni	60	2	He	-0.399	-2.7	500	8.7	2.5	
Cu	63	2	He	-0.925	-3.0	1947	8.9	2	
Zn	66	2	He	-0.611	-6.2	373	21.5	2.5	
As	75	2	He	0.012	126.6	563	3.9	2.5	
Se	78	2	He	0.312	1.4	178	2.2	2	
B	11	1	nogas	23.745	6.5	419293	2.1	10	CCB Main CR1 Failed
Si	28	1	nogas	14.440	8.1	1407624	0.9	5	CCB Main CR1 Failed
Ca	43	1	nogas	-1.608	-146.6	3000	3.6	100	
Ca	44	1	nogas	-29.152	-0.9	100826	0.3	100	
Fe	56	1	nogas	0.870	562.8	2768297	5.5	100	
Se	77	1	nogas	-10.395	-34.6	36400	3.4	2.5	
Se	82	1	nogas	-0.146	-102.1	213	25.8	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.250	40.9	2280	35.6	2.5	
Sn	118	1	nogas	-0.030	-189.1	3134	22.2	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.023	-54.8	927	7.2	2.5	
Sb	121	2	He	0.494	4.3	3697	5.4	2.5	
P	31	1	nogas	-8.388	-16.9	128564	2.3	10	
La	139	1	nogas	-40.816	-4.7	93	16.4	2.5	
Au	197	1	nogas	5.717	271.7	13	43.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1635148	1.05	1519169	107.63	70	125	
Ge	72	1	nogas	4461159	0.29	4041586	110.38	70	125	
In	115	1	nogas	4147272	1.02	3794837	109.29	70	125	
Bi	209	1	nogas	3175278	3.82	2841860	111.73	70	125	
Ge	72	2	He	1085849	2.25	991378	109.53	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	385_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T02:51:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	90.103	2.096	820524	2.99	100	90.1	90	110	
Na	23	1	nogas	9804.393	5.988	291440815	2.69	10000	98.0	90	110	
Mg	24	1	nogas	9908.639	7.709	184194596	2.18	10000	99.1	90	110	
Al	27	1	nogas	100.591	0.414	2593973	0.77	100	100.6	90	110	
K	39	1	nogas	9862.620	1.165	239899205	1.24	10000	98.6	90	110	
Ti	47	1	nogas	97.108	2.826	224901	2.84	100	97.1	90	110	
V	51	1	nogas	88.302	2.507	3483558	1.87	100	88.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	93.885	1.774	2592786	0.79	100	93.9	90	110	
Mn	55	1	nogas	96.697	3.238	3307405	3.46	100	96.7	90	110	
Co	59	1	nogas	95.673	1.741	2730299	0.60	100	95.7	90	110	
Ni	60	1	nogas	96.092	3.768	635183	2.96	100	96.1	90	110	
Cu	63	1	nogas	95.263	5.632	1432648	4.44	100	95.3	90	110	
Zn	66	1	nogas	96.982	2.097	505297	1.07	100	97.0	90	110	
As	75	1	nogas	88.267	0.380	677331	0.96	100	88.3	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	98.706	2.440	3429692	1.99	100	98.7	90	110	
Ag	107	1	nogas	99.885	2.716	1738822	1.58	100	99.9	90	110	
Cd	111	1	nogas	97.390	6.271	361220	2.44	100	97.4	90	110	
Sb	121	1	nogas	92.676	3.073	1535784	3.92	100	92.7	90	110	
Tl	205	1	nogas	97.871	2.656	2364075	2.05	100	97.9	90	110	
Pb	208	1	nogas	96.841	1.365	3285140	1.36	100	96.8	90	110	
U	238	1	nogas	104.843	2.756	3288800	1.72	100	104.8	90	110	
[Pb]	206	1	nogas	99.139	0.575	806625	1.12	100	99.1	90	110	
[Pb]	207	1	nogas	98.033	0.645	713333	1.07	100	98.0	90	110	
Na	23	2	He	9629.534	1.746	16981536	2.21	10000	96.3	90	110	
Mg	24	2	He	9347.042	1.177	8882736	1.69	10000	93.5	90	110	
Al	27	2	He	96.722	3.612	56872	2.99	100	96.7	90	110	
K	39	2	He	8992.675	1.045	9366695	1.02	10000	89.9	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9418.359	2.240	25731	0.86	10000	94.2	90	110	
Ca	44	2	He	9432.567	2.544	436955	1.64	10000	94.3	90	110	
V	51	2	He	94.263	0.413	667532	1.07	100	94.3	90	110	
Cr	52	2	He	93.813	1.618	723716	0.77	100	93.8	90	110	
Mn	55	2	He	96.971	1.944	506070	0.52	100	97.0	90	110	
Fe	56	2	He	9690.168	1.016	62196104	0.90	10000	96.9	90	110	
Co	59	2	He	97.572	2.575	1006019	1.13	100	97.6	90	110	
Ni	60	2	He	99.699	1.660	270232	0.69	100	99.7	90	110	
Cu	63	2	He	95.933	0.720	653540	1.31	100	95.9	90	110	
Zn	66	2	He	96.777	1.184	158523	2.02	100	96.8	90	110	
As	75	2	He	93.391	3.490	144422	2.03	100	93.4	90	110	
Se	78	2	He	93.175	1.263	11159	0.66	100	93.2	90	110	
B	11	1	nogas	458.931	5.328	2801287	1.18	500	91.8	90	110	
Si	28	1	nogas	4821.821	2.038	61712122	0.90	5000	96.4	90	110	
Ca	43	1	nogas	9717.999	2.896	426769	3.34	10000	97.2	90	110	
Ca	44	1	nogas	9770.872	3.134	7048701	2.87	10000	97.7	90	110	
Fe	56	1	nogas	9615.730	2.834	275908598	2.22	10000	96.2	90	110	
Se	77	1	nogas	65.133	3.501	53408	1.78	100	65.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.241	2.115	32089	0.97	100	97.2	90	110	
Mo	95	1	nogas	96.585	1.344	678505	1.16	100	96.6	90	110	
Sn	118	1	nogas	95.249	2.271	1028905	4.08	100	95.2	90	110	
Ba	137	1	nogas	96.186	6.989	481538	0.72	100	96.2	90	110	
Sb	121	2	He	96.360	1.329	533463	0.14	100	96.4	90	110	
Li	7	1	nogas	94.071	1.912	1940190	3.74	100	94.1	90	110	
P	31	1	nogas	449.936	2.086	999919	1.31	500	90.0	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	91.621	10.931	930	4.93	100	91.6	90	110	
Au	197	1	nogas	115.533	61.118	47	49.49	100	115.5	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1371361	4.99	1519169	90.27	70	125	
Ge	72	1	nogas	3926508	1.16	4041586	97.15	70	125	
In	115	1	nogas	3578827	6.23	3794837	94.31	70	125	
Bi	209	1	nogas	2635849	1.02	2841860	92.75	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	933679	1.46	991378	94.18	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	386_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T02:53:30-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.123	18.0	1190	15.7	1	
Na	23	1	nogas	111.427	7.5	5459320	1.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	5.314	26.0	173390	11.7	100	
Al	27	1	nogas	-1.331	-39.8	43945	30.2	5	
K	39	1	nogas	-2.369	-271.2	8779946	1.1	100	
Ti	47	1	nogas	0.105	38.7	573	16.8	2.5	
V	51	1	nogas	-6.752	-5.9	445737	3.5	2.5	
Cr	52	1	nogas	-0.412	-9.3	46248	1.6	2.5	
Mn	55	1	nogas	-0.683	-1.3	25057	0.5	2.5	
Co	59	1	nogas	0.102	9.9	3814	6.8	2.5	
Ni	60	1	nogas	0.336	2.1	3737	1.1	2.5	
Cu	63	1	nogas	-3.004	-1.4	7322	7.6	2	
Zn	66	1	nogas	0.103	16.1	3114	2.1	2.5	
As	75	1	nogas	-3.210	-9.7	77863	3.2	2.5	
Sr	88	1	nogas	0.174	2.8	10700	1.8	2.5	
Ag	107	1	nogas	0.185	13.9	5421	7.7	2.5	
Cd	111	1	nogas	0.082	16.8	313	15.7	1	
Sb	121	1	nogas	0.962	20.4	16895	18.2	2.5	
Tl	205	1	nogas	0.567	46.1	14898	46.3	1	
Pb	208	1	nogas	0.068	34.2	3457	22.8	2.5	
U	238	1	nogas	0.172	60.1	6795	52.0	2.5	
[Pb]	206	1	nogas	0.060	47.5	813	31.6	2.5	
[Pb]	207	1	nogas	0.069	17.8	793	12.9	2.5	
Na	23	2	He	104.161	2.5	402044	0.7	100	CCB Main CR1 Failed
Mg	24	2	He	4.858	22.6	9579	12.0	100	
Al	27	2	He	-3.912	-2.4	900	6.2	5	
K	39	2	He	-16.043	-8.2	202744	0.7	100	
Ca	43	2	He	-15.698	-44.5	53	39.0	100	
Ca	44	2	He	-6.031	-29.2	1637	6.0	100	
V	51	2	He	-0.096	-32.9	5477	4.0	2.5	
Cr	52	2	He	-0.120	-34.5	4887	7.2	2.5	
Mn	55	2	He	-0.663	-6.5	1587	16.1	2.5	
Fe	56	2	He	6.347	11.2	65771	7.8	100	
Co	59	2	He	0.078	16.2	1200	11.8	2.5	
Ni	60	2	He	-0.356	-6.5	600	10.9	2.5	
Cu	63	2	He	-0.826	-3.4	2584	8.6	2	
Zn	66	2	He	-0.590	-5.0	390	13.6	2.5	
As	75	2	He	-0.007	-514.1	501	11.9	2.5	
Se	78	2	He	0.275	32.7	164	7.6	2	
B	11	1	nogas	3.628	35.2	241949	3.1	10	
Si	28	1	nogas	52.426	3.9	1694052	2.1	5	CCB Main CR1 Failed
Ca	43	1	nogas	-9.019	-53.9	2287	9.4	100	
Ca	44	1	nogas	-30.955	-3.7	86298	1.5	100	
Fe	56	1	nogas	2.243	343.3	2441851	8.2	100	
Se	77	1	nogas	-34.416	-14.0	24907	6.0	2.5	
Se	82	1	nogas	0.055	436.9	250	30.2	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.350	38.1	2670	33.9	2.5	
Sn	118	1	nogas	0.000	13028.0	2940	18.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.035	37.4	1060	5.9	2.5	
Sb	121	2	He	0.706	3.2	4797	3.0	2.5	
P	31	1	nogas	-11.357	-9.9	105981	2.3	10	
La	139	1	nogas	-47.903	-11.2	33	96.4	2.5	
Au	197	1	nogas	-9.452	-354.7	7	173.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1392832	1.90	1519169	91.68	70	125	
Ge	72	1	nogas	3874115	0.66	4041586	95.86	70	125	
In	115	1	nogas	3483624	3.11	3794837	91.80	70	125	
Bi	209	1	nogas	2768576	1.53	2841860	97.42	70	125	
Ge	72	2	He	1029771	0.63	991378	103.87	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	390LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T03:01:25-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	4.437	3.714	40557	2.24	5	88.7	70	130	
Na	23	1	nogas	680.149	26.588	22064158	20.38	500	136.0	70	130	LLICV Main CR1 Failed
Mg	24	1	nogas	509.925	7.901	9500543	4.19	500	102.0	70	130	
Al	27	1	nogas	6.987	18.678	253358	10.91	5	139.7	70	130	LLICV Main CR1 Failed
K	39	1	nogas	491.353	6.025	20550703	1.33	500	98.3	70	130	
Ti	47	1	nogas	4.778	6.625	11440	6.39	5	95.6	70	130	
V	51	1	nogas	-2.200	-14.496	599815	2.90	5	-44.0	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.361	4.305	176533	0.63	5	87.2	70	130	
Mn	55	1	nogas	4.979	4.878	217166	1.61	5	99.6	70	130	
Co	59	1	nogas	4.835	2.594	139553	2.03	5	96.7	70	130	
Ni	60	1	nogas	5.500	3.030	38013	0.56	5	110.0	70	130	
Cu	63	1	nogas	2.182	9.206	83035	1.68	5	43.6	70	130	LLICV Main CR1 Failed
Zn	66	1	nogas	5.820	4.541	32934	1.86	5	116.4	70	130	
As	75	1	nogas	0.722	28.389	105137	2.41	5	14.4	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.543	11.538	197777	9.07	5	110.9	70	130	
Ag	107	1	nogas	5.032	5.368	90137	2.94	5	100.6	70	130	
Cd	111	1	nogas	4.813	2.541	18146	1.15	5	96.3	70	130	
Sb	121	1	nogas	4.940	3.372	83369	1.82	5	98.8	70	130	
Tl	205	1	nogas	4.477	8.222	114935	2.84	5	89.5	70	130	
Pb	208	1	nogas	4.891	2.121	167019	2.11	5	97.8	70	130	
U	238	1	nogas	4.817	3.447	161346	3.09	5	96.3	70	130	
[Pb]	206	1	nogas	4.775	9.444	41393	3.50	5	95.5	70	130	
[Pb]	207	1	nogas	4.685	5.219	36388	0.97	5	93.7	70	130	
Na	23	2	He	545.849	5.949	1131003	4.46	500	109.2	70	130	
Mg	24	2	He	488.263	0.814	466297	1.45	500	97.7	70	130	
Al	27	2	He	3.905	13.393	5154	6.13	5	78.1	70	130	
K	39	2	He	435.631	1.477	662201	0.99	500	87.1	70	130	
Ca	43	2	He	518.321	10.965	1497	9.74	500	103.7	70	130	
Ca	44	2	He	493.836	4.181	24463	3.24	500	98.8	70	130	
V	51	2	He	4.667	0.925	38280	0.28	5	93.3	70	130	
Cr	52	2	He	4.595	1.624	40404	0.76	5	91.9	70	130	
Mn	55	2	He	4.731	5.095	29220	4.04	5	94.6	70	130	
Fe	56	2	He	485.106	2.097	3121168	2.21	500	97.0	70	130	
Co	59	2	He	4.953	0.644	51175	0.75	5	99.1	70	130	
Ni	60	2	He	5.198	7.777	15463	7.00	5	104.0	70	130	
Cu	63	2	He	4.346	2.763	37018	1.64	5	86.9	70	130	
Zn	66	2	He	5.201	2.410	9729	2.65	5	104.0	70	130	
As	75	2	He	4.626	1.539	7573	0.83	5	92.5	70	130	
Se	78	2	He	4.772	0.775	679	0.74	5	95.4	70	130	
B	11	1	nogas	21.011	25.136	336363	4.71	25	84.0	70	130	
Si	28	1	nogas	260.498	6.474	4352602	2.64	25	1042.0	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	514.317	10.073	25241	6.79	500	102.9	70	130	
Ca	44	1	nogas	490.894	9.442	459841	4.91	500	98.2	70	130	
Fe	56	1	nogas	476.799	3.046	16047255	0.26	500	95.4	70	130	
Se	77	1	nogas	-32.743	-9.166	25825	1.01	5	-654.9	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.475	16.579	1707	12.42	5	89.5	70	130	
Mo	95	1	nogas	4.853	5.993	34471	3.75	5	97.1	70	130	
Sn	118	1	nogas	4.617	4.499	53476	1.71	5	92.3	70	130	
Ba	137	1	nogas	4.894	0.292	25786	3.56	5	97.9	70	130	
Sb	121	2	He	5.003	1.955	28029	2.00	5	100.1	70	130	
Li	7	1	nogas	6.001	3.483	230057	3.64	5	120.0	70	130	
P	31	1	nogas	15.287	29.338	159611	3.15	25	61.1	70	130	LLICV Main CR1 Failed
La	139	1	nogas	2.908	56.830	367	5.68	5	58.2	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	50.124	172.417	27	108.25	5	1002.5	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1374984	3.99	1519169	90.51	70	125	
Ge	72	1	nogas	3945784	2.38	4041586	97.63	70	125	
In	115	1	nogas	3627482	3.29	3794837	95.59	70	125	
Bi	209	1	nogas	2799394	6.11	2841860	98.51	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	930494	0.67	991378	93.86	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	391SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T03:03:23-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	234CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.746	1.746	4.37	16097	0.01	2000	
Na	23	1	nogas	234.487	234.487	3.59	8991549	0.00	200000	
Mg	24	1	nogas	202.281	202.281	2.92	3779020	0.01	200000	
Al	27	1	nogas	1.425	1.425	14.84	112048	0.00	2000	
K	39	1	nogas	201.568	201.568	6.94	13512678	0.00	200000	
Ti	47	1	nogas	1.922	1.922	7.51	4724	0.04	2000	
V	51	1	nogas	-4.235	-4.235	-17.10	525640	0.00	2000	
Cr	52	1	nogas	1.467	1.467	9.36	96460	0.00	2000	
Mn	55	1	nogas	1.513	1.513	3.73	98244	0.00	2000	
Co	59	1	nogas	2.046	2.046	2.08	58634	0.00	2000	
Ni	60	1	nogas	2.253	2.253	3.64	16237	0.01	2000	
Cu	63	1	nogas	-1.036	-1.036	-6.23	35565	0.00	2000	
Zn	66	1	nogas	2.089	2.089	0.80	13298	0.02	2000	
As	75	1	nogas	-1.233	-1.233	-54.49	90732	0.00	2000	
Sr	88	1	nogas	2.132	2.132	1.97	77882	0.00	2000	
Ag	107	1	nogas	1.993	1.993	4.57	36471	0.01	2000	
Cd	111	1	nogas	2.024	2.024	3.50	7518	0.03	2000	
Sb	121	1	nogas	2.073	2.073	3.35	35115	0.01	2000	
Tl	205	1	nogas	1.854	1.854	6.31	48078	0.00	2000	
Pb	208	1	nogas	1.974	1.974	0.88	68087	0.00	2000	
U	238	1	nogas	1.974	1.974	4.02	66988	0.00	2000	
[Pb]	206	1	nogas	1.890	1.890	5.00	16652	0.01	2000	
[Pb]	207	1	nogas	1.913	1.913	4.17	15077	0.01	2000	
Na	23	2	He	244.518	244.518	5.35	610566	0.04	200000	
Mg	24	2	He	200.493	200.493	4.10	194889	0.10	200000	
Al	27	2	He	-0.719	-0.719	-22.11	2600	-0.03	2000	
K	39	2	He	160.433	160.433	3.11	382260	0.04	200000	
Ca	43	2	He	210.770	210.770	3.21	667	31.61	200000	
Ca	44	2	He	185.972	185.972	5.60	10363	1.79	200000	
V	51	2	He	1.841	1.841	5.48	18601	0.01	2000	
Cr	52	2	He	1.882	1.882	7.56	19798	0.01	2000	
Mn	55	2	He	1.586	1.586	13.70	13081	0.01	2000	
Fe	56	2	He	197.238	197.238	3.87	1287270	0.02	200000	
Co	59	2	He	1.965	1.965	2.72	20588	0.01	2000	
Ni	60	2	He	1.726	1.726	5.42	6171	0.03	2000	
Cu	63	2	He	1.269	1.269	15.31	16458	0.01	2000	
Zn	66	2	He	1.633	1.633	10.15	3971	0.04	2000	
As	75	2	He	1.857	1.857	4.03	3336	0.06	2000	
Se	78	2	He	2.193	2.193	19.44	376	0.58	2000	
B	11	1	nogas	3.741	3.741	14.59	240968	0.00	2000	
Si	28	1	nogas	121.706	121.706	6.02	2557238	0.00	2000	
Ca	43	1	nogas	180.973	180.973	4.45	10486	1.73	200000	

Sample Report

Ca	44	1	nogas	161.577	161.577	3.40	221584	0.07	200000	
Fe	56	1	nogas	195.318	195.318	1.16	7875957	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-29.784	-29.784	-9.46	26239	-0.11	2000	
Se	82	1	nogas	1.972	1.972	21.70	873	0.23	2000	
Mo	95	1	nogas	1.988	1.988	4.03	14036	0.01	2000	
Sn	118	1	nogas	1.787	1.787	3.42	22228	0.01	2000	
Ba	137	1	nogas	2.026	2.026	5.84	11030	0.02	2000	
Sb	121	2	He	2.127	2.127	2.50	12241	0.02	2000	
La	139	1	nogas	-28.846	-28.846	-19.74	157	-18.41	2000	
Au	197	1	nogas	78.559	78.559	46.00	37	214.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1383509	2.23	1519169	91.07	70	125	
Ge	72	1	nogas	3881633	2.76	4041586	96.04	70	125	
In	115	1	nogas	3569849	3.27	3794837	94.07	70	125	
Bi	209	1	nogas	2806726	3.48	2841860	98.76	70	125	
Ge	72	2	He	936253	3.39	991378	94.44	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	392ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T03:05:20-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.037	20.9	357	18.2	0	ICSA Main CR1 Failed
Na	23	1	nogas	101031.903	5.9	2760364062	0.1	0	
Mg	24	1	nogas	101199.224	5.3	1742381372	1.5	0	
Al	27	1	nogas	79547.056	5.8	2014703010	0.3	0	
K	39	1	nogas	94218.879	5.8	2243053183	1.5	0	
Ti	47	1	nogas	1875.450	5.6	4393622	3.3	0	
V	51	1	nogas	-7.234	-11.8	441701	1.2	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.264	46.6	65970	2.4	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.149	60.6	54106	0.7	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.403	10.5	12601	4.4	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.419	7.9	11063	3.8	0	ICSA Main CR1 Failed
Cu	63	1	nogas	-2.228	-3.7	18927	4.2	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.835	9.0	12281	2.2	0	ICSA Main CR1 Failed
As	75	1	nogas	-0.133	-379.3	100364	2.3	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.794	7.2	32750	0.6	0	ICSA Main CR1 Failed
Ag	107	1	nogas	-0.038	-30.4	1633	10.0	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.913	5.2	6488	0.1	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.289	2.0	6081	4.7	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.061	27.9	1823	23.6	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.060	12.4	3177	7.9	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.056	9.6	710	8.5	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.065	1.7	703	4.1	0	ICSA Main CR1 Failed
Na	23	2	He	98075.441	2.6	162527698	1.4	0	
Mg	24	2	He	96937.347	1.0	87393945	0.6	0	
Al	27	2	He	86008.306	1.6	45479148	1.5	0	
K	39	2	He	91705.479	2.4	93504759	2.4	0	
Ca	43	2	He	96632.431	3.6	249767	2.8	0	
Ca	44	2	He	99118.115	4.9	4341981	4.4	0	
V	51	2	He	-0.073	-13.6	4870	1.5	0	ICSA Main CR1 Failed
Cr	52	2	He	0.198	19.8	6518	3.7	0	ICSA Main CR1 Failed
Mn	55	2	He	0.367	20.1	6418	5.0	0	ICSA Main CR1 Failed
Fe	56	2	He	100481.751	1.9	611967378	1.8	0	
Co	59	2	He	0.272	3.7	2934	3.8	0	ICSA Main CR1 Failed
Ni	60	2	He	0.134	43.3	1770	7.8	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.594	-2.3	3700	2.5	0	ICSA Main CR1 Failed
Zn	66	2	He	0.290	6.1	1693	2.5	0	ICSA Main CR1 Failed
As	75	2	He	0.032	97.9	489	9.2	0	ICSA Main CR1 Failed
Se	78	2	He	0.466	10.6	163	4.3	0	ICSA Main CR1 Failed
B	11	1	nogas	-0.394	-284.9	192981	2.8	0	ICSA Main CR1 Failed
Si	28	1	nogas	74.748	12.6	2022689	1.8	0	
Ca	43	1	nogas	91109.454	5.5	4028736	2.0	0	
Ca	44	1	nogas	93671.069	6.7	67482194	3.9	0	
Fe	56	1	nogas	93537.626	4.7	2697641060	1.3	0	
Se	77	1	nogas	-13.847	-51.7	31437	1.2	0	ICSA Main CR1 Failed
Se	82	1	nogas	0.023	806.0	247	24.4	0	ICSA Main CR1 Failed
Mo	95	1	nogas	1813.495	5.5	12895975	0.3	0	
Sn	118	1	nogas	0.071	42.6	3450	5.4	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.198	13.8	1737	8.4	0	ICSA Main CR1 Failed
Sb	121	2	He	0.311	7.2	2053	5.5	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	86399.609	3.9	169524781	2.0	0	
La	139	1	nogas	29.428	31.4	483	6.3	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1227736	0.41	1519169	80.82	70	125	
Ge	72	1	nogas	3984138	5.69	4041586	98.58	70	125	
In	115	1	nogas	3262694	5.05	3794837	85.98	70	125	
Bi	209	1	nogas	2537560	3.02	2841860	89.29	70	125	
Ge	72	2	He	886182	1.37	991378	89.39	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	393ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-18T03:07:24-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	112.148	2.215	882257	1.30	100	112.1	80	120	
Na	23	1	nogas	110218.667	1.096	3013022734	2.33	100	110218.7	80	120	
Mg	24	1	nogas	110771.147	4.951	1906179576	1.66	100	110771.1	80	120	
Al	27	1	nogas	82315.536	3.179	2003616823	1.81	100	82315.5	80	120	ICSB Main CR1 Failed
K	39	1	nogas	110870.048	5.014	2533572390	1.45	100	110870.0	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2054.749	3.419	4623256	0.88	100	2054.7	80	120	ICSB Main CR1 Failed
V	51	1	nogas	100.486	4.333	3767198	0.19	100	100.5	80	120	
Cr	52	1	nogas	109.137	2.794	2924021	1.58	100	109.1	80	120	
Mn	55	1	nogas	110.175	3.659	3659378	0.35	100	110.2	80	120	
Co	59	1	nogas	106.504	5.295	2956235	2.65	100	106.5	80	120	
Ni	60	1	nogas	107.326	5.208	689942	2.45	100	107.3	80	120	
Cu	63	1	nogas	108.085	6.552	1574189	2.73	100	108.1	80	120	
Zn	66	1	nogas	110.361	3.428	559130	0.24	100	110.4	80	120	
As	75	1	nogas	102.943	3.765	752384	0.37	100	102.9	80	120	
Sr	88	1	nogas	109.813	5.340	3710332	1.95	100	109.8	80	120	
Ag	107	1	nogas	106.317	6.661	1799463	3.11	100	106.3	80	120	
Cd	111	1	nogas	116.509	5.304	398556	1.40	100	116.5	80	120	
Sb	121	1	nogas	107.271	4.650	1728593	1.78	100	107.3	80	120	
Tl	205	1	nogas	108.712	2.714	2439087	3.04	100	108.7	80	120	
Pb	208	1	nogas	103.518	1.181	3511549	1.18	100	103.5	80	120	
U	238	1	nogas	123.838	1.061	3607986	0.58	100	123.8	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	113.884	0.973	860500	1.40	100	113.9	80	120	
[Pb]	207	1	nogas	112.957	1.294	763308	1.69	100	113.0	80	120	
Na	23	2	He	107962.736	2.320	180641171	1.99	100	107962.7	80	120	
Mg	24	2	He	105405.217	1.525	95943655	1.13	100	105405.2	80	120	
Al	27	2	He	85314.999	0.839	45548538	0.92	100	85315.0	80	120	ICSB Main CR1 Failed
K	39	2	He	99195.079	0.991	101123415	0.99	100	99195.1	80	120	ICSB Main CR1 Failed
Ca	43	2	He	105424.057	0.338	275162	0.60	100	105424.1	80	120	
Ca	44	2	He	107205.552	0.856	4742130	0.61	100	107205.6	80	120	
V	51	2	He	111.783	1.585	757530	1.18	100	111.8	80	120	
Cr	52	2	He	110.783	1.966	818084	1.65	100	110.8	80	120	
Mn	55	2	He	112.249	0.906	560691	0.49	100	112.2	80	120	
Fe	56	2	He	109927.231	1.283	675941950	0.97	100	109927.2	80	120	
Co	59	2	He	112.046	0.526	1107225	0.40	100	112.0	80	120	
Ni	60	2	He	111.344	1.325	289065	1.35	100	111.3	80	120	
Cu	63	2	He	108.931	0.919	710103	1.15	100	108.9	80	120	
Zn	66	2	He	112.540	0.916	176436	1.09	100	112.5	80	120	
As	75	2	He	110.971	1.405	164406	1.05	100	111.0	80	120	
Se	78	2	He	110.053	1.542	12611	1.16	100	110.1	80	120	
B	11	1	nogas	552.194	3.479	2875733	1.33	100	552.2	80	120	
Si	28	1	nogas	5413.745	3.598	67293924	1.39	100	5413.7	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	104130.639	3.556	4422823	0.34	100	104130.6	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	105801.280	4.050	73206769	1.45	100	105801.3	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	107368.910	5.560	2972261333	1.96	100	107368.9	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	85.524	10.484	57561	1.17	100	85.5	80	120	
Se	82	1	nogas	109.982	5.108	35271	1.94	100	110.0	80	120	
Mo	95	1	nogas	2000.360	3.149	13667926	0.46	100	2000.4	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	111.595	4.691	1110041	2.41	100	111.6	80	120	
Ba	137	1	nogas	116.917	5.667	539833	1.11	100	116.9	80	120	
Sb	121	2	He	113.231	0.484	600691	0.72	100	113.2	80	120	
La	139	1	nogas	108.087	16.140	957	12.47	100	108.1	80	120	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1184283	2.51	1519169	77.96	70	125	
Ge	72	1	nogas	3823050	3.56	4041586	94.59	70	125	
In	115	1	nogas	3300304	6.49	3794837	86.97	70	125	
Bi	209	1	nogas	2447877	0.48	2841860	86.14	70	125	
Ge	72	2	He	894682	0.41	991378	90.25	70	125	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\121718A.b
Report Comment
Instrument Name G3281A JP11080910

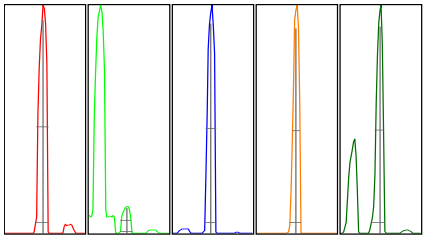
[nogas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		25878				NaN	-	
24		54602				NaN	-	
59		61615				NaN	-	
115		60946				NaN	-	
208		31284				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	1.29	5.00				
24	0.83	5.00				
59	1.04	5.00				
115	1.59	5.00				
208	1.22	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	26296	26047	25865	25788	25393
24	55019	54622	54992	54468	53908
59	61724	62491	61563	61619	60680
115	60567	61059	62240	61264	59600
208	31708	30907	31520	31433	30854

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	7168.16	8.95	8.9 - 9.1		0.37	0.465	0.750	
24	15166.45	23.95	23.9 - 24.1		0.37	0.446	0.750	
59	18265.77	58.95	58.9 - 59.1		0.34	0.441	0.750	
115	19155.13	115.00	114.9 - 115.1		0.31	0.443	0.750	
208	9430.44	208.00	207.9 - 208.1		0.32	0.515	0.750	

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 168.5 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.40 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	15.0 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-58 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		459				NaN	-	
24		2947				NaN	-	
59		22478				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	6.73	5.00	[F]			
24	3.69	5.00				
59	4.00	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	493	413	450	457	481
24	2981	2923	2908	2814	3110
59	22800	22041	21720	21919	23908

Integration Time [sec] 0.1

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	126.89	8.95	8.9 - 9.1		0.37	0.486	0.750	
24	828.03	23.95	23.9 - 24.1		0.37	0.444	0.750	
59	6894.76	58.95	58.9 - 59.1		0.32	0.436	0.750	

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 100.6 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.40 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	2.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-70 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	4.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

HS18111497 Wet Chem Raw

ALS WO# HS18111497

Report Date: 12/11/2018 : 7:40 PM

PC-TitratION PLUS
Calibration Report

HS18121497

Calibration Record # 2057

Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	12/11/2018
Channel	1	Time	7:40 PM
Probe Type	pH	Temperature	295.57 K 22.42 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-57.615	CorrCoeff	0.9997
Intercept	3.460	Equation: Y = (-57.615) X + (3.460)	

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-57.615	-65.00	-53.00
Intercept	3.460	-100.00	100.00
Correlation Coefficient	0.9997	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

A: 329027

B: 329028

C: 329029

Calibration Data	Standard	Reading
	4.00	178.58
	7.00	-1.09
	10.00	-167.11

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Report Date: 12/11/2018 : 7:40 PM

PC-TitratION PLUS
Calibration Report

HS18111497

~~HS18121497~~ JL
1/28/2019

Calibration Record # 2057

Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	12/11/2018
Channel	1	Time	7:40 PM
Probe Type	pH	Temperature	295.57 K 22.42 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-57.615	CorrCoeff	0.9997
Intercept	3.460	Equation: Y = (-57.615) X + (3.460)	

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-57.615	-65.00	-53.00
Intercept	3.460	-100.00	100.00
Correlation Coefficient	0.9997	0.99	1.00

A: 329027

B: 329028

C: 329029

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	178.58
	7.00	-1.09
	10.00	-167.11

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Report Date: 12/12/2018 : 6:04 AM

PC-TitratION PLUS
Water Analysis Report

Run Number 3433 **Order Number** 20181211-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
ICV-PH	12/11/2018	7:44 PM	22.37	-1.00	6.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
TAP WATER	12/11/2018	7:51 PM	22.46	-1.00	7.79	.00	362.54	362.54	.00	.00	.00	3.45	3.45
WBLKW1-181211	12/11/2018	7:56 PM	22.42	-1.00	5.74	.00	.60	.60	.00	.00	.00	.02	.02
LCS1-181211	12/11/2018	8:04 PM	22.49	-1.00	10.93	552.72	1,070.04	.00	1,034.64	35.41	5.26	10.19	10.19
LCSD1-181211	12/11/2018	8:13 PM	22.46	-1.00	10.93	552.20	1,071.71	.00	1,039.01	32.70	5.26	10.21	10.21
HS18111440-01	12/11/2018	8:19 PM	22.52	-1.00	6.79	.00	118.23	118.23	.00	.00	.00	1.13	1.13
HS18111440-01DUP	12/11/2018	8:25 PM	22.35	-1.00	6.81	.00	114.72	114.72	.00	.00	.00	1.09	1.09
HS18111440-02	12/11/2018	8:31 PM	22.31	-1.00	6.69	.00	312.35	312.35	.00	.00	.00	2.97	2.97
HS18111440-03	12/11/2018	8:37 PM	22.31	-1.00	6.95	.00	313.08	313.08	.00	.00	.00	2.98	2.98
HS18111440-04	12/11/2018	8:43 PM	22.31	-1.00	6.61	.00	239.40	239.40	.00	.00	.00	2.28	2.28
HS18111440-05	12/11/2018	8:49 PM	22.43	-1.00	6.93	.00	434.87	434.87	.00	.00	.00	4.14	4.14
CCV-PH	12/11/2018	8:51 PM	22.54	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	12/11/2018	9:00 PM	22.32	-1.00	10.90	542.04	1,055.06	.00	1,026.04	29.02	5.16	10.05	10.05
DI RINSE	12/11/2018	9:05 PM	22.63	-1.00	5.91	.00	.34	.34	.00	.00	.00	.02	.02
HS18111491-10DF2	12/11/2018	9:14 PM	22.55	-1.00	7.53	.00	1,037.44	1,037.44	.00	.00	.00	9.88	9.88
HS18111491-11DF2	12/11/2018	9:23 PM	22.81	-1.00	7.84	.00	1,174.83	1,174.83	.00	.00	.00	11.19	11.19
HS18111491-12DF2	12/11/2018	9:31 PM	22.78	-1.00	7.35	.00	642.43	642.43	.00	.00	.00	6.12	6.12
HS18111491-13DF2	12/11/2018	9:38 PM	22.83	-1.00	7.40	.00	652.82	652.82	.00	.00	.00	6.22	6.22
HS18111491-14DF2	12/11/2018	9:44 PM	22.89	-1.00	7.83	.00	238.13	238.13	.00	.00	.00	2.27	2.27
HS18111491-15	12/11/2018	9:51 PM	23.06	-1.00	7.47	.00	602.01	602.01	.00	.00	.00	5.73	5.73
HS18111528-01	12/11/2018	9:58 PM	23.19	-1.00	7.92	.00	437.22	437.22	.00	.00	.00	4.16	4.16
HS18111497-01	12/11/2018	10:05 PM	22.93	-1.00	7.89	.00	88.56	88.56	.00	.00	.00	.84	.84
HS18111497-02	12/11/2018	10:12 PM	22.96	-1.00	7.62	.00	356.67	356.67	.00	.00	.00	3.40	3.40
CCV-PH	12/11/2018	10:14 PM	22.92	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	12/11/2018	10:22 PM	22.63	-1.00	10.87	534.42	1,049.29	.00	1,029.74	19.55	5.09	9.99	9.99
DI RINSE	12/11/2018	10:27 PM	22.95	-1.00	6.02	.00	.61	.61	.00	.00	.00	.02	.02
HS18111497-03	12/11/2018	10:33 PM	22.93	-1.00	7.46	.00	265.42	265.42	.00	.00	.00	2.53	2.53

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GENERAL RESULTS REPORT.SRW

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Run Number 3433 **Order Number** 20181211-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS18120114-06	12/11/2018	10:39 PM	23.09	-1.00	6.69	.00	273.00	273.00	.00	.00	.00	2.60	2.60
HS18120114-07	12/11/2018	10:45 PM	23.25	-1.00	6.72	.00	417.00	417.00	.00	.00	.00	3.97	3.97
HS18120113-01	12/11/2018	10:53 PM	23.17	-1.00	6.98	.00	8.43	8.43	.00	.00	.00	.10	.10
HS18120545-01	12/11/2018	11:01 PM	23.14	-1.00	8.20	.00	488.40	488.40	.00	.00	.00	4.65	4.65
HS18120545-02	12/11/2018	11:07 PM	22.95	-1.00	8.75	12.37	216.24	191.50	24.75	.00	.12	2.06	2.06
WBLKW2-181211	12/11/2018	11:12 PM	22.99	-1.00	5.93	.00	.45	.45	.00	.00	.00	.02	.02
WLCS2-181211	12/11/2018	11:21 PM	22.84	-1.00	10.85	536.34	1,060.05	.00	1,047.40	12.64	5.11	10.10	10.10
WLCSD2-181211	12/11/2018	11:30 PM	23.07	-1.00	10.84	536.00	1,061.71	.00	1,051.42	10.29	5.10	10.11	10.11
CCV-PH	12/11/2018	11:32 PM	23.11	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	12/11/2018	11:41 PM	23.03	-1.00	10.83	537.82	1,065.50	.00	1,055.36	10.14	5.12	10.15	10.15
DI RINSE	12/11/2018	11:46 PM	23.43	-1.00	5.98	.00	.49	.49	.00	.00	.00	.02	.02
HS18120166-01	12/11/2018	11:53 PM	23.23	-1.00	7.78	.00	278.58	278.58	.00	.00	.00	2.65	2.65
HS18120166-01DUP	12/11/2018	11:59 PM	23.20	-1.00	7.80	.00	282.09	282.09	.00	.00	.00	2.69	2.69
HS18120166-02	12/12/2018	12:06 AM	23.15	-1.00	7.24	.00	322.38	322.38	.00	.00	.00	3.07	3.07
HS18120166-03	12/12/2018	12:12 AM	23.17	-1.00	7.42	.00	311.75	311.75	.00	.00	.00	2.97	2.97
HS18120166-04	12/12/2018	12:19 AM	23.22	-1.00	7.60	.00	432.55	432.55	.00	.00	.00	4.12	4.12
HS18120166-05	12/12/2018	12:26 AM	23.20	-1.00	7.66	.00	420.24	420.24	.00	.00	.00	4.00	4.00
HS18120166-06	12/12/2018	12:33 AM	23.35	-1.00	7.45	.00	524.74	524.74	.00	.00	.00	5.00	5.00
HS18120166-07	12/12/2018	12:39 AM	23.57	-1.00	6.93	.00	183.61	183.61	.00	.00	.00	1.75	1.75
HS18120166-08	12/12/2018	12:46 AM	23.43	-1.00	7.72	.00	552.16	552.16	.00	.00	.00	5.26	5.26
CCV-PH	12/12/2018	12:48 AM	23.25	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	12/12/2018	12:57 AM	22.92	-1.00	10.80	524.09	1,045.81	.00	1,043.43	2.38	4.99	9.96	9.96
DI RINSE	12/12/2018	1:02 AM	23.28	-1.00	5.98	.00	.44	.44	.00	.00	.00	.02	.02
HS18120166-09	12/12/2018	1:08 AM	23.20	-1.00	7.76	.00	286.26	286.26	.00	.00	.00	2.73	2.73
HS18120166-10	12/12/2018	1:14 AM	23.31	-1.00	6.59	.00	264.45	264.45	.00	.00	.00	2.52	2.52
HS18120166-11	12/12/2018	1:20 AM	23.41	-1.00	7.55	.00	343.27	343.27	.00	.00	.00	3.27	3.27
HS18120166-12	12/12/2018	1:26 AM	23.52	-1.00	7.15	.00	164.38	164.38	.00	.00	.00	1.57	1.57
HS18120166-13	12/12/2018	1:33 AM	23.56	-1.00	7.50	.00	175.88	175.88	.00	.00	.00	1.68	1.68
HS18120166-14	12/12/2018	1:39 AM	23.47	-1.00	7.41	.00	179.89	179.89	.00	.00	.00	1.71	1.71
HS18120166-15	12/12/2018	1:45 AM	23.39	-1.00	7.42	.00	260.69	260.69	.00	.00	.00	2.48	2.48

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GENERAL RESULTS REPORT.SRW

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Run Number 3433 **Order Number** 20181211-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS18120166-16	12/12/2018	1:52 AM	23.36	-1.00	7.37	.00	292.13	292.13	.00	.00	.00	2.78	2.78
HS18120166-17	12/12/2018	1:58 AM	23.23	-1.00	7.13	.00	262.71	262.71	.00	.00	.00	2.50	2.50
CCV-PH	12/12/2018	2:00 AM	23.15	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	12/12/2018	2:09 AM	22.99	-1.00	10.79	528.43	1,057.43	.58	1,056.85	.00	5.03	10.07	10.07
DI RINSE	12/12/2018	2:14 AM	23.56	-1.00	5.99	.00	.41	.41	.00	.00	.00	.02	.02
HS18120166-18	12/12/2018	2:20 AM	23.76	-1.00	7.34	.00	268.11	268.11	.00	.00	.00	2.55	2.55
HS18120166-19	12/12/2018	2:27 AM	23.64	-1.00	7.58	.00	304.07	304.07	.00	.00	.00	2.90	2.90
HS18120166-20	12/12/2018	2:33 AM	23.41	-1.00	7.15	.00	279.20	279.20	.00	.00	.00	2.66	2.66
WBLKW3-180714	12/12/2018	2:38 AM	23.39	-1.00	5.95	.00	.52	.52	.00	.00	.00	.02	.02
LCS3-180714	12/12/2018	2:48 AM	23.30	-1.00	10.77	523.28	1,051.59	5.02	1,046.57	.00	4.98	10.02	10.02
LCSD3-180714	12/12/2018	2:56 AM	23.33	-1.00	10.78	523.33	1,049.15	2.50	1,046.65	.00	4.98	9.99	9.99
HS18120166-21	12/12/2018	3:02 AM	23.52	-1.00	7.55	.00	376.78	376.78	.00	.00	.00	3.59	3.59
HS18120166-21DUP	12/12/2018	3:09 AM	23.57	-1.00	7.55	.00	374.64	374.64	.00	.00	.00	3.57	3.57
HS18120166-22	12/12/2018	3:15 AM	23.57	-1.00	7.64	.00	306.07	306.07	.00	.00	.00	2.91	2.91
CCV-PH	12/12/2018	3:18 AM	23.67	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	12/12/2018	3:27 AM	23.39	-1.00	10.75	517.52	1,044.19	9.15	1,035.04	.00	4.93	9.94	9.94
DI RINSE	12/12/2018	3:32 AM	23.54	-1.00	6.02	.00	.53	.53	.00	.00	.00	.02	.02
HS18120166-23	12/12/2018	3:38 AM	23.44	-1.00	7.55	.00	366.43	366.43	.00	.00	.00	3.49	3.49
HS18120166-24	12/12/2018	3:44 AM	23.52	-1.00	7.56	.00	152.56	152.56	.00	.00	.00	1.45	1.45
HS18120166-25	12/12/2018	3:51 AM	23.47	-1.00	7.66	.00	320.35	320.35	.00	.00	.00	3.05	3.05
HS18120166-26	12/12/2018	3:57 AM	23.56	-1.00	7.45	.00	206.04	206.04	.00	.00	.00	1.96	1.96
HS18120166-27	12/12/2018	4:04 AM	23.56	-1.00	7.38	.00	259.22	259.22	.00	.00	.00	2.47	2.47
HS18120166-28	12/12/2018	4:10 AM	23.89	-1.00	7.31	.00	327.16	327.16	.00	.00	.00	3.12	3.12
HS18120166-29	12/12/2018	4:16 AM	23.75	-1.00	7.66	.00	212.43	212.43	.00	.00	.00	2.02	2.02
HS18120166-30	12/12/2018	4:23 AM	23.70	-1.00	7.78	.00	149.71	149.71	.00	.00	.00	1.43	1.43
HS18120166-31	12/12/2018	4:30 AM	23.60	-1.00	7.73	.00	156.64	156.64	.00	.00	.00	1.49	1.49
CCV-PH	12/12/2018	4:32 AM	23.49	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	12/12/2018	4:40 AM	23.33	-1.00	10.73	516.68	1,050.46	17.10	1,033.36	.00	4.92	10.00	10.00
DI RINSE	12/12/2018	4:45 AM	23.59	-1.00	6.00	.00	.56	.56	.00	.00	.00	.02	.02
HS18120166-32	12/12/2018	4:52 AM	23.62	-1.00	7.86	.00	309.51	309.51	.00	.00	.00	2.95	2.95

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Run Number 3433 **Order Number** 20181211-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS18120166-33	12/12/2018	4:59 AM	23.59	-1.00	7.85	.00	232.62	232.62	.00	.00	.00	2.22	2.22
HS18120166-39	12/12/2018	5:05 AM	23.83	-1.00	6.50	.00	425.07	425.07	.00	.00	.00	4.05	4.05
HS18120166-40	12/12/2018	5:12 AM	23.76	-1.00	7.79	.00	285.47	285.47	.00	.00	.00	2.72	2.72
HS18120166-41	12/12/2018	5:19 AM	23.73	-1.00	8.08	.00	186.69	186.69	.00	.00	.00	1.78	1.78
HS18120166-42	12/12/2018	5:25 AM	23.73	-1.00	8.00	.00	164.93	164.93	.00	.00	.00	1.57	1.57
HS18120166-43	12/12/2018	5:32 AM	23.59	-1.00	7.62	.00	601.51	601.51	.00	.00	.00	5.73	5.73
HS18111500-01	12/12/2018	5:39 AM	23.67	-1.00	8.29	.00	295.77	295.77	.00	.00	.00	2.82	2.82
HS18120490-01	12/12/2018	5:47 AM	23.62	-1.00	8.14	.00	92.47	92.47	.00	.00	.00	.88	.88
CCV-PH	12/12/2018	5:49 AM	23.65	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	12/12/2018	5:58 AM	23.80	-1.00	10.69	514.02	1,061.57	33.54	1,028.03	.00	4.90	10.11	10.11
DI RINSE	12/12/2018	6:02 AM	23.86	-1.00	6.00	.00	.51	.51	.00	.00	.00	.02	.02

PC-TitratION PLUS by Man-Tech Associates, Inc.

GENERAL RESULTS REPORT.SRW

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HS 18111497

Reagent ID:	Prep. Date:		Date/Time:	12/6/18 15:40	Reported by:	JHD/
2970207704			Batch ID:		Reviewed by:	
2970207820					Log Book #:	
2970204614			LCS ID# :	2970206703 →	Prep. Date:	
308055203	10/31/18		MS ID# :	2970206703 →	Prep. Date:	

Calculated Iodine Normality => 0.024625 Iodine (N)

WO	WO	Sx Vol. (mL)	Iodine (mL)	Titrant used (mL)	Sod. Thio. (N)	Iodine (N)	Init. Conc.	Final Conc.
STD1	STD1	0	20	19.70	0.0250	0.02463		
STD2	STD2	0	20	19.70	0.0250	0.02463	0.0246	
STD3	STD3	0	20	19.70	0.0250	0.02463	Iodine (N)	(mg/L)
BLK	BLK	200	20	19.90	0.0250	0.0246		-0.44
LCS	LCS	200	20	8.70	0.0250	0.0246		21.96
LCSD	LCSD	200	20	8.80	0.0250	0.0246		21.76
HS18111497-01	SAMP	200	20	12.50	0.0250	0.0246		14.36
HS18111497-02	SAMP	200	20	18.50	0.0250	0.0246		2.36
HS18111497-03	SAMP	200	20	18.60	0.0250	0.0246		2.16
HS18120114-06	SAMP	200	20	19.20	0.0250	0.0246		0.96
HS18120114-07	SAMP	200	20	19.70	0.0250	0.0246		-0.04
HS18120007-01	SAMP	200	20	19.20	0.0250	0.0246		0.96
HS18120039-01	SAMP	200	30	28.90	0.0250	0.0246		1.24
HS18120114-07MS	MS	200	20	7.10	0.0250	0.0246		25.16
HS18120226-01	SAMP	200	20	12.70	0.0250	0.0246		13.96
HS18120226-02	SAMP	200	30	29.90	0.0250	0.0246		-0.76
					0.0250			
					0.0250			
					0.0250			
					0.0250			
					0.0250			
					0.0250			
					0.0250			
					0.0250			
					0.0250			
					0.0250			

HS 18111497

Prep Batch Report

Batch ID: 135148
Prep Code: P_TW_PR4500
Start Date: 03 Dec 2018 10:00 AM
End Date: 03 Dec 2018 12:30 PM
Technician: Maitri Desai

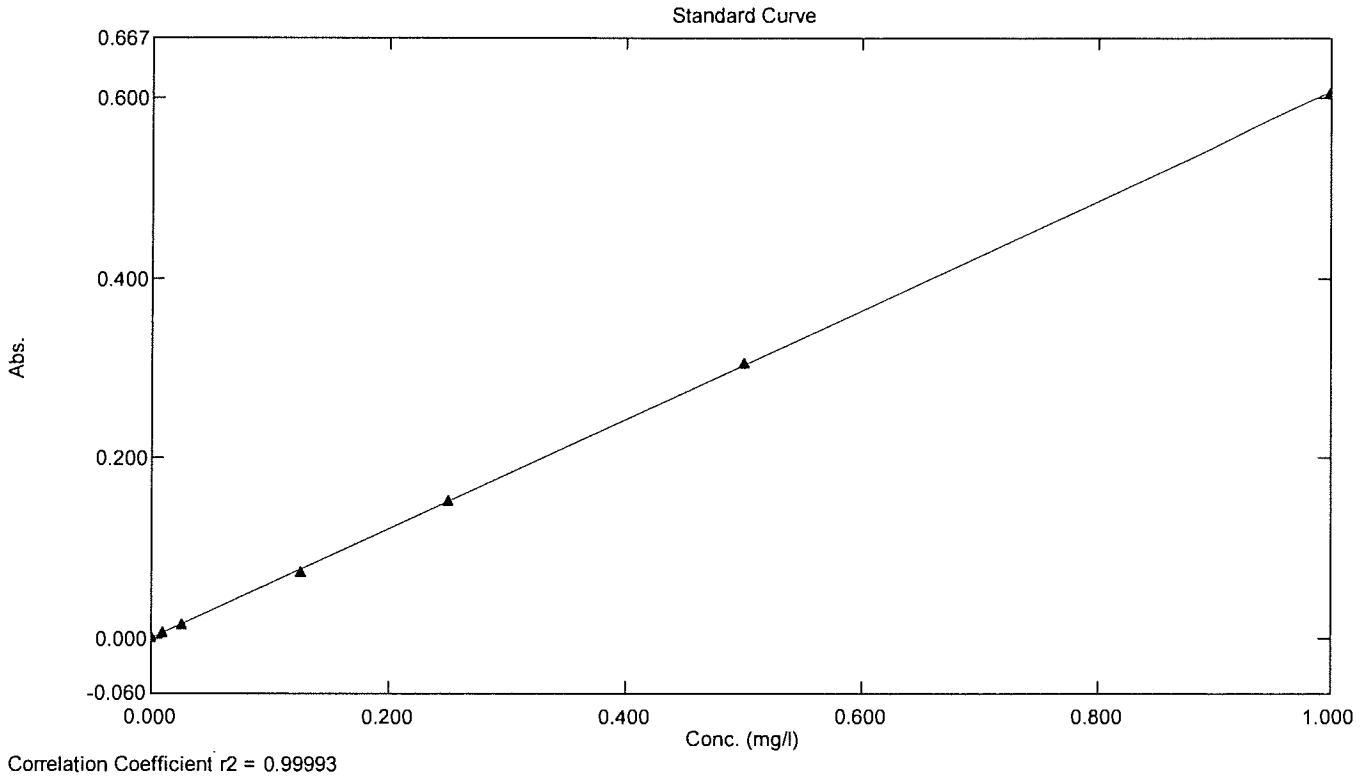
Init Sample Weight / Volume: 50
Final Sample Volume: 50
Original Factor: 1
Prep Unit Factor: 1
Prep Unit: mL

Sample ID	Fraction	Matrix	pH	Initial Weight / Volume	Final Volume	Prep Factor	Spike Factor	Comments
HS18111307-01	E	Water		50	50	1	1	
HS18111357-01	E	Water		50	50	1	1	
HS18111407-01	B	Wastewater		50	50	1	1	
HS18111426-01	F	Water		50	50	1	1	
HS18111426-02	F	Water		50	50	1	1	
HS18111426-03	F	Water		50	50	1	1	
HS18111426-03MS	A			50	50	1	1	
HS18111426-03MSD	A			50	50	1	1	
HS18111432-01	G	Water		50	50	1	1	
HS18111440-02	I	Groundwater		50	50	1	1	
HS18111440-03	I	Groundwater		50	50	1	1	
HS18111440-04	I	Groundwater		50	50	1	1	
HS18111440-05	I	Groundwater		50	50	1	1	
HS18111497-01	I	Groundwater		50	50	1	1	
HS18111497-02	I	Groundwater		50	50	1	1	
HS18111497-03	I	Groundwater		50	50	1	1	
HS18111504-01	A	Wastewater		50	50	1	1	
HS18111504-02	A	Wastewater		50	50	1	1	
HS18111517-01	H	Water		1	50	50	50	
HS18120006-01	B	Aqueous		50	50	1	1	
LCS-135148	A			50	50	1	1	
LCSD-135148	A			50	50	1	1	
MBLK-135148	A			50	50	1	1	

Standard Table Report

01/09/2019 01:26:00 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\T_PO4_UNKNOWN\2018P_TW\181203_P_TW_.pho



Correlation Coefficient r2 = 0.99993

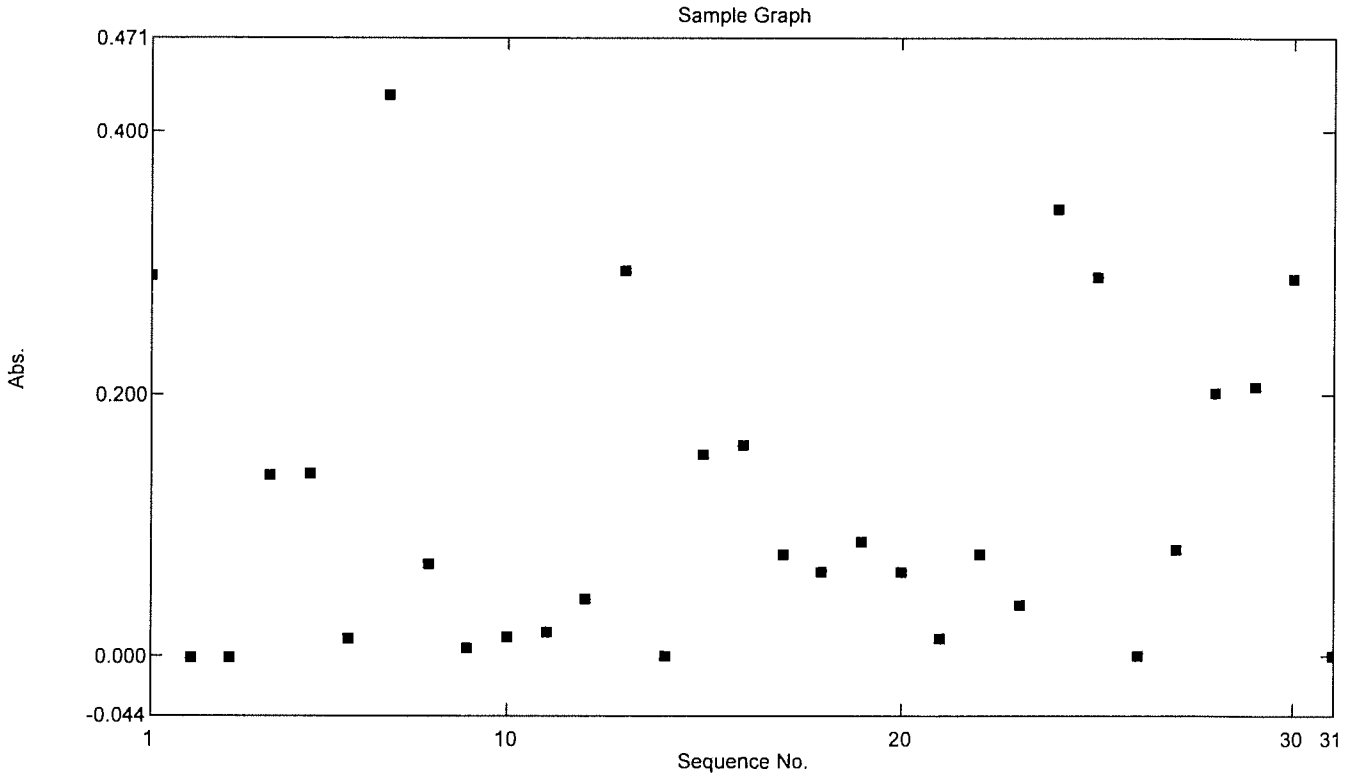
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	0.001	1.000	
2	STD2	Standard		0.010	0.007	1.000	
3	STD3	Standard		0.025	0.016	1.000	
4	STD4	Standard		0.125	0.073	1.000	
5	STD5	Standard		0.250	0.153	1.000	
6	STD6	Standard		0.500	0.307	1.000	
7	STD7	Standard		1.000	0.606	1.000	
8							

Sample Table Report

01/09/2019 01:26:06 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\T_PO4_UNKNOWN\2018P_TW\181203_P_TW_.pho



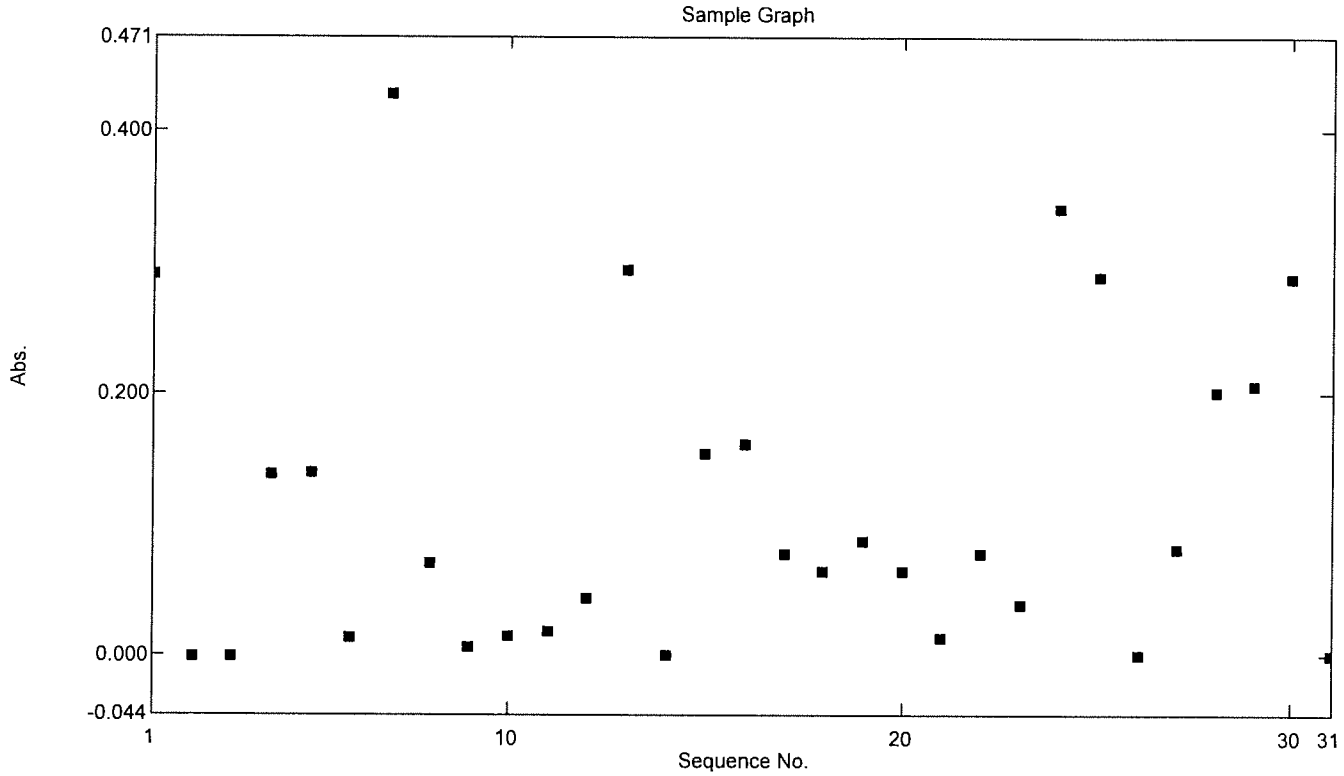
Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.476	0.290	
2	CCB	Unknown		-0.003	-0.001	
3	MBLK	Unknown		-0.002	-0.000	
4	LCS	Unknown		0.227	0.138	
5	LCSD	Unknown		0.228	0.139	
6	18111307.01	Unknown		0.021	0.014	
7	18111357.01	Unknown		0.704	0.428	
8	18111407.01	Unknown		0.114	0.070	
9	18111426.01	Unknown		0.009	0.006	
10	18111426.02	Unknown		0.023	0.015	
11	18111426.03	Unknown		0.029	0.018	
12	18111432.01	Unknown		0.070	0.043	
13	CCV2	Unknown		0.483	0.294	
14	CCB2	Unknown		-0.001	0.000	
15	18111426.03MS	Unknown		0.252	0.154	
16	18111426.03MSD	Unknown		0.263	0.160	
17	18111440.02	Unknown		0.128	0.078	
18	18111440.03	Unknown		0.104	0.064	
19	18111440.04	Unknown		0.142	0.087	

Sample Table Report

01/09/2019 01:26:06 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\T_PO4_UNKNOWN\2018P_TW\181203_P_TW_.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
20	18111440.05	Unknown		0.104	0.064	
21	18111497.01	Unknown		0.020	0.013	
22	18111497.02	Unknown		0.126	0.077	
23	18111497.03	Unknown		0.064	0.040	
24	18111504.01	Unknown		0.560	0.341	DF:10X
25	CCV3	Unknown		0.474	0.288	
26	CCB3	Unknown		-0.000	0.001	
27	18111504.02	Unknown		0.133	0.081	
28	18111517.01	Unknown		0.330	0.201	PF:50X
29	18120006.01	Unknown		0.338	0.206	
30	CCV4	Unknown		0.472	0.287	
31	CCB4	Unknown		-0.001	0.001	
32						

Sequence: 112918 HS18111497
Operator: alshs.nouser

Printed: 1/16/2019 5:14:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	Comment	Pos.	Type	Dil. Factor	Program
1	STD1	297.020.7208	91	Standard	1.0000	anions3
2	STD2		92	Standard	1.0000	anions3
3	STD3		93	Standard	1.0000	anions3
4	STD4		94	Standard	1.0000	anions3
5	STD5		95	Standard	1.0000	anions3
6	STD6		96	Standard	1.0000	anions3
7	ICV		97	Unknown	1.0000	anions3
8	ICB		98	Unknown	1.0000	anions3
9	CCV1		3	Unknown	1.0000	anions3
10	CCB		4	Unknown	1.0000	anions3
11	WBLKW1-112918		18	Unknown	1.0000	anions3
12	WLCSW1-112918		19	Unknown	1.0000	anions3
13	WLCSDW1-112918		20	Unknown	1.0000	anions3
14	HS18111426-01		21	Unknown	1.0000	anions3
15	HS18111426-01DF20		22	Unknown	20.0000	anions3
16	HS18111426-02		23	Unknown	1.0000	anions3
17	HS18111426-02DF20		24	Unknown	20.0000	anions3
18	HS18111426-03		25	Unknown	1.0000	anions3
19	HS18111426-03MS		26	Unknown	1.0000	anions3
20	HS18111426-03MSD		27	Unknown	1.0000	anions3
21	CCV		1	Unknown	1.0000	anions3
22	CCB		2	Unknown	1.0000	anions3
23	HS18111426-03DF20		28	Unknown	20.0000	anions3
24	HS18111428-01		29	Unknown	1.0000	anions3
25	HS18111428-01DF10		30	Unknown	10.0000	anions3
26	HS18111428-02		31	Unknown	1.0000	anions3
27	HS18111428-02DF10		32	Unknown	10.0000	anions3
28	HS18111428-03DF2		33	Unknown	2.0000	anions3
29	HS18111428-03DF20		34	Unknown	20.0000	anions3
30	HS18111428-03DF200		35	Unknown	200.0000	anions3
31	HS18111160-01DF200		50	Unknown	200.0000	anions3
32	HS18110696-11DF500		48	Unknown	500.0000	anions3
33	CCV1		3	Unknown	1.0000	anions3
34	CCB		4	Unknown	1.0000	anions3

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Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2 Created: 11/30/2018 2:30:38 PM by alshs.nouser
#Samples: 134 (Modified, not saved)

No.	Name	Method	Inj. Vol.	Status	Inj. Date/Time	Weight
1	STD1	110818	20.0	Finished	11/8/2018 3:37:13 PM	1.0000
2	STD2	110818	20.0	Finished	11/8/2018 3:58:55 PM	1.0000
3	STD3	110818	20.0	Finished	11/8/2018 4:20:37 PM	1.0000
4	STD4	110818	20.0	Finished	11/8/2018 4:42:20 PM	1.0000
5	STD5	110818	20.0	Finished	11/8/2018 5:04:01 PM	1.0000
6	STD6	110818	20.0	Finished	11/8/2018 5:25:43 PM	1.0000
7	ICV	110818	20.0	Finished	11/8/2018 5:47:25 PM	1.0000
8	ICB	110818	20.0	Finished	11/8/2018 6:09:07 PM	1.0000
9	CCV1	110818	20.0	Finished	11/29/2018 3:25:12 PM	1.0000
10	CCB	110818	20.0	Finished	11/29/2018 3:46:54 PM	1.0000
11	WBLKW1-112918	110818	20.0	Finished	11/29/2018 4:08:36 PM	1.0000
12	WLCSW1-112918	110818	20.0	Finished	11/29/2018 4:30:18 PM	1.0000
13	WLCSDW1-112918	110818	20.0	Finished	11/29/2018 4:51:59 PM	1.0000
14	HS18111426-01	110818	20.0	Finished	11/29/2018 5:13:41 PM	1.0000
15	HS18111426-01DF20	110818	20.0	Finished	11/29/2018 5:35:23 PM	1.0000
16	HS18111426-02	110818	20.0	Finished	11/29/2018 5:57:06 PM	1.0000
17	HS18111426-02DF20	110818	20.0	Finished	11/29/2018 6:18:48 PM	1.0000
18	HS18111426-03	110818	20.0	Finished	11/29/2018 6:40:29 PM	1.0000
19	HS18111426-03MS	110818	20.0	Finished	11/29/2018 7:02:11 PM	1.0000
20	HS18111426-03MSD	110818	20.0	Finished	11/29/2018 7:23:53 PM	1.0000
21	CCV	110818	20.0	Finished	11/29/2018 7:45:34 PM	1.0000
22	CCB	110818	20.0	Finished	11/29/2018 8:07:16 PM	1.0000
23	HS18111426-03DF20	110818	20.0	Finished	11/29/2018 8:28:58 PM	1.0000
24	HS18111428-01	110818	20.0	Finished	11/29/2018 8:50:40 PM	1.0000
25	HS18111428-01DF10	110818	20.0	Finished	11/29/2018 9:12:22 PM	1.0000
26	HS18111428-02	110818	20.0	Finished	11/29/2018 9:34:03 PM	1.0000
27	HS18111428-02DF10	110818	20.0	Finished	11/29/2018 9:55:45 PM	1.0000
28	HS18111428-03DF2	110818	20.0	Finished	11/29/2018 10:17:27 PM	1.0000
29	HS18111428-03DF20	110818	20.0	Finished	11/29/2018 10:39:10 PM	1.0000
30	HS18111428-03DF200	110818	20.0	Finished	11/29/2018 11:00:52 PM	1.0000
31	HS18111160-01DF200	110818	20.0	Finished	11/29/2018 11:22:35 PM	1.0000
32	HS18110696-11DF500	110818	20.0	Finished	11/29/2018 11:44:17 PM	1.0000
33	CCV1	110818	20.0	Finished	11/30/2018 12:05:59 AM	1.0000
34	CCB	110818	20.0	Finished	11/30/2018 12:27:41 AM	1.0000

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Sequence: 112918
Operator: alshs.nouser

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	ISTD Amount	Sample ID	Replicate ID
1	STD1	1.0000		01
2	STD2	1.0000		01
3	STD3	1.0000		01
4	STD4	1.0000		01
5	STD5	1.0000		01
6	STD6	1.0000		01
7	ICV	1.0000		01
8	ICB	1.0000		01
9	CCV1	1.0000		01
10	CCB	1.0000		01
11	WBLKW1-112918	1.0000		01
12	WLCSW1-112918	1.0000		01
13	WLCSDW1-112918	1.0000		01
14	HS18111426-01	1.0000		01
15	HS18111426-01DF20	1.0000		01
16	HS18111426-02	1.0000		01
17	HS18111426-02DF20	1.0000		01
18	HS18111426-03	1.0000		01
19	HS18111426-03MS	1.0000		01
20	HS18111426-03MSD	1.0000		01
21	CCV	1.0000		01
22	CCB	1.0000		01
23	HS18111426-03DF20	1.0000		01
24	HS18111428-01	1.0000		01
25	HS18111428-01DF10	1.0000		01
26	HS18111428-02	1.0000		01
27	HS18111428-02DF10	1.0000		01
28	HS18111428-03DF2	1.0000		01
29	HS18111428-03DF20	1.0000		01
30	HS18111428-03DF200	1.0000		01
31	HS18111160-01DF200	1.0000		01
32	HS18110696-11DF500	1.0000		01
33	CCV1	1.0000		01
34	CCB	1.0000		01

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Sequence: 112918
Operator: alshs.nouser

Printed: 1/16/2019 5:14:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	Comment	Pos.	Type	Dil. Factor	Program
35	HS18111440-01		53	Unknown	1.0000	anions3
36	HS18111440-01MS		54	Unknown	1.0000	anions3
37	HS18111440-01MSD		55	Unknown	1.0000	anions3
38	HS18111440-02DF2		56	Unknown	2.0000	anions3
39	HS18111440-02DF20		57	Unknown	20.0000	anions3
40	HS18111440-03		58	Unknown	1.0000	anions3
41	HS18111440-03DF20		59	Unknown	20.0000	anions3
42	HS18111440-04DF2		60	Unknown	2.0000	anions3
43	HS18111440-04DF20		61	Unknown	20.0000	anions3
44	HS18111440-05DF10		63	Unknown	10.0000	anions3
45	CCV		1	Unknown	1.0000	anions3
46	CCB		2	Unknown	1.0000	anions3
47	HS18111280-01		51	Unknown	1.0000	anions3
48	HS18111280-02		52	Unknown	1.0000	anions3
49	HS18111440-05		62	Unknown	1.0000	anions3
50	HS18110696-08DF500		45	Unknown	500.0000	anions3
51	HS18110696-09DF500		46	Unknown	500.0000	anions3
52	HS18110696-10DF500		47	Unknown	500.0000	anions3
53	HS18111381-01DF20		64	Unknown	1.0000	anions3
54	HS18111381-02DF20		65	Unknown	1.0000	anions3
55	HS18110696-01DF500		36	Unknown	500.0000	anions3
56	HS18110696-07DF500		44	Unknown	500.0000	anions3
57	CCV1		3	Unknown	1.0000	anions3
58	CCB		4	Unknown	1.0000	anions3
59	WBLKW1-113018		66	Unknown	1.0000	anions3
60	WLCSW1-113018		67	Unknown	1.0000	anions3
61	WLCSDW1-113018		68	Unknown	1.0000	anions3
62	HS18110696-02DF20		37	Unknown	20.0000	anions3
63	HS18110696-02MSDF20		38	Unknown	20.0000	anions3
64	HS18110696-02MSDDF20		39	Unknown	20.0000	anions3
65	HS18110696-03DF500		40	Unknown	500.0000	anions3
66	HS18110696-04DF500		41	Unknown	500.0000	anions3
67	HS18110696-05DF500		42	Unknown	500.0000	anions3
68	HS18110696-06DF500		43	Unknown	500.0000	anions3

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Sequence: 112918
Operator: alshs.nouser

Printed: 1/16/2019 5:14:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	Method	Inj. Vol.	Status	Inj. Date/Time	Weight
35	HS18111440-01	110818	20.0	Finished	11/30/2018 12:49:23 AM	1.0000
36	HS18111440-01MS	110818	20.0	Finished	11/30/2018 1:11:05 AM	1.0000
37	HS18111440-01MSD	110818	20.0	Finished	11/30/2018 1:32:47 AM	1.0000
38	HS18111440-02DF2	110818	20.0	Finished	11/30/2018 1:54:29 AM	1.0000
39	HS18111440-02DF20	110818	20.0	Finished	11/30/2018 2:16:11 AM	1.0000
40	HS18111440-03	110818	20.0	Finished	11/30/2018 2:37:53 AM	1.0000
41	HS18111440-03DF20	110818	20.0	Finished	11/30/2018 2:59:35 AM	1.0000
42	HS18111440-04DF2	110818	20.0	Finished	11/30/2018 3:21:17 AM	1.0000
43	HS18111440-04DF20	110818	20.0	Finished	11/30/2018 3:43:00 AM	1.0000
44	HS18111440-05DF10	110818	20.0	Finished	11/30/2018 4:04:42 AM	1.0000
45	CCV	110818	20.0	Finished	11/30/2018 4:26:24 AM	1.0000
46	CCB	110818	20.0	Finished	11/30/2018 4:48:06 AM	1.0000
47	HS18111280-01	110818	20.0	Finished	11/30/2018 5:09:48 AM	1.0000
48	HS18111280-02	110818	20.0	Finished	11/30/2018 5:31:30 AM	1.0000
49	HS18111440-05	110818	20.0	Finished	11/30/2018 5:53:12 AM	1.0000
50	HS18110696-08DF500	110818	20.0	Finished	11/30/2018 6:14:53 AM	1.0000
51	HS18110696-09DF500	110818	20.0	Finished	11/30/2018 6:36:35 AM	1.0000
52	HS18110696-10DF500	110818	20.0	Finished	11/30/2018 6:58:17 AM	1.0000
53	HS18111381-01DF20	110818	20.0	Finished	11/30/2018 7:19:59 AM	1.0000
54	HS18111381-02DF20	110818	20.0	Finished	11/30/2018 7:41:41 AM	1.0000
55	HS18110696-01DF500	110818	20.0	Finished	11/30/2018 8:03:23 AM	1.0000
56	HS18110696-07DF500	110818	20.0	Finished	11/30/2018 8:25:05 AM	1.0000
57	CCV1	110818	20.0	Finished	11/30/2018 8:46:47 AM	1.0000
58	CCB	110818	20.0	Finished	11/30/2018 9:08:29 AM	1.0000
59	WBLKW1-113018	110818	20.0	Finished	11/30/2018 9:30:11 AM	1.0000
60	WLCSW1-113018	110818	20.0	Finished	11/30/2018 9:51:53 AM	1.0000
61	WLCSDW1-113018	110818	20.0	Finished	11/30/2018 10:13:35 AM	1.0000
62	HS18110696-02DF20	110818	20.0	Finished	11/30/2018 10:35:17 AM	1.0000
63	HS18110696-02MSDF20	110818	20.0	Finished	11/30/2018 10:56:59 AM	1.0000
64	HS18110696-02MSDDF20	110818	20.0	Finished	11/30/2018 11:18:41 AM	1.0000
65	HS18110696-03DF500	110818	20.0	Finished	11/30/2018 11:40:23 AM	1.0000
66	HS18110696-04DF500	110818	20.0	Finished	11/30/2018 12:02:05 PM	1.0000
67	HS18110696-05DF500	110818	20.0	Finished	11/30/2018 12:23:47 PM	1.0000
68	HS18110696-06DF500	110818	20.0	Finished	11/30/2018 12:45:28 PM	1.0000

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Sequence: 112918
Operator: alshs.nouser

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	ISTD Amount	Sample ID	Replicate ID
35	HS18111440-01	1.0000		01
36	HS18111440-01MS	1.0000		01
37	HS18111440-01MSD	1.0000		01
38	HS18111440-02DF2	1.0000		01
39	HS18111440-02DF20	1.0000		01
40	HS18111440-03	1.0000		01
41	HS18111440-03DF20	1.0000		01
42	HS18111440-04DF2	1.0000		01
43	HS18111440-04DF20	1.0000		01
44	HS18111440-05DF10	1.0000		01
45	CCV	1.0000		01
46	CCB	1.0000		01
47	HS18111280-01	1.0000		01
48	HS18111280-02	1.0000		01
49	HS18111440-05	1.0000		01
50	HS18110696-08DF500	1.0000		01
51	HS18110696-09DF500	1.0000		01
52	HS18110696-10DF500	1.0000		01
53	HS18111381-01DF20	1.0000		01
54	HS18111381-02DF20	1.0000		01
55	HS18110696-01DF500	1.0000		01
56	HS18110696-07DF500	1.0000		01
57	CCV1	1.0000		01
58	CCB	1.0000		01
59	WBLKW1-113018	1.0000		01
60	WLCSW1-113018	1.0000		01
61	WLCSDW1-113018	1.0000		01
62	HS18110696-02DF20	1.0000		01
63	HS18110696-02MSDF20	1.0000		01
64	HS18110696-02MSDDF20	1.0000		01
65	HS18110696-03DF500	1.0000		01
66	HS18110696-04DF500	1.0000		01
67	HS18110696-05DF500	1.0000		01
68	HS18110696-06DF500	1.0000		01

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Sequence: 112918
Operator: alshs.nouser

Printed: 1/16/2019 5:14:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	Comment	Pos.	Type	Dil. Factor	Program
69	CCV		1	Unknown	1.0000	anions3
70	CCB		2	Unknown	1.0000	anions3
71	HS18111280-01		51	Unknown	1.0000	anions3
72	HS18111432-01		69	Unknown	1.0000	anions3
73	HS18111432-01DF10		71	Unknown	10.0000	anions3
74	HS18111432-01DF50		72	Unknown	50.0000	anions3
75	HS18111434-01DF10		73	Unknown	10.0000	anions3
76	HS18111408-01		74	Unknown	1.0000	anions3
77	HS18111408-01DF10		75	Unknown	10.0000	anions3
78	HS18111408-02		76	Unknown	1.0000	anions3
79	HS18111408-02DF10		77	Unknown	10.0000	anions3
80	CCV1		3	Unknown	1.0000	anions3
81	CCB		4	Unknown	1.0000	anions3
82	HS18111497-01		78	Unknown	1.0000	anions3
83	HS18111497-01MS		79	Unknown	1.0000	anions3
84	HS18111497-01MSD		80	Unknown	1.0000	anions3
85	HS18111497-02		81	Unknown	1.0000	anions3
86	HS18111497-02DF20		82	Unknown	20.0000	anions3
87	HS18111497-03		83	Unknown	1.0000	anions3
88	HS18111497-03DF20		84	Unknown	20.0000	anions3
89	HS18110758-01DF2		85	Unknown	2.0000	anions3
90	HS18110758-01DF20		86	Unknown	20.0000	anions3
91	HS18111084-01DF200		87	Unknown	200.0000	anions3
92	CCV		1	Unknown	1.0000	anions3
93	CCB		2	Unknown	1.0000	anions3
94	HS18110760-01		88	Unknown	1.0000	anions3
95	HS18110760-01DF20		89	Unknown	20.0000	anions3
96	HS18110755-01DF500		90	Unknown	500.0000	anions3
97	HS18110755-02DF500		91	Unknown	500.0000	anions3
98	HS18110755-03DF500		92	Unknown	500.0000	anions3
99	HS18110755-04DF500		93	Unknown	500.0000	anions3
100	HS18110754-01DF50		11	Unknown	50.0000	anions3
101	HS18110754-02DF500		12	Unknown	500.0000	anions3
102	HS18110754-02MSDF500		13	Unknown	500.0000	anions3

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Sequence: 112918
Operator: alshs.nouser

Printed: 1/16/2019 5:14:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	Method	Inj. Vol.	Status	Inj. Date/Time	Weight
69	CCV	110818	20.0	Finished	11/30/2018 1:07:10 PM	1.0000
70	CCB	110818	20.0	Finished	11/30/2018 1:28:53 PM	1.0000
71	HS18111280-01	110818	20.0	Finished	11/30/2018 2:38:12 PM	1.0000
72	HS18111432-01	110818	20.0	Finished	11/30/2018 2:59:54 PM	1.0000
73	HS18111432-01DF10	110818	20.0	Finished	11/30/2018 3:21:36 PM	1.0000
74	HS18111432-01DF50	110818	20.0	Finished	11/30/2018 3:43:18 PM	1.0000
75	HS18111434-01DF10	110818	20.0	Finished	11/30/2018 4:05:00 PM	1.0000
76	HS18111408-01	110818	20.0	Finished	11/30/2018 4:26:42 PM	1.0000
77	HS18111408-01DF10	110818	20.0	Finished	11/30/2018 4:48:24 PM	1.0000
78	HS18111408-02	110818	20.0	Finished	11/30/2018 5:10:05 PM	1.0000
79	HS18111408-02DF10	110818	20.0	Finished	11/30/2018 5:31:47 PM	1.0000
80	CCV1	110818	20.0	Finished	11/30/2018 5:53:29 PM	1.0000
81	CCB	110818	20.0	Finished	11/30/2018 6:15:11 PM	1.0000
82	HS18111497-01	110818	20.0	Finished	11/30/2018 7:07:37 PM	1.0000
83	HS18111497-01MS	110818	20.0	Finished	11/30/2018 7:29:19 PM	1.0000
84	HS18111497-01MSD	110818	20.0	Finished	11/30/2018 7:51:01 PM	1.0000
85	HS18111497-02	110818	20.0	Finished	11/30/2018 8:12:43 PM	1.0000
86	HS18111497-02DF20	110818	20.0	Finished	11/30/2018 8:34:25 PM	1.0000
87	HS18111497-03	110818	20.0	Finished	11/30/2018 8:56:06 PM	1.0000
88	HS18111497-03DF20	110818	20.0	Finished	11/30/2018 9:17:48 PM	1.0000
89	HS18110758-01DF2	110818	20.0	Finished	11/30/2018 9:39:30 PM	1.0000
90	HS18110758-01DF20	110818	20.0	Finished	11/30/2018 10:01:12 PM	1.0000
91	HS18111084-01DF200	110818	20.0	Finished	11/30/2018 10:22:54 PM	1.0000
92	CCV	110818	20.0	Finished	11/30/2018 10:44:36 PM	1.0000
93	CCB	110818	20.0	Finished	11/30/2018 11:06:18 PM	1.0000
94	HS18110760-01	110818	20.0	Finished	11/30/2018 11:28:00 PM	1.0000
95	HS18110760-01DF20	110818	20.0	Finished	11/30/2018 11:49:42 PM	1.0000
96	HS18110755-01DF500	110818	20.0	Finished	12/1/2018 12:11:24 AM	1.0000
97	HS18110755-02DF500	110818	20.0	Finished	12/1/2018 12:33:06 AM	1.0000
98	HS18110755-03DF500	110818	20.0	Finished	12/1/2018 12:54:48 AM	1.0000
99	HS18110755-04DF500	110818	20.0	Finished	12/1/2018 1:16:30 AM	1.0000
100	HS18110754-01DF50	110818	20.0	Finished	12/1/2018 1:38:12 AM	1.0000
101	HS18110754-02DF500	110818	20.0	Finished	12/1/2018 1:59:56 AM	1.0000
102	HS18110754-02MSDF500	110818	20.0	Finished	12/1/2018 2:21:38 AM	1.0000

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Sequence: 112918 Page 9 of 12
Operator: alshs.nouser Printed: 1/16/2019 5:14:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2 Created: 11/30/2018 2:30:38 PM by alshs.nouser
#Samples: 134 (Modified, not saved)

No.	Name	ISTD Amount	Sample ID	Replicate ID
69	CCV	1.0000		01
70	CCB	1.0000		01
71	HS18111280-01	1.0000		01
72	HS18111432-01	1.0000		01
73	HS18111432-01DF10	1.0000		01
74	HS18111432-01DF50	1.0000		01
75	HS18111434-01DF10	1.0000		01
76	HS18111408-01	1.0000		01
77	HS18111408-01DF10	1.0000		01
78	HS18111408-02	1.0000		01
79	HS18111408-02DF10	1.0000		01
80	CCV1	1.0000		01
81	CCB	1.0000		01
82	HS18111497-01	1.0000		01
83	HS18111497-01MS	1.0000		01
84	HS18111497-01MSD	1.0000		01
85	HS18111497-02	1.0000		01
86	HS18111497-02DF20	1.0000		01
87	HS18111497-03	1.0000		01
88	HS18111497-03DF20	1.0000		01
89	HS18110758-01DF2	1.0000		01
90	HS18110758-01DF20	1.0000		01
91	HS18111084-01DF200	1.0000		01
92	CCV	1.0000		01
93	CCB	1.0000		01
94	HS18110760-01	1.0000		01
95	HS18110760-01DF20	1.0000		01
96	HS18110755-01DF500	1.0000		01
97	HS18110755-02DF500	1.0000		01
98	HS18110755-03DF500	1.0000		01
99	HS18110755-04DF500	1.0000		01
100	HS18110754-01DF50	1.0000		01
101	HS18110754-02DF500	1.0000		01
102	HS18110754-02MSDF500	1.0000		01

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Sequence: 112918
Operator: alshs.nouser

Printed: 1/16/2019 5:14:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	Comment	Pos.	Type	Dil. Factor	Program
103	HS18110754-02MSDDF500		14	Unknown	500.0000	anions3
104	CCV1		3	Unknown	1.0000	anions3
105	CCB		4	Unknown	1.0000	anions3
106	WBLKW1-120118		5	Unknown	1.0000	anions3
107	WLCSW1-120118		6	Unknown	1.0000	anions3
108	WLCSDW1-120118		7	Unknown	1.0000	anions3
109	HS18110754-03DF500		15	Unknown	500.0000	anions3
110	HS18110754-04DF500		16	Unknown	500.0000	anions3
111	HS18110834-04		17	Unknown	1.0000	anions3
112	HS18110834-05		18	Unknown	1.0000	anions3
113	HS18110834-06		19	Unknown	1.0000	anions3
114	HS18110835-01		20	Unknown	1.0000	anions3
115	HS18110835-02		21	Unknown	1.0000	anions3
116	CCV		1	Unknown	1.0000	anions3
117	CCB		2	Unknown	1.0000	anions3
118	CCV		1	Unknown	1.0000	anions3
119	CCB		2	Unknown	1.0000	anions3
120	HS18120007-01		22	Unknown	1.0000	anions3
121	DI H2O		10	Unknown	1.0000	anions3
122	HS18120007-01DF20		23	Unknown	20.0000	anions3
123	HS18120007-01MSDF20		24	Unknown	20.0000	anions3
124	HS18120007-01MSDDF20		25	Unknown	20.0000	anions3
125	HS18120007-01DF50		26	Unknown	50.0000	anions3
126	CCV1		3	Unknown	1.0000	anions3
127	CCB1		4	Unknown	1.0000	anions3
128	DI H2O		10	Unknown	1.0000	anions3
129	DI H2O		10	Unknown	1.0000	anions3
130	CCV		1	Unknown	1.0000	anions3
131	CCB		2	Unknown	1.0000	anions3
132	HS18110755-04DF10		94	Unknown	10.0000	anions3
133	CCV1		3	Unknown	1.0000	anions3
134	CCB		4	Unknown	1.0000	anions3

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Sequence: 112918
Operator: alshs.nouser

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	Method	Inj. Vol.	Status	Inj. Date/Time	Weight
103	HS18110754-02MSDDF500	110818	20.0	Finished	12/1/2018 2:43:20 AM	1.0000
104	CCV1	110818	20.0	Finished	12/1/2018 3:05:02 AM	1.0000
105	CCB	110818	20.0	Finished	12/1/2018 3:26:44 AM	1.0000
106	WBLKW1-120118	110818	20.0	Finished	12/1/2018 3:48:26 AM	1.0000
107	WLCSW1-120118	110818	20.0	Finished	12/1/2018 4:10:08 AM	1.0000
108	WLCSDW1-120118	110818	20.0	Finished	12/1/2018 4:31:50 AM	1.0000
109	HS18110754-03DF500	110818	20.0	Finished	12/1/2018 4:53:32 AM	1.0000
110	HS18110754-04DF500	110818	20.0	Finished	12/1/2018 5:15:14 AM	1.0000
111	HS18110834-04	110818	20.0	Finished	12/1/2018 5:36:56 AM	1.0000
112	HS18110834-05	110818	20.0	Finished	12/1/2018 5:58:39 AM	1.0000
113	HS18110834-06	110818	20.0	Finished	12/1/2018 6:20:21 AM	1.0000
114	HS18110835-01	110818	20.0	Finished	12/1/2018 6:42:03 AM	1.0000
115	HS18110835-02	110818	20.0	Finished	12/1/2018 7:03:45 AM	1.0000
116	CCV	110818	20.0	Finished	12/1/2018 7:25:27 AM	1.0000
117	CCB	110818	20.0	Finished	12/1/2018 7:47:09 AM	1.0000
118	CCV	110818	20.0	Finished	12/1/2018 2:18:47 PM	1.0000
119	CCB	110818	20.0	Finished	12/1/2018 2:40:29 PM	1.0000
120	HS18120007-01	110818	20.0	Finished	12/1/2018 3:02:11 PM	1.0000
121	DI H2O	110818	20.0	Finished	12/1/2018 3:23:53 PM	1.0000
122	HS18120007-01DF20	110818	20.0	Finished	12/1/2018 3:45:35 PM	1.0000
123	HS18120007-01MSDF20	110818	20.0	Finished	12/1/2018 4:07:17 PM	1.0000
124	HS18120007-01MSDDF20	110818	20.0	Finished	12/1/2018 4:29:00 PM	1.0000
125	HS18120007-01DF50	110818	20.0	Finished	12/1/2018 4:50:42 PM	1.0000
126	CCV1	110818	20.0	Finished	12/1/2018 5:12:24 PM	1.0000
127	CCB1	110818	20.0	Finished	12/1/2018 5:34:06 PM	1.0000
128	DI H2O	110818	20.0	Finished	12/3/2018 9:46:56 AM	1.0000
129	DI H2O	110818	20.0	Finished	12/3/2018 10:08:39 AM	1.0000
130	CCV	110818	20.0	Finished	12/3/2018 11:42:49 AM	1.0000
131	CCB	110818	20.0	Finished	12/3/2018 12:04:31 PM	1.0000
132	HS18110755-04DF10	110818	20.0	Finished	12/3/2018 12:26:13 PM	1.0000
133	CCV1	110818	20.0	Finished	12/3/2018 12:52:43 PM	1.0000
134	CCB	110818	20.0	Finished	12/3/2018 1:14:25 PM	1.0000

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Sequence: 112918
Operator: alshs.nouser

Title: Temporary sequence for manual data acquisition
Datasource: HP0307B_local
Location: ICS3000_2\2_Data\02-2018
Timebase: ICS3000_2
#Samples: 134

Created: 11/30/2018 2:30:38 PM by alshs.nouser
(Modified, not saved)

No.	Name	ISTD Amount	Sample ID	Replicate ID
103	HS18110754-02MSDDF500	1.0000		01
104	CCV1	1.0000		01
105	CCB	1.0000		01
106	WBLKW1-120118	1.0000		01
107	WLCSW1-120118	1.0000		01
108	WLCSDW1-120118	1.0000		01
109	HS18110754-03DF500	1.0000		01
110	HS18110754-04DF500	1.0000		01
111	HS18110834-04	1.0000		01
112	HS18110834-05	1.0000		01
113	HS18110834-06	1.0000		01
114	HS18110835-01	1.0000		01
115	HS18110835-02	1.0000		01
116	CCV	1.0000		01
117	CCB	1.0000		01
118	CCV	1.0000		01
119	CCB	1.0000		01
120	HS18120007-01	1.0000		01
121	DI H2O	1.0000		01
122	HS18120007-01DF20	1.0000		01
123	HS18120007-01MSDF20	1.0000		01
124	HS18120007-01MSDDF20	1.0000		01
125	HS18120007-01DF50	1.0000		01
126	CCV1	1.0000		01
127	CCB1	1.0000		01
128	DI H2O	1.0000		01
129	DI H2O	1.0000		01
130	CCV	1.0000		01
131	CCB	1.0000		01
132	HS18110755-04DF10	1.0000		01
133	CCV1	1.0000		01
134	CCB	1.0000		01

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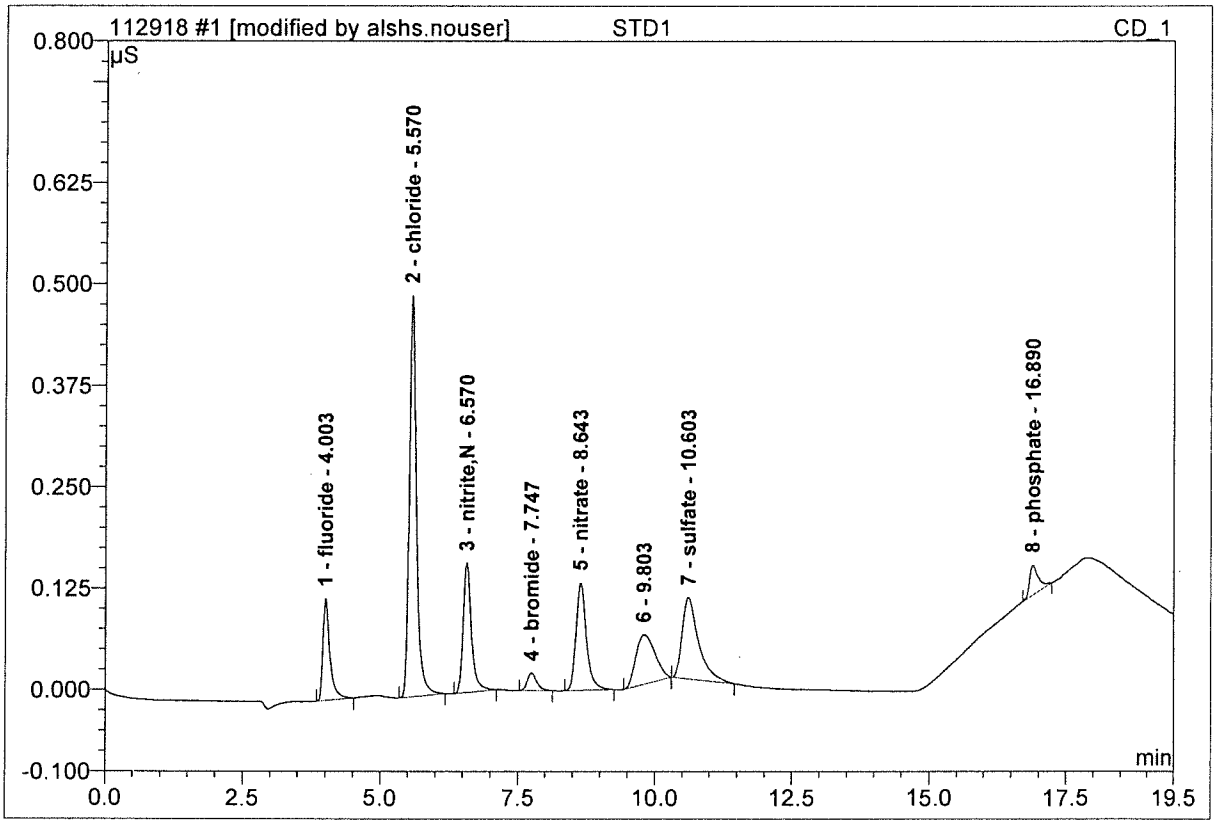
1 STD1

297.020.7208

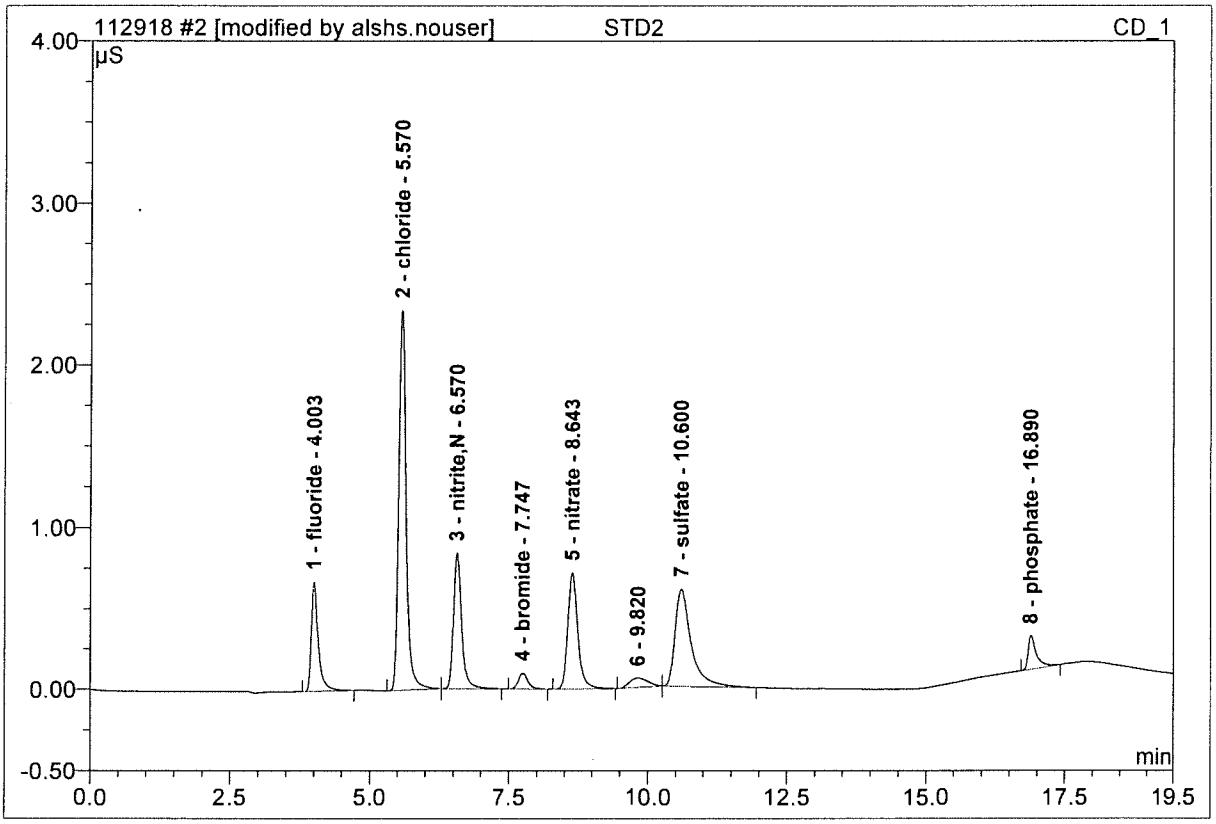
Sample Name:	**STD1**	*Injection Volume:*	**20.0**
Vial Number:	**91**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/8/2018 15:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.00	fluoride	0.125	0.018	8.40	0.110	1.
2	5.57	chloride	0.494	0.074	33.62	0.568	1.
3	6.57	nitrite,N	0.160	0.028	12.63	0.094	1.
4	7.75	bromide	0.022	0.004	2.03	0.144	1.
5	8.64	nitrate	0.133	0.029	13.35	0.123	1.
7	10.60	sulfate	0.101	0.035	15.83	0.648	1.
8	16.89	phosphate	0.037	0.006	2.95	0.157	1.
Total:			1.071	0.195	88.80	1.845	

2 STD2

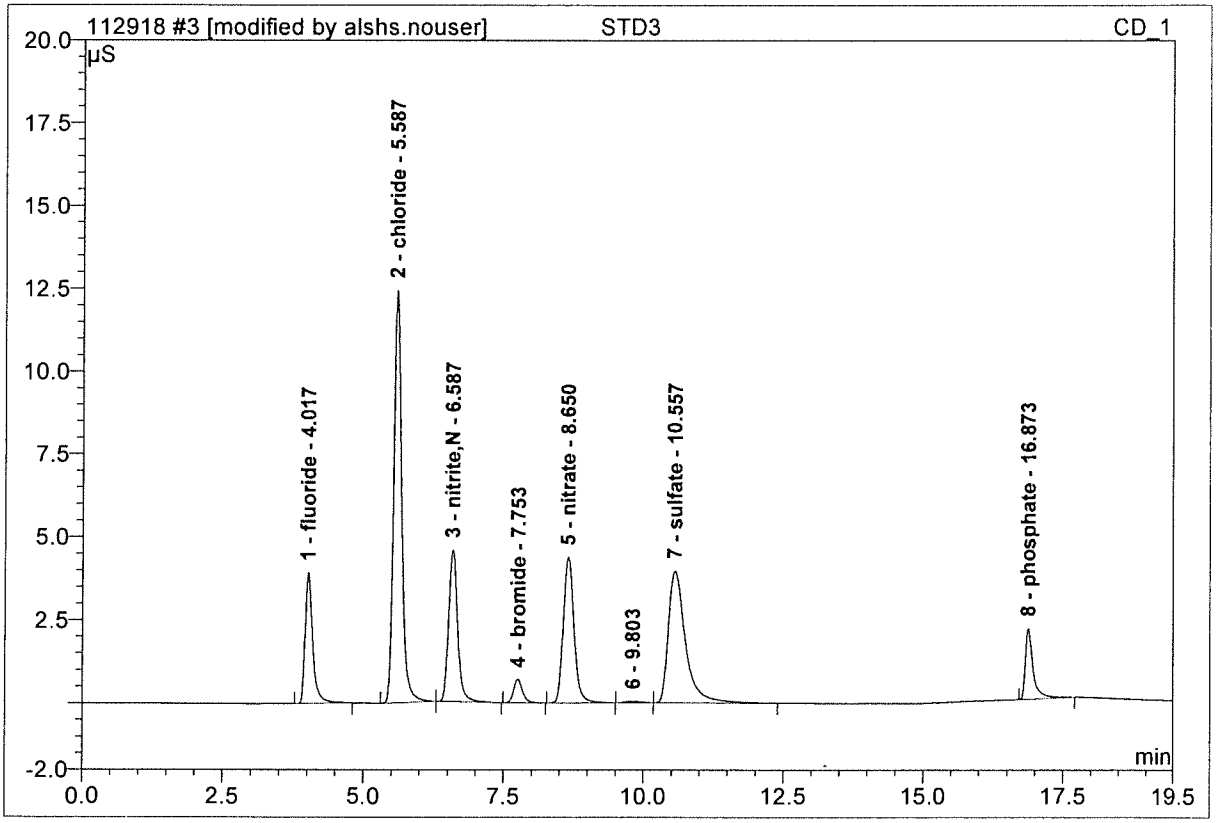
Sample Name:	**STD2**	*Injection Volume:*	**20.0**
Vial Number:	**92**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/8/2018 15:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.00	fluoride	0.678	0.098	9.47	0.361	1.
2	5.57	chloride	2.343	0.362	34.95	1.864	1.
3	6.57	nitrite,N	0.840	0.143	13.78	0.375	1.
4	7.75	bromide	0.099	0.019	1.88	0.321	1.
5	8.64	nitrate	0.720	0.152	14.68	0.345	1.
7	10.60	sulfate	0.605	0.203	19.66	1.680	1.
8	16.89	phosphate	0.209	0.036	3.44	0.279	1.
Total:			5.495	1.012	97.86	5.224	

3 STD3

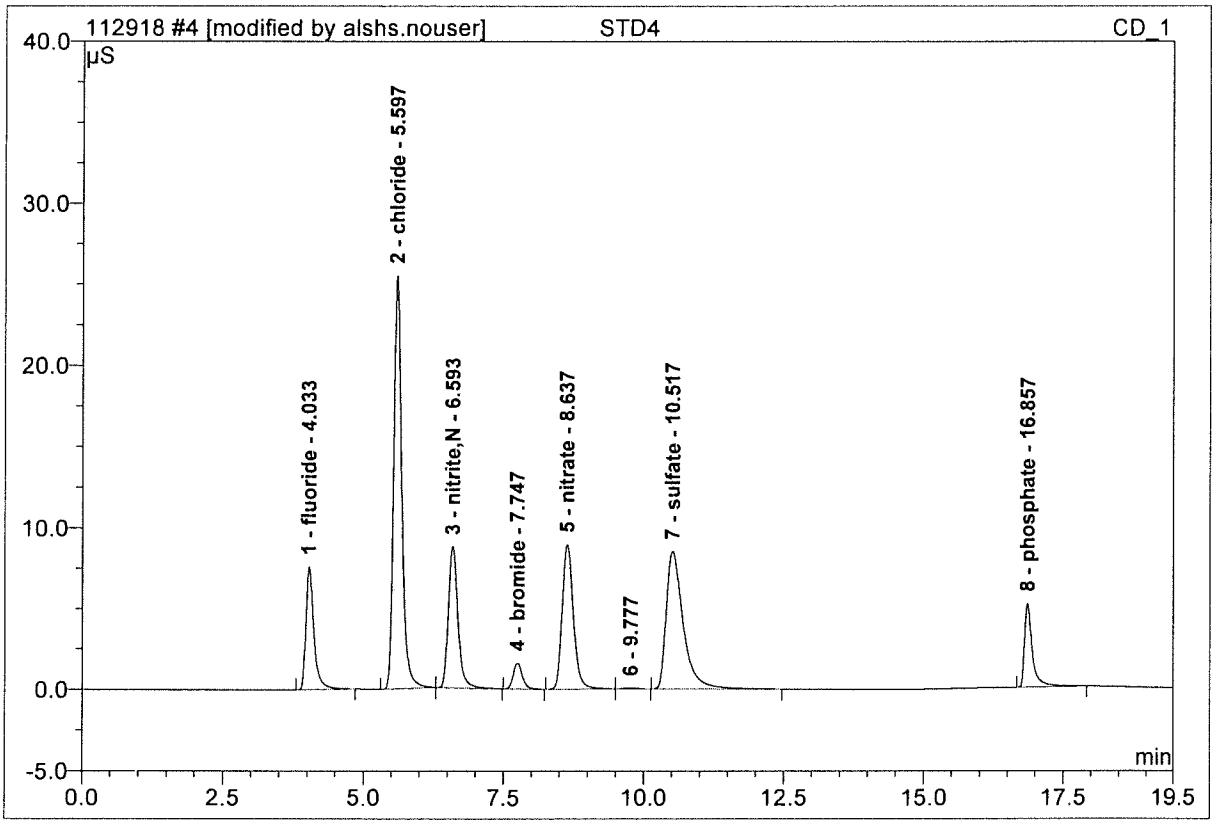
Sample Name:	**STD3**	*Injection Volume:*	**20.0**
Vial Number:	**93**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/8/2018 16:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.02	fluoride	3.931	0.610	9.51	1.974	1.
2	5.59	chloride	12.426	2.058	32.10	9.501	1.
3	6.59	nitrite,N	4.563	0.856	13.35	2.121	1.
4	7.75	bromide	0.706	0.131	2.05	1.630	1.
5	8.65	nitrate	4.384	0.989	15.42	1.862	1.
7	10.56	sulfate	3.970	1.409	21.98	9.063	1.
8	16.87	phosphate	2.125	0.344	5.36	1.565	1.
Total:			32.104	6.396	99.78	27.715	

4 STD4

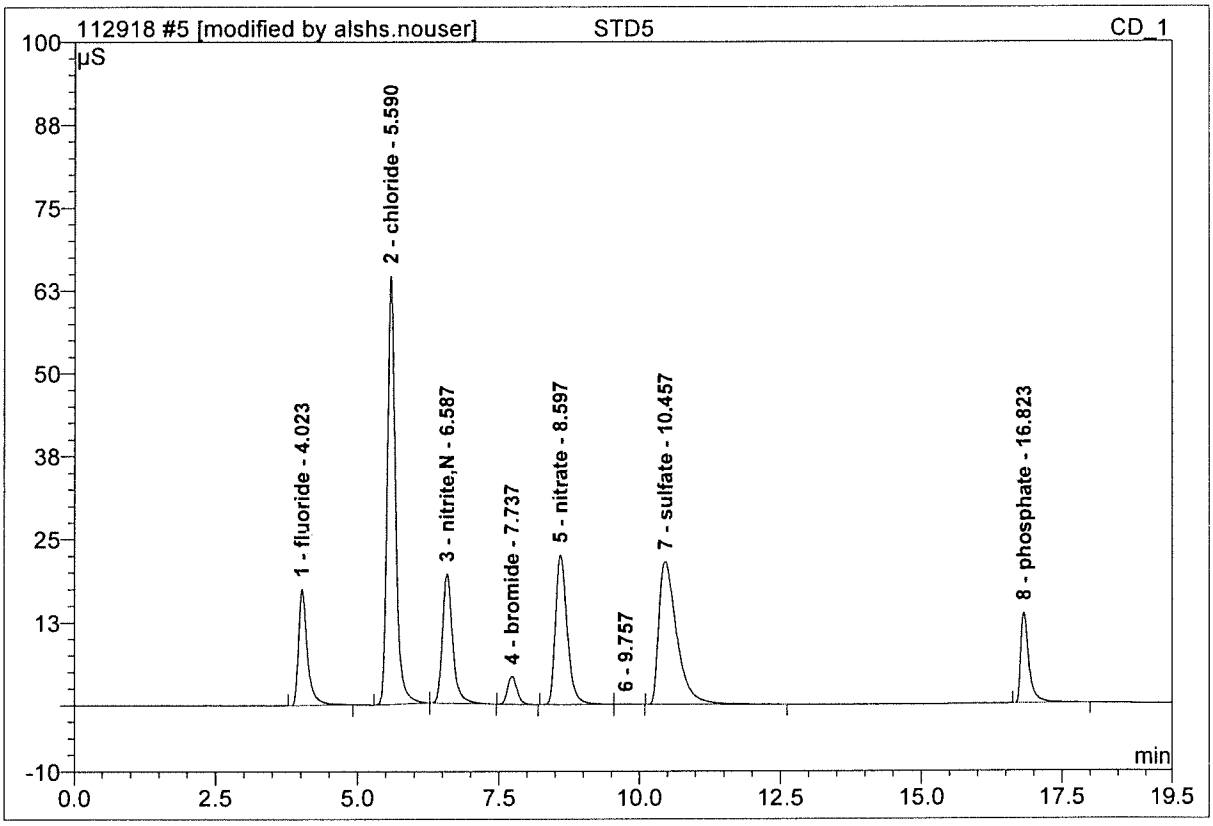
Sample Name:	**STD4**	*Injection Volume:*	**20.0**
Vial Number:	**94**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/8/2018 16:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.03	fluoride	7.603	1.260	9.33	4.021	1.
2	5.60	chloride	25.472	4.277	31.67	19.493	1.
3	6.59	nitrite,N	8.744	1.730	12.81	4.260	1.
4	7.75	bromide	1.599	0.300	2.22	3.612	1.
5	8.64	nitrate	8.957	2.077	15.38	3.835	1.
7	10.52	sulfate	8.533	3.005	22.25	18.833	1.
8	16.86	phosphate	5.156	0.840	6.22	3.633	1.
Total:			66.066	13.487	99.88	57.688	

5 STD5

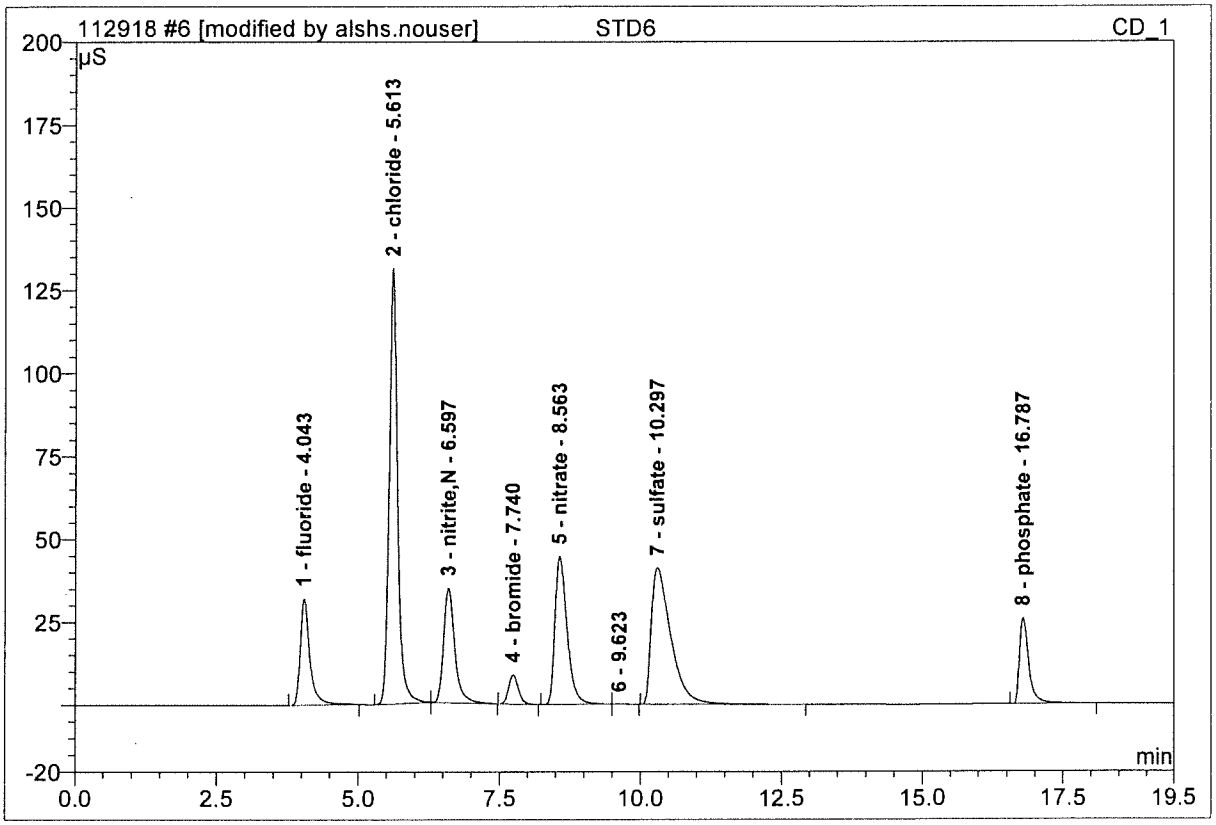
Sample Name:	**STD5**	*Injection Volume:*	**20.0**
Vial Number:	**95**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/8/2018 17:04**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.02	fluoride	17.561	3.171	9.07	10.044	1.
2	5.59	chloride	64.602	10.958	31.33	49.578	1.
3	6.59	nitrite,N	19.488	4.165	11.91	10.222	1.
4	7.74	bromide	4.284	0.838	2.40	9.922	1.
5	8.60	nitrate	22.525	5.473	15.65	9.994	1.
7	10.46	sulfate	21.536	8.002	22.88	49.430	1.
8	16.82	phosphate	13.630	2.350	6.72	9.933	1.
Total:			163.627	34.958	99.95	149.122	

6 STD6

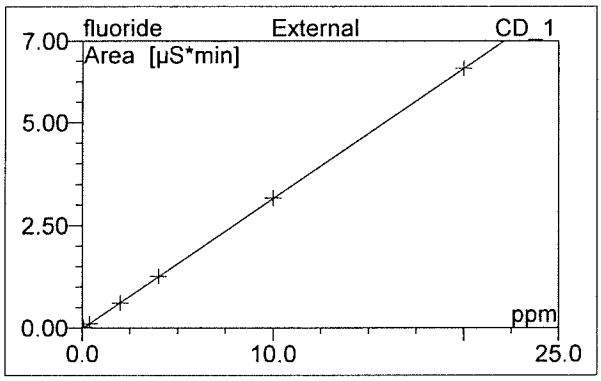
Sample Name:	**STD6**	*Injection Volume:*	**20.0**
Vial Number:	**96**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/8/2018 17:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**

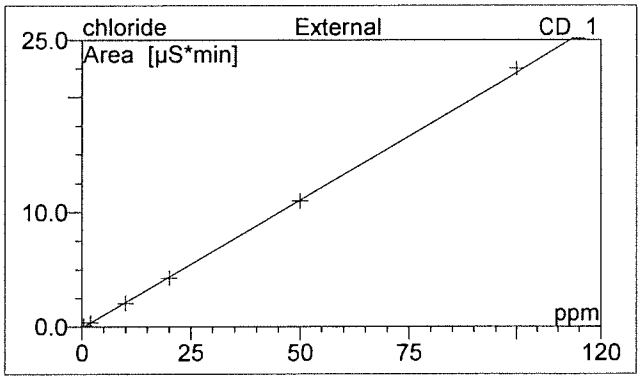


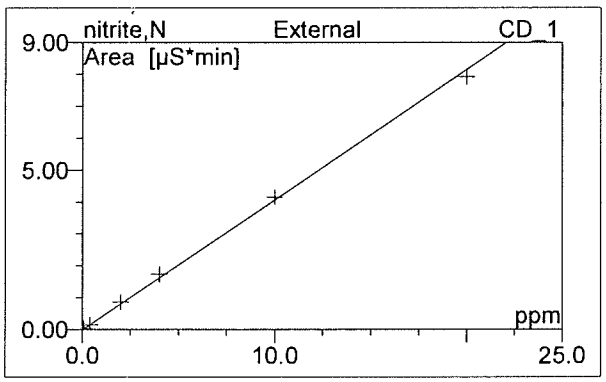
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.04	fluoride	32.109	6.327	8.86	19.990	1.
2	5.61	chloride	131.095	22.488	31.49	101.496	1.
3	6.60	nitrite,N	34.513	7.926	11.10	19.428	1.
4	7.74	bromide	8.856	1.772	2.48	20.871	1.
5	8.56	nitrate	44.623	11.179	15.65	20.340	1.
7	10.30	sulfate	41.276	16.726	23.42	102.847	1.
8	16.79	phosphate	25.834	4.988	6.98	20.933	1.
Total:			318.304	71.406	99.98	305.906	

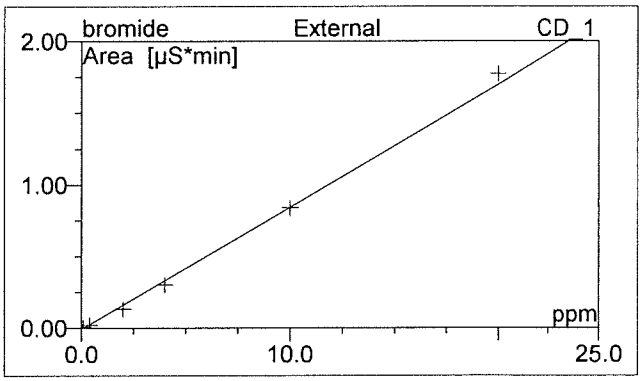
6 STD6

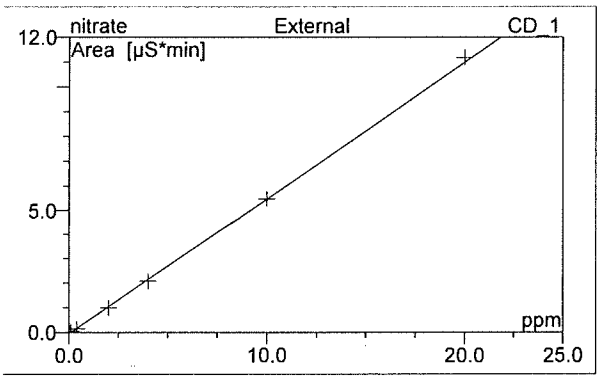
Sample Name:	**STD6**	*Injection Volume:*	**20.0**
Vial Number:	**96**	*Channel:*	**CD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2018 17:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**

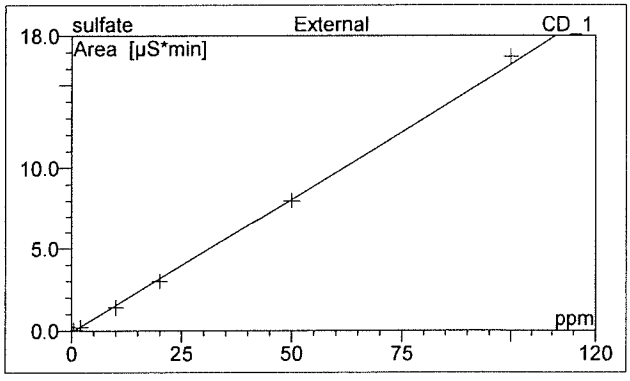


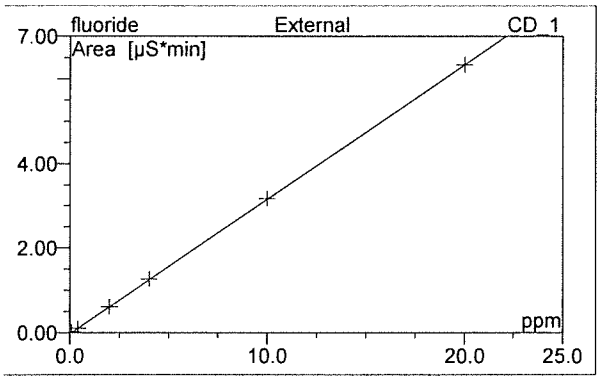


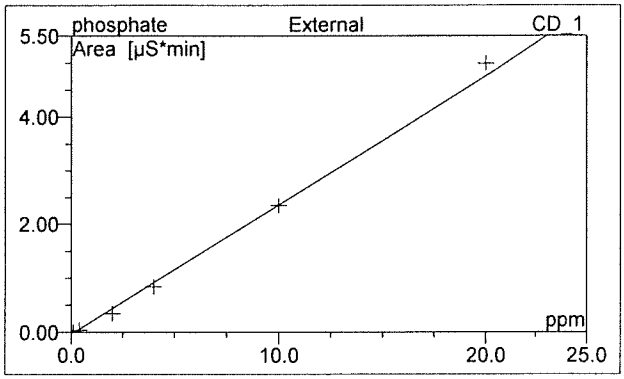










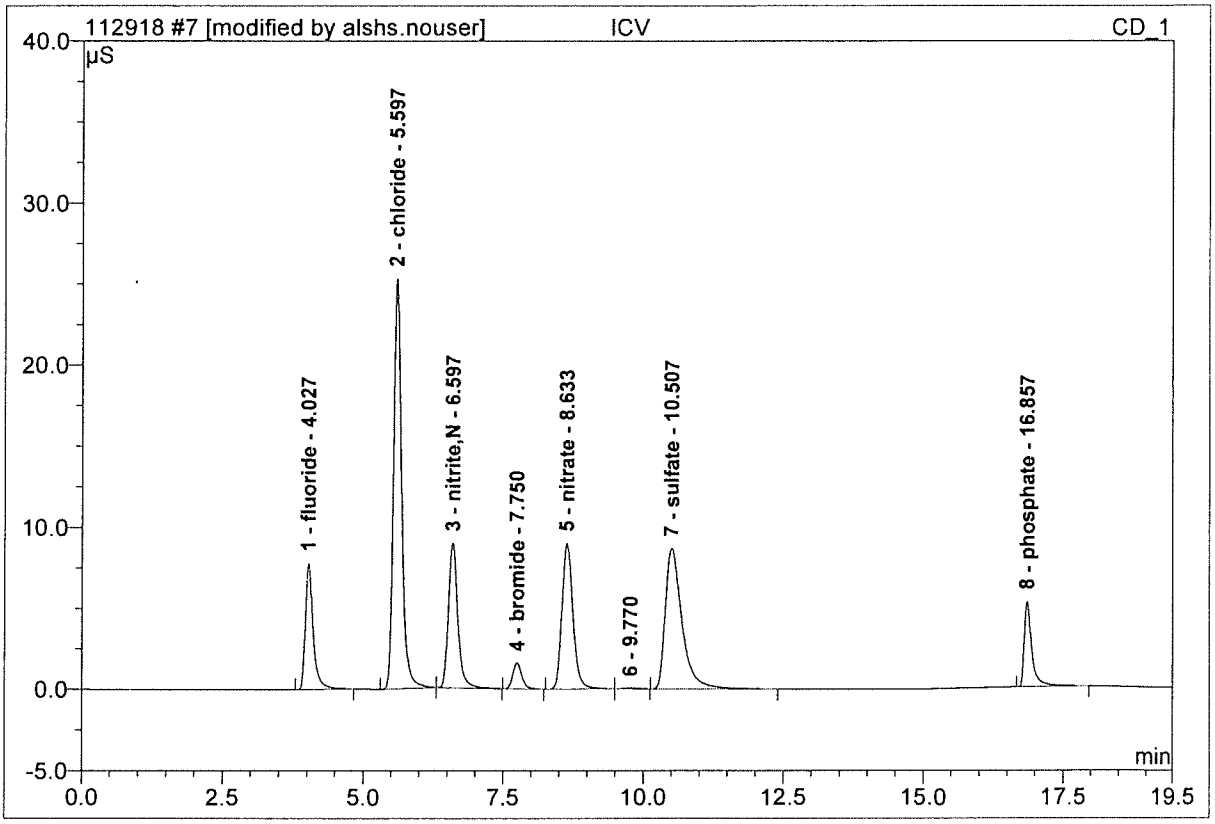


No.	Ret.Time min	Peak Name	Cal.Type	Points	Coeff.Det. %	Offset	Slope	Curve
1	4.04	fluoride	XLOff	6	99.9834	-0.0165	0.3174	0.000
2	5.61	chloride	XLOff	6	99.9513	-0.0523	0.2221	0.000
3	6.60	nitrite,N	XLOff	6	99.8600	-0.0107	0.4085	0.000
4	7.74	bromide	XLOff	6	99.4702	-0.0079	0.0853	0.000
5	8.56	nitrate	XLOff	6	99.8969	-0.0385	0.5515	0.000
7	10.30	sulfate	XLOff	6	99.8003	-0.0709	0.1633	0.000
8	16.79	phosphate	XLOff	6	99.2890	-0.0312	0.2398	0.000
Average:					99.7502	-0.0326	0.2840	0.0000

No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	RF-Value	Std.Dev.	RSD %
1	4.04	fluoride	XLOff	6	99.992	3.151	0.008	6.327
2	5.61	chloride	XLOff	6	99.976	4.503	0.048	10.720
3	6.60	nitrite,N	XLOff	6	99.930	2.448	0.030	17.286
4	7.74	bromide	XLOff	6	99.735	11.729	0.012	39.935
5	8.56	nitrate	XLOff	6	99.948	1.813	0.034	16.534
7	10.30	sulfate	XLOff	6	99.900	6.123	0.071	24.113
8	16.79	phosphate	XLOff	6	99.644	4.171	0.039	51.853
Average:					99.8749	4.8482	0.0346	23.8238

7 ICV

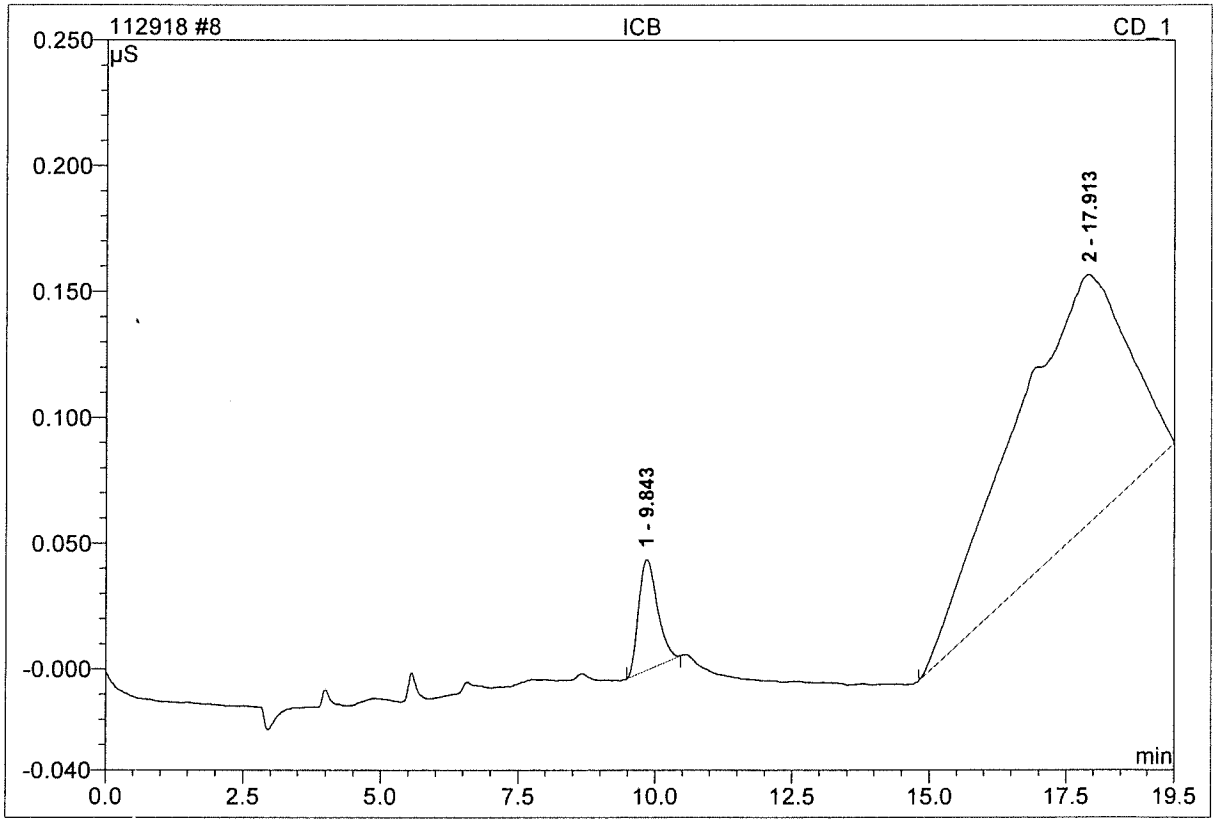
Sample Name:	**ICV**	*Injection Volume:*	**20.0**
Vial Number:	**97**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/8/2018 17:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.03	fluoride	7.797	1.274	9.44	4.066	1.
2	5.60	chloride	25.280	4.240	31.42	19.328	1.
3	6.60	nitrite,N	8.911	1.748	12.95	4.306	1.
4	7.75	bromide	1.599	0.300	2.22	3.608	1.
5	8.63	nitrate	8.971	2.059	15.26	3.804	1.
7	10.51	sulfate	8.674	3.010	22.31	18.867	1.
8	16.86	phosphate	5.266	0.850	6.30	3.676	1.
Total:			66.498	13.482	99.89	57.656	

8 ICB

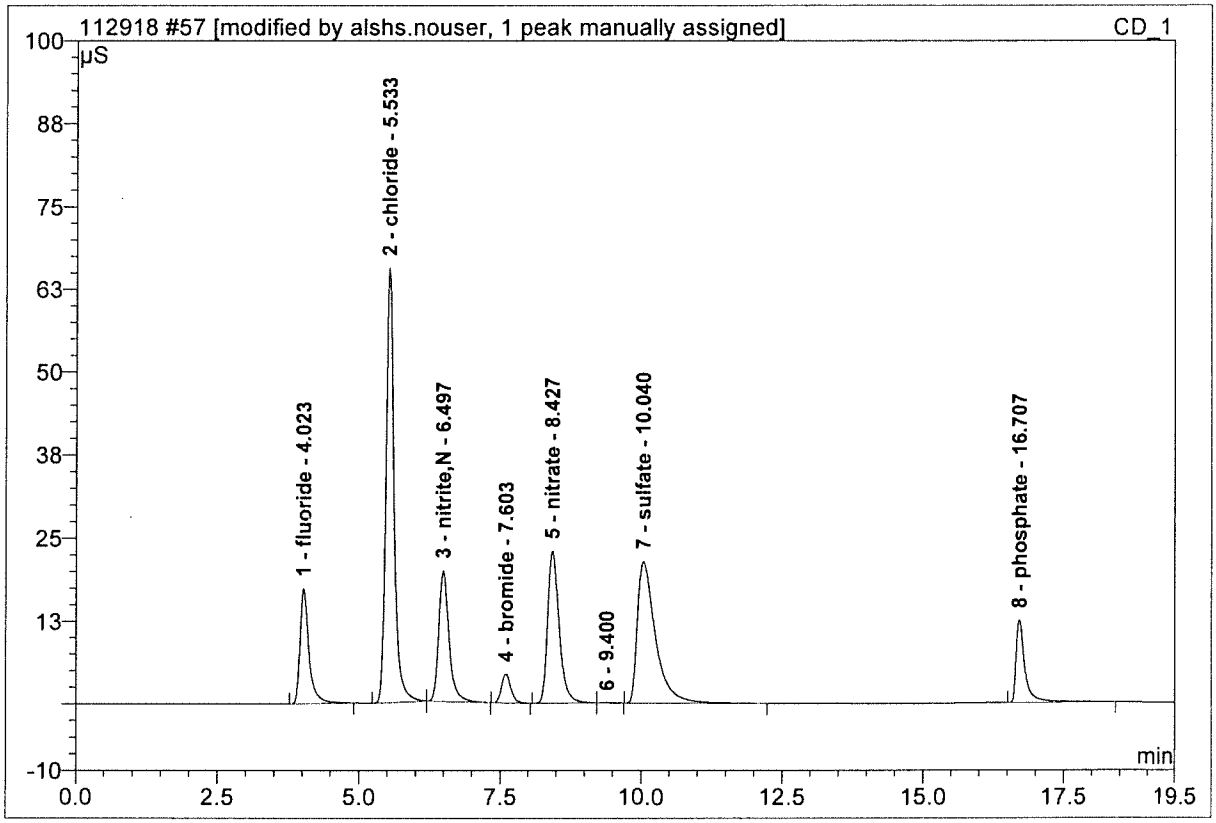
Sample Name:	**ICB**	*Injection Volume:*	**20.0**
Vial Number:	**98**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/8/2018 18:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
Total:			0.000	0.000	0.00	0.000	

57 CCV1

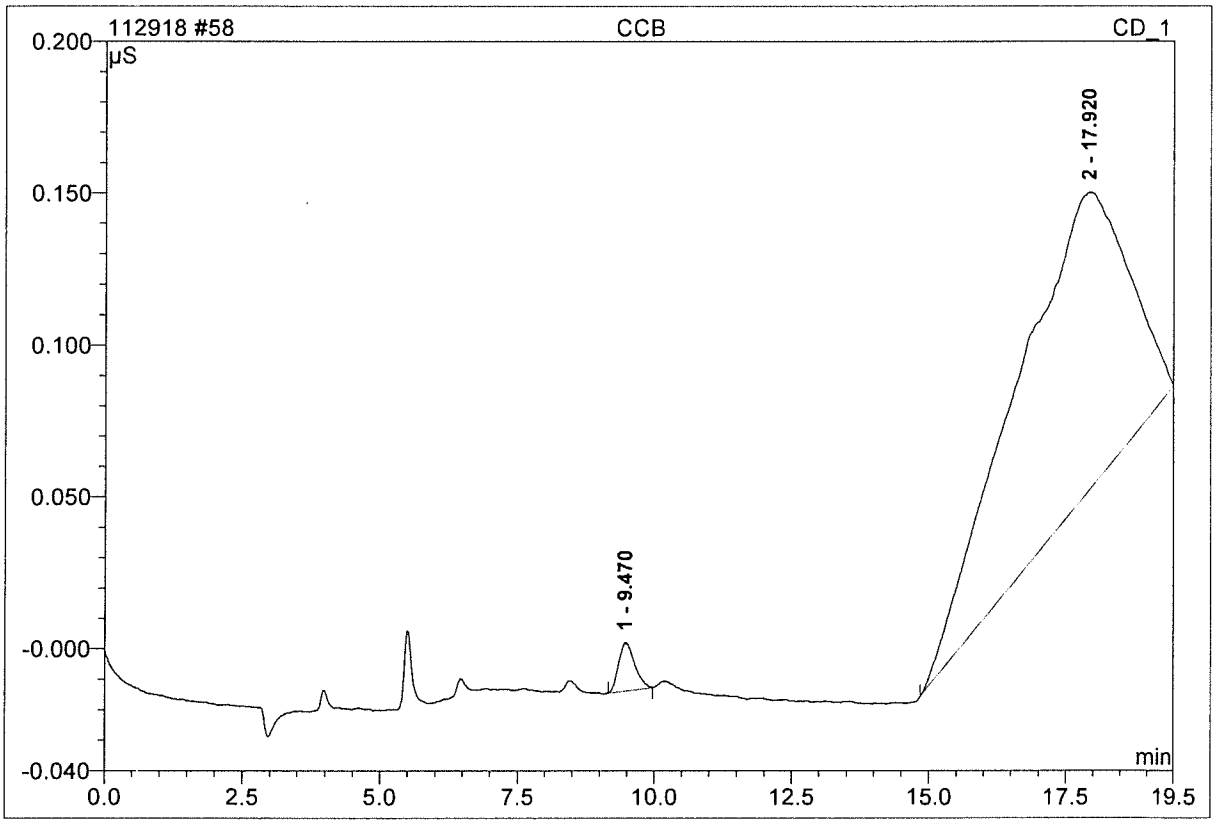
Sample Name:	**CCV1**	*Injection Volume:*	**20.0**
Vial Number:	**3**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 8:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.02	fluoride	17.442	3.191	9.13	10.107	1.
2	5.53	chloride	65.573	10.984	31.41	49.693	1.
3	6.50	nitrite,N	19.794	4.193	11.99	10.290	1.
4	7.60	bromide	4.387	0.848	2.42	10.035	1.
5	8.43	nitrate	23.009	5.438	15.55	9.931	1.
7	10.04	sulfate	21.460	7.990	22.85	49.357	1.
8	16.71	phosphate	12.455	2.312	6.61	9.774	1.
Total:			164.119	34.956	99.96	149.188	

58 CCB

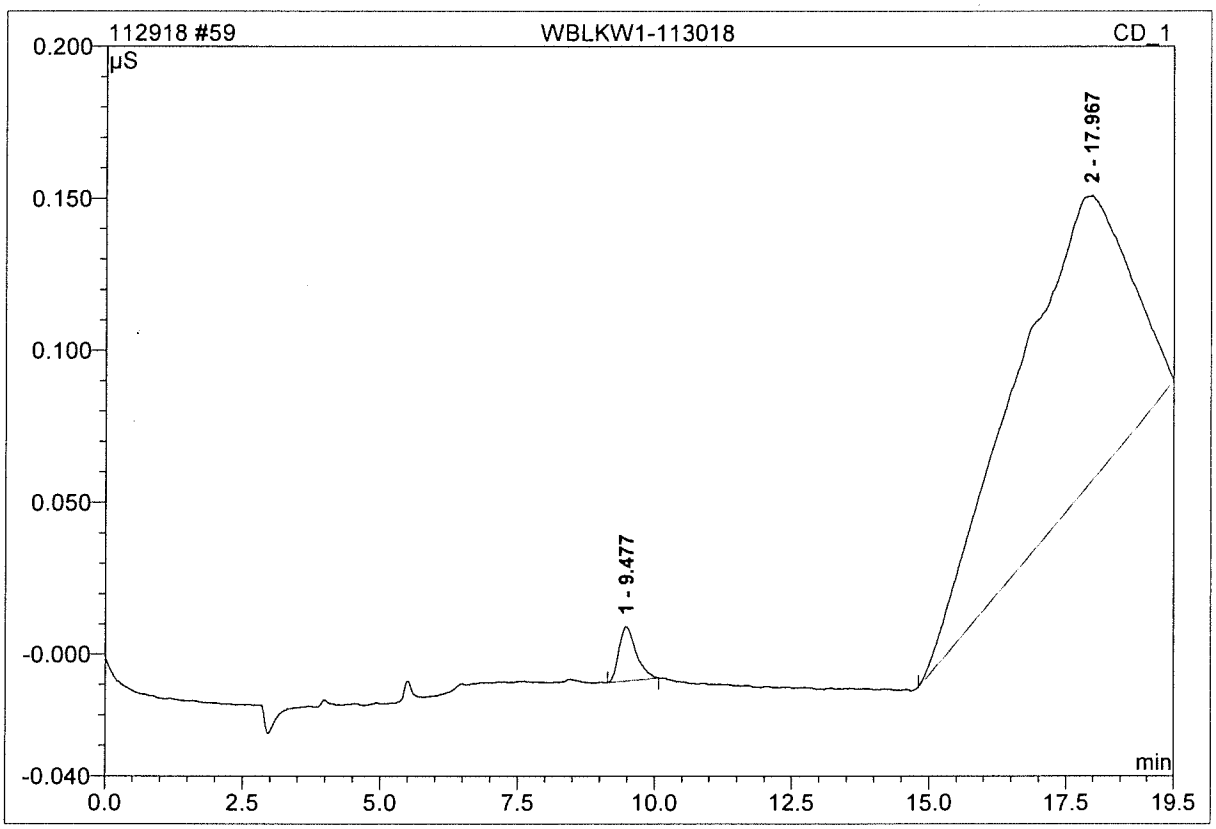
Sample Name:	**CCB**	*Injection Volume:*	**20.0**
Vial Number:	**4**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 9:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
Total:			0.000	0.000	0.00	0.000	

59 WBLKW1-113018

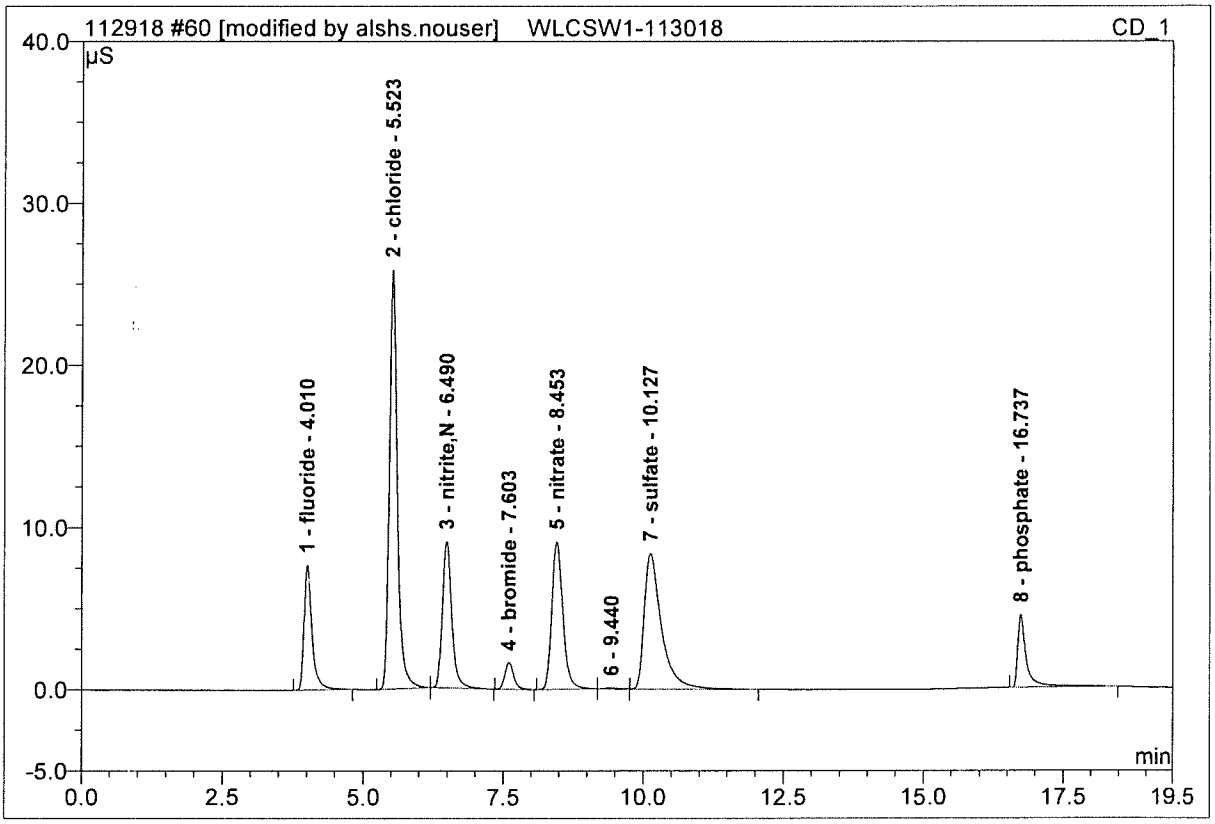
Sample Name:	**WBLKW1-113018**	*Injection Volume:*	**20.0**
Vial Number:	**66**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 9:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
Total:			0.000	0.000	0.00	0.000	

60 WLCSW1-113018

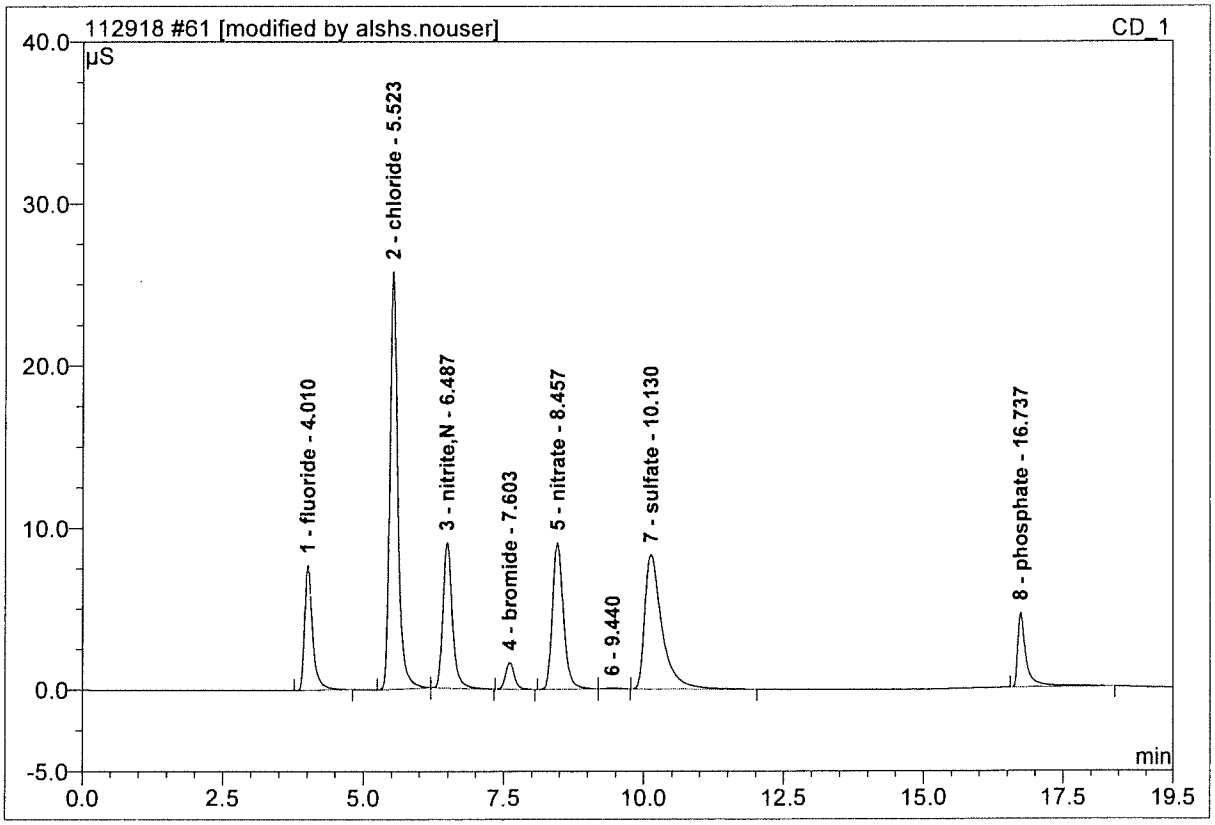
Sample Name:	**WLCSW1-113018**	*Injection Volume:*	**20.0**
Vial Number:	**67**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 9:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.01	fluoride	7.699	1.268	9.39	4.048	1.
2	5.52	chloride	25.856	4.271	31.61	19.469	1.
3	6.49	nitrite,N	9.006	1.762	13.04	4.338	1.
4	7.60	bromide	1.653	0.304	2.25	3.663	1.
5	8.45	nitrate	9.080	2.077	15.37	3.835	1.
7	10.13	sulfate	8.351	2.976	22.03	18.658	1.
8	16.74	phosphate	4.474	0.839	6.21	3.628	1.
Total:			66.120	13.497	99.90	57.639	

61 WLCSDW1-113018

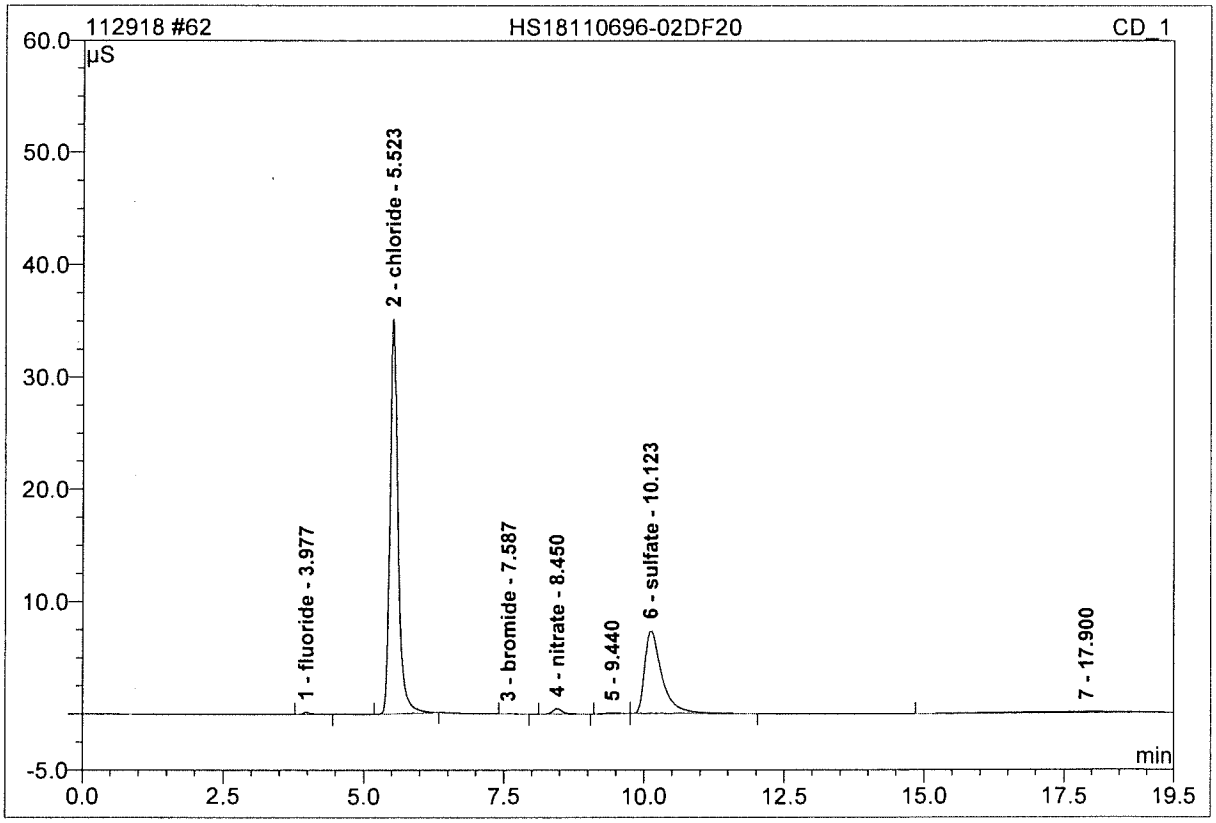
Sample Name:	**WLCSDW1-113018**	*Injection Volume:*	**20.0**
Vial Number:	**68**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 10:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.01	fluoride	7.724	1.264	9.40	4.036	1.
2	5.52	chloride	25.751	4.241	31.52	19.332	1.
3	6.49	nitrite,N	8.984	1.759	13.08	4.333	1.
4	7.60	bromide	1.647	0.303	2.25	3.640	1.
5	8.46	nitrate	9.062	2.064	15.34	3.813	1.
7	10.13	sulfate	8.313	2.963	22.02	18.579	1.
8	16.74	phosphate	4.583	0.847	6.29	3.662	1.
Total:			66.064	13.441	99.90	57.395	

62 HS18110696-02DF20

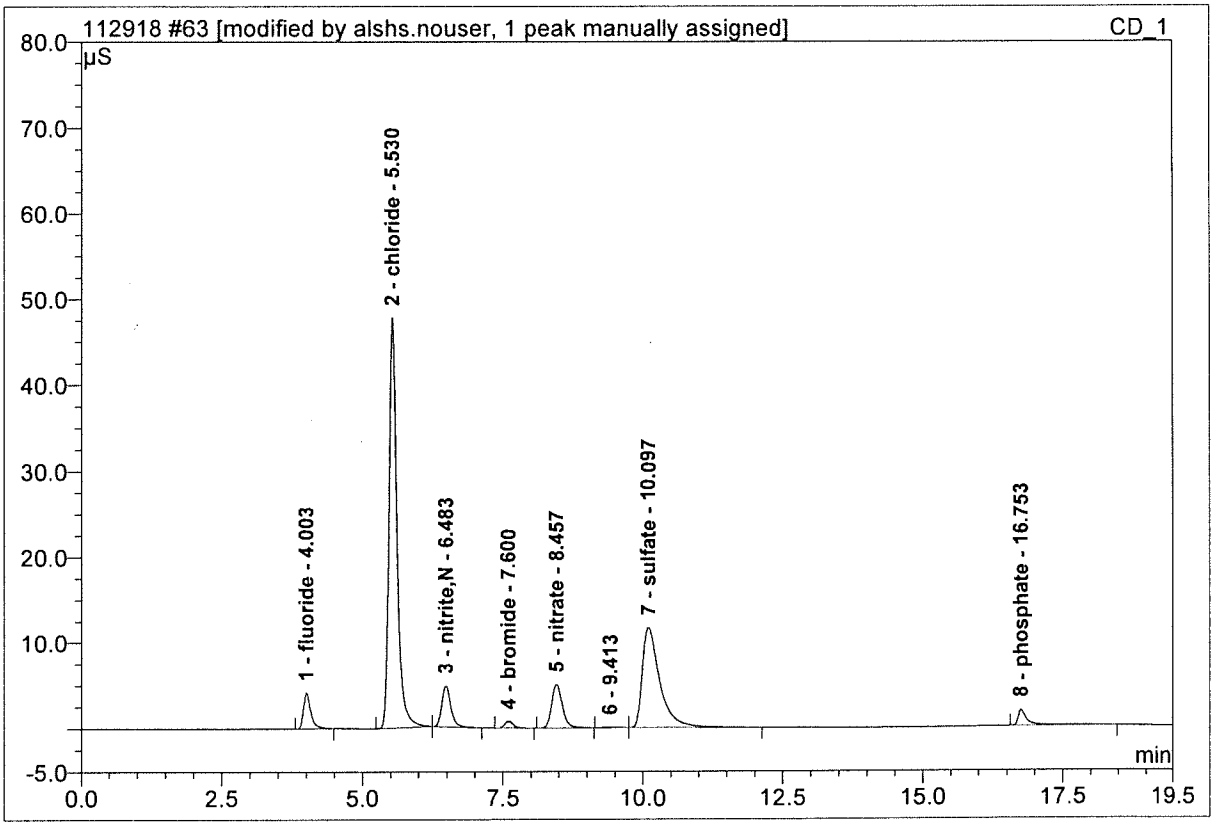
Sample Name:	**HS18110696-02DF20**	*Injection Volume:*	**20.0**
Vial Number:	**37**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**20.**
Recording Time:	**11/30/2018 10:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	3.98	fluoride	0.185	0.028	0.31	2.803	20.
2	5.52	chloride	35.160	5.859	65.75	532.359	20.
3	7.59	bromide	0.034	0.006	0.07	3.316	20.
4	8.45	nitrate	0.489	0.100	1.12	5.016	20.
6	10.12	sulfate	7.345	2.621	29.41	329.658	20.
Total:			43.212	8.614	96.67	873.153	

63 HS18110696-02MSDF20

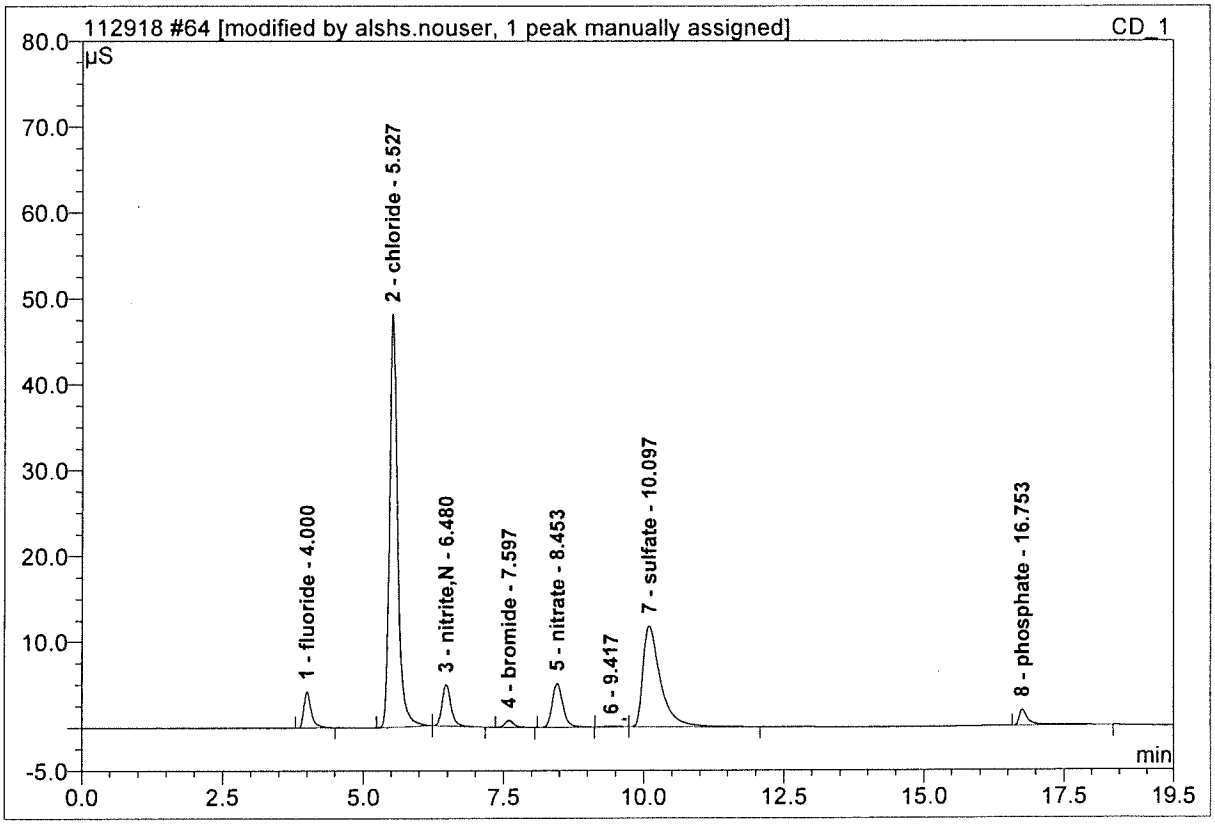
Sample Name:	**HS18110696-02MSDF20**	*Injection Volume:*	**20.0**
Vial Number:	**38**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**20.**
Recording Time:	**11/30/2018 10:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.00	fluoride	4.184	0.637	4.16	41.189	20.
2	5.53	chloride	47.733	7.924	51.69	718.354	20.
3	6.48	nitrite,N	4.773	0.880	5.74	43.593	20.
4	7.60	bromide	0.814	0.147	0.96	36.253	20.
5	8.46	nitrate	5.079	1.123	7.32	42.113	20.
7	10.10	sulfate	11.675	4.213	27.48	524.568	20.
8	16.75	phosphate	1.844	0.385	2.51	34.752	20.
Total:			76.102	15.309	99.86	1440.824	

64 HS18110696-02MSDDF20

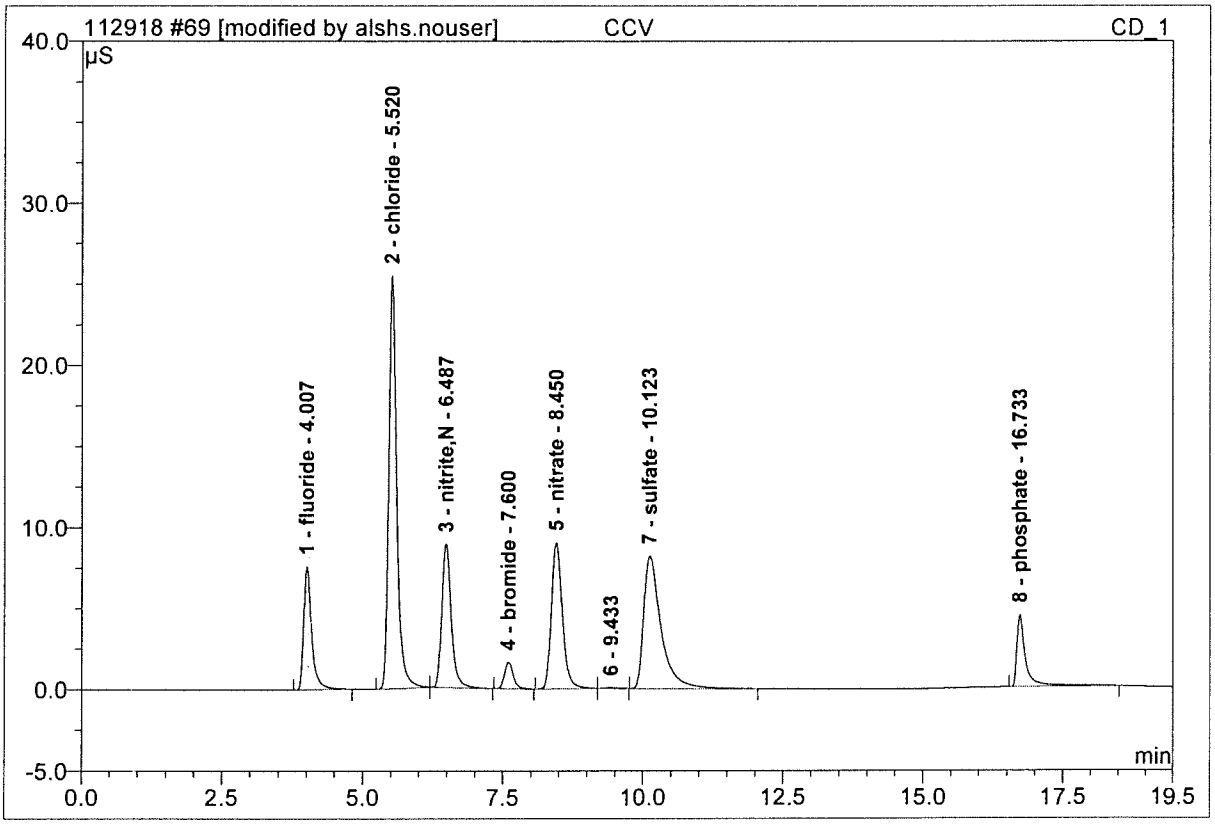
Sample Name:	**HS18110696-02MSDDF20**	*Injection Volume:*	**20.0**
Vial Number:	**39**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**20.**
Recording Time:	**11/30/2018 11:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.00	fluoride	4.232	0.644	4.17	41.613	20.
2	5.53	chloride	48.092	7.987	51.71	723.961	20.
3	6.48	nitrite,N	4.816	0.888	5.75	44.016	20.
4	7.60	bromide	0.821	0.148	0.96	36.601	20.
5	8.45	nitrate	5.133	1.129	7.31	42.330	20.
7	10.10	sulfate	11.832	4.241	27.46	528.091	20.
8	16.75	phosphate	1.902	0.386	2.50	34.830	20.
Total:			76.828	15.423	99.86	1451.441	

69 CCV

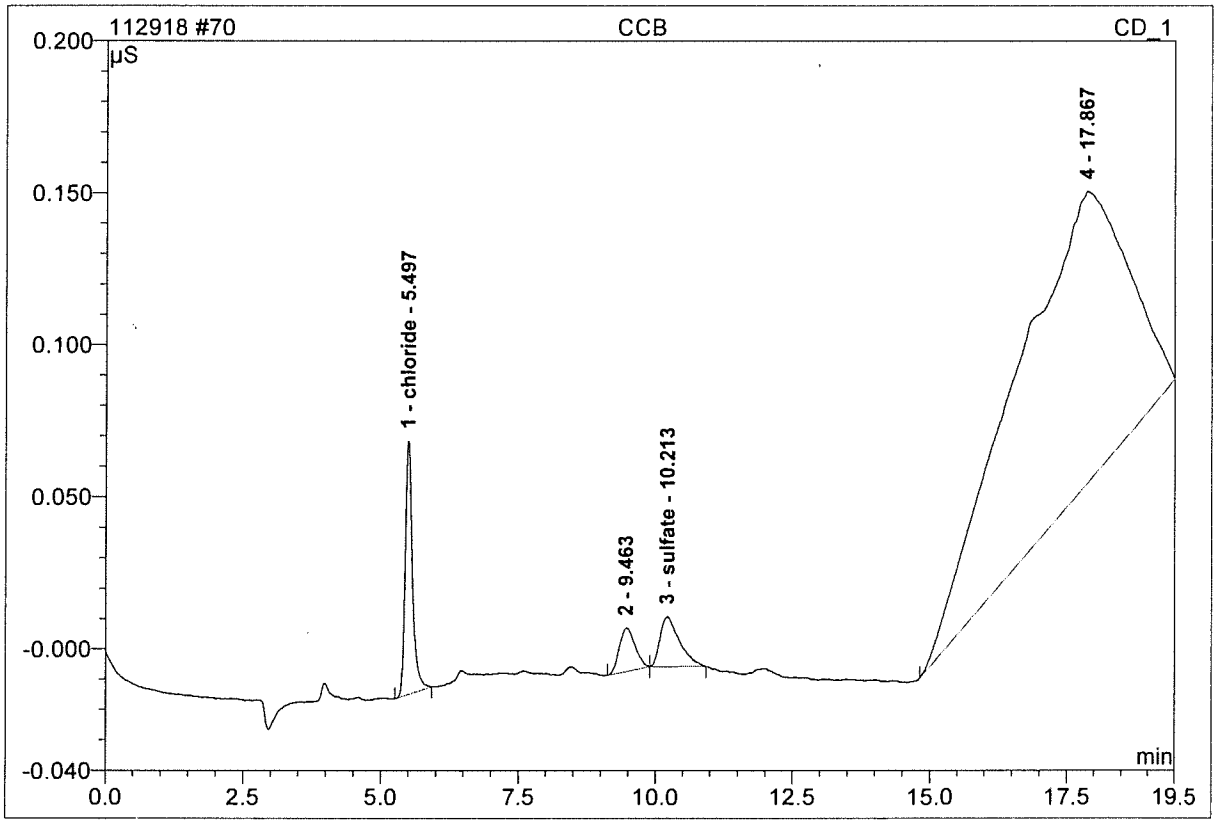
Sample Name:	**CCV**	*Injection Volume:*	**20.0**
Vial Number:	**1**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 13:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.01	fluoride	7.593	1.246	9.36	3.979	1.
2	5.52	chloride	25.438	4.214	31.64	19.210	1.
3	6.49	nitrite,N	8.848	1.732	13.00	4.265	1.
4	7.60	bromide	1.629	0.300	2.25	3.608	1.
5	8.45	nitrate	8.998	2.054	15.42	3.794	1.
7	10.12	sulfate	8.175	2.934	22.03	18.398	1.
8	16.73	phosphate	4.427	0.826	6.21	3.577	1.
Total:			65.107	13.306	99.90	56.832	

70 CCB

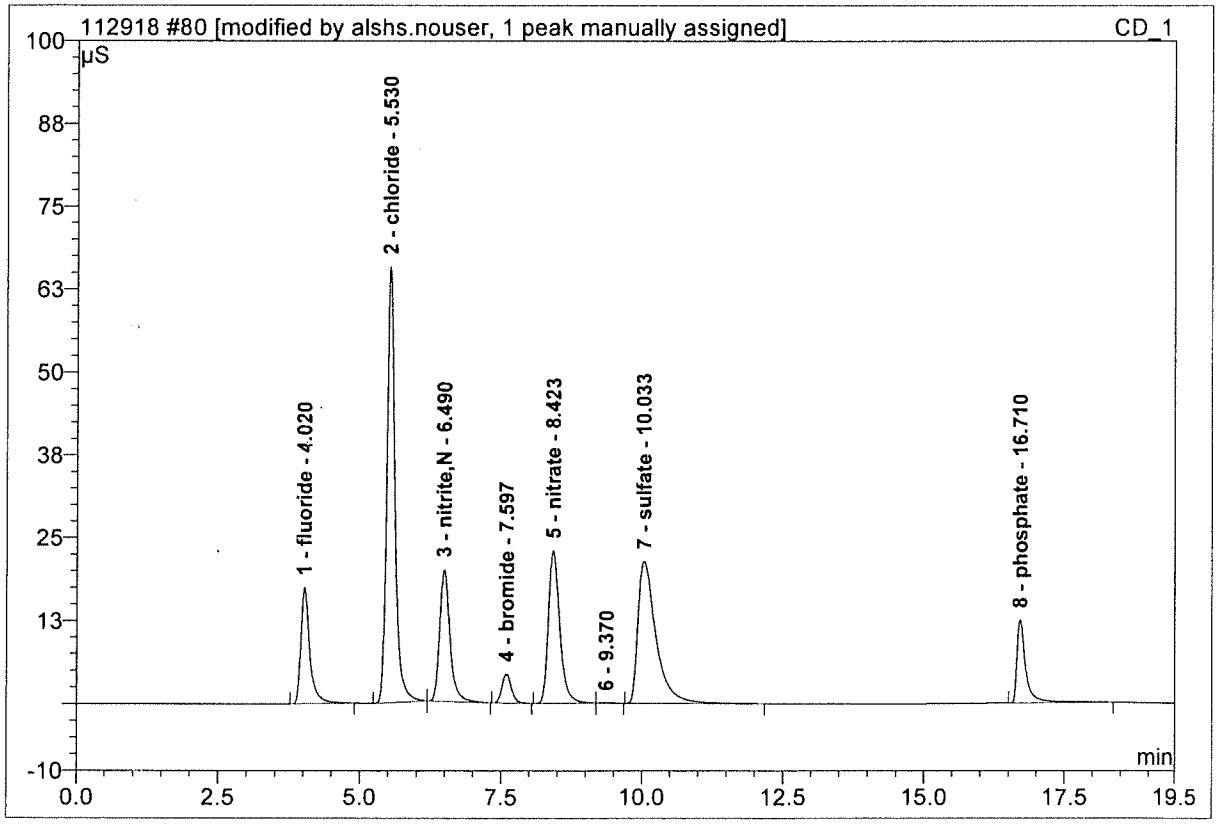
Sample Name:	**CCB**	*Injection Volume:*	**20.0**
Vial Number:	**2**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 13:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	5.50	chloride	0.083	0.013	4.84	0.293	1.
3	10.21	sulfate	0.017	0.007	2.58	0.476	1.
Total:			0.100	0.020	7.42	0.769	

80 CCV1

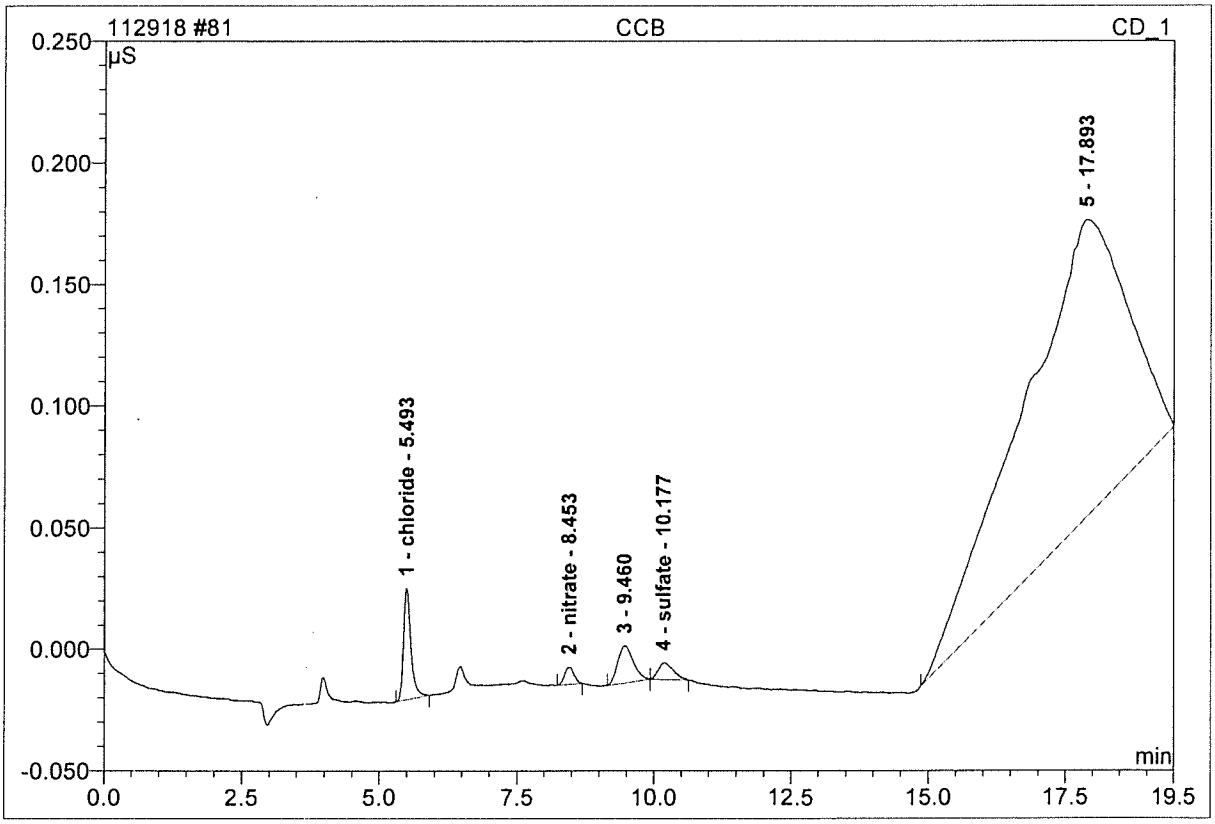
Sample Name:	**CCV1**	*Injection Volume:*	**20.0**
Vial Number:	**3**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 17:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.02	fluoride	17.503	3.195	9.14	10.121	1.
2	5.53	chloride	65.714	10.968	31.37	49.625	1.
3	6.49	nitrite,N	19.846	4.200	12.01	10.306	1.
4	7.60	bromide	4.386	0.846	2.42	10.020	1.
5	8.42	nitrate	22.955	5.422	15.51	9.902	1.
7	10.03	sulfate	21.411	7.996	22.87	49.393	1.
8	16.71	phosphate	12.453	2.324	6.65	9.823	1.
Total:			164.267	34.952	99.96	149.189	

81 CCB

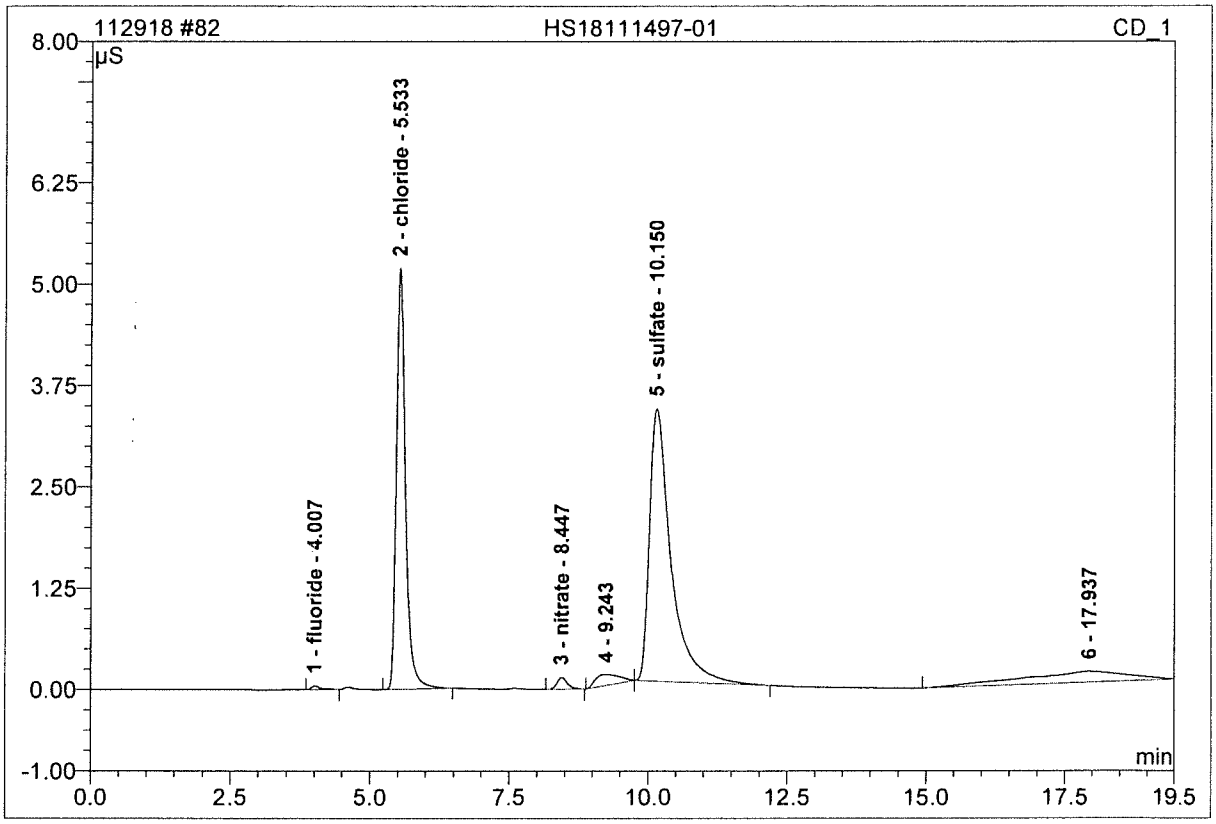
Sample Name:	**CCB**	*Injection Volume:*	**20.0**
Vial Number:	**4**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 18:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	5.49	chloride	0.046	0.007	2.44	0.268	1.
2	8.45	nitrate	0.007	0.001	0.49	0.072	1.
4	10.18	sulfate	0.007	0.002	0.75	0.448	1.
Total:			0.060	0.011	3.68	0.788	

82 HS18111497-01

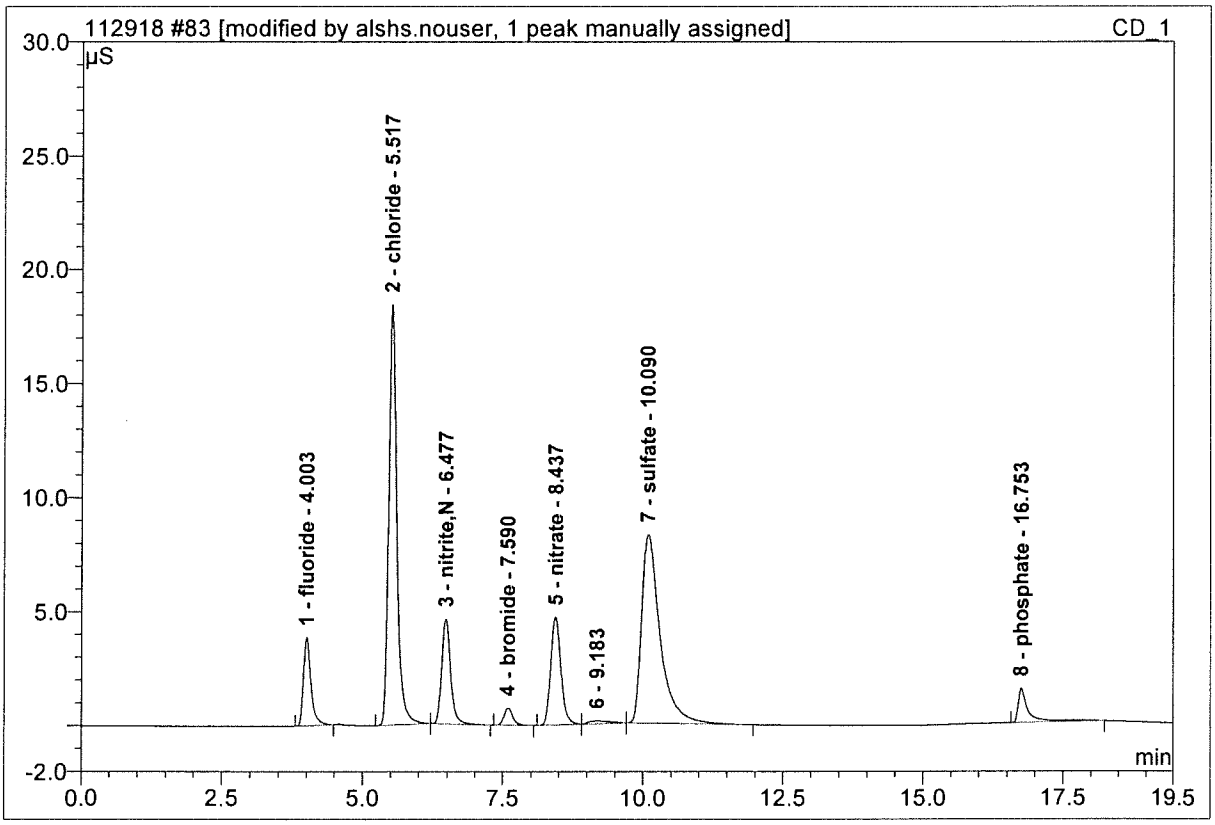
Sample Name:	**HS18111497-01**	*Injection Volume:*	**20.0**
Vial Number:	**78**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 19:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.01	fluoride	0.046	0.009	0.31	0.080	1.
2	5.53	chloride	5.187	0.977	33.95	4.637	1.
3	8.45	nitrate	0.144	0.031	1.09	0.127	1.
5	10.15	sulfate	3.362	1.505	52.27	9.649	1.
Total:			8.739	2.523	87.63	14.493	

83 HS18111497-01MS

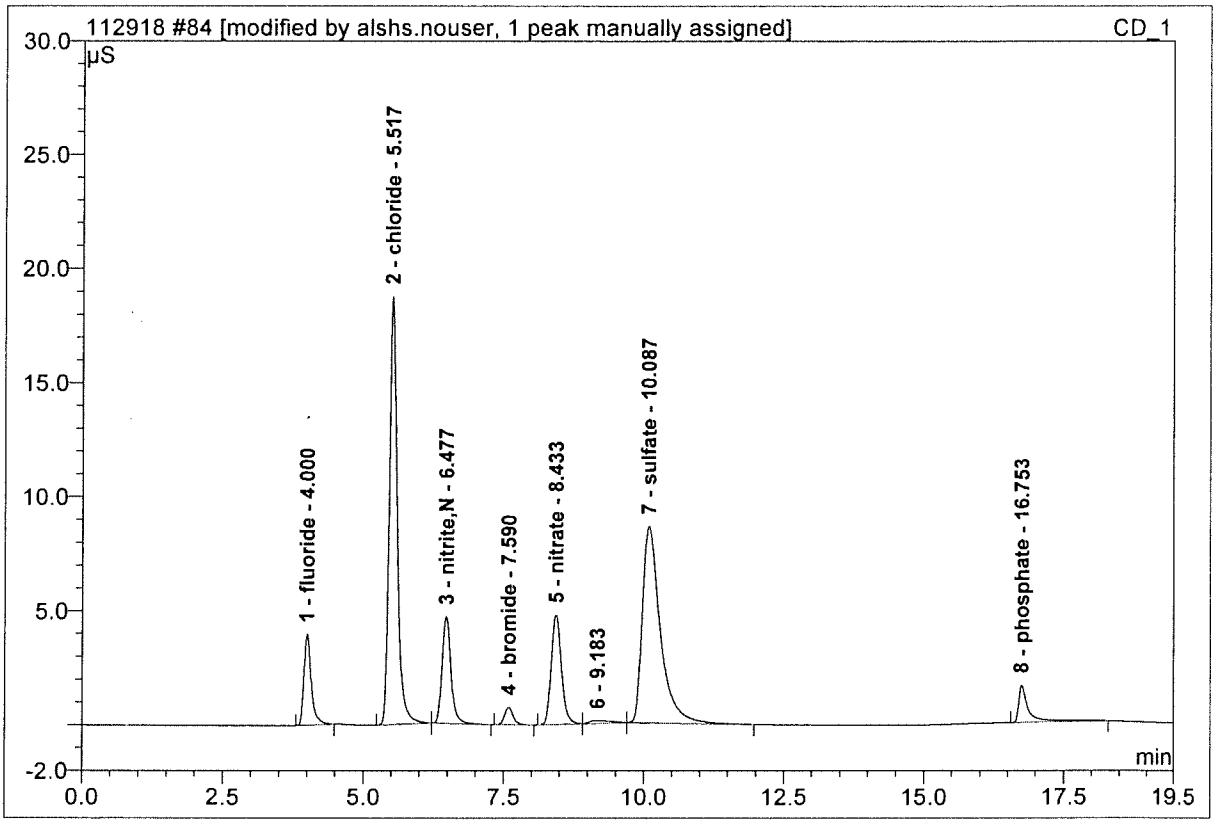
Sample Name:	**HS18111497-01MS**	*Injection Volume:*	**20.0**
Vial Number:	**79**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 19:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.00	fluoride	3.856	0.594	6.43	1.923	1.
2	5.52	chloride	18.434	3.065	33.19	14.036	1.
3	6.48	nitrite,N	4.597	0.857	9.28	2.124	1.
4	7.59	bromide	0.762	0.137	1.48	1.699	1.
5	8.44	nitrate	4.725	1.004	10.87	1.890	1.
7	10.09	sulfate	8.296	3.197	34.62	20.008	1.
8	16.75	phosphate	1.487	0.323	3.50	1.477	1.
Total:			42.157	9.176	99.38	43.157	

84 HS18111497-01MSD

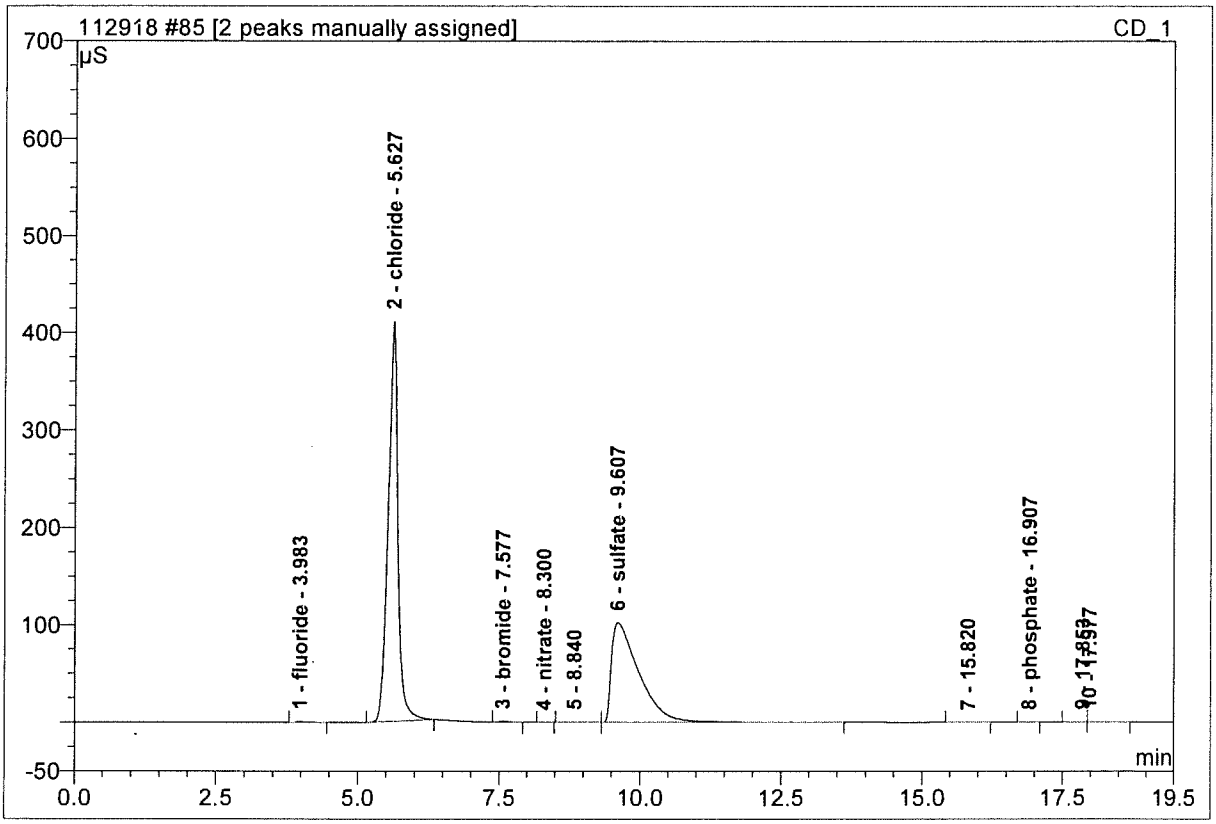
Sample Name:	**HS18111497-01MSD**	*Injection Volume:*	**20.0**
Vial Number:	**80**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 19:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.00	fluoride	3.981	0.602	6.44	1.948	1.
2	5.52	chloride	18.744	3.084	33.02	14.122	1.
3	6.48	nitrite,N	4.681	0.864	9.25	2.141	1.
4	7.59	bromide	0.775	0.138	1.48	1.715	1.
5	8.43	nitrate	4.798	1.016	10.88	1.913	1.
7	10.09	sulfate	8.613	3.229	34.58	20.208	1.
8	16.75	phosphate	1.627	0.351	3.76	1.593	1.
Total:			43.219	9.284	99.40	43.639	

85 HS18111497-02

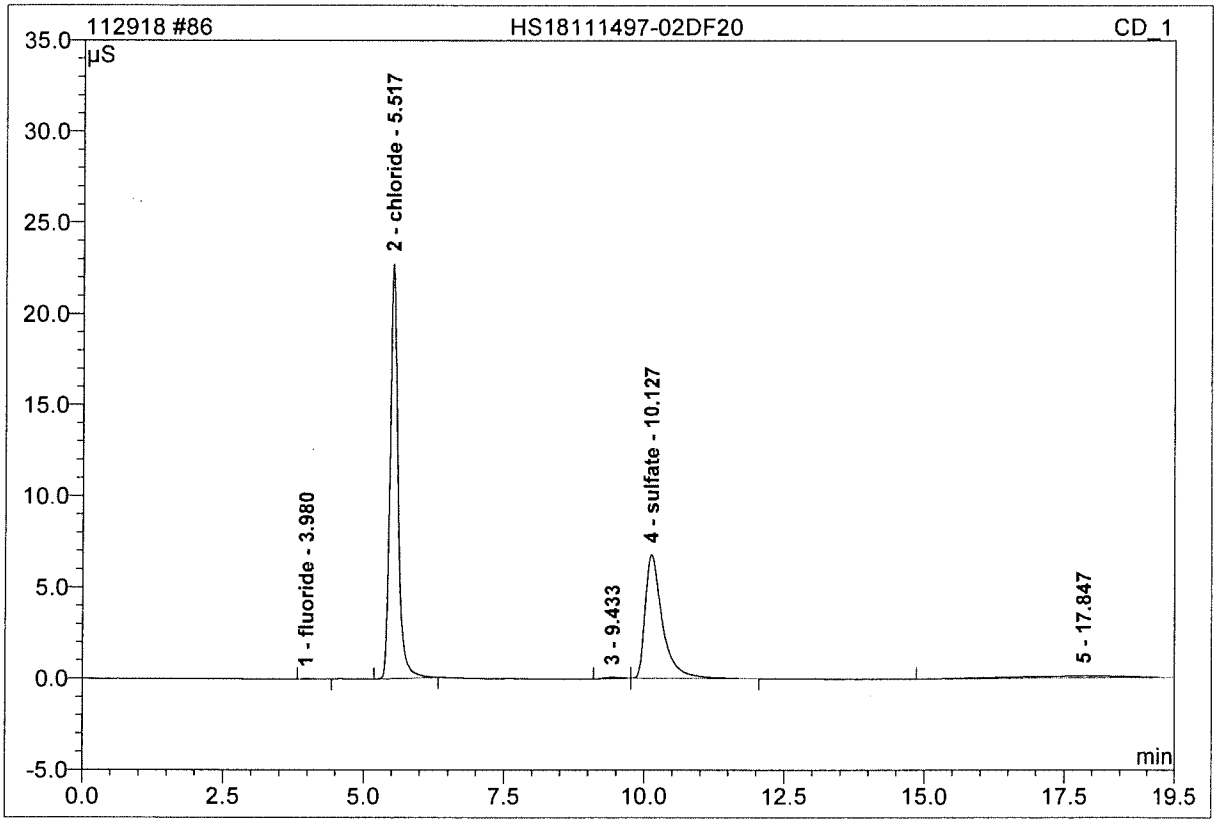
Sample Name:	**HS18111497-02**	*Injection Volume:*	**20.0**
Vial Number:	**81**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 20:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	3.98	fluoride	0.581	0.095	0.07	0.352	1.
2	5.63	chloride	410.590	81.149	58.58	365.641	1.
3	7.58	bromide	0.883	0.152	0.11	1.875	1.
4	8.30	nitrate	0.014	0.003	0.00	0.074	1.
6	9.61	sulfate	102.465	57.004	41.15	349.474	1.
8	16.91	phosphate	0.021	0.004	0.00	0.148	1.
Total:			514.553	138.408	99.92	717.563	

86 HS18111497-02DF20

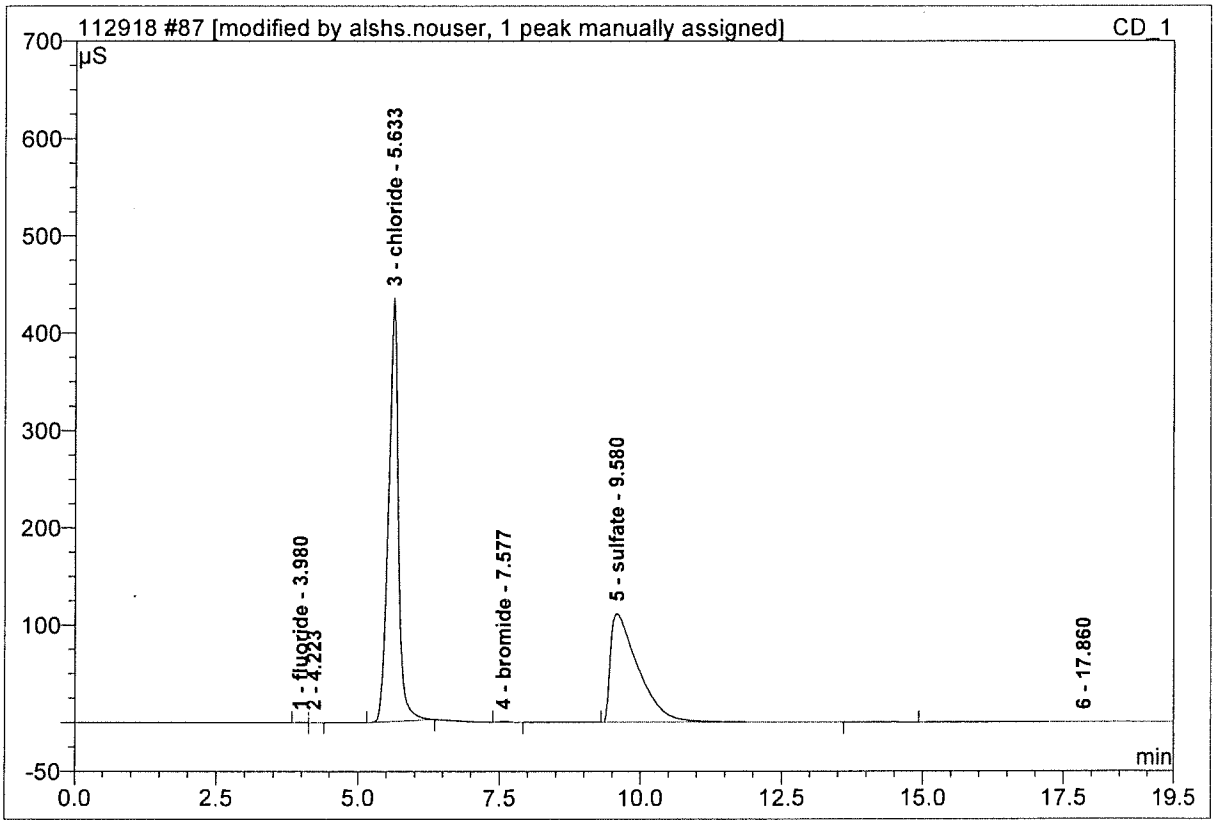
Sample Name:	**HS18111497-02DF20**	*Injection Volume:*	**20.0**
Vial Number:	**82**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**20.**
Recording Time:	**11/30/2018 20:34**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	3.98	fluoride	0.027	0.005	0.08	1.377	20.
2	5.52	chloride	22.735	3.757	57.92	343.095	20.
4	10.13	sulfate	6.764	2.410	37.14	303.774	20.
Total:			29.525	6.172	95.14	648.246	

87 HS18111497-03

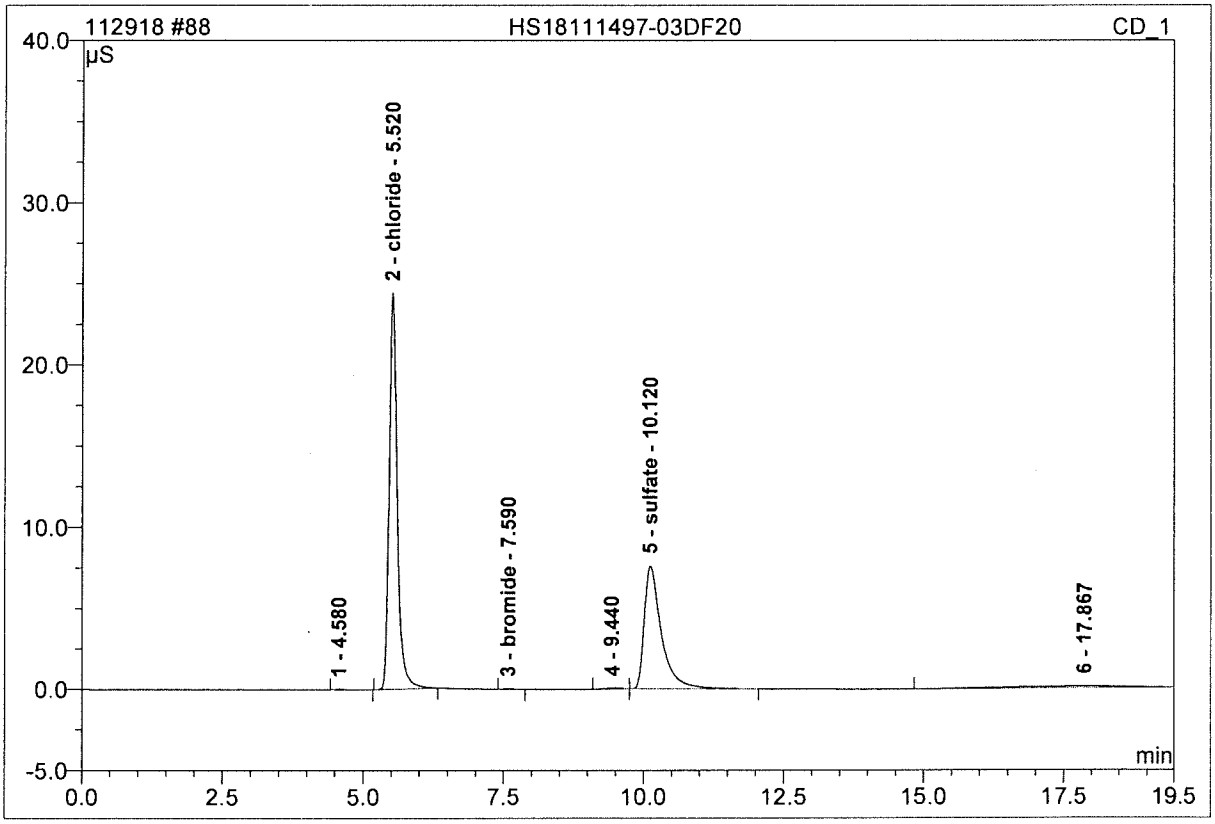
Sample Name:	**HS18111497-03**	*Injection Volume:*	**20.0**
Vial Number:	**83**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 20:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	3.98	fluoride	0.245	0.030	0.02	0.147	1.
3	5.63	chloride	434.479	87.510	57.80	394.283	1.
4	7.58	bromide	0.970	0.169	0.11	2.076	1.
5	9.58	sulfate	111.188	63.318	41.82	388.130	1.
Total:			546.883	151.027	99.75	784.636	

88 HS18111497-03DF20

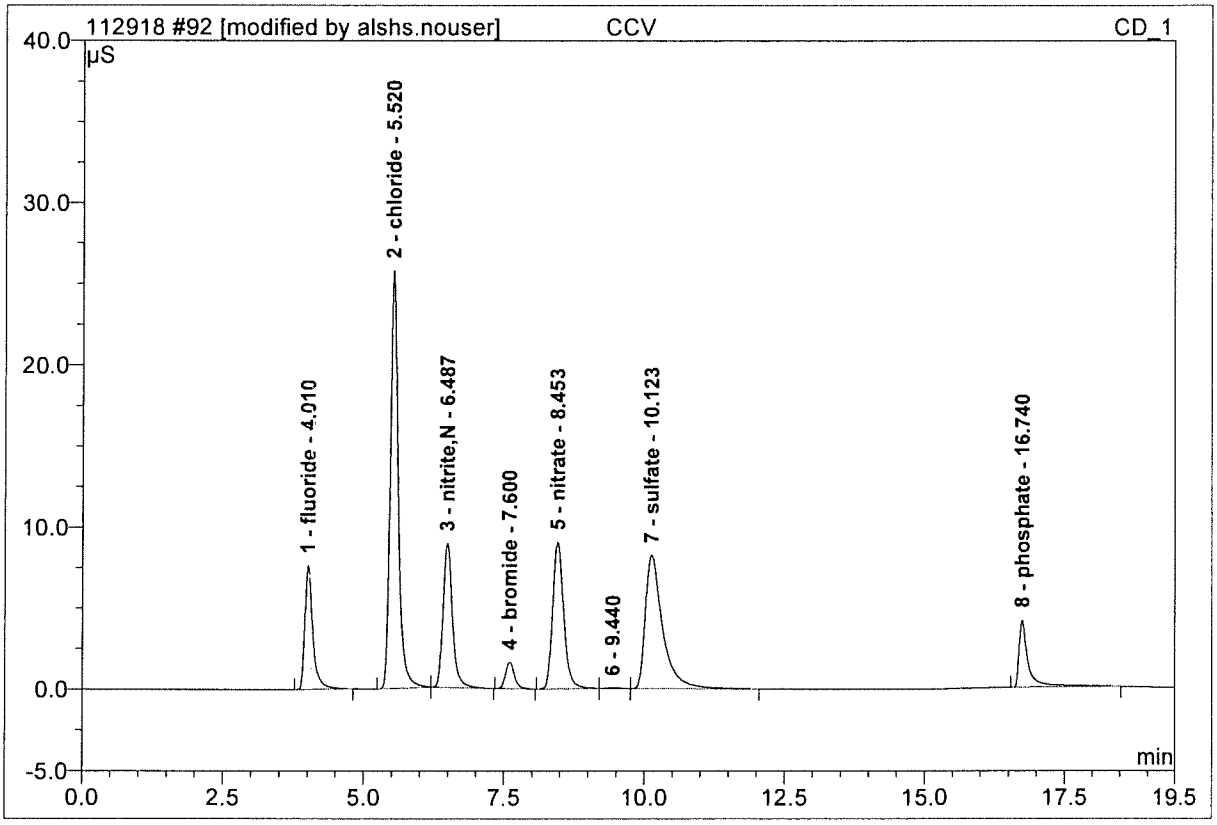
Sample Name:	**HS18111497-03DF20**	*Injection Volume:*	**20.0**
Vial Number:	**84**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**20.**
Recording Time:	**11/30/2018 21:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
2	5.52	chloride	24.432	4.046	57.15	369.098	20.
3	7.59	bromide	0.028	0.005	0.07	3.028	20.
5	10.12	sulfate	7.587	2.710	38.28	340.611	20.
Total:			32.047	6.762	95.51	712.736	

92 CCV

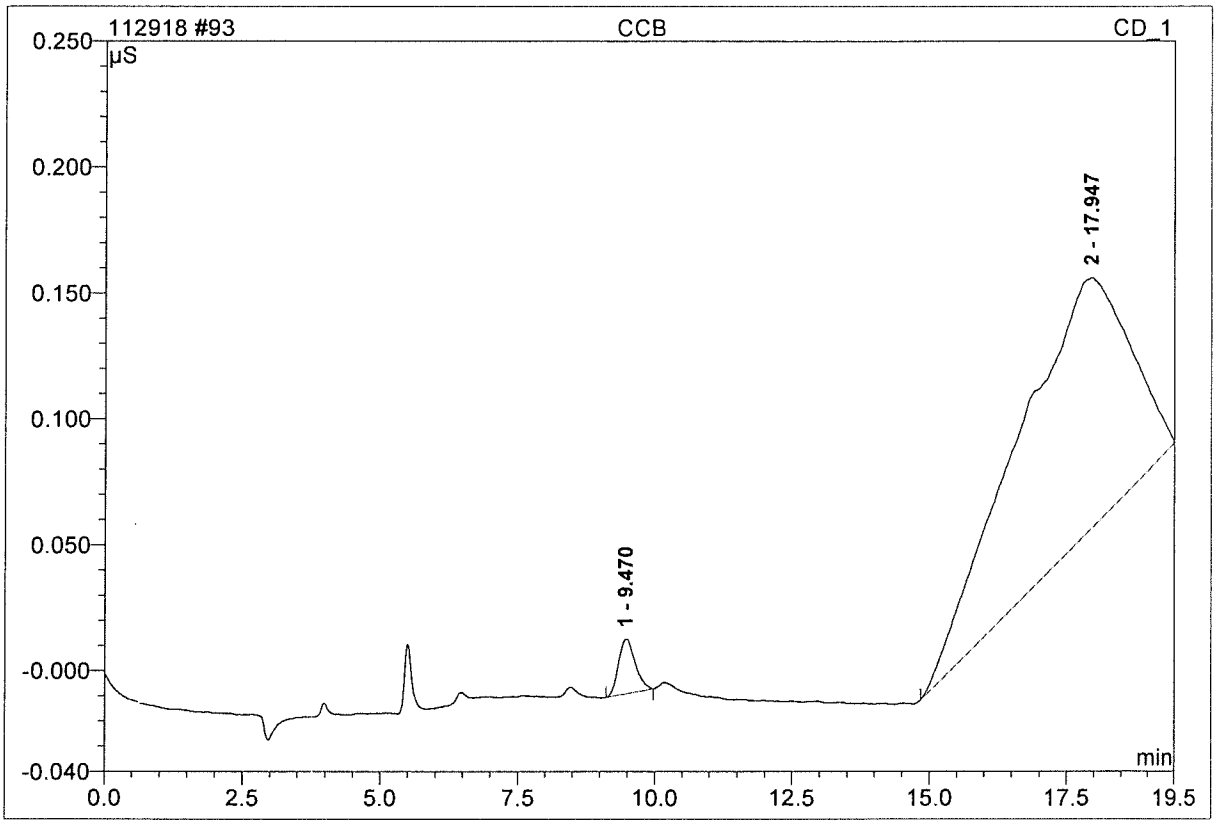
Sample Name:	**CCV**	*Injection Volume:*	**20.0**
Vial Number:	**1**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 22:44**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
1	4.01	fluoride	7.627	1.254	9.35	4.004	1.
2	5.52	chloride	25.744	4.263	31.79	19.433	1.
3	6.49	nitrite,N	8.873	1.739	12.97	4.283	1.
4	7.60	bromide	1.637	0.302	2.25	3.632	1.
5	8.45	nitrate	9.043	2.068	15.42	3.820	1.
7	10.12	sulfate	8.230	2.958	22.06	18.549	1.
8	16.74	phosphate	4.130	0.814	6.07	3.525	1.
Total:			65.286	13.399	99.91	57.246	

93 CCB

Sample Name:	**CCB**	*Injection Volume:*	**20.0**
Vial Number:	**2**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**anions3**	*Bandwidth:*	**n.a.**
Quantif. Method:	**110818**	*Dilution Factor:*	**1.**
Recording Time:	**11/30/2018 23:06**	*Sample Weight:*	**1.0000**
Run Time (min):	**19.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Dil.Fac.
Total:			0.000	0.000	0.00	0.000	

HS18120114 Cover Page

ALS WO# HS18120114

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HS18120114 Longhorn Army Ammunition Plant LHAAP50

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- Form 5B - ICPMS05_328925 PDS
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- Form 7 - ICPMS05_328925 LCS
- Form 8 - ICPMS04_329160 SD
- Form 8 - ICPMS05_328925 SD

HS18120114 Wet chem Raw Data

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WorkOrder: HS18120114

Longhorn Army Ammunition Plant LHAAP-50

Aptim Environmental & Infrastucture, Inc.

Susan Huang
2500 City West Blvd., Suite 1700
Houston TX 77042

28-Jan-2019

HS18120114 Longhorn Army Ammunition Plant
LHAAP50 REV01 Final

ALS WO# HS18120114

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December 28, 2018

Susan Huang
Aptim Environmental & Infrastucture, Inc.
2500 City West Blvd., Suite 1700
Houston, TX 77042

Work Order: **HS18120114**

Laboratory Results for: **Longhorn Army Ammunition Plant LHAAP-50**

Dear Susan,

ALS Environmental received 13 sample(s) on Dec 04, 2018 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Work Order: HS18120114

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18120114-01	50WW18-181130	Groundwater		30-Nov-2018 09:00	04-Dec-2018 09:30	☐
HS18120114-02	50WW17-181130	Groundwater		30-Nov-2018 09:50	04-Dec-2018 09:30	☐
HS18120114-03	50WW24-181130	Groundwater		30-Nov-2018 10:45	04-Dec-2018 09:30	☐
HS18120114-04	50WW21-181130	Groundwater		30-Nov-2018 11:35	04-Dec-2018 09:30	☐
HS18120114-05	50WW15-181130	Groundwater		30-Nov-2018 12:30	04-Dec-2018 09:30	☐
HS18120114-06	50WW23-181203	Groundwater		03-Dec-2018 09:15	04-Dec-2018 09:30	☐
HS18120114-07	50WW22-181203	Groundwater		03-Dec-2018 10:15	04-Dec-2018 09:30	☐
HS18120114-08	50WW05-181203	Groundwater		03-Dec-2018 11:15	04-Dec-2018 09:30	☐
HS18120114-09	50WW27-181203	Groundwater		03-Dec-2018 12:20	04-Dec-2018 09:30	☐
HS18120114-10	50WW27-181203 FD	Groundwater		03-Dec-2018 12:20	04-Dec-2018 09:30	☐
HS18120114-11	50WW09-181203	Groundwater		03-Dec-2018 13:15	04-Dec-2018 09:30	☐
HS18120114-12	50WW10-181203	Groundwater		03-Dec-2018 14:15	04-Dec-2018 09:30	☐
HS18120114-13	Trip Blank ALS-071918-85	Groundwater		03-Dec-2018 00:00	04-Dec-2018 09:30	☐

Revision:1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP-50
Work Order:

Work Order Comments

• Report revised on December 28,2018 to report TOC analysis performed by our Kelso Lab

The analysis for Methane, Methene, Ethane and CO2 by RSK175 was subcontracted to ALS Simi Valley, CA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS Salt Lake City, UT. Final report attached.

The analysis for TOC was subcontracted to ALS Kelso, WA. Final report attached.

GCMS Volatiles by Method SW8260

Batch ID: R329168

Sample ID: 50WW21-181130 (HS18120114-04MS)

• MS/MSD failed QC limits for select target compounds.

Sample ID: VLCSW-1812013

• 1,4-Dichlorobenzene and Hexachlorobutadiene exceeded QC limits in the LCS; associated samples are non-detect.

Sample ID: VSTD050

• cis-1,3-Dichloropropene exceeded %D limits for CCV; associated samples are non-detect for this compound.

Metals by Method SW6020

Batch ID: 135381,135382

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E376.1

Batch ID: R328778

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM2320B

Batch ID: R329027

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500P E

Batch ID: 135291

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP-50
Work Order:

WetChemistry by Method SW9056

Batch ID: R328782

Sample ID: 50WW22-181203 (HS18120114-07)

- Sample was analyzed outside of the holding time due to instrumentation error. Results should be considered estimated.

Sample ID: 50WW23-181203 (HS18120114-06)

- Sample was analyzed outside of the holding time due to instrumentation error. Results should be considered estimated.

Sample ID: CCV

- The associated CCV %D was above the upper acceptance limit. The high CCV recovery does not affect the non-detect results for analyte(s): (Nitrogen, Nitrite (As N))

Batch ID: R329585

Sample ID: 50WW22-181203 (HS18120114-07)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Nitrogen, Nitrate-Nitrite)

Sample ID: 50WW23-181203 (HS18120114-06)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Nitrogen, Nitrate-Nitrite)

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW18-181130
Collection Date: 30-Nov-2018 09:00

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 11:44
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 11:44
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 11:44
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 11:44
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 11:44
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 11:44
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 11:44
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 11:44
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW18-181130
Collection Date: 30-Nov-2018 09:00

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 11:44
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 11:44
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 11:44
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 11:44
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 11:44
Surr: 1,2-Dichloroethane-d4	*93.3*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 11:44*
Surr: 4-Bromofluorobenzene	*101*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 11:44*
Surr: Dibromofluoromethane	*89.3*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 11:44*
Surr: Toluene-d8	*105*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 11:44*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW17-181130
Collection Date: 30-Nov-2018 09:50

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 12:09
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:09
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 12:09
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 12:09
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:09
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 12:09
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 12:09
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 12:09
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW17-181130
Collection Date: 30-Nov-2018 09:50

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 12:09
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 12:09
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 12:09
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:09
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:09
Surr: 1,2-Dichloroethane-d4	*92.9*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 12:09*
Surr: 4-Bromofluorobenzene	*97.2*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 12:09*
Surr: Dibromofluoromethane	*88.7*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 12:09*
Surr: Toluene-d8	*104*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 12:09*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW24-181130 Lab ID:HS18120114-03
Collection Date: 30-Nov-2018 10:45 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 12:34
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:34
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 12:34
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 12:34
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:34
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 12:34
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 12:34
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 12:34
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW24-181130
Collection Date: 30-Nov-2018 10:45

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 12:34
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 12:34
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 12:34
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:34
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:34
Surr: 1,2-Dichloroethane-d4	*92.9*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 12:34*
Surr: 4-Bromofluorobenzene	*98.4*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 12:34*
Surr: Dibromofluoromethane	*88.8*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 12:34*
Surr: Toluene-d8	*106*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 12:34*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW21-181130 Lab ID:HS18120114-04
Collection Date: 30-Nov-2018 11:35 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 12:58
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:58
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 12:58
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 12:58
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:58
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 12:58
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 12:58
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 12:58
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW21-181130 Lab ID:HS18120114-04
Collection Date: 30-Nov-2018 11:35 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 12:58
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 12:58
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 12:58
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 12:58
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 12:58
Surr: 1,2-Dichloroethane-d4	*92.9*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 12:58*
Surr: 4-Bromofluorobenzene	*98.8*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 12:58*
Surr: Dibromofluoromethane	*87.9*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 12:58*
Surr: Toluene-d8	*106*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 12:58*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW15-181130
Collection Date: 30-Nov-2018 12:30

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 13:23
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:23
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 13:23
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 13:23
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:23
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 13:23
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 13:23
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 13:23
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW15-181130
Collection Date: 30-Nov-2018 12:30

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
cis-1,2-Dichloroethene	**5.9**		**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 13:23
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 13:23
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 13:23
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 13:23
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:23
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Tetrachloroethene	**2.0**		**0.30**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 13:23
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Trichloroethene	**9.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 13:23
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:23
Vinyl chloride	**1.5**		**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 13:23
Surr: 1,2-Dichloroethane-d4	*92.8*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 13:23*
Surr: 4-Bromofluorobenzene	*98.0*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 13:23*
Surr: Dibromofluoromethane	*88.4*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 13:23*
Surr: Toluene-d8	*105*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 13:23*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW23-181203 Lab ID:HS18120114-06
Collection Date: 03-Dec-2018 09:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 14:13
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:13
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 14:13
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 14:13
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:13
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 14:13
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 14:13
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 14:13
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW23-181203
Collection Date: 03-Dec-2018 09:15

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 14:13
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 14:13
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 14:13
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:13
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:13
Surr: 1,2-Dichloroethane-d4	*93.5*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 14:13*
Surr: 4-Bromofluorobenzene	*98.5*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 14:13*
Surr: Dibromofluoromethane	*89.5*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 14:13*
Surr: Toluene-d8	*105*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 14:13*
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 10-Dec-2018		Analyst: JCJ
Iron	**0.660**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	13-Dec-2018 20:14
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**				Prep:SW3010A / 10-Dec-2018		Analyst: ALR
Iron	**0.648**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	10-Dec-2018 20:40
Manganese	**0.0224**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	10-Dec-2018 20:40
SULFIDE BY E376.1		**Method:E376.1**						Analyst: KVL
Sulfide	1.00	U	1.00	1.00	1.00	mg/L	1	06-Dec-2018 15:40
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: AJH
Alkalinity, Total (As CaCO3)	**273**		**5.00**	**5.00**	**5.00**	**mg/L**	1	11-Dec-2018 22:39

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW23-181203
Collection Date: 03-Dec-2018 09:15

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
PHOSPHORUS BY SM4500P E		**Method:SM4500P E**				Prep:SM4500P E / 06-Dec-2018		Analyst: MZD
Phosphorus, Total (As P)	**0.112**		**0.0200**	**0.0250**	**0.0500**	**mg/L**	1	06-Dec-2018 15:15
ANIONS BY SW9056A		**Method:SW9056**						Analyst: KMU
Chloride	**2,020**		**10.0**	**25.0**	**25.0**	**mg/L**	50	06-Dec-2018 19:55
Nitrogen, Nitrate (As N)	**0.207**	H	**0.0300**	**0.100**	**0.100**	**mg/L**	1	06-Dec-2018 19:41
Nitrogen, Nitrite (As N)	0.100	HU	0.0300	0.100	0.100	mg/L	1	06-Dec-2018 19:41
Sulfate	**119**		**10.0**	**25.0**	**25.0**	**mg/L**	50	06-Dec-2018 19:55
NITRATE/NITRITE BY IC BY SW9056A		**Method:SW9056**						Analyst: KMU
Nitrogen, Nitrate-Nitrite	**0.393**	J	**0.150**	**0.500**	**1.00**	**mg/L**	5	18-Dec-2018 21:15
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	19-Dec-2018 17:22
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	28-Dec-2018 10:25

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW22-181203
Collection Date: 03-Dec-2018 10:15

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 14:37
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:37
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 14:37
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 14:37
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:37
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 14:37
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 14:37
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 14:37
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW22-181203 Lab ID:HS18120114-07
Collection Date: 03-Dec-2018 10:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 14:37
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 14:37
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 14:37
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 14:37
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 14:37
Surr: 1,2-Dichloroethane-d4	*94.2*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 14:37*
Surr: 4-Bromofluorobenzene	*98.5*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 14:37*
Surr: Dibromofluoromethane	*90.8*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 14:37*
Surr: Toluene-d8	*106*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 14:37*
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 10-Dec-2018		Analyst: JCJ
Iron	**0.405**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	13-Dec-2018 20:16
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**				Prep:SW3010A / 10-Dec-2018		Analyst: ALR
Iron	**0.448**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	10-Dec-2018 20:42
Manganese	**0.0264**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	10-Dec-2018 20:42
SULFIDE BY E376.1		**Method:E376.1**						Analyst: KVL
Sulfide	1.00	U	1.00	1.00	1.00	mg/L	1	06-Dec-2018 15:40
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: AJH
Alkalinity, Total (As CaCO3)	**417**		**5.00**	**5.00**	**5.00**	**mg/L**	1	11-Dec-2018 22:45

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW22-181203
Collection Date: 03-Dec-2018 10:15

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
PHOSPHORUS BY SM4500P E		**Method:SM4500P E**				Prep:SM4500P E / 06-Dec-2018		Analyst: MZD
Phosphorus, Total (As P)	**0.0750**		**0.0200**	**0.0250**	**0.0500**	**mg/L**	1	06-Dec-2018 15:15
ANIONS BY SW9056A		**Method:SW9056**						Analyst: KMU
Chloride	**1,030**		**10.0**	**25.0**	**25.0**	**mg/L**	50	06-Dec-2018 20:24
Nitrogen, Nitrate (As N)	0.100	HU	0.0300	0.100	0.100	mg/L	1	06-Dec-2018 20:10
Nitrogen, Nitrite (As N)	0.100	HU	0.0300	0.100	0.100	mg/L	1	06-Dec-2018 20:10
Sulfate	**756**		**10.0**	**25.0**	**25.0**	**mg/L**	50	06-Dec-2018 20:24
NITRATE/NITRITE BY IC BY SW9056A		**Method:SW9056**						Analyst: KMU
Nitrogen, Nitrate-Nitrite	**0.410**	J	**0.150**	**0.500**	**1.00**	**mg/L**	5	18-Dec-2018 22:20
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	19-Dec-2018 17:22
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	28-Dec-2018 10:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW05-181203 Lab ID:HS18120114-08
Collection Date: 03-Dec-2018 11:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,1-Dichloroethene	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 16:17
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 16:17
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,2-Dichloroethane	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 16:17
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:17
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 16:17
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 16:17
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:17
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 16:17
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 16:17
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 16:17
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW05-181203 Lab ID:HS18120114-08
Collection Date: 03-Dec-2018 11:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
cis-1,2-Dichloroethene	**18**		**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 16:17
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 16:17
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 16:17
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 16:17
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:17
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Tetrachloroethene	**0.86**	J	**0.30**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 16:17
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Trichloroethene	**150**		**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 16:17
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:17
Surr: 1,2-Dichloroethane-d4	*93.4*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 16:17*
Surr: 4-Bromofluorobenzene	*98.1*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 16:17*
Surr: Dibromofluoromethane	*90.2*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 16:17*
Surr: Toluene-d8	*106*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 16:17*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW27-181203
Collection Date: 03-Dec-2018 12:20

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 15:02
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:02
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 15:02
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 15:02
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:02
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 15:02
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 15:02
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 15:02
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW27-181203 Lab ID:HS18120114-09
Collection Date: 03-Dec-2018 12:20 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 15:02
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 15:02
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 15:02
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:02
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:02
Vinyl chloride	**0.66**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 15:02
Surr: 1,2-Dichloroethane-d4	*93.5*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 15:02*
Surr: 4-Bromofluorobenzene	*97.8*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 15:02*
Surr: Dibromofluoromethane	*89.7*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 15:02*
Surr: Toluene-d8	*106*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 15:02*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW27-181203 FD
Collection Date: 03-Dec-2018 12:20

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 15:27
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:27
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 15:27
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 15:27
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:27
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 15:27
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 15:27
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 15:27
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW27-181203 FD
Collection Date: 03-Dec-2018 12:20

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 15:27
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 15:27
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 15:27
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:27
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:27
Vinyl chloride	**0.66**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 15:27
Surr: 1,2-Dichloroethane-d4	*94.0*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 15:27*
Surr: 4-Bromofluorobenzene	*97.9*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 15:27*
Surr: Dibromofluoromethane	*89.6*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 15:27*
Surr: Toluene-d8	*105*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 15:27*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW09-181203 Lab ID:HS18120114-11
Collection Date: 03-Dec-2018 13:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,1,2-Trichlor-1,2,2-trifluoroethane	**1.2**		**0.50**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 16:41
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 16:41
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:41
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 16:41
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 16:41
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:41
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 16:41
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 16:41
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 16:41
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW09-181203
Collection Date: 03-Dec-2018 13:15

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-11
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
cis-1,2-Dichloroethene	**7.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 16:41
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 16:41
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 16:41
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 16:41
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 16:41
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Trichloroethene	**120**		**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Dec-2018 16:41
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 16:41
Surr: 1,2-Dichloroethane-d4	*93.0*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 16:41*
Surr: 4-Bromofluorobenzene	*99.3*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 16:41*
Surr: Dibromofluoromethane	*89.0*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 16:41*
Surr: Toluene-d8	*107*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 16:41*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: 50WW10-181203 Lab ID:HS18120114-12
Collection Date: 03-Dec-2018 14:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 15:52
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:52
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 15:52
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 15:52
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:52
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 15:52
Acetone	2.0	U	2.0	2.0	2.0	ug/L	1	13-Dec-2018 15:52
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 15:52
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: 50WW10-181203
Collection Date: 03-Dec-2018 14:15

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-12
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 15:52
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 15:52
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 15:52
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 15:52
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 15:52
Surr: 1,2-Dichloroethane-d4	*94.1*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 15:52*
Surr: 4-Bromofluorobenzene	*98.5*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 15:52*
Surr: Dibromofluoromethane	*90.8*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 15:52*
Surr: Toluene-d8	*106*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 15:52*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Dec-2018 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP-50 WorkOrder:HS18120114
Sample ID: Trip Blank ALS-071918-85 Lab ID:HS18120114-13
Collection Date: 03-Dec-2018 00:00 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**						Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,2-Dibromo-3-chloropropane	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 13:48
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:48
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 13:48
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	13-Dec-2018 13:48
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:48
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	13-Dec-2018 13:48
Acetone	**9.0**		**2.0**	**2.0**	**2.0**	**ug/L**	1	13-Dec-2018 13:48
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	13-Dec-2018 13:48
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Sample ID: Trip Blank ALS-071918-85
Collection Date: 03-Dec-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18120114
Lab ID:HS18120114-13
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	13-Dec-2018 13:48
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	13-Dec-2018 13:48
Methylene chloride	0.50	U	1.0	0.50	2.0	ug/L	1	13-Dec-2018 13:48
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	13-Dec-2018 13:48
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	13-Dec-2018 13:48
Surr: 1,2-Dichloroethane-d4	*92.4*			**0**	*70-126*	*%REC*	*1*	*13-Dec-2018 13:48*
Surr: 4-Bromofluorobenzene	*99.2*			**0**	*81-113*	*%REC*	*1*	*13-Dec-2018 13:48*
Surr: Dibromofluoromethane	*88.6*			**0**	*77-123*	*%REC*	*1*	*13-Dec-2018 13:48*
Surr: Toluene-d8	*107*			**0**	*82-127*	*%REC*	*1*	*13-Dec-2018 13:48*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

WEIGHT LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Batch ID: 135291 **Method:** PHOSPHORUS BY SM4500P E **Prep:** P_TW_PR4500

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18120114-06	1	50	50 (mL)	1
HS18120114-07	1	50	50 (mL)	1

Batch ID: 135381 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18120114-06	1	10	10 (mL)	1
HS18120114-07	1	10	10 (mL)	1

Batch ID: 135382 **Method:** DISSOLVED METALS BY SW6020A **Prep:** 3010A DISS

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18120114-06	1	10	10 (mL)	1
HS18120114-07	1	10	10 (mL)	1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 135291	**Test Name :** PHOSPHORUS BY SM4500P E			**Matrix:** Groundwater		
HS18120114-06	50WW23-181203	03 Dec 2018 09:15		06 Dec 2018 09:30	06 Dec 2018 15:15	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15		06 Dec 2018 09:30	06 Dec 2018 15:15	1
Batch ID 135381	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Groundwater		
HS18120114-06	50WW23-181203	03 Dec 2018 09:15		10 Dec 2018 09:30	13 Dec 2018 20:14	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15		10 Dec 2018 09:30	13 Dec 2018 20:16	1
Batch ID 135382	**Test Name :** DISSOLVED METALS BY SW6020A			**Matrix:** Groundwater		
HS18120114-06	50WW23-181203	03 Dec 2018 09:15		10 Dec 2018 09:30	10 Dec 2018 20:40	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15		10 Dec 2018 09:30	10 Dec 2018 20:42	1
Batch ID R328778	**Test Name :** SULFIDE BY E376.1			**Matrix:** Groundwater		
HS18120114-06	50WW23-181203	03 Dec 2018 09:15			06 Dec 2018 15:40	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15			06 Dec 2018 15:40	1
Batch ID R328782	**Test Name :** ANIONS BY SW9056A			**Matrix:** Groundwater		
HS18120114-06	50WW23-181203	03 Dec 2018 09:15			06 Dec 2018 19:55	50
HS18120114-06	50WW23-181203	03 Dec 2018 09:15			06 Dec 2018 19:41	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15			06 Dec 2018 20:24	50
HS18120114-07	50WW22-181203	03 Dec 2018 10:15			06 Dec 2018 20:10	1
Batch ID R329027	**Test Name :** ALKALINITY BY SM2320B			**Matrix:** Groundwater		
HS18120114-06	50WW23-181203	03 Dec 2018 09:15			11 Dec 2018 22:39	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15			11 Dec 2018 22:45	1
Batch ID R329168	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Groundwater		
HS18120114-01	50WW18-181130	30 Nov 2018 09:00			13 Dec 2018 11:44	1
HS18120114-02	50WW17-181130	30 Nov 2018 09:50			13 Dec 2018 12:09	1
HS18120114-03	50WW24-181130	30 Nov 2018 10:45			13 Dec 2018 12:34	1
HS18120114-04	50WW21-181130	30 Nov 2018 11:35			13 Dec 2018 12:58	1
HS18120114-05	50WW15-181130	30 Nov 2018 12:30			13 Dec 2018 13:23	1
HS18120114-06	50WW23-181203	03 Dec 2018 09:15			13 Dec 2018 14:13	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15			13 Dec 2018 14:37	1
HS18120114-08	50WW05-181203	03 Dec 2018 11:15			13 Dec 2018 16:17	1
HS18120114-09	50WW27-181203	03 Dec 2018 12:20			13 Dec 2018 15:02	1
HS18120114-10	50WW27-181203 FD	03 Dec 2018 12:20			13 Dec 2018 15:27	1
HS18120114-11	50WW09-181203	03 Dec 2018 13:15			13 Dec 2018 16:41	1
HS18120114-12	50WW10-181203	03 Dec 2018 14:15			13 Dec 2018 15:52	1
HS18120114-13	Trip Blank ALS-071918-85	03 Dec 2018 00:00			13 Dec 2018 13:48	1

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R329197	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			**Matrix:** Groundwater		
HS18120114-01	50WW18-181130	30 Nov 2018 09:00			13 Dec 2018 16:53	1
HS18120114-02	50WW17-181130	30 Nov 2018 09:50			13 Dec 2018 16:53	1
HS18120114-03	50WW24-181130	30 Nov 2018 10:45			13 Dec 2018 16:53	1
HS18120114-04	50WW21-181130	30 Nov 2018 11:35			13 Dec 2018 16:53	1
HS18120114-05	50WW15-181130	30 Nov 2018 12:30			13 Dec 2018 16:53	1
HS18120114-06	50WW23-181203	03 Dec 2018 09:15			13 Dec 2018 16:53	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15			13 Dec 2018 16:53	1
HS18120114-08	50WW05-181203	03 Dec 2018 11:15			13 Dec 2018 16:53	1
HS18120114-09	50WW27-181203	03 Dec 2018 12:20			13 Dec 2018 16:53	1
HS18120114-10	50WW27-181203 FD	03 Dec 2018 12:20			13 Dec 2018 16:53	1
HS18120114-11	50WW09-181203	03 Dec 2018 13:15			13 Dec 2018 16:53	1
HS18120114-12	50WW10-181203	03 Dec 2018 14:15			13 Dec 2018 16:53	1
Batch ID R329585	**Test Name :** NITRATE/NITRITE BY IC BY SW9056A			**Matrix:** Groundwater		
HS18120114-06	50WW23-181203	03 Dec 2018 09:15			18 Dec 2018 21:15	5
HS18120114-07	50WW22-181203	03 Dec 2018 10:15			18 Dec 2018 22:20	5
Batch ID R329611	**Test Name :** SUBCONTRACT ANALYSIS - RSK			**Matrix:** Groundwater		
HS18120114-06	50WW23-181203	03 Dec 2018 09:15			19 Dec 2018 17:22	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15			19 Dec 2018 17:22	1
Batch ID R330084	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS			**Matrix:** Groundwater		
HS18120114-06	50WW23-181203	03 Dec 2018 09:15			28 Dec 2018 10:25	1
HS18120114-07	50WW22-181203	03 Dec 2018 10:15			28 Dec 2018 10:25	1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: 135381 **Instrument: ICPMS04** **Method: SW6020**

MBLK Sample ID: **MBLK-135381** Units: **mg/L** Analysis Date: **13-Dec-2018 18:52**
Client ID: Run ID: **ICPMS04_329160** SeqNo: **4863889** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	0.100	0.200								U

LCS Sample ID: **LCS-135381** Units: **mg/L** Analysis Date: **13-Dec-2018 18:54**
Client ID: Run ID: **ICPMS04_329160** SeqNo: **4863890** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	5.059	0.200	5	0	101	80 - 120				

MS Sample ID: **HS18111538-04MS** Units: **mg/L** Analysis Date: **13-Dec-2018 19:34**
Client ID: Run ID: **ICPMS04_329160** SeqNo: **4864136** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	10.79	0.200	5	5.661	103	80 - 120				

MSD Sample ID: **HS18111538-04MSD** Units: **mg/L** Analysis Date: **13-Dec-2018 19:36**
Client ID: Run ID: **ICPMS04_329160** SeqNo: **4864137** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	10.65	0.200	5	5.661	99.8	80 - 120	10.79	1.26	20	

PDS Sample ID: **HS18111538-04PDS** Units: **mg/L** Analysis Date: **13-Dec-2018 19:38**
Client ID: Run ID: **ICPMS04_329160** SeqNo: **4864138** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	15.82	0.200	10	5.661	102	75 - 125				

SD Sample ID: **HS18111538-04SD** Units: **mg/L** Analysis Date: **13-Dec-2018 19:31**
Client ID: Run ID: **ICPMS04_329160** SeqNo: **4864135** PrepDate: **10-Dec-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Iron	5.914	1.00					5.661	4.46	10	

The following samples were analyzed in this batch: HS18120114-06 HS18120114-07

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: 135382 **Instrument: ICPMS05** **Method: SW6020 (dissolved) (DISSOLVED)**

MBLK Sample ID: **MBLKF1-135382** Units: **mg/L** Analysis Date: **10-Dec-2018 19:59**
Client ID: Run ID: **ICPMS05_328925** SeqNo: **4857201** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	0.100	0.200								U
Manganese	0.00226	0.00500								J

MBLK Sample ID: **MBLK-135382** Units: **mg/L** Analysis Date: **10-Dec-2018 20:01**
Client ID: Run ID: **ICPMS05_328925** SeqNo: **4857202** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	0.100	0.200								U
Manganese	0.001521	0.00500								J

LCS Sample ID: **LCS-135382** Units: **mg/L** Analysis Date: **10-Dec-2018 20:03**
Client ID: Run ID: **ICPMS05_328925** SeqNo: **4857203** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	5.001	0.200	5	0	100	80 - 120				
Manganese	0.05062	0.00500	0.05	0	101	80 - 120				

LCSD Sample ID: **LCSD-135382** Units: **mg/L** Analysis Date: **10-Dec-2018 20:05**
Client ID: Run ID: **ICPMS05_328925** SeqNo: **4857204** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	5.082	0.200	5	0	102	80 - 120	5.001	1.61	20	
Manganese	0.05048	0.00500	0.05	0	101	80 - 120	0.05062	0.277	20	

MS Sample ID: **HS18111440-01MS** Units: **mg/L** Analysis Date: **10-Dec-2018 20:16**
Client ID: Run ID: **ICPMS05_328925** SeqNo: **4857209** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	6.274	0.200	5	1.553	94.4	75 - 125				
Manganese	0.08137	0.00500	0.05	0.03851	85.7	75 - 125				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: 135382 **Instrument: ICPMS05** **Method: SW6020 (dissolved) (DISSOLVED)**

MSD Sample ID: **HS18111440-01MSD** Units: **mg/L** Analysis Date: **10-Dec-2018 20:18**
Client ID: Run ID: **ICPMS05_328925** SeqNo: **4857210** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	6.289	0.200	5	1.553	94.7	75 - 125	6.274	0.246	20	
Manganese	0.08202	0.00500	0.05	0.03851	87.0	75 - 125	0.08137	0.785	20	

PDS Sample ID: **HS18111440-01PDS** Units: **mg/L** Analysis Date: **10-Dec-2018 20:20**
Client ID: Run ID: **ICPMS05_328925** SeqNo: **4857211** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	11.44	0.200	10	1.553	98.9	75 - 125				
Manganese	0.1314	0.00500	0.1	0.03851	92.9	75 - 125				

SD Sample ID: **HS18111440-01SD** Units: **mg/L** Analysis Date: **10-Dec-2018 20:13**
Client ID: Run ID: **ICPMS05_328925** SeqNo: **4857208** PrepDate: **10-Dec-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Iron	1.642	1.00					1.553	5.73	10	

The following samples were analyzed in this batch: HS18120114-06 HS18120114-07

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

MBLK Sample ID: **VBLKW-181213** Units: **ug/L** Analysis Date: **13-Dec-2018 11:19**
Client ID: Run ID: **VOA9_329168** SeqNo: **4862946** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichlor-1,2,2-trifluoroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	0.50	1.0								U
1,2,3-Trichloropropane	0.50	1.0								U
1,2,4-Trichlorobenzene	0.50	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	1.0	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	0.50	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	0.50	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	1.0	2.0								U
4-Chlorotoluene	0.50	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	1.0	2.0								U
Acetone	2.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	0.50	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

MBLK Sample ID: **VBLKW-181213** Units: **ug/L** Analysis Date: **13-Dec-2018 11:19**
Client ID: Run ID: **VOA9_329168** SeqNo: **4862946** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	0.50	1.0								U
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	0.50	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	0.50	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*46.15*	*1.0*	*50*	*0*	*92.3*	*70 - 123*				
Surr: 4-Bromofluorobenzene	*49.55*	*1.0*	*50*	*0*	*99.1*	*82 - 115*				
Surr: Dibromofluoromethane	*44.26*	*1.0*	*50*	*0*	*88.5*	*73 - 126*				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument: VOA9** **Method: SW8260**

MBLK Sample ID: **VBLKW-181213** Units: **ug/L** Analysis Date: **13-Dec-2018 11:19**
Client ID: Run ID: **VOA9_329168** SeqNo: **4862946** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*53*	*1.0*	*50*	*0*	*106*	*81 - 120*				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

LCS Sample ID: **VLCSW-1812013** Units: **ug/L** Analysis Date: **13-Dec-2018 10:30**
Client ID: Run ID: **VOA9_329168** SeqNo: **4862945** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	22.29	1.0	20	0	111	77 - 118				
1,1,1-Trichloroethane	19.94	1.0	20	0	99.7	70 - 130				
1,1,2,2-Tetrachloroethane	22.48	1.0	20	0	112	70 - 120				
1,1,2-Trichlor-1,2,2-trifluoroethane	20.17	1.0	20	0	101	70 - 130				
1,1,2-Trichloroethane	22.46	1.0	20	0	112	77 - 113				
1,1-Dichloroethane	21.25	1.0	20	0	106	71 - 122				
1,1-Dichloroethene	19.7	1.0	20	0	98.5	70 - 130				
1,1-Dichloropropene	22.39	1.0	20	0	112	78 - 118				
1,2,3-Trichlorobenzene	23.26	1.0	20	0	116	70 - 130				
1,2,3-Trichloropropane	22.55	1.0	20	0	113	70 - 127				
1,2,4-Trichlorobenzene	22.97	1.0	20	0	115	77 - 126				
1,2,4-Trimethylbenzene	23.58	1.0	20	0	118	73 - 121				
1,2-Dibromo-3-chloropropane	20.23	1.0	20	0	101	70 - 130				
1,2-Dibromoethane	22.74	1.0	20	0	114	76 - 123				
1,2-Dichlorobenzene	21.7	1.0	20	0	108	77 - 113				
1,2-Dichloroethane	21.13	1.0	20	0	106	70 - 124				
1,2-Dichloropropane	23.59	1.0	20	0	118	72 - 119				
1,3,5-Trimethylbenzene	23.47	1.0	20	0	117	75 - 118				
1,3-Dichlorobenzene	21.96	1.0	20	0	110	78 - 118				
1,3-Dichloropropane	22.77	1.0	20	0	114	75 - 116				
1,4-Dichlorobenzene	23.45	1.0	20	0	117	79 - 113				S
2,2-Dichloropropane	20.72	1.0	20	0	104	70 - 130				
2-Butanone	44.33	2.0	40	0	111	70 - 130				
2-Chlorotoluene	23.04	1.0	20	0	115	70 - 128				
2-Hexanone	48.36	2.0	40	0	121	70 - 130				
4-Chlorotoluene	23.4	1.0	20	0	117	74 - 126				
4-Isopropyltoluene	24.16	1.0	20	0	121	74 - 126				
4-Methyl-2-pentanone	48.41	2.0	40	0	121	70 - 130				
Acetone	47.94	2.0	40	0	120	70 - 130				
Benzene	22.75	1.0	20	0	114	74 - 120				
Bromobenzene	22	1.0	20	0	110	78 - 113				
Bromochloromethane	22.74	1.0	20	0	114	76 - 124				
Bromodichloromethane	20.94	1.0	20	0	105	74 - 122				
Bromoform	19.59	1.0	20	0	98.0	73 - 128				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

LCS Sample ID: **VLCSW-1812013** Units: **ug/L** Analysis Date: **13-Dec-2018 10:30**
Client ID: Run ID: **VOA9_329168** SeqNo: **4862945** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	20.83	1.0	20	0	104	70 - 130				
Carbon disulfide	43.14	2.0	40	0	108	70 - 130				
Carbon tetrachloride	20.54	1.0	20	0	103	71 - 125				
Chlorobenzene	22.22	1.0	20	0	111	76 - 113				
Chloroethane	20.84	1.0	20	0	104	70 - 130				
Chloroform	20.14	1.0	20	0	101	71 - 121				
Chloromethane	22.74	1.0	20	0	114	70 - 129				
cis-1,2-Dichloroethene	21.16	1.0	20	0	106	75 - 122				
cis-1,3-Dichloropropene	23.35	1.0	20	0	117	73 - 127				
Dibromochloromethane	22.25	1.0	20	0	111	77 - 122				
Dibromomethane	21.73	1.0	20	0	109	78 - 121				
Dichlorodifluoromethane	18.54	1.0	20	0	92.7	70 - 130				
Ethylbenzene	23.09	1.0	20	0	115	77 - 117				
Hexachlorobutadiene	26.18	1.0	20	0	131	70 - 130				S
Isopropylbenzene	23.09	1.0	20	0	115	73 - 127				
m,p-Xylene	46.12	2.0	40	0	115	77 - 122				
Methylene chloride	22.47	2.0	20	0	112	70 - 127				
Naphthalene	24.35	1.0	20	0	122	70 - 130				
n-Butylbenzene	24.65	1.0	20	0	123	72 - 130				
n-Propylbenzene	23.56	1.0	20	0	118	73 - 124				
o-Xylene	23.42	1.0	20	0	117	75 - 119				
sec-Butylbenzene	23.63	1.0	20	0	118	73 - 128				
Styrene	23.69	1.0	20	0	118	72 - 126				
tert-Butylbenzene	23.33	1.0	20	0	117	73 - 124				
Tetrachloroethene	22.43	1.0	20	0	112	76 - 119				
Toluene	22.89	1.0	20	0	114	77 - 118				
trans-1,2-Dichloroethene	20.96	1.0	20	0	105	72 - 127				
trans-1,3-Dichloropropene	20.49	1.0	20	0	102	77 - 119				
Trichloroethene	21.69	1.0	20	0	108	77 - 121				
Trichlorofluoromethane	19.14	1.0	20	0	95.7	70 - 130				
Vinyl chloride	21.88	1.0	20	0	109	70 - 130				
Surr: 1,2-Dichloroethane-d4	*44.48*	*1.0*	*50*	*0*	*89.0*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*51.54*	*1.0*	*50*	*0*	*103*	*82 - 115*				
Surr: Dibromofluoromethane	*44.89*	*1.0*	*50*	*0*	*89.8*	*73 - 126*				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument: VOA9** **Method: SW8260**

LCS Sample ID: **VLCSW-1812013** Units: **ug/L** Analysis Date: **13-Dec-2018 10:30**
Client ID: Run ID: **VOA9_329168** SeqNo: **4862945** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*53.37*	*1.0*	*50*	*0*	*107*	*81 - 120*				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

MS Sample ID: **HS18120114-04MS** Units: **ug/L** Analysis Date: **13-Dec-2018 17:06**
Client ID: **50WW21-181130** Run ID: **VOA9_329168** SeqNo: **4865064** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	22.79	1.0	20	0	114	70 - 120				
1,1,1-Trichloroethane	21.42	1.0	20	0	107	70 - 130				
1,1,2,2-Tetrachloroethane	23.49	1.0	20	0	117	70 - 123				
1,1,2-Trichlor-1,2,2-trifluoroethane	21.08	1.0	20	0	105	70 - 130				
1,1,2-Trichloroethane	23.49	1.0	20	0	117	70 - 117				S
1,1-Dichloroethane	22.48	1.0	20	0	112	70 - 127				
1,1-Dichloroethene	21.7	1.0	20	0	108	70 - 130				
1,1-Dichloropropene	24.59	1.0	20	0	123	70 - 129				
1,2,3-Trichlorobenzene	22.47	1.0	20	0	112	70 - 130				
1,2,3-Trichloropropane	22.8	1.0	20	0	114	70 - 130				
1,2,4-Trichlorobenzene	22.15	1.0	20	0	111	70 - 125				
1,2,4-Trimethylbenzene	24.28	1.0	20	0	121	70 - 125				
1,2-Dibromo-3-chloropropane	20.58	1.0	20	0	103	70 - 130				
1,2-Dibromoethane	23.02	1.0	20	0	115	70 - 124				
1,2-Dichlorobenzene	22.34	1.0	20	0	112	70 - 115				
1,2-Dichloroethane	22.61	1.0	20	0	113	70 - 127				
1,2-Dichloropropane	24.92	1.0	20	0	125	70 - 122				S
1,3,5-Trimethylbenzene	24.36	1.0	20	0	122	70 - 126				
1,3-Dichlorobenzene	22.35	1.0	20	0	112	70 - 119				
1,3-Dichloropropane	23.48	1.0	20	0	117	70 - 121				
1,4-Dichlorobenzene	23.63	1.0	20	0	118	70 - 114				S
2,2-Dichloropropane	19.53	1.0	20	0	97.6	70 - 130				
2-Butanone	45.3	2.0	40	0	113	70 - 130				
2-Chlorotoluene	23.92	1.0	20	0	120	70 - 130				
2-Hexanone	50.73	2.0	40	0	127	70 - 130				
4-Chlorotoluene	24.16	1.0	20	0	121	70 - 130				
4-Isopropyltoluene	24.85	1.0	20	0	124	70 - 130				
4-Methyl-2-pentanone	49.51	2.0	40	0	124	70 - 130				
Acetone	49.66	2.0	40	0	124	70 - 130				
Benzene	24.7	1.0	20	0	123	70 - 127				
Bromobenzene	22.26	1.0	20	0	111	70 - 115				
Bromochloromethane	23.51	1.0	20	0	118	70 - 127				
Bromodichloromethane	22.06	1.0	20	0	110	70 - 124				
Bromoform	19.65	1.0	20	0	98.3	70 - 129				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

MS Sample ID: **HS18120114-04MS** Units: **ug/L** Analysis Date: **13-Dec-2018 17:06**
Client ID: **50WW21-181130** Run ID: **VOA9_329168** SeqNo: **4865064** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	18.9	1.0	20	0	94.5	70 - 130				
Carbon disulfide	43	2.0	40	0	108	70 - 130				
Carbon tetrachloride	22.97	1.0	20	0	115	70 - 130				
Chlorobenzene	22.84	1.0	20	0	114	70 - 114				S
Chloroethane	21.77	1.0	20	0	109	70 - 130				
Chloroform	21.58	1.0	20	0	108	70 - 125				
Chloromethane	20.46	1.0	20	0	102	70 - 130				
cis-1,2-Dichloroethene	22.23	1.0	20	0	111	70 - 128				
cis-1,3-Dichloropropene	23.07	1.0	20	0	115	70 - 125				
Dibromochloromethane	22.09	1.0	20	0	110	70 - 124				
Dibromomethane	22.81	1.0	20	0	114	70 - 124				
Dichlorodifluoromethane	12.05	1.0	20	0	60.2	70 - 130				S
Ethylbenzene	23.88	1.0	20	0	119	70 - 124				
Hexachlorobutadiene	24.14	1.0	20	0	121	70 - 130				
Isopropylbenzene	24.45	1.0	20	0	122	70 - 130				
m,p-Xylene	47.67	2.0	40	0	119	70 - 130				
Methylene chloride	23.58	2.0	20	0	118	70 - 128				
Naphthalene	24.2	1.0	20	0	121	70 - 130				
n-Butylbenzene	25.3	1.0	20	0	126	70 - 130				
n-Propylbenzene	24.79	1.0	20	0	124	70 - 130				
o-Xylene	24.02	1.0	20	0	120	70 - 124				
sec-Butylbenzene	24.71	1.0	20	0	124	70 - 130				
Styrene	24	1.0	20	0	120	70 - 130				
tert-Butylbenzene	24.48	1.0	20	0	122	70 - 130				
Tetrachloroethene	23.8	1.0	20	0	119	70 - 130				
Toluene	23.9	1.0	20	0	119	70 - 123				
trans-1,2-Dichloroethene	22.43	1.0	20	0	112	70 - 130				
trans-1,3-Dichloropropene	20.32	1.0	20	0	102	70 - 121				
Trichloroethene	23.66	1.0	20	0	118	70 - 129				
Trichlorofluoromethane	20.35	1.0	20	0	102	70 - 130				
Vinyl chloride	21.34	1.0	20	0	107	70 - 130				
Surr: 1,2-Dichloroethane-d4	*45.12*	*1.0*	*50*	*0*	*90.2*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*51.35*	*1.0*	*50*	*0*	*103*	*81 - 113*				
Surr: Dibromofluoromethane	*45.07*	*1.0*	*50*	*0*	*90.1*	*77 - 123*				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

MS Sample ID: **HS18120114-04MS** Units: **ug/L** Analysis Date: **13-Dec-2018 17:06**
Client ID: **50WW21-181130** Run ID: **VOA9_329168** SeqNo: **4865064** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*52.75*	*1.0*	*50*	*0*	*105*	*82 - 127*				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

MSD Sample ID: **HS18120114-04MSD** Units: **ug/L** Analysis Date: **13-Dec-2018 17:31**
Client ID: **50WW21-181130** Run ID: **VOA9_329168** SeqNo: **4865065** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	22.61	1.0	20	0	113	70 - 120	22.79	0.788	20	
1,1,1-Trichloroethane	21	1.0	20	0	105	70 - 130	21.42	2.02	20	
1,1,2,2-Tetrachloroethane	23.67	1.0	20	0	118	70 - 123	23.49	0.753	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	20.22	1.0	20	0	101	70 - 130	21.08	4.18	20	
1,1,2-Trichloroethane	23.48	1.0	20	0	117	70 - 117	23.49	0.0345	20	S
1,1-Dichloroethane	22.72	1.0	20	0	114	70 - 127	22.48	1.04	20	
1,1-Dichloroethene	21.35	1.0	20	0	107	70 - 130	21.7	1.63	20	
1,1-Dichloropropene	24.16	1.0	20	0	121	70 - 129	24.59	1.76	20	
1,2,3-Trichlorobenzene	22.75	1.0	20	0	114	70 - 130	22.47	1.24	20	
1,2,3-Trichloropropane	23.45	1.0	20	0	117	70 - 130	22.8	2.81	20	
1,2,4-Trichlorobenzene	22.25	1.0	20	0	111	70 - 125	22.15	0.435	20	
1,2,4-Trimethylbenzene	24.22	1.0	20	0	121	70 - 125	24.28	0.255	20	
1,2-Dibromo-3-chloropropane	20.89	1.0	20	0	104	70 - 130	20.58	1.5	20	
1,2-Dibromoethane	23.28	1.0	20	0	116	70 - 124	23.02	1.1	20	
1,2-Dichlorobenzene	22.09	1.0	20	0	110	70 - 115	22.34	1.14	20	
1,2-Dichloroethane	22.25	1.0	20	0	111	70 - 127	22.61	1.6	20	
1,2-Dichloropropane	24.62	1.0	20	0	123	70 - 122	24.92	1.24	20	S
1,3,5-Trimethylbenzene	24.13	1.0	20	0	121	70 - 126	24.36	0.949	20	
1,3-Dichlorobenzene	22.24	1.0	20	0	111	70 - 119	22.35	0.467	20	
1,3-Dichloropropane	23.88	1.0	20	0	119	70 - 121	23.48	1.71	20	
1,4-Dichlorobenzene	23.72	1.0	20	0	119	70 - 114	23.63	0.346	20	S
2,2-Dichloropropane	19.01	1.0	20	0	95.1	70 - 130	19.53	2.66	20	
2-Butanone	47.19	2.0	40	0	118	70 - 130	45.3	4.1	20	
2-Chlorotoluene	23.66	1.0	20	0	118	70 - 130	23.92	1.07	20	
2-Hexanone	52.47	2.0	40	0	131	70 - 130	50.73	3.37	20	S
4-Chlorotoluene	24.06	1.0	20	0	120	70 - 130	24.16	0.414	20	
4-Isopropyltoluene	24.82	1.0	20	0	124	70 - 130	24.85	0.0913	20	
4-Methyl-2-pentanone	51.68	2.0	40	0	129	70 - 130	49.51	4.29	20	
Acetone	52.39	2.0	40	0	131	70 - 130	49.66	5.37	20	S
Benzene	24.02	1.0	20	0	120	70 - 127	24.7	2.8	20	
Bromobenzene	22.37	1.0	20	0	112	70 - 115	22.26	0.525	20	
Bromochloromethane	23.54	1.0	20	0	118	70 - 127	23.51	0.124	20	
Bromodichloromethane	21.92	1.0	20	0	110	70 - 124	22.06	0.626	20	
Bromoform	19.23	1.0	20	0	96.1	70 - 129	19.65	2.2	20	

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

MSD Sample ID: **HS18120114-04MSD** Units: **ug/L** Analysis Date: **13-Dec-2018 17:31**
Client ID: **50WW21-181130** Run ID: **VOA9_329168** SeqNo: **4865065** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	19	1.0	20	0	95.0	70 - 130	18.9	0.529	20	
Carbon disulfide	42.03	2.0	40	0	105	70 - 130	43	2.29	20	
Carbon tetrachloride	22.75	1.0	20	0	114	70 - 130	22.97	0.999	20	
Chlorobenzene	22.69	1.0	20	0	113	70 - 114	22.84	0.669	20	
Chloroethane	21.07	1.0	20	0	105	70 - 130	21.77	3.3	20	
Chloroform	21.28	1.0	20	0	106	70 - 125	21.58	1.42	20	
Chloromethane	18.94	1.0	20	0	94.7	70 - 130	20.46	7.68	20	
cis-1,2-Dichloroethene	21.85	1.0	20	0	109	70 - 128	22.23	1.72	20	
cis-1,3-Dichloropropene	22.82	1.0	20	0	114	70 - 125	23.07	1.1	20	
Dibromochloromethane	22.42	1.0	20	0	112	70 - 124	22.09	1.51	20	
Dibromomethane	22.79	1.0	20	0	114	70 - 124	22.81	0.0603	20	
Dichlorodifluoromethane	11.85	1.0	20	0	59.3	70 - 130	12.05	1.63	20	S
Ethylbenzene	23.63	1.0	20	0	118	70 - 124	23.88	1.09	20	
Hexachlorobutadiene	24.23	1.0	20	0	121	70 - 130	24.14	0.401	20	
Isopropylbenzene	23.97	1.0	20	0	120	70 - 130	24.45	1.95	20	
m,p-Xylene	47.89	2.0	40	0	120	70 - 130	47.67	0.466	20	
Methylene chloride	23.3	2.0	20	0	116	70 - 128	23.58	1.19	20	
Naphthalene	24.49	1.0	20	0	122	70 - 130	24.2	1.19	20	
n-Butylbenzene	24.77	1.0	20	0	124	70 - 130	25.3	2.1	20	
n-Propylbenzene	24.74	1.0	20	0	124	70 - 130	24.79	0.212	20	
o-Xylene	23.85	1.0	20	0	119	70 - 124	24.02	0.738	20	
sec-Butylbenzene	24.62	1.0	20	0	123	70 - 130	24.71	0.365	20	
Styrene	23.99	1.0	20	0	120	70 - 130	24	0.0592	20	
tert-Butylbenzene	24.2	1.0	20	0	121	70 - 130	24.48	1.16	20	
Tetrachloroethene	23.76	1.0	20	0	119	70 - 130	23.8	0.15	20	
Toluene	23.79	1.0	20	0	119	70 - 123	23.9	0.464	20	
trans-1,2-Dichloroethene	21.86	1.0	20	0	109	70 - 130	22.43	2.55	20	
trans-1,3-Dichloropropene	20.51	1.0	20	0	103	70 - 121	20.32	0.916	20	
Trichloroethene	22.73	1.0	20	0	114	70 - 129	23.66	3.99	20	
Trichlorofluoromethane	19.75	1.0	20	0	98.8	70 - 130	20.35	3	20	
Vinyl chloride	20.97	1.0	20	0	105	70 - 130	21.34	1.79	20	
Surr: 1,2-Dichloroethane-d4	*44.99*	*1.0*	*50*	*0*	*90.0*	*70 - 126*	*45.12*	*0.288*	*20*	
Surr: 4-Bromofluorobenzene	*51.26*	*1.0*	*50*	*0*	*103*	*81 - 113*	*51.35*	*0.171*	*20*	
Surr: Dibromofluoromethane	*45.29*	*1.0*	*50*	*0*	*90.6*	*77 - 123*	*45.07*	*0.484*	*20*	

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329168 **Instrument:** VOA9 **Method:** SW8260

MSD Sample ID: **HS18120114-04MSD** Units: **ug/L** Analysis Date: **13-Dec-2018 17:31**
Client ID: **50WW21-181130** Run ID: **VOA9_329168** SeqNo: **4865065** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*53.24*	*1.0*	*50*	*0*	*106*	*82 - 127*	*52.75*	*0.929*	*20*	

The following samples were analyzed in this batch:

HS18120114-01	HS18120114-02	HS18120114-03	HS18120114-04
HS18120114-05	HS18120114-06	HS18120114-07	HS18120114-08
HS18120114-09	HS18120114-10	HS18120114-11	HS18120114-12
HS18120114-13			

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: 135291 **Instrument: UV-2450** **Method: SM4500P E**

MBLK Sample ID: **MBLK-135291** Units: **mg/L** Analysis Date: **06-Dec-2018 15:15**
Client ID: Run ID: **UV-2450_328729** SeqNo: **4852202** PrepDate: **06-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total (As P)	0.0250	0.0500								U

LCS Sample ID: **LCS-135291** Units: **mg/L** Analysis Date: **06-Dec-2018 15:15**
Client ID: Run ID: **UV-2450_328729** SeqNo: **4852201** PrepDate: **06-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total (As P)	0.23	0.0500	0.25	0	92.0	80 - 120				

MS Sample ID: **HS18111440-01MS** Units: **mg/L** Analysis Date: **06-Dec-2018 15:15**
Client ID: Run ID: **UV-2450_328729** SeqNo: **4852199** PrepDate: **06-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total (As P)	3.43	0.500	2.5	0.91	101	80 - 120				

MSD Sample ID: **HS18111440-01MSD** Units: **mg/L** Analysis Date: **06-Dec-2018 15:15**
Client ID: Run ID: **UV-2450_328729** SeqNo: **4852200** PrepDate: **06-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total (As P)	3.42	0.500	2.5	0.91	100	80 - 120	3.43	0.292	20	

The following samples were analyzed in this batch: HS18120114-06 HS18120114-07

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R328778 **Instrument: WetChem_HS** **Method: E376.1**

MBLK Sample ID: **MBLK-R328778** Units: **mg/L** Analysis Date: **06-Dec-2018 15:40**
Client ID: Run ID: **WetChem_HS_328778** SeqNo: **4853445** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	1.00	1.00								U

LCS Sample ID: **LCS-R328778** Units: **mg/L** Analysis Date: **06-Dec-2018 15:40**
Client ID: Run ID: **WetChem_HS_328778** SeqNo: **4853444** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.96	1.00	25	0	87.8	80 - 120				

LCSD Sample ID: **LCSD-R328778** Units: **mg/L** Analysis Date: **06-Dec-2018 15:40**
Client ID: Run ID: **WetChem_HS_328778** SeqNo: **4853443** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.76	1.00	25	0	87.0	80 - 120	21.96	0.915	20	

MS Sample ID: **HS18120114-07MS** Units: **mg/L** Analysis Date: **06-Dec-2018 15:40**
Client ID: **50WW22-181203** Run ID: **WetChem_HS_328778** SeqNo: **4853446** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	25.16	1.00	25	-0.004	101	80 - 120				

The following samples were analyzed in this batch: HS18120114-06 HS18120114-07

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R328782 **Instrument: ICS2100** **Method: SW9056**

MBLK Sample ID: **WBLKW1-120618** Units: **mg/L** Analysis Date: **06-Dec-2018 18:57**
Client ID: Run ID: **ICS2100_328782** SeqNo: **4853530** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Nitrogen, Nitrate (As N)	0.100	0.100								U
Nitrogen, Nitrite (As N)	0.100	0.100								U
Sulfate	0.500	0.500								U

LCS Sample ID: **WLCSW1-120618** Units: **mg/L** Analysis Date: **06-Dec-2018 19:12**
Client ID: Run ID: **ICS2100_328782** SeqNo: **4853531** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.3	0.500	20	0	102	80 - 120				
Nitrogen, Nitrate (As N)	4.015	0.100	4	0	100	80 - 120				
Nitrogen, Nitrite (As N)	4.353	0.100	4	0	109	80 - 120				
Sulfate	19.78	0.500	20	0	98.9	80 - 120				

LCSD Sample ID: **WLCSDW1-120618** Units: **mg/L** Analysis Date: **06-Dec-2018 19:26**
Client ID: Run ID: **ICS2100_328782** SeqNo: **4853532** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.58	0.500	20	0	97.9	80 - 120	20.3	3.6	20	
Nitrogen, Nitrate (As N)	3.867	0.100	4	0	96.7	80 - 120	4.015	3.76	20	
Nitrogen, Nitrite (As N)	4.215	0.100	4	0	105	80 - 120	4.353	3.22	20	
Sulfate	19.12	0.500	20	0	95.6	80 - 120	19.78	3.4	20	

MS Sample ID: **HS18120266-01MS** Units: **mg/L** Analysis Date: **06-Dec-2018 22:50**
Client ID: Run ID: **ICS2100_328782** SeqNo: **4853540** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	13.1	0.500	10	3.302	97.9	80 - 120				
Nitrogen, Nitrate (As N)	1.897	0.100	2	0	94.8	80 - 120				
Nitrogen, Nitrite (As N)	2.061	0.100	2	0	103	80 - 120				
Sulfate	46.8	0.500	10	38.01	87.9	80 - 120				

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R328782 **Instrument: ICS2100** **Method: SW9056**

MSD Sample ID: **HS18120266-01MSD** Units: **mg/L** Analysis Date: **06-Dec-2018 23:04**
Client ID: Run ID: **ICS2100_328782** SeqNo: **4853541** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	13.1	0.500	10	3.302	97.9	80 - 120	13.1	0	20	
Nitrogen, Nitrate (As N)	1.888	0.100	2	0	94.4	80 - 120	1.897	0.476	20	
Nitrogen, Nitrite (As N)	2.057	0.100	2	0	103	80 - 120	2.061	0.194	20	
Sulfate	46.51	0.500	10	38.01	85.0	80 - 120	46.8	0.617	20	

The following samples were analyzed in this batch: HS18120114-06 HS18120114-07

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329027 **Instrument: ManTech01** **Method: SM2320B**

MBLK Sample ID: **WBLKW1-181211** Units: **mg/L** Analysis Date: **11-Dec-2018 19:56**
Client ID: Run ID: **ManTech01_329027** SeqNo: **4859850** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	5.00	5.00								U

LCS Sample ID: **LCS1-181211** Units: **mg/L** Analysis Date: **11-Dec-2018 20:04**
Client ID: Run ID: **ManTech01_329027** SeqNo: **4859851** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1070	5.00	1000	0	107	85 - 115				

LCSD Sample ID: **LCSD1-181211** Units: **mg/L** Analysis Date: **11-Dec-2018 20:13**
Client ID: Run ID: **ManTech01_329027** SeqNo: **4859852** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1072	5.00	1000	0	107	85 - 115	1070	0.156	20	

DUP Sample ID: **HS18111440-01DUP** Units: **mg/L** Analysis Date: **11-Dec-2018 20:25**
Client ID: Run ID: **ManTech01_329027** SeqNo: **4859854** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	114.7	5.00					118.2	3.01	20	

The following samples were analyzed in this batch: HS18120114-06 HS18120114-07

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

QC BATCH REPORT

Batch ID: R329585 **Instrument: ICS3K2** **Method: SW9056**

MBLK Sample ID: **WBLKW1-121818** Units: **mg/L** Analysis Date: **18-Dec-2018 20:10**
Client ID: Run ID: **ICS3K2_329585** SeqNo: **4873228** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate-Nitrite	0.100	0.200								U

LCS Sample ID: **WLCSW1-121818** Units: **mg/L** Analysis Date: **18-Dec-2018 20:32**
Client ID: Run ID: **ICS3K2_329585** SeqNo: **4873229** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate-Nitrite	8.077	0.200	8	0	101	90 - 110				

LCSD Sample ID: **WLCSDW1-121818** Units: **mg/L** Analysis Date: **18-Dec-2018 20:53**
Client ID: Run ID: **ICS3K2_329585** SeqNo: **4873230** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate-Nitrite	8.125	0.200	8	0	102	90 - 110	8.077	0.593	20	

MS Sample ID: **HS18120114-06MS** Units: **mg/L** Analysis Date: **18-Dec-2018 21:36**
Client ID: **50WW23-181203** Run ID: **ICS3K2_329585** SeqNo: **4873232** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate-Nitrite	17.87	1.00	20	0.393	87.4	80 - 120				

MSD Sample ID: **HS18120114-06MSD** Units: **mg/L** Analysis Date: **18-Dec-2018 21:58**
Client ID: **50WW23-181203** Run ID: **ICS3K2_329585** SeqNo: **4873233** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate-Nitrite	17.52	1.00	20	0.393	85.6	80 - 120	17.87	1.97	20	

The following samples were analyzed in this batch: HS18120114-06 HS18120114-07

Revision: 1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: **HS18120114**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
North Carolina	624-2018	31-Dec-2018
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Work Order: HS18120114

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	Sub
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	WET185
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	WET185
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	WET185
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	MET064
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	MET064
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	VOA076
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	Sub
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	Sub
HS18120114-06	50WW23-181203	Login	12/4/2018 3:26:21 PM	RPG	Sub
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	Sub
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	WET185
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	WET185
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	WET185
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	MET064
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	MET064
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	VOA076
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	Sub
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	Sub
HS18120114-07	50WW22-181203	Login	12/4/2018 3:26:21 PM	RPG	Sub
HS18120114-01	50WW18-181130	Login	12/4/2018 3:37:28 PM	JML	Sub
HS18120114-01	50WW18-181130	Login	12/4/2018 3:37:28 PM	JML	VOA130
HS18120114-02	50WW17-181130	Login	12/4/2018 3:42:19 PM	JML	Sub
HS18120114-02	50WW17-181130	Login	12/4/2018 3:42:19 PM	JML	VOA130
HS18120114-03	50WW24-181130	Login	12/4/2018 3:42:19 PM	JML	Sub
HS18120114-03	50WW24-181130	Login	12/4/2018 3:42:19 PM	JML	VOA130
HS18120114-04	50WW21-181130	Login	12/4/2018 3:42:19 PM	JML	Sub
HS18120114-04	50WW21-181130	Login	12/4/2018 3:42:19 PM	JML	VOA130
HS18120114-05	50WW15-181130	Login	12/4/2018 3:42:19 PM	JML	Sub
HS18120114-05	50WW15-181130	Login	12/4/2018 3:42:19 PM	JML	VOA130
HS18120114-08	50WW05-181203	Login	12/4/2018 3:47:08 PM	JML	Sub
HS18120114-08	50WW05-181203	Login	12/4/2018 3:47:08 PM	JML	VOA130
HS18120114-09	50WW27-181203	Login	12/4/2018 3:47:08 PM	JML	Sub
HS18120114-09	50WW27-181203	Login	12/4/2018 3:47:08 PM	JML	VOA130
HS18120114-10	50WW27-181203 FD	Login	12/4/2018 3:47:08 PM	JML	Sub
HS18120114-10	50WW27-181203 FD	Login	12/4/2018 3:47:08 PM	JML	VOA130
HS18120114-11	50WW09-181203	Login	12/4/2018 3:47:08 PM	JML	Sub
HS18120114-11	50WW09-181203	Login	12/4/2018 3:47:08 PM	JML	VOA130
HS18120114-12	50WW10-181203	Login	12/4/2018 3:47:08 PM	JML	Sub

Revision:1

ALS Houston, US Date: 28-Dec-18

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
Work Order: HS18120114

SAMPLE TRACKING

HS18120114-12	50WW10-181203	Login	12/4/2018 3:47:08 PM	JML	VOA130
HS18120114-13	Trip Blank ALS-071918-85	Login	12/4/2018 3:48:47 PM	JML	VOA130

ALS Houston, US Date: 28-Dec-18

Sample Receipt Checklist

Client Name: CBI-Houston Date/Time Received: **04-Dec-2018 09:30**

Work Order: HS18120114 Received by: **NDR**

Checklist completed by: *Raegen Giga* eSignature 4-Dec-2018 Date

Reviewed by: *RJ Modashia* eSignature 5-Dec-2018 Date

Matrices: **GW** Carrier name: **UPS**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.5c/2.9c uc/c	IR #11	
Cooler(s)/Kit(s):	44052		
Date/Time sample(s) sent to storage:	1204201816:20		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes: Vial # 2 (of 2) received for sample # 7 RSK Neat vial has the same ID & collection Date as sample # 6. I have logged in this 1 vial as Fraction # 07K with no test code

Client Contacted: Aptim Date Contacted: 5-Dec-2018 Person Contacted: Susan Huang

Contacted By: 509 Regarding: Nitrate, Nitrite Holding Times

Comments: Per the clients request run samples out of holding time as Nitrate+Nitrite preserved as confirmation.

Corrective Action:

HS18120114

APTIM

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant LHAAP-50

COC ID: 50-NOV2018-GW-ALSHT-1811 TURNAROUND TIME: normal

PROJECT/CLIENT INFO

Facility Name	Longhorn AAP
Project Number	501032
	LHAAP-50
Address	1203-B East Grand Avenue
	PMB 202
City	Marshall
State	TX
Postal Code	75670
Country	USA
Phone Number	713.243.7264
Project Manager	Praveen Srivastav

LABORATORY

Lab Name	ALS Laboratories
Lab Contact	RJ Modashia
Email	RJ.Modashia@alsglobal.com
Address	10450 Stanclift Rd., Suite 210
City	Houston
State	TX
Postal Code	77099
Country	USA
Phone Number	281.575.2279 or 281.530.5656

Email Report To	Kim.napier@aptim.com
Mail Reports To	Kim Napier
Address	2410 Cherahala Blvd.
City	Knoxville
State	TN
Postal Code	37932
Country	USA
Shipping Company	

SAMPLE DETAILS

Sample ID	Location	Start Depth	End Depth	Depth Unit	Field Matrix	Date	Time (24hr)	# Of Cont.
SDWW18-181130	LHAAP 50	19.38	19.63	[redacted]	WG	11/30/18	0900	4
SDWW17-181130	LHAAP 50	19.61	19.83		WG	11/30/18	0950	4
SDWW24-181130	LHAAP 50	25.46	25.70		WG	11/30/18	1045	4
SDWW21-181130	LHAAP 50	23.90	24.12		WG	11/30/18	1135	4
SDWW15-181130	LHAAP 50	19.88	20.12		WG	11/30/18	1230	4
SDWW23-181203	LHAAP 50	24.77	25.01		WG	12/3/18	0915	16
SDWW22-181203	LHAAP 50	25.97	26.21		WG	12/3/18	1015	16
SDWW05-181203	LHAAP 50	21.52	21.71		WG	12/3/18	1115	4
SDWW27-181203	LHAAP 50	20.00	20.23		WG	12/3/18	1220	4
SDWW27-181203-FD	LHAAP 50	20.00	20.23		WG	12/3/18	1220	4
SDWW09-181203	LHAAP 50	23.10	23.31		WG	12/3/18	1315	4
SDWW10-181203	LHAAP 50	23.80	24.04		WG	12/3/18	1415	4
TRIP BLANK					W	12/3/18		2

ANALYSIS REQUESTED

ANALYSIS	VOCs in Water by 8260B	Carbon Dioxide in Water by RSK175	Methane, Ethane, Ethene in Water by RSK175	Anions in Water by E300.0	TOC in Water by E415.1	Perchlorate by 6850	Sulfide in Water by E376.1	Phosphorous by E365.2	Alkalinity by E310.1	Dissolved Fe and Mn by 6020	Fe Total by 6020
SDWW18-181130	X					X					
SDWW17-181130	X					X					
SDWW24-181130	X					X					
SDWW21-181130	X					X					
SDWW15-181130	X					X					
SDWW23-181203	X	X	X	X	X	X	X	X	X	X	X
SDWW22-181203	X	X	X	X	X	X	X	X	X	X	X
SDWW05-181203	X					X					
SDWW27-181203	X					X					
SDWW27-181203-FD	X					X					
SDWW09-181203	X					X					
SDWW10-181203	X					X					
TRIP BLANK	X										

ADDITIONAL COMMENTS/SPECIAL INSTRUCTIONS

Anions should include chloride, nitrate, nitrite, and sulfate.

RELINQUISHED BY/AFFILIATION	DATE/TIME	ACCEPTED BY/AFFILIATION	DATE/TIME
[redacted] BTHTE	12/3/18 1430		
[redacted] 12/04/18	12/04/18 9:30	LHA052	

U/C 2.5 IR-4 Cf=+0.4

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

44052

CUSTODY SEAL

Date: 12/3/18 Time: 1430
Name: Scott Boessinger
Company: B. Hays

Seal Broken By: SBM
Date: 12/04/18

44052 DEC 04 2018

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LABORATORY REPORT

December 19, 2018

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road Suite 210
Houston, TX 77099-4338

RE: HS18120114

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on December 5, 2018. For your reference, these analyses have been assigned our service request number P1806638.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
By Kate Kaneko at 3:14 pm, 12/19/18

Kate Kaneko
Laboratory Director

Client: ALS Laboratory Group Service Request No: P1806638
Project: HS18120114

CASE NARRATIVE

The samples were received intact under chain of custody on December 5, 2018 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

Methane, Ethene and Ethane Analysis

The samples were also analyzed for methane, ethene and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-005
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-18-9
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272018-9
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Service Request: P1806638
Project ID: HS18120114

Date Received: 12/5/2018
Time Received: 15:27

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
50WW23-181203	P1806638-001	Water	12/3/2018	09:15	X	X
50WW22-181203	P1806638-002	Water	12/3/2018	10:15	X	X

P180C38

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

COC ID: 10354

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS18120114
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS18120114-06**	**50WW23-181203**	**Groundwater**	**03 Dec 2018 09:15**
	MEE + CO2. DOD IV. Equis EDD			18 Dec 2018
2.	**HS18120114-07**	**50WW22-181203**	**Groundwater**	**03 Dec 2018 10:15**
	MEE + CO2. DOD IV. Equis EDD			18 Dec 2018

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: R Cuga Date/Time: 12/04/18 18:00

Received By: Date/Time: 12-5-18 1045 2°water

Cooler ID(s): Temperature(s):

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P1806638

Project: HS18120114

Sample(s) received on: 12/5/18 Date opened: 12/5/18 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 2° C Thermometer ID CO907034581 Wet Ice			
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1806638-001.01	40mL VOA NP		7		A	MR 12/17/18
P1806638-001.02	40mL VOA NP				A	
P1806638-001.04	40ml VOA HCL		1		A	MR 12/12/18
P1806638-001.05	40ml VOA HCL				A	
P1806638-001.06	40ml VOA HCL				A	
P1806638-002.01	40mL VOA NP		7		A	MR 12/17/18
P1806638-002.04	40ml VOA HCL		1		A	MR 12/12/18
P1806638-002.05	40ml VOA HCL				A	
P1806638-002.06	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS18120114** ALS Project ID: P1806638

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Magaly Rodriguez
Matrix: Water
Test Notes:

Date(s) Collected: 12/3/18
Date Received: 12/5/18
Date Analyzed: 12/17/18

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
50WW23-181203	P1806638-001	0.050	**240,000**	2,000	1,700	740	
50WW22-181203	P1806638-002	0.050	**260,000**	2,000	1,700	740	
Method Control Sample	P181217-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS18120114**

ALS Project ID: P1806638
ALS Sample ID: P181217-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Magaly Rodriguez
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 12/17/18
Volume(s) Analyzed: NA ml(s)

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result[1] LCS ug/L	Result[1] DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	18,600	18,300	**81**	**80**	80-122	1	12	

[1] = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **50WW23-181203**
Client Project ID: **HS18120114**

ALS Project ID: P1806638
ALS Sample ID: P1806638-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Magaly Rodriguez
Matrix: Water
Test Notes:

Date Collected: 12/3/18
Date Received: 12/5/18
Date Analyzed: 12/12/18
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **50WW22-181203**
Client Project ID: **HS18120114**

ALS Project ID: P1806638
ALS Sample ID: P1806638-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Magaly Rodriguez
Matrix: Water
Test Notes:

Date Collected: 12/3/18
Date Received: 12/5/18
Date Analyzed: 12/12/18
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample**
Client Project ID: **HS18120114**

ALS Project ID: P1806638
ALS Sample ID: P181212-MB

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Magaly Rodriguez
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 12/12/18
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS18120114**

ALS Project ID: P1806638
ALS Sample ID: P181212-LCS
P181212-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Magaly Rodriguez
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 12/12/18
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.50	2.80	2.72	**112**	**109**	73-125	3	26	
74-85-1	Ethene	4.37	4.75	4.68	**109**	**107**	72-133	2	11	
74-84-0	Ethane	4.69	4.94	4.85	**105**	**103**	74-131	2	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171814.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 15:53:35
Operator : MR
Sample : P1806638-001 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 17 16:04:45 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

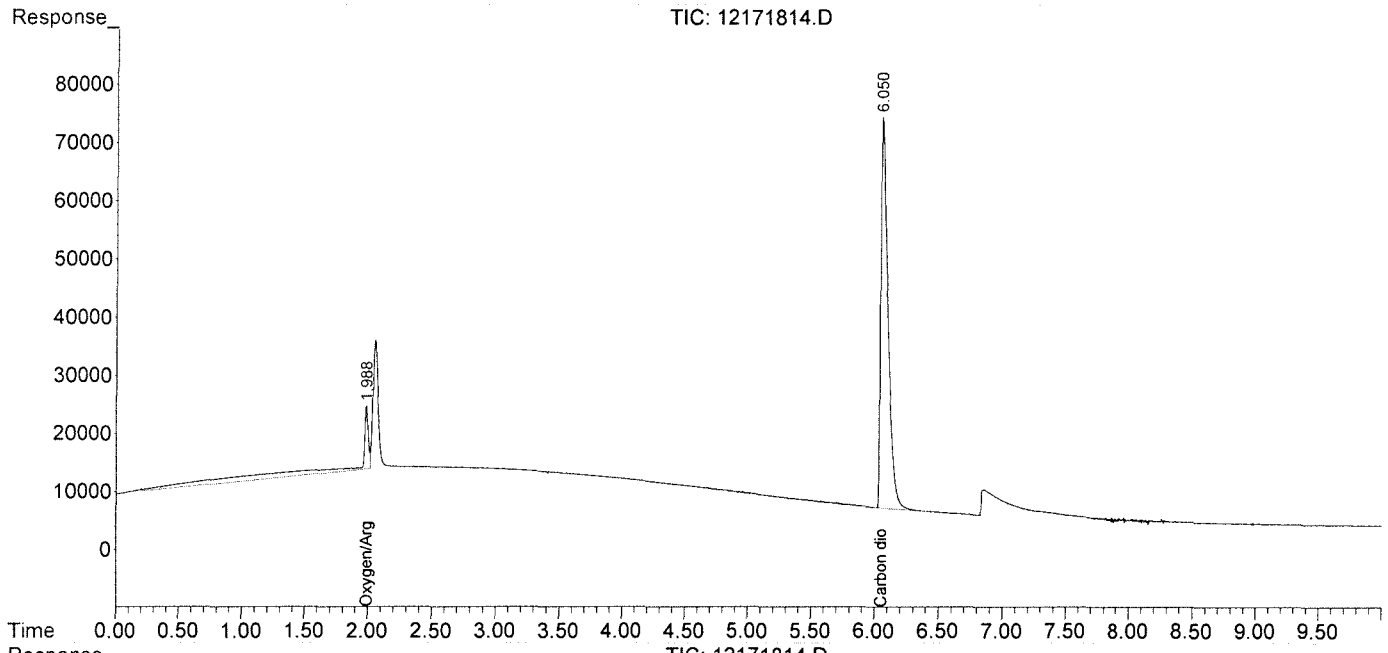
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.989f	893229	0.188	ppm
2)	Carbon monoxide	1.989f	893229	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	6.051	2632500	11215.053	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

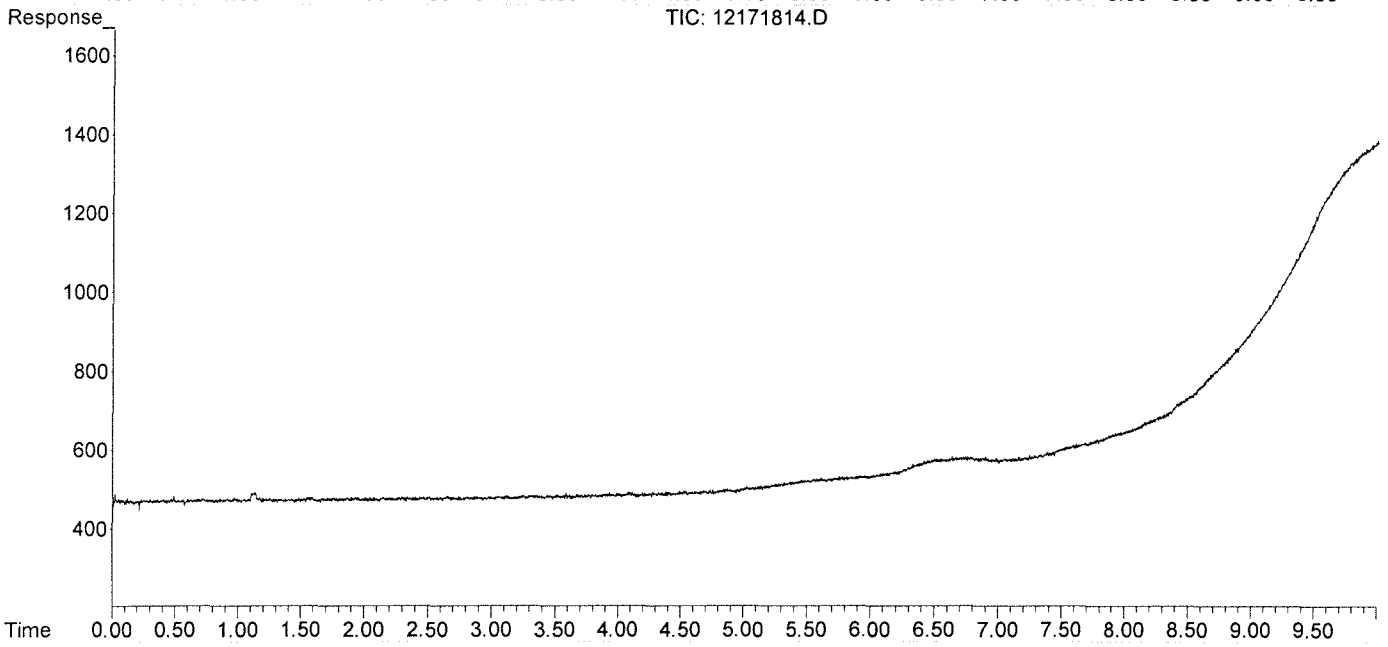
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171814.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 15:53:35
Operator : MR
Sample : P1806638-001 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 17 16:04:45 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171815.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 16:06:48
Operator : MR
Sample : P1806638-002 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 14:15:09 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

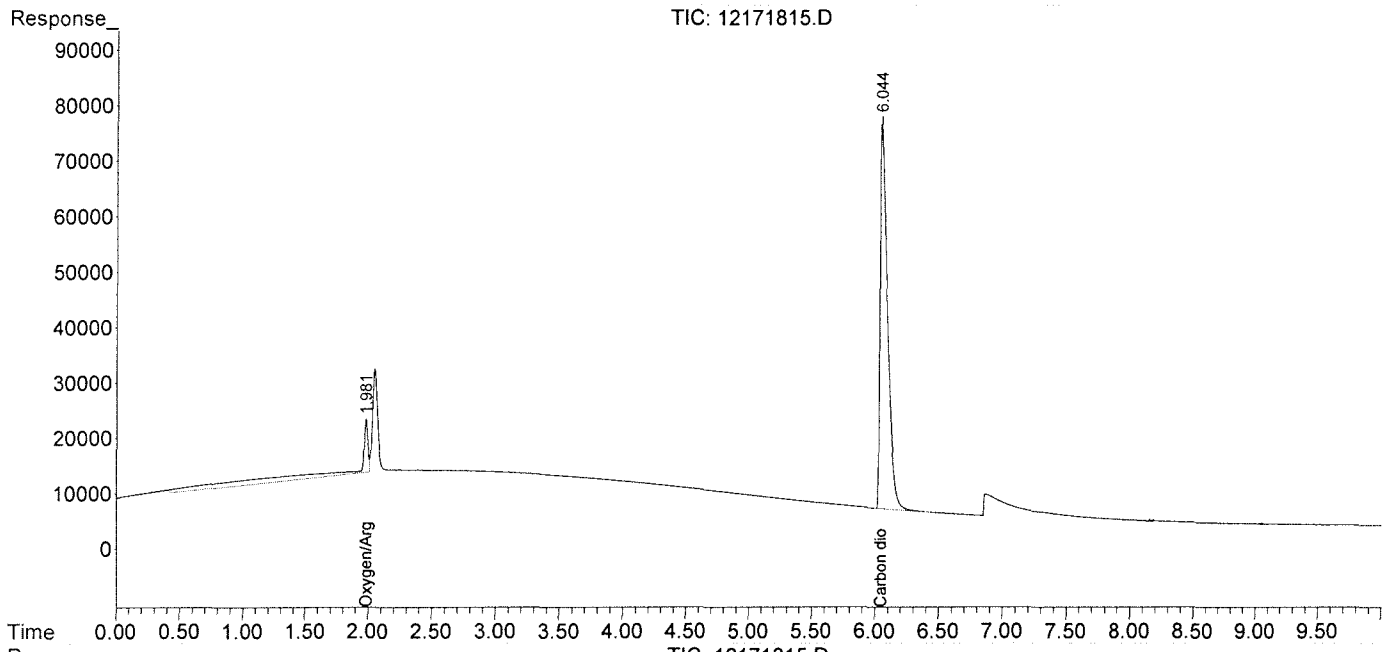
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Oxygen/Argon	1.982f	818524	0.172	ppm
2)	Carbon monoxide	1.982f	818524	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	6.045	2807607	11961.049	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

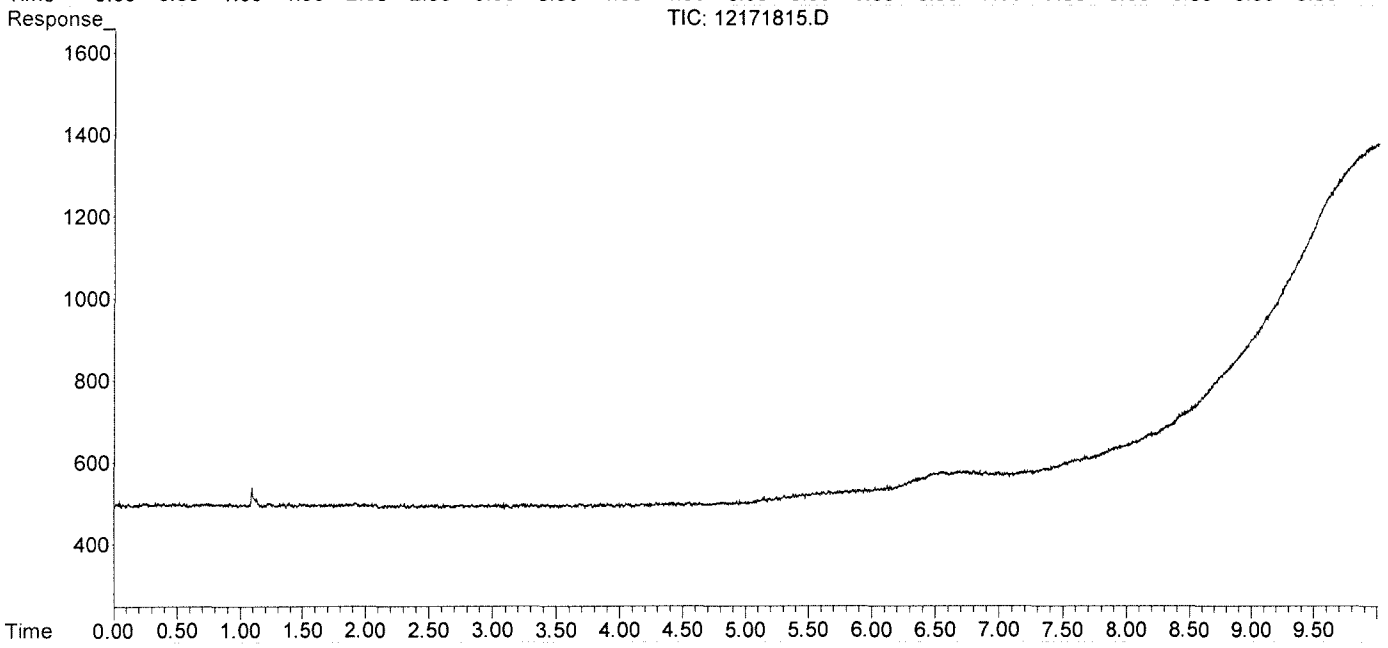
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171815.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 16:06:48
Operator : MR
Sample : P1806638-002 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 14:15:09 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171803.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 12:47:59
Operator : MR
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 17 13:21:48 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

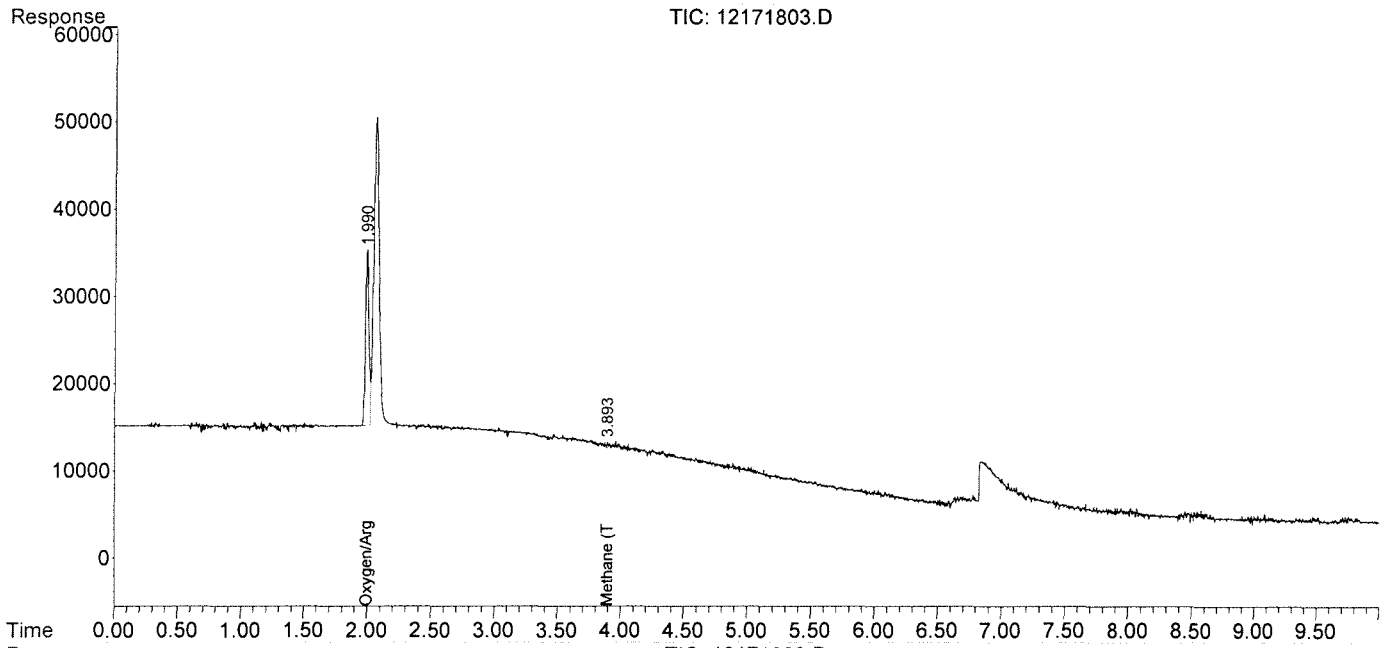
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.991f	367908	0.077	ppm	
2)	Carbon monoxide	1.991f	367908	N.D.	ppm	
3)	Methane (TCD)	3.894	3873	409.557	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.121	2895	0.306	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

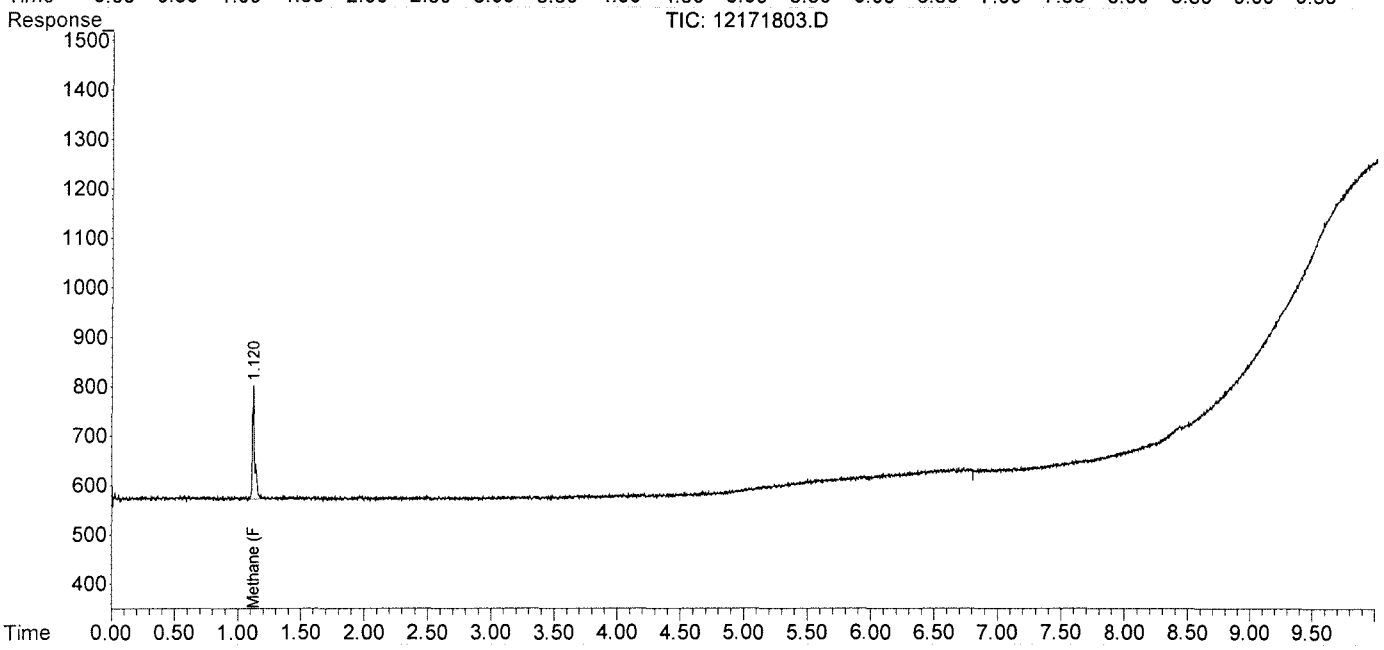
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171803.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 12:47:59
Operator : MR
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 17 13:21:48 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171816.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 16:35:26
Operator : MR
Sample : tcd lcs s32-10081801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:36:37 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

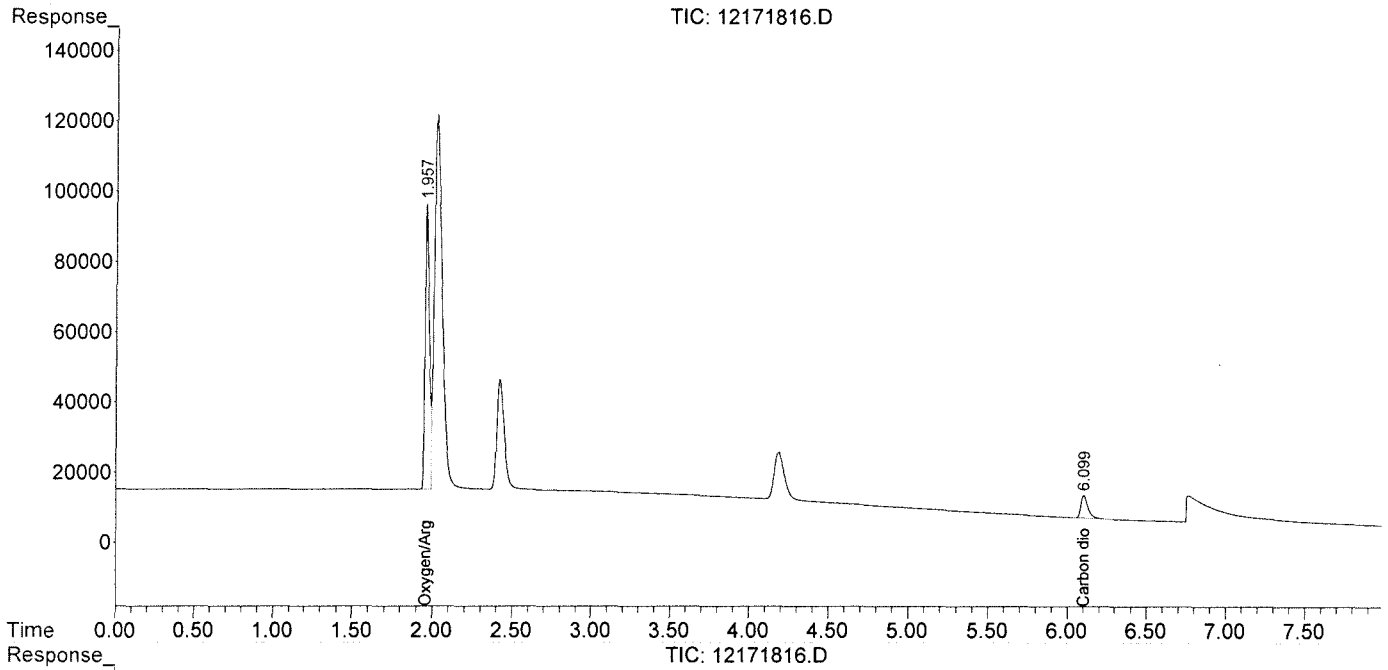
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.958f	1479705	0.311	ppm	
2)	Carbon monoxide	1.958f	1479705	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	6.099	199754	850.998	ppm	m
6)	Methane (FID)	1.110	32571086	3447.473	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

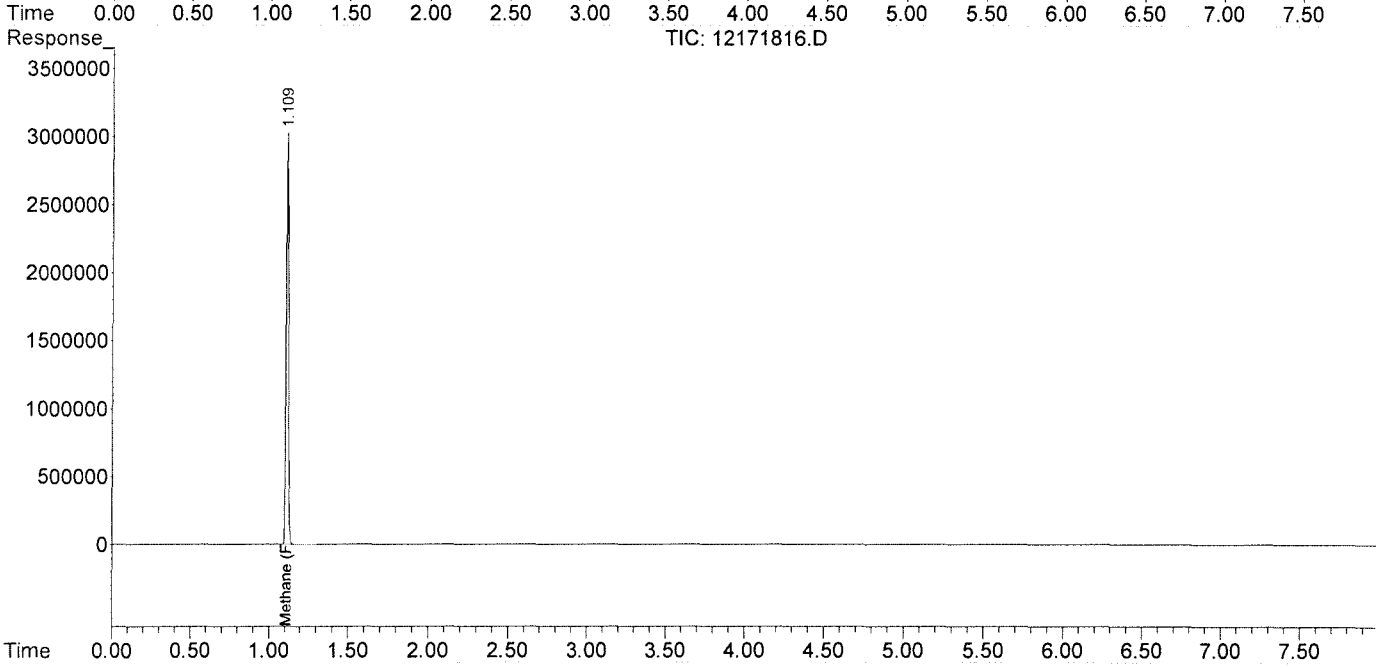
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171816.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 16:35:26
Operator : MR
Sample : tcd lcs s32-10081801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:36:37 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

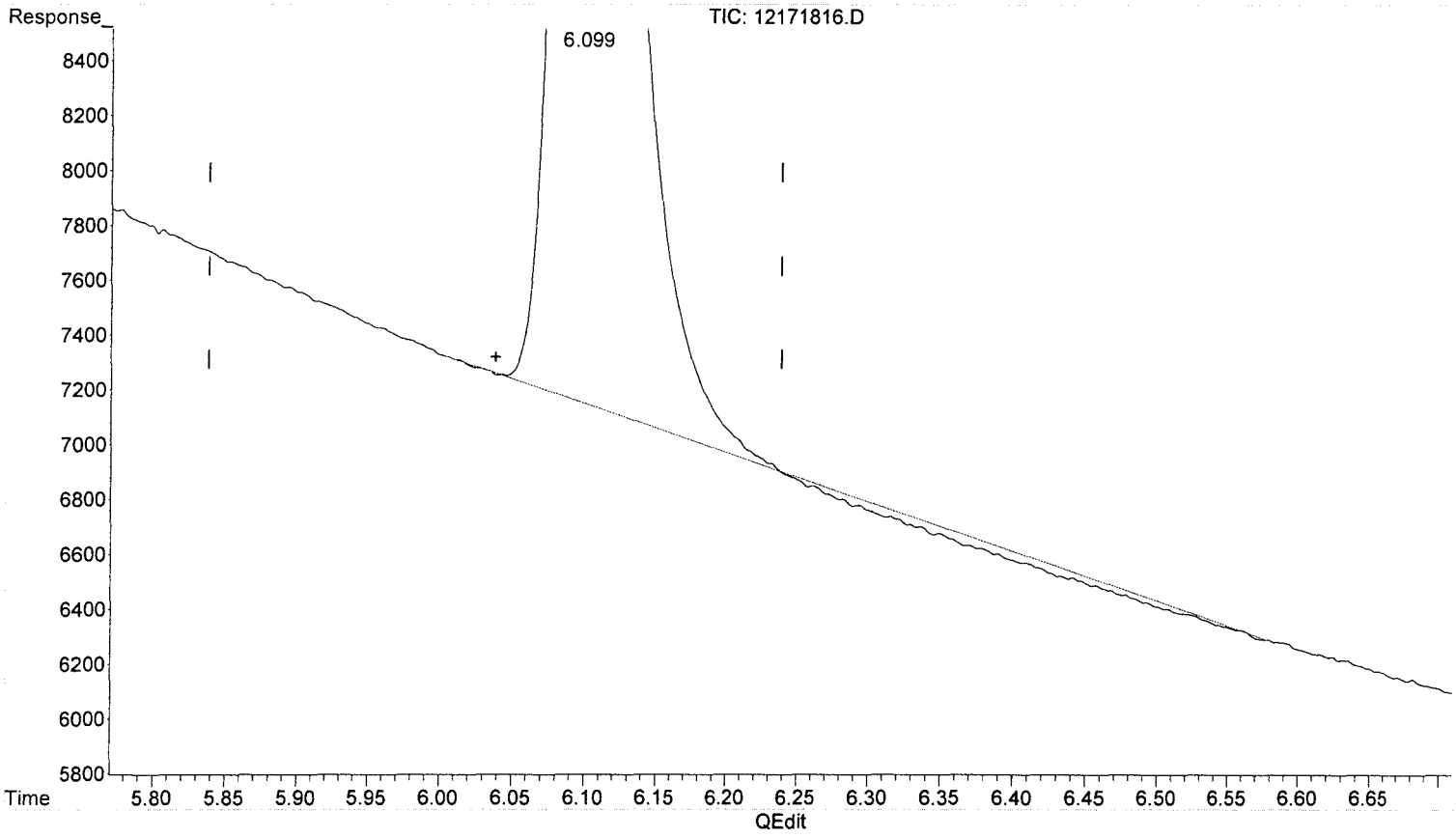




Data Path : J:\GC10\DATA\RSK_FID\2018_12\17TCD\
Data File : 12171816.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 16:35:26
Operator : MR
Sample : tcd lcs s32-10081801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:36:37 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide

6.100min 822.075 ppm

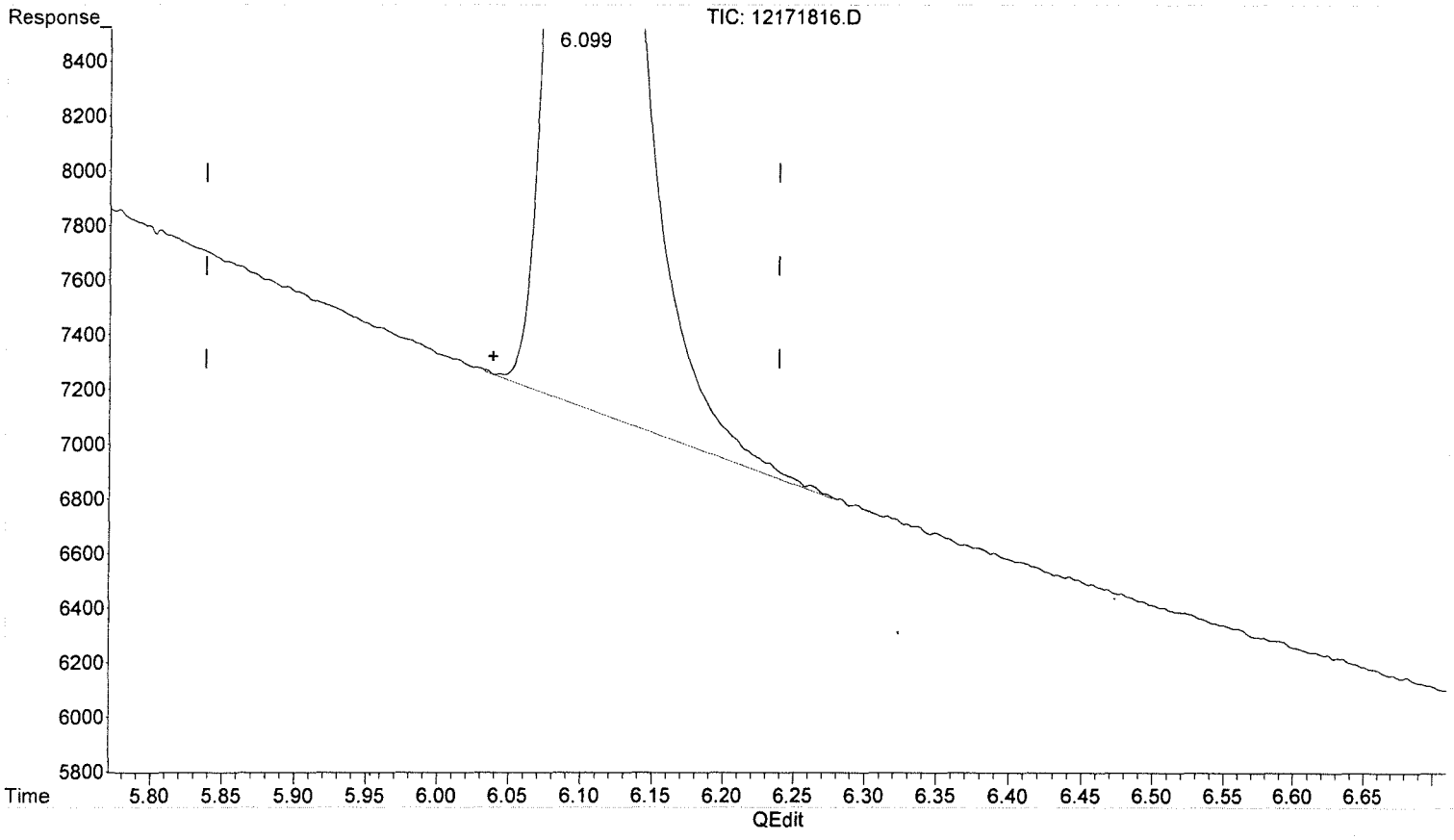
response 192965

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2018_12\17TCD\
Data File : 12171816.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 16:35:26
Operator : MR
Sample : tcd lcs s32-10081801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:36:37 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide

6.099min 850.998 ppm m

response 199754

MK 12/18/18
BLC

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171817.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 16:46:42
Operator : MR
Sample : tcd lcsd s32-10081801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:37:39 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

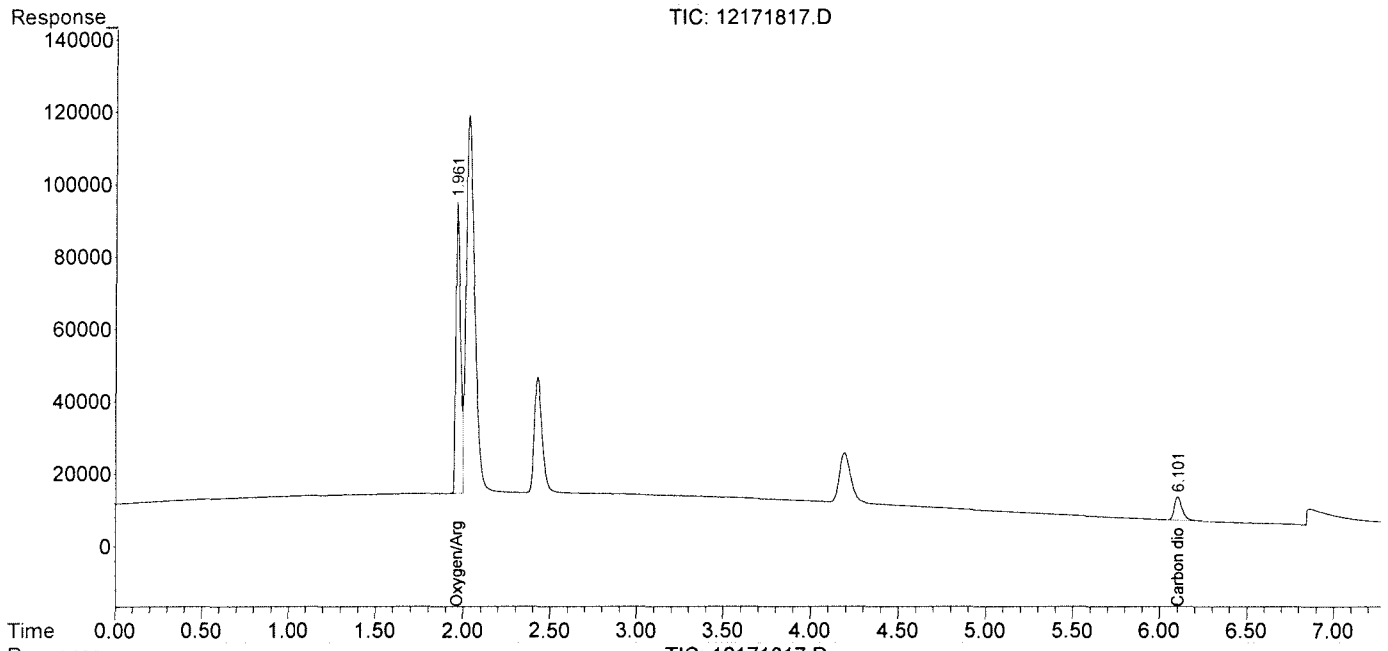
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.962f	1474209	0.310	ppm	
2)	Carbon monoxide	1.962f	1474209	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	6.101	197188	840.064	ppm	m
6)	Methane (FID)	1.114	32961735	3488.821	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

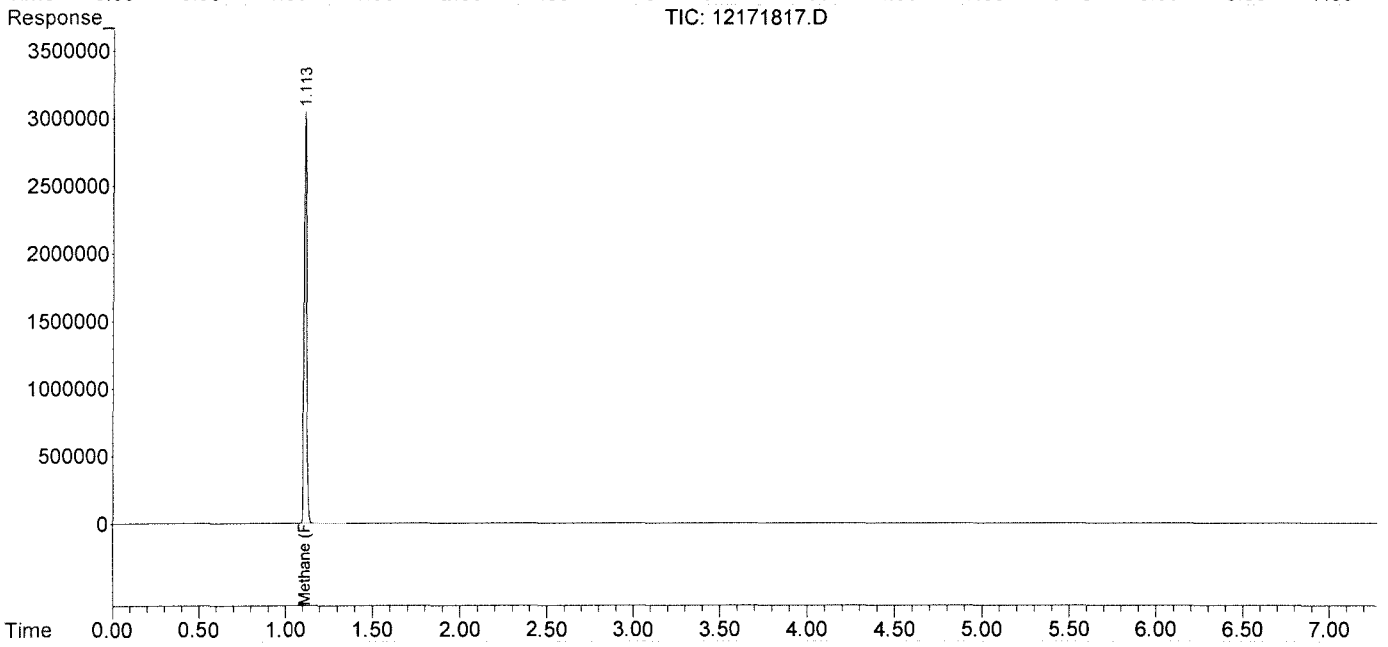
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171817.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 16:46:42
Operator : MR
Sample : tcd lcsd s32-10081801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:37:39 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

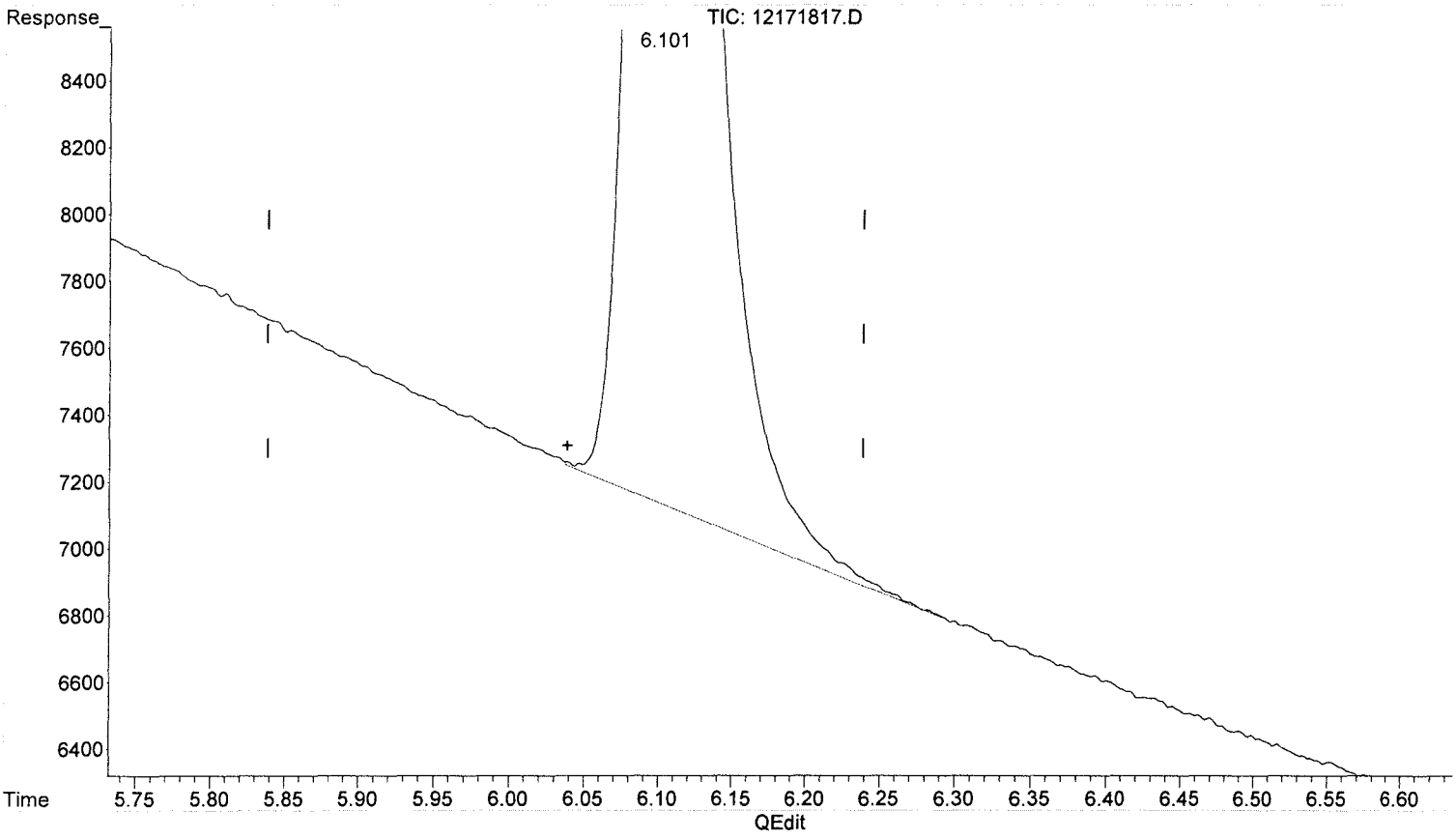




Data Path : J:\GC10\DATA\RSK_FID\2018_12\17TCD\
Data File : 12171817.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 16:46:42
Operator : MR
Sample : tcd lcsd s32-10081801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:37:39 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide
6.101min 840.064 ppm m
response 197188

MR 12/18/18
BLC
no previous

(+) = Expected Retention Time

Response Factor Report HP5890

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg		%RSD
1)	Oxygen/Argon	4.760						4.760	E6	0.00
2)	Carbon monoxide	2.775		1.066	0.043	0.033	0.027	0.657	E6	170.12
3)	Methane (TCD)							9.457		0.00
4)	Carbon dioxide	2.717	2.193	2.338	2.272	2.265	2.298	2.347	E2	7.99

Signal #2 Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg		%RSD
6)	Methane (FID)	1.253	1.160	1.005	0.927	0.848	0.848	0.945	E4	15.85
7)	Ethylene	1.677	1.605	1.900	1.749	1.597	1.579	1.684	E4	7.30
8)	Ethane	1.769	1.631	1.866	1.767	1.639	1.667	1.723	E4	5.40
9)	Propylene	2.402	2.309	2.767	2.551	2.331	2.333	2.449	E4	7.32
10)	Propane	2.906	2.737	2.817	2.639	2.410	2.420	2.655	E4	7.75
11)	Isobutylene							0.000		-1.00
12)	Isobutane							0.000		-1.00
13)	n-Butane							0.000		-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS082817_CO2.M Wed Aug 30 13:24:19 2017

Compounds -- Compound #4 -- Carbon dioxide

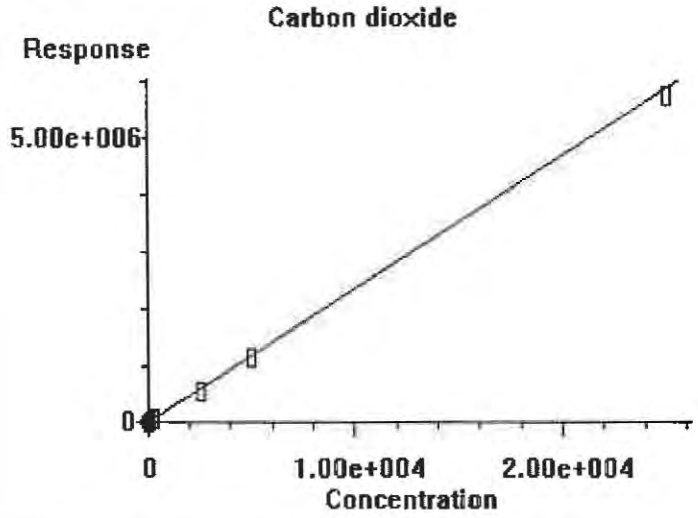
Search by: Ret Time | Name | Index — Find Compound

Compound Database
External Standard Compoun
- Oxygen/Argon
- Carbon monoxide
- Methane (TCD)
- Carbon dioxide
- Signal #2
- Methane (FID)
- Ethylene
- Ethane
- Propylene
- Propane
- Isobutylene
- Isobutane
- n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	25.000000	6793.665186
2	100.000000	21932.418000
3	250.000000	58460.642510
4	2500.000000	568043.388750
5	5000.000000	1132363.215937
6	25000.000000	5744294.891563
7	25000.000000	
8	25000.000000	
9	2000.000000	
10	30000.000000	

Lvl ID	Concentration	Response



0.000e+000	Quadratic term
2.347e+002	Linear term
0.000e+000	Constant term
7.987%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Calibration Status Report HP5890

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291715.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291716.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291717.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291719.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291720.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291721.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241711.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 29 14:21 2017	Aug 29 14:20 2017	29-Aug-2017, 14:07
2	2	Aug 29 14:52 2017	Aug 29 14:51 2017	29-Aug-2017, 14:22
3	3	Aug 29 15:04 2017	Aug 29 15:04 2017	29-Aug-2017, 14:53
4	4	Aug 29 15:36 2017	Aug 29 15:36 2017	29-Aug-2017, 15:23
5	5	Aug 29 15:57 2017	Aug 29 15:57 2017	29-Aug-2017, 15:44
6	6	Aug 29 16:13 2017	Aug 29 16:13 2017	29-Aug-2017, 16:00
7	7	Aug 25 09:05 2017	Aug 24 16:00 2017	24-Aug-2017, 15:44
8	8	Aug 25 09:06 2017	Aug 24 16:13 2017	24-Aug-2017, 16:02
9	9	Aug 25 09:06 2017	Aug 24 16:31 2017	24-Aug-2017, 16:16
10	10	Aug 25 09:07 2017	Aug 24 16:42 2017	24-Aug-2017, 16:33

RS082817_CO2.M Wed Aug 30 13:24:30 2017

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.776	277465	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	6794	27.870	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

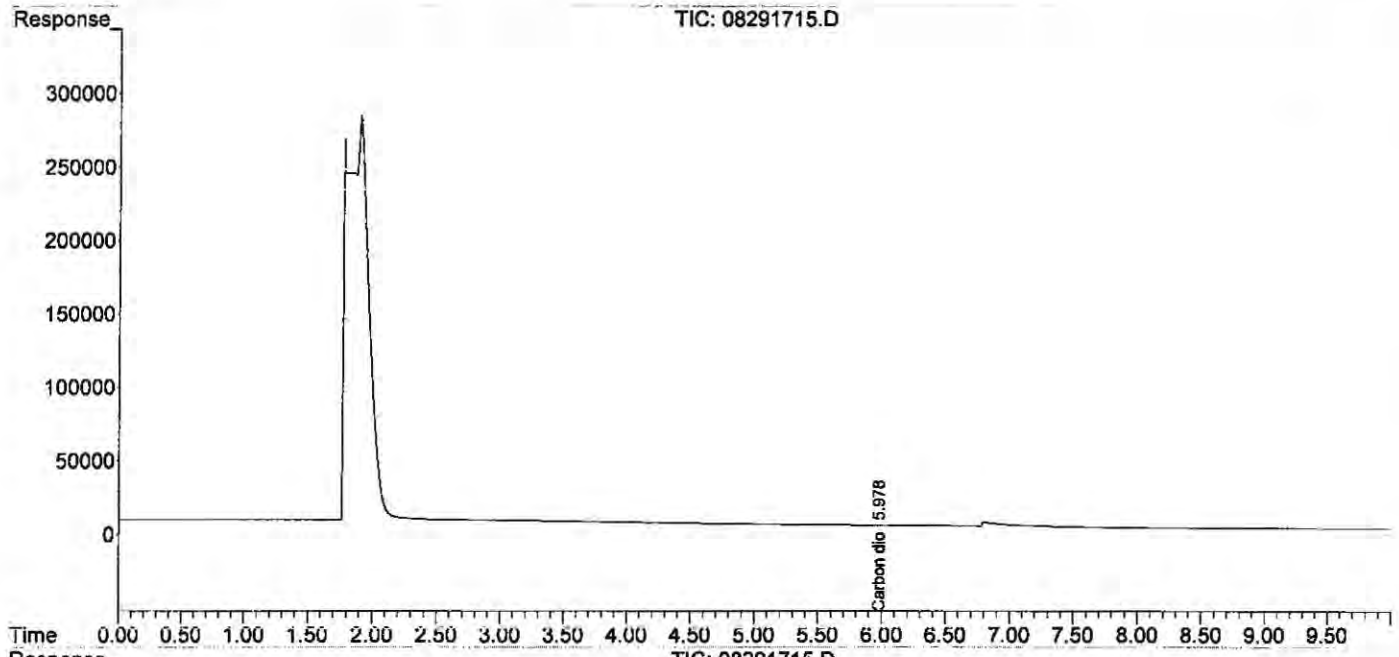
(f)=RT Delta > 1/2 Window (m)=manual int.

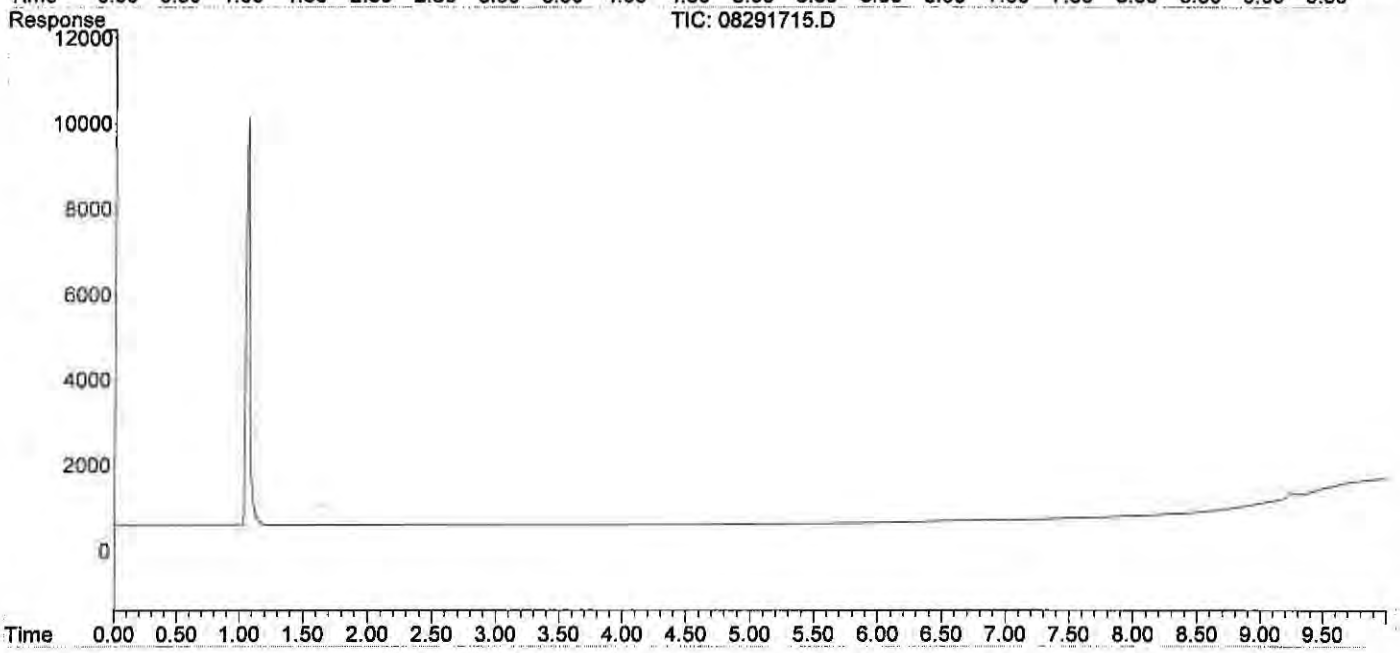
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



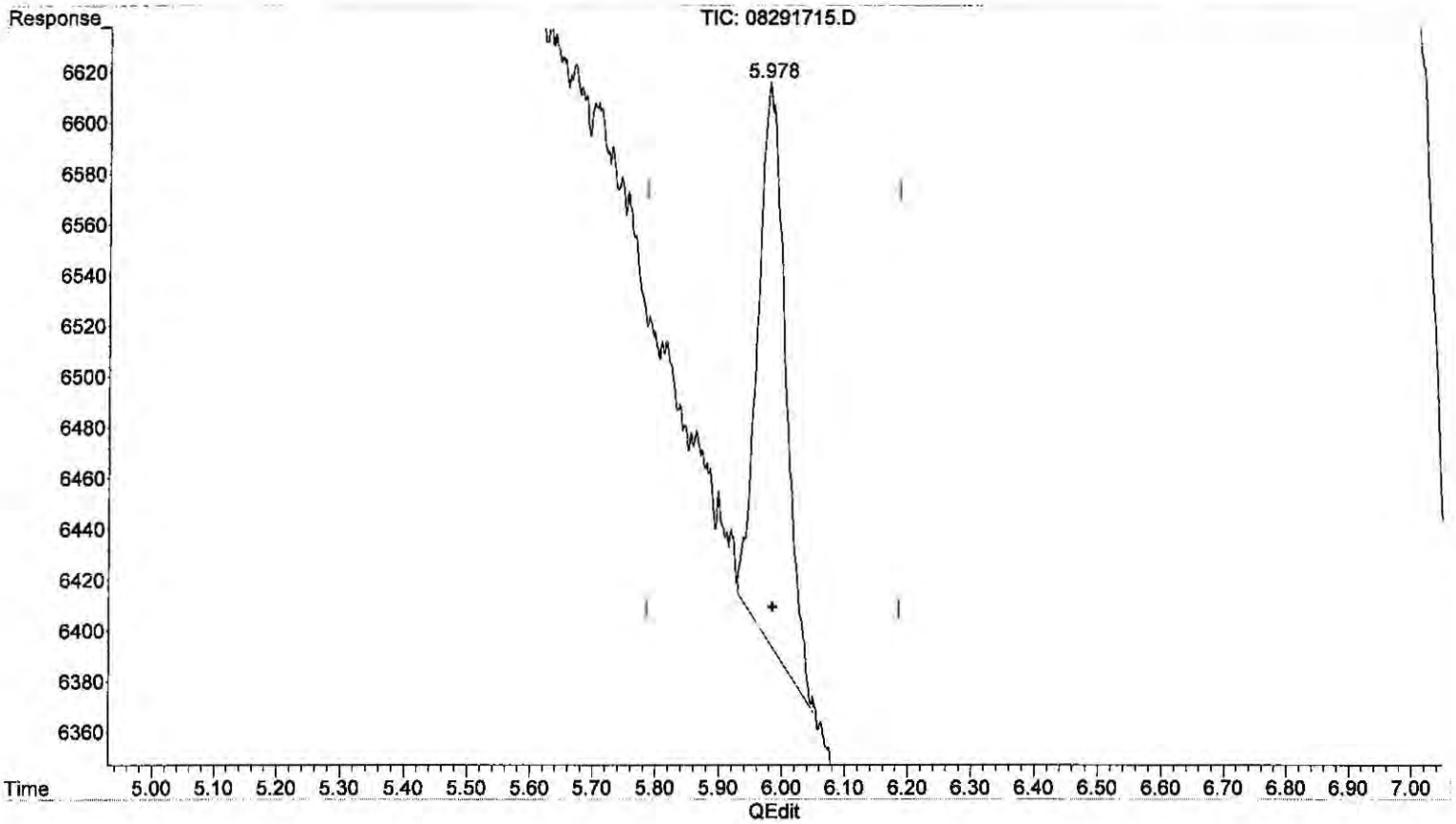


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide
5.978min 27.870 ppm m
response 6794

(+) = Expected Retention Time
RS082817_CO2.M Wed Aug 30 13:17:47 2017 Page: 1

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.790	-598962	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	21932	87.858	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

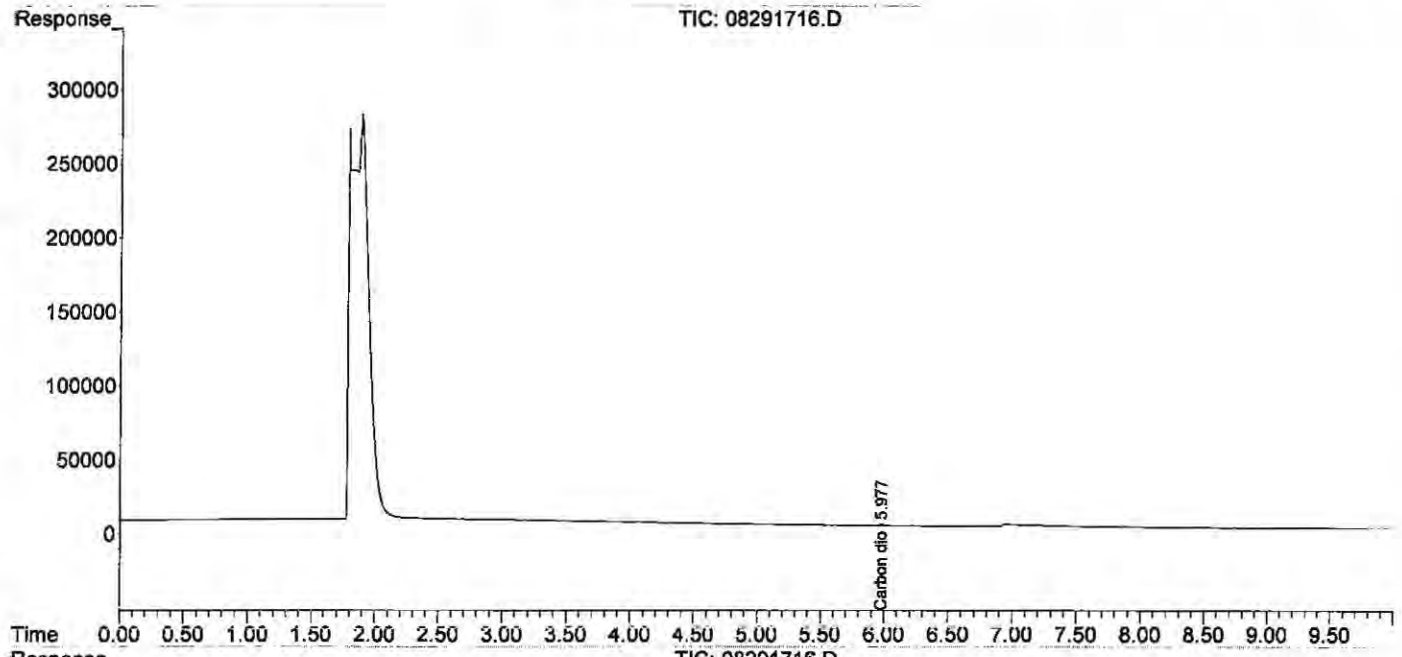
(f)=RT Delta > 1/2 Window (m)=manual int.

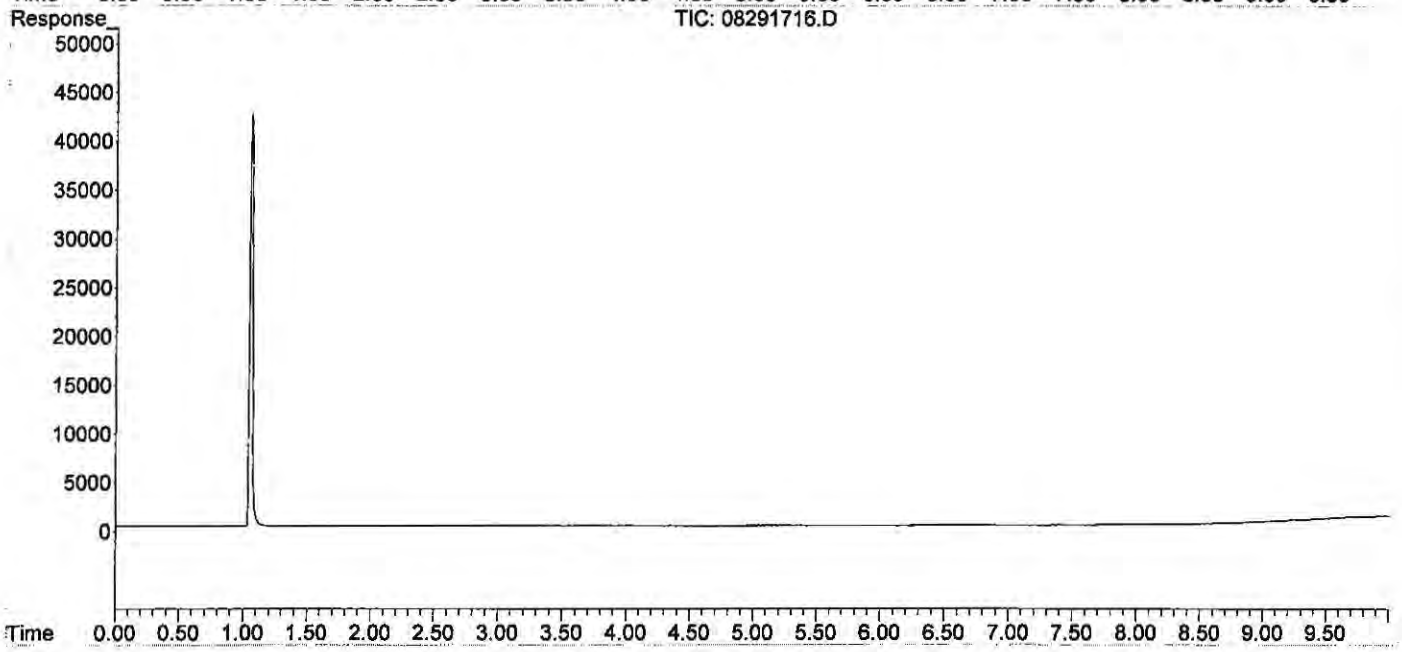
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

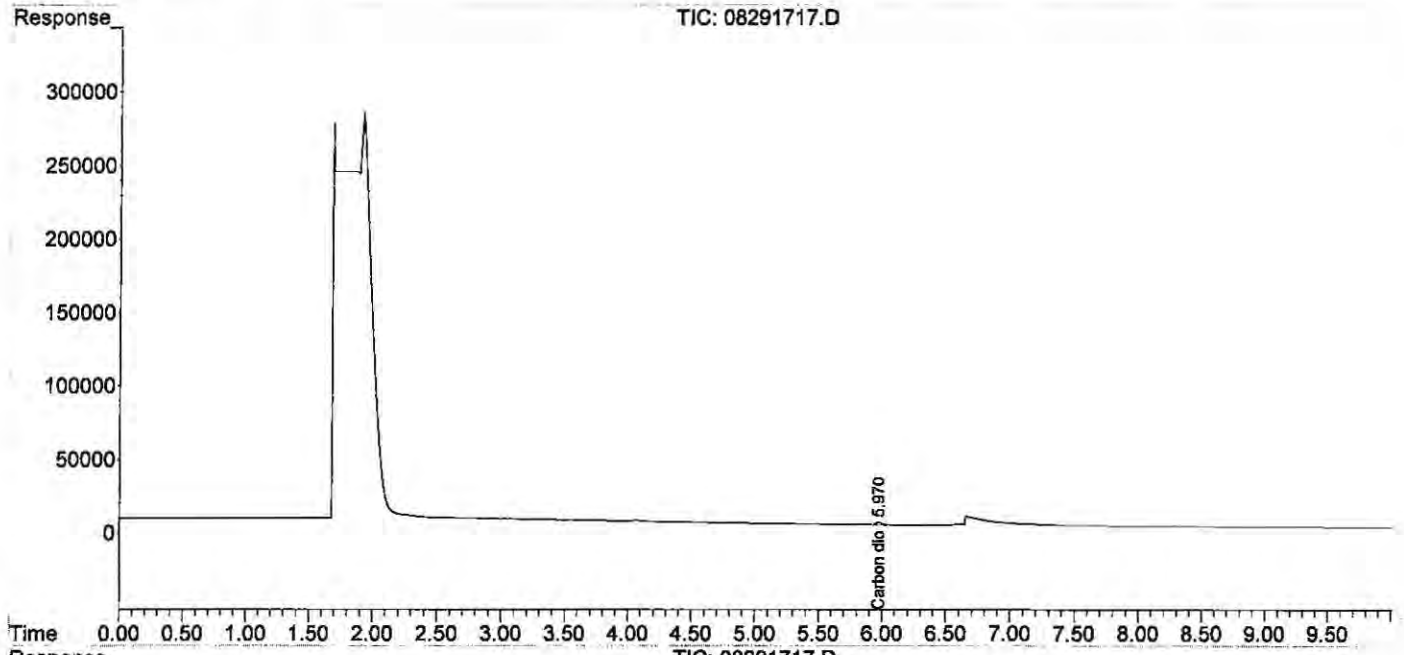
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.920f	-30716454	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.970	58461	240.204	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

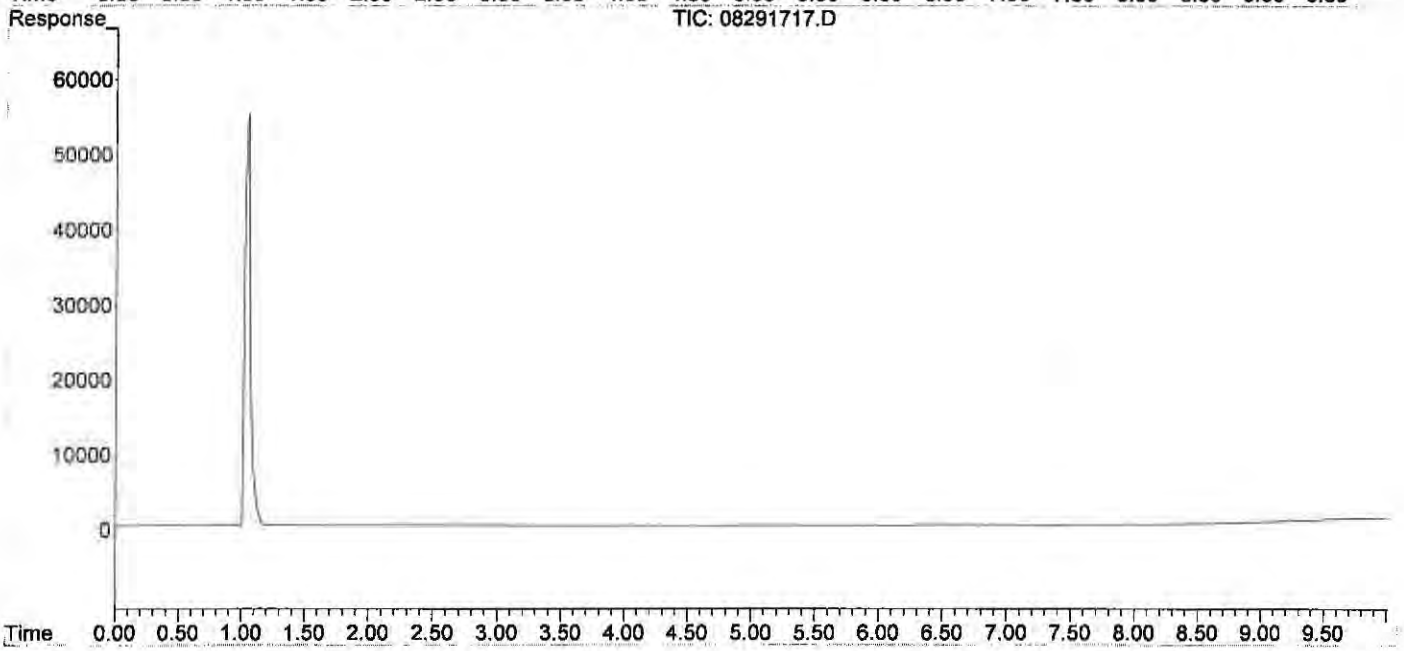
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



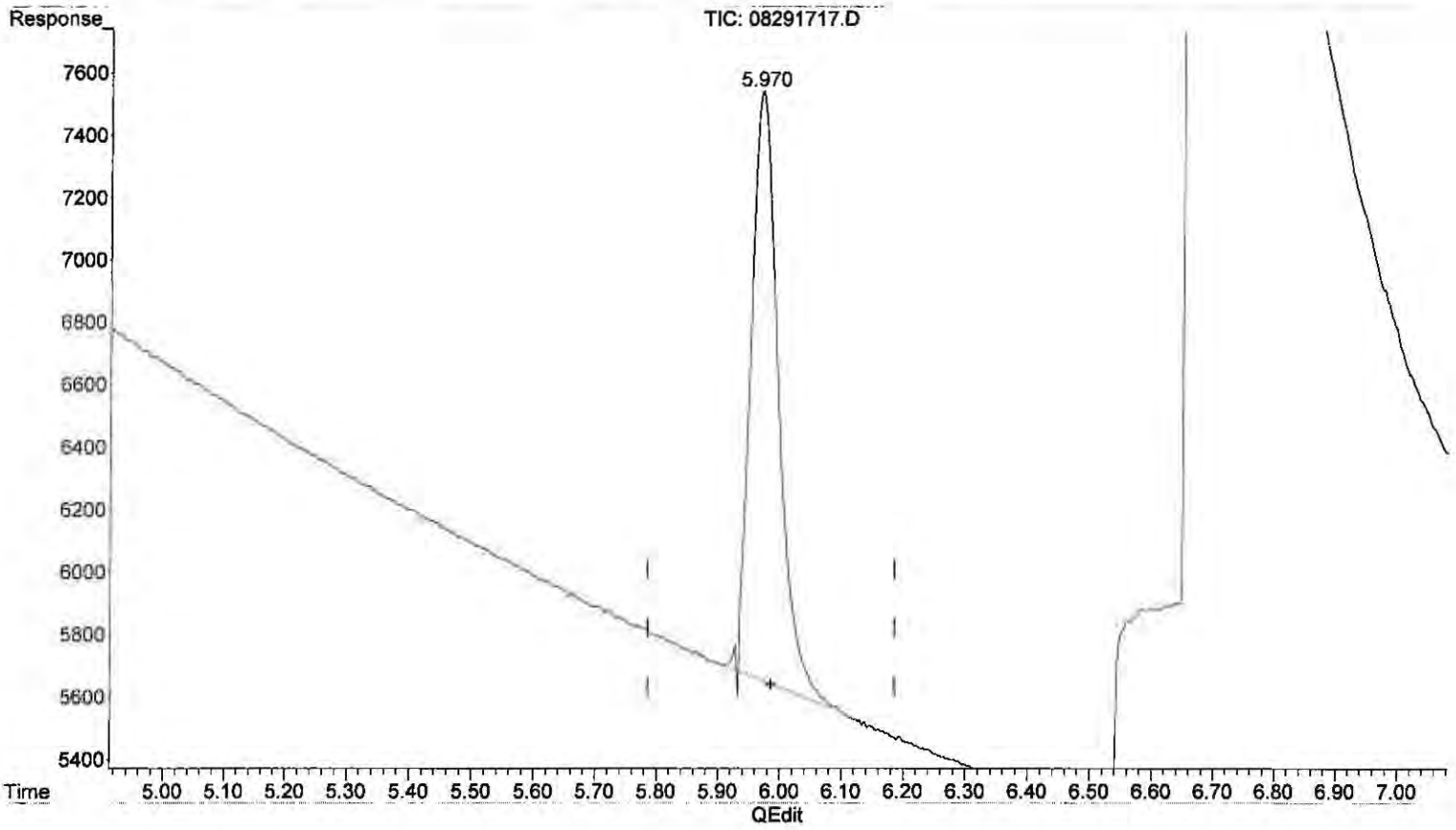


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide

5.970min 240.204 ppm m

response 58461

(+) = Expected Retention Time

RS082817_CO2.M Wed Aug 30 13:19:20 2017

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

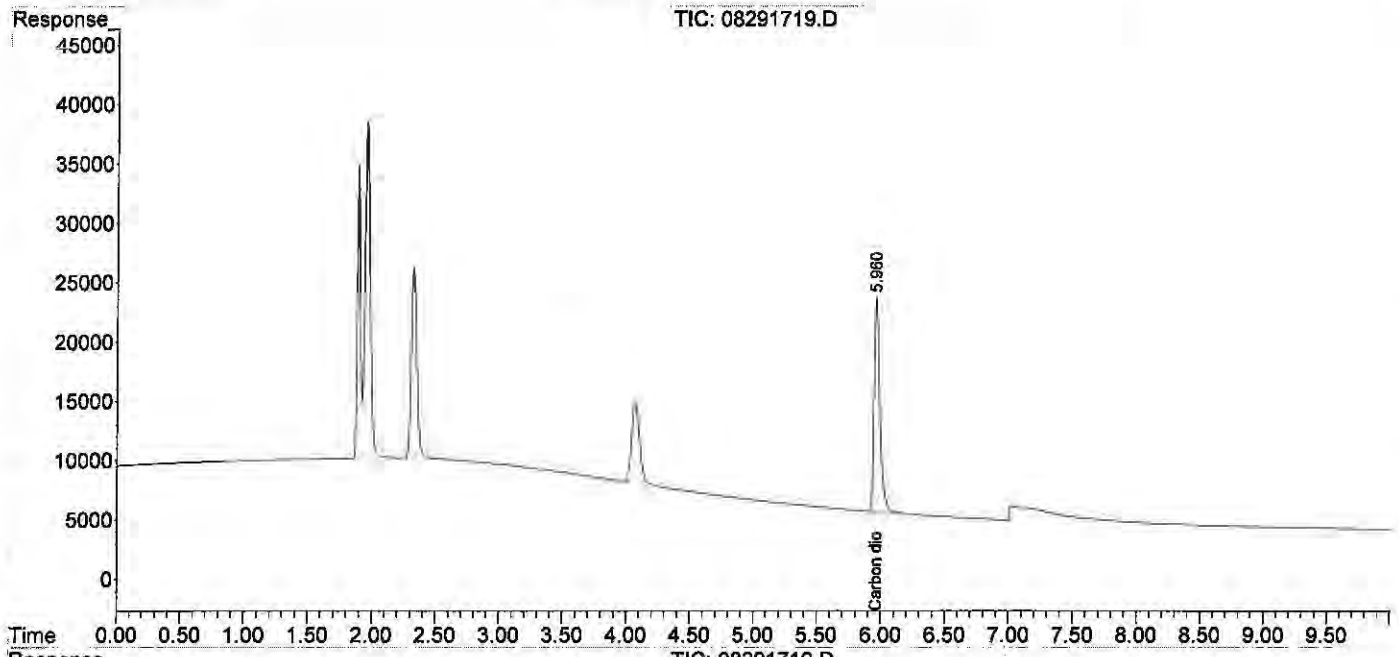
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.891	425113	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.962	568043	2369.673	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

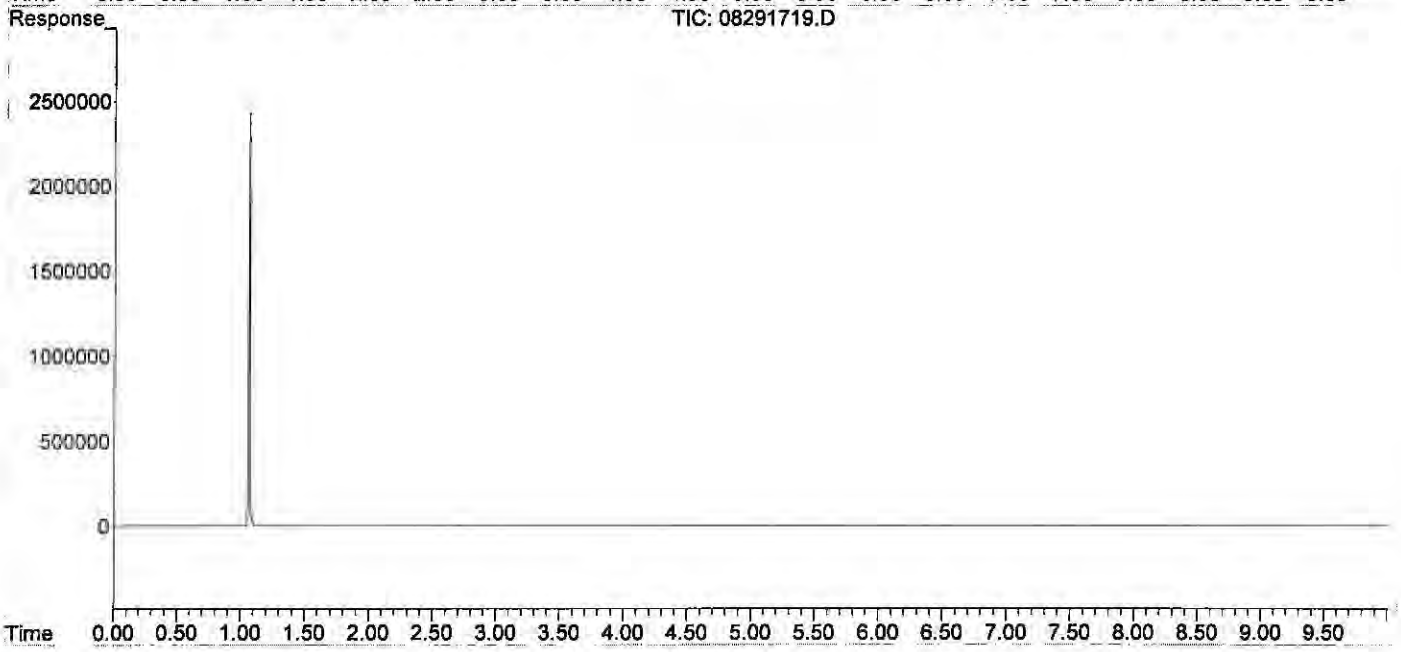
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

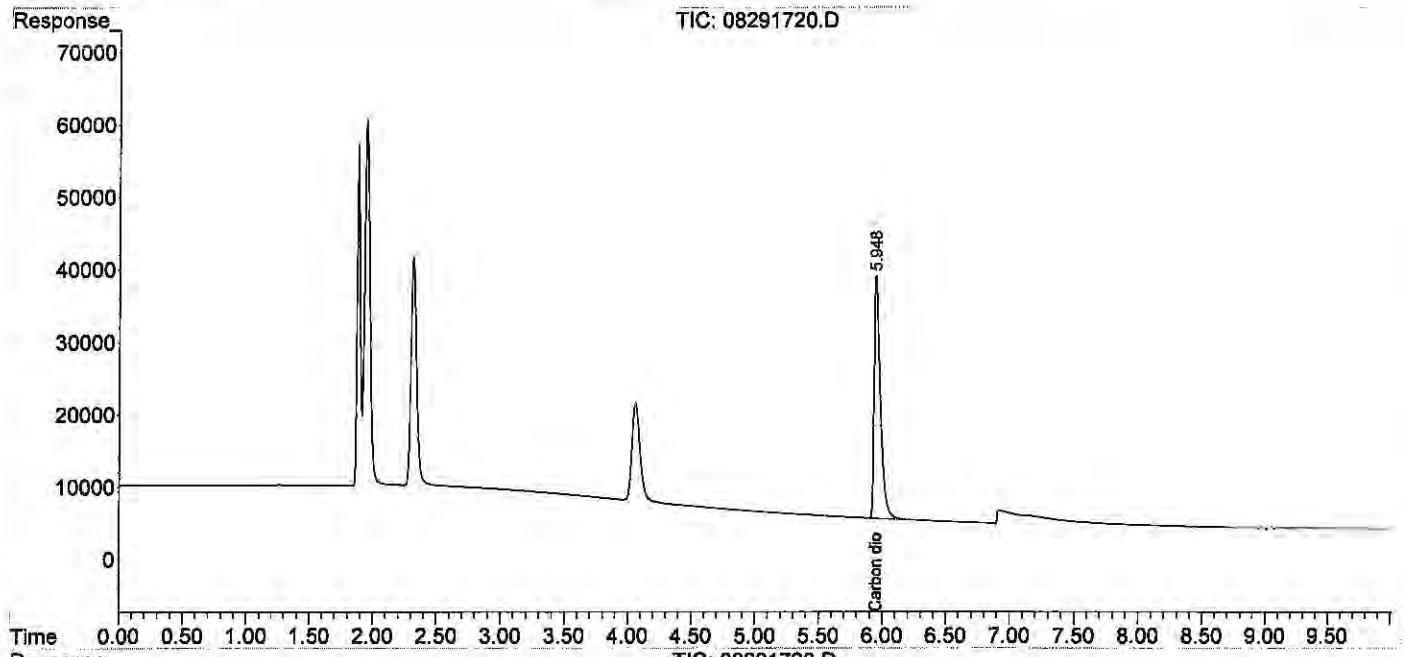
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.880	819221	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.948	1132363	4753.126	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

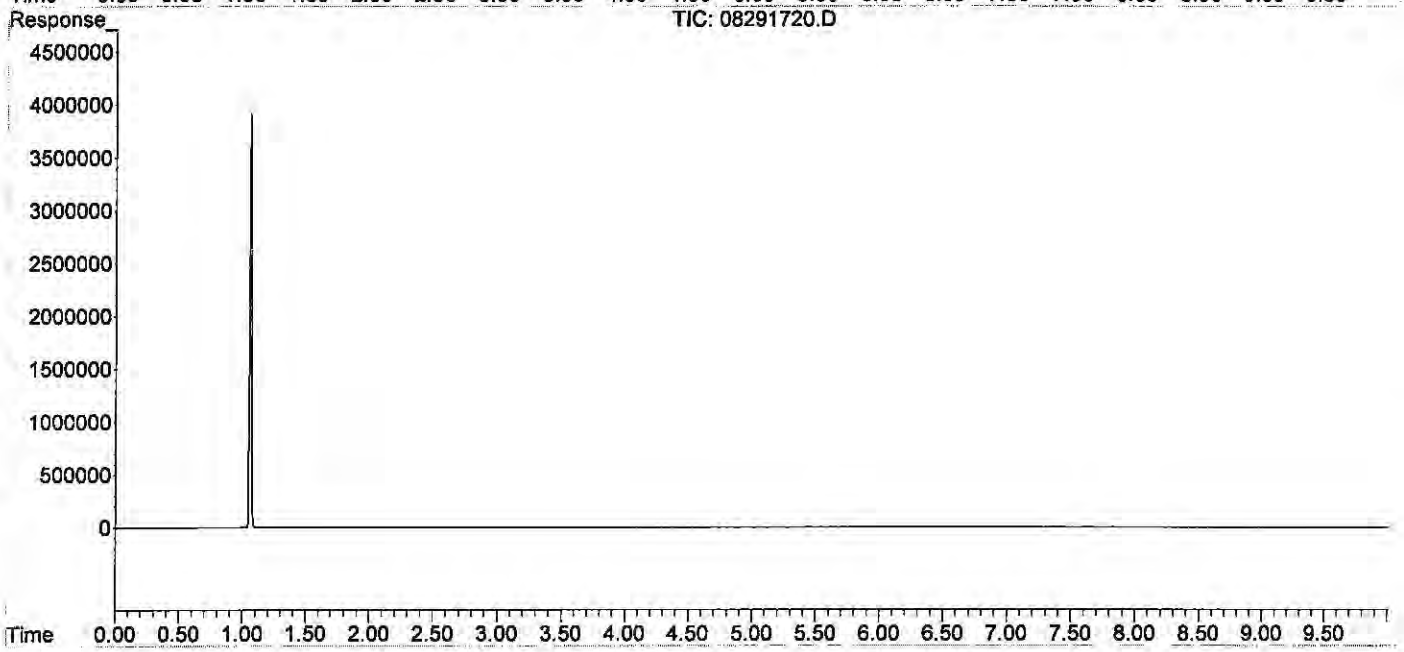
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.827	3325463	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.879f	5744295	24443.288	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

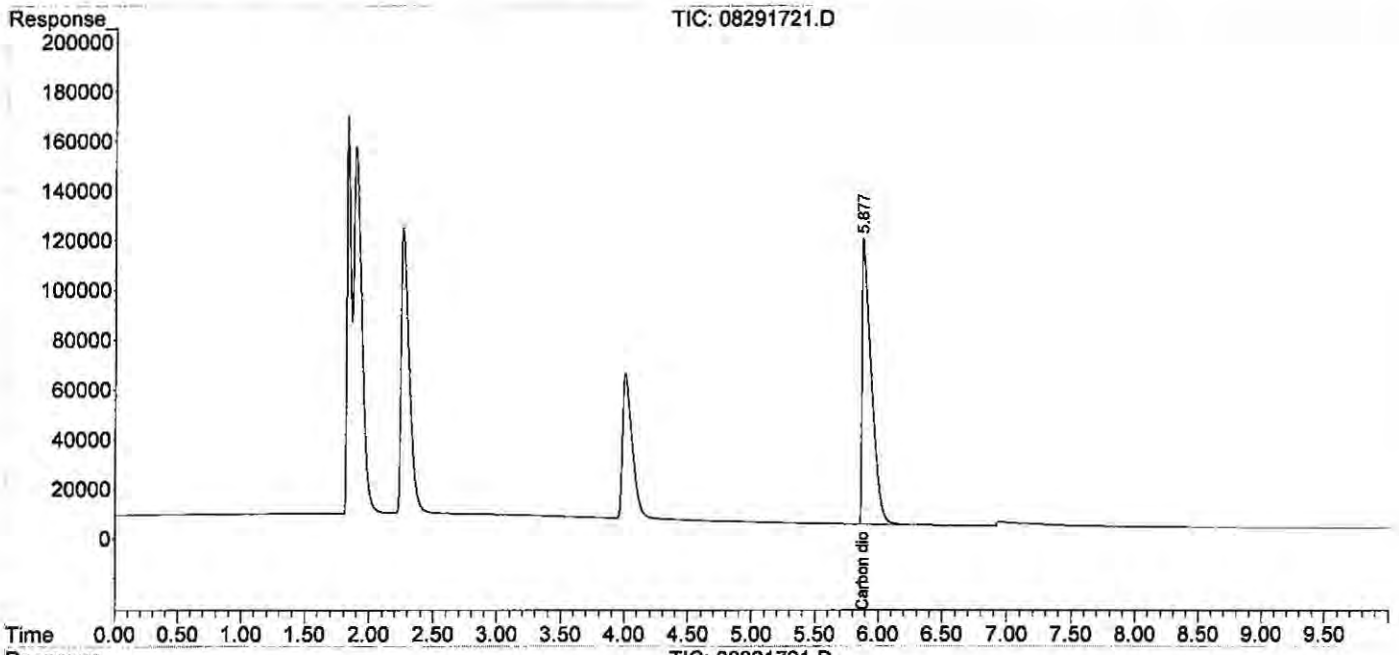
(f)=RT Delta > 1/2 Window (m)=manual int.

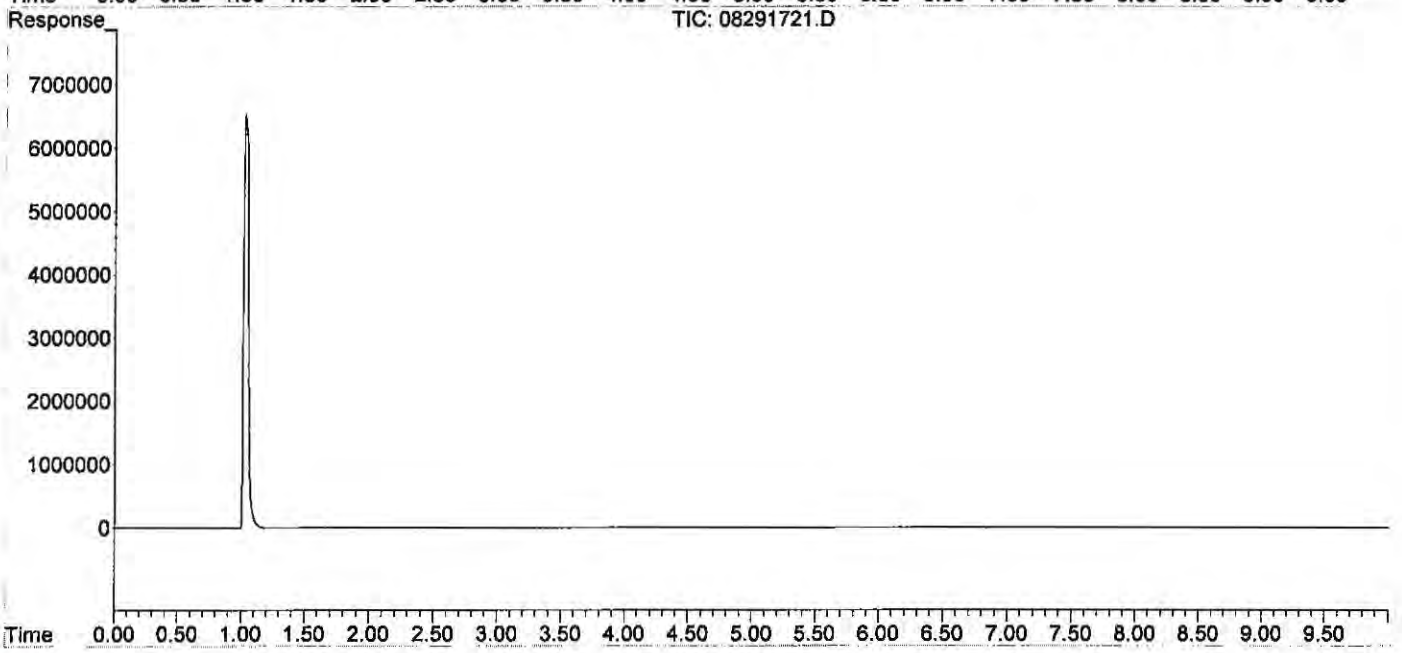
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.886	536422	0.113	ppm	Actual %D
2)	Carbon monoxide	1.886	536422	N.D.	ppm	
3)	Methane (TCD)	4.059f	626500	66244.710	ppm	
4)	Carbon dioxide	5.947	1163775	4957.948	ppm	5000 99.16
6)	Methane (FID)	1.062	37290742	3947.023	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

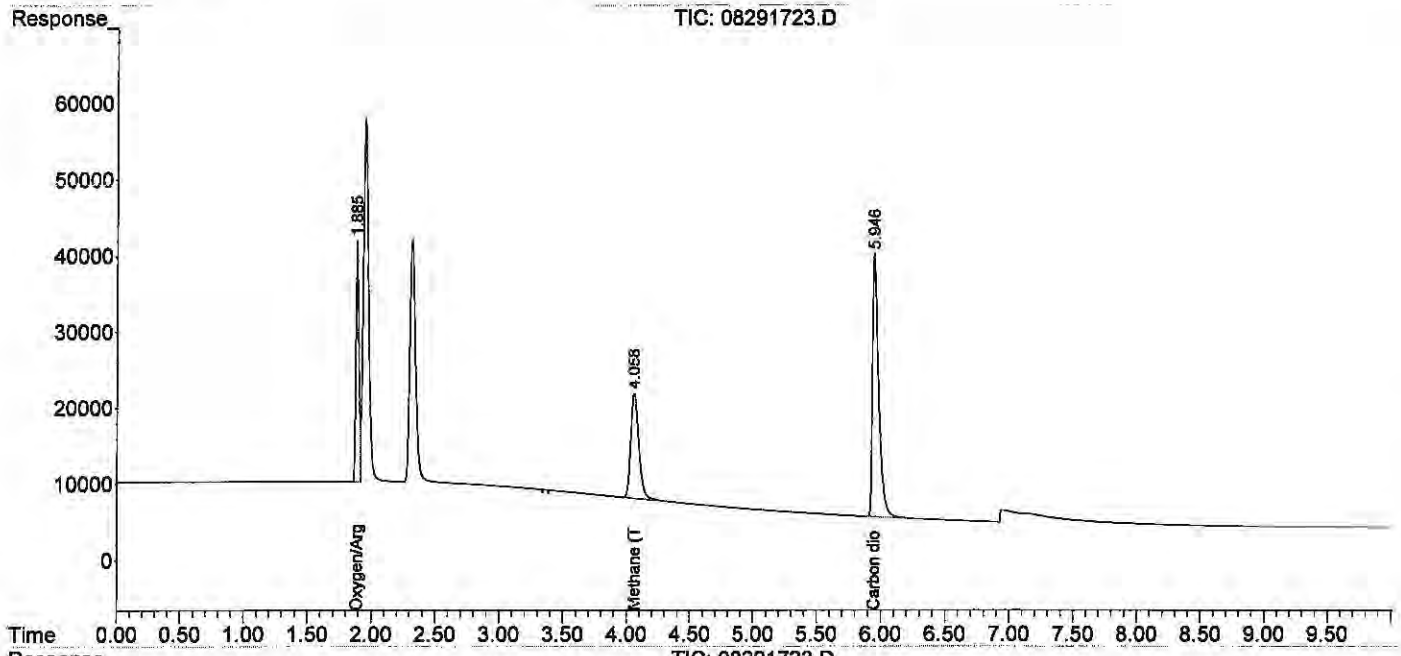
(f)=RT Delta > 1/2 Window (m)=manual int.

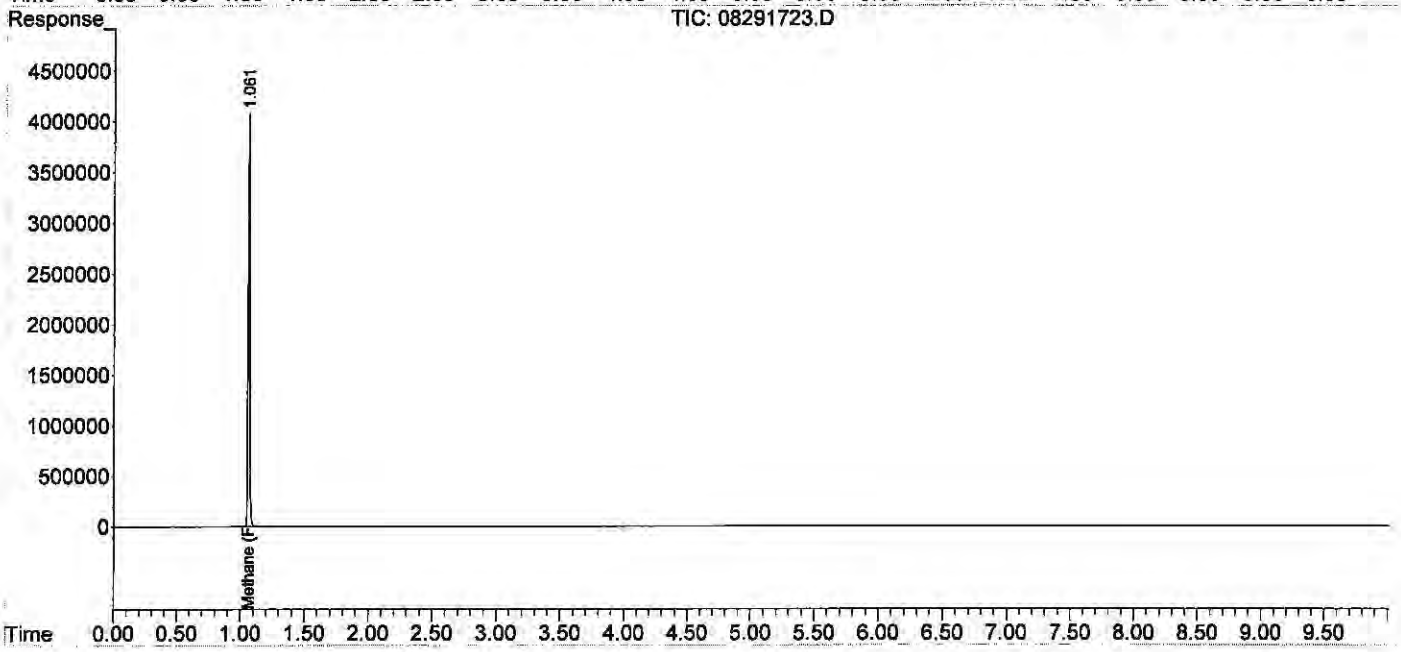
W 9/4/17

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P1806638
Sample Vol. (ml) : 32.00 ml
Analyst : MR
Date Analysis : 12/17/18
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Carbon Dioxide
std s32-11091801	0.100	5082.662
ACTUAL		5000.00
%Difference		1.7%
mcs 0.1ml	0.100	0.000
rb 0.1ml	0.100	0.000
tcd lcs s32-10081801	0.100	850.998
tcd lcsd s32-10081801	0.100	840.064
P1806638-001 50ul	0.100	11215.05
P1806638-002 50ul	0.100	11961.05

FINAL HEAD SPACE RESULT (ppm)

	Carbon Dioxide
WWt.	44.10
HENRY'S CONSTANT	1.42E+03
RL	100.00
mcs 0.1ml	0.000
tcd lcs s32-10081801	8509.980
tcd lcsd s32-10081801	8400.640
P1806638-001 50ul	112150.53
P1806638-002 50ul	119610.49

std s32-11091801	4986.008
ACTUAL	5000.00
%Difference	0.3%

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171801.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 11:51:06
Operator : MR
Sample : std s32-11091801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:25:49 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.980f	573139	0.120	ppm	
2)	Carbon monoxide	1.980f	573139	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	6.078	1193049	5082.662	ppm	m
6)	Methane (FID)	1.113	33953511	3593.795	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

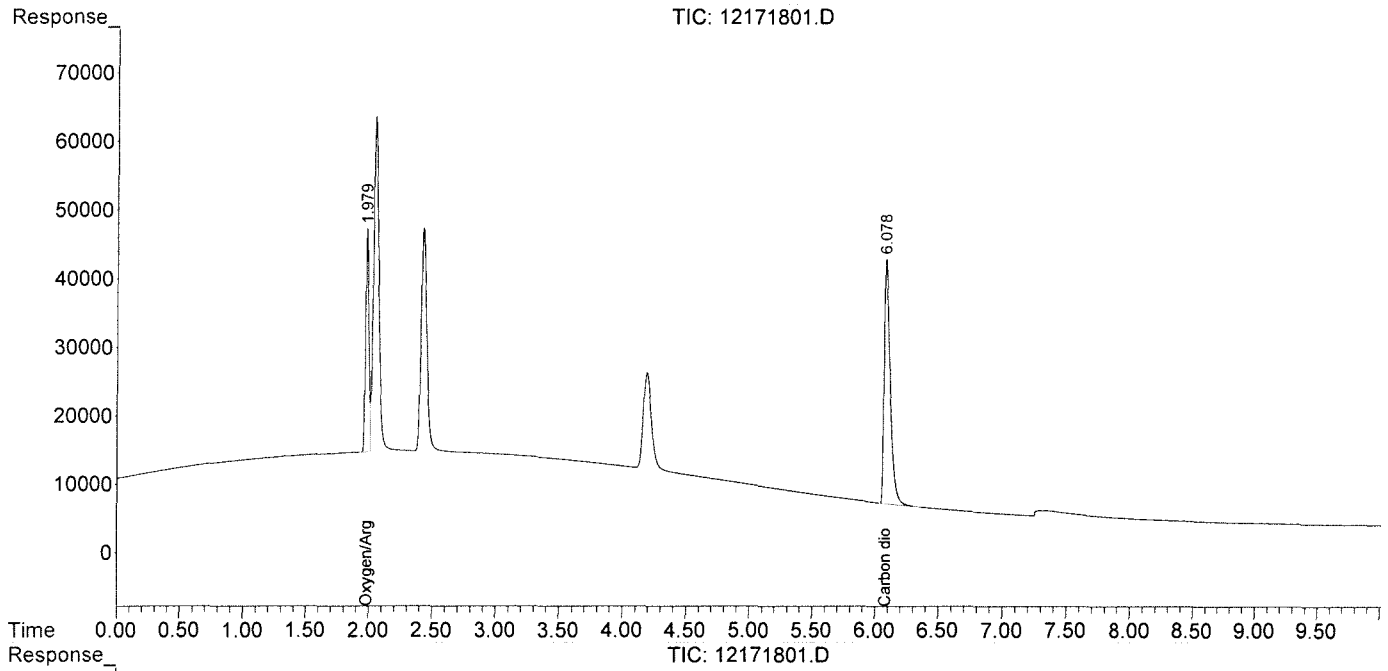
(f)=RT Delta > 1/2 Window (m)=manual int.

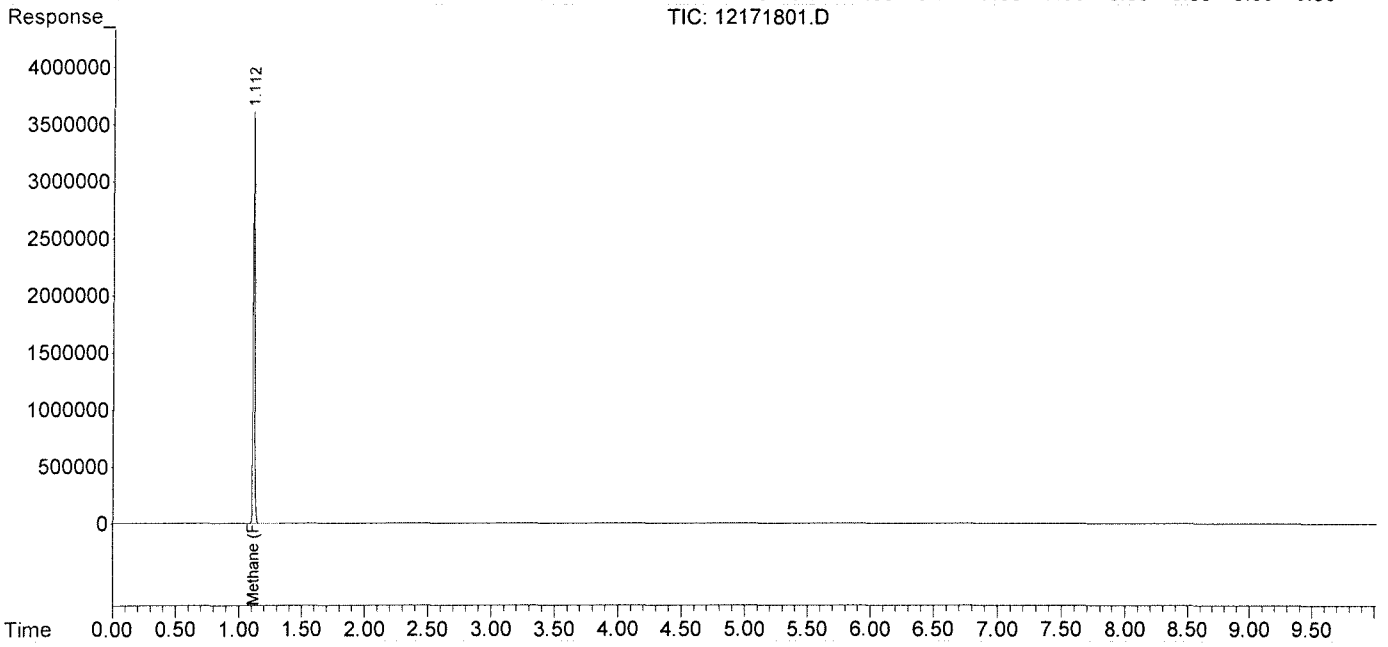
MK 12/18/18

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171801.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 11:51:06
Operator : MR
Sample : std s32-11091801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:25:49 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

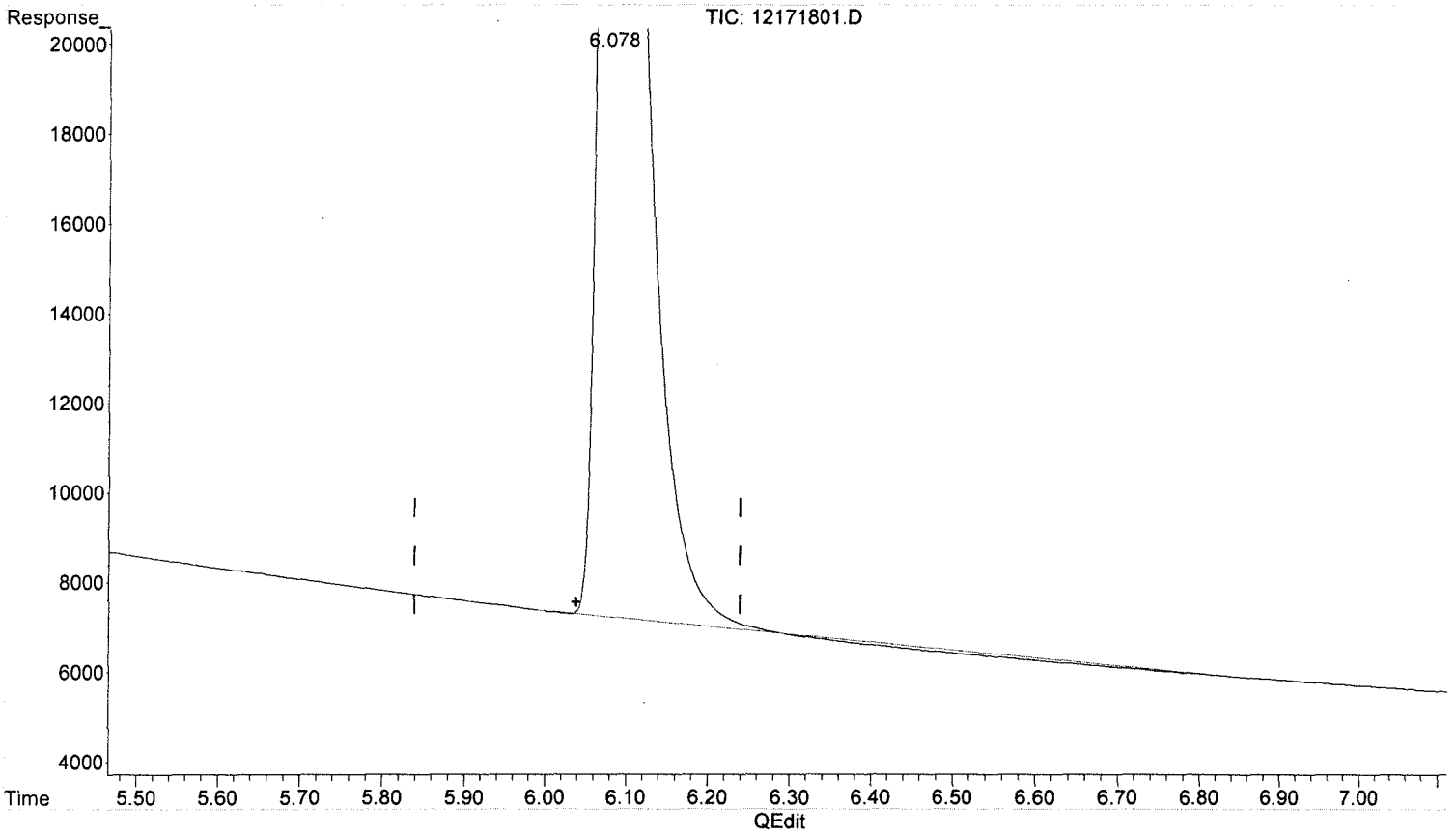




Data Path : J:\GC10\DATA\RSK_FID\2018_12\17TCD\
Data File : 12171801.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 11:51:06
Operator : MR
Sample : std s32-11091801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:25:49 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide

6.079min 4992.840 ppm

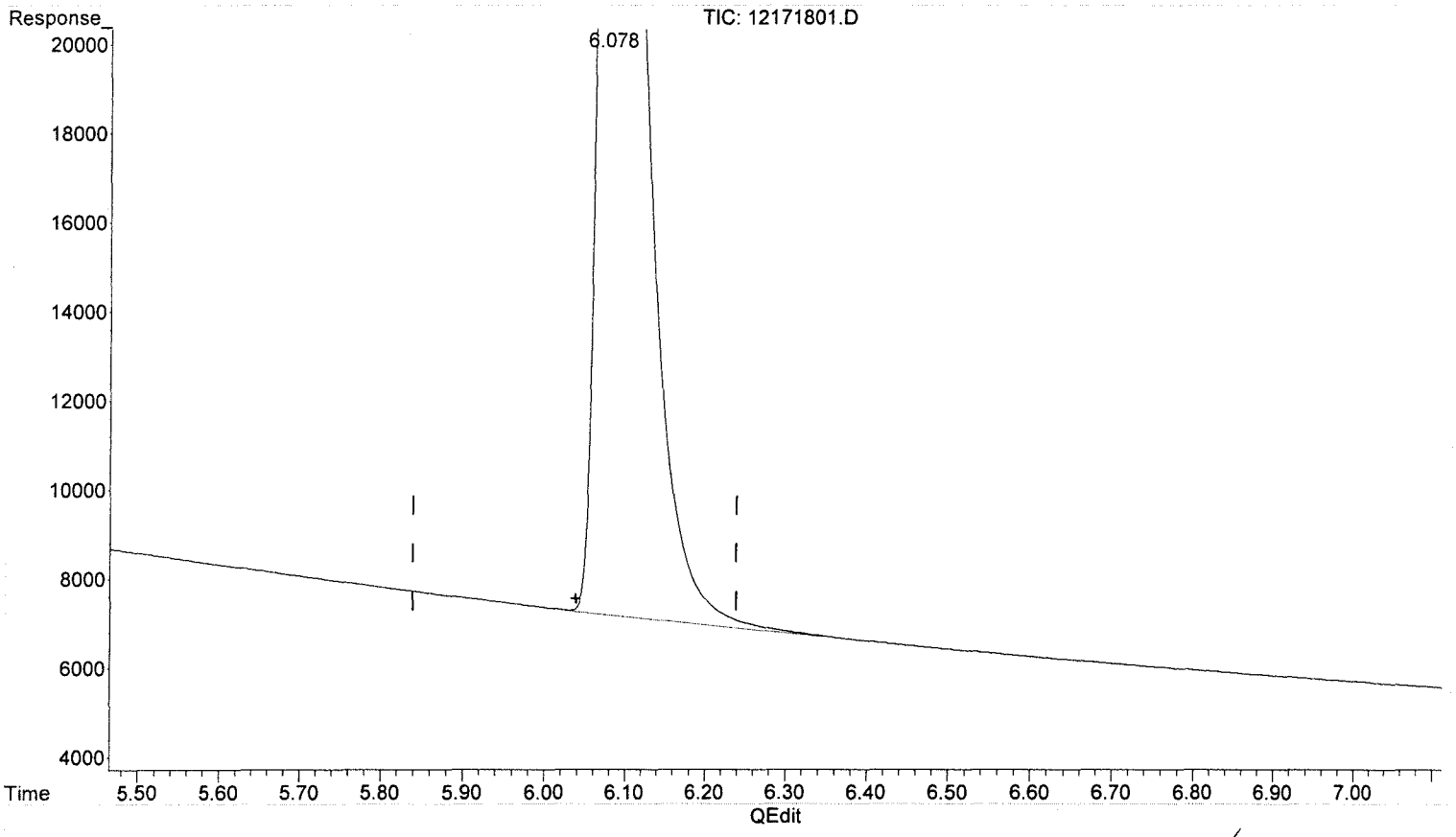
response 1171965

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2018_12\17TCD\
Data File : 12171801.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 11:51:06
Operator : MR
Sample : std s32-11091801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 18 12:25:49 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide
6.078min 5082.662 ppm m
response 1193049

ME 12/18/18
BLC

(+) = Expected Retention Time
RS082817_CO2.M Tue Dec 18 12:26:25 2018 Page: 1

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171818.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 17:01:06
Operator : MR
Sample : std s32-11091801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 17 17:09:29 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

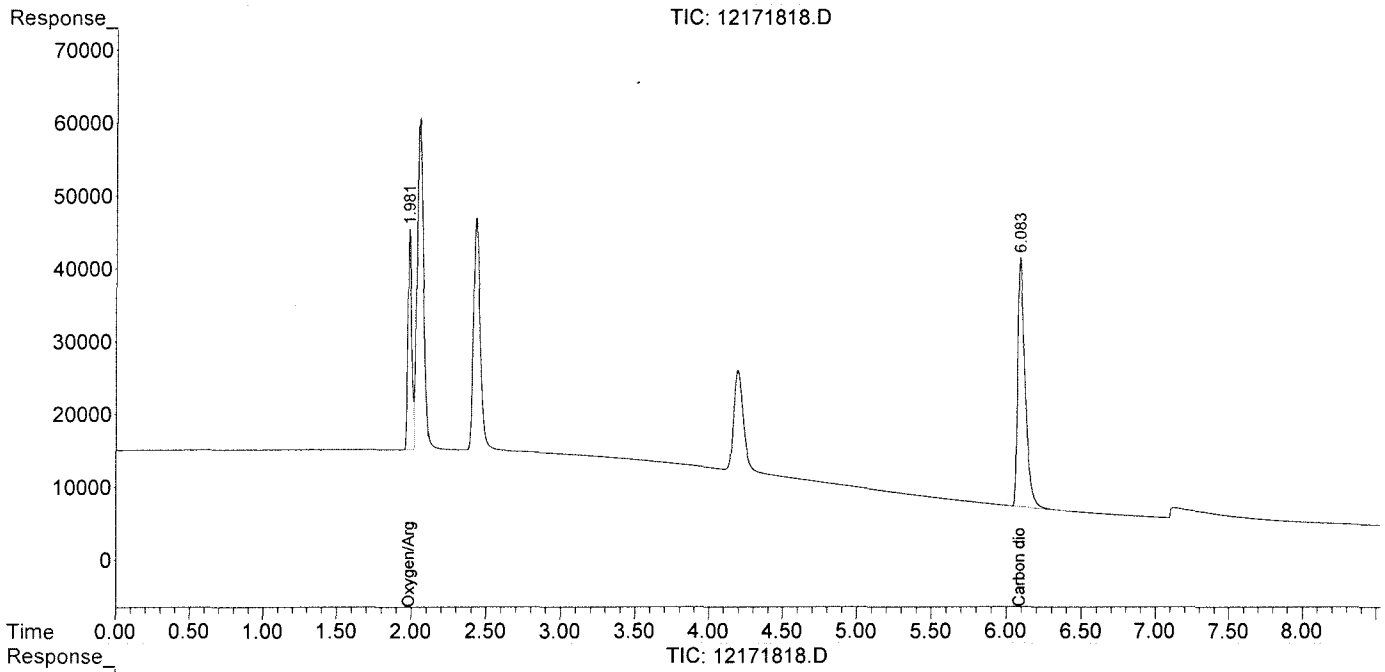
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.982f	539329	0.113	ppm
2)	Carbon monoxide	1.982f	539329	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	6.084	1170362	4986.008	ppm
6)	Methane (FID)	1.114	33579214	3554.178	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

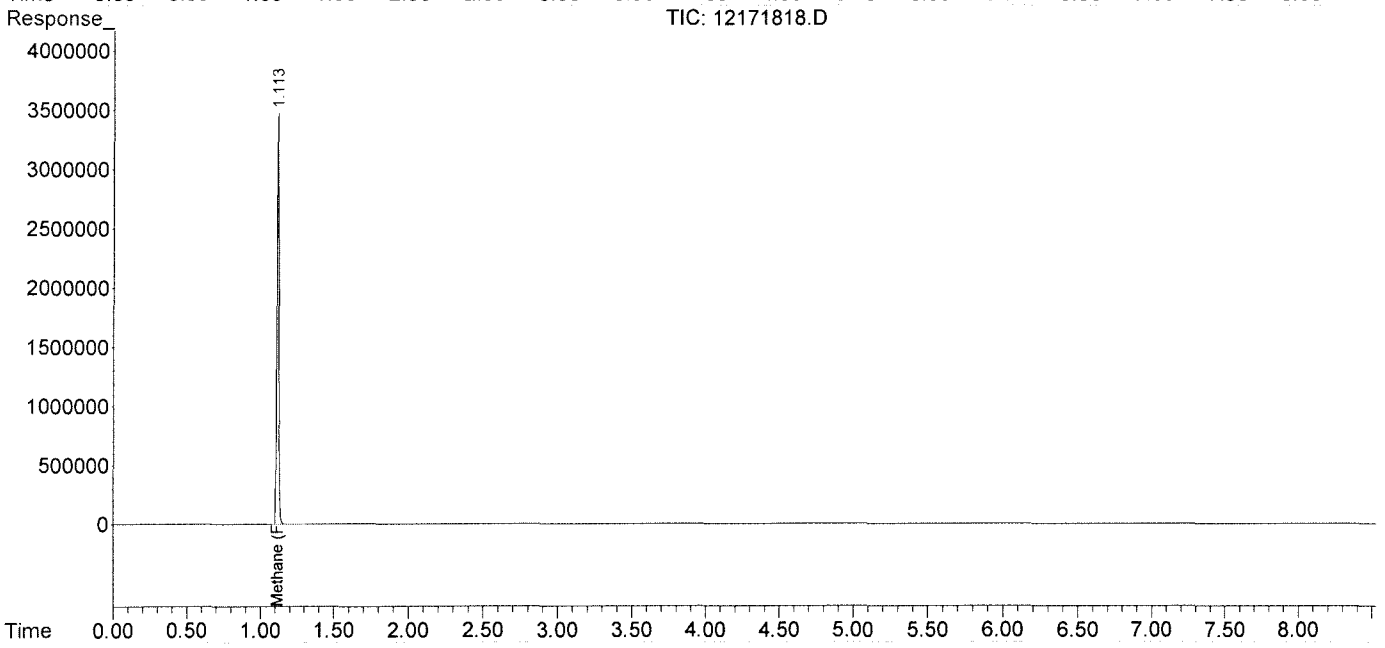
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2018_12\17\
Data File : 12171818.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 17-Dec-2018, 17:01:06
Operator : MR
Sample : std s32-11091801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 17 17:09:29 2018
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_08\29\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	29-Aug-17, 07:58:00	08291701.D	std s30-06161601		MC	RSKBOTH.M	Pass
2	29-Aug-17, 08:11:02	08291702.D	mb 0.5ml		MC	RSKBOTH.M	Pass
3	29-Aug-17, 08:24:13	08291703.D	4089-001 0.5ml		MC	RSKBOTH.M	
4	29-Aug-17, 08:39:29	08291704.D	4089-002 0.5ml		MC	RSKBOTH.M	
5	29-Aug-17, 08:53:38	08291705.D	4089-003 0.5ml		MC	RSKBOTH.M	
6	29-Aug-17, 09:33:52	08291706.D	4089-004 0.5ml		MC	RSKBOTH.M	
7	29-Aug-17, 09:50:51	08291707.D	4089-005 0.5ml		MC	RSKBOTH.M	
8	29-Aug-17, 10:07:54	08291708.D	4089-006 0.5ml		MC	RSKBOTH.M	
9	29-Aug-17, 10:42:34	08291709.D	4089-007 0.5ml		MC	RSKBOTH.M	
10	29-Aug-17, 11:06:01	08291710.D	4089-008 0.5ml		MC	RSKBOTH.M	
11	29-Aug-17, 11:23:53	08291711.D	4089-009 0.5ml		MC	RSKBOTH.M	
12	29-Aug-17, 11:37:17	08291712.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
13	29-Aug-17, 11:50:31	08291713.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
14	29-Aug-17, 12:29:45	08291714.D	std s30-06161601		MC	RSKBOTH.M	Pass
15	29-Aug-17, 14:07:01	08291715.D	25ppm s32-08291701 0.25ml		MC	RSKBOTH.M	Curve
16	29-Aug-17, 14:22:12	08291716.D	100ppm s32-08291702 0.2ml		MC	RSKBOTH.M	Curve
17	29-Aug-17, 14:53:00	08291717.D	250ppm s32-08291702 0.5ml		MC	RSKBOTH.M	Curve
18	29-Aug-17, 15:07:43	08291718.D	mls inject		MC	RSKBOTH.M	
19	29-Aug-17, 15:23:21	08291719.D	2500ppm s32-08231701 50ul		MC	RSKBOTH.M	Curve
20	29-Aug-17, 15:44:54	08291720.D	5000ppm s32-08231701 0.1ml		MC	RSKBOTH.M	Curve
21	29-Aug-17, 16:00:09	08291721.D	25000ppm s32-08231701 0.5ml		MC	RSKBOTH.M	Curve
22	29-Aug-17, 16:15:43	08291722.D	mb 0.1ml		MC	RSKBOTH.M	Pass
23	29-Aug-17, 16:35:37	08291723.D	lcv s30-07071701		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_TCD\2018_12\17\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	17-Dec-18, 11:51:06	12171801.D	std s32-11091801		MR	RSKBOTH.M	pass
2	17-Dec-18, 12:08:01	12171802.D	rb 0.1ml		MR	RSKBOTH.M	pass
3	17-Dec-18, 12:47:59	12171803.D	mcs 0.1ml		MR	RSKBOTH.M	pass
4	17-Dec-18, 13:10:41	12171804.D	XXtcd lcs		MR	RSKBOTH.M	
5	17-Dec-18, 13:34:51	12171805.D	XXtcd lcs		MR	RSKBOTH.M	
6	17-Dec-18, 13:50:20	12171806.D	XXtcd lcsd		MR	RSKBOTH.M	
7	17-Dec-18, 14:00:32	12171807.D	XXP1806800-001 0.1		MR	RSKBOTH.M	
8	17-Dec-18, 14:20:13	12171808.D	XXP1806800-002 0.1		MR	RSKBOTH.M	
9	17-Dec-18, 14:36:49	12171809.D	P1806800-001 50ul		MR	RSKBOTH.M	
10	17-Dec-18, 14:50:03	12171810.D	P1806800-002 50ul		MR	RSKBOTH.M	
11	17-Dec-18, 15:08:33	12171811.D	P1806800-003 50ul		MR	RSKBOTH.M	
12	17-Dec-18, 15:21:55	12171812.D	P1806800-004 50ul		MR	RSKBOTH.M	
13	17-Dec-18, 15:40:17	12171813.D	P1806800-005 50ul		MR	RSKBOTH.M	
14	17-Dec-18, 15:53:35	12171814.D	P1806638-001 50ul		MR	RSKBOTH.M	
15	17-Dec-18, 16:06:48	12171815.D	P1806638-002 50ul		MR	RSKBOTH.M	
16	17-Dec-18, 16:35:26	12171816.D	tcd lcs s32-10081801		MR	RSKBOTH.M	pass
17	17-Dec-18, 16:46:42	12171817.D	tcd lcsd s32-10081801		MR	RSKBOTH.M	pass
18	17-Dec-18, 17:01:06	12171818.D	std s32-11091801		MR	RSKBOTH.M	pass

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121817.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 15:32:52
Operator : MR
Sample : K1806638-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 13 07:46:20 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

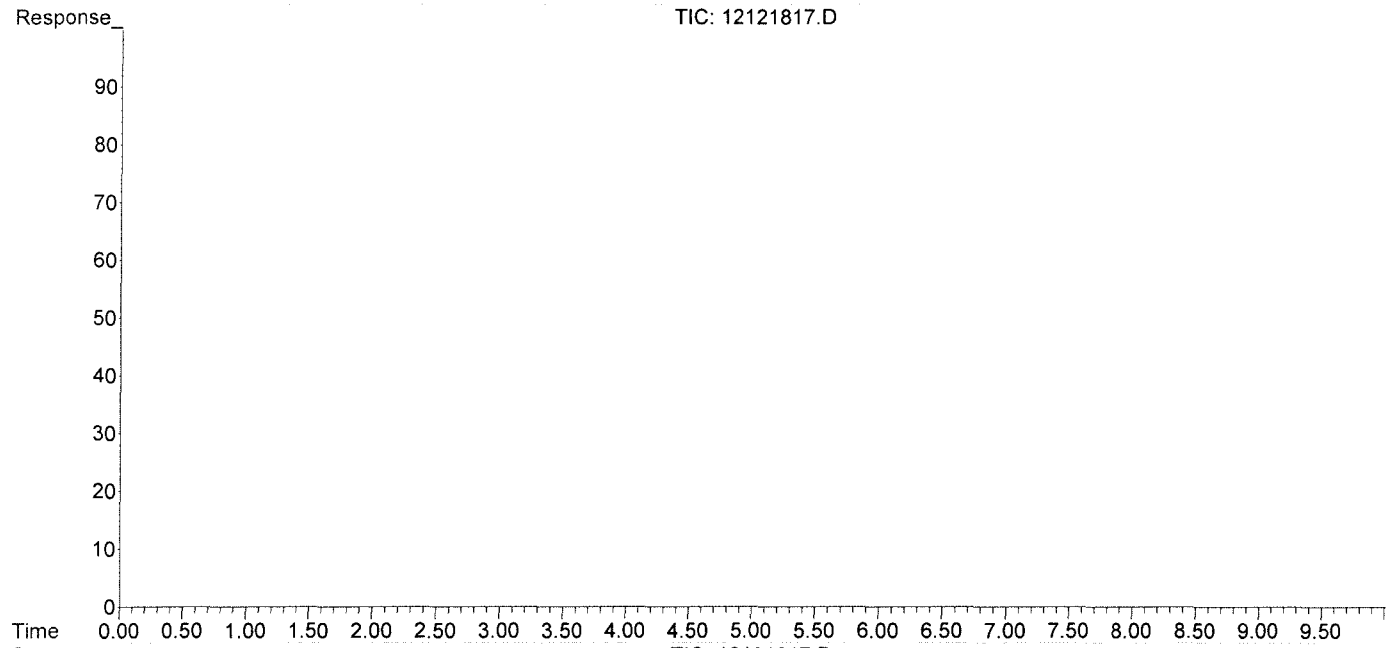
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.103	798	0.088	ppm	m
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

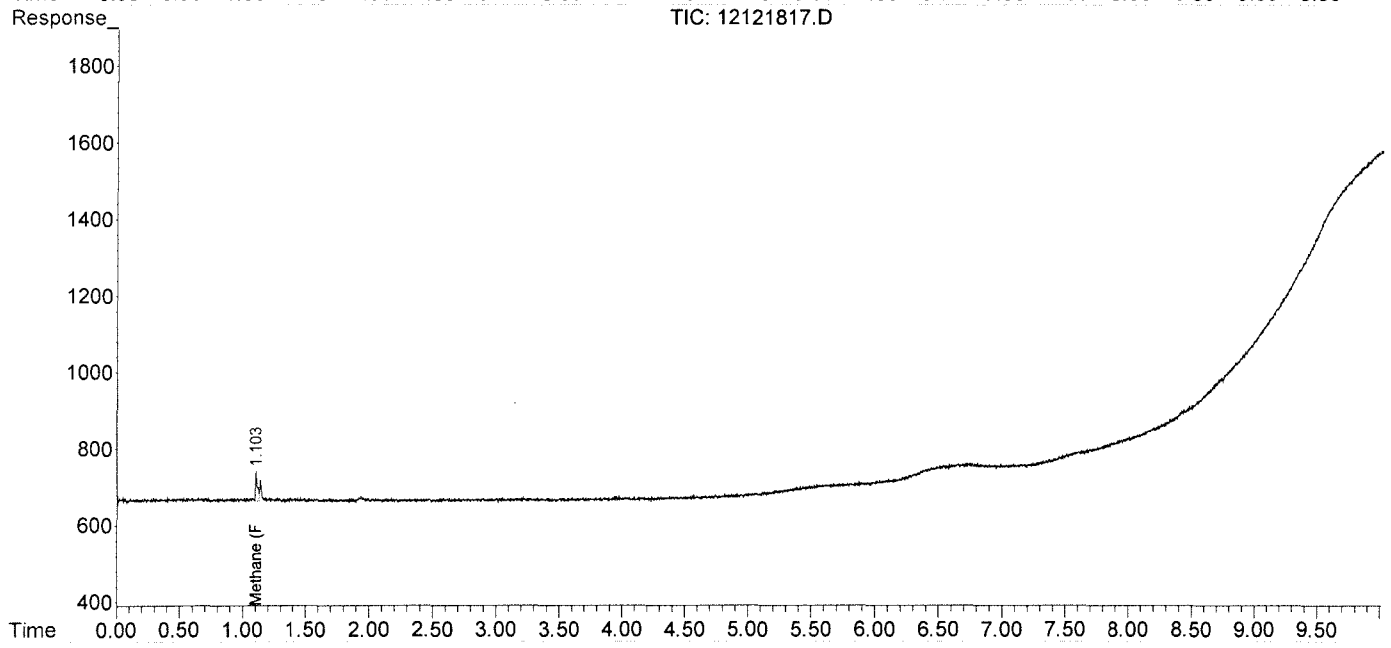
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121817.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 15:32:52
Operator : MR
Sample : K1806638-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 13 07:46:20 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

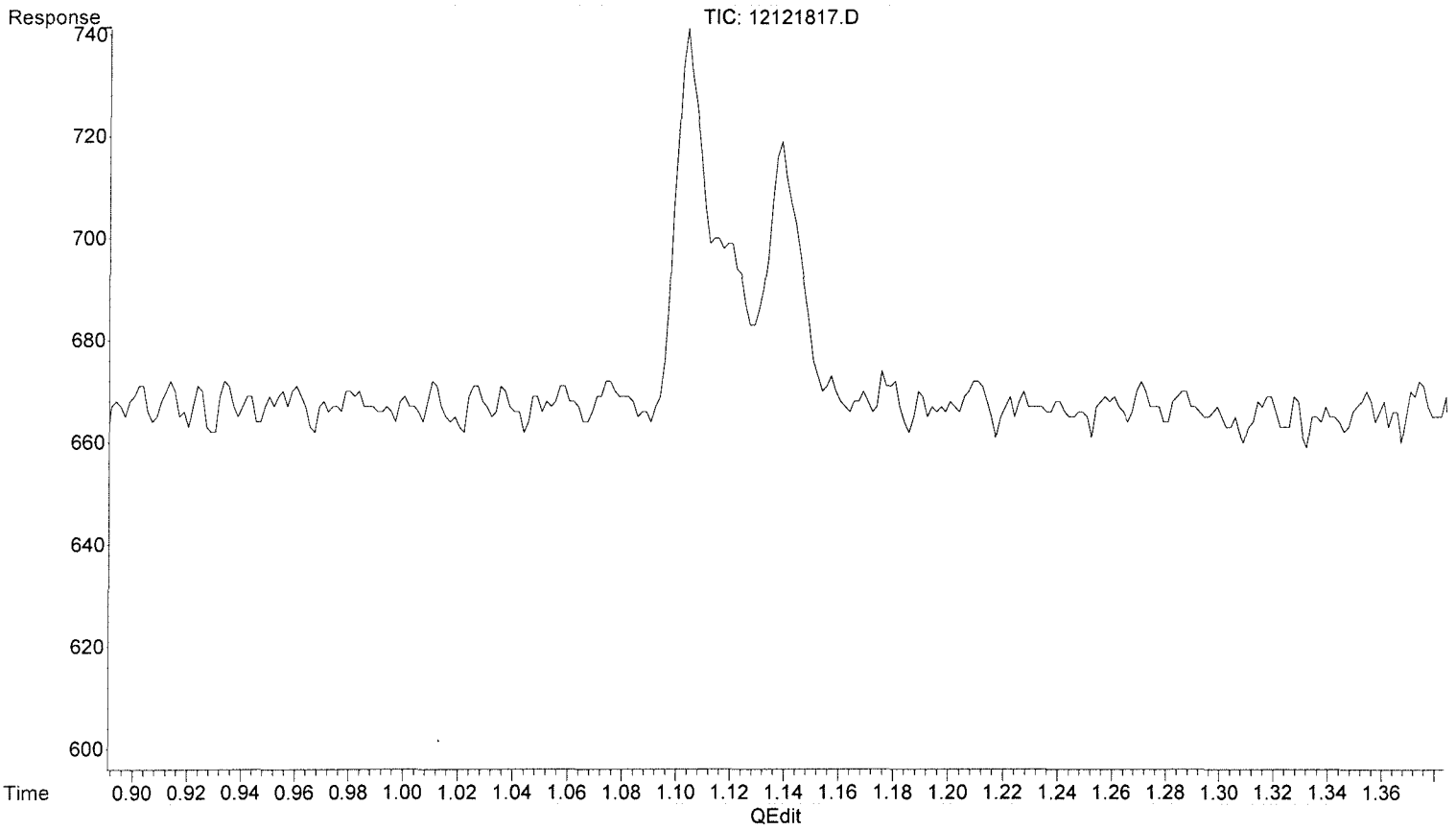




Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121817.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 15:32:52
Operator : MR
Sample : K1806638-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 13 07:46:20 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



(6) Methane (FID)

1.115min 0.000 ppm

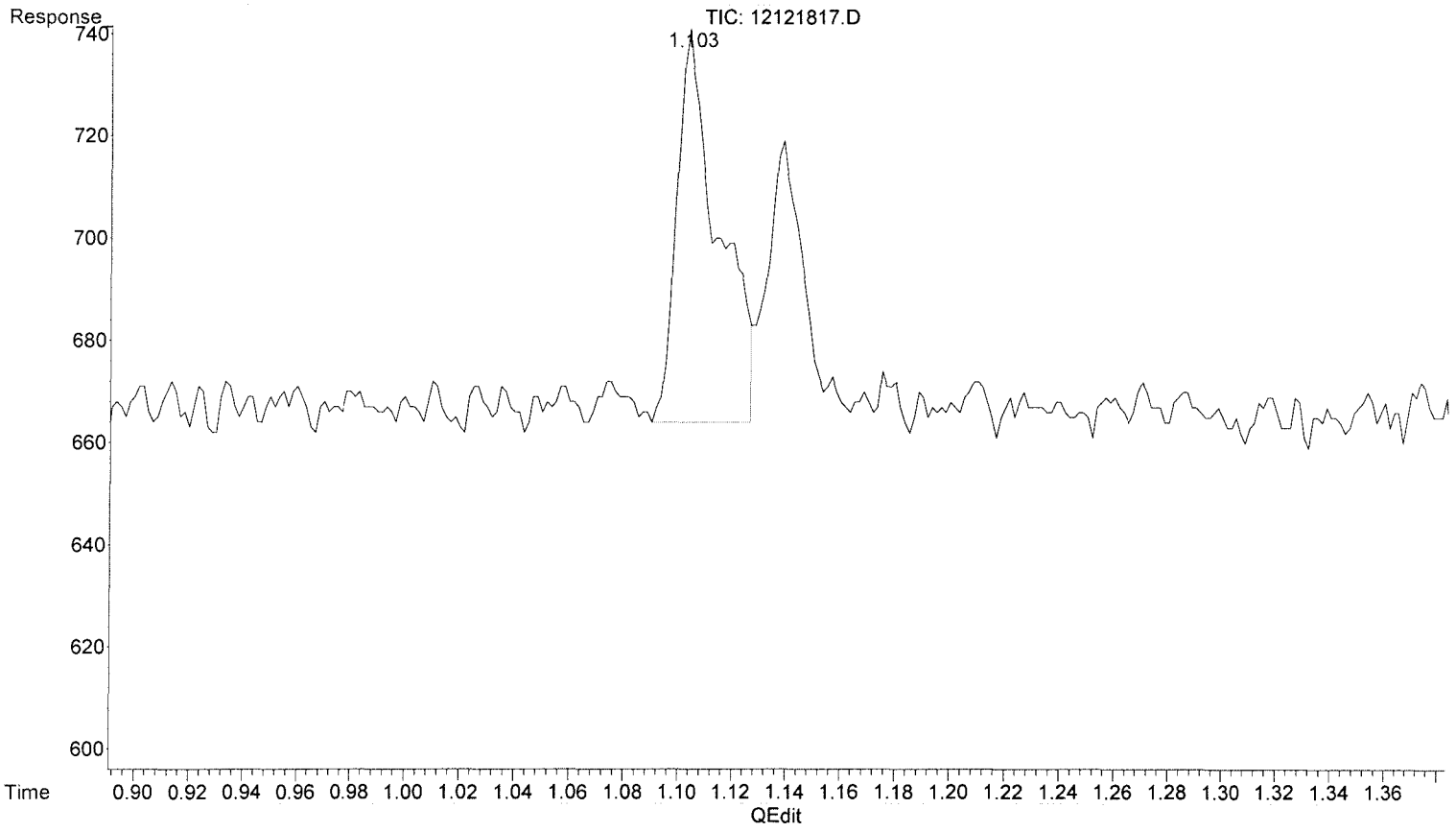
response 0

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121817.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 15:32:52
Operator : MR
Sample : K1806638-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 13 07:46:20 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(6) Methane (FID)

1.103min 0.088 ppm m

response 798

MR 12/13/18
MP

MR 12/13/18

(+) = Expected Retention Time

RS091217_R.M Thu Dec 13 07:47:05 2018 Page: 1

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121818.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 15:52:05
Operator : MR
Sample : K1806638-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 13 07:47:26 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

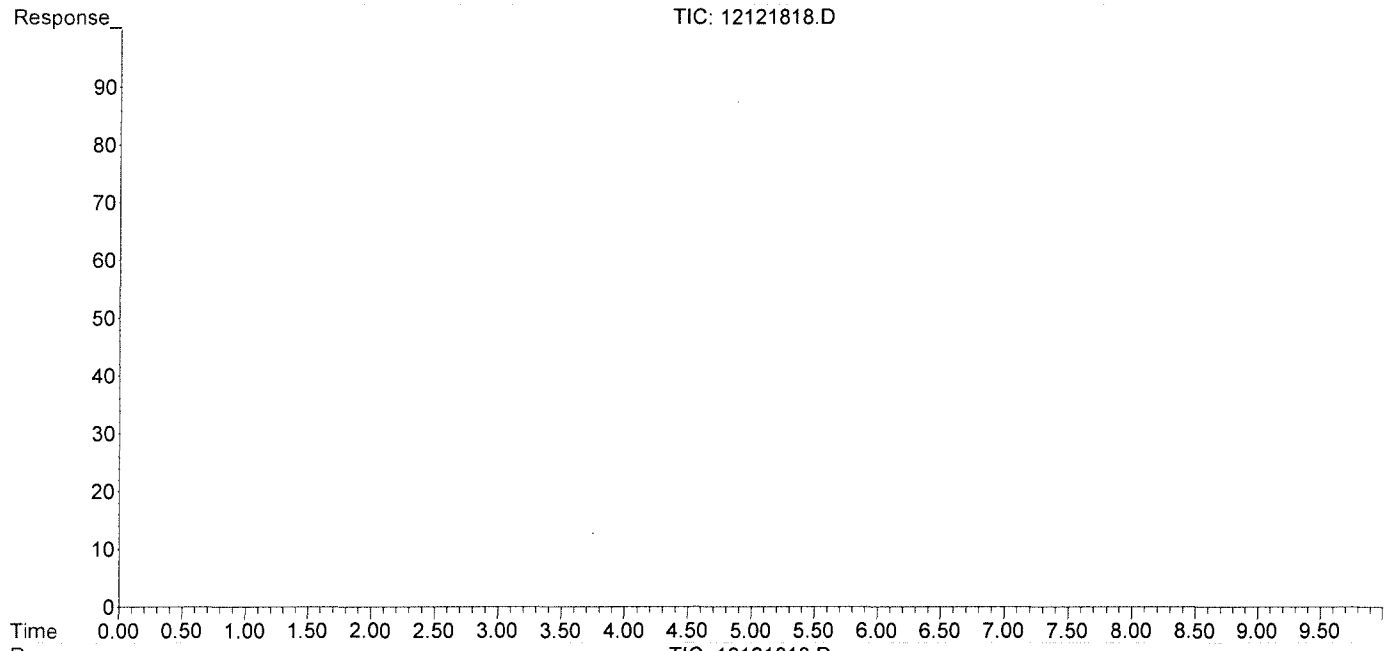
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.107	1034	0.114	ppm	m
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

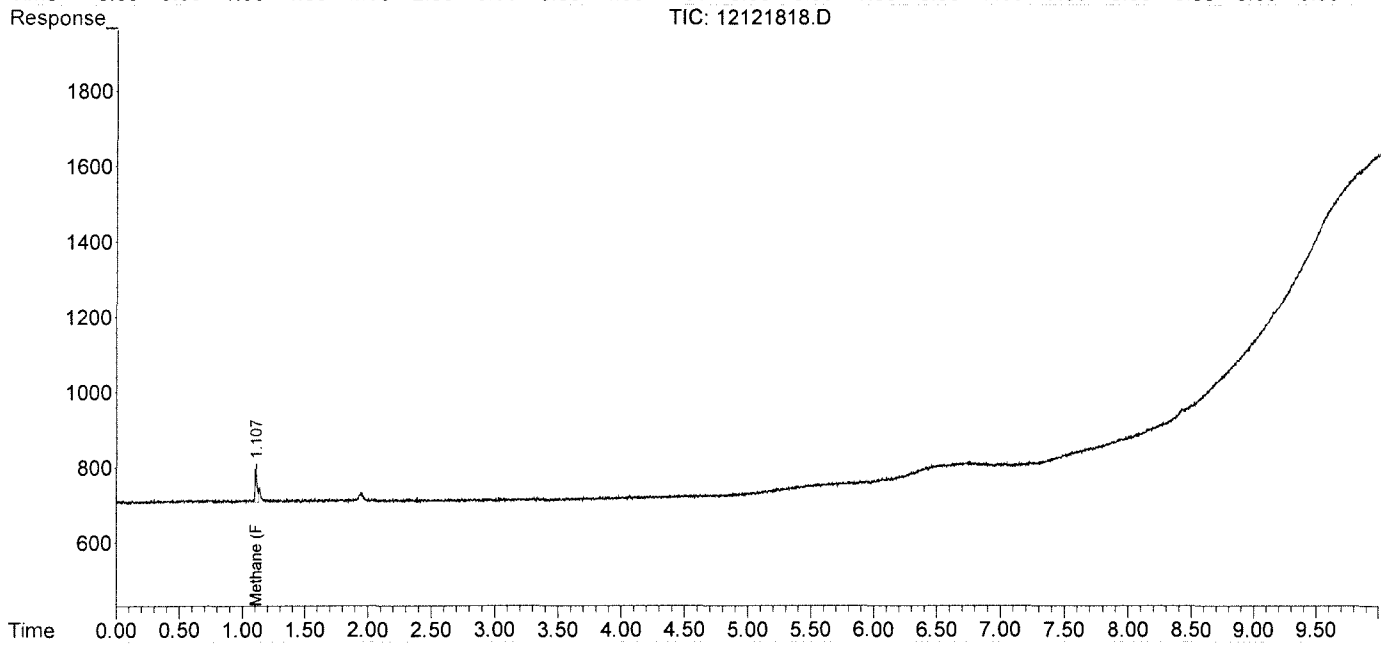
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121818.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 15:52:05
Operator : MR
Sample : K1806638-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 13 07:47:26 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

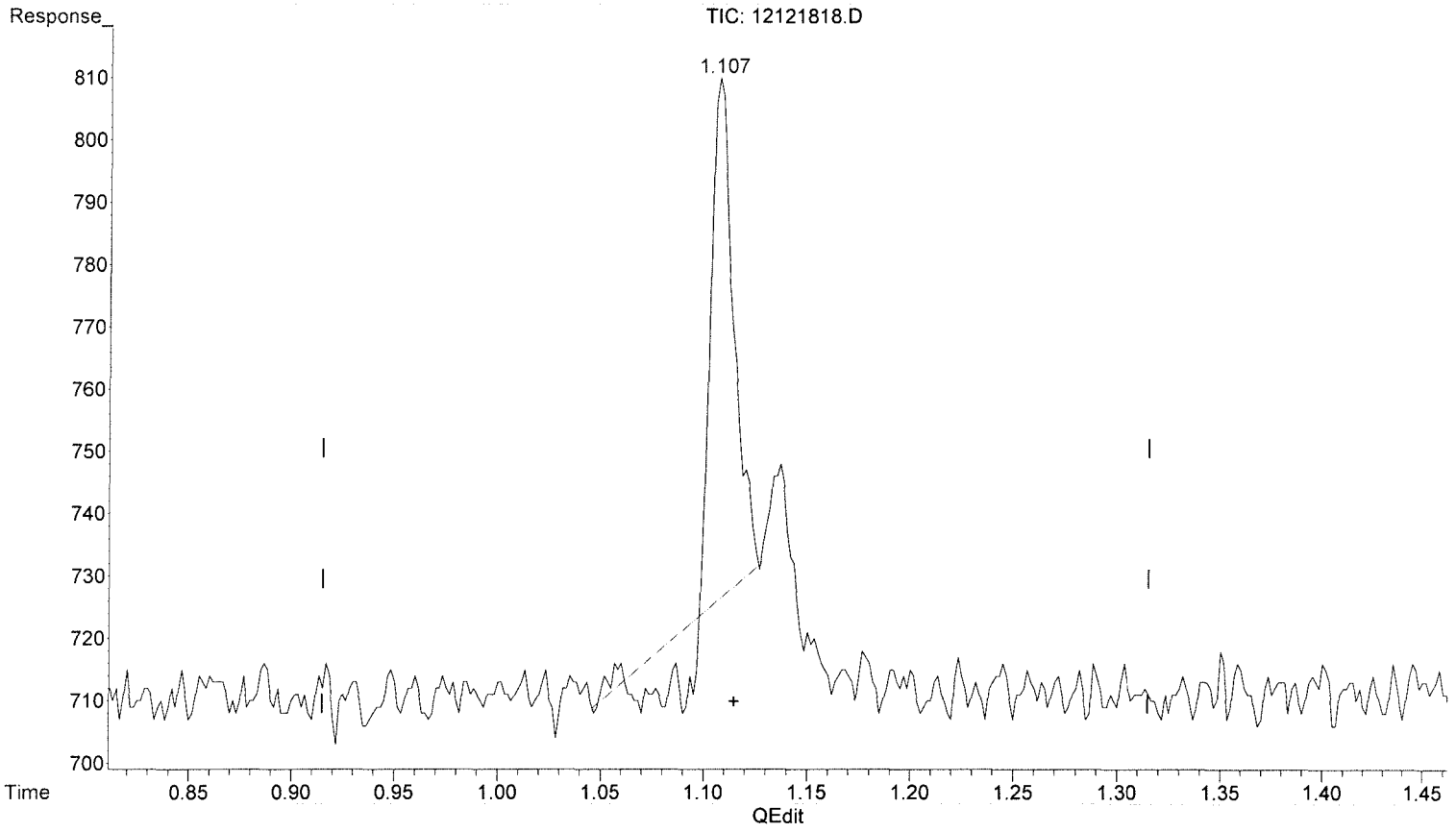




Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121818.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 15:52:05
Operator : MR
Sample : K1806638-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 13 07:47:26 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



(6) Methane (FID)

1.108min 0.055 ppm

response 503

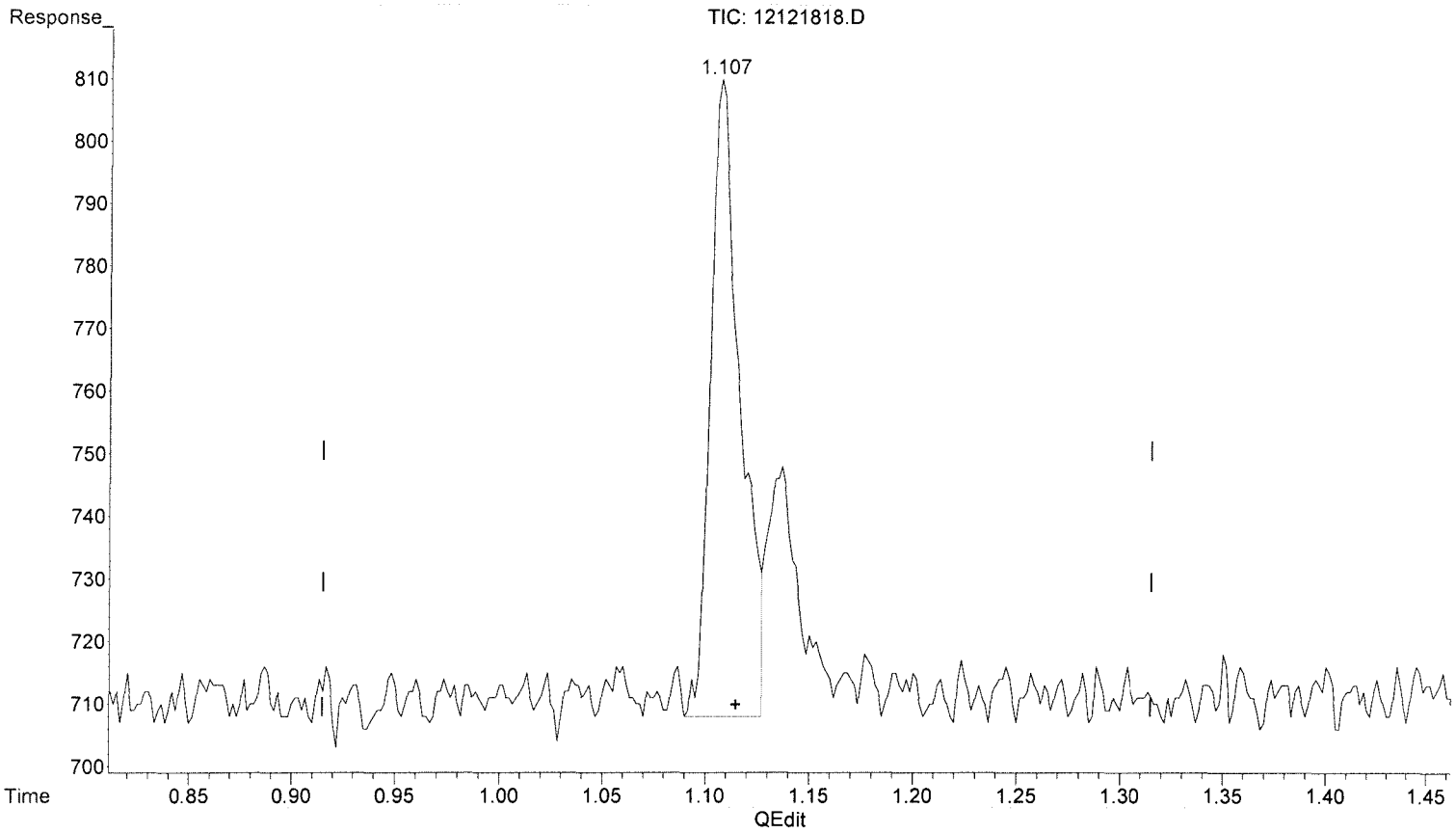
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121818.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 15:52:05
Operator : MR
Sample : K1806638-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 13 07:47:26 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(6) Methane (FID)

1.107min 0.114 ppm m

response 1034

MR 12/13/18
BLC

12/13/18

(+) = Expected Retention Time

RS091217_R.M Thu Dec 13 07:48:08 2018

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121803.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 11:31:04
Operator : MR
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 11:43:10 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

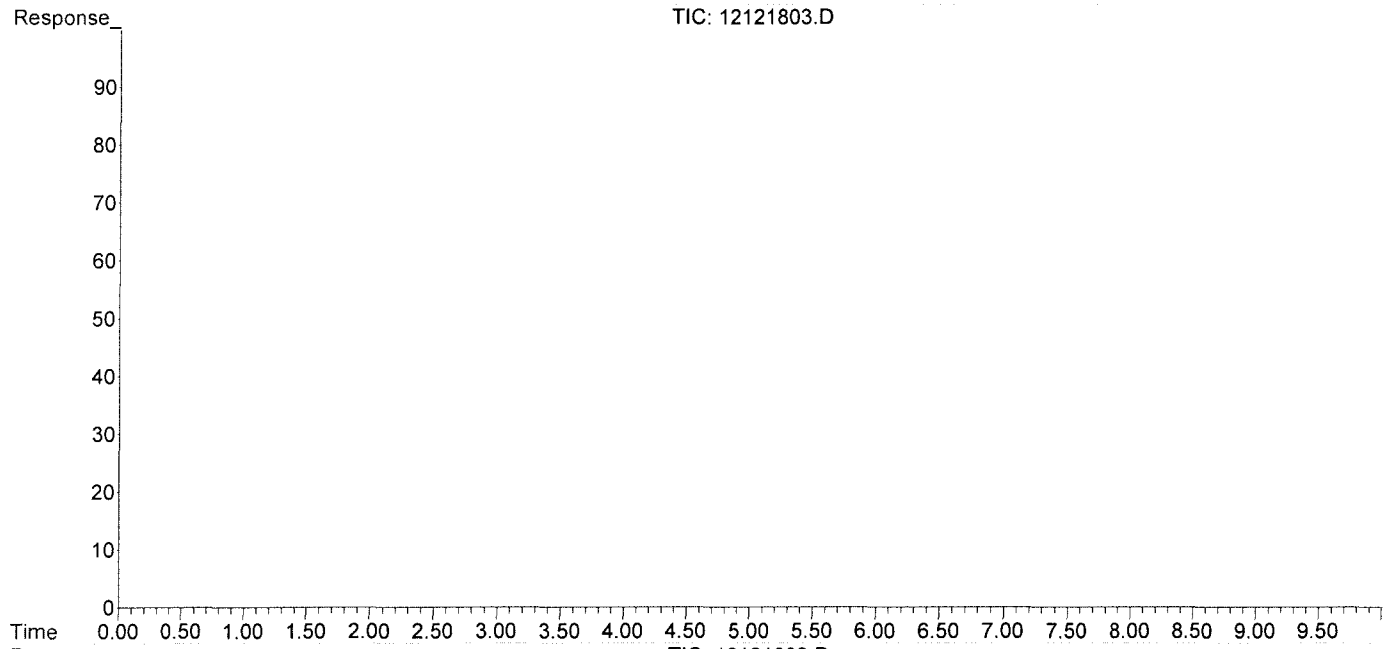
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.122	1169	0.129	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

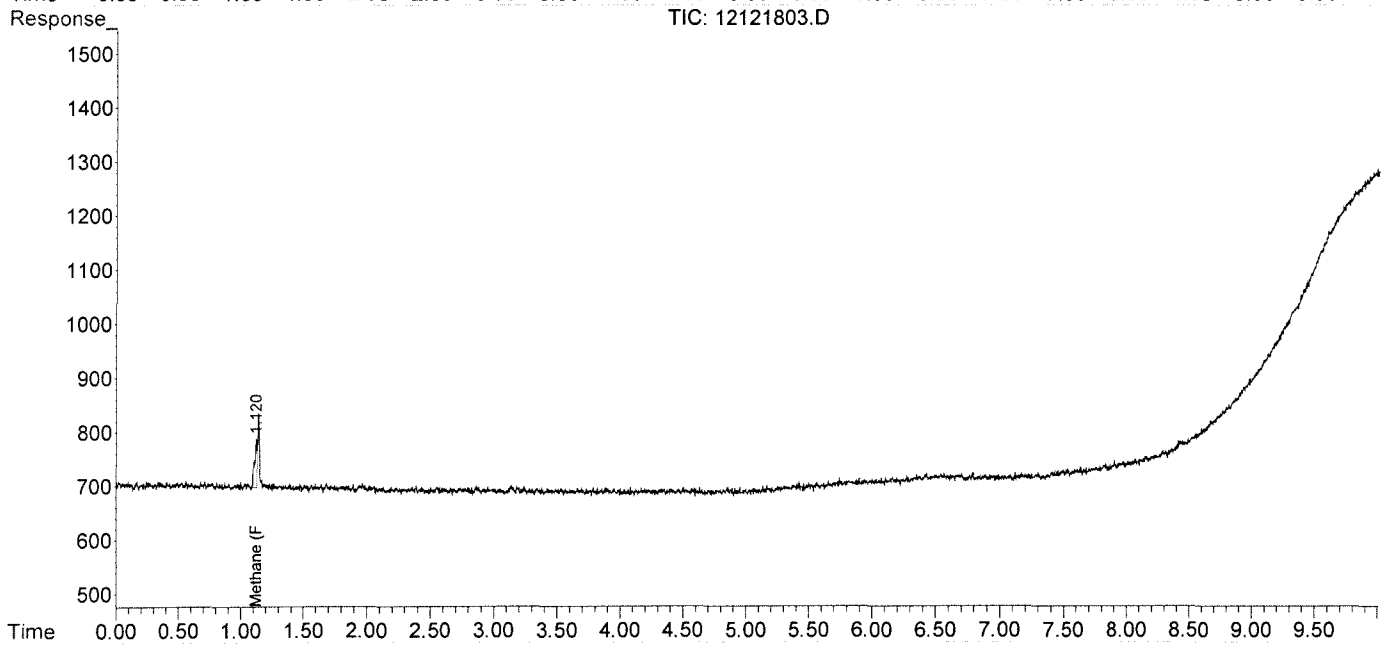
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121803.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 11:31:04
Operator : MR
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 11:43:10 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121804.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 11:44:40
Operator : MR
Sample : fid lcs s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 11:54:03 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

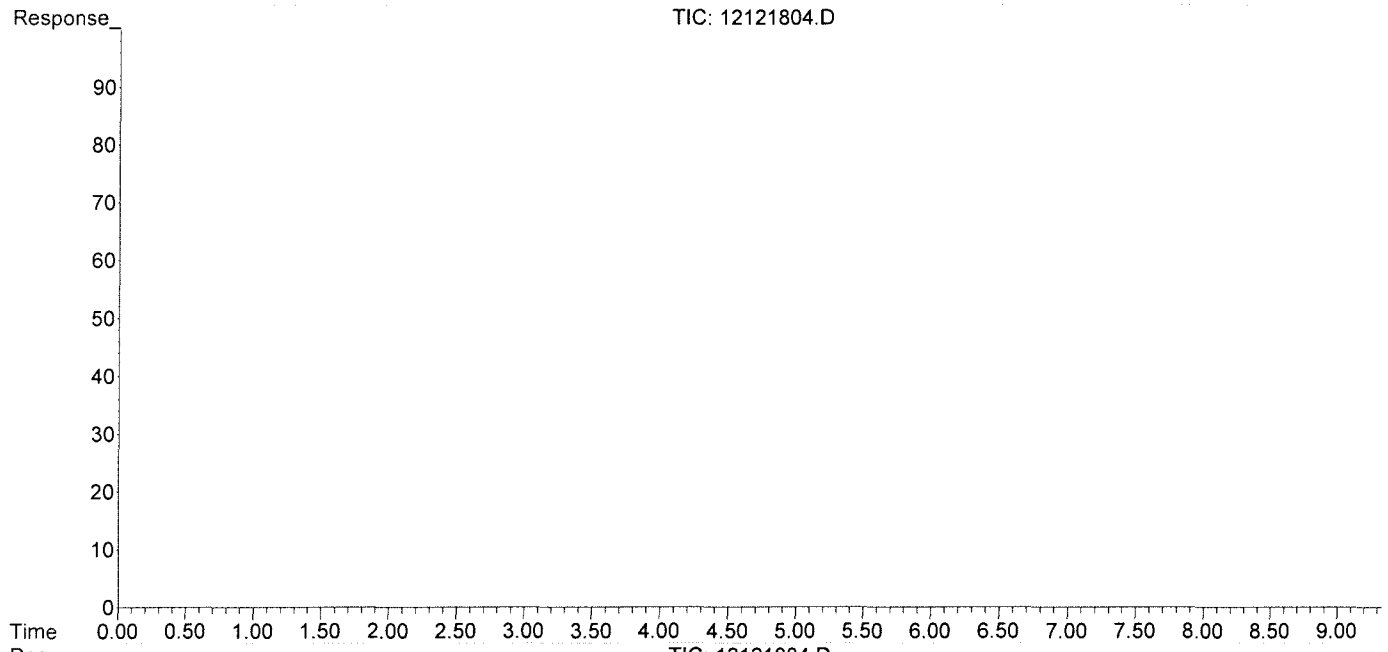
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.120	14500	1.599	ppm
7)	Ethylene	1.682	17908	1.070	ppm
8)	Ethane	1.946	22286	1.315	ppm
9)	Propylene	4.327	24536	1.047	ppm
10)	Propane	4.449	34841	1.400	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.665	46040	1.730	ppm
13)	n-Butane	6.665	46040	1.730	ppm

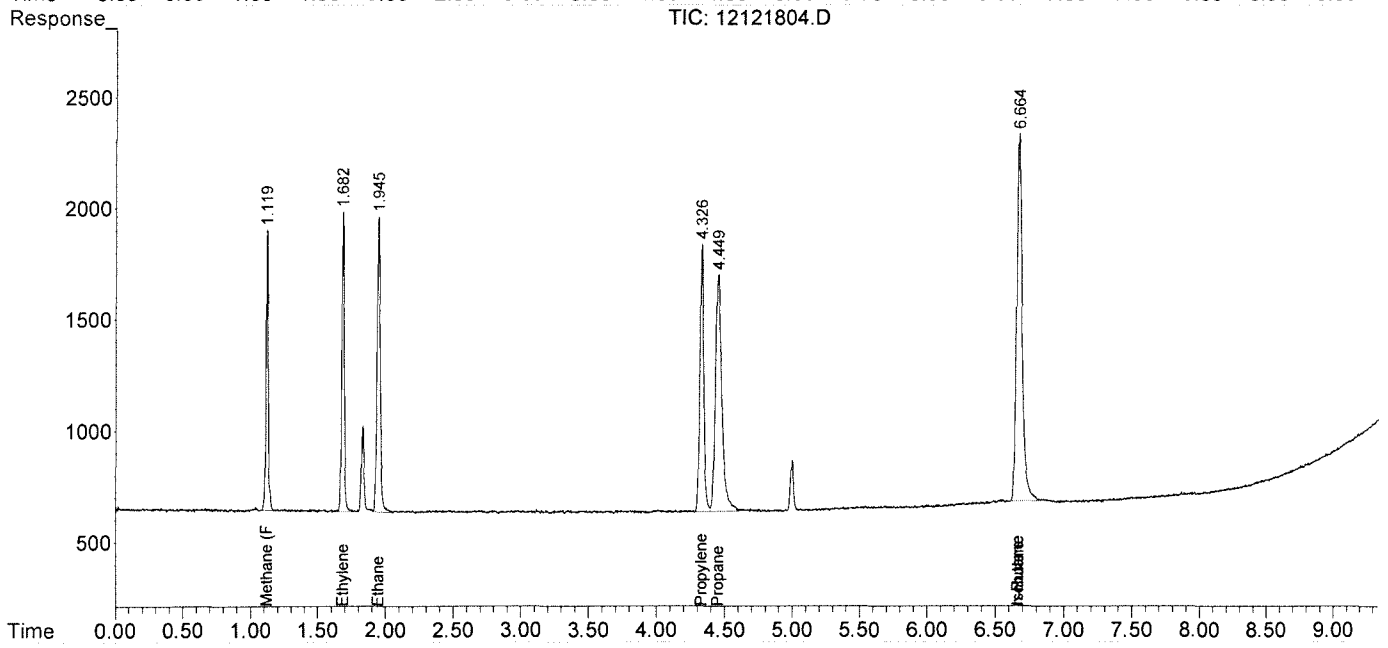
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121804.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 11:44:40
Operator : MR
Sample : fid lcs s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 11:54:03 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121805.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 11:57:17
Operator : MR
Sample : fid lcsd s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 12:06:32 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

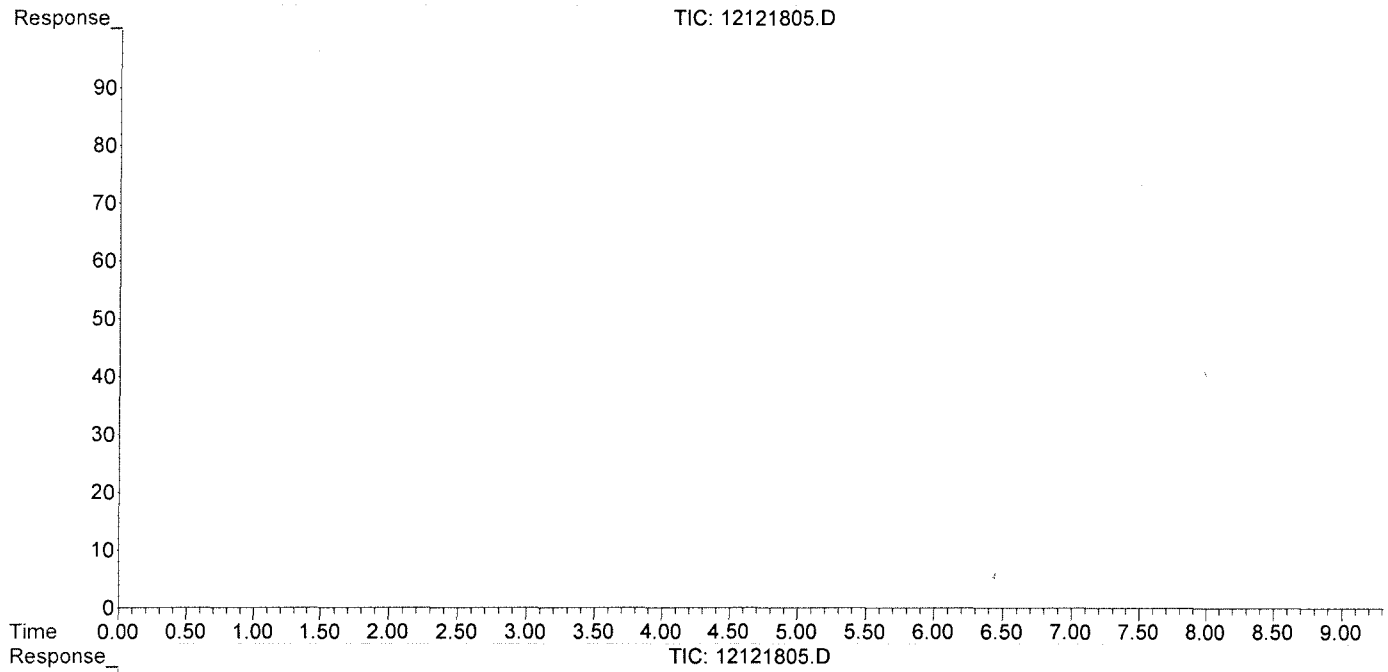
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.121	14141	1.559	ppm
7)	Ethylene	1.682	17628	1.053	ppm
8)	Ethane	1.946	21874	1.291	ppm
9)	Propylene	4.327	24517	1.046	ppm
10)	Propane	4.449	35020	1.408	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.666	46867	1.761	ppm
13)	n-Butane	6.666	46867	1.761	ppm

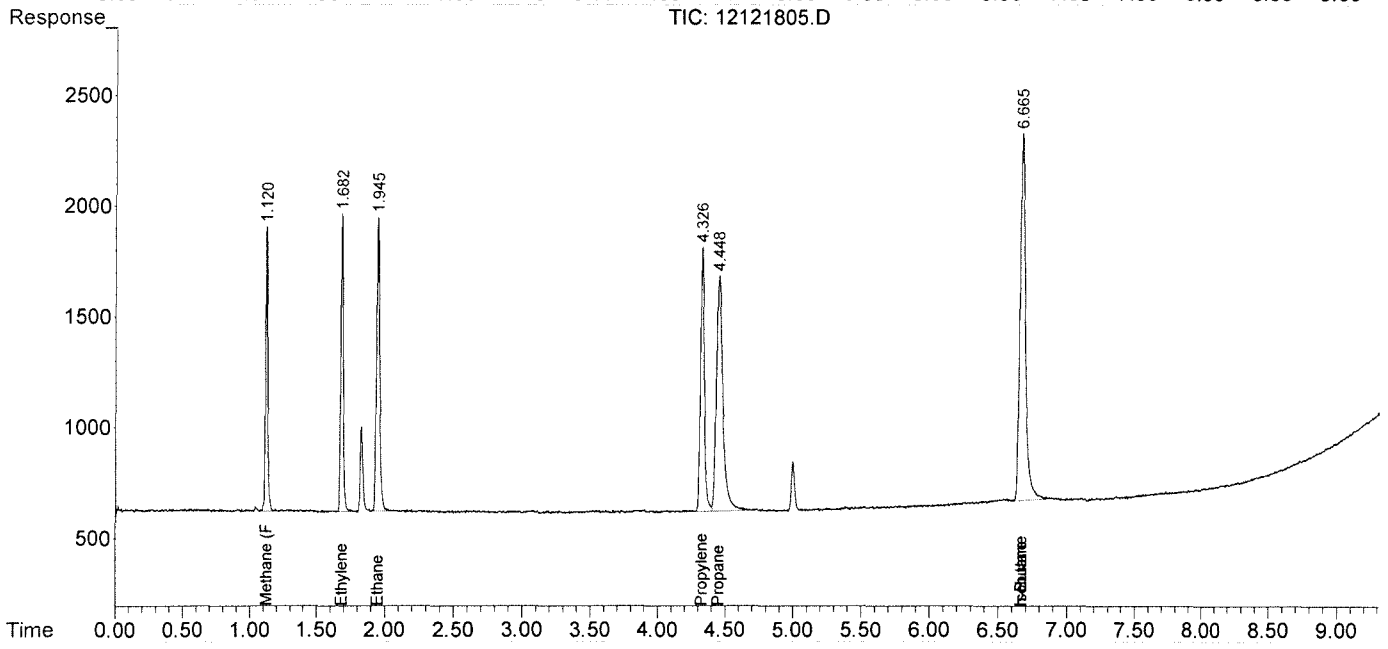
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121805.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 11:57:17
Operator : MR
Sample : fid lcsd s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 12:06:32 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Response Factor Report HP5890

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg		%RSD
1)	Oxygen/Argon	3.739		1.014			0.001	0.793	E6	189.17
2)	Carbon monoxide	3.739		1.014			0.001	0.594	E6	221.92
3)	Methane (TCD)						2.161	0.951	E2	106.37
4)	Carbon dioxide	2.365	2.569	2.558	2.361	2.459	2.314	2.438	E2	4.44

Signal #2 Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg		%RSD
6)	Methane (FID)		1.180	0.975	0.908	0.870	0.868	0.907	E4	11.66
7)	Ethylene	1.736	1.638	1.780	1.720	1.628	1.670	1.673	E4	3.90
8)	Ethane	1.781	1.676	1.784	1.730	1.692	1.675	1.695	E4	3.83
9)	Propylene	2.505	2.296	2.592	2.480	2.346	2.252	2.343	E4	6.56
10)	Propane	2.439	2.283	2.645	2.555	2.433	2.522	2.488	E4	4.20
11)	Isobutylene							0.652	E1	138.46
12)	Isobutane	6.058	4.793	2.214	1.553	1.353		2.662	E4	86.17
13)	n-Butane	6.058	4.793	2.214	1.553	1.353		2.662	E4	86.17

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS091217_R.M Wed Sep 13 15:11:48 2017

Edit Compounds -- Compound #6 -- Methane (FID)

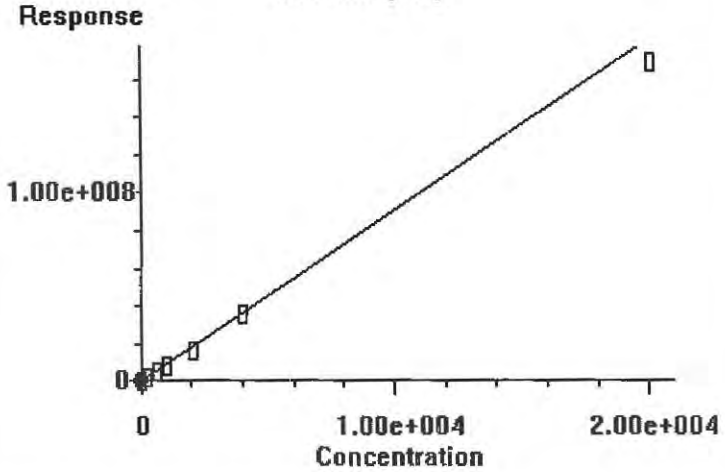
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	
2	0.302000	3564.400000
3	1.510000	14725.268625
4	4.530000	41128.575000
5	10.570000	91966.784531
6	200.000000	1735997.497500
7	600.000000	5189848.900000
8	1000.000000	8598533.570000
9	2000.000000	16098209.390000
10	4000.000000	35776839.311362
11	20000.000000	169009160.49199

Methane (FID)



0.000e+000	Quadratic term
9.071e+003	Linear term
0.000e+000	Constant term
11.657%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #7 -- Ethylene

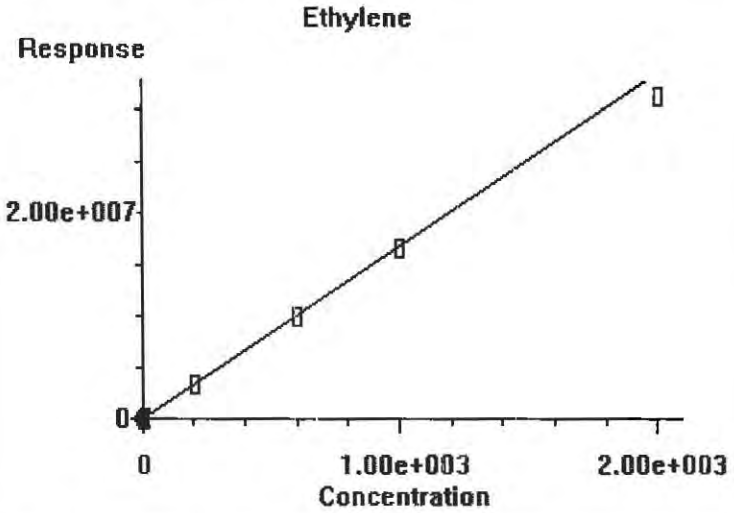
Search by: Ret Time | Name | Index | Find Compound

Compound Database
External Standard Compoun
- Oxygen/Argon
- Carbon monoxide
- Methane (TCD)
- Carbon dioxide
- Signal #2
- Methane (FID)
- Ethylene
- Ethane
- Propylene
- Propane
- Isobutylene
- Isobutane
- n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2621.970000
2	0.302000	4946.731301
3	1.510000	26884.746847
4	4.530000	77902.721497
5	10.570000	172085.529560
6	200.000000	3339702.313219
7	600.000000	10007758.776971
8	1000.000000	16608503.805988
9	2000.000000	31192443.898600
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.673e+004	Linear term
0.000e+000	Constant term
3.897%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #8 -- Ethane

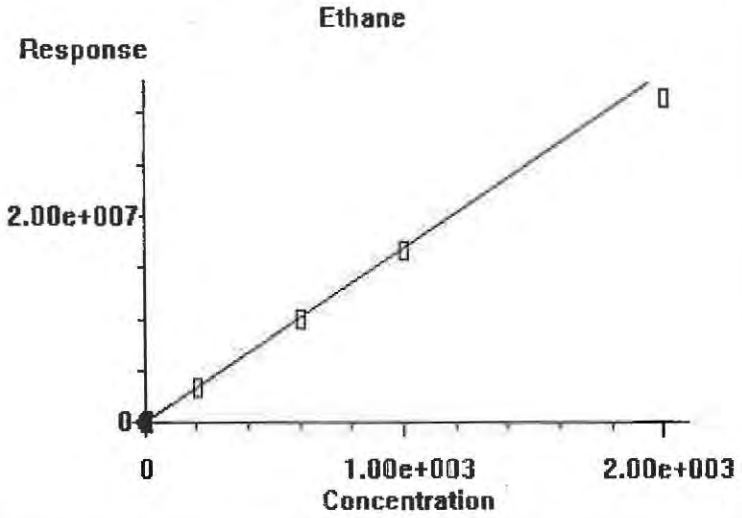
Search by: Ret Time | Name | Index — Find Compound

- Compound Database
  - External Standard Compoun
    - Oxygen/Argon
    - Carbon monoxide
    - Methane (TCD)
    - Carbon dioxide
    - Signal #2
    - Methane (FID)
    - Ethylene
    - Ethane
    - Propylene
    - Propane
    - Isobutylene
    - Isobutane
    - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2689.928008
2	0.302000	5060.331943
3	1.510000	26943.667500
4	4.530000	78353.525045
5	10.570000	178840.731148
6	200.000000	3350442.319129
7	600.000000	10048964.218029
8	1000.000000	16703164.879012
9	2000.000000	31424217.938900
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.695e+004	Linear term
0.000e+000	Constant term
3.831%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #9 -- Propylene

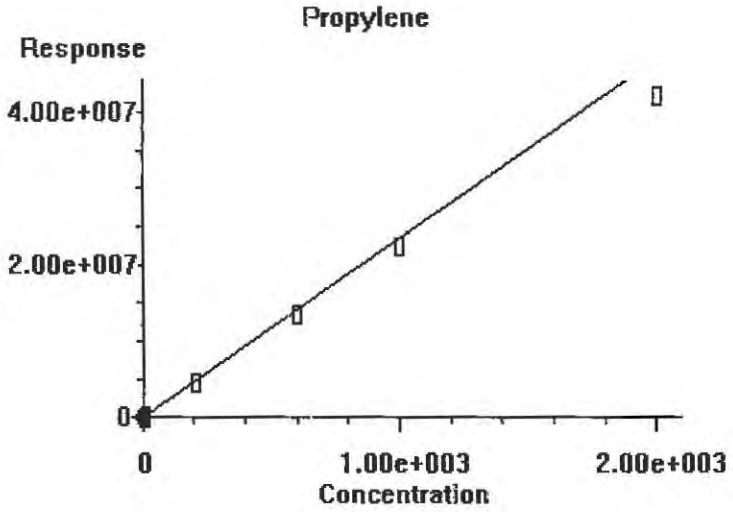
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3782.537646
2	0.302000	6933.285530
3	1.510000	39139.518208
4	4.530000	112341.896872
5	10.570000	248003.903623
6	200.000000	4504060.086084
7	600.000000	13569342.761419
8	1000.000000	22494887.720990
9	2000.000000	42124689.656800
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.343e+004	Linear term
0.000e+000	Constant term
6.559%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #10 -- Propane

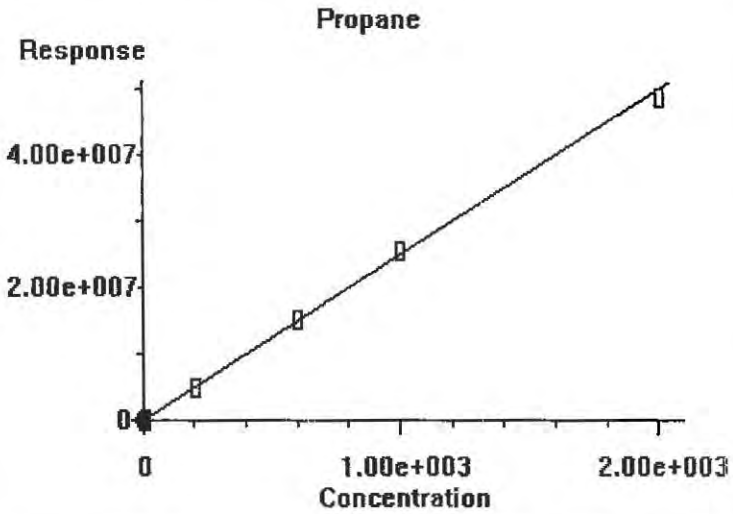
Search by: Ret Time | Name | Index — Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3682.897354
2	0.302000	6894.237803
3	1.510000	39934.166792
4	4.530000	115723.428128
5	10.570000	257124.432806
6	200.000000	5043035.663916
7	600.000000	15251325.797404
8	1000.000000	25459410.657938
9	2000.000000	48583085.287451
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.488e+004	Linear term
0.000e+000	Constant term
4.200%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Calibration Status Report HP5890

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121702.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121703.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121704.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121705.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121706.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121707.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121711.D
11	11	20000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121712.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 13 11:04 2017	Sep 12 15:03 2017	12-Sep-2017, 10:52
2	2	Sep 13 11:05 2017	Sep 13 11:05 2017	12-Sep-2017, 11:05
3	3	Sep 13 11:06 2017	Sep 13 11:05 2017	12-Sep-2017, 11:45
4	4	Sep 13 11:09 2017	Sep 13 11:06 2017	12-Sep-2017, 12:09
5	5	Sep 13 11:09 2017	Sep 13 11:09 2017	12-Sep-2017, 12:30
6	6	Sep 13 11:10 2017	Sep 13 11:10 2017	12-Sep-2017, 12:47
7	7	Sep 13 11:11 2017	Sep 13 11:10 2017	12-Sep-2017, 13:00
8	8	Sep 13 11:12 2017	Sep 13 11:11 2017	12-Sep-2017, 13:47
9	9	Sep 13 11:12 2017	Sep 13 11:12 2017	12-Sep-2017, 14:07
10	10	Sep 13 11:14 2017	Sep 13 11:13 2017	12-Sep-2017, 14:48
11	11	Sep 13 11:14 2017	Sep 13 11:14 2017	12-Sep-2017, 15:21

RS091217_R.M Wed Sep 13 15:11:22 2017

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.767	373920	0.128	ppm	
2)	Carbon monoxide	1.767	373920	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	1.595	2622	0.156	ppm	
8)	Ethane	1.848	2690	0.156	ppm	
9)	Propylene	4.222	3783	0.154	ppm	
10)	Propane	4.348	3683	0.139	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.582f	6058	NoCal	ppm	
13)	n-Butane	6.582f	6058	NoCal	ppm	

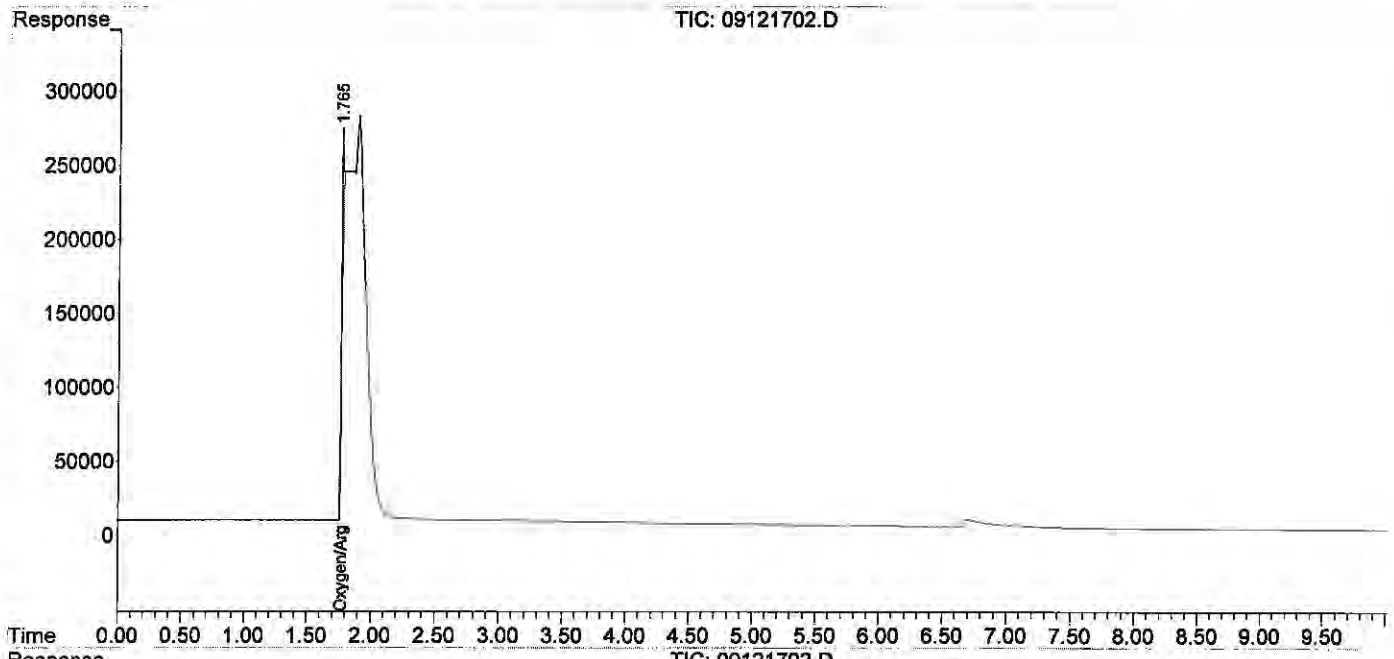
(f)=RT Delta > 1/2 Window (m)=manual int.

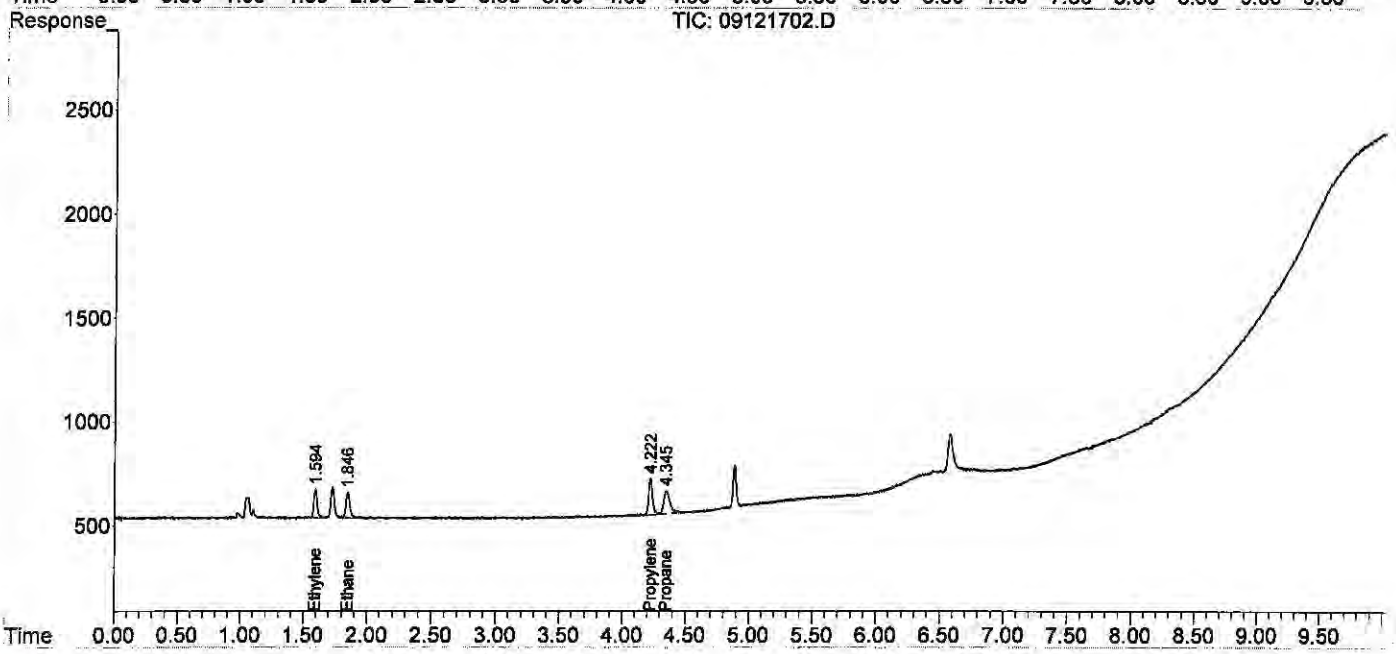
9/13/17

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





RS091217_R.M Wed Sep 13 14:58:18 2017 Page: 2

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.913f	-25181981	N.D.	ppm	
2)	Carbon monoxide	1.913f	-25181981	1.089	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.049	3564	0.391	ppm	m
7)	Ethylene	1.577	4947	0.292	ppm	
8)	Ethane	1.828	5060	0.293	ppm	
9)	Propylene	4.207	6933	0.281	ppm	
10)	Propane	4.337	6894	0.268	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	9587	0.158	ppm	
13)	n-Butane	6.579f	9587	0.158	ppm	

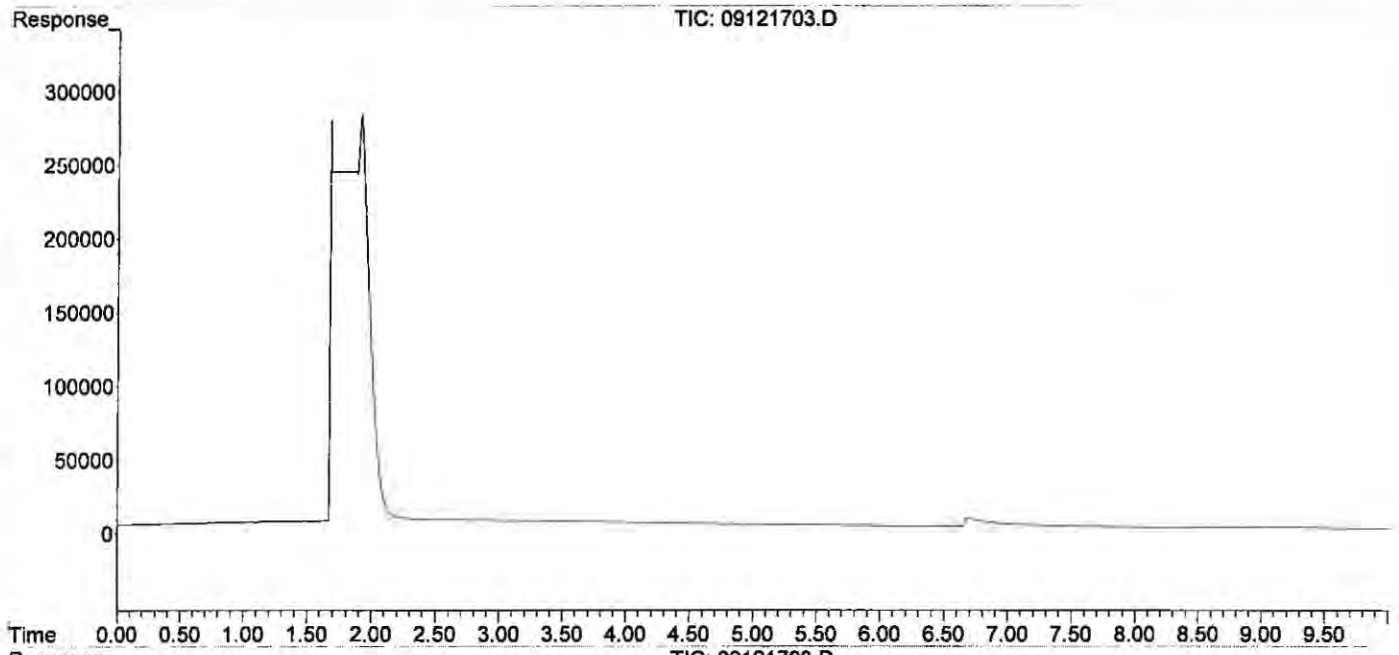
(f)=RT Delta > 1/2 Window (m)=manual int.

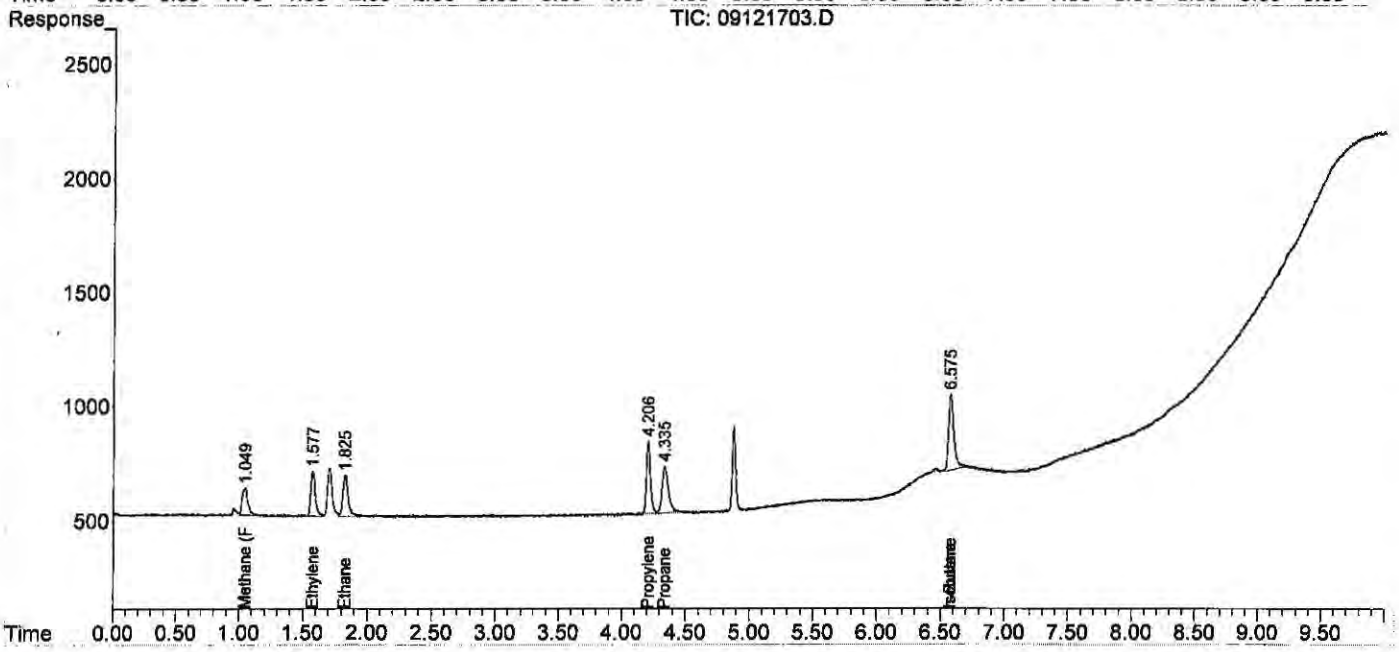
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



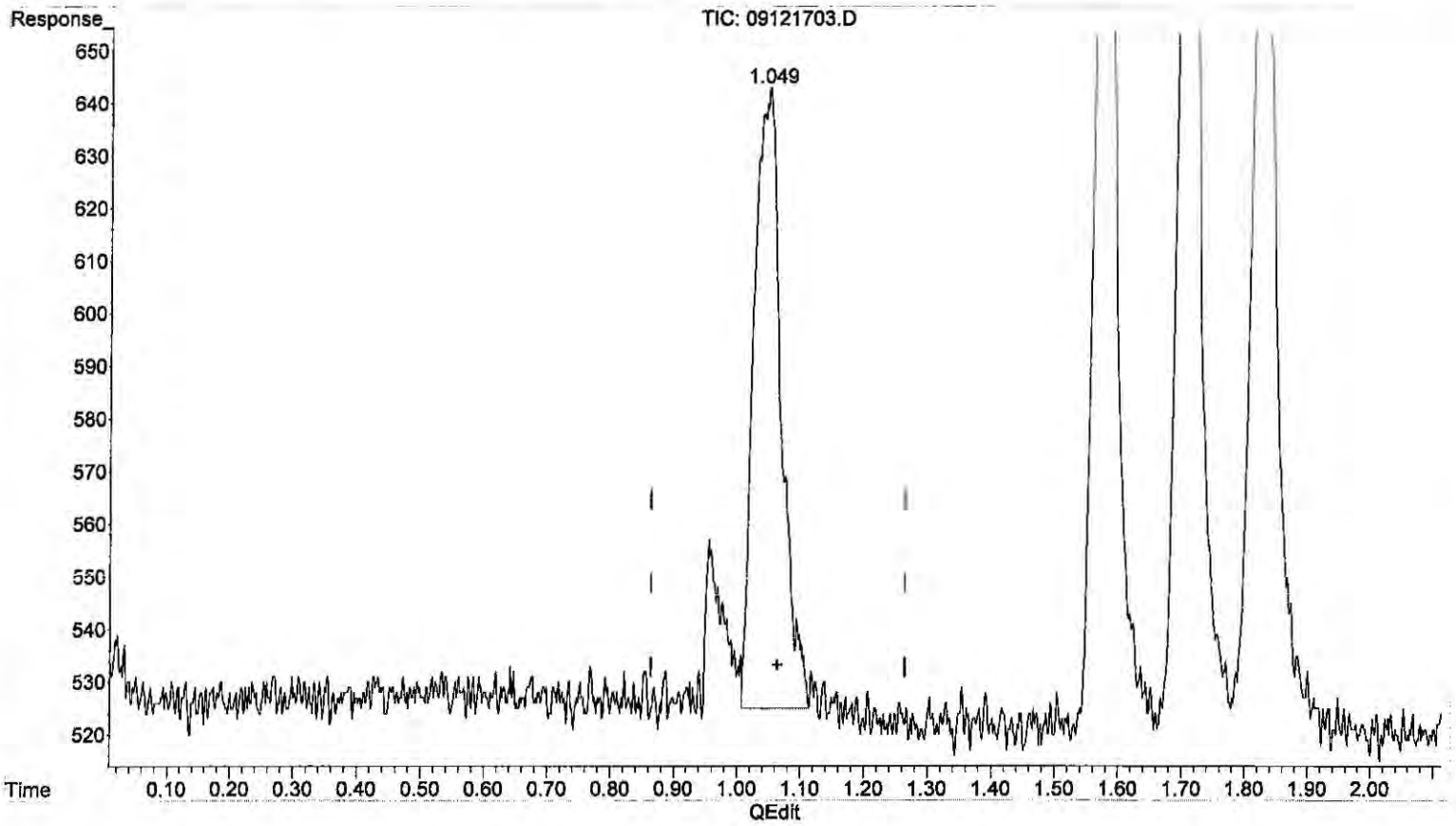


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(6) Methane (FID)
1.049min 0.391 ppm m
response 3564

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

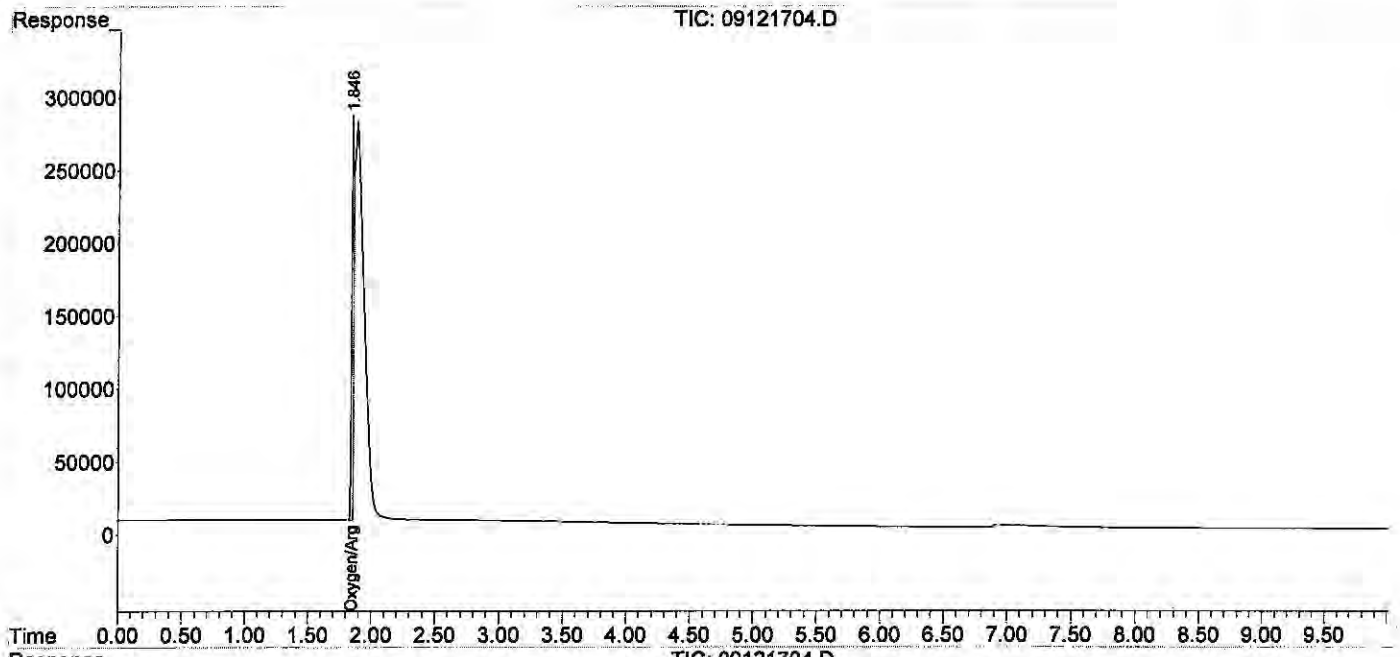
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.847	2536230	1.056	ppm
2)	Carbon monoxide	1.847	2536230	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.064	14725	1.613	ppm
7)	Ethylene	1.598	26885	1.582	ppm
8)	Ethane	1.851	26944	1.555	ppm
9)	Propylene	4.220	39140	1.589	ppm
10)	Propane	4.349	39934	1.596	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	55348	1.020	ppm
13)	n-Butane	6.578f	55348	1.020	ppm

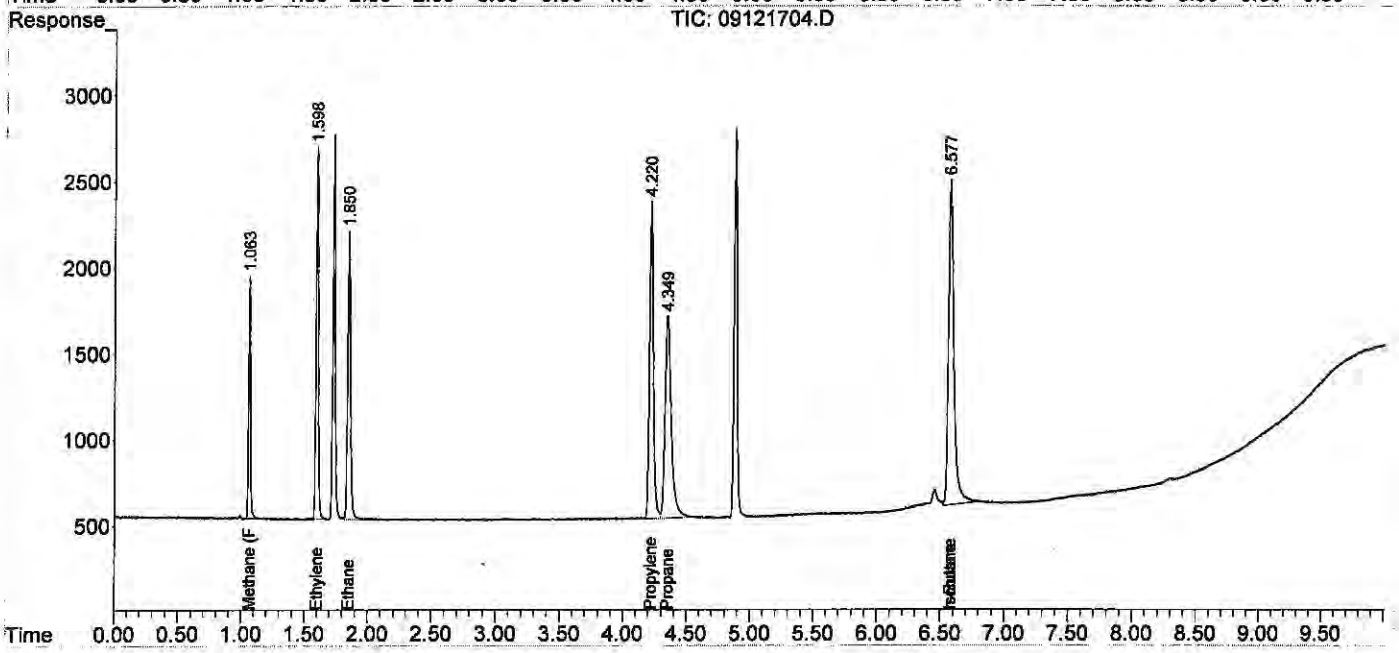
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.738	-331216	N.D.	ppm
2)	Carbon monoxide	1.738	-331216	0.019	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.052	41129	4.522	ppm
7)	Ethylene	1.586	77903	4.637	ppm
8)	Ethane	1.838	78354	4.558	ppm
9)	Propylene	4.218	112342	4.614	ppm
10)	Propane	4.347	115723	4.680	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.580f	155256	3.565	ppm
13)	n-Butane	6.580f	155256	3.565	ppm

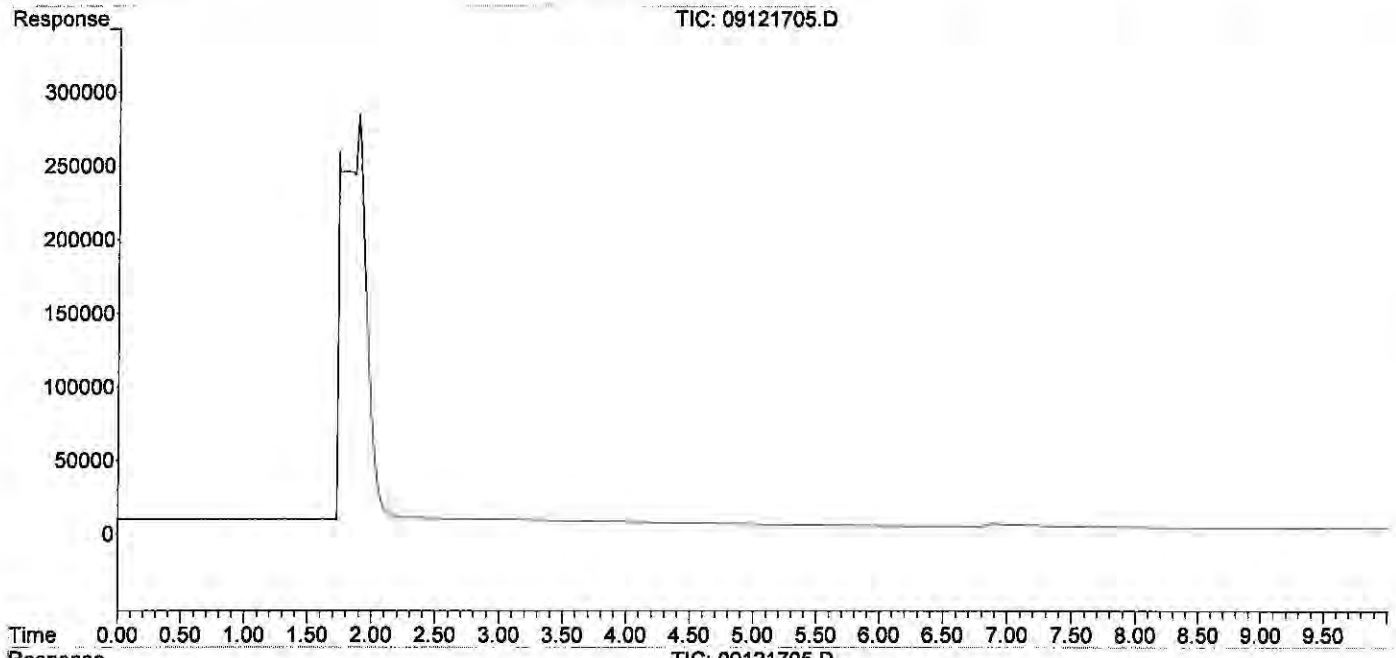
(f)=RT Delta > 1/2 Window (m)=manual int.

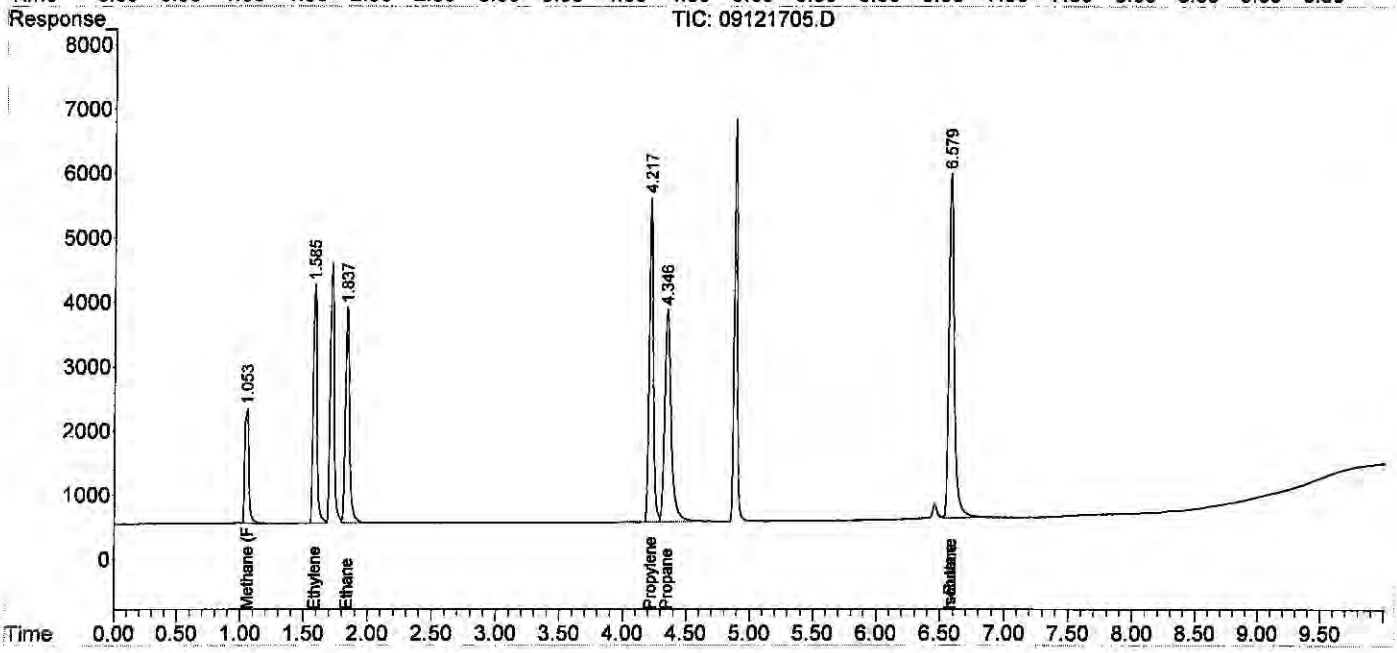
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.929f	-31871242	N.D.	ppm
2)	Carbon monoxide	1.929f	-31871242	1.818	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.025	91967	10.135	ppm
7)	Ethylene	1.568	172086	10.273	ppm
8)	Ethane	1.822	178841	10.441	ppm
9)	Propylene	4.214	248004	10.236	ppm
10)	Propane	4.344	257124	10.458	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	338181	9.254	ppm
13)	n-Butane	6.578f	338181	9.254	ppm

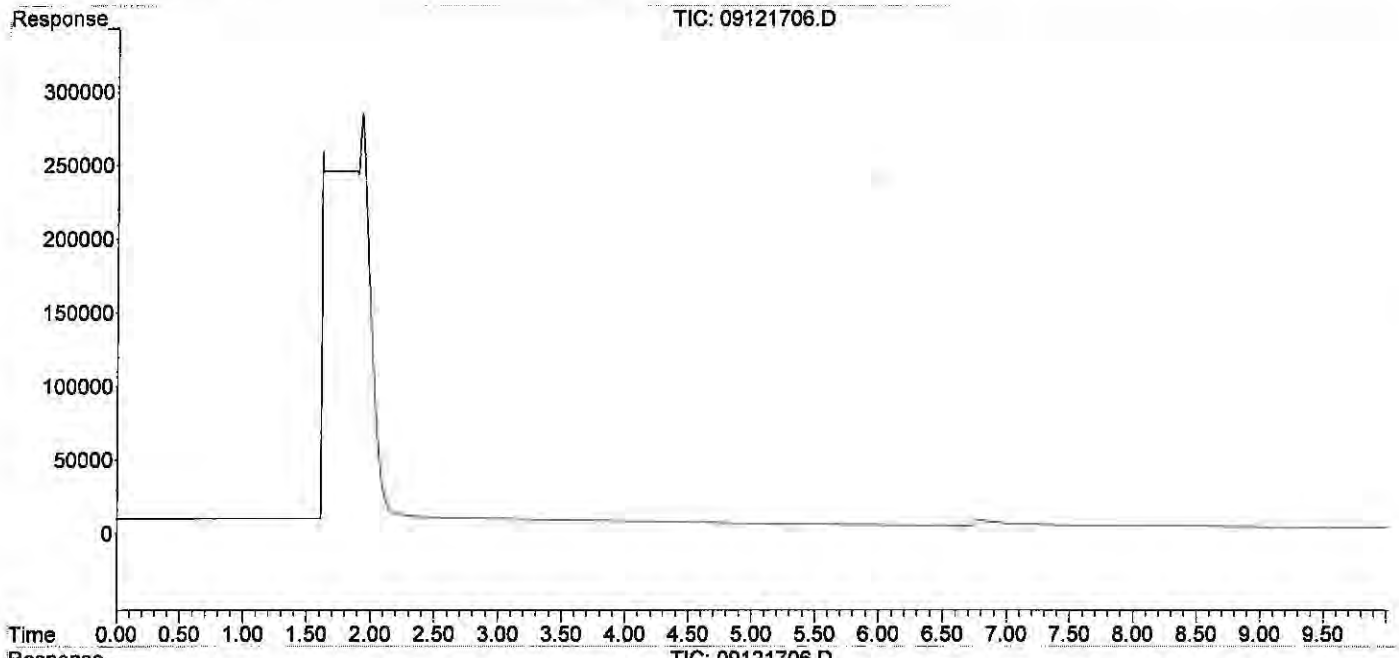
(f)=RT Delta > 1/2 Window (m)=manual int.

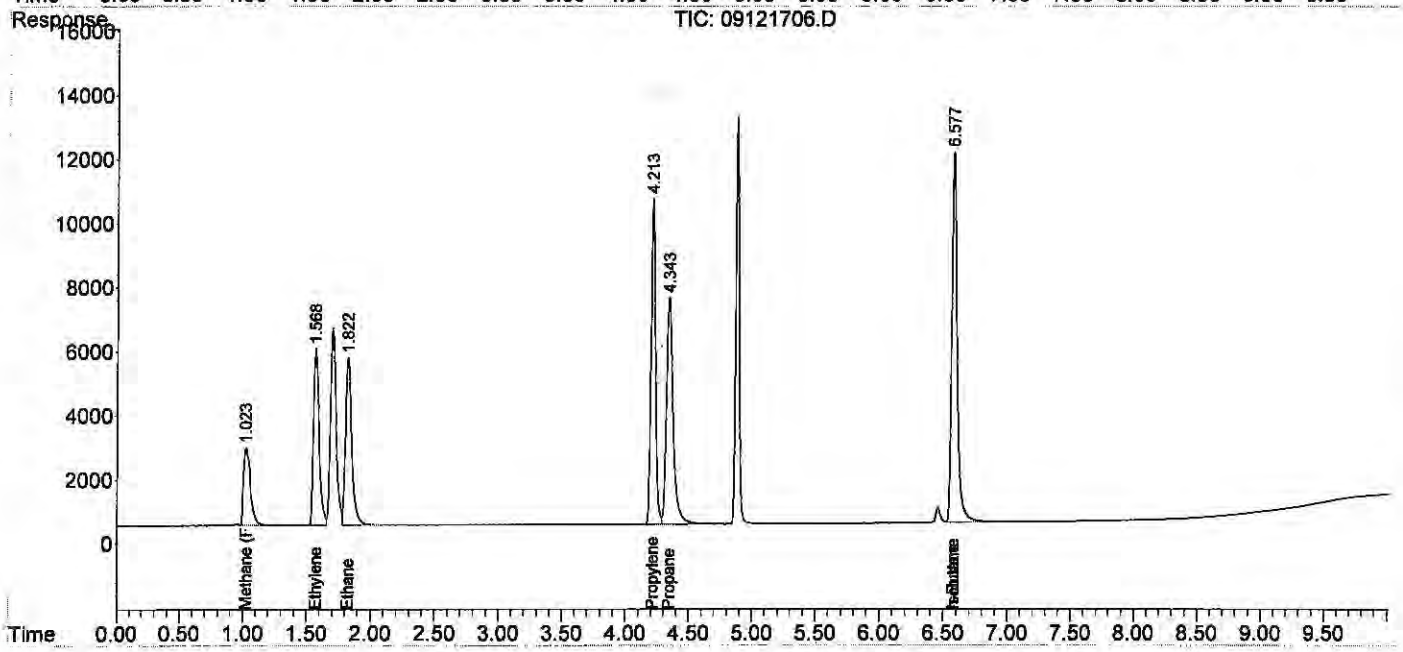
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

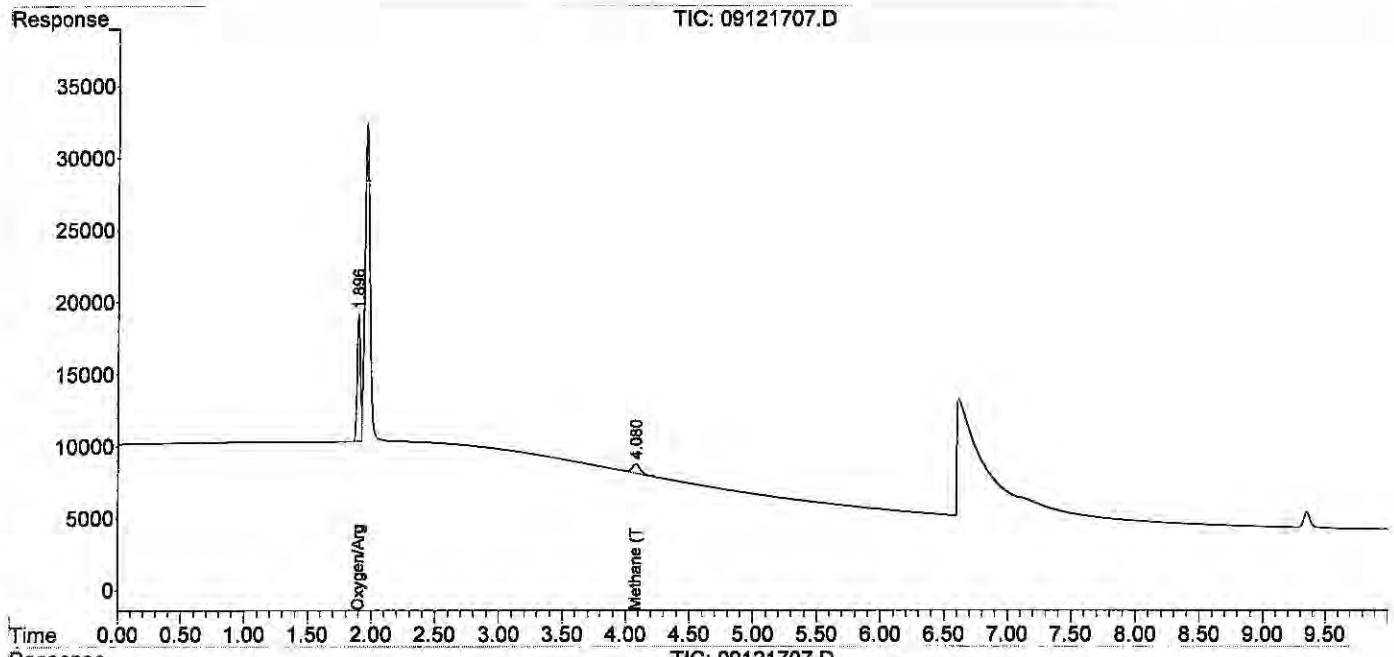
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.897	155286	0.065	ppm
2)	Carbon monoxide	1.897	155286	N.D.	ppm
3)	Methane (TCD)	4.079f	27015	2856.472	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.063	1735997	190.792	ppm
7)	Ethylene	1.597	3339702	198.758	ppm
8)	Ethane	1.849	3350442	194.597	ppm
9)	Propylene	4.201	4504060	185.706	ppm
10)	Propane	4.333	5043036	204.809	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

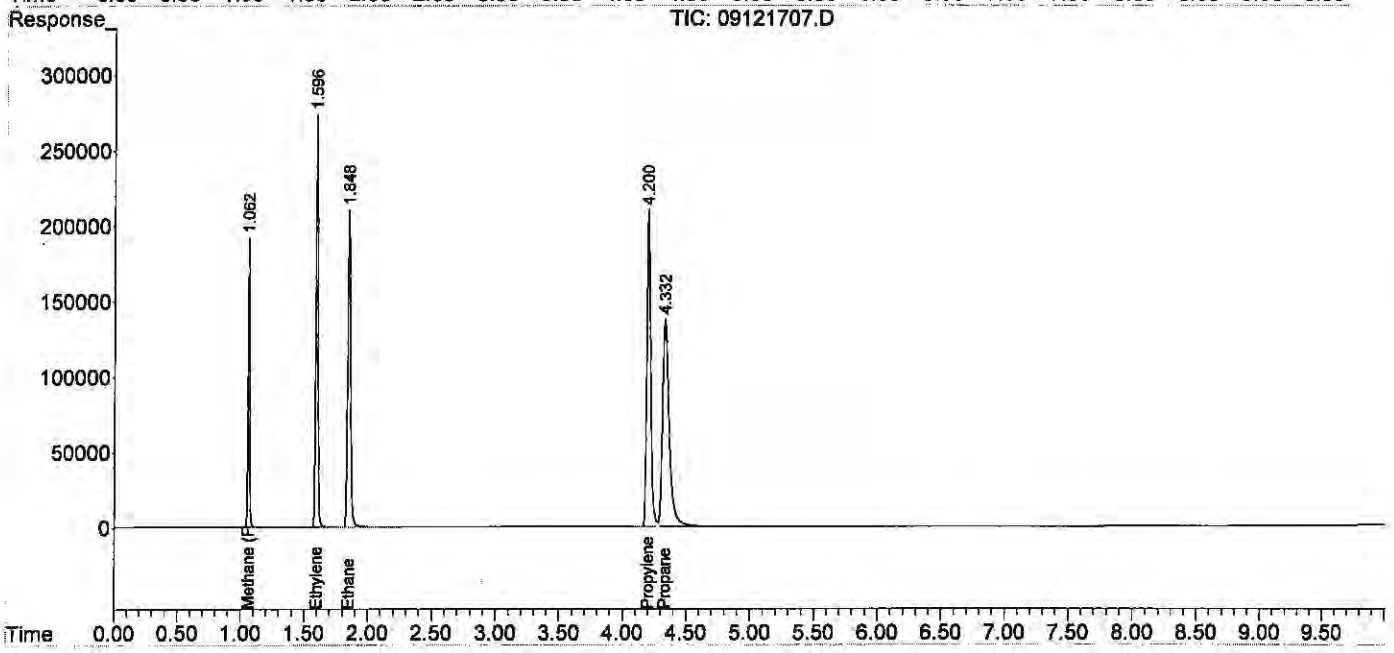
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.884	196022	0.124	ppm
2)	Carbon monoxide	1.884	196022	N.D.	ppm
3)	Methane (TCD)	4.070f	88282	782.730	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.044	5189849	539.759	ppm
7)	Ethylene	1.573	10007759	590.286	ppm
8)	Ethane	1.822	10048964	583.213	ppm
9)	Propylene	4.160	13569343	562.612	ppm
10)	Propane	4.300	15251326	615.171	ppm
11)	Isobutylene	6.143	9815	NoCal	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

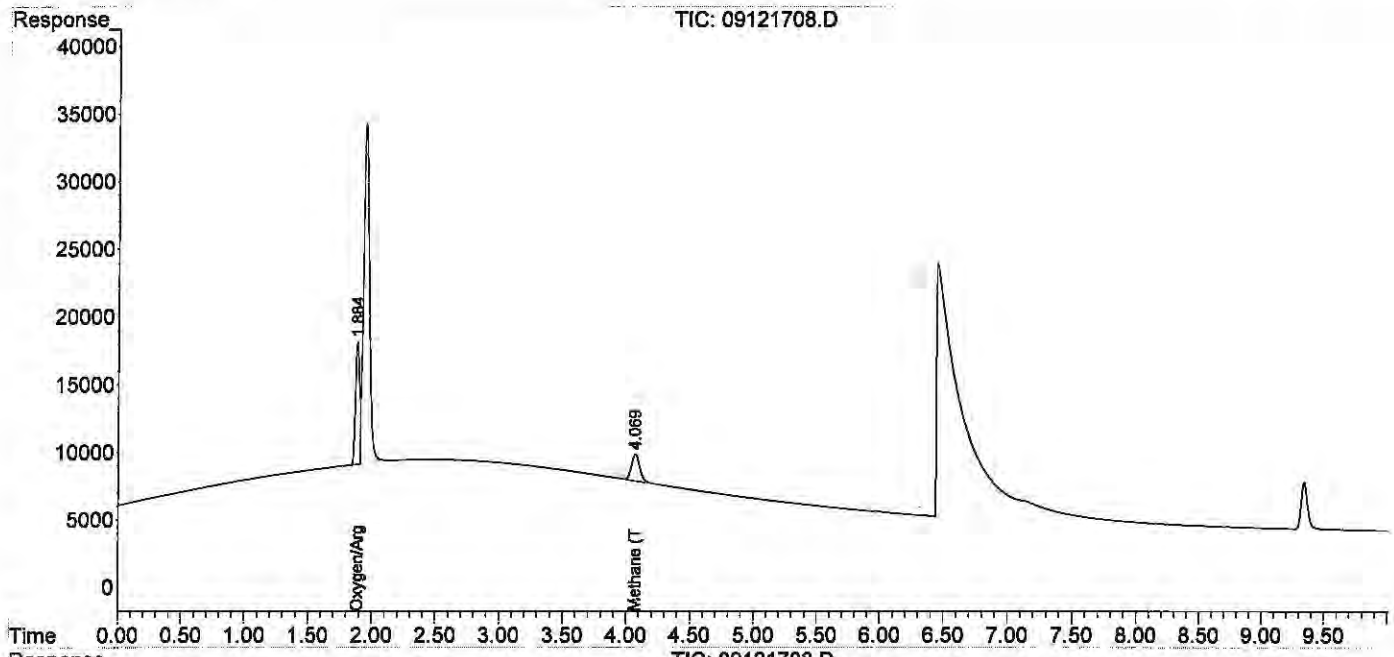
(f)=RT Delta > 1/2 Window (m)=manual int.

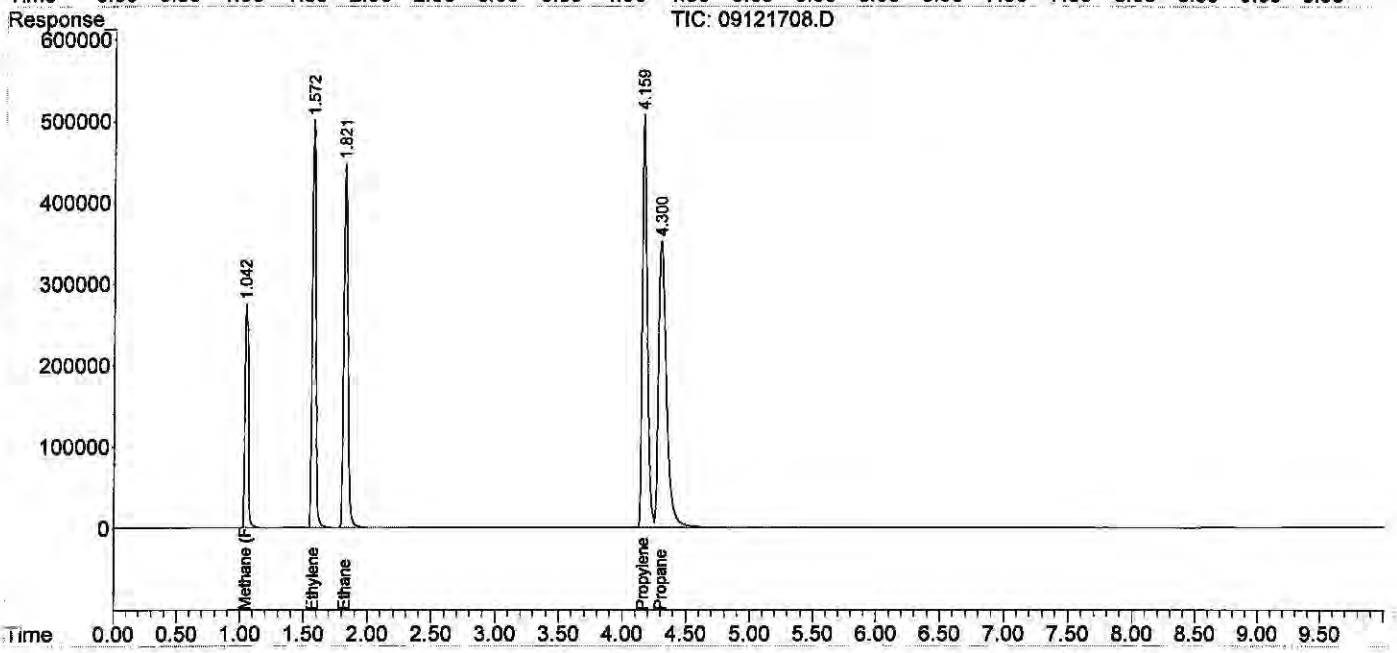
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

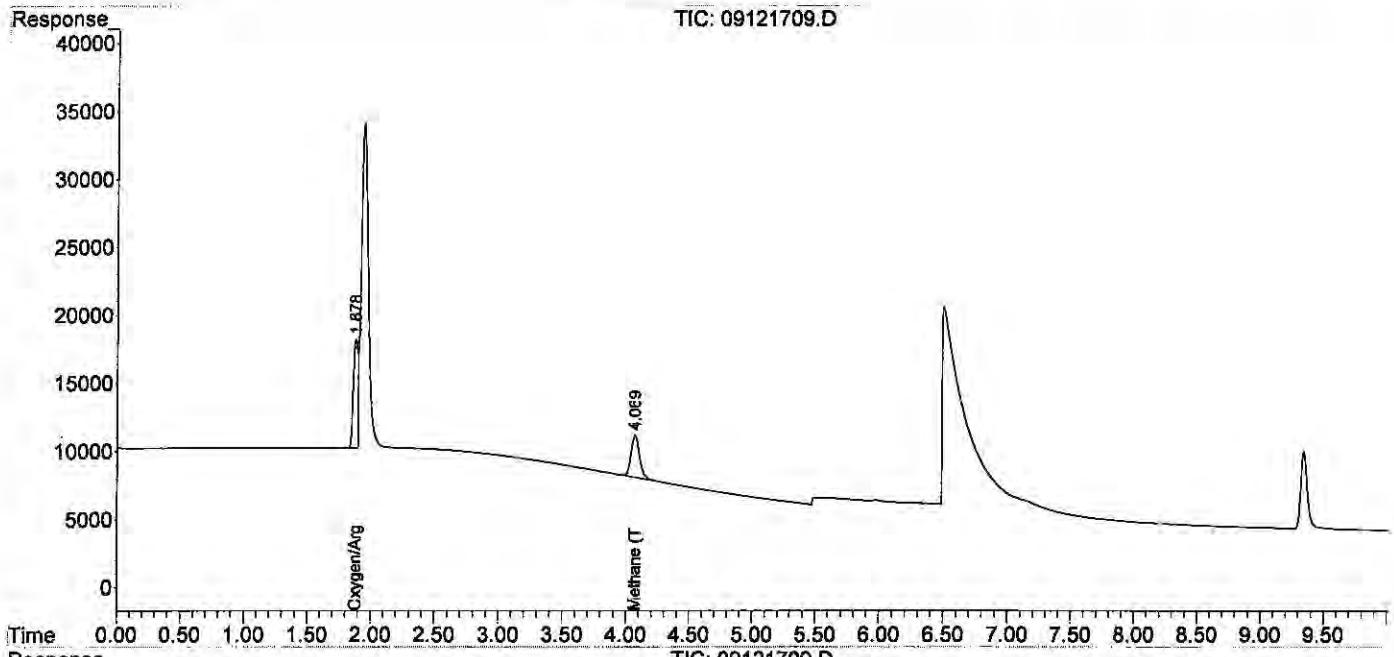
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.879	192611	0.162	ppm
2)	Carbon monoxide	1.879	192611	N.D.	ppm
3)	Methane (TCD)	4.070f	145492	1244.729	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.039	8598534	945.644	ppm
7)	Ethylene	1.576	16608504	981.887	ppm
8)	Ethane	1.827	16709165	973.644	ppm
9)	Propylene	4.161	22494888	941.060	ppm
10)	Propane	4.298	25459411	1023.223	ppm
11)	Isobutylene	6.138	16970	8645.243	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

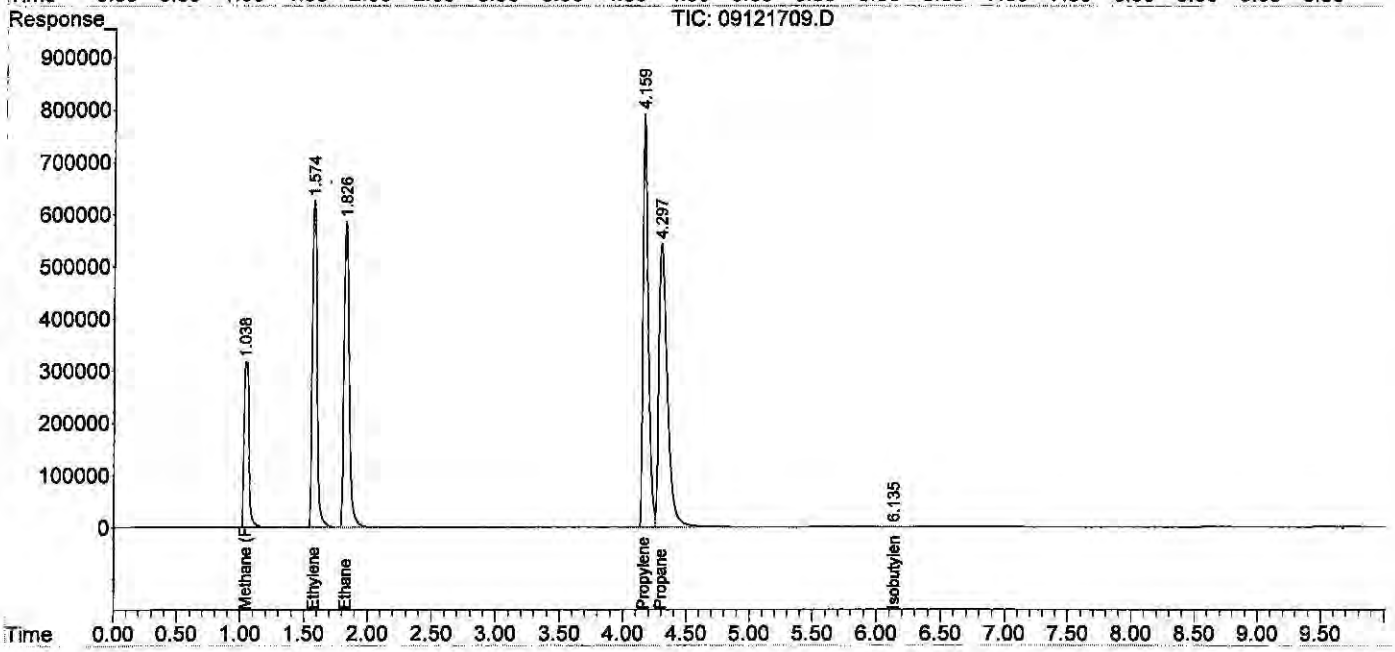
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

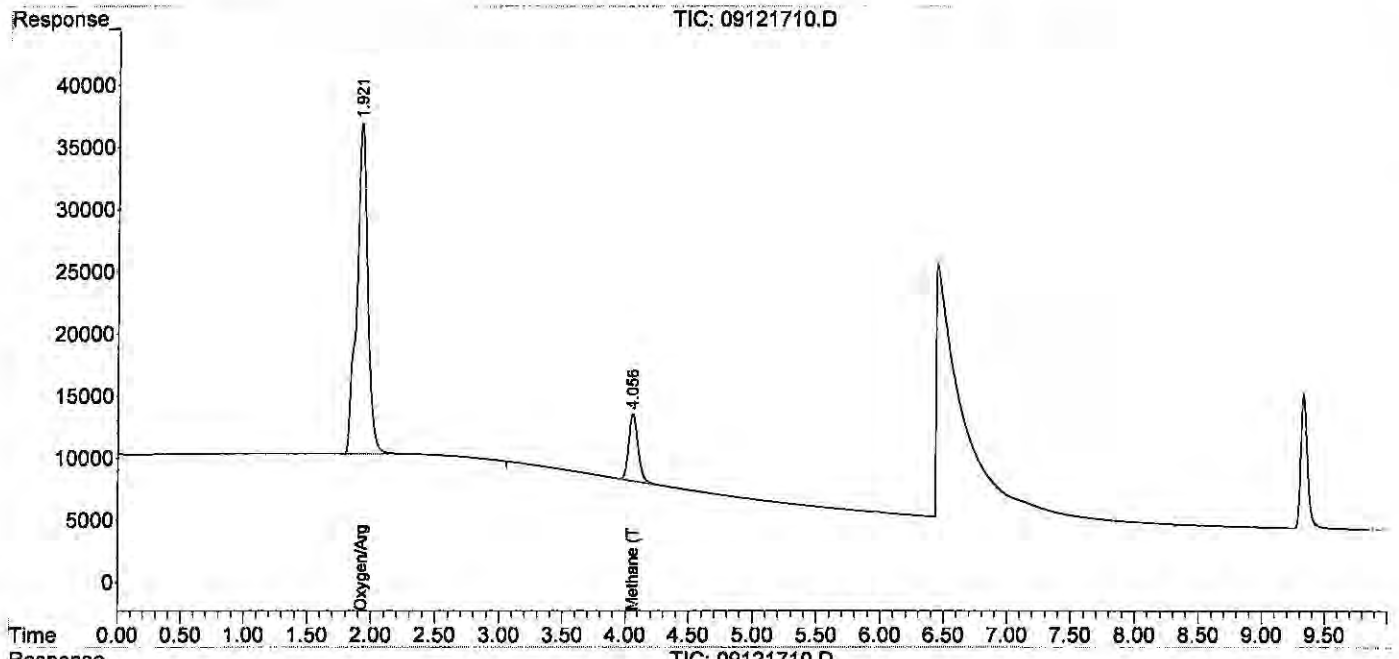
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.922f	1578147	1.659	ppm	
2)	Carbon monoxide	1.922f	1578147	N.D.	ppm	
3)	Methane (TCD)	4.057f	281651	3526.607	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.016	16098209	1763.622	ppm	
7)	Ethylene	1.552	31192444	1848.268	ppm	
8)	Ethane	1.801	31424218	1837.143	ppm	
9)	Propylene	4.129	42124690	1775.341	ppm	m
10)	Propane	4.269	48583085	1946.921	ppm	
11)	Isobutylene	6.136	33832	25613.603	ppm	
12)	Isobutane	6.576f	3845	0.120	ppm	
13)	n-Butane	6.576f	3845	0.120	ppm	

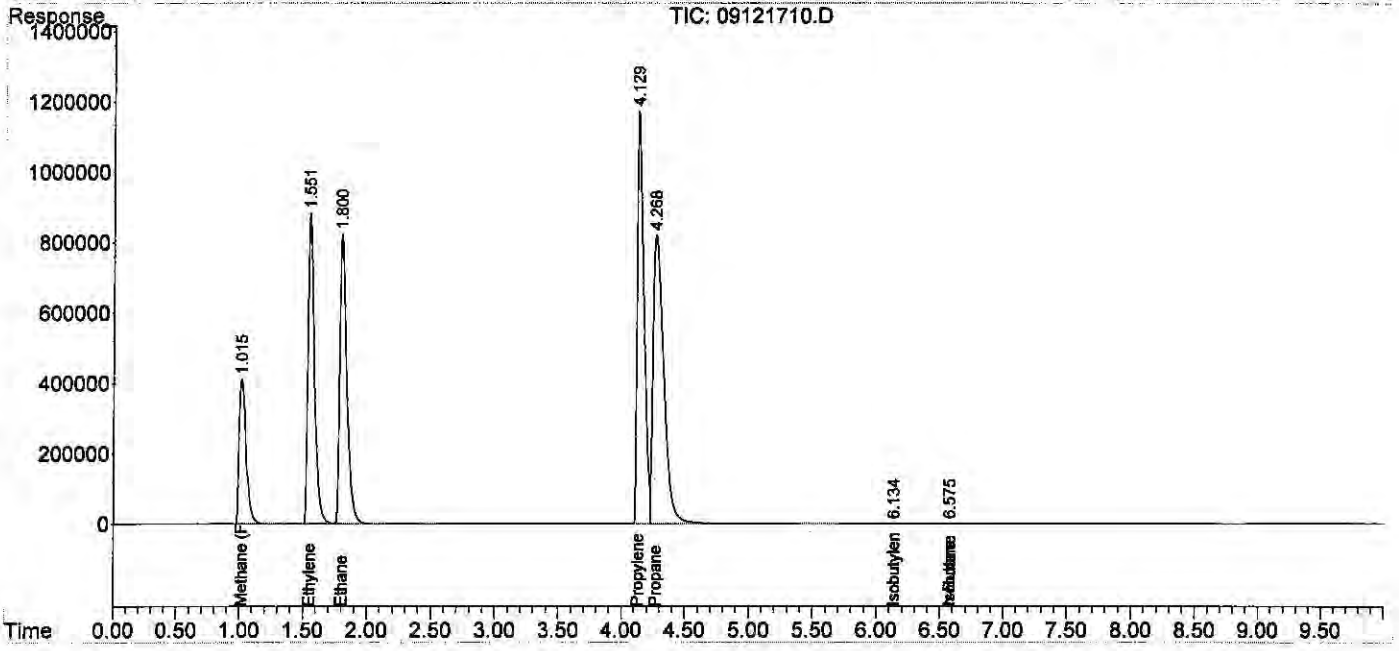
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



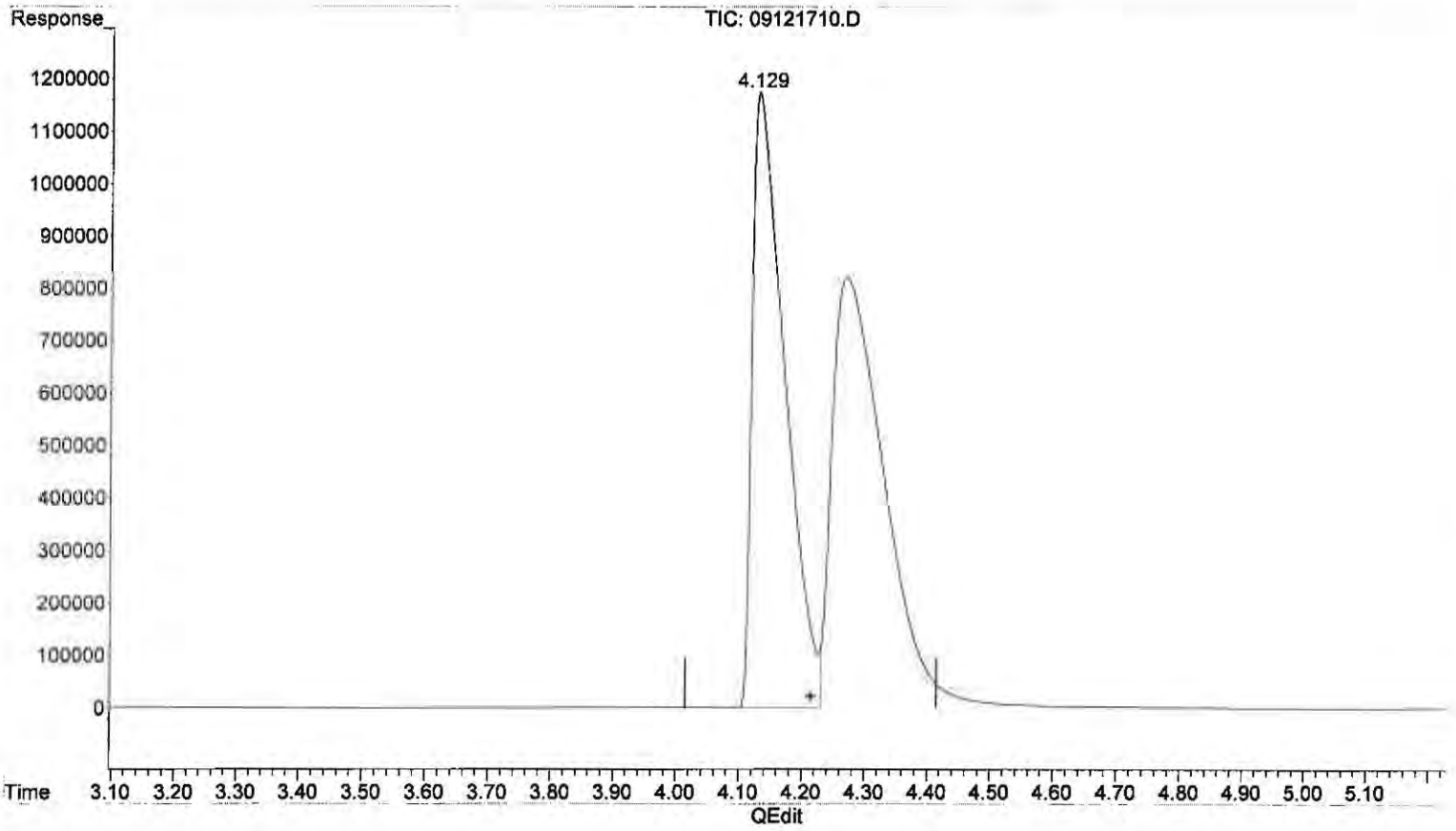


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



(9) Propylene
4.129min 1775.341 ppm m
response 42124690

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121711.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:48
Operator : MC
Sample : 4000ppm 0.1ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:13:37 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

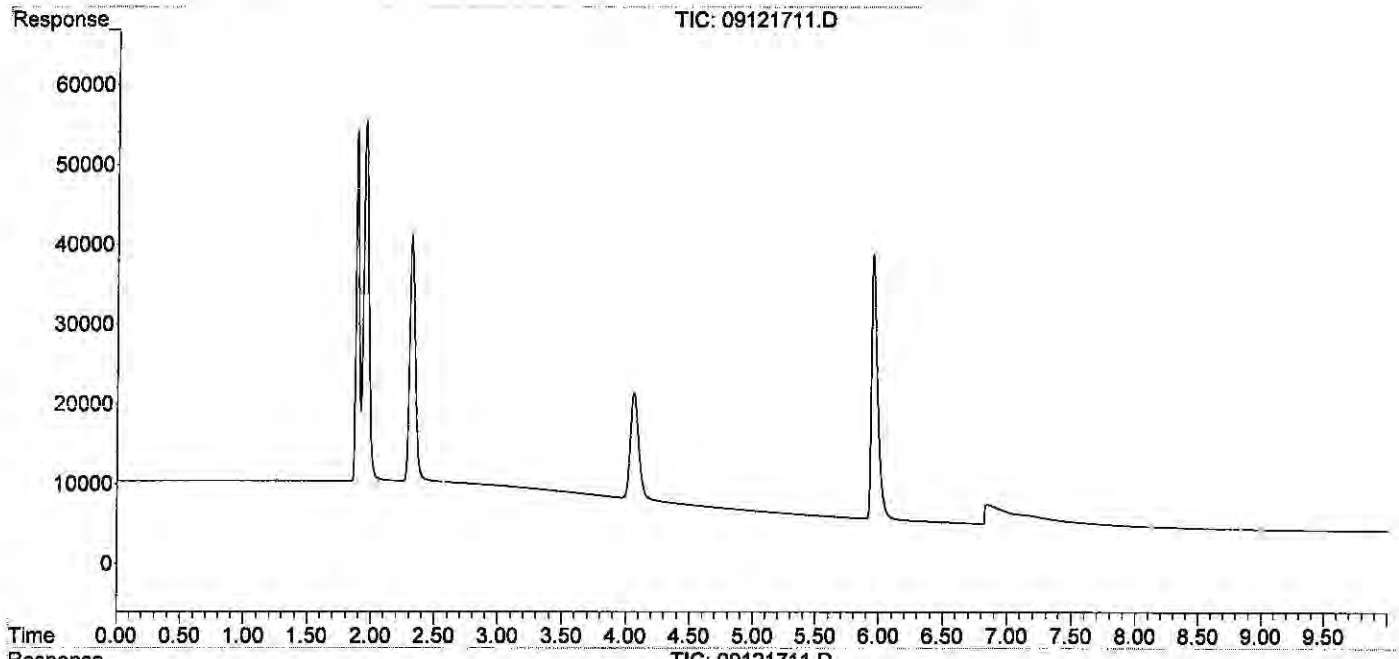
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.059	35776839	3925.122	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

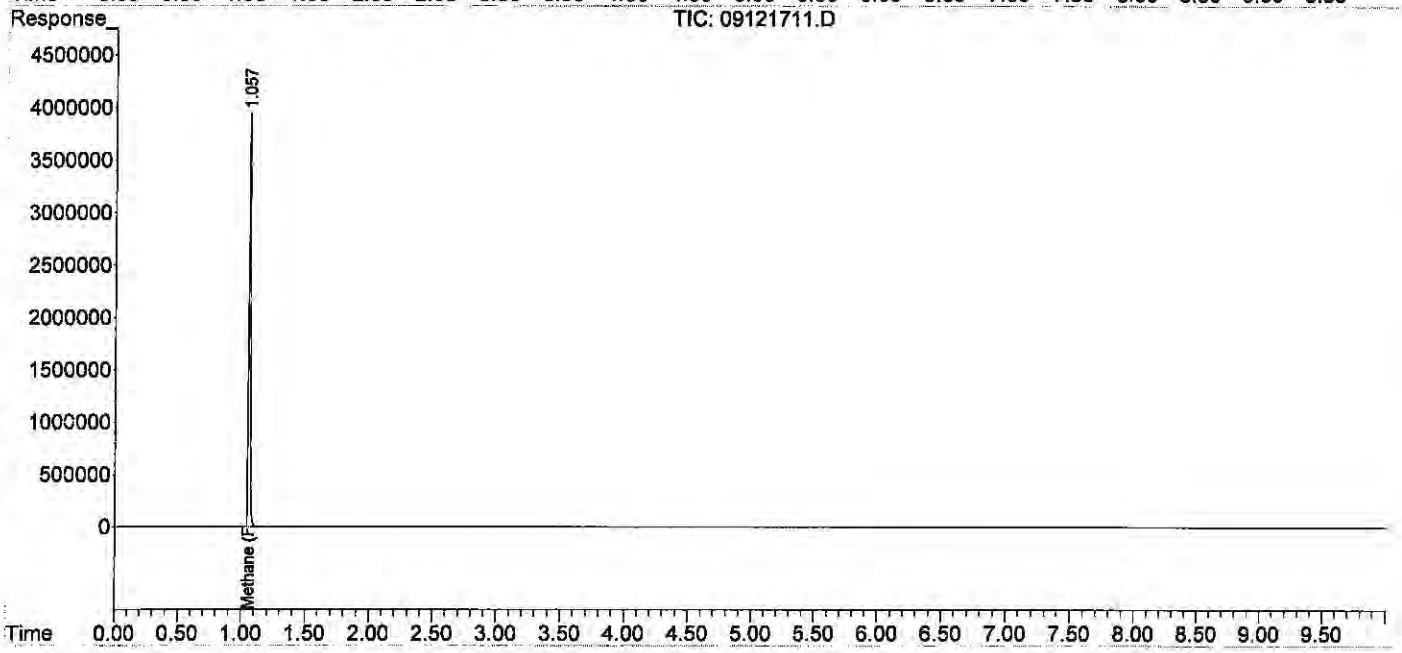
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121711.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:48
Operator : MC
Sample : 4000ppm 0.1ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:13:37 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121712.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 15:21
Operator : MC
Sample : 20000ppm 0.5ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:14:17 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.836	3190788	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.034	169009160	18492.064	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

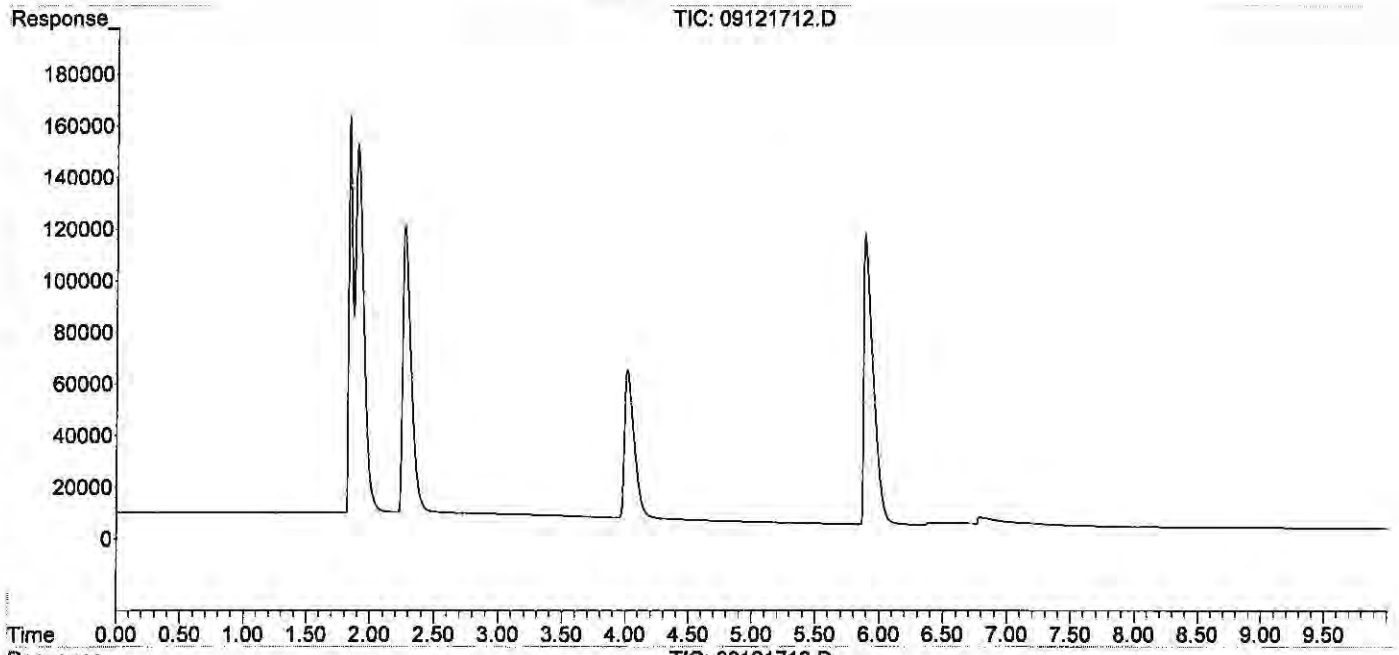
(f)=RT Delta > 1/2 Window (m)=manual int.

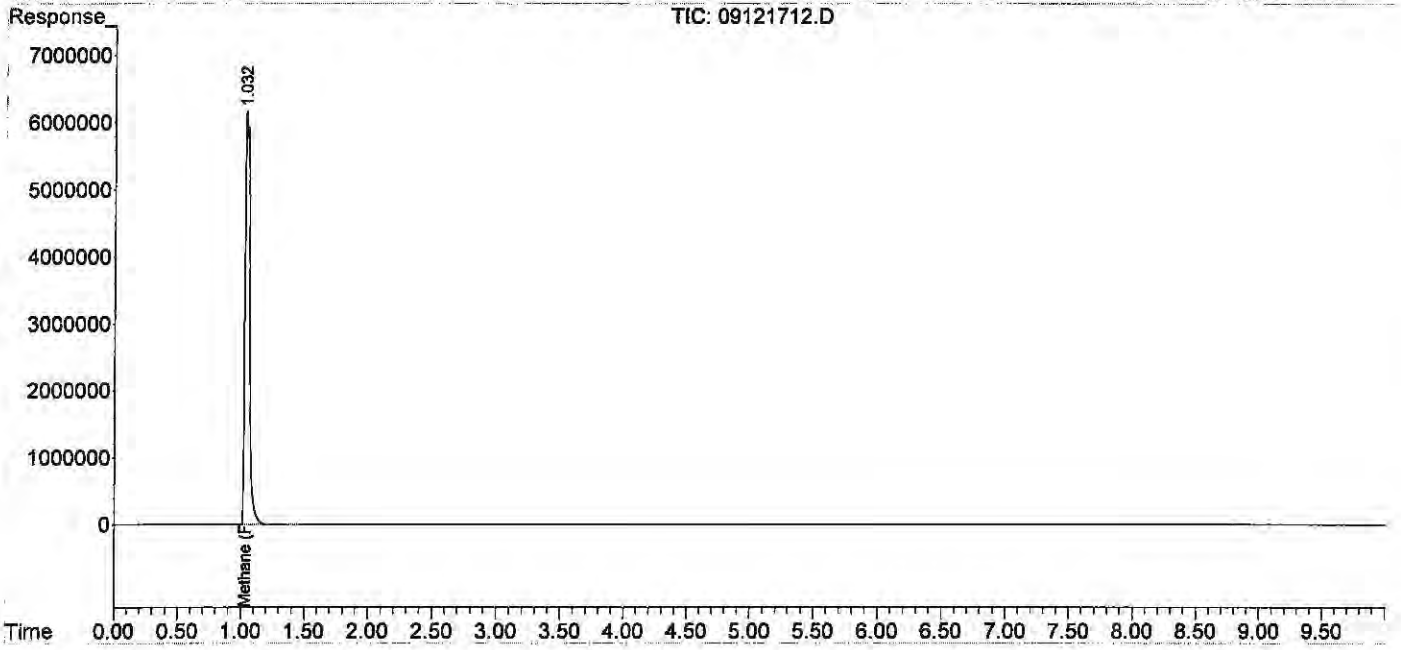
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121712.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 15:21
Operator : MC
Sample : 20000ppm 0.5ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:14:17 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 16:15
Operator : MC
Sample : icv s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:15:11 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.843	2922459	3.687	ppm	
2)	Carbon monoxide	1.843	2922459	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	actual %D
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.063	13748	1.516	ppm	1.50 101.1
7)	Ethylene	1.598	24153	1.443	ppm	1.50 96.2
8)	Ethane	1.850	24488	1.445	ppm	1.50 96.3
9)	Propylene	4.221	36004	1.537	ppm	1.50 102.5
10)	Propane	4.350	37738	1.517	ppm	1.51 100.5
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	48019	1.804	ppm	9/14/2
13)	n-Butane	6.579f	48019	1.804	ppm	

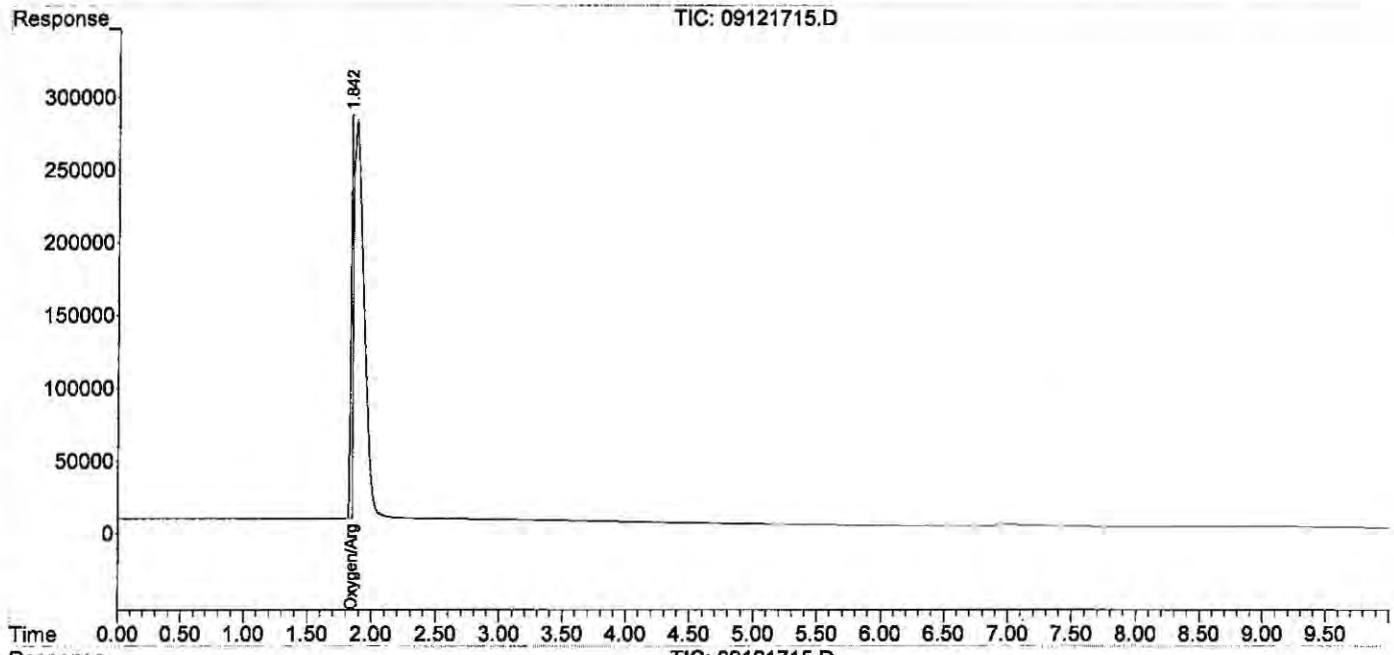
(f)=RT Delta > 1/2 Window (m)=manual int.

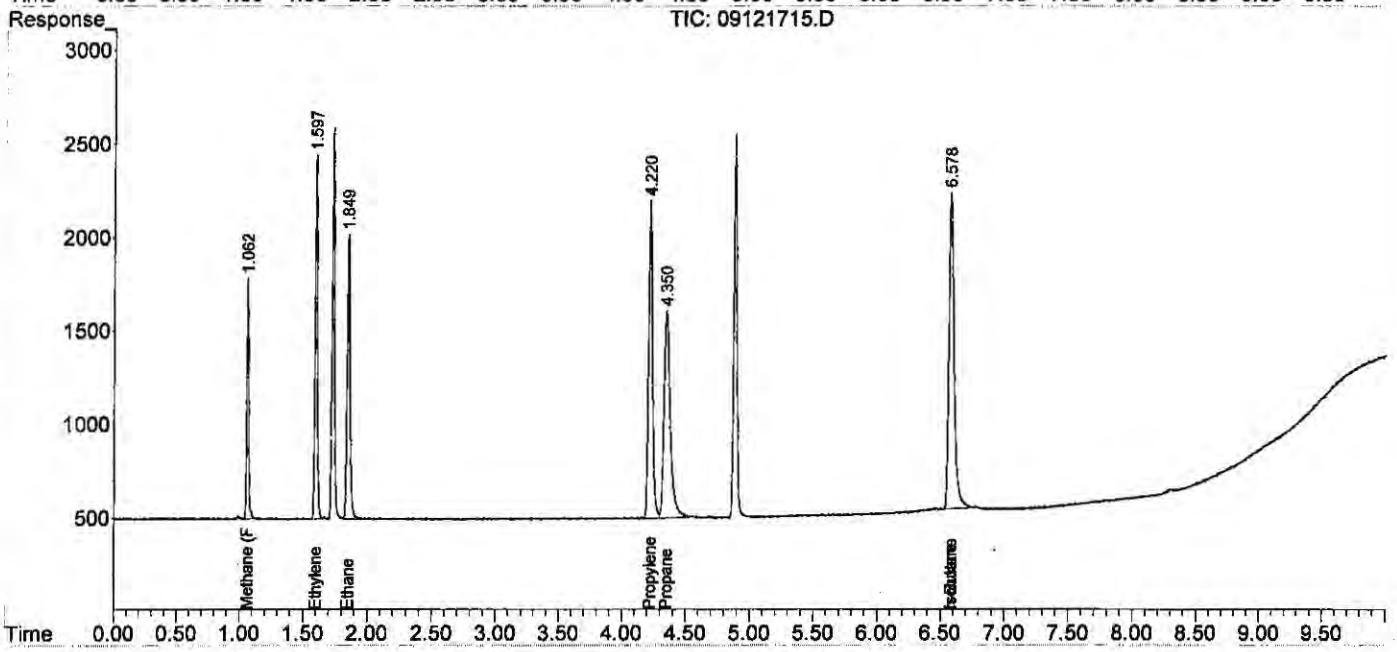
9/14/2017

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 16:15
Operator : MC
Sample : icv s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:15:11 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P1806638
Sample Vol. (ml) : 32.00 ml
Analyst : MR
Date Analysis : 12/12/18
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Methane	Ethylene	Ethane
std s32-07231801	0.100	1.500	1.439	1.424
ACTUAL		1.51	1.51	1.51
%Difference		0.7%	4.7%	5.7%
mcs 0.1ml	0.100	0.129	0.000	0.000
rb 0.1ml	0.100	0.141	0.000	0.000
fid lcs s30-05241604	0.100	1.599	1.070	1.315
fid lcsd s30-05241604	0.100	1.559	1.053	1.291
K1806638-001 0.1ml	0.100	0.088	0.000	0.000
K1806638-002 0.1ml	0.100	0.114	0.000	0.000

FINAL HEAD SPACE RESULT (ppm)

	Methane	Ethylene	Ethane
WWt.	16.04	28.05	30.07
HENRY'S CONSTANT	3.76E+04	1.02E+04	2.63E+04
RL	1.30	1.00	0.60
mcs 0.1ml	1.290	0.000	0.000
fid lcs s30-05241604	15.990	10.700	13.150
fid lcsd s30-05241604	15.590	10.530	12.910
K1806638-001 0.1ml	0.880	0.000	0.000
K1806638-002 0.1ml	1.140	0.000	0.000

std s32-07231801	1.510	1.519	1.513
ACTUAL	1.51	1.51	1.51
%Difference	0.0%	0.6%	0.2%

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121801.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 10:58:34
Operator : MR
Sample : std s32-07231801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 11:11:06 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.119	13605	1.500	ppm
7)	Ethylene	1.684	24088	1.439	ppm
8)	Ethane	1.949	24141	1.424	ppm
9)	Propylene	4.329	33605	1.434	ppm
10)	Propane	4.452	34961	1.405	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.663	45014	1.691	ppm
13)	n-Butane	6.663	45014	1.691	ppm

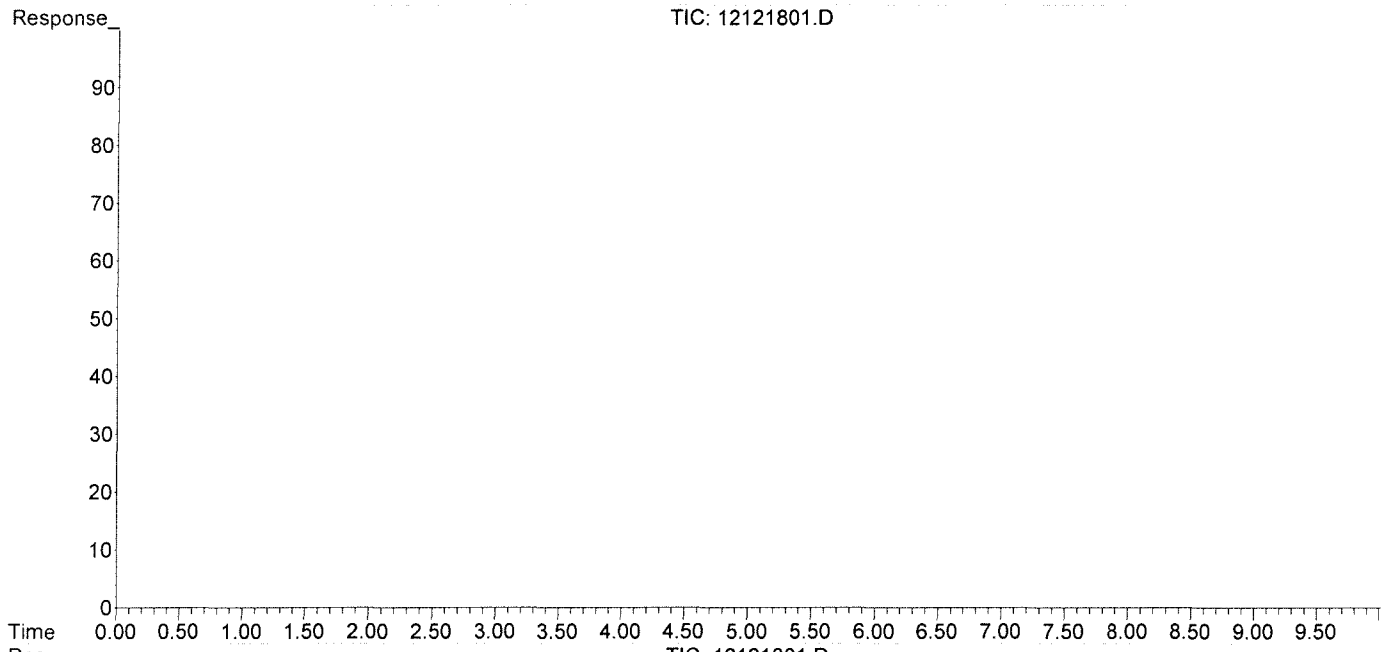
(f)=RT Delta > 1/2 Window (m)=manual int.

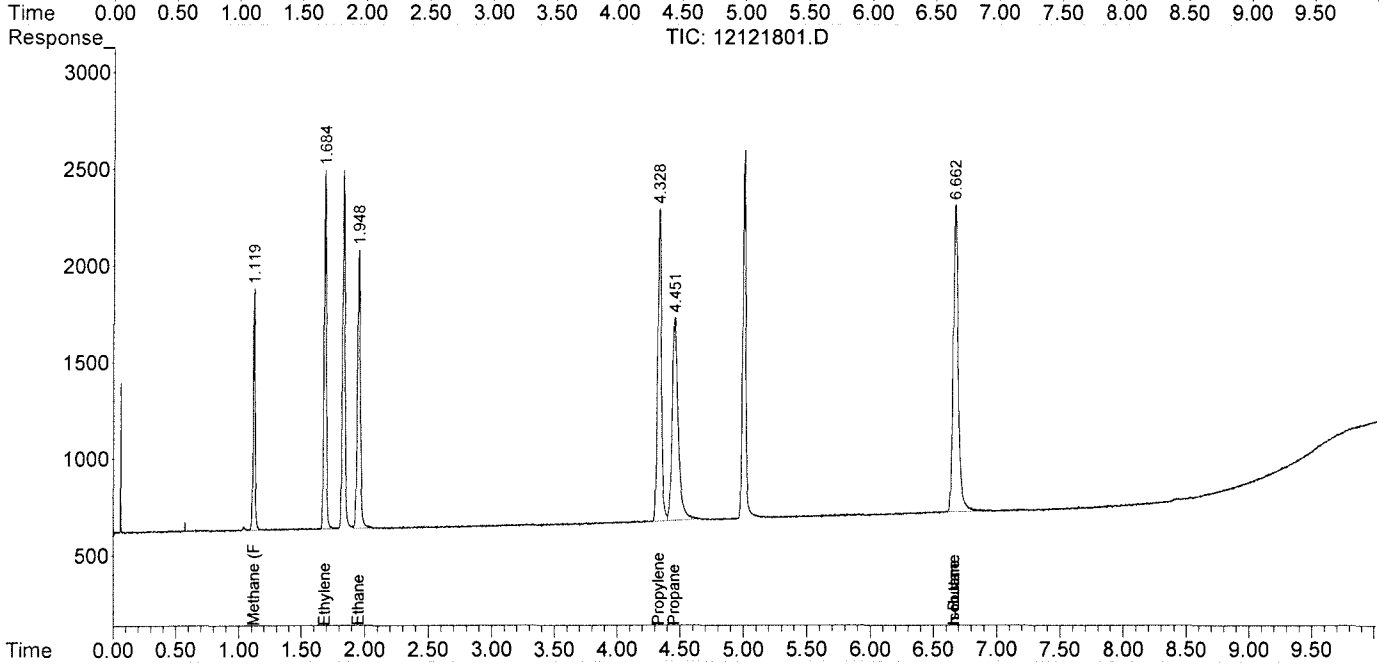
MR 12/13/18

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121801.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 10:58:34
Operator : MR
Sample : std s32-07231801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 11:11:06 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121819.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 16:12:07
Operator : MR
Sample : std s32-07231801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 16:20:30 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

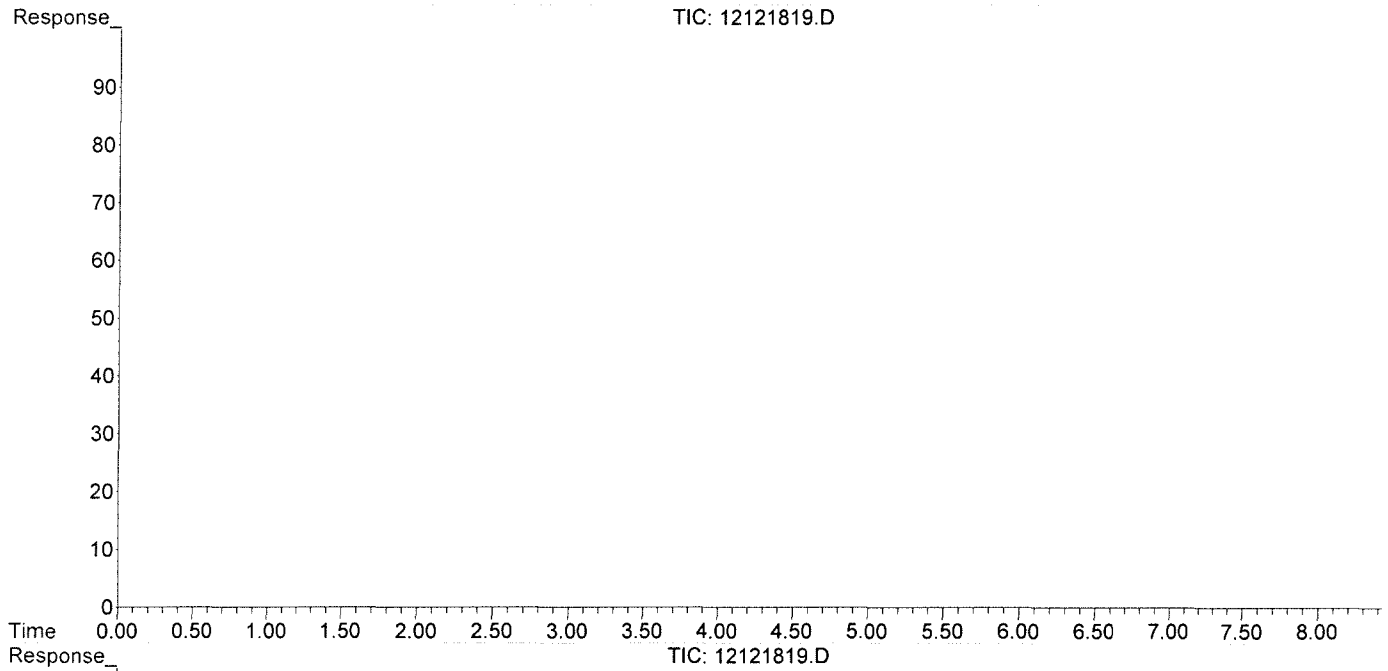
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.121	13698	1.510	ppm
7)	Ethylene	1.686	25415	1.519	ppm
8)	Ethane	1.951	25641	1.513	ppm
9)	Propylene	4.329	36411	1.554	ppm
10)	Propane	4.453	37812	1.520	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.664	52336	1.966	ppm
13)	n-Butane	6.664	52336	1.966	ppm

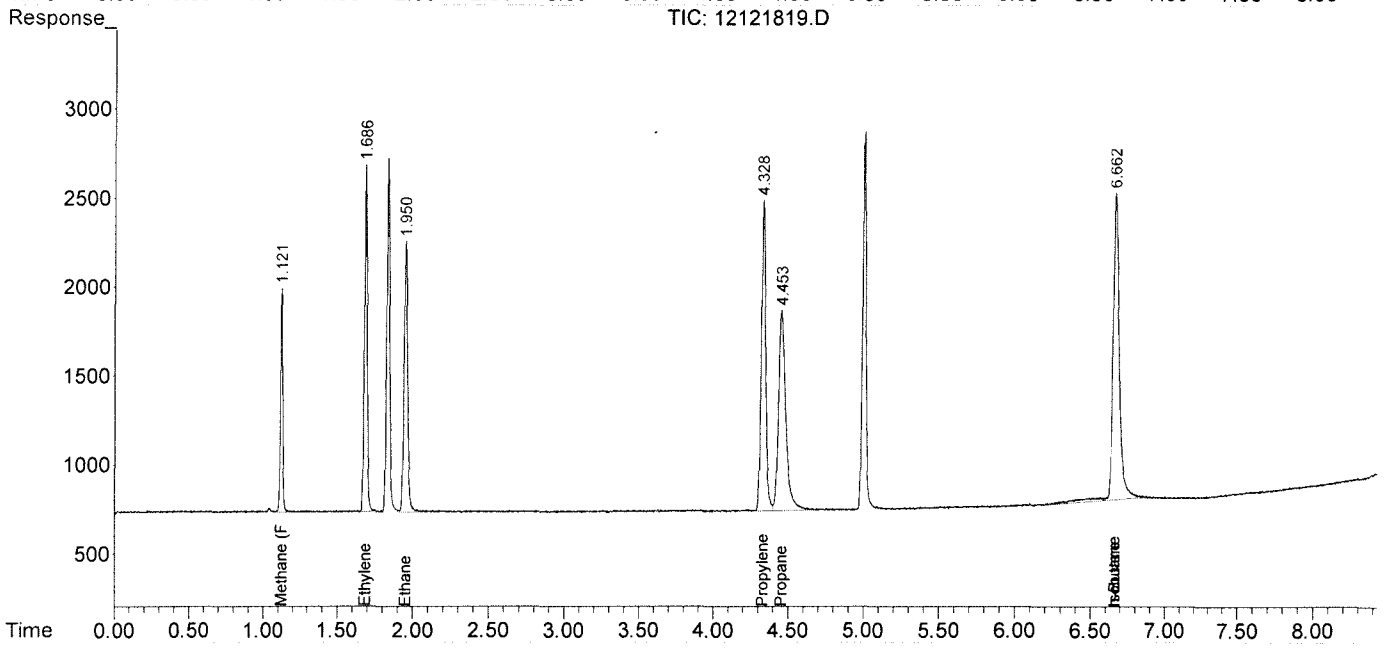
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2018_12\12\
Data File : 12121819.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Dec-2018, 16:12:07
Operator : MR
Sample : std s32-07231801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Dec 12 16:20:30 2018
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_09\12\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	12-Sep-17, 08:38:08	09121701.D	test		MC	RSKBOTH.M	
2	12-Sep-17, 10:52:40	09121702.D	0.151ppm 0.250ml s32-09121702		MC	RSKBOTH.M	Curve
3	12-Sep-17, 11:05:49	09121703.D	0.302ppm 0.5ml s32-09121702		MC	RSKBOTH.M	Curve
4	12-Sep-17, 11:45:34	09121704.D	1.51ppm 0.1ml s32-09051701		MC	RSKBOTH.M	Curve
5	12-Sep-17, 12:09:33	09121705.D	4.53ppm 0.3ml s32-09051701		MC	RSKBOTH.M	Curve
6	12-Sep-17, 12:30:23	09121706.D	10.57ppm 0.7ml s32-09051701		MC	RSKBOTH.M	Curve
7	12-Sep-17, 12:47:18	09121707.D	200ppm 0.1ml s32-09121701		MC	RSKBOTH.M	Curve
8	12-Sep-17, 13:00:22	09121708.D	600ppm 0.3ml s32-09121701		MC	RSKBOTH.M	Curve
9	12-Sep-17, 13:47:48	09121709.D	1000ppm 0.5ml s32-09121701		MC	RSKBOTH.M	Curve
10	12-Sep-17, 14:07:58	09121710.D	2000ppm 1ml s32-09121701		MC	RSKBOTH.M	Curve
11	12-Sep-17, 14:48:48	09121711.D	4000ppm 0.1ml s32-08231701		MC	RSKBOTH.M	Curve
12	12-Sep-17, 15:21:51	09121712.D	20000ppm 0.5ml s32-08231701		MC	RSKBOTH.M	Curve
13	12-Sep-17, 15:38:59	09121713.D	mb 0.5ml		MC	RSKBOTH.M	Pass
14	12-Sep-17, 15:55:35	09121714.D	mb 0.1ml		MC	RSKBOTH.M	Pass
15	12-Sep-17, 16:15:26	09121715.D	icv s30-05241604		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2018_12\12\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	12-Dec-18, 10:58:34	12121801.D	std s32-07231801		MR	RSKBOTH.M	pass
2	12-Dec-18, 11:12:41	12121802.D	rb 0.1ml		MR	RSKBOTH.M	pass
3	12-Dec-18, 11:31:04	12121803.D	mcs 0.1ml		MR	RSKBOTH.M	pass
4	12-Dec-18, 11:44:40	12121804.D	fid lcs s30-05241604		MR	RSKBOTH.M	pass
5	12-Dec-18, 11:57:17	12121805.D	fid lcsd s30-05241604		MR	RSKBOTH.M	pass
6	12-Dec-18, 12:09:38	12121806.D	K1811789-002 0.1ml		MR	RSKBOTH.M	
7	12-Dec-18, 12:23:03	12121807.D	K1811789-003 0.1ml		MR	RSKBOTH.M	
8	12-Dec-18, 12:45:46	12121808.D	K1811789-004 0.1ml		MR	RSKBOTH.M	
9	12-Dec-18, 13:28:39	12121809.D	K1811789-005 0.1ml		MR	RSKBOTH.M	
10	12-Dec-18, 13:41:55	12121810.D	K1811789-006 0.1ml		MR	RSKBOTH.M	
11	12-Dec-18, 13:55:12	12121811.D	K1811789-008 0.1ml		MR	RSKBOTH.M	
12	12-Dec-18, 14:08:03	12121812.D	std s32-07231801		MR	RSKBOTH.M	pass
13	12-Dec-18, 14:23:07	12121813.D	K1811783-001 0.1		MR	RSKBOTH.M	
14	12-Dec-18, 14:37:06	12121814.D	K1811783-002 0.1		MR	RSKBOTH.M	
15	12-Dec-18, 15:00:44	12121815.D	K1811783-003 0.1		MR	RSKBOTH.M	
16	12-Dec-18, 15:19:46	12121816.D	K1811783-004 0.1		MR	RSKBOTH.M	
17	12-Dec-18, 15:32:52	12121817.D	K1806638-001 0.1		MR	RSKBOTH.M	
18	12-Dec-18, 15:52:05	12121818.D	K1806638-002 0.1		MR	RSKBOTH.M	
19	12-Dec-18, 16:12:07	12121819.D	std s32-07231801		MR	RSKBOTH.M	pass

Case Narrative

Method: 6850
Analysis: Perchlorate
Analysis SOP: LC-MS-CLO4
ALS WO ID(s): 1833461; 1833875; 1833980

Client: ALS Laboratories (Houston, TX)
Matrix: Water
ELMS Batch (HBN): 2179 (229053)

General Set Information: There were twenty field samples in these Work Orders. The samples were analyzed for perchlorate.

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1100 LC/MSD system in select ion monitoring (SIM) mode at m/z 83 and 85, which corresponds to the loss of one oxygen atom from the perchlorate molecule. ChemStation software was used for instrument control and data analysis. The ion ratio of m/z 83 to 85 was used to positively identify the response peak as perchlorate. Quantitation was performed using the m/z 83 peak area. An internal standard (ISTD) of ^{18}O labeled perchlorate was added to each sample to establish the perchlorate peak retention time and used in quantitation.

Sample Preparation: A 10.0mL aliquot of each sample was transferred into a 15-mL centrifuge tube. 50µL of an ^{18}O labeled perchlorate solution was added to each sample as an internal standard. The samples were then capped, vortexed, and filtered into autosampler vial using Phenex PES membrane 0.45µm Syringe filters.

Holding Times: Holding times were met for all analyses.

Dilutions: Field samples 1833461004/05 and 1833875002 were analyzed and reported from 1:100 dilutions. Field sample 1833461006 was analyzed and reported from 1:10,000 dilution. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 631667) was less than 1/2 the CRDL. The recovery for the LCS (631668) was within acceptable parameters.

MS/MSD Analysis: MS/MSD was performed on samples 1833461002/03 (Client ID: 50WW16-181128). 5.0µl of Working Standard Solution Horizon ID 43701 was added to 10.0mL of sample preparation. The spike target was 5.µg/L. The MS/MSD percent recoveries and relative percent difference (RPD) were within the performance limits.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with published procedures.

NC/CAR(s): NA

Sample Calculation: Samples were reported in µg/L. Results were calculated in µg/L by the equation (A)x(B),

where: A = Analyte concentration from the standard curve (µg/L)
B = Dilution performed at time of analysis

Miscellaneous Comments: These samples were analyzed in accordance with the requirements found in the DOD QSM Version 5.1.1.

Thomas Bosch December 13, 2018
Analyst Date

ANALYTICAL REPORT

Report Date: December 13, 2018

RJ Modashia
ALS Environmental (Houston)
10450 Stancliff Road
Suite 210
Houston, TX 77099

Phone: 281 530-5656

E-mail: RJ.Modashia@ALSGlobal.com

Workorder: **34-1833980**

Project ID: HS18120114
Purchase Order: HS18120114
Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
50WW18-181130	1833980001	11/30/18	12/05/18	
50WW17-181130	1833980002	11/30/18	12/05/18	
50WW24-181130	1833980003	11/30/18	12/05/18	
50WW21-181130	1833980004	11/30/18	12/05/18	
50WW15-181130	1833980005	11/30/18	12/05/18	
50WW23-181203	1833980006	12/03/18	12/05/18	
50WW22-181203	1833980007	12/03/18	12/05/18	
50WW05-181203	1833980008	12/03/18	12/05/18	
50WW27-181203	1833980009	12/03/18	12/05/18	
50WW27-181203FD	1833980010	12/03/18	12/05/18	
50WW09-181203	1833980011	12/03/18	12/05/18	
50WW10-181203	1833980012	12/03/18	12/05/18	

ANALYTICAL REPORT

Workorder: 34-1833980
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **50WW18-181130** | Sampling Site: NA | Collected: 11/30/2018
Lab ID: 1833980001 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable | **Analysis:** EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 11:29 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **50WW17-181130** | Sampling Site: NA | Collected: 11/30/2018
Lab ID: 1833980002 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable | **Analysis:** EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 11:43 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **50WW24-181130** | Sampling Site: NA | Collected: 11/30/2018
Lab ID: 1833980003 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable | **Analysis:** EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 12:24 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **50WW21-181130** | Sampling Site: NA | Collected: 11/30/2018
Lab ID: 1833980004 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable | **Analysis:** EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 12:38 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

ANALYTICAL REPORT

Workorder: 34-1833980
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **50WW15-181130** | Sampling Site: NA | Collected: 11/30/2018
Lab ID: 1833980005 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 12:52 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **50WW23-181203** | Sampling Site: NA | Collected: 12/03/2018
Lab ID: 1833980006 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 13:06 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **50WW22-181203** | Sampling Site: NA | Collected: 12/03/2018
Lab ID: 1833980007 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 13:19 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **50WW05-181203** | Sampling Site: NA | Collected: 12/03/2018
Lab ID: 1833980008 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 13:33 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

ANALYTICAL REPORT

Workorder: 34-1833980
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **50WW27-181203** | Sampling Site: NA | Collected: 12/03/2018
Lab ID: 1833980009 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 13:47 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **50WW27-181203FD** | Sampling Site: NA | Collected: 12/03/2018
Lab ID: 1833980010 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 14:01 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **50WW09-181203** | Sampling Site: NA | Collected: 12/03/2018
Lab ID: 1833980011 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 14:14 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **50WW10-181203** | Sampling Site: NA | Collected: 12/03/2018
Lab ID: 1833980012 | Media: 125 mL Nalgene | Received: 12/05/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2179 (HBN: 229053) | **Percent Solid:** NA
Analyzed: 12/11/2018 14:28 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

ANALYTICAL REPORT

Workorder: 34-1833980
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Comments

Quality Control: EPA 6850, DoD QSM - (HBN: 229053)

Field samples 1833461004/05 and 1833875002 were analyzed and reported from 1:100 dilutions. Field sample 1833461006 was analyzed and reported from 1:10,000 dilution. The reporting limits have been adjusted accordingly.

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
EPA 6850, DoD QSM	/S/ Thomas Bosch 12/12/2018 10:58	/S/ Stephen Brose 12/13/2018 14:23

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body	Certificate Number	Website
Environmental	PJLA (DoD ELAP)		
	Utah (TNI)		
	Nevada		
	Oklahoma		
	Iowa		

ANALYTICAL REPORT

Workorder: 34-1833980
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1833980

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850, DoD QSM
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2179 (HBN: 229053)
		Prepared By:	NA	**Analyzed By:**	Thom as Bosch

Blank

LMB: 631667
Analyzed: 12/11/2018 08:44
Units: ug/L

Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 631668
Analyzed: 12/11/2018 08:57
Dilution: 1
Units: ug/L

Analyte	Result	Target	% Rec	QC Limits	
Perchlorate	4.58	5.00	91.6	78.8	123.8

Matrix Spike - Matrix Spike Duplicate

Sample: 1833461001	**MS:** 1833461002	**MSD:** 1833461003
Analyzed: 12/11/2018 09:11	**Analyzed:** 12/11/2018 09:25	**Analyzed:** 12/11/2018 09:39
Dilution: 1	**Dilution:** 1	**Dilution:** 1
Units: ug/L	**Units:** ug/L	**Units:** ug/L

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Perchlorate	ND	4.85	5	97.0	78.8	123.8	5.01	100	3.24	0.0	20.0

Continuing Calibration Verification

CCV: 631664	**CCV:** 631669	**CCV:** 631671
Analyzed: 12/11/2018 08:01	**Analyzed:** 12/11/2018 11:57	**Analyzed:** 12/11/2018 14:42
Units: ug/L	**Units:** ug/L	**Units:** ug/L
Criteria: ± 15%	**Criteria:** ± 15%	**Criteria:** ± 15%

Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	25.8	25.0	103	23.6	25.0	94.3	23.8	25.0	95.3

Interference Check Sample

ICSA: 631666
Analyzed: 12/11/2018 08:30
Units: ug/L
Criteria: ± 30%

Analyte	Result	Target	% Rec.
Perchlorate	1.11	1.00	111

Limit of Detection Verification

LODV: 631665	**LODV:** 631670	**LODV:** 631672
Analyzed: 12/11/2018 08:16	**Analyzed:** 12/11/2018 12:10	**Analyzed:** 12/11/2018 14:56
Units: ug/L	**Units:** ug/L	**Units:** ug/L
Criteria: ± 50%	**Criteria:** ± 50%	**Criteria:** ± 50%

Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	1.08	1.00	108	0.932	1.00	93.2	1.01	1.00	101

Quality Control Sample Batch Report

Analysis Information

Workorder: 1833980

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850, DoD QSM
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2179 (HBN: 229053)
		Prepared By:	NA	**Analyzed By:**	Thom as Bosch

Comments

Field samples 1833461004/05 and 1833875002 were analyzed and reported from 1:100 dilutions. Field sample 1833461006 was analyzed and reported from 1:10,000 dilution. The reporting limits have been adjusted accordingly.

QC Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Analyst	Peer Review
/S/ Thomas Bosch	/S/ Stephen Brose
12/12/2018 10:58	12/13/2018 14:23

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit
⬣ - Result is above the calibration range
- The Matrix Spike, Matrix Spike duplicate or Matrix Duplicate is reported for your information only. The sample matrix may be inappropriate for the method selected.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected (U - Qualifier also flags analyte as not detected)
NA - Not Applicable
QC results are not adjusted for moisture correction, where applicable

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

18698/#2

1833980

Subcontract Chain of Custody

COC ID: 10353

1833980

SUBCONTRACT TO:

ALS Laboratory Group
960 LeVoy Dr
Salt Lake City, UT 84123

Phone: +1 801 266 7700

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS18120114
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS18120114-01**	**50WW18-181130**	**Groundwater**	**30 Nov 2018 09:00**
	SUB_Perch-6850			18 Dec 2018
2.	**HS18120114-02**	**50WW17-181130**	**Groundwater**	**30 Nov 2018 09:50**
	SUB_Perch-6850			18 Dec 2018
3.	**HS18120114-03**	**50WW24-181130**	**Groundwater**	**30 Nov 2018 10:45**
	SUB_Perch-6850			18 Dec 2018
4.	**HS18120114-04**	**50WW21-181130**	**Groundwater**	**30 Nov 2018 11:35**
	SUB_Perch-6850			18 Dec 2018
5.	**HS18120114-05**	**50WW15-181130**	**Groundwater**	**30 Nov 2018 12:30**
	SUB_Perch-6850			18 Dec 2018
6.	**HS18120114-06**	**50WW23-181203**	**Groundwater**	**03 Dec 2018 09:15**
	SUB_Perch-6850			18 Dec 2018
7.	**HS18120114-07**	**50WW22-181203**	**Groundwater**	**03 Dec 2018 10:15**
	SUB_Perch-6850			18 Dec 2018
8.	**HS18120114-08**	**50WW05-181230**	**Groundwater**	**03 Dec 2018 11:15**
	SUB_Perch-6850			18 Dec 2018
9.	**HS18120114-09**	**50WW27-181230**	**Groundwater**	**03 Dec 2018 12:20**

Subcontract Chain of Custody

COC ID: 10353

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	SUB_Perch-6850			18 Dec 2018
10.	**HS18120114-10**	**50WW27-181230 FD**	**Groundwater**	**03 Dec 2018 12:20**
	SUB_Perch-6850			18 Dec 2018
11.	**HS18120114-11**	**50WW09-181230**	**Groundwater**	**03 Dec 2018 13:15**
	SUB_Perch-6850			18 Dec 2018
12.	**HS18120114-12**	**50WW10-181230**	**Groundwater**	**03 Dec 2018 14:15**
	SUB_Perch-6850			18 Dec 2018

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: R Cisa Date/Time: 12/04/18 18:00

Received By: [signature] Date/Time: 12-05-18 10:10

Cooler ID(s): _____ Temperature(s): _____

ALS-SALT LAKE CITY-RELATED INFORMATION REPORT (CRIR)

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

1833980

Client Name: ALS Houston

Project/Task/Site:

Date/Time of Receipt: 12-05-18 10:10

Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Cooler Custody Seals:	Present/Absent/NA Intact/Broken/NA	Location Temp Taken:	Control/Between Samples
Container Custody Seals:	Present/Absent/NA Intact/Broken/NA	Are all temperatures within project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA Frozen/Melted/NA	VOA Headspace Present?	Yes/No/NA

pH Check Performed:							
	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C18 8991	1 °C	4	C18	°C	7	C18	°C
2	C18	°C	5	C18	°C	8	C18	°C
3	C18	°C	6	C18	°C	9	C18	°C

Taken By: Tammi Tassell (Signature) Tammi Tassell (Printed Name) 12-05-18 (Date)

CLIENT-RELATED INFORMATION

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	

BRIEFLY DESCRIBE THE PROBLEM AND THE ACTION TAKEN:

Client Notified? YES ☐ NO ☐

Response Required Within 24 Hours

PROJECT MANAGEMENT

PROJECT MANAGER COMMENTS:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____



Must Deliver Next Business Day
Time and Tempature Sensitive!

ALS

ORIGIN ID:SGRA (281) 530-5656
CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 04DEC18
ACTWGT: 10.75 LB
CAD: 300130/CAFE3211
DIMS: 14x11x10 IN
BILL THIRD PARTY

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL
960 W. LEVOY DRIVE

SALT LAKE CITY UT 84123
(801) 266-7700
DEPT: SALT LAKE LAB CERT
REF: HS18120114 RJ

FedEx Express

TRK# 0201 4380 9535 2592

WED - 05 DEC 3:00P
STANDARD OVERNIGHT

AX BTFA

84123
UT-US SLC

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: HS18120114	Split:	Workorder ID: 1833980	Level: ENV_LVL4	Requested Analysis
Client: ALS Environmental (Houston)		Account: 8101	Type: 125Poly	
Comments:			Preservatives	
			COOL	
			Containers	

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	EPA 6850, DoD QSM
1	11/30/2018 09:00	50WW18-181130	1833980001		Water	A	1	A
2	11/30/2018 09:50	50WW17-181130	1833980002		Water	A	1	A
3	11/30/2018 10:45	50WW24-181130	1833980003		Water	A	1	A
4	11/30/2018 11:35	50WW21-181130	1833980004		Water	A	1	A
5	11/30/2018 11:35	50WW15-181130	1833980005		Water	A	1	A
6	12/03/2018 09:15	50WW23-181203	1833980006		Water	A	1	A
7	12/03/2018 10:15	50WW22-181203	1833980007		Water	A	1	A
8	12/03/2018 11:15	50WW05-181203	1833980008		Water	A	1	A
9	12/03/2018 12:20	50WW27-181203	1833980009		Water	A	1	A
10	12/03/2018 12:20	50WW27-181203FD	1833980010	FLDDUP	Water	A	1	A

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Warath, Julie	12/05/2018 10:10	ALS Sample Receiving	Sample Login
Julie Warath	12/5/18 1430	BD	storage
R.33.1	12.10.18/10:10	T.Bond	6850

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

Wed, 12/05/18 2:27 PM

ALSCOCV3.1

00965396

Project / Job / Task: HS18120114 | Split: | Workorder ID: 1833980 | Level: ENV_LVL4

Client: ALS Environmental (Houston) | Account: 8101 | Type: 125Poly

Comments:

Preservatives: COOL

Containers: ID(s), Count

Requested Analysis: EPA 6850, DoD QSM

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	EPA 6850, DoD QSM
11	12/03/2018 13:15	50WW09-181203	1833980011		Water	A	1	A
12	12/03/2018 14:15	50WW10-181203	1833980012		Water	A	1	A
13								
14								
15								
16								
17								
18								
19								
20								

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186 of 395

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Warath, Julie	12/05/2018 10:10	ALS Sample Receiving	Sample Login
Julie Warath	12/5/18 1430	130	storage
R.33.1	12.10.18/10.10	T.Buell	6850

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

Batch Worklist

Batch: ELMS/ 2179 **Created:** 12/10/2018 16:16 **Instrument:** **HBN:** 229053

Rule: EPA 6850, DoD QSM Water **Analyst:** T. Bosch **Status:** WP

Workorder: 1833461 [ENV_LVL4]
Workorder: 1833875 [ENV_LVL4]
Workorder: 1833980 [ENV_LVL4]

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Dust Weight	Type	Mx	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	631664	CCV for HBN 229053 [ELMS/2179]				CCV	3		E685041C3Q	5311		12/13/2018	
2	631665	LODV for HBN 229053 [ELMS/2179				LODV	3		E6850..D3Q	5311		12/13/2018	
3	631666	ICS for HBN 229053 [ELMS/2179]				ICS	3		E6850..D3Q	5311		12/13/2018	
4	631667	LMB for HBN 229053 [ELMS/2179]				LMB	3		E6850Q413Q	5311		12/13/2018	
5	631668	LCS for HBN 229053 [ELMS/2179]				LCS	3		E6850Q413Q	5311		12/13/2018	
6	1833461001	50WW16-181128				SAMPLE	3	1833461001-A	E6850Q41.3	5480	12/26/2018	12/13/2018	
7	1833461002	50WW16-181128MS				MS	3	1833461002-A	E6850Q413Q	5480		12/13/2018	
8	1833461003	50WW16-181128MSD				MSD	3	1833461003-A	E6850Q413Q	5480		12/13/2018	
9	1833461004	50WW11-181128				SAMPLE	3	1833461004-A	E6850Q41.3	5480	12/26/2018	12/13/2018	
10	1833461005	50WW11-181128-FD				FLDDUP	3	1833461005-A	E6850Q41.3	5480	12/26/2018	12/13/2018	
11	1833461006	50WW12-181128				SAMPLE	3	1833461006-A	E6850Q41.3	5480	12/26/2018	12/13/2018	
12	1833461007	50WW08-181128				SAMPLE	3	1833461007-A	E6850Q41.3	5480	12/26/2018	12/13/2018	
13	1833875001	50WW06-181129				SAMPLE	3	1833875001-A	E6850Q41.3	5480	12/27/2018	12/13/2018	
14	1833875002	50WW13-181129				SAMPLE	3	1833875002-A	E6850Q41.3	5480	12/27/2018	12/13/2018	
15	1833875003	50WW14-181129				SAMPLE	3	1833875003-A	E6850Q41.3	5480	12/27/2018	12/13/2018	
16	1833980001	50WW18-181130				SAMPLE	3	1833980001-A	E6850Q41.3	5480	12/28/2018	12/18/2018	
17	1833980002	50WW17-181130				SAMPLE	3	1833980002-A	E6850Q41.3	5480	12/28/2018	12/18/2018	
18	631669	CCV for HBN 229053 [ELMS/2179]				CCV	3		E685041C3Q	5311		12/13/2018	
19	631670	LODV for HBN 229053 [ELMS/2179				LODV	3		E6850..D3Q	5311		12/13/2018	
20	1833980003	50WW24-181130				SAMPLE	3	1833980003-A	E6850Q41.3	5480	12/28/2018	12/18/2018	
21	1833980004	50WW21-181130				SAMPLE	3	1833980004-A	E6850Q41.3	5480	12/28/2018	12/18/2018	
22	1833980005	50WW15-181130				SAMPLE	3	1833980005-A	E6850Q41.3	5480	12/28/2018	12/18/2018	
23	1833980006	50WW23-181203				SAMPLE	3	1833980006-A	E6850Q41.3	5480	12/31/2018	12/18/2018	
24	1833980007	50WW22-181203				SAMPLE	3	1833980007-A	E6850Q41.3	5480	12/31/2018	12/18/2018	
25	1833980008	50WW05-181203				SAMPLE	3	1833980008-A	E6850Q41.3	5480	12/31/2018	12/18/2018	
26	1833980009	50WW27-181203				SAMPLE	3	1833980009-A	E6850Q41.3	5480	12/31/2018	12/18/2018	
27	1833980010	50WW27-181203FD				FLDDUP	3	1833980010-A	E6850Q41.3	5480	12/31/2018	12/18/2018	

Batch Worklist

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Dust Weight	Type	Mx	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
28	1833980011	50WW09-181203				SAMPLE	3	1833980011-A	E6850Q41.3	5480	12/31/2018	12/18/2018	
29	1833980012	50WW10-181203				SAMPLE	3	1833980012-A	E6850Q41.3	5480	12/31/2018	12/18/2018	
30	631671	CCV for HBN 229053 [ELMS/2179]				CCV	3		E685041C3Q	5311		12/13/2018	
31	631672	LODV for HBN 229053 [ELMS/2179				LODV	3		E6850..D3Q	5311		12/13/2018	

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS Work Order #'s & Sample #( )'s: 1833461 (001-07); 1833875 (001-03); 1833980 (001-12)
ELMS Batch/HBN ID: 2179 (229053)
Prep Date: 12/10/2018 Analysis Date: 12/11/2018 Analyst: T. Bosch
Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
Sequence: \\HPCHEM\1\SEQUENCE\CLO4\2018\NOV\11DEC18D.s
Reported DL: **1.0µg/L** Reported LOD: **2.0µg/L** Reported LOQ: **4.0µg/L**

SAMPLE PREPARATION/ANALYSIS:
Water: Samples were prepared by TNB. 10.0mL of each sample was pipetted into a 15-mL centrifuge tube, and 50µL of an oxygen-18 labeled perchlorate solution was added as an internal standard. The samples were capped, vortexed, and filtered with Phenex PES membrane 0.45µm Syringe filters prior to analysis.

REAGENTS: Eluent A1: 95% ASTM Type II water (ALS)/ 5% ACN (B&J Lot AH015-4)/0.1% glacial acetic acid (JT-Baker Lot 04802).
Eluent B1: 95% ACN (B&J Lot AH015-4)/ 5% ASTM Type II water (ALS)/0.1% glacial acetic acid (JT-Baker Lot 04802).

STANDARDS: Internal Standard Spiking Solution Horizon# 43730. Dilutions of Working Standard Solution ID 43702 used for CCV's, LODV's, RLVS and IPC.

CALIBRATION CURVE: Used curve from 10/08/2018, sequence 08OCT18D.s Offline Quantitation Method: CLO4-DPR.M

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1100 LC/MSD system, in negative SIM mode, monitoring m/z 83, 85, and 89.
Instrument ID: LCMS04 Online Acquisition Method: CLO4-AQN.M Fragmentor: 160 Output Gain: 3 Injection Volume: 30µL
Column: KP-RPPX C8 separator, 250mm Mobile Phase: 70% Eluent A1; 30% Eluent B1

FLOW GRADIENT:

Time (min.)	Flow (mL/min)
0	0.50
5.0	0.50
5.3	0.25
10.0	0.25
10.5	0.50
12.0	0.50

QC DATA: 5.0µL of QC Solution Horizon ID 41830 was used for LCS 631668; Target = 5.0µg/L. ASTM type II water was used for LMB 631667.

MS/MSD: MS/MSD was performed on samples 1833461002/03 (Client ID: 50WW16-181128). 5.0µl of Working Standard Solution Horizon ID 43701 was added to 10.0mL of sample preparation. Spike target = 5.0µg/L.

COMMENTS:
1) Results reported in µg/L. Field samples 1833461004/05 and 1833875002 were analyzed and reported from 1:100 dilutions. Field sample 1833461006 was analyzed and reported from 1:10,000 dilution. The reporting limits have been adjusted accordingly.
2) All QC, Blank, CCV, and MS/MSD results were within method parameters.
3) Sample data can be viewed at two directories within the ALS system: \\ALSLTWS013\LCMS\LCMS04\2018\DEC\HBN# or through NuGenesis\Tree\PrintData\LCMS\DefaultView.
4) Notebook: \\alsltws013\ORGANIC\BOSCH\LCMS\Perchlorates\Waters\2018\229053-DoD-ALS-Hstn LCMS4 or through \\ALSLTWS013\DATAREVIEW\HBN#

5.5 Chromatography (GC, HPLC and LC/MS) Technical Review

Note: It is the peer reviewer's responsibility to ensure that appropriate criteria are used as defined in the HORIZON PROFILE. The evaluation criteria are prioritized as per Section 2.2 of this SOP. These items must be checked for all projects. The following checklist will be completed by both the analyst and the peer reviewer and scanned into the HBN folder with the raw data.

Chromatography (GC, HPLC, LC/MS) Technical Review Criteria Batch(es)/SDG: ELMS: 2179 HBN: 229053 Sample Set IDs if Applicable: 1833461 / 1833875/1833980	Analyst Initials	Reviewer Initials
Calibration standards analyzed and meets criteria	TB	SB
Standards traceability checked and meets criteria	TB	SB
Standard curve coefficients evaluated and meet criteria	TB	SB
ICVs analyzed and meet acceptance criteria	TB	SB
CCVs analyzed and meet acceptance criteria	TB	SB
Method Blanks analyzed and meet acceptance criteria	TB	SB
Retention Time Windows checked	TB	SB
For method 8081A, Endrin/DDT Breakdown is checked for compliance	—	—
Surrogate recoveries checked and appropriately addressed	—	—
Method Preparation Blanks analyzed and meet acceptance criteria	TB	SB
MSs, MSDs, and/or MDs analyzed and calculations checked; applicable flags applied on QC reports; LCSs analyzed and meet acceptance criteria when performed	TB	SB
RLVS analyzed	TB	SB
Preparation and analysis hold times met	TB	SB
Preparation deviations and re-preparations noted when performed	TB	SB
Analysis deviations and re-analyses noted when performed	TB	SB
Sample dilution factors noted on reports	TB	SB
Electronic records in HBN transcription accuracy and completeness checked	TB	SB
Preparation and analysis calculations checked	TB	SB
NCRs are completed as necessary NC/CAR#	—	—
Report forms are complete and accurate	TB	SB
Manual integrations checked	TB	SB

STANDARD REPORT

Working Standard - CLO4 WRK

CLO4 WRK — **Description - 6850 WKG Std 100.ug/L**

Standard: 43702
MFG: ALS/SLC
MFG Lot: TNB: 09/18/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 09/18/2018 02:09PM

Amount: 10 mL
Expires: 09/18/2019
Usable: Yes
Lab Lot: CLO4 WRK

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	0.1 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
43701	CLO4 INT	6850 Intermdt AccStd 10.ug/mL	CLO4 INT	0.1 mL	09/18/2019

STANDARD REPORT

Constituent

Stock Standard - CLO4 STOCK

CLO4 STOCK — **Description - 6850 Stock AccStd 1,000ug/mL**

Standard: 43659
MFG: AccuStandard
MFG Lot: 218065075
Part ID: IC-PER-10X-1

Created By: Thomas Bosch
Create Date: 09/17/2018 09:09AM

Amount: 100 mL
Expires: 07/25/2020
Usable: No
Lab Lot: CLO4 STOCK

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	1000 ug/mL

STANDARD REPORT

Constituent

Solvent Standard - ASTM H2O

ASTM H2O		Description - ASTM Type II Water
Standard: 109	**Created By:** ALS Support (Lims)	**Amount:** 1000 L
MFG: DCL In House	**Create Date:** 10/06/2005 09:10AM	**Expires:** 11/07/2025
MFG Lot: Not Provided		**Usable:** Yes
Part ID: Not Provided		**Lab Lot:** LAB 109

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Working Standard - CLO4 INT

CLO4 INT — **Description - 6850 Intermdt AccStd 10.ug/mL**

Standard: 43701
MFG: ALS/SLC
MFG Lot: TNB: 09/18/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 09/18/2018 02:09PM

Amount: 10 mL
Expires: 09/18/2019
Usable: Yes
Lab Lot: CLO4 INT

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	10 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
43659	CLO4 STOCK	6850 Stock AccStd 1,000ug/mL	CLO4 STOCK	0.1 mL	07/25/2020

STANDARD REPORT

Working Standard - CLO4 QC WRK

CLO4 QC WRK — **Description - 6850 QC WKG STD 100ug/L**

Standard: 41831
MFG: ALS/SLC
MFG Lot: TNB: 05/09/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 05/09/2018 10:05AM

Amount: 10 mL
Expires: 05/09/2019
Usable: Yes
Lab Lot: CLO4 QC WRK 100.ug/L

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	100 ug/L

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
41830	CLO4 QC INT	6850 QC Intrmdt Std-QC 10ug/mL	CLO4 QC INT 10.ug/mL	0.1 mL	05/09/2019

STANDARD REPORT

Constituent

Working Standard - CLO4 QC INT

CLO4 QC INT — **Description** - 6850 QC Intrmdt Std-QC 10ug/mL

Standard: 41830
MFG: ALS/SLC
MFG Lot: TNB: 05/09/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 05/09/2018 10:05AM

Amount: 10 mL
Expires: 05/09/2019
Usable: Yes
Lab Lot: CLO4 QC INT 10.ug/mL

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	10 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
36748	CLO4 QCSTOCK	6850 QC Stock STD 1,000ug/mL	CLO4 QC STOCK	0.1 mL	03/31/2020

STANDARD REPORT

Constituent

Solvent Standard - ASTM H2O

ASTM H2O		Description - ASTM Type II Water
Standard: 109	Created By: ALS Support (Lims)	Amount: 1000 L
MFG: DCL In House	Create Date: 10/06/2005 09:10AM	Expires: 11/07/2025
MFG Lot: Not Provided		Usable: Yes
Part ID: Not Provided		Lab Lot: LAB 109

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Stock Standard - CLO4 QCSTOCK

CLO4 QCSTOCK — **Description** - 6850 QC Stock STD 1,000ug/mL

Standard: 36748
MFG: Ultra Scientific
MFG Lot: CP-0860
Part ID: ICC-013

Created By: Thomas Bosch
Create Date: 05/11/2017 01:05PM

Amount: 100 mL
Expires: 03/31/2020
Usable: Yes
Lab Lot: CLO4 QC STOCK

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	1000 ug/mL

STANDARD REPORT

Working Standard - CLO4ISTDWRK

CLO4ISTDWRK		Description - Perchlorate ISTD Wrk 1,000ug/L
Standard: 43730	**Created By:** Thomas Bosch	**Amount:** 25 mL
MFG: ALS/SLC	**Create Date:** 09/20/2018 09:09AM	**Expires:** 09/20/2019
MFG Lot: TNB: 05/09/2018	**Verified By:** Thomas Bosch	**Usable:** Yes
Pipette ID: Not Provided	**Verify Date:**	**Lab Lot:** CLO4ISTDWRK

Pos.	Analyte	Name	Concentration
1	14797-73-0-8385	Perchlorate 83:85 Ratio	1000 ug/L
2	14797-73-0-89	Perchlorate 89	1000 ug/L

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
43729	CLO4ISTDSTK	Perchlorate ISTD Stock	CLO4ISTDSTK	0.25 mL	04/28/2026

STANDARD REPORT

Constituent

Stock Standard - CLO4ISTDSTK

CLO4ISTDSTK		Description - Perchlorate ISTD Stock
Standard: 43729	**Created By:** Thomas Bosch	**Amount:** 1 mL
MFG: Cambridge Isotope	**Create Date:** 09/20/2018 09:09AM	**Expires:** 04/28/2026
MFG Lot: SDFF-012A	**Verified By:** Thomas Bosch	**Usable:** Yes
Part ID: OLM-7310-S	**Verify Date:**	**Lab Lot:** CLO4ISTDSTK

Pos.	Analyte	Name	Concentration
1	14797-73-0-8385	Perchlorate 83:85 Ratio	100 ug/mL
2	14797-73-0-89	Perchlorate 89	100 ug/mL

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICC-013
Lot Number: CP-0860

Lot Issue Date: 29-Feb 2016
Expiration Date: 31-Mar 2020

Product Name: Perchlorate IC Standard

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	Starting Material	Lot Number	Purity (%)	Calculated Value	True Value	Traceability & Method
perchlorate	potassium perchlorate	RM07987	100	1001 ± 5 µg/mL	976 ± 6 µg/mL	NIST SRM 3141A; ICP-OES

Solvent: water (low TOC, < 50 ppb)

Storage: Store at Room Temperature (15° to 30°C).

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICC-013
Lot Number: CP-0860

Lot Issue Date: 29-Feb 2016
Expiration Date: 31-Mar 2020

Maintenance of Certification:
The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.

Peter A. King, Ph.D.
VP, Technical Operations

Daniel J. Lamendola
Director of QA/RA

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

S 43659

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 218065075
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Signal Word: None

Date Certified: Jun 25, 2018
Expiration: Jul 25, 2020
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO 17034 Scope of Accreditation: Yes

Component		SRM #	Prepared Concentration (µg/mL)
ClO_4	Perchlorate	Ind. Std.	1000

AccuStandard

The gravimetric uncertainty for this product is ±0.24%.
The final solution was checked against an independent standard to verify its concentration.
We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.
All solutions are filtered through a 0.2 µm filter prior to being bottled.
All glassware used in preparation is Class A and calibrated regularly.
All weights are traceable through NIST, Test No. 822-275872-11
All bottles are triple rinsed with deionized water prior to use.
Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.
We certify the accuracy of this standard to be ±0.5% of the stated value until its expiration date provided it is kept tightly capped and stored under the conditions stated above.

Certified By: Meigan O'Leary
Meigan O'Leary, Inorganic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

Quality Standards:
ISO Guide 34 • ISO/IEC 17025 • ISO 13485 • cGMP

23118

Product Name: (Isotopic Label & Enrichment Specification)	PERCHLORIC ACID, SODIUM SALT (18O4, 90%+) 100 UG/ML IN WATER
Lot Number:	SDDG-013
Catalog Number:	OLM-7310-S

Product Information

Chemical Purity Specification:	≥98%
Labeled CAS Number:	NA
Unlabeled CAS Number:	7601-89-0
MW*:	130.4
Chemical Formula:	NaCl*O4
Storage:	Store at room temperature away from light and moisture.
Stability:	See storage and expiration date.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

* *For isotopically labeled compounds, MW listed is for the fully enriched product.*

Approved by: T. J. Eckersley

Timothy J. Eckersley, Ph.D., Quality Assurance

Quality Control Tests and Results

QC Release Date	2/27/2014
Expiration Date	2/27/2024
Concentration Based on Gravimetry	102 µg/mL
Chemical Purity of Neat Material(s)	98%
LC/MS for Concentration	109.4 ± 2.8 µg/mL (k=2)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

atch Report: C:\HPCHEM\1\DATA\11DEC18D\11DEC18S.B

Batch Review Method:
C:\HPCHEM\1\METHODS\CLO4-DPR.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	SampleType	Run	Perchlorate Area	Perchlorate RT	Perchlorate Amount
#*	631664 C	Vial 71	1	Control	1	3.48124e6	7.871	25.75214
#*	631665 L	Vial 72	1	Control	2	8.19641e4	7.889	1.08395
#*	631666 I	Vial 73	1	Control	3	6.66958e4	7.879	1.10767
#*	631667 L	Vial 74	1	Control	4	0.00000	0.000	0.00000
#*	631668 Q	Vial 75	1	Control	5	4.08977e5	7.891	4.57756
#*	1833461001	Vial 76	1	Sample	6	0.00000	0.000	0.00000
#*	1833461002	Vial 77	1	Sample	7	5.87665e5	7.876	4.85131
#*	1833461003	Vial 78	1	Sample	8	6.44190e5	7.865	5.01118
#*	1833461004	Vial 79	1	Sample	9	2.89111e6	7.906	2851.92545
#*	1833461005	Vial 80	1	Sample	10	3.29822e6	7.906	3211.78490
#*	1833461006	Vial 81	1	Sample	11	4.76196e5	7.903	4.73259e4
#*	1833461007	Vial 82	1	Sample	12	4.51305e6	7.852	50.94588
#*	1833875001	Vial 83	1	Sample	13	2.74604e6	7.870	24.07175
#*	1833875002	Vial 84	1	Sample	14	1.14039e6	7.899	1052.75983
#*	1833875003	Vial 85	1	Sample	15	1.68396e5	7.864	1.85043
#*	1833980001	Vial 86	1	Sample	16	0.00000	0.000	0.00000
#*	1833980002	Vial 87	1	Sample	17	0.00000	0.000	0.00000
#*	631669 C	Vial 71	1	Control	18	2.47816e6	7.907	23.56695
#*	631670 L	Vial 72	1	Control	19	5.69947e4	7.914	9.31810e-1
#*	1833980003	Vial 88	1	Sample	20	0.00000	0.000	0.00000
#*	1833980004	Vial 89	1	Sample	21	2.99274e4	7.855	5.87268e-1
#*	1833980005	Vial 90	1	Sample	22	0.00000	0.000	0.00000
#*	1833980006	Vial 91	1	Sample	23	0.00000	0.000	0.00000
#*	1833980007	Vial 92	1	Sample	24	4.79408e4	7.817	6.85344e-1
#*	1833980008	Vial 93	1	Sample	25	0.00000	0.000	0.00000
#*	1833980009	Vial 94	1	Sample	26	0.00000	0.000	0.00000
#*	1833980010	Vial 95	1	Sample	27	0.00000	0.000	0.00000
#*	1833980011	Vial 96	1	Sample	28	0.00000	0.000	0.00000
#*	1833980012	Vial 97	1	Sample	29	0.00000	0.000	0.00000
#*	631671 C	Vial 71	1	Control	30	2.59417e6	7.853	23.82186
*	631672 L	Vial 72	1	Control	31	6.79751e4	7.883	1.00534

#	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
#*	631664 C	Vial 71	1	Control	1	1.01321e6	7.889	24.86780
#*	631665 L	Vial 72	1	Control	2	2.63912e4	7.895	1.03937
#*	631666 I	Vial 73	1	Control	3	2.77513e4	7.895	1.35059
#*	631667 L	Vial 74	1	Control	4	0.00000	0.000	0.00000
#*	631668 Q	Vial 75	1	Control	5	1.28593e5	7.908	4.72010
#*	1833461001	Vial 76	1	Sample	6	0.00000	0.000	0.00000
#*	1833461002	Vial 77	1	Sample	7	1.87638e5	7.892	5.08460
#*	1833461003	Vial 78	1	Sample	8	1.92804e5	7.883	4.93604
#*	1833461004	Vial 79	1	Sample	9	8.51631e5	7.924	2782.22156
#*	1833461005	Vial 80	1	Sample	10	9.78590e5	7.922	3149.58587
#*	1833461006	Vial 81	1	Sample	11	1.52823e5	7.915	4.98186e4
#*	1833461007	Vial 82	1	Sample	12	1.38970e6	7.868	51.21926
#*	1833875001	Vial 83	1	Sample	13	8.29390e5	7.886	24.08637
#*	1833875002	Vial 84	1	Sample	14	3.43364e5	7.914	1052.74290
#*	1833875003	Vial 85	1	Sample	15	6.11284e4	7.880	2.09974
#*	1833980001	Vial 86	1	Sample	16	0.00000	0.000	0.00000
#*	1833980002	Vial 87	1	Sample	17	0.00000	0.000	0.00000
#*	631669 C	Vial 71	1	Control	18	7.61945e5	7.924	23.98608
#*	631670 L	Vial 72	1	Control	19	2.16085e4	7.928	1.01329
#*	1833980003	Vial 88	1	Sample	20	0.00000	0.000	0.00000
#*	1833980004	Vial 89	1	Sample	21	1.41879e4	7.866	6.93161e-1
#*	1833980005	Vial 90	1	Sample	22	0.00000	0.000	0.00000
#*	1833980006	Vial 91	1	Sample	23	0.00000	0.000	0.00000
#*	1833980007	Vial 92	1	Sample	24	1.99684e4	7.830	7.57624e-1
#*	1833980008	Vial 93	1	Sample	25	0.00000	0.000	0.00000
#*	1833980009	Vial 94	1	Sample	26	0.00000	0.000	0.00000

atch Report: C:\HPCHEM\1\DATA\11DEC18D\11DEC18S.B

#	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
#*	1833980010	Vial 95	1	Sample	27	0.00000	0.000	0.00000
#*	1833980011	Vial 96	1	Sample	28	0.00000	0.000	0.00000
#*	1833980012	Vial 97	1	Sample	29	0.00000	0.000	0.00000
#*	631671 C	Vial 71	1	Control	30	7.92460e5	7.872	24.09514
*	631672 L	Vial 72	1	Control	31	2.40769e4	7.903	1.04045

#	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
#*	631664 C	Vial 71	1	Control	1	4.02870e5	7.899	5.00000
#*	631665 L	Vial 72	1	Control	2	2.89019e5	7.911	5.00000
#*	631666 I	Vial 73	1	Control	3	2.28966e5	7.912	5.00000
#*	631667 L	Vial 74	1	Control	4	3.22648e5	7.925	5.00000
#*	631668 Q	Vial 75	1	Control	5	2.87169e5	7.921	5.00000
#*	1833461001	Vial 76	1	Sample	6	3.60792e5	7.921	5.00000
#*	1833461002	Vial 77	1	Sample	7	3.88117e5	7.903	5.00000
#*	1833461003	Vial 78	1	Sample	8	4.11170e5	7.891	5.00000
#*	1833461004	Vial 79	1	Sample	9	3.00445e5	7.933	500.00000
#*	1833461005	Vial 80	1	Sample	10	3.02235e5	7.931	500.00000
#*	1833461006	Vial 81	1	Sample	11	3.22820e5	7.929	5.00000e4
#*	1833461007	Vial 82	1	Sample	12	2.52017e5	7.879	5.00000
#*	1833875001	Vial 83	1	Sample	13	3.41152e5	7.897	5.00000
#*	1833875002	Vial 84	1	Sample	14	3.35467e5	7.926	500.00000
#*	1833875003	Vial 85	1	Sample	15	3.16169e5	7.893	5.00000
#*	1833980001	Vial 86	1	Sample	16	3.00388e5	7.891	5.00000
#*	1833980002	Vial 87	1	Sample	17	2.47847e5	7.882	5.00000
#*	631669 C	Vial 71	1	Control	18	3.14800e5	7.936	5.00000
#*	631670 L	Vial 72	1	Control	19	2.43309e5	7.942	5.00000
#*	1833980003	Vial 88	1	Sample	20	3.22751e5	7.879	5.00000
#*	1833980004	Vial 89	1	Sample	21	2.44118e5	7.893	5.00000
#*	1833980005	Vial 90	1	Sample	22	2.69834e5	7.873	5.00000
#*	1833980006	Vial 91	1	Sample	23	2.09759e5	7.843	5.00000
#*	1833980007	Vial 92	1	Sample	24	3.10572e5	7.850	5.00000
#*	1833980008	Vial 93	1	Sample	25	2.90513e5	7.867	5.00000
#*	1833980009	Vial 94	1	Sample	26	2.96165e5	7.855	5.00000
#*	1833980010	Vial 95	1	Sample	27	2.96909e5	7.863	5.00000
#*	1833980011	Vial 96	1	Sample	28	3.18562e5	7.861	5.00000
#*	1833980012	Vial 97	1	Sample	29	3.26637e5	7.918	5.00000
#*	631671 C	Vial 71	1	Control	30	3.25836e5	7.882	5.00000
*	631672 L	Vial 72	1	Control	31	2.63374e5	7.913	5.00000

*** End of Report ***

equence: C:\HPCHEM\1\SEQUENCE\CLO4\2018\DEC\11DEC18D.S

Sequence Table:

Method and Injection Info Part:

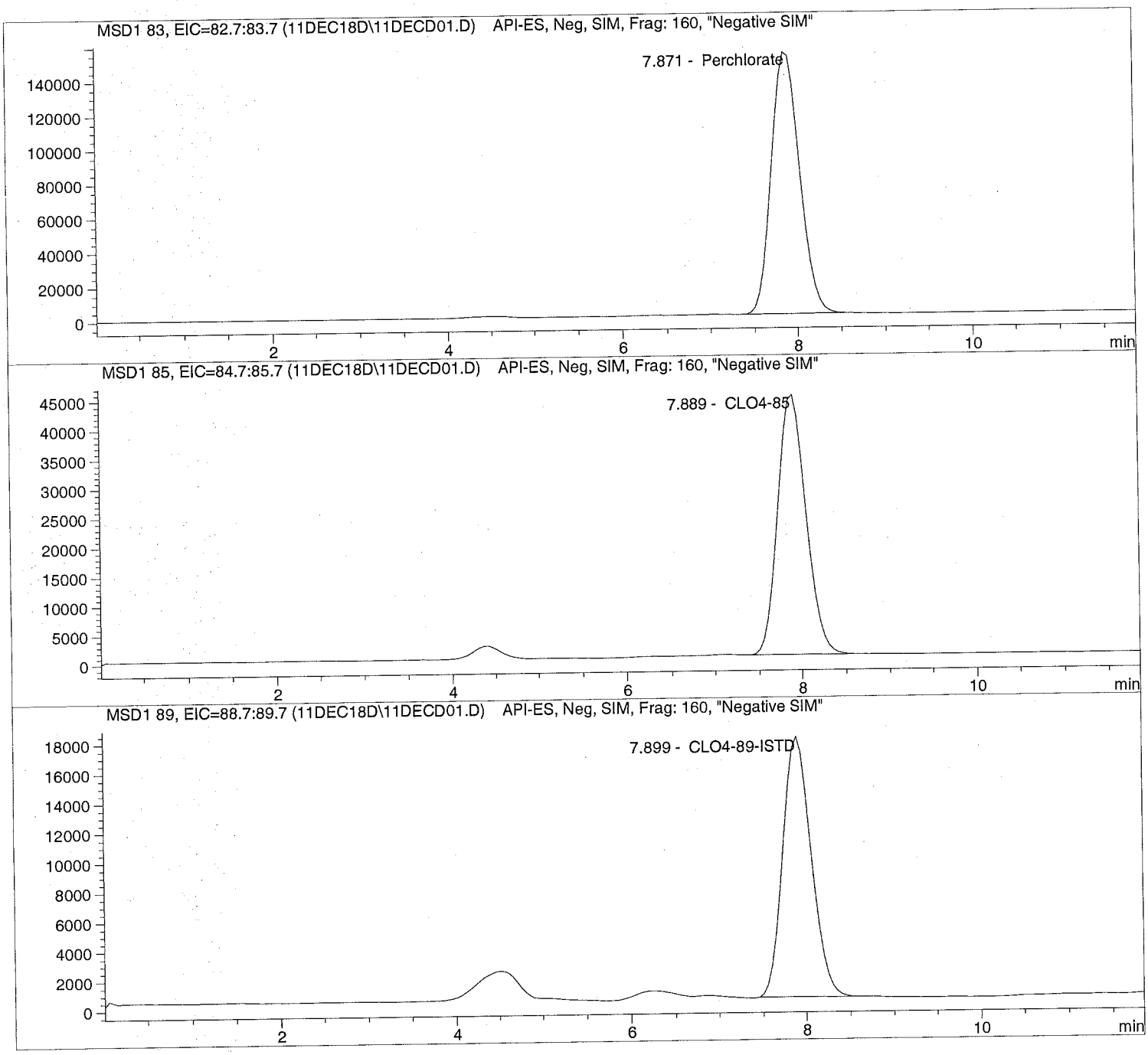
Line	Location	SampleName		Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	631664	CCV@25	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	631665	LODV@1.	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	631666	ICS@1.0	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	631667	LMB	CLO4-AQN	1	Ctrl Samp		
5	Vial 75	631668	QC@5.0	CLO4-AQN	1	Ctrl Samp		
6	Vial 76	1833461001		CLO4-AQN	1	Sample		
7	Vial 77	1833461002	MS	CLO4-AQN	1	Sample		
8	Vial 78	1833461003	MSD	CLO4-AQN	1	Sample		
9	Vial 79	1833461004	100	CLO4-AQN	1	Sample		
10	Vial 80	1833461005	100	CLO4-AQN	1	Sample		
11	Vial 81	1833461006	10K	CLO4-AQN	1	Sample		
12	Vial 82	1833461007		CLO4-AQN	1	Sample		
13	Vial 83	1833875001		CLO4-AQN	1	Sample		
14	Vial 84	1833875002	100	CLO4-AQN	1	Sample		
15	Vial 85	1833875003		CLO4-AQN	1	Sample		
16	Vial 86	1833980001		CLO4-AQN	1	Sample		
17	Vial 87	1833980002		CLO4-AQN	1	Sample		
18	Vial 71	631669	CCV@25	CLO4-AQN	1	Ctrl Samp		
19	Vial 72	631670	LODV@1.	CLO4-AQN	1	Ctrl Samp		
20	Vial 88	1833980003		CLO4-AQN	1	Sample		
21	Vial 89	1833980004		CLO4-AQN	1	Sample		
22	Vial 90	1833980005		CLO4-AQN	1	Sample		
23	Vial 91	1833980006		CLO4-AQN	1	Sample		
24	Vial 92	1833980007		CLO4-AQN	1	Sample		
25	Vial 93	1833980008		CLO4-AQN	1	Sample		
26	Vial 94	1833980009		CLO4-AQN	1	Sample		
27	Vial 95	1833980010		CLO4-AQN	1	Sample		
28	Vial 96	1833980011		CLO4-AQN	1	Sample		
29	Vial 97	1833980012		CLO4-AQN	1	Sample		
30	Vial 71	631671	CCV@25	CLO4-AQN	1	Ctrl Samp		
31	Vial 72	631672	LODV@1.	CLO4-AQN	1	Ctrl Samp		

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD01.D Sample Name: 631664 CCV@25

Injection Date:	12/11/2018 08:01:38	Seq Line:	1
Sample Name:	631664 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD01.D Sample Name: 631664 CCV@25

Injection Date:	12/11/2018 08:01:38	Seq Line:	1
Sample Name:	631664 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.871	PBA	3481236.5	25.7521	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.889	PBA	1013205.2	24.8678	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.899	PBA	402869.5	5.0000	CLO4-89-ISTD

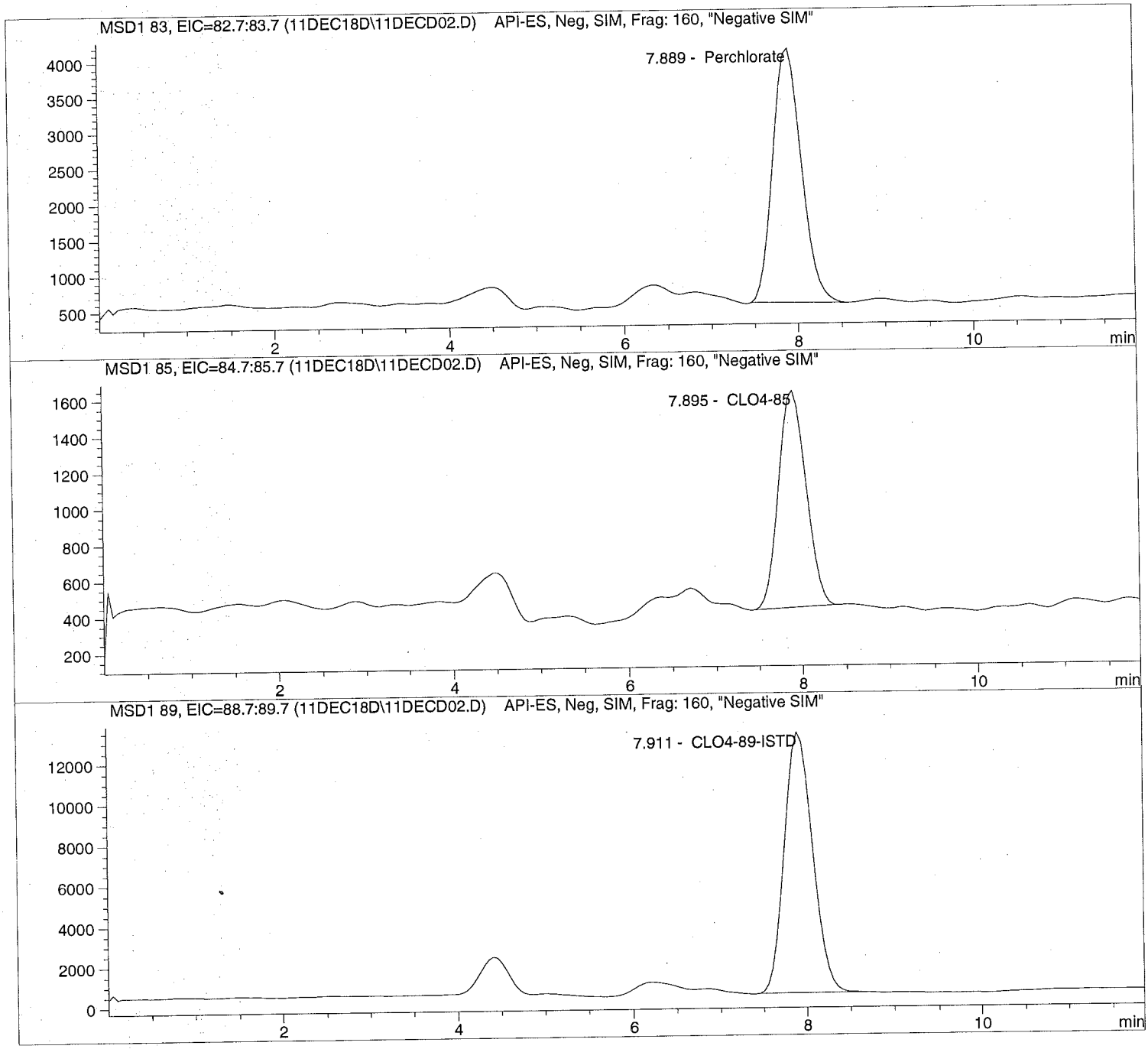
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD02.D Sample Name: 631665 LODV@1.

Injection Date:	12/11/2018 08:16:29	Seq Line:	2
Sample Name:	631665 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD02.D Sample Name: 631665 LODV@1.

Injection Date:	12/11/2018 08:16:29	Seq Line:	2
Sample Name:	631665 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.889	PBA	81964.1	1.0839	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.895	PBA	26391.2	1.0394	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.911	PBA	289018.6	5.0000	CLO4-89-ISTD

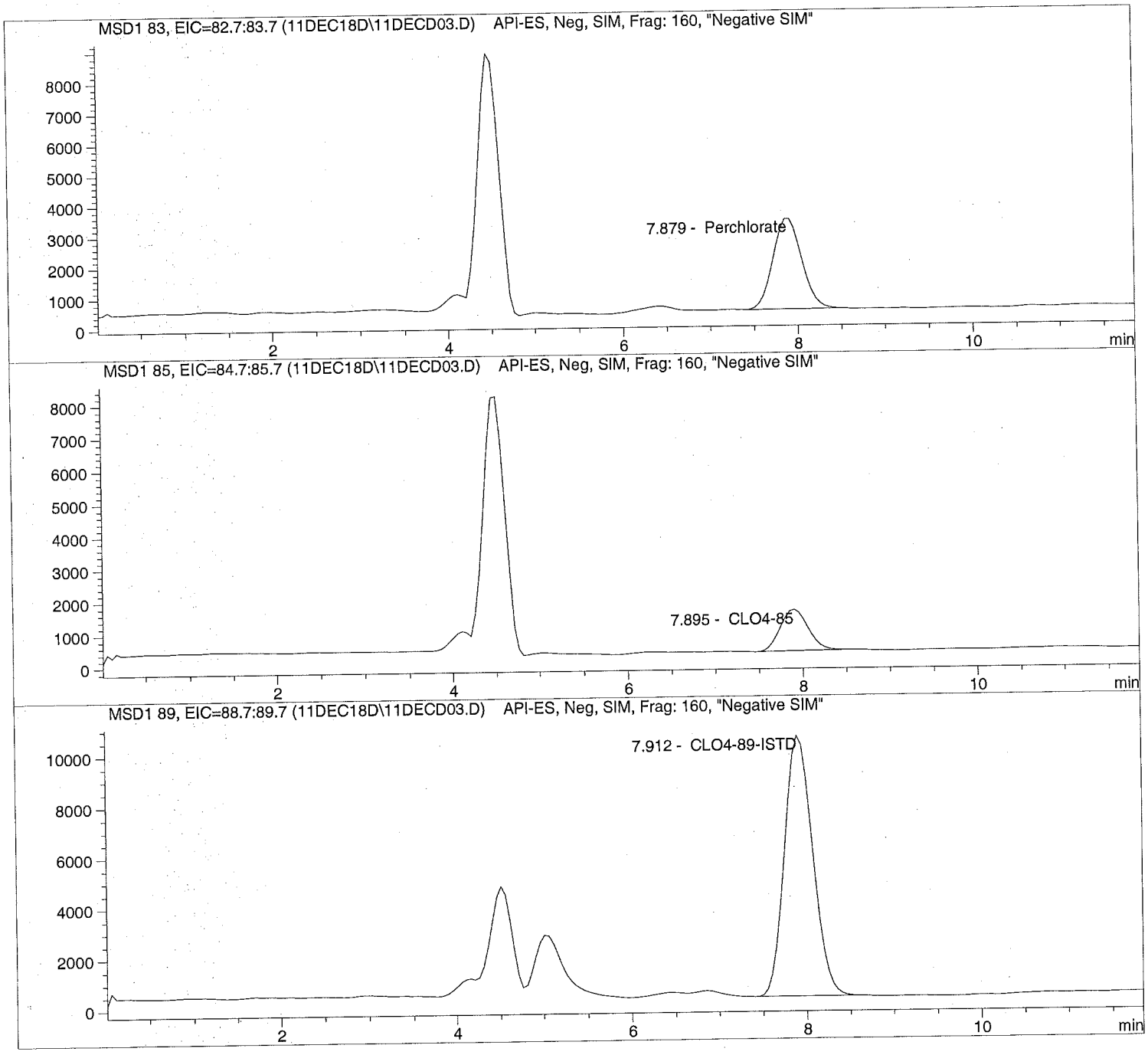
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD03.D Sample Name: 631666 ICS@1.0

Injection Date:	12/11/2018 08:30:20	Seq Line:	3
Sample Name:	631666 ICS@1.0	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD03.D Sample Name: 631666 ICS@1.0

Injection Date:	12/11/2018 08:30:20	Seq Line:	3
Sample Name:	631666 ICS@1.0	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.879	PBA	66695.8	1.1077	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.895	PBA	27751.3	1.3506	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.912	PBA	228966.4	5.0000	CLO4-89-ISTD

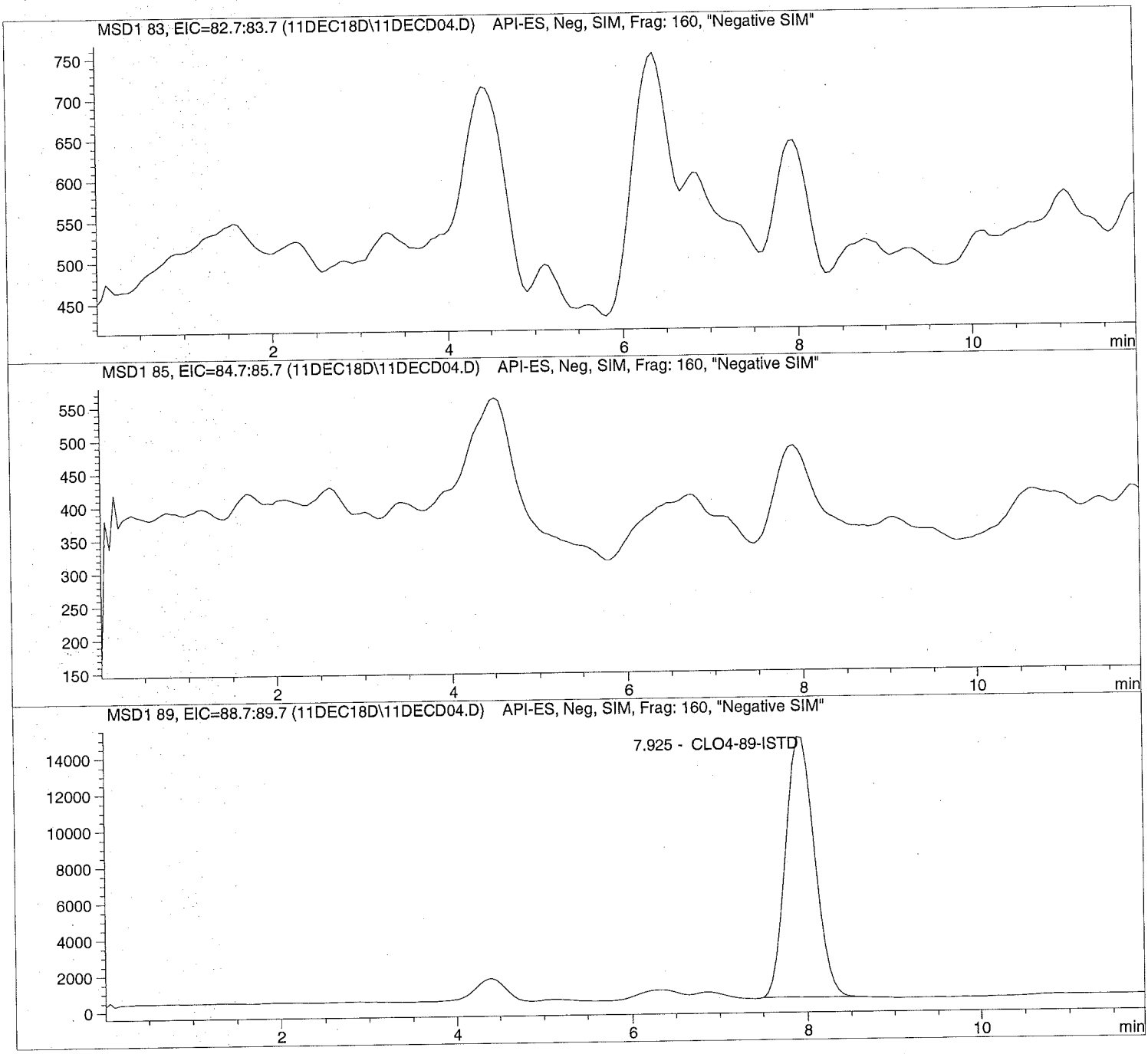
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD04.D Sample Name: 631667 LMB

Injection Date:	12/11/2018 08:44:10	Seq Line:	4
Sample Name:	631667 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD04.D Sample Name: 631667 LMB

Injection Date:	12/11/2018 08:44:10	Seq Line:	4
Sample Name:	631667 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.925	PBA	322647.7	5.0000	CLO4-89-ISTD

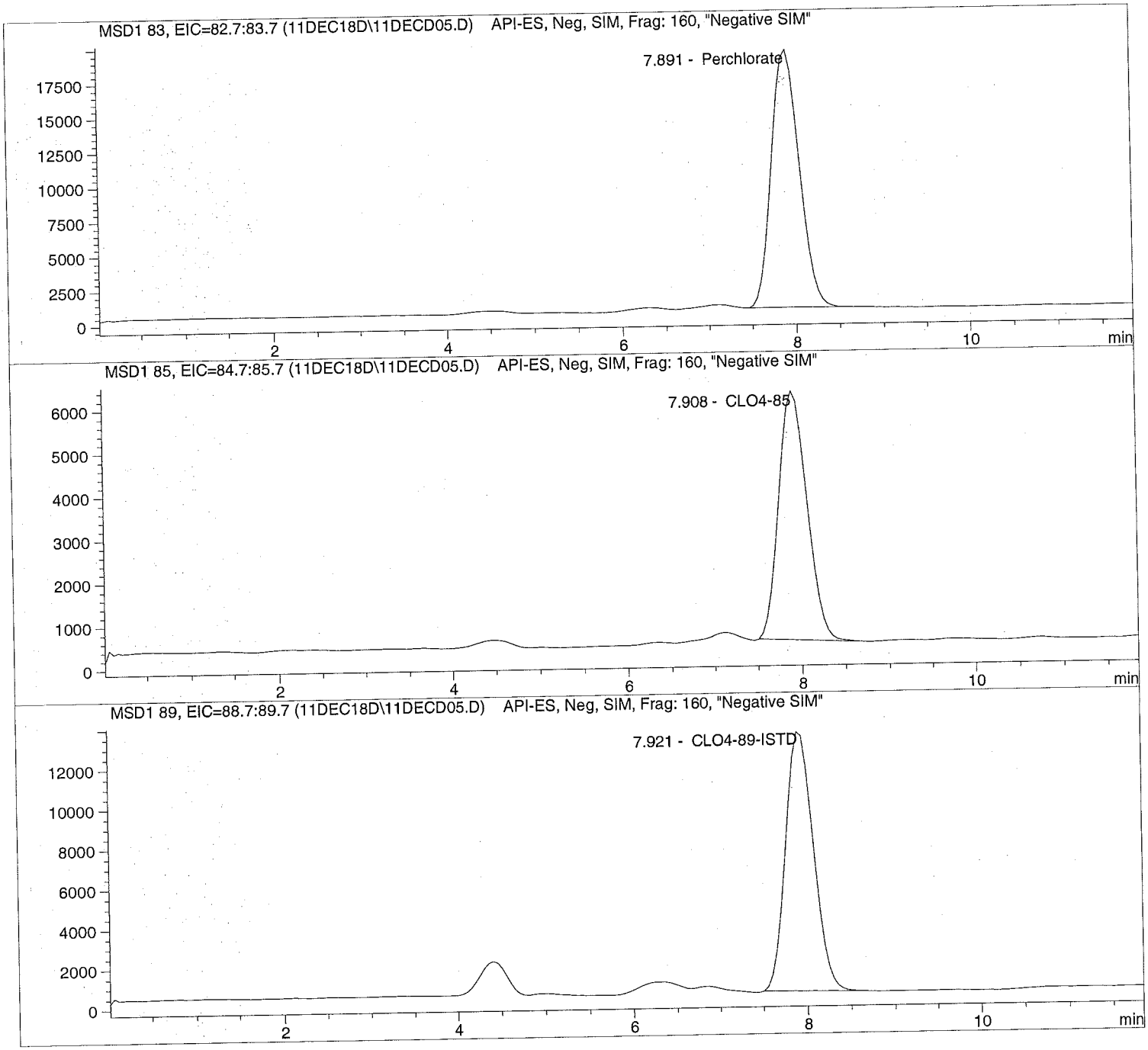
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD05.D Sample Name: 631668 QC@5.0

Injection Date:	12/11/2018 08:57:58	Seq Line:	5
Sample Name:	631668 QC@5.0	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD05.D Sample Name: 631668 QC@5.0

Injection Date:	12/11/2018 08:57:58	Seq Line:	5
Sample Name:	631668 QC@5.0	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	5.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.891	PBA	408977.5	4.5776	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.908	PBA	128593.4	4.7201	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.921	PBA	287168.8	5.0000	CLO4-89-ISTD

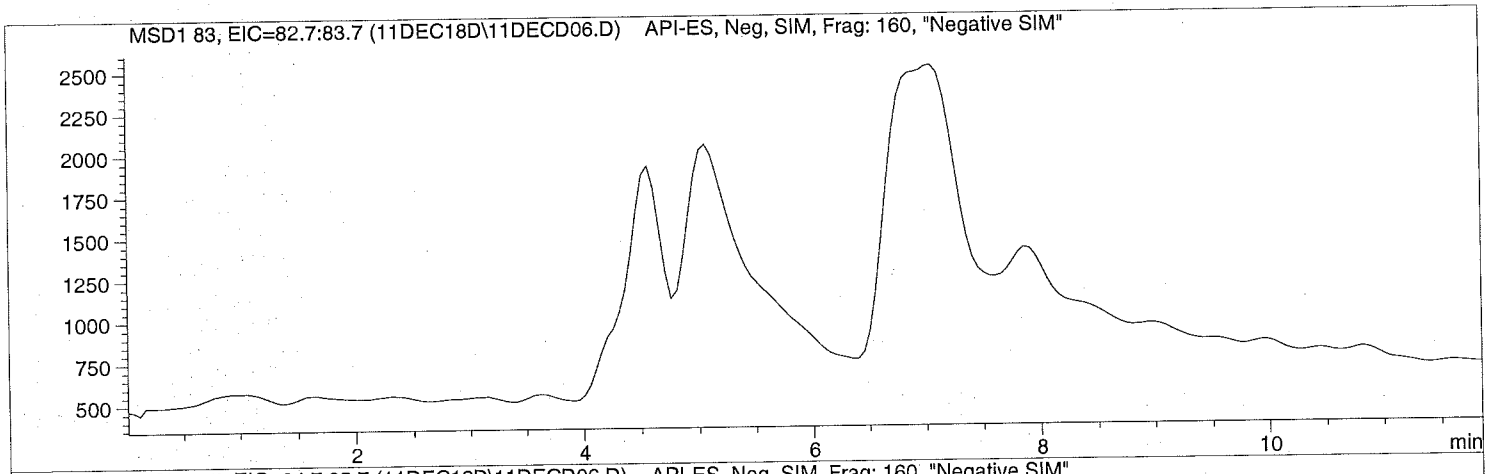
*** End of Report ***

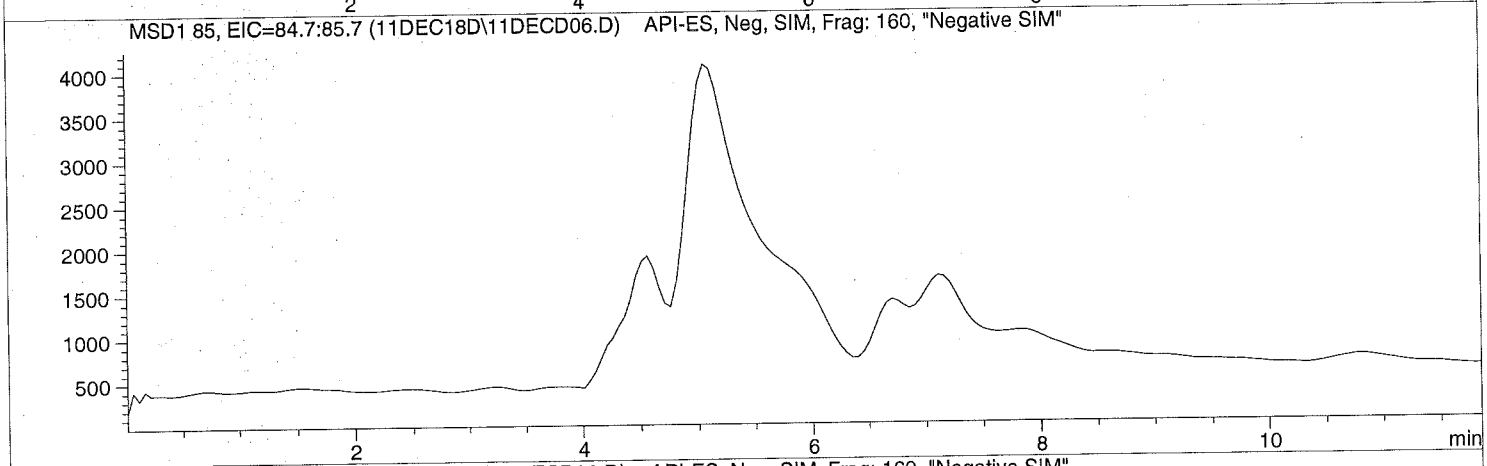
Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD06.D Sample Name: 1833461001

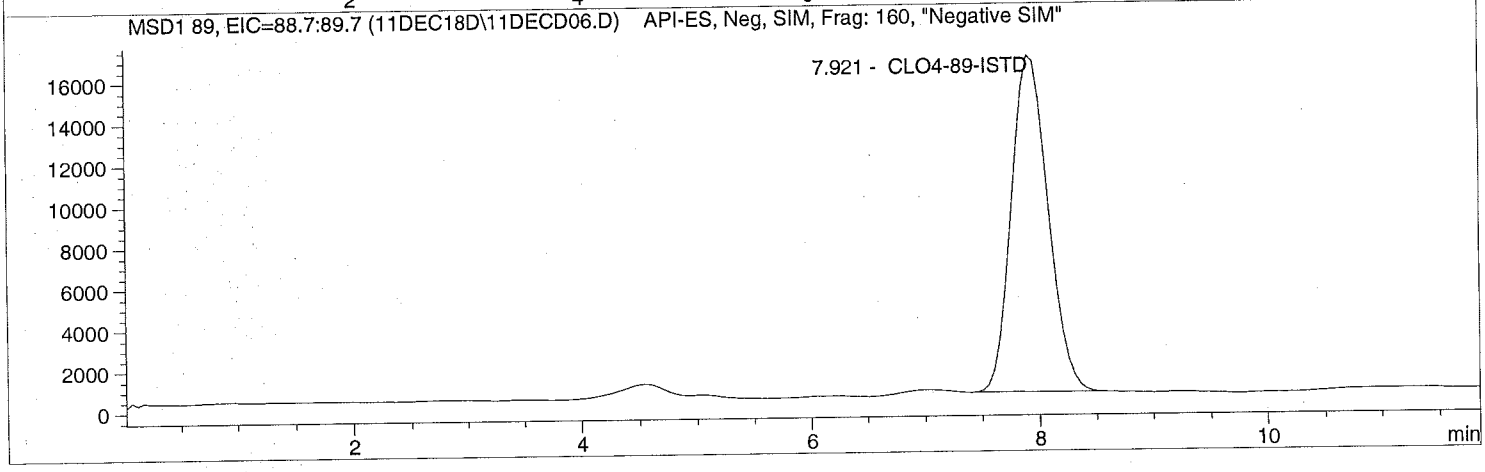
Injection Date:	12/11/2018 09:11:48	Seq Line:	6
Sample Name:	1833461001	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD06.D Sample Name: 1833461001

Injection Date:	12/11/2018 09:11:48	Seq Line:	6
Sample Name:	1833461001	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.921	PBA	360792.0	5.0000	CLO4-89-ISTD

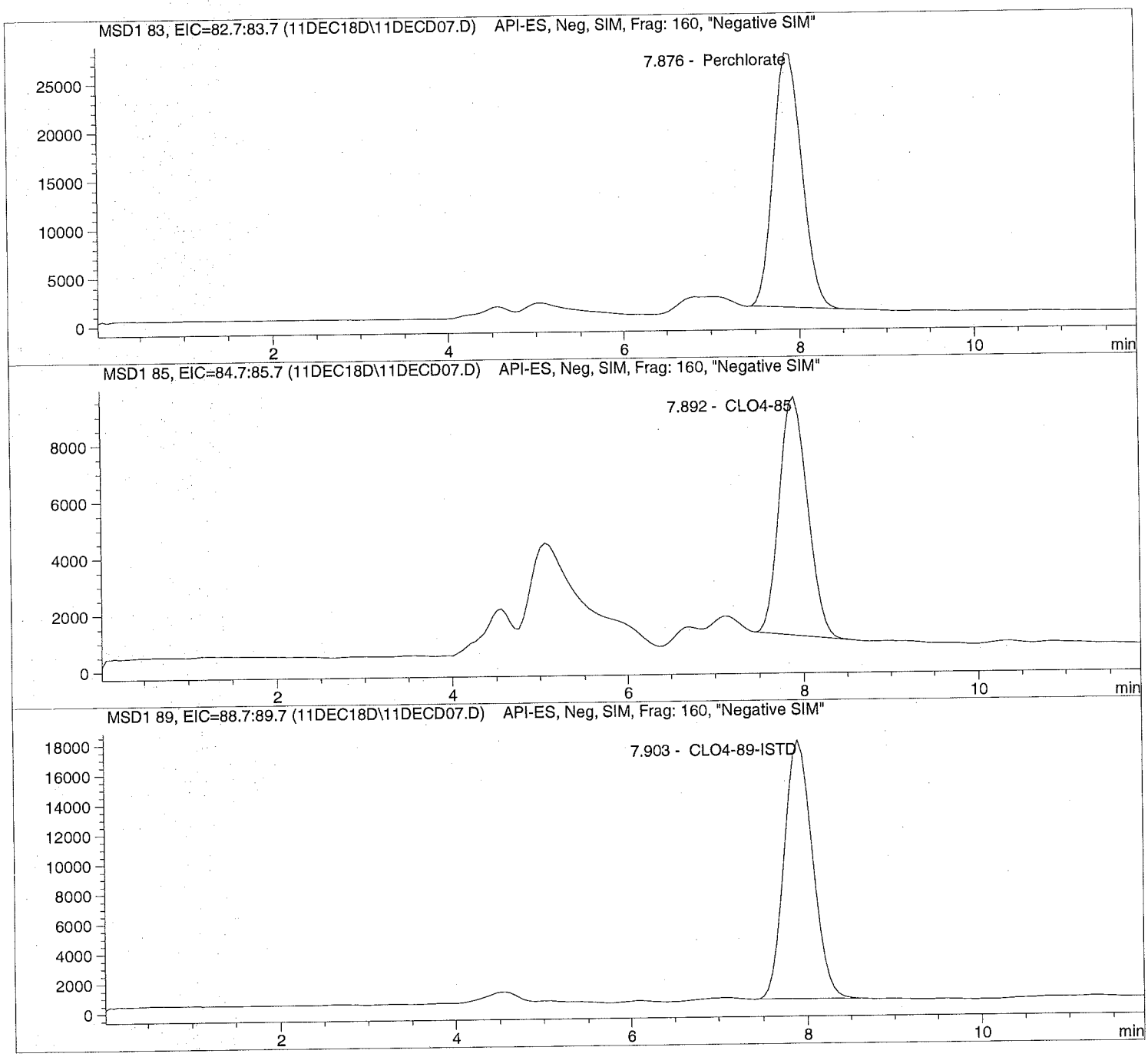
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD07.D Sample Name: 1833461002 MS

Injection Date:	12/11/2018 09:25:39	Seq Line:	7
Sample Name:	1833461002 MS	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD07.D Sample Name: 1833461002 MS

Injection Date:	12/11/2018 09:25:39	Seq Line:	7
Sample Name:	1833461002 MS	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.876	PBA	587664.7	4.8513	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.892	VBA	187637.6	5.0846	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.903	PBA	388117.1	5.0000	CLO4-89-ISTD

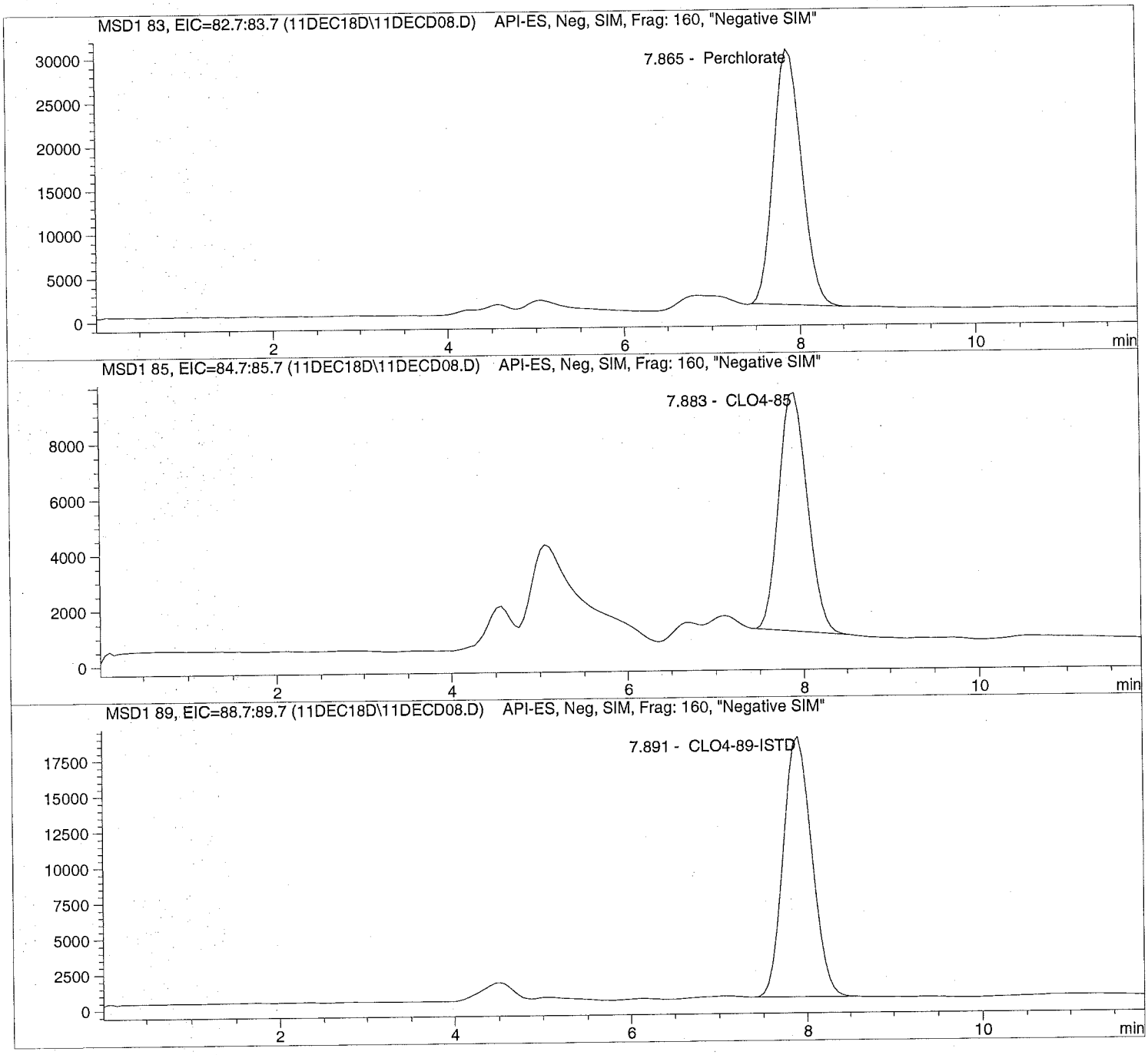
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD08.D Sample Name: 1833461003 MSD

Injection Date:	12/11/2018 09:39:25	Seq Line:	8
Sample Name:	1833461003 MSD	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD08.D Sample Name: 1833461003 MSD

Injection Date:	12/11/2018 09:39:25	Seq Line:	8
Sample Name:	1833461003 MSD	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.865	PBA	644190.4	5.0112	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.883	PBA	192803.6	4.9360	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.891	PBA	411169.7	5.0000	CLO4-89-ISTD

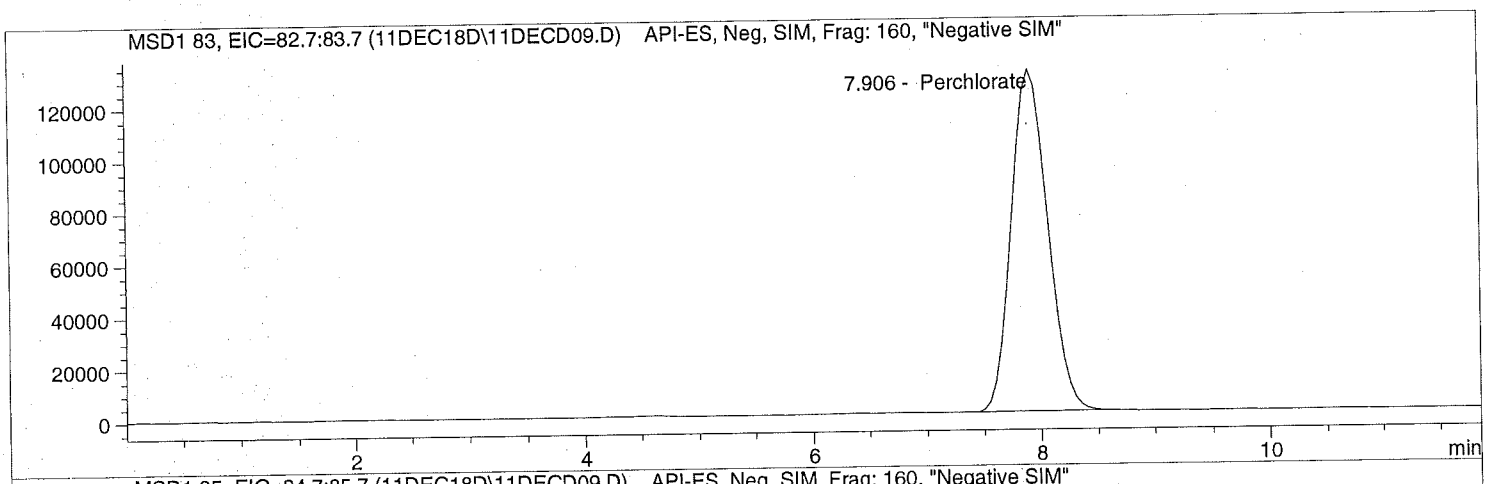
*** End of Report ***

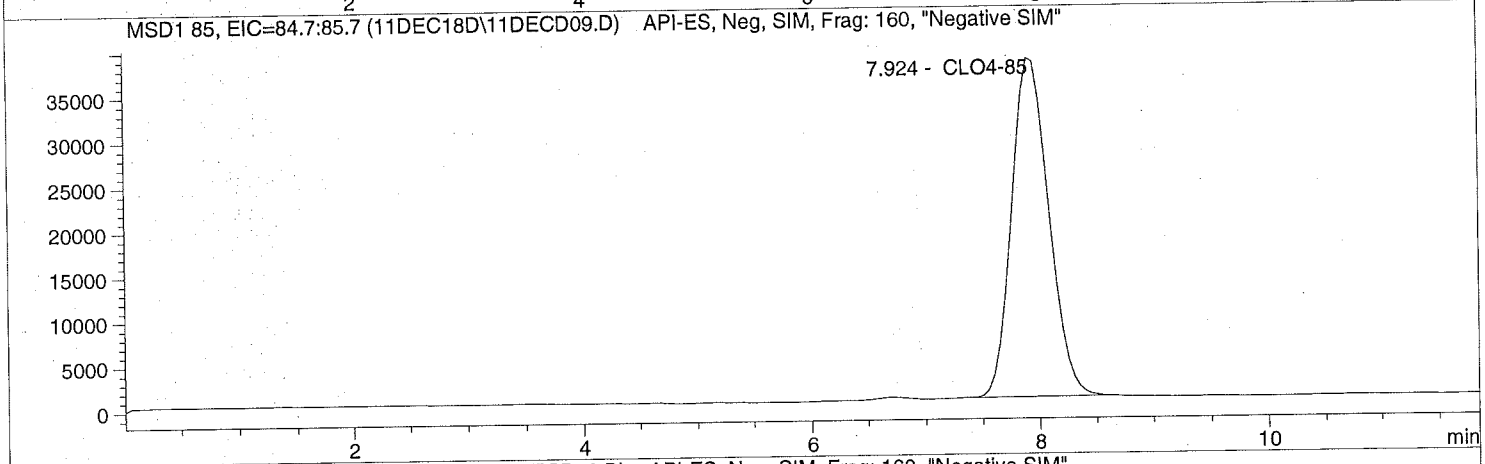
Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD09.D Sample Name: 1833461004 100

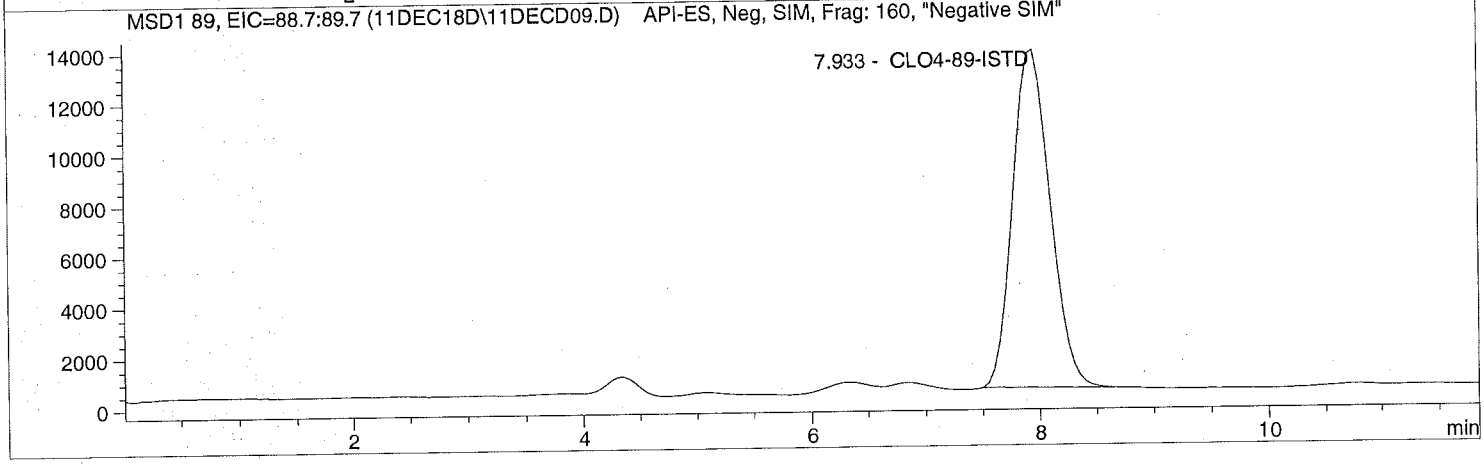
Injection Date:	12/11/2018 09:53:11	Seq Line:	9
Sample Name:	1833461004 100	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD09.D Sample Name: 1833461004 100

Injection Date:	12/11/2018 09:53:11	Seq Line:	9
Sample Name:	1833461004 100	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	100.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.906	PBA	2891111.8	2851.9254	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.924	BBA	851631.1	2782.2216	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.933	PBA	300444.9	500.0000	CLO4-89-ISTD

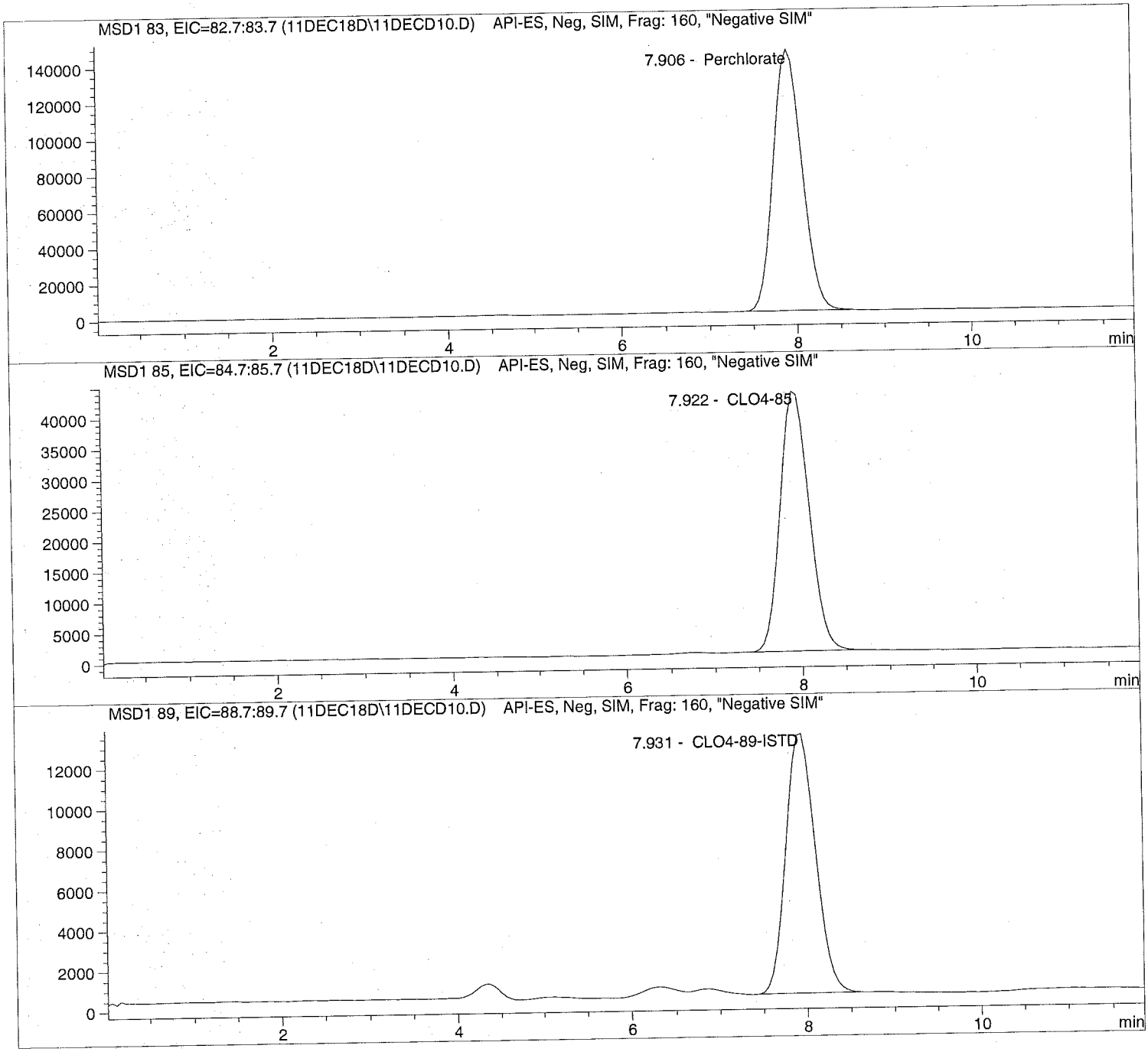
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD10.D Sample Name: 1833461005 100

Injection Date:	12/11/2018 10:06:58	Seq Line:	10
Sample Name:	1833461005 100	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD10.D Sample Name: 1833461005 100

Injection Date:	12/11/2018 10:06:58	Seq Line:	10
Sample Name:	1833461005 100	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	100.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.906	PBA	3298217.8	3211.7849	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.922	PBA	978589.6	3149.5859	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.931	PBA	302235.4	500.0000	CLO4-89-ISTD

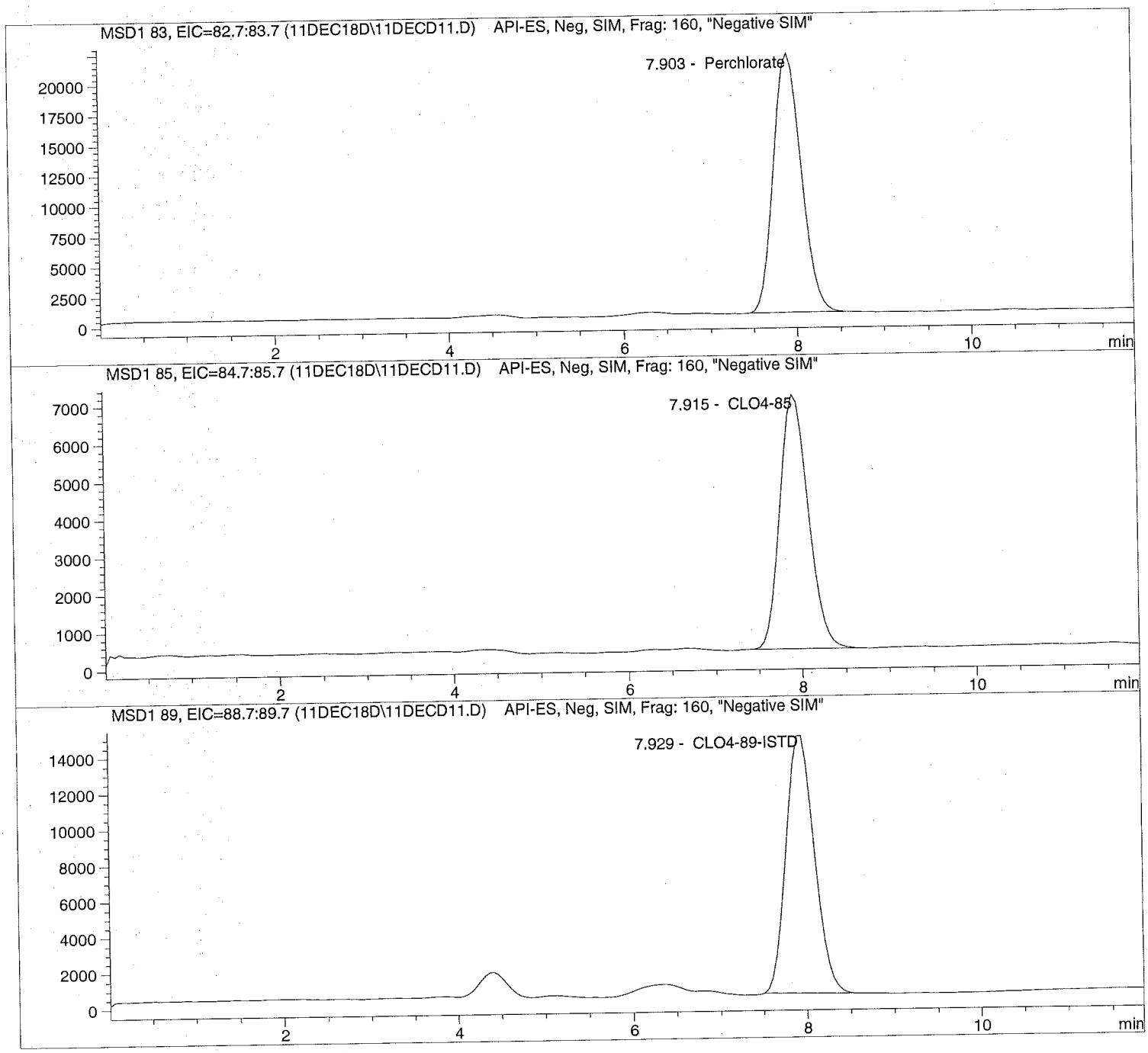
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD11.D Sample Name: 1833461006 10K

Injection Date:	12/11/2018 10:20:44	Seq Line:	11
Sample Name:	1833461006 10K	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD11.D Sample Name: 1833461006 10K

Injection Date:	12/11/2018 10:20:44	Seq Line:	11
Sample Name:	1833461006 10K	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	10000.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.903	PBA	476196.3	47325.9026	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.915	BBA	152822.6	49818.5957	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.929	PBA	322820.2	50000.0000	CLO4-89-ISTD

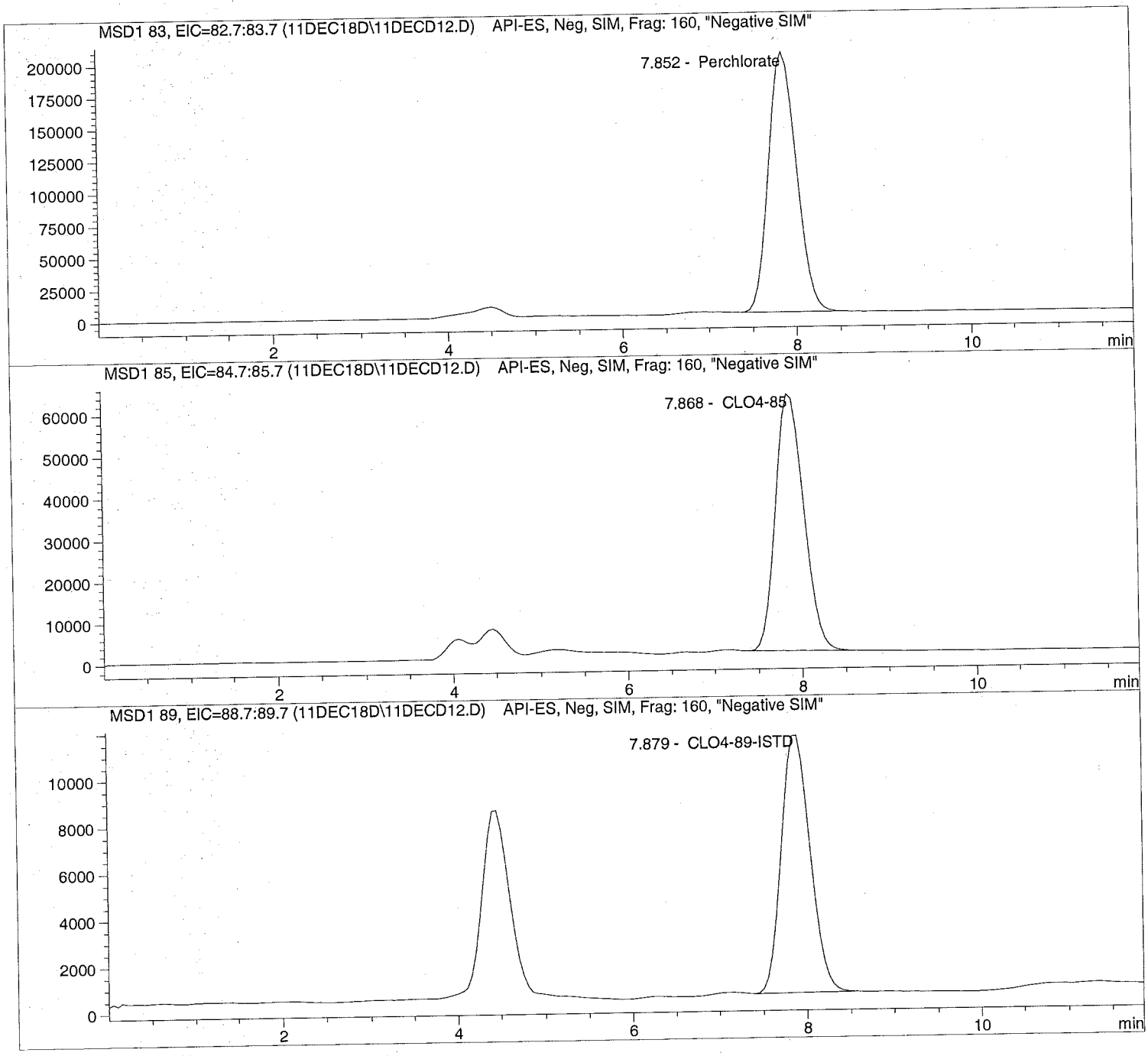
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD12.D Sample Name: 1833461007

Injection Date:	12/11/2018 10:34:29	Seq Line:	12
Sample Name:	1833461007	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD12.D Sample Name: 1833461007

Injection Date:	12/11/2018 10:34:29	Seq Line:	12
Sample Name:	1833461007	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.852	PBA	4513045.5	50.9459	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.868	VBA	1389702.0	51.2193	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.879	PBA	252017.3	5.0000	CLO4-89-ISTD

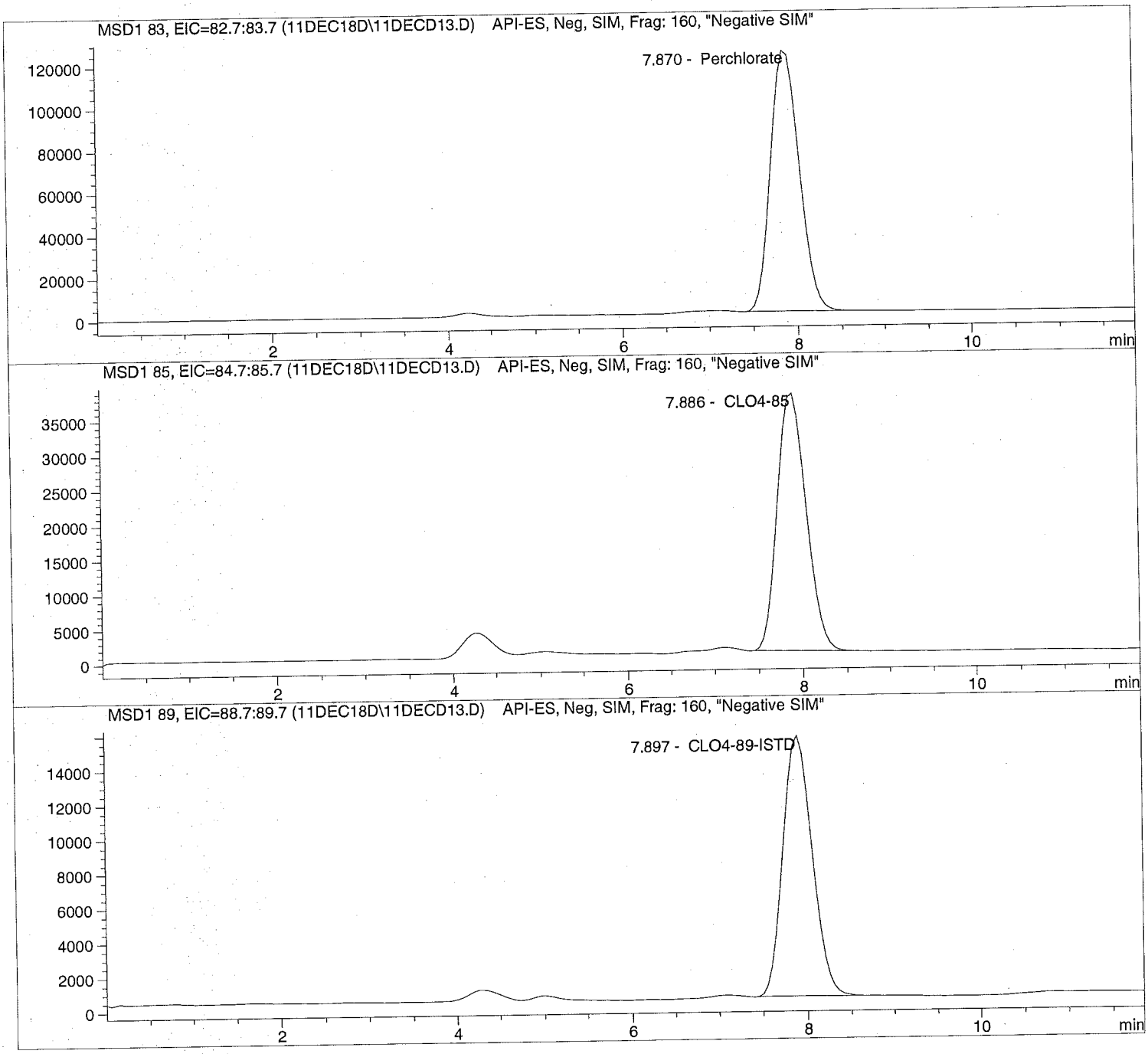
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD13.D Sample Name: 1833875001

Injection Date:	12/11/2018 10:48:16	Seq Line:	13
Sample Name:	1833875001	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD13.D Sample Name: 1833875001

Injection Date:	12/11/2018 10:48:16	Seq Line:	13
Sample Name:	1833875001	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.870	PBA	2746040.0	24.0717	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.886	PBA	829390.4	24.0864	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.897	PBA	341152.2	5.0000	CLO4-89-ISTD

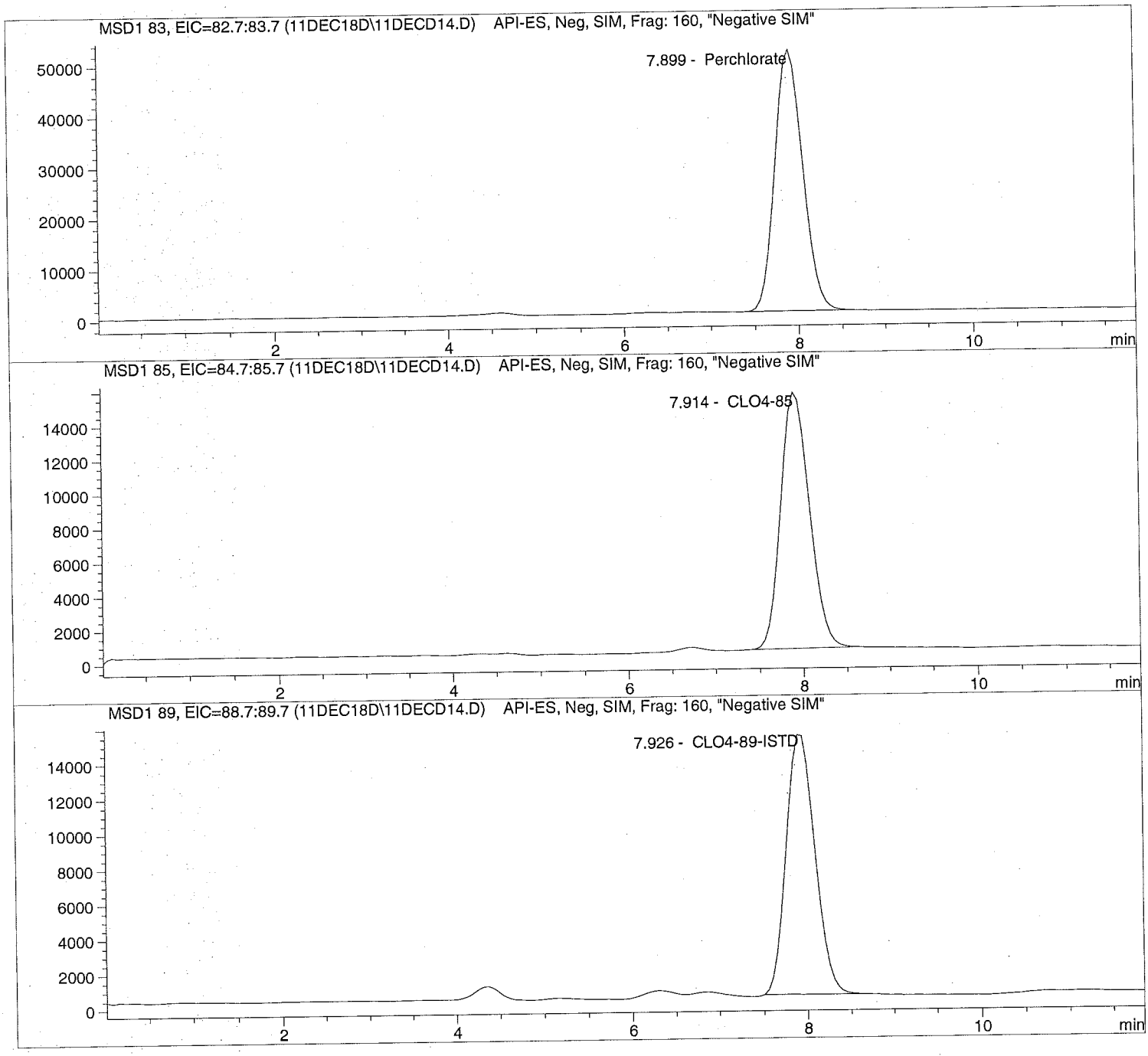
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD14.D Sample Name: 1833875002 100

Injection Date:	12/11/2018 11:02:02	Seq Line:	14
Sample Name:	1833875002 100	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD14.D Sample Name: 1833875002 100

Injection Date:	12/11/2018 11:02:02	Seq Line:	14
Sample Name:	1833875002 100	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	100.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.899	PBA	1140387.5	1052.7598	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.914	PBA	343363.9	1052.7429	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.926	PBA	335466.7	500.0000	CLO4-89-ISTD

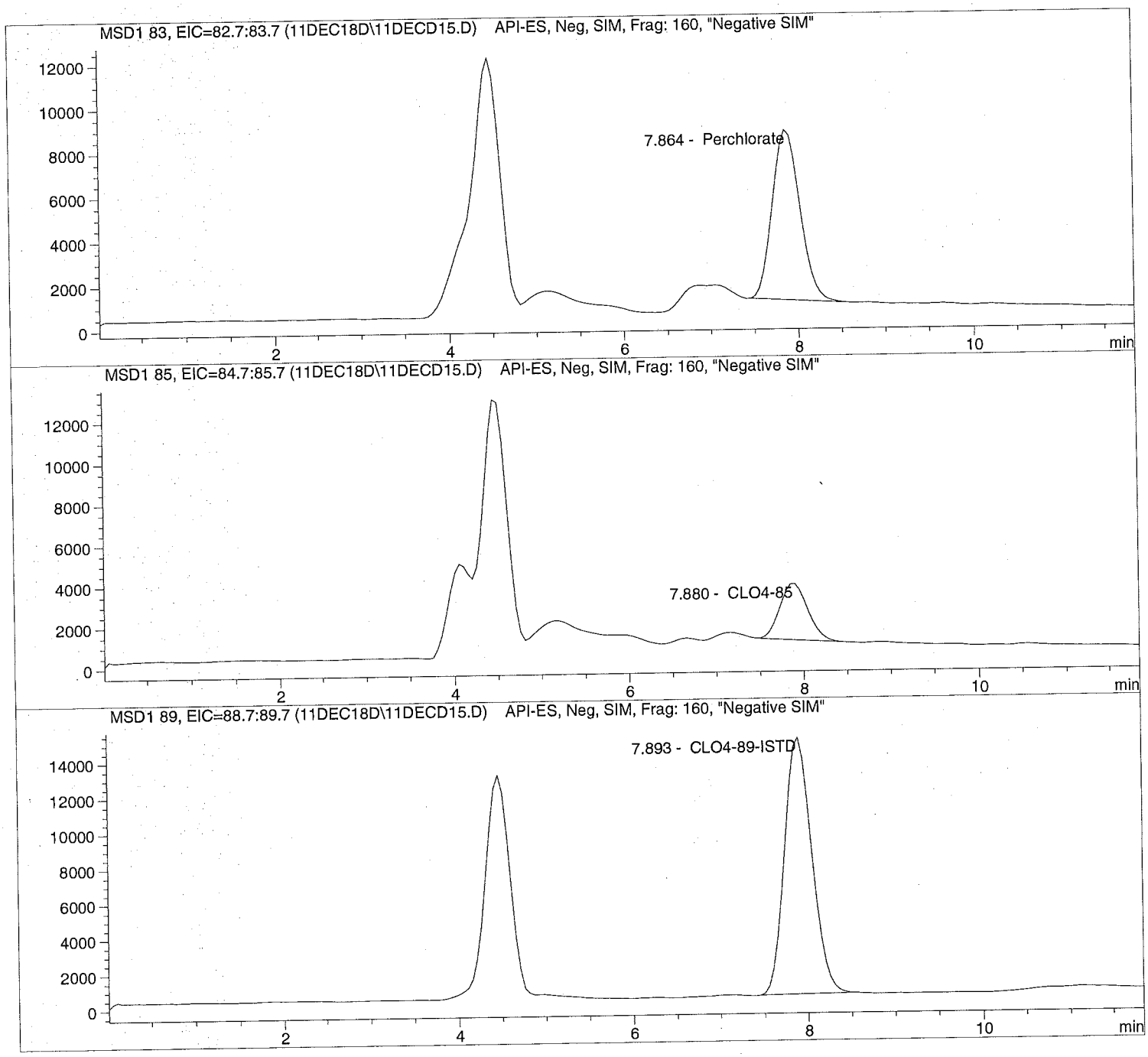
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD15.D Sample Name: 1833875003

Injection Date:	12/11/2018 11:15:49	Seq Line:	15
Sample Name:	1833875003	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD15.D Sample Name: 1833875003

Injection Date:	12/11/2018 11:15:49	Seq Line:	15
Sample Name:	1833875003	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.864	PBA	168396.0	1.8504	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.880	VBA	61128.4	2.0997	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.893	PBA	316168.6	5.0000	CLO4-89-ISTD

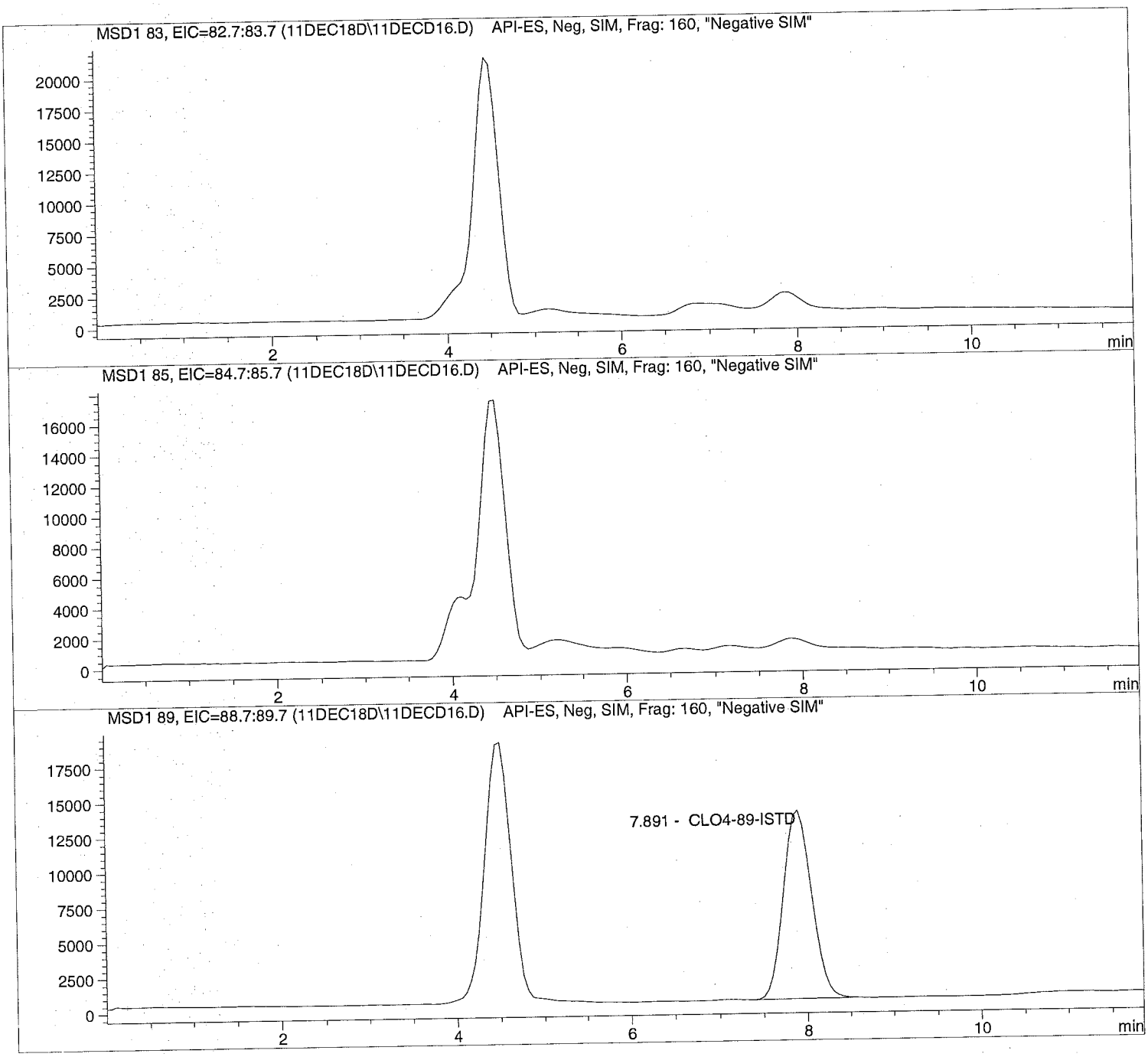
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD16.D Sample Name: 1833980001

Injection Date:	12/11/2018 11:29:36	Seq Line:	16
Sample Name:	1833980001	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD16.D Sample Name: 1833980001

Injection Date:	12/11/2018 11:29:36	Seq Line:	16
Sample Name:	1833980001	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.891	PBA	300388.2	5.0000	CLO4-89-ISTD

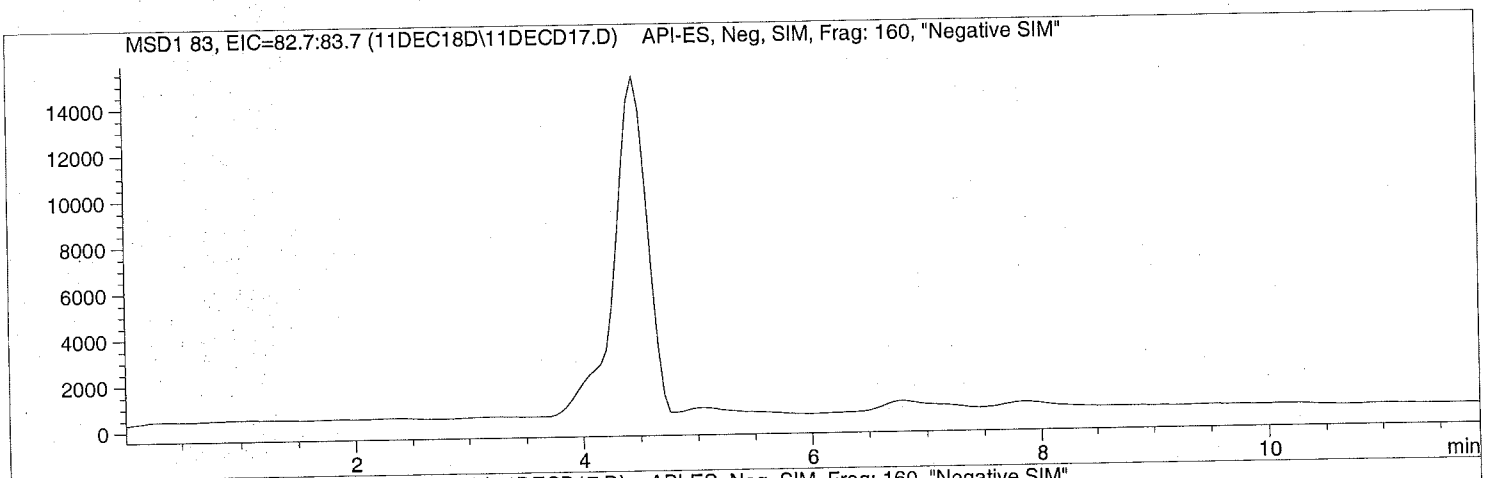
*** End of Report ***

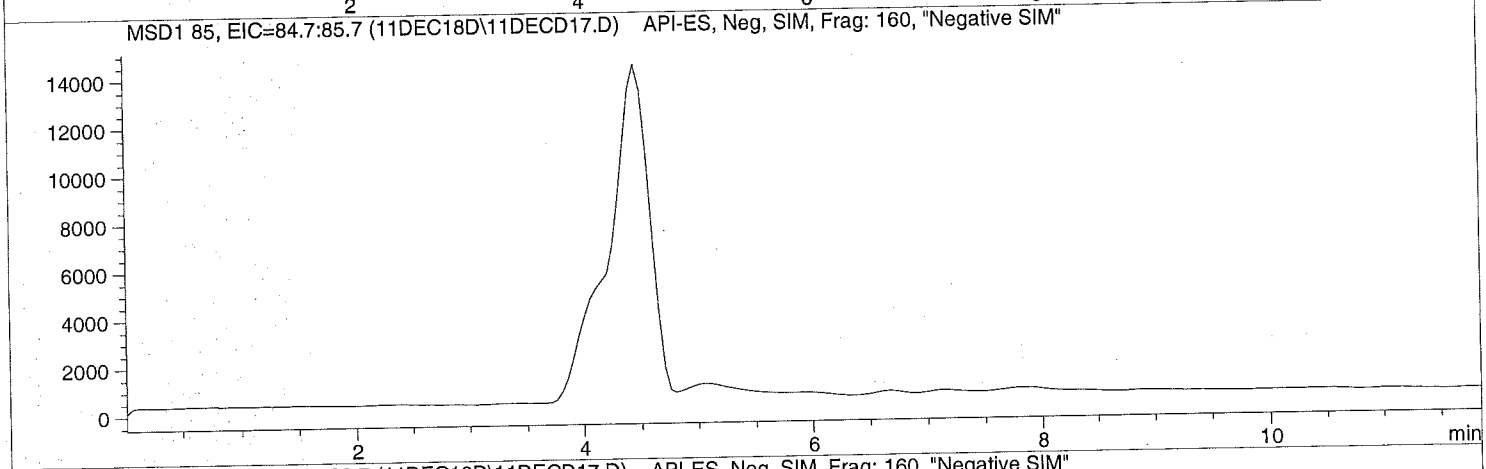
Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD17.D Sample Name: 1833980002

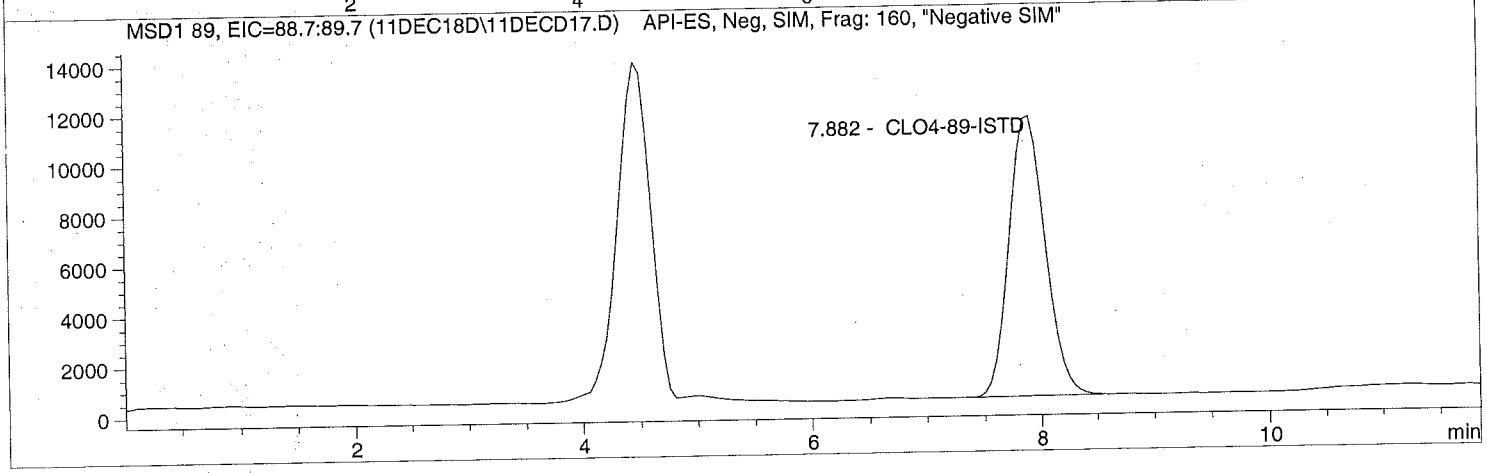
Injection Date:	12/11/2018 11:43:23	Seq Line:	17
Sample Name:	1833980002	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD17.D Sample Name: 1833980002

Injection Date:	12/11/2018 11:43:23	Seq Line:	17
Sample Name:	1833980002	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.882	PBA	247846.6	5.0000	CLO4-89-ISTD

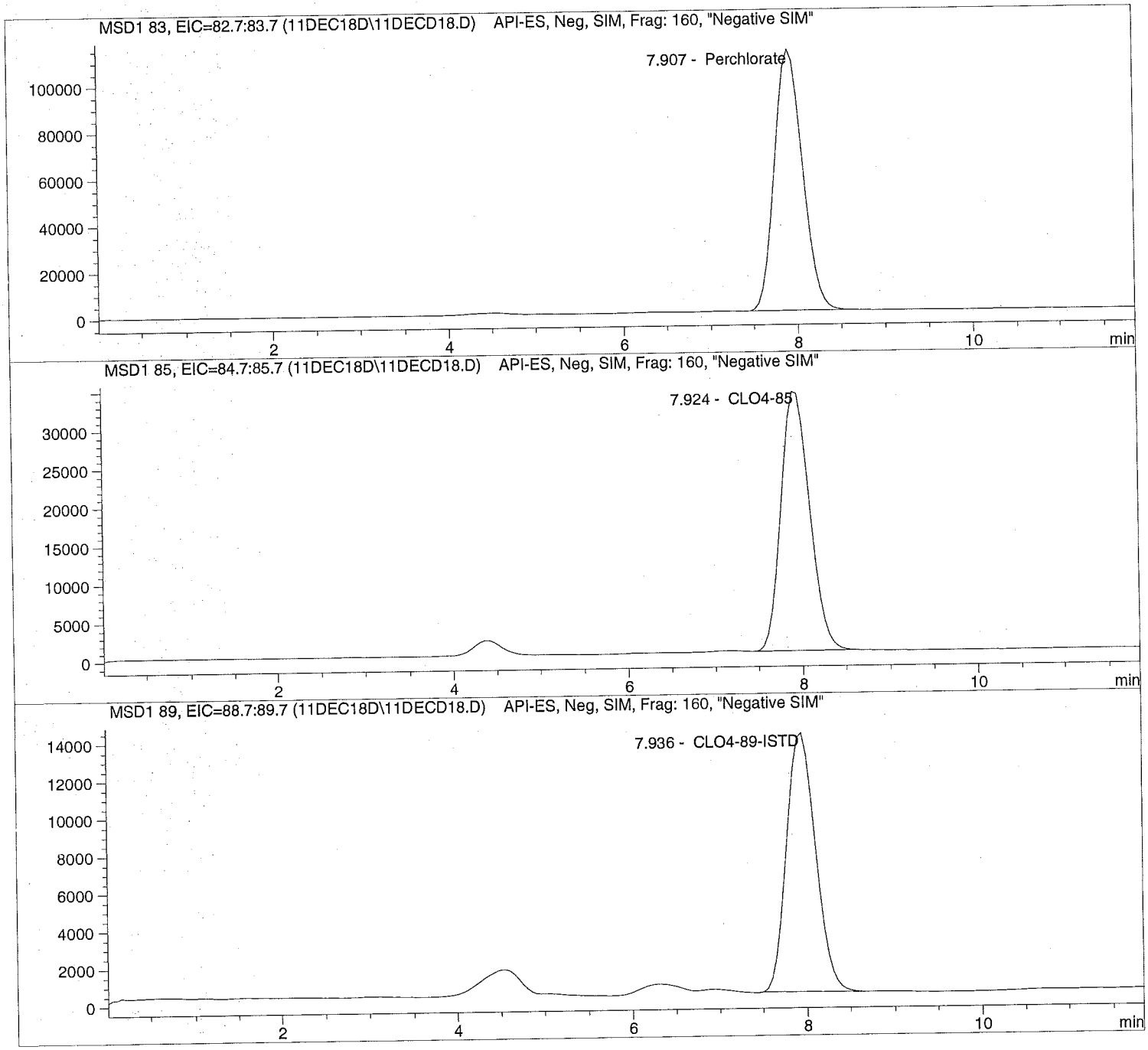
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD18.D Sample Name: 631669 CCV@25

Injection Date:	12/11/2018 11:57:11	Seq Line:	18
Sample Name:	631669 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD18.D Sample Name: 631669 CCV@25

Injection Date:	12/11/2018 11:57:11	Seq Line:	18
Sample Name:	631669 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.907	PBA	2478161.8	23.5670	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.924	PBA	761944.6	23.9861	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.936	PBA	314800.1	5.0000	CLO4-89-ISTD

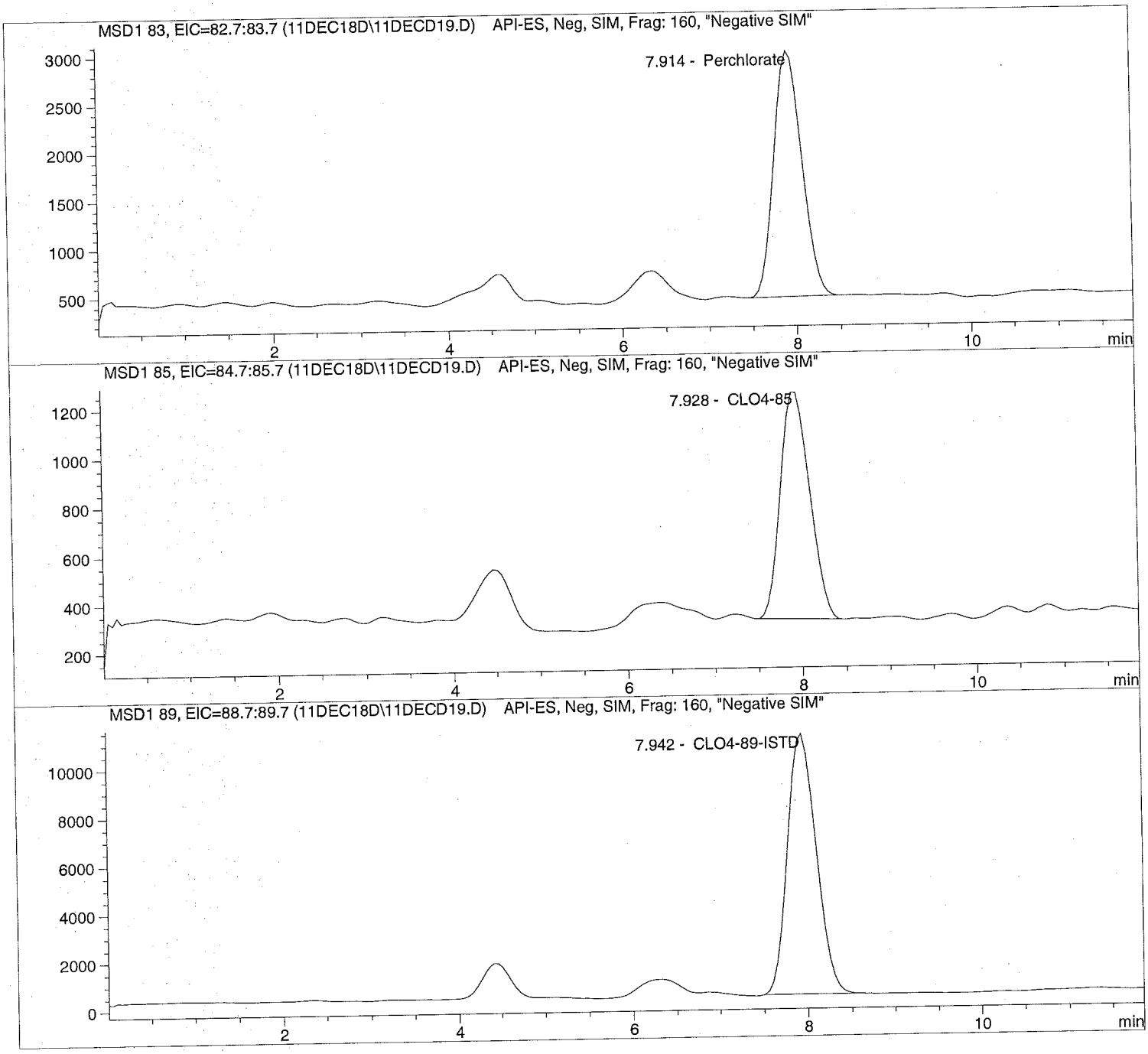
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD19.D Sample Name: 631670 LODV@1.

Injection Date:	12/11/2018 12:10:56	Seq Line:	19
Sample Name:	631670 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD19.D Sample Name: 631670 LODV@1.

Injection Date:	12/11/2018 12:10:56	Seq Line:	19
Sample Name:	631670 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.914	PBA	56994.7	0.9318	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.928	PBA	21608.5	1.0133	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.942	PBA	243309.5	5.0000	CLO4-89-ISTD

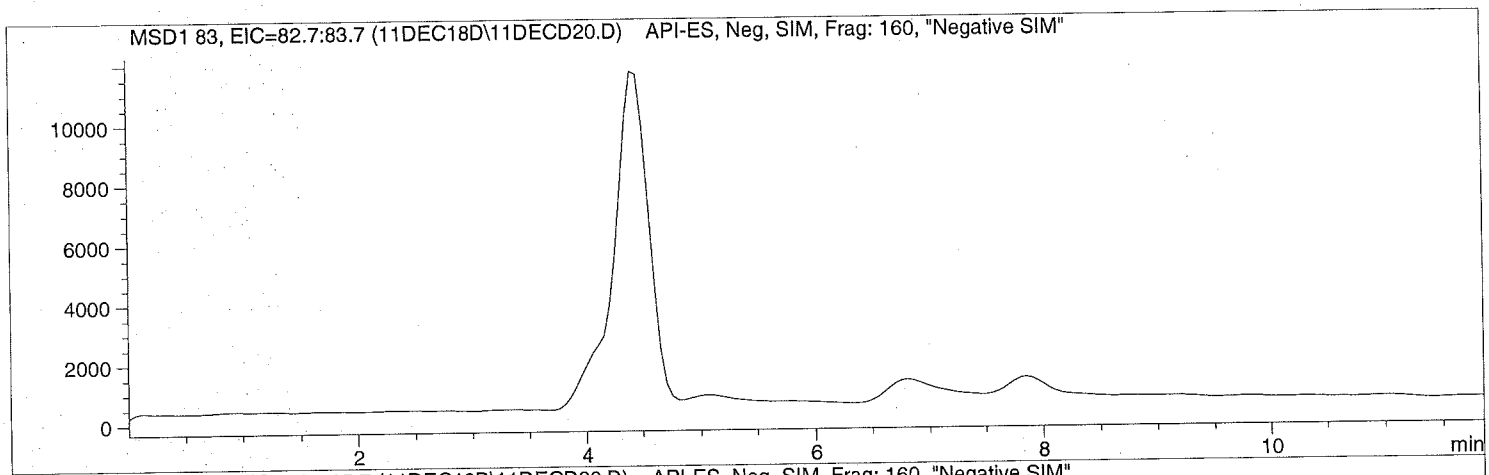
*** End of Report ***

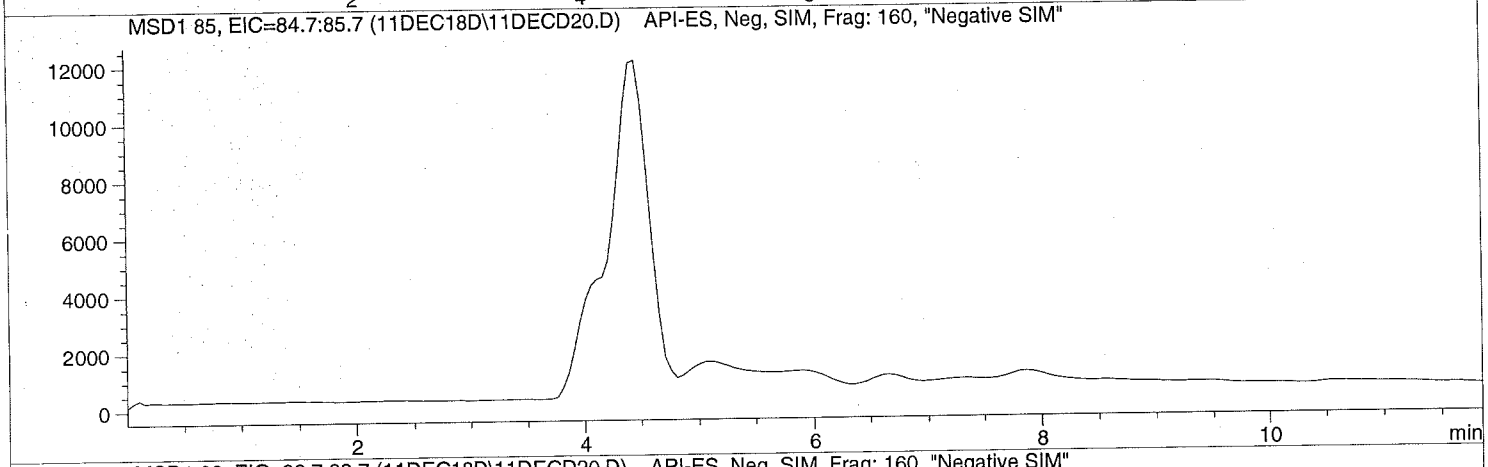
Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD20.D Sample Name: 1833980003

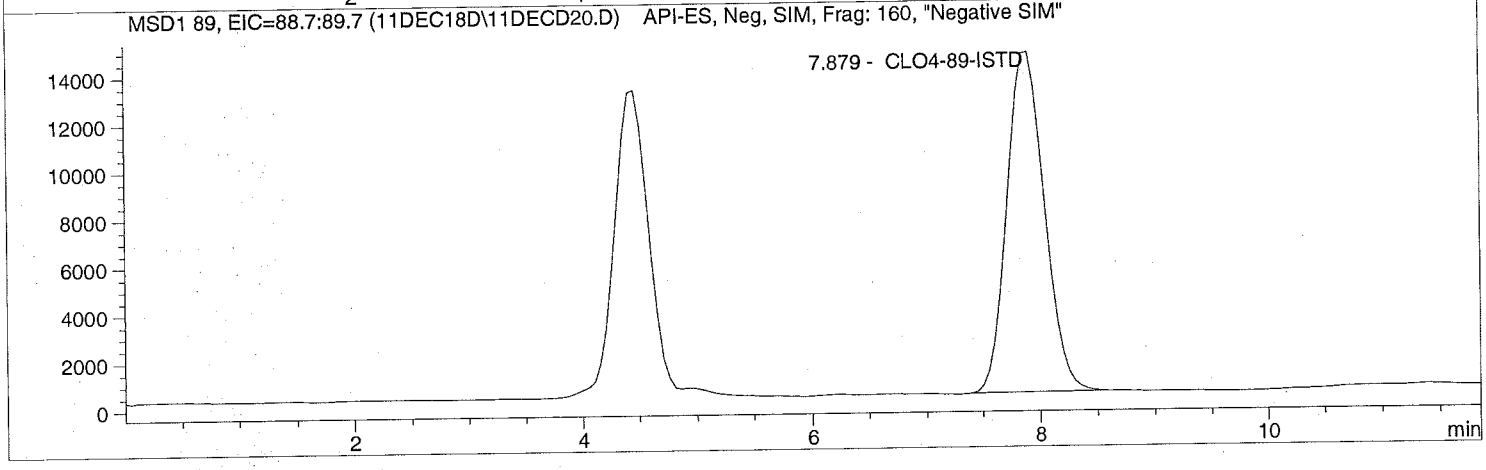
Injection Date:	12/11/2018 12:24:42	Seq Line:	20
Sample Name:	1833980003	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD20.D Sample Name: 1833980003

Injection Date:	12/11/2018 12:24:42	Seq Line:	20
Sample Name:	1833980003	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.879	PBA	322750.5	5.0000	CLO4-89-ISTD

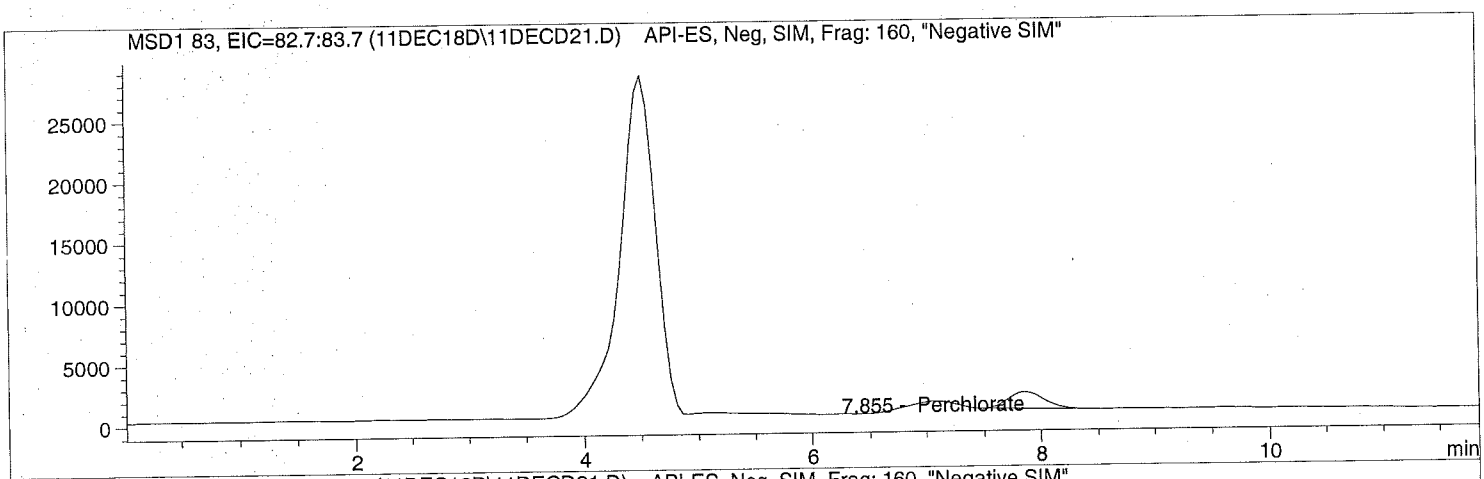
*** End of Report ***

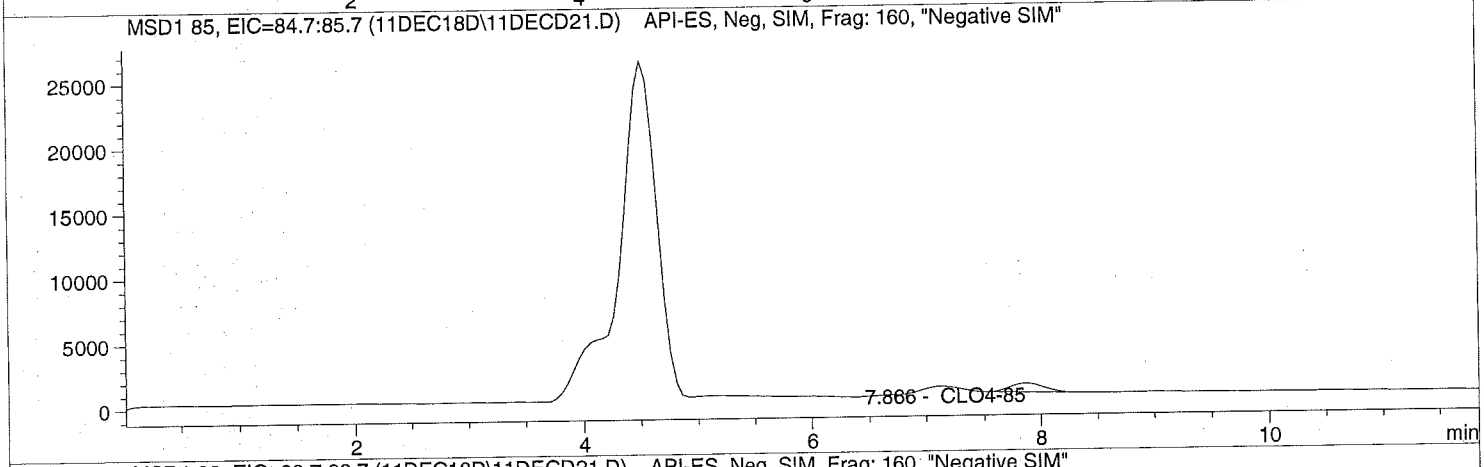
Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD21.D Sample Name: 1833980004

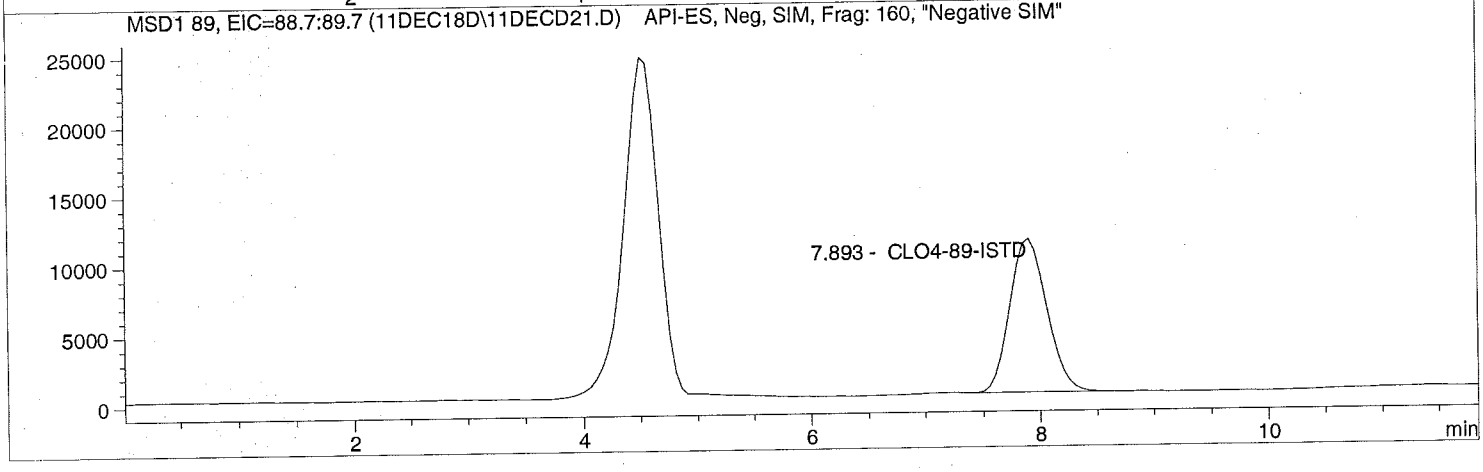
Injection Date:	12/11/2018 12:38:33	Seq Line:	21
Sample Name:	1833980004	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD21.D Sample Name: 1833980004

Injection Date:	12/11/2018 12:38:33	Seq Line:	21
Sample Name:	1833980004	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.855	PBA	29927.4	0.5873	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.866	VBA	14187.9	0.6932	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.893	BBA	244118.1	5.0000	CLO4-89-ISTD

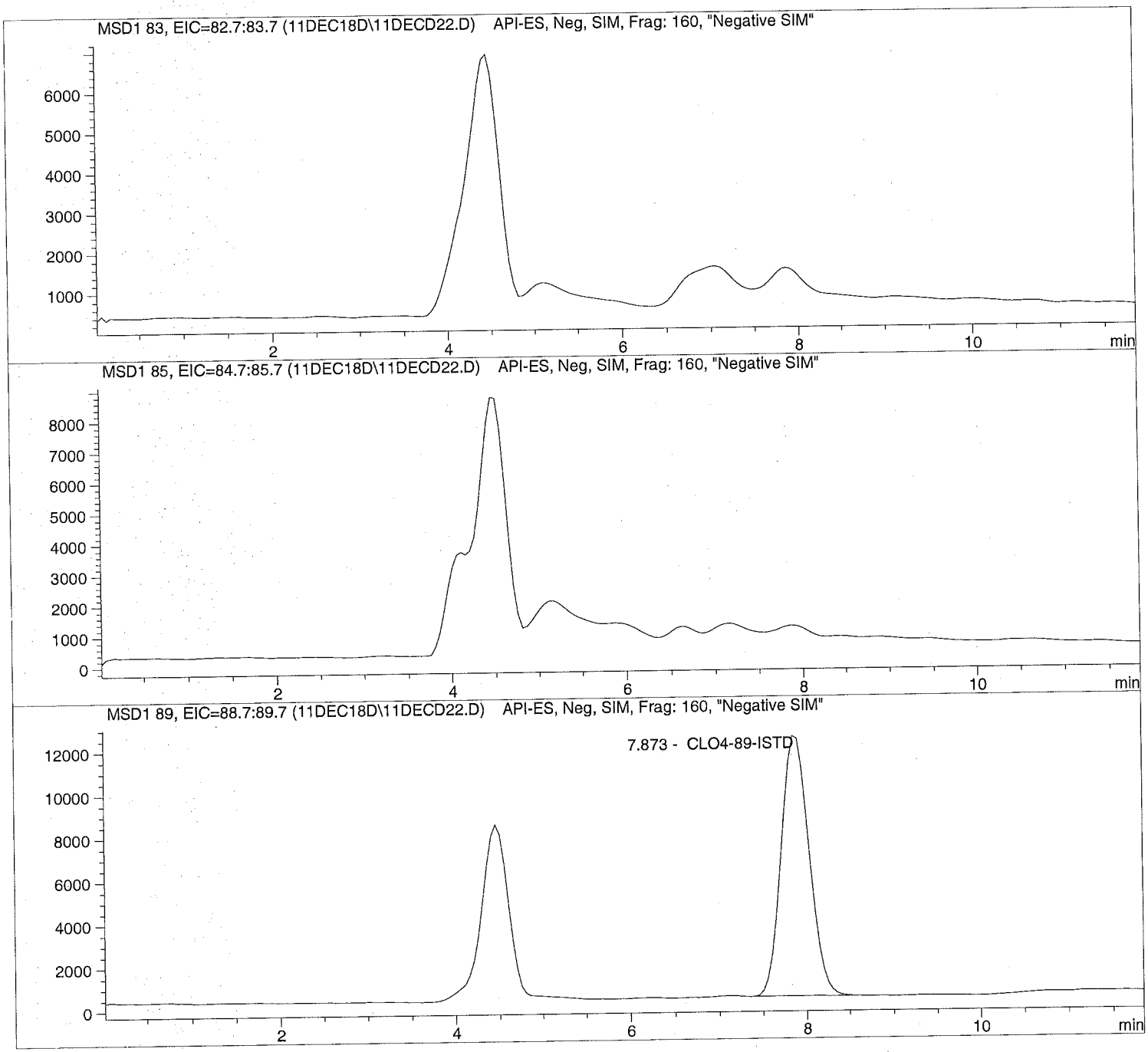
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD22.D Sample Name: 1833980005

Injection Date:	12/11/2018 12:52:19	Seq Line:	22
Sample Name:	1833980005	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD22.D Sample Name: 1833980005

Injection Date:	12/11/2018 12:52:19	Seq Line:	22
Sample Name:	1833980005	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.873	PBA	269834.5	5.0000	CLO4-89-ISTD

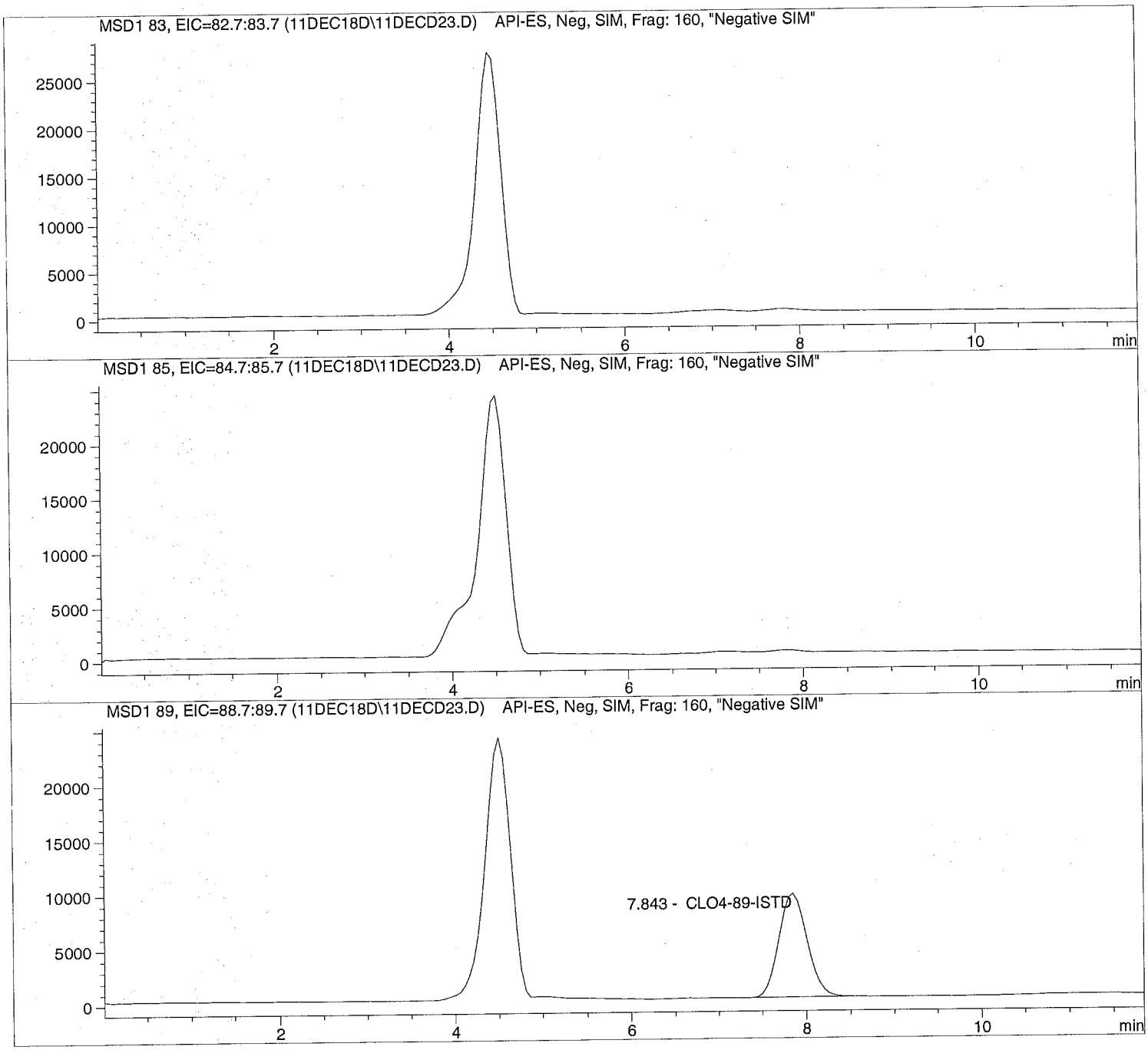
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD23.D Sample Name: 1833980006

Injection Date:	12/11/2018 13:06:07	Seq Line:	23
Sample Name:	1833980006	Location:	Vial 91
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD23.D Sample Name: 1833980006

Injection Date:	12/11/2018 13:06:07	Seq Line:	23
Sample Name:	1833980006	Location:	Vial 91
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.843	PBA	209759.2	5.0000	CLO4-89-ISTD

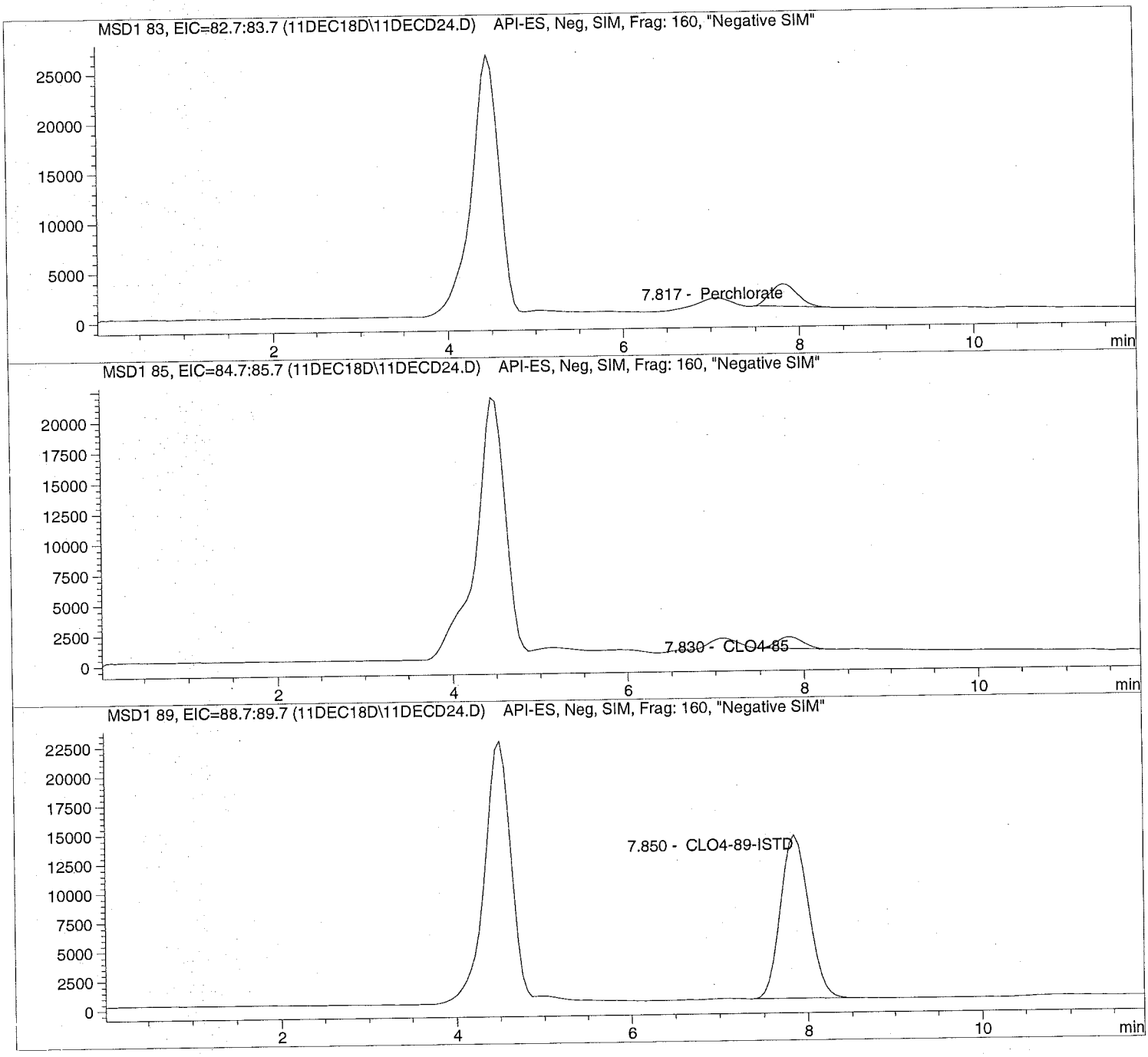
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD24.D Sample Name: 1833980007

Injection Date:	12/11/2018 13:19:52	Seq Line:	24
Sample Name:	1833980007	Location:	Vial 92
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD24.D Sample Name: 1833980007

Injection Date:	12/11/2018 13:19:52	Seq Line:	24
Sample Name:	1833980007	Location:	Vial 92
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.817	PBA	47940.8	0.6853	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.830	PBA	19968.4	0.7576	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.850	PBA	310571.8	5.0000	CLO4-89-ISTD

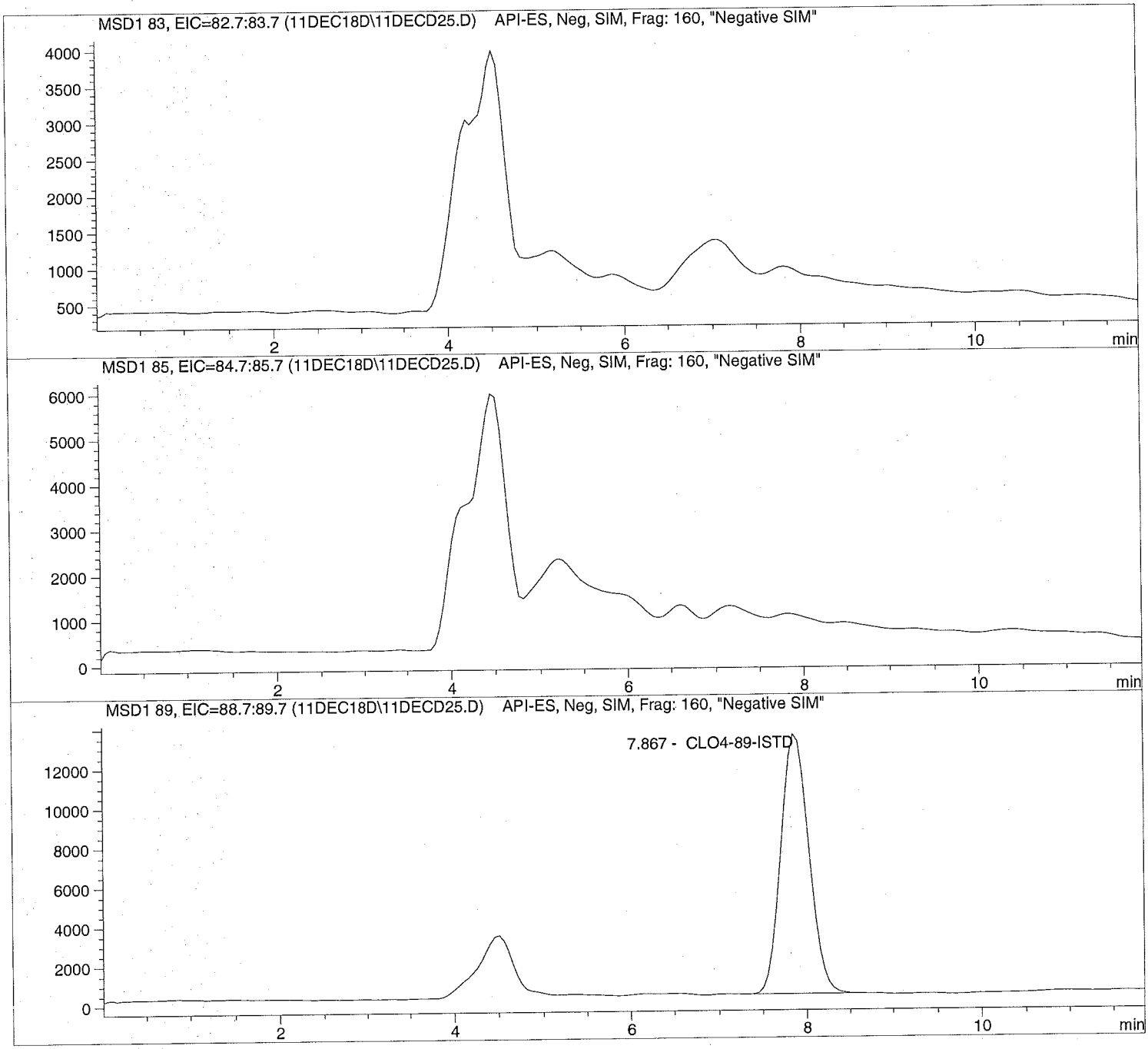
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD25.D Sample Name: 1833980008

Injection Date:	12/11/2018 13:33:40	Seq Line:	25
Sample Name:	1833980008	Location:	Vial 93
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD25.D Sample Name: 1833980008

Injection Date:	12/11/2018 13:33:40	Seq Line:	25
Sample Name:	1833980008	Location:	Vial 93
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.867	PBA	290513.1	5.0000	CLO4-89-ISTD

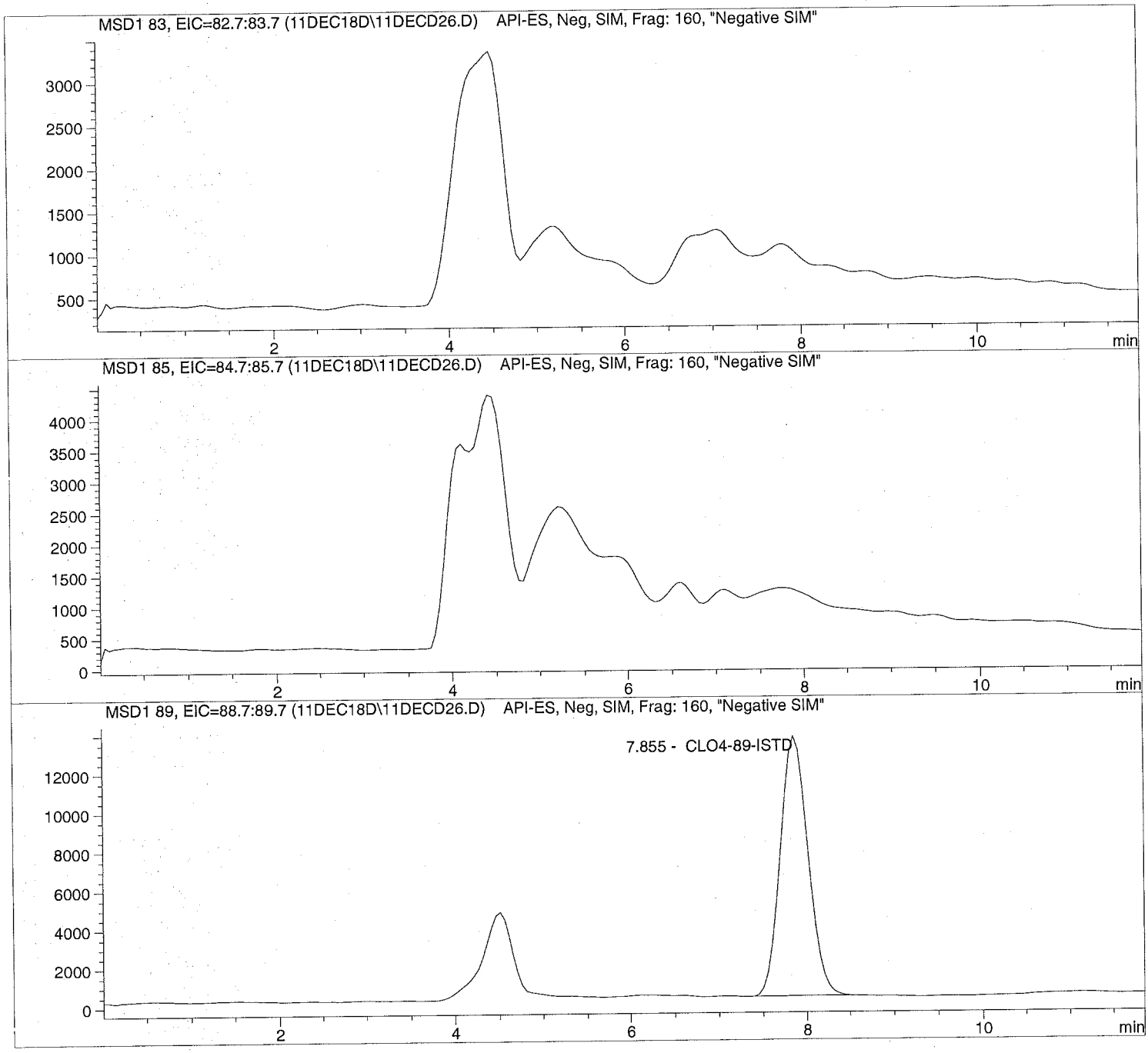
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD26.D Sample Name: 1833980009

Injection Date:	12/11/2018 13:47:28	Seq Line:	26
Sample Name:	1833980009	Location:	Vial 94
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD26.D Sample Name: 1833980009

Injection Date:	12/11/2018 13:47:28	Seq Line:	26
Sample Name:	1833980009	Location:	Vial 94
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.855	PBA	296165.2	5.0000	CLO4-89-ISTD

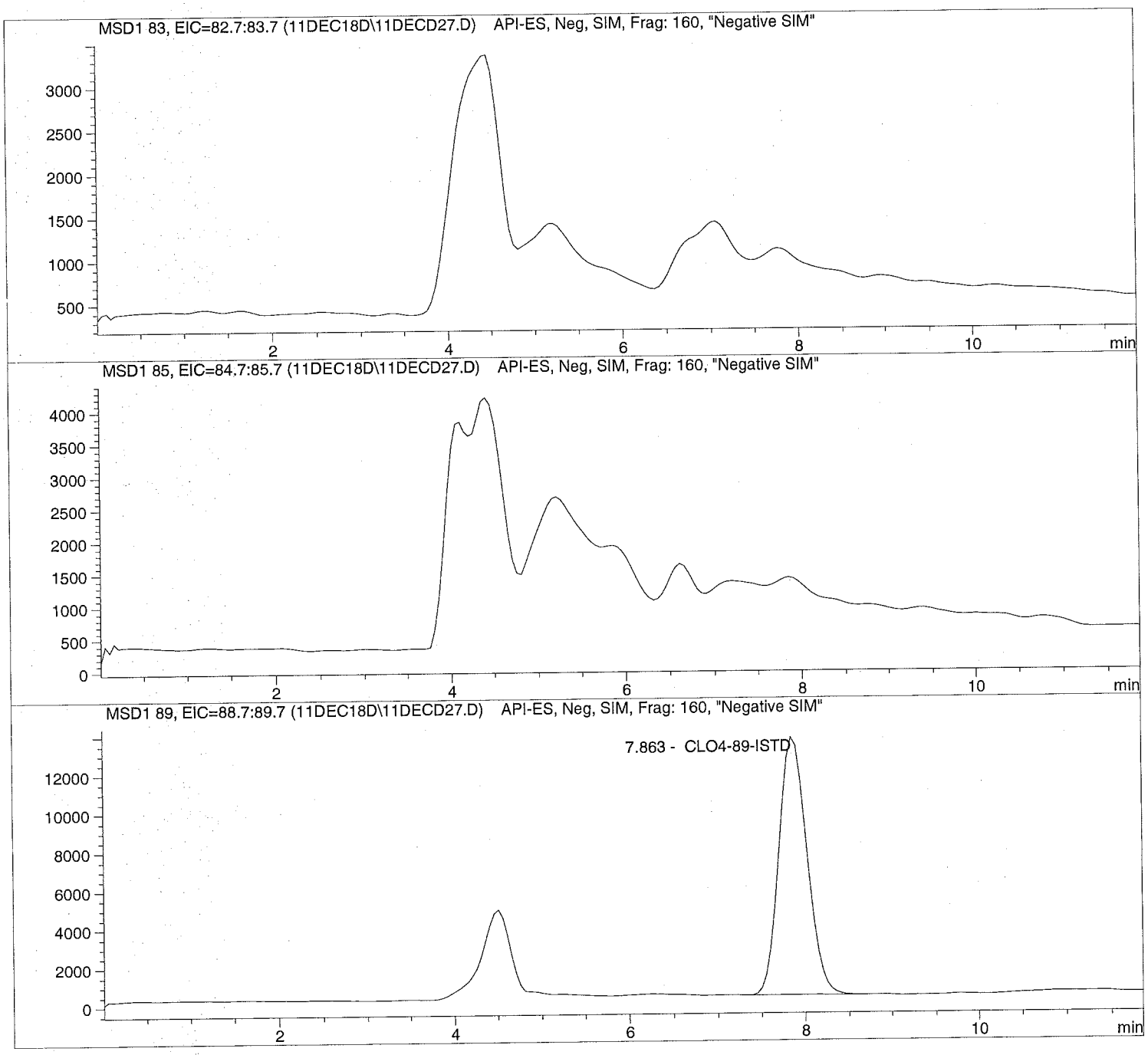
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD27.D Sample Name: 1833980010

Injection Date:	12/11/2018 14:01:12	Seq Line:	27
Sample Name:	1833980010	Location:	Vial 95
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD27.D Sample Name: 1833980010

Injection Date:	12/11/2018 14:01:12	Seq Line:	27
Sample Name:	1833980010	Location:	Vial 95
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.863	PBA	296908.7	5.0000	CLO4-89-ISTD

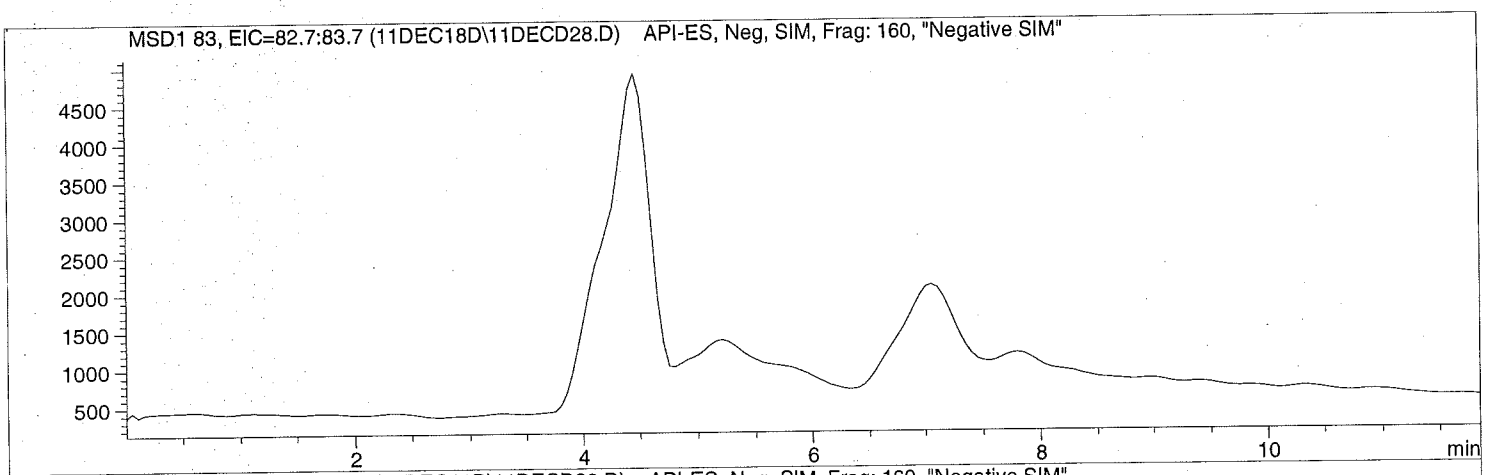
*** End of Report ***

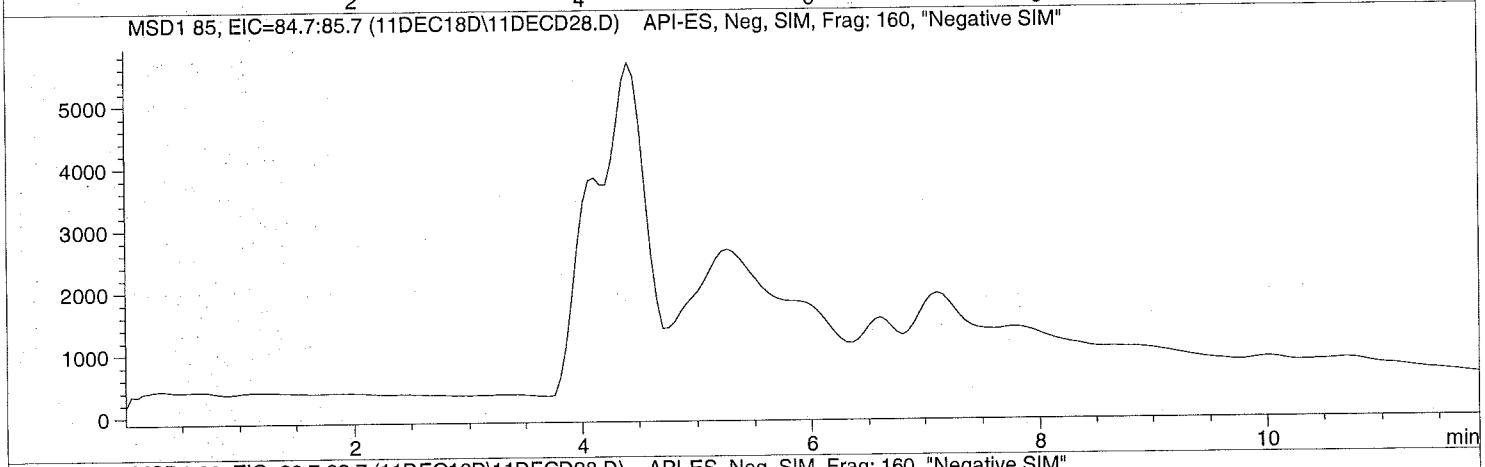
Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD28.D Sample Name: 1833980011

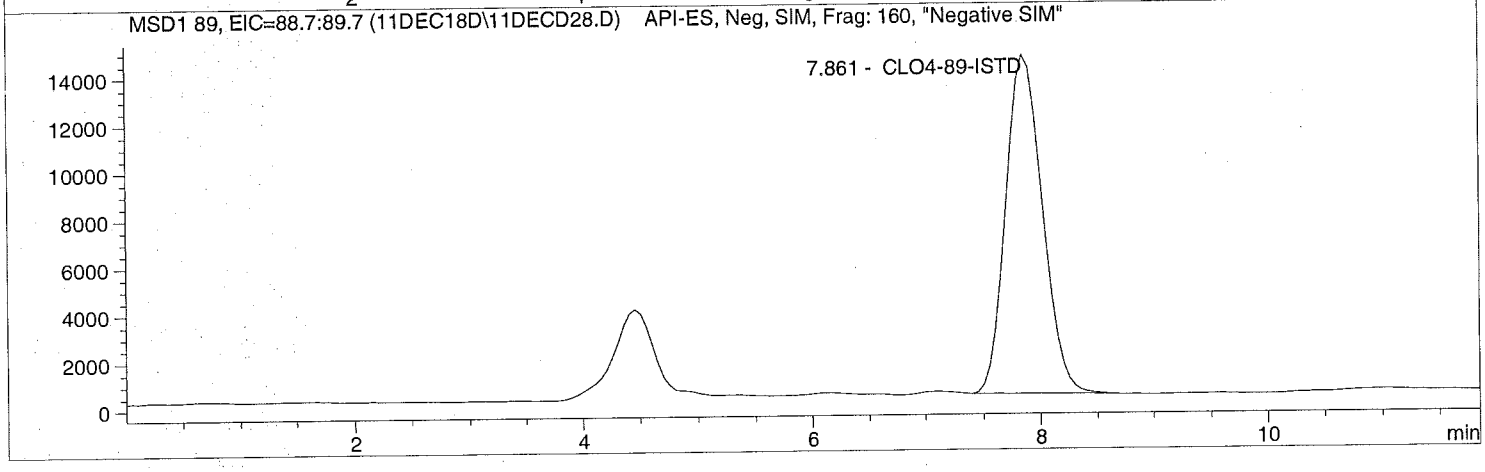
Injection Date:	12/11/2018 14:14:57	Seq Line:	28
Sample Name:	1833980011	Location:	Vial 96
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD28.D Sample Name: 1833980011

Injection Date:	12/11/2018 14:14:57	Seq Line:	28
Sample Name:	1833980011	Location:	Vial 96
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.861	PBA	318562.2	5.0000	CLO4-89-ISTD

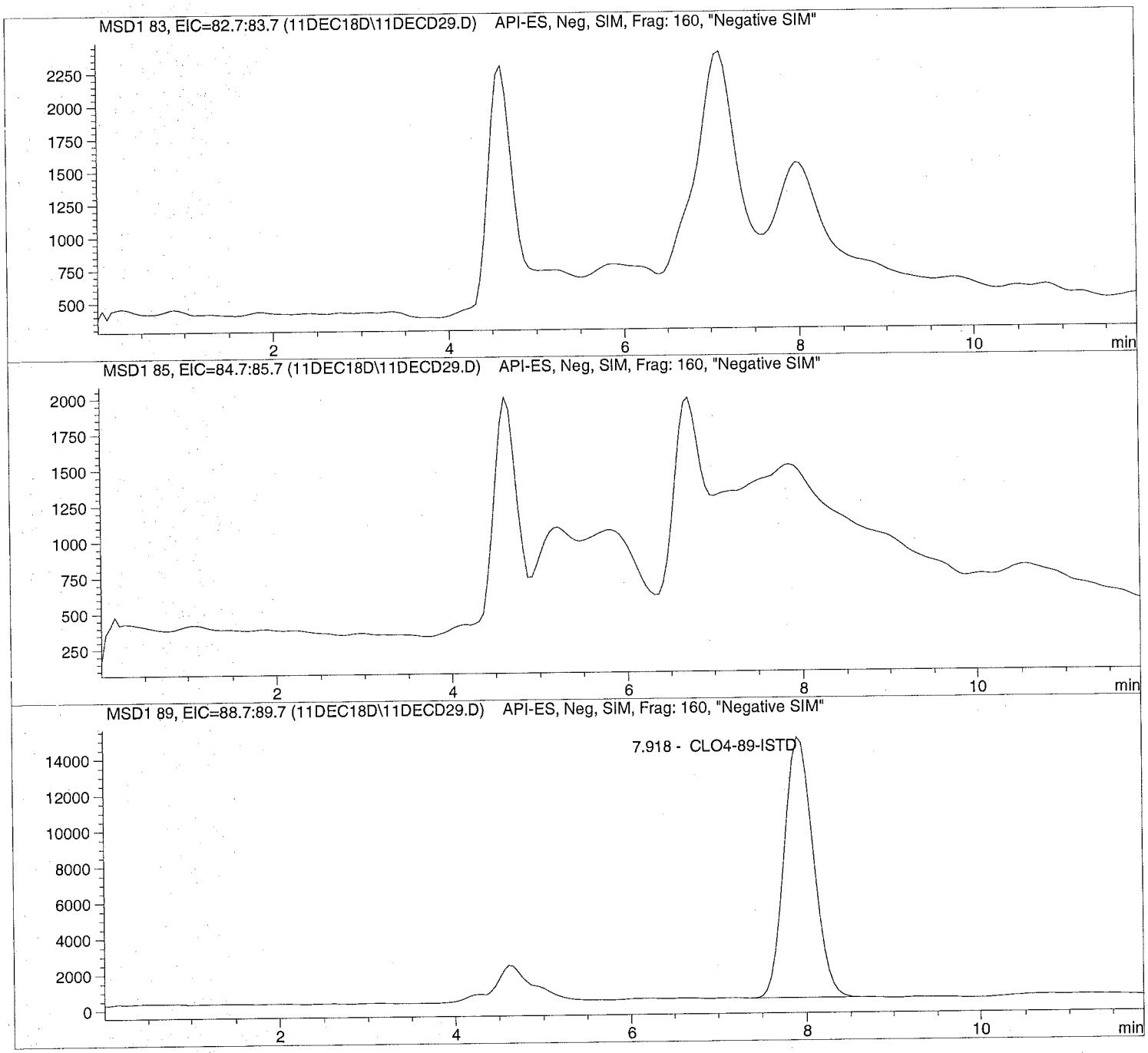
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD29.D Sample Name: 1833980012

Injection Date:	12/11/2018 14:28:41	Seq Line:	29
Sample Name:	1833980012	Location:	Vial 97
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD29.D Sample Name: 1833980012

Injection Date:	12/11/2018 14:28:41	Seq Line:	29
Sample Name:	1833980012	Location:	Vial 97
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.918	PBA	326637.3	5.0000	CLO4-89-ISTD

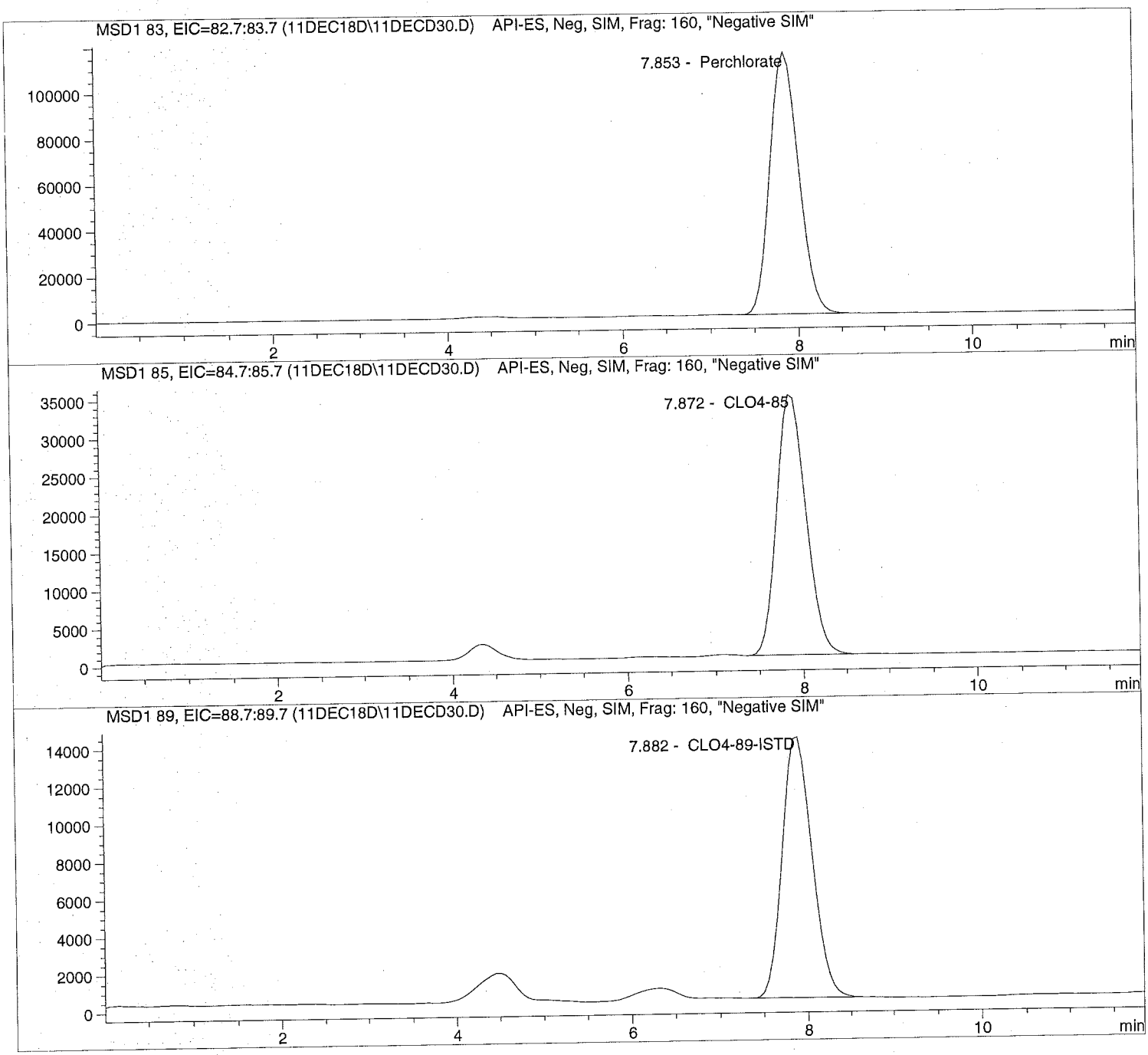
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD30.D Sample Name: 631671 CCV@25

Injection Date:	12/11/2018 14:42:25	Seq Line:	30
Sample Name:	631671 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD30.D Sample Name: 631671 CCV@25

Injection Date:	12/11/2018 14:42:25	Seq Line:	30
Sample Name:	631671 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.853	PBA	2594170.3	23.8219	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.872	PBA	792459.8	24.0951	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.882	PBA	325835.8	5.0000	CLO4-89-ISTD

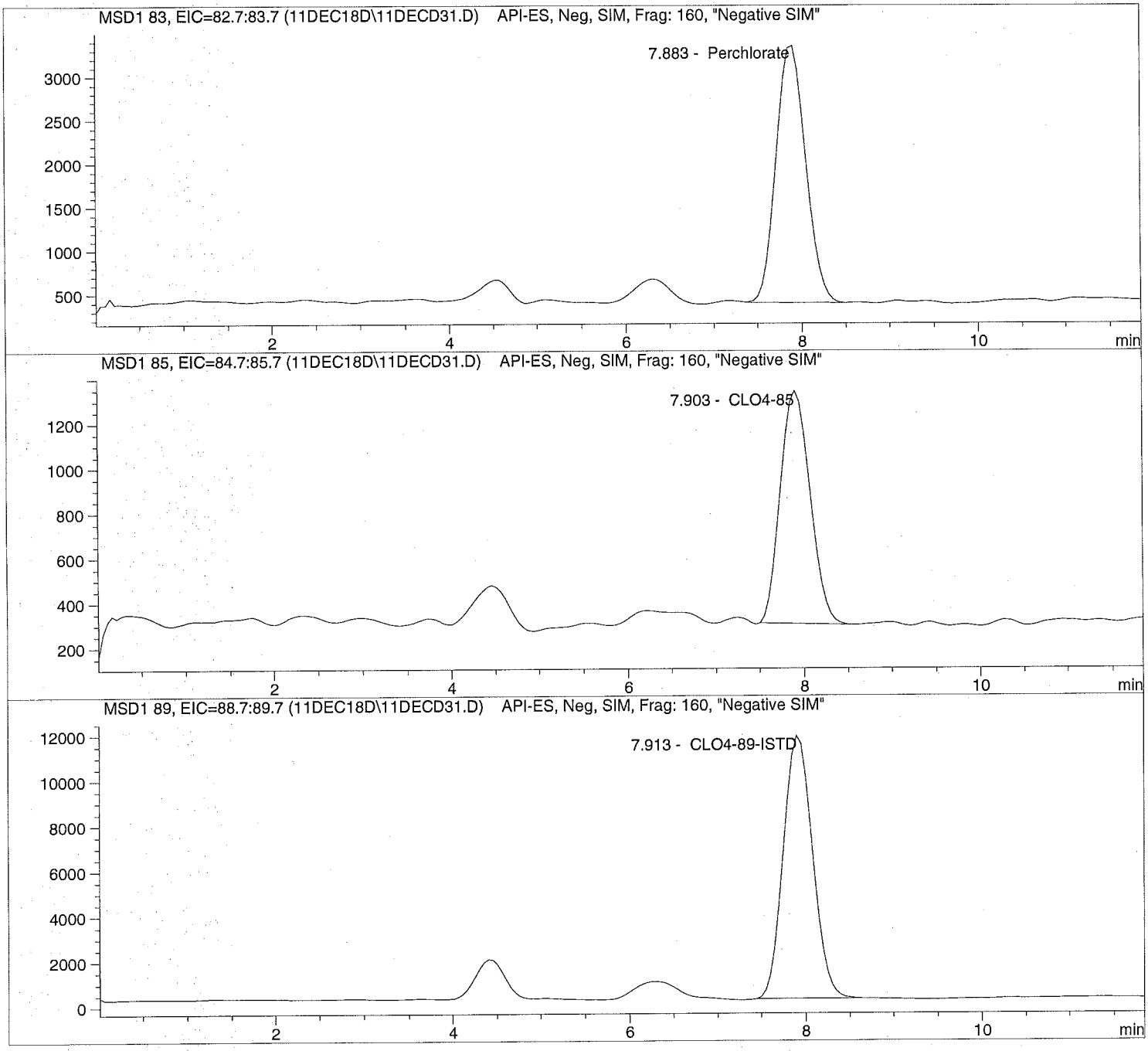
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD31.D Sample Name: 631672 LODV@1.

Injection Date:	12/11/2018 14:56:09	Seq Line:	31
Sample Name:	631672 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\11DEC18D\11DECD31.D Sample Name: 631672 LODV@1.

Injection Date:	12/11/2018 14:56:09	Seq Line:	31
Sample Name:	631672 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.883	BBA	67975.1	1.0053	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.903	PBA	24076.9	1.0404	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
7.913	PBA	263374.5	5.0000	CLO4-89-ISTD

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Initial Calibration

atch Report: C:\HPCHEM\1\DATA\08OCT18I\08OCT18D.B

Batch Review Method:
C:\HPCHEM\1\METHODS\CLO4-DPR.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	SampleType	Run	Perchlorate Area	Perchlorate RT	Perchlorate Amount
#*	CLO4@ 1.0u	Vial 74	1	Control	4	9.40790e4	9.287	9.73826e-1
#*	CLO4@ 2.0u	Vial 75	1	Control	5	2.26957e5	9.259	2.19167
#*	CLO4@ 5.0u	Vial 76	1	Control	6	5.50307e5	9.208	4.80912
#*	CLO4@ 10.u	Vial 77	1	Control	7	1.07623e6	9.246	9.38291
#*	CLO4@ 25.u	Vial 78	1	Control	8	2.88097e6	9.175	25.83039
#*	CLO4@ 50.u	Vial 79	1	Control	9	6.29507e6	9.261	49.91981
#*	CLO4@ 75.u	Vial 80	1	Control	10	9.45737e6	9.236	74.88523
*	ICAL Verf@	Vial 81	1	Control	11	1.10069e6	9.244	9.38952

#	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
#*	CLO4@ 1.0u	Vial 74	1	Control	4	3.79545e5	9.314	5.00000
#*	CLO4@ 2.0u	Vial 75	1	Control	5	3.52582e5	9.297	5.00000
#*	CLO4@ 5.0u	Vial 76	1	Control	6	3.66805e5	9.223	5.00000
#*	CLO4@ 10.u	Vial 77	1	Control	7	3.56815e5	9.266	5.00000
#*	CLO4@ 25.u	Vial 78	1	Control	8	3.32340e5	9.196	5.00000
#*	CLO4@ 50.u	Vial 79	1	Control	9	3.59393e5	9.277	5.00000
#*	CLO4@ 75.u	Vial 80	1	Control	10	3.45193e5	9.253	5.00000
*	ICAL Verf@	Vial 81	1	Control	11	3.64657e5	9.264	5.00000

#	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
#*	CLO4@ 1.0u	Vial 74	1	Control	4	3.17987e4	9.316	9.60861e-1
#*	CLO4@ 2.0u	Vial 75	1	Control	5	7.05436e4	9.273	2.16955
#*	CLO4@ 5.0u	Vial 76	1	Control	6	1.69833e5	9.217	4.87565
#*	CLO4@ 10.u	Vial 77	1	Control	7	3.31565e5	9.259	9.58732
#*	CLO4@ 25.u	Vial 78	1	Control	8	8.62978e5	9.187	25.62680
#*	CLO4@ 50.u	Vial 79	1	Control	9	1.91847e6	9.278	49.74848
#*	CLO4@ 75.u	Vial 80	1	Control	10	2.93835e6	9.251	75.02646
*	ICAL Verf@	Vial 81	1	Control	11	3.27974e5	9.261	9.28908

*** End of Report ***

[ethod C:\HPCHEM\1\METHODS\CLO4-DPR.M

Calibration Table

Perchlorate

Calib. Data Modified : 10/9/2018 8:01:57 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 20.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 20.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
1	5.00000	CLO4-89-ISTD

Signal 1: MSD1 83, EIC=82.7:83.7
Signal 2: MSD1 85, EIC=84.7:85.7
Signal 3: MSD1 89, EIC=88.7:89.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
9.287	1	1	1.00000	9.40790e4	1.06294e-5	1		Perchlorate
		2	2.00000	2.26957e5	8.81224e-6			
		3	5.00000	5.50307e5	9.08584e-6			
		4	10.00000	1.07623e6	9.29172e-6			
		5	25.00000	2.88097e6	8.67764e-6			
		6	50.00000	6.29507e6	7.94272e-6			
		7	75.00000	9.45737e6	7.93033e-6			
9.314	3	1	5.00000	3.79545e5	1.31737e-5	+I1		CLO4-89-ISTD
		2	5.00000	3.52582e5	1.41811e-5			
		3	5.00000	3.66805e5	1.36312e-5			
		4	5.00000	3.56815e5	1.40129e-5			
		5	5.00000	3.32340e5	1.50448e-5			
		6	5.00000	3.59393e5	1.39124e-5			
		7	5.00000	3.45193e5	1.44847e-5			
9.316	2	1	1.00000	3.17987e4	3.14479e-5	1		CLO4-85
		2	2.00000	7.05436e4	2.83513e-5			
		3	5.00000	1.69833e5	2.94406e-5			
		4	10.00000	3.31565e5	3.01600e-5			
		5	25.00000	8.62978e5	2.89695e-5			
		6	50.00000	1.91847e6	2.60625e-5			

ethod C:\HPCHEM\1\METHODS\CLO4-DPR.M

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
		7	75.00000	2.93835e6	2.55246e-5			

More compound-specific settings:

Compound: Perchlorate
- Time Window : From 7.196 min To 11.196 min
- Curve Type : Quadratic
- Origin : Ignored
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 0.5
  - Level 3 : 0.2
  - Level 4 : 0.1
  - Level 5 : 0.04
  - Level 6 : 0.02
  - Level 7 : 0.013333

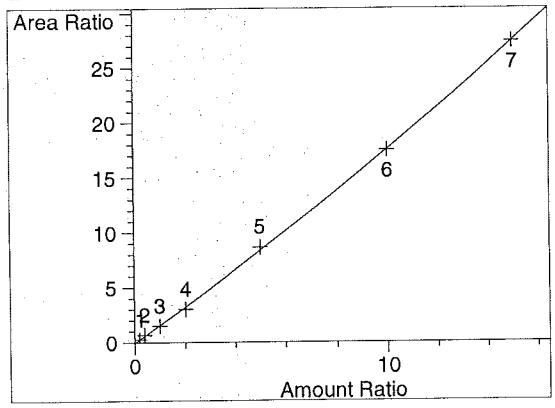
Compound: CLO4-89-ISTD
- Time Window : From 7.207 min To 11.192 min
- Curve Type : Linear
- Origin : Included
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 1
  - Level 3 : 1
  - Level 4 : 1
  - Level 5 : 1
  - Level 6 : 1
  - Level 7 : 1

Compound: CLO4-85
- Time Window : From 7.211 min To 11.211 min
- Curve Type : Quadratic
- Origin : Ignored
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 0.5
  - Level 3 : 0.2
  - Level 4 : 0.1
  - Level 5 : 0.04
  - Level 6 : 0.02
  - Level 7 : 0.013333

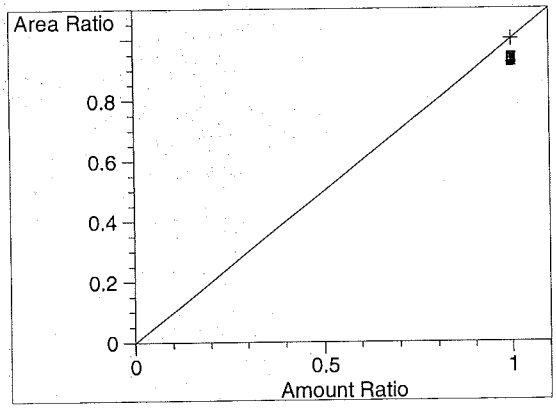
Peak Sum Table

No Entries in table

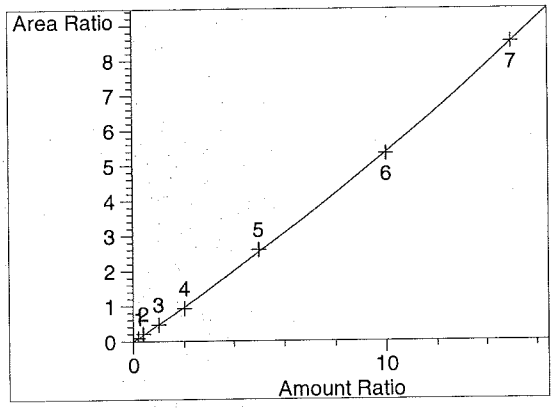
Calibration Curves



Perchlorate at exp. RT: 9.287
MSD1 83, EIC=82.7:83.7
Correlation: 0.99971
Residual Std. Dev.: 0.16701
Formula: $y = ax^2 + bx + c$
a: 1.45482e-2
b: 1.61590
c: -6.73998e-2
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.5
Level 3 : 0.2
Level 4 : 0.1
Level 5 : 0.04
Level 6 : 0.02
Level 7 : 0.013333



CLO4-89-ISTD at exp. RT: 9.314
MSD1 89, EIC=88.7:89.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: $y = mx + b$
m: 1.00000
b: 0.00000
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 1
Level 3 : 1
Level 4 : 1
Level 5 : 1
Level 6 : 1
Level 7 : 1



CLO4-85 at exp. RT: 9.316
MSD1 85, EIC=84.7:85.7
Correlation: 0.99984
Residual Std. Dev.: 0.03901
Formula: $y = ax^2 + bx + c$
a: 6.03220e-3
b: 4.77309e-1
c: -8.16718e-3
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.5
Level 3 : 0.2
Level 4 : 0.1
Level 5 : 0.04
Level 6 : 0.02
Level 7 : 0.013333

equence: C:\HPCHEM\1\SEQUENCE\CLO4\2018\OCT\08OCT18I.S

Sequence Table:

Method and Injection Info Part:

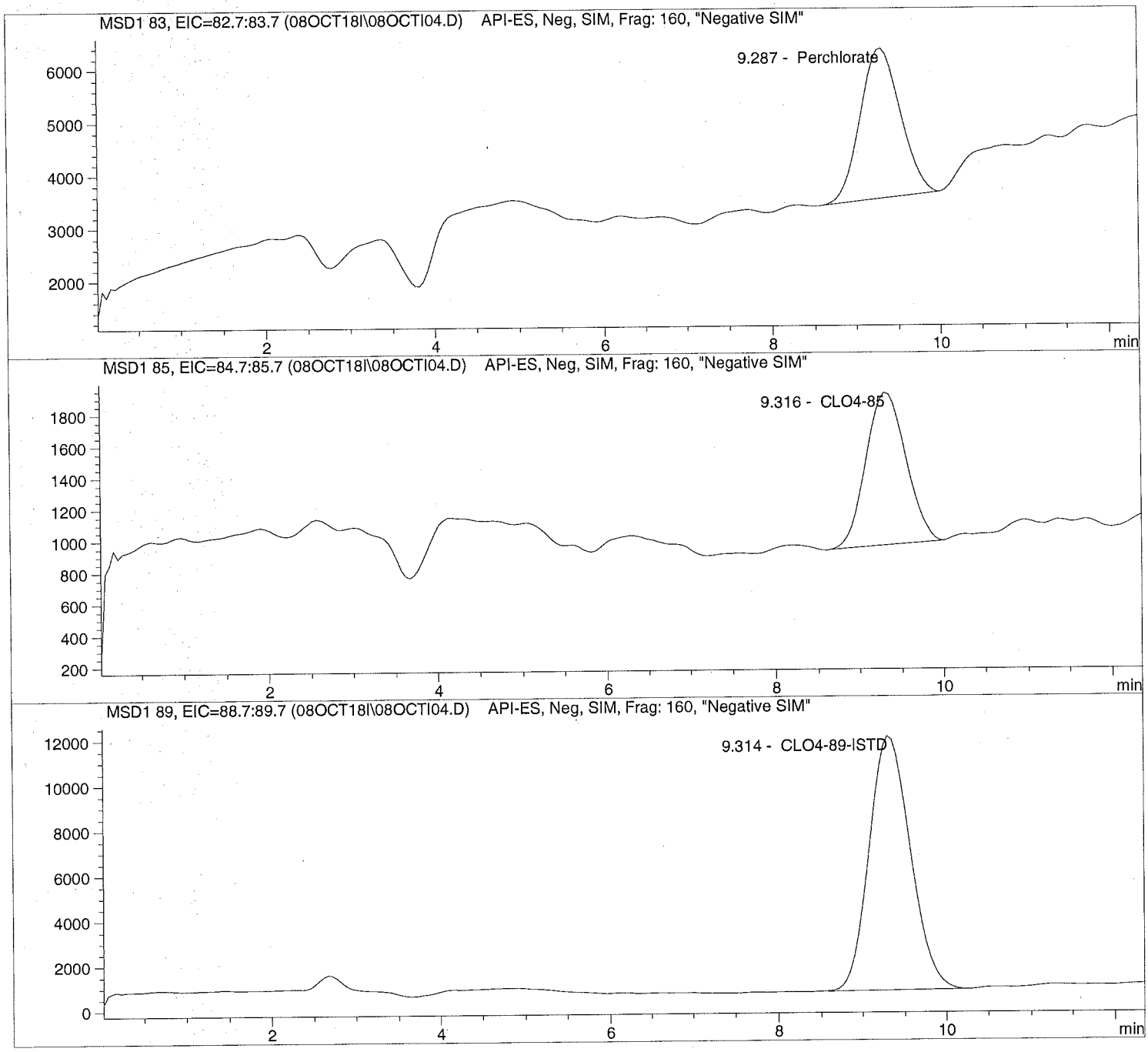
Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	CLO4@ .10ug/L	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	CLO4@ .20ug/L	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	CLO4@ 0.5ug/L	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	CLO4@ 1.0ug/L	CLO4-AQN	1	Ctrl Samp		
5	Vial 75	CLO4@ 2.0ug/L	CLO4-AQN	1	Ctrl Samp		
6	Vial 76	CLO4@ 5.0ug/L	CLO4-AQN	1	Ctrl Samp		
7	Vial 77	CLO4@ 10.ug/L	CLO4-AQN	1	Ctrl Samp		
8	Vial 78	CLO4@ 25.ug/L	CLO4-AQN	1	Ctrl Samp		
9	Vial 79	CLO4@ 50.ug/L	CLO4-AQN	1	Ctrl Samp		
10	Vial 80	CLO4@ 75.ug/L	CLO4-AQN	1	Ctrl Samp		
11	Vial 81	ICAL Verf@10ug/L	CLO4-AQN	1	Ctrl Samp		

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI04.D Sample Name: CLO4@ 1.0ug/L

Injection Date:	10/08/2018 11:37:35	Seq Line:	4
Sample Name:	CLO4@ 1.0ug/L	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI04.D Sample Name: CLO4@ 1.0ug/L

Injection Date:	10/08/2018 11:37:35	Seq Line:	4
Sample Name:	CLO4@ 1.0ug/L	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.287	PBA	94079.0	0.9738	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.316	PBA	31798.7	0.9609	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.314	PBA	379544.7	5.0000	CLO4-89-ISTD

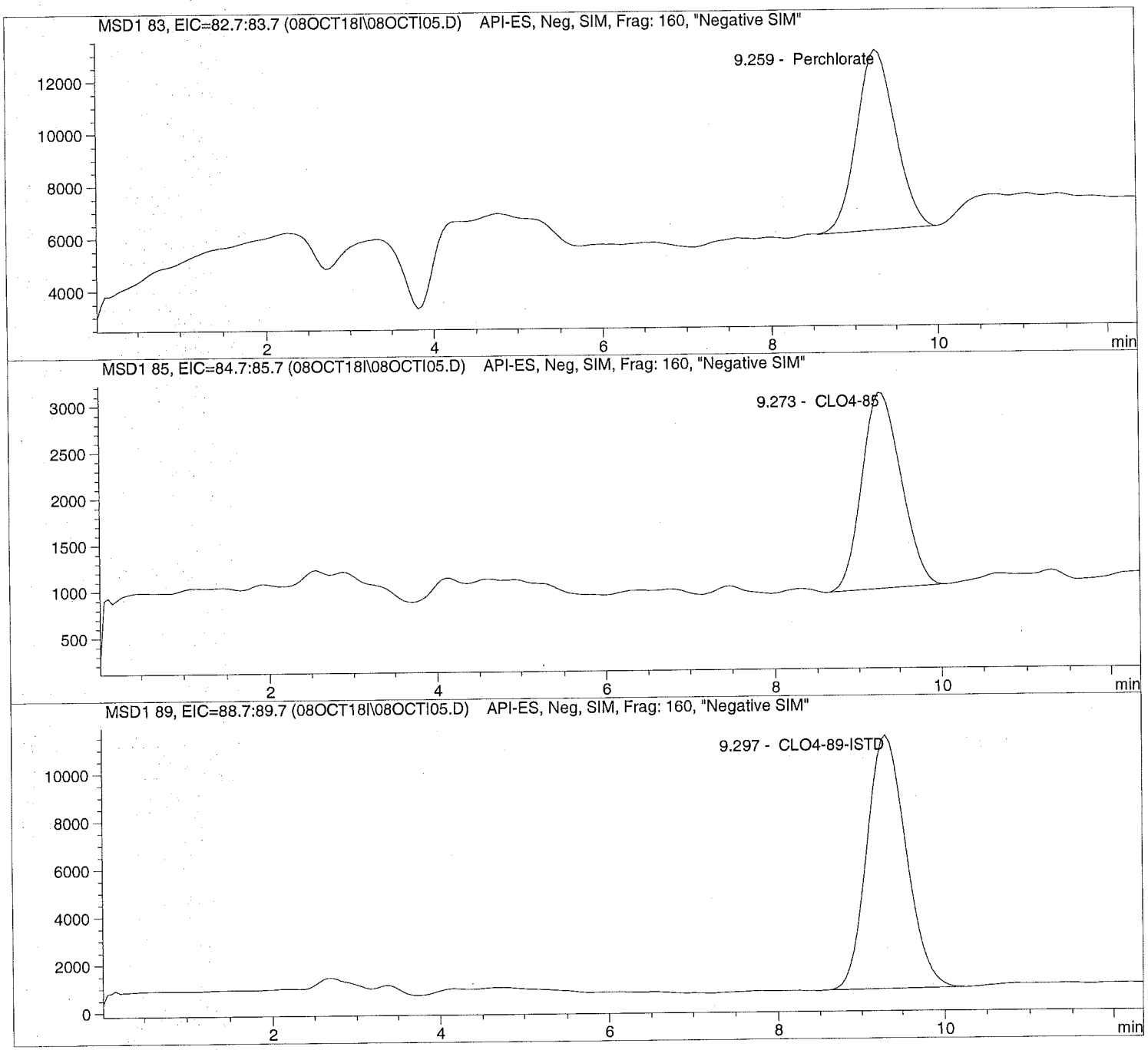
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI05.D Sample Name: CLO4@ 2.0ug/L

Injection Date:	10/08/2018 11:51:45	Seq Line:	5
Sample Name:	CLO4@ 2.0ug/L	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI05.D Sample Name: CLO4@ 2.0ug/L

Injection Date:	10/08/2018 11:51:45	Seq Line:	5
Sample Name:	CLO4@ 2.0ug/L	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	2.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.259	BBA	226957.1	2.1917	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.273	PBA	70543.6	2.1695	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.297	PBA	352581.8	5.0000	CLO4-89-ISTD

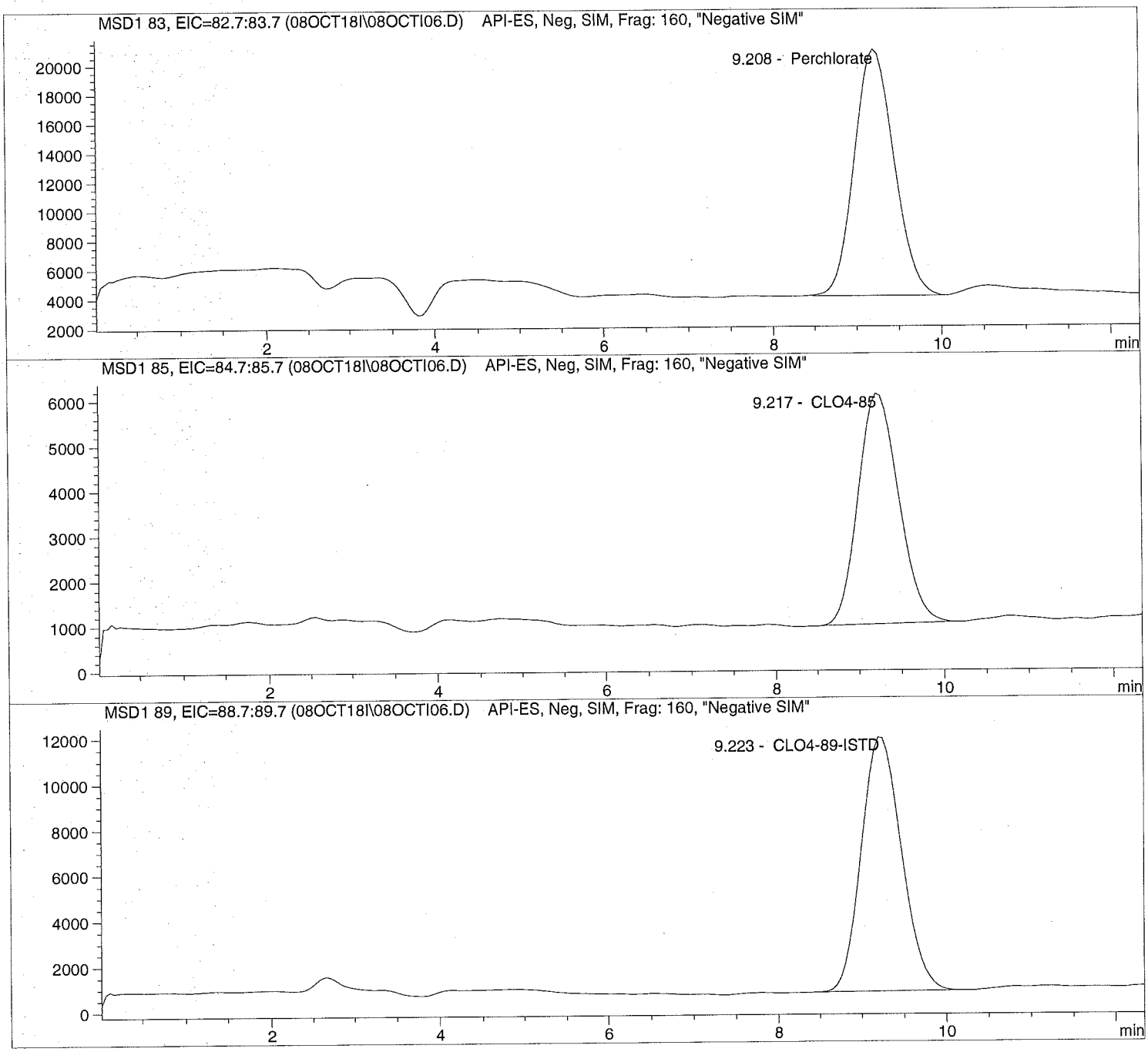
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI06.D Sample Name: CLO4@ 5.0ug/L

Injection Date:	10/08/2018 12:05:59	Seq Line:	6
Sample Name:	CLO4@ 5.0ug/L	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI06.D Sample Name: CLO4@ 5.0ug/L

Injection Date:	10/08/2018 12:05:59	Seq Line:	6
Sample Name:	CLO4@ 5.0ug/L	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	5.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.208	BBA	550306.9	4.8091	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.217	PBA	169833.3	4.8757	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.223	PBA	366804.8	5.0000	CLO4-89-ISTD

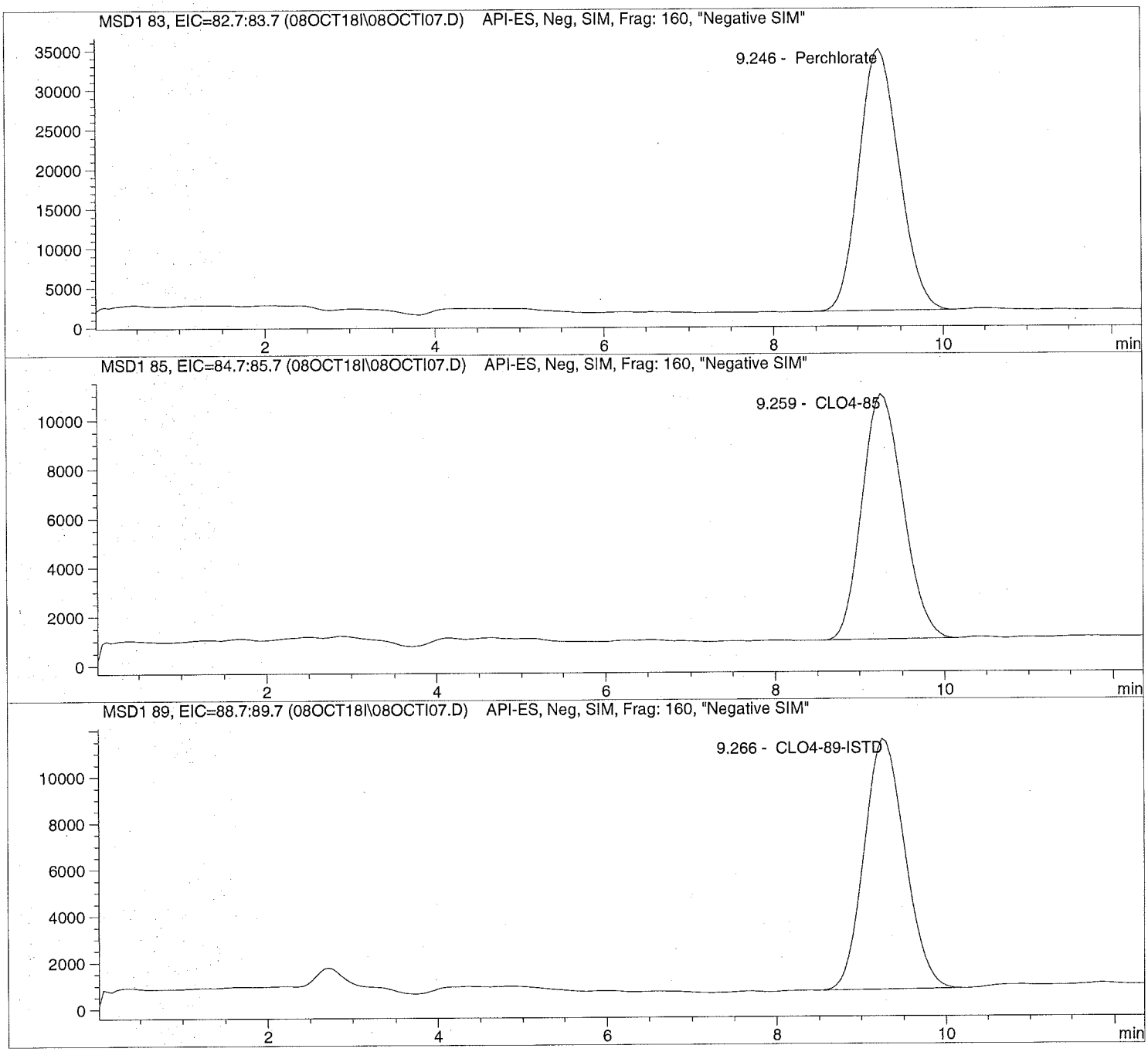
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI07.D Sample Name: CLO4@ 10.ug/L

Injection Date:	10/08/2018 12:20:10	Seq Line:	7
Sample Name:	CLO4@ 10.ug/L	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI07.D Sample Name: CLO4@ 10.ug/L

Injection Date:	10/08/2018 12:20:10	Seq Line:	7
Sample Name:	CLO4@ 10.ug/L	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	10.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.246	PBA	1076227.4	9.3829	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.259	PBA	331564.9	9.5873	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.266	PBA	356815.3	5.0000	CLO4-89-ISTD

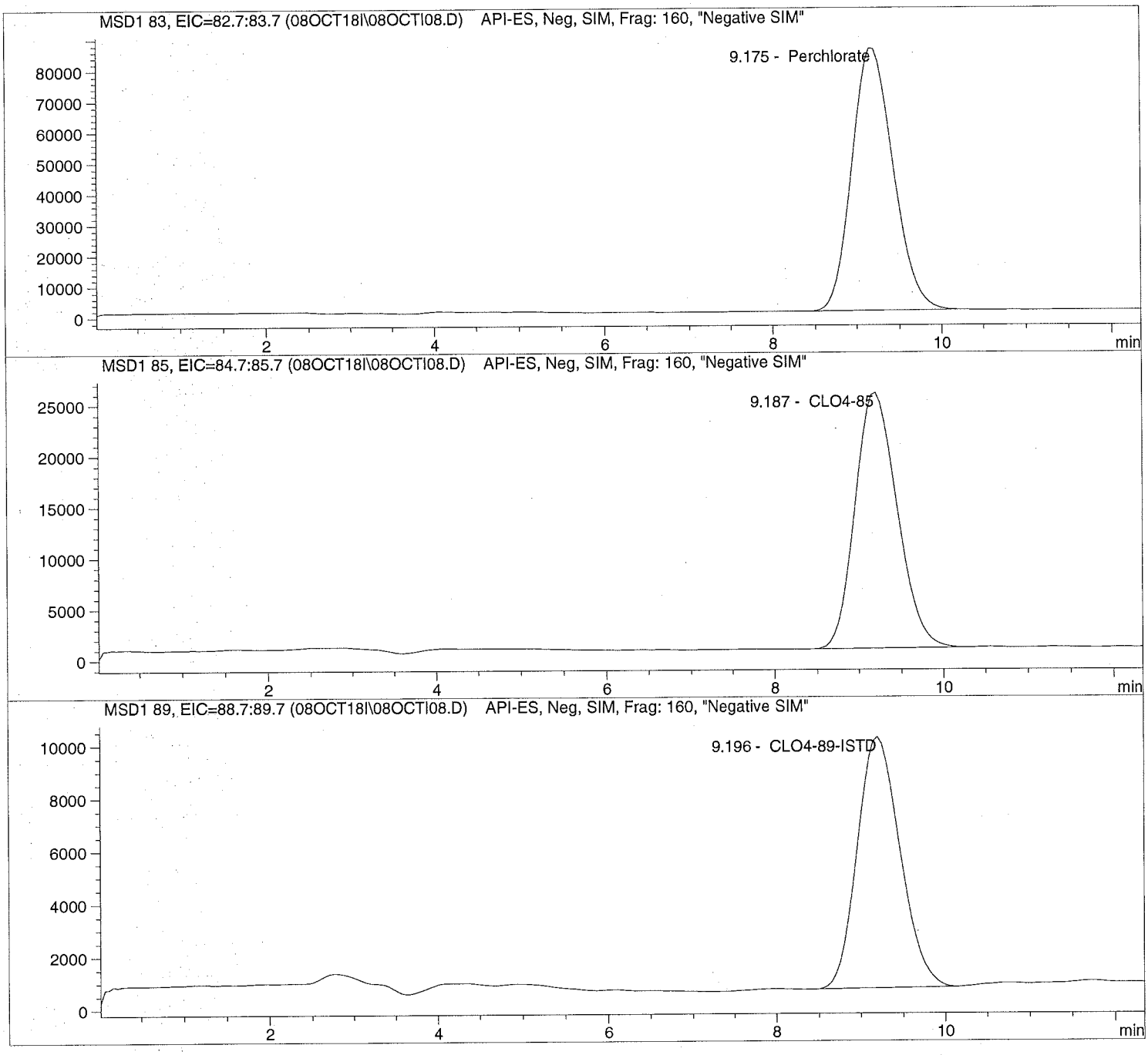
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI08.D Sample Name: CLO4@ 25.ug/L

Injection Date:	10/08/2018 12:34:24	Seq Line:	8
Sample Name:	CLO4@ 25.ug/L	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI08.D Sample Name: CLO4@ 25.ug/L

Injection Date:	10/08/2018 12:34:24	Seq Line:	8
Sample Name:	CLO4@ 25.ug/L	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.175	PBA	2880966.0	25.8304	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.187	PBA	862978.0	25.6268	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.196	PBA	332339.7	5.0000	CLO4-89-ISTD

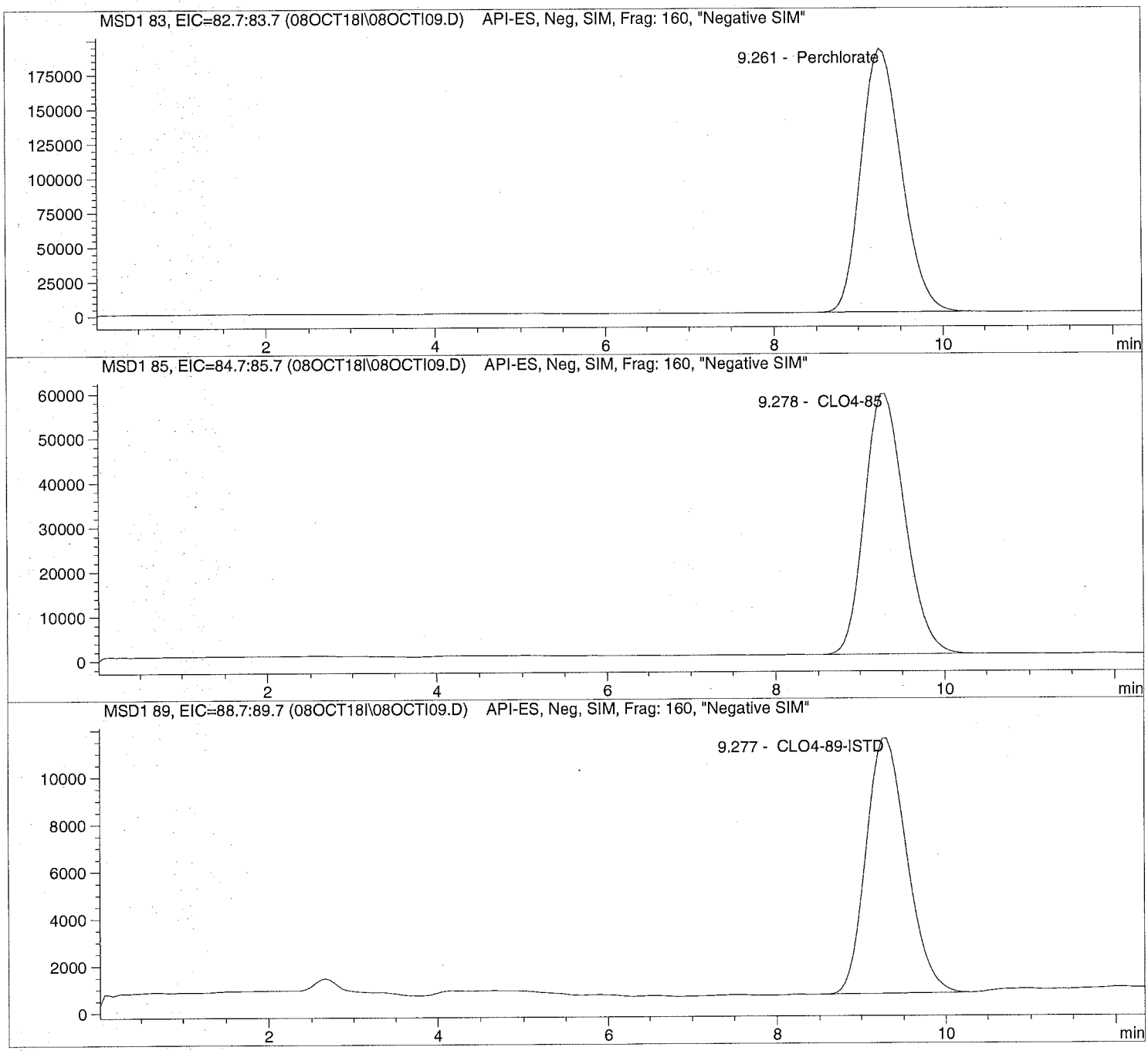
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI09.D Sample Name: CLO4@ 50.ug/L

Injection Date:	10/08/2018 12:48:34	Seq Line:	9
Sample Name:	CLO4@ 50.ug/L	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI09.D Sample Name: CLO4@ 50.ug/L

Injection Date:	10/08/2018 12:48:34	Seq Line:	9
Sample Name:	CLO4@ 50.ug/L	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	50.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.261	PBA	6295070.5	49.9198	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.278	PBA	1918466.9	49.7485	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.277	PBA	359392.8	5.0000	CLO4-89-ISTD

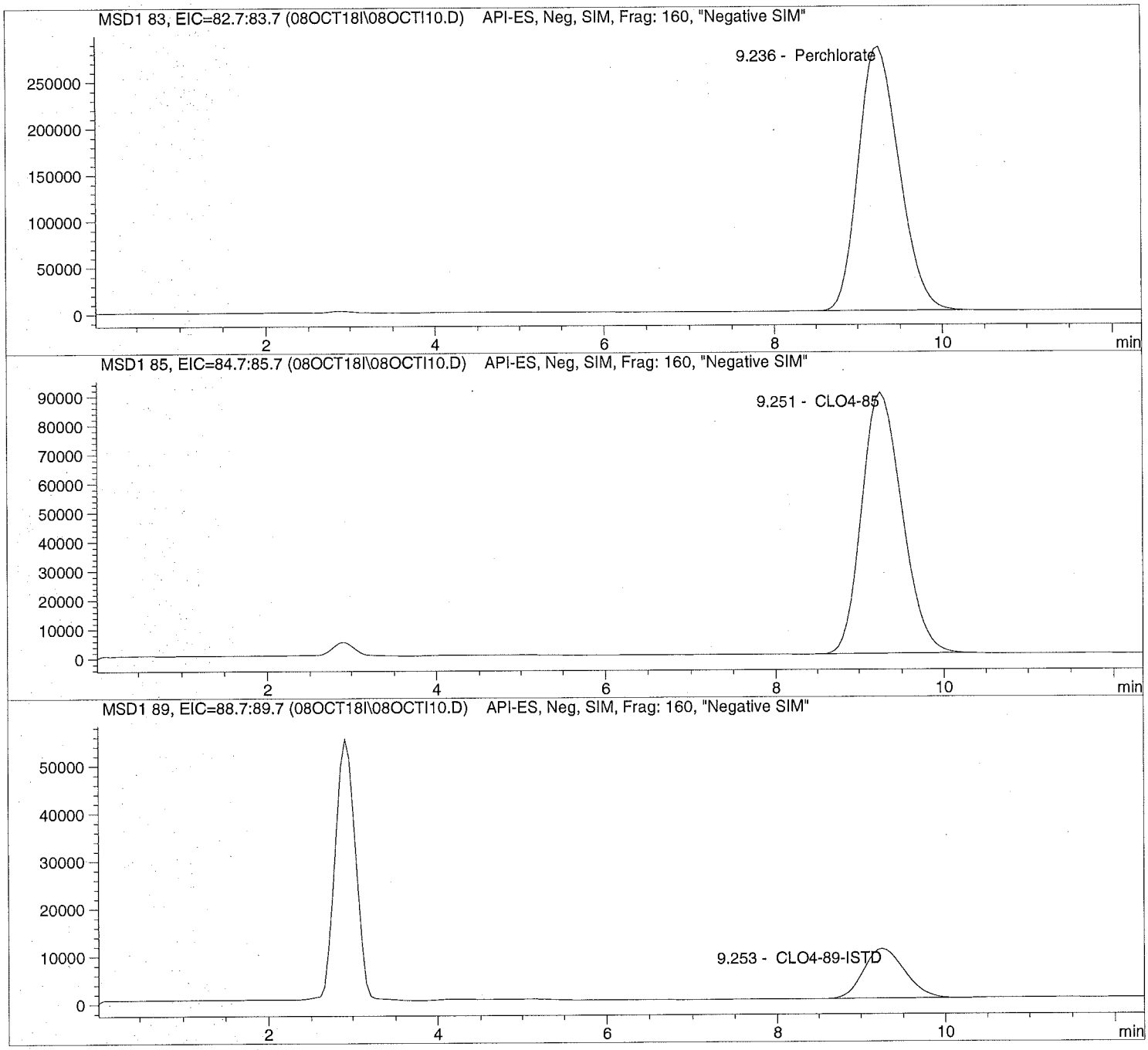
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI10.D Sample Name: CLO4@ 75.ug/L

Injection Date:	10/08/2018 13:02:48	Seq Line:	10
Sample Name:	CLO4@ 75.ug/L	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI10.D Sample Name: CLO4@ 75.ug/L

Injection Date:	10/08/2018 13:02:48	Seq Line:	10
Sample Name:	CLO4@ 75.ug/L	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	75.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.236	PBA	9457367.0	74.8852	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.251	PBA	2938347.5	75.0265	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.253	PBA	345192.7	5.0000	CLO4-89-ISTD

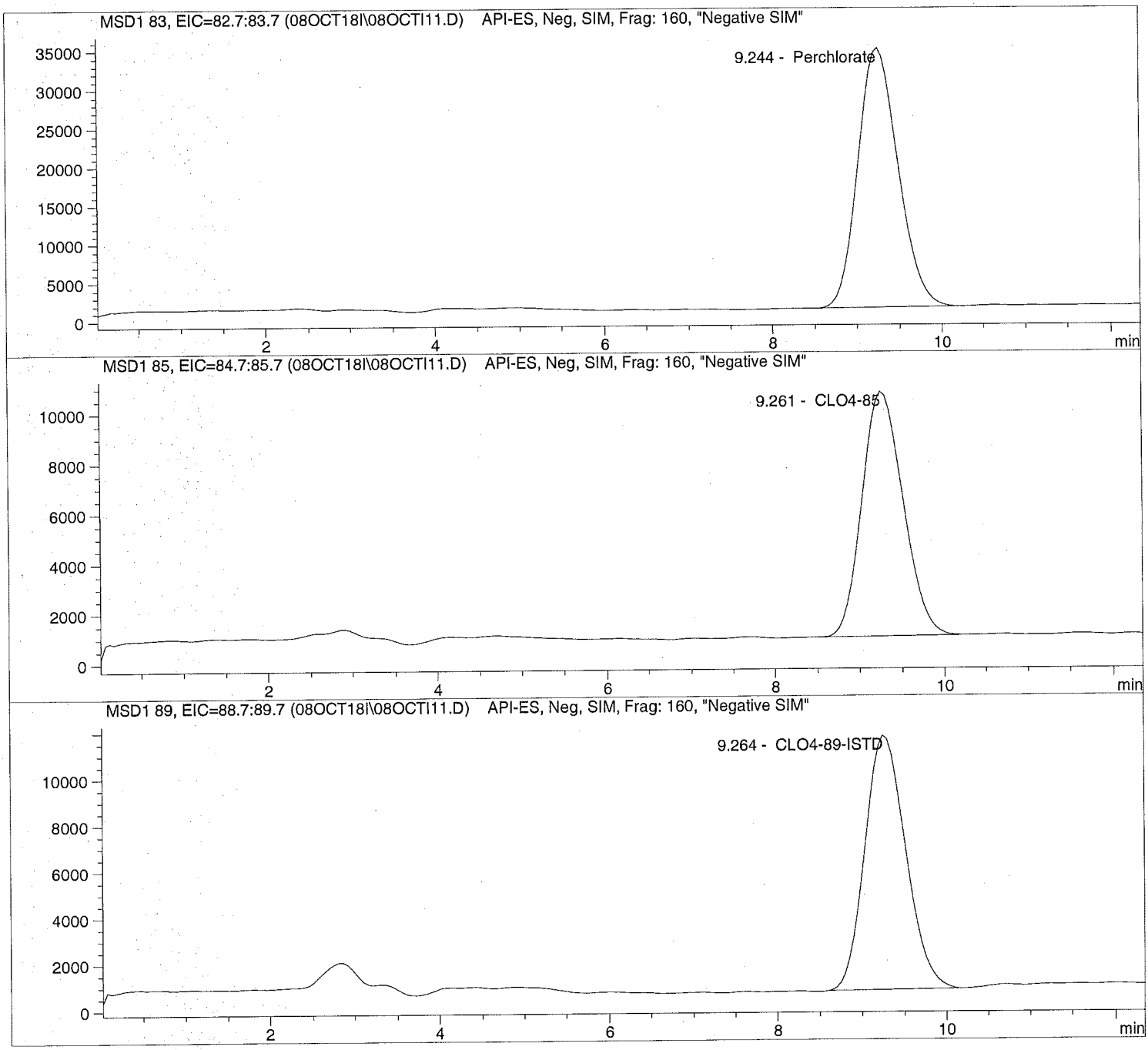
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI11.D Sample Name: ICAL Verf@10ug/L

Injection Date:	10/08/2018 13:17:00	Seq Line:	11
Sample Name:	ICAL Verf@10ug/L	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI11.D Sample Name: ICAL Verf@10ug/L

Injection Date:	10/08/2018 13:17:00	Seq Line:	11
Sample Name:	ICAL Verf@10ug/L	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	10.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.244	PBA	1100685.7	9.3895	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.261	PBA	327974.4	9.2891	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.264	PBA	364657.2	5.0000	CLO4-89-ISTD

*** End of Report ***

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December 28, 2018 **Analytical Report for Service Request No:** K1811888

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS18120114

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 05, 2018
For your reference, these analyses have been assigned our service request number **K1811888.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS18120114
Sample Matrix: Water

Service Request: K1811888
Date Received: 12/05/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt:

Two water samples were received for analysis at ALS Environmental on 12/05/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Noe D. Dan Date 12/28/2018

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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K 18/1888

Subcontract Chain of Custody

COC ID: 10355

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS18120114
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS18120114-06**	**50WW23-181203**	**Groundwater**	**03 Dec 2018 09:15**
	TOC Analysis with DOD Level IV			18 Dec 2018
2.	**HS18120114-07**	**50WW22-181203**	**Groundwater**	**03 Dec 2018 10:15**
	TOC Analysis with DOD Level IV			18 Dec 2018

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Morrow Date/Time: 12/4/18 18:20

Received By: J. Morrow ALS Date/Time: 12/5/18 1020

Cooler ID(s): Temperature(s):

PC KL

Cooler Receipt and Preservation Form

Client ALS-Houston Service Request *K18* 11888

Received: 12/5/18 Opened: 12/5/18 By: KM Unloaded: 12/5/18 By: KM

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.4	-0.5	NA	NA	-0.1	351	10355	4380 9535 2581	
		1.7	1.6					

4. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

General Chemistry

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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K1811888
Project:	HS18120114	**Date Collected:**	12/3/18
Sample Matrix:	Water	**Date Received:**	12/5/18
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
50WW23-181203	K1811888-001	**1.97**	0.50	0.20	0.07	1	12/18/18 12:52	
50WW22-181203	K1811888-002	**2.74**	0.50	0.20	0.07	1	12/20/18 14:22	
Method Blank	K1811888-MB1	ND U	0.50	0.20	0.07	1	12/18/18 16:37	
Method Blank	K1811888-MB2	ND U	0.50	0.20	0.07	1	12/20/18 12:29	
Method Blank	K1811888-MB3	ND U	0.50	0.20	0.07	1	12/20/18 22:06	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1811888
Project:	HS18120114	**Date Analyzed:**	12/18/18
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	619305

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1811888-LCS1	20.3	21.9	93	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1811888
Project:	HS18120114	**Date Analyzed:**	12/20/18
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	619808

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1811888-LCS2	20.6	21.9	94	83-117
Lab Control Sample	K1811888-LCS3	20.6	21.9	94	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K1811888
Project: HS18120114

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	619305	KQ1818480-26	12/18/18 06:42	25.0	24.5	98	90-110
CCV2	619305	KQ1818480-27	12/18/18 11:15	25.0	24.0	96	90-110
CCV3	619305	KQ1818480-28	12/18/18 16:04	25.0	24.0	96	90-110
CCV4	619305	KQ1818480-29	12/18/18 21:23	25.0	24.0	96	90-110
CCV5	619305	KQ1818480-30	12/19/18 02:13	25.0	24.1	96	90-110
CCV6	619808	KQ1818705-41	12/20/18 11:56	25.0	24.1	96	90-110
CCV7	619808	KQ1818705-42	12/20/18 15:58	25.0	24.0	96	90-110
CCV8	619808	KQ1818705-43	12/20/18 21:33	25.0	24.1	96	90-110
CCV9	619808	KQ1818705-44	12/21/18 05:13	25.0	24.3	97	90-110
CCV10	619808	KQ1818705-45	12/21/18 10:33	25.0	24.0	96	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K1811888
Project: HS18120114

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	619305	KQ1818480-31	12/18/18 06:58	0.50	0.20	0.07	ND	U
CCB2	619305	KQ1818480-32	12/18/18 11:32	0.50	0.20	0.07	ND	U
CCB3	619305	KQ1818480-33	12/18/18 16:20	0.50	0.20	0.07	ND	U
CCB4	619305	KQ1818480-34	12/18/18 21:40	0.50	0.20	0.07	ND	U
CCB5	619305	KQ1818480-35	12/19/18 02:29	0.50	0.20	0.07	ND	U
CCB6	619808	KQ1818705-46	12/20/18 12:13	0.50	0.20	0.07	ND	U
CCB7	619808	KQ1818705-47	12/20/18 16:14	0.50	0.20	0.07	ND	U
CCB8	619808	KQ1818705-48	12/20/18 21:50	0.50	0.20	0.07	ND	U
CCB9	619808	KQ1818705-49	12/21/18 05:30	0.50	0.20	0.07	ND	U
CCB10	619808	KQ1818705-50	12/21/18 10:49	0.50	0.20	0.07	ND	U

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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General Chemistry

ALS Environmental—Kelso Laboratory
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Work Request # (Original) K1811791, 1579, 1723, 1888, 1809, 1519, 2001, 1625, 1790, 1783

Tier: IV I III IV II II IV I II IV

Date Analyzed: 12/17/18

Analyst: CES

Run # DOC: 619304
TOC: 619305, 619306

Analysis: DOC/TOC

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	yes/(no)
6.	Is the calibration curve correlation coefficient ≥ 0.995?	(yes)/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
9.	Are results for methods blanks all ND?	(yes)/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/(no)/NA
11.	Are all exceptions explained?	(yes)/no/NA
12.	Have all applicable service requests been reviewed?	(yes)/no/NA
13.	Are all samples labeled correctly?	(yes)/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	(yes)/no/NA
15.	Are detection limits and units reported correctly?	(yes)/no/NA
16.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/(no)/NA

COMMENTS:

(1791-1, 3, 6, 8, 9, 10, 12 DOC), 1723-13, 1888-1, 1809-5, (1791-5, 7, 11, 3, 6, 10, 12 TOC), 1783-1, 2 RPD not within acceptance limits. The sample results are less than 5x the MRL.

1791-5 MS/MSD % R not within acceptance limits - salt water samples - ran on extended reaction method with a 2x minimum dilution.

RA 1888-2, 1625-1, 3 RPD not within acceptance limits.

Final Approved by: [signature] Date: 12/20/18

DQREPORT

RA 2001-1 over dilution.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619304 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
K1811579-001	Carbon, Dissolved Organic (DOC)	N/A		Water	1.04 mg/L	10 ml	1.04 mg/L	1	0.07	0.50			12/18/18 08:19	N	
K1811579-002	Carbon, Dissolved Organic (DOC)	N/A		Water	5.52 mg/L	10 ml	55.2 mg/L	10	0.7	5.0			12/18/18 09:24	N	
K1811791-001	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	0.20 mg/L	10 ml	0.20 mg/L J	1	0.07	0.50			12/17/18 22:28	N	
K1811791-002	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	0.12 mg/L	10 ml	0.12 mg/L J	1	0.07	0.50			12/17/18 23:00	N	I
K1811791-003	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	1.12 mg/L	10 ml	2.2 mg/L	2	0.2	1.0			12/17/18 23:32	N	I
K1811791-004	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	0.85 mg/L	10 ml	1.7 mg/L	2	0.2	1.0			12/18/18 00:04	N	I
K1811791-005	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	1.01 mg/L	10 ml	2.0 mg/L	2	0.2	1.0			12/18/18 00:35	N	I
K1811791-006	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	0.96 mg/L	10 ml	1.9 mg/L	2	0.2	1.0			12/18/18 02:28	N	
K1811791-007	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	0.72 mg/L	10 ml	1.4 mg/L	2	0.2	1.0			12/18/18 03:00	N	I
K1811791-008	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	0.62 mg/L	10 ml	1.2 mg/L	2	0.2	1.0			12/18/18 03:32	N	I
K1811791-009	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	1.22 mg/L	10 ml	2.4 mg/L	2	0.2	1.0			12/18/18 04:03	N	I
K1811791-010	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	0.84 mg/L	10 ml	1.7 mg/L	2	0.2	1.0			12/18/18 04:35	N	I
K1811791-011	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	0.53 mg/L	10 ml	1.1 mg/L	2	0.2	1.0			12/18/18 05:07	N	I
K1811791-012	Carbon, Dissolved Organic (DOC)	N/A		Ocean Water	0.65 mg/L	10 ml	1.3 mg/L	2	0.2	1.0			12/18/18 05:38	N	I
KQ1818477-01	Carbon, Dissolved Organic DUP (DOC)		K1811791-001	Ocean Water	0.12 mg/L	10 ml	0.12 mg/L J	1	0.07	0.50		51*	12/17/18 22:28	N	I
KQ1818477-02	Carbon, Dissolved Organic DUP (DOC)		K1811791-002	Ocean Water	0.06 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50		NC	12/17/18 23:00	N	I
KQ1818477-03	Carbon, Dissolved Organic DUP (DOC)		K1811791-003	Ocean Water	0.87 mg/L	10 ml	1.7 mg/L	2	0.2	1.0		25*	12/17/18 23:32	N	I
KQ1818477-04	Carbon, Dissolved Organic DUP (DOC)		K1811791-004	Ocean Water	0.82 mg/L	10 ml	1.6 mg/L	2	0.2	1.0		3	12/18/18 00:04	N	I
KQ1818477-05	Carbon, Dissolved Organic MS (DOC)		K1811791-005	Ocean Water	17.94 mg/L	10 ml	35.9 mg/L	2	0.2	1.0	68*		12/18/18 01:40	N	I
KQ1818477-06	Carbon, Dissolved Organic DMS (DOC)		K1811791-005	Ocean Water	17.82 mg/L	10 ml	35.6 mg/L	2	0.2	1.0	67*	<1	12/18/18 01:40	N	I
KQ1818477-07	Carbon, Dissolved Organic DUP (DOC)		K1811791-005	Ocean Water	0.94 mg/L	10 ml	1.9 mg/L	2	0.2	1.0		8	12/18/18 00:35	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

12/20/18 CES 12/19/18

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619304 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
KQ1818477-08	Carbon, Dissolved Organic (DOC)	DUP	K1811791-006	Ocean Water	0.75 mg/L	10 ml	1.5 mg/L	2	0.2	1.0		25*	12/18/18 02:28	N	I
KQ1818477-09	Carbon, Dissolved Organic (DOC)	DUP	K1811791-007	Ocean Water	0.69 mg/L	10 ml	1.4 mg/L	2	0.2	1.0		4	12/18/18 03:00	N	I
KQ1818477-10	Carbon, Dissolved Organic (DOC)	DUP	K1811791-008	Ocean Water	0.99 mg/L	10 ml	2.0 mg/L	2	0.2	1.0		46*	12/18/18 03:32	N	I
KQ1818477-11	Carbon, Dissolved Organic (DOC)	DUP	K1811791-009	Ocean Water	0.66 mg/L	10 ml	1.3 mg/L	2	0.2	1.0		60*	12/18/18 04:03	N	I
KQ1818477-12	Carbon, Dissolved Organic (DOC)	DUP	K1811791-010	Ocean Water	0.59 mg/L	10 ml	1.2 mg/L	2	0.2	1.0		35*	12/18/18 04:35	N	I
KQ1818477-13	Carbon, Dissolved Organic (DOC)	DUP	K1811791-011	Ocean Water	0.53 mg/L	10 ml	1.1 mg/L	2	0.2	1.0		<1	12/18/18 05:07	N	I
KQ1818477-14	Carbon, Dissolved Organic (DOC)	DUP	K1811791-012	Ocean Water	0.54 mg/L	10 ml	1.1 mg/L	2	0.2	1.0		19*	12/18/18 05:38	N	I
KQ1818477-15	Carbon, Dissolved Organic (DOC)	MS	K1811579-001	Water	25.66 mg/L	10 ml	25.7 mg/L	1	0.07	0.50	98		12/18/18 08:51	N	
KQ1818477-16	Carbon, Dissolved Organic (DOC)	DUP	K1811579-001	Water	1.01 mg/L	10 ml	1.00 mg/L	1	0.07	0.50		3	12/18/18 08:19	N	
KQ1818477-17	Carbon, Dissolved Organic (DOC)	DUP	K1811579-002	Water	5.29 mg/L	10 ml	52.9 mg/L	10	0.7	5.0		4	12/18/18 09:24	N	
KQ1818477-18	Carbon, Dissolved Organic (DOC)	MB		Ocean Water	0.08 mg/L	10 ml	0.08 mg/L J	1	0.07	0.50			12/17/18 21:07	N	I
KQ1818477-19	Carbon, Dissolved Organic (DOC)	MB		Ocean Water	0.03 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 07:15	N	I
KQ1818477-20	Carbon, Dissolved Organic (DOC)	LCS		Ocean Water	20.87 mg/L	10 ml	20.9 mg/L	1	0.07	0.50	95		12/17/18 21:24	N	
KQ1818477-21	Carbon, Dissolved Organic (DOC)	LCS		Ocean Water	20.89 mg/L	10 ml	20.9 mg/L	1	0.07	0.50	95		12/18/18 07:31	N	I
KQ1818477-22	Carbon, Dissolved Organic (DOC)	CCV		Ocean Water	24.71 mg/L	10 ml	24.7 mg/L	1			99		12/17/18 20:34	N	I
KQ1818477-23	Carbon, Dissolved Organic (DOC)	CCV		Ocean Water	24.91 mg/L	10 ml	24.9 mg/L	1			100		12/18/18 01:07	N	I
KQ1818477-24	Carbon, Dissolved Organic (DOC)	CCV		Ocean Water	24.50 mg/L	10 ml	24.5 mg/L	1			98		12/18/18 06:42	N	I
KQ1818477-25	Carbon, Dissolved Organic (DOC)	CCV		Ocean Water	24.00 mg/L	10 ml	24.0 mg/L	1			96		12/18/18 11:15	N	I
KQ1818477-26	Carbon, Dissolved Organic (DOC)	CCB		Ocean Water	-0.03 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/17/18 20:51	N	I
KQ1818477-27	Carbon, Dissolved Organic (DOC)	CCB		Ocean Water	0.22 mg/L	10 ml	0.22 mg/L J	1	0.07	0.50			12/18/18 01:24	N	I
KQ1818477-28	Carbon, Dissolved Organic (DOC)	CCB		Ocean Water	3.17000000000001E	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 06:58	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619304 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1818477-29	Carbon, Dissolved Organic (DOC)	CCB		Ocean Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 11:32	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619305 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
K1811519-001	Carbon, Total Organic	N/A		Water	1.72 mg/L	10 ml	1.72 mg/L	1	0.07	0.50			12/19/18 00:04	N	
K1811723-001	Carbon, Total Organic	N/A		Ground Water	1.19 mg/L	10 ml	1.19 mg/L	1	0.07	0.50			12/18/18 10:27	N	I
K1811723-002	Carbon, Total Organic	N/A		Ground Water	1.58 mg/L	10 ml	1.58 mg/L	1	0.07	0.50			12/18/18 11:48	N	I
K1811723-003	Carbon, Total Organic	N/A		Ground Water	1.46 mg/L	10 ml	1.46 mg/L	1	0.07	0.50			12/18/18 12:20	N	I
K1811791-001	Carbon, Total Organic	N/A		Ocean Water	-0.09 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 15:32	N	I
K1811791-002	Carbon, Total Organic	N/A		Ocean Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 17:10	N	I
K1811791-003	Carbon, Total Organic	N/A		Ocean Water	0.34 mg/L	10 ml	0.7 mg/L J	2	0.2	1.0			12/18/18 17:42	N	I
K1811791-004	Carbon, Total Organic	N/A		Ocean Water	0.24 mg/L	10 ml	0.5 mg/L J	2	0.2	1.0			12/18/18 18:13	N	I
K1811791-005	Carbon, Total Organic	N/A		Ocean Water	0.28 mg/L	10 ml	0.6 mg/L J	2	0.2	1.0			12/18/18 18:45	N	
K1811791-006	Carbon, Total Organic	N/A		Ocean Water	0.41 mg/L	10 ml	0.8 mg/L J	2	0.2	1.0			12/18/18 19:17	N	
K1811791-007	Carbon, Total Organic	N/A		Ocean Water	0.35 mg/L	10 ml	0.7 mg/L J	2	0.2	1.0			12/18/18 19:48	N	I
K1811791-008	Carbon, Total Organic	N/A		Ocean Water	0.28 mg/L	10 ml	0.6 mg/L J	2	0.2	1.0			12/18/18 20:20	N	I
K1811791-009	Carbon, Total Organic	N/A		Ocean Water	0.26 mg/L	10 ml	0.5 mg/L J	2	0.2	1.0			12/18/18 20:52	N	I
K1811791-010	Carbon, Total Organic	N/A		Ocean Water	0.24 mg/L	10 ml	0.5 mg/L J	2	0.2	1.0			12/18/18 21:57	N	I
K1811791-011	Carbon, Total Organic	N/A		Ocean Water	0.17 mg/L	10 ml	0.3 mg/L J	2	0.2	1.0			12/18/18 22:29	N	I
K1811791-012	Carbon, Total Organic	N/A		Ocean Water	0.67 mg/L	10 ml	1.3 mg/L	2	0.2	1.0			12/18/18 23:00	N	I
K1811809-005	Carbon, Total Organic	N/A		Water	0.62 mg/L	10 ml	0.62 mg/L	1	0.07	0.50			12/18/18 14:28	N	I
K1811888-001	Carbon, Total Organic	N/A		Water	1.97 mg/L	10 ml	1.97 mg/L	1	0.07	0.50			12/18/18 12:52	N	I
K1811888-002	Carbon, Total Organic	N/A		Water	2.84 mg/L	10 ml	2.84 mg/L	1	0.07	0.50			12/18/18 13:56	N	I
KQ1818480-01	Carbon, Total Organic	MS	K1811723-001	Ground Water	25.79 mg/L	10 ml	25.8 mg/L	1	0.07	0.50	98		12/18/18 10:59	N	I
KQ1818480-02	Carbon, Total Organic	DUP	K1811723-001	Ground Water	1.10 mg/L	10 ml	1.10 mg/L	1	0.07	0.50		8	12/18/18 10:27	N	I
KQ1818480-03	Carbon, Total Organic	DUP	K1811723-002	Ground Water	1.55 mg/L	10 ml	1.55 mg/L	1	0.07	0.50		2	12/18/18 11:48	N	I
KQ1818480-04	Carbon, Total Organic	DUP	K1811723-003	Ground Water	1.28 mg/L	10 ml	1.28 mg/L	1	0.07	0.50		13*	12/18/18 12:20	N	I
KQ1818480-05	Carbon, Total Organic	MS	K1811888-001	Water	24.62 mg/L	10 ml	24.6 mg/L	1	0.07	0.50	91		12/18/18 13:23	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

12/20/18 CES 12/19/18

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619305 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
KQ1818480-06	Carbon, Total Organic	DUP	K1811888-001	Water	1.39 mg/L	10 ml	1.39 mg/L	1	0.07	0.50		35*	12/18/18 12:52	N	I
KQ1818480-07	Carbon, Total Organic	DUP	K1811888-002	Water	3.16 mg/L	10 ml	3.16 mg/L	1	0.07	0.50		11*	12/18/18 13:56	N	
KQ1818480-08	Carbon, Total Organic	MS	K1811809-005	Water	24.88 mg/L	10 ml	24.9 mg/L	1	0.07	0.50	97		12/18/18 15:00	N	I
KQ1818480-09	Carbon, Total Organic	DUP	K1811809-005	Water	0.43 mg/L	10 ml	0.43 mg/L J	1	0.07	0.50		35*	12/18/18 14:28	N	I
KQ1818480-10	Carbon, Total Organic	DUP	K1811791-001	Ocean Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50		NC	12/18/18 15:32	N	I
KQ1818480-11	Carbon, Total Organic	DUP	K1811791-002	Ocean Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50		NC	12/18/18 17:10	N	
KQ1818480-12	Carbon, Total Organic	DUP	K1811791-003	Ocean Water	0.51 mg/L	10 ml	1.0 mg/L	2	0.2	1.0		38*	12/18/18 17:42	N	I
KQ1818480-13	Carbon, Total Organic	DUP	K1811791-004	Ocean Water	0.05 mg/L	10 ml	1.0 mg/L U	2	0.2	1.0		NC	12/18/18 18:13	N	I
KQ1818480-14	Carbon, Total Organic	DUP	K1811791-005	Ocean Water	0.76 mg/L	10 ml	1.5 mg/L	2	0.2	1.0		92*	12/18/18 18:45	N	I
KQ1818480-15	Carbon, Total Organic	DUP	K1811791-006	Ocean Water	0.22 mg/L	10 ml	0.4 mg/L J	2	0.2	1.0		62*	12/18/18 19:17	N	I
KQ1818480-16	Carbon, Total Organic	DUP	K1811791-007	Ocean Water	0.22 mg/L	10 ml	0.4 mg/L J	2	0.2	1.0		49*	12/18/18 19:48	N	I
KQ1818480-17	Carbon, Total Organic	DUP	K1811791-008	Ocean Water	0.02 mg/L	10 ml	1.0 mg/L U	2	0.2	1.0		NC	12/18/18 20:20	N	I
KQ1818480-18	Carbon, Total Organic	DUP	K1811791-009	Ocean Water	0.02 mg/L	10 ml	1.0 mg/L U	2	0.2	1.0		NC	12/18/18 20:52	N	I
KQ1818480-19	Carbon, Total Organic	DUP	K1811791-010	Ocean Water	0.13 mg/L	10 ml	0.3 mg/L J	2	0.2	1.0		55*	12/18/18 21:57	N	I
KQ1818480-20	Carbon, Total Organic	DUP	K1811791-011	Ocean Water	0.11 mg/L	10 ml	0.2 mg/L J	2	0.2	1.0		42*	12/18/18 22:29	N	I
KQ1818480-21	Carbon, Total Organic	DUP	K1811791-012	Ocean Water	0.36 mg/L	10 ml	0.7 mg/L J	2	0.2	1.0		61*	12/18/18 23:00	N	I
KQ1818480-22	Carbon, Total Organic	MS	K1811519-001	Water	26.65 mg/L	10 ml	26.7 mg/L	1	0.07	0.50	100		12/19/18 00:35	N	I
KQ1818480-23	Carbon, Total Organic	DUP	K1811519-001	Water	1.57 mg/L	10 ml	1.57 mg/L	1	0.07	0.50		10	12/19/18 00:04	N	I
KQ1818480-24	Carbon, Total Organic	MB		Ground Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 16:37	N	I
KQ1818480-25	Carbon, Total Organic	LCS		Ground Water	20.30 mg/L	10 ml	20.3 mg/L	1	0.07	0.50	93		12/18/18 16:54	N	I
KQ1818480-26	Carbon, Total Organic	CCV		Ground Water	24.50 mg/L	10 ml	24.5 mg/L	1			98		12/18/18 06:42	N	I
KQ1818480-27	Carbon, Total Organic	CCV		Ground Water	24.00 mg/L	10 ml	24.0 mg/L	1			96		12/18/18 11:15	N	I
KQ1818480-28	Carbon, Total Organic	CCV		Ground Water	23.99 mg/L	10 ml	24.0 mg/L	1			96		12/18/18 16:04	N	I
KQ1818480-29	Carbon, Total Organic	CCV		Ground Water	23.98 mg/L	10 ml	24.0 mg/L	1			96		12/18/18 21:23	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619305 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	i r
KQ1818480-30	Carbon, Total Organic	CCV		Ground Water	24.08 mg/L	10 ml	24.1 mg/L	1			96		12/19/18 02:13	N	IV
KQ1818480-31	Carbon, Total Organic	CCB		Ground Water	3.17000000000001E	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 06:58	N	I
KQ1818480-32	Carbon, Total Organic	CCB		Ground Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 11:32	N	I
KQ1818480-33	Carbon, Total Organic	CCB		Ground Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 16:20	N	I
KQ1818480-34	Carbon, Total Organic	CCB		Ground Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 21:40	N	I
KQ1818480-35	Carbon, Total Organic	CCB		Ground Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/19/18 02:29	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619306 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
K1811625-001	Carbon, Total Organic	N/A		Ground Water	4.20 mg/L	10 ml	8.4 mg/L	2	0.2	1.0			12/19/18 03:19	N	
K1811625-002	Carbon, Total Organic	N/A		Ground Water	3.26 mg/L	10 ml	13.0 mg/L	4	0.3	2.0			12/19/18 04:38	N	
K1811625-003	Carbon, Total Organic	N/A		Ground Water	4.69 mg/L	10 ml	18.8 mg/L	4	0.3	2.0			12/19/18 05:10	N	
K1811625-004	Carbon, Total Organic	N/A		Ground Water	5.71 mg/L	10 ml	22.8 mg/L	4	0.3	2.0			12/19/18 05:42	N	
K1811625-005	Carbon, Total Organic	N/A		Ground Water	0.75 mg/L	10 ml	7.5 mg/L	10	0.7	5.0			12/19/18 06:13	N	
K1811783-001	Carbon, Total Organic	N/A		Ground Water	0.68 mg/L	10 ml	0.67 mg/L	1	0.07	0.50			12/19/18 10:13	N	I
K1811783-002	Carbon, Total Organic	N/A		Ground Water	0.77 mg/L	10 ml	0.77 mg/L	1	0.07	0.50			12/19/18 11:32	N	I
K1811783-003	Carbon, Total Organic	N/A		Ground Water	1.55 mg/L	10 ml	1.55 mg/L	1	0.07	0.50			12/19/18 12:35	N	
K1811783-004	Carbon, Total Organic	N/A		Ground Water	0.41 mg/L	10 ml	0.41 mg/L J	1	0.07	0.50			12/19/18 13:38	N	I
K1811790-001	Carbon, Total Organic	N/A		Water	8.35 mg/L	10 ml	835 mg/L	100	7	50			12/19/18 06:45	N	I
K1811790-002	Carbon, Total Organic	N/A		Water	9.85 mg/L	10 ml	985 mg/L	100	7	50			12/19/18 08:38	N	I
K1811790-003	Carbon, Total Organic	N/A		Water	8.64 mg/L	10 ml	864 mg/L	100	7	50			12/19/18 09:10	N	I
K1812001-001	Carbon, Total Organic	N/A		Water	0.54 mg/L	10 ml	54 mg/L	100	7	50			12/19/18 01:08	N	
KQ1818481-01	Carbon, Total Organic	MS	K1812001-001	Water	24.61 mg/L	10 ml	2460 mg/L	100	7	50	96		12/19/18 01:40	N	I
KQ1818481-02	Carbon, Total Organic	DUP	K1812001-001	Water	0.36 mg/L	10 ml	36 mg/L J	100	7	50		39*	12/19/18 01:08	N	I
KQ1818481-03	Carbon, Total Organic	MS	K1811625-001	Ground Water	29.29 mg/L	10 ml	58.6 mg/L	2	0.2	1.0	100		12/19/18 03:50	N	
KQ1818481-04	Carbon, Total Organic	DUP	K1811625-001	Ground Water	3.71 mg/L	10 ml	7.4 mg/L	2	0.2	1.0		12*	12/19/18 03:19	N	
KQ1818481-05	Carbon, Total Organic	DUP	K1811625-002	Ground Water	2.97 mg/L	10 ml	11.9 mg/L	4	0.3	2.0		9	12/19/18 04:38	N	
KQ1818481-06	Carbon, Total Organic	DUP	K1811625-003	Ground Water	4.19 mg/L	10 ml	16.8 mg/L	4	0.3	2.0		11*	12/19/18 05:10	N	
KQ1818481-07	Carbon, Total Organic	DUP	K1811625-004	Ground Water	5.67 mg/L	10 ml	22.7 mg/L	4	0.3	2.0		<1	12/19/18 05:42	N	
KQ1818481-08	Carbon, Total Organic	DUP	K1811625-005	Ground Water	0.79 mg/L	10 ml	7.9 mg/L	10	0.7	5.0		5	12/19/18 06:13	N	I
KQ1818481-09	Carbon, Total Organic	MS	K1811790-001	Water	33.45 mg/L	10 ml	3350 mg/L	100	7	50	100		12/19/18 07:50	N	I
KQ1818481-10	Carbon, Total Organic	DUP	K1811790-001	Water	8.58 mg/L	10 ml	858 mg/L	100	7	50		3	12/19/18 06:45	N	I
KQ1818481-11	Carbon, Total Organic	DUP	K1811790-002	Water	9.86 mg/L	10 ml	986 mg/L	100	7	50		<1	12/19/18 08:38	N	I
KQ1818481-12	Carbon, Total Organic	DUP	K1811790-003	Water	8.46 mg/L	10 ml	846 mg/L	100	7	50		2	12/19/18 09:10	N	I
KQ1818481-13	Carbon, Total Organic	MS	K1811783-001	Ground Water	25.24 mg/L	10 ml	25.2 mg/L	1	0.07	0.50	98		12/19/18 11:16	N	I
KQ1818481-14	Carbon, Total Organic	DUP	K1811783-001	Ground Water	0.53 mg/L	10 ml	0.53 mg/L	1	0.07	0.50		25*	12/19/18 10:13	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

12/20/18 CES 12/19/18

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619306 **Method/Testcode:** 9060/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
KQ1818481-15	Carbon, Total Organic	TRP	K1811783-001	Ground Water	0.54 mg/L	10 ml	0.54 mg/L	1	0.07	0.50		14	12/19/18 10:13	N	I
KQ1818481-16	Carbon, Total Organic	QUAD	K1811783-001	Ground Water	0.48 mg/L	10 ml	0.48 mg/L J	1	0.07	0.50		15	12/19/18 10:13	N	I
KQ1818481-17	Carbon, Total Organic	DUP	K1811783-002	Ground Water	0.62 mg/L	10 ml	0.62 mg/L	1	0.07	0.50		22*	12/19/18 11:32	N	I
KQ1818481-18	Carbon, Total Organic	TRP	K1811783-002	Ground Water	0.56 mg/L	10 ml	0.56 mg/L	1	0.07	0.50		17	12/19/18 11:32	N	I
KQ1818481-19	Carbon, Total Organic	QUAD	K1811783-002	Ground Water	0.46 mg/L	10 ml	0.46 mg/L J	1	0.07	0.50		21*	12/19/18 11:32	N	
KQ1818481-20	Carbon, Total Organic	DUP	K1811783-003	Ground Water	1.44 mg/L	10 ml	1.44 mg/L	1	0.07	0.50		7	12/19/18 12:35	N	I
KQ1818481-21	Carbon, Total Organic	TRP	K1811783-003	Ground Water	1.38 mg/L	10 ml	1.38 mg/L	1	0.07	0.50		6	12/19/18 12:35	N	I
KQ1818481-22	Carbon, Total Organic	QUAD	K1811783-003	Ground Water	1.35 mg/L	10 ml	1.35 mg/L	1	0.07	0.50		6	12/19/18 12:35	N	I
KQ1818481-23	Carbon, Total Organic	DUP	K1811783-004	Ground Water	0.37 mg/L	10 ml	0.37 mg/L J	1	0.07	0.50		11	12/19/18 13:38	N	I
KQ1818481-24	Carbon, Total Organic	TRP	K1811783-004	Ground Water	0.35 mg/L	10 ml	0.35 mg/L J	1	0.07	0.50		8	12/19/18 13:38	N	I
KQ1818481-25	Carbon, Total Organic	QUAD	K1811783-004	Ground Water	0.34 mg/L	10 ml	0.34 mg/L J	1	0.07	0.50		8	12/19/18 13:38	N	I
KQ1818481-26	Carbon, Total Organic	MB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/19/18 02:46	N	I
KQ1818481-26	Carbon, Total Organic	MB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/19/18 02:46	N	I
KQ1818481-27	Carbon, Total Organic	LCS		Water	20.54 mg/L	10 ml	20.5 mg/L	1	0.07	0.50	94		12/19/18 03:02	N	I
KQ1818481-27	Carbon, Total Organic	LCS		Water	20.54 mg/L	10 ml	20.5 mg/L	1	0.07	0.50	94		12/19/18 03:02	N	I
KQ1818481-28	Carbon, Total Organic	CCV		Water	23.98 mg/L	10 ml	24.0 mg/L	1			96		12/18/18 21:23	N	I
KQ1818481-28	Carbon, Total Organic	CCV		Water	23.98 mg/L	10 ml	24.0 mg/L	1			96		12/18/18 21:23	N	I
KQ1818481-29	Carbon, Total Organic	CCV		Water	24.08 mg/L	10 ml	24.1 mg/L	1			96		12/19/18 02:13	N	I
KQ1818481-29	Carbon, Total Organic	CCV		Water	24.08 mg/L	10 ml	24.1 mg/L	1			96		12/19/18 02:13	N	I
KQ1818481-30	Carbon, Total Organic	CCV		Water	23.86 mg/L	10 ml	23.9 mg/L	1			96		12/19/18 07:17	N	I
KQ1818481-30	Carbon, Total Organic	CCV		Water	23.86 mg/L	10 ml	23.9 mg/L	1			96		12/19/18 07:17	N	I
KQ1818481-31	Carbon, Total Organic	CCV		Water	24.40 mg/L	10 ml	24.4 mg/L	1			98		12/19/18 14:41	N	I
KQ1818481-31	Carbon, Total Organic	CCV		Water	24.40 mg/L	10 ml	24.4 mg/L	1			98		12/19/18 14:41	N	I
KQ1818481-32	Carbon, Total Organic	CCB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 21:40	N	I
KQ1818481-32	Carbon, Total Organic	CCB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/18/18 21:40	N	I
KQ1818481-33	Carbon, Total Organic	CCB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/19/18 02:29	N	I
KQ1818481-33	Carbon, Total Organic	CCB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/19/18 02:29	N	I
KQ1818481-34	Carbon, Total Organic	CCB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/19/18 07:33	N	I
KQ1818481-34	Carbon, Total Organic	CCB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/19/18 07:33	N	I
KQ1818481-35	Carbon, Total Organic	CCB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/19/18 14:58	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619306 **Method/Testcode:** SM 5 10 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Ti
KQ1818481-35	Carbon, Total Organic	CCB		Water	-0.16 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/19/18 14:58	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

0.132	0.132	0.132	0.132	OBSERVATIONS	13	0.1315
0.244				STD Deviation	0.12576	ABOVE
0.383				AVERAGE	0.08505	ABOVE
0.163	0.163	0.163	0.163	UCL	0.21082	0.163
0.185	0.185	0.185	0.185	LCL	-0.04071	0.185
0.000						0
0.000						0
0.000				OBSERVATIONS	3	0
0.000				STD Deviation	0.04695	0
0.000				AVERAGE	0.15983	0
0.000				UCL	0.20679	0
0.000				LCL	0.11288	0
0.000						0
						0
				OBSERVATIONS	3	0
				STD Deviation	0.04695	0
				AVERAGE	0.15983	0
				UCL	0.20679	0
				LCL	0.11288	0
						0
						0
				OBSERVATIONS	3	0
				STD Deviation	0.03293	0
				AVERAGE	0.15983	0
						0
						0
						0
						0
						0

12/20/18

DOC: 619304,
TOC: 619305,
619306

Schedule: 12172018C

Version: 14
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2018/12/18 14:41 - Tuesday

12/20/18

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps
(Clean)	Clean	Clean		1
D	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
(Clean)	Clean	Clean		1
D	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
(Clean)	Clean	Clean		1
D	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
(Blank)	Blank	Reagent/Acid Blank		1
D	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
1	Sample	MB1	Extended Reaction 021711 (Extended Reaction 021711)	1
2	Check Standard	[TOC] LCS ER [21.9 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
3	Sample	ICS	Extended Reaction 021711 (Extended Reaction 021711)	1
4	Sample	FB 12/4/18	Extended Reaction 021711 (Extended Reaction 021711)	2
5	Sample	K1811791-001 doc	Extended Reaction 021711 (Extended Reaction 021711)	2
6	Sample	K1811791-002 doc	Extended Reaction 021711 (Extended Reaction 021711)	2
7	Sample	K1811791-003 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
8	Sample	K1811791-004 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
9	Sample	K1811791-005 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
10	Sample	K1811791-005 ms/msd doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
11	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
12	Sample	K1811791-006 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
13	Sample	K1811791-007 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
14	Sample	K1811791-008 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
15	Sample	K1811791-009 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
16	Sample	K1811791-010 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
17	Sample	K1811791-011 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
18	Sample	K1811791-012 doc 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
19	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
20	Sample	MB2	Extended Reaction 021711 (Extended Reaction 021711)	1
2	Check Standard	[TOC] LCS ER [21.9 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
21	Sample	FB 11/29/18	Extended Reaction 021711 (Extended Reaction 021711)	2
22	Sample	K1811579-001 doc	Extended Reaction 021711 (Extended Reaction 021711)	2
23	Sample	K1811579-001 ms doc	Extended Reaction 021711 (Extended Reaction 021711)	1
24	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
25	Sample	K1811579-002 doc 10x	Extended Reaction 021711 (Extended Reaction 021711)	2
26	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
27	Sample	K1811723-001.02	Extended Reaction 021711 (Extended Reaction 021711)	2
28	Sample	K1811723-001.02 ms	Extended Reaction 021711 (Extended Reaction 021711)	1
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
29	Sample	K1811723-002.02	Extended Reaction 021711 (Extended Reaction 021711)	2
30	Sample	K1811723-003.02	Extended Reaction 021711 (Extended Reaction 021711)	2
31	Sample	K1811888-001.01	Extended Reaction 021711 (Extended Reaction 021711)	2
32	Sample	K1811888-001.01 ms	Extended Reaction 021711 (Extended Reaction 021711)	1
33	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
34	Sample	K1811888-002.02	Extended Reaction 021711 (Extended Reaction 021711)	2
35	Sample	K1811809-005.14	Extended Reaction 021711 (Extended Reaction 021711)	2
36	Sample	K1811809-005.14 ms	Extended Reaction 021711 (Extended Reaction 021711)	1
37	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1

Schedule: 12172018C

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps
38	Sample	K1811791-001.01	Extended Reaction (021711) (Extended Reaction (021711)	2
C	Check Standard	[TOC] CCV (021711) [25 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1
D	Check Standard	[TOC] CCB (021711) [0.0 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1
39	Sample	MB	Extended Reaction (021711) (Extended Reaction (021711)	1
2	Check Standard	[TOC] LCS ER (21.9 ppm)	Extended Reaction (021711) (Extended Reaction (021711)	1
40	Sample	K1811791-002.01	Extended Reaction (021711) (Extended Reaction (021711)	2
41	Sample	K1811791-003.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
42	Sample	K1811791-004.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
43	Sample	K1811791-005.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
44	Sample	K1811791-006.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
45	Sample	K1811791-007.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
46	Sample	K1811791-008.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
47	Sample	K1811791-009.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
C	Check Standard	[TOC] CCV (021711) [25 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1
D	Check Standard	[TOC] CCB (021711) [0.0 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1
48	Sample	K1811791-010.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
49	Sample	K1811791-011.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
50	Sample	K1811791-012.01 2x	Extended Reaction (021711) (Extended Reaction (021711)	2
51	Sample	RE	Extended Reaction (021711) (Extended Reaction (021711)	2
52	Sample	K1811791-013.01	Extended Reaction (021711) (Extended Reaction (021711)	2
53	Sample	K1811819-001.01 ms	Extended Reaction (021711) (Extended Reaction (021711)	1
54	Sample	MB	Extended Reaction (021711) (Extended Reaction (021711)	1
55	Sample	K1812001-001.01 10x	Extended Reaction (021711) (Extended Reaction (021711)	2
56	Sample	K1812001-001.01 ms 10x	Extended Reaction (021711) (Extended Reaction (021711)	1
57	Sample	RE	Extended Reaction (021711) (Extended Reaction (021711)	1
C	Check Standard	[TOC] CCV (021711) [25 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1
D	Check Standard	[TOC] CCB (021711) [0.0 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1
58	Sample	MB	Extended Reaction (021711) (Extended Reaction (021711)	1
2	Check Standard	[TOC] LCS ER (21.9 ppm)	Extended Reaction (021711) (Extended Reaction (021711)	1
59	Sample	K1811825-001.01	Extended Reaction (021711) (Extended Reaction (021711)	2
60	Sample	K1811825-001.01 ms 2x	Extended Reaction (021711) (Extended Reaction (021711)	1
61	Sample	MB	Extended Reaction (021711) (Extended Reaction (021711)	1
62	Sample	K1811825-002.01 4x	Extended Reaction (021711) (Extended Reaction (021711)	2
63	Sample	K1811825-003.01	Extended Reaction (021711) (Extended Reaction (021711)	2
64	Sample	K1811825-004.01 4x	Extended Reaction (021711) (Extended Reaction (021711)	2
65	Sample	K1811825-005.01	Extended Reaction (021711) (Extended Reaction (021711)	2
66	Sample	K1811794-001.01 10x	Extended Reaction (021711) (Extended Reaction (021711)	2
C	Check Standard	[TOC] CCV (021711) [25 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1
D1	Check Standard	[TOC] CCB (021711) [0.0 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1
67	Sample	K1811794-001.01 ms 10x	Extended Reaction (021711) (Extended Reaction (021711)	1
68	Sample	RE	Extended Reaction (021711) (Extended Reaction (021711)	2
69	Sample	K1811794-002.01 10x	Extended Reaction (021711) (Extended Reaction (021711)	2
70	Sample	K1811794-003.01 10x	Extended Reaction (021711) (Extended Reaction (021711)	2
71	Sample	MB	Extended Reaction (021711) (Extended Reaction (021711)	2
72	Sample	K1811763-001.09	Extended Reaction (021711) (Extended Reaction (021711)	4
73	Sample	K1811763-001.09 ms	Extended Reaction (021711) (Extended Reaction (021711)	1
74	Sample	K1811763-002.09	Extended Reaction (021711) (Extended Reaction (021711)	4
75	Sample	K1811763-003.09	Extended Reaction (021711) (Extended Reaction (021711)	4
1	Sample	K1811763-004.09	Extended Reaction (021711) (Extended Reaction (021711)	4
76	Check Standard	[TOC] CCV (021711) [25 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1
D	Check Standard	[TOC] CCB (021711) [0.0 ppm]	Extended Reaction (021711) (Extended Reaction (021711)	1

Fusion Report - 12172018C
Monday, December 17, 2018 05:49 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2018/12/19 15:35 - Wednesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	12172018C	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v1) Fusion1 (Fusion1) (v2) Fusion1 (Fusion1) (v3) Fusion1 (Fusion1) (v5) Fusion1 (Fusion1) (v6) Fusion1 (Fusion1) (v7) Fusion1 (Fusion1) (v9) Fusion1 (Fusion1) (v10) Fusion1 (Fusion1) (v11) Fusion1 (Fusion1) (v12) Fusion1 (Fusion1) (v14)		
Comment:			

12/20/18

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◈	(clean)		Clean	2018/12/17 17:49

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	13.44	16.04	2.60	49.35	05:26
2	TC Clean	6.88	9.30	2.42	49.98	04:03
3	TC Clean	2.27	4.99	2.72	50.04	03:49
4	TC Clean	2.11	4.65	2.54	50.04	03:48

Sample Type: Sample — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	D	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/17 18:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	0.0000	0.0000	12.99	15.78	2.79	50.01	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.8487 (IC) (v1200)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◈	(clean)		Clean	2018/12/17 18:27

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.58	15.63	3.05	49.42	05:26
2	TC Clean	5.35	8.09	2.74	50.03	04:03
3	TC Clean	1.92	4.57	2.64	50.03	03:56
4	TC Clean	1.75	4.42	2.67	50.04	03:55

Sample Type: Sample — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	D	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/17 18:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	13.11	15.75	2.64	50.08	12:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.8487 (IC) (v1200)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◈	(clean)		Clean	2018/12/17 19:06

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.45	15.75	3.29	49.26	05:25
2	TC Clean	5.16	7.92	2.77	50.06	04:06
3	TC Clean	1.79	4.46	2.67	50.04	03:47
4	TC Clean	1.44	4.20	2.75	50.04	03:47

Sample Type: Sample — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/17 19:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	13.40	16.13	2.73	50.08	12:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.8487 (IC) (v1200)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Blank (Creating v1201) From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2018/12/17 19:44

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.33	15.59	3.26	49.36	05:24
2	TC Clean	5.44	8.28	2.84	50.00	04:03
3	TC Clean	1.90	4.51	2.61	50.07	03:51
4	TC Clean	1.54	4.25	2.71	50.08	03:48
5	Reagent Blank	6.62	9.24	2.62	50.08	05:05
6	Acid Blank	1.62	4.06	2.44	49.34	05:27

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	1.6691 ppm	0.0000 ppm	0.0000%	2018/12/17 20:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6691	16.6907	29.80	32.86	3.06	50.04	12:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.8711 ppm	0.0000 ppm	0%	2018/12/17 20:34

						(PASS)				

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.8711	248.7113	208.58	211.55	2.97	50.06	12:31

Completion State: Success - Criteria met.

Success Action: Do Nothing

Method: Extended Reaction 021711 (v3)

Calibration: Extended Reaction 021711 (v24)

STD Conc - Pos B: 50 ppmC

Sample Type: Check Standard --> CCB 021711

From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.1315 ppm (PASS)	0.0000 ppm	0%	2018/12/17 20:51

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.1315	1.3151	19.45	22.31	2.86	50.06	12:30

Completion State: Success - Criteria met.

Success Action: Do Nothing

Method: Extended Reaction 021711 (v3)

Calibration: Extended Reaction 021711 (v24)

STD Conc - Pos D: 0 ppmC

Sample Type: Sample

From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	1	TOC	MB1	0.2435 ppm	0.0000 ppm	0.0000%	2018/12/17 21:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2435	2.4350	18.91	21.70	2.79	50.01	12:29

Dilution: 1:10

Blank Contribution: (TC) 17.0445 (IC) (v1201)

Method: Extended Reaction 021711 (v3)

Calibration: Extended Reaction 021711 (v24)

Sample Type: Check Standard --> LCS ER

From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	2	TOC	21.9000	1:1	[TOC] LCS ER [21.9 ppm]	0 / infinity (NA / NA)	21.0291 ppm (PASS)	0.0000 ppm	0%	2018/12/17 21:24

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
2	TOC	21.9 ppm	1	21.0291	210.2910	179.21	181.82	2.62	49.97	12:32

Completion State

Success Action

Method

Calibration

STD Conc - Pos 2

Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	21.9 ppmC

Sample Type: Sample

From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	3	TOC	ICS	0.5767 ppm	0.0000 ppm	0.0000%	2018/12/17 21:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5767	5.7668	21.45	24.21	2.76	49.91	12:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	4	TOC	FB 12/4/18	0.4085 ppm	0.2143 ppm	52.4600%	2018/12/17 21:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2570	2.5698	19.01	21.67	2.66	49.88	12:28
2	TOC	0.5601	5.6006	21.33	23.92	2.60	49.85	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K1811791-001 doc	0.3154 ppm	0.0560 ppm	17.7400%	2018/12/17 22:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3550	3.5495	19.76	22.38	2.62	49.84	12:28
2	TOC	0.2758	2.7581	19.15	21.78	2.63	49.84	12:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K1811791-002 doc	0.2521 ppm	0.0457 ppm	18.1200%	2018/12/17 23:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2844	2.8445	19.22	21.86	2.64	49.81	12:24
2	TOC	0.2198	2.1983	18.72	21.29	2.57	49.80	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

7	TOC	K1811791-003 doc 2x	1.1525 ppm	0.1778 ppm	15.4300%	2018/12/17 23:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2782	12.7821	26.82	29.31	2.49	49.76	12:26
2	TOC	1.0268	10.2680	24.89	27.47	2.58	49.76	12:26

Dilution: 1:10

Blank Contribution: (TC) 17.0445 (IC) (v1201)

Method: Extended Reaction 021711 (v3)

Calibration: Extended Reaction 021711 (v24)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
8	TOC	K1811791-004 doc 2x	0.9959 ppm	0.0178 ppm	1.7800%	2018/12/18 00:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0085	10.0848	24.75	27.60	2.84	49.73	12:31
2	TOC	0.9834	9.8337	24.56	27.34	2.78	49.73	12:26

Dilution: 1:10

Blank Contribution: (TC) 17.0445 (IC) (v1201)

Method: Extended Reaction 021711 (v3)

Calibration: Extended Reaction 021711 (v24)

Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
9	TOC	K1811791-005 doc 2x	1.1333 ppm	0.0537 ppm	4.7400%	2018/12/18 00:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1713	11.7134	26.00	28.80	2.80	49.71	12:28
2	TOC	1.0953	10.9534	25.42	28.21	2.79	49.73	12:27

Dilution: 1:10

Blank Contribution: (TC) 17.0445 (IC) (v1201)

Method: Extended Reaction 021711 (v3)

Calibration: Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711

From Schedule Version 6

Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	25.0685 ppm (PASS)	0.0000 ppm	0%	2018/12/18 01:07

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.0685	250.6852	210.09	212.95	2.86	49.74	12:33

Completion State: Success - Criteria met.

Success Action: Do Nothing

Method: Extended Reaction 021711 (v3)

Calibration: Extended Reaction 021711 (v24)

STD Conc - Pos -: 50 ppmC

Sample Type: Check Standard --> CCB 021711

From Schedule Version 6

			Concentration			Min / Max				

	Pos	BAT	(ppm)	Dil	Sample ID	(% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.3827 ppm (PASS)	0.0000 ppm	0%	2018/12/18 01:24

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.3827	3.8266	21.37	24.25	2.88	49.70	12:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	10	TOC	K1811791-005 ms/msd doc 2x	18.0421 ppm	0.0816 ppm	0.4500%	2018/12/18 01:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	18.0998	180.9976	155.41	158.12	2.70	49.66	12:29
2	TOC	17.9844	179.8439	154.53	157.47	2.94	49.68	12:20

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	11	TOC	RB	1.2384 ppm	0.0000 ppm	0.0000%	2018/12/18 02:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2384	12.3845	26.51	29.35	2.84	49.67	12:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	12	TOC	K1811791-006 doc 2x	1.0184 ppm	0.1495 ppm	14.6800%	2018/12/18 02:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1241	11.2412	25.64	28.39	2.75	49.65	12:28
2	TOC	0.9127	9.1273	24.02	26.77	2.75	49.65	12:27

Dilution	Blank Contribution	Method	Calibratio
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	13	TOC	K1811791-007 doc 2x	0.8607 ppm	0.0221 ppm	2.5700%	2018/12/18 03:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8764	8.7636	23.74	26.50	2.75	49.66	12:23
2	TOC	0.8451	8.4510	23.50	26.30	2.79	49.63	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K1811791-008 doc 2x	0.9612 ppm	0.2596 ppm	27.0100%	2018/12/18 03:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7776	7.7760	22.99	25.83	2.84	49.65	12:23
2	TOC	1.1448	11.4479	25.80	28.61	2.82	49.65	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K1811791-009 doc 2x	1.0978 ppm	0.3978 ppm	36.2400%	2018/12/18 04:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3791	13.7907	27.59	30.42	2.83	49.62	12:24
2	TOC	0.8165	8.1645	23.29	26.02	2.73	49.60	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K1811791-010 doc 2x	0.8754 ppm	0.1751 ppm	20.0000%	2018/12/18 04:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9992	9.9919	24.68	27.38	2.70	49.62	12:25
2	TOC	0.7516	7.5157	22.79	25.42	2.63	49.63	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K1811791-011 doc 2x	0.6892 ppm	0.0030 ppm	0.4300%	2018/12/18 05:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6913	6.9127	22.33	25.15	2.82	49.62	12:27
2	TOC	0.6871	6.8708	22.30	25.24	2.94	49.64	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC)	Extended Reaction	Extended Reaction

(v1201) 021711 (v3) 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	18	TOC	K1811791-012 doc 2x	0.7555 ppm	0.0784 ppm	10.3800%	2018/12/18 05:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8110	8.1096	23.24	25.97	2.73	49.62	12:28
2	TOC	0.7000	7.0003	22.40	25.09	2.70	49.61	12:27

Dilution: 1:10
Blank Contribution: (TC) 17.0445 (IC) (v1201)
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	19	TOC	RB	0.2535 ppm	0.0595 ppm	23.4600%	2018/12/18 06:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2956	2.9557	19.30	22.06	2.76	49.63	12:22
2	TOC	0.2115	2.1145	18.66	21.35	2.68	49.62	12:26

Dilution: 1:10
Blank Contribution: (TC) 17.0445 (IC) (v1201)
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.6631 ppm (PASS)	0.0000 ppm	0%	2018/12/18 06:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.6631	246.6314	206.99	209.68	2.69	49.65	12:30

Completion State: Success - Criteria met.
Success Action: Do Nothing
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)
STD Conc - Pos B: 50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.1630 ppm (PASS)	0.0000 ppm	0%	2018/12/18 06:58

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.1630	1.6303	19.69	22.46	2.77	49.62	12:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample — From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.1850 ppm	0.0000 ppm	0.0000%	2018/12/18 07:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1850	1.8503	18.46	21.30	2.84	49.62	12:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> LCS ER — From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	2	TOC	21.9000	1:1	[TOC] LCS ER [21.9 ppm]	0 / infinity (NA / NA)	21.0464 ppm (PASS)	0.0000 ppm	0%	2018/12/18 07:31

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
2	TOC	21.9 ppm	1	21.0464	210.4637	179.34	182.04	2.70	49.62	12:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos 2
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	21.9 ppmC

Sample Type: Sample — From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	FB 11/29/18	0.1484 ppm	0.0686 ppm	46.2500%	2018/12/18 07:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1969	1.9694	18.55	21.39	2.84	49.61	12:27
2	TOC	0.0999	0.9987	17.81	20.41	2.60	49.60	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K1811579-001 doc	1.1821 ppm	0.0245 ppm	2.0700%	2018/12/18 08:19

Rep	Base	ppm	µg	Adjusted	NDIR (Abs)	Baseline	Pressure	Run

#	Analysis Type			(Abs)		(Abs)	(psig)	Time
1	TOC	1.1995	11.9946	26.21	28.95	2.74	49.62	12:26
2	TOC	1.1648	11.6480	25.95	28.64	2.69	49.63	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K1811579-001 ms doc	25.8210 ppm	0.0000 ppm	0.0000%	2018/12/18 08:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.8210	258.2097	214.44	217.19	2.76	49.65	12:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	RB	0.2820 ppm	0.0000 ppm	0.0000%	2018/12/18 09:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2820	2.8196	19.20	22.02	2.82	49.65	12:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K1811579-002 doc 10x	5.5622 ppm	0.1603 ppm	2.8800%	2018/12/18 09:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.6755	56.7553	60.43	63.10	2.67	49.66	12:25
2	TOC	5.4488	54.4884	58.70	61.33	2.63	49.76	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	RB	0.1481 ppm	0.0097 ppm	6.5600%	2018/12/18 09:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1549	1.5494	18.23	20.94	2.71	49.83	12:27
2	TOC	0.1412	1.4121	18.12	20.78	2.65	49.87	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◈	27	TOC	K1811723-001.02	1.3077 ppm	0.0621 ppm	4.7500%	2018/12/18 10:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3516	13.5160	27.38	29.94	2.57	49.92	12:25
2	TOC	1.2638	12.6382	26.71	29.34	2.63	49.95	12:26

Dilution: 1:10
Blank Contribution: (TC) 17.0445 (IC) (v1201)
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	28	TOC	K1811723-001.02 ms	25.9544 ppm	0.0000 ppm	0.0000%	2018/12/18 10:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.9544	259.5439	215.46	218.02	2.56	49.97	12:33

Dilution: 1:10
Blank Contribution: (TC) 17.0445 (IC) (v1201)
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.1578 ppm (PASS)	0.0000 ppm	0%	2018/12/18 11:15

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.1578	241.5782	203.13	205.84	2.71	49.99	12:31

Completion State: Success - Criteria met.
Success Action: Do Nothing
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)
STD Conc - Pos B: 50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/18 11:32

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	17.99	20.49	2.50	50.01	12:33

Completion State: Success - Criteria met.
Success Action: Do Nothing
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)
STD Conc - Pos D: 0 ppmC

Sample Type: Sample

From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	29	TOC	K1811723-002.02	1.7234 ppm	0.0179 ppm	1.0400%	2018/12/18 11:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7360	17.3605	30.32	32.93	2.62	50.00	12:27
2	TOC	1.7108	17.1080	30.12	32.92	2.80	50.00	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	30	TOC	K1811723-003.02	1.5303 ppm	0.1283 ppm	8.3800%	2018/12/18 12:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6211	16.2107	29.44	32.15	2.71	49.97	12:27
2	TOC	1.4396	14.3963	28.05	30.61	2.56	49.95	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Sample

From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	31	TOC	K1811888-001.01	1.8398 ppm	0.4145 ppm	22.5300%	2018/12/18 12:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1329	21.3293	33.35	35.99	2.64	49.94	12:28
2	TOC	1.5468	15.4677	28.87	31.52	2.66	49.98	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Sample

From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	32	TOC	K1811888-001.01 ms	24.7758 ppm	0.0000 ppm	0.0000%	2018/12/18 13:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	24.7758	247.7579	206.45	209.06	2.62	49.97	12:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC)	Extended Reaction	Extended Reaction

(v1201)	021711 (v3)	021711 (v24)

Sample Type: Sample — From Schedule Version 10

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	33	TOC	RB	0.1438 ppm	0.0000 ppm	0.0000%	2018/12/18 13:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1438	1.4383	18.14	20.82	2.67	49.98	12:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Sample — From Schedule Version 11

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	34	TOC	K1811888-002.02	3.1600 ppm	0.2234 ppm	7.0700%	2018/12/18 13:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.0020	30.0203	39.99	42.68	2.69	49.98	12:25
2	TOC	3.3179	33.1794	42.41	45.28	2.87	50.02	12:22

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Sample — From Schedule Version 12

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	35	TOC	K1811809-005.14	0.6832 ppm	0.1304 ppm	19.0900%	2018/12/18 14:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7754	7.7538	22.97	25.63	2.66	50.02	12:26
2	TOC	0.5909	5.9094	21.56	24.23	2.67	50.04	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Sample — From Schedule Version 14

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	36	TOC	K1811809-005.14 ms	25.0348 ppm	0.0000 ppm	0.0000%	2018/12/18 15:00

Rep	Base			Adjusted		Baseline	Pressure	Run

#	Analysis Type	ppm	µg	(Abs)	NDIR (Abs)	(Abs)	(psig)	Time
1	TOC	25.0348	250.3480	208.43	211.18	2.75	50.04	12:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	RB	0.2006 ppm	0.0000 ppm	0.0000%	2018/12/18 15:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2006	2.0060	18.58	21.16	2.58	50.06	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	38	TOC	K1811791-001.01	0.0352 ppm	0.0498 ppm	141.4200%	2018/12/18 15:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0704	0.7044	17.58	20.40	2.81	50.08	12:25
2	TOC	0.0000	0.0000	16.18	18.88	2.70	50.10	12:21

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.1479 ppm (PASS)	0.0000 ppm	0%	2018/12/18 16:04

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.1479	241.4788	203.05	205.87	2.82	50.07	12:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/18 16:20

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	17.47	20.06	2.58	50.14	12:30

Completion State: Success - Criteria met.
Success Action: Do Nothing
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)
STD Conc - Pos D: 0 ppmC

Sample Type: Sample — From Schedule Version 14

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	39	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/18 16:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	16.58	19.15	2.57	50.12	12:33

Dilution: 1:10
Blank Contribution: (TC) 17.0445 (IC) (v1201)
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)

Sample Type: Check Standard --> LCS ER — From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	2	TOC	21.9000	1:1	[TOC] LCS ER [21.9 ppm]	0 / infinity (NA / NA)	20.4581 ppm (PASS)	0.0000 ppm	0%	2018/12/18 16:54

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
2	TOC	21.9 ppm	1	20.4581	204.5812	174.84	177.41	2.57	50.13	12:28

Completion State: Success - Criteria met.
Success Action: Do Nothing
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)
STD Conc - Pos 2: 21.9 ppmC

Sample Type: Sample — From Schedule Version 14

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	40	TOC	K1811791-002.01	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/18 17:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	16.38	19.07	2.69	50.15	12:23
2	TOC	0.0000	0.0000	15.63	18.28	2.64	50.14	12:22

Dilution: 1:10
Blank Contribution: (TC) 17.0445 (IC) (v1201)
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	41	TOC	K1811791-003.01 2x	0.5851 ppm	0.1144 ppm	19.5500%	2018/12/18 17:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5042	5.0421	20.90	23.49	2.60	50.15	12:27
2	TOC	0.6660	6.6602	22.14	24.83	2.70	50.18	12:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	42	TOC	K1811791-004.01 2x	0.3073 ppm	0.1328 ppm	43.2200%	2018/12/18 18:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4013	4.0126	20.11	22.83	2.71	50.16	12:29
2	TOC	0.2134	2.1342	18.68	21.29	2.61	50.24	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	43	TOC	K1811791-005.01 2x	0.6815 ppm	0.3393 ppm	49.7900%	2018/12/18 18:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4416	4.4155	20.42	23.02	2.60	50.26	12:28
2	TOC	0.9214	9.2136	24.09	26.68	2.59	50.07	12:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	44	TOC	K1811791-006.01 2x	0.4718 ppm	0.1360 ppm	28.8200%	2018/12/18 19:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5679	5.6791	21.39	24.02	2.64	50.11	12:24
2	TOC	0.3756	3.7562	19.92	22.67	2.75	50.10	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	45	TOC	K1811791-007.01 2x	0.4444 ppm	0.0980 ppm	22.0400%	2018/12/18 19:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5136	5.1363	20.97	23.53	2.56	50.11	12:27

2	TOC	0.3751	3.7510	19.91	22.68	2.77	50.09	12:24

Dilution 1:10 **Blank Contribution** (TC) 17.0445 (IC) (v1201) **Method** Extended Reaction 021711 (v3) **Calibration** Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	46	TOC	K1811791-008.01 2x	0.3106 ppm	0.1878 ppm	60.4500%	2018/12/18 20:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4434	4.4338	20.43	23.21	2.77	50.10	12:25
2	TOC	0.1778	1.7784	18.40	21.08	2.68	50.05	12:27

Dilution 1:10 **Blank Contribution** (TC) 17.0445 (IC) (v1201) **Method** Extended Reaction 021711 (v3) **Calibration** Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	47	TOC	K1811791-009.01 2x	0.2990 ppm	0.1716 ppm	57.3800%	2018/12/18 20:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4204	4.2036	20.26	22.95	2.69	50.02	12:28
2	TOC	0.1777	1.7771	18.40	20.96	2.56	50.06	12:25

Dilution 1:10 **Blank Contribution** (TC) 17.0445 (IC) (v1201) **Method** Extended Reaction 021711 (v3) **Calibration** Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.1409 ppm (PASS)	0.0000 ppm	0%	2018/12/18 21:23

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.1409	241.4095	203.00	205.71	2.71	50.09	12:29

Completion State Success - Criteria met. **Success Action** Do Nothing **Method** Extended Reaction 021711 (v3) **Calibration** Extended Reaction 021711 (v24) **STD Conc - Pos B** 50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/18 21:40

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	18.39	21.12	2.73	50.08	12:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 14

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	48	TOC	K1811791-010.01 2x	0.3448 ppm	0.0718 ppm	20.8200%	2018/12/18 21:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3955	3.9551	20.07	22.98	2.91	50.06	12:24
2	TOC	0.2940	2.9400	19.29	21.88	2.59	50.01	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	49	TOC	K1811791-011.01 2x	0.3018 ppm	0.0422 ppm	13.9700%	2018/12/18 22:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3317	3.3167	19.58	22.18	2.60	49.95	12:27
2	TOC	0.2720	2.7202	19.12	21.88	2.75	49.94	12:22

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	50	TOC	K1811791-012.01 2x	0.6735 ppm	0.2212 ppm	32.8400%	2018/12/18 23:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8299	8.2993	23.39	26.14	2.75	49.86	12:24
2	TOC	0.5172	5.1716	21.00	23.90	2.91	49.88	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	51	TOC	RB	0.1533 ppm	0.1011 ppm	65.9400%	2018/12/18 23:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2248	2.2480	18.76	21.51	2.75	49.87	12:27
2	TOC	0.0818	0.8182	17.67	20.46	2.79	49.84	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	52	TOC	K1811519-001.01	1.8054 ppm	0.1116 ppm	6.1800%	2018/12/19 00:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8844	18.8439	31.45	33.98	2.53	49.83	12:28
2	TOC	1.7265	17.2650	30.24	32.98	2.73	49.80	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	53	TOC	K1811519-001.01 ms	26.8104 ppm	0.0000 ppm	0.0000%	2018/12/19 00:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	26.8104	268.1042	222.00	224.74	2.74	49.80	12:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	54	TOC	RB	0.1106 ppm	0.0000 ppm	0.0000%	2018/12/19 00:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1106	1.1060	17.89	20.42	2.53	49.78	12:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	55	TOC	K1812001-001.01 100x	0.6108 ppm	0.1233 ppm	20.1900%	2018/12/19 01:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6979	6.9794	22.38	24.94	2.56	49.79	12:26
2	TOC	0.5236	5.2357	21.05	23.80	2.75	49.78	12:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	56	TOC	K1812001-001.01 ms 100x	24.7719 ppm	0.0000 ppm	0.0000%	2018/12/19 01:40

Rep	Base	ppm	µg	Adjusted	NDIR (Abs)	Baseline	Pressure	Run

#	Analysis Type			(Abs)		(Abs)	(psig)	Time
1	TOC	24.7719	247.7187	206.42	209.12	2.70	49.76	12:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	57	TOC	RB	0.0400 ppm	0.0000 ppm	0.0000%	2018/12/19 01:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0400	0.3996	17.35	20.05	2.70	49.75	12:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.2359 ppm (PASS)	0.0000 ppm	0%	2018/12/19 02:13

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.2359	242.3592	203.72	206.27	2.55	49.76	12:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/19 02:29

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	17.53	20.07	2.54	49.76	12:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 14

		Analysis			Std. Dev.		

	Pos	Type	Sample ID	Result (ppmC)	(ppmC)	RSD	Start Time
◈	58	TOC	MB4	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/19 02:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	17.04	19.74	2.70	49.74	12:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> LCS ER From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	2	TOC	21.9000	1:1	[TOC] LCS ER [21.9 ppm]	0 / infinity (NA / NA)	20.6962 ppm (PASS)	0.0000 ppm	0%	2018/12/19 03:02

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
2	TOC	21.9 ppm	1	20.6962	206.9619	176.66	179.26	2.60	49.74	12:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos 2
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	21.9 ppmC

Sample Type: Sample From Schedule Version 14

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	59	TOC	K1811625-001.03 2x	4.1158 ppm	0.3420 ppm	8.3100%	2018/12/19 03:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3576	43.5762	50.36	53.04	2.68	49.72	12:24
2	TOC	3.8740	38.7401	46.66	49.27	2.61	49.74	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	60	TOC	K1811625-001.03 ms 2x	29.4511 ppm	0.0000 ppm	0.0000%	2018/12/19 03:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.4511	294.5108	242.19	244.81	2.62	49.72	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis	Sample ID	Result (ppmC)	Std. Dev.	RSD	Start Time

		Type			(ppmC)		
◈	61	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/19 04:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.59	17.19	2.60	49.73	12:25
2	TOC	0.0000	0.0000	14.56	17.21	2.66	49.67	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	62	TOC	K1811625-002.03 4x	3.2755 ppm	0.2014 ppm	6.1500%	2018/12/19 04:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.4179	34.1788	43.17	45.78	2.60	49.70	12:24
2	TOC	3.1331	31.3310	41.00	43.63	2.63	49.71	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	63	TOC	K1811625-003.03 4x	4.6014 ppm	0.3565 ppm	7.7500%	2018/12/19 05:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.8535	48.5352	54.15	56.71	2.56	49.71	12:23
2	TOC	4.3494	43.4938	50.29	52.90	2.61	49.72	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	64	TOC	K1811625-004.03 4x	5.8531 ppm	0.0267 ppm	0.4600%	2018/12/19 05:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.8720	58.7201	61.93	64.43	2.50	49.70	12:27
2	TOC	5.8342	58.3420	61.64	64.27	2.62	49.70	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	65	TOC	K1811625-005.03 10x	0.9256 ppm	0.0280 ppm	3.0300%	2018/12/19 06:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9058	9.0580	23.97	26.61	2.64	49.67	12:27
2	TOC	0.9454	9.4543	24.27	26.76	2.49	49.71	12:28

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	66	TOC	K1811790-001.01 100x	8.6250 ppm	0.1668 ppm	1.9300%	2018/12/19 06:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.5071	85.0705	82.08	84.59	2.51	49.73	12:25
2	TOC	8.7429	87.4290	83.88	86.65	2.76	49.71	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.0171 ppm (PASS)	0.0000 ppm	0%	2018/12/19 07:17

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.0171	240.1707	202.05	204.73	2.68	49.69	12:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/19 07:33

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	15.83	18.43	2.60	49.68	12:27

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 14

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	67	TOC	K1811790-001.01 ms	33.6141 ppm	0.0000 ppm	0.0000%	2018/12/19 07:50

		100x						

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	33.6141	336.1412	274.01	276.60	2.59	49.69	12:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	68	TOC	RB	0.0385 ppm	0.0166 ppm	43.0500%	2018/12/19 08:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0268	0.2675	17.25	19.99	2.74	49.68	12:27
2	TOC	0.0502	0.5017	17.43	20.17	2.74	49.73	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	69	TOC	K1811790-002.01 100x	10.0140 ppm	0.0095 ppm	0.1000%	2018/12/19 08:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.0073	100.0731	93.55	96.17	2.62	49.71	12:26
2	TOC	10.0208	100.2079	93.65	96.31	2.66	49.74	12:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	70	TOC	K1811790-003.01 100x	8.7089 ppm	0.1249 ppm	1.4300%	2018/12/19 09:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.7972	87.9719	84.30	86.86	2.56	49.71	12:25
2	TOC	8.6206	86.2059	82.95	85.82	2.87	49.71	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	71	TOC	RB	0.0331 ppm	0.0056 ppm	17.0500%	2018/12/19 09:4

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0371	0.3708	17.33	20.14	2.81	49.71	12:24
2	TOC	0.0291	0.2911	17.27	19.89	2.62	49.67	12:25

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	72	TOC	K1811783-001.08	0.7160 ppm	0.0833 ppm	11.6300%	2018/12/19 10:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8348	8.3477	23.43	26.16	2.74	49.69	12:26
2	TOC	0.6854	6.8538	22.28	24.95	2.66	49.72	12:26
3	TOC	0.7025	7.0252	22.42	25.10	2.69	49.69	12:25
4	TOC	0.6413	6.4130	21.95	24.69	2.74	49.69	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	73	TOC	K1811783-001.08 ms	25.3987 ppm	0.0000 ppm	0.0000%	2018/12/19 11:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.3987	253.9871	211.21	213.89	2.68	49.83	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	74	TOC	K1811783-002.08	0.7637 ppm	0.1298 ppm	16.9900%	2018/12/19 11:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9324	9.3235	24.17	26.82	2.65	49.89	12:27
2	TOC	0.7805	7.8048	23.01	25.44	2.43	49.93	12:24
3	TOC	0.7193	7.1926	22.54	25.06	2.52	50.00	12:24
4	TOC	0.6229	6.2285	21.81	24.27	2.46	50.07	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	75	TOC	K1811783-003.08	1.5883 ppm	0.0861 ppm	5.4200%	2018/12/19 12:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7060	17.0596	30.09	32.53	2.45	49.95	12:28
2	TOC	1.5974	15.9739	29.26	31.91	2.65	49.93	12:25
3	TOC	1.5366	15.3656	28.79	31.39	2.60	49.94	12:28
4	TOC	1.5133	15.1328	28.61	31.29	2.67	49.92	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC)	Extended Reaction	Extended Reaction

(v1201) 021711 (v3) 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	K1811783-004.08	0.5263 ppm	0.0292 ppm	5.5400%	2018/12/19 13:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5677	5.6765	21.38	23.95	2.56	49.94	12:26
2	TOC	0.5258	5.2579	21.06	23.64	2.58	49.91	12:27
3	TOC	0.5083	5.0826	20.93	23.61	2.68	49.93	12:25
4	TOC	0.5036	5.0355	20.89	23.51	2.62	49.95	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.5560 ppm (PASS)	0.0000 ppm	0%	2018/12/19 14:41

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.5560	245.5601	206.17	208.80	2.63	49.93	12:35

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 14

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/19 14:58

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	17.90	20.59	2.69	49.92	12:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1200	1.2290	0.9990	0.0000	0.0000	0.0000	2018/12/17 11:49	Fusion1 (Fusion1)
v1201	2.2080	1.6200	0.0000	0.0000	0.0000	2018/12/17 20:18	Fusion1 (Fusion1)

Calibrations

Name: Extended Reaction 021711 (TOC)

Version: v24

Ver Creation: 2018/11/26 18:53

Comment:

Operator: Fusion1 (Fusion1)

Basic Analysis Type: TOC

Calibration curve formula: TOC: y = 7.645x + 18.448

r^2 value: TOC: r^2 = 0.99984

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
0.0 ppm	19.1720	0.0000		2018/11/26 17:15
0.50 ppm	23.8410	0.5000		2018/11/26 17:31
1.00 ppm	25.1300	1.0000		2018/11/26 17:47
5.00 ppm	53.5500	5.0000		2018/11/26 18:03
10.0 ppm	95.3860	10.0000		2018/11/26 18:20
25.0 ppm	211.7220	25.0000		2018/11/26 18:36
50.0 ppm	399.8190	50.0000		2018/11/26 18:52

Methods

Name: Extended Reaction 021711 (TOC)

Version: v3

Ver Creation: 2013/02/04 11:44

Comment:

Operator: Gen Chem Lab (Fusion1)

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7

PreSpargeTime	4.00 mins
SystemFlow	500 ml/min

SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	7
SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	7
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off
SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2018/12/19 15:17

StarLIMS Run: 619304, 619305, 619306

Analysis: DOC, TOC

Method: SM 5310 C, 9060

CCV: 11-GEN-05-73F 50 ppm LCS: 11-GEN-05-73C 21.9 ppm

ICAL Date: 11/26/18

ICAL ID: 11-GEN-05-72J

ICS ID: 11-GEN-05-73B

ICS TV: 25.0 ppm ICS % R = 2

Spike ID: 11-GEN-05-70O 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 11-GEN-05-73J

21 % H3PO4: 11-GEN-05-73I

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, Marge, N11314F, 129001F

FILTER ID: 16848878

Analyzed By: CES	Date Analyzed: 12/17/18
Reviewed By:	Date Reviewed: 12/20/18

Work Request # Original ( ) K18/1658, 1888, 2001, 1625, 1728, 1789, 1849, 1831, 2101, 2154, 1928, 2278, 2279, 2272, 1745, 1747, 2416

Tier: II IV III I I IV II II IV IV II IV IV IV IV IV II

Date Analyzed: 12/20/18

Analyst: CLS

Run # TOC 619808, 619810
DOC 620105

Analysis: TOC/DOC

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	yes/(no)
6.	Is the calibration curve correlation coefficient ≥ 0.995?	(yes)/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
9.	Are results for methods blanks all ND?	(yes)/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/(no)/NA
11.	Are all exceptions explained?	(yes)/no/NA
12.	Have all applicable service requests been reviewed?	(yes)/no/NA
13.	Are all samples labeled correctly?	(yes)/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	(yes)/no/NA
15.	Are detection limits and units reported correctly?	(yes)/no/NA
16.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/(no)/NA

COMMENTS:

1789-2, 3, 4, 5, 8, 1849-4, 2416-35 RPD not within acceptance limits. The sample results are less than 5x the MRL.
RA 2154-1, 2154-5 - over diluted.
1831-2, 1745-1 RPD not within acceptance limits - samples contain sediment - non homogeneous.

Final Approved by: _____ Date: 12/26/18

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619808 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1811625-001	Carbon, Total Organic	N/A		Ground Water	4.25 mg/L	10 ml	8.5 mg/L	2	0.2	1.0			12/20/18 16:31	N	I
K1811625-003	Carbon, Total Organic	N/A		Ground Water	4.47 mg/L	10 ml	4.47 mg/L	1	0.07	0.50			12/20/18 17:51	N	I
K1811658-004	Carbon, Total Organic	N/A		Water	3.83 mg/L	10 ml	3.83 mg/L	1	0.07	0.50			12/20/18 13:18	N	II
K1811728-001	Carbon, Total Organic	N/A		Reagent Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 18:54	N	I
K1811728-002	Carbon, Total Organic	N/A		Reagent Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 19:26	N	I
K1811789-002	Carbon, Total Organic	N/A		Ground Water	0.51 mg/L	10 ml	0.51 mg/L	1	0.07	0.50			12/20/18 19:58	N	IV
K1811789-003	Carbon, Total Organic	N/A		Ground Water	0.74 mg/L	10 ml	0.74 mg/L	1	0.07	0.50			12/20/18 22:39	N	IV
K1811789-004	Carbon, Total Organic	N/A		Ground Water	0.16 mg/L	10 ml	0.16 mg/L J	1	0.07	0.50			12/20/18 23:42	N	IV
K1811789-005	Carbon, Total Organic	N/A		Ground Water	0.77 mg/L	10 ml	0.77 mg/L	1	0.07	0.50			12/21/18 00:45	N	IV
K1811789-006	Carbon, Total Organic	N/A		Ground Water	0.55 mg/L	10 ml	0.55 mg/L	1	0.07	0.50			12/21/18 01:48	N	IV
K1811789-008	Carbon, Total Organic	N/A		Ground Water	0.39 mg/L	10 ml	0.39 mg/L J	1	0.07	0.50			12/21/18 02:51	N	IV
K1811831-002	Carbon, Total Organic	N/A		Water	6.74 mg/L	10 ml	6.74 mg/L	1	0.07	0.50			12/21/18 08:25	N	II
K1811849-001	Carbon, Total Organic	N/A		Water	1.24 mg/L	10 ml	1.24 mg/L	1	0.07	0.50			12/21/18 04:25	N	II
K1811849-002	Carbon, Total Organic	N/A		Water	8.22 mg/L	10 ml	32.9 mg/L	4	0.3	2.0			12/21/18 05:46	N	II
K1811849-003	Carbon, Total Organic	N/A		Water	7.74 mg/L	10 ml	31.0 mg/L	4	0.3	2.0			12/21/18 06:18	N	II
K1811849-004	Carbon, Total Organic	N/A		Water	1.09 mg/L	10 ml	1.09 mg/L	1	0.07	0.50			12/21/18 06:50	N	II
K1811849-005	Carbon, Total Organic	N/A		Water	5.34 mg/L	10 ml	5.34 mg/L	1	0.07	0.50			12/21/18 07:22	N	II
K1811888-002	Carbon, Total Organic	N/A		Water	2.74 mg/L	10 ml	2.74 mg/L	1	0.07	0.50			12/20/18 14:22	N	IV
K1812001-001	Carbon, Total Organic	N/A		Water	6.94 mg/L	10 ml	69.4 mg/L	10	0.7	5.0			12/20/18 14:54	N	IV
KQ1818705-01	Carbon, Total Organic	DUP	K1811658-004	Water	3.91 mg/L	10 ml	3.91 mg/L	1	0.07	0.50		2	12/20/18 13:18	N	II
KQ1818705-02	Carbon, Total Organic	DUP	K1811888-002	Water	2.73 mg/L	10 ml	2.73 mg/L	1	0.07	0.50		<1	12/20/18 14:22	N	IV
KQ1818705-03	Carbon, Total Organic	MS	K1812001-001	Water	31.62 mg/L	10 ml	316 mg/L	10	0.7	5.0	99		12/20/18 15:25	N	IV
KQ1818705-04	Carbon, Total Organic	DUP	K1812001-001	Water	6.88 mg/L	10 ml	68.8 mg/L	10	0.7	5.0		<1	12/20/18 14:54	N	IV
KQ1818705-05	Carbon, Total Organic	MS	K1811625-001	Ground Water	29.15 mg/L	10 ml	58.3 mg/L	2	0.2	1.0	100		12/20/18 17:03	N	I
KQ1818705-06	Carbon, Total Organic	DUP	K1811625-001	Ground Water	3.84 mg/L	10 ml	7.7 mg/L	2	0.2	1.0		10	12/20/18 16:31	N	I
KQ1818705-07	Carbon, Total Organic	DUP	K1811625-003	Ground Water	4.23 mg/L	10 ml	4.23 mg/L	1	0.07	0.50		6	12/20/18 17:51	N	I
KQ1818705-08	Carbon, Total Organic	DUP	K1811728-001	Reagent Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50		NC	12/20/18 18:54	N	I
KQ1818705-09	Carbon, Total Organic	DUP	K1811728-002	Reagent Water	0.80 mg/L	10 ml	0.80 mg/L	1	0.07	0.50		NC	12/20/18 19:26	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619808 **Method/Testcode:** 9060/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1818705-10	Carbon, Total Organic	MS	K1811789-002	Ground Water	25.21 mg/L	10 ml	25.2 mg/L	1	0.07	0.50	99		12/20/18 21:01	N	IV
KQ1818705-11	Carbon, Total Organic	DUP	K1811789-002	Ground Water	0.26 mg/L	10 ml	0.26 mg/L J	1	0.07	0.50		66*	12/20/18 19:58	N	IV
KQ1818705-12	Carbon, Total Organic	TRP	K1811789-002	Ground Water	0.22 mg/L	10 ml	0.22 mg/L J	1	0.07	0.50		48*	12/20/18 19:58	N	IV
KQ1818705-13	Carbon, Total Organic	QUAD	K1811789-002	Ground Water	0.23 mg/L	10 ml	0.23 mg/L J	1	0.07	0.50		45*	12/20/18 19:58	N	IV
KQ1818705-14	Carbon, Total Organic	DUP	K1811789-003	Ground Water	0.60 mg/L	10 ml	0.60 mg/L	1	0.07	0.50		21*	12/20/18 22:39	N	IV
KQ1818705-15	Carbon, Total Organic	TRP	K1811789-003	Ground Water	0.58 mg/L	10 ml	0.58 mg/L	1	0.07	0.50		14	12/20/18 22:39	N	IV
KQ1818705-16	Carbon, Total Organic	QUAD	K1811789-003	Ground Water	0.52 mg/L	10 ml	0.52 mg/L	1	0.07	0.50		16	12/20/18 22:39	N	IV
KQ1818705-17	Carbon, Total Organic	DUP	K1811789-004	Ground Water	1.01 mg/L	10 ml	1.01 mg/L	1	0.07	0.50		146*	12/20/18 23:42	N	IV
KQ1818705-18	Carbon, Total Organic	TRP	K1811789-004	Ground Water	0.19 mg/L	10 ml	0.19 mg/L J	1	0.07	0.50		106*	12/20/18 23:42	N	IV
KQ1818705-19	Carbon, Total Organic	QUAD	K1811789-004	Ground Water	0.07 mg/L	10 ml	0.07 mg/L J	1	0.07	0.50		122*	12/20/18 23:42	N	IV
KQ1818705-20	Carbon, Total Organic	DUP	K1811789-005	Ground Water	0.58 mg/L	10 ml	0.58 mg/L	1	0.07	0.50		27*	12/21/18 00:45	N	IV
KQ1818705-21	Carbon, Total Organic	TRP	K1811789-005	Ground Water	0.57 mg/L	10 ml	0.57 mg/L	1	0.07	0.50		17	12/21/18 00:45	N	IV
KQ1818705-22	Carbon, Total Organic	QUAD	K1811789-005	Ground Water	0.61 mg/L	10 ml	0.61 mg/L	1	0.07	0.50		14	12/21/18 00:45	N	IV
KQ1818705-23	Carbon, Total Organic	DUP	K1811789-006	Ground Water	0.53 mg/L	10 ml	0.53 mg/L	1	0.07	0.50		3	12/21/18 01:48	N	IV
KQ1818705-24	Carbon, Total Organic	TRP	K1811789-006	Ground Water	0.50 mg/L	10 ml	0.50 mg/L	1	0.07	0.50		5	12/21/18 01:48	N	IV
KQ1818705-25	Carbon, Total Organic	QUAD	K1811789-006	Ground Water	0.54 mg/L	10 ml	0.54 mg/L	1	0.07	0.50		4	12/21/18 01:48	N	IV
KQ1818705-26	Carbon, Total Organic	DUP	K1811789-008	Ground Water	0.34 mg/L	10 ml	0.34 mg/L J	1	0.07	0.50		16	12/21/18 02:51	N	IV
KQ1818705-27	Carbon, Total Organic	TRP	K1811789-008	Ground Water	0.20 mg/L	10 ml	0.20 mg/L J	1	0.07	0.50		31*	12/21/18 02:51	N	IV
KQ1818705-28	Carbon, Total Organic	QUAD	K1811789-008	Ground Water	0.26 mg/L	10 ml	0.26 mg/L J	1	0.07	0.50		28*	12/21/18 02:51	N	IV
KQ1818705-29	Carbon, Total Organic	MS	K1811849-001	Water	25.43 mg/L	10 ml	25.4 mg/L	1	0.07	0.50	97		12/21/18 04:57	N	II
KQ1818705-30	Carbon, Total Organic	DUP	K1811849-001	Water	1.25 mg/L	10 ml	1.25 mg/L	1	0.07	0.50		1	12/21/18 04:25	N	II
KQ1818705-31	Carbon, Total Organic	DUP	K1811849-002	Water	8.05 mg/L	10 ml	32.2 mg/L	4	0.3	2.0		2	12/21/18 05:46	N	II
KQ1818705-32	Carbon, Total Organic	DUP	K1811849-003	Water	7.59 mg/L	10 ml	30.3 mg/L	4	0.3	2.0		2	12/21/18 06:18	N	II
KQ1818705-33	Carbon, Total Organic	DUP	K1811849-004	Water	0.86 mg/L	10 ml	0.86 mg/L	1	0.07	0.50		24*	12/21/18 06:50	N	II
KQ1818705-34	Carbon, Total Organic	DUP	K1811849-005	Water	5.16 mg/L	10 ml	5.16 mg/L	1	0.07	0.50		3	12/21/18 07:22	N	II
KQ1818705-35	Carbon, Total Organic	MS	K1811831-002	Water	31.00 mg/L	10 ml	31.0 mg/L	1	0.07	0.50	97		12/21/18 08:57	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619808 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1818705-36	Carbon, Total Organic	DUP	K1811831-002	Water	6.02 mg/L	10 ml	6.02 mg/L	1	0.07	0.50		11*	12/21/18 08:25	N	II
KQ1818705-37	Carbon, Total Organic	MB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 12:29	N	II
KQ1818705-37	Carbon, Total Organic	MB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 12:29	N	II
KQ1818705-38	Carbon, Total Organic	LCS		Water	20.64 mg/L	10 ml	20.6 mg/L	1	0.07	0.50	94		12/20/18 12:46	N	II
KQ1818705-38	Carbon, Total Organic	LCS		Water	20.64 mg/L	10 ml	20.6 mg/L	1	0.07	0.50	94		12/20/18 12:46	N	II
KQ1818705-39	Carbon, Total Organic	MB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 22:06	N	II
KQ1818705-39	Carbon, Total Organic	MB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 22:06	N	II
KQ1818705-40	Carbon, Total Organic	LCS		Water	20.62 mg/L	10 ml	20.6 mg/L	1	0.07	0.50	94		12/20/18 22:23	N	II
KQ1818705-40	Carbon, Total Organic	LCS		Water	20.62 mg/L	10 ml	20.6 mg/L	1	0.07	0.50	94		12/20/18 22:23	N	II
KQ1818705-41	Carbon, Total Organic	CCV		Water	24.08 mg/L	10 ml	24.1 mg/L	1			96		12/20/18 11:56	N	II
KQ1818705-41	Carbon, Total Organic	CCV		Water	24.08 mg/L	10 ml	24.1 mg/L	1			96		12/20/18 11:56	N	II
KQ1818705-42	Carbon, Total Organic	CCV		Water	24.01 mg/L	10 ml	24.0 mg/L	1			96		12/20/18 15:58	N	II
KQ1818705-42	Carbon, Total Organic	CCV		Water	24.01 mg/L	10 ml	24.0 mg/L	1			96		12/20/18 15:58	N	II
KQ1818705-43	Carbon, Total Organic	CCV		Water	24.07 mg/L	10 ml	24.1 mg/L	1			96		12/20/18 21:33	N	II
KQ1818705-43	Carbon, Total Organic	CCV		Water	24.07 mg/L	10 ml	24.1 mg/L	1			96		12/20/18 21:33	N	II
KQ1818705-44	Carbon, Total Organic	CCV		Water	24.26 mg/L	10 ml	24.3 mg/L	1			97		12/21/18 05:13	N	II
KQ1818705-44	Carbon, Total Organic	CCV		Water	24.26 mg/L	10 ml	24.3 mg/L	1			97		12/21/18 05:13	N	II
KQ1818705-45	Carbon, Total Organic	CCV		Water	24.05 mg/L	10 ml	24.0 mg/L	1			96		12/21/18 10:33	N	II
KQ1818705-45	Carbon, Total Organic	CCV		Water	24.05 mg/L	10 ml	24.0 mg/L	1			96		12/21/18 10:33	N	II
KQ1818705-46	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 12:13	N	II
KQ1818705-46	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 12:13	N	II
KQ1818705-47	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 16:14	N	II
KQ1818705-47	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 16:14	N	II
KQ1818705-48	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 21:50	N	II
KQ1818705-48	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/20/18 21:50	N	II
KQ1818705-49	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 05:30	N	II
KQ1818705-49	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 05:30	N	II
KQ1818705-50	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 10:49	N	II
KQ1818705-50	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 10:49	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619810 **Method/Testcode:** 415.1/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1811745-001	Carbon, Total Organic	N/A		Water	1.55 mg/L	10 ml	1.55 mg/L	1	0.07	0.50			12/22/18 05:13	N	IV
K1811747-001	Carbon, Total Organic	N/A		Water	4.71 mg/L	10 ml	4.71 mg/L	1	0.07	0.50			12/22/18 06:48	N	IV
K1811928-001	Carbon, Total Organic	N/A		Drinking Water	0.10 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 17:14	N	II
K1812101-001	Carbon, Total Organic	N/A		Water	16.05 mg/L	10 ml	16.0 mg/L	1	0.07	0.50			12/21/18 09:45	N	IV
K1812154-001	Carbon, Total Organic	N/A		Ground Water	0.19 mg/L	10 ml	10 mg/L J	50	4	25			12/21/18 11:39	N	IV
K1812154-002	Carbon, Total Organic	N/A		Ground Water	1.67 mg/L	10 ml	1.67 mg/L	1	0.07	0.50			12/21/18 12:59	N	IV
K1812154-003	Carbon, Total Organic	N/A		Ground Water	2.17 mg/L	10 ml	2.17 mg/L	1	0.07	0.50			12/21/18 14:02	N	IV
K1812154-004	Carbon, Total Organic	N/A		Ground Water	17.57 mg/L	10 ml	879 mg/L	50	4	25			12/21/18 14:34	N	IV
K1812154-005	Carbon, Total Organic	N/A		Ground Water	0.16 mg/L	10 ml	3 mg/L J	20	2	10			12/21/18 16:10	N	IV
K1812272-001	Carbon, Total Organic	N/A		Ground Water	10.54 mg/L	10 ml	42.2 mg/L	4	0.3	2.0			12/22/18 00:42	N	IV
K1812272-002	Carbon, Total Organic	N/A		Ground Water	3.92 mg/L	10 ml	392 mg/L	100	7	50			12/22/18 03:06	N	IV
K1812272-003	Carbon, Total Organic	N/A		Ground Water	3.97 mg/L	10 ml	3.97 mg/L	1	0.07	0.50			12/22/18 03:38	N	IV
K1812272-004	Carbon, Total Organic	N/A		Ground Water	4.03 mg/L	10 ml	4.03 mg/L	1	0.07	0.50			12/22/18 04:09	N	IV
K1812278-001	Carbon, Total Organic	N/A		Ground Water	13.71 mg/L	10 ml	685 mg/L	50	4	25			12/21/18 18:19	N	IV
K1812278-002	Carbon, Total Organic	N/A		Ground Water	14.02 mg/L	10 ml	701 mg/L	50	4	25			12/21/18 22:19	N	IV
K1812278-003	Carbon, Total Organic	N/A		Ground Water	1.13 mg/L	10 ml	4.5 mg/L	4	0.3	2.0			12/21/18 20:41	N	IV
K1812279-001	Carbon, Total Organic	N/A		Water	24.72 mg/L	10 ml	24.7 mg/L	1	0.07	0.50			12/21/18 23:22	N	IV
KQ1818709-01	Carbon, Total Organic	MS	K1812101-001	Water	40.70 mg/L	10 ml	40.7 mg/L	1	0.07	0.50	99		12/21/18 10:16	N	IV
KQ1818709-02	Carbon, Total Organic	DUP	K1812101-001	Water	16.03 mg/L	10 ml	16.0 mg/L	1	0.07	0.50		<1	12/21/18 09:45	N	IV
KQ1818709-03	Carbon, Total Organic	MS	K1812154-001	Ground Water	24.33 mg/L	10 ml	1220 mg/L	50	4	25	97		12/21/18 12:11	N	IV
KQ1818709-04	Carbon, Total Organic	DUP	K1812154-001	Ground Water	0.00 mg/L	10 ml	25 mg/L U	50	4	25		NC	12/21/18 11:39	N	IV
KQ1818709-05	Carbon, Total Organic	DUP	K1812154-002	Ground Water	1.52 mg/L	10 ml	1.52 mg/L	1	0.07	0.50		9	12/21/18 12:59	N	IV
KQ1818709-06	Carbon, Total Organic	DUP	K1812154-003	Ground Water	2.18 mg/L	10 ml	2.18 mg/L	1	0.07	0.50		<1	12/21/18 14:02	N	IV
KQ1818709-07	Carbon, Total Organic	DUP	K1812154-004	Ground Water	17.56 mg/L	10 ml	878 mg/L	50	4	25		<1	12/21/18 14:34	N	IV
KQ1818709-08	Carbon, Total Organic	DUP	K1812154-005	Ground Water	0.00 mg/L	10 ml	10 mg/L U	20	2	10		NC	12/21/18 16:10	N	IV
KQ1818709-09	Carbon, Total Organic	MS	K1811928-001	Drinking Water	24.48 mg/L	10 ml	24.5 mg/L	1	0.07	0.50	98		12/21/18 17:46	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619810 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1818709-10	Carbon, Total Organic	DUP	K1811928-001	Drinking Water	0.01 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50		NC	12/21/18 17:14	N	II
KQ1818709-11	Carbon, Total Organic	MS	K1812278-001	Ground Water	38.12 mg/L	10 ml	1910 mg/L	50	4	25	98		12/21/18 19:22	N	IV
KQ1818709-12	Carbon, Total Organic	DUP	K1812278-001	Ground Water	13.53 mg/L	10 ml	677 mg/L	50	4	25		1	12/21/18 18:19	N	IV
KQ1818709-13	Carbon, Total Organic	DUP	K1812278-002	Ground Water	13.66 mg/L	10 ml	683 mg/L	50	4	25		3	12/21/18 22:19	N	IV
KQ1818709-14	Carbon, Total Organic	DUP	K1812278-003	Ground Water	1.15 mg/L	10 ml	4.6 mg/L	4	0.3	2.0		1	12/21/18 20:41	N	IV
KQ1818709-15	Carbon, Total Organic	MS	K1812279-001	Water	48.60 mg/L	10 ml	48.6 mg/L	1	0.07	0.50	96		12/21/18 23:54	N	IV
KQ1818709-16	Carbon, Total Organic	DUP	K1812279-001	Water	24.96 mg/L	10 ml	25.0 mg/L	1	0.07	0.50		<1	12/21/18 23:22	N	IV
KQ1818709-17	Carbon, Total Organic	MS	K1812272-001	Ground Water	36.01 mg/L	10 ml	144 mg/L	4	0.3	2.0	102		12/22/18 01:14	N	IV
KQ1818709-18	Carbon, Total Organic	DUP	K1812272-001	Ground Water	10.47 mg/L	10 ml	41.9 mg/L	4	0.3	2.0		<1	12/22/18 00:42	N	IV
KQ1818709-19	Carbon, Total Organic	DUP	K1812272-002	Ground Water	3.78 mg/L	10 ml	378 mg/L	100	7	50		4	12/22/18 03:06	N	IV
KQ1818709-20	Carbon, Total Organic	DUP	K1812272-003	Ground Water	3.95 mg/L	10 ml	3.95 mg/L	1	0.07	0.50		<1	12/22/18 03:38	N	IV
KQ1818709-21	Carbon, Total Organic	DUP	K1812272-004	Ground Water	3.99 mg/L	10 ml	3.99 mg/L	1	0.07	0.50		1	12/22/18 04:09	N	IV
KQ1818709-23	Carbon, Total Organic	DUP	K1811745-001	Water	2.34 mg/L	10 ml	2.34 mg/L	1	0.07	0.50		41*	12/22/18 05:13	N	IV
KQ1818709-24	Carbon, Total Organic	MS	K1811747-001	Water	29.30 mg/L	10 ml	29.3 mg/L	1	0.07	0.50	98		12/22/18 07:20	N	IV
KQ1818709-25	Carbon, Total Organic	DUP	K1811747-001	Water	4.71 mg/L	10 ml	4.71 mg/L	1	0.07	0.50		<1	12/22/18 06:48	N	IV
KQ1818709-26	Carbon, Total Organic	MB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 11:06	N	IV
KQ1818709-26	Carbon, Total Organic	MB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 11:06	N	IV
KQ1818709-27	Carbon, Total Organic	LCS		Water	20.26 mg/L	10 ml	20.3 mg/L	1	0.07	0.50	93		12/21/18 11:22	N	IV
KQ1818709-27	Carbon, Total Organic	LCS		Water	20.26 mg/L	10 ml	20.3 mg/L	1	0.07	0.50	93		12/21/18 11:22	N	IV
KQ1818709-28	Carbon, Total Organic	CCV		Water	24.26 mg/L	10 ml	24.3 mg/L	1			97		12/21/18 05:13	N	IV
KQ1818709-28	Carbon, Total Organic	CCV		Water	24.26 mg/L	10 ml	24.3 mg/L	1			97		12/21/18 05:13	N	IV
KQ1818709-29	Carbon, Total Organic	CCV		Water	24.05 mg/L	10 ml	24.0 mg/L	1			96		12/21/18 10:33	N	IV
KQ1818709-29	Carbon, Total Organic	CCV		Water	24.05 mg/L	10 ml	24.0 mg/L	1			96		12/21/18 10:33	N	IV
KQ1818709-30	Carbon, Total Organic	CCV		Water	23.72 mg/L	10 ml	23.7 mg/L	1			95		12/21/18 15:37	N	IV
KQ1818709-30	Carbon, Total Organic	CCV		Water	23.72 mg/L	10 ml	23.7 mg/L	1			95		12/21/18 15:37	N	IV
KQ1818709-31	Carbon, Total Organic	CCV		Water	23.55 mg/L	10 ml	23.6 mg/L	1			94		12/21/18 21:13	N	IV
KQ1818709-31	Carbon, Total Organic	CCV		Water	23.55 mg/L	10 ml	23.6 mg/L	1			94		12/21/18 21:13	N	IV
KQ1818709-32	Carbon, Total Organic	CCV		Water	23.63 mg/L	10 ml	23.6 mg/L	1			94		12/22/18 02:33	N	IV
KQ1818709-32	Carbon, Total Organic	CCV		Water	23.63 mg/L	10 ml	23.6 mg/L	1			94		12/22/18 02:33	N	IV
KQ1818709-33	Carbon, Total Organic	CCV		Water	23.86 mg/L	10 ml	23.9 mg/L	1			96		12/22/18 07:36	N	IV
KQ1818709-33	Carbon, Total Organic	CCV		Water	23.86 mg/L	10 ml	23.9 mg/L	1			96		12/22/18 07:36	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 619810 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1818709-34	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 05:30	N	IV
KQ1818709-34	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 05:30	N	IV
KQ1818709-35	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 10:49	N	IV
KQ1818709-35	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 10:49	N	IV
KQ1818709-36	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 15:54	N	IV
KQ1818709-36	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 15:54	N	IV
KQ1818709-37	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 21:29	N	IV
KQ1818709-37	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 21:29	N	IV
KQ1818709-38	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/22/18 02:49	N	IV
KQ1818709-38	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/22/18 02:49	N	IV
KQ1818709-39	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/22/18 07:53	N	IV
KQ1818709-39	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/22/18 07:53	N	IV
KQ1818709-40	Carbon, Total Organic	MS	K1811745-001	Water	26.18 mg/L	10 ml	26.2 mg/L	1	0.07	0.50	99		12/22/18 05:45	N	IV
KQ1818709-41	Carbon, Total Organic	DMS	K1811745-001	Water	25.64 mg/L	10 ml	25.6 mg/L	1	0.07	0.50	96		12/22/18 05:45	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** CSETHE **Analysis Lot:** 620105 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1812416-035	Carbon, Dissolved Organic (DOC)	N/A		Water	1.24 mg/L	10 ml	1.24 mg/L	1	0.07	0.50			12/22/18 08:10	N	II
KQ1818712-01	Carbon, Dissolved Organic (DOC)	MS	K1812416-035	Water	24.33 mg/L	10 ml	24.3 mg/L	1	0.07	0.50	92		12/22/18 08:41	N	II
KQ1818712-02	Carbon, Dissolved Organic (DOC)	DUP	K1812416-035	Water	1.48 mg/L	10 ml	1.48 mg/L	1	0.07	0.50		18*	12/22/18 08:10	N	II
KQ1818712-03	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 21:46	N	II
KQ1818712-04	Carbon, Dissolved Organic (DOC)	LCS		Water	19.23 mg/L	10 ml	19.2 mg/L	1	0.07	0.50	88		12/21/18 22:02	N	II
KQ1818712-05	Carbon, Dissolved Organic (DOC)	CCV		Water	23.55 mg/L	10 ml	23.6 mg/L	1			94		12/21/18 21:13	N	II
KQ1818712-06	Carbon, Dissolved Organic (DOC)	CCV		Water	23.63 mg/L	10 ml	23.6 mg/L	1			94		12/22/18 02:33	N	II
KQ1818712-07	Carbon, Dissolved Organic (DOC)	CCV		Water	23.86 mg/L	10 ml	23.9 mg/L	1			96		12/22/18 07:36	N	II
KQ1818712-08	Carbon, Dissolved Organic (DOC)	CCV		Water	23.93 mg/L	10 ml	23.9 mg/L	1			96		12/22/18 08:58	N	II
KQ1818712-09	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/21/18 21:29	N	II
KQ1818712-10	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/22/18 02:49	N	II
KQ1818712-11	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/22/18 07:53	N	II
KQ1818712-12	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 ml	0.50 mg/L U	1	0.07	0.50			12/22/18 09:14	N	II

CES 12/26/18

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StarLIMS Run: 619808, 619810, 620105

Analysis: TOC

Method: SM 5310 C, 9060, 415.1

CCV: 11-GEN-05-73F 50 ppm LCS: 11-GEN-05-73C 21.9 ppm

ICAL Date: 11/26/18

ICAL ID: 11-GEN-05-72J

ICS ID: 11-GEN-05-73B

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 11-GEN-05-70O 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 11-GEN-05-73J

21 % H3PO4: 11-GEN-05-73I

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, Marge, 129001F, N11314F

FILTER ID: NA

Analyzed By: CES	Date Analyzed: 12/20/18
Reviewed By:	Date Reviewed: 12/26/18

TOC: 619808, 619810
DOC: 620105

Schedule: 12202018

Version: 9
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2018/12/21 10:33 - Friday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps
(Clean)	Clean	Clean		1
D	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
(Clean)	Clean	Clean		1
D	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
(Clean)	Clean	Clean		1
D	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
(Blank)	Blank	Reagent/Acid Blank		1
D	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
1	Sample	MB1	Extended Reaction 021711 (Extended Reaction 021711)	1
2	Check Standard	[TOC] LCS ER [21.9 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
3	Sample	ICS	Extended Reaction 021711 (Extended Reaction 021711)	1
4	Sample	K1811658-004.01	Extended Reaction 021711 (Extended Reaction 021711)	2
5	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
6	Sample	K1811888-002.01	Extended Reaction 021711 (Extended Reaction 021711)	2
7	Sample	K1812001-001.01 10x	Extended Reaction 021711 (Extended Reaction 021711)	2
8	Sample	K1812001-001.01 ms 10x	Extended Reaction 021711 (Extended Reaction 021711)	1
9	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
10	Sample	K1811625-001.03 2x	Extended Reaction 021711 (Extended Reaction 021711)	2
11	Sample	K1811625-001.03 ms 2x	Extended Reaction 021711 (Extended Reaction 021711)	1
12	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
13	Sample	K1811625-003.03	Extended Reaction 021711 (Extended Reaction 021711)	2
14	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
15	Sample	K1811728-001	Extended Reaction 021711 (Extended Reaction 021711)	2
16	Sample	K1811728-002	Extended Reaction 021711 (Extended Reaction 021711)	2
17	Sample	K1811789-002.08	Extended Reaction 021711 (Extended Reaction 021711)	4
18	Sample	K1811789-002.08 ms	Extended Reaction 021711 (Extended Reaction 021711)	1
19	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
20	Sample	MB2	Extended Reaction 021711 (Extended Reaction 021711)	1
2	Check Standard	[TOC] LCS ER [21.9 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
21	Sample	K1811789-003.08	Extended Reaction 021711 (Extended Reaction 021711)	4
22	Sample	K1811789-004.08	Extended Reaction 021711 (Extended Reaction 021711)	4
23	Sample	K1811789-005.08	Extended Reaction 021711 (Extended Reaction 021711)	4
24	Sample	K1811789-006.08	Extended Reaction 021711 (Extended Reaction 021711)	4
25	Sample	K1811789-008.08	Extended Reaction 021711 (Extended Reaction 021711)	4
26	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
27	Sample	K1811849-001.04	Extended Reaction 021711 (Extended Reaction 021711)	2
28	Sample	K1811849-001.04 ms	Extended Reaction 021711 (Extended Reaction 021711)	1
B	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
D	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
29	Sample	K1811849-002.04 4x	Extended Reaction 021711 (Extended Reaction 021711)	2
30	Sample	K1811849-003.04 4x	Extended Reaction 021711 (Extended Reaction 021711)	2
31	Sample	K1811849-004.04	Extended Reaction 021711 (Extended Reaction 021711)	2
32	Sample	K1811849-005.04	Extended Reaction 021711 (Extended Reaction 021711)	2
33	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
34	Sample	K1811831-002.01	Extended Reaction 021711 (Extended Reaction 021711)	2
35	Sample	K1811831-002.01 ms	Extended Reaction 021711 (Extended Reaction 021711)	1
36	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	2
37	Sample	K1812101-001.02	Extended Reaction 021711 (Extended Reaction 021711)	2

Schedule: 12202018

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Page
38	Sample	K181210-001.02 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
39	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
40	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
41	Sample	K181210-001.03	Extended Reaction 021711 (Extended Reaction 021711)	1
42	Sample	K181210-001.04	Extended Reaction 021711 (Extended Reaction 021711)	1
43	Sample	K181210-002.01	Extended Reaction 021711 (Extended Reaction 021711)	1
44	Sample	K181210-002.02	Extended Reaction 021711 (Extended Reaction 021711)	1
45	Sample	K181210-002.03	Extended Reaction 021711 (Extended Reaction 021711)	1
46	Sample	K181210-002.04 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
47	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
48	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
49	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
50	Sample	K181210-003.01 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
51	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
52	Sample	K181210-003.02 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
53	Sample	K181210-003.03 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
54	Sample	K181210-003.04 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
55	Sample	K181210-004.01 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
56	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
57	Sample	K181210-004.02 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
58	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
59	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
60	Sample	K181210-004.03 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
61	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
62	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
63	Sample	K181210-004.04 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
64	Sample	K181210-005.01 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
65	Sample	K181210-005.02 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
66	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
67	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
68	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
69	Sample	K181210-005.03 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
70	Sample	K181210-005.04 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
71	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
72	Sample	K181210-006.01 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
73	Sample	RB	Extended Reaction 021711 (Extended Reaction 021711)	1
74	Sample	K181210-006.02 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
75	Sample	K181210-006.03 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
76	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
77	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
78	Sample	K181210-006.04 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
79	Sample	K181210-007.01 rns	Extended Reaction 021711 (Extended Reaction 021711)	1
80	Check Standard	[TOC] CCV 021711 [25 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1
81	Check Standard	[TOC] CCB 021711 [0.0 ppm]	Extended Reaction 021711 (Extended Reaction 021711)	1

Fusion Report - 12202018
Thursday, December 20, 2018 08:21 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2018/12/26 11:38 - Wednesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	12202018	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v1) Fusion1 (Fusion1) (v2) Fusion1 (Fusion1) (v3) Fusion1 (Fusion1) (v5) Fusion1 (Fusion1) (v6) Fusion1 (Fusion1) (v7) Fusion1 (Fusion1) (v8) Fusion1 (Fusion1) (v9)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◈	(clean)		Clean	2018/12/20 08:21

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.04	16.47	4.43	49.47	05:34
2	TC Clean	8.60	11.29	2.69	49.71	07:15
3	TC Clean	2.48	5.22	2.74	49.77	07:01
4	TC Clean	1.83	4.57	2.75	49.73	07:03

Sample Type: Sample — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	D	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/20 08:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	13.50	16.00	2.50	49.87	12:34

Dilution **Blank Contribution** **Method** **Calibration**

1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2018/12/20 09:09

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	10.06	13.45	3.39	49.37	07:59
2	TC Clean	5.19	7.86	2.67	49.71	07:17
3	TC Clean	3.04	5.66	2.63	49.76	07:01
4	TC Clean	1.91	4.53	2.62	49.76	07:03

Sample Type: Sample — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/20 09:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	13.36	15.83	2.47	49.86	12:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2018/12/20 10:00

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	10.15	13.24	3.09	49.44	08:00
2	TC Clean	4.75	7.44	2.69	49.80	07:17
3	TC Clean	1.82	4.43	2.62	49.83	07:02
4	TC Clean	1.43	4.08	2.65	49.84	07:02

Sample Type: Sample — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
				367 of 395			

◈	D	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/20 10:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	13.13	15.68	2.54	49.91	12:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 17.0445 (IC) (v1201)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Blank (Creating v1202) From Schedule Version 3

	Pos	Analysis Type	Sample ID	Start Time
◈	(blank)		Reagent/Acid Blank	2018/12/20 10:50

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	10.18	13.18	3.00	49.42	07:58
2	TC Clean	4.60	7.15	2.55	49.76	07:16
3	TC Clean	1.96	4.47	2.51	49.84	07:03
4	TC Clean	1.49	4.08	2.59	49.85	07:01
5	Reagent Blank	5.37	8.01	2.63	49.80	08:12
6	Acid Blank	1.31	3.85	2.54	49.49	05:40

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	D	TOC	RB	0.7100 ppm	0.0000 ppm	0.0000%	2018/12/20 11:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7100	7.1003	22.39	25.22	2.83	49.95	12:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.0779 ppm (PASS)	0.0000 ppm	0%	2018/12/20 11:56

	Base

Pos	Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.0779	240.7790	202.52	205.21	2.70	49.94	12:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/20 12:13

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	17.20	19.92	2.72	49.96	12:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/20 12:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	16.53	19.20	2.67	49.98	12:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> LCS ER From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	2	TOC	21.9000	1:1	[TOC] LCS ER [21.9 ppm]	0 / infinity (NA / NA)	20.6415 ppm (PASS)	0.0000 ppm	0%	2018/12/20 12:46

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
2	TOC	21.9 ppm	1	20.6415	206.4151	176.24	178.89	2.65	49.99	12:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos 2
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	21.9 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	3	TOC	ICS	0.2428 ppm	0.0000 ppm	0.0000%	2018/12/20 13:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2428	2.4278	18.82	21.60	2.78	50.00	12:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	4	TOC	K1811658-004.01	3.8703 ppm	0.0531 ppm	1.3700%	2018/12/20 13:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.8327	38.3274	46.26	49.03	2.77	49.98	12:27
2	TOC	3.9078	39.0782	46.84	49.59	2.76	50.00	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	RB	0.0004 ppm	0.0006 ppm	141.4200%	2018/12/20 13:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0008	0.0078	16.97	19.66	2.69	50.05	12:27
2	TOC	0.0000	0.0000	15.66	18.25	2.59	50.03	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K1811888-002.01	2.7312 ppm	0.0057 ppm	0.2100%	2018/12/20 14:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.7352	27.3524	37.87	40.73	2.86	50.02	12:28
2	TOC	2.7271	27.2713	37.81	40.62	2.81	50.08	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	K1812001-001.01 10x	6.9117 ppm	0.0401 ppm	0.5800%	2018/12/20 14:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	6.9401	69.4013	70.02	72.80	2.79	50.07	12:25
2	TOC	6.8834	68.8336	69.58	72.19	2.61	50.09	12:22

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	K1812001-001.01 ms 10x	31.6218 ppm	0.0000 ppm	0.0000%	2018/12/20 15:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	31.6218	316.2181	258.70	261.23	2.53	50.11	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	9	TOC	RB	0.1048 ppm	0.0000 ppm	0.0000%	2018/12/20 15:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1048	1.0477	17.76	20.50	2.74	50.11	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.0103 ppm (PASS)	0.0000 ppm	0%	2018/12/20 15:58

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.0103	240.1027	202.00	204.73	2.73	50.11	12:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/20 16:14

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	17.00	19.74	2.75	50.14	12:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	10	TOC	K1811625-001.03 2x	4.0447 ppm	0.2857 ppm	7.0600%	2018/12/20 16:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.2468	42.4675	49.43	52.16	2.73	50.15	12:28
2	TOC	3.8427	38.4268	46.34	48.97	2.63	50.14	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	11	TOC	K1811625-001.03 ms 2x	29.1500 ppm	0.0000 ppm	0.0000%	2018/12/20 17:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.1500	291.5002	239.80	242.66	2.86	50.11	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	12	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/20 17:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.64	17.28	2.63	50.16	12:29
2	TOC	0.0000	0.0000	14.52	17.37	2.85	50.16	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	13	TOC	K1811625-003.03	4.3494 ppm	0.1702 ppm	3.9100%	2018/12/20 17:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.4698	44.6978	51.13	53.85	2.72	50.20	12:30
2	TOC	4.2291	42.2909	49.29	51.80	2.51	50.15	12:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	14	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/20 18:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	13.47	16.22	2.75	50.18	12:22
2	TOC	0.0000	0.0000	14.66	17.23	2.57	50.14	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	15	TOC	K1811728-001	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/20 18:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.67	17.32	2.65	50.14	12:26
2	TOC	0.0000	0.0000	14.89	17.48	2.58	50.12	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	16	TOC	K1811728-002	0.3981 ppm	0.5629 ppm	141.4200%	2018/12/20 19:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.71	17.40	2.68	50.14	12:27
2	TOC	0.7961	7.9611	23.05	25.78	2.73	50.12	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	17	TOC	K1811789-002.08	0.3032 ppm	0.1364 ppm	44.9900%	2018/12/20 19:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5064	5.0636	20.83	23.42	2.59	50.08	12:28
2	TOC	0.2565	2.5651	18.92	21.63	2.71	50.14	12:25
3	TOC	0.2160	2.1596	18.61	21.36	2.75	50.13	12:2
4	TOC	0.2341	2.3415	18.75	21.38	2.63	50.14	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

		Analysis			Std. Dev.		

	Pos	Type	Sample ID	Result (ppmC)	(ppmC)	RSD	Start Time
◆	18	TOC	K1811789-002.08 ms	25.2126 ppm	0.0000 ppm	0.0000%	2018/12/20 21:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.2126	252.1263	209.70	212.25	2.55	50.12	12:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/20 21:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	16.94	19.63	2.68	50.10	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.0674 ppm (PASS)	0.0000 ppm	0%	2018/12/20 21:33

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.0674	240.6743	202.44	205.01	2.58	50.10	12:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/20 21:50

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	16.32	19.03	2.72	50.15	12:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/20 22:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	15.21	17.97	2.76	50.11	12:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> LCS ER From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	2	TOC	21.9000	1:1	[TOC] LCS ER [21.9 ppm]	0 / infinity (NA / NA)	20.6186 ppm (PASS)	0.0000 ppm	0%	2018/12/20 22:23

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
2	TOC	21.9 ppm	1	20.6186	206.1862	176.07	178.69	2.62	50.07	12:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos 2
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	21.9 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K1811789-003.08	0.6115 ppm	0.0957 ppm	15.6500%	2018/12/20 22:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7447	7.4470	22.65	25.41	2.75	50.03	12:29
2	TOC	0.6046	6.0460	21.58	24.25	2.67	49.99	12:26
3	TOC	0.5775	5.7752	21.38	23.89	2.51	49.91	12:24
4	TOC	0.5192	5.1918	20.93	23.51	2.58	49.93	12:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K1811789-004.08	0.3582 ppm	0.4373 ppm	122.0700%	2018/12/20 23:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1593	1.5932	18.18	20.90	2.72	49.89	12:24

2	TOC	1.0099	10.0985	24.68	27.32	2.64	49.87	12:26
3	TOC	0.1908	1.9085	18.42	21.15	2.73	49.87	12:26
4	TOC	0.0729	0.7286	17.52	20.19	2.67	49.84	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K1811789-005.08	0.6339 ppm	0.0893 ppm	14.0800%	2018/12/21 00:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7650	7.6497	22.81	25.45	2.65	49.83	12:24
2	TOC	0.5847	5.8472	21.43	24.13	2.70	49.81	12:25
3	TOC	0.5711	5.7111	21.33	24.07	2.74	49.79	12:24
4	TOC	0.6149	6.1493	21.66	24.35	2.68	49.78	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K1811789-006.08	0.5329 ppm	0.0218 ppm	4.1000%	2018/12/21 01:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5515	5.5149	21.18	23.88	2.70	49.78	12:27
2	TOC	0.5332	5.3318	21.04	23.57	2.54	49.78	12:26
3	TOC	0.5022	5.0218	20.80	23.44	2.64	49.72	12:25
4	TOC	0.5447	5.4469	21.12	23.86	2.73	49.78	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K1811789-008.08	0.2970 ppm	0.0830 ppm	27.9500%	2018/12/21 02:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3918	3.9177	19.96	22.52	2.56	49.74	12:28
2	TOC	0.3350	3.3500	19.52	22.21	2.69	49.74	12:24
3	TOC	0.2038	2.0380	18.52	21.29	2.77	49.72	12:27
4	TOC	0.2574	2.5743	18.93	21.62	2.69	49.72	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 03:54

Rep	Base			Adjusted		Baseline	Pressure	Run

#	Analysis Type	ppm	µg	(Abs)	NDIR (Abs)	(Abs)	(psig)	Time
1	TOC	0.0000	0.0000	15.47	17.90	2.42	49.72	12:24
2	TOC	0.0000	0.0000	14.64	17.20	2.56	49.73	12:23

Dilution 1:10

Blank Contribution (TC) 16.9610 (IC) (v1202)

Method Extended Reaction 021711 (v3)

Calibration Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K1811849-001.04	1.2435 ppm	0.0105 ppm	0.8400%	2018/12/21 04:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2362	12.3615	26.41	29.06	2.65	49.71	12:22
2	TOC	1.2509	12.5093	26.52	29.16	2.63	49.71	12:26

Dilution 1:10

Blank Contribution (TC) 16.9610 (IC) (v1202)

Method Extended Reaction 021711 (v3)

Calibration Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K1811849-001.04 ms	25.4293 ppm	0.0000 ppm	0.0000%	2018/12/21 04:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.4293	254.2925	211.36	213.95	2.59	49.70	12:30

Dilution 1:10

Blank Contribution (TC) 16.9610 (IC) (v1202)

Method Extended Reaction 021711 (v3)

Calibration Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.2565 ppm (PASS)	0.0000 ppm	0%	2018/12/21 05:13

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.2565	242.5645	203.88	206.62	2.74	49.66	12:31

Completion State Success - Criteria met.

Success Action Do Nothing

Method Extended Reaction 021711 (v3)

Calibration Extended Reaction 021711 (v24)

STD Conc - Pos B 50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/21 05:30

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	16.31	19.10	2.80	49.66	12:27

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	29	TOC	K1811849-002.04 4x	8.1359 ppm	0.1209 ppm	1.4900%	2018/12/21 05:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.2214	82.2142	79.81	82.70	2.89	49.69	12:23
2	TOC	8.0505	80.5045	78.50	81.19	2.69	49.68	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	30	TOC	K1811849-003.04 4x	7.6636 ppm	0.1108 ppm	1.4500%	2018/12/21 06:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.7420	77.4200	76.15	78.89	2.75	49.68	12:26
2	TOC	7.5853	75.8529	74.95	77.63	2.68	49.71	12:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	31	TOC	K1811849-004.04	0.9762 ppm	0.1639 ppm	16.7900%	2018/12/21 06:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0921	10.9213	25.31	27.99	2.68	49.67	12:28
2	TOC	0.8603	8.6033	23.54	26.17	2.64	49.67	12:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	32	TOC	K1811849-005.04	5.2512 ppm	0.1272 ppm	2.4200%	2018/12/21 07:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.3411	53.4111	57.79	60.40	2.61	49.69	12:24
2	TOC	5.1612	51.6125	56.42	59.23	2.82	49.71	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	33	TOC	RB	0.3241 ppm	0.4583 ppm	141.4200%	2018/12/21 07:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	16.09	18.66	2.57	49.67	12:29
2	TOC	0.6482	6.4816	21.92	24.59	2.67	49.61	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	34	TOC	K1811831-002.01	6.3814 ppm	0.5082 ppm	7.9600%	2018/12/21 08:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	6.7408	67.4078	68.49	71.00	2.51	49.71	12:27
2	TOC	6.0221	60.2211	63.00	65.39	2.40	49.90	12:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Sample From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	35	TOC	K1811831-002.01 ms	31.0037 ppm	0.0000 ppm	0.0000%	2018/12/21 08:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	31.0037	310.0373	253.97	256.56	2.59	49.92	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	36	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 09:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	13.45	16.02	2.57	49.95	12:24
2	TOC	0.0000	0.0000	13.80	16.48	2.67	49.92	12:23

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Sample — From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	37	TOC	K1812101-001.02	16.0372 ppm	0.0155 ppm	0.1000%	2018/12/21 09:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	16.0482	160.4819	139.64	142.30	2.66	49.93	12:27
2	TOC	16.0262	160.2622	139.48	142.17	2.69	49.89	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	38	TOC	K1812101-001.02 ms	40.7000 ppm	0.0000 ppm	0.0000%	2018/12/21 10:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	40.7000	407.0004	328.10	330.64	2.54	49.86	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 — From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	24.0495 ppm (PASS)	0.0000 ppm	0%	2018/12/21 10:33

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.0495	240.4951	202.30	204.97	2.67	49.86	12:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 — From Schedule Version

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/21 10:49

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	15.93	18.55	2.62	49.84	12:29

Completion State: Success - Criteria met.
Success Action: Do Nothing
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)
STD Conc - Pos D: 0 ppmC

Sample Type: Sample — From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	39	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 11:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.88	17.48	2.60	50.04	12:31

Dilution: 1:10
Blank Contribution: (TC) 16.9610 (IC) (v1202)
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)

Sample Type: Check Standard --> LCS ER — From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	2	TOC	21.9000	1:1	[TOC] LCS ER [21.9 ppm]	0 / infinity (NA / NA)	20.2644 ppm (PASS)	0.0000 ppm	0%	2018/12/21 11:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
2	TOC	21.9 ppm	1	20.2644	202.6439	173.36	175.92	2.56	49.99	12:35

Completion State: Success - Criteria met.
Success Action: Do Nothing
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)
STD Conc - Pos 2: 21.9 ppmC

Sample Type: Sample — From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	40	TOC	K1812154-001.01 50x	0.0965 ppm	0.1365 ppm	141.4200%	2018/12/21 11:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1931	1.9307	18.44	21.05	2.61	49.95	12:28
2	TOC	0.0000	0.0000	16.89	19.63	2.74	49.95	12:27

Dilution: 1:10
Blank Contribution: (TC) 16.9610 (IC) (v1202)
Method: Extended Reaction 021711 (v3)
Calibration: Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	41	TOC	K1812154-001.01 ms 50x	24.3267 ppm	0.0000 ppm	0.0000%	2018/12/21 12:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	24.3267	243.2665	202.93	205.49	2.56	49.93	12:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	42	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 12:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.90	17.47	2.57	49.92	12:27
2	TOC	0.0000	0.0000	13.95	16.42	2.47	49.95	12:21

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	43	TOC	K1812154-002.01	1.5973 ppm	0.1048 ppm	6.5600%	2018/12/21 12:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6714	16.7136	29.74	32.52	2.78	49.93	12:27
2	TOC	1.5232	15.2315	28.60	31.41	2.81	49.97	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	44	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 13:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.83	17.44	2.61	49.98	12:26
2	TOC	0.0000	0.0000	13.52	16.27	2.75	49.99	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	45	TOC	K1812154-003.01	2.1735 ppm	0.0087 ppm	0.4000%	2018/12/21 14:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1674	21.6739	33.53	36.21	2.68	49.99	12:27

2	TOC	2.1797	21.7969	33.62	36.23	2.60	49.96	12:25

Dilution 1:10 **Blank Contribution** (TC) 16.9610 (IC) (v1202) **Method** Extended Reaction 021711 (v3) **Calibration** Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	46	TOC	K1812154-004.01 50x	17.5683 ppm	0.0074 ppm	0.0400%	2018/12/21 14:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	17.5736	175.7357	151.30	154.08	2.77	50.00	12:27
2	TOC	17.5631	175.6311	151.22	153.86	2.64	49.96	12:28

Dilution 1:10 **Blank Contribution** (TC) 16.9610 (IC) (v1202) **Method** Extended Reaction 021711 (v3) **Calibration** Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	47	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 15:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	15.33	17.92	2.59	49.96	12:28
2	TOC	0.0000	0.0000	13.94	16.74	2.80	49.99	12:26

Dilution 1:10 **Blank Contribution** (TC) 16.9610 (IC) (v1202) **Method** Extended Reaction 021711 (v3) **Calibration** Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	23.7161 ppm (PASS)	0.0000 ppm	0%	2018/12/21 15:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.7161	237.1608	199.75	202.36	2.62	50.01	12:29

Completion State Success - Criteria met. **Success Action** Do Nothing **Method** Extended Reaction 021711 (v3) **Calibration** Extended Reaction 021711 (v24) **STD Conc - Pos B** 50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/21 15:54

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	15.45	17.92	2.47	50.01	12:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	48	TOC	K1812154-005.01.20x	0.0816 ppm	0.1112 ppm	136.2200%	2018/12/21 16:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1602	1.6024	18.19	20.63	2.44	50.06	12:26
2	TOC	0.0030	0.0300	16.98	19.62	2.63	50.02	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	49	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 16:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.08	16.76	2.68	50.06	12:24
2	TOC	0.0000	0.0000	13.43	15.97	2.54	50.07	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	50	TOC	K1811928-001.01	0.0564 ppm	0.0642 ppm	113.8700%	2018/12/21 17:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1018	1.0177	17.74	20.38	2.64	50.07	12:24
2	TOC	0.0110	0.1098	17.05	19.66	2.62	50.06	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	51	TOC	K1811928-001.01 ms	24.4826 ppm	0.0000 ppm	0.0000%	2018/12/21 17:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	24.4826	244.8258	204.12	206.67	2.55	50.07	12:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	52	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 18:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	15.50	18.26	2.75	50.01	12:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	53	TOC	K1812278-001.01 50x	13.6190 ppm	0.1234 ppm	0.9100%	2018/12/21 18:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	13.7063	137.0630	121.74	124.53	2.79	49.97	12:26
2	TOC	13.5318	135.3180	120.41	123.06	2.65	49.99	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	54	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 18:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.98	17.57	2.59	50.00	12:29
2	TOC	0.0000	0.0000	14.14	16.73	2.59	49.98	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	55	TOC	K1812278-001.01 ms 50x	38.1173 ppm	0.0000 ppm	0.0000%	2018/12/21 19:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	38.1173	381.1732	308.36	311.11	2.76	50.03	12:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reactio 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	56	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 19:38

Rep	Base	ppm	µg	Adjusted	NDIR (Abs)	Baseline	Pressure	Run

#	Analysis Type			(Abs)		(Abs)	(psig)	Time
1	TOC	0.0000	0.0000	15.38	18.03	2.65	50.12	12:21
2	TOC	0.0000	0.0000	13.18	15.90	2.72	50.12	12:29
3	TOC	0.0000	0.0000	13.10	15.85	2.75	50.11	12:25
4	TOC	0.0000	0.0000	13.37	15.90	2.53	50.14	12:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	57	TOC	K1812278-003.02 4x	1.1389 ppm	0.0119 ppm	1.0500%	2018/12/21 20:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1305	11.3046	25.60	28.30	2.69	50.14	12:28
2	TOC	1.1473	11.4733	25.73	28.49	2.76	50.17	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	23.5524 ppm (PASS)	0.0000 ppm	0%	2018/12/21 21:13

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.5524	235.5243	198.50	201.17	2.67	50.15	12:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/21 21:29

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	16.23	18.82	2.59	50.15	12:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	58	TOC	MB4	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 21:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.51	17.24	2.74	50.15	12:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> LCS ER From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	2	TOC	21.9000	1:1	[TOC] LCS ER [21.9 ppm]	0 / infinity (NA / NA)	19.2260 ppm (PASS)	0.0000 ppm	0%	2018/12/21 22:02

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
2	TOC	21.9 ppm	1	19.2260	192.2601	165.42	168.09	2.66	50.13	12:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos 2
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	21.9 ppmC

Sample Type: Sample From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	59	TOC	K1812278-002.01 50x	13.8400 ppm	0.2571 ppm	1.8600%	2018/12/21 22:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	14.0218	140.2181	124.15	126.95	2.79	50.10	12:23
2	TOC	13.6582	136.5816	121.37	124.17	2.79	50.13	12:22

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	60	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/21 22:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	14.44	17.22	2.77	50.12	12:27
2	TOC	0.0000	0.0000	13.12	15.76	2.64	50.12	12:27

Dilution	Blank Contribution	Method	Calibration

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	61	TOC	K1812279-001.02	24.8410 ppm	0.1722 ppm	0.6900%	2018/12/21 23:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	24.7192	247.1921	205.93	208.61	2.68	50.12	12:24
2	TOC	24.9628	249.6278	207.79	210.56	2.77	50.10	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	62	TOC	K1812279-001.02 ms	48.6019 ppm	0.0000 ppm	0.0000%	2018/12/21 23:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	48.6019	486.0190	388.51	391.29	2.78	50.13	12:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	63	TOC	RB	0.3638 ppm	0.5145 ppm	141.4200%	2018/12/22 00:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7276	7.2756	22.52	25.36	2.84	50.13	12:25
2	TOC	0.0000	0.0000	16.69	19.45	2.76	50.14	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	64	TOC	K1812272-001.01 4x	10.5041 ppm	0.0528 ppm	0.5000%	2018/12/22 00:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.5415	105.4147	97.55	100.17	2.62	50.14	12:27
2	TOC	10.4668	104.6678	96.98	99.78	2.81	50.13	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	65	TOC	K1812272-001.01 ms 4x	36.0064 ppm	0.0000 ppm	0.0000%	2018/12/22 01:14

Rep	Base			Adjusted		Baseline	Pressure	Run

#	Analysis Type	ppm	µg	(Abs)	NDIR (Abs)	(Abs)	(psig)	Time
1	TOC	36.0064	360.0644	292.22	294.86	2.64	50.13	12:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	66	TOC	RB	0.0221 ppm	0.0441 ppm	200.0000%	2018/12/22 01:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0883	0.8829	17.64	20.45	2.81	50.10	12:26
2	TOC	0.0000	0.0000	15.76	18.39	2.63	50.11	12:26
3	TOC	0.0000	0.0000	14.56	17.38	2.82	50.12	12:26
4	TOC	0.0000	0.0000	14.00	16.68	2.68	50.13	12:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	23.6288 ppm (PASS)	0.0000 ppm	0%	2018/12/22 02:33

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.6288	236.2883	199.08	201.57	2.49	50.12	12:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/22 02:49

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	15.09	17.75	2.66	50.13	12:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	67	TOC	K1812272-002.01 100x	3.8476 ppm	0.0975 ppm	2.5300%	2018/12/22 03:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.9166	39.1659	46.90	49.50	2.60	50.12	12:28
2	TOC	3.7787	37.7871	45.85	48.70	2.85	50.12	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	68	TOC	K1812272-003.01	3.9636 ppm	0.0156 ppm	0.3900%	2018/12/22 03:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.9747	39.7467	47.35	50.10	2.76	50.12	12:26
2	TOC	3.9526	39.5256	47.18	49.88	2.70	50.11	12:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	69	TOC	K1812272-004.01	4.0087 ppm	0.0333 ppm	0.8300%	2018/12/22 04:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.0322	40.3222	47.79	50.48	2.69	50.10	12:29
2	TOC	3.9851	39.8513	47.43	50.17	2.74	50.12	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	70	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/22 04:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	15.38	18.09	2.72	50.15	12:28
2	TOC	0.0000	0.0000	14.56	17.22	2.66	50.14	12:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	71	TOC	K1811745-001.09	1.9426 ppm	0.5604 ppm	28.8500%	2018/12/22 05:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	1.5463	15.4630	28.78	31.48	2.70	50.17	12:27
2	TOC	2.3389	23.3888	34.84	37.63	2.79	50.13	12:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	72	TOC	K1811745-001.09 ms	25.9104 ppm	0.3760 ppm	1.4500%	2018/12/22 05:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	26.1763	261.7631	217.07	219.81	2.74	50.12	12:24
2	TOC	25.6446	256.4457	213.00	215.81	2.81	50.13	12:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	73	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2018/12/22 06:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	15.93	18.61	2.68	50.12	12:23
2	TOC	0.0000	0.0000	14.21	17.02	2.81	50.10	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	74	TOC	K1811747-001.09	4.7084 ppm	0.0027 ppm	0.0600%	2018/12/22 06:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.7103	47.1034	52.97	55.91	2.94	50.11	12:24
2	TOC	4.7065	47.0655	52.94	55.63	2.69	50.12	12:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	75	TOC	K1811747-001.09 ms	29.2991 ppm	0.0000 ppm	0.0000%	2018/12/22 07:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.2991	292.9914	240.94	243.69	2.75	50.09	12:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	23.8618 ppm (PASS)	0.0000 ppm	0%	2018/12/22 07:36

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.8618	238.6180	200.86	203.53	2.67	50.09	12:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/22 07:53

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	14.88	17.69	2.81	50.09	12:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Sample Type: Sample From Schedule Version 9

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	K1812416-035.01 doc	1.3602 ppm	0.1716 ppm	12.6100%	2018/12/22 08:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2389	12.3890	26.43	29.31	2.88	50.08	12:27
2	TOC	1.4816	14.8155	28.29	31.38	3.09	50.10	12:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K1812416-035.01 ms doc	24.3251 ppm	0.0000 ppm	0.0000%	2018/12/22 08:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	24.3251	243.2508	202.92	205.83	2.92	50.10	12:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 16.9610 (IC) (v1202)	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)

Sample Type: Check Standard --> CCV 021711 From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 021711 [25 ppm]	0 / infinity (NA / NA)	23.9324 ppm (PASS)	0.0000 ppm	0%	2018/12/22 08:58

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.9324	239.3244	201.40	204.23	2.82	50.11	12:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	50 ppmC

Sample Type: Check Standard --> CCB 021711 From Schedule Version 9

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:2	[TOC] CCB 021711 [0.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2018/12/22 09:14

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0.0 ppm	1	0.0000	0.0000	16.24	18.97	2.73	50.12	12:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	Extended Reaction 021711 (v3)	Extended Reaction 021711 (v24)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1201	2.2080	1.6200	0.0000	0.0000	0.0000	2018/12/17 20:18	Fusion1 (Fusion1)
v1202	1.7907	1.3090	0.0000	0.0000	0.0000	2018/12/20 11:40	Fusion1 (Fusion1)

Calibrations

Name: Extended Reaction 021711 (TOC)

Version:	v24	Calibration curve formula:	TOC: y = 7.645x + 18.448
Ver Creation:	2018/11/26 18:53	r^2 value:	TOC: r^2 = 0.99984
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
0.0 ppm	19.1720	0.0000		2018/11/26 17:15
0.50 ppm	23.8410	0.5000		2018/11/26 17:31
1.00 ppm	25.1300	1.0000		2018/11/26 17:47
5.00 ppm	53.5500	5.0000		2018/11/26 18:03
10.0 ppm	95.3860	10.0000		2018/11/26 18:20
25.0 ppm	211.7220	25.0000		2018/11/26 18:36
50.0 ppm	399.8190	50.0000		2018/11/26 18:52

Methods

Name: Extended Reaction 021711 (TOC)

Version:	v3	Operator:	Gen Chem Lab (Fusion1)
Ver Creation:	2013/02/04 11:44		
Comment:			

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	4.00 mins
SystemFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	7
SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	7
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off
SampleMixingCycles	1

SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2018/12/22 09:34

HS18120114 8260 Raw Data

ALS WO# HS18120114

MSVOA09 -Logbook

Batch: 33625
Date: 11-13-2018
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer: Anjana Poluri
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	11-13-2018 10:58 am	1.00	50 mL	50 mL	U111301.D	Liquid	Y	NA
	Auto find/purged									
2	VSTD000.25	ICAL1	11-13-2018 11:23 am	1.00	50 mL	50 mL	U111302.D	Liquid	Y	NA
	0.25 uL cal std/250 mL DI									
3	VSTD000.5	ICAL2	11-13-2018 11:47 am	1.00	50 mL	50 mL	U111303.D	Liquid	Y	NA
	0.5 uL cal std/250 mL DI									
4	VSTD001	ICAL3	11-13-2018 12:36 pm	1.00	50 mL	50 mL	U111304.D	Liquid	Y	NA
	1 uL cal std/250 mL DI									
5	VSTD002	ICAL4	11-13-2018 01:01 pm	1.00	50 mL	50 mL	U111305.D	Liquid	Y	NA
	2 uL cal std/250 mL DI									
6	VSTD005	ICAL5	11-13-2018 01:25 pm	1.00	50 mL	50 mL	U111306.D	Liquid	Y	NA
	5 uL cal std/250 mL DI									
7	VSTD020	ICAL6	11-13-2018 01:50 pm	1.00	50 mL	50 mL	U111307.D	Liquid	Y	NA
	4 uL cal std/50 mL DI									
8	VSTD050	ICAL7	11-13-2018 02:15 pm	1.00	50 mL	50 mL	U111308.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	11-13-2018 02:39 pm	1.00	50 mL	50 mL	U111309.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	11-13-2018 03:04 pm	1.00	50 mL	50 mL	U111310.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	11-13-2018 03:28 pm	1.00	50 mL	50 mL	U111311.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	11-13-2018 03:53 pm	1.00	50 mL	50 mL	U111312.D	Liquid	Y	NA
	Cleanup blk									
13	VSTD050	ICV	11-13-2018 04:18 pm	1.00	50 mL	50 mL	U111313.D	Liquid	Y	NA
	10 uL ICV std/50 mL DI									
14	BFB	TUNE	11-13-2018 05:07 pm	1.00	50 mL	50 mL	V111301.D	Liquid	Y	NA
	Auto find/purged									
15	VSTD050	CCV	11-13-2018 05:32 pm	1.00	50 mL	50 mL	V111302.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
16	VSTD050	CCV	11-13-2018 05:56 pm	1.00	50 mL	50 mL	V111303.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
17	VLCSW-181113	LCS	11-13-2018 06:21 pm	1.00	50 mL	50 mL	V111304.D	Liquid	Y	NA
	4 uL cal std/50 mL DI									
18	BLANK	SAMP	11-13-2018 06:46 pm	1.00	50 mL	50 mL	V111305.D	Liquid	Y	NA
19	VBLKW-181113	MBLK	11-13-2018 07:10 pm	1.00	50 mL	50 mL	V111306.D	Liquid	Y	NA
20	HS18110428-01	SAMP	11-13-2018 07:35 pm	1.00	50 mL	50 mL	V111307.D	Liquid	Y	<2
21	HS18110496-01	SAMP	11-13-2018 08:00 pm	1.00	50 mL	50 mL	V111308.D	Liquid	Y	<2
22	HS18110428-02	SAMP	11-13-2018 08:25 pm	1.00	50 mL	50 mL	V111309.D	Liquid	Y	<2
23	HS18110428-03	SAMP	11-13-2018 08:49 pm	1.00	50 mL	50 mL	V111310.D	Liquid	Y	<2
24	HS18110428-04	SAMP	11-13-2018 09:14 pm	1.00	50 mL	50 mL	V111311.D	Liquid	Y	<2
25	HS18110496-04	SAMP	11-13-2018 09:39 pm	1.00	50 mL	50 mL	V111312.D	Liquid	Y	<2
26	HS18110496-05	SAMP	11-13-2018 10:04 pm	1.00	50 mL	50 mL	V111313.D	Liquid	Y	<2
27	HS18110496-06	SAMP	11-13-2018 10:28 pm	1.00	50 mL	50 mL	V111314.D	Liquid	Y	<2
28	HS18110428-08	SAMP	11-13-2018 10:53 pm	1.00	50 mL	50 mL	V111315.D	Liquid	Y	<2
29	HS18110428-09	SAMP	11-13-2018 11:18 pm	1.00	50 mL	50 mL	V111316.D	Liquid	Y	<2
30	HS18110496-04MS	MS	11-13-2018 11:43 pm	1.00	50 mL	50 mL	V111317.D	Liquid	Y	<2
	8 uL cal std/40 mL Sample									
31	HS18110496-04MSD	MSD	11-14-2018 12:07 am	1.00	50 mL	50 mL	V111318.D	Liquid	Y	<2
	8 uL cal std/40 mL Sample									

MSVOA09 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
32	HS18110650-09	SAMP	11-14-2018 12:32 am	1.00	50 mL	50 mL	V111319.D	Liquid	Y	<2
33	HS18110428-05	SAMP	11-14-2018 12:57 am	5.00	10 mL	50 mL	V111320.D	Liquid	Y	<2
34	HS18110428-05	SAMP	11-14-2018 01:22 am	25.00	2 mL	50 mL	V111321.D	Liquid	Y	<2
35	HS18110428-06	SAMP	11-14-2018 01:46 am	5.00	10 mL	50 mL	V111322.D	Liquid	Y	<2
36	HS18110428-06	SAMP	11-14-2018 02:11 am	25.00	2 mL	50 mL	V111323.D	Liquid	Y	<2
37	HS18110428-07	SAMP	11-14-2018 02:36 am	100.0(	500 µL	50 mL	V111324.D	Liquid	Y	<2
38	HS18110428-07	SAMP	11-14-2018 03:01 am	10.00	5 mL	50 mL	V111325.D	Liquid	Y	<2
39	HS18110650-05	SAMP	11-14-2018 03:25 am	1.00	50 mL	50 mL	V111326.D	Liquid	Y	<2
40	HS18110650-06	SAMP	11-14-2018 03:50 am	1.00	50 mL	50 mL	V111327.D	Liquid	Y	<2
41	VSTD050-END	CCV	11-14-2018 04:15 am	1.00	50 mL	50 mL	V111328.D	Liquid	Y	NA

10 uL cal std/50 mL DI

Chemical	Value
SURR SPK ID	30502-51-03
IS ID	30502-51-03
ICV STD ID	30603-41-01
LCS/MS ID	30502-51-01/02
CAL STD ID	30502-51-01/02
BFB ID	30502-51-03

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Matrix Spike - Sample No.: VICV050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	53.22	106	80-120
trans-1,3-Dichloroprope	50.00	47.39	95	80-120
1,3-Dichlorobenzene	50.00	45.55	91	80-120
2,2-Dichloropropane	50.00	51.21	102	80-120
1,1-Dichloropropene	50.00	46.61	93	80-120
Dibromomethane	50.00	47.16	94	80-120
1,2-Dibromoethane	50.00	48.42	97	80-120
trans-1,2-Dichloroethen	50.00	46.36	93	80-120
1,1,1,2-Tetrachloroetha	50.00	49.98	100	80-120
1,1,1-Trichloroethane	50.00	48.15	96	80-120
1,1,2,2-Tetrachloroetha	50.00	45.96	92	80-120
Freon TF	50.00	46.03	92	80-120
1,1,2-Trichloroethane	50.00	45.83	92	80-120
1,1-Dichloroethane	50.00	45.57	91	80-120
1,1-Dichloroethene	50.00	45.66	91	80-120
Trichlorofluoromethane	50.00	46.76	94	80-120
1,2,3-Trichlorobenzene	50.00	48.30	97	80-120
Toluene	50.00	46.16	92	80-120
1,2,4-Trichlorobenzene	50.00	47.47	95	80-120
1,2,4-Trimethylbenzene	50.00	47.71	95	80-120
Tetrachloroethene	50.00	45.53	91	80-120
Trichloroethene	50.00	46.38	93	80-120
1,2-Dichlorobenzene	50.00	44.93	90	80-120
1,2-Dichloroethane	50.00	45.18	90	80-120
1,2-Dichloropropane	50.00	47.27	94	80-120
1,3,5-Trimethylbenzene	50.00	47.70	95	80-120
1,3-Dichloropropane	50.00	46.16	92	80-120
1,4-Dichlorobenzene	50.00	48.32	97	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Matrix Spike - Sample No.: VICV050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Butanone	100.00	92.32	92	80-120
2-Chlorotoluene	50.00	45.71	91	80-120
2-Hexanone	100.00	99.26	99	80-120
4-Chlorotoluene	50.00	46.84	94	80-120
tert-Butylbenzene	50.00	47.82	96	80-120
4-Methyl-2-Pentanone	100.00	96.36	96	80-120
Acetone	100.00	95.46	95	80-120
Benzene	50.00	46.32	93	80-120
Bromobenzene	50.00	46.19	92	80-120
Bromochloromethane	50.00	50.90	102	80-120
Bromodichloromethane	50.00	48.53	97	80-120
Bromoform	50.00	47.71	95	80-120
Bromomethane	50.00	50.93	102	80-120
Carbon Disulfide	100.00	98.32	98	80-120
Carbon Tetrachloride	50.00	49.39	99	80-120
Chlorobenzene	50.00	45.35	91	80-120
Chloroethane	50.00	44.97	90	80-120
Chloroform	50.00	45.67	91	80-120
Chloromethane	50.00	46.70	93	80-120
cis-1,2-Dichloroethene	50.00	45.95	92	80-120
Dibromochloromethane	50.00	52.11	104	80-120
Dichlorodifluoromethane	50.00	47.87	96	80-120
Ethylbenzene	50.00	46.81	94	80-120
Hexachlorobutadiene	50.00	55.07	110	80-120
Isopropylbenzene	50.00	47.92	96	80-120
m,p-Xylenes	100.00	94.65	95	80-120
Methylene Chloride	50.00	48.07	96	80-120
n-Butylbenzene	50.00	49.50	99	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Matrix Spike - Sample No.: VICV050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
n-Propylbenzene	50.00	47.57	95	80-120
Naphthalene	50.00	51.20	102	80-120
o-Xylene	50.00	47.39	95	80-120
sec-Butylbenzene	50.00	48.40	97	80-120
Styrene	50.00	49.81	100	80-120
Vinyl Chloride	50.00	47.66	95	80-120
1,2,3-Trichloropropane	50.00	49.28	98	80-120
p-Isopropyltoluene	50.00	49.15	98	80-120
1,2-Dibromo-3-Chloropro	50.00	47.82	96	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Lab File ID: U111301 BFB Injection Date: 11/13/18

Instrument ID: VOA9 BFB Injection Time: 1058

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.9
75	30.0 - 60.0% of mass 95	53.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.6 (1.0)1
174	Greater than 50.0% of mass 95	67.7
175	5.0 - 9.0% of mass 174	5.2 (7.7)1
176	95.0 - 101.0% of mass 174	64.6 (95.4)1
177	5.0 - 9.0% of mass 176	4.8 (7.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	U111302	11/13/18	1123
02	VSTD000.5	VSTD000.5	U111303	11/13/18	1147
03	VSTD001	VSTD001	U111304	11/13/18	1236
04	VSTD002	VSTD002	U111305	11/13/18	1301
05	VSTD005	VSTD005	U111306	11/13/18	1325
06	VSTD020	VSTD020	U111307	11/13/18	1350
07	VSTD050	VSTD050	U111308	11/13/18	1415
08	VSTD100	VSTD100	U111309	11/13/18	1439
09	VSTD150	VSTD150	U111310	11/13/18	1504
10	VSTD200	VSTD200	U111311	11/13/18	1528
11	VICV050	VICV050	U111313	11/13/18	1618
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Instrument ID: VOA9 Calibration Date(s): 11/13/18 11/13/18

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1528

LAB FILE ID: RF0.25: U111302 RF0.5: U111303 RF1: U111304
RF2: U111305 RF5: U111306 RF20: U111307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.514	0.452	0.424	0.458	0.523
trans-1,3-Dichloropropene		3218	5482	10881	30108	147063
1,3-Dichlorobenzene		2.016	1.635	1.560	1.502	1.485
2,2-Dichloropropane		0.895	0.675	0.644	0.597	0.645
1,1-Dichloropropene		0.589	0.484	0.455	0.407	0.432
Dibromomethane		0.272	0.224	0.217	0.212	0.216
1,2-Dibromoethane		0.438	0.364	0.337	0.365	0.365
trans-1,2-Dichloroethene		0.776	0.676	0.607	0.562	0.575
1,1,1,2-Tetrachloroethane		0.357	0.286	0.272	0.294	0.309
1,1,1-Trichloroethane		1.047	0.838	0.848	0.741	0.818
1,1,2,2-Tetrachloroethane		1.478	1.172	1.145	1.215	1.150
Freon TF		0.612	0.528	0.532	0.409	0.460
1,1,2-Trichloroethane		0.411	0.336	0.304	0.314	0.307
1,1-Dichloroethane		1.465	1.215	1.128	1.077	1.065
1,1-Dichloroethene		0.736	0.626	0.565	0.474	0.526
Trichlorofluoromethane		1.241	1.099	1.043	0.817	0.913
1,2,3-Trichlorobenzene		1.196	0.776	0.891	0.911	0.922
Toluene		2.078	1.628	1.576	1.529	1.532
1,2,4-Trichlorobenzene		1.260	0.914	0.912	0.902	0.924
1,2,4-Trimethylbenzene		3.320	2.638	2.610	2.690	2.770
Tetrachloroethene		0.336	0.285	0.263	0.234	0.246
Trichloroethene		0.440	0.361	0.330	0.306	0.325
1,2-Dichlorobenzene		2.072	1.662	1.534	1.584	1.503
1,2-Dichloroethane		0.688	0.543	0.533	0.514	0.502
1,2-Dichloropropane		0.420	0.368	0.338	0.340	0.346
1,3,5-Trimethylbenzene		3.173	2.583	2.523	2.530	2.676
1,3-Dichloropropane		0.875	0.710	0.656	0.685	0.660
1,4-Dichlorobenzene		7995	11659	22453	55298	228900
2-Butanone		0.438	0.357	0.328	0.355	0.335
2-Chlorotoluene		3.108	2.512	2.344	2.371	2.366
2-Hexanone		0.309	0.250	0.264	0.296	0.296
4-Chlorotoluene		3.515	2.726	2.736	2.786	2.768
tert-Butylbenzene		2.788	2.149	2.208	2.094	2.254
4-Methyl-2-Pentanone		0.448	0.409	0.382	0.418	0.418
Acetone		5795	7657	12023	24249	87797
Benzene		1.791	1.472	1.332	1.296	1.322
Bromobenzene		1.057	0.812	0.769	0.798	0.781
Bromochloromethane		0.288	0.289	0.307	0.306	0.304
Bromodichloromethane		0.499	0.390	0.373	0.378	0.400
Bromoform		1478	2470	4530	13391	60993
Bromomethane		2224	4167	7606	17760	65394
Carbon Disulfide		2.186	1.775	1.666	1.469	1.640
Carbon Tetrachloride		0.413	0.348	0.330	0.290	0.344
Chlorobenzene		1.390	1.114	0.980	0.979	0.984

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812011

Instrument ID: VOA9 Calibration Date(s): 11/13/18 11/13/18

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1528

LAB FILE ID: RF0.25: U111302 RF0.5: U111303 RF1: U111304
RF2: U111305 RF5: U111306 RF20: U111307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroethane		0.691	0.561	0.547	0.455	0.484
Chloroform		1.493	1.230	1.118	1.087	1.079
Chloromethane		4145	6506	12000	26431	114171
cis-1,2-Dichloroethene		0.890	0.758	0.706	0.655	0.674
Dibromochloromethane		0.340	0.262	0.256	0.287	0.314
Dichlorodifluoromethane		4116	6358	12615	24157	119108
Ethylbenzene		0.660	0.543	0.490	0.475	0.502
Hexachlorobutadiene		2273	2210	4667	8782	45235
Isopropylbenzene		1.845	1.478	1.459	1.431	1.486
m,p-Xylenes		0.830	0.625	0.602	0.602	0.634
Methylene Chloride		5188	7766	13586	29126	113894
n-Butylbenzene		11934	17894	36189	79206	381141
n-Propylbenzene		4.808	3.945	3.820	3.699	3.871
Naphthalene		2.957	2.577	2.535	2.887	3.092
o-Xylene		0.725	0.632	0.608	0.619	0.643
sec-Butylbenzene		4.052	3.193	3.096	2.852	3.218
Styrene		1.201	0.990	1.012	1.047	1.097
Vinyl Chloride		4801	7374	13465	29718	136290
1,2,3-Trichloropropane		1.381	1.095	1.101	1.220	1.204
p-Isopropyltoluene		3.227	2.386	2.598	2.465	2.727
1,2-Dibromo-3-Chloropropane		479	955	1762	5351	24969
1,2-Dichloroethane-d4		8937	11059	18531	38984	138453
Dibromofluoromethane		5664	7705	12925	27004	102630
Toluene-d8		23871	30489	51591	112942	412445
4-Bromofluorobenzene		8554	10512	18827	41214	154498

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812011

Instrument ID: VOA9 Calibration Date(s): 11/13/18 11/13/18

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1528

LAB FILE ID: RF50: U111308 RF100: U111309 RF150: U111310
RF200: U111311

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.547	0.595	0.608	0.588
trans-1,3-Dichloropropene	407060	912116	1439550	1983766
1,3-Dichlorobenzene	1.441	1.512	1.522	1.494
2,2-Dichloropropane	0.668	0.740	0.784	0.738
1,1-Dichloropropene	0.414	0.457	0.468	0.451
Dibromomethane	0.214	0.221	0.220	0.212
1,2-Dibromoethane	0.363	0.366	0.360	0.353
trans-1,2-Dichloroethene	0.578	0.598	0.615	0.580
1,1,1,2-Tetrachloroethane	0.320	0.333	0.335	0.332
1,1,1-Trichloroethane	0.837	0.918	0.956	0.902
1,1,2,2-Tetrachloroethane	1.122	1.135	1.138	1.104
Freon TF	0.433	0.506	0.529	0.498
1,1,2-Trichloroethane	0.296	0.302	0.299	0.291
1,1-Dichloroethane	1.077	1.100	1.127	1.057
1,1-Dichloroethene	0.507	0.543	0.568	0.534
Trichlorofluoromethane	0.888	0.996	1.035	0.964
1,2,3-Trichlorobenzene	0.895	0.964	0.981	0.959
Toluene	1.480	1.511	1.507	1.445
1,2,4-Trichlorobenzene	0.918	0.997	1.018	1.004
1,2,4-Trimethylbenzene	2.646	2.808	2.798	2.714
Tetrachloroethene	0.231	0.253	0.257	0.253
Trichloroethene	0.310	0.331	0.336	0.327
1,2-Dichlorobenzene	1.470	1.530	1.529	1.486
1,2-Dichloroethane	0.482	0.494	0.487	0.468
1,2-Dichloropropane	0.339	0.355	0.356	0.342
1,3,5-Trimethylbenzene	2.552	2.731	2.750	2.658
1,3-Dichloropropane	0.642	0.647	0.644	0.623
1,4-Dichlorobenzene	576011	1240019	1907496	2606334
2-Butanone	0.340	0.348	0.343	0.318
2-Chlorotoluene	2.278	2.377	2.372	2.306
2-Hexanone	0.297	0.307	0.305	0.292
4-Chlorotoluene	2.640	2.769	2.781	2.705
tert-Butylbenzene	2.136	2.334	2.363	2.278
4-Methyl-2-Pentanone	0.416	0.431	0.421	0.410
Acetone	201617	430350	636098	869596
Benzene	1.290	1.330	1.333	1.271
Bromobenzene	0.757	0.802	0.810	0.796
Bromochloromethane	0.308	0.299	0.285	0.266
Bromodichloromethane	0.406	0.432	0.438	0.424
Bromoform	170886	383125	610635	844522
Bromomethane	154362	367005	609177	
Carbon Disulfide	1.661	1.759	1.826	1.705
Carbon Tetrachloride	0.337	0.388	0.405	0.392
Chlorobenzene	0.950	0.978	0.966	0.946

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812011

Instrument ID: VOA9 Calibration Date(s): 11/13/18 11/13/18

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1528

LAB FILE ID: RF50: U111308 RF100: U111309 RF150: U111310
RF200: U111311

COMPOUND	RF50	RF100	RF150	RF200
Chloroethane	0.482	0.493	0.509	0.472
Chloroform	1.082	1.104	1.121	1.047
Chloromethane	285521	595590	963160	1334230
cis-1,2-Dichloroethene	0.664	0.681	0.694	0.654
Dibromochloromethane	0.333	0.351	0.354	0.351
Dichlorodifluoromethane	293949	680233	1086406	1483355
Ethylbenzene	0.492	0.514	0.517	0.504
Hexachlorobutadiene	110558	270039	426795	
Isopropylbenzene	1.427	1.543	1.535	1.471
m,p-Xylenes	0.609	0.638	0.632	0.615
Methylene Chloride	276248	577262	911224	1246871
n-Butylbenzene	954951	2203969	3347969	
n-Propylbenzene	3.668	3.966	3.962	3.771
Naphthalene	3.062	3.229	3.212	3.095
o-Xylene	0.629	0.652	0.649	0.635
sec-Butylbenzene	3.062	3.389	3.420	3.284
Styrene	1.100	1.130	1.117	1.082
Vinyl Chloride	335638	744825	1189386	1622522
1,2,3-Trichloropropane	1.240	1.296	1.309	1.275
p-Isopropyltoluene	2.627	2.886	2.907	2.820
1,2-Dibromo-3-Chloropropane	66581	149236	234820	321770
1,2-Dichloroethane-d4	335901	696595	1062364	1441844
Dibromofluoromethane	255826	526814	809097	1112100
Toluene-d8	1045096	2142731	3238162	4386438
4-Bromofluorobenzene	396604	823996	1261578	1723103

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812011

Instrument ID: VOA9 Calibration Date(s): 11/13/18 11/13/18

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1528

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.52317106		12.886	20.000
trans-1,3-Dichloropropene	LINR	2.955e-002	1.87475164		0.9992282	0.9900000
1,3-Dichlorobenzene	AVRG		1.57423339		11.066	20.000
2,2-Dichloropropane	AVRG		0.70955952		12.773	20.000
1,1-Dichloropropene	AVRG		0.46178698		11.618	20.000
Dibromomethane	AVRG		0.22310340		8.428	20.000
1,2-Dibromoethane	AVRG		0.36809182		7.515	20.000
trans-1,2-Dichloroethene	AVRG		0.61854084		10.984	20.000
1,1,1,2-Tetrachloroethane	AVRG		0.31538401		8.665	20.000
1,1,1-Trichloroethane	AVRG		0.87828248		10.125	20.000
1,1,2,2-Tetrachloroethane	AVRG		1.18433615		9.680	20.000
Freon TF	AVRG		0.50088227		12.161	20.000
1,1,2-Trichloroethane	AVRG		0.31787570		11.701	20.000
1,1-Dichloroethane	AVRG		1.14578561		11.273	20.000
1,1-Dichloroethene	AVRG		0.56438078		13.689	20.000
Trichlorofluoromethane	AVRG		0.99961564		12.536	20.000
1,2,3-Trichlorobenzene	AVRG		0.94398267		11.868	20.000
Toluene	AVRG		1.58742783		12.041	20.000
1,2,4-Trichlorobenzene	AVRG		0.98325969		11.514	20.000
1,2,4-Trimethylbenzene	AVRG		2.77717297		7.772	20.000
Tetrachloroethene	AVRG		0.26191977		12.290	20.000
Trichloroethene	AVRG		0.34069901		11.908	20.000
1,2-Dichlorobenzene	AVRG		1.59672308		11.731	20.000
1,2-Dichloroethane	AVRG		0.52321079		12.632	20.000
1,2-Dichloropropane	AVRG		0.35598971		7.249	20.000
1,3,5-Trimethylbenzene	AVRG		2.68643867		7.489	20.000
1,3-Dichloropropane	AVRG		0.68254990		11.227	20.000
1,4-Dichlorobenzene	LINR	-8.51e-004	0.64997268		0.9997856	0.9900000
2-Butanone	AVRG		0.35147036		9.867	20.000
2-Chlorotoluene	AVRG		2.44838115		10.438	20.000
2-Hexanone	AVRG		0.29065206		6.972	20.000
4-Chlorotoluene	AVRG		2.82514687		9.297	20.000
tert-Butylbenzene	AVRG		2.28952823		9.083	20.000
4-Methyl-2-Pentanone	AVRG		0.41710960		4.264	20.000
Acetone	LINR	-8.86e-002	4.54997798		0.9976530	0.9900000
Benzene	AVRG		1.38203708		11.842	20.000
Bromobenzene	AVRG		0.82019754		11.060	20.000
Bromochloromethane	AVRG		0.29476503		4.761	20.000
Bromodichloromethane	AVRG		0.41544996		9.300	20.000
Bromoform	2ORDR	2.367e-002	4.32863402	-0.1428982	0.9996117	0.9900000
Bromomethane	LINR	3.806e-002	2.31863844		0.9951529	0.9900000
Carbon Disulfide	AVRG		1.74293069		11.174	20.000
Carbon Tetrachloride	AVRG		0.36075188		11.334	20.000
Chlorobenzene	AVRG		1.03196120		13.892	20.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812011

Instrument ID: VOA9 Calibration Date(s): 11/13/18 11/13/18

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1528

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroethane	AVRG		0.52169853		13.844	20.000
Chloroform	AVRG		1.15119170		11.977	20.000
Chloromethane	LINR	4.59e-003	1.49116761		0.9990790	0.9900000
cis-1,2-Dichloroethene	AVRG		0.70849189		10.610	20.000
Dibromochloromethane	AVRG		0.31638584		12.330	20.000
Dichlorodifluoromethane	LINR	2.002e-002	1.32602499		0.9979384	0.9900000
Ethylbenzene	AVRG		0.52179627		10.571	20.000
Hexachlorobutadiene	2ORDR	5.037e-003	3.37955533	-0.5103543	0.9988978	0.9900000
Isopropylbenzene	AVRG		1.51953048		8.449	20.000
m,p-Xylenes	AVRG		0.64297054		11.093	20.000
Methylene Chloride	LINR	-1.4e-002	1.58950727		0.9987446	0.9900000
n-Butylbenzene	2ORDR	7.523e-003	0.38680994	-2.96e-003	0.9992256	0.9900000
n-Propylbenzene	AVRG		3.94550864		8.657	20.000
Naphthalene	AVRG		2.96078148		8.567	20.000
o-Xylene	AVRG		0.64354428		5.210	20.000
sec-Butylbenzene	AVRG		3.28524136		10.228	20.000
Styrene	AVRG		1.08640200		5.880	20.000
Vinyl Chloride	LINR	1.016e-002	1.21438330		0.9982930	0.9900000
1,2,3-Trichloropropane	AVRG		1.23587941		7.613	20.000
p-Isopropyltoluene	AVRG		2.73812048		9.374	20.000
1,2-Dibromo-3-Chloropropane	2ORDR	2.08e-002	5.38876079	-0.2033476	0.9995316	0.9900000
1,2-Dichloroethane-d4	LINR	-3.55e-002	1.36996396		0.9980055	0.9900000
Dibromofluoromethane	LINR	-2.51e-002	1.78351549		0.9987270	0.9900000
Toluene-d8	LINR	-3.42e-002	0.80924260		0.9991601	0.9900000
4-Bromofluorobenzene	LINR	-2.13e-002	2.06564990		0.9996344	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111301.D

Date : 13-NOV-2018 10:58

Client ID: BFB

Instrument: VOA9.i

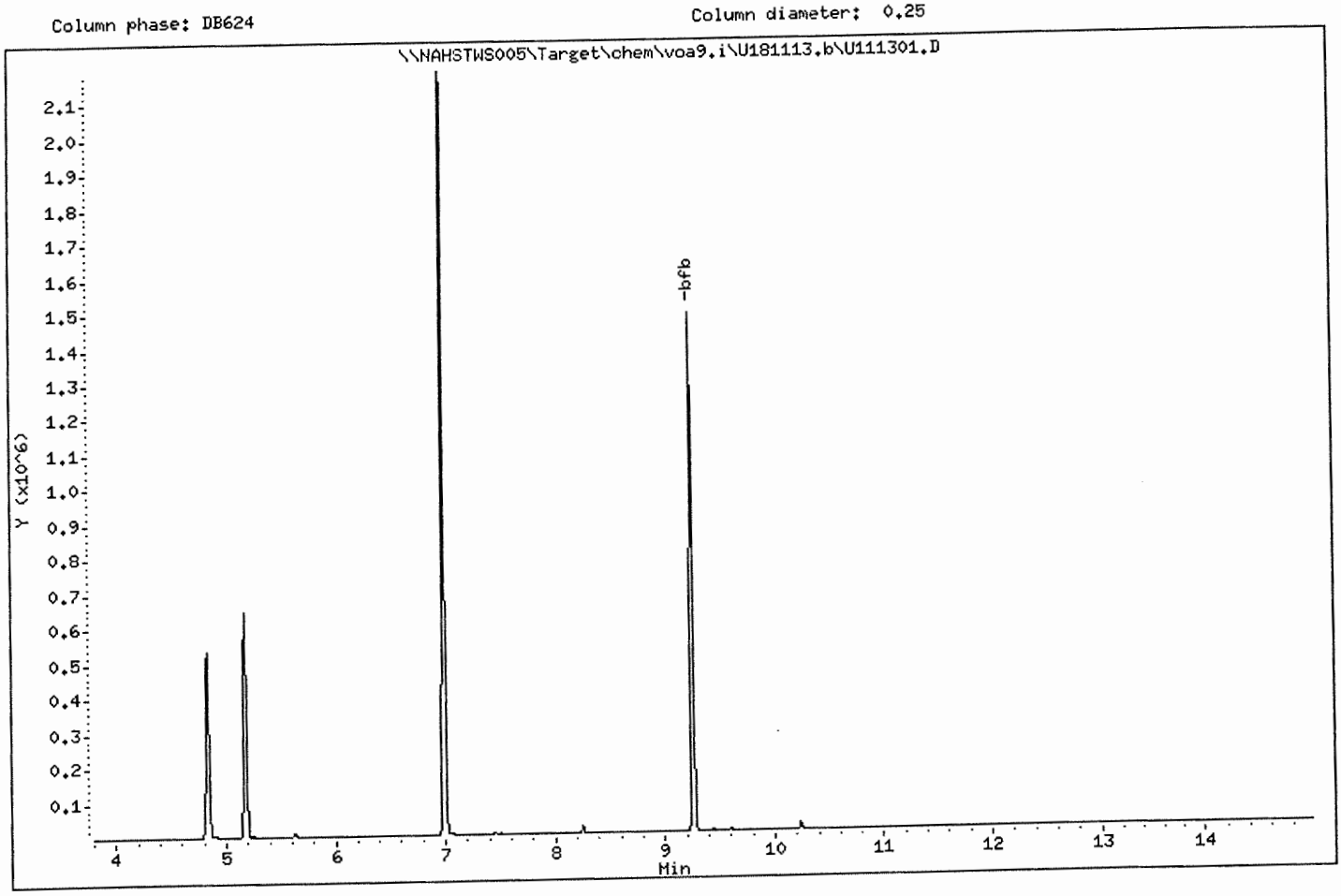
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111301.D

Date : 13-NOV-2018 10:58

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

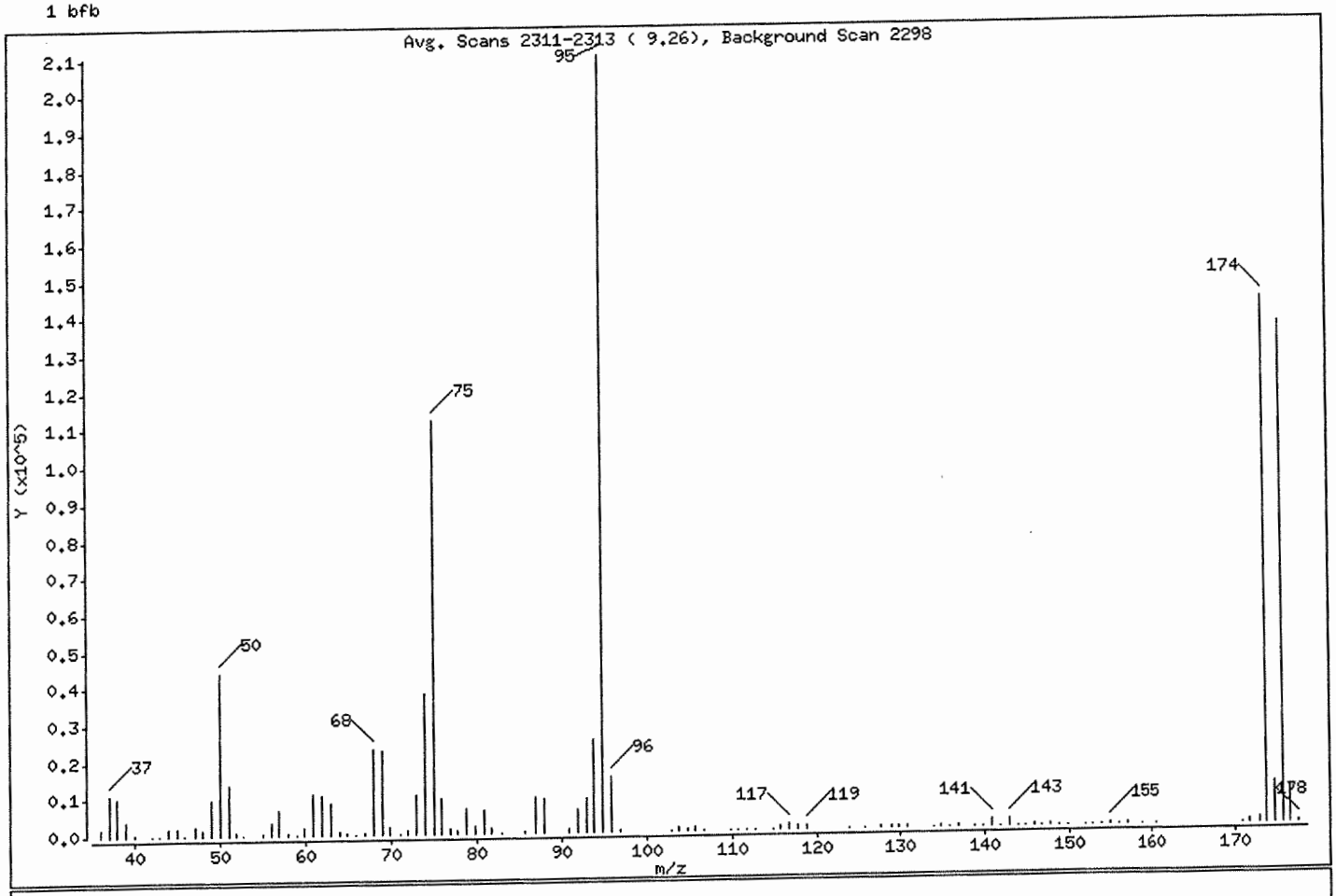
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.93
75	30.00 - 60.00% of mass 95	53.26
96	5.00 - 9.00% of mass 95	7.05
173	Less than 2.00% of mass 174	0.64 (0.95)
174	Greater than 50.00% of mass 95	67.71
175	5.00 - 9.00% of mass 174	5.22 (7.70)
176	95.00 - 101.00% of mass 174	64.61 (95.42)
177	5.00 - 9.00% of mass 176	4.79 (7.41)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111301.D

Date : 13-NOV-2018 10:58

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: U111301.D

Spectrum: Avg. Scans 2311-2313 (9.26), Background Scan 2298

Location of Maximum: 94.95

Number of points: 108

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2069	65.90	90	102.90	106	142.80	1933
37.00	11082	66.90	610	103.80	947	143.90	71
38.00	10274	67.90	23360	104.80	338	144.70	179
39.00	3978	69.00	22944	105.80	973	145.70	325
40.00	381	69.90	1893	106.80	216	146.60	113
42.00	60	71.00	66	109.80	116	147.70	442
42.90	178	71.90	1065	110.70	166	148.60	101
43.90	1871	72.90	10562	111.80	126	149.70	180
45.00	2116	73.90	38432	112.70	189	151.80	82
45.90	123	75.00	112016	114.80	219	152.70	121
47.00	2495	75.90	9870	115.70	740	153.70	104
48.00	1426	76.90	1360	116.70	1240	154.70	552
49.00	9563	77.80	949	117.80	730	155.80	58
50.00	44016	78.80	6592	118.80	907	156.70	431
51.00	13714	79.80	1796	123.80	120	158.70	192
51.90	746	80.80	6503	125.70	57	160.60	164
52.70	59	81.80	1400	127.70	639	170.70	72
55.00	590	82.90	197	128.90	349	171.70	746
56.00	3508	85.70	252	129.70	626	172.80	1355
57.00	6688	86.90	9661	130.80	249	173.70	142400
57.90	351	87.90	8961	133.90	56	174.70	10971
58.90	116	90.80	826	134.70	394	175.70	135872
59.90	2009	91.90	6125	135.70	82	176.70	10067
60.90	11206	92.90	9048	136.70	337	177.70	296
62.00	10418	93.90	25168	138.70	60		
63.00	8677	94.90	210304	139.60	79		
63.90	848	95.90	14829	140.70	1870		
64.90	610	96.90	545	141.80	179		

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111302.D Page 1
Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111302.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 13-NOV-2018 11:23
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD000.25;VSTD000.25;1;1;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 11:23 Cal File: U111302.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

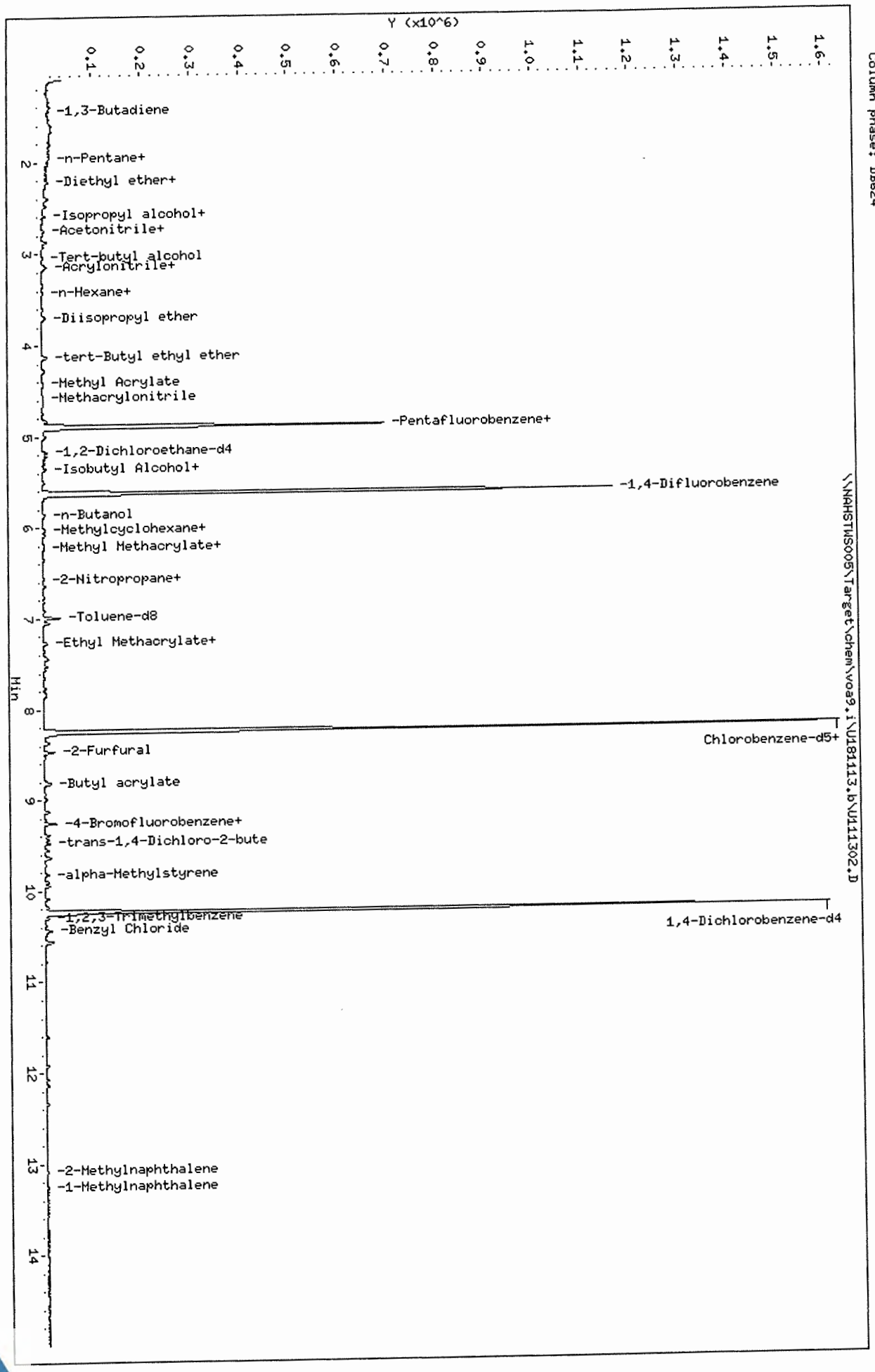
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	421654	50.0000		
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	823585	50.0000		
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	757808	50.0000		
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	346489	50.0000		
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	4873	0.25000		(a)
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	7659	0.25000		(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	19596	0.25000		(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	7125	0.25000		(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



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Date : 13-NOV-2018 11:23
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111303.D Page 1
Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111303.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 13-NOV-2018 11:47
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD000.5;VSTD000.5;1;2;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 11:23 Cal File: U111302.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

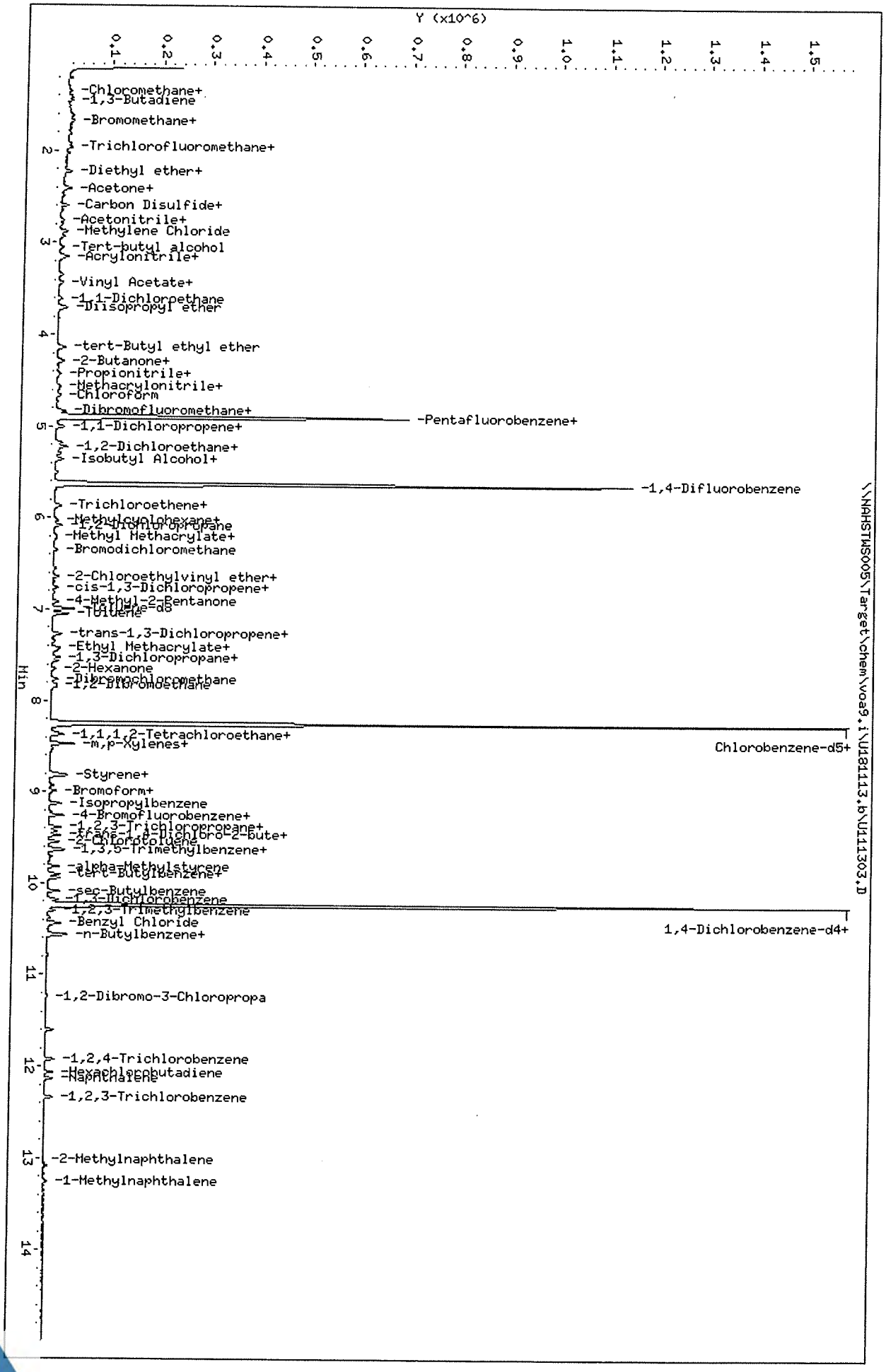
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	421285	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	817288	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	753573	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	345123	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	5664	0.50000	(a)
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	8937	0.50000	(a)
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	23871	0.50000	(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	8554	0.50000	0.10(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	2690	0.50000	0.56(a)
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	4410	0.50000	0.59(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	5102	0.50000	0.62(aM)
138 Freon TF	101	2.409	2.409	(0.492)	2580	0.50000	0.61(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	3095	0.50000	0.64(a)
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	6173	0.50000	0.63(a)
11 1,1-Dichloroethene	96	2.409	2.409	(0.492)	3102	0.50000	0.65(a)
32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	4812	0.50000	0.63(a)
93 1,2,3-Trichlorobenzene	180	12.339	12.339	(1.205)	4127	0.50000	0.63(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	4767	0.50000	0.55(a)
90 1,2,4-Trichlorobenzene	180	11.927	11.927	(1.165)	4348	0.50000	0.64(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	11460	0.50000	0.59(a)
89 1,2-Dibromo-3-Chloropropane	155	11.237	11.237	(1.098)	479	0.50000	1.41(aM)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	3298	0.50000	0.59(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111303.D Page 2
Report Date: 24-Jan-2019 18:55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	7152	0.50000	0.64(a)
33	1,2-Dichloroethane	62	5.258	5.258	(0.934)	5619	0.50000	0.65(aM)
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	3429	0.50000	0.58(a)
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	10952	0.50000	0.59(a)
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	6957	0.50000	0.64(a)
54	1,3-Dichloropropane	76	7.567	7.567	(0.917)	6595	0.50000	0.64(a)
84	1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	7995	0.50000	0.71(a)
26	2,2-Dichloropropane	77	4.279	4.279	(0.874)	3772	0.50000	0.63(a)
24	2-Butanone	43	4.354	4.354	(0.889)	3689	1.00000	1.24(a)
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	10726	0.50000	0.63(a)
52	2-Hexanone	43	7.649	7.649	(0.927)	4658	1.00000	1.06(a)
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	12130	0.50000	0.62(a)
82	p-Isopropyltoluene	119	10.213	10.213	(0.998)	11138	0.50000	0.58(a)
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	6749	1.00000	1.07(a)
10	Acetone	43	2.487	2.487	(0.508)	5795	1.00000	(a)
37	Benzene	78	5.220	5.220	(0.927)	14635	0.50000	0.64(a)
74	Bromobenzene	156	9.381	9.381	(0.917)	3648	0.50000	0.64(a)
29	Bromochloromethane	128	4.560	4.560	(0.931)	1212	0.50000	0.48(a)
39	Bromodichloromethane	83	6.348	6.348	(1.128)	4075	0.50000	0.60(aM)
66	Bromoform	173	8.988	8.988	(1.090)	1478	0.50000	1.60(Ta)
6	Bromomethane	94	1.678	1.678	(0.343)	2224	0.50000	2.51(a)
19	Carbon Disulfide	76	2.596	2.596	(0.530)	18415	1.00000	1.25(a)
34	Carbon Tetrachloride	117	4.995	4.995	(0.887)	3377	0.50000	0.57(a)
59	Chlorobenzene	112	8.275	8.275	(1.003)	10477	0.50000	0.67(a)
7	Chloroethane	64	1.760	1.760	(0.359)	2912	0.50000	0.66(aM)
28	Chloroform	83	4.662	4.662	(0.952)	6289	0.50000	0.64(a)
3	Chloromethane	50	1.348	1.348	(0.275)	4145	0.50000	0.96(a)
27	cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	3748	0.50000	0.62(a)
46	cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	4205	0.50000	0.49(a)
55	Dibromochloromethane	129	7.758	7.758	(0.940)	2561	0.50000	0.53(a)
44	Dibromomethane	93	6.191	6.191	(1.100)	2223	0.50000	0.60(aM)
2	Dichlorodifluoromethane	85	1.213	1.213	(0.248)	4116	0.50000	1.64(a)
61	Ethylbenzene	106	8.373	8.373	(1.015)	4972	0.50000	0.63(a)
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	2273	0.50000	1.36(a)
67	Isopropylbenzene	105	9.126	9.126	(1.106)	13902	0.50000	0.60(a)
62	m,p-Xylenes	106	8.474	8.474	(1.027)	12504	1.00000	1.29(a)
17	Methylene Chloride	84	2.877	2.877	(0.587)	5188	0.50000	0.27(a)
87	n-Butylbenzene	91	10.558	10.558	(1.031)	11934	0.50000	1.04(a)
73	n-Propylbenzene	91	9.475	9.475	(0.926)	16592	0.50000	0.60(a)
92	Naphthalene	128	12.133	12.133	(1.185)	10205	0.50000	0.49(a)
63	o-Xylene	106	8.811	8.811	(1.068)	5464	0.50000	0.56(aH)
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	13984	0.50000	0.61(a)
64	Styrene	104	8.826	8.826	(1.070)	9048	0.50000	0.55(a)
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	9624	0.50000	0.60(a)
56	Tetrachloroethene	164	7.526	7.526	(0.912)	2536	0.50000	0.64(a)
50	Toluene	91	7.049	7.049	(0.855)	15656	0.50000	0.65(a)
20	trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	3270	0.50000	0.62(a)
51	trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	3218	0.50000	1.84(a)
38	Trichloroethene	130	5.865	5.865	(1.042)	3600	0.50000	0.64(a)
8	Trichlorofluoromethane	101	1.963	1.963	(0.401)	5229	0.50000	0.62(a)
5	Vinyl Chloride	62	1.426	1.426	(0.291)	4801	0.50000	1.20(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.


Y (x10^6)
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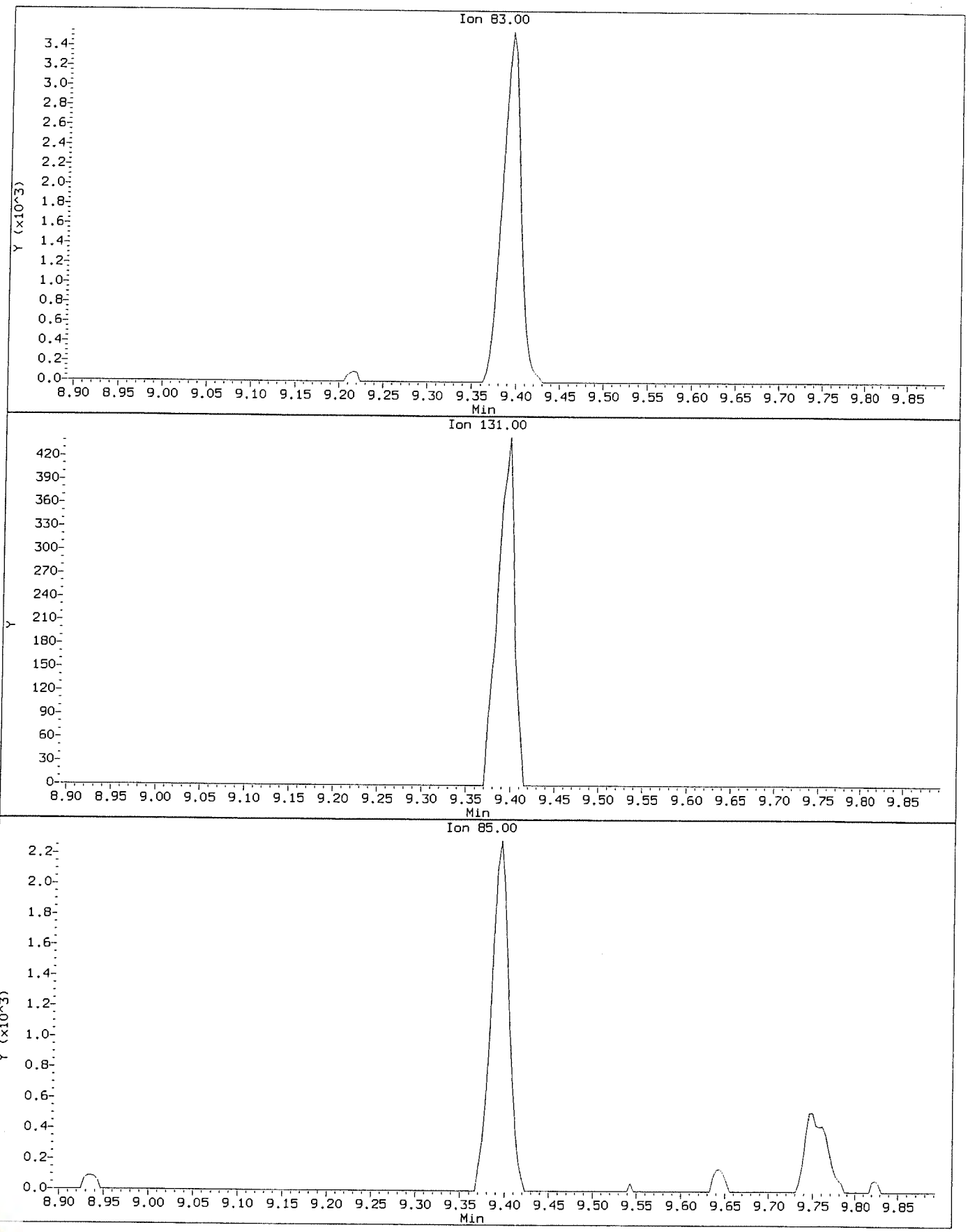
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
Min
2
3
4
5
6
7
8
9
10
11
12
13
14
-Chloromethane+
-1,3-Butadiene
-Bromomethane+
-Trichlorofluoromethane+
-Diethyl ether+
-Acetone+
-Carbon Disulfide+
-Acetonitrile+
-Methylene Chloride
-Tert-butyl alcohol
-Acrylonitrile+
-Vinyl Acetate+
-1,1-Dichloroethane
-Diisopropyl ether
-tert-Butyl ethyl ether
-2-Butanone+
-Propionitrile+
-Methacrylonitrile+
-Chloroform
-Dibromofluoromethane+
-1,1-Dichloropropene+
-1,2-Dichloroethane+
-Isobutyl Alcohol+
-Trichloroethene+
-Methylcyclohexane+
-1,2-Dichloropropane
-Methyl Methacrylate+
-Bromodichloromethane
-2-Chloroethylvinyl ether+
-cis-1,3-Dichloropropene+
-4-Methyl-2-Pentanone
-Toluene-d8
-Toluene
-trans-1,3-Dichloropropene+
-Ethyl Methacrylate+
-1,3-Dichloropropane+
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane
-1,1,1,2-Tetrachloroethane+
-m,p-Xylenes+
-Styrene+
-Bromoform+
-Isopropylbenzene
-4-Bromofluorobenzene+
-1,2,3-Trichloropropane+
-trans-1,4-Dichloro-2-bute+
-2-Chlorotoluene
-1,3,5-Trimethylbenzene+
-alpha-Methylstyrene
-tert-Butylbenzene+
-sec-Butylbenzene
-1,3-Dichlorobenzene
-1,2,3-Trimethylbenzene
-Benzyl Chloride
-n-Butylbenzene+
-1,2-Dibromo-3-Chloropropa
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
-1-Methylnaphthalene
-Pentafluorobenzene+
-1,4-Difluorobenzene
Chlorobenzene-d5+
1,4-Dichlorobenzene-d4+
\\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111303.D
Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111303.D
Date : 13-NOV-2018 11:47
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

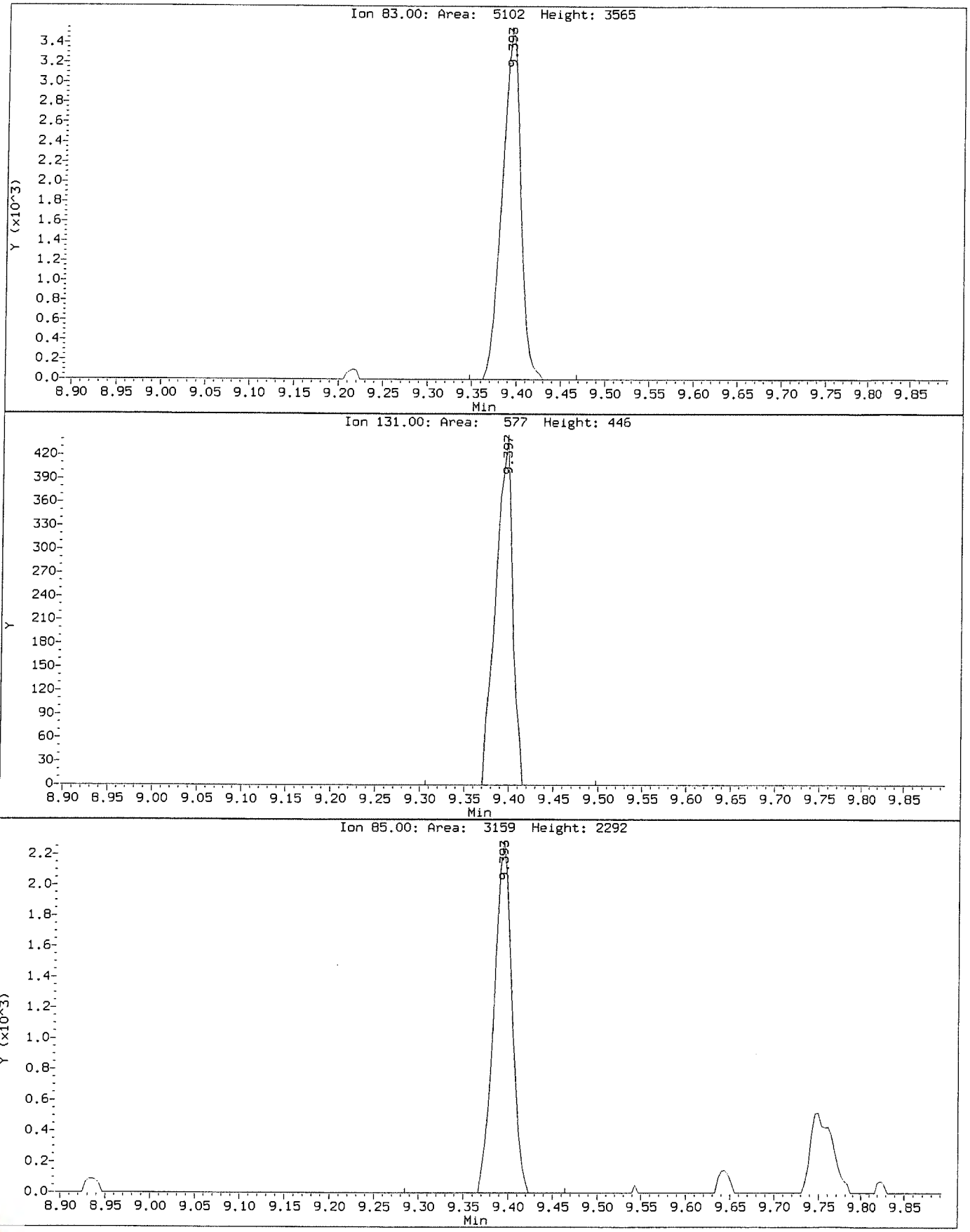
Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\Before\U111303.D
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



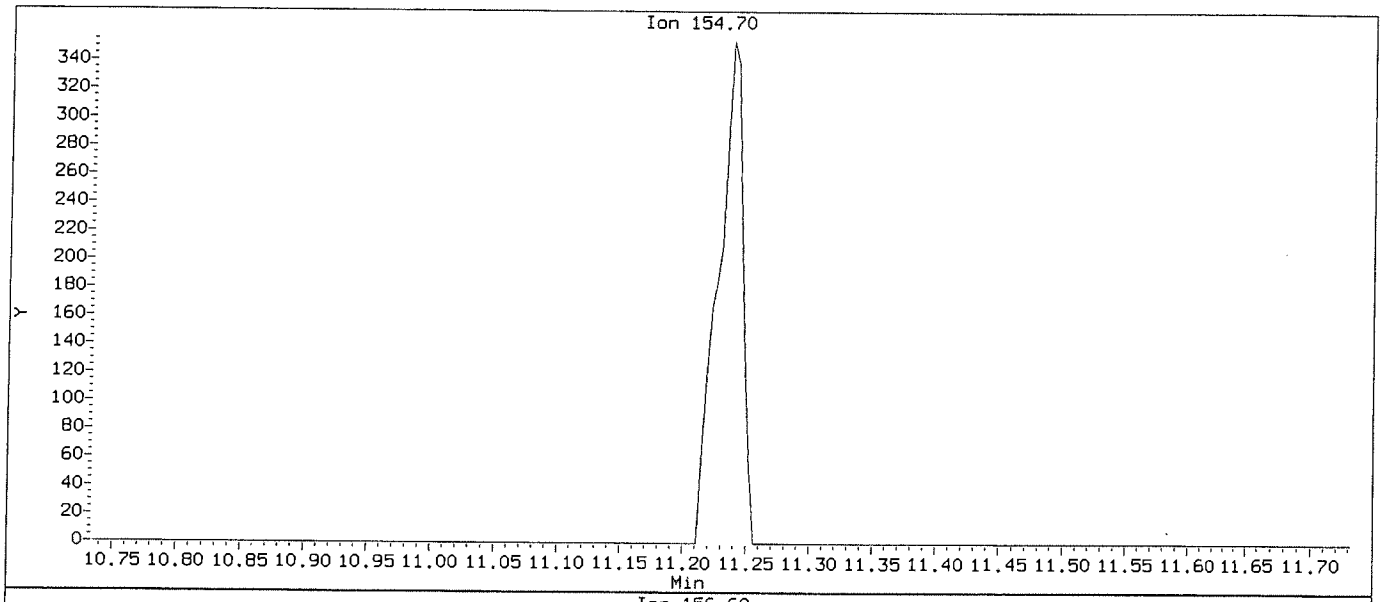
Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111303.D
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

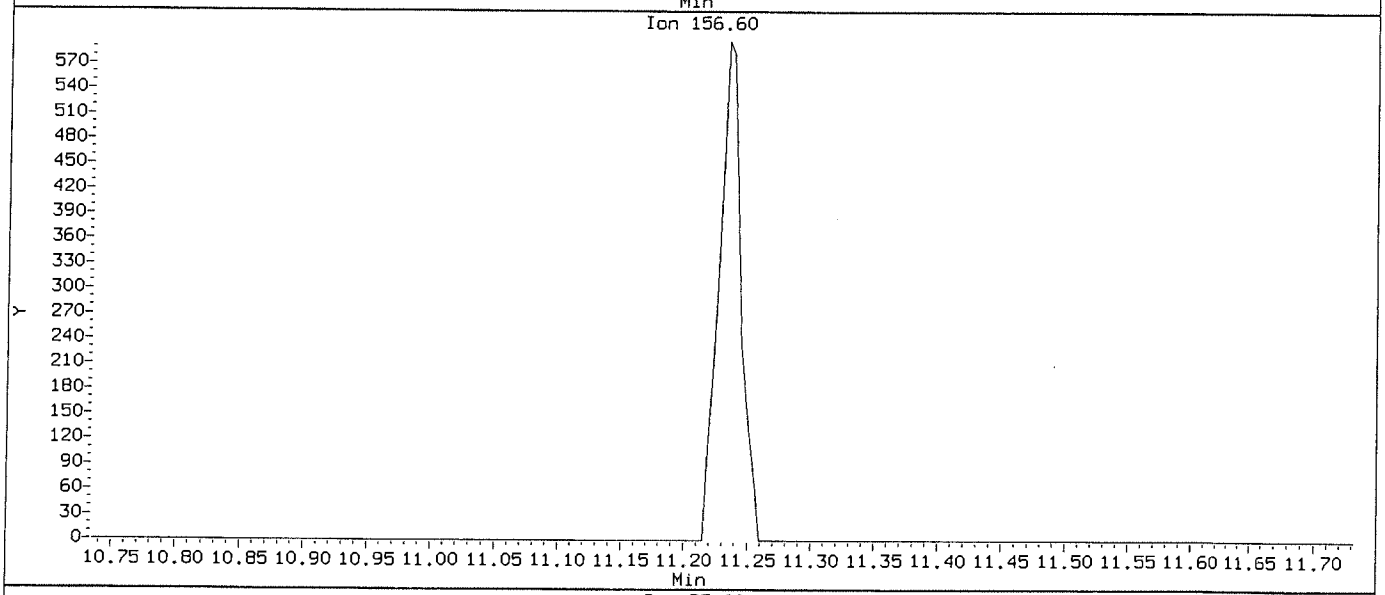
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

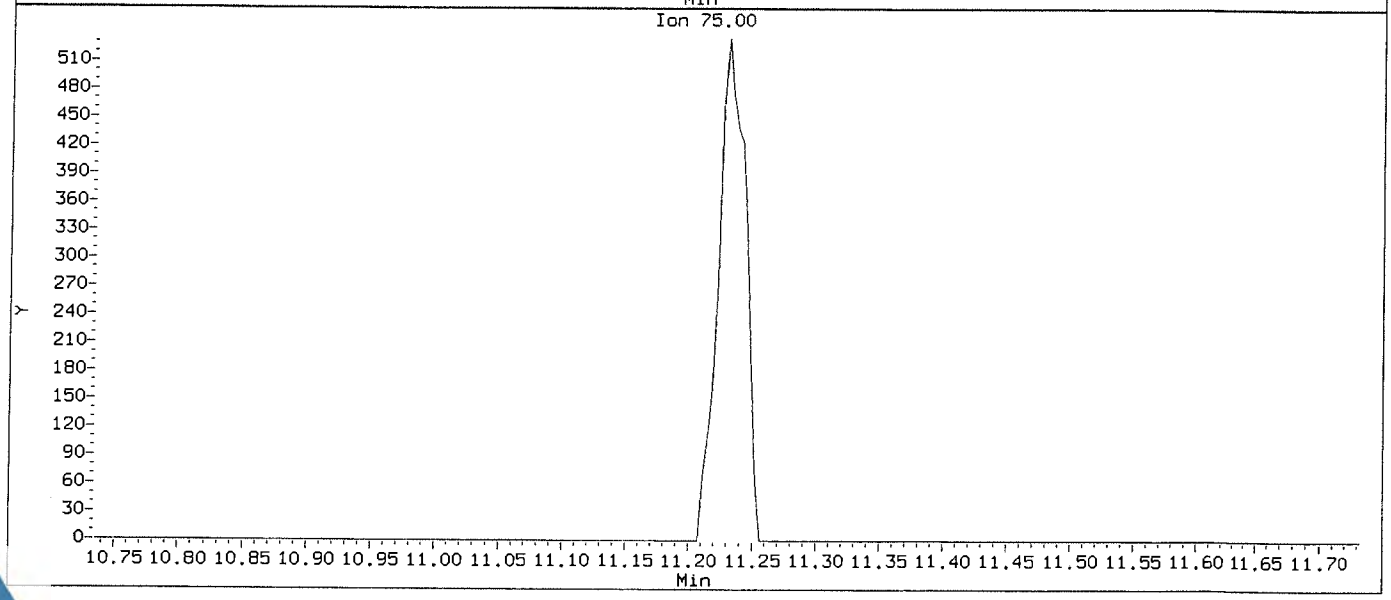


Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\Before\U111303.D
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8







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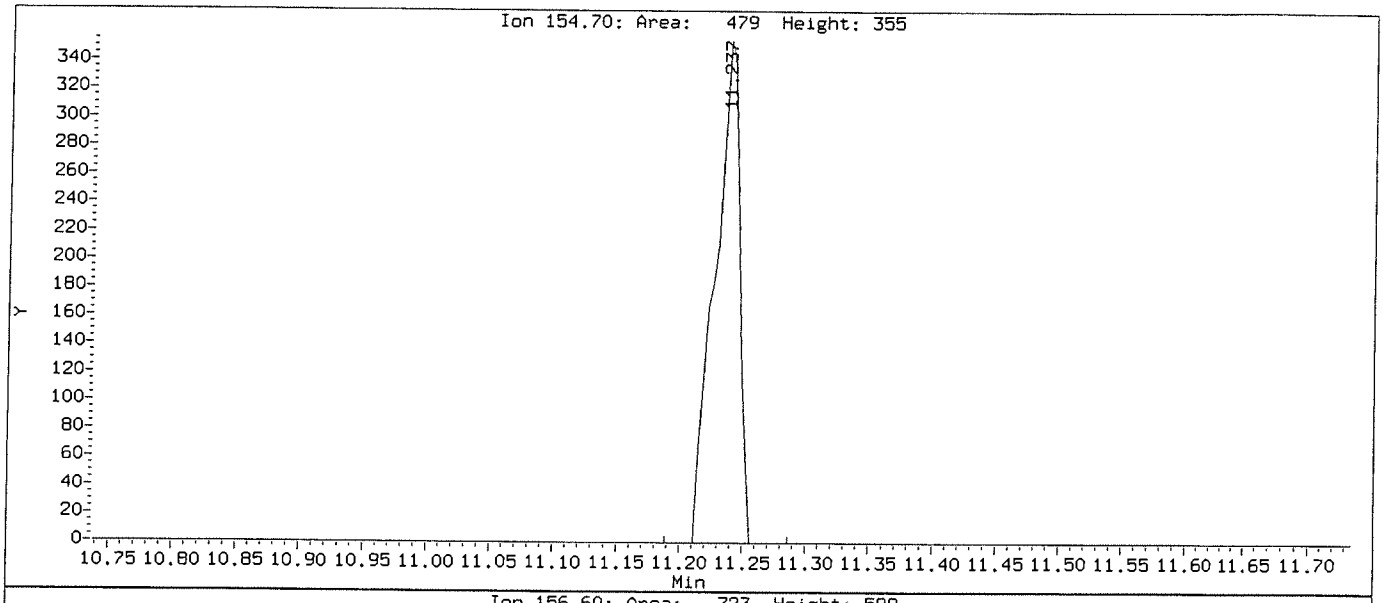
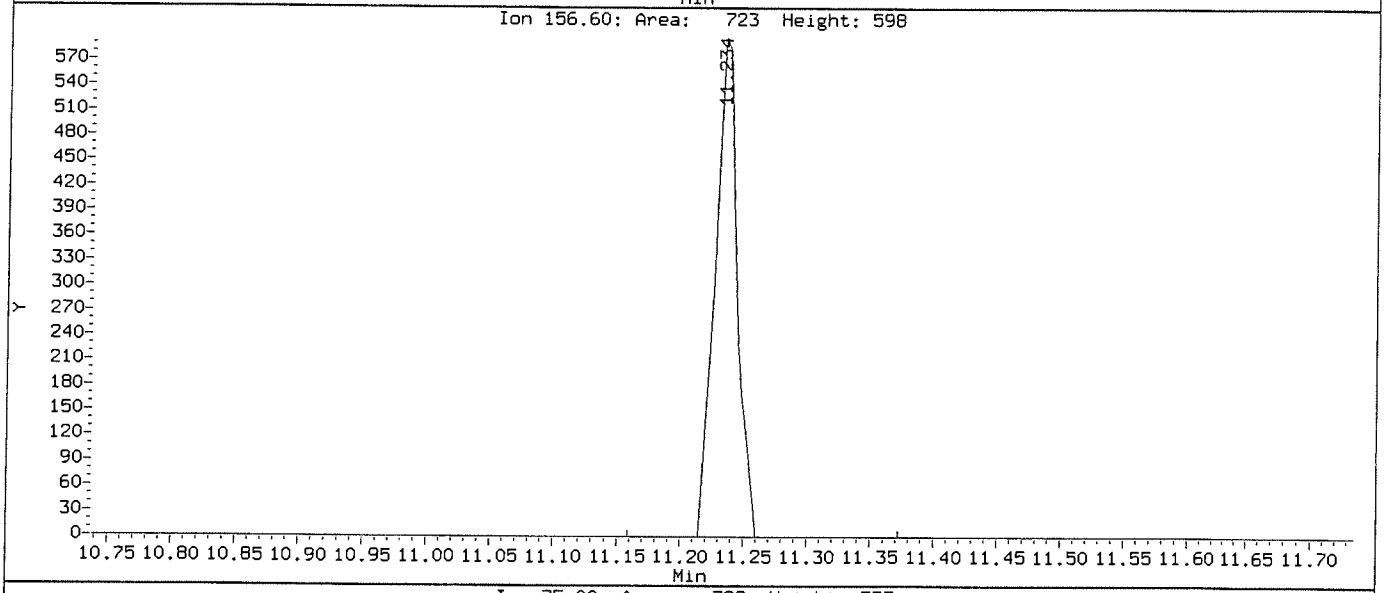
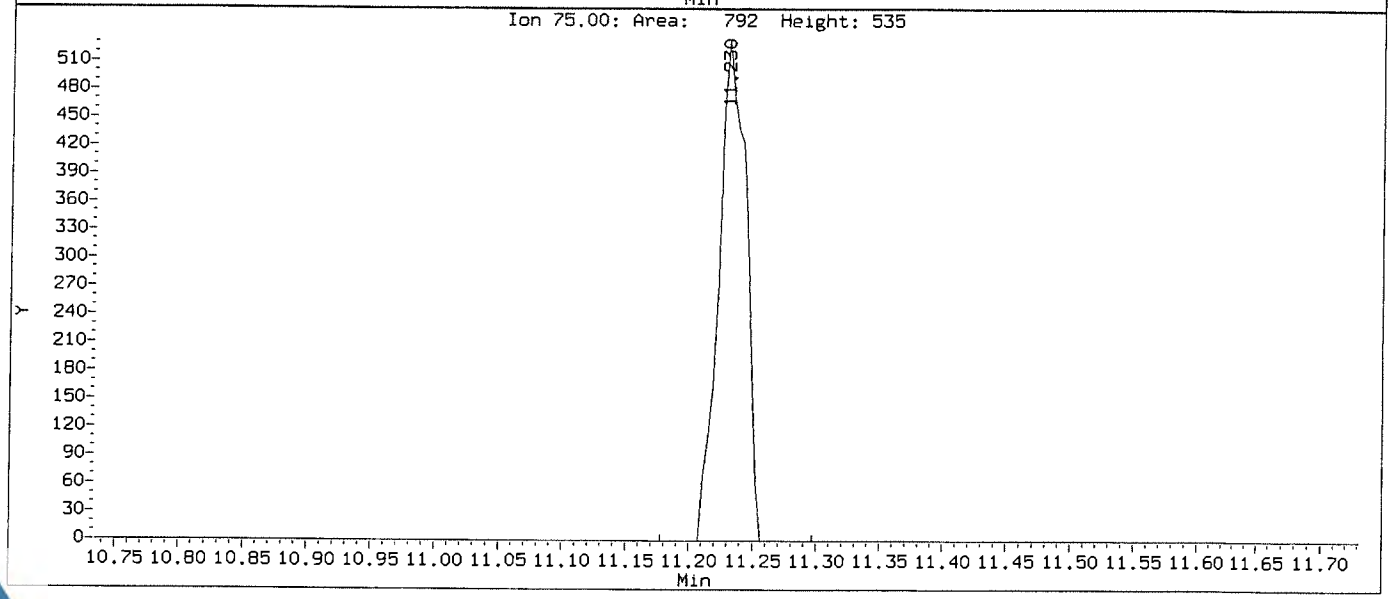
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8







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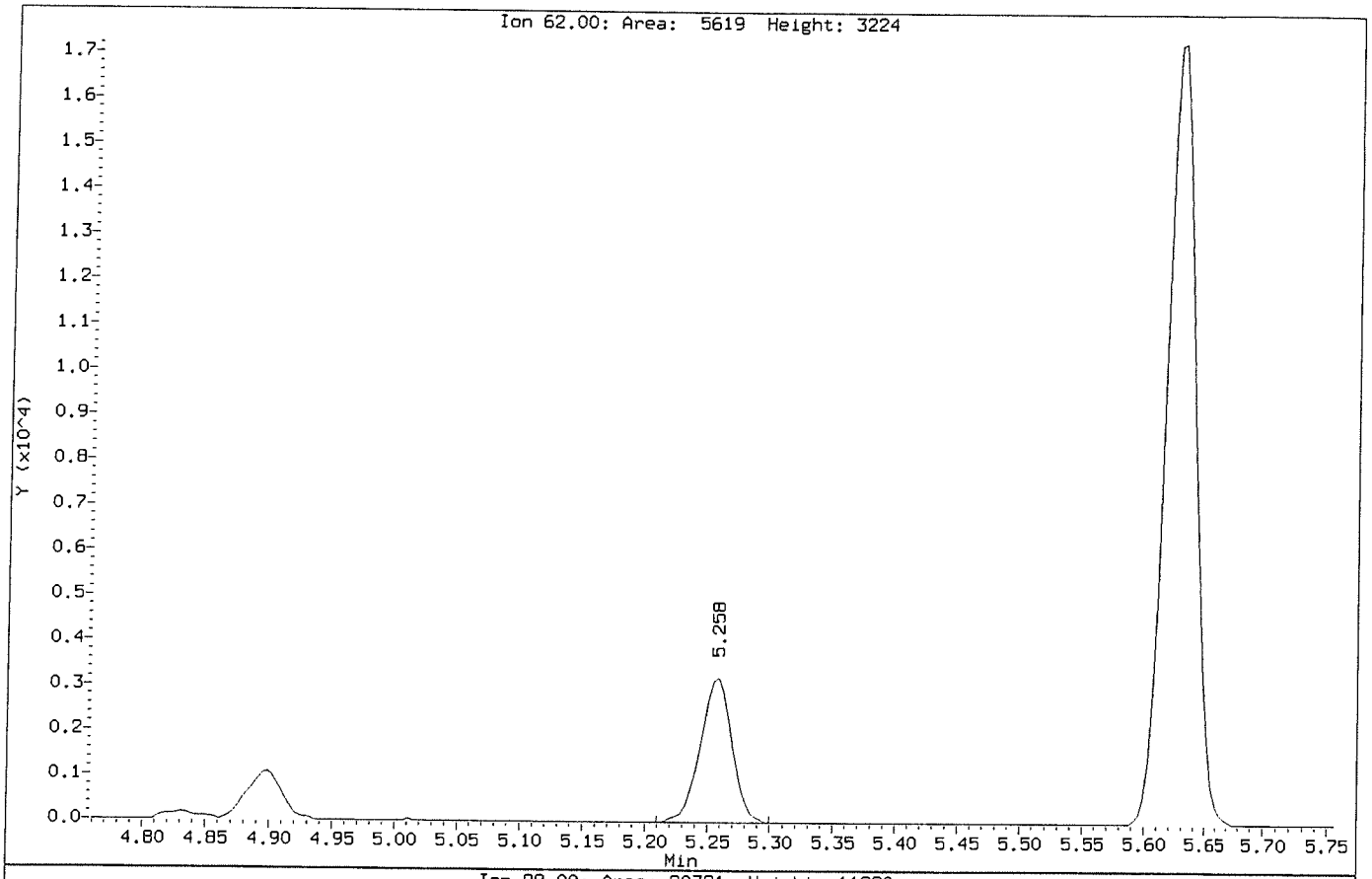
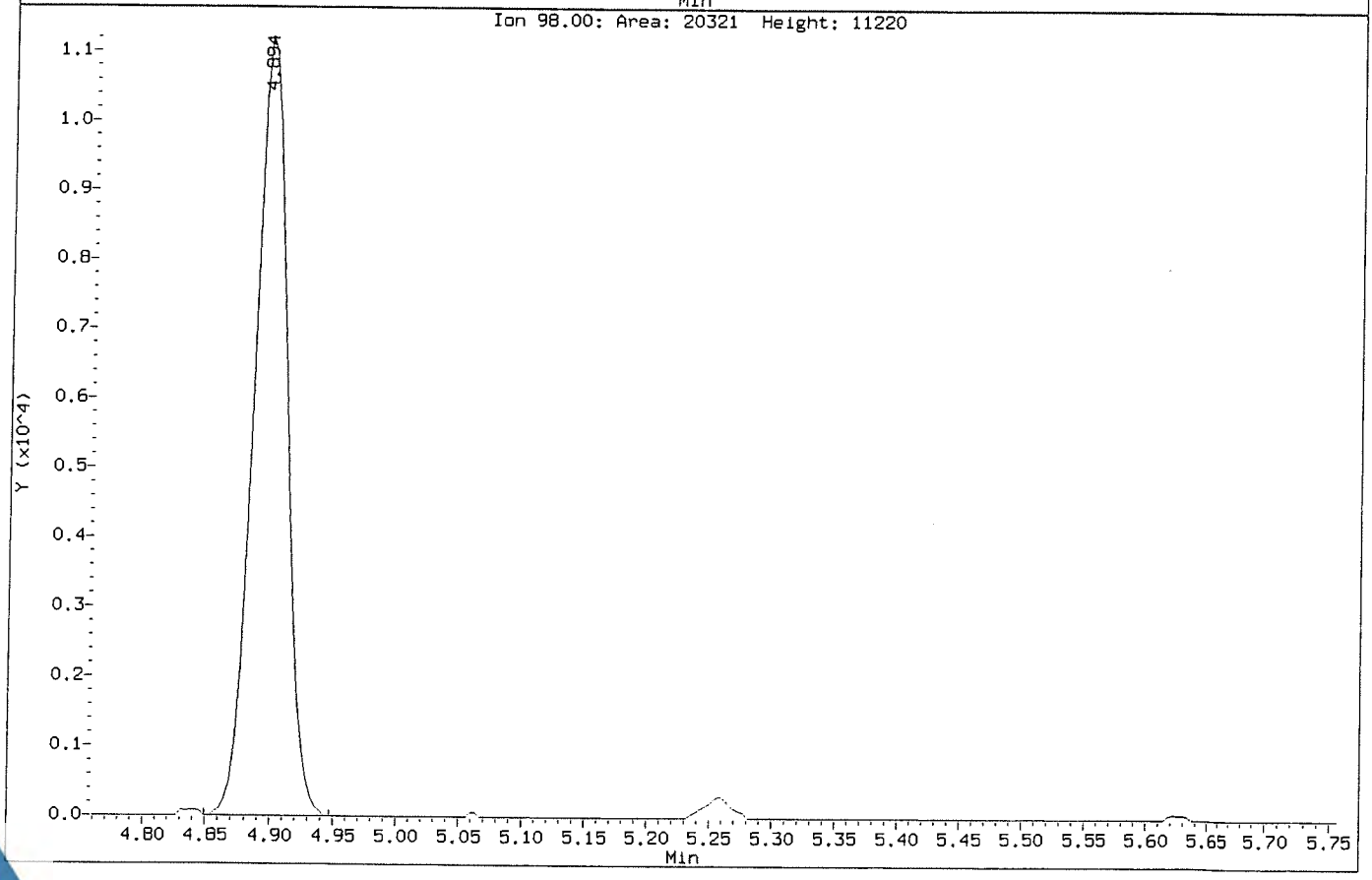
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloroethane
CAS Number: 107-06-2





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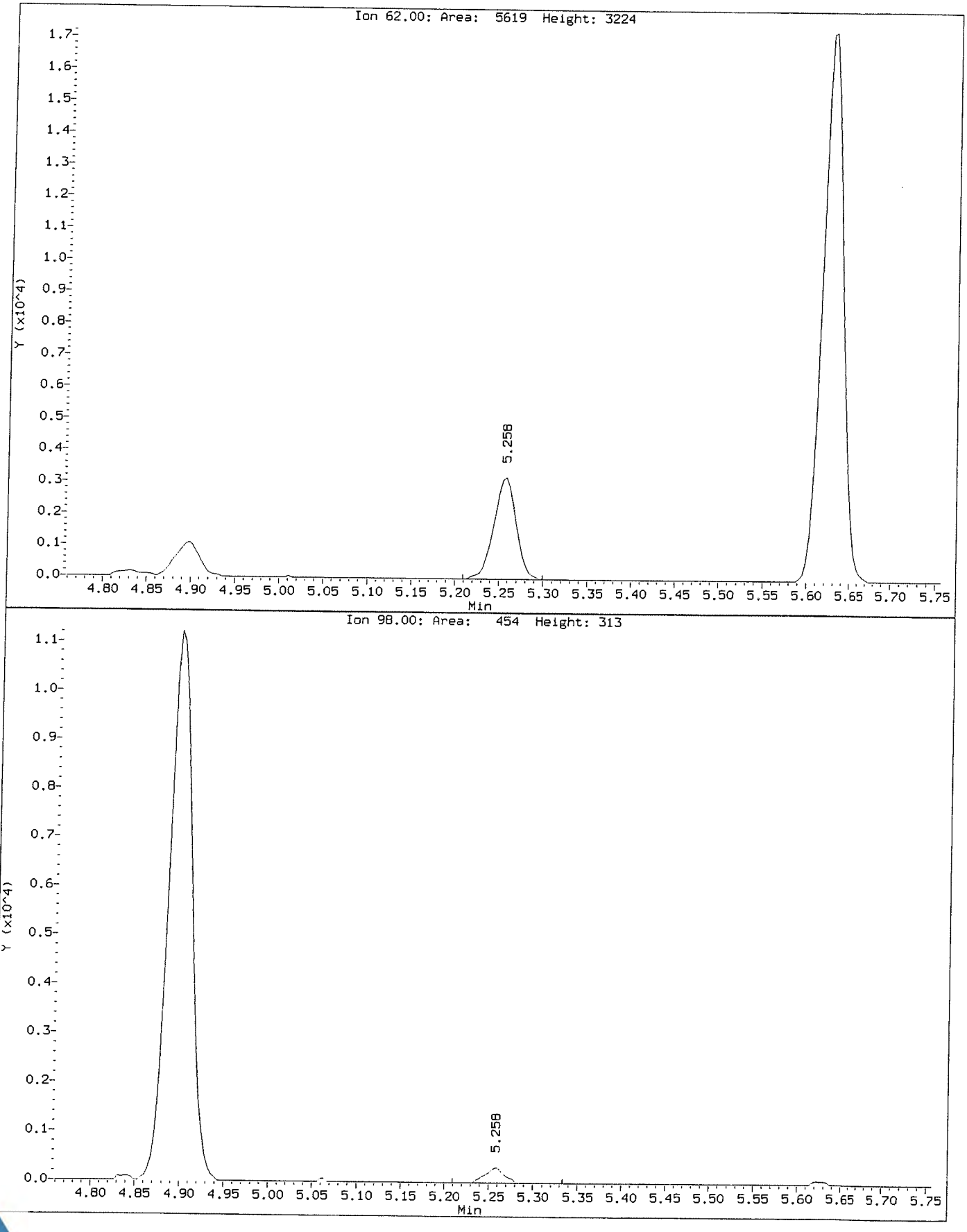
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloroethane
CAS Number: 107-06-2



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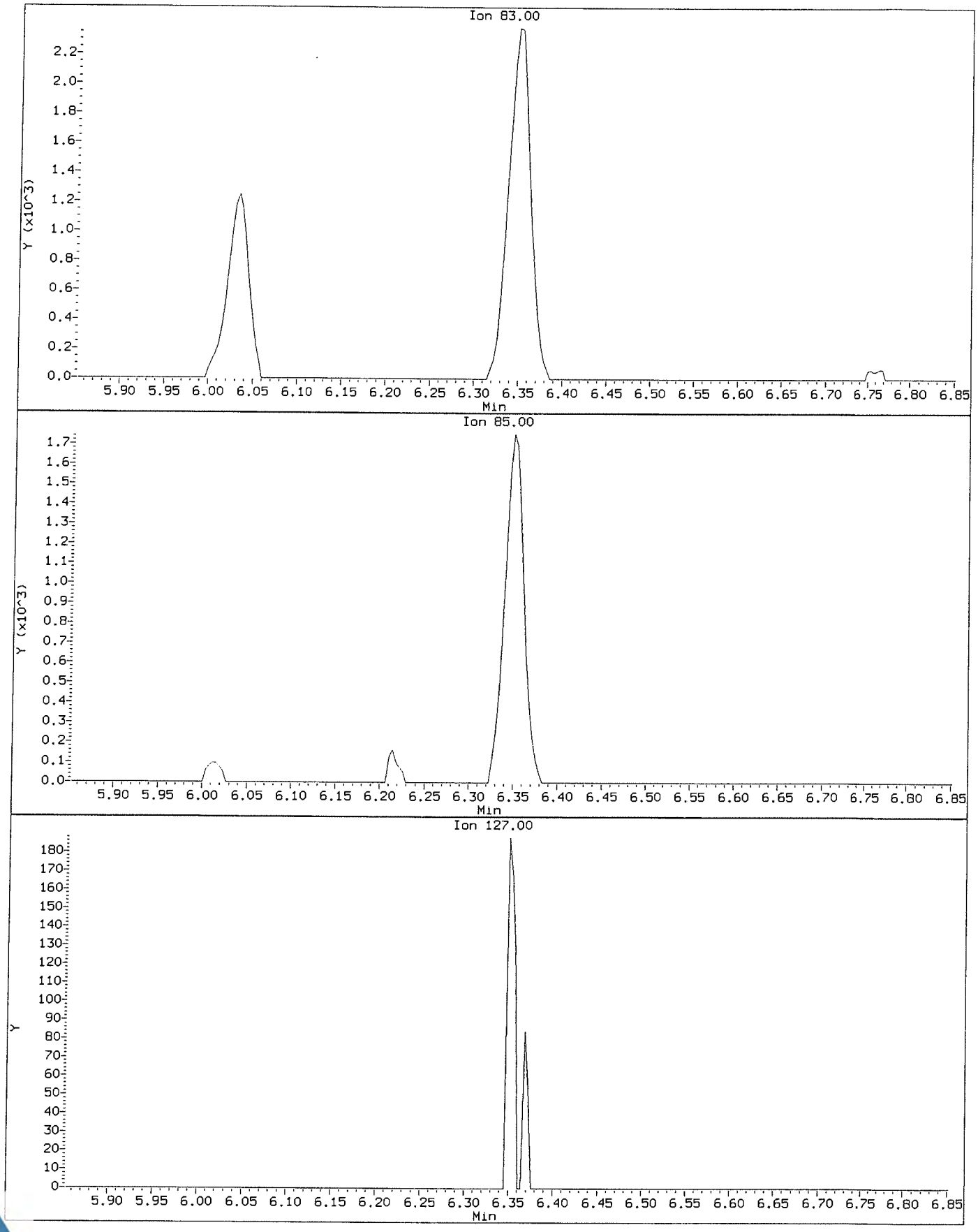
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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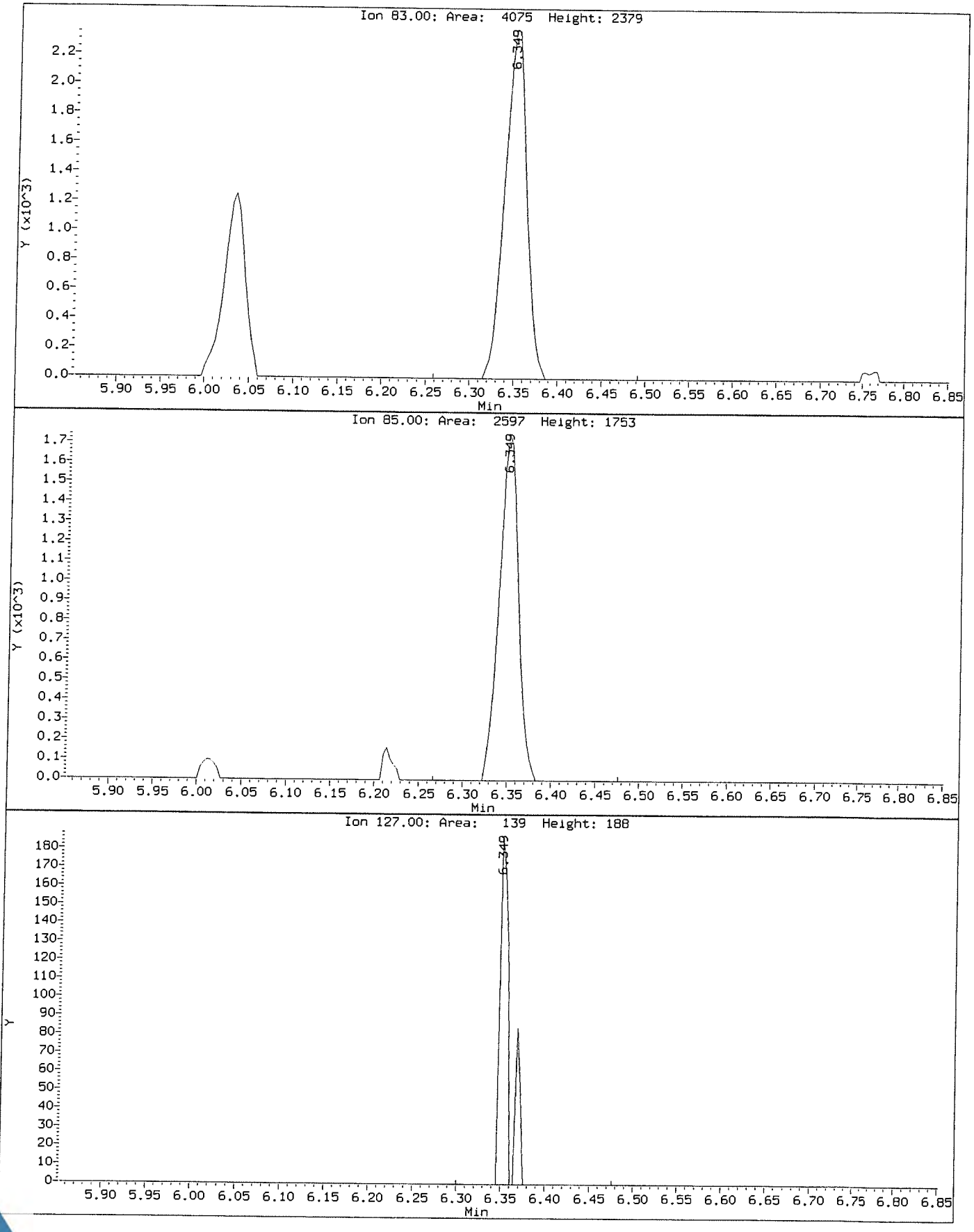
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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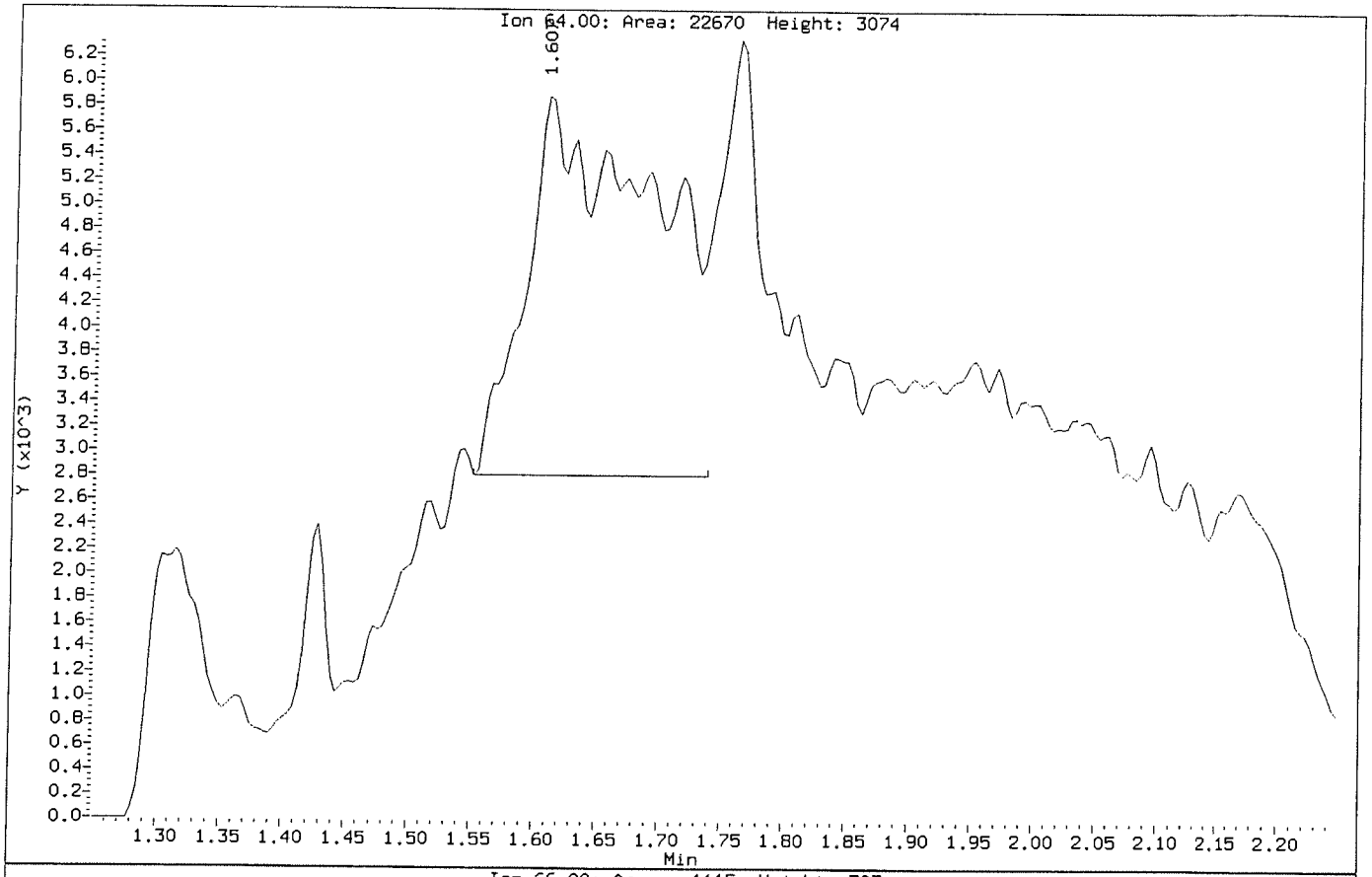
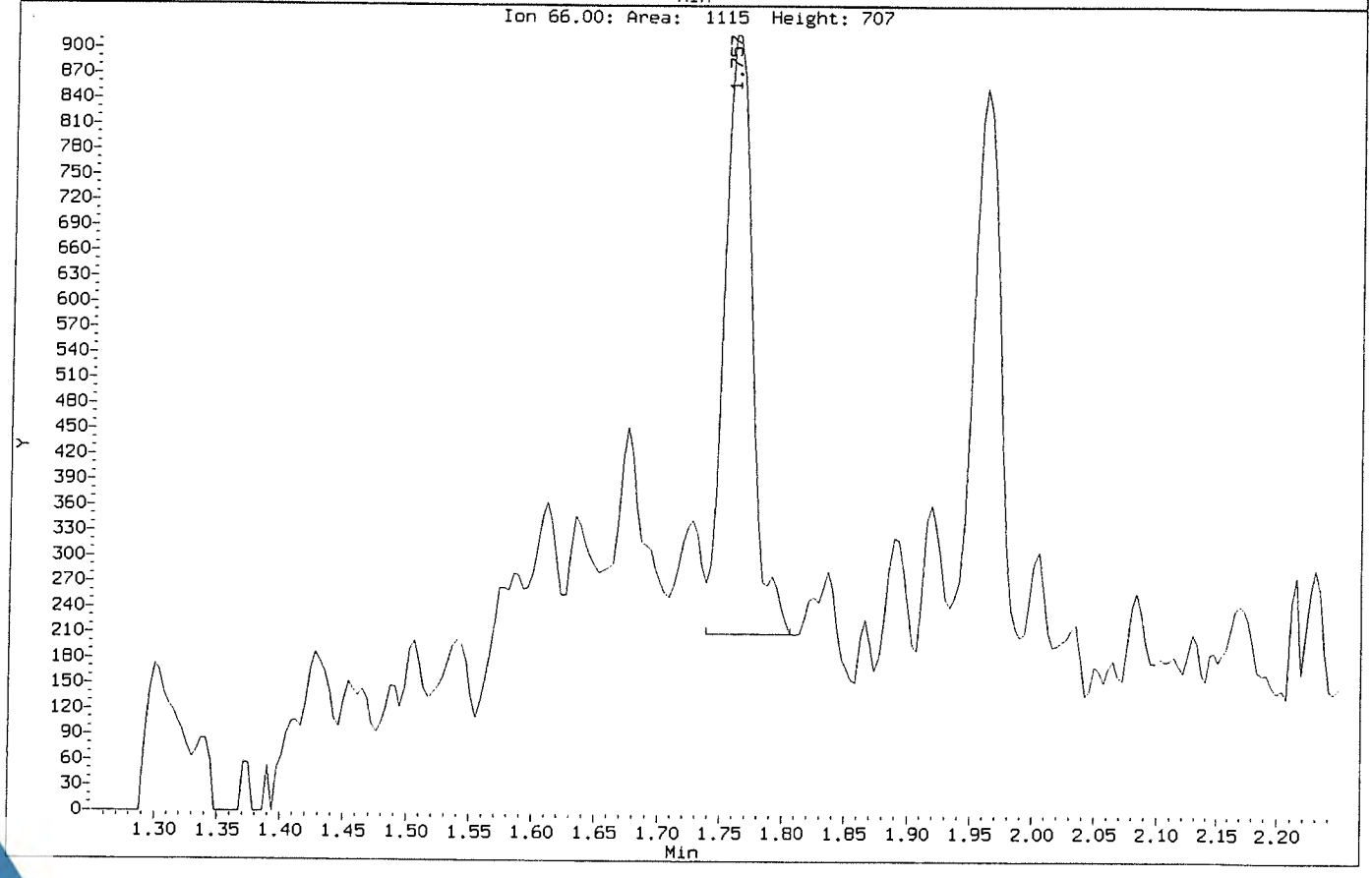
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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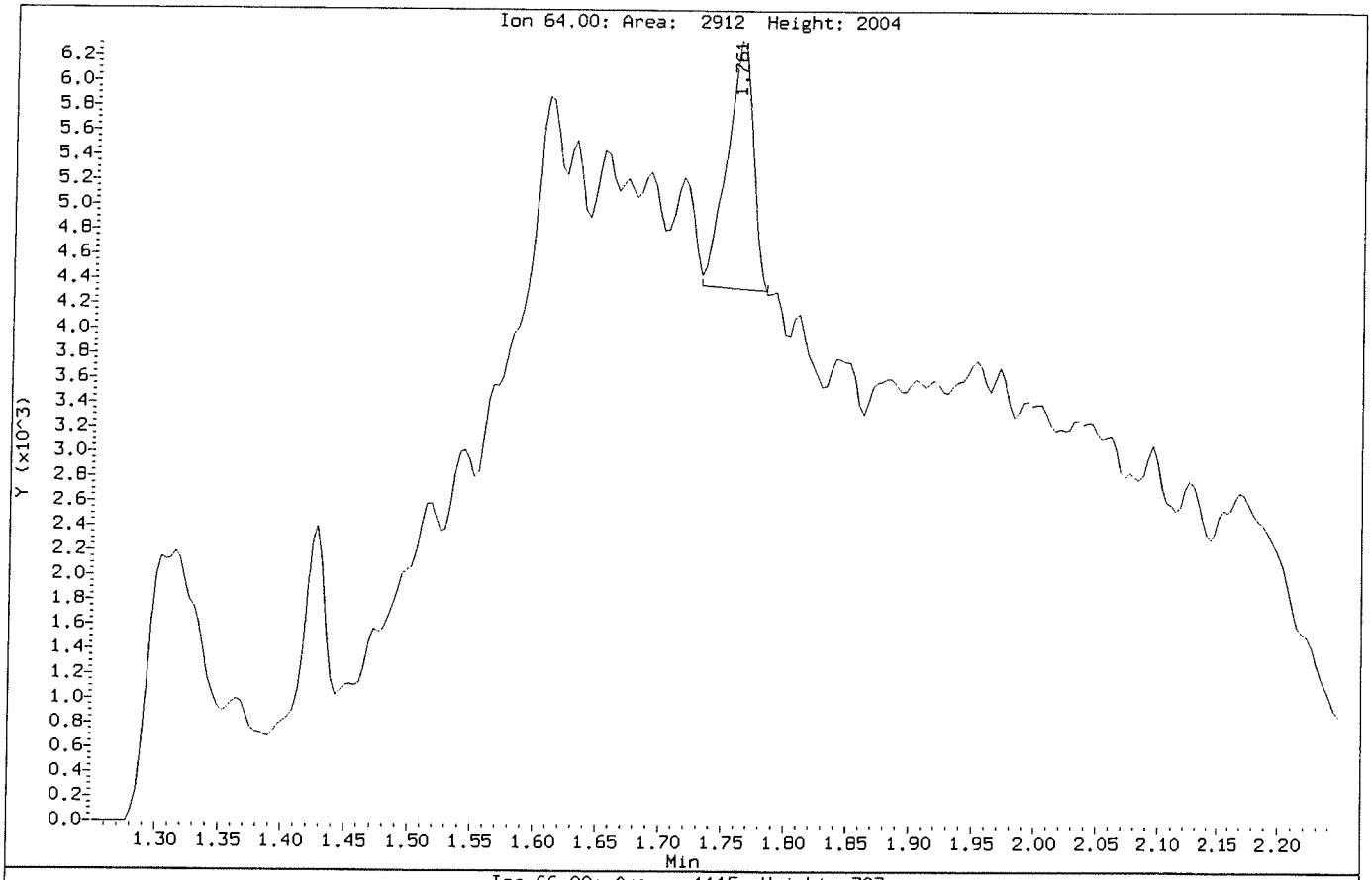
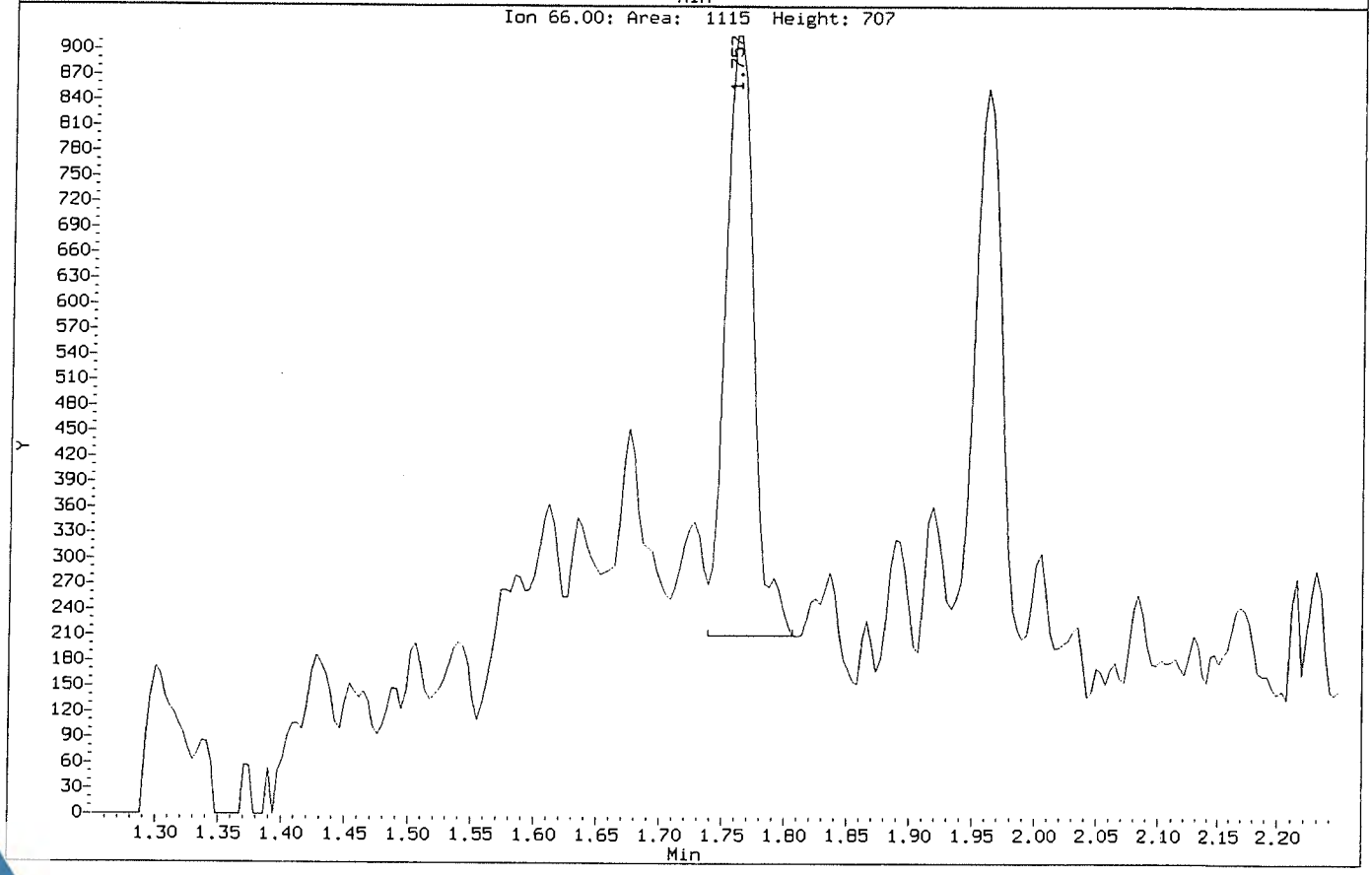
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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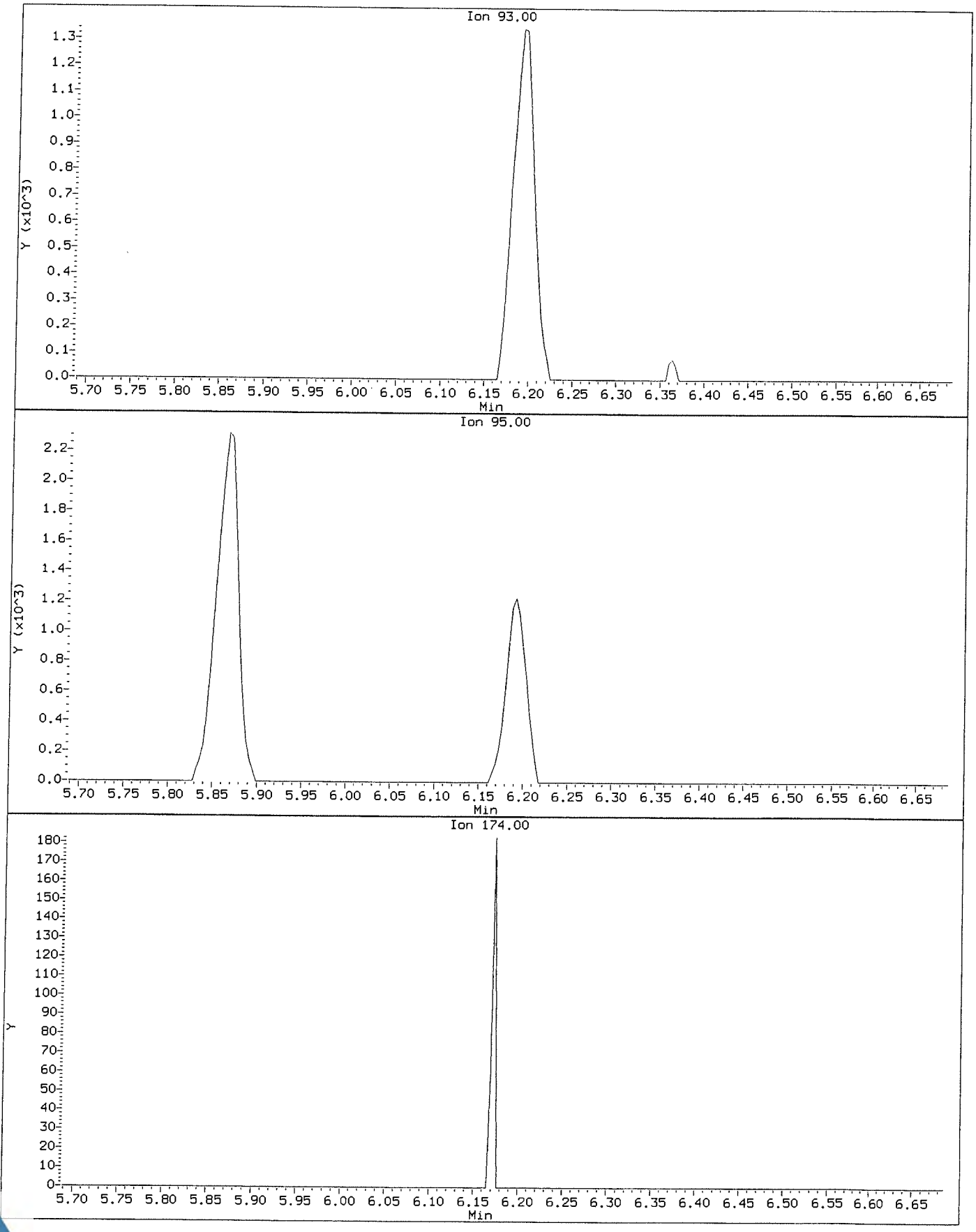
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Dibromomethane
CAS Number: 74-95-3



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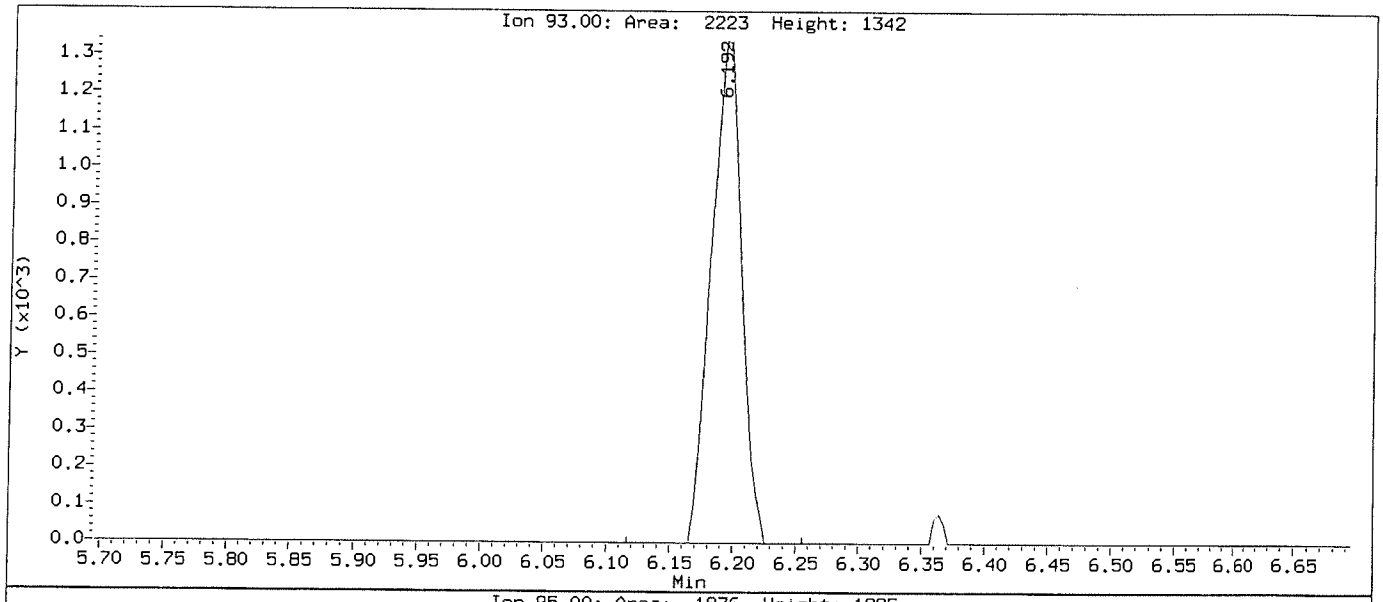
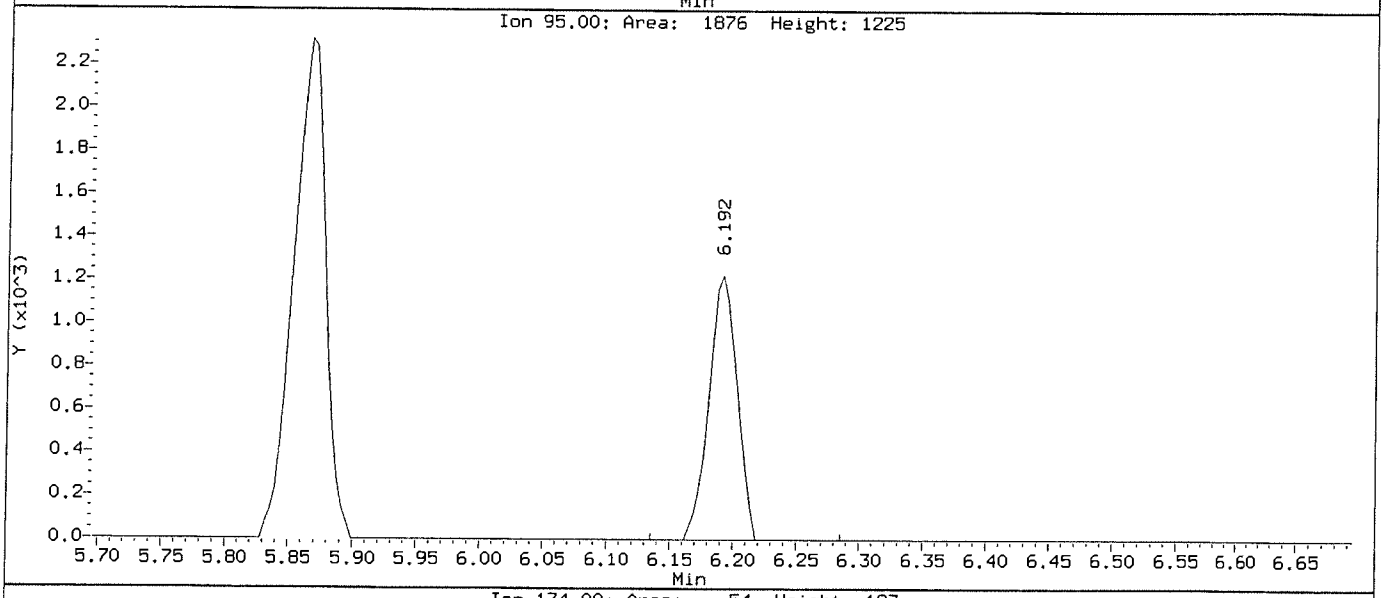
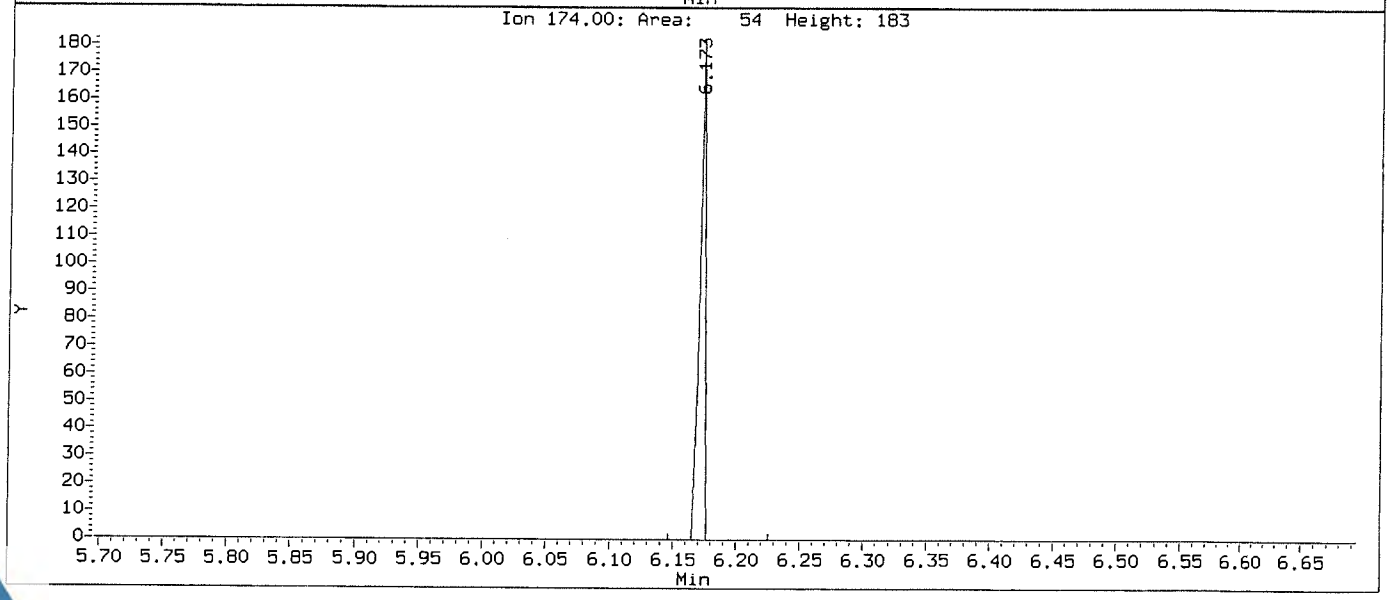
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Dibromomethane
CAS Number: 74-95-3







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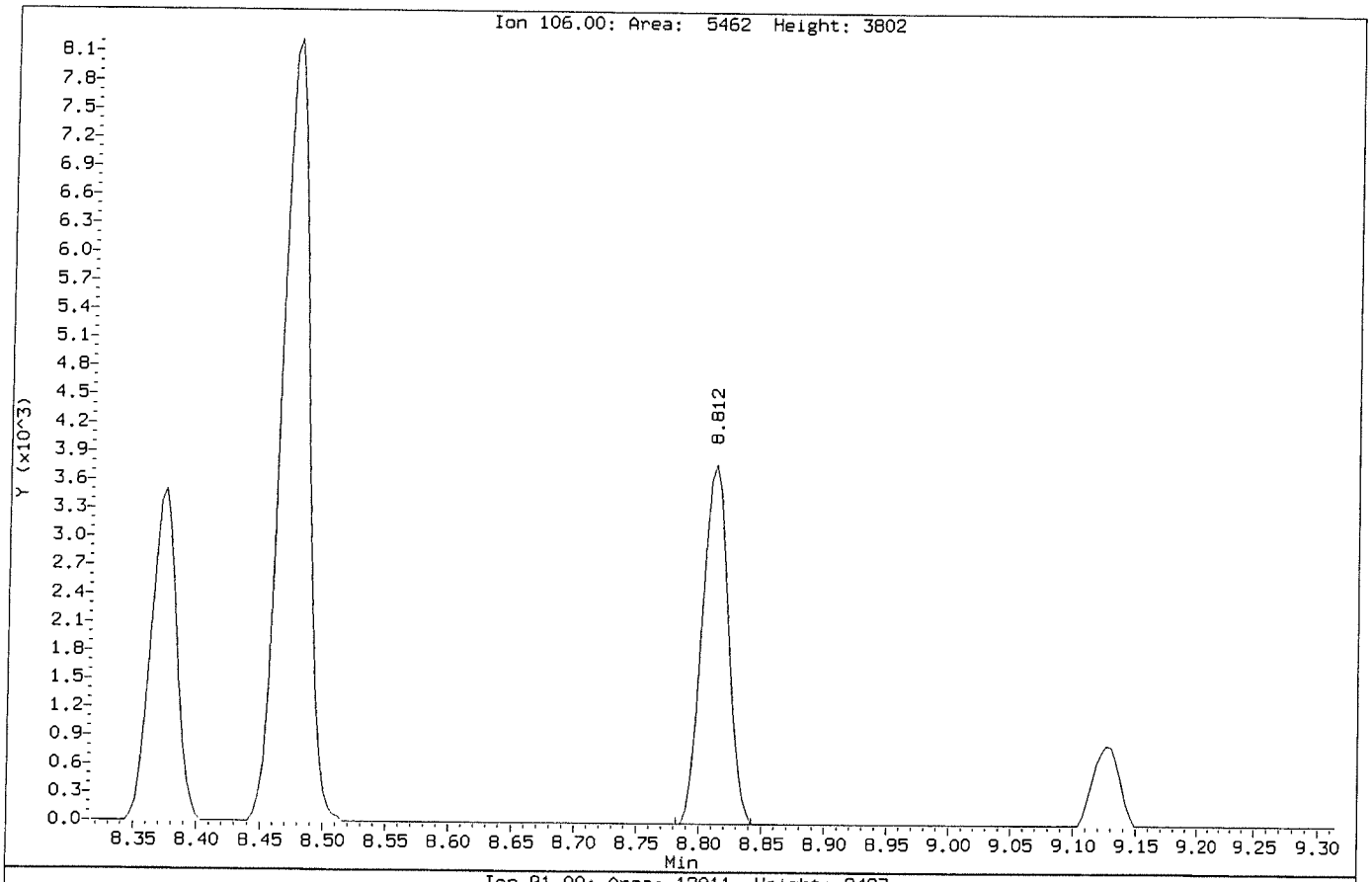
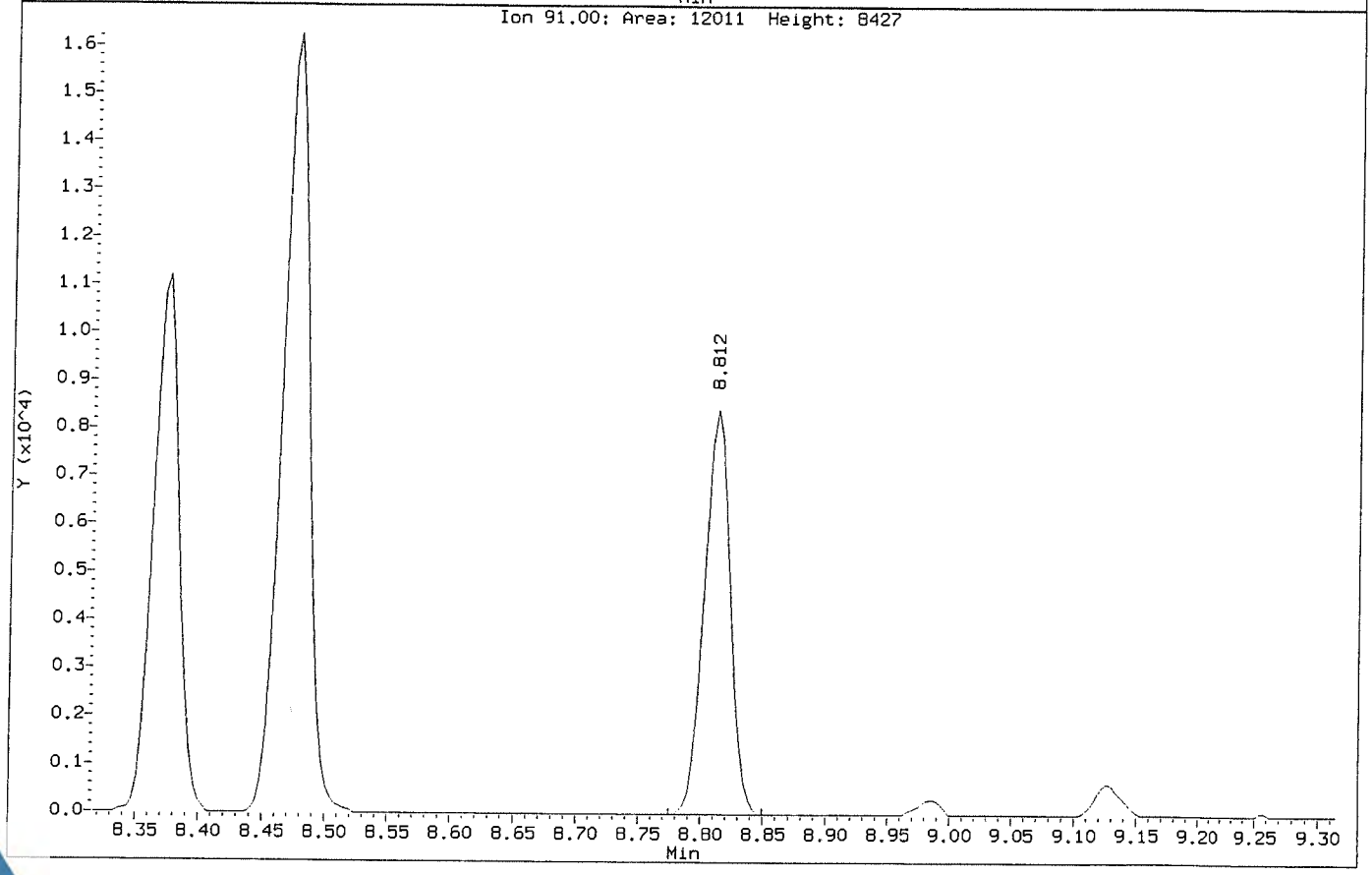
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: o-Xylene
CAS Number: 95-47-6





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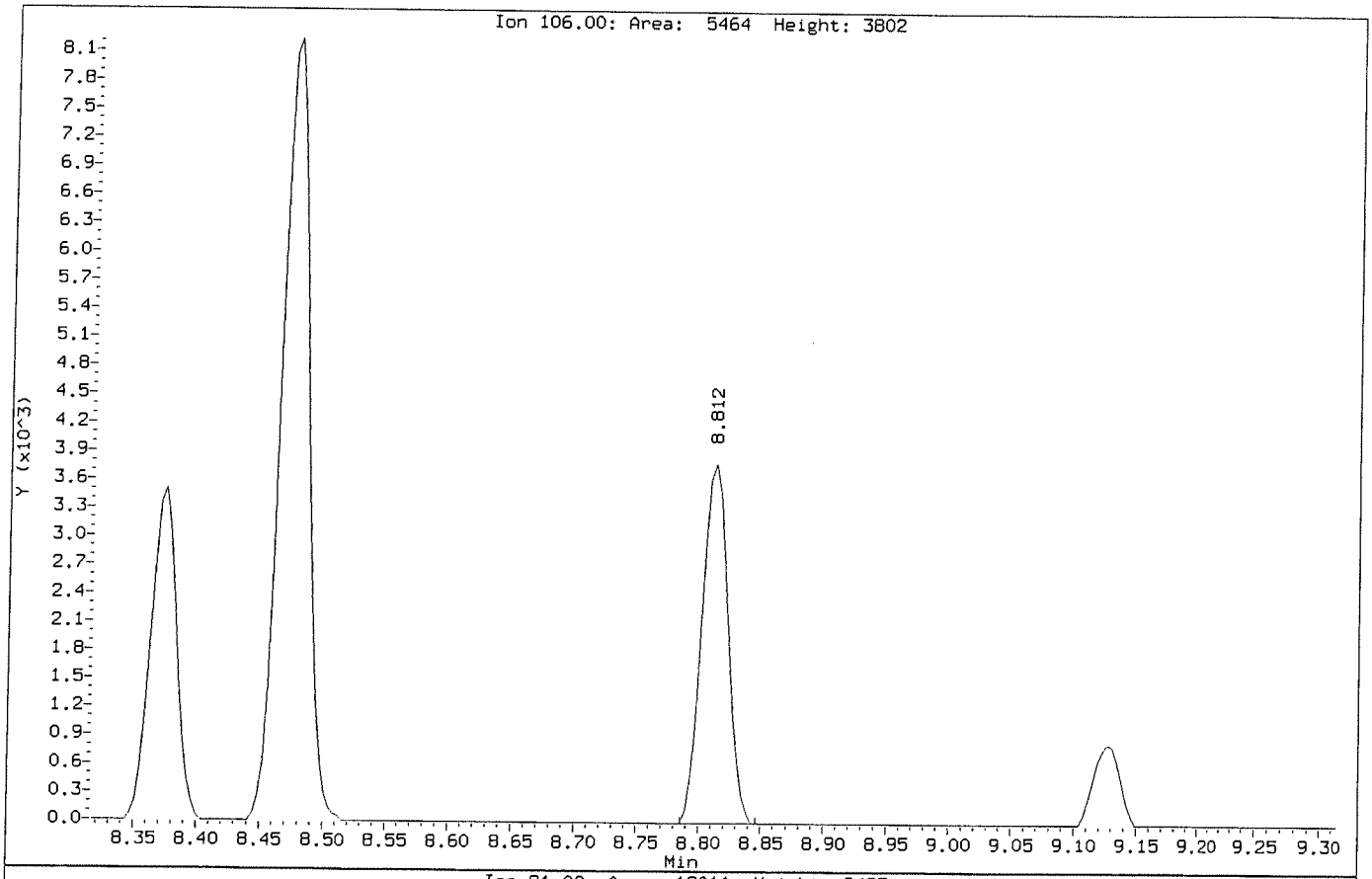
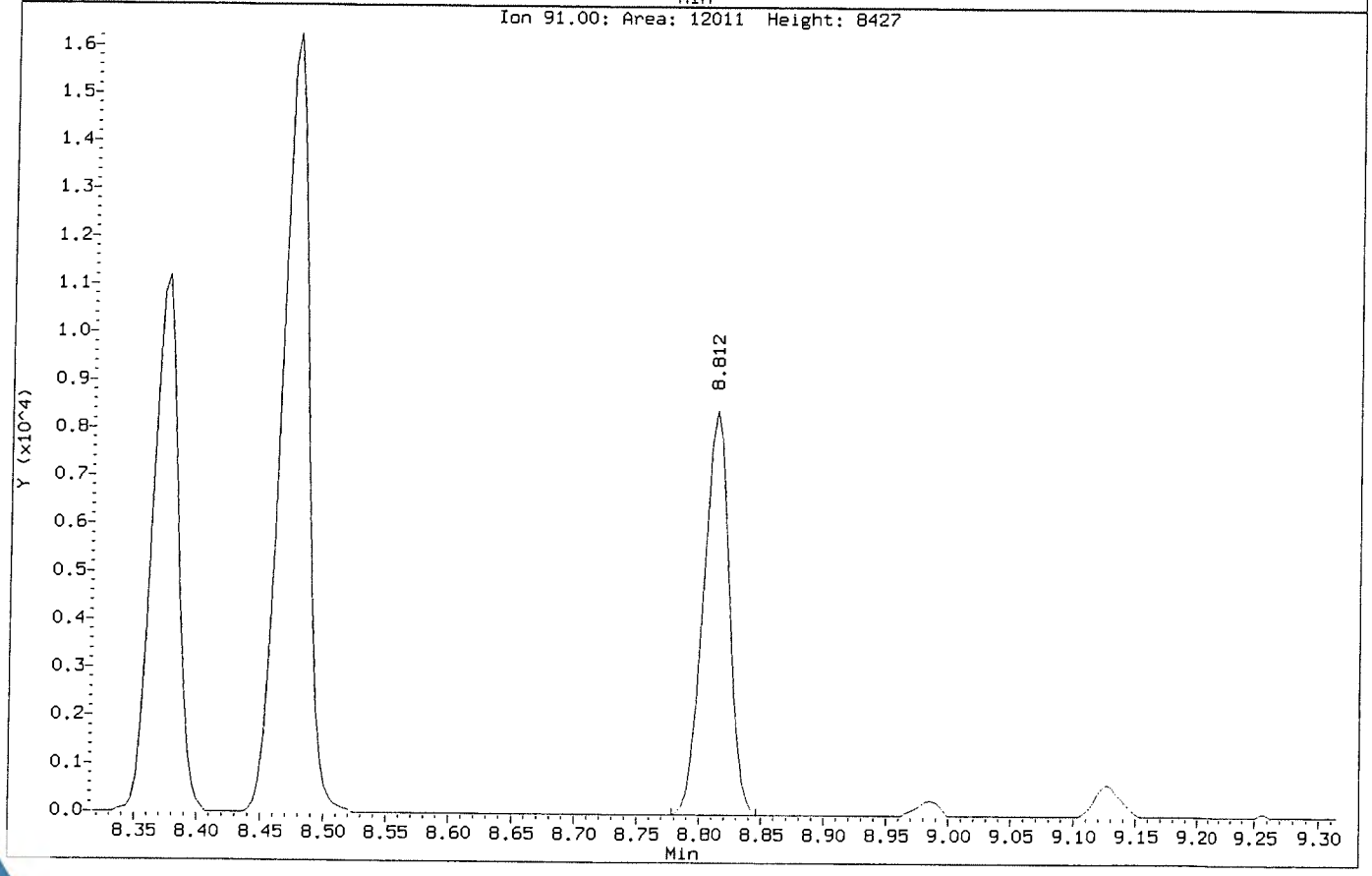
Injection Date: 13-NOV-2018 11:47
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: o-Xylene
CAS Number: 95-47-6





Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111304.D Page 1
Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111304.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 13-NOV-2018 12:36
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD001;VSTD001;1;3;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 11:47 Cal File: U111303.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

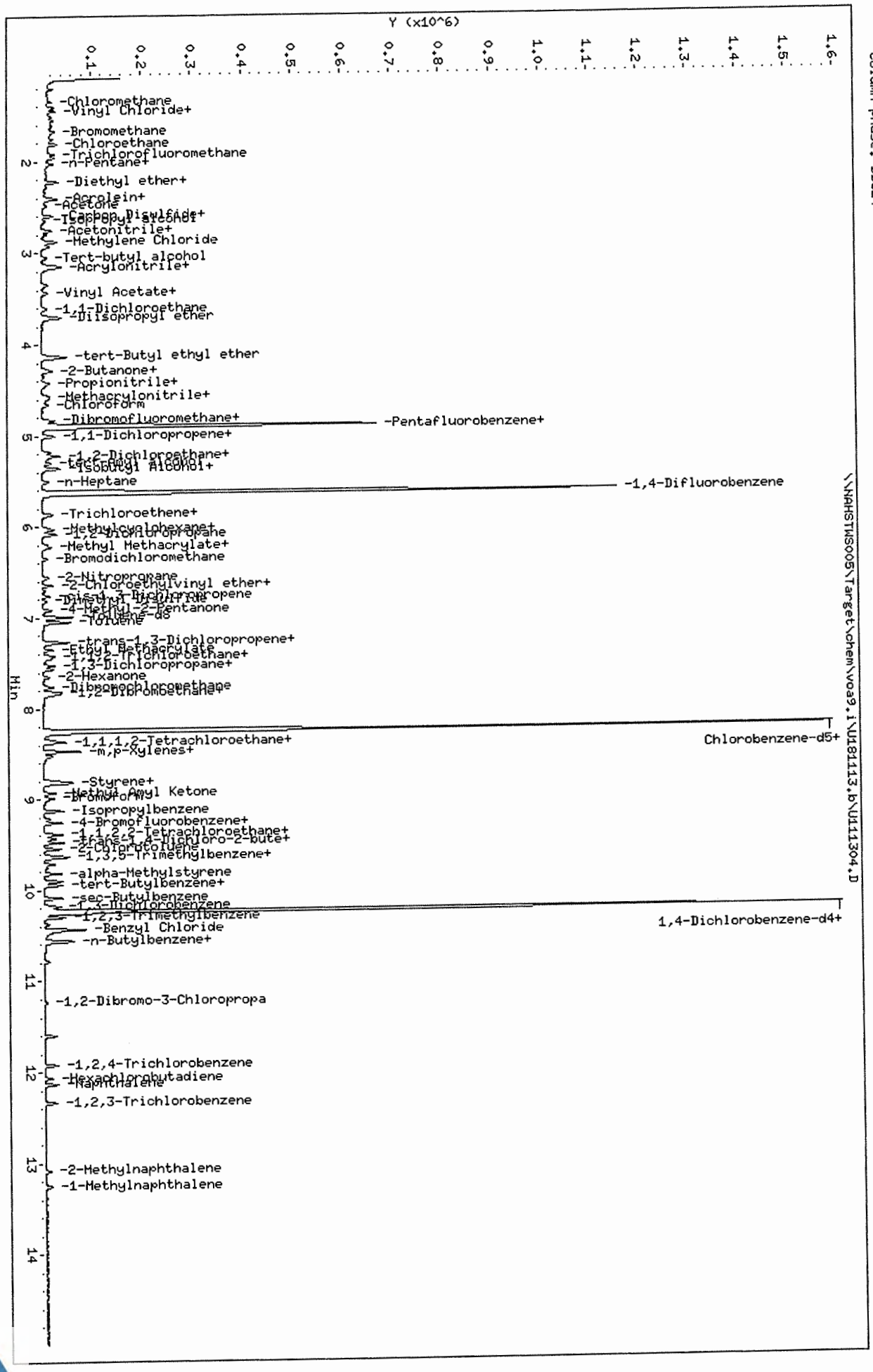
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.898	4.898	(1.000)	405565	50.0000	
*	36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	804218	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	748347	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	345100	50.0000	
$	30 Dibromofluoromethane	113	4.834	4.834	(0.987)	7705	1.00000	0.43(a)
$	35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	11059	1.00000	0.09(a)
$	48 Toluene-d8	98	6.989	6.989	(0.847)	30489	1.00000	(a)
$	69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	10512	1.00000	0.38(a)
	60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	4277	1.00000	0.90(a)
	31 1,1,1-Trichloroethane	97	4.826	4.826	(0.985)	6795	1.00000	0.95(a)
	68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	8088	1.00000	0.98(a)
	138 Freon TF	101	2.405	2.405	(0.491)	4282	1.00000	1.05(a)
	53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	5034	1.00000	1.05(a)
	22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	9857	1.00000	1.06(a)
	11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	5079	1.00000	1.10(a)
	32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	7778	1.00000	1.04(a)
	93 1,2,3-Trichlorobenzene	180	12.339	12.339	(1.205)	5356	1.00000	0.82(a)
	71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	7560	1.00000	0.88(a)
	90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	6307	1.00000	0.92(a)
	79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	18207	1.00000	0.94(a)
	89 1,2-Dibromo-3-Chloropropane	155	11.237	11.237	(1.098)	955	1.00000	1.78(a)
	57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	5452	1.00000	0.98(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111304.D Page 2
Report Date: 24-Jan-2019 18:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	11469	1.00000	1.04(a)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	8729	1.00000	1.03(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	5924	1.00000	1.03(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	17829	1.00000	0.96(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	11288	1.00000	1.03(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	10633	1.00000	1.04(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	11659	1.00000	1.05(a)
26 2,2-Dichloropropane	77	4.275	4.275	(0.873)	5473	1.00000	0.95(a)
24 2-Butanone	43	4.343	4.343	(0.887)	5794	2.00000	2.03(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	17337	1.00000	1.02(a)
52 2-Hexanone	43	7.653	7.653	(0.928)	7477	2.00000	1.71(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	18812	1.00000	0.96(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	16467	1.00000	0.87(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	12236	2.00000	1.96(a)
10 Acetone	43	2.484	2.484	(0.507)	7657	2.00000	(a)
37 Benzene	78	5.220	5.220	(0.928)	23677	1.00000	1.06(a)
74 Bromobenzene	156	9.385	9.385	(0.917)	5602	1.00000	0.98(a)
29 Bromochloromethane	128	4.557	4.557	(0.930)	2347	1.00000	0.98(aM)
39 Bromodichloromethane	83	6.348	6.348	(1.129)	6268	1.00000	0.93(aM)
66 Bromoform	173	8.984	8.984	(1.089)	2470	1.00000	1.89(Ta)
6 Bromomethane	94	1.674	1.674	(0.342)	4167	1.00000	3.09(a)
19 Carbon Disulfide	76	2.592	2.592	(0.529)	28789	2.00000	2.03(a)
34 Carbon Tetrachloride	117	4.999	4.999	(0.889)	5592	1.00000	0.96(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	16679	1.00000	1.07(a)
7 Chloroethane	64	1.756	1.756	(0.359)	4550	1.00000	1.07(aM)
28 Chloroform	83	4.658	4.658	(0.951)	9975	1.00000	1.06(a)
3 Chloromethane	50	1.344	1.344	(0.274)	6506	1.00000	1.42(a)
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	6147	1.00000	1.06(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	7263	1.00000	0.86(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	3914	1.00000	0.82(a)
44 Dibromomethane	93	6.191	6.191	(1.101)	3612	1.00000	1.00(aM)
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	6358	1.00000	2.04(a)
61 Ethylbenzene	106	8.373	8.373	(1.015)	8122	1.00000	1.03(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	2210	1.00000	1.33(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	22125	1.00000	0.97(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	18714	2.00000	1.94(a)
17 Methylene Chloride	84	2.877	2.877	(0.587)	7766	1.00000	0.81(a)
87 n-Butylbenzene	91	10.558	10.558	(1.031)	17894	1.00000	1.37(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	27227	1.00000	0.99(a)
92 Naphthalene	128	12.133	12.133	(1.185)	17787	1.00000	0.87(a)
63 o-Xylene	106	8.811	8.811	(1.068)	9461	1.00000	0.98(aH)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	22039	1.00000	0.97(a)
64 Styrene	104	8.826	8.826	(1.070)	14819	1.00000	0.91(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	14832	1.00000	0.93(a)
56 Tetrachloroethene	164	7.525	7.525	(0.912)	4264	1.00000	1.08(a)
50 Toluene	91	7.049	7.049	(0.855)	24363	1.00000	1.02(a)
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	5480	1.00000	1.09(a)
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	5482	1.00000	2.11(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	5801	1.00000	1.05(a)
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	8913	1.00000	1.09(a)
5 Vinyl Chloride	62	1.423	1.423	(0.291)	7374	1.00000	1.61(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111304.D
Date : 13-NOV-2018 12:36
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111304.D

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

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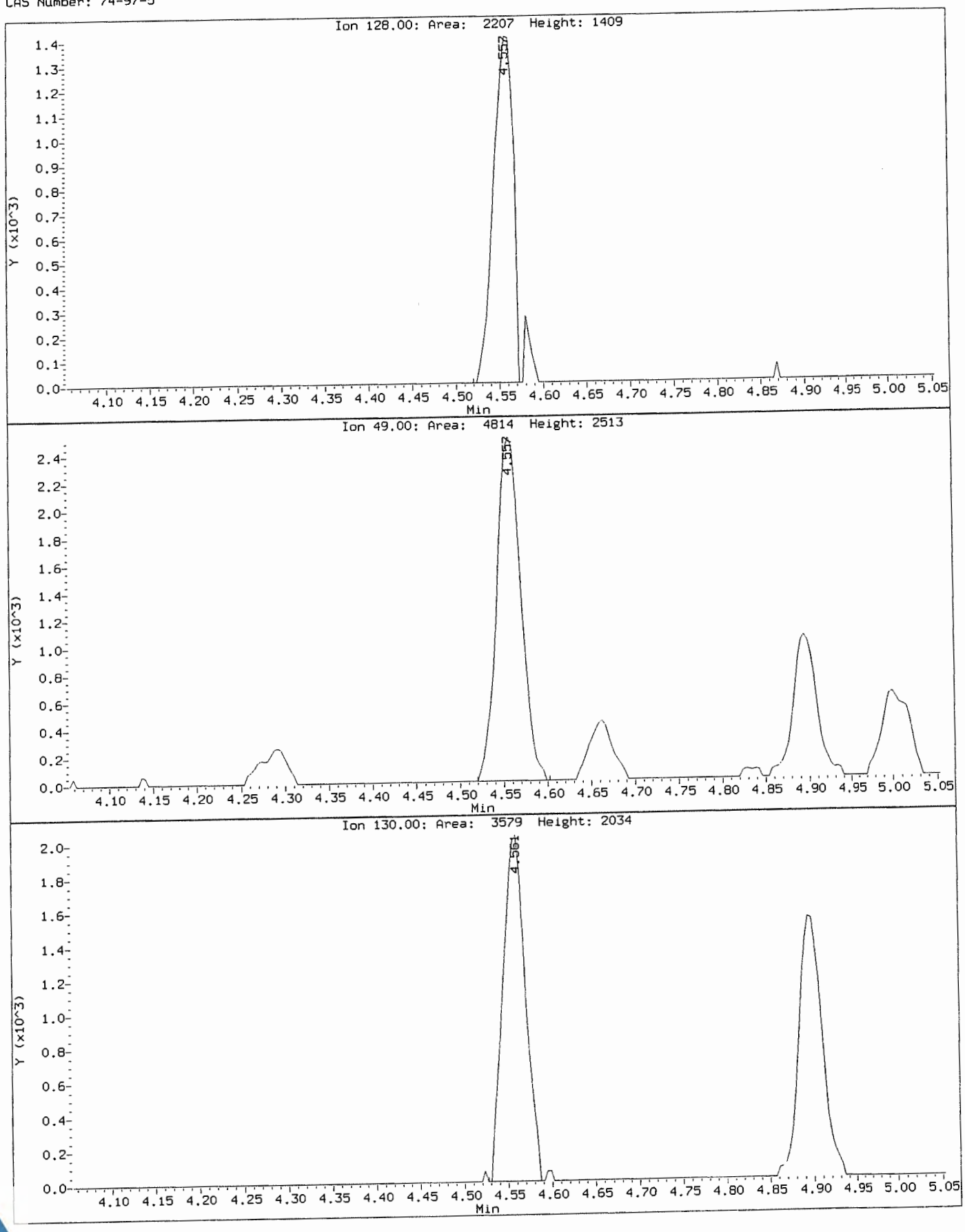
Injection Date: 13-NOV-2018 12:36
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromochloromethane
CAS Number: 74-97-5



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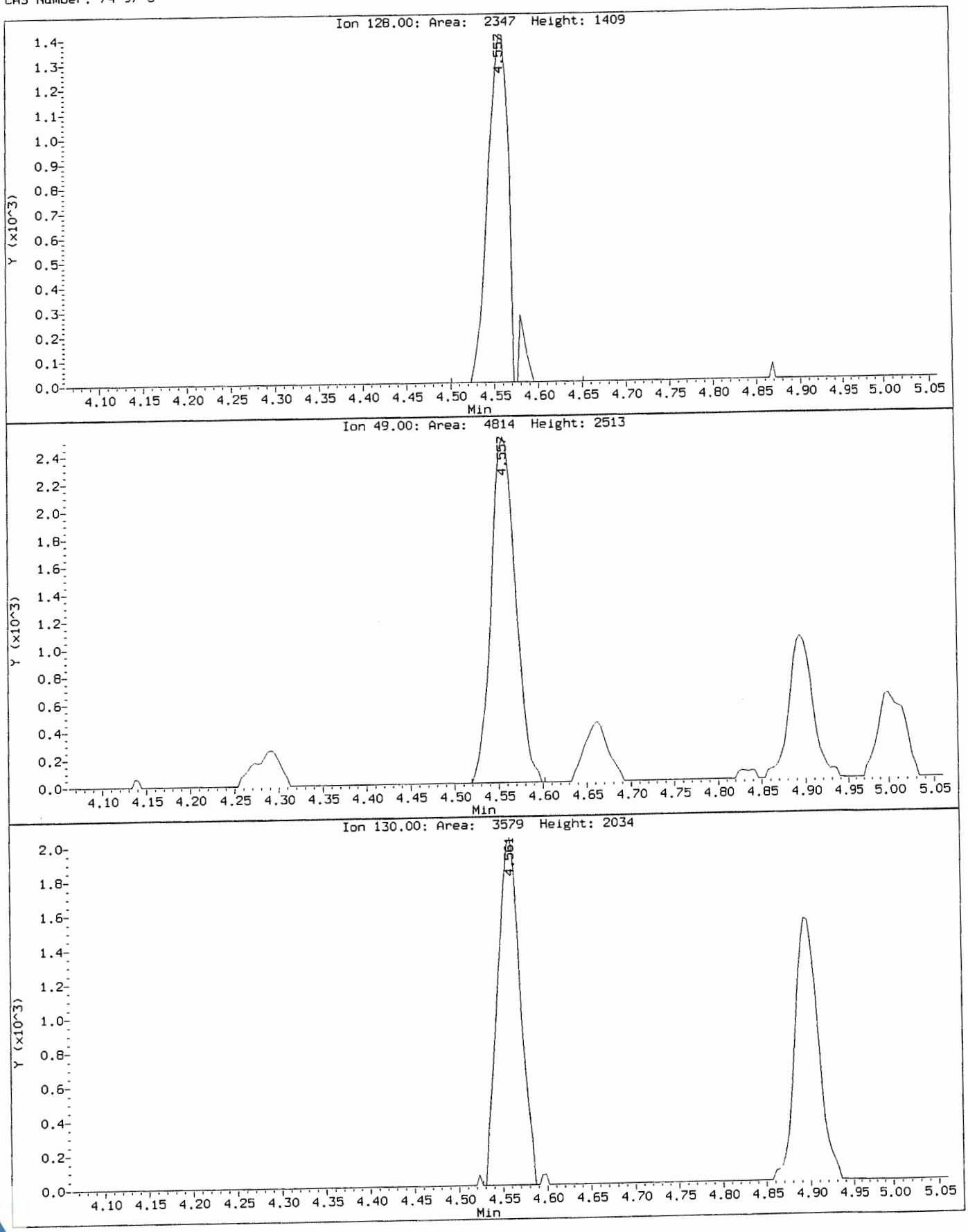
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromochloromethane
CAS Number: 74-97-5



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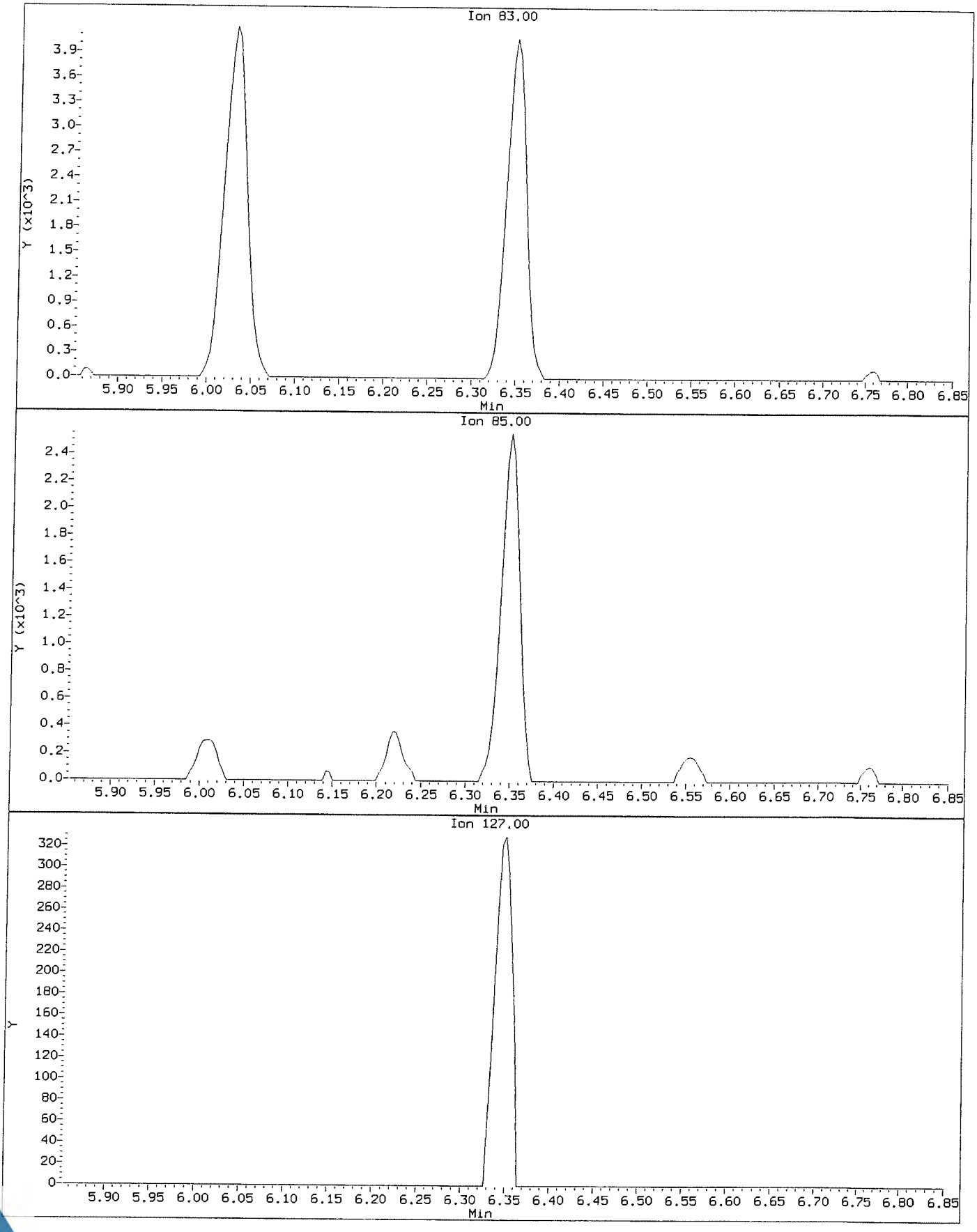
Injection Date: 13-NOV-2018 12:36
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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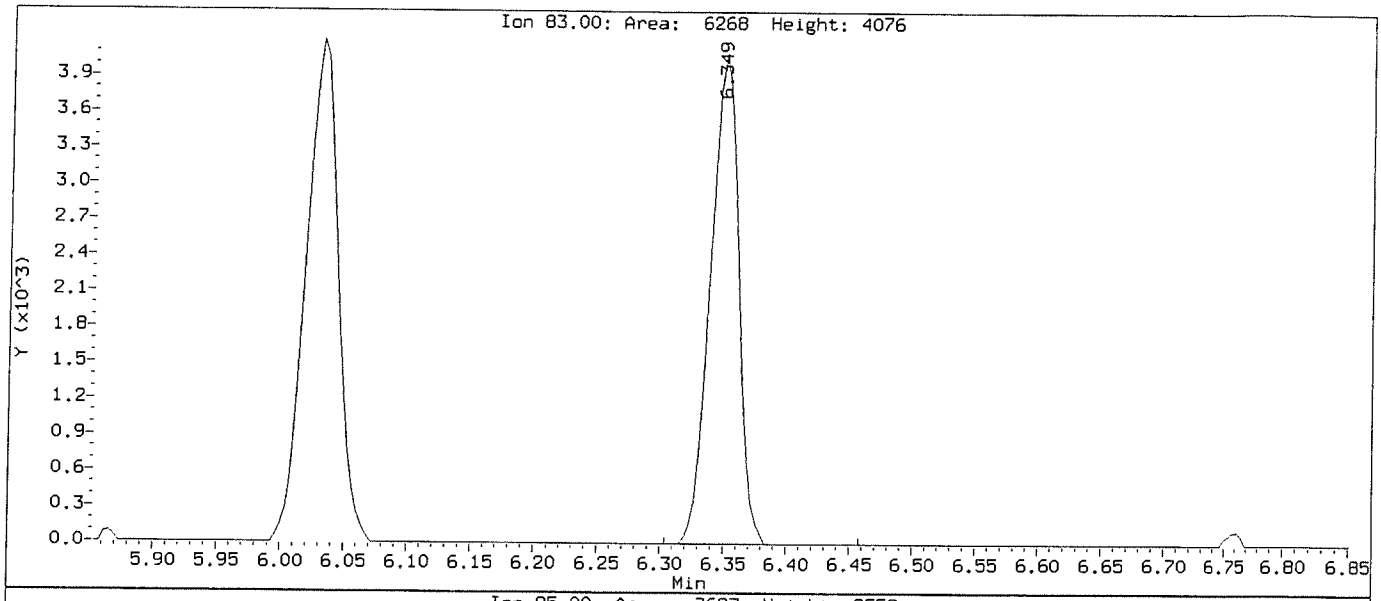
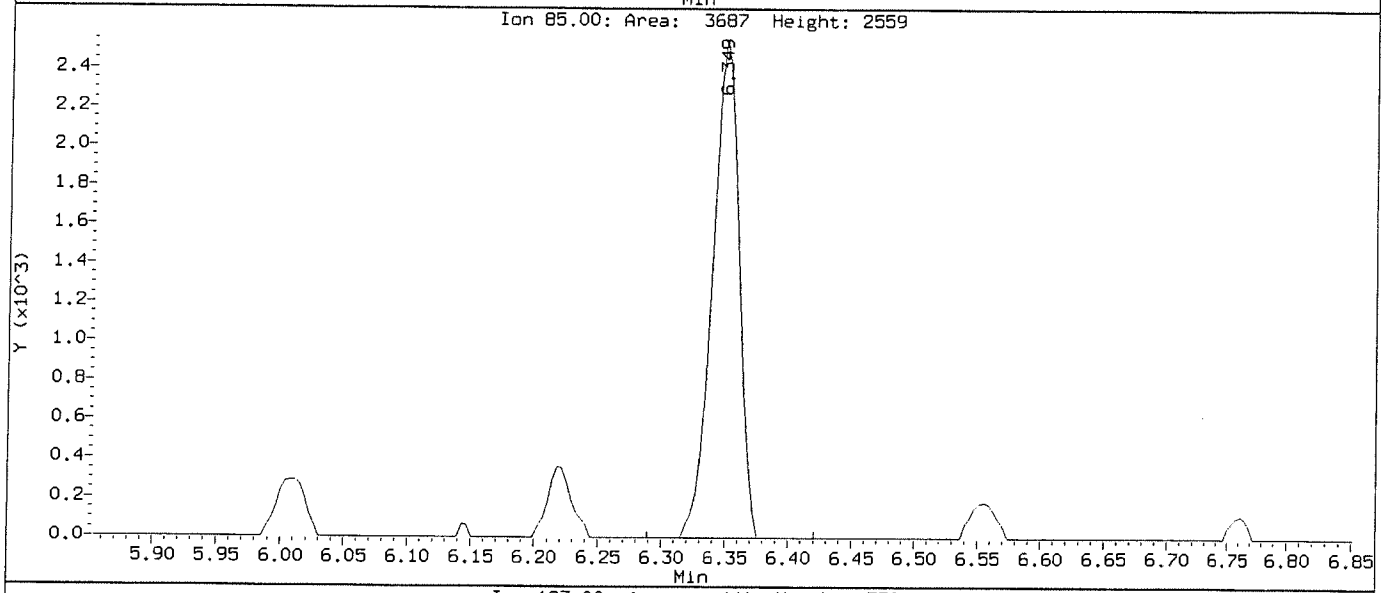
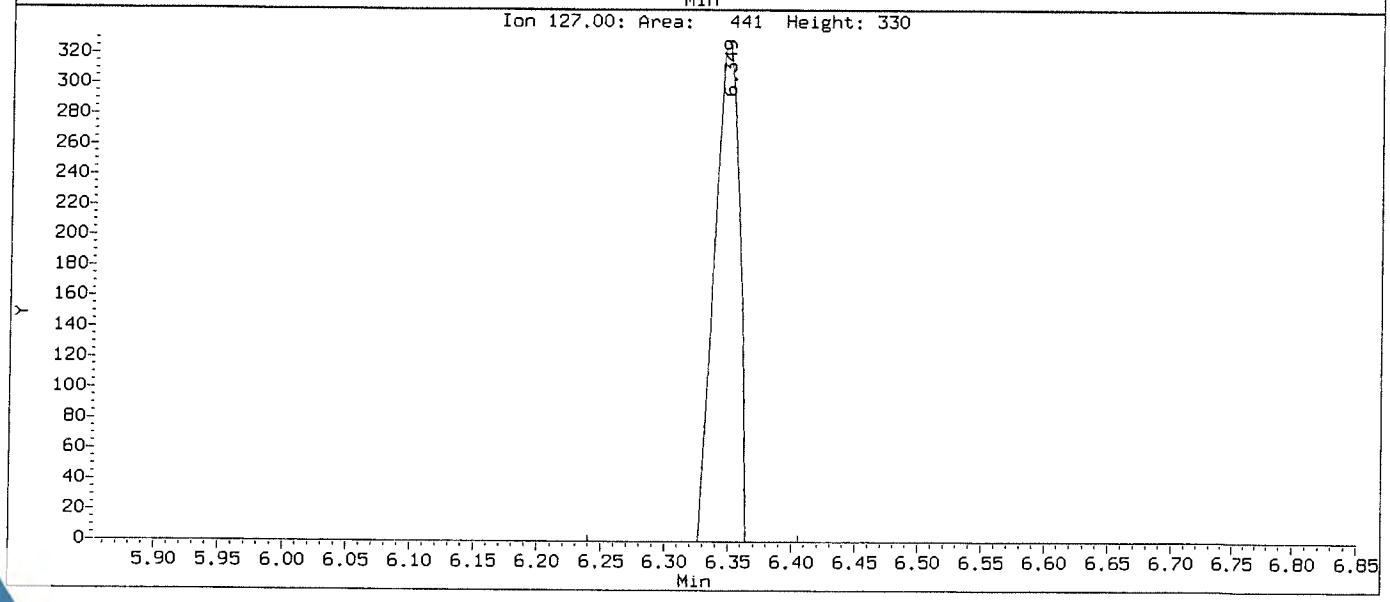
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4







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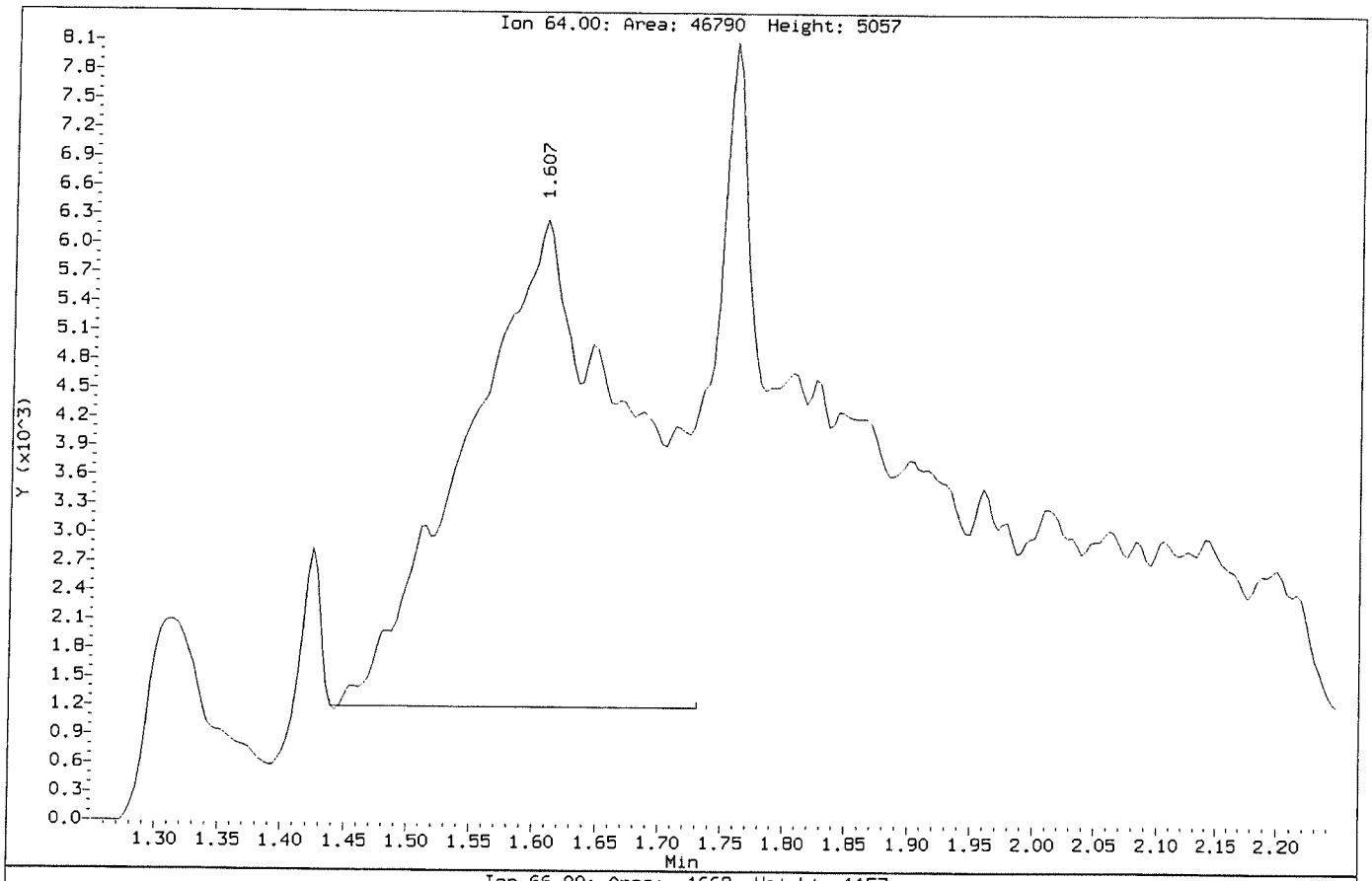
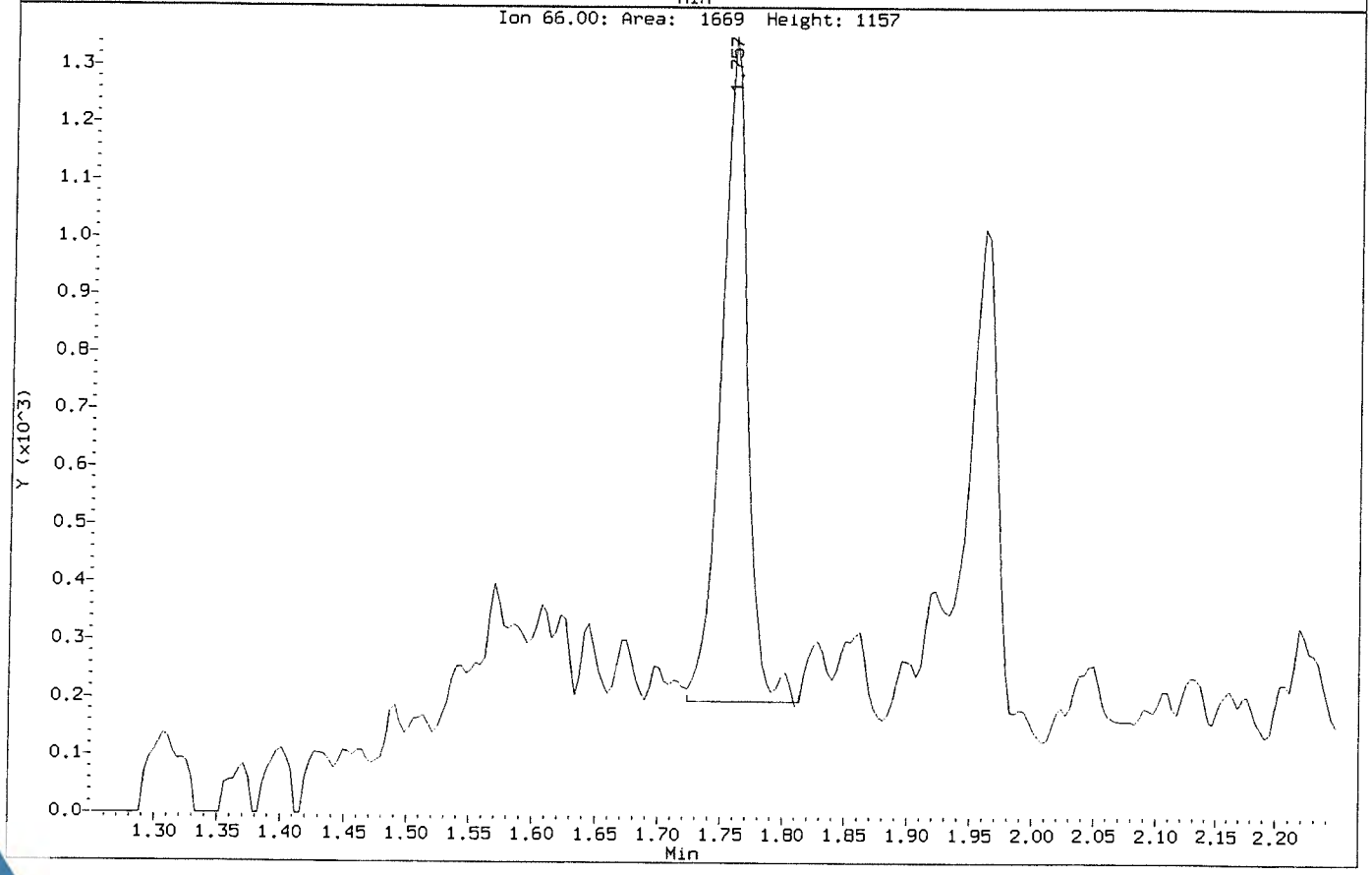
Injection Date: 13-NOV-2018 12:36
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3





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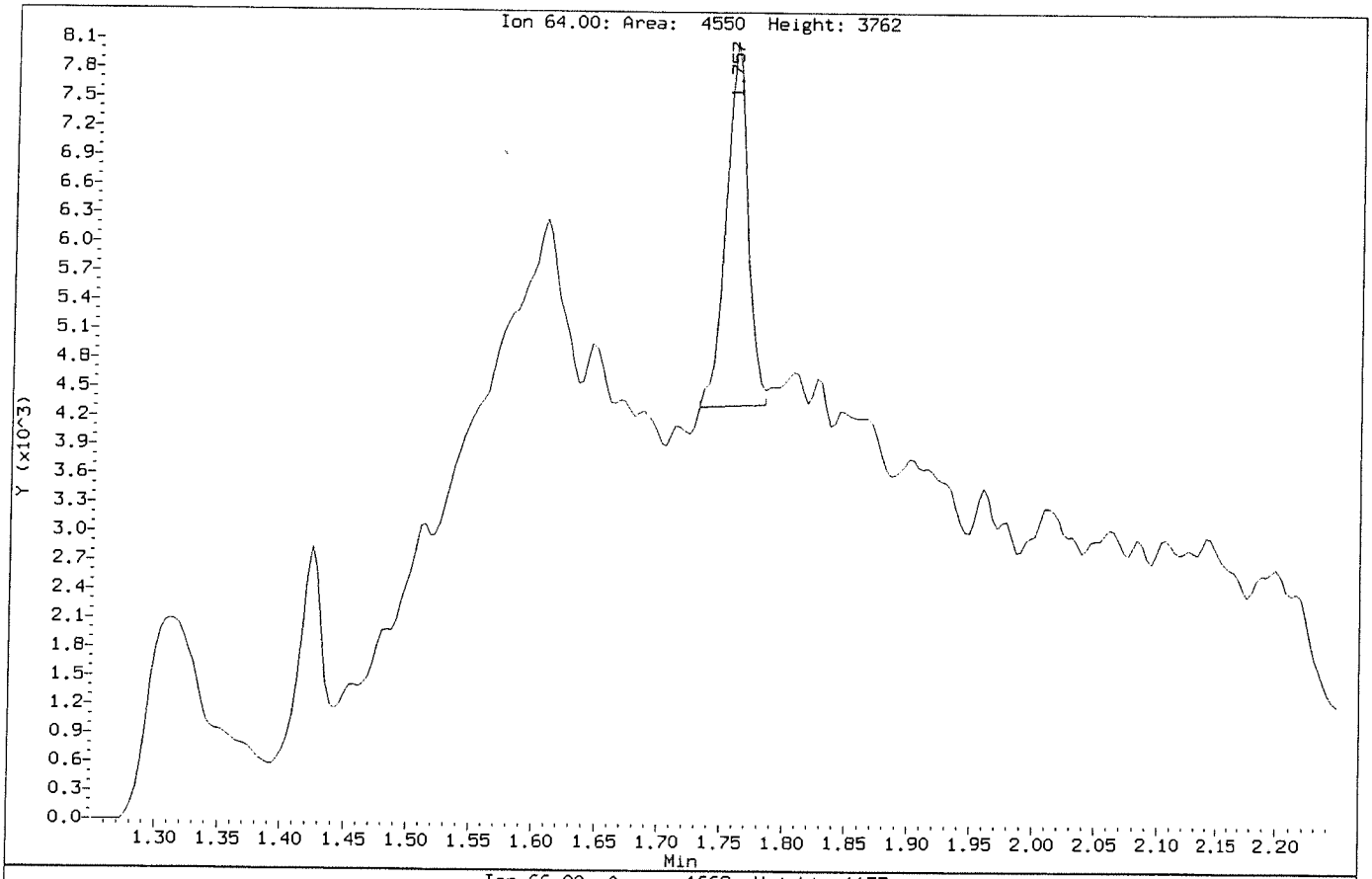
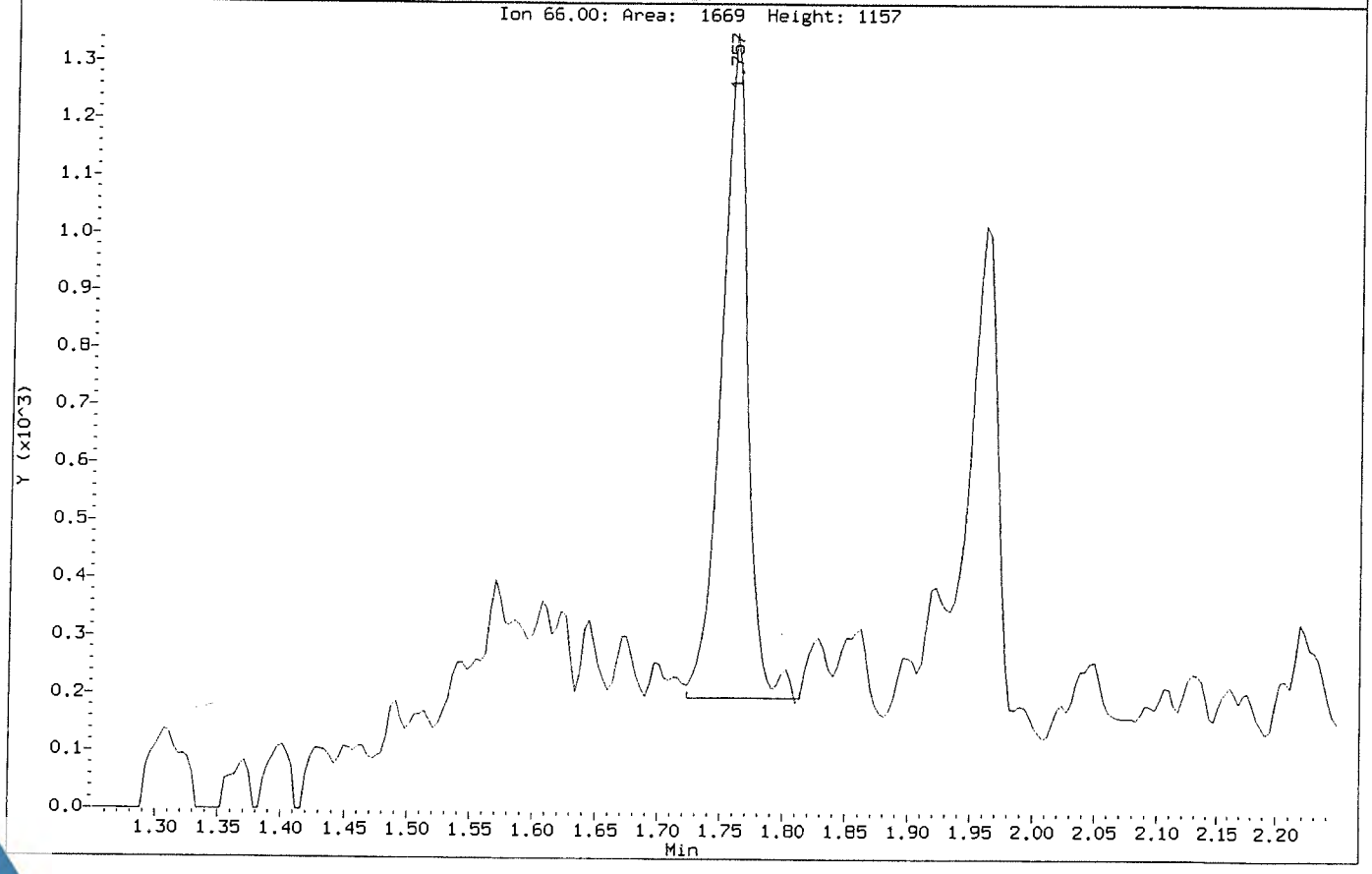
Compound: Chloroethane
CAS Number: 75-00-3





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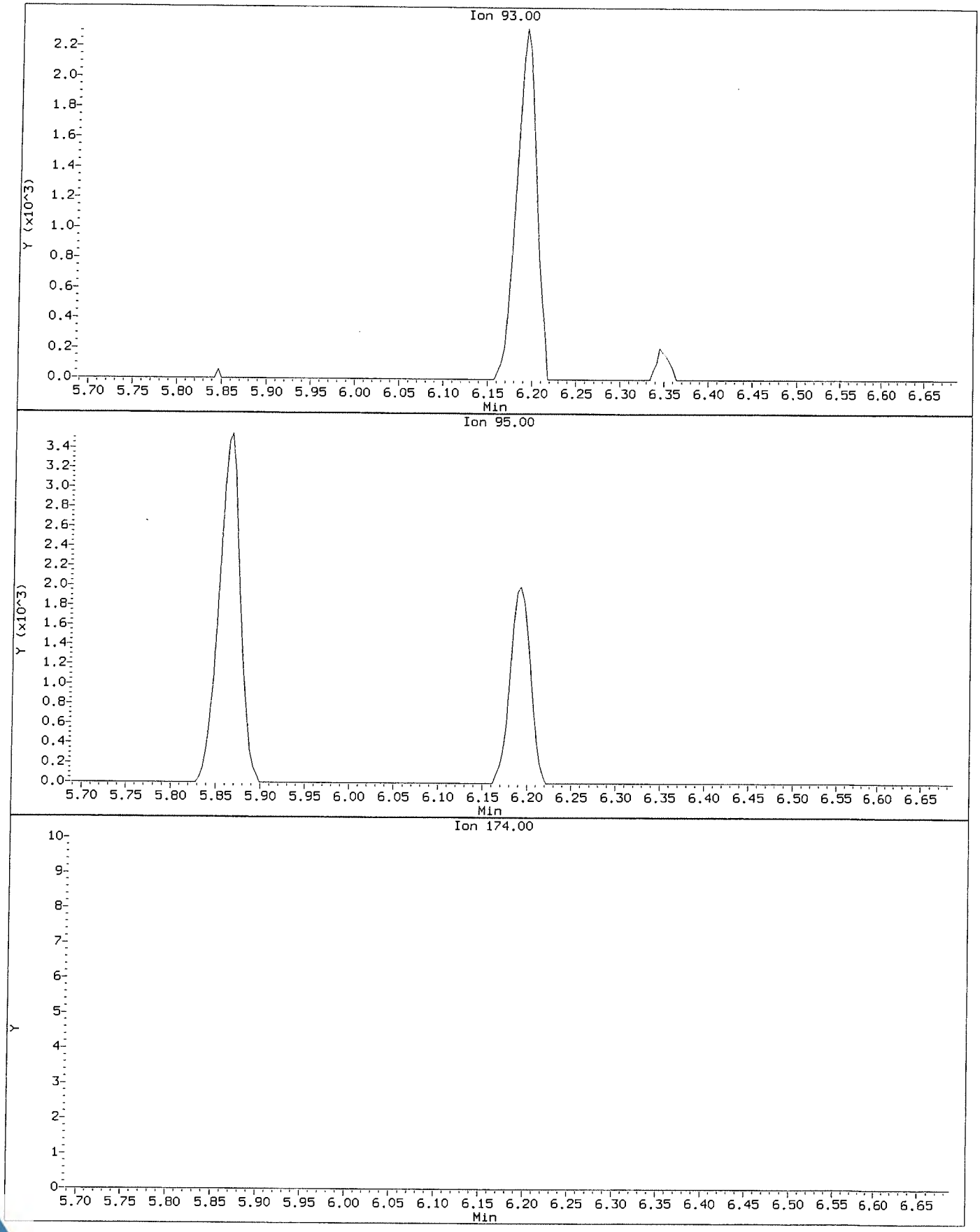
Injection Date: 13-NOV-2018 12:36
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3



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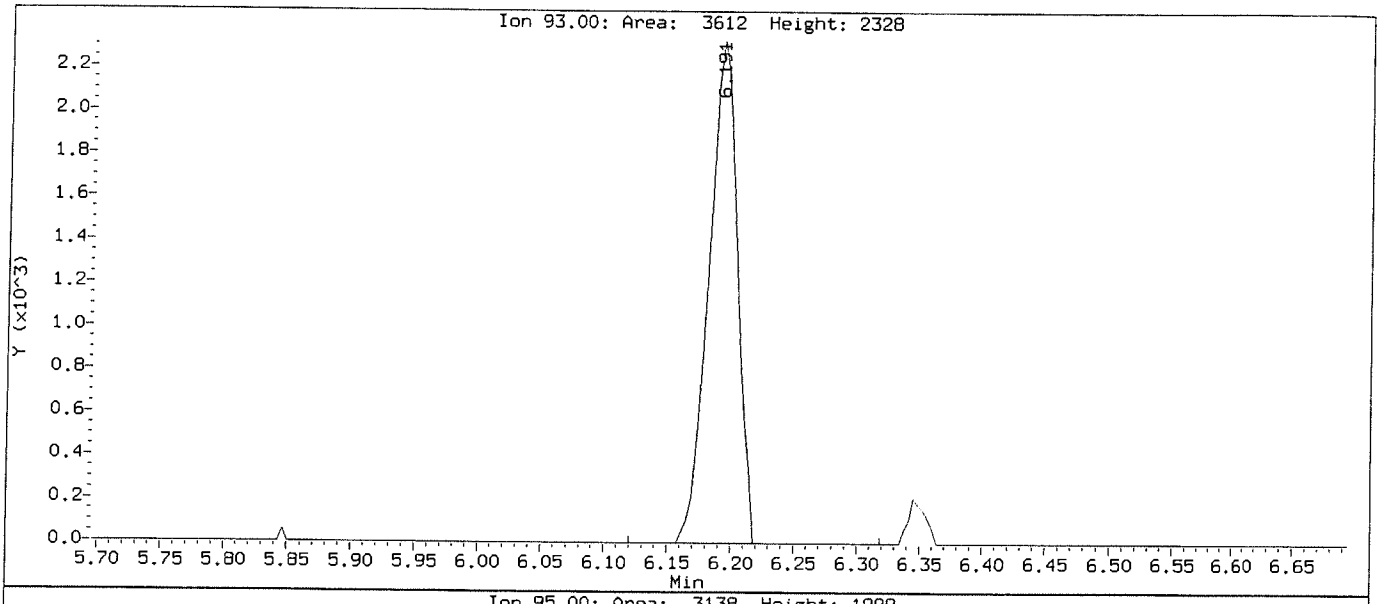
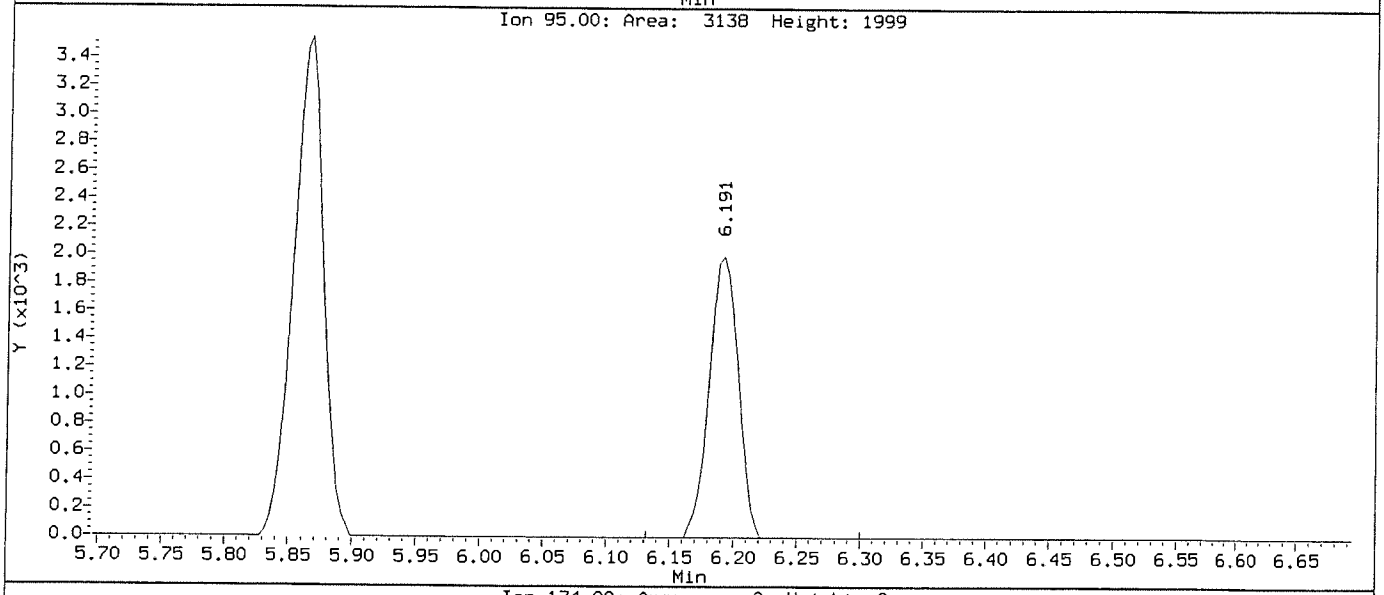
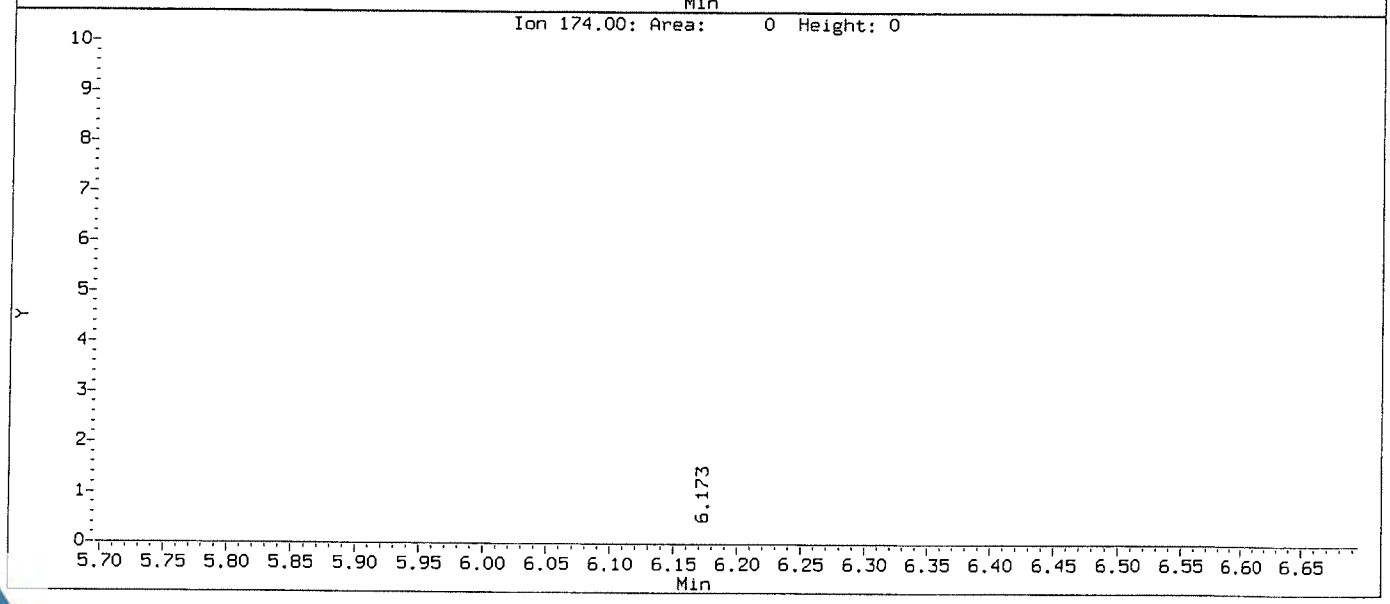
Compound: Dibromomethane
CAS Number: 74-95-3







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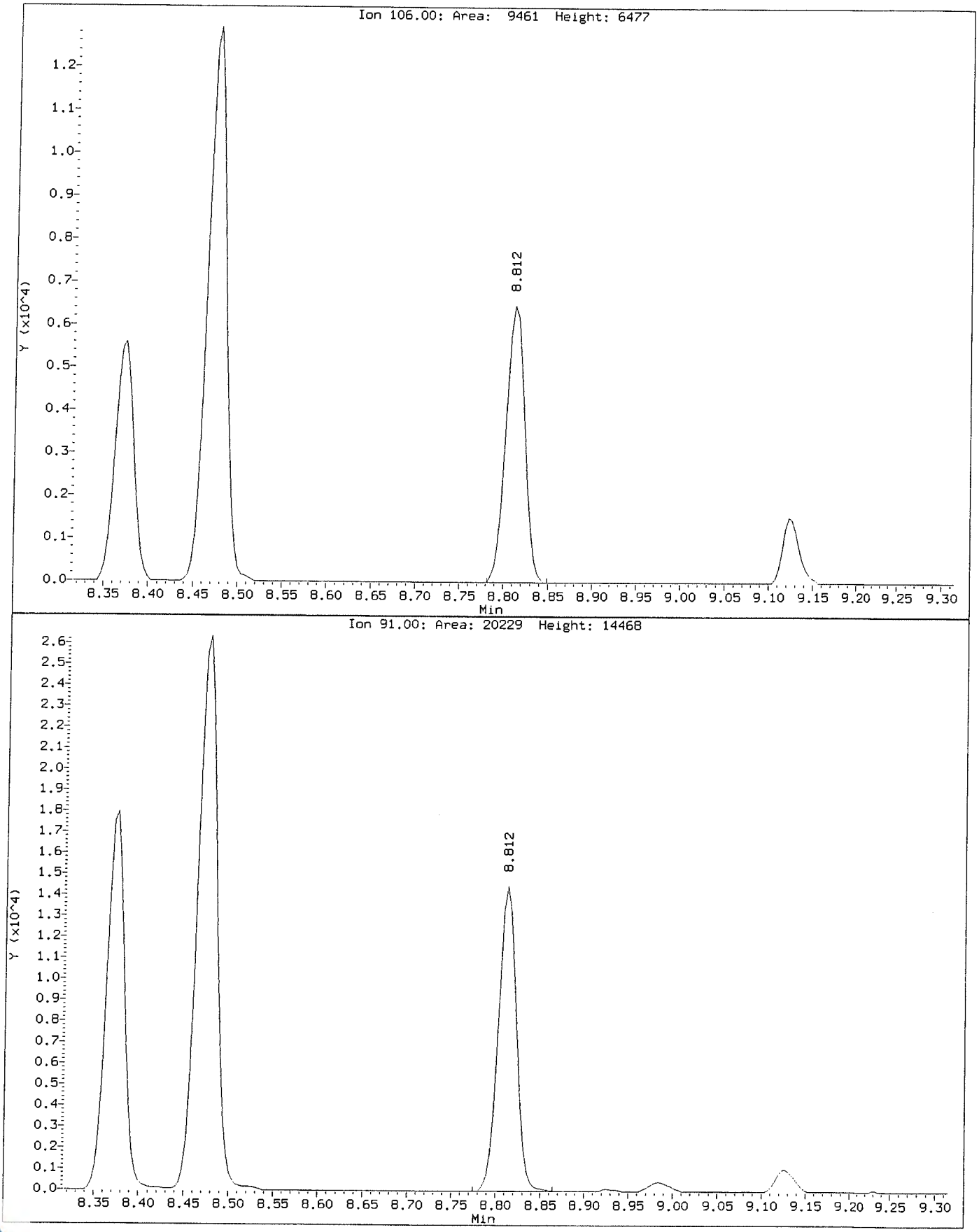
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: o-Xylene
CAS Number: 95-47-6



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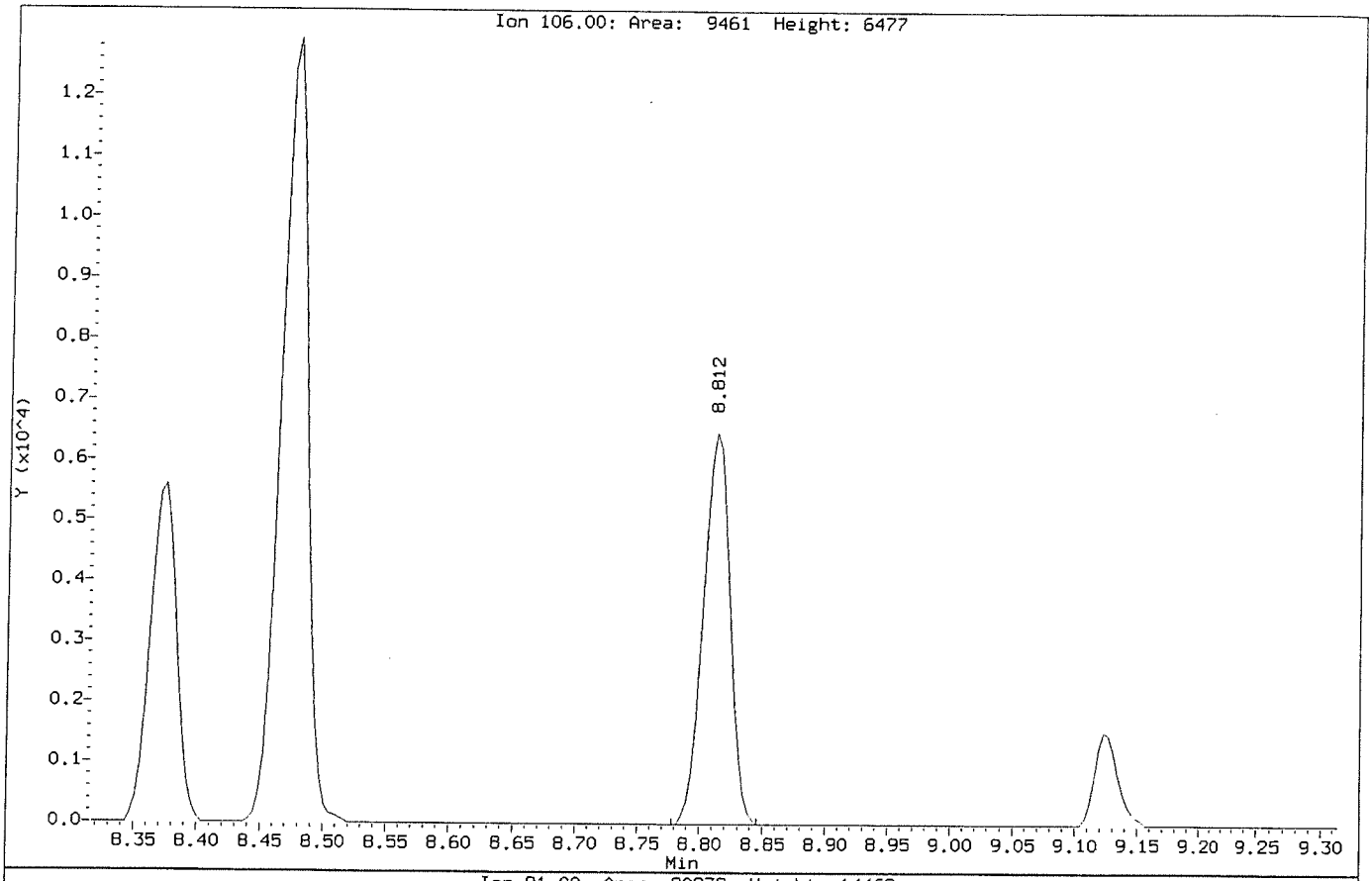
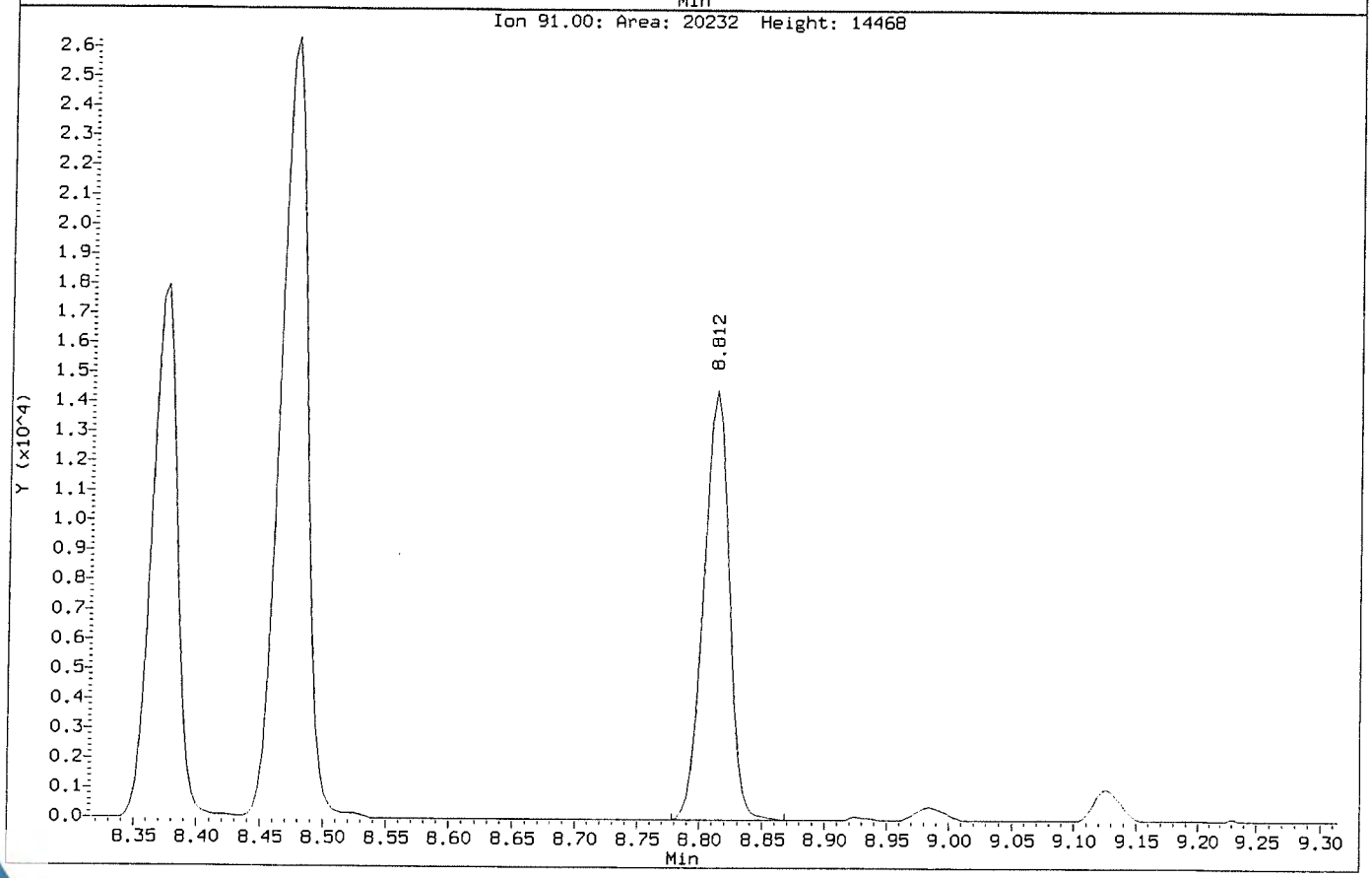
Client Sample ID: VSTD001

Compound: o-Xylene
CAS Number: 95-47-6





Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111305.D Page 1
Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111305.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 13-NOV-2018 13:01
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 12:36 Cal File: U111304.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

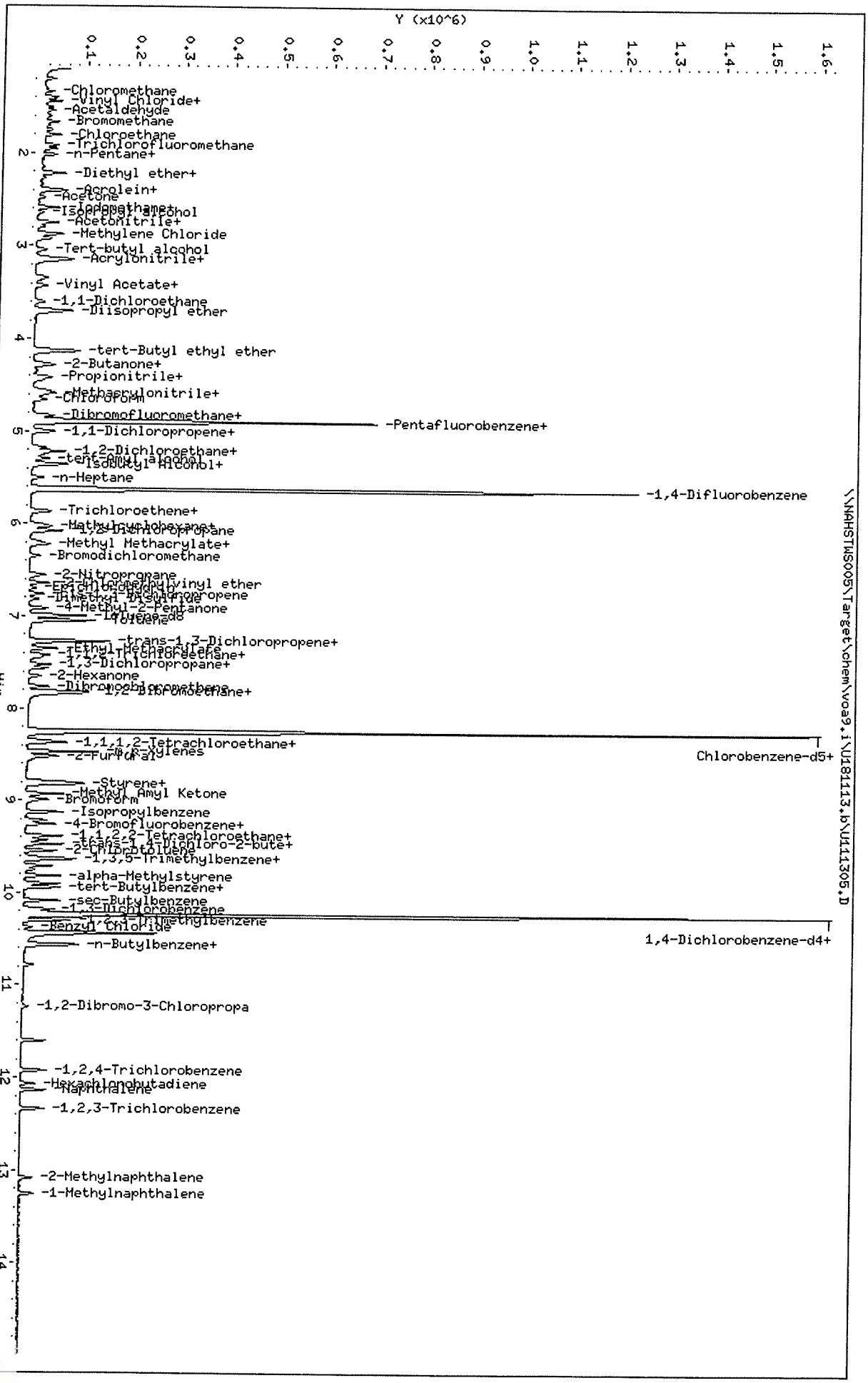
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	414744	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	809284	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	755385	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	352080	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	12925	2.00000	1.52(a)
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	18531	2.00000	1.28(a)
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	51591	2.00000	1.05(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	18827	2.00000	1.50(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	8223	2.00000	1.72(a)
31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	14071	2.00000	1.93(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	16127	2.00000	1.93(a)
138 Freon TF	101	2.401	2.401	(0.491)	8834	2.00000	2.12(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	9196	2.00000	1.91(a)
22 1,1-Dichloroethane	63	3.604	3.604	(0.737)	18719	2.00000	1.96(a)
11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	9368	2.00000	2.00(a)
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	14736	2.00000	1.97(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	12553	2.00000	1.88(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	15506	2.00000	1.78(a)
90 1,2,4-Trichlorobenzene	180	11.927	11.927	(1.165)	12849	2.00000	1.85(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	36765	2.00000	1.88(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	1762	2.00000	2.38(a)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	10196	2.00000	1.83(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111305.D Page 2
Report Date: 24-Jan-2019 18:55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	21603	2.00000	1.92(a)
33	1,2-Dichloroethane	62	5.250	5.250	(0.933)	17243	2.00000	2.03(a)
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	10957	2.00000	1.90(a)
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	35537	2.00000	1.87(a)
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	21971	2.00000	1.98(a)
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	19816	2.00000	1.92(a)
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	22453	2.00000	2.02(a)
26	2,2-Dichloropropane	77	4.275	4.275	(0.874)	10687	2.00000	1.81(a)
24	2-Butanone	43	4.343	4.343	(0.887)	10886	4.00000	3.73(a)
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	33012	2.00000	1.91(a)
52	2-Hexanone	43	7.649	7.649	(0.927)	15967	4.00000	3.63(a)
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	38540	2.00000	1.93(a)
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	36591	2.00000	1.89(a)
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	23062	4.00000	3.65(a)
10	Acetone	43	2.480	2.480	(0.507)	12023	4.00000	2.16(a)
37	Benzene	78	5.216	5.216	(0.927)	43114	2.00000	1.92(a)
74	Bromobenzene	156	9.381	9.381	(0.917)	10831	2.00000	1.87(a)
29	Bromochloromethane	128	4.553	4.553	(0.930)	5091	2.00000	2.08(a)
39	Bromodichloromethane	83	6.348	6.348	(1.129)	12072	2.00000	1.79(a)
66	Bromoform	173	8.984	8.984	(1.089)	4530	2.00000	2.48(Ta)
6	Bromomethane	94	1.670	1.670	(0.341)	7606	2.00000	4.02(a)
19	Carbon Disulfide	76	2.589	2.589	(0.529)	55277	4.00000	3.82(a)
34	Carbon Tetrachloride	117	4.995	4.995	(0.888)	10688	2.00000	1.83(a)
59	Chlorobenzene	112	8.275	8.275	(1.003)	29617	2.00000	1.89(a)
7	Chloroethane	64	1.749	1.749	(0.357)	9074	2.00000	2.09(aM)
28	Chloroform	83	4.658	4.658	(0.952)	18550	2.00000	1.94(a)
3	Chloromethane	50	1.336	1.336	(0.273)	12000	2.00000	2.38(a)
27	cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	11719	2.00000	1.99(a)
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	13722	2.00000	1.62(a)
55	Dibromochloromethane	129	7.758	7.758	(0.940)	7733	2.00000	1.61(a)
44	Dibromomethane	93	6.191	6.191	(1.101)	7013	2.00000	1.94(aM)
2	Dichlorodifluoromethane	85	1.202	1.202	(0.246)	12615	2.00000	3.01(a)
61	Ethylbenzene	106	8.373	8.373	(1.015)	14817	2.00000	1.87(a)
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	4667	2.00000	2.48(a)
67	Isopropylbenzene	105	9.126	9.126	(1.106)	44094	2.00000	1.92(a)
62	m,p-Xylenes	106	8.474	8.474	(1.027)	36359	4.00000	3.74(a)
17	Methylene Chloride	84	2.870	2.870	(0.586)	13586	2.00000	1.90(a)
87	n-Butylbenzene	91	10.558	10.558	(1.031)	36189	2.00000	2.36(a)
73	n-Propylbenzene	91	9.475	9.475	(0.926)	53805	2.00000	1.93(a)
92	Naphthalene	128	12.133	12.133	(1.185)	35700	2.00000	1.71(a)
63	o-Xylene	106	8.811	8.811	(1.068)	18379	2.00000	1.89(aH)
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	43610	2.00000	1.88(a)
64	Styrene	104	8.826	8.826	(1.070)	30570	2.00000	1.86(a)
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	31095	2.00000	1.92(a)
56	Tetrachloroethene	164	7.526	7.526	(0.912)	7936	2.00000	2.00(a)
50	Toluene	91	7.046	7.046	(0.854)	47615	2.00000	1.98(a)
20	trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	10067	2.00000	1.96(a)
51	trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	10881	2.00000	2.73(a)
38	Trichloroethene	130	5.861	5.861	(1.042)	10685	2.00000	1.93(a)
8	Trichlorofluoromethane	101	1.951	1.951	(0.399)	17301	2.00000	2.08(a)
5	Vinyl Chloride	62	1.415	1.415	(0.289)	13465	2.00000	2.47(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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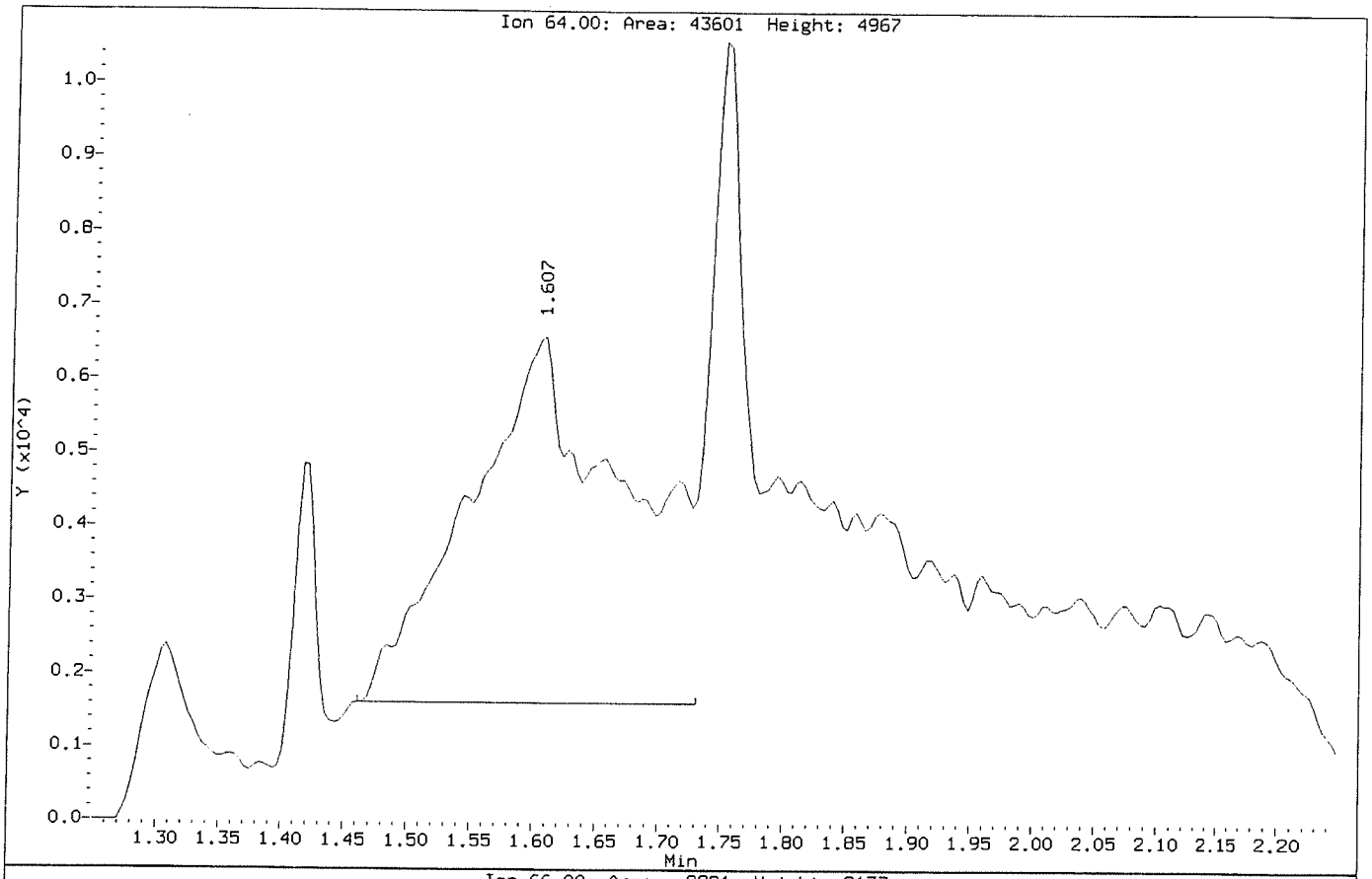
Purge Volume: 5.0
Column phase: DB624

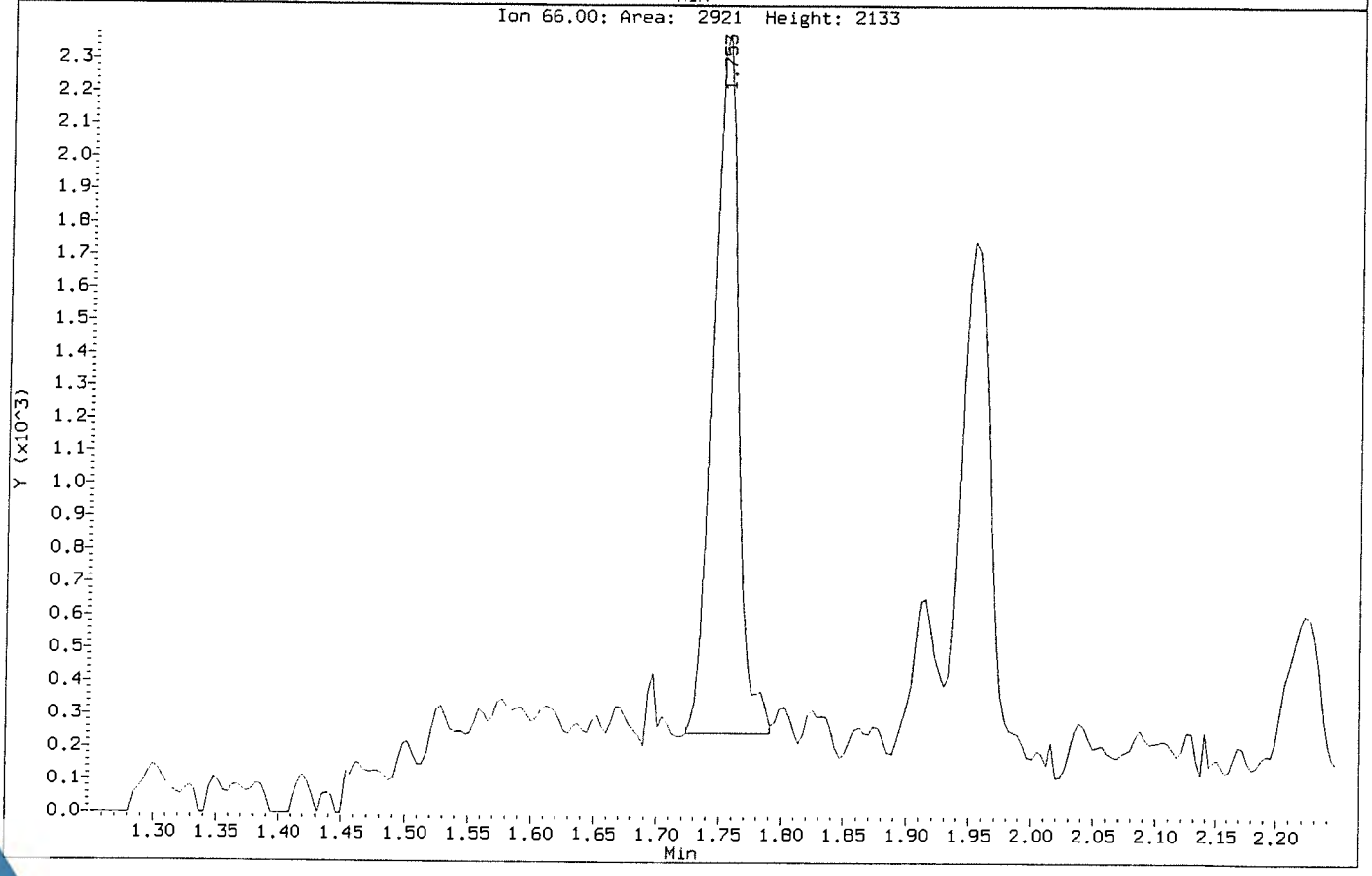
\\NAHSTWS005\Target\chem\voa9,i\U181113,b\U111305,D

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\Before\U111305.D
Injection Date: 13-NOV-2018 13:01
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3





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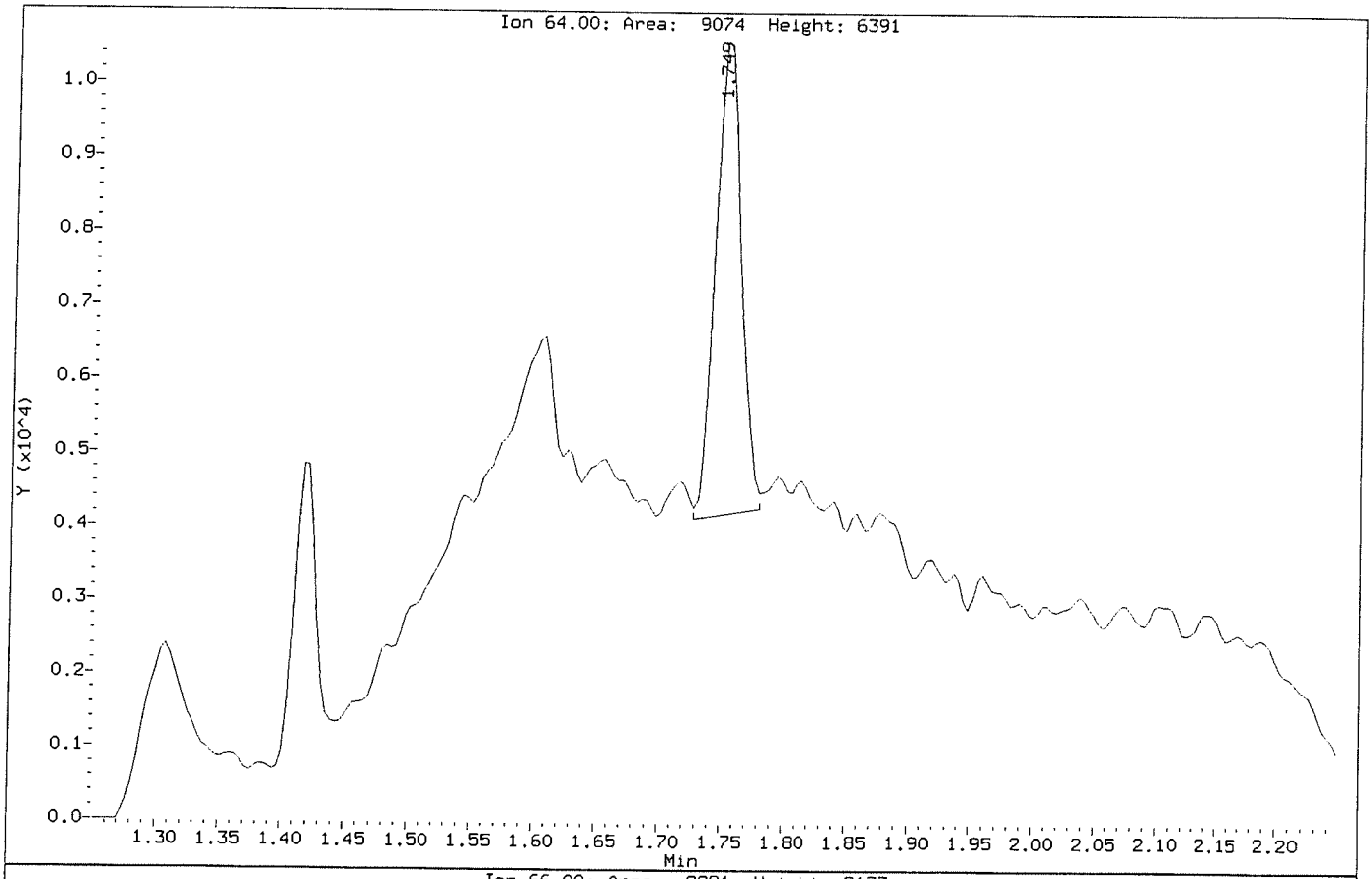
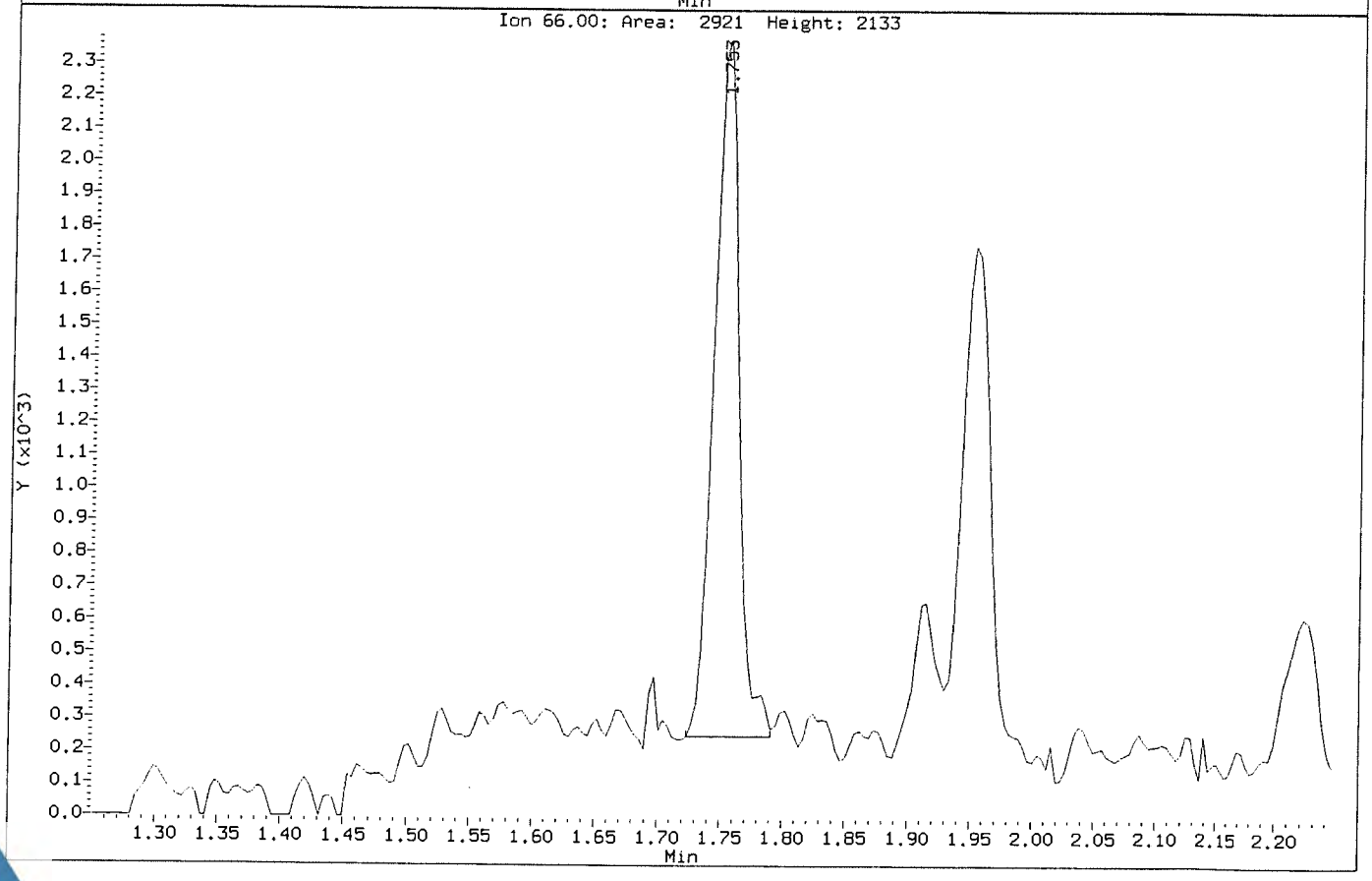
Compound: Chloroethane
CAS Number: 75-00-3





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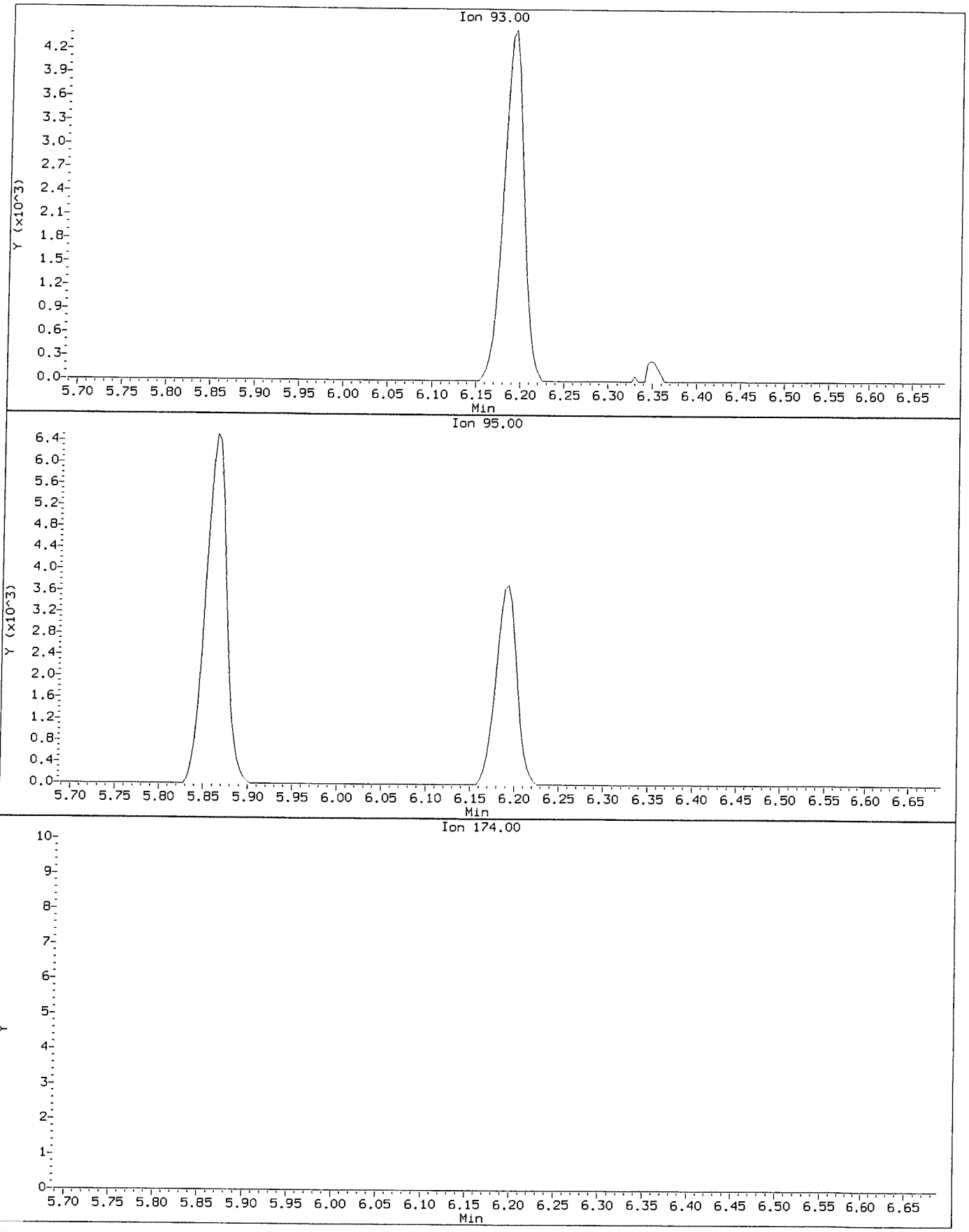
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3



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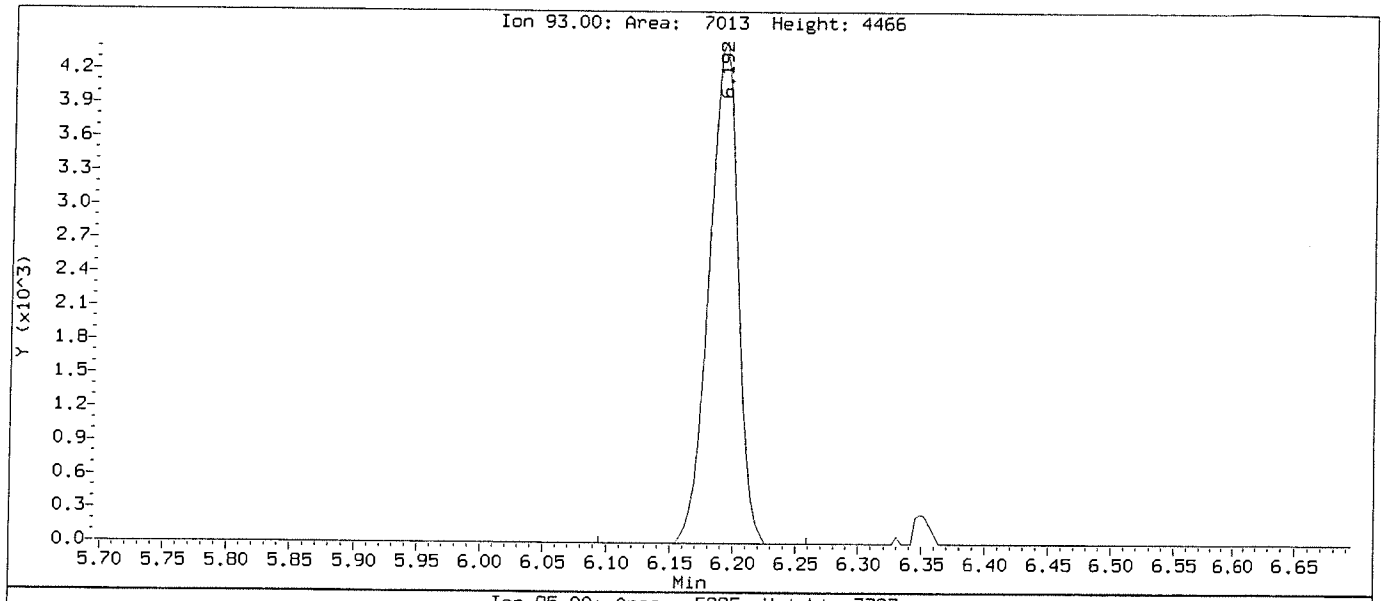
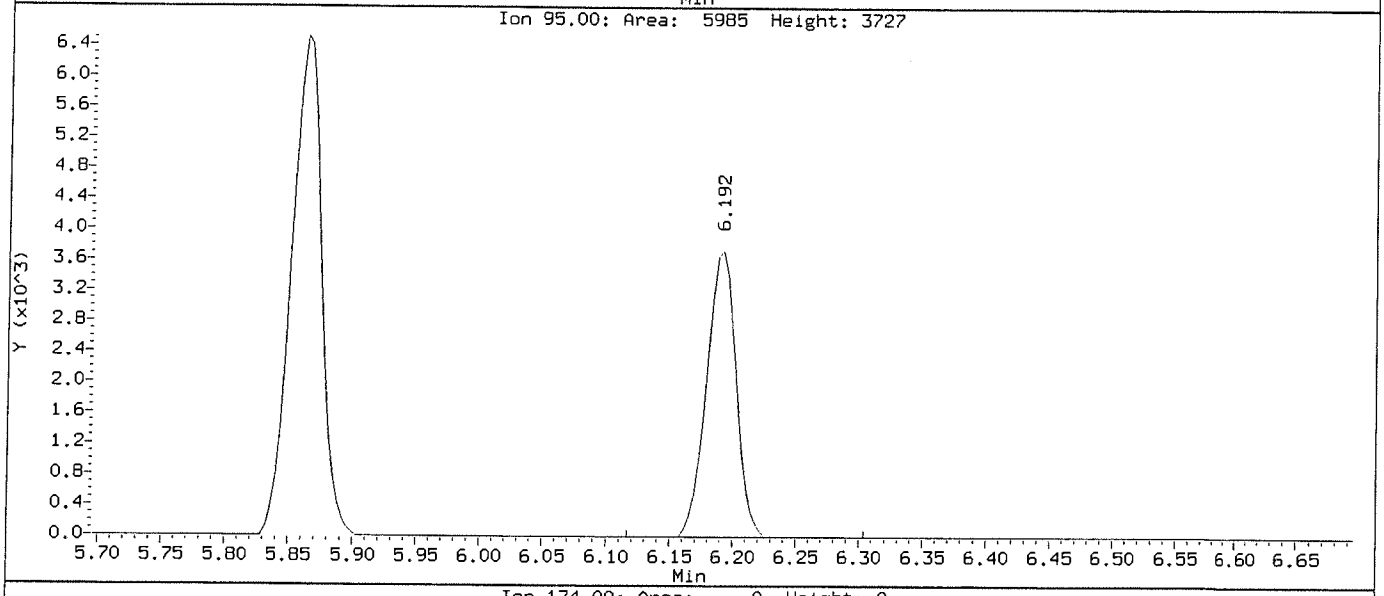
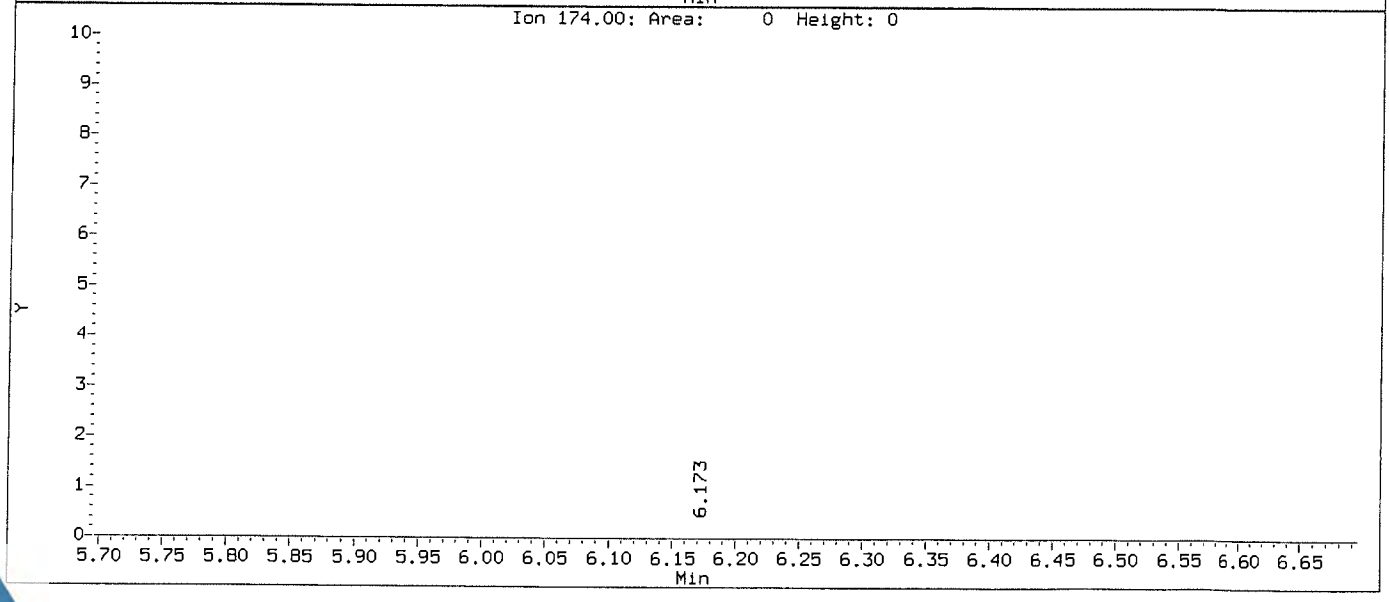
Injection Date: 13-NOV-2018 13:01
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3







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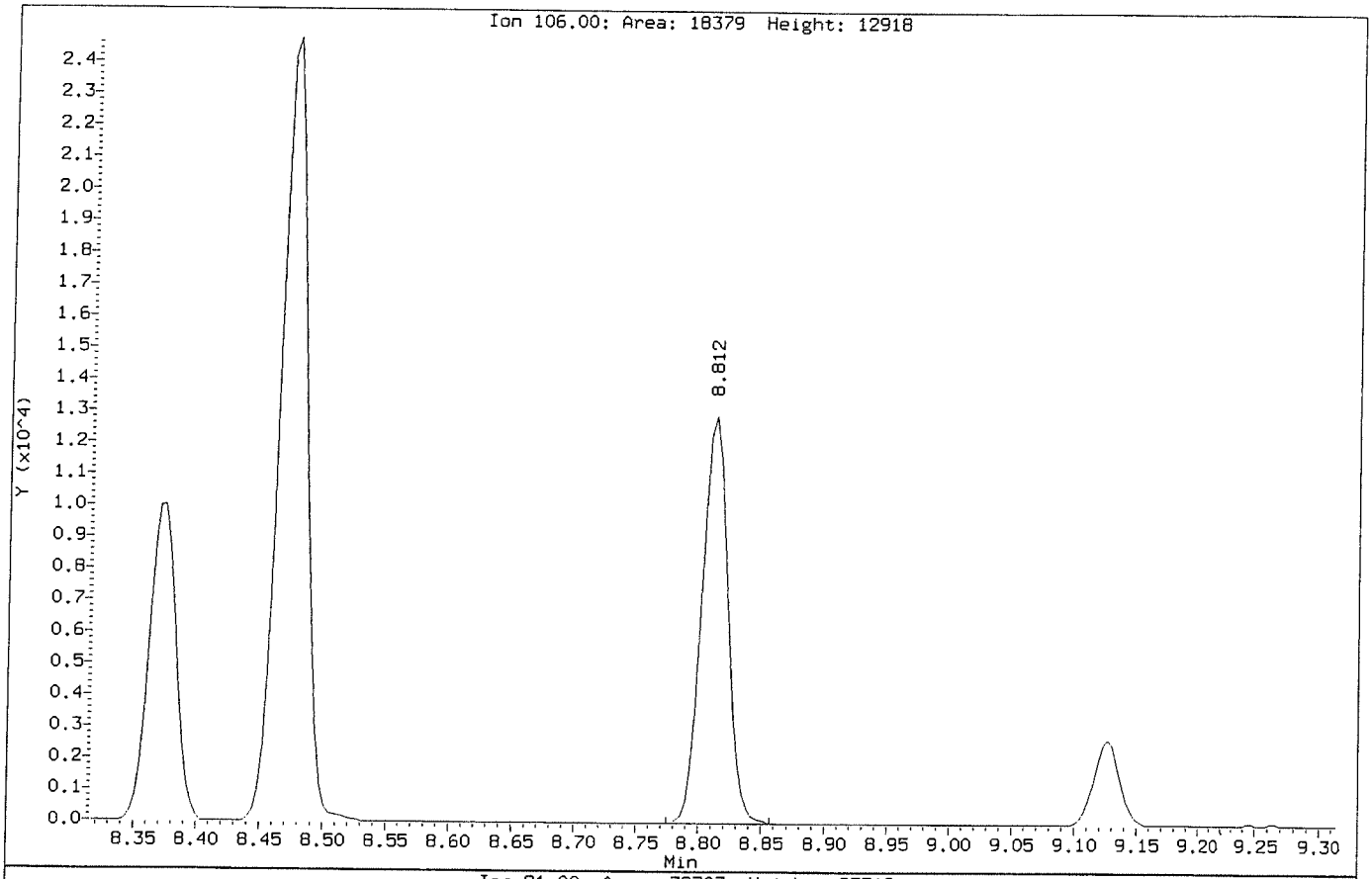
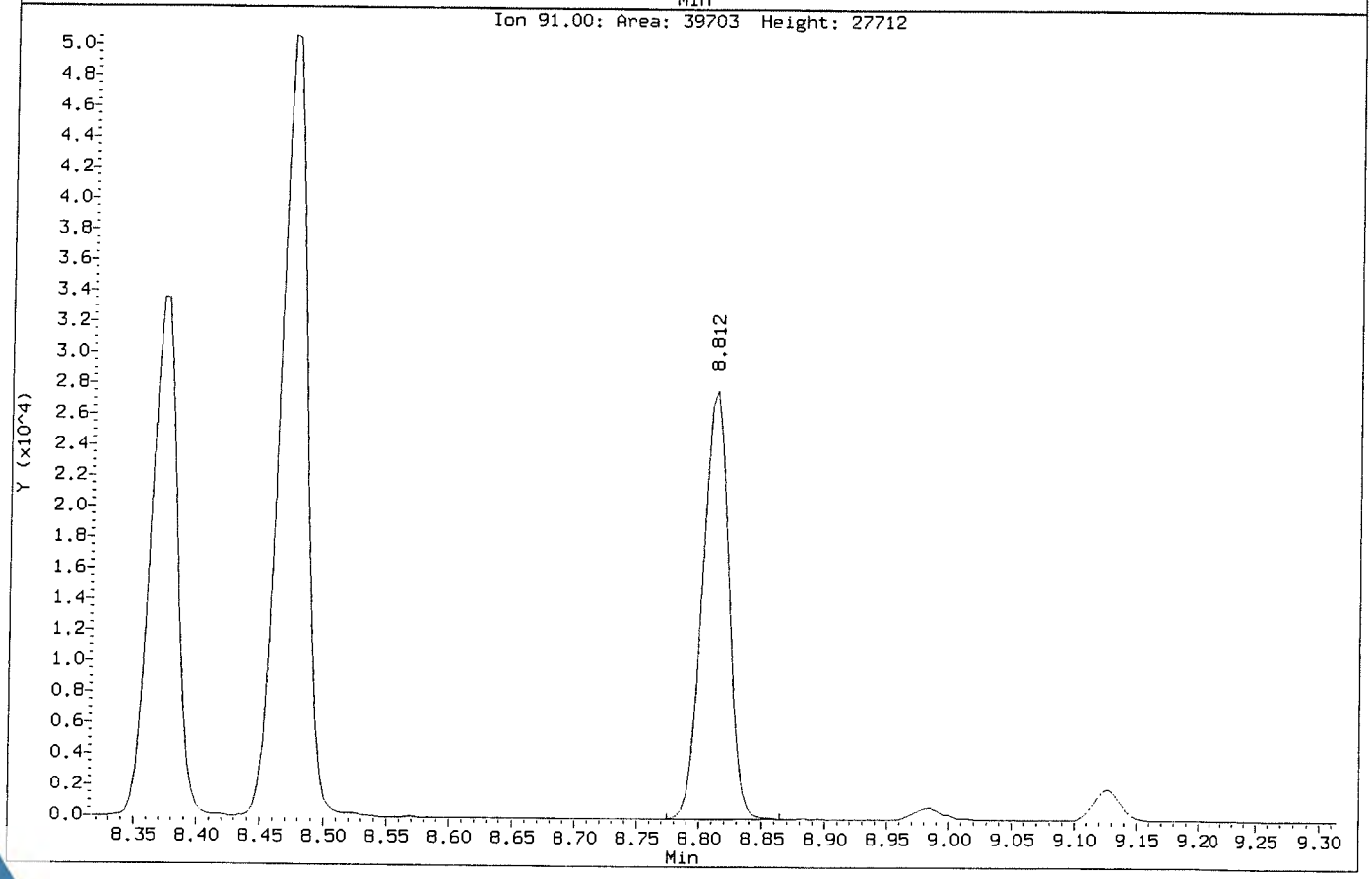
Injection Date: 13-NOV-2018 13:01
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: o-Xylene
CAS Number: 95-47-6





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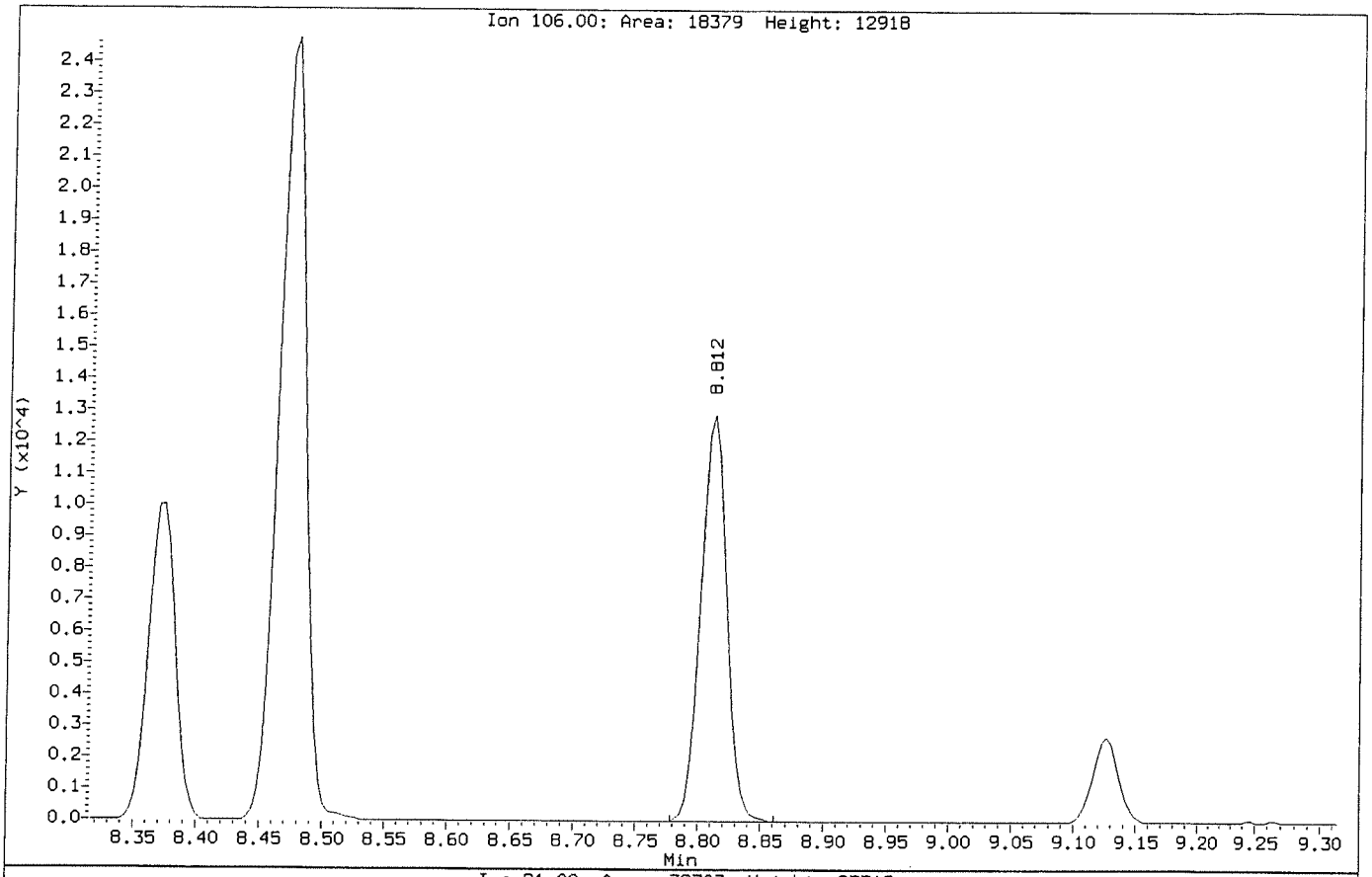
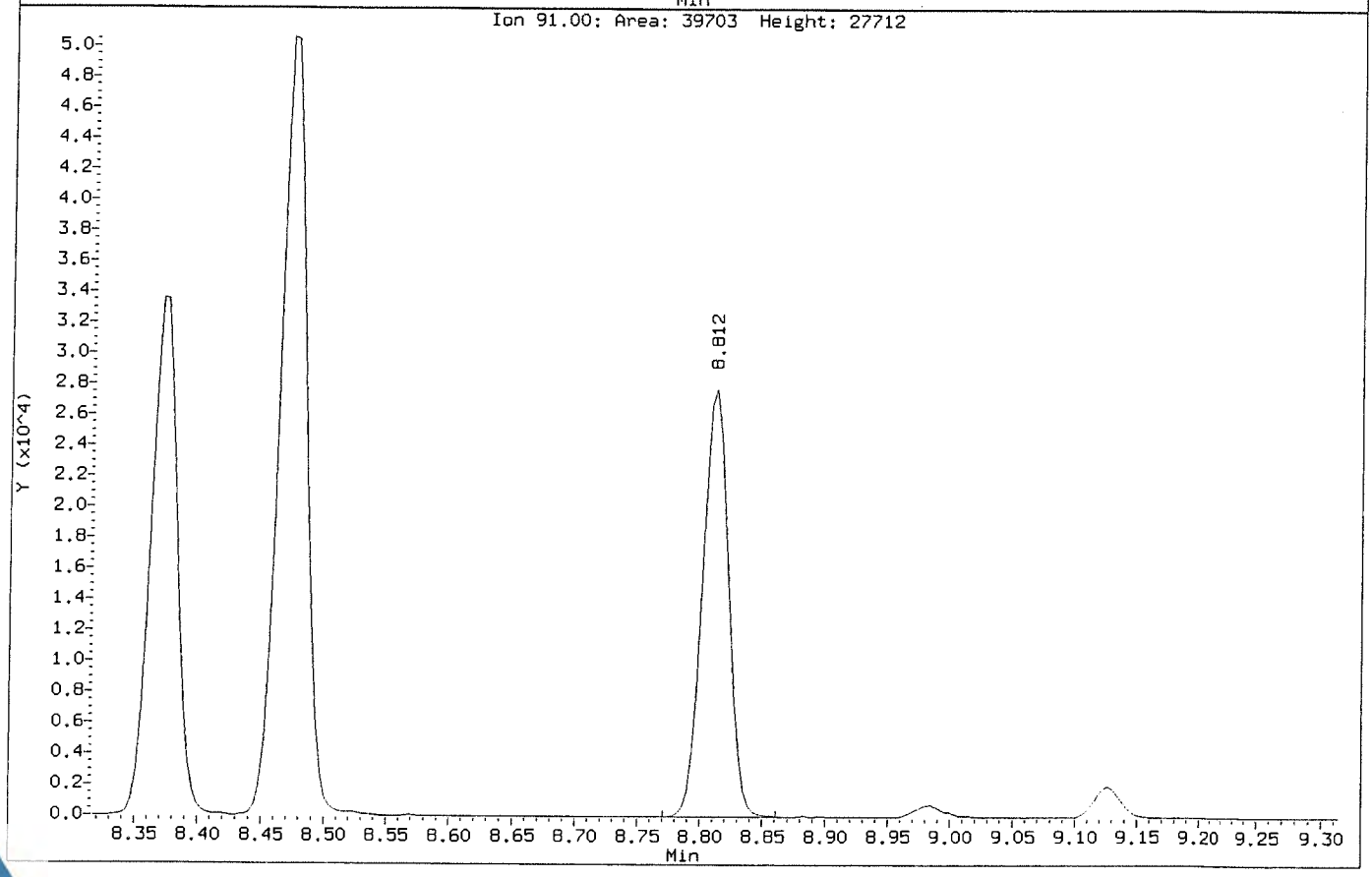
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: o-Xylene
CAS Number: 95-47-6





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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111306.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 13-NOV-2018 13:25
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD005;VSTD005;1;5;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 13:01 Cal File: U111305.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

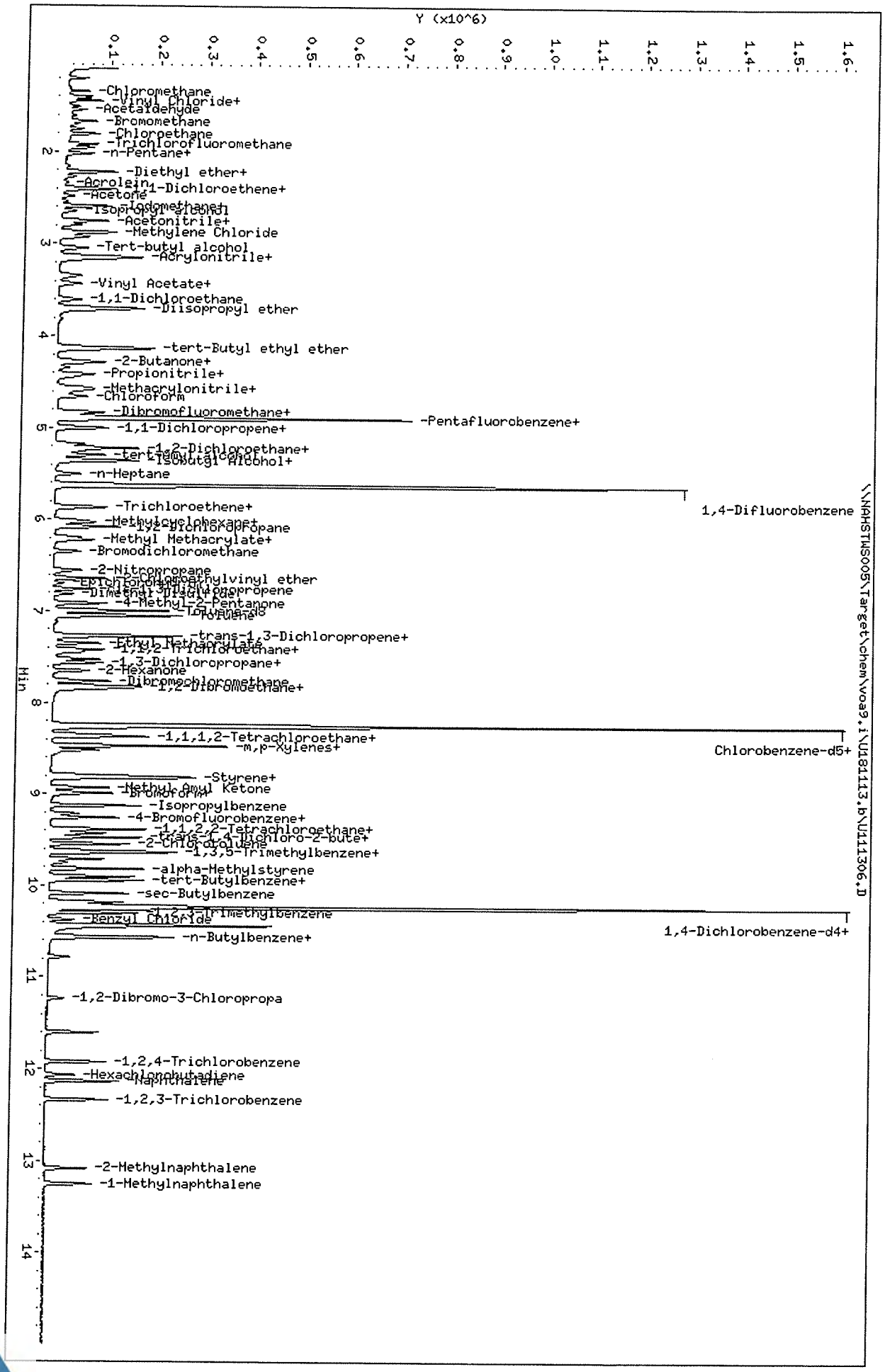
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	422530	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	813180	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	744948	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	348698	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	27004	5.00000	4.44(a)
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	38984	5.00000	4.54(a)
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	112942	5.00000	4.42(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	41214	5.00000	4.64(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	21915	5.00000	4.66(a)
31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	31327	5.00000	4.22(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	42360	5.00000	5.12
138 Freon TF	101	2.405	2.405	(0.491)	17279	5.00000	4.08(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	23401	5.00000	4.94(a)
22 1,1-Dichloroethane	63	3.604	3.604	(0.737)	45506	5.00000	4.69(a)
11 1,1-Dichloroethene	96	2.401	2.401	(0.491)	20013	5.00000	4.19(a)
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	33087	5.00000	4.40(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	31782	5.00000	4.82(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	42556	5.00000	4.93(a)
90 1,2,4-Trichlorobenzene	180	11.927	11.927	(1.165)	31441	5.00000	4.58(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	93787	5.00000	4.84(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	5351	5.00000	5.17
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	27191	5.00000	4.95(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111306.D Page 2
Report Date: 24-Jan-2019 18:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	55248	5.00000	4.96(a)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	41764	5.00000	4.90(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	27675	5.00000	4.78(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	88227	5.00000	4.70(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	52374	5.00000	4.77(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	51002	5.00000	5.01
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	55298	5.00000	5.11
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	25227	5.00000	4.20(a)
24 2-Butanone	43	4.343	4.343	(0.887)	30016	10.0000	10.10
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	82685	5.00000	4.84(a)
52 2-Hexanone	43	7.653	7.653	(0.928)	44101	10.0000	10.18
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	97151	5.00000	4.93(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	85956	5.00000	4.50(a)
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	62316	10.0000	10.02
10 Acetone	43	2.484	2.484	(0.508)	24249	10.0000	8.62
37 Benzene	78	5.220	5.220	(0.928)	105397	5.00000	4.68(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	27842	5.00000	4.86(a)
29 Bromochloromethane	128	4.557	4.557	(0.931)	12948	5.00000	5.19
39 Bromodichloromethane	83	6.349	6.349	(1.129)	30775	5.00000	4.55(a)
66 Bromoform	173	8.984	8.984	(1.089)	13391	5.00000	5.07(T)
6 Bromomethane	94	1.674	1.674	(0.342)	17760	5.00000	6.77
19 Carbon Disulfide	76	2.592	2.592	(0.530)	124164	10.0000	8.43
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	23569	5.00000	4.01(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	72938	5.00000	4.74(a)
7 Chloroethane	64	1.756	1.756	(0.359)	19233	5.00000	4.36(aMH)
28 Chloroform	83	4.658	4.658	(0.952)	45918	5.00000	4.72(a)
3 Chloromethane	50	1.340	1.340	(0.274)	26431	5.00000	4.89(a)
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.877)	27696	5.00000	4.62(a)
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.202)	37232	5.00000	4.37(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	21374	5.00000	4.53(a)
44 Dibromomethane	93	6.191	6.191	(1.101)	17227	5.00000	4.74(aM)
2 Dichlorodifluoromethane	85	1.205	1.205	(0.246)	24157	5.00000	4.79(a)
61 Ethylbenzene	106	8.373	8.373	(1.015)	35416	5.00000	4.55(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	8782	5.00000	4.49(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	106616	5.00000	4.70(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	89708	10.0000	9.36
17 Methylene Chloride	84	2.873	2.873	(0.587)	29126	5.00000	4.77(a)
87 n-Butylbenzene	91	10.558	10.558	(1.031)	79206	5.00000	4.76(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	128990	5.00000	4.68(a)
92 Naphthalene	128	12.133	12.133	(1.185)	100680	5.00000	4.87(a)
63 o-Xylene	106	8.811	8.811	(1.068)	46119	5.00000	4.81(aH)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	99437	5.00000	4.34(a)
64 Styrene	104	8.826	8.826	(1.070)	78010	5.00000	4.81(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	73015	5.00000	4.57(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	17447	5.00000	4.47(a)
50 Toluene	91	7.050	7.050	(0.855)	113936	5.00000	4.81(a)
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	23739	5.00000	4.54(a)
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	30108	5.00000	4.94(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	24849	5.00000	4.48(a)
8 Trichlorofluoromethane	101	1.955	1.955	(0.400)	34539	5.00000	4.08(a)
5 Vinyl Chloride	62	1.419	1.419	(0.290)	29718	5.00000	4.77(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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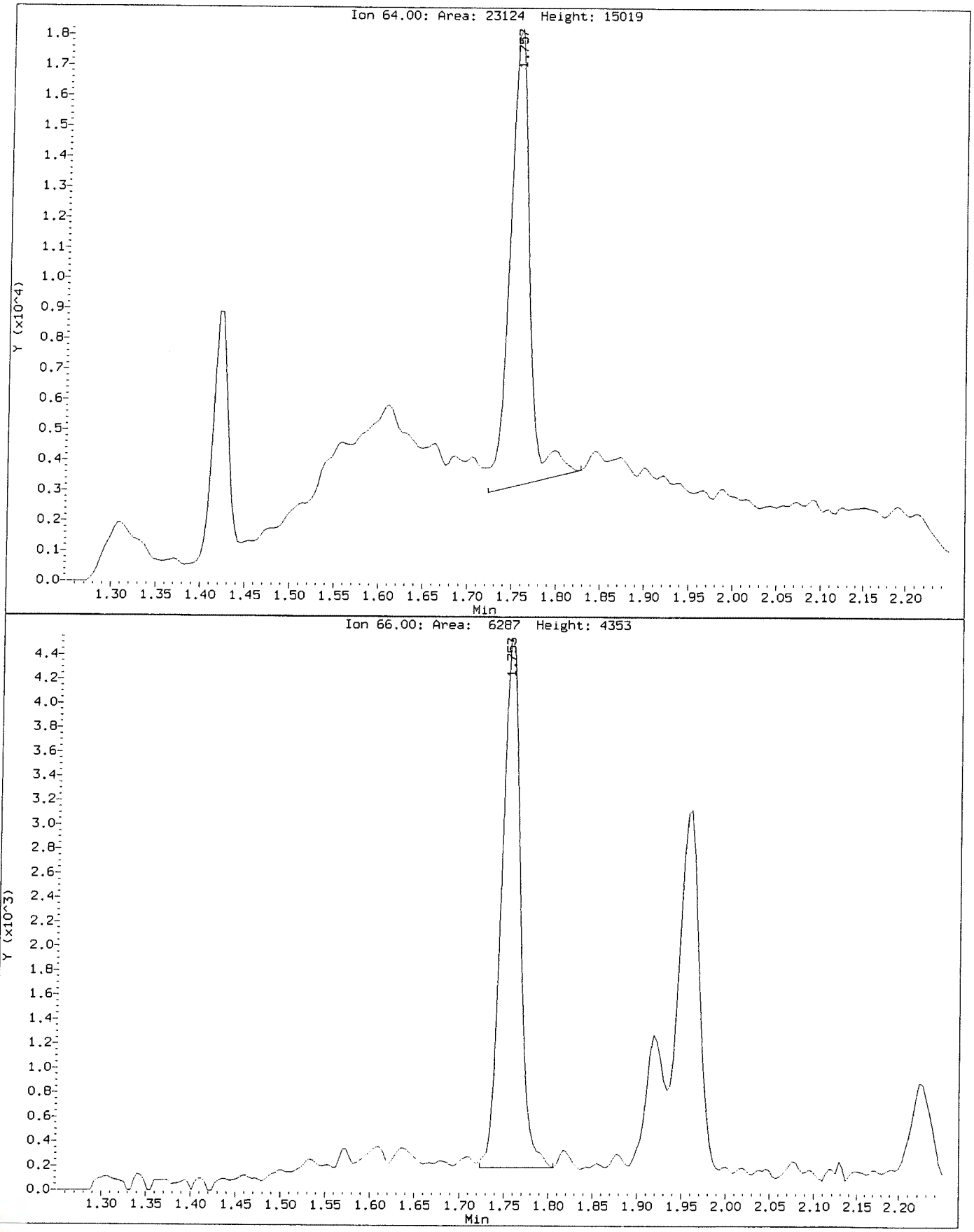
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111306.D

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\Before\U111306.D
Injection Date: 13-NOV-2018 13:25
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3



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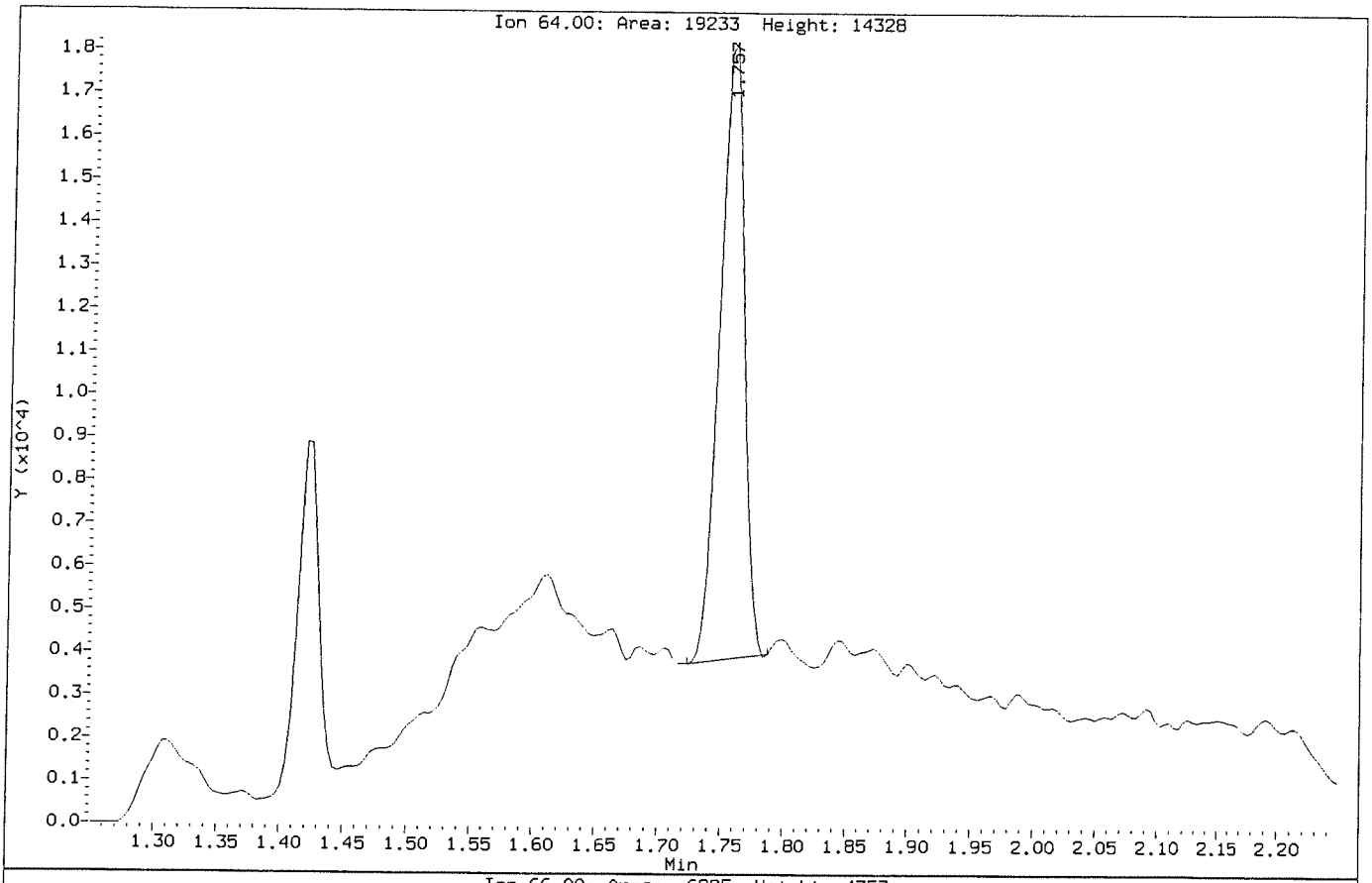
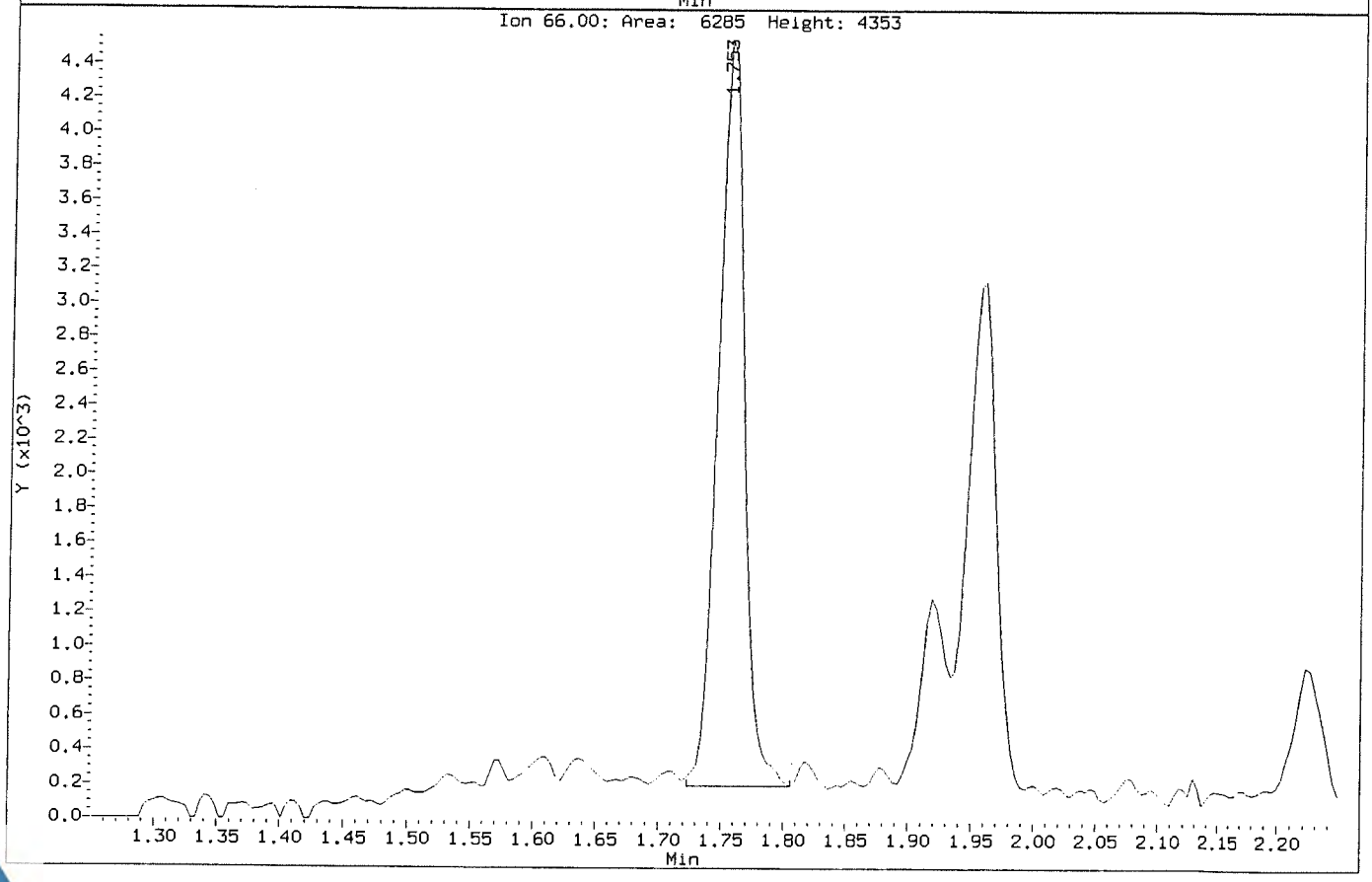
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3





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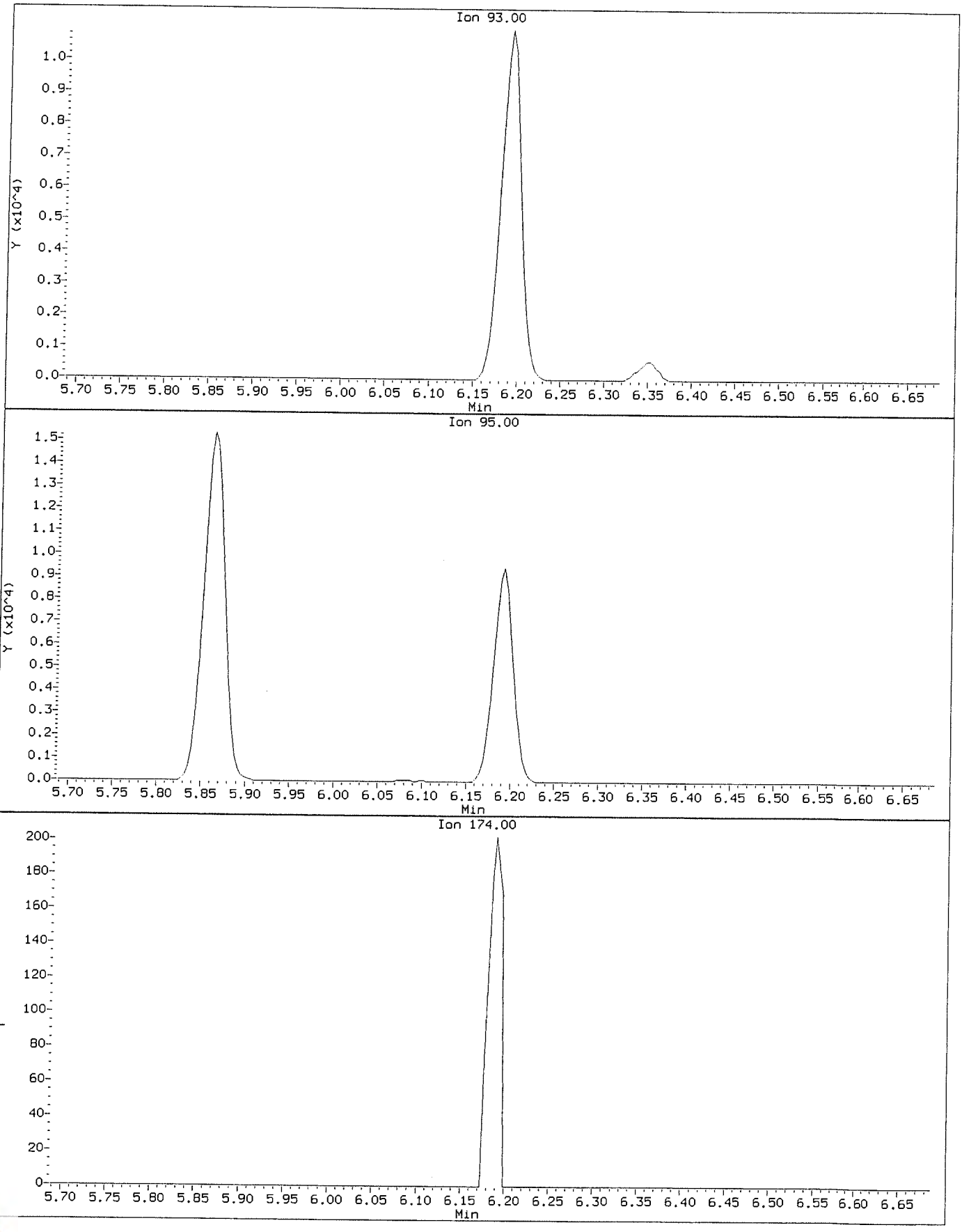
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



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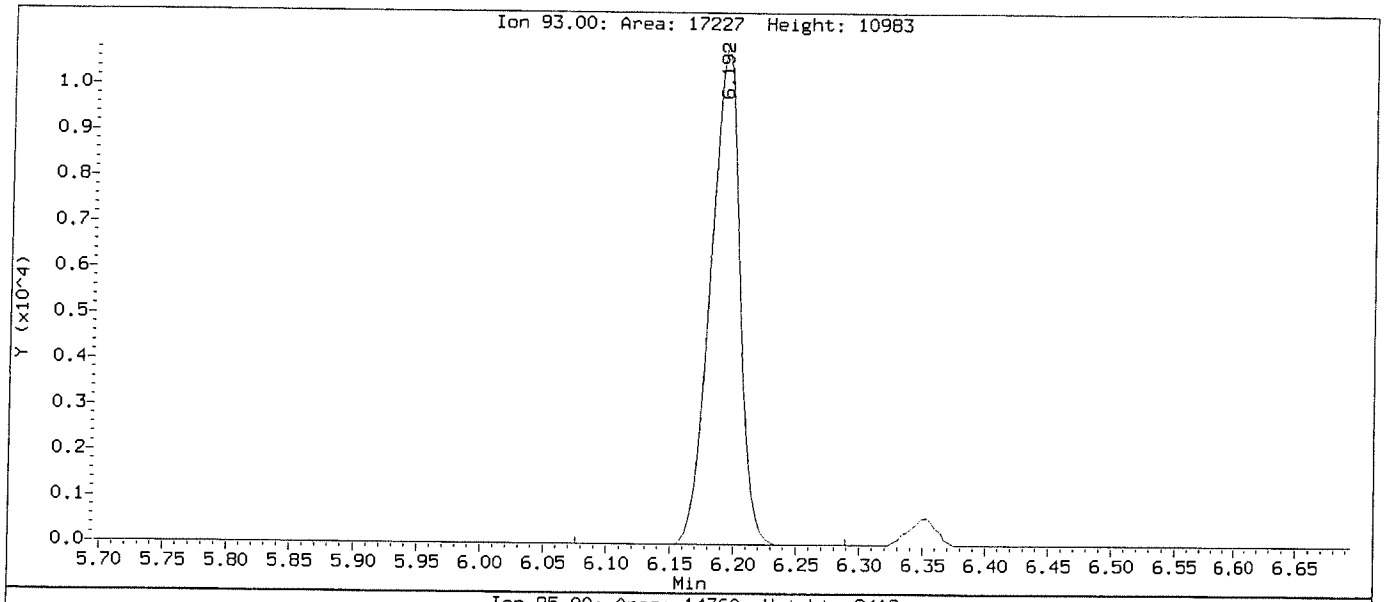
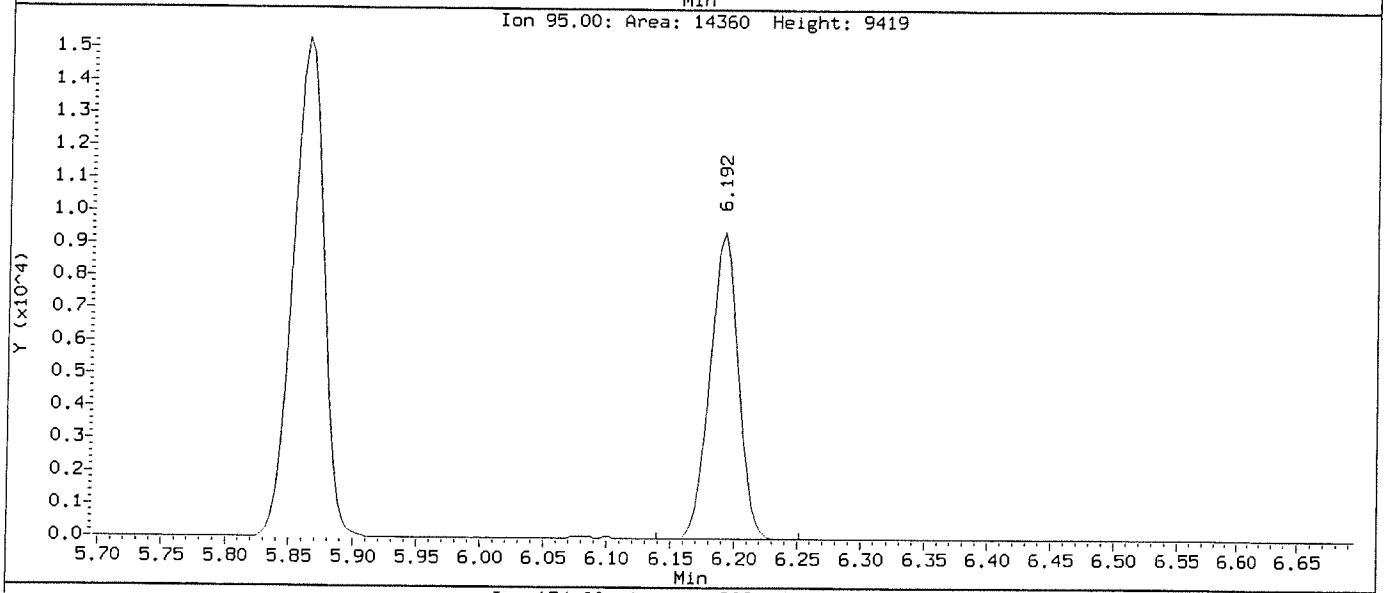
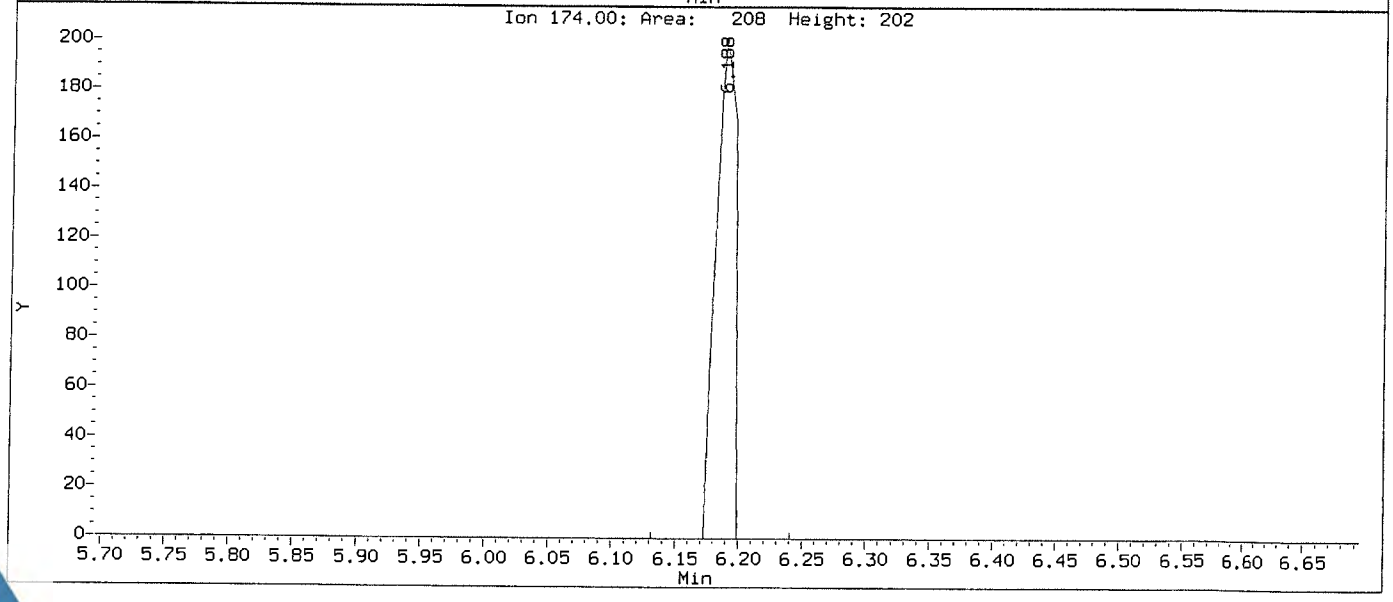
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3







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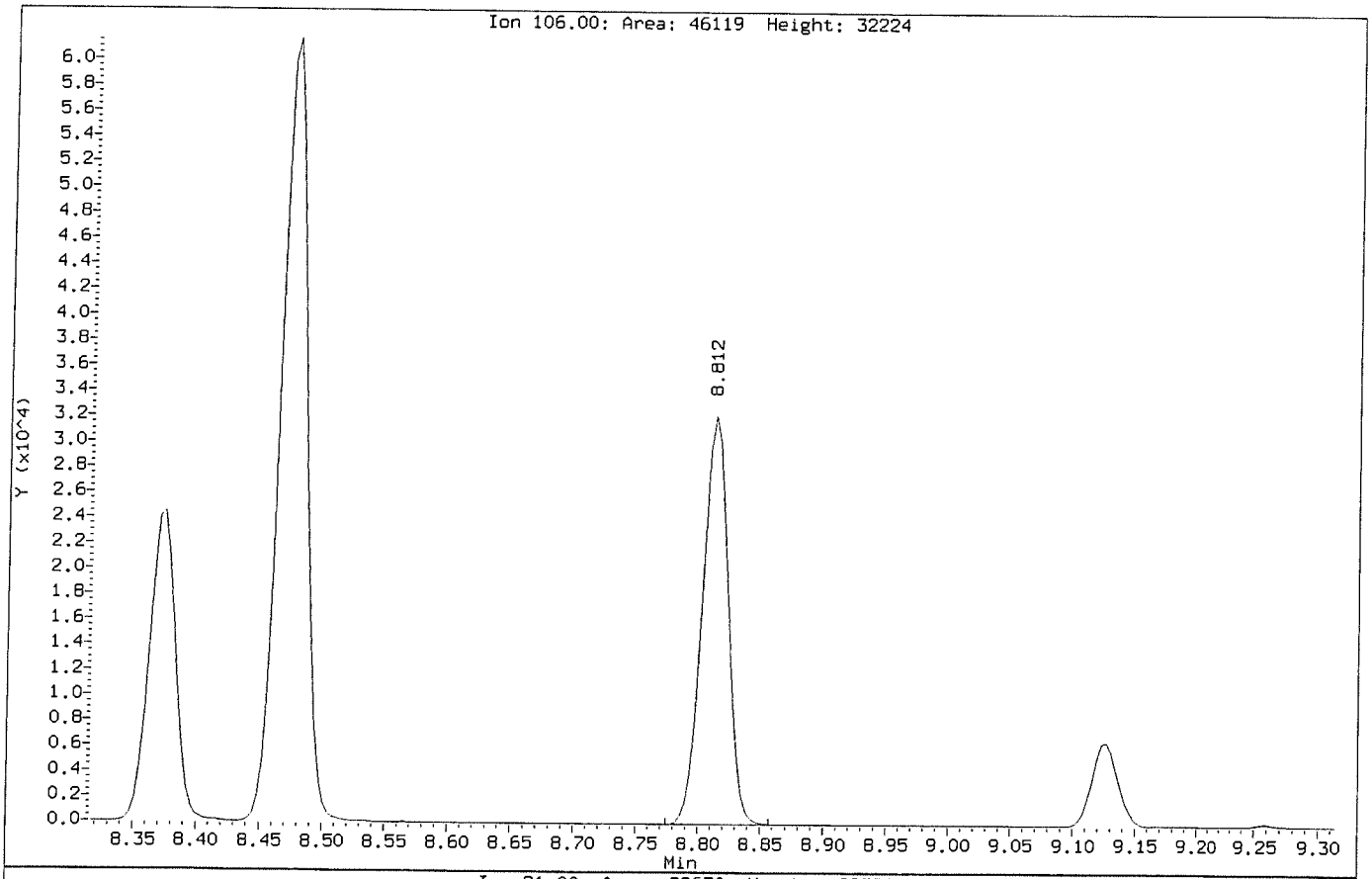
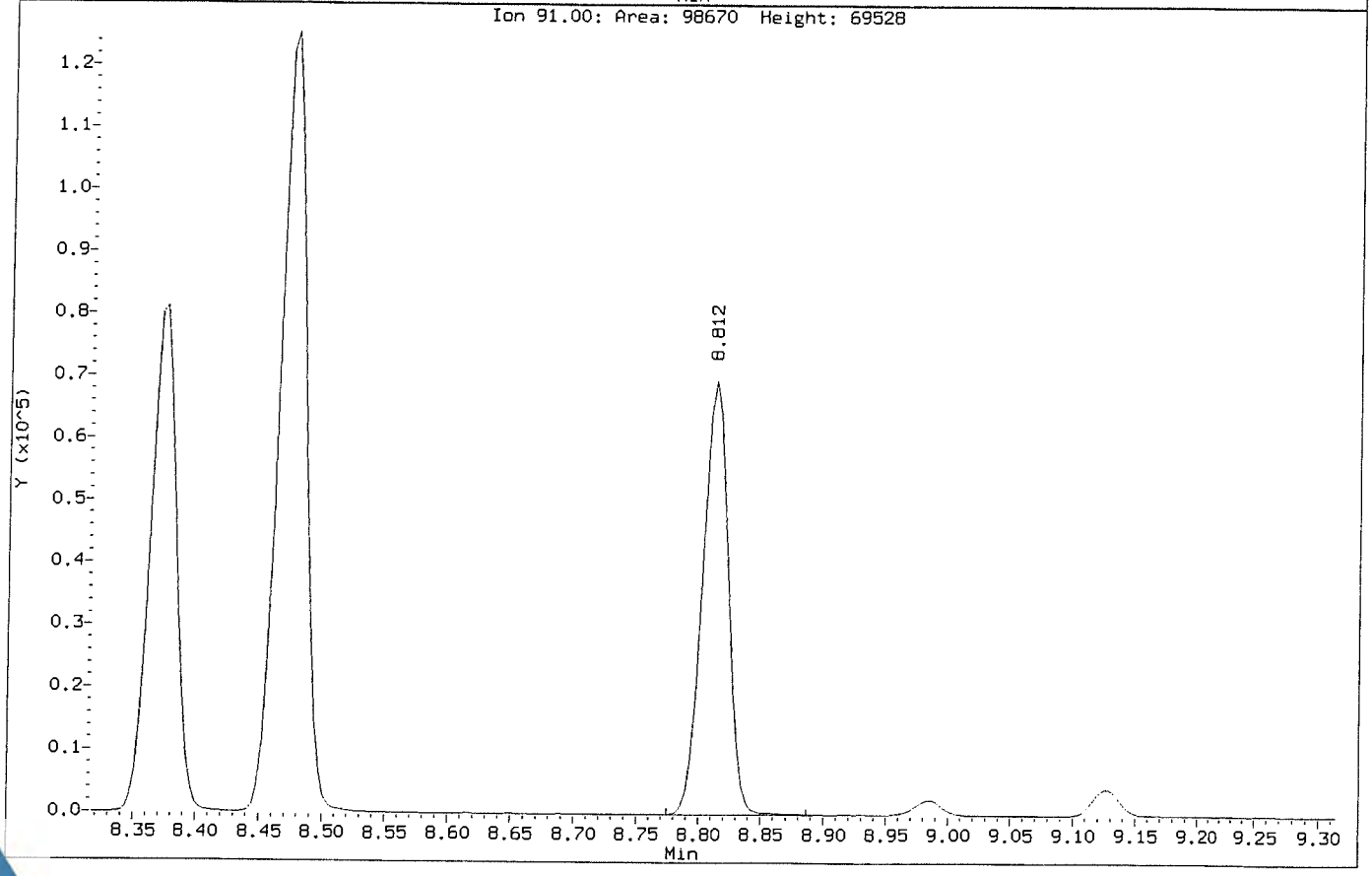
Injection Date: 13-NOV-2018 13:25
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: o-Xylene
CAS Number: 95-47-6





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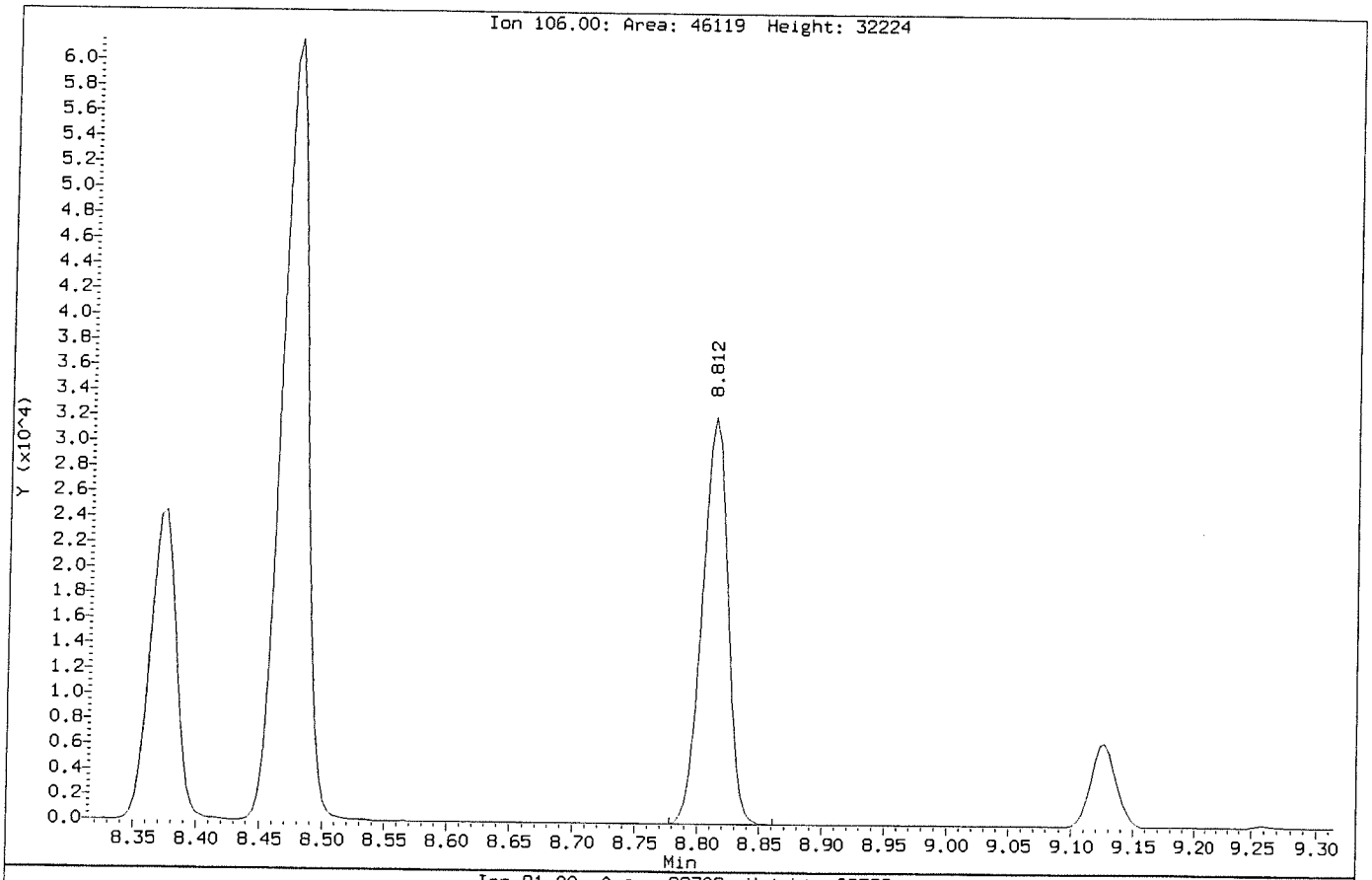
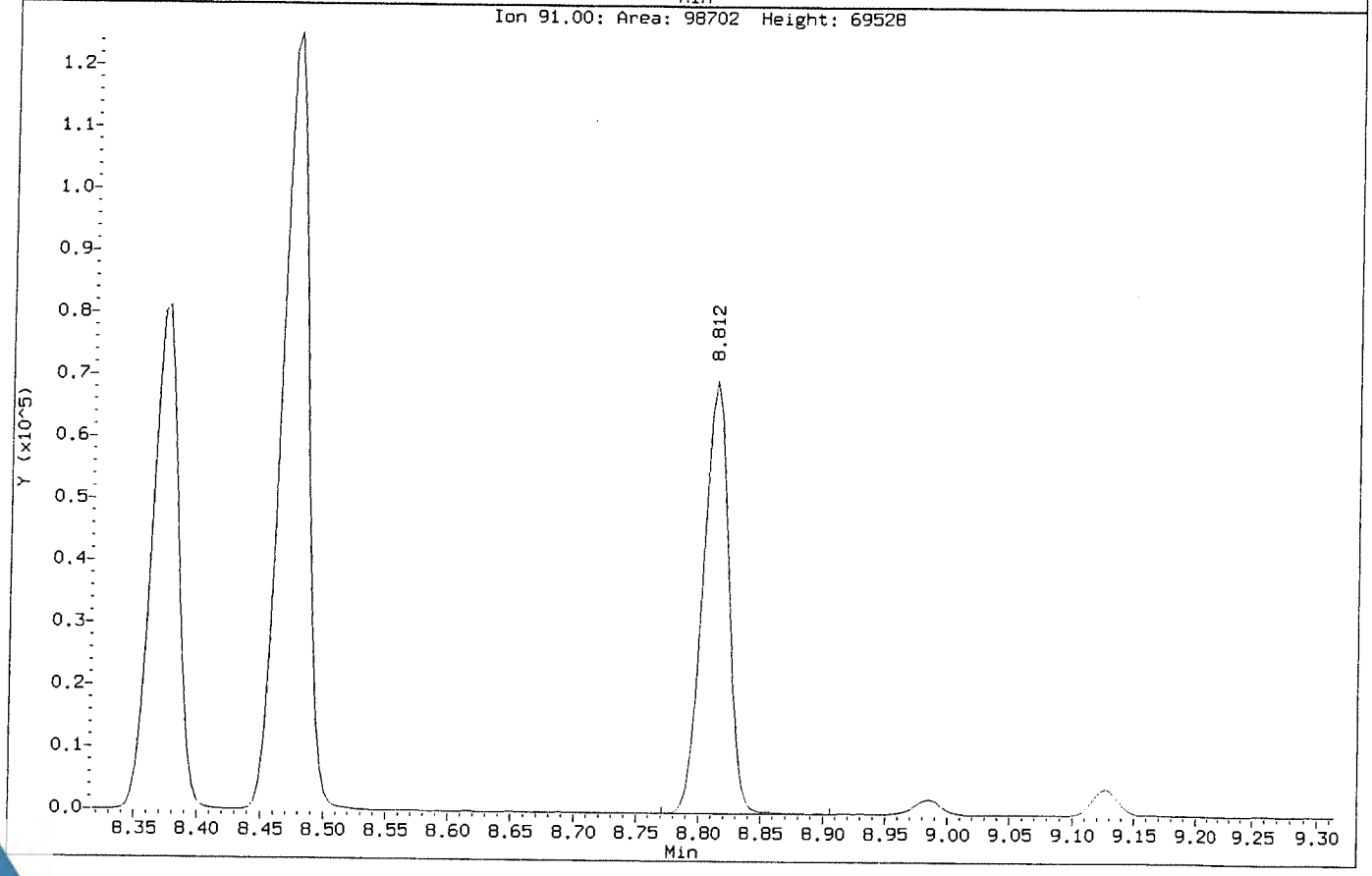
Injection Date: 13-NOV-2018 13:25
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: o-Xylene
CAS Number: 95-47-6





Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111307.D Page 1
Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111307.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 13-NOV-2018 13:50
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 13:25 Cal File: U111306.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

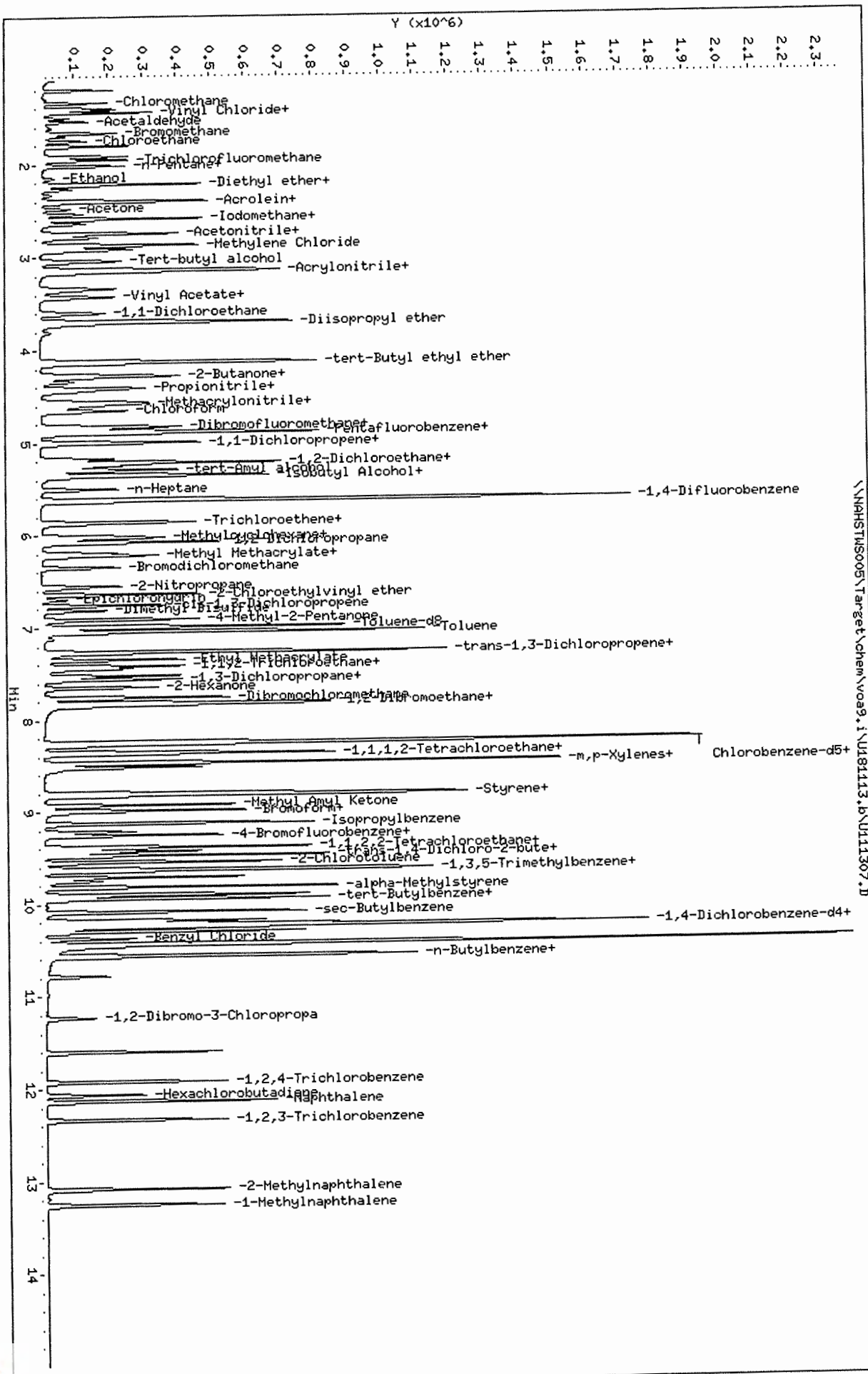
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	441430	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	825527	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	767763	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	370767	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.826	(0.986)	102630	20.0000	19.47
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	138453	20.0000	19.70
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	412445	20.0000	20.02
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	154498	20.0000	19.71
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	94836	20.0000	19.58
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	144369	20.0000	18.61
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	170546	20.0000	19.41
138 Freon TF	101	2.397	2.397	(0.490)	81210	20.0000	18.36
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	94236	20.0000	19.30
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	188042	20.0000	18.58
11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	92859	20.0000	18.63
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	142695	20.0000	18.71
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	136668	20.0000	19.52
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	178640	20.0000	19.49
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	137085	20.0000	18.80
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	410829	20.0000	19.94
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	24969	20.0000	19.13
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	112223	20.0000	19.85

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111307.D Page 2
Report Date: 24-Jan-2019 18:55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	222900	20.0000	18.82
33	1,2-Dichloroethane	62	5.250	5.250	(0.933)	165626	20.0000	19.17
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	114197	20.0000	19.42
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	396843	20.0000	19.92
83	1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	220218	20.0000	18.86
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	202833	20.0000	19.35
84	1,4-Dichlorobenzene	146	10.254	10.254	(1.002)	228900	20.0000	20.02
26	2,2-Dichloropropane	77	4.272	4.272	(0.873)	113941	20.0000	18.18
24	2-Butanone	43	4.335	4.335	(0.886)	118404	40.0000	38.15
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	350860	20.0000	19.32
52	2-Hexanone	43	7.649	7.649	(0.927)	181765	40.0000	40.72
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	410588	20.0000	19.59
82	p-Isopropyltoluene	119	10.209	10.209	(0.997)	404381	20.0000	19.91
45	4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	257102	40.0000	40.14
10	Acetone	43	2.476	2.476	(0.506)	87797	40.0000	40.81
37	Benzene	78	5.216	5.216	(0.927)	436595	20.0000	19.13
74	Bromobenzene	156	9.381	9.381	(0.917)	115775	20.0000	19.03
29	Bromochloromethane	128	4.553	4.553	(0.930)	53724	20.0000	20.64
39	Bromodichloromethane	83	6.348	6.348	(1.129)	132026	20.0000	19.24
66	Bromoform	173	8.984	8.984	(1.089)	60993	20.0000	18.33(T)
6	Bromomethane	94	1.666	1.666	(0.341)	65394	20.0000	19.07
19	Carbon Disulfide	76	2.585	2.585	(0.528)	579343	40.0000	37.64
34	Carbon Tetrachloride	117	4.995	4.995	(0.888)	113726	20.0000	19.09
59	Chlorobenzene	112	8.275	8.275	(1.003)	302097	20.0000	19.06
7	Chloroethane	64	1.749	1.749	(0.357)	85496	20.0000	18.56(M)
28	Chloroform	83	4.654	4.654	(0.951)	190532	20.0000	18.74
3	Chloromethane	50	1.336	1.336	(0.273)	114171	20.0000	19.51
27	cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	119044	20.0000	19.03
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	172818	20.0000	20.00
55	Dibromochloromethane	129	7.758	7.758	(0.940)	96570	20.0000	19.87
44	Dibromomethane	93	6.191	6.191	(1.101)	71419	20.0000	19.38
2	Dichlorodifluoromethane	85	1.201	1.201	(0.246)	119108	20.0000	18.89
61	Ethylbenzene	106	8.369	8.369	(1.015)	154131	20.0000	19.23
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	45235	20.0000	20.48
67	Isopropylbenzene	105	9.126	9.126	(1.106)	456275	20.0000	19.55
62	m,p-Xylenes	106	8.474	8.474	(1.027)	389423	40.0000	39.44
17	Methylene Chloride	84	2.866	2.866	(0.586)	113894	20.0000	19.80
87	n-Butylbenzene	91	10.558	10.558	(1.031)	381141	20.0000	20.10
73	n-Propylbenzene	91	9.475	9.475	(0.926)	574080	20.0000	19.62
92	Naphthalene	128	12.133	12.133	(1.185)	458615	20.0000	20.88
63	o-Xylene	106	8.811	8.811	(1.068)	197393	20.0000	19.97(H)
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	477299	20.0000	19.59
64	Styrene	104	8.826	8.826	(1.070)	337037	20.0000	20.20
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	334318	20.0000	19.69
56	Tetrachloroethene	164	7.525	7.525	(0.912)	75404	20.0000	18.74
50	Toluene	91	7.046	7.046	(0.854)	470397	20.0000	19.29
20	trans-1,2-Dichloroethene	96	3.139	3.139	(0.642)	101477	20.0000	18.58
51	trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	147063	20.0000	18.17
38	Trichloroethene	130	5.861	5.861	(1.042)	107204	20.0000	19.05
8	Trichlorofluoromethane	101	1.951	1.951	(0.399)	161290	20.0000	18.27
5	Vinyl Chloride	62	1.415	1.415	(0.289)	136290	20.0000	19.25

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

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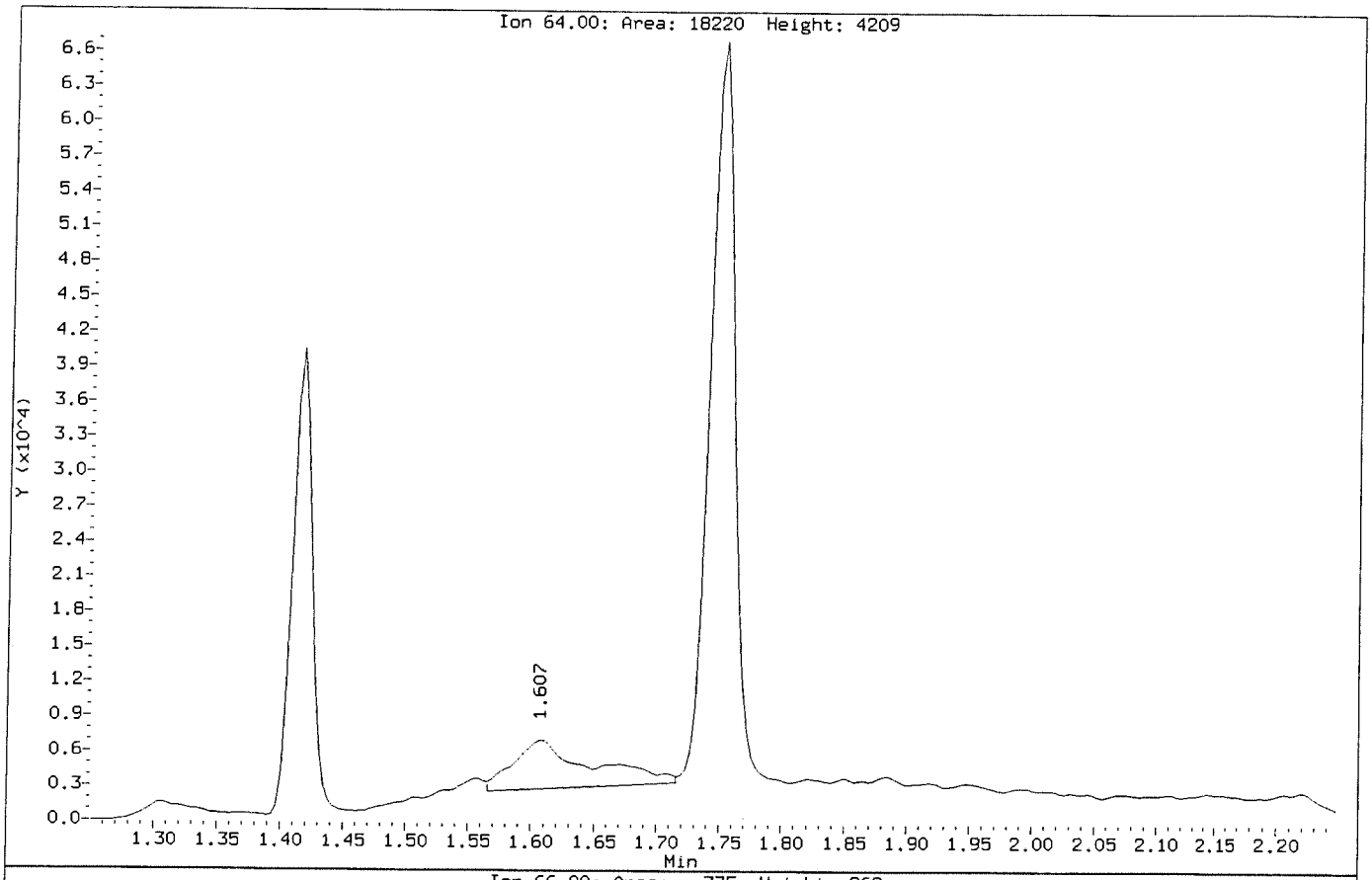
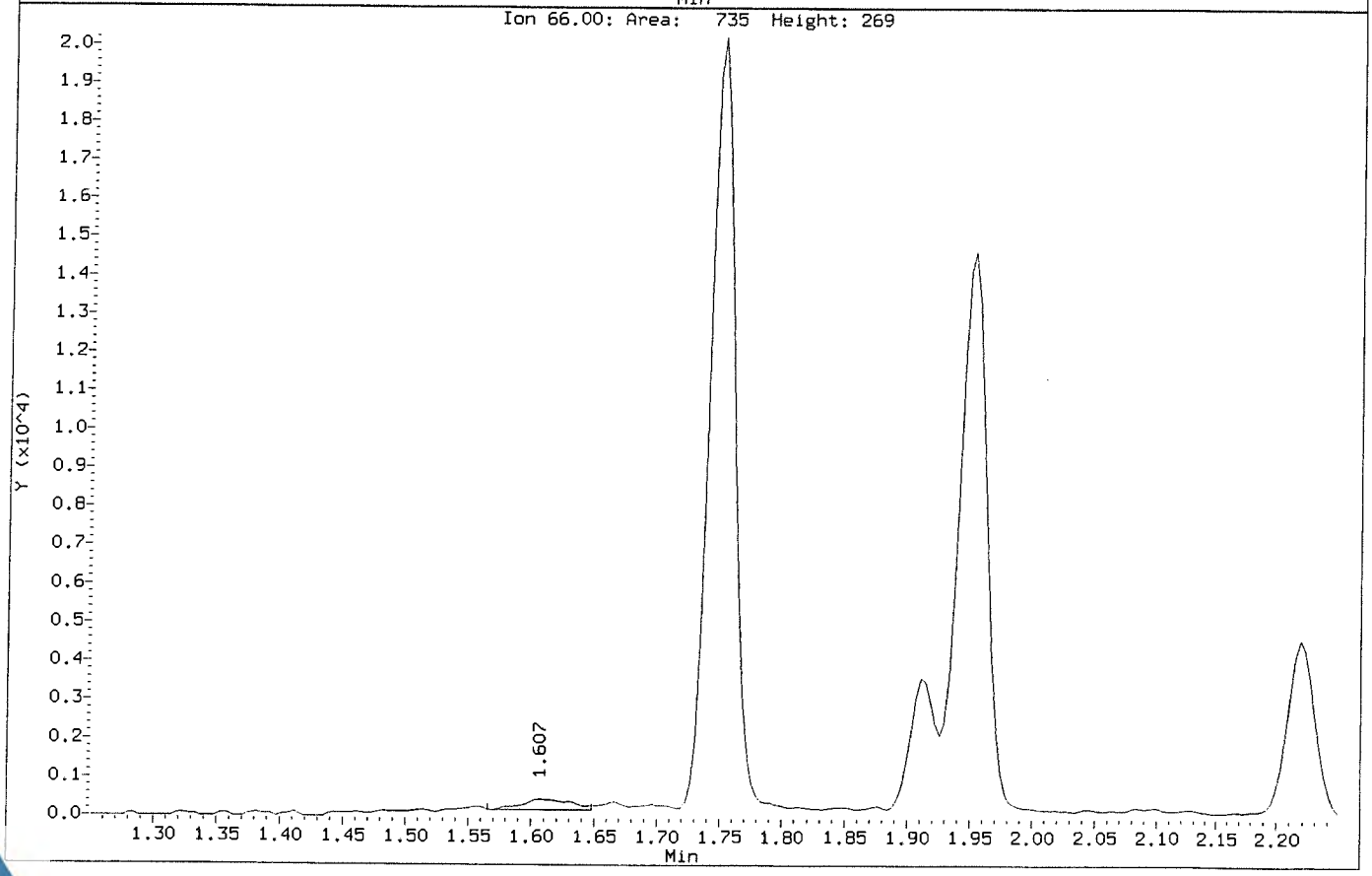
Instrument: VOA9.i
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3





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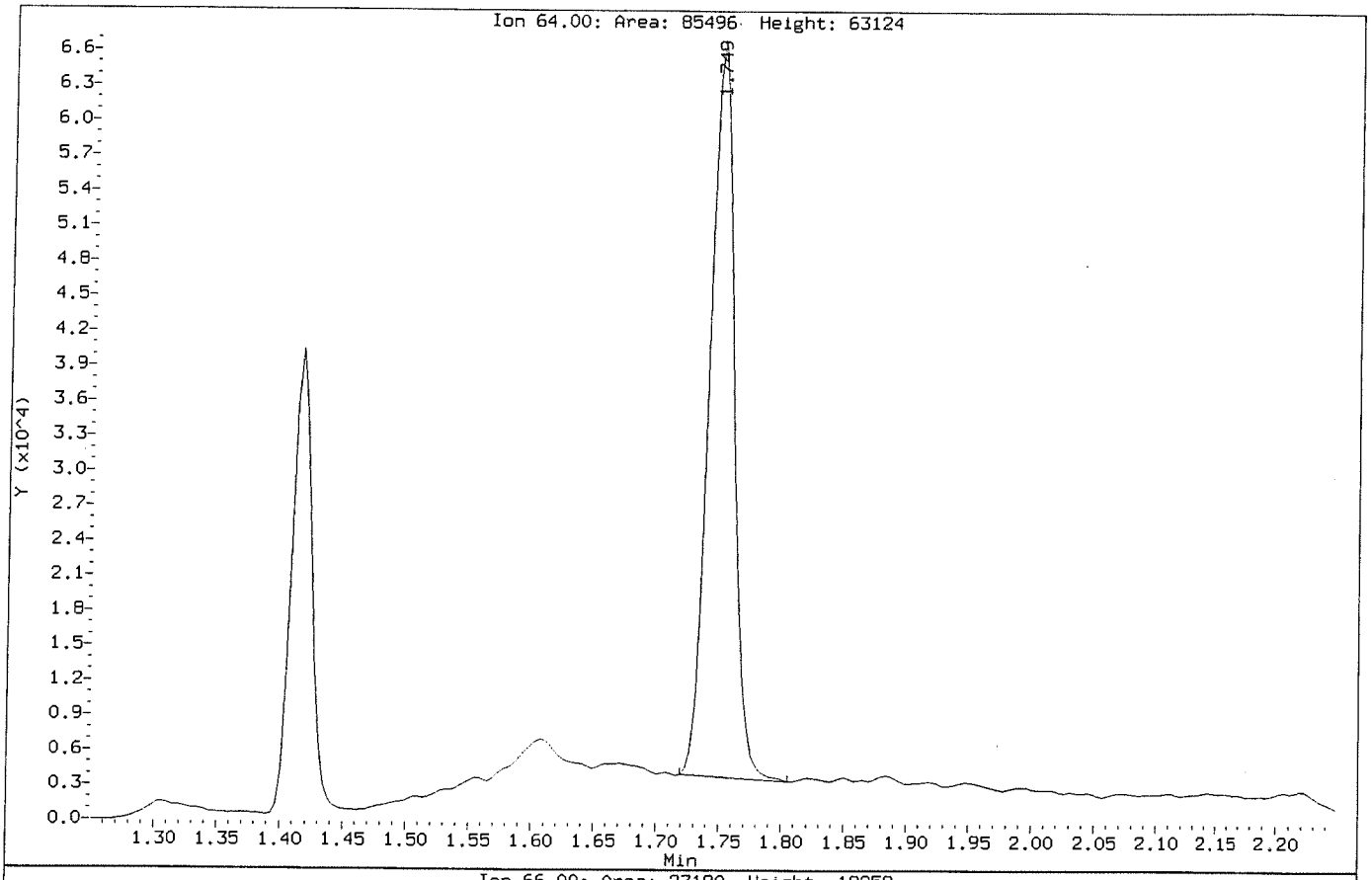
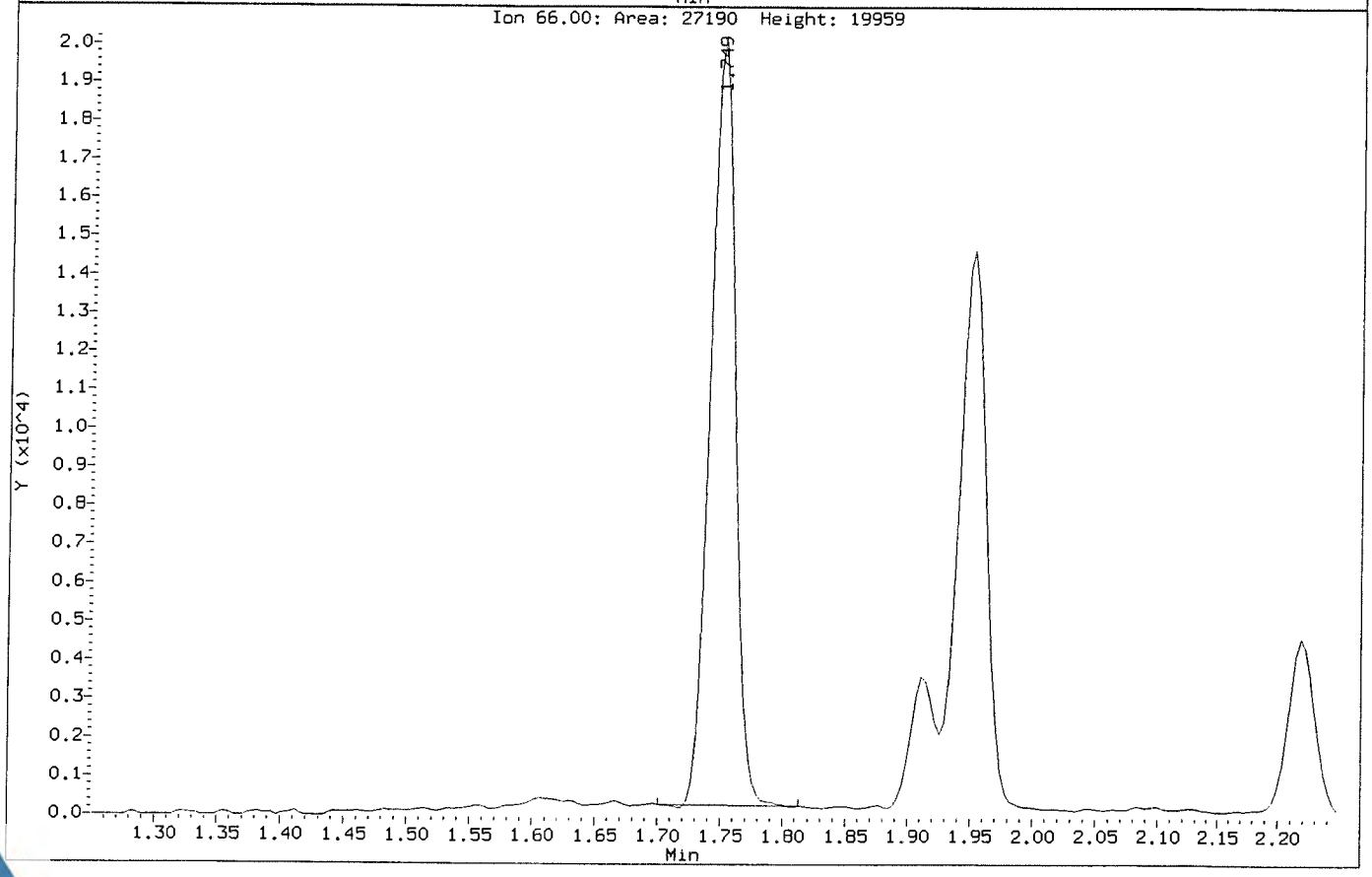
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3





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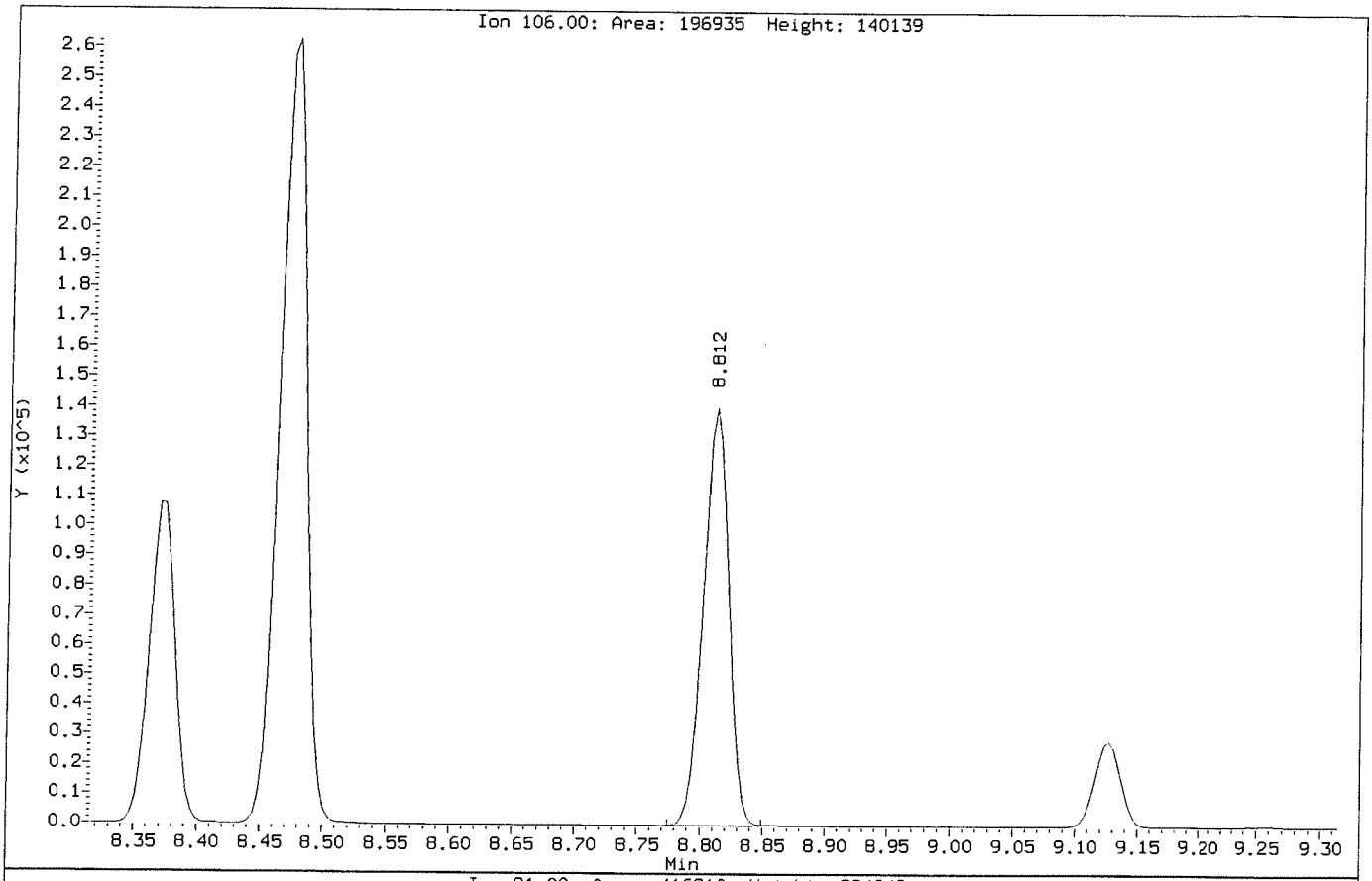
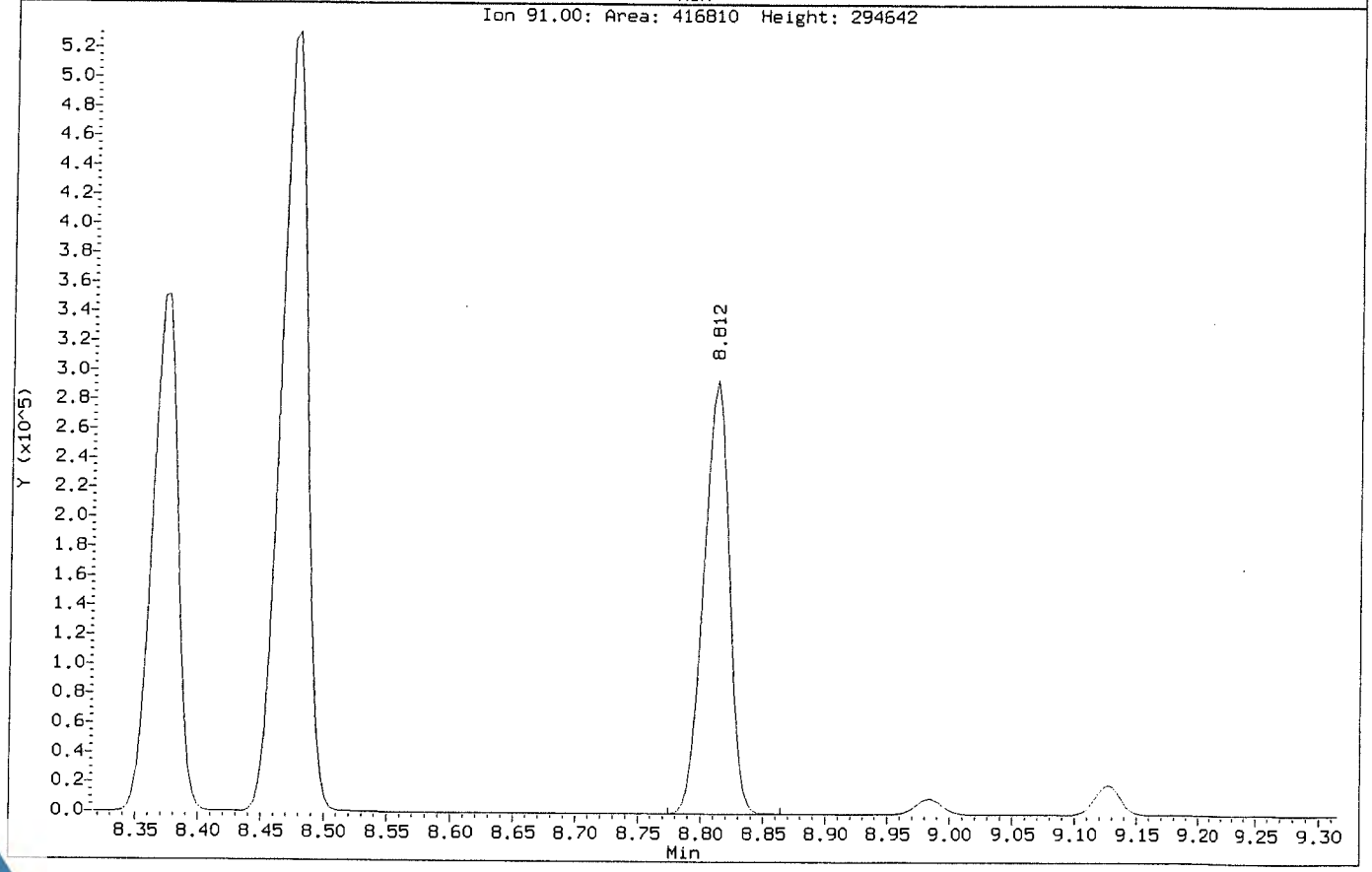
Instrument: VOA9.i
Client Sample ID: VSTD020

Compound: o-Xylene
CAS Number: 95-47-6





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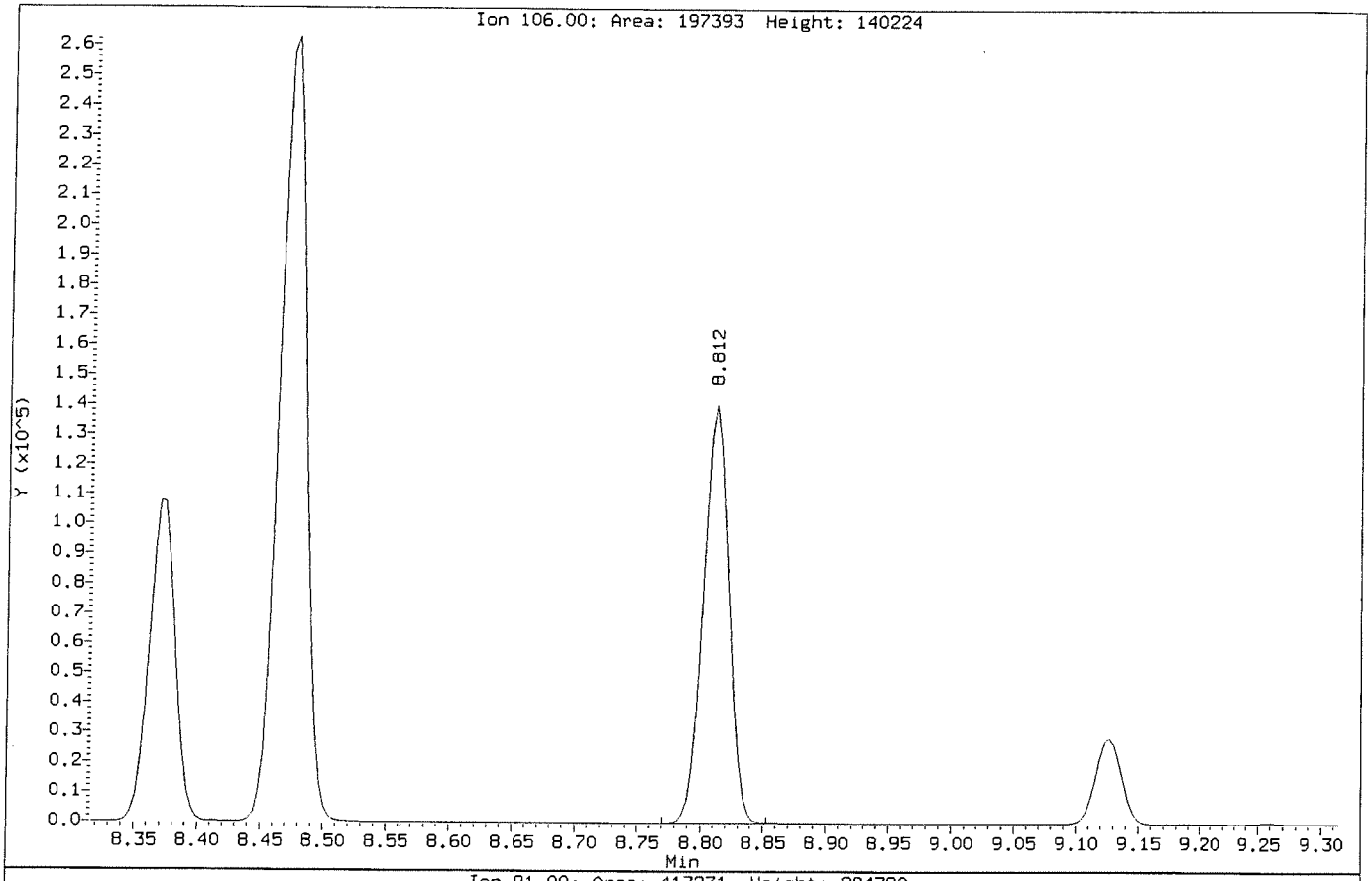
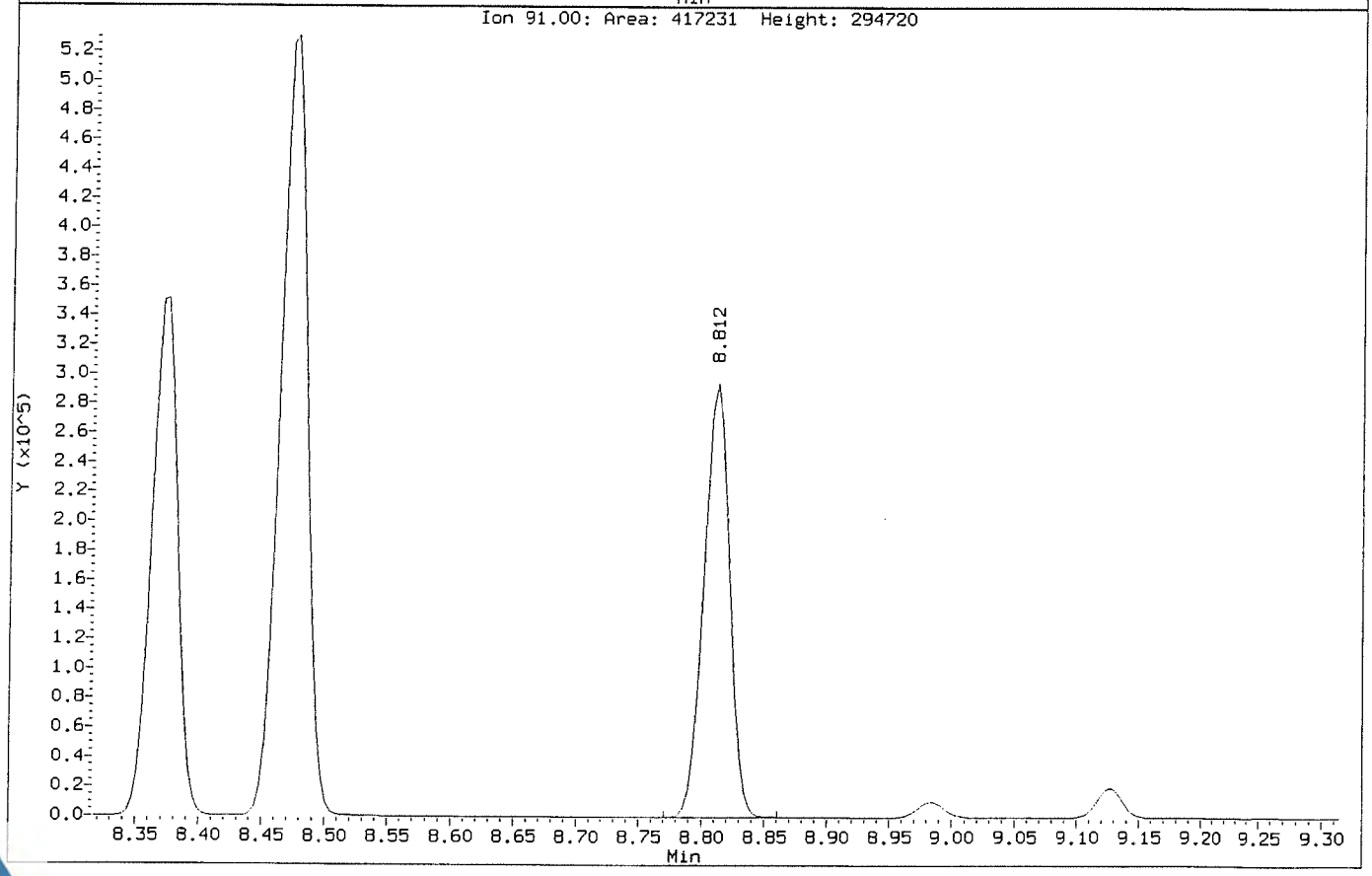
Client Sample ID: VSTD020

Compound: o-Xylene
CAS Number: 95-47-6





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111308.D
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Inj Date : 13-NOV-2018 14:15
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Smp Info : VSTD050;VSTD050;1;7;
Misc Info : 180315V9;WATER;0;1;
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Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 13:50 Cal File: U111307.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

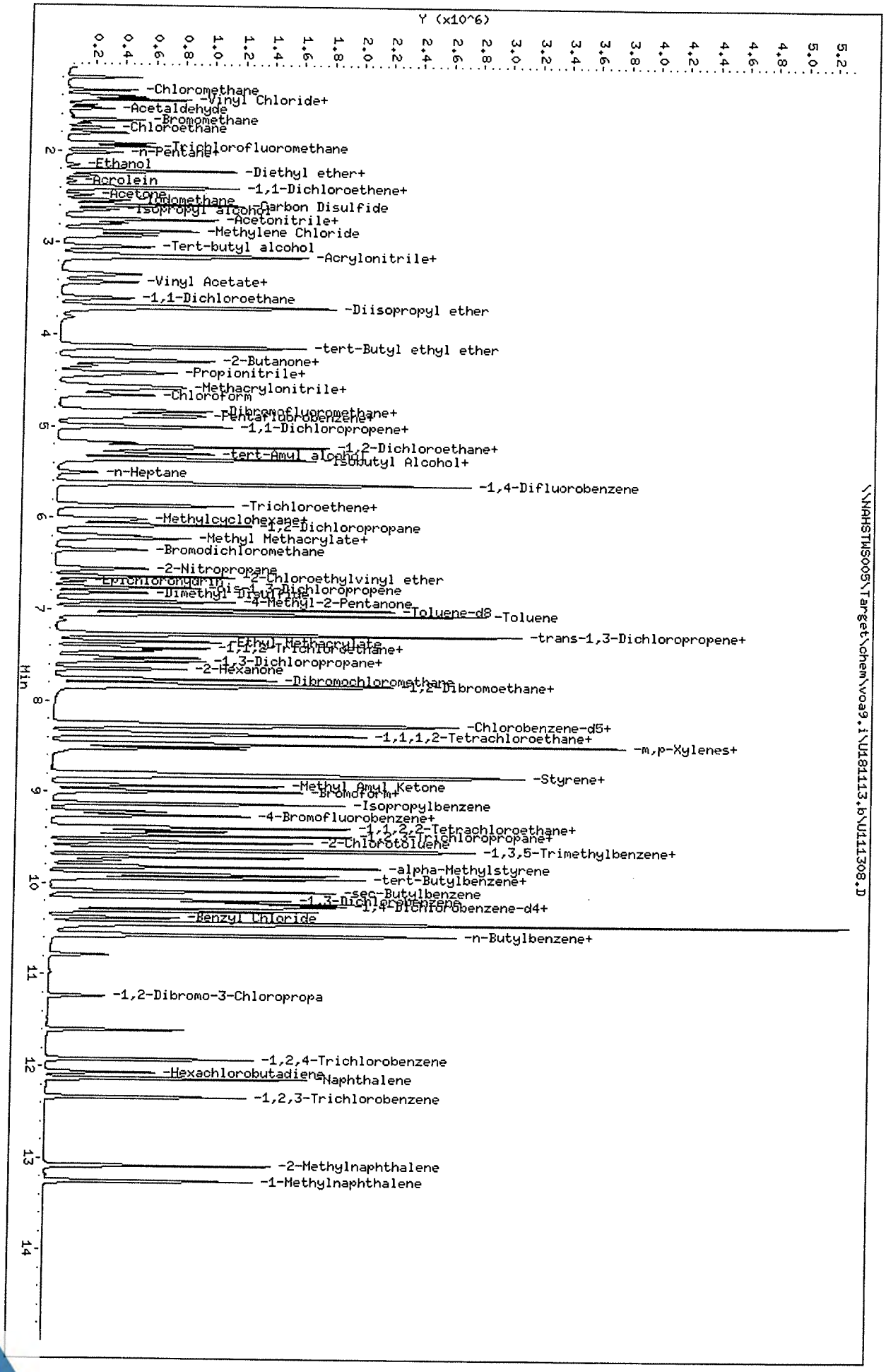
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	442076	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	849587	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	790877	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	387587	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	255826	50.0000	50.35
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	335901	50.0000	50.27
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	1045096	50.0000	51.75
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	396604	50.0000	50.72
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	253286	50.0000	50.77
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	369959	50.0000	47.64
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	434682	50.0000	47.34
138 Freon TF	101	2.401	2.401	(0.491)	191531	50.0000	43.24
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	234031	50.0000	46.54
22 1,1-Dichloroethane	63	3.604	3.604	(0.737)	476032	50.0000	46.99
11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	224107	50.0000	44.91
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	351415	50.0000	44.78
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	346843	50.0000	47.39
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	480640	50.0000	50.17
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	355891	50.0000	46.69
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	1025451	50.0000	47.63
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	66581	50.0000	47.02
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	287318	50.0000	49.34

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111308.D Page 2
Report Date: 24-Jan-2019 18:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	569575	50.0000	46.01
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	409387	50.0000	46.04
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	288083	50.0000	47.62
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	989153	50.0000	47.49
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	558678	50.0000	45.78
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	507685	50.0000	47.02
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	576011	50.0000	48.25
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	295338	50.0000	47.07
24 2-Butanone	43	4.339	4.339	(0.887)	300842	100.000	96.81
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	883069	50.0000	46.52
52 2-Hexanone	43	7.649	7.649	(0.927)	469848	100.000	102.19
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	1023060	50.0000	46.71
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	1018309	50.0000	47.97
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	657858	100.000	99.71
10 Acetone	43	2.480	2.480	(0.507)	201617	100.000	99.32
37 Benzene	78	5.216	5.216	(0.927)	1096105	50.0000	46.67
74 Bromobenzene	156	9.385	9.385	(0.917)	293372	50.0000	46.14
29 Bromochloromethane	128	4.553	4.553	(0.930)	136269	50.0000	52.28
39 Bromodichloromethane	83	6.348	6.348	(1.129)	344674	50.0000	48.82
66 Bromoform	173	8.984	8.984	(1.089)	170886	50.0000	47.61(T)
6 Bromomethane	94	1.666	1.666	(0.341)	154362	50.0000	42.38
19 Carbon Disulfide	76	2.588	2.588	(0.529)	1468777	100.000	95.31
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	286167	50.0000	46.68
59 Chlorobenzene	112	8.275	8.275	(1.003)	750956	50.0000	46.00
7 Chloroethane	64	1.749	1.749	(0.357)	213028	50.0000	46.18(M)
28 Chloroform	83	4.658	4.658	(0.952)	478555	50.0000	47.01
3 Chloromethane	50	1.340	1.340	(0.274)	285521	50.0000	48.38
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	293496	50.0000	46.85
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	464679	50.0000	52.27
55 Dibromochloromethane	129	7.758	7.758	(0.940)	263139	50.0000	52.58
44 Dibromomethane	93	6.191	6.191	(1.101)	181664	50.0000	47.92
2 Dichlorodifluoromethane	85	1.205	1.205	(0.246)	293949	50.0000	45.08
61 Ethylbenzene	106	8.373	8.373	(1.015)	388724	50.0000	47.09
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	110558	50.0000	46.37
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1128288	50.0000	46.94
62 m,p-Xylenes	106	8.474	8.474	(1.027)	962791	100.000	94.66
17 Methylene Chloride	84	2.870	2.870	(0.586)	276248	50.0000	48.96
87 n-Butylbenzene	91	10.558	10.558	(1.031)	954951	50.0000	47.12
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1421540	50.0000	46.47
92 Naphthalene	128	12.133	12.133	(1.185)	1186850	50.0000	51.71
63 o-Xylene	106	8.811	8.811	(1.068)	497517	50.0000	48.87(H)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1186653	50.0000	46.59
64 Styrene	104	8.826	8.826	(1.070)	870320	50.0000	50.64
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	827990	50.0000	46.65
56 Tetrachloroethene	164	7.525	7.525	(0.912)	182495	50.0000	44.04
50 Toluene	91	7.049	7.049	(0.855)	1170933	50.0000	46.63
20 trans-1,2-Dichloroethene	96	3.139	3.139	(0.642)	255498	50.0000	46.71
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	407060	50.0000	46.38
38 Trichloroethene	130	5.861	5.861	(1.042)	263822	50.0000	45.57
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	392628	50.0000	44.42
5 Vinyl Chloride	62	1.419	1.419	(0.290)	335638	50.0000	46.60

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111308.D

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

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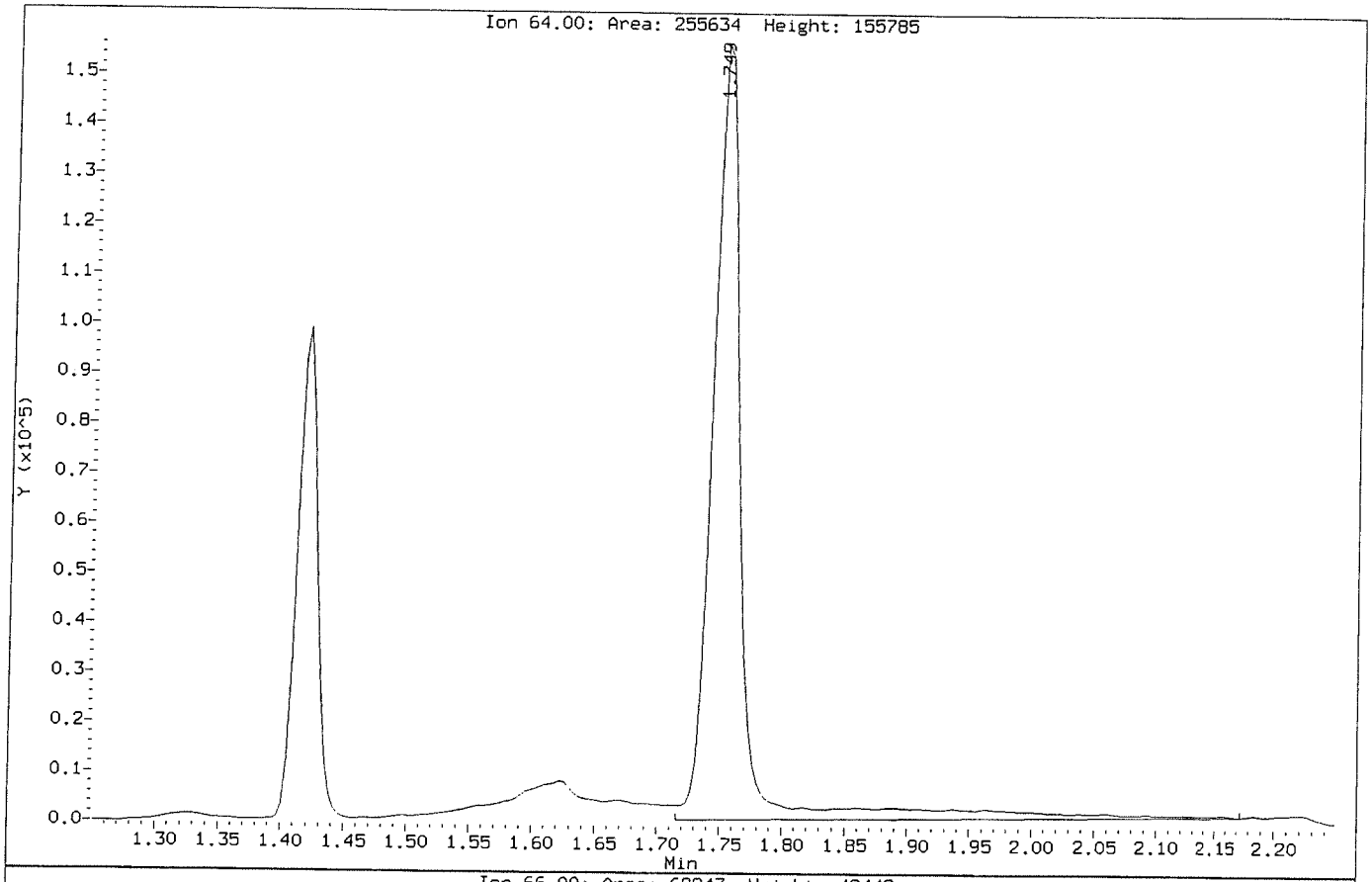
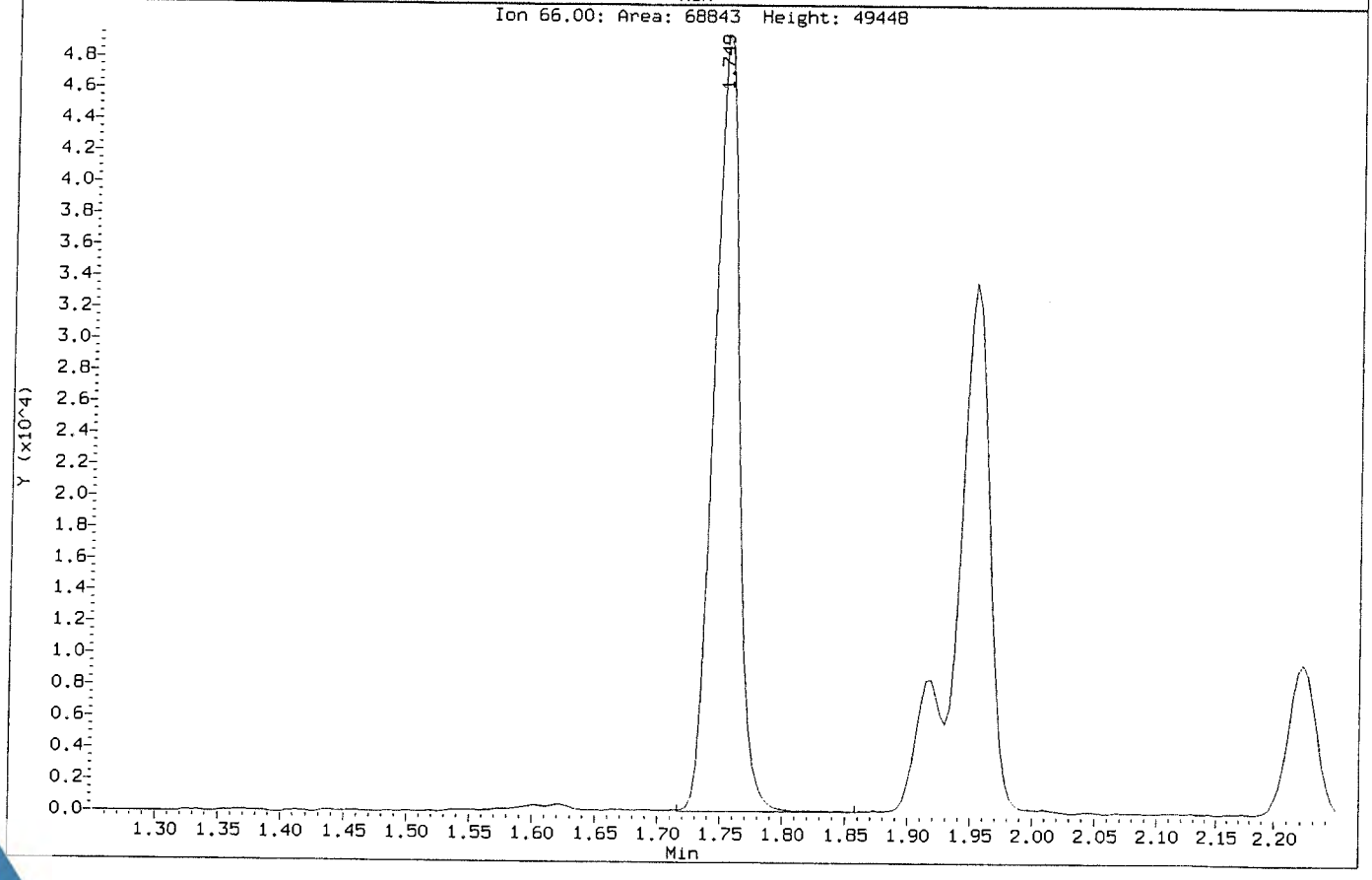
Compound: Chloroethane
CAS Number: 75-00-3





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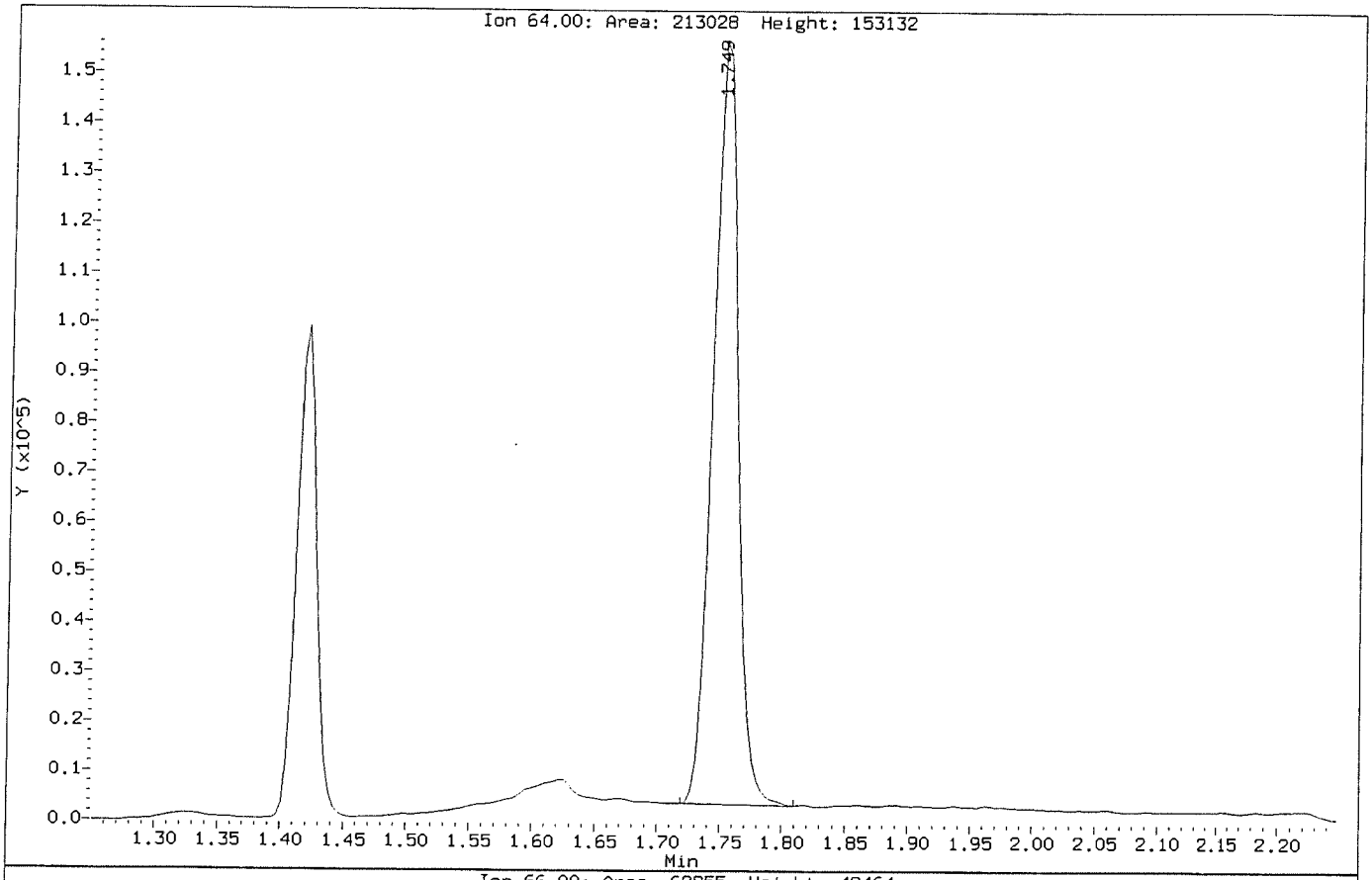
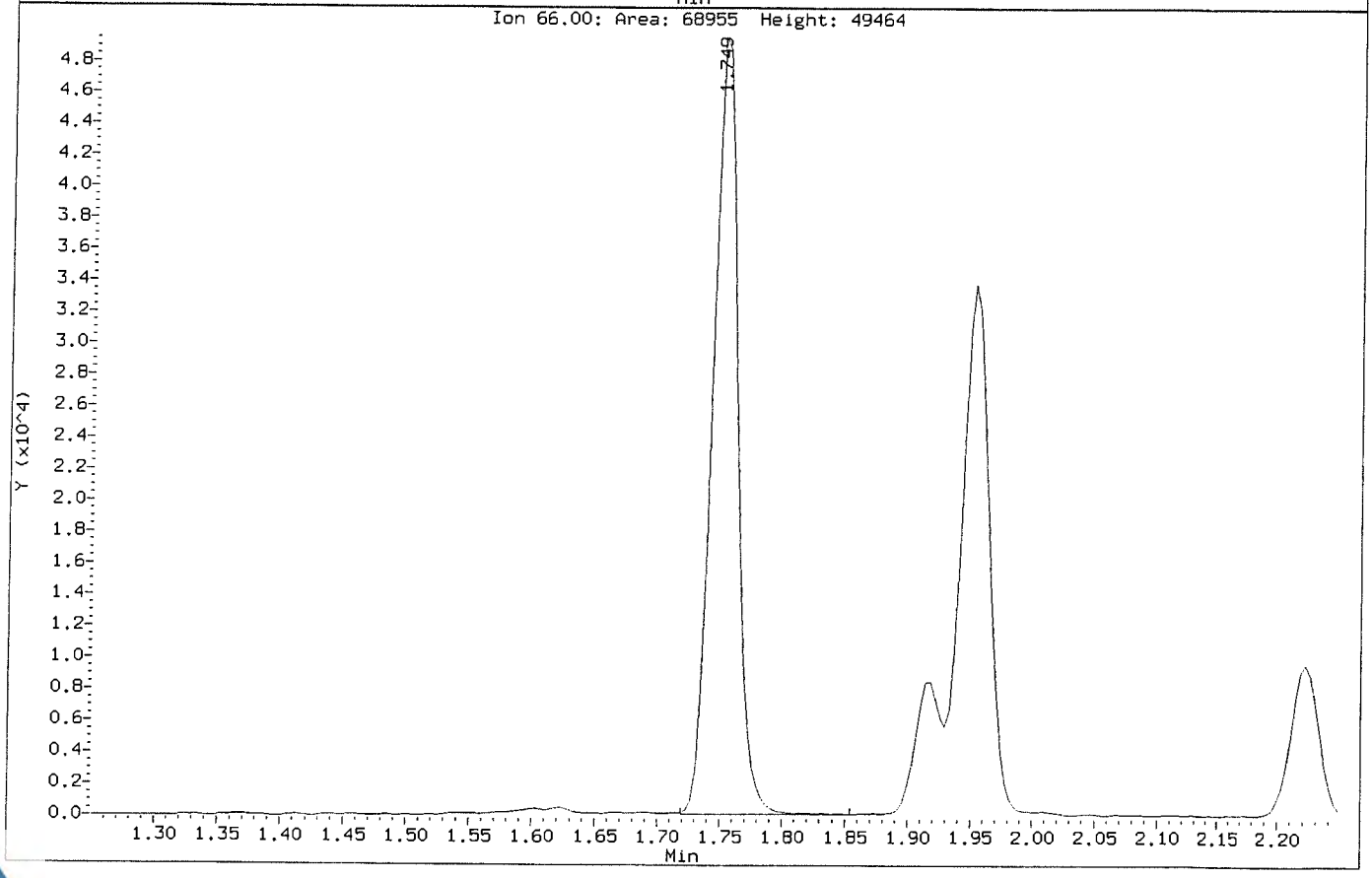
Compound: Chloroethane
CAS Number: 75-00-3





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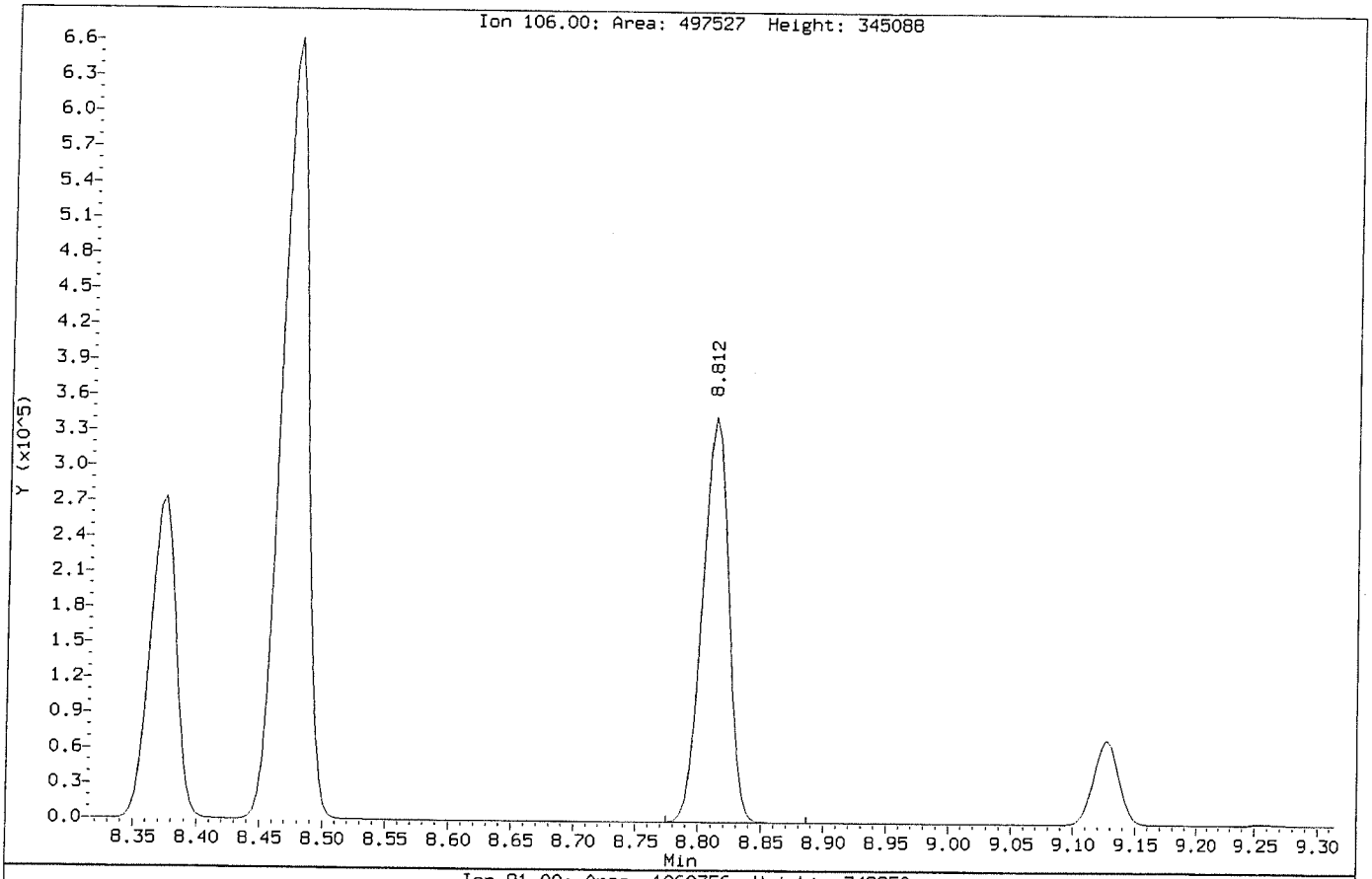
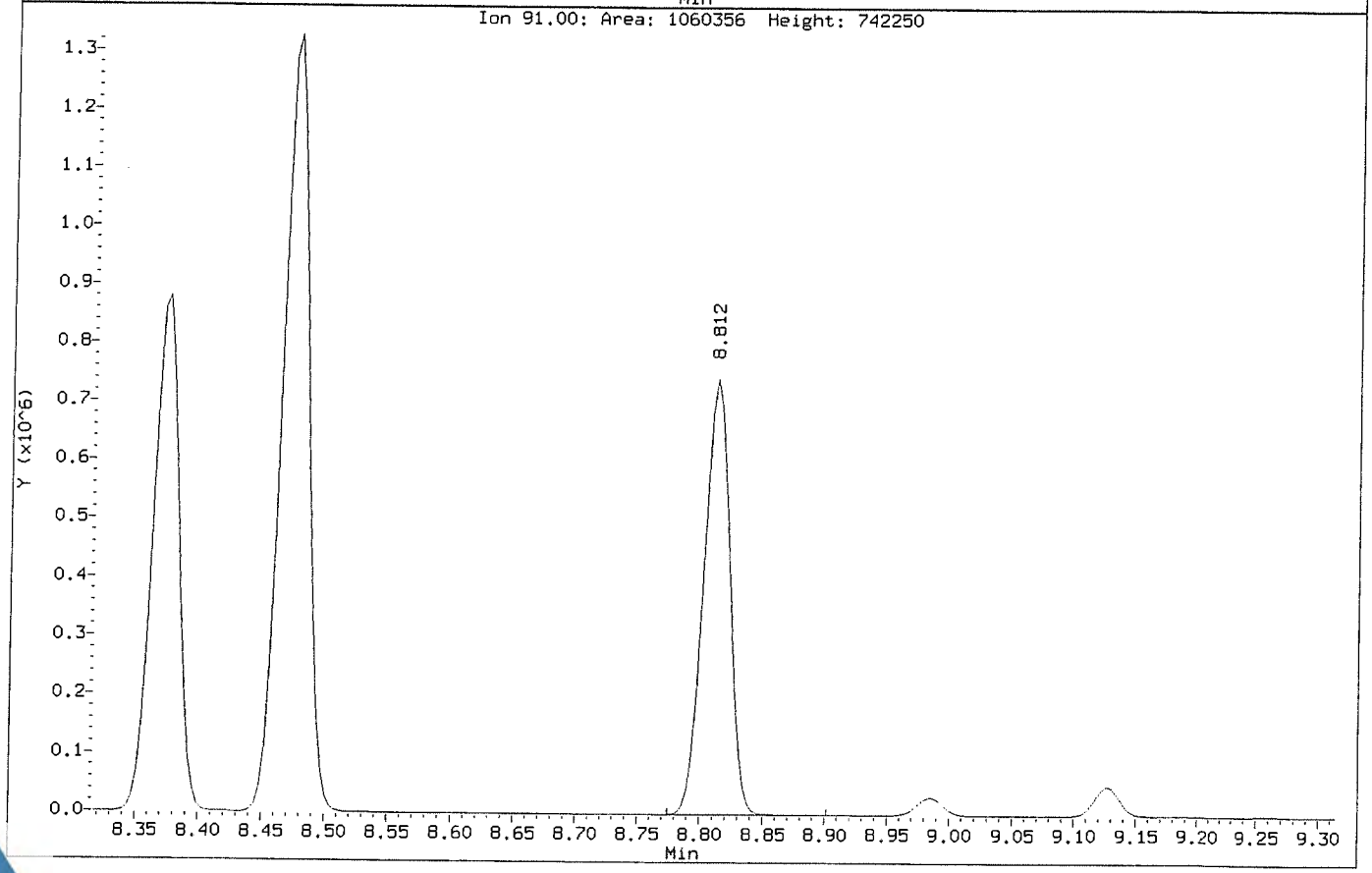
Injection Date: 13-NOV-2018 14:15
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: o-Xylene
CAS Number: 95-47-6





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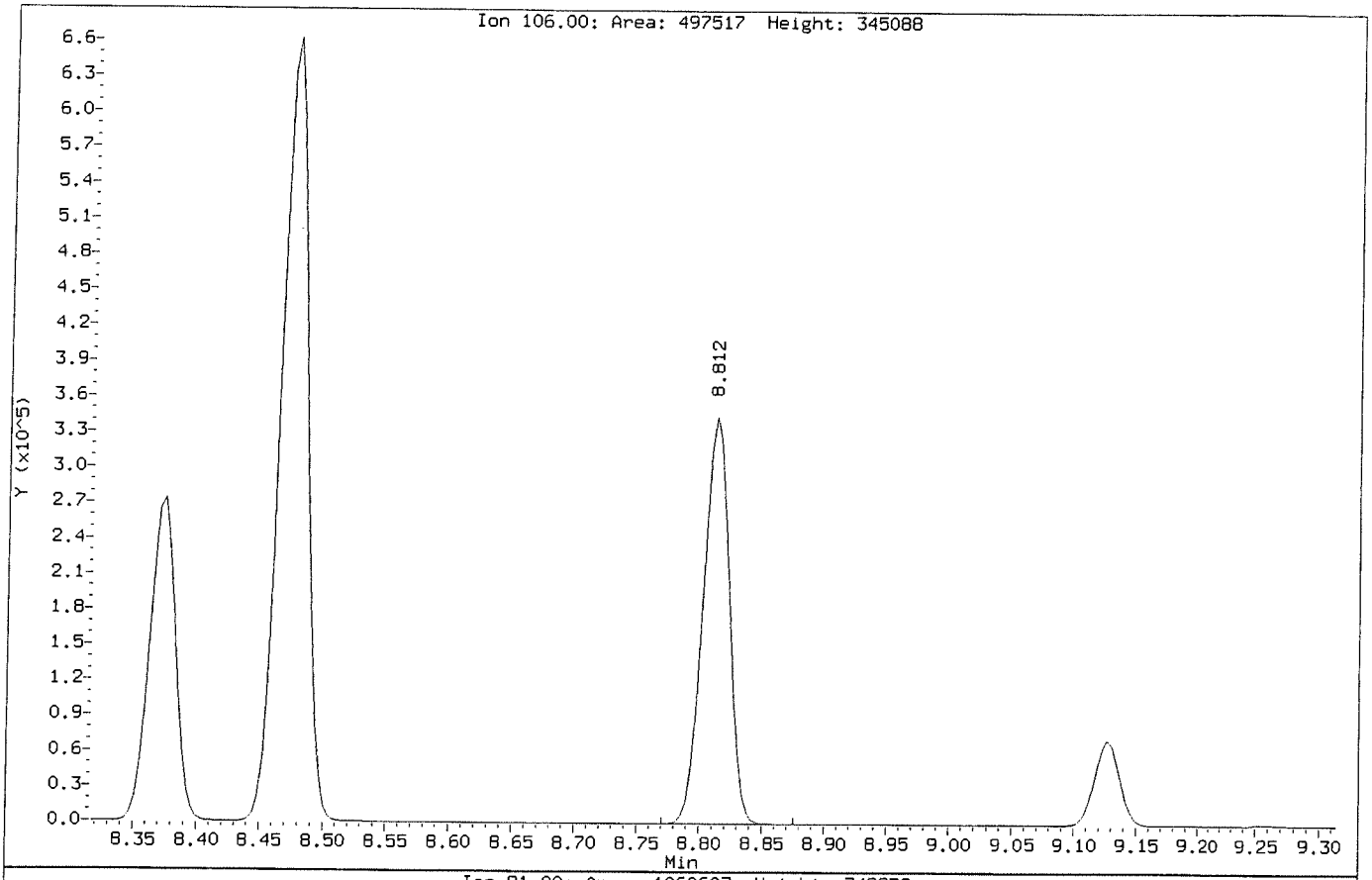
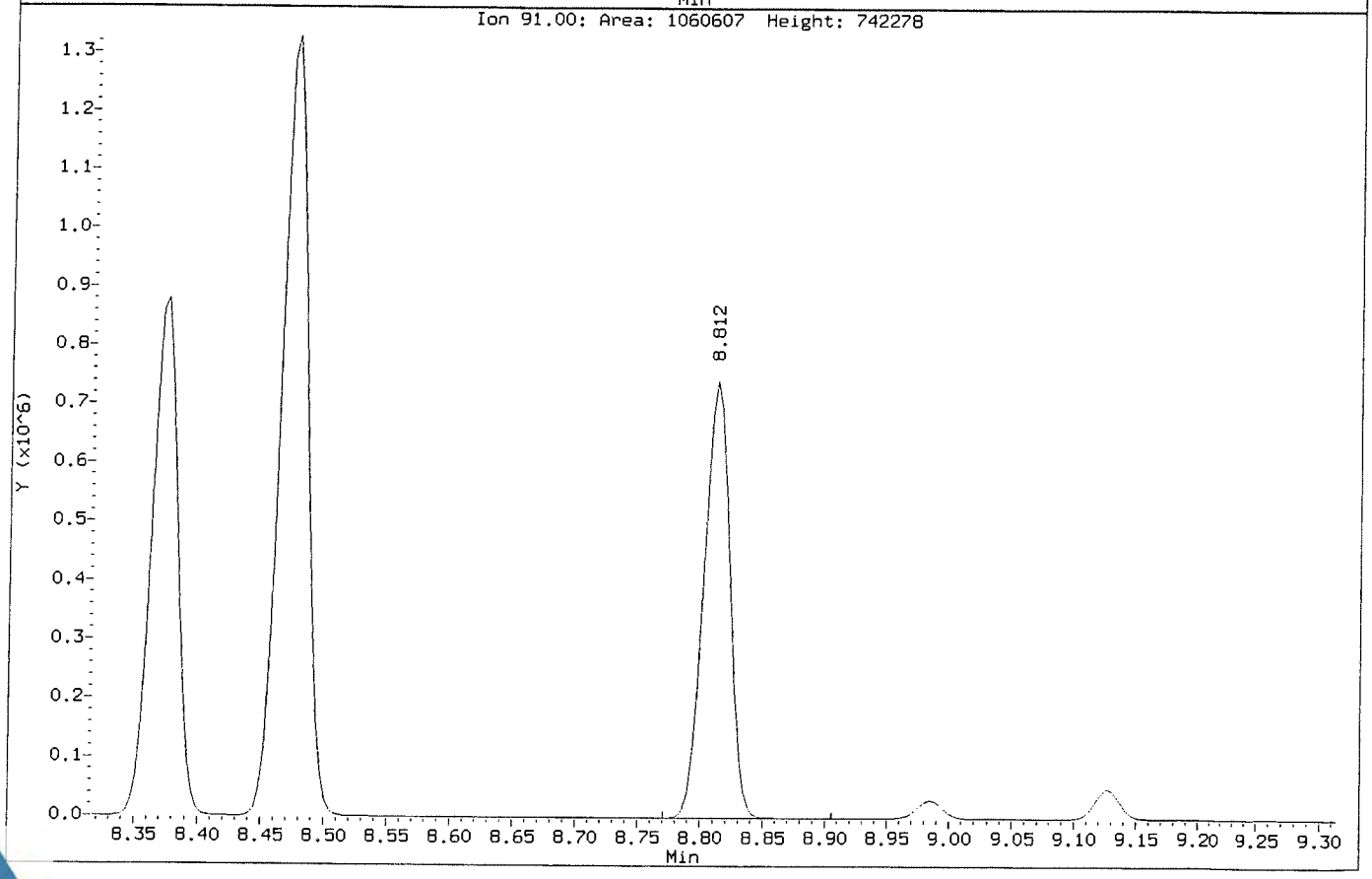
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: o-Xylene
CAS Number: 95-47-6





Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111309.D Page 1
Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111309.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 13-NOV-2018 14:39
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD100;VSTD100;1;8;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

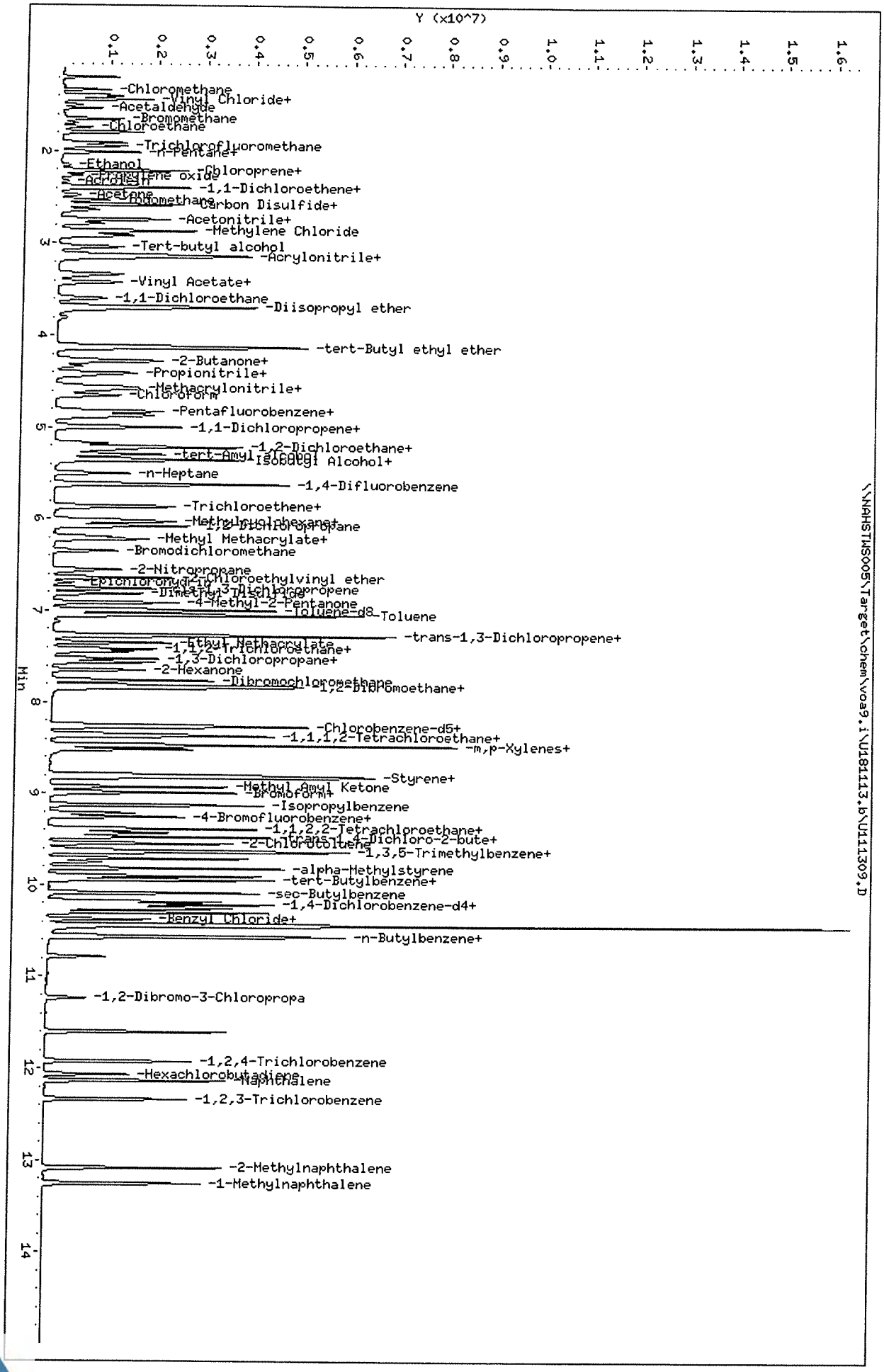
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.890	4.890	(1.000)	450542	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	856582	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	821336	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	399019	50.0000	
$ 30 Dibromofluoromethane	113	4.827	4.827	(0.987)	526814	100.000	103.01
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	696595	100.000	104.13
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	2142731	100.000	103.85
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	823996	100.000	102.55
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	547424	100.000	105.66
31 1,1,1-Trichloroethane	97	4.823	4.823	(0.986)	826811	100.000	104.47
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	905540	100.000	95.80
138 Freon TF	101	2.394	2.394	(0.490)	456374	100.000	101.11
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	496464	100.000	95.07
22 1,1-Dichloroethane	63	3.597	3.597	(0.736)	991209	100.000	96.00
11 1,1-Dichloroethene	96	2.394	2.394	(0.490)	489401	100.000	96.23
32 1,1-Dichloropropene	75	4.999	4.999	(0.889)	782616	100.000	98.92
93 1,2,3-Trichlorobenzene	180	12.339	12.339	(1.205)	769767	100.000	102.18
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1033869	100.000	104.82
90 1,2,4-Trichlorobenzene	180	11.927	11.927	(1.165)	795857	100.000	101.42
79 1,2,4-Trimethylbenzene	105	9.944	9.944	(0.971)	2240667	100.000	101.09
89 1,2-Dibromo-3-Chloropropane	155	11.237	11.237	(1.098)	149236	100.000	100.38
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	601967	100.000	99.55

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111309.D Page 2
Report Date: 24-Jan-2019 18:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	1221135	100.000	95.83
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	845716	100.000	94.35
42 1,2-Dichloropropane	63	6.079	6.079	(1.081)	607568	100.000	99.62
75 1,3,5-Trimethylbenzene	105	9.629	9.629	(0.941)	2179527	100.000	101.66
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1206946	100.000	96.07
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1063077	100.000	94.81
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	1240019	100.000	100.95
26 2,2-Dichloropropane	77	4.268	4.268	(0.873)	666488	100.000	104.24
24 2-Butanone	43	4.332	4.332	(0.886)	626648	200.000	197.86
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	1897282	100.000	97.10
52 2-Hexanone	43	7.649	7.649	(0.927)	1009723	200.000	211.48(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	2209785	100.000	98.01
82 p-Isopropyltoluene	119	10.213	10.213	(0.998)	2303162	100.000	105.40
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	1416197	200.000	206.69(A)
10 Acetone	43	2.476	2.476	(0.506)	430350	200.000	212.87(A)
37 Benzene	78	5.216	5.216	(0.927)	2279526	100.000	96.27
74 Bromobenzene	156	9.385	9.385	(0.917)	640019	100.000	97.78
29 Bromochloromethane	128	4.549	4.549	(0.930)	269321	100.000	101.39
39 Bromodichloromethane	83	6.345	6.345	(1.128)	740758	100.000	104.07
66 Bromoform	173	8.984	8.984	(1.089)	383125	100.000	100.58
6 Bromomethane	94	1.655	1.655	(0.339)	367005	100.000	96.33
19 Carbon Disulfide	76	2.581	2.581	(0.528)	3169516	200.000	201.81(A)
34 Carbon Tetrachloride	117	4.991	4.991	(0.887)	664499	100.000	107.51
59 Chlorobenzene	112	8.275	8.275	(1.003)	1606902	100.000	94.79
7 Chloroethane	64	1.741	1.741	(0.356)	444513	100.000	94.55(M)
28 Chloroform	83	4.654	4.654	(0.952)	994934	100.000	95.91
3 Chloromethane	50	1.333	1.333	(0.273)	595590	100.000	98.79
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.876)	613605	100.000	96.11
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	1019257	100.000	113.72
55 Dibromochloromethane	129	7.758	7.758	(0.940)	576245	100.000	110.87
44 Dibromomethane	93	6.187	6.187	(1.100)	378115	100.000	98.92
2 Dichlorodifluoromethane	85	1.198	1.198	(0.245)	680233	100.000	101.10
61 Ethylbenzene	106	8.373	8.373	(1.015)	844002	100.000	98.46
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	270039	100.000	102.92
67 Isopropylbenzene	105	9.126	9.126	(1.106)	2535018	100.000	101.55
62 m,p-Xylenes	106	8.474	8.474	(1.027)	2096282	200.000	198.47
17 Methylene Chloride	84	2.866	2.866	(0.586)	577262	100.000	101.12
87 n-Butylbenzene	91	10.558	10.558	(1.031)	2203969	100.000	102.68
73 n-Propylbenzene	91	9.479	9.479	(0.926)	3164922	100.000	100.51
92 Naphthalene	128	12.133	12.133	(1.185)	2576616	100.000	109.04
63 o-Xylene	106	8.811	8.811	(1.068)	1070218	100.000	101.23(H)
81 sec-Butylbenzene	105	10.090	10.090	(0.986)	2704732	100.000	103.16
64 Styrene	104	8.826	8.826	(1.070)	1856392	100.000	104.02
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	1862977	100.000	101.96
56 Tetrachloroethene	164	7.526	7.526	(0.912)	415217	100.000	96.50
50 Toluene	91	7.046	7.046	(0.854)	2482746	100.000	95.21
20 trans-1,2-Dichloroethene	96	3.136	3.136	(0.641)	538852	100.000	96.67
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	912116	100.000	101.29
38 Trichloroethene	130	5.861	5.861	(1.042)	566649	100.000	97.08
8 Trichlorofluoromethane	101	1.944	1.944	(0.398)	897271	100.000	99.61
5 Vinyl Chloride	62	1.411	1.411	(0.289)	744825	100.000	100.88

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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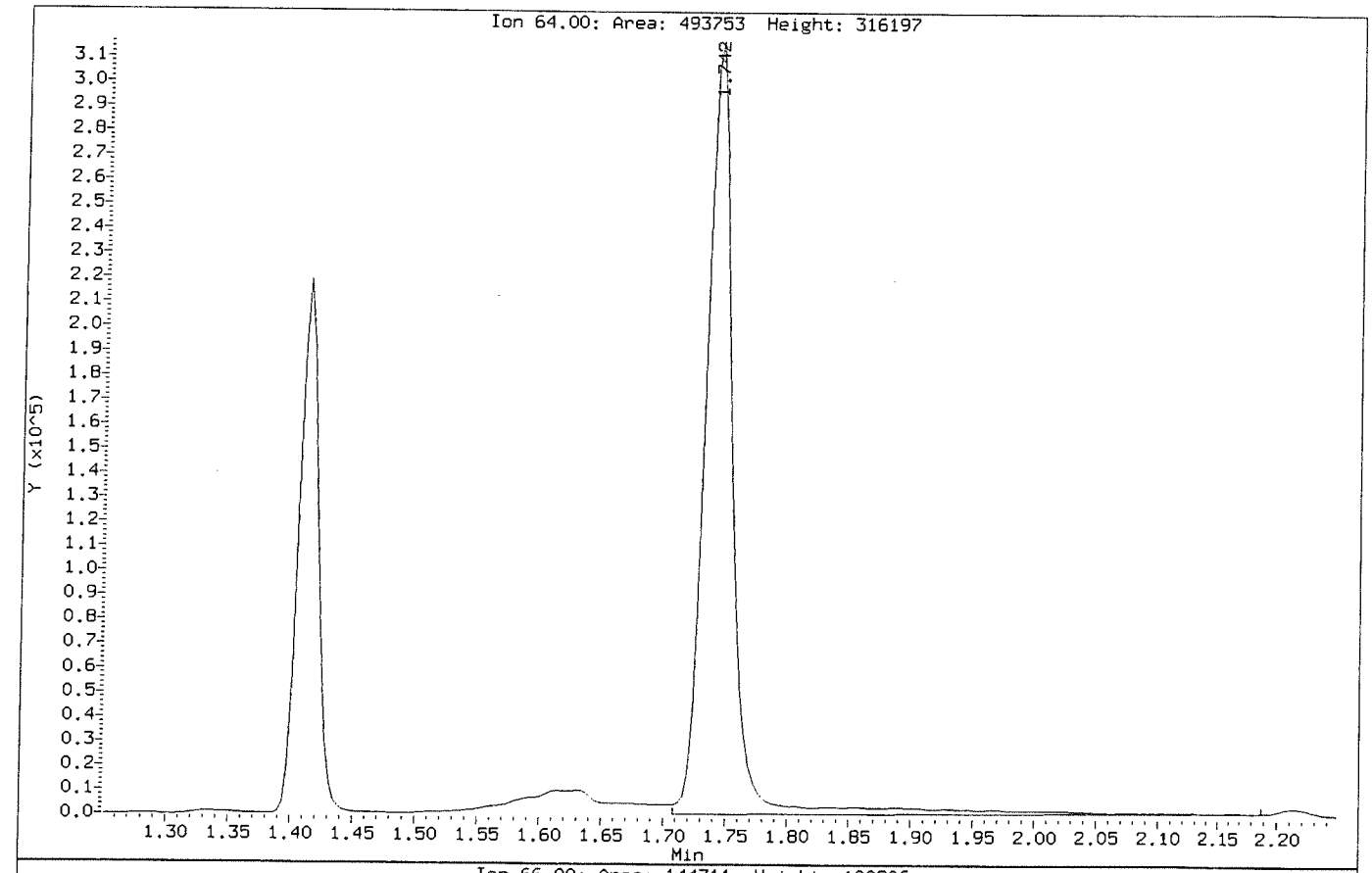
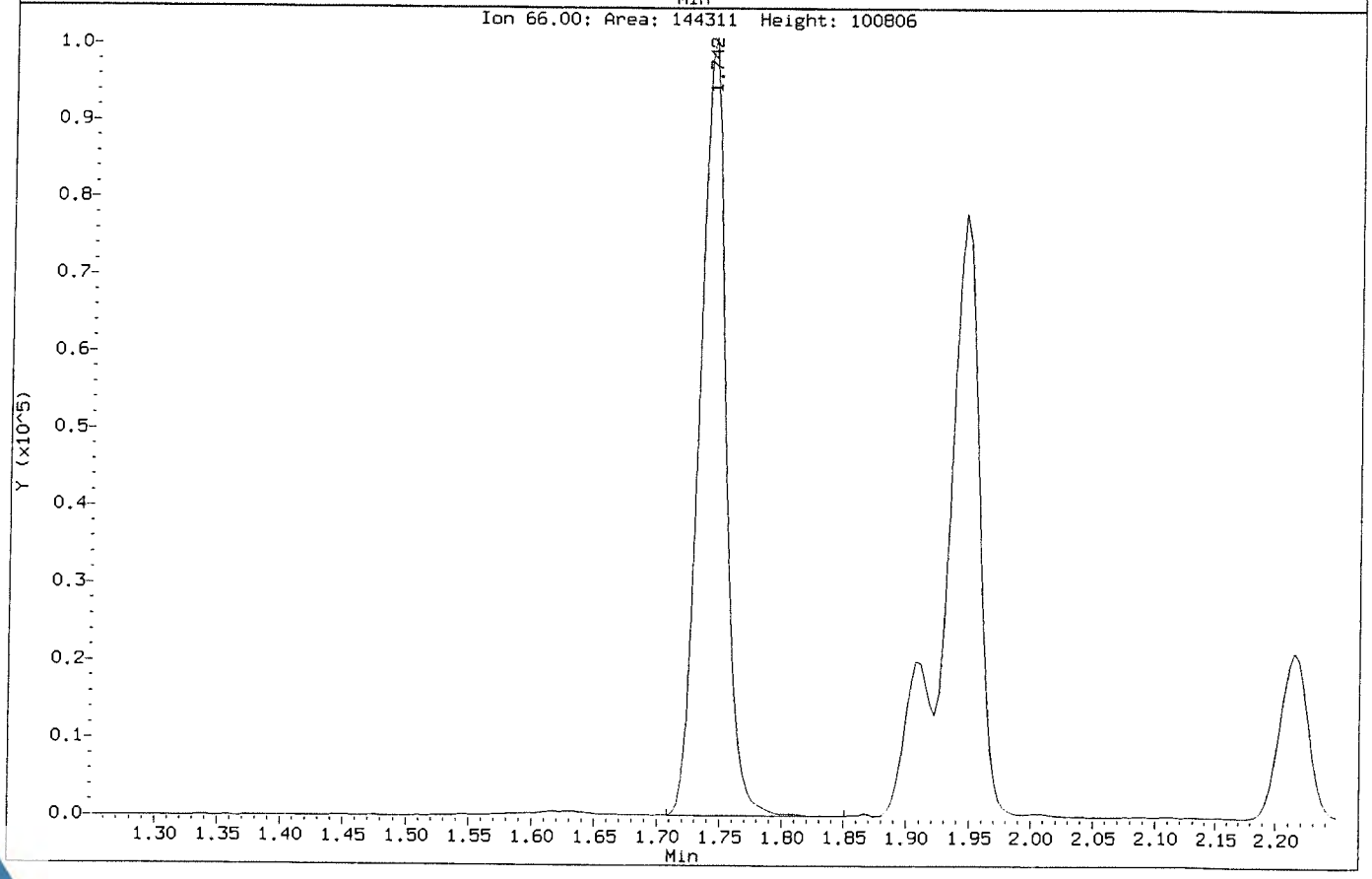
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U1B1113.b\Before\U111309.D
Injection Date: 13-NOV-2018 14:39
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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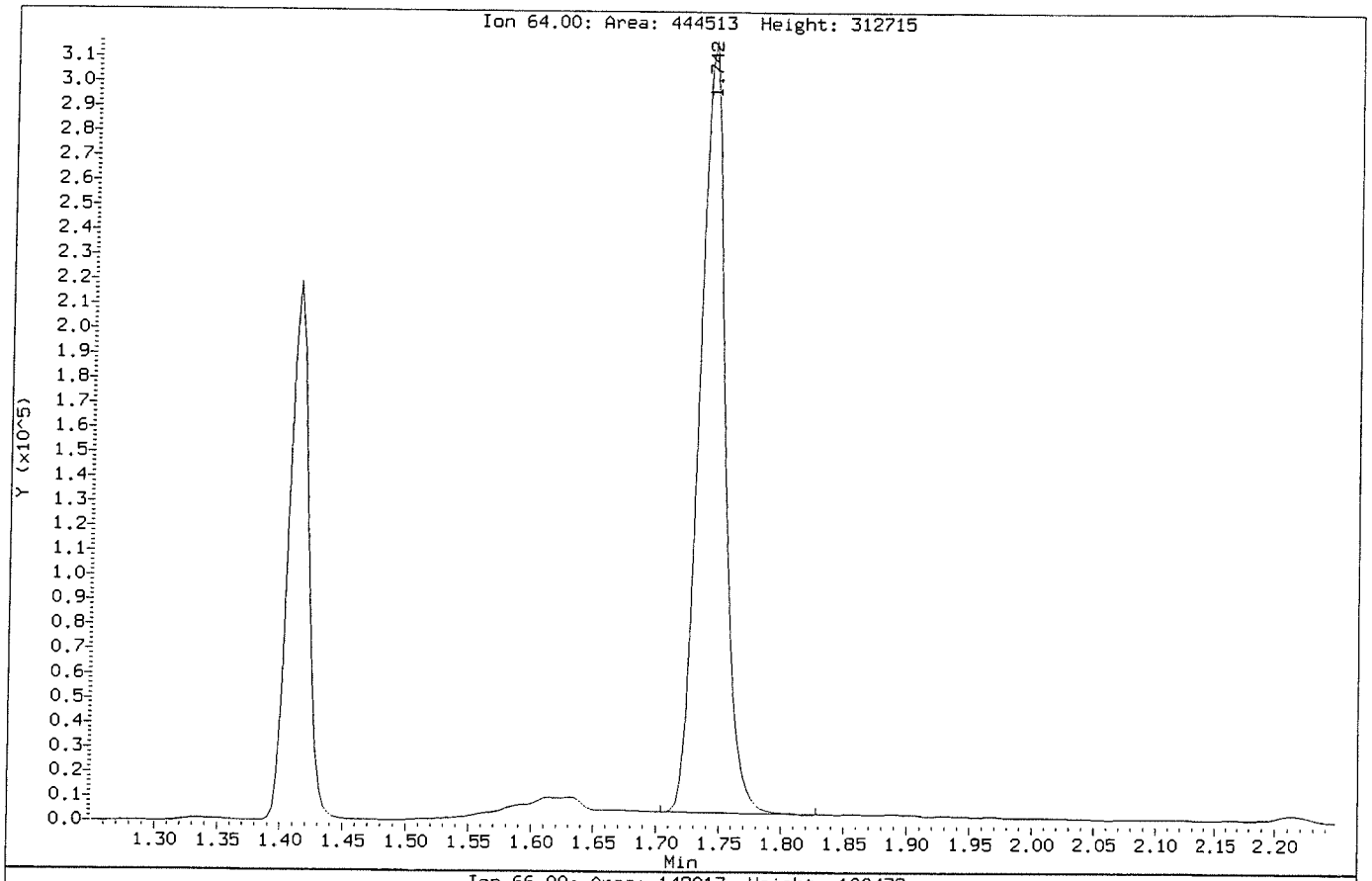
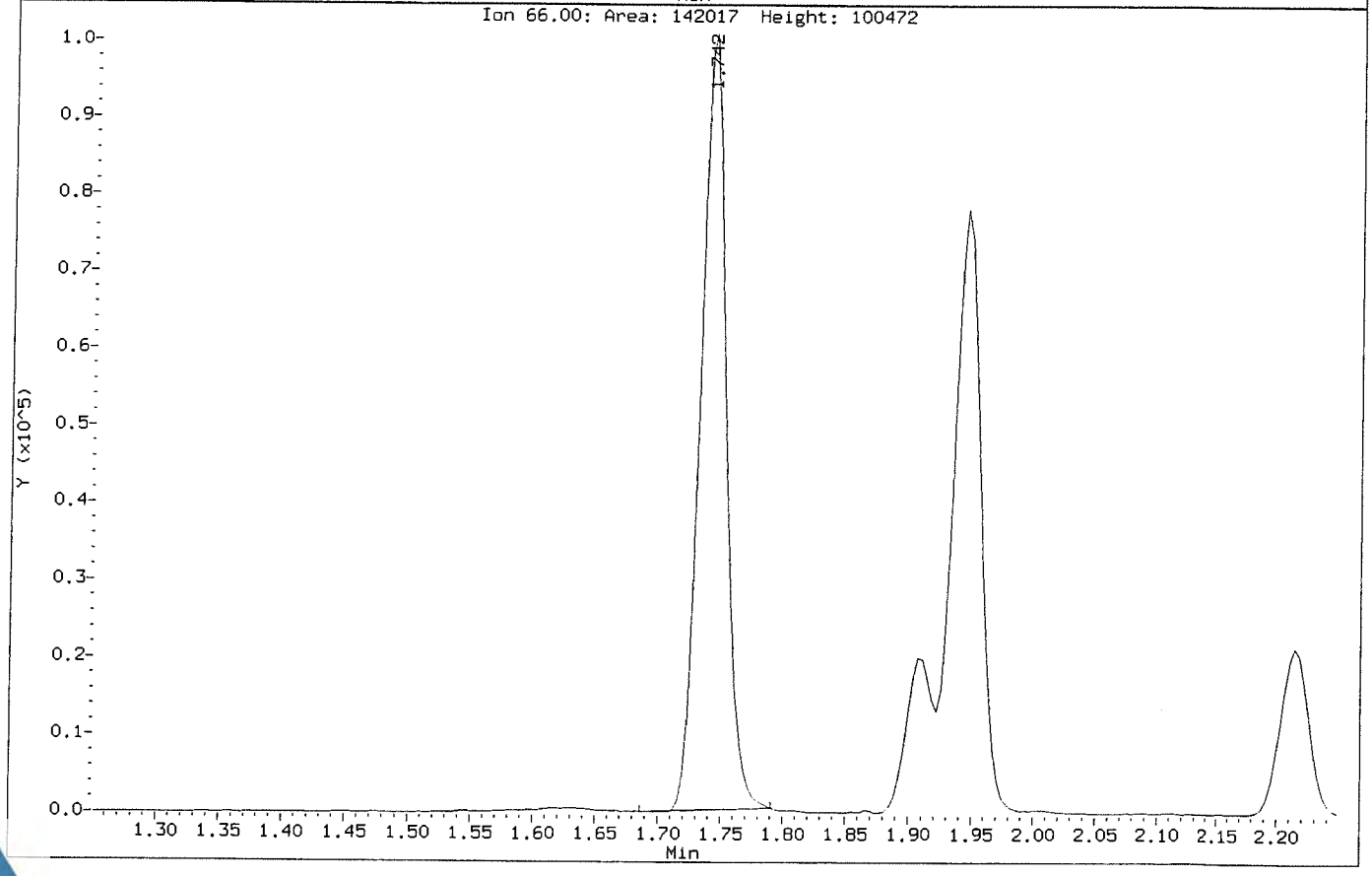
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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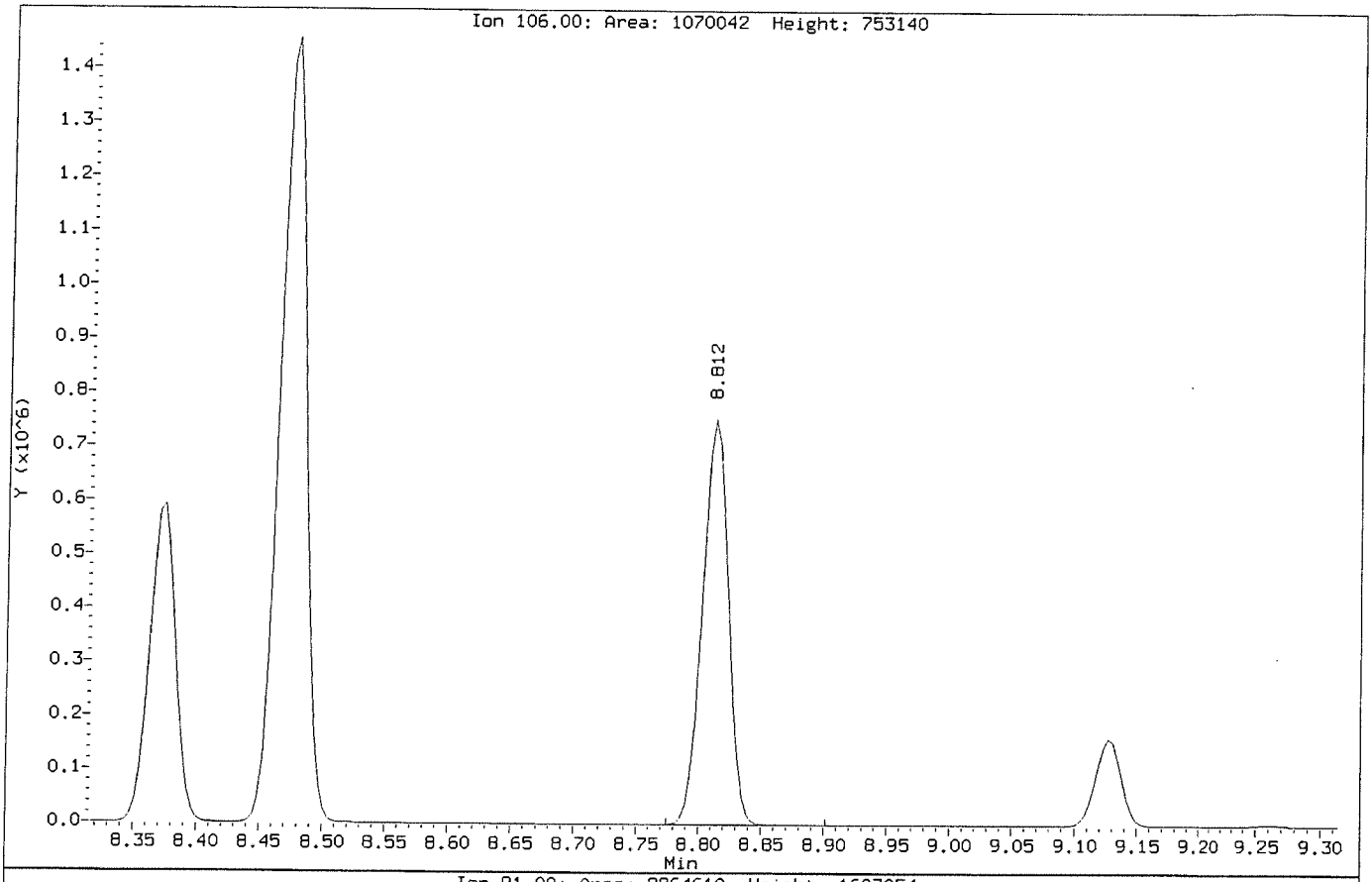
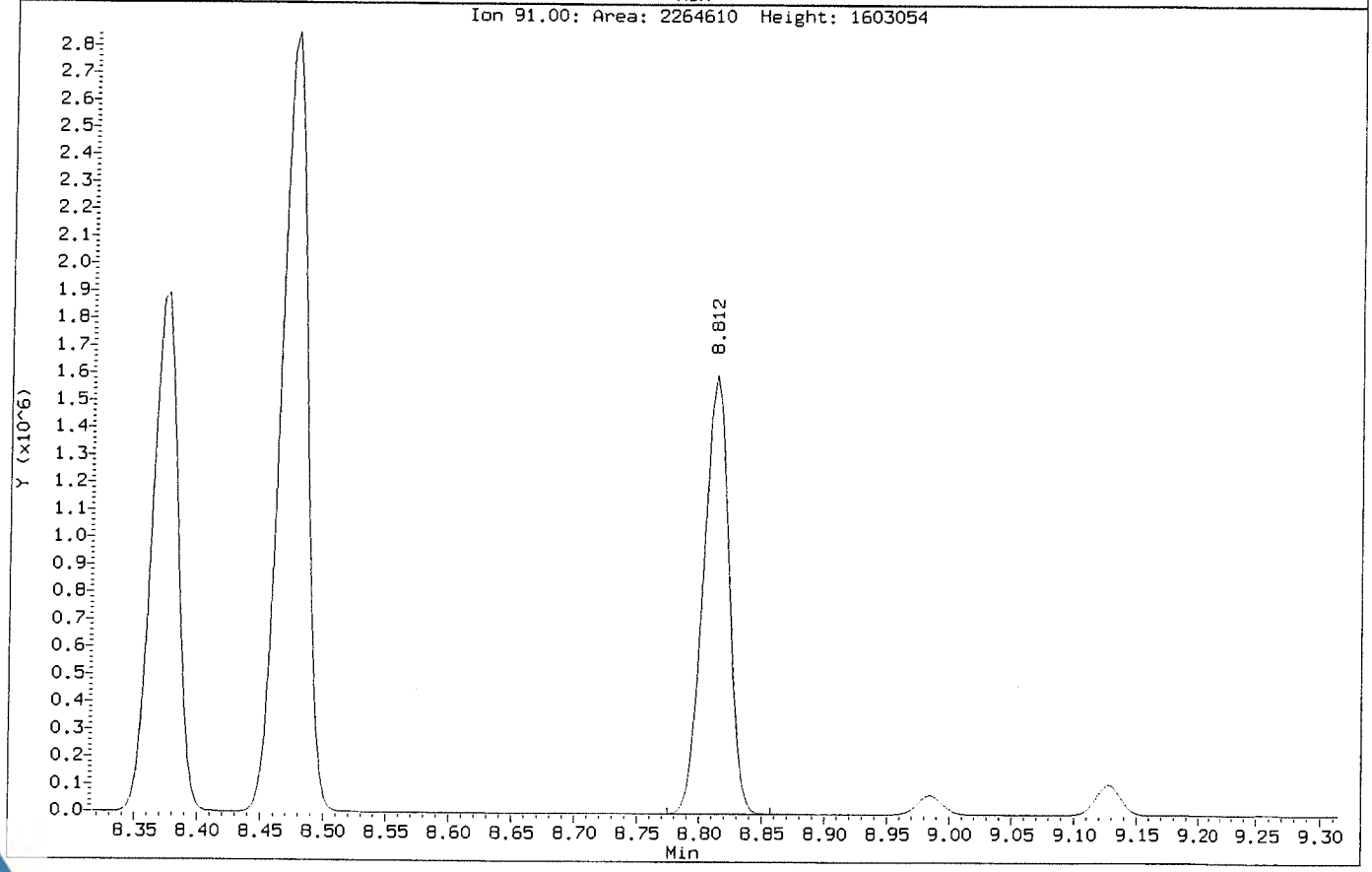
Injection Date: 13-NOV-2018 14:39
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: o-Xylene
CAS Number: 95-47-6





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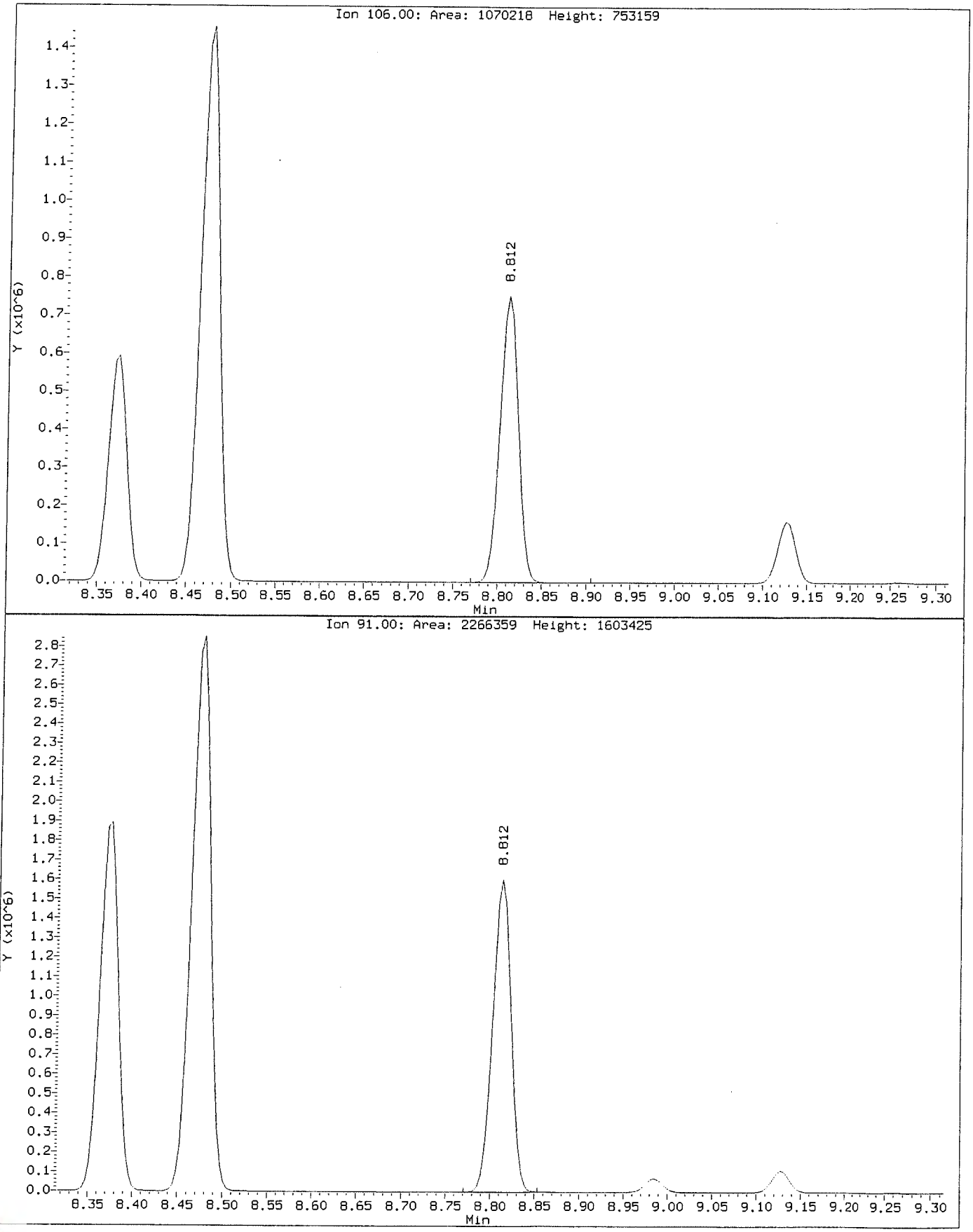
Injection Date: 13-NOV-2018 14:39
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: o-Xylene
CAS Number: 95-47-6



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Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111310.D
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Inj Date : 13-NOV-2018 15:04
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD150;VSTD150;1;9;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:39 Cal File: U111309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

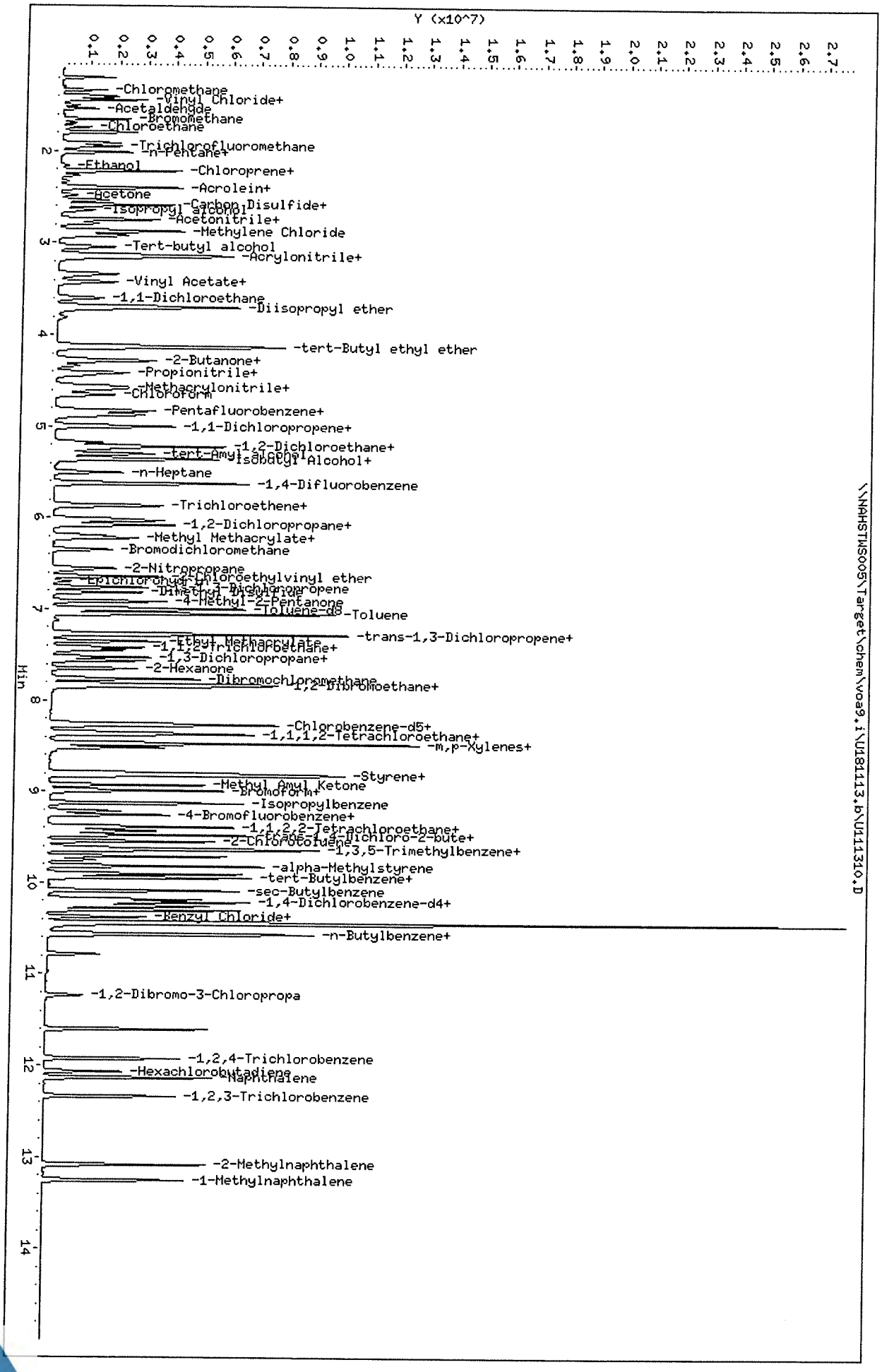
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	463456	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	890799	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	854800	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	408174	50.0000	
$ 30 Dibromofluoromethane	113	4.827	4.827	(0.986)	809097	150.000	154.42
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	1062364	150.000	155.24
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	3238162	150.000	151.57
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	1261578	150.000	151.36
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	858465	150.000	159.21
31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	1329534	150.000	163.31
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1394090	150.000	144.19
138 Freon TF	101	2.397	2.397	(0.490)	735007	150.000	158.31
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	767365	150.000	141.20
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	1566973	150.000	147.54
11 1,1-Dichloroethene	96	2.394	2.394	(0.489)	789917	150.000	150.99
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	1250083	150.000	151.94
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	1201294	150.000	155.88
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1603390	150.000	158.92
90 1,2,4-Trichlorobenzene	180	11.927	11.927	(1.165)	1246599	150.000	155.30
79 1,2,4-Trimethylbenzene	105	9.944	9.944	(0.971)	3425922	150.000	151.11
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	234820	150.000	152.68
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	923726	150.000	146.78

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111310.D Page 2
Report Date: 24-Jan-2019 18:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	1872904	150.000	143.68
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	1302354	150.000	139.71
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	950163	150.000	149.81
75 1,3,5-Trimethylbenzene	105	9.629	9.629	(0.941)	3367895	150.000	153.56
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1864119	150.000	145.05
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1651259	150.000	141.50
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	1907496	150.000	151.83
26 2,2-Dichloropropane	77	4.272	4.272	(0.873)	1089497	150.000	165.65
24 2-Butanone	43	4.336	4.336	(0.886)	955107	300.000	293.17(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	2905161	150.000	145.35
52 2-Hexanone	43	7.653	7.653	(0.928)	1563288	300.000	314.60(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	3405553	150.000	147.66
82 p-Isopropyltoluene	119	10.213	10.213	(0.998)	3559913	150.000	159.26
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	2161270	300.000	303.08(A)
10 Acetone	43	2.480	2.480	(0.507)	636098	300.000	307.81(A)
37 Benzene	78	5.216	5.216	(0.927)	3563563	150.000	144.72
74 Bromobenzene	156	9.385	9.385	(0.917)	991935	150.000	148.14
29 Bromochloromethane	128	4.553	4.553	(0.930)	396590	150.000	145.15
39 Bromodichloromethane	83	6.349	6.349	(1.129)	1169536	150.000	158.01
66 Bromoform	173	8.984	8.984	(1.089)	610635	150.000	152.14
6 Bromomethane	94	1.655	1.655	(0.338)	609177	150.000	154.28
19 Carbon Disulfide	76	2.585	2.585	(0.528)	5076235	300.000	314.21(A)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	1081499	150.000	168.27
59 Chlorobenzene	112	8.275	8.275	(1.003)	2477986	150.000	140.45
7 Chloroethane	64	1.741	1.741	(0.356)	708077	150.000	146.42(M)
28 Chloroform	83	4.654	4.654	(0.951)	1558200	150.000	146.02
3 Chloromethane	50	1.337	1.337	(0.273)	963160	150.000	155.17
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	965405	150.000	147.00
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	1623779	150.000	174.21
55 Dibromochloromethane	129	7.758	7.758	(0.940)	908238	150.000	167.91
44 Dibromomethane	93	6.191	6.191	(1.101)	587501	150.000	147.80
2 Dichlorodifluoromethane	85	1.202	1.202	(0.246)	1086406	150.000	156.42
61 Ethylbenzene	106	8.373	8.373	(1.015)	1325471	150.000	148.58
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	426795	150.000	149.03
67 Isopropylbenzene	105	9.126	9.126	(1.106)	3937489	150.000	151.57
62 m,p-Xylenes	106	8.474	8.474	(1.027)	3241074	300.000	294.85(A)
17 Methylene Chloride	84	2.866	2.866	(0.586)	911224	150.000	155.55
87 n-Butylbenzene	91	10.558	10.558	(1.031)	3347969	150.000	149.04
73 n-Propylbenzene	91	9.479	9.479	(0.926)	4851775	150.000	150.63
92 Naphthalene	128	12.133	12.133	(1.185)	3933835	150.000	162.75
63 o-Xylene	106	8.811	8.811	(1.068)	1663910	150.000	151.23(H)
81 sec-Butylbenzene	105	10.090	10.090	(0.986)	4188144	150.000	156.16
64 Styrene	104	8.826	8.826	(1.070)	2865534	150.000	154.28
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	2893337	150.000	154.80
56 Tetrachloroethene	164	7.526	7.526	(0.912)	658457	150.000	147.04
50 Toluene	91	7.050	7.050	(0.855)	3865080	150.000	142.41
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	855722	150.000	149.25
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	1439550	150.000	152.95
38 Trichloroethene	130	5.861	5.861	(1.042)	898620	150.000	148.04
8 Trichlorofluoromethane	101	1.948	1.948	(0.398)	1438631	150.000	155.26
5 Vinyl Chloride	62	1.415	1.415	(0.289)	1189386	150.000	156.33

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111310.D

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\Before\U111310.D
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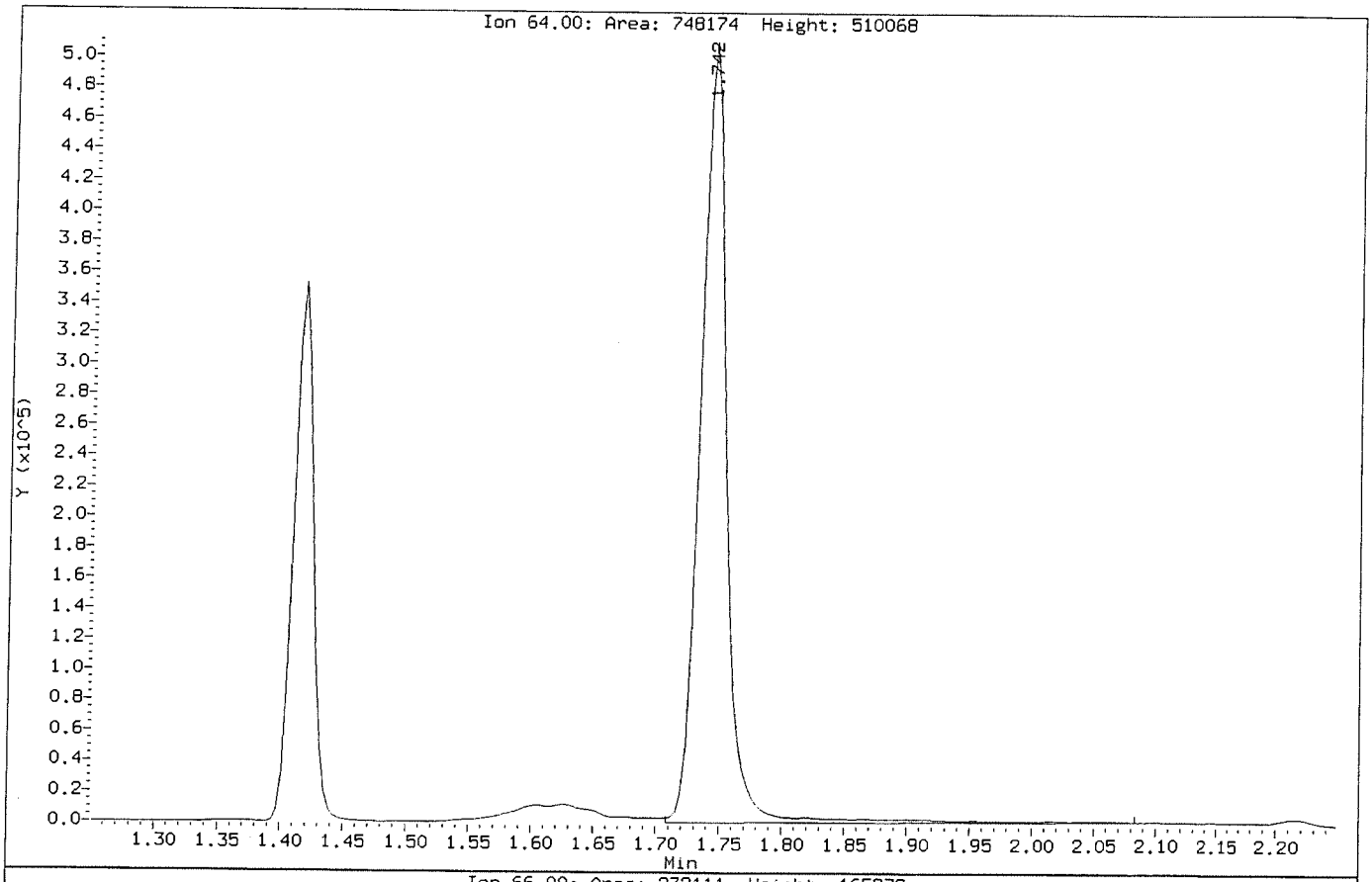
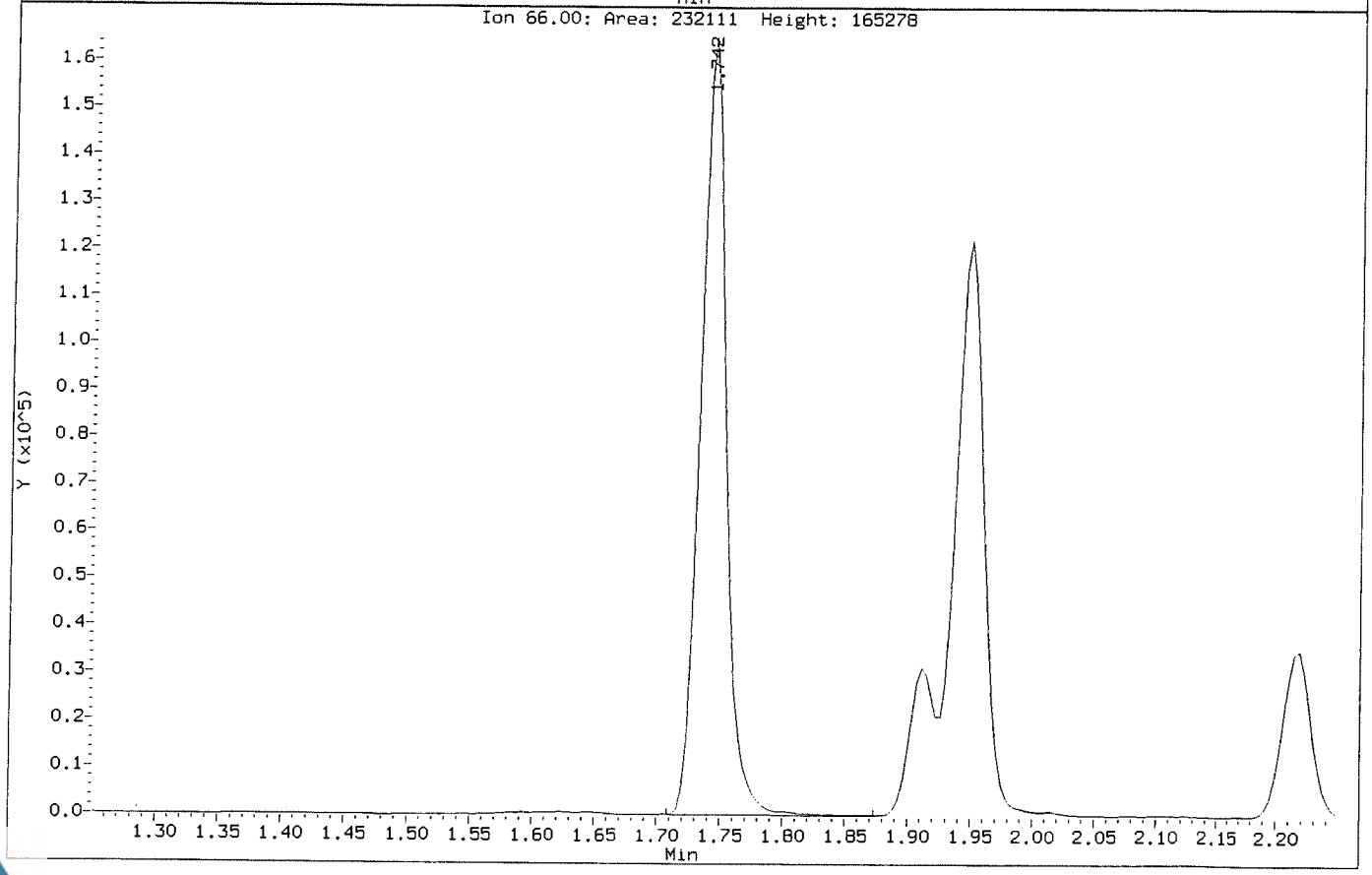
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: Chloroethane
CAS Number: 75-00-3





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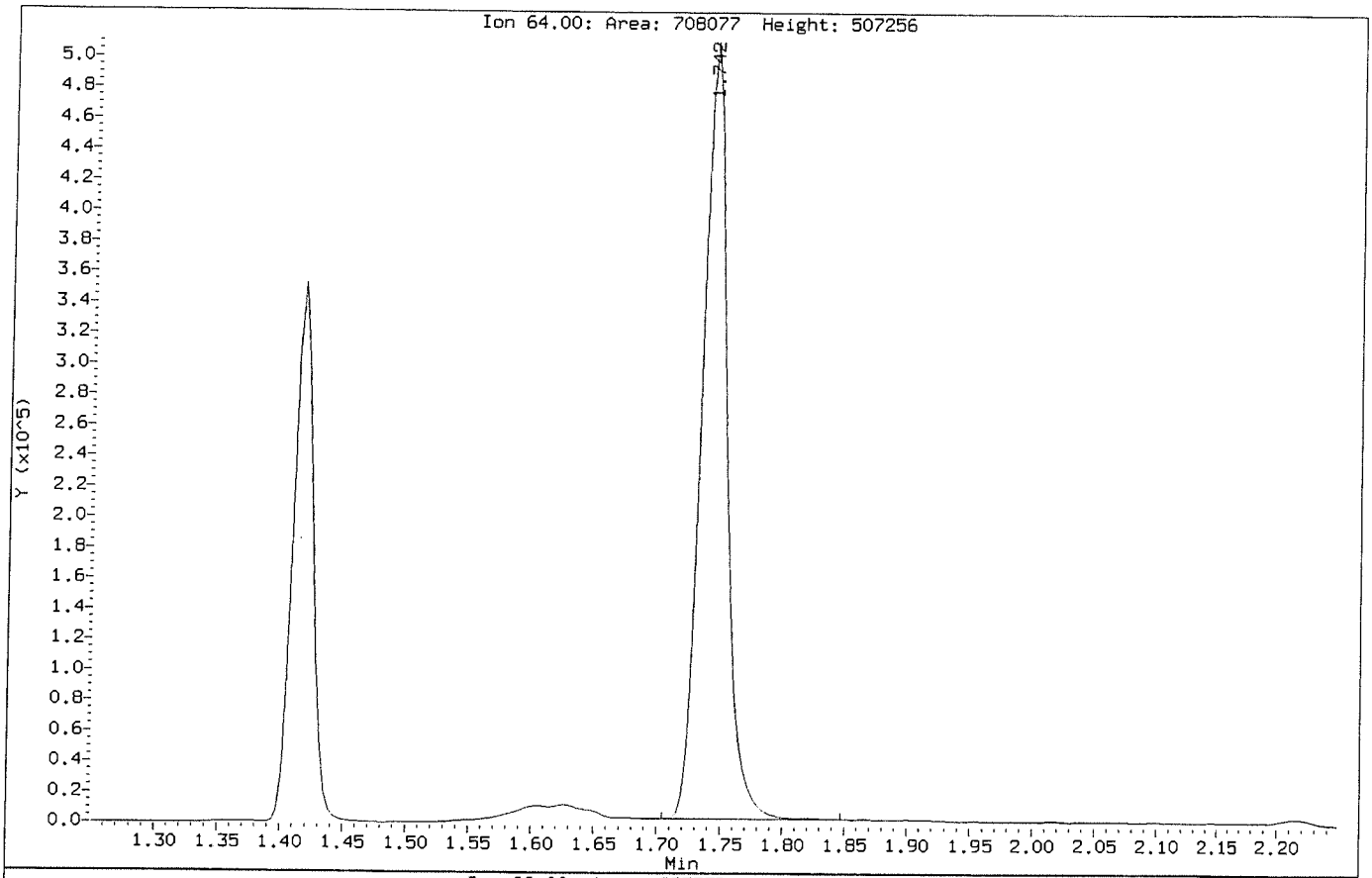
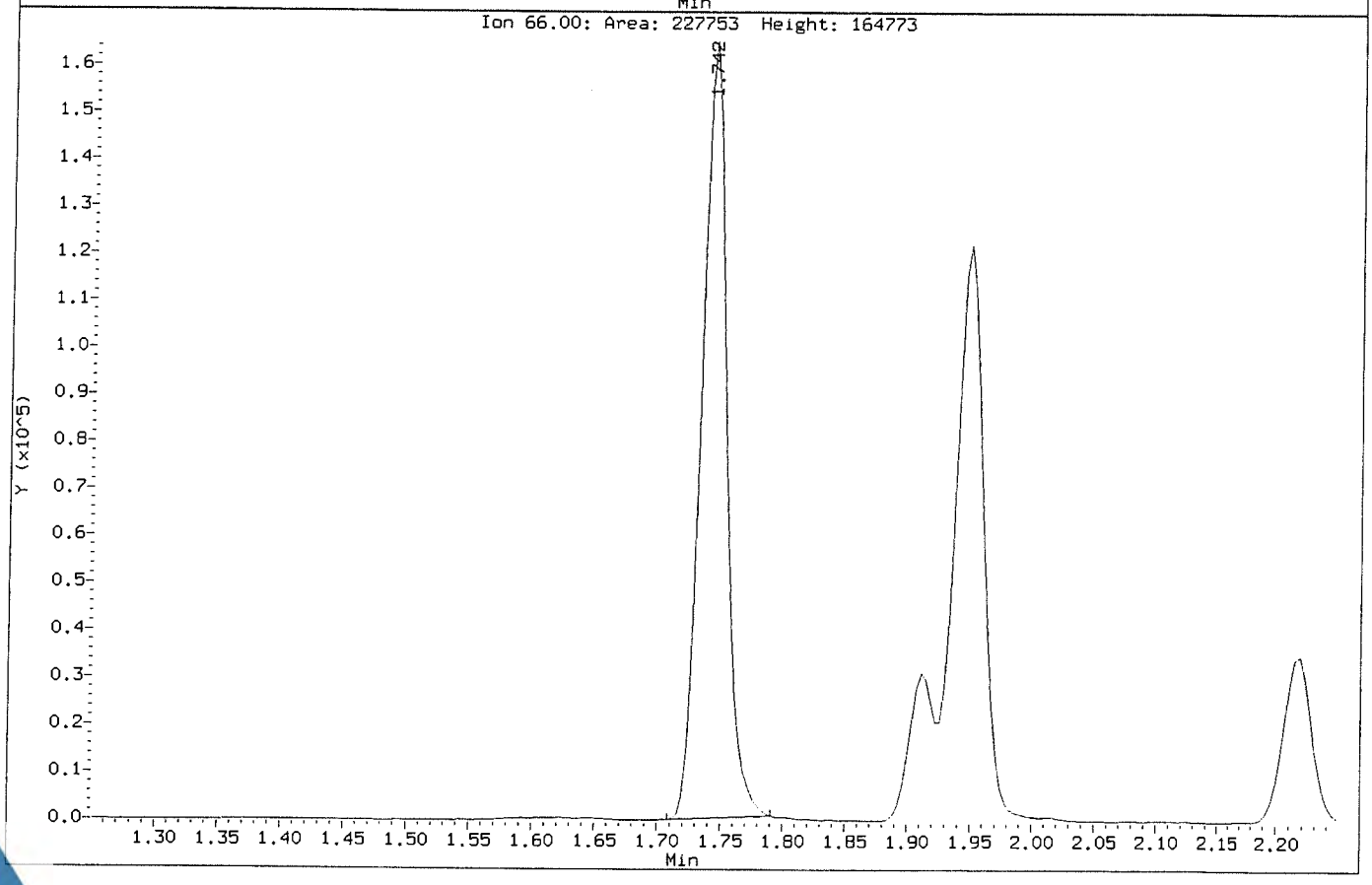
Client Sample ID: VSTD150

Compound: Chloroethane
CAS Number: 75-00-3





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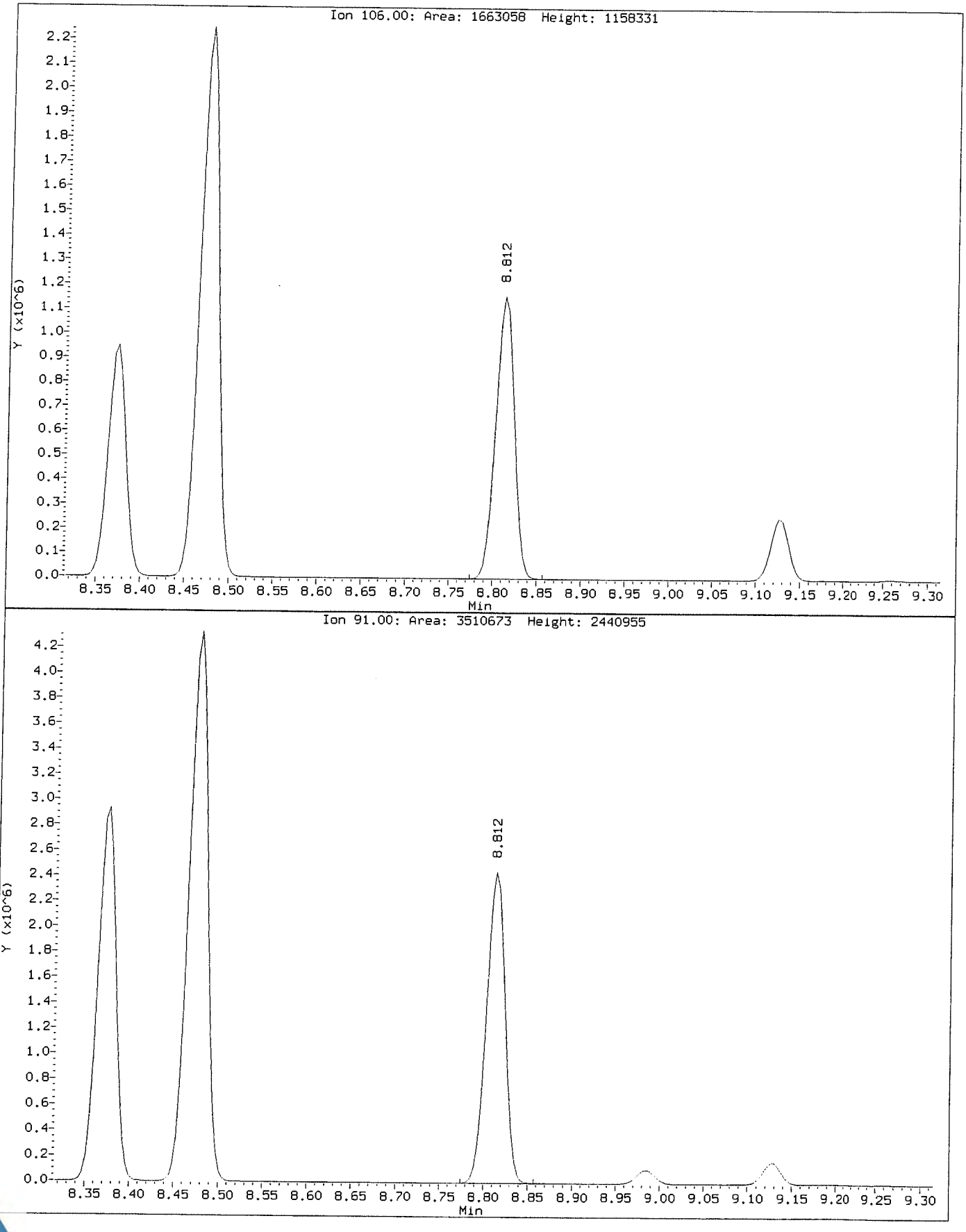
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: o-Xylene
CAS Number: 95-47-6



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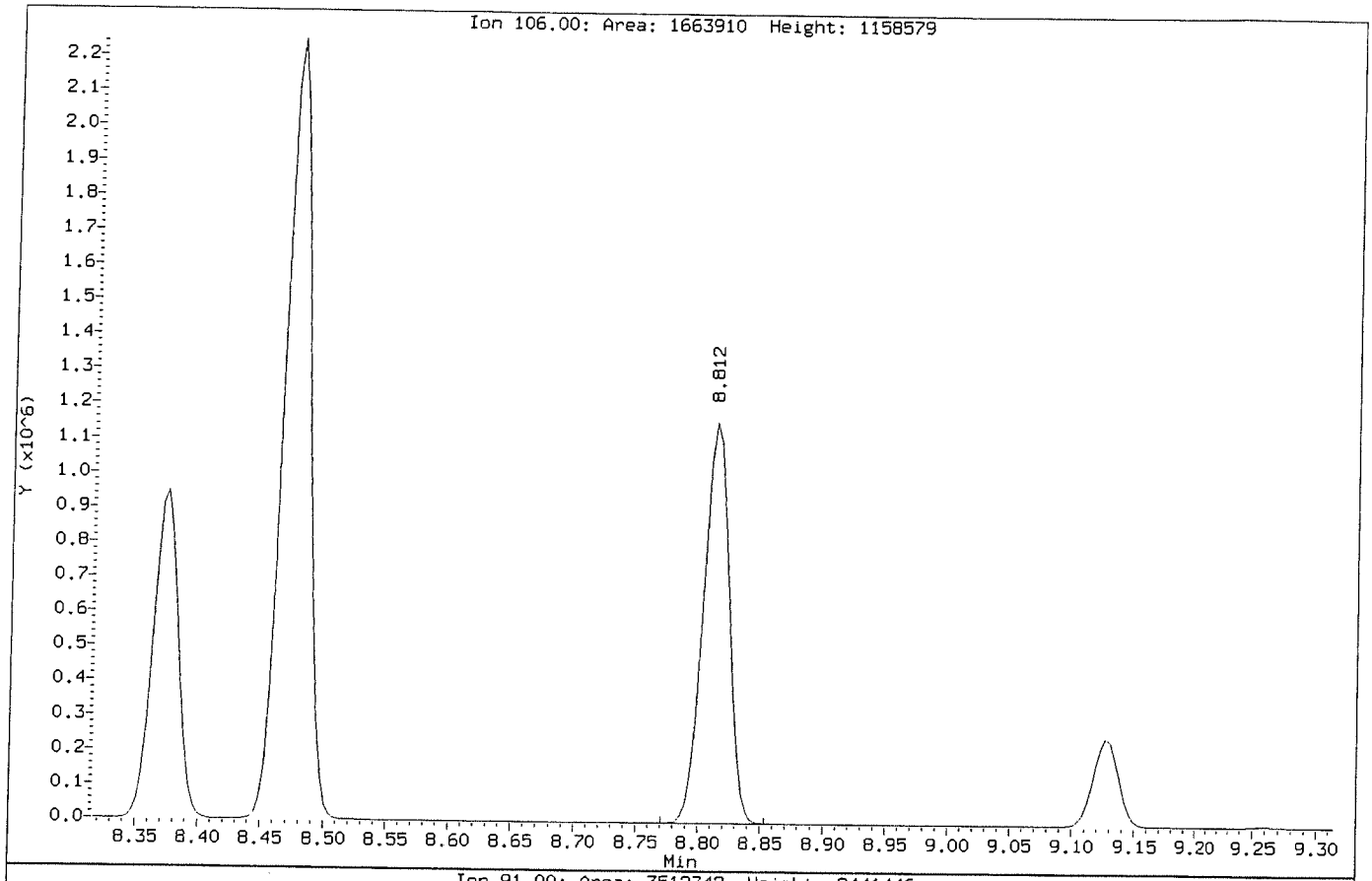
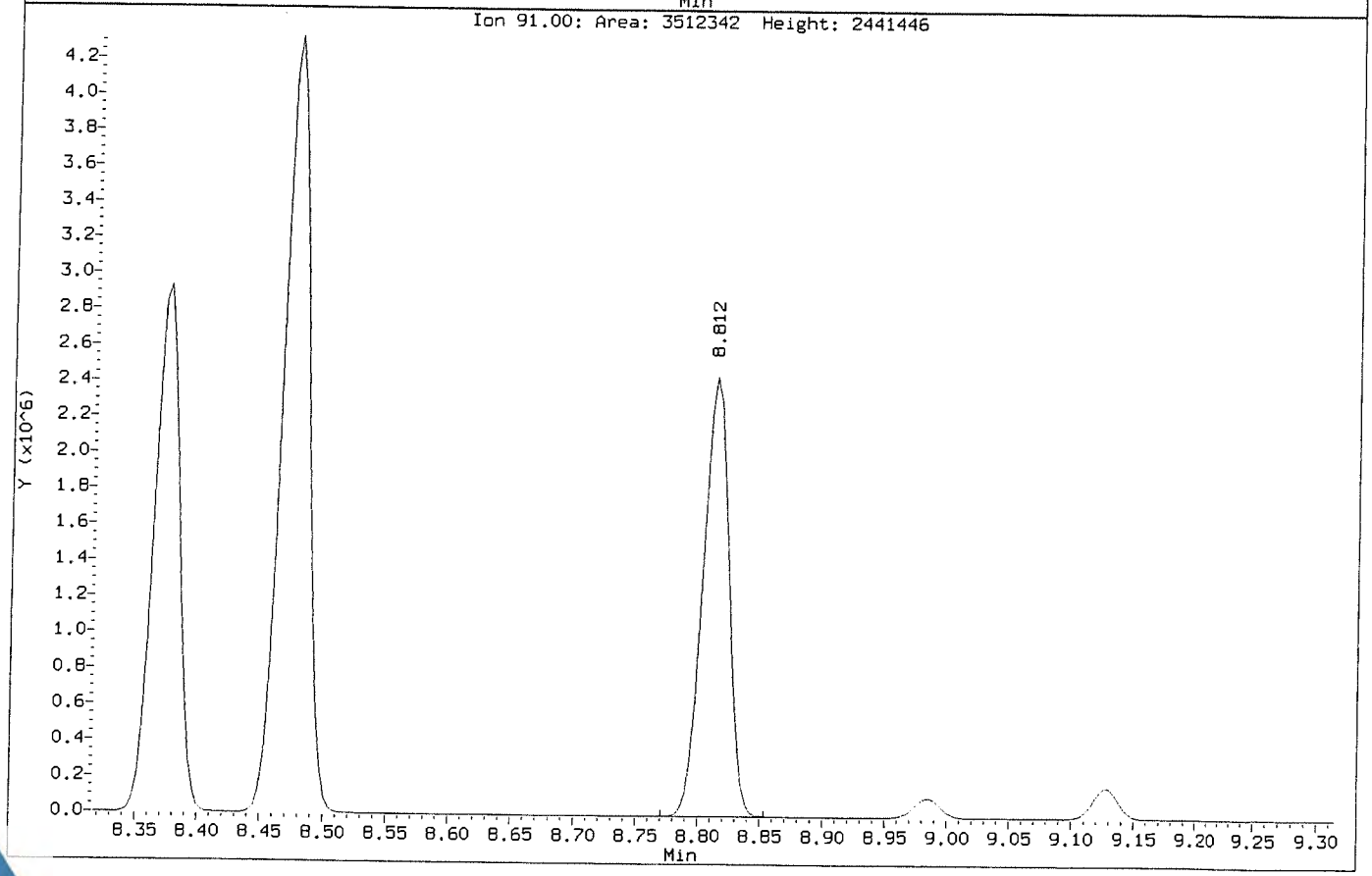
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: o-Xylene
CAS Number: 95-47-6





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Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111311.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 13-NOV-2018 15:28
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 15:04 Cal File: U111310.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

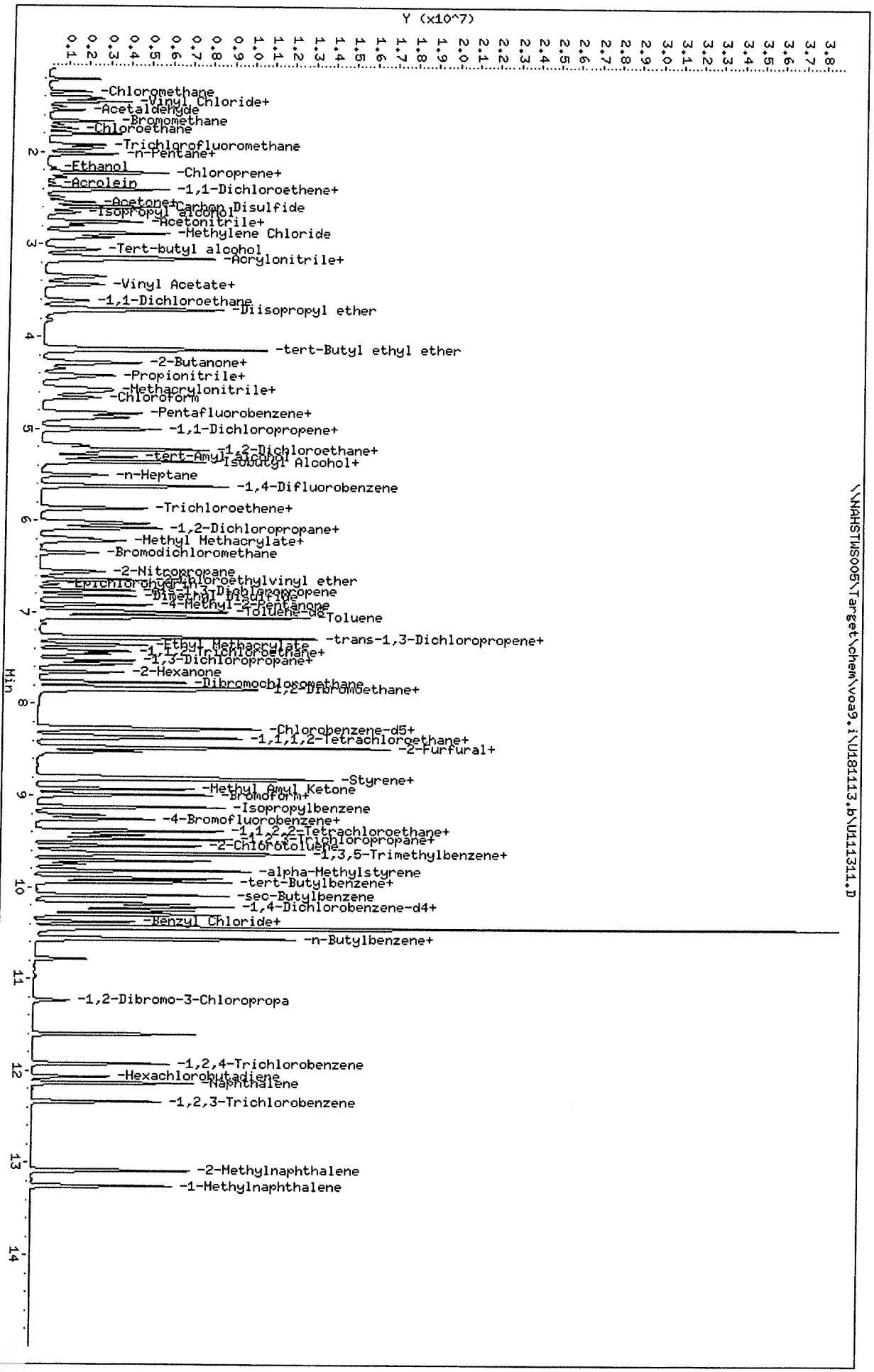
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	505644	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	946062	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.253	(1.000)	896349	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.239	10.239	(1.000)	426550	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	1112100	200.000	194.87
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	1441844	200.000	193.54
$ 48 Toluene-d8	98	6.993	6.993	(0.847)	4386438	200.000	196.29
$ 69 4-Bromofluorobenzene	95	9.261	9.261	(1.122)	1723103	200.000	197.48
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	1191494	200.000	210.73(A)
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	1824622	200.000	205.42(A)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.917)	1884161	200.000	186.48
138 Freon TF	101	2.405	2.405	(0.491)	1007022	200.000	198.80
53 1,1,2-Trichloroethane	83	7.424	7.424	(0.900)	1043779	200.000	183.16
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	2138732	200.000	184.57
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	1081090	200.000	189.41
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	1707700	200.000	195.44
93 1,2,3-Trichlorobenzene	180	12.339	12.339	(1.205)	1636643	200.000	203.23(A)
71 1,2,3-Trichloropropane	75	9.434	9.434	(0.921)	2176006	200.000	206.38(A)
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	1712716	200.000	204.18(A)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	4631542	200.000	195.48
89 1,2-Dibromo-3-Chloropropane	155	11.237	11.237	(1.097)	321770	200.000	198.50
57 1,2-Dibromoethane	107	7.855	7.855	(0.952)	1265930	200.000	191.84

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111311.D Page 2
Report Date: 24-Jan-2019 18:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	2535364	200.000	186.12
33 1,2-Dichloroethane	62	5.257	5.257	(0.934)	1770998	200.000	178.89
42 1,2-Dichloropropane	63	6.086	6.086	(1.081)	1294674	200.000	192.20
75 1,3,5-Trimethylbenzene	105	9.628	9.628	(0.940)	4535917	200.000	197.91
83 1,3-Dichlorobenzene	146	10.183	10.183	(0.995)	2548608	200.000	189.77
54 1,3-Dichloropropane	76	7.567	7.567	(0.917)	2235193	200.000	182.67
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	2606334	200.000	198.53
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	1492829	200.000	208.03(A)
24 2-Butanone	43	4.343	4.343	(0.887)	1287268	400.000	362.16(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	3934986	200.000	188.39
52 2-Hexanone	43	7.653	7.653	(0.927)	2091584	400.000	401.41(A)
77 4-Chlorotoluene	91	9.643	9.643	(0.942)	4615489	200.000	191.50
82 p-Isopropyltoluene	119	10.213	10.213	(0.997)	4810748	200.000	205.94(A)
45 4-Methyl-2-Pentanone	43	6.918	6.918	(0.838)	2944165	400.000	393.73(A)
10 Acetone	43	2.491	2.491	(0.509)	869596	400.000	386.81(A)
37 Benzene	78	5.224	5.224	(0.928)	4810692	200.000	183.96(M)
74 Bromobenzene	156	9.385	9.385	(0.917)	1358088	200.000	194.09
29 Bromochloromethane	128	4.560	4.560	(0.931)	537789	200.000	180.41
39 Bromodichloromethane	83	6.352	6.352	(1.129)	1603888	200.000	204.03(A)
66 Bromoform	173	8.987	8.987	(1.089)	844522	200.000	198.75
6 Bromomethane	94	1.662	1.662	(0.340)	794649	200.000	184.09
19 Carbon Disulfide	76	2.596	2.596	(0.530)	6896612	400.000	391.27(A)
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	1483776	200.000	217.37(A)
59 Chlorobenzene	112	8.279	8.279	(1.003)	3391468	200.000	183.32
7 Chloroethane	64	1.749	1.749	(0.357)	955282	200.000	181.06(M)
28 Chloroform	83	4.661	4.661	(0.952)	2117243	200.000	181.86
3 Chloromethane	50	1.344	1.344	(0.274)	1334230	200.000	196.96
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	1322041	200.000	184.51
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	2224591	200.000	224.72(A)
55 Dibromochloromethane	129	7.762	7.762	(0.940)	1258930	200.000	221.96(A)
44 Dibromomethane	93	6.195	6.195	(1.101)	803081	200.000	190.24
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	1483355	200.000	195.50
61 Ethylbenzene	106	8.373	8.373	(1.015)	1806514	200.000	193.12(M)
91 Hexachlorobutadiene	225	12.065	12.065	(1.178)	582613	200.000	183.44
67 Isopropylbenzene	105	9.130	9.130	(1.106)	5274717	200.000	193.63
62 m,p-Xylenes	106	8.474	8.474	(1.027)	4413064	400.000	382.86(AM)
17 Methylene Chloride	84	2.877	2.877	(0.587)	1246871	200.000	195.27
87 n-Butylbenzene	91	10.558	10.558	(1.031)	4531778	200.000	189.12
73 n-Propylbenzene	91	9.478	9.478	(0.926)	6433909	200.000	191.14
92 Naphthalene	128	12.136	12.136	(1.185)	5280797	200.000	209.07(A)
63 o-Xylene	106	8.815	8.815	(1.068)	2277275	200.000	197.39(MH)
81 sec-Butylbenzene	105	10.090	10.090	(0.985)	5603961	200.000	199.95
64 Styrene	104	8.826	8.826	(1.069)	3881020	200.000	199.27
78 tert-Butylbenzene	119	9.906	9.906	(0.967)	3887715	200.000	199.04
56 Tetrachloroethene	164	7.525	7.525	(0.912)	907758	200.000	193.32
50 Toluene	91	7.049	7.049	(0.854)	5182031	200.000	182.09
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	1173691	200.000	187.63
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	1983766	200.000	198.03
38 Trichloroethene	130	5.865	5.865	(1.042)	1238549	200.000	192.12
8 Trichlorofluoromethane	101	1.955	1.955	(0.399)	1950000	200.000	192.89
5 Vinyl Chloride	62	1.426	1.426	(0.291)	1622522	200.000	195.34

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111311.D

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

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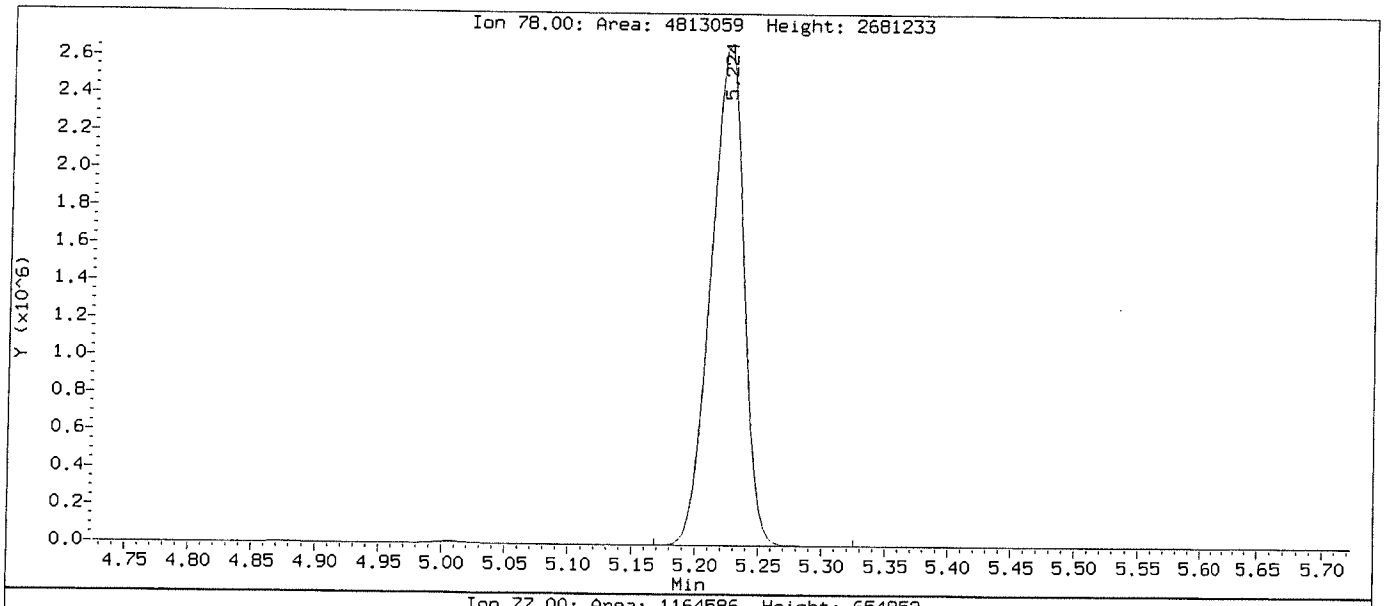
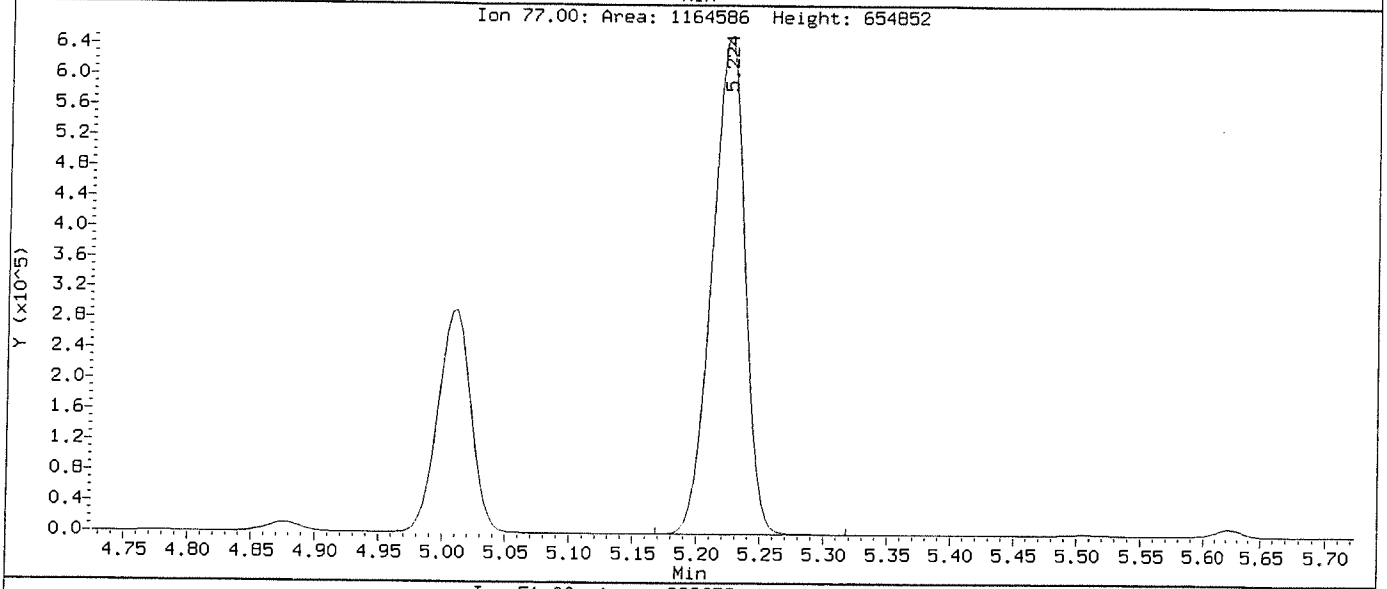
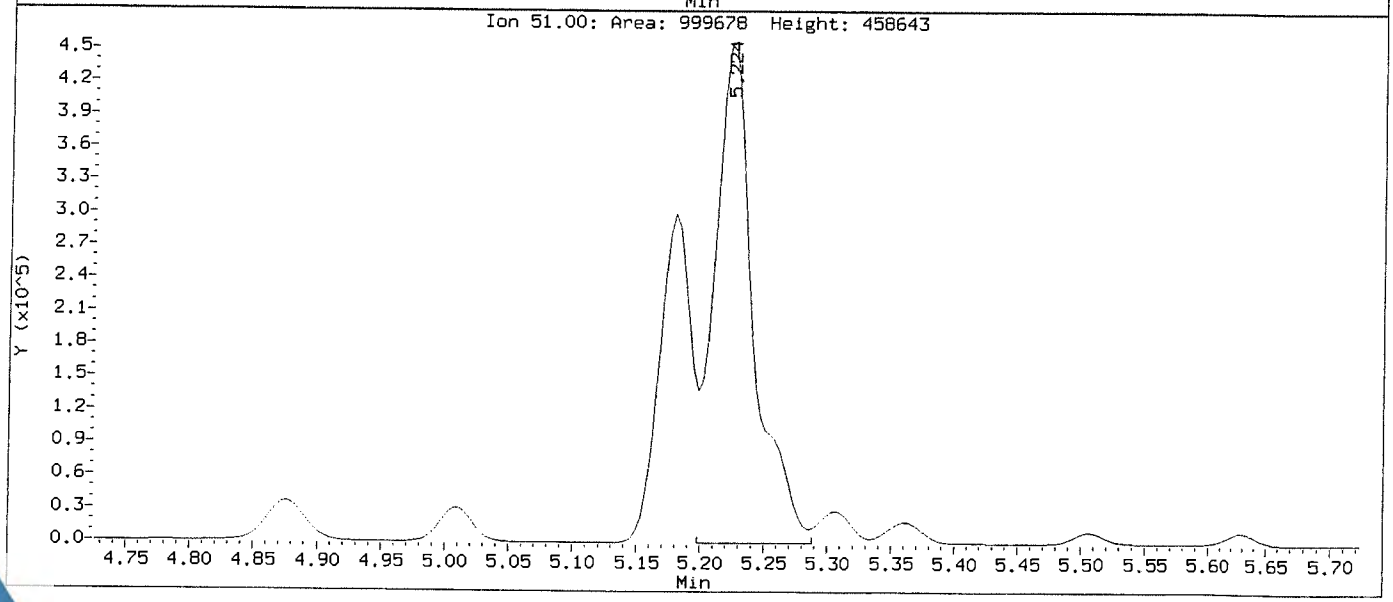
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Benzene
CAS Number: 71-43-2







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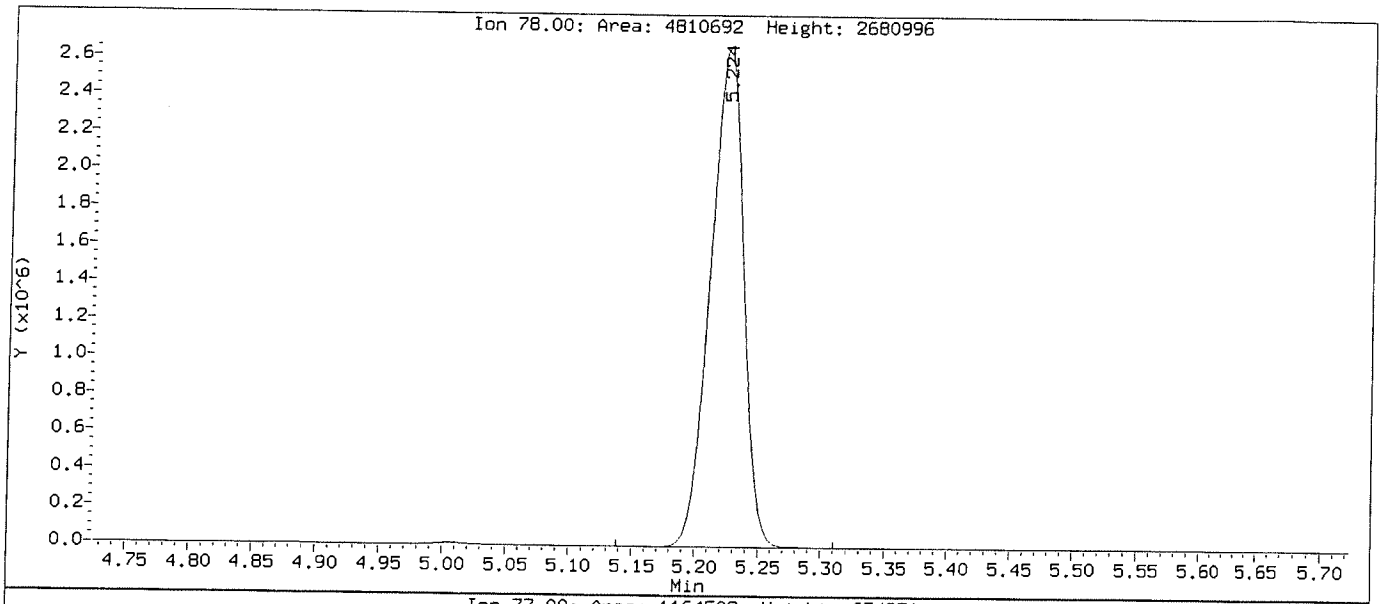
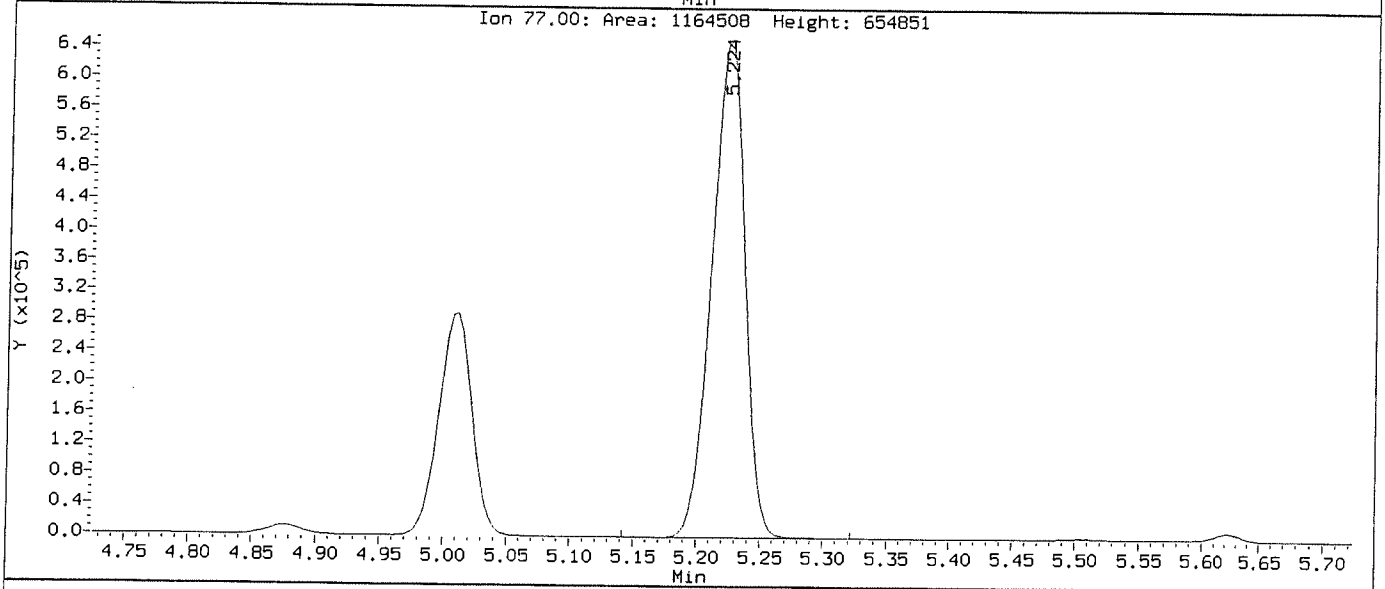
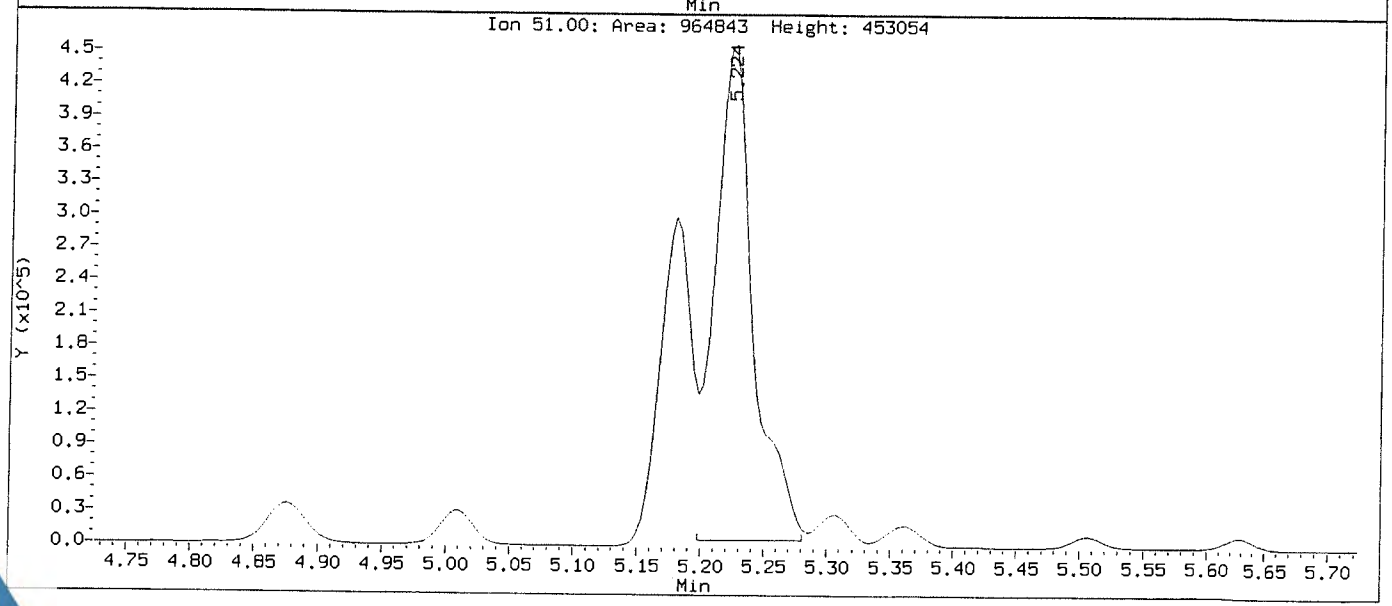
Client Sample ID: VSTD200

Compound: Benzene
CAS Number: 71-43-2







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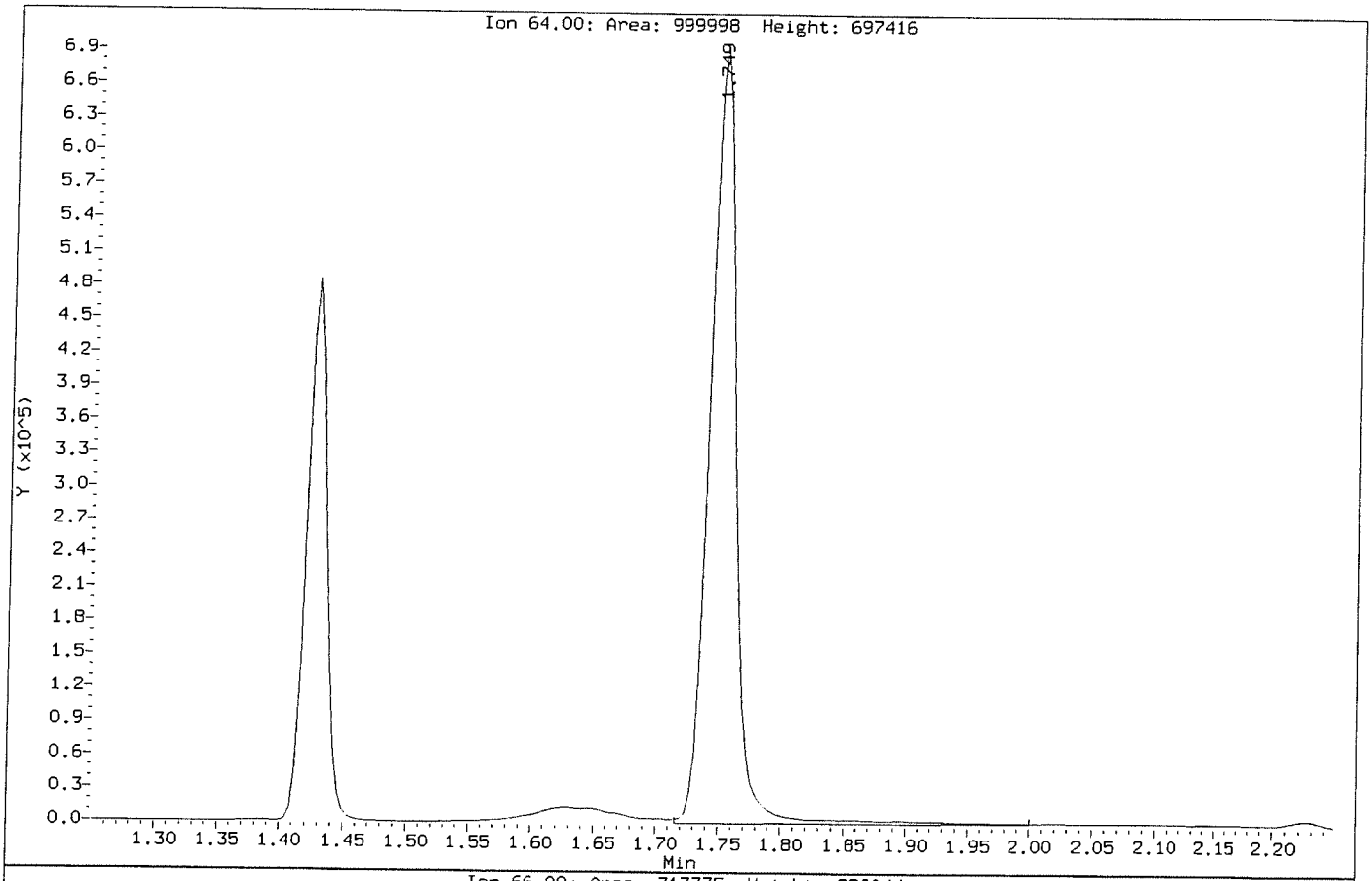
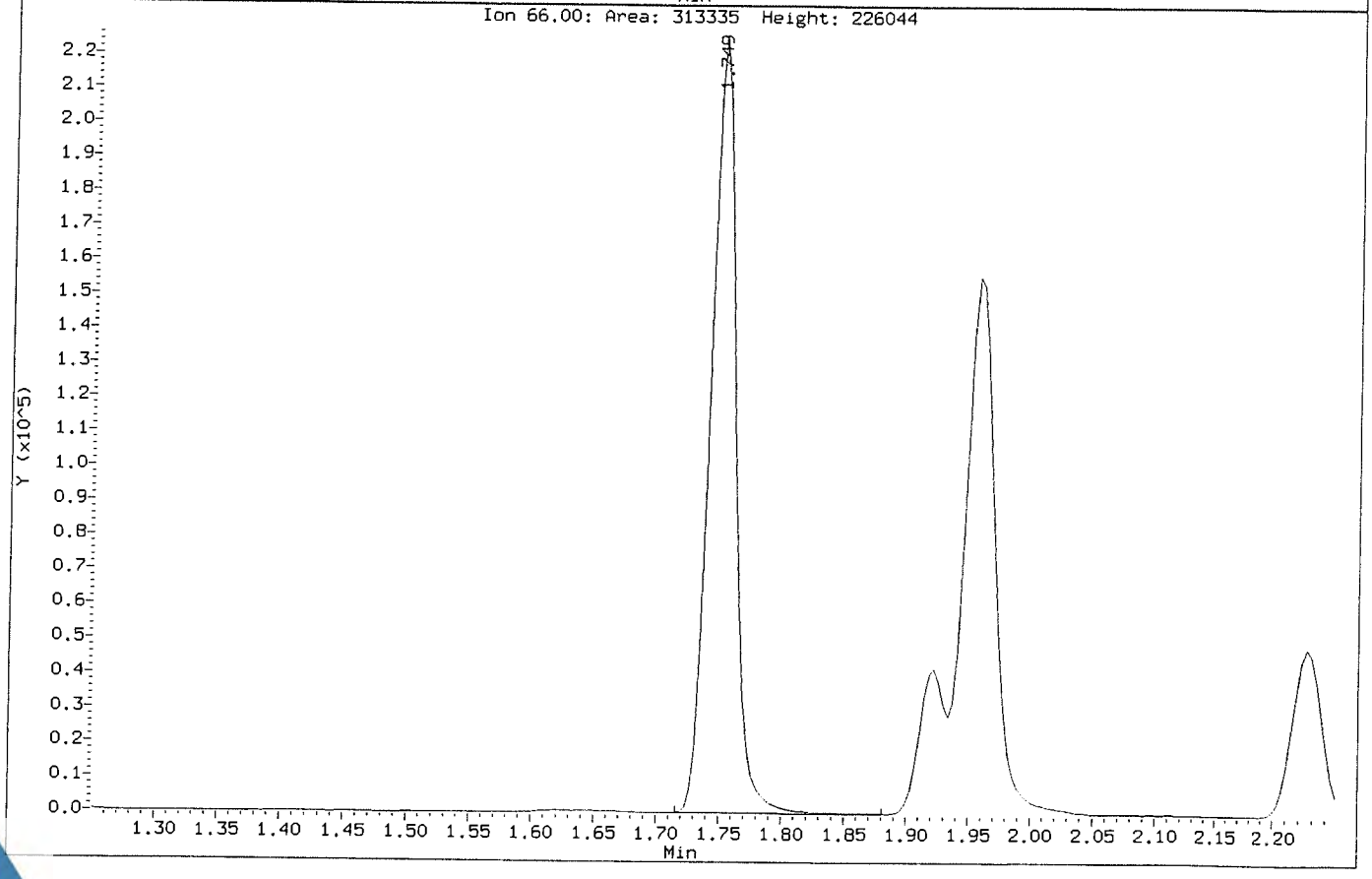
Injection Date: 13-NOV-2018 15:28
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





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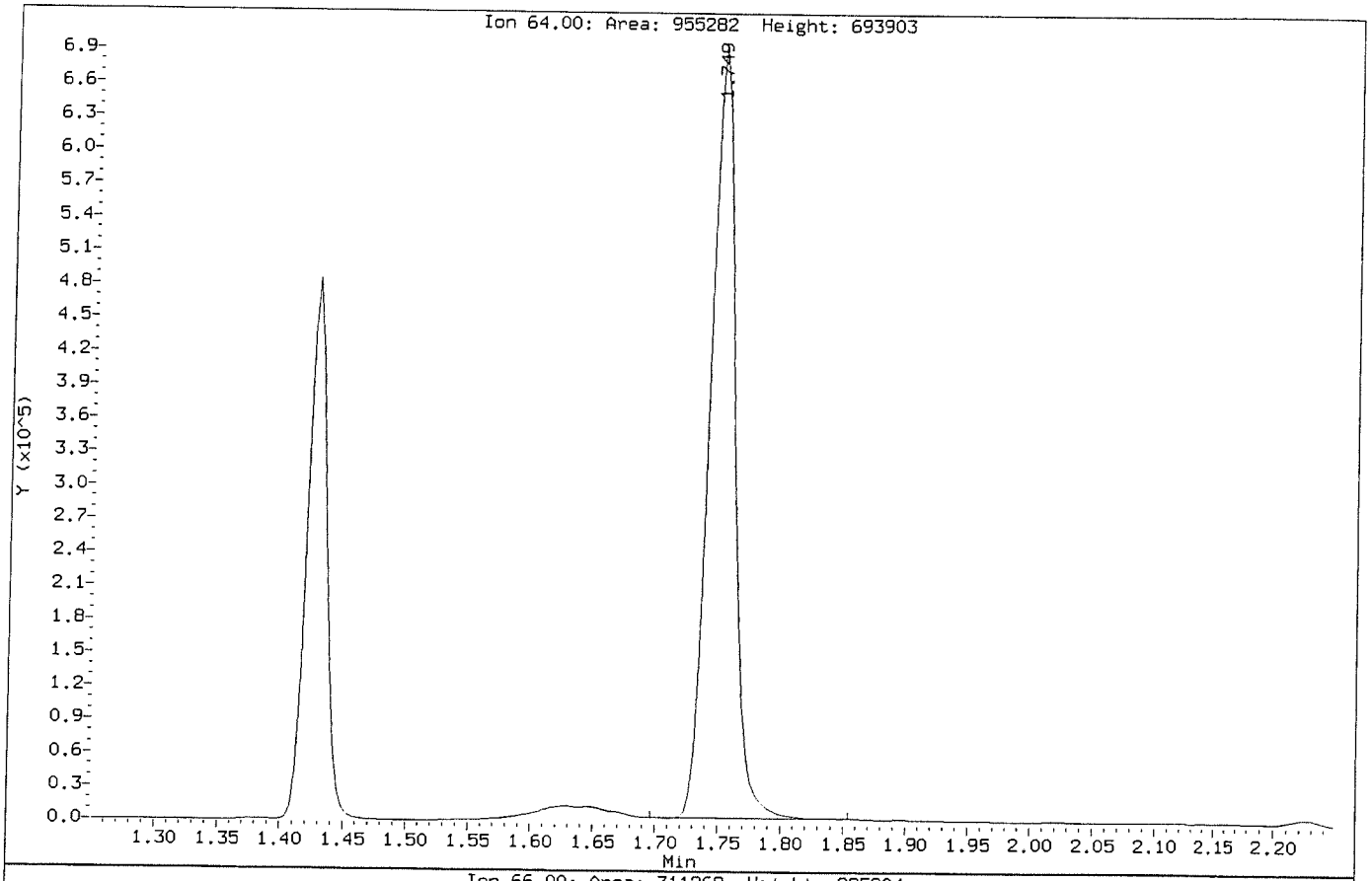
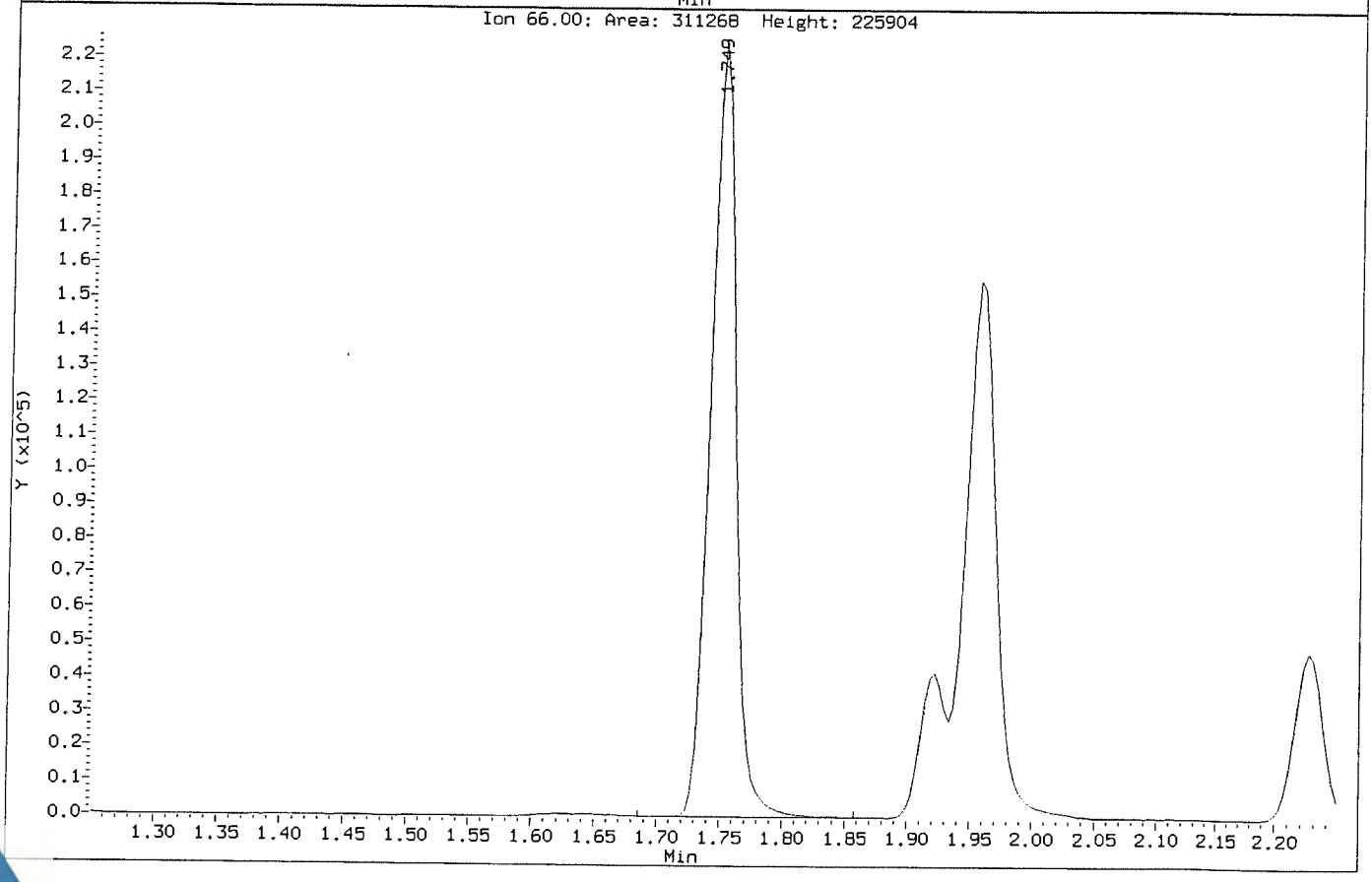
Injection Date: 13-NOV-2018 15:28
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





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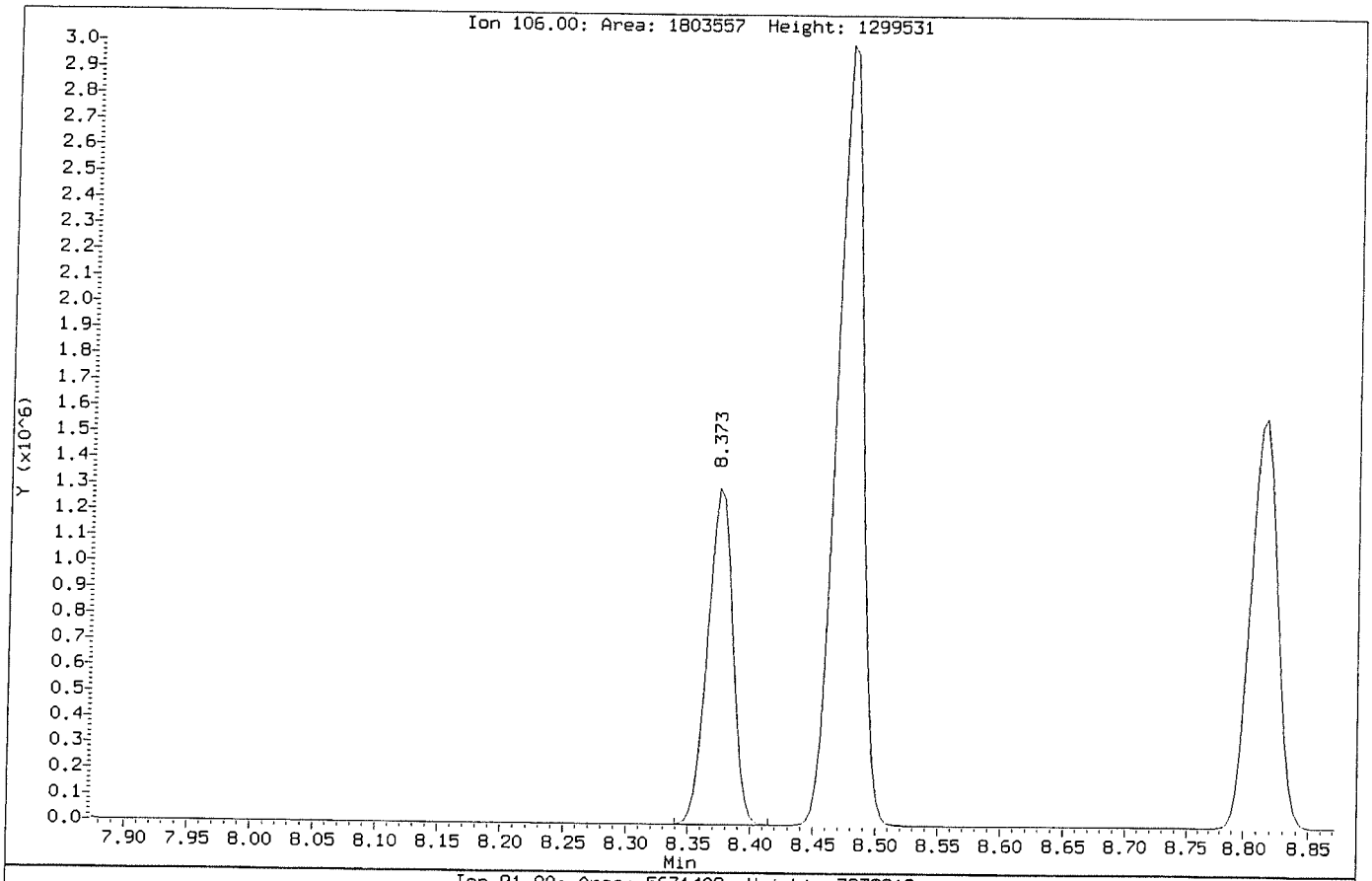
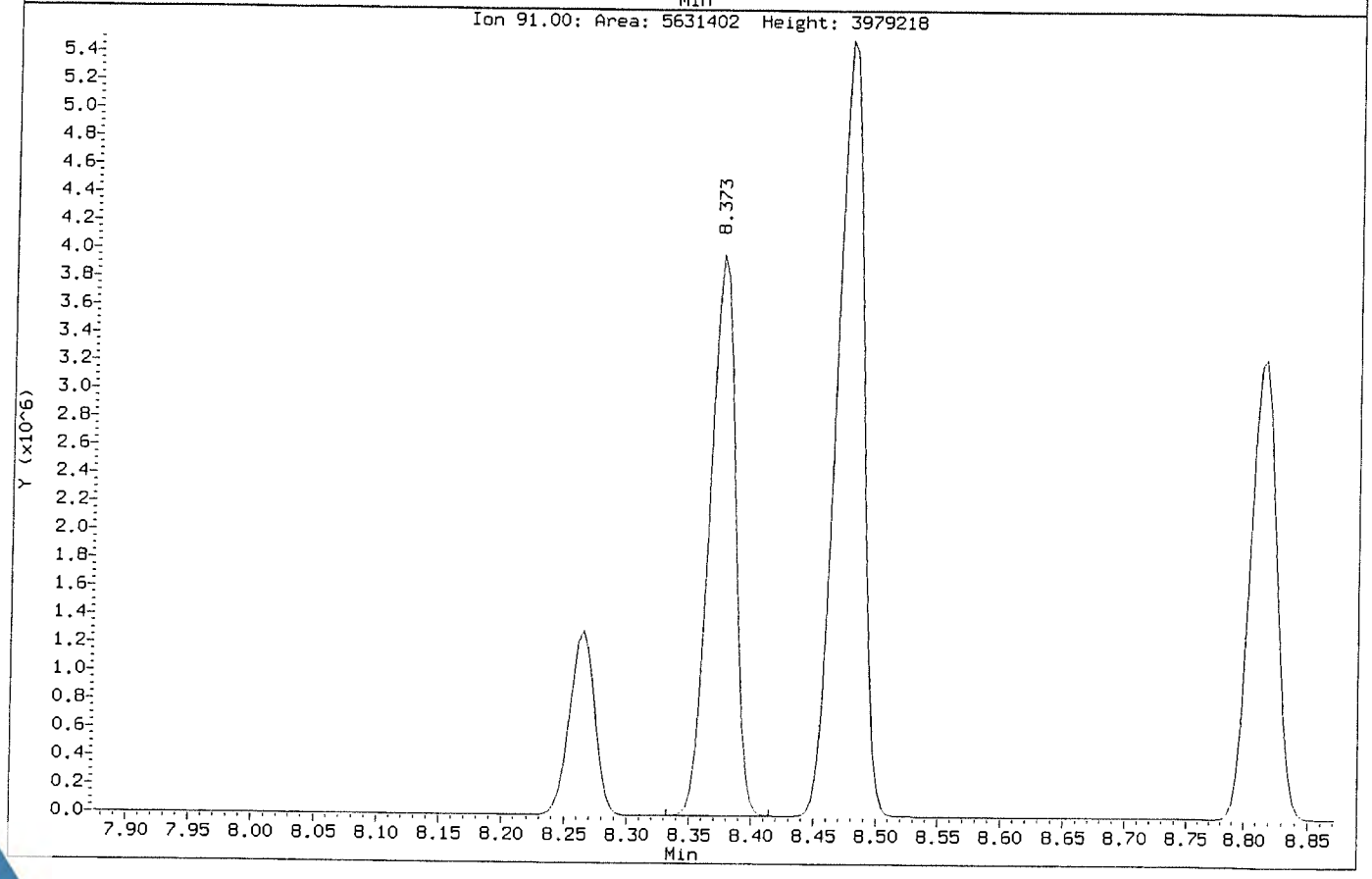
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Ethylbenzene
CAS Number: 100-41-4





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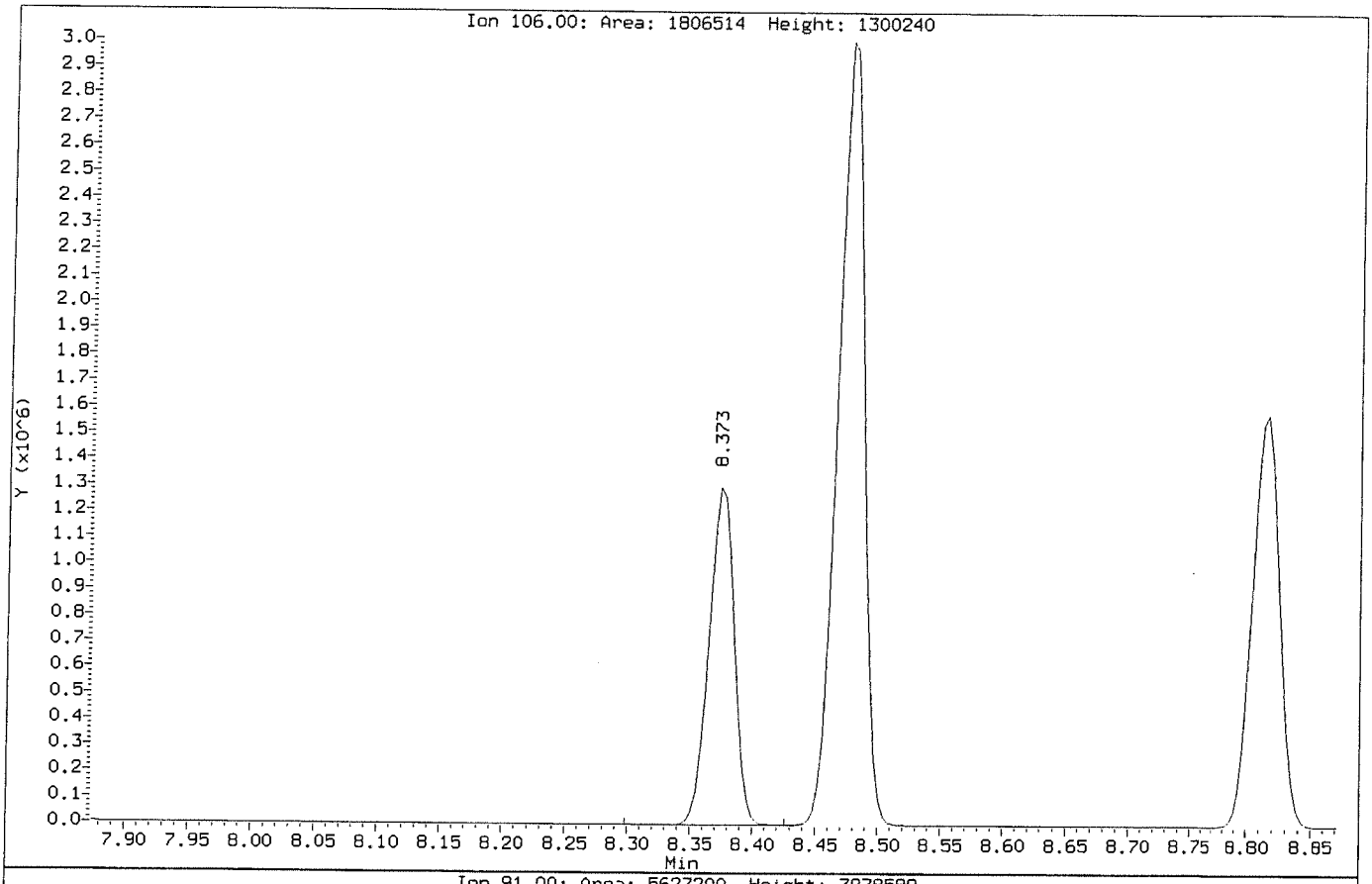
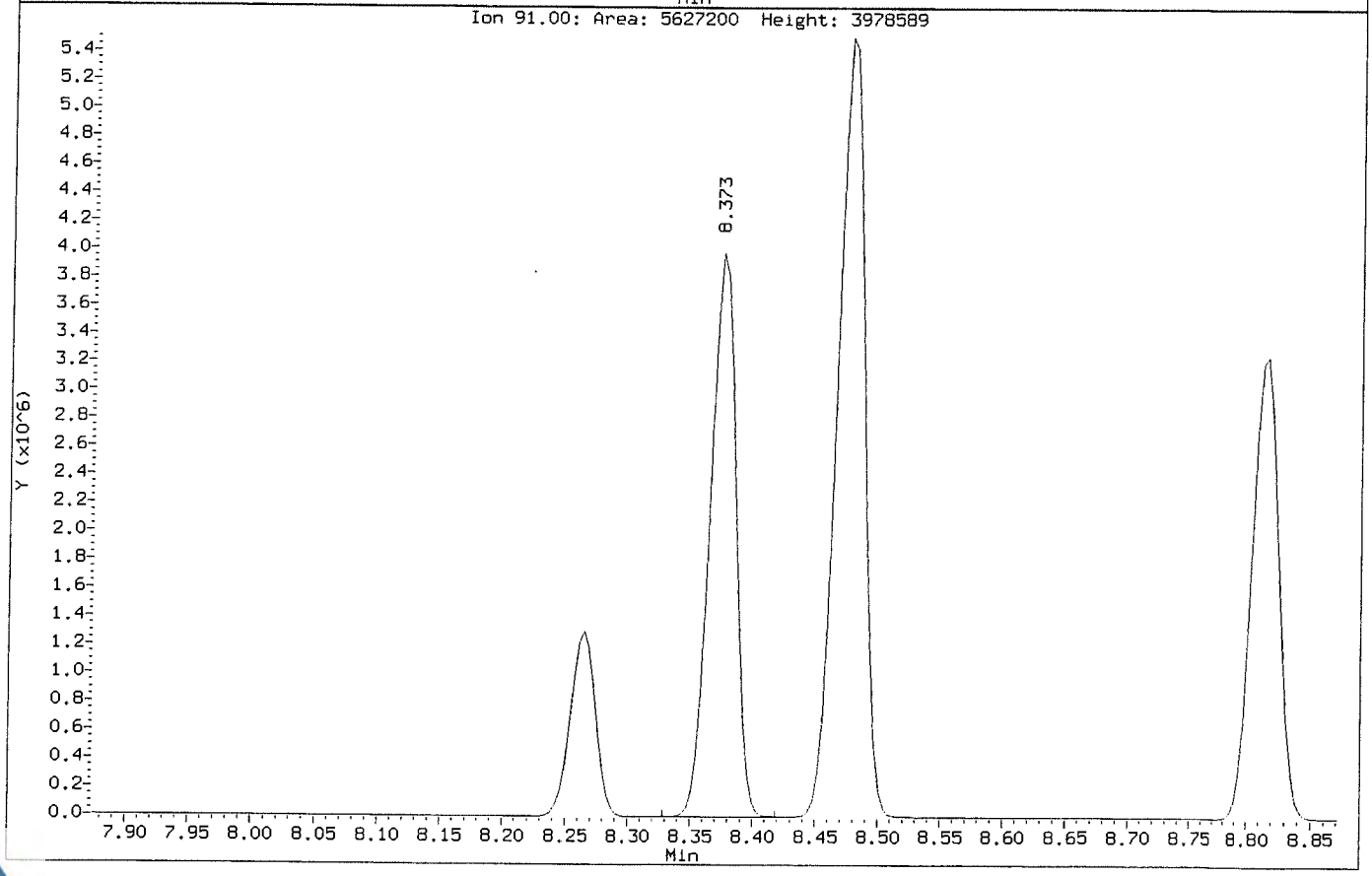
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Ethylbenzene
CAS Number: 100-41-4





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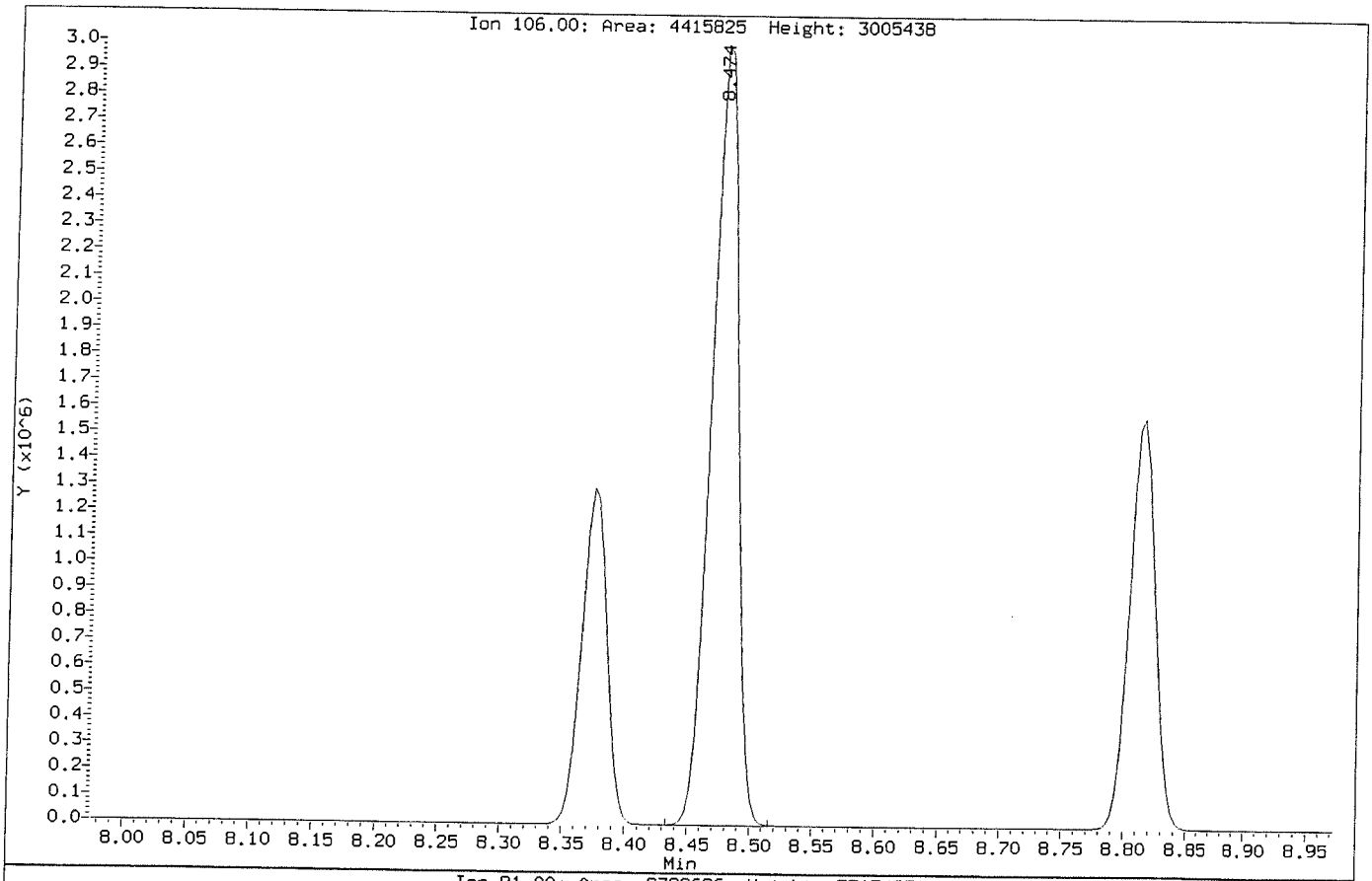
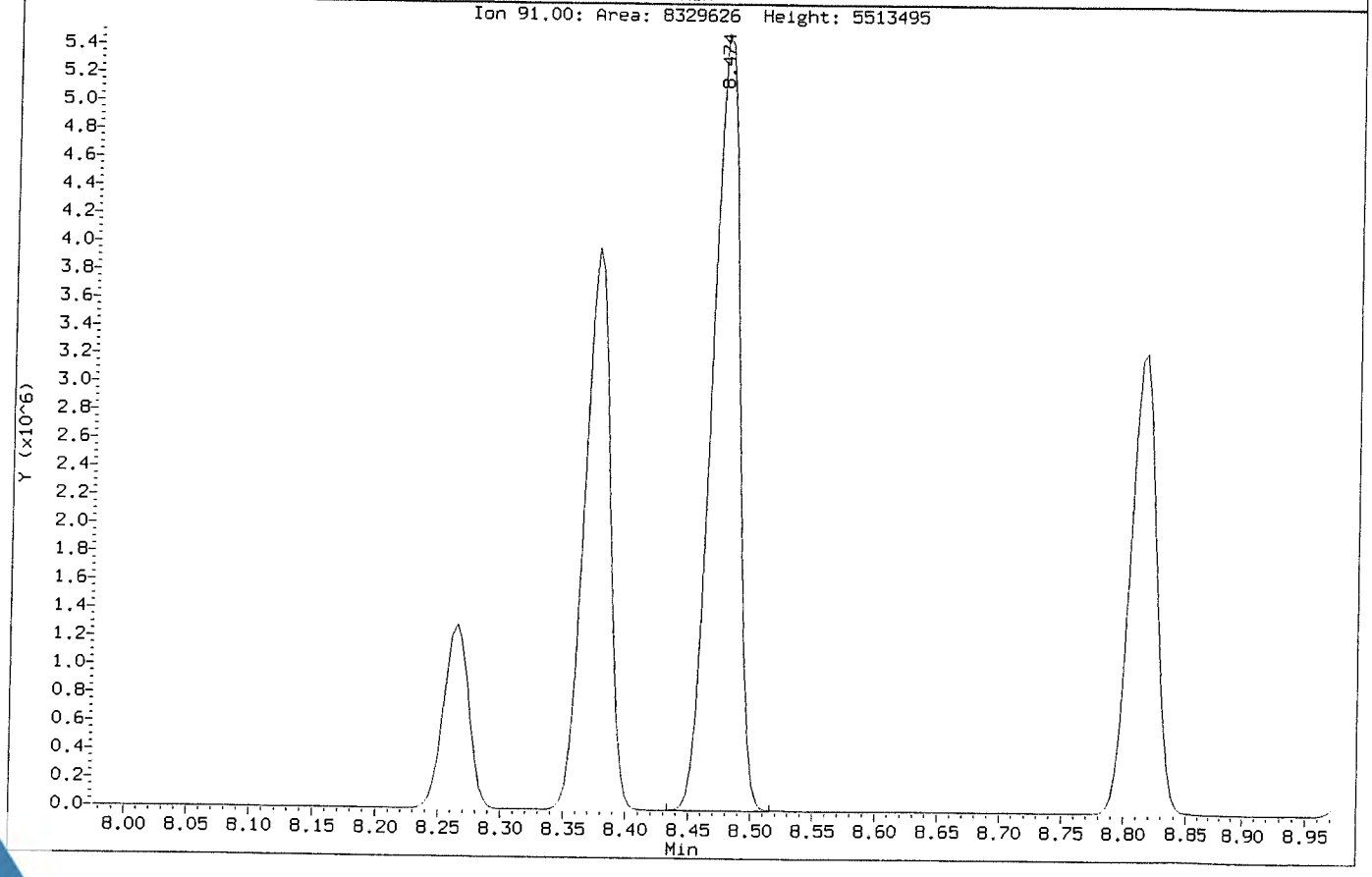
Injection Date: 13-NOV-2018 15:28
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: m,p-Xylenes
CAS Number:





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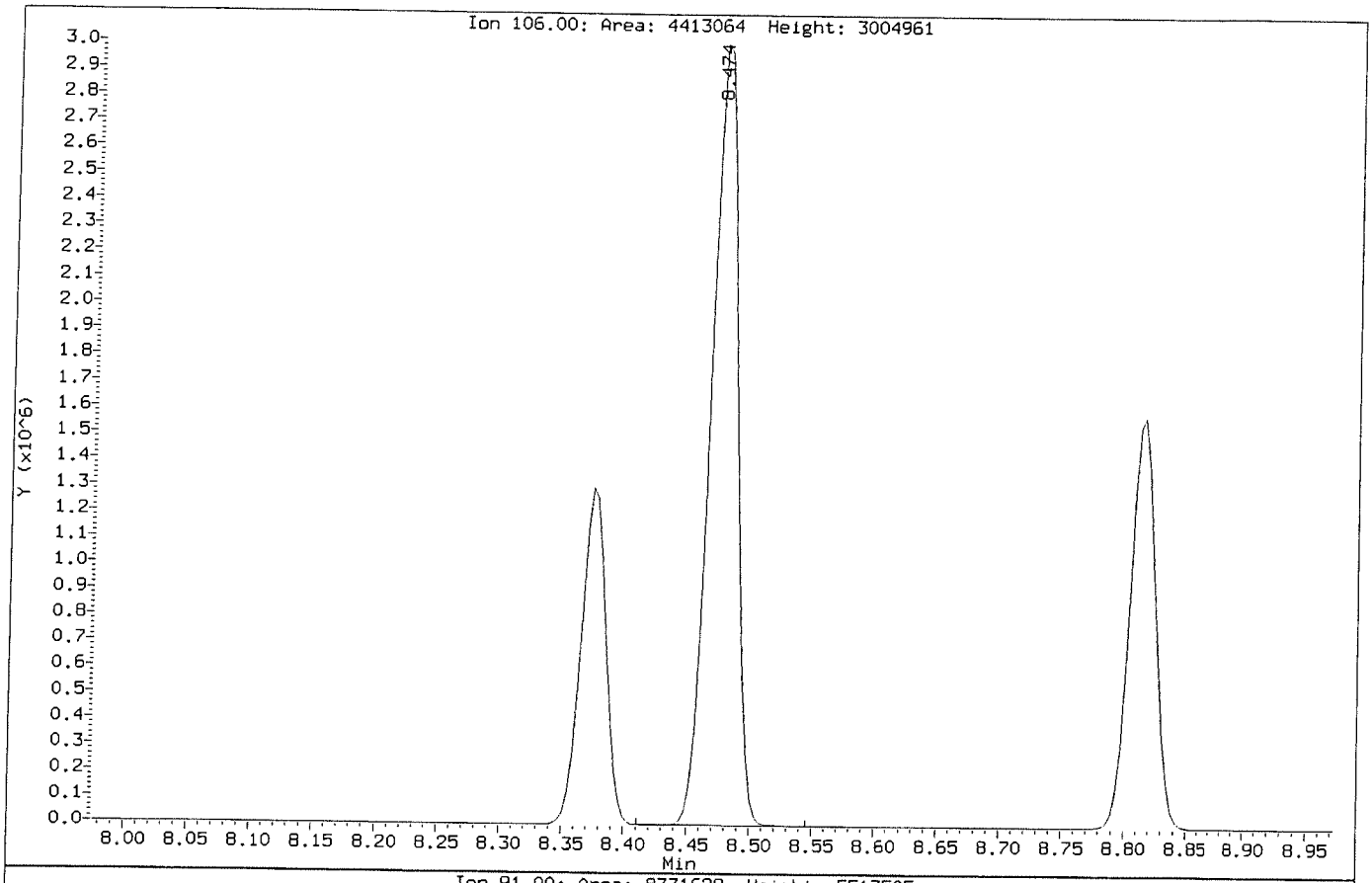
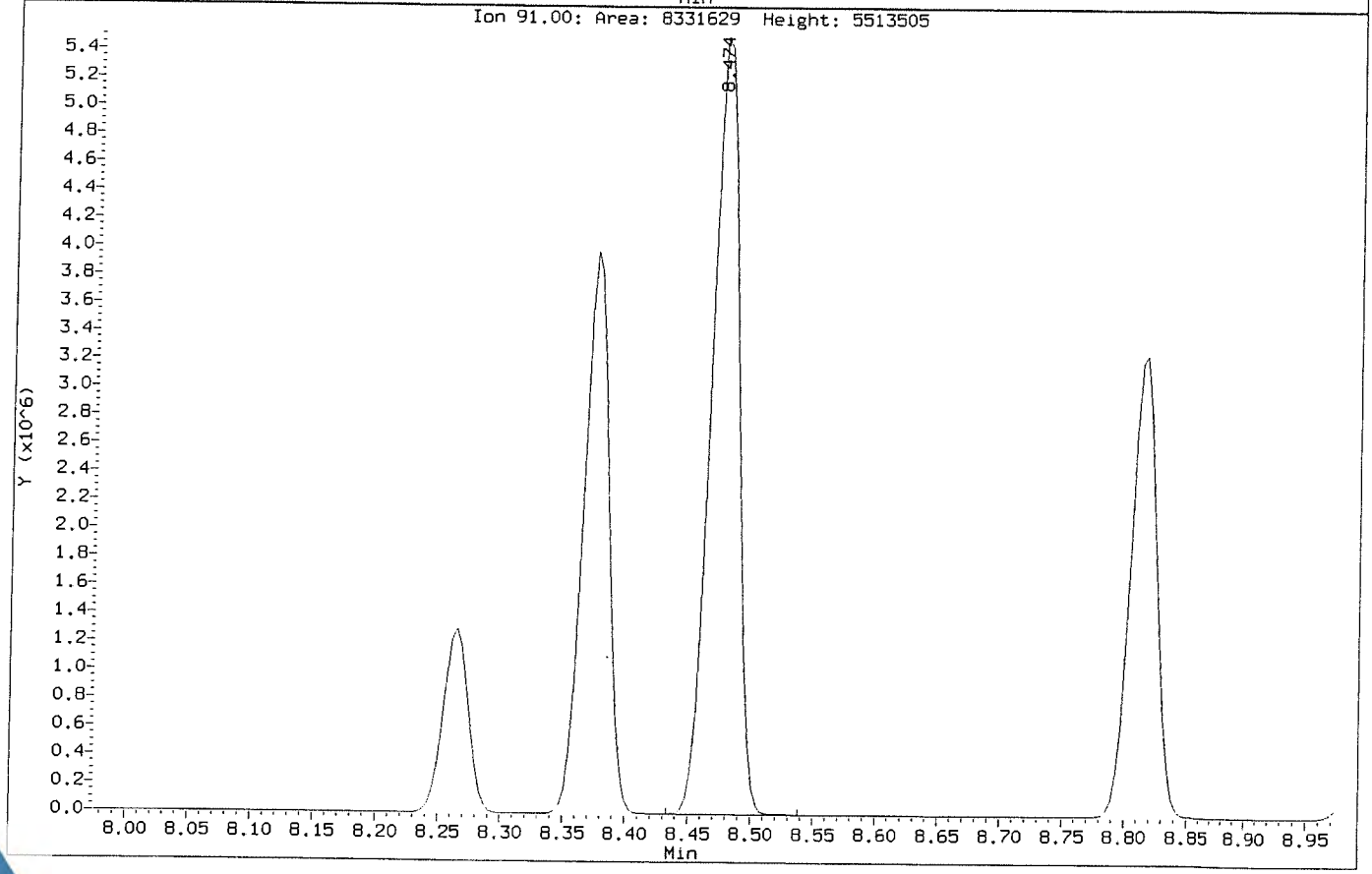
Compound: m,p-Xylenes
CAS Number:





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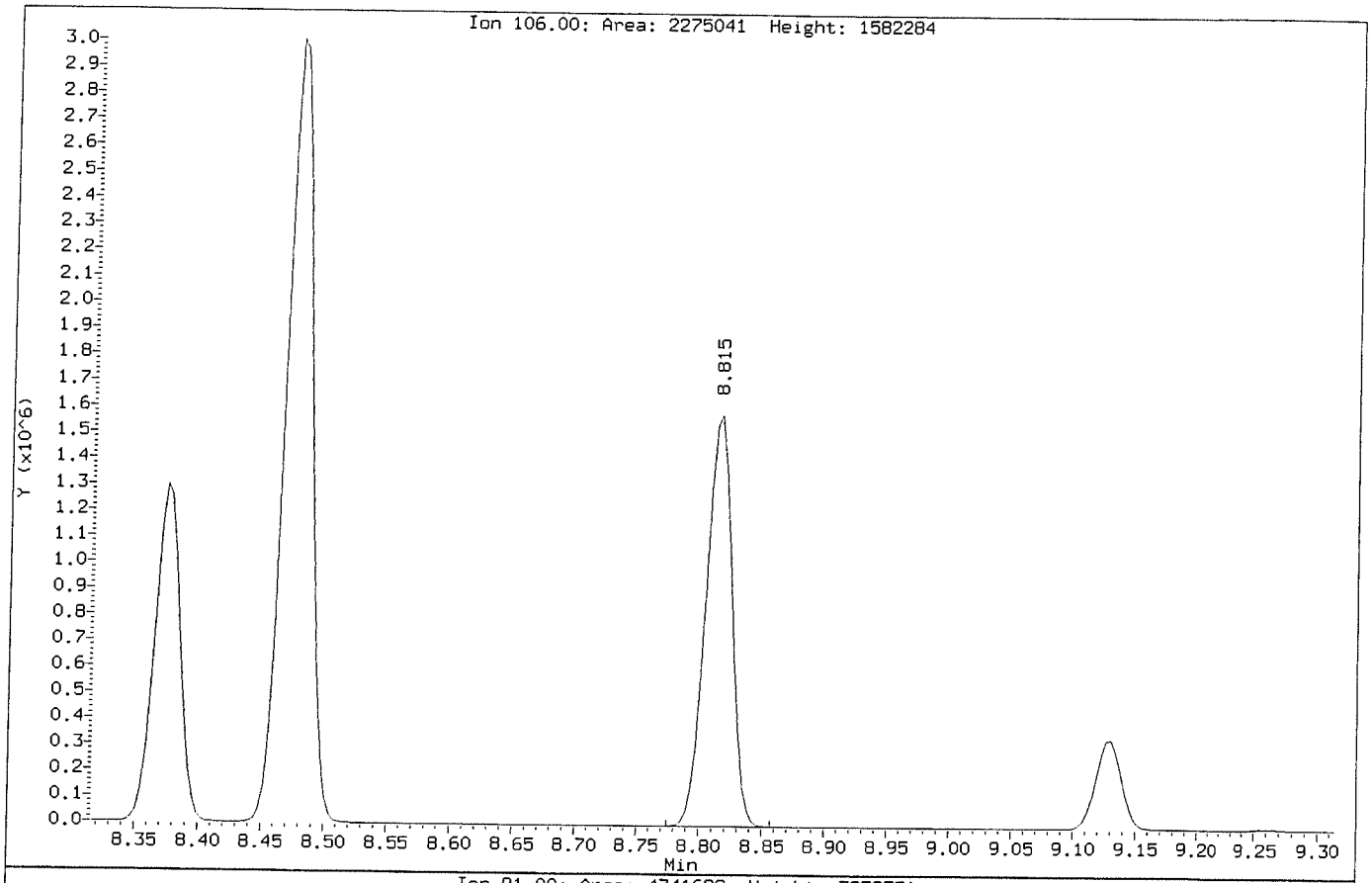
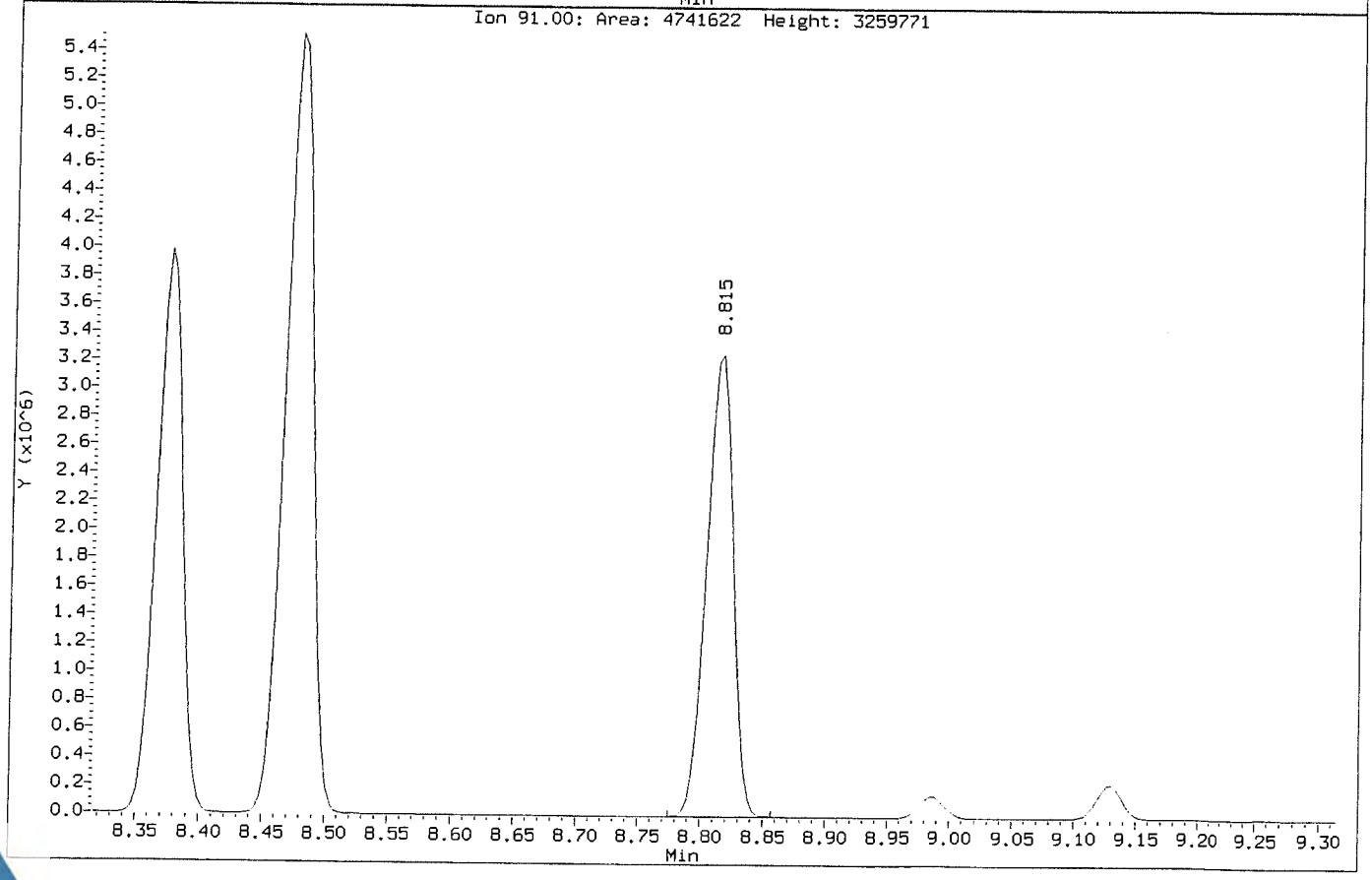
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: o-Xylene
CAS Number: 95-47-6





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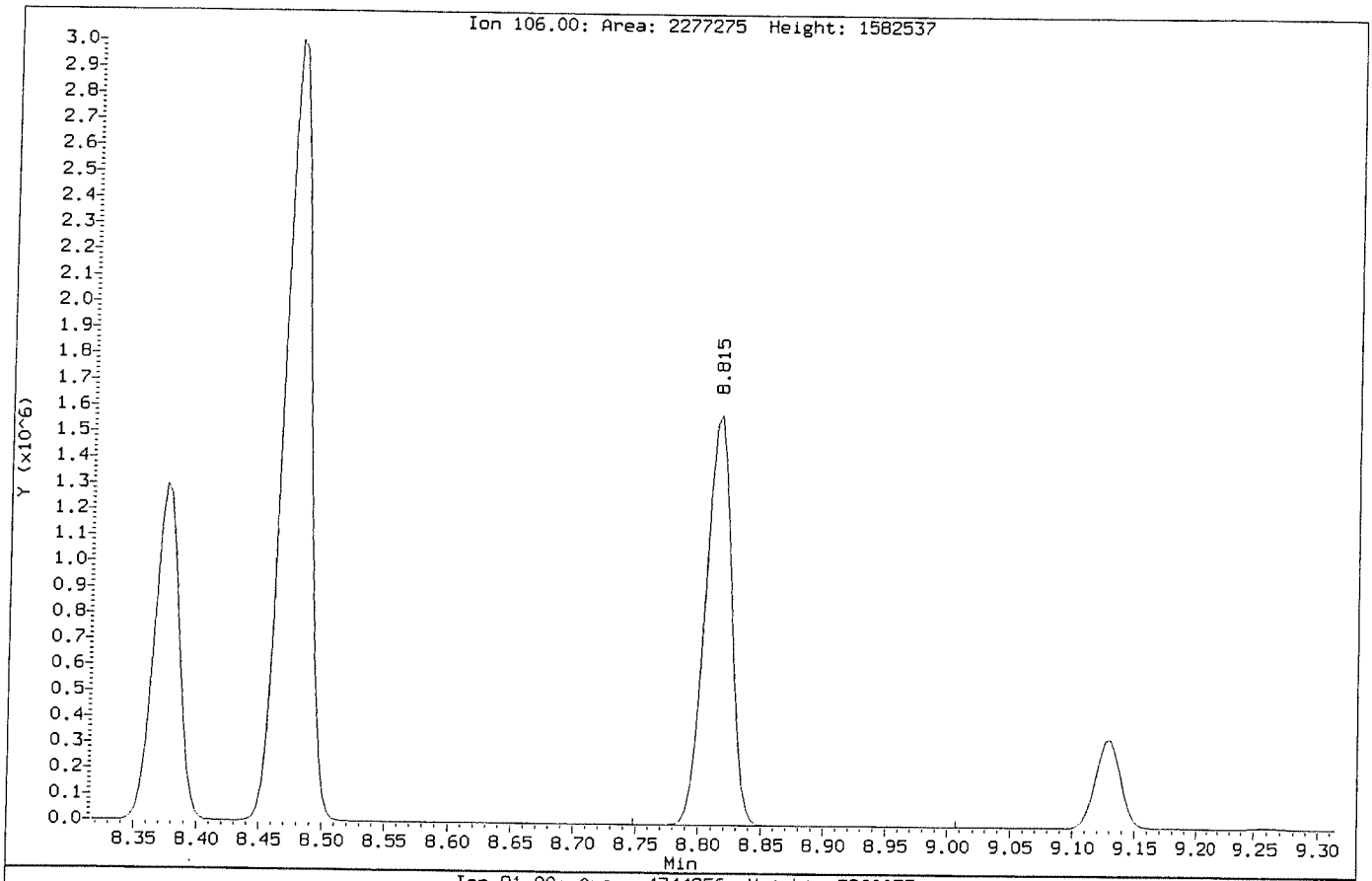
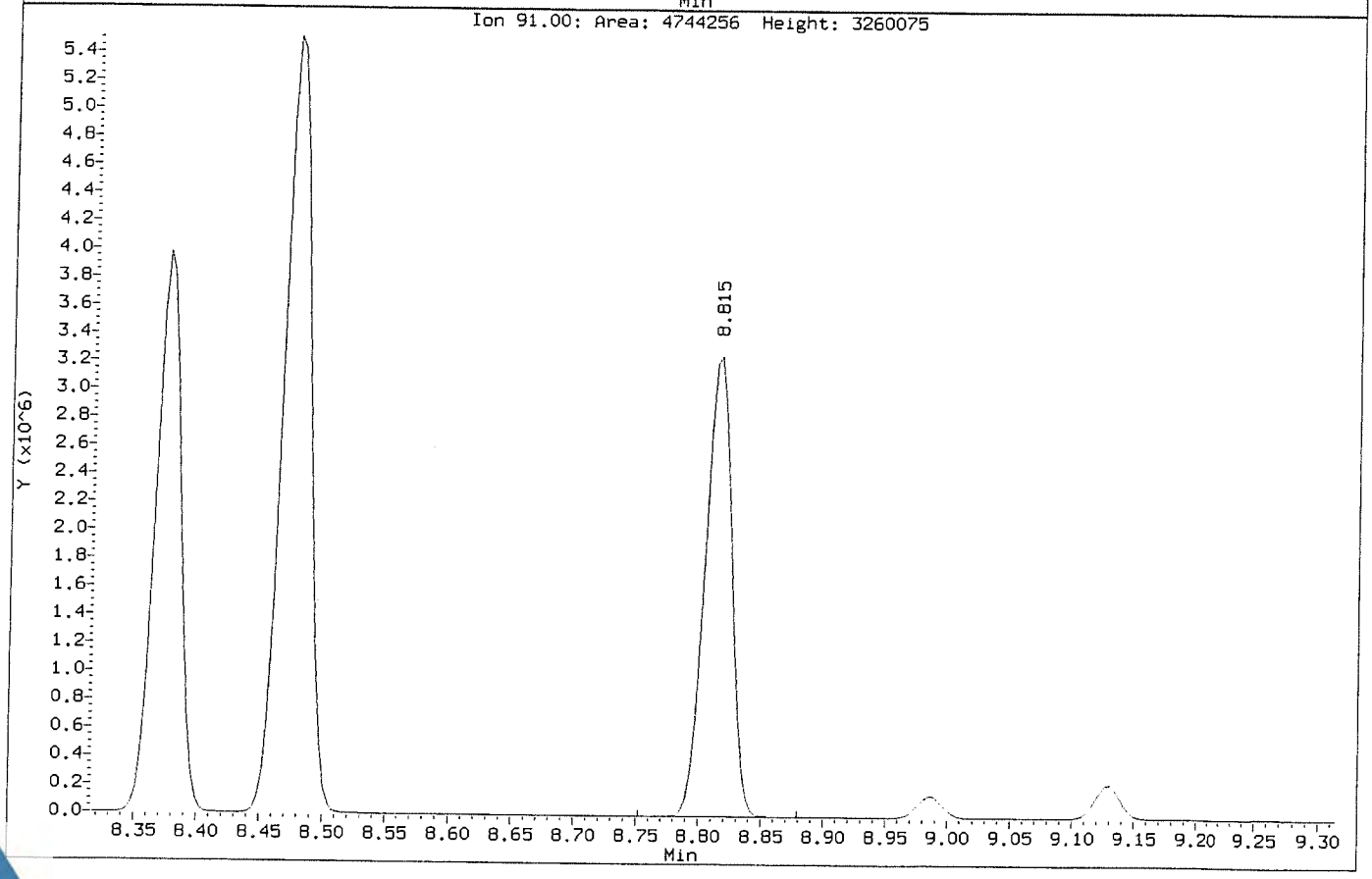
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: o-Xylene
CAS Number: 95-47-6





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Report Date: 24-Jan-2019 18:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111313.D
Lab Smp Id: VICV050 Client Smp ID: VICV050
Inj Date : 13-NOV-2018 16:18
Operator : PC Inst ID: VOA9.i
Smp Info : VICV050;VICV050;2;;ICV
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181113.b\8260C.m
Meth Date : 24-Jan-2019 18:55 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 15:28 Cal File: U111311.D
Als bottle: 14 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

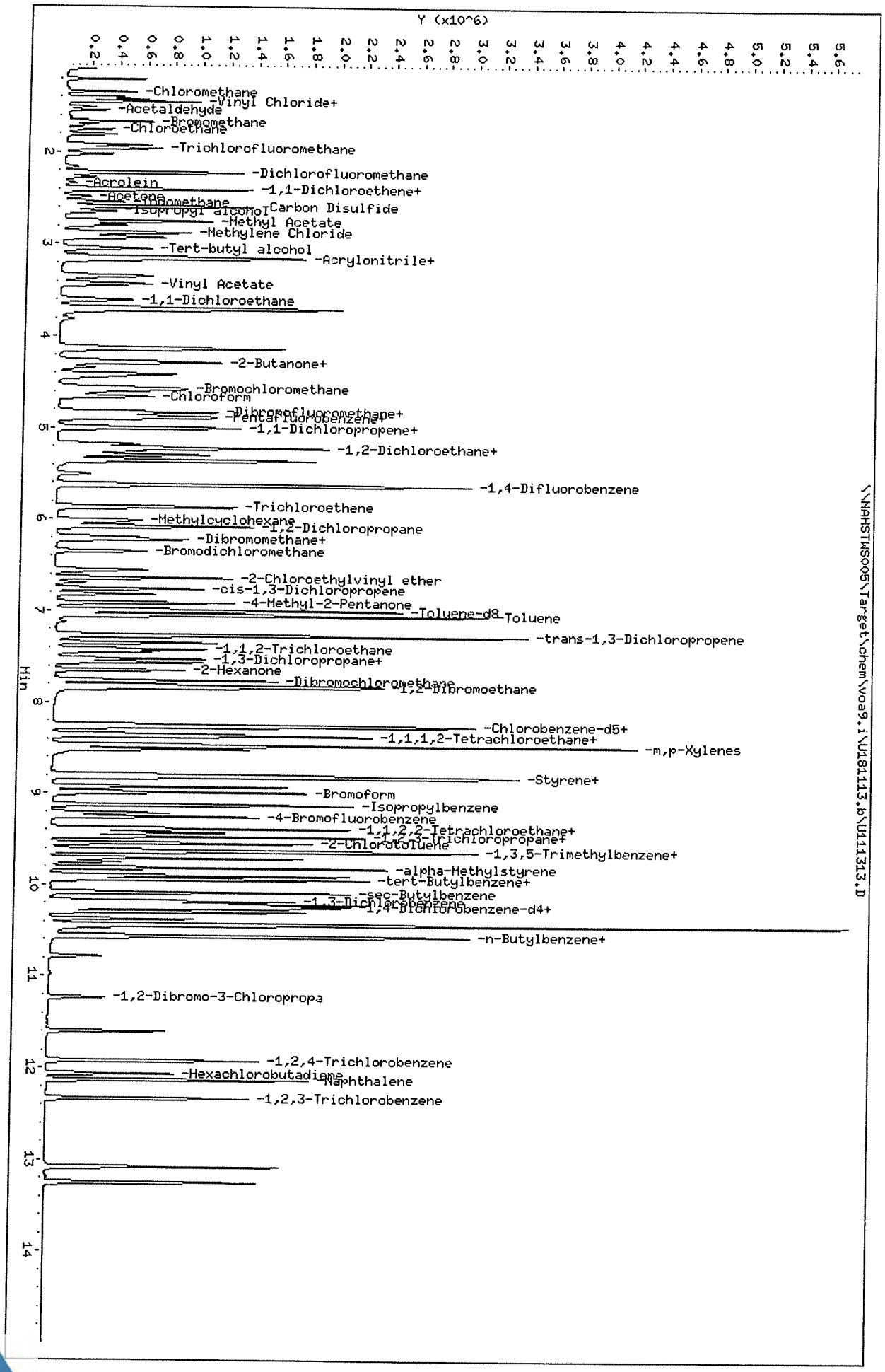
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	492069	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	927951	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.253	(1.000)	869612	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.239	(1.000)	424507	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	285495	50.4842	50.48
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	379384	51.0366	51.03
$ 48 Toluene-d8	98	6.990	6.993	(0.847)	1145021	51.5678	51.56
$ 69 4-Bromofluorobenzene	95	9.258	9.261	(1.122)	441801	51.4072	51.40
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	274179	49.9849	49.98
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	416232	48.1554	48.15
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	462139	45.9603	45.96
138 Freon TF	101	2.409	2.405	(0.492)	226905	46.0312	46.03
53 1,1,2-Trichloroethane	83	7.421	7.424	(0.899)	253396	45.8339	45.83
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	513902	45.5744	45.57
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	253613	45.6608	45.66
32 1,1-Dichloropropene	75	5.006	5.010	(0.889)	399473	46.6112	46.61
93 1,2,3-Trichlorobenzene	180	12.335	12.339	(1.205)	387107	48.3006	48.30
71 1,2,3-Trichloropropane	75	9.430	9.434	(0.921)	517101	49.2816	49.28
90 1,2,4-Trichlorobenzene	180	11.923	11.926	(1.165)	396308	47.4733	47.47
79 1,2,4-Trimethylbenzene	105	9.944	9.943	(0.971)	1125014	47.7134	47.71
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.237	(1.097)	74206	47.8284	47.82
57 1,2-Dibromoethane	107	7.852	7.855	(0.951)	310006	48.4238	48.42

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181113.b\U111313.D Page 2
Report Date: 24-Jan-2019 18:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	609149	44.9344	44.93
33 1,2-Dichloroethane	62	5.254	5.257	(0.933)	438739	45.1829	45.18
42 1,2-Dichloropropane	63	6.082	6.086	(1.081)	312363	47.2789	47.27
75 1,3,5-Trimethylbenzene	105	9.629	9.628	(0.941)	1087962	47.7004	47.70
83 1,3-Dichlorobenzene	146	10.180	10.183	(0.995)	608880	45.5562	45.55
54 1,3-Dichloropropane	76	7.567	7.567	(0.917)	548032	46.1653	46.16
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	631760	48.3226	48.32
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	357603	51.2102	51.21
24 2-Butanone	43	4.343	4.343	(0.887)	319364	92.3297	92.32
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	950278	45.7148	45.71
52 2-Hexanone	43	7.653	7.653	(0.927)	501801	99.2665	99.26
77 4-Chlorotoluene	91	9.640	9.643	(0.942)	1123555	46.8423	46.84
82 p-Isopropyltoluene	119	10.213	10.213	(0.998)	1142647	49.1524	49.15
45 4-Methyl-2-Pentanone	43	6.915	6.918	(0.838)	699041	96.3600	96.36
10 Acetone	43	2.487	2.491	(0.508)	216067	95.4641	95.46
37 Benzene	78	5.220	5.224	(0.927)	1188078	46.3202	46.32
74 Bromobenzene	156	9.385	9.385	(0.917)	321699	46.1973	46.19
29 Bromochloromethane	128	4.557	4.560	(0.930)	147658	50.9008	50.90
39 Bromodichloromethane	83	6.349	6.352	(1.128)	374186	48.5304	48.53
66 Bromoform	173	8.984	8.987	(1.089)	188320	47.7183	47.71(T)
6 Bromomethane	94	1.670	1.662	(0.341)	208101	50.9317	50.93
19 Carbon Disulfide	76	2.596	2.596	(0.530)	1686616	98.3287	98.32
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	330709	49.3949	49.39
59 Chlorobenzene	112	8.275	8.279	(1.003)	813973	45.3514	45.35
7 Chloroethane	64	1.756	1.749	(0.359)	230904	44.9734	44.97(M)
28 Chloroform	83	4.662	4.661	(0.952)	517425	45.6713	45.67
3 Chloromethane	50	1.344	1.344	(0.274)	306744	46.7074	46.70
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	320390	45.9503	45.95
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	516764	53.2223	53.22
55 Dibromochloromethane	129	7.758	7.762	(0.940)	286771	52.1150	52.11
44 Dibromomethane	93	6.191	6.195	(1.100)	195311	47.1700	47.16
2 Dichlorodifluoromethane	85	1.209	1.213	(0.247)	347869	47.8726	47.87
61 Ethylbenzene	106	8.373	8.373	(1.015)	424849	46.8143	46.81
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	145238	55.0778	55.07
67 Isopropylbenzene	105	9.126	9.130	(1.106)	1266469	47.9214	47.92
62 m,p-Xylenes	106	8.474	8.474	(1.027)	1058456	94.6512	94.65
17 Methylene Chloride	84	2.877	2.877	(0.587)	301983	48.0719	48.07
87 n-Butylbenzene	91	10.558	10.558	(1.031)	1100279	49.5091	49.50
73 n-Propylbenzene	91	9.475	9.478	(0.926)	1593592	47.5729	47.57
92 Naphthalene	128	12.133	12.136	(1.185)	1287047	51.2004	51.20
63 o-Xylene	106	8.811	8.815	(1.068)	530431	47.3909	47.39(H)
81 sec-Butylbenzene	105	10.086	10.090	(0.985)	1350043	48.4022	48.40
64 Styrene	104	8.826	8.826	(1.069)	941191	49.8117	49.81
78 tert-Butylbenzene	119	9.902	9.906	(0.967)	929608	47.8232	47.82
56 Tetrachloroethene	164	7.526	7.525	(0.912)	207441	45.5377	45.53
50 Toluene	91	7.050	7.049	(0.854)	1274589	46.1658	46.16
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	282235	46.3646	46.36
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	454600	47.3993	47.39
38 Trichloroethene	130	5.865	5.865	(1.042)	293292	46.3847	46.38
8 Trichlorofluoromethane	101	1.959	1.955	(0.400)	460052	46.7647	46.76
5 Vinyl Chloride	62	1.423	1.426	(0.291)	382169	47.6661	47.66

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.


Y (x10^6)
Min
-Chloromethane
-Vinyl Chloride+
-Acetaldehyde
-Bromomethane
-Chloroethane
-Trichlorofluoromethane
-Dichlorofluoromethane
-Acrolein
-1,1-Dichloroethene+
-Acetone
-Iodomethane
-Carbon Disulfide
-Isopropyl alcohol
-Methyl Acetate
-Methylene Chloride
-Tert-butyl alcohol
-Acrylonitrile+
-Vinyl Acetate
-1,1-Dichloroethane
-2-Butanone+
-Bromochloromethane
-Chloroform
-Dibromofluoromethane+
-Pentafluorobenzene
-1,1-Dichloropropene+
-1,2-Dichloroethane+
-1,4-Difluorobenzene
-Trichloroethene
-Methylcyclohexane
-1,2-Dichloropropane
-Dibromomethane+
-Bromodichloromethane
-2-Chloroethylvinyl ether
-cis-1,3-Dichloropropene
-4-Methyl-2-Pentanone
-Toluene-d8
-Toluene
-trans-1,3-Dichloropropene
-1,1,2-Trichloroethane
-1,3-Dichloropropane+
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane
-Chlorobenzene-d5+
-1,1,1,2-Tetrachloroethane+
-m,p-Xylenes
-Styrene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-1,1,2,2-Tetrachloroethane+
-1,2,3-Trichloropropane+
-2-Chlorotoluene
-1,3,5-Trimethylbenzene+
-alpha-Methylstyrene
-tert-Butylbenzene+
-sec-Butylbenzene
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-d4+
-n-Butylbenzene+
-1,2-Dibromo-3-Chloropropa
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
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Client ID: VICV050
Sample Info: VICV050;VICV050;2;;ICV
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

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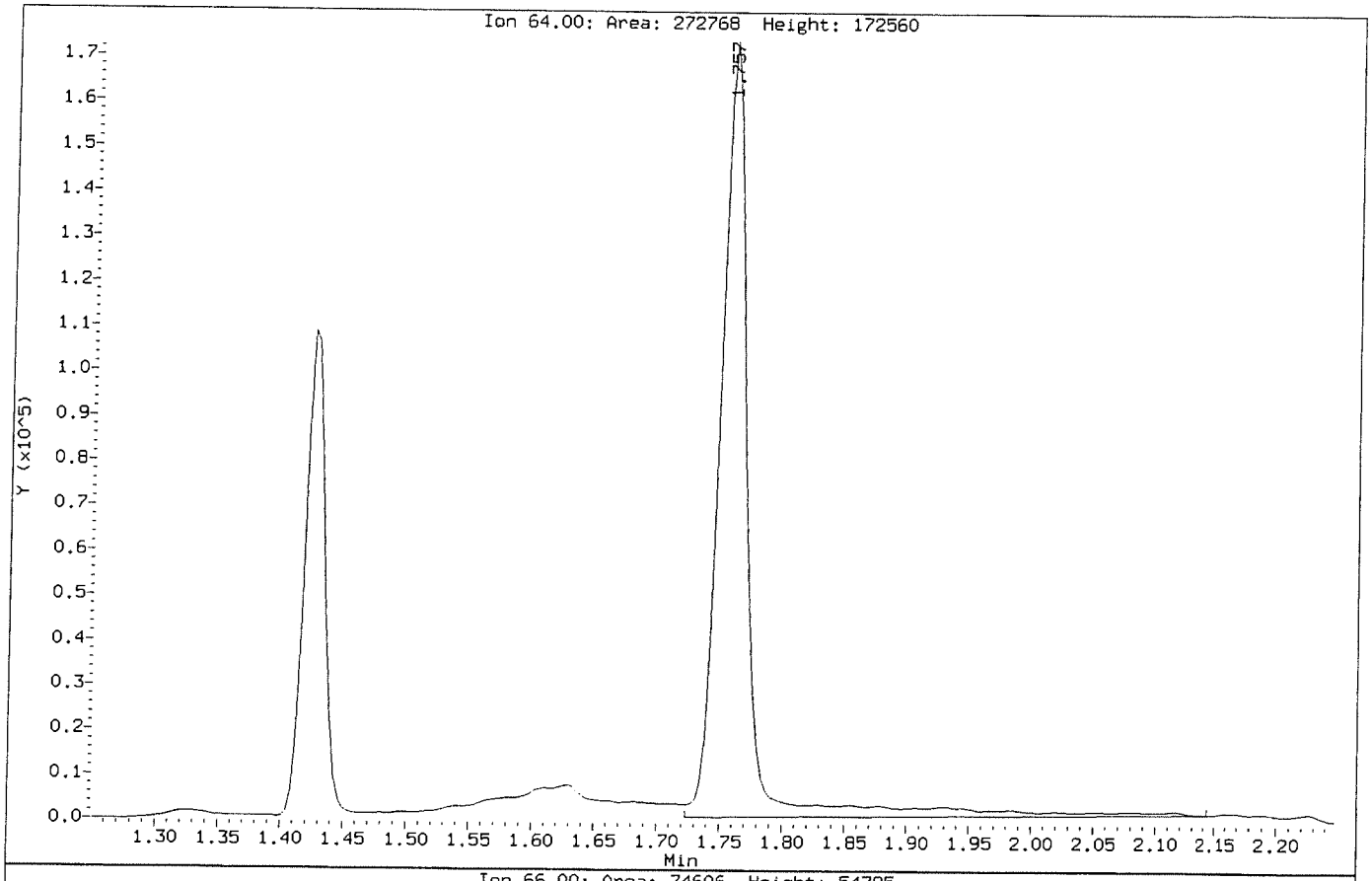
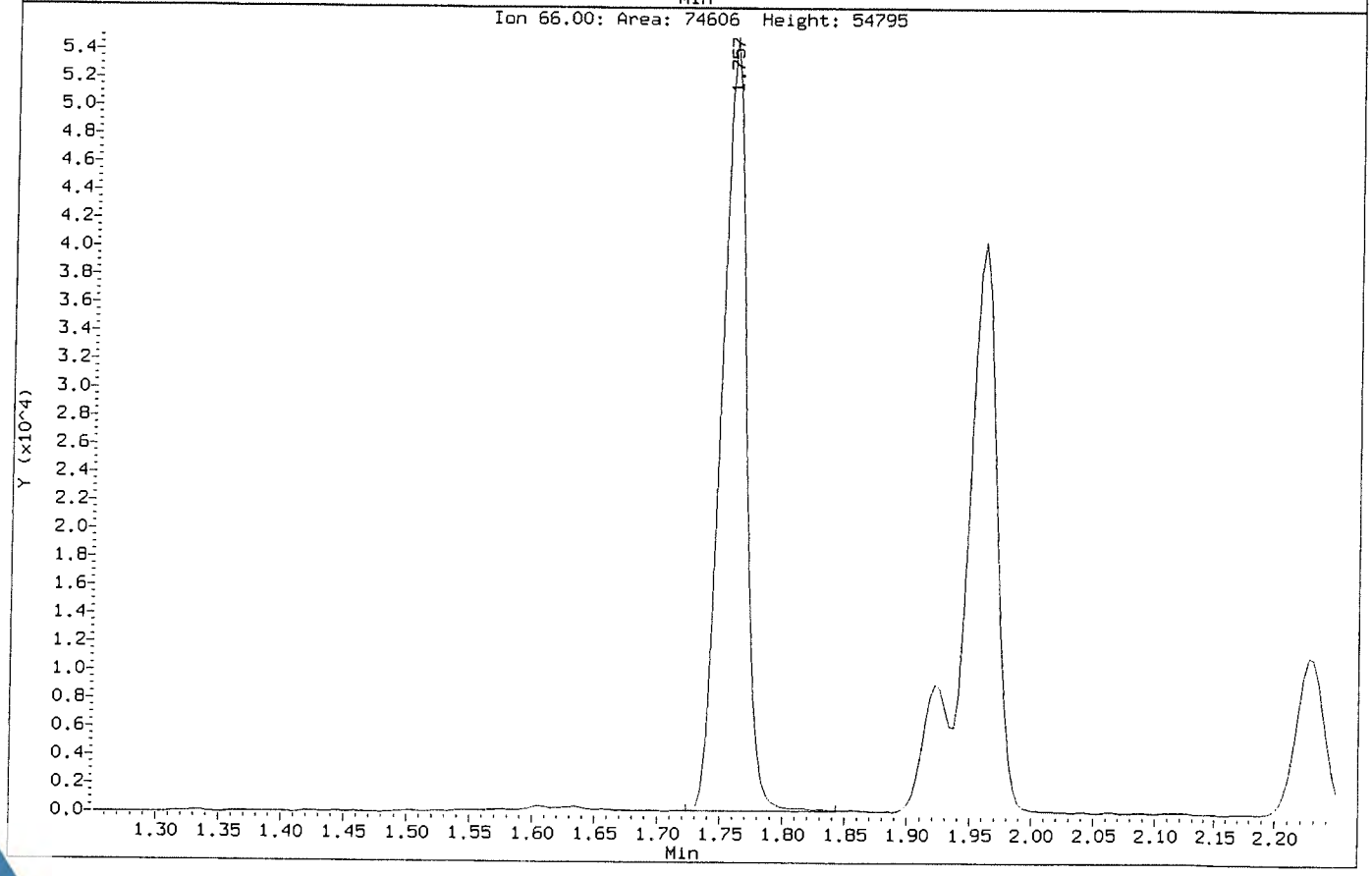
Injection Date: 13-NOV-2018 16:18
Instrument: VOA9.i
Client Sample ID: VICV050

Compound: Chloroethane
CAS Number: 75-00-3





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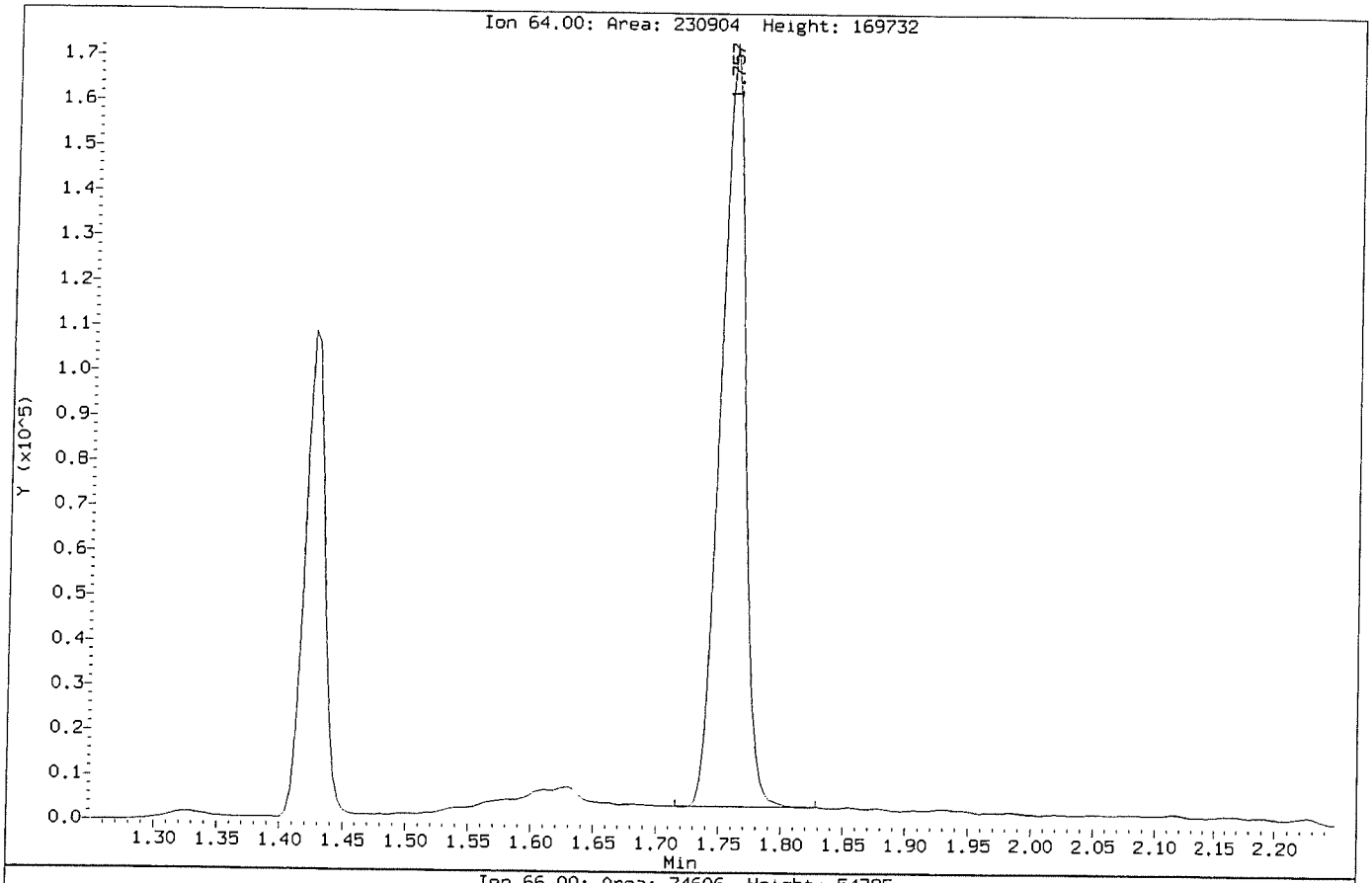
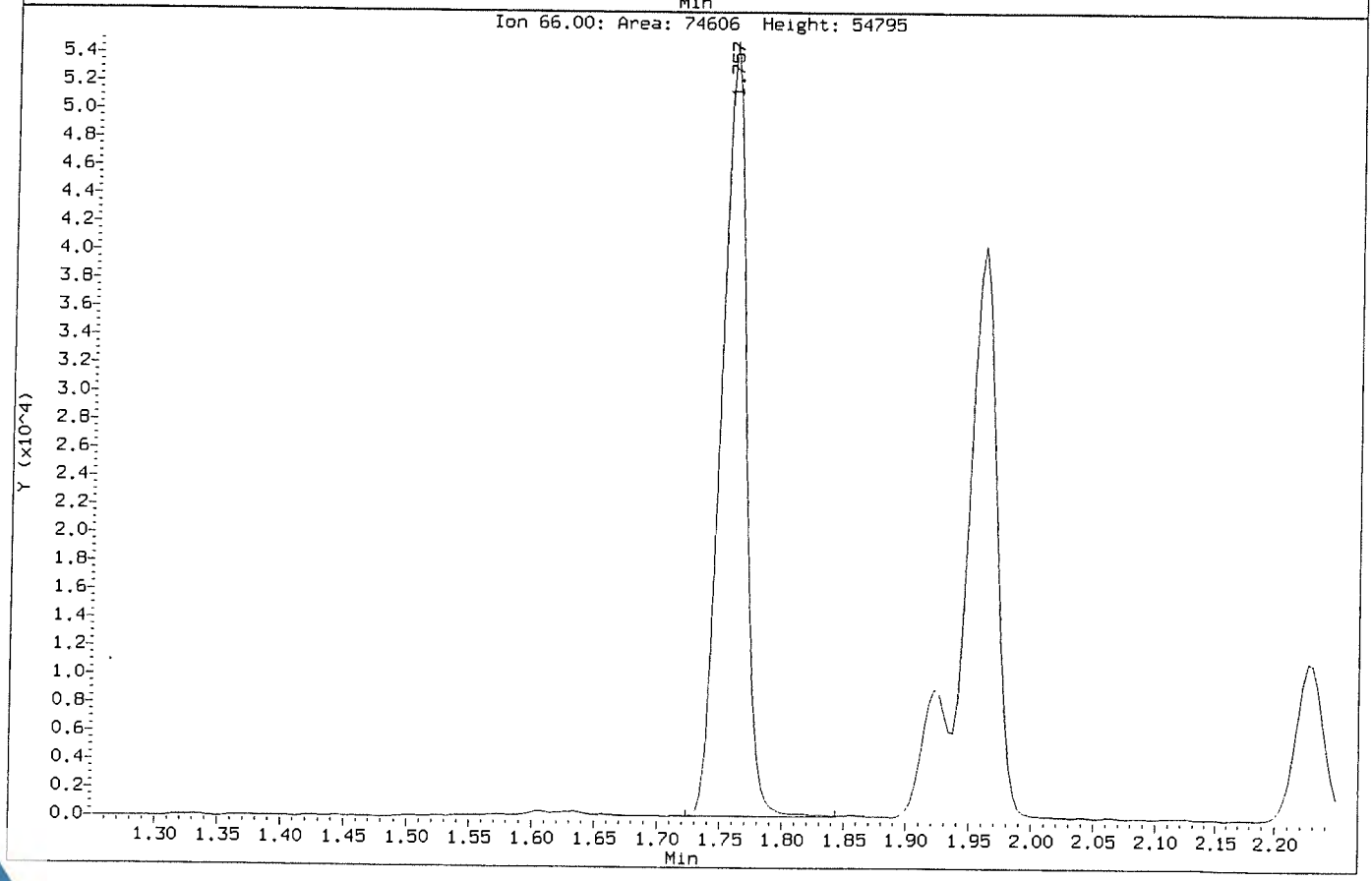
Instrument: VOA9.i
Client Sample ID: VICV050

Compound: Chloroethane
CAS Number: 75-00-3





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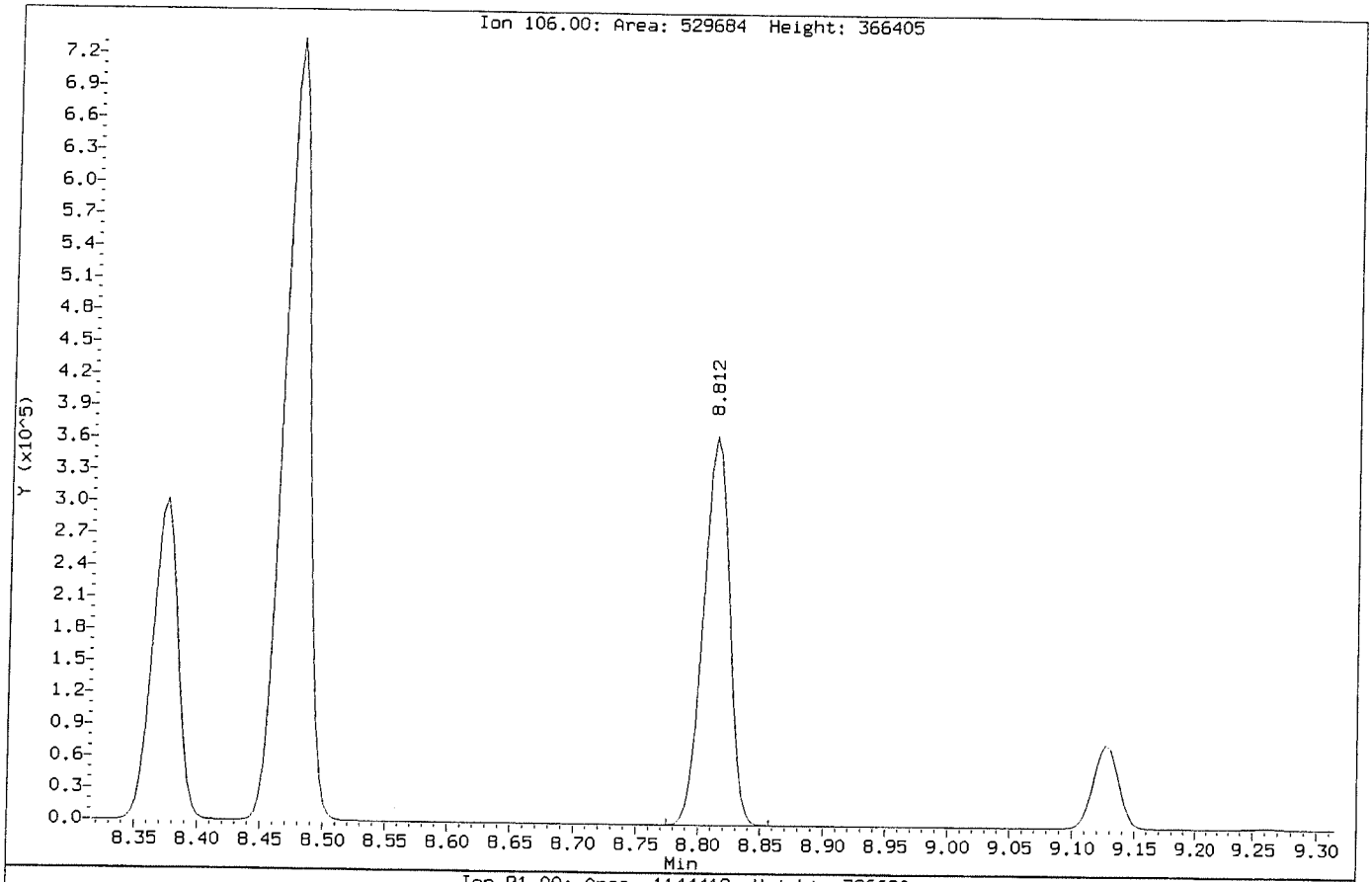
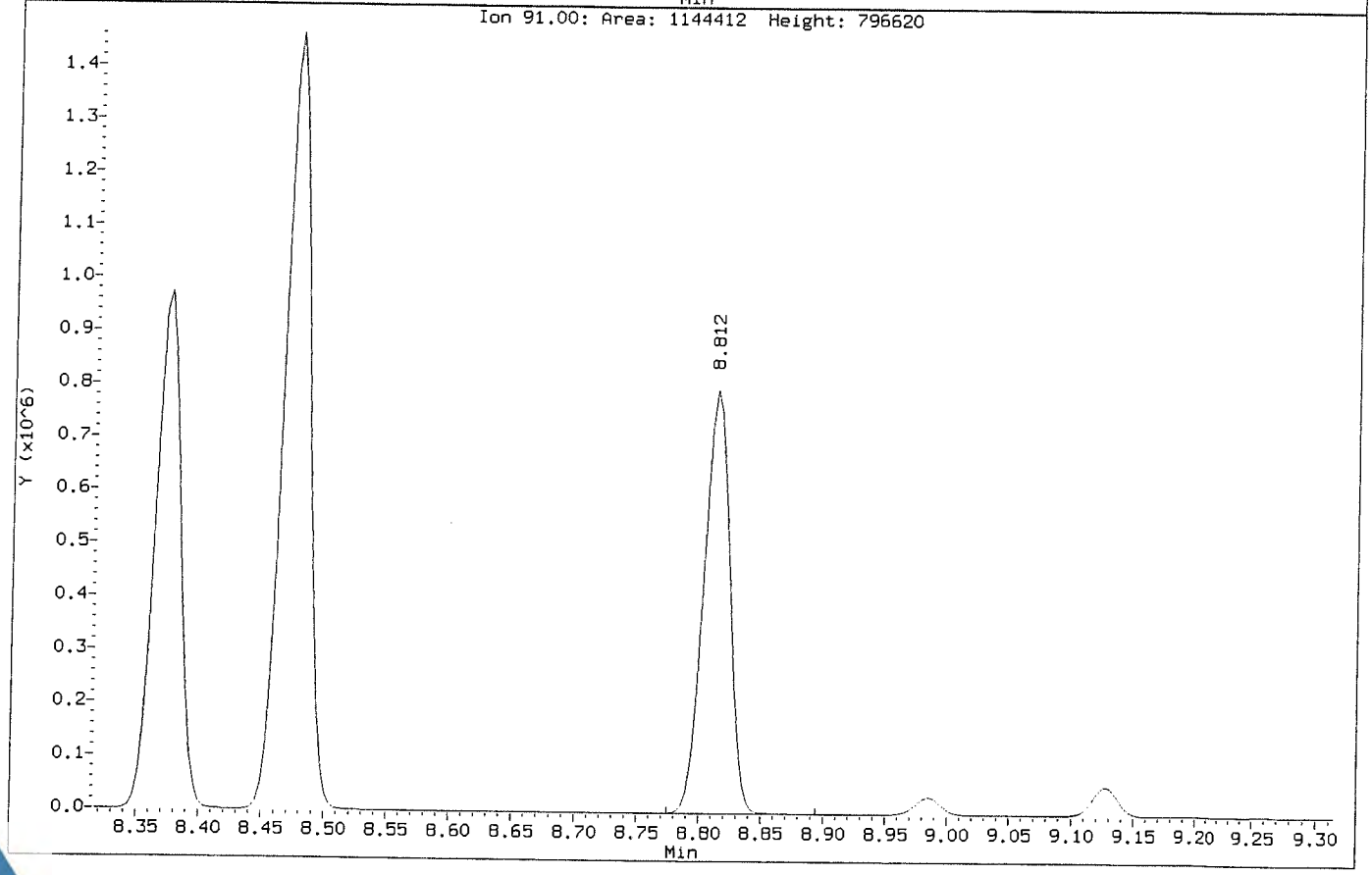
Instrument: VOA9.i
Client Sample ID: VICV050

Compound: o-Xylene
CAS Number: 95-47-6





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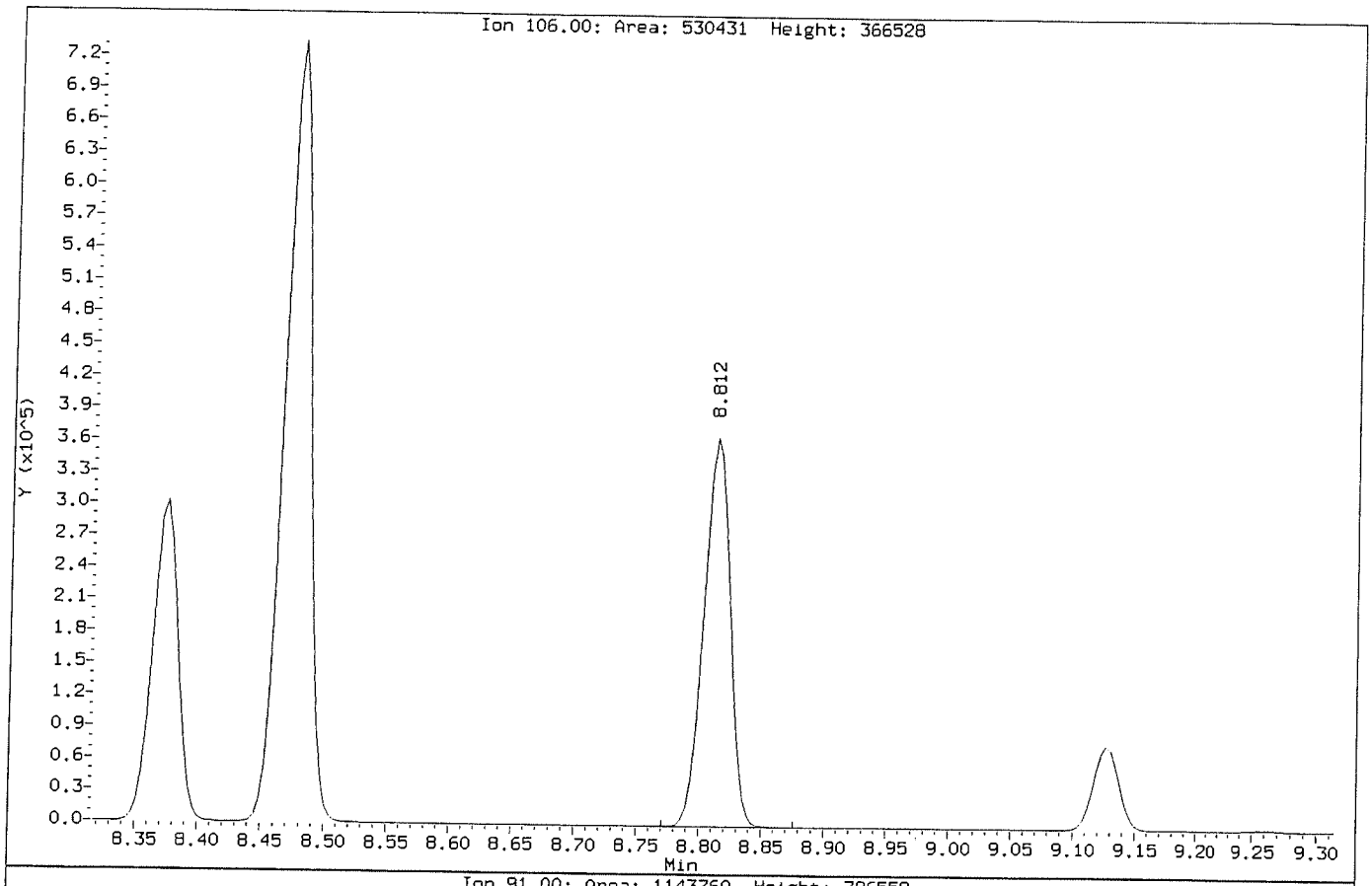
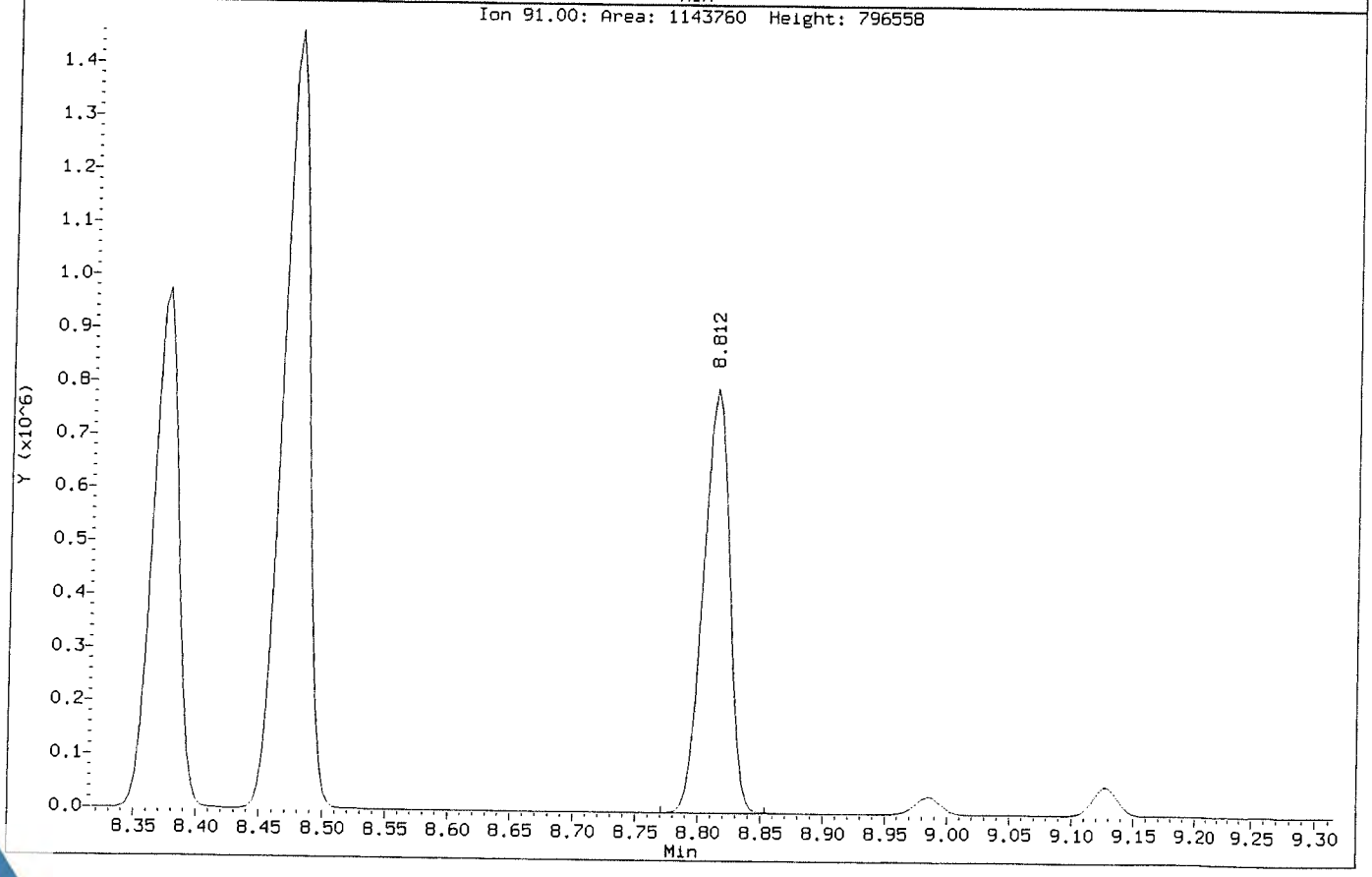
Injection Date: 13-NOV-2018 16:18
Instrument: VOA9.i
Client Sample ID: VICV050

Compound: o-Xylene
CAS Number: 95-47-6





MSVOA09 -Logbook

Batch: 33999
Date: 12-13-2018
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	12-13-2018 09:40 am	1.00	50 mL	50 mL	U121301.D	Liquid	Y	NA
	Auto find/purged									
2	VSTD050	CCV	12-13-2018 10:05 am	1.00	50 mL	50 mL	U121302.D	Liquid	Y	NA
	10 uL cal std/50 ml DI									
3	VLCSW-1812013	LCS	12-13-2018 10:30 am	1.00	50 mL	50 mL	U121303.D	Liquid	Y	NA
	4 uL ICV std/50 ml DI									
4	BLANK	SAMP	12-13-2018 10:55 am	1.00	50 mL	50 mL	U121304.D	Liquid	Y	NA
5	VBLKW-181213	MBLK	12-13-2018 11:19 am	1.00	50 mL	50 mL	U121305.D	Liquid	Y	NA
6	HS18120114-01	SAMP	12-13-2018 11:44 am	1.00	50 mL	50 mL	U121306.D	Liquid	Y	<2
7	HS18120114-02	SAMP	12-13-2018 12:09 pm	1.00	50 mL	50 mL	U121307.D	Liquid	Y	<2
8	HS18120114-03	SAMP	12-13-2018 12:34 pm	1.00	50 mL	50 mL	U121308.D	Liquid	Y	<2
9	HS18120114-04	SAMP	12-13-2018 12:58 pm	1.00	50 mL	50 mL	U121309.D	Liquid	Y	<2
10	HS18120114-05	SAMP	12-13-2018 01:23 pm	1.00	50 mL	50 mL	U121310.D	Liquid	Y	<2
11	HS18120114-13	SAMP	12-13-2018 01:48 pm	1.00	50 mL	50 mL	U121311.D	Liquid	Y	<2
12	HS18120114-06	SAMP	12-13-2018 02:13 pm	1.00	50 mL	50 mL	U121312.D	Liquid	Y	<2
13	HS18120114-07	SAMP	12-13-2018 02:37 pm	1.00	50 mL	50 mL	U121313.D	Liquid	Y	<2
14	HS18120114-09	SAMP	12-13-2018 03:02 pm	1.00	50 mL	50 mL	U121314.D	Liquid	Y	<2
15	HS18120114-10	SAMP	12-13-2018 03:27 pm	1.00	50 mL	50 mL	U121315.D	Liquid	Y	<2
16	HS18120114-12	SAMP	12-13-2018 03:52 pm	1.00	50 mL	50 mL	U121316.D	Liquid	Y	<2
17	HS18120114-08	SAMP	12-13-2018 04:17 pm	1.00	50 mL	50 mL	U121317.D	Liquid	Y	<2
18	HS18120114-11	SAMP	12-13-2018 04:41 pm	1.00	50 mL	50 mL	U121318.D	Liquid	Y	<2
19	HS18120114-04MS	MS	12-13-2018 05:06 pm	1.00	50 mL	50 mL	U121319.D	Liquid	Y	<2
	3.5 uL cal std/43 mL Sample									
20	HS18120114-04MSD	MSD	12-13-2018 05:31 pm	1.00	50 mL	50 mL	U121320.D	Liquid	Y	<2
	3.5 uL cal std/43 mL Sample									
21	HS18120117-02	SAMP	12-13-2018 05:56 pm	1.00	50 mL	50 mL	U121321.D	Liquid	Y	<2
22	HS18120216-02	SAMP	12-13-2018 06:20 pm	1.00	50 mL	50 mL	U121322.D	Liquid	Y	<2
23	HS18120216-03	SAMP	12-13-2018 06:45 pm	1.00	50 mL	50 mL	U121323.D	Liquid	Y	<2
24	HS18120216-04	SAMP	12-13-2018 07:10 pm	1.00	50 mL	50 mL	U121324.D	Liquid	Y	<2
25	HS18120216-05	SAMP	12-13-2018 07:35 pm	1.00	50 mL	50 mL	U121325.D	Liquid	Y	<2
26	HS18120216-06	SAMP	12-13-2018 07:59 pm	1.00	50 mL	50 mL	U121326.D	Liquid	Y	<2
27	HS18120216-10	SAMP	12-13-2018 08:24 pm	1.00	50 mL	50 mL	U121327.D	Liquid	Y	<2
28	VSTD050-END	CCV	12-13-2018 08:49 pm	1.00	50 mL	50 mL	U121328.D	Liquid	Y	NA
	10 uL cal std/50 ml DI									
29	BFB	TUNE	12-13-2018 09:14 pm	1.00	50 mL	50 mL	V121301.D	Liquid	Y	NA
30	VSTD050	CCV	12-13-2018 09:38 pm	1.00	50 mL	50 mL	V121302.D	Liquid	Y	NA
	10 uL cal std/50 ml DI									
31	VLCSW-181213	LCS	12-13-2018 10:03 pm	1.00	50 mL	50 mL	V121303.D	Liquid	Y	NA
	4 uL ICV std/50 ml DI									
32	VLCSW-181213	SAMP	12-13-2018 10:28 pm	1.00	50 mL	50 mL	V121304.D	Liquid	Y	NA
33	BLK	SAMP	12-13-2018 10:53 pm	1.00	50 mL	50 mL	V121305.D	Liquid	Y	NA
34	VBLKW-181213	MBLK	12-13-2018 11:18 pm	1.00	50 mL	50 mL	V121306.D	Liquid	Y	NA
35	HS18120242-16	SAMP	12-13-2018 11:42 pm	1.00	50 mL	50 mL	V121307.D	Liquid	Y	<2
36	HS18120242-03	SAMP	12-14-2018 12:07 am	1.00	50 mL	50 mL	V121308.D	Liquid	Y	<2
37	HS18120242-06	SAMP	12-14-2018 12:32 am	1.00	50 mL	50 mL	V121309.D	Liquid	Y	<2

MSVOA09 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
38	HS18120242-05	SAMP	12-14-2018 12:57 am	1.00	50 mL	50 mL	V121310.D	Liquid	Y	<2
39	HS18120242-05MS	MS	12-14-2018 01:21 am	25.00	2 mL	50 mL	V121311.D	Liquid	Y	<2
	3.5 uL cal std/43 mL Sample									
40	HS18120242-05MSD	MSD	12-14-2018 01:46 am	25.00	2 mL	50 mL	V121312.D	Liquid	Y	<2
	3.5 uL cal std/43 mL Sample									
41	HS18120242-05	SAMP	12-14-2018 02:11 am	25.00	2 mL	50 mL	V121313.D	Liquid	Y	<2
42	HS18120242-07	SAMP	12-14-2018 02:36 am	1.00	50 mL	50 mL	V121314.D	Liquid	Y	<2
43	HS18120242-11	SAMP	12-14-2018 03:00 am	1.00	50 mL	50 mL	V121315.D	Liquid	Y	<2
44	HS18120242-13	SAMP	12-14-2018 03:25 am	1.00	50 mL	50 mL	V121316.D	Liquid	Y	<2
45	HS18120242-14	SAMP	12-14-2018 03:50 am	1.00	50 mL	50 mL	V121317.D	Liquid	Y	<2
46	HS18120242-15	SAMP	12-14-2018 04:15 am	1.00	50 mL	50 mL	V121318.D	Liquid	Y	<2
47	HS18120242-15	SAMP	12-14-2018 04:39 am	10.00	5 mL	50 mL	V121319.D	Liquid	Y	<2
48	HS18120242-08	SAMP	12-14-2018 05:04 am	5.00	10 mL	50 mL	V121320.D	Liquid	Y	<2
49	HS18120242-08o/c	SAMP	12-14-2018 05:29 am	25.00	2 mL	50 mL	V121321.D	Liquid	Y	<2
50	HS18120242-09	SAMP	12-14-2018 05:53 am	5.00	10 mL	50 mL	V121322.D	Liquid	Y	<2
51	HS18120242-09	SAMP	12-14-2018 06:18 am	25.00	2 mL	50 mL	V121323.D	Liquid	Y	<2
52	HS18120242-10	SAMP	12-14-2018 06:43 am	5.00	10 mL	50 mL	V121324.D	Liquid	Y	<2
53	HS18120242-10	SAMP	12-14-2018 07:08 am	50.00	1 mL	50 mL	V121325.D	Liquid	Y	<2
54	HS18120242-02	SAMP	12-14-2018 07:32 am	25.00	2 mL	50 mL	V121326.D	Liquid	Y	<2
55	HS18120242-02	SAMP	12-14-2018 07:57 am	250.0(	200 µL	50 mL	V121327.D	Liquid	Y	<2
56	HS18120242-04	SAMP	12-14-2018 08:22 am	10.00	5 mL	50 mL	V121328.D	Liquid	Y	<2

Chemical	Value
SURR SPK ID	30502-52-03
IS ID	30502-52-04
ICV STD ID	30603-45-01
LCS/MS ID	30603-45-01
CAL STD ID	30502-55-01/02
BFB ID	30502-52-03

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-181213	89	90	107	103	0
02	VBLKW-181213	92	88	106	99	0
03	HS18120114-0	93	89	105	101	0
04	HS18120114-0	93	89	104	97	0
05	HS18120114-0	93	89	106	98	0
06	HS18120114-0	93	88	106	99	0
07	HS18120114-0	93	88	105	98	0
08	HS18120114-1	92	89	107	99	0
09	HS18120114-0	94	90	105	98	0
10	HS18120114-0	94	91	106	98	0
11	HS18120114-0	94	90	106	98	0
12	HS18120114-1	94	90	105	98	0
13	HS18120114-1	94	91	106	98	0
14	HS18120114-0	93	90	106	98	0
15	HS18120114-1	93	89	107	99	0
16	HS18120114-0	90	90	105	103	0
17	HS18120114-0	90	90	106	102	0
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-181213

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Lab File ID: U121305 Lab Sample ID: VBLKW-181213

Date Analyzed: 12/13/18 Time Analyzed: 1119

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA9

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-181213	VLCSW-1812013	U121303	1030
02	HS18120114-0	HS18120114-01	U121306	1144
03	HS18120114-0	HS18120114-02	U121307	1209
04	HS18120114-0	HS18120114-03	U121308	1234
05	HS18120114-0	HS18120114-04	U121309	1258
06	HS18120114-0	HS18120114-05	U121310	1323
07	HS18120114-1	HS18120114-13	U121311	1348
08	HS18120114-0	HS18120114-06	U121312	1413
09	HS18120114-0	HS18120114-07	U121313	1437
10	HS18120114-0	HS18120114-09	U121314	1502
11	HS18120114-1	HS18120114-10	U121315	1527
12	HS18120114-1	HS18120114-12	U121316	1552
13	HS18120114-0	HS18120114-08	U121317	1617
14	HS18120114-1	HS18120114-11	U121318	1641
15	HS18120114-0	HS18120114-04M	U121319	1706
16	HS18120114-0	HS18120114-04M	U121320	1731
17				
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29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Lab File ID: U121301 BFB Injection Date: 12/13/18

Instrument ID: VOA9 BFB Injection Time: 0940

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.4
75	30.0 - 60.0% of mass 95	49.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.5 (0.7)1
174	Greater than 50.0% of mass 95	65.1
175	5.0 - 9.0% of mass 174	5.1 (7.8)1
176	95.0 - 101.0% of mass 174	62.4 (95.9)1
177	5.0 - 9.0% of mass 176	4.1 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	U121302	12/13/18	1005
02	VLCSW-181213	VLCSW-1812013	U121303	12/13/18	1030
03	VBLKW-181213	VBLKW-181213	U121305	12/13/18	1119
04	HS18120114-0	HS18120114-01	U121306	12/13/18	1144
05	HS18120114-0	HS18120114-02	U121307	12/13/18	1209
06	HS18120114-0	HS18120114-03	U121308	12/13/18	1234
07	HS18120114-0	HS18120114-04	U121309	12/13/18	1258
08	HS18120114-0	HS18120114-05	U121310	12/13/18	1323
09	HS18120114-1	HS18120114-13	U121311	12/13/18	1348
10	HS18120114-0	HS18120114-06	U121312	12/13/18	1413
11	HS18120114-0	HS18120114-07	U121313	12/13/18	1437
12	HS18120114-0	HS18120114-09	U121314	12/13/18	1502
13	HS18120114-1	HS18120114-10	U121315	12/13/18	1527
14	HS18120114-1	HS18120114-12	U121316	12/13/18	1552
15	HS18120114-0	HS18120114-08	U121317	12/13/18	1617
16	HS18120114-1	HS18120114-11	U121318	12/13/18	1641
17	HS18120114-0	HS18120114-04M	U121319	12/13/18	1706
18	HS18120114-0	HS18120114-04M	U121320	12/13/18	1731
19	VSTD050-END	VSTD050-END	U121328	12/13/18	2049
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Instrument ID: VOA9 Calibration Date: 12/13/18 Time: 1005

Lab File ID: U121302 Init. Calib. Date(s): 11/13/18 11/13/18

Init. Calib. Times: 1123 1528

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
cis-1,3-Dichloropropene	0.5230000	0.6630369	0.6630369	0.2	-26.78	20.00	AVRG	<-
trans-1,3-Dichloropropene	51.420262	50.000000	0.5656544	0.1	-2.84	20.00	LINR	
1,3-Dichlorobenzene	1.5740000	1.7770251	1.7770251	0.6	-12.90	20.00	AVRG	
2,2-Dichloropropane	0.7100000	0.6707492	0.6707492	0.1	5.53	20.00	AVRG	
1,1-Dichloropropene	0.4620000	0.5526481	0.5526481	0.1	-19.62	20.00	AVRG	
Dibromomethane	0.2230000	0.2561433	0.2561433	0.1	-14.86	20.00	AVRG	
1,2-Dibromoethane	0.3680000	0.4341810	0.4341810	0.1	-17.98	20.00	AVRG	
trans-1,2-Dichloroethene	0.6180000	0.6814254	0.6814254	0.1	-10.26	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3150000	0.3764169	0.3764169	0.1	-19.50	20.00	AVRG	
1,1,1-Trichloroethane	0.8780000	0.9545234	0.9545234	0.1	-8.72	20.00	AVRG	
1,1,2,2-Tetrachloroethane	1.1840000	1.4023433	1.4023433	0.3	-18.44	20.00	AVRG	
Freon TF	0.5010000	0.5532758	0.5532758	0.1	-10.43	20.00	AVRG	
1,1,2-Trichloroethane	0.3180000	0.3730487	0.3730487	0.1	-17.31	20.00	AVRG	
1,1-Dichloroethane	1.1460000	1.3051316	1.3051316	0.2	-13.88	20.00	AVRG	
1,1-Dichloroethene	0.5640000	0.6084412	0.6084412	0.1	-7.88	20.00	AVRG	
Trichlorofluoromethane	1.0000000	1.0468851	1.0468851	0.1	-4.69	20.00	AVRG	
1,2,3-Trichlorobenzene	0.9440000	1.1274261	1.1274261	0.1	-19.43	20.00	AVRG	
Toluene	1.5870000	1.8716784	1.8716784	0.4	-17.94	20.00	AVRG	
1,2,4-Trichlorobenzene	0.9830000	1.1509612	1.1509612	0.2	-17.09	20.00	AVRG	
1,2,4-Trimethylbenzene	2.7770000	3.3725723	3.3725723	0.1	-21.45	20.00	AVRG	<-
Tetrachloroethene	0.2620000	0.3034052	0.3034052	0.2	-15.80	20.00	AVRG	
Trichloroethene	0.3410000	0.3871407	0.3871407	0.2	-13.53	20.00	AVRG	
1,2-Dichlorobenzene	1.5970000	1.7726182	1.7726182	0.4	-11.00	20.00	AVRG	
1,2-Dichloroethane	0.5230000	0.5771877	0.5771877	0.1	-10.36	20.00	AVRG	
1,2-Dichloropropane	0.3560000	0.4451970	0.4451970	0.1	-25.06	20.00	AVRG	<-
1,3,5-Trimethylbenzene	2.6860000	3.2638125	3.2638125	0.1	-21.51	20.00	AVRG	<-
1,3-Dichloropropane	0.6820000	0.8120178	0.8120178	0.1	-19.06	20.00	AVRG	
1,4-Dichlorobenzene	52.996058	50.000000	1.8224734	0.4	-5.99	20.00	LINR	
2-Butanone	0.3510000	0.4160151	0.4160151	0.1	-18.52	20.00	AVRG	
2-Chlorotoluene	2.4480000	2.8955355	2.8955355	0.1	-18.28	20.00	AVRG	
2-Hexanone	0.2910000	0.3802864	0.3802864	0.1	-30.68	20.00	AVRG	<-
4-Chlorotoluene	2.8250000	3.3766574	3.3766574	0.1	-19.53	20.00	AVRG	
tert-Butylbenzene	2.2890000	2.7892260	2.7892260	0.1	-21.85	20.00	AVRG	<-
4-Methyl-2-Pentanone	0.4170000	0.5356459	0.5356459	0.1	-28.45	20.00	AVRG	<-
Acetone	115.52900	100.00000	0.2889043	0.1	-15.53	20.00	LINR	
Benzene	1.3820000	1.6658132	1.6658132	0.5	-20.54	20.00	AVRG	<-
Bromobenzene	0.8200000	0.9379535	0.9379535	0.1	-14.38	20.00	AVRG	
Bromochloromethane	0.2950000	0.3489266	0.3489266	0.1	-18.28	20.00	AVRG	
Bromodichloromethane	0.4160000	0.4795232	0.4795232	0.2	-15.27	20.00	AVRG	
Bromoform	49.143777	50.000000	0.2409507	0.1	1.71	20.00	2RDR	
Bromomethane	46.548575	50.000000	0.2791403	0.1	6.90	20.00	LINR	
Carbon Disulfide	1.7430000	1.9962947	1.9962947	0.1	-14.53	20.00	AVRG	

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812011

Instrument ID: VOA9 Calibration Date: 12/13/18 Time: 1005

Lab File ID: U121302 Init. Calib. Date(s): 11/13/18 11/13/18

Init. Calib. Times: 1123 1528

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Carbon Tetrachloride	0.3610000	0.4175093	0.4175093	0.1	-15.65	20.00	AVRG	
Chlorobenzene	1.0320000	1.1718952	1.1718952	0.5	-13.56	20.00	AVRG	
Chloroethane	0.5220000	0.5746508	0.5746508	0.1	-10.09	20.00	AVRG	
Chloroform	1.1510000	1.2249899	1.2249899	0.2	-6.43	20.00	AVRG	
Chloromethane	51.133402	50.000000	0.7049632	0.1	-2.27	20.00	LINR	
cis-1,2-Dichloroethene	0.7080000	0.7764762	0.7764762	0.1	-9.67	20.00	AVRG	
Dibromochloromethane	0.3160000	0.3832616	0.3832616	0.1	-21.28	20.00	AVRG	<-
Dichlorodifluoromethane	41.745685	50.000000	0.7370419	0.1	16.51	20.00	LINR	
Ethylbenzene	0.5220000	0.6158792	0.6158792	0.1	-17.98	20.00	AVRG	
Hexachlorobutadiene	55.348678	50.000000	0.3852608	0.1	-10.70	20.00	2RDR	
Isopropylbenzene	1.5190000	1.8414040	1.8414040	0.1	-21.22	20.00	AVRG	<-
m,p-Xylenes	0.6430000	0.7640636	0.7640636	0.1	-18.83	20.00	AVRG	
Methylene Chloride	53.910528	50.000000	0.7551414	0.1	-7.82	20.00	LINR	
n-Butylbenzene	52.404083	50.000000	3.2426481	0.5	-4.81	20.00	2RDR	
n-Propylbenzene	3.9460000	4.8605865	4.8605865	0.1	-23.18	20.00	AVRG	<-
Naphthalene	2.9610000	3.7885441	3.7885441	0.2	-27.95	20.00	AVRG	<-
o-Xylene	0.6430000	0.7775692	0.7775692	0.3	-20.93	20.00	AVRG	<-
sec-Butylbenzene	3.2850000	4.0801360	4.0801360	0.1	-24.20	20.00	AVRG	<-
Styrene	1.0860000	1.3453900	1.3453900	0.3	-23.88	20.00	AVRG	<-
Vinyl Chloride	50.998660	50.000000	0.9431128	0.1	-2.00	20.00	LINR	
1,2,3-Trichloropropane	1.2360000	1.4719099	1.4719099	0.1	-19.09	20.00	AVRG	
p-Isopropyltoluene	2.7380000	3.4435696	3.4435696	0.1	-25.77	20.00	AVRG	<-
1,2-Dibromo-3-Chloropropane	51.502681	50.000000	0.2009789	0.05	-3.00	20.00	2RDR	
1,2-Dichloroethane-d4	43.705634	50.000000	0.6746212	0.1	12.59	20.00	LINR	
Dibromofluoromethane	44.323503	50.000000	0.5220667	0.1	11.35	20.00	LINR	
Toluene-d8	52.946544	50.000000	1.3499495	0.1	-5.89	20.00	LINR	
4-Bromofluorobenzene	51.455285	50.000000	0.5108900	0.1	-2.91	20.00	LINR	

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Instrument ID: VOA9 Calibration Date: 12/13/18 Time: 2049

Lab File ID: U121328 Init. Calib. Date(s): 11/13/18 11/13/18

Init. Calib. Times: 1123 1528

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
cis-1,3-Dichloropropene	0.5230000	0.6630369	0.6630369	0.2	-26.78	50.00	AVRG
trans-1,3-Dichloropropene	54.500639	50.000000	0.5656544	0.1	-9.00	50.00	LINR
1,3-Dichlorobenzene	1.5740000	1.7770251	1.7770251	0.6	-12.90	50.00	AVRG
2,2-Dichloropropane	0.7100000	0.6707492	0.6707492	0.1	5.53	50.00	AVRG
1,1-Dichloropropene	0.4620000	0.5526481	0.5526481	0.1	-19.62	50.00	AVRG
Dibromomethane	0.2230000	0.2561433	0.2561433	0.1	-14.86	50.00	AVRG
1,2-Dibromoethane	0.3680000	0.4341810	0.4341810	0.1	-17.98	50.00	AVRG
trans-1,2-Dichloroethene	0.6180000	0.6814254	0.6814254	0.1	-10.26	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3150000	0.3764169	0.3764169	0.1	-19.50	50.00	AVRG
1,1,1-Trichloroethane	0.8780000	0.9545234	0.9545234	0.1	-8.72	50.00	AVRG
1,1,2,2-Tetrachloroethane	1.1840000	1.4023433	1.4023433	0.3	-18.44	50.00	AVRG
Freon TF	0.5010000	0.5532758	0.5532758	0.1	-10.43	50.00	AVRG
1,1,2-Trichloroethane	0.3180000	0.3730487	0.3730487	0.1	-17.31	50.00	AVRG
1,1-Dichloroethane	1.1460000	1.3051316	1.3051316	0.2	-13.88	50.00	AVRG
1,1-Dichloroethene	0.5640000	0.6084412	0.6084412	0.1	-7.88	50.00	AVRG
Trichlorofluoromethane	1.0000000	1.0468851	1.0468851	0.1	-4.69	50.00	AVRG
1,2,3-Trichlorobenzene	0.9440000	1.1274261	1.1274261	0.1	-19.43	50.00	AVRG
Toluene	1.5870000	1.8716784	1.8716784	0.4	-17.94	50.00	AVRG
1,2,4-Trichlorobenzene	0.9830000	1.1509612	1.1509612	0.2	-17.09	50.00	AVRG
1,2,4-Trimethylbenzene	2.7770000	3.3725723	3.3725723	0.1	-21.45	50.00	AVRG
Tetrachloroethene	0.2620000	0.3034052	0.3034052	0.2	-15.80	50.00	AVRG
Trichloroethene	0.3410000	0.3871407	0.3871407	0.2	-13.53	50.00	AVRG
1,2-Dichlorobenzene	1.5970000	1.7726182	1.7726182	0.4	-11.00	50.00	AVRG
1,2-Dichloroethane	0.5230000	0.5771877	0.5771877	0.1	-10.36	50.00	AVRG
1,2-Dichloropropane	0.3560000	0.4451970	0.4451970	0.1	-25.06	50.00	AVRG
1,3,5-Trimethylbenzene	2.6860000	3.2638125	3.2638125	0.1	-21.51	50.00	AVRG
1,3-Dichloropropane	0.6820000	0.8120178	0.8120178	0.1	-19.06	50.00	AVRG
1,4-Dichlorobenzene	59.185368	50.000000	1.8224734	0.4	-18.37	50.00	LINR
2-Butanone	0.3510000	0.4160151	0.4160151	0.1	-18.52	50.00	AVRG
2-Chlorotoluene	2.4480000	2.8955355	2.8955355	0.1	-18.28	50.00	AVRG
2-Hexanone	0.2910000	0.3802864	0.3802864	0.1	-30.68	50.00	AVRG
4-Chlorotoluene	2.8250000	3.3766574	3.3766574	0.1	-19.53	50.00	AVRG
tert-Butylbenzene	2.2890000	2.7892260	2.7892260	0.1	-21.85	50.00	AVRG
4-Methyl-2-Pentanone	0.4170000	0.5356459	0.5356459	0.1	-28.45	50.00	AVRG
Acetone	127.02036	100.00000	0.2889043	0.1	-27.02	50.00	LINR
Benzene	1.3820000	1.6658132	1.6658132	0.5	-20.54	50.00	AVRG
Bromobenzene	0.8200000	0.9379535	0.9379535	0.1	-14.38	50.00	AVRG
Bromochloromethane	0.2950000	0.3489266	0.3489266	0.1	-18.28	50.00	AVRG
Bromodichloromethane	0.4160000	0.4795232	0.4795232	0.2	-15.27	50.00	AVRG
Bromoform	52.918222	50.000000	0.2409507	0.1	-5.84	50.00	2RDR
Bromomethane	34.264144	50.000000	0.2791403	0.1	31.47	50.00	LINR
Carbon Disulfide	1.7430000	1.9962947	1.9962947	0.1	-14.53	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812011

Instrument ID: VOA9 Calibration Date: 12/13/18 Time: 2049

Lab File ID: U121328 Init. Calib. Date(s): 11/13/18 11/13/18

Init. Calib. Times: 1123 1528

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Carbon Tetrachloride	0.3610000	0.4175093	0.4175093	0.1	-15.65	50.00	AVRG
Chlorobenzene	1.0320000	1.1718952	1.1718952	0.5	-13.56	50.00	AVRG
Chloroethane	0.5220000	0.5746508	0.5746508	0.1	-10.09	50.00	AVRG
Chloroform	1.1510000	1.2249899	1.2249899	0.2	-6.43	50.00	AVRG
Chloromethane	52.790433	50.000000	0.7049632	0.1	-5.58	50.00	LINR
cis-1,2-Dichloroethene	0.7080000	0.7764762	0.7764762	0.1	-9.67	50.00	AVRG
Dibromochloromethane	0.3160000	0.3832616	0.3832616	0.1	-21.28	50.00	AVRG
Dichlorodifluoromethane	49.867643	50.000000	0.7370419	0.1	0.26	50.00	LINR
Ethylbenzene	0.5220000	0.6158792	0.6158792	0.1	-17.98	50.00	AVRG
Hexachlorobutadiene	61.564846	50.000000	0.3852608	0.1	-23.13	50.00	2RDR
Isopropylbenzene	1.5190000	1.8414040	1.8414040	0.1	-21.22	50.00	AVRG
m,p-Xylenes	0.6430000	0.7640636	0.7640636	0.1	-18.83	50.00	AVRG
Methylene Chloride	59.313003	50.000000	0.7551414	0.1	-18.63	50.00	LINR
n-Butylbenzene	61.532219	50.000000	3.2426481	0.5	-23.06	50.00	2RDR
n-Propylbenzene	3.9460000	4.8605865	4.8605865	0.1	-23.18	50.00	AVRG
Naphthalene	2.9610000	3.7885441	3.7885441	0.2	-27.95	50.00	AVRG
o-Xylene	0.6430000	0.7775692	0.7775692	0.3	-20.93	50.00	AVRG
sec-Butylbenzene	3.2850000	4.0801360	4.0801360	0.1	-24.20	50.00	AVRG
Styrene	1.0860000	1.3453900	1.3453900	0.3	-23.88	50.00	AVRG
Vinyl Chloride	57.773122	50.000000	0.9431128	0.1	-15.55	50.00	LINR
1,2,3-Trichloropropane	1.2360000	1.4719099	1.4719099	0.1	-19.09	50.00	AVRG
p-Isopropyltoluene	2.7380000	3.4435696	3.4435696	0.1	-25.77	50.00	AVRG
1,2-Dibromo-3-Chloropropane	54.780609	50.000000	0.2009789	0.05	-9.56	50.00	2RDR
1,2-Dichloroethane-d4	44.435022	50.000000	0.6746212	0.1	11.13	50.00	LINR
Dibromofluoromethane	45.300706	50.000000	0.5220667	0.1	9.40	50.00	LINR
Toluene-d8	52.913017	50.000000	1.3499495	0.1	-5.83	50.00	LINR
4-Bromofluorobenzene	51.701161	50.000000	0.5108900	0.1	-3.40	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Lab File ID (Standard): U121302 Date Analyzed: 12/13/18

Instrument ID: VOA9 Time Analyzed: 1005

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(DCB) AREA #	IS1(DCB) RT #	IS2(CBZ) AREA #	IS2(CBZ) RT #	IS3(DFB) AREA #	IS3(DFB) RT #
	12 HOUR STD	335050	10.24	694764	8.25	757165	5.63
	UPPER LIMIT	670100	10.74	1389528	8.75	1514330	6.13
	LOWER LIMIT	167525	9.74	347382	7.75	378583	5.13
	CLIENT SAMPLE NO.						
01	VLCSW-181213	319131	10.24	667411	8.25	734328	5.63
02	VBLKW-181213	303517	10.24	660372	8.25	728991	5.63
03	HS18120114-0	316949	10.24	676813	8.25	741264	5.63
04	HS18120114-0	302238	10.24	664827	8.25	727486	5.63
05	HS18120114-0	304036	10.24	670814	8.25	736318	5.63
06	HS18120114-0	301161	10.24	660830	8.25	726532	5.63
07	HS18120114-0	298105	10.24	656432	8.25	715486	5.63
08	HS18120114-1	294944	10.24	641063	8.25	708961	5.63
09	HS18120114-0	293615	10.24	651329	8.25	712153	5.63
10	HS18120114-0	297326	10.24	656946	8.25	725485	5.63
11	HS18120114-0	292838	10.24	650853	8.25	713882	5.63
12	HS18120114-1	292924	10.24	649450	8.25	714637	5.63
13	HS18120114-1	287586	10.24	629523	8.25	694867	5.63
14	HS18120114-0	297533	10.24	659969	8.25	725160	5.63
15	HS18120114-1	291447	10.24	638805	8.25	711627	5.63
16	HS18120114-0	312600	10.24	660395	8.25	710152	5.63
17	HS18120114-0	309013	10.24	651238	8.25	709892	5.63
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18120114

Lab File ID (Standard): U121302 Date Analyzed: 12/13/18

Instrument ID: VOA9 Time Analyzed: 1005

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	426790	4.90				
	UPPER LIMIT	853580	5.40				
	LOWER LIMIT	213395	4.40				
	CLIENT SAMPLE NO.						
01	VLCSW-181213	411387	4.89				
02	VBLKW-181213	403683	4.90				
03	HS18120114-0	405801	4.90				
04	HS18120114-0	401840	4.89				
05	HS18120114-0	409143	4.90				
06	HS18120114-0	404331	4.90				
07	HS18120114-0	395930	4.90				
08	HS18120114-1	394307	4.89				
09	HS18120114-0	393495	4.90				
10	HS18120114-0	396203	4.89				
11	HS18120114-0	393895	4.90				
12	HS18120114-1	389253	4.89				
13	HS18120114-1	383004	4.89				
14	HS18120114-0	399665	4.89				
15	HS18120114-1	393496	4.90				
16	HS18120114-0	399772	4.89				
17	HS18120114-0	398708	4.90				
18							
19							
20							

IS4 = Pentafluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121301.D

Date : 13-DEC-2018 09:40

Client ID: BFB

Instrument: VOA9.i

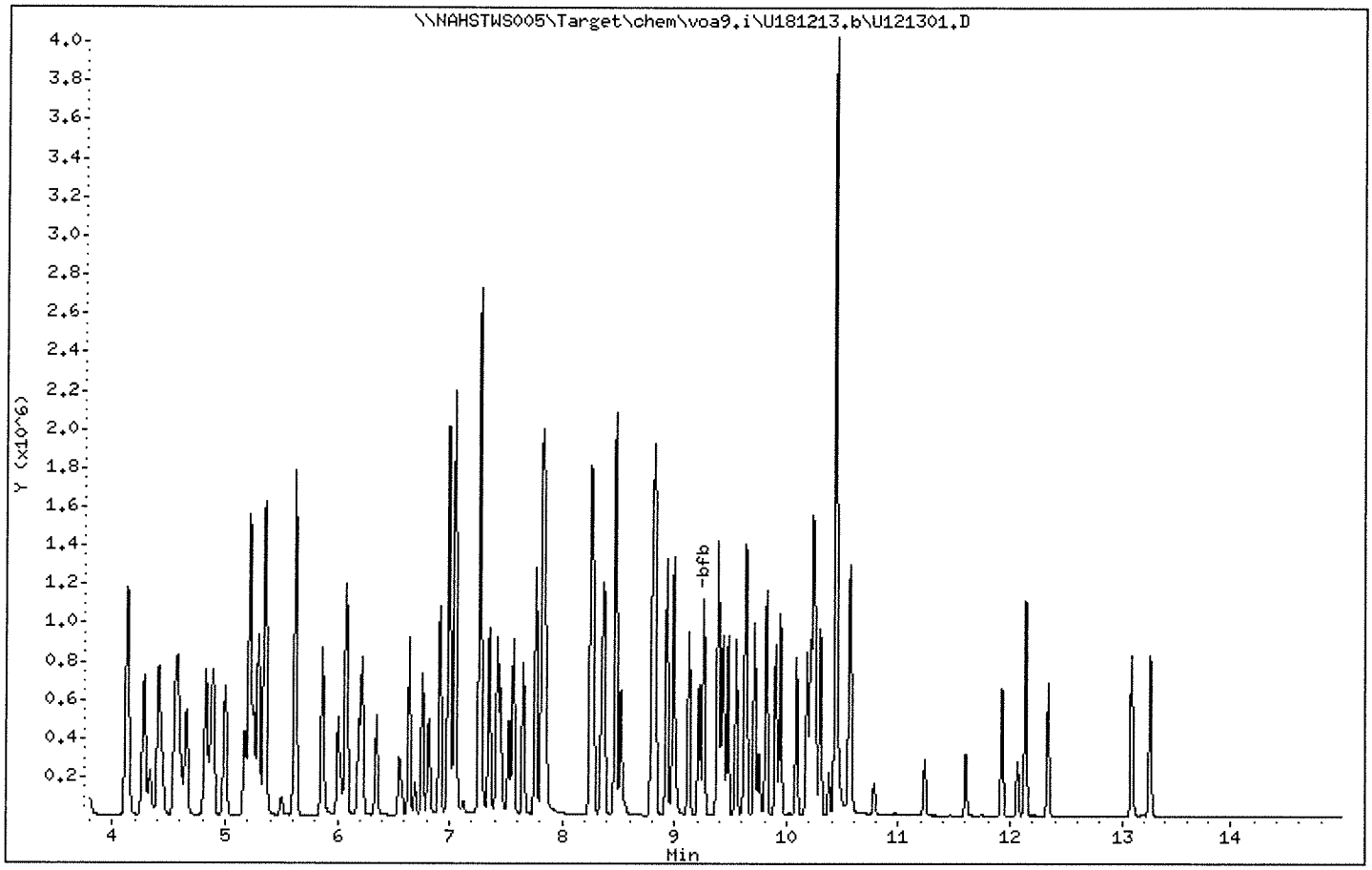
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121301.D

Date : 13-DEC-2018 09:40

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

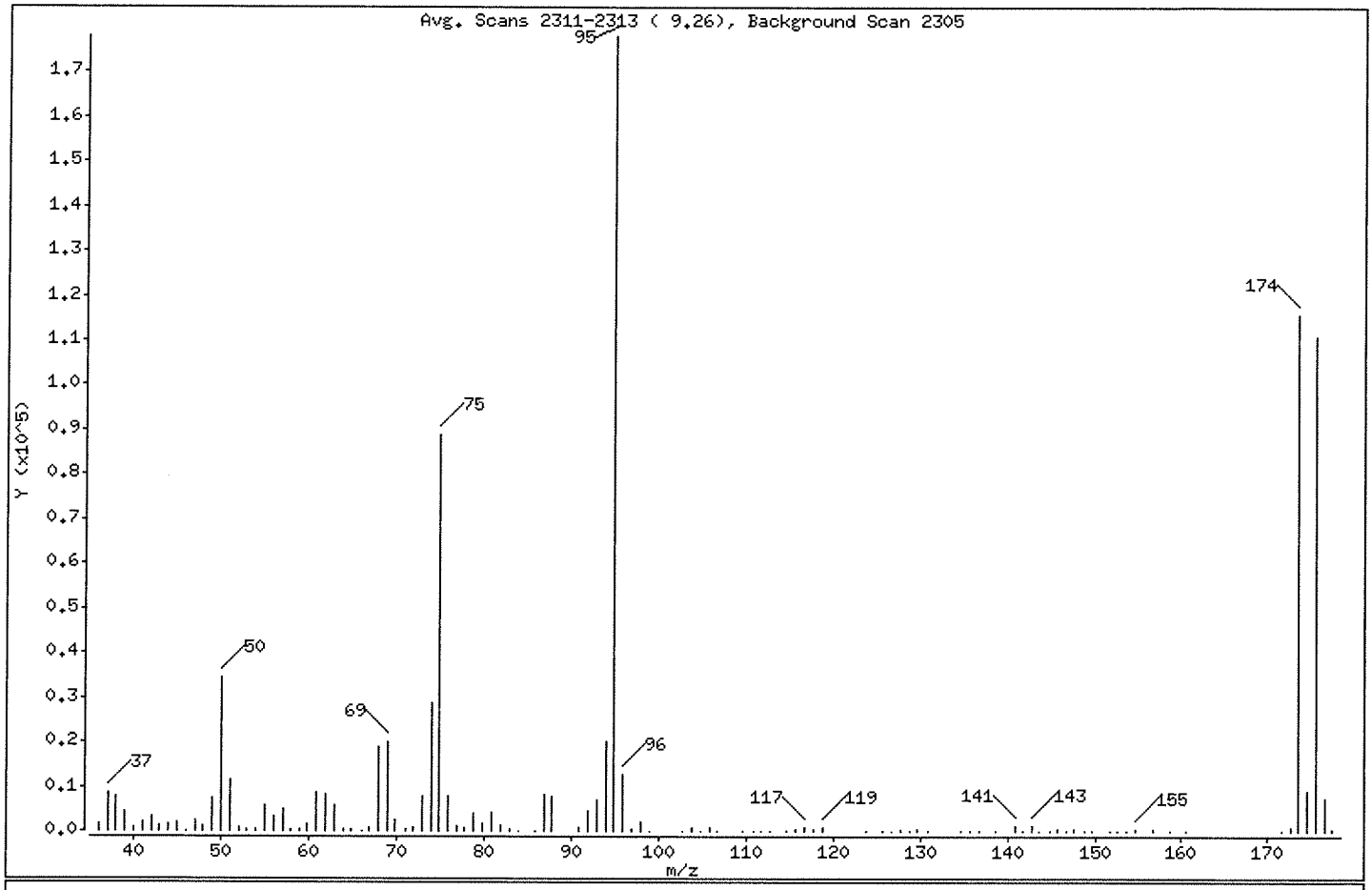
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.41
75	30.00 - 60.00% of mass 95	49.84
96	5.00 - 9.00% of mass 95	7.09
173	Less than 2.00% of mass 174	0.46 (0.71)
174	Greater than 50.00% of mass 95	65.08
175	5.00 - 9.00% of mass 174	5.08 (7.81)
176	95.00 - 101.00% of mass 174	62.39 (95.87)
177	5.00 - 9.00% of mass 176	4.12 (6.60)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121301.D

Date : 13-DEC-2018 09:40

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: U121301.D
Spectrum: Avg. Scans 2311-2313 (9.26), Background Scan 2305
Location of Maximum: 94.95
Number of points: 110

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1818	63.90	566	94.90	177856	136.70	178
37.00	8409	64.90	286	95.90	12613	138.60	63
38.00	7608	66.00	90	96.90	428	140.80	1229
39.00	4483	66.90	762	97.90	1985	141.70	167
40.00	1022	67.90	18720	98.90	182	142.70	1378
41.00	2112	68.90	19968	102.80	69	143.60	91
42.00	3308	69.90	2542	103.80	711	144.80	85
43.00	1252	71.00	245	104.80	174	145.70	222
43.90	1507	71.90	783	105.80	807	146.70	53
45.00	1916	72.90	7906	106.70	163	147.60	248
46.10	128	73.90	28560	109.60	52	148.70	107
47.00	2432	74.90	88648	110.80	152	149.70	104
47.90	1093	75.90	7882	111.70	82	151.70	76
48.90	7349	76.80	1289	112.80	132	152.60	90
50.00	34528	77.70	874	114.70	99	153.50	104
51.00	11267	78.80	4015	115.70	483	154.70	363
52.00	682	79.90	1446	116.80	887	156.70	248
52.90	432	80.80	4239	117.70	484	158.70	195
53.90	400	81.80	1051	118.70	707	160.70	144
55.00	5620	83.00	583	123.80	68	171.80	204
56.00	3076	83.90	71	125.60	56	172.80	823
57.00	4960	85.80	162	126.80	75	173.70	115744
58.00	426	86.90	8238	127.70	508	174.70	9034
58.90	254	87.80	7845	128.70	193	175.70	110960
59.90	1688	90.80	672	129.70	504	176.70	7321
60.90	8446	91.90	4588	130.80	193	177.60	265
61.90	7990	92.90	7000	134.70	156		
63.00	5911	93.90	20000	135.70	77		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121302.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 13-DEC-2018 10:05
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

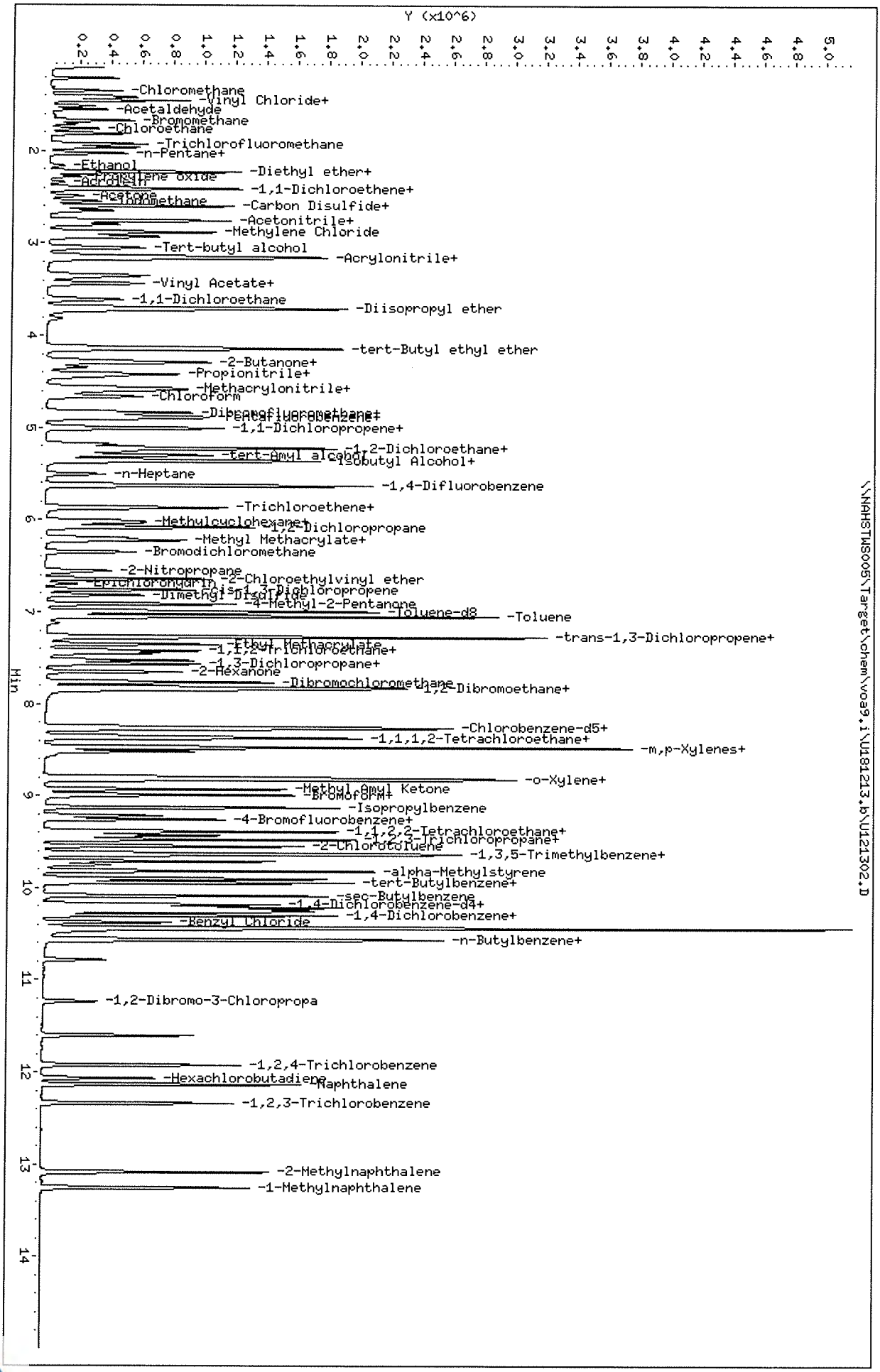
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	426790	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	757165	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.253	(1.000)	694764	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	335050	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	218136	50.0000	44.32
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	283377	50.0000	43.70
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	938472	50.0000	52.94
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	353294	50.0000	51.45
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	239598	50.0000	54.67
31 1,1,1-Trichloroethane	97	4.834	4.834	(0.987)	355147	50.0000	47.37
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	428510	50.0000	53.99
138 Freon TF	101	2.412	2.412	(0.493)	197022	50.0000	46.08
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.899)	236884	50.0000	53.63
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	492803	50.0000	50.38
11 1,1-Dichloroethene	96	2.408	2.408	(0.492)	226051	50.0000	46.92
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	365311	50.0000	52.23
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	330979	50.0000	52.32
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	470560	50.0000	56.81
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	336588	50.0000	51.08
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	982399	50.0000	52.78
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	63201	50.0000	51.50
57 1,2-Dibromoethane	107	7.852	7.852	(0.951)	279724	50.0000	54.68

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121302.D Page 2
Report Date: 25-Jan-2019 20:03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	536300	50.0000	50.12
33	1,2-Dichloroethane	62	5.257	5.257	(0.934)	398013	50.0000	50.23
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	302895	50.0000	56.18
75	1,3,5-Trimethylbenzene	105	9.628	9.628	(0.941)	938848	50.0000	52.15
83	1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	527308	50.0000	49.98
54	1,3-Dichloropropane	76	7.567	7.567	(0.917)	516700	50.0000	54.47
84	1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	546810	50.0000	52.99
26	2,2-Dichloropropane	77	4.279	4.279	(0.874)	311326	50.0000	51.40
24	2-Butanone	43	4.343	4.343	(0.887)	319911	100.000	106.63
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	847434	50.0000	51.65
52	2-Hexanone	43	7.653	7.653	(0.927)	478403	100.000	118.45
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	997790	50.0000	52.70
82	p-Isopropyltoluene	119	10.209	10.209	(0.997)	970514	50.0000	52.89
45	4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	681174	100.000	117.52
10	Acetone	43	2.487	2.487	(0.508)	225045	100.000	115.52
37	Benzene	78	5.224	5.224	(0.928)	1132548	50.0000	54.11
74	Bromobenzene	156	9.381	9.381	(0.917)	282271	50.0000	51.35
29	Bromochloromethane	128	4.560	4.560	(0.931)	134632	50.0000	53.50
39	Bromodichloromethane	83	6.348	6.348	(1.128)	333915	50.0000	53.07
66	Bromoform	173	8.984	8.984	(1.089)	155099	50.0000	49.14(T)
6	Bromomethane	94	1.674	1.674	(0.342)	164358	50.0000	46.54
19	Carbon Disulfide	76	2.600	2.600	(0.531)	1507257	100.000	101.31
34	Carbon Tetrachloride	117	4.999	4.999	(0.888)	275044	50.0000	50.34
59	Chlorobenzene	112	8.275	8.275	(1.003)	735592	50.0000	51.29
7	Chloroethane	64	1.760	1.760	(0.359)	229630	50.0000	51.56
28	Chloroform	83	4.661	4.661	(0.952)	472326	50.0000	48.06
3	Chloromethane	50	1.348	1.348	(0.275)	291386	50.0000	51.13
27	cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	301148	50.0000	49.79
46	cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	475590	50.0000	60.03
55	Dibromochloromethane	129	7.758	7.758	(0.940)	249964	50.0000	56.85
44	Dibromomethane	93	6.191	6.191	(1.100)	177436	50.0000	52.51
2	Dichlorodifluoromethane	85	1.213	1.213	(0.248)	262280	50.0000	41.74
61	Ethylbenzene	106	8.373	8.373	(1.015)	381522	50.0000	52.62
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	115231	50.0000	55.34
67	Isopropylbenzene	105	9.126	9.126	(1.106)	1099950	50.0000	52.09
62	m,p-Xylenes	106	8.474	8.474	(1.027)	948135	100.000	106.11
17	Methylene Chloride	84	2.877	2.877	(0.587)	293275	50.0000	53.91
87	n-Butylbenzene	91	10.558	10.558	(1.031)	920707	50.0000	52.40
73	n-Propylbenzene	91	9.475	9.475	(0.926)	1397315	50.0000	52.85
92	Naphthalene	128	12.133	12.133	(1.185)	1142950	50.0000	57.60
63	o-Xylene	106	8.811	8.811	(1.068)	482214	50.0000	53.93
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	1141650	50.0000	51.85
64	Styrene	104	8.826	8.826	(1.069)	842251	50.0000	55.79
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	782676	50.0000	51.01
56	Tetrachloroethene	164	7.525	7.525	(0.912)	181958	50.0000	49.99
50	Toluene	91	7.049	7.049	(0.854)	1166385	50.0000	52.87
20	trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	260324	50.0000	49.30
51	trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	403412	50.0000	51.42
38	Trichloroethene	130	5.865	5.865	(1.042)	260253	50.0000	50.44
8	Trichlorofluoromethane	101	1.962	1.962	(0.401)	383933	50.0000	44.99
5	Vinyl Chloride	62	1.426	1.426	(0.291)	354894	50.0000	50.99

QC Flag Legend

T - Target compound detected outside RT window.



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Client ID: VSTD050
Sample Info: VSTD050;VSTD050;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121303.D Page 1
Report Date: 25-Jan-2019 20:03

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121303.D
Lab Smp Id: VLCSW-1812013 Client Smp ID: VLCSW-181213
Inj Date : 13-DEC-2018 10:30
Operator : PC Inst ID: VOA9.i
Smp Info : VLCSW-1812013;VLCSW-181213;3;;LCS
Misc Info : 180315V9;WATER;0;1;
Comment :
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Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

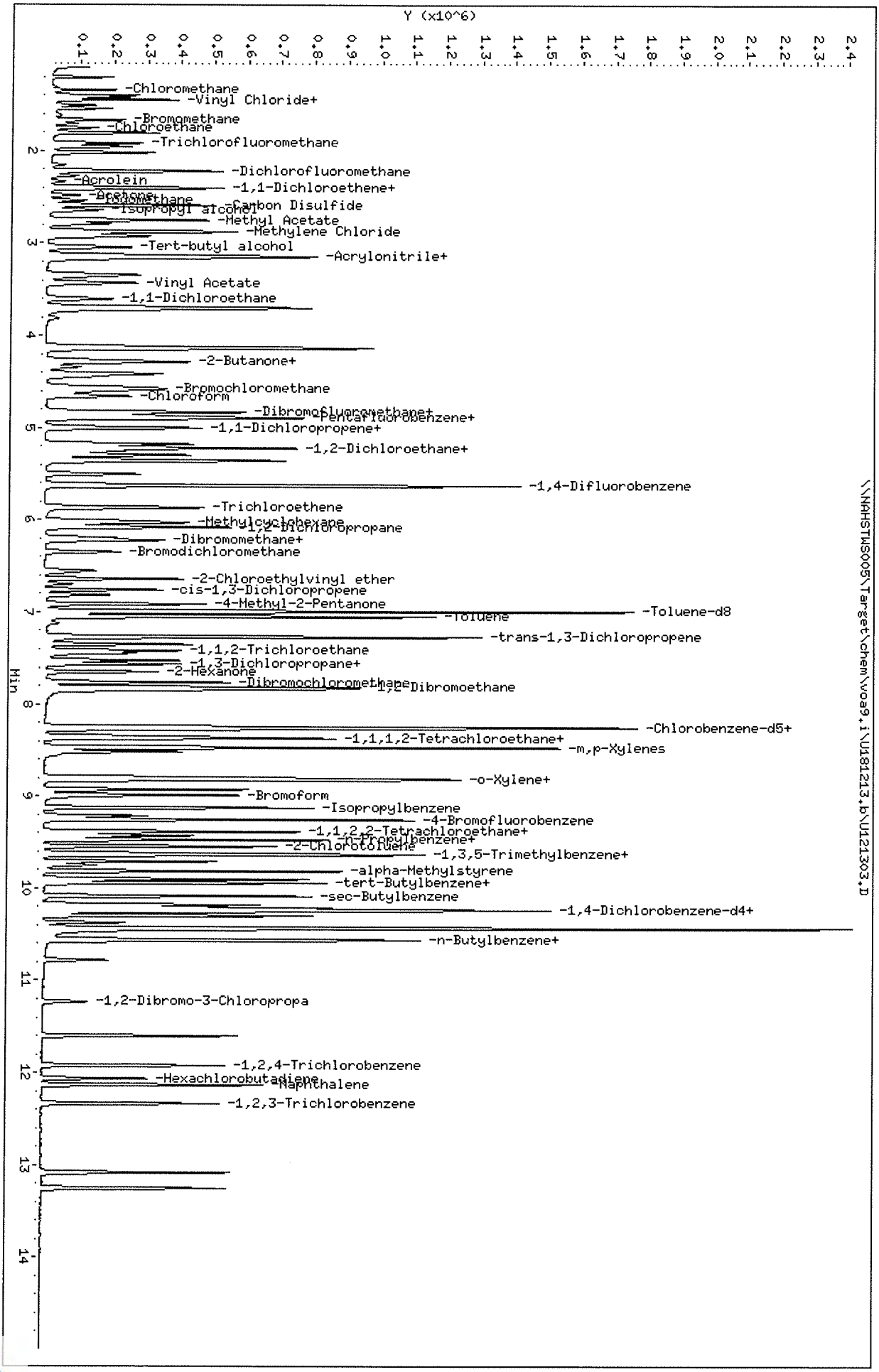
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	411387	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	734328	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	667411	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	319131	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.834	(0.987)	212867	44.8879	44.88
$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	277796	44.4792	44.47
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	908552	53.3726	53.37
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	339909	51.5364	51.53
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	93845	22.2920	22.29
31 1,1,1-Trichloroethane	97	4.830	4.834	(0.987)	144093	19.9401	19.94
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	169904	22.4765	22.47
138 Freon TF	101	2.405	2.412	(0.491)	83130	20.1717	20.17
53 1,1,2-Trichloroethane	83	7.421	7.420	(0.900)	95282	22.4559	22.45
22 1,1-Dichloroethane	63	3.604	3.612	(0.737)	200347	21.2520	21.25
11 1,1-Dichloroethene	96	2.401	2.408	(0.491)	91489	19.7023	19.70
32 1,1-Dichloropropene	75	5.006	5.010	(0.890)	151825	22.3863	22.38
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	140161	23.2629	23.26
71 1,2,3-Trichloropropane	75	9.426	9.430	(0.921)	177910	22.5541	22.55
90 1,2,4-Trichlorobenzene	180	11.927	11.926	(1.165)	144146	22.9686	22.96
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	418023	23.5830	23.58
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	22786	20.2260	20.22
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	111734	22.7408	22.74

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121303.D Page 2
Report Date: 25-Jan-2019 20:03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88 1,2-Dichlorobenzene	146	10.570	10.573	(1.033)	221122	21.6972	21.69
33 1,2-Dichloroethane	62	5.254	5.257	(0.934)	162382	21.1320	21.13
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	123315	23.5862	23.58
75 1,3,5-Trimethylbenzene	105	9.625	9.628	(0.940)	402495	23.4739	23.47
83 1,3-Dichlorobenzene	146	10.180	10.179	(0.995)	220626	21.9578	21.95
54 1,3-Dichloropropane	76	7.563	7.567	(0.917)	207489	22.7739	22.77
84 1,4-Dichlorobenzene	146	10.255	10.258	(1.002)	230737	23.4545	23.45
26 2,2-Dichloropropane	77	4.275	4.279	(0.874)	120950	20.7175	20.71
24 2-Butanone	43	4.339	4.343	(0.887)	128206	44.3342	44.33
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	359995	23.0366	23.03
52 2-Hexanone	43	7.649	7.653	(0.927)	187628	48.3616	48.36
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	421871	23.3959	23.39
82 p-Isopropyltoluene	119	10.210	10.209	(0.997)	422285	24.1632	24.16
45 4-Methyl-2-Pentanone	43	6.915	6.914	(0.838)	269507	48.4057	48.40
10 Acetone	43	2.480	2.487	(0.507)	94703	47.9408	47.94
37 Benzene	78	5.220	5.224	(0.928)	461841	22.7526	22.75
74 Bromobenzene	156	9.381	9.381	(0.917)	115148	21.9958	21.99
29 Bromochloromethane	128	4.557	4.560	(0.931)	55150	22.7399	22.73
39 Bromodichloromethane	83	6.349	6.348	(1.129)	127765	20.9398	20.93
66 Bromoform	173	8.984	8.984	(1.089)	56930	19.5933	19.59
6 Bromomethane	94	1.670	1.674	(0.341)	67167	20.8310	20.83
19 Carbon Disulfide	76	2.592	2.600	(0.530)	618650	43.1404	43.14
34 Carbon Tetrachloride	117	4.995	4.999	(0.888)	108846	20.5439	20.54
59 Chlorobenzene	112	8.275	8.275	(1.003)	306022	22.2160	22.21
7 Chloroethane	64	1.753	1.760	(0.358)	89462	20.8420	20.84(M)
28 Chloroform	83	4.658	4.661	(0.952)	190750	20.1389	20.13
3 Chloromethane	50	1.340	1.348	(0.274)	124179	22.7353	22.73
27 cis-1,2-Dichloroethene	96	4.287	4.294	(0.876)	123372	21.1642	21.16
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.202)	179379	23.3457	23.34
55 Dibromochloromethane	129	7.758	7.758	(0.940)	93959	22.2484	22.24
44 Dibromomethane	93	6.191	6.191	(1.101)	71208	21.7321	21.73
2 Dichlorodifluoromethane	85	1.205	1.213	(0.246)	108833	18.5409	18.54
61 Ethylbenzene	106	8.373	8.373	(1.015)	160777	23.0874	23.08
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	50150	26.1758	26.17
67 Isopropylbenzene	105	9.126	9.126	(1.106)	468427	23.0945	23.09
62 m,p-Xylenes	106	8.474	8.474	(1.027)	395861	46.1211	46.12
17 Methylene Chloride	84	2.873	2.877	(0.587)	119942	22.4693	22.46
87 n-Butylbenzene	91	10.558	10.558	(1.031)	404527	24.6538	24.65
73 n-Propylbenzene	91	9.475	9.475	(0.926)	593274	23.5588	23.55
92 Naphthalene	128	12.133	12.133	(1.185)	460151	24.3498	24.34
63 o-Xylene	106	8.811	8.811	(1.068)	201165	23.4218	23.42
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	495486	23.6301	23.63
64 Styrene	104	8.826	8.826	(1.070)	343514	23.6881	23.68
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	340920	23.3296	23.32
56 Tetrachloroethene	164	7.526	7.525	(0.912)	78412	22.4280	22.42
50 Toluene	91	7.050	7.049	(0.855)	484982	22.8880	22.88
20 trans-1,2-Dichloroethene	96	3.143	3.151	(0.642)	106668	20.9597	20.95
51 trans-1,3-Dichloropropene	75	7.259	7.263	(1.291)	148913	20.4864	20.48
38 Trichloroethene	130	5.861	5.865	(1.042)	108537	21.6914	21.69
8 Trichlorofluoromethane	101	1.955	1.962	(0.400)	157416	19.1397	19.13
5 Vinyl Chloride	62	1.423	1.426	(0.291)	144770	21.8756	21.87

QC Flag Legend

M - Compound response manually integrated.



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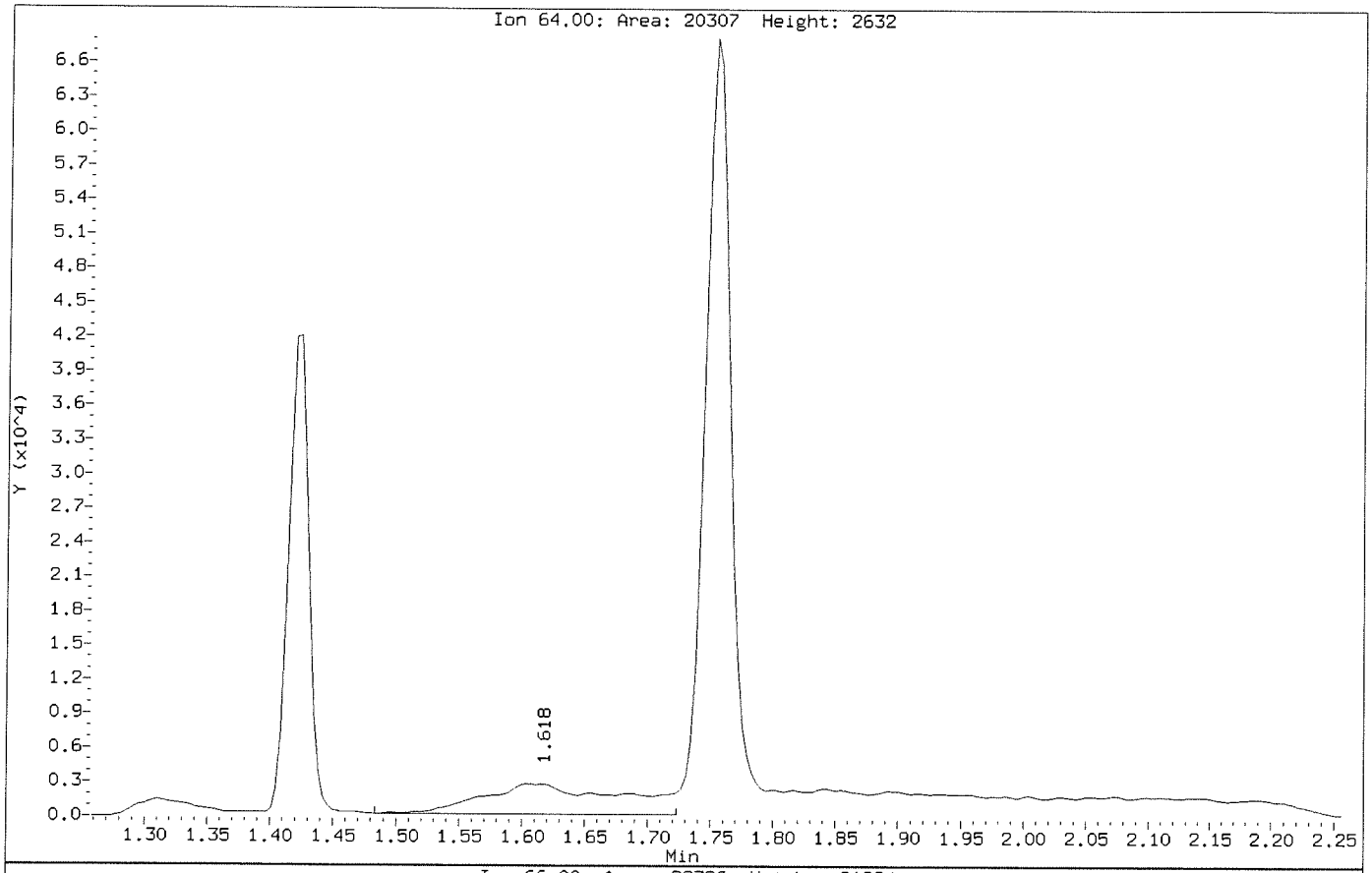
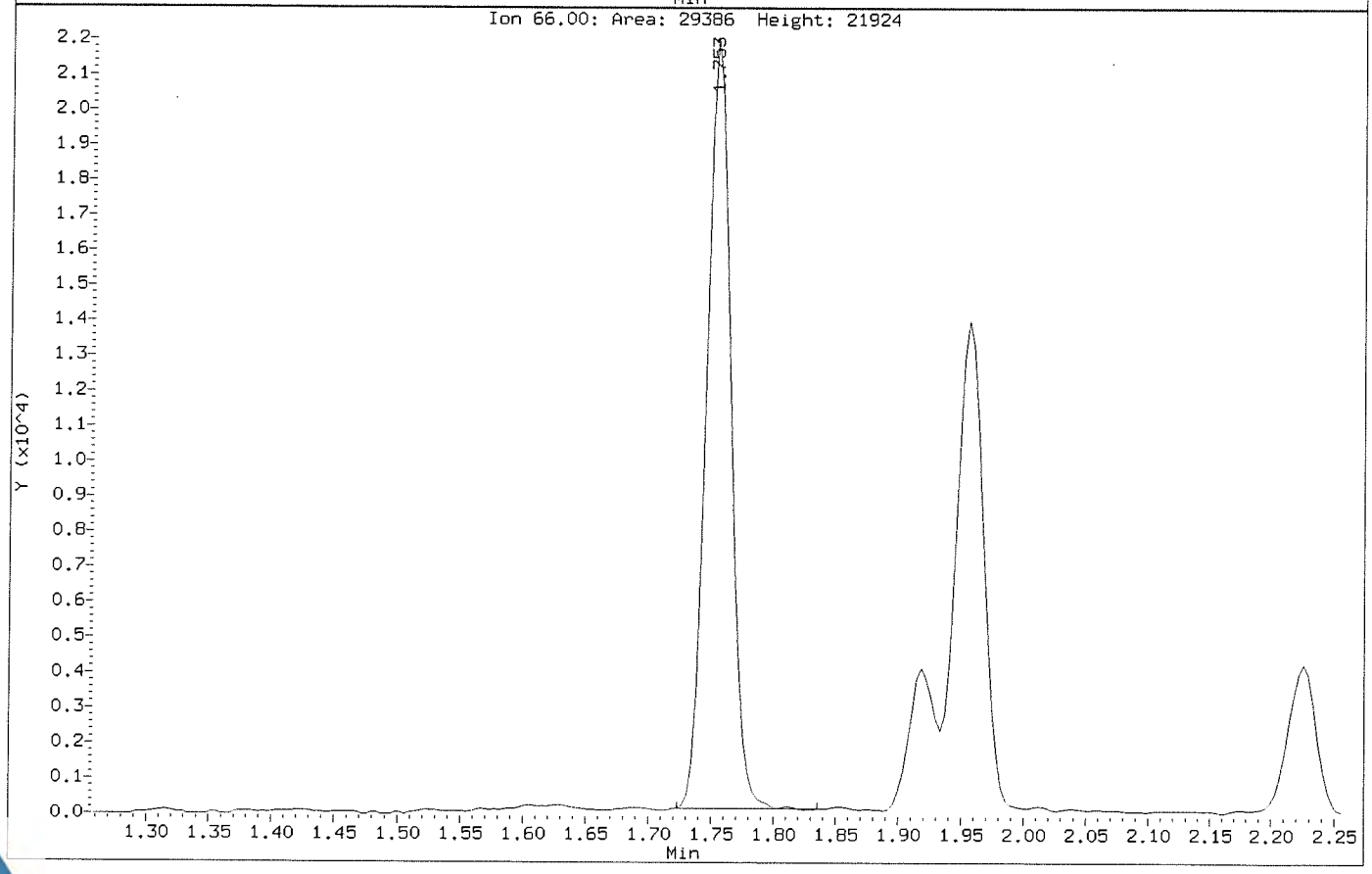
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\Before\U121303.D
Injection Date: 13-DEC-2018 10:30
Instrument: VOA9.i
Client Sample ID: VLCSW-181213

Compound: Chloroethane
CAS Number: 75-00-3





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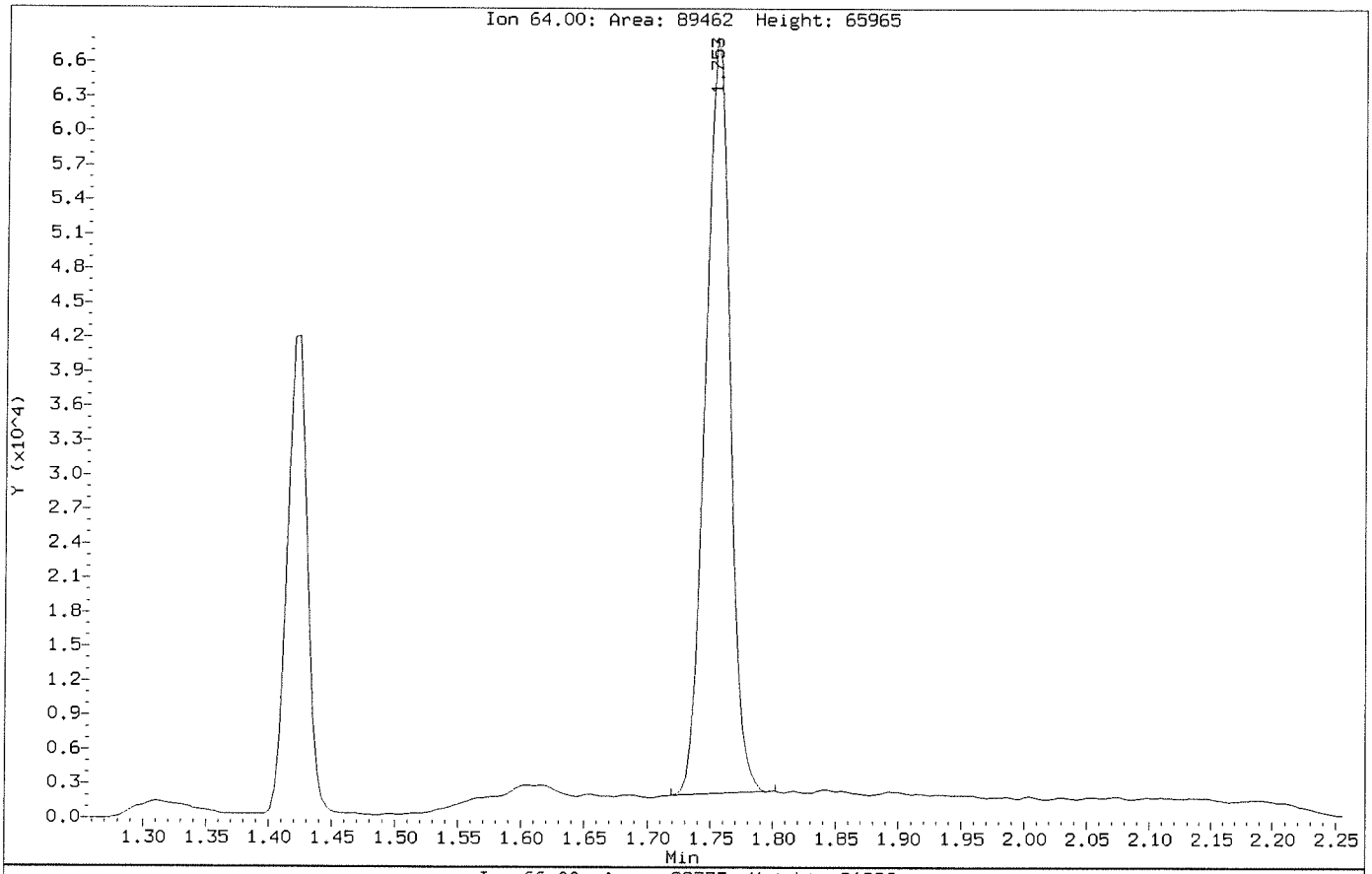
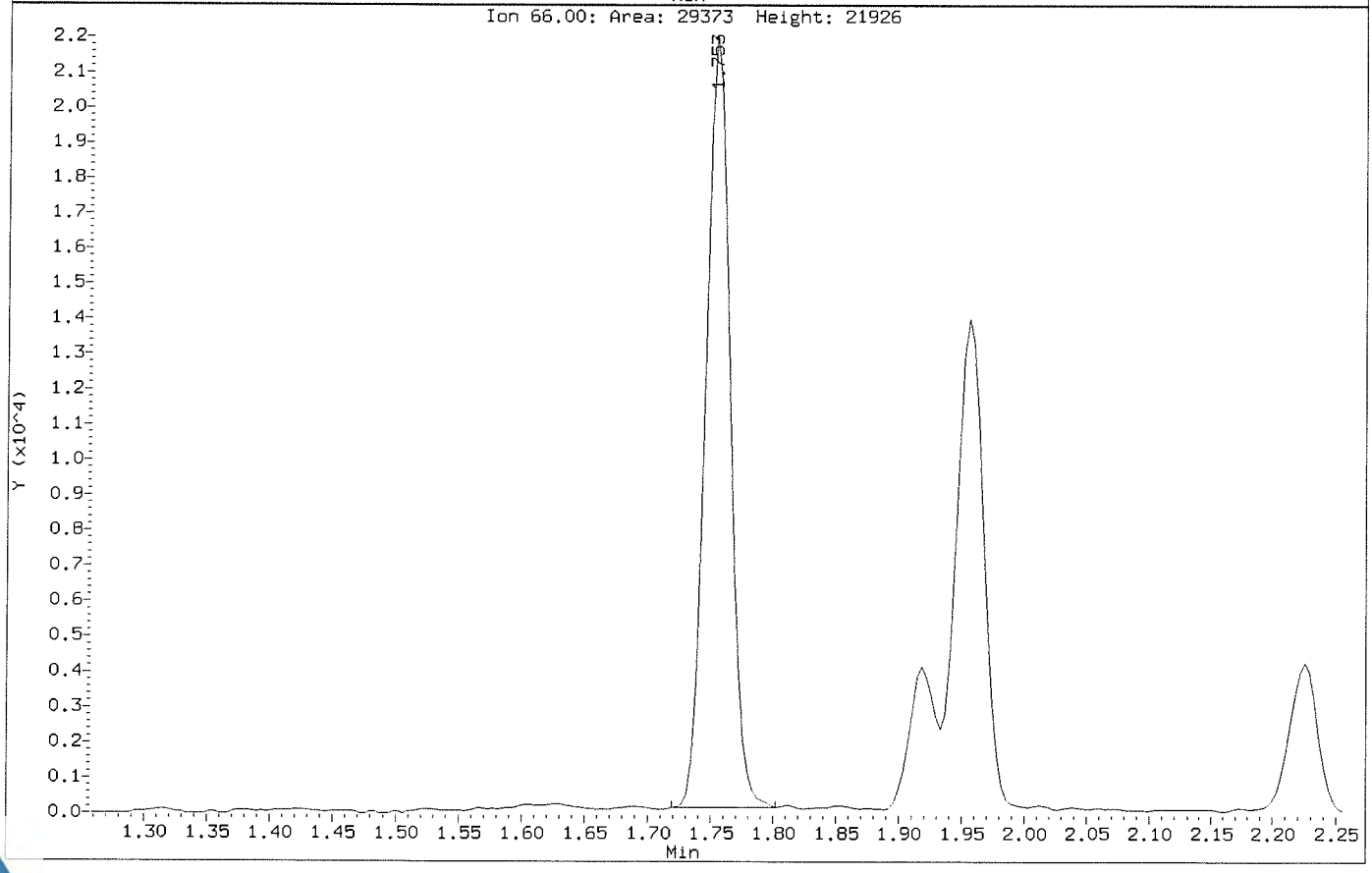
Injection Date: 13-DEC-2018 10:30
Instrument: VOA9.i
Client Sample ID: VLCSW-181213

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121305.D Page 1
Report Date: 25-Jan-2019 20:03

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121305.D
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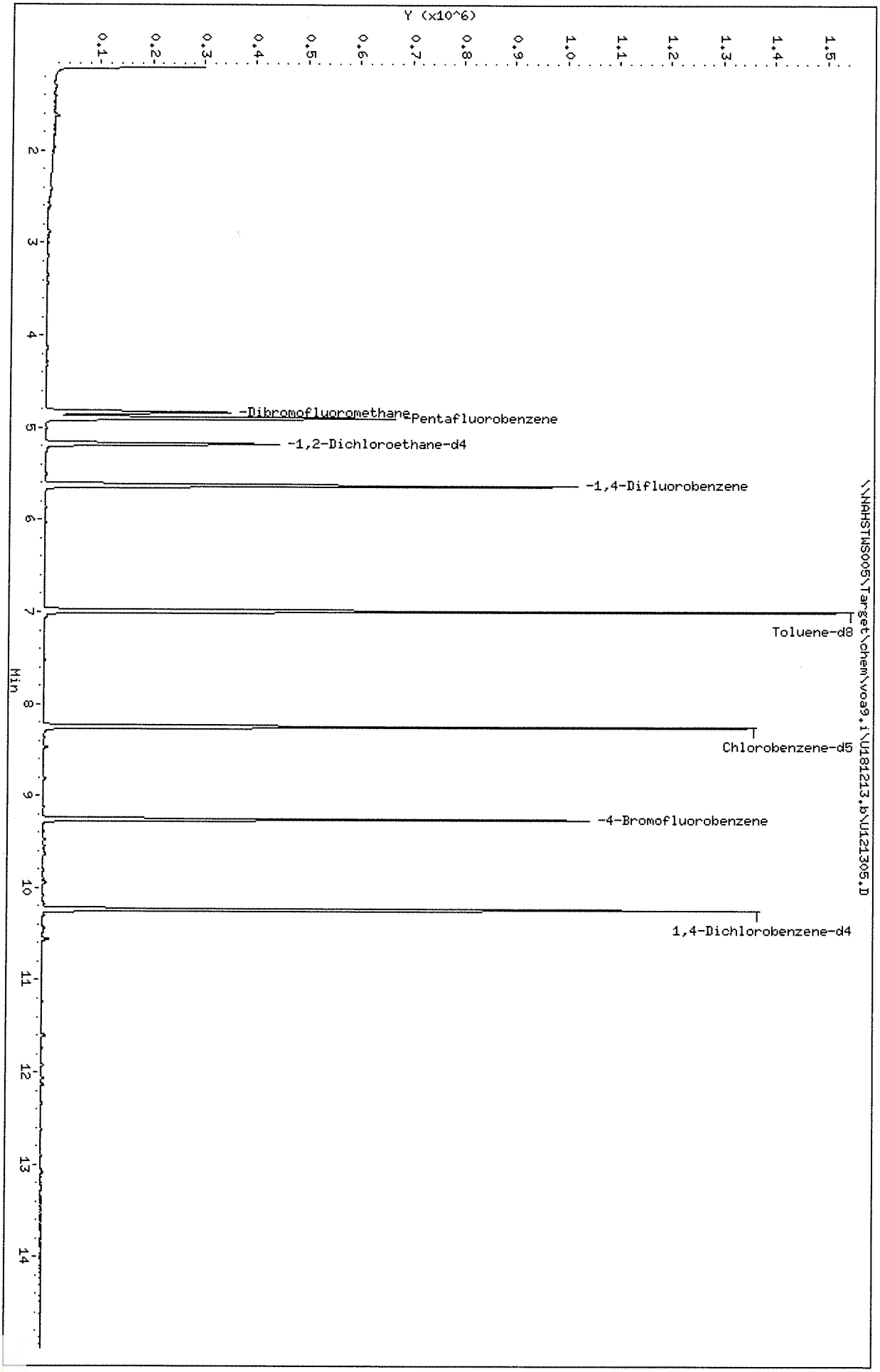
Inj Date : 13-DEC-2018 11:19
Operator : PC Inst ID: VOA9.i
Smp Info : VBLKW-181213;VBLKW-181213;3;;BLANK
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	403683	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	728991	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	660372	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	303517	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	206028	44.2577	44.25
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	282460	46.1534	46.15
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	892968	53.0049	53.00
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	323603	49.5468	49.54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Date : 13-DEC-2018 11:19
Client ID: VBLKW-181213
Sample Info: VBLKW-181213;VBLKW-181213;3;;BLANK
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA9.i
Operator: PC
Column diameter: 0.18
Page 2
Y (x10^6)
Min
-Dibromofluoromethane
Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
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Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121306.D Page 1
Report Date: 25-Jan-2019 20:03

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121306.D
Lab Smp Id: HS18120114-01 Client Smp ID: HS18120114-01
Inj Date : 13-DEC-2018 11:44
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-01;HS18120114-01;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	405801	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	741264	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	676813	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	316949	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.834	(0.986)	208785	44.6260	44.62
$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	286919	46.6559	46.65
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	906148	52.4637	52.46
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	337514	50.4402	50.44

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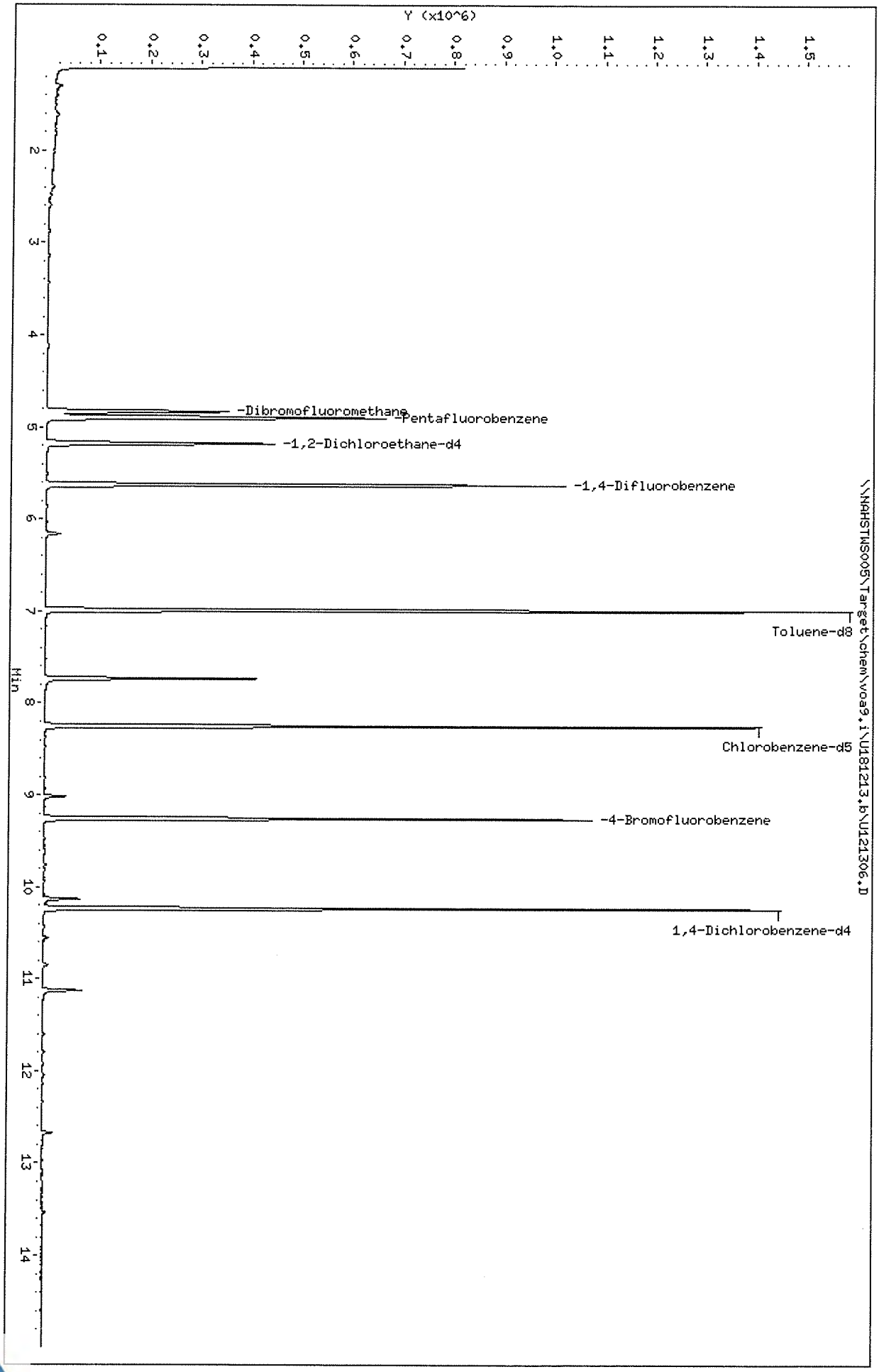
Date : 13-DEC-2018 11:44
Client ID: HS18120114-01
Sample Info: HS18120114-01;HS18120114-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121307.D Page 1
Report Date: 25-Jan-2019 20:03

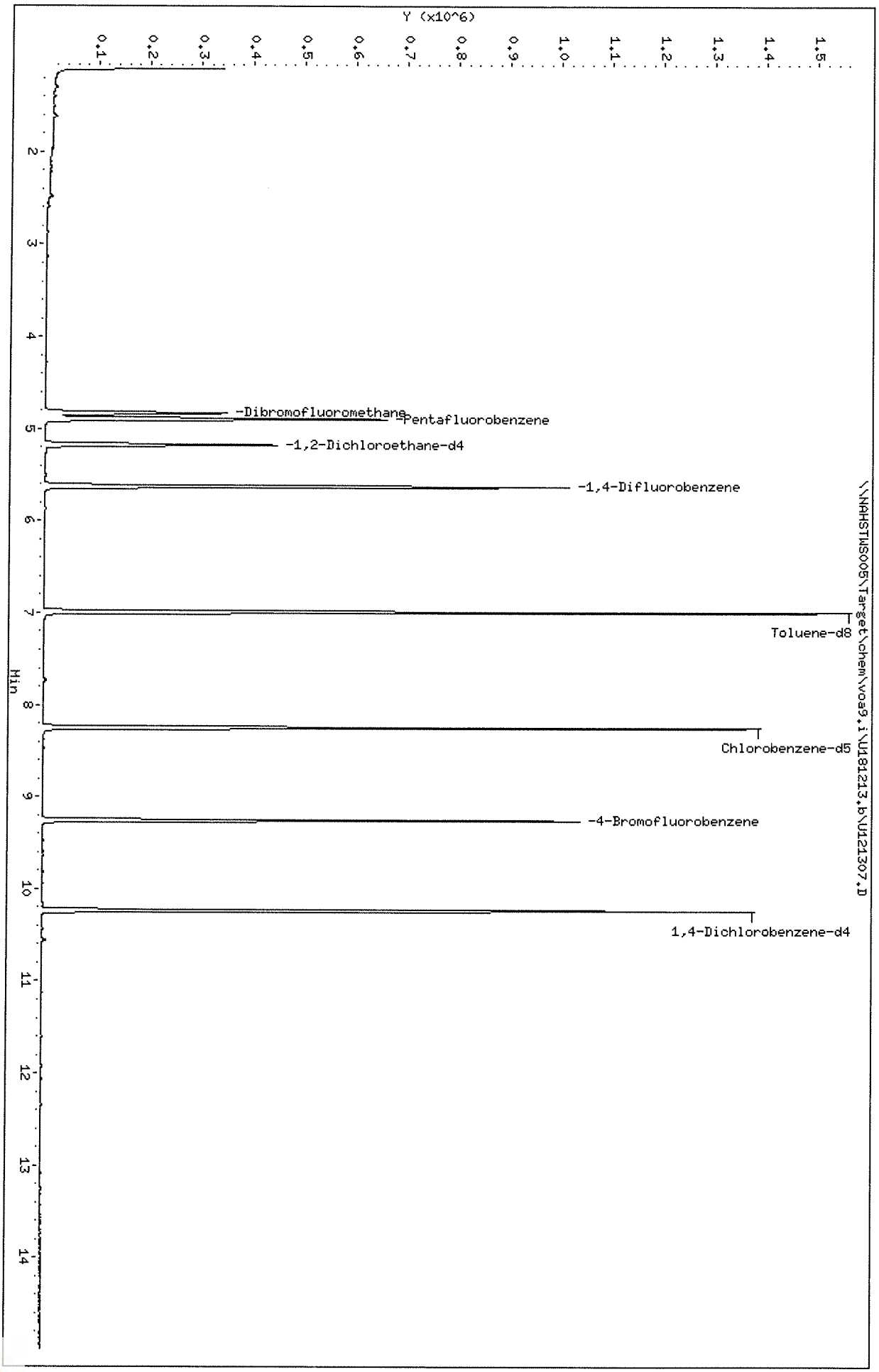
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121307.D
Lab Smp Id: HS18120114-02 Client Smp ID: HS18120114-02
Inj Date : 13-DEC-2018 12:09
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-02;HS18120114-02;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	401840	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	727486	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	664827	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	302238	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.834	(0.987)	205583	44.3677	44.36
$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	282841	46.4382	46.43
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	885131	52.1613	52.16
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	319556	48.5790	48.57



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Date : 13-DEC-2018 12:09
Client ID: HS18120114-02
Sample Info: HS18120114-02;HS18120114-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121308.D
Lab Smp Id: HS18120114-03 Client Smp ID: HS18120114-03
Inj Date : 13-DEC-2018 12:34
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-03;HS18120114-03;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	409143	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	736318	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.253	(1.000)	670814	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	304036	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	209521	44.4117	44.41
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	288024	46.4453	46.44
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	910948	53.2377	53.23
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	326364	49.1841	49.18

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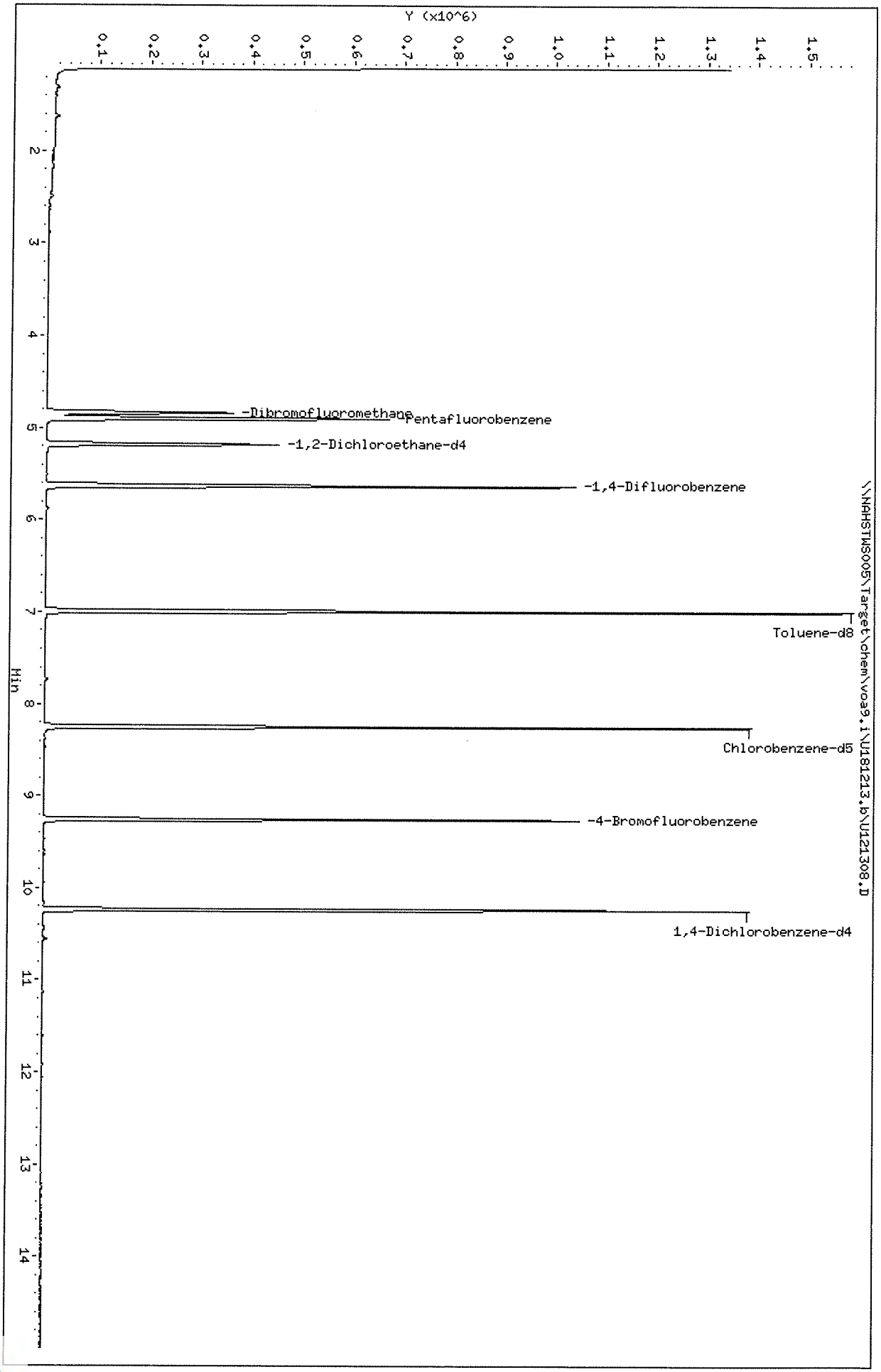
Date : 13-DEC-2018 12:34
Client ID: HS18120114-03
Sample Info: HS18120114-03;HS18120114-03;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



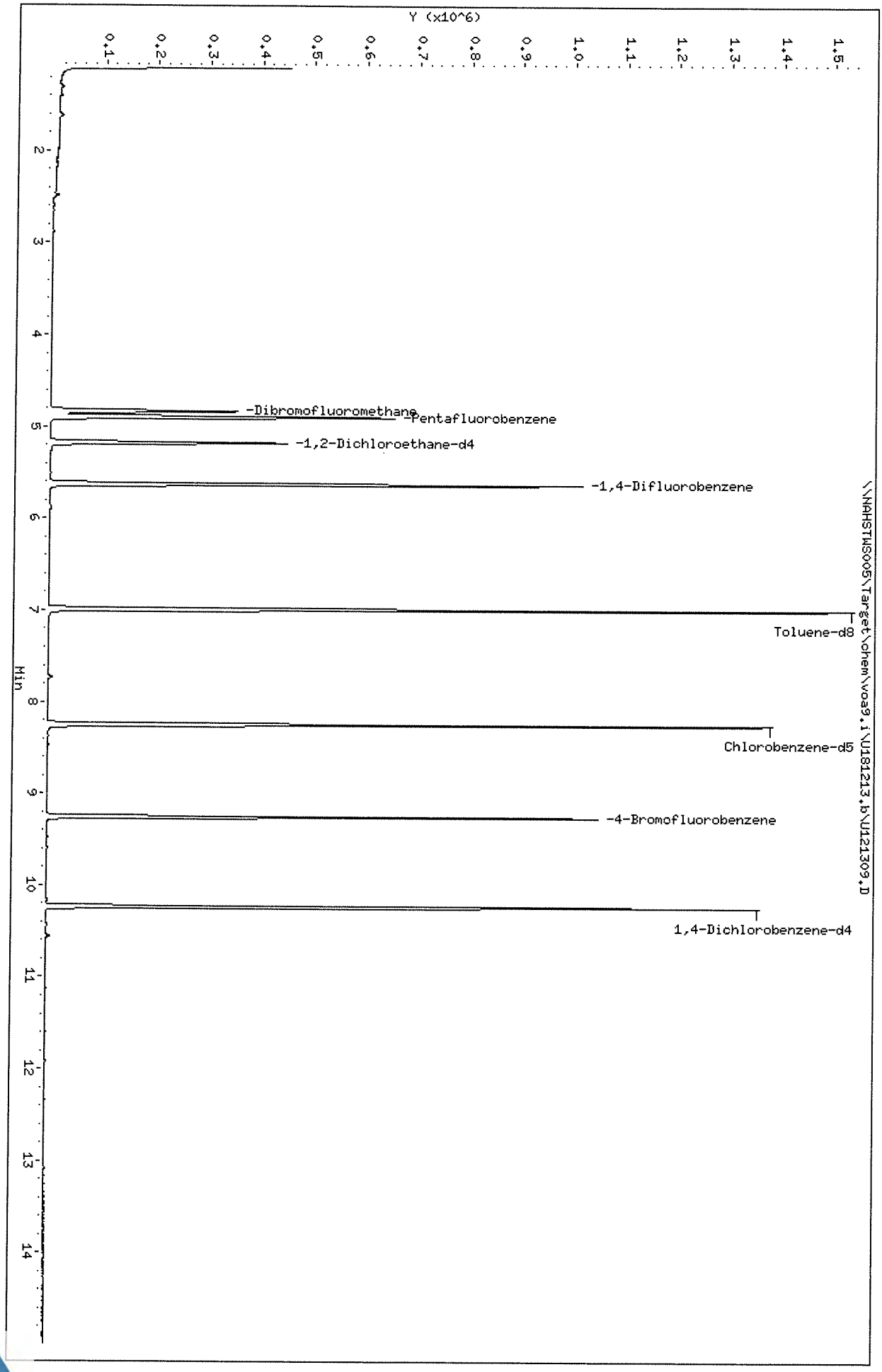
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121309.D
Lab Smp Id: HS18120114-04 Client Smp ID: HS18120114-04
Inj Date : 13-DEC-2018 12:58
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-04;HS18120114-04;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	404331	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	726532	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	660830	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	301161	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.834	(0.986)	205063	43.9719	43.97
$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	284630	46.4442	46.44
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	892560	52.9420	52.94
$ 69 4-Bromofluorobenzene	95	9.258	9.257	(1.122)	322904	49.4025	49.40



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Date : 13-DEC-2018 12:58
Client ID: HS18120114-04
Sample Info: HS18120114-04;HS18120114-04;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121310.D
Lab Smp Id: HS18120114-05 Client Smp ID: HS18120114-05
Inj Date : 13-DEC-2018 13:23
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-05;HS18120114-05;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

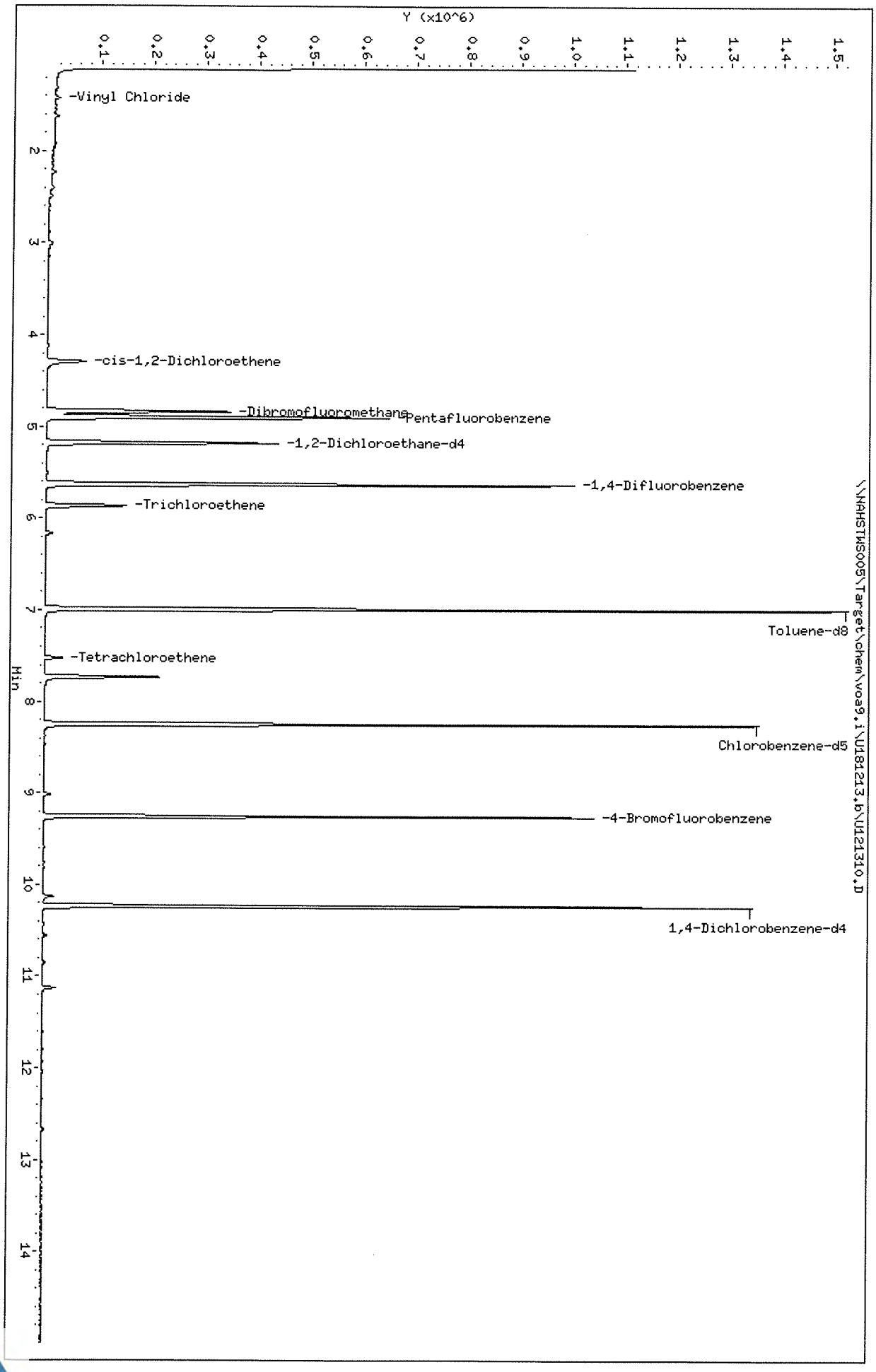
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	395930	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	715486	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	656432	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	298105	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	201802	44.1971	44.19
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	278482	46.4037	46.40
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	878059	52.4143	52.41
$ 69 4-Bromofluorobenzene	95	9.258	9.257	(1.122)	318226	49.0046	49.00
27 cis-1,2-Dichloroethene	96	4.291	4.294	(0.876)	33007	5.88332	5.88
56 Tetrachloroethene	164	7.526	7.525	(0.912)	6805	1.97897	1.97(a)
38 Trichloroethene	130	5.865	5.865	(1.042)	44408	9.10876	9.10
5 Vinyl Chloride	62	1.427	1.426	(0.291)	6646	1.52732	1.52(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121310.D
Date : 13-DEC-2018 13:23
Client ID: HS18120114-05
Sample Info: HS18120114-05;HS18120114-05;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



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Date : 13-DEC-2018 13:23

Client ID: HS18120114-05

Instrument: VOA9.i

Sample Info: HS18120114-05;HS18120114-05;;;

Purge Volume: 5.0

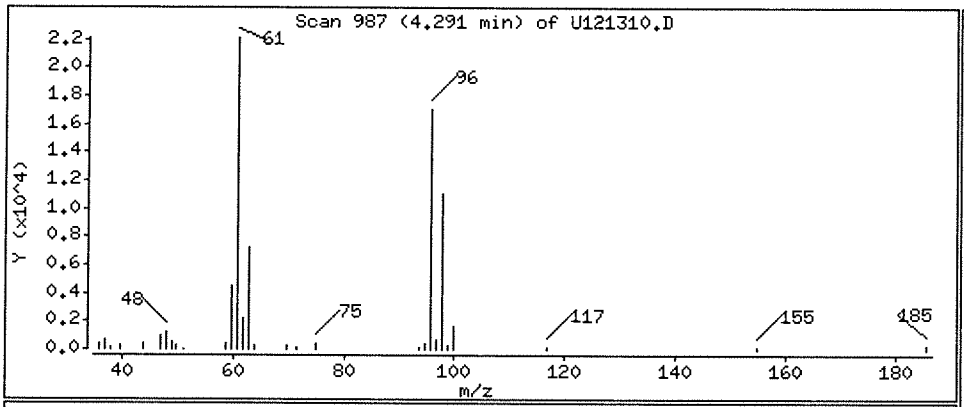
Operator: PC

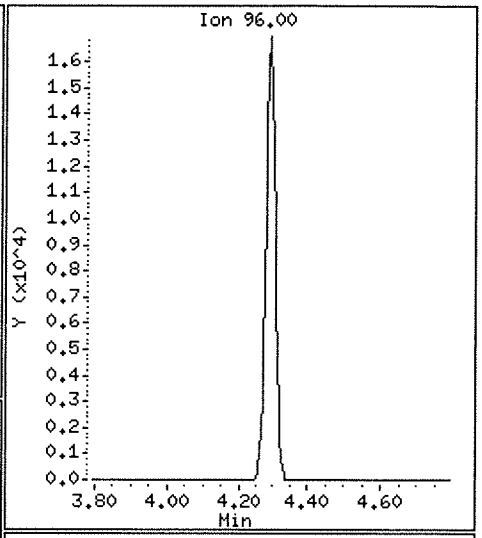
Column phase: DB624

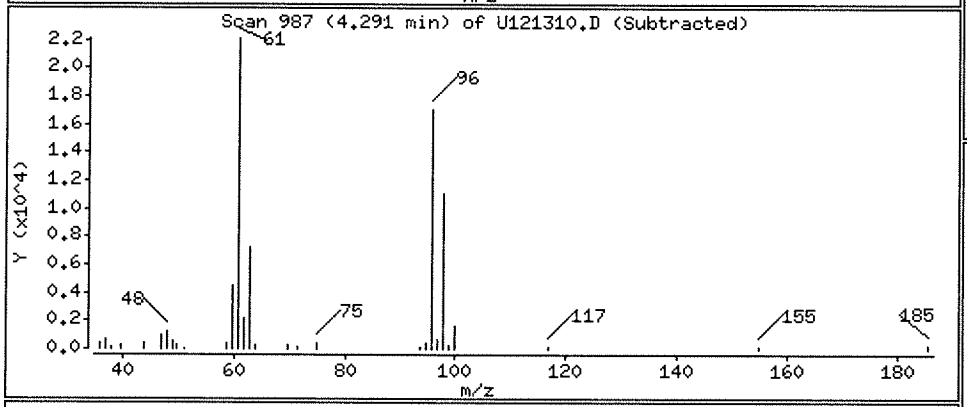
Column diameter: 0.18

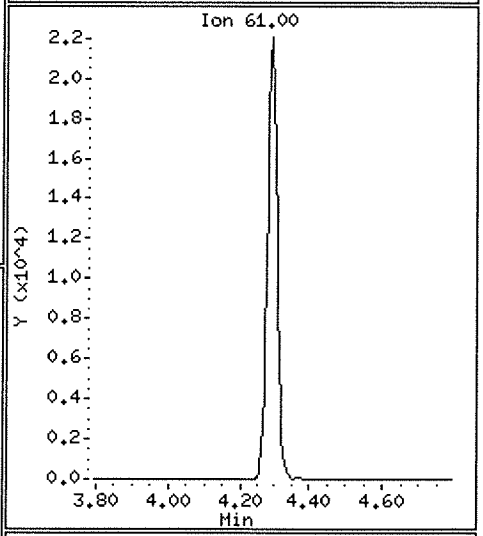
27 cis-1,2-Dichloroethene

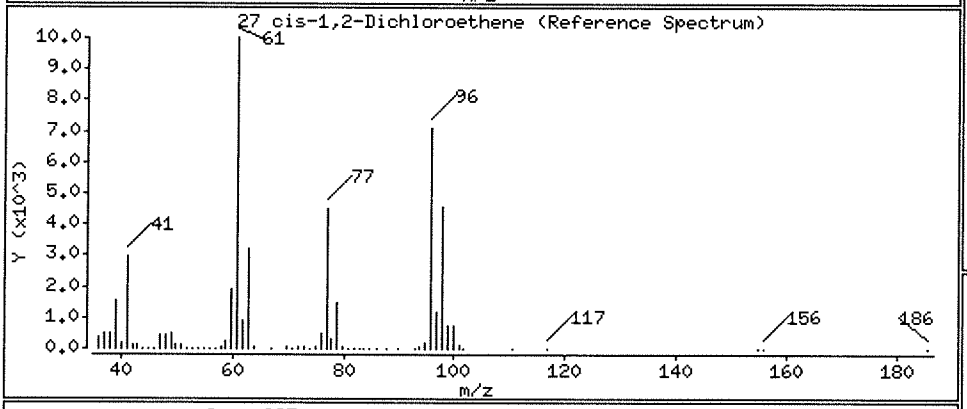
Concentration: 5.88 ug/l

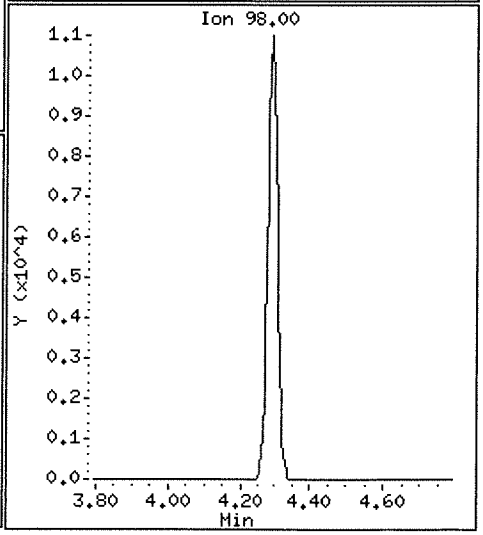


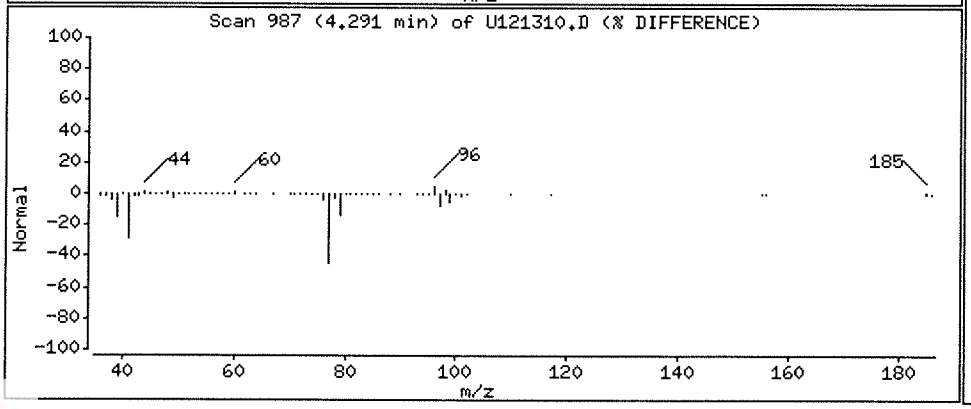












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Date : 13-DEC-2018 13:23

Client ID: HS18120114-05

Instrument: VOA9.i

Sample Info: HS18120114-05;HS18120114-05;;;

Purge Volume: 5.0

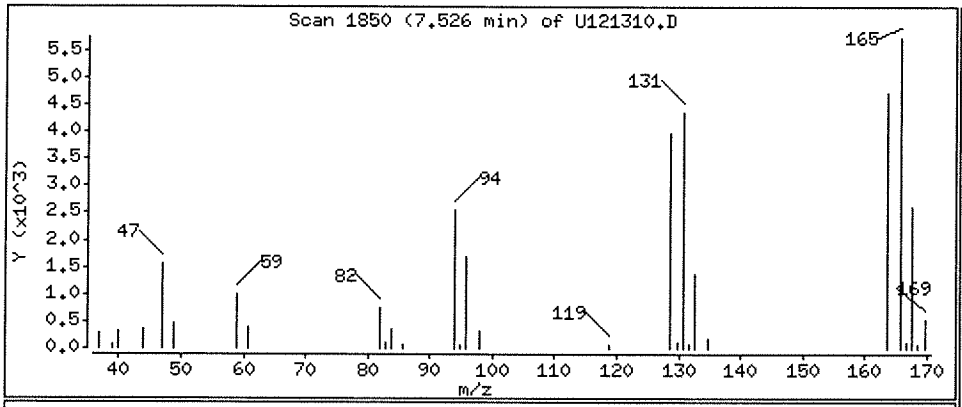
Operator: PC

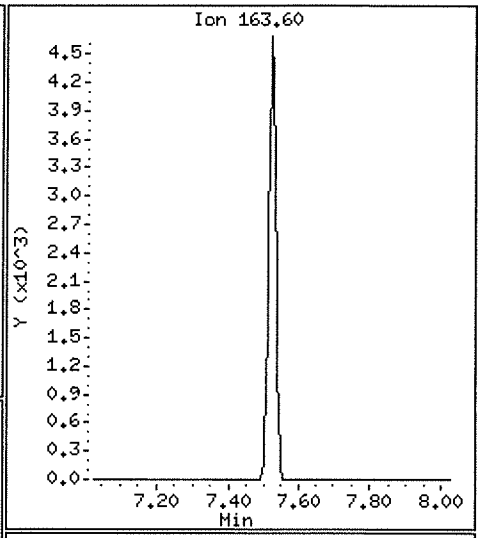
Column phase: DB624

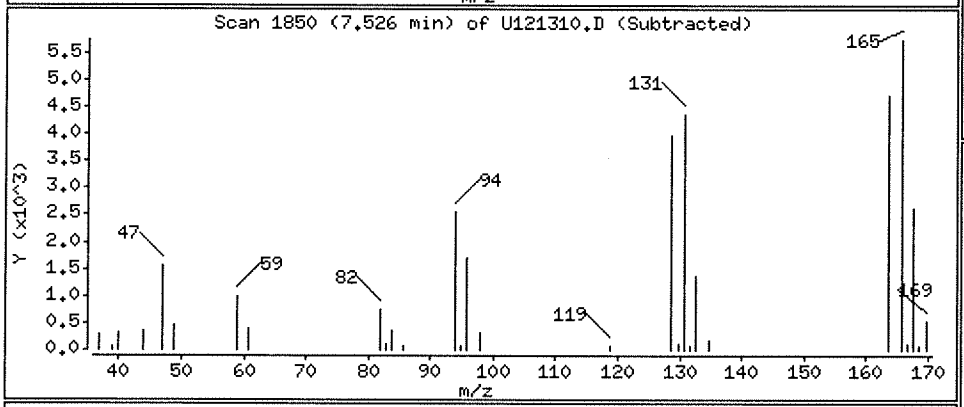
Column diameter: 0.18

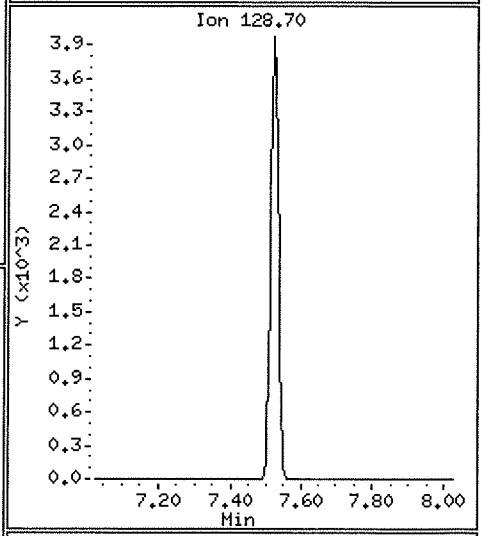
56 Tetrachloroethene

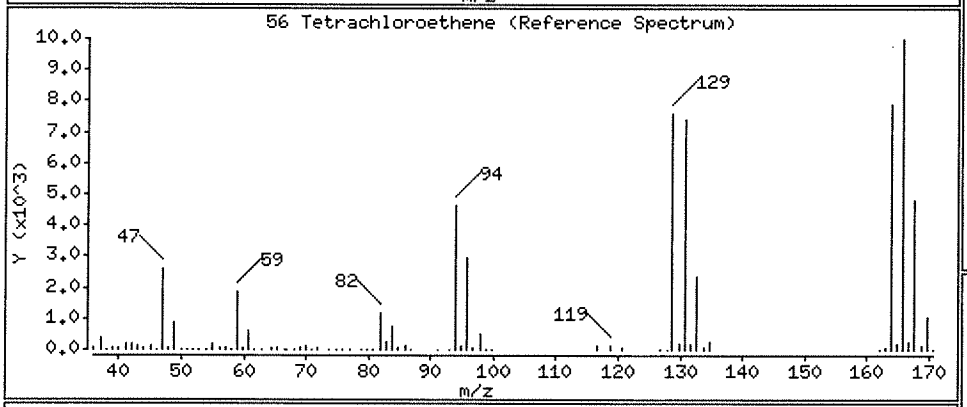
Concentration: 1.97 ug/l

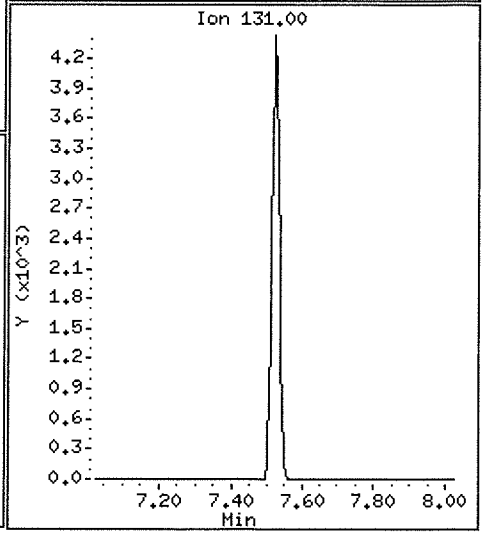


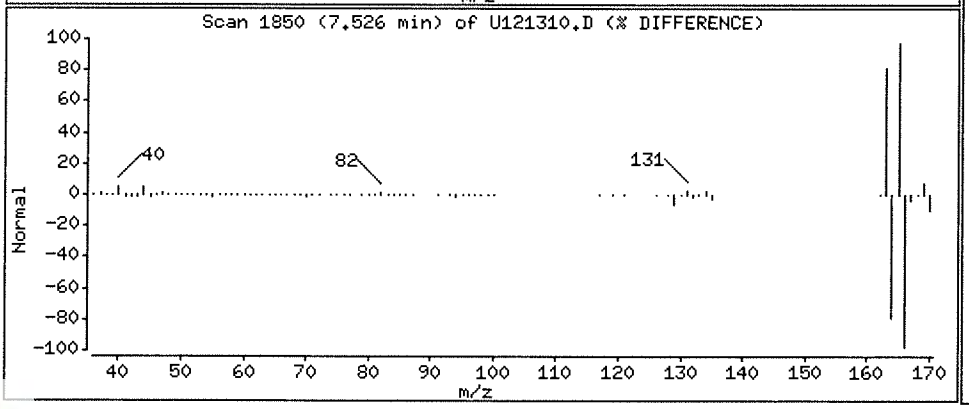












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121310.D

Date : 13-DEC-2018 13:23

Client ID: HS18120114-05

Instrument: VOA9.i

Sample Info: HS18120114-05;HS18120114-05;;;

Purge Volume: 5.0

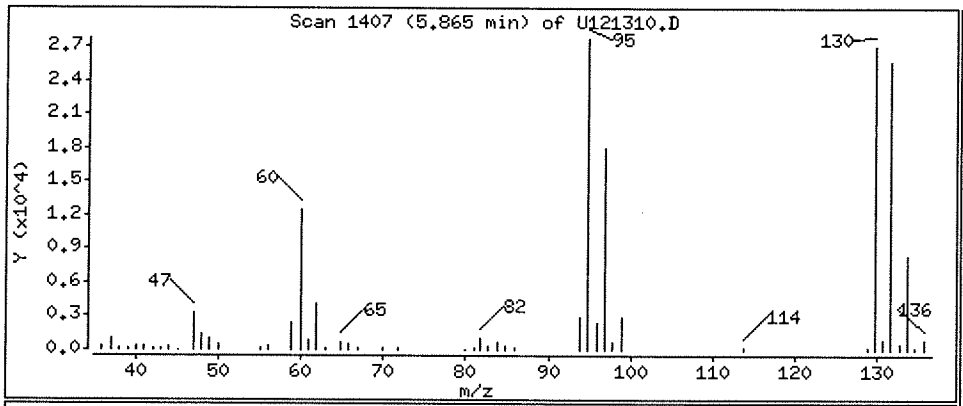
Operator: PC

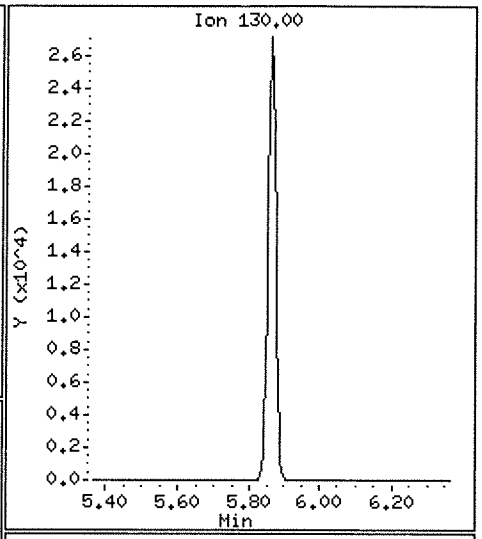
Column phase: DB624

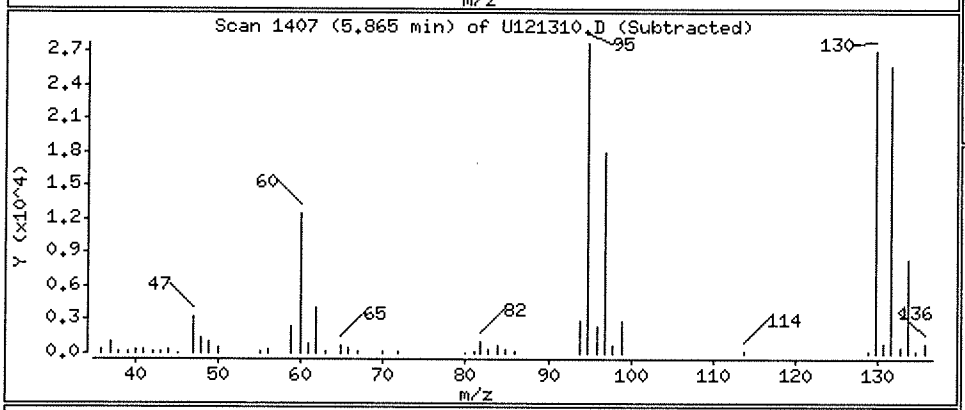
Column diameter: 0.18

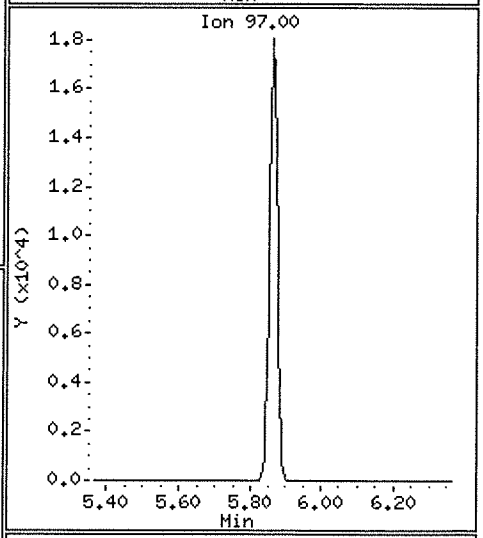
38 Trichloroethene

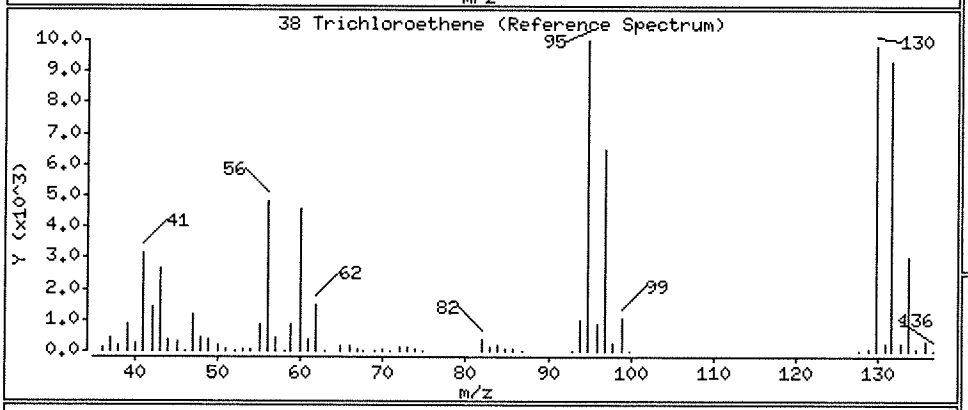
Concentration: 9.10 ug/l

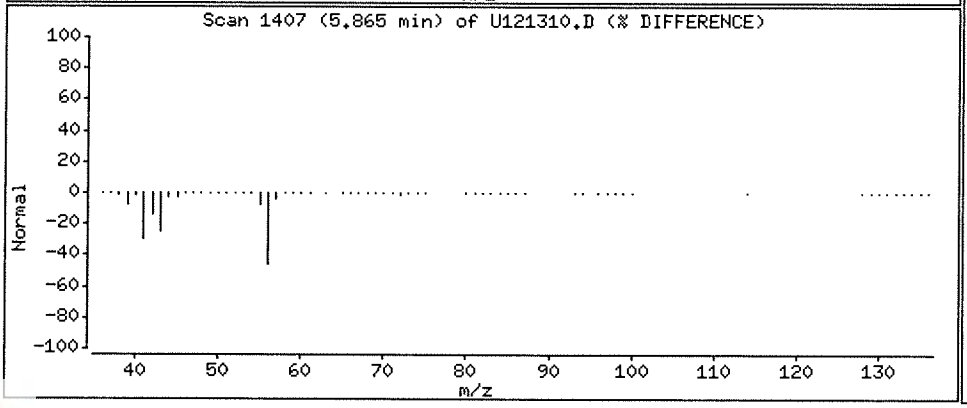


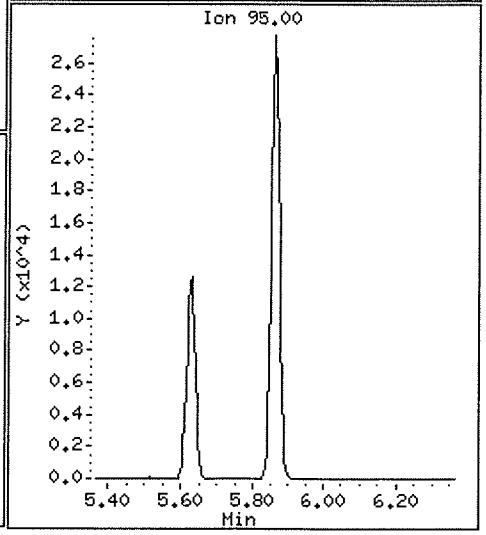












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121310.D

Date : 13-DEC-2018 13:23

Client ID: HS18120114-05

Instrument: VOA9.i

Sample Info: HS18120114-05;HS18120114-05;;;

Purge Volume: 5.0

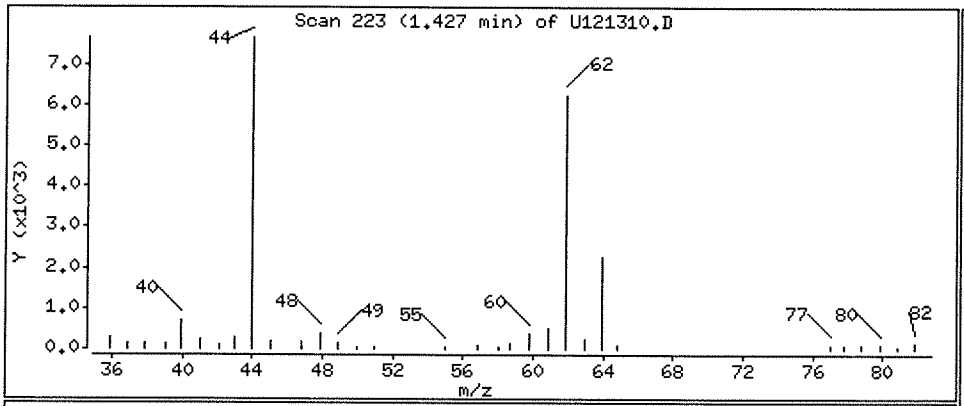
Operator: PC

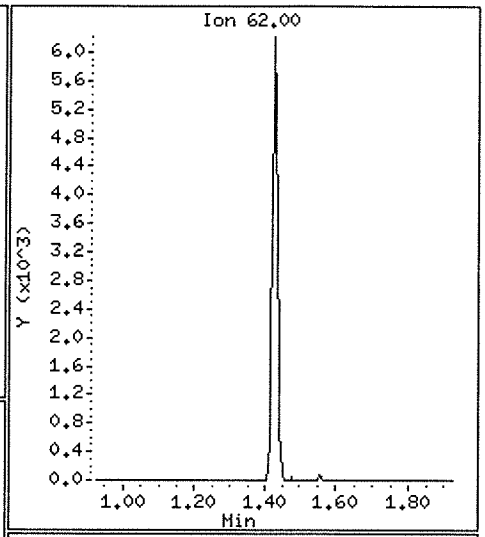
Column phase: DB624

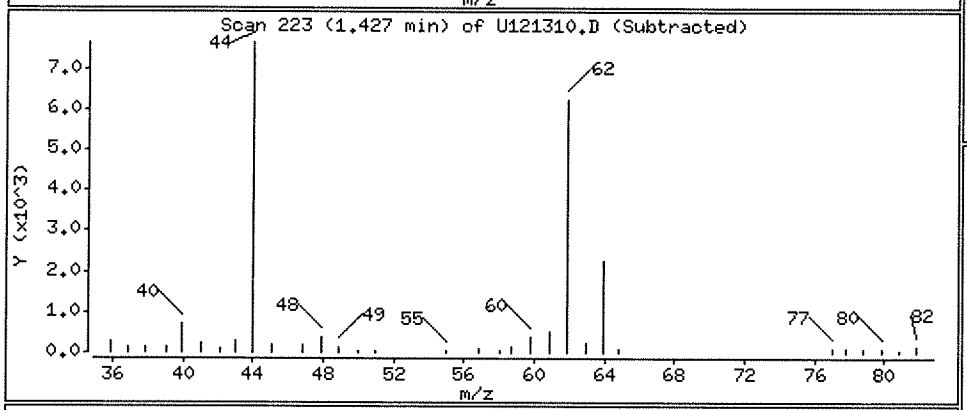
Column diameter: 0.18

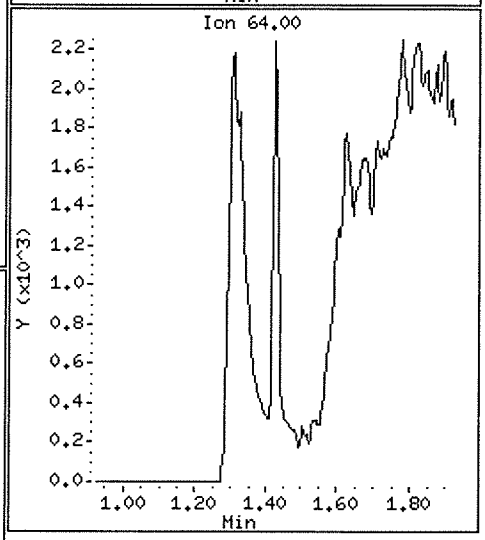
5 Vinyl Chloride

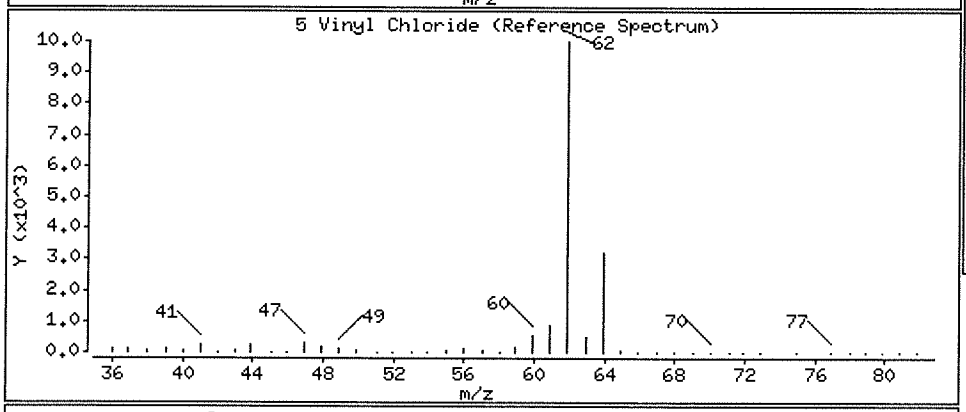
Concentration: 1.52 ug/l

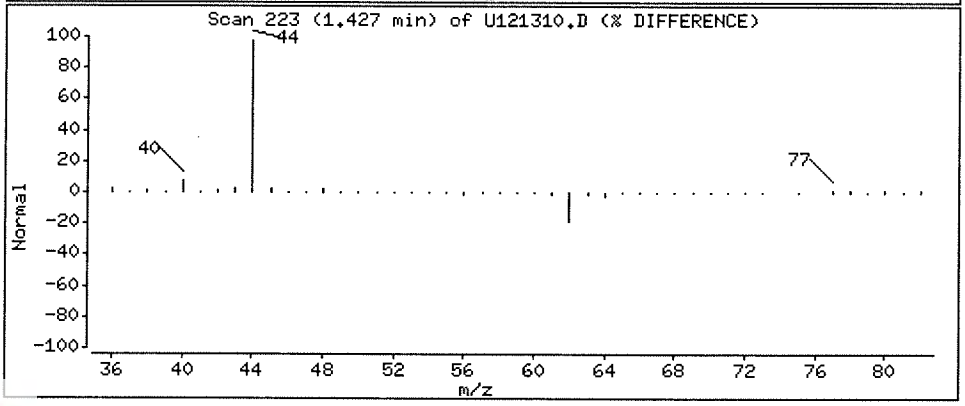












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121311.D Page 1
Report Date: 25-Jan-2019 20:03

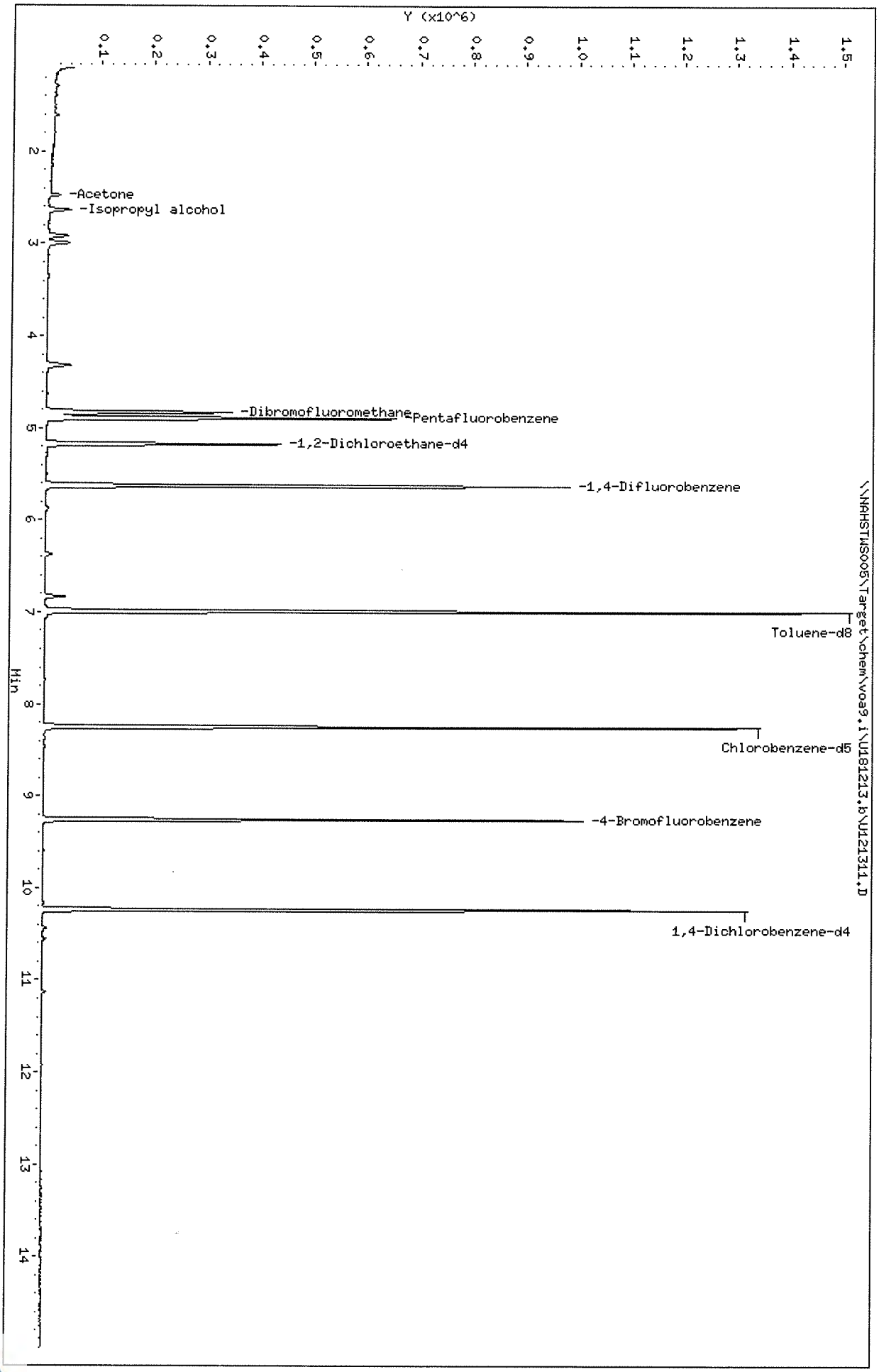
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121311.D
Lab Smp Id: HS18120114-13 Client Smp ID: HS18120114-13
Inj Date : 13-DEC-2018 13:48
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-13;HS18120114-13;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.890	4.898	(1.000)	394307	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	708961	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	641063	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	294944	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.834	(0.987)	201466	44.3082	44.30
$ 35 1,2-Dichloroethane-d4	65	5.171	5.179	(1.057)	276153	46.1974	46.19
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	873459	53.4215	53.42
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	314416	49.5911	49.59
10 Acetone	43	2.476	2.487	(0.506)	23315	9.02136	9.02



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121311.D
Date : 13-DEC-2018 13:48
Client ID: HS18120114-13
Sample Info: HS18120114-13;HS18120114-13;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121311.D

Date : 13-DEC-2018 13:48

Client ID: HS18120114-13

Instrument: VOA9.i

Sample Info: HS18120114-13;HS18120114-13;;;

Purge Volume: 5.0

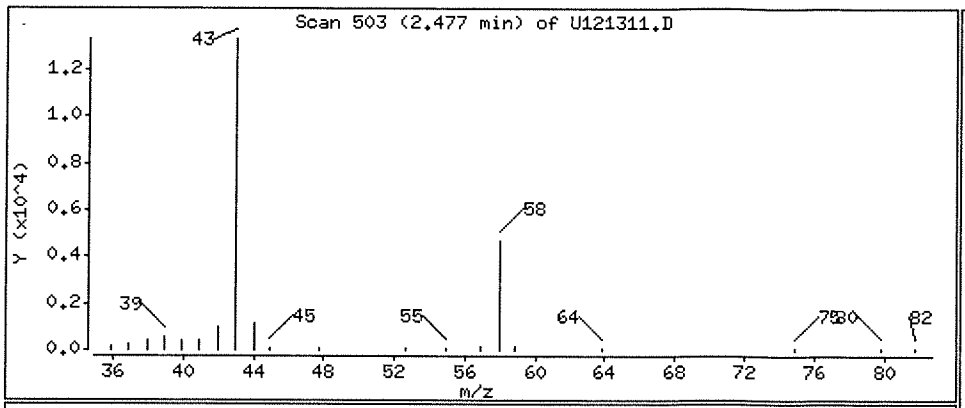
Operator: PC

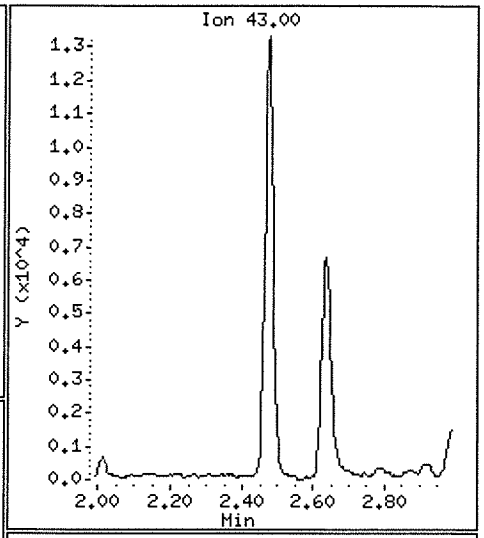
Column phase: DB624

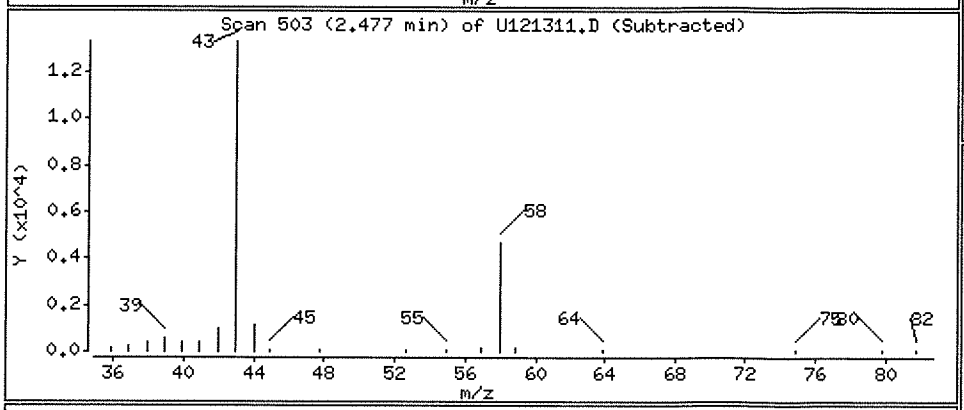
Column diameter: 0.18

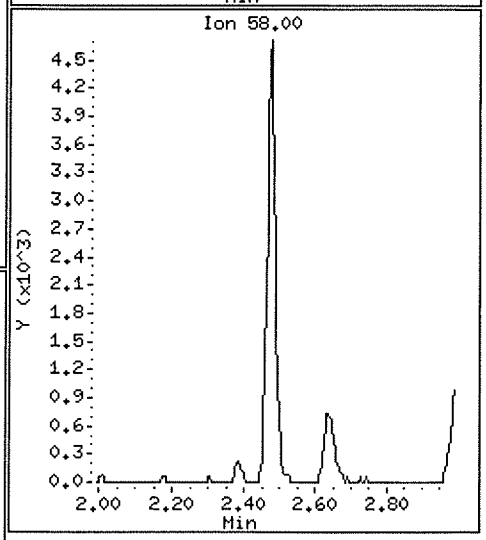
10 Acetone

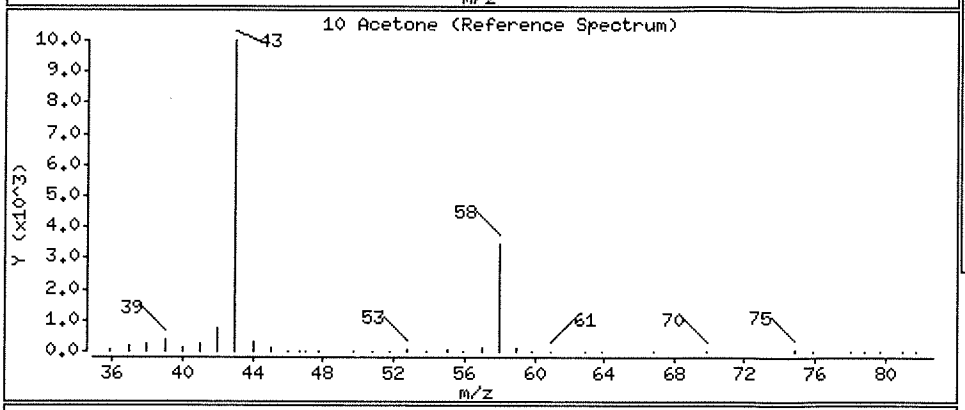
Concentration: 9.02 ug/l

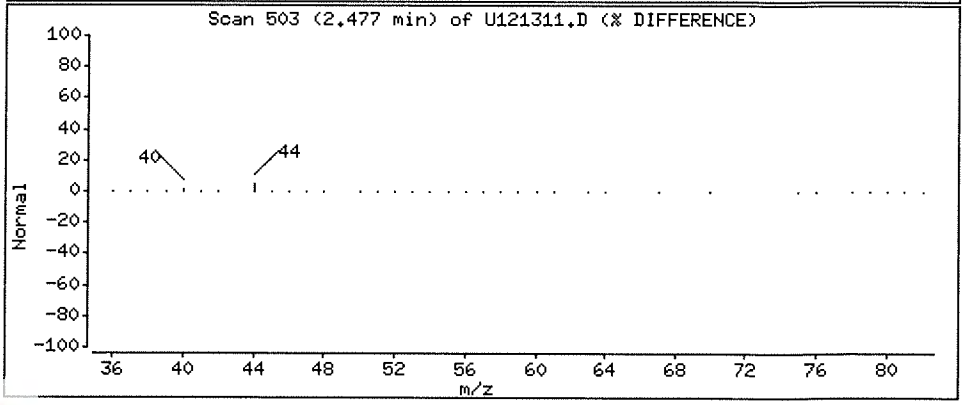












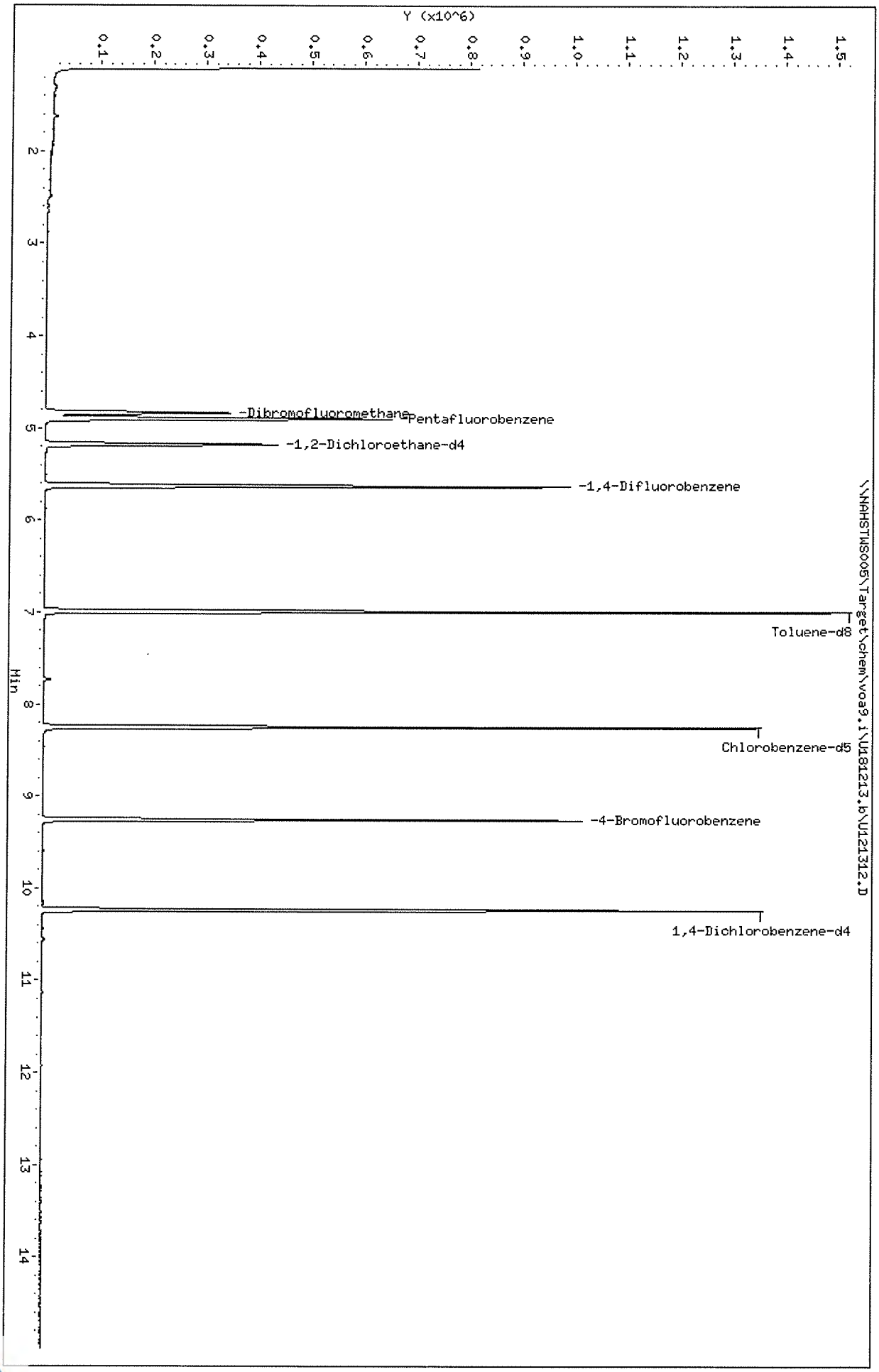
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121312.D
Lab Smp Id: HS18120114-06 Client Smp ID: HS18120114-06
Inj Date : 13-DEC-2018 14:13
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-06;HS18120114-06;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	393495	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	712153	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	651329	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	293615	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	203060	44.7635	44.76
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	278815	46.7598	46.75
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	873148	52.5332	52.53
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	317254	49.2427	49.24



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Date : 13-DEC-2018 14:13
Client ID: HS18120114-06
Sample Info: HS18120114-06;HS18120114-06;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121313.D Page 1
Report Date: 25-Jan-2019 20:03

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121313.D
Lab Smp Id: HS18120114-07 Client Smp ID: HS18120114-07
Inj Date : 13-DEC-2018 14:37
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-07;HS18120114-07;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

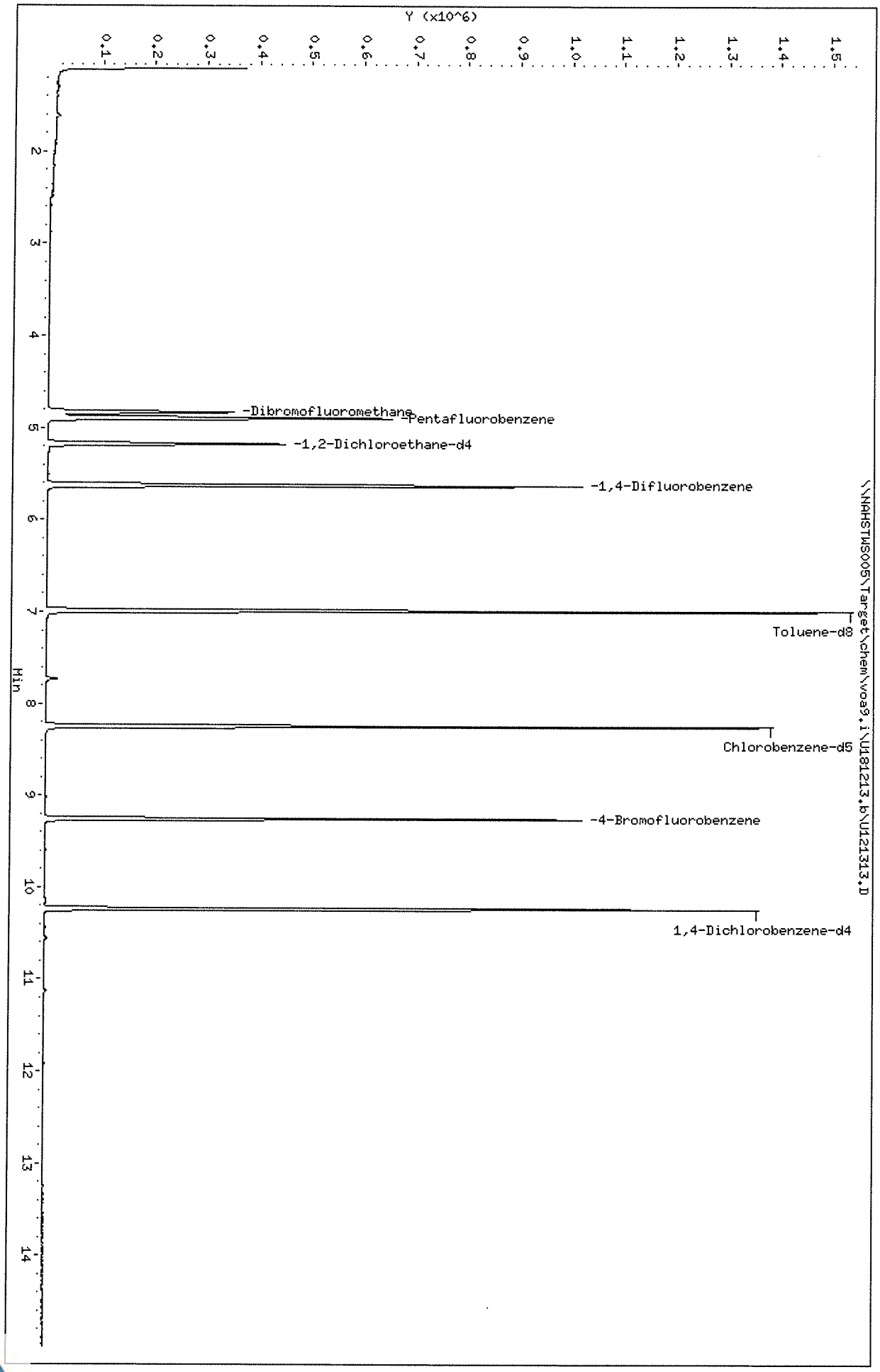
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	396203	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	725485	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	656946	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	297326	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.834	(0.987)	207253	45.3927	45.39
$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	282642	47.0897	47.08
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	885046	52.8023	52.80
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	319998	49.2440	49.24

Data File: \\NAHSTWS005\Target\chem\voa9,i\U181213,b\U121313.D
Date : 13-DEC-2018 14:37
Client ID: HS18120114-07
Sample Info: HS18120114-07;HS18120114-07;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18



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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121314.D
Lab Smp Id: HS18120114-09 Client Smp ID: HS18120114-09
Inj Date : 13-DEC-2018 15:02
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-09;HS18120114-09;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

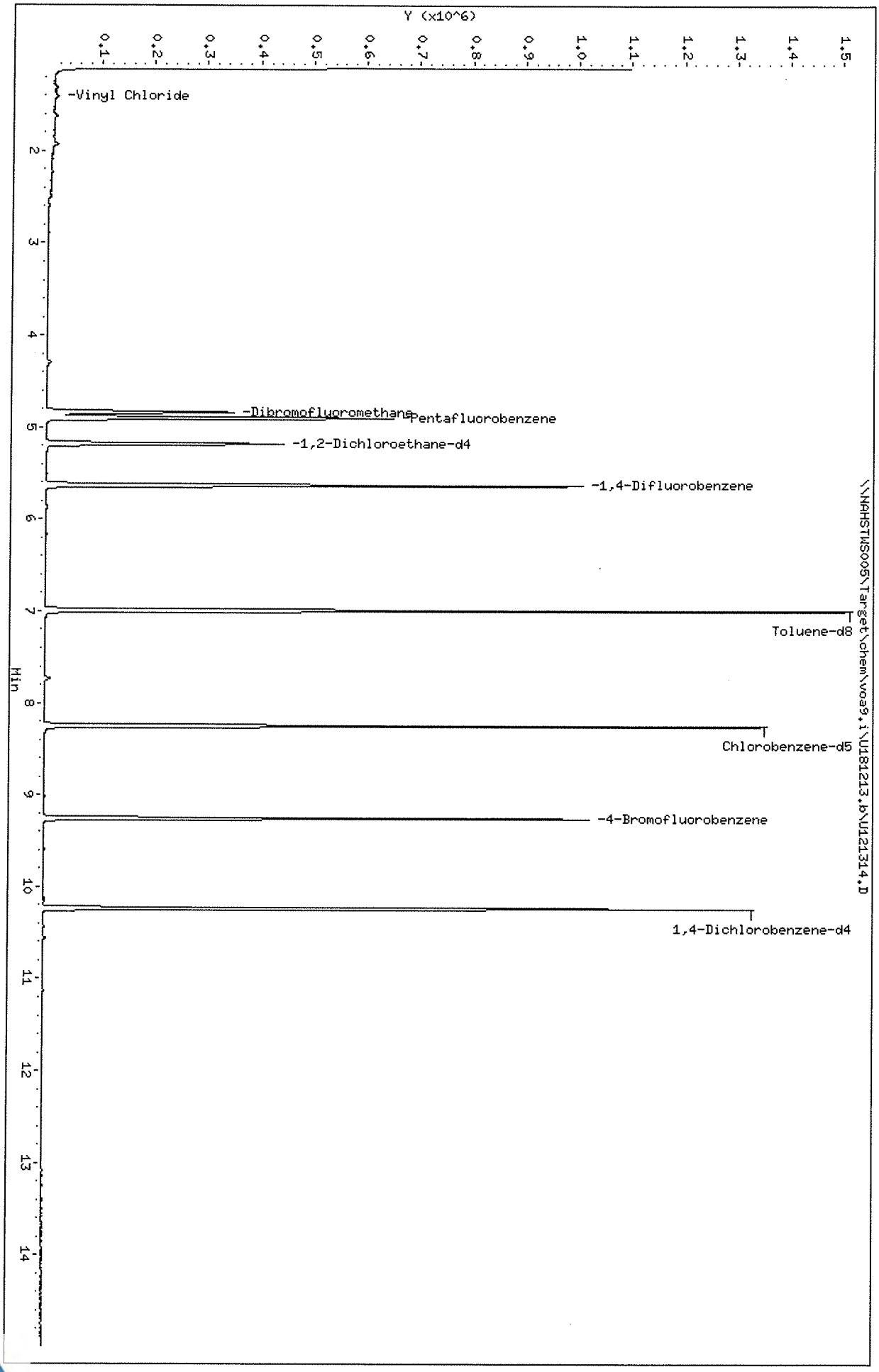
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.901	4.898	(1.000)	393895	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	713882	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	650853	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	292838	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.986)	203736	44.8698	44.86
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	279105	46.7609	46.76
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	883289	53.2034	53.20
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	314820	48.8933	48.89
5 Vinyl Chloride	62	1.430	1.426	(0.292)	980	0.65916	0.65(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121314.D
Date : 13-DEC-2018 15:02
Client ID: HS18120114-09
Sample Info: HS18120114-09;HS18120114-09;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121314.D

Date : 13-DEC-2018 15:02

Client ID: HS18120114-09

Instrument: VOA9.i

Sample Info: HS18120114-09;HS18120114-09;;;

Purge Volume: 5.0

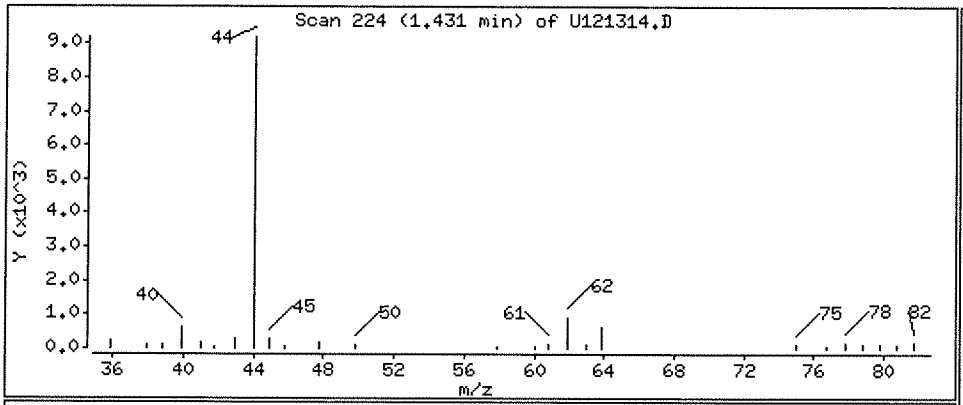
Operator: PC

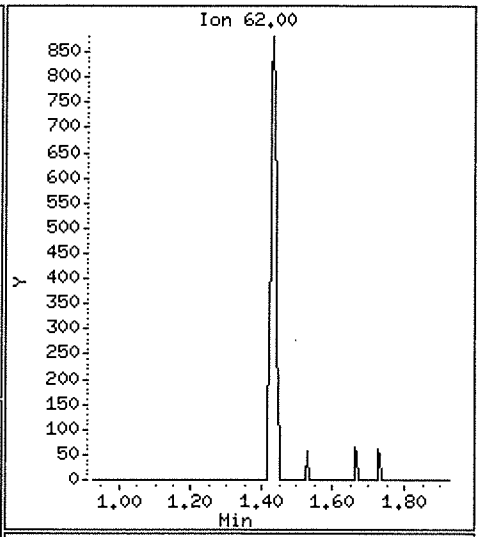
Column phase: DB624

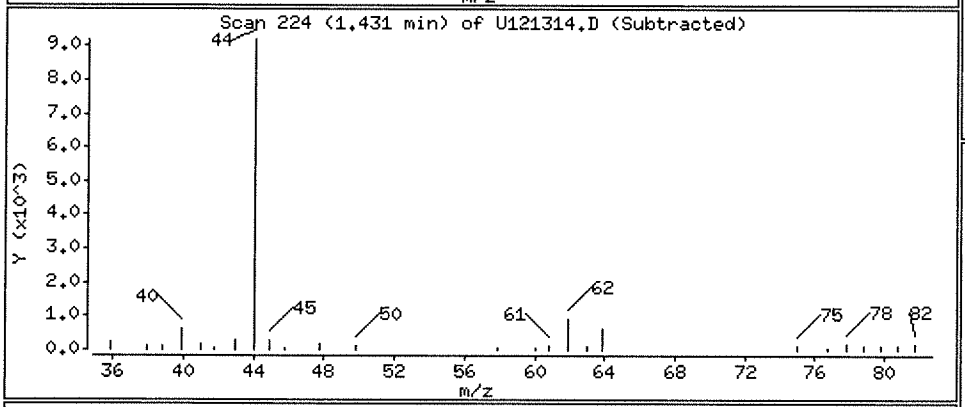
Column diameter: 0.18

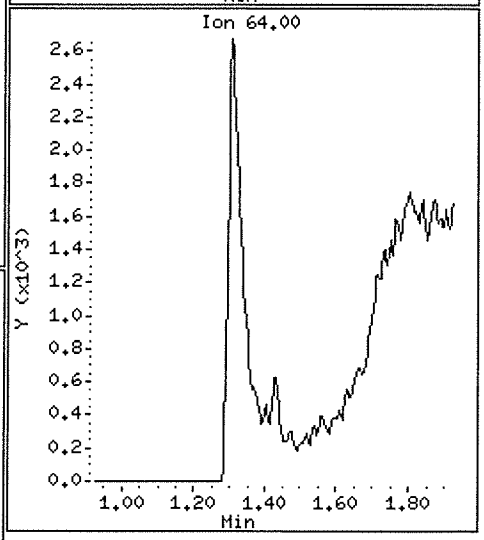
5 Vinyl Chloride

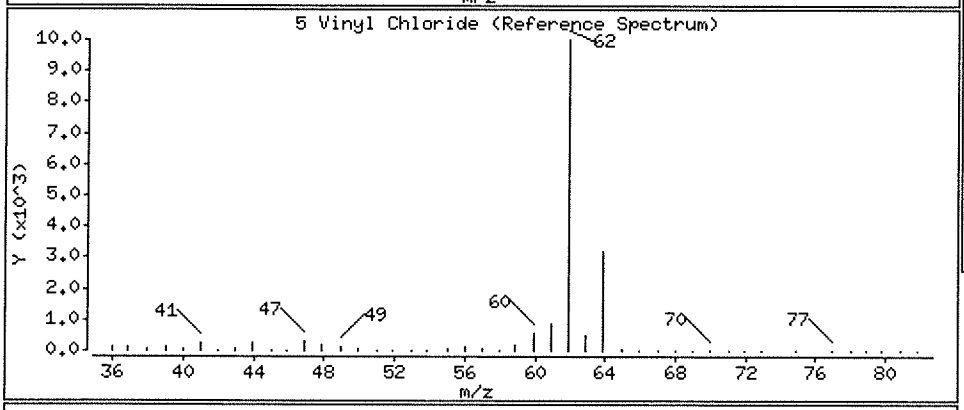
Concentration: 0.65 ug/l

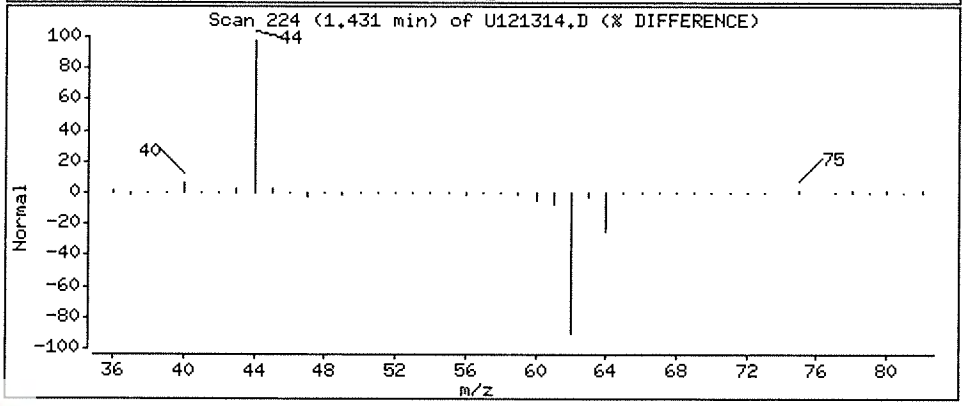












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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121315.D
Lab Smp Id: HS18120114-10 Client Smp ID: HS18120114-10
Inj Date : 13-DEC-2018 15:27
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-10;HS18120114-10;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

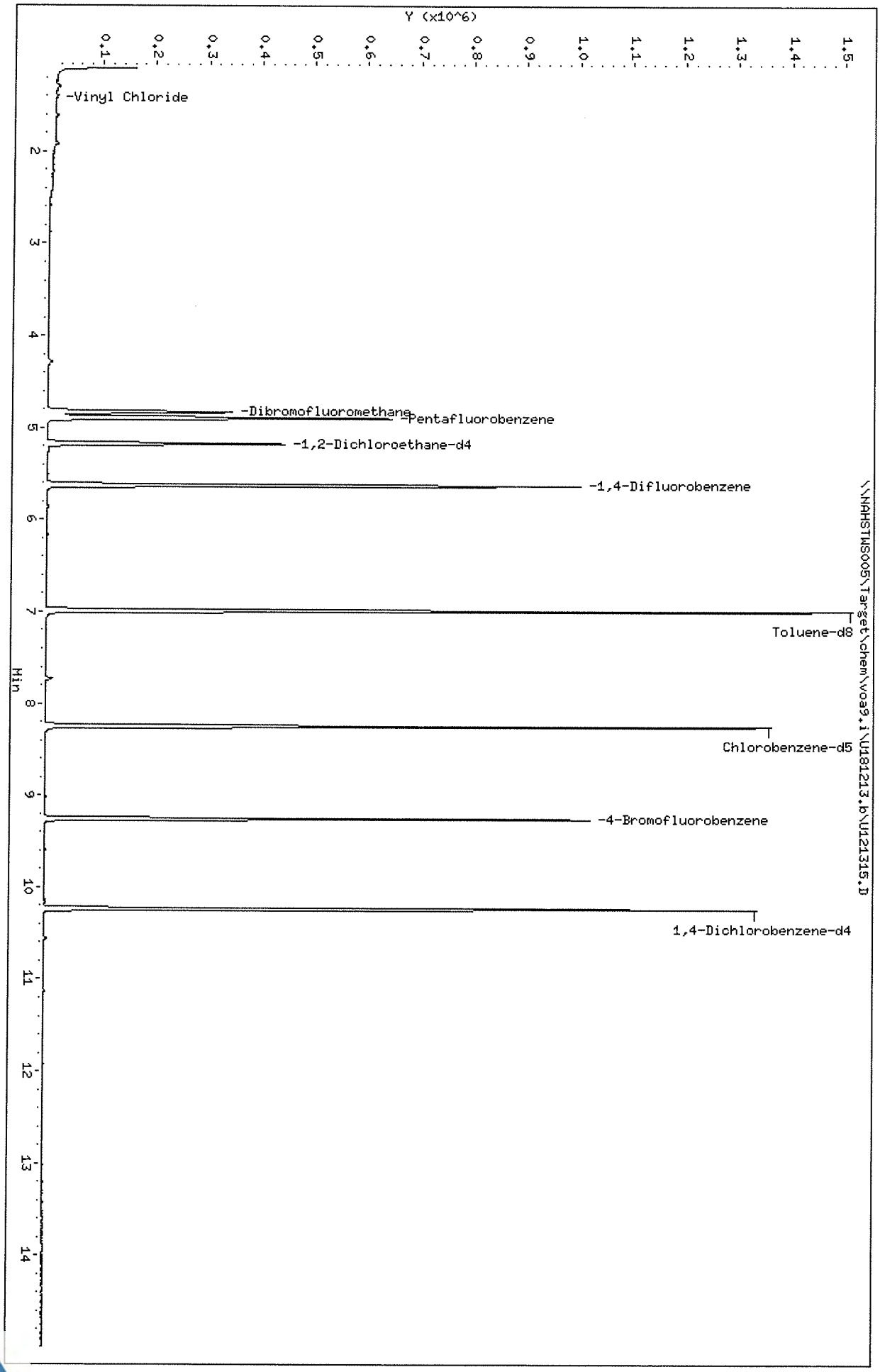
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	389253	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	714637	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	649450	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	292924	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.834	(0.987)	201096	44.8150	44.81
$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	277300	47.0221	47.02
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	869284	52.4494	52.44
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	314366	48.9290	48.92
5 Vinyl Chloride	62	1.419	1.426	(0.290)	970	0.65941	0.65(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



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Date : 13-DEC-2018 15:27
Client ID: HS18120114-10
Sample Info: HS18120114-10;HS18120114-10;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121315.D

Date : 13-DEC-2018 15:27

Client ID: HS18120114-10

Instrument: VOA9.i

Sample Info: HS18120114-10;HS18120114-10;;;

Purge Volume: 5.0

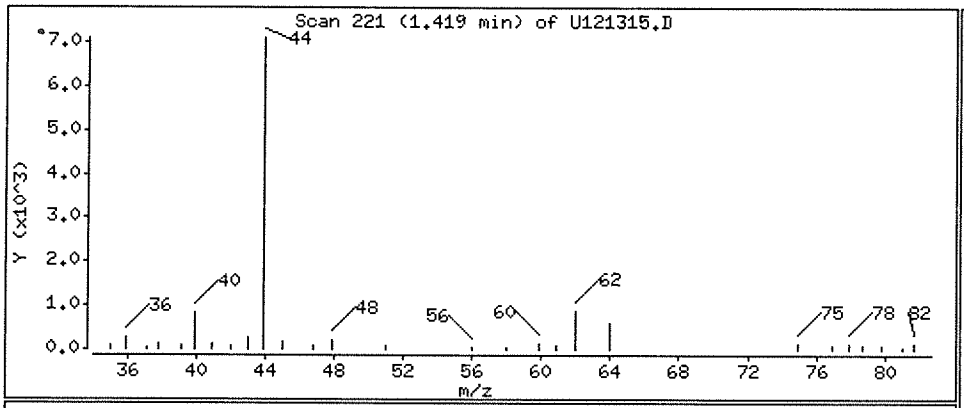
Operator: PC

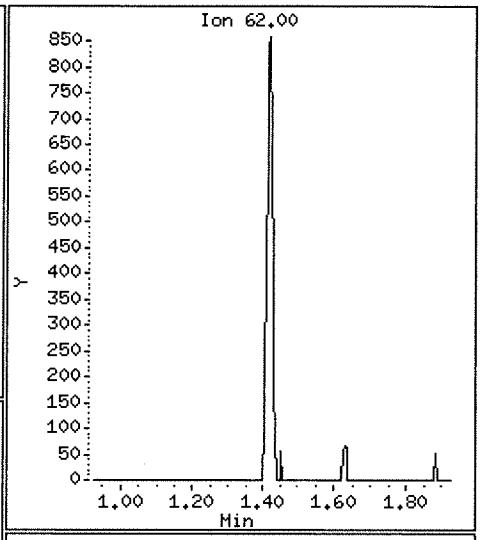
Column phase: DB624

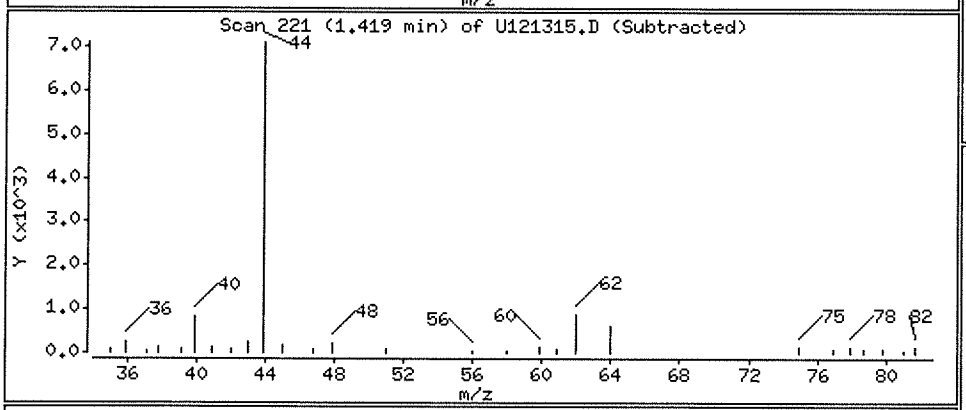
Column diameter: 0.18

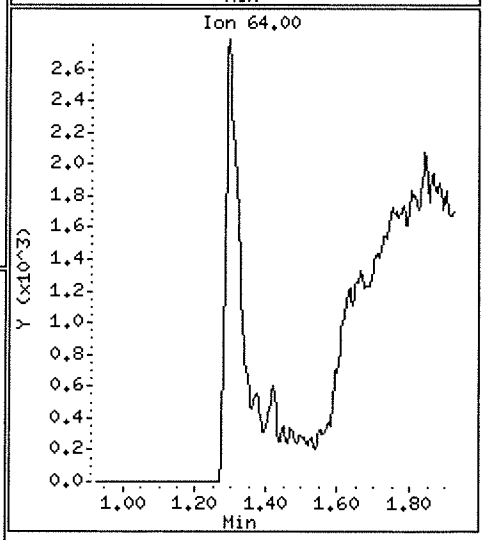
5 Vinyl Chloride

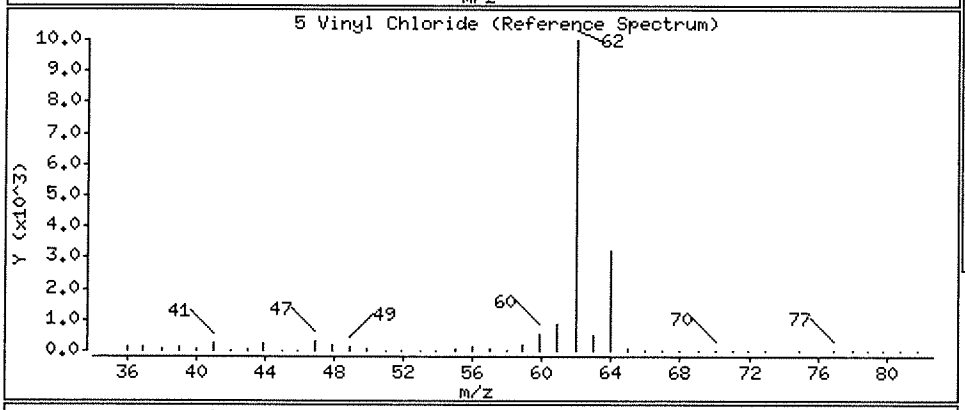
Concentration: 0.65 ug/l

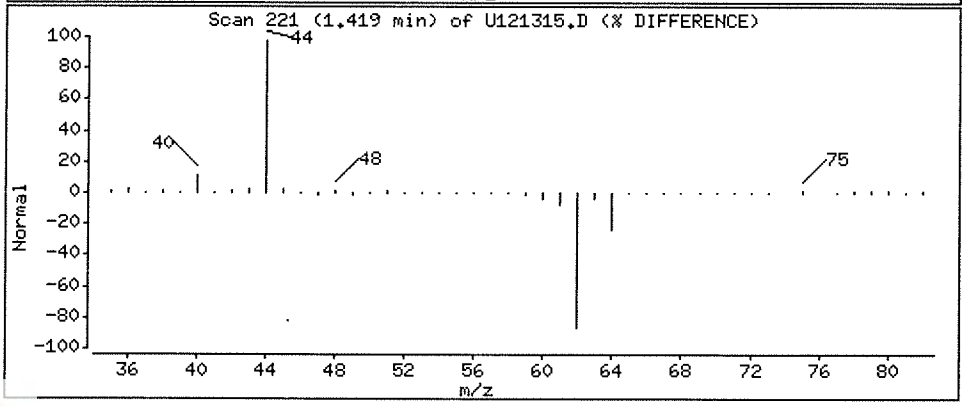












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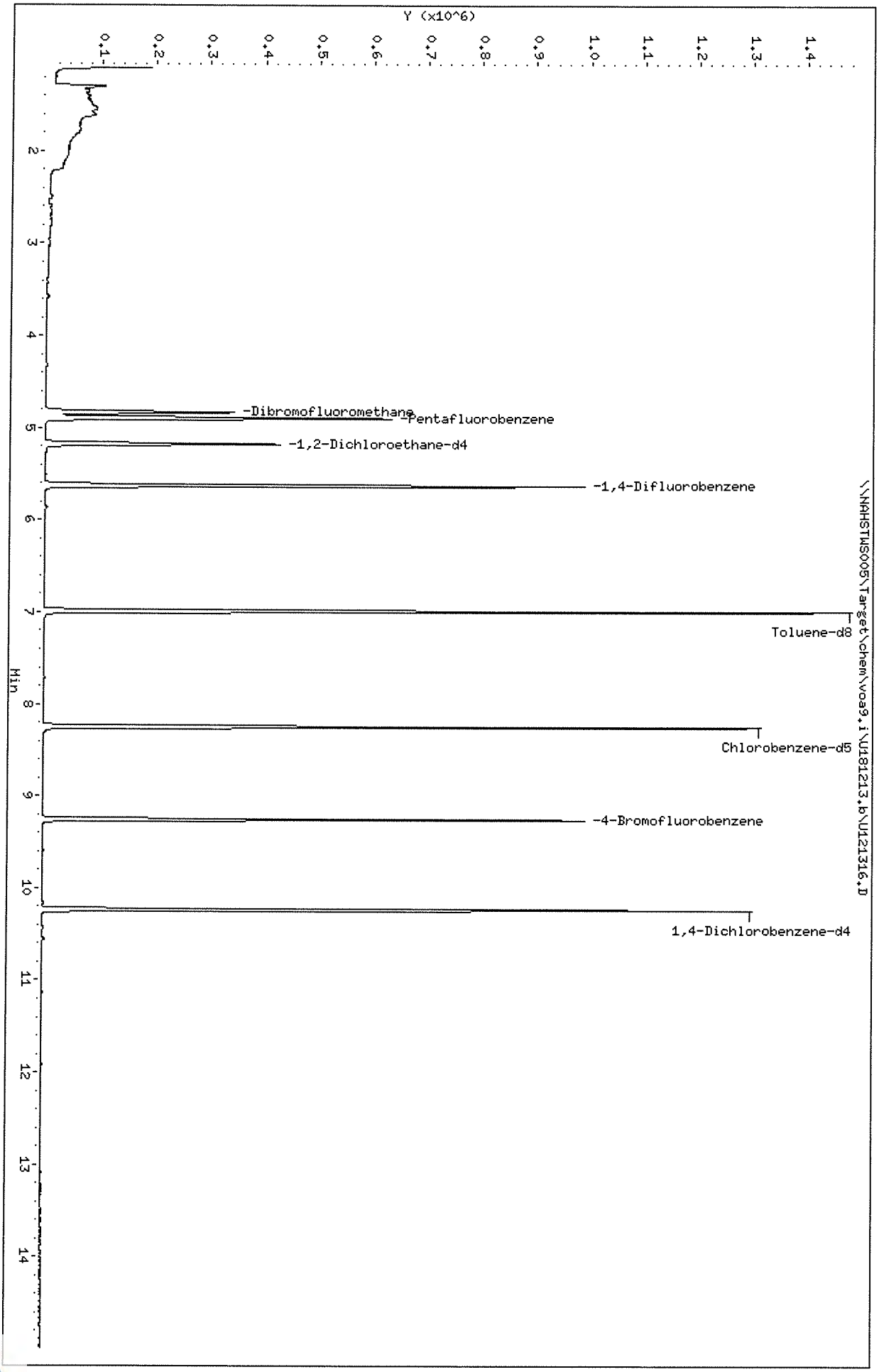
Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121316.D
Lab Smp Id: HS18120114-12 Client Smp ID: HS18120114-12
Inj Date : 13-DEC-2018 15:52
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-12;HS18120114-12;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	383004	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	694867	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	629523	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	287586	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.834	(0.987)	200365	45.3965	45.39
$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	273129	47.0723	47.07
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	853518	53.1504	53.15
$ 69 4-Bromofluorobenzene	95	9.258	9.257	(1.122)	306643	49.2445	49.24



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Date : 13-DEC-2018 15:52
Client ID: HS18120114-12
Sample Info: HS18120114-12;HS18120114-12;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121317.D Page 1
Report Date: 25-Jan-2019 20:04

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121317.D
Lab Smp Id: HS18120114-08 Client Smp ID: HS18120114-08
Inj Date : 13-DEC-2018 16:17
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-08;HS18120114-08;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

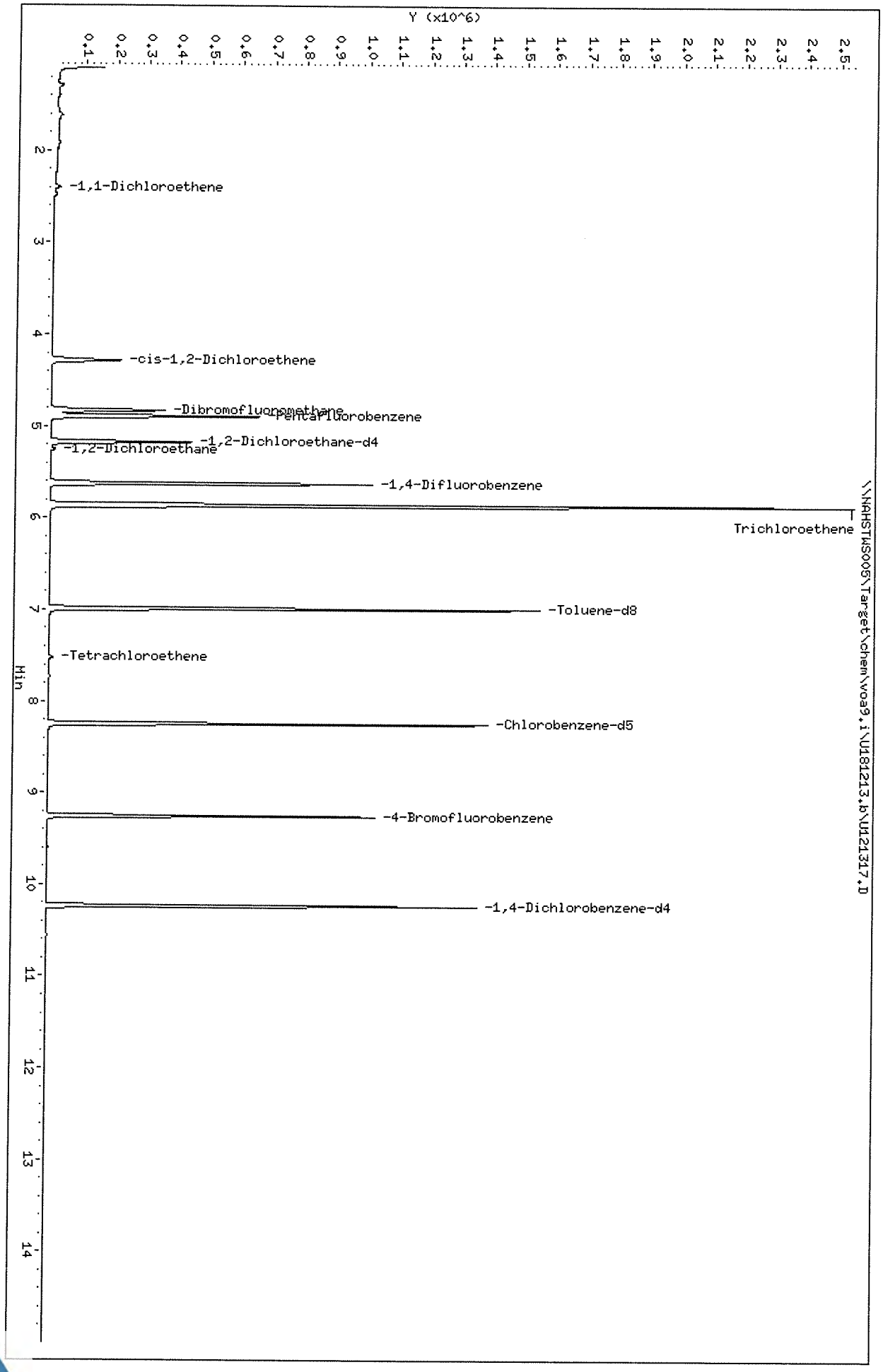
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	399665	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	725160	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	659969	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	297533	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.834	(0.986)	207773	45.1046	45.10
$ 35 1,2-Dichloroethane-d4	65	5.171	5.179	(1.057)	282893	46.7094	46.70
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	891376	52.9407	52.94
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	320262	49.0549	49.05
11 1,1-Dichloroethene	96	2.397	2.408	(0.490)	5444	1.20676	1.20(a)
33 1,2-Dichloroethane	62	5.250	5.257	(0.933)	9455	1.24601	1.24(a)
27 cis-1,2-Dichloroethene	96	4.283	4.294	(0.875)	100238	17.6999	17.69
56 Tetrachloroethene	164	7.522	7.525	(0.912)	2990	0.86487	0.86(a)
38 Trichloroethene	130	5.861	5.865	(1.042)	740979	149.959	149.95

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



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Date : 13-DEC-2018 16:17
Client ID: HS18120114-08
Sample Info: HS18120114-08;HS18120114-08;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121317.D

Date : 13-DEC-2018 16:17

Client ID: HS18120114-08

Instrument: VOA9.i

Sample Info: HS18120114-08;HS18120114-08;;;

Purge Volume: 5.0

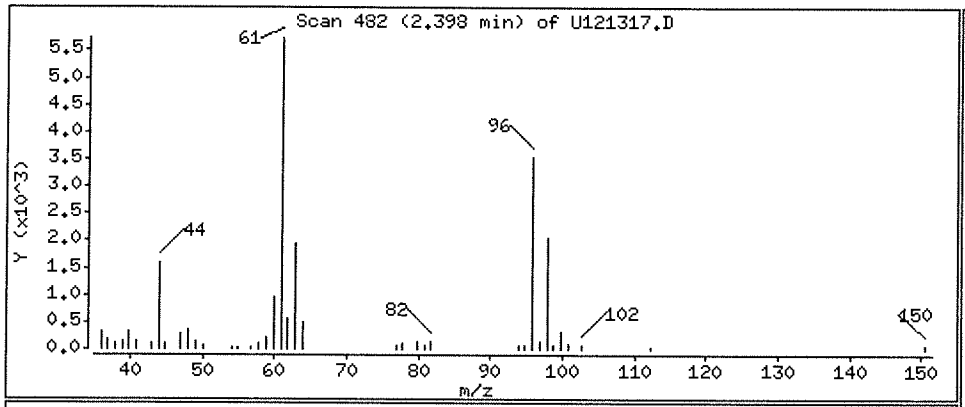
Operator: PC

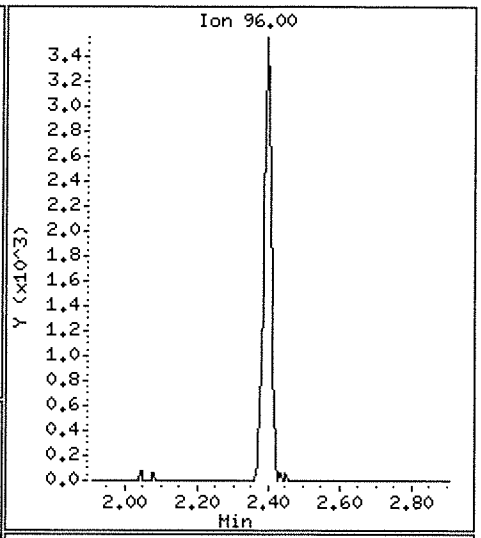
Column phase: DB624

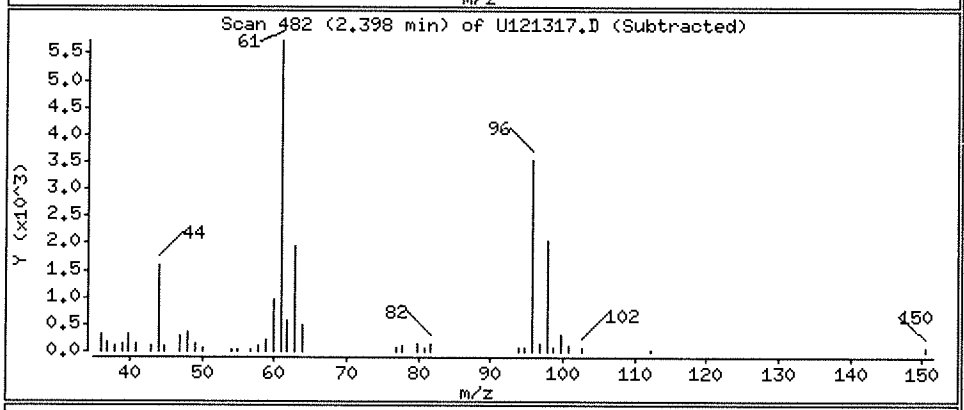
Column diameter: 0.18

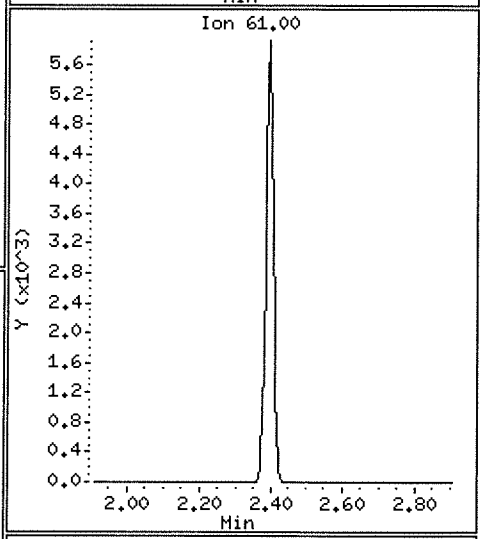
11 1,1-Dichloroethene

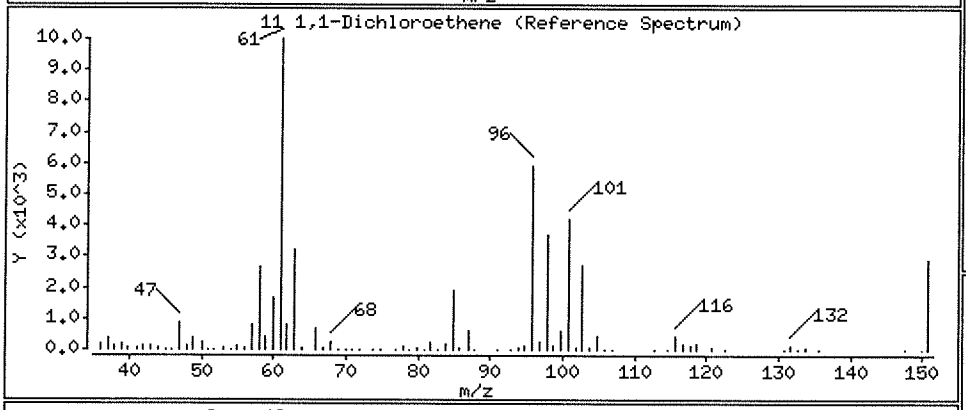
Concentration: 1.20 ug/l

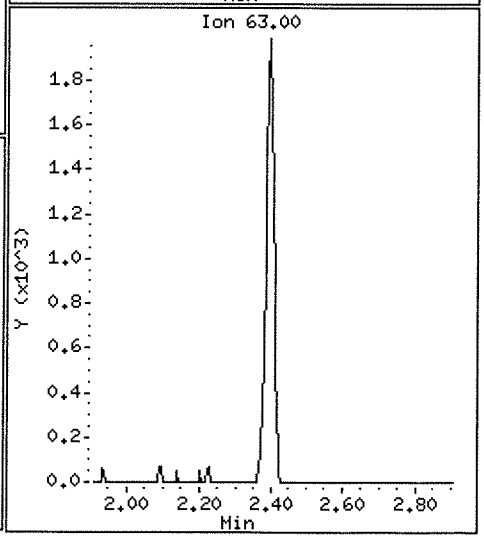


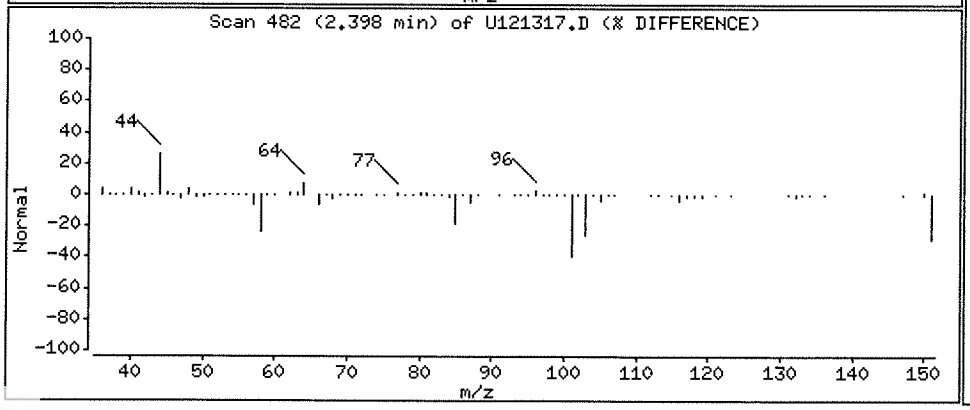












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121317.D

Date : 13-DEC-2018 16:17

Client ID: HS18120114-08

Instrument: VOA9.i

Sample Info: HS18120114-08;HS18120114-08;;;

Purge Volume: 5.0

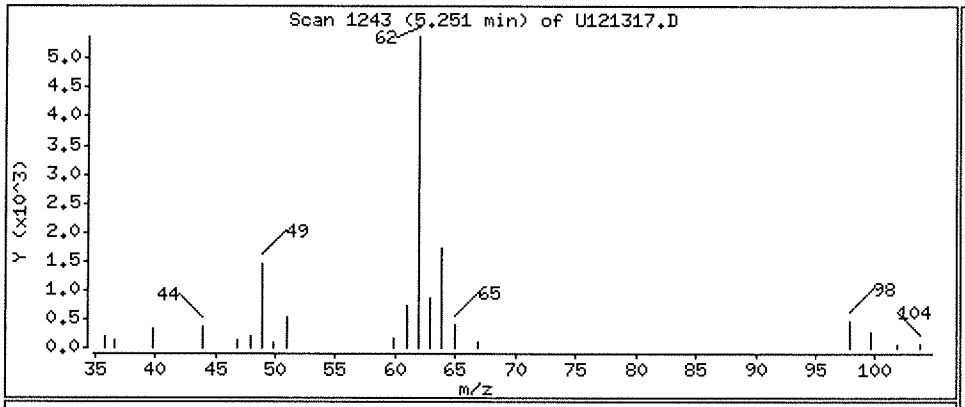
Operator: PC

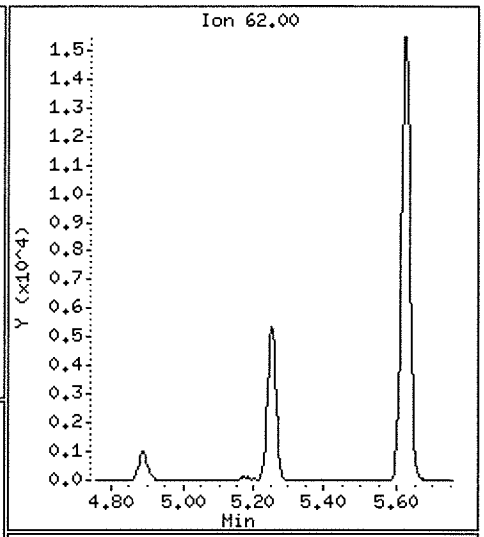
Column phase: DB624

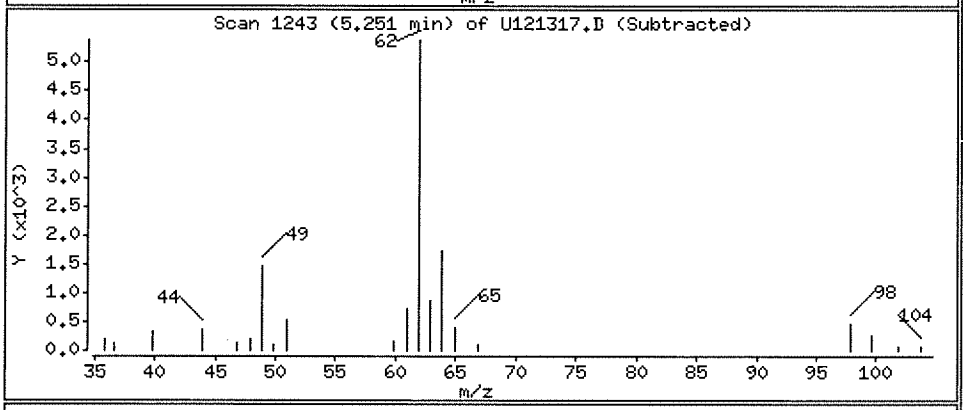
Column diameter: 0.18

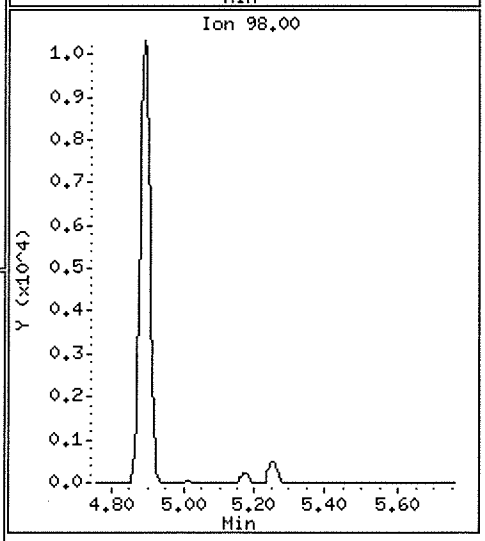
33 1,2-Dichloroethane

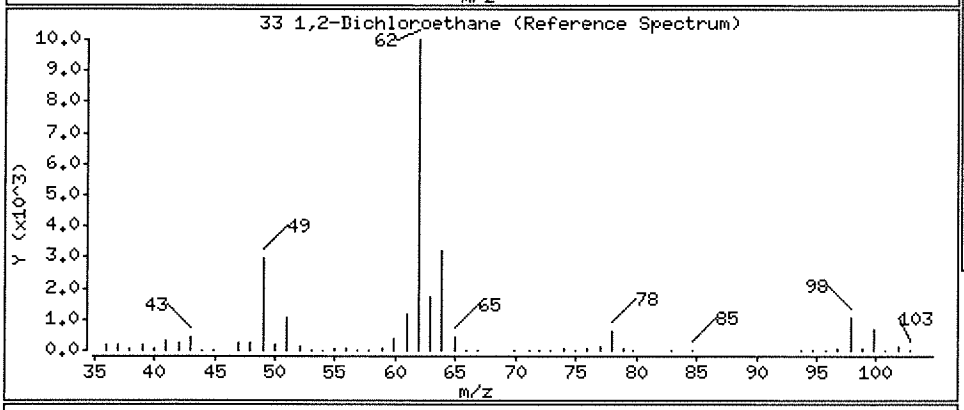
Concentration: 1.24 ug/l

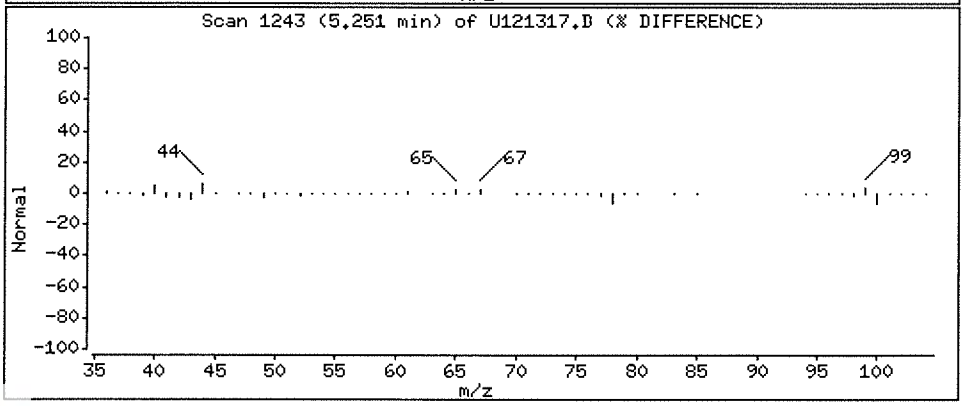












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Date : 13-DEC-2018 16:17

Client ID: HS18120114-08

Instrument: VOA9.i

Sample Info: HS18120114-08;HS18120114-08;;;

Purge Volume: 5.0

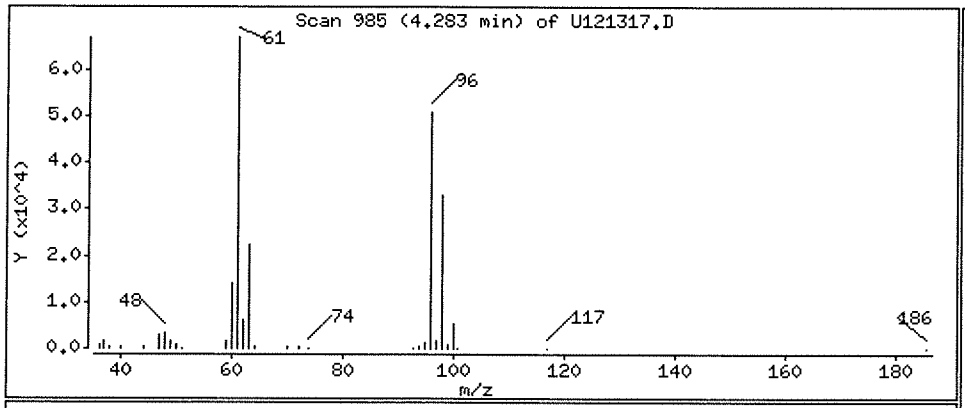
Operator: PC

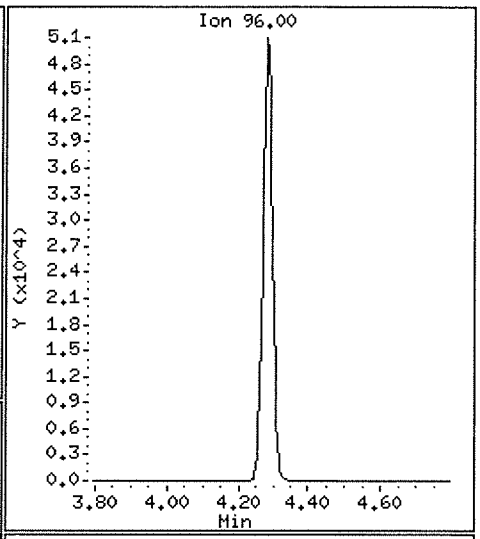
Column phase: DB624

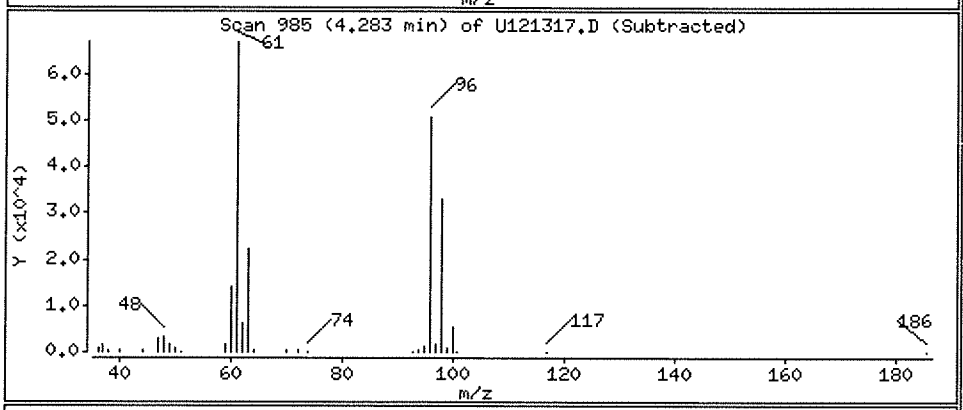
Column diameter: 0.18

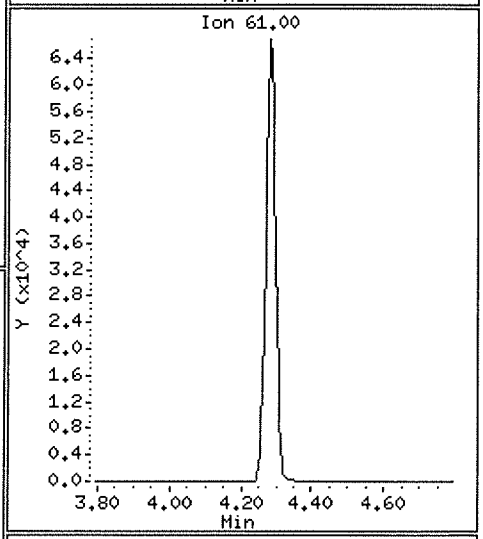
27 cis-1,2-Dichloroethene

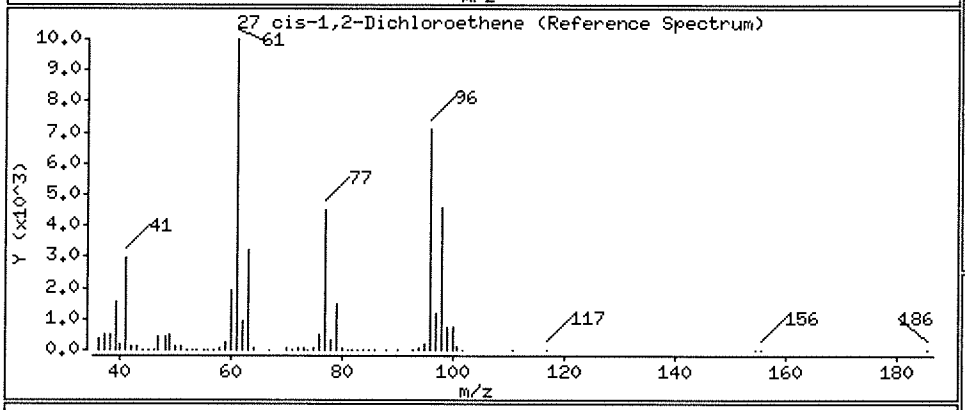
Concentration: 17.69 ug/l

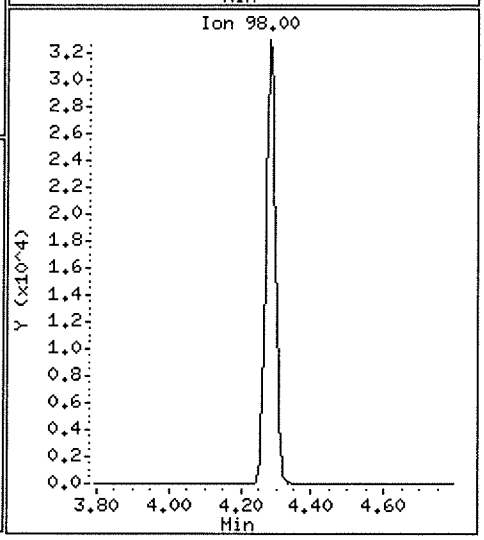


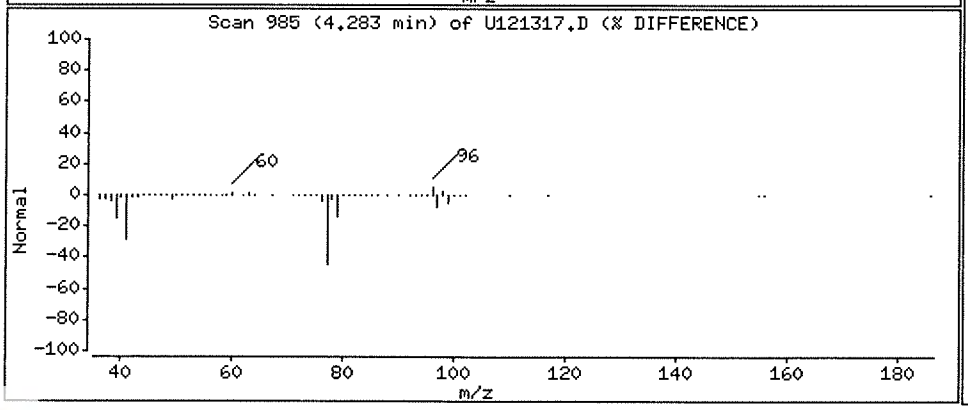












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121317.D

Date : 13-DEC-2018 16:17

Client ID: HS18120114-08

Instrument: VOA9.i

Sample Info: HS18120114-08;HS18120114-08;;;

Purge Volume: 5.0

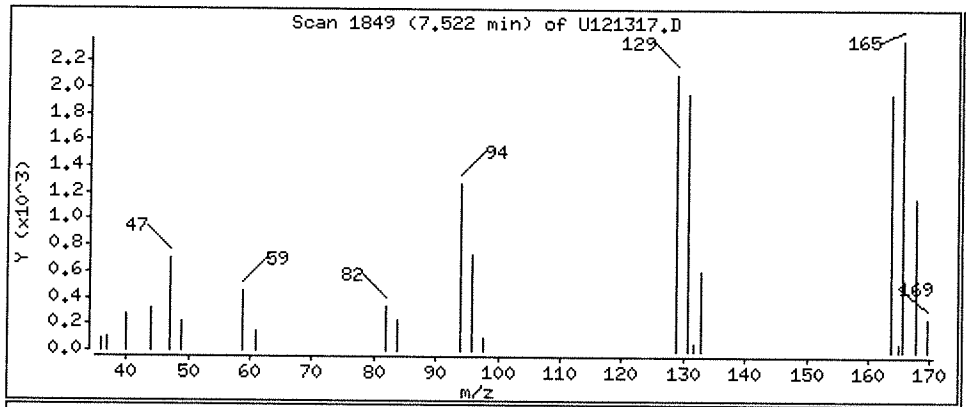
Operator: PC

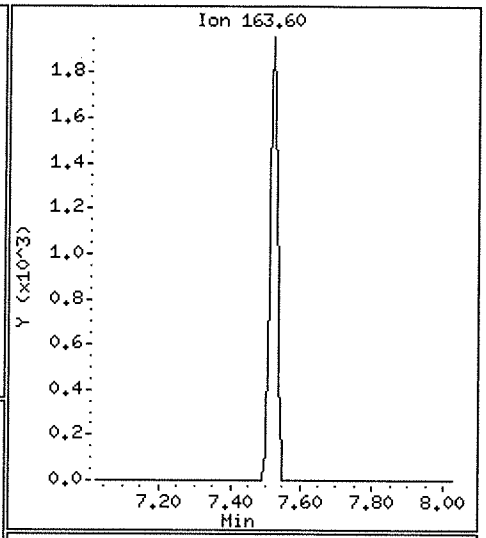
Column phase: DB624

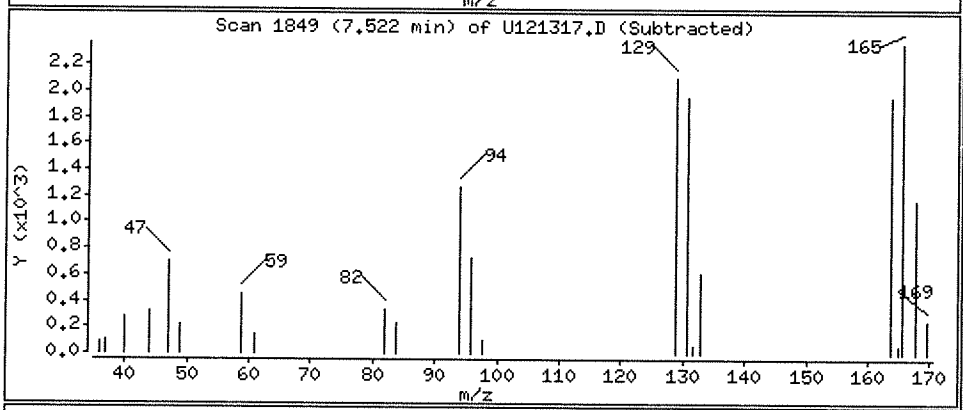
Column diameter: 0.18

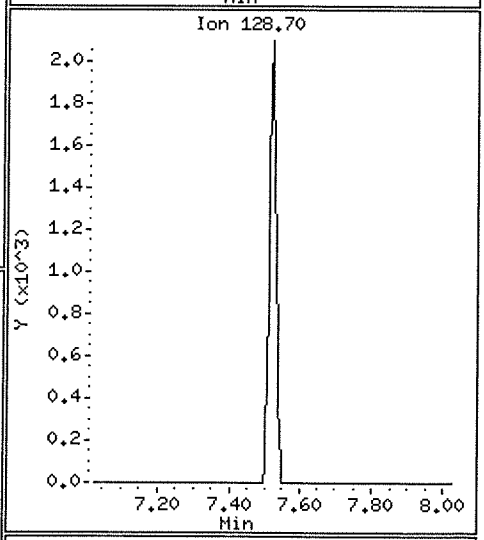
56 Tetrachloroethene

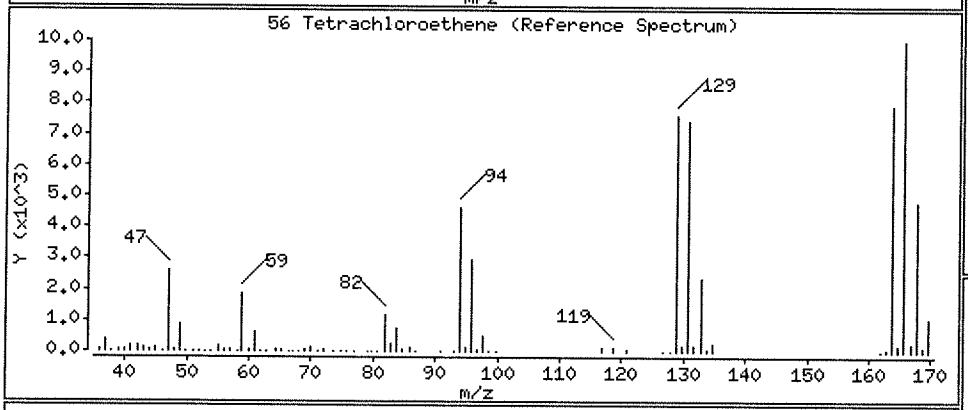
Concentration: 0.86 ug/l

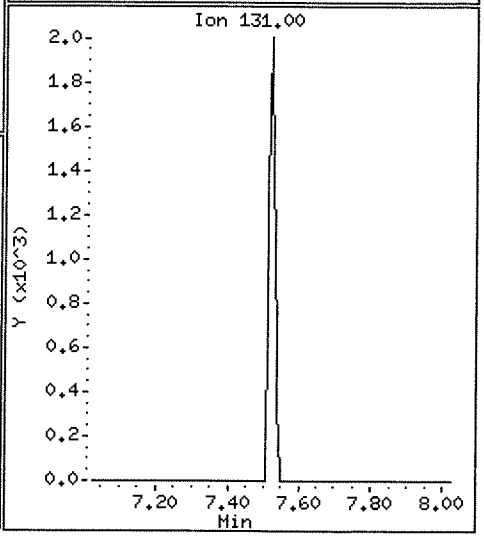


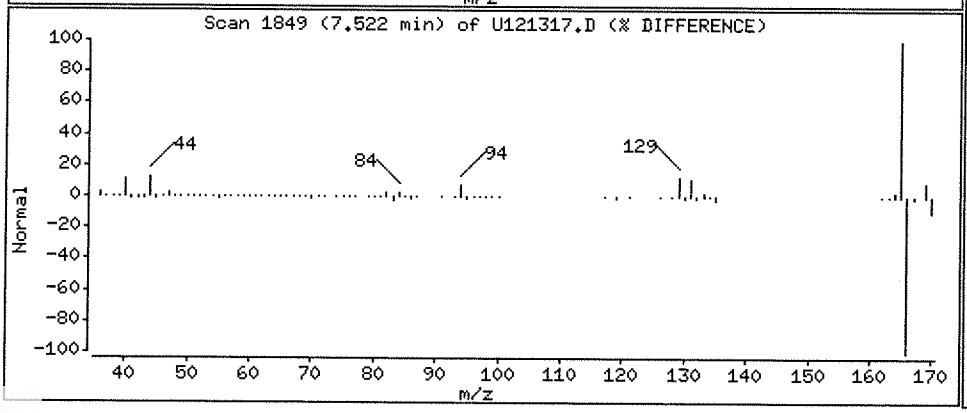












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121317.D

Date : 13-DEC-2018 16:17

Client ID: HS18120114-08

Instrument: VOA9.i

Sample Info: HS18120114-08;HS18120114-08;;;

Purge Volume: 5.0

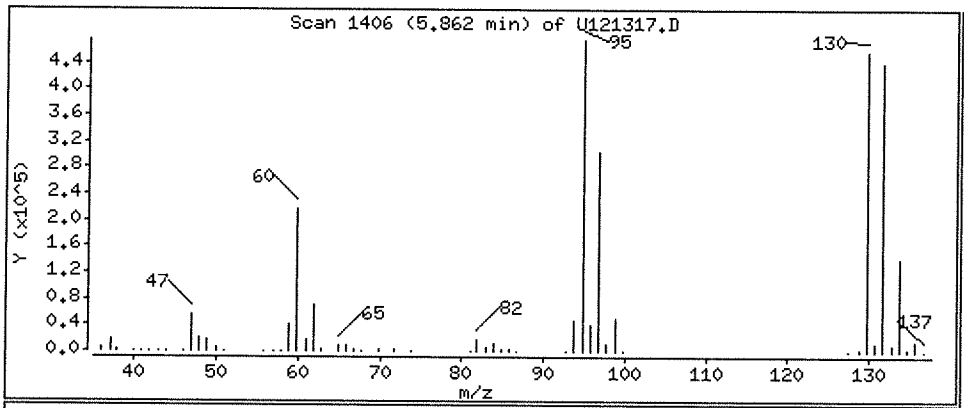
Operator: PC

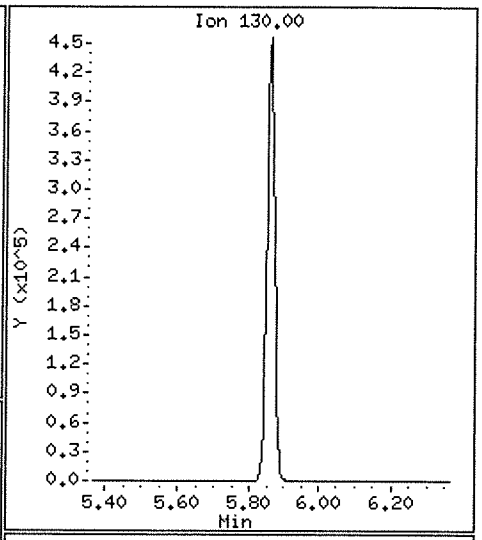
Column phase: DB624

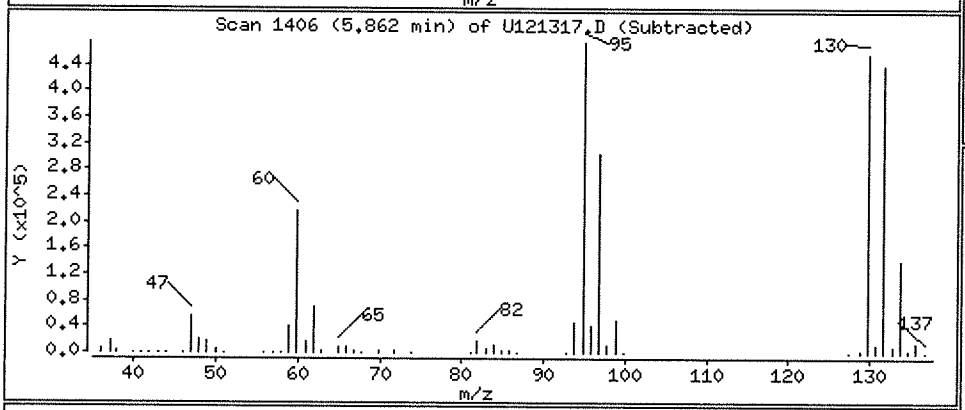
Column diameter: 0.18

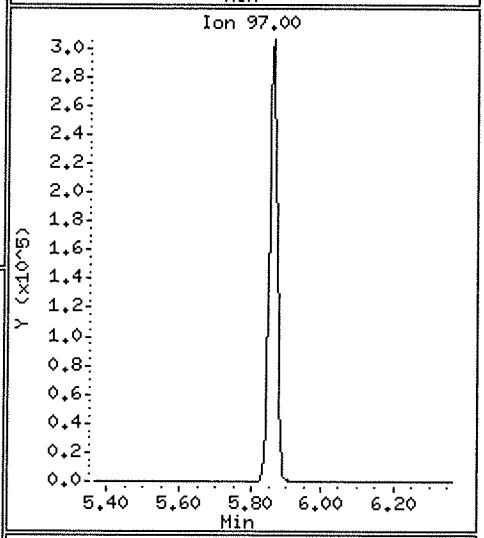
38 Trichloroethene

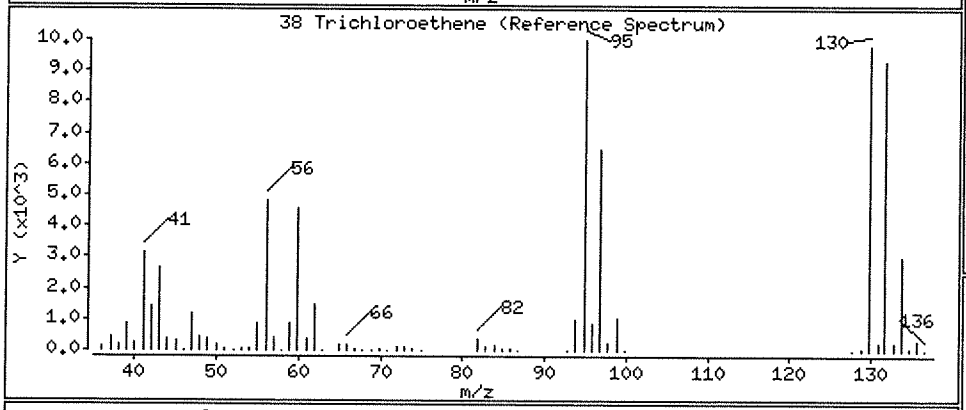
Concentration: 149.95 ug/l

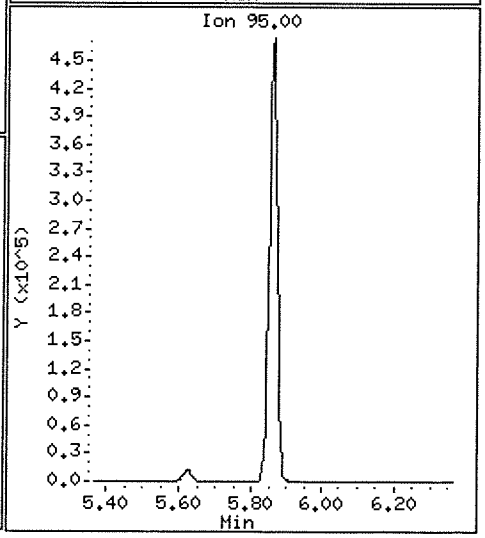


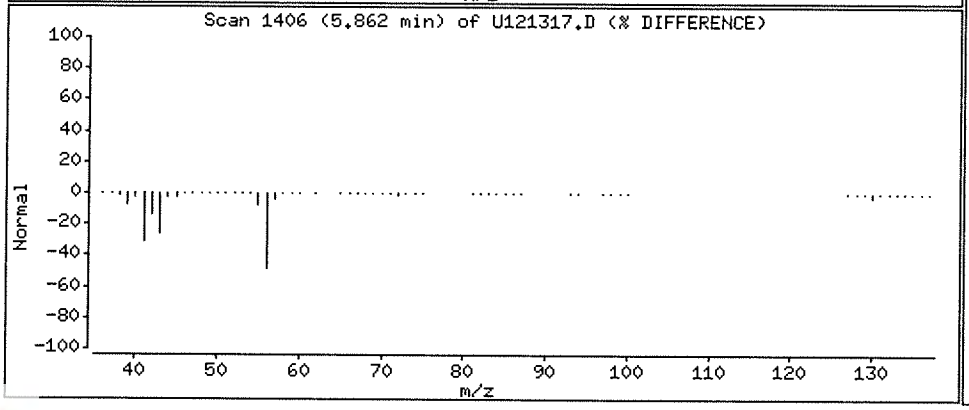












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121318.D Page 1
Report Date: 25-Jan-2019 20:04

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121318.D
Lab Smp Id: HS18120114-11 Client Smp ID: HS18120114-11
Inj Date : 13-DEC-2018 16:41
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-11;HS18120114-11;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

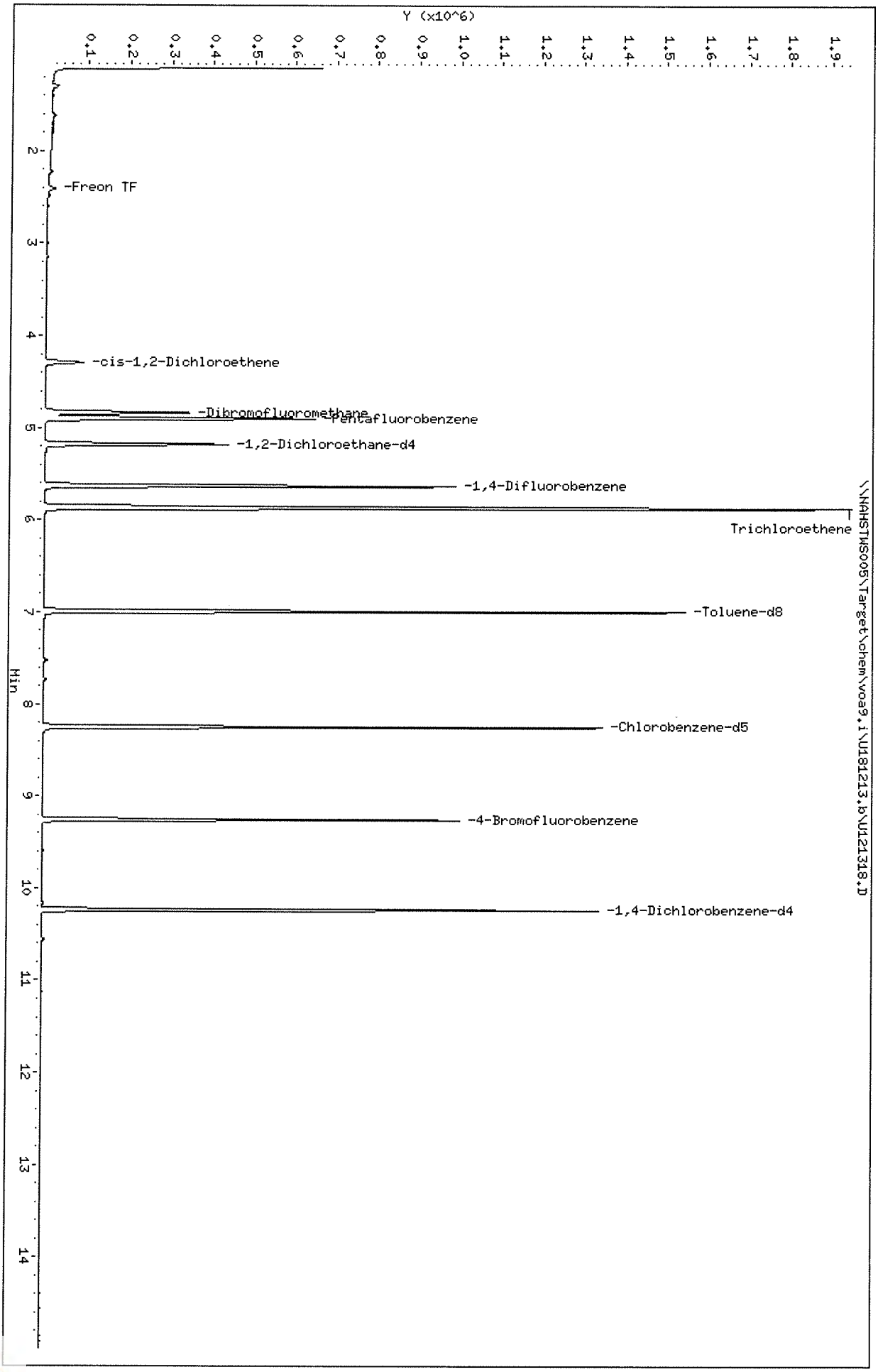
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	393496	50.0000.	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	711627	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	638805	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	291447	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	201883	44.4966	44.49
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	277458	46.5235	46.52
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	873280	53.6050	53.60
$ 69 4-Bromofluorobenzene	95	9.258	9.257	(1.122)	313608	49.6396	49.63
138 Freon TF	101	2.405	2.412	(0.491)	4707	1.19409	1.19(a)
27 cis-1,2-Dichloroethene	96	4.291	4.294	(0.876)	40514	7.26608	7.26
38 Trichloroethene	130	5.865	5.865	(1.042)	576138	118.816	118.81

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTWS005\Target\chem\voa9,i\U181213,b\U121318,D
Date : 13-DEC-2018 16:41
Client ID: HS18120114-11
Sample Info: HS18120114-11;HS18120114-11;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121318.D

Date : 13-DEC-2018 16:41

Client ID: HS18120114-11

Instrument: VOA9.i

Sample Info: HS18120114-11;HS18120114-11;;;

Purge Volume: 5.0

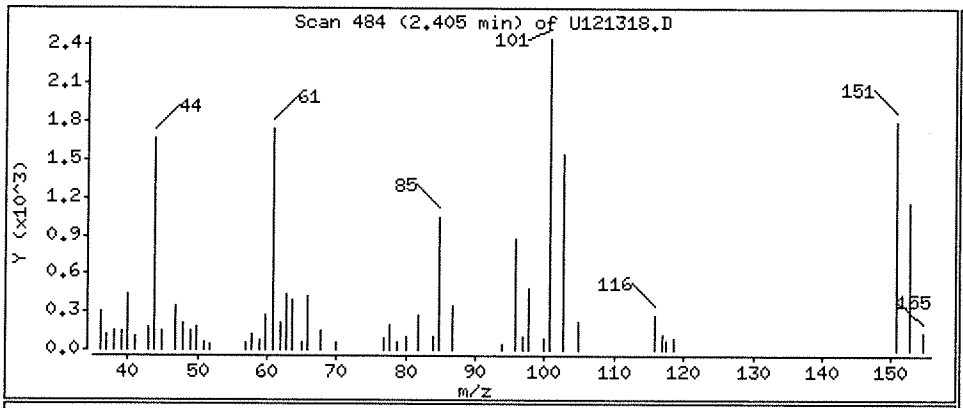
Operator: PC

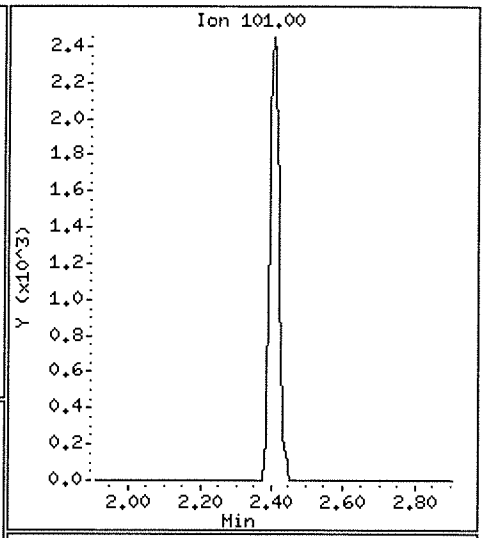
Column phase: DB624

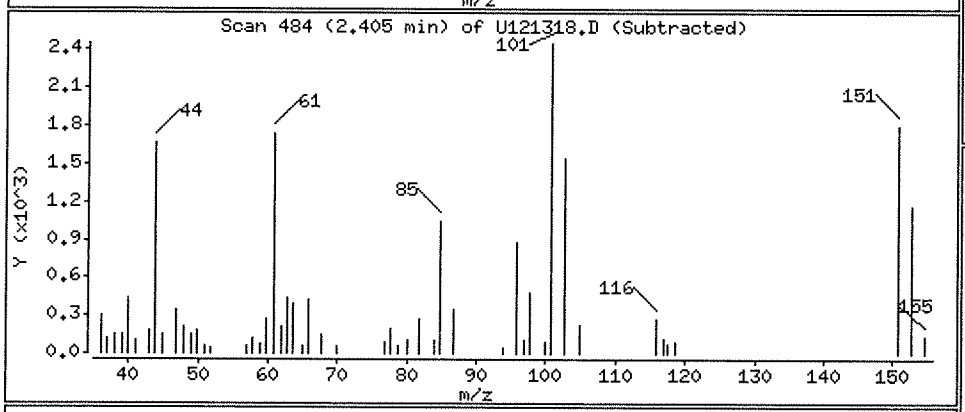
Column diameter: 0.18

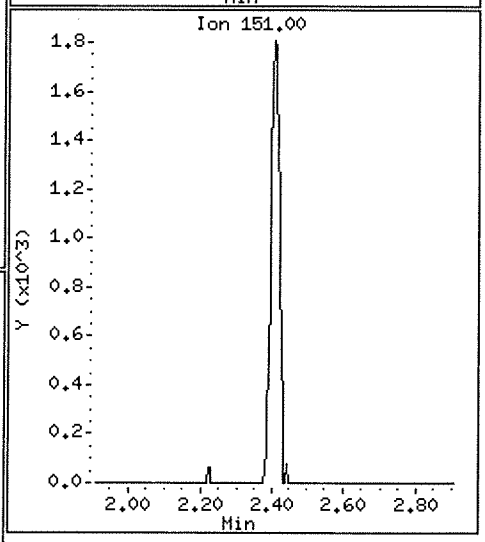
138 Freon TF

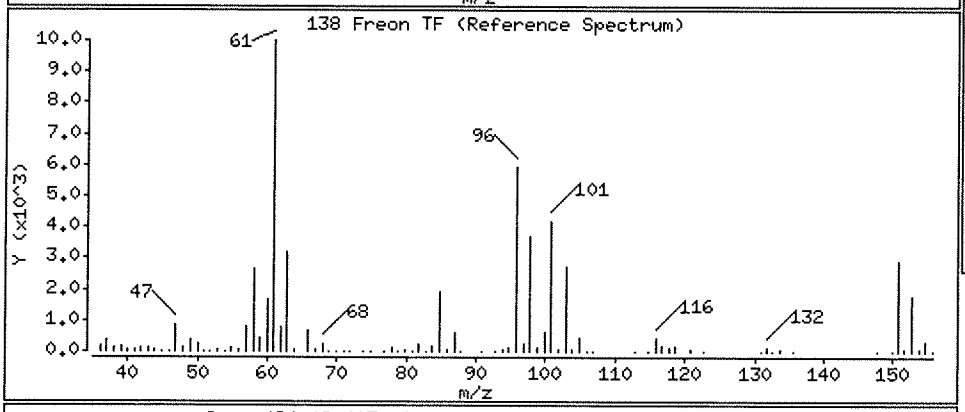
Concentration: 1.19 ug/l

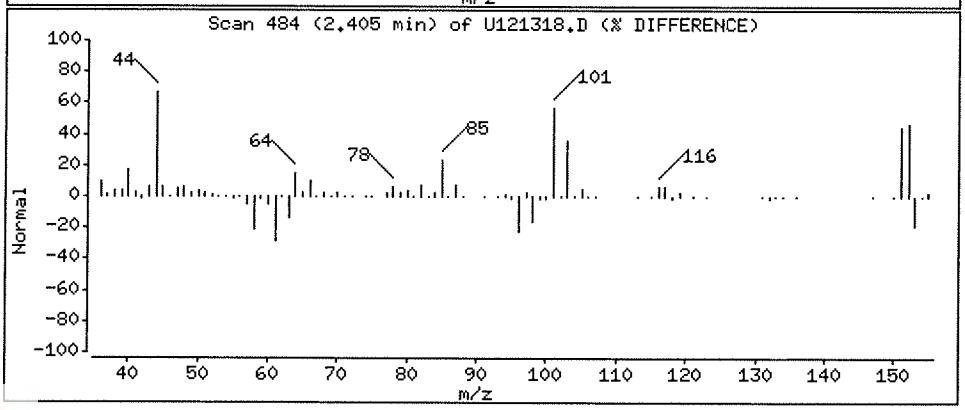












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121318.D

Date : 13-DEC-2018 16:41

Client ID: HS18120114-11

Instrument: VOA9.i

Sample Info: HS18120114-11;HS18120114-11;;;

Purge Volume: 5.0

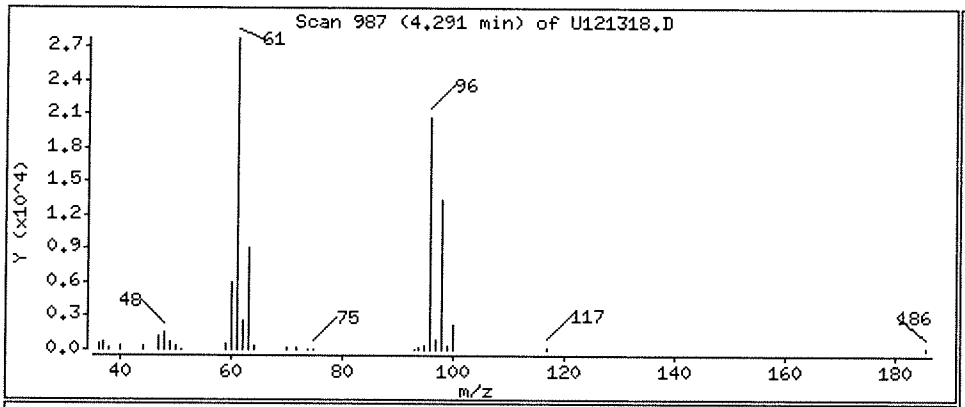
Operator: PC

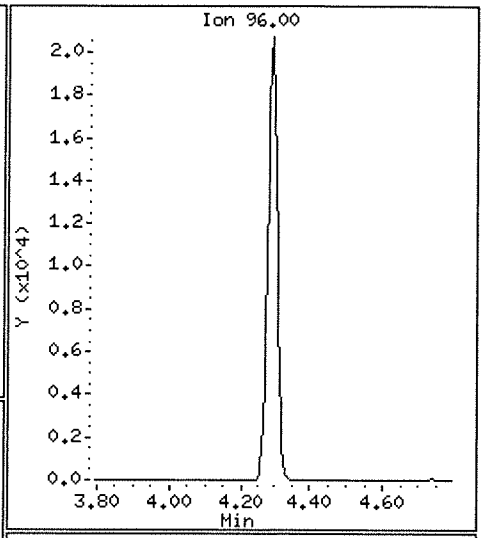
Column phase: DB624

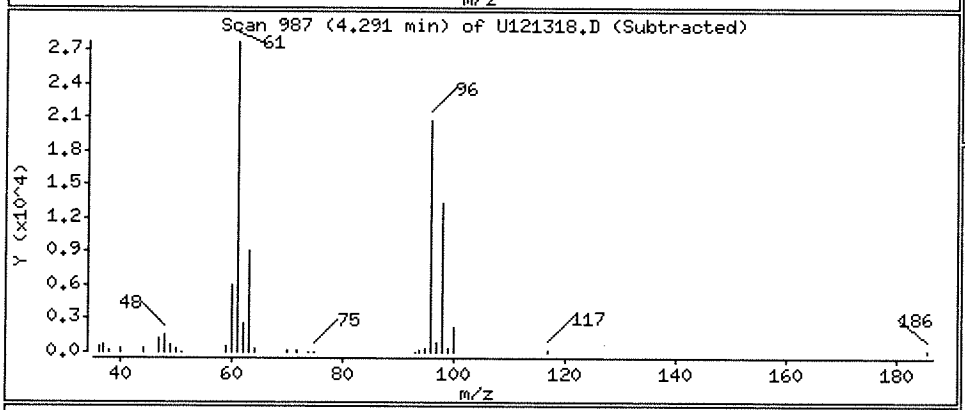
Column diameter: 0.18

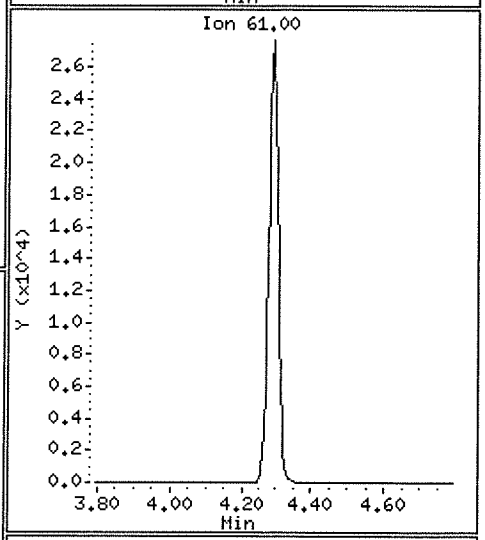
27 cis-1,2-Dichloroethene

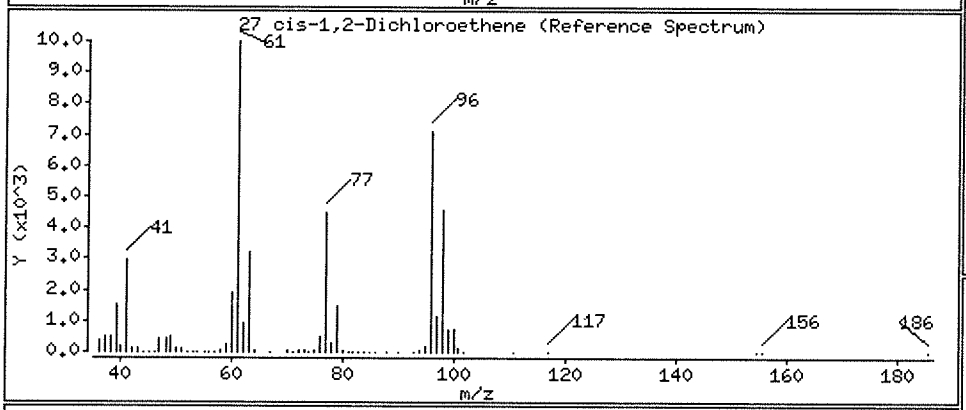
Concentration: 7.26 ug/l

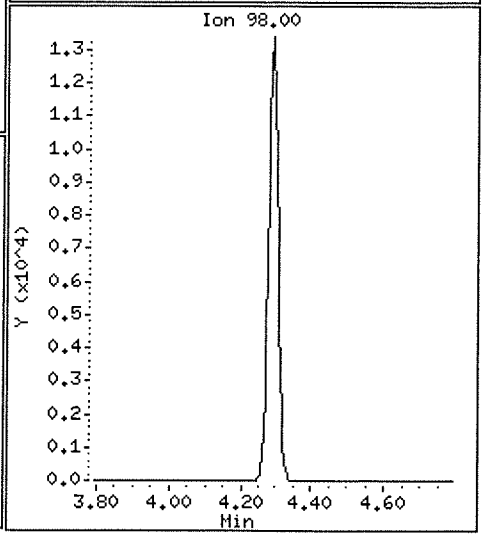


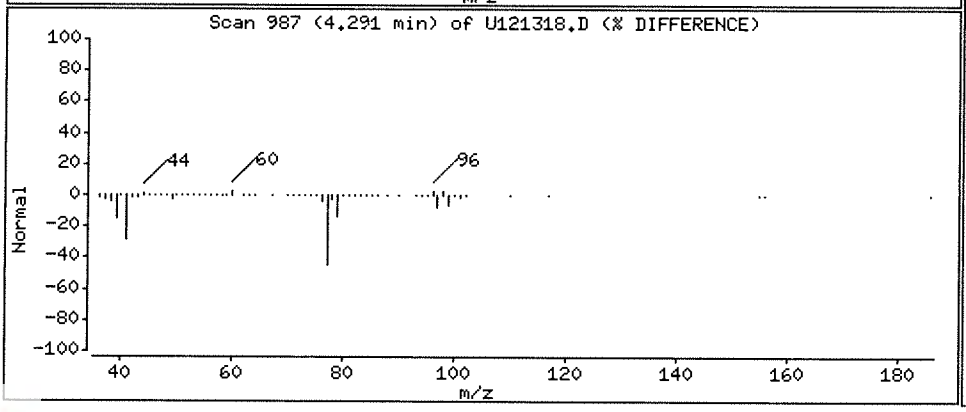












Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121318.D

Date : 13-DEC-2018 16:41

Client ID: HS18120114-11

Instrument: VOA9.i

Sample Info: HS18120114-11;HS18120114-11;;;

Purge Volume: 5.0

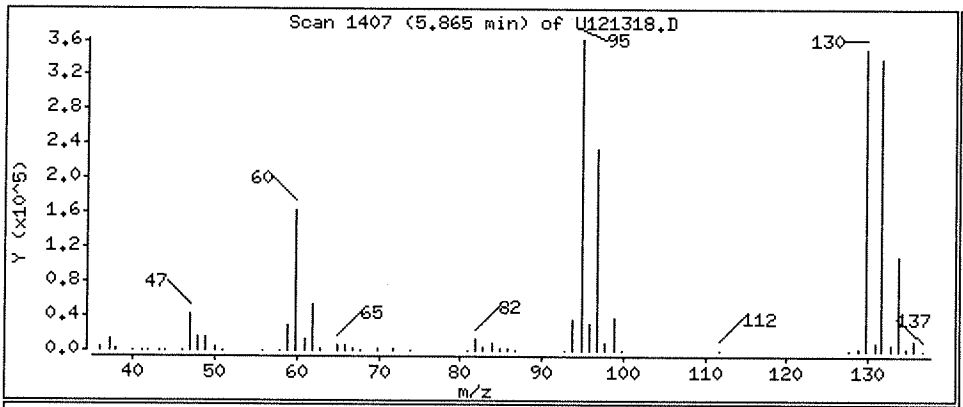
Operator: PC

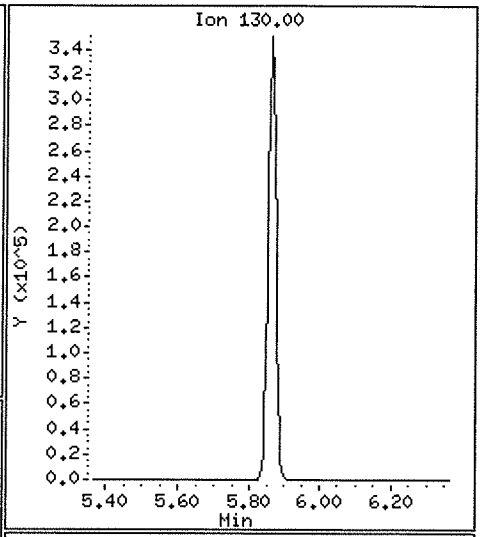
Column phase: DB624

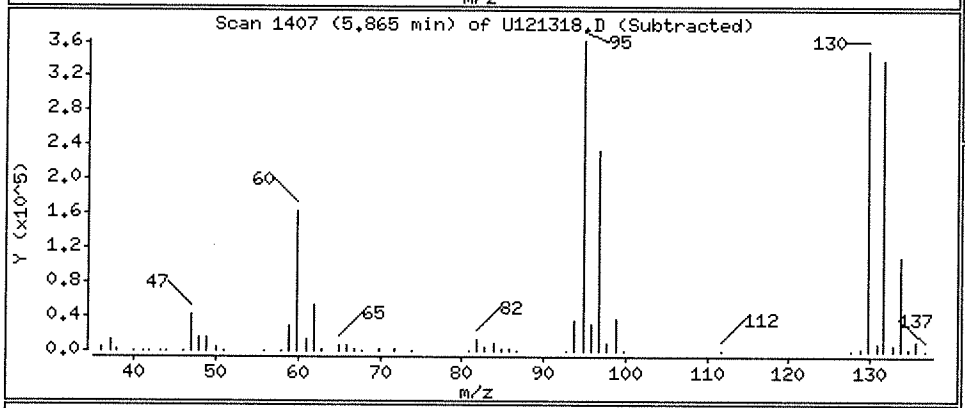
Column diameter: 0.18

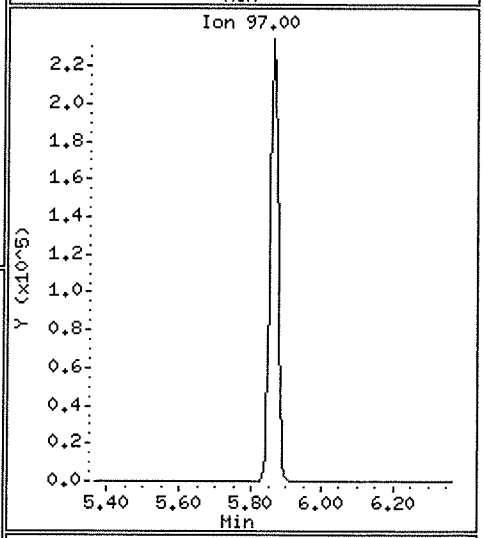
38 Trichloroethene

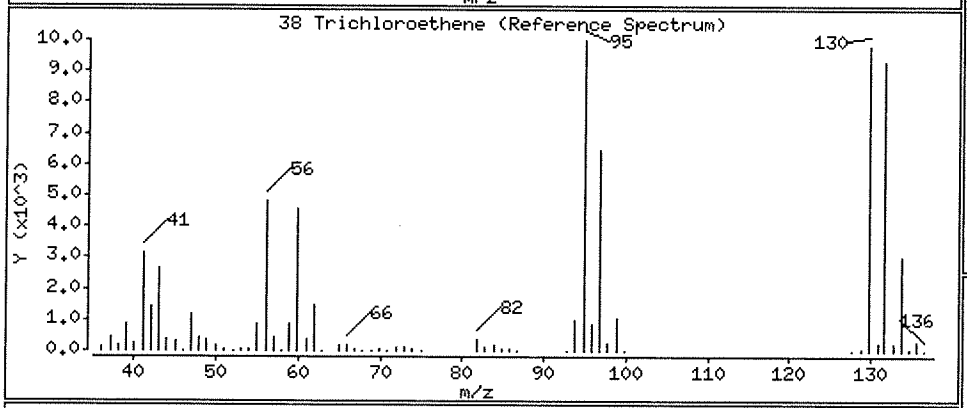
Concentration: 118.81 ug/l

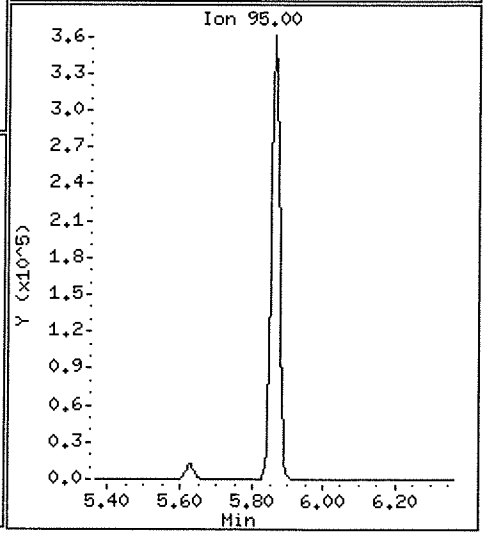


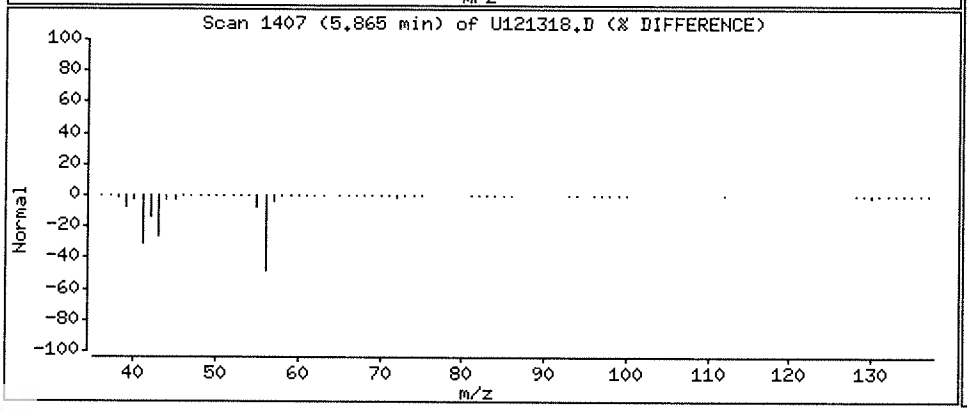












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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121319.D
Lab Smp Id: HS18120114-04MS Client Smp ID: HS18120114-04MS
Inj Date : 13-DEC-2018 17:06
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-04MS;HS18120114-04MS;3;;MS
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 19 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

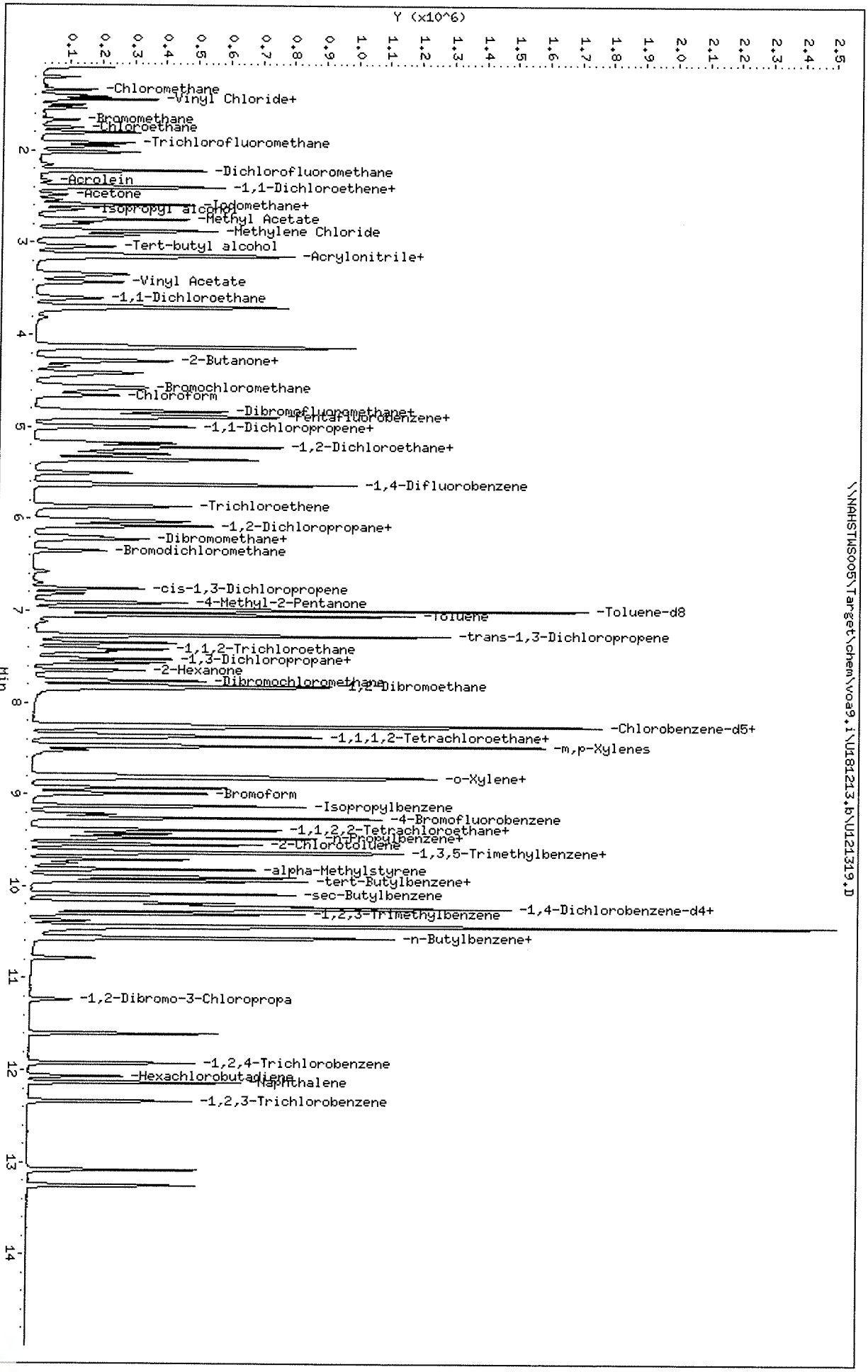
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.894	4.898	(1.000)	399772	50.0000	
*	36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	710152	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	660395	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	312600	50.0000	
$	30 Dibromofluoromethane	113	4.830	4.834	(0.987)	207665	45.0681	45.06
$	35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	273667	45.1157	45.11
$	48 Toluene-d8	98	6.989	6.989	(0.847)	888812	52.7483	52.74
$	69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	335114	51.3453	51.34
	60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	94917	22.7861	22.78
	31 1,1,1-Trichloroethane	97	4.826	4.834	(0.986)	150448	21.4245	21.42
	68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	173938	23.4909	23.49
	138 Freon TF	101	2.401	2.412	(0.491)	84427	21.0816	21.08
	53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	98619	23.4893	23.48
	22 1,1-Dichloroethane	63	3.604	3.612	(0.737)	205986	22.4850	22.48
	11 1,1-Dichloroethene	96	2.397	2.408	(0.490)	97912	21.6981	21.69
	32 1,1-Dichloropropene	75	5.003	5.010	(0.889)	161269	24.5883	24.58
	93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	132615	22.4703	22.47
	71 1,2,3-Trichloropropane	75	9.426	9.430	(0.921)	176142	22.7965	22.79
	90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	136180	22.1527	22.15
	79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	421555	24.2791	24.27
	89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	22731	20.5786	20.57
	57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	111940	23.0248	23.02

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121319.D Page 2
Report Date: 25-Jan-2019 20:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	223001	22.3387	22.33
33	1,2-Dichloroethane	62	5.254	5.257	(0.934)	167982	22.6050	22.60
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	126013	24.9228	24.92
75	1,3,5-Trimethylbenzene	105	9.625	9.628	(0.940)	409141	24.3600	24.35
83	1,3-Dichlorobenzene	146	10.180	10.179	(0.995)	219952	22.3481	22.34
54	1,3-Dichloropropane	76	7.563	7.567	(0.917)	211630	23.4752	23.47
84	1,4-Dichlorobenzene	146	10.254	10.258	(1.002)	227747	23.6346	23.63
26	2,2-Dichloropropane	77	4.275	4.279	(0.874)	110773	19.5255	19.52
24	2-Butanone	43	4.339	4.343	(0.887)	127295	45.2981	45.29
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	366140	23.9193	23.91
52	2-Hexanone	43	7.649	7.653	(0.927)	194739	50.7278	50.72
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	426674	24.1566	24.15
82	p-Isopropyltoluene	119	10.210	10.209	(0.997)	425323	24.8455	24.84
45	4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	272770	49.5122	49.51
10	Acetone	43	2.480	2.487	(0.507)	95042	49.6553	49.65
37	Benzene	78	5.216	5.224	(0.927)	484805	24.6970	24.69
74	Bromobenzene	156	9.381	9.381	(0.917)	114126	22.2560	22.25
29	Bromochloromethane	128	4.556	4.560	(0.931)	55412	23.5118	23.51
39	Bromodichloromethane	83	6.348	6.348	(1.129)	130144	22.0559	22.05
66	Bromoform	173	8.984	8.984	(1.089)	56520	19.6547	19.65
6	Bromomethane	94	1.666	1.674	(0.341)	58609	18.8992	18.89
19	Carbon Disulfide	76	2.588	2.600	(0.529)	599255	43.0021	43.00
34	Carbon Tetrachloride	117	4.995	4.999	(0.888)	117711	22.9735	22.97
59	Chlorobenzene	112	8.275	8.275	(1.003)	311307	22.8398	22.83
7	Chloroethane	64	1.752	1.760	(0.358)	90826	21.7745	21.77(M)
28	Chloroform	83	4.658	4.661	(0.952)	198661	21.5835	21.58
3	Chloromethane	50	1.340	1.348	(0.274)	108457	20.4570	20.45
27	cis-1,2-Dichloroethene	96	4.287	4.294	(0.876)	125915	22.2280	22.22
46	cis-1,3-Dichloropropene	75	6.757	6.761	(1.201)	171434	23.0713	23.07
55	Dibromochloromethane	129	7.758	7.758	(0.940)	92305	22.0889	22.08
44	Dibromomethane	93	6.191	6.191	(1.101)	72272	22.8078	22.80
2	Dichlorodifluoromethane	85	1.205	1.213	(0.246)	66598	12.0460	12.04
61	Ethylbenzene	106	8.373	8.373	(1.015)	164582	23.8849	23.88
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	45174	24.1380	24.13
67	Isopropylbenzene	105	9.126	9.126	(1.106)	490609	24.4451	24.44
62	m,p-Xylenes	106	8.474	8.474	(1.027)	404843	47.6687	47.66
17	Methylene Chloride	84	2.870	2.877	(0.586)	122119	23.5753	23.57
87	n-Butylbenzene	91	10.558	10.558	(1.031)	406887	25.2991	25.29
73	n-Propylbenzene	91	9.475	9.475	(0.926)	611456	24.7881	24.78
92	Naphthalene	128	12.133	12.133	(1.185)	448050	24.2048	24.20
63	o-Xylene	106	8.811	8.811	(1.068)	204173	24.0246	24.02
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	507575	24.7123	24.71
64	Styrene	104	8.826	8.826	(1.070)	344435	24.0040	24.00
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	350403	24.4795	24.47
56	Tetrachloroethene	164	7.525	7.525	(0.912)	82326	23.7977	23.79
50	Toluene	91	7.049	7.049	(0.855)	501077	23.8988	23.89
20	trans-1,2-Dichloroethene	96	3.143	3.151	(0.642)	110910	22.4264	22.42
51	trans-1,3-Dichloropropene	75	7.259	7.263	(1.291)	142785	20.3247	20.32
38	Trichloroethene	130	5.861	5.865	(1.042)	114476	23.6571	23.65
8	Trichlorofluoromethane	101	1.951	1.962	(0.399)	162671	20.3533	20.35
5	Vinyl Chloride	62	1.419	1.426	(0.290)	137188	21.3448	21.34

QC Flag Legend

M - Compound response manually integrated.



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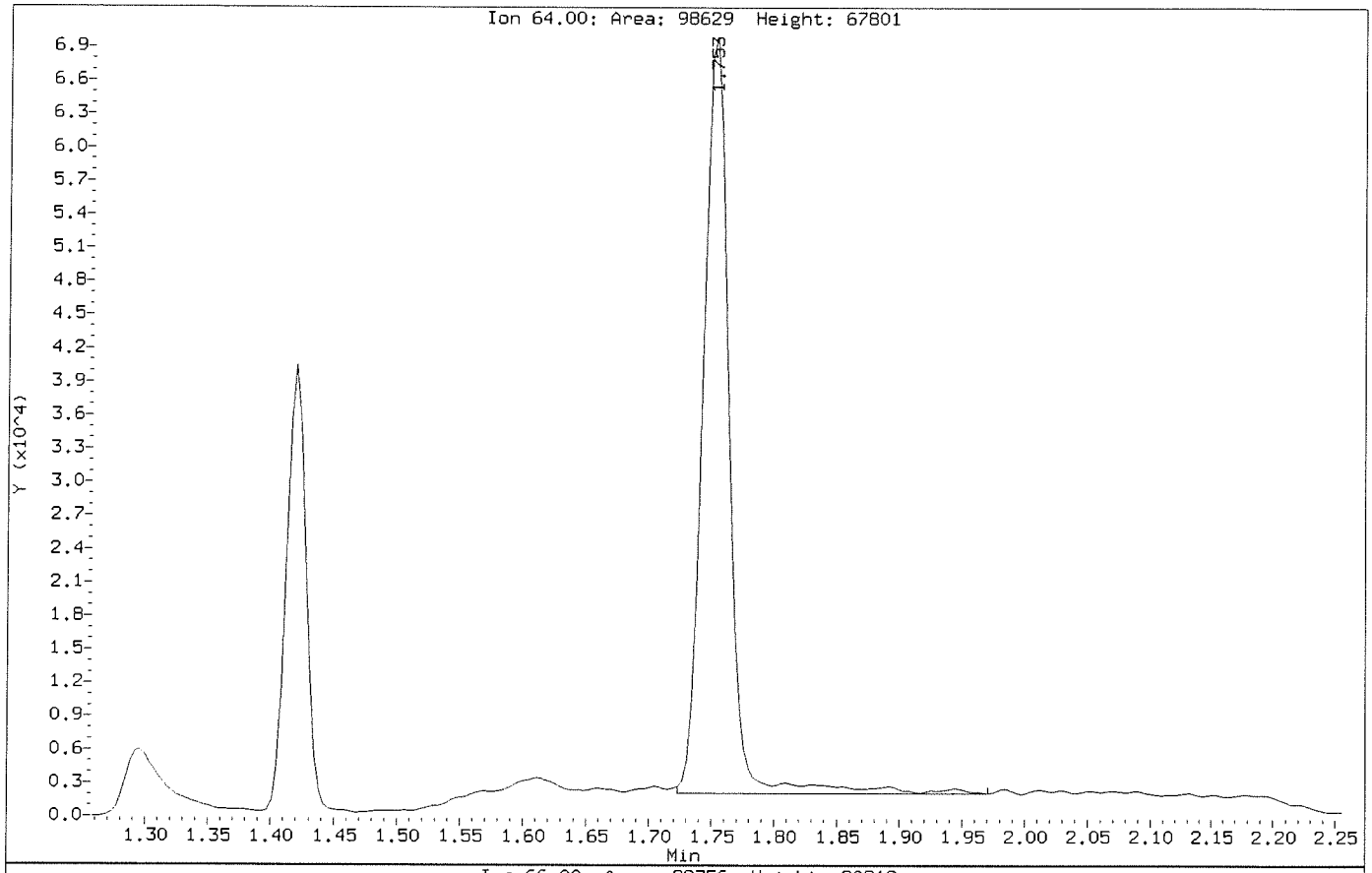
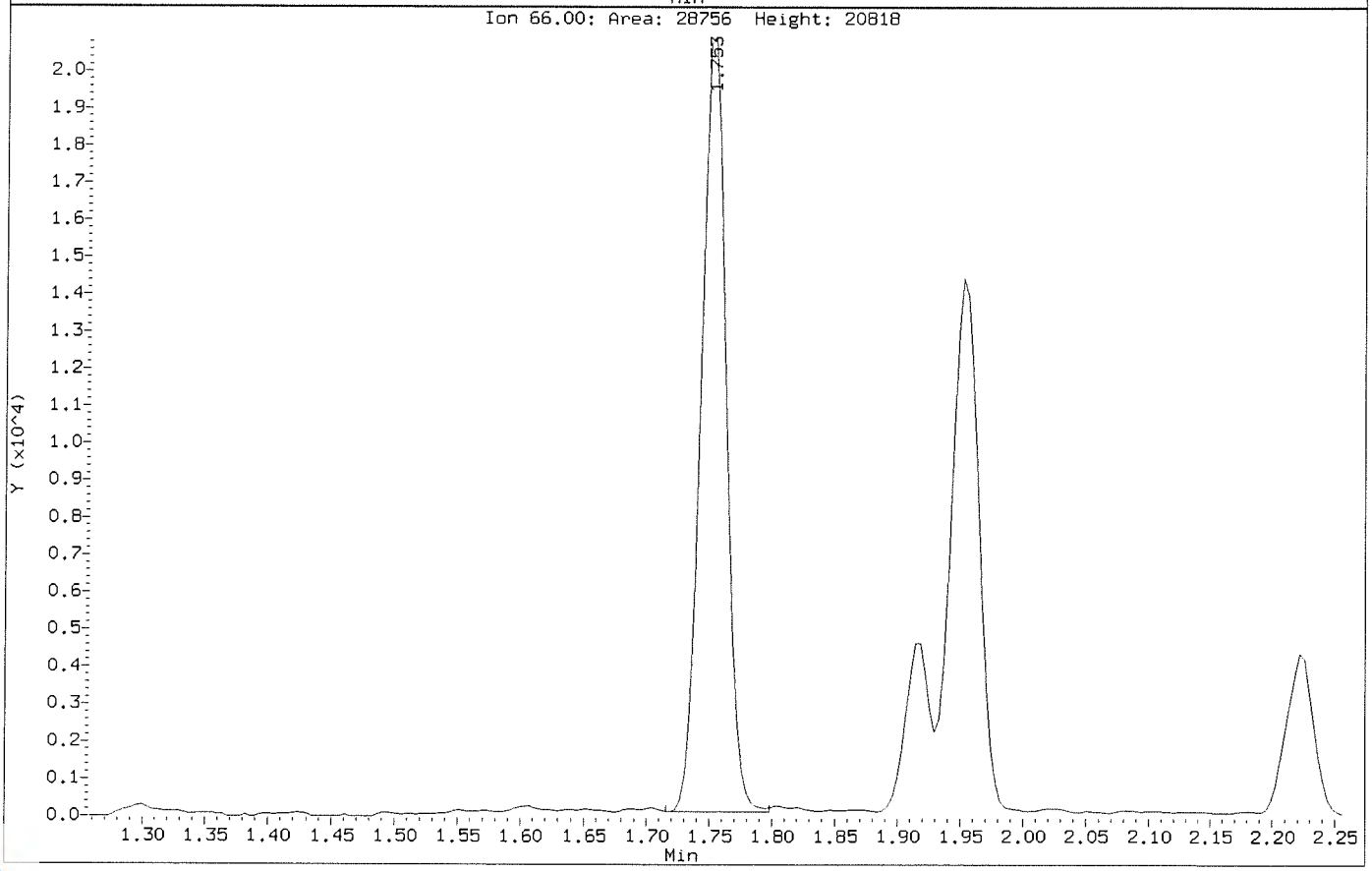
Date : 13-DEC-2018 17:06
Client ID: HS18120114-04MS
Sample Info: HS18120114-04MS;HS18120114-04MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\Before\U121319.D
Injection Date: 13-DEC-2018 17:06
Instrument: VOA9.i
Client Sample ID: HS18120114-04MS

Compound: Chloroethane
CAS Number: 75-00-3





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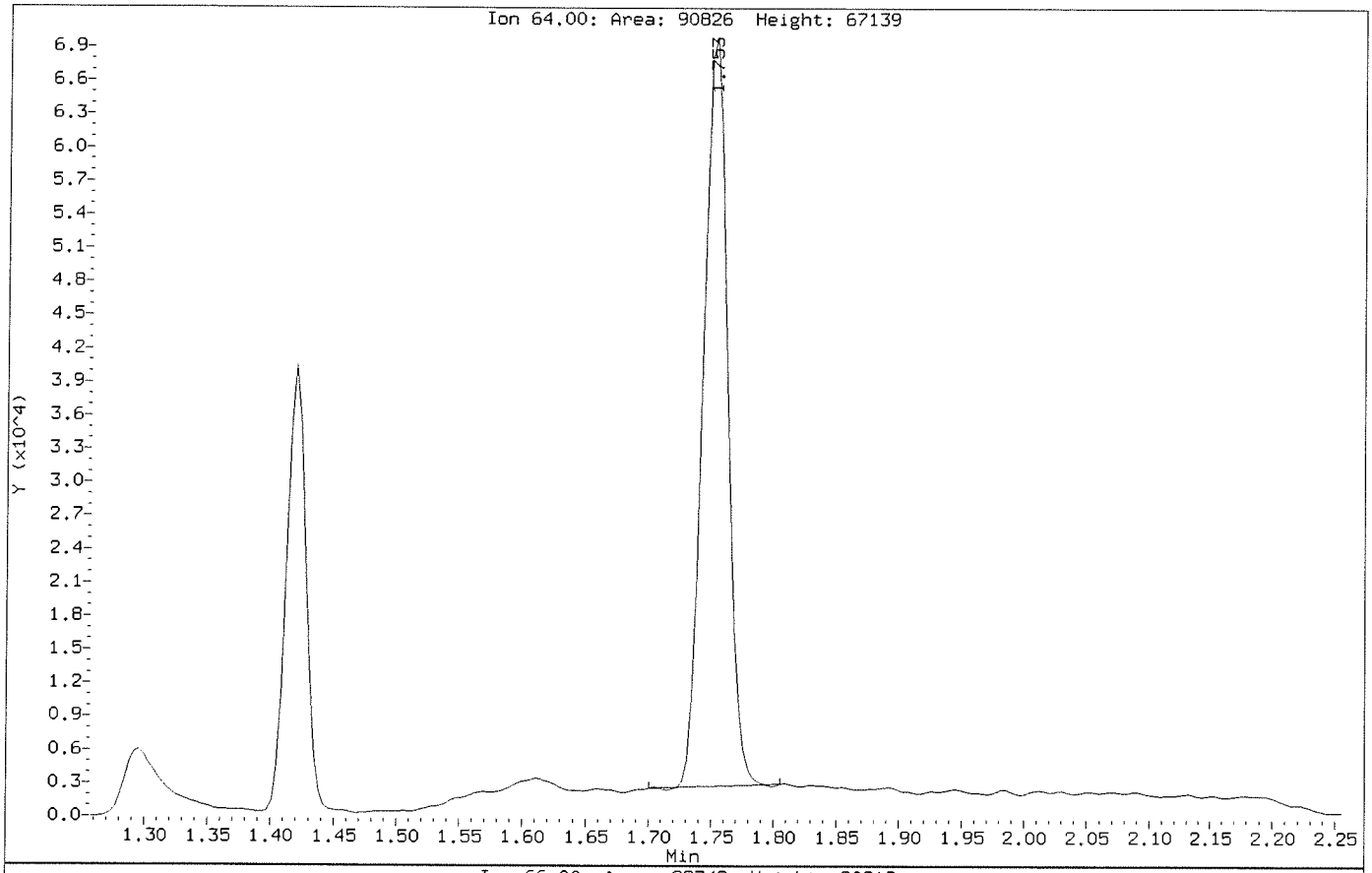
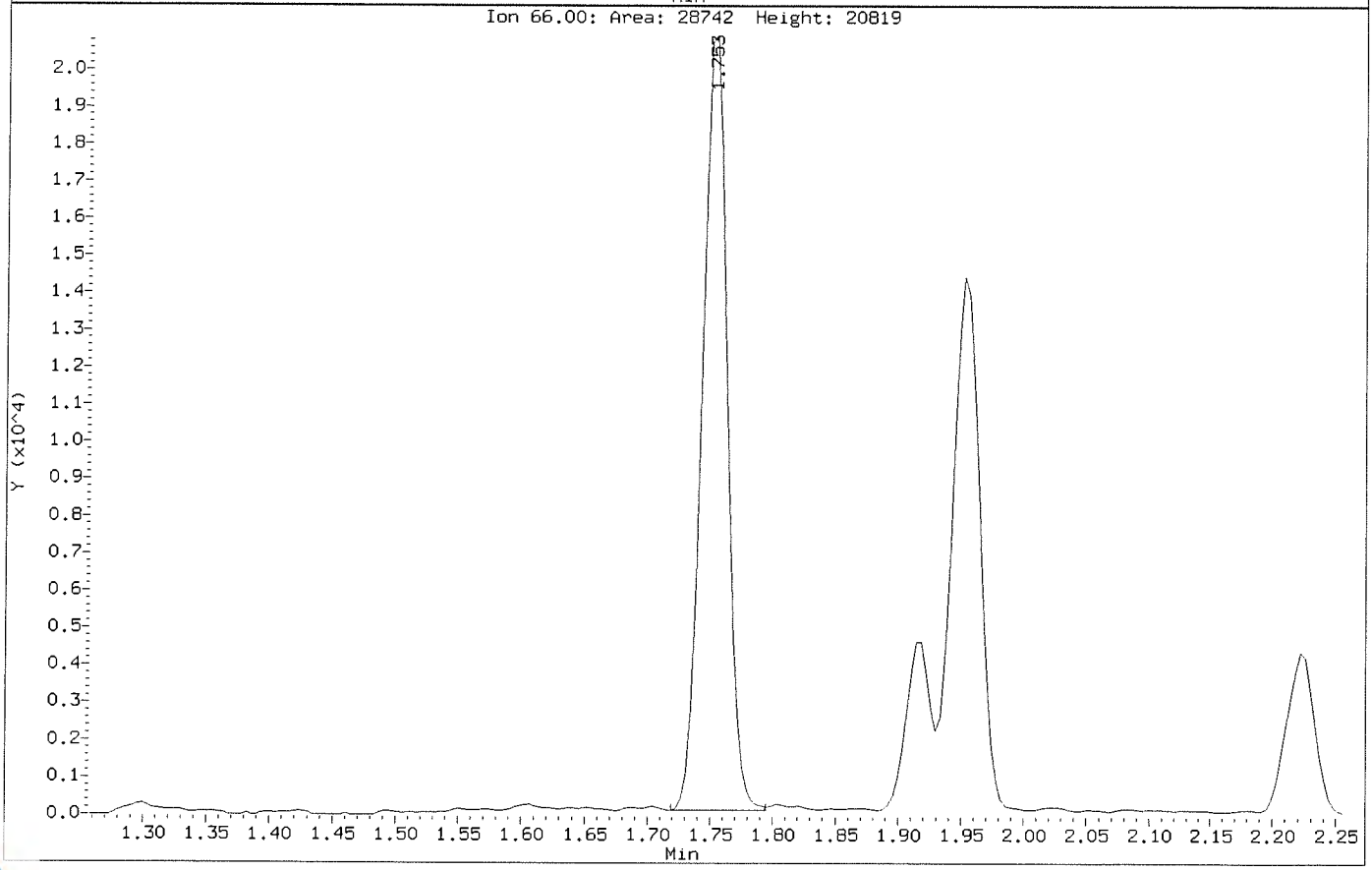
Injection Date: 13-DEC-2018 17:06
Instrument: VOA9.i
Client Sample ID: HS18120114-04MS

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121320.D Page 1
Report Date: 25-Jan-2019 20:04

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121320.D
Lab Smp Id: HS18120114-04MSD Client Smp ID: HS18120114-04MSD
Inj Date : 13-DEC-2018 17:31
Operator : PC Inst ID: VOA9.i
Smp Info : HS18120114-04MSD;HS18120114-04MSD;3;;MSD
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:03 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 19 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

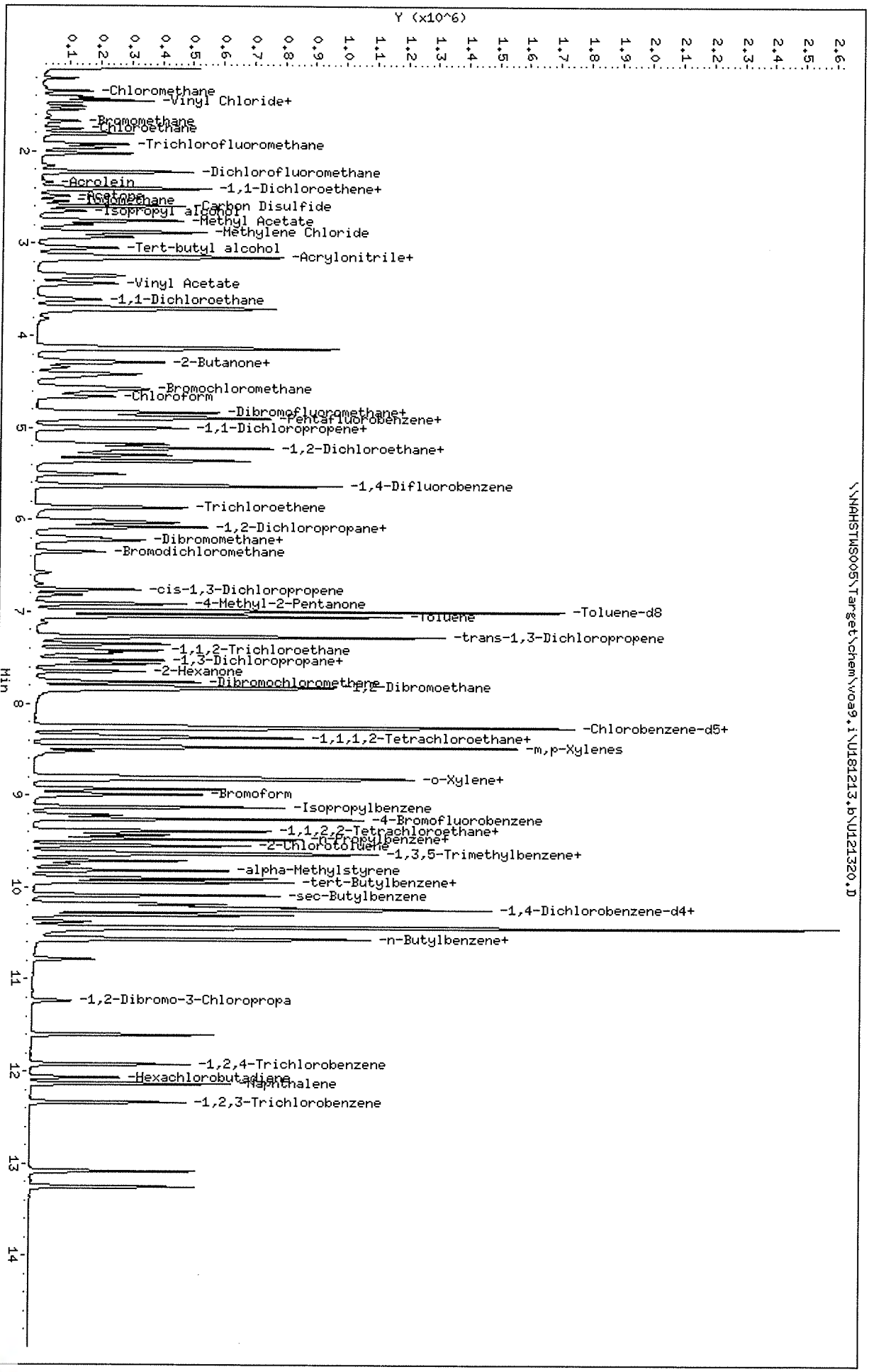
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	398708	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	709892	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.253	(1.000)	651238	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	309013	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.834	(0.986)	208089	45.2866	45.28
$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	272183	44.9858	44.98
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	884415	53.2409	53.24
$ 69 4-Bromofluorobenzene	95	9.258	9.257	(1.122)	329914	51.2576	51.25
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	92866	22.6072	22.60
31 1,1,1-Trichloroethane	97	4.830	4.834	(0.986)	147042	20.9953	20.99
68 1,1,2,2-Tetrachloroethane	83	9.393	9.392	(0.918)	173241	23.6684	23.66
138 Freon TF	101	2.405	2.412	(0.491)	80757	20.2190	20.21
53 1,1,2-Trichloroethane	83	7.421	7.420	(0.900)	97218	23.4812	23.48
22 1,1-Dichloroethane	63	3.608	3.612	(0.737)	207583	22.7197	22.71
11 1,1-Dichloroethene	96	2.405	2.408	(0.491)	96073	21.3474	21.34
32 1,1-Dichloropropene	75	5.007	5.010	(0.890)	158394	24.1588	24.15
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	132723	22.7497	22.74
71 1,2,3-Trichloropropane	75	9.426	9.430	(0.921)	179092	23.4473	23.44
90 1,2,4-Trichlorobenzene	180	11.923	11.926	(1.165)	135204	22.2492	22.24
79 1,2,4-Trimethylbenzene	105	9.944	9.943	(0.971)	415657	24.2173	24.21
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	22830	20.8906	20.89
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	111614	23.2805	23.28

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121320.D Page 2
Report Date: 25-Jan-2019 20:04

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88 1,2-Dichlorobenzene	146	10.570	10.573	(1.033)	217946	22.0858	22.08
33 1,2-Dichloroethane	62	5.254	5.257	(0.934)	165247	22.2451	22.24
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	124412	24.6152	24.61
75 1,3,5-Trimethylbenzene	105	9.625	9.628	(0.940)	400626	24.1299	24.12
83 1,3-Dichlorobenzene	146	10.180	10.179	(0.995)	216416	22.2440	22.24
54 1,3-Dichloropropane	76	7.563	7.567	(0.917)	212296	23.8802	23.88
84 1,4-Dichlorobenzene	146	10.255	10.258	(1.002)	225912	23.7164	23.71
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	107573	19.0121	19.01
24 2-Butanone	43	4.343	4.343	(0.887)	132270	47.1941	47.19
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	358088	23.6649	23.66
52 2-Hexanone	43	7.649	7.653	(0.927)	198626	52.4678	52.46
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	420035	24.0568	24.05
82 p-Isopropyltoluene	119	10.210	10.209	(0.997)	420059	24.8228	24.82
45 4-Methyl-2-Pentanone	43	6.915	6.914	(0.838)	280777	51.6823	51.68
10 Acetone	43	2.484	2.487	(0.507)	99588	52.3935	52.39
37 Benzene	78	5.220	5.224	(0.928)	471256	24.0156	24.01
74 Bromobenzene	156	9.381	9.381	(0.917)	113410	22.3731	22.37
29 Bromochloromethane	128	4.557	4.560	(0.930)	55333	23.5409	23.54
39 Bromodichloromethane	83	6.349	6.348	(1.129)	129284	21.9181	21.91
66 Bromoform	173	8.984	8.984	(1.089)	54442	19.2269	19.22
6 Bromomethane	94	1.670	1.674	(0.341)	58798	18.9995	18.99
19 Carbon Disulfide	76	2.592	2.600	(0.529)	584149	42.0299	42.02
34 Carbon Tetrachloride	117	4.999	4.999	(0.889)	116498	22.7451	22.74
59 Chlorobenzene	112	8.275	8.275	(1.003)	304944	22.6875	22.68
7 Chloroethane	64	1.756	1.760	(0.359)	87643	21.0675	21.06(M)
28 Chloroform	83	4.658	4.661	(0.951)	195338	21.2791	21.27
3 Chloromethane	50	1.344	1.348	(0.274)	100081	18.9447	18.94
27 cis-1,2-Dichloroethene	96	4.291	4.294	(0.876)	123436	21.8485	21.84
46 cis-1,3-Dichloropropene	75	6.757	6.761	(1.201)	169498	22.8191	22.81
55 Dibromochloromethane	129	7.758	7.758	(0.940)	92409	22.4247	22.42
44 Dibromomethane	93	6.191	6.191	(1.101)	72202	22.7940	22.79
2 Dichlorodifluoromethane	85	1.209	1.213	(0.247)	65248	11.8509	11.85
61 Ethylbenzene	106	8.373	8.373	(1.015)	160548	23.6271	23.62
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	44841	24.2349	24.23
67 Isopropylbenzene	105	9.126	9.126	(1.106)	474446	23.9722	23.97
62 m,p-Xylenes	106	8.474	8.474	(1.027)	401096	47.8915	47.89
17 Methylene Chloride	84	2.874	2.877	(0.587)	120392	23.2959	23.29
87 n-Butylbenzene	91	10.558	10.558	(1.031)	393644	24.7730	24.77
73 n-Propylbenzene	91	9.475	9.475	(0.926)	603162	24.7357	24.73
92 Naphthalene	128	12.133	12.133	(1.185)	448194	24.4936	24.49
63 o-Xylene	106	8.811	8.811	(1.068)	199862	23.8480	23.84
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	499921	24.6222	24.62
64 Styrene	104	8.826	8.826	(1.070)	339458	23.9898	23.98
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	342402	24.1982	24.19
56 Tetrachloroethene	164	7.526	7.525	(0.912)	81063	23.7621	23.76
50 Toluene	91	7.050	7.049	(0.855)	491842	23.7882	23.78
20 trans-1,2-Dichloroethene	96	3.147	3.151	(0.643)	107829	21.8616	21.86
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	144149	20.5117	20.51
38 Trichloroethene	130	5.861	5.865	(1.042)	109957	22.7316	22.73
8 Trichlorofluoromethane	101	1.959	1.962	(0.400)	157437	19.7510	19.75
5 Vinyl Chloride	62	1.423	1.426	(0.291)	134339	20.9666	20.96

QC Flag Legend

M - Compound response manually integrated.



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Sample Info: HS18120114-04MSD;HS18120114-04MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

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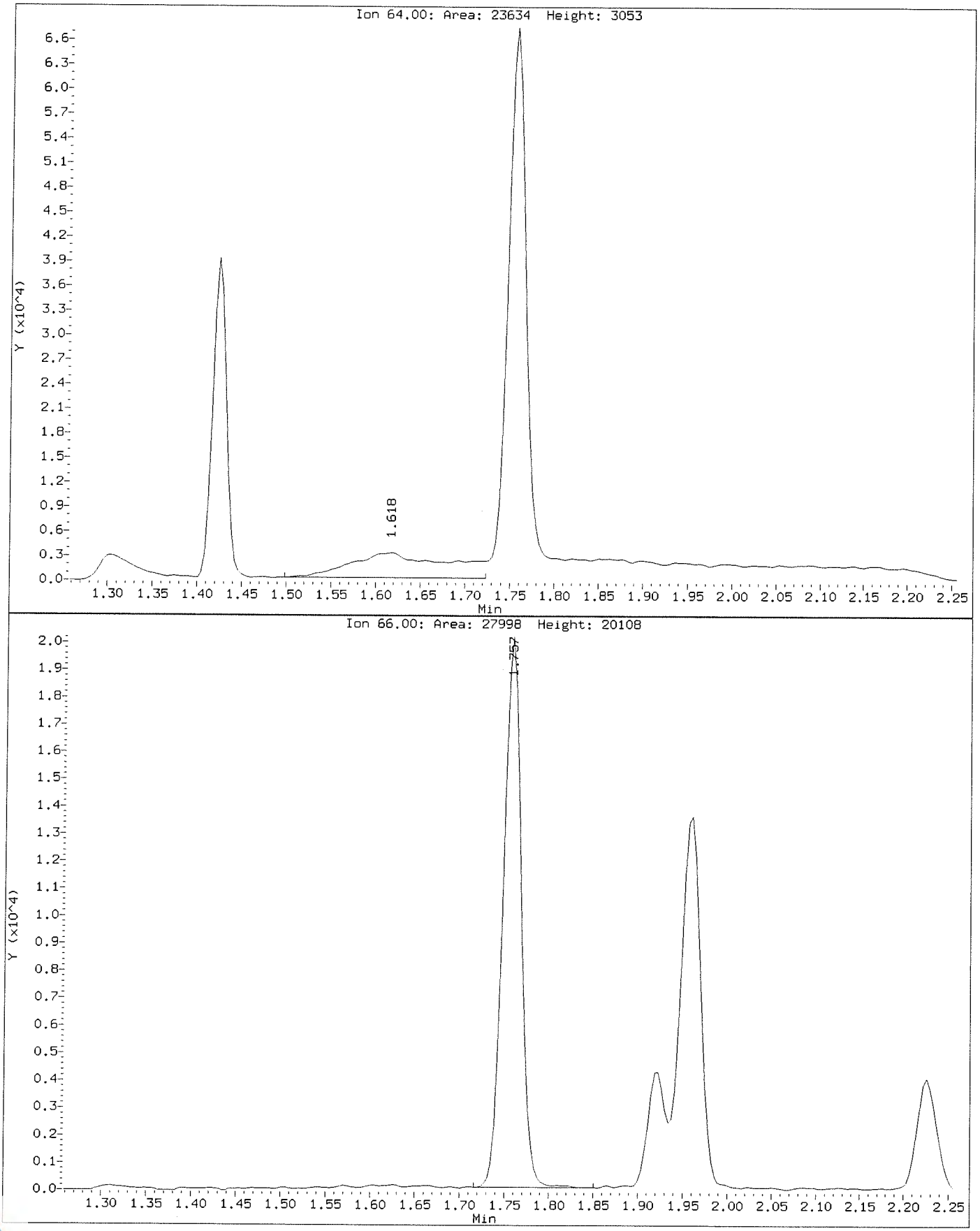
Injection Date: 13-DEC-2018 17:31
Instrument: VOA9.i
Client Sample ID: HS18120114-04MSD

Compound: Chloroethane
CAS Number: 75-00-3



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Instrument: VOA9.i
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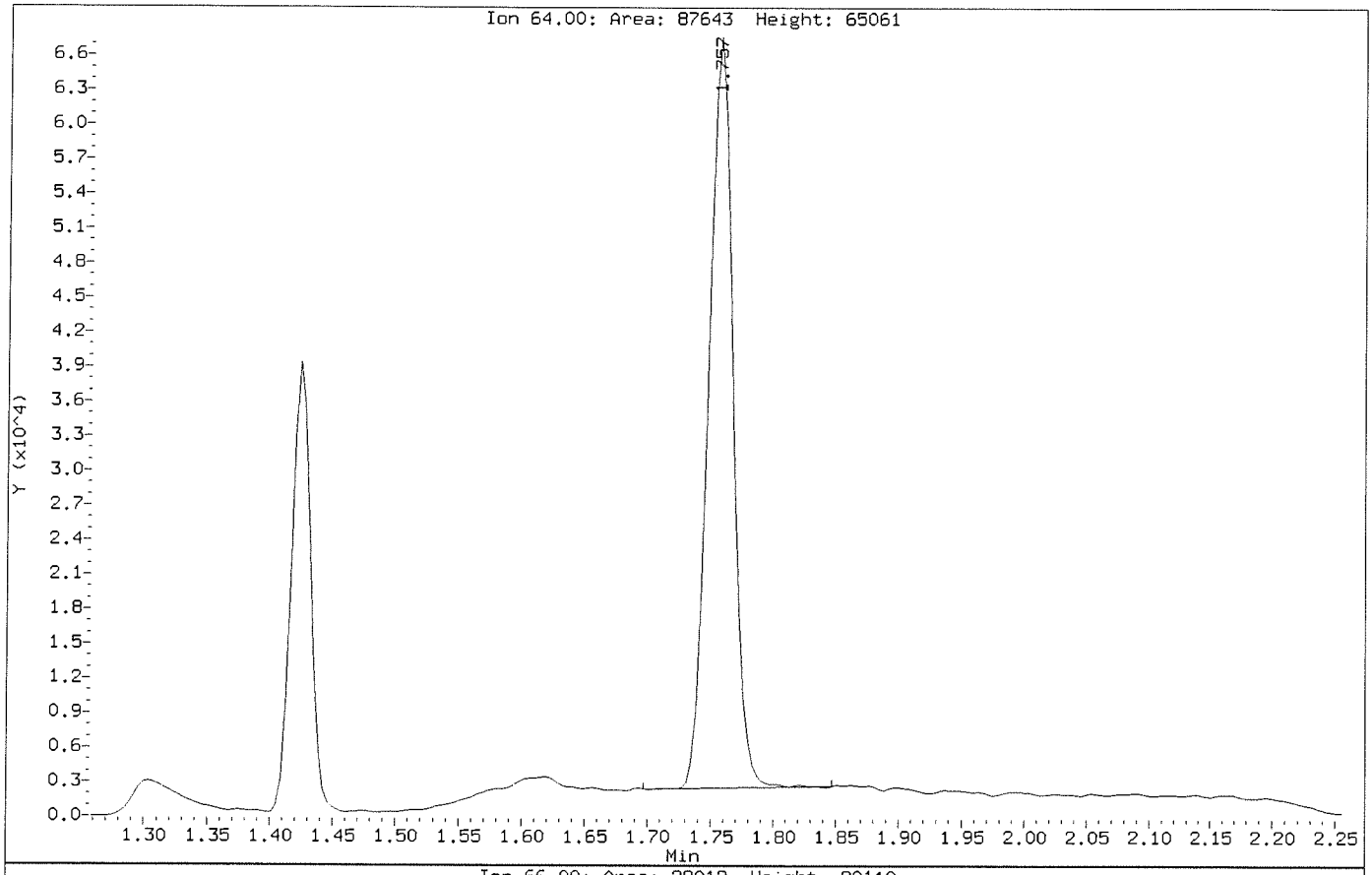
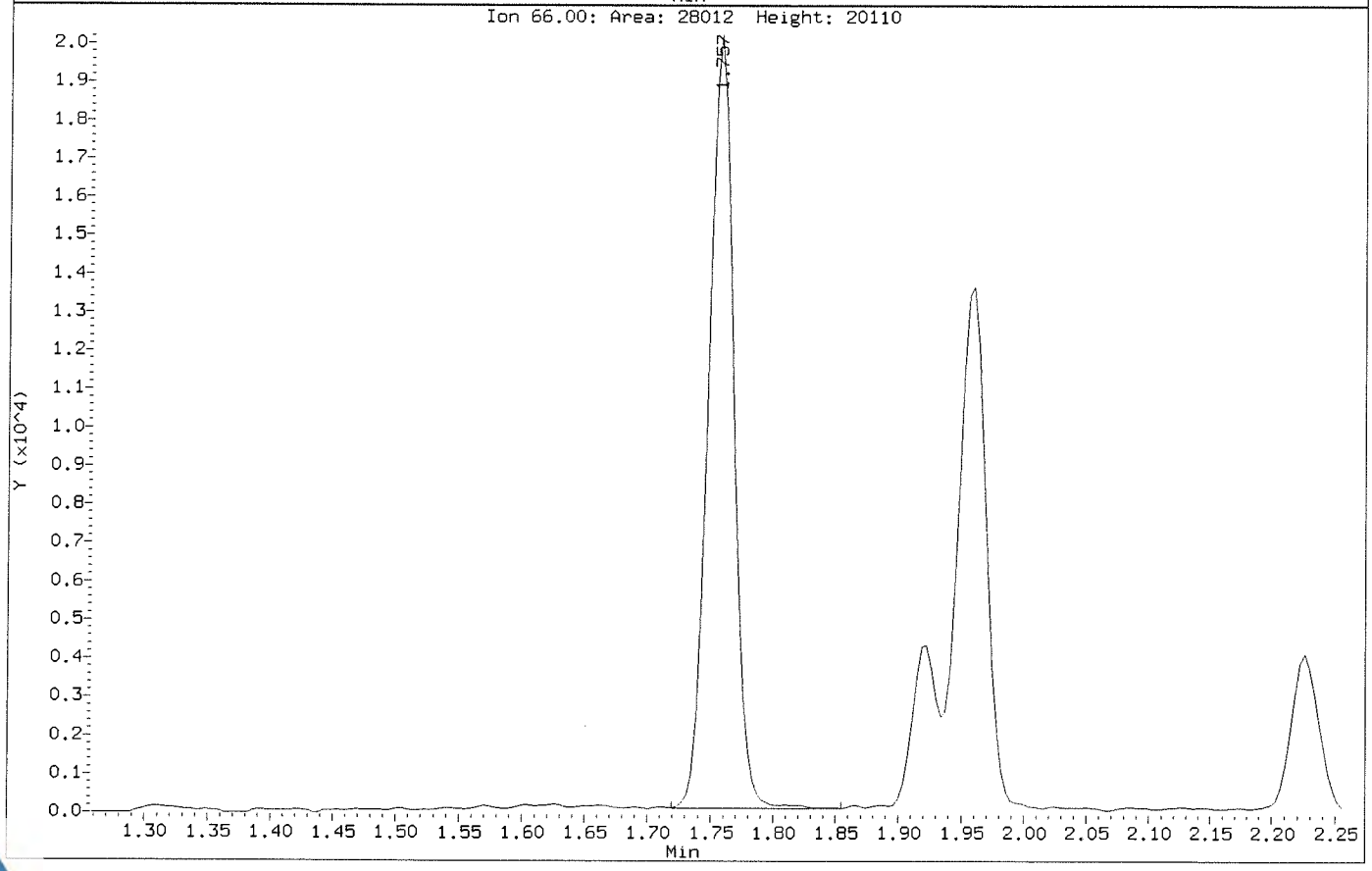
Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121328.D Page 1
Report Date: 25-Jan-2019 20:04

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121328.D
Lab Smp Id: VSTD050-END Client Smp ID: VSTD050-END
Inj Date : 13-DEC-2018 20:49
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050-END;VSTD050-END;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U181213.b\8260C.m
Meth Date : 25-Jan-2019 20:04 VOA9.i Quant Type: ISTD
Cal Date : 13-NOV-2018 14:15 Cal File: U111308.D
Als bottle: 27 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAP.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

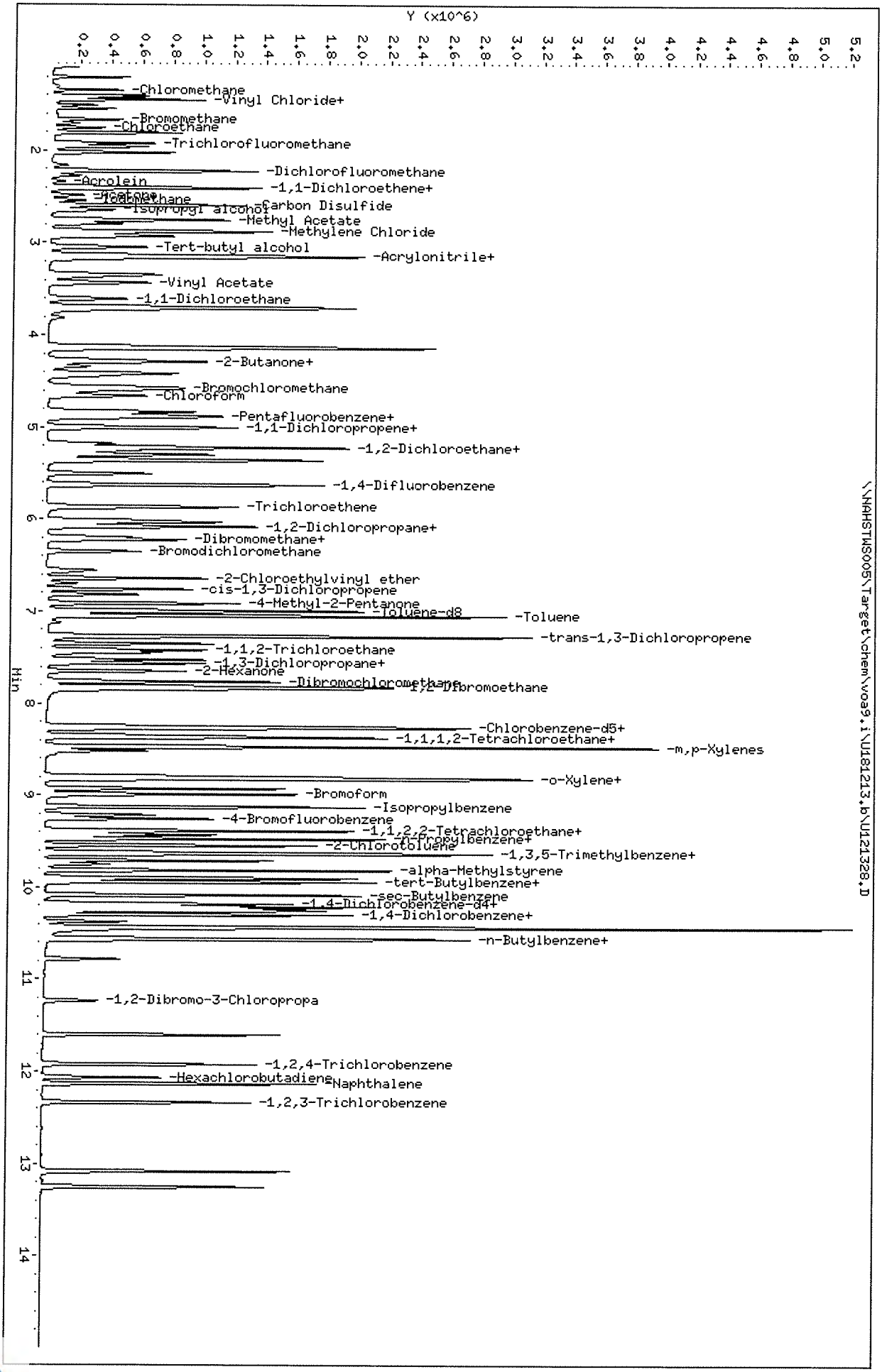
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	399018	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	712808	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	656429	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	313829	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	208314	50.0000	45.30
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	269186	50.0000	44.43
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	886146	50.0000	52.91
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	335363	50.0000	51.70
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	247091	50.0000	59.67
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	380872	50.0000	54.34
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	440096	50.0000	59.20
138 Freon TF	101	2.405	2.405	(0.491)	220767	50.0000	55.23
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	244880	50.0000	58.67
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	520771	50.0000	56.95
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	242779	50.0000	53.90
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	393932	50.0000	59.83
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	353819	50.0000	59.71
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	461928	50.0000	59.54
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	361205	50.0000	58.52
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	1058411	50.0000	60.71
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	63073	50.0000	54.78
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	285009	50.0000	58.97

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\U121328.D Page 2
Report Date: 25-Jan-2019 20:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	556299	50.0000	55.50
33	1,2-Dichloroethane	62	5.254	5.254	(0.934)	411424	50.0000	55.15
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	317340	50.0000	62.52
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	1024279	50.0000	60.74
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	557682	50.0000	56.44
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	533032	50.0000	59.48
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	571945	50.0000	59.18
26	2,2-Dichloropropane	77	4.279	4.279	(0.874)	267641	50.0000	47.26
24	2-Butanone	43	4.339	4.339	(0.886)	331995	100.000	118.36
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	908703	50.0000	59.13
52	2-Hexanone	43	7.649	7.649	(0.927)	499262	100.000	130.83
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	1059693	50.0000	59.76
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	1080692	50.0000	62.88
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	703227	100.000	128.41
10	Acetone	43	2.484	2.484	(0.507)	230556	100.000	127.02
37	Benzene	78	5.220	5.220	(0.928)	1187405	50.0000	60.26
74	Bromobenzene	156	9.381	9.381	(0.917)	294357	50.0000	57.17
29	Bromochloromethane	128	4.557	4.557	(0.930)	139228	50.0000	59.18
39	Bromodichloromethane	83	6.348	6.348	(1.129)	341808	50.0000	57.71
66	Bromoform	173	8.984	8.984	(1.089)	158167	50.0000	52.91(T)
6	Bromomethane	94	1.670	1.670	(0.341)	111382	50.0000	34.26
19	Carbon Disulfide	76	2.592	2.592	(0.529)	1593115	100.000	114.53
34	Carbon Tetrachloride	117	4.999	4.999	(0.889)	297604	50.0000	57.86
59	Chlorobenzene	112	8.275	8.275	(1.003)	769266	50.0000	56.78
7	Chloroethane	64	1.756	1.756	(0.359)	229296	50.0000	55.07(M)
28	Chloroform	83	4.658	4.658	(0.951)	488793	50.0000	53.20
3	Chloromethane	50	1.344	1.344	(0.274)	281293	50.0000	52.79
27	cis-1,2-Dichloroethene	96	4.287	4.287	(0.875)	309828	50.0000	54.79
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	472618	50.0000	63.36
55	Dibromochloromethane	129	7.758	7.758	(0.940)	251584	50.0000	60.56
44	Dibromomethane	93	6.191	6.191	(1.101)	182581	50.0000	57.40
2	Dichlorodifluoromethane	85	1.209	1.209	(0.247)	294093	50.0000	49.86
61	Ethylbenzene	106	8.373	8.373	(1.015)	404281	50.0000	59.02
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	120906	50.0000	61.56
67	Isopropylbenzene	105	9.126	9.126	(1.106)	1208751	50.0000	60.59
62	m,p-Xylenes	106	8.474	8.474	(1.027)	1003107	100.000	118.82
17	Methylene Chloride	84	2.873	2.873	(0.587)	301315	50.0000	59.31
87	n-Butylbenzene	91	10.558	10.558	(1.031)	1017637	50.0000	61.53
73	n-Propylbenzene	91	9.475	9.475	(0.926)	1525393	50.0000	61.59
92	Naphthalene	128	12.133	12.133	(1.185)	1188955	50.0000	63.97
63	o-Xylene	106	8.811	8.811	(1.068)	510419	50.0000	60.42
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	1280465	50.0000	62.09
64	Styrene	104	8.826	8.826	(1.070)	883153	50.0000	61.91
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	875340	50.0000	60.91
56	Tetrachloroethene	164	7.526	7.526	(0.912)	199164	50.0000	57.91
50	Toluene	91	7.049	7.049	(0.855)	1228624	50.0000	58.95
20	trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	271901	50.0000	55.08
51	trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	403203	50.0000	54.50
38	Trichloroethene	130	5.861	5.861	(1.042)	275957	50.0000	56.81
8	Trichlorofluoromethane	101	1.959	1.959	(0.400)	417726	50.0000	52.36
5	Vinyl Chloride	62	1.423	1.423	(0.291)	376319	50.0000	57.77

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

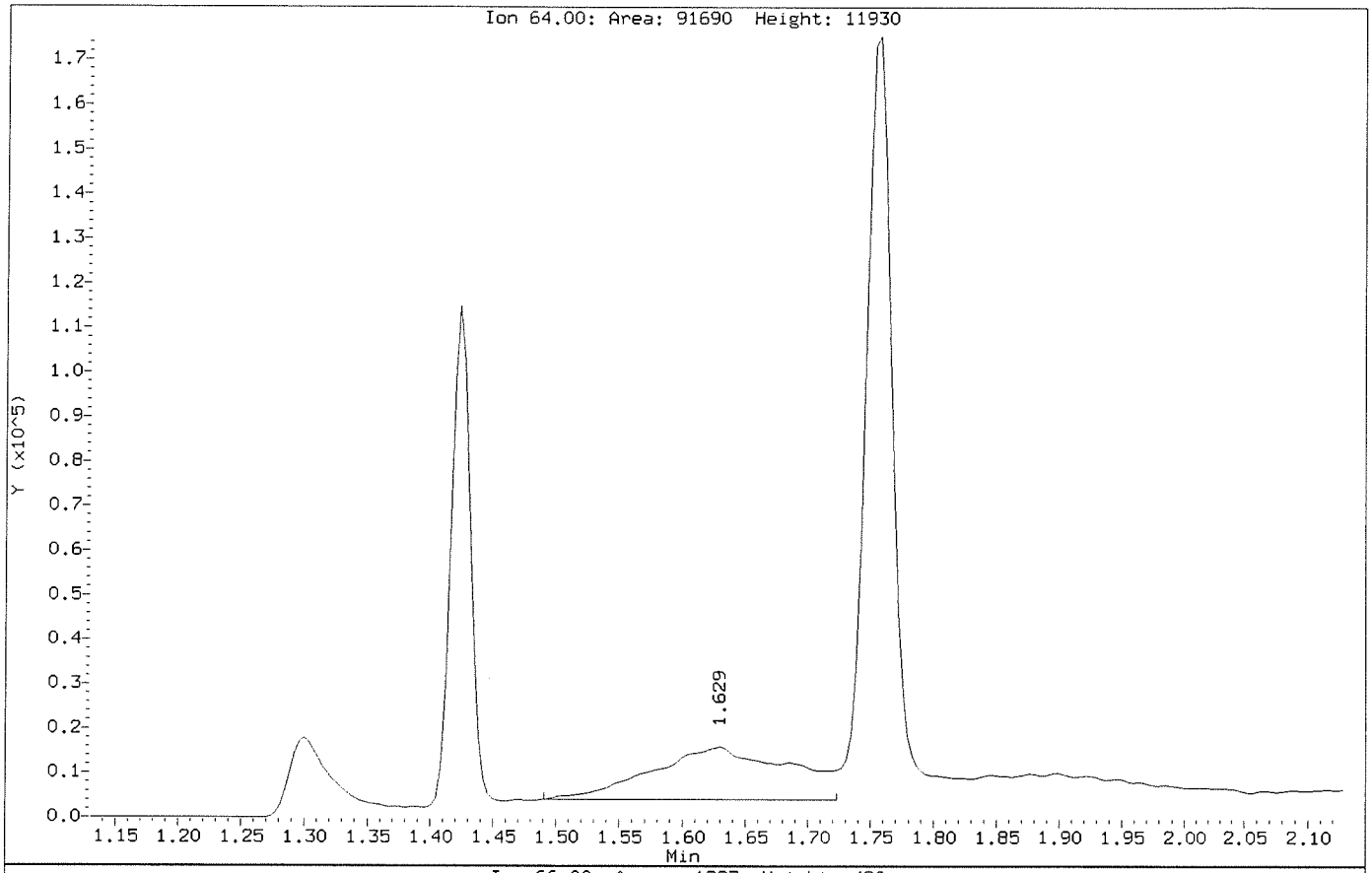


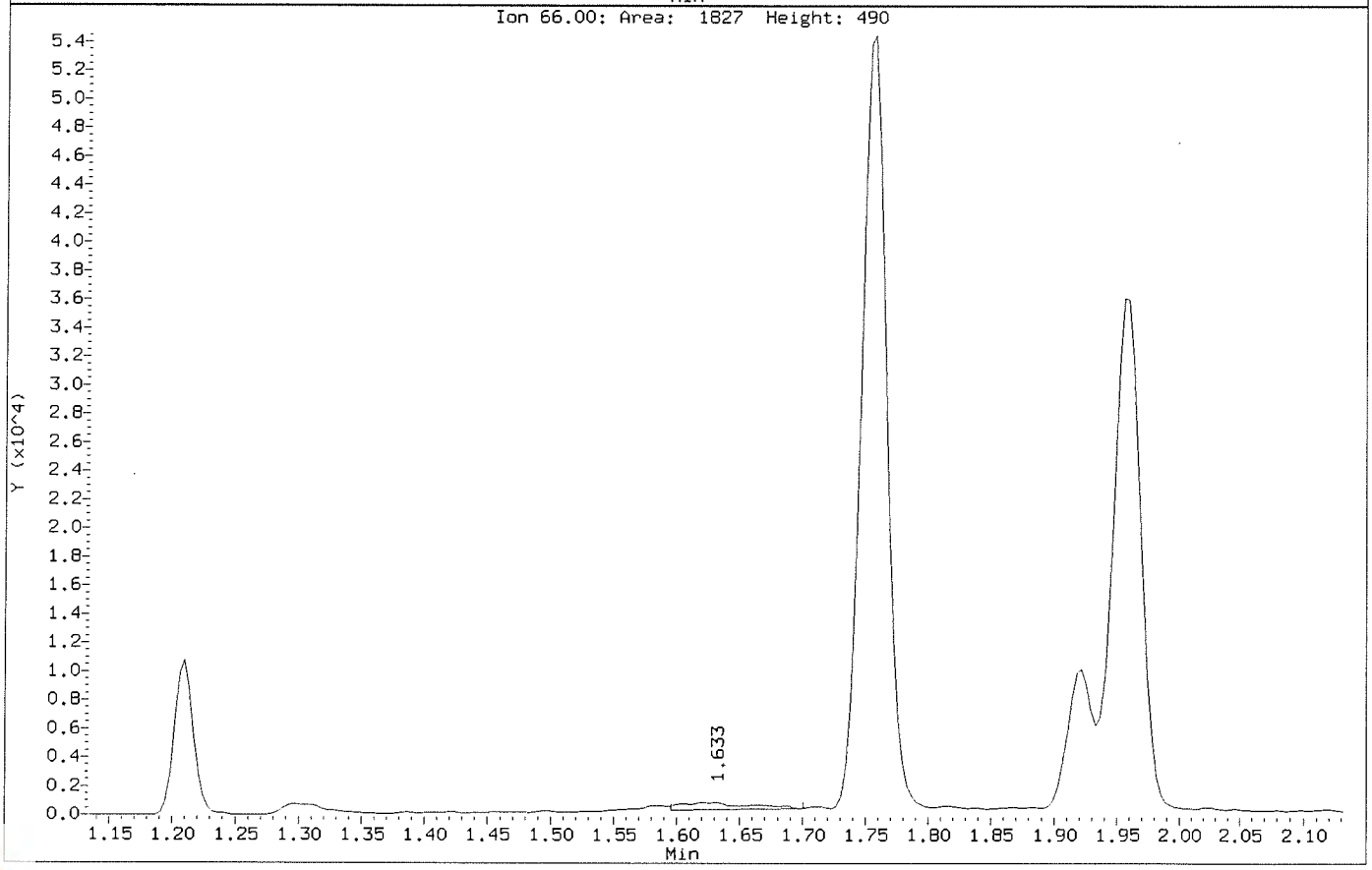
Data File: \\NAHSTWS005\Target\chem\voa9,i\U181213,b\U121328,D
Date : 13-DEC-2018 20:49
Client ID: VSTD050-END
Sample Info: VSTD050-END;VSTD050-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181213.b\Before\U121328.D
Injection Date: 13-DEC-2018 20:49
Instrument: VOA9.i
Client Sample ID: VSTD050-END

Compound: Chloroethane
CAS Number: 75-00-3





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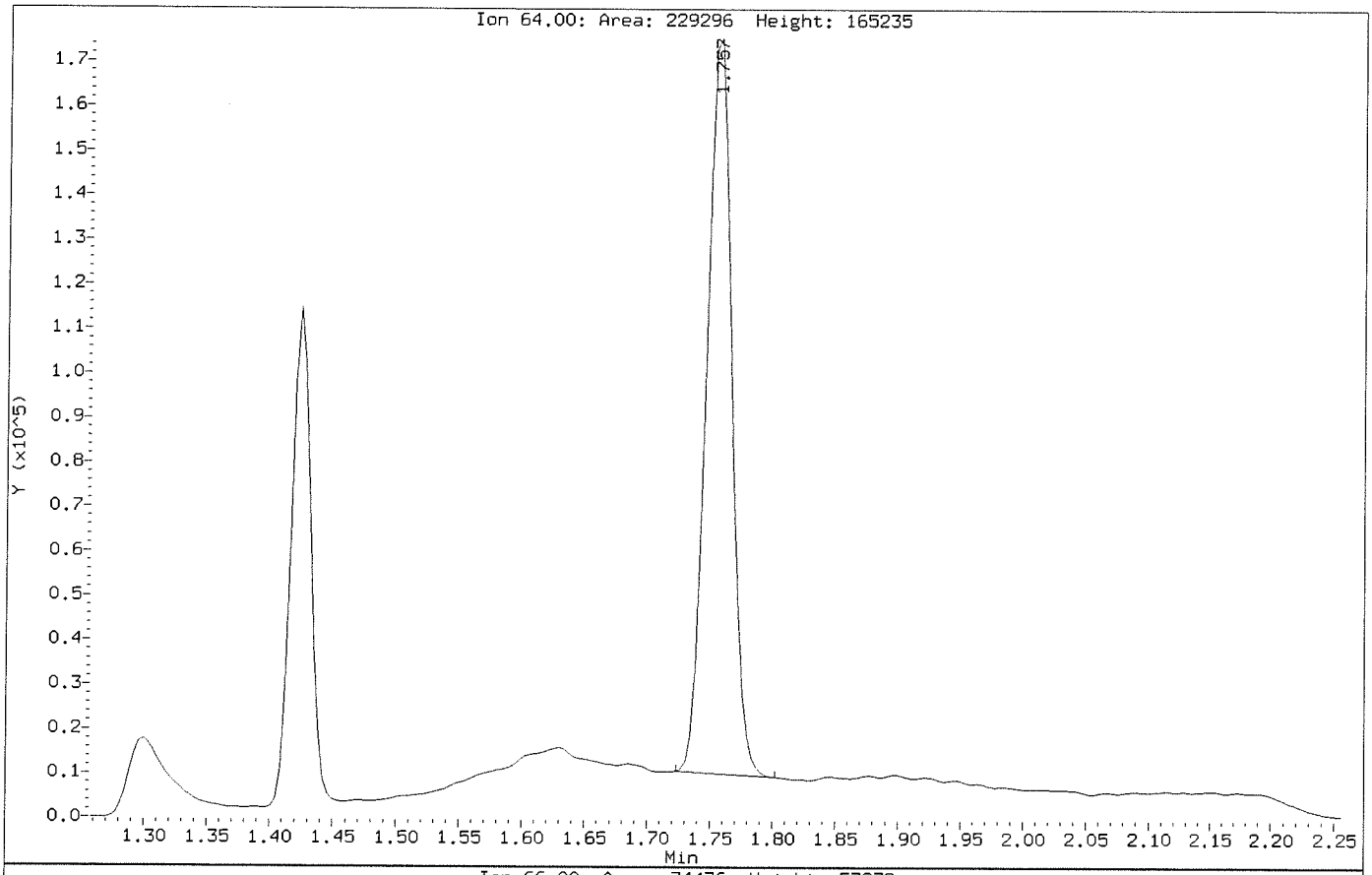
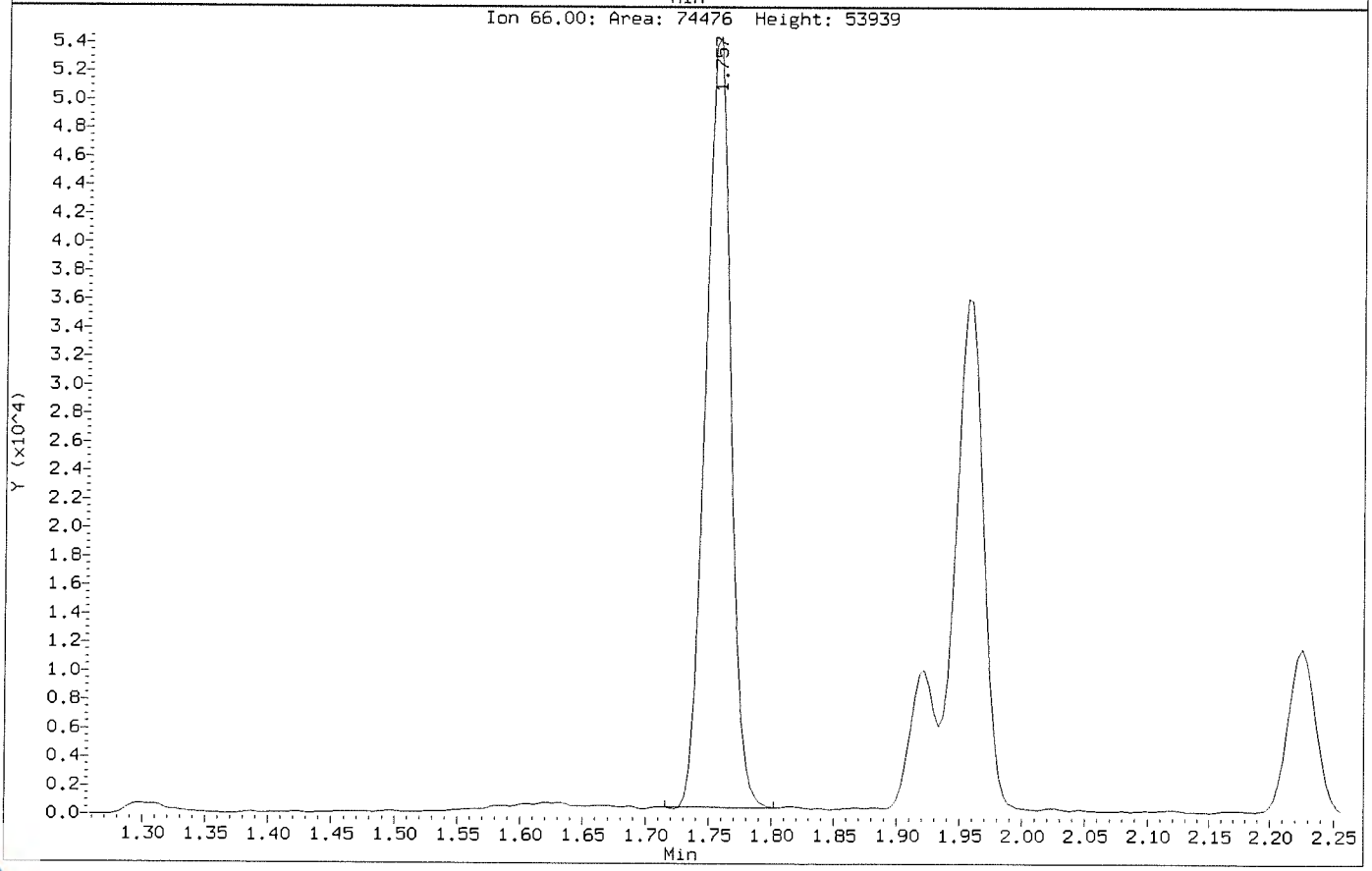
Injection Date: 13-DEC-2018 20:49
Instrument: VOA9.i
Client Sample ID: VSTD050-END

Compound: Chloroethane
CAS Number: 75-00-3





HS18120114 Longhorn Army Ammunition Plant LHAAP50

ALS WO# HS18120114

ALS Houston, US

Date: 04-Jan-19

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Aptim Environmental & Infrastucture, Inc.

Project: Longhorn Army Ammunition Plant LHAAP-50

WorkOrder: HS18120114

Instrument:ICPMS04

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		Ar
24	Magnesium	Germanium		Ar
27	Aluminum	Germanium		Ar
39	Potassium	Germanium		Ar
44	Calcium	Germanium		ArHe
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
78	Selenium	Germanium		ArHe
88	Strontium	Germanium		Ar
95	Molybdenum	Germanium		Ar
105	Palladium	Germanium		Ar
107	Silver	Germanium		Ar
111	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
135	Barium	Indium		Ar
203	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Aptim Environmental & Infrastucture, Inc.

Project: Longhorn Army Ammunition Plant LHAAP-50

WorkOrder: HS18120114

Instrument:ICPMS05

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		Ar
24	Magnesium	Germanium		Ar
27	Aluminum	Germanium		Ar
39	Potassium	Germanium		Ar
44	Calcium	Germanium		Ar
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
78	Selenium	Germanium		ArHe
88	Strontium	Germanium		Ar
95	Molybdenum	Germanium		Ar
105	Palladium	Germanium		Ar
107	Silver	Germanium		Ar
114	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
137	Barium	Indium		Ar
205	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

ALS Houston, US

Date: 04-Jan-19

FORM 12 - PREPARATION LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114
Start Date: 10-Dec-2018 09:30 End Date: 10-Dec-2018 13:30

Batch ID: 135381
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18111538-04MS				10	10	1
HS18111538-04MSD				10	10	1
HS18111538-04PDS				10	10	1
HS18111538-04SD				10	10	1
HS18120114-06	50WW23-181203	Groundwater		10	10	1
HS18120114-07	50WW22-181203	Groundwater		10	10	1
LCS-135381				10	10	1
MBLK-135381				10	10	1

ALS Houston, US

Date: 04-Jan-19

FORM 12 - PREPARATION LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114
Start Date: 10-Dec-2018 09:30 End Date: 10-Dec-2018 13:30

Batch ID: 135382
Prep Code: 3010A Diss
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18111440-01MS				10	10	1
HS18111440-01MSD				10	10	1
HS18111440-01PDS				10	10	1
HS18111440-01SD				10	10	1
HS18120114-06	50WW23-181203	Groundwater		10	10	1
HS18120114-07	50WW22-181203	Groundwater		10	10	1
LCS-135382				10	10	1
LCSD-135382				10	10	1
MBLK-135382				10	10	1
MBLKF1-135382				10	10	1

ALS Houston, US

Date: 04-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114
Start Date: 13-Dec-2018 End Date: 14-Dec-2018

Run ID:ICPMS04_329160
Instrument:ICPMS04
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS04_329160_Tune	1	13-Dec-2018 00:00	ICPMS04_329160_Tune_1	
CAL BLK	1	13-Dec-2018 12:37	016CALB.d_4862754	FE
2/10/200	1	13-Dec-2018 12:39	017CALS.d_4862755	FE
5/25/500	1	13-Dec-2018 12:41	018CALS.d_4862756	FE
10/50/1000	1	13-Dec-2018 12:43	019CALS.d_4862757	FE
100/500/10K	1	13-Dec-2018 12:46	020CALS.d_4862758	FE
200/1000/20K	1	13-Dec-2018 12:48	021CALS.d_4862759	FE
ICV	1	13-Dec-2018 12:52	023_ICV.d_4862761	FE
LLICV2	1	13-Dec-2018 12:55	024SMPL.d_4862762	FE
LLICV5	1	13-Dec-2018 12:57	025LICV.d_4862763	FE
ICB	1	13-Dec-2018 12:59	026_ICB.d_4862764	FE
ICSA	1	13-Dec-2018 13:04	027ICSA.d_4862801	FE
ICSAB	1	13-Dec-2018 13:14	030ICSB.d_4862818	FE
CCV 1	1	13-Dec-2018 13:34	038_CCV.d_4862878	FE
CCB 1	1	13-Dec-2018 13:36	039_CCB.d_4862879	FE
CCV 2	1	13-Dec-2018 14:06	050_CCV.d_4863024	FE
CCB 2	1	13-Dec-2018 14:08	051_CCB.d_4863025	FE
CCV 3	1	13-Dec-2018 14:37	062_CCV.d_4863060	FE
CCB 3	1	13-Dec-2018 14:44	065_CCB.d_4863063	FE
CCV 4	1	13-Dec-2018 15:10	076_CCV.d_4863144	FE
CCB 4	1	13-Dec-2018 15:12	077_CCB.d_4863145	FE
CCV 5	1	13-Dec-2018 15:56	087_CCV.d_4863306	FE
CCB 5	1	13-Dec-2018 15:58	088_CCB.d_4863307	FE
CCV 6	1	13-Dec-2018 16:31	096_CCV.d_4863423	FE
CCB 6	1	13-Dec-2018 16:34	097_CCB.d_4863424	FE
CCV 7	1	13-Dec-2018 17:05	108_CCV.d_4863582	FE
CCB 7	1	13-Dec-2018 17:07	109_CCB.d_4863583	FE
CCV 8	1	13-Dec-2018 17:58	120_CCV.d_4863855	FE
CCB 8	1	13-Dec-2018 18:01	121_CCB.d_4863856	FE
CCV 9	1	13-Dec-2018 18:30	131_CCV.d_4863870	FE
CCB 9	1	13-Dec-2018 18:32	132_CCB.d_4863871	FE
MBLK-135381	1	13-Dec-2018 18:52	134SMPL.d_4863889	FE
LCS-135381	1	13-Dec-2018 18:54	135SMPL.d_4863890	FE
CCV 10	1	13-Dec-2018 19:12	143_CCV.d_4863898	FE
CCB 10	1	13-Dec-2018 19:15	144_CCB.d_4864403	FE
ZZZZZZSD	5	13-Dec-2018 19:31	147SMPL.d_4864135	FE
ZZZZZZMS	1	13-Dec-2018 19:34	148SMPL.d_4864136	FE
ZZZZZZMSD	1	13-Dec-2018 19:36	149SMPL.d_4864137	FE
ZZZZZZPDS	1	13-Dec-2018 19:38	150SMPL.d_4864138	FE
CCV 11	1	13-Dec-2018 19:49	155_CCV.d_4864143	FE
CCB 11	1	13-Dec-2018 19:51	156_CCB.d_4864144	FE
50WW23-181203	1	13-Dec-2018 20:14	164SMPL.d_4864152	FE
50WW22-181203	1	13-Dec-2018 20:16	165SMPL.d_4864153	FE
CCV 12	1	13-Dec-2018 20:23	168_CCV.d_4864156	FE
CCB 12	1	13-Dec-2018 20:25	169_CCB.d_4864157	FE
CCV 13	1	13-Dec-2018 20:50	180_CCV.d_4864168	FE
CCB 13	1	13-Dec-2018 20:52	181_CCB.d_4864169	FE
CCV 14	1	13-Dec-2018 21:17	192_CCV.d_4864180	FE
CCB 14	1	13-Dec-2018 21:19	193_CCB.d_4864181	FE
CCV 15	1	13-Dec-2018 21:41	203_CCV.d_4864191	FE
CCB 15	1	13-Dec-2018 21:44	204_CCB.d_4864192	FE

ALS Houston, US Date: 04-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114
Start Date: 13-Dec-2018 End Date: 14-Dec-2018

Run ID:ICPMS04_329160
Instrument:ICPMS04
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 16	1	13-Dec-2018 22:13	216_CCB.d_4864204	FE
CCV 16	1	13-Dec-2018 22:29	218_CCV.d_4864206	FE
CAL BLK	1	13-Dec-2018 22:40	223CALB.d_4864207	FE
2/10/200	1	13-Dec-2018 22:43	224CALS.d_4864208	FE
5/25/500	1	13-Dec-2018 22:45	225CALS.d_4864209	FE
10/50/1000	1	13-Dec-2018 22:47	226CALS.d_4864210	FE
100/500/10K	1	13-Dec-2018 22:49	227CALS.d_4864211	FE
200/1000/20K	1	13-Dec-2018 22:52	228CALS.d_4864212	FE
ICV	1	13-Dec-2018 22:56	230_ICV.d_4864214	FE
LLICV2	1	13-Dec-2018 22:58	231SMPL.d_4864215	FE
LLICV5	1	13-Dec-2018 23:01	232LICV.d_4864216	FE
ICB	1	13-Dec-2018 23:03	233_ICB.d_4864217	FE
CCV 17	1	13-Dec-2018 23:30	245_CCV.d_4864229	FE
CCB 17	1	13-Dec-2018 23:32	246_CCB.d_4864230	FE
CCV 18	1	13-Dec-2018 23:48	251_CCV.d_4864235	FE
CCB 18	1	13-Dec-2018 23:50	252_CCB.d_4864236	FE
CCV 19	1	14-Dec-2018 00:18	262_CCV.d_4864253	FE
CCB 19	1	14-Dec-2018 00:20	263_CCB.d_4864254	FE

ALS Houston, US Date: 04-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114
Start Date: 14-Dec-2018 End Date: 14-Dec-2018

Run ID:ICPMS04_329261
Instrument:ICPMS04
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS04_329261_Tune	1	14-Dec-2018 00:00	ICPMS04_329261_Tune_1	

ALS Houston, US

Date: 04-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114
Start Date: 10-Dec-2018 End Date: 11-Dec-2018

Run ID:ICPMS05_328925
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_328925_Tune	1	10-Dec-2018 00:00	ICPMS05_328925_Tune_1	
CAL BLK	1	10-Dec-2018 17:22	019CALB.d_4857059	FE MN
2/10/200	1	10-Dec-2018 17:24	020CALS.d_4857060	FE MN
5/25/500	1	10-Dec-2018 17:26	021CALS.d_4857061	FE MN
10/50/1000	1	10-Dec-2018 17:28	022CALS.d_4857062	FE MN
100/500/10K	1	10-Dec-2018 17:31	023CALS.d_4857063	FE MN
200/1000/20K	1	10-Dec-2018 17:33	024CALS.d_4857064	FE MN
ICV	1	10-Dec-2018 17:37	026_ICV.d_4857066	FE MN
LLICV2	1	10-Dec-2018 17:39	027SMPL.d_4857067	FE MN
LLICV5	1	10-Dec-2018 17:41	028LICV.d_4857068	FE MN
ICB	1	10-Dec-2018 17:43	029_ICB.d_4857069	FE MN
ICSA	1	10-Dec-2018 17:47	031ICSA.d_4857071	FE MN
ICSAB	1	10-Dec-2018 17:49	032ICSB.d_4857072	FE MN
CCV 1	1	10-Dec-2018 18:12	043_CCV.d_4857116	FE MN
CCB 1	1	10-Dec-2018 18:14	044_CCB.d_4857117	FE MN
CCV 2	1	10-Dec-2018 18:38	054_CCV.d_4857147	FE MN
CCB 2	1	10-Dec-2018 18:41	055_CCB.d_4857148	FE MN
CCV 3	1	10-Dec-2018 18:59	064_CCV.d_4857169	FE MN
CCB 3	1	10-Dec-2018 19:01	065_CCB.d_4857170	FE MN
CCV 4	1	10-Dec-2018 19:24	076_CCV.d_4857181	FE MN
CCB 4	1	10-Dec-2018 19:26	077_CCB.d_4857182	FE MN
CCV 5	1	10-Dec-2018 19:49	088_CCV.d_4857193	FE MN
CCB 5	1	10-Dec-2018 19:51	089_CCB.d_4857194	FE MN
MBLKF1-135382	1	10-Dec-2018 19:59	093SMPL.d_4857201	FE MN
MBLK-135382	1	10-Dec-2018 20:01	094SMPL.d_4857202	FE MN
LCS-135382	1	10-Dec-2018 20:03	095SMPL.d_4857203	FE MN
LCSD-135382	1	10-Dec-2018 20:05	096SMPL.d_4857204	FE MN
CCV 6	1	10-Dec-2018 20:07	097_CCV.d_4857205	FE MN
CCB 6	1	10-Dec-2018 20:09	098_CCB.d_4857206	FE MN
ZZZZZZSD	5	10-Dec-2018 20:13	100SMPL.d_4857208	FE
ZZZZZZMS	1	10-Dec-2018 20:16	101SMPL.d_4857209	FE MN
ZZZZZZMSD	1	10-Dec-2018 20:18	102SMPL.d_4857210	FE MN
ZZZZZZPDS	1	10-Dec-2018 20:20	103SMPL.d_4857211	FE MN
CCV 7	1	10-Dec-2018 20:32	109_CCV.d_4857217	FE MN
CCB 7	1	10-Dec-2018 20:34	110_CCB.d_4857218	FE MN
50WW23-181203	1	10-Dec-2018 20:40	113SMPL.d_4857221	FE MN
50WW22-181203	1	10-Dec-2018 20:42	114SMPL.d_4857222	FE MN
CCV 8	1	10-Dec-2018 20:57	121_CCV.d_4857229	FE MN
CCB 8	1	10-Dec-2018 20:59	122_CCB.d_4857230	FE MN
CCV 9	1	10-Dec-2018 21:09	127_CCV.d_4857235	FE MN
CCB 9	1	10-Dec-2018 21:12	128_CCB.d_4857236	FE MN
CAL BLK	1	10-Dec-2018 21:20	132CALB.d_4857240	FE MN
2/10/200	1	10-Dec-2018 21:22	133CALS.d_4857241	FE MN
5/25/500	1	10-Dec-2018 21:24	134CALS.d_4857242	FE MN
10/50/1000	1	10-Dec-2018 21:26	135CALS.d_4857243	FE MN
100/500/10K	1	10-Dec-2018 21:28	136CALS.d_4857244	FE MN
200/1000/20K	1	10-Dec-2018 21:30	137CALS.d_4857245	FE MN
ICCV 10	1	10-Dec-2018 21:32	138_ICV.d_4857246	FE MN
LLCCV2	1	10-Dec-2018 21:34	139SMPL.d_4857247	FE MN
LLCCV5	1	10-Dec-2018 21:36	140LICV.d_4857248	FE MN
ICCB 10	1	10-Dec-2018 21:38	141_ICB.d_4857249	FE MN

ALS Houston, US Date: 04-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114
Start Date: 10-Dec-2018 End Date: 11-Dec-2018

Run ID:ICPMS05_328925
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCV 11	1	10-Dec-2018 21:57	150_CCV.d_4857258	FE MN
CCB 11	1	10-Dec-2018 21:59	151_CCB.d_4857259	FE MN
CCV 12	1	10-Dec-2018 22:22	162_CCV.d_4857270	FE MN
CCB 12	1	10-Dec-2018 22:24	163_CCB.d_4857271	FE MN
CCV 13	1	10-Dec-2018 22:41	171_CCV.d_4857279	FE MN
CCB 13	1	10-Dec-2018 22:43	172_CCB.d_4857280	FE MN
CCV 14	1	10-Dec-2018 23:06	183_CCV.d_4857511	FE MN
CCB 14	1	10-Dec-2018 23:08	184_CCB.d_4857512	FE MN
CCV 15	1	10-Dec-2018 23:31	195_CCV.d_4857523	FE MN
CCB 15	1	10-Dec-2018 23:33	196_CCB.d_4857524	FE MN
CCB 16	1	10-Dec-2018 23:54	206_CCB.d_4857534	FE MN
CCV 16	1	11-Dec-2018 00:02	208_CCV.d_4857536	FE MN
CCV 17	1	11-Dec-2018 00:23	218_CCV.d_4857643	FE MN
CCB 17	1	11-Dec-2018 00:25	219_CCB.d_4857644	FE MN
CCV 18	1	11-Dec-2018 00:27	220_CCV.d_4857645	FE MN
CCB 18	1	11-Dec-2018 00:29	221_CCB.d_4857646	FE MN
CCV 19	1	11-Dec-2018 00:52	232_CCV.d_4857657	FE MN
CCB 19	1	11-Dec-2018 00:54	233_CCB.d_4857658	FE MN
CCV 20	1	11-Dec-2018 01:13	242_CCV.d_4857667	FE MN
CCB 20	1	11-Dec-2018 01:15	243_CCB.d_4857668	FE MN
CCV 21	1	11-Dec-2018 01:37	254_CCV.d_4857679	FE MN
CCB 21	1	11-Dec-2018 01:39	255_CCB.d_4857680	FE MN
CCV 22	1	11-Dec-2018 01:41	256_CCV.d_4857681	FE MN
CCB 22	1	11-Dec-2018 01:43	257_CCB.d_4857682	FE MN
LLCCV5	1	11-Dec-2018 01:46	258LICV.d_4857683	FE MN
LLCCV2	1	11-Dec-2018 01:48	259SMPL.d_4857684	FE MN
ICSA	1	11-Dec-2018 01:50	260ICSA.d_4857685	FE MN
ICSAB	1	11-Dec-2018 01:52	261ICSB.d_4857686	FE MN

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS04_329160
Instrument: ICPMS04
Method: SW6020

ICV	Date: 13-Dec-2018 12:52		Seq: 4862761	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10346.966	103	90-110	

CCV1	Date: 13-Dec-2018 13:34		Seq: 4862878	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10432.005	104	90-110	

CCV2	Date: 13-Dec-2018 14:06		Seq: 4863024	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10602.36	106	90-110	

CCV3	Date: 13-Dec-2018 14:37		Seq: 4863060	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10578.351	106	90-110	

CCV4	Date: 13-Dec-2018 15:10		Seq: 4863144	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10358.909	104	90-110	

CCV5	Date: 13-Dec-2018 15:56		Seq: 4863306	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10336.098	103	90-110	

CCV6	Date: 13-Dec-2018 16:31		Seq: 4863423	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10586.891	106	90-110	

CCV7	Date: 13-Dec-2018 17:05		Seq: 4863582	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10481.575	105	90-110	

CCV8	Date: 13-Dec-2018 17:58		Seq: 4863855	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10408.586	104	90-110	

CCV9	Date: 13-Dec-2018 18:30		Seq: 4863870	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10586.888	106	90-110	

CCV10	Date: 13-Dec-2018 19:12		Seq: 4863898	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10521.807	105	90-110	

CCV11	Date: 13-Dec-2018 19:49		Seq: 4864143	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10467.408	105	90-110	

CCV12	Date: 13-Dec-2018 20:23		Seq: 4864156	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10401.24	104	90-110	

CCV13	Date: 13-Dec-2018 20:50		Seq: 4864168	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10366.118	104	90-110	

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Date: 04-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS04_329160
Instrument: ICPMS04
Method: SW6020

CCV14	Date: 13-Dec-2018 21:17		Seq: 4864180	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10468.67	105	90-110	

CCV15	Date: 13-Dec-2018 21:41		Seq: 4864191	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10328.588	103	90-110	

CCV16	Date: 13-Dec-2018 22:29		Seq: 4864206	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10269.508	103	90-110	

ICV	Date: 13-Dec-2018 22:56		Seq: 4864214	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10297.081	103	90-110	

CCV17	Date: 13-Dec-2018 23:30		Seq: 4864229	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10038.889	100	90-110	

CCV18	Date: 13-Dec-2018 23:48		Seq: 4864235	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9929.814	99	90-110	

CCV19	Date: 14-Dec-2018 00:18		Seq: 4864253	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9995.384	100	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

ICV	Date: 10-Dec-2018 17:37		Seq: 4857066	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9979.052	100	90-110	
Manganese	100	98.654	99	90-110	

CCV1	Date: 10-Dec-2018 18:12		Seq: 4857116	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10112.688	101	90-110	
Manganese	100	101.137	101	90-110	

CCV2	Date: 10-Dec-2018 18:38		Seq: 4857147	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10303.453	103	90-110	
Manganese	100	103.098	103	90-110	

CCV3	Date: 10-Dec-2018 18:59		Seq: 4857169	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10011.439	100	90-110	
Manganese	100	100.033	100	90-110	

CCV4	Date: 10-Dec-2018 19:24		Seq: 4857181	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9750.742	98	90-110	
Manganese	100	99.022	99	90-110	

CCV5	Date: 10-Dec-2018 19:49		Seq: 4857193	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9889.226	99	90-110	
Manganese	100	98.406	98	90-110	

CCV6	Date: 10-Dec-2018 20:07		Seq: 4857205	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9920.947	99	90-110	
Manganese	100	98.686	99	90-110	

CCV7	Date: 10-Dec-2018 20:32		Seq: 4857217	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10029.326	100	90-110	
Manganese	100	98.597	99	90-110	

CCV8	Date: 10-Dec-2018 20:57		Seq: 4857229	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9913.873	99	90-110	
Manganese	100	97.804	98	90-110	

CCV9	Date: 10-Dec-2018 21:09		Seq: 4857235	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10059.449	101	90-110	
Manganese	100	100.52	101	90-110	

ICCV10	Date: 10-Dec-2018 21:32		Seq: 4857246	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10364.522	104	90-110	
Manganese	100	101.305	101	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

CCV11	Date: 10-Dec-2018 21:57		Seq: 4857258	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10240.425	102	90-110	
Manganese	100	102.954	103	90-110	

CCV12	Date: 10-Dec-2018 22:22		Seq: 4857270	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10153.735	102	90-110	
Manganese	100	101.083	101	90-110	

CCV13	Date: 10-Dec-2018 22:41		Seq: 4857279	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10132.344	101	90-110	
Manganese	100	101.031	101	90-110	

CCV14	Date: 10-Dec-2018 23:06		Seq: 4857511	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10062.185	101	90-110	
Manganese	100	99.843	100	90-110	

CCV15	Date: 10-Dec-2018 23:31		Seq: 4857523	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10152.363	102	90-110	
Manganese	100	100.34	100	90-110	

CCV16	Date: 11-Dec-2018 00:02		Seq: 4857536	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9829.612	98	90-110	
Manganese	100	99.111	99	90-110	

CCV17	Date: 11-Dec-2018 00:23		Seq: 4857643	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10373.839	104	90-110	
Manganese	100	104.855	105	90-110	

CCV18	Date: 11-Dec-2018 00:27		Seq: 4857645	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	10078.685	101	90-110	
Manganese	100	99.51	100	90-110	

CCV19	Date: 11-Dec-2018 00:52		Seq: 4857657	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9722.227	97	90-110	
Manganese	100	98.678	99	90-110	

CCV20	Date: 11-Dec-2018 01:13		Seq: 4857667	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9746.941	98	90-110	
Manganese	100	97.977	98	90-110	

CCV21	Date: 11-Dec-2018 01:37		Seq: 4857679	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Iron	10000	9899.631	99	90-110	
Manganese	100	99.233	99	90-110	

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Date: 04-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

CCV22 | Date: 11-Dec-2018 01:41 | Seq: 4857681 | CCV | Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Iron	10000	9954.743	100	90-110	
Manganese	100	98.904	99	90-110	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS04_329160
Instrument: ICPMS04
Method: SW6020

ICB	Date: 13-Dec-2018 12:59		Seq: 4862764	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB1	Date: 13-Dec-2018 13:36		Seq: 4862879	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	-13.12	12	200	J	
CCB2	Date: 13-Dec-2018 14:08		Seq: 4863025	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB3	Date: 13-Dec-2018 14:44		Seq: 4863063	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB4	Date: 13-Dec-2018 15:12		Seq: 4863145	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB5	Date: 13-Dec-2018 15:58		Seq: 4863307	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB6	Date: 13-Dec-2018 16:34		Seq: 4863424	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB7	Date: 13-Dec-2018 17:07		Seq: 4863583	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB8	Date: 13-Dec-2018 18:01		Seq: 4863856	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB9	Date: 13-Dec-2018 18:32		Seq: 4863871	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
MBLK-135381	Date: 13-Dec-2018 18:52		Seq: 4863889	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB10	Date: 13-Dec-2018 19:15		Seq: 4864403	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB11	Date: 13-Dec-2018 19:51		Seq: 4864144	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
CCB12	Date: 13-Dec-2018 20:25		Seq: 4864157	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	15.96	12	200	J	
CCB13	Date: 13-Dec-2018 20:52		Seq: 4864169	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS04_329160
Instrument: ICPMS04
Method: SW6020

CCB14	Date: 13-Dec-2018 21:19		Seq: 4864181	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB15	Date: 13-Dec-2018 21:44		Seq: 4864192	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

CCB16	Date: 13-Dec-2018 22:13		Seq: 4864204	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

ICB	Date: 13-Dec-2018 23:03		Seq: 4864217	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	-13.71	12	200	J	

CCB17	Date: 13-Dec-2018 23:32		Seq: 4864230	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	-12.07	12	200	J	

CCB18	Date: 13-Dec-2018 23:50		Seq: 4864236	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	-14.66	12	200	J	

CCB19	Date: 14-Dec-2018 00:20		Seq: 4864254	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	-14.86	12	200	J	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

ICB	Date: 10-Dec-2018 17:43		Seq: 4857069	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB1	Date: 10-Dec-2018 18:14		Seq: 4857117	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB2	Date: 10-Dec-2018 18:41		Seq: 4857148	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB3	Date: 10-Dec-2018 19:01		Seq: 4857170	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB4	Date: 10-Dec-2018 19:26		Seq: 4857182	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB5	Date: 10-Dec-2018 19:51		Seq: 4857194	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
MBLKF1-135382	Date: 10-Dec-2018 19:59		Seq: 4857201	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	2.26	0.7	5	J	
MBLK-135382	Date: 10-Dec-2018 20:01		Seq: 4857202	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	1.521	0.7	5	J	
CCB6	Date: 10-Dec-2018 20:09		Seq: 4857206	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB7	Date: 10-Dec-2018 20:34		Seq: 4857218	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB8	Date: 10-Dec-2018 20:59		Seq: 4857230	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB9	Date: 10-Dec-2018 21:12		Seq: 4857236	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

CCB9	Date: 10-Dec-2018 21:12		Seq: 4857236	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Manganese	0.919	0.7	5	J	
ICCB10	Date: 10-Dec-2018 21:38		Seq: 4857249	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB11	Date: 10-Dec-2018 21:59		Seq: 4857259	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB12	Date: 10-Dec-2018 22:24		Seq: 4857271	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB13	Date: 10-Dec-2018 22:43		Seq: 4857280	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB14	Date: 10-Dec-2018 23:08		Seq: 4857512	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB15	Date: 10-Dec-2018 23:33		Seq: 4857524	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB16	Date: 10-Dec-2018 23:54		Seq: 4857534	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB17	Date: 11-Dec-2018 00:25		Seq: 4857644	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	0.795	0.7	5	J	
CCB18	Date: 11-Dec-2018 00:29		Seq: 4857646	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB19	Date: 11-Dec-2018 00:54		Seq: 4857658	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	
CCB20	Date: 11-Dec-2018 01:15		Seq: 4857668	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	

ALS Houston, US

Date: 04-Jan-19

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

CCB21	Date: 11-Dec-2018 01:39		Seq: 4857680	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	

CCB22	Date: 11-Dec-2018 01:43		Seq: 4857682	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Manganese	5	0.7	5	U	

ALS Houston, US

Date: 04-Jan-19

Form 4 - ICP Interference Check Sample

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS04_329160
Instrument: ICPMS04
Method: SW6020

ICSA	Date: 13-Dec-2018 13:04	Seq: 4862801	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	100000	100600	101	

ICSAB	Date: 13-Dec-2018 13:14	Seq: 4862818	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	110000	110000	100.0	

ALS Houston, US

Date: 04-Jan-19

Form 4 - ICP Interference Check Sample

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Run ID: ICPMS05_328925
Instrument: ICPMS05
Method: SW6020

ICSA	Date: 10-Dec-2018 17:47	Seq: 4857071	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	100000	98610	98.6	
Manganese		0.225	0	

ICSAB	Date: 10-Dec-2018 17:49	Seq: 4857072	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	110000	107700	97.9	
Manganese	100	106.5	106	

ICSA	Date: 11-Dec-2018 01:50	Seq: 4857685	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	100000	100300	100	
Manganese		-0.157	0	

ICSAB	Date: 11-Dec-2018 01:52	Seq: 4857686	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Iron	110000	109800	99.8	
Manganese	100	106.8	107	

ALS Houston, US Date: 04-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Date Analyzed: 13-Dec-2018 19:36
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Matrix Spike: HS18111538-04MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Iron	5661	10790	5000	103	10650	5000	99.8	80-120	1.26	20
Manganese	146.8	199.6	50.00	106	192.7	50.00	91.8	80-120	3.52	20

ALS Houston, US Date: 04-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Date Analyzed: 10-Dec-2018 20:18
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Matrix Spike: HS18111440-01MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Iron	1553	6274	5000	94.4	6289	5000	94.7	75-125	0.246	20
Manganese	38.51	81.37	50.00	85.7	82.02	50.00	87.0	75-125	0.785	20

ALS Houston, US

Date: 04-Jan-19

Form 5B - Post Digest Sample Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Date Analyzed: 13-Dec-2018 19:38
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Lab Sample ID: HS18111538-04PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Iron	5661	15820	10000	102	75-125
Manganese	146.8	235.3	100	89	75-125

ALS Houston, US

Date: 04-Jan-19

Form 5B - Post Digest Sample Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Date Analyzed: 10-Dec-2018 20:20
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Lab Sample ID: HS18111440-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Iron	1553	11440	10000	99	75-125
Manganese	38.51	131.4	100	93	75-125

ALS Houston, US Date: 04-Jan-19

Form 7 - Laboratory Control Sample

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Date Analyzed: 13-Dec-2018 18:54
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Lab Sample ID: LCS-135381 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Iron	5000	5059	101	80-120
Manganese	50	45.31	91	80-120

ALS Houston, US

Date: 04-Jan-19

Form 7 - Laboratory Control Sample

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Date Analyzed: 10-Dec-2018 20:03
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Lab Sample ID: LCS-135382
Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Iron	5000	5001	100	80-120
Manganese	50	50.62	101	80-120

ALS Houston, US

Date: 04-Jan-19

Form 8 - ICP Serial Dilutions

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Date Analyzed: 13-Dec-2018 19:31
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Lab Sample ID: HS18111538-04SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Iron	5661		5914		4	
Manganese	146.8		156.7		7	

ALS Houston, US

Date: 04-Jan-19

Form 8 - ICP Serial Dilutions

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP-50
WorkOrder: HS18120114

Date Analyzed: 10-Dec-2018 20:13
Date Extracted: 10-Dec-2018 09:30
Units: ug/L

Lab Sample ID: HS18111440-01SD
Client Sample ID:

Analysis Method: SW6020

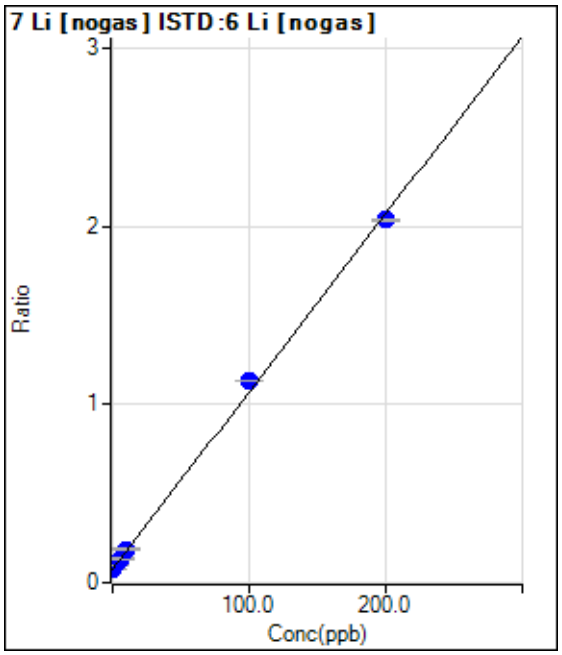
Analyte	Sample Result	C	SD Result	C	RPD	Q
Iron	1553		1642		6	

Calibration for 230_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121318A.b\
Analysis File: 121318A.batch.bin
DA Date-Time: 12/13/2018 11:58:59 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	223CALB.d	CAL BLK	12/13/2018 10:40:56 PM
2	224CALS.d	2/10/200	12/13/2018 10:43:11 PM
3	225CALS.d	5/25/500	12/13/2018 10:45:27 PM
4	226CALS.d	10/50/1000	12/13/2018 10:47:42 PM
5	227CALS.d	100/500/10K	12/13/2018 10:49:57 PM
6	228CALS.d	200/1000/20K	12/13/2018 10:52:11 PM
7			

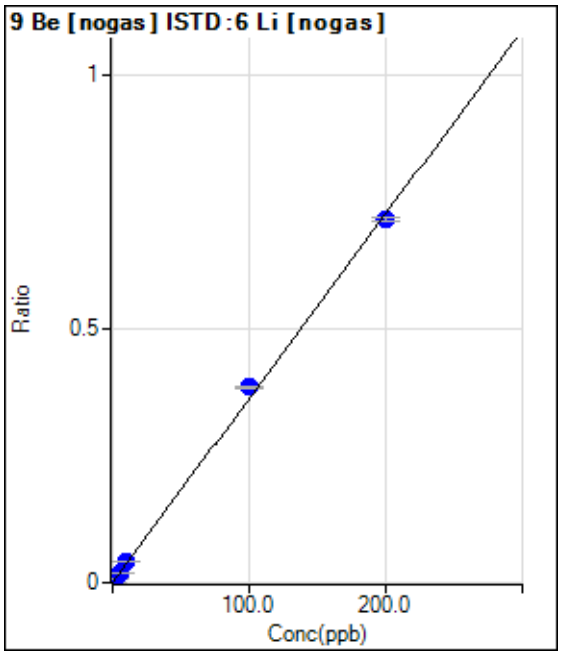
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34011.13	0.0747	P	1.4
2	☐	2.000	2.586	45281.36	0.1005	P	3.0
3	☐	5.000	5.929	60500.95	0.1338	P	2.0
4	☐	10.000	11.313	83534.88	0.1875	P	2.9
5	☐	100.000	106.287	528373.17	1.1340	P	0.8
6	☐	200.000	196.762	1000759.02	2.0356	P	0.5
7	☐	1.000					

y = 0.0100 * x + 0.0747
R = 0.9993
DL = 0.3254
BEC = 7.498

Weight: <None>
Min Conc: <None>

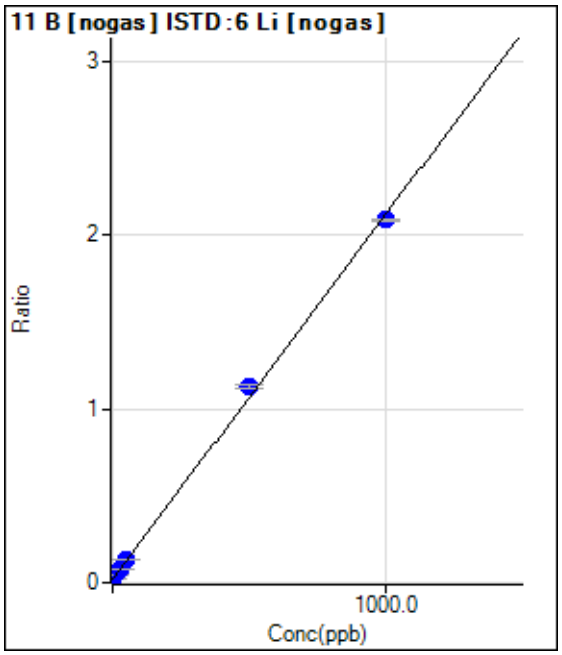


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0002	P	34.4
2	☐	2.000	2.166	3607.08	0.0080	P	8.4
3	☐	5.000	5.555	9169.03	0.0203	P	3.7
4	☐	10.000	11.322	18339.17	0.0412	P	3.9
5	☐	100.000	105.999	178945.00	0.3840	P	1.3
6	☐	200.000	196.919	350674.01	0.7133	P	1.0
7	☐	1.000					

y = 0.0036 * x + 1.6116E-004
R = 0.9994
DL = 0.04593
BEC = 0.0445

Weight: <None>
Min Conc: <None>

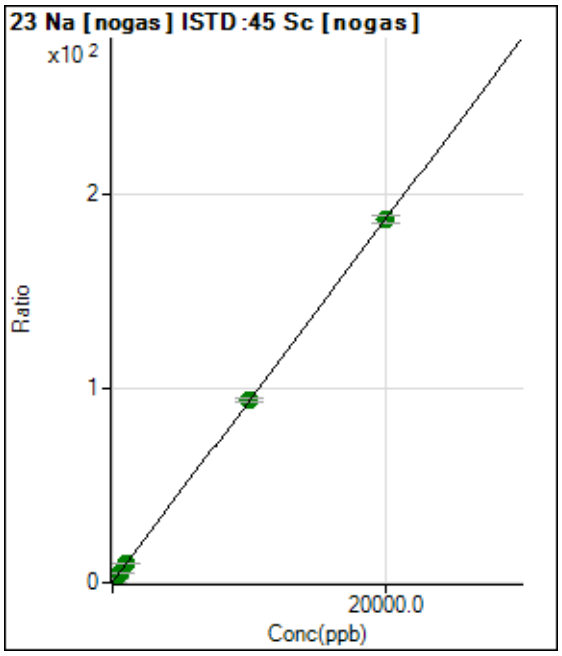
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8248.60	0.0181	P	6.5
2	☐	10.000	10.653	18229.08	0.0405	P	4.8
3	☐	25.000	27.331	34097.90	0.0754	P	4.2
4	☐	50.000	53.976	58504.49	0.1313	P	3.3
5	☐	500.000	527.341	523734.20	1.1239	P	1.7
6	☐	1000.000	986.066	1025414.15	2.0858	P	0.4
7	☐	5.000					

y = 0.0021 * x + 0.0181
R = 0.9995
DL = 1.683
BEC = 8.643

Weight: <None>
Min Conc: <None>

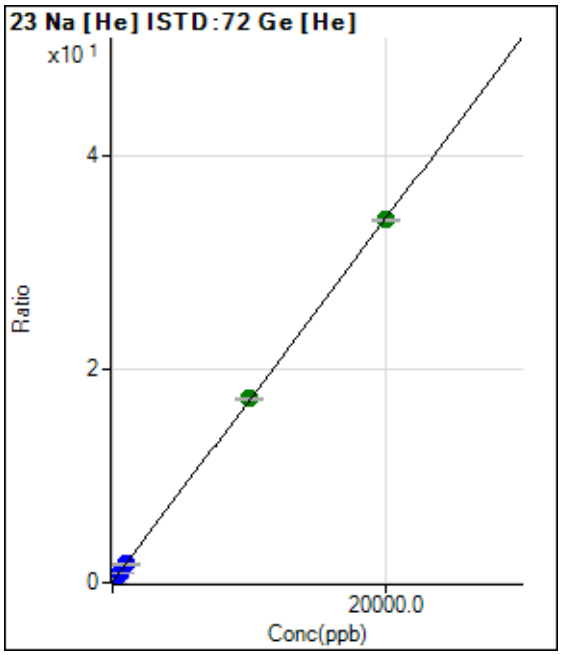


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	219281.37	0.2820	P	4.1
2	☐	200.000	211.055	1776897.70	2.2551	A	2.7
3	☐	500.000	512.627	4007223.53	5.0745	A	2.1
4	☐	1000.000	1005.685	7601014.75	9.6840	A	1.2
5	☐	10000.00	10055.579	72567799.54	94.2905	A	2.1
6	☐	20000.00	19971.500	142828882.3	186.993	A	2.0
7	☐	100.000					

y = 0.0093 * x + 0.2820
R = 1.0000
DL = 3.708
BEC = 30.17

Weight: <None>
Min Conc: <None>

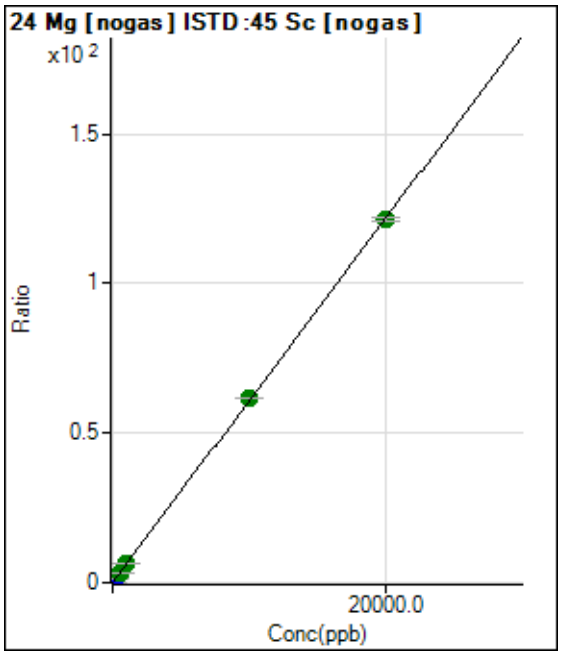
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22874.37	0.0638	P	1.9
2	☐	200.000	197.973	146300.35	0.3999	P	0.8
3	☐	500.000	488.151	324818.14	0.8925	P	1.0
4	☐	1000.000	971.655	619387.35	1.7134	P	3.2
5	☐	10000.00	10109.186	6123349.91	17.2256	A	0.6
6	☐	20000.00	19947.141	11969713.15	33.9268	A	0.2
7	☐	100.000					

y = 0.0017 * x + 0.0638
R = 1.0000
DL = 2.148
BEC = 37.61

Weight: <None>
Min Conc: <None>

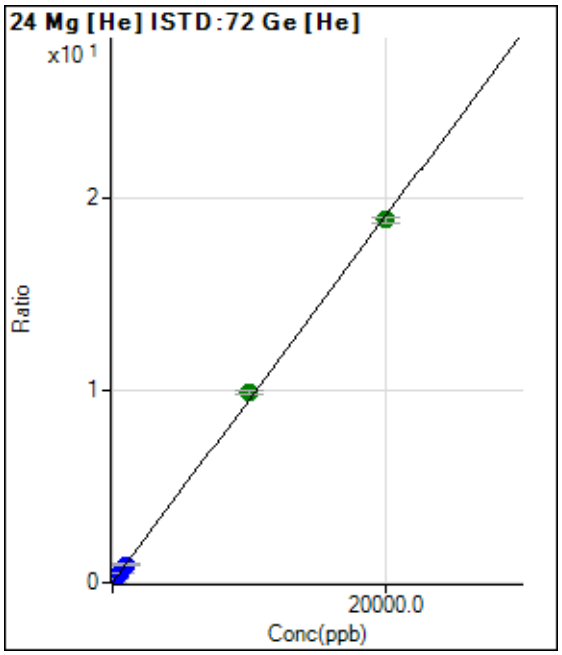


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33437.66	0.0430	P	7.9
2	☐	200.000	203.286	1007382.77	1.2786	P	3.2
3	☐	500.000	519.419	2527661.84	3.2002	A	0.7
4	☐	1000.000	1010.662	4855308.83	6.1860	A	2.5
5	☐	10000.00	10132.129	47432300.02	61.6282	A	0.5
6	☐	20000.00	19932.884	92586214.57	121.199	A	1.2
7	☐	100.000					

y = 0.0061 * x + 0.0430
R = 1.0000
DL = 1.686
BEC = 7.078

Weight: <None>
Min Conc: <None>

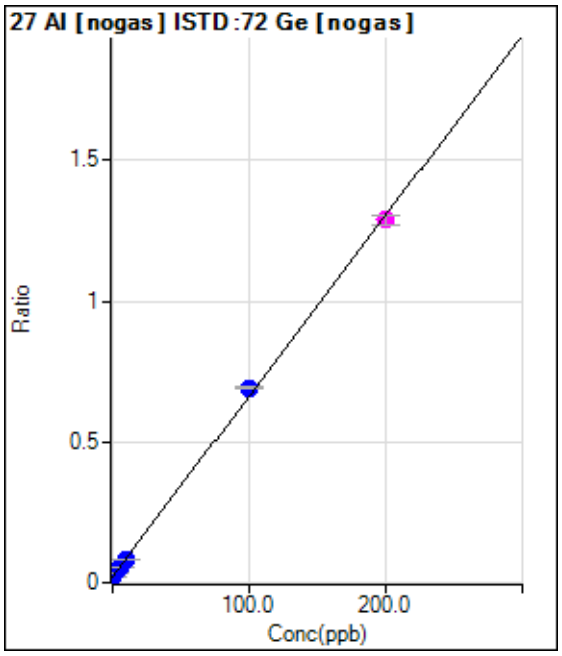
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2473.54	0.0069	P	5.2
2	☐	200.000	202.064	72999.52	0.1996	P	0.5
3	☐	500.000	496.108	174646.59	0.4799	P	0.8
4	☐	1000.000	986.363	342534.58	0.9473	P	2.1
5	☐	10000.00	10393.569	3525179.74	9.9162	A	2.0
6	☐	20000.00	19803.974	6663318.44	18.8882	A	1.6
7	☐	100.000					

y = 9.5341E-004 * x + 0.0069
R = 0.9997
DL = 1.128
BEC = 7.243

Weight: <None>
Min Conc: <None>

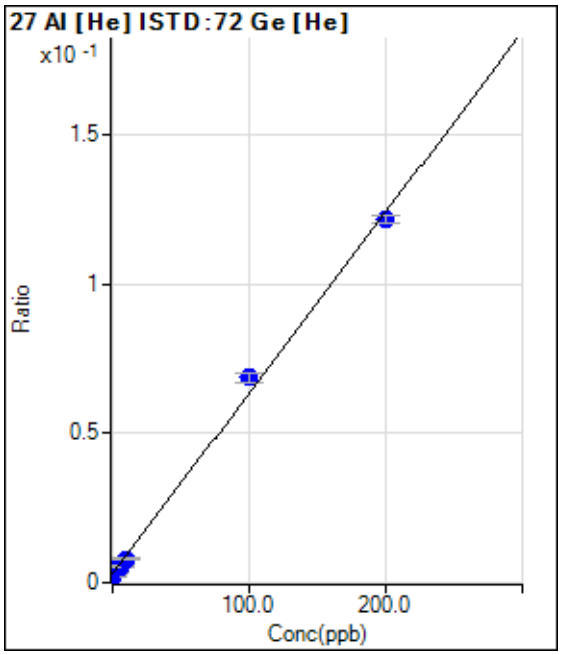


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20305.81	0.0216	P	19.4
2	☐	2.000	2.384	34930.32	0.0369	P	4.2
3	☐	5.000	5.317	52016.53	0.0557	P	0.9
4	☐	10.000	9.609	78378.68	0.0832	P	1.8
5	☐	100.000	104.612	650412.98	0.6923	P	1.1
6	☐	200.000	197.702	1203179.41	1.2891	M	2.7
7	☐	1.000					

y = 0.0064 * x + 0.0216
R = 0.9996
DL = 1.959
BEC = 3.365

Weight: <None>
Min Conc: <None>

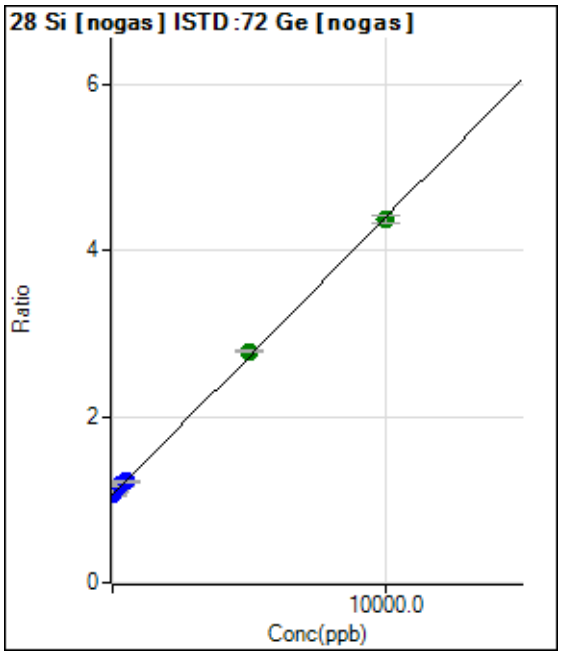
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.559	743.36	0.0021	P	18.1
2	☐	2.000	2.028	1553.61	0.0042	P	33.5
3	☐	5.000	4.044	1986.81	0.0055	P	12.8
4	☐	10.000	8.089	2863.61	0.0079	P	5.2
5	☐	100.000	108.559	24443.27	0.0688	P	5.0
6	☐	200.000	195.840	42903.35	0.1216	P	2.0
7	☐	1.000					

y = 6.0559E-004 * x + 0.0030
R = 0.9985
DL = 1.854
BEC = 4.98

Weight: <None>
Min Conc: <None>

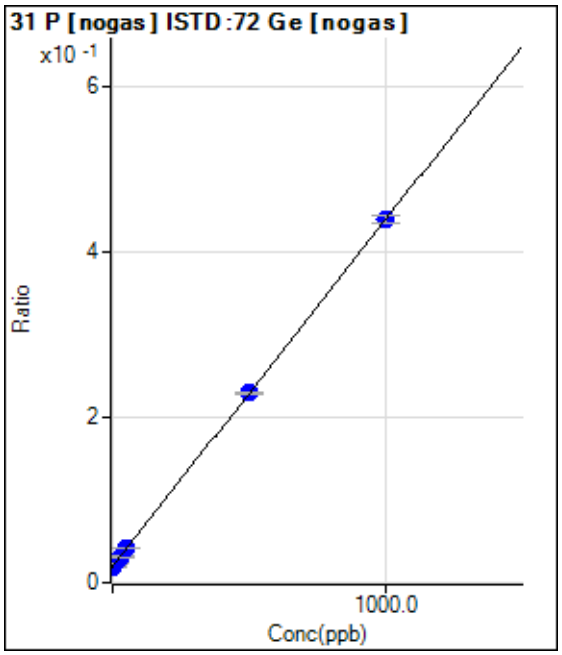


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	992312.80	1.0533	P	1.2
2	☐	100.000	160.316	1049319.73	1.1070	P	1.4
3	☐	250.000	351.978	1093975.37	1.1711	P	2.8
4	☐	500.000	500.811	1150229.57	1.2209	P	1.8
5	☐	5000.000	5183.389	2618743.03	2.7873	A	0.6
6	☐	10000.00	9905.112	4075979.94	4.3669	A	2.1
7	☐	50.000					

y = 3.3453E-004 * x + 1.0533
R = 0.9998
DL = 116.4
BEC = 3149

Weight: <None>
Min Conc: <None>

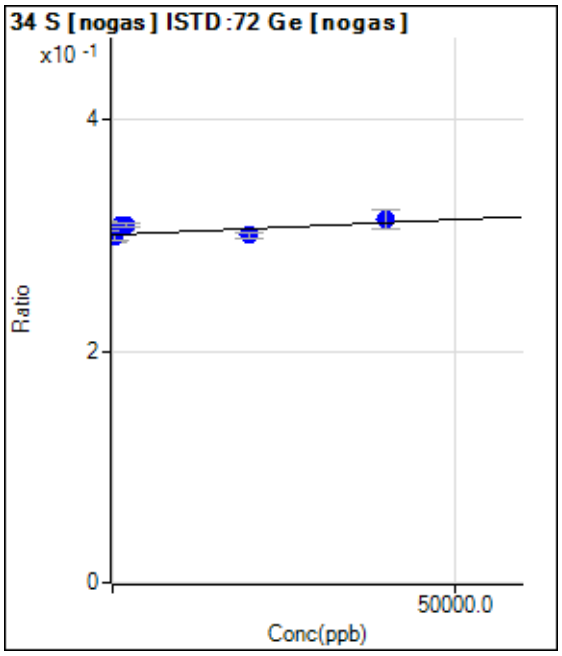
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18522.90	0.0197	P	3.9
2	☐	10.000	10.121	22664.15	0.0239	P	4.7
3	☐	25.000	28.028	29376.95	0.0314	P	1.1
4	☐	50.000	50.962	38700.75	0.0411	P	0.5
5	☐	500.000	500.598	216054.67	0.2300	P	1.2
6	☐	1000.000	999.576	410290.90	0.4396	P	2.2
7	☐	5.000					

y = 4.2009E-004 * x + 0.0197
R = 1.0000
DL = 5.499
BEC = 46.81

Weight: <None>
Min Conc: <None>

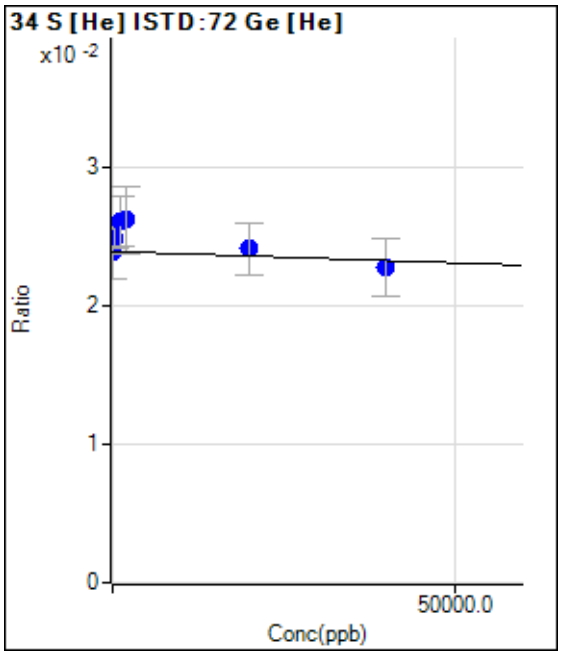


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	283264.92	0.3007	P	3.9
2	☐	400.000	-8874.499	282825.23	0.2984	P	1.8
3	☐	1000.000	28818.126	288130.50	0.3083	P	2.2
4	☐	2000.000	33698.612	291728.56	0.3096	P	1.3
5	☐	20000.00	-2001.888	282057.88	0.3002	P	1.7
6	☐	40000.00	48813.305	292566.29	0.3136	P	5.4
7	☐	200.000					

y = 2.6295E-007 * x + 0.3007
R = 0.4925
DL = 1.338E+05
BEC = 1.144E+06

Weight: <None>
Min Conc: <None>

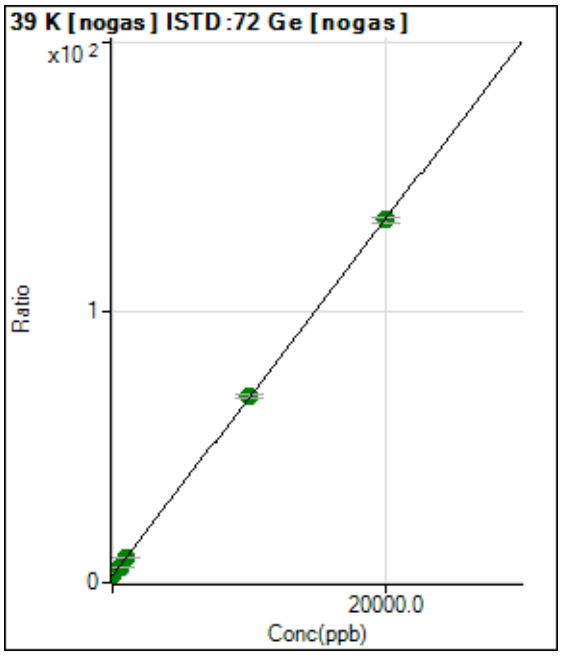
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8570.16	0.0239	P	16.7
2	☐	400.000	-59957.020	9103.99	0.0249	P	5.7
3	☐	1000.000	-130902.22	9471.01	0.0261	P	14.0
4	☐	2000.000	-138170.65	9437.43	0.0262	P	18.4
5	☐	20000.00	-12292.207	8570.75	0.0241	P	15.5
6	☐	40000.00	67055.762	8036.84	0.0228	P	18.4
7	☐	200.000					

y = -1.6465E-008 * x + 0.0239
R = -0.7509
DL = -7.287E+05
BEC = -1.452E+06

Weight: <None>
Min Conc: <None>

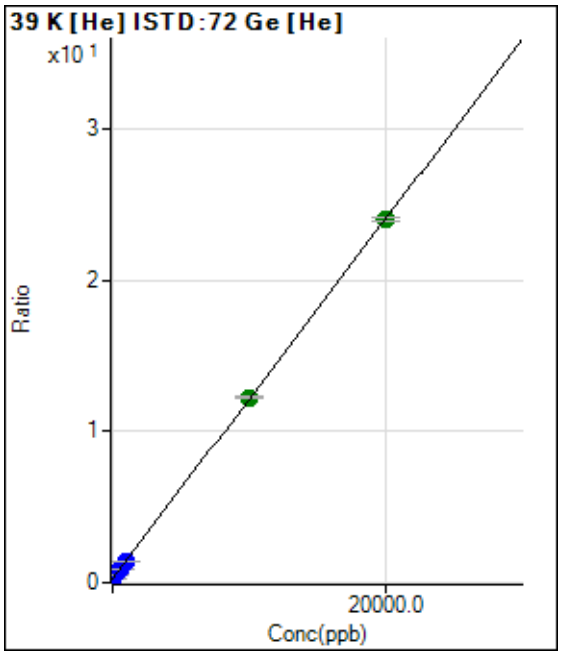


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2428187.75	2.5774	A	1.6
2	☐	200.000	206.154	3730798.39	3.9368	A	3.1
3	☐	500.000	518.697	5604018.09	5.9978	A	1.3
4	☐	1000.000	1011.103	8710215.56	9.2449	A	1.4
5	☐	10000.00	10070.009	64808024.37	68.9815	A	1.7
6	☐	20000.00	19963.912	125297165.3	134.224	A	1.8
7	☐	100.000					

y = 0.0066 * x + 2.5774
R = 1.0000
DL = 18.97
BEC = 390.9

Weight: <None>
Min Conc: <None>

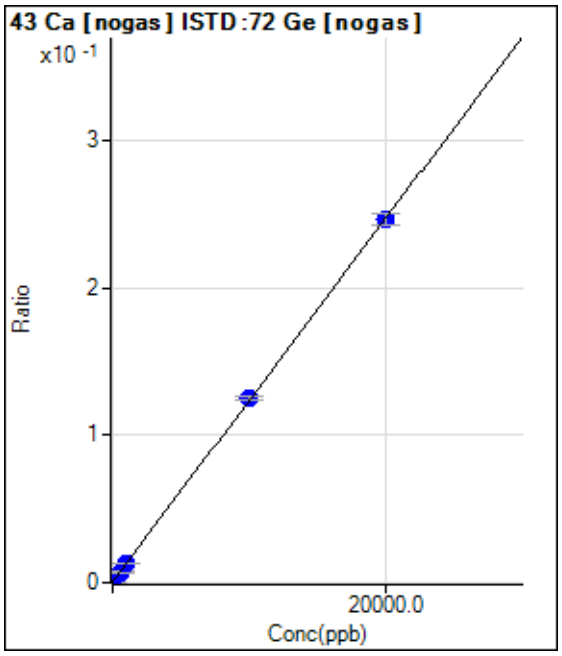
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94063.64	0.2625	P	1.4
2	☐	200.000	201.289	183573.91	0.5018	P	1.0
3	☐	500.000	494.991	309692.67	0.8510	P	0.8
4	☐	1000.000	975.682	514376.32	1.4225	P	1.8
5	☐	10000.00	10083.879	4355089.83	12.2511	A	0.9
6	☐	20000.00	19959.389	8465024.87	23.9920	A	1.1
7	☐	100.000					

y = 0.0012 * x + 0.2625
R = 1.0000
DL = 9.309
BEC = 220.8

Weight: <None>
Min Conc: <None>

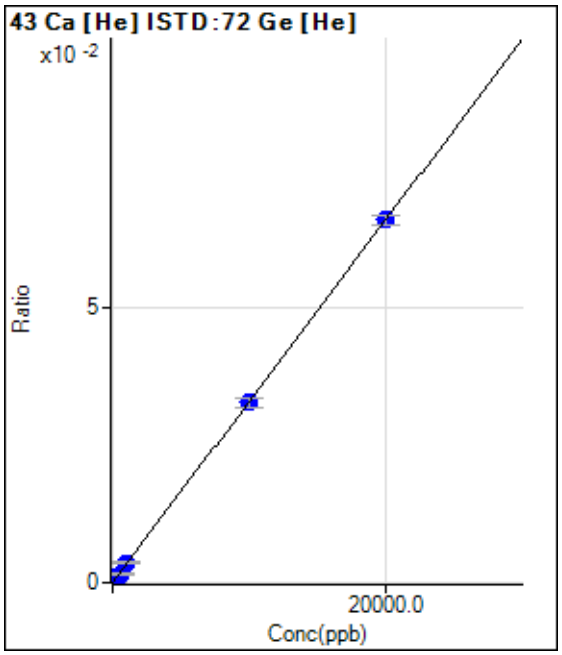


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	416.68	0.0004	P	10.5
2	☐	200.000	266.611	3533.73	0.0037	P	3.7
3	☐	500.000	544.389	6684.67	0.0072	P	2.5
4	☐	1000.000	1019.905	12260.99	0.0130	P	3.6
5	☐	10000.00	10122.761	117659.80	0.1252	P	2.1
6	☐	20000.00	19935.848	229805.12	0.2462	P	3.0
7	☐	100.000					

y = 1.2328E-005 * x + 4.4247E-004
R = 1.0000
DL = 11.33
BEC = 35.89

Weight: <None>
Min Conc: <None>

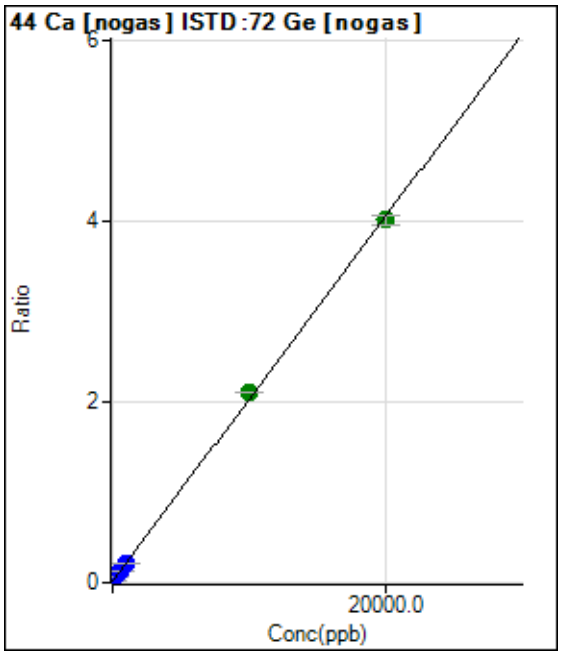
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	100.
2	☐	200.000	290.907	360.01	0.0010	P	4.7
3	☐	500.000	468.535	570.02	0.0016	P	12.0
4	☐	1000.000	1088.634	1303.40	0.0036	P	14.1
5	☐	10000.00	9956.297	11640.51	0.0327	P	5.5
6	☐	20000.00	20017.297	23221.62	0.0658	P	2.6
7	☐	100.000					

y = 3.2864E-006 * x + 2.8082E-005
R = 1.0000
DL = 25.85
BEC = 8.545

Weight: <None>
Min Conc: <None>

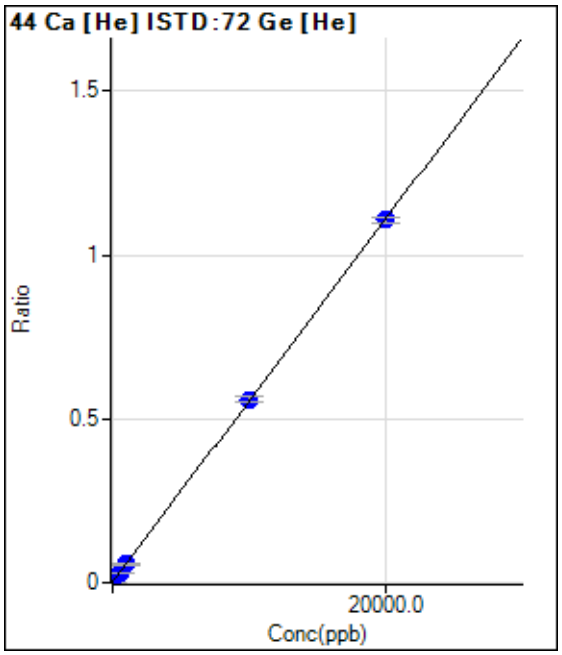


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12974.84	0.0138	P	3.9
2	☐	200.000	252.603	61433.31	0.0648	P	1.1
3	☐	500.000	535.179	113927.13	0.1219	P	1.8
4	☐	1000.000	992.470	201941.27	0.2143	P	1.5
5	☐	10000.00	10352.566	1978294.03	2.1057	A	0.3
6	☐	20000.00	19822.688	3751332.86	4.0192	A	2.6
7	☐	100.000					

y = 2.0206E-004 * x + 0.0138
R = 0.9998
DL = 8.029
BEC = 68.14

Weight: <None>
Min Conc: <None>

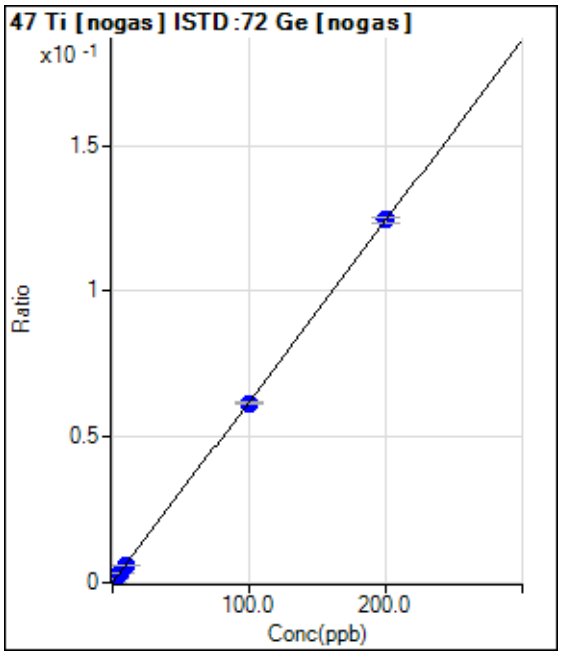
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	470.02	0.0013	P	7.1
2	☐	200.000	259.314	5734.34	0.0157	P	8.3
3	☐	500.000	509.520	10749.95	0.0295	P	0.9
4	☐	1000.000	990.023	20288.14	0.0562	P	6.3
5	☐	10000.00	10075.277	198857.61	0.5594	P	3.1
6	☐	20000.00	19962.029	390564.03	1.1071	P	1.4
7	☐	100.000					

y = 5.5395E-005 * x + 0.0013
R = 1.0000
DL = 5.073
BEC = 23.68

Weight: <None>
Min Conc: <None>

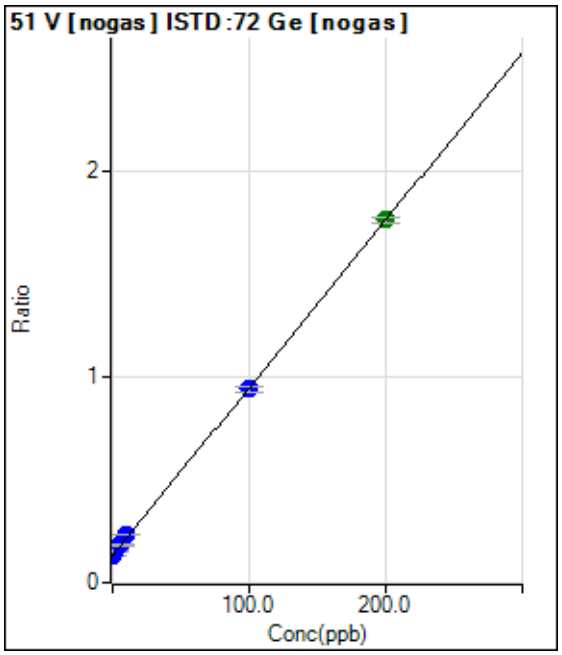


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	48.4
2	☐	2.000	2.027	1276.73	0.0013	P	7.4
3	☐	5.000	5.116	3053.63	0.0033	P	11.0
4	☐	10.000	9.588	5690.99	0.0060	P	3.2
5	☐	100.000	99.135	57886.09	0.0616	P	1.6
6	☐	200.000	200.450	116212.26	0.1245	P	1.7
7	☐	1.000					

y = 6.2063E-004 * x + 8.8421E-005
R = 1.0000
DL = 0.2067
BEC = 0.1425

Weight: <None>
Min Conc: <None>

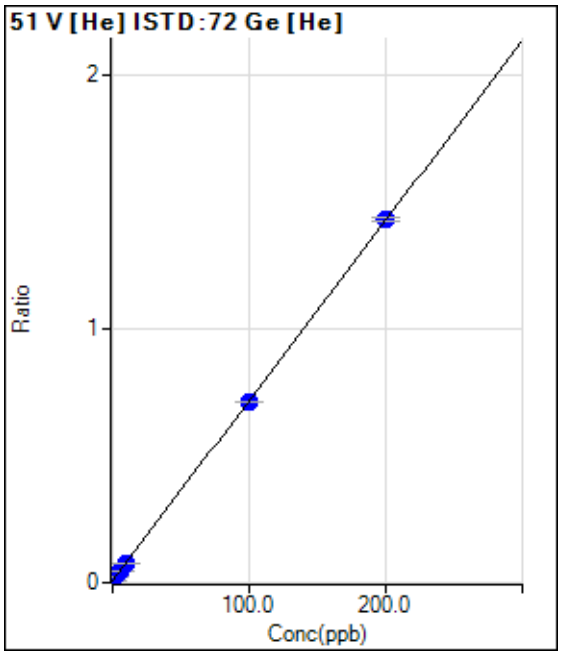
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	125149.96	0.1328	P	2.2
2	☐	2.000	2.540	145598.13	0.1535	P	6.1
3	☐	5.000	6.421	173009.50	0.1852	P	5.3
4	☐	10.000	12.441	220754.29	0.2343	P	2.0
5	☐	100.000	99.238	885156.99	0.9422	P	2.4
6	☐	200.000	200.218	1648247.63	1.7658	A	1.7
7	☐	1.000					

y = 0.0082 * x + 0.1328
R = 0.9999
DL = 1.089
BEC = 16.29

Weight: <None>
Min Conc: <None>

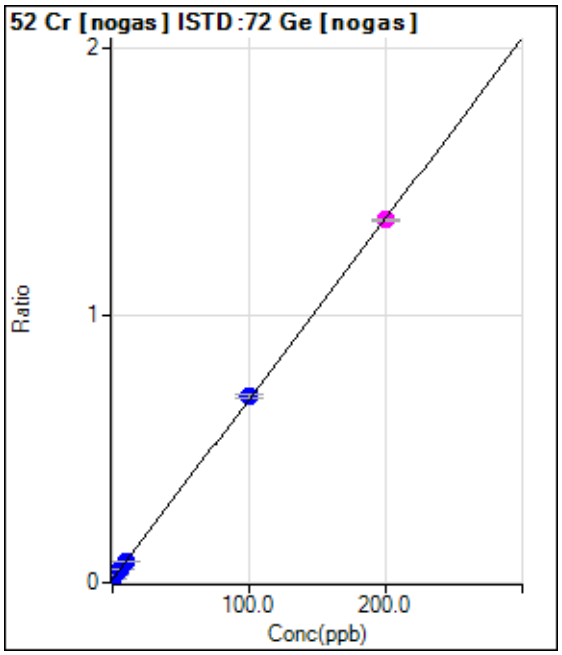


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.087	2586.86	0.0072	P	4.3
2	☐	2.000	2.152	8006.43	0.0219	P	2.4
3	☐	5.000	5.078	15526.61	0.0427	P	1.3
4	☐	10.000	9.996	28052.26	0.0776	P	2.7
5	☐	100.000	99.380	253237.22	0.7124	P	0.8
6	☐	200.000	200.307	504181.94	1.4291	P	1.0
7	☐	1.000					

y = 0.0071 * x + 0.0066
R = 1.0000
DL = 0.1305
BEC = 0.9297

Weight: <None>
Min Conc: <None>

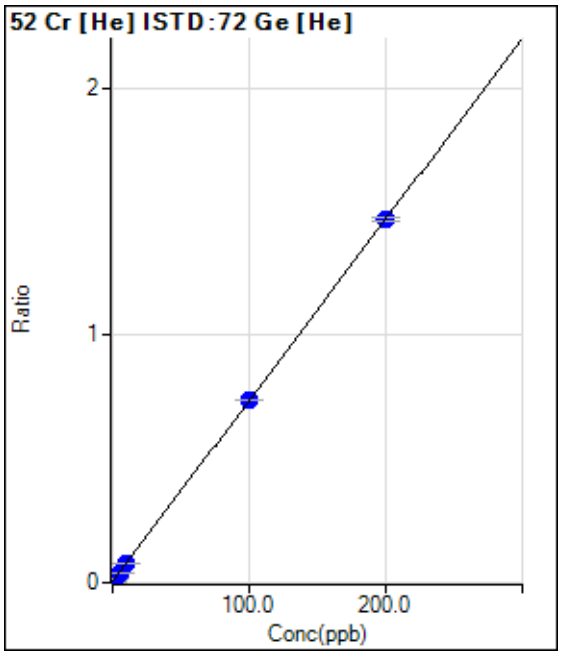
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11753.98	0.0125	P	1.8
2	☐	2.000	2.067	25057.49	0.0264	P	0.7
3	☐	5.000	5.446	46008.79	0.0492	P	1.4
4	☐	10.000	10.266	77059.82	0.0818	P	1.7
5	☐	100.000	101.438	655155.55	0.6974	P	1.7
6	☐	200.000	199.256	1267689.36	1.3578	M	0.3
7	☐	1.000					

y = 0.0068 * x + 0.0125
R = 1.0000
DL = 0.09843
BEC = 1.848

Weight: <None>
Min Conc: <None>

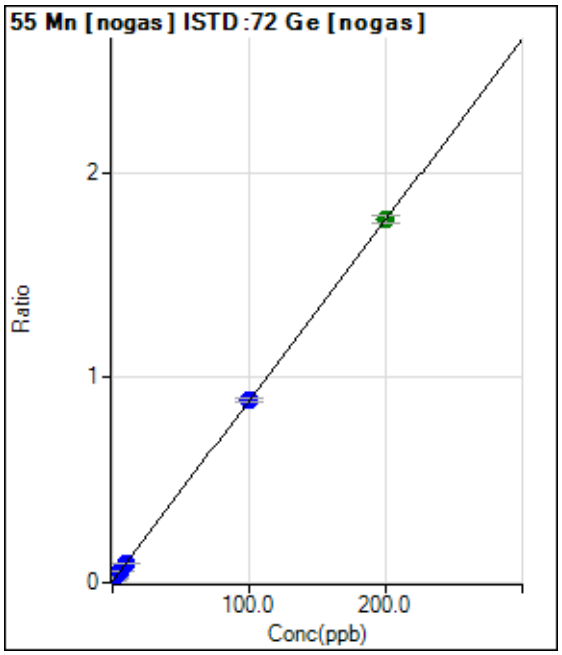


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1440.09	0.0040	P	7.6
2	☐	2.000	2.033	6918.09	0.0189	P	2.3
3	☐	5.000	5.166	15233.35	0.0419	P	2.2
4	☐	10.000	9.977	27885.08	0.0771	P	4.8
5	☐	100.000	100.476	263035.35	0.7399	P	0.3
6	☐	200.000	199.759	517644.98	1.4671	P	0.9
7	☐	1.000					

y = 0.0073 * x + 0.0040
R = 1.0000
DL = 0.1249
BEC = 0.5486

Weight: <None>
Min Conc: <None>

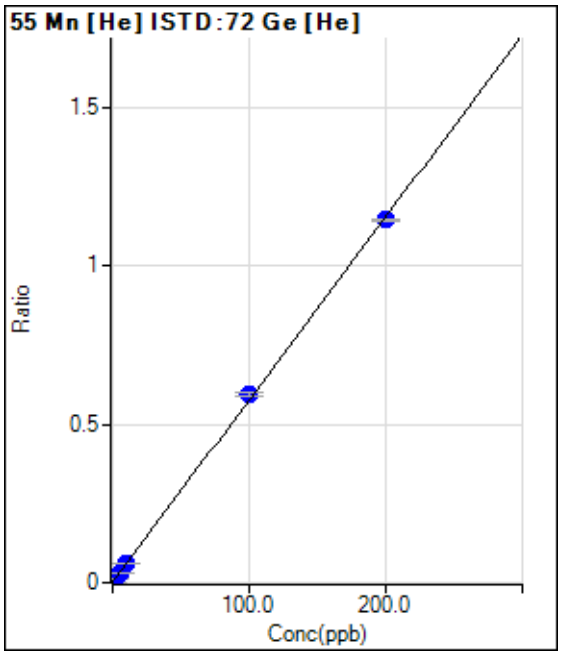
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6291.21	0.0067	P	3.0
2	☐	2.000	1.956	22644.44	0.0239	P	4.8
3	☐	5.000	5.132	48468.49	0.0519	P	1.2
4	☐	10.000	10.119	90261.52	0.0958	P	0.8
5	☐	100.000	99.889	832657.05	0.8863	P	2.0
6	☐	200.000	200.047	1650520.60	1.7683	A	2.0
7	☐	1.000					

y = 0.0088 * x + 0.0067
R = 1.0000
DL = 0.06717
BEC = 0.7583

Weight: <None>
Min Conc: <None>

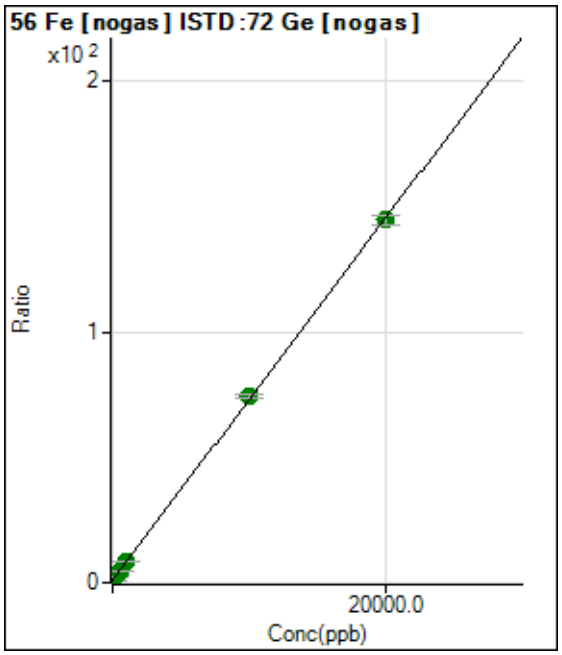


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	463.34	0.0013	P	7.9
2	☐	2.000	2.013	4714.02	0.0129	P	4.5
3	☐	5.000	5.147	11257.01	0.0309	P	3.1
4	☐	10.000	10.258	21826.74	0.0604	P	3.0
5	☐	100.000	102.773	210870.12	0.5932	P	1.8
6	☐	200.000	198.597	403995.97	1.1451	P	0.3
7	☐	1.000					

y = 0.0058 * x + 0.0013
R = 0.9999
DL = 0.05294
BEC = 0.2244

Weight: <None>
Min Conc: <None>

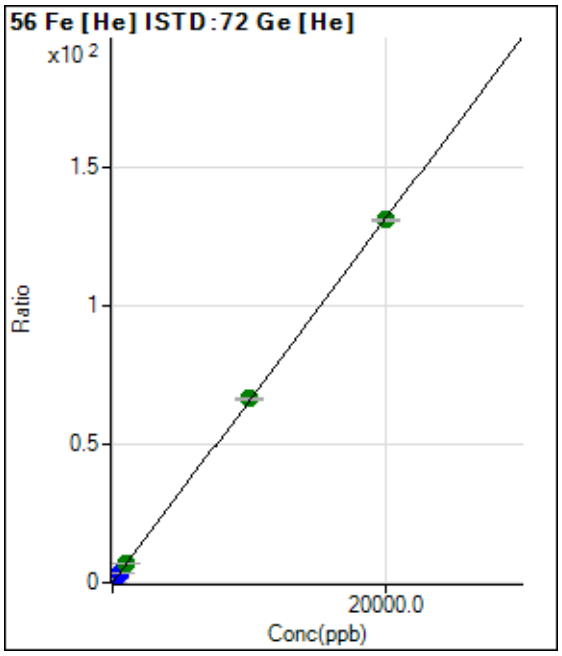
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	876339.21	0.9302	P	1.4
2	☐	200.000	219.501	2382235.47	2.5137	A	2.5
3	☐	500.000	524.737	4406295.54	4.7158	A	1.2
4	☐	1000.000	1035.357	7914525.44	8.3996	A	1.0
5	☐	10000.00	10158.622	69727103.64	74.2182	A	1.7
6	☐	20000.00	19918.108	134986961.3	144.626	A	2.4
7	☐	100.000					

y = 0.0072 * x + 0.9302
R = 1.0000
DL = 5.232
BEC = 128.9

Weight: <None>
Min Conc: <None>

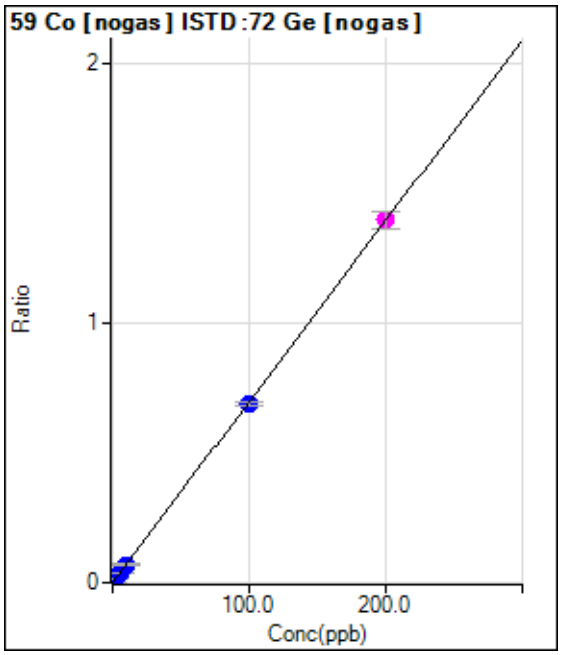


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16357.62	0.0456	P	0.6
2	☐	200.000	198.519	493440.67	1.3490	P	3.1
3	☐	500.000	489.170	1185268.60	3.2571	P	1.3
4	☐	1000.000	1032.658	2467774.29	6.8252	A	3.4
5	☐	10000.00	10104.219	23597133.82	66.3812	A	1.1
6	☐	20000.00	19946.543	46216445.98	130.997	A	0.3
7	☐	100.000					

y = 0.0066 * x + 0.0456
R = 1.0000
DL = 0.1272
BEC = 6.953

Weight: <None>
Min Conc: <None>

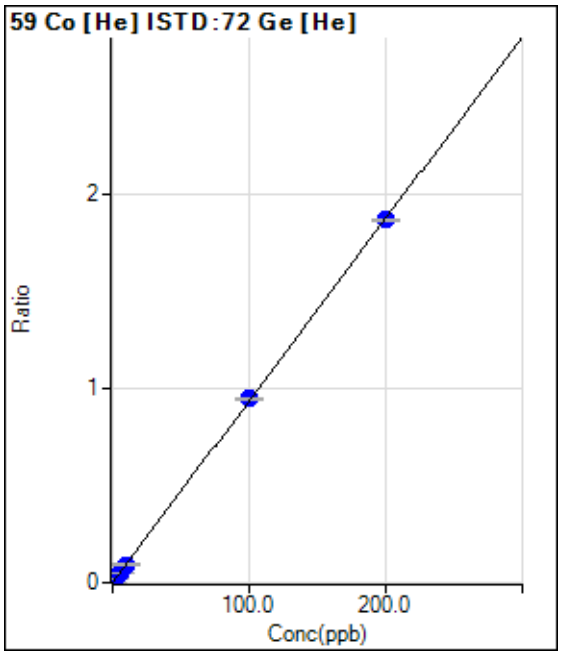
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.34	0.0002	P	26.5
2	☐	2.000	1.962	13138.32	0.0139	P	2.5
3	☐	5.000	5.113	33488.37	0.0358	P	2.3
4	☐	10.000	10.067	66342.21	0.0704	P	1.5
5	☐	100.000	98.811	647776.97	0.6895	P	1.9
6	☐	200.000	200.589	1305931.85	1.3995	M	4.6
7	☐	1.000					

y = 0.0070 * x + 1.7365E-004
R = 1.0000
DL = 0.01975
BEC = 0.02489

Weight: <None>
Min Conc: <None>

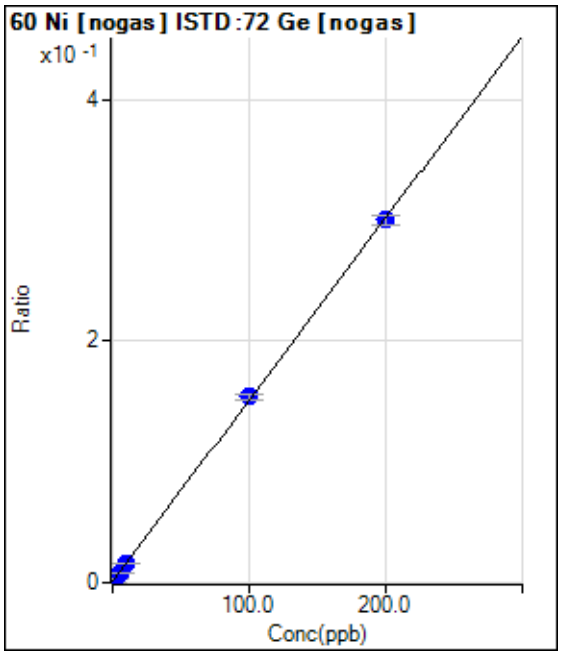


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0001	P	24.4
2	☐	2.000	1.988	6858.05	0.0187	P	1.2
3	☐	5.000	5.173	17682.26	0.0486	P	2.5
4	☐	10.000	9.959	33748.77	0.0934	P	6.7
5	☐	100.000	101.164	336814.59	0.9475	P	1.4
6	☐	200.000	199.416	658885.96	1.8676	P	0.7
7	☐	1.000					

y = 0.0094 * x + 1.3019E-004
R = 1.0000
DL = 0.01018
BEC = 0.0139

Weight: <None>
Min Conc: <None>

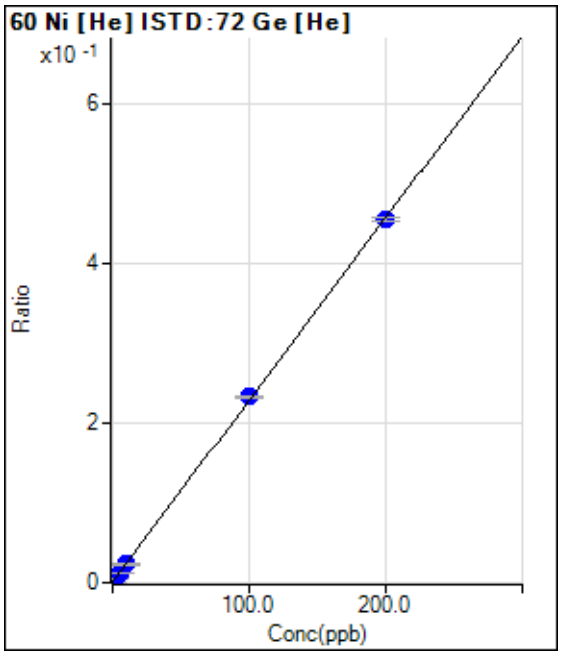
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.433	170.00	0.0002	P	19.6
2	☐	2.000	1.640	3130.32	0.0033	P	8.3
3	☐	5.000	4.866	7618.42	0.0082	P	1.5
4	☐	10.000	10.026	14996.49	0.0159	P	3.1
5	☐	100.000	101.790	144684.69	0.1540	P	3.0
6	☐	200.000	199.110	280483.81	0.3005	P	2.9
7	☐	1.000					

y = 0.0015 * x + 8.3164E-004
R = 0.9999
DL = 0.07043
BEC = 0.5526

Weight: <None>
Min Conc: <None>

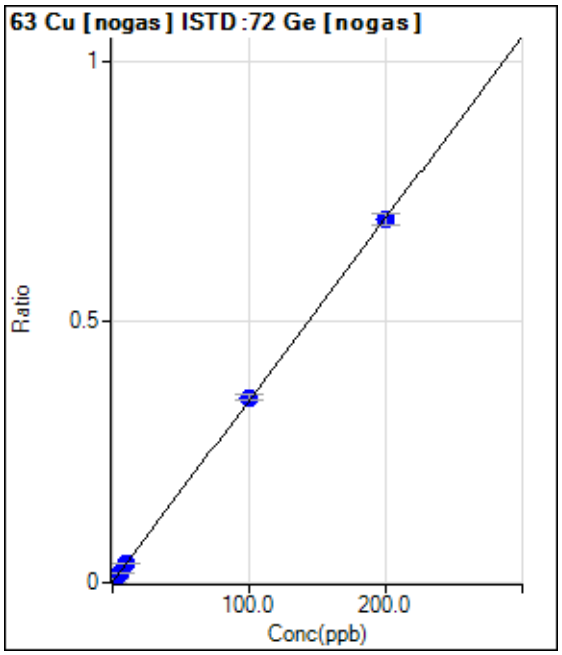


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.311	56.67	0.0002	P	27.3
2	☐	2.000	1.602	1650.10	0.0045	P	5.4
3	☐	5.000	4.713	4217.22	0.0116	P	5.7
4	☐	10.000	10.047	8568.82	0.0237	P	8.4
5	☐	100.000	101.879	82716.20	0.2327	P	1.3
6	☐	200.000	199.069	160109.78	0.4538	P	1.1
7	☐	1.000					

y = 0.0023 * x + 8.6501E-004
R = 0.9999
DL = 0.05707
BEC = 0.3801

Weight: <None>
Min Conc: <None>

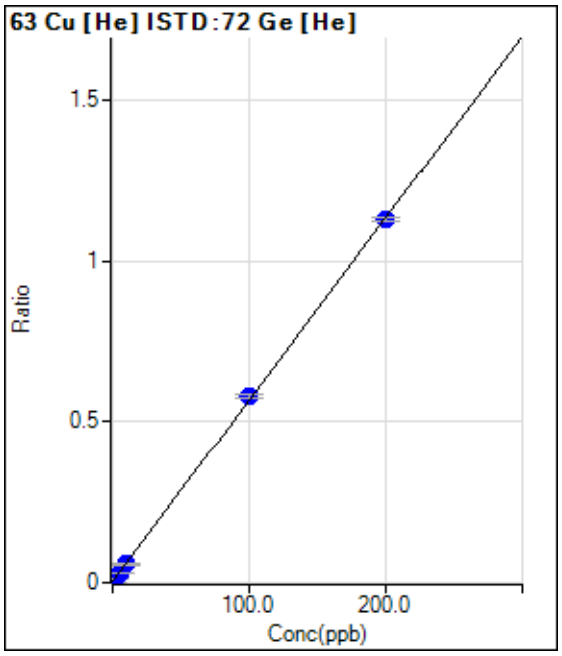
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	853.37	0.0009	P	26.8
2	☐	2.000	2.147	7951.86	0.0084	P	5.9
3	☐	5.000	5.190	17748.96	0.0190	P	2.2
4	☐	10.000	10.377	34937.81	0.0371	P	3.9
5	☐	100.000	101.615	333577.78	0.3551	P	3.1
6	☐	200.000	199.167	648803.08	0.6951	P	3.3
7	☐	1.000					

y = 0.0035 * x + 9.0677E-004
R = 1.0000
DL = 0.2091
BEC = 0.2602

Weight: <None>
Min Conc: <None>

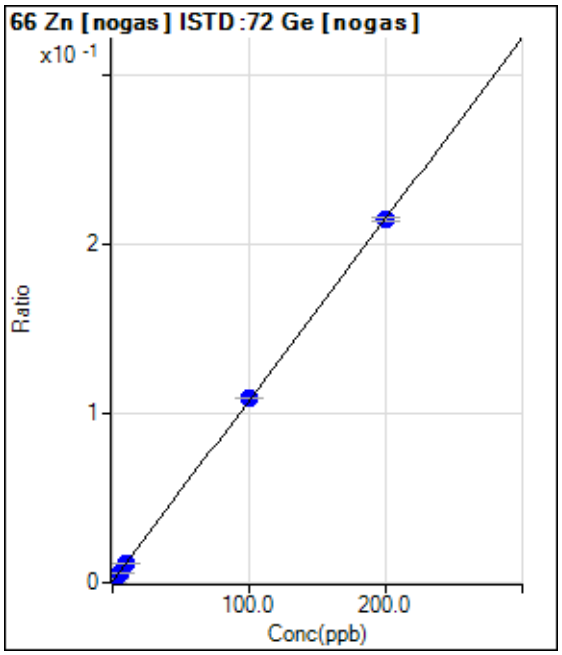


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.348	420.01	0.0012	P	13.1
2	☐	2.000	1.817	4897.40	0.0134	P	2.4
3	☐	5.000	4.839	11080.25	0.0304	P	3.2
4	☐	10.000	9.746	20999.22	0.0581	P	7.1
5	☐	100.000	101.855	205404.79	0.5778	P	1.6
6	☐	200.000	199.091	397398.98	1.1264	P	1.1
7	☐	1.000					

y = 0.0056 * x + 0.0031
R = 0.9999
DL = 0.08133
BEC = 0.5558

Weight: <None>
Min Conc: <None>

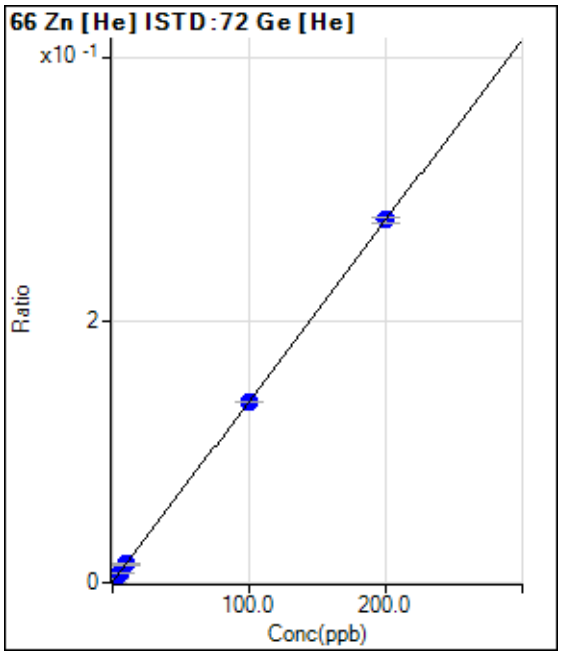
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.236	383.34	0.0004	P	24.9
2	☐	2.000	1.865	2520.22	0.0027	P	3.7
3	☐	5.000	5.027	5647.64	0.0060	P	4.6
4	☐	10.000	9.752	10469.87	0.0111	P	2.3
5	☐	100.000	101.159	102468.79	0.1091	P	0.7
6	☐	200.000	199.433	200146.03	0.2144	P	1.0
7	☐	1.000					

y = 0.0011 * x + 6.5936E-004
R = 1.0000
DL = 0.2834
BEC = 0.6153

Weight: <None>
Min Conc: <None>

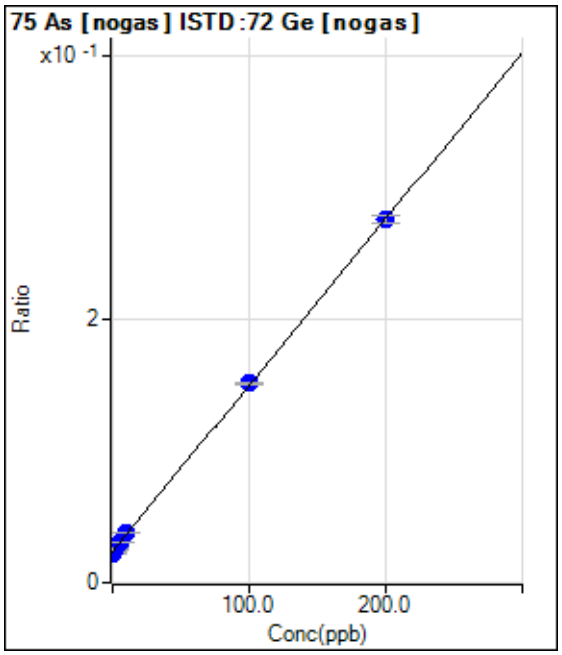


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.097	183.34	0.0005	P	42.4
2	☐	2.000	1.988	1143.39	0.0031	P	10.7
3	☐	5.000	5.074	2686.91	0.0074	P	4.9
4	☐	10.000	10.141	5204.17	0.0144	P	9.7
5	☐	100.000	99.417	48933.59	0.1377	P	0.1
6	☐	200.000	200.283	97694.98	0.2769	P	1.5
7	☐	1.000					

y = 0.0014 * x + 3.8000E-004
R = 1.0000
DL = 0.4725
BEC = 0.2752

Weight: <None>
Min Conc: <None>

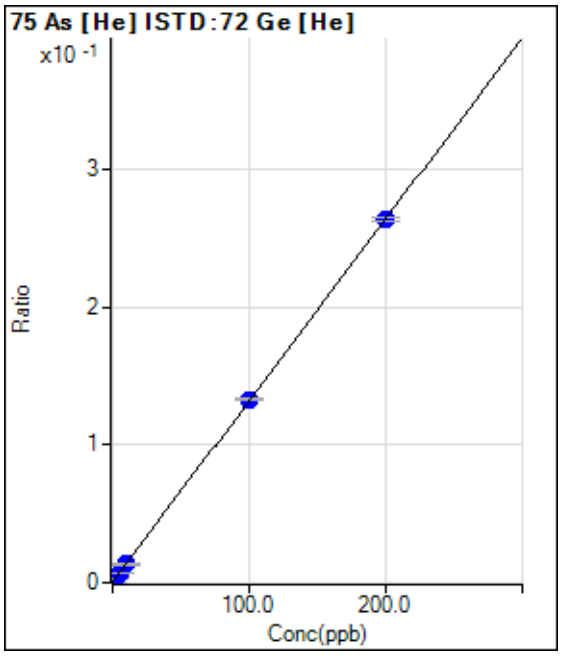
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.080	21089.53	0.0224	P	4.3
2	☐	2.000	1.009	23706.02	0.0250	P	4.4
3	☐	5.000	5.332	28476.40	0.0305	P	2.4
4	☐	10.000	11.320	35839.58	0.0380	P	3.4
5	☐	100.000	100.968	142038.24	0.1512	P	1.8
6	☐	200.000	199.451	257160.96	0.2755	P	2.3
7	☐	1.000					

y = 0.0013 * x + 0.0237
R = 0.9999
DL = 2.278
BEC = 18.81

Weight: <None>
Min Conc: <None>

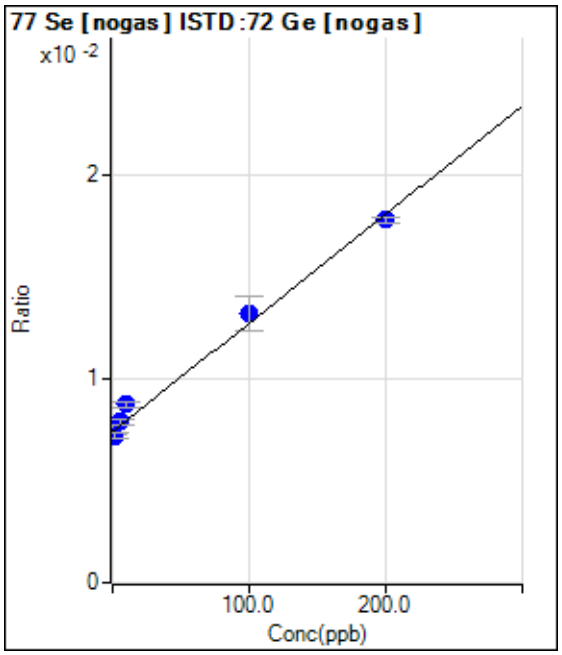


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	148.89	0.0004	P	19.5
2	☐	2.000	1.961	1095.60	0.0030	P	2.0
3	☐	5.000	4.987	2539.08	0.0070	P	0.8
4	☐	10.000	9.772	4797.34	0.0133	P	3.9
5	☐	100.000	100.729	47246.65	0.1329	P	1.3
6	☐	200.000	199.648	92791.55	0.2630	P	1.1
7	☐	1.000					

y = 0.0013 * x + 4.1604E-004
R = 1.0000
DL = 0.1855
BEC = 0.3163

Weight: <None>
Min Conc: <None>

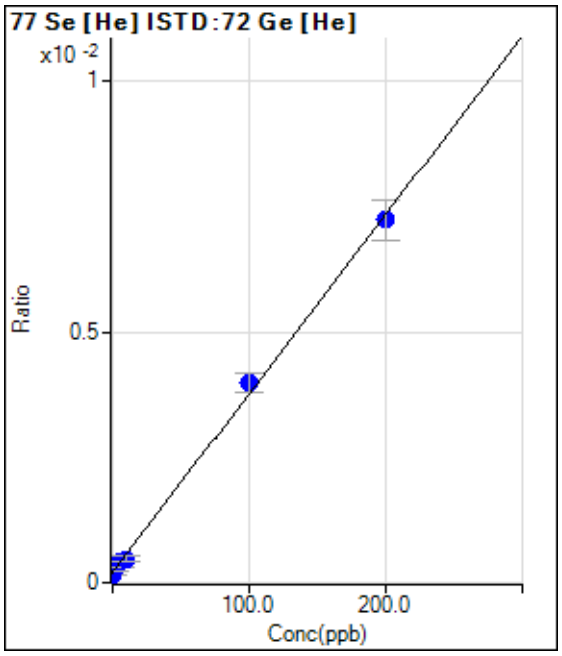
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6978.15	0.0074	P	5.2
2	☐	2.000	-3.836	6824.77	0.0072	P	4.7
3	☐	5.000	8.786	7358.33	0.0079	P	4.0
4	☐	10.000	25.088	8238.70	0.0087	P	2.8
5	☐	100.000	108.803	12402.85	0.0132	P	12.8
6	☐	200.000	194.808	16594.65	0.0178	P	1.5
7	☐	1.000					

y = 5.3213E-005 * x + 0.0074
R = 0.9951
DL = 21.91
BEC = 139.2

Weight: <None>
Min Conc: <None>

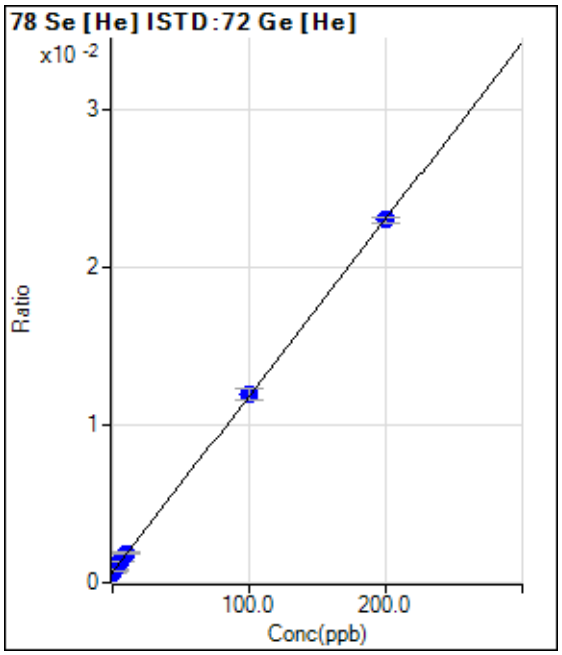


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.857	50.00	0.0001	P	1.3
2	☐	2.000	2.156	103.33	0.0003	P	24.6
3	☐	5.000	6.256	156.67	0.0004	P	59.0
4	☐	10.000	7.449	170.00	0.0005	P	25.3
5	☐	100.000	105.802	1413.42	0.0040	P	9.3
6	☐	200.000	197.193	2553.56	0.0072	P	11.2
7	☐	1.000					

y = 3.5641E-005 * x + 2.0574E-004
R = 0.9992
DL = 0.1536
BEC = 5.773

Weight: <None>
Min Conc: <None>

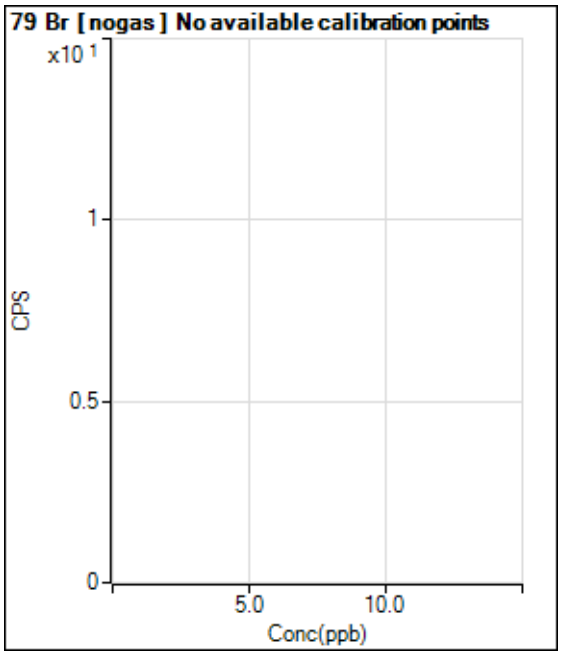
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	234.67	0.0007	P	16.8
2	☐	2.000	1.526	302.00	0.0008	P	10.0
3	☐	5.000	5.941	480.01	0.0013	P	5.9
4	☐	10.000	10.796	673.35	0.0019	P	6.8
5	☐	100.000	100.671	4237.85	0.0119	P	6.0
6	☐	200.000	199.606	8111.86	0.0230	P	1.7
7	☐	1.000					

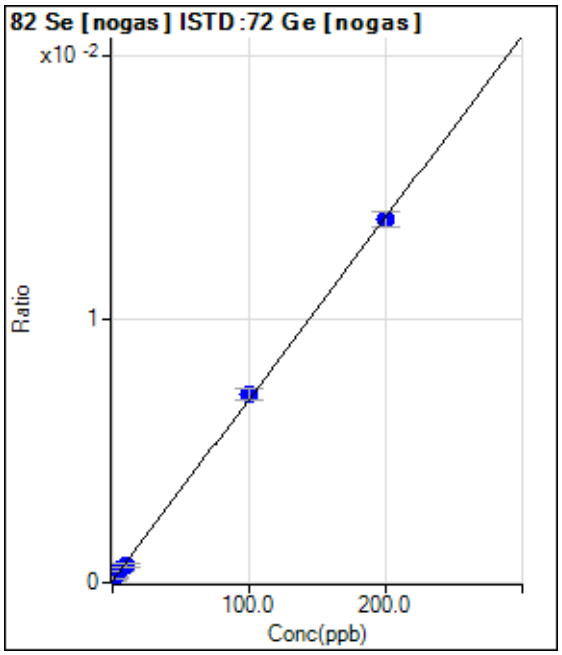
y = 1.1190E-004 * x + 6.5491E-004
R = 1.0000
DL = 2.945
BEC = 5.852

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

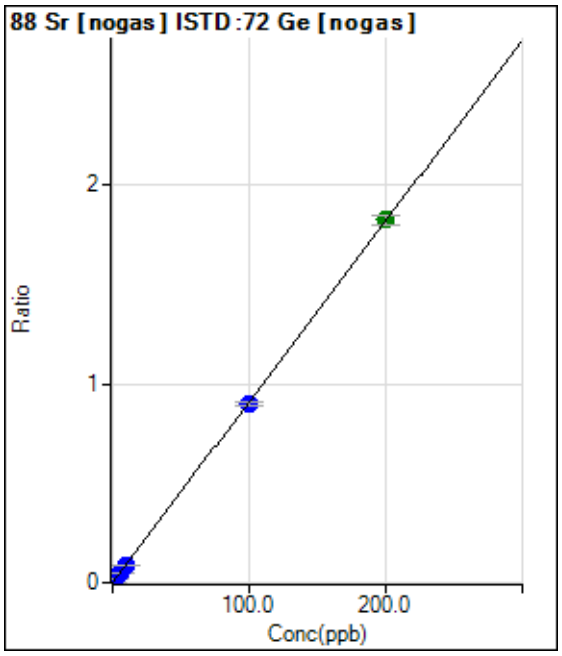
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	60.8
2	☐	2.000	1.633	180.00	0.0002	P	35.0
3	☐	5.000	6.084	463.35	0.0005	P	25.8
4	☐	10.000	8.383	616.69	0.0007	P	21.9
5	☐	100.000	102.782	6718.37	0.0071	P	6.2
6	☐	200.000	198.666	12834.90	0.0137	P	4.1
7	☐	1.000					

y = 6.8808E-005 * x + 7.7556E-005
R = 0.9998
DL = 2.057
BEC = 1.127

Weight: <None>
Min Conc: <None>

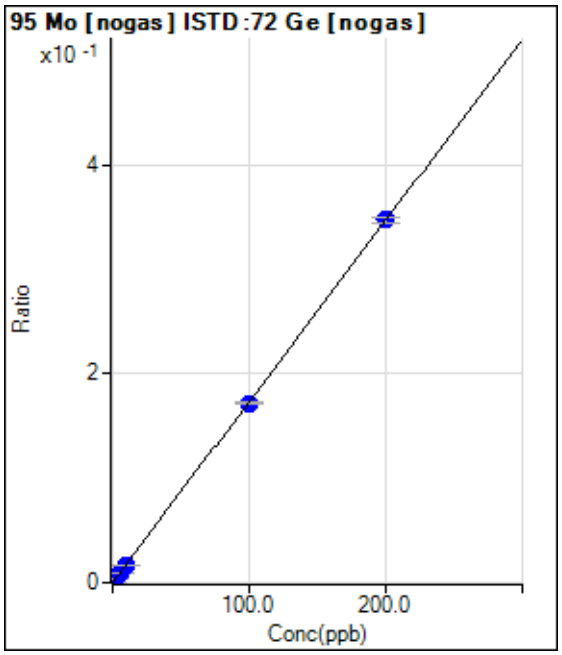


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	456.68	0.0005	P	11.4
2	☐	2.000	2.203	19424.33	0.0205	P	7.5
3	☐	5.000	5.261	45131.64	0.0483	P	2.5
4	☐	10.000	9.824	84576.48	0.0898	P	1.7
5	☐	100.000	98.573	842134.10	0.8964	P	1.9
6	☐	200.000	200.714	1703090.44	1.8247	A	2.6
7	☐	1.000					

y = 0.0091 * x + 4.8500E-004
R = 1.0000
DL = 0.01829
BEC = 0.05336

Weight: <None>
Min Conc: <None>

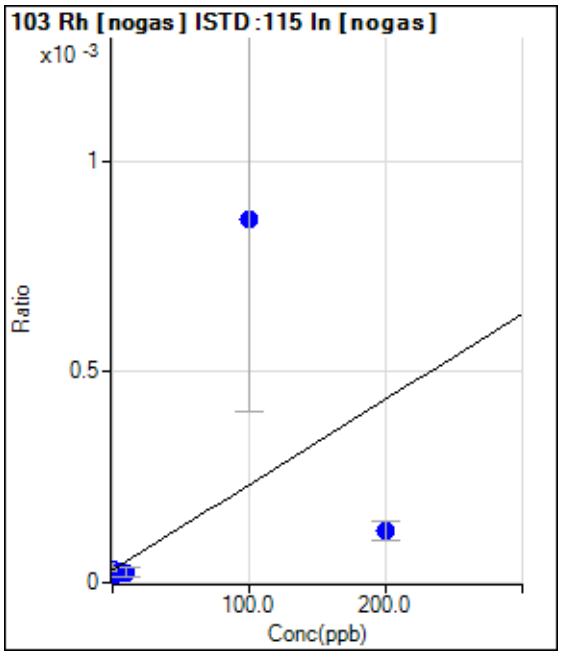
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	66.0
2	☐	2.000	1.919	3223.69	0.0034	P	4.7
3	☐	5.000	5.233	8548.91	0.0092	P	1.8
4	☐	10.000	9.767	16034.25	0.0170	P	2.0
5	☐	100.000	99.210	161713.50	0.1721	P	1.4
6	☐	200.000	200.402	324515.78	0.3476	P	1.5
7	☐	1.000					

y = 0.0017 * x + 7.4588E-005
R = 1.0000
DL = 0.08517
BEC = 0.04301

Weight: <None>
Min Conc: <None>

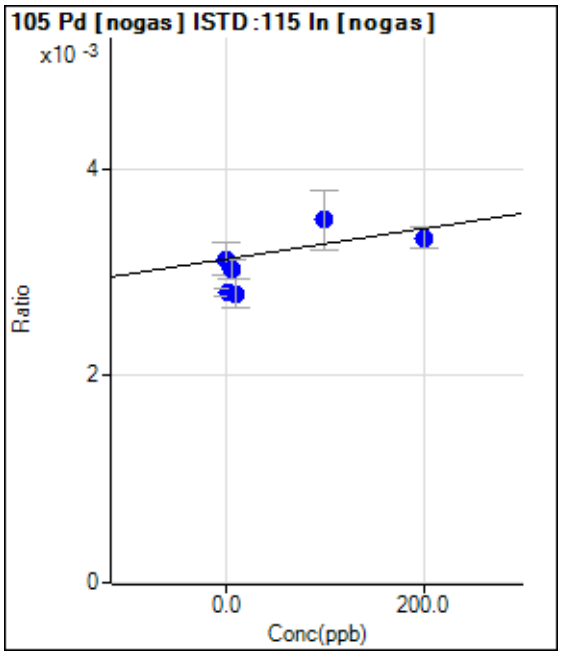


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	107.
2	☐	2.000	-6.551	13.33	0.0000	P	41.5
3	☐	5.000	-0.220	23.33	0.0000	P	24.7
4	☐	10.000	-2.533	20.00	0.0000	P	86.9
5	☐	100.000	409.981	670.39	0.0009	P	105.
6	☐	200.000	45.852	96.67	0.0001	P	36.8
7	☐	1.000					

y = 2.0257E-006 * x + 3.0010E-005
R = 0.3924
DL = 47.72
BEC = 14.81

Weight: <None>
Min Conc: <None>

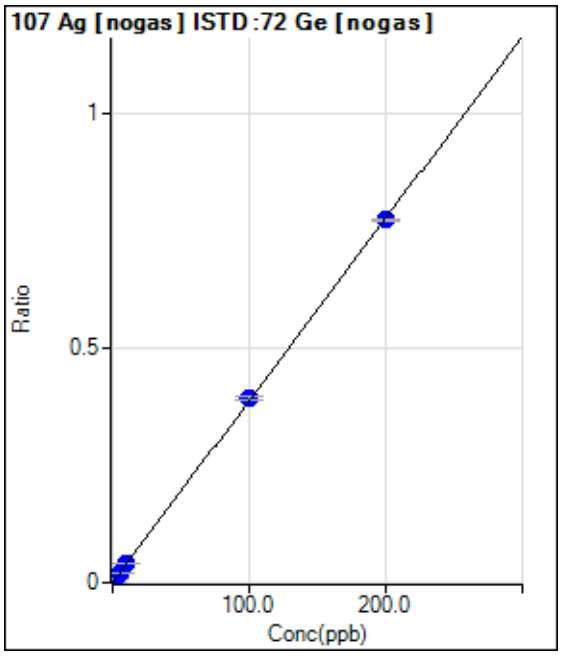
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2440.21	0.0031	P	10.5
2	☐	2.000	-217.723	2226.85	0.0028	P	2.9
3	☐	5.000	-70.942	2386.87	0.0030	P	5.8
4	☐	10.000	-229.788	2246.85	0.0028	P	10.2
5	☐	100.000	256.680	2760.66	0.0035	P	16.3
6	☐	200.000	137.745	2623.58	0.0033	P	6.1
7	☐	1.000					

y = 1.4694E-006 * x + 0.0031
R = 0.7164
DL = 671.4
BEC = 2129

Weight: <None>
Min Conc: <None>

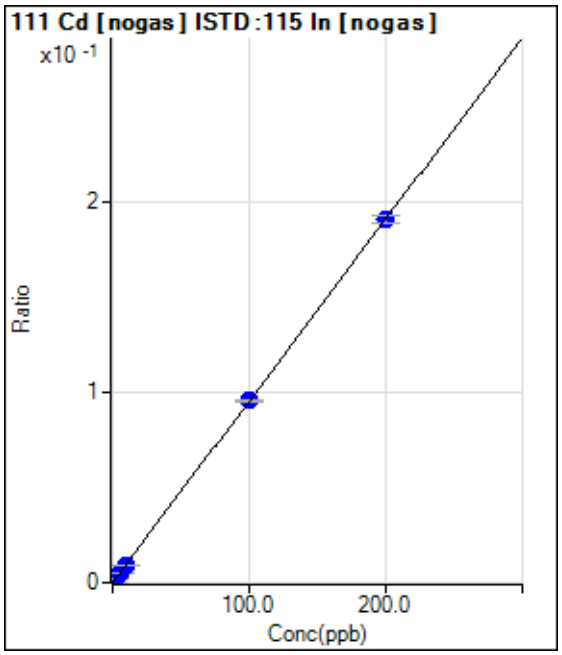


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0001	P	40.5
2	☐	2.000	2.069	7678.47	0.0081	P	1.3
3	☐	5.000	5.052	18380.14	0.0197	P	1.8
4	☐	10.000	10.206	37377.55	0.0397	P	2.4
5	☐	100.000	101.331	369506.20	0.3933	P	1.9
6	☐	200.000	199.322	722234.91	0.7736	P	0.2
7	☐	1.000					

y = 0.0039 * x + 6.7344E-005
R = 1.0000
DL = 0.02109
BEC = 0.01735

Weight: <None>
Min Conc: <None>

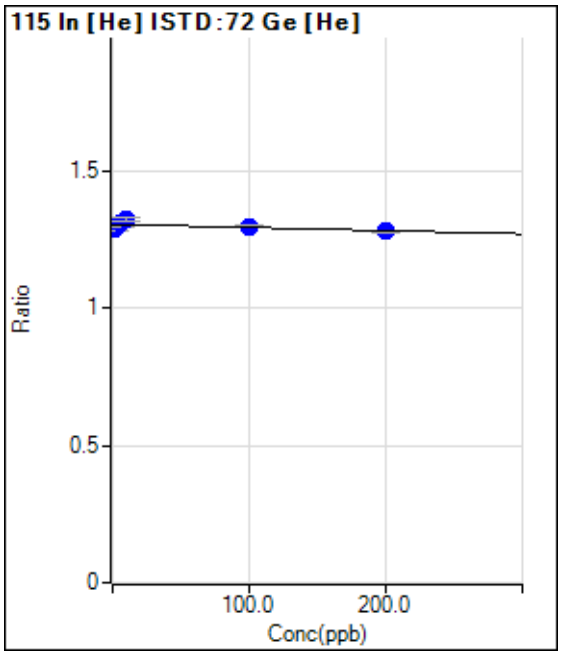
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.
2	☐	2.000	2.120	1606.77	0.0020	P	10.0
3	☐	5.000	5.151	3877.17	0.0049	P	7.5
4	☐	10.000	9.566	7341.68	0.0091	P	4.2
5	☐	100.000	100.434	75445.44	0.0956	P	1.1
6	☐	200.000	199.800	149859.26	0.1902	P	2.1
7	☐	1.000					

y = 9.5201E-004 * x + 8.6544E-006
R = 1.0000
DL = 0.04724
BEC = 0.009091

Weight: <None>
Min Conc: <None>

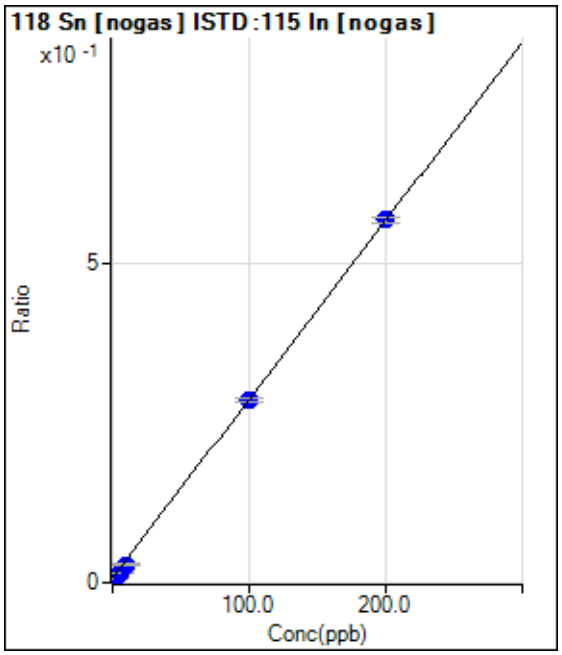


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	468250.81	1.3068	P	3.6
2	☐	2.000	132.272	472356.27	1.2912	P	1.8
3	☐	5.000	-23.466	476581.87	1.3096	P	1.6
4	☐	10.000	-131.996	478375.11	1.3224	P	1.1
5	☐	100.000	61.692	461976.66	1.2996	P	0.5
6	☐	200.000	225.663	451701.52	1.2802	P	0.7
7	☐	1.000					

y = -1.1783E-004 * x + 1.3068
R = -0.7063
DL = -1191
BEC = -1.109E+04

Weight: <None>
Min Conc: <None>

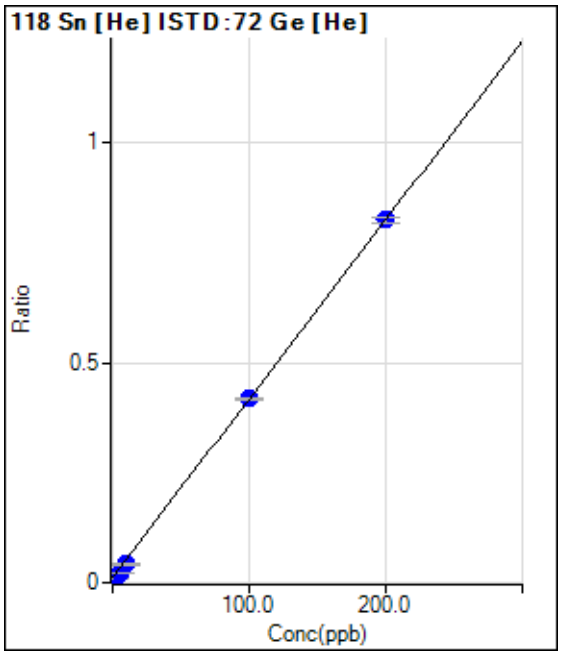
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6067.85	0.0078	P	4.5
2	☐	2.000	-0.703	4604.03	0.0058	P	6.8
3	☐	5.000	2.334	11283.89	0.0143	P	3.0
4	☐	10.000	7.407	22929.03	0.0285	P	1.3
5	☐	100.000	99.438	225378.89	0.2856	P	1.4
6	☐	200.000	200.504	447522.63	0.5681	P	1.5
7	☐	1.000					

y = 0.0028 * x + 0.0078
R = 0.9999
DL = 0.3789
BEC = 2.782

Weight: <None>
Min Conc: <None>

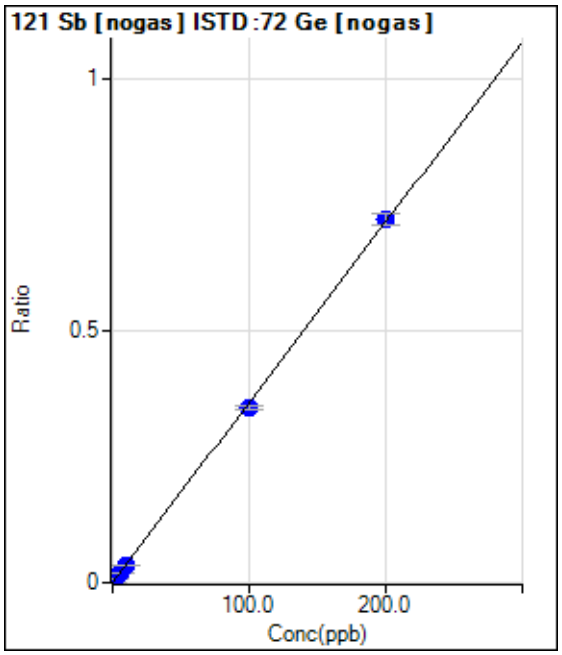


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4123.91	0.0115	P	6.5
2	☐	2.000	-0.758	3080.32	0.0084	P	3.4
3	☐	5.000	2.450	7815.26	0.0215	P	3.2
4	☐	10.000	7.399	15050.16	0.0416	P	1.9
5	☐	100.000	100.197	148965.95	0.4191	P	0.7
6	☐	200.000	200.123	291255.74	0.8255	P	1.3
7	☐	1.000					

y = 0.0041 * x + 0.0115
R = 0.9999
DL = 0.5476
BEC = 2.829

Weight: <None>
Min Conc: <None>

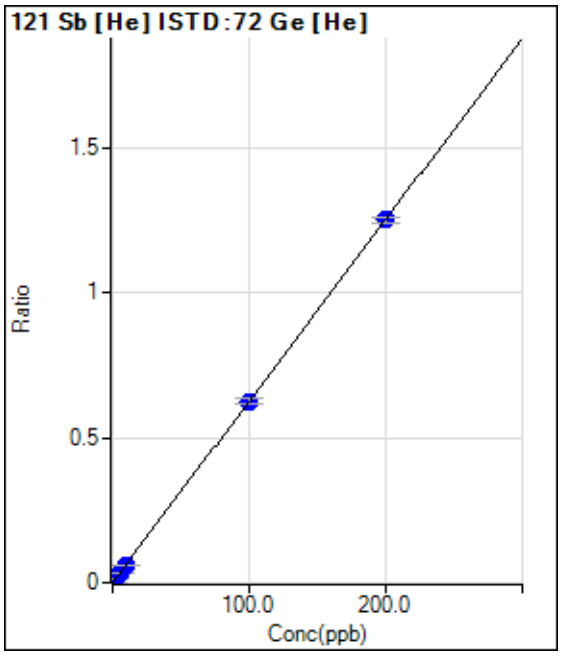
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.68	0.0003	P	9.9
2	☐	2.000	1.908	6771.45	0.0071	P	0.9
3	☐	5.000	4.965	16895.25	0.0181	P	4.6
4	☐	10.000	9.657	32862.03	0.0349	P	1.2
5	☐	100.000	97.321	327467.54	0.3486	P	2.4
6	☐	200.000	201.358	673000.59	0.7209	P	3.1
7	☐	1.000					

y = 0.0036 * x + 3.1483E-004
R = 0.9999
DL = 0.02622
BEC = 0.08798

Weight: <None>
Min Conc: <None>

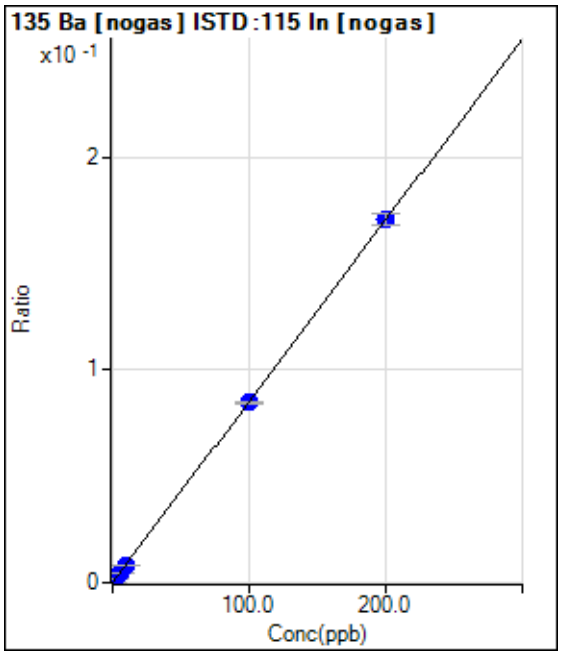


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	223.34	0.0006	P	17.2
2	☐	2.000	1.899	4570.70	0.0125	P	5.0
3	☐	5.000	4.995	11590.75	0.0319	P	3.3
4	☐	10.000	9.670	22107.83	0.0611	P	2.3
5	☐	100.000	100.006	222540.46	0.6260	P	2.4
6	☐	200.000	200.015	441492.75	1.2515	P	1.7
7	☐	1.000					

y = 0.0063 * x + 6.2261E-004
R = 1.0000
DL = 0.05143
BEC = 0.09956

Weight: <None>
Min Conc: <None>

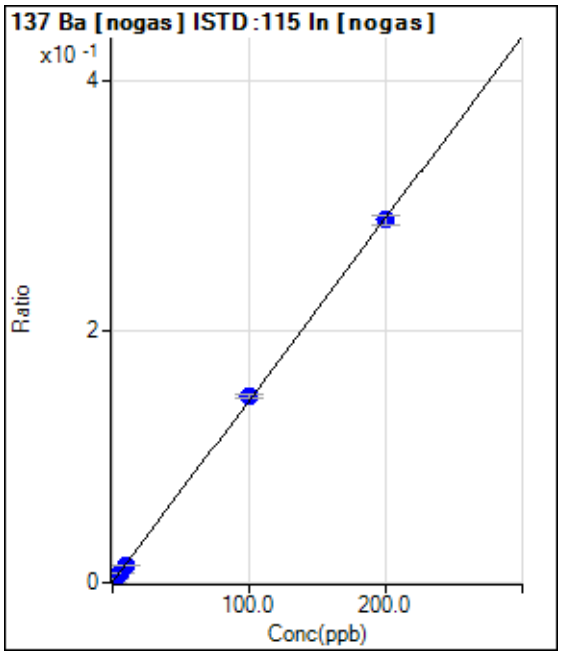
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	11.8
2	☐	2.000	1.908	1370.07	0.0017	P	7.1
3	☐	5.000	5.105	3513.76	0.0045	P	6.4
4	☐	10.000	9.383	6518.04	0.0081	P	8.4
5	☐	100.000	99.633	67047.02	0.0850	P	1.1
6	☐	200.000	200.213	134473.80	0.1707	P	3.2
7	☐	1.000					

y = 8.5198E-004 * x + 1.0246E-004
R = 1.0000
DL = 0.0427
BEC = 0.1203

Weight: <None>
Min Conc: <None>

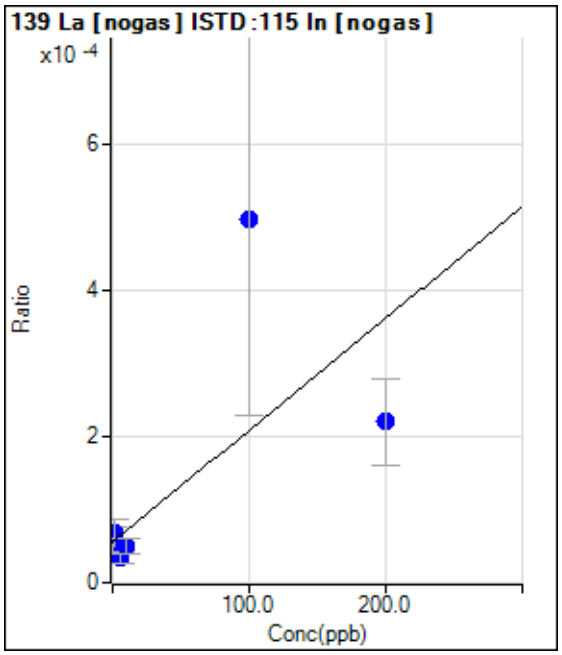


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0003	P	19.2
2	☐	2.000	1.895	2406.88	0.0030	P	7.6
3	☐	5.000	5.143	6114.54	0.0077	P	3.0
4	☐	10.000	9.549	11384.02	0.0141	P	2.9
5	☐	100.000	101.812	116686.79	0.1479	P	2.0
6	☐	200.000	199.114	227691.64	0.2890	P	2.9
7	☐	1.000					

y = 0.0015 * x + 2.9001E-004
R = 0.9999
DL = 0.1149
BEC = 0.2

Weight: <None>
Min Conc: <None>

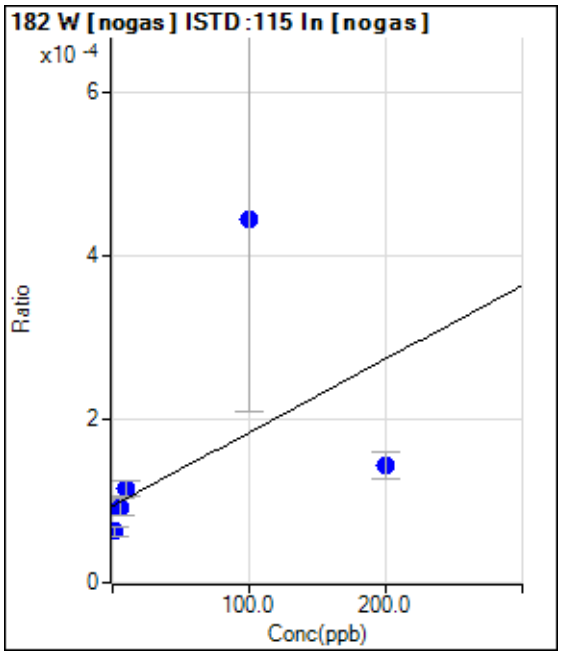
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0001	P	70.5
2	☐	2.000	7.781	53.33	0.0001	P	55.0
3	☐	5.000	-14.362	26.67	0.0000	P	43.2
4	☐	10.000	-3.944	40.00	0.0000	P	43.6
5	☐	100.000	287.972	386.75	0.0005	P	107.
6	☐	200.000	107.138	173.34	0.0002	P	54.9
7	☐	1.000					

y = 1.5295E-006 * x + 5.5749E-005
R = 0.6165
DL = 77.14
BEC = 36.45

Weight: <None>
Min Conc: <None>

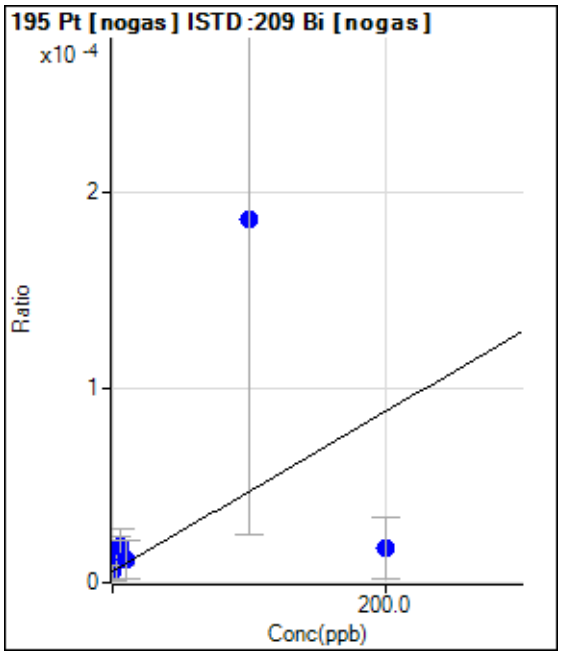


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	16.8
2	☐	2.000	-34.633	50.00	0.0001	P	17.9
3	☐	5.000	-1.282	73.33	0.0001	P	20.8
4	☐	10.000	24.139	93.33	0.0001	P	15.7
5	☐	100.000	388.909	346.82	0.0004	P	105.
6	☐	200.000	55.362	113.33	0.0001	P	22.7
7	☐	1.000					

y = 9.0117E-007 * x + 9.4080E-005
R = 0.4224
DL = 52.51
BEC = 104.4

Weight: <None>
Min Conc: <None>

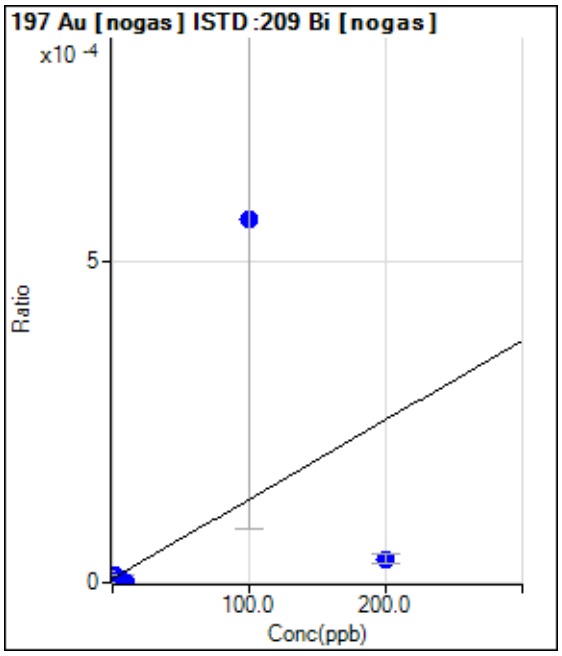
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	16.639	6.67	0.0000	P	173.
3	☐	5.000	30.634	10.00	0.0000	P	99.4
4	☐	10.000	13.480	6.67	0.0000	P	173.
5	☐	100.000	439.467	103.38	0.0002	P	173.
6	☐	200.000	29.305	10.00	0.0000	P	173.
7	☐	1.000					

y = 4.0959E-007 * x + 5.9015E-006
R = 0.3145
DL = 74.87
BEC = 14.41

Weight: <None>
Min Conc: <None>

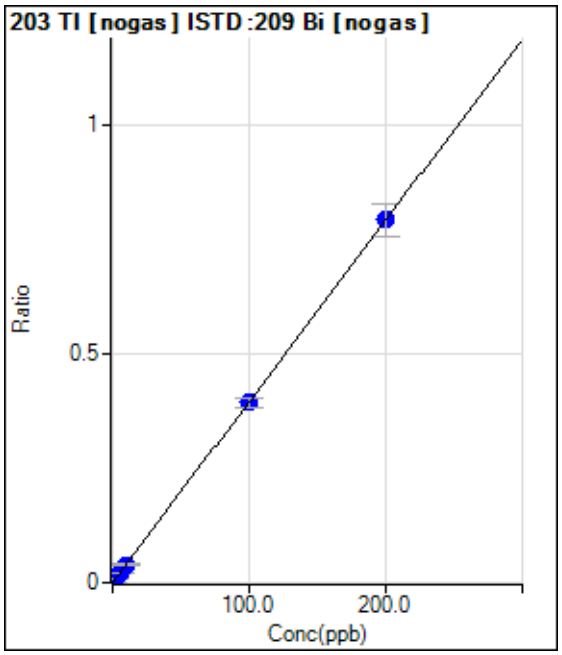


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	4.721	6.67	0.0000	P	86.8
3	☐	5.000	-0.140	3.33	0.0000	P	173.
4	☐	10.000	-5.177	0.00	0.0000	P	
5	☐	100.000	451.737	313.62	0.0006	P	170.
6	☐	200.000	24.992	20.00	0.0000	P	46.4
7	☐	1.000					

y = 1.2347E-006 * x + 6.3926E-006
R = 0.3345
DL = 26.9
BEC = 5.177

Weight: <None>
Min Conc: <None>

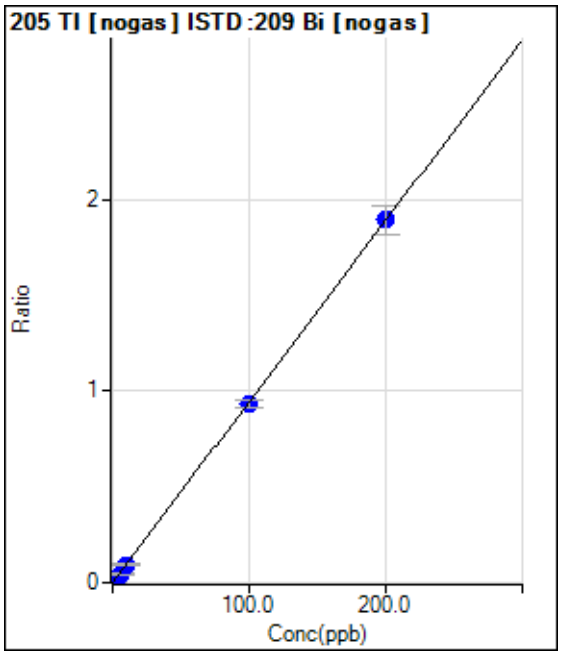
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	107.
2	☐	2.000	2.026	4337.32	0.0081	P	7.5
3	☐	5.000	4.937	10777.15	0.0196	P	6.6
4	☐	10.000	9.934	21554.96	0.0394	P	6.7
5	☐	100.000	99.305	212581.53	0.3935	P	4.3
6	☐	200.000	200.352	420703.70	0.7938	P	9.1
7	☐	1.000					

y = 0.0040 * x + 4.4880E-005
R = 1.0000
DL = 0.03653
BEC = 0.01133

Weight: <None>
Min Conc: <None>

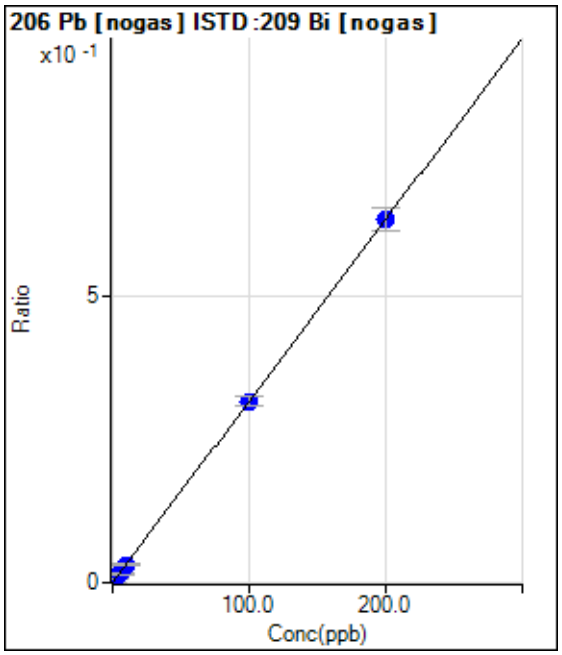


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0001	P	47.5
2	☐	2.000	2.007	10196.76	0.0190	P	9.3
3	☐	5.000	4.774	24802.90	0.0451	P	2.6
4	☐	10.000	9.778	50423.88	0.0923	P	9.4
5	☐	100.000	98.874	503802.08	0.9324	P	3.8
6	☐	200.000	200.580	1002612.41	1.8915	P	8.2
7	☐	1.000					

y = 0.0094 * x + 6.2584E-005
R = 1.0000
DL = 0.009456
BEC = 0.006637

Weight: <None>
Min Conc: <None>

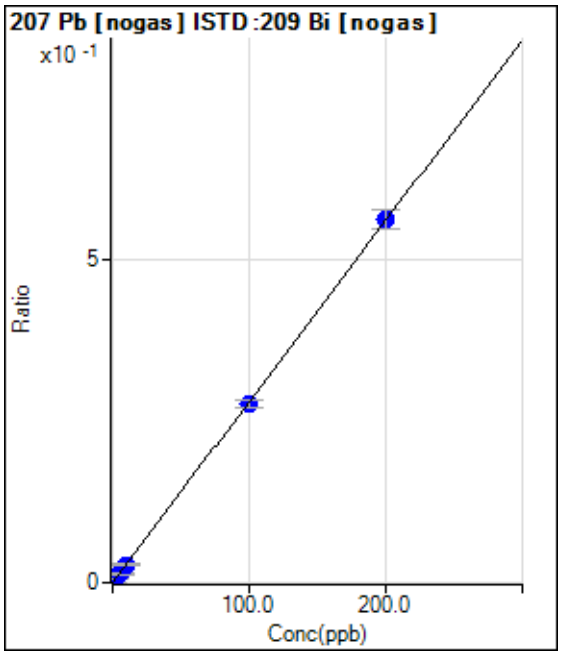
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	15.0
2	☐	2.000	2.163	3753.84	0.0070	P	12.3
3	☐	5.000	4.762	8389.04	0.0153	P	3.5
4	☐	10.000	9.805	17092.82	0.0313	P	9.2
5	☐	100.000	100.078	171760.06	0.3179	P	4.5
6	☐	200.000	199.975	336847.25	0.6351	P	6.4
7	☐	1.000					

y = 0.0032 * x + 1.3120E-004
R = 1.0000
DL = 0.01854
BEC = 0.04132

Weight: <None>
Min Conc: <None>

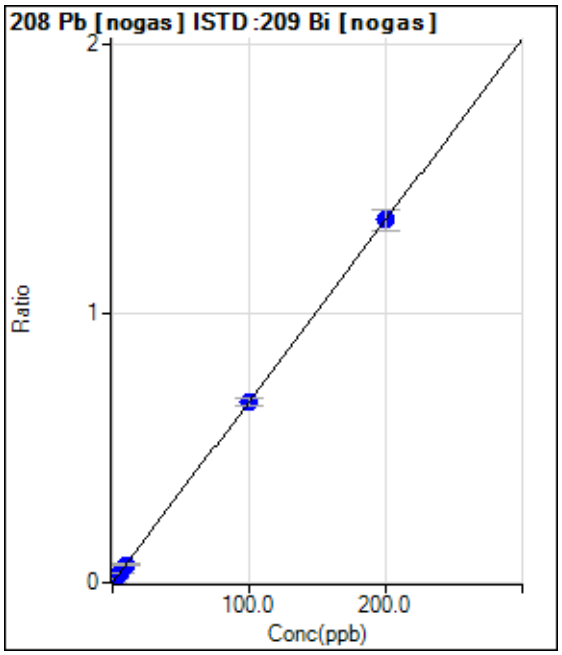


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0001	P	36.1
2	☐	2.000	2.035	3113.69	0.0058	P	9.1
3	☐	5.000	4.775	7408.49	0.0135	P	3.0
4	☐	10.000	9.679	14867.17	0.0272	P	9.0
5	☐	100.000	98.826	149541.86	0.2768	P	4.4
6	☐	200.000	200.608	298047.46	0.5618	P	5.3
7	☐	1.000					

y = 0.0028 * x + 9.9041E-005
R = 1.0000
DL = 0.03826
BEC = 0.03537

Weight: <None>
Min Conc: <None>

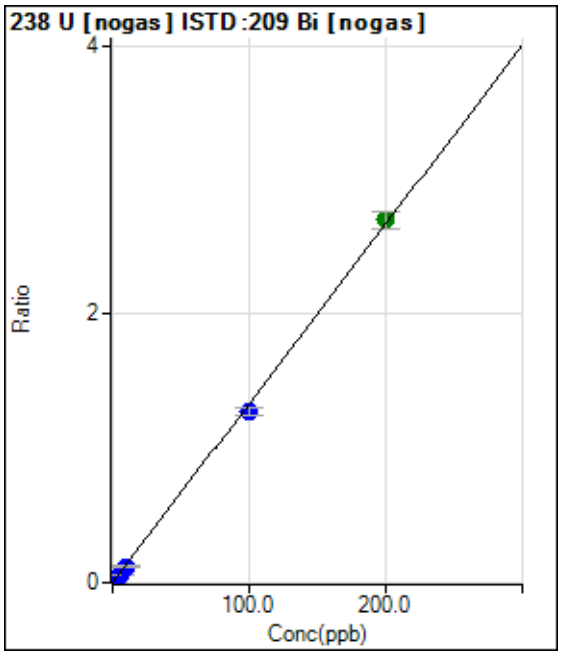
Calibration for 230_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0003	P	9.0
2	☐	2.000	2.059	7578.60	0.0141	P	6.3
3	☐	5.000	4.968	18501.03	0.0337	P	6.7
4	☐	10.000	9.881	36482.56	0.0667	P	6.7
5	☐	100.000	99.661	362196.14	0.6703	P	3.4
6	☐	200.000	200.176	714026.29	1.3460	P	5.6
7	☐	1.000					

y = 0.0067 * x + 2.5663E-004
R = 1.0000
DL = 0.01025
BEC = 0.03817

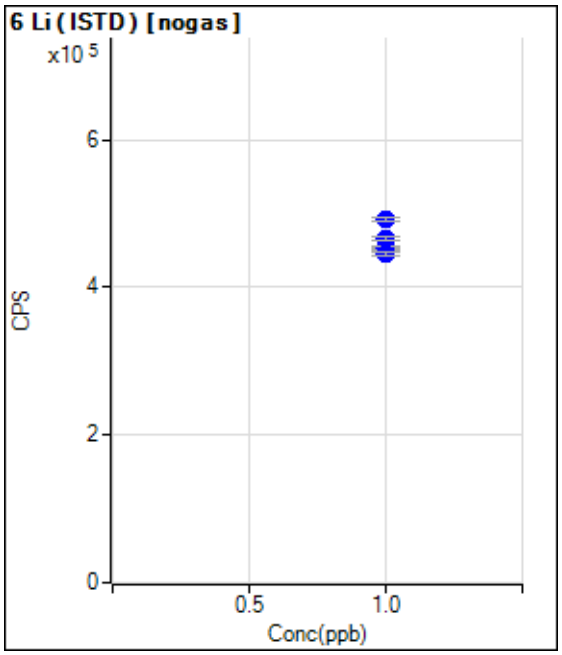
Weight: <None>
Min Conc: <None>



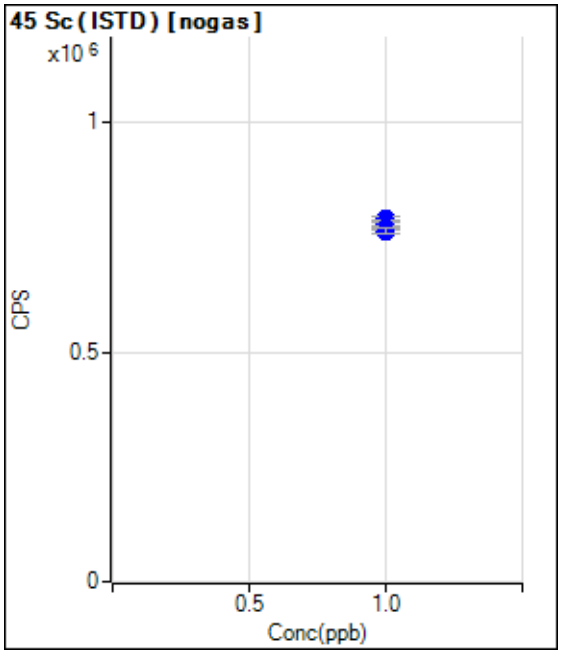
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	173.
2	☐	2.000	1.839	13205.81	0.0246	P	5.3
3	☐	5.000	4.577	33626.73	0.0611	P	2.9
4	☐	10.000	9.044	66038.19	0.1208	P	7.7
5	☐	100.000	95.133	686286.29	1.2701	P	4.6
6	☐	200.000	202.493	1434369.51	2.7035	A	5.0
7	☐	1.000					

y = 0.0134 * x + 1.9178E-005
R = 0.9996
DL = 0.007464
BEC = 0.001436

Weight: <None>
Min Conc: <None>

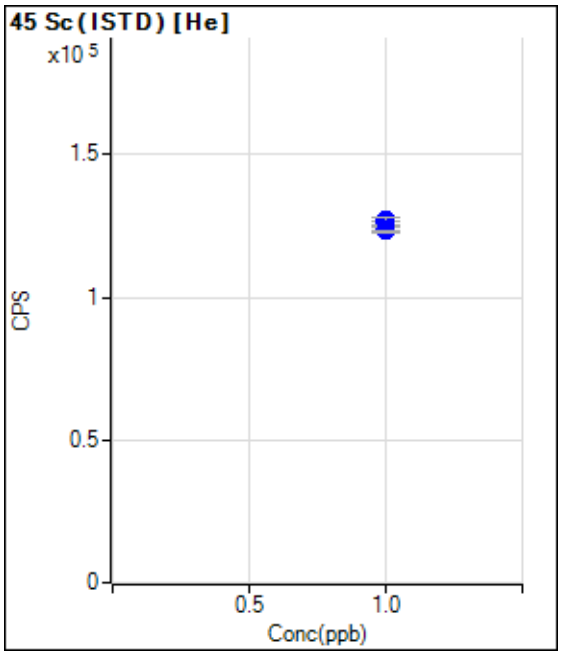


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		455171.79		P	0.3
2	☐	1.000		450612.28		P	0.6
3	☐	1.000		452214.40		P	1.6
4	☐	1.000		445706.48		P	1.5
5	☐	1.000		465984.37		P	1.3
6	☐	1.000		491614.02		P	0.9
7	☐	1.000					

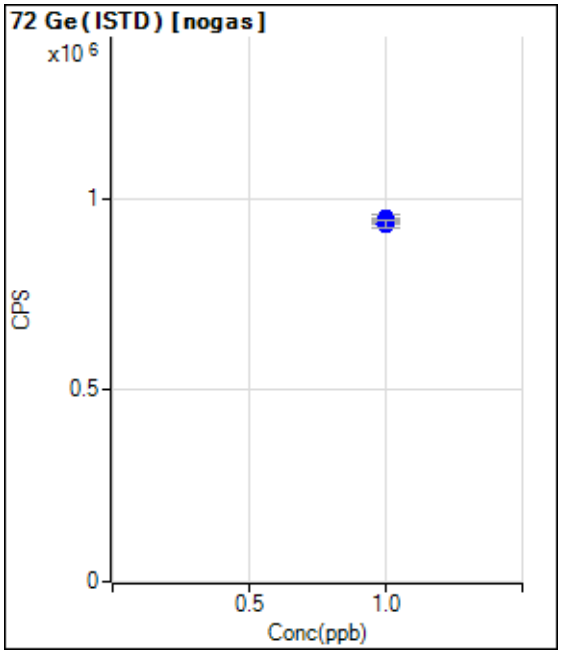


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		777886.45		P	1.8
2	☐	1.000		788099.42		P	1.4
3	☐	1.000		789867.25		P	1.7
4	☐	1.000		784947.49		P	0.8
5	☐	1.000		769673.61		P	1.3
6	☐	1.000		763973.22		P	1.7
7	☐	1.000					

Calibration for 230_ICV.d

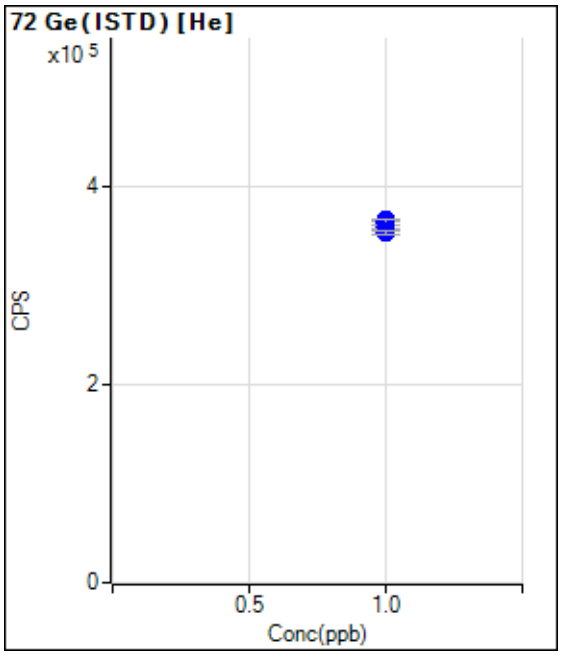


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		126778.13		P	0.4
2	☐	1.000		126022.97		P	0.6
3	☐	1.000		127163.70		P	1.1
4	☐	1.000		126721.27		P	2.1
5	☐	1.000		124160.11		P	0.8
6	☐	1.000		123092.83		P	0.6
7	☐	1.000					

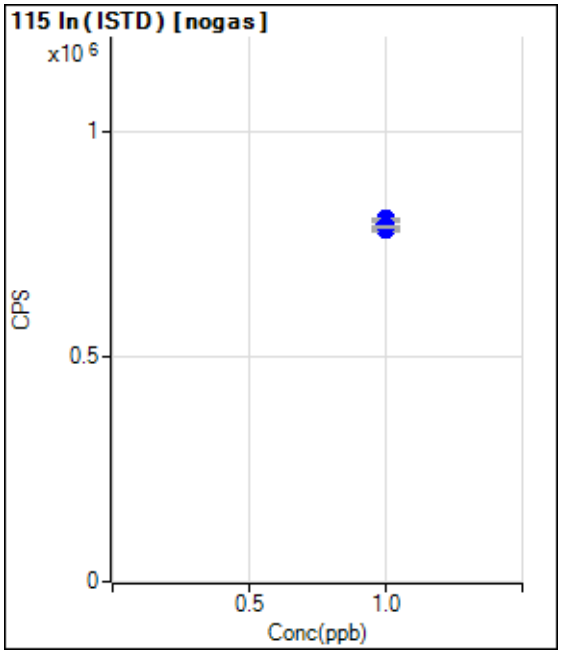


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		942111.97		P	0.9
2	☐	1.000		948019.62		P	2.2
3	☐	1.000		934477.46		P	1.9
4	☐	1.000		942270.90		P	1.3
5	☐	1.000		939517.64		P	0.4
6	☐	1.000		933627.95		P	1.9
7	☐	1.000					

Calibration for 230_ICV.d

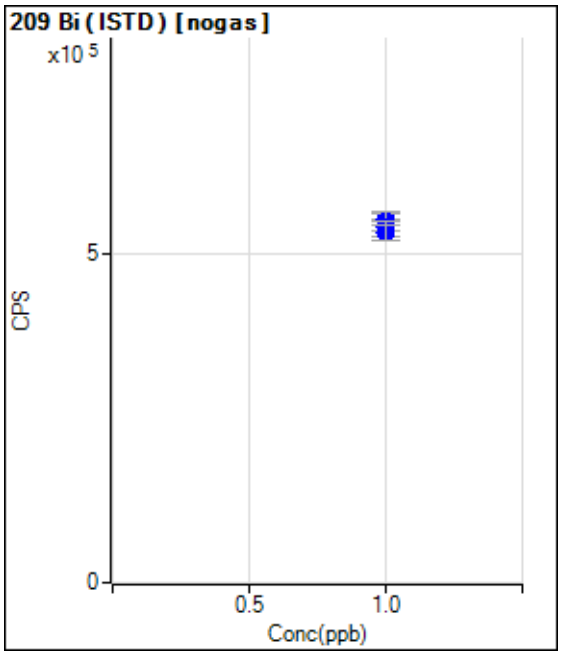


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		358309.44		P	1.3
2	☐	1.000		365813.76		P	0.3
3	☐	1.000		363942.01		P	1.5
4	☐	1.000		361727.84		P	2.9
5	☐	1.000		355484.06		P	0.3
6	☐	1.000		352810.79		P	0.9
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		780487.15		P	1.3
2	☐	1.000		793181.55		P	2.4
3	☐	1.000		789172.44		P	0.1
4	☐	1.000		805238.01		P	0.7
5	☐	1.000		788975.85		P	1.8
6	☐	1.000		787836.55		P	0.8
7	☐	1.000					

Calibration for 230_ICV.d



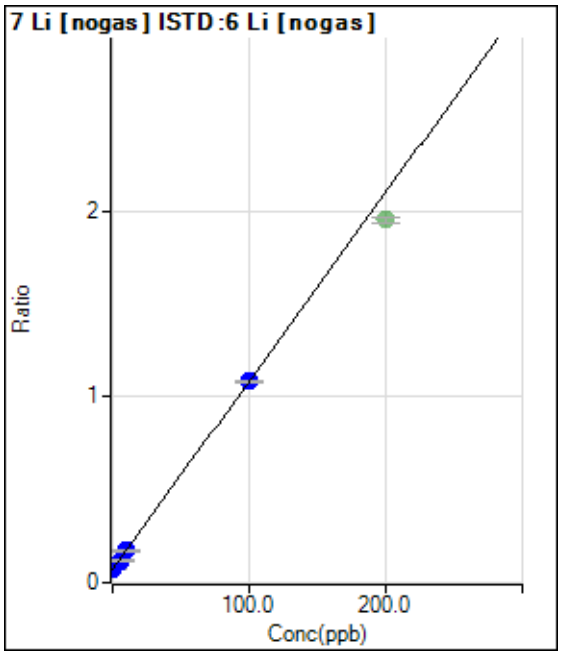
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		534129.94		P	5.0
2	☐	1.000		538485.87		P	4.8
3	☐	1.000		550463.44		P	3.2
4	☐	1.000		548398.54		P	5.6
5	☐	1.000		540705.92		P	2.8
6	☐	1.000		531346.36		P	4.5
7	☐	1.000					

Calibration for 023_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121318A.b\
Analysis File: 121318A.batch.bin
DA Date-Time: 12/13/2018 11:58:58 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	016CALB.d	CAL BLK	12/13/2018 12:37:08 PM
2	017CALS.d	2/10/200	12/13/2018 12:39:23 PM
3	018CALS.d	5/25/500	12/13/2018 12:41:39 PM
4	019CALS.d	10/50/1000	12/13/2018 12:43:53 PM
5	020CALS.d	100/500/10K	12/13/2018 12:46:08 PM
6	021CALS.d	200/1000/20K	12/13/2018 12:48:22 PM
7			

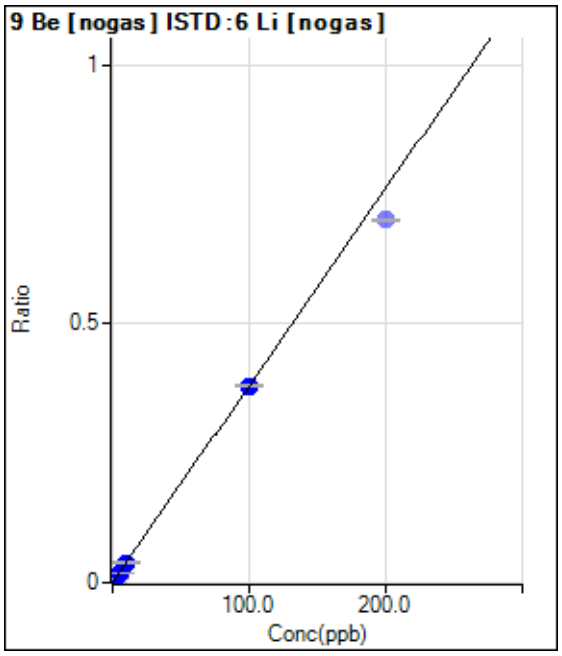
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37888.48	0.0701	P	2.8
2	☐	2.000	2.092	50096.85	0.0913	P	2.0
3	☐	5.000	4.796	65654.70	0.1187	P	3.3
4	☐	10.000	10.023	94570.57	0.1717	P	1.6
5	☐	100.000	100.006	628034.95	1.0838	P	0.9
6	☑	200.000		1230145.16	1.9515	A	1.3
7	☐	1.000					

y = 0.0101 * x + 0.0701
R = 1.0000
DL = 0.5774
BEC = 6.919

Weight: <None>
Min Conc: <None>

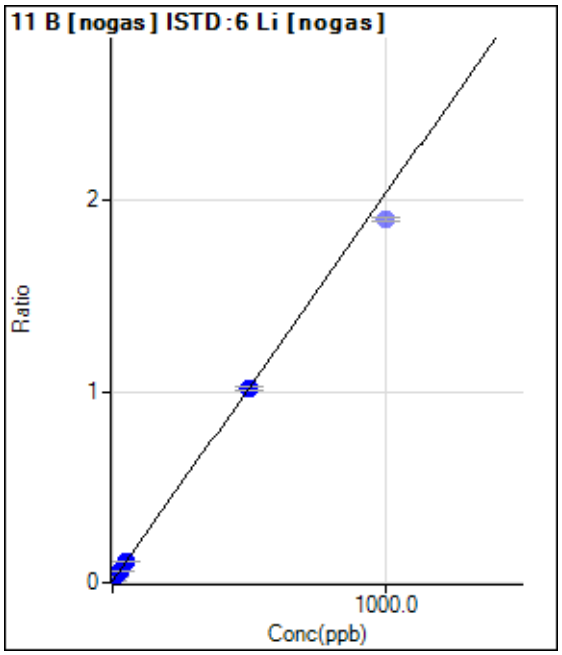


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0001	P	24.8
2	☐	2.000	2.021	4277.23	0.0078	P	9.1
3	☐	5.000	5.098	10783.24	0.0195	P	1.1
4	☐	10.000	10.205	21425.70	0.0389	P	1.9
5	☐	100.000	99.974	220276.29	0.3801	P	0.4
6	☑	200.000		441478.69	0.7004	P	0.6
7	☐	1.000					

y = 0.0038 * x + 1.1733E-004
R = 1.0000
DL = 0.02292
BEC = 0.03087

Weight: <None>
Min Conc: <None>

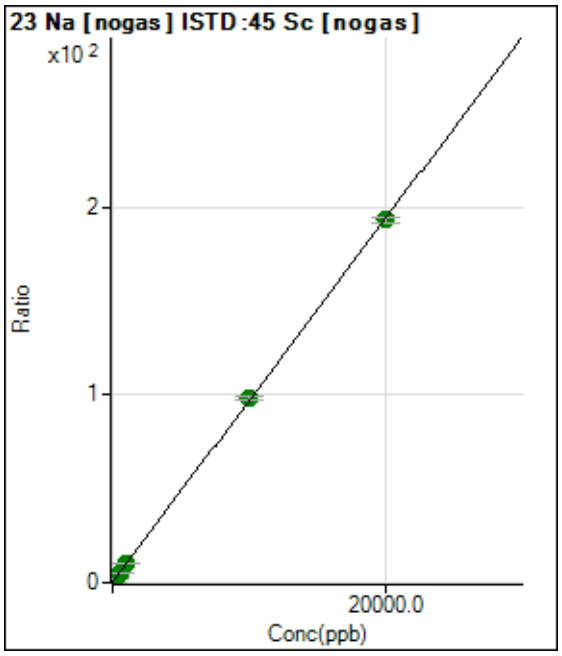
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3813.78	0.0071	P	7.5
2	☐	10.000	10.759	15826.94	0.0289	P	5.3
3	☐	25.000	26.648	33783.97	0.0611	P	1.4
4	☐	50.000	51.794	61701.19	0.1120	P	1.0
5	☐	500.000	499.723	591072.86	1.0199	P	1.8
6	☑	1000.000		1196480.42	1.8982	P	0.9
7	☐	5.000					

y = 0.0020 * x + 0.0071
R = 1.0000
DL = 0.7808
BEC = 3.481

Weight: <None>
Min Conc: <None>

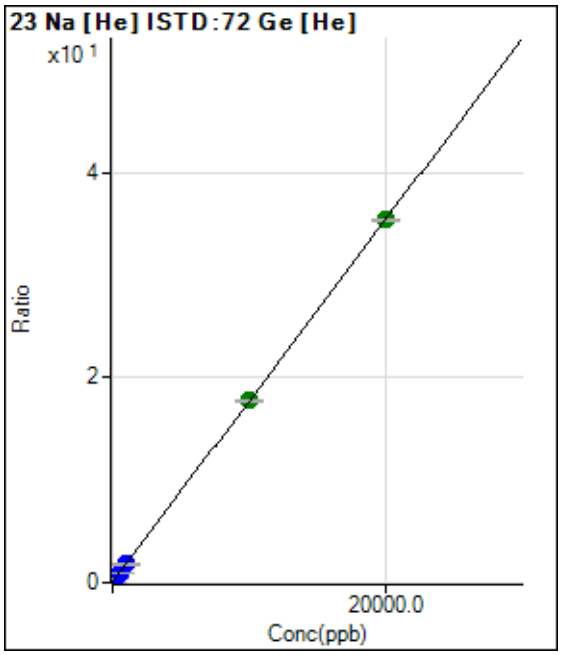


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140785.69	0.1964	P	1.7
2	☐	200.000	213.430	1651234.67	2.2617	A	0.9
3	☐	500.000	518.495	3783940.97	5.2137	A	1.5
4	☐	1000.000	1010.651	7212920.21	9.9761	A	0.6
5	☐	10000.00	10133.588	71337270.35	98.2559	A	1.9
6	☐	20000.00	19932.077	139584744.7	193.072	A	1.8
7	☐	100.000					

y = 0.0097 * x + 0.1964
R = 1.0000
DL = 1.044
BEC = 20.29

Weight: <None>
Min Conc: <None>

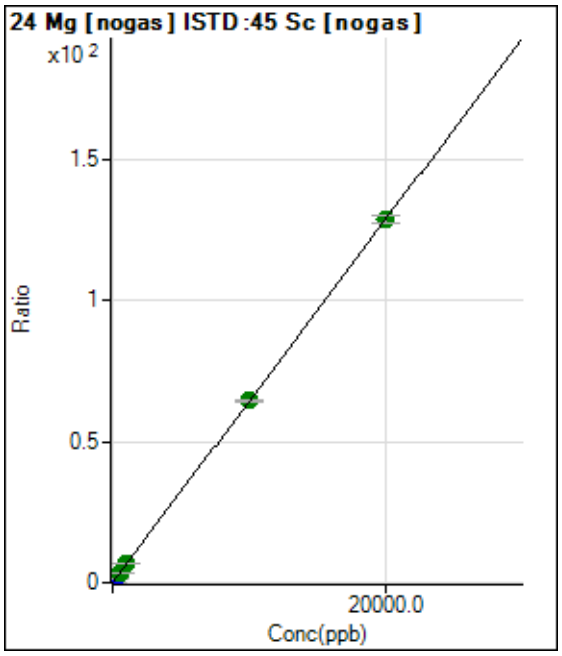
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17555.18	0.0476	P	3.6
2	☐	200.000	197.792	151185.78	0.3970	P	1.5
3	☐	500.000	490.046	348711.57	0.9133	P	3.2
4	☐	1000.000	984.613	671861.50	1.7870	P	2.4
5	☐	10000.00	10024.272	6823678.44	17.7558	A	1.5
6	☐	20000.00	19988.904	13340158.55	35.3587	A	0.5
7	☐	100.000					

y = 0.0018 * x + 0.0476
R = 1.0000
DL = 2.909
BEC = 26.96

Weight: <None>
Min Conc: <None>

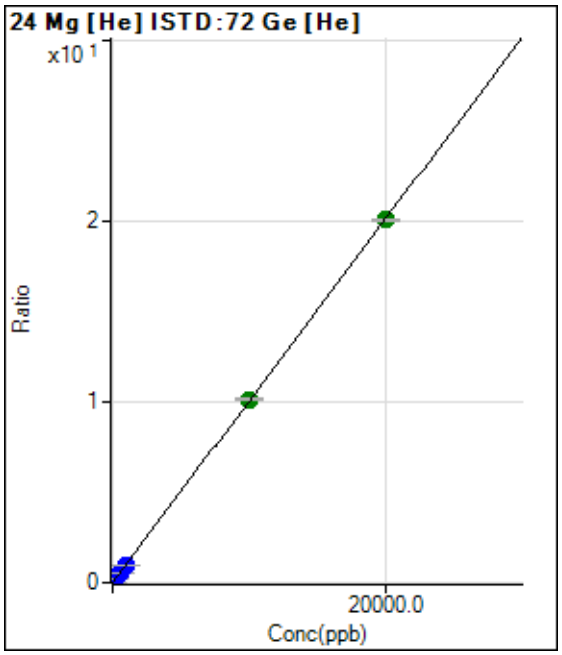


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3934.33	0.0055	P	19.8
2	☐	200.000	200.889	948129.55	1.2989	P	1.2
3	☐	500.000	521.466	2440845.63	3.3630	A	1.7
4	☐	1000.000	1013.730	4722964.69	6.5324	A	0.9
5	☐	10000.00	10022.449	46859978.13	64.5352	A	1.0
6	☐	20000.00	19987.544	93047497.91	128.695	A	2.2
7	☐	100.000					

y = 0.0064 * x + 0.0055
R = 1.0000
DL = 0.5067
BEC = 0.8523

Weight: <None>
Min Conc: <None>

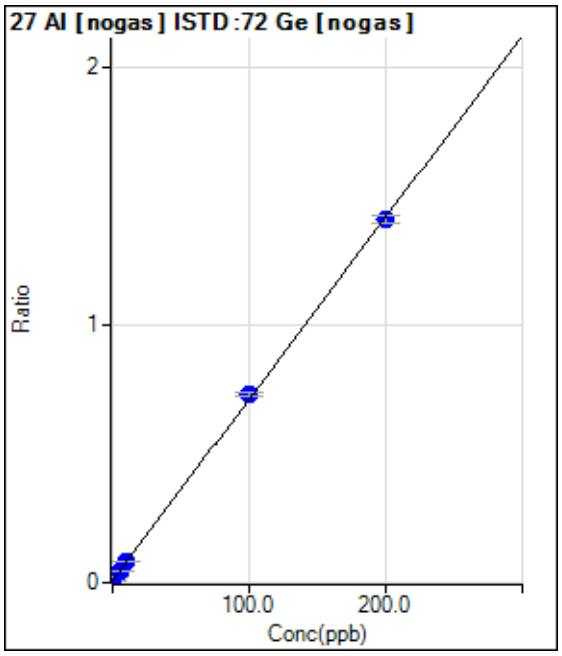
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.68	0.0008	P	0.4
2	☐	200.000	200.776	77119.79	0.2025	P	1.1
3	☐	500.000	494.537	189993.57	0.4976	P	2.8
4	☐	1000.000	987.670	373406.43	0.9930	P	2.9
5	☐	10000.00	10095.653	3898233.07	10.1428	A	0.4
6	☐	20000.00	19952.919	7562778.01	20.0454	A	0.5
7	☐	100.000					

y = 0.0010 * x + 8.0441E-004
R = 1.0000
DL = 0.01062
BEC = 0.8007

Weight: <None>
Min Conc: <None>

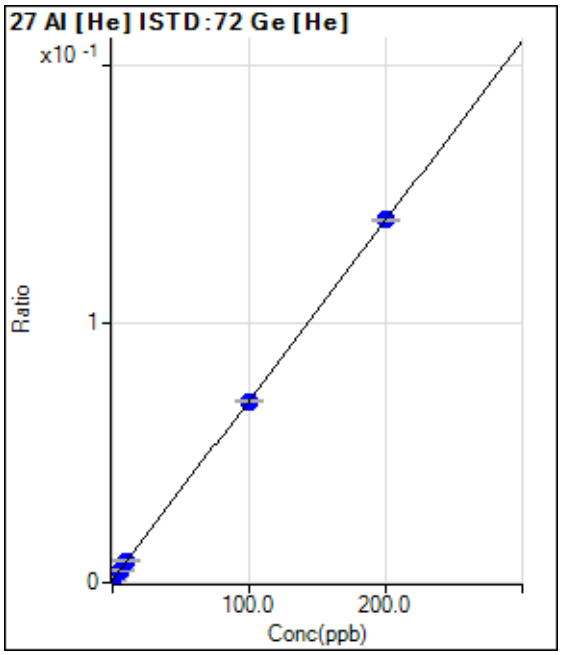


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6621.30	0.0080	P	3.0
2	☐	2.000	2.666	22811.72	0.0268	P	7.8
3	☐	5.000	5.430	39385.37	0.0462	P	2.0
4	☐	10.000	10.170	67312.28	0.0796	P	1.0
5	☐	100.000	102.585	621902.89	0.7298	P	1.4
6	☐	200.000	198.682	1193299.85	1.4060	P	2.2
7	☐	1.000					

y = 0.0070 * x + 0.0080
R = 0.9999
DL = 0.104
BEC = 1.138

Weight: <None>
Min Conc: <None>

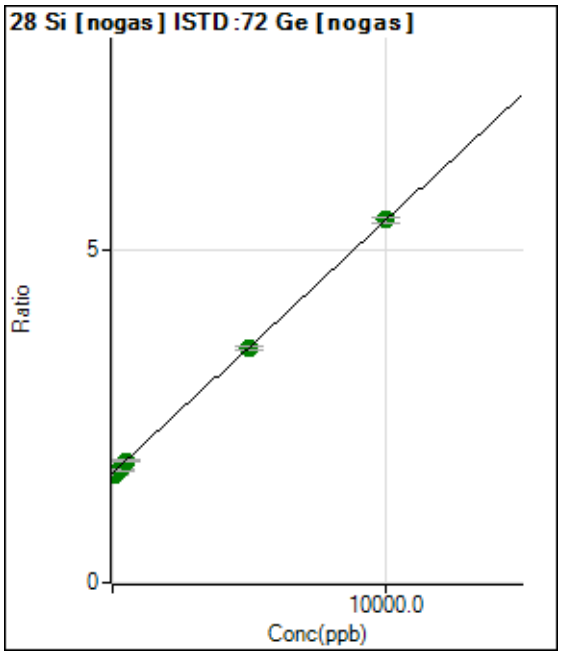
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.542	250.01	0.0007	P	16.3
2	☐	2.000	2.239	993.38	0.0026	P	6.9
3	☐	5.000	5.214	1783.45	0.0047	P	11.7
4	☐	10.000	10.510	3140.32	0.0083	P	7.2
5	☐	100.000	99.226	26863.06	0.0699	P	0.8
6	☐	200.000	200.354	52838.92	0.1401	P	0.9
7	☐	1.000					

y = 6.9376E-004 * x + 0.0011
R = 1.0000
DL = 0.4787
BEC = 1.52

Weight: <None>
Min Conc: <None>

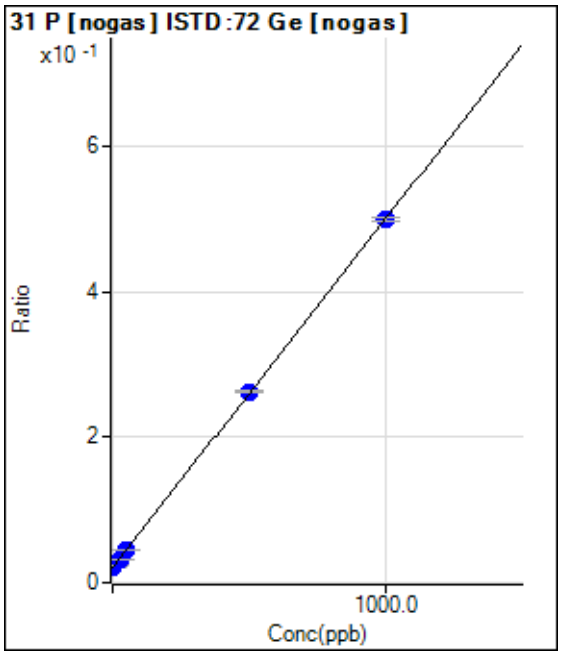


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1364001.80	1.6495	A	0.8
2	☐	100.000	-48.535	1390757.38	1.6311	A	1.7
3	☐	250.000	134.692	1448840.29	1.7006	A	1.4
4	☐	500.000	479.070	1549056.12	1.8312	A	0.9
5	☐	5000.000	4961.270	3009126.62	3.5314	A	1.2
6	☐	10000.00	10024.780	4627646.39	5.4521	A	1.4
7	☐	50.000					

y = 3.7932E-004 * x + 1.6495
R = 0.9999
DL = 101.7
BEC = 4349

Weight: <None>
Min Conc: <None>

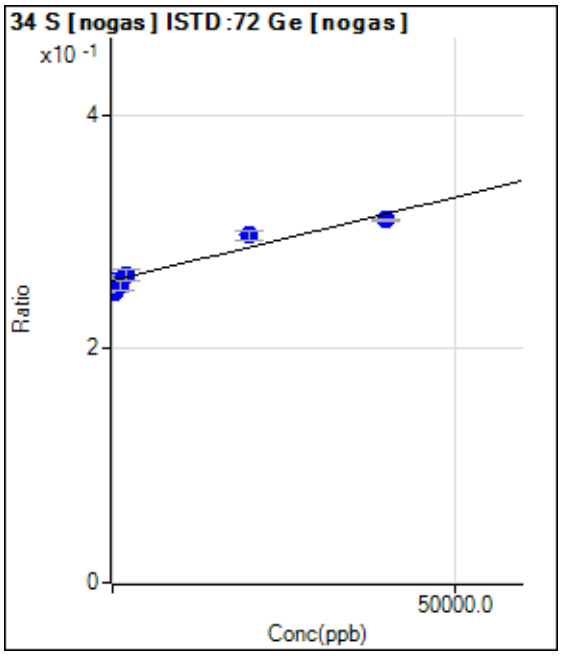
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17051.46	0.0206	P	4.8
2	☐	10.000	9.595	21512.73	0.0252	P	2.4
3	☐	25.000	23.718	27273.78	0.0320	P	3.0
4	☐	50.000	49.851	37695.24	0.0446	P	3.0
5	☐	500.000	505.297	224323.11	0.2632	P	0.4
6	☐	1000.000	997.395	423971.37	0.4995	P	1.1
7	☐	5.000					

y = 4.8014E-004 * x + 0.0206
R = 1.0000
DL = 6.244
BEC = 42.96

Weight: <None>
Min Conc: <None>

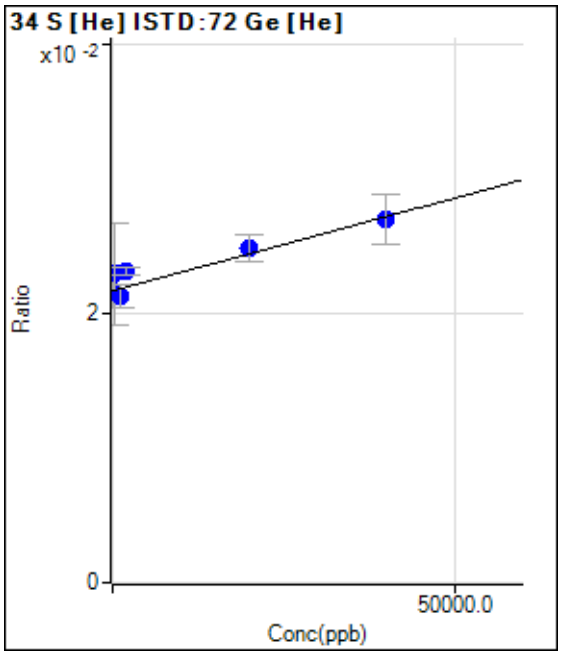


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213527.69	0.2583	P	3.9
2	☐	400.000	-6746.777	212076.22	0.2487	P	0.8
3	☐	1000.000	-2455.055	217056.13	0.2548	P	3.7
4	☐	2000.000	3056.768	222096.29	0.2626	P	4.0
5	☐	20000.00	27363.179	253234.07	0.2971	P	2.7
6	☐	40000.00	36423.416	263123.62	0.3100	P	0.7
7	☐	200.000					

y = 1.4188E-006 * x + 0.2583
R = 0.9604
DL = 2.154E+04
BEC = 1.821E+05

Weight: <None>
Min Conc: <None>

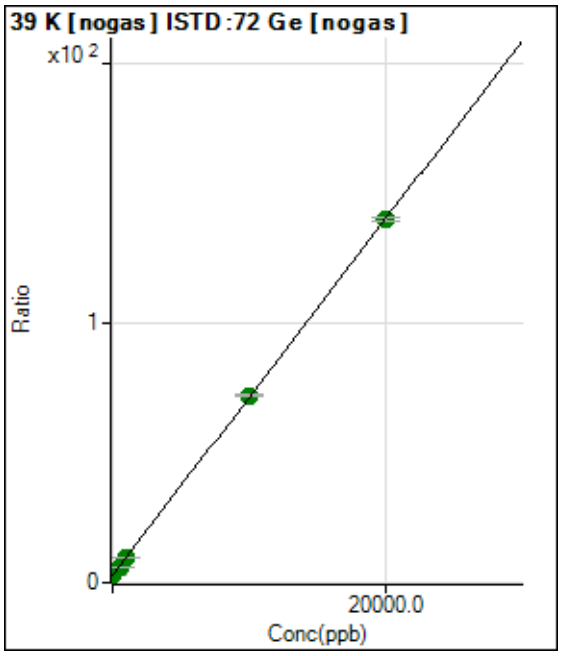
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8003.55	0.0217	P	12.0
2	☐	400.000	9157.526	8737.22	0.0230	P	33.1
3	☐	1000.000	-2920.841	8136.42	0.0213	P	8.1
4	☐	2000.000	10578.916	8703.57	0.0231	P	2.5
5	☐	20000.00	22623.801	9537.63	0.0248	P	8.0
6	☐	40000.00	38269.600	10171.32	0.0270	P	13.9
7	☐	200.000					

y = 1.3771E-007 * x + 0.0217
R = 0.9456
DL = 5.662E+04
BEC = 1.575E+05

Weight: <None>
Min Conc: <None>

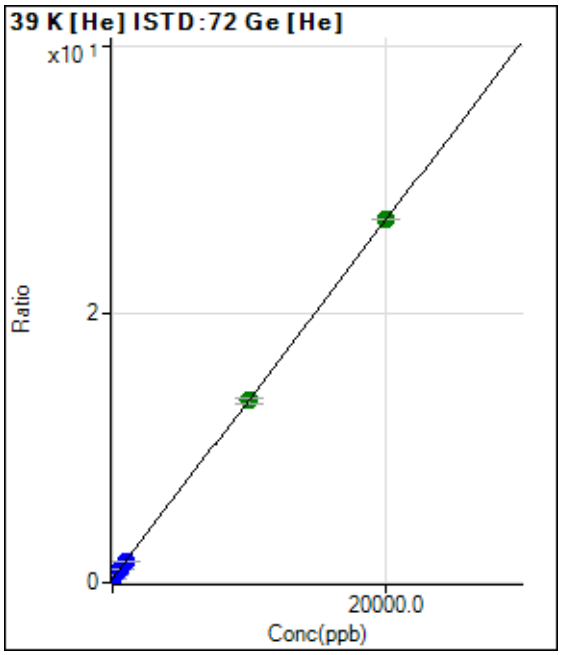


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2330534.04	2.8188	A	2.3
2	☐	200.000	193.306	3533450.60	4.1445	A	0.5
3	☐	500.000	494.471	5290670.04	6.2098	A	1.0
4	☐	1000.000	998.290	8175398.10	9.6650	A	0.5
5	☐	10000.00	10097.386	61405511.79	72.0657	A	1.5
6	☐	20000.00	19951.598	118532260.9	139.644	A	0.9
7	☐	100.000					

y = 0.0069 * x + 2.8188
R = 1.0000
DL = 27.85
BEC = 411

Weight: <None>
Min Conc: <None>

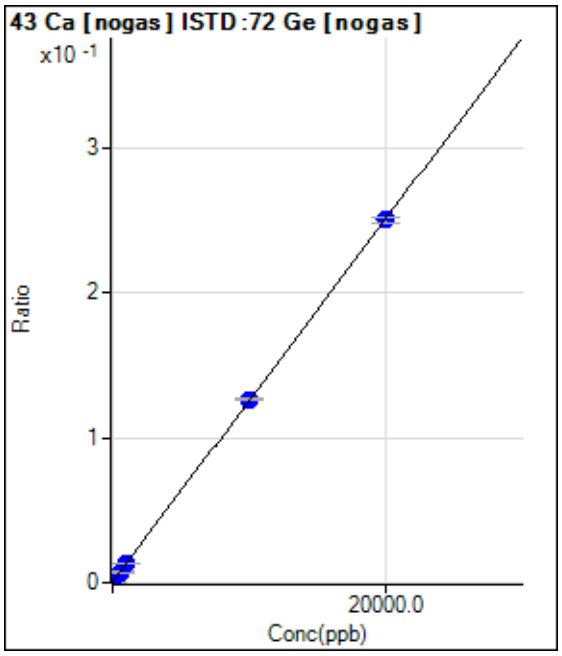
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111238.76	0.3016	P	1.9
2	☐	200.000	190.599	211719.26	0.5560	P	2.3
3	☐	500.000	483.388	361571.32	0.9468	P	1.6
4	☐	1000.000	973.290	601848.68	1.6007	P	1.8
5	☐	10000.00	9936.753	5212045.96	13.5643	A	3.9
6	☐	20000.00	20033.468	10201884.43	27.0404	A	0.1
7	☐	100.000					

y = 0.0013 * x + 0.3016
R = 1.0000
DL = 12.69
BEC = 226

Weight: <None>
Min Conc: <None>

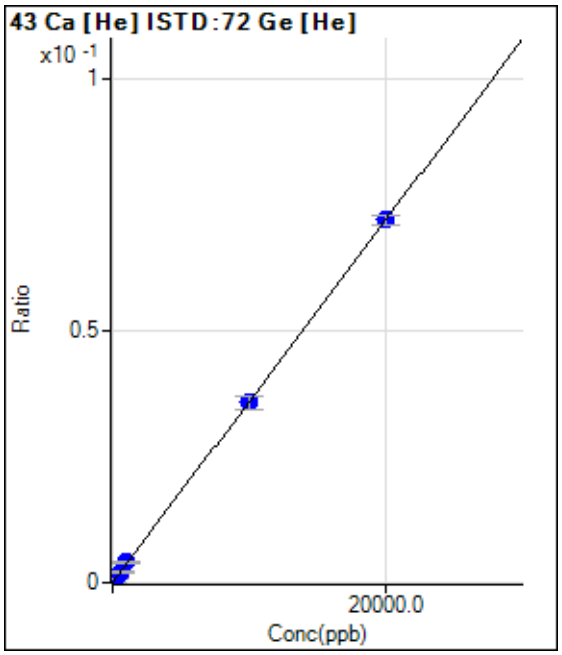


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	423.34	0.0005	P	2.4
2	☐	200.000	260.061	3210.33	0.0038	P	9.3
3	☐	500.000	528.774	6067.77	0.0071	P	9.6
4	☐	1000.000	1017.279	11196.92	0.0132	P	1.7
5	☐	10000.00	10060.552	107656.59	0.1263	P	1.0
6	☐	20000.00	19967.540	212417.62	0.2502	P	1.8
7	☐	100.000					

y = 1.2507E-005 * x + 5.1186E-004
R = 1.0000
DL = 2.974
BEC = 40.93

Weight: <None>
Min Conc: <None>

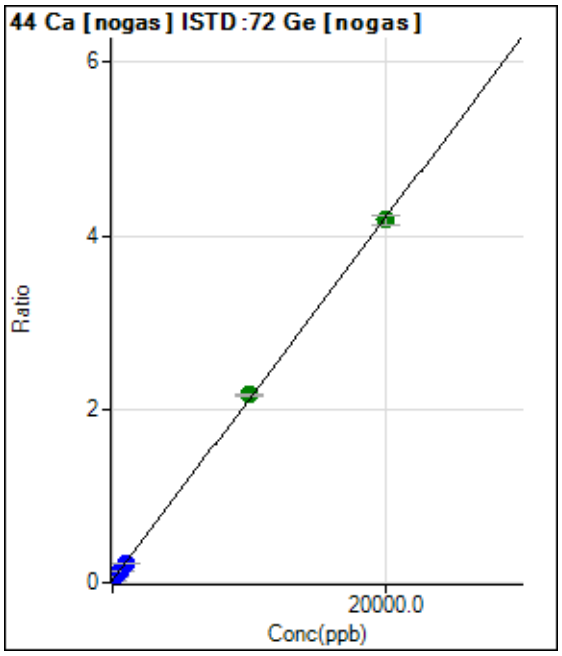
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	200.000	248.136	346.68	0.0009	P	14.5
3	☐	500.000	577.010	800.03	0.0021	P	13.3
4	☐	1000.000	1114.983	1516.76	0.0040	P	11.9
5	☐	10000.00	9926.928	13715.31	0.0357	P	6.8
6	☐	20000.00	20028.380	27170.51	0.0720	P	2.3
7	☐	100.000					

y = 3.5949E-006 * x + 1.8209E-005
R = 1.0000
DL = 13.16
BEC = 5.065

Weight: <None>
Min Conc: <None>

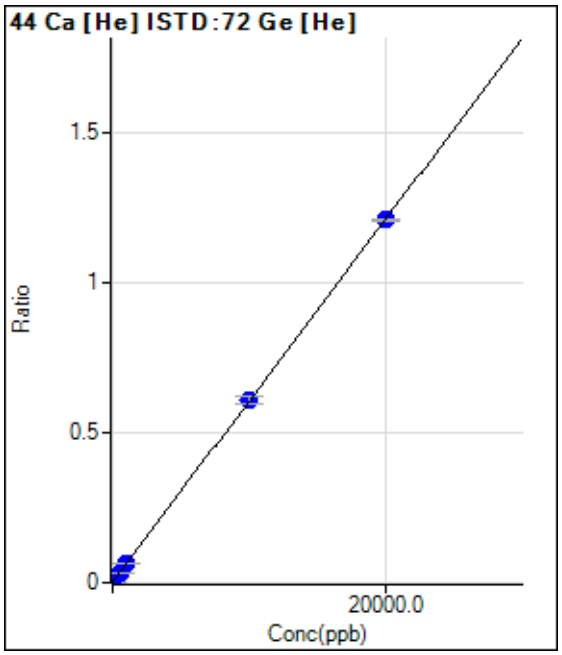


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21546.39	0.0261	P	3.5
2	☐	200.000	244.525	65794.75	0.0772	P	1.2
3	☐	500.000	504.187	111984.28	0.1314	P	1.5
4	☐	1000.000	971.655	193832.92	0.2292	P	0.9
5	☐	10000.00	10225.850	1843489.09	2.1634	A	0.7
6	☐	20000.00	19887.942	3550508.28	4.1829	A	2.7
7	☐	100.000					

y = 2.0901E-004 * x + 0.0261
R = 0.9999
DL = 12.91
BEC = 124.7

Weight: <None>
Min Conc: <None>

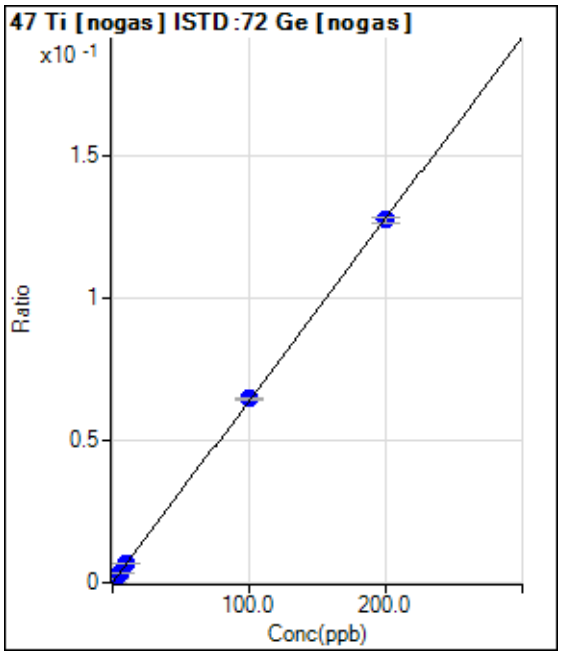
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0014	P	4.3
2	☐	200.000	263.026	6604.65	0.0173	P	1.7
3	☐	500.000	524.136	12647.91	0.0331	P	3.1
4	☐	1000.000	999.368	23265.17	0.0619	P	1.0
5	☐	10000.00	10036.813	233712.98	0.6083	P	3.9
6	☐	20000.00	19980.391	456303.82	1.2094	P	0.8
7	☐	100.000					

y = 6.0460E-005 * x + 0.0014
R = 1.0000
DL = 3.047
BEC = 23.77

Weight: <None>
Min Conc: <None>

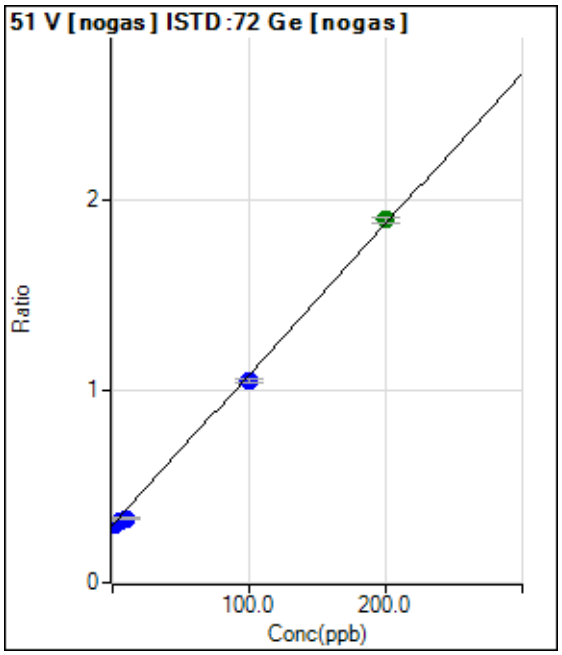


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0001	P	98.0
2	☐	2.000	1.978	1126.72	0.0013	P	7.2
3	☐	5.000	4.837	2686.91	0.0032	P	4.5
4	☐	10.000	10.358	5657.63	0.0067	P	3.4
5	☐	100.000	101.157	55234.48	0.0648	P	0.8
6	☐	200.000	199.408	108401.36	0.1277	P	1.6
7	☐	1.000					

y = 6.4015E-004 * x + 5.6036E-005
R = 1.0000
DL = 0.2573
BEC = 0.08754

Weight: <None>
Min Conc: <None>

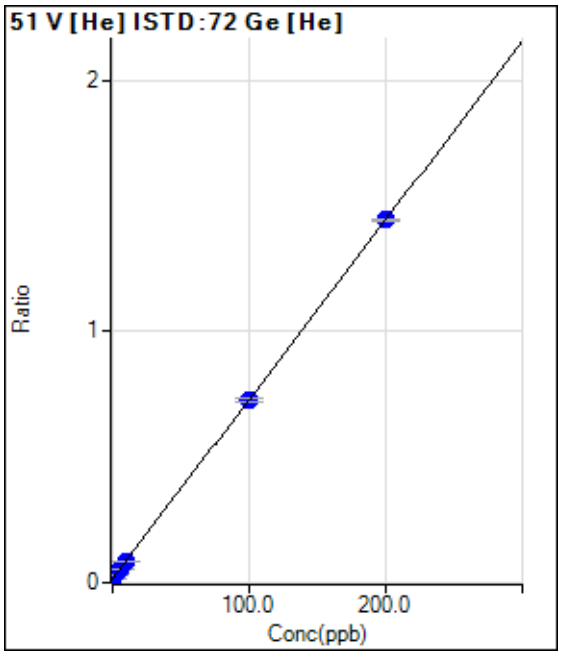
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	249197.10	0.3014	P	3.1
2	☐	2.000	0.402	259628.08	0.3045	P	1.2
3	☐	5.000	2.444	273103.27	0.3206	P	2.4
4	☐	10.000	4.378	284009.69	0.3358	P	2.5
5	☐	100.000	95.551	896454.68	1.0522	P	2.3
6	☐	200.000	202.585	1607027.15	1.8932	A	1.5
7	☐	1.000					

y = 0.0079 * x + 0.3014
R = 0.9995
DL = 3.576
BEC = 38.35

Weight: <None>
Min Conc: <None>

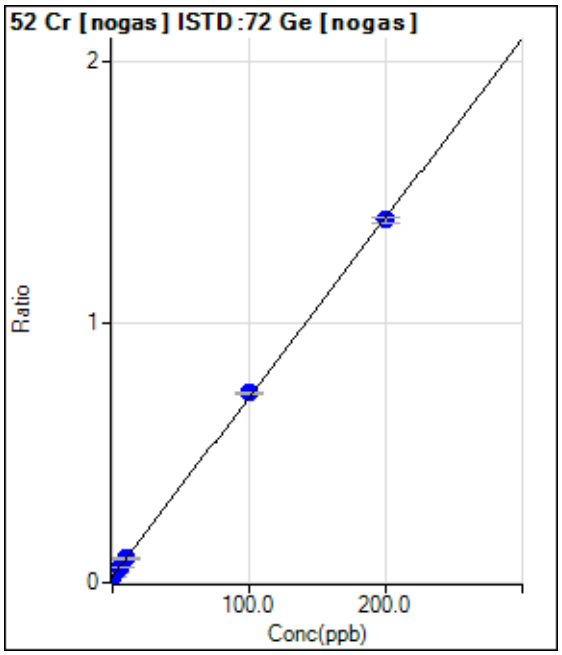


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.299	6766.61	0.0183	P	1.2
2	☐	2.000	2.102	11885.89	0.0312	P	1.2
3	☐	5.000	4.983	19770.04	0.0518	P	2.0
4	☐	10.000	9.772	32309.92	0.0859	P	2.4
5	☐	100.000	99.666	279569.81	0.7274	P	1.3
6	☐	200.000	200.178	545024.54	1.4446	P	0.9
7	☐	1.000					

y = 0.0071 * x + 0.0162
R = 1.0000
DL = 0.09219
BEC = 2.272

Weight: <None>
Min Conc: <None>

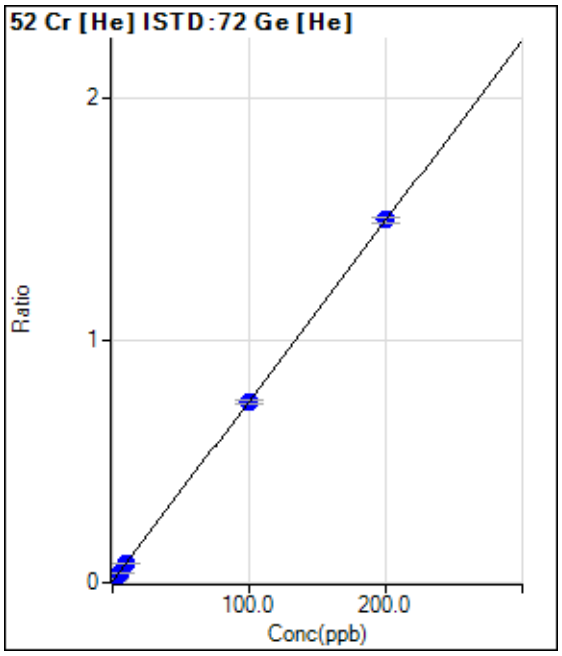
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19540.75	0.0236	P	2.2
2	☐	2.000	1.830	30899.81	0.0362	P	0.8
3	☐	5.000	4.753	48033.81	0.0564	P	1.3
4	☐	10.000	10.026	78412.34	0.0927	P	1.3
5	☐	100.000	102.331	620837.52	0.7286	P	0.6
6	☐	200.000	198.841	1182693.47	1.3934	P	1.8
7	☐	1.000					

y = 0.0069 * x + 0.0236
R = 0.9999
DL = 0.2228
BEC = 3.431

Weight: <None>
Min Conc: <None>

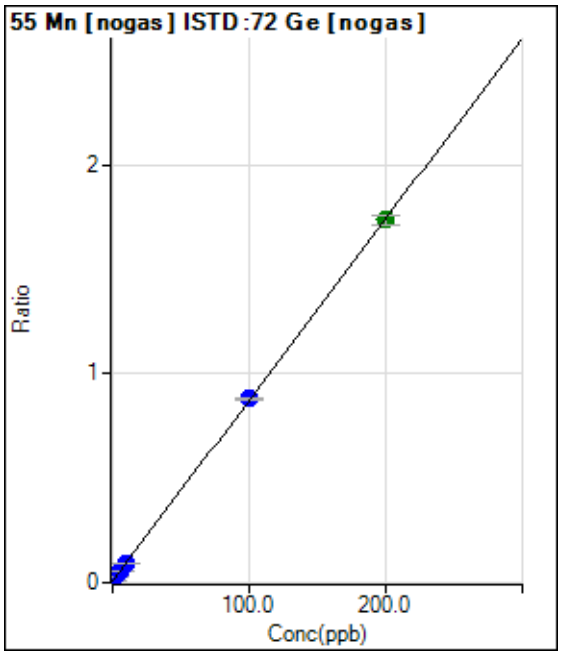


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1780.12	0.0048	P	5.7
2	☐	2.000	1.947	7364.93	0.0193	P	3.8
3	☐	5.000	5.068	16277.57	0.0426	P	4.2
4	☐	10.000	9.865	29470.93	0.0784	P	1.5
5	☐	100.000	99.179	286095.42	0.7443	P	2.0
6	☐	200.000	200.416	565616.05	1.4992	P	1.5
7	☐	1.000					

y = 0.0075 * x + 0.0048
R = 1.0000
DL = 0.1103
BEC = 0.6471

Weight: <None>
Min Conc: <None>

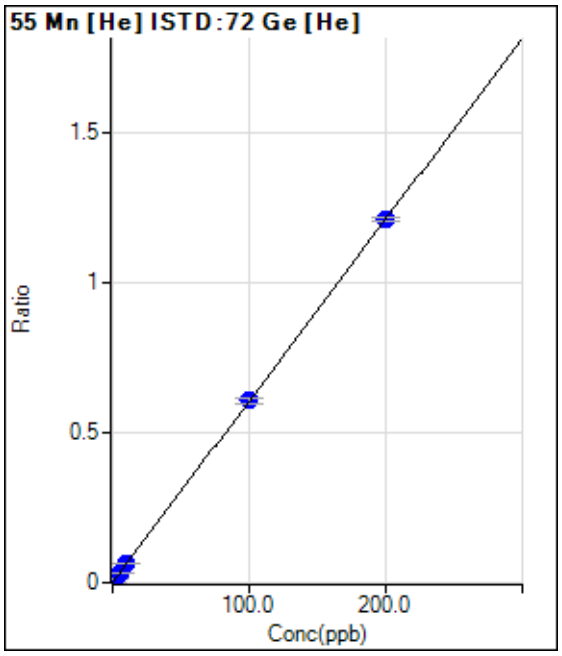
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6137.82	0.0074	P	3.8
2	☐	2.000	2.012	21192.67	0.0249	P	3.9
3	☐	5.000	5.066	43746.67	0.0513	P	1.3
4	☐	10.000	10.052	80009.56	0.0946	P	2.3
5	☐	100.000	100.774	750851.86	0.8811	P	0.8
6	☐	200.000	199.609	1475001.38	1.7380	A	2.8
7	☐	1.000					

y = 0.0087 * x + 0.0074
R = 1.0000
DL = 0.09647
BEC = 0.8561

Weight: <None>
Min Conc: <None>

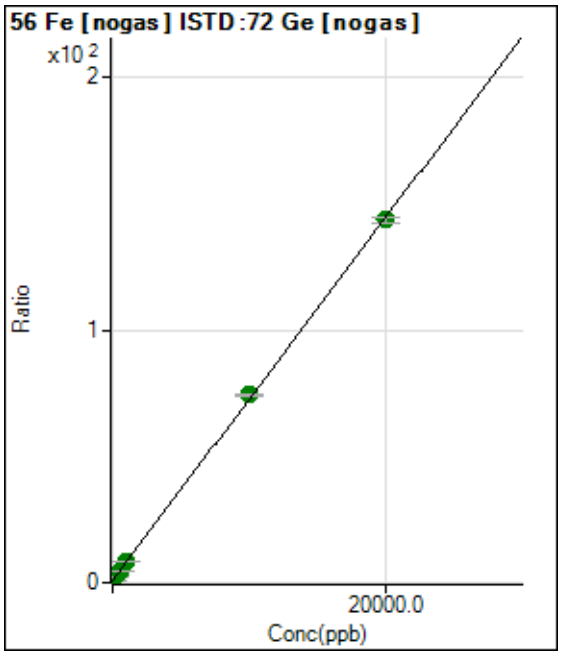


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0007	P	17.9
2	☐	2.000	2.033	4970.76	0.0131	P	6.9
3	☐	5.000	5.039	11947.46	0.0313	P	3.5
4	☐	10.000	10.365	23882.64	0.0635	P	3.9
5	☐	100.000	100.269	233712.46	0.6081	P	3.5
6	☐	200.000	199.846	457020.85	1.2113	P	1.0
7	☐	1.000					

y = 0.0061 * x + 7.4035E-004
R = 1.0000
DL = 0.06553
BEC = 0.1222

Weight: <None>
Min Conc: <None>

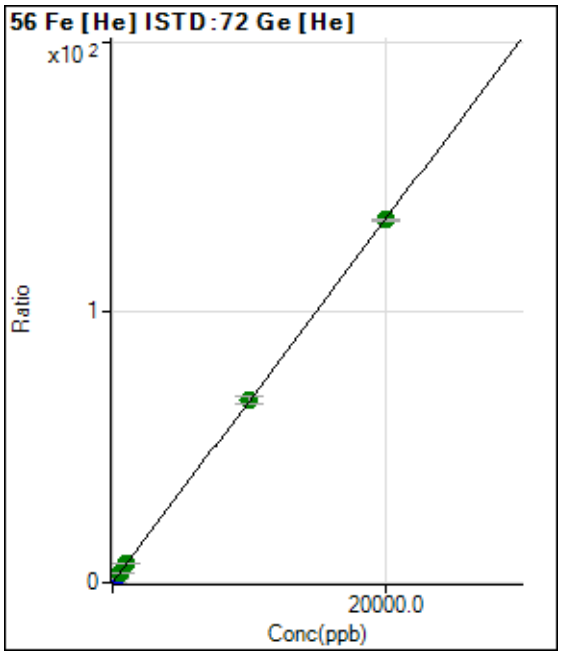
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	706934.47	0.8550	P	1.4
2	☐	200.000	214.874	2044016.39	2.3975	A	1.0
3	☐	500.000	519.700	3907190.58	4.5859	A	0.8
4	☐	1000.000	1021.029	6923572.29	8.1848	A	0.0
5	☐	10000.00	10230.969	63315238.91	74.3020	A	0.8
6	☐	20000.00	19882.823	121874331.8	143.591	A	1.5
7	☐	100.000					

y = 0.0072 * x + 0.8550
R = 0.9999
DL = 4.907
BEC = 119.1

Weight: <None>
Min Conc: <None>

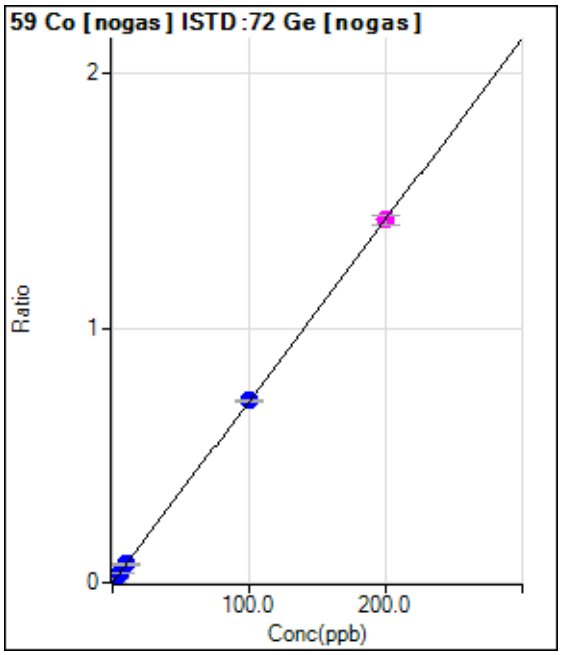


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7938.53	0.0215	P	4.2
2	☐	200.000	198.783	516302.95	1.3560	P	2.9
3	☐	500.000	530.281	1367842.32	3.5816	A	0.9
4	☐	1000.000	1056.204	2673069.23	7.1123	A	4.6
5	☐	10000.00	10059.215	25956589.61	67.5540	A	4.5
6	☐	20000.00	19966.837	50581522.58	134.068	A	0.9
7	☐	100.000					

y = 0.0067 * x + 0.0215
R = 1.0000
DL = 0.405
BEC = 3.205

Weight: <None>
Min Conc: <None>

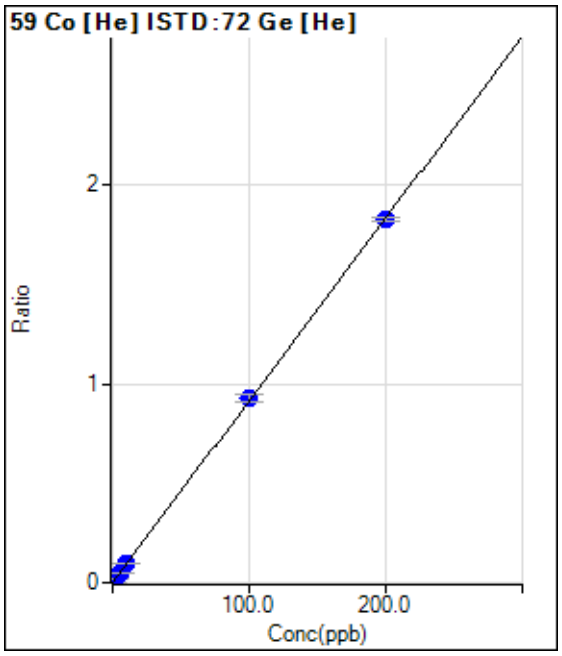
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0001	P	22.0
2	☐	2.000	2.040	12524.55	0.0147	P	1.6
3	☐	5.000	5.114	31184.13	0.0366	P	2.7
4	☐	10.000	10.080	60923.56	0.0720	P	0.8
5	☐	100.000	100.148	608712.66	0.7143	P	0.3
6	☐	200.000	199.919	1209943.50	1.4257	M	2.6
7	☐	1.000					

y = 0.0071 * x + 1.4117E-004
R = 1.0000
DL = 0.01309
BEC = 0.0198

Weight: <None>
Min Conc: <None>

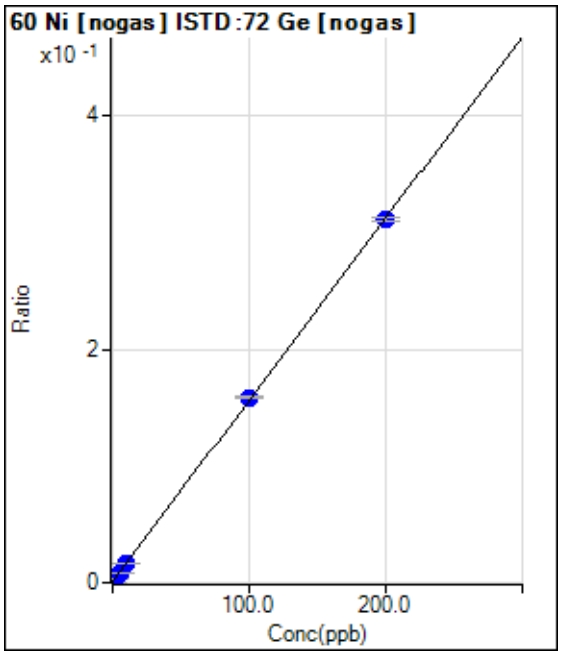


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0001	P	20.2
2	☐	2.000	2.040	7141.51	0.0188	P	4.2
3	☐	5.000	5.134	17972.53	0.0471	P	6.2
4	☐	10.000	10.480	36109.83	0.0961	P	2.9
5	☐	100.000	101.366	356737.65	0.9284	P	3.3
6	☐	200.000	199.289	688655.80	1.8253	P	0.9
7	☐	1.000					

y = 0.0092 * x + 7.2135E-005
R = 1.0000
DL = 0.004761
BEC = 0.007876

Weight: <None>
Min Conc: <None>

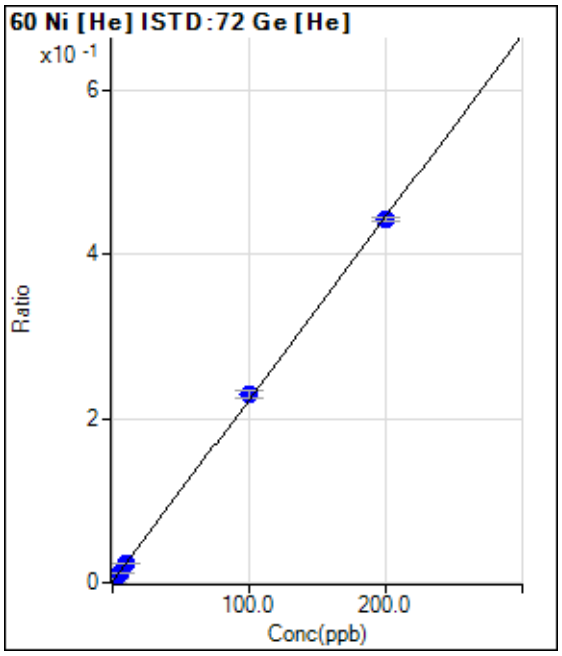
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.460	76.67	0.0001	P	25.9
2	☐	2.000	1.669	2900.28	0.0034	P	4.6
3	☐	5.000	4.840	7101.52	0.0083	P	6.3
4	☐	10.000	10.209	14112.44	0.0167	P	3.7
5	☐	100.000	101.490	135155.20	0.1586	P	0.6
6	☐	200.000	199.252	263683.19	0.3106	P	0.9
7	☐	1.000					

y = 0.0016 * x + 8.0738E-004
R = 1.0000
DL = 0.04629
BEC = 0.5193

Weight: <None>
Min Conc: <None>

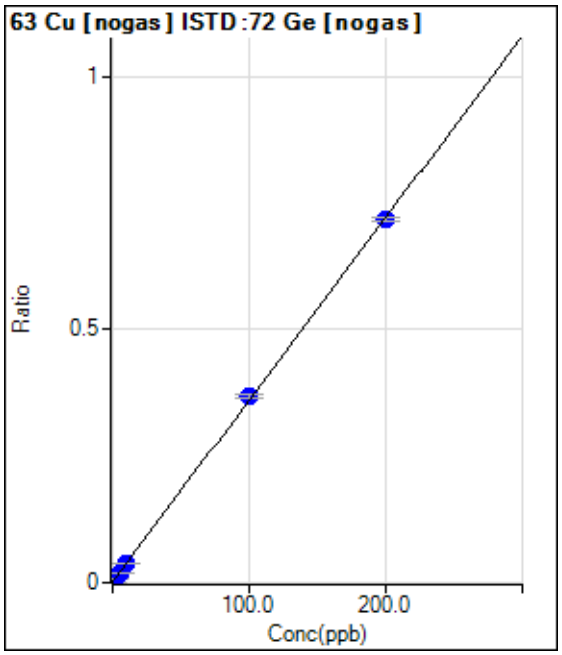


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.474	40.00	0.0001	P	26.5
2	☐	2.000	1.630	1820.12	0.0048	P	5.8
3	☐	5.000	4.530	4280.59	0.0112	P	4.6
4	☐	10.000	9.752	8572.17	0.0228	P	2.2
5	☐	100.000	103.068	88326.50	0.2299	P	4.2
6	☐	200.000	198.494	166620.17	0.4416	P	1.1
7	☐	1.000					

y = 0.0022 * x + 0.0012
R = 0.9998
DL = 0.03895
BEC = 0.5232

Weight: <None>
Min Conc: <None>

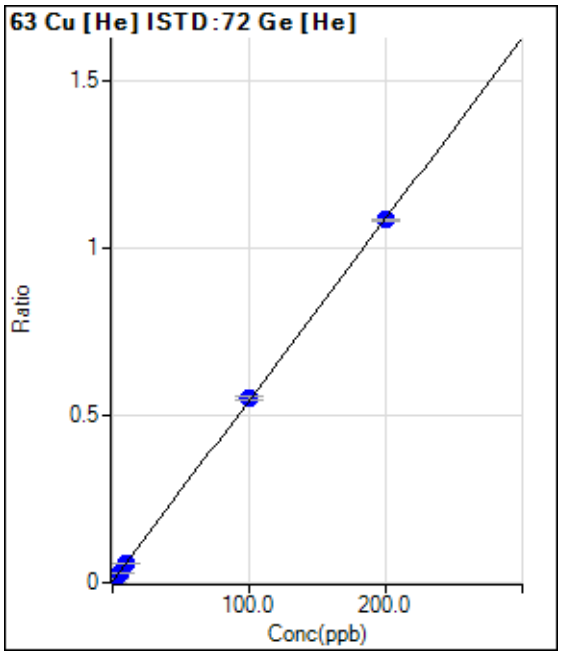
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1156.72	0.0014	P	1.5
2	☐	2.000	2.110	7665.09	0.0090	P	4.7
3	☐	5.000	5.141	16954.87	0.0199	P	2.8
4	☐	10.000	10.253	32382.75	0.0383	P	2.4
5	☐	100.000	102.057	314063.39	0.3686	P	1.7
6	☐	200.000	198.954	608882.19	0.7172	P	1.2
7	☐	1.000					

y = 0.0036 * x + 0.0014
R = 0.9999
DL = 0.01701
BEC = 0.3887

Weight: <None>
Min Conc: <None>

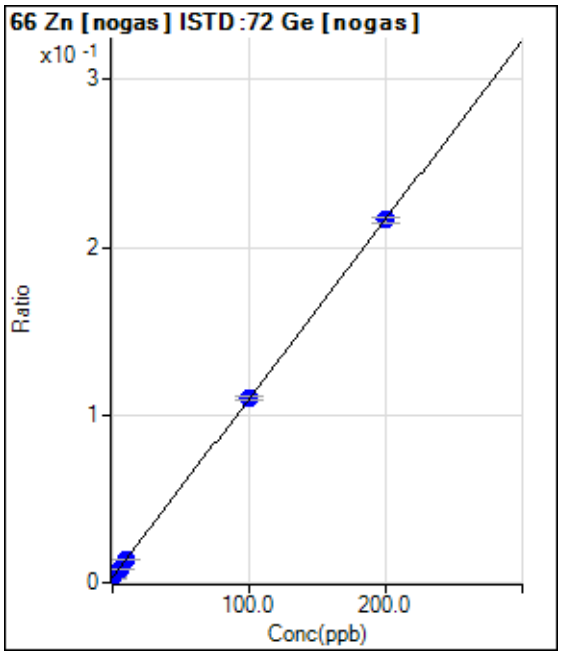


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.370	510.02	0.0014	P	9.7
2	☐	2.000	1.770	4937.43	0.0130	P	1.6
3	☐	5.000	4.951	11530.56	0.0302	P	2.5
4	☐	10.000	10.165	21956.99	0.0584	P	2.9
5	☐	100.000	100.975	211315.01	0.5498	P	1.5
6	☐	200.000	199.508	408616.00	1.0830	P	0.6
7	☐	1.000					

y = 0.0054 * x + 0.0034
R = 1.0000
DL = 0.07411
BEC = 0.6254

Weight: <None>
Min Conc: <None>

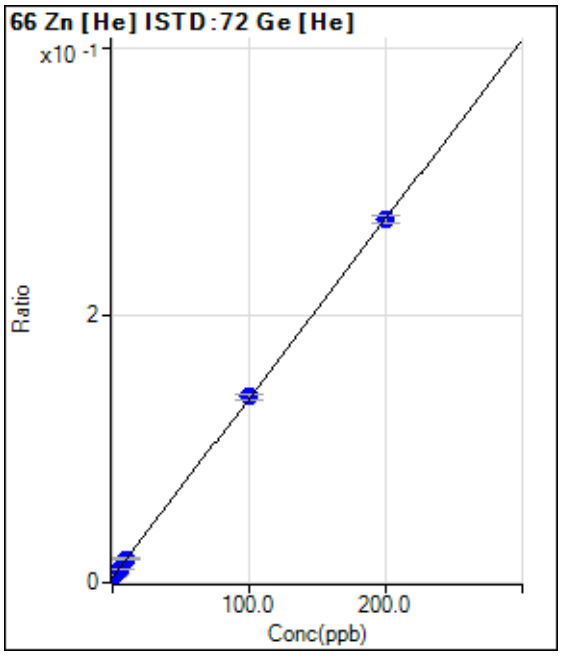
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.154	2400.20	0.0029	P	5.3
2	☐	2.000	2.262	4674.02	0.0055	P	3.8
3	☐	5.000	4.783	6961.47	0.0082	P	2.6
4	☐	10.000	9.852	11493.84	0.0136	P	5.0
5	☐	100.000	100.493	94029.63	0.1103	P	1.6
6	☐	200.000	199.764	183606.14	0.2163	P	1.5
7	☐	1.000					

y = 0.0011 * x + 0.0031
R = 1.0000
DL = 0.4322
BEC = 2.873

Weight: <None>
Min Conc: <None>

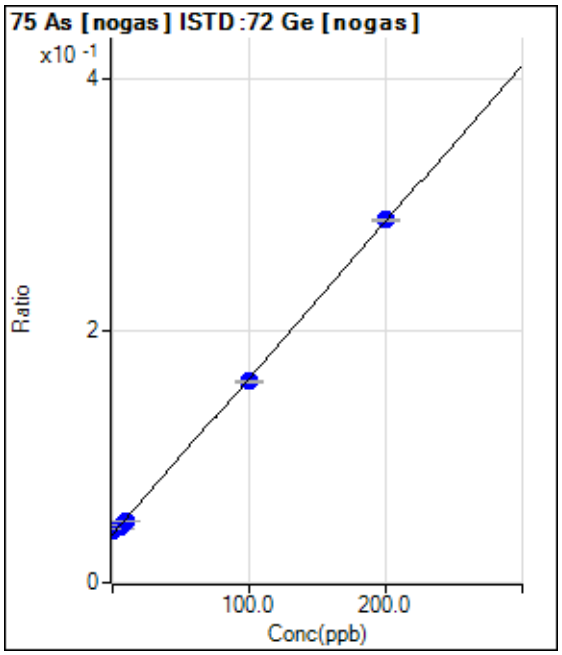


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.044	1420.08	0.0038	P	4.3
2	☐	2.000	1.757	2383.53	0.0063	P	10.5
3	☐	5.000	4.789	3947.16	0.0103	P	2.3
4	☐	10.000	10.063	6544.62	0.0174	P	7.0
5	☐	100.000	100.861	53513.44	0.1392	P	2.6
6	☐	200.000	199.574	102478.29	0.2716	P	2.1
7	☐	1.000					

y = 0.0013 * x + 0.0039
R = 1.0000
DL = 0.3681
BEC = 2.913

Weight: <None>
Min Conc: <None>

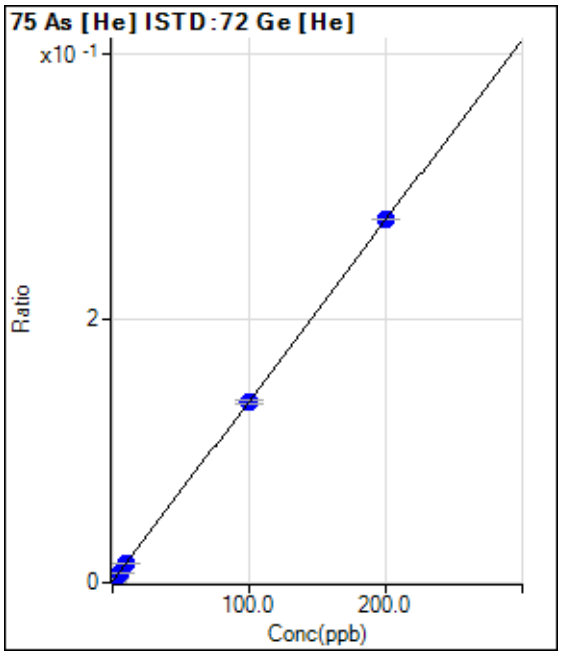
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	1.781	33575.54	0.0406	P	1.4
2	☐	2.000	2.950	35849.82	0.0421	P	4.2
3	☐	5.000	4.726	37696.93	0.0443	P	6.2
4	☐	10.000	8.492	41401.89	0.0489	P	2.9
5	☐	100.000	97.955	136444.36	0.1601	P	1.3
6	☐	200.000	201.095	244729.74	0.2883	P	0.5
7	☐	1.000					

y = 0.0012 * x + 0.0384
R = 0.9998
DL = 1.372
BEC = 30.89

Weight: <None>
Min Conc: <None>

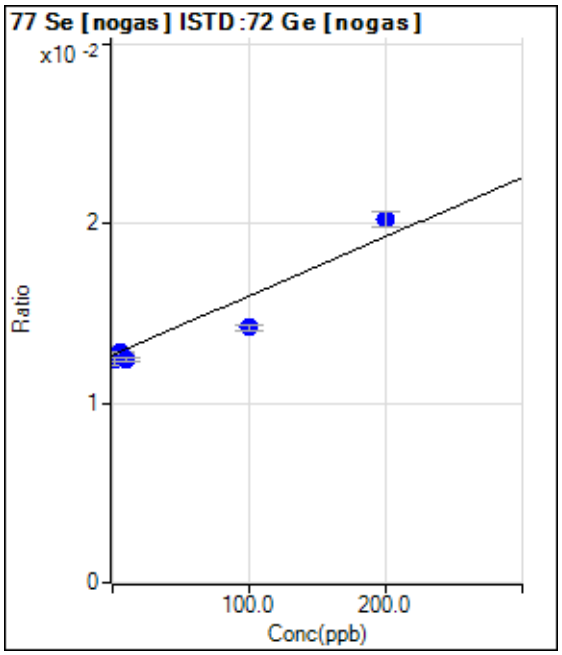


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	271.12	0.0007	P	8.5
2	☐	2.000	2.037	1342.28	0.0035	P	5.4
3	☐	5.000	5.079	2934.70	0.0077	P	3.4
4	☐	10.000	10.161	5501.98	0.0146	P	6.1
5	☐	100.000	99.417	52573.74	0.1368	P	1.5
6	☐	200.000	200.281	103697.77	0.2749	P	0.1
7	☐	1.000					

y = 0.0014 * x + 7.3517E-004
R = 1.0000
DL = 0.1371
BEC = 0.5371

Weight: <None>
Min Conc: <None>

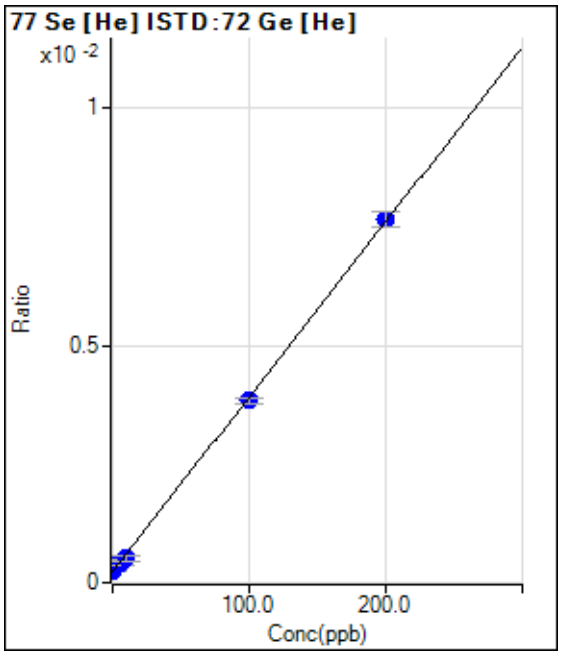
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10483.20	0.0127	P	7.3
2	☐	2.000	-9.333	10550.03	0.0124	P	4.4
3	☐	5.000	4.215	10926.83	0.0128	P	1.2
4	☐	10.000	-7.736	10513.29	0.0124	P	1.8
5	☐	100.000	45.780	12094.31	0.0142	P	2.8
6	☐	200.000	228.130	17141.84	0.0202	P	4.1
7	☐	1.000					

y = 3.2940E-005 * x + 0.0127
R = 0.9597
DL = 84.65
BEC = 385.1

Weight: <None>
Min Conc: <None>

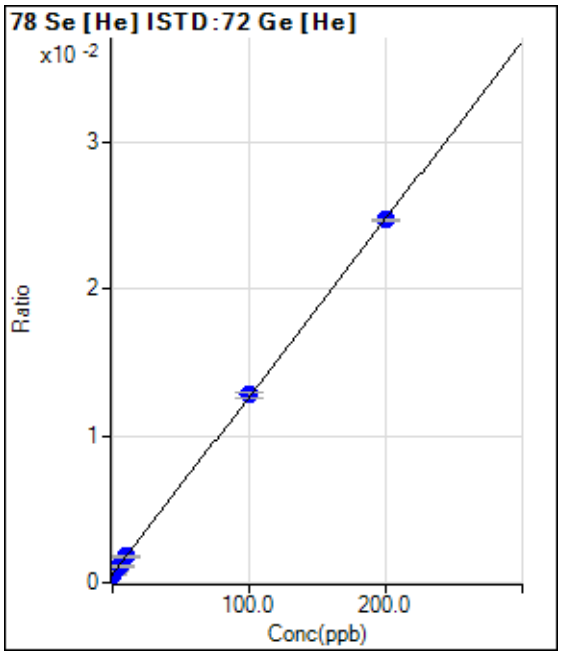


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.611	93.33	0.0003	P	13.0
2	☐	2.000	4.649	153.33	0.0004	P	18.0
3	☐	5.000	5.138	160.00	0.0004	P	24.3
4	☐	10.000	7.653	193.33	0.0005	P	19.2
5	☐	100.000	97.724	1473.43	0.0038	P	2.9
6	☐	200.000	201.226	2886.95	0.0077	P	4.3
7	☐	1.000					

y = 3.6878E-005 * x + 2.3071E-004
R = 0.9997
DL = 2.68
BEC = 6.256

Weight: <None>
Min Conc: <None>

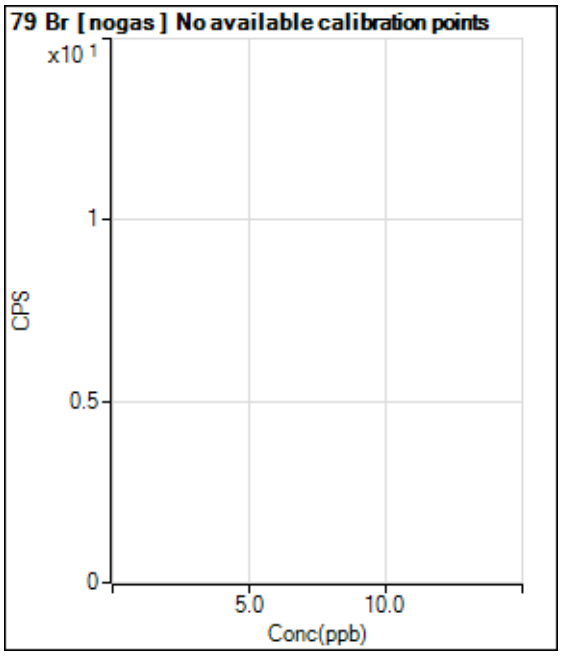
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	208.00	0.0006	P	20.4
2	☐	2.000	1.844	299.33	0.0008	P	17.2
3	☐	5.000	4.715	433.34	0.0011	P	5.7
4	☐	10.000	9.955	664.68	0.0018	P	2.0
5	☐	100.000	100.932	4906.02	0.0128	P	3.2
6	☐	200.000	199.545	9310.44	0.0247	P	0.7
7	☐	1.000					

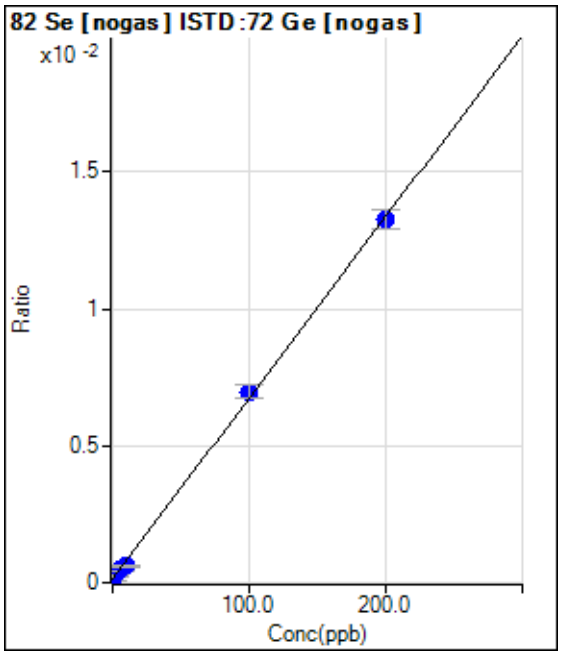
y = 1.2084E-004 * x + 5.6440E-004
R = 1.0000
DL = 2.865
BEC = 4.671

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

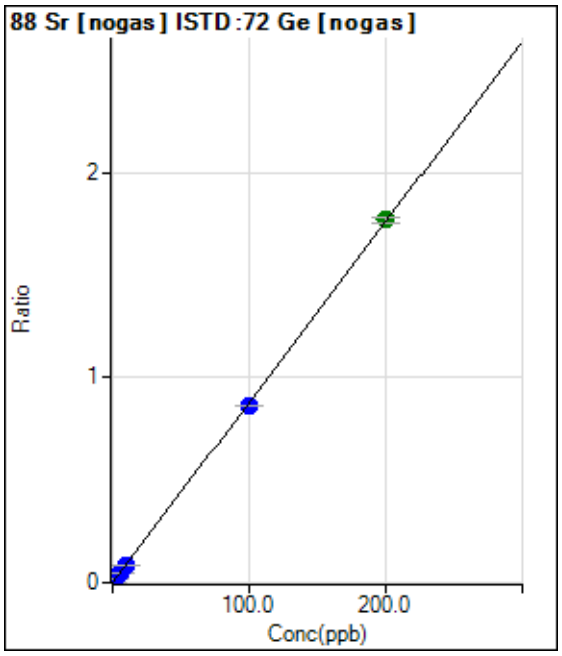
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.00	0.0001	P	65.8
2	☐	2.000	1.709	210.00	0.0002	P	13.3
3	☐	5.000	5.568	426.68	0.0005	P	25.3
4	☐	10.000	7.467	530.02	0.0006	P	12.4
5	☐	100.000	103.369	5934.43	0.0070	P	7.2
6	☐	200.000	198.431	11237.12	0.0132	P	5.4
7	☐	1.000					

y = 6.6073E-005 * x + 1.3357E-004
R = 0.9997
DL = 3.989
BEC = 2.022

Weight: <None>
Min Conc: <None>

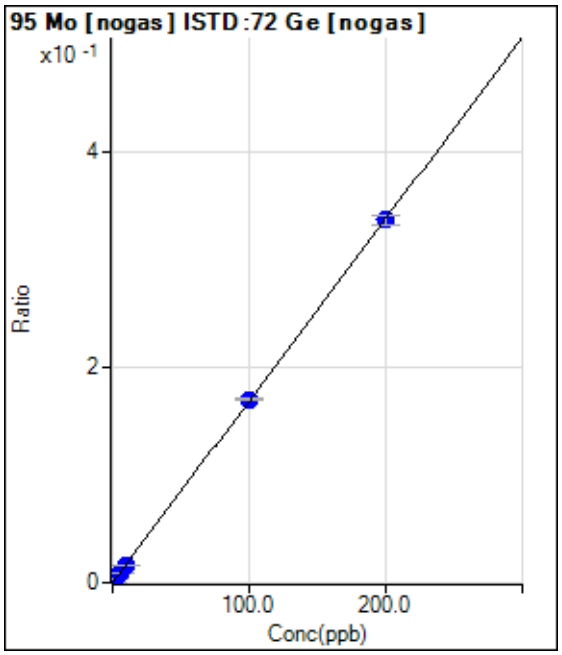


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	233.34	0.0003	P	12.6
2	☐	2.000	2.136	16244.43	0.0191	P	2.0
3	☐	5.000	5.071	38215.33	0.0449	P	2.7
4	☐	10.000	9.729	72573.17	0.0858	P	1.1
5	☐	100.000	97.864	733354.05	0.8605	P	0.6
6	☐	200.000	201.078	1500804.19	1.7678	A	1.7
7	☐	1.000					

y = 0.0088 * x + 2.8192E-004
R = 0.9999
DL = 0.0121
BEC = 0.03207

Weight: <None>
Min Conc: <None>

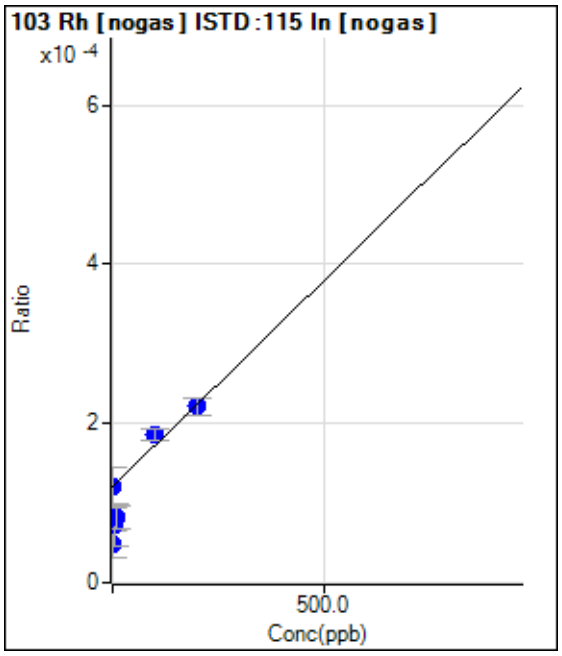
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0001	P	38.8
2	☐	2.000	2.053	3013.64	0.0035	P	1.2
3	☐	5.000	4.821	6981.51	0.0082	P	2.2
4	☐	10.000	9.687	13862.37	0.0164	P	2.2
5	☐	100.000	100.875	144843.25	0.1700	P	0.6
6	☐	200.000	199.582	285440.84	0.3362	P	2.4
7	☐	1.000					

y = 0.0017 * x + 7.6432E-005
R = 1.0000
DL = 0.05279
BEC = 0.04538

Weight: <None>
Min Conc: <None>

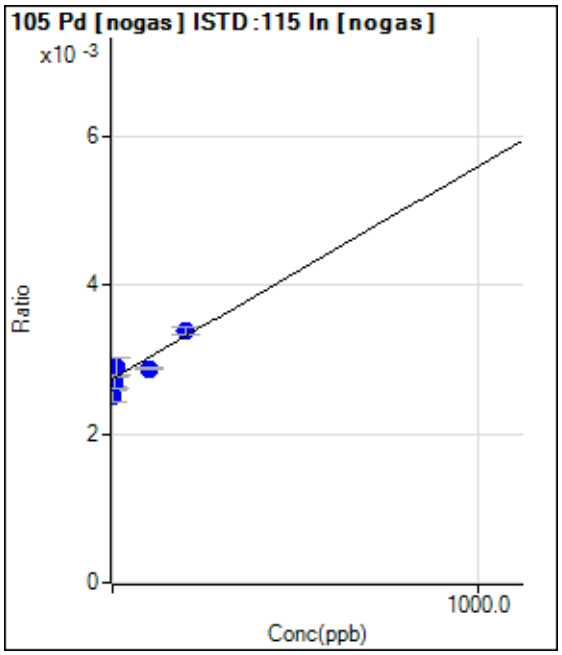


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	42.1
2	☐	2.000	-138.729	33.33	0.0000	P	68.8
3	☐	5.000	-91.887	50.00	0.0001	P	72.8
4	☐	10.000	-74.418	56.67	0.0001	P	36.7
5	☐	100.000	127.379	130.00	0.0002	P	8.1
6	☐	200.000	194.361	150.00	0.0002	P	9.9
7	☐	1.000					

y = 5.1902E-007 * x + 1.2025E-004
R = 0.9129
DL = 292.4
BEC = 231.7

Weight: <None>
Min Conc: <None>

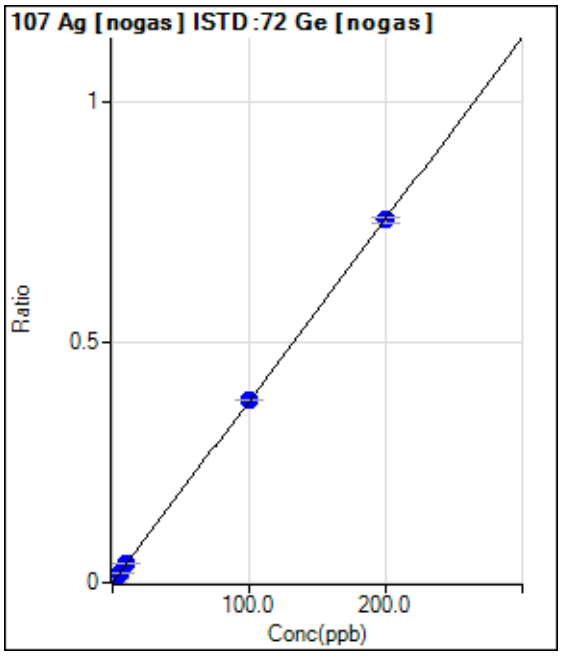
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1900.14	0.0027	P	8.5
2	☐	2.000	-83.398	1726.78	0.0025	P	5.4
3	☐	5.000	-18.978	1856.79	0.0027	P	6.7
4	☐	10.000	57.306	2016.82	0.0029	P	8.0
5	☐	100.000	48.472	2010.14	0.0029	P	1.6
6	☐	200.000	224.852	2293.53	0.0034	P	2.9
7	☐	1.000					

y = 2.8524E-006 * x + 0.0027
R = 0.8899
DL = 244.3
BEC = 961.6

Weight: <None>
Min Conc: <None>

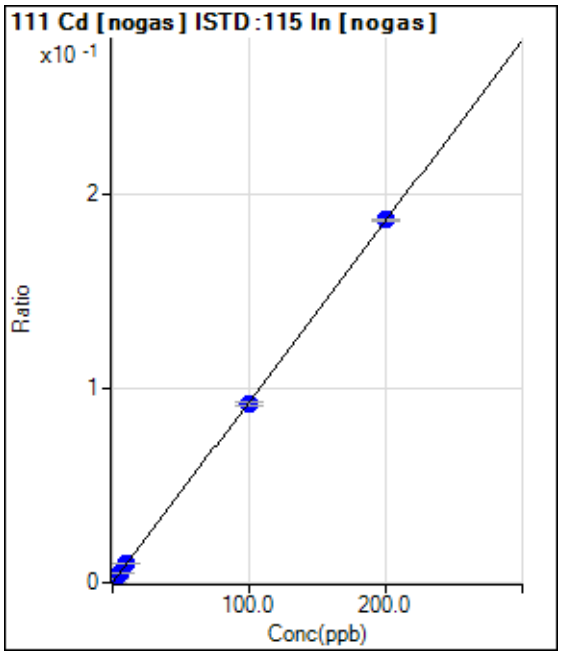


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	34.0
2	☐	2.000	1.974	6401.29	0.0075	P	2.9
3	☐	5.000	5.126	16564.82	0.0194	P	1.8
4	☐	10.000	10.147	32524.33	0.0384	P	1.0
5	☐	100.000	100.773	325133.84	0.3815	P	0.4
6	☐	200.000	199.603	641316.68	0.7556	P	1.9
7	☐	1.000					

y = 0.0038 * x + 3.6320E-005
R = 1.0000
DL = 0.009782
BEC = 0.009594

Weight: <None>
Min Conc: <None>

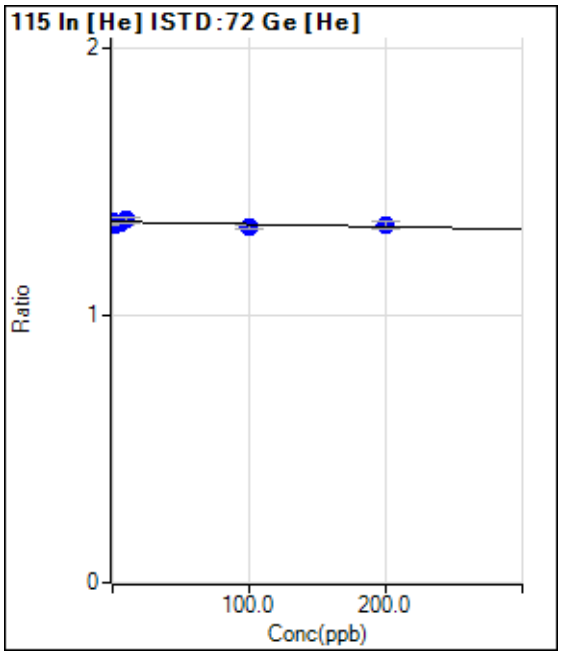
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	2.000	1.996	1286.74	0.0019	P	11.3
3	☐	5.000	5.223	3360.38	0.0049	P	6.2
4	☐	10.000	10.510	6791.44	0.0098	P	1.7
5	☐	100.000	98.606	63995.53	0.0917	P	2.0
6	☐	200.000	200.666	126462.93	0.1866	P	0.5
7	☐	1.000					

y = 9.3006E-004 * x + 9.6302E-006
R = 1.0000
DL = 0.0269
BEC = 0.01035

Weight: <None>
Min Conc: <None>

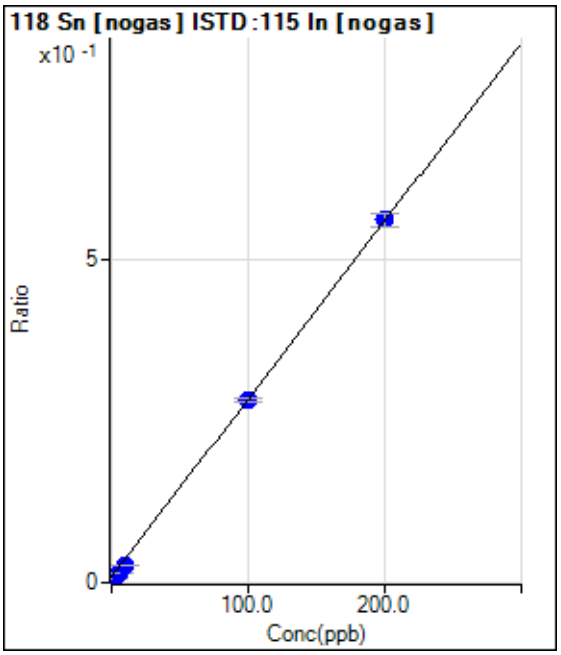


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	497621.20	1.3493	P	1.2
2	☐	2.000	119.281	509487.88	1.3379	P	1.1
3	☐	5.000	59.463	513142.63	1.3436	P	0.9
4	☐	10.000	-66.035	509836.53	1.3556	P	1.4
5	☐	100.000	224.711	510396.91	1.3278	P	1.2
6	☐	200.000	138.912	504064.34	1.3360	P	1.8
7	☐	1.000					

y = -9.5456E-005 * x + 1.3493
R = -0.5874
DL = -492.9
BEC = -1.414E+04

Weight: <None>
Min Conc: <None>

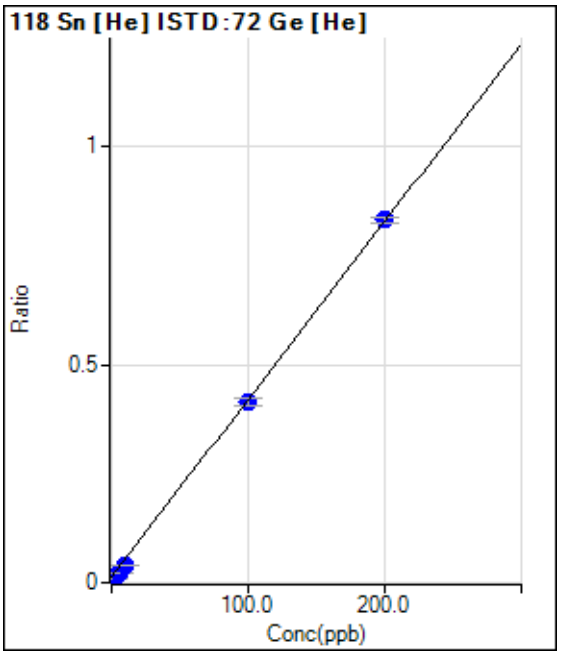
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6194.56	0.0089	P	5.0
2	☐	2.000	-1.132	4013.88	0.0058	P	4.3
3	☐	5.000	1.977	9936.38	0.0144	P	1.8
4	☐	10.000	6.512	18660.44	0.0269	P	1.7
5	☐	100.000	99.120	196818.62	0.2821	P	1.8
6	☐	200.000	200.721	380755.57	0.5621	P	3.5
7	☐	1.000					

y = 0.0028 * x + 0.0089
R = 0.9999
DL = 0.4821
BEC = 3.244

Weight: <None>
Min Conc: <None>

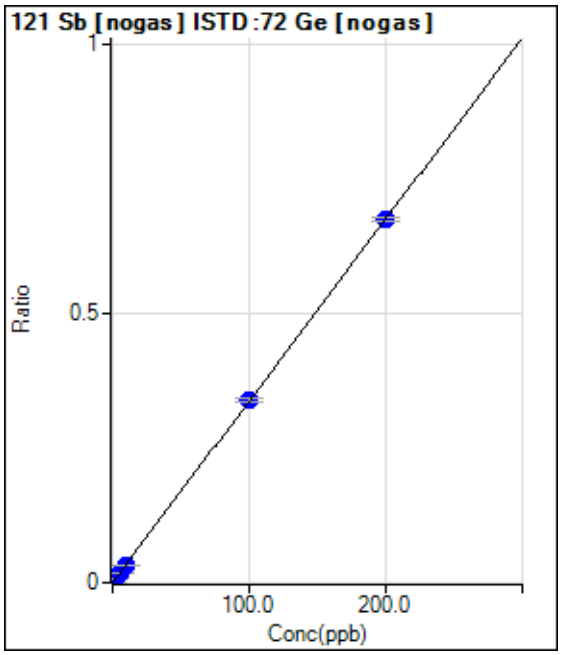


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4927.45	0.0134	P	4.0
2	☐	2.000	-0.938	3630.46	0.0095	P	7.6
3	☐	5.000	1.849	7978.65	0.0209	P	1.2
4	☐	10.000	6.651	15213.61	0.0405	P	1.8
5	☐	100.000	98.463	159305.28	0.4146	P	4.4
6	☐	200.000	201.044	314103.73	0.8325	P	1.6
7	☐	1.000					

y = 0.0041 * x + 0.0134
R = 0.9999
DL = 0.3959
BEC = 3.278

Weight: <None>
Min Conc: <None>

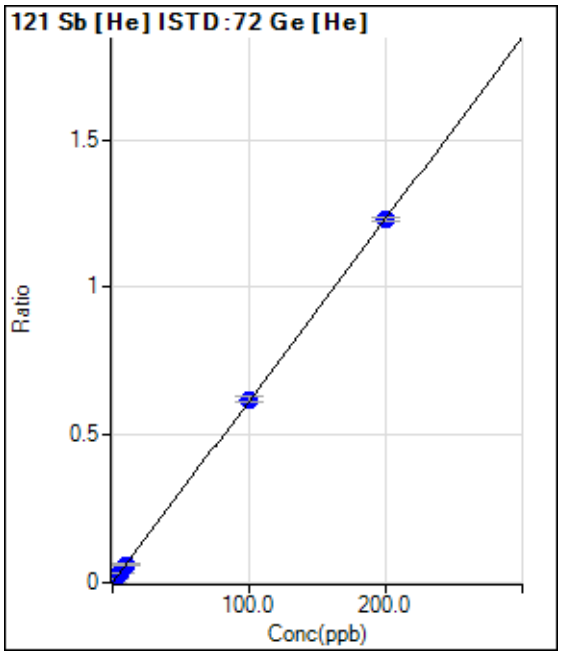
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.33	0.0002	P	38.0
2	☐	2.000	2.017	5954.46	0.0070	P	2.1
3	☐	5.000	4.954	14386.33	0.0169	P	0.5
4	☐	10.000	9.894	28367.13	0.0335	P	1.2
5	☐	100.000	100.482	288734.99	0.3389	P	1.4
6	☐	200.000	199.765	571738.13	0.6735	P	0.9
7	☐	1.000					

y = 0.0034 * x + 1.8598E-004
R = 1.0000
DL = 0.06289
BEC = 0.05518

Weight: <None>
Min Conc: <None>

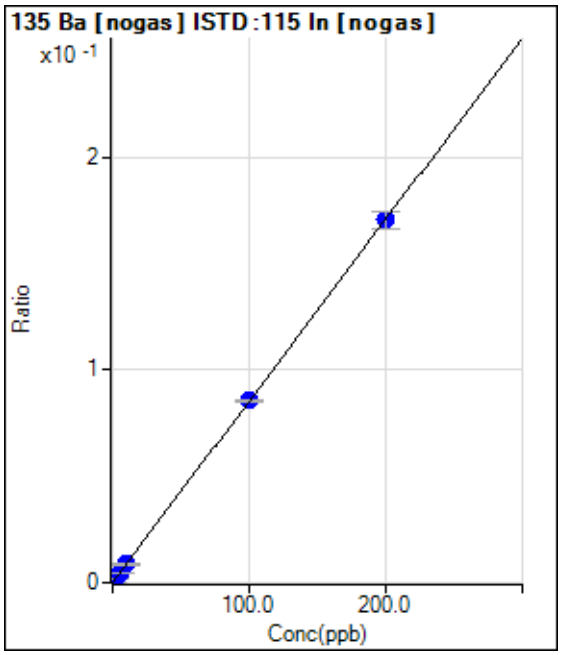


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0003	P	16.4
2	☐	2.000	2.029	4850.78	0.0127	P	2.3
3	☐	5.000	5.112	12111.12	0.0317	P	4.6
4	☐	10.000	9.975	23189.27	0.0617	P	1.0
5	☐	100.000	100.909	238742.51	0.6213	P	3.3
6	☐	200.000	199.544	463472.48	1.2284	P	0.9
7	☐	1.000					

y = 0.0062 * x + 2.5314E-004
R = 1.0000
DL = 0.02019
BEC = 0.04113

Weight: <None>
Min Conc: <None>

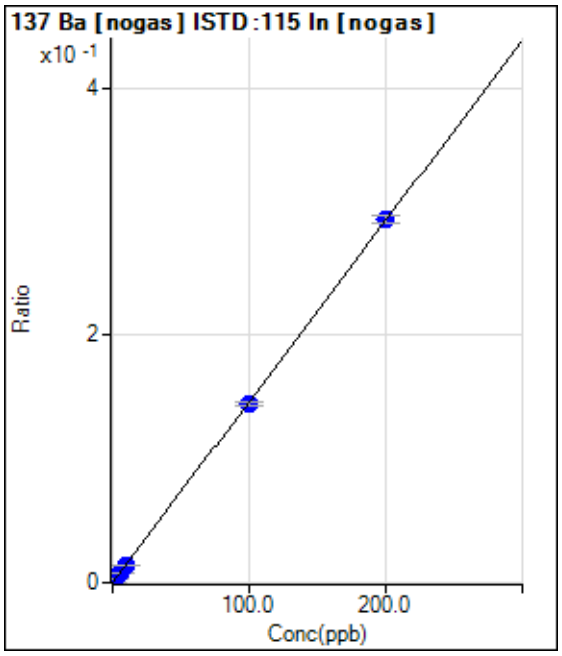
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	69.2
2	☐	2.000	1.984	1200.06	0.0017	P	13.4
3	☐	5.000	4.974	2966.98	0.0043	P	7.0
4	☐	10.000	10.011	5964.49	0.0086	P	2.6
5	☐	100.000	100.280	59759.60	0.0857	P	1.7
6	☐	200.000	199.861	115578.64	0.1707	P	4.5
7	☐	1.000					

y = 8.5369E-004 * x + 4.8106E-005
R = 1.0000
DL = 0.117
BEC = 0.05635

Weight: <None>
Min Conc: <None>

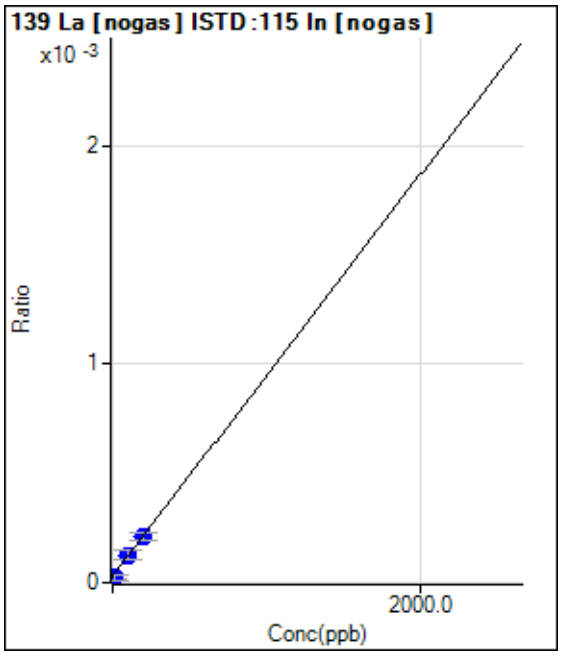


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	33.1
2	☐	2.000	2.060	2156.84	0.0031	P	5.8
3	☐	5.000	5.019	5147.53	0.0075	P	4.4
4	☐	10.000	9.483	9706.29	0.0140	P	0.6
5	☐	100.000	98.828	100924.88	0.1447	P	1.8
6	☐	200.000	200.611	198846.28	0.2935	P	2.0
7	☐	1.000					

y = 0.0015 * x + 1.1550E-004
R = 1.0000
DL = 0.0785
BEC = 0.07897

Weight: <None>
Min Conc: <None>

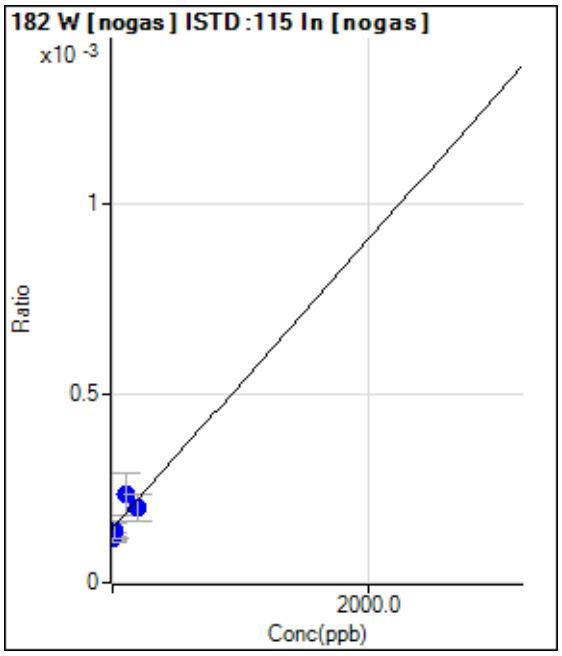
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	49.9
2	☐	2.000	0.131	20.00	0.0000	P	49.6
3	☐	5.000	0.145	20.00	0.0000	P	50.5
4	☐	10.000	-5.250	16.67	0.0000	P	91.9
5	☐	100.000	103.780	86.67	0.0001	P	34.9
6	☐	200.000	199.013	143.33	0.0002	P	20.1
7	☐	1.000					

y = 9.1788E-007 * x + 2.8854E-005
R = 0.9974
DL = 47.03
BEC = 31.44

Weight: <None>
Min Conc: <None>

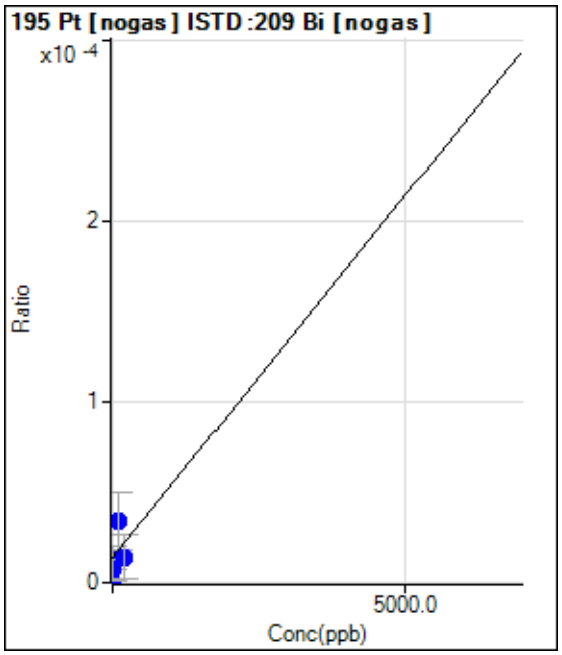


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0001	P	20.1
2	☐	2.000	-23.231	93.33	0.0001	P	33.1
3	☐	5.000	-75.033	80.00	0.0001	P	11.6
4	☐	10.000	-12.917	96.67	0.0001	P	32.2
5	☐	100.000	236.298	163.34	0.0002	P	46.9
6	☐	200.000	135.250	133.34	0.0002	P	36.4
7	☐	1.000					

y = 3.8119E-007 * x + 1.4437E-004
R = 0.7570
DL = 228.8
BEC = 378.8

Weight: <None>
Min Conc: <None>

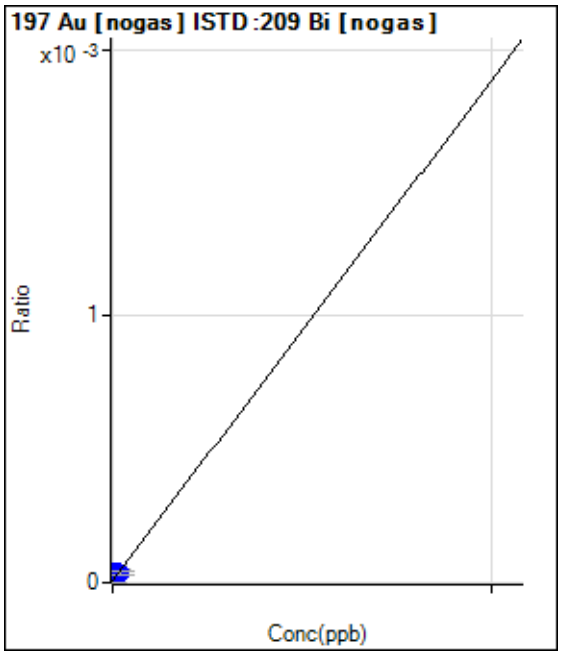
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.7
2	☐	2.000	-168.788	3.33	0.0000	P	173.
3	☐	5.000	-345.904	0.00	0.0000	P	
4	☐	10.000	-172.052	3.33	0.0000	P	173.
5	☐	100.000	515.439	16.67	0.0000	P	92.5
6	☐	200.000	11.864	6.67	0.0000	P	173.
7	☐	1.000					

y = 3.9992E-008 * x + 1.3833E-005
R = 0.4835
DL = 900
BEC = 345.9

Weight: <None>
Min Conc: <None>

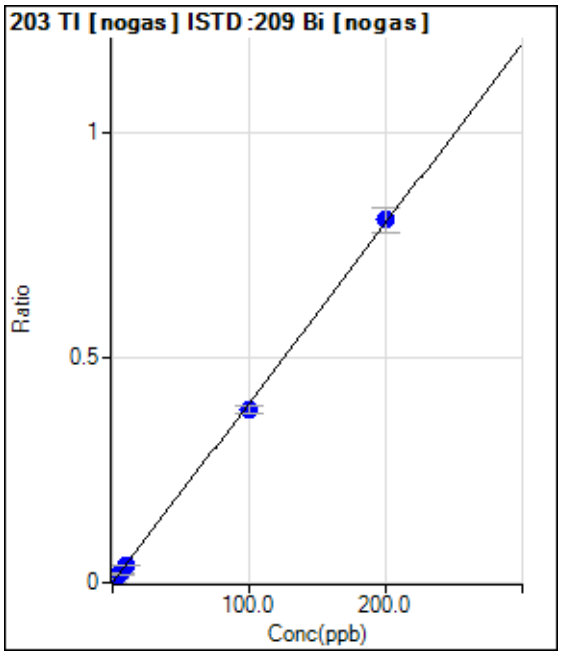


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	111.362	13.33	0.0000	P	116.
3	☐	5.000	189.112	20.00	0.0000	P	90.0
4	☐	10.000	-0.968	3.33	0.0000	P	173.
5	☐	100.000	183.445	20.00	0.0000	P	51.3
6	☐	200.000	153.130	16.67	0.0000	P	32.6
7	☐	1.000					

y = 1.8750E-007 * x + 7.1342E-006
R = 0.4649
DL = 197.7
BEC = 38.05

Weight: <None>
Min Conc: <None>

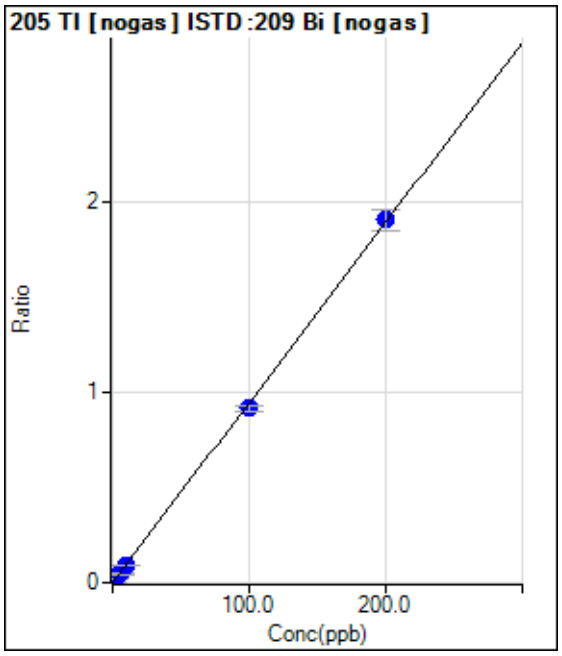
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	61.9
2	☐	2.000	1.932	3710.50	0.0078	P	8.5
3	☐	5.000	4.868	9349.58	0.0195	P	2.6
4	☐	10.000	9.675	18918.17	0.0387	P	3.3
5	☐	100.000	96.104	186139.83	0.3843	P	3.9
6	☐	200.000	201.968	372736.54	0.8076	P	7.0
7	☐	1.000					

y = 0.0040 * x + 4.8219E-005
R = 0.9997
DL = 0.02239
BEC = 0.01206

Weight: <None>
Min Conc: <None>

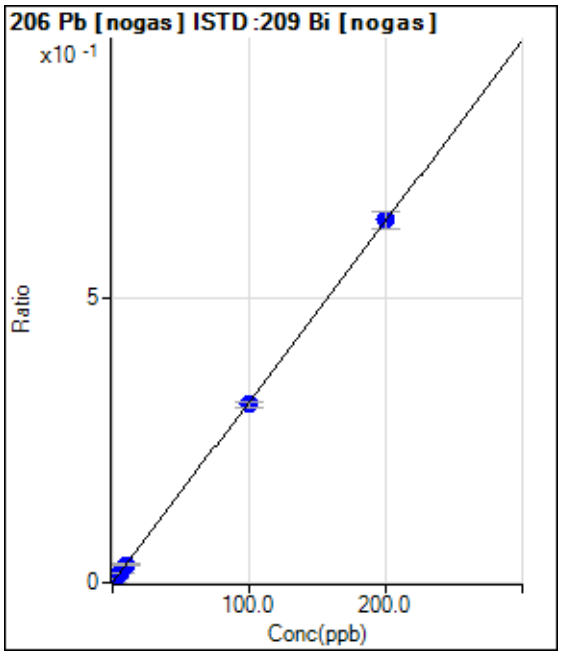


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0001	P	62.5
2	☐	2.000	2.022	9182.78	0.0192	P	2.5
3	☐	5.000	4.955	22496.18	0.0470	P	9.5
4	☐	10.000	9.579	44342.50	0.0908	P	4.2
5	☐	100.000	96.930	444654.44	0.9181	P	3.0
6	☐	200.000	201.557	881295.48	1.9091	P	6.0
7	☐	1.000					

y = 0.0095 * x + 7.6400E-005
R = 0.9998
DL = 0.01512
BEC = 0.008066

Weight: <None>
Min Conc: <None>

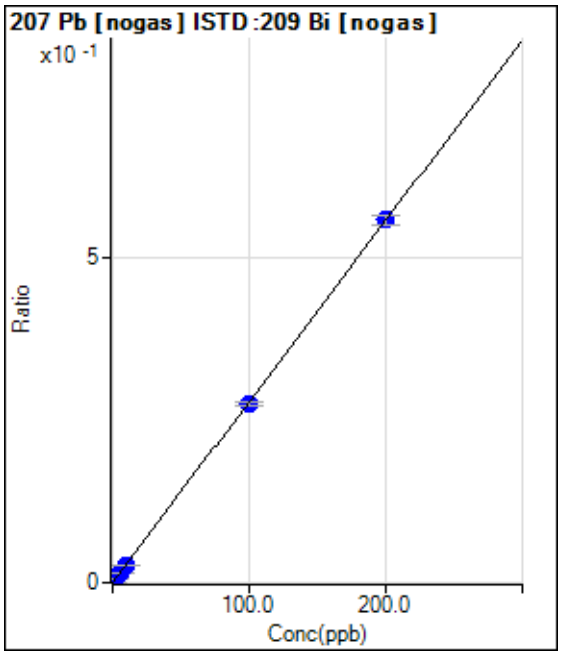
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0002	P	17.4
2	☐	2.000	1.938	3023.67	0.0063	P	2.1
3	☐	5.000	5.071	7802.07	0.0163	P	8.0
4	☐	10.000	9.902	15467.75	0.0317	P	7.3
5	☐	100.000	98.551	152042.90	0.3139	P	3.8
6	☐	200.000	200.728	295183.50	0.6393	P	4.8
7	☐	1.000					

y = 0.0032 * x + 1.6122E-004
R = 1.0000
DL = 0.02641
BEC = 0.05063

Weight: <None>
Min Conc: <None>

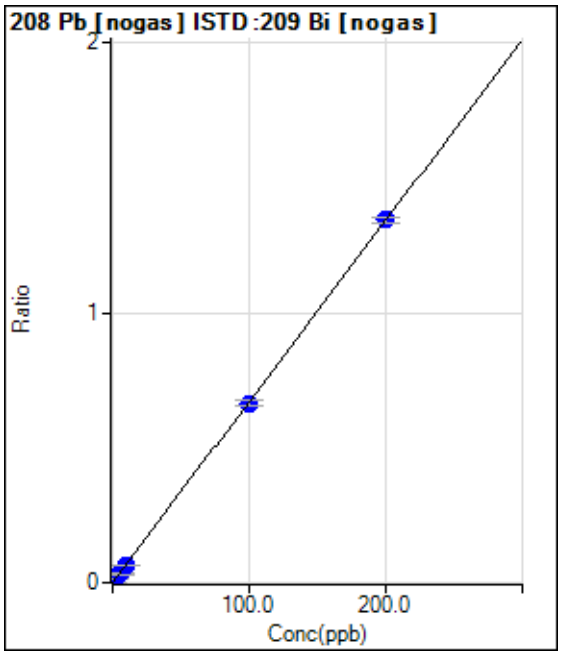


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0001	P	34.9
2	☐	2.000	2.006	2726.94	0.0057	P	5.0
3	☐	5.000	5.003	6724.89	0.0140	P	5.2
4	☐	10.000	9.577	13068.89	0.0268	P	2.3
5	☐	100.000	98.864	133114.33	0.2748	P	3.0
6	☐	200.000	200.589	257514.93	0.5575	P	2.8
7	☐	1.000					

y = 0.0028 * x + 1.3885E-004
R = 1.0000
DL = 0.05232
BEC = 0.04997

Weight: <None>
Min Conc: <None>

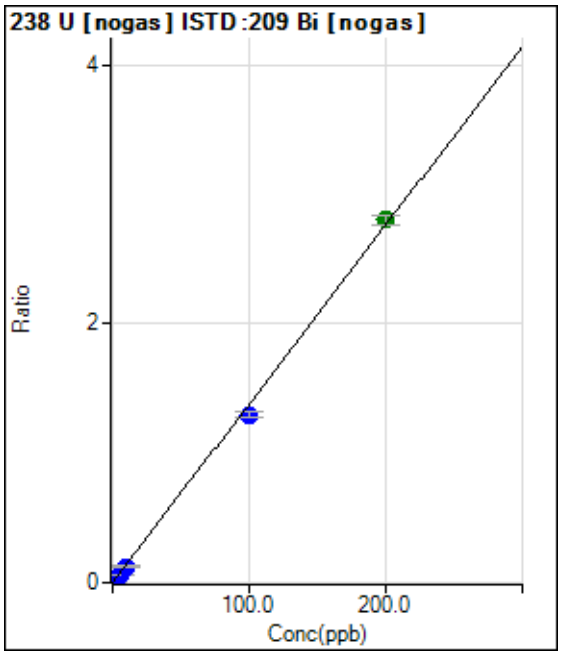
Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0002	P	11.2
2	☐	2.000	2.055	6684.83	0.0140	P	1.4
3	☐	5.000	4.820	15587.97	0.0325	P	3.9
4	☐	10.000	9.879	32470.20	0.0665	P	3.6
5	☐	100.000	99.131	322115.90	0.6651	P	2.7
6	☐	200.000	200.444	621295.42	1.3446	P	1.8
7	☐	1.000					

y = 0.0067 * x + 2.1614E-004
R = 1.0000
DL = 0.01087
BEC = 0.03223

Weight: <None>
Min Conc: <None>

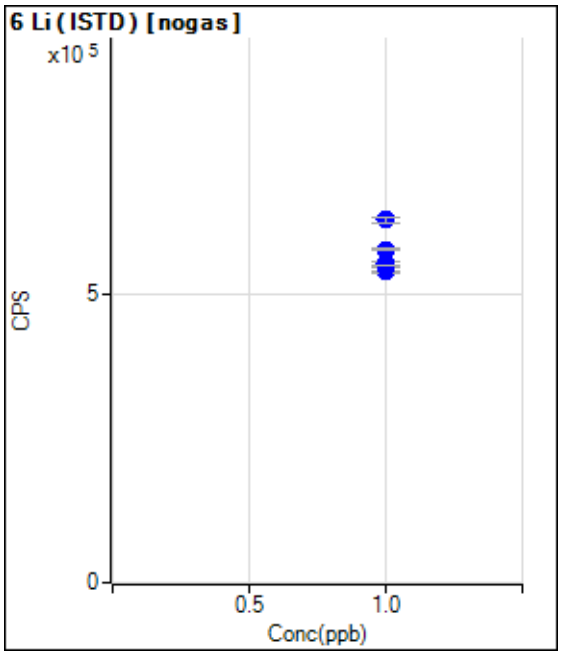


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	1.877	12358.49	0.0259	P	3.5
3	☐	5.000	4.696	31011.39	0.0648	P	5.0
4	☐	10.000	9.055	60977.67	0.1249	P	4.3
5	☐	100.000	93.956	627444.95	1.2956	P	3.5
6	☐	200.000	203.078	1293951.60	2.8004	A	2.4
7	☐	1.000					

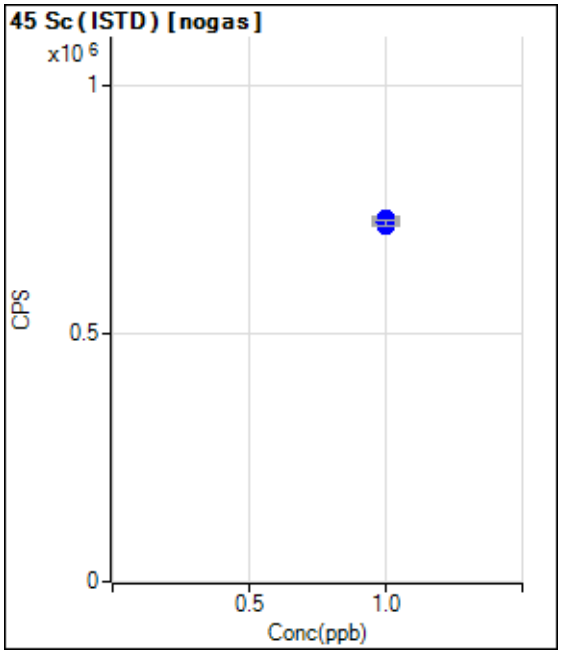
y = 0.0138 * x + 7.1539E-006
R = 0.9994
DL = 0.002696
BEC = 0.0005188

Weight: <None>
Min Conc: <None>

Calibration for 023_ICV.d

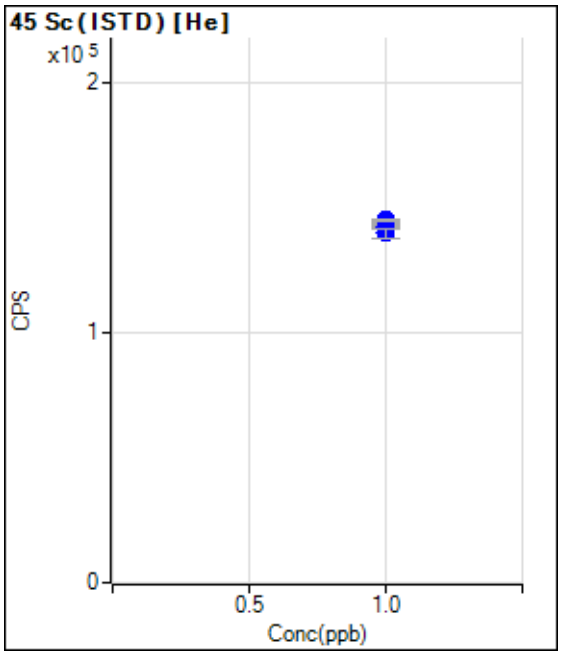


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		540314.81		P	0.7
2	☐	1.000		548485.58		P	0.7
3	☐	1.000		553127.27		P	1.6
4	☐	1.000		550720.81		P	0.1
5	☐	1.000		579500.13		P	0.9
6	☐	1.000		630332.54		P	1.5
7	☐	1.000					

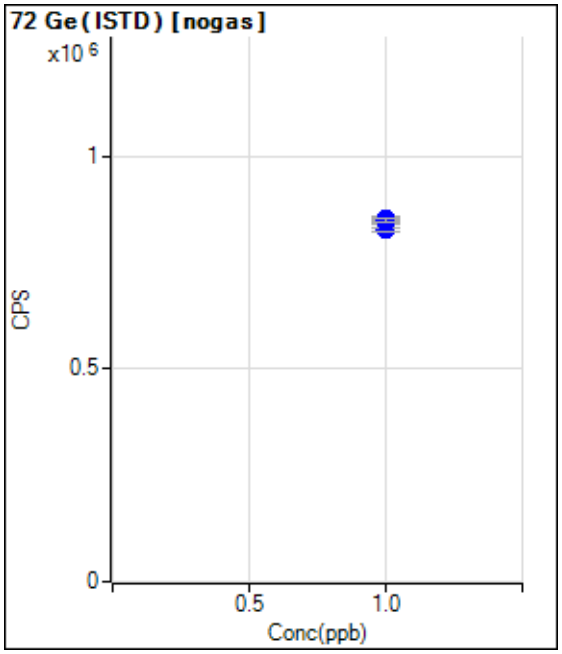


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		717023.32		P	0.6
2	☐	1.000		730041.81		P	1.7
3	☐	1.000		725873.79		P	1.4
4	☐	1.000		723066.27		P	1.7
5	☐	1.000		726162.62		P	1.4
6	☐	1.000		723089.18		P	1.6
7	☐	1.000					

Calibration for 023_ICV.d

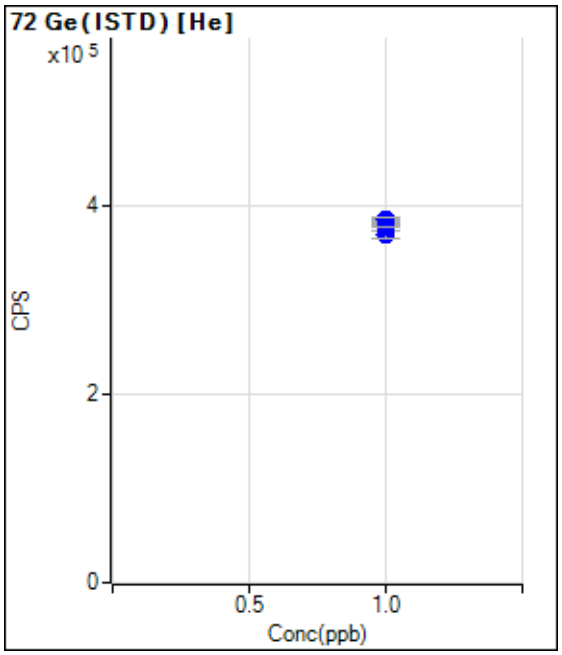


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		143628.95		P	1.5
2	☐	1.000		142522.93		P	1.4
3	☐	1.000		142020.99		P	0.8
4	☐	1.000		142818.14		P	1.2
5	☐	1.000		145267.60		P	0.7
6	☐	1.000		139943.74		P	2.5
7	☐	1.000					

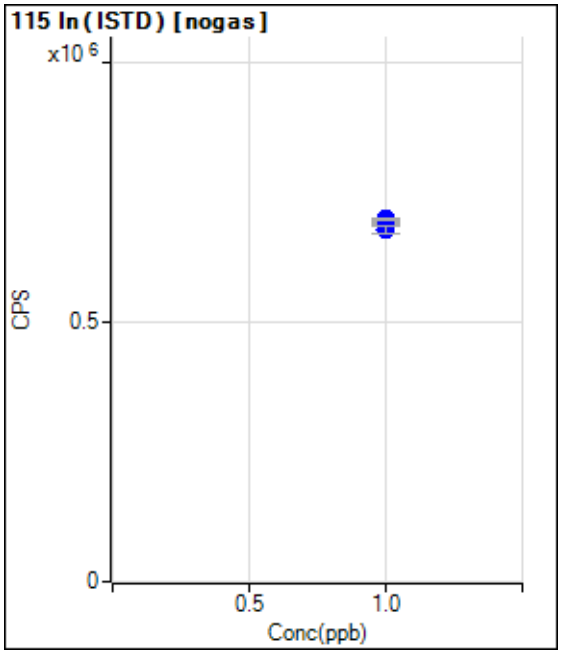


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		826908.92		P	1.2
2	☐	1.000		852592.07		P	0.9
3	☐	1.000		852046.73		P	1.2
4	☐	1.000		845900.95		P	1.3
5	☐	1.000		852177.20		P	1.5
6	☐	1.000		848842.15		P	1.4
7	☐	1.000					

Calibration for 023_ICV.d

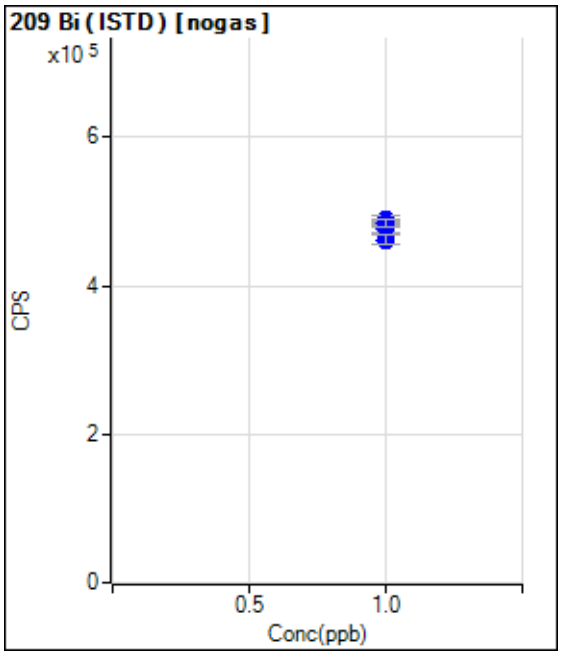


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		368809.27		P	1.8
2	☐	1.000		380850.70		P	1.5
3	☐	1.000		381956.51		P	2.1
4	☐	1.000		376087.71		P	2.2
5	☐	1.000		384347.56		P	1.3
6	☐	1.000		377284.10		P	0.2
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		692761.71		P	0.2
2	☐	1.000		689387.96		P	0.5
3	☐	1.000		690553.51		P	0.9
4	☐	1.000		694069.94		P	0.6
5	☐	1.000		697707.70		P	0.5
6	☐	1.000		677601.79		P	2.4
7	☐	1.000					

Calibration for 023_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		476916.20		P	3.8
2	☐	1.000		477669.81		P	2.5
3	☐	1.000		479460.10		P	4.0
4	☐	1.000		488694.55		P	2.6
5	☐	1.000		484476.19		P	1.8
6	☐	1.000		462163.43		P	2.9
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	016CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:37:08-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	63	38.08
B	11	1	nogas	3814	0.21
Na	23	1	nogas	140786	0.00
Mg	24	1	nogas	3934	0.50
Al	27	1	nogas	6621	0.03
P	31	1	nogas	17051	0.02
K	39	1	nogas	2330534	0.00
Ca	43	1	nogas	423	0.85
Ca	44	1	nogas	21546	0.01
Ti	47	1	nogas	47	212.09
V	51	1	nogas	249197	0.00
Cr	52	1	nogas	19541	0.01
Mn	55	1	nogas	6138	0.07
Fe	56	1	nogas	706934	0.00
Co	59	1	nogas	117	18.49
Ni	60	1	nogas	77	35.42
Cu	63	1	nogas	1157	0.23
Zn	66	1	nogas	2400	0.23
As	75	1	nogas	33576	0.00
Se	77	1	nogas	10483	0.06
Se	82	1	nogas	110	59.60
Sr	88	1	nogas	233	5.90
Mo	95	1	nogas	63	62.74
Ag	107	1	nogas	30	111.11
Cd	111	1	nogas	7	1299.04
Sn	118	1	nogas	6195	0.08
Sb	121	1	nogas	153	24.19
Ba	137	1	nogas	80	41.34
Tl	205	1	nogas	37	171.77
Pb	208	1	nogas	103	14.31
Li	7	1	nogas	37888	0.01
Si	28	1	nogas	1364002	0.00
La	139	1	nogas	20	250.00
Na	23	2	He	17555	0.01
Mg	24	2	He	297	0.66
Al	27	2	He	250	6.40
K	39	2	He	111239	0.00
Ca	43	2	He	7	1299.04
Ca	44	2	He	530	0.94
V	51	2	He	6767	0.04
Cr	52	2	He	1780	0.38
Mn	55	2	He	273	6.87

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	2	He	7939	0.07
Co	59	2	He	27	81.19
Ni	60	2	He	40	62.50
Cu	63	2	He	510	1.68
Zn	66	2	He	1420	0.42
As	75	2	He	271	3.19
Sb	121	2	He	93	17.54
Se	78	2	He	208	9.71

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	826909	1.18
In	115	1	nogas	692762	0.18
Li	6	1	nogas	540315	0.69
Bi	209	1	nogas	476916	3.75
Ge	72	2	He	368809	1.81

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	017CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:39:23-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	4277	0.21
B	11	1	nogas	15827	0.03
Na	23	1	nogas	1651235	0.00
Mg	24	1	nogas	948130	0.00
Al	27	1	nogas	22812	0.03
P	31	1	nogas	21513	0.01
K	39	1	nogas	3533451	0.00
Ca	43	1	nogas	3210	0.30
Ca	44	1	nogas	65795	0.00
Ti	47	1	nogas	1127	0.57
V	51	1	nogas	259628	0.00
Cr	52	1	nogas	30900	0.00
Mn	55	1	nogas	21193	0.01
Fe	56	1	nogas	2044016	0.00
Co	59	1	nogas	12525	0.02
Ni	60	1	nogas	2900	0.14
Cu	63	1	nogas	7665	0.07
Zn	66	1	nogas	4674	0.09
As	75	1	nogas	35850	0.01
Se	77	1	nogas	10550	0.03
Se	82	1	nogas	210	6.00
Sr	88	1	nogas	16244	0.01
Mo	95	1	nogas	3014	0.06
Ag	107	1	nogas	6401	0.04
Cd	111	1	nogas	1287	0.91
Sn	118	1	nogas	4014	0.10
Sb	121	1	nogas	5954	0.04
Ba	137	1	nogas	2157	0.29
Tl	205	1	nogas	9183	0.01
Pb	208	1	nogas	6685	0.02
Si	28	1	nogas	1390757	0.00
La	139	1	nogas	20	250.00
Na	23	2	He	151186	0.00
Mg	24	2	He	77120	0.00
Al	27	2	He	993	0.77
K	39	2	He	211719	0.00
Ca	43	2	He	347	4.19
Ca	44	2	He	6605	0.05
V	51	2	He	11886	0.00
Cr	52	2	He	7365	0.04

Calibration Standard Report

Mn	55	2	He	4971	0.13
Fe	56	2	He	516303	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	7142	0.05
Ni	60	2	He	1820	0.34
Cu	63	2	He	4937	0.02
Zn	66	2	He	2384	0.39
As	75	2	He	1342	0.51
Sb	121	2	He	4851	0.03
Se	78	2	He	299	5.29

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	852592	0.88	826909	103.11	70	125	
In	115	1	nogas	689388	0.46	692762	99.51	70	125	
Li	6	1	nogas	548486	0.75	540315	101.51	70	125	
Bi	209	1	nogas	477670	2.49	476916	100.16	70	125	
Ge	72	2	He	380851	1.47	368809	103.26	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	018CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:41:39-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	10783	0.02
B	11	1	nogas	33784	0.01
Na	23	1	nogas	3783941	0.00
Mg	24	1	nogas	2440846	0.00
Al	27	1	nogas	39385	0.01
P	31	1	nogas	27274	0.01
K	39	1	nogas	5290670	0.00
Ca	43	1	nogas	6068	0.14
Ca	44	1	nogas	111984	0.00
Ti	47	1	nogas	2687	0.20
V	51	1	nogas	273103	0.00
Cr	52	1	nogas	48034	0.00
Mn	55	1	nogas	43747	0.01
Fe	56	1	nogas	3907191	0.00
Co	59	1	nogas	31184	0.01
Ni	60	1	nogas	7102	0.10
Cu	63	1	nogas	16955	0.02
Zn	66	1	nogas	6961	0.02
As	75	1	nogas	37697	0.01
Se	77	1	nogas	10927	0.02
Se	82	1	nogas	427	5.77
Sr	88	1	nogas	38215	0.00
Mo	95	1	nogas	6982	0.02
Ag	107	1	nogas	16565	0.01
Cd	111	1	nogas	3360	0.18
Sn	118	1	nogas	9936	0.01
Sb	121	1	nogas	14386	0.01
Ba	137	1	nogas	5148	0.07
Tl	205	1	nogas	22496	0.03
Pb	208	1	nogas	15588	0.01
Si	28	1	nogas	1448840	0.00
La	139	1	nogas	20	250.00
Na	23	2	He	348712	0.00
Mg	24	2	He	189994	0.00
Al	27	2	He	1783	0.64
K	39	2	He	361571	0.00
Ca	43	2	He	800	1.80
Ca	44	2	He	12648	0.01
V	51	2	He	19770	0.01
Cr	52	2	He	16278	0.03

Calibration Standard Report

Mn	55	2	He	11947	0.05
Fe	56	2	He	1367842	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	17973	0.02
Ni	60	2	He	4281	0.06
Cu	63	2	He	11531	0.04
Zn	66	2	He	3947	0.11
As	75	2	He	2935	0.05
Sb	121	2	He	12111	0.03
Se	78	2	He	433	1.60

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	852047	1.19	826909	103.04	70	125	
In	115	1	nogas	690554	0.88	692762	99.68	70	125	
Li	6	1	nogas	553127	1.61	540315	102.37	70	125	
Bi	209	1	nogas	479460	4.00	476916	100.53	70	125	
Ge	72	2	He	381957	2.08	368809	103.56	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	019CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:43:53-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	21426	0.01
B	11	1	nogas	61701	0.00
Na	23	1	nogas	7212920	0.00
Mg	24	1	nogas	4722965	0.00
Al	27	1	nogas	67312	0.00
P	31	1	nogas	37695	0.01
K	39	1	nogas	8175398	0.00
Ca	43	1	nogas	11197	0.03
Ca	44	1	nogas	193833	0.00
Ti	47	1	nogas	5658	0.08
V	51	1	nogas	284010	0.00
Cr	52	1	nogas	78412	0.00
Mn	55	1	nogas	80010	0.00
Fe	56	1	nogas	6923572	0.00
Co	59	1	nogas	60924	0.00
Ni	60	1	nogas	14112	0.03
Cu	63	1	nogas	32383	0.00
Zn	66	1	nogas	11494	0.05
As	75	1	nogas	41402	0.01
Se	77	1	nogas	10513	0.01
Se	82	1	nogas	530	2.22
Sr	88	1	nogas	72573	0.00
Mo	95	1	nogas	13862	0.01
Ag	107	1	nogas	32524	0.01
Cd	111	1	nogas	6791	0.03
Sn	118	1	nogas	18660	0.01
Sb	121	1	nogas	28367	0.01
Ba	137	1	nogas	9706	0.00
Tl	205	1	nogas	44342	0.00
Pb	208	1	nogas	32470	0.01
Si	28	1	nogas	1549056	0.00
La	139	1	nogas	17	549.91
Na	23	2	He	671862	0.00
Mg	24	2	He	373406	0.00
Al	27	2	He	3140	0.27
K	39	2	He	601849	0.00
Ca	43	2	He	1517	0.93
Ca	44	2	He	23265	0.01
V	51	2	He	32310	0.00
Cr	52	2	He	29471	0.00

Calibration Standard Report

Mn	55	2	He	23883	0.01
Fe	56	2	He	2673069	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	36110	0.00
Ni	60	2	He	8572	0.01
Cu	63	2	He	21957	0.01
Zn	66	2	He	6545	0.11
As	75	2	He	5502	0.07
Sb	121	2	He	23189	0.01
Se	78	2	He	665	0.43

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	845901	1.26	826909	102.30	70	125	
In	115	1	nogas	694070	0.61	692762	100.19	70	125	
Li	6	1	nogas	550721	0.09	540315	101.93	70	125	
Bi	209	1	nogas	488695	2.59	476916	102.47	70	125	
Ge	72	2	He	376088	2.17	368809	101.97	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	020CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:46:08-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	220276	0.00
B	11	1	nogas	591073	0.00
Na	23	1	nogas	71337270	0.00
Mg	24	1	nogas	46859978	0.00
Al	27	1	nogas	621903	0.00
P	31	1	nogas	224323	0.00
K	39	1	nogas	61405512	0.00
Ca	43	1	nogas	107657	0.00
Ca	44	1	nogas	1843489	0.00
Ti	47	1	nogas	55234	0.00
V	51	1	nogas	896455	0.00
Cr	52	1	nogas	620838	0.00
Mn	55	1	nogas	750852	0.00
Fe	56	1	nogas	63315239	0.00
Co	59	1	nogas	608713	0.00
Ni	60	1	nogas	135155	0.00
Cu	63	1	nogas	314063	0.00
Zn	66	1	nogas	94030	0.00
As	75	1	nogas	136444	0.00
Se	77	1	nogas	12094	0.03
Se	82	1	nogas	5934	0.13
Sr	88	1	nogas	733354	0.00
Mo	95	1	nogas	144843	0.00
Ag	107	1	nogas	325134	0.00
Cd	111	1	nogas	63996	0.00
Sn	118	1	nogas	196819	0.00
Sb	121	1	nogas	288735	0.00
Ba	137	1	nogas	100925	0.00
Tl	205	1	nogas	444654	0.00
Pb	208	1	nogas	322116	0.00
Si	28	1	nogas	3009127	0.00
La	139	1	nogas	87	40.67
Na	23	2	He	6823678	0.00
Mg	24	2	He	3898233	0.00
Al	27	2	He	26863	0.01
K	39	2	He	5212046	0.00
Ca	43	2	He	13715	0.04
Ca	44	2	He	233713	0.00
V	51	2	He	279570	0.00
Cr	52	2	He	286095	0.00

Calibration Standard Report

Mn	55	2	He	233712	0.00
Fe	56	2	He	25956590	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	356738	0.00
Ni	60	2	He	88327	0.00
Cu	63	2	He	211315	0.00
Zn	66	2	He	53513	0.01
As	75	2	He	52574	0.00
Sb	121	2	He	238743	0.00
Se	78	2	He	4906	0.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	852177	1.54	826909	103.06	70	125	
In	115	1	nogas	697708	0.47	692762	100.71	70	125	
Li	6	1	nogas	579500	0.89	540315	107.25	70	125	
Bi	209	1	nogas	484476	1.80	476916	101.59	70	125	
Ge	72	2	He	384348	1.33	368809	104.21	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	021CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:48:22-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	441479	0.00
B	11	1	nogas	1196480	0.00
Na	23	1	nogas	139584745	0.00
Mg	24	1	nogas	93047498	0.00
Al	27	1	nogas	1193300	0.00
P	31	1	nogas	423971	0.00
K	39	1	nogas	118532261	0.00
Ca	43	1	nogas	212418	0.00
Ca	44	1	nogas	3550508	0.00
Ti	47	1	nogas	108401	0.00
V	51	1	nogas	1607027	0.00
Cr	52	1	nogas	1182693	0.00
Mn	55	1	nogas	1475001	0.00
Fe	56	1	nogas	121874332	0.00
Co	59	1	nogas	1209943	0.00
Ni	60	1	nogas	263683	0.00
Cu	63	1	nogas	608882	0.00
Zn	66	1	nogas	183606	0.00
As	75	1	nogas	244730	0.00
Se	77	1	nogas	17142	0.02
Se	82	1	nogas	11237	0.04
Sr	88	1	nogas	1500804	0.00
Mo	95	1	nogas	285441	0.00
Ag	107	1	nogas	641317	0.00
Cd	111	1	nogas	126463	0.00
Sn	118	1	nogas	380756	0.00
Sb	121	1	nogas	571738	0.00
Ba	137	1	nogas	198846	0.00
Tl	205	1	nogas	881295	0.00
Pb	208	1	nogas	621295	0.00
Si	28	1	nogas	4627646	0.00
La	139	1	nogas	143	14.05
Na	23	2	He	13340159	0.00
Mg	24	2	He	7562778	0.00
Al	27	2	He	52839	0.00
K	39	2	He	10201884	0.00
Ca	43	2	He	27171	0.01
Ca	44	2	He	456304	0.00
V	51	2	He	545025	0.00
Cr	52	2	He	565616	0.00

Calibration Standard Report

Mn	55	2	He	457021	0.00
Fe	56	2	He	50581523	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	688656	0.00
Ni	60	2	He	166620	0.00
Cu	63	2	He	408616	0.00
Zn	66	2	He	102478	0.00
As	75	2	He	103698	0.00
Sb	121	2	He	463472	0.00
Se	78	2	He	9310	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	848842	1.36	826909	102.65	70	125	
In	115	1	nogas	677602	2.38	692762	97.81	70	125	
Li	6	1	nogas	630333	1.49	540315	116.66	70	125	
Bi	209	1	nogas	462163	2.90	476916	96.91	70	125	
Ge	72	2	He	377284	0.24	368809	102.30	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	023_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:52:50-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	97.945	0.859	222183	1.00	100	97.9	90	110	
B	11	1	nogas	499.045	1.847	607698	2.02	500	99.8	90	110	
Na	23	1	nogas	10137.163	1.057	71961091	1.22	10000	101.4	90	110	
Mg	24	1	nogas	10114.514	0.241	47682135	0.74	10000	101.1	90	110	
Al	27	1	nogas	100.709	0.796	613829	1.94	100	100.7	90	110	
P	31	1	nogas	513.180	0.970	228687	0.55	500	102.6	90	110	
K	39	1	nogas	10247.263	1.333	62596368	0.27	10000	102.5	90	110	
Ca	43	1	nogas	10260.162	0.809	110338	0.88	10000	102.6	90	110	
Ca	44	1	nogas	10393.874	2.489	1882775	2.04	10000	103.9	90	110	
Ti	47	1	nogas	100.888	1.973	55365	2.59	100	100.9	90	110	
V	51	1	nogas	90.240	1.098	865464	1.89	100	90.2	90	110	
Cr	52	1	nogas	98.984	1.456	604296	2.30	100	99.0	90	110	
Mn	55	1	nogas	99.101	1.021	742166	0.71	100	99.1	90	110	
Fe	56	1	nogas	10346.966	1.620	64346637	1.42	10000	103.5	90	110	
Co	59	1	nogas	99.720	1.784	609062	0.71	100	99.7	90	110	
Ni	60	1	nogas	102.508	1.663	137186	1.12	100	102.5	90	110	
Cu	63	1	nogas	100.478	1.017	310812	0.65	100	100.5	90	110	
Zn	66	1	nogas	98.711	2.375	92867	2.77	100	98.7	90	110	
As	75	1	nogas	95.155	0.952	134161	0.48	100	95.2	90	110	
Se	77	1	nogas	52.667	107.885	12339	11.95	100	52.7	90	110	ICV Main CR1 Failed
Se	82	1	nogas	99.404	5.745	5738	4.76	100	99.4	90	110	
Sr	88	1	nogas	97.732	1.452	736005	1.70	100	97.7	90	110	
Mo	95	1	nogas	98.522	0.601	142177	1.59	100	98.5	90	110	
Ag	107	1	nogas	99.808	1.479	323616	1.54	100	99.8	90	110	
Cd	111	1	nogas	101.385	1.189	65693	1.64	100	101.4	90	110	
Sn	118	1	nogas	95.738	2.144	190043	2.86	100	95.7	90	110	
Sb	121	1	nogas	100.307	0.952	289713	1.32	100	100.3	90	110	
Ba	137	1	nogas	97.759	3.361	99658	2.30	100	97.8	90	110	
Tl	205	1	nogas	100.202	1.567	450766	2.24	100	100.2	90	110	
Pb	208	1	nogas	99.517	1.832	317031	0.28	100	99.5	90	110	
U	238	1	nogas	94.635	4.179	619548	2.96	100	94.6	90	110	
Li	7	1	nogas	102.575	0.424	662134	0.73	100	102.6	90	110	
Si	28	1	nogas	5142.220	3.947	3082898	1.24	5000	102.8	90	110	
Ba	135	1	nogas	97.270	0.996	57880	1.61	100	97.3	90	110	
La	139	1	nogas	1778.580	159.500	1154	156.72	100	1778.6	90	110	ICV Main CR1 Failed
Au	197	1	nogas	7224.405	171.389	658	170.58	100	7224.4	90	110	ICV Main CR1 Failed
Tl	203	1	nogas	99.225	0.780	188431	0.94	100	99.2	90	110	
Na	23	2	He	10140.345	1.433	6915040	0.48	10000	101.4	90	110	
Mg	24	2	He	10195.339	1.644	3943716	1.31	10000	102.0	90	110	
Al	27	2	He	95.110	1.816	25815	2.66	100	95.1	90	110	
K	39	2	He	10275.162	0.566	5396814	1.35	10000	102.8	90	110	
Ca	43	2	He	10090.925	3.299	13972	2.58	10000	100.9	90	110	
Ca	44	2	He	10119.190	0.541	236122	1.09	10000	101.2	90	110	
V	51	2	He	99.358	0.889	279214	0.10	100	99.4	90	110	
Cr	52	2	He	98.948	0.457	285929	0.61	100	98.9	90	110	
Mn	55	2	He	99.835	1.062	233129	0.33	100	99.8	90	110	
Fe	56	2	He	10228.193	2.030	26446269	1.81	10000	102.3	90	110	
Co	59	2	He	99.985	2.257	352582	1.72	100	100.0	90	110	
Ni	60	2	He	100.217	1.049	86072	0.88	100	100.2	90	110	
Cu	63	2	He	100.308	1.524	210296	0.68	100	100.3	90	110	
Zn	66	2	He	101.563	0.191	53961	0.77	100	101.6	90	110	
As	75	2	He	100.318	0.794	53152	1.63	100	100.3	90	110	
Sn	118	2	He	97.446	1.131	158017	0.38	100	97.4	90	110	
Sb	121	2	He	99.262	1.487	235332	1.49	100	99.3	90	110	
Se	78	2	He	101.375	1.220	4934	1.32	100	101.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	856472	1.18	826909	103.58	70	125	
In	115	1	nogas	696619	1.29	692762	100.56	70	125	
Li	6	1	nogas	596617	0.33	540315	110.42	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Bi	209	1	nogas	474931	1.67	476916	99.58	70	125	
Ge	72	2	He	385041	0.94	368809	104.40	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	024SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:55:03-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	2.008	2.008	5.79	4391	0.05	2000	
B	11	1	nogas	27.981	27.981	9.73	36142	0.08	2000	
Na	23	1	nogas	218.657	218.657	0.64	1699133	0.01	200000	
Mg	24	1	nogas	205.067	205.067	0.94	974276	0.02	200000	
Al	27	1	nogas	2.796	2.796	4.11	23539	0.01	2000	
K	39	1	nogas	216.006	216.006	1.69	3655755	0.01	200000	
Ca	43	1	nogas	256.368	256.368	5.92	3160	8.11	200000	
Ca	44	1	nogas	246.927	246.927	1.25	66033	0.37	200000	
Ti	47	1	nogas	2.112	2.112	10.38	1197	0.18	2000	
V	51	1	nogas	-12.515	-12.515	-3.15	172635	-0.01	2000	
Cr	52	1	nogas	1.286	1.286	5.90	27628	0.00	2000	
Mn	55	1	nogas	2.091	2.091	0.63	21723	0.01	2000	
Fe	56	1	nogas	217.187	217.187	3.24	2052206	0.01	200000	
Co	59	1	nogas	2.132	2.132	1.28	13045	0.02	2000	
Ni	60	1	nogas	1.708	1.708	3.73	2944	0.06	2000	
Cu	63	1	nogas	2.103	2.103	2.86	7622	0.03	2000	
Zn	66	1	nogas	1.936	1.936	9.90	4364	0.04	2000	
As	75	1	nogas	-9.103	-9.103	-5.67	23019	-0.04	2000	
Se	77	1	nogas	-122.871	-122.871	-15.83	7345	-1.67	2000	
Se	82	1	nogas	2.671	2.671	28.53	263	1.01	2000	
Sr	88	1	nogas	2.235	2.235	3.07	16942	0.01	2000	
Mo	95	1	nogas	2.298	2.298	9.25	3354	0.07	2000	
Ag	107	1	nogas	2.075	2.075	2.40	6708	0.03	2000	
Cd	111	1	nogas	1.946	1.946	8.80	1253	0.16	2000	
Sn	118	1	nogas	-0.513	-0.513	-23.29	5184	-0.01	2000	
Sb	121	1	nogas	2.346	2.346	0.44	6881	0.03	2000	
Ba	137	1	nogas	2.031	2.031	10.74	2124	0.10	2000	
Tl	205	1	nogas	2.182	2.182	3.55	9903	0.02	2000	
Pb	208	1	nogas	2.125	2.125	4.97	6902	0.03	2000	
U	238	1	nogas	1.938	1.938	1.51	12766	0.02	2000	
Si	28	1	nogas	54.417	54.417	168.00	1419838	0.00	2000	
La	139	1	nogas	-26.128	-26.128	-35.18	3	-783.83	2000	
Au	197	1	nogas	-0.308	-0.308	-21236.64	3	-9.23	2000	
Na	23	2	He	200.709	200.709	2.02	153847	0.13	200000	
Mg	24	2	He	205.402	205.402	3.61	79249	0.26	200000	
Al	27	2	He	1.835	1.835	40.83	890	0.21	2000	
K	39	2	He	201.511	201.511	1.81	218267	0.09	200000	
Ca	43	2	He	239.743	239.743	43.41	337	71.21	200000	
Ca	44	2	He	248.286	248.286	8.26	6291	3.95	200000	
V	51	2	He	1.394	1.394	4.39	10007	0.01	2000	
Cr	52	2	He	1.841	1.841	6.65	7098	0.03	2000	
Mn	55	2	He	2.086	2.086	3.04	5117	0.04	2000	

Sample Report

Fe	56	2	He	206.195	206.195	2.22	537729	0.04	200000	
Co	59	2	He	2.088	2.088	4.14	7342	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ni	60	2	He	1.939	1.939	2.25	2090	0.09	2000	
Cu	63	2	He	1.834	1.834	7.99	5091	0.04	2000	
Zn	66	2	He	1.850	1.850	7.33	2444	0.08	2000	
As	75	2	He	2.003	2.003	5.82	1330	0.15	2000	
Sb	121	2	He	2.389	2.389	1.64	5721	0.04	2000	
Se	78	2	He	1.762	1.762	1.30	297	0.59	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	850169	0.97	826909	102.81	70	125	
In	115	1	nogas	688701	1.29	692762	99.41	70	125	
Li	6	1	nogas	566695	0.58	540315	104.88	70	125	
Bi	209	1	nogas	477505	3.18	476916	100.12	70	125	
Ge	72	2	He	382529	0.40	368809	103.72	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	025LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:57:18-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	5.212	3.982	11227	2.63	5	104.2	70	130	
B	11	1	nogas	33.276	2.475	41981	0.89	25	133.1	70	130	LLICV Main CR1 Failed
Na	23	1	nogas	528.193	2.159	3847984	0.35	500	105.6	70	130	
Mg	24	1	nogas	528.305	2.365	2470189	1.58	500	105.7	70	130	
Al	27	1	nogas	5.584	5.175	39900	3.44	5	111.7	70	130	
P	31	1	nogas	28.065	7.425	28769	1.76	25	112.3	70	130	
K	39	1	nogas	513.807	2.235	5351312	1.12	500	102.8	70	130	
Ca	43	1	nogas	513.945	6.677	5858	7.07	500	102.8	70	130	
Ca	44	1	nogas	514.037	1.044	112645	1.12	500	102.8	70	130	
Ti	47	1	nogas	4.867	3.748	2677	4.82	5	97.3	70	130	
V	51	1	nogas	-7.422	-7.449	205106	2.70	5	-148.4	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.330	2.777	45106	0.51	5	86.6	70	130	
Mn	55	1	nogas	5.007	0.413	42891	1.37	5	100.1	70	130	
Fe	56	1	nogas	523.860	1.120	3894376	0.33	500	104.8	70	130	
Co	59	1	nogas	5.078	2.212	30667	1.04	5	101.6	70	130	
Ni	60	1	nogas	4.810	8.156	6991	7.33	5	96.2	70	130	
Cu	63	1	nogas	5.229	1.264	17055	2.20	5	104.6	70	130	
Zn	66	1	nogas	5.244	4.103	7312	3.81	5	104.9	70	130	
As	75	1	nogas	-3.912	-3.979	28289	0.75	5	-78.2	70	130	LLICV Main CR1 Failed
Se	77	1	nogas	-115.806	-6.813	7485	3.52	5	-2316.1	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	6.038	27.317	450	21.43	5	120.8	70	130	
Sr	88	1	nogas	5.105	1.211	38098	1.05	5	102.1	70	130	
Mo	95	1	nogas	4.926	1.746	7065	2.78	5	98.5	70	130	
Ag	107	1	nogas	5.211	1.656	16675	1.67	5	104.2	70	130	
Cd	111	1	nogas	5.177	1.492	3344	1.80	5	103.5	70	130	
Sn	118	1	nogas	2.034	10.718	10080	3.23	5	40.7	70	130	LLICV Main CR1 Failed
Sb	121	1	nogas	5.068	0.705	14570	1.73	5	101.4	70	130	
Ba	137	1	nogas	4.803	3.167	4951	4.55	5	96.1	70	130	
Tl	205	1	nogas	5.022	3.168	22890	1.63	5	100.4	70	130	
Pb	208	1	nogas	4.920	1.169	15968	3.86	5	98.4	70	130	
U	238	1	nogas	4.622	1.419	30641	3.22	5	92.4	70	130	
Li	7	1	nogas	5.239	1.172	69451	1.29	5	104.8	70	130	
Si	28	1	nogas	227.202	39.936	1464341	1.12	25	908.8	70	130	LLICV Main CR1 Failed
La	139	1	nogas	-5.461	-434.413	17	91.65	5	-109.2	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	0.083	79480.103	3	173.21	5	1.7	70	130	LLICV Main CR1 Failed
Na	23	2	He	488.688	2.286	350452	1.11	500	97.7	70	130	
Mg	24	2	He	498.096	1.990	192829	1.19	500	99.6	70	130	
Al	27	2	He	5.098	1.451	1767	2.29	5	102.0	70	130	
K	39	2	He	482.638	1.815	363910	0.03	500	96.5	70	130	
Ca	43	2	He	544.493	17.395	760	17.11	500	108.9	70	130	
Ca	44	2	He	531.272	1.404	12911	0.56	500	106.3	70	130	
V	51	2	He	4.351	1.887	18184	1.13	5	87.0	70	130	
Cr	52	2	He	4.955	1.356	16074	1.66	5	99.1	70	130	
Mn	55	2	He	4.994	6.329	11921	4.99	5	99.9	70	130	
Fe	56	2	He	533.815	3.534	1386993	2.76	500	106.8	70	130	
Co	59	2	He	5.149	3.400	18169	2.29	5	103.0	70	130	
Ni	60	2	He	4.823	4.773	4564	3.40	5	96.5	70	130	
Cu	63	2	He	4.867	6.212	11440	6.33	5	97.3	70	130	
Zn	66	2	He	5.452	6.235	4317	3.77	5	109.0	70	130	
As	75	2	He	4.872	5.098	2848	3.47	5	97.4	70	130	
Sb	121	2	He	5.094	4.986	12158	3.71	5	101.9	70	130	
Se	78	2	He	5.000	17.967	450	10.51	5	100.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	843779	1.17	826909	102.04	70	125	
In	115	1	nogas	693126	1.44	692762	100.05	70	125	
Li	6	1	nogas	563609	1.50	540315	104.31	70	125	
Bi	209	1	nogas	480810	3.71	476916	100.82	70	125	
Ge	72	2	He	384795	1.25	368809	104.33	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	026_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T12:59:33-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.040	13.1	147	7.9	1	
B	11	1	nogas	5.366	6.0	9743	3.2	10	
Na	23	1	nogas	-0.342	-67.6	137353	2.0	100	
Mg	24	1	nogas	0.058	181.6	4168	10.8	100	
Al	27	1	nogas	-0.057	-146.7	6214	7.3	5	
P	31	1	nogas	2.664	45.3	17899	1.8	10	
K	39	1	nogas	12.269	95.1	2371600	1.3	100	
Ca	43	1	nogas	0.171	2998.5	420	12.6	100	
Ca	44	1	nogas	-10.311	-12.9	19537	2.1	100	
Ti	47	1	nogas	0.084	76.5	90	38.5	2.5	
V	51	1	nogas	-13.308	-1.3	160838	2.0	2.5	
Cr	52	1	nogas	-0.742	-7.4	15133	0.5	2.5	
Mn	55	1	nogas	0.051	88.4	6431	6.4	2.5	
Fe	56	1	nogas	-6.976	-35.5	657616	0.6	100	
Co	59	1	nogas	0.004	152.0	140	25.8	2.5	
Ni	60	1	nogas	-0.446	-2.6	93	16.4	2.5	
Cu	63	1	nogas	-0.079	-24.5	910	7.7	1	
Zn	66	1	nogas	-0.459	-47.2	2107	10.0	2.5	
As	75	1	nogas	-9.485	-1.1	21740	2.0	2.5	
Se	77	1	nogas	-111.578	-2.5	7362	0.7	2.5	
Se	82	1	nogas	-0.487	-226.9	83	72.3	1	
Sr	88	1	nogas	-0.007	-86.0	180	22.2	2.5	
Mo	95	1	nogas	0.018	443.0	87	126.6	2.5	
Ag	107	1	nogas	-0.004	-158.0	17	124.9	2.5	
Cd	111	1	nogas	-0.005	-177.8	3	173.2	1	
Sn	118	1	nogas	-3.005	-1.0	450	12.4	5	
Sb	121	1	nogas	0.092	45.2	403	26.5	2.5	
Ba	137	1	nogas	0.071	0.3	150	0.0	2.5	
Tl	205	1	nogas	0.031	50.9	173	37.1	1	
Pb	208	1	nogas	0.017	41.7	157	13.3	2.5	
U	238	1	nogas	0.007	44.2	47	44.6	2.5	
Si	28	1	nogas	50.484	331.8	1363431	3.6	5	ICB Main CR1 Failed
La	139	1	nogas	-20.791	-44.3	7	86.6	2.5	
Au	197	1	nogas	70.799	151.8	10	100.0	2.5	ICB Main CR1 Failed
Na	23	2	He	-0.751	-68.7	17362	2.2	100	
Mg	24	2	He	0.190	77.1	373	15.2	100	
Al	27	2	He	-0.171	-534.1	350	67.4	5	
K	39	2	He	-1.567	-177.0	112335	0.8	100	
Ca	43	2	He	2.353	2.3	10	0.0	100	
Ca	44	2	He	-0.082	-4210.8	537	14.0	100	
V	51	2	He	-0.638	-2.4	4373	1.0	2.5	
Cr	52	2	He	0.001	3365.3	1813	7.0	2.5	
Mn	55	2	He	-0.031	-17.3	207	5.6	2.5	
Fe	56	2	He	0.371	20.2	9002	2.6	100	
Co	59	2	He	0.005	70.4	43	26.6	2.5	
Ni	60	2	He	-0.455	-6.7	57	44.4	2.5	

Initial Calibration Blank (ICB) Report

Cu	63	2	He	-0.348	-12.1	563	14.9	1	
Zn	66	2	He	-0.574	-34.3	1177	9.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.174	-15.9	187	8.2	2.5	
Sb	121	2	He	0.082	15.4	283	10.8	2.5	
Se	78	2	He	0.037	1026.1	213	8.0	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	817200	1.62	826909	98.83	70	125	
In	115	1	nogas	682275	0.15	692762	98.49	70	125	
Li	6	1	nogas	543387	0.68	540315	100.57	70	125	
Bi	209	1	nogas	475522	4.63	476916	99.71	70	125	
Ge	72	2	He	375029	0.73	368809	101.69	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	027ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T13:04:34-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	-0.004	-448.8	53	60.3	0	ICSA Main CR1 Failed
B	11	1	nogas	3.381	5.8	7165	1.8	0	ICSA Main CR1 Failed
Na	23	1	nogas	99887.138	1.3	661538765	0.7	0	
Mg	24	1	nogas	95072.031	1.8	418920901	2.5	0	
Al	27	1	nogas	92754.403	0.8	517589512	1.0	0	
P	31	1	nogas	93507.313	1.6	35617939	0.9	0	
K	39	1	nogas	100738.849	0.3	550166046	2.0	0	
Ca	43	1	nogas	100307.992	1.8	995181	0.8	0	
Ca	44	1	nogas	99482.388	2.2	16507608	0.6	0	
Ti	47	1	nogas	2014.993	0.2	1023061	1.8	0	
V	51	1	nogas	-12.399	-3.2	161738	1.8	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.546	4.4	21727	2.3	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.264	16.9	7698	2.9	0	ICSA Main CR1 Failed
Fe	56	1	nogas	100641.750	1.0	573705546	2.3	0	
Co	59	1	nogas	0.526	1.2	3087	1.5	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.908	25.6	1763	17.9	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.972	14.1	3887	11.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	0.970	31.8	3254	8.2	0	ICSA Main CR1 Failed
As	75	1	nogas	-1.220	-56.8	29238	1.2	0	ICSA Main CR1 Failed
Se	77	1	nogas	-23.359	-41.8	9449	2.9	0	ICSA Main CR1 Failed
Se	82	1	nogas	0.397	281.2	127	46.3	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.880	3.5	6358	4.6	0	ICSA Main CR1 Failed
Mo	95	1	nogas	1967.635	1.0	2628397	2.6	0	
Ag	107	1	nogas	0.044	13.8	160	10.8	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.493	12.5	880	11.5	0	ICSA Main CR1 Failed
Sn	118	1	nogas	-2.939	-1.8	530	16.8	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.183	12.4	637	9.6	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.232	48.9	287	37.3	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.017	14.6	110	18.2	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.187	15.0	680	5.3	0	ICSA Main CR1 Failed
Si	28	1	nogas	403.610	28.0	1429248	0.7	0	
La	139	1	nogas	60.772	15.3	53	10.8	0	
Na	23	2	He	100929.421	0.8	63856644	0.5	0	
Mg	24	2	He	100169.420	0.5	36031669	0.3	0	
Al	27	2	He	92220.065	0.6	22908384	0.1	0	
K	39	2	He	101808.403	2.0	48767531	2.6	0	
Ca	43	2	He	98635.011	1.1	126976	1.8	0	
Ca	44	2	He	104769.870	0.8	2268713	1.4	0	
V	51	2	He	-0.181	-210.8	5346	19.0	0	ICSA Main CR1 Failed
Cr	52	2	He	0.481	85.9	3017	37.3	0	ICSA Main CR1 Failed
Mn	55	2	He	0.328	27.3	977	20.6	0	ICSA Main CR1 Failed
Fe	56	2	He	101381.437	1.3	243725716	1.8	0	
Co	59	2	He	0.382	37.5	1280	37.4	0	ICSA Main CR1 Failed
Ni	60	2	He	0.029	1115.8	440	59.8	0	ICSA Main CR1 Failed
Cu	63	2	He	0.064	165.1	1337	16.0	0	ICSA Main CR1 Failed
Zn	66	2	He	0.289	449.0	1540	41.2	0	ICSA Main CR1 Failed
As	75	2	He	0.875	162.1	695	101.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.570	103.4	1352	97.0	0	ICSA Main CR1 Failed
Se	78	2	He	9.102	90.6	598	60.2	0	

Interference Check Solution A (ICS-A) Report

Interference Check Solution A (ICS-A) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	793088	1.66	826909	95.91	70	125	
In	115	1	nogas	629867	0.84	692762	90.92	70	125	
Li	6	1	nogas	515254	1.92	540315	95.36	70	125	
Bi	209	1	nogas	465015	9.92	476916	97.50	70	125	
Ge	72	2	He	358067	0.71	368809	97.09	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	030ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T13:14:17-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	95.060	3.002	210095	0.79	100	95.1	80	120	
B	11	1	nogas	475.556	1.835	564530	1.65	100	475.6	80	120	
Na	23	1	nogas	108517.172	1.654	761720367	1.82	100	108517.2	80	120	
Mg	24	1	nogas	106976.914	2.985	499451028	2.04	100	106976.9	80	120	
Al	27	1	nogas	88003.517	0.722	531589859	1.37	100	88003.5	80	120	ICSB Main CR1 Failed
K	39	1	nogas	108071.748	0.224	638695098	1.84	100	108071.7	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	107140.283	1.230	1150678	1.11	100	107140.3	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	105343.414	1.410	18924311	2.00	100	105343.4	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2037.756	0.203	1120007	2.26	100	2037.8	80	120	ICSB Main CR1 Failed
V	51	1	nogas	100.005	3.374	933074	0.74	100	100.0	80	120	
Cr	52	1	nogas	99.731	1.688	610034	1.56	100	99.7	80	120	
Mn	55	1	nogas	98.967	1.850	742969	2.56	100	99.0	80	120	
Fe	56	1	nogas	109992.312	1.356	678528549	0.90	100	109992.3	80	120	
Co	59	1	nogas	98.523	1.065	603271	2.18	100	98.5	80	120	
Ni	60	1	nogas	99.325	0.630	133268	1.44	100	99.3	80	120	
Cu	63	1	nogas	97.077	1.964	300992	0.30	100	97.1	80	120	
Zn	66	1	nogas	100.390	1.059	94613	1.04	100	100.4	80	120	
As	75	1	nogas	105.755	0.496	145801	2.09	100	105.8	80	120	
Se	77	1	nogas	174.408	7.645	15817	0.52	100	174.4	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	101.168	7.517	5848	5.39	100	101.2	80	120	
Sr	88	1	nogas	97.600	0.678	736720	1.38	100	97.6	80	120	
Mo	95	1	nogas	2058.427	2.460	2975506	1.62	100	2058.4	80	120	
Ag	107	1	nogas	94.297	0.417	306482	1.76	100	94.3	80	120	
Cd	111	1	nogas	102.342	1.209	63337	1.92	100	102.3	80	120	
Sn	118	1	nogas	99.561	1.362	188492	1.10	100	99.6	80	120	
Sb	121	1	nogas	97.618	1.534	282580	0.95	100	97.6	80	120	
Ba	137	1	nogas	102.555	0.957	99873	1.50	100	102.6	80	120	
Tl	205	1	nogas	100.339	3.813	431896	3.62	100	100.3	80	120	
Pb	208	1	nogas	98.705	3.165	300904	2.48	100	98.7	80	120	
U	238	1	nogas	95.107	1.411	596027	1.54	100	95.1	80	120	
Si	28	1	nogas	5170.414	4.889	3099078	1.74	100	5170.4	80	120	ICSB Main CR1 Failed
La	139	1	nogas	88.428	55.824	73	41.66	100	88.4	80	120	ICSB Main CR1 Failed
Na	23	2	He	113347.630	19.482	73671486	2.17	100	113347.6	80	120	ICSB Main CR1 Failed
Mg	24	2	He	112063.212	19.818	41394139	2.85	100	112063.2	80	120	
Al	27	2	He	93042.195	20.840	23702082	3.97	100	93042.2	80	120	ICSB Main CR1 Failed
K	39	2	He	111016.687	19.362	54628286	2.23	100	111016.7	80	120	
Ca	43	2	He	108214.580	21.094	142801	4.01	100	108214.6	80	120	
Ca	44	2	He	116001.683	21.056	2574996	4.12	100	116001.7	80	120	
V	51	2	He	102.764	20.867	275358	3.22	100	102.8	80	120	
Cr	52	2	He	100.645	20.962	277319	3.77	100	100.6	80	120	
Mn	55	2	He	101.044	21.202	224912	4.12	100	101.0	80	120	
Fe	56	2	He	111739.213	20.848	275450589	3.90	100	111739.2	80	120	
Co	59	2	He	103.938	20.423	349748	3.22	100	103.9	80	120	
Ni	60	2	He	102.243	19.929	83845	2.60	100	102.2	80	120	
Cu	63	2	He	101.446	20.466	202956	3.28	100	101.4	80	120	
Zn	66	2	He	101.584	21.353	51474	3.60	100	101.6	80	120	
As	75	2	He	100.659	20.351	50896	3.02	100	100.7	80	120	
Sb	121	2	He	100.563	20.432	227497	3.55	100	100.6	80	120	
Se	78	2	He	105.294	21.246	4883	3.24	100	105.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	858528	2.06	826909	103.82	70	125	
In	115	1	nogas	665310	0.71	692762	96.04	70	125	
Li	6	1	nogas	581544	2.35	540315	107.63	70	125	
Bi	209	1	nogas	454455	0.75	476916	95.29	70	125	
Ge	72	2	He	377428	19.56	368809	102.34	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	038_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T13:34:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	99.659	2.682	213220	0.89	100	99.7	90	110	
B	11	1	nogas	525.009	3.353	602784	2.45	500	105.0	90	110	
Na	23	1	nogas	10128.551	0.337	78251673	1.48	10000	101.3	90	110	
Mg	24	1	nogas	10086.078	1.164	51751562	2.31	10000	100.9	90	110	
Al	27	1	nogas	103.607	1.295	685894	2.03	100	103.6	90	110	
P	31	1	nogas	477.054	0.375	232345	1.22	500	95.4	90	110	
K	39	1	nogas	10111.352	0.757	67148960	0.99	10000	101.1	90	110	
Ca	43	1	nogas	10269.729	2.234	119979	1.13	10000	102.7	90	110	
Ca	44	1	nogas	10359.076	2.692	2038732	1.68	10000	103.6	90	110	
Ti	47	1	nogas	102.152	0.285	60905	1.41	100	102.2	90	110	
V	51	1	nogas	97.359	0.525	992340	1.18	100	97.4	90	110	
Cr	52	1	nogas	101.123	1.076	670266	1.86	100	101.1	90	110	
Mn	55	1	nogas	101.948	0.530	829405	1.49	100	101.9	90	110	
Fe	56	1	nogas	10432.005	1.120	70491395	2.22	10000	104.3	90	110	
Co	59	1	nogas	99.869	0.579	662845	1.50	100	99.9	90	110	
Ni	60	1	nogas	100.994	0.675	146874	0.86	100	101.0	90	110	
Cu	63	1	nogas	100.537	0.502	337932	1.64	100	100.5	90	110	
Zn	66	1	nogas	101.573	0.758	103746	1.84	100	101.6	90	110	
As	75	1	nogas	97.814	2.052	148833	0.47	100	97.8	90	110	
Se	77	1	nogas	75.953	14.746	14132	2.85	100	76.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.154	6.310	6218	5.07	100	99.2	90	110	
Sr	88	1	nogas	101.066	1.188	826961	1.57	100	101.1	90	110	
Mo	95	1	nogas	103.457	1.069	162202	1.26	100	103.5	90	110	
Ag	107	1	nogas	101.752	0.559	358462	0.72	100	101.8	90	110	
Cd	111	1	nogas	101.310	1.406	73182	2.51	100	101.3	90	110	
Sn	118	1	nogas	97.637	1.795	215865	0.76	100	97.6	90	110	
Sb	121	1	nogas	102.304	1.665	321070	2.52	100	102.3	90	110	
Ba	137	1	nogas	97.141	1.211	110418	1.84	100	97.1	90	110	
Tl	205	1	nogas	98.564	2.485	490062	2.31	100	98.6	90	110	
Pb	208	1	nogas	98.566	1.492	347137	1.78	100	98.6	90	110	
U	238	1	nogas	94.305	3.400	682687	3.64	100	94.3	90	110	
Li	7	1	nogas	102.923	1.965	626575	1.18	100	102.9	90	110	
Si	28	1	nogas	4409.476	2.549	3091480	1.83	5000	88.2	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	96.197	2.745	63794	1.68	100	96.2	90	110	
La	139	1	nogas	122.458	50.943	110	41.66	100	122.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	63.553	0.473	10	0.00	100	63.6	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.310	2.094	206362	1.98	100	98.3	90	110	
Na	23	2	He	10421.962	1.828	7111300	1.60	10000	104.2	90	110	
Mg	24	2	He	10369.261	0.372	4013673	0.60	10000	103.7	90	110	
Al	27	2	He	100.056	1.696	27150	1.81	100	100.1	90	110	
K	39	2	He	10110.058	1.540	5315002	1.43	10000	101.1	90	110	
Ca	43	2	He	9919.240	0.770	13745	1.14	10000	99.2	90	110	
Ca	44	2	He	9929.117	2.827	231808	2.06	10000	99.3	90	110	
V	51	2	He	101.008	0.980	283943	1.44	100	101.0	90	110	
Cr	52	2	He	100.321	1.319	290048	1.16	100	100.3	90	110	
Mn	55	2	He	99.556	1.538	232619	0.71	100	99.6	90	110	
Fe	56	2	He	10244.277	2.327	26502210	1.38	10000	102.4	90	110	
Co	59	2	He	103.491	1.861	365172	1.00	100	103.5	90	110	
Ni	60	2	He	104.546	1.365	89824	0.66	100	104.5	90	110	
Cu	63	2	He	105.333	0.661	220916	0.33	100	105.3	90	110	
Zn	66	2	He	102.332	1.754	54393	1.79	100	102.3	90	110	
As	75	2	He	99.455	1.242	52725	0.74	100	99.5	90	110	
Sb	121	2	He	98.873	3.035	234531	2.37	100	98.9	90	110	
Se	78	2	He	98.587	2.699	4807	1.66	100	98.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	930564	1.14	826909	112.54	70	125	
In	115	1	nogas	776521	1.09	692762	112.09	70	125	
Li	6	1	nogas	562914	2.14	540315	104.18	70	125	
Bi	209	1	nogas	524928	0.30	476916	110.07	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	385284	0.96	368809	104.47	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	039_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T13:36:24-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.053	23.9	167	15.1	1	
B	11	1	nogas	12.964	14.3	17388	11.8	10	CCB Main CR1 Failed
Na	23	1	nogas	11.701	11.5	247086	2.6	100	
Mg	24	1	nogas	2.957	44.8	19515	33.3	100	
Al	27	1	nogas	1.329	9.4	16164	4.6	5	
P	31	1	nogas	-5.414	-29.3	16785	3.9	10	
K	39	1	nogas	-6.223	-64.8	2584716	0.4	100	
Ca	43	1	nogas	6.319	66.0	550	8.3	100	
Ca	44	1	nogas	-4.886	-73.5	23319	3.6	100	
Ti	47	1	nogas	0.097	60.6	110	31.5	2.5	
V	51	1	nogas	-14.624	-8.0	173645	5.4	2.5	
Cr	52	1	nogas	-1.123	-4.8	14803	1.7	2.5	
Mn	55	1	nogas	-0.017	-249.2	6775	4.3	2.5	
Fe	56	1	nogas	-13.118	-11.0	708353	0.7	100	
Co	59	1	nogas	0.026	33.7	307	18.8	2.5	
Ni	60	1	nogas	-0.448	-4.8	103	29.6	2.5	
Cu	63	1	nogas	-0.054	-75.8	1120	11.7	2	
Zn	66	1	nogas	-1.176	-17.8	1687	12.7	2.5	
As	75	1	nogas	-9.449	-9.0	24814	4.6	2.5	
Se	77	1	nogas	-121.453	-5.6	8085	2.4	2.5	
Se	82	1	nogas	0.198	304.4	137	27.7	2	
Sr	88	1	nogas	0.040	20.6	593	11.2	2.5	
Mo	95	1	nogas	0.414	36.5	720	32.3	2.5	
Ag	107	1	nogas	0.018	40.6	97	26.0	2.5	
Cd	111	1	nogas	0.032	76.4	30	57.7	1	
Sn	118	1	nogas	-2.718	-3.4	1107	16.0	5	
Sb	121	1	nogas	0.380	9.6	1367	8.2	2.5	
Ba	137	1	nogas	0.005	291.6	93	16.4	2.5	
Tl	205	1	nogas	0.163	54.5	867	55.9	1	
Pb	208	1	nogas	0.070	43.2	363	31.9	2.5	
U	238	1	nogas	0.034	25.1	250	28.8	2.5	
Si	28	1	nogas	-552.218	-15.3	1340793	2.2	5	
La	139	1	nogas	-17.249	-82.7	10	100.0	2.5	
Au	197	1	nogas	28.200	203.7	7	86.6	2.5	CCB Main CR1 Failed
Na	23	2	He	10.694	9.6	25141	4.2	100	
Mg	24	2	He	1.636	29.7	923	18.6	100	
Al	27	2	He	0.656	57.3	570	16.7	5	
K	39	2	He	-2.296	-291.5	112795	1.5	100	
Ca	43	2	He	21.707	126.4	37	103.3	100	
Ca	44	2	He	4.605	172.9	650	29.2	100	
V	51	2	He	-0.694	-4.4	4254	0.5	2.5	
Cr	52	2	He	-0.028	-148.1	1747	8.0	2.5	
Mn	55	2	He	0.037	223.0	363	51.7	2.5	
Fe	56	2	He	2.236	17.3	13792	5.4	100	
Co	59	2	He	0.013	92.8	73	56.8	2.5	
Ni	60	2	He	-0.492	-5.0	27	78.1	2.5	
Cu	63	2	He	-0.348	-15.2	567	17.8	2	
Zn	66	2	He	-1.116	-10.8	910	5.0	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.095	-48.7	229	11.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.284	9.7	757	9.6	2.5	
Se	78	2	He	0.482	68.5	235	6.9	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	931092	0.61	826909	112.60	70	125	
In	115	1	nogas	763558	1.69	692762	110.22	70	125	
Li	6	1	nogas	521483	0.67	540315	96.51	70	125	
Bi	209	1	nogas	528152	3.92	476916	110.74	70	125	
Ge	72	2	He	377895	1.66	368809	102.46	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	050_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T14:06:05-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	108.018	1.812	217165	0.75	100	108.0	90	110	
B	11	1	nogas	580.536	2.351	625892	1.03	500	116.1	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9974.299	1.590	85408433	0.63	10000	99.7	90	110	
Mg	24	1	nogas	9891.352	0.649	56250866	1.06	10000	98.9	90	110	
Al	27	1	nogas	104.157	0.782	746301	1.00	100	104.2	90	110	
P	31	1	nogas	488.089	0.529	256838	1.01	500	97.6	90	110	
K	39	1	nogas	10519.755	0.613	75508735	1.11	10000	105.2	90	110	
Ca	43	1	nogas	10578.739	0.831	133788	1.43	10000	105.8	90	110	
Ca	44	1	nogas	10675.389	0.766	2273773	0.83	10000	106.8	90	110	
Ti	47	1	nogas	102.690	3.334	66257	2.20	100	102.7	90	110	
V	51	1	nogas	98.262	1.249	1081350	1.71	100	98.3	90	110	
Cr	52	1	nogas	100.844	0.113	723605	1.52	100	100.8	90	110	
Mn	55	1	nogas	103.246	0.835	909071	0.74	100	103.2	90	110	
Fe	56	1	nogas	10602.360	1.805	77519035	0.30	10000	106.0	90	110	
Co	59	1	nogas	102.136	1.033	733742	0.91	100	102.1	90	110	
Ni	60	1	nogas	101.963	0.842	160514	1.76	100	102.0	90	110	
Cu	63	1	nogas	102.345	1.071	372344	1.68	100	102.3	90	110	
Zn	66	1	nogas	101.400	2.066	112092	0.87	100	101.4	90	110	
As	75	1	nogas	99.650	2.814	163402	1.24	100	99.7	90	110	
Se	77	1	nogas	107.955	22.828	16358	4.88	100	108.0	90	110	
Se	82	1	nogas	102.508	3.627	6955	2.06	100	102.5	90	110	
Sr	88	1	nogas	100.842	0.591	893250	2.04	100	100.8	90	110	
Mo	95	1	nogas	100.886	1.054	171214	0.98	100	100.9	90	110	
Ag	107	1	nogas	99.748	0.647	380388	1.07	100	99.7	90	110	
Cd	111	1	nogas	101.878	1.282	78044	1.63	100	101.9	90	110	
Sn	118	1	nogas	96.377	1.408	226097	1.04	100	96.4	90	110	
Sb	121	1	nogas	99.719	0.167	338758	1.53	100	99.7	90	110	
Ba	137	1	nogas	97.341	2.732	117335	2.36	100	97.3	90	110	
Tl	205	1	nogas	100.444	3.858	504288	1.52	100	100.4	90	110	
Pb	208	1	nogas	98.840	3.845	351479	1.57	100	98.8	90	110	
U	238	1	nogas	92.035	3.792	672686	1.22	100	92.0	90	110	
Li	7	1	nogas	109.722	0.369	625239	1.34	100	109.7	90	110	
Si	28	1	nogas	4597.506	2.324	3418076	1.20	5000	92.0	90	110	
Ba	135	1	nogas	96.920	3.013	68175	2.65	100	96.9	90	110	
La	139	1	nogas	136.107	31.168	127	25.38	100	136.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-38.049	0.000	0	#DIV/0!	100	-38.0	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.025	2.001	207832	0.64	100	98.0	90	110	
Na	23	2	He	10622.452	1.844	7699866	0.54	10000	106.2	90	110	
Mg	24	2	He	10549.646	2.731	4337733	1.42	10000	105.5	90	110	
Al	27	2	He	101.624	0.792	29293	1.81	100	101.6	90	110	
K	39	2	He	9945.091	0.363	5557159	1.22	10000	99.5	90	110	
Ca	43	2	He	9942.967	3.721	14643	4.70	10000	99.4	90	110	
Ca	44	2	He	10029.337	1.968	248788	1.61	10000	100.3	90	110	
V	51	2	He	101.718	2.016	303712	1.00	100	101.7	90	110	
Cr	52	2	He	100.027	0.116	307292	1.44	100	100.0	90	110	
Mn	55	2	He	99.551	1.736	247141	1.29	100	99.6	90	110	
Fe	56	2	He	10369.146	0.678	28506266	1.67	10000	103.7	90	110	
Co	59	2	He	105.278	2.144	394668	1.13	100	105.3	90	110	
Ni	60	2	He	105.274	3.049	96086	2.19	100	105.3	90	110	
Cu	63	2	He	105.998	3.149	236145	2.05	100	106.0	90	110	
Zn	66	2	He	101.477	1.577	57318	1.15	100	101.5	90	110	
As	75	2	He	99.199	1.240	55875	0.67	100	99.2	90	110	
Sb	121	2	He	98.589	1.423	248491	1.30	100	98.6	90	110	
Se	78	2	He	99.488	0.790	5152	0.60	100	99.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1007335	1.49	826909	121.82	70	125	
In	115	1	nogas	823546	0.38	692762	118.88	70	125	
Li	6	1	nogas	528867	1.51	540315	97.88	70	125	
Bi	209	1	nogas	530381	2.65	476916	111.21	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	409361	1.34	368809	111.00	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	051_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T14:08:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.038	68.6	127	38.9	1	
B	11	1	nogas	14.220	13.7	17435	14.0	10	CCB Main CR1 Failed
Na	23	1	nogas	8.354	24.2	243035	5.6	100	
Mg	24	1	nogas	2.850	38.1	20850	27.7	100	
Al	27	1	nogas	1.273	8.4	16978	3.7	5	
P	31	1	nogas	-5.016	-39.3	18233	5.1	10	
K	39	1	nogas	2.678	270.6	2839098	1.5	100	
Ca	43	1	nogas	11.280	36.9	653	7.9	100	
Ca	44	1	nogas	-16.265	-15.8	22678	1.9	100	
Ti	47	1	nogas	0.147	1.3	150	0.0	2.5	
V	51	1	nogas	-14.100	-12.4	190685	6.8	2.5	
Cr	52	1	nogas	-1.203	-3.7	15363	2.8	2.5	
Mn	55	1	nogas	-0.019	-122.8	7265	3.1	2.5	
Fe	56	1	nogas	-11.537	-13.0	772770	2.0	100	
Co	59	1	nogas	0.026	37.1	330	21.2	2.5	
Ni	60	1	nogas	-0.436	-8.1	130	42.8	2.5	
Cu	63	1	nogas	-0.092	-25.8	1070	8.1	2	
Zn	66	1	nogas	-1.415	-14.4	1557	13.1	2.5	
As	75	1	nogas	-8.450	-18.9	27902	6.7	2.5	
Se	77	1	nogas	-114.498	-5.7	8919	2.1	2.5	
Se	82	1	nogas	-0.207	-66.0	120	8.3	2	
Sr	88	1	nogas	0.041	21.5	647	11.4	2.5	
Mo	95	1	nogas	0.148	33.6	327	25.7	2.5	
Ag	107	1	nogas	0.041	57.2	193	46.9	2.5	
Cd	111	1	nogas	0.043	63.0	40	50.0	1	
Sn	118	1	nogas	-2.713	-0.9	1190	5.9	5	
Sb	121	1	nogas	0.380	19.1	1470	17.2	2.5	
Ba	137	1	nogas	0.019	117.0	117	21.6	2.5	
Tl	205	1	nogas	0.176	54.0	957	53.9	1	
Pb	208	1	nogas	0.085	8.2	430	8.4	2.5	
U	238	1	nogas	0.038	32.3	293	33.5	2.5	
Si	28	1	nogas	-584.489	-15.6	1428663	1.6	5	
La	139	1	nogas	-8.995	-89.7	17	34.6	2.5	
Au	197	1	nogas	59.116	165.7	10	100.0	2.5	CCB Main CR1 Failed
Na	23	2	He	8.703	9.0	25938	1.7	100	
Mg	24	2	He	1.365	26.7	897	17.5	100	
Al	27	2	He	0.146	125.9	477	12.8	5	
K	39	2	He	-8.347	-76.2	119594	0.9	100	
Ca	43	2	He	17.310	56.4	33	45.8	100	
Ca	44	2	He	2.437	162.5	653	16.4	100	
V	51	2	He	-0.759	-4.9	4445	2.7	2.5	
Cr	52	2	He	-0.052	-38.1	1827	5.4	2.5	
Mn	55	2	He	0.007	139.1	323	7.8	2.5	
Fe	56	2	He	2.122	12.9	14716	3.2	100	
Co	59	2	He	0.021	56.0	110	39.6	2.5	
Ni	60	2	He	-0.468	-4.8	50	40.0	2.5	
Cu	63	2	He	-0.424	-9.2	450	21.2	2	
Zn	66	2	He	-1.537	-1.6	760	2.3	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.106	-7.4	243	3.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.295	5.7	853	7.2	2.5	
Se	78	2	He	0.425	135.5	253	9.9	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1000737	0.81	826909	121.02	70	125	
In	115	1	nogas	812804	1.87	692762	117.33	70	125	
Li	6	1	nogas	484959	3.45	540315	89.75	70	125	
Bi	209	1	nogas	544250	2.53	476916	114.12	70	125	
Ge	72	2	He	411851	2.16	368809	111.67	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	062_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T14:37:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	120.355	2.170	210033	2.54	100	120.4	90	110	CCV Main CR1-2 Failed
B	11	1	nogas	683.679	2.380	639303	2.79	500	136.7	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9737.592	0.516	94636029	1.47	10000	97.4	90	110	
Mg	24	1	nogas	9587.237	0.296	61872687	1.55	10000	95.9	90	110	
Al	27	1	nogas	105.842	1.262	866379	0.73	100	105.8	90	110	
P	31	1	nogas	469.834	0.297	283411	1.69	500	94.0	90	110	
K	39	1	nogas	10375.565	0.225	85145096	1.28	10000	103.8	90	110	
Ca	43	1	nogas	10541.734	0.780	152343	1.42	10000	105.4	90	110	
Ca	44	1	nogas	10609.979	0.843	2582755	2.15	10000	106.1	90	110	
Ti	47	1	nogas	100.099	1.683	73827	2.66	100	100.1	90	110	
V	51	1	nogas	84.148	2.683	1108172	3.29	100	84.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.259	0.665	806387	2.11	100	98.3	90	110	
Mn	55	1	nogas	102.907	1.121	1035532	2.34	100	102.9	90	110	
Fe	56	1	nogas	10578.351	1.681	88386479	1.39	10000	105.8	90	110	
Co	59	1	nogas	99.872	0.895	819861	1.16	100	99.9	90	110	
Ni	60	1	nogas	99.247	0.653	178557	1.91	100	99.2	90	110	
Cu	63	1	nogas	100.335	0.945	417146	1.69	100	100.3	90	110	
Zn	66	1	nogas	101.065	0.498	127701	1.91	100	101.1	90	110	
As	75	1	nogas	93.448	2.020	177849	0.61	100	93.4	90	110	
Se	77	1	nogas	55.208	10.122	16695	2.31	100	55.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.176	2.239	7849	2.69	100	101.2	90	110	
Sr	88	1	nogas	99.432	0.967	1006401	2.06	100	99.4	90	110	
Mo	95	1	nogas	97.940	0.870	189952	2.02	100	97.9	90	110	
Ag	107	1	nogas	97.780	0.614	426086	1.18	100	97.8	90	110	
Cd	111	1	nogas	102.001	0.447	86583	1.01	100	102.0	90	110	
Sn	118	1	nogas	97.314	2.688	252860	1.44	100	97.3	90	110	
Sb	121	1	nogas	96.721	0.912	375457	1.83	100	96.7	90	110	
Ba	137	1	nogas	96.931	2.609	129459	1.45	100	96.9	90	110	
Tl	205	1	nogas	100.616	7.492	531319	2.48	100	100.6	90	110	
Pb	208	1	nogas	100.346	3.289	375891	2.21	100	100.3	90	110	
U	238	1	nogas	90.194	6.501	693681	2.04	100	90.2	90	110	
Li	7	1	nogas	114.886	2.366	566716	2.93	100	114.9	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4302.074	1.548	3776960	1.54	5000	86.0	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	95.124	3.775	74130	2.50	100	95.1	90	110	
La	139	1	nogas	239.140	17.525	227	15.50	100	239.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	55.030	163.540	10	100.00	100	55.0	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	100.159	6.808	223341	1.73	100	100.2	90	110	
Na	23	2	He	10451.027	2.008	8291496	0.98	10000	104.5	90	110	
Mg	24	2	He	10299.376	1.647	4635294	0.52	10000	103.0	90	110	
Al	27	2	He	102.244	3.912	32245	3.16	100	102.2	90	110	
K	39	2	He	10079.401	1.681	6161910	1.36	10000	100.8	90	110	
Ca	43	2	He	9681.203	4.415	15597	3.72	10000	96.8	90	110	
Ca	44	2	He	10045.370	1.142	272760	2.11	10000	100.5	90	110	
V	51	2	He	101.526	2.223	331769	0.66	100	101.5	90	110	
Cr	52	2	He	102.177	1.736	343524	2.66	100	102.2	90	110	
Mn	55	2	He	100.711	0.418	273677	1.96	100	100.7	90	110	
Fe	56	2	He	10340.500	1.595	31111350	1.91	10000	103.4	90	110	
Co	59	2	He	104.116	2.486	427198	2.01	100	104.1	90	110	
Ni	60	2	He	102.947	3.758	102838	2.57	100	102.9	90	110	
Cu	63	2	He	102.975	4.649	251067	3.06	100	103.0	90	110	
Zn	66	2	He	99.504	2.700	61536	1.01	100	99.5	90	110	
As	75	2	He	98.689	0.619	60848	1.78	100	98.7	90	110	
Sb	121	2	He	97.693	2.010	269501	2.14	100	97.7	90	110	
Se	78	2	He	95.789	5.291	5436	3.59	100	95.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1151045	1.47	826909	139.20	70	125	ISTD Failed
In	115	1	nogas	912625	1.45	692762	131.74	70	125	ISTD Failed
Li	6	1	nogas	459092	2.75	540315	84.97	70	125	
Bi	209	1	nogas	559010	5.50	476916	117.21	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	448042	1.69	368809	121.48	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	065_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T14:44:42-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.003	101.0	53	10.8	1	
B	11	1	nogas	4.995	9.9	7065	5.0	10	
Na	23	1	nogas	5.147	10.0	237399	1.3	100	
Mg	24	1	nogas	1.771	21.8	16277	13.7	100	
Al	27	1	nogas	2.462	12.5	27701	9.8	5	
P	31	1	nogas	-5.198	-33.7	19808	3.7	10	
K	39	1	nogas	-6.155	-93.4	3033659	0.2	100	
Ca	43	1	nogas	4.844	211.3	627	23.7	100	
Ca	44	1	nogas	-20.737	-9.9	23746	3.0	100	
Ti	47	1	nogas	0.056	105.0	100	40.0	2.5	
V	51	1	nogas	-14.631	-5.7	203721	4.1	2.5	
Cr	52	1	nogas	-1.345	-8.2	15697	4.4	2.5	
Mn	55	1	nogas	-0.035	-95.5	7782	3.6	2.5	
Fe	56	1	nogas	4.344	36.6	968270	1.0	100	
Co	59	1	nogas	0.014	25.3	263	9.6	2.5	
Ni	60	1	nogas	-0.445	-6.0	127	35.6	2.5	
Cu	63	1	nogas	-0.067	-13.4	1263	4.1	2	
Zn	66	1	nogas	-1.761	-3.6	1297	4.6	2.5	
As	75	1	nogas	-7.184	-9.3	32186	1.7	2.5	
Se	77	1	nogas	-111.923	-1.9	9833	2.0	2.5	
Se	82	1	nogas	-0.077	-1587.6	140	62.3	2	
Sr	88	1	nogas	0.026	14.6	557	6.3	2.5	
Mo	95	1	nogas	0.069	49.1	210	29.0	2.5	
Ag	107	1	nogas	0.011	122.2	87	65.6	2.5	
Cd	111	1	nogas	0.031	94.4	33	69.3	1	
Sn	118	1	nogas	-3.058	-0.3	447	5.6	5	
Sb	121	1	nogas	0.082	8.6	507	4.1	2.5	
Ba	137	1	nogas	-0.008	-180.8	90	19.2	2.5	
Tl	205	1	nogas	0.014	47.0	117	32.5	1	
Pb	208	1	nogas	0.031	15.5	233	9.9	2.5	
U	238	1	nogas	0.018	34.0	140	31.1	2.5	
Si	28	1	nogas	-413.044	-16.8	1631053	1.1	5	
La	139	1	nogas	22.828	32.8	43	13.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-6.308	-871.5	3	173.2	2.5	
Na	23	2	He	10.133	12.6	28455	3.2	100	
Mg	24	2	He	2.065	8.5	1250	5.2	100	
Al	27	2	He	1.253	41.5	837	19.7	5	
K	39	2	He	-6.694	-61.0	127127	1.7	100	
Ca	43	2	He	18.355	71.7	37	56.8	100	
Ca	44	2	He	2.633	166.4	693	16.8	100	
V	51	2	He	-0.806	-6.9	4544	4.8	2.5	
Cr	52	2	He	-0.079	-59.3	1840	8.0	2.5	
Mn	55	2	He	0.028	96.5	397	19.1	2.5	
Fe	56	2	He	3.289	3.7	18933	1.6	100	
Co	59	2	He	0.011	69.9	77	41.9	2.5	
Ni	60	2	He	-0.471	-6.7	50	60.0	2.5	
Cu	63	2	He	-0.349	-2.6	650	3.1	2	
Zn	66	2	He	-1.957	-7.1	557	15.0	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.074	-61.5	276	10.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.066	7.1	287	5.3	2.5	
Se	78	2	He	0.562	54.8	275	6.2	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1092719	1.28	826909	132.14	70	125	ISTD Failed
In	115	1	nogas	870515	1.86	692762	125.66	70	125	ISTD Failed
Li	6	1	nogas	411356	1.42	540315	76.13	70	125	
Bi	209	1	nogas	545797	2.68	476916	114.44	70	125	
Ge	72	2	He	434337	1.06	368809	117.77	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	076_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T15:10:26-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	120.587	3.818	211956	1.06	100	120.6	90	110	CCV Main CR1-2 Failed
B	11	1	nogas	691.193	2.940	651070	0.97	500	138.2	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9907.777	0.476	94676777	1.81	10000	99.1	90	110	
Mg	24	1	nogas	9761.834	0.346	61942374	1.35	10000	97.6	90	110	
Al	27	1	nogas	107.487	1.833	881092	0.90	100	107.5	90	110	
P	31	1	nogas	467.505	0.715	282571	1.38	500	93.5	90	110	
K	39	1	nogas	10124.737	1.498	83304512	2.24	10000	101.2	90	110	
Ca	43	1	nogas	10230.706	0.611	148110	1.59	10000	102.3	90	110	
Ca	44	1	nogas	10238.691	1.310	2497473	2.33	10000	102.4	90	110	
Ti	47	1	nogas	99.605	3.148	73559	2.14	100	99.6	90	110	
V	51	1	nogas	86.345	1.647	1129565	0.60	100	86.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.026	0.297	813701	0.89	100	99.0	90	110	
Mn	55	1	nogas	101.527	1.062	1023261	0.57	100	101.5	90	110	
Fe	56	1	nogas	10358.909	0.925	86715292	0.47	10000	103.6	90	110	
Co	59	1	nogas	97.760	1.415	803903	2.29	100	97.8	90	110	
Ni	60	1	nogas	99.893	1.901	180015	2.86	100	99.9	90	110	
Cu	63	1	nogas	98.483	0.661	410117	0.75	100	98.5	90	110	
Zn	66	1	nogas	99.113	0.585	125497	1.25	100	99.1	90	110	
As	75	1	nogas	94.041	1.829	178990	0.40	100	94.0	90	110	
Se	77	1	nogas	26.524	42.359	15630	2.63	100	26.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.955	1.237	7692	1.58	100	99.0	90	110	
Sr	88	1	nogas	99.138	2.221	1005035	2.67	100	99.1	90	110	
Mo	95	1	nogas	97.650	1.389	189685	1.75	100	97.7	90	110	
Ag	107	1	nogas	97.454	0.540	425341	0.50	100	97.5	90	110	
Cd	111	1	nogas	101.982	0.962	86890	0.70	100	102.0	90	110	
Sn	118	1	nogas	96.612	2.712	252078	2.55	100	96.6	90	110	
Sb	121	1	nogas	96.015	0.422	373297	0.61	100	96.0	90	110	
Ba	137	1	nogas	96.511	2.007	129402	1.81	100	96.5	90	110	
Tl	205	1	nogas	99.731	5.139	537666	3.47	100	99.7	90	110	
Pb	208	1	nogas	100.408	3.038	383497	1.52	100	100.4	90	110	
U	238	1	nogas	91.602	4.788	718846	2.11	100	91.6	90	110	
Li	7	1	nogas	113.411	0.687	564256	2.86	100	113.4	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4087.763	1.028	3689270	1.00	5000	81.8	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	95.677	2.029	74860	1.84	100	95.7	90	110	
La	139	1	nogas	245.986	24.491	233	21.99	100	246.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	87.620	65.487	13	43.30	100	87.6	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	99.464	5.449	226347	3.34	100	99.5	90	110	
Na	23	2	He	10335.397	2.116	8223815	2.01	10000	103.4	90	110	
Mg	24	2	He	10403.723	1.395	4697033	3.12	10000	104.0	90	110	
Al	27	2	He	101.406	0.862	32088	2.90	100	101.4	90	110	
K	39	2	He	9788.405	1.873	6004289	0.23	10000	97.9	90	110	
Ca	43	2	He	9416.994	8.330	15203	6.42	10000	94.2	90	110	
Ca	44	2	He	9727.096	5.388	264698	3.31	10000	97.3	90	110	
V	51	2	He	100.083	0.645	328200	2.67	100	100.1	90	110	
Cr	52	2	He	101.102	1.882	340810	0.66	100	101.1	90	110	
Mn	55	2	He	95.952	3.717	261391	2.25	100	96.0	90	110	
Fe	56	2	He	9926.556	5.397	29932748	3.49	10000	99.3	90	110	
Co	59	2	He	100.508	4.112	413412	2.08	100	100.5	90	110	
Ni	60	2	He	100.893	4.027	101068	2.19	100	100.9	90	110	
Cu	63	2	He	102.808	1.705	251478	1.95	100	102.8	90	110	
Zn	66	2	He	102.179	1.142	63335	1.39	100	102.2	90	110	
As	75	2	He	95.838	3.750	59239	1.76	100	95.8	90	110	
Sb	121	2	He	93.676	4.892	259020	3.01	100	93.7	90	110	
Se	78	2	He	94.548	3.304	5389	4.84	100	94.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1152880	1.03	826909	139.42	70	125	ISTD Failed
In	115	1	nogas	916003	0.27	692762	132.22	70	125	ISTD Failed
Li	6	1	nogas	462698	3.37	540315	85.63	70	125	
Bi	209	1	nogas	569563	2.73	476916	119.43	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	449325	2.06	368809	121.83	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	077_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T15:12:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.039	84.2	120	46.4	1	
B	11	1	nogas	17.677	14.7	19420	11.8	10	CCB Main CR1 Failed
Na	23	1	nogas	8.353	12.6	267129	2.4	100	
Mg	24	1	nogas	3.672	22.4	28060	17.5	100	
Al	27	1	nogas	5.214	23.4	50461	19.1	5	CCB Main CR1 Failed
P	31	1	nogas	-4.529	-26.2	20839	3.1	10	
K	39	1	nogas	-17.137	-5.6	3050366	0.5	100	
Ca	43	1	nogas	9.588	22.9	713	4.0	100	
Ca	44	1	nogas	-23.120	-13.4	23973	2.8	100	
Ti	47	1	nogas	0.166	31.3	183	20.7	2.5	
V	51	1	nogas	-24.157	-1.7	125987	3.1	2.5	
Cr	52	1	nogas	-1.678	-2.8	13639	3.0	2.5	
Mn	55	1	nogas	-0.069	-62.9	7705	5.3	2.5	
Fe	56	1	nogas	5.494	63.7	1009990	2.7	100	
Co	59	1	nogas	0.034	21.0	437	13.4	2.5	
Ni	60	1	nogas	-0.419	-2.0	177	8.6	2.5	
Cu	63	1	nogas	0.026	11.3	1683	0.9	2	
Zn	66	1	nogas	-1.753	-3.5	1350	5.9	2.5	
As	75	1	nogas	-13.012	-4.1	25091	3.3	2.5	
Se	77	1	nogas	-171.768	-3.7	7935	3.2	2.5	
Se	82	1	nogas	-0.816	-28.0	90	19.2	2	
Sr	88	1	nogas	0.050	20.1	810	11.9	2.5	
Mo	95	1	nogas	0.114	58.5	303	41.7	2.5	
Ag	107	1	nogas	0.033	28.0	183	22.0	2.5	
Cd	111	1	nogas	0.042	83.2	43	66.6	1	
Sn	118	1	nogas	-2.617	-5.0	1543	20.5	5	
Sb	121	1	nogas	0.377	14.4	1643	12.5	2.5	
Ba	137	1	nogas	0.026	140.3	137	33.8	2.5	
Tl	205	1	nogas	0.167	45.9	950	47.1	1	
Pb	208	1	nogas	0.097	17.9	493	17.0	2.5	
U	238	1	nogas	0.041	30.8	330	34.1	2.5	
Si	28	1	nogas	-780.159	-17.3	1528587	4.0	5	
La	139	1	nogas	66.113	31.8	80	21.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	57.377	165.5	10	100.0	2.5	CCB Main CR1 Failed
Na	23	2	He	10.552	9.3	29053	2.0	100	
Mg	24	2	He	2.794	9.9	1583	7.4	100	
Al	27	2	He	2.829	16.2	1323	11.1	5	
K	39	2	He	-11.901	-52.1	125292	2.1	100	
Ca	43	2	He	16.114	46.2	33	34.6	100	
Ca	44	2	He	6.908	28.9	813	6.8	100	
V	51	2	He	-1.346	-2.9	2897	4.0	2.5	
Cr	52	2	He	-0.041	-48.5	1980	2.6	2.5	
Mn	55	2	He	0.011	568.0	353	45.8	2.5	
Fe	56	2	He	8.494	3.7	34443	3.2	100	
Co	59	2	He	0.026	38.7	137	29.6	2.5	
Ni	60	2	He	-0.458	-3.3	63	24.1	2.5	
Cu	63	2	He	-0.347	-6.0	660	6.9	2	
Zn	66	2	He	-1.915	-1.3	587	2.6	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.191	-29.9	208	17.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.316	7.5	963	6.6	2.5	
Se	78	2	He	-0.070	-1082.0	244	17.1	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1129231	0.32	826909	136.56	70	125	ISTD Failed
In	115	1	nogas	893440	0.71	692762	128.97	70	125	ISTD Failed
Li	6	1	nogas	453030	0.75	540315	83.85	70	125	
Bi	209	1	nogas	568654	3.44	476916	119.24	70	125	
Ge	72	2	He	438517	0.78	368809	118.90	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	087_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T15:56:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	108.225	1.092	208630	0.14	100	108.2	90	110	
B	11	1	nogas	599.280	2.232	619405	1.43	500	119.9	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10042.897	1.369	88772867	1.78	10000	100.4	90	110	
Mg	24	1	nogas	9818.525	1.617	57636326	2.12	10000	98.2	90	110	
Al	27	1	nogas	107.309	0.964	810041	0.41	100	107.3	90	110	
P	31	1	nogas	472.121	1.696	262549	2.00	500	94.4	90	110	
K	39	1	nogas	10155.022	1.908	76919418	1.68	10000	101.6	90	110	
Ca	43	1	nogas	10255.824	2.503	136693	1.86	10000	102.6	90	110	
Ca	44	1	nogas	10244.810	2.116	2300669	1.72	10000	102.4	90	110	
Ti	47	1	nogas	101.025	2.924	68713	3.07	100	101.0	90	110	
V	51	1	nogas	126.063	1.307	1371439	0.96	100	126.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.620	2.262	753684	2.90	100	99.6	90	110	
Mn	55	1	nogas	101.353	2.145	940624	1.90	100	101.4	90	110	
Fe	56	1	nogas	10336.098	1.477	79676308	1.46	10000	103.4	90	110	
Co	59	1	nogas	98.317	1.351	744422	1.85	100	98.3	90	110	
Ni	60	1	nogas	98.914	2.263	164142	3.03	100	98.9	90	110	
Cu	63	1	nogas	99.139	1.975	380119	1.37	100	99.1	90	110	
Zn	66	1	nogas	98.537	1.914	114894	1.13	100	98.5	90	110	
As	75	1	nogas	113.587	3.125	190601	2.04	100	113.6	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	290.468	8.083	23619	2.93	100	290.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.041	7.046	6878	6.91	100	96.0	90	110	
Sr	88	1	nogas	98.459	1.044	919006	0.38	100	98.5	90	110	
Mo	95	1	nogas	97.935	0.654	175166	0.35	100	97.9	90	110	
Ag	107	1	nogas	96.851	1.181	389260	1.73	100	96.9	90	110	
Cd	111	1	nogas	100.603	1.248	77649	3.83	100	100.6	90	110	
Sn	118	1	nogas	97.237	2.490	229642	0.54	100	97.2	90	110	
Sb	121	1	nogas	95.766	1.646	342821	0.85	100	95.8	90	110	
Ba	137	1	nogas	98.020	4.302	118967	3.03	100	98.0	90	110	
Tl	205	1	nogas	99.039	1.755	485918	1.27	100	99.0	90	110	
Pb	208	1	nogas	100.907	2.910	350638	2.22	100	100.9	90	110	
U	238	1	nogas	89.691	1.726	640635	0.84	100	89.7	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	110.100	2.160	601334	0.98	100	110.1	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4073.315	3.265	3391063	1.04	5000	81.5	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	99.414	3.541	70407	1.36	100	99.4	90	110	
La	139	1	nogas	287.697	37.580	243	34.95	100	287.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-4.090	-1438.183	3	173.21	100	-4.1	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.481	2.292	203976	1.55	100	98.5	90	110	
Na	23	2	He	10266.796	0.874	7755380	0.26	10000	102.7	90	110	
Mg	24	2	He	10280.437	1.016	4405161	1.27	10000	102.8	90	110	
Al	27	2	He	105.140	5.104	31553	4.42	100	105.1	90	110	
K	39	2	He	9920.260	1.097	5775568	0.45	10000	99.2	90	110	
Ca	43	2	He	10065.324	3.031	15441	3.23	10000	100.7	90	110	
Ca	44	2	He	10178.844	3.086	263072	2.85	10000	101.8	90	110	
V	51	2	He	103.334	1.698	321382	1.33	100	103.3	90	110	
Cr	52	2	He	98.263	1.792	314524	1.14	100	98.3	90	110	
Mn	55	2	He	98.179	1.928	253963	1.71	100	98.2	90	110	
Fe	56	2	He	10258.373	2.099	29380621	1.76	10000	102.6	90	110	
Co	59	2	He	104.440	2.118	407987	2.14	100	104.4	90	110	
Ni	60	2	He	104.621	0.944	99509	0.43	100	104.6	90	110	
Cu	63	2	He	105.307	3.505	244470	2.94	100	105.3	90	110	
Zn	66	2	He	101.455	3.025	59714	3.18	100	101.5	90	110	
As	75	2	He	98.947	0.926	58071	0.31	100	98.9	90	110	
Sb	121	2	He	98.367	1.723	258327	1.62	100	98.4	90	110	
Se	78	2	He	101.490	5.271	5471	4.84	100	101.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1061573	0.84	826909	128.38	70	125	ISTD Failed
In	115	1	nogas	829661	2.91	692762	119.76	70	125	
Li	6	1	nogas	507065	1.06	540315	93.85	70	125	
Bi	209	1	nogas	518016	0.93	476916	108.62	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	426505	0.64	368809	115.64	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	088_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T15:58:24-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.059	8.6	157	7.4	1	
B	11	1	nogas	12.615	18.8	14986	14.7	10	CCB Main CR1 Failed
Na	23	1	nogas	8.587	15.0	255699	4.0	100	
Mg	24	1	nogas	4.074	12.2	28994	8.1	100	
Al	27	1	nogas	3.626	16.4	35511	12.1	5	
P	31	1	nogas	-6.587	-15.1	18506	2.4	10	
K	39	1	nogas	-15.730	-16.8	2872630	1.1	100	
Ca	43	1	nogas	8.394	90.4	653	15.0	100	
Ca	44	1	nogas	-38.420	-8.8	19107	3.8	100	
Ti	47	1	nogas	0.104	62.2	130	33.5	2.5	
V	51	1	nogas	9.552	14.3	398900	3.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.376	-19.0	22297	2.5	2.5	
Mn	55	1	nogas	-0.054	-27.8	7372	2.1	2.5	
Fe	56	1	nogas	6.727	48.2	957092	2.2	100	
Co	59	1	nogas	0.042	18.1	463	11.9	2.5	
Ni	60	1	nogas	-0.444	-3.9	123	23.4	2.5	
Cu	63	1	nogas	-0.105	-7.4	1080	2.8	2	
Zn	66	1	nogas	-2.166	-3.1	800	9.4	2.5	
As	75	1	nogas	5.892	21.4	48443	3.7	2.5	CCB Main CR1 Failed
Se	77	1	nogas	68.869	15.7	15844	2.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.116	-261.2	133	15.6	2	
Sr	88	1	nogas	0.061	9.4	867	5.8	2.5	
Mo	95	1	nogas	0.141	45.8	333	34.8	2.5	
Ag	107	1	nogas	0.047	16.4	227	13.5	2.5	
Cd	111	1	nogas	0.041	110.9	40	90.1	1	
Sn	118	1	nogas	-2.725	-3.8	1183	18.2	5	
Sb	121	1	nogas	0.427	6.7	1720	5.5	2.5	
Ba	137	1	nogas	0.026	130.9	127	31.9	2.5	
Tl	205	1	nogas	0.190	47.2	993	49.3	1	
Pb	208	1	nogas	0.073	19.2	370	11.8	2.5	
U	238	1	nogas	0.047	39.5	347	43.4	2.5	
Si	28	1	nogas	-1037.713	-15.6	1330858	5.1	5	
La	139	1	nogas	60.885	39.5	70	24.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	29.430	199.0	7	86.6	2.5	CCB Main CR1 Failed
Na	23	2	He	8.477	23.0	27230	4.3	100	
Mg	24	2	He	3.470	5.8	1867	4.3	100	
Al	27	2	He	2.332	0.6	1163	2.6	5	
K	39	2	He	-15.371	-62.4	122285	2.3	100	
Ca	43	2	He	26.883	40.9	50	34.6	100	
Ca	44	2	He	7.316	51.3	817	10.3	100	
V	51	2	He	0.994	14.8	10136	2.2	2.5	
Cr	52	2	He	-0.036	-273.8	1983	16.4	2.5	
Mn	55	2	He	0.040	55.5	427	11.8	2.5	
Fe	56	2	He	7.719	6.8	31899	2.6	100	
Co	59	2	He	0.018	55.9	103	39.1	2.5	
Ni	60	2	He	-0.475	-3.6	47	32.7	2.5	
Cu	63	2	He	-0.403	-8.4	523	14.8	2	
Zn	66	2	He	-2.318	-3.2	347	11.7	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	0.146	23.8	407	3.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.310	13.9	943	14.4	2.5	
Se	78	2	He	0.714	56.7	283	8.5	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1059634	0.41	826909	128.14	70	125	ISTD Failed
In	115	1	nogas	828423	1.88	692762	119.58	70	125	
Li	6	1	nogas	459367	1.86	540315	85.02	70	125	
Bi	209	1	nogas	523219	3.97	476916	109.71	70	125	
Ge	72	2	He	435280	2.36	368809	118.02	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	096_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T16:31:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	117.073	3.341	205068	0.61	100	117.1	90	110	CCV Main CR1-2 Failed
B	11	1	nogas	657.999	3.946	617653	1.65	500	131.6	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9907.883	1.160	89032429	0.51	10000	99.1	90	110	
Mg	24	1	nogas	9720.455	1.061	58005237	0.58	10000	97.2	90	110	
Al	27	1	nogas	104.754	0.710	796365	1.07	100	104.8	90	110	
P	31	1	nogas	479.077	1.077	267894	1.28	500	95.8	90	110	
K	39	1	nogas	10337.307	0.181	78783658	1.28	10000	103.4	90	110	
Ca	43	1	nogas	10442.477	1.167	140133	1.45	10000	104.4	90	110	
Ca	44	1	nogas	10589.031	0.855	2393389	1.35	10000	105.9	90	110	
Ti	47	1	nogas	100.449	2.033	68787	2.31	100	100.4	90	110	
V	51	1	nogas	115.002	6.556	1287857	4.90	100	115.0	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.728	1.729	766957	2.48	100	100.7	90	110	
Mn	55	1	nogas	103.461	1.567	966669	2.32	100	103.5	90	110	
Fe	56	1	nogas	10586.891	0.873	82149769	1.90	10000	105.9	90	110	
Co	59	1	nogas	98.398	1.430	750090	1.80	100	98.4	90	110	
Ni	60	1	nogas	99.937	1.735	166954	2.58	100	99.9	90	110	
Cu	63	1	nogas	100.776	1.206	389020	1.12	100	100.8	90	110	
Zn	66	1	nogas	98.335	0.696	115457	1.26	100	98.3	90	110	
As	75	1	nogas	110.853	1.788	188271	1.03	100	110.9	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	208.438	11.878	20889	3.04	100	208.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.656	5.327	7112	5.99	100	98.7	90	110	
Sr	88	1	nogas	100.190	0.855	941525	0.27	100	100.2	90	110	
Mo	95	1	nogas	100.675	1.286	181278	0.16	100	100.7	90	110	
Ag	107	1	nogas	98.445	1.676	398384	2.56	100	98.4	90	110	
Cd	111	1	nogas	102.379	3.335	80579	5.26	100	102.4	90	110	
Sn	118	1	nogas	97.802	2.475	235483	1.73	100	97.8	90	110	
Sb	121	1	nogas	97.437	1.199	351188	1.04	100	97.4	90	110	
Ba	137	1	nogas	96.539	2.078	119498	1.47	100	96.5	90	110	
Tl	205	1	nogas	98.655	4.707	493957	2.04	100	98.7	90	110	
Pb	208	1	nogas	99.563	4.371	353132	2.37	100	99.6	90	110	
U	238	1	nogas	89.362	5.371	651360	3.19	100	89.4	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	111.938	1.611	555236	1.65	100	111.9	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	3662.422	2.192	3247882	1.67	5000	73.2	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	97.955	1.525	70756	0.95	100	98.0	90	110	
La	139	1	nogas	235.276	23.404	207	19.56	100	235.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	95.517	161.579	13	114.56	100	95.5	90	110	
Tl	203	1	nogas	97.442	2.700	206084	2.40	100	97.4	90	110	
Na	23	2	He	10360.446	2.452	7967347	1.76	10000	103.6	90	110	
Mg	24	2	He	10214.751	1.267	4456107	0.17	10000	102.1	90	110	
Al	27	2	He	99.238	2.338	30355	2.59	100	99.2	90	110	
K	39	2	He	9801.783	1.258	5811705	0.81	10000	98.0	90	110	
Ca	43	2	He	9854.357	1.388	15393	2.64	10000	98.5	90	110	
Ca	44	2	He	9808.016	2.658	258079	1.47	10000	98.1	90	110	
V	51	2	He	101.764	2.418	322313	1.16	100	101.8	90	110	
Cr	52	2	He	97.231	1.623	316884	0.29	100	97.2	90	110	
Mn	55	2	He	96.129	1.122	253175	0.22	100	96.1	90	110	
Fe	56	2	He	9883.492	2.220	28818657	1.17	10000	98.8	90	110	
Co	59	2	He	101.679	1.984	404368	0.91	100	101.7	90	110	
Ni	60	2	He	102.707	3.132	99451	1.79	100	102.7	90	110	
Cu	63	2	He	104.481	1.728	246971	0.65	100	104.5	90	110	
Zn	66	2	He	98.271	3.447	58927	2.26	100	98.3	90	110	
As	75	2	He	96.839	3.726	57858	2.38	100	96.8	90	110	
Sb	121	2	He	95.768	2.873	256042	2.22	100	95.8	90	110	
Se	78	2	He	95.557	1.763	5259	0.49	100	95.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1068806	1.13	826909	129.25	70	125	ISTD Failed
In	115	1	nogas	845845	2.36	692762	122.10	70	125	
Li	6	1	nogas	461011	2.90	540315	85.32	70	125	
Bi	209	1	nogas	529034	2.67	476916	110.93	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	434262	1.34	368809	117.75	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	097_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T16:34:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.074	65.1	167	45.8	1	
B	11	1	nogas	17.937	15.9	18189	13.0	10	CCB Main CR1 Failed
Na	23	1	nogas	9.428	16.2	270913	3.6	100	
Mg	24	1	nogas	4.993	21.6	35407	16.9	100	
Al	27	1	nogas	2.212	10.1	25258	4.9	5	
P	31	1	nogas	-4.623	-15.9	19734	0.3	10	
K	39	1	nogas	-14.576	-87.1	2914042	1.2	100	
Ca	43	1	nogas	7.627	87.3	650	12.0	100	
Ca	44	1	nogas	-41.416	-2.5	18663	2.1	100	
Ti	47	1	nogas	0.131	12.9	150	6.7	2.5	
V	51	1	nogas	-6.605	-12.1	267593	4.5	2.5	
Cr	52	1	nogas	-1.075	-2.6	17402	1.0	2.5	
Mn	55	1	nogas	-0.025	-57.9	7725	0.5	2.5	
Fe	56	1	nogas	-0.161	-2672.5	915093	1.6	100	
Co	59	1	nogas	0.035	25.6	420	14.5	2.5	
Ni	60	1	nogas	-0.411	-7.6	180	28.9	2.5	
Cu	63	1	nogas	-0.043	-173.5	1330	19.5	2	
Zn	66	1	nogas	-2.276	-1.5	683	5.5	2.5	
As	75	1	nogas	-2.315	-21.6	38084	3.2	2.5	
Se	77	1	nogas	-32.846	-0.8	12441	2.1	2.5	
Se	82	1	nogas	0.011	6274.5	143	31.5	2	
Sr	88	1	nogas	0.054	45.8	810	26.7	2.5	
Mo	95	1	nogas	0.140	29.2	333	20.0	2.5	
Ag	107	1	nogas	0.046	49.0	227	40.0	2.5	
Cd	111	1	nogas	0.037	102.8	37	78.7	1	
Sn	118	1	nogas	-2.532	-3.2	1663	12.7	5	
Sb	121	1	nogas	0.531	7.3	2117	4.6	2.5	
Ba	137	1	nogas	0.018	151.2	120	28.9	2.5	
Tl	205	1	nogas	0.195	50.1	1033	52.5	1	
Pb	208	1	nogas	0.089	20.6	433	19.4	2.5	
U	238	1	nogas	0.045	48.7	340	51.0	2.5	
Si	28	1	nogas	-1322.686	-18.4	1229468	6.1	5	
La	139	1	nogas	-1.499	-1299.9	23	65.5	2.5	
Au	197	1	nogas	-6.032	-919.3	3	173.2	2.5	
Na	23	2	He	11.875	8.1	29971	1.8	100	
Mg	24	2	He	3.482	8.8	1880	7.4	100	
Al	27	2	He	1.480	23.9	910	12.5	5	
K	39	2	He	-12.038	-17.1	124795	1.9	100	
Ca	43	2	He	-0.790	-937.2	7	173.2	100	
Ca	44	2	He	1.759	151.1	673	8.2	100	
V	51	2	He	-0.180	-32.5	6523	1.4	2.5	
Cr	52	2	He	-0.017	-205.9	2053	7.9	2.5	
Mn	55	2	He	0.058	25.7	477	8.5	2.5	
Fe	56	2	He	5.711	6.4	26143	2.2	100	
Co	59	2	He	0.014	122.6	87	78.5	2.5	
Ni	60	2	He	-0.454	-7.5	67	48.2	2.5	
Cu	63	2	He	-0.291	-22.8	793	21.4	2	
Zn	66	2	He	-2.388	-4.3	307	18.0	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.052	-90.9	290	9.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.411	11.9	1213	9.1	2.5	
Se	78	2	He	0.945	10.3	297	4.1	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1072264	2.04	826909	129.67	70	125	ISTD Failed
In	115	1	nogas	846268	1.37	692762	122.16	70	125	
Li	6	1	nogas	419122	0.78	540315	77.57	70	125	
Bi	209	1	nogas	531129	4.20	476916	111.37	70	125	
Ge	72	2	He	437036	2.39	368809	118.50	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	108_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T17:05:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	105.792	2.387	202562	1.69	100	105.8	90	110	
B	11	1	nogas	597.487	0.775	613562	2.11	500	119.5	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10203.021	1.197	87063229	1.51	10000	102.0	90	110	
Mg	24	1	nogas	9956.814	2.478	56413147	1.20	10000	99.6	90	110	
Al	27	1	nogas	101.787	0.173	760305	0.83	100	101.8	90	110	
P	31	1	nogas	464.158	0.475	255614	0.75	500	92.8	90	110	
K	39	1	nogas	10166.788	0.462	76153329	0.63	10000	101.7	90	110	
Ca	43	1	nogas	10096.741	0.975	133113	1.88	10000	101.0	90	110	
Ca	44	1	nogas	10230.456	2.457	2272523	3.34	10000	102.3	90	110	
Ti	47	1	nogas	97.079	0.912	65298	0.84	100	97.1	90	110	
V	51	1	nogas	82.355	0.836	995741	1.21	100	82.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	97.731	0.502	731619	1.38	100	97.7	90	110	
Mn	55	1	nogas	101.541	1.120	932021	1.97	100	101.5	90	110	
Fe	56	1	nogas	10481.575	1.011	79895887	1.84	10000	104.8	90	110	
Co	59	1	nogas	97.588	0.889	730697	1.37	100	97.6	90	110	
Ni	60	1	nogas	98.300	1.458	161311	2.15	100	98.3	90	110	
Cu	63	1	nogas	99.540	1.031	377459	1.50	100	99.5	90	110	
Zn	66	1	nogas	99.062	1.341	114212	0.60	100	99.1	90	110	
As	75	1	nogas	90.772	1.446	158731	0.94	100	90.8	90	110	
Se	77	1	nogas	19.225	69.623	13979	2.63	100	19.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.763	1.875	6992	2.68	100	98.8	90	110	
Sr	88	1	nogas	101.148	1.620	933612	1.00	100	101.1	90	110	
Mo	95	1	nogas	101.104	0.908	178824	0.53	100	101.1	90	110	
Ag	107	1	nogas	99.856	1.907	396922	2.81	100	99.9	90	110	
Cd	111	1	nogas	101.349	0.962	82511	1.87	100	101.3	90	110	
Sn	118	1	nogas	96.428	1.398	240393	0.54	100	96.4	90	110	
Sb	121	1	nogas	101.856	0.895	360582	0.06	100	101.9	90	110	
Ba	137	1	nogas	97.034	2.774	124308	2.79	100	97.0	90	110	
Tl	205	1	nogas	98.092	4.937	532502	2.39	100	98.1	90	110	
Pb	208	1	nogas	100.096	5.309	384836	2.63	100	100.1	90	110	
U	238	1	nogas	92.499	1.227	731568	2.12	100	92.5	90	110	
Li	7	1	nogas	108.273	1.402	588038	1.32	100	108.3	90	110	
Si	28	1	nogas	3133.504	2.686	2979423	1.25	5000	62.7	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	96.470	1.115	72121	1.47	100	96.5	90	110	
La	139	1	nogas	280.088	17.080	250	14.42	100	280.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	111.266	232.435	17	173.21	100	111.3	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.518	3.973	225812	0.97	100	98.5	90	110	
Na	23	2	He	10242.510	2.072	7344868	1.39	10000	102.4	90	110	
Mg	24	2	He	10239.281	2.051	4164857	1.14	10000	102.4	90	110	
Al	27	2	He	99.374	0.988	28342	1.23	100	99.4	90	110	
K	39	2	He	9707.543	1.135	5368091	0.21	10000	97.1	90	110	
Ca	43	2	He	9851.895	2.972	14346	2.38	10000	98.5	90	110	
Ca	44	2	He	9869.724	0.971	242192	0.79	10000	98.7	90	110	
V	51	2	He	97.721	2.094	288868	0.82	100	97.7	90	110	
Cr	52	2	He	98.609	1.159	299651	0.60	100	98.6	90	110	
Mn	55	2	He	99.051	1.103	243258	1.60	100	99.1	90	110	
Fe	56	2	He	10195.511	0.690	27723647	1.03	10000	102.0	90	110	
Co	59	2	He	103.040	1.459	382116	0.84	100	103.0	90	110	
Ni	60	2	He	102.579	1.189	92638	1.27	100	102.6	90	110	
Cu	63	2	He	104.336	2.375	229956	1.15	100	104.3	90	110	
Zn	66	2	He	98.618	2.626	55138	1.52	100	98.6	90	110	
As	75	2	He	97.317	1.904	54223	0.76	100	97.3	90	110	
Sb	121	2	He	100.819	0.801	251355	0.54	100	100.8	90	110	
Se	78	2	He	95.503	2.810	4901	1.87	100	95.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1049811	0.92	826909	126.96	70	125	ISTD Failed
In	115	1	nogas	875216	1.01	692762	126.34	70	125	ISTD Failed
Li	6	1	nogas	503732	2.25	540315	93.23	70	125	
Bi	209	1	nogas	573675	3.27	476916	120.29	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	404922	1.26	368809	109.79	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	109_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T17:07:58-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.071	35.9	180	24.2	1	
B	11	1	nogas	18.739	13.2	20925	12.5	10	CCB Main CR1 Failed
Na	23	1	nogas	41.320	5.9	525295	2.2	100	
Mg	24	1	nogas	6.320	19.8	40617	15.5	100	
Al	27	1	nogas	1.919	7.1	22481	2.4	5	
P	31	1	nogas	2.852	59.3	22991	1.6	10	
K	39	1	nogas	-19.048	-45.1	2810558	2.2	100	
Ca	43	1	nogas	1.566	457.7	557	18.4	100	
Ca	44	1	nogas	-43.646	-6.8	17709	3.0	100	
Ti	47	1	nogas	0.083	86.0	113	39.8	2.5	
V	51	1	nogas	-25.306	-1.6	107266	5.1	2.5	
Cr	52	1	nogas	-1.773	-1.8	11937	1.9	2.5	
Mn	55	1	nogas	-0.080	-27.7	7041	4.7	2.5	
Fe	56	1	nogas	-0.303	-1212.7	891406	1.0	100	
Co	59	1	nogas	0.028	21.2	357	11.7	2.5	
Ni	60	1	nogas	-0.373	-4.8	237	10.6	2.5	
Cu	63	1	nogas	0.194	24.4	2190	6.0	2	
Zn	66	1	nogas	-2.320	-3.7	617	13.5	2.5	
As	75	1	nogas	-15.002	-3.2	20652	4.5	2.5	
Se	77	1	nogas	-175.139	-2.3	7232	2.8	2.5	
Se	82	1	nogas	-1.005	-27.4	70	24.7	2	
Sr	88	1	nogas	0.077	13.7	1003	7.5	2.5	
Mo	95	1	nogas	0.127	22.6	303	16.6	2.5	
Ag	107	1	nogas	0.044	22.2	213	19.5	2.5	
Cd	111	1	nogas	0.065	88.9	60	76.4	1	
Sn	118	1	nogas	-2.770	-2.7	1117	15.4	5	
Sb	121	1	nogas	0.348	11.1	1420	7.8	2.5	
Ba	137	1	nogas	0.078	51.4	197	25.6	2.5	
Tl	205	1	nogas	0.196	50.2	1143	52.6	1	
Pb	208	1	nogas	0.066	48.5	387	36.2	2.5	
U	238	1	nogas	0.046	45.8	377	49.7	2.5	
Si	28	1	nogas	-1760.550	-4.3	1026140	1.1	5	
La	139	1	nogas	23.797	32.9	43	13.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	55.614	168.2	10	100.0	2.5	CCB Main CR1 Failed
Na	23	2	He	40.677	6.0	48493	1.1	100	
Mg	24	2	He	4.691	18.6	2234	13.0	100	
Al	27	2	He	1.302	24.6	793	8.9	5	
K	39	2	He	-14.426	-30.0	114657	1.8	100	
Ca	43	2	He	8.595	79.7	20	50.0	100	
Ca	44	2	He	9.095	87.4	803	21.3	100	
V	51	2	He	-1.365	-1.6	2628	3.2	2.5	
Cr	52	2	He	-0.057	-121.7	1790	13.7	2.5	
Mn	55	2	He	0.075	28.5	483	7.8	2.5	
Fe	56	2	He	5.752	11.6	24383	4.2	100	
Co	59	2	He	0.021	33.5	107	21.7	2.5	
Ni	60	2	He	-0.463	-5.3	53	39.0	2.5	
Cu	63	2	He	-0.149	-35.3	1047	10.5	2	
Zn	66	2	He	-2.481	-6.1	233	32.2	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.112	-35.6	237	12.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.264	17.0	763	15.1	2.5	
Se	78	2	He	0.550	168.4	256	17.1	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1045692	2.10	826909	126.46	70	125	ISTD Failed
In	115	1	nogas	855451	1.12	692762	123.48	70	125	
Li	6	1	nogas	464181	1.32	540315	85.91	70	125	
Bi	209	1	nogas	582762	4.08	476916	122.19	70	125	
Ge	72	2	He	406197	3.41	368809	110.14	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	120_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T17:58:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	104.183	1.070	207970	1.53	100	104.2	90	110	
B	11	1	nogas	587.867	1.447	629277	1.65	500	117.6	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10184.365	0.730	85844856	1.33	10000	101.8	90	110	
Mg	24	1	nogas	10028.540	0.977	56135126	1.06	10000	100.3	90	110	
Al	27	1	nogas	96.458	1.009	712340	1.53	100	96.5	90	110	
P	31	1	nogas	462.938	2.540	251931	1.87	500	92.6	90	110	
K	39	1	nogas	10004.721	1.858	74081714	0.12	10000	100.0	90	110	
Ca	43	1	nogas	10074.522	2.045	131218	1.84	10000	100.7	90	110	
Ca	44	1	nogas	10145.238	0.479	2226738	1.91	10000	101.5	90	110	
Ti	47	1	nogas	97.950	0.889	65100	1.69	100	97.9	90	110	
V	51	1	nogas	81.799	1.968	979353	2.09	100	81.8	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.338	0.989	727163	0.79	100	98.3	90	110	
Mn	55	1	nogas	102.082	1.689	925648	1.55	100	102.1	90	110	
Fe	56	1	nogas	10408.586	1.770	78391279	1.79	10000	104.1	90	110	
Co	59	1	nogas	97.436	0.583	720843	1.19	100	97.4	90	110	
Ni	60	1	nogas	98.134	1.490	159090	0.32	100	98.1	90	110	
Cu	63	1	nogas	98.268	1.207	368176	0.84	100	98.3	90	110	
Zn	66	1	nogas	98.302	1.903	112036	3.17	100	98.3	90	110	
As	75	1	nogas	88.508	2.045	153912	1.16	100	88.5	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	-6.630	-307.930	12928	4.86	100	-6.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.868	2.181	6848	3.87	100	97.9	90	110	
Sr	88	1	nogas	100.604	1.527	917612	2.11	100	100.6	90	110	
Mo	95	1	nogas	99.647	1.153	174160	1.93	100	99.6	90	110	
Ag	107	1	nogas	101.197	2.537	397401	2.74	100	101.2	90	110	
Cd	111	1	nogas	102.033	4.523	80308	4.15	100	102.0	90	110	
Sn	118	1	nogas	100.119	2.739	241102	3.33	100	100.1	90	110	
Sb	121	1	nogas	100.998	0.221	353321	1.92	100	101.0	90	110	
Ba	137	1	nogas	98.837	2.977	122416	2.20	100	98.8	90	110	
Tl	205	1	nogas	97.827	6.828	527473	3.42	100	97.8	90	110	
Pb	208	1	nogas	98.903	4.967	377915	2.54	100	98.9	90	110	
U	238	1	nogas	91.084	4.478	715515	2.82	100	91.1	90	110	
Li	7	1	nogas	107.585	0.264	609372	1.69	100	107.6	90	110	
Si	28	1	nogas	3423.161	2.862	3057709	1.14	5000	68.5	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	97.076	2.883	70156	0.97	100	97.1	90	110	
La	139	1	nogas	114.057	33.877	113	28.36	100	114.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	57.830	167.467	10	100.00	100	57.8	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	95.903	4.412	218422	0.94	100	95.9	90	110	
Na	23	2	He	10225.496	1.848	7464148	0.62	10000	102.3	90	110	
Mg	24	2	He	10173.627	1.205	4212752	0.93	10000	101.7	90	110	
Al	27	2	He	93.673	1.552	27224	2.51	100	93.7	90	110	
K	39	2	He	9713.907	2.197	5467740	1.53	10000	97.1	90	110	
Ca	43	2	He	9380.879	4.917	13902	3.76	10000	93.8	90	110	
Ca	44	2	He	9519.273	3.599	237725	1.57	10000	95.2	90	110	
V	51	2	He	99.409	1.404	299042	0.99	100	99.4	90	110	
Cr	52	2	He	100.136	0.286	309791	2.39	100	100.1	90	110	
Mn	55	2	He	97.760	2.430	244348	0.84	100	97.8	90	110	
Fe	56	2	He	9996.530	4.640	27657087	2.77	10000	100.0	90	110	
Co	59	2	He	100.320	5.153	378514	3.20	100	100.3	90	110	
Ni	60	2	He	100.766	1.641	92635	0.62	100	100.8	90	110	
Cu	63	2	He	103.586	1.685	232424	0.47	100	103.6	90	110	
Zn	66	2	He	100.602	0.629	57242	2.22	100	100.6	90	110	
As	75	2	He	97.249	1.529	55160	0.78	100	97.2	90	110	
Sb	121	2	He	98.516	3.501	249941	1.38	100	98.5	90	110	
Se	78	2	He	95.655	2.931	4996	1.69	100	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1037336	1.75	826909	125.45	70	125	ISTD Failed
In	115	1	nogas	846400	2.17	692762	122.18	70	125	
Li	6	1	nogas	525049	1.56	540315	97.17	70	125	
Bi	209	1	nogas	570143	3.64	476916	119.55	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	412230	2.12	368809	111.77	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	121_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T18:01:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.091	22.1	230	15.7	1	
B	11	1	nogas	30.018	9.4	33744	7.4	10	CCB Main CR1 Failed
Na	23	1	nogas	74.460	7.3	799240	4.1	100	
Mg	24	1	nogas	7.172	16.0	44994	12.7	100	
Al	27	1	nogas	1.937	4.1	22133	1.8	5	
P	31	1	nogas	2.193	12.4	22180	2.2	10	
K	39	1	nogas	-15.830	-53.5	2771816	0.6	100	
Ca	43	1	nogas	-5.244	-63.8	457	10.1	100	
Ca	44	1	nogas	-44.362	-3.4	17178	3.2	100	
Ti	47	1	nogas	0.204	69.3	190	46.8	2.5	
V	51	1	nogas	-25.975	-3.3	99553	8.0	2.5	
Cr	52	1	nogas	-1.782	-2.2	11617	1.7	2.5	
Mn	55	1	nogas	-0.081	-75.9	6875	8.1	2.5	
Fe	56	1	nogas	-0.465	-943.4	870863	2.1	100	
Co	59	1	nogas	0.033	62.0	387	37.5	2.5	
Ni	60	1	nogas	-0.366	-6.7	243	17.1	2.5	
Cu	63	1	nogas	0.168	8.7	2047	1.0	2	
Zn	66	1	nogas	-2.302	-2.7	623	10.7	2.5	
As	75	1	nogas	-15.633	-1.0	19398	2.5	2.5	
Se	77	1	nogas	-200.481	-2.1	6221	3.3	2.5	
Se	82	1	nogas	-0.345	-63.8	113	13.5	2	
Sr	88	1	nogas	0.085	14.4	1057	10.1	2.5	
Mo	95	1	nogas	0.118	33.2	280	22.3	2.5	
Ag	107	1	nogas	0.047	32.4	220	25.3	2.5	
Cd	111	1	nogas	0.028	79.6	30	57.7	1	
Sn	118	1	nogas	-2.637	-2.7	1410	10.9	5	
Sb	121	1	nogas	0.470	18.1	1807	15.1	2.5	
Ba	137	1	nogas	0.080	76.7	197	38.8	2.5	
Tl	205	1	nogas	0.153	49.4	873	50.2	1	
Pb	208	1	nogas	0.058	17.5	343	8.9	2.5	
U	238	1	nogas	0.042	43.7	337	46.2	2.5	
Si	28	1	nogas	-1558.532	-4.8	1082317	1.3	5	
La	139	1	nogas	33.166	170.0	50	87.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	54.756	164.7	10	100.0	2.5	CCB Main CR1 Failed
Na	23	2	He	67.996	3.4	68797	2.2	100	
Mg	24	2	He	5.688	5.9	2674	4.8	100	
Al	27	2	He	0.999	57.2	717	22.6	5	
K	39	2	He	-17.517	-10.7	114137	1.3	100	
Ca	43	2	He	15.292	44.7	30	33.3	100	
Ca	44	2	He	9.178	61.7	817	16.9	100	
V	51	2	He	-1.466	-1.4	2361	2.8	2.5	
Cr	52	2	He	-0.070	-144.0	1767	17.6	2.5	
Mn	55	2	He	0.039	28.8	400	6.6	2.5	
Fe	56	2	He	5.981	5.9	25291	3.5	100	
Co	59	2	He	0.023	18.0	117	13.1	2.5	
Ni	60	2	He	-0.450	-6.1	67	37.7	2.5	
Cu	63	2	He	-0.154	-11.0	1047	3.4	2	
Zn	66	2	He	-2.301	-9.2	337	34.8	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.151	-3.4	217	1.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.413	8.7	1147	7.9	2.5	
Se	78	2	He	0.387	67.3	251	4.8	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1022951	1.58	826909	123.71	70	125	
In	115	1	nogas	842880	1.02	692762	121.67	70	125	
Li	6	1	nogas	497253	1.01	540315	92.03	70	125	
Bi	209	1	nogas	566948	4.34	476916	118.88	70	125	
Ge	72	2	He	410168	0.36	368809	111.21	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	131_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T18:30:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	103.755	3.062	204985	1.48	100	103.8	90	110	
B	11	1	nogas	576.179	1.152	610670	1.47	500	115.2	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10227.704	1.342	85370275	1.40	10000	102.3	90	110	
Mg	24	1	nogas	10001.762	0.481	55443426	1.02	10000	100.0	90	110	
Al	27	1	nogas	97.506	1.851	709806	2.33	100	97.5	90	110	
P	31	1	nogas	472.023	0.408	252851	1.22	500	94.4	90	110	
K	39	1	nogas	10256.055	0.366	74804825	1.03	10000	102.6	90	110	
Ca	43	1	nogas	10399.535	1.180	133538	2.33	10000	104.0	90	110	
Ca	44	1	nogas	10343.610	1.842	2237360	1.89	10000	103.4	90	110	
Ti	47	1	nogas	100.021	2.168	65521	1.13	100	100.0	90	110	
V	51	1	nogas	81.253	1.373	961047	1.38	100	81.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.091	0.829	722241	1.92	100	99.1	90	110	
Mn	55	1	nogas	103.017	0.665	920918	1.74	100	103.0	90	110	
Fe	56	1	nogas	10586.888	0.925	78595333	1.78	10000	105.9	90	110	
Co	59	1	nogas	99.609	0.515	726502	1.58	100	99.6	90	110	
Ni	60	1	nogas	100.001	0.258	159822	1.15	100	100.0	90	110	
Cu	63	1	nogas	101.290	0.543	374092	0.75	100	101.3	90	110	
Zn	66	1	nogas	101.678	1.258	114103	0.30	100	101.7	90	110	
As	75	1	nogas	92.293	1.833	156558	2.00	100	92.3	90	110	
Se	77	1	nogas	33.319	98.390	14093	7.86	100	33.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	119.525	19.834	8209	19.37	100	119.5	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	104.036	1.207	935419	1.51	100	104.0	90	110	
Mo	95	1	nogas	103.851	0.822	178915	0.36	100	103.9	90	110	
Ag	107	1	nogas	102.248	1.098	395876	2.23	100	102.2	90	110	
Cd	111	1	nogas	102.618	2.693	81845	1.59	100	102.6	90	110	
Sn	118	1	nogas	101.705	2.232	248017	1.12	100	101.7	90	110	
Sb	121	1	nogas	104.406	1.564	360037	1.95	100	104.4	90	110	
Ba	137	1	nogas	97.574	2.690	122471	1.81	100	97.6	90	110	
Tl	205	1	nogas	98.229	5.655	532746	2.46	100	98.2	90	110	
Pb	208	1	nogas	100.099	3.092	384730	0.38	100	100.1	90	110	
U	238	1	nogas	91.990	4.487	726491	1.04	100	92.0	90	110	
Li	7	1	nogas	108.535	3.019	608152	2.12	100	108.5	90	110	
Si	28	1	nogas	3380.565	0.544	2997989	0.96	5000	67.6	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	98.512	4.200	72125	1.34	100	98.5	90	110	
La	139	1	nogas	745.583	149.077	627	144.20	100	745.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	3337.122	167.876	360	166.00	100	3337.1	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.047	5.765	224475	2.33	100	98.0	90	110	
Na	23	2	He	10356.428	0.761	7354652	0.82	10000	103.6	90	110	
Mg	24	2	He	10209.862	2.311	4112956	2.45	10000	102.1	90	110	
Al	27	2	He	93.583	2.379	26456	2.59	100	93.6	90	110	
K	39	2	He	9651.226	0.985	5285824	0.67	10000	96.5	90	110	
Ca	43	2	He	9378.466	2.284	13525	2.23	10000	93.8	90	110	
Ca	44	2	He	9553.710	0.456	232175	0.23	10000	95.5	90	110	
V	51	2	He	99.835	1.518	292137	1.53	100	99.8	90	110	
Cr	52	2	He	99.086	1.823	298160	1.49	100	99.1	90	110	
Mn	55	2	He	98.380	2.626	239239	2.35	100	98.4	90	110	
Fe	56	2	He	10003.139	2.090	26934323	1.77	10000	100.0	90	110	
Co	59	2	He	102.327	1.246	375790	1.01	100	102.3	90	110	
Ni	60	2	He	103.480	0.263	92538	0.59	100	103.5	90	110	
Cu	63	2	He	105.026	2.982	229250	3.01	100	105.0	90	110	
Zn	66	2	He	100.902	1.602	55838	1.55	100	100.9	90	110	
As	75	2	He	97.062	0.703	53560	0.50	100	97.1	90	110	
Sb	121	2	He	100.291	1.353	247608	1.32	100	100.3	90	110	
Se	78	2	He	95.240	2.842	4841	2.51	100	95.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1022583	1.16	826909	123.66	70	125	
In	115	1	nogas	857860	3.03	692762	123.83	70	125	
Li	6	1	nogas	519857	2.46	540315	96.21	70	125	
Bi	209	1	nogas	573298	3.49	476916	120.21	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	400961	0.32	368809	108.72	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	132_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T18:32:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.084	42.1	213	30.5	1	
B	11	1	nogas	21.994	9.0	25167	7.7	10	CCB Main CR1 Failed
Na	23	1	nogas	64.758	4.6	723610	2.4	100	
Mg	24	1	nogas	6.837	21.8	43459	17.7	100	
Al	27	1	nogas	1.804	1.6	21506	1.5	5	
P	31	1	nogas	2.252	35.3	22554	3.3	10	
K	39	1	nogas	-19.236	-73.6	2789807	2.1	100	
Ca	43	1	nogas	7.045	92.1	623	14.0	100	
Ca	44	1	nogas	-44.105	-7.2	17489	2.3	100	
Ti	47	1	nogas	0.098	53.4	123	28.5	2.5	
V	51	1	nogas	-26.670	-0.5	95365	1.9	2.5	
Cr	52	1	nogas	-1.854	-1.3	11287	2.8	2.5	
Mn	55	1	nogas	-0.099	-18.3	6818	1.8	2.5	
Fe	56	1	nogas	-1.640	-255.6	875519	1.9	100	
Co	59	1	nogas	0.029	58.7	357	32.9	2.5	
Ni	60	1	nogas	-0.344	-3.0	283	7.3	2.5	
Cu	63	1	nogas	0.215	36.9	2257	13.1	2	
Zn	66	1	nogas	-2.356	-1.4	573	6.1	2.5	
As	75	1	nogas	-15.879	-1.2	19378	2.0	2.5	
Se	77	1	nogas	-201.615	-6.1	6281	8.1	2.5	
Se	82	1	nogas	-0.810	-35.3	83	25.0	2	
Sr	88	1	nogas	0.088	28.8	1097	19.4	2.5	
Mo	95	1	nogas	0.165	27.9	367	20.5	2.5	
Ag	107	1	nogas	0.042	5.5	203	2.8	2.5	
Cd	111	1	nogas	0.053	24.8	50	20.0	1	
Sn	118	1	nogas	-2.660	-4.2	1377	18.5	5	
Sb	121	1	nogas	0.372	24.4	1493	19.9	2.5	
Ba	137	1	nogas	0.075	52.5	193	26.5	2.5	
Tl	205	1	nogas	0.174	42.0	997	44.1	1	
Pb	208	1	nogas	0.059	22.0	353	18.0	2.5	
U	238	1	nogas	0.050	16.1	400	19.8	2.5	
Si	28	1	nogas	-1669.403	-2.0	1055475	0.9	5	
La	139	1	nogas	-1.773	-822.9	23	49.5	2.5	
Au	197	1	nogas	-38.049	0.0	0	#DIV/0!	2.5	
Na	23	2	He	61.645	4.1	63027	0.5	100	
Mg	24	2	He	6.164	12.6	2814	8.9	100	
Al	27	2	He	1.651	31.0	887	16.6	5	
K	39	2	He	-15.822	-41.5	112962	1.3	100	
Ca	43	2	He	20.024	67.8	37	56.8	100	
Ca	44	2	He	3.336	45.7	660	5.5	100	
V	51	2	He	-1.431	-1.5	2416	2.0	2.5	
Cr	52	2	He	-0.058	-133.8	1767	11.2	2.5	
Mn	55	2	He	0.045	80.9	407	19.7	2.5	
Fe	56	2	He	6.261	9.4	25588	5.4	100	
Co	59	2	He	0.036	28.9	160	22.5	2.5	
Ni	60	2	He	-0.423	-13.2	90	58.8	2.5	
Cu	63	2	He	-0.144	-10.3	1050	5.3	2	
Zn	66	2	He	-2.351	-3.5	303	13.7	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.138	-26.2	220	6.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.259	6.5	743	3.4	2.5	
Se	78	2	He	0.753	5.6	264	2.0	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1038701	1.62	826909	125.61	70	125	ISTD Failed
In	115	1	nogas	855455	0.85	692762	123.48	70	125	
Li	6	1	nogas	487487	1.52	540315	90.22	70	125	
Bi	209	1	nogas	572326	4.47	476916	120.01	70	125	
Ge	72	2	He	402878	2.58	368809	109.24	70	125	

Sample Report

Sample Table

Sample Name	MBLK-135381
Data File Name	134SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T18:52:42-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 135381
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	-0.008	-0.008	-92.79	47	-0.02	2000	
B	11	1	nogas	5.177	5.177	4.50	9606	0.05	2000	
Na	23	1	nogas	31.751	31.751	3.95	453345	0.01	200000	
Mg	24	1	nogas	17.764	17.764	3.71	107896	0.02	200000	
Al	27	1	nogas	4.784	4.784	1.28	43729	0.01	2000	
K	39	1	nogas	-25.713	-25.713	-13.66	2772526	0.00	200000	
Ca	43	1	nogas	-4.296	-4.296	-257.36	480	-0.90	200000	
Ca	44	1	nogas	-58.148	-58.148	-3.16	14593	-0.40	200000	
Ti	47	1	nogas	0.027	0.027	265.40	77	0.04	2000	
V	51	1	nogas	-25.795	-25.795	-1.84	103577	-0.02	2000	
Cr	52	1	nogas	-1.770	-1.770	-0.95	12004	-0.01	2000	
Mn	55	1	nogas	-0.101	-0.101	-16.95	6868	0.00	2000	
Fe	56	1	nogas	10.664	10.664	9.16	977411	0.00	200000	
Co	59	1	nogas	0.006	0.006	136.63	190	0.00	2000	
Ni	60	1	nogas	-0.366	-0.366	-17.59	250	-0.15	2000	
Cu	63	1	nogas	-0.104	-0.104	-32.17	1073	-0.01	2000	
Zn	66	1	nogas	-2.395	-2.395	-2.94	537	-0.45	2000	
As	75	1	nogas	-15.386	-15.386	-3.42	20222	-0.08	2000	
Se	77	1	nogas	-196.098	-196.098	-4.08	6531	-3.00	2000	
Se	82	1	nogas	-0.722	-0.722	-53.26	90	-0.80	2000	
Sr	88	1	nogas	0.011	0.011	45.62	393	0.00	2000	
Mo	95	1	nogas	0.017	0.017	185.89	110	0.02	2000	
Ag	107	1	nogas	0.001	0.001	396.81	43	0.00	2000	
Cd	111	1	nogas	-0.002	-0.002	-337.73	7	-0.03	2000	
Sn	118	1	nogas	-3.140	-3.140	-0.15	250	-1.26	2000	
Sb	121	1	nogas	0.023	0.023	98.37	277	0.01	2000	
Ba	137	1	nogas	-0.032	-0.032	-50.35	60	-0.05	2000	
Tl	205	1	nogas	-0.005	-0.005	-80.21	17	-0.03	2000	
Pb	208	1	nogas	0.006	0.006	159.11	153	0.00	2000	
U	238	1	nogas	0.002	0.002	70.56	20	0.01	2000	
Si	28	1	nogas	-587.495	-587.495	-8.63	1497104	-0.04	2000	
La	139	1	nogas	-6.409	-6.409	-192.57	20	-32.04	2000	
Au	197	1	nogas	49.466	49.466	182.09	10	494.66	2000	
Na	23	2	He	32.988	32.988	4.94	43835	0.08	200000	
Mg	24	2	He	18.474	18.474	0.96	8019	0.23	200000	
Al	27	2	He	4.309	4.309	15.81	1673	0.26	2000	
K	39	2	He	-17.361	-17.361	-22.74	115280	-0.02	200000	
Ca	43	2	He	6.084	6.084	60.88	17	36.50	200000	
Ca	44	2	He	0.748	0.748	680.72	613	0.12	200000	
V	51	2	He	-1.409	-1.409	-2.91	2550	-0.06	2000	
Cr	52	2	He	-0.055	-0.055	-89.83	1827	0.00	2000	
Mn	55	2	He	0.202	0.202	16.64	813	0.02	2000	

Sample Report

Fe	56	2	He	2.669	2.669	6.98	16321	0.02	200000	
Co	59	2	He	0.008	0.008	4.09	60	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ni	60	2	He	-0.404	-0.404	-11.25	110	-0.37	2000	
Cu	63	2	He	-0.355	-0.355	-14.22	607	-0.06	2000	
Zn	66	2	He	-2.456	-2.456	-1.15	253	-0.97	2000	
As	75	2	He	-0.229	-0.229	-23.97	174	-0.13	2000	
Sb	121	2	He	0.044	0.044	68.65	217	0.02	2000	
Se	78	2	He	0.510	0.510	27.36	259	0.20	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1049285	1.00	826909	126.89	70	125	ISTD Failed
In	115	1	nogas	868972	0.91	692762	125.44	70	125	ISTD Failed
Li	6	1	nogas	547667	2.96	540315	101.36	70	125	
Bi	209	1	nogas	598441	7.47	476916	125.48	70	125	ISTD Failed
Ge	72	2	He	414075	2.04	368809	112.27	70	125	

Sample Report

Sample Table

Sample Name	LCS-135381
Data File Name	135SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T18:54:57-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 135381
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	48.667	48.667	1.27	105464	0.05	2000	
B	11	1	nogas	522.582	522.582	0.95	607495	0.09	2000	
Na	23	1	nogas	4899.177	4899.177	0.68	43251440	0.01	200000	
Mg	24	1	nogas	4810.128	4810.128	0.31	28143508	0.02	200000	
Al	27	1	nogas	94.170	94.170	1.20	712319	0.01	2000	
K	39	1	nogas	4844.536	4844.536	1.59	38279866	0.01	200000	
Ca	43	1	nogas	4866.245	4866.245	1.31	65190	7.46	200000	
Ca	44	1	nogas	4690.659	4690.659	1.92	1068940	0.44	200000	
Ti	47	1	nogas	140.048	140.048	1.55	95286	0.15	2000	
V	51	1	nogas	22.744	22.744	8.48	509867	0.00	2000	
Cr	52	1	nogas	45.143	45.143	1.75	355393	0.01	2000	
Mn	55	1	nogas	48.282	48.282	2.03	452438	0.01	2000	
Fe	56	1	nogas	5059.250	5059.250	1.42	39483607	0.01	200000	
Co	59	1	nogas	46.426	46.426	2.85	351775	0.01	2000	
Ni	60	1	nogas	46.449	46.449	2.57	77561	0.06	2000	
Cu	63	1	nogas	46.966	46.966	1.70	180968	0.03	2000	
Zn	66	1	nogas	46.239	46.239	1.16	55677	0.08	2000	
As	75	1	nogas	31.779	31.779	4.46	82718	0.04	2000	
Se	77	1	nogas	-133.573	-133.573	-3.20	8799	-1.52	2000	
Se	82	1	nogas	50.006	50.006	4.11	3650	1.37	2000	
Sr	88	1	nogas	95.421	95.421	2.41	891127	0.01	2000	
Mo	95	1	nogas	46.543	46.543	2.61	83329	0.06	2000	
Ag	107	1	nogas	47.912	47.912	1.58	192693	0.02	2000	
Cd	111	1	nogas	48.546	48.546	3.59	39078	0.12	2000	
Sn	118	1	nogas	92.637	92.637	1.09	228651	0.04	2000	
Sb	121	1	nogas	47.633	47.633	1.42	170711	0.03	2000	
Ba	137	1	nogas	43.830	43.830	0.62	55569	0.08	2000	
Tl	205	1	nogas	44.847	44.847	5.63	249736	0.02	2000	
Pb	208	1	nogas	45.346	45.346	6.74	178833	0.03	2000	
U	238	1	nogas	81.786	81.786	5.59	663045	0.01	2000	
Si	28	1	nogas	3524.751	3524.751	3.24	3172027	0.11	2000	>LDR
La	139	1	nogas	2.180	2.180	884.67	27	8.18	2000	
Au	197	1	nogas	21.328	21.328	241.75	7	319.92	2000	
Na	23	2	He	5009.133	5009.133	0.95	3783923	0.13	200000	
Mg	24	2	He	4975.724	4975.724	0.28	2126483	0.23	200000	
Al	27	2	He	89.071	89.071	3.02	26730	0.33	2000	
K	39	2	He	4720.423	4720.423	0.37	2808108	0.17	200000	
Ca	43	2	He	4645.394	4645.394	4.67	7111	65.32	200000	
Ca	44	2	He	4551.757	4551.757	0.34	117664	3.87	200000	
V	51	2	He	44.679	44.679	0.45	142504	0.03	2000	
Cr	52	2	He	45.828	45.828	0.85	147396	0.03	2000	
Mn	55	2	He	45.312	45.312	0.57	117068	0.04	2000	
Fe	56	2	He	4699.137	4699.137	0.94	13427341	0.03	200000	
Co	59	2	He	47.025	47.025	0.26	183219	0.03	2000	

Sample Report

Ni	60	2	He	47.107	47.107	0.20	44957	0.10	2000	
Cu	63	2	He	48.638	48.638	1.69	113394	0.04	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	46.762	46.762	2.60	28343	0.16	2000	
As	75	2	He	45.646	45.646	0.91	26887	0.17	2000	
Sb	121	2	He	44.971	44.971	0.39	117840	0.04	2000	
Se	78	2	He	45.233	45.233	6.36	2566	1.76	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1062194	1.17	826909	128.45	70	125	ISTD Failed
In	115	1	nogas	865287	0.43	692762	124.90	70	125	
Li	6	1	nogas	569736	0.96	540315	105.45	70	125	
Bi	209	1	nogas	589020	5.38	476916	123.51	70	125	
Ge	72	2	He	425346	0.56	368809	115.33	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	143_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T19:12:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	103.840	1.766	206486	2.07	100	103.8	90	110	
B	11	1	nogas	582.794	1.656	621431	1.18	500	116.6	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10083.802	2.134	86867075	0.35	10000	100.8	90	110	
Mg	24	1	nogas	9959.587	1.031	56985764	1.22	10000	99.6	90	110	
Al	27	1	nogas	95.348	1.392	719682	1.69	100	95.3	90	110	
P	31	1	nogas	461.073	3.479	256447	0.85	500	92.2	90	110	
K	39	1	nogas	10315.382	4.054	77938479	1.19	10000	103.2	90	110	
Ca	43	1	nogas	10324.082	2.457	137411	2.49	10000	103.2	90	110	
Ca	44	1	nogas	10273.917	2.098	2303744	1.70	10000	102.7	90	110	
Ti	47	1	nogas	98.749	1.918	67061	1.19	100	98.7	90	110	
V	51	1	nogas	77.074	4.236	961155	0.17	100	77.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.174	0.700	742099	2.73	100	98.2	90	110	
Mn	55	1	nogas	102.830	1.474	952997	2.63	100	102.8	90	110	
Fe	56	1	nogas	10521.807	1.783	80970696	1.54	10000	105.2	90	110	
Co	59	1	nogas	98.851	2.461	747190	0.76	100	98.9	90	110	
Ni	60	1	nogas	98.662	2.722	163424	0.29	100	98.7	90	110	
Cu	63	1	nogas	98.468	2.599	376948	0.41	100	98.5	90	110	
Zn	66	1	nogas	100.239	0.876	116680	2.41	100	100.2	90	110	
As	75	1	nogas	86.787	1.820	155040	2.05	100	86.8	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	-50.545	-32.429	11674	2.58	100	-50.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.305	1.041	7238	2.78	100	101.3	90	110	
Sr	88	1	nogas	100.272	2.835	934336	0.21	100	100.3	90	110	
Mo	95	1	nogas	100.341	3.339	179141	0.39	100	100.3	90	110	
Ag	107	1	nogas	102.661	0.361	412128	3.27	100	102.7	90	110	
Cd	111	1	nogas	104.301	1.924	84063	0.77	100	104.3	90	110	
Sn	118	1	nogas	98.980	2.065	244108	0.90	100	99.0	90	110	
Sb	121	1	nogas	101.161	2.543	361557	1.31	100	101.2	90	110	
Ba	137	1	nogas	99.348	2.342	126026	2.73	100	99.3	90	110	
Tl	205	1	nogas	100.348	3.627	536790	0.37	100	100.3	90	110	
Pb	208	1	nogas	100.711	4.330	381530	1.38	100	100.7	90	110	
U	238	1	nogas	90.708	5.904	706064	2.74	100	90.7	90	110	
Li	7	1	nogas	108.973	1.161	614385	2.03	100	109.0	90	110	
Si	28	1	nogas	3161.731	2.492	3020005	1.97	5000	63.2	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	99.970	2.629	73990	1.94	100	100.0	90	110	
La	139	1	nogas	119.718	29.498	120	22.05	100	119.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	115.088	163.683	17	124.90	100	115.1	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	97.483	2.988	220200	1.63	100	97.5	90	110	
Na	23	2	He	10258.953	3.059	7470858	0.91	10000	102.6	90	110	
Mg	24	2	He	10145.502	2.012	4191500	0.29	10000	101.5	90	110	
Al	27	2	He	90.409	1.306	26229	0.98	100	90.4	90	110	
K	39	2	He	9671.809	0.442	5433998	2.19	10000	96.7	90	110	
Ca	43	2	He	9308.552	1.601	13772	2.73	10000	93.1	90	110	
Ca	44	2	He	9547.733	4.096	237893	1.85	10000	95.5	90	110	
V	51	2	He	99.332	3.244	298084	0.97	100	99.3	90	110	
Cr	52	2	He	99.206	0.807	306295	3.07	100	99.2	90	110	
Mn	55	2	He	96.425	0.106	240577	2.37	100	96.4	90	110	
Fe	56	2	He	9934.090	1.781	27434862	0.49	10000	99.3	90	110	
Co	59	2	He	101.980	3.031	384045	0.80	100	102.0	90	110	
Ni	60	2	He	102.490	4.514	93969	2.37	100	102.5	90	110	
Cu	63	2	He	105.497	3.285	236132	1.72	100	105.5	90	110	
Zn	66	2	He	101.851	4.405	57770	2.08	100	101.9	90	110	
As	75	2	He	96.729	2.537	54741	1.15	100	96.7	90	110	
Sb	121	2	He	99.005	4.377	250599	2.17	100	99.0	90	110	
Se	78	2	He	96.554	3.881	5029	1.45	100	96.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1060305	2.96	826909	128.23	70	125	ISTD Failed
In	115	1	nogas	866619	1.29	692762	125.10	70	125	ISTD Failed
Li	6	1	nogas	523000	1.05	540315	96.80	70	125	
Bi	209	1	nogas	565197	3.34	476916	118.51	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	411342	2.27	368809	111.53	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	144_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T19:15:09-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.048	45.8	147	27.6	1	
B	11	1	nogas	18.757	7.5	22007	6.3	10	CCB Main CR1 Failed
Na	23	1	nogas	52.299	4.1	631734	1.8	100	
Mg	24	1	nogas	6.574	19.2	42958	16.0	100	
Al	27	1	nogas	1.407	1.4	19000	1.1	5	
P	31	1	nogas	0.064	2547.2	21920	4.2	10	
K	39	1	nogas	-26.270	-18.9	2799253	0.7	100	
Ca	43	1	nogas	12.336	10.5	707	2.2	100	
Ca	44	1	nogas	-43.432	-2.1	18019	0.9	100	
Ti	47	1	nogas	0.109	122.7	133	67.6	2.5	
V	51	1	nogas	-27.323	-3.5	91951	8.5	2.5	
Cr	52	1	nogas	-1.872	-3.8	11387	3.9	2.5	
Mn	55	1	nogas	-0.093	-39.2	7018	4.2	2.5	
Fe	56	1	nogas	-6.319	-47.9	858857	2.0	100	
Co	59	1	nogas	0.029	28.2	370	16.2	2.5	
Ni	60	1	nogas	-0.321	-7.9	327	12.4	2.5	
Cu	63	1	nogas	0.386	7.3	2957	3.9	2	
Zn	66	1	nogas	-2.402	-1.5	533	7.1	2.5	
As	75	1	nogas	-17.329	-4.8	17883	6.5	2.5	
Se	77	1	nogas	-223.333	-4.6	5654	7.0	2.5	
Se	82	1	nogas	-0.877	-72.0	80	54.5	2	
Sr	88	1	nogas	0.072	13.6	973	8.7	2.5	
Mo	95	1	nogas	0.169	34.4	383	26.4	2.5	
Ag	107	1	nogas	0.031	54.3	163	40.8	2.5	
Cd	111	1	nogas	0.035	87.7	37	68.6	1	
Sn	118	1	nogas	-2.682	-2.5	1340	10.3	5	
Sb	121	1	nogas	0.329	17.7	1373	14.7	2.5	
Ba	137	1	nogas	0.032	73.5	140	21.4	2.5	
Tl	205	1	nogas	0.178	50.5	1017	52.0	1	
Pb	208	1	nogas	0.053	5.4	327	6.4	2.5	
U	238	1	nogas	0.046	22.0	370	21.5	2.5	
Si	28	1	nogas	-1788.117	-2.3	1030341	0.9	5	
La	139	1	nogas	6.301	392.8	30	66.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-8.268	-623.8	3	173.2	2.5	
Na	23	2	He	52.525	2.6	56890	0.9	100	
Mg	24	2	He	5.239	16.3	2460	14.8	100	
Al	27	2	He	1.064	26.7	727	11.7	5	
K	39	2	He	-14.765	-10.3	114245	0.9	100	
Ca	43	2	He	17.708	135.5	33	105.4	100	
Ca	44	2	He	8.631	45.0	793	11.4	100	
V	51	2	He	-1.459	-0.2	2350	0.9	2.5	
Cr	52	2	He	-0.090	-24.8	1683	3.4	2.5	
Mn	55	2	He	0.132	9.3	623	4.0	2.5	
Fe	56	2	He	5.243	3.9	22978	1.8	100	
Co	59	2	He	0.019	61.8	100	43.6	2.5	
Ni	60	2	He	-0.412	-5.6	100	20.0	2.5	
Cu	63	2	He	-0.019	-297.8	1330	9.8	2	
Zn	66	2	He	-2.514	-2.6	217	16.2	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.213	-33.6	180	22.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.233	11.0	683	8.4	2.5	
Se	78	2	He	1.144	27.1	285	4.6	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1060931	0.69	826909	128.30	70	125	ISTD Failed
In	115	1	nogas	865409	2.39	692762	124.92	70	125	
Li	6	1	nogas	488229	0.91	540315	90.36	70	125	
Bi	209	1	nogas	571969	3.88	476916	119.93	70	125	
Ge	72	2	He	405220	0.83	368809	109.87	70	125	

Sample Report

Sample Table

Sample Name	HS18111538-04SD
Data File Name	147SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T19:31:46-06:00
Sample Type	Sample
Dilution	5
Comment	TW B 135381
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.222	1.110	171.98	471	0.05	2000	
B	11	1	nogas	19.515	97.574	2.32	22611	0.09	2000	
Na	23	1	nogas	1615.795	8078.975	2.39	14137690	0.01	200000	
Mg	24	1	nogas	1904.649	9523.244	1.79	10956649	0.02	200000	
Al	27	1	nogas	4.801	24.006	2.54	43829	0.01	2000	
K	39	1	nogas	574.518	2872.589	4.65	7087643	0.01	200000	
Ca	43	1	nogas	31452.441	157262.205	2.67	413045	7.61	200000	
Ca	44	1	nogas	30965.385	154826.924	2.48	6815029	0.45	200000	
Ti	47	1	nogas	0.191	0.954	32.66	187	0.10	2000	
V	51	1	nogas	-23.154	-115.772	-2.36	125317	-0.02	2000	
Cr	52	1	nogas	-1.395	-6.975	-4.33	14710	-0.01	2000	
Mn	55	1	nogas	31.705	158.527	2.03	296048	0.01	2000	
Fe	56	1	nogas	1182.771	5913.857	4.28	9799034	0.01	200000	
Co	59	1	nogas	0.170	0.849	6.66	1417	0.01	2000	
Ni	60	1	nogas	0.105	0.526	73.49	1020	0.01	2000	
Cu	63	1	nogas	0.350	1.749	26.46	2790	0.01	2000	
Zn	66	1	nogas	-1.103	-5.517	-10.71	1983	-0.06	2000	
As	75	1	nogas	-12.866	-64.332	-4.02	23489	-0.05	2000	
Se	77	1	nogas	-175.624	-878.121	-7.28	7242	-2.43	2000	
Se	82	1	nogas	1.166	5.832	235.21	223	0.52	2000	
Sr	88	1	nogas	85.725	428.626	3.44	790413	0.01	2000	
Mo	95	1	nogas	0.694	3.469	28.09	1310	0.05	2000	
Ag	107	1	nogas	-0.002	-0.010	-214.81	30	-0.01	2000	
Cd	111	1	nogas	0.101	0.503	148.09	90	0.11	2000	
Sn	118	1	nogas	-3.108	-15.538	-0.59	323	-0.96	2000	
Sb	121	1	nogas	0.148	0.741	127.35	727	0.02	2000	
Ba	137	1	nogas	19.188	95.939	1.26	24134	0.08	2000	
Tl	205	1	nogas	0.309	1.546	172.07	1704	0.02	2000	
Pb	208	1	nogas	0.096	0.480	188.81	487	0.02	2000	
U	238	1	nogas	0.101	0.507	12.98	800	0.01	2000	
Si	28	1	nogas	5579.072	27895.361	6.32	3948343	0.14	2000	>LDR
La	139	1	nogas	778.049	3890.247	7.01	637	122.20	2000	
Au	197	1	nogas	55.588	277.938	4.36	10	555.88	2000	
Na	23	2	He	1598.360	7991.798	3.31	1187497	0.13	200000	
Mg	24	2	He	1854.969	9274.843	1.03	771080	0.24	200000	
Al	27	2	He	7.294	36.470	35.70	2531	0.29	2000	
K	39	2	He	527.127	2635.636	0.53	415743	0.13	200000	
Ca	43	2	He	29993.769	149968.843	3.11	44599	67.25	200000	
Ca	44	2	He	29078.479	145392.394	0.83	727718	4.00	200000	
V	51	2	He	-0.157	-0.784	-64.61	6243	0.00	2000	
Cr	52	2	He	0.480	2.401	63.38	3475	0.01	2000	
Mn	55	2	He	31.350	156.749	2.21	78847	0.04	2000	
Fe	56	2	He	1146.291	5731.456	1.90	3191673	0.04	200000	
Co	59	2	He	0.717	3.583	70.84	2742	0.03	2000	

Sample Report

Ni	60	2	He	1.261	6.306	69.51	1637	0.08	2000	
Cu	63	2	He	0.774	3.871	28.25	3132	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	1.535	7.675	114.67	2468	0.06	2000	
As	75	2	He	3.192	15.962	14.35	2112	0.15	2000	
Sb	121	2	He	0.634	3.170	64.68	1718	0.04	2000	
Se	78	2	He	41.267	206.335	18.65	2296	1.80	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1049017	2.20	826909	126.86	70	125	ISTD Failed
In	115	1	nogas	856576	2.14	692762	123.65	70	125	
Li	6	1	nogas	485136	1.05	540315	89.79	70	125	
Bi	209	1	nogas	569837	2.61	476916	119.48	70	125	
Ge	72	2	He	413594	0.35	368809	112.14	70	125	

Sample Report

Sample Table

Sample Name	HS18111538-04MS
Data File Name	148SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T19:34:00-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 135381
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	50.654	50.654	0.75	102692	0.05	2000	
B	11	1	nogas	613.810	613.810	2.57	666881	0.09	2000	
Na	23	1	nogas	12884.931	12884.931	1.82	112186623	0.01	200000	
Mg	24	1	nogas	14057.967	14057.967	2.19	81311962	0.02	200000	
Al	27	1	nogas	97.315	97.315	0.77	734128	0.01	2000	
K	39	1	nogas	7946.439	7946.439	0.79	60738116	0.01	200000	
Ca	43	1	nogas	170208.636	170208.636	0.96	2256474	7.54	200000	
Ca	44	1	nogas	161133.827	161133.827	1.51	35719440	0.45	200000	
Ti	47	1	nogas	143.667	143.667	1.19	97514	0.15	2000	
V	51	1	nogas	27.573	27.573	0.59	548965	0.01	2000	
Cr	52	1	nogas	46.517	46.517	0.66	364626	0.01	2000	
Mn	55	1	nogas	210.675	210.675	1.21	1943292	0.01	2000	
Fe	56	1	nogas	10786.773	10786.773	0.38	82964656	0.01	200000	
Co	59	1	nogas	47.046	47.046	0.64	355650	0.01	2000	
Ni	60	1	nogas	48.258	48.258	1.69	80373	0.06	2000	
Cu	63	1	nogas	48.824	48.824	0.42	187645	0.03	2000	
Zn	66	1	nogas	51.053	51.053	2.61	60994	0.08	2000	
As	75	1	nogas	41.383	41.383	2.26	95190	0.04	2000	
Se	77	1	nogas	-112.101	-112.101	-2.64	9529	-1.18	2000	
Se	82	1	nogas	51.213	51.213	5.53	3727	1.37	2000	
Sr	88	1	nogas	537.252	537.252	1.28	5005049	0.01	2000	
Mo	95	1	nogas	51.773	51.773	1.67	92486	0.06	2000	
Ag	107	1	nogas	48.128	48.128	0.88	193114	0.02	2000	
Cd	111	1	nogas	49.576	49.576	2.59	39709	0.12	2000	
Sn	118	1	nogas	95.236	95.236	1.89	233684	0.04	2000	
Sb	121	1	nogas	49.601	49.601	1.10	177356	0.03	2000	
Ba	137	1	nogas	143.893	143.893	0.82	181312	0.08	2000	
Tl	205	1	nogas	48.436	48.436	7.29	260203	0.02	2000	
Pb	208	1	nogas	47.116	47.116	6.61	179377	0.03	2000	
U	238	1	nogas	84.515	84.515	6.32	661240	0.01	2000	
Si	28	1	nogas	37784.839	37784.839	1.52	16935267	0.22	2000	>LDR
La	139	1	nogas	3666.337	3666.337	9.50	2924	125.40	2000	>LDR
Au	197	1	nogas	23.371	23.371	228.60	7	350.56	2000	
Na	23	2	He	13207.059	13207.059	0.99	9395814	0.14	200000	
Mg	24	2	He	14737.142	14737.142	0.54	5950643	0.25	200000	
Al	27	2	He	94.887	94.887	1.38	26880	0.35	2000	
K	39	2	He	7628.786	7628.786	2.13	4213100	0.18	200000	
Ca	43	2	He	151702.818	151702.818	1.27	219181	69.21	200000	
Ca	44	2	He	160412.887	160412.887	1.54	3898302	4.11	200000	
V	51	2	He	49.838	49.838	0.57	149447	0.03	2000	
Cr	52	2	He	47.711	47.711	1.72	144906	0.03	2000	
Mn	55	2	He	199.625	199.625	1.83	486276	0.04	2000	
Fe	56	2	He	10562.735	10562.735	2.04	28506348	0.04	200000	
Co	59	2	He	49.807	49.807	3.27	183333	0.03	2000	

Sample Report

Ni	60	2	He	49.773	49.773	3.83	44846	0.11	2000	
Cu	63	2	He	51.854	51.854	2.62	114135	0.05	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	50.998	50.998	2.32	29071	0.18	2000	
As	75	2	He	53.903	53.903	0.87	29947	0.18	2000	
Sb	121	2	He	49.446	49.446	4.07	122385	0.04	2000	
Se	78	2	He	47.707	47.707	2.75	2544	1.88	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1059699	0.66	826909	128.15	70	125	ISTD Failed
In	115	1	nogas	861041	0.90	692762	124.29	70	125	
Li	6	1	nogas	533079	1.64	540315	98.66	70	125	
Bi	209	1	nogas	568910	6.58	476916	119.29	70	125	
Ge	72	2	He	401935	1.24	368809	108.98	70	125	

Sample Report

Sample Table

Sample Name	HS18111538-04MSD
Data File Name	149SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T19:36:13-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 135381
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	50.841	50.841	1.51	99056	0.05	2000	
B	11	1	nogas	647.152	647.152	1.46	675559	0.10	2000	
Na	23	1	nogas	12571.284	12571.284	1.03	108435290	0.01	200000	
Mg	24	1	nogas	13898.221	13898.221	1.83	79640389	0.02	200000	
Al	27	1	nogas	96.322	96.322	2.04	722527	0.01	2000	
K	39	1	nogas	7826.918	7826.918	1.83	59520276	0.01	200000	
Ca	43	1	nogas	165303.347	165303.347	1.57	2178794	7.59	200000	
Ca	44	1	nogas	156413.139	156413.139	1.18	34473056	0.45	200000	
Ti	47	1	nogas	138.302	138.302	2.38	93339	0.15	2000	
V	51	1	nogas	24.483	24.483	8.28	520145	0.00	2000	
Cr	52	1	nogas	45.561	45.561	1.93	355592	0.01	2000	
Mn	55	1	nogas	210.241	210.241	1.03	1928259	0.01	2000	
Fe	56	1	nogas	10652.127	10652.127	2.33	81465475	0.01	200000	
Co	59	1	nogas	46.073	46.073	2.64	346281	0.01	2000	
Ni	60	1	nogas	47.433	47.433	0.72	78558	0.06	2000	
Cu	63	1	nogas	48.072	48.072	0.73	183712	0.03	2000	
Zn	66	1	nogas	50.661	50.661	2.17	60198	0.08	2000	
As	75	1	nogas	39.498	39.498	1.86	92171	0.04	2000	
Se	77	1	nogas	-131.433	-131.433	-7.24	8802	-1.49	2000	
Se	82	1	nogas	47.013	47.013	7.05	3414	1.38	2000	
Sr	88	1	nogas	520.531	520.531	0.74	4821181	0.01	2000	
Mo	95	1	nogas	51.517	51.517	0.94	91503	0.06	2000	
Ag	107	1	nogas	47.943	47.943	2.48	191270	0.03	2000	
Cd	111	1	nogas	48.626	48.626	0.61	39703	0.12	2000	
Sn	118	1	nogas	93.776	93.776	0.46	234684	0.04	2000	
Sb	121	1	nogas	49.381	49.381	0.45	175568	0.03	2000	
Ba	137	1	nogas	138.204	138.204	2.16	177481	0.08	2000	
Tl	205	1	nogas	45.332	45.332	4.59	252591	0.02	2000	
Pb	208	1	nogas	45.709	45.709	5.56	180390	0.03	2000	
U	238	1	nogas	83.281	83.281	6.13	675199	0.01	2000	
Si	28	1	nogas	36919.815	36919.815	1.97	16492127	0.22	2000	>LDR
La	139	1	nogas	3383.039	3383.039	2.33	2750	123.01	2000	>LDR
Au	197	1	nogas	-7.264	-7.264	-734.01	3	-217.93	2000	
Na	23	2	He	12868.169	12868.169	1.13	9121148	0.14	200000	
Mg	24	2	He	14268.806	14268.806	1.59	5739790	0.25	200000	
Al	27	2	He	94.619	94.619	0.87	26706	0.35	2000	
K	39	2	He	7455.288	7455.288	0.36	4105189	0.18	200000	
Ca	43	2	He	146287.523	146287.523	0.90	210582	69.47	200000	
Ca	44	2	He	154559.185	154559.185	1.19	3742207	4.13	200000	
V	51	2	He	49.318	49.318	0.66	147402	0.03	2000	
Cr	52	2	He	47.860	47.860	1.41	144828	0.03	2000	
Mn	55	2	He	192.727	192.727	0.98	467776	0.04	2000	
Fe	56	2	He	10250.927	10250.927	0.79	27565677	0.04	200000	
Co	59	2	He	48.838	48.838	0.62	179126	0.03	2000	

Sample Report

Ni	60	2	He	48.828	48.828	3.40	43847	0.11	2000	
Cu	63	2	He	50.672	50.672	1.12	111159	0.05	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	51.059	51.059	1.08	28990	0.18	2000	
As	75	2	He	53.584	53.584	1.15	29661	0.18	2000	
Sb	121	2	He	48.795	48.795	0.50	120361	0.04	2000	
Se	78	2	He	46.378	46.378	3.26	2470	1.88	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1053666	1.01	826909	127.42	70	125	ISTD Failed
In	115	1	nogas	877677	1.28	692762	126.69	70	125	ISTD Failed
Li	6	1	nogas	512332	1.31	540315	94.82	70	125	
Bi	209	1	nogas	588891	4.02	476916	123.48	70	125	
Ge	72	2	He	400417	0.41	368809	108.57	70	125	

Sample Report

Sample Table

Sample Name	HS18111538-04PDS
Data File Name	150SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T19:38:25-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 135381
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	109.513	109.513	0.45	199135	0.05	2000	
B	11	1	nogas	75.904	75.904	3.42	76938	0.10	2000	
Na	23	1	nogas	17226.724	17226.724	1.08	147500437	0.01	200000	
Mg	24	1	nogas	18323.963	18323.963	1.77	104271940	0.02	200000	
Al	27	1	nogas	98.048	98.048	3.57	731088	0.01	2000	
K	39	1	nogas	12491.565	12491.565	1.95	92713542	0.01	200000	
Ca	43	1	nogas	160034.242	160034.242	2.75	2097528	7.63	200000	
Ca	44	1	nogas	154862.378	154862.378	1.55	33944886	0.46	200000	
Ti	47	1	nogas	94.715	94.715	1.20	63598	0.15	2000	
V	51	1	nogas	75.163	75.163	4.22	934484	0.01	2000	
Cr	52	1	nogas	93.019	93.019	3.80	695991	0.01	2000	
Mn	55	1	nogas	252.476	252.476	5.49	2299935	0.01	2000	
Fe	56	1	nogas	15817.902	15817.902	3.54	119852853	0.01	200000	
Co	59	1	nogas	93.908	93.908	3.68	701590	0.01	2000	
Ni	60	1	nogas	94.934	94.934	3.52	155469	0.06	2000	
Cu	63	1	nogas	93.661	93.661	2.28	354584	0.03	2000	
Zn	66	1	nogas	102.790	102.790	1.06	118211	0.09	2000	
As	75	1	nogas	89.820	89.820	2.24	157208	0.06	2000	
Se	77	1	nogas	-47.257	-47.257	-37.47	11654	-0.41	2000	
Se	82	1	nogas	100.840	100.840	10.62	7135	1.41	2000	
Sr	88	1	nogas	411.748	411.748	3.71	3791654	0.01	2000	
Mo	95	1	nogas	99.523	99.523	2.31	175684	0.06	2000	
Ag	107	1	nogas	94.841	94.841	1.78	376269	0.03	2000	
Cd	111	1	nogas	97.608	97.608	3.26	80074	0.12	2000	
Sn	118	1	nogas	-2.099	-2.099	-8.24	2777	-0.08	2000	
Sb	121	1	nogas	89.694	89.694	2.21	316968	0.03	2000	
Ba	137	1	nogas	180.806	180.806	5.99	233198	0.08	2000	
Tl	205	1	nogas	92.148	92.148	7.43	503785	0.02	2000	
Pb	208	1	nogas	93.420	93.420	5.59	362003	0.03	2000	
U	238	1	nogas	0.612	0.612	11.81	4871	0.01	2000	
Si	28	1	nogas	32168.922	32168.922	2.79	14512864	0.22	2000	>LDR
La	139	1	nogas	3282.264	3282.264	13.64	2677	122.61	2000	>LDR
Au	197	1	nogas	1971.218	1971.218	117.57	213	923.68	2000	>LDR
Na	23	2	He	17441.576	17441.576	1.57	12384534	0.14	200000	
Mg	24	2	He	18544.453	18544.453	1.15	7477419	0.25	200000	
Al	27	2	He	93.712	93.712	2.45	26516	0.35	2000	
K	39	2	He	11977.088	11977.088	3.69	6534898	0.18	200000	
Ca	43	2	He	145163.111	145163.111	2.26	209418	69.32	200000	
Ca	44	2	He	152583.591	152583.591	1.27	3703075	4.12	200000	
V	51	2	He	97.361	97.361	2.03	285314	0.03	2000	
Cr	52	2	He	94.564	94.564	2.53	284881	0.03	2000	
Mn	55	2	He	235.268	235.268	2.85	572172	0.04	2000	
Fe	56	2	He	14990.513	14990.513	2.01	40397537	0.04	200000	
Co	59	2	He	98.300	98.300	3.38	361254	0.03	2000	

Sample Report

Ni	60	2	He	99.867	99.867	3.42	89385	0.11	2000	
Cu	63	2	He	100.592	100.592	1.37	219841	0.05	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	105.386	105.386	0.81	58312	0.18	2000	
As	75	2	He	100.551	100.551	2.90	55517	0.18	2000	
Sb	121	2	He	88.384	88.384	1.93	218416	0.04	2000	
Se	78	2	He	92.987	92.987	2.59	4736	1.96	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1048100	2.45	826909	126.75	70	125	ISTD Failed
In	115	1	nogas	882500	3.11	692762	127.39	70	125	ISTD Failed
Li	6	1	nogas	478276	1.08	540315	88.52	70	125	
Bi	209	1	nogas	578668	5.23	476916	121.34	70	125	
Ge	72	2	He	401411	1.97	368809	108.84	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	155_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T19:49:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	108.869	2.519	203368	1.92	100	108.9	90	110	
B	11	1	nogas	611.082	2.655	612004	2.09	500	122.2	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10033.647	2.187	85958302	1.60	10000	100.3	90	110	
Mg	24	1	nogas	9795.261	3.112	55726222	2.66	10000	98.0	90	110	
Al	27	1	nogas	94.572	1.686	709005	1.88	100	94.6	90	110	
P	31	1	nogas	465.826	0.203	257176	0.27	500	93.2	90	110	
K	39	1	nogas	10143.084	1.110	76196435	1.03	10000	101.4	90	110	
Ca	43	1	nogas	10221.129	1.010	135118	1.31	10000	102.2	90	110	
Ca	44	1	nogas	10067.900	1.286	2242697	0.83	10000	100.7	90	110	
Ti	47	1	nogas	101.533	2.286	68480	1.97	100	101.5	90	110	
V	51	1	nogas	80.930	0.988	986755	1.09	100	80.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.692	2.581	747922	2.91	100	99.7	90	110	
Mn	55	1	nogas	102.405	1.018	942478	1.32	100	102.4	90	110	
Fe	56	1	nogas	10467.408	1.329	80009656	1.55	10000	104.7	90	110	
Co	59	1	nogas	98.890	1.232	742492	0.92	100	98.9	90	110	
Ni	60	1	nogas	100.300	1.457	165026	1.45	100	100.3	90	110	
Cu	63	1	nogas	99.966	0.756	380134	1.18	100	100.0	90	110	
Zn	66	1	nogas	101.296	1.252	117053	1.59	100	101.3	90	110	
As	75	1	nogas	89.042	0.555	156918	0.38	100	89.0	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	10.642	452.431	13719	11.83	100	10.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	118.815	6.231	8404	5.82	100	118.8	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	101.761	0.843	941963	0.72	100	101.8	90	110	
Mo	95	1	nogas	100.857	0.805	178897	1.09	100	100.9	90	110	
Ag	107	1	nogas	103.325	2.490	411841	2.93	100	103.3	90	110	
Cd	111	1	nogas	104.917	3.634	82609	1.00	100	104.9	90	110	
Sn	118	1	nogas	101.711	3.164	244878	0.64	100	101.7	90	110	
Sb	121	1	nogas	102.422	1.875	363637	2.32	100	102.4	90	110	
Ba	137	1	nogas	100.034	4.371	123929	1.39	100	100.0	90	110	
Tl	205	1	nogas	102.689	7.448	532330	2.78	100	102.7	90	110	
Pb	208	1	nogas	101.771	5.521	373896	1.20	100	101.8	90	110	
U	238	1	nogas	93.176	5.783	703558	1.12	100	93.2	90	110	
Li	7	1	nogas	109.504	1.822	579817	1.56	100	109.5	90	110	
Si	28	1	nogas	3092.644	2.508	2971441	0.79	5000	61.9	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	99.556	7.025	71937	4.01	100	99.6	90	110	
La	139	1	nogas	350.287	76.865	293	68.22	100	350.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	4023.996	112.602	430	114.97	100	4024.0	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	101.940	4.532	223297	0.49	100	101.9	90	110	
Na	23	2	He	10351.487	1.922	7320982	1.20	10000	103.5	90	110	
Mg	24	2	He	10071.247	1.227	4040569	0.77	10000	100.7	90	110	
Al	27	2	He	91.263	2.964	25708	3.44	100	91.3	90	110	
K	39	2	He	9402.471	1.524	5132074	1.57	10000	94.0	90	110	
Ca	43	2	He	10148.484	12.436	14561	11.02	10000	101.5	90	110	
Ca	44	2	He	9679.457	1.351	234263	0.27	10000	96.8	90	110	
V	51	2	He	100.506	1.353	292863	0.88	100	100.5	90	110	
Cr	52	2	He	99.537	0.386	298341	1.75	100	99.5	90	110	
Mn	55	2	He	97.478	1.677	236083	0.46	100	97.5	90	110	
Fe	56	2	He	9978.855	1.993	26759314	1.05	10000	99.8	90	110	
Co	59	2	He	103.497	1.408	378553	1.14	100	103.5	90	110	
Ni	60	2	He	104.789	0.621	93326	0.83	100	104.8	90	110	
Cu	63	2	He	107.614	3.419	233864	2.16	100	107.6	90	110	
Zn	66	2	He	103.119	1.580	56800	1.56	100	103.1	90	110	
As	75	2	He	100.182	1.602	55048	1.24	100	100.2	90	110	
Sb	121	2	He	100.056	0.835	246037	1.00	100	100.1	90	110	
Se	78	2	He	118.960	19.109	5957	17.04	100	119.0	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1052751	0.44	826909	127.31	70	125	ISTD Failed
In	115	1	nogas	847098	2.96	692762	122.28	70	125	
Li	6	1	nogas	491377	1.00	540315	90.94	70	125	
Bi	209	1	nogas	548551	4.71	476916	115.02	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	399371	1.41	368809	108.29	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	156_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T19:51:53-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.091	37.1	213	28.6	1	
B	11	1	nogas	19.950	11.0	21866	9.0	10	CCB Main CR1 Failed
Na	23	1	nogas	56.541	6.5	668322	3.5	100	
Mg	24	1	nogas	6.787	11.1	44193	8.6	100	
Al	27	1	nogas	1.227	24.9	17529	11.7	5	
P	31	1	nogas	3.429	48.5	23485	3.0	10	
K	39	1	nogas	-18.103	-47.8	2841121	1.2	100	
Ca	43	1	nogas	1.801	249.8	563	10.1	100	
Ca	44	1	nogas	-47.178	-1.0	17085	1.1	100	
Ti	47	1	nogas	0.051	203.7	93	75.3	2.5	
V	51	1	nogas	-26.674	-3.8	96840	9.5	2.5	
Cr	52	1	nogas	-1.870	-4.4	11334	4.1	2.5	
Mn	55	1	nogas	-0.034	-102.4	7518	3.8	2.5	
Fe	56	1	nogas	-2.690	-97.7	881137	1.6	100	
Co	59	1	nogas	0.024	54.6	330	28.9	2.5	
Ni	60	1	nogas	-0.241	-15.7	457	14.6	2.5	
Cu	63	1	nogas	0.391	10.8	2957	4.3	2	
Zn	66	1	nogas	-2.399	-1.1	533	4.7	2.5	
As	75	1	nogas	-17.344	-5.3	17762	8.0	2.5	
Se	77	1	nogas	-219.152	-7.2	5768	10.5	2.5	
Se	82	1	nogas	-0.968	-37.7	73	34.3	2	
Sr	88	1	nogas	0.064	16.1	890	9.8	2.5	
Mo	95	1	nogas	0.124	61.1	300	43.6	2.5	
Ag	107	1	nogas	0.032	36.0	167	27.1	2.5	
Cd	111	1	nogas	0.048	66.5	47	53.9	1	
Sn	118	1	nogas	-2.610	-2.9	1503	10.8	5	
Sb	121	1	nogas	0.493	18.5	1947	15.8	2.5	
Ba	137	1	nogas	0.032	3.7	140	0.0	2.5	
Tl	205	1	nogas	0.182	36.2	1050	38.2	1	
Pb	208	1	nogas	0.047	52.0	307	32.8	2.5	
U	238	1	nogas	0.047	46.1	383	49.8	2.5	
Si	28	1	nogas	-1655.562	-3.6	1077024	1.0	5	
La	139	1	nogas	-18.712	-68.5	10	100.0	2.5	
Au	197	1	nogas	-7.120	-752.4	3	173.2	2.5	
Na	23	2	He	54.446	0.9	57870	1.1	100	
Mg	24	2	He	5.947	10.2	2727	8.3	100	
Al	27	2	He	3.274	151.8	1347	104.5	5	
K	39	2	He	-14.053	-53.6	113832	3.3	100	
Ca	43	2	He	13.443	157.5	27	114.6	100	
Ca	44	2	He	6.931	35.9	747	7.6	100	
V	51	2	He	-1.457	-2.2	2340	4.1	2.5	
Cr	52	2	He	-0.101	-56.9	1637	10.1	2.5	
Mn	55	2	He	0.042	85.9	400	21.4	2.5	
Fe	56	2	He	5.636	2.2	23886	2.2	100	
Co	59	2	He	0.021	71.5	107	51.6	2.5	
Ni	60	2	He	-0.333	-12.5	170	21.2	2.5	
Cu	63	2	He	0.030	277.0	1427	12.4	2	
Zn	66	2	He	-2.517	-2.8	213	17.7	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.265	-12.7	150	12.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.387	2.6	1060	1.9	2.5	
Se	78	2	He	0.581	60.5	255	6.3	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1054533	1.23	826909	127.53	70	125	ISTD Failed
In	115	1	nogas	860943	1.05	692762	124.28	70	125	
Li	6	1	nogas	460550	0.95	540315	85.24	70	125	
Bi	209	1	nogas	578344	4.10	476916	121.27	70	125	
Ge	72	2	He	402434	0.96	368809	109.12	70	125	

Sample Report

Sample Table

Sample Name	HS18120114-06
Data File Name	164SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T20:14:32-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 135381
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.087	0.087	36.45	217	0.04	2000	
B	11	1	nogas	36.273	36.273	6.34	38844	0.09	2000	
Na	23	1	nogas	478836.619	478836.619	2.98	4051139424	0.01	200000	>LDR
Mg	24	1	nogas	156787.348	156787.348	1.65	882944786	0.02	200000	
Al	27	1	nogas	292.647	292.647	2.01	2096547	0.01	2000	
K	39	1	nogas	3173.304	3173.304	1.26	24931538	0.01	200000	
Ca	43	1	nogas	425466.896	425466.896	0.65	5398542	7.88	200000	>LDR
Ca	44	1	nogas	414491.730	414491.730	1.07	87917759	0.47	200000	>LDR
Ti	47	1	nogas	7.514	7.514	3.46	4934	0.15	2000	
V	51	1	nogas	-2.321	-2.321	-144.70	287559	0.00	2000	
Cr	52	1	nogas	3.247	3.247	4.66	46677	0.01	2000	
Mn	55	1	nogas	32.767	32.767	1.47	295626	0.01	2000	
Fe	56	1	nogas	660.367	660.367	4.36	5673357	0.01	200000	
Co	59	1	nogas	1.007	1.007	2.14	7425	0.01	2000	
Ni	60	1	nogas	12.609	12.609	1.44	20709	0.06	2000	
Cu	63	1	nogas	4.003	4.003	4.28	16021	0.02	2000	
Zn	66	1	nogas	1.892	1.892	8.97	5161	0.04	2000	
As	75	1	nogas	15.285	15.285	13.38	58246	0.03	2000	
Se	77	1	nogas	171.944	171.944	19.38	18627	0.92	2000	
Se	82	1	nogas	10.859	10.859	19.49	863	1.26	2000	
Sr	88	1	nogas	4622.075	4622.075	1.43	41204770	0.01	2000	>LDR
Mo	95	1	nogas	0.236	0.236	2.80	480	0.05	2000	
Ag	107	1	nogas	0.031	0.031	72.93	153	0.02	2000	
Cd	111	1	nogas	0.267	0.267	49.23	193	0.14	2000	
Sn	118	1	nogas	-2.831	-2.831	-1.88	853	-0.33	2000	
Sb	121	1	nogas	0.182	0.182	11.66	810	0.02	2000	
Ba	137	1	nogas	263.454	263.454	4.45	288481	0.09	2000	
Tl	205	1	nogas	0.007	0.007	99.63	70	0.01	2000	
Pb	208	1	nogas	0.503	0.503	1.05	1710	0.03	2000	
U	238	1	nogas	3.882	3.882	7.56	25445	0.02	2000	
Si	28	1	nogas	186525.462	186525.462	2.38	73419811	0.25	2000	>LDR
La	139	1	nogas	6420.855	6420.855	2.19	4434	144.81	2000	>LDR
Au	197	1	nogas	115.681	115.681	115.18	13	867.61	2000	
Na	23	2	He	517980.897	517980.897	1.70	348724088	0.15	200000	>LDR
Mg	24	2	He	173707.097	173707.097	1.23	66504467	0.26	200000	
Al	27	2	He	297.004	297.004	1.91	78931	0.38	2000	
K	39	2	He	3329.548	3329.548	2.52	1808401	0.18	200000	
Ca	43	2	He	416530.079	416530.079	2.29	570609	73.00	200000	>LDR
Ca	44	2	He	425573.547	425573.547	2.59	9805295	4.34	200000	>LDR
V	51	2	He	1.803	1.803	11.98	11078	0.02	2000	
Cr	52	2	He	4.376	4.376	1.10	14273	0.03	2000	
Mn	55	2	He	32.644	32.644	2.25	75638	0.04	2000	
Fe	56	2	He	623.823	623.823	4.34	1603970	0.04	200000	
Co	59	2	He	0.418	0.418	11.65	1487	0.03	2000	

Sample Report

Ni	60	2	He	8.802	8.802	3.65	7885	0.11	2000	
Cu	63	2	He	1.033	1.033	5.70	3420	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	1.747	1.747	20.37	2384	0.07	2000	
As	75	2	He	1.259	1.259	7.28	937	0.13	2000	
Sb	121	2	He	0.170	0.170	10.69	497	0.03	2000	
Se	78	2	He	3.770	3.770	5.47	389	0.97	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1014359	1.99	826909	122.67	70	125	
In	115	1	nogas	748922	2.29	692762	108.11	70	125	
Li	6	1	nogas	482761	3.72	540315	89.35	70	125	
Bi	209	1	nogas	476348	5.40	476916	99.88	70	125	
Ge	72	2	He	381127	0.99	368809	103.34	70	125	

Sample Report

Sample Table

Sample Name	HS18120114-07
Data File Name	165SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T20:16:48-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 135381
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.024	0.024	57.72	103	0.02	2000	
B	11	1	nogas	171.222	171.222	2.50	174564	0.10	2000	
Na	23	1	nogas	540698.219	540698.219	1.92	4495635167	0.01	200000	>LDR
Mg	24	1	nogas	117967.640	117967.640	1.23	652668498	0.02	200000	
Al	27	1	nogas	90.812	90.812	1.02	638799	0.01	2000	
K	39	1	nogas	2270.204	2270.204	3.06	18150766	0.01	200000	
Ca	43	1	nogas	323163.513	323163.513	2.76	3990085	8.10	200000	>LDR
Ca	44	1	nogas	310801.294	310801.294	2.54	64151552	0.48	200000	>LDR
Ti	47	1	nogas	3.875	3.875	4.40	2504	0.15	2000	
V	51	1	nogas	12.757	12.757	17.67	396380	0.00	2000	
Cr	52	1	nogas	1.298	1.298	8.65	32155	0.00	2000	
Mn	55	1	nogas	25.430	25.430	3.57	224970	0.01	2000	
Fe	56	1	nogas	405.080	405.080	1.93	3714949	0.01	200000	
Co	59	1	nogas	0.915	0.915	3.52	6581	0.01	2000	
Ni	60	1	nogas	5.849	5.849	3.68	9776	0.06	2000	
Cu	63	1	nogas	4.066	4.066	3.94	15827	0.03	2000	
Zn	66	1	nogas	9.799	9.799	7.74	13349	0.07	2000	
As	75	1	nogas	22.799	22.799	12.26	65855	0.03	2000	
Se	77	1	nogas	256.542	256.542	15.31	20856	1.23	2000	
Se	82	1	nogas	6.672	6.672	12.09	567	1.18	2000	
Sr	88	1	nogas	3373.788	3373.788	2.52	29274652	0.01	2000	>LDR
Mo	95	1	nogas	0.157	0.157	19.50	337	0.05	2000	
Ag	107	1	nogas	0.027	0.027	60.67	137	0.02	2000	
Cd	111	1	nogas	0.157	0.157	39.53	123	0.13	2000	
Sn	118	1	nogas	-3.068	-3.068	-2.01	387	-0.79	2000	
Sb	121	1	nogas	0.204	0.204	16.39	860	0.02	2000	
Ba	137	1	nogas	29.564	29.564	3.33	34392	0.09	2000	
Tl	205	1	nogas	0.006	0.006	49.85	67	0.01	2000	
Pb	208	1	nogas	0.193	0.193	17.10	743	0.03	2000	
U	238	1	nogas	14.087	14.087	5.05	95388	0.01	2000	
Si	28	1	nogas	172357.251	172357.251	1.69	66172571	0.26	2000	>LDR
La	139	1	nogas	3369.885	3369.885	2.68	2477	136.05	2000	>LDR
Au	197	1	nogas	-1.946	-1.946	-3213.55	3	-58.38	2000	
Na	23	2	He	571190.531	571190.531	1.27	388098341	0.15	200000	>LDR
Mg	24	2	He	127470.895	127470.895	1.72	49251606	0.26	200000	
Al	27	2	He	90.652	90.652	3.12	24593	0.37	2000	
K	39	2	He	2106.498	2106.498	1.22	1197390	0.18	200000	
Ca	43	2	He	301466.274	301466.274	0.19	416826	72.32	200000	>LDR
Ca	44	2	He	308795.057	308795.057	1.30	7181057	4.30	200000	>LDR
V	51	2	He	1.710	1.710	5.25	10929	0.02	2000	
Cr	52	2	He	1.723	1.723	7.04	6798	0.03	2000	
Mn	55	2	He	24.996	24.996	1.16	58521	0.04	2000	
Fe	56	2	He	310.088	310.088	0.09	808957	0.04	200000	
Co	59	2	He	0.483	0.483	6.24	1730	0.03	2000	

Sample Report

Ni	60	2	He	1.430	1.430	6.46	1667	0.09	2000	
Cu	63	2	He	0.856	0.856	7.45	3084	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	8.408	8.408	2.96	5841	0.14	2000	
As	75	2	He	0.860	0.860	2.32	736	0.12	2000	
Sb	121	2	He	0.169	0.169	20.15	497	0.03	2000	
Se	78	2	He	0.723	0.723	31.02	251	0.29	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	987355	1.45	826909	119.40	70	125	
In	115	1	nogas	793400	2.07	692762	114.53	70	125	
Li	6	1	nogas	493120	1.93	540315	91.27	70	125	
Bi	209	1	nogas	491892	5.49	476916	103.14	70	125	
Ge	72	2	He	384616	0.23	368809	104.29	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	168_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T20:23:39-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	99.295	2.318	205467	0.64	100	99.3	90	110	
B	11	1	nogas	542.913	1.373	602881	2.15	500	108.6	90	110	
Na	23	1	nogas	10441.129	1.102	85489179	0.87	10000	104.4	90	110	
Mg	24	1	nogas	9856.167	0.977	53594982	0.63	10000	98.6	90	110	
Al	27	1	nogas	96.093	1.922	686369	0.18	100	96.1	90	110	
P	31	1	nogas	464.450	1.926	244445	1.85	500	92.9	90	110	
K	39	1	nogas	9997.044	1.365	71615577	1.31	10000	100.0	90	110	
Ca	43	1	nogas	10098.327	1.198	127229	0.83	10000	101.0	90	110	
Ca	44	1	nogas	10304.099	0.916	2187069	1.11	10000	103.0	90	110	
Ti	47	1	nogas	99.559	1.466	64003	1.69	100	99.6	90	110	
V	51	1	nogas	116.456	2.331	1220693	2.82	100	116.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.228	1.037	709577	1.36	100	99.2	90	110	
Mn	55	1	nogas	102.805	1.168	901694	1.11	100	102.8	90	110	
Fe	56	1	nogas	10401.240	1.449	75779129	1.79	10000	104.0	90	110	
Co	59	1	nogas	98.970	1.537	708241	1.61	100	99.0	90	110	
Ni	60	1	nogas	100.791	0.962	158048	1.06	100	100.8	90	110	
Cu	63	1	nogas	101.509	1.760	367818	0.33	100	101.5	90	110	
Zn	66	1	nogas	102.250	1.858	112566	0.62	100	102.2	90	110	
As	75	1	nogas	113.878	2.256	180504	0.25	100	113.9	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	277.752	10.986	21907	4.71	100	277.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.258	1.506	6915	3.12	100	102.3	90	110	
Sr	88	1	nogas	102.199	0.590	901777	2.32	100	102.2	90	110	
Mo	95	1	nogas	102.034	3.184	172472	2.74	100	102.0	90	110	
Ag	107	1	nogas	102.160	0.714	388090	1.77	100	102.2	90	110	
Cd	111	1	nogas	101.680	1.282	78902	1.18	100	101.7	90	110	
Sn	118	1	nogas	100.293	0.711	238047	0.61	100	100.3	90	110	
Sb	121	1	nogas	103.371	2.739	349781	3.05	100	103.4	90	110	
Ba	137	1	nogas	99.791	2.145	121848	1.34	100	99.8	90	110	
Tl	205	1	nogas	102.188	6.791	528453	4.60	100	102.2	90	110	
Pb	208	1	nogas	100.703	3.137	369063	0.78	100	100.7	90	110	
U	238	1	nogas	93.150	5.340	701428	2.90	100	93.1	90	110	
Li	7	1	nogas	104.959	1.104	617248	0.93	100	105.0	90	110	
Si	28	1	nogas	3131.785	2.780	2846932	1.22	5000	62.6	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	98.131	5.011	69916	4.39	100	98.1	90	110	
La	139	1	nogas	151.449	30.057	140	24.74	100	151.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	60.422	161.044	10	100.00	100	60.4	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	101.695	6.373	221995	3.33	100	101.7	90	110	
Na	23	2	He	10416.035	2.852	7139523	1.52	10000	104.2	90	110	
Mg	24	2	He	10055.360	2.548	3909818	1.22	10000	100.6	90	110	
Al	27	2	He	91.911	3.834	25084	2.56	100	91.9	90	110	
K	39	2	He	9450.358	2.106	4998903	1.50	10000	94.5	90	110	
Ca	43	2	He	9465.850	4.083	13175	2.77	10000	94.7	90	110	
Ca	44	2	He	9416.856	2.747	220899	1.43	10000	94.2	90	110	
V	51	2	He	99.952	1.440	282334	0.24	100	100.0	90	110	
Cr	52	2	He	97.915	1.837	284460	1.41	100	97.9	90	110	
Mn	55	2	He	97.376	2.839	228593	2.23	100	97.4	90	110	
Fe	56	2	He	9962.160	2.085	25893648	0.75	10000	99.6	90	110	
Co	59	2	He	102.545	3.733	363466	2.40	100	102.5	90	110	
Ni	60	2	He	103.731	3.419	89529	2.07	100	103.7	90	110	
Cu	63	2	He	106.531	1.652	224449	0.55	100	106.5	90	110	
Zn	66	2	He	102.358	2.520	54660	2.25	100	102.4	90	110	
As	75	2	He	96.999	2.260	51670	1.63	100	97.0	90	110	
Sb	121	2	He	100.622	1.555	239812	0.21	100	100.6	90	110	
Se	78	2	He	93.074	1.147	4572	0.64	100	93.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1003471	2.02	826909	121.35	70	125	
In	115	1	nogas	834275	0.81	692762	120.43	70	125	
Li	6	1	nogas	544388	1.81	540315	100.75	70	125	
Bi	209	1	nogas	546607	3.11	476916	114.61	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	387109	1.35	368809	104.96	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	169_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T20:25:54-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.052	57.8	160	34.8	1	
B	11	1	nogas	12.967	13.3	16958	9.0	10	CCB Main CR1 Failed
Na	23	1	nogas	230.747	6.6	2026172	5.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	8.546	13.1	50446	10.9	100	
Al	27	1	nogas	0.963	3.0	14863	0.2	5	
P	31	1	nogas	2.060	58.0	21743	4.1	10	
K	39	1	nogas	-33.991	-18.8	2599810	1.6	100	
Ca	43	1	nogas	6.782	49.3	600	7.3	100	
Ca	44	1	nogas	-50.430	-3.7	15607	2.5	100	
Ti	47	1	nogas	0.115	85.9	130	48.0	2.5	
V	51	1	nogas	-10.377	-15.5	221014	5.3	2.5	
Cr	52	1	nogas	-1.207	-5.2	15410	3.9	2.5	
Mn	55	1	nogas	-0.048	-33.5	7041	1.6	2.5	
Fe	56	1	nogas	15.963	15.4	974941	2.2	100	
Co	59	1	nogas	0.024	6.2	313	1.8	2.5	
Ni	60	1	nogas	-0.245	-28.1	430	25.9	2.5	
Cu	63	1	nogas	0.837	19.7	4431	13.0	2	
Zn	66	1	nogas	-2.429	-3.8	477	21.1	2.5	
As	75	1	nogas	-4.473	-22.3	33018	4.6	2.5	
Se	77	1	nogas	-59.478	-14.3	10787	3.8	2.5	
Se	82	1	nogas	0.442	207.8	163	36.9	2	
Sr	88	1	nogas	0.089	11.4	1073	8.8	2.5	
Mo	95	1	nogas	0.100	16.2	247	10.2	2.5	
Ag	107	1	nogas	0.047	40.2	213	32.9	2.5	
Cd	111	1	nogas	0.024	59.1	27	43.3	1	
Sn	118	1	nogas	-2.662	-6.9	1333	30.0	5	
Sb	121	1	nogas	0.467	18.5	1770	16.3	2.5	
Ba	137	1	nogas	0.061	71.2	170	31.1	2.5	
Tl	205	1	nogas	0.179	65.6	1027	66.1	1	
Pb	208	1	nogas	0.043	56.0	287	29.7	2.5	
U	238	1	nogas	0.040	32.1	323	33.4	2.5	
Si	28	1	nogas	-1910.948	-5.0	929495	2.9	5	
La	139	1	nogas	8.037	334.6	30	66.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-38.049	0.0	0	#DIV/0!	2.5	
Na	23	2	He	190.050	2.0	147781	1.8	100	CCB Main CR1 Failed
Mg	24	2	He	6.786	7.8	2937	6.0	100	
Al	27	2	He	0.454	77.5	527	15.8	5	
K	39	2	He	-27.242	-26.5	102230	1.7	100	
Ca	43	2	He	28.766	54.6	47	44.6	100	
Ca	44	2	He	3.976	35.3	647	5.4	100	
V	51	2	He	-0.487	-16.6	4911	3.9	2.5	
Cr	52	2	He	-0.049	-111.9	1720	10.7	2.5	
Mn	55	2	He	0.058	18.1	420	4.1	2.5	
Fe	56	2	He	4.668	3.7	20375	2.4	100	
Co	59	2	He	0.013	31.5	73	20.8	2.5	
Ni	60	2	He	-0.407	-5.2	100	20.0	2.5	
Cu	63	2	He	0.307	16.5	1947	6.2	2	
Zn	66	2	He	-2.460	-5.2	233	26.2	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.029	-223.0	268	11.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.235	36.0	657	31.3	2.5	
Se	78	2	He	0.324	11.9	233	1.3	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1005560	1.57	826909	121.60	70	125	
In	115	1	nogas	832181	2.08	692762	120.13	70	125	
Li	6	1	nogas	509217	1.74	540315	94.24	70	125	
Bi	209	1	nogas	571721	3.22	476916	119.88	70	125	
Ge	72	2	He	385546	1.95	368809	104.54	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	180_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T20:50:24-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	105.688	2.339	204455	0.86	100	105.7	90	110	
B	11	1	nogas	595.300	2.750	617518	1.77	500	119.1	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9917.086	0.760	87141725	1.25	10000	99.2	90	110	
Mg	24	1	nogas	9659.571	0.642	56365395	1.25	10000	96.6	90	110	
Al	27	1	nogas	114.457	5.853	880947	5.64	100	114.5	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	446.063	1.336	254314	0.74	500	89.2	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10036.869	3.129	77594250	1.97	10000	100.4	90	110	
Ca	43	1	nogas	10210.087	0.604	138876	1.58	10000	102.1	90	110	
Ca	44	1	nogas	10034.933	2.353	2299985	2.15	10000	100.3	90	110	
Ti	47	1	nogas	99.788	2.512	69245	1.97	100	99.8	90	110	
V	51	1	nogas	92.329	1.757	1112184	0.59	100	92.3	90	110	
Cr	52	1	nogas	98.455	1.818	760175	1.14	100	98.5	90	110	
Mn	55	1	nogas	103.022	3.032	975340	2.34	100	103.0	90	110	
Fe	56	1	nogas	10366.118	2.973	81521802	2.38	10000	103.7	90	110	
Co	59	1	nogas	98.350	2.872	759694	2.27	100	98.3	90	110	
Ni	60	1	nogas	99.840	2.764	168998	2.05	100	99.8	90	110	
Cu	63	1	nogas	100.372	1.976	392644	1.12	100	100.4	90	110	
Zn	66	1	nogas	101.146	1.519	120255	1.44	100	101.1	90	110	
As	75	1	nogas	93.930	0.563	168029	0.69	100	93.9	90	110	
Se	77	1	nogas	70.129	24.420	16238	2.68	100	70.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.793	5.291	7285	4.56	100	99.8	90	110	
Sr	88	1	nogas	100.694	2.832	958974	2.67	100	100.7	90	110	
Mo	95	1	nogas	100.758	2.202	183857	1.19	100	100.8	90	110	
Ag	107	1	nogas	101.214	0.730	415063	1.47	100	101.2	90	110	
Cd	111	1	nogas	103.586	0.482	83446	1.01	100	103.6	90	110	
Sn	118	1	nogas	99.947	2.026	246314	2.58	100	99.9	90	110	
Sb	121	1	nogas	101.051	2.531	369077	1.94	100	101.1	90	110	
Ba	137	1	nogas	100.379	1.801	127233	0.38	100	100.4	90	110	
Tl	205	1	nogas	101.338	6.938	538791	2.28	100	101.3	90	110	
Pb	208	1	nogas	101.757	4.499	383516	1.13	100	101.8	90	110	
U	238	1	nogas	91.254	5.814	706570	0.35	100	91.3	90	110	
Li	7	1	nogas	109.646	1.658	601194	0.41	100	109.6	90	110	
Si	28	1	nogas	3643.050	6.573	3283440	3.06	5000	72.9	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	100.209	1.650	74123	0.60	100	100.2	90	110	
La	139	1	nogas	329.248	32.850	287	29.67	100	329.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	86.559	53.205	13	43.30	100	86.6	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.890	6.216	222009	0.94	100	98.9	90	110	
Na	23	2	He	10112.314	1.565	7343399	1.95	10000	101.1	90	110	
Mg	24	2	He	10011.908	1.092	4124027	1.82	10000	100.1	90	110	
Al	27	2	He	96.697	1.692	27941	3.16	100	96.7	90	110	
K	39	2	He	9401.347	2.196	5267204	0.67	10000	94.0	90	110	
Ca	43	2	He	9351.350	2.755	13789	2.56	10000	93.5	90	110	
Ca	44	2	He	9421.227	2.038	234078	0.48	10000	94.2	90	110	
V	51	2	He	100.482	1.745	300569	0.74	100	100.5	90	110	
Cr	52	2	He	100.966	1.921	310580	0.61	100	101.0	90	110	
Mn	55	2	He	97.403	3.252	242131	1.47	100	97.4	90	110	
Fe	56	2	He	10042.429	2.764	27642729	1.07	10000	100.4	90	110	
Co	59	2	He	103.932	2.757	390185	1.23	100	103.9	90	110	
Ni	60	2	He	104.713	3.710	95708	2.00	100	104.7	90	110	
Cu	63	2	He	105.749	1.645	235997	1.48	100	105.7	90	110	
Zn	66	2	He	102.371	1.722	57897	1.14	100	102.4	90	110	
As	75	2	He	96.726	2.282	54568	1.02	100	96.7	90	110	
Sb	121	2	He	97.404	3.804	245803	2.04	100	97.4	90	110	
Se	78	2	He	94.835	1.294	4929	0.68	100	94.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1083180	1.11	826909	130.99	70	125	ISTD Failed
In	115	1	nogas	866099	1.48	692762	125.02	70	125	ISTD Failed
Li	6	1	nogas	508935	1.70	540315	94.19	70	125	
Bi	209	1	nogas	562746	5.77	476916	118.00	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	410010	1.78	368809	111.17	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	181_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T20:52:37-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.085	14.9	217	11.6	1	
B	11	1	nogas	19.419	11.0	22868	8.5	10	CCB Main CR1 Failed
Na	23	1	nogas	50.831	5.0	627166	2.7	100	
Mg	24	1	nogas	7.967	14.2	51712	12.0	100	
Al	27	1	nogas	10.316	57.6	84969	51.8	5	CCB Main CR1 Failed
P	31	1	nogas	-6.259	-12.2	18586	2.0	10	
K	39	1	nogas	-44.437	-14.9	2651352	1.5	100	
Ca	43	1	nogas	9.112	22.2	660	4.0	100	
Ca	44	1	nogas	-46.916	-9.6	17145	5.8	100	
Ti	47	1	nogas	0.194	8.1	190	5.3	2.5	
V	51	1	nogas	-16.418	-1.9	181792	1.5	2.5	
Cr	52	1	nogas	-1.399	-2.2	14763	1.4	2.5	
Mn	55	1	nogas	0.200	28.7	9659	5.2	2.5	
Fe	56	1	nogas	2.525	165.5	920822	3.4	100	
Co	59	1	nogas	0.032	47.5	390	29.1	2.5	
Ni	60	1	nogas	-0.357	-3.6	267	7.8	2.5	
Cu	63	1	nogas	0.154	51.2	2060	14.3	2	
Zn	66	1	nogas	-2.364	-3.9	573	17.9	2.5	
As	75	1	nogas	-10.589	-5.5	26610	3.0	2.5	
Se	77	1	nogas	-138.059	-4.6	8582	2.9	2.5	
Se	82	1	nogas	-0.587	-106.4	100	43.6	2	
Sr	88	1	nogas	0.079	16.4	1033	11.8	2.5	
Mo	95	1	nogas	0.105	29.9	267	20.7	2.5	
Ag	107	1	nogas	0.038	22.8	190	18.2	2.5	
Cd	111	1	nogas	0.023	84.2	27	57.3	1	
Sn	118	1	nogas	-2.568	-7.4	1624	26.6	5	
Sb	121	1	nogas	0.549	24.5	2147	22.0	2.5	
Ba	137	1	nogas	0.135	15.9	273	9.2	2.5	
Tl	205	1	nogas	0.233	42.4	1297	44.3	1	
Pb	208	1	nogas	0.088	24.3	453	16.3	2.5	
U	238	1	nogas	0.051	12.1	400	15.6	2.5	
Si	28	1	nogas	-1470.841	-1.9	1151259	1.2	5	
La	139	1	nogas	64.354	13.4	77	7.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	211.099	64.8	27	57.3	2.5	CCB Main CR1 Failed
Na	23	2	He	50.387	4.0	54681	1.3	100	
Mg	24	2	He	6.598	6.2	2977	7.0	100	
Al	27	2	He	3.958	15.8	1520	10.3	5	
K	39	2	He	-33.449	-18.0	102861	2.6	100	
Ca	43	2	He	39.107	38.4	63	32.9	100	
Ca	44	2	He	6.057	109.8	723	23.7	100	
V	51	2	He	-0.900	-4.5	3921	4.2	2.5	
Cr	52	2	He	0.014	418.3	1973	9.4	2.5	
Mn	55	2	He	0.291	11.0	1000	6.1	2.5	
Fe	56	2	He	10.154	2.2	35896	1.3	100	
Co	59	2	He	0.019	14.1	100	10.0	2.5	
Ni	60	2	He	-0.366	-17.3	140	39.8	2.5	
Cu	63	2	He	-0.134	-65.0	1063	17.5	2	
Zn	66	2	He	-2.552	-1.2	193	7.9	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.152	-18.0	211	6.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.350	8.6	963	7.9	2.5	
Se	78	2	He	0.832	37.7	266	4.2	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1054652	0.29	826909	127.54	70	125	ISTD Failed
In	115	1	nogas	872802	1.60	692762	125.99	70	125	ISTD Failed
Li	6	1	nogas	492904	0.82	540315	91.23	70	125	
Bi	209	1	nogas	563207	3.78	476916	118.09	70	125	
Ge	72	2	He	400315	1.72	368809	108.54	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	192_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T21:17:22-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	99.359	3.029	192335	1.90	100	99.4	90	110	
B	11	1	nogas	566.849	3.522	588491	2.11	500	113.4	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9833.118	1.583	84927175	2.32	10000	98.3	90	110	
Mg	24	1	nogas	9685.449	1.720	55546814	2.13	10000	96.9	90	110	
Al	27	1	nogas	121.461	6.302	915241	5.27	100	121.5	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	435.307	0.726	243723	0.72	500	87.1	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9946.823	1.930	75382212	0.62	10000	99.5	90	110	
Ca	43	1	nogas	10047.422	2.273	133893	0.95	10000	100.5	90	110	
Ca	44	1	nogas	10017.441	1.785	2249663	0.55	10000	100.2	90	110	
Ti	47	1	nogas	99.421	0.478	67610	1.01	100	99.4	90	110	
V	51	1	nogas	80.808	1.387	993825	1.67	100	80.8	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	95.197	1.449	721222	2.67	100	95.2	90	110	
Mn	55	1	nogas	99.076	0.525	919538	1.09	100	99.1	90	110	
Fe	56	1	nogas	10468.670	1.330	80665754	0.13	10000	104.7	90	110	
Co	59	1	nogas	95.662	2.360	724029	1.08	100	95.7	90	110	
Ni	60	1	nogas	95.746	3.095	158824	1.78	100	95.7	90	110	
Cu	63	1	nogas	96.351	1.947	369389	1.07	100	96.4	90	110	
Zn	66	1	nogas	95.516	3.543	111459	3.48	100	95.5	90	110	
As	75	1	nogas	85.850	1.833	153986	1.23	100	85.9	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	-9.434	-74.164	13132	0.81	100	-9.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.782	3.702	7072	4.95	100	98.8	90	110	
Sr	88	1	nogas	99.201	1.581	925706	0.37	100	99.2	90	110	
Mo	95	1	nogas	100.006	3.169	178798	2.01	100	100.0	90	110	
Ag	107	1	nogas	97.567	1.104	392079	2.12	100	97.6	90	110	
Cd	111	1	nogas	98.161	0.254	79457	0.94	100	98.2	90	110	
Sn	118	1	nogas	97.210	0.742	240912	0.42	100	97.2	90	110	
Sb	121	1	nogas	91.077	2.939	325937	1.68	100	91.1	90	110	
Ba	137	1	nogas	93.320	0.375	118876	0.75	100	93.3	90	110	
Tl	205	1	nogas	92.831	5.999	498303	1.87	100	92.8	90	110	
Pb	208	1	nogas	95.777	4.365	364311	0.25	100	95.8	90	110	
U	238	1	nogas	86.394	5.646	675431	3.49	100	86.4	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	104.249	0.990	573767	0.89	100	104.2	90	110	
Si	28	1	nogas	3381.380	3.315	3111815	0.74	5000	67.6	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	94.316	1.701	70103	0.89	100	94.3	90	110	
La	139	1	nogas	344.370	41.668	300	37.86	100	344.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	21.701	476.890	7	173.21	100	21.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	92.370	4.455	209442	1.92	100	92.4	90	110	
Na	23	2	He	9755.888	2.867	7054066	1.09	10000	97.6	90	110	
Mg	24	2	He	9668.928	2.959	3965058	1.08	10000	96.7	90	110	
Al	27	2	He	95.715	4.756	27557	6.22	100	95.7	90	110	
K	39	2	He	9235.433	1.631	5155376	0.28	10000	92.4	90	110	
Ca	43	2	He	9152.041	2.934	13442	3.62	10000	91.5	90	110	
Ca	44	2	He	9314.915	2.659	230479	1.37	10000	93.1	90	110	
V	51	2	He	95.264	2.089	284114	0.45	100	95.3	90	110	
Cr	52	2	He	95.498	1.257	292678	0.78	100	95.5	90	110	
Mn	55	2	He	92.613	0.897	229354	1.01	100	92.6	90	110	
Fe	56	2	He	9887.048	0.963	27109967	1.49	10000	98.9	90	110	
Co	59	2	He	99.137	2.243	370673	0.86	100	99.1	90	110	
Ni	60	2	He	98.968	5.046	90093	3.16	100	99.0	90	110	
Cu	63	2	He	99.814	4.298	221825	2.43	100	99.8	90	110	
Zn	66	2	He	96.178	2.950	54259	1.58	100	96.2	90	110	
As	75	2	He	93.266	0.571	52421	1.69	100	93.3	90	110	
Sb	121	2	He	89.095	2.728	223944	1.05	100	89.1	90	110	CCV Main CR1-2 Failed
Se	78	2	He	90.009	5.588	4669	3.47	100	90.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1061398	1.34	826909	128.36	70	125	ISTD Failed
In	115	1	nogas	870242	1.06	692762	125.62	70	125	ISTD Failed
Li	6	1	nogas	509254	1.53	540315	94.25	70	125	
Bi	209	1	nogas	567663	4.31	476916	119.03	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	408324	1.87	368809	110.71	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	193_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T21:19:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.073	27.4	193	19.6	1	
B	11	1	nogas	16.969	9.7	20308	7.7	10	CCB Main CR1 Failed
Na	23	1	nogas	37.476	11.5	489735	4.8	100	
Mg	24	1	nogas	10.596	12.4	64524	8.8	100	
Al	27	1	nogas	8.742	41.6	72336	36.5	5	CCB Main CR1 Failed
P	31	1	nogas	-5.935	-26.5	18520	2.7	10	
K	39	1	nogas	-48.111	-11.2	2593306	0.7	100	
Ca	43	1	nogas	15.346	15.3	733	4.2	100	
Ca	44	1	nogas	-45.266	-8.7	17292	3.4	100	
Ti	47	1	nogas	0.373	32.6	307	25.3	2.5	
V	51	1	nogas	-19.902	-2.0	151115	3.0	2.5	
Cr	52	1	nogas	-1.590	-2.6	13215	2.4	2.5	
Mn	55	1	nogas	0.044	79.6	8125	1.8	2.5	
Fe	56	1	nogas	5.740	85.7	933489	1.9	100	
Co	59	1	nogas	0.029	35.0	367	22.0	2.5	
Ni	60	1	nogas	-0.311	-3.9	337	6.2	2.5	
Cu	63	1	nogas	0.147	46.7	2007	10.7	2	
Zn	66	1	nogas	-2.452	-2.6	470	16.9	2.5	
As	75	1	nogas	-12.259	-1.2	24133	2.6	2.5	
Se	77	1	nogas	-147.566	-9.9	8159	7.8	2.5	
Se	82	1	nogas	-0.279	-136.4	120	22.0	2	
Sr	88	1	nogas	0.097	22.8	1180	15.0	2.5	
Mo	95	1	nogas	0.111	33.0	273	21.4	2.5	
Ag	107	1	nogas	0.033	14.1	170	11.8	2.5	
Cd	111	1	nogas	0.045	115.5	43	93.3	1	
Sn	118	1	nogas	-2.636	-4.4	1427	18.6	5	
Sb	121	1	nogas	3.170	22.7	11294	20.2	2.5	CCB Main CR1 Failed
Ba	137	1	nogas	0.090	24.4	210	12.6	2.5	
Tl	205	1	nogas	0.072	14.8	410	12.2	1	
Pb	208	1	nogas	0.072	49.2	380	32.3	2.5	
U	238	1	nogas	0.055	21.0	417	22.3	2.5	
Si	28	1	nogas	-1531.997	-3.4	1113170	0.6	5	
La	139	1	nogas	49.668	60.4	63	36.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	225.987	93.0	27	78.1	2.5	CCB Main CR1 Failed
Na	23	2	He	31.971	7.0	41530	2.6	100	
Mg	24	2	He	9.276	1.3	4041	2.7	100	
Al	27	2	He	4.719	25.9	1730	21.0	5	
K	39	2	He	-36.021	-12.3	101171	1.1	100	
Ca	43	2	He	11.319	128.9	23	89.2	100	
Ca	44	2	He	6.806	75.7	737	15.9	100	
V	51	2	He	-1.104	-0.6	3325	1.0	2.5	
Cr	52	2	He	-0.062	-141.0	1743	16.4	2.5	
Mn	55	2	He	0.227	14.3	843	9.7	2.5	
Fe	56	2	He	10.188	5.1	35876	3.4	100	
Co	59	2	He	0.029	30.8	133	22.9	2.5	
Ni	60	2	He	-0.368	-21.0	137	48.7	2.5	
Cu	63	2	He	-0.251	-17.7	810	12.5	2	
Zn	66	2	He	-2.501	-3.8	220	22.7	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.154	-33.6	209	12.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	2.184	4.2	5464	3.8	2.5	
Se	78	2	He	0.363	98.7	243	6.4	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1042178	2.09	826909	126.03	70	125	ISTD Failed
In	115	1	nogas	851743	0.54	692762	122.95	70	125	
Li	6	1	nogas	490044	0.79	540315	90.70	70	125	
Bi	209	1	nogas	543920	1.92	476916	114.05	70	125	
Ge	72	2	He	399080	1.44	368809	108.21	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	203_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T21:41:58-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	98.143	1.774	181803	1.68	100	98.1	90	110	
B	11	1	nogas	550.064	2.138	546601	1.66	500	110.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9666.368	1.888	77788820	0.37	10000	96.7	90	110	
Mg	24	1	nogas	9554.274	1.659	51056402	0.35	10000	95.5	90	110	
Al	27	1	nogas	99.581	2.341	707605	1.51	100	99.6	90	110	
P	31	1	nogas	430.028	0.548	226774	0.74	500	86.0	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9705.341	0.942	69276881	1.11	10000	97.1	90	110	
Ca	43	1	nogas	9920.381	1.942	124394	1.36	10000	99.2	90	110	
Ca	44	1	nogas	9789.454	2.058	2069181	2.03	10000	97.9	90	110	
Ti	47	1	nogas	97.819	0.549	62584	0.76	100	97.8	90	110	
V	51	1	nogas	73.906	2.068	880901	2.18	100	73.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	93.100	0.513	664042	1.20	100	93.1	90	110	
Mn	55	1	nogas	97.213	1.437	848940	0.65	100	97.2	90	110	
Fe	56	1	nogas	10328.588	1.025	74891508	0.50	10000	103.3	90	110	
Co	59	1	nogas	95.006	1.864	676587	1.28	100	95.0	90	110	
Ni	60	1	nogas	94.628	0.914	147723	0.83	100	94.6	90	110	
Cu	63	1	nogas	94.183	1.176	339778	1.21	100	94.2	90	110	
Zn	66	1	nogas	95.637	0.897	104990	0.31	100	95.6	90	110	
As	75	1	nogas	80.510	0.667	138255	1.15	100	80.5	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	-63.849	-5.778	10567	1.67	100	-63.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.172	5.835	6678	6.32	100	99.2	90	110	
Sr	88	1	nogas	101.055	1.492	887226	0.67	100	101.1	90	110	
Mo	95	1	nogas	99.314	1.291	167081	0.56	100	99.3	90	110	
Ag	107	1	nogas	98.631	0.270	372878	1.06	100	98.6	90	110	
Cd	111	1	nogas	98.247	3.311	76896	2.24	100	98.2	90	110	
Sn	118	1	nogas	97.234	0.440	233061	1.12	100	97.2	90	110	
Sb	121	1	nogas	93.797	0.785	315859	0.14	100	93.8	90	110	
Ba	137	1	nogas	93.649	4.418	115341	3.28	100	93.6	90	110	
Tl	205	1	nogas	94.298	3.975	496919	0.12	100	94.3	90	110	
Pb	208	1	nogas	94.280	6.187	351692	2.30	100	94.3	90	110	
U	238	1	nogas	86.081	4.076	660378	0.20	100	86.1	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	104.078	0.521	548150	1.01	100	104.1	90	110	
Si	28	1	nogas	3435.519	3.744	2948218	1.10	5000	68.7	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	93.817	3.163	67435	2.27	100	93.8	90	110	
La	139	1	nogas	175.381	25.649	160	22.53	100	175.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	25.118	218.193	7	86.60	100	25.1	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	93.902	3.839	208915	0.69	100	93.9	90	110	
Na	23	2	He	9609.274	1.311	6392381	0.66	10000	96.1	90	110	
Mg	24	2	He	9758.738	1.390	3681728	0.73	10000	97.6	90	110	
Al	27	2	He	94.612	1.989	25047	2.41	100	94.6	90	110	
K	39	2	He	9128.286	0.952	4688515	0.11	10000	91.3	90	110	
Ca	43	2	He	9123.001	3.522	12321	2.76	10000	91.2	90	110	
Ca	44	2	He	9218.535	0.351	209853	1.14	10000	92.2	90	110	
V	51	2	He	94.919	1.202	260429	0.40	100	94.9	90	110	
Cr	52	2	He	96.399	1.609	271736	1.42	100	96.4	90	110	
Mn	55	2	He	93.274	0.570	212463	0.27	100	93.3	90	110	
Fe	56	2	He	9932.608	1.543	25048391	0.83	10000	99.3	90	110	
Co	59	2	He	97.766	2.473	336243	1.67	100	97.8	90	110	
Ni	60	2	He	98.995	2.977	82921	2.15	100	99.0	90	110	
Cu	63	2	He	100.352	2.251	205196	1.58	100	100.4	90	110	
Zn	66	2	He	93.887	1.942	48763	1.90	100	93.9	90	110	
As	75	2	He	93.107	1.578	48129	0.95	100	93.1	90	110	
Sb	121	2	He	90.894	1.725	210178	1.22	100	90.9	90	110	
Se	78	2	He	93.292	1.702	4445	0.82	100	93.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	998565	0.83	826909	120.76	70	125	
In	115	1	nogas	841679	1.48	692762	121.50	70	125	
Li	6	1	nogas	487218	0.63	540315	90.17	70	125	
Bi	209	1	nogas	556938	4.12	476916	116.78	70	125	

Ge	72	2	He	375545	0.83	368809	101.83	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	204_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T21:44:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.085	10.8	203	7.5	1	
B	11	1	nogas	18.062	11.5	20228	8.8	10	CCB Main CR1 Failed
Na	23	1	nogas	33.544	7.8	427810	3.4	100	
Mg	24	1	nogas	13.336	10.5	74996	8.7	100	
Al	27	1	nogas	7.646	10.7	60800	7.0	5	CCB Main CR1 Failed
P	31	1	nogas	-2.659	-25.0	19060	1.9	10	
K	39	1	nogas	-36.365	-22.9	2530469	1.9	100	
Ca	43	1	nogas	10.792	30.2	637	4.8	100	
Ca	44	1	nogas	-47.942	-3.8	15797	0.9	100	
Ti	47	1	nogas	0.302	57.9	247	46.6	2.5	
V	51	1	nogas	-26.142	-2.1	94594	6.8	2.5	
Cr	52	1	nogas	-1.878	-3.5	10540	4.7	2.5	
Mn	55	1	nogas	-0.050	-139.5	6871	6.4	2.5	
Fe	56	1	nogas	4.862	98.3	876138	2.0	100	
Co	59	1	nogas	0.048	21.7	477	16.3	2.5	
Ni	60	1	nogas	-0.358	-4.6	247	8.4	2.5	
Cu	63	1	nogas	0.151	18.3	1910	2.8	2	
Zn	66	1	nogas	-2.445	-0.8	450	4.4	2.5	
As	75	1	nogas	-16.439	-1.5	17689	2.2	2.5	
Se	77	1	nogas	-202.773	-1.9	5918	4.5	2.5	
Se	82	1	nogas	-1.095	-43.0	60	50.0	2	
Sr	88	1	nogas	0.101	13.4	1153	7.8	2.5	
Mo	95	1	nogas	0.126	39.2	283	26.7	2.5	
Ag	107	1	nogas	0.046	24.4	207	18.3	2.5	
Cd	111	1	nogas	0.042	32.5	40	25.0	1	
Sn	118	1	nogas	-2.643	-4.1	1363	16.8	5	
Sb	121	1	nogas	3.244	23.3	10917	20.7	2.5	CCB Main CR1 Failed
Ba	137	1	nogas	0.143	10.8	267	5.7	2.5	
Tl	205	1	nogas	0.076	28.4	443	29.4	1	
Pb	208	1	nogas	0.091	28.5	457	24.2	2.5	
U	238	1	nogas	0.051	24.6	390	28.2	2.5	
Si	28	1	nogas	-1030.355	-16.6	1238856	2.8	5	
La	139	1	nogas	79.127	69.1	83	48.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	122.148	42.2	17	34.6	2.5	CCB Main CR1 Failed
Na	23	2	He	32.782	2.0	38871	0.5	100	
Mg	24	2	He	12.219	5.6	4817	5.0	100	
Al	27	2	He	7.574	51.7	2327	43.6	5	CCB Main CR1 Failed
K	39	2	He	-27.846	-11.2	97412	0.5	100	
Ca	43	2	He	12.697	140.0	23	99.0	100	
Ca	44	2	He	7.236	62.6	690	14.0	100	
V	51	2	He	-1.466	0.0	2120	1.2	2.5	
Cr	52	2	He	-0.040	-82.3	1667	5.1	2.5	
Mn	55	2	He	0.168	32.3	647	18.3	2.5	
Fe	56	2	He	12.344	6.3	38451	5.1	100	
Co	59	2	He	0.035	51.7	143	40.9	2.5	
Ni	60	2	He	-0.393	-19.9	107	60.3	2.5	
Cu	63	2	He	-0.152	-37.8	943	10.8	2	
Zn	66	2	He	-2.461	-4.7	223	26.2	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.213	-18.6	163	13.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	2.173	4.4	5017	3.3	2.5	
Se	78	2	He	0.667	120.8	237	13.9	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	985076	2.41	826909	119.13	70	125	
In	115	1	nogas	823592	1.24	692762	118.89	70	125	
Li	6	1	nogas	463484	1.13	540315	85.78	70	125	
Bi	209	1	nogas	551041	5.60	476916	115.54	70	125	
Ge	72	2	He	368365	1.21	368809	99.88	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	216_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:13:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.075	34.8	187	25.3	1	
B	11	1	nogas	15.558	11.9	17812	10.3	10	CCB Main CR1 Failed
Na	23	1	nogas	19.414	6.8	301722	2.6	100	
Mg	24	1	nogas	14.621	10.0	78213	8.8	100	
Al	27	1	nogas	8.002	15.3	61238	13.5	5	CCB Main CR1 Failed
P	31	1	nogas	-3.500	-20.3	18039	2.2	10	
K	39	1	nogas	-36.272	-14.3	2446571	0.9	100	
Ca	43	1	nogas	10.555	95.6	613	20.1	100	
Ca	44	1	nogas	-50.911	-4.8	14683	3.8	100	
Ti	47	1	nogas	0.291	69.1	230	52.7	2.5	
V	51	1	nogas	-26.401	-2.2	89436	5.3	2.5	
Cr	52	1	nogas	-1.795	-3.3	10730	3.0	2.5	
Mn	55	1	nogas	-0.037	-221.3	6758	9.8	2.5	
Fe	56	1	nogas	9.472	47.7	878597	3.1	100	
Co	59	1	nogas	0.055	25.5	510	19.3	2.5	
Ni	60	1	nogas	-0.326	-10.1	287	16.5	2.5	
Cu	63	1	nogas	0.019	136.7	1397	6.2	2	
Zn	66	1	nogas	-2.463	-1.4	417	8.4	2.5	
As	75	1	nogas	-16.268	-4.1	17299	4.3	2.5	
Se	77	1	nogas	-204.140	-1.7	5674	2.0	2.5	
Se	82	1	nogas	0.152	400.1	137	27.7	2	
Sr	88	1	nogas	0.103	4.6	1133	3.1	2.5	
Mo	95	1	nogas	0.140	43.5	297	32.4	2.5	
Ag	107	1	nogas	0.047	27.0	203	22.2	2.5	
Cd	111	1	nogas	0.067	78.3	57	66.8	1	
Sn	118	1	nogas	-2.548	-6.0	1523	20.9	5	
Sb	121	1	nogas	3.317	27.5	10817	26.8	2.5	CCB Main CR1 Failed
Ba	137	1	nogas	0.133	13.7	247	9.4	2.5	
Tl	205	1	nogas	0.100	25.6	563	27.7	1	
Pb	208	1	nogas	0.086	55.0	437	44.3	2.5	
U	238	1	nogas	0.051	19.6	393	23.6	2.5	
Si	28	1	nogas	-800.878	-12.9	1281126	3.0	5	
La	139	1	nogas	100.552	66.6	97	52.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-4.445	-1309.5	3	173.2	2.5	
Na	23	2	He	17.538	6.6	28619	2.0	100	
Mg	24	2	He	11.718	4.1	4581	4.7	100	
Al	27	2	He	6.577	50.4	2057	43.2	5	CCB Main CR1 Failed
K	39	2	He	-30.924	-23.6	94774	1.7	100	
Ca	43	2	He	10.239	151.4	20	100.0	100	
Ca	44	2	He	11.884	47.6	783	14.1	100	
V	51	2	He	-1.460	-1.5	2111	4.7	2.5	
Cr	52	2	He	-0.049	-96.7	1623	6.3	2.5	
Mn	55	2	He	0.167	22.3	637	11.1	2.5	
Fe	56	2	He	13.397	6.6	40597	6.1	100	
Co	59	2	He	0.034	20.6	140	18.9	2.5	
Ni	60	2	He	-0.355	-18.7	137	41.6	2.5	
Cu	63	2	He	-0.363	-11.9	517	14.5	2	
Zn	66	2	He	-2.454	-5.8	223	29.1	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.186	-29.4	174	13.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	2.327	2.3	5311	4.3	2.5	
Se	78	2	He	0.167	244.7	213	6.7	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	952002	0.54	826909	115.13	70	125	
In	115	1	nogas	794706	1.42	692762	114.72	70	125	
Li	6	1	nogas	461412	0.57	540315	85.40	70	125	
Bi	209	1	nogas	546322	4.01	476916	114.55	70	125	
Ge	72	2	He	364188	2.07	368809	98.75	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	218_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:29:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	100.486	1.127	183895	1.53	100	100.5	90	110	
B	11	1	nogas	546.499	0.941	536552	1.46	500	109.3	90	110	
Na	23	1	nogas	9698.572	2.053	74039139	1.08	10000	97.0	90	110	
Mg	24	1	nogas	9663.390	1.775	48987179	0.87	10000	96.6	90	110	
Al	27	1	nogas	99.663	3.238	671560	3.26	100	99.7	90	110	
P	31	1	nogas	449.807	1.744	224000	0.90	500	90.0	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9835.305	1.431	66527814	0.91	10000	98.4	90	110	
Ca	43	1	nogas	9955.982	1.498	118378	1.53	10000	99.6	90	110	
Ca	44	1	nogas	10094.537	1.568	2022533	2.30	10000	100.9	90	110	
Ti	47	1	nogas	98.420	2.633	59701	2.25	100	98.4	90	110	
V	51	1	nogas	81.267	2.538	890151	3.19	100	81.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	97.388	0.645	657635	1.78	100	97.4	90	110	
Mn	55	1	nogas	101.762	2.116	842243	1.11	100	101.8	90	110	
Fe	56	1	nogas	10269.508	1.641	70609012	1.32	10000	102.7	90	110	
Co	59	1	nogas	98.785	1.493	667111	1.91	100	98.8	90	110	
Ni	60	1	nogas	100.959	1.360	149400	2.02	100	101.0	90	110	
Cu	63	1	nogas	99.076	0.709	338843	0.99	100	99.1	90	110	
Zn	66	1	nogas	101.654	1.942	105628	1.54	100	101.7	90	110	
As	75	1	nogas	90.524	2.121	142868	1.41	100	90.5	90	110	
Se	77	1	nogas	1.771	1052.905	12064	4.62	100	1.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.509	1.244	6101	0.87	100	95.5	90	110	
Sr	88	1	nogas	102.677	1.781	854841	2.14	100	102.7	90	110	
Mo	95	1	nogas	103.122	1.463	164501	1.29	100	103.1	90	110	
Ag	107	1	nogas	102.446	1.202	367205	0.76	100	102.4	90	110	
Cd	111	1	nogas	102.828	0.744	75932	0.91	100	102.8	90	110	
Sn	118	1	nogas	100.568	0.512	227145	1.54	100	100.6	90	110	
Sb	121	1	nogas	104.335	1.328	333126	1.27	100	104.3	90	110	
Ba	137	1	nogas	99.873	2.746	116039	1.77	100	99.9	90	110	
Tl	205	1	nogas	98.955	6.106	506036	2.25	100	99.0	90	110	
Pb	208	1	nogas	99.251	4.647	359646	1.41	100	99.3	90	110	
U	238	1	nogas	90.460	5.275	673647	1.90	100	90.5	90	110	
Li	7	1	nogas	105.009	0.321	546038	0.68	100	105.0	90	110	
Si	28	1	nogas	3371.158	5.730	2772008	1.05	5000	67.4	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	98.232	2.127	66606	1.16	100	98.2	90	110	
La	139	1	nogas	110.319	13.727	103	11.17	100	110.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-38.049	0.000	0	#DIV/0!	100	-38.0	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	97.186	6.233	209810	2.40	100	97.2	90	110	
Na	23	2	He	9775.739	0.725	6214380	0.90	10000	97.8	90	110	
Mg	24	2	He	9907.059	0.775	3571896	0.86	10000	99.1	90	110	
Al	27	2	He	93.548	3.261	23669	3.26	100	93.5	90	110	
K	39	2	He	9222.757	1.041	4525774	1.23	10000	92.2	90	110	
Ca	43	2	He	9309.977	3.160	12018	3.39	10000	93.1	90	110	
Ca	44	2	He	9601.231	0.393	208831	0.59	10000	96.0	90	110	
V	51	2	He	99.855	0.339	261515	0.29	100	99.9	90	110	
Cr	52	2	He	99.399	1.270	267700	1.16	100	99.4	90	110	
Mn	55	2	He	99.816	0.997	217252	1.03	100	99.8	90	110	
Fe	56	2	He	10078.203	0.859	24288087	0.74	10000	100.8	90	110	
Co	59	2	He	105.313	0.795	346157	0.90	100	105.3	90	110	
Ni	60	2	He	107.107	2.390	85711	2.45	100	107.1	90	110	
Cu	63	2	He	106.280	0.448	207613	0.22	100	106.3	90	110	
Zn	66	2	He	102.920	1.401	50946	1.20	100	102.9	90	110	
As	75	2	He	98.469	0.209	48628	0.29	100	98.5	90	110	
Sb	121	2	He	102.992	0.997	227577	0.98	100	103.0	90	110	
Se	78	2	He	95.235	2.143	4333	2.27	100	95.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	946882	1.60	826909	114.51	70	125	
In	115	1	nogas	793933	1.45	692762	114.60	70	125	
Li	6	1	nogas	481318	0.83	540315	89.08	70	125	
Bi	209	1	nogas	540748	3.97	476916	113.38	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	358862	0.23	368809	97.30	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	223CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:40:56-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	73	46.80
B	11	1	nogas	8249	0.08
Na	23	1	nogas	219281	0.00
Mg	24	1	nogas	33438	0.02
Al	27	1	nogas	20306	0.09
P	31	1	nogas	18523	0.02
K	39	1	nogas	2428188	0.00
Ca	43	1	nogas	417	2.40
Ca	44	1	nogas	12975	0.04
Ti	47	1	nogas	83	58.20
V	51	1	nogas	125150	0.00
Cr	52	1	nogas	11754	0.02
Mn	55	1	nogas	6291	0.05
Fe	56	1	nogas	876339	0.00
Co	59	1	nogas	163	15.61
Ni	60	1	nogas	170	11.99
Cu	63	1	nogas	853	3.09
Zn	66	1	nogas	383	6.68
As	75	1	nogas	21090	0.02
Se	77	1	nogas	6978	0.07
Se	82	1	nogas	73	83.85
Sr	88	1	nogas	457	2.37
Mo	95	1	nogas	70	93.52
Ag	107	1	nogas	63	62.74
Cd	111	1	nogas	7	2598.08
Sn	118	1	nogas	6068	0.07
Sb	121	1	nogas	297	3.47
Ba	137	1	nogas	227	8.99
Tl	205	1	nogas	33	137.48
Pb	208	1	nogas	137	3.09
Li	7	1	nogas	34011	0.00
Si	28	1	nogas	992313	0.00
La	139	1	nogas	43	162.69
Na	23	2	He	22874	0.01
Mg	24	2	He	2474	0.17
Al	27	2	He	743	2.59
K	39	2	He	94064	0.00
Ca	43	2	He	10	1000.00
Ca	44	2	He	470	1.57
V	51	2	He	2587	0.16
Cr	52	2	He	1440	0.57
Mn	55	2	He	463	1.94

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	2	He	16358	0.01
Co	59	2	He	47	53.02
Ni	60	2	He	57	47.57
Cu	63	2	He	420	3.40
Zn	66	2	He	183	22.33
As	75	2	He	149	12.61
Sb	121	2	He	223	8.10
Se	78	2	He	235	7.21

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	942112	0.92
In	115	1	nogas	780487	1.30
Li	6	1	nogas	455172	0.29
Bi	209	1	nogas	534130	5.00
Ge	72	2	He	358309	1.30

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	224CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:43:11-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	3607	0.22
B	11	1	nogas	18229	0.02
Na	23	1	nogas	1776898	0.00
Mg	24	1	nogas	1007383	0.00
Al	27	1	nogas	34930	0.01
P	31	1	nogas	22664	0.02
K	39	1	nogas	3730798	0.00
Ca	43	1	nogas	3534	0.05
Ca	44	1	nogas	61433	0.00
Ti	47	1	nogas	1277	0.63
V	51	1	nogas	145598	0.00
Cr	52	1	nogas	25057	0.01
Mn	55	1	nogas	22644	0.01
Fe	56	1	nogas	2382235	0.00
Co	59	1	nogas	13138	0.02
Ni	60	1	nogas	3130	0.31
Cu	63	1	nogas	7952	0.08
Zn	66	1	nogas	2520	0.21
As	75	1	nogas	23706	0.01
Se	77	1	nogas	6825	0.04
Se	82	1	nogas	180	19.28
Sr	88	1	nogas	19424	0.03
Mo	95	1	nogas	3224	0.08
Ag	107	1	nogas	7678	0.04
Cd	111	1	nogas	1607	0.56
Sn	118	1	nogas	4604	0.10
Sb	121	1	nogas	6771	0.04
Ba	137	1	nogas	2407	0.22
Tl	205	1	nogas	10197	0.05
Pb	208	1	nogas	7579	0.03
Si	28	1	nogas	1049320	0.00
La	139	1	nogas	53	101.49
Na	23	2	He	146300	0.00
Mg	24	2	He	73000	0.00
Al	27	2	He	1554	2.17
K	39	2	He	183574	0.00
Ca	43	2	He	360	1.34
Ca	44	2	He	5734	0.14
V	51	2	He	8006	0.03
Cr	52	2	He	6918	0.03

Calibration Standard Report

Mn	55	2	He	4714	0.10
Fe	56	2	He	493441	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	6858	0.02
Ni	60	2	He	1650	0.32
Cu	63	2	He	4897	0.04
Zn	66	2	He	1143	0.93
As	75	2	He	1096	0.16
Sb	121	2	He	4571	0.10
Se	78	2	He	302	3.23

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	948020	2.19	942112	100.63	70	125	
In	115	1	nogas	793182	2.36	780487	101.63	70	125	
Li	6	1	nogas	450612	0.58	455172	99.00	70	125	
Bi	209	1	nogas	538486	4.83	534130	100.82	70	125	
Ge	72	2	He	365814	0.29	358309	102.09	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	225CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:45:27-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	9169	0.04
B	11	1	nogas	34098	0.01
Na	23	1	nogas	4007224	0.00
Mg	24	1	nogas	2527662	0.00
Al	27	1	nogas	52017	0.00
P	31	1	nogas	29377	0.01
K	39	1	nogas	5604018	0.00
Ca	43	1	nogas	6685	0.04
Ca	44	1	nogas	113927	0.00
Ti	47	1	nogas	3054	0.43
V	51	1	nogas	173010	0.00
Cr	52	1	nogas	46009	0.00
Mn	55	1	nogas	48468	0.00
Fe	56	1	nogas	4406296	0.00
Co	59	1	nogas	33488	0.01
Ni	60	1	nogas	7618	0.01
Cu	63	1	nogas	17749	0.01
Zn	66	1	nogas	5648	0.06
As	75	1	nogas	28476	0.01
Se	77	1	nogas	7358	0.06
Se	82	1	nogas	463	5.44
Sr	88	1	nogas	45132	0.01
Mo	95	1	nogas	8549	0.01
Ag	107	1	nogas	18380	0.01
Cd	111	1	nogas	3877	0.19
Sn	118	1	nogas	11284	0.03
Sb	121	1	nogas	16895	0.03
Ba	137	1	nogas	6115	0.05
Tl	205	1	nogas	24803	0.00
Pb	208	1	nogas	18501	0.02
Si	28	1	nogas	1093975	0.00
La	139	1	nogas	27	162.38
Na	23	2	He	324818	0.00
Mg	24	2	He	174647	0.00
Al	27	2	He	1987	0.58
K	39	2	He	309693	0.00
Ca	43	2	He	570	1.87
Ca	44	2	He	10750	0.02
V	51	2	He	15527	0.00
Cr	52	2	He	15233	0.02

Calibration Standard Report

Mn	55	2	He	11257	0.03
Fe	56	2	He	1185269	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	17682	0.02
Ni	60	2	He	4217	0.13
Cu	63	2	He	11080	0.04
Zn	66	2	He	2687	0.13
As	75	2	He	2539	0.09
Sb	121	2	He	11591	0.02
Se	78	2	He	480	0.91

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	934477	1.89	942112	99.19	70	125	
In	115	1	nogas	789172	0.15	780487	101.11	70	125	
Li	6	1	nogas	452214	1.58	455172	99.35	70	125	
Bi	209	1	nogas	550463	3.23	534130	103.06	70	125	
Ge	72	2	He	363942	1.50	358309	101.57	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	226CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:47:42-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	18339	0.01
B	11	1	nogas	58504	0.00
Na	23	1	nogas	7601015	0.00
Mg	24	1	nogas	4855309	0.00
Al	27	1	nogas	78379	0.00
P	31	1	nogas	38701	0.00
K	39	1	nogas	8710216	0.00
Ca	43	1	nogas	12261	0.02
Ca	44	1	nogas	201941	0.00
Ti	47	1	nogas	5691	0.07
V	51	1	nogas	220754	0.00
Cr	52	1	nogas	77060	0.00
Mn	55	1	nogas	90262	0.00
Fe	56	1	nogas	7914525	0.00
Co	59	1	nogas	66342	0.00
Ni	60	1	nogas	14996	0.01
Cu	63	1	nogas	34938	0.01
Zn	66	1	nogas	10470	0.03
As	75	1	nogas	35840	0.01
Se	77	1	nogas	8239	0.04
Se	82	1	nogas	617	3.55
Sr	88	1	nogas	84576	0.00
Mo	95	1	nogas	16034	0.02
Ag	107	1	nogas	37378	0.00
Cd	111	1	nogas	7342	0.06
Sn	118	1	nogas	22929	0.01
Sb	121	1	nogas	32862	0.01
Ba	137	1	nogas	11384	0.03
Tl	205	1	nogas	50424	0.01
Pb	208	1	nogas	36483	0.01
Si	28	1	nogas	1150230	0.00
La	139	1	nogas	40	108.25
Na	23	2	He	619387	0.00
Mg	24	2	He	342535	0.00
Al	27	2	He	2864	0.23
K	39	2	He	514376	0.00
Ca	43	2	He	1303	1.04
Ca	44	2	He	20288	0.02
V	51	2	He	28052	0.00
Cr	52	2	He	27885	0.02

Calibration Standard Report

Mn	55	2	He	21827	0.00
Fe	56	2	He	2467774	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	33749	0.01
Ni	60	2	He	8569	0.06
Cu	63	2	He	20999	0.02
Zn	66	2	He	5204	0.20
As	75	2	He	4797	0.06
Sb	121	2	He	22108	0.02
Se	78	2	He	673	0.79

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	942271	1.26	942112	100.02	70	125	
In	115	1	nogas	805238	0.68	780487	103.17	70	125	
Li	6	1	nogas	445706	1.55	455172	97.92	70	125	
Bi	209	1	nogas	548399	5.61	534130	102.67	70	125	
Ge	72	2	He	361728	2.86	358309	100.95	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	227CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:49:57-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	178945	0.00
B	11	1	nogas	523734	0.00
Na	23	1	nogas	72567800	0.00
Mg	24	1	nogas	47432300	0.00
Al	27	1	nogas	650413	0.00
P	31	1	nogas	216055	0.00
K	39	1	nogas	64808024	0.00
Ca	43	1	nogas	117660	0.00
Ca	44	1	nogas	1978294	0.00
Ti	47	1	nogas	57886	0.00
V	51	1	nogas	885157	0.00
Cr	52	1	nogas	655156	0.00
Mn	55	1	nogas	832657	0.00
Fe	56	1	nogas	69727104	0.00
Co	59	1	nogas	647777	0.00
Ni	60	1	nogas	144685	0.00
Cu	63	1	nogas	333578	0.00
Zn	66	1	nogas	102469	0.00
As	75	1	nogas	142038	0.00
Se	77	1	nogas	12403	0.11
Se	82	1	nogas	6718	0.10
Sr	88	1	nogas	842134	0.00
Mo	95	1	nogas	161714	0.00
Ag	107	1	nogas	369506	0.00
Cd	111	1	nogas	75445	0.00
Sn	118	1	nogas	225379	0.00
Sb	121	1	nogas	327468	0.00
Ba	137	1	nogas	116687	0.00
Tl	205	1	nogas	503802	0.00
Pb	208	1	nogas	362196	0.00
Si	28	1	nogas	2618743	0.00
La	139	1	nogas	387	27.42
Na	23	2	He	6123350	0.00
Mg	24	2	He	3525180	0.00
Al	27	2	He	24443	0.02
K	39	2	He	4355090	0.00
Ca	43	2	He	11641	0.05
Ca	44	2	He	198858	0.00
V	51	2	He	253237	0.00
Cr	52	2	He	263035	0.00

Calibration Standard Report

Mn	55	2	He	210870	0.00
Fe	56	2	He	23597134	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	336815	0.00
Ni	60	2	He	82716	0.00
Cu	63	2	He	205405	0.00
Zn	66	2	He	48934	0.00
As	75	2	He	47247	0.00
Sb	121	2	He	222540	0.00
Se	78	2	He	4238	0.15

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	939518	0.37	942112	99.72	70	125	
In	115	1	nogas	788976	1.78	780487	101.09	70	125	
Li	6	1	nogas	465984	1.26	455172	102.38	70	125	
Bi	209	1	nogas	540706	2.82	534130	101.23	70	125	
Ge	72	2	He	355484	0.25	358309	99.21	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	228CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:52:11-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	350674	0.00
B	11	1	nogas	1025414	0.00
Na	23	1	nogas	142828882	0.00
Mg	24	1	nogas	92586215	0.00
Al	27	1	nogas	1203179	0.00
P	31	1	nogas	410291	0.00
K	39	1	nogas	125297165	0.00
Ca	43	1	nogas	229805	0.00
Ca	44	1	nogas	3751333	0.00
Ti	47	1	nogas	116212	0.00
V	51	1	nogas	1648248	0.00
Cr	52	1	nogas	1267689	0.00
Mn	55	1	nogas	1650521	0.00
Fe	56	1	nogas	134986961	0.00
Co	59	1	nogas	1305932	0.00
Ni	60	1	nogas	280484	0.00
Cu	63	1	nogas	648803	0.00
Zn	66	1	nogas	200146	0.00
As	75	1	nogas	257161	0.00
Se	77	1	nogas	16595	0.02
Se	82	1	nogas	12835	0.03
Sr	88	1	nogas	1703090	0.00
Mo	95	1	nogas	324516	0.00
Ag	107	1	nogas	722235	0.00
Cd	111	1	nogas	149859	0.00
Sn	118	1	nogas	447523	0.00
Sb	121	1	nogas	673001	0.00
Ba	137	1	nogas	227692	0.00
Tl	205	1	nogas	1002612	0.00
Pb	208	1	nogas	714026	0.00
Si	28	1	nogas	4075980	0.00
La	139	1	nogas	173	31.98
Na	23	2	He	11969713	0.00
Mg	24	2	He	6663318	0.00
Al	27	2	He	42903	0.00
K	39	2	He	8465025	0.00
Ca	43	2	He	23222	0.01
Ca	44	2	He	390564	0.00
V	51	2	He	504182	0.00
Cr	52	2	He	517645	0.00

Calibration Standard Report

Mn	55	2	He	403996	0.00
Fe	56	2	He	46216446	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	658886	0.00
Ni	60	2	He	160110	0.00
Cu	63	2	He	397399	0.00
Zn	66	2	He	97695	0.00
As	75	2	He	92792	0.00
Sb	121	2	He	441493	0.00
Se	78	2	He	8112	0.03

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	933628	1.86	942112	99.10	70	125	
In	115	1	nogas	787837	0.80	780487	100.94	70	125	
Li	6	1	nogas	491614	0.95	455172	108.01	70	125	
Bi	209	1	nogas	531346	4.45	534130	99.48	70	125	
Ge	72	2	He	352811	0.92	358309	98.47	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	230_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:56:40-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	106.325	1.212	177987	1.88	100	106.3	90	110	
B	11	1	nogas	532.054	1.020	523836	1.60	500	106.4	90	110	
Na	23	1	nogas	10193.889	0.284	72672091	1.03	10000	101.9	90	110	
Mg	24	1	nogas	10285.629	0.784	47566327	1.50	10000	102.9	90	110	
Al	27	1	nogas	105.534	1.902	648516	1.71	100	105.5	90	110	
P	31	1	nogas	509.489	1.501	217068	1.51	500	101.9	90	110	
K	39	1	nogas	10175.201	1.603	64713951	0.99	10000	101.8	90	110	
Ca	43	1	nogas	10064.317	1.354	115669	2.19	10000	100.6	90	110	
Ca	44	1	nogas	10256.279	0.515	1937869	1.47	10000	102.6	90	110	
Ti	47	1	nogas	99.880	1.019	57658	0.64	100	99.9	90	110	
V	51	1	nogas	97.623	3.433	862880	2.75	100	97.6	90	110	
Cr	52	1	nogas	100.867	1.214	644136	0.92	100	100.9	90	110	
Mn	55	1	nogas	100.167	0.255	825543	1.24	100	100.2	90	110	
Fe	56	1	nogas	10297.081	0.659	69869402	1.58	10000	103.0	90	110	
Co	59	1	nogas	101.899	1.586	660498	2.13	100	101.9	90	110	
Ni	60	1	nogas	101.582	2.641	142761	2.72	100	101.6	90	110	
Cu	63	1	nogas	101.483	3.021	329382	3.14	100	101.5	90	110	
Zn	66	1	nogas	102.300	2.223	102465	3.53	100	102.3	90	110	
As	75	1	nogas	97.757	0.811	136680	1.95	100	97.8	90	110	
Se	77	1	nogas	82.112	1.844	10940	2.03	100	82.1	90	110	ICV Main CR1 Failed
Se	82	1	nogas	98.048	6.307	6341	7.26	100	98.0	90	110	
Sr	88	1	nogas	99.209	1.380	837928	0.75	100	99.2	90	110	
Mo	95	1	nogas	100.334	2.968	161682	2.66	100	100.3	90	110	
Ag	107	1	nogas	100.894	1.068	363748	1.15	100	100.9	90	110	
Cd	111	1	nogas	97.942	1.318	74274	1.64	100	97.9	90	110	
Sn	118	1	nogas	96.746	1.552	221525	1.88	100	96.7	90	110	
Sb	121	1	nogas	98.693	0.759	328337	1.39	100	98.7	90	110	
Ba	137	1	nogas	101.763	0.915	117761	1.36	100	101.8	90	110	
Tl	205	1	nogas	99.244	5.057	504110	0.38	100	99.2	90	110	
Pb	208	1	nogas	101.130	5.857	366256	1.20	100	101.1	90	110	
U	238	1	nogas	93.645	5.474	673330	0.85	100	93.6	90	110	
Li	7	1	nogas	107.586	0.542	529885	0.70	100	107.6	90	110	
Si	28	1	nogas	5322.271	2.750	2631972	1.09	5000	106.4	90	110	
Ba	135	1	nogas	100.105	1.513	68011	1.55	100	100.1	90	110	
La	139	1	nogas	53.885	45.964	110	27.27	100	53.9	90	110	ICV Main CR1 Failed
Au	197	1	nogas	5.170	346.674	7	173.21	100	5.2	90	110	ICV Main CR1 Failed
Tl	203	1	nogas	99.328	5.568	211979	2.12	100	99.3	90	110	
Na	23	2	He	10017.773	2.012	6086257	1.45	10000	100.2	90	110	
Mg	24	2	He	10113.560	1.821	3440272	0.91	10000	101.1	90	110	
Al	27	2	He	104.274	3.281	23589	2.53	100	104.3	90	110	
K	39	2	He	10193.342	2.111	4414310	1.32	10000	101.9	90	110	
Ca	43	2	He	10163.480	4.048	11917	3.33	10000	101.6	90	110	
Ca	44	2	He	10086.381	1.731	199674	0.80	10000	100.9	90	110	
V	51	2	He	99.586	0.838	254520	0.15	100	99.6	90	110	
Cr	52	2	He	99.427	1.436	261086	1.08	100	99.4	90	110	
Mn	55	2	He	101.313	1.027	208505	0.44	100	101.3	90	110	
Fe	56	2	He	10072.377	1.832	23592413	0.89	10000	100.7	90	110	
Co	59	2	He	100.512	1.705	335647	1.03	100	100.5	90	110	
Ni	60	2	He	100.849	4.376	82114	3.52	100	100.8	90	110	
Cu	63	2	He	100.798	2.525	203901	2.44	100	100.8	90	110	
Zn	66	2	He	99.243	1.413	48997	1.57	100	99.2	90	110	
As	75	2	He	101.360	2.255	47683	1.72	100	101.4	90	110	
Sn	118	2	He	99.748	1.365	148762	0.83	100	99.7	90	110	
Sb	121	2	He	99.831	1.325	222821	0.48	100	99.8	90	110	
Se	78	2	He	101.186	4.662	4270	3.48	100	101.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	928904	1.45	942112	98.60	70	125	
In	115	1	nogas	796472	0.46	780487	102.05	70	125	
Li	6	1	nogas	462019	0.83	455172	101.50	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Bi	209	1	nogas	539507	4.82	534130	101.01	70	125	
Ge	72	2	He	356572	0.95	358309	99.52	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	231SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T22:58:54-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	223CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	2.386	2.386	5.55	3984	0.06	2000	
B	11	1	nogas	22.649	22.649	10.92	29704	0.08	2000	
Na	23	1	nogas	220.171	220.171	1.90	1822359	0.01	200000	
Mg	24	1	nogas	205.282	205.282	1.86	1005019	0.02	200000	
Al	27	1	nogas	2.203	2.203	8.64	33892	0.01	2000	
K	39	1	nogas	196.783	196.783	4.73	3679075	0.01	200000	
Ca	43	1	nogas	264.189	264.189	10.37	3510	7.53	200000	
Ca	44	1	nogas	248.541	248.541	0.99	60758	0.41	200000	
Ti	47	1	nogas	2.133	2.133	9.56	1340	0.16	2000	
V	51	1	nogas	-2.760	-2.760	-14.97	104749	0.00	2000	
Cr	52	1	nogas	1.801	1.801	7.29	23385	0.01	2000	
Mn	55	1	nogas	1.957	1.957	4.75	22711	0.01	2000	
Fe	56	1	nogas	193.589	193.589	3.52	2209073	0.01	200000	
Co	59	1	nogas	2.020	2.020	5.90	13539	0.01	2000	
Ni	60	1	nogas	1.729	1.729	8.72	3260	0.05	2000	
Cu	63	1	nogas	2.239	2.239	6.62	8272	0.03	2000	
Zn	66	1	nogas	1.903	1.903	7.16	2564	0.07	2000	
As	75	1	nogas	-2.984	-2.984	-15.32	18974	-0.02	2000	
Se	77	1	nogas	-38.320	-38.320	-4.31	5097	-0.75	2000	
Se	82	1	nogas	2.391	2.391	11.04	230	1.04	2000	
Sr	88	1	nogas	2.282	2.282	2.98	20155	0.01	2000	
Mo	95	1	nogas	2.226	2.226	2.43	3737	0.06	2000	
Ag	107	1	nogas	2.025	2.025	3.85	7528	0.03	2000	
Cd	111	1	nogas	1.896	1.896	8.81	1420	0.13	2000	
Sn	118	1	nogas	-0.020	-0.020	-171.05	6044	0.00	2000	
Sb	121	1	nogas	2.432	2.432	6.13	8559	0.03	2000	
Ba	137	1	nogas	2.065	2.065	12.10	2570	0.08	2000	
Tl	205	1	nogas	2.247	2.247	2.44	11698	0.02	2000	
Pb	208	1	nogas	2.075	2.075	3.50	7815	0.03	2000	
U	238	1	nogas	1.991	1.991	2.16	14641	0.01	2000	
Si	28	1	nogas	85.321	85.321	20.84	1027304	0.01	2000	
La	139	1	nogas	8.407	8.407	424.19	53	15.76	2000	
Au	197	1	nogas	4.596	4.596	184.65	7	68.94	2000	
Na	23	2	He	208.679	208.679	1.86	150244	0.14	200000	
Mg	24	2	He	202.326	202.326	2.81	71799	0.28	200000	
Al	27	2	He	0.261	0.261	259.66	1140	0.02	2000	
K	39	2	He	195.342	195.342	0.68	177804	0.11	200000	
Ca	43	2	He	265.251	265.251	36.89	323	82.03	200000	
Ca	44	2	He	250.532	250.532	5.40	5458	4.59	200000	
V	51	2	He	1.820	1.820	4.45	7016	0.03	2000	

Sample Report

Cr	52	2	He	1.963	1.963	9.63	6611	0.03	2000	
Mn	55	2	He	1.903	1.903	5.52	4404	0.04	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Fe	56	2	He	199.551	199.551	0.68	487212	0.04	200000	
Co	59	2	He	2.079	2.079	3.46	7042	0.03	2000	
Ni	60	2	He	1.740	1.740	6.36	1733	0.10	2000	
Cu	63	2	He	1.806	1.806	7.38	4791	0.04	2000	
Zn	66	2	He	2.279	2.279	17.57	1267	0.18	2000	
As	75	2	He	2.030	2.030	5.98	1109	0.18	2000	
Sb	121	2	He	2.348	2.348	0.57	5501	0.04	2000	
Se	78	2	He	2.471	2.471	15.59	335	0.74	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	949543	1.24	942112	100.79	70	125	
In	115	1	nogas	783275	1.47	780487	100.36	70	125	
Li	6	1	nogas	452826	1.59	455172	99.48	70	125	
Bi	209	1	nogas	550729	4.31	534130	103.11	70	125	
Ge	72	2	He	359373	0.70	358309	100.30	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	232LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T23:01:09-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	5.492	2.992	9122	2.23	5	109.8	70	130	
B	11	1	nogas	32.333	6.085	39091	4.20	25	129.3	70	130	
Na	23	1	nogas	513.459	1.689	3980757	0.65	500	102.7	70	130	
Mg	24	1	nogas	519.974	0.447	2509462	1.09	500	104.0	70	130	
Al	27	1	nogas	4.956	3.457	50446	1.91	5	99.1	70	130	
P	31	1	nogas	27.356	8.581	29464	4.01	25	109.4	70	130	
K	39	1	nogas	508.453	2.512	5606815	0.70	500	101.7	70	130	
Ca	43	1	nogas	504.723	8.588	6305	8.87	500	100.9	70	130	
Ca	44	1	nogas	515.258	1.265	111471	2.06	500	103.1	70	130	
Ti	47	1	nogas	5.166	11.428	3117	11.94	5	103.3	70	130	
V	51	1	nogas	0.429	131.218	128876	2.65	5	8.6	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.768	2.136	42233	1.48	5	95.4	70	130	
Mn	55	1	nogas	5.068	3.162	48509	2.54	5	101.4	70	130	
Fe	56	1	nogas	505.643	0.772	4328611	0.81	500	101.1	70	130	
Co	59	1	nogas	5.075	2.564	33638	1.62	5	101.5	70	130	
Ni	60	1	nogas	4.804	1.050	7622	0.68	5	96.1	70	130	
Cu	63	1	nogas	5.057	3.756	17522	3.87	5	101.1	70	130	
Zn	66	1	nogas	4.839	2.419	5528	2.99	5	96.8	70	130	
As	75	1	nogas	0.391	215.076	22925	5.19	5	7.8	70	130	LLICV Main CR1 Failed
Se	77	1	nogas	-26.462	-28.803	5674	7.49	5	-529.2	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.710	13.989	380	12.06	5	94.2	70	130	
Sr	88	1	nogas	4.998	2.150	43401	1.21	5	100.0	70	130	
Mo	95	1	nogas	4.906	1.751	8115	1.30	5	98.1	70	130	
Ag	107	1	nogas	5.106	4.979	18794	4.32	5	102.1	70	130	
Cd	111	1	nogas	4.946	4.330	3767	3.84	5	98.9	70	130	
Sn	118	1	nogas	2.393	8.931	11554	4.59	5	47.9	70	130	LLICV Main CR1 Failed
Sb	121	1	nogas	5.186	4.366	17850	5.25	5	103.7	70	130	
Ba	137	1	nogas	4.930	3.667	5941	3.52	5	98.6	70	130	
Tl	205	1	nogas	5.032	0.910	25721	3.10	5	100.6	70	130	
Pb	208	1	nogas	5.070	4.674	18574	2.46	5	101.4	70	130	
U	238	1	nogas	4.640	2.683	33524	1.12	5	92.8	70	130	
Li	7	1	nogas	5.796	4.759	60283	1.39	5	115.9	70	130	
Si	28	1	nogas	243.487	28.056	1072863	1.18	25	973.9	70	130	LLICV Main CR1 Failed
La	139	1	nogas	-11.936	-117.490	30	57.74	5	-238.7	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	24.819	122.563	20	100.00	5	496.4	70	130	LLICV Main CR1 Failed
Na	23	2	He	496.953	3.389	328088	1.33	500	99.4	70	130	
Mg	24	2	He	495.788	2.707	173415	1.84	500	99.2	70	130	
Al	27	2	He	6.777	70.437	2557	37.64	5	135.5	70	130	LLICV Main CR1 Failed
K	39	2	He	500.400	2.827	310050	0.98	500	100.1	70	130	
Ca	43	2	He	546.596	13.040	660	13.47	500	109.3	70	130	
Ca	44	2	He	535.124	4.552	11197	5.17	500	107.0	70	130	
V	51	2	He	4.755	2.065	14601	2.30	5	95.1	70	130	
Cr	52	2	He	5.075	2.031	14896	2.36	5	101.5	70	130	
Mn	55	2	He	5.136	5.812	11164	5.49	5	102.7	70	130	
Fe	56	2	He	494.648	3.105	1190525	0.40	500	98.9	70	130	
Co	59	2	He	5.017	1.967	17045	4.20	5	100.3	70	130	
Ni	60	2	He	4.694	3.343	4177	4.42	5	93.9	70	130	
Cu	63	2	He	4.780	3.582	10883	0.49	5	95.6	70	130	
Zn	66	2	He	5.032	8.654	2647	5.67	5	100.6	70	130	
As	75	2	He	4.894	0.598	2479	3.12	5	97.9	70	130	
Sb	121	2	He	5.037	1.521	11621	3.83	5	100.7	70	130	
Se	78	2	He	6.162	38.323	487	21.41	5	123.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	945532	0.94	942112	100.36	70	125	
In	115	1	nogas	798771	0.53	780487	102.34	70	125	
Li	6	1	nogas	455060	0.98	455172	99.98	70	125	
Bi	209	1	nogas	541238	2.28	534130	101.33	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	361721	2.68	358309	100.95	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	233_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T23:03:24-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.015	89.8	97	21.5	1	
B	11	1	nogas	4.476	19.4	12448	6.2	10	
Na	23	1	nogas	4.344	4.2	251074	1.3	100	
Mg	24	1	nogas	0.379	107.1	35272	5.5	100	
Al	27	1	nogas	0.247	48.7	21686	2.8	5	
P	31	1	nogas	3.719	12.7	19878	2.2	10	
K	39	1	nogas	4.077	157.1	2438390	0.9	100	
Ca	43	1	nogas	9.102	89.6	520	18.9	100	
Ca	44	1	nogas	-1.230	-129.2	12658	1.1	100	
Ti	47	1	nogas	-0.004	-1061.6	80	33.1	2.5	
V	51	1	nogas	-3.239	-27.8	99693	7.9	2.5	
Cr	52	1	nogas	-0.200	-41.7	10417	4.2	2.5	
Mn	55	1	nogas	-0.080	-28.8	5594	3.2	2.5	
Fe	56	1	nogas	-13.714	-18.4	778257	1.6	100	
Co	59	1	nogas	0.010	86.0	230	24.2	2.5	
Ni	60	1	nogas	-0.380	-11.9	243	26.4	2.5	
Cu	63	1	nogas	0.006	959.2	867	19.8	1	
Zn	66	1	nogas	-0.194	-39.8	423	18.9	2.5	
As	75	1	nogas	-4.545	-4.6	16862	0.4	2.5	
Se	77	1	nogas	-32.731	-10.9	5304	2.4	2.5	
Se	82	1	nogas	0.631	121.0	113	43.5	1	
Sr	88	1	nogas	0.016	77.9	593	17.0	2.5	
Mo	95	1	nogas	0.023	147.7	107	51.6	2.5	
Ag	107	1	nogas	0.006	76.7	83	18.3	2.5	
Cd	111	1	nogas	0.004	313.8	10	100.0	1	
Sn	118	1	nogas	-2.504	-1.2	610	11.5	5	
Sb	121	1	nogas	0.056	27.7	483	12.1	2.5	
Ba	137	1	nogas	-0.003	-2254.1	223	32.4	2.5	
Tl	205	1	nogas	0.057	13.4	323	15.6	1	
Pb	208	1	nogas	0.016	7.5	197	2.9	2.5	
U	238	1	nogas	0.016	32.4	127	27.7	2.5	
Si	28	1	nogas	40.134	208.7	998698	1.2	5	ICB Main CR1 Failed
La	139	1	nogas	-11.413	-128.0	30	57.7	2.5	
Au	197	1	nogas	9.804	5.8	10	0.0	2.5	ICB Main CR1 Failed
Na	23	2	He	3.811	41.5	25207	2.8	100	
Mg	24	2	He	0.860	28.1	2770	3.1	100	
Al	27	2	He	-1.558	-29.8	743	13.7	5	
K	39	2	He	0.248	2190.0	94231	1.3	100	
Ca	43	2	He	25.414	33.5	40	25.0	100	
Ca	44	2	He	7.031	39.7	610	9.1	100	
V	51	2	He	-0.116	-33.8	2073	5.6	2.5	
Cr	52	2	He	0.022	514.6	1497	18.8	2.5	
Mn	55	2	He	0.018	183.1	500	13.1	2.5	
Fe	56	2	He	0.623	24.1	17836	1.9	100	

Initial Calibration Blank (ICB) Report

Co	59	2	He	0.011	81.6	83	36.7	2.5	
Ni	60	2	He	-0.249	-10.9	107	19.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Cu	63	2	He	-0.353	-12.1	410	20.0	1	
Zn	66	2	He	0.197	62.3	233	24.7	2.5	
As	75	2	He	-0.008	-1125.5	146	30.5	2.5	
Sb	121	2	He	0.028	108.1	287	24.7	2.5	
Se	78	2	He	0.798	102.6	267	11.2	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	936415	1.40	942112	99.40	70	125	
In	115	1	nogas	785293	2.06	780487	100.62	70	125	
Li	6	1	nogas	452559	0.54	455172	99.43	70	125	
Bi	209	1	nogas	541132	3.83	534130	101.31	70	125	
Ge	72	2	He	358607	1.13	358309	100.08	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	245_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T23:30:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	104.093	1.155	173568	0.53	100	104.1	90	110	
B	11	1	nogas	524.090	2.565	514054	1.64	500	104.8	90	110	
Na	23	1	nogas	9970.346	1.037	73119256	1.51	10000	99.7	90	110	
Mg	24	1	nogas	9950.310	1.735	47333332	1.98	10000	99.5	90	110	
Al	27	1	nogas	103.747	1.834	656414	2.99	100	103.7	90	110	
P	31	1	nogas	486.109	2.872	213908	1.42	500	97.2	90	110	
K	39	1	nogas	9988.528	1.055	65415893	2.17	10000	99.9	90	110	
Ca	43	1	nogas	10034.096	1.443	118630	0.20	10000	100.3	90	110	
Ca	44	1	nogas	10262.085	1.971	1994672	1.53	10000	102.6	90	110	
Ti	47	1	nogas	102.425	3.550	60823	2.82	100	102.4	90	110	
V	51	1	nogas	91.602	1.448	840838	0.09	100	91.6	90	110	
Cr	52	1	nogas	94.926	1.286	624398	1.13	100	94.9	90	110	
Mn	55	1	nogas	93.472	1.622	792917	0.48	100	93.5	90	110	
Fe	56	1	nogas	10038.889	0.608	70105902	1.68	10000	100.4	90	110	
Co	59	1	nogas	94.973	2.970	633219	1.85	100	95.0	90	110	
Ni	60	1	nogas	97.480	3.322	140948	2.06	100	97.5	90	110	
Cu	63	1	nogas	97.824	1.693	326665	0.87	100	97.8	90	110	
Zn	66	1	nogas	98.860	2.908	101863	2.46	100	98.9	90	110	
As	75	1	nogas	90.711	0.717	132115	1.25	100	90.7	90	110	
Se	77	1	nogas	90.605	32.535	11675	11.64	100	90.6	90	110	
Se	82	1	nogas	138.931	3.290	9211	4.09	100	138.9	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	96.324	1.804	837004	0.57	100	96.3	90	110	
Mo	95	1	nogas	97.093	2.240	160963	1.02	100	97.1	90	110	
Ag	107	1	nogas	96.969	0.473	359694	1.03	100	97.0	90	110	
Cd	111	1	nogas	95.675	3.268	74039	1.86	100	95.7	90	110	
Sn	118	1	nogas	97.534	1.615	227893	1.21	100	97.5	90	110	
Sb	121	1	nogas	90.745	3.369	310558	2.35	100	90.7	90	110	
Ba	137	1	nogas	96.039	4.061	113423	2.97	100	96.0	90	110	
Tl	205	1	nogas	95.023	7.798	492328	1.50	100	95.0	90	110	
Pb	208	1	nogas	95.211	8.006	351788	1.74	100	95.2	90	110	
U	238	1	nogas	89.137	6.834	654125	1.05	100	89.1	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	103.189	0.167	507698	0.83	100	103.2	90	110	
Si	28	1	nogas	5311.905	5.523	2704368	2.78	5000	106.2	90	110	
Ba	135	1	nogas	98.866	4.448	68555	4.08	100	98.9	90	110	
La	139	1	nogas	1772.189	47.069	2238	44.34	100	1772.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	3502.844	74.645	2328	71.81	100	3502.8	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	95.588	7.683	208103	1.58	100	95.6	90	110	
Na	23	2	He	9860.527	0.224	6114901	0.70	10000	98.6	90	110	
Mg	24	2	He	9923.835	2.328	3445250	1.63	10000	99.2	90	110	
Al	27	2	He	106.978	2.425	24671	1.63	100	107.0	90	110	
K	39	2	He	10123.510	0.272	4475453	0.84	10000	101.2	90	110	
Ca	43	2	He	11428.932	4.678	13680	4.97	10000	114.3	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9973.139	1.258	201516	1.14	10000	99.7	90	110	
V	51	2	He	94.856	1.728	247528	1.16	100	94.9	90	110	
Cr	52	2	He	97.511	0.662	261372	1.16	100	97.5	90	110	
Mn	55	2	He	98.648	1.085	207218	1.14	100	98.6	90	110	
Fe	56	2	He	9911.113	1.957	23693190	1.28	10000	99.1	90	110	
Co	59	2	He	96.450	0.723	328738	0.98	100	96.4	90	110	
Ni	60	2	He	98.257	3.134	81669	2.63	100	98.3	90	110	
Cu	63	2	He	97.003	3.220	200283	2.55	100	97.0	90	110	
Zn	66	2	He	102.708	2.446	51747	2.57	100	102.7	90	110	
As	75	2	He	100.433	1.229	48226	1.45	100	100.4	90	110	
Sb	121	2	He	90.681	0.317	206598	0.42	100	90.7	90	110	
Se	78	2	He	138.024	7.543	5860	7.54	100	138.0	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	955684	1.23	942112	101.44	70	125	
In	115	1	nogas	813066	1.67	780487	104.17	70	125	
Li	6	1	nogas	460252	0.89	455172	101.12	70	125	
Bi	209	1	nogas	551342	6.79	534130	103.22	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	363909	0.71	358309	101.56	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	246_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T23:32:35-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	1.654	12.9	2698	13.6	1	CCB Main CR1 Failed
B	11	1	nogas	11.243	30.2	18250	16.2	10	CCB Main CR1 Failed
Na	23	1	nogas	8.899	8.5	285411	0.9	100	
Mg	24	1	nogas	11.612	21.4	88700	12.2	100	
Al	27	1	nogas	5.597	29.7	54396	17.4	5	CCB Main CR1 Failed
P	31	1	nogas	-0.615	-216.5	18403	3.4	10	
K	39	1	nogas	-3.732	-227.0	2420344	0.6	100	
Ca	43	1	nogas	193.692	89.4	2704	77.0	100	CCB Main CR1 Failed
Ca	44	1	nogas	13.886	43.7	15708	6.0	100	
Ti	47	1	nogas	5.577	8.9	3363	7.0	2.5	CCB Main CR1 Failed
V	51	1	nogas	-4.763	-6.9	89098	1.4	2.5	
Cr	52	1	nogas	0.003	4111.4	11845	6.5	2.5	
Mn	55	1	nogas	0.169	88.4	7729	14.5	2.5	
Fe	56	1	nogas	-12.071	-33.3	799218	1.8	100	
Co	59	1	nogas	0.385	74.5	2696	68.4	2.5	
Ni	60	1	nogas	0.242	192.0	1127	57.4	2.5	
Cu	63	1	nogas	0.575	59.4	2748	39.4	2	
Zn	66	1	nogas	2.956	84.9	3606	68.7	2.5	CCB Main CR1 Failed
As	75	1	nogas	-4.015	-9.4	17716	3.8	2.5	
Se	77	1	nogas	-11.283	-218.7	6459	19.9	2.5	
Se	82	1	nogas	8.973	69.9	657	60.9	2	CCB Main CR1 Failed
Sr	88	1	nogas	0.349	34.9	3462	29.2	2.5	
Mo	95	1	nogas	1.582	24.9	2666	23.1	2.5	
Ag	107	1	nogas	0.443	35.4	1698	35.6	2.5	
Cd	111	1	nogas	3.058	36.8	2312	35.5	1	CCB Main CR1 Failed
Sn	118	1	nogas	-1.417	-50.5	3016	51.3	5	
Sb	121	1	nogas	3.297	22.1	11462	19.8	2.5	CCB Main CR1 Failed
Ba	137	1	nogas	1.221	13.8	1637	12.6	2.5	
Tl	205	1	nogas	0.384	41.9	2031	43.5	1	
Pb	208	1	nogas	0.424	47.7	1714	47.0	2.5	
U	238	1	nogas	0.268	18.9	1958	15.9	2.5	
Si	28	1	nogas	275.892	15.4	1086344	1.1	5	CCB Main CR1 Failed
La	139	1	nogas	1029.285	81.5	1288	77.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	1975.353	96.1	1308	92.3	2.5	CCB Main CR1 Failed
Na	23	2	He	7.095	12.4	27358	0.8	100	
Mg	24	2	He	9.532	12.2	5765	6.2	100	
Al	27	2	He	7.353	77.4	2684	45.1	5	CCB Main CR1 Failed
K	39	2	He	-6.969	-37.8	91662	0.8	100	
Ca	43	2	He	1008.472	59.4	1207	59.4	100	CCB Main CR1 Failed
Ca	44	2	He	89.781	112.5	2282	90.1	100	
V	51	2	He	0.366	127.4	3325	37.1	2.5	
Cr	52	2	He	0.557	123.3	2934	63.4	2.5	
Mn	55	2	He	0.540	80.0	1584	55.7	2.5	
Fe	56	2	He	8.495	11.7	36551	5.2	100	
Co	59	2	He	0.579	95.0	2015	93.8	2.5	
Ni	60	2	He	0.637	84.1	837	53.3	2.5	
Cu	63	2	He	0.252	253.2	1638	78.1	2	
Zn	66	2	He	2.768	73.8	1508	66.3	2.5	CCB Main CR1 Failed

Continuing Calibration Blank (CCB) Report

As	75	2	He	3.086	77.7	1621	71.6	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	2.630	13.3	6159	13.7	2.5	CCB Main CR1 Failed
Se	78	2	He	27.208	48.7	1336	40.8	2	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	948346	1.73	942112	100.66	70	125	
In	115	1	nogas	794180	1.32	780487	101.75	70	125	
Li	6	1	nogas	438174	1.41	455172	96.27	70	125	
Bi	209	1	nogas	546566	3.85	534130	102.33	70	125	
Ge	72	2	He	360564	1.20	358309	100.63	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	251_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T23:48:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	105.178	1.195	176092	1.85	100	105.2	90	110	
B	11	1	nogas	523.317	3.250	515285	1.56	500	104.7	90	110	
Na	23	1	nogas	10062.462	1.536	73640247	0.26	10000	100.6	90	110	
Mg	24	1	nogas	9910.598	2.256	47046077	1.38	10000	99.1	90	110	
Al	27	1	nogas	98.981	2.189	616670	1.99	100	99.0	90	110	
P	31	1	nogas	498.150	2.412	215141	2.03	500	99.6	90	110	
K	39	1	nogas	10181.765	1.962	65517051	1.43	10000	101.8	90	110	
Ca	43	1	nogas	10230.343	0.416	118945	0.64	10000	102.3	90	110	
Ca	44	1	nogas	10269.316	1.203	1963144	1.66	10000	102.7	90	110	
Ti	47	1	nogas	103.325	3.102	60355	3.63	100	103.3	90	110	
V	51	1	nogas	90.829	1.563	821002	1.21	100	90.8	90	110	
Cr	52	1	nogas	95.859	1.426	620002	1.94	100	95.9	90	110	
Mn	55	1	nogas	94.012	1.694	784339	2.14	100	94.0	90	110	
Fe	56	1	nogas	9929.814	0.525	68198714	0.82	10000	99.3	90	110	
Co	59	1	nogas	94.727	0.872	621209	0.74	100	94.7	90	110	
Ni	60	1	nogas	98.756	3.326	140438	3.07	100	98.8	90	110	
Cu	63	1	nogas	98.895	1.411	324769	1.01	100	98.9	90	110	
Zn	66	1	nogas	99.076	1.167	100403	1.46	100	99.1	90	110	
As	75	1	nogas	91.399	2.704	130740	2.55	100	91.4	90	110	
Se	77	1	nogas	106.693	13.120	12300	6.22	100	106.7	90	110	
Se	82	1	nogas	118.962	13.377	7769	13.74	100	119.0	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	95.098	0.859	812711	0.32	100	95.1	90	110	
Mo	95	1	nogas	98.322	1.595	160318	1.65	100	98.3	90	110	
Ag	107	1	nogas	94.367	2.636	344233	2.69	100	94.4	90	110	
Cd	111	1	nogas	97.867	6.146	73761	4.05	100	97.9	90	110	
Sn	118	1	nogas	97.577	3.907	222130	3.11	100	97.6	90	110	
Sb	121	1	nogas	88.954	0.444	299448	0.93	100	89.0	90	110	CCV Main CR1-2 Failed
Ba	137	1	nogas	95.324	6.088	109635	3.59	100	95.3	90	110	
Tl	205	1	nogas	93.845	6.309	472626	1.25	100	93.8	90	110	
Pb	208	1	nogas	94.978	6.853	341069	1.60	100	95.0	90	110	
U	238	1	nogas	86.682	5.683	618194	1.26	100	86.7	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	105.876	1.865	522033	0.30	100	105.9	90	110	
Si	28	1	nogas	4874.817	5.532	2522195	2.80	5000	97.5	90	110	
Ba	135	1	nogas	97.230	5.187	65660	2.71	100	97.2	90	110	
La	139	1	nogas	2584.048	62.295	3147	60.37	100	2584.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	3786.535	81.535	2439	79.22	100	3786.5	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	94.555	7.533	199983	2.07	100	94.6	90	110	
Na	23	2	He	9830.982	2.436	6091373	2.26	10000	98.3	90	110	
Mg	24	2	He	9977.637	2.902	3461487	3.06	10000	99.8	90	110	
Al	27	2	He	111.407	5.327	25626	4.85	100	111.4	90	110	CCV Main CR1-2 Failed
K	39	2	He	10031.789	1.015	4432147	1.37	10000	100.3	90	110	
Ca	43	2	He	11637.240	7.648	13914	7.33	10000	116.4	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9938.356	2.420	200647	2.29	10000	99.4	90	110	
V	51	2	He	94.780	2.012	247138	1.91	100	94.8	90	110	
Cr	52	2	He	94.960	1.063	254359	1.34	100	95.0	90	110	
Mn	55	2	He	95.414	2.448	200263	2.05	100	95.4	90	110	
Fe	56	2	He	9698.717	3.573	23169147	3.71	10000	97.0	90	110	
Co	59	2	He	95.281	1.334	324482	1.28	100	95.3	90	110	
Ni	60	2	He	96.252	1.661	79954	2.03	100	96.3	90	110	
Cu	63	2	He	96.052	0.830	198189	0.41	100	96.1	90	110	
Zn	66	2	He	98.943	0.319	49813	0.24	100	98.9	90	110	
As	75	2	He	99.295	1.594	47640	1.31	100	99.3	90	110	
Sb	121	2	He	89.468	1.590	203665	1.34	100	89.5	90	110	CCV Main CR1-2 Failed
Se	78	2	He	157.495	12.281	6645	11.51	100	157.5	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	939794	0.55	942112	99.75	70	125	
In	115	1	nogas	792348	2.58	780487	101.52	70	125	
Li	6	1	nogas	462119	1.71	455172	101.53	70	125	
Bi	209	1	nogas	535317	5.75	534130	100.22	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	363605	0.42	358309	101.48	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	252_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-13T23:50:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.584	71.3	1004	67.1	1	
B	11	1	nogas	11.757	12.6	18871	8.5	10	CCB Main CR1 Failed
Na	23	1	nogas	7.649	3.5	275691	0.9	100	
Mg	24	1	nogas	7.601	13.2	69539	5.5	100	
Al	27	1	nogas	1.719	4.6	30612	4.9	5	
P	31	1	nogas	1.091	328.0	18922	10.9	10	
K	39	1	nogas	6.020	157.6	2455644	0.9	100	
Ca	43	1	nogas	113.343	143.3	1769	111.6	100	CCB Main CR1 Failed
Ca	44	1	nogas	5.665	52.9	13989	1.4	100	
Ti	47	1	nogas	1.505	111.5	951	99.9	2.5	
V	51	1	nogas	-4.550	-9.7	89901	6.3	2.5	
Cr	52	1	nogas	-0.020	-1627.8	11548	15.1	2.5	
Mn	55	1	nogas	0.011	461.6	6365	9.8	2.5	
Fe	56	1	nogas	-14.656	-45.5	773081	3.2	100	
Co	59	1	nogas	0.081	36.7	697	31.2	2.5	
Ni	60	1	nogas	-0.081	-401.1	664	66.5	2.5	
Cu	63	1	nogas	0.341	86.1	1952	47.0	2	
Zn	66	1	nogas	0.319	292.8	961	102.9	2.5	
As	75	1	nogas	-4.818	-11.6	16581	4.7	2.5	
Se	77	1	nogas	-20.611	-74.9	5942	16.6	2.5	
Se	82	1	nogas	3.077	184.7	267	134.3	2	CCB Main CR1 Failed
Sr	88	1	nogas	0.182	61.4	2033	51.2	2.5	
Mo	95	1	nogas	0.574	54.6	1004	49.7	2.5	
Ag	107	1	nogas	0.148	78.6	604	69.0	2.5	
Cd	111	1	nogas	1.039	100.0	787	99.8	1	CCB Main CR1 Failed
Sn	118	1	nogas	-2.124	-5.1	1450	16.8	5	
Sb	121	1	nogas	2.954	24.7	10173	21.4	2.5	CCB Main CR1 Failed
Ba	137	1	nogas	0.329	115.6	607	72.6	2.5	
Tl	205	1	nogas	0.339	83.4	1711	79.2	1	
Pb	208	1	nogas	0.271	19.8	1111	16.2	2.5	
U	238	1	nogas	0.080	23.8	583	26.0	2.5	
Si	28	1	nogas	-69.603	-38.3	966846	2.5	5	
La	139	1	nogas	249.510	169.8	347	148.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	1419.950	124.4	911	123.8	2.5	CCB Main CR1 Failed
Na	23	2	He	10.203	46.2	28915	7.5	100	
Mg	24	2	He	18.021	64.4	8540	43.6	100	
Al	27	2	He	10.857	80.5	3416	55.2	5	CCB Main CR1 Failed
K	39	2	He	-0.559	-1132.2	93385	0.2	100	
Ca	43	2	He	1960.864	28.5	2302	26.6	100	CCB Main CR1 Failed
Ca	44	2	He	93.741	82.7	2325	67.3	100	
V	51	2	He	0.945	93.2	4717	44.5	2.5	
Cr	52	2	He	0.675	56.4	3191	30.4	2.5	
Mn	55	2	He	0.933	48.0	2371	38.0	2.5	
Fe	56	2	He	5.814	20.4	29864	6.9	100	
Co	59	2	He	0.844	79.1	2842	76.2	2.5	
Ni	60	2	He	3.522	95.7	3134	84.6	2.5	CCB Main CR1 Failed
Cu	63	2	He	0.845	138.3	2783	80.9	2	
Zn	66	2	He	4.578	87.7	2358	80.1	2.5	CCB Main CR1 Failed

Continuing Calibration Blank (CCB) Report

As	75	2	He	4.104	86.6	2061	79.6	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	2.915	27.8	6706	25.1	2.5	CCB Main CR1 Failed
Se	78	2	He	53.391	78.7	2348	69.6	2	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	938802	3.33	942112	99.65	70	125	
In	115	1	nogas	787504	1.01	780487	100.90	70	125	
Li	6	1	nogas	440912	1.97	455172	96.87	70	125	
Bi	209	1	nogas	535360	5.45	534130	100.23	70	125	
Ge	72	2	He	356814	2.80	358309	99.58	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	262_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-14T00:18:12-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	103.535	5.684	175140	2.34	100	103.5	90	110	
B	11	1	nogas	505.648	3.233	503803	1.55	500	101.1	90	110	
Na	23	1	nogas	9869.543	2.916	70631431	1.60	10000	98.7	90	110	
Mg	24	1	nogas	10105.173	5.444	46888980	3.41	10000	101.1	90	110	
Al	27	1	nogas	136.153	11.102	838381	9.52	100	136.2	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	494.359	2.540	213236	1.44	500	98.9	90	110	
K	39	1	nogas	9883.773	0.850	63563941	1.97	10000	98.8	90	110	
Ca	43	1	nogas	10176.899	2.726	118086	1.36	10000	101.8	90	110	
Ca	44	1	nogas	9719.858	0.989	1855480	1.91	10000	97.2	90	110	
Ti	47	1	nogas	102.068	3.334	59503	3.12	100	102.1	90	110	
V	51	1	nogas	93.980	2.103	843623	1.88	100	94.0	90	110	
Cr	52	1	nogas	95.361	0.637	615704	1.34	100	95.4	90	110	
Mn	55	1	nogas	94.673	0.728	788350	1.27	100	94.7	90	110	
Fe	56	1	nogas	9995.384	3.840	68530572	4.49	10000	100.0	90	110	
Co	59	1	nogas	95.570	0.622	625643	1.64	100	95.6	90	110	
Ni	60	1	nogas	99.429	4.167	141138	4.14	100	99.4	90	110	
Cu	63	1	nogas	98.685	1.719	323468	0.35	100	98.7	90	110	
Zn	66	1	nogas	100.609	2.431	101747	1.71	100	100.6	90	110	
As	75	1	nogas	95.061	3.181	134817	2.03	100	95.1	90	110	
Se	77	1	nogas	136.019	42.039	13722	20.05	100	136.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	142.974	18.500	9292	17.66	100	143.0	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	98.176	1.421	837459	1.04	100	98.2	90	110	
Mo	95	1	nogas	100.977	1.544	164352	2.01	100	101.0	90	110	
Ag	107	1	nogas	99.190	1.400	361134	0.22	100	99.2	90	110	
Cd	111	1	nogas	101.801	4.042	79118	4.99	100	101.8	90	110	
Sn	118	1	nogas	98.441	1.825	230811	1.10	100	98.4	90	110	
Sb	121	1	nogas	92.761	1.008	311722	2.38	100	92.8	90	110	
Ba	137	1	nogas	97.910	1.858	116095	2.09	100	97.9	90	110	
Tl	205	1	nogas	92.359	8.908	493599	1.39	100	92.4	90	110	
Pb	208	1	nogas	95.360	7.052	363825	0.75	100	95.4	90	110	
U	238	1	nogas	89.637	6.554	679115	1.99	100	89.6	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	102.566	2.027	512588	2.10	100	102.6	90	110	
Si	28	1	nogas	4905.132	1.484	2527482	1.44	5000	98.1	90	110	
Ba	135	1	nogas	100.035	2.519	69645	3.37	100	100.0	90	110	
La	139	1	nogas	3196.122	70.946	4077	70.80	100	3196.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	5782.611	94.020	4249	99.67	100	5782.6	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	95.979	9.303	215510	2.70	100	96.0	90	110	
Na	23	2	He	9656.070	2.861	5935306	1.64	10000	96.6	90	110	
Mg	24	2	He	9938.196	3.176	3419803	1.96	10000	99.4	90	110	
Al	27	2	He	118.123	1.880	26896	2.50	100	118.1	90	110	CCV Main CR1-2 Failed
K	39	2	He	9778.936	1.568	4289000	2.21	10000	97.8	90	110	
Ca	43	2	He	16905.538	9.415	20045	8.82	10000	169.1	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9998.200	2.003	200248	1.15	10000	100.0	90	110	
V	51	2	He	95.419	1.546	246814	0.67	100	95.4	90	110	
Cr	52	2	He	95.464	1.365	253666	0.37	100	95.5	90	110	
Mn	55	2	He	97.592	1.621	203208	0.86	100	97.6	90	110	
Fe	56	2	He	10030.726	1.801	23771215	1.48	10000	100.3	90	110	
Co	59	2	He	96.672	1.958	326622	1.93	100	96.7	90	110	
Ni	60	2	He	102.637	2.696	84561	2.63	100	102.6	90	110	
Cu	63	2	He	96.953	1.107	198459	0.53	100	97.0	90	110	
Zn	66	2	He	103.704	3.731	51782	2.84	100	103.7	90	110	
As	75	2	He	108.456	2.325	51624	3.55	100	108.5	90	110	
Sb	121	2	He	93.242	0.450	210581	0.85	100	93.2	90	110	
Se	78	2	He	231.127	7.863	9562	6.78	100	231.1	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	938123	1.37	942112	99.58	70	125	
In	115	1	nogas	816181	2.22	780487	104.57	70	125	
Li	6	1	nogas	467547	3.97	455172	102.72	70	125	
Bi	209	1	nogas	569432	8.07	534130	106.61	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	360755	1.25	358309	100.68	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	263_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-14T00:20:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	223CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	2.780	43.8	4558	43.4	1	CCB Main CR1 Failed
B	11	1	nogas	12.625	26.5	19826	14.8	10	CCB Main CR1 Failed
Na	23	1	nogas	3.751	53.6	241213	5.0	100	
Mg	24	1	nogas	8.693	25.6	72890	13.3	100	
Al	27	1	nogas	7.809	41.0	67168	28.3	5	CCB Main CR1 Failed
P	31	1	nogas	8.205	92.8	21687	13.9	10	
K	39	1	nogas	-32.784	-15.0	2215736	1.6	100	
Ca	43	1	nogas	319.441	51.0	4117	46.3	100	CCB Main CR1 Failed
Ca	44	1	nogas	12.361	60.1	15260	8.8	100	
Ti	47	1	nogas	6.182	78.7	3674	76.8	2.5	CCB Main CR1 Failed
V	51	1	nogas	0.261	349.3	126664	6.0	2.5	
Cr	52	1	nogas	0.603	70.7	15529	17.4	2.5	
Mn	55	1	nogas	0.564	88.0	10909	37.1	2.5	
Fe	56	1	nogas	-14.861	-44.5	772219	5.8	100	
Co	59	1	nogas	1.111	39.6	7428	38.5	2.5	
Ni	60	1	nogas	2.285	92.3	4015	74.8	2.5	
Cu	63	1	nogas	0.923	140.0	3869	109.2	2	
Zn	66	1	nogas	5.599	40.8	6241	36.3	2.5	CCB Main CR1 Failed
As	75	1	nogas	1.747	208.3	24352	17.7	2.5	
Se	77	1	nogas	92.064	45.9	11550	18.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	82.397	40.5	5389	39.8	2	CCB Main CR1 Failed
Sr	88	1	nogas	0.367	51.3	3583	44.4	2.5	
Mo	95	1	nogas	4.492	44.4	7371	43.5	2.5	CCB Main CR1 Failed
Ag	107	1	nogas	1.419	79.1	5217	78.1	2.5	
Cd	111	1	nogas	7.742	95.1	5799	94.9	1	CCB Main CR1 Failed
Sn	118	1	nogas	1.399	154.6	9167	51.9	5	
Sb	121	1	nogas	3.367	14.1	11601	13.8	2.5	CCB Main CR1 Failed
Ba	137	1	nogas	4.128	62.8	4932	60.3	2.5	CCB Main CR1 Failed
Tl	205	1	nogas	1.055	80.3	5589	80.4	1	CCB Main CR1 Failed
Pb	208	1	nogas	0.827	10.3	3194	10.9	2.5	
U	238	1	nogas	0.525	29.4	3835	25.4	2.5	
Si	28	1	nogas	-408.374	-16.3	860193	2.1	5	
La	139	1	nogas	7228.988	71.6	8736	71.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	1430.623	85.8	941	84.6	2.5	CCB Main CR1 Failed
Na	23	2	He	7.018	89.6	26526	12.7	100	
Mg	24	2	He	13.883	59.7	7036	38.0	100	
Al	27	2	He	14.145	110.8	4058	82.2	5	CCB Main CR1 Failed
K	39	2	He	-8.377	-118.4	88525	3.8	100	
Ca	43	2	He	3954.520	125.0	4558	125.3	100	CCB Main CR1 Failed
Ca	44	2	He	138.058	149.5	3144	127.8	100	CCB Main CR1 Failed
V	51	2	He	1.975	82.1	7197	55.1	2.5	
Cr	52	2	He	1.467	112.7	5137	80.8	2.5	
Mn	55	2	He	2.107	102.2	4694	92.8	2.5	
Fe	56	2	He	14.264	5.4	48823	2.2	100	
Co	59	2	He	1.420	97.1	4664	95.5	2.5	
Ni	60	2	He	6.999	100.0	5834	94.3	2.5	CCB Main CR1 Failed
Cu	63	2	He	2.602	103.5	6217	85.6	2	CCB Main CR1 Failed
Zn	66	2	He	8.032	87.3	4000	84.6	2.5	CCB Main CR1 Failed

Continuing Calibration Blank (CCB) Report

As	75	2	He	7.299	94.8	3496	91.3	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	4.008	53.4	8962	50.8	2.5	CCB Main CR1 Failed
Se	78	2	He	144.678	85.1	5866	81.6	2	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	938375	0.49	942112	99.60	70	125	
In	115	1	nogas	783638	0.68	780487	100.40	70	125	
Li	6	1	nogas	445027	1.11	455172	97.77	70	125	
Bi	209	1	nogas	549605	7.28	534130	102.90	70	125	
Ge	72	2	He	350620	1.45	358309	97.85	70	125	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\121318A.b
Report Comment
Instrument Name G3281A JP09420132

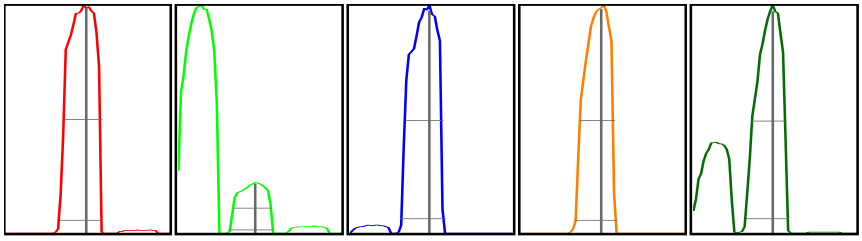
[nogas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		11593				NaN	-	
24		25215				NaN	-	
59		28867				NaN	-	
115		35866				NaN	-	
208		17341				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	1.63	5.00				
24	0.86	5.00				
59	1.20	5.00				
115	1.40	5.00				
208	1.36	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	11588	11742	11589	11288	11758
24	25395	25249	25114	24898	25419
59	29079	28886	28871	28299	29199
115	36537	35859	35933	35122	35878
208	17677	17188	17382	17056	17403

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	1809.45	9.00	8.9 - 9.1		0.66	0.783		
24	3909.02	23.95	23.9 - 24.1		0.69	0.789		
59	4652.96	59.00	58.9 - 59.1		0.65	0.765		
115	6275.18	115.00	114.9 - 115.1		0.59	0.733		
208	3024.99	208.00	207.9 - 208.1		0.59	0.782		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 168.5 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.48 L/min	S/C Temp	2 ℃
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	10.0 V
Extract 2	-170.5 V	Cell Entrance	-30 V	Plate Bias	-40 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	180 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		301				NaN	-	
24		2138				NaN	-	
59		16957				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	3.95	5.00				
24	2.77	5.00				
59	0.69	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	300	302	292	321	292
24	2150	2079	2139	2094	2230
59	16759	16971	16975	17012	17069

Integration Time [sec] 0.1

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	50.24	8.90	8.9 - 9.1		0.63	0.781		
24	342.84	23.95	23.9 - 24.1		0.67	0.784		
59	2845.48	58.95	58.9 - 59.1		0.63	0.755		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 100.6 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.48 L/min	S/C Temp	2 ℃
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.0 V
Extract 2	-170.5 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

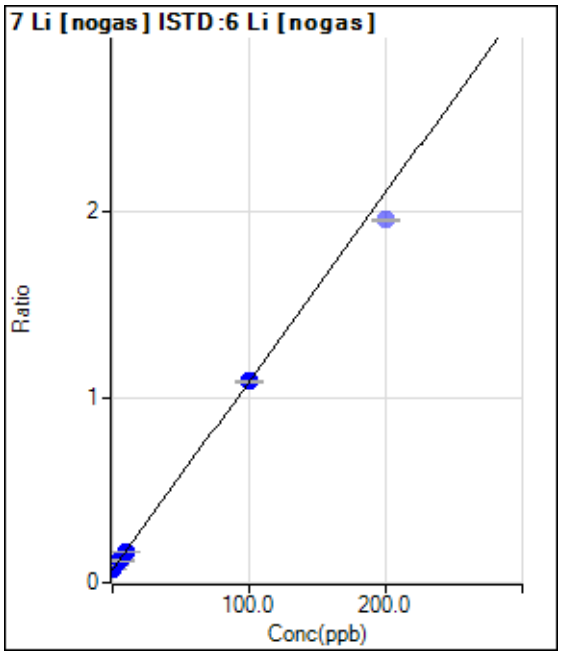
OctP Bias	-18.0 V	He Flow	3.5 mL/min	Energy Discrimination	5.0 V
OctP RF	180 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration for 021_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121418A.b\
Analysis File: 121418A.batch.bin
DA Date-Time: 12/14/2018 10:21:14 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	014CALB.d	CAL BLK	12/14/2018 12:24:52 PM
2	015CALS.d	2/10/200	12/14/2018 12:27:07 PM
3	016CALS.d	5/25/500	12/14/2018 12:29:23 PM
4	017CALS.d	10/50/1000	12/14/2018 12:31:38 PM
5	018CALS.d	100/500/10K	12/14/2018 12:33:53 PM
6	019CALS.d	200/1000/20K	12/14/2018 12:36:07 PM
7			

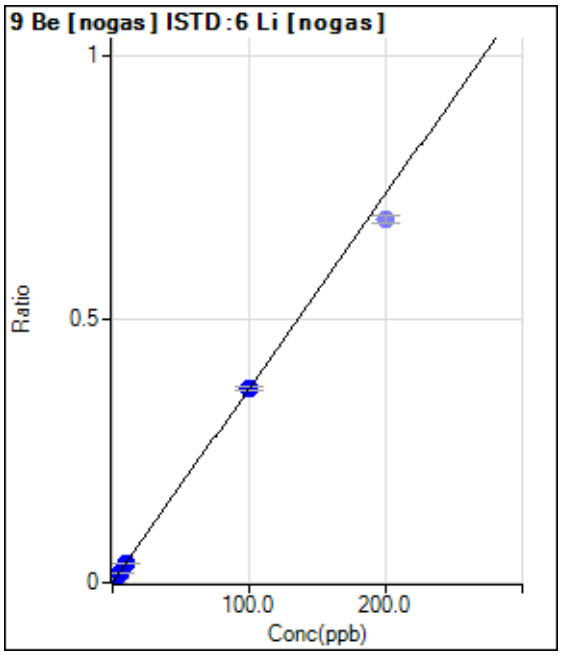
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27827.69	0.0691	P	3.6
2	☐	2.000	2.109	36766.14	0.0906	P	3.8
3	☐	5.000	5.043	49024.06	0.1204	P	2.7
4	☐	10.000	9.838	69527.94	0.1692	P	2.1
5	☐	100.000	100.012	465841.06	1.0867	P	0.6
6	☑	200.000		892863.94	1.9579	P	0.4
7	☐	1.000					

y = 0.0102 * x + 0.0691
R = 1.0000
DL = 0.73
BEC = 6.79

Weight: <None>
Min Conc: <None>

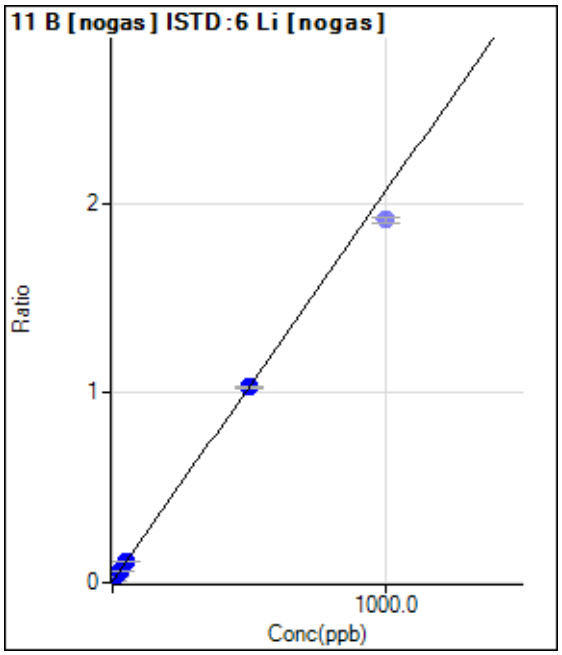


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0001	P	10.9
2	☐	2.000	2.227	3380.36	0.0083	P	8.4
3	☐	5.000	4.895	7388.29	0.0181	P	1.5
4	☐	10.000	10.045	15243.07	0.0371	P	3.9
5	☐	100.000	99.996	157779.45	0.3681	P	1.1
6	☑	200.000		313582.23	0.6877	P	2.1
7	☐	1.000					

y = 0.0037 * x + 1.3242E-004
R = 1.0000
DL = 0.01174
BEC = 0.03599

Weight: <None>
Min Conc: <None>

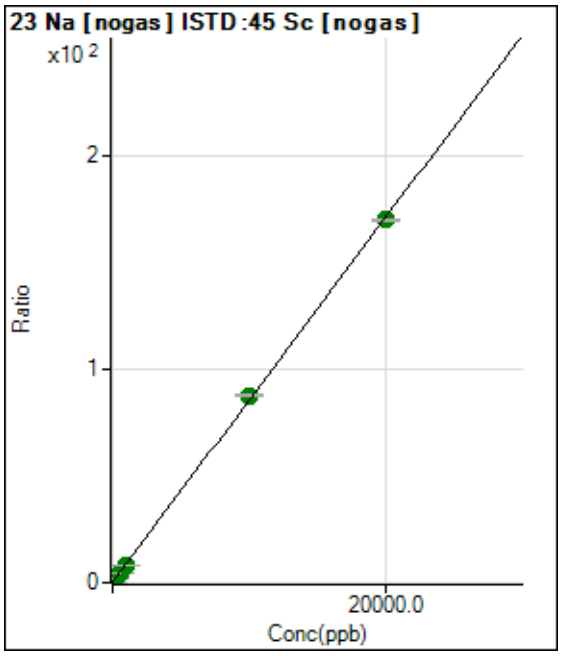
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2286.85	0.0057	P	4.0
2	☐	10.000	9.884	10546.47	0.0260	P	3.5
3	☐	25.000	25.482	23621.84	0.0580	P	2.6
4	☐	50.000	49.599	44188.88	0.1075	P	1.4
5	☐	500.000	500.018	442639.37	1.0326	P	1.1
6	☑	1000.000		871689.28	1.9116	P	1.8
7	☐	5.000					

y = 0.0021 * x + 0.0057
R = 1.0000
DL = 0.3323
BEC = 2.764

Weight: <None>
Min Conc: <None>

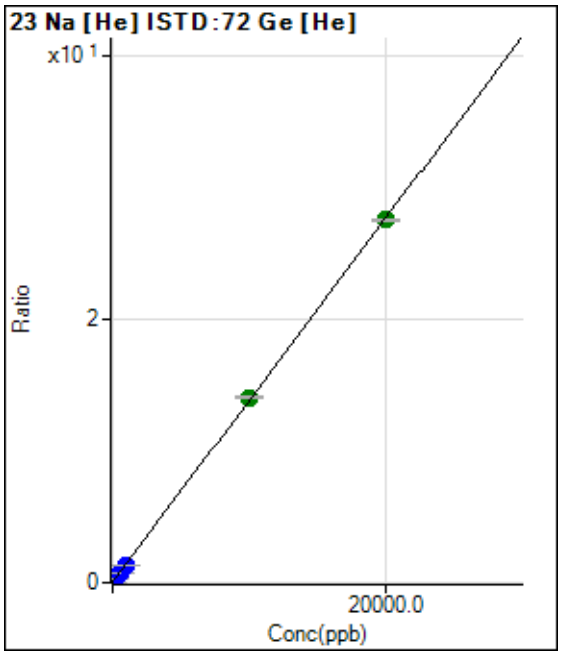


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110445.48	0.1703	P	3.7
2	☐	200.000	215.500	1313462.66	2.0071	A	4.0
3	☐	500.000	507.241	2940586.39	4.4937	A	1.7
4	☐	1000.000	973.438	5554137.63	8.4673	A	1.6
5	☐	10000.00	10241.340	57321547.12	87.4605	A	0.7
6	☐	20000.00	19880.322	111510152.4	169.616	A	0.6
7	☐	100.000					

y = 0.0085 * x + 0.1703
R = 0.9999
DL = 2.193
BEC = 19.99

Weight: <None>
Min Conc: <None>

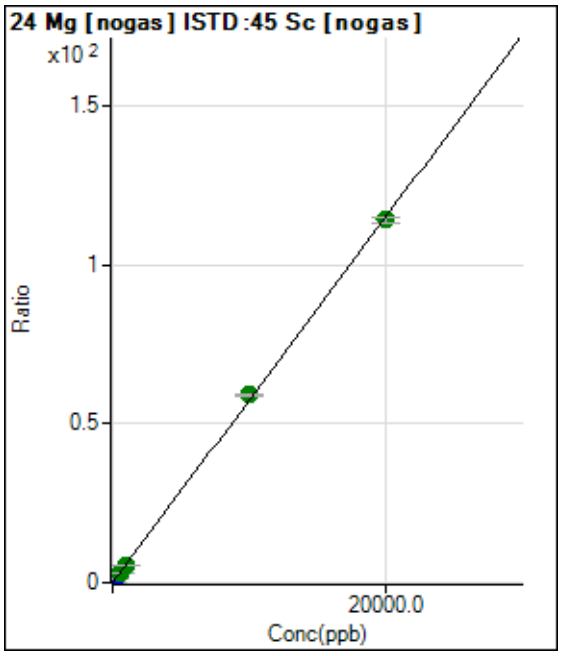
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13368.42	0.0359	P	1.9
2	☐	200.000	205.728	119900.69	0.3197	P	2.9
3	☐	500.000	505.213	277577.34	0.7328	P	0.4
4	☐	1000.000	961.124	523934.99	1.3618	P	2.4
5	☐	10000.00	10160.490	5361048.25	14.0520	A	0.5
6	☐	20000.00	19921.511	10453229.63	27.5170	A	0.7
7	☐	100.000					

y = 0.0014 * x + 0.0359
R = 1.0000
DL = 1.464
BEC = 26.04

Weight: <None>
Min Conc: <None>

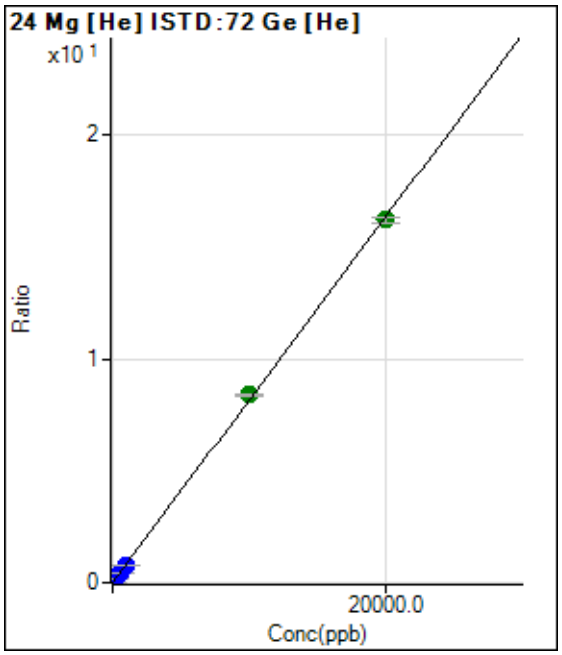


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2067.23	0.0032	P	24.0
2	☐	200.000	203.657	768719.42	1.1746	P	0.8
3	☐	500.000	515.887	1943790.08	2.9706	A	1.5
4	☐	1000.000	991.884	3744540.06	5.7086	A	0.6
5	☐	10000.00	10269.929	38719136.28	59.0770	A	0.7
6	☐	20000.00	19865.008	75118707.93	114.268	A	1.2
7	☐	100.000					

y = 0.0058 * x + 0.0032
R = 0.9999
DL = 0.3996
BEC = 0.554

Weight: <None>
Min Conc: <None>

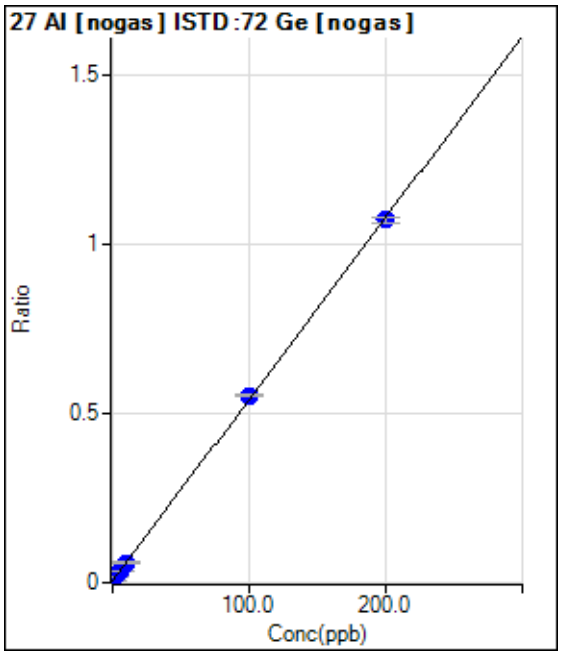
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.33	0.0004	P	43.1
2	☐	200.000	206.482	63365.11	0.1689	P	2.4
3	☐	500.000	504.538	156178.41	0.4123	P	0.7
4	☐	1000.000	960.438	301870.12	0.7846	P	1.8
5	☐	10000.00	10290.940	3205718.70	8.4029	A	0.8
6	☐	20000.00	19856.330	6158885.53	16.2130	A	1.6
7	☐	100.000					

y = 8.1650E-004 * x + 3.5740E-004
R = 0.9998
DL = 0.5666
BEC = 0.4377

Weight: <None>
Min Conc: <None>

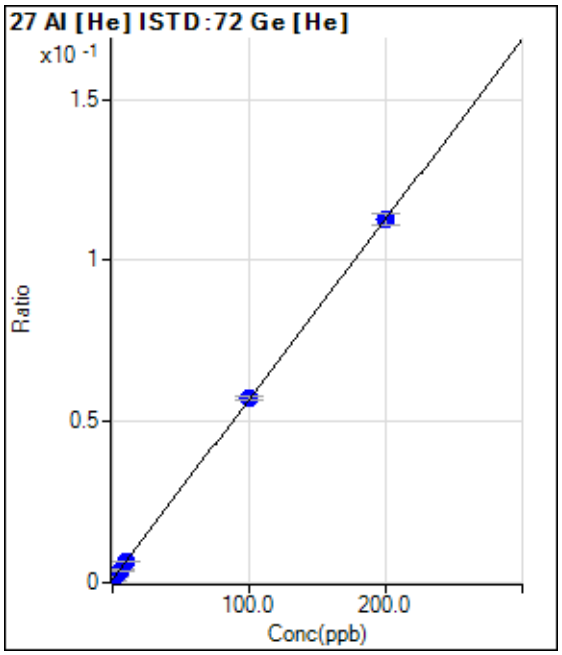


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4820.73	0.0052	P	4.5
2	☐	2.000	2.734	18426.13	0.0199	P	11.0
3	☐	5.000	5.548	32372.04	0.0350	P	3.0
4	☐	10.000	10.092	55747.40	0.0594	P	1.8
5	☐	100.000	102.173	520433.81	0.5533	P	1.7
6	☐	200.000	198.888	1004976.18	1.0721	P	1.8
7	☐	1.000					

y = 0.0054 * x + 0.0052
R = 0.9999
DL = 0.1313
BEC = 0.9725

Weight: <None>
Min Conc: <None>

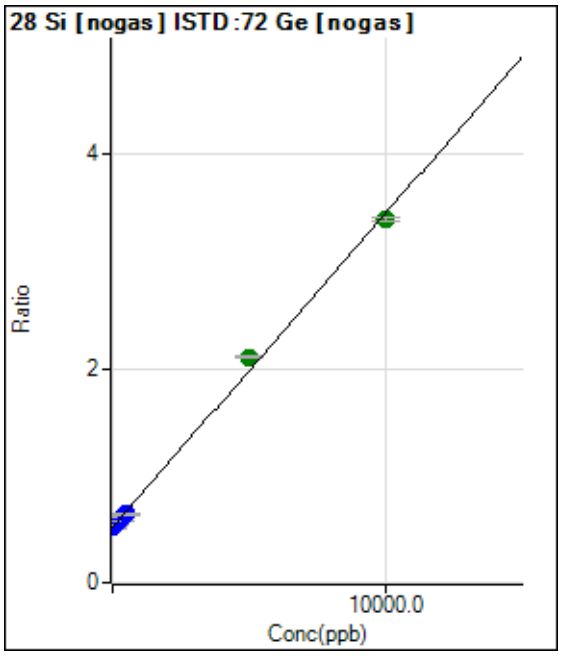
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.351	270.01	0.0007	P	23.2
2	☐	2.000	1.675	696.69	0.0019	P	7.7
3	☐	5.000	5.180	1446.75	0.0038	P	5.3
4	☐	10.000	10.103	2530.23	0.0066	P	6.5
5	☐	100.000	100.799	21859.93	0.0573	P	2.8
6	☐	200.000	199.594	42766.32	0.1126	P	3.1
7	☐	1.000					

y = 5.5936E-004 * x + 9.2208E-004
R = 1.0000
DL = 0.9029
BEC = 1.648

Weight: <None>
Min Conc: <None>

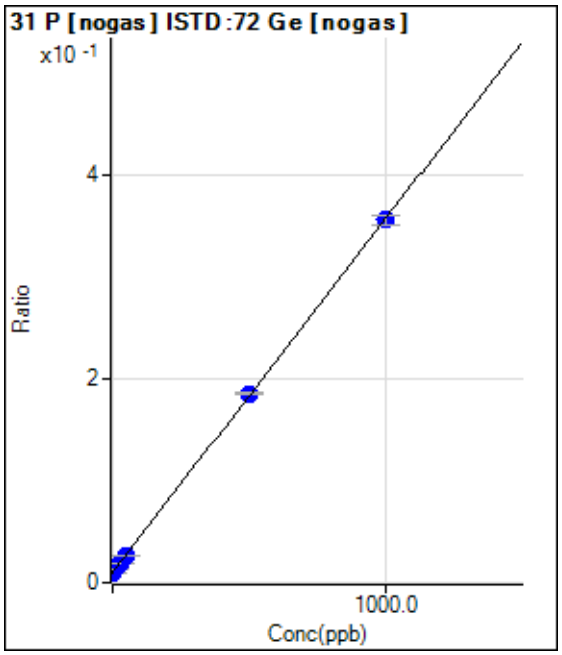


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	478078.69	0.5174	P	2.7
2	☐	100.000	102.632	507713.01	0.5474	P	2.0
3	☐	250.000	255.362	547924.21	0.5922	P	4.2
4	☐	500.000	416.138	600445.87	0.6393	P	2.3
5	☐	5000.000	5420.669	1981247.78	2.1063	A	0.8
6	☐	10000.00	9793.698	3176451.41	3.3882	A	0.9
7	☐	50.000					

y = 2.9313E-004 * x + 0.5174
R = 0.9987
DL = 142.4
BEC = 1765

Weight: <None>
Min Conc: <None>

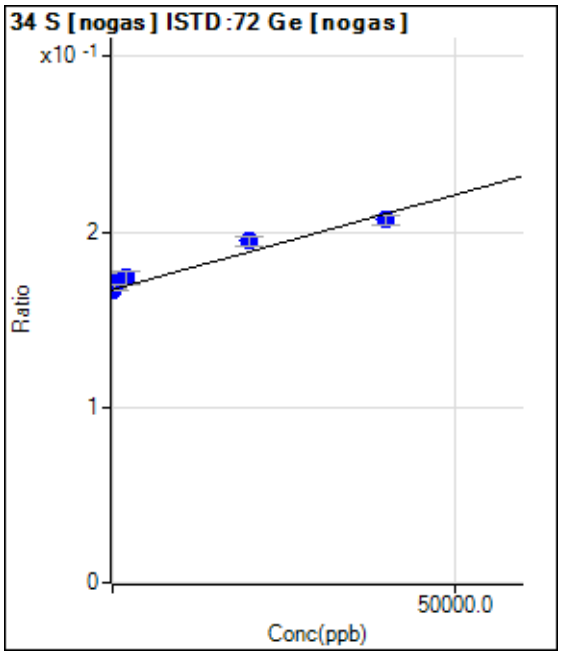
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9285.85	0.0100	P	1.8
2	☐	10.000	10.194	12591.22	0.0136	P	3.9
3	☐	25.000	25.949	17615.37	0.0190	P	6.3
4	☐	50.000	48.325	25154.17	0.0268	P	3.8
5	☐	500.000	505.720	174227.36	0.1852	P	1.0
6	☐	1000.000	997.198	333173.97	0.3555	P	2.4
7	☐	5.000					

y = 3.4640E-004 * x + 0.0100
R = 1.0000
DL = 1.555
BEC = 29.01

Weight: <None>
Min Conc: <None>

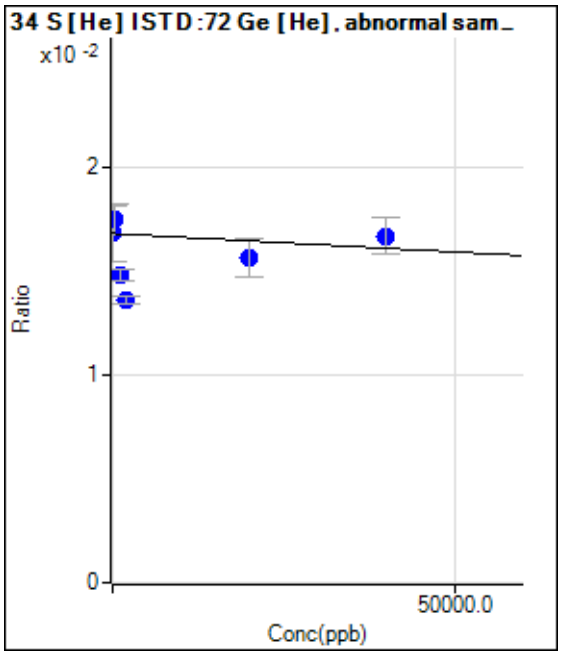


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	154504.30	0.1672	P	0.9
2	☐	400.000	1820.316	156853.98	0.1692	P	3.3
3	☐	1000.000	5645.247	160356.39	0.1733	P	3.2
4	☐	2000.000	6156.854	163213.33	0.1738	P	4.4
5	☐	20000.00	25736.691	183413.53	0.1950	P	3.0
6	☐	40000.00	36793.477	193954.30	0.2069	P	3.0
7	☐	200.000					

y = 1.0798E-006 * x + 0.1672
R = 0.9805
DL = 4327
BEC = 1.548E+05

Weight: <None>
Min Conc: <None>

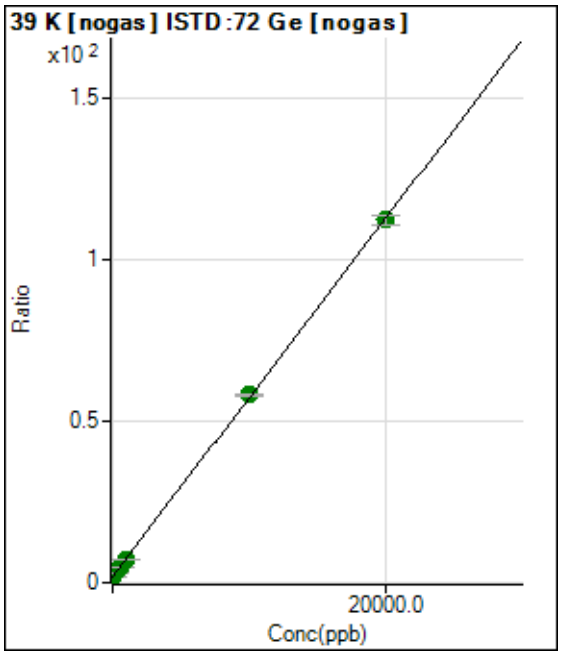
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6236.01	0.0168	P	15.9
2	☐	400.000	-36892.79	6535.84	0.0174	P	8.6
3	☐	1000.000	113160.85	5601.85	0.0148	P	3.9
4	☐	2000.000	179990.17	5235.08	0.0136	P	2.7
5	☐	20000.00	64815.349	5968.64	0.0156	P	11.6
6	☐	40000.00	6261.723	6335.66	0.0167	P	10.8
7	☐	200.000					

y = -1.7697E-008 * x + 0.0168
R = 0.2192
DL = -4.534E+05
BEC = -9.487E+05

Weight: <None>
Min Conc: <None>

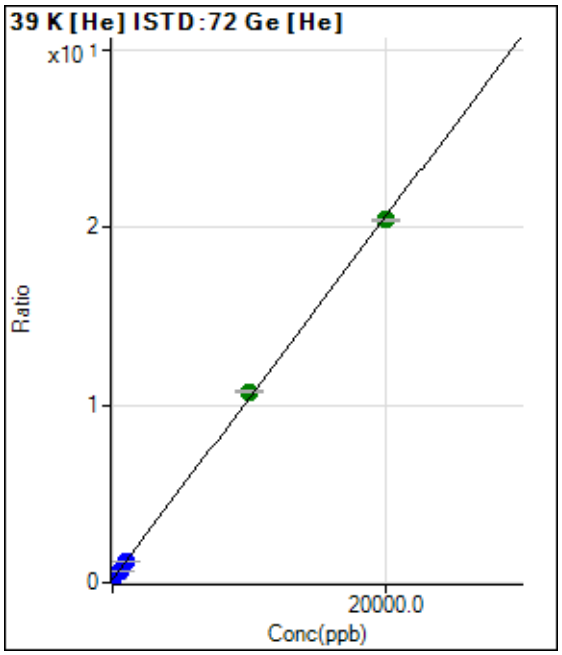


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1724674.26	1.8663	A	0.5
2	☐	200.000	205.743	2786081.77	3.0043	A	0.7
3	☐	500.000	504.151	4308588.64	4.6549	A	1.7
4	☐	1000.000	970.747	6796809.53	7.2358	A	0.4
5	☐	10000.00	10148.605	54556611.64	58.0007	A	0.8
6	☐	20000.00	19926.999	105048712.7	112.087	A	2.8
7	☐	100.000					

y = 0.0055 * x + 1.8663
R = 1.0000
DL = 4.955
BEC = 337.4

Weight: <None>
Min Conc: <None>

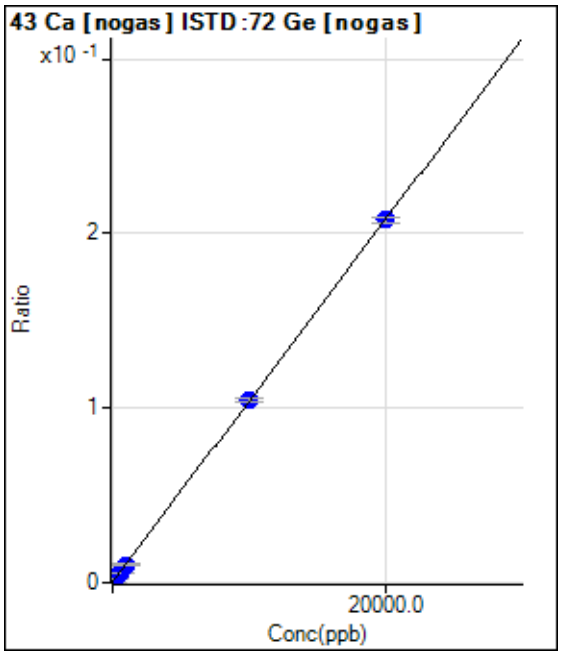
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	69201.38	0.1860	P	3.0
2	☐	200.000	201.856	147088.43	0.3922	P	2.6
3	☐	500.000	498.953	263471.24	0.6956	P	0.6
4	☐	1000.000	947.014	443798.63	1.1532	P	0.7
5	☐	10000.00	10359.426	4107828.58	10.7659	A	1.5
6	☐	20000.00	19822.944	7761655.51	20.4309	A	0.8
7	☐	100.000					

y = 0.0010 * x + 0.1860
R = 0.9998
DL = 16.48
BEC = 182.1

Weight: <None>
Min Conc: <None>

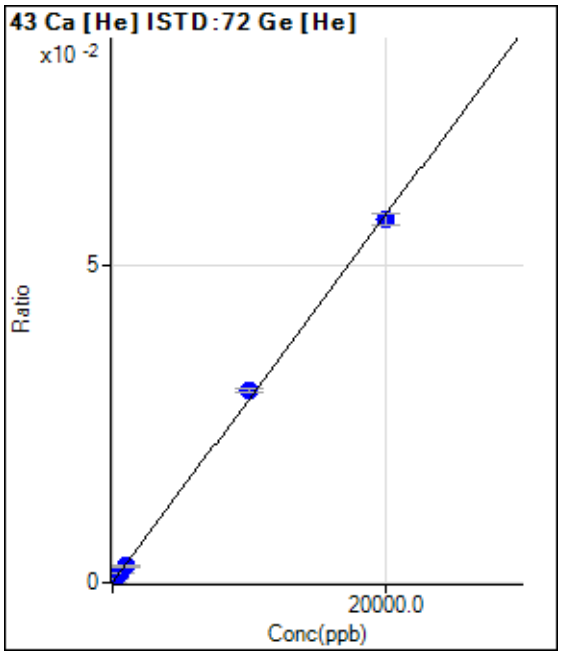


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	280.01	0.0003	P	15.9
2	☐	200.000	214.178	2343.53	0.0025	P	7.3
3	☐	500.000	498.259	5067.47	0.0055	P	3.1
4	☐	1000.000	969.668	9739.48	0.0104	P	2.0
5	☐	10000.00	10040.050	98313.67	0.1045	P	1.7
6	☐	20000.00	19981.393	194692.65	0.2077	P	1.8
7	☐	100.000					

y = 1.0380E-005 * x + 3.0309E-004
R = 1.0000
DL = 13.88
BEC = 29.2

Weight: <None>
Min Conc: <None>

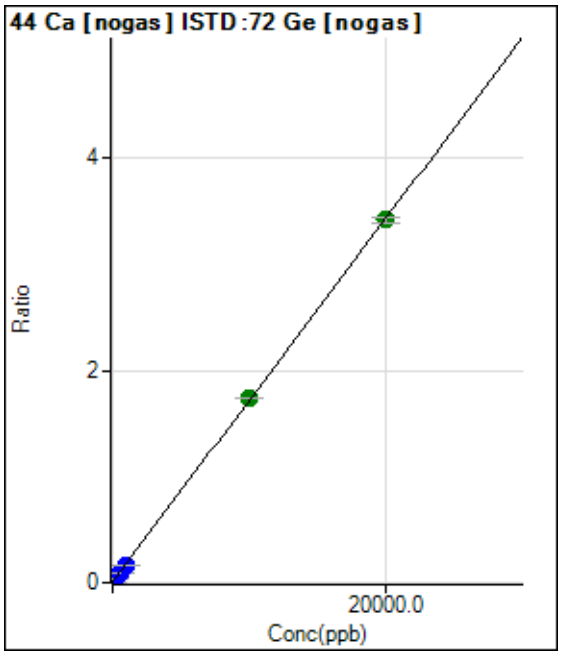
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	200.000	199.075	230.01	0.0006	P	14.8
3	☐	500.000	488.343	550.02	0.0015	P	9.0
4	☐	1000.000	905.163	1023.39	0.0027	P	6.8
5	☐	10000.00	10508.120	11637.26	0.0305	P	2.1
6	☐	20000.00	19750.983	21763.27	0.0573	P	3.2
7	☐	100.000					

y = 2.8990E-006 * x + 3.5434E-005
R = 0.9995
DL = 31.76
BEC = 12.22

Weight: <None>
Min Conc: <None>

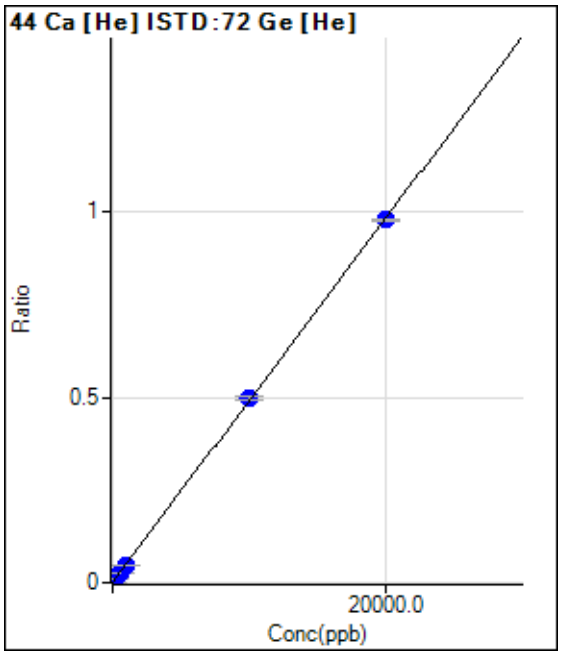


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7078.19	0.0077	P	7.1
2	☐	200.000	200.368	38891.77	0.0419	P	1.1
3	☐	500.000	493.028	85198.65	0.0920	P	1.1
4	☐	1000.000	931.577	156912.03	0.1670	P	0.9
5	☐	10000.00	10112.952	1634600.03	1.7378	A	0.4
6	☐	20000.00	19947.116	3206381.83	3.4203	A	1.3
7	☐	100.000					

y = 1.7108E-004 * x + 0.0077
R = 1.0000
DL = 9.601
BEC = 44.78

Weight: <None>
Min Conc: <None>

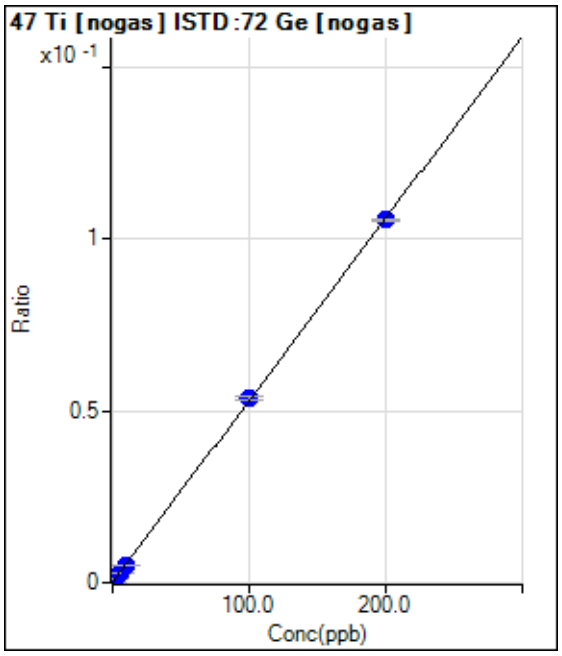
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.01	0.0007	P	19.5
2	☐	200.000	213.041	4173.89	0.0111	P	8.7
3	☐	500.000	506.455	9679.44	0.0256	P	6.1
4	☐	1000.000	934.080	17912.40	0.0466	P	3.5
5	☐	10000.00	10143.926	190360.34	0.4990	P	1.2
6	☐	20000.00	19931.041	372210.77	0.9798	P	0.5
7	☐	100.000					

y = 4.9124E-005 * x + 6.7349E-004
R = 1.0000
DL = 8.02
BEC = 13.71

Weight: <None>
Min Conc: <None>

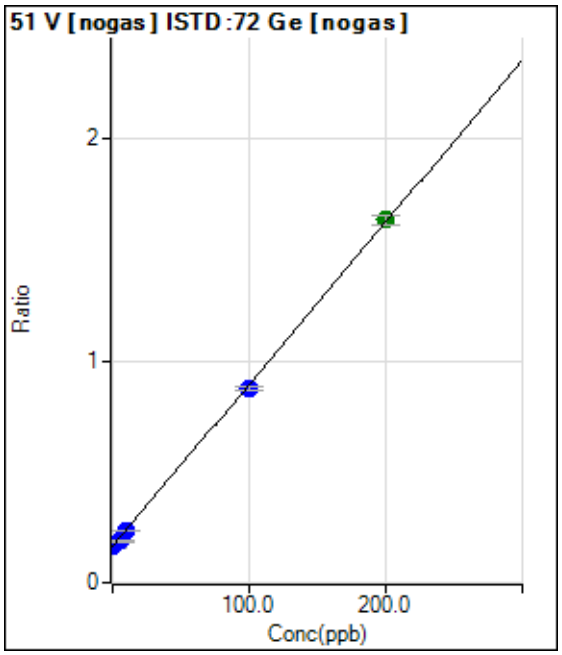


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	34.3
2	☐	2.000	1.810	963.38	0.0010	P	27.6
3	☐	5.000	4.745	2396.87	0.0026	P	4.4
4	☐	10.000	9.463	4774.03	0.0051	P	8.3
5	☐	100.000	101.422	50557.11	0.0537	P	2.7
6	☐	200.000	199.324	98968.59	0.1056	P	0.4
7	☐	1.000					

y = 5.2915E-004 * x + 7.9358E-005
R = 1.0000
DL = 0.1542
BEC = 0.15

Weight: <None>
Min Conc: <None>

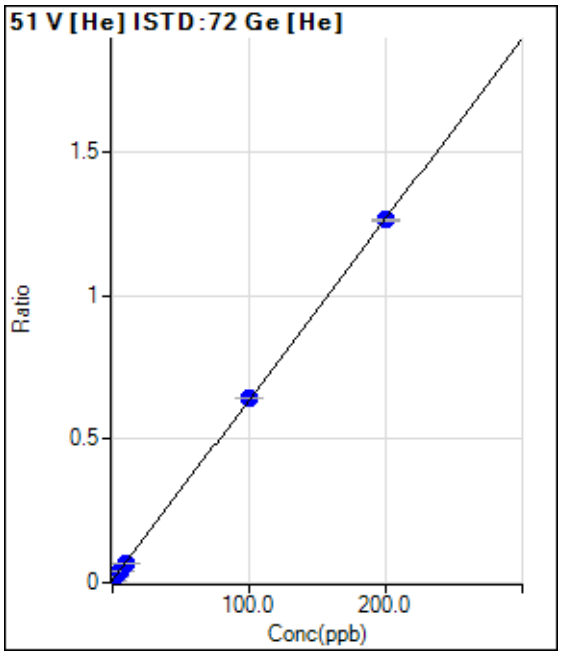
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	151696.55	0.1642	P	5.5
2	☐	2.000	1.719	163901.09	0.1767	P	4.1
3	☐	5.000	3.050	172615.78	0.1864	P	1.5
4	☐	10.000	9.766	221133.53	0.2354	P	0.6
5	☐	100.000	97.309	822284.08	0.8743	P	2.7
6	☐	200.000	201.409	1532466.25	1.6339	A	2.6
7	☐	1.000					

y = 0.0073 * x + 0.1642
R = 0.9999
DL = 3.727
BEC = 22.5

Weight: <None>
Min Conc: <None>

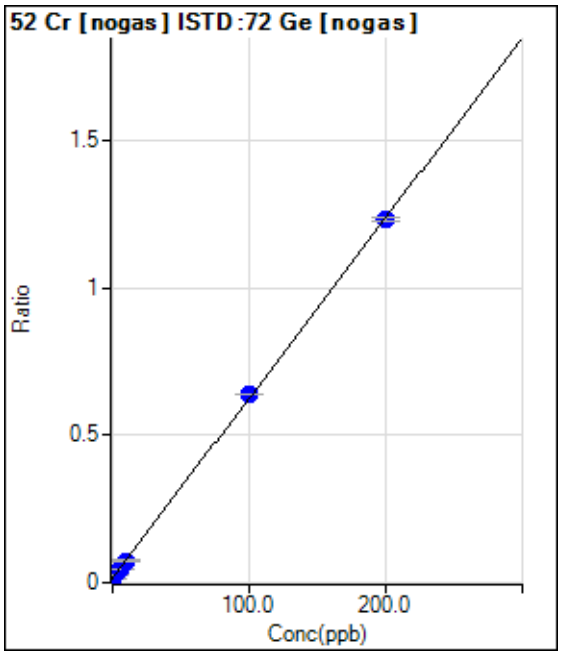


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.054	3325.65	0.0089	P	3.1
2	☐	2.000	2.069	8109.83	0.0216	P	1.5
3	☐	5.000	4.940	15022.88	0.0397	P	0.9
4	☐	10.000	9.452	26180.79	0.0680	P	0.5
5	☐	100.000	100.913	245393.40	0.6432	P	0.5
6	☐	200.000	199.572	480047.51	1.2636	P	0.5
7	☐	1.000					

y = 0.0063 * x + 0.0086
R = 1.0000
DL = 0.1335
BEC = 1.367

Weight: <None>
Min Conc: <None>

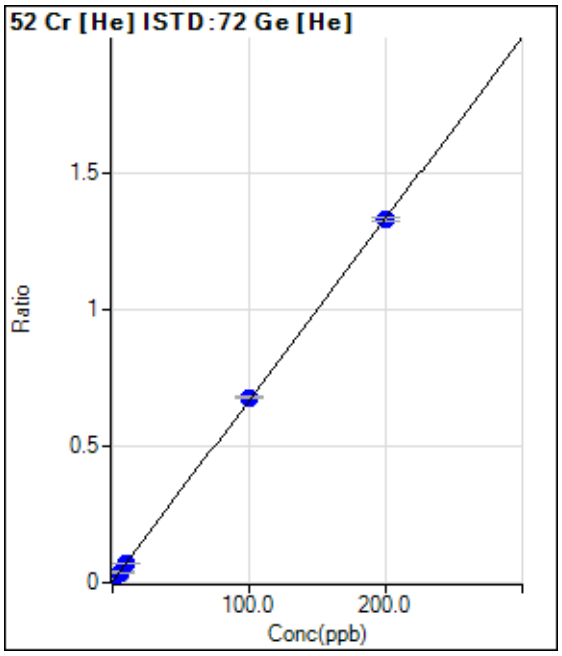
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13785.56	0.0149	P	0.5
2	☐	2.000	2.032	25344.65	0.0273	P	3.0
3	☐	5.000	4.929	41674.94	0.0450	P	2.3
4	☐	10.000	9.707	69693.88	0.0742	P	3.4
5	☐	100.000	102.030	600339.86	0.6382	P	0.6
6	☐	200.000	199.001	1153708.45	1.2307	P	1.2
7	☐	1.000					

y = 0.0061 * x + 0.0149
R = 0.9999
DL = 0.03803
BEC = 2.442

Weight: <None>
Min Conc: <None>

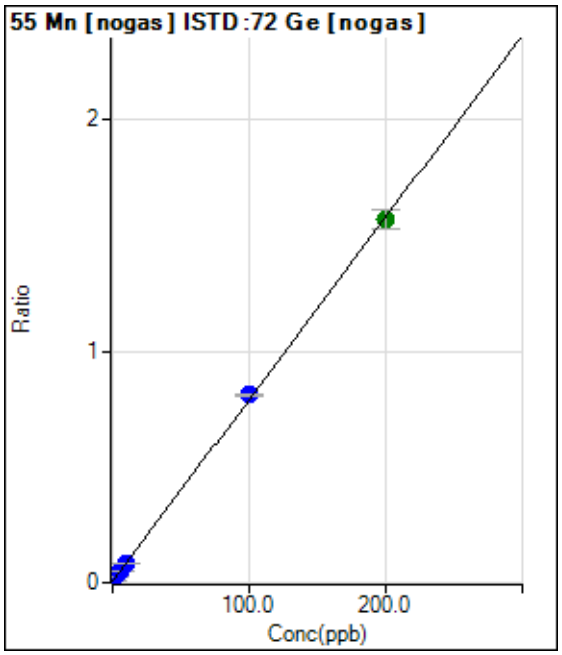


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1540.10	0.0041	P	6.1
2	☐	2.000	2.048	6654.68	0.0177	P	5.9
3	☐	5.000	5.129	14472.74	0.0382	P	3.1
4	☐	10.000	9.785	26603.21	0.0692	P	3.3
5	☐	100.000	101.314	258353.06	0.6772	P	1.2
6	☐	200.000	199.350	504699.45	1.3285	P	1.2
7	☐	1.000					

y = 0.0066 * x + 0.0041
R = 1.0000
DL = 0.1138
BEC = 0.6235

Weight: <None>
Min Conc: <None>

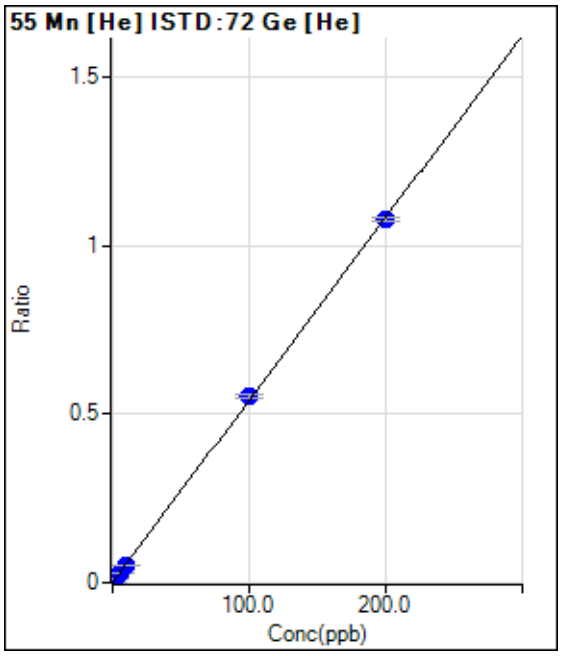
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4730.71	0.0051	P	4.5
2	☐	2.000	2.305	21563.16	0.0233	P	0.5
3	☐	5.000	5.288	43238.63	0.0467	P	1.6
4	☐	10.000	9.940	78242.94	0.0833	P	1.8
5	☐	100.000	102.679	764524.65	0.8128	P	1.0
6	☐	200.000	198.653	1468787.06	1.5677	A	5.2
7	☐	1.000					

y = 0.0079 * x + 0.0051
R = 0.9999
DL = 0.08741
BEC = 0.6508

Weight: <None>
Min Conc: <None>

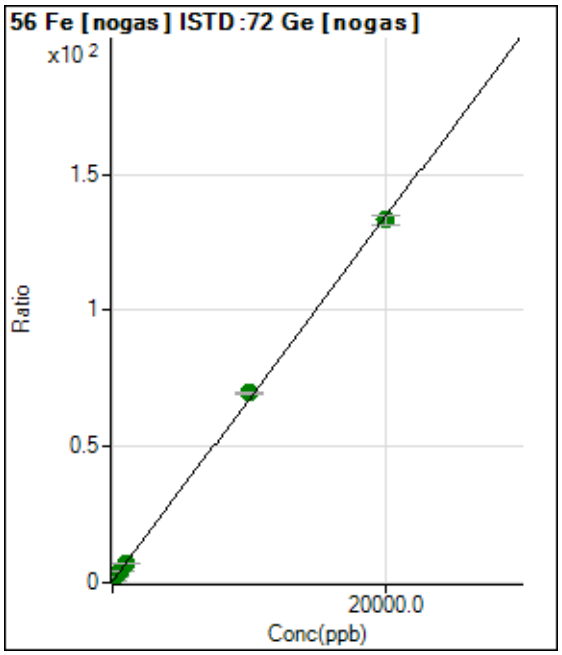


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	220.00	0.0006	P	26.3
2	☐	2.000	2.443	5180.84	0.0138	P	3.9
3	☐	5.000	5.210	10896.79	0.0288	P	1.8
4	☐	10.000	9.504	20004.74	0.0520	P	3.7
5	☐	100.000	102.320	211372.59	0.5540	P	1.7
6	☐	200.000	198.855	408811.57	1.0761	P	1.1
7	☐	1.000					

y = 0.0054 * x + 5.9004E-004
R = 0.9999
DL = 0.08608
BEC = 0.1091

Weight: <None>
Min Conc: <None>

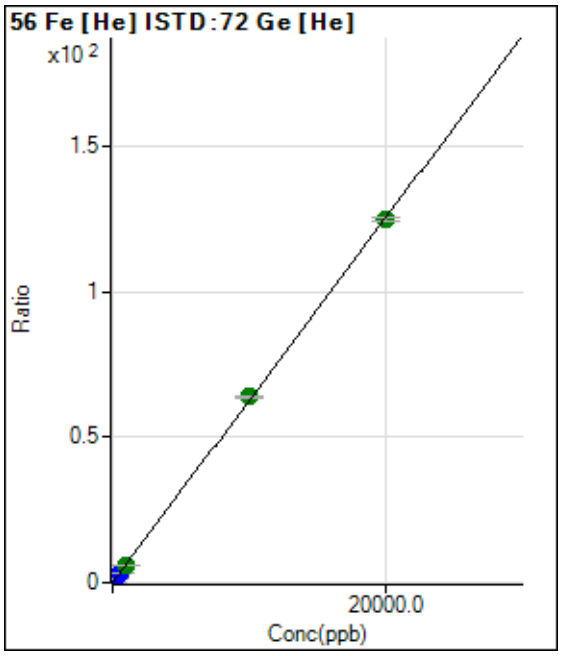
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	495896.05	0.5366	P	2.4
2	☐	200.000	218.543	1853365.08	1.9988	A	3.5
3	☐	500.000	527.284	3762216.88	4.0645	A	1.6
4	☐	1000.000	993.112	6745885.31	7.1811	A	0.8
5	☐	10000.00	10328.516	65504078.55	69.6403	A	1.3
6	☐	20000.00	19835.219	124878723.6	133.245	A	2.7
7	☐	100.000					

y = 0.0067 * x + 0.5366
R = 0.9998
DL = 5.744
BEC = 80.21

Weight: <None>
Min Conc: <None>

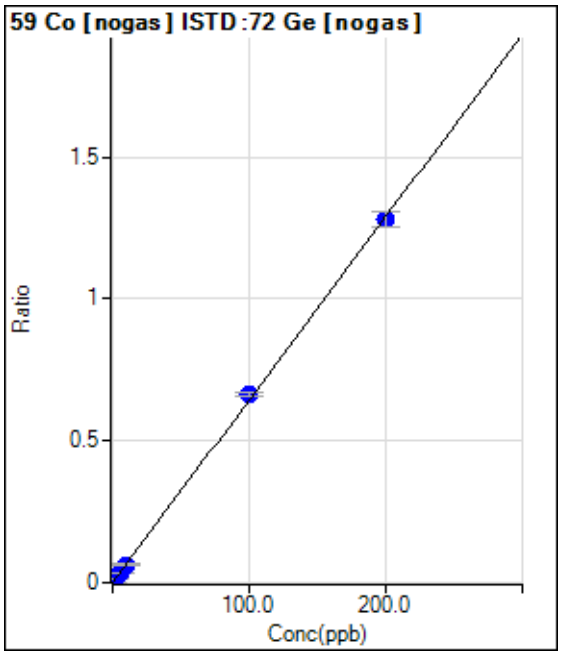


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8505.51	0.0228	P	7.3
2	☐	200.000	204.893	489308.18	1.3048	P	3.3
3	☐	500.000	497.880	1188432.25	3.1379	P	1.1
4	☐	1000.000	966.766	2336342.41	6.0715	A	1.1
5	☐	10000.00	10191.876	24336307.14	63.7896	A	1.7
6	☐	20000.00	19905.728	47321542.63	124.565	A	0.9
7	☐	100.000					

y = 0.0063 * x + 0.0228
R = 0.9999
DL = 0.7975
BEC = 3.651

Weight: <None>
Min Conc: <None>

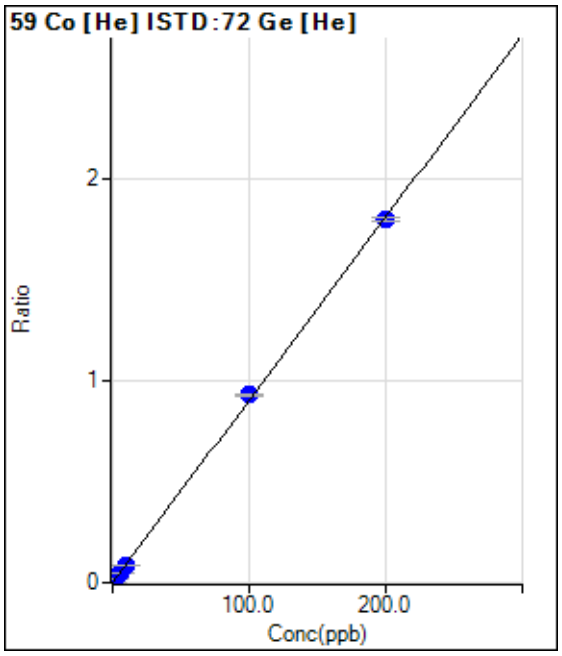
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0002	P	28.0
2	☐	2.000	2.078	12611.33	0.0136	P	6.7
3	☐	5.000	5.190	31133.91	0.0336	P	1.9
4	☐	10.000	9.908	60130.65	0.0640	P	2.2
5	☐	100.000	102.970	623721.46	0.6631	P	2.2
6	☐	200.000	198.514	1197649.72	1.2781	P	4.2
7	☐	1.000					

y = 0.0064 * x + 2.1651E-004
R = 0.9998
DL = 0.02828
BEC = 0.03363

Weight: <None>
Min Conc: <None>

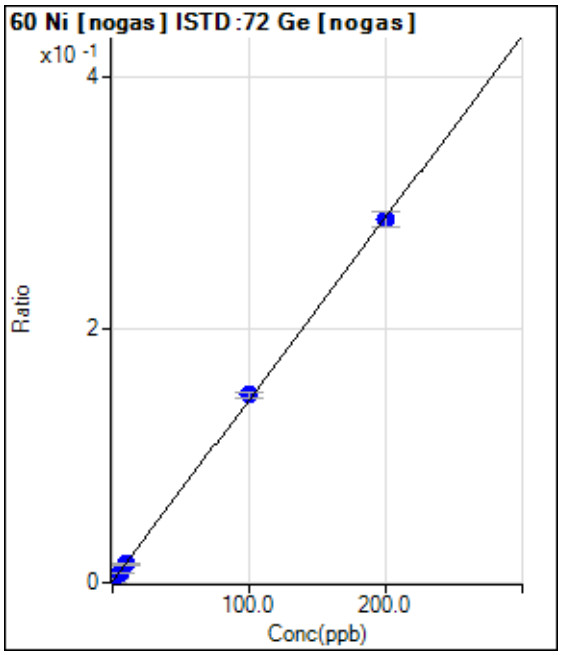


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0002	P	11.2
2	☐	2.000	2.047	7008.13	0.0187	P	4.1
3	☐	5.000	4.990	17165.15	0.0453	P	1.8
4	☐	10.000	9.311	32486.32	0.0844	P	0.6
5	☐	100.000	102.743	354746.76	0.9299	P	1.0
6	☐	200.000	198.663	682953.51	1.7978	P	1.0
7	☐	1.000					

y = 0.0090 * x + 1.7044E-004
R = 0.9999
DL = 0.006311
BEC = 0.01884

Weight: <None>
Min Conc: <None>

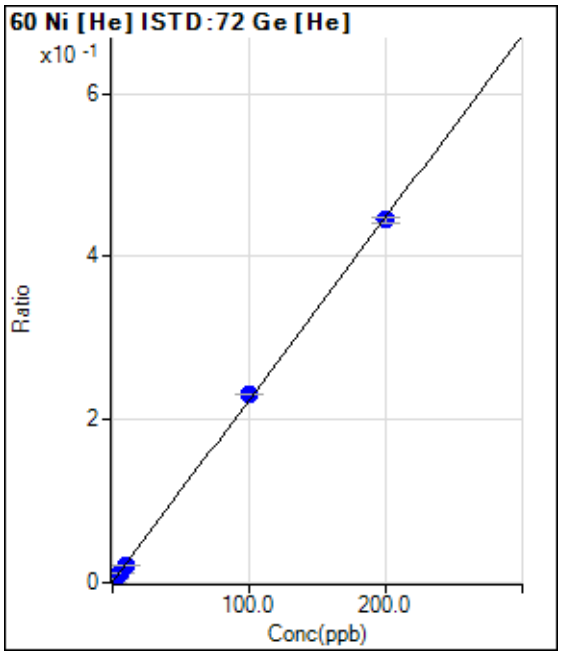
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.472	226.67	0.0002	P	26.7
2	☐	2.000	2.008	3533.76	0.0038	P	11.5
3	☐	5.000	4.614	6998.15	0.0076	P	4.4
4	☐	10.000	9.576	13815.53	0.0147	P	3.9
5	☐	100.000	102.485	139571.43	0.1484	P	3.5
6	☐	200.000	198.788	268853.46	0.2869	P	4.3
7	☐	1.000					

y = 0.0014 * x + 9.2361E-004
R = 0.9999
DL = 0.1367
BEC = 0.642

Weight: <None>
Min Conc: <None>

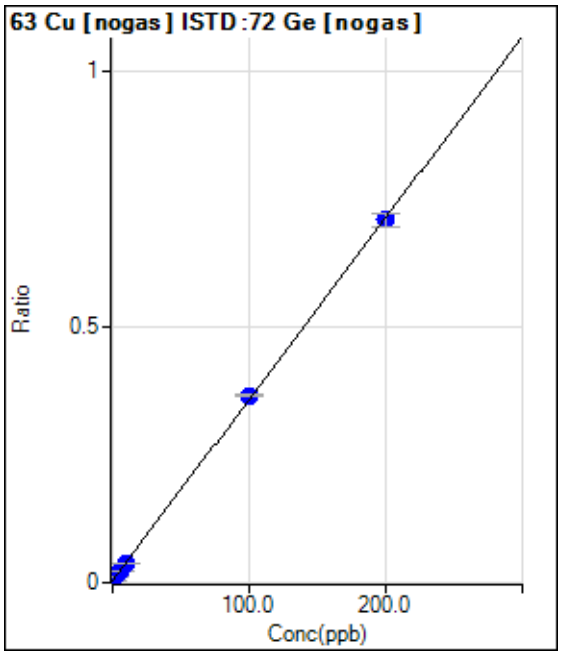


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.201	133.34	0.0004	P	33.0
2	☐	2.000	2.058	2030.16	0.0054	P	5.2
3	☐	5.000	4.657	4250.59	0.0112	P	4.4
4	☐	10.000	8.998	8051.95	0.0209	P	6.0
5	☐	100.000	102.859	88091.42	0.2309	P	0.6
6	☐	200.000	198.629	169089.52	0.4451	P	1.5
7	☐	1.000					

y = 0.0022 * x + 8.0670E-004
R = 0.9998
DL = 0.1585
BEC = 0.3606

Weight: <None>
Min Conc: <None>

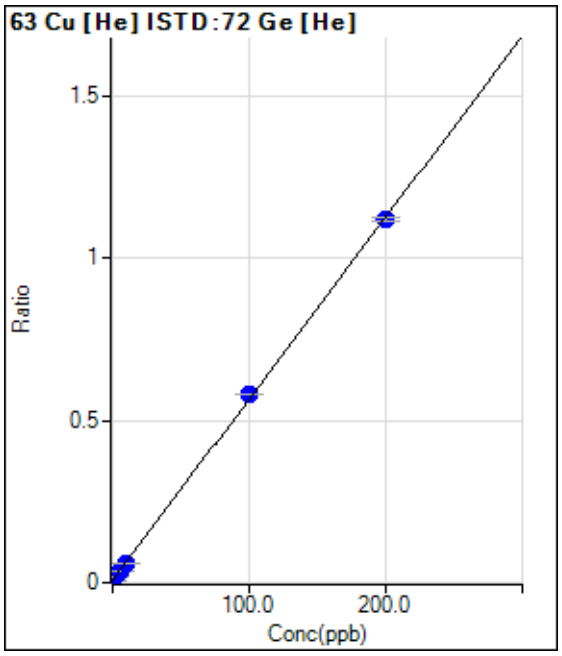
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3697.12	0.0040	P	7.8
2	☐	2.000	2.181	10880.16	0.0117	P	1.3
3	☐	5.000	5.030	20214.99	0.0218	P	0.8
4	☐	10.000	9.655	35922.73	0.0382	P	3.1
5	☐	100.000	102.052	344092.76	0.3658	P	1.3
6	☐	200.000	198.989	664868.40	0.7095	P	3.4
7	☐	1.000					

y = 0.0035 * x + 0.0040
R = 0.9999
DL = 0.265
BEC = 1.128

Weight: <None>
Min Conc: <None>

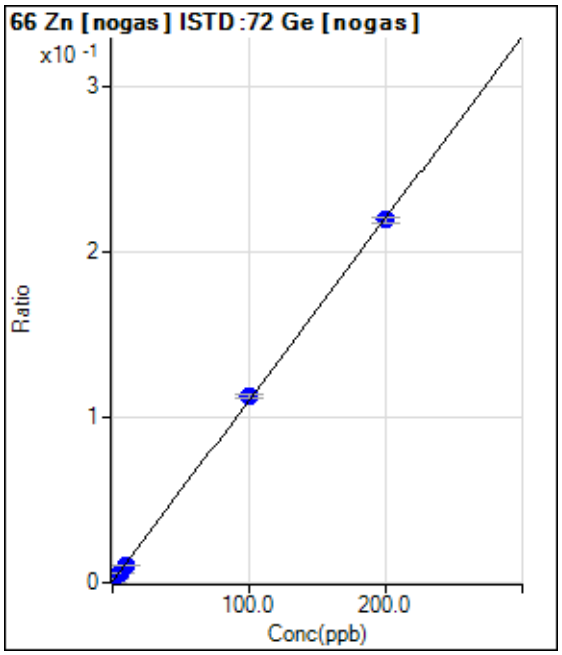


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.466	1573.43	0.0042	P	19.7
2	☐	2.000	1.768	6277.87	0.0167	P	6.1
3	☐	5.000	4.756	12678.00	0.0335	P	1.3
4	☐	10.000	9.560	23232.04	0.0604	P	2.7
5	☐	100.000	102.703	222017.01	0.5819	P	0.7
6	☐	200.000	198.679	425209.80	1.1193	P	0.9
7	☐	1.000					

y = 0.0056 * x + 0.0068
R = 0.9999
DL = 0.4475
BEC = 1.222

Weight: <None>
Min Conc: <None>

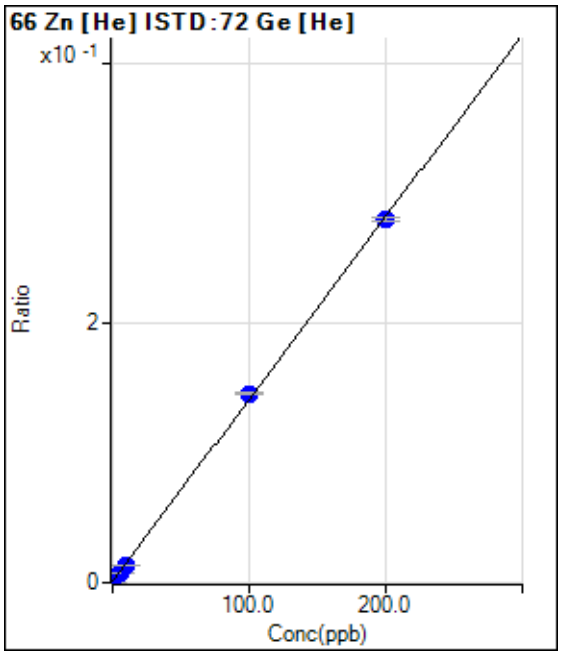
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.341	220.00	0.0002	P	8.2
2	☐	2.000	2.167	2776.93	0.0030	P	8.0
3	☐	5.000	5.052	5704.33	0.0062	P	1.3
4	☐	10.000	9.173	10043.00	0.0107	P	2.5
5	☐	100.000	101.822	105780.68	0.1125	P	2.5
6	☐	200.000	199.127	205639.20	0.2193	P	1.3
7	☐	1.000					

y = 0.0011 * x + 6.1289E-004
R = 0.9999
DL = 0.05304
BEC = 0.558

Weight: <None>
Min Conc: <None>

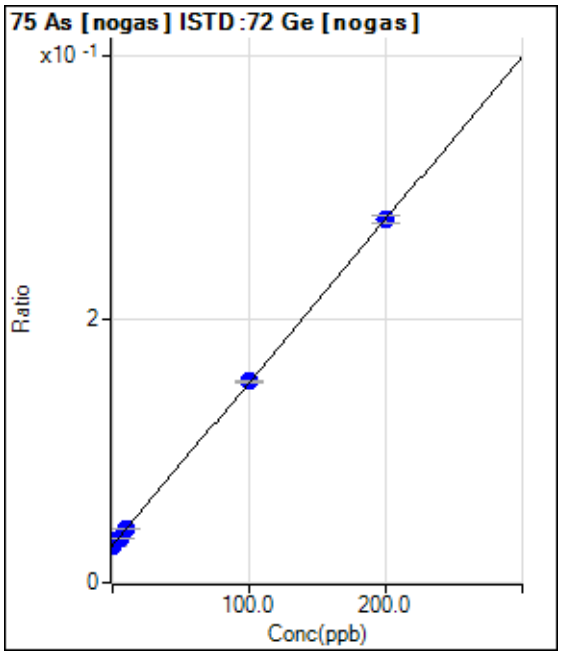


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.507	80.00	0.0002	P	33.7
2	☐	2.000	2.086	1446.76	0.0039	P	4.5
3	☐	5.000	4.659	2830.28	0.0075	P	8.8
4	☐	10.000	9.085	5267.53	0.0137	P	2.9
5	☐	100.000	103.247	55680.09	0.1460	P	1.4
6	☐	200.000	198.430	106236.26	0.2797	P	0.9
7	☐	1.000					

y = 0.0014 * x + 9.2816E-004
R = 0.9998
DL = 0.1552
BEC = 0.6608

Weight: <None>
Min Conc: <None>

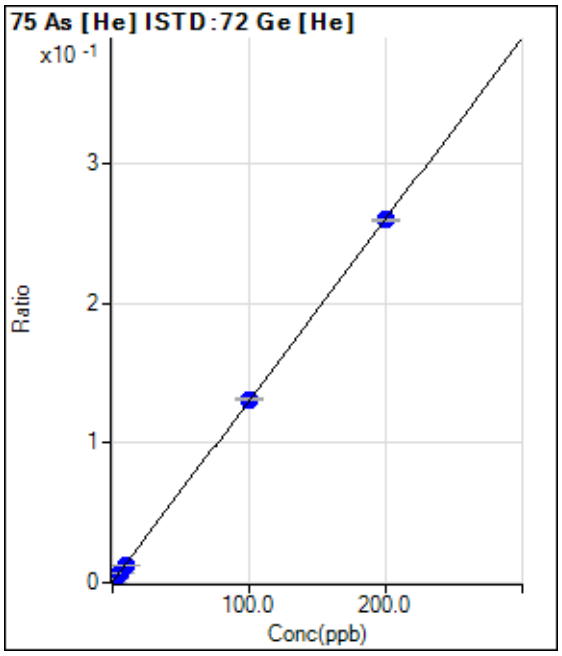
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.339	25825.94	0.0279	P	3.2
2	☐	2.000	2.696	29398.13	0.0317	P	4.3
3	☐	5.000	4.447	31354.97	0.0339	P	1.2
4	☐	10.000	9.864	38118.11	0.0406	P	0.9
5	☐	100.000	100.636	143843.17	0.1529	P	1.3
6	☐	200.000	199.696	258255.25	0.2755	P	2.1
7	☐	1.000					

y = 0.0012 * x + 0.0284
R = 1.0000
DL = 2.148
BEC = 22.92

Weight: <None>
Min Conc: <None>

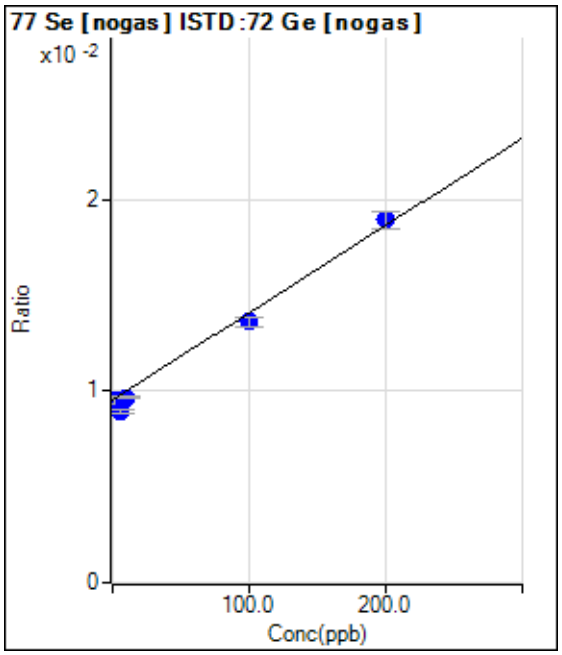


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	184.45	0.0005	P	13.9
2	☐	2.000	2.018	1170.05	0.0031	P	5.4
3	☐	5.000	5.033	2666.88	0.0070	P	0.9
4	☐	10.000	9.449	4917.37	0.0128	P	4.6
5	☐	100.000	100.813	50201.43	0.1316	P	0.8
6	☐	200.000	199.620	98796.90	0.2601	P	0.8
7	☐	1.000					

y = 0.0013 * x + 4.9592E-004
R = 1.0000
DL = 0.1587
BEC = 0.3814

Weight: <None>
Min Conc: <None>

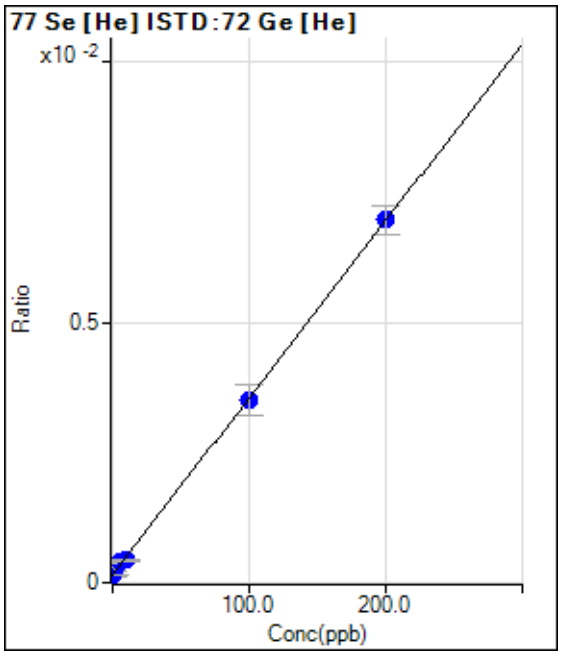
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8832.39	0.0096	P	3.8
2	☐	2.000	-0.675	8835.72	0.0095	P	3.2
3	☐	5.000	-13.763	8268.74	0.0089	P	2.2
4	☐	10.000	2.901	9102.51	0.0097	P	1.0
5	☐	100.000	89.117	12811.53	0.0136	P	4.0
6	☐	200.000	206.292	17765.91	0.0190	P	4.9
7	☐	1.000					

y = 4.5579E-005 * x + 0.0096
R = 0.9961
DL = 24.03
BEC = 209.7

Weight: <None>
Min Conc: <None>

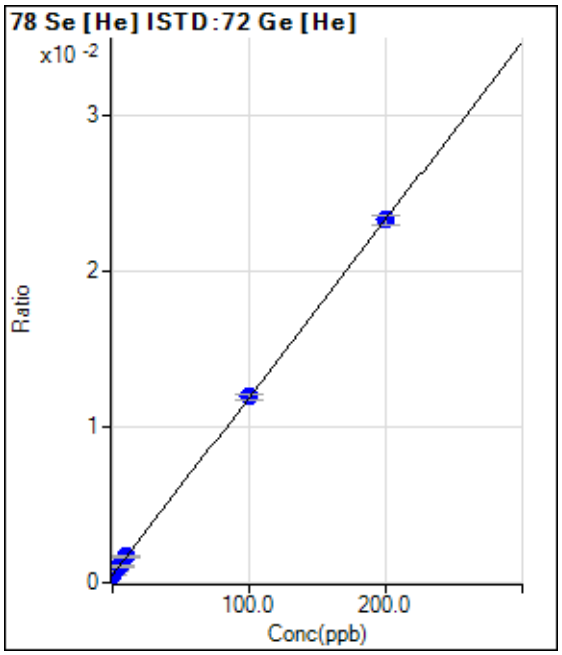


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.252	60.00	0.0002	P	74.7
2	☐	2.000	1.721	80.00	0.0002	P	61.3
3	☐	5.000	7.386	153.34	0.0004	P	10.9
4	☐	10.000	8.220	166.67	0.0004	P	8.3
5	☐	100.000	98.780	1340.08	0.0035	P	16.2
6	☐	200.000	200.642	2646.91	0.0070	P	8.1
7	☐	1.000					

y = 3.3958E-005 * x + 1.5429E-004
R = 0.9998
DL = 10.74
BEC = 4.543

Weight: <None>
Min Conc: <None>

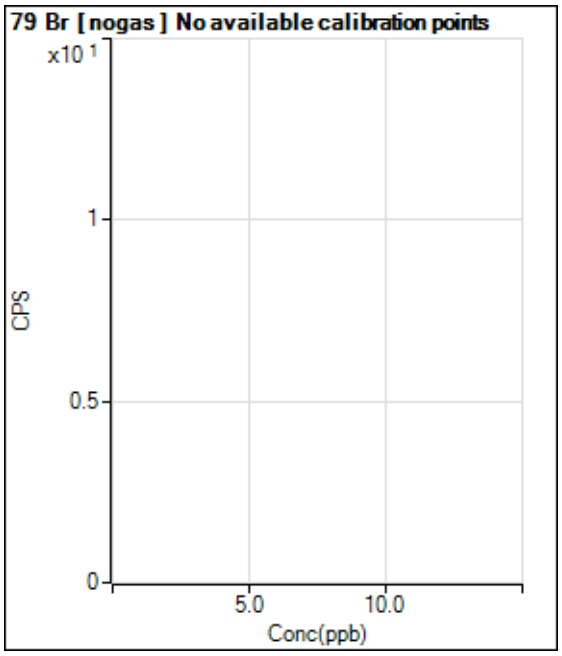
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	182.67	0.0005	P	10.7
2	☐	2.000	2.292	282.67	0.0008	P	5.8
3	☐	5.000	4.914	398.68	0.0011	P	12.0
4	☐	10.000	10.495	650.01	0.0017	P	7.6
5	☐	100.000	100.188	4554.60	0.0119	P	2.4
6	☐	200.000	199.880	8861.57	0.0233	P	2.5
7	☐	1.000					

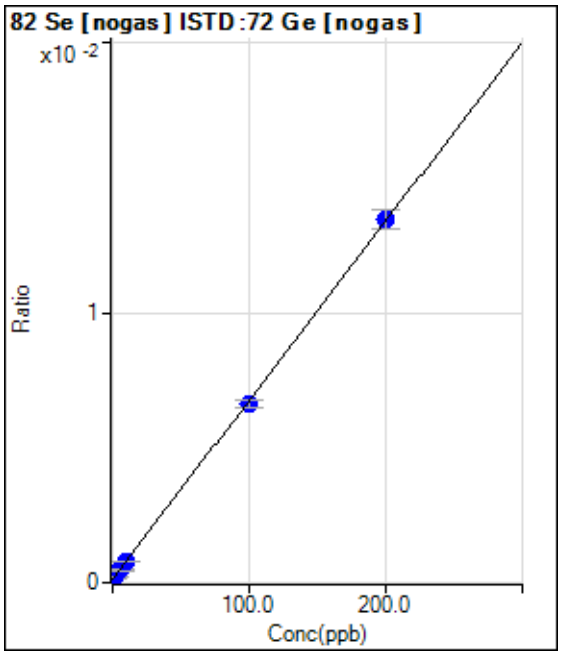
y = 1.1424E-004 * x + 4.9123E-004
R = 1.0000
DL = 1.381
BEC = 4.3

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

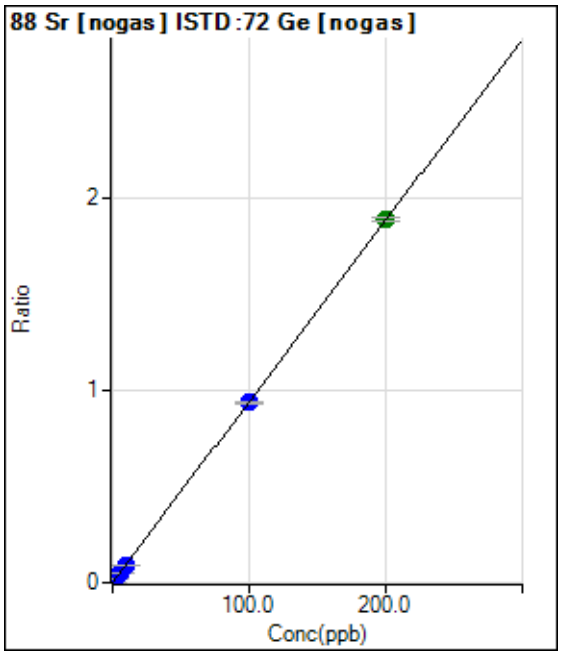
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0001	P	29.8
2	☐	2.000	1.512	213.34	0.0002	P	5.8
3	☐	5.000	5.192	440.01	0.0005	P	20.4
4	☐	10.000	9.711	726.70	0.0008	P	5.5
5	☐	100.000	98.317	6254.55	0.0066	P	4.2
6	☐	200.000	200.856	12604.69	0.0134	P	5.4
7	☐	1.000					

y = 6.6308E-005 * x + 1.2980E-004
R = 0.9999
DL = 1.752
BEC = 1.958

Weight: <None>
Min Conc: <None>

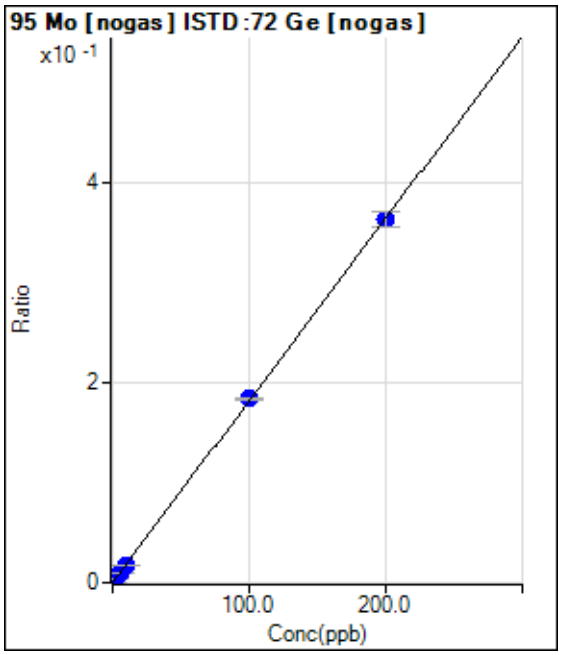


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243.34	0.0003	P	6.2
2	☐	2.000	2.030	17969.47	0.0194	P	1.3
3	☐	5.000	4.979	43637.91	0.0471	P	0.6
4	☐	10.000	9.447	83816.70	0.0892	P	2.0
5	☐	100.000	99.297	879532.02	0.9351	P	1.0
6	☐	200.000	200.379	1768798.00	1.8867	A	1.1
7	☐	1.000					

y = 0.0094 * x + 2.6332E-004
R = 1.0000
DL = 0.00519
BEC = 0.02797

Weight: <None>
Min Conc: <None>

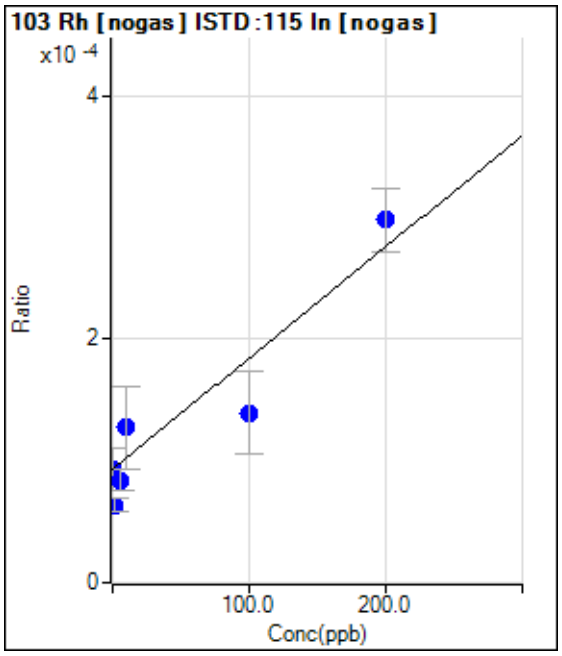
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	66.3
2	☐	2.000	1.872	3190.35	0.0034	P	13.6
3	☐	5.000	5.028	8492.26	0.0092	P	1.9
4	☐	10.000	9.807	16778.36	0.0179	P	3.6
5	☐	100.000	101.266	173045.26	0.1840	P	1.0
6	☐	200.000	199.377	339355.98	0.3622	P	4.1
7	☐	1.000					

y = 0.0018 * x + 4.3325E-005
R = 1.0000
DL = 0.04742
BEC = 0.02385

Weight: <None>
Min Conc: <None>

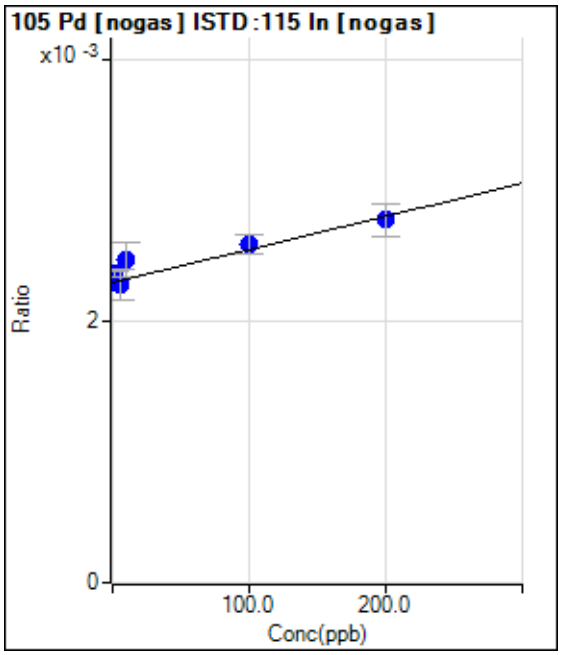


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0001	P	35.9
2	☐	2.000	-32.315	60.00	0.0001	P	16.7
3	☐	5.000	-10.233	80.00	0.0001	P	21.2
4	☐	10.000	37.217	123.33	0.0001	P	52.9
5	☐	100.000	50.419	133.33	0.0001	P	49.0
6	☐	200.000	224.154	276.68	0.0003	P	17.4
7	☐	1.000					

y = 9.1351E-007 * x + 9.3361E-005
R = 0.9451
DL = 110.1
BEC = 102.2

Weight: <None>
Min Conc: <None>

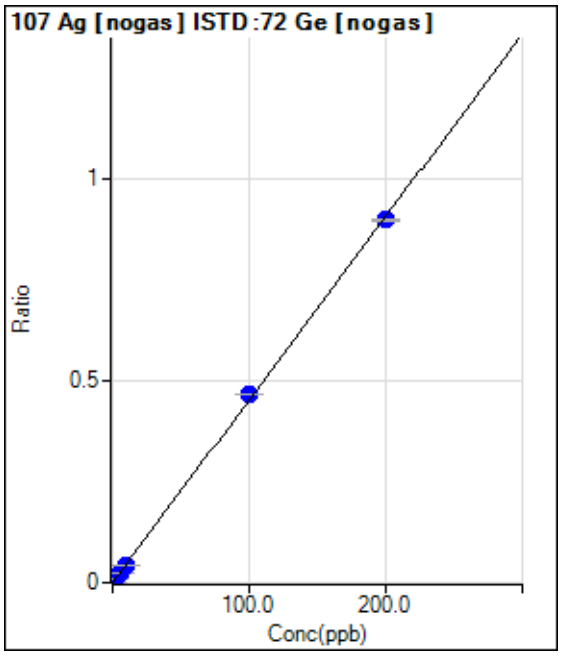
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2136.85	0.0023	P	3.0
2	☐	2.000	26.911	2223.53	0.0024	P	2.0
3	☐	5.000	-5.883	2173.51	0.0023	P	10.7
4	☐	10.000	70.579	2383.55	0.0025	P	10.6
5	☐	100.000	115.744	2466.88	0.0026	P	6.1
6	☐	200.000	189.122	2576.92	0.0028	P	9.3
7	☐	1.000					

y = 2.5325E-006 * x + 0.0023
R = 0.9427
DL = 82.24
BEC = 907.4

Weight: <None>
Min Conc: <None>

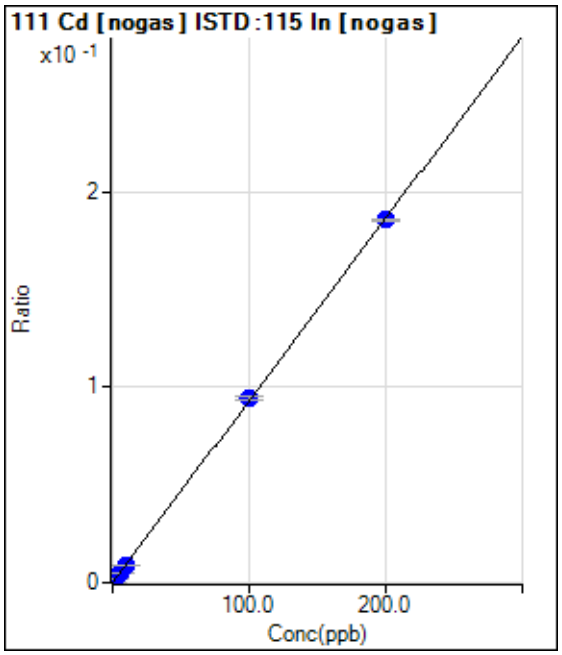


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	45.8
2	☐	2.000	1.964	8265.48	0.0089	P	5.1
3	☐	5.000	5.207	21827.62	0.0236	P	1.6
4	☐	10.000	9.863	41921.12	0.0446	P	1.9
5	☐	100.000	103.202	438953.45	0.4667	P	0.5
6	☐	200.000	198.401	841161.16	0.8971	P	0.3
7	☐	1.000					

y = 0.0045 * x + 3.6070E-005
R = 0.9998
DL = 0.01095
BEC = 0.007977

Weight: <None>
Min Conc: <None>

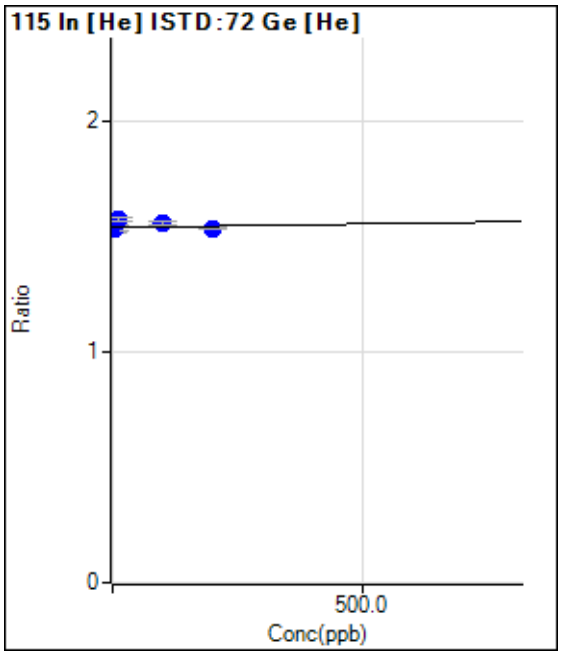
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	69.4
2	☐	2.000	1.870	1653.44	0.0018	P	17.5
3	☐	5.000	4.922	4380.64	0.0046	P	1.3
4	☐	10.000	9.517	8545.63	0.0089	P	2.9
5	☐	100.000	101.388	89941.08	0.0945	P	1.2
6	☐	200.000	199.334	172491.59	0.1857	P	0.8
7	☐	1.000					

y = 9.3156E-004 * x + 1.7936E-005
R = 1.0000
DL = 0.0401
BEC = 0.01925

Weight: <None>
Min Conc: <None>

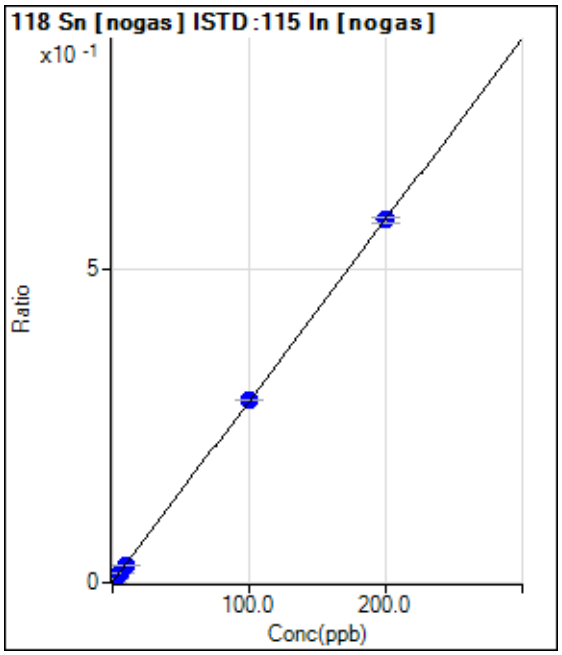


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	572884.94	1.5399	P	2.4
2	☐	2.000	-93.191	576683.65	1.5369	P	1.1
3	☐	5.000	579.588	590387.88	1.5589	P	1.5
4	☐	10.000	1018.279	605381.97	1.5733	P	1.1
5	☐	100.000	527.759	594090.73	1.5572	P	0.9
6	☐	200.000	-77.706	584017.69	1.5374	P	0.9
7	☐	1.000					

y = 3.2744E-005 * x + 1.5399
R = -0.2867
DL = 3337
BEC = 4.703E+04

Weight: <None>
Min Conc: <None>

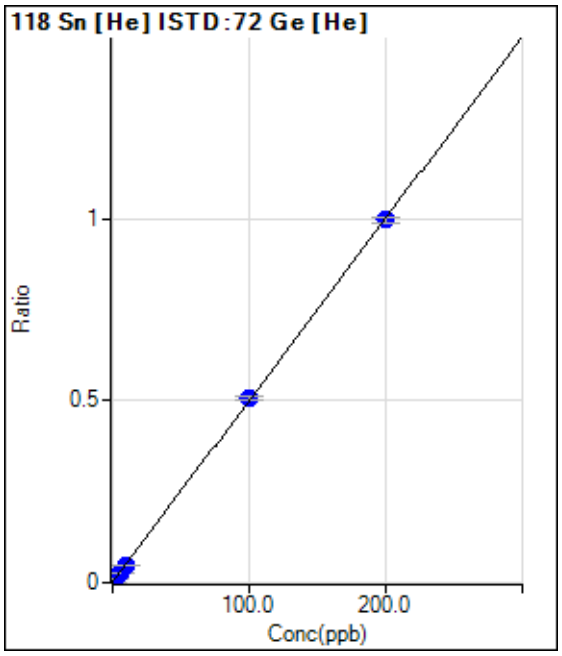
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	556.69	0.0006	P	9.9
2	☐	2.000	2.018	6034.50	0.0064	P	4.0
3	☐	5.000	4.925	14089.33	0.0148	P	3.0
4	☐	10.000	9.166	26020.06	0.0270	P	0.4
5	☐	100.000	100.349	276221.09	0.2901	P	0.3
6	☐	200.000	199.869	536214.91	0.5772	P	1.3
7	☐	1.000					

y = 0.0029 * x + 5.9845E-004
R = 1.0000
DL = 0.06178
BEC = 0.2074

Weight: <None>
Min Conc: <None>

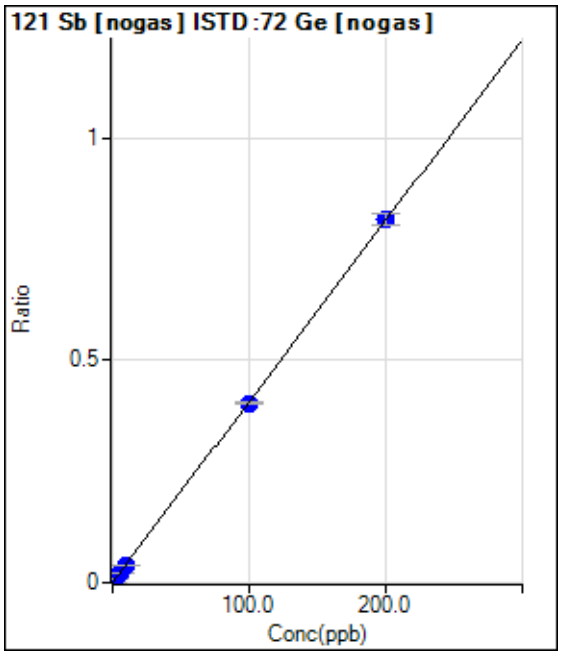


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.01	0.0010	P	13.3
2	☐	2.000	1.971	4070.56	0.0108	P	2.8
3	☐	5.000	4.955	9759.61	0.0258	P	4.8
4	☐	10.000	9.167	18019.73	0.0468	P	1.5
5	☐	100.000	101.463	193914.07	0.5083	P	2.0
6	☐	200.000	199.312	378971.44	0.9976	P	1.7
7	☐	1.000					

y = 0.0050 * x + 9.9572E-004
R = 1.0000
DL = 0.07926
BEC = 0.1991

Weight: <None>
Min Conc: <None>

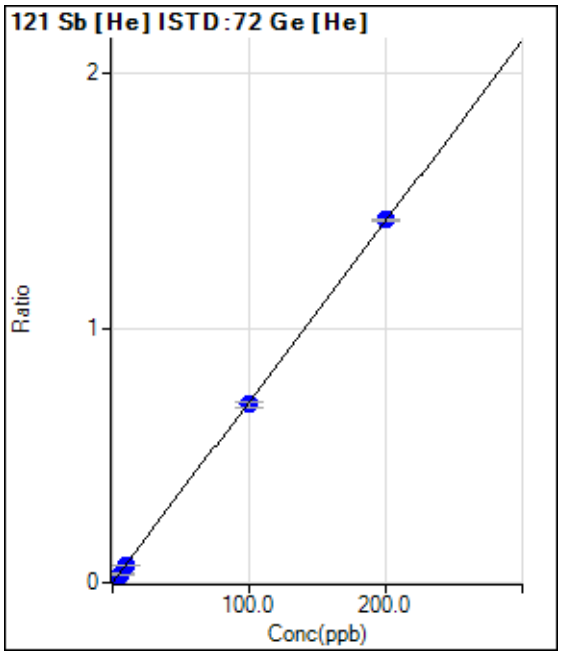
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	550.02	0.0006	P	11.1
2	☐	2.000	2.153	8679.02	0.0094	P	0.9
3	☐	5.000	4.790	18603.73	0.0201	P	3.1
4	☐	10.000	9.702	37648.50	0.0401	P	3.1
5	☐	100.000	99.155	380226.57	0.4042	P	1.0
6	☐	200.000	200.441	765215.22	0.8166	P	3.3
7	☐	1.000					

y = 0.0041 * x + 5.9507E-004
R = 1.0000
DL = 0.04868
BEC = 0.1462

Weight: <None>
Min Conc: <None>

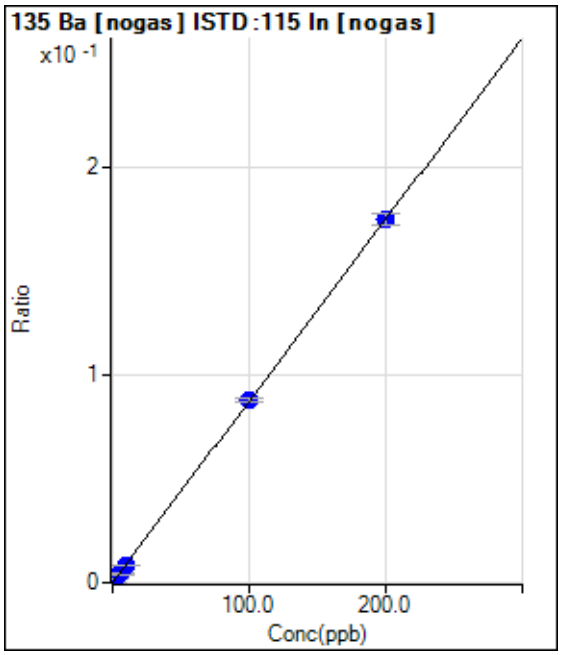


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	343.34	0.0009	P	4.4
2	☐	2.000	2.068	5844.44	0.0156	P	5.4
3	☐	5.000	4.654	12855.04	0.0339	P	3.9
4	☐	10.000	9.209	25482.71	0.0662	P	1.6
5	☐	100.000	98.615	267128.94	0.7003	P	2.7
6	☐	200.000	200.740	541160.49	1.4245	P	0.6
7	☐	1.000					

y = 0.0071 * x + 9.2301E-004
R = 1.0000
DL = 0.01728
BEC = 0.1301

Weight: <None>
Min Conc: <None>

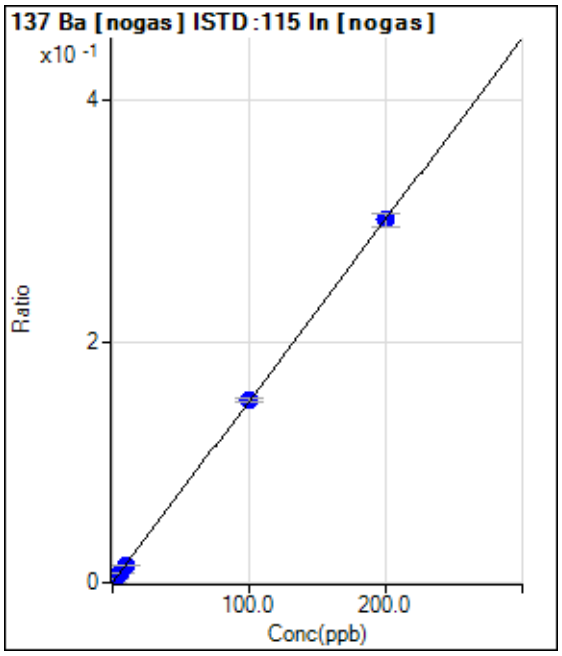
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0001	P	18.8
2	☐	2.000	1.967	1680.12	0.0018	P	12.6
3	☐	5.000	4.775	4037.22	0.0042	P	5.7
4	☐	10.000	9.435	8002.05	0.0083	P	3.1
5	☐	100.000	100.386	83640.36	0.0878	P	1.5
6	☐	200.000	199.841	162315.81	0.1748	P	3.1
7	☐	1.000					

y = 8.7434E-004 * x + 6.8173E-005
R = 1.0000
DL = 0.04407
BEC = 0.07797

Weight: <None>
Min Conc: <None>

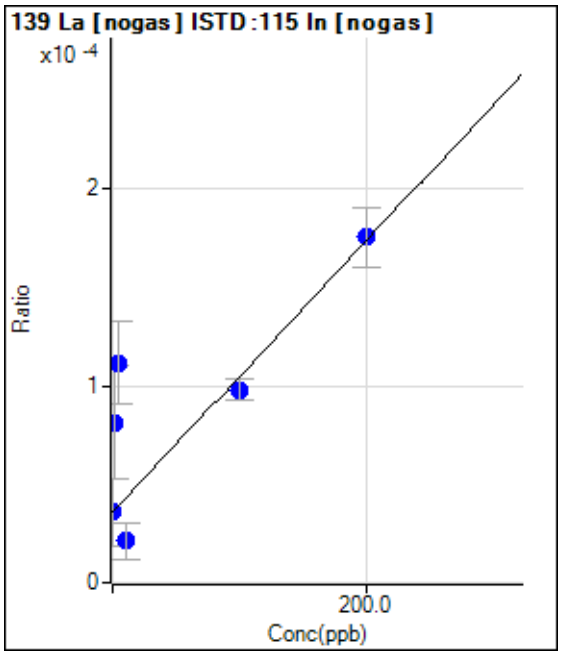


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0001	P	16.4
2	☐	2.000	1.913	2846.98	0.0030	P	6.9
3	☐	5.000	4.804	7028.27	0.0074	P	2.4
4	☐	10.000	9.370	13729.15	0.0143	P	3.2
5	☐	100.000	100.464	144246.58	0.1515	P	1.6
6	☐	200.000	199.805	279659.34	0.3012	P	3.6
7	☐	1.000					

y = 0.0015 * x + 1.4690E-004
R = 1.0000
DL = 0.04801
BEC = 0.0975

Weight: <None>
Min Conc: <None>

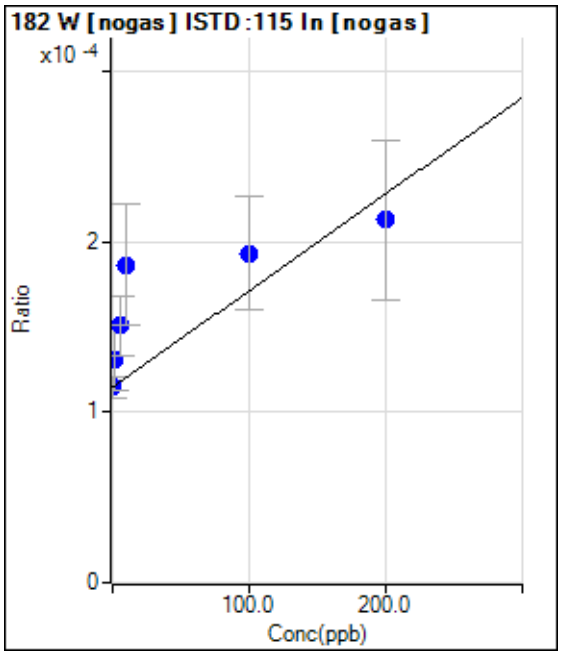
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	96.6
2	☐	2.000	66.122	76.67	0.0001	P	71.4
3	☐	5.000	110.478	106.67	0.0001	P	37.4
4	☐	10.000	-21.559	20.00	0.0000	P	88.4
5	☐	100.000	90.179	93.33	0.0001	P	11.2
6	☐	200.000	203.210	163.33	0.0002	P	17.2
7	☐	1.000					

y = 6.8838E-007 * x + 3.5855E-005
R = 0.7971
DL = 151
BEC = 52.09

Weight: <None>
Min Conc: <None>

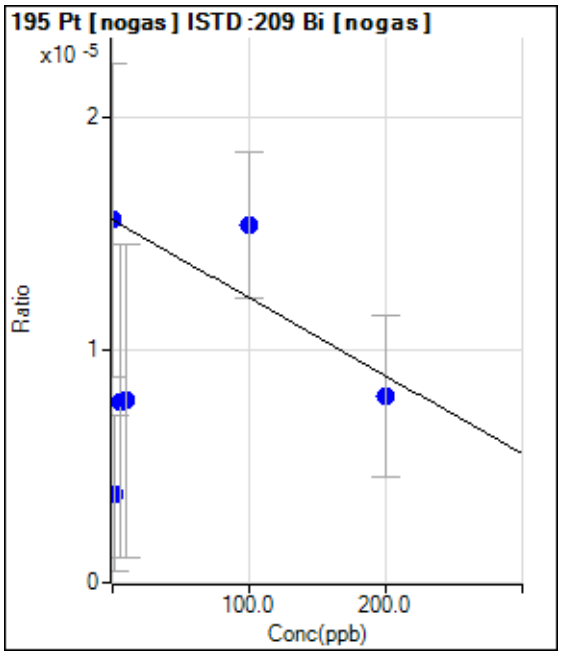


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	11.0
2	☐	2.000	29.177	123.33	0.0001	P	28.6
3	☐	5.000	63.706	143.34	0.0002	P	23.3
4	☐	10.000	126.627	180.00	0.0002	P	37.8
5	☐	100.000	138.556	183.34	0.0002	P	34.7
6	☐	200.000	173.151	196.67	0.0002	P	44.2
7	☐	1.000					

y = 5.6599E-007 * x + 1.1473E-004
R = 0.7947
DL = 66.82
BEC = 202.7

Weight: <None>
Min Conc: <None>

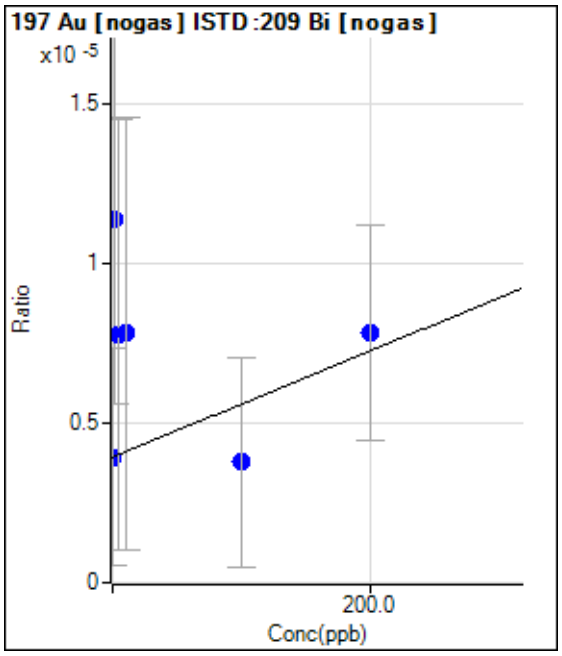
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	350.739	3.33	0.0000	P	173.
3	☐	5.000	232.395	6.67	0.0000	P	173.
4	☐	10.000	232.094	6.67	0.0000	P	173.
5	☐	100.000	6.306	13.33	0.0000	P	40.9
6	☐	200.000	226.570	6.67	0.0000	P	86.6
7	☐	1.000					

y = -3.3516E-008 * x + 1.5593E-005
R = 0.0912
DL = -1209
BEC = -465.2

Weight: <None>
Min Conc: <None>

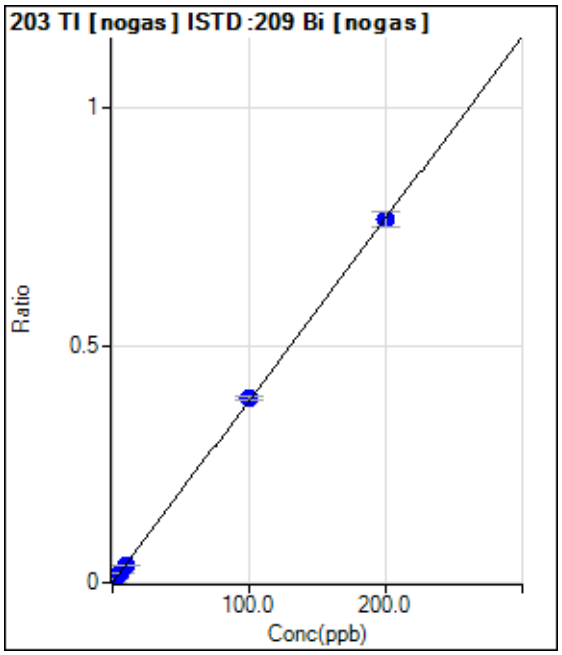


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	446.749	10.00	0.0000	P	101.
3	☐	5.000	231.985	6.67	0.0000	P	173.
4	☐	10.000	232.591	6.67	0.0000	P	173.
5	☐	100.000	-10.073	3.33	0.0000	P	173.
6	☐	200.000	233.785	6.67	0.0000	P	86.6
7	☐	1.000					

y = 1.6650E-008 * x + 3.9415E-006
R = -0.1402
DL = 1230
BEC = 236.7

Weight: <None>
Min Conc: <None>

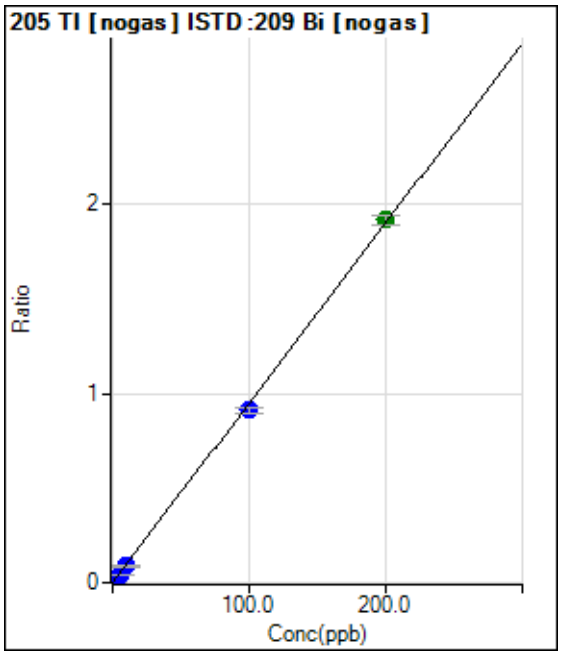
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0001	P	72.2
2	☐	2.000	2.016	6801.60	0.0078	P	1.8
3	☐	5.000	5.018	17019.40	0.0193	P	7.1
4	☐	10.000	9.330	31551.51	0.0359	P	3.4
5	☐	100.000	101.690	336555.79	0.3906	P	2.1
6	☐	200.000	199.188	644978.99	0.7651	P	4.2
7	☐	1.000					

y = 0.0038 * x + 5.7940E-005
R = 0.9999
DL = 0.03269
BEC = 0.01509

Weight: <None>
Min Conc: <None>

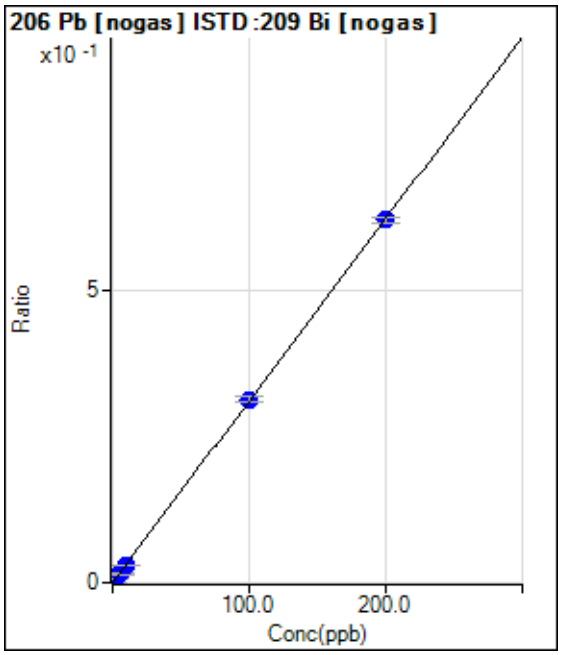


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	80.8
2	☐	2.000	1.952	16205.19	0.0186	P	7.4
3	☐	5.000	4.640	38824.27	0.0441	P	4.7
4	☐	10.000	9.125	76202.84	0.0867	P	5.6
5	☐	100.000	96.302	788041.65	0.9148	P	3.3
6	☐	200.000	201.902	1618045.55	1.9179	A	2.7
7	☐	1.000					

y = 0.0095 * x + 6.6284E-005
R = 0.9998
DL = 0.01692
BEC = 0.006978

Weight: <None>
Min Conc: <None>

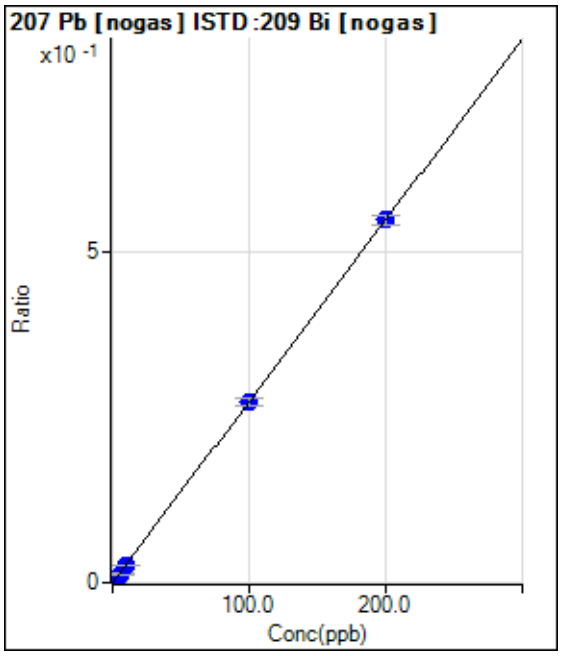
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0001	P	19.4
2	☐	2.000	1.954	5404.36	0.0062	P	1.2
3	☐	5.000	4.807	13242.57	0.0151	P	11.2
4	☐	10.000	9.370	25744.46	0.0293	P	2.4
5	☐	100.000	100.927	270695.89	0.3143	P	3.8
6	☐	200.000	199.574	524046.10	0.6213	P	1.5
7	☐	1.000					

y = 0.0031 * x + 1.1568E-004
R = 1.0000
DL = 0.02168
BEC = 0.03716

Weight: <None>
Min Conc: <None>

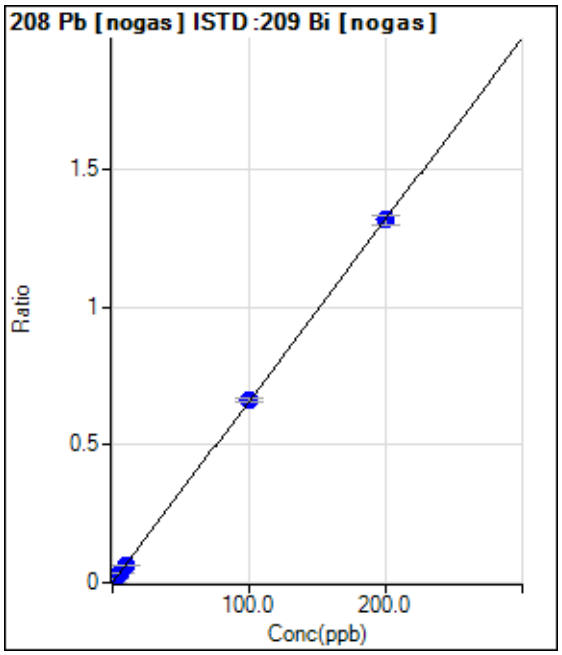


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	68.0
2	☐	2.000	1.939	4714.14	0.0054	P	2.3
3	☐	5.000	4.692	11384.29	0.0129	P	6.7
4	☐	10.000	9.504	22956.97	0.0261	P	5.5
5	☐	100.000	99.686	235305.13	0.2732	P	3.6
6	☐	200.000	200.190	462604.95	0.5485	P	2.5
7	☐	1.000					

y = 0.0027 * x + 9.6663E-005
R = 1.0000
DL = 0.07195
BEC = 0.03529

Weight: <None>
Min Conc: <None>

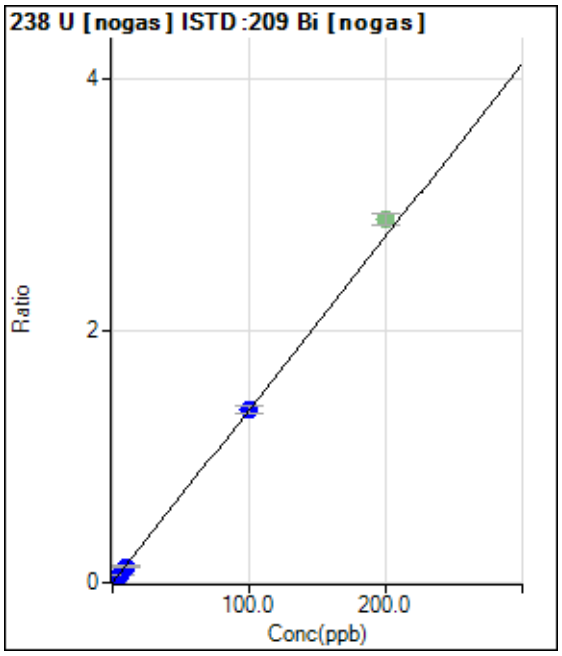
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	173.34	0.0002	P	15.2
2	☐	2.000	2.001	11644.55	0.0134	P	7.4
3	☐	5.000	4.963	28916.71	0.0329	P	4.5
4	☐	10.000	9.526	55297.27	0.0629	P	2.7
5	☐	100.000	100.513	570222.06	0.6619	P	2.5
6	☐	200.000	199.768	1109103.26	1.3153	P	2.5
7	☐	1.000					

y = 0.0066 * x + 1.9937E-004
R = 1.0000
DL = 0.01385
BEC = 0.03029

Weight: <None>
Min Conc: <None>

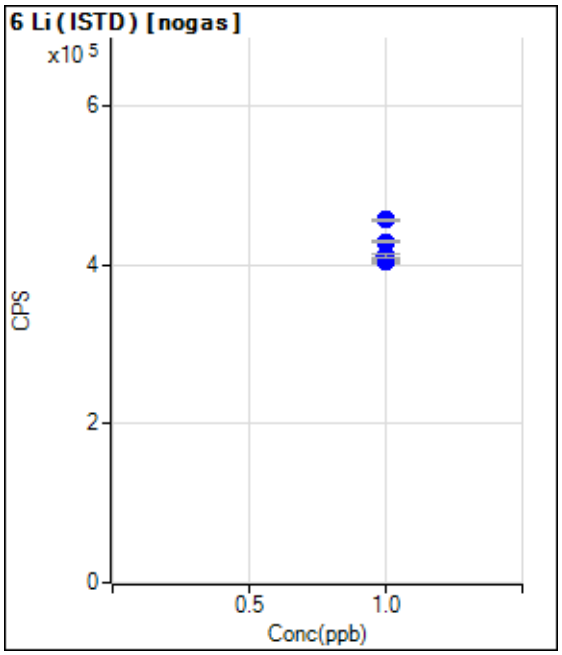


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	23.7
2	☐	2.000	1.942	23271.26	0.0267	P	3.1
3	☐	5.000	4.693	56690.32	0.0645	P	5.3
4	☐	10.000	9.257	111643.08	0.1271	P	6.0
5	☐	100.000	100.091	1183516.93	1.3741	P	4.3
6	☑	200.000		2428280.90	2.8800	A	3.2
7	☐	1.000					

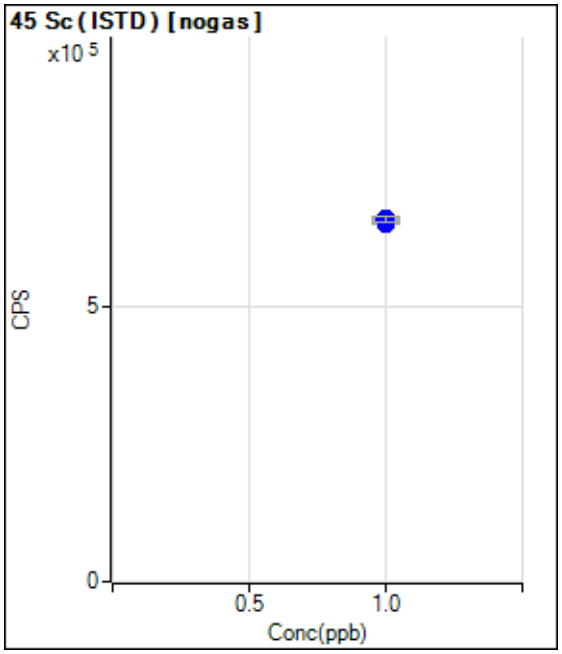
y = 0.0137 * x + 3.0869E-005
R = 1.0000
DL = 0.001598
BEC = 0.002249

Weight: <None>
Min Conc: <None>

Calibration for 021_ICV.d

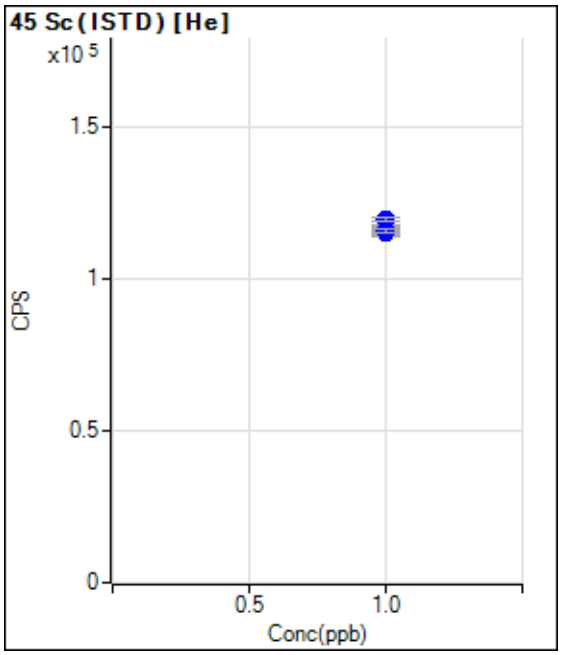


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		402781.04		P	0.5
2	☐	1.000		405993.66		P	0.1
3	☐	1.000		407195.34		P	0.5
4	☐	1.000		410903.72		P	0.9
5	☐	1.000		428653.50		P	0.4
6	☐	1.000		456029.42		P	0.6
7	☐	1.000					

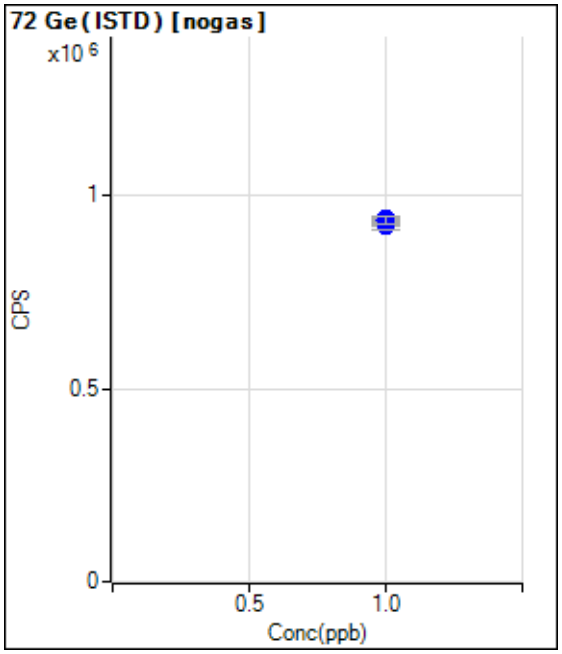


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		648370.76		P	0.4
2	☐	1.000		654436.23		P	1.0
3	☐	1.000		654354.14		P	0.3
4	☐	1.000		655932.89		P	0.8
5	☐	1.000		655393.99		P	0.6
6	☐	1.000		657467.06		P	1.9
7	☐	1.000					

Calibration for 021_ICV.d

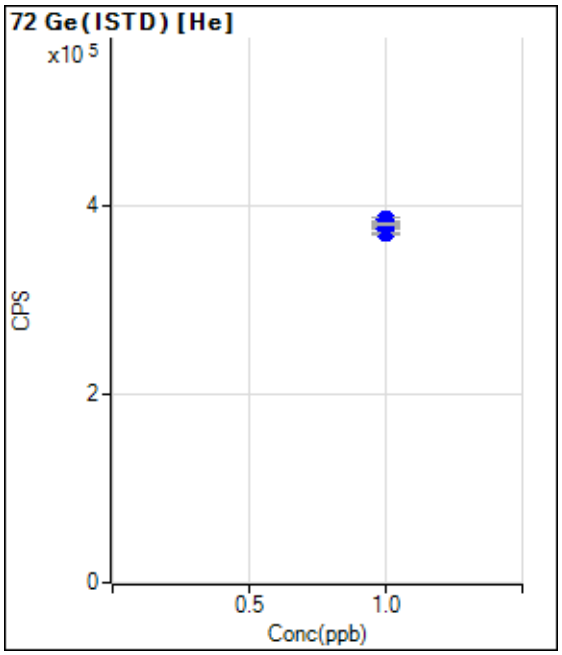


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		116214.92		P	1.6
2	☐	1.000		116409.21		P	3.1
3	☐	1.000		115859.26		P	0.9
4	☐	1.000		115195.39		P	1.5
5	☐	1.000		119606.35		P	1.0
6	☐	1.000		116087.01		P	1.3
7	☐	1.000					

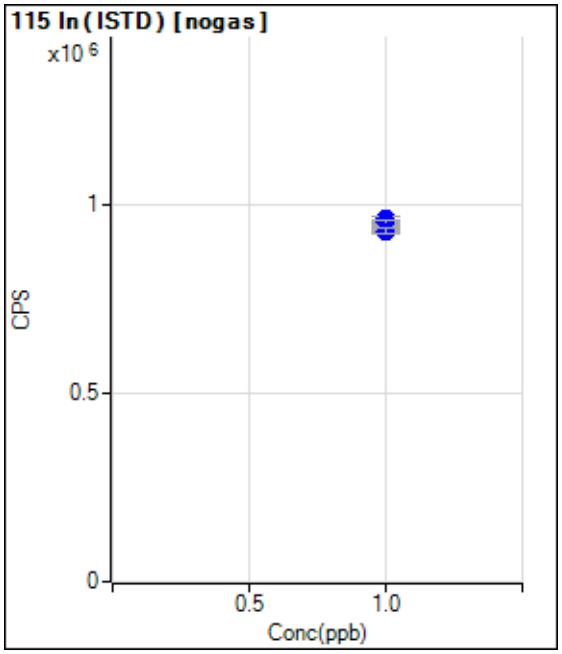


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		924103.87		P	0.3
2	☐	1.000		927368.21		P	1.0
3	☐	1.000		925826.55		P	2.4
4	☐	1.000		939376.71		P	1.9
5	☐	1.000		940603.11		P	0.3
6	☐	1.000		937596.86		P	2.4
7	☐	1.000					

Calibration for 021_ICV.d

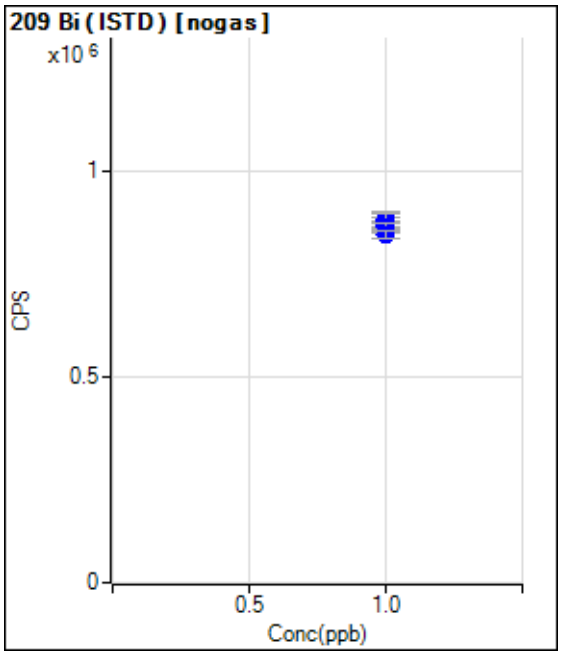


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		372134.39		P	2.0
2	☐	1.000		375187.30		P	2.2
3	☐	1.000		378765.31		P	1.2
4	☐	1.000		384823.34		P	1.3
5	☐	1.000		381522.06		P	1.0
6	☐	1.000		379889.92		P	0.5
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		929828.68		P	0.7
2	☐	1.000		939846.62		P	0.6
3	☐	1.000		951719.49		P	0.8
4	☐	1.000		962182.02		P	1.9
5	☐	1.000		952164.57		P	1.3
6	☐	1.000		928878.32		P	1.7
7	☐	1.000					

Calibration for 021_ICV.d



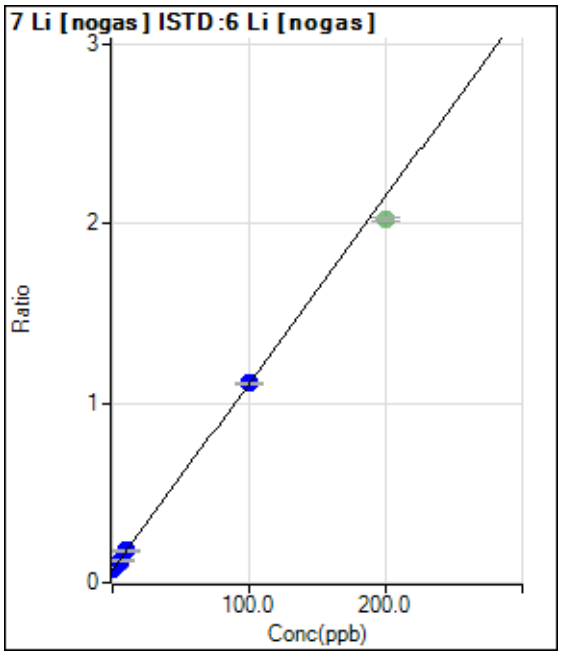
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		867246.68		P	2.6
2	☐	1.000		872166.39		P	3.0
3	☐	1.000		880745.22		P	4.1
4	☐	1.000		879518.32		P	3.3
5	☐	1.000		861874.15		P	2.6
6	☐	1.000		843500.38		P	2.2
7	☐	1.000					

Calibration for 082_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121418A.b\
Analysis File: 121418A.batch.bin
DA Date-Time: 12/14/2018 10:21:14 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	075CALB.d	CAL BLK	12/14/2018 3:20:09 PM
2	076CALS.d	2/10/200	12/14/2018 3:22:25 PM
3	077CALS.d	5/25/500	12/14/2018 3:24:39 PM
4	078CALS.d	10/50/1000	12/14/2018 3:26:54 PM
5	079CALS.d	100/500/10K	12/14/2018 3:29:09 PM
6	080CALS.d	200/1000/20K	12/14/2018 3:31:23 PM
7			

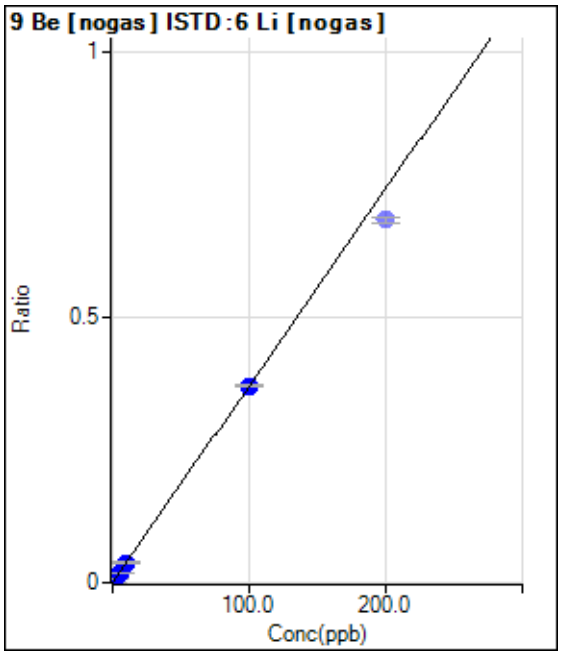
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35797.63	0.0703	P	0.6
2	☐	2.000	1.850	46614.45	0.0895	P	2.8
3	☐	5.000	5.085	63800.97	0.1232	P	1.8
4	☐	10.000	10.416	89362.87	0.1786	P	4.4
5	☐	100.000	99.957	588973.87	1.1099	P	0.8
6	☑	200.000		1130612.40	2.0212	A	1.1
7	☐	1.000					

y = 0.0104 * x + 0.0703
R = 1.0000
DL = 0.1234
BEC = 6.756

Weight: <None>
Min Conc: <None>

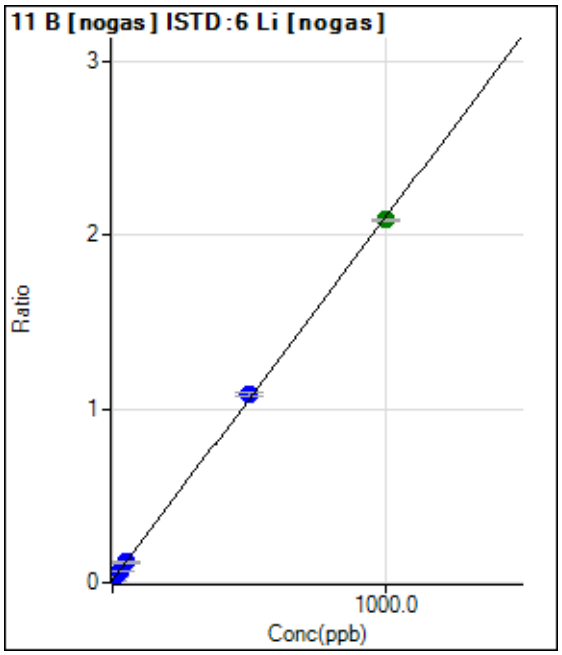


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0001	P	135.
2	☐	2.000	2.067	4040.52	0.0078	P	4.1
3	☐	5.000	5.049	9749.34	0.0188	P	0.8
4	☐	10.000	10.162	18863.07	0.0378	P	8.2
5	☐	100.000	99.980	196881.14	0.3710	P	1.2
6	☑	200.000		382775.24	0.6843	P	1.3
7	☐	1.000					

y = 0.0037 * x + 8.5172E-005
R = 1.0000
DL = 0.09317
BEC = 0.02296

Weight: <None>
Min Conc: <None>

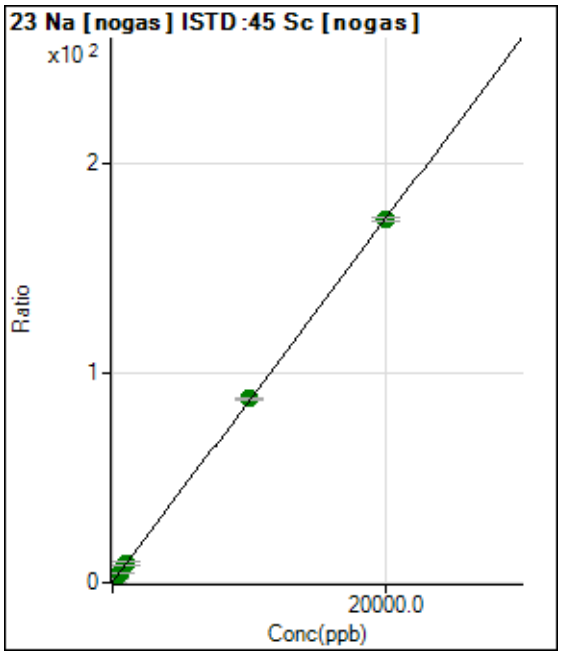
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6621.29	0.0130	P	6.7
2	☐	10.000	9.561	17174.80	0.0330	P	3.5
3	☐	25.000	25.447	34281.74	0.0662	P	2.0
4	☐	50.000	51.466	60082.76	0.1206	P	10.5
5	☐	500.000	513.284	576109.16	1.0857	P	2.0
6	☐	1000.000	993.278	1168515.14	2.0889	A	0.5
7	☐	5.000					

y = 0.0021 * x + 0.0130
R = 0.9999
DL = 1.244
BEC = 6.219

Weight: <None>
Min Conc: <None>

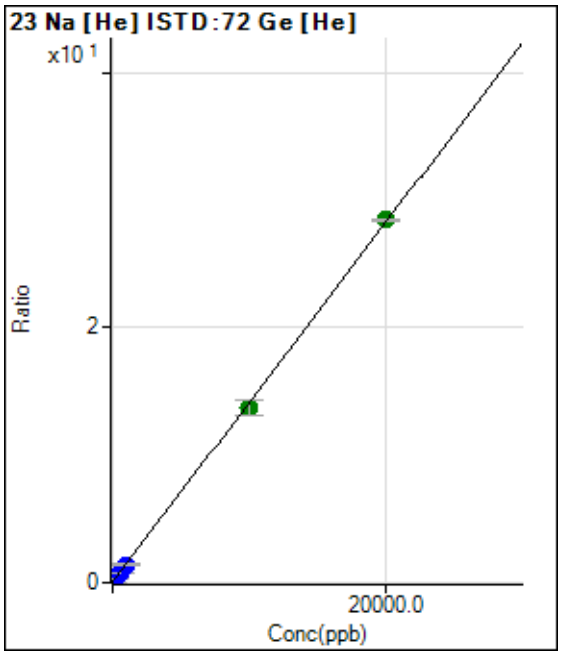


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	202291.69	0.2088	P	1.0
2	☐	200.000	207.523	1951017.49	2.0082	A	3.9
3	☐	500.000	508.372	4474298.80	4.6169	A	1.5
4	☐	1000.000	993.776	8297763.73	8.8258	A	22.8
5	☐	10000.00	10095.133	84004385.21	87.7431	A	0.8
6	☐	20000.00	19952.460	161301282.7	173.215	A	1.0
7	☐	100.000					

y = 0.0087 * x + 0.2088
R = 1.0000
DL = 0.7267
BEC = 24.08

Weight: <None>
Min Conc: <None>

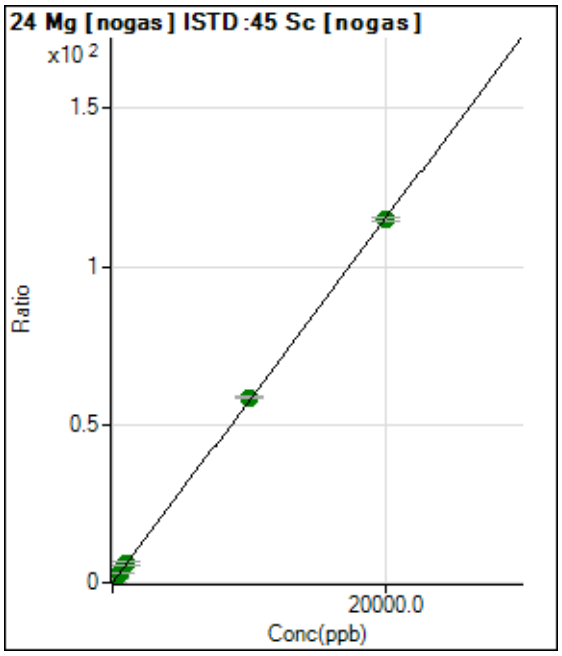
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23485.33	0.0467	P	2.6
2	☐	200.000	202.262	167924.36	0.3318	P	0.6
3	☐	500.000	502.654	381492.14	0.7553	P	1.0
4	☐	1000.000	974.551	712348.19	1.4205	P	3.5
5	☐	10000.00	9673.198	7086128.85	13.6821	A	9.0
6	☐	20000.00	20164.585	13584708.55	28.4707	A	0.4
7	☐	100.000					

y = 0.0014 * x + 0.0467
R = 0.9998
DL = 2.59
BEC = 33.16

Weight: <None>
Min Conc: <None>

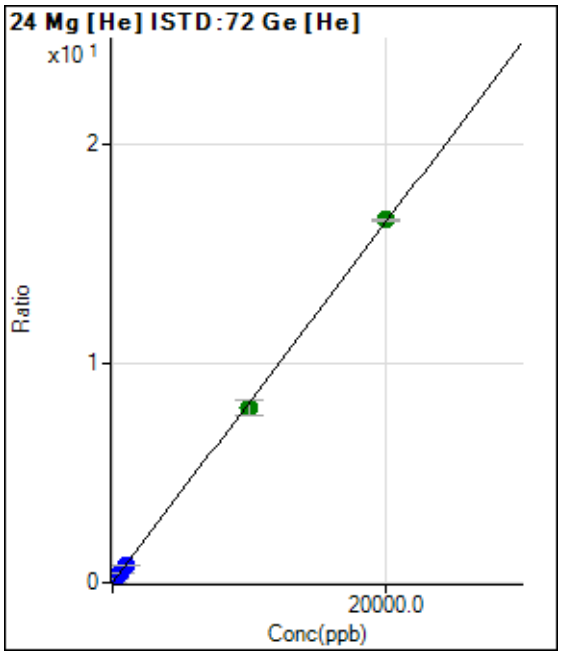


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11372.22	0.0118	P	22.2
2	☐	200.000	218.679	1234938.08	1.2709	A	1.4
3	☐	500.000	519.301	2908858.60	3.0018	A	2.6
4	☐	1000.000	1015.171	5506133.85	5.8570	A	22.8
5	☐	10000.00	10144.658	55936097.08	58.4232	A	0.9
6	☐	20000.00	19926.243	106857510.7	114.744	A	1.1
7	☐	100.000					

y = 0.0058 * x + 0.0118
R = 1.0000
DL = 1.362
BEC = 2.041

Weight: <None>
Min Conc: <None>

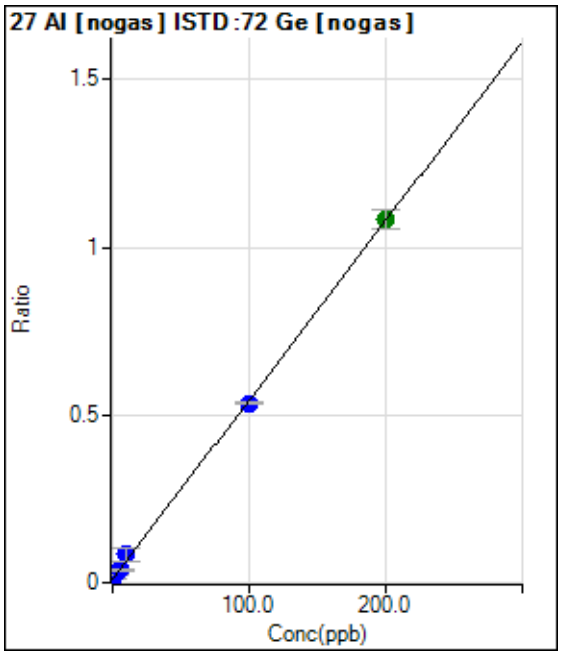
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	846.70	0.0017	P	26.8
2	☐	200.000	202.840	85077.71	0.1681	P	1.0
3	☐	500.000	500.393	208248.86	0.4123	P	0.4
4	☐	1000.000	971.483	400625.01	0.7988	P	2.6
5	☐	10000.00	9714.727	4127007.96	7.9730	A	9.8
6	☐	20000.00	20144.024	7887508.63	16.5307	A	0.4
7	☐	100.000					

y = 8.2054E-004 * x + 0.0017
R = 0.9999
DL = 1.655
BEC = 2.059

Weight: <None>
Min Conc: <None>

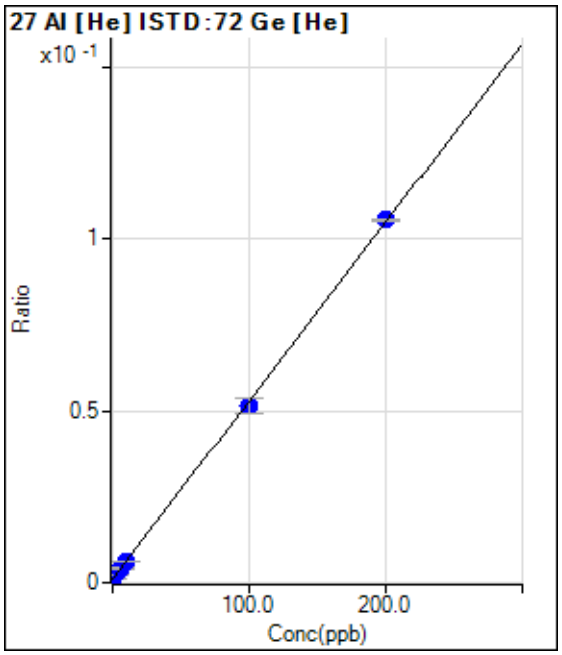


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13948.78	0.0102	P	8.9
2	☐	2.000	2.338	31700.02	0.0227	P	8.0
3	☐	5.000	5.141	51150.94	0.0376	P	2.3
4	☐	10.000	13.847	114863.70	0.0841	P	44.4
5	☐	100.000	98.439	734859.10	0.5360	P	0.8
6	☐	200.000	200.581	1435422.27	1.0816	A	5.4
7	☐	1.000					

y = 0.0053 * x + 0.0102
R = 0.9998
DL = 0.509
BEC = 1.906

Weight: <None>
Min Conc: <None>

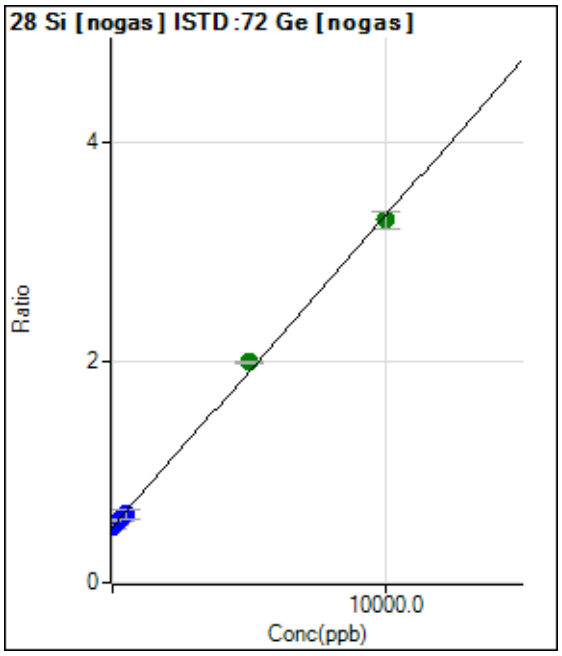
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.141	546.69	0.0011	P	11.0
2	☐	2.000	2.628	1203.40	0.0024	P	4.5
3	☐	5.000	6.046	2096.83	0.0042	P	5.9
4	☐	10.000	9.672	3026.98	0.0060	P	4.7
5	☐	100.000	97.057	26619.61	0.0514	P	8.3
6	☐	200.000	201.455	50348.94	0.1055	P	0.8
7	☐	1.000					

y = 5.1877E-004 * x + 0.0010
R = 0.9998
DL = 0.6953
BEC = 1.957

Weight: <None>
Min Conc: <None>

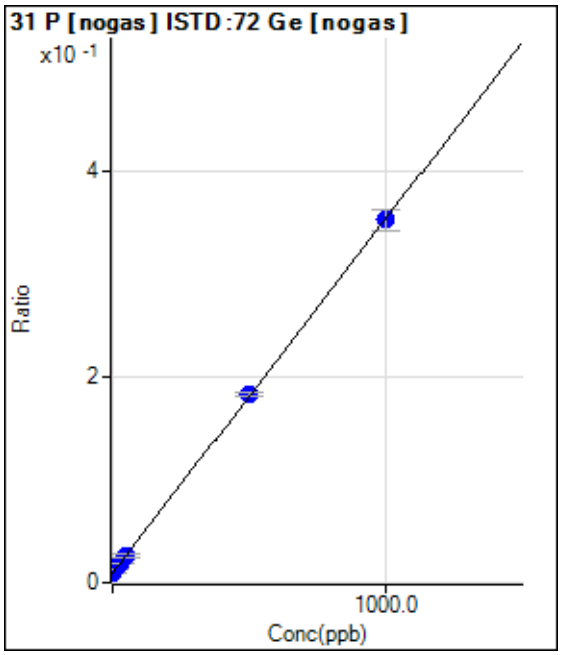


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	693621.66	0.5057	P	5.1
2	☐	100.000	43.948	724085.79	0.5181	P	0.9
3	☐	250.000	237.716	778353.58	0.5728	P	2.2
4	☐	500.000	410.383	840492.96	0.6215	P	12.1
5	☐	5000.000	5283.560	2737891.11	1.9971	A	1.5
6	☐	10000.00	9863.569	4367484.83	3.2899	A	4.6
7	☐	50.000					

y = 2.8227E-004 * x + 0.5057
R = 0.9993
DL = 276
BEC = 1791

Weight: <None>
Min Conc: <None>

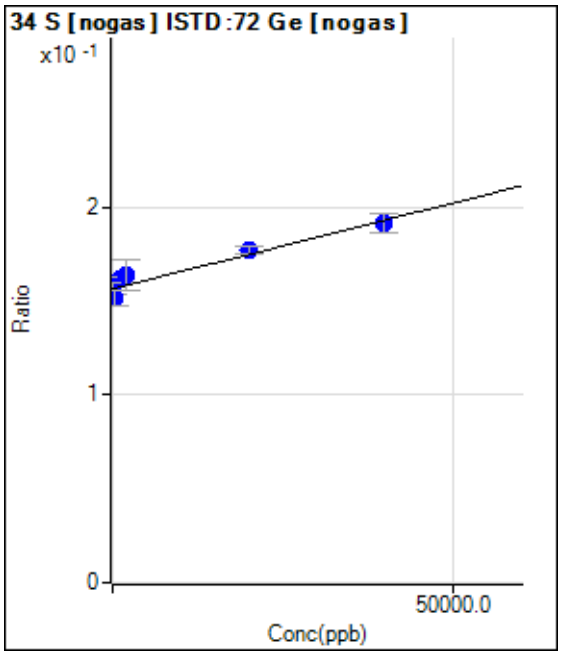
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12724.62	0.0093	P	1.3
2	☐	10.000	9.922	17725.39	0.0127	P	3.7
3	☐	25.000	25.881	24700.13	0.0182	P	4.2
4	☐	50.000	47.758	34629.46	0.0257	P	17.5
5	☐	500.000	503.962	250695.93	0.1829	P	2.4
6	☐	1000.000	998.110	468599.80	0.3531	P	5.6
7	☐	5.000					

y = 3.4446E-004 * x + 0.0093
R = 1.0000
DL = 1.072
BEC = 26.9

Weight: <None>
Min Conc: <None>

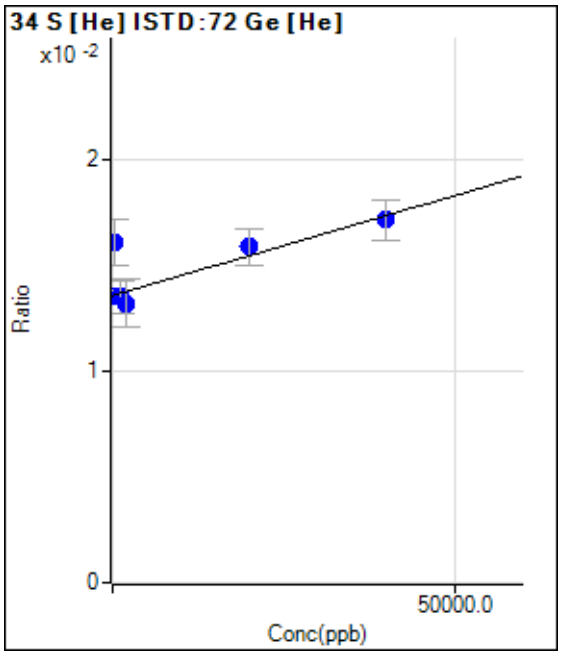


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	214748.14	0.1565	P	4.1
2	☐	400.000	-5689.154	211475.42	0.1513	P	5.4
3	☐	1000.000	5508.967	219504.74	0.1615	P	2.0
4	☐	2000.000	8030.752	222004.58	0.1638	P	9.6
5	☐	20000.00	22899.116	243165.23	0.1774	P	2.2
6	☐	40000.00	38197.072	253948.05	0.1913	P	5.2
7	☐	200.000					

y = 9.1185E-007 * x + 0.1565
R = 0.9622
DL = 2.134E+04
BEC = 1.716E+05

Weight: <None>
Min Conc: <None>

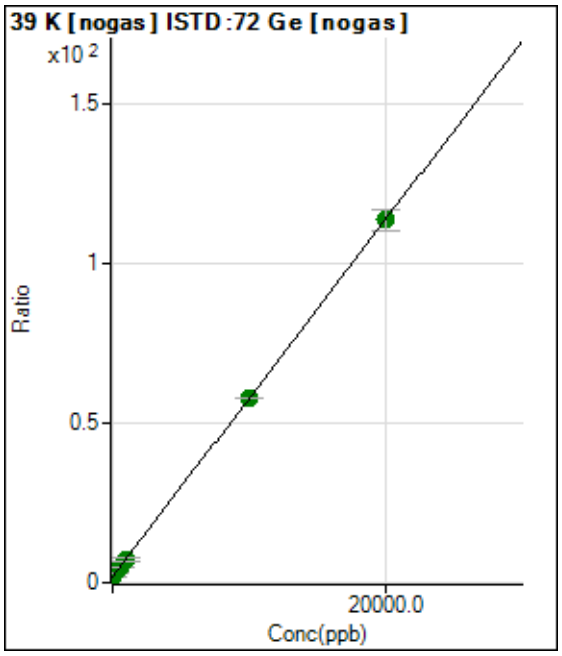
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6836.25	0.0136	P	3.6
2	☐	400.000	26901.166	8170.27	0.0161	P	13.5
3	☐	1000.000	-721.699	6835.88	0.0135	P	11.2
4	☐	2000.000	-3722.857	6636.02	0.0133	P	16.6
5	☐	20000.00	24376.298	8236.89	0.0159	P	10.6
6	☐	40000.00	37876.025	8203.78	0.0172	P	11.3
7	☐	200.000					

y = 9.4613E-008 * x + 0.0136
R = 0.7665
DL = 1.567E+04
BEC = 1.438E+05

Weight: <None>
Min Conc: <None>

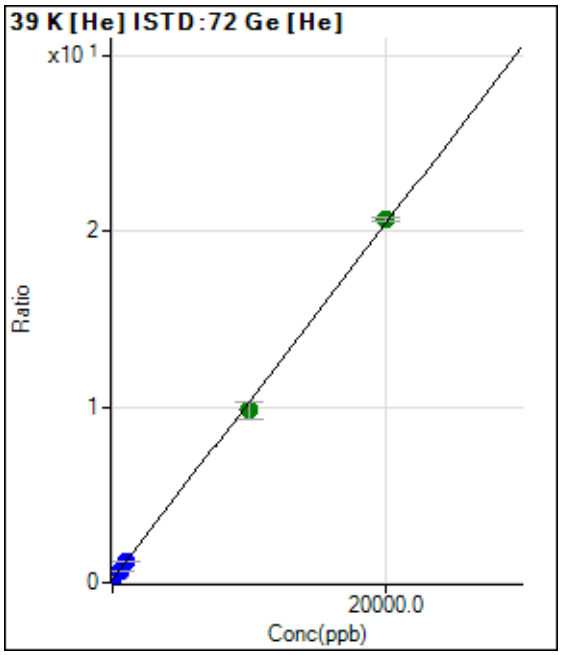


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2506430.20	1.8267	A	4.3
2	☐	200.000	195.093	4077135.38	2.9170	A	0.5
3	☐	500.000	510.406	6358584.78	4.6791	A	2.4
4	☐	1000.000	989.249	9929185.38	7.3552	A	14.2
5	☐	10000.00	10029.844	79352355.94	57.8787	A	0.4
6	☐	20000.00	19985.405	150634045.0	113.515	A	5.8
7	☐	100.000					

y = 0.0056 * x + 1.8267
R = 1.0000
DL = 41.86
BEC = 326.9

Weight: <None>
Min Conc: <None>

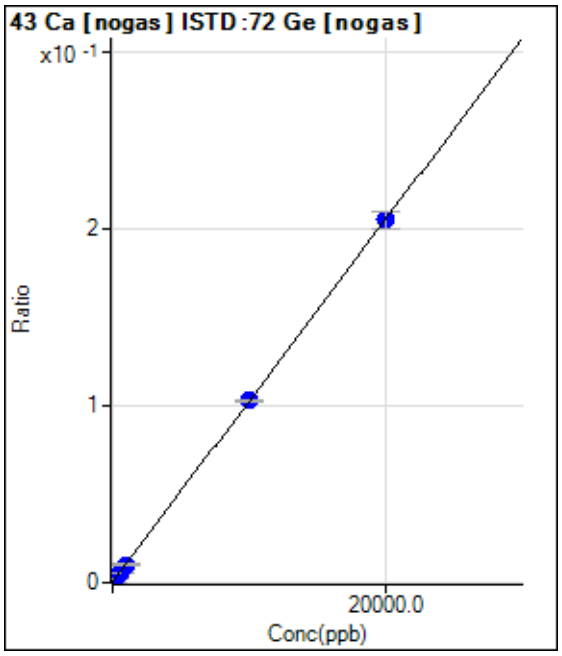
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93639.13	0.1863	P	1.9
2	☐	200.000	195.270	194191.98	0.3838	P	1.3
3	☐	500.000	497.849	348385.92	0.6897	P	1.5
4	☐	1000.000	972.884	586882.26	1.1700	P	1.0
5	☐	10000.00	9546.316	5092264.40	9.8387	A	10.1
6	☐	20000.00	20228.299	9847600.48	20.6394	A	1.2
7	☐	100.000					

y = 0.0010 * x + 0.1863
R = 0.9996
DL = 10.56
BEC = 184.3

Weight: <None>
Min Conc: <None>

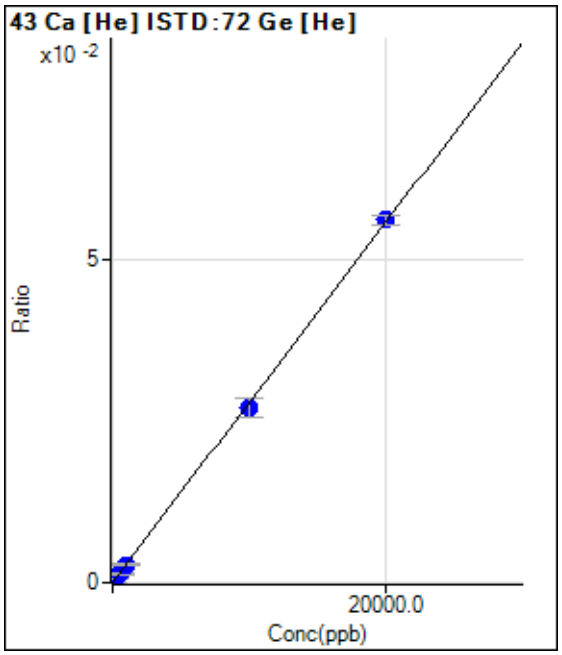


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0003	P	33.5
2	☐	200.000	196.454	3203.66	0.0023	P	6.4
3	☐	500.000	524.275	7691.74	0.0057	P	1.8
4	☐	1000.000	976.330	13862.20	0.0103	P	18.0
5	☐	10000.00	10031.404	141565.73	0.1033	P	1.2
6	☐	20000.00	19984.910	272703.37	0.2054	P	4.9
7	☐	100.000					

y = 1.0266E-005 * x + 2.7513E-004
R = 1.0000
DL = 26.91
BEC = 26.8

Weight: <None>
Min Conc: <None>

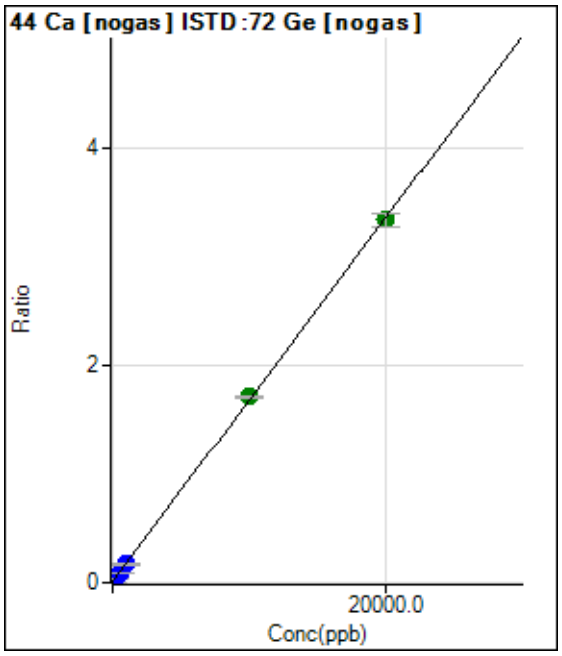
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	64.9
2	☐	200.000	233.653	353.34	0.0007	P	12.4
3	☐	500.000	466.002	680.03	0.0013	P	6.7
4	☐	1000.000	952.513	1356.74	0.0027	P	10.8
5	☐	10000.00	9678.607	13995.54	0.0270	P	10.8
6	☐	20000.00	20163.584	26860.17	0.0563	P	3.0
7	☐	100.000					

y = 2.7898E-006 * x + 4.6214E-005
R = 0.9998
DL = 32.27
BEC = 16.57

Weight: <None>
Min Conc: <None>

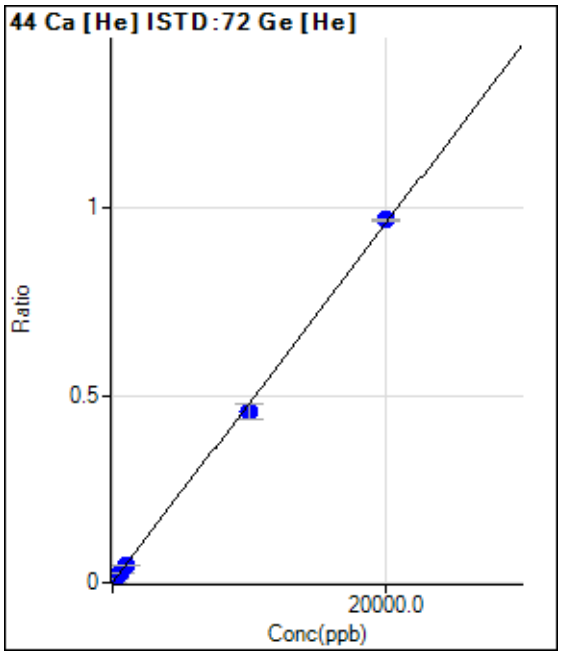


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12024.20	0.0088	P	1.2
2	☐	200.000	200.625	59222.56	0.0424	P	2.8
3	☐	500.000	504.411	126790.22	0.0933	P	1.6
4	☐	1000.000	956.408	227887.23	0.1690	P	15.7
5	☐	10000.00	10193.257	2353969.29	1.7169	A	1.0
6	☐	20000.00	19905.435	4441067.01	3.3445	A	4.0
7	☐	100.000					

y = 1.6758E-004 * x + 0.0088
R = 0.9999
DL = 1.923
BEC = 52.25

Weight: <None>
Min Conc: <None>

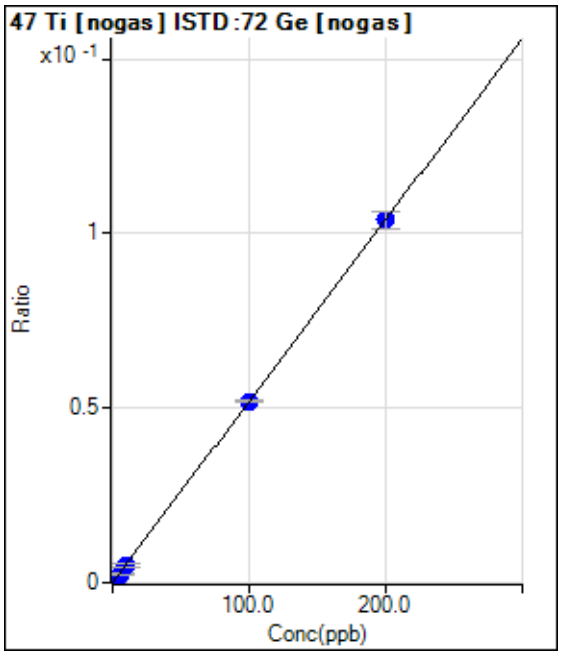
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0006	P	17.2
2	☐	200.000	211.526	5430.91	0.0107	P	3.7
3	☐	500.000	494.963	12267.66	0.0243	P	4.2
4	☐	1000.000	961.005	23358.70	0.0466	P	1.5
5	☐	10000.00	9547.398	236743.60	0.4572	P	9.2
6	☐	20000.00	20228.262	461831.16	0.9679	P	0.7
7	☐	100.000					

y = 4.7820E-005 * x + 6.1642E-004
R = 0.9996
DL = 6.652
BEC = 12.89

Weight: <None>
Min Conc: <None>

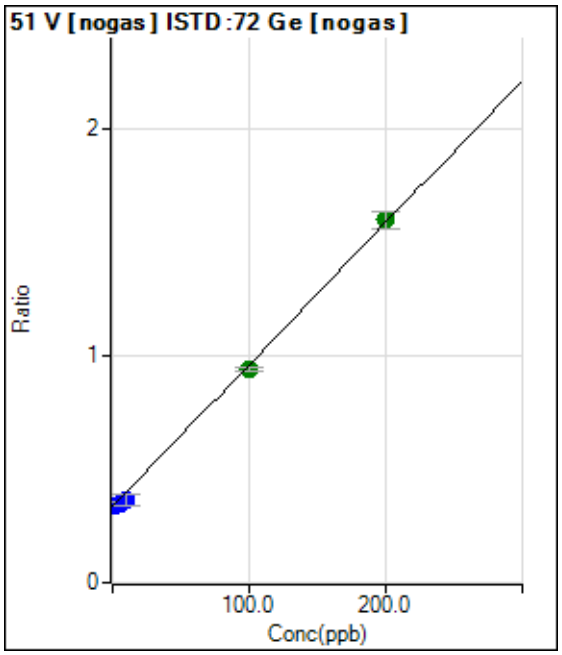


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	48.5
2	☐	2.000	1.874	1420.09	0.0010	P	18.2
3	☐	5.000	4.647	3337.03	0.0025	P	4.9
4	☐	10.000	9.606	6781.39	0.0050	P	16.1
5	☐	100.000	100.059	71276.33	0.0520	P	1.4
6	☐	200.000	200.000	137902.16	0.1039	P	4.5
7	☐	1.000					

y = 5.1915E-004 * x + 4.4222E-005
R = 1.0000
DL = 0.1239
BEC = 0.08518

Weight: <None>
Min Conc: <None>

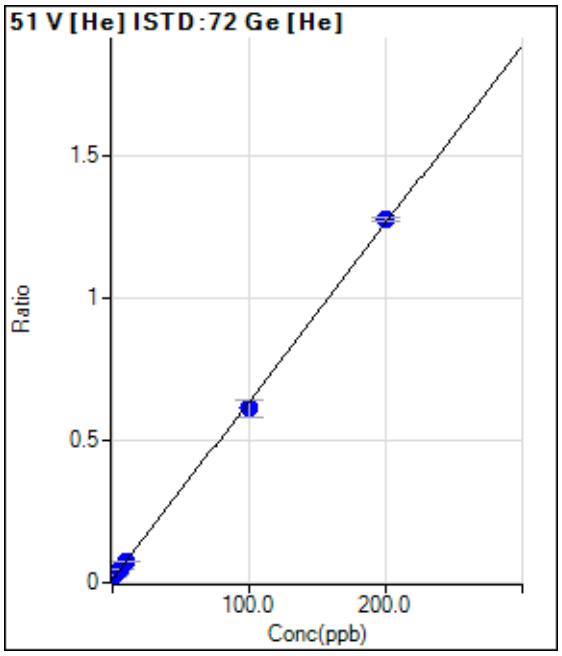
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	459709.68	0.3350	P	4.0
2	☐	2.000	0.743	474790.64	0.3397	P	1.2
3	☐	5.000	1.519	468032.50	0.3445	P	4.2
4	☐	10.000	4.797	492480.55	0.3650	P	15.0
5	☐	100.000	97.150	1292216.60	0.9426	A	1.7
6	☐	200.000	201.785	2120438.26	1.5969	A	4.4
7	☐	1.000					

y = 0.0063 * x + 0.3350
R = 0.9997
DL = 6.398
BEC = 53.57

Weight: <None>
Min Conc: <None>

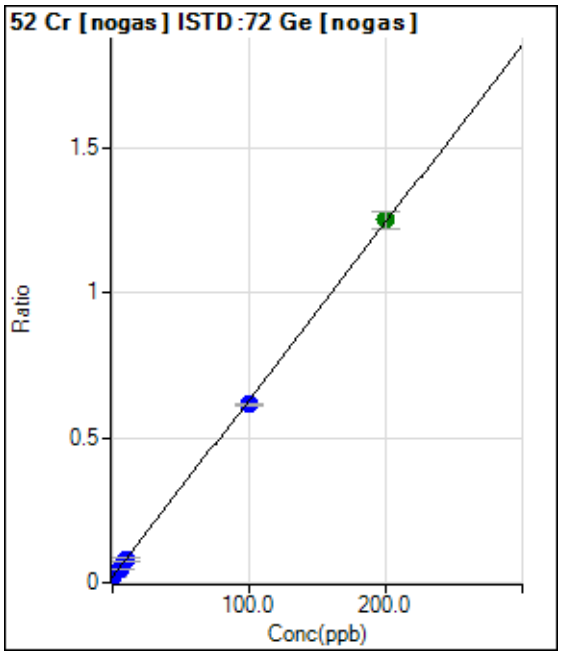


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.844	8656.08	0.0172	P	1.7
2	☐	2.000	2.822	14966.17	0.0296	P	1.3
3	☐	5.000	5.329	22843.64	0.0452	P	0.3
4	☐	10.000	10.057	37486.43	0.0747	P	1.9
5	☐	100.000	95.937	316090.69	0.6109	P	10.5
6	☐	200.000	202.012	607465.62	1.2732	P	0.9
7	☐	1.000					

y = 0.0062 * x + 0.0120
R = 0.9997
DL = 0.1396
BEC = 1.915

Weight: <None>
Min Conc: <None>

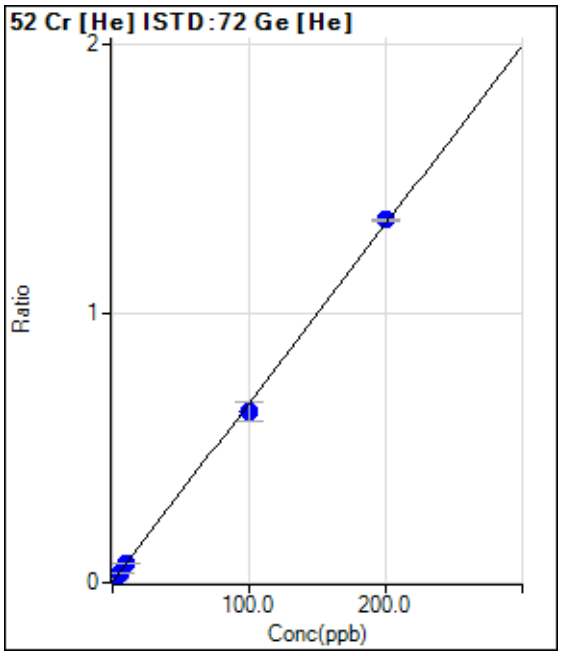
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27207.45	0.0198	P	2.5
2	☐	2.000	1.885	43816.57	0.0313	P	0.9
3	☐	5.000	4.593	65097.17	0.0479	P	2.4
4	☐	10.000	9.359	103833.86	0.0770	P	16.1
5	☐	100.000	97.237	842284.65	0.6143	P	0.5
6	☐	200.000	201.425	1661159.51	1.2513	A	5.1
7	☐	1.000					

y = 0.0061 * x + 0.0198
R = 0.9999
DL = 0.2398
BEC = 3.242

Weight: <None>
Min Conc: <None>

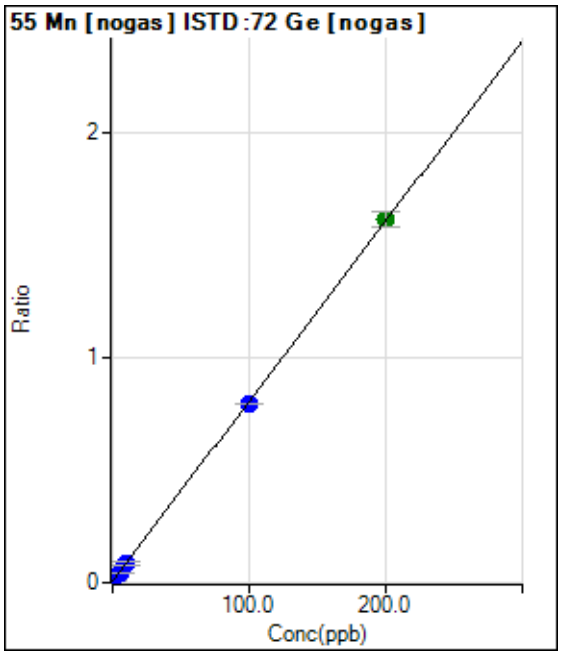


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1866.80	0.0037	P	7.1
2	☐	2.000	2.027	8692.20	0.0172	P	2.2
3	☐	5.000	5.006	18676.53	0.0370	P	2.9
4	☐	10.000	9.748	34356.38	0.0685	P	1.5
5	☐	100.000	95.207	329202.36	0.6363	P	10.8
6	☐	200.000	202.409	643510.65	1.3487	P	0.3
7	☐	1.000					

y = 0.0066 * x + 0.0037
R = 0.9996
DL = 0.1187
BEC = 0.5585

Weight: <None>
Min Conc: <None>

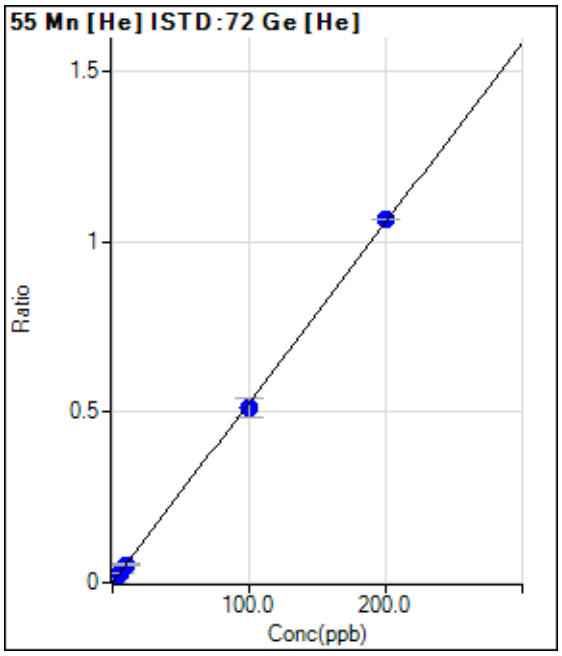
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6267.86	0.0046	P	2.2
2	☐	2.000	2.263	31701.55	0.0227	P	1.7
3	☐	5.000	5.190	62648.96	0.0461	P	2.9
4	☐	10.000	9.864	112428.49	0.0835	P	17.4
5	☐	100.000	98.653	1088794.64	0.7941	P	1.0
6	☐	200.000	200.673	2138819.08	1.6107	A	4.4
7	☐	1.000					

y = 0.0080 * x + 0.0046
R = 1.0000
DL = 0.03782
BEC = 0.5705

Weight: <None>
Min Conc: <None>

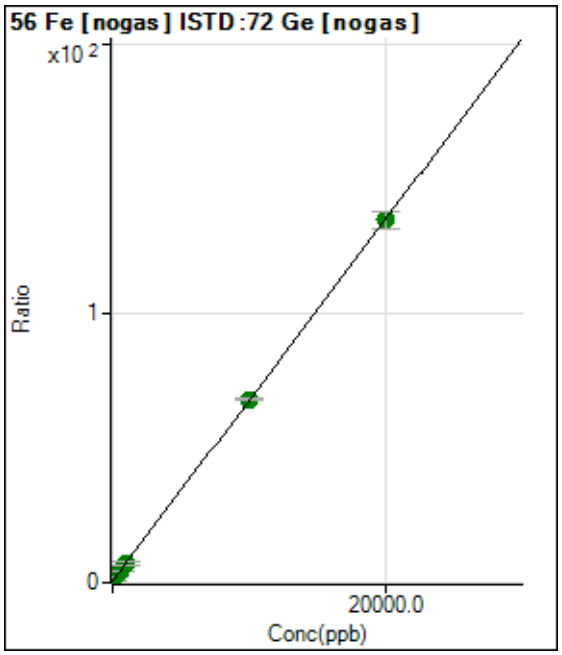


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0007	P	20.7
2	☐	2.000	2.484	6991.51	0.0138	P	3.2
3	☐	5.000	5.504	15023.21	0.0297	P	3.0
4	☐	10.000	10.001	26816.88	0.0535	P	0.5
5	☐	100.000	96.875	264605.45	0.5116	P	11.2
6	☐	200.000	201.545	507462.27	1.0635	P	0.2
7	☐	1.000					

y = 0.0053 * x + 7.1719E-004
R = 0.9998
DL = 0.08439
BEC = 0.136

Weight: <None>
Min Conc: <None>

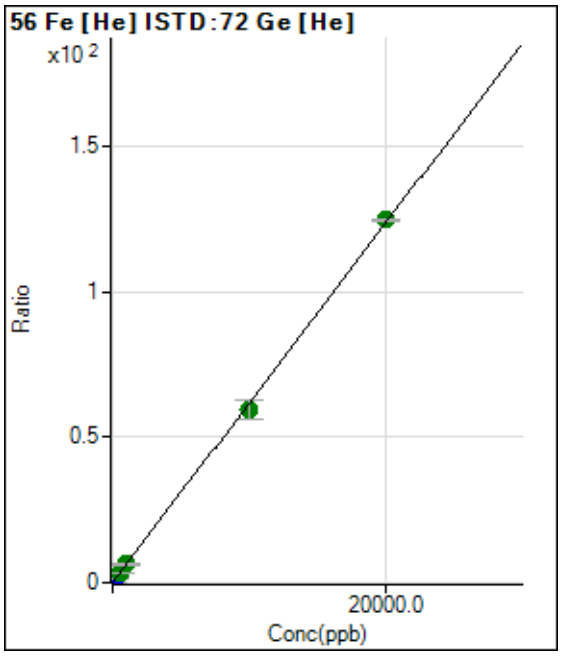
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	784642.47	0.5719	P	4.3
2	☐	200.000	215.724	2827718.42	2.0230	A	0.5
3	☐	500.000	514.934	5483836.58	4.0358	A	2.9
4	☐	1000.000	1011.678	9938971.32	7.3774	A	16.5
5	☐	10000.00	10060.612	93570112.51	68.2491	A	0.6
6	☐	20000.00	19968.579	179079741.5	134.899	A	4.7
7	☐	100.000					

y = 0.0067 * x + 0.5719
R = 1.0000
DL = 10.9
BEC = 85.01

Weight: <None>
Min Conc: <None>

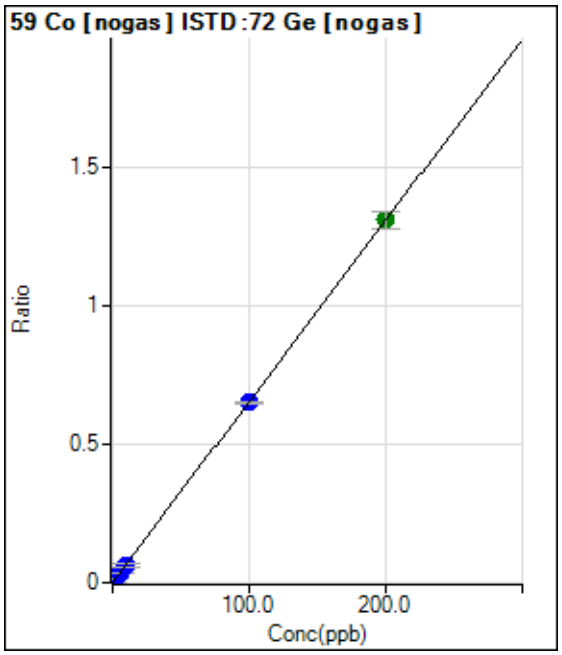


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14139.09	0.0281	P	2.4
2	☐	200.000	201.701	643593.90	1.2719	P	1.6
3	☐	500.000	507.597	1595182.16	3.1582	A	1.5
4	☐	1000.000	1021.434	3173415.47	6.3267	A	3.6
5	☐	10000.00	9610.178	30662302.04	59.2880	A	11.3
6	☐	20000.00	20193.632	59426937.45	124.549	A	0.5
7	☐	100.000					

y = 0.0062 * x + 0.0281
R = 0.9997
DL = 0.3288
BEC = 4.563

Weight: <None>
Min Conc: <None>

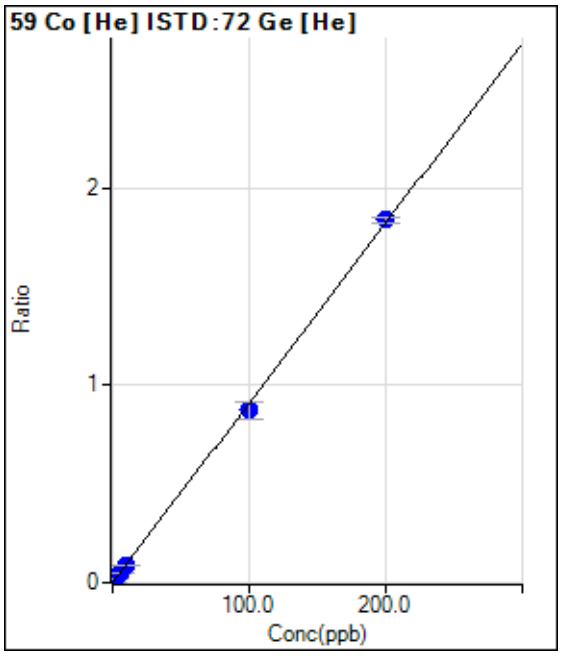
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.68	0.0002	P	19.5
2	☐	2.000	1.912	17795.73	0.0127	P	4.2
3	☐	5.000	5.004	44752.72	0.0329	P	1.6
4	☐	10.000	9.738	86015.43	0.0638	P	16.4
5	☐	100.000	99.291	889273.79	0.6486	P	2.0
6	☐	200.000	200.369	1737208.20	1.3087	A	4.9
7	☐	1.000					

y = 0.0065 * x + 2.4492E-004
R = 1.0000
DL = 0.02188
BEC = 0.0375

Weight: <None>
Min Conc: <None>

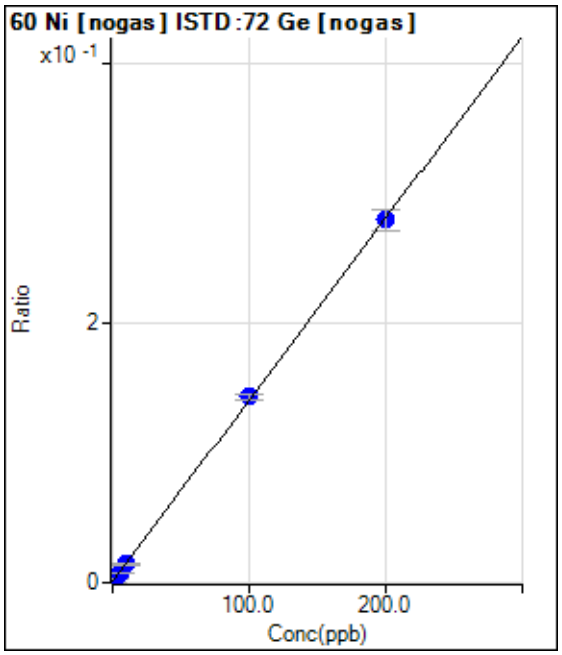


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0002	P	18.6
2	☐	2.000	2.019	9382.63	0.0185	P	4.6
3	☐	5.000	5.098	23525.74	0.0466	P	2.0
4	☐	10.000	9.688	44321.27	0.0884	P	1.6
5	☐	100.000	96.109	452904.72	0.8753	P	10.4
6	☐	200.000	201.959	877491.99	1.8391	P	1.4
7	☐	1.000					

y = 0.0091 * x + 1.5225E-004
R = 0.9997
DL = 0.009345
BEC = 0.01672

Weight: <None>
Min Conc: <None>

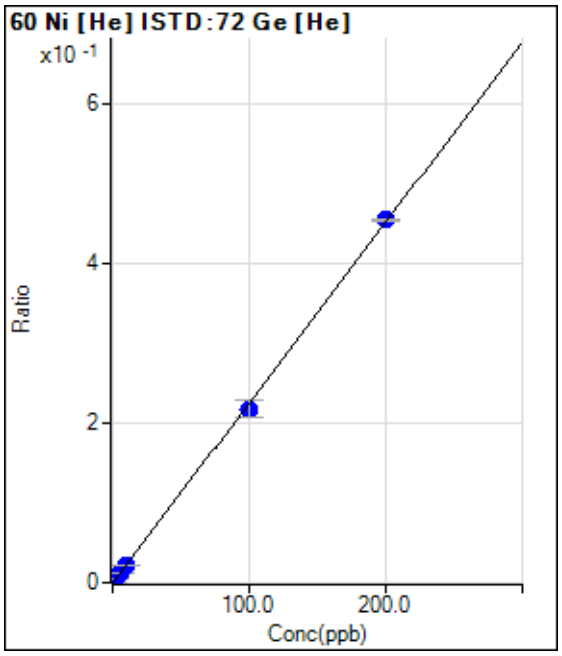
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.379	320.01	0.0002	P	20.1
2	☐	2.000	1.815	4624.03	0.0033	P	5.5
3	☐	5.000	4.904	10389.86	0.0076	P	3.5
4	☐	10.000	9.797	19621.02	0.0145	P	11.4
5	☐	100.000	101.696	196480.25	0.1433	P	2.8
6	☐	200.000	199.166	371489.99	0.2799	P	5.8
7	☐	1.000					

y = 0.0014 * x + 7.6407E-004
R = 0.9999
DL = 0.1006
BEC = 0.5451

Weight: <None>
Min Conc: <None>

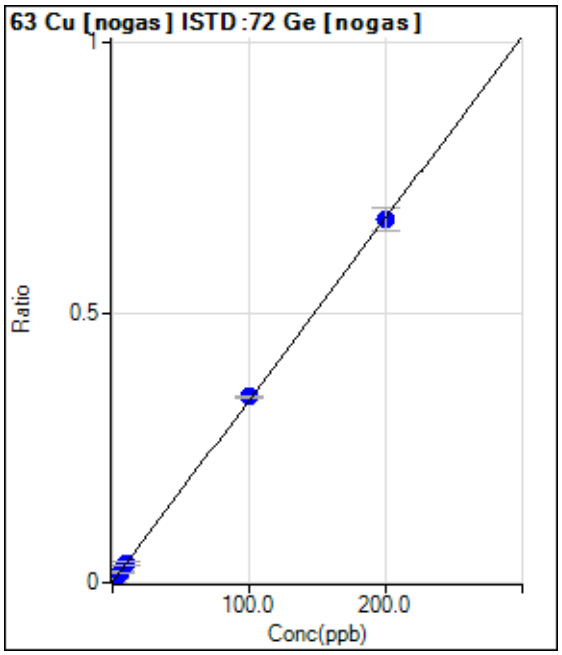


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.344	140.00	0.0003	P	13.1
2	☐	2.000	2.578	2693.59	0.0053	P	8.6
3	☐	5.000	5.515	6037.80	0.0120	P	3.7
4	☐	10.000	10.206	11303.74	0.0225	P	2.9
5	☐	100.000	96.771	112803.33	0.2180	P	10.1
6	☐	200.000	201.585	216888.18	0.4546	P	0.5
7	☐	1.000					

y = 0.0023 * x - 4.9754E-004
R = 0.9998
DL = 0.04851
BEC = -0.2204

Weight: <None>
Min Conc: <None>

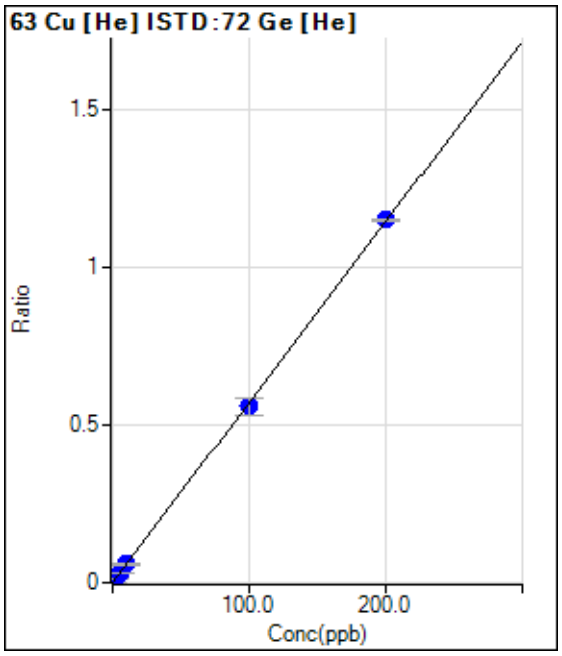
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1733.46	0.0013	P	13.1
2	☐	2.000	2.099	11647.30	0.0083	P	0.7
3	☐	5.000	5.357	26226.33	0.0193	P	5.6
4	☐	10.000	10.087	47466.31	0.0352	P	17.0
5	☐	100.000	101.861	472261.59	0.3445	P	1.6
6	☐	200.000	199.055	891541.78	0.6720	P	6.3
7	☐	1.000					

y = 0.0034 * x + 0.0013
R = 0.9999
DL = 0.1466
BEC = 0.3738

Weight: <None>
Min Conc: <None>

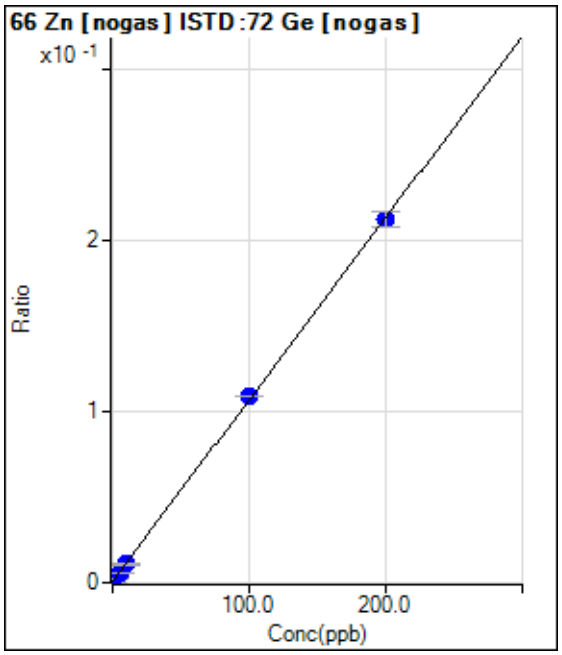


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.145	803.37	0.0016	P	8.0
2	☐	2.000	2.427	7401.64	0.0146	P	2.8
3	☐	5.000	5.567	16437.75	0.0325	P	1.5
4	☐	10.000	10.036	29113.94	0.0580	P	3.7
5	☐	100.000	97.691	289012.94	0.5583	P	9.6
6	☐	200.000	201.134	548038.98	1.1486	P	0.5
7	☐	1.000					

y = 0.0057 * x + 7.7458E-004
R = 0.9999
DL = 0.06754
BEC = 0.1357

Weight: <None>
Min Conc: <None>

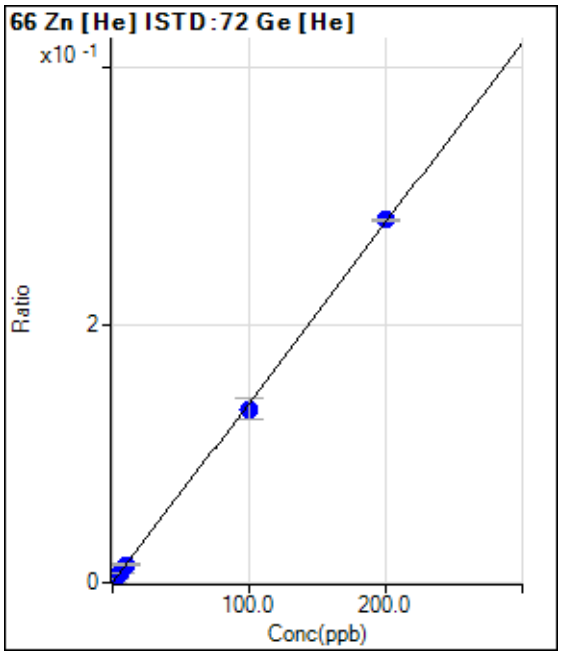
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.424	350.01	0.0003	P	33.6
2	☐	2.000	2.036	4010.53	0.0029	P	7.6
3	☐	5.000	4.853	7978.59	0.0059	P	4.2
4	☐	10.000	9.417	14502.80	0.0107	P	12.4
5	☐	100.000	102.170	149986.09	0.1094	P	0.4
6	☐	200.000	198.948	281964.96	0.2124	P	4.1
7	☐	1.000					

y = 0.0011 * x + 7.0462E-004
R = 0.9999
DL = 0.2398
BEC = 0.6623

Weight: <None>
Min Conc: <None>

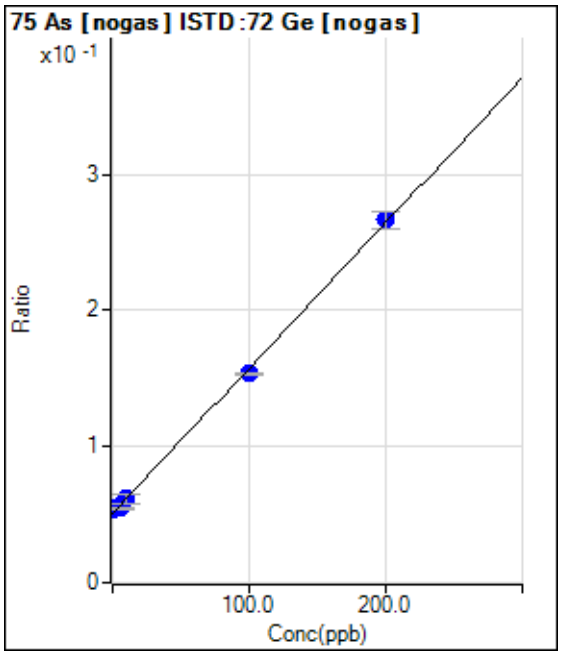


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.243	100.00	0.0002	P	42.9
2	☐	2.000	2.647	1800.13	0.0036	P	16.6
3	☐	5.000	5.628	3900.50	0.0077	P	0.6
4	☐	10.000	10.149	7044.85	0.0140	P	3.7
5	☐	100.000	96.725	69816.18	0.1350	P	11.3
6	☐	200.000	201.608	134327.67	0.2815	P	0.7
7	☐	1.000					

y = 0.0014 * x - 1.4063E-004
R = 0.9998
DL = 0.183
BEC = -0.1007

Weight: <None>
Min Conc: <None>

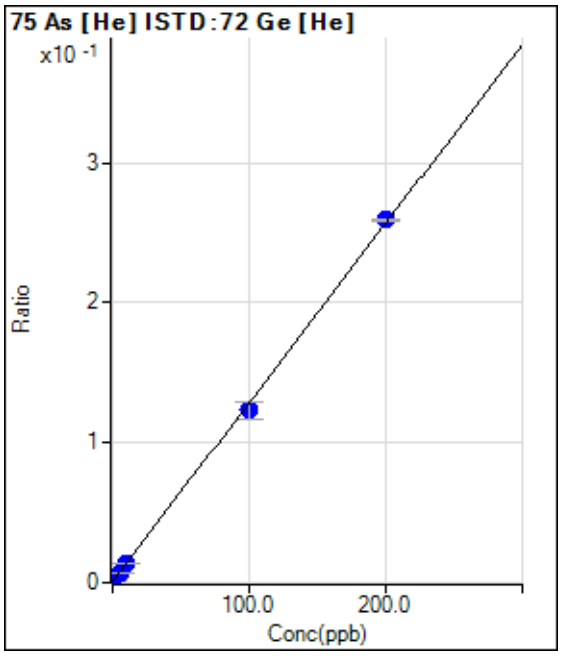
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	1.993	72932.83	0.0531	P	3.3
2	☐	2.000	3.597	76681.48	0.0549	P	1.9
3	☐	5.000	3.336	74174.19	0.0546	P	1.3
4	☐	10.000	10.006	83458.73	0.0617	P	11.7
5	☐	100.000	96.087	210567.58	0.1536	P	1.2
6	☐	200.000	201.982	353927.36	0.2666	P	5.0
7	☐	1.000					

y = 0.0011 * x + 0.0510
R = 0.9996
DL = 4.883
BEC = 47.78

Weight: <None>
Min Conc: <None>

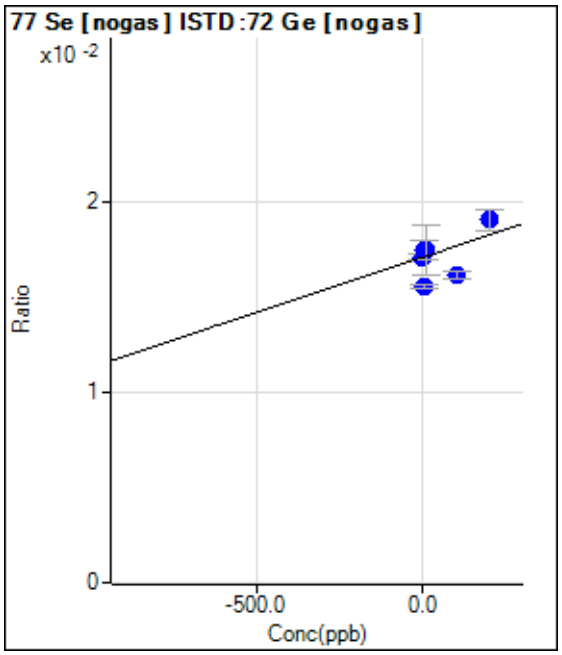


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	401.12	0.0008	P	2.9
2	☐	2.000	2.138	1787.88	0.0035	P	5.3
3	☐	5.000	5.013	3641.51	0.0072	P	3.9
4	☐	10.000	9.669	6603.48	0.0132	P	0.8
5	☐	100.000	95.826	63852.40	0.1234	P	10.0
6	☐	200.000	202.102	123723.11	0.2593	P	0.4
7	☐	1.000					

y = 0.0013 * x + 7.9813E-004
R = 0.9997
DL = 0.05462
BEC = 0.624

Weight: <None>
Min Conc: <None>

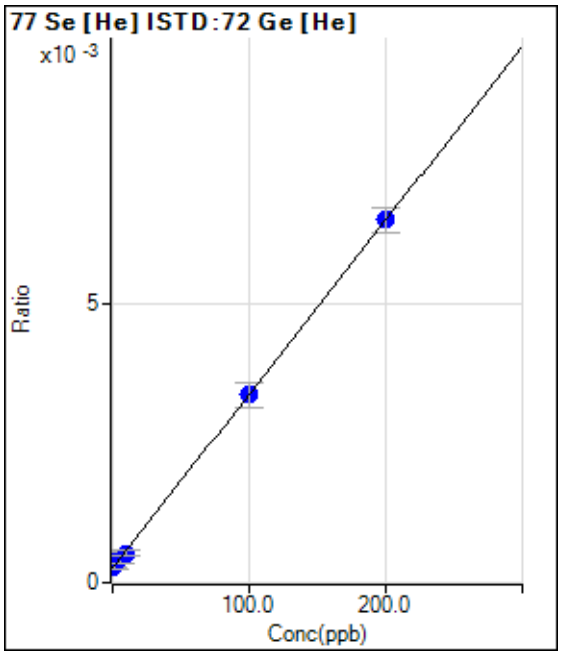
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23519.32	0.0171	P	1.5
2	☐	2.000	60.233	24420.50	0.0175	P	5.8
3	☐	5.000	-266.210	21179.68	0.0156	P	1.2
4	☐	10.000	65.944	23622.69	0.0175	P	15.0
5	☐	100.000	-164.851	22170.87	0.0162	P	2.9
6	☐	200.000	335.826	25315.00	0.0191	P	6.0
7	☐	1.000					

y = 5.8070E-006 * x + 0.0171
R = 0.5676
DL = 128.3
BEC = 2950

Weight: <None>
Min Conc: <None>

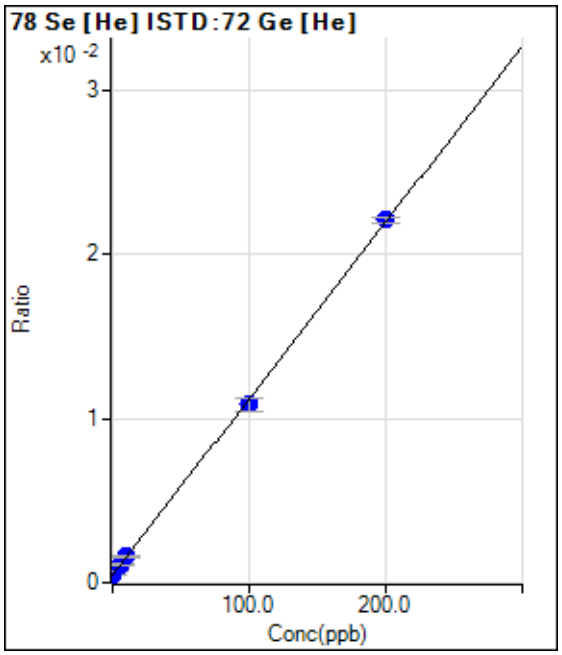


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.078	133.33	0.0003	P	17.9
2	☐	2.000	2.368	170.00	0.0003	P	51.5
3	☐	5.000	6.382	233.34	0.0005	P	43.1
4	☐	10.000	8.377	263.34	0.0005	P	20.2
5	☐	100.000	99.505	1740.12	0.0034	P	13.8
6	☐	200.000	200.290	3107.00	0.0065	P	6.6
7	☐	1.000					

y = 3.1206E-005 * x + 2.6250E-004
R = 0.9999
DL = 4.547
BEC = 8.412

Weight: <None>
Min Conc: <None>

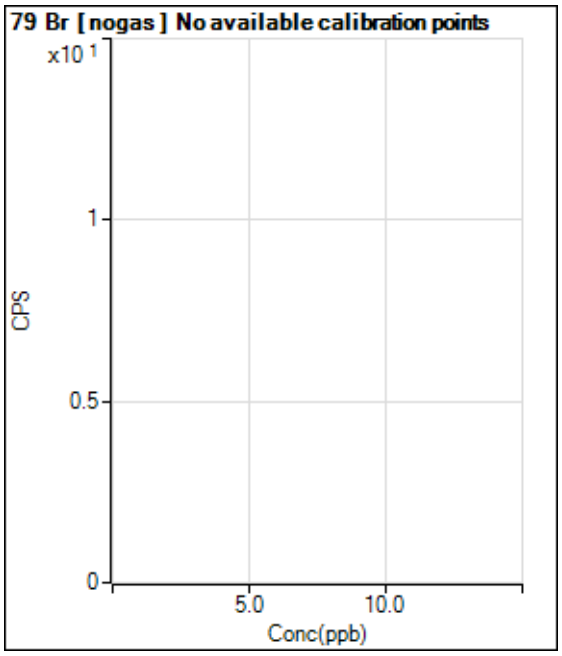
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	233.33	0.0005	P	4.2
2	☐	2.000	2.785	386.01	0.0008	P	6.6
3	☐	5.000	5.686	542.68	0.0011	P	8.0
4	☐	10.000	10.668	807.35	0.0016	P	3.7
5	☐	100.000	96.979	5635.57	0.0109	P	7.4
6	☐	200.000	201.452	10536.46	0.0221	P	1.7
7	☐	1.000					

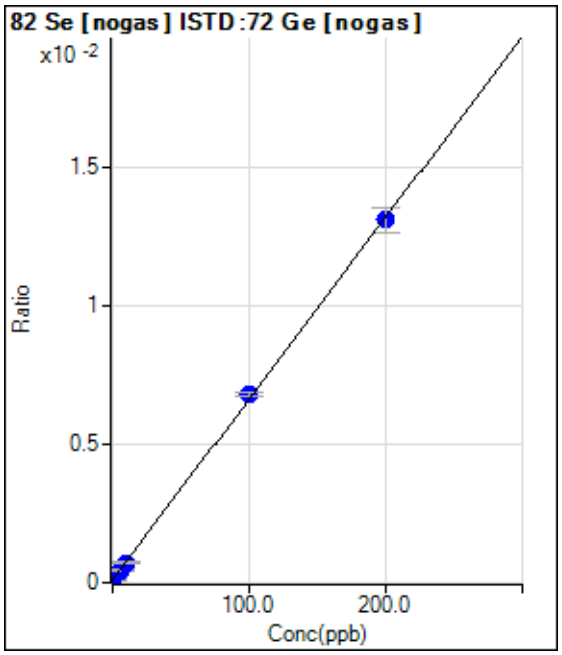
y = 1.0731E-004 * x + 4.6408E-004
R = 0.9998
DL = 0.5462
BEC = 4.325

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

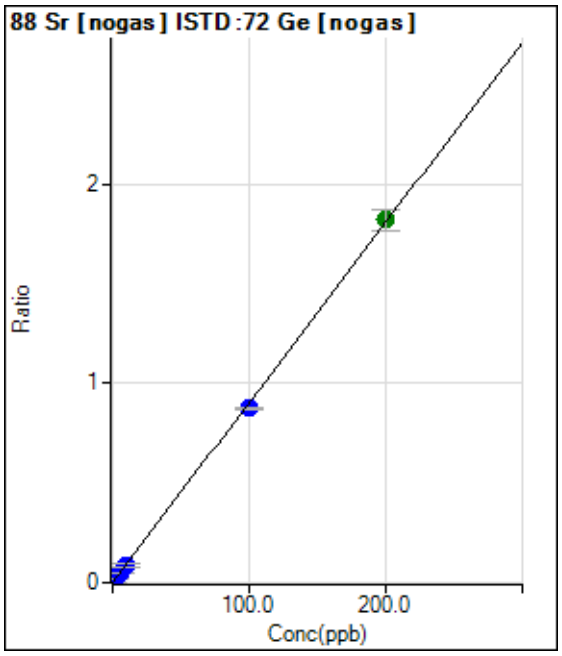
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.33	0.0001	P	15.8
2	☐	2.000	2.593	373.34	0.0003	P	6.3
3	☐	5.000	5.336	606.69	0.0004	P	8.0
4	☐	10.000	9.592	983.38	0.0007	P	15.4
5	☐	100.000	102.490	9322.63	0.0068	P	1.9
6	☐	200.000	198.761	17372.15	0.0131	P	6.8
7	☐	1.000					

y = 6.5398E-005 * x + 9.7490E-005
R = 0.9999
DL = 0.7064
BEC = 1.491

Weight: <None>
Min Conc: <None>

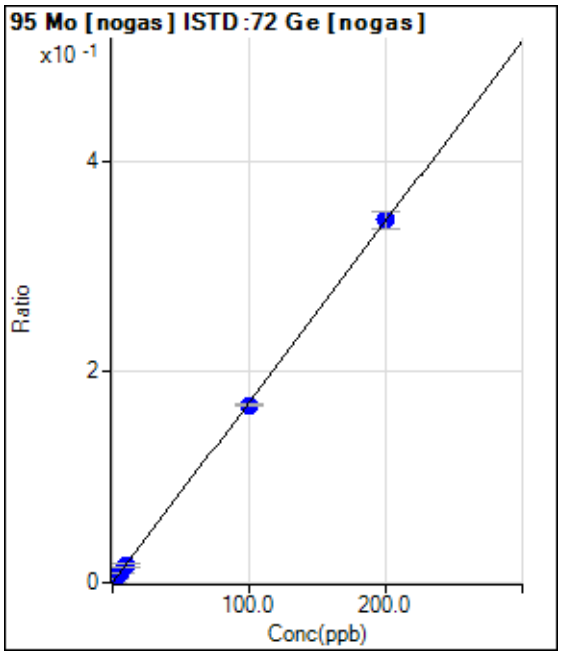


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	383.35	0.0003	P	25.3
2	☐	2.000	1.895	24317.22	0.0174	P	1.5
3	☐	5.000	4.894	60474.77	0.0445	P	1.6
4	☐	10.000	9.478	115694.90	0.0859	P	17.1
5	☐	100.000	96.961	1201308.19	0.8762	P	1.5
6	☐	200.000	201.549	2417074.76	1.8211	A	6.1
7	☐	1.000					

y = 0.0090 * x + 2.7947E-004
R = 0.9998
DL = 0.02348
BEC = 0.03094

Weight: <None>
Min Conc: <None>

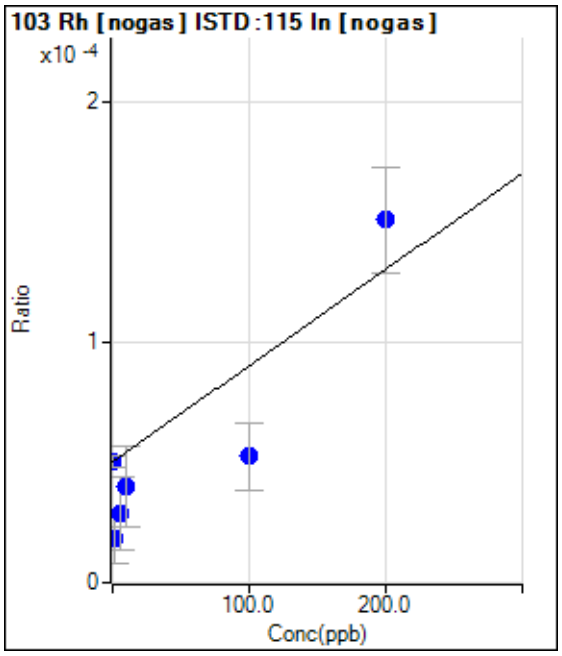
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	40.8
2	☐	2.000	1.977	4804.09	0.0034	P	8.4
3	☐	5.000	5.044	11810.90	0.0087	P	3.2
4	☐	10.000	9.505	22021.02	0.0163	P	16.4
5	☐	100.000	98.337	231094.67	0.1686	P	1.6
6	☐	200.000	200.855	457042.06	0.3442	P	4.7
7	☐	1.000					

y = 0.0017 * x + 4.8916E-005
R = 1.0000
DL = 0.03496
BEC = 0.02855

Weight: <None>
Min Conc: <None>

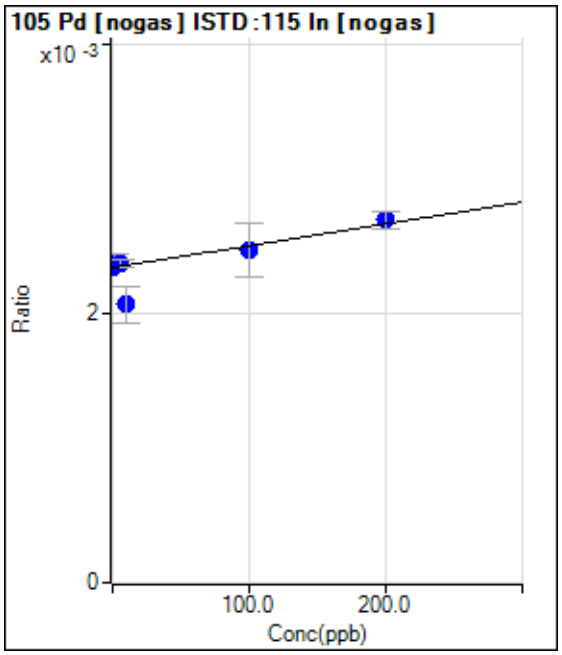


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0001	P	8.6
2	☐	2.000	-80.551	23.33	0.0000	P	108.
3	☐	5.000	-53.596	36.67	0.0000	P	104.
4	☐	10.000	-25.705	53.33	0.0000	P	85.3
5	☐	100.000	5.344	66.67	0.0001	P	53.5
6	☐	200.000	251.403	190.01	0.0002	P	29.0
7	☐	1.000					

y = 4.0028E-007 * x + 5.0305E-005
R = 0.9201
DL = 32.55
BEC = 125.7

Weight: <None>
Min Conc: <None>

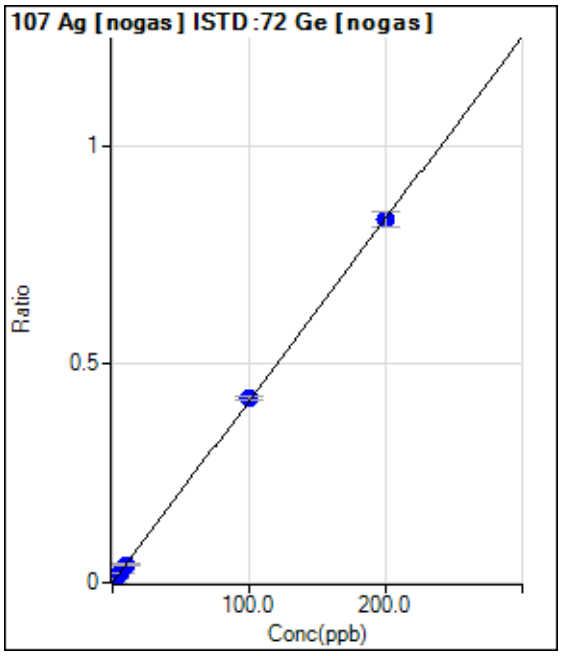
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2950.31	0.0023	P	1.4
2	☐	2.000	28.077	3073.69	0.0024	P	4.1
3	☐	5.000	17.734	3050.33	0.0024	P	2.0
4	☐	10.000	-168.848	2706.95	0.0021	P	13.2
5	☐	100.000	80.990	3157.03	0.0025	P	15.9
6	☐	200.000	217.868	3403.74	0.0027	P	4.9
7	☐	1.000					

y = 1.6219E-006 * x + 0.0023
R = 0.7979
DL = 60.29
BEC = 1445

Weight: <None>
Min Conc: <None>

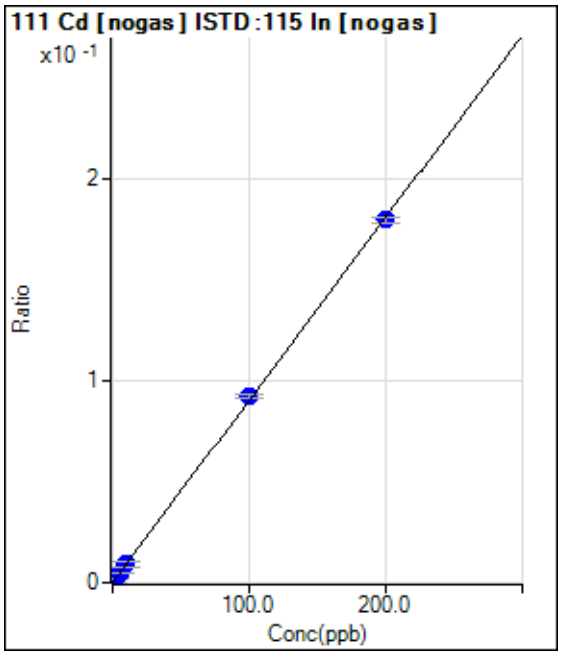


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	48.9
2	☐	2.000	1.948	11407.34	0.0082	P	1.3
3	☐	5.000	5.001	28376.98	0.0209	P	1.5
4	☐	10.000	9.975	55991.38	0.0416	P	17.5
5	☐	100.000	101.268	578366.19	0.4218	P	1.4
6	☐	200.000	199.368	1102669.47	0.8304	P	4.3
7	☐	1.000					

y = 0.0042 * x + 5.0279E-005
R = 1.0000
DL = 0.0177
BEC = 0.01207

Weight: <None>
Min Conc: <None>

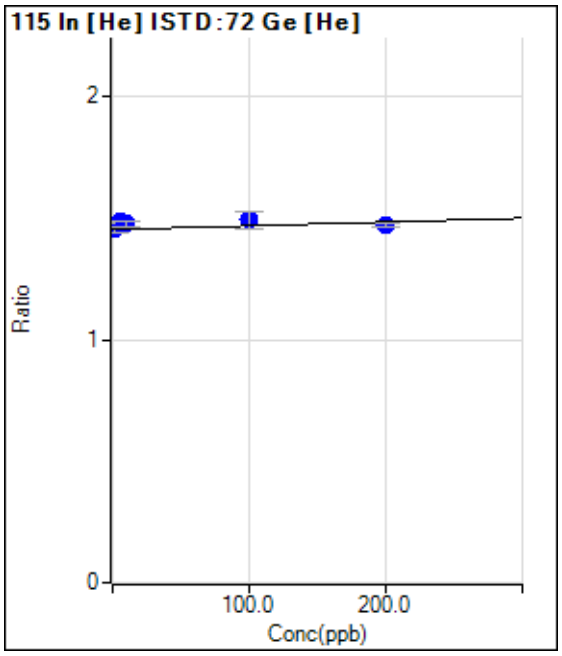
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	100.
2	☐	2.000	1.840	2146.85	0.0017	P	6.2
3	☐	5.000	5.177	6021.16	0.0047	P	2.5
4	☐	10.000	10.017	11607.46	0.0091	P	23.2
5	☐	100.000	102.287	117939.39	0.0923	P	1.4
6	☐	200.000	198.853	226618.37	0.1795	P	1.3
7	☐	1.000					

y = 9.0276E-004 * x + 7.9863E-006
R = 0.9999
DL = 0.02667
BEC = 0.008847

Weight: <None>
Min Conc: <None>

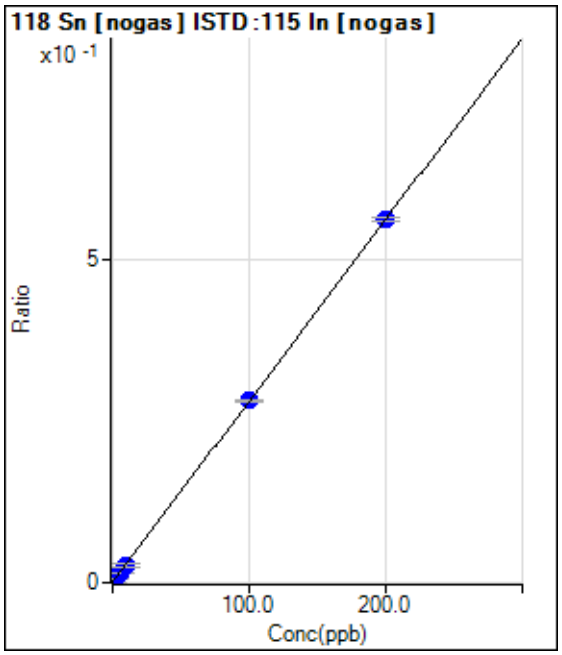


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	730808.11	1.4539	P	1.5
2	☐	2.000	-0.494	735677.93	1.4539	P	1.3
3	☐	5.000	206.757	750917.33	1.4866	P	0.8
4	☐	10.000	147.805	740912.98	1.4773	P	2.0
5	☐	100.000	251.558	780108.35	1.4937	P	4.7
6	☐	200.000	112.312	702221.99	1.4717	P	0.9
7	☐	1.000					

y = 1.5809E-004 * x + 1.4539
R = 0.2858
DL = 408.1
BEC = 9197

Weight: <None>
Min Conc: <None>

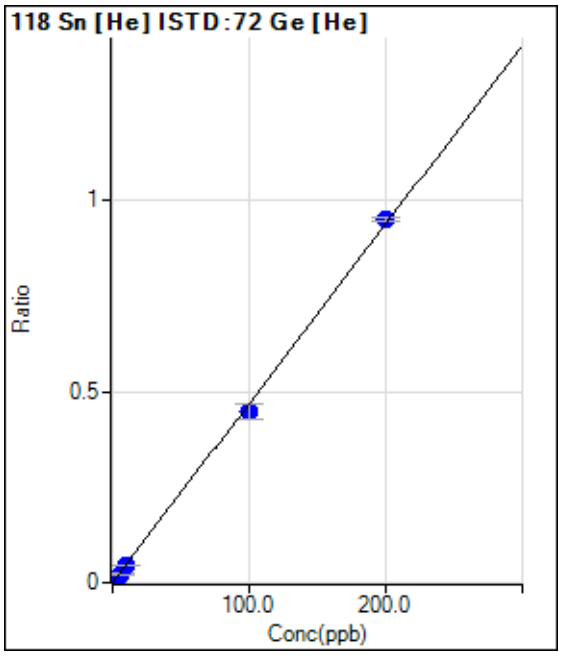
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	610.02	0.0005	P	17.0
2	☐	2.000	1.874	7398.42	0.0058	P	1.1
3	☐	5.000	4.868	18216.62	0.0142	P	2.8
4	☐	10.000	9.393	34515.12	0.0269	P	22.6
5	☐	100.000	100.153	360187.08	0.2821	P	1.6
6	☐	200.000	199.958	710315.38	0.5627	P	1.0
7	☐	1.000					

y = 0.0028 * x + 4.8512E-004
R = 1.0000
DL = 0.08823
BEC = 0.1726

Weight: <None>
Min Conc: <None>

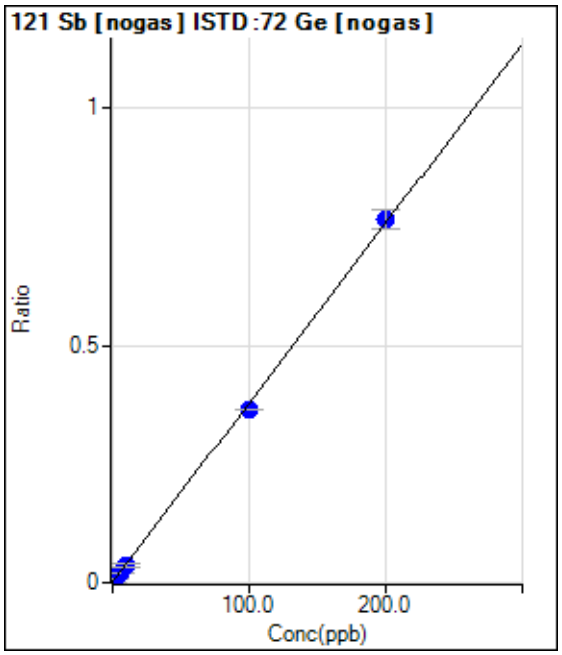


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.01	0.0007	P	15.7
2	☐	2.000	1.921	4930.80	0.0097	P	2.8
3	☐	5.000	4.648	11380.71	0.0225	P	1.2
4	☐	10.000	9.452	22605.32	0.0451	P	2.5
5	☐	100.000	95.007	231080.54	0.4462	P	8.9
6	☐	200.000	202.533	453431.82	0.9503	P	0.9
7	☐	1.000					

y = 0.0047 * x + 7.3733E-004
R = 0.9996
DL = 0.07421
BEC = 0.1573

Weight: <None>
Min Conc: <None>

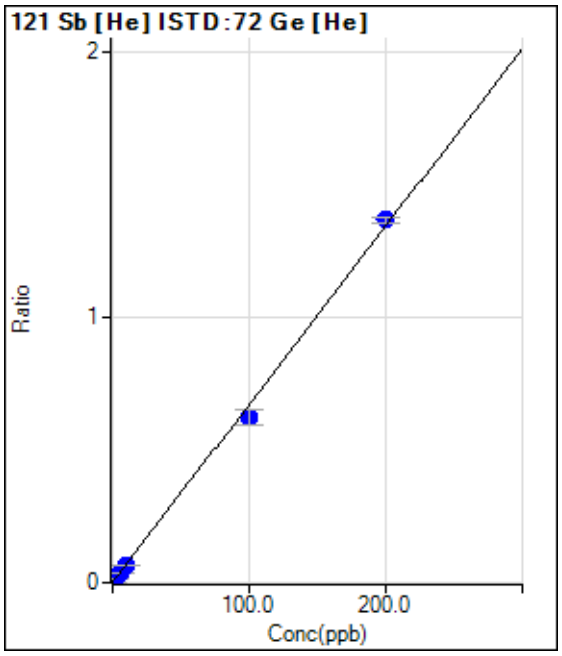
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1236.74	0.0009	P	10.3
2	☐	2.000	1.895	11280.57	0.0081	P	3.3
3	☐	5.000	4.681	25302.51	0.0186	P	1.8
4	☐	10.000	9.670	50461.67	0.0375	P	17.9
5	☐	100.000	96.072	499670.72	0.3644	P	0.5
6	☐	200.000	201.990	1015698.27	0.7653	P	5.4
7	☐	1.000					

y = 0.0038 * x + 8.9836E-004
R = 0.9997
DL = 0.07315
BEC = 0.2374

Weight: <None>
Min Conc: <None>

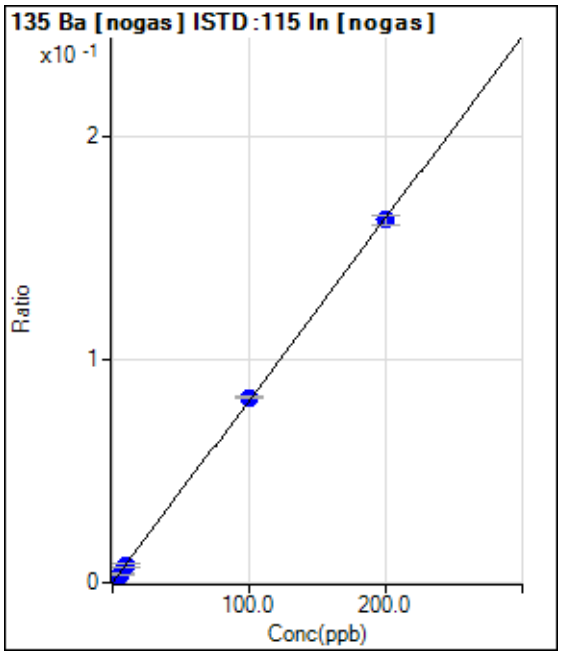


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	806.70	0.0016	P	6.4
2	☐	2.000	1.967	7481.79	0.0148	P	3.7
3	☐	5.000	4.774	16971.99	0.0336	P	0.8
4	☐	10.000	9.580	33008.78	0.0658	P	3.6
5	☐	100.000	92.632	322340.63	0.6224	P	9.1
6	☐	200.000	203.711	652143.44	1.3668	P	1.4
7	☐	1.000					

y = 0.0067 * x + 0.0016
R = 0.9991
DL = 0.0457
BEC = 0.2393

Weight: <None>
Min Conc: <None>

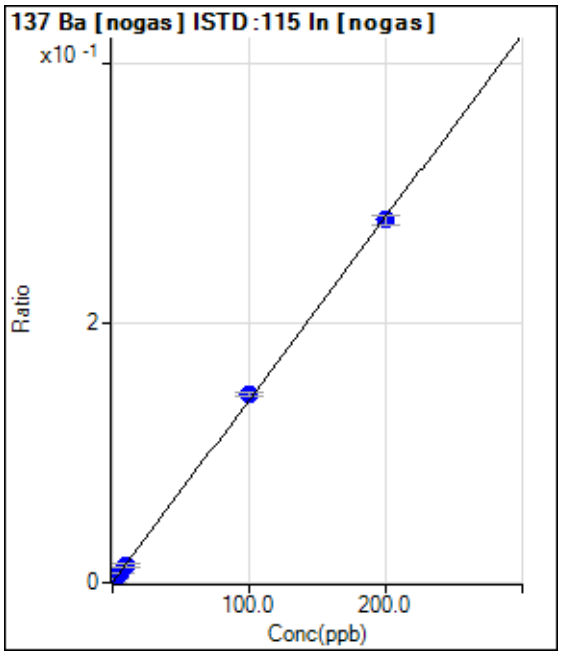
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	24.8
2	☐	2.000	2.011	2193.53	0.0017	P	10.8
3	☐	5.000	4.654	4967.49	0.0039	P	6.2
4	☐	10.000	9.646	10226.64	0.0079	P	20.2
5	☐	100.000	101.763	106265.15	0.0832	P	1.8
6	☐	200.000	199.145	205447.63	0.1628	P	2.3
7	☐	1.000					

y = 8.1710E-004 * x + 6.3555E-005
R = 0.9999
DL = 0.05793
BEC = 0.07778

Weight: <None>
Min Conc: <None>

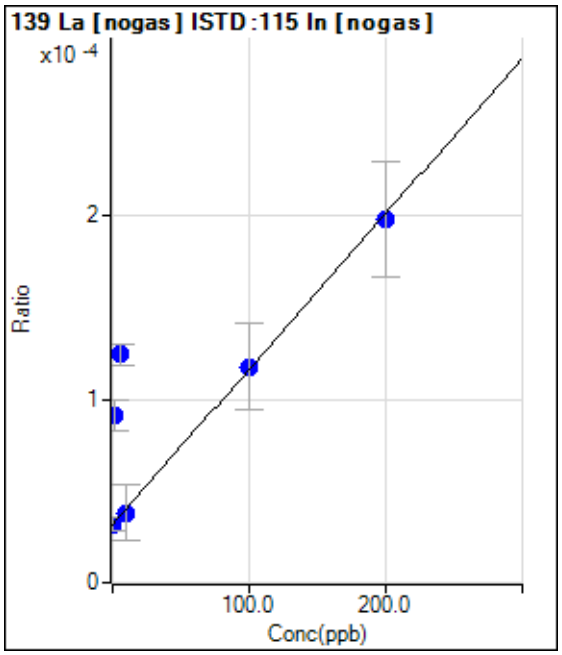


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0001	P	50.2
2	☐	2.000	2.159	4027.24	0.0031	P	3.4
3	☐	5.000	4.979	9122.70	0.0071	P	5.4
4	☐	10.000	9.464	17232.59	0.0134	P	21.5
5	☐	100.000	103.108	185355.87	0.1452	P	2.9
6	☐	200.000	198.472	352526.26	0.2793	P	2.9
7	☐	1.000					

y = 0.0014 * x + 9.5208E-005
R = 0.9998
DL = 0.1019
BEC = 0.06768

Weight: <None>
Min Conc: <None>

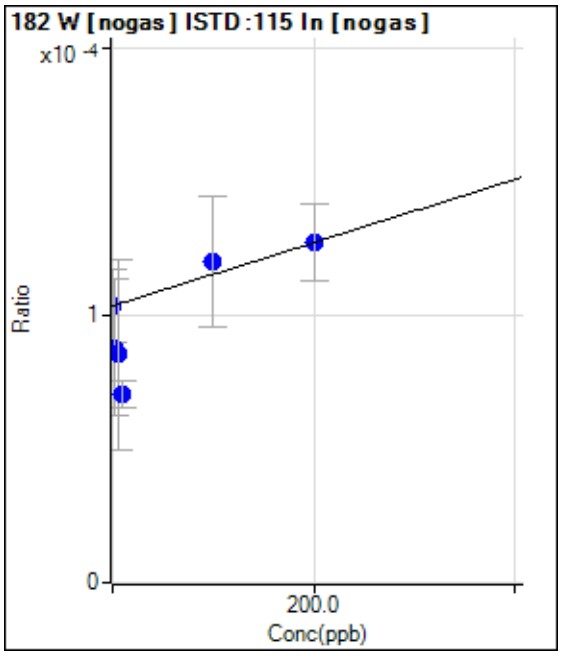
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	24.4
2	☐	2.000	69.824	116.67	0.0001	P	18.9
3	☐	5.000	109.399	160.00	0.0001	P	9.4
4	☐	10.000	7.125	53.33	0.0000	P	80.1
5	☐	100.000	101.684	150.00	0.0001	P	40.8
6	☐	200.000	196.013	250.01	0.0002	P	31.8
7	☐	1.000					

y = 8.4635E-007 * x + 3.1743E-005
R = 0.8240
DL = 27.45
BEC = 37.51

Weight: <None>
Min Conc: <None>

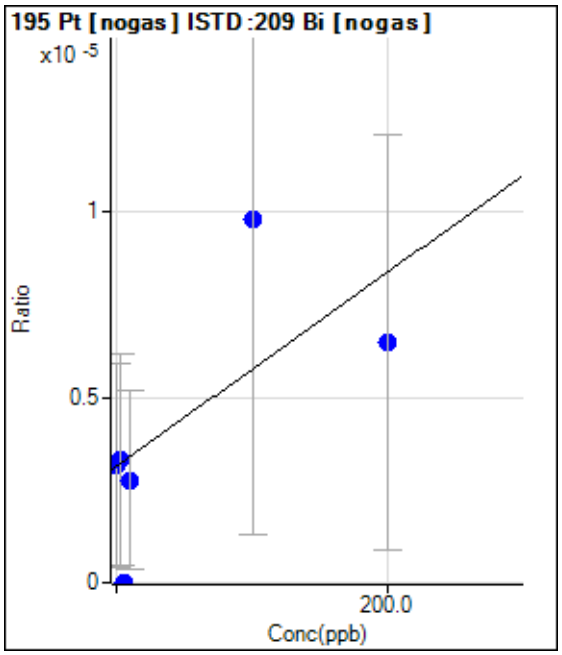


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0001	P	27.0
2	☐	2.000	-130.631	113.33	0.0001	P	58.0
3	☐	5.000	-152.244	110.00	0.0001	P	83.6
4	☐	10.000	-278.492	93.33	0.0001	P	14.5
5	☐	100.000	139.631	153.34	0.0001	P	41.1
6	☐	200.000	199.867	160.00	0.0001	P	22.9
7	☐	1.000					

y = 1.1849E-007 * x + 1.0336E-004
R = 0.8234
DL = 705.5
BEC = 872.3

Weight: <None>
Min Conc: <None>

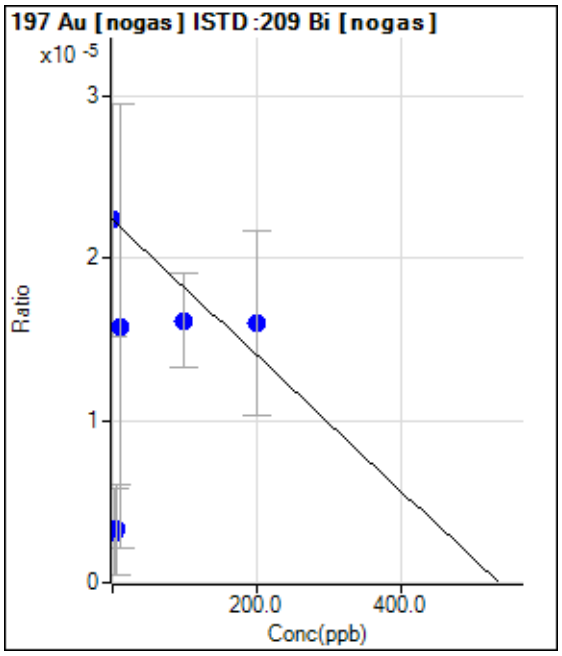
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	5.694	3.33	0.0000	P	173.
3	☐	5.000	-121.232	0.00	0.0000	P	
4	☐	10.000	-14.888	3.33	0.0000	P	173.
5	☐	100.000	254.357	10.00	0.0000	P	173.
6	☐	200.000	127.185	6.67	0.0000	P	173.
7	☐	1.000					

y = 2.6078E-008 * x + 3.1615E-006
R = 0.6907
DL = 629.9
BEC = 121.2

Weight: <None>
Min Conc: <None>

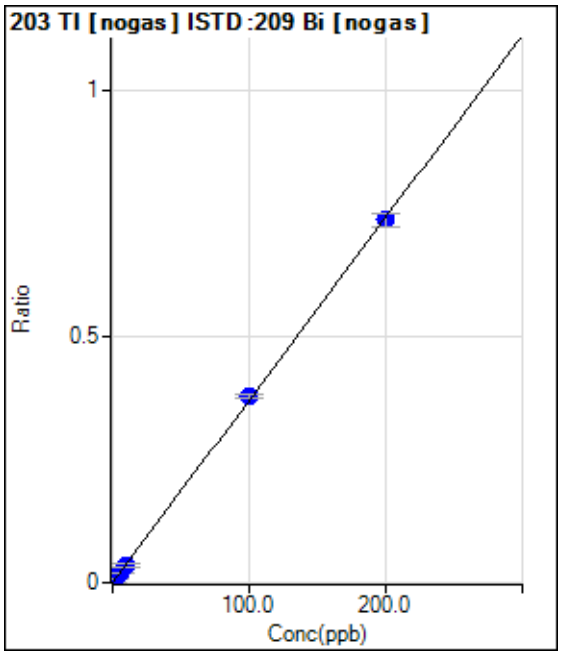


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	63.8
2	☐	2.000	461.697	3.33	0.0000	P	173.
3	☐	5.000	458.348	3.33	0.0000	P	173.
4	☐	10.000	157.366	13.33	0.0000	P	173.
5	☐	100.000	149.280	16.67	0.0000	P	36.1
6	☐	200.000	152.061	16.67	0.0000	P	70.9
7	☐	1.000					

y = -4.1663E-008 * x + 2.2362E-005
R = 0.2959
DL = -1027
BEC = -536.7

Weight: <None>
Min Conc: <None>

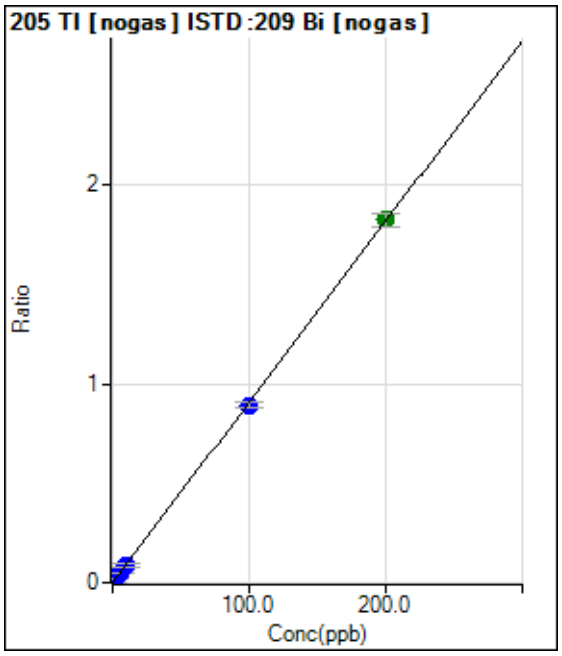
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	22.3
2	☐	2.000	2.013	7705.34	0.0075	P	2.3
3	☐	5.000	5.160	19796.09	0.0191	P	6.6
4	☐	10.000	9.642	37043.81	0.0357	P	27.1
5	☐	100.000	102.372	392900.77	0.3788	P	1.6
6	☐	200.000	198.828	770273.06	0.7356	P	3.4
7	☐	1.000					

y = 0.0037 * x + 2.5819E-005
R = 0.9999
DL = 0.004666
BEC = 0.006979

Weight: <None>
Min Conc: <None>

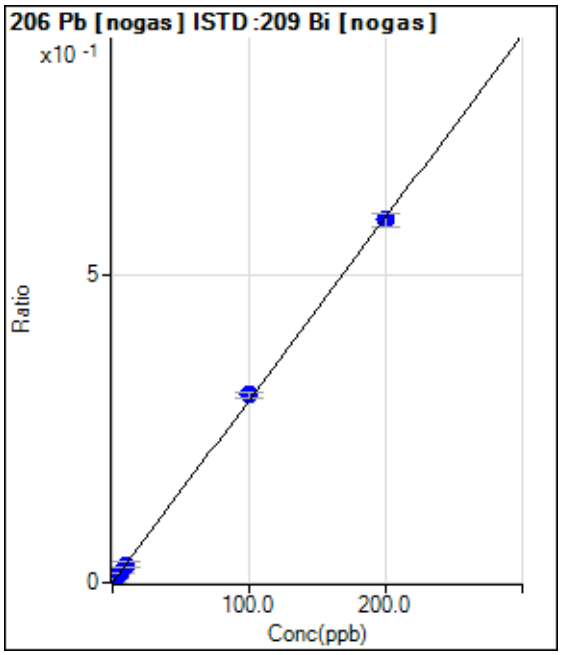


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0001	P	27.0
2	☐	2.000	1.949	18334.24	0.0178	P	2.5
3	☐	5.000	4.834	45575.95	0.0440	P	1.7
4	☐	10.000	9.343	88395.31	0.0849	P	24.7
5	☐	100.000	98.417	927010.11	0.8937	P	2.4
6	☐	200.000	200.829	1909652.99	1.8236	A	3.4
7	☐	1.000					

y = 0.0091 * x + 8.3462E-005
R = 1.0000
DL = 0.007445
BEC = 0.009192

Weight: <None>
Min Conc: <None>

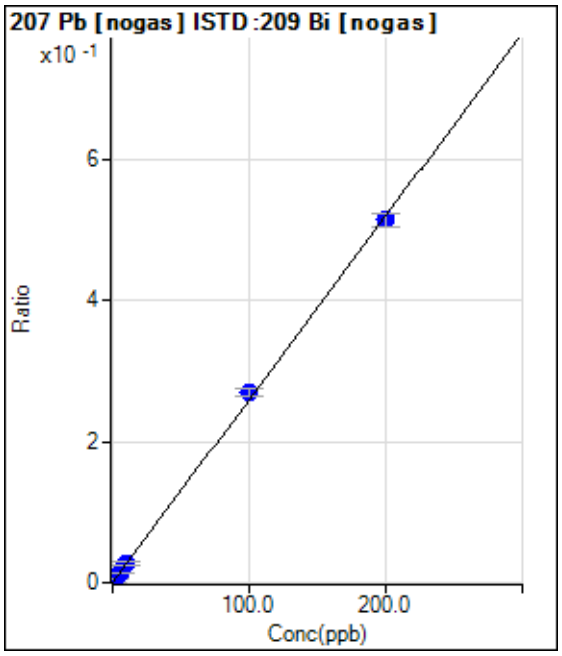
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	46.5
2	☐	2.000	2.068	6358.06	0.0062	P	5.8
3	☐	5.000	5.146	15858.22	0.0153	P	2.0
4	☐	10.000	9.879	30509.71	0.0293	P	25.0
5	☐	100.000	102.676	315664.03	0.3044	P	3.6
6	☐	200.000	198.664	616606.03	0.5889	P	3.6
7	☐	1.000					

y = 0.0030 * x + 4.1604E-005
R = 0.9999
DL = 0.01958
BEC = 0.01404

Weight: <None>
Min Conc: <None>

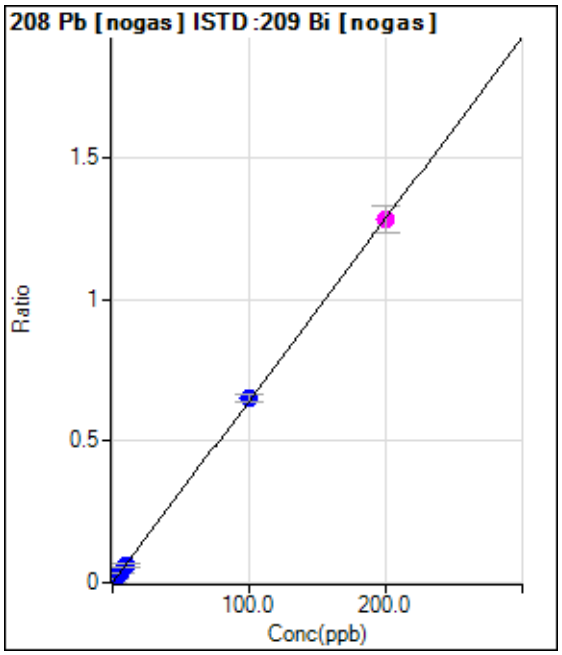


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0001	P	74.9
2	☐	2.000	2.022	5454.37	0.0053	P	15.8
3	☐	5.000	5.142	13873.04	0.0134	P	5.9
4	☐	10.000	9.996	27173.71	0.0260	P	21.3
5	☐	100.000	103.891	279570.26	0.2696	P	3.9
6	☐	200.000	198.051	538086.45	0.5139	P	3.8
7	☐	1.000					

y = 0.0026 * x + 5.7411E-005
R = 0.9997
DL = 0.04973
BEC = 0.02213

Weight: <None>
Min Conc: <None>

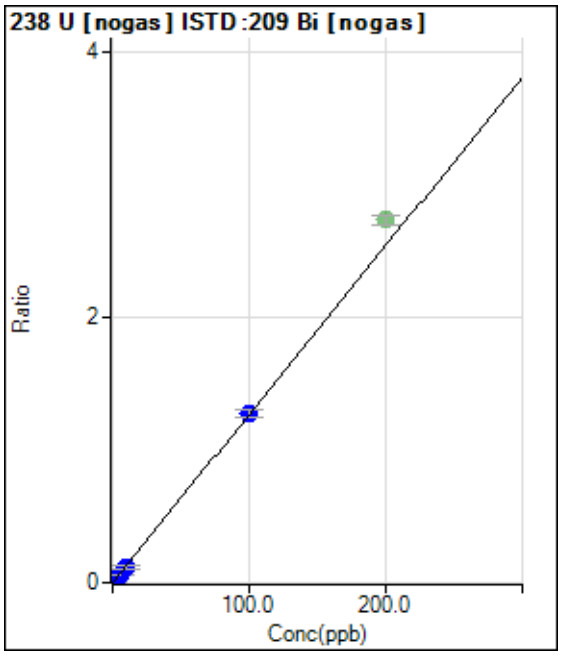
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0001	P	28.1
2	☐	2.000	1.981	13215.74	0.0128	P	3.4
3	☐	5.000	4.993	33322.22	0.0322	P	6.5
4	☐	10.000	9.443	63471.44	0.0608	P	22.2
5	☐	100.000	101.074	673874.94	0.6499	P	4.2
6	☐	200.000	199.491	1342263.26	1.2825	M	7.6
7	☐	1.000					

y = 0.0064 * x + 8.4095E-005
R = 1.0000
DL = 0.01101
BEC = 0.01308

Weight: <None>
Min Conc: <None>

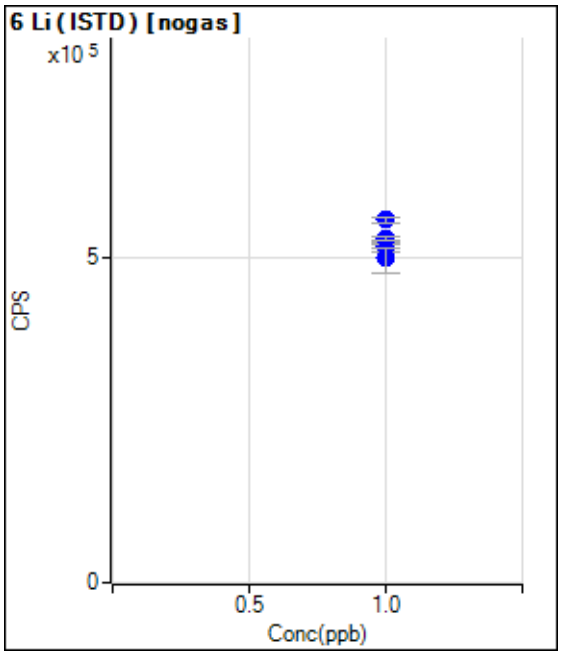


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	68.7
2	☐	2.000	1.921	25164.20	0.0244	P	6.2
3	☐	5.000	4.828	63553.28	0.0613	P	3.2
4	☐	10.000	9.505	125716.74	0.1207	P	24.4
5	☐	100.000	100.060	1317601.85	1.2707	P	4.4
6	☑	200.000		2865859.96	2.7358	A	2.5
7	☐	1.000					

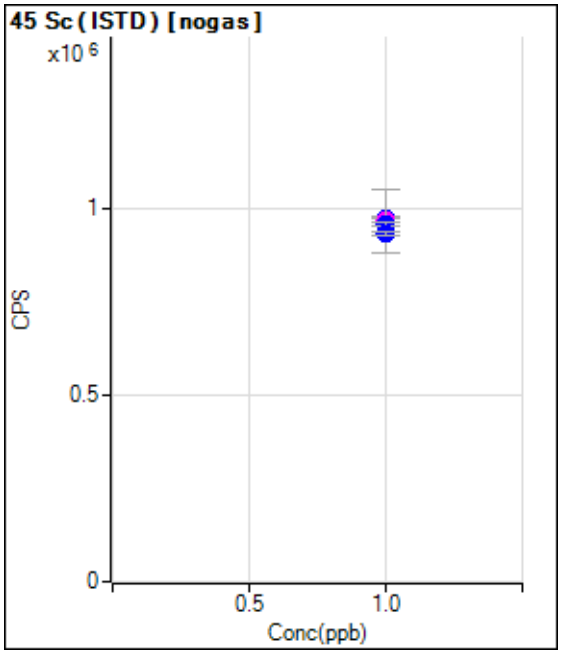
y = 0.0127 * x + 3.2161E-005
R = 1.0000
DL = 0.005217
BEC = 0.002533

Weight: <None>
Min Conc: <None>

Calibration for 082_ICV.d

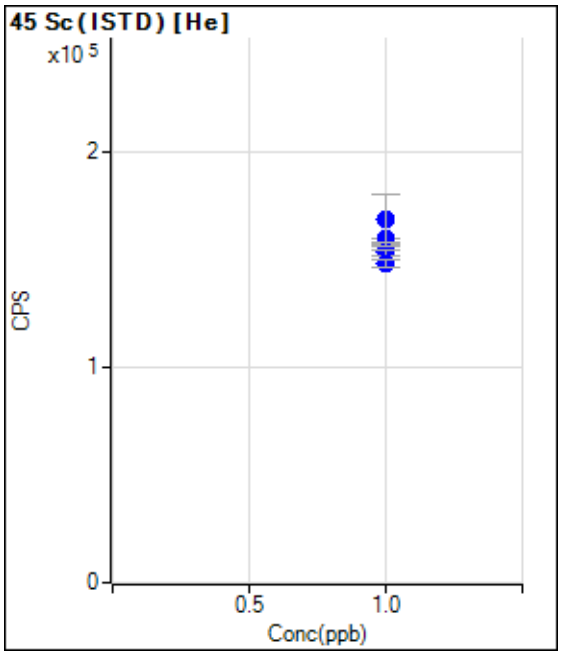


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		509396.72		P	0.1
2	☐	1.000		520865.33		P	1.6
3	☐	1.000		518100.97		P	1.4
4	☐	1.000		501728.78		P	9.5
5	☐	1.000		530649.67		P	1.0
6	☐	1.000		559377.20		P	1.2
7	☐	1.000					

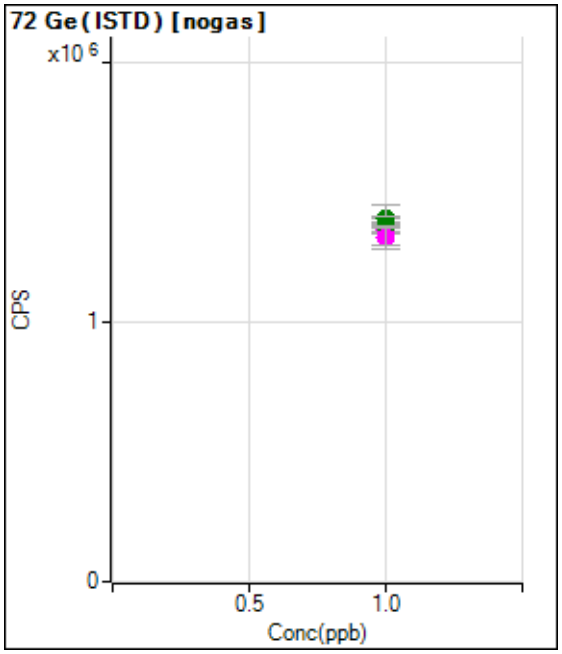


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		968827.04		P	1.6
2	☐	1.000		971689.07		P	1.4
3	☐	1.000		969193.52		P	1.2
4	☐	1.000		966418.45		M	17.9
5	☐	1.000		957396.03		P	0.8
6	☐	1.000		931264.36		P	0.9
7	☐	1.000					

Calibration for 082_ICV.d

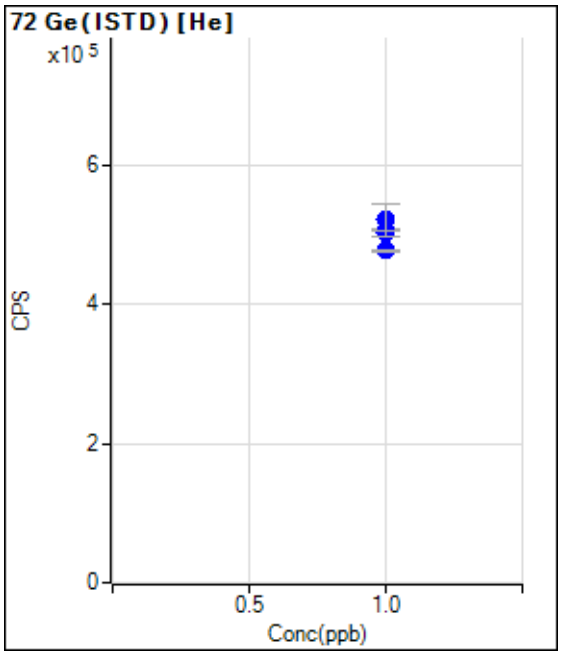


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		158023.66		P	0.4
2	☐	1.000		160225.24		P	0.4
3	☐	1.000		157932.73		P	0.6
4	☐	1.000		153742.64		P	1.6
5	☐	1.000		168804.98		P	14.3
6	☐	1.000		148457.50		P	2.3
7	☐	1.000					

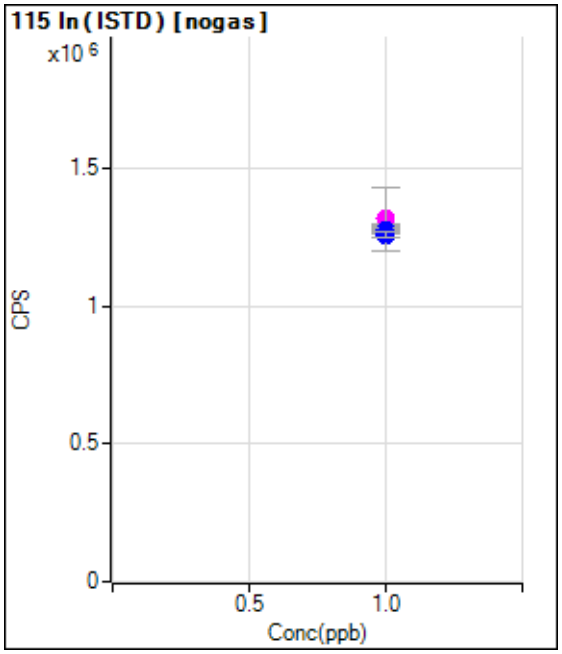


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1373661.10		M	4.2
2	☐	1.000		1397767.79		A	1.4
3	☐	1.000		1359488.00		M	2.6
4	☐	1.000		1366470.55		M	12.8
5	☐	1.000		1371026.33		A	0.4
6	☐	1.000		1329778.71		M	5.4
7	☐	1.000					

Calibration for 082_ICV.d

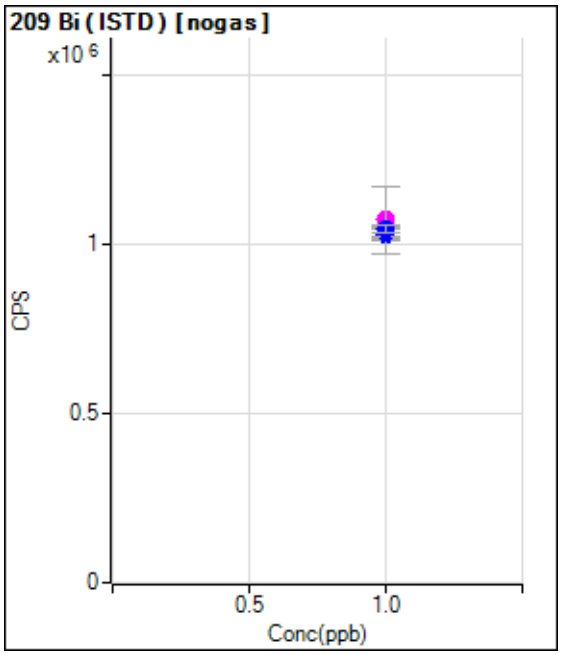


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		502631.59		P	1.8
2	☐	1.000		506023.73		P	0.4
3	☐	1.000		505109.91		P	0.2
4	☐	1.000		501636.29		P	1.6
5	☐	1.000		520782.30		P	9.2
6	☐	1.000		477142.40		P	0.5
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1258681.00		P	0.9
2	☐	1.000		1285952.82		P	1.0
3	☐	1.000		1285712.64		P	1.8
4	☐	1.000		1317800.27		M	17.3
5	☐	1.000		1277181.31		P	1.4
6	☐	1.000		1262357.56		P	1.5
7	☐	1.000					

Calibration for 082_ICV.d



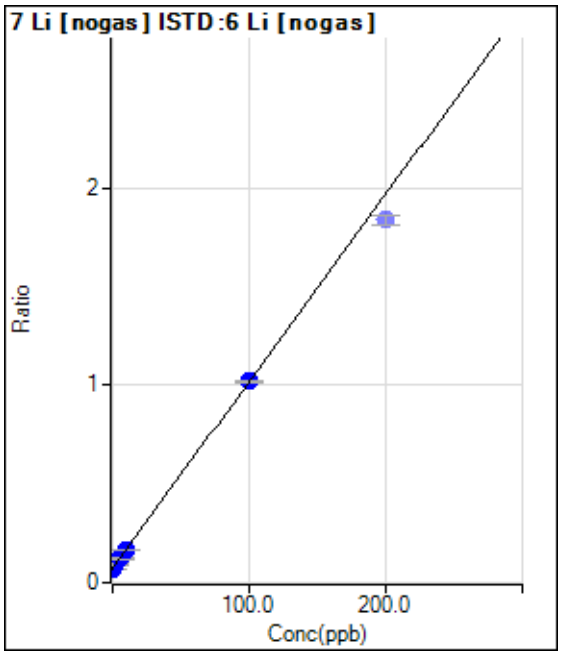
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1034070.53		P	2.3
2	☐	1.000		1031424.23		P	3.0
3	☐	1.000		1036722.59		P	3.2
4	☐	1.000		1073796.08		M	18.6
5	☐	1.000		1037557.83		P	2.1
6	☐	1.000		1047651.26		P	2.2
7	☐	1.000					

Calibration for 213_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121418A.b\
Analysis File: 121418A.batch.bin
DA Date-Time: 12/14/2018 10:21:14 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	206CALB.d	CAL BLK	12/14/2018 10:03:50 PM
2	207CALS.d	2/10/200	12/14/2018 10:06:05 PM
3	208CALS.d	5/25/500	12/14/2018 10:08:21 PM
4	209CALS.d	10/50/1000	12/14/2018 10:10:36 PM
5	210CALS.d	100/500/10K	12/14/2018 10:12:50 PM
6	211CALS.d	200/1000/20K	12/14/2018 10:15:04 PM
7			

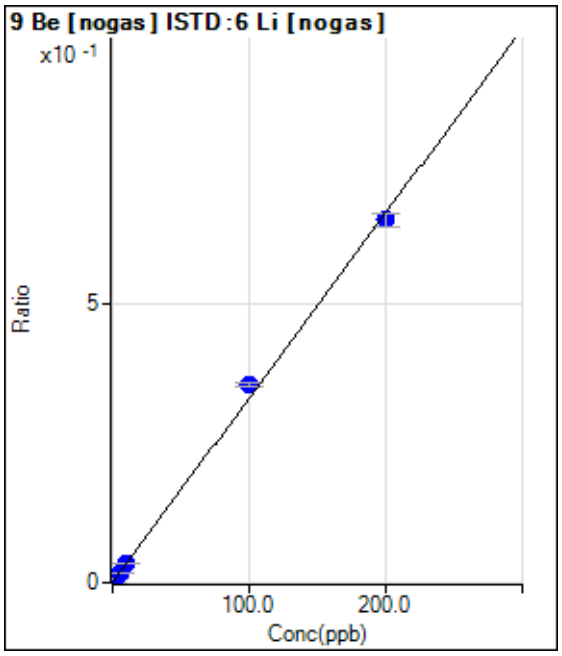
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25467.58	0.0723	P	1.1
2	☐	2.000	2.024	33293.13	0.0915	P	2.4
3	☐	5.000	5.267	44432.54	0.1222	P	2.1
4	☐	10.000	9.789	61042.37	0.1650	P	2.2
5	☐	100.000	100.007	393721.91	1.0191	P	1.5
6	☑	200.000		731052.72	1.8375	P	2.4
7	☐	1.000					

y = 0.0095 * x + 0.0723
R = 1.0000
DL = 0.2448
BEC = 7.642

Weight: <None>
Min Conc: <None>

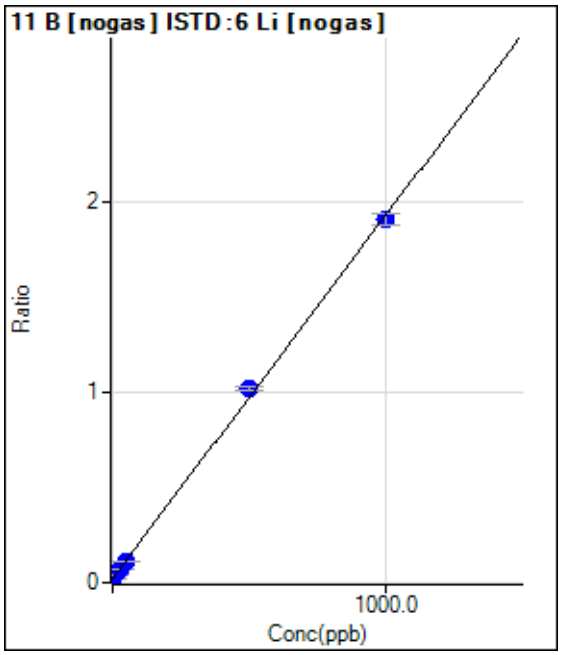


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0002	P	23.2
2	☐	2.000	2.197	2706.91	0.0074	P	8.4
3	☐	5.000	5.227	6344.55	0.0174	P	11.3
4	☐	10.000	10.248	12587.78	0.0340	P	4.2
5	☐	100.000	107.041	136692.47	0.3538	P	1.7
6	☐	200.000	196.460	258250.39	0.6492	P	4.1
7	☐	1.000					

y = 0.0033 * x + 1.7966E-004
R = 0.9991
DL = 0.03785
BEC = 0.05438

Weight: <None>
Min Conc: <None>

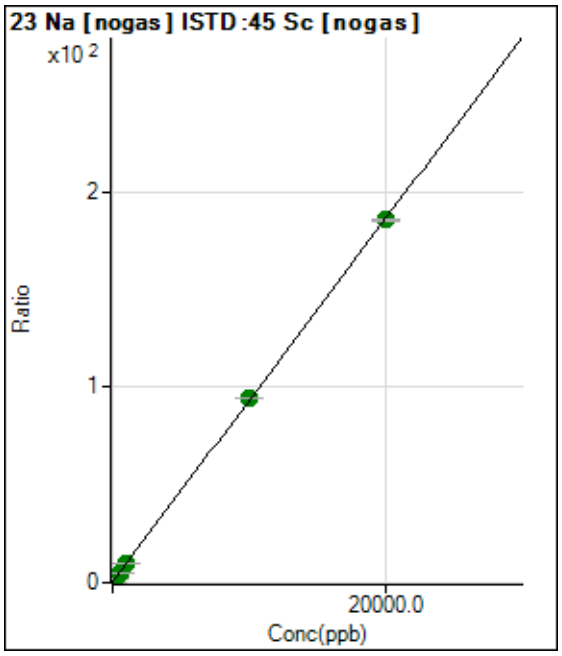
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7271.50	0.0207	P	3.6
2	☐	10.000	9.640	14192.32	0.0390	P	2.8
3	☐	25.000	25.390	25087.15	0.0690	P	2.3
4	☐	50.000	48.869	42064.23	0.1137	P	1.5
5	☐	500.000	522.869	392623.12	1.0162	P	1.9
6	☐	1000.000	988.616	757085.87	1.9031	P	3.1
7	☐	5.000					

y = 0.0019 * x + 0.0207
R = 0.9996
DL = 1.157
BEC = 10.85

Weight: <None>
Min Conc: <None>

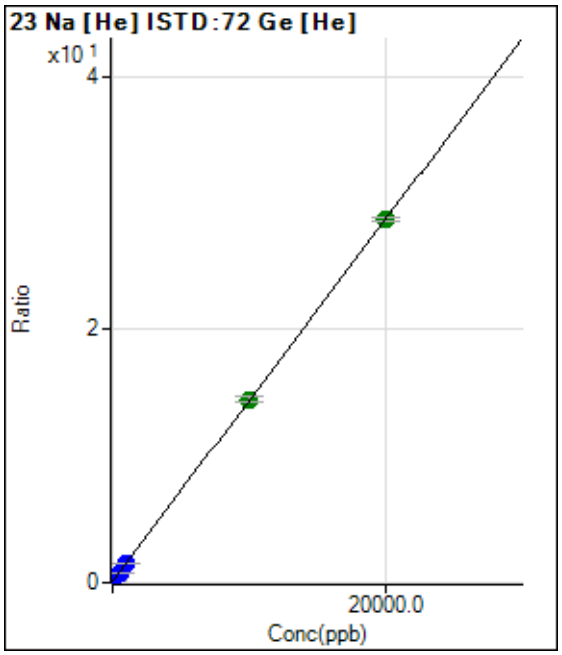


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	207926.86	0.3983	P	4.8
2	☐	200.000	211.457	1245731.54	2.3632	A	1.2
3	☐	500.000	503.219	2719331.05	5.0743	A	1.4
4	☐	1000.000	987.192	5086880.45	9.5716	A	3.0
5	☐	10000.00	10115.330	51061481.35	94.3929	A	0.5
6	☐	20000.00	19942.780	98021502.19	185.712	A	0.3
7	☐	100.000					

y = 0.0093 * x + 0.3983
R = 1.0000
DL = 6.125
BEC = 42.86

Weight: <None>
Min Conc: <None>

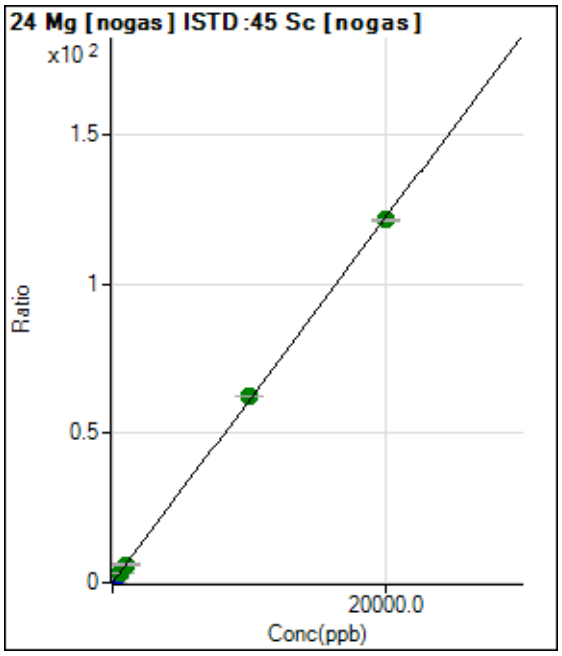
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28402.25	0.0991	P	4.1
2	☐	200.000	203.437	112477.86	0.3900	P	1.2
3	☐	500.000	502.914	236071.08	0.8183	P	0.1
4	☐	1000.000	965.764	431266.82	1.4801	P	0.6
5	☐	10000.00	10055.945	4168611.92	14.4793	A	3.1
6	☐	20000.00	19973.632	8000425.09	28.6618	A	0.9
7	☐	100.000					

y = 0.0014 * x + 0.0991
R = 1.0000
DL = 8.483
BEC = 69.28

Weight: <None>
Min Conc: <None>

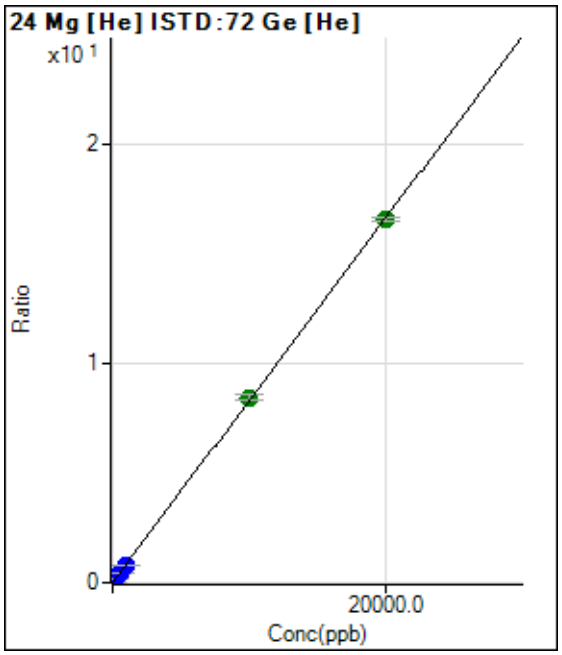


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16844.02	0.0322	P	10.5
2	☐	200.000	200.742	664488.05	1.2602	P	1.3
3	☐	500.000	520.902	1724622.63	3.2188	A	1.4
4	☐	1000.000	993.592	3247273.38	6.1103	A	3.1
5	☐	10000.00	10218.248	33831029.92	62.5404	A	0.8
6	☐	20000.00	19890.666	64237199.35	121.709	A	0.8
7	☐	100.000					

y = 0.0061 * x + 0.0322
R = 0.9999
DL = 1.662
BEC = 5.27

Weight: <None>
Min Conc: <None>

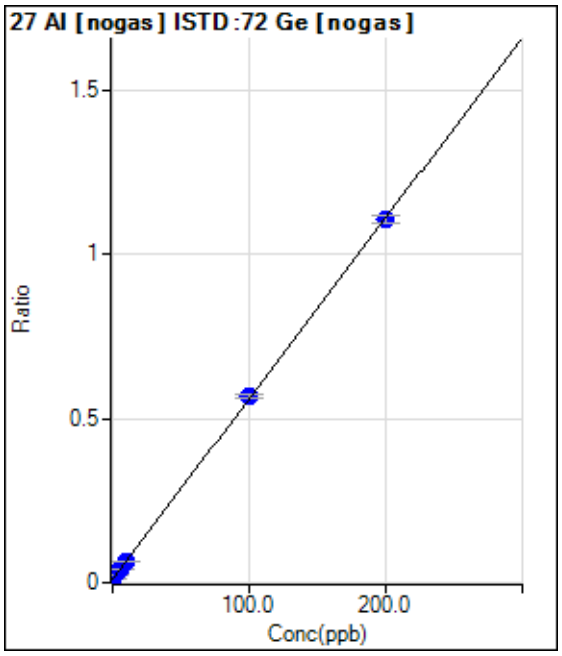
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1266.74	0.0044	P	6.2
2	☐	200.000	200.118	49175.41	0.1705	P	2.2
3	☐	500.000	498.122	120554.90	0.4179	P	1.1
4	☐	1000.000	954.371	232069.96	0.7965	P	0.7
5	☐	10000.00	10171.429	2431528.19	8.4467	A	3.8
6	☐	20000.00	19916.613	4615515.97	16.5352	A	1.1
7	☐	100.000					

y = 8.3000E-004 * x + 0.0044
R = 0.9999
DL = 0.9872
BEC = 5.323

Weight: <None>
Min Conc: <None>

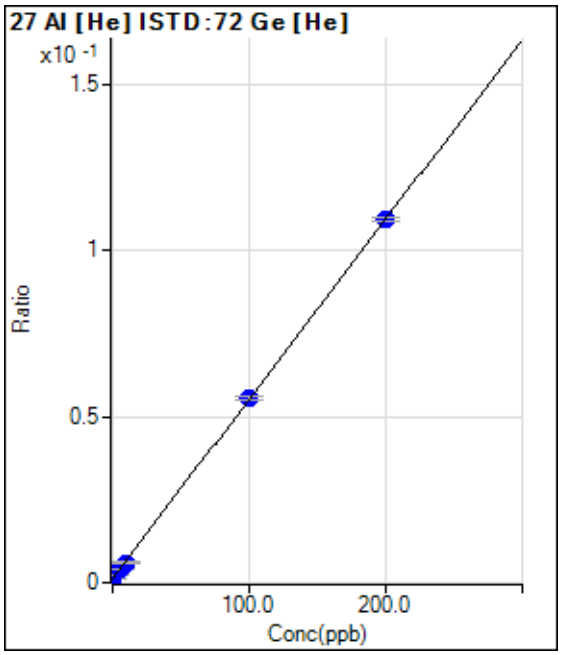


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7788.45	0.0106	P	6.0
2	☐	2.000	2.461	17738.81	0.0241	P	3.4
3	☐	5.000	5.625	31133.14	0.0415	P	1.7
4	☐	10.000	10.074	49690.13	0.0659	P	1.2
5	☐	100.000	101.577	437907.78	0.5682	P	1.5
6	☐	200.000	199.188	833704.83	1.1040	P	2.0
7	☐	1.000					

y = 0.0055 * x + 0.0106
R = 1.0000
DL = 0.3498
BEC = 1.931

Weight: <None>
Min Conc: <None>

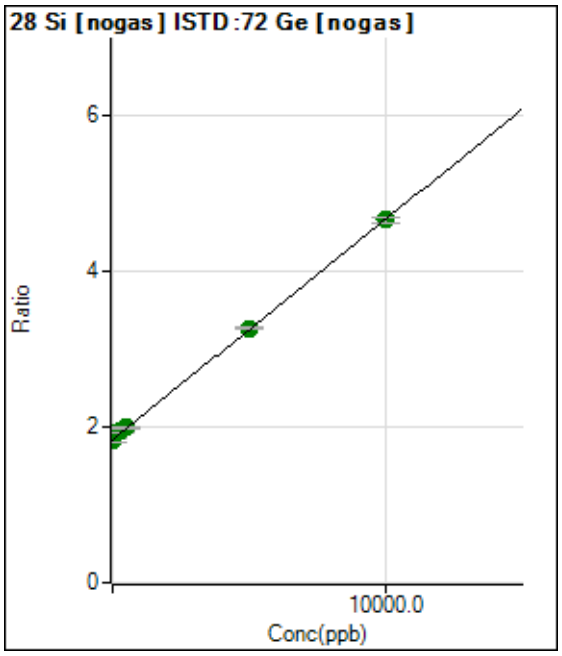
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.182	316.68	0.0011	P	12.1
2	☐	2.000	2.650	760.03	0.0026	P	9.0
3	☐	5.000	5.509	1206.73	0.0042	P	4.8
4	☐	10.000	8.710	1723.46	0.0059	P	7.1
5	☐	100.000	100.536	16007.24	0.0556	P	2.4
6	☐	200.000	199.777	30495.53	0.1093	P	1.0
7	☐	1.000					

y = 5.4084E-004 * x + 0.0012
R = 1.0000
DL = 0.7418
BEC = 2.225

Weight: <None>
Min Conc: <None>

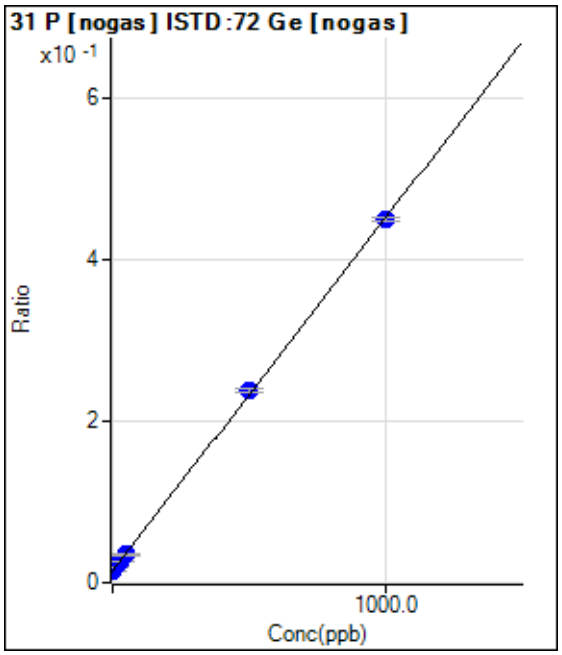


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1349953.00	1.8374	A	2.7
2	☐	100.000	346.756	1423983.05	1.9355	A	1.8
3	☐	250.000	394.738	1463031.12	1.9490	A	2.3
4	☐	500.000	530.856	1498445.13	1.9875	A	1.3
5	☐	5000.000	5054.751	2518043.82	3.2669	A	1.1
6	☐	10000.00	9964.996	3515944.74	4.6556	A	1.8
7	☐	50.000					

y = 2.8281E-004 * x + 1.8374
R = 0.9998
DL = 527.9
BEC = 6497

Weight: <None>
Min Conc: <None>

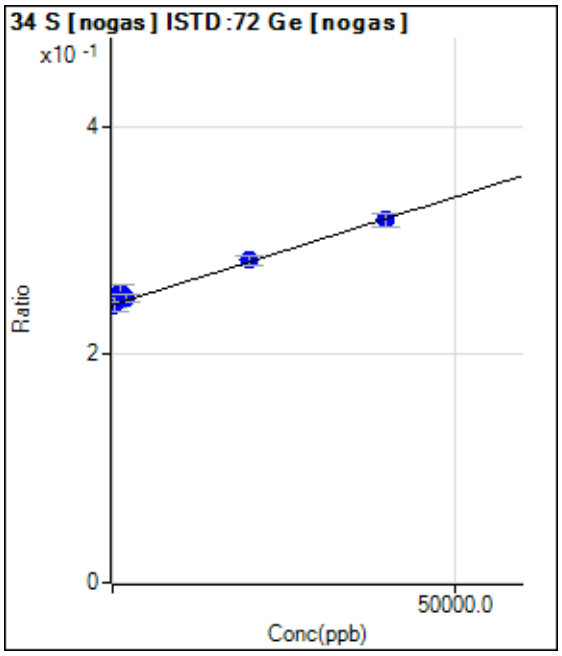
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10609.91	0.0144	P	3.2
2	☐	10.000	10.261	13918.83	0.0189	P	3.8
3	☐	25.000	26.049	19377.14	0.0258	P	0.8
4	☐	50.000	47.224	26426.07	0.0351	P	3.4
5	☐	500.000	510.810	183024.16	0.2375	P	1.7
6	☐	1000.000	994.705	338955.70	0.4488	P	1.2
7	☐	5.000					

y = 4.3666E-004 * x + 0.0144
R = 0.9999
DL = 3.195
BEC = 33.06

Weight: <None>
Min Conc: <None>

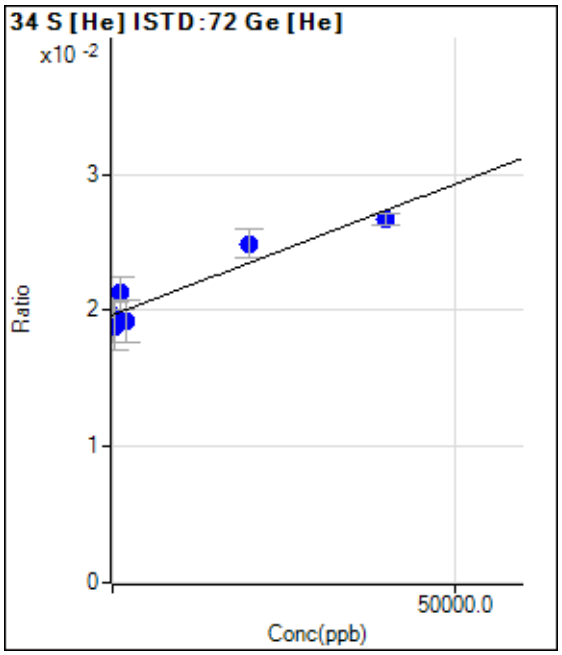


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	179025.97	0.2436	P	1.3
2	☐	400.000	45.869	179340.06	0.2437	P	4.7
3	☐	1000.000	6025.016	191457.36	0.2550	P	4.7
4	☐	2000.000	3024.236	187987.79	0.2494	P	2.4
5	☐	20000.00	20751.617	218018.81	0.2829	P	2.9
6	☐	40000.00	39450.895	240256.91	0.3182	P	3.4
7	☐	200.000					

y = 1.8897E-006 * x + 0.2436
R = 0.9924
DL = 5188
BEC = 1.289E+05

Weight: <None>
Min Conc: <None>

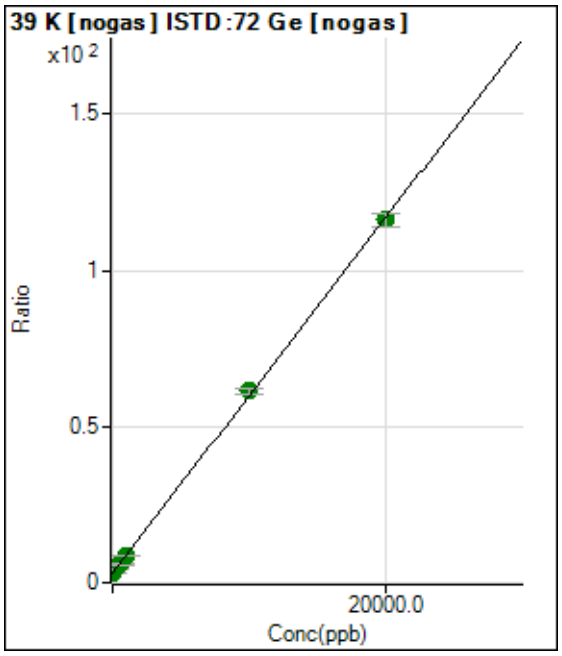
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5635.44	0.0197	P	20.4
2	☐	400.000	-4261.519	5435.45	0.0188	P	18.1
3	☐	1000.000	8347.581	6135.67	0.0213	P	11.4
4	☐	2000.000	-2188.020	5602.12	0.0192	P	16.2
5	☐	20000.00	27397.408	7169.33	0.0249	P	9.0
6	☐	40000.00	36373.623	7436.51	0.0266	P	3.1
7	☐	200.000					

y = 1.9202E-007 * x + 0.0197
R = 0.9432
DL = 6.254E+04
BEC = 1.024E+05

Weight: <None>
Min Conc: <None>

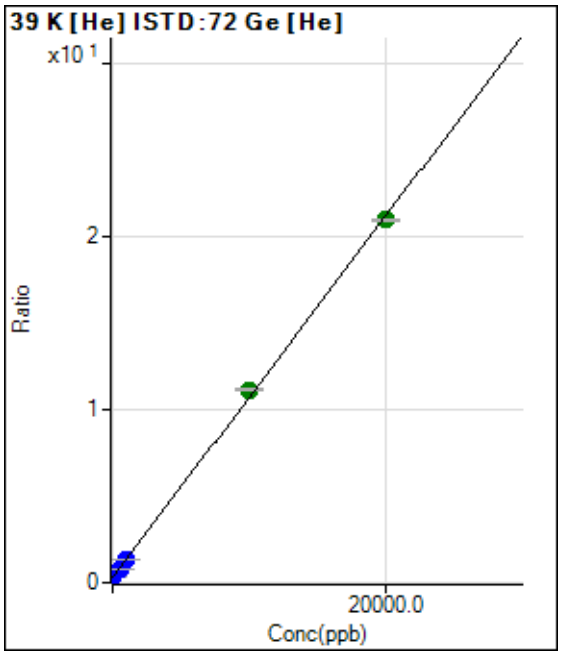


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2231882.80	3.0377	A	2.0
2	☐	200.000	202.738	3083692.00	4.1913	A	0.9
3	☐	500.000	495.204	4395437.08	5.8556	A	2.1
4	☐	1000.000	986.351	6520605.09	8.6505	A	2.9
5	☐	10000.00	10235.091	47220034.39	61.2801	A	2.6
6	☐	20000.00	19883.229	87710020.71	116.182	A	3.8
7	☐	100.000					

y = 0.0057 * x + 3.0377
R = 0.9999
DL = 31.45
BEC = 533.8

Weight: <None>
Min Conc: <None>

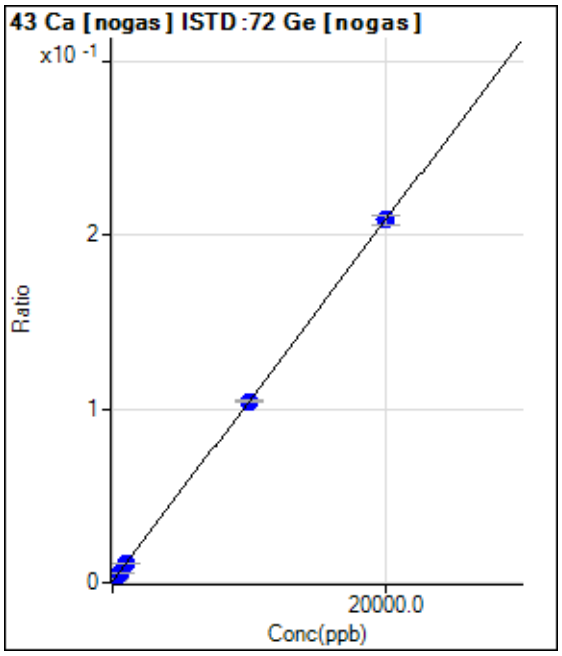
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	85120.75	0.2969	P	0.9
2	☐	200.000	202.751	146650.61	0.5086	P	2.0
3	☐	500.000	502.472	236996.12	0.8215	P	0.6
4	☐	1000.000	967.621	380792.09	1.3071	P	1.0
5	☐	10000.00	10386.567	3208349.53	11.1400	A	1.1
6	☐	20000.00	19808.246	5855495.54	20.9758	A	0.4
7	☐	100.000					

y = 0.0010 * x + 0.2969
R = 0.9997
DL = 7.715
BEC = 284.4

Weight: <None>
Min Conc: <None>

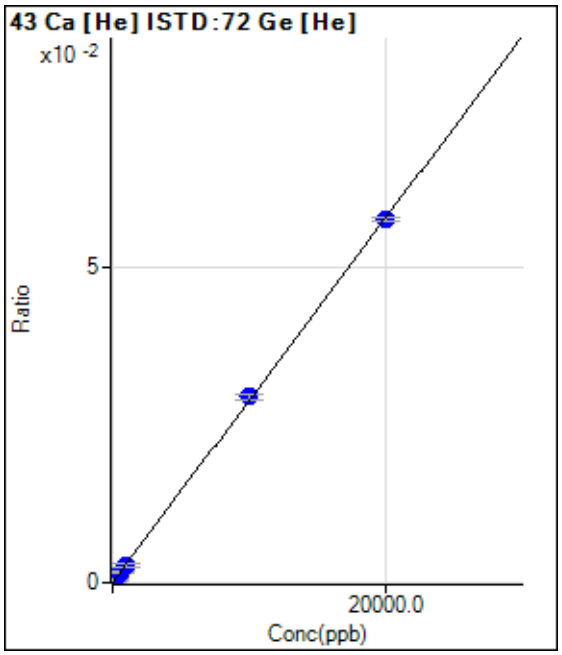


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	433.35	0.0006	P	8.3
2	☐	200.000	196.916	1940.13	0.0026	P	7.8
3	☐	500.000	507.367	4400.62	0.0059	P	5.9
4	☐	1000.000	993.209	8225.31	0.0109	P	4.2
5	☐	10000.00	9959.865	80246.09	0.1041	P	0.9
6	☐	20000.00	20020.254	157562.84	0.2087	P	2.9
7	☐	100.000					

y = 1.0394E-005 * x + 5.8979E-004
R = 1.0000
DL = 14.05
BEC = 56.74

Weight: <None>
Min Conc: <None>

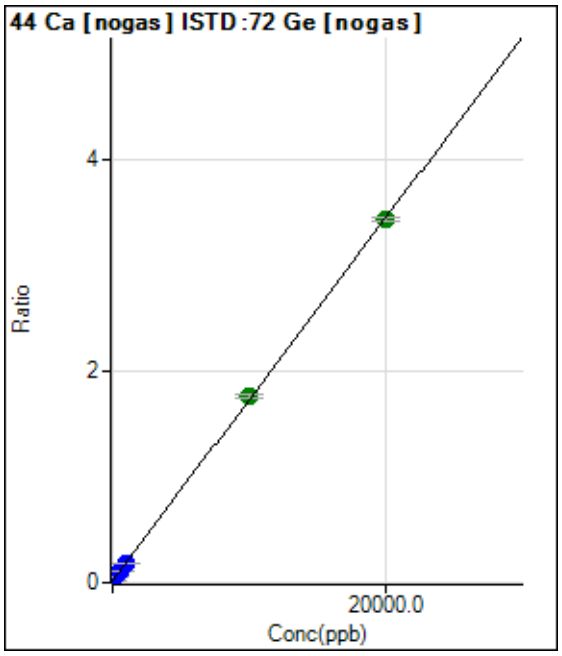
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	200.000	183.896	160.00	0.0006	P	60.0
3	☐	500.000	539.747	456.68	0.0016	P	12.1
4	☐	1000.000	937.705	796.70	0.0027	P	19.4
5	☐	10000.00	10181.155	8475.48	0.0294	P	3.8
6	☐	20000.00	19911.704	16067.33	0.0576	P	1.1
7	☐	100.000					

y = 2.8896E-006 * x + 2.3286E-005
R = 0.9999
DL = 20.94
BEC = 8.059

Weight: <None>
Min Conc: <None>

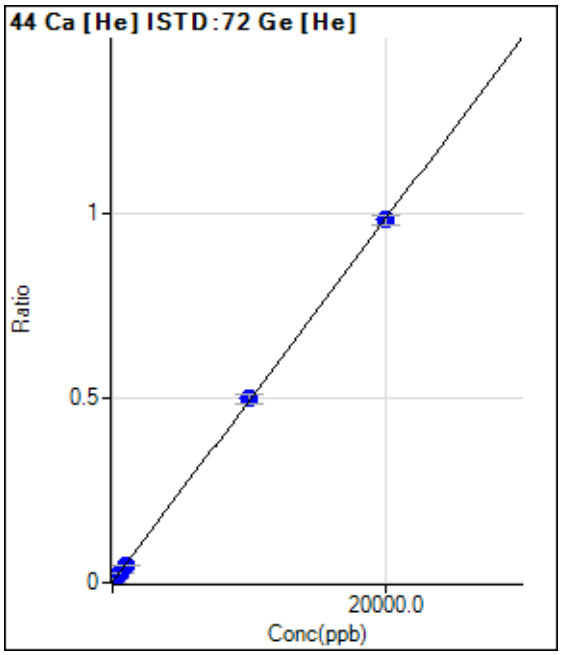


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12381.08	0.0168	P	3.3
2	☐	200.000	203.995	38073.46	0.0518	P	3.2
3	☐	500.000	510.243	78170.20	0.1041	P	2.9
4	☐	1000.000	945.128	134597.98	0.1786	P	2.7
5	☐	10000.00	10182.070	1355622.22	1.7590	A	1.5
6	☐	20000.00	19911.412	2586024.07	3.4237	A	1.1
7	☐	100.000					

y = 1.7110E-004 * x + 0.0168
R = 0.9999
DL = 9.728
BEC = 98.46

Weight: <None>
Min Conc: <None>

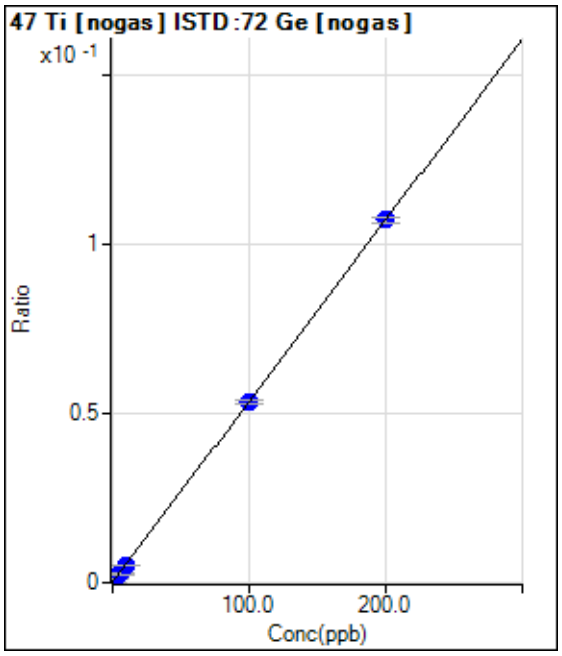
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	376.68	0.0013	P	10.8
2	☐	200.000	219.599	3487.07	0.0121	P	8.3
3	☐	500.000	489.904	7314.94	0.0254	P	8.0
4	☐	1000.000	951.389	13985.54	0.0480	P	1.9
5	☐	10000.00	10097.308	142994.14	0.4968	P	4.8
6	☐	20000.00	19953.833	273679.49	0.9805	P	2.3
7	☐	100.000					

y = 4.9074E-005 * x + 0.0013
R = 1.0000
DL = 8.661
BEC = 26.77

Weight: <None>
Min Conc: <None>

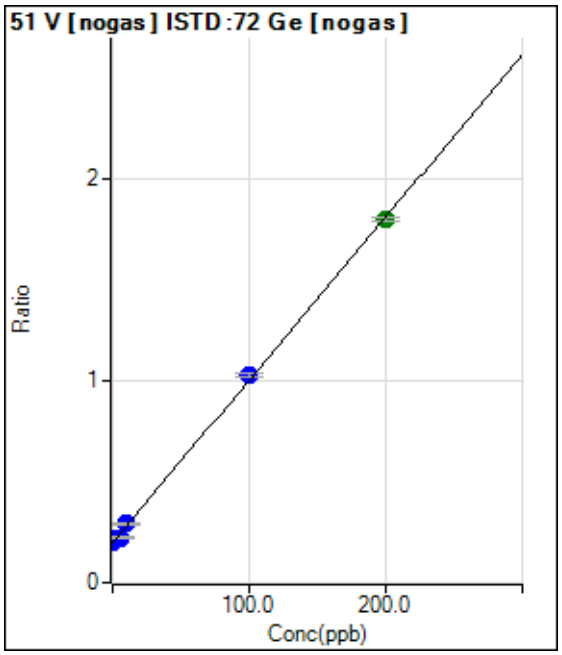


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	56.0
2	☐	2.000	1.913	826.70	0.0011	P	24.5
3	☐	5.000	4.609	1926.80	0.0026	P	3.6
4	☐	10.000	9.388	3863.82	0.0051	P	3.7
5	☐	100.000	99.667	41200.32	0.0535	P	1.9
6	☐	200.000	200.208	81037.18	0.1073	P	1.3
7	☐	1.000					

y = 5.3532E-004 * x + 9.9532E-005
R = 1.0000
DL = 0.3123
BEC = 0.1859

Weight: <None>
Min Conc: <None>

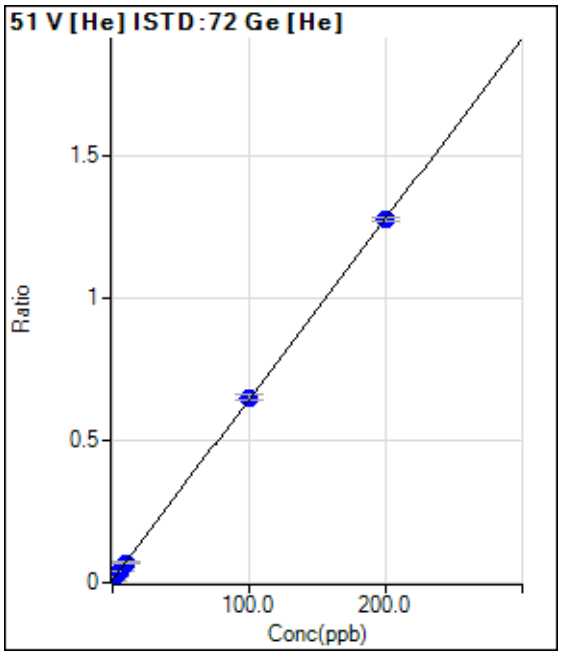
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146280.20	0.1991	P	3.3
2	☐	2.000	2.628	162049.06	0.2203	P	5.6
3	☐	5.000	2.959	167363.69	0.2230	P	1.3
4	☐	10.000	11.459	219785.75	0.2916	P	4.8
5	☐	100.000	103.154	795734.69	1.0320	P	1.4
6	☐	200.000	198.395	1360752.99	1.8011	A	1.1
7	☐	1.000					

y = 0.0081 * x + 0.1991
R = 0.9997
DL = 2.436
BEC = 24.65

Weight: <None>
Min Conc: <None>

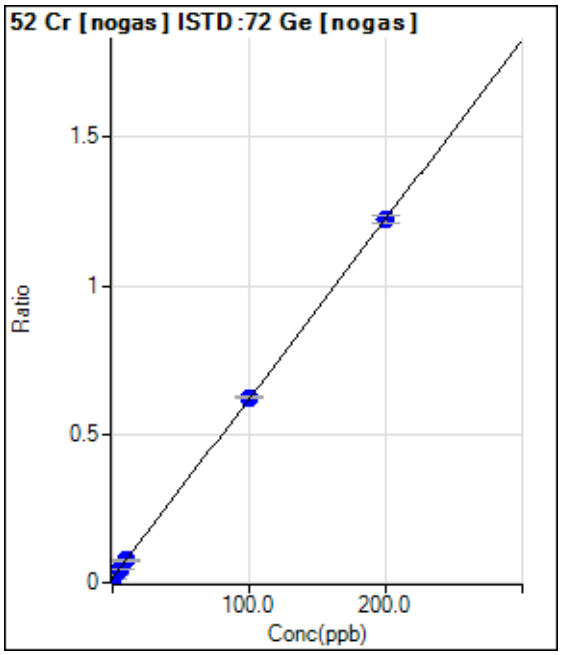


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.021	2744.22	0.0096	P	1.3
2	☐	2.000	1.935	6329.78	0.0220	P	2.0
3	☐	5.000	4.840	11639.73	0.0403	P	1.0
4	☐	10.000	9.609	20548.95	0.0705	P	1.3
5	☐	100.000	101.226	187302.65	0.6505	P	2.6
6	☐	200.000	199.411	355078.58	1.2721	P	1.1
7	☐	1.000					

y = 0.0063 * x + 0.0097
R = 1.0000
DL = 0.05685
BEC = 1.533

Weight: <None>
Min Conc: <None>

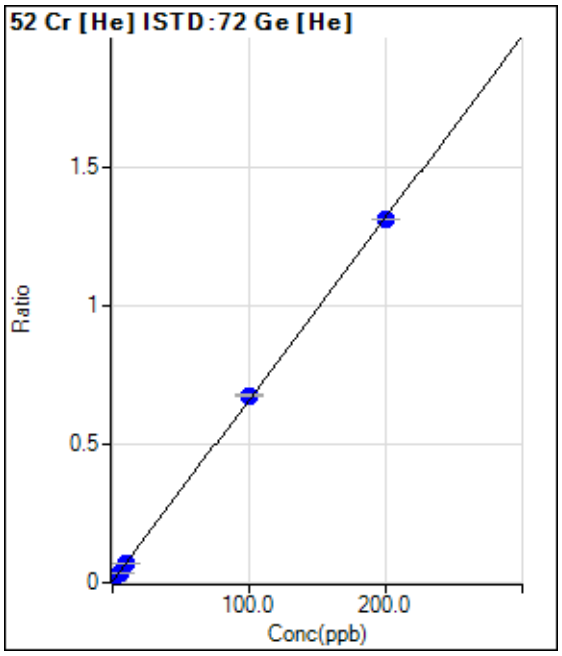
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10743.44	0.0146	P	5.4
2	☐	2.000	2.018	19734.45	0.0268	P	1.7
3	☐	5.000	5.071	34002.17	0.0453	P	2.5
4	☐	10.000	10.068	56953.15	0.0755	P	2.9
5	☐	100.000	100.768	481133.80	0.6241	P	0.5
6	☐	200.000	199.611	922917.25	1.2220	P	2.2
7	☐	1.000					

y = 0.0060 * x + 0.0146
R = 1.0000
DL = 0.3934
BEC = 2.417

Weight: <None>
Min Conc: <None>

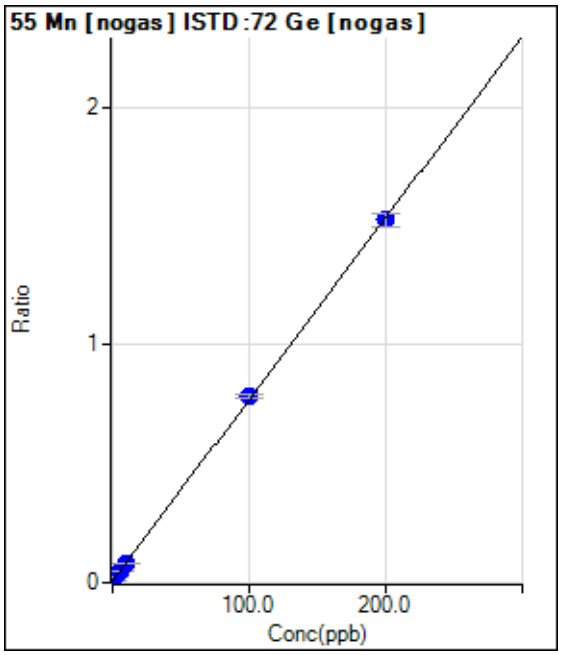


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1390.08	0.0048	P	9.5
2	☐	2.000	1.996	5177.49	0.0179	P	5.7
3	☐	5.000	4.915	10703.38	0.0371	P	3.0
4	☐	10.000	9.479	19530.93	0.0670	P	2.0
5	☐	100.000	102.339	194791.05	0.6764	P	1.5
6	☐	200.000	198.859	365600.89	1.3097	P	0.2
7	☐	1.000					

y = 0.0066 * x + 0.0048
R = 0.9999
DL = 0.2101
BEC = 0.739

Weight: <None>
Min Conc: <None>

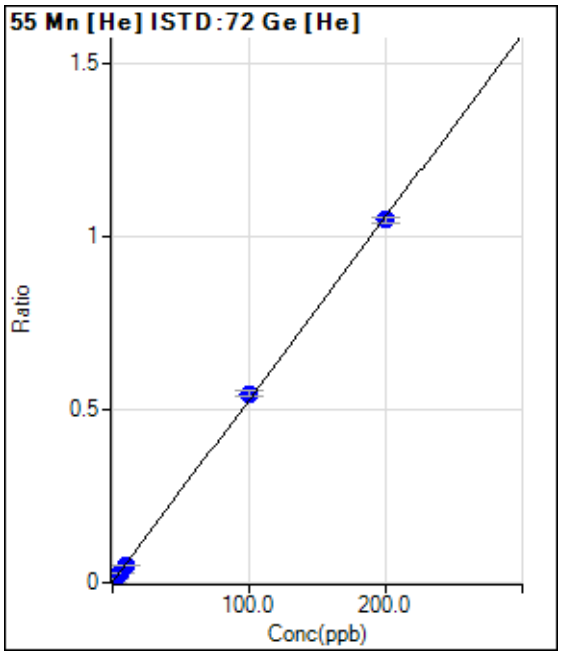
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5187.51	0.0071	P	6.0
2	☐	2.000	2.364	18459.74	0.0251	P	5.3
3	☐	5.000	5.198	35071.26	0.0467	P	2.9
4	☐	10.000	9.838	61899.48	0.0821	P	3.5
5	☐	100.000	102.013	605229.55	0.7854	P	2.1
6	☐	200.000	198.993	1151549.28	1.5253	P	3.7
7	☐	1.000					

y = 0.0076 * x + 0.0071
R = 0.9999
DL = 0.1656
BEC = 0.9251

Weight: <None>
Min Conc: <None>

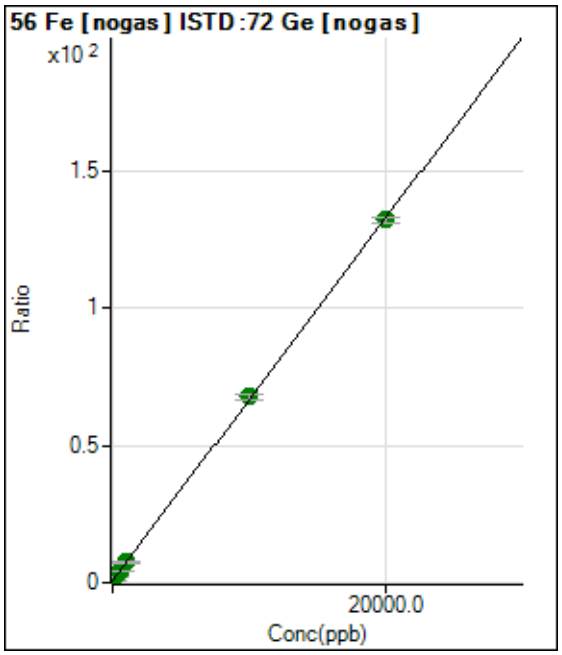


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	396.68	0.0014	P	12.7
2	☐	2.000	2.185	3717.12	0.0129	P	4.6
3	☐	5.000	5.358	8538.85	0.0296	P	2.8
4	☐	10.000	9.626	15169.94	0.0521	P	1.6
5	☐	100.000	103.164	156800.68	0.5446	P	3.2
6	☐	200.000	198.426	292055.78	1.0463	P	1.7
7	☐	1.000					

y = 0.0053 * x + 0.0014
R = 0.9998
DL = 0.09981
BEC = 0.2628

Weight: <None>
Min Conc: <None>

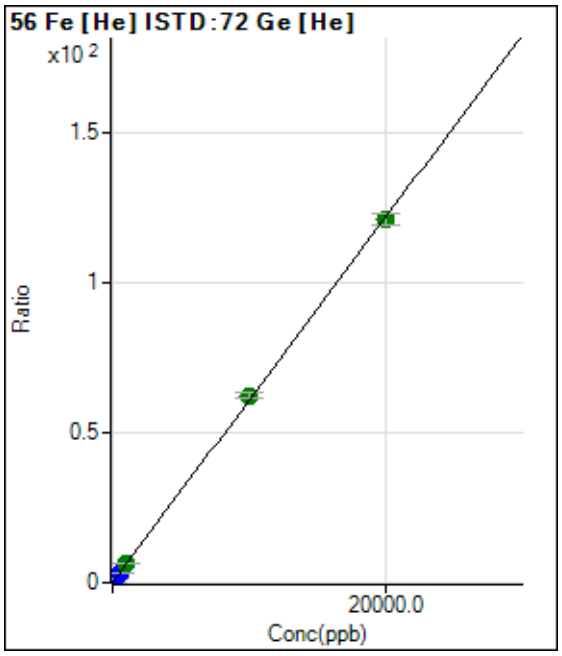
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	561318.45	0.7639	P	1.3
2	☐	200.000	227.987	1667595.09	2.2665	A	0.4
3	☐	500.000	519.455	3143387.63	4.1876	A	1.3
4	☐	1000.000	1003.072	5558165.62	7.3750	A	4.4
5	☐	10000.00	10163.708	52205393.87	67.7509	A	2.8
6	☐	20000.00	19917.226	99710800.15	132.034	A	1.8
7	☐	100.000					

y = 0.0066 * x + 0.7639
R = 1.0000
DL = 4.546
BEC = 115.9

Weight: <None>
Min Conc: <None>

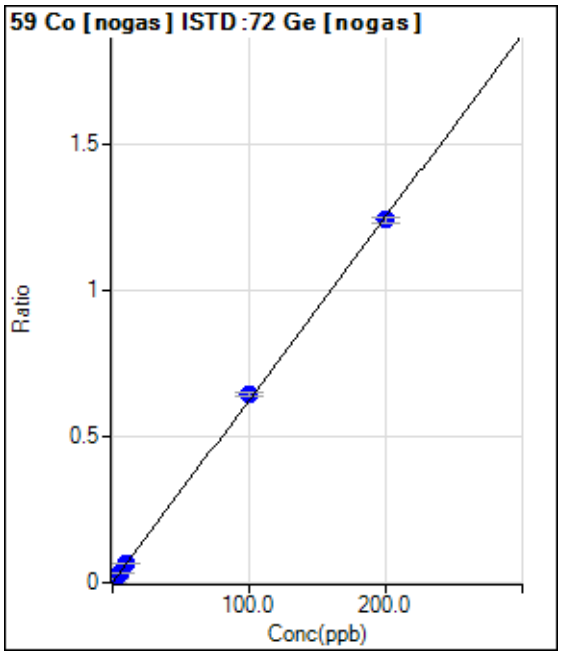


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13465.26	0.0470	P	4.4
2	☐	200.000	198.871	362766.60	1.2579	P	1.7
3	☐	500.000	491.937	877723.76	3.0423	P	0.7
4	☐	1000.000	1008.694	1803121.59	6.1887	A	0.7
5	☐	10000.00	10258.547	17994906.40	62.5092	A	3.6
6	☐	20000.00	19870.505	33779704.50	121.034	A	3.2
7	☐	100.000					

y = 0.0061 * x + 0.0470
R = 0.9999
DL = 1.014
BEC = 7.714

Weight: <None>
Min Conc: <None>

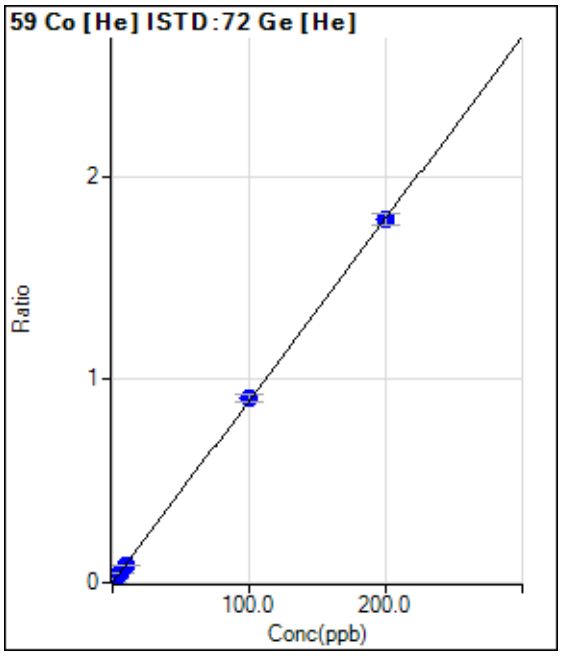
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	276.68	0.0004	P	12.1
2	☐	2.000	2.146	10166.40	0.0138	P	6.3
3	☐	5.000	5.139	24446.84	0.0326	P	1.4
4	☐	10.000	10.144	48174.78	0.0639	P	4.0
5	☐	100.000	102.964	497314.95	0.6453	P	2.5
6	☐	200.000	198.506	939432.93	1.2438	P	1.2
7	☐	1.000					

y = 0.0063 * x + 3.7636E-004
R = 0.9998
DL = 0.0218
BEC = 0.06008

Weight: <None>
Min Conc: <None>

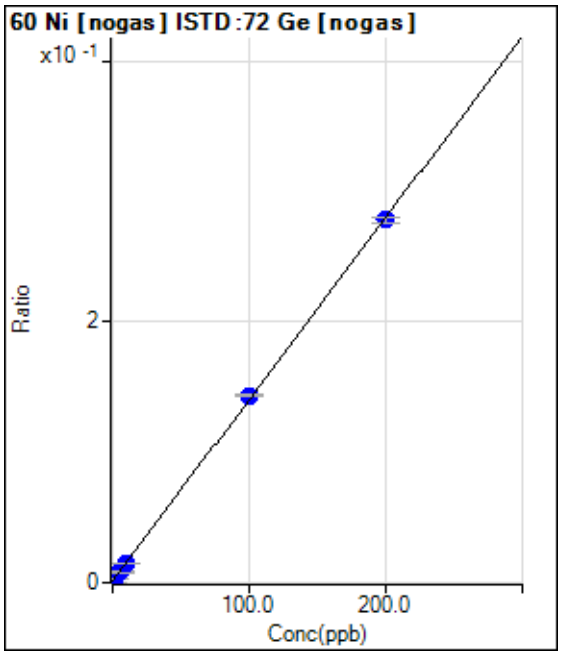


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0004	P	13.2
2	☐	2.000	1.939	5120.83	0.0178	P	3.7
3	☐	5.000	4.971	12954.89	0.0449	P	5.7
4	☐	10.000	9.587	25124.57	0.0862	P	2.0
5	☐	100.000	101.388	261458.80	0.9082	P	3.2
6	☐	200.000	199.328	498184.05	1.7850	P	3.2
7	☐	1.000					

y = 0.0090 * x + 3.9523E-004
R = 1.0000
DL = 0.01753
BEC = 0.04414

Weight: <None>
Min Conc: <None>

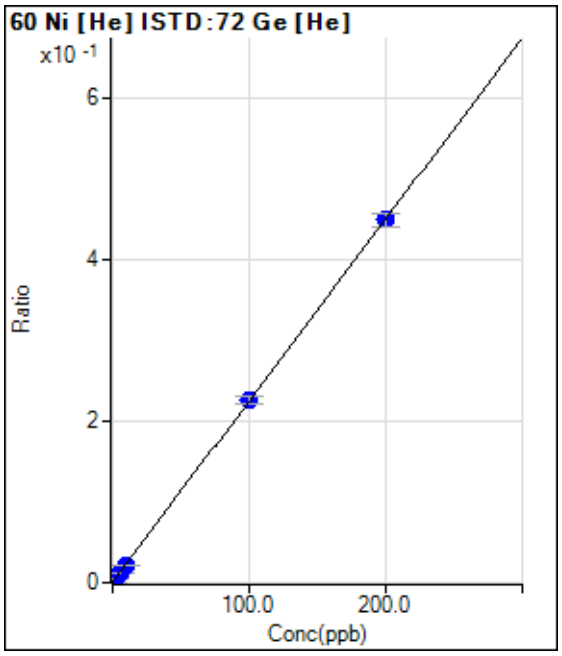
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.581	340.01	0.0005	P	27.5
2	☐	2.000	1.698	2676.92	0.0036	P	2.1
3	☐	5.000	5.036	6221.18	0.0083	P	4.6
4	☐	10.000	9.768	11223.67	0.0149	P	1.8
5	☐	100.000	102.132	110652.26	0.1436	P	1.1
6	☐	200.000	198.948	210289.25	0.2784	P	1.7
7	☐	1.000					

y = 0.0014 * x + 0.0013
R = 0.9999
DL = 0.2747
BEC = 0.9139

Weight: <None>
Min Conc: <None>

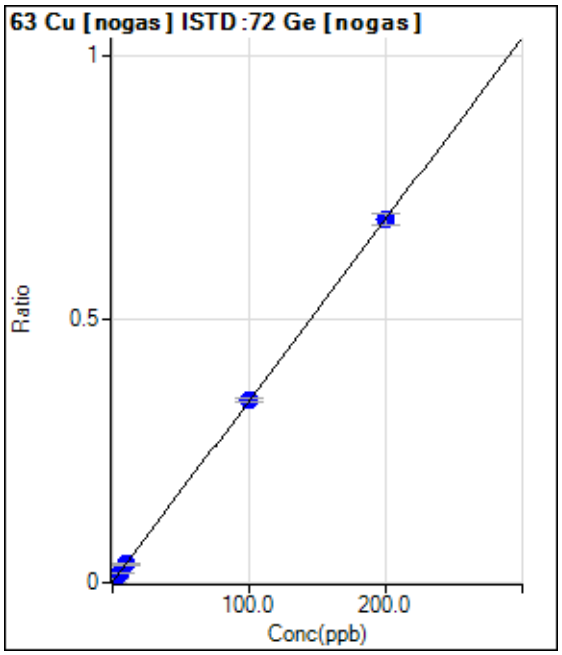


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.033	156.67	0.0005	P	42.4
2	☐	2.000	2.109	1543.43	0.0054	P	1.7
3	☐	5.000	5.075	3463.74	0.0120	P	9.8
4	☐	10.000	9.520	6401.22	0.0220	P	4.7
5	☐	100.000	100.614	65151.65	0.2263	P	4.2
6	☐	200.000	199.714	125216.96	0.4487	P	3.6
7	☐	1.000					

y = 0.0022 * x + 6.1959E-004
R = 1.0000
DL = 0.3101
BEC = 0.2762

Weight: <None>
Min Conc: <None>

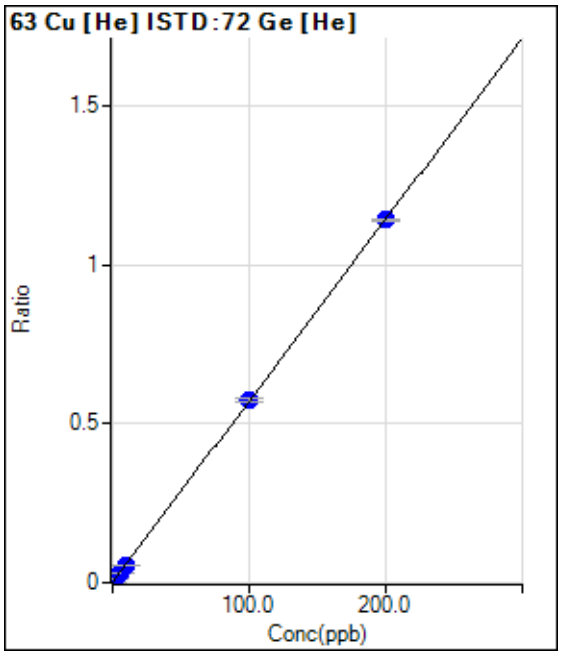
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	730.03	0.0010	P	5.7
2	☐	2.000	2.361	6714.70	0.0091	P	1.4
3	☐	5.000	5.149	14055.75	0.0187	P	5.5
4	☐	10.000	9.845	26322.96	0.0349	P	2.8
5	☐	100.000	100.706	268107.58	0.3479	P	2.2
6	☐	200.000	199.647	520036.93	0.6888	P	3.3
7	☐	1.000					

y = 0.0034 * x + 9.9342E-004
R = 1.0000
DL = 0.04948
BEC = 0.2884

Weight: <None>
Min Conc: <None>

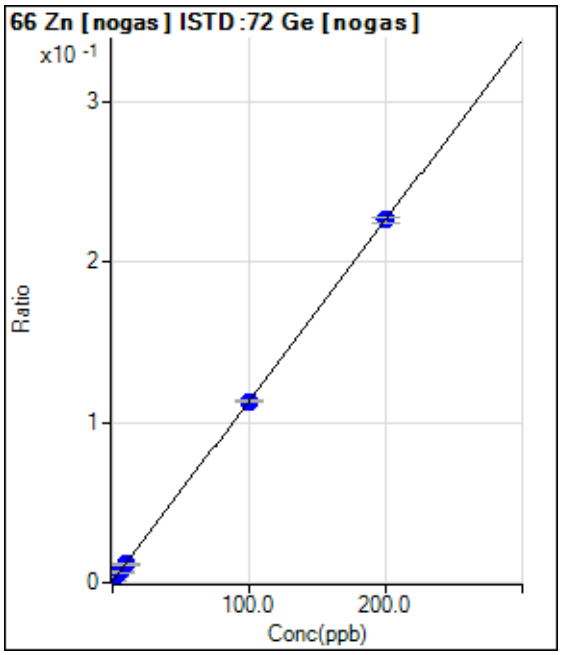


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.089	380.01	0.0013	P	18.2
2	☐	2.000	2.173	3817.15	0.0132	P	2.9
3	☐	5.000	4.935	8372.12	0.0290	P	6.4
4	☐	10.000	9.576	16180.88	0.0555	P	4.1
5	☐	100.000	100.412	165476.55	0.5747	P	2.5
6	☐	200.000	199.815	318992.08	1.1428	P	0.8
7	☐	1.000					

y = 0.0057 * x + 8.1621E-004
R = 1.0000
DL = 0.1266
BEC = 0.1428

Weight: <None>
Min Conc: <None>

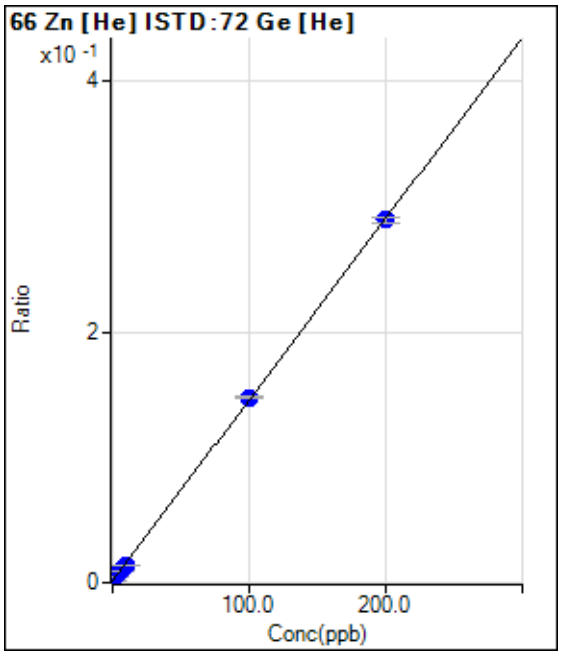
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.134	506.68	0.0007	P	13.8
2	☐	2.000	2.483	2676.91	0.0036	P	5.0
3	☐	5.000	5.190	5020.81	0.0067	P	3.9
4	☐	10.000	9.547	8748.95	0.0116	P	5.2
5	☐	100.000	99.800	87349.13	0.1133	P	0.2
6	☐	200.000	200.113	170961.83	0.2264	P	1.7
7	☐	1.000					

y = 0.0011 * x + 8.4008E-004
R = 1.0000
DL = 0.2529
BEC = 0.7454

Weight: <None>
Min Conc: <None>

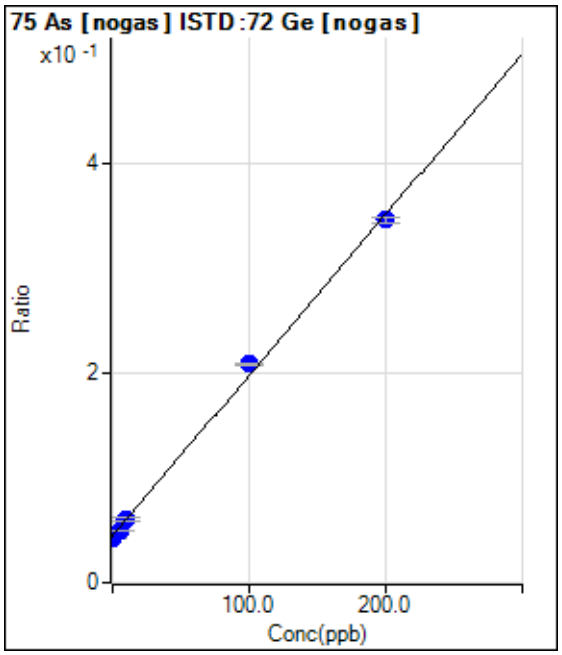


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.134	323.34	0.0011	P	8.8
2	☐	2.000	2.014	1220.07	0.0042	P	12.6
3	☐	5.000	5.367	2620.25	0.0091	P	4.4
4	☐	10.000	9.023	4187.23	0.0144	P	2.2
5	☐	100.000	101.381	42604.44	0.1479	P	1.7
6	☐	200.000	199.349	80838.95	0.2896	P	1.8
7	☐	1.000					

y = 0.0014 * x + 0.0013
R = 0.9999
DL = 0.2063
BEC = 0.9138

Weight: <None>
Min Conc: <None>

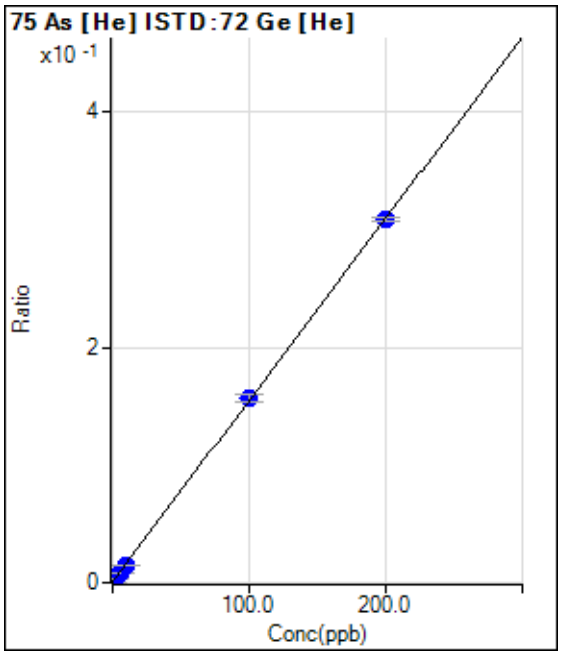
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.129	31691.91	0.0431	P	1.7
2	☐	2.000	0.913	34036.20	0.0463	P	0.6
3	☐	5.000	3.041	37172.52	0.0495	P	2.7
4	☐	10.000	10.765	46250.41	0.0614	P	5.6
5	☐	100.000	106.778	160873.57	0.2087	P	1.5
6	☐	200.000	196.633	261698.18	0.3465	P	1.8
7	☐	1.000					

y = 0.0015 * x + 0.0449
R = 0.9990
DL = 1.412
BEC = 29.24

Weight: <None>
Min Conc: <None>

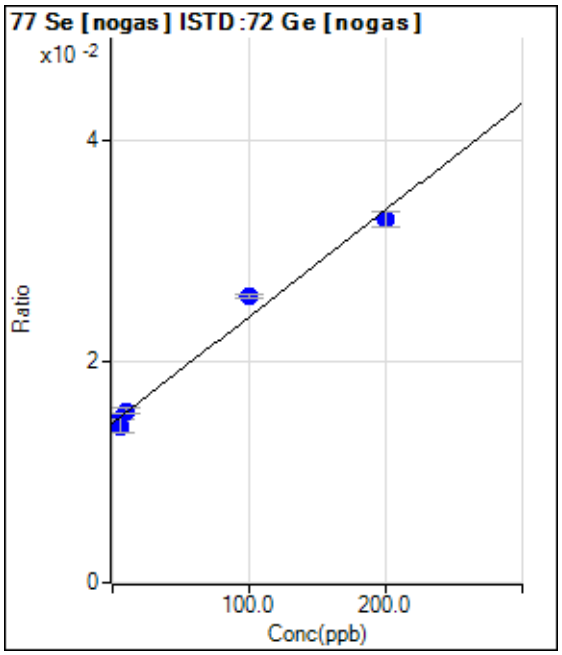


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0007	P	25.0
2	☐	2.000	2.062	1118.93	0.0039	P	5.8
3	☐	5.000	4.880	2373.51	0.0082	P	1.8
4	☐	10.000	9.354	4408.34	0.0151	P	2.9
5	☐	100.000	101.319	45203.77	0.1570	P	3.6
6	☐	200.000	199.375	86056.18	0.3083	P	1.2
7	☐	1.000					

y = 0.0015 * x + 6.9734E-004
R = 1.0000
DL = 0.3385
BEC = 0.452

Weight: <None>
Min Conc: <None>

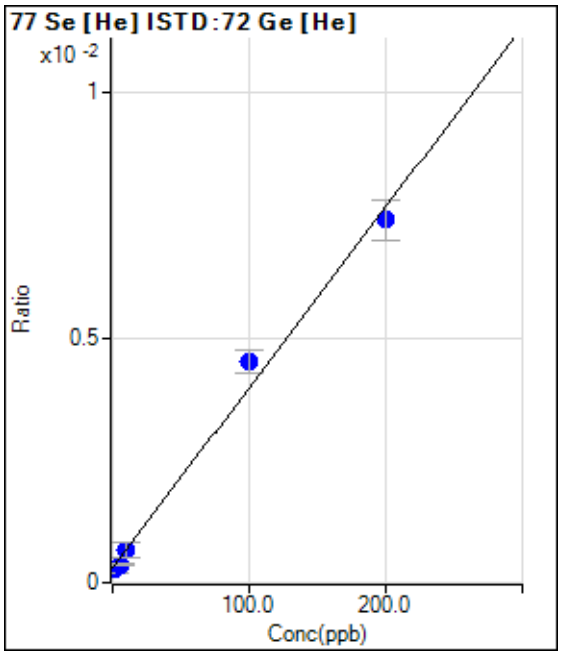
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10603.42	0.0144	P	2.6
2	☐	2.000	-1.901	10479.97	0.0142	P	4.1
3	☐	5.000	-3.160	10596.71	0.0141	P	9.1
4	☐	10.000	11.244	11697.40	0.0155	P	3.7
5	☐	100.000	119.198	19978.27	0.0259	P	1.4
6	☐	200.000	190.582	24767.59	0.0328	P	4.4
7	☐	1.000					

y = 9.6363E-005 * x + 0.0144
R = 0.9920
DL = 11.61
BEC = 149.7

Weight: <None>
Min Conc: <None>

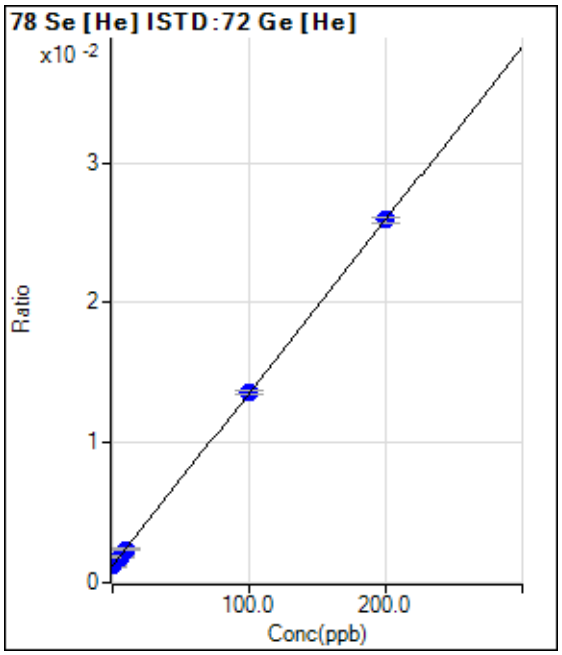


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.954	76.67	0.0003	P	37.4
2	☐	2.000	-0.702	80.00	0.0003	P	49.3
3	☐	5.000	1.831	106.67	0.0004	P	14.4
4	☐	10.000	9.550	190.01	0.0007	P	46.5
5	☐	100.000	114.294	1296.74	0.0045	P	9.9
6	☐	200.000	192.982	2066.83	0.0074	P	11.5
7	☐	1.000					

y = 3.6808E-005 * x + 3.0237E-004
R = 0.9960
DL = 8.142
BEC = 8.215

Weight: <None>
Min Conc: <None>

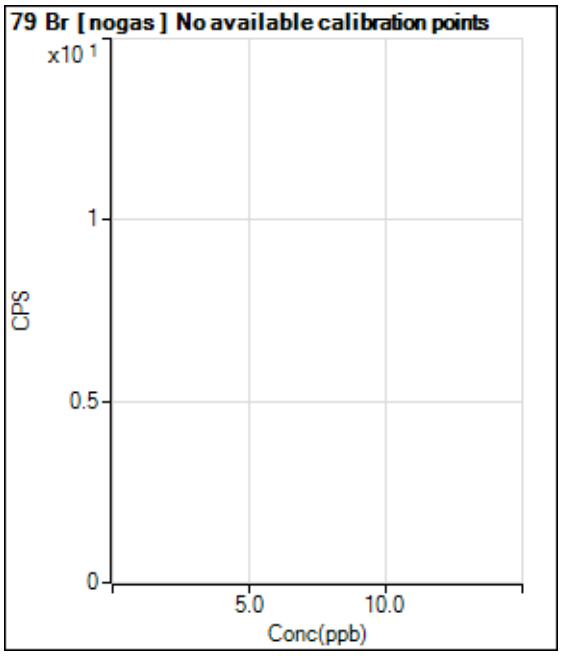
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	346.01	0.0012	P	11.4
2	☐	2.000	2.488	436.68	0.0015	P	0.9
3	☐	5.000	4.934	524.01	0.0018	P	4.7
4	☐	10.000	9.514	694.02	0.0024	P	3.1
5	☐	100.000	100.072	3908.44	0.0136	P	1.6
6	☐	200.000	199.985	7234.16	0.0259	P	1.4
7	☐	1.000					

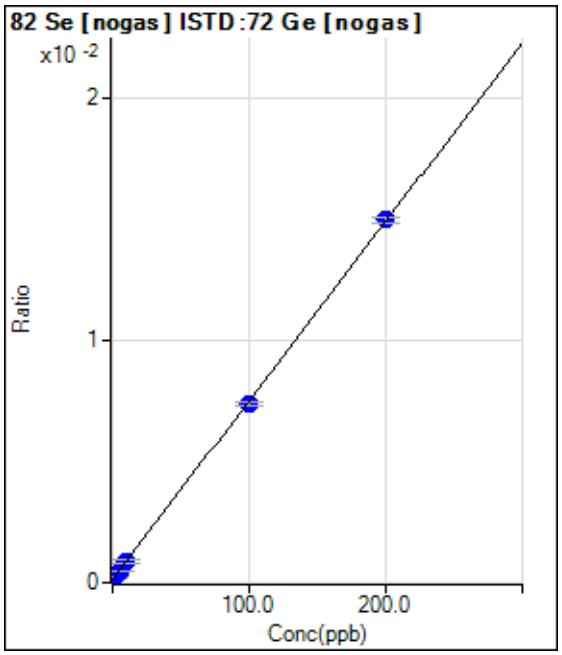
y = 1.2356E-004 * x + 0.0012
R = 1.0000
DL = 3.332
BEC = 9.766

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

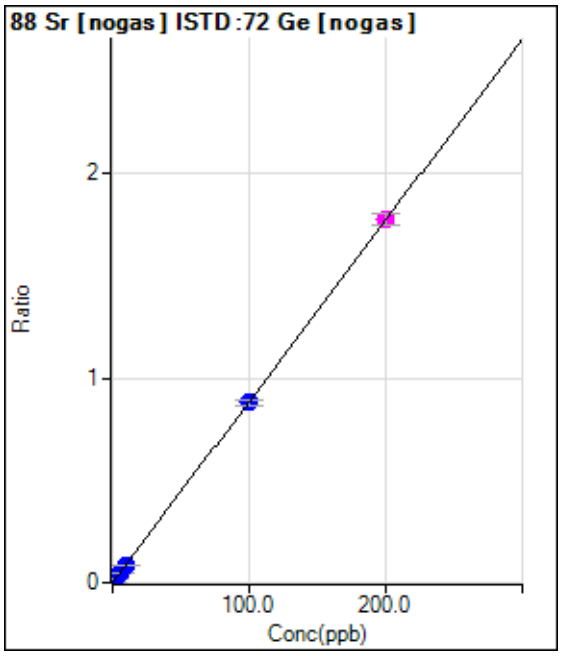
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0001	P	4.8
2	☐	2.000	1.714	196.67	0.0003	P	23.9
3	☐	5.000	4.587	360.01	0.0005	P	4.5
4	☐	10.000	10.086	666.69	0.0009	P	21.5
5	☐	100.000	97.898	5684.37	0.0074	P	2.3
6	☐	200.000	201.060	11330.53	0.0150	P	1.7
7	☐	1.000					

y = 7.3892E-005 * x + 1.4059E-004
R = 0.9999
DL = 0.2756
BEC = 1.903

Weight: <None>
Min Conc: <None>

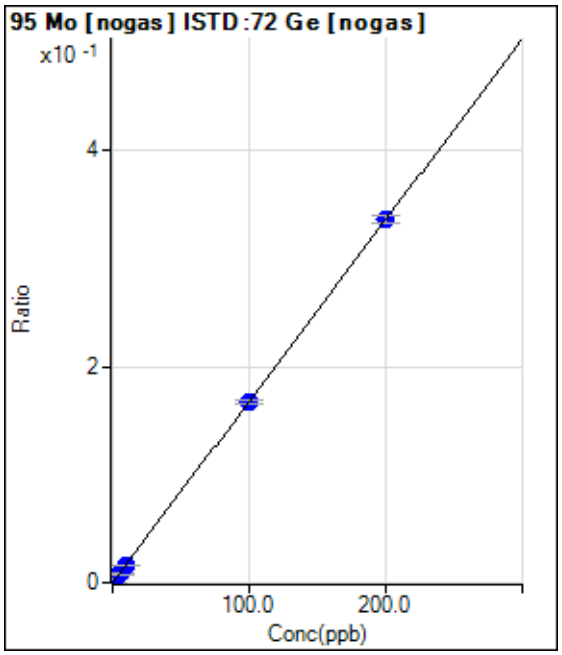


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	203.34	0.0003	P	2.1
2	☐	2.000	2.090	13805.66	0.0188	P	3.4
3	☐	5.000	4.968	33198.42	0.0442	P	0.8
4	☐	10.000	9.702	64903.38	0.0861	P	2.6
5	☐	100.000	99.367	677567.36	0.8793	P	3.1
6	☐	200.000	200.331	1338355.86	1.7724	M	3.1
7	☐	1.000					

y = 0.0088 * x + 2.7669E-004
R = 1.0000
DL = 0.001961
BEC = 0.03128

Weight: <None>
Min Conc: <None>

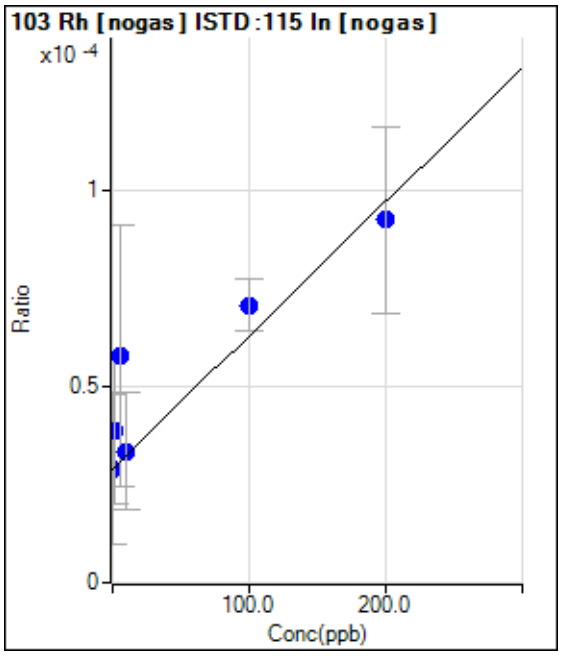
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	53.2
2	☐	2.000	2.043	2580.24	0.0035	P	2.2
3	☐	5.000	4.737	6024.50	0.0080	P	7.4
4	☐	10.000	9.563	12164.46	0.0161	P	4.8
5	☐	100.000	99.875	129259.46	0.1677	P	1.9
6	☐	200.000	200.091	253699.87	0.3360	P	2.0
7	☐	1.000					

y = 0.0017 * x + 7.6926E-005
R = 1.0000
DL = 0.0731
BEC = 0.04583

Weight: <None>
Min Conc: <None>

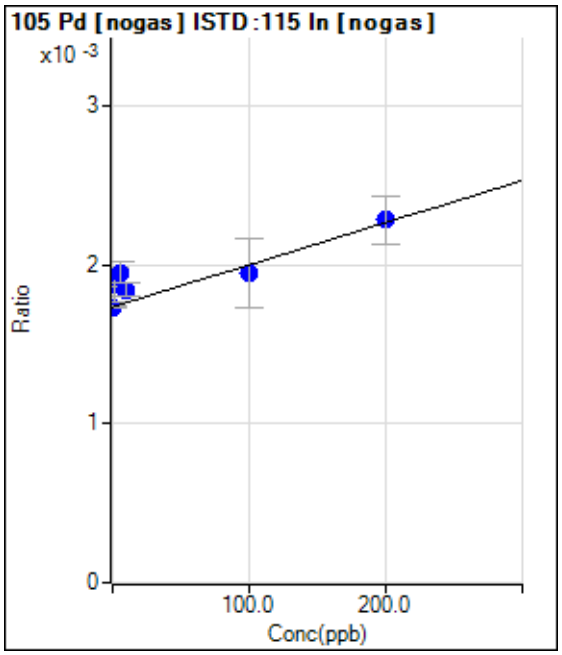


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	131.
2	☐	2.000	28.650	26.67	0.0000	P	95.3
3	☐	5.000	84.275	40.00	0.0001	P	115.
4	☐	10.000	12.891	23.33	0.0000	P	89.2
5	☐	100.000	122.609	50.00	0.0001	P	19.2
6	☐	200.000	186.303	63.33	0.0001	P	51.7
7	☐	1.000					

y = 3.3983E-007 * x + 2.8994E-005
R = 0.9161
DL = 336.7
BEC = 85.32

Weight: <None>
Min Conc: <None>

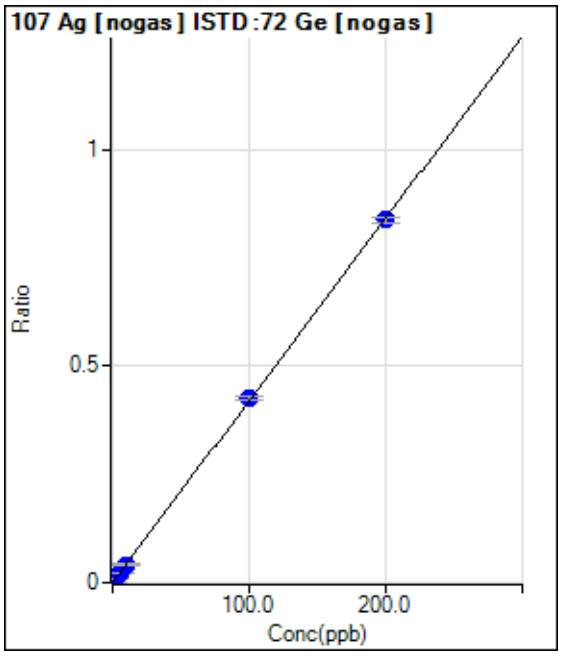
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1190.06	0.0017	P	1.2
2	☐	2.000	54.902	1303.41	0.0019	P	11.6
3	☐	5.000	78.978	1363.41	0.0019	P	7.9
4	☐	10.000	40.950	1300.08	0.0018	P	4.5
5	☐	100.000	79.537	1370.09	0.0019	P	22.7
6	☐	200.000	206.306	1570.10	0.0023	P	13.5
7	☐	1.000					

y = 2.6526E-006 * x + 0.0017
R = 0.9028
DL = 24.27
BEC = 653.8

Weight: <None>
Min Conc: <None>

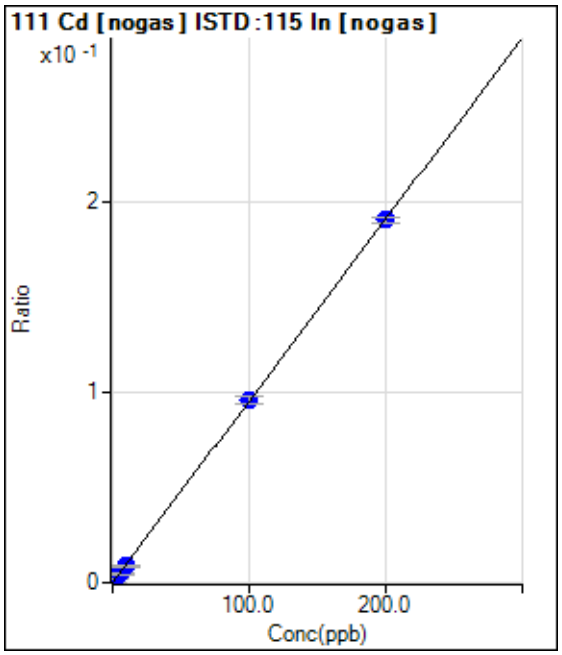


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	0.7
2	☐	2.000	2.011	6241.26	0.0085	P	5.1
3	☐	5.000	5.074	16021.08	0.0213	P	1.7
4	☐	10.000	9.801	31041.57	0.0412	P	4.7
5	☐	100.000	101.306	327968.45	0.4253	P	2.6
6	☐	200.000	199.355	632018.90	0.8369	P	1.7
7	☐	1.000					

y = 0.0042 * x + 4.0829E-005
R = 1.0000
DL = 0.000215
BEC = 0.009726

Weight: <None>
Min Conc: <None>

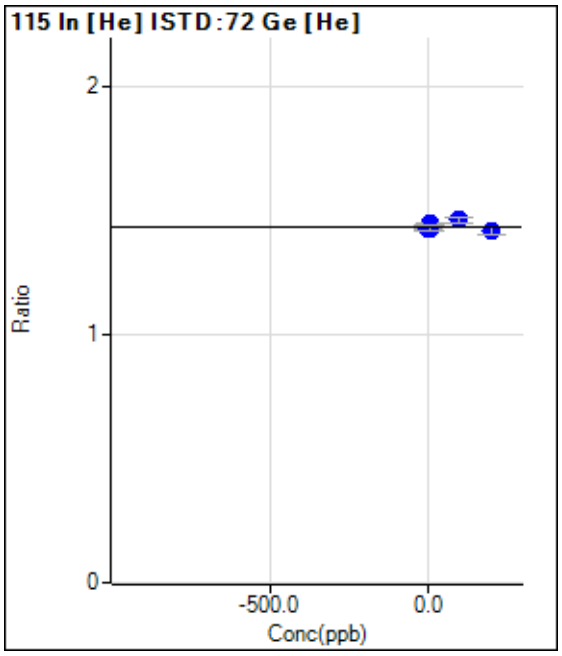
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	1.997	1333.41	0.0019	P	2.2
3	☐	5.000	4.800	3227.03	0.0046	P	9.4
4	☐	10.000	9.085	6121.20	0.0087	P	3.0
5	☐	100.000	100.672	67790.18	0.0959	P	4.7
6	☐	200.000	199.715	130909.69	0.1902	P	1.6
7	☐	1.000					

y = 9.5248E-004 * x + 1.9479E-005
R = 1.0000
DL = 0.05314
BEC = 0.02045

Weight: <None>
Min Conc: <None>

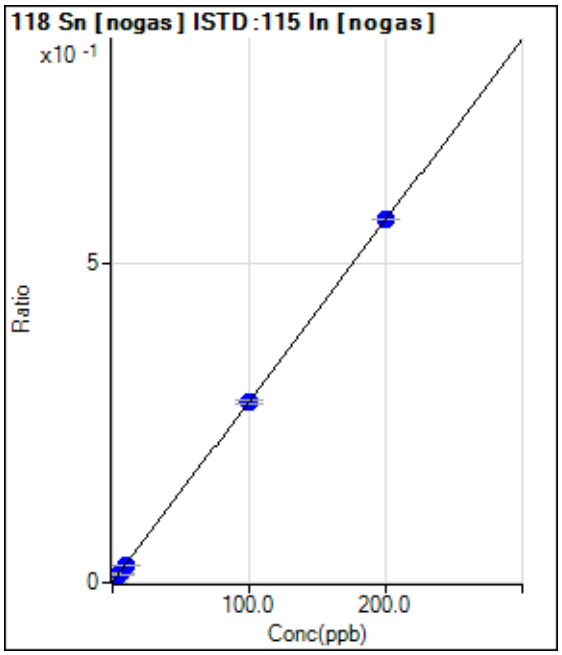


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	411627.47	1.4358	P	1.0
2	☐	2.000	2141.247	412021.60	1.4288	P	1.4
3	☐	5.000	-4058.206	418064.88	1.4491	P	0.4
4	☐	10.000	1420.169	416931.22	1.4311	P	1.4
5	☐	100.000	-8979.990	421976.41	1.4652	P	1.9
6	☐	200.000	4749.674	396510.28	1.4203	P	2.1
7	☐	1.000					

y = -3.2701E-006 * x + 1.4358
R = -0.1483
DL = -1.256E+04
BEC = -4.391E+05

Weight: <None>
Min Conc: <None>

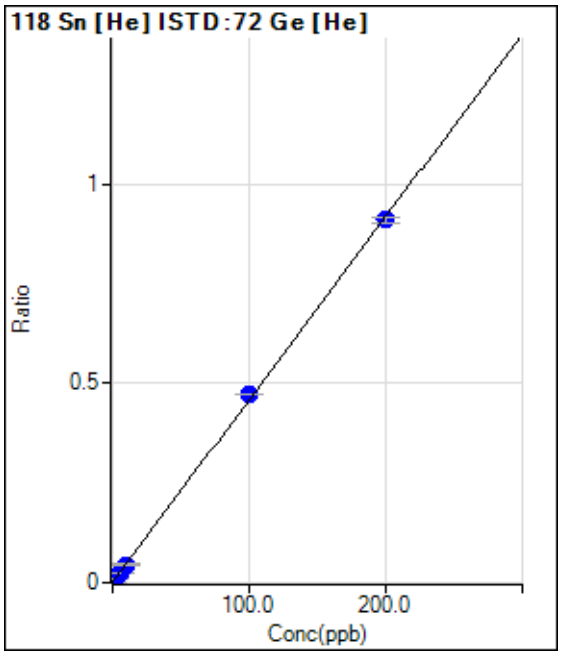
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0005	P	3.0
2	☐	2.000	1.989	4247.27	0.0061	P	0.8
3	☐	5.000	4.688	9656.21	0.0138	P	3.5
4	☐	10.000	9.480	19277.86	0.0273	P	7.0
5	☐	100.000	99.738	200038.44	0.2829	P	2.0
6	☐	200.000	200.165	390369.47	0.5672	P	0.2
7	☐	1.000					

y = 0.0028 * x + 4.8587E-004
R = 1.0000
DL = 0.01529
BEC = 0.1716

Weight: <None>
Min Conc: <None>

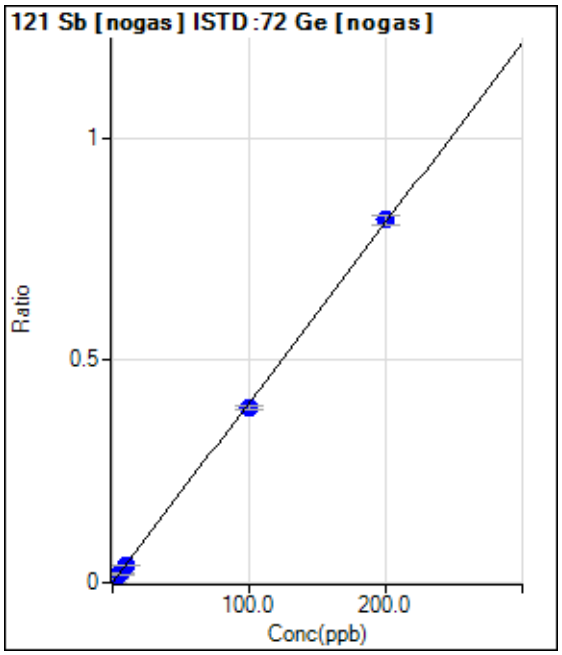


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.00	0.0008	P	30.3
2	☐	2.000	1.951	2810.30	0.0097	P	3.1
3	☐	5.000	5.059	6921.55	0.0240	P	5.4
4	☐	10.000	9.689	13165.30	0.0452	P	7.2
5	☐	100.000	103.174	136443.35	0.4737	P	0.6
6	☐	200.000	198.427	254110.47	0.9102	P	1.8
7	☐	1.000					

y = 0.0046 * x + 8.0246E-004
R = 0.9998
DL = 0.1589
BEC = 0.1751

Weight: <None>
Min Conc: <None>

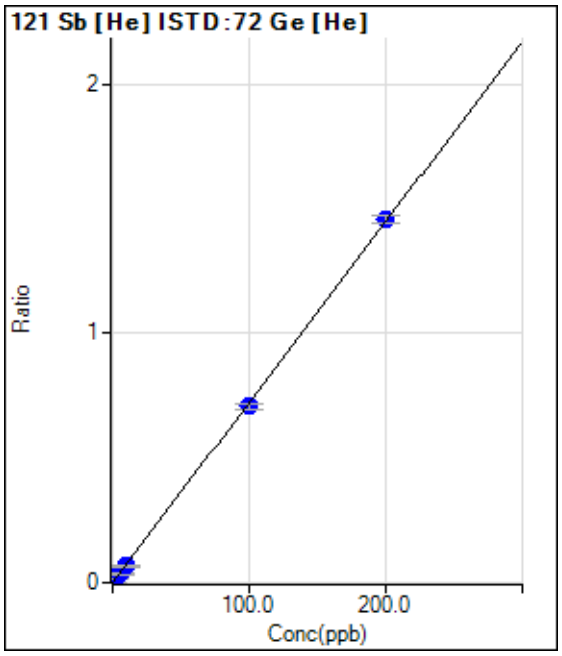
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	373.35	0.0005	P	39.2
2	☐	2.000	1.950	6171.22	0.0084	P	8.8
3	☐	5.000	4.833	15040.23	0.0200	P	6.8
4	☐	10.000	9.599	29636.13	0.0393	P	3.7
5	☐	100.000	96.770	301839.44	0.3917	P	2.4
6	☐	200.000	201.640	615860.20	0.8156	P	2.7
7	☐	1.000					

y = 0.0040 * x + 5.0804E-004
R = 0.9998
DL = 0.1476
BEC = 0.1257

Weight: <None>
Min Conc: <None>

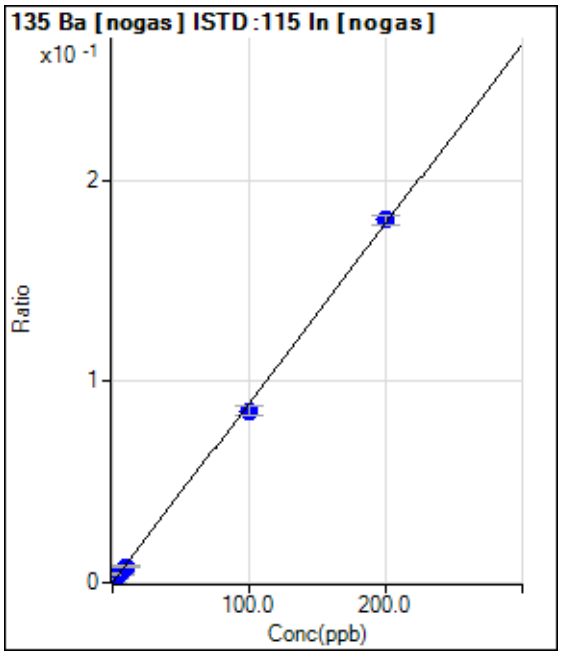


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	210.01	0.0007	P	29.7
2	☐	2.000	2.010	4403.97	0.0153	P	2.2
3	☐	5.000	4.758	10136.53	0.0351	P	6.0
4	☐	10.000	9.096	19371.28	0.0665	P	3.4
5	☐	100.000	97.571	203348.99	0.7062	P	3.0
6	☐	200.000	201.265	406385.09	1.4560	P	2.0
7	☐	1.000					

y = 0.0072 * x + 7.3241E-004
R = 0.9999
DL = 0.09029
BEC = 0.1013

Weight: <None>
Min Conc: <None>

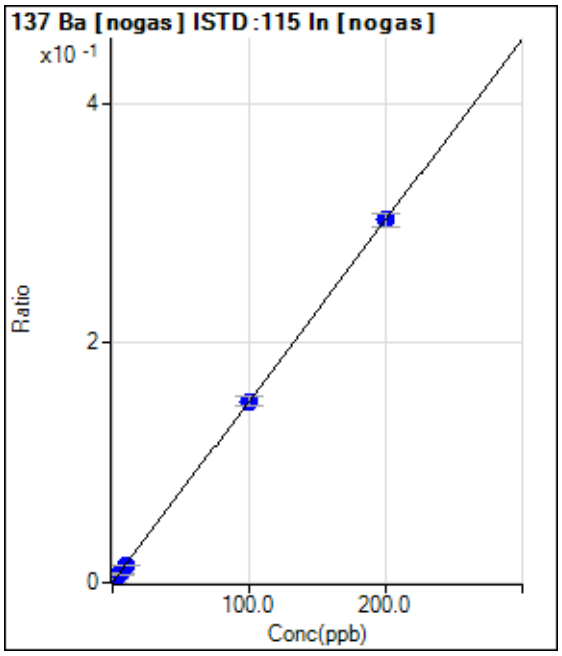
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	39.9
2	☐	2.000	1.707	1140.06	0.0016	P	4.6
3	☐	5.000	4.703	3023.68	0.0043	P	5.9
4	☐	10.000	8.937	5697.73	0.0081	P	11.8
5	☐	100.000	95.799	60371.77	0.0854	P	6.1
6	☐	200.000	202.164	123965.52	0.1802	P	2.6
7	☐	1.000					

y = 8.9052E-004 * x + 1.2181E-004
R = 0.9997
DL = 0.1637
BEC = 0.1368

Weight: <None>
Min Conc: <None>

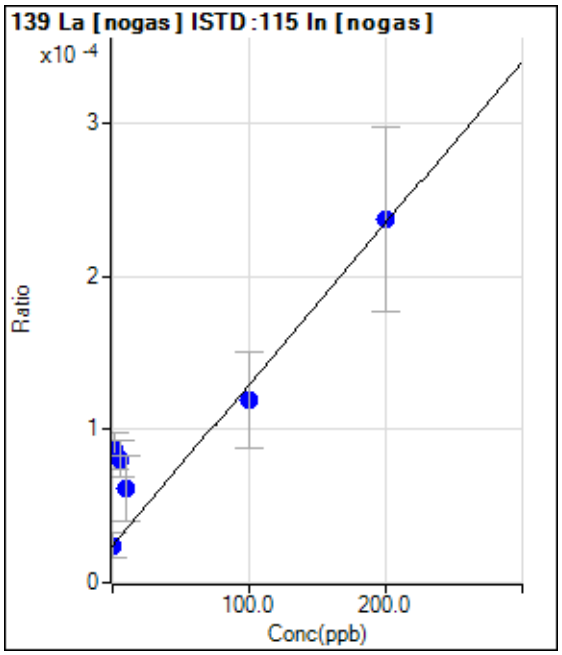


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.34	0.0002	P	44.0
2	☐	2.000	1.916	2166.85	0.0031	P	6.2
3	☐	5.000	4.755	5197.59	0.0074	P	10.8
4	☐	10.000	9.527	10320.01	0.0146	P	7.2
5	☐	100.000	99.921	106911.86	0.1513	P	5.1
6	☐	200.000	200.070	208258.67	0.3027	P	3.8
7	☐	1.000					

y = 0.0015 * x + 2.2336E-004
R = 1.0000
DL = 0.1952
BEC = 0.1478

Weight: <None>
Min Conc: <None>

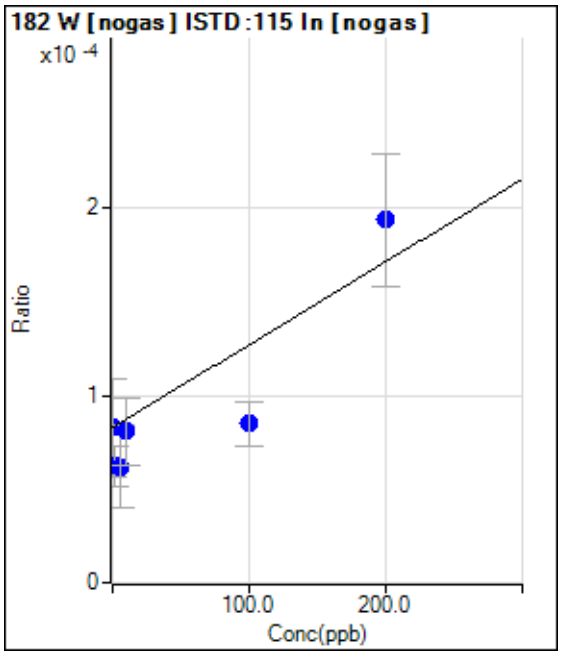
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	68.4
2	☐	2.000	58.813	60.00	0.0001	P	27.5
3	☐	5.000	53.894	56.67	0.0001	P	28.5
4	☐	10.000	35.001	43.33	0.0001	P	69.6
5	☐	100.000	89.922	83.33	0.0001	P	53.0
6	☐	200.000	201.998	163.34	0.0002	P	50.8
7	☐	1.000					

y = 1.0533E-006 * x + 2.4200E-005
R = 0.9452
DL = 47.16
BEC = 22.98

Weight: <None>
Min Conc: <None>

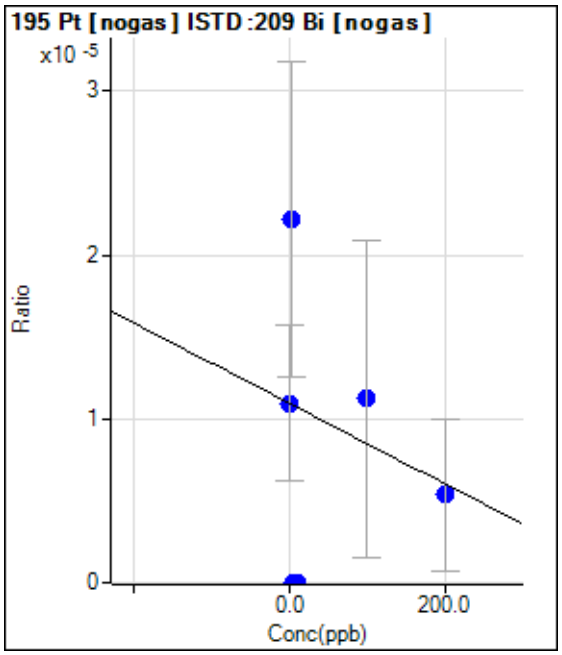


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	62.9
2	☐	2.000	-46.653	43.33	0.0001	P	34.3
3	☐	5.000	-47.317	43.33	0.0001	P	70.3
4	☐	10.000	-5.045	56.67	0.0001	P	45.4
5	☐	100.000	4.160	60.00	0.0001	P	28.0
6	☐	200.000	250.467	133.33	0.0002	P	36.7
7	☐	1.000					

y = 4.4219E-007 * x + 8.2885E-005
R = 0.9127
DL = 353.5
BEC = 187.4

Weight: <None>
Min Conc: <None>

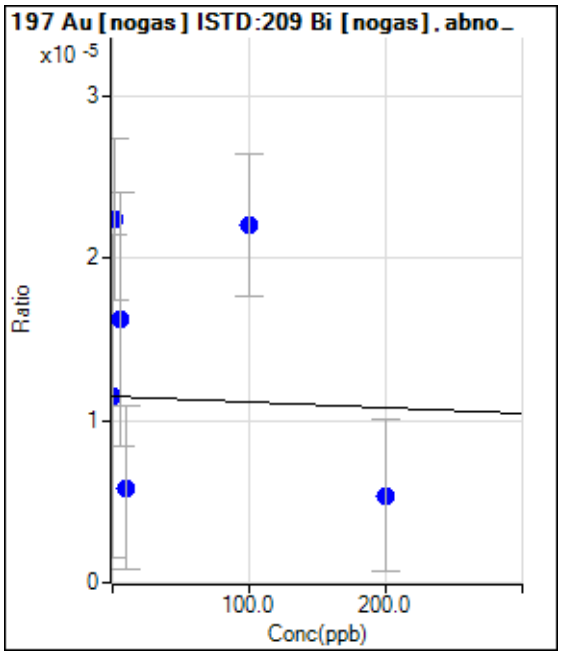
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.9
2	☐	2.000	-456.029	13.33	0.0000	P	86.8
3	☐	5.000	445.968	0.00	0.0000	P	
4	☐	10.000	445.968	0.00	0.0000	P	
5	☐	100.000	-10.833	6.67	0.0000	P	173.
6	☐	200.000	227.174	3.33	0.0000	P	173.
7	☐	1.000					

y = -2.4547E-008 * x + 1.0947E-005
R = -0.1120
DL = -1163
BEC = -446

Weight: <None>
Min Conc: <None>

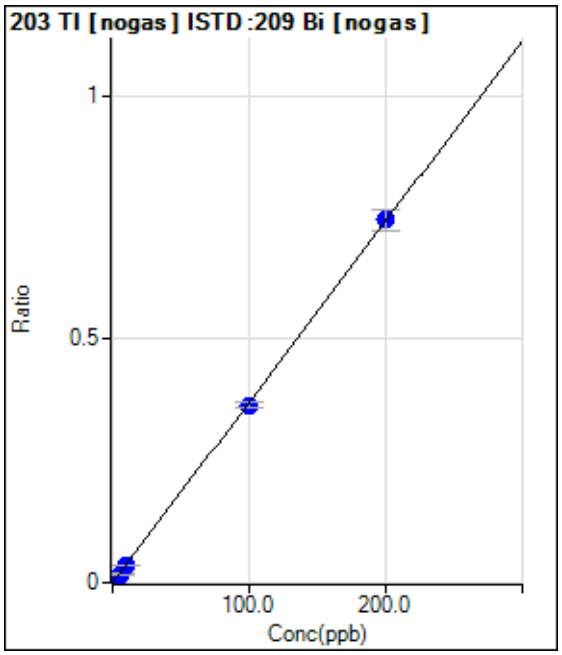


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.
2	☐	2.000	-3100.455	13.33	0.0000	P	44.6
3	☐	5.000	-1355.218	10.00	0.0000	P	96.7
4	☐	10.000	1602.269	3.33	0.0000	P	173.
5	☐	100.000	-3014.239	13.33	0.0000	P	39.8
6	☐	200.000	1742.536	3.33	0.0000	P	173.
7	☐	1.000					

y = -3.5065E-009 * x + 1.1481E-005
R = -0.3039
DL = -1.701E+04
BEC = -3274

Weight: <None>
Min Conc: <None>

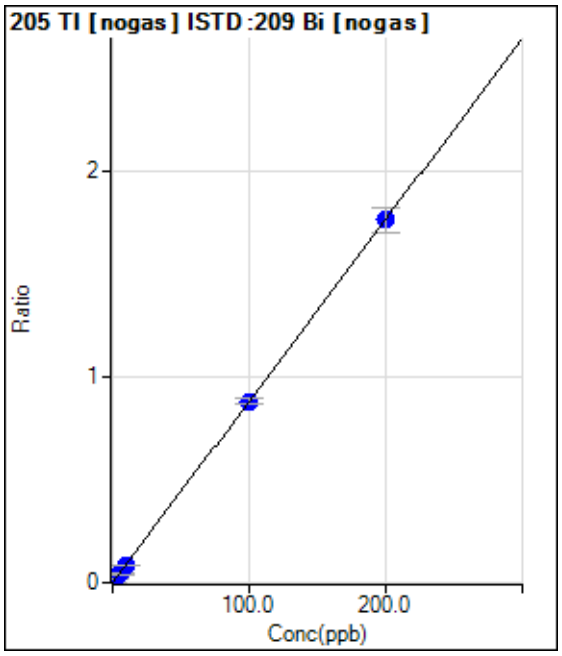
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	5.5
2	☐	2.000	2.025	4510.73	0.0075	P	3.1
3	☐	5.000	4.753	10610.40	0.0177	P	4.2
4	☐	10.000	9.576	21080.82	0.0355	P	8.1
5	☐	100.000	98.298	218587.97	0.3647	P	3.7
6	☐	200.000	200.878	441270.22	0.7454	P	6.1
7	☐	1.000					

y = 0.0037 * x + 1.6675E-005
R = 0.9999
DL = 0.0007388
BEC = 0.004494

Weight: <None>
Min Conc: <None>

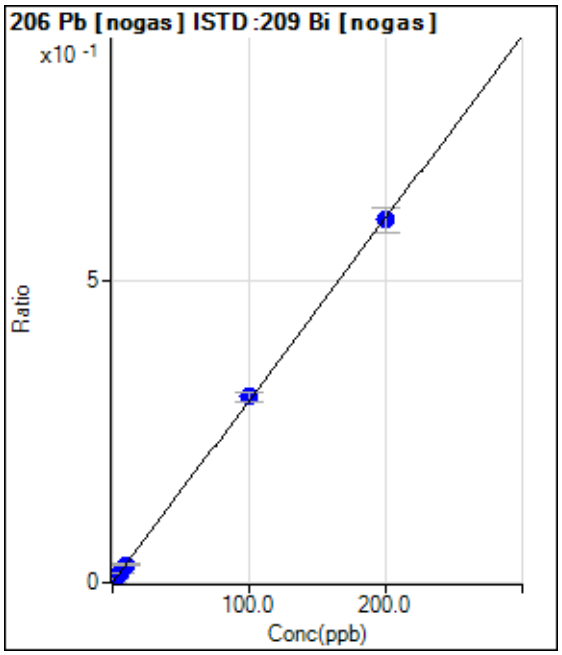


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0001	P	41.9
2	☐	2.000	1.983	10500.38	0.0176	P	5.1
3	☐	5.000	4.865	25784.67	0.0430	P	10.0
4	☐	10.000	9.491	49648.09	0.0838	P	8.6
5	☐	100.000	100.146	529381.63	0.8833	P	3.6
6	☐	200.000	199.956	1043837.48	1.7635	P	6.7
7	☐	1.000					

y = 0.0088 * x + 6.6153E-005
R = 1.0000
DL = 0.009436
BEC = 0.007501

Weight: <None>
Min Conc: <None>

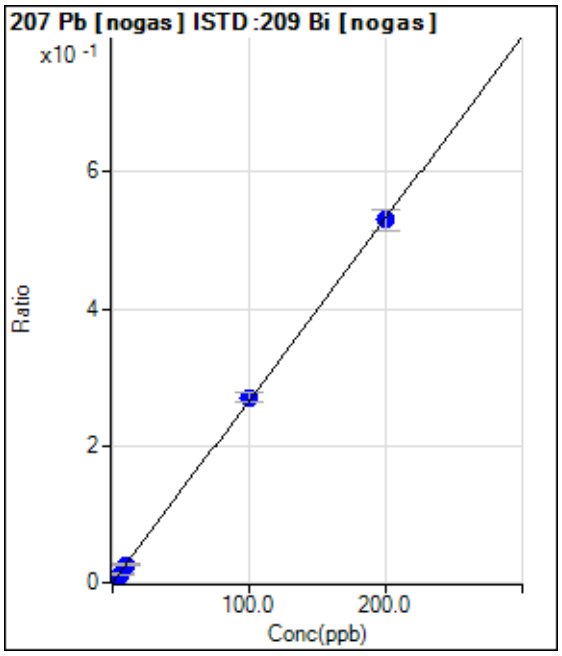
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	36.8
2	☐	2.000	1.977	3643.82	0.0061	P	9.1
3	☐	5.000	5.004	9142.79	0.0152	P	9.0
4	☐	10.000	9.924	17840.34	0.0301	P	7.5
5	☐	100.000	101.928	184435.04	0.3078	P	4.5
6	☐	200.000	199.040	355681.12	0.6009	P	6.8
7	☐	1.000					

y = 0.0030 * x + 1.2926E-004
R = 0.9999
DL = 0.0473
BEC = 0.04282

Weight: <None>
Min Conc: <None>

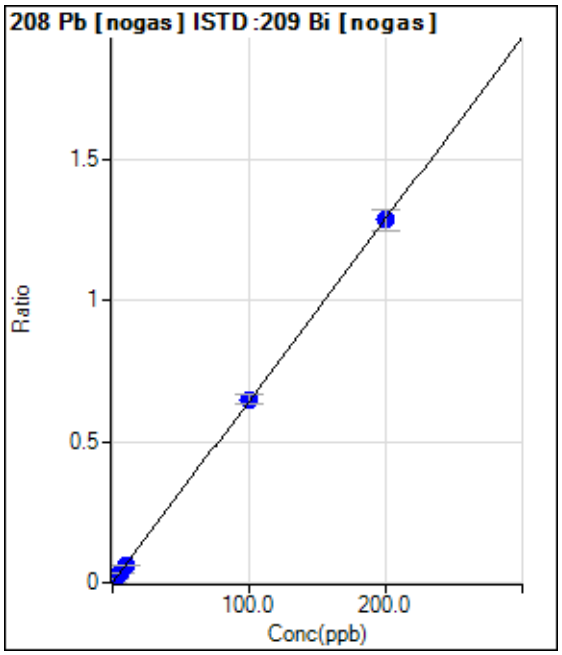


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	9.2
2	☐	2.000	1.972	3217.07	0.0054	P	4.3
3	☐	5.000	4.660	7508.59	0.0125	P	10.1
4	☐	10.000	9.741	15434.43	0.0260	P	7.6
5	☐	100.000	101.632	161993.39	0.2704	P	5.0
6	☐	200.000	199.206	313684.58	0.5298	P	5.9
7	☐	1.000					

y = 0.0027 * x + 1.2714E-004
R = 0.9999
DL = 0.01313
BEC = 0.04781

Weight: <None>
Min Conc: <None>

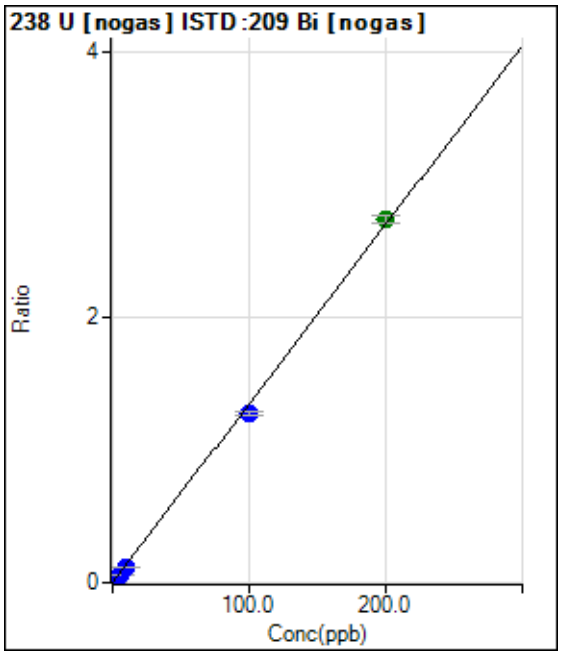
Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.67	0.0002	P	50.9
2	☐	2.000	2.004	7845.41	0.0131	P	6.4
3	☐	5.000	4.911	19138.40	0.0318	P	5.0
4	☐	10.000	9.586	36802.98	0.0620	P	4.0
5	☐	100.000	100.882	389500.79	0.6502	P	5.3
6	☐	200.000	199.582	761387.57	1.2861	P	5.9
7	☐	1.000					

y = 0.0064 * x + 2.0682E-004
R = 1.0000
DL = 0.04904
BEC = 0.0321

Weight: <None>
Min Conc: <None>

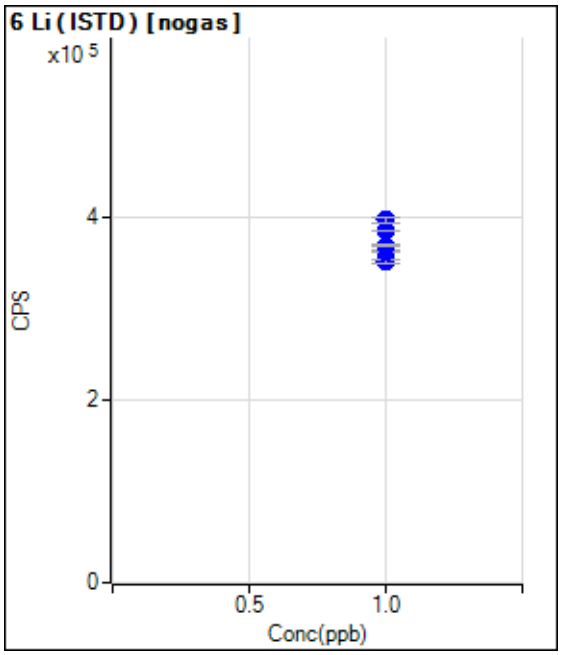


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	33.1
2	☐	2.000	1.832	14797.32	0.0247	P	4.5
3	☐	5.000	4.488	36316.17	0.0605	P	9.4
4	☐	10.000	8.819	70538.05	0.1189	P	6.9
5	☐	100.000	94.599	764445.72	1.2753	P	2.8
6	☐	200.000	202.774	1620217.01	2.7335	A	2.3
7	☐	1.000					

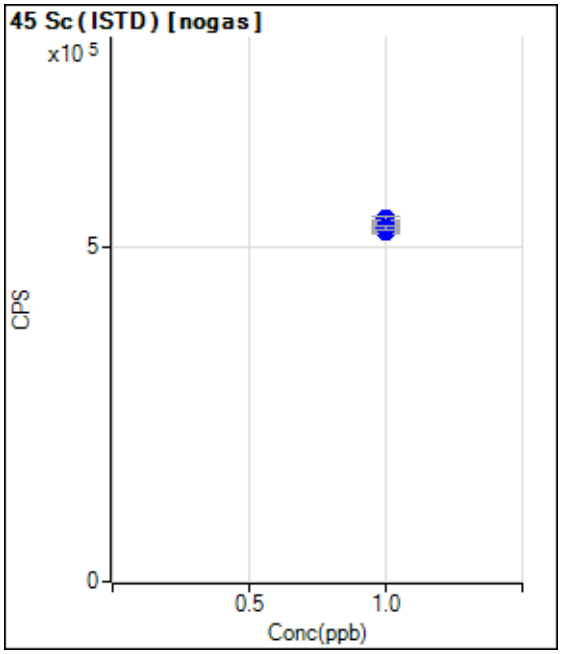
y = 0.0135 * x + 2.7609E-005
R = 0.9995
DL = 0.002032
BEC = 0.002048

Weight: <None>
Min Conc: <None>

Calibration for 213_ICV.d

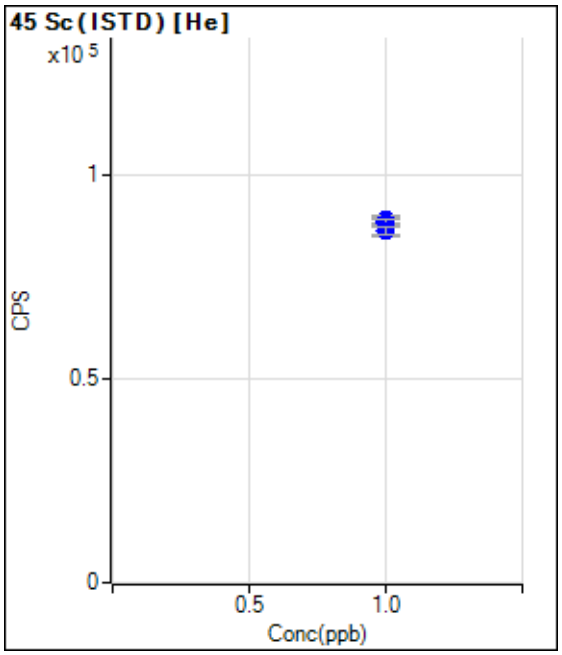


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		352037.78		P	0.9
2	☐	1.000		363869.33		P	0.5
3	☐	1.000		363603.19		P	0.1
4	☐	1.000		369925.94		P	0.8
5	☐	1.000		386357.69		P	0.3
6	☐	1.000		397948.46		P	1.6
7	☐	1.000					

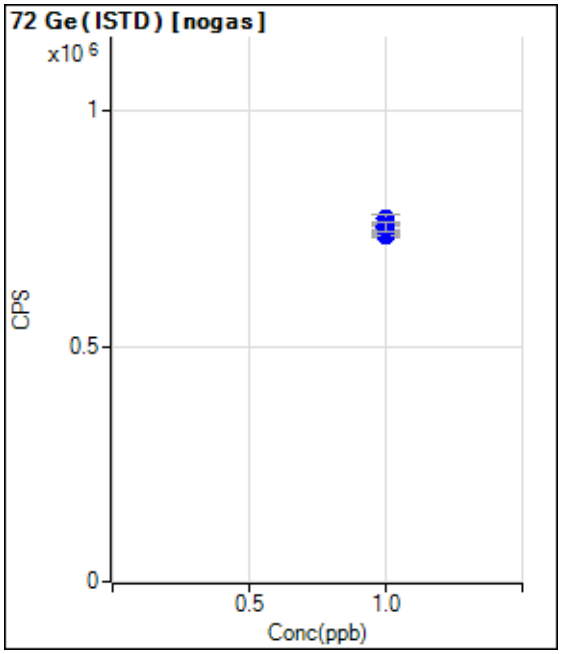


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		522135.29		P	1.1
2	☐	1.000		527223.94		P	2.4
3	☐	1.000		535841.15		P	1.2
4	☐	1.000		531571.31		P	1.2
5	☐	1.000		540925.95		P	1.1
6	☐	1.000		527826.62		P	1.4
7	☐	1.000					

Calibration for 213_ICV.d

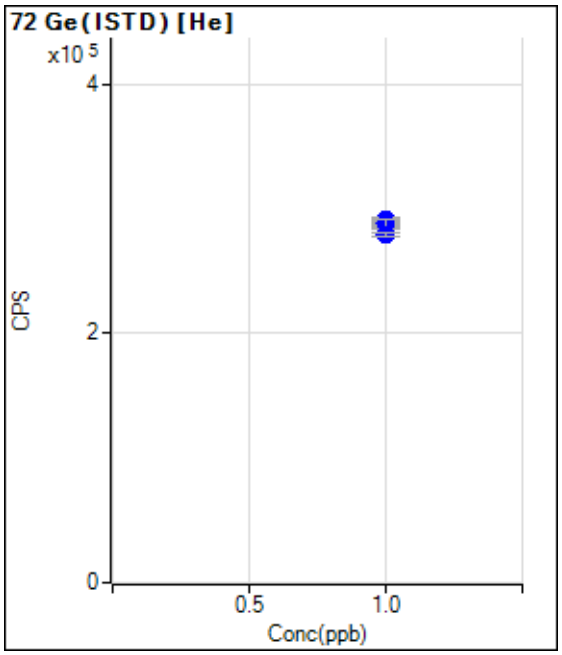


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		85979.27		P	2.5
2	☐	1.000		88363.33		P	0.9
3	☐	1.000		88497.98		P	2.4
4	☐	1.000		88795.90		P	2.0
5	☐	1.000		88099.51		P	2.0
6	☐	1.000		86099.58		P	2.0
7	☐	1.000					

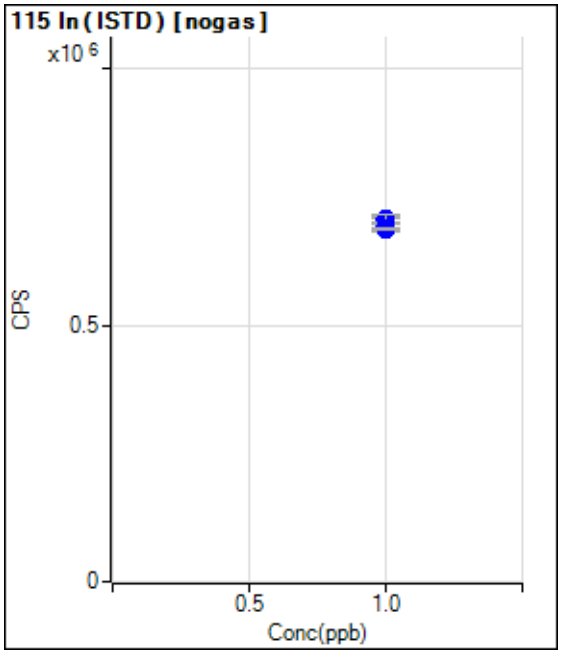


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		734802.15		P	0.7
2	☐	1.000		735747.54		P	0.4
3	☐	1.000		750708.37		P	1.0
4	☐	1.000		754032.90		P	1.7
5	☐	1.000		770873.74		P	2.4
6	☐	1.000		755423.89		P	2.6
7	☐	1.000					

Calibration for 213_ICV.d

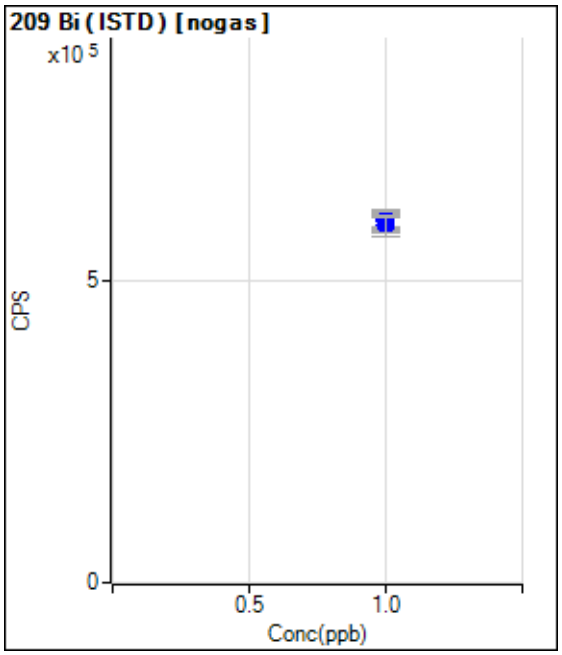


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		286694.38		P	0.2
2	☐	1.000		288397.13		P	1.0
3	☐	1.000		288507.27		P	0.2
4	☐	1.000		291359.49		P	1.2
5	☐	1.000		288058.00		P	2.7
6	☐	1.000		279147.91		P	1.0
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		686245.56		P	1.2
2	☐	1.000		694257.85		P	1.8
3	☐	1.000		702017.38		P	1.8
4	☐	1.000		705745.98		P	1.6
5	☐	1.000		707404.23		P	2.9
6	☐	1.000		688176.03		P	0.9
7	☐	1.000					

Calibration for 213_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		600947.09		P	5.7
2	☐	1.000		599042.08		P	4.1
3	☐	1.000		601905.81		P	5.4
4	☐	1.000		594984.10		P	6.8
5	☐	1.000		599761.89		P	3.2
6	☐	1.000		592980.52		P	4.1
7	☐	1.000					

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\121418A.b
Report Comment
Instrument Name G3281A JP09420132

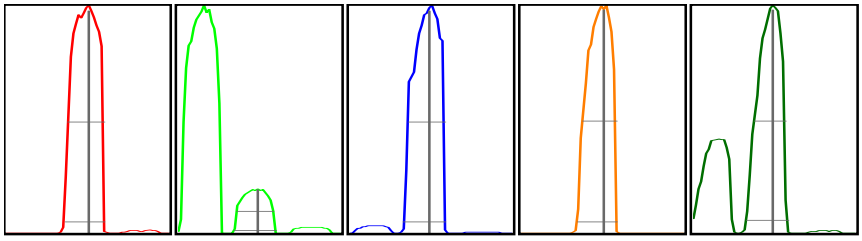
[nogas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		7116				NaN	-	
24		16181				NaN	-	
59		23044				NaN	-	
115		36481				NaN	-	
208		21739				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	1.00	5.00				
24	0.94	5.00				
59	0.56	5.00				
115	0.65	5.00				
208	0.71	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7169	7055	7140	7190	7027
24	16386	15968	16209	16129	16212
59	23192	23115	22979	22861	23075
115	36535	36821	36515	36189	36344
208	21884	21541	21739	21894	21636

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	1133.32	9.05	8.9 - 9.1		0.65	0.742		
24	2608.59	24.00	23.9 - 24.1		0.66	0.767		
59	3813.67	59.00	58.9 - 59.1		0.64	0.742		
115	6399.14	115.05	114.9 - 115.1		0.60	0.726		
208	4021.43	208.00	207.9 - 208.1		0.55	0.756		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 168.5 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.48 L/min	S/C Temp	2 ℃
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	10.0 V
Extract 2	-170.5 V	Cell Entrance	-30 V	Plate Bias	-40 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	180 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		192				NaN	-	
24		1492				NaN	-	
59		13317				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	5.61	5.00	[F]			
24	3.94	5.00				
59	1.34	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	189	176	202	202	194
24	1399	1504	1479	1529	1551
59	13171	13464	13128	13287	13534

Integration Time [sec] 0.1

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	33.16	9.05	8.9 - 9.1		0.62	0.728		
24	250.74	23.95	23.9 - 24.1		0.64	0.744		
59	2301.58	59.00	58.9 - 59.1		0.62	0.736		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 100.6 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.48 L/min	S/C Temp	2 ℃
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.0 V
Extract 2	-170.5 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

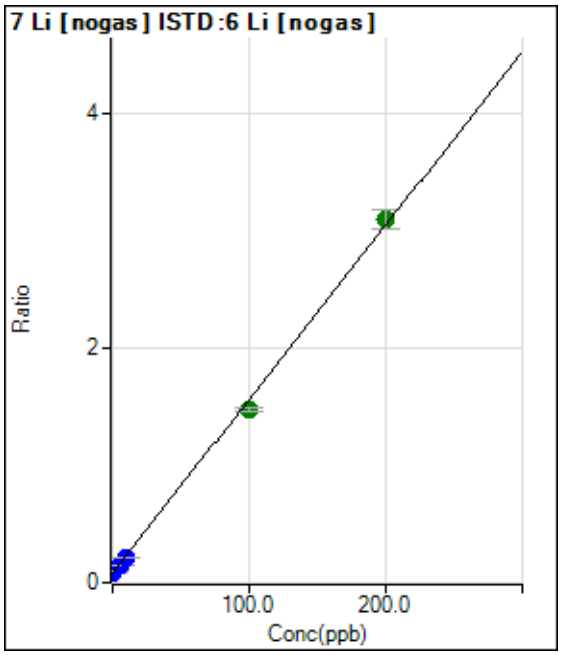
OctP Bias	-18.0 V	He Flow	3.5 mL/min	Energy Discrimination	5.0 V
OctP RF	180 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration for 026_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121018B.b\
Analysis File: 121018B.batch.bin
DA Date-Time: 2018-12-10 17:46:50
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	019CALB.d	CAL BLK	2018-12-10 17:22:50
2	020CALS.d	2/10/200	2018-12-10 17:24:52
3	021CALS.d	5/25/500	2018-12-10 17:26:55
4	022CALS.d	10/50/1000	2018-12-10 17:28:58
5	023CALS.d	100/500/10K	2018-12-10 17:31:00
6	024CALS.d	200/1000/20K	2018-12-10 17:33:03
7			

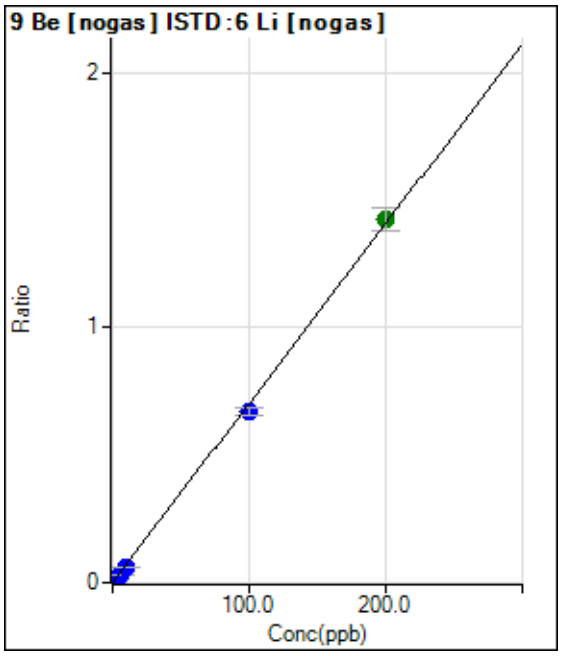
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	101659.32	0.0828	P	3.2
2	☐	2.000	1.723	132851.12	0.1083	P	4.3
3	☐	5.000	4.100	175639.00	0.1435	P	1.9
4	☐	10.000	8.613	262909.70	0.2103	P	3.7
5	☐	100.000	93.797	1681555.55	1.4711	A	2.5
6	☐	200.000	203.196	3241400.26	3.0903	A	5.2
7	☐	1.000					

y = 0.0148 * x + 0.0828
R = 0.9994
DL = 0.5437
BEC = 5.593

Weight: <None>
Min Conc: <None>

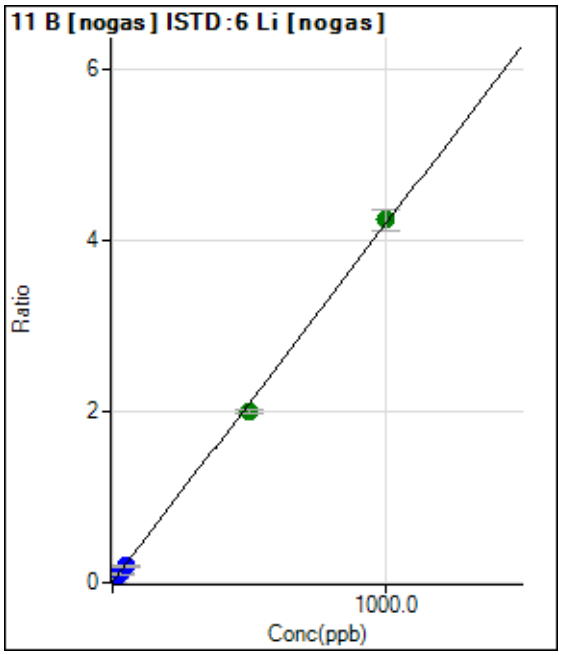


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	106.
2	☐	2.000	1.725	14892.62	0.0122	P	8.6
3	☐	5.000	4.346	37420.34	0.0306	P	2.1
4	☐	10.000	8.607	75655.29	0.0605	P	5.2
5	☐	100.000	95.676	768211.11	0.6724	P	4.0
6	☐	200.000	202.251	1490338.94	1.4215	A	6.2
7	☐	1.000					

y = 0.0070 * x + 3.0869E-005
R = 0.9997
DL = 0.01397
BEC = 0.004392

Weight: <None>
Min Conc: <None>

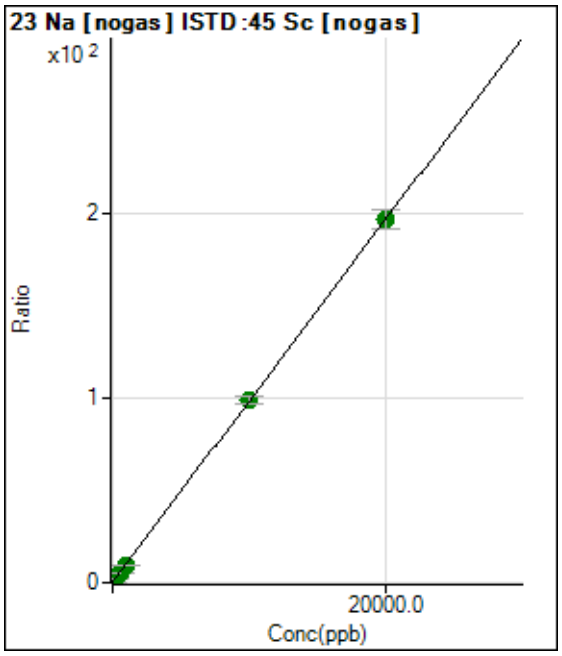
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9259.03	0.0076	P	12.0
2	☐	10.000	8.594	53374.51	0.0435	P	6.0
3	☐	25.000	22.402	123947.25	0.1013	P	3.3
4	☐	50.000	43.944	239318.10	0.1915	P	5.9
5	☐	500.000	475.868	2284042.78	1.9989	A	2.8
6	☐	1000.000	1012.448	4449103.68	4.2443	A	5.9
7	☐	5.000					

y = 0.0042 * x + 0.0076
R = 0.9996
DL = 0.652
BEC = 1.809

Weight: <None>
Min Conc: <None>

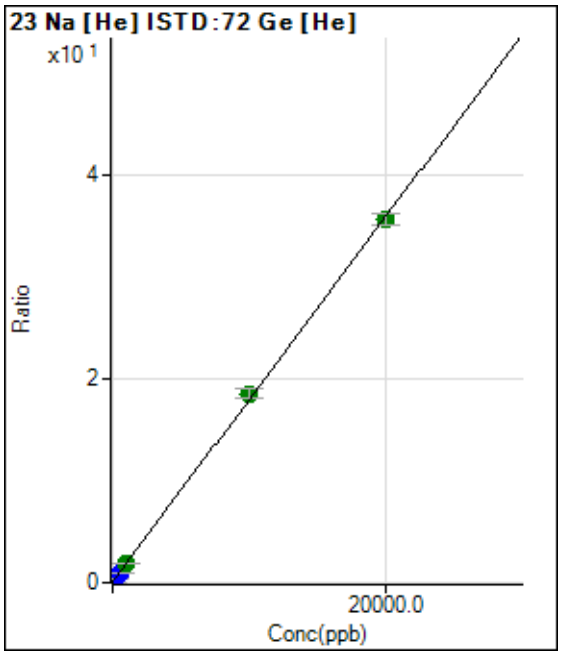


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	496567.70	0.1889	P	4.1
2	☐	200.000	192.936	5429107.28	2.0839	A	1.0
3	☐	500.000	521.172	13049242.22	5.3079	A	1.0
4	☐	1000.000	965.253	25117059.41	9.6696	A	0.7
5	☐	10000.00	10036.953	246379138.8	98.7723	A	4.7
6	☐	20000.00	19982.802	481847077.4	196.461	A	5.2
7	☐	100.000					

y = 0.0098 * x + 0.1889
R = 1.0000
DL = 2.36
BEC = 19.23

Weight: <None>
Min Conc: <None>

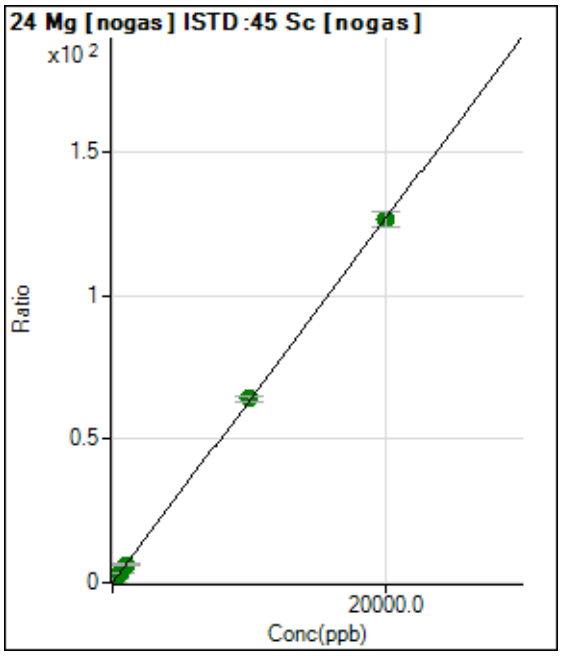
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71384.33	0.0719	P	3.2
2	☐	200.000	200.265	399017.30	0.4305	P	3.2
3	☐	500.000	501.619	892709.28	0.9701	P	2.3
4	☐	1000.000	1004.751	1730789.66	1.8709	A	3.9
5	☐	10000.00	10314.394	16078625.59	18.5402	A	4.8
6	☐	20000.00	19842.522	31690889.53	35.6006	A	3.2
7	☐	100.000					

y = 0.0018 * x + 0.0719
R = 0.9998
DL = 3.812
BEC = 40.16

Weight: <None>
Min Conc: <None>

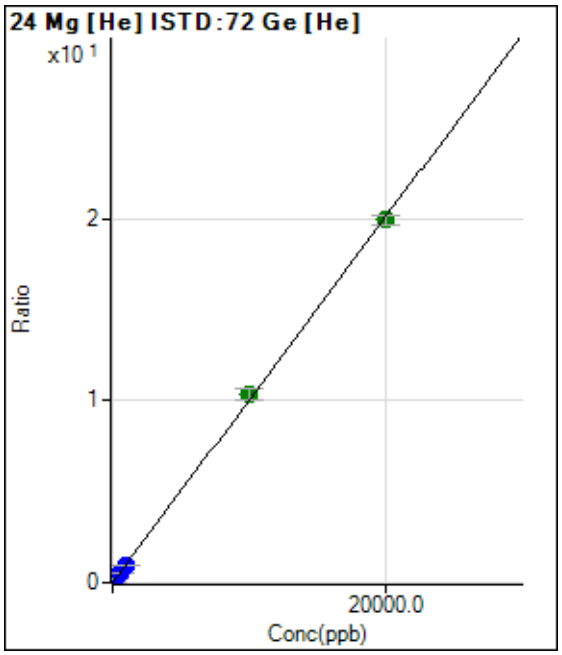


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5968.63	0.0023	P	5.2
2	☐	200.000	200.623	3317538.29	1.2732	A	2.3
3	☐	500.000	539.539	8403653.84	3.4203	A	3.9
4	☐	1000.000	993.128	16349977.45	6.2938	A	2.3
5	☐	10000.00	10118.078	159932991.0	64.1010	A	3.7
6	☐	20000.00	19940.310	309884790.2	126.325	A	4.1
7	☐	100.000					

y = 0.0063 * x + 0.0023
R = 1.0000
DL = 0.05537
BEC = 0.3582

Weight: <None>
Min Conc: <None>

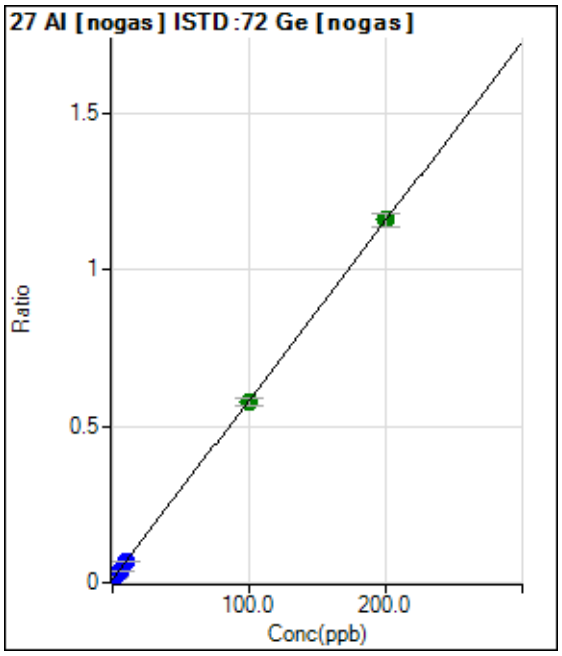
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540.02	0.0005	P	15.1
2	☐	200.000	199.096	185807.38	0.2005	P	4.5
3	☐	500.000	498.507	461122.25	0.5011	P	3.5
4	☐	1000.000	982.466	913345.19	0.9871	P	2.4
5	☐	10000.00	10301.712	8966446.53	10.3451	A	6.7
6	☐	20000.00	19850.067	17745286.40	19.9331	A	2.5
7	☐	100.000					

y = 0.0010 * x + 5.4535E-004
R = 0.9998
DL = 0.2461
BEC = 0.5431

Weight: <None>
Min Conc: <None>

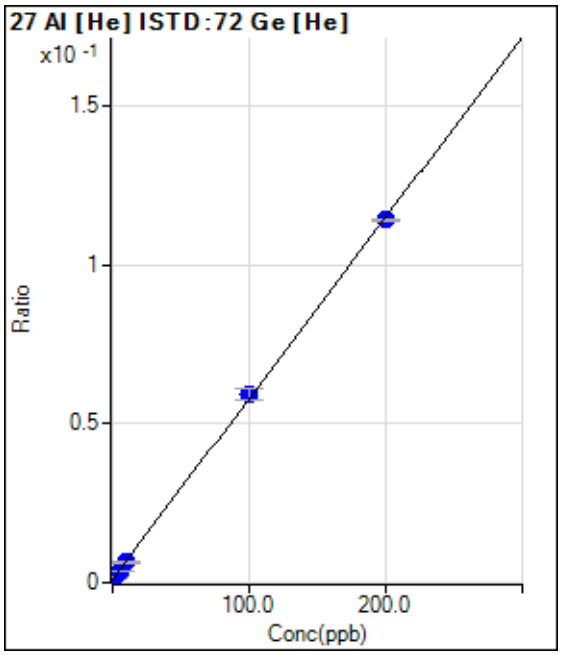


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38856.78	0.0110	P	2.3
2	☐	2.000	1.542	68910.12	0.0198	P	3.0
3	☐	5.000	4.543	127300.03	0.0370	P	0.5
4	☐	10.000	9.616	227124.10	0.0660	P	1.7
5	☐	100.000	98.883	1950181.12	0.5767	A	3.5
6	☐	200.000	200.594	3782656.30	1.1586	A	3.7
7	☐	1.000					

y = 0.0057 * x + 0.0110
R = 1.0000
DL = 0.1312
BEC = 1.918

Weight: <None>
Min Conc: <None>

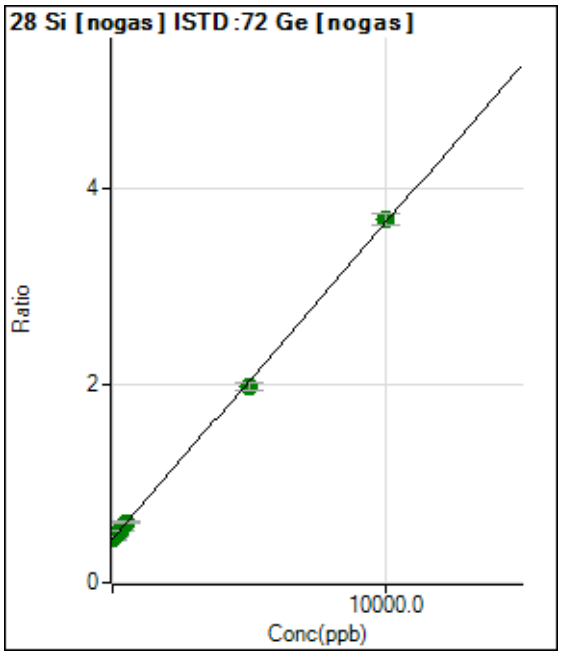
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.062	1043.38	0.0011	P	14.6
2	☐	2.000	1.734	1923.47	0.0021	P	5.1
3	☐	5.000	4.570	3390.35	0.0037	P	10.4
4	☐	10.000	9.501	6007.71	0.0065	P	4.7
5	☐	100.000	102.438	51493.98	0.0594	P	6.0
6	☐	200.000	198.819	101712.34	0.1142	P	0.5
7	☐	1.000					

y = 5.6907E-004 * x + 0.0011
R = 0.9999
DL = 0.8089
BEC = 1.913

Weight: <None>
Min Conc: <None>

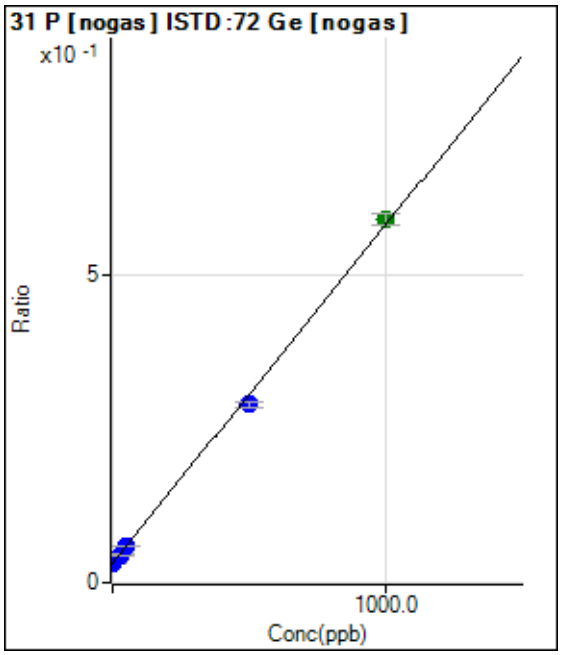


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1566587.89	0.4426	A	3.6
2	☐	100.000	85.902	1636137.16	0.4701	A	0.4
3	☐	250.000	250.694	1800665.70	0.5229	A	2.1
4	☐	500.000	518.770	2095245.12	0.6087	A	1.6
5	☐	5000.000	4818.958	6715267.81	1.9862	A	4.5
6	☐	10000.00	10089.706	11996350.66	3.6745	A	3.3
7	☐	5.000					

y = 3.2032E-004 * x + 0.4426
R = 0.9998
DL = 151.3
BEC = 1382

Weight: <None>
Min Conc: <None>

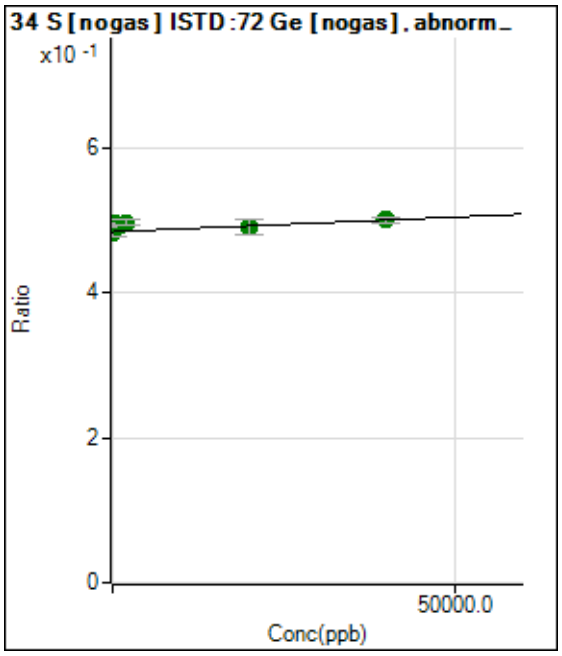
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111301.54	0.0314	P	3.2
2	☐	10.000	9.665	127861.09	0.0367	P	1.8
3	☐	25.000	25.093	155640.26	0.0452	P	1.8
4	☐	50.000	49.357	201331.02	0.0585	P	2.6
5	☐	500.000	469.771	977117.85	0.2890	P	3.3
6	☐	1000.000	1015.148	1920065.34	0.5881	A	3.2
7	☐	5.000					

y = 5.4835E-004 * x + 0.0314
R = 0.9994
DL = 5.538
BEC = 57.33

Weight: <None>
Min Conc: <None>

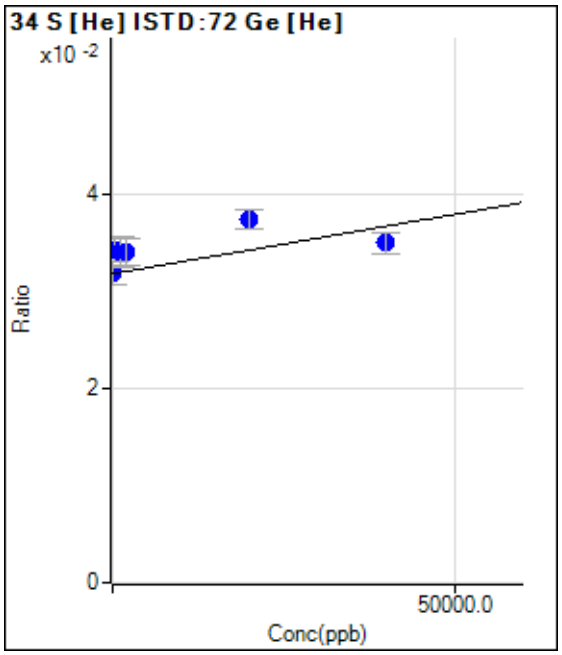


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1712092.42	0.4835	A	2.5
2	☐	400.000	27229.811	1721374.84	0.4946	A	2.2
3	☐	1000.000	23169.344	1697516.05	0.4929	A	1.1
4	☐	2000.000	31996.747	1708862.34	0.4965	A	1.8
5	☐	20000.00	14926.341	1654810.49	0.4896	A	4.0
6	☐	40000.00	40214.461	1631836.10	0.4998	A	1.4
7	☐	100.000					

y = 4.0647E-007 * x + 0.4835
R = 0.4801
DL = 9.054E+04
BEC = 1.189E+06

Weight: <None>
Min Conc: <None>

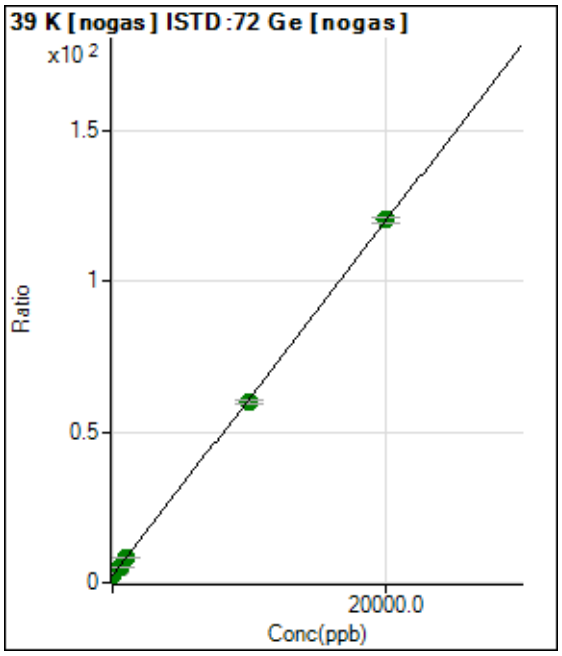
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31530.77	0.0318	P	7.5
2	☐	400.000	20314.488	31765.29	0.0343	P	7.3
3	☐	1000.000	19000.660	31364.42	0.0341	P	9.3
4	☐	2000.000	18660.291	31497.42	0.0341	P	8.2
5	☐	20000.00	45364.044	32366.64	0.0373	P	5.5
6	☐	40000.00	25835.802	31099.32	0.0349	P	6.2
7	☐	100.000					

y = 1.2207E-007 * x + 0.0318
R = 0.5366
DL = 5.863E+04
BEC = 2.604E+05

Weight: <None>
Min Conc: <None>

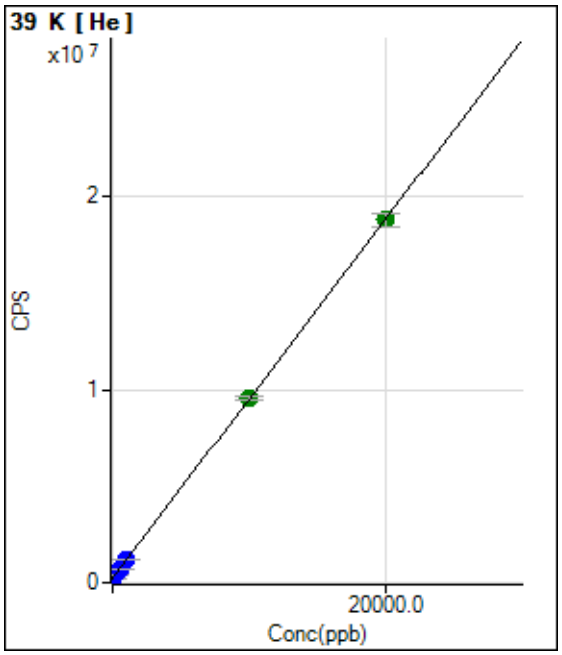


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8289091.85	2.3411	A	1.7
2	☐	200.000	201.388	12268207.83	3.5247	A	1.7
3	☐	500.000	501.091	18204673.32	5.2862	A	2.2
4	☐	1000.000	1004.186	28374235.01	8.2431	A	1.2
5	☐	10000.00	9823.483	203139275.3	60.0781	A	1.4
6	☐	20000.00	20088.008	393096833.7	120.407	A	1.5
7	☐	100.000					

y = 0.0059 * x + 2.3411
R = 0.9999
DL = 20.67
BEC = 398.3

Weight: <None>
Min Conc: <None>

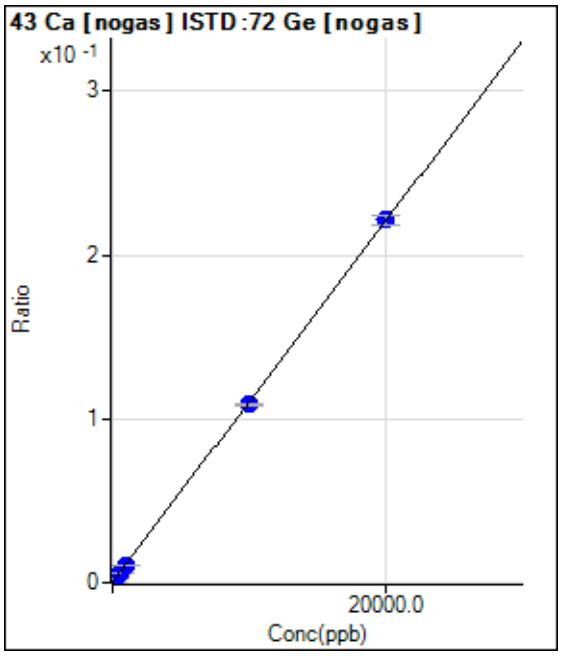
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	225828.67		P	1.4
2	☐	200.000	207.946	419262.62		P	0.7
3	☐	500.000	534.074	722630.51		P	1.8
4	☐	1000.000	1053.850	1206131.94		P	1.0
5	☐	10000.00	10051.724	9576055.48		A	1.6
6	☐	20000.00	19970.514	18802625.14		A	3.5
7	☐	100.000					

y = 930.2112 * x + 225828.6667
R = 1.0000
DL = 10.22
BEC = 242.8

Weight: <None>
Min Conc: <None>

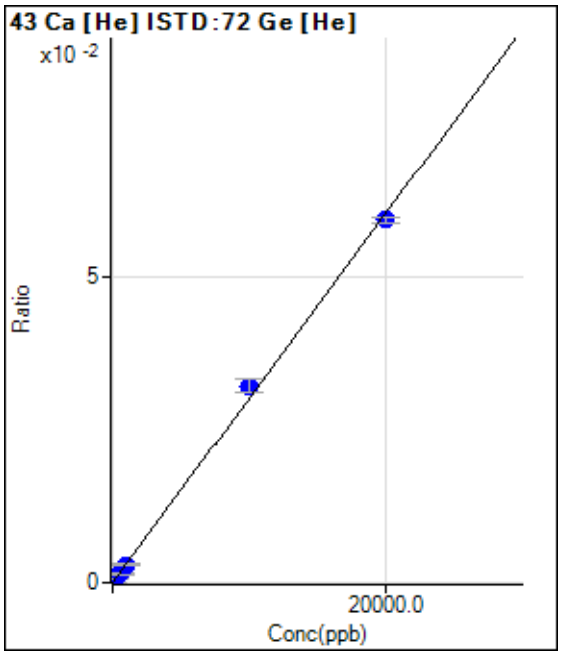


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	930.04	0.0003	P	20.8
2	☐	200.000	197.546	8492.10	0.0024	P	2.6
3	☐	500.000	479.600	19103.43	0.0055	P	2.6
4	☐	1000.000	974.876	37879.09	0.0110	P	1.9
5	☐	10000.00	9840.960	367566.24	0.1087	P	1.3
6	☐	20000.00	20081.311	723176.32	0.2215	P	2.7
7	☐	100.000					

y = 1.1018E-005 * x + 2.6329E-004
R = 1.0000
DL = 14.9
BEC = 23.9

Weight: <None>
Min Conc: <None>

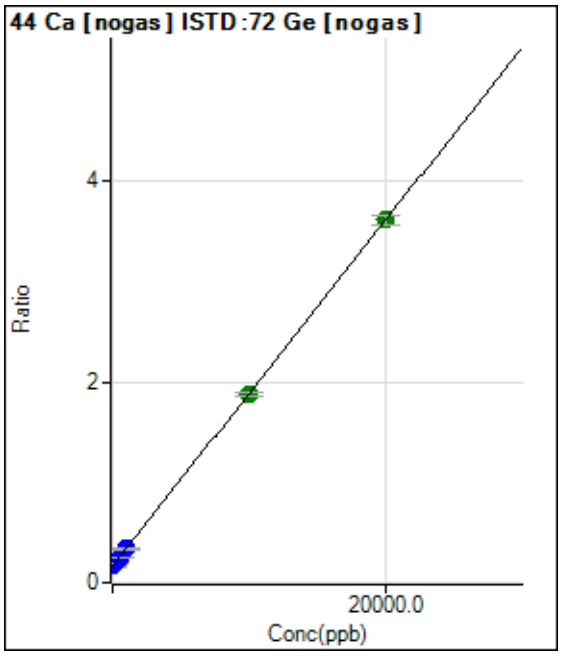
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	99.3
2	☐	200.000	222.500	630.02	0.0007	P	9.6
3	☐	500.000	468.623	1306.73	0.0014	P	8.6
4	☐	1000.000	964.898	2693.58	0.0029	P	8.6
5	☐	10000.00	10670.145	27834.44	0.0321	P	6.8
6	☐	20000.00	19667.242	52694.69	0.0592	P	1.6
7	☐	100.000					

y = 3.0089E-006 * x + 1.0202E-005
R = 0.9992
DL = 10.1
BEC = 3.391

Weight: <None>
Min Conc: <None>

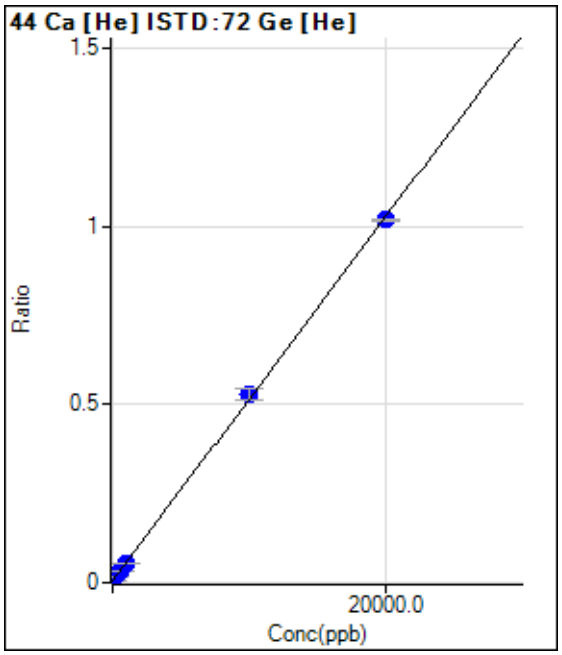


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	580985.60	0.1641	P	3.0
2	☐	200.000	208.291	696122.39	0.2000	P	0.6
3	☐	500.000	525.330	876898.19	0.2546	P	0.7
4	☐	1000.000	1015.833	1167137.07	0.3391	P	2.4
5	☐	10000.00	9959.524	6358463.24	1.8802	A	1.4
6	☐	20000.00	20018.730	11798086.08	3.6135	A	2.6
7	☐	100.000					

y = 1.7231E-004 * x + 0.1641
R = 1.0000
DL = 86.4
BEC = 952.5

Weight: <None>
Min Conc: <None>

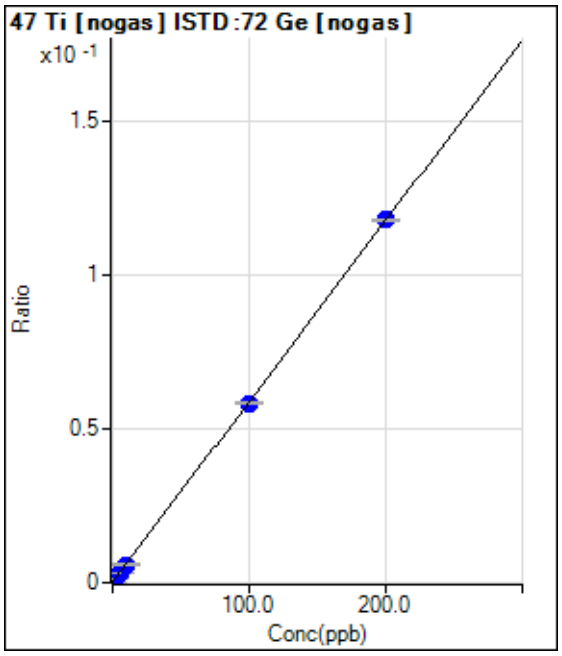
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4433.93	0.0045	P	4.1
2	☐	200.000	199.993	13618.45	0.0147	P	3.4
3	☐	500.000	512.364	28218.21	0.0307	P	4.6
4	☐	1000.000	1006.101	51741.70	0.0559	P	1.5
5	☐	10000.00	10306.201	460785.89	0.5315	P	6.2
6	☐	20000.00	19846.285	907691.37	1.0194	P	0.6
7	☐	100.000					

y = 5.1141E-005 * x + 0.0045
R = 0.9998
DL = 10.69
BEC = 87.27

Weight: <None>
Min Conc: <None>

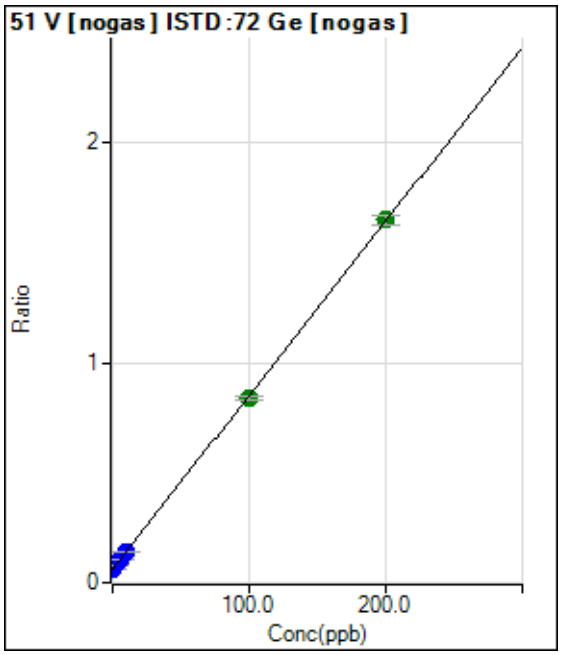


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0001	P	12.3
2	☐	2.000	1.904	4360.57	0.0013	P	4.0
3	☐	5.000	4.845	10266.33	0.0030	P	2.9
4	☐	10.000	9.701	20074.43	0.0058	P	4.2
5	☐	100.000	99.002	197202.13	0.0583	P	1.4
6	☐	200.000	200.519	385199.20	0.1180	P	0.6
7	☐	1.000					

y = 5.8771E-004 * x + 1.3361E-004
R = 1.0000
DL = 0.08392
BEC = 0.2273

Weight: <None>
Min Conc: <None>

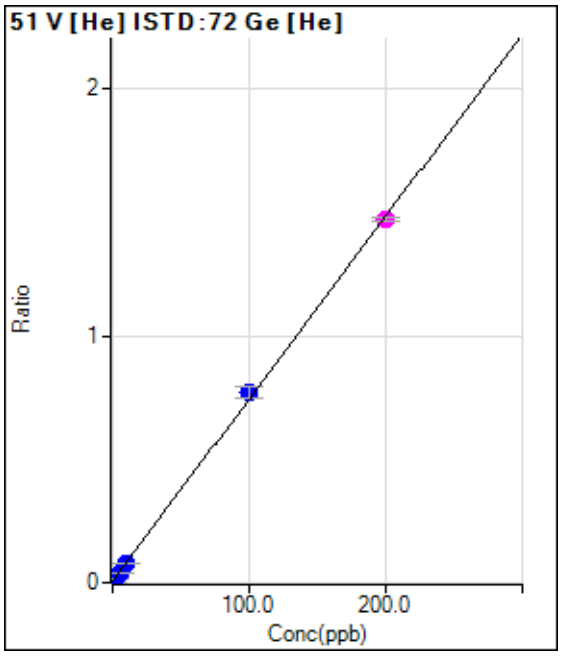
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216785.89	0.0612	P	4.4
2	☐	2.000	2.058	269703.40	0.0775	P	5.9
3	☐	5.000	5.283	354652.58	0.1030	P	1.7
4	☐	10.000	9.805	477473.47	0.1387	P	2.2
5	☐	100.000	98.235	2832910.80	0.8378	A	1.4
6	☐	200.000	200.885	5384219.13	1.6492	A	2.3
7	☐	1.000					

y = 0.0079 * x + 0.0612
R = 0.9999
DL = 1.029
BEC = 7.744

Weight: <None>
Min Conc: <None>

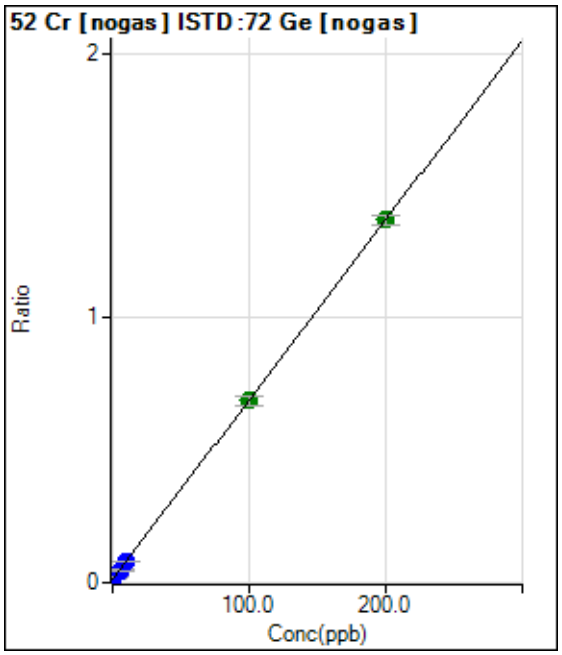


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.367	3338.97	0.0034	P	3.6
2	☐	2.000	1.607	16614.76	0.0179	P	2.3
3	☐	5.000	4.554	36498.97	0.0397	P	2.9
4	☐	10.000	9.344	69397.11	0.0750	P	2.3
5	☐	100.000	103.627	668253.94	0.7706	P	5.3
6	☐	200.000	198.234	1307510.79	1.4685	M	1.0
7	☐	1.000					

y = 0.0074 * x + 0.0061
R = 0.9997
DL = 0.04912
BEC = 0.8227

Weight: <None>
Min Conc: <None>

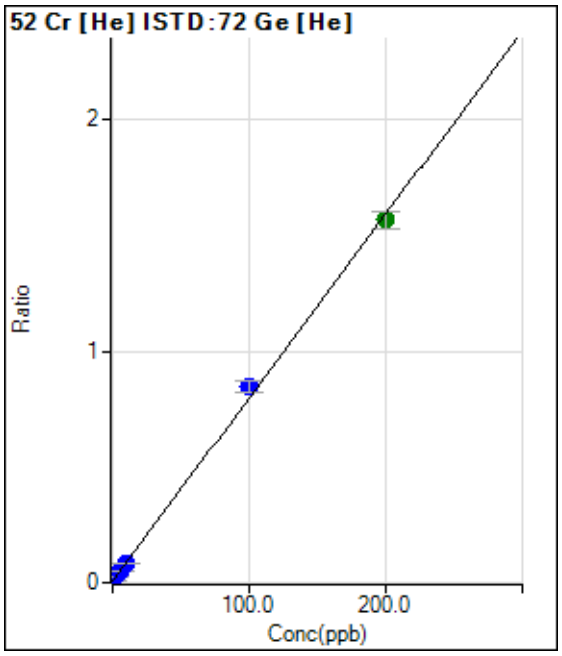
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41864.07	0.0118	P	3.7
2	☐	2.000	2.005	88517.22	0.0254	P	2.2
3	☐	5.000	5.163	161392.53	0.0469	P	4.0
4	☐	10.000	10.122	277056.74	0.0805	P	2.3
5	☐	100.000	99.696	2326480.90	0.6883	A	5.0
6	☐	200.000	200.142	4472257.23	1.3699	A	2.9
7	☐	1.000					

y = 0.0068 * x + 0.0118
R = 1.0000
DL = 0.1918
BEC = 1.743

Weight: <None>
Min Conc: <None>

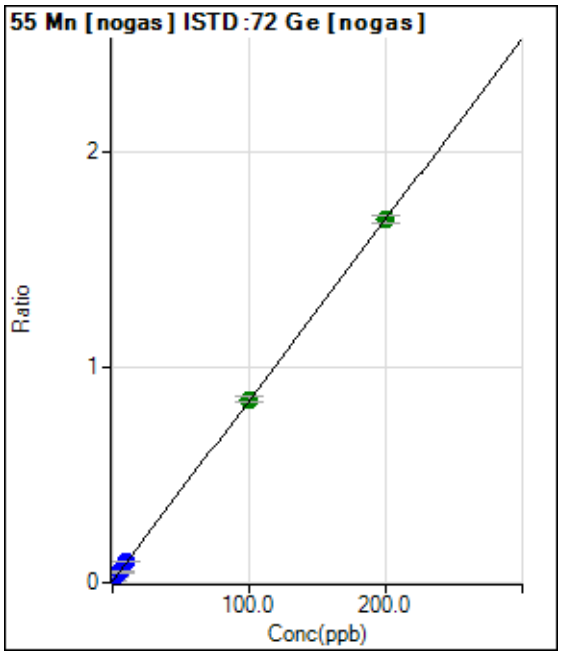


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6124.45	0.0062	P	3.2
2	☐	2.000	2.080	20985.45	0.0226	P	0.6
3	☐	5.000	5.255	43952.53	0.0478	P	3.6
4	☐	10.000	10.042	79272.94	0.0857	P	1.8
5	☐	100.000	105.945	732662.25	0.8450	P	5.7
6	☐	200.000	197.018	1393826.33	1.5660	A	4.5
7	☐	1.000					

y = 0.0079 * x + 0.0062
R = 0.9994
DL = 0.07577
BEC = 0.7793

Weight: <None>
Min Conc: <None>

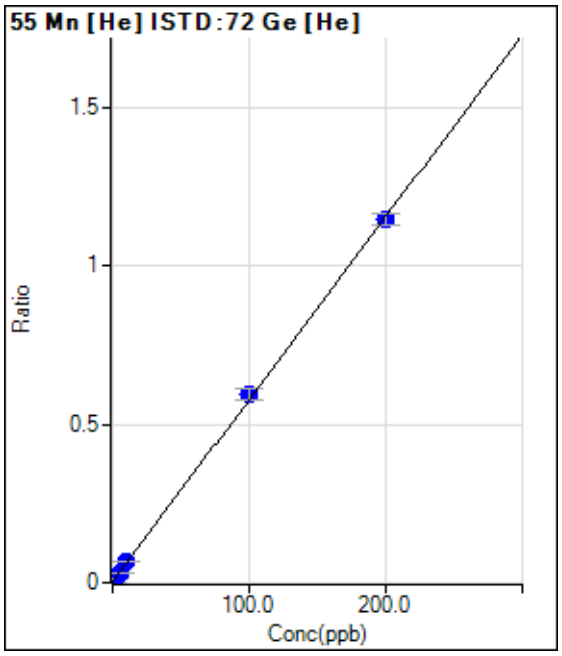
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24106.02	0.0068	P	4.1
2	☐	2.000	1.951	80626.06	0.0232	P	2.4
3	☐	5.000	5.067	169729.11	0.0493	P	2.2
4	☐	10.000	10.899	337912.31	0.0982	P	1.8
5	☐	100.000	100.476	2870602.15	0.8492	A	3.1
6	☐	200.000	199.716	5488765.13	1.6812	A	2.0
7	☐	1.000					

y = 0.0084 * x + 0.0068
R = 1.0000
DL = 0.09978
BEC = 0.8115

Weight: <None>
Min Conc: <None>

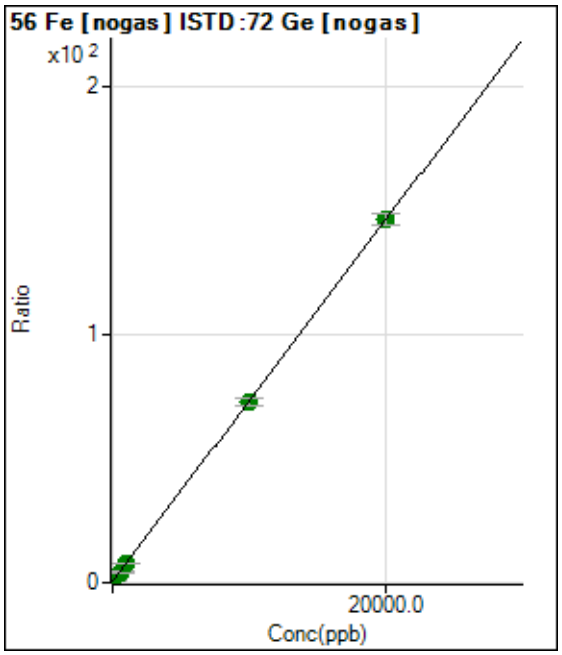


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2873.59	0.0029	P	7.6
2	☐	2.000	2.027	13481.85	0.0145	P	4.5
3	☐	5.000	5.093	29577.29	0.0322	P	6.2
4	☐	10.000	10.744	59817.49	0.0646	P	1.5
5	☐	100.000	102.911	515346.02	0.5943	P	5.2
6	☐	200.000	198.505	1018107.15	1.1437	P	3.0
7	☐	1.000					

y = 0.0057 * x + 0.0029
R = 0.9998
DL = 0.1155
BEC = 0.5037

Weight: <None>
Min Conc: <None>

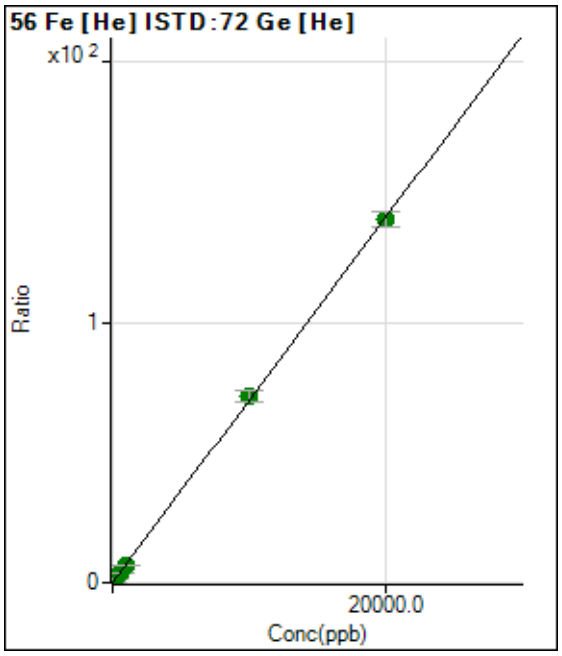
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2248066.46	0.6349	A	1.6
2	☐	200.000	192.123	7072808.49	2.0321	A	2.7
3	☐	500.000	492.005	14507447.20	4.2130	A	2.7
4	☐	1000.000	967.253	26396951.63	7.6692	A	1.3
5	☐	10000.00	9948.221	246666080.5	72.9832	A	4.7
6	☐	20000.00	20027.806	477588844.0	146.286	A	3.3
7	☐	100.000					

y = 0.0073 * x + 0.6349
R = 1.0000
DL = 4.136
BEC = 87.3

Weight: <None>
Min Conc: <None>

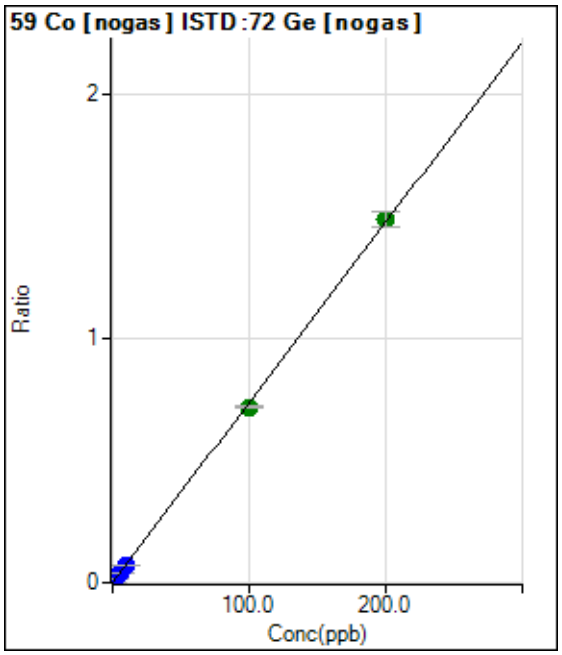


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15286.54	0.0154	P	2.8
2	☐	200.000	204.544	1344255.50	1.4503	A	4.7
3	☐	500.000	504.894	3274561.93	3.5573	A	1.8
4	☐	1000.000	970.359	6314221.16	6.8225	A	0.9
5	☐	10000.00	10239.315	62281095.74	71.8450	A	6.3
6	☐	20000.00	19881.657	124153878.1	139.486	A	4.2
7	☐	100.000					

y = 0.0070 * x + 0.0154
R = 0.9999
DL = 0.1842
BEC = 2.194

Weight: <None>
Min Conc: <None>

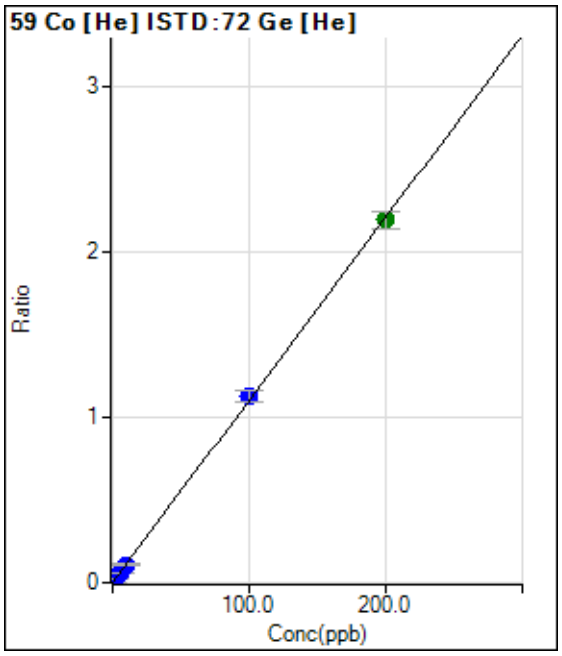
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1433.41	0.0004	P	3.3
2	☐	2.000	1.940	51194.92	0.0147	P	1.4
3	☐	5.000	4.873	125136.50	0.0363	P	2.1
4	☐	10.000	9.792	249898.70	0.0726	P	1.2
5	☐	100.000	97.264	2427126.48	0.7176	A	0.9
6	☐	200.000	201.382	4848474.09	1.4853	A	4.1
7	☐	1.000					

y = 0.0074 * x + 4.0489E-004
R = 0.9999
DL = 0.00543
BEC = 0.05491

Weight: <None>
Min Conc: <None>

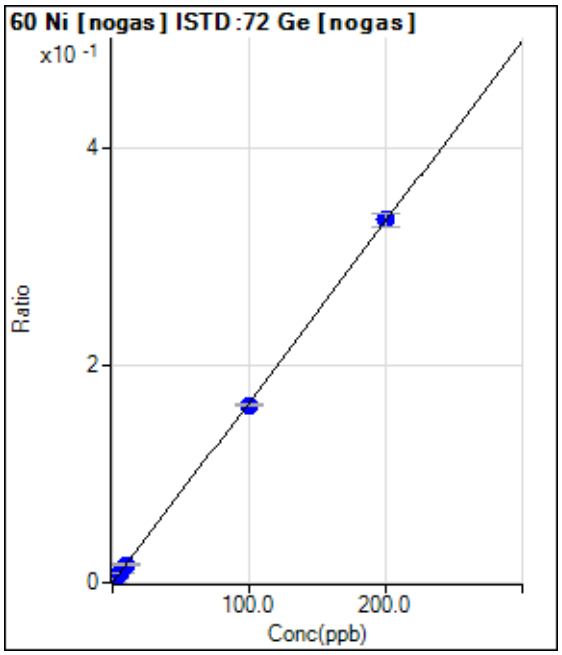


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	423.35	0.0004	P	26.3
2	☐	2.000	1.999	20798.67	0.0224	P	1.7
3	☐	5.000	5.011	51178.19	0.0556	P	5.0
4	☐	10.000	9.840	100661.12	0.1088	P	3.2
5	☐	100.000	102.431	978259.91	1.1287	P	6.7
6	☐	200.000	198.792	1949276.79	2.1900	A	4.9
7	☐	1.000					

y = 0.0110 * x + 4.2484E-004
R = 0.9999
DL = 0.03044
BEC = 0.03857

Weight: <None>
Min Conc: <None>

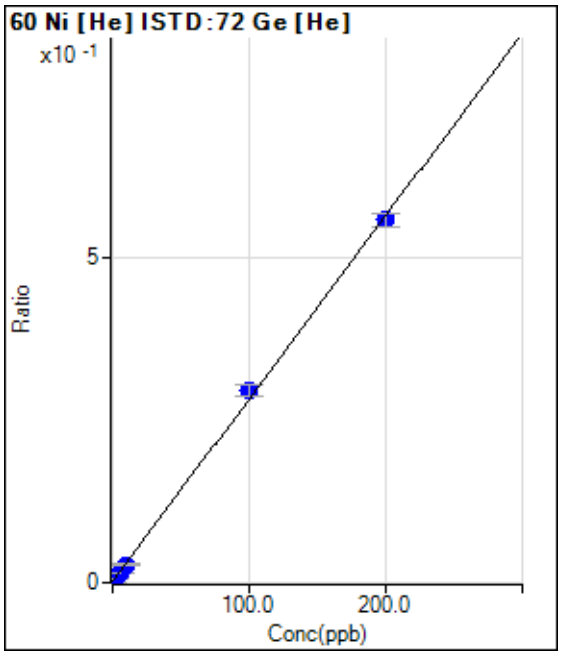
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.249	596.69	0.0002	P	19.0
2	☐	2.000	2.184	11793.95	0.0034	P	1.5
3	☐	5.000	5.304	29547.38	0.0086	P	0.4
4	☐	10.000	10.212	57633.87	0.0167	P	2.6
5	☐	100.000	98.142	551339.73	0.1630	P	1.1
6	☐	200.000	200.909	1090401.86	0.3340	P	4.0
7	☐	1.000					

y = 0.0017 * x - 2.4547E-004
R = 0.9999
DL = 0.05799
BEC = -0.1475

Weight: <None>
Min Conc: <None>

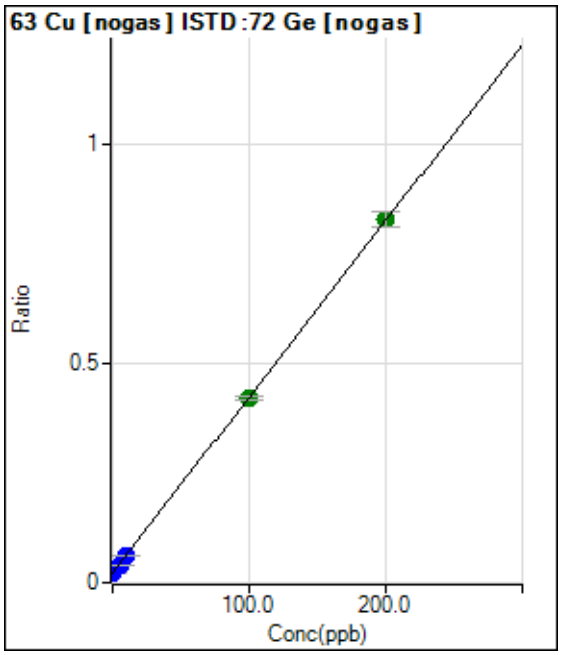


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.498	193.34	0.0002	P	17.8
2	☐	2.000	1.518	5424.22	0.0059	P	3.9
3	☐	5.000	4.423	12884.74	0.0140	P	8.4
4	☐	10.000	9.369	25798.44	0.0279	P	2.4
5	☐	100.000	104.273	255072.33	0.2942	P	5.8
6	☐	200.000	197.914	495773.16	0.5570	P	3.5
7	☐	1.000					

y = 0.0028 * x + 0.0016
R = 0.9996
DL = 0.0369
BEC = 0.5671

Weight: <None>
Min Conc: <None>

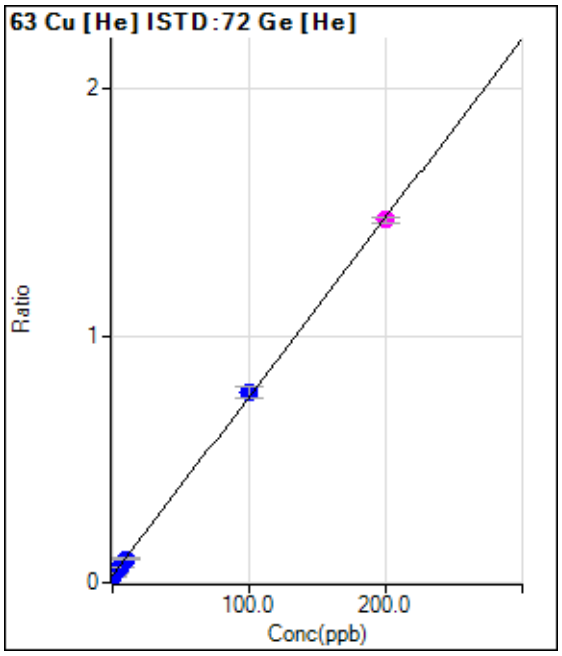
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	79347.30	0.0224	P	1.1
2	☐	2.000	1.695	101634.85	0.0292	P	2.7
3	☐	5.000	4.606	140755.62	0.0409	P	1.2
4	☐	10.000	9.672	210597.54	0.0612	P	1.3
5	☐	100.000	98.846	1415687.38	0.4187	A	2.1
6	☐	200.000	200.606	2698816.63	0.8267	A	4.3
7	☐	1.000					

y = 0.0040 * x + 0.0224
R = 1.0000
DL = 0.1865
BEC = 5.588

Weight: <None>
Min Conc: <None>

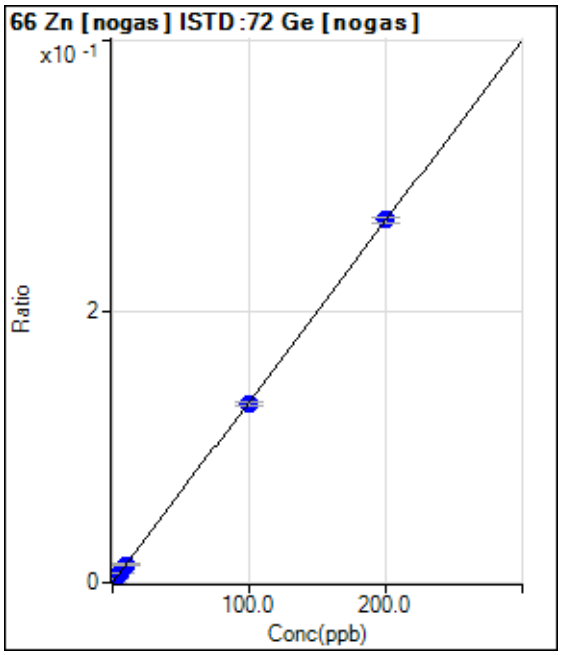


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.181	27070.20	0.0273	P	4.4
2	☐	2.000	1.744	38226.46	0.0412	P	3.5
3	☐	5.000	4.620	57158.58	0.0621	P	3.1
4	☐	10.000	9.462	89962.38	0.0973	P	5.1
5	☐	100.000	102.632	670772.77	0.7736	P	5.7
6	☐	200.000	198.723	1309729.43	1.4711	M	1.9
7	☐	1.000					

y = 0.0073 * x + 0.0286
R = 0.9999
DL = 0.4959
BEC = 3.938

Weight: <None>
Min Conc: <None>

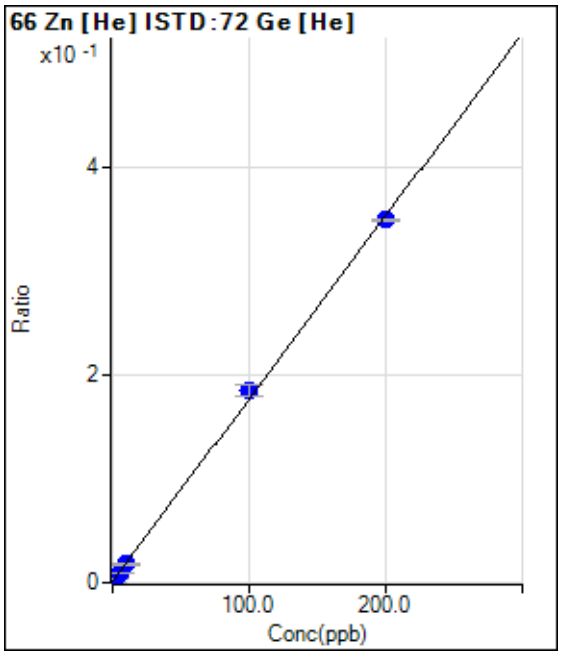
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.186	980.04	0.0003	P	2.6
2	☐	2.000	2.153	10089.61	0.0029	P	1.1
3	☐	5.000	5.208	24006.12	0.0070	P	2.7
4	☐	10.000	10.072	46312.18	0.0135	P	1.1
5	☐	100.000	98.781	445333.93	0.1317	P	1.7
6	☐	200.000	200.599	873086.21	0.2674	P	1.4
7	☐	1.000					

y = 0.0013 * x + 2.8348E-005
R = 1.0000
DL = 0.01614
BEC = 0.02127

Weight: <None>
Min Conc: <None>

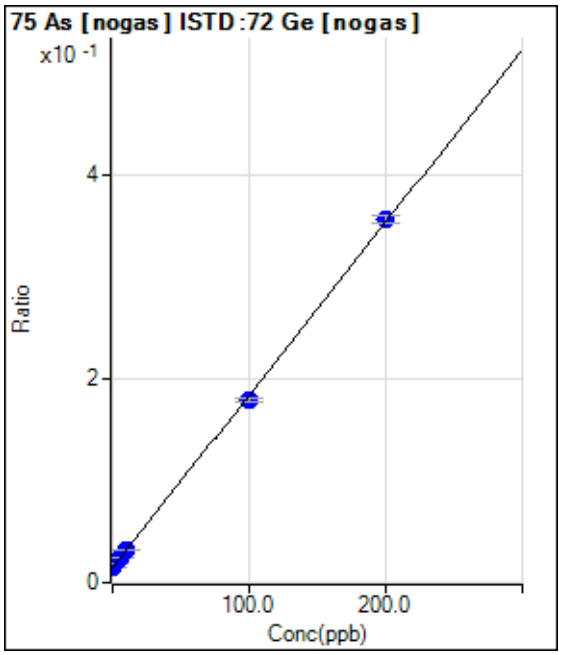


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.486	366.67	0.0004	P	16.4
2	☐	2.000	1.469	3537.08	0.0038	P	4.9
3	☐	5.000	4.490	8408.71	0.0091	P	7.6
4	☐	10.000	9.359	16400.90	0.0177	P	2.1
5	☐	100.000	104.238	160399.04	0.1850	P	5.9
6	☐	200.000	197.931	311834.25	0.3502	P	0.7
7	☐	1.000					

y = 0.0018 * x + 0.0012
R = 0.9996
DL = 0.1026
BEC = 0.6953

Weight: <None>
Min Conc: <None>

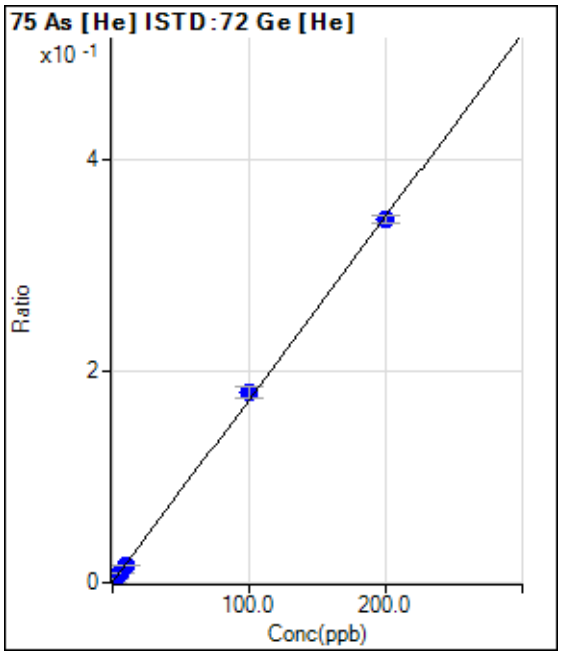
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.279	53472.21	0.0151	P	2.2
2	☐	2.000	2.227	64022.35	0.0184	P	1.3
3	☐	5.000	5.524	82536.15	0.0240	P	2.3
4	☐	10.000	10.558	111783.07	0.0325	P	1.3
5	☐	100.000	96.910	603316.46	0.1784	P	1.7
6	☐	200.000	201.501	1159609.33	0.3552	P	2.2
7	☐	1.000					

y = 0.0017 * x + 0.0146
R = 0.9998
DL = 0.5858
BEC = 8.657

Weight: <None>
Min Conc: <None>

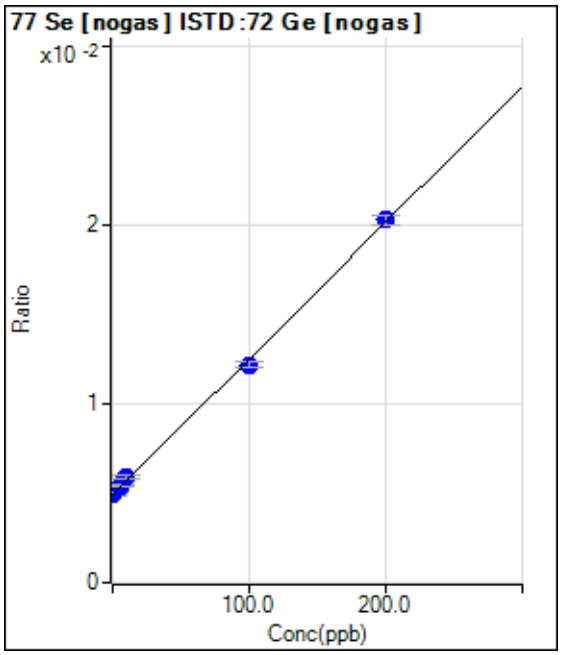


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	346.67	0.0003	P	11.4
2	☐	2.000	2.017	3559.26	0.0038	P	0.4
3	☐	5.000	4.956	8212.99	0.0089	P	2.7
4	☐	10.000	9.446	15446.57	0.0167	P	2.8
5	☐	100.000	103.622	155774.10	0.1797	P	5.7
6	☐	200.000	198.218	305661.30	0.3433	P	2.1
7	☐	1.000					

y = 0.0017 * x + 3.4917E-004
R = 0.9998
DL = 0.06872
BEC = 0.2018

Weight: <None>
Min Conc: <None>

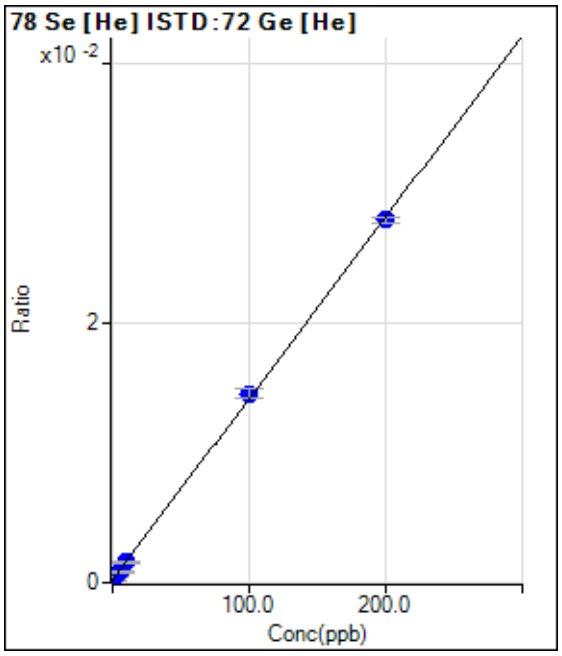
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17428.70	0.0049	P	1.5
2	☐	2.000	3.225	17985.86	0.0052	P	3.5
3	☐	5.000	6.638	18693.12	0.0054	P	1.9
4	☐	10.000	13.012	20354.97	0.0059	P	3.0
5	☐	100.000	95.677	41310.46	0.0122	P	2.1
6	☐	200.000	201.958	66343.92	0.0203	P	2.9
7	☐	1.000					

y = 7.6254E-005 * x + 0.0049
R = 0.9995
DL = 2.966
BEC = 64.55

Weight: <None>
Min Conc: <None>

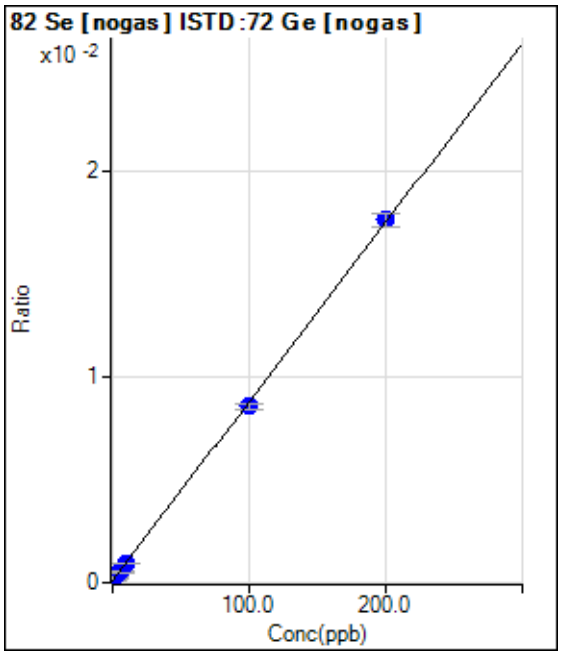


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.260	174.67	0.0002	P	13.6
2	☐	2.000	1.766	426.01	0.0005	P	3.0
3	☐	5.000	4.384	760.02	0.0008	P	3.0
4	☐	10.000	9.615	1440.06	0.0016	P	5.4
5	☐	100.000	102.917	12657.07	0.0146	P	5.7
6	☐	200.000	198.578	24908.32	0.0280	P	1.2
7	☐	1.000					

y = 1.3978E-004 * x + 2.1275E-004
R = 0.9998
DL = 0.5135
BEC = 1.522

Weight: <None>
Min Conc: <None>

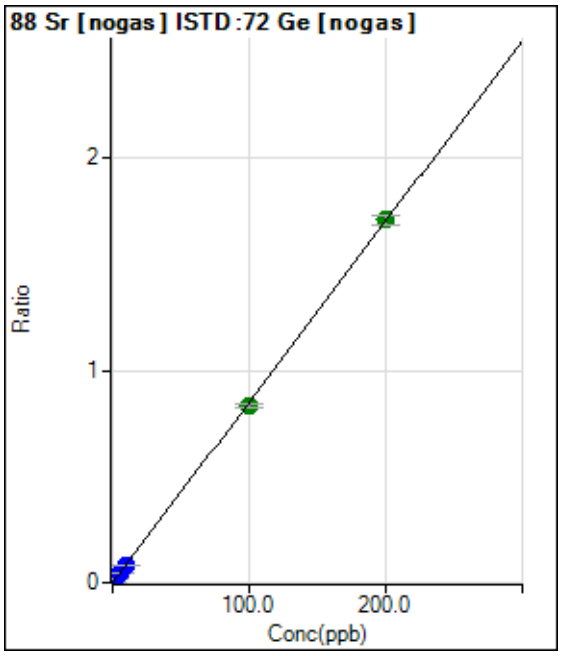
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.01	0.0001	P	6.7
2	☐	2.000	1.532	826.70	0.0002	P	5.2
3	☐	5.000	4.849	1810.12	0.0005	P	7.0
4	☐	10.000	9.303	3140.32	0.0009	P	3.8
5	☐	100.000	97.114	28880.24	0.0085	P	4.2
6	☐	200.000	201.486	57474.71	0.0176	P	3.4
7	☐	1.000					

y = 8.6861E-005 * x + 1.0442E-004
R = 0.9999
DL = 0.2413
BEC = 1.202

Weight: <None>
Min Conc: <None>

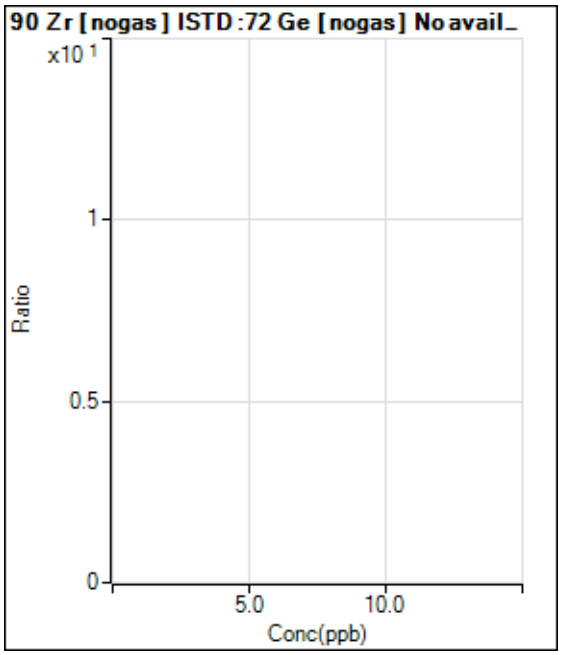


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	963.38	0.0003	P	12.8
2	☐	2.000	1.973	59318.52	0.0170	P	3.1
3	☐	5.000	4.873	143554.79	0.0417	P	3.7
4	☐	10.000	9.930	291422.84	0.0847	P	1.9
5	☐	100.000	98.296	2826180.79	0.8357	A	2.0
6	☐	200.000	200.859	5575103.46	1.7075	A	2.4
7	☐	1.000					

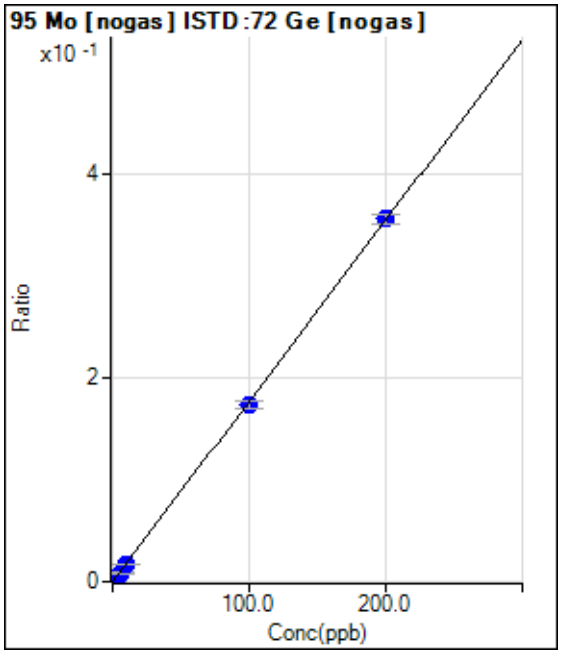
y = 0.0085 * x + 2.7157E-004
R = 0.9999
DL = 0.01228
BEC = 0.03195

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

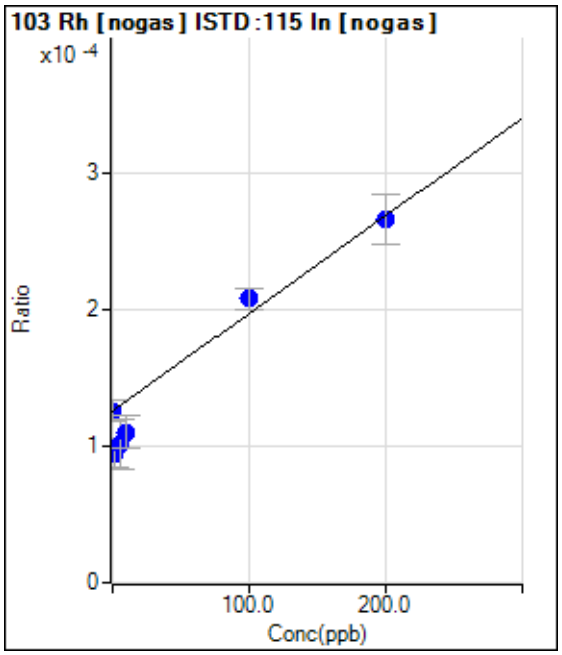


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0001	P	21.2
2	☐	2.000	1.791	11343.77	0.0033	P	1.5
3	☐	5.000	4.734	29164.11	0.0085	P	3.2
4	☐	10.000	9.682	59308.62	0.0172	P	1.0
5	☐	100.000	98.132	587620.47	0.1739	P	4.8
6	☐	200.000	200.958	1162024.02	0.3559	P	2.8
7	☐	1.000					

y = 0.0018 * x + 8.7308E-005
R = 0.9999
DL = 0.03135
BEC = 0.04931

Weight: <None>
Min Conc: <None>

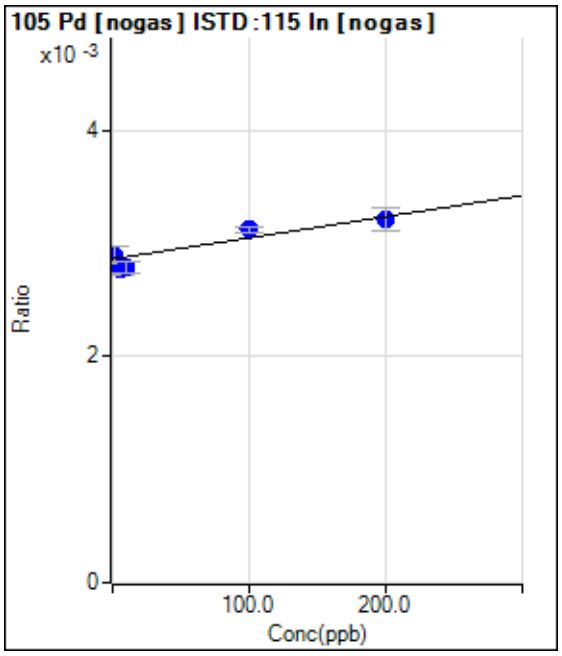
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0001	P	11.8
2	☐	2.000	-44.037	280.01	0.0001	P	22.3
3	☐	5.000	-34.948	300.01	0.0001	P	36.3
4	☐	10.000	-21.882	326.68	0.0001	P	21.1
5	☐	100.000	114.825	583.35	0.0002	P	7.3
6	☐	200.000	195.641	733.36	0.0003	P	13.7
7	☐	1.000					

y = 7.1605E-007 * x + 1.2614E-004
R = 0.9780
DL = 62.56
BEC = 176.2

Weight: <None>
Min Conc: <None>

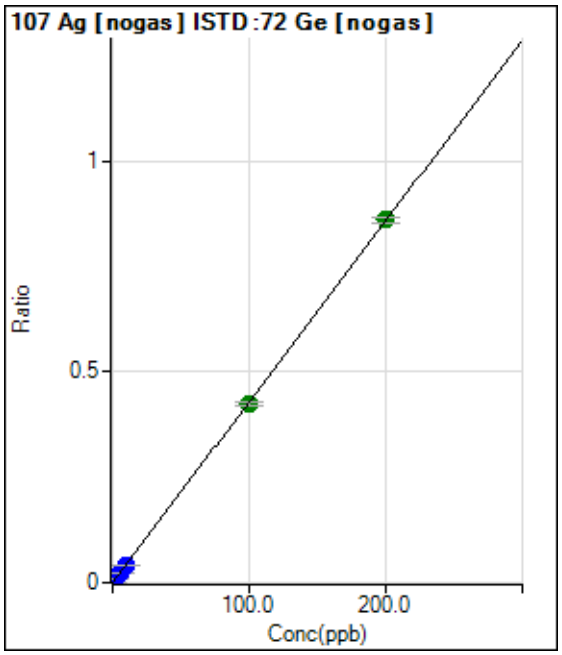


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8582.28	0.0029	P	7.7
2	☐	2.000	14.730	8552.23	0.0029	P	5.9
3	☐	5.000	-50.499	8165.33	0.0028	P	3.5
4	☐	10.000	-42.484	8235.38	0.0028	P	3.5
5	☐	100.000	139.199	8742.30	0.0031	P	1.5
6	☐	200.000	184.285	8819.01	0.0032	P	6.2
7	☐	1.000					

y = 1.8734E-006 * x + 0.0029
R = 0.9298
DL = 352.7
BEC = 1527

Weight: <None>
Min Conc: <None>

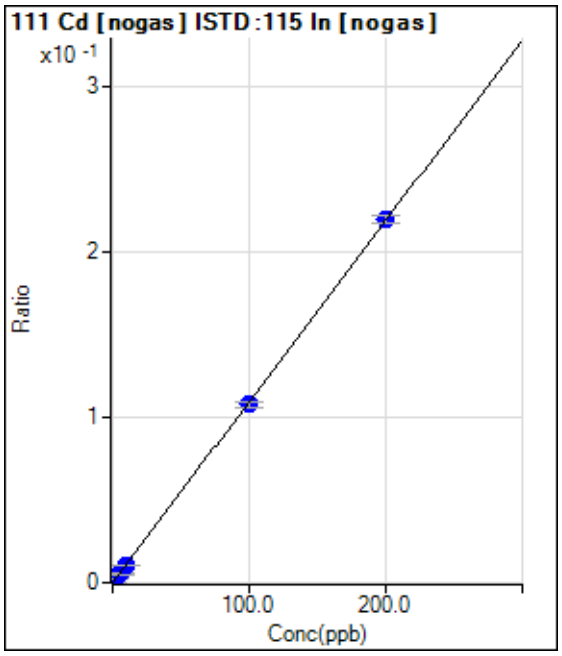
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0000	P	59.4
2	☐	2.000	1.947	29174.42	0.0084	P	3.8
3	☐	5.000	4.973	73540.92	0.0214	P	4.6
4	☐	10.000	9.911	146315.13	0.0425	P	3.5
5	☐	100.000	98.615	1430032.69	0.4228	A	2.6
6	☐	200.000	200.698	2808797.25	0.8604	A	1.7
7	☐	1.000					

y = 0.0043 * x + 3.7028E-005
R = 1.0000
DL = 0.01539
BEC = 0.008638

Weight: <None>
Min Conc: <None>

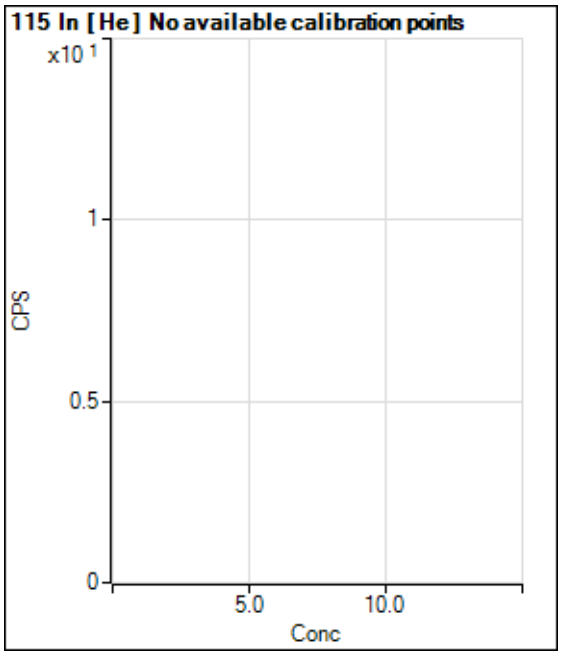


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	102.
2	☐	2.000	1.864	6047.79	0.0020	P	6.6
3	☐	5.000	4.791	15460.31	0.0052	P	2.8
4	☐	10.000	9.627	31144.45	0.0105	P	1.6
5	☐	100.000	98.762	302145.44	0.1079	P	3.0
6	☐	200.000	200.644	603088.78	0.2191	P	2.1
7	☐	1.000					

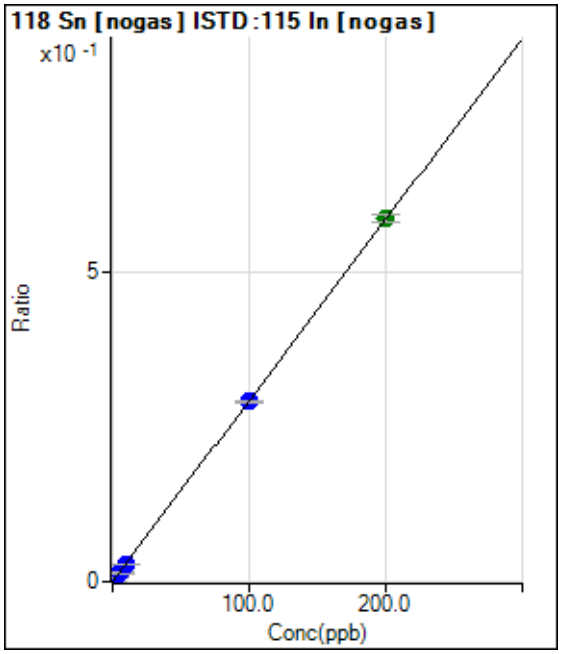
y = 0.0011 * x + 6.7945E-006
R = 1.0000
DL = 0.01908
BEC = 0.006222

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1105940.57		P	3.2
2	☐			1063093.03		P	1.7
3	☐			1070171.60		P	2.9
4	☐			1079595.73		P	1.5
5	☐			986563.25		P	6.8
6	☐			1036373.93		P	1.1
7	☐						

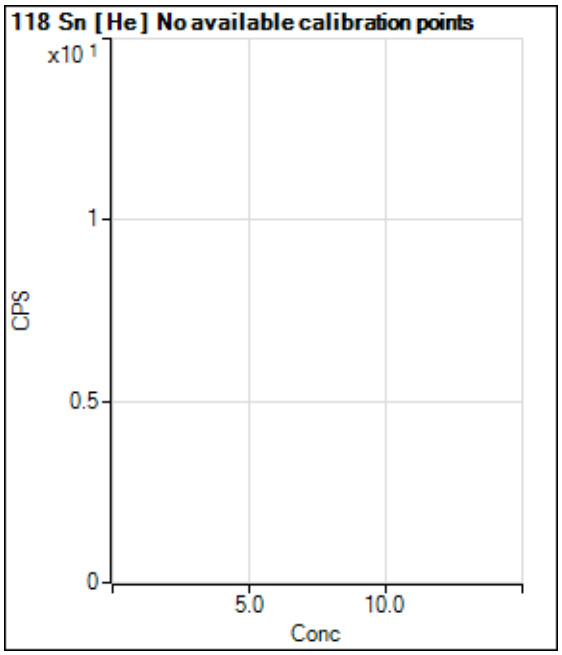


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1100.05	0.0004	P	5.1
2	☐	2.000	1.908	17629.14	0.0060	P	3.7
3	☐	5.000	4.715	41810.58	0.0142	P	3.2
4	☐	10.000	9.535	83693.11	0.0283	P	2.9
5	☐	100.000	99.254	814798.11	0.2909	P	2.1
6	☐	200.000	200.404	1616222.01	0.5870	A	2.0
7	☐	1.000					

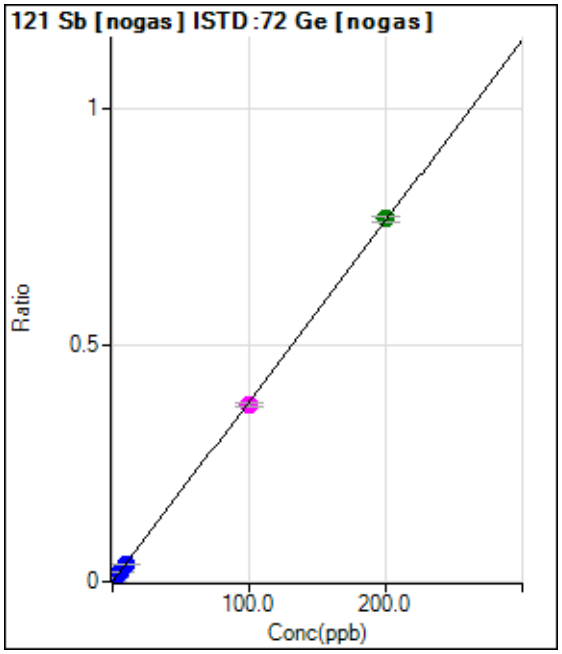
y = 0.0029 * x + 3.6619E-004
R = 1.0000
DL = 0.01931
BEC = 0.1251

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			550.01		P	19.2
2	☐			6981.50		P	0.9
3	☐			17282.11		P	3.2
4	☐			34731.43		P	1.3
5	☐			335570.25		P	1.3
6	☐			683623.89		P	1.0
7	☐						

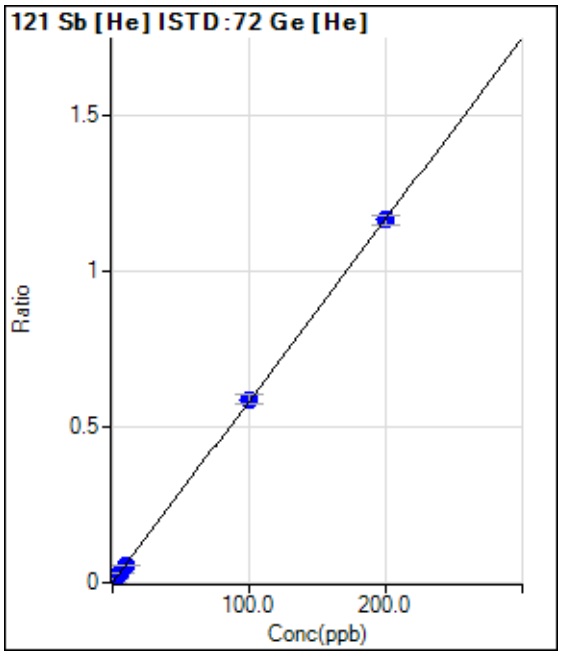


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1370.08	0.0004	P	6.8
2	☐	2.000	1.891	26393.47	0.0076	P	3.3
3	☐	5.000	4.733	63368.22	0.0184	P	1.2
4	☐	10.000	9.634	127509.91	0.0371	P	3.1
5	☐	100.000	98.015	1262749.59	0.3734	M	1.7
6	☐	200.000	201.018	2499064.91	0.7655	A	1.8
7	☐	1.000					

y = 0.0038 * x + 3.8707E-004
R = 0.9999
DL = 0.02082
BEC = 0.1017

Weight: <None>
Min Conc: <None>

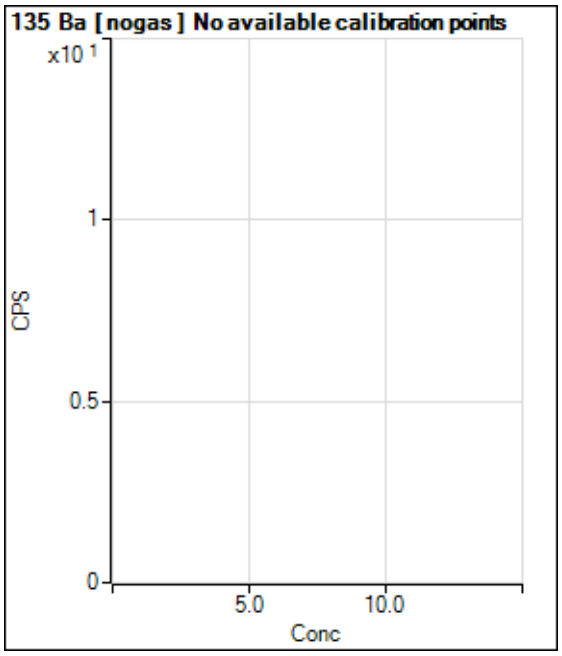
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540.02	0.0005	P	23.8
2	☐	2.000	1.798	10203.13	0.0110	P	3.4
3	☐	5.000	4.790	26169.89	0.0284	P	1.9
4	☐	10.000	9.325	50737.13	0.0548	P	0.4
5	☐	100.000	100.676	508576.65	0.5864	P	5.1
6	☐	200.000	199.703	1035074.96	1.1627	P	2.8
7	☐	1.000					

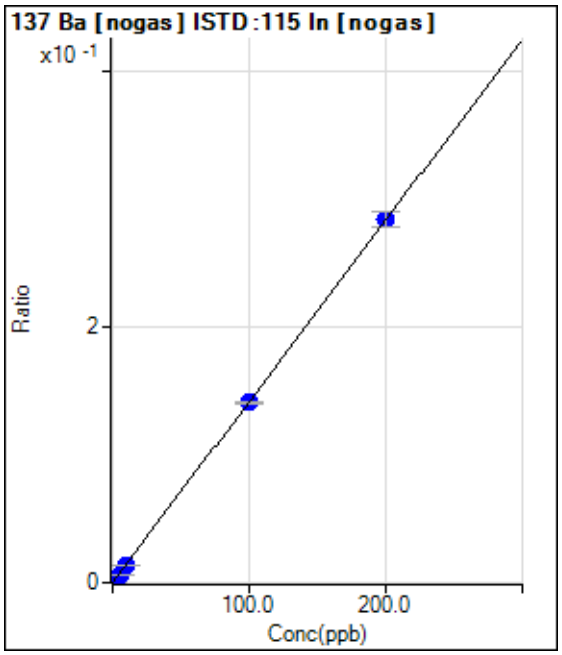
y = 0.0058 * x + 5.4525E-004
R = 1.0000
DL = 0.06697
BEC = 0.09369

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			186.67		P	11.2
2	☐			4807.42		P	4.6
3	☐			11627.39		P	3.0
4	☐			23386.29		P	1.8
5	☐			231247.66		P	2.2
6	☐			451644.94		P	1.6
7	☐						

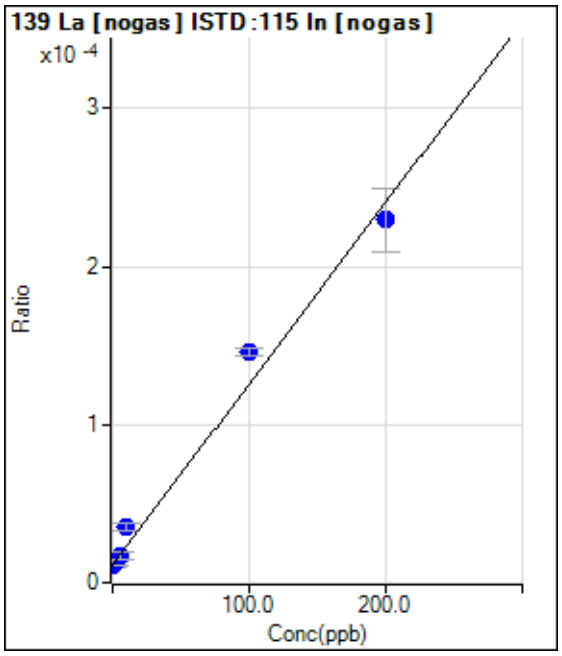
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	340.01	0.0001	P	17.4
2	☐	2.000	1.849	8085.36	0.0027	P	5.4
3	☐	5.000	4.669	19845.01	0.0067	P	1.1
4	☐	10.000	9.363	39572.60	0.0134	P	2.3
5	☐	100.000	99.389	394424.42	0.1408	P	1.2
6	☐	200.000	200.347	780655.14	0.2837	P	4.3
7	☐	1.000					

y = 0.0014 * x + 1.1263E-004
R = 1.0000
DL = 0.04153
BEC = 0.07956

Weight: <None>
Min Conc: <None>

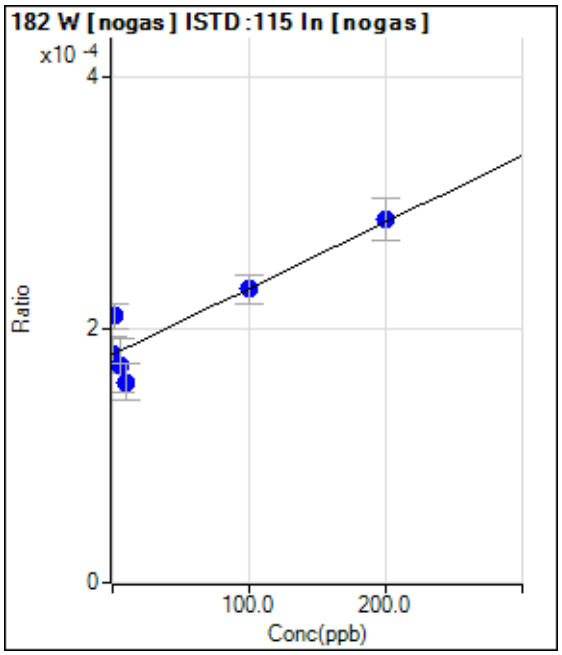


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	36.0
2	☐	2.000	1.075	36.67	0.0000	P	15.2
3	☐	5.000	5.000	50.00	0.0000	P	32.6
4	☐	10.000	20.698	103.33	0.0000	P	13.8
5	☐	100.000	117.913	410.01	0.0001	P	3.1
6	☐	200.000	190.518	633.36	0.0002	P	17.6
7	☐	1.000					

y = 1.1465E-006 * x + 1.1139E-005
R = 0.9930
DL = 10.5
BEC = 9.716

Weight: <None>
Min Conc: <None>

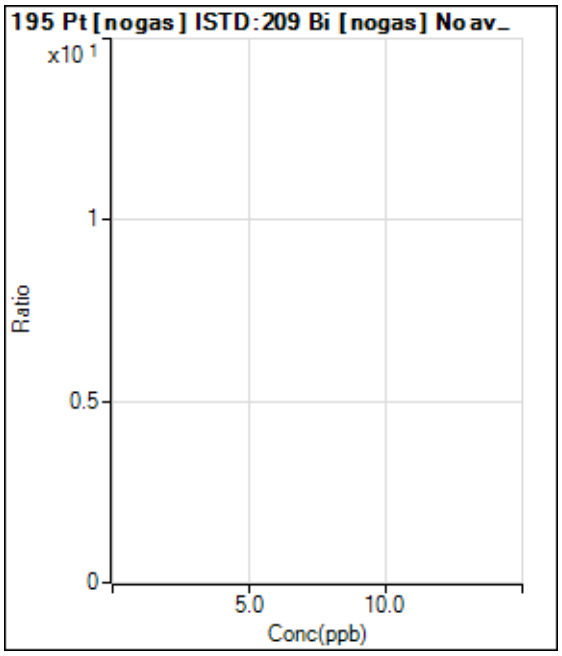
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540.02	0.0002	P	16.1
2	☐	2.000	57.768	623.35	0.0002	P	9.8
3	☐	5.000	-15.309	506.68	0.0002	P	24.9
4	☐	10.000	-40.868	470.01	0.0002	P	18.0
5	☐	100.000	98.757	650.03	0.0002	P	9.5
6	☐	200.000	203.115	790.03	0.0003	P	11.7
7	☐	1.000					

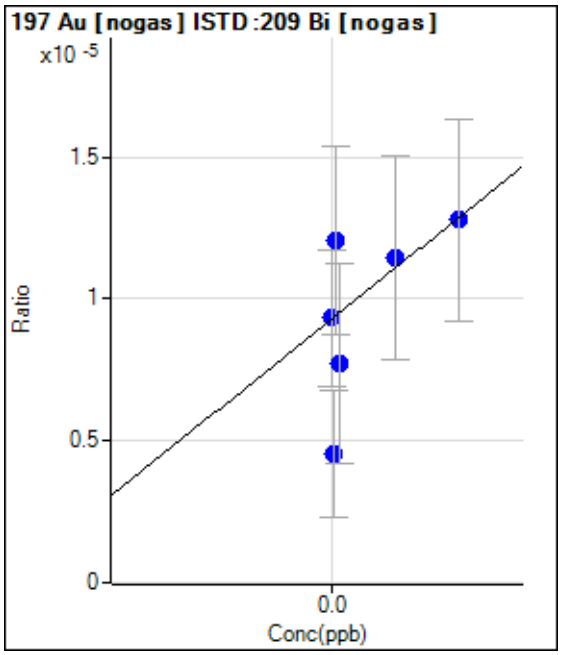
y = 5.2432E-007 * x + 1.8018E-004
R = 0.9227
DL = 166.1
BEC = 343.6

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

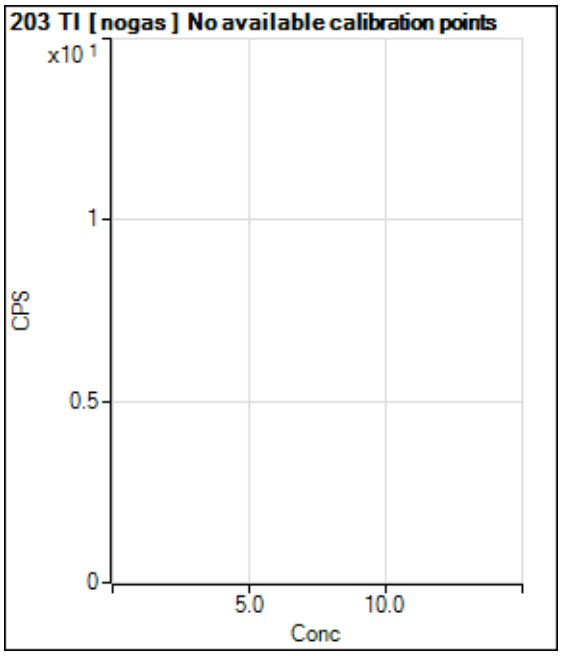
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	51.6
2	☐	2.000	-268.148	10.00	0.0000	P	98.1
3	☐	5.000	152.914	26.67	0.0000	P	55.1
4	☐	10.000	-90.160	16.67	0.0000	P	91.3
5	☐	100.000	119.361	23.33	0.0000	P	62.9
6	☐	200.000	194.331	26.67	0.0000	P	55.4
7	☐	1.000					

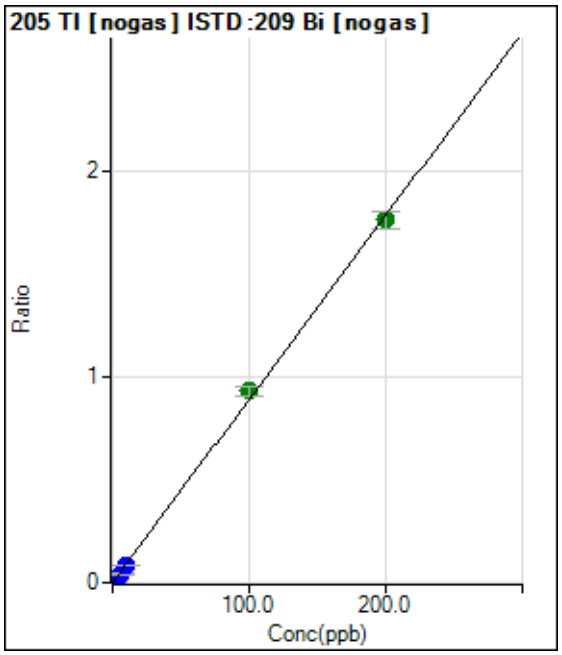
y = 1.7803E-008 * x + 9.3189E-006
R = 0.6204
DL = 810
BEC = 523.4

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			213.34		P	5.4
2	☐			15491.00		P	5.8
3	☐			38138.38		P	1.9
4	☐			78743.54		P	1.4
5	☐			781830.01		P	0.0
6	☐			1584112.69		A	3.1
7	☐						

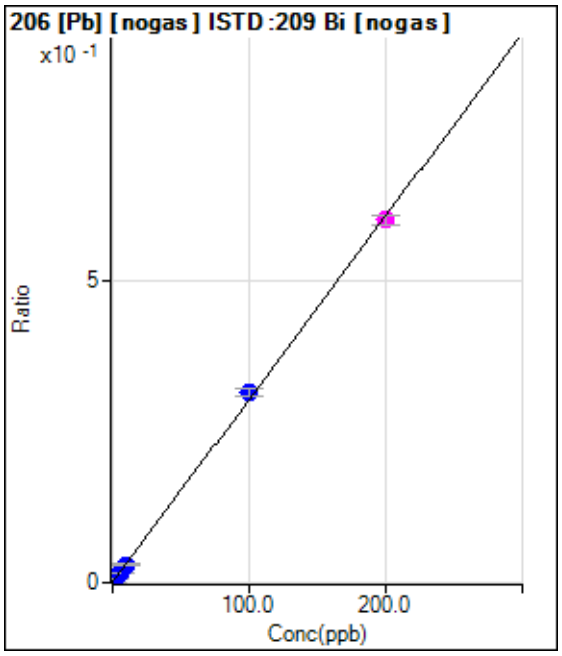
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0002	P	20.9
2	☐	2.000	1.868	36324.42	0.0168	P	6.1
3	☐	5.000	4.643	91200.87	0.0416	P	4.4
4	☐	10.000	9.647	186691.66	0.0861	P	1.5
5	☐	100.000	104.383	1878981.07	0.9302	A	4.4
6	☐	200.000	197.836	3625414.22	1.7629	A	4.6
7	☐	1.000					

y = 0.0089 * x + 1.8813E-004
R = 0.9996
DL = 0.01327
BEC = 0.02111

Weight: <None>
Min Conc: <None>

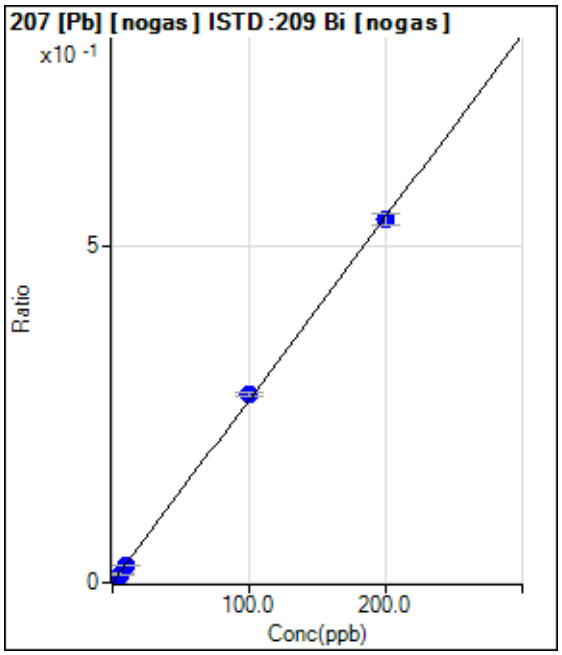


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1140.06	0.0005	P	0.2
2	☐	2.000	1.894	13525.80	0.0063	P	3.8
3	☐	5.000	4.741	32683.30	0.0149	P	1.8
4	☐	10.000	9.703	64809.98	0.0299	P	2.2
5	☐	100.000	104.001	637153.48	0.3154	P	3.4
6	☐	200.000	198.022	1234604.02	0.6000	M	2.5
7	☐	1.000					

y = 0.0030 * x + 5.2947E-004
R = 0.9997
DL = 0.0008089
BEC = 0.1749

Weight: <None>
Min Conc: <None>

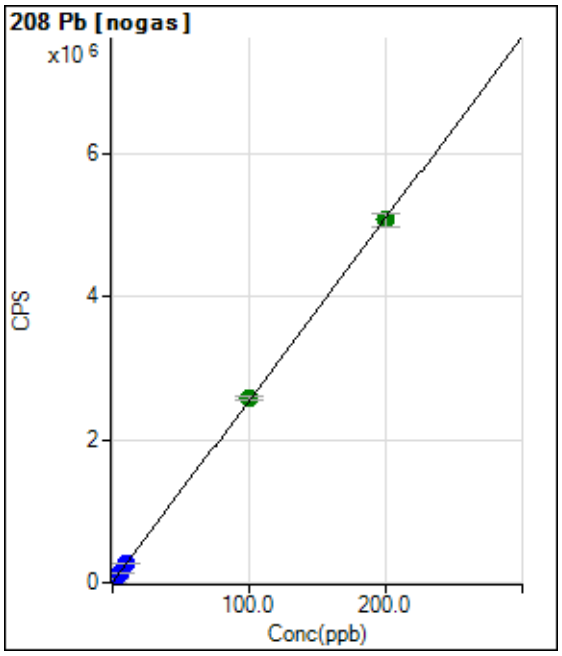
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	870.04	0.0004	P	10.7
2	☐	2.000	1.941	12214.76	0.0057	P	8.9
3	☐	5.000	4.569	28051.23	0.0128	P	5.4
4	☐	10.000	9.574	57094.08	0.0263	P	2.5
5	☐	100.000	103.058	565155.60	0.2796	P	1.6
6	☐	200.000	198.504	1107818.73	0.5383	P	3.0
7	☐	1.000					

y = 0.0027 * x + 4.0476E-004
R = 0.9998
DL = 0.04782
BEC = 0.1494

Weight: <None>
Min Conc: <None>

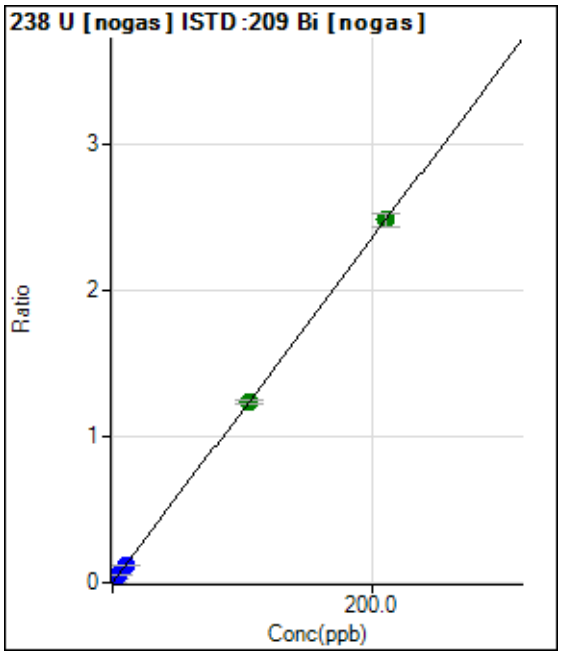


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4020.26		P	0.9
2	☐	2.000	2.011	55170.96		P	2.2
3	☐	5.000	4.990	130966.61		P	2.3
4	☐	10.000	10.022	258983.22		P	0.8
5	☐	100.000	101.565	2587797.24		A	2.3
6	☐	200.000	199.216	5072002.19		A	3.4
7	☐	1.000					

y = 25439.5808 * x + 4020.2567
R = 1.0000
DL = 0.004253
BEC = 0.158

Weight: <None>
Min Conc: <None>

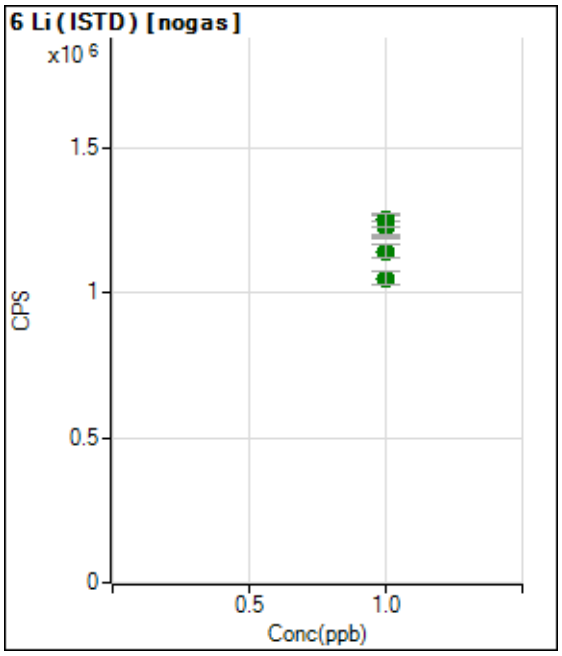
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	19.8
2	☐	2.000	1.905	48682.59	0.0225	P	0.2
3	☐	5.000	4.717	122522.07	0.0558	P	1.1
4	☐	10.000	9.602	246049.31	0.1135	P	0.6
5	☐	105.000	104.496	2497748.14	1.2352	A	2.1
6	☐	210.000	210.279	5112087.32	2.4856	A	3.7
7	☐	1.000					

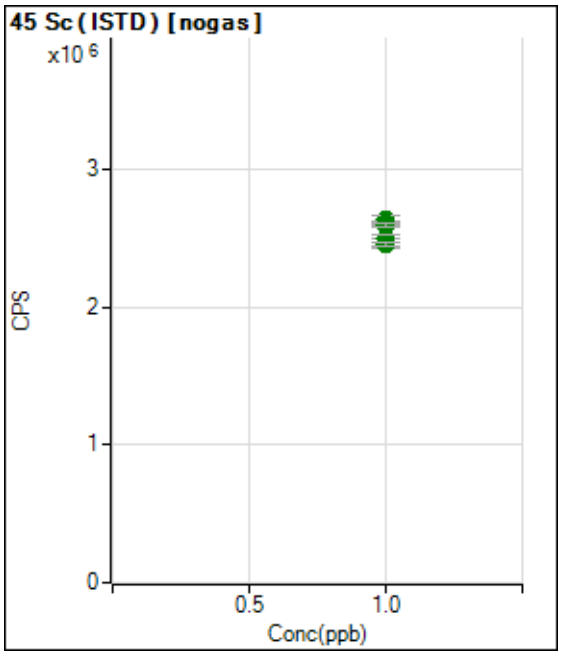
y = 0.0118 * x + 2.3211E-005
R = 1.0000
DL = 0.001164
BEC = 0.001964

Weight: <None>
Min Conc: <None>

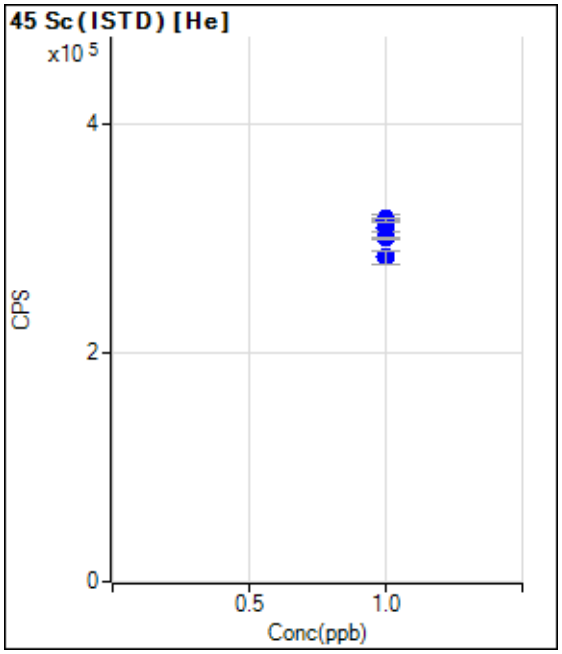


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1229805.43		A	6.8
2	☐	1.000		1228956.58		A	5.9
3	☐	1.000		1224222.27		A	3.3
4	☐	1.000		1251492.84		A	3.6
5	☐	1.000		1143511.75		A	4.1
6	☐	1.000		1050150.29		A	4.8
7	☐	1.000					

Calibration for 026_ICV.d

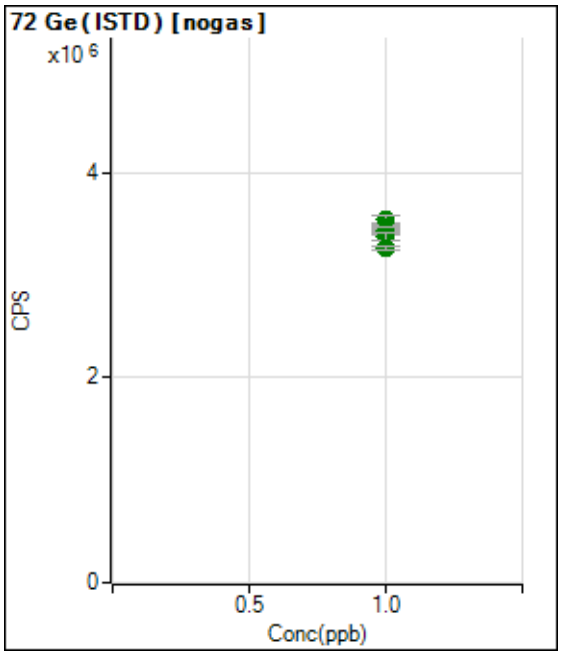


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2630545.12		A	2.6
2	☐	1.000		2605370.22		A	1.0
3	☐	1.000		2458870.33		A	3.1
4	☐	1.000		2597407.15		A	1.0
5	☐	1.000		2495971.52		A	2.3
6	☐	1.000		2453955.33		A	1.6
7	☐	1.000					

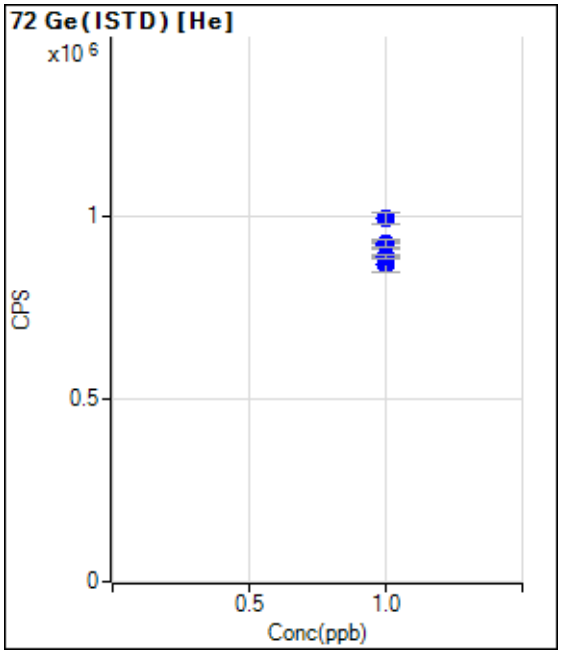


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		315265.37		P	0.5
2	☐	1.000		310299.20		P	2.7
3	☐	1.000		317425.51		P	2.1
4	☐	1.000		315967.42		P	1.0
5	☐	1.000		283754.26		P	4.0
6	☐	1.000		300464.19		P	0.6
7	☐	1.000					

Calibration for 026_ICV.d

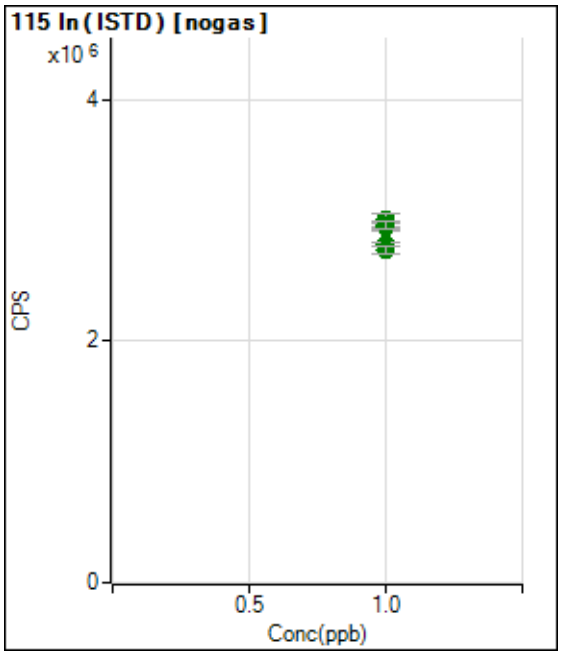


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3541557.45		A	2.2
2	☐	1.000		3480521.93		A	0.2
3	☐	1.000		3443846.51		A	0.6
4	☐	1.000		3442490.26		A	2.1
5	☐	1.000		3382029.53		A	2.5
6	☐	1.000		3264970.37		A	0.7
7	☐	1.000					

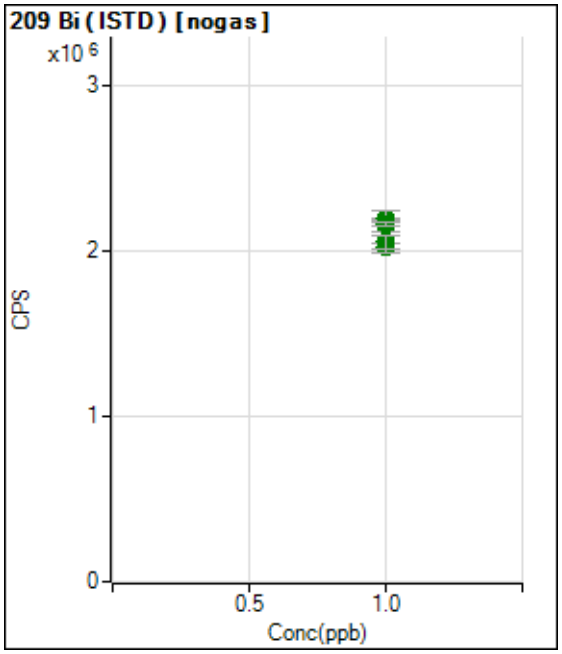


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		993327.33		P	3.1
2	☐	1.000		926943.19		P	0.3
3	☐	1.000		920502.90		P	2.4
4	☐	1.000		925552.20		P	2.2
5	☐	1.000		868492.33		P	4.5
6	☐	1.000		890447.33		P	1.5
7	☐	1.000					

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3006327.37		A	3.6
2	☐	1.000		2961941.38		A	1.3
3	☐	1.000		2952199.08		A	2.3
4	☐	1.000		2960727.31		A	1.8
5	☐	1.000		2801397.37		A	1.3
6	☐	1.000		2753059.62		A	2.1
7	☐	1.000					



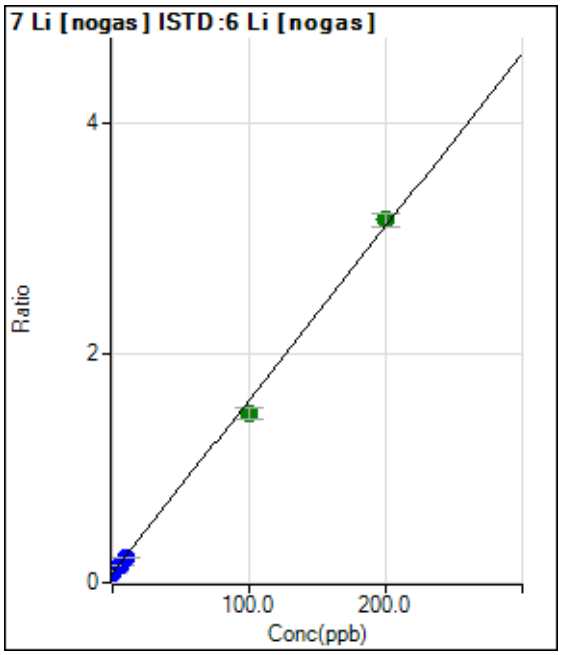
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2153139.50		A	3.0
2	☐	1.000		2160139.71		A	3.3
3	☐	1.000		2197258.67		A	4.1
4	☐	1.000		2167413.14		A	1.1
5	☐	1.000		2021585.28		A	2.9
6	☐	1.000		2058667.99		A	4.0
7	☐	1.000					

Calibration for 138_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\121018B.b\
Analysis File: 121018B.batch.bin
DA Date-Time: 2018-12-10 21:33:35
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	132CALB.d	CAL BLK	2018-12-10 21:20:18
2	133CALS.d	2/10/200	2018-12-10 21:22:20
3	134CALS.d	5/25/500	2018-12-10 21:24:24
4	135CALS.d	10/50/1000	2018-12-10 21:26:28
5	136CALS.d	100/500/10K	2018-12-10 21:28:31
6	137CALS.d	200/1000/20K	2018-12-10 21:30:36
7			

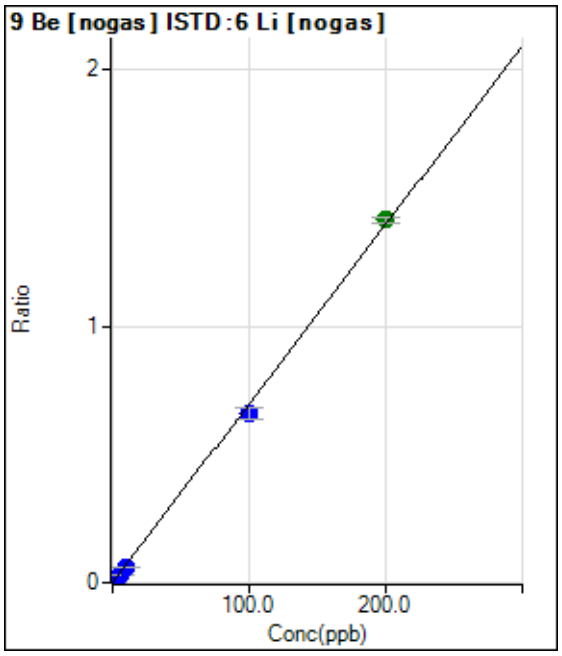
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98156.72	0.0838	P	1.2
2	☐	2.000	1.682	125243.92	0.1091	P	3.8
3	☐	5.000	4.244	171686.09	0.1478	P	3.6
4	☐	10.000	8.651	244566.01	0.2143	P	2.4
5	☐	100.000	92.479	1587240.50	1.4787	A	7.1
6	☐	200.000	203.850	3081008.60	3.1586	A	3.7
7	☐	1.000					

y = 0.0151 * x + 0.0838
R = 0.9991
DL = 0.1951
BEC = 5.555

Weight: <None>
Min Conc: <None>

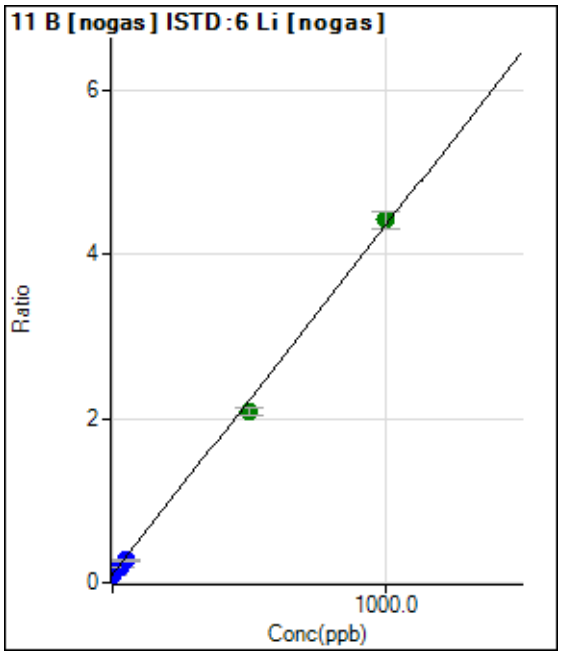


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	17.7
2	☐	2.000	1.664	13374.89	0.0117	P	2.6
3	☐	5.000	4.294	34831.82	0.0300	P	5.3
4	☐	10.000	8.426	67130.43	0.0588	P	3.0
5	☐	100.000	94.656	708918.38	0.6603	P	6.2
6	☐	200.000	202.772	1380233.05	1.4145	A	1.3
7	☐	1.000					

y = 0.0070 * x + 4.2550E-005
R = 0.9995
DL = 0.003237
BEC = 0.0061

Weight: <None>
Min Conc: <None>

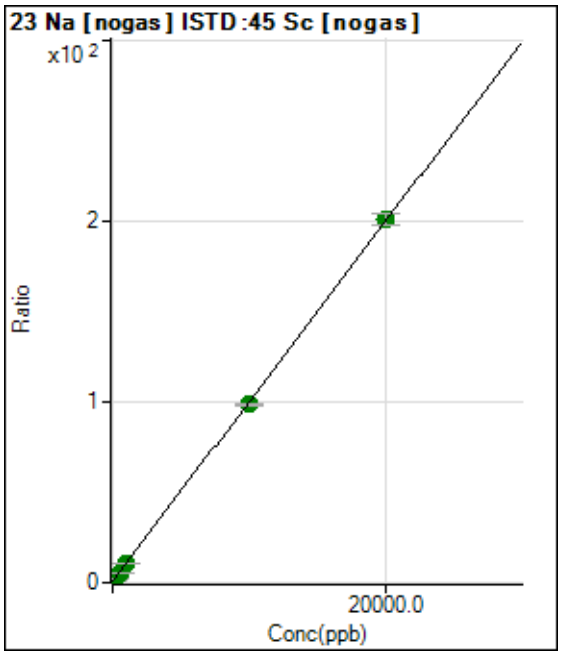
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118774.79	0.1014	P	2.1
2	☐	10.000	8.093	155757.22	0.1358	P	4.2
3	☐	25.000	19.096	211892.21	0.1825	P	4.8
4	☐	50.000	40.942	313967.17	0.2752	P	5.2
5	☐	500.000	467.793	2242263.41	2.0874	A	5.0
6	☐	1000.000	1016.723	4305823.79	4.4179	A	4.7
7	☐	5.000					

y = 0.0042 * x + 0.1014
R = 0.9993
DL = 1.526
BEC = 23.88

Weight: <None>
Min Conc: <None>

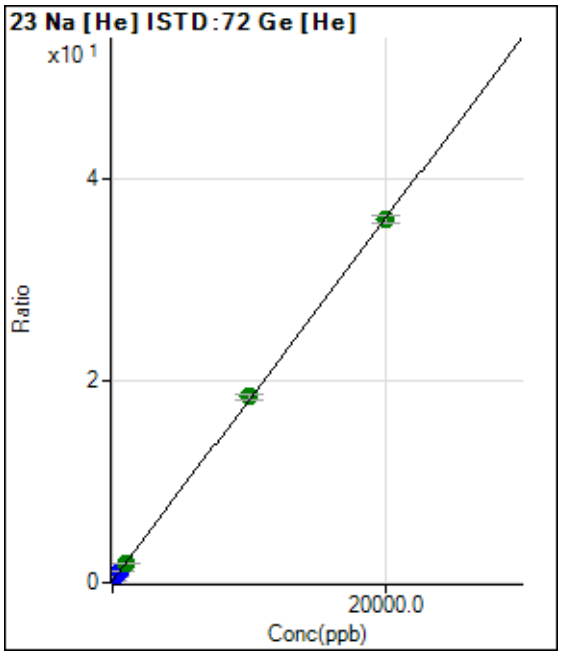


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1656557.33	0.6740	A	6.8
2	☐	200.000	190.924	6369548.58	2.5746	A	2.9
3	☐	500.000	466.835	13348913.32	5.3212	A	3.0
4	☐	1000.000	968.985	24792704.72	10.3200	A	1.3
5	☐	10000.00	9827.363	239318263.6	98.5035	A	0.8
6	☐	20000.00	20088.789	469382227.1	200.654	A	3.2
7	☐	100.000					

y = 0.0100 * x + 0.6740
R = 0.9999
DL = 13.78
BEC = 67.7

Weight: <None>
Min Conc: <None>

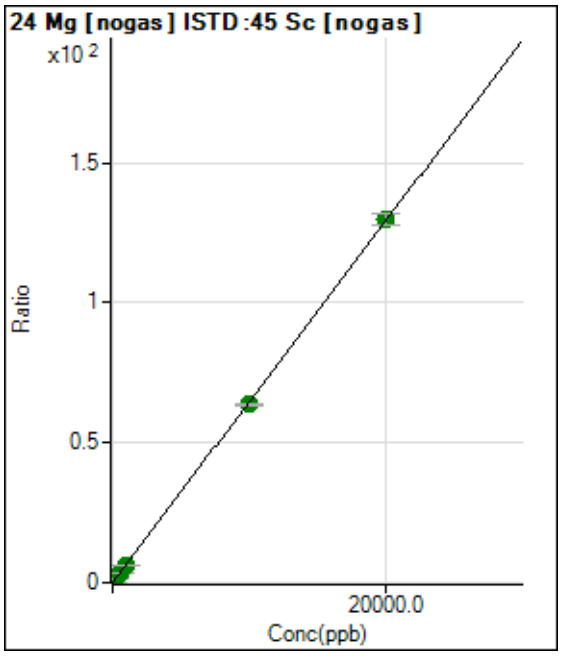
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	152546.78	0.1883	P	1.7
2	☐	200.000	202.044	443743.19	0.5514	P	2.0
3	☐	500.000	511.475	894828.50	1.1074	P	0.8
4	☐	1000.000	1001.282	1617547.37	1.9875	A	1.1
5	☐	10000.00	10146.260	14853822.28	18.4202	A	3.2
6	☐	20000.00	19926.499	28601452.90	35.9943	A	2.0
7	☐	100.000					

y = 0.0018 * x + 0.1883
R = 1.0000
DL = 5.295
BEC = 104.8

Weight: <None>
Min Conc: <None>

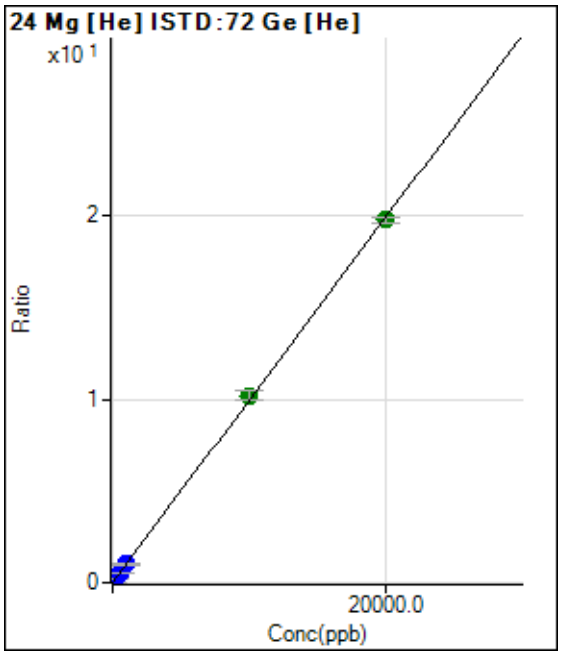


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41989.09	0.0171	P	13.7
2	☐	200.000	201.394	3260445.00	1.3179	A	1.7
3	☐	500.000	484.818	7899016.32	3.1486	A	2.4
4	☐	1000.000	982.085	15278293.05	6.3604	A	3.1
5	☐	10000.00	9858.871	154747315.9	63.6960	A	0.9
6	☐	20000.00	20071.826	303328815.1	129.661	A	3.1
7	☐	100.000					

y = 0.0065 * x + 0.0171
R = 1.0000
DL = 1.087
BEC = 2.649

Weight: <None>
Min Conc: <None>

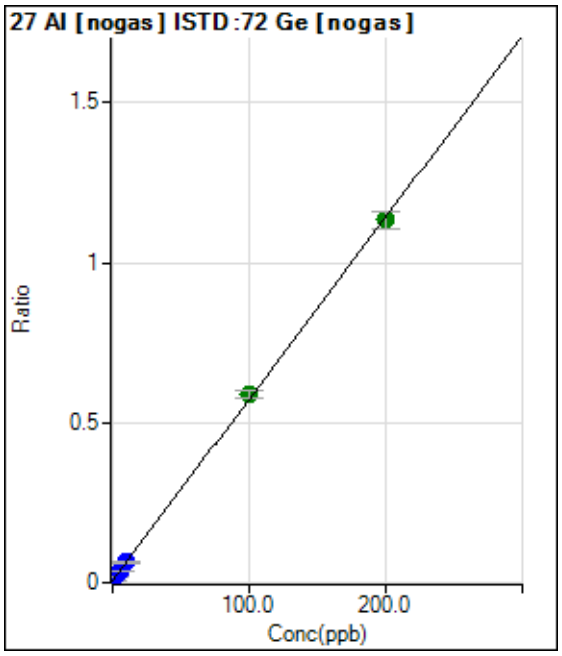
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2396.85	0.0030	P	7.2
2	☐	200.000	207.291	168330.19	0.2092	P	3.1
3	☐	500.000	522.963	422787.42	0.5232	P	0.9
4	☐	1000.000	1000.245	812312.98	0.9980	P	0.9
5	☐	10000.00	10238.506	8216398.63	10.1887	A	4.8
6	☐	20000.00	19880.088	15719288.10	19.7806	A	1.3
7	☐	100.000					

y = 9.9484E-004 * x + 0.0030
R = 0.9999
DL = 0.6443
BEC = 2.975

Weight: <None>
Min Conc: <None>

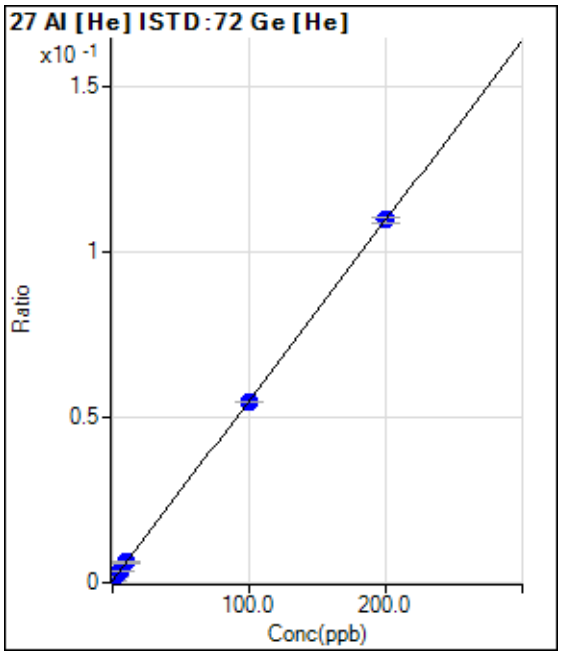


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20988.53	0.0065	P	2.5
2	☐	2.000	1.771	54394.93	0.0165	P	3.3
3	☐	5.000	4.883	112157.41	0.0342	P	2.0
4	☐	10.000	10.040	209579.00	0.0635	P	2.1
5	☐	100.000	102.676	1913956.01	0.5892	A	4.6
6	☐	200.000	198.665	3591850.57	1.1340	A	4.6
7	☐	1.000					

y = 0.0057 * x + 0.0065
R = 0.9999
DL = 0.08496
BEC = 1.144

Weight: <None>
Min Conc: <None>

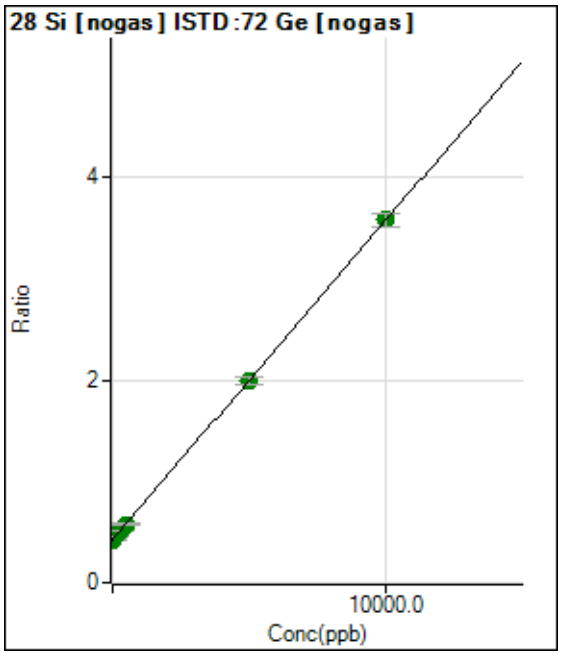
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.140	576.68	0.0007	P	6.3
2	☐	2.000	1.839	1316.74	0.0016	P	3.0
3	☐	5.000	5.200	2800.25	0.0035	P	3.5
4	☐	10.000	10.131	5000.73	0.0061	P	5.3
5	☐	100.000	99.401	44111.53	0.0547	P	0.5
6	☐	200.000	200.289	87065.98	0.1096	P	1.4
7	☐	1.000					

y = 5.4385E-004 * x + 6.3611E-004
R = 1.0000
DL = 0.2467
BEC = 1.17

Weight: <None>
Min Conc: <None>

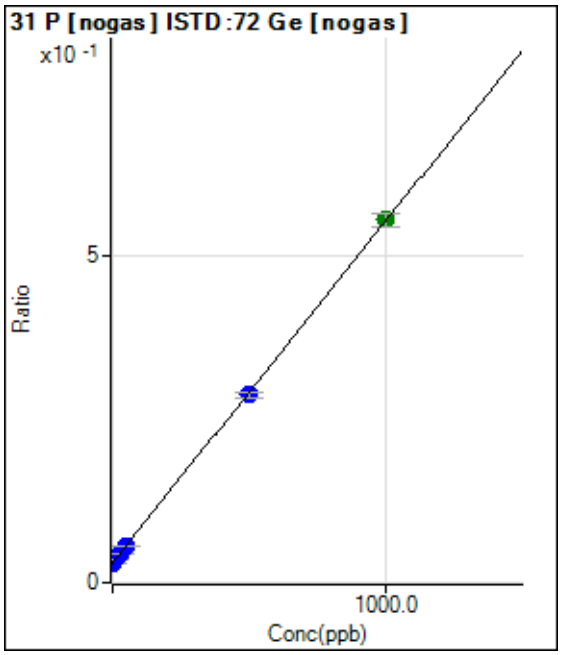


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1375550.81	0.4255	A	2.4
2	☐	100.000	113.405	1516523.26	0.4612	A	3.9
3	☐	250.000	269.773	1673936.85	0.5104	A	1.5
4	☐	500.000	480.921	1904500.91	0.5769	A	3.0
5	☐	5000.000	4965.448	6461019.07	1.9889	A	4.1
6	☐	10000.00	10017.601	11340206.91	3.5797	A	3.7
7	☐	5.000					

y = 3.1487E-004 * x + 0.4255
R = 1.0000
DL = 95.39
BEC = 1351

Weight: <None>
Min Conc: <None>

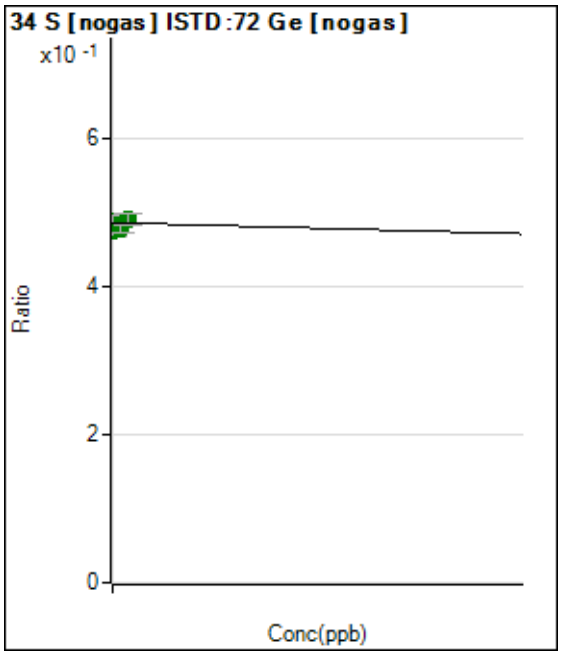
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98907.24	0.0306	P	1.9
2	☐	10.000	8.129	114597.49	0.0348	P	2.0
3	☐	25.000	24.479	142256.11	0.0434	P	1.1
4	☐	50.000	49.349	186094.81	0.0564	P	3.1
5	☐	500.000	491.726	934021.55	0.2875	P	2.9
6	☐	1000.000	1004.201	1758776.64	0.5552	A	3.8
7	☐	5.000					

y = 5.2240E-004 * x + 0.0306
R = 1.0000
DL = 3.318
BEC = 58.56

Weight: <None>
Min Conc: <None>

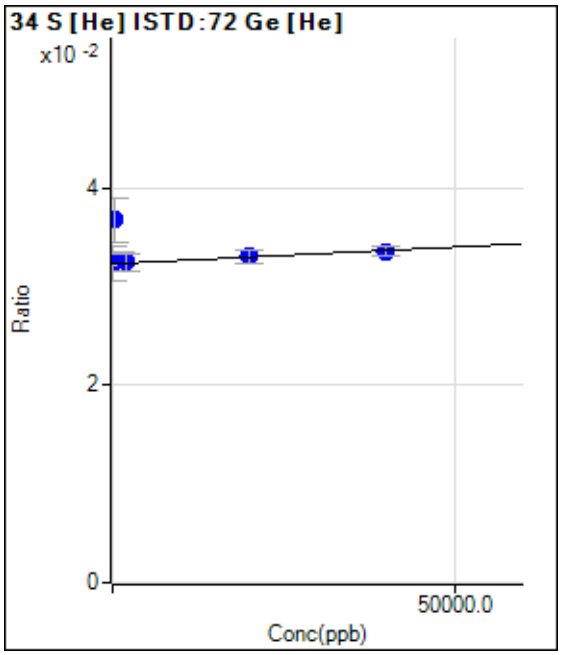


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1573283.89	0.4867	A	3.4
2	☐	400.000	790308.54	1562470.93	0.4751	A	3.4
3	☐	1000.000	-56410.764	1598252.57	0.4876	A	4.1
4	☐	2000.000	691106.86	1573214.52	0.4766	A	3.0
5	☐	20000.00	502239.99	1557745.15	0.4793	A	2.3
6	☐	40000.00	-242039.15	1553318.49	0.4903	A	3.3
7	☐	100.000					

y = -1.4708E-008 * x + 0.4867
R = 0.4453
DL = -3.408E+06
BEC = -3.309E+07

Weight: <None>
Min Conc: <None>

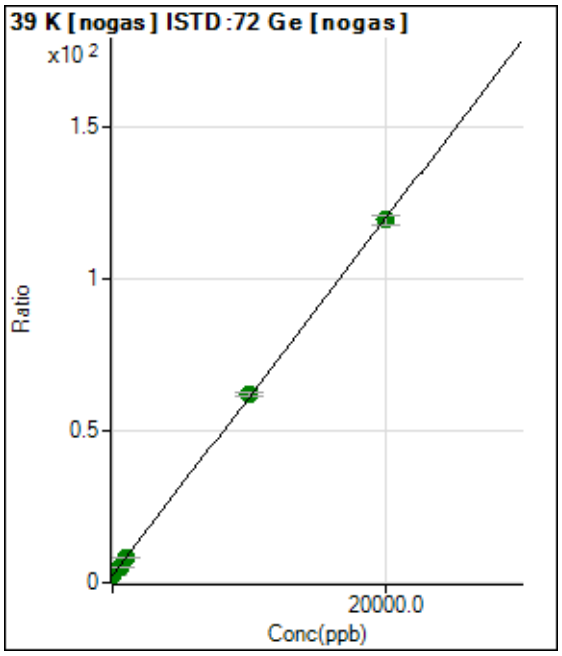
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26156.40	0.0323	P	10.8
2	☐	400.000	130572.70	29560.94	0.0367	P	12.3
3	☐	1000.000	12599.256	26456.57	0.0327	P	4.2
4	☐	2000.000	4741.813	26423.62	0.0325	P	5.7
5	☐	20000.00	21080.333	26623.27	0.0330	P	4.2
6	☐	40000.00	37731.034	26689.35	0.0336	P	3.0
7	☐	100.000					

y = 3.4043E-008 * x + 0.0323
R = -0.0448
DL = 3.084E+05
BEC = 9.488E+05

Weight: <None>
Min Conc: <None>

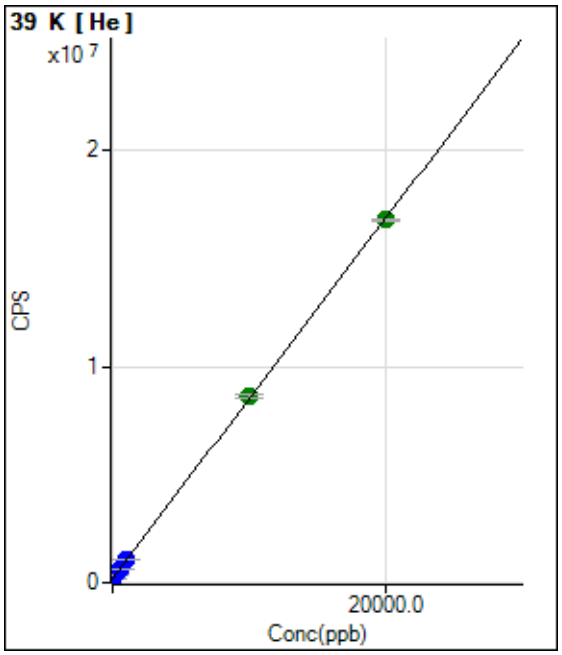


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7714377.78	2.3864	A	1.9
2	☐	200.000	196.731	11651533.07	3.5428	A	2.6
3	☐	500.000	495.507	17375545.18	5.2991	A	1.7
4	☐	1000.000	994.179	27168466.23	8.2304	A	3.2
5	☐	10000.00	10138.881	201423454.5	61.9848	A	2.0
6	☐	20000.00	19930.996	378799533.4	119.544	A	2.3
7	☐	100.000					

y = 0.0059 * x + 2.3864
R = 1.0000
DL = 23.17
BEC = 406

Weight: <None>
Min Conc: <None>

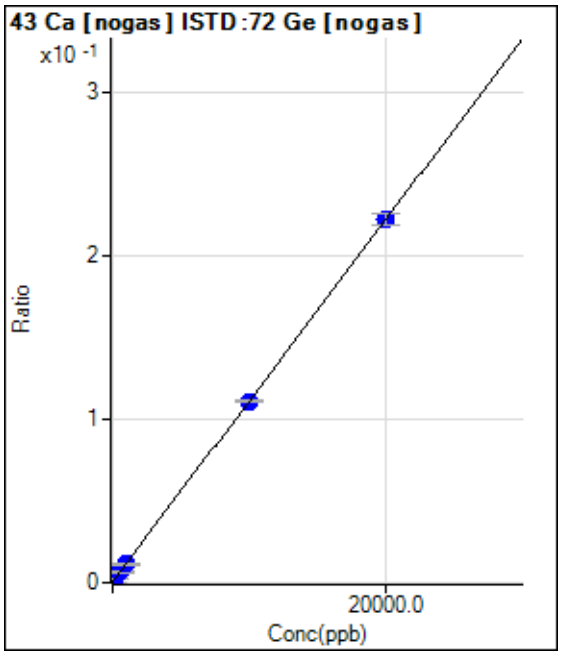
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190056.99		P	1.2
2	☐	200.000	208.759	363905.70		P	0.3
3	☐	500.000	515.669	619491.06		P	0.4
4	☐	1000.000	1051.890	1066040.59		P	1.9
5	☐	10000.00	10145.081	8638586.75		A	1.4
6	☐	20000.00	19924.386	16782508.92		A	0.8
7	☐	100.000					

y = 832.7711 * x + 190056.9933
R = 1.0000
DL = 8.388
BEC = 228.2

Weight: <None>
Min Conc: <None>

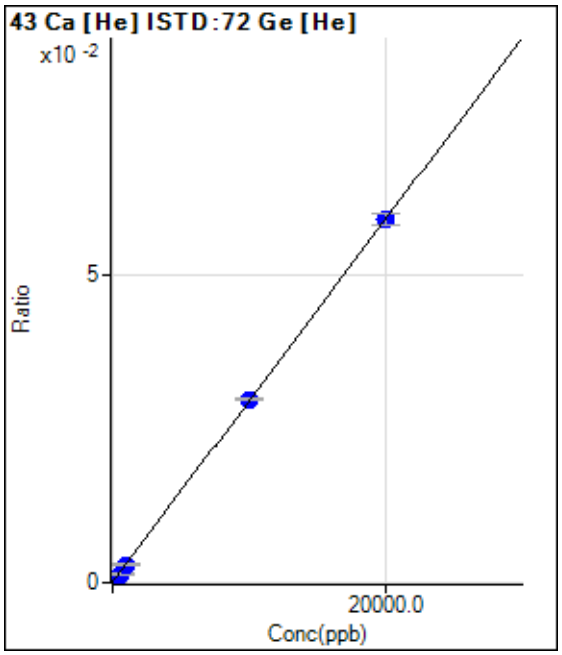


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1570.09	0.0005	P	16.7
2	☐	200.000	189.883	8498.74	0.0026	P	6.4
3	☐	500.000	551.618	21573.15	0.0066	P	23.6
4	☐	1000.000	965.871	36840.02	0.0112	P	4.2
5	☐	10000.00	9996.204	360667.22	0.1110	P	1.8
6	☐	20000.00	20002.415	702064.03	0.2216	P	3.1
7	☐	100.000					

y = 1.1054E-005 * x + 4.8595E-004
R = 1.0000
DL = 22.07
BEC = 43.96

Weight: <None>
Min Conc: <None>

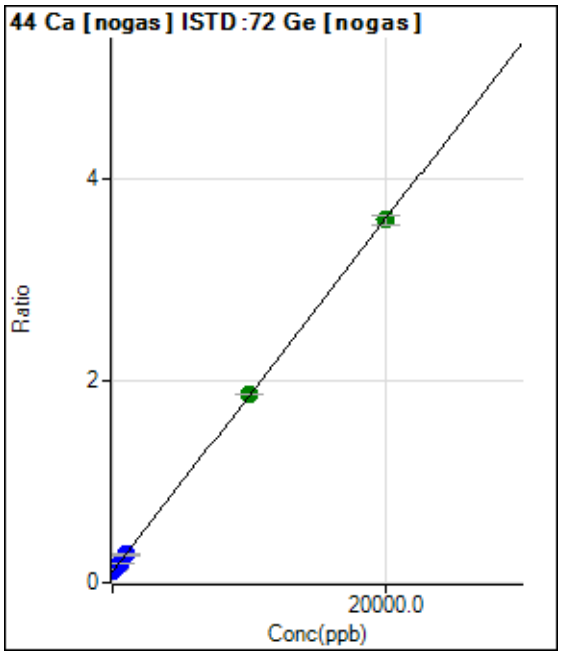
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	29.0
2	☐	200.000	190.513	520.01	0.0006	P	13.1
3	☐	500.000	438.077	1110.05	0.0014	P	18.1
4	☐	1000.000	938.198	2313.52	0.0028	P	11.9
5	☐	10000.00	10068.440	23935.69	0.0297	P	0.6
6	☐	20000.00	19970.513	46702.27	0.0588	P	3.0
7	☐	100.000					

y = 2.9390E-006 * x + 8.6499E-005
R = 1.0000
DL = 25.56
BEC = 29.43

Weight: <None>
Min Conc: <None>

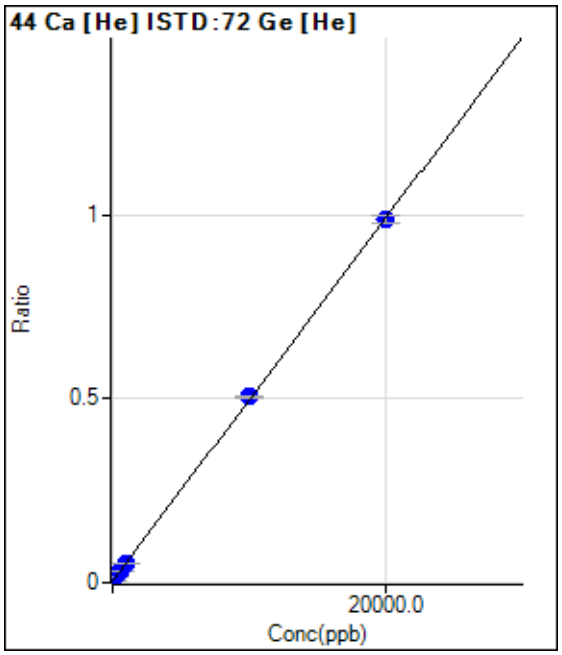


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	346445.06	0.1072	P	0.6
2	☐	200.000	195.345	464418.78	0.1412	P	2.4
3	☐	500.000	505.505	640198.75	0.1953	P	3.0
4	☐	1000.000	978.226	916610.12	0.2777	P	3.1
5	☐	10000.00	10091.250	6066129.28	1.8661	A	0.2
6	☐	20000.00	19955.373	11360076.91	3.5855	A	2.9
7	☐	100.000					

y = 1.7430E-004 * x + 0.1072
R = 1.0000
DL = 11.64
BEC = 614.8

Weight: <None>
Min Conc: <None>

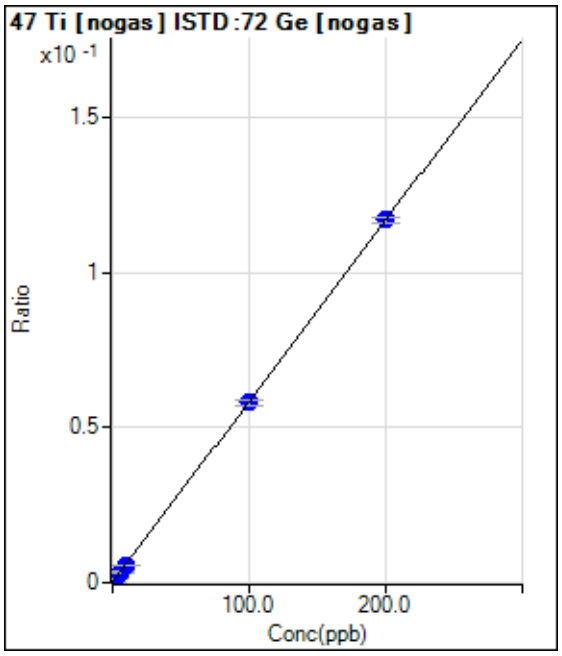
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3160.31	0.0039	P	11.7
2	☐	200.000	198.044	10993.37	0.0137	P	1.7
3	☐	500.000	515.380	23668.64	0.0293	P	1.5
4	☐	1000.000	987.876	42775.90	0.0526	P	1.5
5	☐	10000.00	10153.257	406490.05	0.5040	P	1.8
6	☐	20000.00	19923.613	782864.62	0.9852	P	2.2
7	☐	100.000					

y = 4.9255E-005 * x + 0.0039
R = 1.0000
DL = 27.77
BEC = 79.25

Weight: <None>
Min Conc: <None>

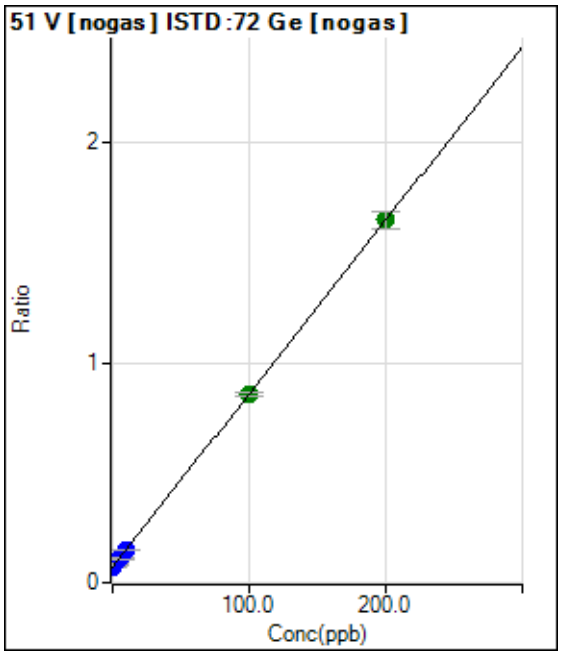


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0001	P	5.5
2	☐	2.000	1.857	4010.50	0.0012	P	3.2
3	☐	5.000	5.418	10826.85	0.0033	P	9.8
4	☐	10.000	9.230	18225.81	0.0055	P	4.2
5	☐	100.000	99.426	189010.87	0.0582	P	2.8
6	☐	200.000	200.317	370955.04	0.1171	P	1.7
7	☐	1.000					

y = 5.8369E-004 * x + 1.3506E-004
R = 1.0000
DL = 0.03851
BEC = 0.2314

Weight: <None>
Min Conc: <None>

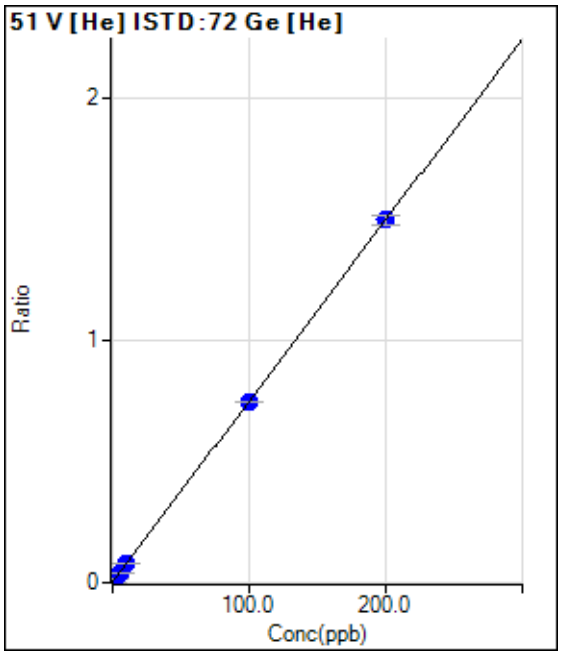
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230343.67	0.0712	P	4.4
2	☐	2.000	1.553	274563.97	0.0835	P	1.4
3	☐	5.000	4.842	358841.39	0.1094	P	2.6
4	☐	10.000	9.864	491727.11	0.1490	P	3.5
5	☐	100.000	99.444	2778562.95	0.8550	A	2.5
6	☐	200.000	200.293	5226242.95	1.6498	A	4.5
7	☐	1.000					

y = 0.0079 * x + 0.0712
R = 1.0000
DL = 1.19
BEC = 9.038

Weight: <None>
Min Conc: <None>

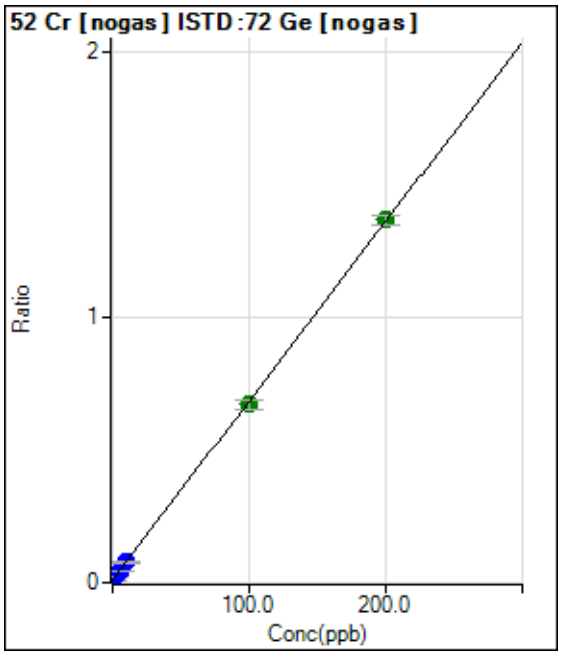


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.136	2635.53	0.0033	P	3.4
2	☐	2.000	2.092	14389.56	0.0179	P	3.6
3	☐	5.000	5.039	32246.53	0.0399	P	2.6
4	☐	10.000	9.937	62290.96	0.0765	P	1.0
5	☐	100.000	99.589	602342.56	0.7469	P	1.0
6	☐	200.000	200.207	1191175.08	1.4992	P	2.7
7	☐	1.000					

y = 0.0075 * x + 0.0022
R = 1.0000
DL = 0.0443
BEC = 0.2992

Weight: <None>
Min Conc: <None>

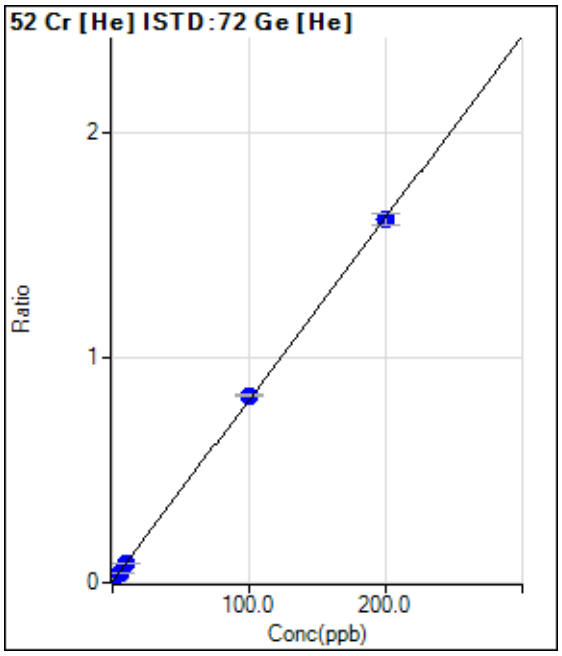
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33153.19	0.0103	P	0.5
2	☐	2.000	1.981	77756.05	0.0236	P	2.6
3	☐	5.000	5.190	148632.04	0.0453	P	1.1
4	☐	10.000	9.786	252243.59	0.0764	P	2.2
5	☐	100.000	97.917	2183332.00	0.6720	A	4.7
6	☐	200.000	201.048	4337628.69	1.3689	A	2.6
7	☐	1.000					

y = 0.0068 * x + 0.0103
R = 0.9999
DL = 0.02172
BEC = 1.517

Weight: <None>
Min Conc: <None>

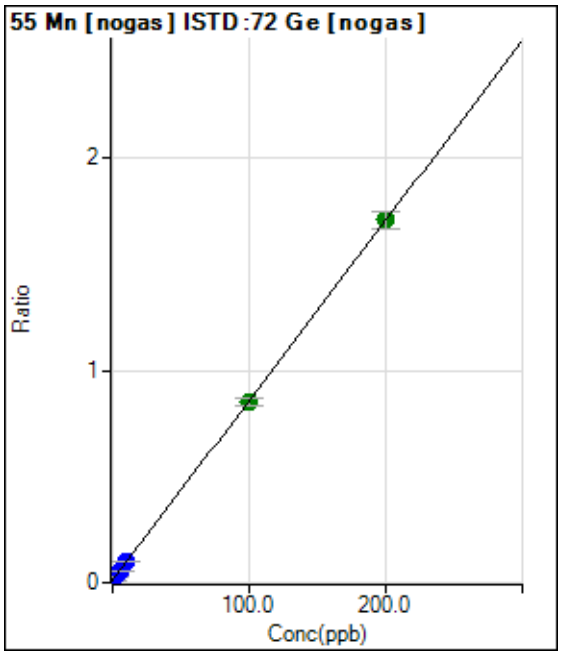


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4597.29	0.0057	P	2.7
2	☐	2.000	1.951	17258.33	0.0214	P	1.1
3	☐	5.000	4.980	37114.16	0.0459	P	0.9
4	☐	10.000	9.679	68285.71	0.0839	P	2.1
5	☐	100.000	102.358	671833.85	0.8330	P	1.0
6	☐	200.000	198.838	1281350.63	1.6127	P	3.1
7	☐	1.000					

y = 0.0081 * x + 0.0057
R = 0.9999
DL = 0.05648
BEC = 0.7023

Weight: <None>
Min Conc: <None>

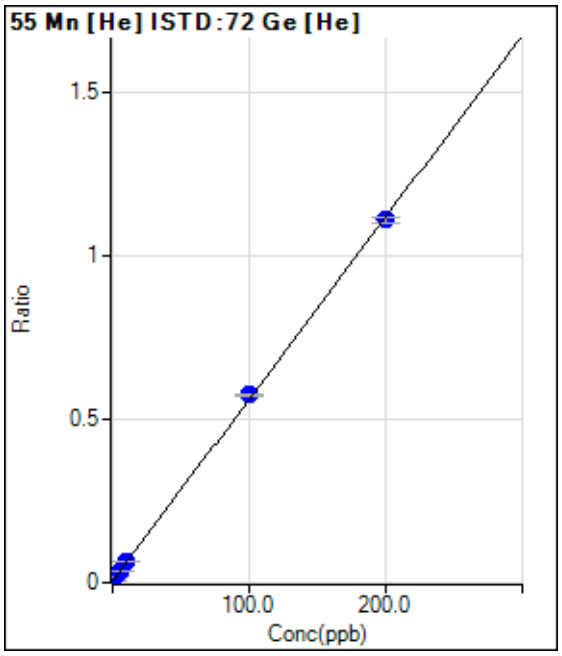
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35550.91	0.0110	P	3.3
2	☐	2.000	1.992	91652.45	0.0279	P	4.6
3	☐	5.000	4.899	172193.42	0.0525	P	1.7
4	☐	10.000	10.521	330635.85	0.1002	P	3.3
5	☐	100.000	99.265	2768286.63	0.8523	A	4.5
6	☐	200.000	200.344	5412668.04	1.7089	A	5.1
7	☐	1.000					

y = 0.0085 * x + 0.0110
R = 1.0000
DL = 0.129
BEC = 1.298

Weight: <None>
Min Conc: <None>

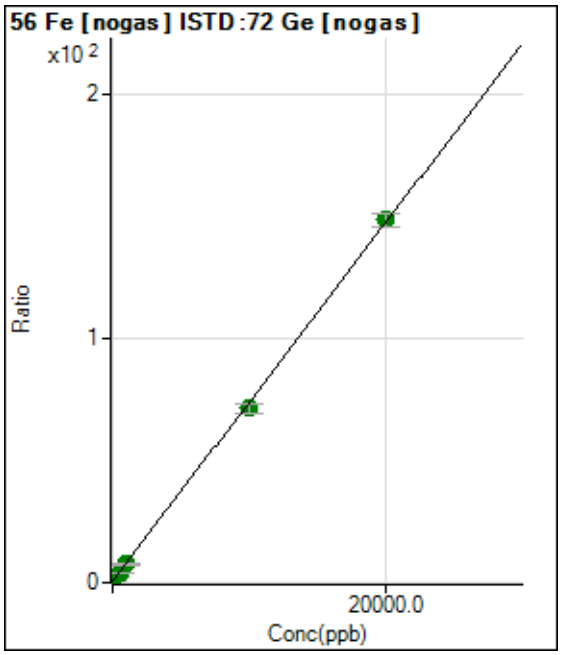


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3757.12	0.0046	P	4.4
2	☐	2.000	2.025	12791.24	0.0159	P	3.5
3	☐	5.000	5.087	26586.08	0.0329	P	3.6
4	☐	10.000	10.717	52237.31	0.0642	P	0.6
5	☐	100.000	102.739	464116.67	0.5754	P	1.0
6	☐	200.000	198.592	880471.23	1.1080	P	1.4
7	☐	1.000					

y = 0.0056 * x + 0.0046
R = 0.9999
DL = 0.1106
BEC = 0.835

Weight: <None>
Min Conc: <None>

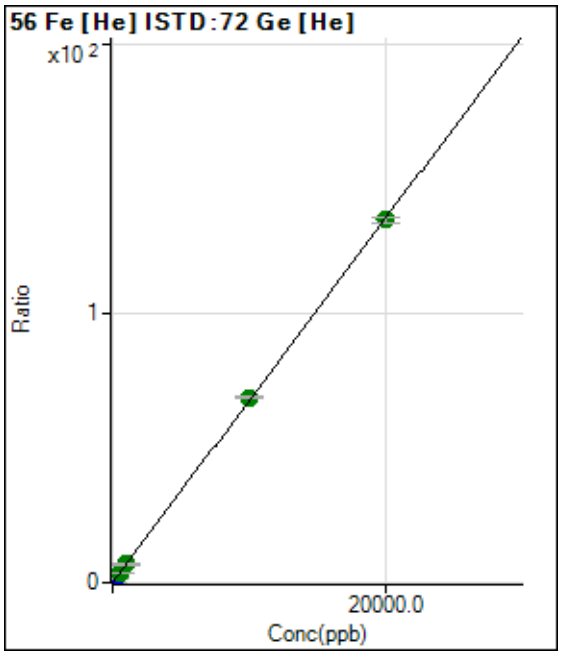
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1956414.17	0.6052	A	2.1
2	☐	200.000	193.025	6643367.08	2.0208	A	4.8
3	☐	500.000	482.743	13592323.74	4.1455	A	2.0
4	☐	1000.000	944.173	24853691.18	7.5294	A	3.5
5	☐	10000.00	9661.030	232052288.5	71.4561	A	5.6
6	☐	20000.00	20172.777	470600377.1	148.545	A	3.6
7	☐	100.000					

y = 0.0073 * x + 0.6052
R = 0.9998
DL = 5.231
BEC = 82.52

Weight: <None>
Min Conc: <None>

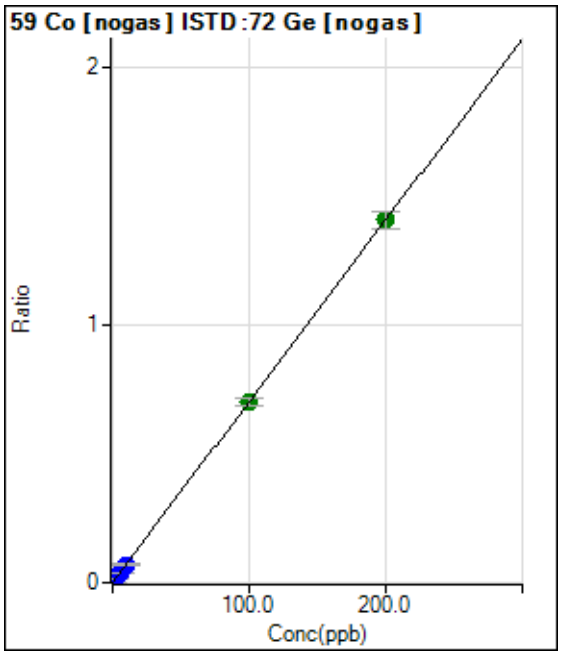


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13091.48	0.0162	P	6.5
2	☐	200.000	210.939	1161661.57	1.4434	P	1.5
3	☐	500.000	511.225	2808440.17	3.4752	A	0.6
4	☐	1000.000	1001.909	5530173.46	6.7952	A	2.2
5	☐	10000.00	10161.774	55464134.17	68.7723	A	0.9
6	☐	20000.00	19918.628	107109075.0	134.788	A	1.9
7	☐	100.000					

y = 0.0068 * x + 0.0162
R = 1.0000
DL = 0.4672
BEC = 2.388

Weight: <None>
Min Conc: <None>

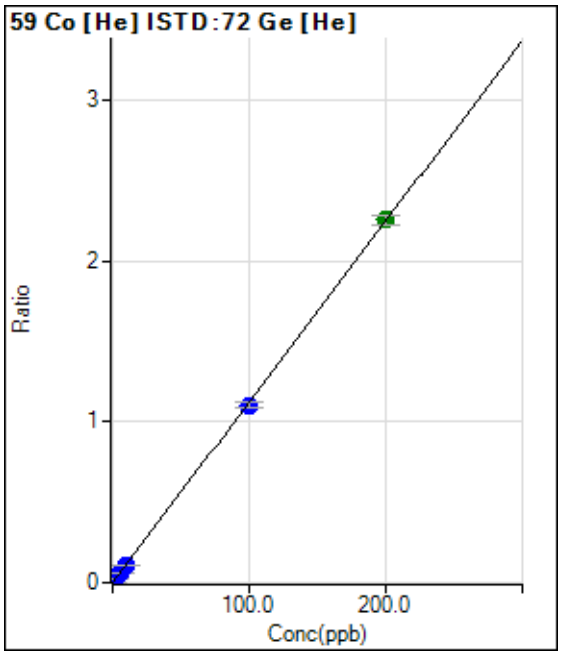
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1110.05	0.0003	P	6.1
2	☐	2.000	2.044	48424.10	0.0147	P	4.6
3	☐	5.000	5.055	117742.98	0.0359	P	2.4
4	☐	10.000	9.932	231885.11	0.0702	P	2.5
5	☐	100.000	99.550	2277158.87	0.7008	A	4.1
6	☐	200.000	200.226	4463820.66	1.4092	A	4.5
7	☐	1.000					

y = 0.0070 * x + 3.4333E-004
R = 1.0000
DL = 0.008964
BEC = 0.04879

Weight: <None>
Min Conc: <None>

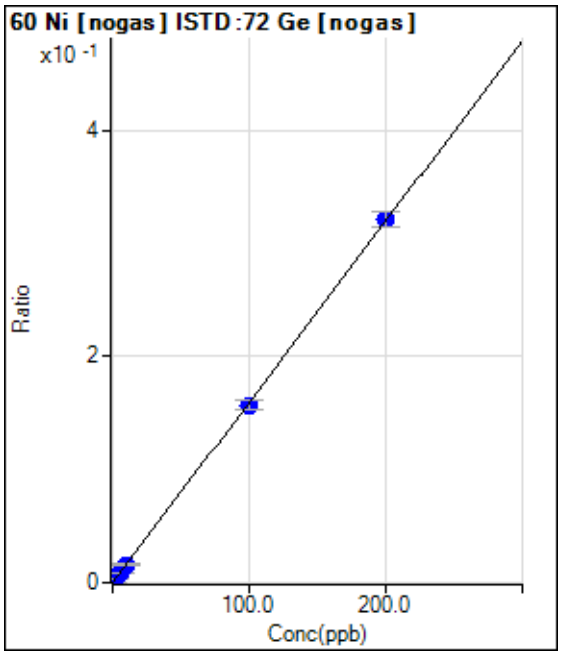


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0004	P	12.2
2	☐	2.000	2.001	18389.43	0.0228	P	1.6
3	☐	5.000	4.922	44961.91	0.0556	P	1.4
4	☐	10.000	9.653	88516.47	0.1088	P	2.3
5	☐	100.000	98.419	891454.62	1.1055	P	2.5
6	☐	200.000	200.810	1791767.06	2.2552	A	2.9
7	☐	1.000					

y = 0.0112 * x + 3.8290E-004
R = 1.0000
DL = 0.01246
BEC = 0.0341

Weight: <None>
Min Conc: <None>

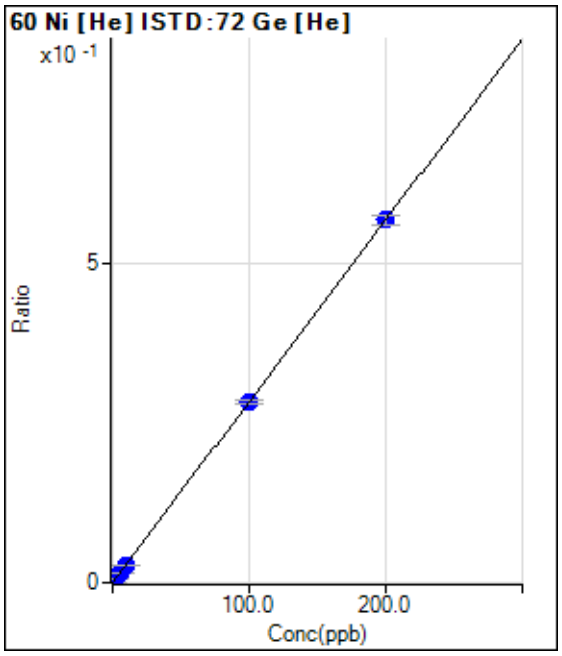
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.220	810.03	0.0003	P	4.0
2	☐	2.000	2.229	11383.69	0.0035	P	5.7
3	☐	5.000	5.275	27327.31	0.0083	P	1.1
4	☐	10.000	10.161	53317.76	0.0161	P	3.4
5	☐	100.000	98.264	510058.21	0.1570	P	5.4
6	☐	200.000	200.851	1017116.63	0.3211	P	4.4
7	☐	1.000					

y = 0.0016 * x - 1.0187E-004
R = 0.9999
DL = 0.01863
BEC = -0.0637

Weight: <None>
Min Conc: <None>

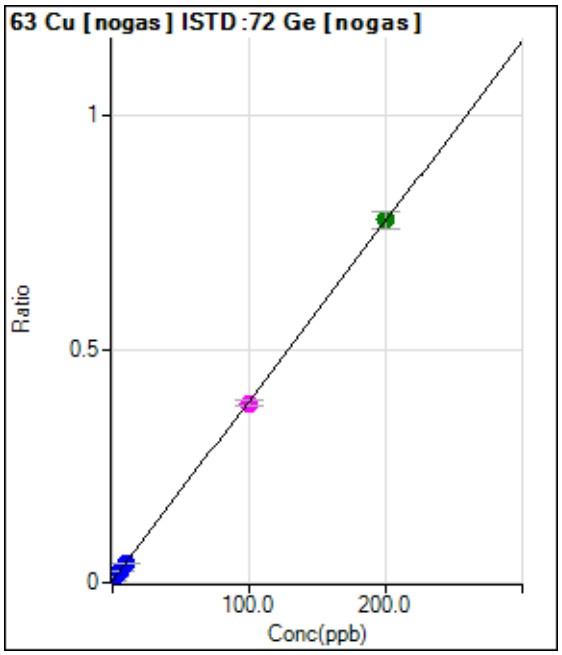


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.085	103.33	0.0001	P	55.2
2	☐	2.000	2.135	4780.69	0.0059	P	4.8
3	☐	5.000	5.093	11577.13	0.0143	P	2.5
4	☐	10.000	9.951	22871.31	0.0281	P	2.6
5	☐	100.000	99.475	227320.65	0.2819	P	2.2
6	☐	200.000	200.261	450978.10	0.5676	P	2.8
7	☐	1.000					

y = 0.0028 * x - 1.1280E-004
R = 1.0000
DL = 0.07452
BEC = -0.03979

Weight: <None>
Min Conc: <None>

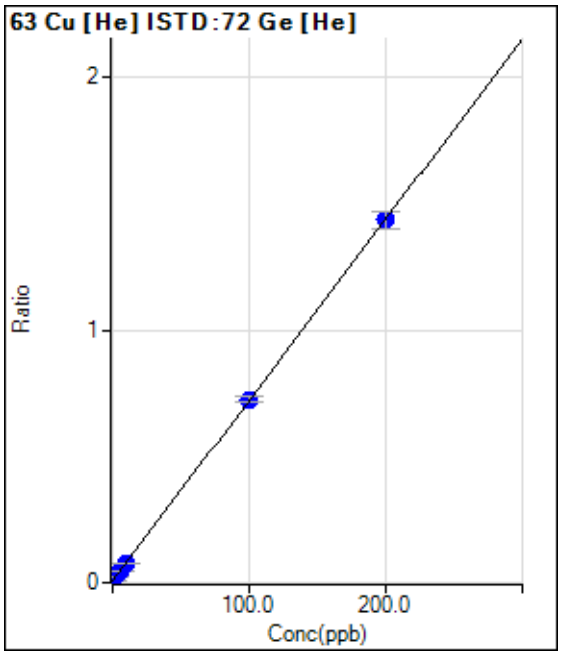
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15116.42	0.0047	P	3.0
2	☐	2.000	2.092	41894.62	0.0127	P	5.4
3	☐	5.000	5.054	79210.34	0.0242	P	0.8
4	☐	10.000	9.849	140775.25	0.0426	P	2.7
5	☐	100.000	98.695	1250823.70	0.3850	M	3.6
6	☐	200.000	200.658	2464249.44	0.7780	A	4.6
7	☐	1.000					

y = 0.0039 * x + 0.0047
R = 1.0000
DL = 0.1098
BEC = 1.213

Weight: <None>
Min Conc: <None>

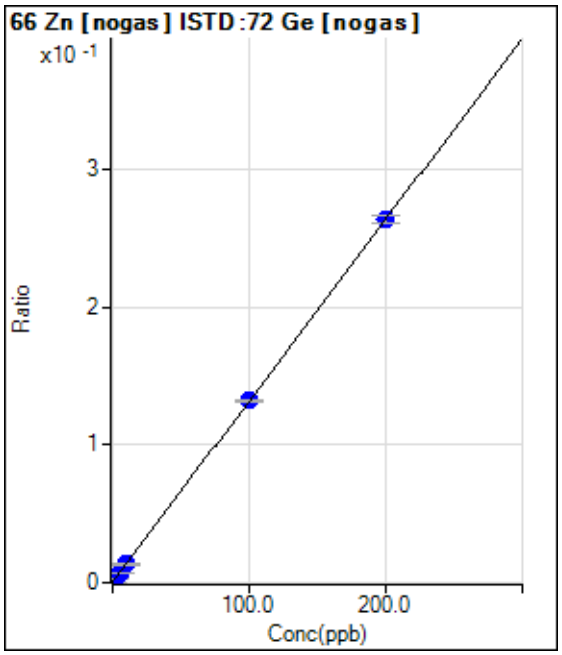


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.102	5817.66	0.0072	P	3.6
2	☐	2.000	1.968	17681.98	0.0220	P	0.9
3	☐	5.000	5.001	35247.47	0.0436	P	3.0
4	☐	10.000	9.991	64527.02	0.0793	P	1.0
5	☐	100.000	100.283	584011.19	0.7242	P	3.0
6	☐	200.000	199.859	1140341.67	1.4355	P	4.6
7	☐	1.000					

y = 0.0071 * x + 0.0079
R = 1.0000
DL = 0.1086
BEC = 1.108

Weight: <None>
Min Conc: <None>

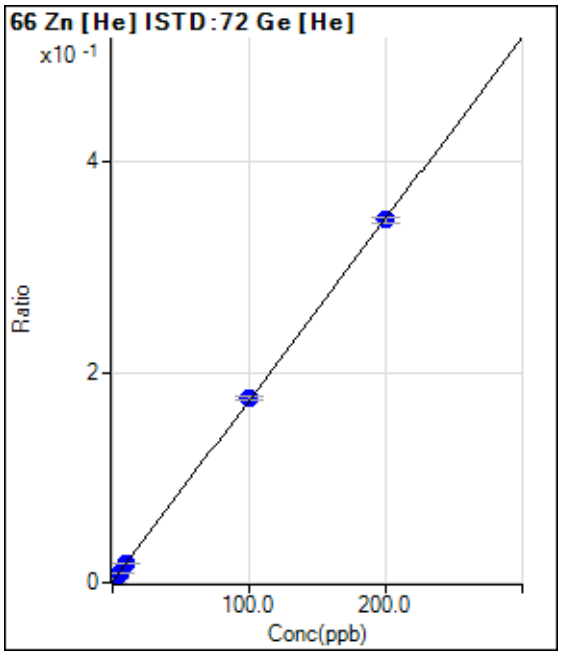
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.063	1340.07	0.0004	P	3.3
2	☐	2.000	2.104	10179.63	0.0031	P	3.5
3	☐	5.000	4.892	22157.05	0.0068	P	4.0
4	☐	10.000	9.873	43922.88	0.0133	P	2.4
5	☐	100.000	100.120	428575.06	0.1319	P	1.7
6	☐	200.000	199.948	833502.33	0.2630	P	2.2
7	☐	1.000					

y = 0.0013 * x + 3.3137E-004
R = 1.0000
DL = 0.0308
BEC = 0.2522

Weight: <None>
Min Conc: <None>

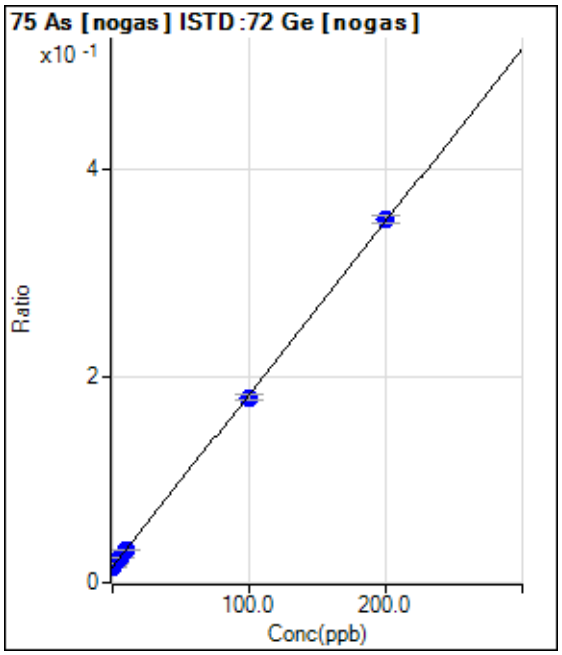


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.228	343.34	0.0004	P	40.2
2	☐	2.000	1.834	3203.67	0.0040	P	0.7
3	☐	5.000	4.738	7264.86	0.0090	P	1.8
4	☐	10.000	9.995	14699.47	0.0181	P	4.5
5	☐	100.000	101.304	141569.40	0.1755	P	1.7
6	☐	200.000	199.356	273886.48	0.3447	P	1.7
7	☐	1.000					

y = 0.0017 * x + 8.1665E-004
R = 1.0000
DL = 0.2964
BEC = 0.4735

Weight: <None>
Min Conc: <None>

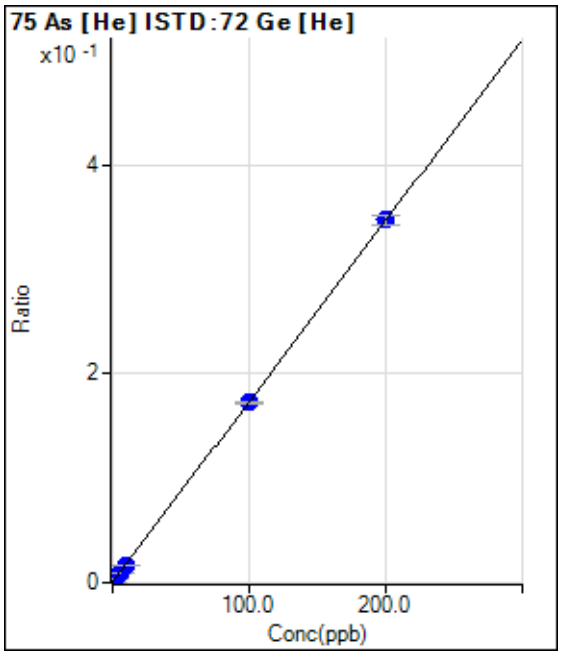
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.321	50720.91	0.0157	P	3.3
2	☐	2.000	2.197	61908.22	0.0188	P	2.9
3	☐	5.000	5.391	79254.97	0.0242	P	0.5
4	☐	10.000	10.037	105469.49	0.0319	P	3.7
5	☐	100.000	98.134	582611.05	0.1793	P	2.7
6	☐	200.000	200.919	1113067.04	0.3512	P	2.2
7	☐	1.000					

y = 0.0017 * x + 0.0151
R = 0.9999
DL = 0.9315
BEC = 9.055

Weight: <None>
Min Conc: <None>

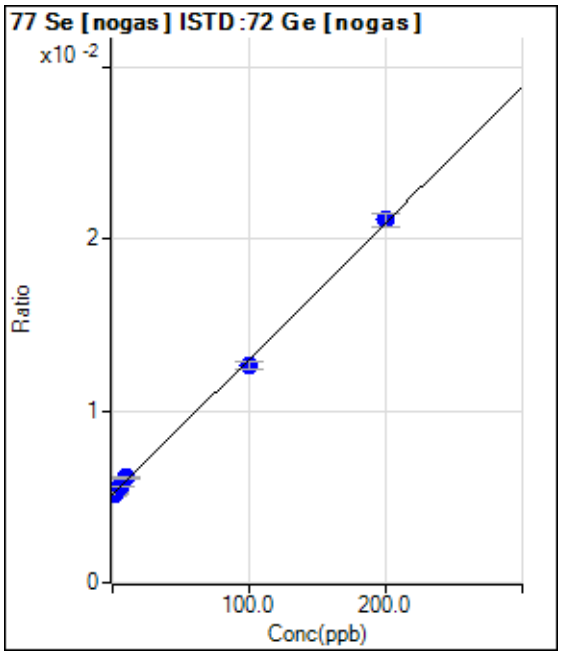


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	265.56	0.0003	P	13.7
2	☐	2.000	1.995	3045.83	0.0038	P	1.1
3	☐	5.000	4.799	6981.36	0.0086	P	3.0
4	☐	10.000	9.715	13963.15	0.0172	P	0.9
5	☐	100.000	99.238	138886.19	0.1722	P	0.9
6	☐	200.000	200.400	276043.22	0.3474	P	2.6
7	☐	1.000					

y = 0.0017 * x + 3.2805E-004
R = 1.0000
DL = 0.07791
BEC = 0.1894

Weight: <None>
Min Conc: <None>

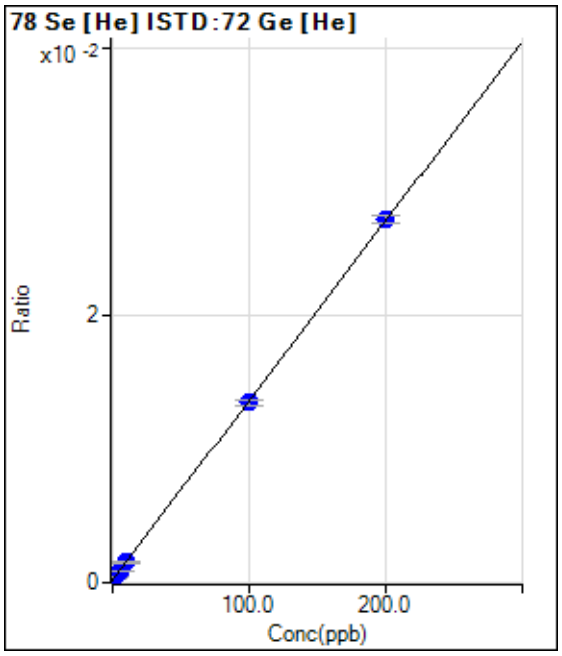
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16564.45	0.0051	P	3.3
2	☐	2.000	0.851	17071.57	0.0052	P	2.2
3	☐	5.000	5.656	18262.68	0.0056	P	1.1
4	☐	10.000	12.601	20198.10	0.0061	P	2.0
5	☐	100.000	95.337	41096.61	0.0126	P	3.7
6	☐	200.000	202.197	66812.34	0.0211	P	3.6
7	☐	1.000					

y = 7.8942E-005 * x + 0.0051
R = 0.9995
DL = 6.461
BEC = 64.89

Weight: <None>
Min Conc: <None>

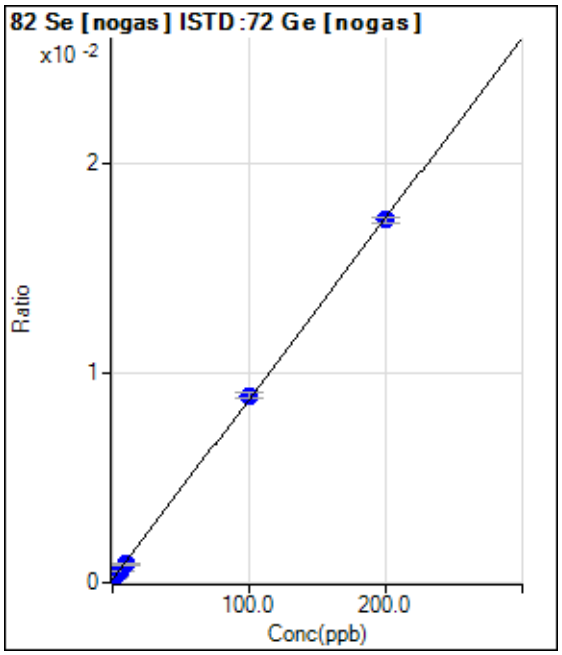


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.460	216.67	0.0003	P	7.1
2	☐	2.000	2.180	401.34	0.0005	P	9.1
3	☐	5.000	5.256	736.02	0.0009	P	3.1
4	☐	10.000	9.763	1233.38	0.0015	P	5.4
5	☐	100.000	98.673	10843.90	0.0134	P	2.9
6	☐	200.000	200.667	21560.74	0.0271	P	2.2
7	☐	1.000					

y = 1.3417E-004 * x + 2.0579E-004
R = 1.0000
DL = 0.4257
BEC = 1.534

Weight: <None>
Min Conc: <None>

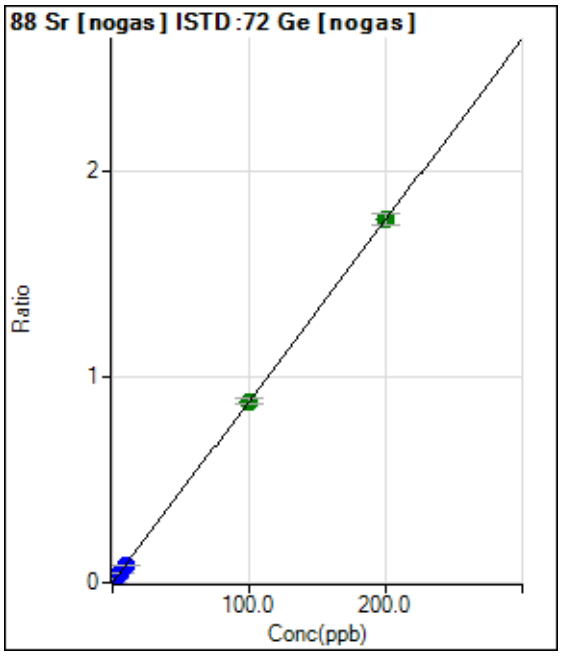
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	480.01	0.0001	P	11.9
2	☐	2.000	1.227	836.70	0.0003	P	6.9
3	☐	5.000	4.514	1760.11	0.0005	P	4.3
4	☐	10.000	8.804	2990.30	0.0009	P	9.6
5	☐	100.000	101.803	28953.40	0.0089	P	3.5
6	☐	200.000	199.178	54809.67	0.0173	P	1.8
7	☐	1.000					

y = 8.6086E-005 * x + 1.4839E-004
R = 0.9999
DL = 0.616
BEC = 1.724

Weight: <None>
Min Conc: <None>

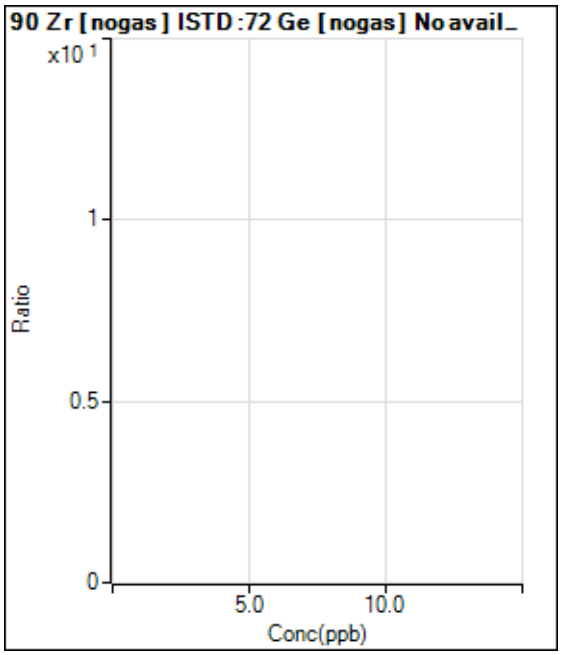


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3567.07	0.0011	P	3.8
2	☐	2.000	1.944	60017.98	0.0183	P	4.7
3	☐	5.000	4.897	145268.29	0.0443	P	2.4
4	☐	10.000	9.701	286095.07	0.0867	P	4.4
5	☐	100.000	99.968	2869077.98	0.8831	A	3.5
6	☐	200.000	200.034	5595267.00	1.7660	A	3.1
7	☐	1.000					

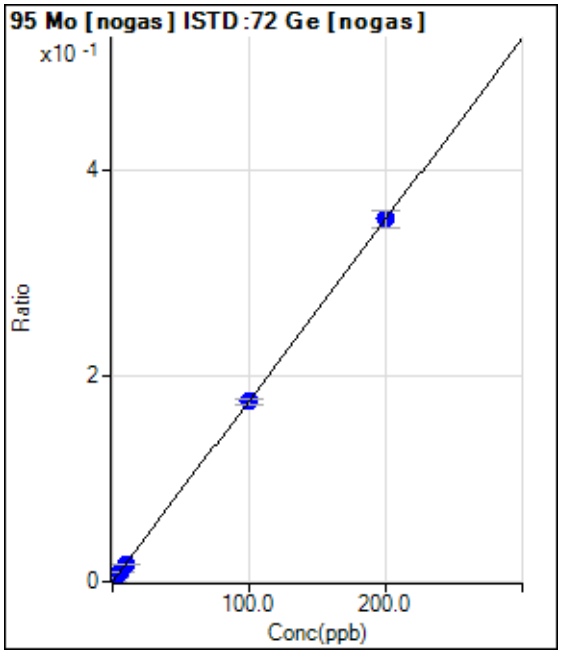
y = 0.0088 * x + 0.0011
R = 1.0000
DL = 0.01426
BEC = 0.1251

Weight: <None>
Min Conc: <None>

Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

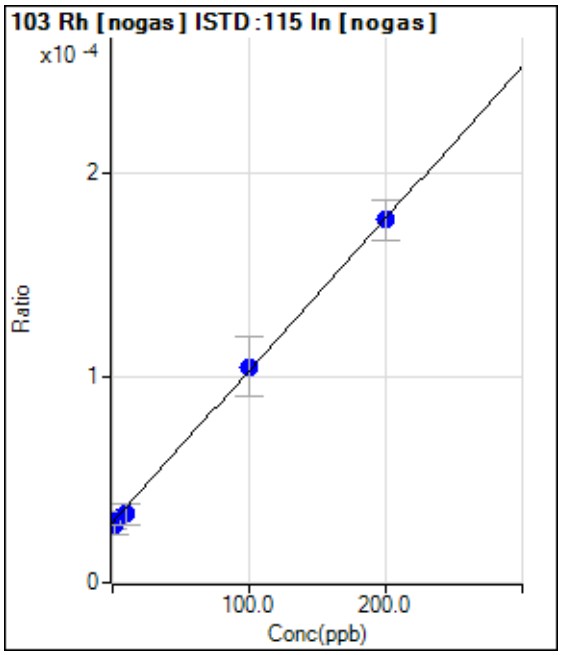


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0000	P	35.1
2	☐	2.000	1.974	11607.28	0.0035	P	3.0
3	☐	5.000	4.966	28873.67	0.0088	P	4.0
4	☐	10.000	9.652	56343.01	0.0171	P	5.8
5	☐	100.000	99.450	570258.34	0.1755	P	2.9
6	☐	200.000	200.293	1119555.63	0.3534	P	4.7
7	☐	1.000					

y = 0.0018 * x + 4.6391E-005
R = 1.0000
DL = 0.02772
BEC = 0.02629

Weight: <None>
Min Conc: <None>

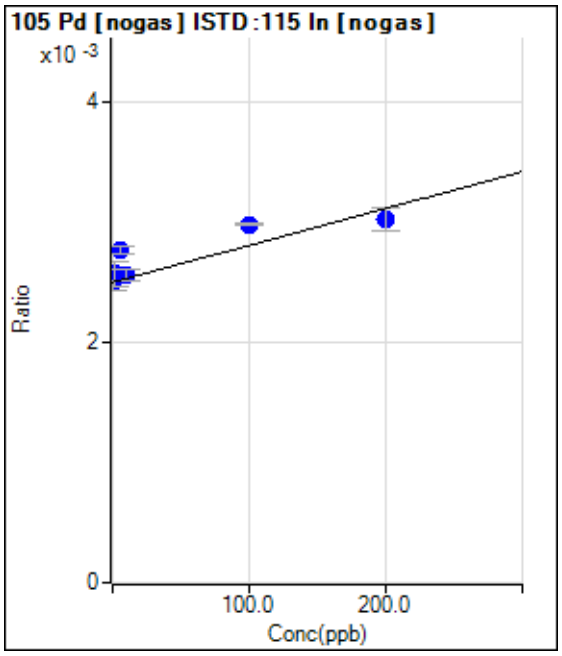
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0000	P	19.6
2	☐	2.000	-1.936	83.33	0.0000	P	32.6
3	☐	5.000	2.983	93.33	0.0000	P	19.5
4	☐	10.000	5.325	96.67	0.0000	P	33.0
5	☐	100.000	102.662	293.34	0.0001	P	27.4
6	☐	200.000	198.992	490.01	0.0002	P	10.9
7	☐	1.000					

y = 7.4138E-007 * x + 2.9371E-005
R = 0.9996
DL = 23.24
BEC = 39.62

Weight: <None>
Min Conc: <None>

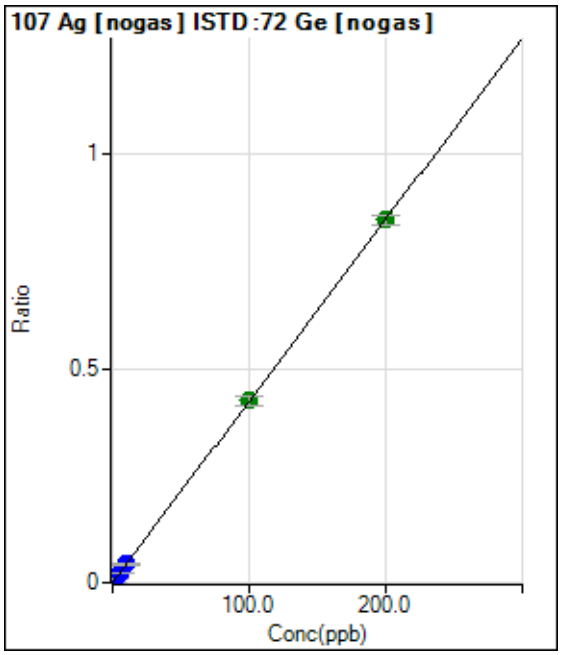


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7398.35	0.0025	P	4.9
2	☐	2.000	22.187	7688.50	0.0026	P	7.9
3	☐	5.000	86.015	8132.01	0.0028	P	2.3
4	☐	10.000	19.311	7428.35	0.0026	P	3.6
5	☐	100.000	157.048	8328.80	0.0030	P	0.9
6	☐	200.000	168.783	8358.76	0.0030	P	6.3
7	☐	1.000					

y = 3.0700E-006 * x + 0.0025
R = 0.8694
DL = 118.5
BEC = 814.1

Weight: <None>
Min Conc: <None>

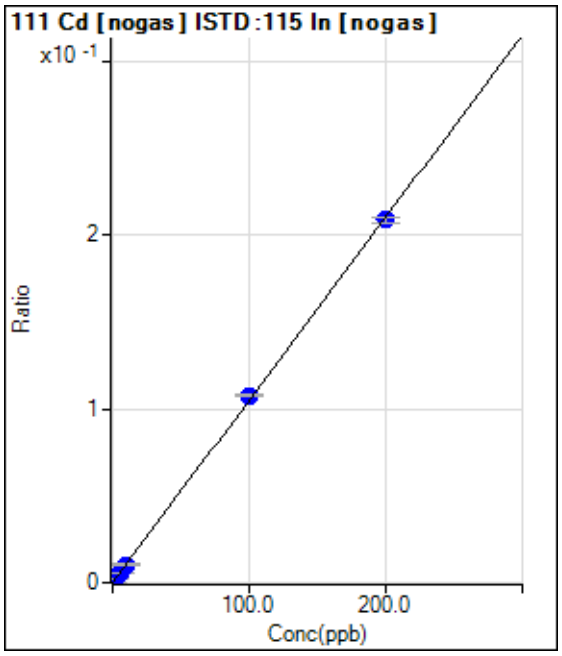
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0000	P	6.9
2	☐	2.000	2.053	28710.36	0.0087	P	3.9
3	☐	5.000	4.982	69336.39	0.0211	P	3.5
4	☐	10.000	10.148	142152.70	0.0431	P	2.6
5	☐	100.000	100.140	1379275.03	0.4247	A	4.8
6	☐	200.000	199.922	2686314.75	0.8478	A	2.5
7	☐	1.000					

y = 0.0042 * x + 2.5776E-005
R = 1.0000
DL = 0.001252
BEC = 0.006079

Weight: <None>
Min Conc: <None>

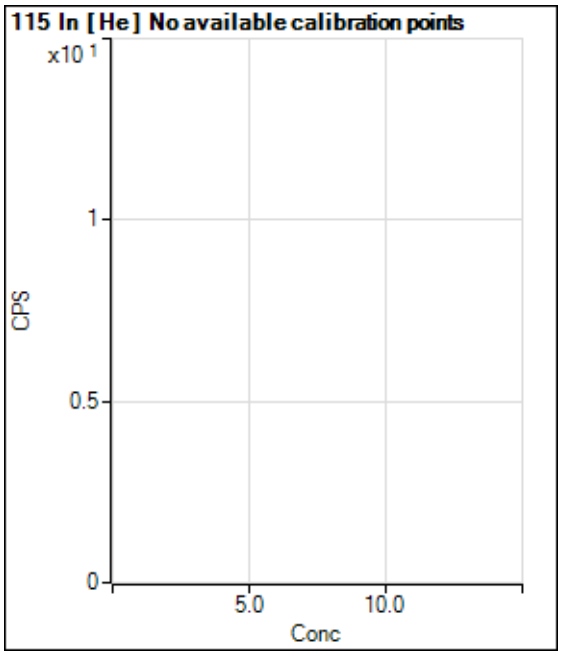


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	31.6
2	☐	2.000	1.956	6194.54	0.0021	P	2.7
3	☐	5.000	4.872	15096.74	0.0051	P	1.5
4	☐	10.000	9.908	30236.39	0.0104	P	2.3
5	☐	100.000	102.487	300914.07	0.1077	P	1.6
6	☐	200.000	198.765	578780.75	0.2089	P	1.3
7	☐	1.000					

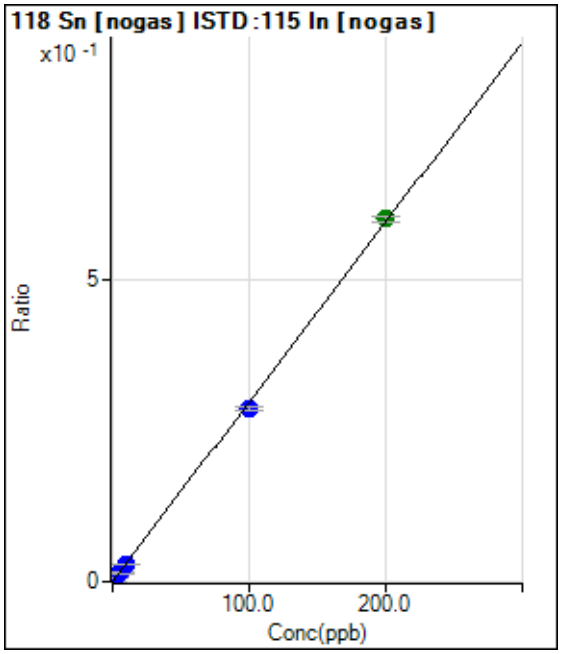
y = 0.0011 * x + 1.0098E-005
R = 0.9999
DL = 0.009118
BEC = 0.009607

Weight: <None>
Min Conc: <None>

Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			956719.59		P	3.3
2	☐			956500.06		P	3.1
3	☐			951304.14		P	2.4
4	☐			955736.62		P	1.7
5	☐			941648.28		P	3.0
6	☐			919722.86		P	1.1
7	☐						

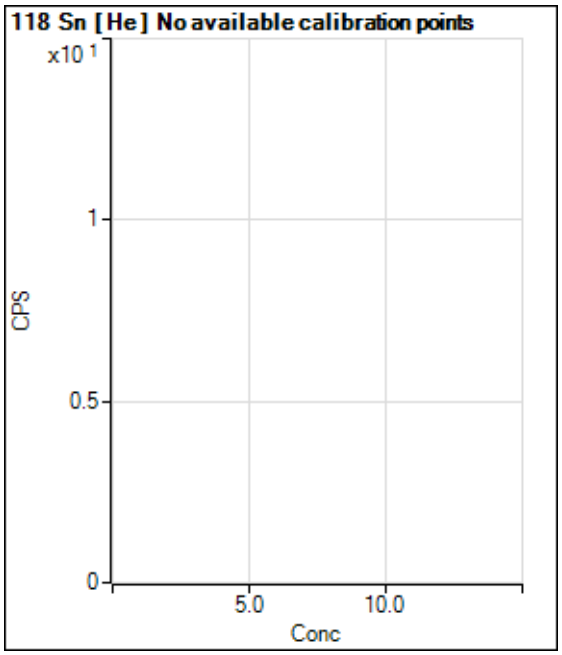


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1000.04	0.0003	P	5.7
2	☐	2.000	1.846	17505.70	0.0058	P	1.5
3	☐	5.000	4.708	42255.09	0.0144	P	4.6
4	☐	10.000	9.288	81258.71	0.0280	P	0.9
5	☐	100.000	96.229	801581.97	0.2871	P	2.2
6	☐	200.000	201.930	1667639.51	0.6020	A	1.4
7	☐	1.000					

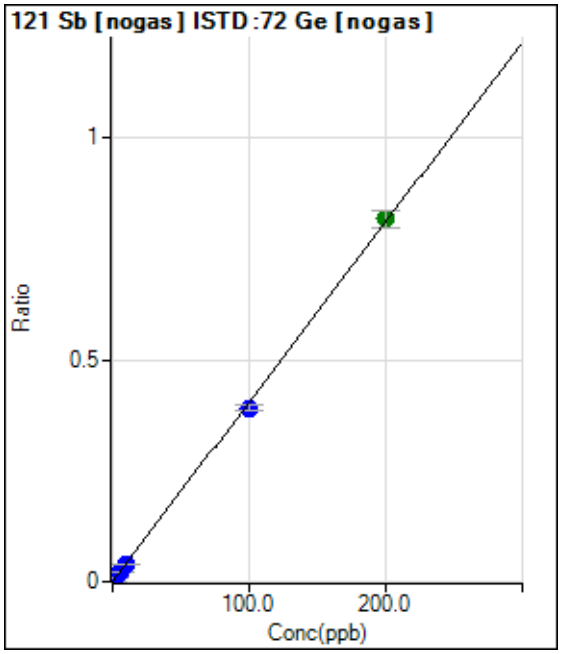
y = 0.0030 * x + 3.3793E-004
R = 0.9998
DL = 0.01956
BEC = 0.1134

Weight: <None>
Min Conc: <None>

Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			366.68		P	27.9
2	☐			6534.66		P	2.1
3	☐			15280.29		P	4.1
4	☐			30740.82		P	1.9
5	☐			304450.59		P	1.2
6	☐			612646.56		P	2.3
7	☐						

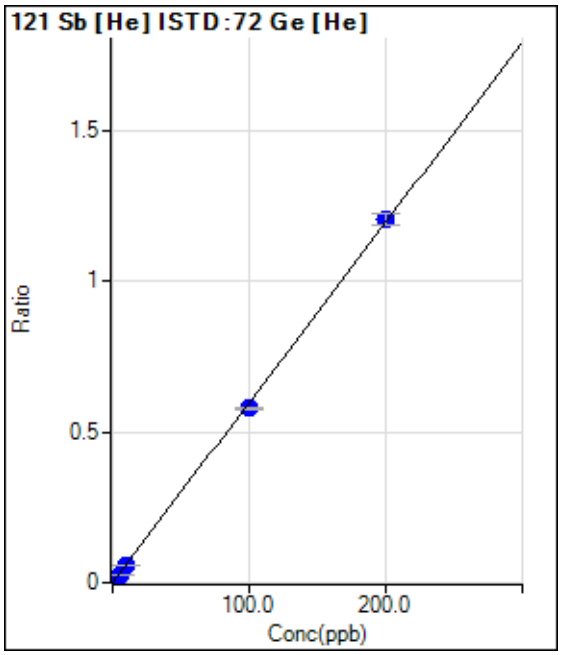


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1053.38	0.0003	P	8.9
2	☐	2.000	1.982	27475.47	0.0084	P	1.6
3	☐	5.000	4.852	65499.72	0.0200	P	0.6
4	☐	10.000	9.324	125699.88	0.0381	P	3.2
5	☐	100.000	96.480	1270308.16	0.3910	P	3.0
6	☐	200.000	201.798	2589194.80	0.8174	A	4.6
7	☐	1.000					

y = 0.0040 * x + 3.2599E-004
R = 0.9998
DL = 0.02153
BEC = 0.08051

Weight: <None>
Min Conc: <None>

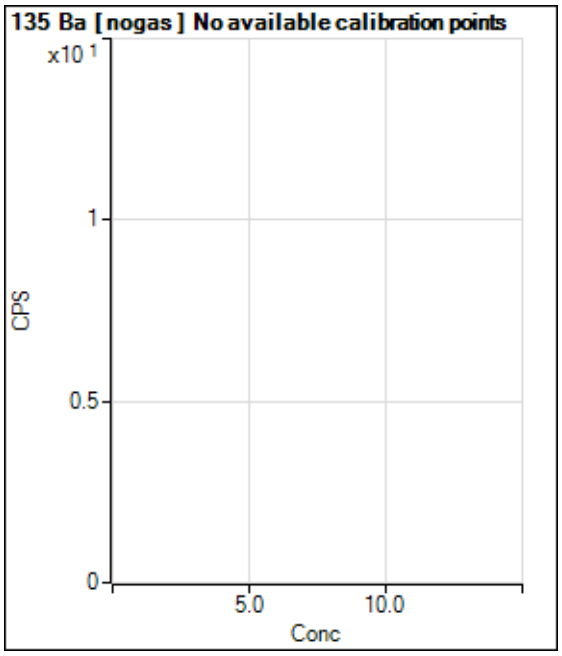
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0005	P	22.2
2	☐	2.000	1.952	9762.86	0.0121	P	4.9
3	☐	5.000	4.643	22788.32	0.0282	P	1.3
4	☐	10.000	9.338	45780.16	0.0563	P	2.4
5	☐	100.000	97.053	467969.33	0.5803	P	1.2
6	☐	200.000	201.516	956850.90	1.2043	P	3.0
7	☐	1.000					

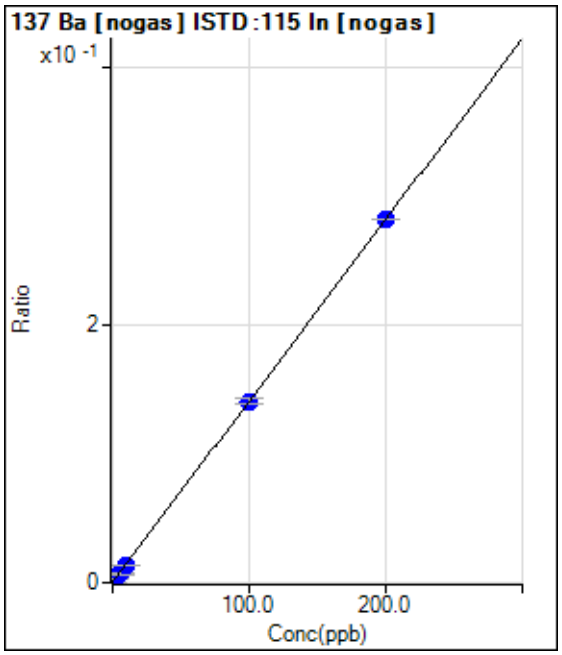
y = 0.0060 * x + 4.6865E-004
R = 0.9999
DL = 0.05224
BEC = 0.07845

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			373.34		P	5.6
2	☐			4774.10		P	8.7
3	☐			11810.87		P	4.4
4	☐			23062.40		P	2.0
5	☐			233250.56		P	0.5
6	☐			457816.31		P	0.8
7	☐						

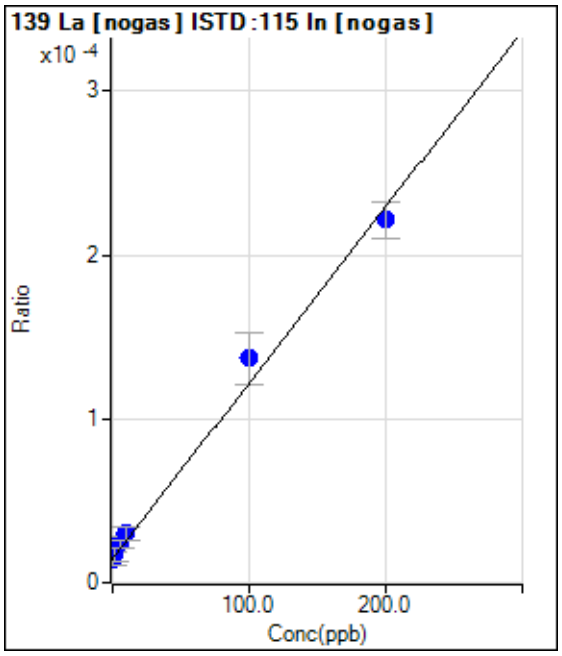
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	726.70	0.0002	P	11.4
2	☐	2.000	1.790	8285.46	0.0028	P	5.1
3	☐	5.000	4.619	19851.74	0.0067	P	4.1
4	☐	10.000	9.706	40357.97	0.0139	P	3.3
5	☐	100.000	100.065	394072.13	0.1411	P	2.8
6	☐	200.000	199.994	780755.87	0.2818	P	0.1
7	☐	1.000					

y = 0.0014 * x + 2.4552E-004
R = 1.0000
DL = 0.05938
BEC = 0.1744

Weight: <None>
Min Conc: <None>

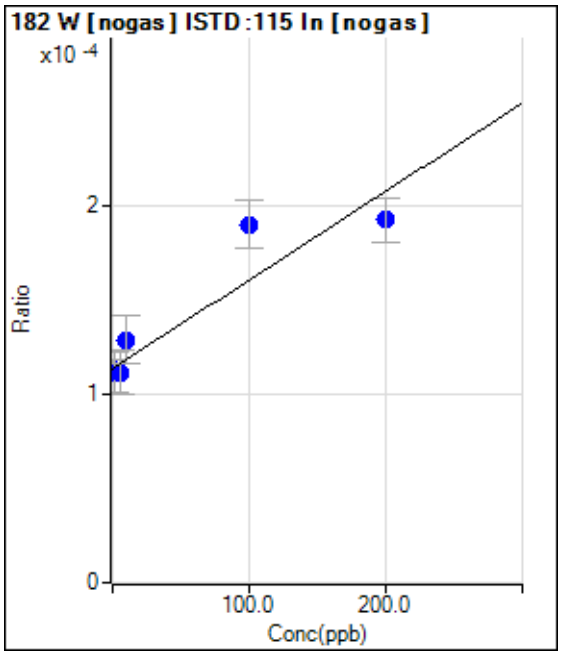


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	56.8
2	☐	2.000	3.103	53.33	0.0000	P	54.8
3	☐	5.000	9.587	73.33	0.0000	P	29.4
4	☐	10.000	14.393	86.67	0.0000	P	30.3
5	☐	100.000	113.838	380.01	0.0001	P	22.7
6	☐	200.000	192.735	613.36	0.0002	P	9.8
7	☐	1.000					

y = 1.0732E-006 * x + 1.4544E-005
R = 0.9966
DL = 23.1
BEC = 13.55

Weight: <None>
Min Conc: <None>

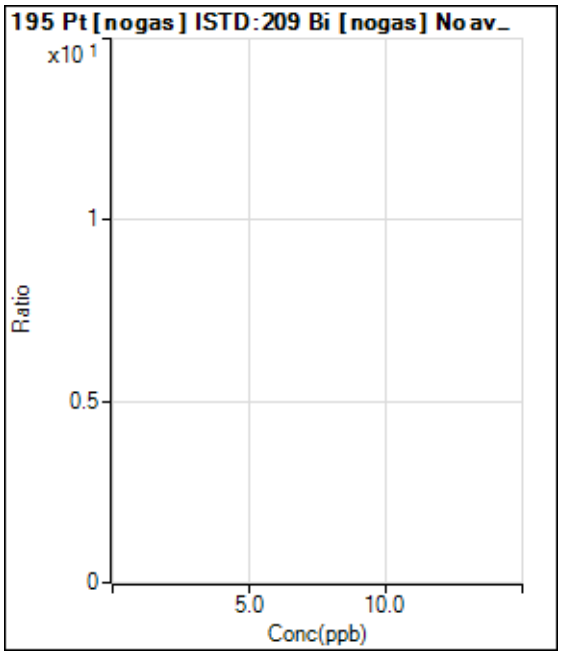
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.68	0.0001	P	7.4
2	☐	2.000	-4.719	333.34	0.0001	P	18.8
3	☐	5.000	-4.841	326.68	0.0001	P	21.4
4	☐	10.000	32.680	373.34	0.0001	P	19.0
5	☐	100.000	162.957	533.35	0.0002	P	13.9
6	☐	200.000	167.701	533.35	0.0002	P	12.5
7	☐	1.000					

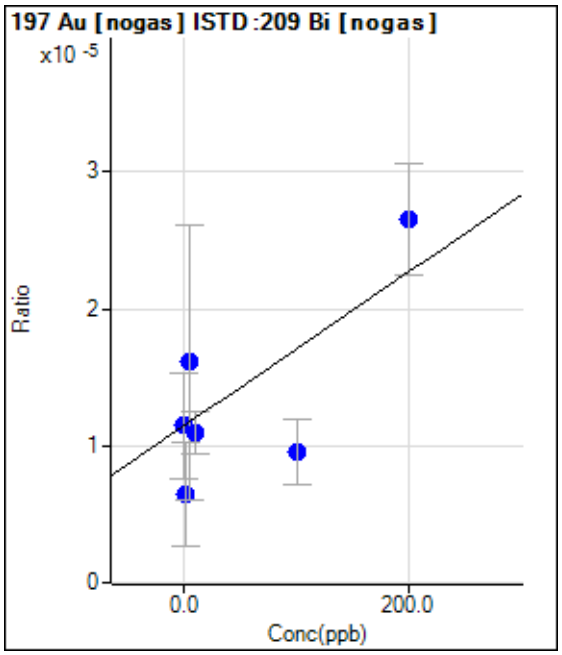
y = 4.6990E-007 * x + 1.1372E-004
R = 0.9206
DL = 53.94
BEC = 242

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

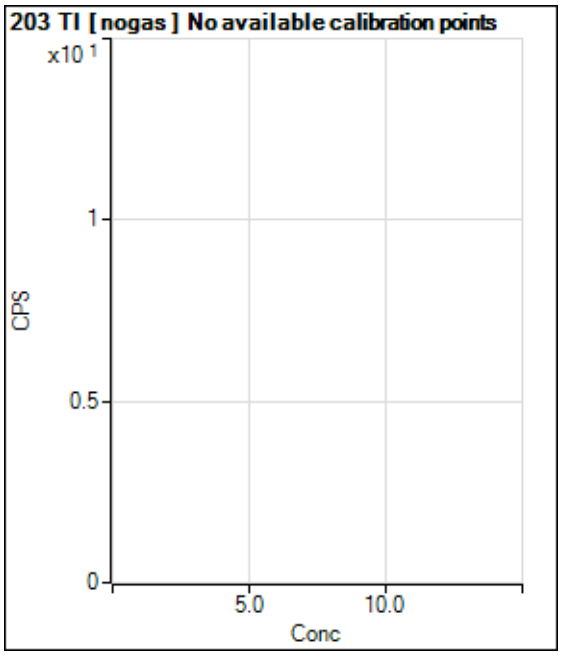
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	67.1
2	☐	2.000	-87.413	13.33	0.0000	P	116.
3	☐	5.000	82.104	33.33	0.0000	P	124.
4	☐	10.000	-8.871	23.33	0.0000	P	28.6
5	☐	100.000	-33.154	20.00	0.0000	P	50.3
6	☐	200.000	266.487	53.33	0.0000	P	30.7
7	☐	1.000					

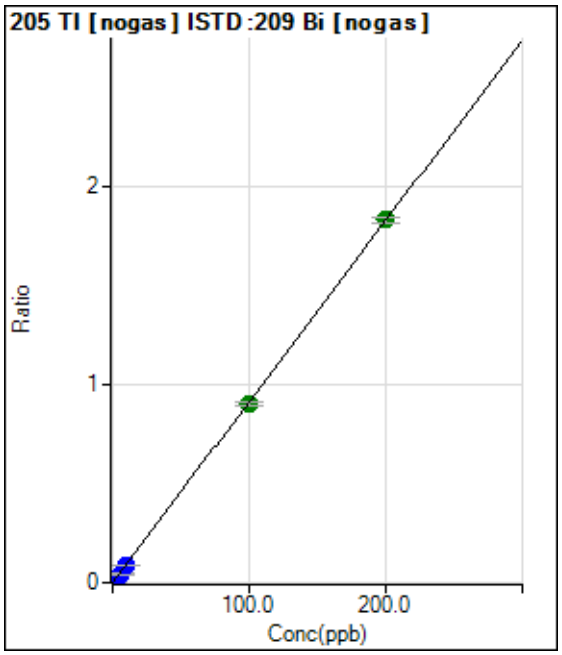
y = 5.6433E-008 * x + 1.1455E-005
R = 0.7527
DL = 408.5
BEC = 203

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			173.33		P	8.8
2	☐			16191.60		P	1.9
3	☐			38251.93		P	0.6
4	☐			77447.56		P	4.3
5	☐			783376.42		P	2.3
6	☐			1582335.03		A	1.2
7	☐						

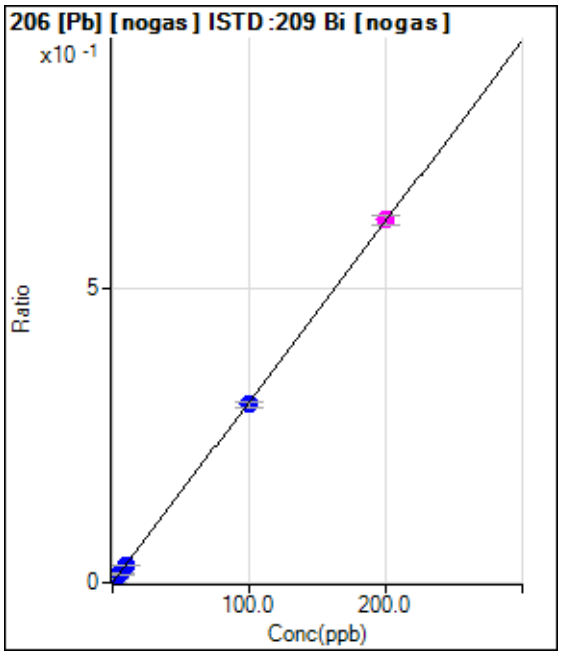
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	416.68	0.0002	P	16.0
2	☐	2.000	1.916	37503.83	0.0177	P	8.3
3	☐	5.000	4.691	92530.95	0.0430	P	5.5
4	☐	10.000	9.332	182925.71	0.0854	P	3.2
5	☐	100.000	98.858	1889793.72	0.9025	A	3.0
6	☐	200.000	200.613	3701900.05	1.8311	A	1.6
7	☐	1.000					

y = 0.0091 * x + 2.0147E-004
R = 1.0000
DL = 0.01061
BEC = 0.02208

Weight: <None>
Min Conc: <None>

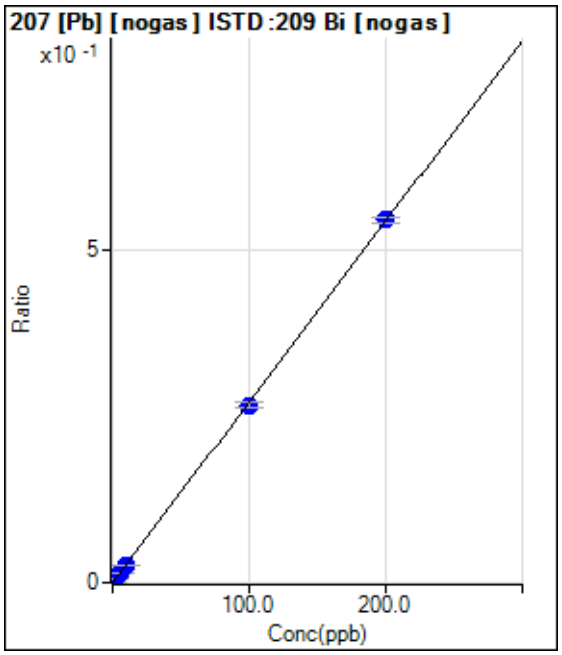


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0002	P	16.8
2	☐	2.000	1.922	12935.35	0.0061	P	4.5
3	☐	5.000	4.784	32025.35	0.0149	P	6.8
4	☐	10.000	9.419	62458.08	0.0291	P	1.1
5	☐	100.000	98.493	634317.97	0.3029	P	2.5
6	☐	200.000	200.789	1247924.38	0.6174	M	2.4
7	☐	1.000					

y = 0.0031 * x + 1.8362E-004
R = 1.0000
DL = 0.03004
BEC = 0.05974

Weight: <None>
Min Conc: <None>

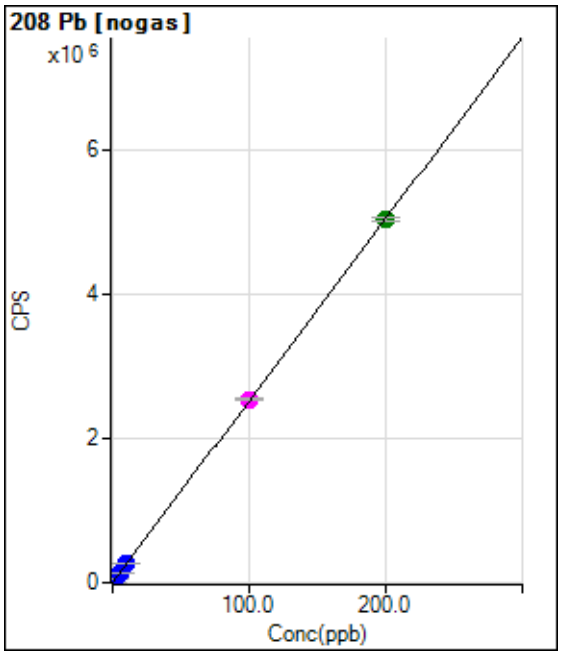
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	363.34	0.0002	P	12.9
2	☐	2.000	1.887	11264.11	0.0053	P	4.0
3	☐	5.000	4.920	29150.06	0.0135	P	3.0
4	☐	10.000	9.668	56646.48	0.0264	P	3.1
5	☐	100.000	98.313	559408.52	0.2672	P	3.4
6	☐	200.000	200.863	1103282.74	0.5457	P	1.9
7	☐	1.000					

y = 0.0027 * x + 1.7652E-004
R = 1.0000
DL = 0.02522
BEC = 0.06499

Weight: <None>
Min Conc: <None>

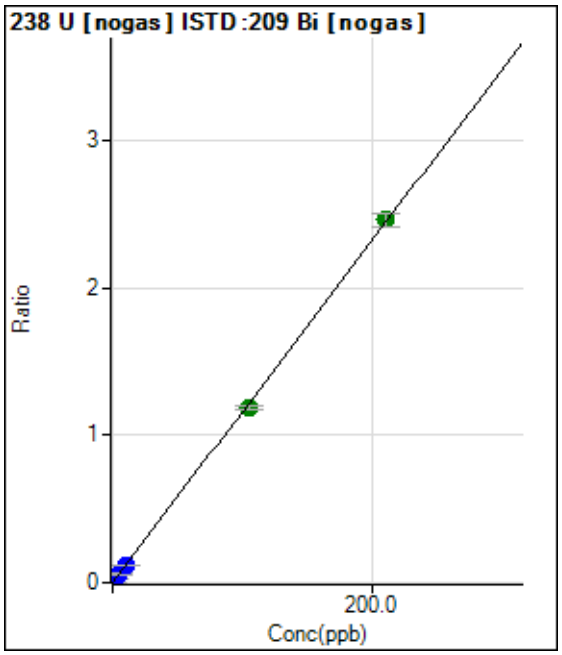


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1603.39		P	9.0
2	☐	2.000	2.018	52380.86		P	2.5
3	☐	5.000	5.173	131803.39		P	1.5
4	☐	10.000	10.154	257143.87		P	1.4
5	☐	100.000	100.904	2541098.81		M	1.1
6	☐	200.000	199.536	5023408.65		A	0.9
7	☐	1.000					

y = 25167.4391 * x + 1603.3867
R = 1.0000
DL = 0.01721
BEC = 0.06371

Weight: <None>
Min Conc: <None>

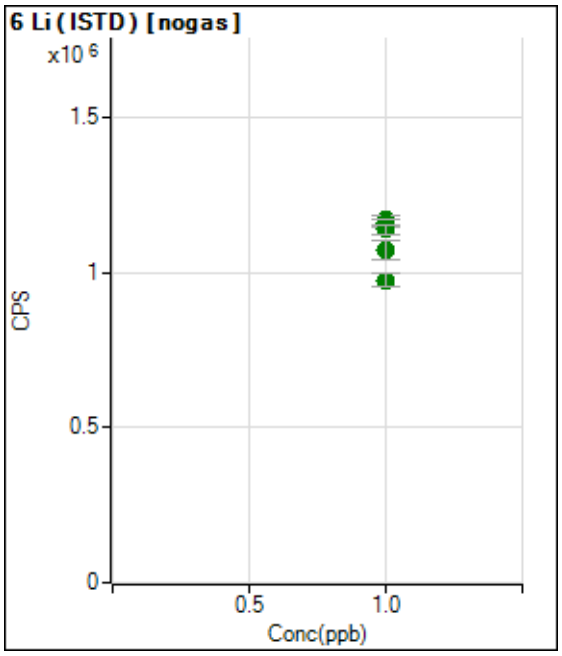
Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.33	0.0001	P	40.5
2	☐	2.000	1.980	49066.10	0.0231	P	7.1
3	☐	5.000	4.958	124455.02	0.0578	P	4.3
4	☐	10.000	9.786	244273.39	0.1140	P	4.1
5	☐	105.000	101.680	2479268.45	1.1840	A	2.4
6	☐	210.000	211.671	4981291.91	2.4647	A	3.5
7	☐	1.000					

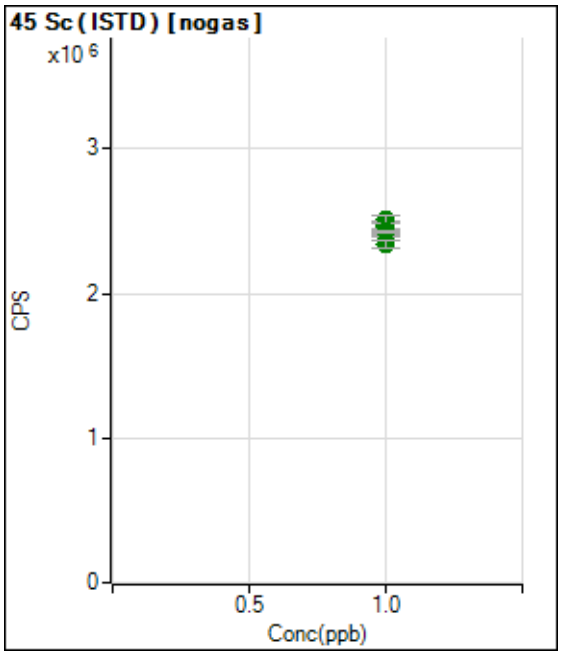
y = 0.0116 * x + 7.4099E-005
R = 0.9998
DL = 0.007735
BEC = 0.006364

Weight: <None>
Min Conc: <None>

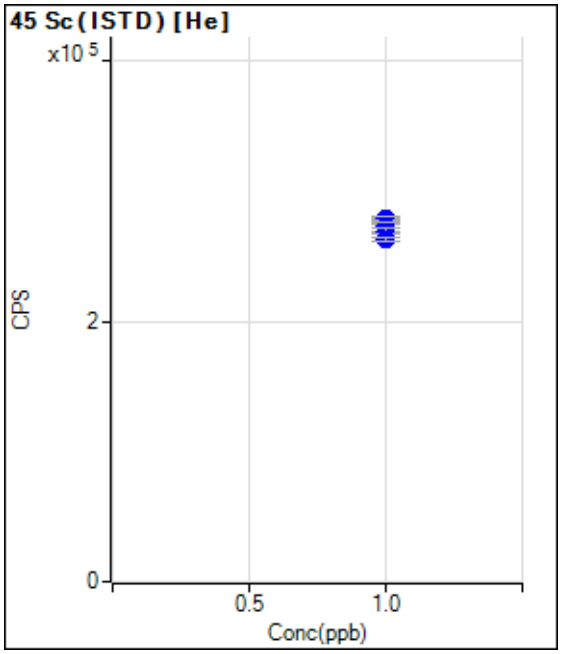


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1171765.53		A	2.4
2	☐	1.000		1148786.75		A	4.7
3	☐	1.000		1162132.92		A	2.4
4	☐	1.000		1141882.24		A	2.8
5	☐	1.000		1076082.38		A	5.7
6	☐	1.000		975979.57		A	4.5
7	☐	1.000					

Calibration for 138_ICV.d

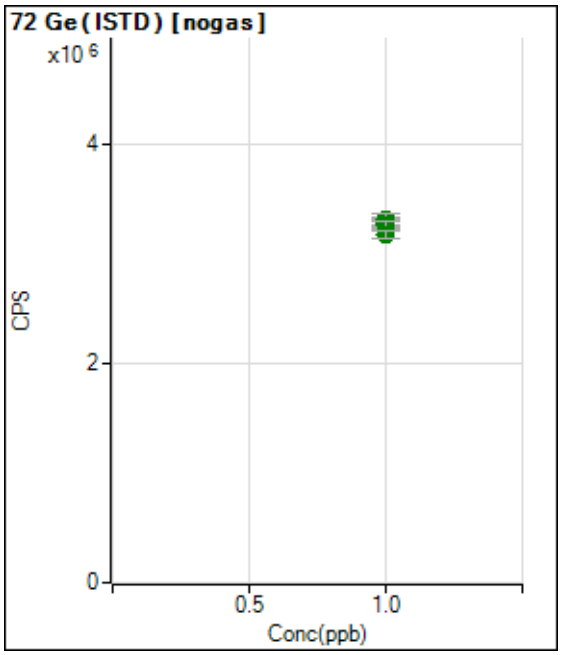


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2460984.03		A	2.9
2	☐	1.000		2474528.45		A	2.2
3	☐	1.000		2509689.91		A	2.3
4	☐	1.000		2402318.04		A	0.5
5	☐	1.000		2429523.30		A	0.7
6	☐	1.000		2340485.54		A	2.8
7	☐	1.000					

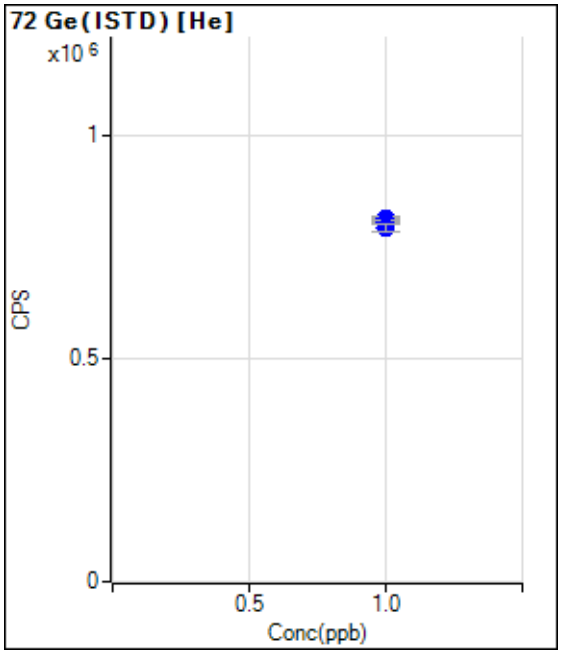


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		277146.58		P	2.1
2	☐	1.000		273300.02		P	1.5
3	☐	1.000		278924.44		P	1.0
4	☐	1.000		272958.99		P	2.7
5	☐	1.000		269519.61		P	1.9
6	☐	1.000		263024.44		P	1.0
7	☐	1.000					

Calibration for 138_ICV.d

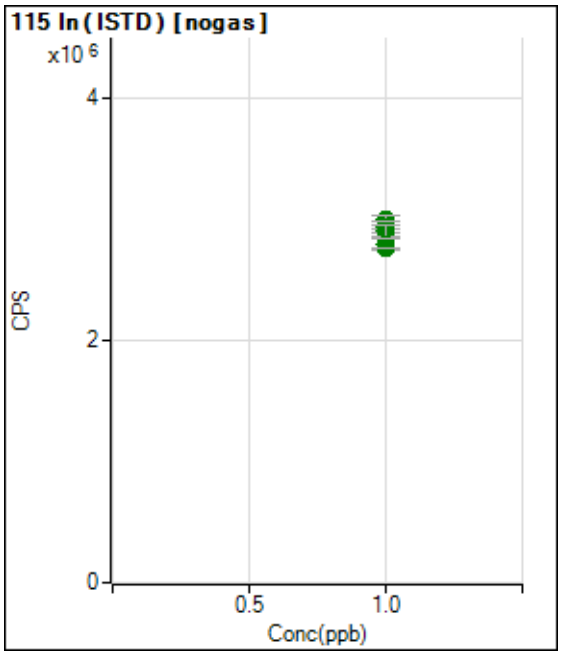


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3233064.74		A	1.0
2	☐	1.000		3290282.76		A	2.7
3	☐	1.000		3279638.60		A	1.9
4	☐	1.000		3303477.97		A	3.5
5	☐	1.000		3250742.14		A	2.7
6	☐	1.000		3169936.10		A	2.6
7	☐	1.000					

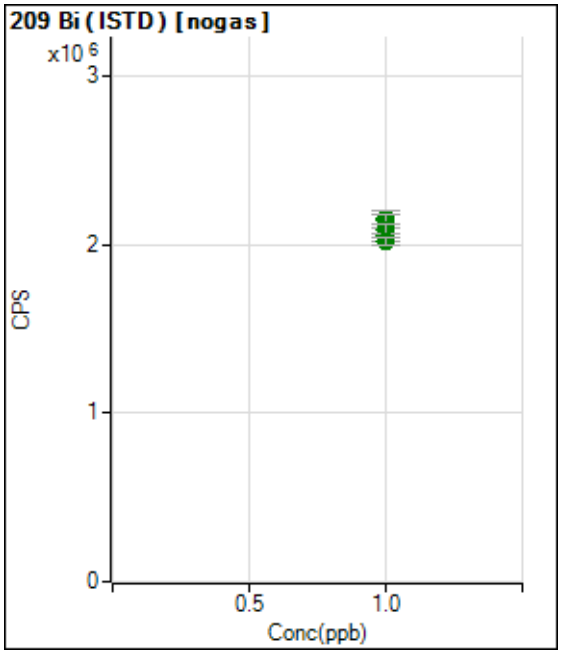


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		810035.41		P	0.7
2	☐	1.000		804888.56		P	1.1
3	☐	1.000		808101.13		P	1.4
4	☐	1.000		813899.52		P	0.9
5	☐	1.000		806514.70		P	0.8
6	☐	1.000		794814.57		P	2.0
7	☐	1.000					

Calibration for 138_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2958353.04		A	2.4
2	☐	1.000		2997832.27		A	2.4
3	☐	1.000		2943060.26		A	3.2
4	☐	1.000		2901412.54		A	3.2
5	☐	1.000		2793850.00		A	3.5
6	☐	1.000		2770189.57		A	0.1
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2061475.33		A	3.5
2	☐	1.000		2126685.85		A	5.2
3	☐	1.000		2155140.02		A	4.8
4	☐	1.000		2144167.62		A	3.6
5	☐	1.000		2094723.46		A	2.4
6	☐	1.000		2022181.32		A	2.5
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	019CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:22:50-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	37	281.60
Na	23	1	nogas	496568	0.00
Mg	24	1	nogas	5969	0.09
Al	27	1	nogas	38857	0.00
K	39	1	nogas	8289092	0.00
Ti	47	1	nogas	473	2.69
V	51	1	nogas	216786	0.00
Cr	52	1	nogas	41864	0.00
Mn	55	1	nogas	24106	0.02
Co	59	1	nogas	1433	0.16
Ni	60	1	nogas	597	2.95
Cu	63	1	nogas	79347	0.00
Zn	66	1	nogas	980	0.21
As	75	1	nogas	53472	0.00
Sr	88	1	nogas	963	1.53
Ag	107	1	nogas	130	44.67
Cd	111	1	nogas	20	500.00
Sb	121	1	nogas	1370	0.43
Tl	205	1	nogas	403	4.53
Pb	208	1	nogas	4020	0.02
[Pb]	206	1	nogas	1140	0.28
[Pb]	207	1	nogas	870	1.00
Na	23	2	He	71384	0.00
Mg	24	2	He	540	2.25
Al	27	2	He	1043	1.16
K	39	2	He	225829	0.00
Ca	43	2	He	10	1000.00
Ca	44	2	He	4434	0.12
V	51	2	He	3339	0.04
Cr	52	2	He	6124	0.01
Mn	55	2	He	2874	0.24
Fe	56	2	He	15287	0.02
Co	59	2	He	423	6.54
Ni	60	2	He	193	10.81
Cu	63	2	He	27070	0.01
Zn	66	2	He	367	4.95
As	75	2	He	347	3.20
Se	78	2	He	175	6.09
B	11	1	nogas	9259	0.06
Si	28	1	nogas	1566588	0.00
Ca	43	1	nogas	930	2.03
Ca	44	1	nogas	580986	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2248066	0.00
Se	77	1	nogas	17429	0.01
Se	82	1	nogas	370	2.19
Mo	95	1	nogas	310	7.50
Sn	118	1	nogas	1100	0.38
Ba	137	1	nogas	340	6.06
Sb	121	2	He	540	4.16
Li	7	1	nogas	101659	0.00
P	31	1	nogas	111302	0.00
La	139	1	nogas	33	103.92

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1229805	6.80
Ge	72	1	nogas	3541557	2.22
In	115	1	nogas	3006327	3.62
Bi	209	1	nogas	2153140	3.03
Ge	72	2	He	993327	3.11

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	020CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:24:52-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	14893	0.02
Na	23	1	nogas	5429107	0.00
Mg	24	1	nogas	3317538	0.00
Al	27	1	nogas	68910	0.00
K	39	1	nogas	12268208	0.00
Ti	47	1	nogas	4361	0.09
V	51	1	nogas	269703	0.00
Cr	52	1	nogas	88517	0.00
Mn	55	1	nogas	80626	0.00
Co	59	1	nogas	51195	0.00
Ni	60	1	nogas	11794	0.01
Cu	63	1	nogas	101635	0.00
Zn	66	1	nogas	10090	0.01
As	75	1	nogas	64022	0.00
Sr	88	1	nogas	59319	0.01
Ag	107	1	nogas	29174	0.01
Cd	111	1	nogas	6048	0.10
Sb	121	1	nogas	26393	0.01
Tl	205	1	nogas	36324	0.01
Pb	208	1	nogas	55171	0.00
[Pb]	206	1	nogas	13526	0.03
[Pb]	207	1	nogas	12215	0.05
Na	23	2	He	399017	0.00
Mg	24	2	He	185807	0.00
Al	27	2	He	1923	0.27
K	39	2	He	419263	0.00
Ca	43	2	He	630	1.53
Ca	44	2	He	13618	0.03
V	51	2	He	16615	0.01
Cr	52	2	He	20985	0.00
Mn	55	2	He	13482	0.03
Fe	56	2	He	1344256	0.00
Co	59	2	He	20799	0.01
Ni	60	2	He	5424	0.07
Cu	63	2	He	38226	0.01
Zn	66	2	He	3537	0.14
As	75	2	He	3559	0.01
Se	78	2	He	426	0.69
B	11	1	nogas	53375	0.00
Si	28	1	nogas	1636137	0.00

Calibration Standard Report

Ca	43	1	nogas	8492	0.03
Ca	44	1	nogas	696122	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	7072808	0.00
Se	77	1	nogas	17986	0.02
Se	82	1	nogas	827	0.61
Mo	95	1	nogas	11344	0.01
Sn	118	1	nogas	17629	0.03
Ba	137	1	nogas	8085	0.07
Sb	121	2	He	10203	0.03
P	31	1	nogas	127861	0.00
La	139	1	nogas	37	42.94

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1228957	5.88	1229805	99.93	70	125	
Ge	72	1	nogas	3480522	0.21	3541557	98.28	70	125	
In	115	1	nogas	2961941	1.28	3006327	98.52	70	125	
Bi	209	1	nogas	2160140	3.34	2153140	100.33	70	125	
Ge	72	2	He	926943	0.28	993327	93.32	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	021CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:26:55-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	37420	0.01
Na	23	1	nogas	13049242	0.00
Mg	24	1	nogas	8403654	0.00
Al	27	1	nogas	127300	0.00
K	39	1	nogas	18204673	0.00
Ti	47	1	nogas	10266	0.03
V	51	1	nogas	354653	0.00
Cr	52	1	nogas	161393	0.00
Mn	55	1	nogas	169729	0.00
Co	59	1	nogas	125137	0.00
Ni	60	1	nogas	29547	0.00
Cu	63	1	nogas	140756	0.00
Zn	66	1	nogas	24006	0.01
As	75	1	nogas	82536	0.00
Sr	88	1	nogas	143555	0.00
Ag	107	1	nogas	73541	0.01
Cd	111	1	nogas	15460	0.00
Sb	121	1	nogas	63368	0.00
Tl	205	1	nogas	91201	0.00
Pb	208	1	nogas	130967	0.00
[Pb]	206	1	nogas	32683	0.01
[Pb]	207	1	nogas	28051	0.01
Na	23	2	He	892709	0.00
Mg	24	2	He	461122	0.00
Al	27	2	He	3390	0.24
K	39	2	He	722631	0.00
Ca	43	2	He	1307	0.62
Ca	44	2	He	28218	0.01
V	51	2	He	36499	0.00
Cr	52	2	He	43953	0.00
Mn	55	2	He	29577	0.01
Fe	56	2	He	3274562	0.00
Co	59	2	He	51178	0.01
Ni	60	2	He	12885	0.06
Cu	63	2	He	57159	0.00
Zn	66	2	He	8409	0.08
As	75	2	He	8213	0.03
Se	78	2	He	760	0.60
B	11	1	nogas	123947	0.00
Si	28	1	nogas	1800666	0.00

Calibration Standard Report

Ca	43	1	nogas	19103	0.01
Ca	44	1	nogas	876898	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	14507447	0.00
Se	77	1	nogas	18693	0.01
Se	82	1	nogas	1810	0.38
Mo	95	1	nogas	29164	0.01
Sn	118	1	nogas	41811	0.01
Ba	137	1	nogas	19845	0.01
Sb	121	2	He	26170	0.02
P	31	1	nogas	155640	0.00
La	139	1	nogas	50	69.28

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1224222	3.33	1229805	99.55	70	125	
Ge	72	1	nogas	3443847	0.56	3541557	97.24	70	125	
In	115	1	nogas	2952199	2.28	3006327	98.20	70	125	
Bi	209	1	nogas	2197259	4.09	2153140	102.05	70	125	
Ge	72	2	He	920503	2.36	993327	92.67	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	022CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:28:58-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	75655	0.00
Na	23	1	nogas	25117059	0.00
Mg	24	1	nogas	16349977	0.00
Al	27	1	nogas	227124	0.00
K	39	1	nogas	28374235	0.00
Ti	47	1	nogas	20074	0.01
V	51	1	nogas	477473	0.00
Cr	52	1	nogas	277057	0.00
Mn	55	1	nogas	337912	0.00
Co	59	1	nogas	249899	0.00
Ni	60	1	nogas	57634	0.00
Cu	63	1	nogas	210598	0.00
Zn	66	1	nogas	46312	0.00
As	75	1	nogas	111783	0.00
Sr	88	1	nogas	291423	0.00
Ag	107	1	nogas	146315	0.00
Cd	111	1	nogas	31144	0.01
Sb	121	1	nogas	127510	0.00
Tl	205	1	nogas	186692	0.00
Pb	208	1	nogas	258983	0.00
[Pb]	206	1	nogas	64810	0.00
[Pb]	207	1	nogas	57094	0.00
Na	23	2	He	1730790	0.00
Mg	24	2	He	913345	0.00
Al	27	2	He	6008	0.05
K	39	2	He	1206132	0.00
Ca	43	2	He	2694	0.25
Ca	44	2	He	51742	0.00
V	51	2	He	69397	0.00
Cr	52	2	He	79273	0.00
Mn	55	2	He	59817	0.00
Fe	56	2	He	6314221	0.00
Co	59	2	He	100661	0.00
Ni	60	2	He	25798	0.00
Cu	63	2	He	89962	0.00
Zn	66	2	He	16401	0.01
As	75	2	He	15447	0.01
Se	78	2	He	1440	0.29
B	11	1	nogas	239318	0.00
Si	28	1	nogas	2095245	0.00

Calibration Standard Report

Ca	43	1	nogas	37879	0.01
Ca	44	1	nogas	1167137	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	26396952	0.00
Se	77	1	nogas	20355	0.01
Se	82	1	nogas	3140	0.10
Mo	95	1	nogas	59309	0.00
Sn	118	1	nogas	83693	0.00
Ba	137	1	nogas	39573	0.01
Sb	121	2	He	50737	0.01
P	31	1	nogas	201331	0.00
La	139	1	nogas	103	14.31

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1251493	3.56	1229805	101.76	70	125	
Ge	72	1	nogas	3442490	2.11	3541557	97.20	70	125	
In	115	1	nogas	2960727	1.83	3006327	98.48	70	125	
Bi	209	1	nogas	2167413	1.08	2153140	100.66	70	125	
Ge	72	2	He	925552	2.24	993327	93.18	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	023CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:31:00-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	768211	0.00
Na	23	1	nogas	246379139	0.00
Mg	24	1	nogas	159932991	0.00
Al	27	1	nogas	1950181	0.00
K	39	1	nogas	203139275	0.00
Ti	47	1	nogas	197202	0.00
V	51	1	nogas	2832911	0.00
Cr	52	1	nogas	2326481	0.00
Mn	55	1	nogas	2870602	0.00
Co	59	1	nogas	2427126	0.00
Ni	60	1	nogas	551340	0.00
Cu	63	1	nogas	1415687	0.00
Zn	66	1	nogas	445334	0.00
As	75	1	nogas	603316	0.00
Sr	88	1	nogas	2826181	0.00
Ag	107	1	nogas	1430033	0.00
Cd	111	1	nogas	302145	0.00
Sb	121	1	nogas	1262750	0.00
Tl	205	1	nogas	1878981	0.00
Pb	208	1	nogas	2587797	0.00
[Pb]	206	1	nogas	637153	0.00
[Pb]	207	1	nogas	565156	0.00
Na	23	2	He	16078626	0.00
Mg	24	2	He	8966447	0.00
Al	27	2	He	51494	0.01
K	39	2	He	9576055	0.00
Ca	43	2	He	27834	0.01
Ca	44	2	He	460786	0.00
V	51	2	He	668254	0.00
Cr	52	2	He	732662	0.00
Mn	55	2	He	515346	0.00
Fe	56	2	He	62281096	0.00
Co	59	2	He	978260	0.00
Ni	60	2	He	255072	0.00
Cu	63	2	He	670773	0.00
Zn	66	2	He	160399	0.00
As	75	2	He	155774	0.00
Se	78	2	He	12657	0.01
B	11	1	nogas	2284043	0.00
Si	28	1	nogas	6715268	0.00

Calibration Standard Report

Ca	43	1	nogas	367566	0.00
Ca	44	1	nogas	6358463	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	246666081	0.00
Se	77	1	nogas	41310	0.00
Se	82	1	nogas	28880	0.02
Mo	95	1	nogas	587620	0.00
Sn	118	1	nogas	814798	0.00
Ba	137	1	nogas	394424	0.00
Sb	121	2	He	508577	0.00
P	31	1	nogas	977118	0.00
La	139	1	nogas	410	1.03

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1143512	4.14	1229805	92.98	70	125	
Ge	72	1	nogas	3382030	2.47	3541557	95.50	70	125	
In	115	1	nogas	2801397	1.27	3006327	93.18	70	125	
Bi	209	1	nogas	2021585	2.89	2153140	93.89	70	125	
Ge	72	2	He	868492	4.55	993327	87.43	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	024CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:33:03-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1490339	0.00
Na	23	1	nogas	481847077	0.00
Mg	24	1	nogas	309884790	0.00
Al	27	1	nogas	3782656	0.00
K	39	1	nogas	393096834	0.00
Ti	47	1	nogas	385199	0.00
V	51	1	nogas	5384219	0.00
Cr	52	1	nogas	4472257	0.00
Mn	55	1	nogas	5488765	0.00
Co	59	1	nogas	4848474	0.00
Ni	60	1	nogas	1090402	0.00
Cu	63	1	nogas	2698817	0.00
Zn	66	1	nogas	873086	0.00
As	75	1	nogas	1159609	0.00
Sr	88	1	nogas	5575103	0.00
Ag	107	1	nogas	2808797	0.00
Cd	111	1	nogas	603089	0.00
Sb	121	1	nogas	2499065	0.00
Tl	205	1	nogas	3625414	0.00
Pb	208	1	nogas	5072002	0.00
[Pb]	206	1	nogas	1234604	0.00
[Pb]	207	1	nogas	1107819	0.00
Na	23	2	He	31690890	0.00
Mg	24	2	He	17745286	0.00
Al	27	2	He	101712	0.00
K	39	2	He	18802625	0.00
Ca	43	2	He	52695	0.00
Ca	44	2	He	907691	0.00
V	51	2	He	1307511	0.00
Cr	52	2	He	1393826	0.00
Mn	55	2	He	1018107	0.00
Fe	56	2	He	124153878	0.00
Co	59	2	He	1949277	0.00
Ni	60	2	He	495773	0.00
Cu	63	2	He	1309729	0.00
Zn	66	2	He	311834	0.00
As	75	2	He	305661	0.00
Se	78	2	He	24908	0.01
B	11	1	nogas	4449104	0.00
Si	28	1	nogas	11996351	0.00

Calibration Standard Report

Ca	43	1	nogas	723176	0.00
Ca	44	1	nogas	11798086	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	477588844	0.00
Se	77	1	nogas	66344	0.00
Se	82	1	nogas	57475	0.01
Mo	95	1	nogas	1162024	0.00
Sn	118	1	nogas	1616222	0.00
Ba	137	1	nogas	780655	0.00
Sb	121	2	He	1035075	0.00
P	31	1	nogas	1920065	0.00
La	139	1	nogas	633	3.08

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1050150	4.76	1229805	85.39	70	125	
Ge	72	1	nogas	3264970	0.74	3541557	92.19	70	125	
In	115	1	nogas	2753060	2.13	3006327	91.58	70	125	
Bi	209	1	nogas	2058668	3.98	2153140	95.61	70	125	
Ge	72	2	He	890447	1.49	993327	89.64	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	026_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:37:12-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	98.668	5.839	764317	1.04	100	98.7	90	110	
Na	23	1	nogas	9876.874	1.475	249704689	1.30	10000	98.8	90	110	
Mg	24	1	nogas	10233.348	3.380	166505741	1.72	10000	102.3	90	110	
Al	27	1	nogas	105.006	2.951	2084627	1.19	100	105.0	90	110	
K	39	1	nogas	10117.317	6.983	210400505	3.09	10000	101.2	90	110	
Ti	47	1	nogas	97.416	6.916	195351	3.35	100	97.4	90	110	
V	51	1	nogas	96.943	6.281	2818068	2.60	100	96.9	90	110	
Cr	52	1	nogas	98.485	5.853	2315967	2.61	100	98.5	90	110	
Mn	55	1	nogas	99.374	6.617	2859443	2.67	100	99.4	90	110	
Co	59	1	nogas	99.888	8.556	2507374	4.74	100	99.9	90	110	
Ni	60	1	nogas	99.727	5.764	564200	2.48	100	99.7	90	110	
Cu	63	1	nogas	96.516	8.633	1393108	4.41	100	96.5	90	110	
Zn	66	1	nogas	99.872	5.323	453465	1.65	100	99.9	90	110	
As	75	1	nogas	96.801	4.486	607165	0.06	100	96.8	90	110	
Sr	88	1	nogas	98.272	7.452	2843829	3.79	100	98.3	90	110	
Ag	107	1	nogas	100.903	5.852	1472989	2.59	100	100.9	90	110	
Cd	111	1	nogas	102.808	1.505	315905	2.70	100	102.8	90	110	
Sb	121	1	nogas	102.071	3.290	1325033	1.22	100	102.1	90	110	
Tl	205	1	nogas	103.293	5.373	1923613	1.13	100	103.3	90	110	
Pb	208	1	nogas	101.997	0.818	2598779	0.82	100	102.0	90	110	
U	238	1	nogas	105.673	3.775	2611476	1.00	100	105.7	90	110	
[Pb]	206	1	nogas	102.686	4.118	651054	2.21	100	102.7	90	110	
[Pb]	207	1	nogas	96.564	2.401	548054	1.81	100	96.6	90	110	
Na	23	2	He	9981.526	1.115	16375441	1.53	10000	99.8	90	110	
Mg	24	2	He	10170.413	1.799	9319126	0.66	10000	101.7	90	110	
Al	27	2	He	99.957	1.029	52907	2.13	100	100.0	90	110	
K	39	2	He	10571.692	2.147	10059736	2.10	10000	105.7	90	110	
Ca	43	2	He	10196.777	0.734	28008	1.36	10000	102.0	90	110	
Ca	44	2	He	9999.154	2.979	470594	0.95	10000	100.0	90	110	
V	51	2	He	100.157	1.873	679849	2.27	100	100.2	90	110	
Cr	52	2	He	100.261	1.923	729996	1.90	100	100.3	90	110	
Mn	55	2	He	98.654	1.288	520102	2.62	100	98.7	90	110	
Fe	56	2	He	9979.052	1.788	63904574	2.74	10000	99.8	90	110	
Co	59	2	He	99.178	2.077	997362	2.75	100	99.2	90	110	
Ni	60	2	He	99.159	1.630	255354	0.94	100	99.2	90	110	
Cu	63	2	He	95.297	2.904	657188	1.11	100	95.3	90	110	
Zn	66	2	He	98.071	1.259	158908	1.86	100	98.1	90	110	
As	75	2	He	100.386	1.328	158826	0.95	100	100.4	90	110	
Se	78	2	He	99.138	1.677	12839	0.68	100	99.1	90	110	
B	11	1	nogas	518.611	5.742	2400264	0.60	500	103.7	90	110	
Si	28	1	nogas	5152.038	4.856	7129948	0.54	5000	103.0	90	110	
Ca	43	1	nogas	10200.655	6.275	383524	2.24	10000	102.0	90	110	
Ca	44	1	nogas	10268.047	7.641	6581408	3.28	10000	102.7	90	110	
Fe	56	1	nogas	10050.080	5.092	251084581	1.49	10000	100.5	90	110	
Se	77	1	nogas	79.006	7.470	37295	2.22	100	79.0	90	110	ICV Main CR1 Failed
Se	82	1	nogas	101.383	2.007	30373	2.28	100	101.4	90	110	
Mo	95	1	nogas	96.153	6.045	580020	2.51	100	96.2	90	110	
Sn	118	1	nogas	97.197	1.021	801444	1.66	100	97.2	90	110	
Ba	137	1	nogas	103.050	2.814	410692	2.89	100	103.0	90	110	
Sb	121	2	He	100.124	1.456	532191	0.65	100	100.1	90	110	
Li	7	1	nogas	107.299	4.970	1843467	4.45	100	107.3	90	110	
P	31	1	nogas	475.973	5.655	995927	1.11	500	95.2	90	110	
La	139	1	nogas	158.347	20.217	543	20.69	100	158.3	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-348.485	-43.491	7	86.60	100	-348.5	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1104772	6.21	1229805	89.83	70	125	
Ge	72	1	nogas	3410351	4.12	3541557	96.30	70	125	
In	115	1	nogas	2813400	1.81	3006327	93.58	70	125	
Bi	209	1	nogas	2092814	4.17	2153140	97.20	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	912671	2.05	993327	91.88	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	027SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:39:16-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	1.812	1.812	5.87	15320	0.01	2000	
Na	23	1	nogas	203.771	203.771	5.95	5555030	0.00	200000	
Mg	24	1	nogas	209.378	209.378	2.32	3371798	0.01	200000	
Al	27	1	nogas	0.950	0.950	10.92	56214	0.00	2000	
K	39	1	nogas	203.705	203.705	8.09	12121727	0.00	200000	
Ti	47	1	nogas	1.965	1.965	2.38	4414	0.04	2000	
V	51	1	nogas	-0.777	-0.777	-13.26	188743	0.00	2000	
Cr	52	1	nogas	1.919	1.919	8.28	85102	0.00	2000	
Mn	55	1	nogas	1.978	1.978	4.68	80107	0.00	2000	
Co	59	1	nogas	2.056	2.056	1.92	53324	0.00	2000	
Ni	60	1	nogas	2.302	2.302	3.25	12281	0.02	2000	
Cu	63	1	nogas	0.988	0.988	3.28	90354	0.00	2000	
Zn	66	1	nogas	2.172	2.172	2.08	10020	0.02	2000	
As	75	1	nogas	0.877	0.877	29.45	55217	0.00	2000	
Sr	88	1	nogas	1.981	1.981	4.60	58589	0.00	2000	
Ag	107	1	nogas	2.020	2.020	2.73	29795	0.01	2000	
Cd	111	1	nogas	1.902	1.902	8.37	6181	0.03	2000	
Sb	121	1	nogas	2.339	2.339	3.45	31826	0.01	2000	
Tl	205	1	nogas	2.268	2.268	7.67	43104	0.01	2000	
Pb	208	1	nogas	2.068	2.068	5.29	56640	0.00	2000	
U	238	1	nogas	2.166	2.166	3.90	54133	0.00	2000	
[Pb]	206	1	nogas	2.078	2.078	4.34	14410	0.01	2000	
[Pb]	207	1	nogas	2.000	2.000	7.80	12312	0.02	2000	
Na	23	2	He	206.374	206.374	1.92	396793	0.05	200000	
Mg	24	2	He	205.334	205.334	2.27	185855	0.11	200000	
Al	27	2	He	1.045	1.045	9.62	1513	0.07	2000	
K	39	2	He	205.610	205.610	4.00	417090	0.05	200000	
Ca	43	2	He	195.061	195.061	10.87	537	36.35	200000	
Ca	44	2	He	206.714	206.714	7.82	13508	1.53	200000	
V	51	2	He	1.500	1.500	5.39	15411	0.01	2000	
Cr	52	2	He	2.091	2.091	1.58	20422	0.01	2000	
Mn	55	2	He	2.045	2.045	5.19	13172	0.02	2000	
Fe	56	2	He	203.900	203.900	1.06	1299629	0.02	200000	
Co	59	2	He	2.010	2.010	2.15	20281	0.01	2000	
Ni	60	2	He	1.465	1.465	4.32	5127	0.03	2000	
Cu	63	2	He	1.267	1.267	4.06	33965	0.00	2000	
Zn	66	2	He	1.512	1.512	2.08	3497	0.04	2000	
As	75	2	He	2.020	2.020	3.55	3455	0.06	2000	
Se	78	2	He	1.944	1.944	22.26	435	0.45	2000	
B	11	1	nogas	24.212	24.212	5.31	130666	0.02	2000	
Si	28	1	nogas	127.935	127.935	33.05	1656655	0.01	2000	
Ca	43	1	nogas	205.298	205.298	2.54	8652	2.37	200000	

Sample Report

Ca	44	1	nogas	223.268	223.268	11.74	694058	0.03	200000	
Fe	56	1	nogas	188.693	188.693	7.75	6874122	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-6.597	-6.597	-35.99	15137	-0.04	2000	
Se	82	1	nogas	2.279	2.279	14.24	1037	0.22	2000	
Mo	95	1	nogas	2.217	2.217	9.18	13739	0.02	2000	
Sn	118	1	nogas	2.093	2.093	4.87	19271	0.01	2000	
Ba	137	1	nogas	1.928	1.928	4.17	8436	0.02	2000	
Sb	121	2	He	2.260	2.260	1.50	12315	0.02	2000	
La	139	1	nogas	5.031	5.031	210.42	50	10.06	2000	
Au	197	1	nogas	-81.620	-81.620	-182.91	17	-489.72	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1200476	1.44	1229805	97.62	70	125	
Ge	72	1	nogas	3426870	1.73	3541557	96.76	70	125	
In	115	1	nogas	2969199	2.21	3006327	98.76	70	125	
Bi	209	1	nogas	2113303	1.98	2153140	98.15	70	125	
Ge	72	2	He	898939	2.08	993327	90.50	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	028LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:41:19-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	4.498	1.691	37717	4.64	5	90.0	70	130	
Na	23	1	nogas	492.068	4.994	12628382	2.16	500	98.4	70	130	
Mg	24	1	nogas	499.715	2.011	7971194	1.93	500	99.9	70	130	
Al	27	1	nogas	3.969	1.761	115911	2.08	5	79.4	70	130	
K	39	1	nogas	494.552	3.414	18055353	1.50	500	98.9	70	130	
Ti	47	1	nogas	4.700	4.099	9963	3.66	5	94.0	70	130	
V	51	1	nogas	2.700	13.806	283964	1.75	5	54.0	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	5.029	2.500	158125	2.96	5	100.6	70	130	
Mn	55	1	nogas	5.010	1.018	167974	2.98	5	100.2	70	130	
Co	59	1	nogas	4.972	2.818	127516	1.63	5	99.4	70	130	
Ni	60	1	nogas	5.371	2.475	29898	0.66	5	107.4	70	130	
Cu	63	1	nogas	3.887	8.081	130666	1.23	5	77.7	70	130	
Zn	66	1	nogas	5.122	5.255	23595	5.97	5	102.4	70	130	
As	75	1	nogas	4.266	9.122	75127	1.19	5	85.3	70	130	
Sr	88	1	nogas	4.906	1.235	144433	2.69	5	98.1	70	130	
Ag	107	1	nogas	4.860	1.194	71823	2.61	5	97.2	70	130	
Cd	111	1	nogas	4.623	4.178	14870	2.63	5	92.5	70	130	
Sb	121	1	nogas	5.158	3.376	68860	1.12	5	103.2	70	130	
Tl	205	1	nogas	4.938	2.137	92898	2.07	5	98.8	70	130	
Pb	208	1	nogas	5.098	1.088	133707	1.06	5	102.0	70	130	
U	238	1	nogas	4.964	3.662	123355	1.72	5	99.3	70	130	
[Pb]	206	1	nogas	5.035	3.311	33154	1.60	5	100.7	70	130	
[Pb]	207	1	nogas	5.065	2.651	29701	1.12	5	101.3	70	130	
Na	23	2	He	499.259	0.350	882234	3.14	500	99.9	70	130	
Mg	24	2	He	503.232	1.341	461949	1.85	500	100.6	70	130	
Al	27	2	He	3.657	6.859	2897	7.08	5	73.1	70	130	
K	39	2	He	513.004	3.778	703031	2.56	500	102.6	70	130	
Ca	43	2	He	467.022	3.454	1293	5.80	500	93.4	70	130	
Ca	44	2	He	505.189	5.656	27651	2.32	500	101.0	70	130	
V	51	2	He	4.355	1.561	34887	2.35	5	87.1	70	130	
Cr	52	2	He	5.229	1.836	43438	1.63	5	104.6	70	130	
Mn	55	2	He	4.940	2.710	28572	3.41	5	98.8	70	130	
Fe	56	2	He	502.772	0.867	3235540	2.99	500	100.6	70	130	
Co	59	2	He	4.934	1.514	50038	4.40	5	98.7	70	130	
Ni	60	2	He	4.397	1.375	12721	2.14	5	87.9	70	130	
Cu	63	2	He	4.020	5.605	52739	0.98	5	80.4	70	130	
Zn	66	2	He	4.325	4.438	8085	5.48	5	86.5	70	130	
As	75	2	He	4.834	2.861	7955	1.16	5	96.7	70	130	
Se	78	2	He	4.809	5.000	808	3.51	5	96.2	70	130	
B	11	1	nogas	32.634	3.021	171782	4.90	25	130.5	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	251.947	17.243	1800079	1.16	25	1007.8	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	486.612	1.519	19354	1.81	500	97.3	70	130	
Ca	44	1	nogas	509.655	8.127	866604	0.67	500	101.9	70	130	
Fe	56	1	nogas	472.869	3.504	14015901	2.63	500	94.6	70	130	
Se	77	1	nogas	-3.151	-42.011	16107	1.90	5	-63.0	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.998	11.023	1857	11.87	5	100.0	70	130	
Mo	95	1	nogas	4.907	2.221	30196	2.40	5	98.1	70	130	
Sn	118	1	nogas	5.015	3.596	44263	1.97	5	100.3	70	130	
Ba	137	1	nogas	4.672	3.847	19785	1.83	5	93.4	70	130	
Sb	121	2	He	4.917	3.538	26654	6.43	5	98.3	70	130	
Li	7	1	nogas	4.635	6.267	180383	4.02	5	92.7	70	130	
P	31	1	nogas	23.627	6.422	152744	2.22	25	94.5	70	130	
La	139	1	nogas	16.852	49.876	90	33.33	5	337.0	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	266.739	254.935	30	88.19	5	5334.8	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1191731	3.57	1229805	96.90	70	125	
Ge	72	1	nogas	3441852	3.15	3541557	97.18	70	125	
In	115	1	nogas	2942833	1.94	3006327	97.89	70	125	
Bi	209	1	nogas	2102837	2.49	2153140	97.66	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	913433	3.14	993327	91.96	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	029_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:43:24-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.012	42.0	140	28.6	1	
Na	23	1	nogas	1.604	25.2	512739	0.8	100	
Mg	24	1	nogas	0.729	18.7	17245	11.7	100	
Al	27	1	nogas	-1.042	-0.4	17698	1.0	5	
K	39	1	nogas	-2.957	-166.6	8202209	0.3	100	
Ti	47	1	nogas	-0.049	-22.2	370	4.7	2.5	
V	51	1	nogas	-2.660	-6.9	141827	2.7	2.5	
Cr	52	1	nogas	-0.169	-4.5	37699	1.2	2.5	
Mn	55	1	nogas	-0.034	-100.7	22994	3.1	2.5	
Co	59	1	nogas	0.004	54.7	1523	2.7	2.5	
Ni	60	1	nogas	0.247	1.4	583	4.3	2.5	
Cu	63	1	nogas	-1.618	-7.8	56199	4.4	2.5	
Zn	66	1	nogas	0.179	11.0	943	10.7	2.5	
As	75	1	nogas	-1.422	-14.7	43165	3.1	2.5	
Sr	88	1	nogas	0.004	148.7	1077	16.9	2.5	
Ag	107	1	nogas	0.001	357.8	150	46.2	2.5	
Cd	111	1	nogas	0.013	57.0	63	36.5	1	
Sb	121	1	nogas	0.215	15.0	4254	9.1	2.5	
Tl	205	1	nogas	0.049	29.0	1343	19.0	1	
Pb	208	1	nogas	0.013	166.6	4354	12.8	2.5	
U	238	1	nogas	0.018	68.4	513	60.4	2.5	
[Pb]	206	1	nogas	-0.003	-730.7	1110	12.4	2.5	
[Pb]	207	1	nogas	0.014	89.0	947	6.0	2.5	
Na	23	2	He	4.837	17.4	73208	0.8	100	
Mg	24	2	He	0.339	39.5	807	16.9	100	
Al	27	2	He	-1.028	-15.4	457	16.4	5	
K	39	2	He	-4.636	-78.7	221516	1.5	100	
Ca	43	2	He	8.757	46.5	33	34.6	100	
Ca	44	2	He	5.297	67.9	4301	2.2	100	
V	51	2	He	-0.509	-0.9	2105	1.3	2.5	
Cr	52	2	He	0.047	98.3	5948	5.7	2.5	
Mn	55	2	He	-0.037	-145.2	2437	12.4	2.5	
Fe	56	2	He	0.505	11.4	17208	3.3	100	
Co	59	2	He	0.001	1008.8	393	19.4	2.5	
Ni	60	2	He	-0.506	-4.1	157	35.2	2.5	
Cu	63	2	He	-1.026	-17.4	19200	4.4	2.5	
Zn	66	2	He	-0.493	-9.1	323	20.6	2.5	
As	75	2	He	0.007	297.0	329	11.7	2.5	
Se	78	2	He	-0.032	-706.8	189	15.4	2.5	
B	11	1	nogas	7.327	9.2	47860	4.3	10	
Si	28	1	nogas	-36.993	-13.0	1520464	1.0	5	
Ca	43	1	nogas	-1.174	-298.3	883	15.1	100	
Ca	44	1	nogas	-8.230	-232.6	574242	0.7	100	
Fe	56	1	nogas	-11.775	-14.7	1938606	1.5	100	
Se	77	1	nogas	-13.263	-12.4	13809	4.6	2.5	
Se	82	1	nogas	-0.048	-383.2	353	14.5	2.5	

Initial Calibration Blank (ICB) Report

Mo	95	1	nogas	0.023	34.2	453	12.1	2.5	
Sn	118	1	nogas	0.827	5.3	8345	2.2	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.028	-42.8	217	21.8	2.5	
Sb	121	2	He	0.167	13.5	1380	10.5	2.5	
P	31	1	nogas	-2.717	-53.8	105687	1.3	10	
La	139	1	nogas	3.921	55.7	47	12.4	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-169.540	-242.0	13	114.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1253987	3.42	1229805	101.97	70	125	
Ge	72	1	nogas	3530177	1.40	3541557	99.68	70	125	
In	115	1	nogas	2997825	4.08	3006327	99.72	70	125	
Bi	209	1	nogas	2139649	1.88	2153140	99.37	70	125	
Ge	72	2	He	908818	1.85	993327	91.49	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	031ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:47:32-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.003	111.5	57	44.4	0	ICSA Main CR1 Failed
Na	23	1	nogas	95398.972	2.5	2282223584	1.9	0	
Mg	24	1	nogas	96047.019	3.1	1481729300	2.7	0	
Al	27	1	nogas	92432.866	3.5	1755038161	2.4	0	
K	39	1	nogas	96014.257	4.3	1879806842	0.5	0	
Ti	47	1	nogas	1930.602	3.9	3764984	1.5	0	
V	51	1	nogas	-1.535	-31.8	162740	5.2	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.820	7.4	57730	1.7	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.094	53.7	25187	1.9	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.370	5.2	10413	7.7	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.515	2.3	7555	3.2	0	ICSA Main CR1 Failed
Cu	63	1	nogas	-1.732	-6.2	51308	1.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.640	1.5	7352	2.5	0	ICSA Main CR1 Failed
As	75	1	nogas	3.506	14.0	68198	0.4	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.775	4.9	22745	1.7	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.064	17.7	1037	12.1	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.680	5.9	5087	2.9	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.241	10.5	4324	4.7	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.021	20.9	737	8.8	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.028	72.9	4724	10.9	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.040	50.0	1287	8.1	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.049	73.4	1067	19.3	0	ICSA Main CR1 Failed
Na	23	2	He	97705.063	1.6	149635031	0.7	0	
Mg	24	2	He	97691.037	1.6	83870984	0.6	0	
Al	27	2	He	93885.124	1.9	45680329	1.2	0	
K	39	2	He	97502.693	0.4	90923929	0.3	0	
Ca	43	2	He	98063.086	2.1	252275	1.4	0	
Ca	44	2	He	97842.515	2.3	4281768	1.4	0	
V	51	2	He	-0.384	-4.5	2765	2.9	0	ICSA Main CR1 Failed
Cr	52	2	He	0.410	11.2	8055	4.5	0	ICSA Main CR1 Failed
Mn	55	2	He	0.225	7.3	3580	2.7	0	ICSA Main CR1 Failed
Fe	56	2	He	98609.081	2.6	591404978	1.6	0	
Co	59	2	He	0.260	5.6	2810	4.6	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.258	-22.6	743	19.5	0	ICSA Main CR1 Failed
Cu	63	2	He	-1.818	-3.7	13155	2.8	0	ICSA Main CR1 Failed
Zn	66	2	He	-0.065	-66.2	950	5.9	0	ICSA Main CR1 Failed
As	75	2	He	0.165	12.8	542	4.8	0	ICSA Main CR1 Failed
Se	78	2	He	-0.150	-21.9	164	1.2	0	ICSA Main CR1 Failed
B	11	1	nogas	6.232	11.4	35924	5.7	0	ICSA Main CR1 Failed
Si	28	1	nogas	557.025	27.5	2058675	4.8	0	
Ca	43	1	nogas	95762.584	3.0	3502538	2.2	0	
Ca	44	1	nogas	97236.912	3.8	56134807	1.4	0	
Fe	56	1	nogas	95558.050	2.2	2308871918	2.3	0	
Se	77	1	nogas	22.991	14.4	22147	1.3	0	
Se	82	1	nogas	0.032	1068.2	357	29.4	0	ICSA Main CR1 Failed
Mo	95	1	nogas	1859.802	3.7	10926633	0.7	0	
Sn	118	1	nogas	0.095	18.7	1780	4.2	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.145	36.4	877	20.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.266	10.0	1787	6.1	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	88251.140	2.0	160729101	1.7	0	
La	139	1	nogas	42.501	71.6	163	55.2	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1069747	3.48	1229805	86.99	70	125	
Ge	72	1	nogas	3320814	3.69	3541557	93.77	70	125	
In	115	1	nogas	2766475	3.78	3006327	92.02	70	125	
Bi	209	1	nogas	1981850	1.95	2153140	92.04	70	125	
Ge	72	2	He	855083	1.21	993327	86.08	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	032ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T17:49:41-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	103.018	5.457	785796	1.30	100	103.0	80	120	
Na	23	1	nogas	113219.149	1.527	2569548591	1.85	100	113219.1	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	114698.268	2.253	1678442971	1.33	100	114698.3	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	90800.105	0.718	1738287334	0.88	100	90800.1	80	120	ICSB Main CR1 Failed
K	39	1	nogas	103950.648	1.961	2052150913	2.14	100	103950.6	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	1980.174	1.726	3894488	1.99	100	1980.2	80	120	ICSB Main CR1 Failed
V	51	1	nogas	104.992	2.013	2981980	2.12	100	105.0	80	120	
Cr	52	1	nogas	105.585	2.057	2436872	2.27	100	105.6	80	120	
Mn	55	1	nogas	103.596	2.001	2928992	2.18	100	103.6	80	120	
Co	59	1	nogas	105.775	2.166	2610906	1.95	100	105.8	80	120	
Ni	60	1	nogas	103.996	0.673	578151	0.89	100	104.0	80	120	
Cu	63	1	nogas	101.006	1.140	1430032	0.86	100	101.0	80	120	
Zn	66	1	nogas	105.505	2.324	470688	2.57	100	105.5	80	120	
As	75	1	nogas	108.788	0.616	664168	0.67	100	108.8	80	120	
Sr	88	1	nogas	108.231	2.491	3078802	2.24	100	108.2	80	120	
Ag	107	1	nogas	103.660	6.070	1487030	6.27	100	103.7	80	120	
Cd	111	1	nogas	104.510	1.341	318527	1.91	100	104.5	80	120	
Sb	121	1	nogas	111.838	1.997	1425485	1.76	100	111.8	80	120	
Tl	205	1	nogas	106.640	0.939	1938627	1.69	100	106.6	80	120	
Pb	208	1	nogas	106.221	2.370	2706241	2.37	100	106.2	80	120	
U	238	1	nogas	117.130	3.878	2824878	4.77	100	117.1	80	120	
[Pb]	206	1	nogas	107.808	0.251	666827	0.74	100	107.8	80	120	
[Pb]	207	1	nogas	106.609	1.466	590018	1.14	100	106.6	80	120	
Na	23	2	He	106324.052	0.576	165201531	0.87	100	106324.1	80	120	
Mg	24	2	He	104429.207	1.013	90961875	1.16	100	104429.2	80	120	ICSB Main CR1 Failed
Al	27	2	He	92930.202	0.595	45874751	1.00	100	92930.2	80	120	ICSB Main CR1 Failed
K	39	2	He	106958.169	1.605	99719519	1.60	100	106958.2	80	120	
Ca	43	2	He	106687.376	0.195	278460	0.56	100	106687.4	80	120	
Ca	44	2	He	105279.652	2.715	4673947	2.45	100	105279.7	80	120	ICSB Main CR1 Failed
V	51	2	He	106.523	1.255	686914	0.85	100	106.5	80	120	
Cr	52	2	He	108.967	0.748	753701	1.04	100	109.0	80	120	
Mn	55	2	He	106.466	0.896	533233	0.61	100	106.5	80	120	
Fe	56	2	He	107656.423	1.651	655086017	1.35	100	107656.4	80	120	
Co	59	2	He	106.324	0.765	1016206	0.36	100	106.3	80	120	
Ni	60	2	He	105.589	0.588	258391	0.31	100	105.6	80	120	
Cu	63	2	He	100.497	1.271	657593	1.57	100	100.5	80	120	
Zn	66	2	He	106.752	0.873	164321	1.25	100	106.8	80	120	
As	75	2	He	107.953	0.971	162331	0.56	100	108.0	80	120	
Se	78	2	He	108.921	1.802	13390	1.37	100	108.9	80	120	
B	11	1	nogas	521.050	5.552	2374479	1.22	100	521.0	80	120	
Si	28	1	nogas	5480.898	0.775	7355191	0.88	100	5480.9	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	102457.422	0.628	3777947	0.37	100	102457.4	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	105832.615	1.837	61565724	1.94	100	105832.6	80	120	
Fe	56	1	nogas	106158.250	1.700	2585388658	1.90	100	106158.3	80	120	
Se	77	1	nogas	133.319	1.231	50483	0.60	100	133.3	80	120	
Se	82	1	nogas	104.773	1.009	30800	1.05	100	104.8	80	120	
Mo	95	1	nogas	2015.418	2.346	11941575	2.51	100	2015.4	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	106.649	0.936	872165	0.44	100	106.6	80	120	
Ba	137	1	nogas	103.960	0.404	411001	0.92	100	104.0	80	120	
Sb	121	2	He	108.523	1.161	548297	0.95	100	108.5	80	120	
La	139	1	nogas	137.425	31.482	470	28.62	100	137.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1087240	5.06	1229805	88.41	70	125	
Ge	72	1	nogas	3345974	0.26	3541557	94.48	70	125	
In	115	1	nogas	2790649	1.12	3006327	92.83	70	125	
Bi	209	1	nogas	2039845	0.99	2153140	94.74	70	125	
Ge	72	2	He	867425	0.41	993327	87.33	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	043_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:12:17-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	98.699	6.026	836563	1.60	100	98.7	90	110	
Na	23	1	nogas	10612.936	5.564	311794049	4.60	10000	106.1	90	110	
Mg	24	1	nogas	10106.182	1.070	191235746	1.88	10000	101.1	90	110	
Al	27	1	nogas	101.846	3.266	2352698	2.57	100	101.8	90	110	
K	39	1	nogas	10115.317	1.949	244908022	1.75	10000	101.2	90	110	
Ti	47	1	nogas	100.092	3.225	233603	1.02	100	100.1	90	110	
V	51	1	nogas	108.444	3.264	3640335	3.11	100	108.4	90	110	
Cr	52	1	nogas	101.693	1.386	2782193	2.53	100	101.7	90	110	
Mn	55	1	nogas	101.739	3.079	3409243	4.84	100	101.7	90	110	
Co	59	1	nogas	100.114	1.514	2927183	0.76	100	100.1	90	110	
Ni	60	1	nogas	101.232	1.313	666764	3.03	100	101.2	90	110	
Cu	63	1	nogas	97.237	1.773	1633922	0.89	100	97.2	90	110	
Zn	66	1	nogas	102.194	1.398	540073	2.14	100	102.2	90	110	
As	75	1	nogas	105.311	2.497	763336	1.16	100	105.3	90	110	
Sr	88	1	nogas	98.975	2.828	3334944	2.27	100	99.0	90	110	
Ag	107	1	nogas	96.334	1.594	1637484	3.84	100	96.3	90	110	
Cd	111	1	nogas	99.103	4.896	355408	1.14	100	99.1	90	110	
Sb	121	1	nogas	100.819	1.191	1522712	2.87	100	100.8	90	110	
Tl	205	1	nogas	103.055	2.474	2018565	3.05	100	103.1	90	110	
Pb	208	1	nogas	108.267	2.643	2758277	2.64	100	108.3	90	110	
U	238	1	nogas	104.245	2.413	2708617	3.54	100	104.2	90	110	
[Pb]	206	1	nogas	101.080	0.931	673665	0.97	100	101.1	90	110	
[Pb]	207	1	nogas	100.656	0.367	600320	1.85	100	100.7	90	110	
Na	23	2	He	10416.228	1.585	19751790	0.46	10000	104.2	90	110	
Mg	24	2	He	10166.372	2.209	10769626	0.65	10000	101.7	90	110	
Al	27	2	He	100.628	1.527	61564	1.14	100	100.6	90	110	
K	39	2	He	12295.806	0.710	11663526	0.70	10000	123.0	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10291.193	3.164	32679	2.95	10000	102.9	90	110	
Ca	44	2	He	10133.857	2.147	551420	0.58	10000	101.3	90	110	
V	51	2	He	101.801	3.621	798544	2.09	100	101.8	90	110	
Cr	52	2	He	104.605	1.921	880213	1.10	100	104.6	90	110	
Mn	55	2	He	101.137	0.492	616354	2.01	100	101.1	90	110	
Fe	56	2	He	10112.688	2.034	74854524	0.78	10000	101.1	90	110	
Co	59	2	He	101.354	2.615	1178074	1.22	100	101.4	90	110	
Ni	60	2	He	101.713	3.102	302758	2.10	100	101.7	90	110	
Cu	63	2	He	95.674	4.335	762654	2.97	100	95.7	90	110	
Zn	66	2	He	99.802	1.961	186913	0.73	100	99.8	90	110	
As	75	2	He	101.953	2.461	186466	1.05	100	102.0	90	110	
Se	78	2	He	100.058	2.762	14978	1.26	100	100.1	90	110	
B	11	1	nogas	880.690	7.792	4451128	3.40	500	176.1	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4855.484	3.074	7917457	1.52	5000	97.1	90	110	
Ca	43	1	nogas	10338.843	3.106	452417	1.68	10000	103.4	90	110	
Ca	44	1	nogas	10173.711	4.111	7595570	1.83	10000	101.7	90	110	
Fe	56	1	nogas	10127.673	3.813	294353582	2.42	10000	101.3	90	110	
Se	77	1	nogas	133.630	6.352	59868	2.31	100	133.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.083	4.319	35205	3.28	100	101.1	90	110	
Mo	95	1	nogas	98.132	2.256	688936	0.56	100	98.1	90	110	
Sn	118	1	nogas	98.914	2.597	952638	2.30	100	98.9	90	110	
Ba	137	1	nogas	98.601	3.531	458883	1.01	100	98.6	90	110	
Sb	121	2	He	95.512	1.554	586978	0.22	100	95.5	90	110	
Li	7	1	nogas	98.578	6.355	1859371	1.46	100	98.6	90	110	
P	31	1	nogas	468.593	1.908	1143005	1.77	500	93.7	90	110	
La	139	1	nogas	115.524	21.147	470	16.06	100	115.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-181.277	-84.637	13	43.30	100	-181.3	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1208235	4.75	1229805	98.25	70	125	
Ge	72	1	nogas	3964082	2.27	3541557	111.93	70	125	
In	115	1	nogas	3287961	4.05	3006327	109.37	70	125	
Bi	209	1	nogas	2197918	1.89	2153140	102.08	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1055142	1.57	993327	106.22	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	044_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:14:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.034	46.8	343	45.2	1	
Na	23	1	nogas	182.262	3.6	6021524	3.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.989	15.4	199564	15.5	100	
Al	27	1	nogas	-0.391	-26.7	34869	6.2	5	
K	39	1	nogas	-23.471	-31.0	8792232	1.2	100	
Ti	47	1	nogas	0.026	228.9	593	22.8	2.5	
V	51	1	nogas	2.462	7.1	322058	3.1	2.5	
Cr	52	1	nogas	0.000	79206.9	47197	2.8	2.5	
Mn	55	1	nogas	0.241	8.4	35204	2.5	2.5	
Co	59	1	nogas	0.013	152.6	1990	28.0	2.5	
Ni	60	1	nogas	0.573	3.0	2827	3.9	2.5	
Cu	63	1	nogas	-4.517	-1.1	17135	3.5	2.5	
Zn	66	1	nogas	0.761	7.3	4161	6.0	2.5	
As	75	1	nogas	1.388	9.3	67769	2.6	2.5	
Sr	88	1	nogas	0.215	8.8	8382	6.6	2.5	
Ag	107	1	nogas	0.015	31.1	403	18.8	2.5	
Cd	111	1	nogas	0.019	138.0	93	101.8	1	
Sb	121	1	nogas	1.203	25.4	19799	22.7	2.5	
Tl	205	1	nogas	0.375	54.5	7966	53.7	1	
Pb	208	1	nogas	-0.018	-168.4	3557	21.9	2.5	
U	238	1	nogas	0.138	68.1	3747	69.6	2.5	
[Pb]	206	1	nogas	-0.059	-46.8	790	26.3	2.5	
[Pb]	207	1	nogas	-0.016	-181.5	817	23.9	2.5	
Na	23	2	He	201.483	3.4	440726	0.8	100	CCB Main CR1 Failed
Mg	24	2	He	9.228	2.3	9999	3.5	100	
Al	27	2	He	0.464	234.0	1364	41.8	5	
K	39	2	He	17.832	10.5	242416	0.7	100	
Ca	43	2	He	22.648	11.1	80	12.5	100	
Ca	44	2	He	8.205	39.8	4974	2.4	100	
V	51	2	He	-0.209	-8.7	4609	0.9	2.5	
Cr	52	2	He	-0.018	-291.9	6138	4.9	2.5	
Mn	55	2	He	0.127	48.8	3690	8.7	2.5	
Fe	56	2	He	3.084	12.0	37692	4.7	100	
Co	59	2	He	0.004	40.0	483	4.8	2.5	
Ni	60	2	He	-0.452	-8.6	330	33.7	2.5	
Cu	63	2	He	-3.159	-1.7	5754	3.4	2.5	
Zn	66	2	He	-0.363	-13.1	597	12.7	2.5	
As	75	2	He	0.031	89.9	411	15.0	2.5	
Se	78	2	He	-0.182	-74.1	191	9.0	2.5	
B	11	1	nogas	243.026	2.5	1300607	1.4	10	CCB Main CR1 Failed
Si	28	1	nogas	-199.223	-7.4	1511772	2.1	5	
Ca	43	1	nogas	35.124	14.5	2594	7.4	100	
Ca	44	1	nogas	-209.276	-7.4	511020	1.0	100	
Fe	56	1	nogas	25.853	21.1	3283627	4.2	100	
Se	77	1	nogas	8.991	34.5	22387	5.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.031	-895.2	407	25.2	2.5	
Mo	95	1	nogas	0.300	27.4	2464	22.8	2.5	
Sn	118	1	nogas	0.195	44.7	3177	27.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.016	119.3	460	19.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.748	8.2	4987	6.7	2.5	
P	31	1	nogas	-14.017	-7.1	94776	1.5	10	
La	139	1	nogas	15.226	62.1	97	36.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	143.796	102.4	27	21.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1270126	3.43	1229805	103.28	70	125	
Ge	72	1	nogas	3991299	1.36	3541557	112.70	70	125	
In	115	1	nogas	3389247	3.95	3006327	112.74	70	125	
Bi	209	1	nogas	2246818	2.76	2153140	104.35	70	125	
Ge	72	2	He	1019296	3.49	993327	102.61	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	054_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:38:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	99.535	2.990	751953	4.62	100	99.5	90	110	
Na	23	1	nogas	10204.938	5.628	274127273	3.19	10000	102.0	90	110	
Mg	24	1	nogas	10117.373	6.536	174968612	4.64	10000	101.2	90	110	
Al	27	1	nogas	100.871	4.277	2145487	3.72	100	100.9	90	110	
K	39	1	nogas	10317.252	5.059	229736663	4.04	10000	103.2	90	110	
Ti	47	1	nogas	100.930	2.410	216894	1.86	100	100.9	90	110	
V	51	1	nogas	105.100	3.831	3254447	3.19	100	105.1	90	110	
Cr	52	1	nogas	100.018	3.538	2518634	1.92	100	100.0	90	110	
Mn	55	1	nogas	102.569	5.651	3160295	3.34	100	102.6	90	110	
Co	59	1	nogas	99.902	3.481	2688909	3.05	100	99.9	90	110	
Ni	60	1	nogas	100.056	3.196	606322	0.91	100	100.1	90	110	
Cu	63	1	nogas	95.761	4.693	1481746	1.22	100	95.8	90	110	
Zn	66	1	nogas	101.206	3.102	492294	2.71	100	101.2	90	110	
As	75	1	nogas	100.899	2.599	675525	1.70	100	100.9	90	110	
Sr	88	1	nogas	101.531	2.498	3149284	1.76	100	101.5	90	110	
Ag	107	1	nogas	97.685	8.503	1527528	7.85	100	97.7	90	110	
Cd	111	1	nogas	99.662	4.035	338400	2.27	100	99.7	90	110	
Sb	121	1	nogas	99.746	2.598	1386372	1.73	100	99.7	90	110	
Tl	205	1	nogas	107.470	2.305	1969913	0.79	100	107.5	90	110	
Pb	208	1	nogas	103.228	0.403	2630109	0.40	100	103.2	90	110	
U	238	1	nogas	102.713	3.009	2497158	1.86	100	102.7	90	110	
[Pb]	206	1	nogas	104.686	1.565	653028	1.21	100	104.7	90	110	
[Pb]	207	1	nogas	102.523	1.189	572324	1.92	100	102.5	90	110	
Na	23	2	He	10928.148	4.886	18155069	1.57	10000	109.3	90	110	
Mg	24	2	He	10680.742	4.319	9916008	0.71	10000	106.8	90	110	
Al	27	2	He	100.949	4.405	54118	0.88	100	100.9	90	110	
K	39	2	He	10728.995	2.090	10206061	2.04	10000	107.3	90	110	
Ca	43	2	He	10248.703	3.308	28529	1.84	10000	102.5	90	110	
Ca	44	2	He	10063.225	4.197	479986	1.83	10000	100.6	90	110	
V	51	2	He	103.652	3.509	712747	1.29	100	103.7	90	110	
Cr	52	2	He	107.145	4.891	789825	0.72	100	107.1	90	110	
Mn	55	2	He	103.098	4.097	550528	1.75	100	103.1	90	110	
Fe	56	2	He	10303.453	4.228	66838951	0.55	10000	103.0	90	110	
Co	59	2	He	105.392	3.943	1073794	1.60	100	105.4	90	110	
Ni	60	2	He	106.634	3.039	278221	1.70	100	106.6	90	110	
Cu	63	2	He	102.531	2.955	714804	1.61	100	102.5	90	110	
Zn	66	2	He	104.977	2.654	172322	1.83	100	105.0	90	110	
As	75	2	He	103.150	2.977	165401	1.54	100	103.2	90	110	
Se	78	2	He	99.524	4.231	13059	1.69	100	99.5	90	110	
B	11	1	nogas	595.236	4.410	2683543	3.19	500	119.0	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4707.352	2.833	7115951	1.87	5000	94.1	90	110	
Ca	43	1	nogas	10110.884	3.260	407290	1.31	10000	101.1	90	110	
Ca	44	1	nogas	9919.443	3.564	6832624	0.88	10000	99.2	90	110	
Fe	56	1	nogas	10080.888	3.943	269715589	2.26	10000	100.8	90	110	
Se	77	1	nogas	112.114	6.262	49130	1.79	100	112.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.437	4.618	32506	1.05	100	101.4	90	110	
Mo	95	1	nogas	99.394	3.078	642284	0.87	100	99.4	90	110	
Sn	118	1	nogas	99.294	4.330	904904	3.37	100	99.3	90	110	
Ba	137	1	nogas	95.425	2.045	420448	1.05	100	95.4	90	110	
Sb	121	2	He	99.383	5.266	535214	3.16	100	99.4	90	110	
Li	7	1	nogas	100.516	6.948	1685240	2.04	100	100.5	90	110	
P	31	1	nogas	470.125	2.873	1055287	2.62	500	94.0	90	110	
La	139	1	nogas	101.300	13.107	397	14.33	100	101.3	90	110	
Au	197	1	nogas	-73.774	-758.335	17	124.90	100	-73.8	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1076119	6.90	1229805	87.50	70	125	
Ge	72	1	nogas	3650290	3.77	3541557	103.07	70	125	
In	115	1	nogas	3111071	2.92	3006327	103.48	70	125	
Bi	209	1	nogas	2057298	1.52	2153140	95.55	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	925692	4.47	993327	93.19	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	055_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:41:09-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.014	60.8	150	46.7	1	
Na	23	1	nogas	43.079	9.1	1769505	5.3	100	
Mg	24	1	nogas	2.768	6.9	57266	5.4	100	
Al	27	1	nogas	-0.570	-7.6	28802	6.5	5	
K	39	1	nogas	-4.501	-189.5	8631865	1.4	100	
Ti	47	1	nogas	-0.026	-134.1	443	20.3	2.5	
V	51	1	nogas	1.435	31.5	270483	3.2	2.5	
Cr	52	1	nogas	-0.128	-28.9	40899	4.1	2.5	
Mn	55	1	nogas	0.203	7.9	31754	4.9	2.5	
Co	59	1	nogas	0.004	262.6	1620	18.8	2.5	
Ni	60	1	nogas	0.325	11.2	1097	18.5	2.5	
Cu	63	1	nogas	-3.257	-5.8	34800	4.7	2.5	
Zn	66	1	nogas	0.466	10.5	2424	9.3	2.5	
As	75	1	nogas	0.089	433.1	55097	1.1	2.5	
Sr	88	1	nogas	0.071	11.3	3277	10.3	2.5	
Ag	107	1	nogas	0.015	31.6	373	22.3	2.5	
Cd	111	1	nogas	0.007	91.0	47	49.5	1	
Sb	121	1	nogas	1.045	21.7	16325	21.8	2.5	
Tl	205	1	nogas	0.607	51.6	12112	53.7	1	
Pb	208	1	nogas	-0.022	-136.3	3467	21.8	2.5	
U	238	1	nogas	0.115	68.6	3007	71.4	2.5	
[Pb]	206	1	nogas	-0.054	-46.2	783	25.0	2.5	
[Pb]	207	1	nogas	0.003	1511.1	887	32.7	2.5	
Na	23	2	He	58.622	6.9	172614	1.7	100	
Mg	24	2	He	2.812	5.5	3294	7.8	100	
Al	27	2	He	-0.712	-44.9	663	24.1	5	
K	39	2	He	7.328	55.6	232645	1.6	100	
Ca	43	2	He	13.755	47.4	50	34.6	100	
Ca	44	2	He	-1.211	-413.1	4297	5.6	100	
V	51	2	He	-0.289	-7.9	3842	1.8	2.5	
Cr	52	2	He	0.000	-2746.5	6024	3.5	2.5	
Mn	55	2	He	-0.009	-673.0	2770	11.0	2.5	
Fe	56	2	He	2.656	10.2	33187	1.7	100	
Co	59	2	He	0.009	98.6	507	14.5	2.5	
Ni	60	2	He	-0.486	-4.1	223	27.0	2.5	
Cu	63	2	He	-2.007	-4.3	13675	1.1	2.5	
Zn	66	2	He	-0.254	-26.8	757	12.6	2.5	
As	75	2	He	0.024	70.9	381	9.4	2.5	
Se	78	2	He	-0.058	-262.0	199	6.8	2.5	
B	11	1	nogas	61.920	1.1	311105	3.1	10	CCB Main CR1 Failed
Si	28	1	nogas	27.360	1780.2	1671379	30.9	5	CCB Main CR1 Failed
Ca	43	1	nogas	22.113	25.6	1887	9.3	100	
Ca	44	1	nogas	-202.805	-12.0	481585	0.3	100	
Fe	56	1	nogas	10.395	77.4	2651645	9.4	100	
Se	77	1	nogas	-0.781	-430.4	18123	2.9	2.5	
Se	82	1	nogas	0.138	115.1	433	9.3	2.5	
Mo	95	1	nogas	0.239	37.7	1907	32.5	2.5	
Sn	118	1	nogas	0.378	9.3	4684	8.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.028	76.9	483	20.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.617	2.1	4041	3.4	2.5	
P	31	1	nogas	-8.689	-11.1	99467	1.7	10	
La	139	1	nogas	12.272	81.6	80	45.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-249.832	-189.7	10	173.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1166516	2.63	1229805	94.85	70	125	
Ge	72	1	nogas	3730988	3.36	3541557	105.35	70	125	
In	115	1	nogas	3175444	1.84	3006327	105.63	70	125	
Bi	209	1	nogas	2133314	4.23	2153140	99.08	70	125	
Ge	72	2	He	976948	4.17	993327	98.35	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	064_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T18:59:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	96.447	2.613	711333	2.10	100	96.4	90	110	
Na	23	1	nogas	9830.502	4.799	268990906	2.32	10000	98.3	90	110	
Mg	24	1	nogas	9708.229	1.229	171122775	1.94	10000	97.1	90	110	
Al	27	1	nogas	99.708	3.875	2139983	3.83	100	99.7	90	110	
K	39	1	nogas	10197.318	5.430	229027513	2.09	10000	102.0	90	110	
Ti	47	1	nogas	105.583	9.025	229336	12.09	100	105.6	90	110	
V	51	1	nogas	100.429	4.385	3145497	0.61	100	100.4	90	110	
Cr	52	1	nogas	99.149	3.990	2518554	1.45	100	99.1	90	110	
Mn	55	1	nogas	104.918	4.966	3260070	1.53	100	104.9	90	110	
Co	59	1	nogas	99.362	7.036	2694741	3.66	100	99.4	90	110	
Ni	60	1	nogas	98.363	6.039	600884	2.90	100	98.4	90	110	
Cu	63	1	nogas	94.437	9.684	1473663	5.82	100	94.4	90	110	
Zn	66	1	nogas	101.139	5.209	495936	2.23	100	101.1	90	110	
As	75	1	nogas	97.235	2.492	658674	2.04	100	97.2	90	110	
Sr	88	1	nogas	100.175	4.930	3132364	1.43	100	100.2	90	110	
Ag	107	1	nogas	99.446	8.966	1566640	5.74	100	99.4	90	110	
Cd	111	1	nogas	100.100	1.038	337329	1.88	100	100.1	90	110	
Sb	121	1	nogas	101.431	1.446	1422895	3.97	100	101.4	90	110	
Tl	205	1	nogas	101.482	2.091	1965777	1.88	100	101.5	90	110	
Pb	208	1	nogas	105.599	1.133	2690420	1.13	100	105.6	90	110	
U	238	1	nogas	101.250	6.938	2598587	3.99	100	101.3	90	110	
[Pb]	206	1	nogas	102.130	2.252	673276	2.78	100	102.1	90	110	
[Pb]	207	1	nogas	99.629	1.195	587818	3.19	100	99.6	90	110	
Na	23	2	He	10403.092	2.393	17746824	3.17	10000	104.0	90	110	
Mg	24	2	He	10038.200	1.377	9565854	1.50	10000	100.4	90	110	
Al	27	2	He	97.496	1.307	53686	1.98	100	97.5	90	110	
K	39	2	He	10726.960	0.740	10204167	0.72	10000	107.3	90	110	
Ca	43	2	He	9985.284	2.699	28522	3.07	10000	99.9	90	110	
Ca	44	2	He	9857.986	1.095	482667	1.66	10000	98.6	90	110	
V	51	2	He	100.361	0.875	708380	1.44	100	100.4	90	110	
Cr	52	2	He	104.120	1.476	788180	2.24	100	104.1	90	110	
Mn	55	2	He	100.033	1.447	548306	1.99	100	100.0	90	110	
Fe	56	2	He	10011.439	1.699	66666181	2.41	10000	100.1	90	110	
Co	59	2	He	101.169	1.049	1057912	1.73	100	101.2	90	110	
Ni	60	2	He	99.437	0.680	266310	1.45	100	99.4	90	110	
Cu	63	2	He	97.903	1.534	701567	2.27	100	97.9	90	110	
Zn	66	2	He	101.690	0.687	171295	1.23	100	101.7	90	110	
As	75	2	He	100.248	2.018	164953	2.56	100	100.2	90	110	
Se	78	2	He	96.431	2.731	12995	3.45	100	96.4	90	110	
B	11	1	nogas	568.948	2.072	2506174	0.59	500	113.8	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4541.493	4.895	6979678	0.56	5000	90.8	90	110	
Ca	43	1	nogas	10054.829	4.024	408517	1.68	10000	100.5	90	110	
Ca	44	1	nogas	9836.513	6.685	6836833	3.71	10000	98.4	90	110	
Fe	56	1	nogas	10048.500	4.742	271105081	1.13	10000	100.5	90	110	
Se	77	1	nogas	88.529	4.161	42954	1.27	100	88.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.769	3.083	31311	0.58	100	96.8	90	110	
Mo	95	1	nogas	99.007	4.820	645201	2.47	100	99.0	90	110	
Sn	118	1	nogas	97.386	0.672	880856	2.54	100	97.4	90	110	
Ba	137	1	nogas	100.883	2.357	440941	1.76	100	100.9	90	110	
Sb	121	2	He	98.029	1.486	541930	2.24	100	98.0	90	110	
Li	7	1	nogas	97.721	7.875	1604256	6.74	100	97.7	90	110	
P	31	1	nogas	462.284	5.231	1047965	1.27	500	92.5	90	110	
La	139	1	nogas	125.882	3.067	480	5.51	100	125.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-7.027	-3725.153	20	50.00	100	-7.0	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1049527	1.52	1229805	85.34	70	125	
Ge	72	1	nogas	3682061	3.63	3541557	103.97	70	125	
In	115	1	nogas	3086214	2.85	3006327	102.66	70	125	
Bi	209	1	nogas	2174348	3.13	2153140	100.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	948960	0.79	993327	95.53	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	065_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:01:41-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.043	28.0	383	26.3	1	
Na	23	1	nogas	27.159	14.8	1236893	4.0	100	
Mg	24	1	nogas	5.785	41.4	105141	35.4	100	
Al	27	1	nogas	-0.608	-17.5	27364	7.5	5	
K	39	1	nogas	2.413	607.3	8599292	1.7	100	
Ti	47	1	nogas	0.045	123.0	587	23.6	2.5	
V	51	1	nogas	-0.798	-30.5	200468	1.1	2.5	
Cr	52	1	nogas	-0.209	-64.8	37989	7.8	2.5	
Mn	55	1	nogas	0.172	36.3	30105	4.5	2.5	
Co	59	1	nogas	0.040	14.9	2554	5.6	2.5	
Ni	60	1	nogas	0.321	15.4	1057	29.3	2.5	
Cu	63	1	nogas	-2.097	-6.9	51088	1.3	2.5	
Zn	66	1	nogas	0.470	9.5	2387	6.4	2.5	
As	75	1	nogas	-1.159	-12.9	46279	1.5	2.5	
Sr	88	1	nogas	0.083	24.4	3567	15.7	2.5	
Ag	107	1	nogas	0.041	50.2	770	40.0	2.5	
Cd	111	1	nogas	0.030	40.9	130	35.3	1	
Sb	121	1	nogas	1.753	20.7	25763	18.8	2.5	
Tl	205	1	nogas	0.722	38.5	14751	42.4	1	
Pb	208	1	nogas	0.003	1422.7	4094	25.5	2.5	
U	238	1	nogas	0.166	65.1	4461	69.7	2.5	
[Pb]	206	1	nogas	-0.015	-178.9	1073	21.6	2.5	
[Pb]	207	1	nogas	0.004	582.8	920	21.0	2.5	
Na	23	2	He	40.129	2.0	136293	1.2	100	
Mg	24	2	He	3.401	8.3	3754	6.6	100	
Al	27	2	He	-0.751	-2.3	627	0.9	5	
K	39	2	He	8.521	43.8	233755	1.5	100	
Ca	43	2	He	12.933	62.0	47	49.5	100	
Ca	44	2	He	0.243	2329.9	4244	6.8	100	
V	51	2	He	-0.387	-1.5	3050	2.0	2.5	
Cr	52	2	He	-0.015	-176.1	5741	4.1	2.5	
Mn	55	2	He	0.003	874.6	2760	4.5	2.5	
Fe	56	2	He	4.005	6.0	41226	3.9	100	
Co	59	2	He	0.023	2.0	640	1.6	2.5	
Ni	60	2	He	-0.448	-7.2	317	25.3	2.5	
Cu	63	2	He	-1.212	-4.8	18760	2.0	2.5	
Zn	66	2	He	-0.303	-8.7	657	8.4	2.5	
As	75	2	He	0.016	68.7	358	3.8	2.5	
Se	78	2	He	-0.029	-873.9	198	17.8	2.5	
B	11	1	nogas	42.625	2.3	215160	2.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-237.020	-14.1	1338815	1.3	5	
Ca	43	1	nogas	39.627	12.1	2554	5.0	100	
Ca	44	1	nogas	-208.748	-16.4	467725	1.3	100	
Fe	56	1	nogas	0.415	3006.2	2327541	12.9	100	
Se	77	1	nogas	-11.910	-6.5	14666	4.0	2.5	
Se	82	1	nogas	0.008	1297.8	383	5.4	2.5	
Mo	95	1	nogas	0.355	29.9	2610	25.0	2.5	
Sn	118	1	nogas	0.375	25.5	4751	20.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.031	53.9	507	16.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.148	2.5	6848	0.5	2.5	
P	31	1	nogas	-2.900	-52.9	109009	3.0	10	
La	139	1	nogas	11.715	57.2	80	33.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-100.092	-139.3	17	34.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1157608	3.64	1229805	94.13	70	125	
Ge	72	1	nogas	3653766	3.43	3541557	103.17	70	125	
In	115	1	nogas	3240555	2.29	3006327	107.79	70	125	
Bi	209	1	nogas	2200471	5.45	2153140	102.20	70	125	
Ge	72	2	He	948155	1.90	993327	95.45	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	076_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:24:22-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	96.467	5.984	667801	2.48	100	96.5	90	110	
Na	23	1	nogas	9641.679	3.300	248021406	1.41	10000	96.4	90	110	
Mg	24	1	nogas	9750.660	2.934	161471124	1.24	10000	97.5	90	110	
Al	27	1	nogas	100.363	1.654	2000731	3.12	100	100.4	90	110	
K	39	1	nogas	9983.520	1.784	208568967	1.63	10000	99.8	90	110	
Ti	47	1	nogas	97.494	1.552	196393	3.84	100	97.5	90	110	
V	51	1	nogas	99.182	2.870	2889372	2.96	100	99.2	90	110	
Cr	52	1	nogas	98.976	1.634	2335998	1.27	100	99.0	90	110	
Mn	55	1	nogas	100.934	4.774	2914883	3.63	100	100.9	90	110	
Co	59	1	nogas	96.952	4.905	2443559	2.57	100	97.0	90	110	
Ni	60	1	nogas	96.410	3.393	547286	1.09	100	96.4	90	110	
Cu	63	1	nogas	92.670	4.239	1346057	1.57	100	92.7	90	110	
Zn	66	1	nogas	99.910	1.109	455375	2.08	100	99.9	90	110	
As	75	1	nogas	95.880	3.354	603797	1.80	100	95.9	90	110	
Sr	88	1	nogas	101.417	3.026	2946839	1.87	100	101.4	90	110	
Ag	107	1	nogas	97.795	6.281	1431883	3.84	100	97.8	90	110	
Cd	111	1	nogas	97.687	1.372	311134	1.58	100	97.7	90	110	
Sb	121	1	nogas	102.180	0.926	1330855	2.38	100	102.2	90	110	
Tl	205	1	nogas	99.632	6.627	1856577	4.65	100	99.6	90	110	
Pb	208	1	nogas	99.265	0.951	2529288	0.95	100	99.3	90	110	
U	238	1	nogas	99.226	3.510	2453348	1.26	100	99.2	90	110	
[Pb]	206	1	nogas	97.579	3.505	618985	0.23	100	97.6	90	110	
[Pb]	207	1	nogas	96.048	3.194	545213	0.13	100	96.0	90	110	
Na	23	2	He	10513.356	0.228	16217431	2.02	10000	105.1	90	110	
Mg	24	2	He	10116.296	0.652	8718622	2.11	10000	101.2	90	110	
Al	27	2	He	94.982	3.300	47303	1.30	100	95.0	90	110	
K	39	2	He	9600.644	1.485	9156455	1.45	10000	96.0	90	110	
Ca	43	2	He	9839.086	4.909	25401	3.24	10000	98.4	90	110	
Ca	44	2	He	9719.325	2.128	430298	0.31	10000	97.2	90	110	
V	51	2	He	101.740	1.140	649277	1.07	100	101.7	90	110	
Cr	52	2	He	105.198	1.576	719948	0.73	100	105.2	90	110	
Mn	55	2	He	99.022	2.870	490691	0.95	100	99.0	90	110	
Fe	56	2	He	9750.742	4.136	58684817	2.10	10000	97.5	90	110	
Co	59	2	He	100.946	3.165	954232	1.41	100	100.9	90	110	
Ni	60	2	He	101.154	1.688	244921	0.68	100	101.2	90	110	
Cu	63	2	He	99.548	2.269	644503	0.43	100	99.5	90	110	
Zn	66	2	He	100.659	1.270	153350	2.15	100	100.7	90	110	
As	75	2	He	99.439	2.117	147931	0.49	100	99.4	90	110	
Se	78	2	He	95.616	0.415	11652	1.80	100	95.6	90	110	
B	11	1	nogas	533.568	4.904	2207009	0.37	500	106.7	90	110	
Si	28	1	nogas	4570.225	3.496	6515177	0.44	5000	91.4	90	110	
Ca	43	1	nogas	10108.696	0.169	381677	2.50	10000	101.1	90	110	
Ca	44	1	nogas	10026.710	2.324	6466804	2.55	10000	100.3	90	110	
Fe	56	1	nogas	9975.508	2.572	250132439	2.23	10000	99.8	90	110	
Se	77	1	nogas	91.993	6.098	40786	1.11	100	92.0	90	110	
Se	82	1	nogas	98.472	1.691	29598	2.70	100	98.5	90	110	
Mo	95	1	nogas	97.285	0.874	589257	2.73	100	97.3	90	110	
Sn	118	1	nogas	99.220	2.344	847902	0.28	100	99.2	90	110	
Ba	137	1	nogas	96.327	3.060	397874	0.64	100	96.3	90	110	
Sb	121	2	He	97.273	1.303	486285	2.13	100	97.3	90	110	
Li	7	1	nogas	96.273	1.971	1486691	2.86	100	96.3	90	110	
P	31	1	nogas	441.821	1.756	935529	1.00	500	88.4	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	85.766	28.964	320	27.06	100	85.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-437.277	-34.133	3	173.21	100	-437.3	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	986637	4.75	1229805	80.23	70	125	
Ge	72	1	nogas	3418839	2.45	3541557	96.53	70	125	
In	115	1	nogas	2916822	2.46	3006327	97.02	70	125	
Bi	209	1	nogas	2093223	3.33	2153140	97.22	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	858242	2.13	993327	86.40	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	077_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:26:27-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.034	28.3	297	25.5	1	
Na	23	1	nogas	46.691	1.4	1725961	1.4	100	
Mg	24	1	nogas	7.376	24.0	130423	21.7	100	
Al	27	1	nogas	-0.469	-11.7	28619	2.6	5	
K	39	1	nogas	-11.180	-36.8	7853599	1.1	100	
Ti	47	1	nogas	0.030	181.0	523	22.1	2.5	
V	51	1	nogas	-0.506	-31.4	197500	2.3	2.5	
Cr	52	1	nogas	-0.274	-15.4	34416	4.8	2.5	
Mn	55	1	nogas	0.264	18.1	31100	3.2	2.5	
Co	59	1	nogas	0.040	50.8	2434	23.8	2.5	
Ni	60	1	nogas	0.332	8.1	1060	16.5	2.5	
Cu	63	1	nogas	-3.248	-4.5	32362	4.3	2.5	
Zn	66	1	nogas	0.523	11.2	2504	11.5	2.5	
As	75	1	nogas	-1.192	-27.2	43529	2.4	2.5	
Sr	88	1	nogas	0.213	1.7	7185	2.9	2.5	
Ag	107	1	nogas	0.031	11.7	587	9.8	2.5	
Cd	111	1	nogas	0.033	33.4	133	28.4	1	
Sb	121	1	nogas	1.102	21.6	15851	21.6	2.5	
Tl	205	1	nogas	0.516	45.0	10424	47.8	1	
Pb	208	1	nogas	-0.027	-104.6	3337	21.4	2.5	
U	238	1	nogas	0.138	48.9	3597	52.8	2.5	
[Pb]	206	1	nogas	-0.048	-25.7	827	14.4	2.5	
[Pb]	207	1	nogas	-0.033	-96.0	683	32.2	2.5	
Na	23	2	He	66.652	3.6	165414	3.4	100	
Mg	24	2	He	5.987	8.7	5674	9.1	100	
Al	27	2	He	-0.510	-57.5	690	20.5	5	
K	39	2	He	-18.862	-13.7	208283	1.2	100	
Ca	43	2	He	50.268	33.7	140	32.7	100	
Ca	44	2	He	59.770	109.5	6482	43.3	100	
V	51	2	He	-0.403	-2.7	2678	1.9	2.5	
Cr	52	2	He	0.029	208.5	5538	8.2	2.5	
Mn	55	2	He	0.083	48.0	2917	6.6	2.5	
Fe	56	2	He	3.842	9.0	36607	5.3	100	
Co	59	2	He	0.029	21.0	643	9.1	2.5	
Ni	60	2	He	-0.433	-1.1	327	4.7	2.5	
Cu	63	2	He	-1.926	-1.3	12631	2.5	2.5	
Zn	66	2	He	-0.322	-15.5	570	14.4	2.5	
As	75	2	He	0.033	29.8	351	5.4	2.5	
Se	78	2	He	0.071	164.8	193	8.4	2.5	
B	11	1	nogas	36.396	5.5	173518	0.8	10	CCB Main CR1 Failed
Si	28	1	nogas	-179.069	-8.8	1329543	1.1	5	
Ca	43	1	nogas	31.739	6.6	2117	5.4	100	
Ca	44	1	nogas	-231.383	-4.1	428825	0.8	100	
Fe	56	1	nogas	10.103	48.4	2446727	6.9	100	
Se	77	1	nogas	-12.319	-23.5	13739	4.0	2.5	
Se	82	1	nogas	0.142	100.2	403	11.7	2.5	
Mo	95	1	nogas	0.273	44.3	1980	39.7	2.5	
Sn	118	1	nogas	0.271	35.3	3574	25.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.031	59.5	483	17.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.696	10.4	3974	9.3	2.5	
P	31	1	nogas	-10.143	-10.0	89296	1.4	10	
La	139	1	nogas	24.192	28.0	120	22.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-13.158	-3919.0	20	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1087537	5.82	1229805	88.43	70	125	
Ge	72	1	nogas	3452021	2.05	3541557	97.47	70	125	
In	115	1	nogas	3078939	2.01	3006327	102.42	70	125	
Bi	209	1	nogas	2148541	5.49	2153140	99.79	70	125	
Ge	72	2	He	864775	1.33	993327	87.06	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	088_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:49:12-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.098	3.813	668684	1.19	100	94.1	90	110	
Na	23	1	nogas	9849.023	4.662	242054489	0.48	10000	98.5	90	110	
Mg	24	1	nogas	9808.621	4.385	155212645	1.97	10000	98.1	90	110	
Al	27	1	nogas	99.950	2.216	1954363	2.41	100	99.9	90	110	
K	39	1	nogas	9975.245	2.558	204401821	0.62	10000	99.8	90	110	
Ti	47	1	nogas	96.007	0.926	189660	1.79	100	96.0	90	110	
V	51	1	nogas	98.833	2.849	2825196	2.96	100	98.8	90	110	
Cr	52	1	nogas	98.577	1.191	2283042	2.79	100	98.6	90	110	
Mn	55	1	nogas	100.926	2.942	2861495	4.80	100	100.9	90	110	
Co	59	1	nogas	97.209	1.141	2405021	2.07	100	97.2	90	110	
Ni	60	1	nogas	95.972	1.770	534719	2.99	100	96.0	90	110	
Cu	63	1	nogas	91.457	5.514	1304864	5.45	100	91.5	90	110	
Zn	66	1	nogas	99.632	2.021	445382	1.14	100	99.6	90	110	
As	75	1	nogas	95.563	1.241	590662	1.53	100	95.6	90	110	
Sr	88	1	nogas	102.395	1.344	2920008	3.20	100	102.4	90	110	
Ag	107	1	nogas	98.981	2.067	1422631	0.29	100	99.0	90	110	
Cd	111	1	nogas	97.044	2.815	306947	1.41	100	97.0	90	110	
Sb	121	1	nogas	101.608	2.352	1298202	3.07	100	101.6	90	110	
Tl	205	1	nogas	99.175	1.781	1827507	0.95	100	99.2	90	110	
Pb	208	1	nogas	97.235	1.262	2477648	1.26	100	97.2	90	110	
U	238	1	nogas	99.698	5.566	2437635	6.31	100	99.7	90	110	
[Pb]	206	1	nogas	98.830	2.209	619728	1.40	100	98.8	90	110	
[Pb]	207	1	nogas	96.528	1.680	541672	1.60	100	96.5	90	110	
Na	23	2	He	10239.174	1.778	15389426	1.69	10000	102.4	90	110	
Mg	24	2	He	10065.434	1.929	8451005	1.34	10000	100.7	90	110	
Al	27	2	He	96.720	2.675	46925	1.56	100	96.7	90	110	
K	39	2	He	9230.846	0.584	8812466	0.57	10000	92.3	90	110	
Ca	43	2	He	9952.515	2.744	25044	1.76	10000	99.5	90	110	
Ca	44	2	He	9818.406	0.572	423583	0.85	10000	98.2	90	110	
V	51	2	He	102.373	1.160	636557	1.02	100	102.4	90	110	
Cr	52	2	He	104.258	0.748	695343	1.04	100	104.3	90	110	
Mn	55	2	He	98.406	2.771	475197	1.47	100	98.4	90	110	
Fe	56	2	He	9889.226	3.273	58006177	1.99	10000	98.9	90	110	
Co	59	2	He	102.921	1.906	948153	0.99	100	102.9	90	110	
Ni	60	2	He	102.133	1.786	240948	1.05	100	102.1	90	110	
Cu	63	2	He	98.412	1.416	621187	1.05	100	98.4	90	110	
Zn	66	2	He	101.026	0.686	149951	0.82	100	101.0	90	110	
As	75	2	He	100.254	2.229	145329	1.52	100	100.3	90	110	
Se	78	2	He	94.661	1.366	11241	0.73	100	94.7	90	110	
B	11	1	nogas	518.112	5.579	2199096	2.92	500	103.6	90	110	
Si	28	1	nogas	4562.572	3.082	6384660	2.51	5000	91.3	90	110	
Ca	43	1	nogas	10020.910	2.059	371063	1.29	10000	100.2	90	110	
Ca	44	1	nogas	9757.850	2.279	6187698	1.63	10000	97.6	90	110	
Fe	56	1	nogas	9998.715	1.692	246000847	2.91	10000	100.0	90	110	
Se	77	1	nogas	85.498	5.659	38354	1.46	100	85.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.323	1.123	28700	2.28	100	97.3	90	110	
Mo	95	1	nogas	98.683	0.881	586231	1.16	100	98.7	90	110	
Sn	118	1	nogas	96.842	2.732	822040	1.20	100	96.8	90	110	
Ba	137	1	nogas	96.348	4.483	395280	3.08	100	96.3	90	110	
Sb	121	2	He	98.739	2.328	480863	1.35	100	98.7	90	110	
Li	7	1	nogas	99.478	1.720	1573003	1.26	100	99.5	90	110	
P	31	1	nogas	453.905	0.501	940064	1.55	500	90.8	90	110	
La	139	1	nogas	106.611	8.094	387	9.08	100	106.6	90	110	
Au	197	1	nogas	-71.235	-217.668	17	34.64	100	-71.2	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1011744	2.61	1229805	82.27	70	125	
Ge	72	1	nogas	3353519	1.86	3541557	94.69	70	125	
In	115	1	nogas	2897871	3.50	3006327	96.39	70	125	
Bi	209	1	nogas	2067903	0.84	2153140	96.04	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	836188	1.31	993327	84.18	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	089_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:51:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.041	28.7	340	26.5	1	
Na	23	1	nogas	26.975	3.7	1142520	1.4	100	
Mg	24	1	nogas	4.750	27.1	81329	23.9	100	
Al	27	1	nogas	-0.524	-32.1	26963	12.9	5	
K	39	1	nogas	1.449	316.1	7939518	0.5	100	
Ti	47	1	nogas	0.060	144.9	570	29.5	2.5	
V	51	1	nogas	-1.155	-24.0	176021	4.4	2.5	
Cr	52	1	nogas	-0.307	-22.7	32920	5.2	2.5	
Mn	55	1	nogas	0.218	15.7	29170	3.0	2.5	
Co	59	1	nogas	0.034	43.5	2224	16.5	2.5	
Ni	60	1	nogas	0.309	6.0	910	11.4	2.5	
Cu	63	1	nogas	-3.487	-2.9	28462	4.1	2.5	
Zn	66	1	nogas	0.486	5.5	2284	5.8	2.5	
As	75	1	nogas	-1.409	-14.7	41391	2.4	2.5	
Sr	88	1	nogas	0.141	8.9	4977	6.6	2.5	
Ag	107	1	nogas	0.024	12.9	473	10.0	2.5	
Cd	111	1	nogas	0.031	21.6	123	18.7	1	
Sb	121	1	nogas	1.076	23.2	15147	21.3	2.5	
Tl	205	1	nogas	0.524	43.3	10414	46.0	1	
Pb	208	1	nogas	-0.034	-63.0	3150	17.4	2.5	
U	238	1	nogas	0.124	53.3	3207	56.8	2.5	
[Pb]	206	1	nogas	-0.048	-39.1	817	19.0	2.5	
[Pb]	207	1	nogas	-0.018	-196.7	757	29.1	2.5	
Na	23	2	He	37.587	5.2	117989	2.9	100	
Mg	24	2	He	3.934	3.9	3810	3.4	100	
Al	27	2	He	-0.531	-16.5	667	6.9	5	
K	39	2	He	-20.036	-1.9	207191	0.2	100	
Ca	43	2	He	43.685	9.7	120	8.3	100	
Ca	44	2	He	5.007	57.5	4000	3.9	100	
V	51	2	He	-0.436	-1.6	2418	1.4	2.5	
Cr	52	2	He	-0.016	-694.3	5124	15.2	2.5	
Mn	55	2	He	0.010	244.4	2504	4.5	2.5	
Fe	56	2	He	3.292	8.7	32616	5.4	100	
Co	59	2	He	0.022	43.3	567	15.0	2.5	
Ni	60	2	He	-0.447	-4.6	287	17.6	2.5	
Cu	63	2	He	-2.203	-4.1	10680	5.8	2.5	
Zn	66	2	He	-0.296	-20.4	597	14.6	2.5	
As	75	2	He	0.000	-6286.6	296	11.7	2.5	
Se	78	2	He	0.093	60.2	191	4.2	2.5	
B	11	1	nogas	25.862	1.4	122180	3.0	10	CCB Main CR1 Failed
Si	28	1	nogas	-155.758	-3.2	1326960	0.9	5	
Ca	43	1	nogas	28.281	16.4	1943	9.5	100	
Ca	44	1	nogas	-233.139	-3.1	418816	0.3	100	
Fe	56	1	nogas	4.133	159.6	2246998	7.2	100	
Se	77	1	nogas	-13.549	-7.0	13142	2.4	2.5	
Se	82	1	nogas	-0.032	-933.1	343	24.8	2.5	
Mo	95	1	nogas	0.224	45.5	1633	37.2	2.5	
Sn	118	1	nogas	0.206	22.2	2924	13.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.024	45.6	443	10.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.685	8.2	3844	7.7	2.5	
P	31	1	nogas	-6.609	-9.7	93986	1.8	10	
La	139	1	nogas	6.650	50.2	57	20.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	254.776	271.3	30	88.2	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1055027	1.85	1229805	85.79	70	125	
Ge	72	1	nogas	3379263	0.82	3541557	95.42	70	125	
In	115	1	nogas	3020267	0.73	3006327	100.46	70	125	
Bi	209	1	nogas	2117873	4.86	2153140	98.36	70	125	
Ge	72	2	He	847531	0.83	993327	85.32	70	125	

Sample Report

Sample Table

Sample Name	MBLKF1-135382
Data File Name	093SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T19:59:33-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.002	0.002	114.60	53	0.00	2000	
Na	23	1	nogas	30.232	30.232	5.40	1237170	0.00	200000	
Mg	24	1	nogas	18.418	18.418	5.70	302850	0.01	200000	
Al	27	1	nogas	4.482	4.482	5.43	122750	0.00	2000	
K	39	1	nogas	11.236	11.236	92.08	8069587	0.00	200000	
Ti	47	1	nogas	-0.050	-0.050	-35.25	350	-0.01	2000	
V	51	1	nogas	-1.088	-1.088	-28.72	176324	0.00	2000	
Cr	52	1	nogas	-0.193	-0.193	-26.07	35260	0.00	2000	
Mn	55	1	nogas	2.340	2.340	3.81	88575	0.00	2000	
Co	59	1	nogas	-0.021	-0.021	-22.30	847	0.00	2000	
Ni	60	1	nogas	0.299	0.299	3.75	843	0.04	2000	
Cu	63	1	nogas	-3.557	-3.557	-5.47	27261	-0.01	2000	
Zn	66	1	nogas	0.730	0.730	11.81	3357	0.02	2000	
As	75	1	nogas	-1.514	-1.514	-7.89	40475	0.00	2000	
Sr	88	1	nogas	0.093	0.093	5.55	3550	0.00	2000	
Ag	107	1	nogas	-0.003	-0.003	-105.19	83	0.00	2000	
Cd	111	1	nogas	0.002	0.002	174.15	27	0.01	2000	
Sb	121	1	nogas	0.010	0.010	149.31	1420	0.00	2000	
Tl	205	1	nogas	0.004	0.004	93.79	470	0.00	2000	
Pb	208	1	nogas	-0.076	-0.076	-21.90	2093	0.00	2000	
U	238	1	nogas	0.003	0.003	50.55	120	0.00	2000	
[Pb]	206	1	nogas	-0.088	-0.088	-6.29	563	-0.02	2000	
[Pb]	207	1	nogas	-0.074	-0.074	-22.56	437	-0.02	2000	
Na	23	2	He	45.002	45.002	4.79	129509	0.03	200000	
Mg	24	2	He	18.889	18.889	9.36	16561	0.11	200000	
Al	27	2	He	4.752	4.752	11.02	3224	0.15	2000	
K	39	2	He	-14.957	-14.957	-5.75	211916	-0.01	200000	
Ca	43	2	He	25.454	25.454	38.71	73	34.71	200000	
Ca	44	2	He	4.307	4.307	111.69	3980	0.11	200000	
V	51	2	He	-0.434	-0.434	-5.25	2433	-0.02	2000	
Cr	52	2	He	0.100	0.100	51.50	5908	0.00	2000	
Mn	55	2	He	2.260	2.260	2.97	13492	0.02	2000	
Fe	56	2	He	1.697	1.697	6.17	23178	0.01	200000	
Co	59	2	He	-0.017	-0.017	-43.05	197	-0.01	2000	
Ni	60	2	He	-0.433	-0.433	-9.99	317	-0.14	2000	
Cu	63	2	He	-2.267	-2.267	-2.09	10300	-0.02	2000	
Zn	66	2	He	0.050	0.050	174.63	1113	0.00	2000	
As	75	2	He	-0.017	-0.017	-128.25	271	-0.01	2000	
Se	78	2	He	0.271	0.271	78.11	213	0.13	2000	
B	11	1	nogas	18.550	18.550	9.64	96629	0.02	2000	
Si	28	1	nogas	837.009	837.009	12.21	2381632	0.04	2000	
Ca	43	1	nogas	24.167	24.167	26.38	1773	1.36	200000	

Sample Report

Ca	44	1	nogas	-208.518	-208.518	-7.75	429748	-0.05	200000	
Fe	56	1	nogas	-2.744	-2.744	-137.50	2060769	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-14.453	-14.453	-1.57	12811	-0.11	2000	
Se	82	1	nogas	0.063	0.063	727.82	367	0.02	2000	
Mo	95	1	nogas	-0.016	-0.016	-25.37	197	-0.01	2000	
Sn	118	1	nogas	0.047	0.047	22.28	1503	0.00	2000	
Ba	137	1	nogas	0.046	0.046	32.17	530	0.01	2000	
Sb	121	2	He	0.021	0.021	123.52	563	0.00	2000	
La	139	1	nogas	4.886	4.886	116.41	50	9.77	2000	
Au	197	1	nogas	5.558	5.558	5008.52	20	27.79	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1138532	6.45	1229805	92.58	70	125	
Ge	72	1	nogas	3353735	2.47	3541557	94.70	70	125	
In	115	1	nogas	2985157	3.32	3006327	99.30	70	125	
Bi	209	1	nogas	2133461	6.25	2153140	99.09	70	125	
Ge	72	2	He	849697	3.16	993327	85.54	70	125	

Sample Report

Sample Table

Sample Name	MBLK-135382
Data File Name	094SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:01:38-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.000	0.000	-3010.98	33	0.00	2000	
Na	23	1	nogas	23.223	23.223	9.09	1090000	0.00	200000	
Mg	24	1	nogas	18.732	18.732	1.08	316381	0.01	200000	
Al	27	1	nogas	4.270	4.270	5.04	121198	0.00	2000	
K	39	1	nogas	-3.120	-3.120	-190.86	7951441	0.00	200000	
Ti	47	1	nogas	0.005	0.005	965.17	467	0.00	2000	
V	51	1	nogas	-1.535	-1.535	-13.87	168038	0.00	2000	
Cr	52	1	nogas	-0.393	-0.393	-12.65	31357	0.00	2000	
Mn	55	1	nogas	1.491	1.491	2.55	66072	0.00	2000	
Co	59	1	nogas	-0.028	-0.028	-10.97	690	0.00	2000	
Ni	60	1	nogas	0.288	0.288	10.40	800	0.04	2000	
Cu	63	1	nogas	-3.766	-3.766	-1.69	25011	-0.02	2000	
Zn	66	1	nogas	0.388	0.388	5.31	1867	0.02	2000	
As	75	1	nogas	-1.744	-1.744	-13.10	40001	0.00	2000	
Sr	88	1	nogas	0.083	0.083	9.59	3357	0.00	2000	
Ag	107	1	nogas	-0.004	-0.004	-22.21	73	0.00	2000	
Cd	111	1	nogas	0.003	0.003	98.82	30	0.01	2000	
Sb	121	1	nogas	-0.004	-0.004	-60.78	1273	0.00	2000	
Tl	205	1	nogas	-0.002	-0.002	-78.34	360	0.00	2000	
Pb	208	1	nogas	-0.073	-0.073	-13.94	2153	0.00	2000	
U	238	1	nogas	0.003	0.003	26.00	137	0.00	2000	
[Pb]	206	1	nogas	-0.090	-0.090	-24.49	550	-0.02	2000	
[Pb]	207	1	nogas	-0.066	-0.066	-7.47	480	-0.01	2000	
Na	23	2	He	37.108	37.108	6.65	115296	0.03	200000	
Mg	24	2	He	18.936	18.936	6.18	16294	0.12	200000	
Al	27	2	He	4.484	4.484	13.72	3040	0.15	2000	
K	39	2	He	-18.921	-18.921	-4.24	208228	-0.01	200000	
Ca	43	2	He	22.287	22.287	112.71	63	35.19	200000	
Ca	44	2	He	-4.158	-4.158	-112.60	3547	-0.12	200000	
V	51	2	He	-0.446	-0.446	-1.03	2315	-0.02	2000	
Cr	52	2	He	0.006	0.006	869.02	5181	0.00	2000	
Mn	55	2	He	1.521	1.521	9.56	9689	0.02	2000	
Fe	56	2	He	1.176	1.176	17.96	19687	0.01	200000	
Co	59	2	He	-0.021	-0.021	-28.82	163	-0.01	2000	
Ni	60	2	He	-0.456	-0.456	-1.92	260	-0.18	2000	
Cu	63	2	He	-2.381	-2.381	-5.90	9409	-0.03	2000	
Zn	66	2	He	-0.332	-0.332	-22.93	533	-0.06	2000	
As	75	2	He	-0.022	-0.022	-62.73	259	-0.01	2000	
Se	78	2	He	0.135	0.135	158.46	193	0.07	2000	
B	11	1	nogas	16.620	16.620	3.41	84493	0.02	2000	
Si	28	1	nogas	683.487	683.487	4.51	2264505	0.03	2000	
Ca	43	1	nogas	16.765	16.765	13.89	1533	1.09	200000	
Ca	44	1	nogas	-225.486	-225.486	-11.40	428773	-0.05	200000	
Fe	56	1	nogas	-7.368	-7.368	-4.28	1989974	0.00	200000	

Sample Report

Se	77	1	nogas	-17.044	-17.044	-6.28	12401	-0.14	2000	
Se	82	1	nogas	-0.137	-0.137	-96.95	317	-0.04	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	-0.018	-0.018	-24.48	190	-0.01	2000	
Sn	118	1	nogas	0.025	0.025	41.25	1313	0.00	2000	
Ba	137	1	nogas	-0.014	-0.014	-63.81	277	-0.01	2000	
Sb	121	2	He	-0.009	-0.009	-119.17	410	0.00	2000	
La	139	1	nogas	1.902	1.902	296.72	40	4.75	2000	
Au	197	1	nogas	-155.100	-155.100	-283.58	13	-1163.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1095891	2.73	1229805	89.11	70	125	
Ge	72	1	nogas	3423393	0.52	3541557	96.66	70	125	
In	115	1	nogas	2986352	1.73	3006327	99.34	70	125	
Bi	209	1	nogas	2133351	6.82	2153140	99.08	70	125	
Ge	72	2	He	833848	2.75	993327	83.94	70	125	

Sample Report

Sample Table

Sample Name	LCS-135382
Data File Name	095SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:03:42-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	47.699	47.699	2.87	351641	0.01	2000	
Na	23	1	nogas	4974.632	4974.632	4.82	127574207	0.00	200000	
Mg	24	1	nogas	4954.696	4954.696	4.03	81649677	0.01	200000	
Al	27	1	nogas	103.270	103.270	1.64	2024905	0.01	2000	
K	39	1	nogas	5286.586	5286.586	3.36	112423232	0.00	200000	
Ti	47	1	nogas	144.458	144.458	2.97	286100	0.05	2000	
V	51	1	nogas	48.205	48.205	1.31	1488118	0.00	2000	
Cr	52	1	nogas	49.532	49.532	1.57	1170649	0.00	2000	
Mn	55	1	nogas	53.817	53.817	1.12	1541033	0.00	2000	
Co	59	1	nogas	48.949	48.949	2.81	1215784	0.00	2000	
Ni	60	1	nogas	49.264	49.264	3.01	274971	0.02	2000	
Cu	63	1	nogas	44.991	44.991	1.41	682351	0.01	2000	
Zn	66	1	nogas	51.159	51.159	0.56	229551	0.02	2000	
As	75	1	nogas	46.089	46.089	1.56	311326	0.01	2000	
Sr	88	1	nogas	101.284	101.284	4.36	2897508	0.00	2000	
Ag	107	1	nogas	50.635	50.635	1.48	730431	0.01	2000	
Cd	111	1	nogas	47.938	47.938	5.36	158685	0.03	2000	
Sb	121	1	nogas	51.213	51.213	2.43	657133	0.01	2000	
Tl	205	1	nogas	48.249	48.249	3.25	896194	0.01	2000	
Pb	208	1	nogas	49.329	49.329	2.10	1258926	0.00	2000	
U	238	1	nogas	94.115	94.115	3.82	2317818	0.00	2000	
[Pb]	206	1	nogas	49.857	49.857	3.86	315565	0.02	2000	
[Pb]	207	1	nogas	48.458	48.458	3.26	274410	0.02	2000	
Na	23	2	He	5170.099	5170.099	3.61	7959716	0.06	200000	
Mg	24	2	He	5108.818	5108.818	2.34	4378239	0.12	200000	
Al	27	2	He	97.128	97.128	1.63	48091	0.20	2000	
K	39	2	He	4867.770	4867.770	3.51	4753883	0.10	200000	
Ca	43	2	He	5232.965	5232.965	2.27	13448	38.91	200000	
Ca	44	2	He	5003.463	5003.463	1.23	222141	2.25	200000	
V	51	2	He	49.526	49.526	2.29	316889	0.02	2000	
Cr	52	2	He	51.327	51.327	2.16	351975	0.01	2000	
Mn	55	2	He	50.622	50.622	2.31	250670	0.02	2000	
Fe	56	2	He	5000.984	5000.984	2.46	29942622	0.02	200000	
Co	59	2	He	50.628	50.628	2.32	476120	0.01	2000	
Ni	60	2	He	50.268	50.268	2.47	121704	0.04	2000	
Cu	63	2	He	47.692	47.692	1.97	319748	0.01	2000	
Zn	66	2	He	50.664	50.664	2.82	77257	0.07	2000	
As	75	2	He	49.438	49.438	2.59	73277	0.07	2000	
Se	78	2	He	47.992	47.992	2.69	5904	0.81	2000	
B	11	1	nogas	501.847	501.847	2.99	2210758	0.02	2000	
Si	28	1	nogas	5395.549	5395.549	2.74	7304141	0.07	2000	>LDR
Ca	43	1	nogas	5229.314	5229.314	1.07	194742	2.69	200000	
Ca	44	1	nogas	5140.113	5140.113	2.98	3532171	0.15	200000	
Fe	56	1	nogas	5140.911	5140.911	3.07	127934645	0.00	200000	

Sample Report

Se	77	1	nogas	28.511	28.511	9.34	23876	0.12	2000	
Se	82	1	nogas	50.236	50.236	1.08	15033	0.33	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	49.061	49.061	3.00	292593	0.02	2000	
Sn	118	1	nogas	91.301	91.301	3.44	811476	0.01	2000	
Ba	137	1	nogas	46.181	46.181	4.60	198522	0.02	2000	
Sb	121	2	He	49.609	49.609	2.37	246768	0.02	2000	
La	139	1	nogas	33.450	33.450	10.36	150	22.30	2000	
Au	197	1	nogas	-77.395	-77.395	-523.88	17	-464.37	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1049167	1.52	1229805	85.31	70	125	
Ge	72	1	nogas	3364657	0.13	3541557	95.01	70	125	
In	115	1	nogas	3034205	3.22	3006327	100.93	70	125	
Bi	209	1	nogas	2084356	1.79	2153140	96.81	70	125	
Ge	72	2	He	853375	1.87	993327	85.91	70	125	

Sample Report

Sample Table

Sample Name	LCSD-135382
Data File Name	096SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:05:42-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	46.924	46.924	6.29	344552	0.01	2000	
Na	23	1	nogas	4765.929	4765.929	0.64	120610282	0.00	200000	
Mg	24	1	nogas	4876.339	4876.339	4.48	79269081	0.01	200000	
Al	27	1	nogas	103.856	103.856	2.56	2067429	0.01	2000	
K	39	1	nogas	5007.095	5007.095	2.30	108529136	0.00	200000	
Ti	47	1	nogas	140.309	140.309	0.95	282166	0.05	2000	
V	51	1	nogas	47.794	47.794	3.20	1500007	0.00	2000	
Cr	52	1	nogas	47.881	47.881	2.00	1150446	0.00	2000	
Mn	55	1	nogas	50.056	50.056	2.82	1457094	0.00	2000	
Co	59	1	nogas	47.054	47.054	1.86	1186639	0.00	2000	
Ni	60	1	nogas	48.073	48.073	3.19	272393	0.02	2000	
Cu	63	1	nogas	43.722	43.722	2.83	675448	0.01	2000	
Zn	66	1	nogas	49.867	49.867	2.24	227191	0.02	2000	
As	75	1	nogas	44.716	44.716	1.71	308165	0.01	2000	
Sr	88	1	nogas	96.728	96.728	2.48	2809540	0.00	2000	
Ag	107	1	nogas	49.673	49.673	1.75	727616	0.01	2000	
Cd	111	1	nogas	48.529	48.529	3.29	156658	0.03	2000	
Sb	121	1	nogas	50.951	50.951	1.84	663850	0.01	2000	
Tl	205	1	nogas	47.682	47.682	6.30	881966	0.01	2000	
Pb	208	1	nogas	48.267	48.267	1.17	1231924	0.00	2000	
U	238	1	nogas	95.698	95.698	4.69	2348817	0.00	2000	
[Pb]	206	1	nogas	49.086	49.086	5.86	309567	0.02	2000	
[Pb]	207	1	nogas	47.655	47.655	5.08	268886	0.02	2000	
Na	23	2	He	5276.148	5276.148	1.64	8021540	0.07	200000	
Mg	24	2	He	5124.078	5124.078	4.31	4336171	0.12	200000	
Al	27	2	He	99.846	99.846	2.96	48803	0.20	2000	
K	39	2	He	4736.858	4736.858	1.58	4632107	0.10	200000	
Ca	43	2	He	4764.740	4764.740	2.79	12087	39.42	200000	
Ca	44	2	He	4920.630	4920.630	1.86	215799	2.28	200000	
V	51	2	He	48.906	48.906	0.08	309136	0.02	2000	
Cr	52	2	He	50.235	50.235	0.87	340325	0.01	2000	
Mn	55	2	He	50.482	50.482	1.19	246896	0.02	2000	
Fe	56	2	He	5082.093	5082.093	1.32	30055327	0.02	200000	
Co	59	2	He	51.064	51.064	2.23	474278	0.01	2000	
Ni	60	2	He	50.711	50.711	1.67	121242	0.04	2000	
Cu	63	2	He	47.204	47.204	1.30	312795	0.02	2000	
Zn	66	2	He	49.309	49.309	0.91	74291	0.07	2000	
As	75	2	He	49.059	49.059	1.36	71825	0.07	2000	
Se	78	2	He	46.953	46.953	3.59	5710	0.82	2000	
B	11	1	nogas	496.377	496.377	6.17	2177919	0.02	2000	
Si	28	1	nogas	5262.520	5262.520	1.20	7271146	0.07	2000	>LDR
Ca	43	1	nogas	5019.671	5019.671	3.92	189827	2.64	200000	
Ca	44	1	nogas	4776.470	4776.470	3.89	3371955	0.14	200000	
Fe	56	1	nogas	4912.829	4912.829	1.42	124237390	0.00	200000	
Se	77	1	nogas	25.684	25.684	14.03	23502	0.11	2000	
Se	82	1	nogas	48.635	48.635	1.01	14790	0.33	2000	

Sample Report

Mo	95	1	nogas	46.296	46.296	3.90	280334	0.02	2000	
Sn	118	1	nogas	93.578	93.578	4.36	810450	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	46.831	46.831	6.73	196100	0.02	2000	
Sb	121	2	He	49.812	49.812	1.87	244750	0.02	2000	
La	139	1	nogas	25.501	25.501	24.69	120	21.25	2000	
Au	197	1	nogas	-261.060	-261.060	-97.56	10	-2610.60	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1046368	3.90	1229805	85.08	70	125	
Ge	72	1	nogas	3416360	0.64	3541557	96.46	70	125	
In	115	1	nogas	2958123	3.98	3006327	98.40	70	125	
Bi	209	1	nogas	2079628	5.38	2153140	96.59	70	125	
Ge	72	2	He	842652	0.87	993327	84.83	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	097_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:07:42-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	94.864	2.522	660318	0.72	100	94.9	90	110	
Na	23	1	nogas	10120.066	4.104	236684514	6.02	10000	101.2	90	110	
Mg	24	1	nogas	10087.715	3.981	151717245	0.86	10000	100.9	90	110	
Al	27	1	nogas	97.407	3.713	1852741	3.13	100	97.4	90	110	
K	39	1	nogas	9872.360	1.082	196910596	3.65	10000	98.7	90	110	
Ti	47	1	nogas	97.193	3.004	186657	2.00	100	97.2	90	110	
V	51	1	nogas	99.416	3.954	2761116	1.53	100	99.4	90	110	
Cr	52	1	nogas	100.162	4.587	2253716	2.82	100	100.2	90	110	
Mn	55	1	nogas	100.624	3.469	2771903	0.14	100	100.6	90	110	
Co	59	1	nogas	97.050	2.169	2334597	1.98	100	97.1	90	110	
Ni	60	1	nogas	94.207	2.347	510224	1.10	100	94.2	90	110	
Cu	63	1	nogas	91.088	5.808	1263547	4.61	100	91.1	90	110	
Zn	66	1	nogas	98.807	0.792	429651	2.71	100	98.8	90	110	
As	75	1	nogas	95.645	2.619	574723	1.20	100	95.6	90	110	
Sr	88	1	nogas	101.520	3.426	2814554	3.59	100	101.5	90	110	
Ag	107	1	nogas	97.846	3.493	1367175	0.15	100	97.8	90	110	
Cd	111	1	nogas	96.268	0.948	296618	0.40	100	96.3	90	110	
Sb	121	1	nogas	100.335	1.676	1246519	2.17	100	100.3	90	110	
Tl	205	1	nogas	100.235	8.035	1799760	4.85	100	100.2	90	110	
Pb	208	1	nogas	95.893	1.350	2443494	1.35	100	95.9	90	110	
U	238	1	nogas	97.967	4.419	2335178	2.45	100	98.0	90	110	
[Pb]	206	1	nogas	97.765	6.614	597568	3.50	100	97.8	90	110	
[Pb]	207	1	nogas	98.611	3.384	539685	1.33	100	98.6	90	110	
Na	23	2	He	10227.032	0.982	14747178	1.80	10000	102.3	90	110	
Mg	24	2	He	10146.477	3.152	8171736	2.33	10000	101.5	90	110	
Al	27	2	He	96.971	2.521	45131	1.35	100	97.0	90	110	
K	39	2	He	9105.387	0.598	8695762	0.58	10000	91.1	90	110	
Ca	43	2	He	9832.954	2.036	23739	1.63	10000	98.3	90	110	
Ca	44	2	He	9802.504	0.233	405718	1.39	10000	98.0	90	110	
V	51	2	He	102.105	2.081	609003	0.69	100	102.1	90	110	
Cr	52	2	He	103.865	1.566	664499	0.18	100	103.9	90	110	
Mn	55	2	He	98.686	2.583	457177	1.65	100	98.7	90	110	
Fe	56	2	He	9920.947	2.078	55833303	1.51	10000	99.2	90	110	
Co	59	2	He	102.717	2.128	907744	0.97	100	102.7	90	110	
Ni	60	2	He	103.151	1.688	233434	0.32	100	103.2	90	110	
Cu	63	2	He	99.080	2.695	599716	1.26	100	99.1	90	110	
Zn	66	2	He	99.770	3.306	142044	2.07	100	99.8	90	110	
As	75	2	He	100.787	1.781	140162	1.39	100	100.8	90	110	
Se	78	2	He	94.656	1.596	10785	2.35	100	94.7	90	110	
B	11	1	nogas	509.825	3.477	2120084	1.49	500	102.0	90	110	
Si	28	1	nogas	4480.946	5.469	6119998	1.44	5000	89.6	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9712.607	2.350	349812	2.75	10000	97.1	90	110	
Ca	44	1	nogas	9615.344	3.364	5936003	1.65	10000	96.2	90	110	
Fe	56	1	nogas	9853.206	4.352	235597305	1.78	10000	98.5	90	110	
Se	77	1	nogas	83.984	8.154	36924	4.05	100	84.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.499	7.663	27361	5.41	100	95.5	90	110	
Mo	95	1	nogas	99.236	2.840	573476	4.41	100	99.2	90	110	
Sn	118	1	nogas	96.672	1.214	799400	1.14	100	96.7	90	110	
Ba	137	1	nogas	96.784	3.479	386813	2.92	100	96.8	90	110	
Sb	121	2	He	98.877	0.541	462044	1.74	100	98.9	90	110	
Li	7	1	nogas	96.781	0.459	1501313	2.79	100	96.8	90	110	
P	31	1	nogas	447.957	2.863	903279	1.06	500	89.6	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	102.601	2.898	363	3.18	100	102.6	90	110	
Au	197	1	nogas	39.870	1224.713	20	86.60	100	39.9	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	990879	3.11	1229805	80.57	70	125	
Ge	72	1	nogas	3261943	3.43	3541557	92.10	70	125	
In	115	1	nogas	2821323	0.59	3006327	93.85	70	125	
Bi	209	1	nogas	2018111	3.12	2153140	93.73	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	802175	1.38	993327	80.76	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	098_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:09:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.047	15.5	370	15.0	1	
Na	23	1	nogas	18.760	4.7	888798	4.3	100	
Mg	24	1	nogas	5.050	24.9	81464	22.3	100	
Al	27	1	nogas	-0.679	-7.6	22984	2.0	5	
K	39	1	nogas	6.745	178.0	7718225	0.7	100	
Ti	47	1	nogas	0.066	128.8	557	26.7	2.5	
V	51	1	nogas	-1.930	-5.0	149085	3.3	2.5	
Cr	52	1	nogas	-0.333	-24.6	30996	3.6	2.5	
Mn	55	1	nogas	0.173	25.4	26766	2.3	2.5	
Co	59	1	nogas	0.042	41.6	2314	16.0	2.5	
Ni	60	1	nogas	0.313	1.8	893	1.3	2.5	
Cu	63	1	nogas	-3.532	-0.5	26733	2.9	2.5	
Zn	66	1	nogas	0.410	1.9	1867	4.0	2.5	
As	75	1	nogas	-1.708	-9.9	38093	3.5	2.5	
Sr	88	1	nogas	0.102	7.0	3690	3.6	2.5	
Ag	107	1	nogas	0.035	6.1	600	2.9	2.5	
Cd	111	1	nogas	0.034	51.8	127	43.5	1	
Sb	121	1	nogas	1.080	27.8	14527	23.2	2.5	
Tl	205	1	nogas	0.681	37.6	12966	40.4	1	
Pb	208	1	nogas	-0.027	-100.9	3344	20.4	2.5	
U	238	1	nogas	0.173	60.2	4304	63.7	2.5	
[Pb]	206	1	nogas	-0.042	-82.1	833	30.1	2.5	
[Pb]	207	1	nogas	-0.006	-148.8	797	9.8	2.5	
Na	23	2	He	30.846	4.1	104679	1.5	100	
Mg	24	2	He	3.958	12.7	3720	10.7	100	
Al	27	2	He	-0.589	-35.7	620	15.4	5	
K	39	2	He	-27.894	-9.9	199881	1.3	100	
Ca	43	2	He	30.216	33.1	83	30.2	100	
Ca	44	2	He	3.999	103.1	3844	4.9	100	
V	51	2	He	-0.449	-1.9	2267	1.9	2.5	
Cr	52	2	He	-0.009	-873.1	5021	10.2	2.5	
Mn	55	2	He	-0.002	-227.6	2374	0.9	2.5	
Fe	56	2	He	3.738	7.7	34269	5.3	100	
Co	59	2	He	0.036	32.0	677	15.7	2.5	
Ni	60	2	He	-0.479	-4.2	203	23.2	2.5	
Cu	63	2	He	-2.283	-0.9	9889	0.8	2.5	
Zn	66	2	He	-0.317	-9.4	550	8.3	2.5	
As	75	2	He	-0.017	-142.6	263	12.8	2.5	
Se	78	2	He	0.048	260.4	181	7.9	2.5	
B	11	1	nogas	27.158	4.3	125002	3.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-63.908	-73.9	1368306	1.5	5	
Ca	43	1	nogas	23.900	16.1	1707	7.0	100	
Ca	44	1	nogas	-180.780	-13.3	431062	1.0	100	
Fe	56	1	nogas	0.376	2695.7	2064519	9.3	100	
Se	77	1	nogas	-14.657	-14.1	12344	6.0	2.5	
Se	82	1	nogas	0.327	67.0	430	12.3	2.5	
Mo	95	1	nogas	0.287	52.4	1920	42.7	2.5	
Sn	118	1	nogas	0.359	21.0	4074	16.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.051	29.9	530	11.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.652	4.7	3574	3.8	2.5	
P	31	1	nogas	-3.363	-57.3	95935	2.3	10	
La	139	1	nogas	13.405	51.6	77	32.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-343.992	-45.2	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1031367	1.55	1229805	83.86	70	125	
Ge	72	1	nogas	3243368	2.23	3541557	91.58	70	125	
In	115	1	nogas	2873569	3.34	3006327	95.58	70	125	
Bi	209	1	nogas	2053010	4.19	2153140	95.35	70	125	
Ge	72	2	He	823380	0.47	993327	82.89	70	125	

Sample Report

Sample Table

Sample Name	HS18111440-01SD
Data File Name	100SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:13:56-06:00
Sample Type	Sample
Dilution	5
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.018	0.089	36.25	170	0.01	2000	
Na	23	1	nogas	12491.798	62458.989	4.17	298660507	0.00	200000	
Mg	24	1	nogas	550.884	2754.420	1.41	8493254	0.01	200000	
Al	27	1	nogas	142.066	710.329	3.18	2709563	0.01	2000	
K	39	1	nogas	87.724	438.618	10.78	9397756	0.00	200000	
Ti	47	1	nogas	3.605	18.024	3.41	7408	0.05	2000	
V	51	1	nogas	0.753	3.765	48.46	220891	0.00	2000	
Cr	52	1	nogas	0.222	1.108	22.73	43849	0.00	2000	
Mn	55	1	nogas	9.924	49.619	4.26	296001	0.00	2000	
Co	59	1	nogas	0.266	1.328	8.24	7772	0.00	2000	
Ni	60	1	nogas	1.007	5.035	6.24	4701	0.02	2000	
Cu	63	1	nogas	-3.698	-18.489	-3.88	24907	-0.01	2000	
Zn	66	1	nogas	1.991	9.953	2.40	8822	0.02	2000	
As	75	1	nogas	0.412	2.060	69.79	50413	0.00	2000	
Sr	88	1	nogas	34.916	174.582	3.63	977013	0.00	2000	
Ag	107	1	nogas	0.002	0.010	111.43	150	0.00	2000	
Cd	111	1	nogas	0.010	0.049	61.60	50	0.02	2000	
Sb	121	1	nogas	0.189	0.944	6.50	3637	0.01	2000	
Tl	205	1	nogas	0.055	0.273	13.29	1353	0.00	2000	
Pb	208	1	nogas	0.112	0.562	3.11	6881	0.00	2000	
U	238	1	nogas	0.050	0.251	3.49	1237	0.00	2000	
[Pb]	206	1	nogas	0.128	0.639	20.40	1837	0.01	2000	
[Pb]	207	1	nogas	0.108	0.542	7.39	1400	0.01	2000	
Na	23	2	He	12733.075	63665.377	2.21	18880526	0.07	200000	
Mg	24	2	He	545.529	2727.645	2.09	452674	0.12	200000	
Al	27	2	He	140.946	704.731	3.95	67116	0.21	2000	
K	39	2	He	51.338	256.690	0.88	273584	0.02	200000	
Ca	43	2	He	1488.614	7443.072	2.52	3707	40.16	200000	
Ca	44	2	He	1341.620	6708.100	2.92	60328	2.22	200000	
V	51	2	He	0.212	1.059	7.51	6300	0.00	2000	
Cr	52	2	He	0.468	2.340	13.52	8152	0.01	2000	
Mn	55	2	He	9.387	46.935	2.77	46923	0.02	2000	
Fe	56	2	He	328.469	1642.346	3.72	1914988	0.02	200000	
Co	59	2	He	0.295	1.476	6.43	3037	0.01	2000	
Ni	60	2	He	0.096	0.482	56.79	1537	0.01	2000	
Cu	63	2	He	-2.364	-11.818	-1.45	9436	-0.03	2000	
Zn	66	2	He	1.240	6.198	10.59	2817	0.04	2000	
As	75	2	He	0.293	1.464	3.39	707	0.04	2000	
Se	78	2	He	0.180	0.902	109.45	197	0.09	2000	
B	11	1	nogas	27.101	135.505	5.16	131075	0.02	2000	
Si	28	1	nogas	57028.653	285143.263	2.51	61545757	0.09	2000	>LDR
Ca	43	1	nogas	1390.757	6953.787	7.94	51231	2.71	200000	
Ca	44	1	nogas	1244.030	6220.148	4.81	1244911	0.10	200000	
Fe	56	1	nogas	305.961	1529.806	3.88	9407010	0.00	200000	

Sample Report

Se	77	1	nogas	-2.327	-11.633	-74.32	15610	-0.01	2000	
Se	82	1	nogas	0.431	2.154	5.44	467	0.09	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.184	0.920	4.21	1360	0.01	2000	
Sn	118	1	nogas	0.122	0.609	17.90	2070	0.01	2000	
Ba	137	1	nogas	11.105	55.526	1.78	45427	0.02	2000	
Sb	121	2	He	0.174	0.871	11.79	1287	0.01	2000	
La	139	1	nogas	1525.763	7628.815	2.16	5054	30.19	2000	
Au	197	1	nogas	-54.161	-270.804	-609.64	17	-324.96	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1084495	2.98	1229805	88.18	70	125	
Ge	72	1	nogas	3290696	2.28	3541557	92.92	70	125	
In	115	1	nogas	2869992	2.77	3006327	95.47	70	125	
Bi	209	1	nogas	2004244	1.00	2153140	93.08	70	125	
Ge	72	2	He	825701	1.49	993327	83.12	70	125	

Sample Report

Sample Table

Sample Name	HS18111440-01MS
Data File Name	101SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:16:02-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	50.112	50.112	2.28	349505	0.01	2000	
Na	23	1	nogas	58498.145	58498.145	3.95	1540927234	0.00	200000	
Mg	24	1	nogas	7096.463	7096.463	2.50	120572082	0.01	200000	
Al	27	1	nogas	834.165	834.165	4.75	15996525	0.01	2000	
K	39	1	nogas	5256.191	5256.191	1.02	111203623	0.00	200000	
Ti	47	1	nogas	153.613	153.613	2.96	302439	0.05	2000	
V	51	1	nogas	50.113	50.113	2.27	1530477	0.00	2000	
Cr	52	1	nogas	48.969	48.969	2.69	1151228	0.00	2000	
Mn	55	1	nogas	82.866	82.866	3.76	2346393	0.00	2000	
Co	59	1	nogas	48.898	48.898	5.01	1206967	0.00	2000	
Ni	60	1	nogas	51.196	51.196	3.94	284066	0.02	2000	
Cu	63	1	nogas	44.464	44.464	3.08	671367	0.01	2000	
Zn	66	1	nogas	55.195	55.195	3.09	246243	0.02	2000	
As	75	1	nogas	48.147	48.147	3.71	321129	0.01	2000	
Sr	88	1	nogas	260.262	260.262	3.71	7399482	0.00	2000	
Ag	107	1	nogas	48.312	48.312	2.87	692897	0.01	2000	
Cd	111	1	nogas	47.503	47.503	0.28	152024	0.03	2000	
Sb	121	1	nogas	51.259	51.259	3.14	653914	0.01	2000	
Tl	205	1	nogas	48.120	48.120	5.06	896953	0.01	2000	
Pb	208	1	nogas	50.375	50.375	1.43	1285531	0.00	2000	
U	238	1	nogas	96.857	96.857	4.02	2395104	0.00	2000	
[Pb]	206	1	nogas	51.091	51.091	3.16	324595	0.02	2000	
[Pb]	207	1	nogas	50.244	50.244	3.51	285551	0.02	2000	
Na	23	2	He	65031.762	65031.762	1.77	98111009	0.07	200000	
Mg	24	2	He	7563.644	7563.644	1.16	6396276	0.12	200000	
Al	27	2	He	825.544	825.544	3.57	396478	0.21	2000	
K	39	2	He	4926.667	4926.667	0.94	4808670	0.10	200000	
Ca	43	2	He	11745.845	11745.845	4.25	29764	39.46	200000	
Ca	44	2	He	11271.728	11271.728	1.90	489158	2.30	200000	
V	51	2	He	51.075	51.075	1.18	322426	0.02	2000	
Cr	52	2	He	51.194	51.194	2.37	346502	0.01	2000	
Mn	55	2	He	81.374	81.374	1.08	396240	0.02	2000	
Fe	56	2	He	6273.884	6273.884	0.99	37075034	0.02	200000	
Co	59	2	He	51.099	51.099	1.72	474304	0.01	2000	
Ni	60	2	He	51.701	51.701	2.09	123507	0.04	2000	
Cu	63	2	He	47.153	47.153	1.95	312296	0.02	2000	
Zn	66	2	He	53.499	53.499	1.28	80464	0.07	2000	
As	75	2	He	50.174	50.174	0.59	73406	0.07	2000	
Se	78	2	He	45.407	45.407	2.23	5524	0.82	2000	
B	11	1	nogas	571.637	571.637	1.15	2381096	0.02	2000	
Si	28	1	nogas	276290.466	276290.466	2.52	297535622	0.09	2000	>LDR
Ca	43	1	nogas	11573.147	11573.147	2.88	427407	2.71	200000	
Ca	44	1	nogas	11641.943	11641.943	2.88	7259249	0.16	200000	
Fe	56	1	nogas	6232.382	6232.382	5.58	153668949	0.00	200000	

Sample Report

Se	77	1	nogas	41.279	41.279	8.85	26990	0.15	2000	
Se	82	1	nogas	47.709	47.709	1.13	14216	0.34	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	47.332	47.332	3.41	280619	0.02	2000	
Sn	118	1	nogas	89.701	89.701	2.91	770441	0.01	2000	
Ba	137	1	nogas	99.352	99.352	1.44	412416	0.02	2000	
Sb	121	2	He	48.612	48.612	1.52	238701	0.02	2000	
La	139	1	nogas	7008.716	7008.716	1.46	23577	29.73	2000	>LDR
Au	197	1	nogas	199.312	199.312	396.47	27	747.42	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	992272	0.58	1229805	80.69	70	125	
Ge	72	1	nogas	3346594	2.48	3541557	94.49	70	125	
In	115	1	nogas	2930165	0.67	3006327	97.47	70	125	
Bi	209	1	nogas	2092353	2.17	2153140	97.18	70	125	
Ge	72	2	He	842140	0.86	993327	84.78	70	125	

Sample Report

Sample Table

Sample Name	HS18111440-01MSD
Data File Name	102SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:18:05-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	47.343	47.343	3.44	355054	0.01	2000	
Na	23	1	nogas	61429.984	61429.984	4.04	1627259336	0.00	200000	
Mg	24	1	nogas	7073.555	7073.555	0.32	120877961	0.01	200000	
Al	27	1	nogas	786.296	786.296	1.63	15514019	0.01	2000	
K	39	1	nogas	5385.379	5385.379	2.21	116938615	0.00	200000	
Ti	47	1	nogas	154.279	154.279	1.26	312404	0.05	2000	
V	51	1	nogas	52.238	52.238	1.28	1631357	0.00	2000	
Cr	52	1	nogas	50.213	50.213	1.86	1212833	0.00	2000	
Mn	55	1	nogas	82.635	82.635	1.96	2406957	0.00	2000	
Co	59	1	nogas	48.829	48.829	2.73	1239946	0.00	2000	
Ni	60	1	nogas	50.158	50.158	1.13	286260	0.02	2000	
Cu	63	1	nogas	44.360	44.360	2.59	688993	0.01	2000	
Zn	66	1	nogas	55.260	55.260	2.00	253537	0.02	2000	
As	75	1	nogas	50.171	50.171	0.40	342069	0.01	2000	
Sr	88	1	nogas	264.387	264.387	3.29	7732083	0.00	2000	
Ag	107	1	nogas	49.175	49.175	2.95	725367	0.01	2000	
Cd	111	1	nogas	48.502	48.502	1.35	161319	0.03	2000	
Sb	121	1	nogas	51.104	51.104	1.29	670536	0.01	2000	
Tl	205	1	nogas	48.155	48.155	6.36	930260	0.01	2000	
Pb	208	1	nogas	52.078	52.078	1.96	1328853	0.00	2000	
U	238	1	nogas	102.502	102.502	2.76	2630455	0.00	2000	
[Pb]	206	1	nogas	50.044	50.044	6.65	329457	0.02	2000	
[Pb]	207	1	nogas	49.416	49.416	6.16	291103	0.02	2000	
Na	23	2	He	68411.732	68411.732	0.84	102035612	0.07	200000	
Mg	24	2	He	7993.318	7993.318	2.10	6682034	0.12	200000	
Al	27	2	He	817.637	817.637	0.92	388255	0.21	2000	
K	39	2	He	5004.310	5004.310	1.17	4880894	0.10	200000	
Ca	43	2	He	12274.397	12274.397	4.76	30749	39.92	200000	
Ca	44	2	He	12028.358	12028.358	0.78	515811	2.33	200000	
V	51	2	He	53.557	53.557	1.41	333961	0.02	2000	
Cr	52	2	He	54.821	54.821	2.11	366453	0.01	2000	
Mn	55	2	He	82.015	82.015	2.11	394780	0.02	2000	
Fe	56	2	He	6289.311	6289.311	0.14	36742885	0.02	200000	
Co	59	2	He	52.020	52.020	0.56	477351	0.01	2000	
Ni	60	2	He	54.424	54.424	0.20	128465	0.04	2000	
Cu	63	2	He	50.061	50.061	0.47	326316	0.02	2000	
Zn	66	2	He	55.847	55.847	2.46	82984	0.07	2000	
As	75	2	He	52.653	52.653	1.04	76136	0.07	2000	
Se	78	2	He	49.599	49.599	2.16	5949	0.83	2000	
B	11	1	nogas	547.760	547.760	4.80	2452211	0.02	2000	
Si	28	1	nogas	284304.455	284304.455	1.49	314809069	0.09	2000	>LDR
Ca	43	1	nogas	11799.008	11799.008	0.64	448156	2.63	200000	
Ca	44	1	nogas	11811.759	11811.759	1.52	7566480	0.16	200000	
Fe	56	1	nogas	6251.367	6251.367	2.18	158590320	0.00	200000	

Sample Report

Se	77	1	nogas	43.975	43.975	3.06	28469	0.15	2000	
Se	82	1	nogas	49.211	49.211	2.99	15066	0.33	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	47.917	47.917	4.54	292171	0.02	2000	
Sn	118	1	nogas	91.418	91.418	1.84	815966	0.01	2000	
Ba	137	1	nogas	100.172	100.172	3.47	432044	0.02	2000	
Sb	121	2	He	50.678	50.678	0.78	245988	0.02	2000	
La	139	1	nogas	7145.695	7145.695	2.67	24982	28.60	2000	>LDR
Au	197	1	nogas	260.445	260.445	112.56	30	868.15	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1068504	6.48	1229805	86.88	70	125	
Ge	72	1	nogas	3440397	0.78	3541557	97.14	70	125	
In	115	1	nogas	3045795	2.52	3006327	101.31	70	125	
Bi	209	1	nogas	2171056	4.28	2153140	100.83	70	125	
Ge	72	2	He	832500	0.59	993327	83.81	70	125	

Sample Report

Sample Table

Sample Name	HS18111440-01PDS
Data File Name	103SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:20:08-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	96.245	96.245	2.71	706029	0.01	2000	
Na	23	1	nogas	63998.755	63998.755	5.54	1632931737	0.00	200000	
Mg	24	1	nogas	12087.066	12087.066	4.30	198951334	0.01	200000	
Al	27	1	nogas	727.606	727.606	1.13	14264068	0.01	2000	
K	39	1	nogas	10179.926	10179.926	4.23	212379592	0.00	200000	
Ti	47	1	nogas	109.686	109.686	3.94	220690	0.05	2000	
V	51	1	nogas	100.193	100.193	0.70	2916059	0.00	2000	
Cr	52	1	nogas	96.870	96.870	1.38	2286920	0.00	2000	
Mn	55	1	nogas	129.918	129.918	2.31	3745393	0.00	2000	
Co	59	1	nogas	94.211	94.211	2.38	2375441	0.00	2000	
Ni	60	1	nogas	94.537	94.537	3.62	536565	0.02	2000	
Cu	63	1	nogas	89.596	89.596	3.62	1303798	0.01	2000	
Zn	66	1	nogas	104.685	104.685	1.85	476934	0.02	2000	
As	75	1	nogas	97.721	97.721	3.00	614280	0.02	2000	
Sr	88	1	nogas	157.983	157.983	1.64	4589619	0.00	2000	
Ag	107	1	nogas	98.694	98.694	2.66	1445579	0.01	2000	
Cd	111	1	nogas	99.672	99.672	1.23	319936	0.03	2000	
Sb	121	1	nogas	94.308	94.308	3.22	1227578	0.01	2000	
Tl	205	1	nogas	101.045	101.045	1.98	1912959	0.01	2000	
Pb	208	1	nogas	101.850	101.850	2.22	2595043	0.00	2000	
U	238	1	nogas	0.448	0.448	36.78	11365	0.00	2000	
[Pb]	206	1	nogas	98.667	98.667	2.91	635455	0.02	2000	
[Pb]	207	1	nogas	98.021	98.021	2.52	564800	0.02	2000	
Na	23	2	He	68198.715	68198.715	2.82	101679568	0.07	200000	
Mg	24	2	He	12590.069	12590.069	1.33	10522701	0.12	200000	
Al	27	2	He	743.982	743.982	4.58	353278	0.21	2000	
K	39	2	He	9741.899	9741.899	0.49	9287853	0.10	200000	
Ca	43	2	He	16514.960	16514.960	2.44	41373	39.92	200000	
Ca	44	2	He	16230.439	16230.439	1.98	694515	2.34	200000	
V	51	2	He	104.665	104.665	0.42	647766	0.02	2000	
Cr	52	2	He	105.032	105.032	1.15	697243	0.02	2000	
Mn	55	2	He	131.377	131.377	3.37	630689	0.02	2000	
Fe	56	2	He	11443.976	11443.976	2.93	66820229	0.02	200000	
Co	59	2	He	102.351	102.351	0.59	938709	0.01	2000	
Ni	60	2	He	105.128	105.128	1.38	246851	0.04	2000	
Cu	63	2	He	102.085	102.085	1.81	640517	0.02	2000	
Zn	66	2	He	107.703	107.703	1.72	159053	0.07	2000	
As	75	2	He	104.080	104.080	0.95	150193	0.07	2000	
Se	78	2	He	99.023	99.023	0.74	11698	0.85	2000	
B	11	1	nogas	65.214	65.214	3.58	292728	0.02	2000	
Si	28	1	nogas	264232.105	264232.105	2.63	290761916	0.09	2000	>LDR
Ca	43	1	nogas	15895.784	15895.784	3.24	599221	2.65	200000	
Ca	44	1	nogas	16072.068	16072.068	2.64	10022570	0.16	200000	
Fe	56	1	nogas	11088.503	11088.503	1.48	277740806	0.00	200000	

Sample Report

Se	77	1	nogas	87.732	87.732	5.81	39670	0.22	2000	
Se	82	1	nogas	97.439	97.439	2.21	29277	0.33	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	96.101	96.101	1.67	581808	0.02	2000	
Sn	118	1	nogas	0.515	0.515	18.09	5508	0.01	2000	
Ba	137	1	nogas	149.442	149.442	2.65	622021	0.02	2000	
Sb	121	2	He	98.279	98.279	3.12	476408	0.02	2000	
La	139	1	nogas	6880.575	6880.575	5.38	23209	29.65	2000	>LDR
Au	197	1	nogas	-81.701	-81.701	-191.04	17	-490.20	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1044214	2.96	1229805	84.91	70	125	
Ge	72	1	nogas	3417851	2.07	3541557	96.51	70	125	
In	115	1	nogas	2939130	1.10	3006327	97.76	70	125	
Bi	209	1	nogas	2124061	2.59	2153140	98.65	70	125	
Ge	72	2	He	832388	1.31	993327	83.80	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	109_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:32:35-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	97.258	3.093	705423	2.00	100	97.3	90	110	
Na	23	1	nogas	10284.823	1.339	250654556	0.97	10000	102.8	90	110	
Mg	24	1	nogas	10345.633	4.032	162266920	2.16	10000	103.5	90	110	
Al	27	1	nogas	107.333	2.538	2053027	4.09	100	107.3	90	110	
K	39	1	nogas	10326.573	5.033	206861975	2.96	10000	103.3	90	110	
Ti	47	1	nogas	100.826	2.614	194981	2.05	100	100.8	90	110	
V	51	1	nogas	103.892	2.217	2897139	0.24	100	103.9	90	110	
Cr	52	1	nogas	99.869	3.797	2263187	2.36	100	99.9	90	110	
Mn	55	1	nogas	101.880	4.889	2825477	3.02	100	101.9	90	110	
Co	59	1	nogas	100.851	3.283	2442539	2.49	100	100.9	90	110	
Ni	60	1	nogas	100.571	2.160	548566	1.46	100	100.6	90	110	
Cu	63	1	nogas	93.657	6.315	1305993	4.80	100	93.7	90	110	
Zn	66	1	nogas	101.748	0.467	445497	2.40	100	101.7	90	110	
As	75	1	nogas	99.446	2.907	599768	0.88	100	99.4	90	110	
Sr	88	1	nogas	106.665	4.655	2976528	3.31	100	106.7	90	110	
Ag	107	1	nogas	100.209	5.608	1409776	4.03	100	100.2	90	110	
Cd	111	1	nogas	94.772	2.731	309848	2.22	100	94.8	90	110	
Sb	121	1	nogas	108.137	6.162	1351716	4.33	100	108.1	90	110	
Tl	205	1	nogas	100.419	2.694	1909550	4.79	100	100.4	90	110	
Pb	208	1	nogas	103.303	4.741	2632004	4.73	100	103.3	90	110	
U	238	1	nogas	103.343	3.094	2604366	0.60	100	103.3	90	110	
[Pb]	206	1	nogas	101.313	1.720	655236	1.59	100	101.3	90	110	
[Pb]	207	1	nogas	100.130	1.696	579688	3.81	100	100.1	90	110	
Na	23	2	He	10517.554	3.234	15822541	2.36	10000	105.2	90	110	
Mg	24	2	He	10138.375	1.722	8522250	0.86	10000	101.4	90	110	
Al	27	2	He	98.695	1.674	47934	2.52	100	98.7	90	110	
K	39	2	He	9373.680	1.298	8945331	1.27	10000	93.7	90	110	
Ca	43	2	He	9935.931	3.207	25040	4.05	10000	99.4	90	110	
Ca	44	2	He	9789.361	1.136	422850	1.49	10000	97.9	90	110	
V	51	2	He	102.068	1.519	635393	0.72	100	102.1	90	110	
Cr	52	2	He	104.132	0.434	695331	0.73	100	104.1	90	110	
Mn	55	2	He	98.597	1.396	476742	0.62	100	98.6	90	110	
Fe	56	2	He	10029.326	1.563	58910224	1.49	10000	100.3	90	110	
Co	59	2	He	103.153	1.192	951461	0.43	100	103.2	90	110	
Ni	60	2	He	102.911	1.398	243070	0.95	100	102.9	90	110	
Cu	63	2	He	98.005	1.838	619426	1.11	100	98.0	90	110	
Zn	66	2	He	100.549	1.896	149413	1.08	100	100.5	90	110	
As	75	2	He	101.152	0.861	146825	1.71	100	101.2	90	110	
Se	78	2	He	97.822	2.503	11624	2.01	100	97.8	90	110	
B	11	1	nogas	536.201	0.314	2323936	1.40	500	107.2	90	110	
Si	28	1	nogas	4933.993	0.826	6643236	2.19	5000	98.7	90	110	
Ca	43	1	nogas	10252.944	3.509	371661	1.94	10000	102.5	90	110	
Ca	44	1	nogas	10159.877	2.887	6285447	0.99	10000	101.6	90	110	
Fe	56	1	nogas	9920.854	1.536	238966889	1.07	10000	99.2	90	110	
Se	77	1	nogas	104.621	5.244	42343	1.59	100	104.6	90	110	
Se	82	1	nogas	100.212	5.979	28907	4.32	100	100.2	90	110	
Mo	95	1	nogas	101.640	1.972	591166	1.14	100	101.6	90	110	
Sn	118	1	nogas	96.621	2.269	847698	0.56	100	96.6	90	110	
Ba	137	1	nogas	96.396	2.395	408832	1.67	100	96.4	90	110	
Sb	121	2	He	100.501	1.168	490057	0.30	100	100.5	90	110	
Li	7	1	nogas	95.967	2.152	1551722	2.74	100	96.0	90	110	
P	31	1	nogas	472.684	0.965	954298	1.56	500	94.5	90	110	
La	139	1	nogas	110.643	6.759	413	7.39	100	110.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	436.736	87.224	37	41.66	100	436.7	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1032226	1.30	1229805	83.93	70	125	
Ge	72	1	nogas	3283762	1.94	3541557	92.72	70	125	
In	115	1	nogas	2994114	1.75	3006327	99.59	70	125	
Bi	209	1	nogas	2133336	3.10	2153140	99.08	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	837154	0.88	993327	84.28	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	110_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:34:40-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.051	19.1	463	21.6	1	
Na	23	1	nogas	40.546	6.0	1496793	2.0	100	
Mg	24	1	nogas	7.830	23.4	131927	20.4	100	
Al	27	1	nogas	-0.649	-6.1	24623	2.5	5	
K	39	1	nogas	4.403	147.5	8025481	1.5	100	
Ti	47	1	nogas	0.022	159.8	497	14.1	2.5	
V	51	1	nogas	0.576	66.4	223018	4.8	2.5	
Cr	52	1	nogas	-0.223	-33.4	34973	4.7	2.5	
Mn	55	1	nogas	0.156	17.1	27487	2.0	2.5	
Co	59	1	nogas	0.039	52.8	2344	22.5	2.5	
Ni	60	1	nogas	0.331	5.5	1037	10.3	2.5	
Cu	63	1	nogas	-4.091	-1.3	20351	3.6	2.5	
Zn	66	1	nogas	0.474	5.5	2240	5.0	2.5	
As	75	1	nogas	-0.072	-387.8	49187	2.1	2.5	
Sr	88	1	nogas	0.166	9.8	5701	8.2	2.5	
Ag	107	1	nogas	0.039	25.7	690	21.1	2.5	
Cd	111	1	nogas	0.043	29.6	163	24.7	1	
Sb	121	1	nogas	1.116	23.1	15721	21.3	2.5	
Tl	205	1	nogas	0.577	52.9	11832	51.6	1	
Pb	208	1	nogas	-0.017	-217.1	3587	26.2	2.5	
U	238	1	nogas	0.160	67.9	4241	67.8	2.5	
[Pb]	206	1	nogas	-0.041	-109.2	900	32.9	2.5	
[Pb]	207	1	nogas	-0.016	-286.8	800	35.3	2.5	
Na	23	2	He	50.139	4.4	139300	1.1	100	
Mg	24	2	He	6.841	3.4	6391	4.6	100	
Al	27	2	He	-0.493	-44.7	697	16.6	5	
K	39	2	He	-23.637	-12.7	203842	1.4	100	
Ca	43	2	He	28.761	43.0	83	38.6	100	
Ca	44	2	He	-4.433	-278.8	3644	12.8	100	
V	51	2	He	-0.360	-1.9	2943	3.4	2.5	
Cr	52	2	He	-0.068	-43.2	4851	5.2	2.5	
Mn	55	2	He	-0.008	-269.9	2454	4.5	2.5	
Fe	56	2	He	4.034	7.1	37632	2.9	100	
Co	59	2	He	0.034	27.9	687	12.6	2.5	
Ni	60	2	He	-0.454	-1.5	273	7.6	2.5	
Cu	63	2	He	-2.746	-2.4	7465	7.4	2.5	
Zn	66	2	He	-0.299	-13.7	603	12.2	2.5	
As	75	2	He	0.046	37.1	370	8.6	2.5	
Se	78	2	He	-0.077	-122.2	174	5.3	2.5	
B	11	1	nogas	17.401	1.2	95028	3.8	10	CCB Main CR1 Failed
Si	28	1	nogas	-118.144	-17.4	1372195	0.8	5	
Ca	43	1	nogas	21.766	42.1	1707	20.6	100	
Ca	44	1	nogas	-259.640	-3.6	404749	0.7	100	
Fe	56	1	nogas	6.025	168.7	2301580	11.2	100	
Se	77	1	nogas	-3.780	-26.4	15710	1.2	2.5	
Se	82	1	nogas	0.380	63.3	467	16.2	2.5	
Mo	95	1	nogas	0.246	32.9	1773	27.8	2.5	
Sn	118	1	nogas	0.254	24.0	3384	16.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.065	24.3	623	9.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.716	7.5	4057	4.6	2.5	
P	31	1	nogas	-3.511	-27.1	100049	0.7	10	
La	139	1	nogas	18.812	65.0	100	43.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-180.898	-220.0	13	114.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1182414	4.55	1229805	96.15	70	125	
Ge	72	1	nogas	3390805	1.15	3541557	95.74	70	125	
In	115	1	nogas	3045852	1.99	3006327	101.31	70	125	
Bi	209	1	nogas	2220064	2.27	2153140	103.11	70	125	
Ge	72	2	He	861816	2.05	993327	86.76	70	125	

Sample Report

Sample Table

Sample Name	HS18120114-06
Data File Name	113SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:40:51-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.078	0.078	18.62	620	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	160519.785	160519.785	3.63	2850030730	0.01	200000	
Al	27	1	nogas	336.118	336.118	3.46	6654937	0.01	2000	
K	39	1	nogas	3370.142	3370.142	3.42	76206752	0.00	200000	
Ti	47	1	nogas	8.349	8.349	1.27	17345	0.05	2000	
V	51	1	nogas	3.747	3.747	7.48	312604	0.00	2000	
Cr	52	1	nogas	4.686	4.686	17.17	150163	0.00	2000	
Mn	55	1	nogas	22.604	22.604	0.25	675696	0.00	2000	
Co	59	1	nogas	0.904	0.904	1.34	24340	0.00	2000	
Ni	60	1	nogas	14.640	14.640	2.69	82970	0.02	2000	
Cu	63	1	nogas	-1.978	-1.978	-6.45	49791	0.00	2000	
Zn	66	1	nogas	6.320	6.320	5.02	29077	0.02	2000	
As	75	1	nogas	13.272	13.272	3.31	127529	0.01	2000	
Sr	88	1	nogas	4934.760	4934.760	2.22	144319418	0.00	2000	>LDR
Ag	107	1	nogas	0.015	0.015	33.94	347	0.00	2000	
Cd	111	1	nogas	0.238	0.238	10.32	800	0.03	2000	
Sb	121	1	nogas	0.237	0.237	11.93	4441	0.01	2000	
Tl	205	1	nogas	0.020	0.020	16.74	747	0.00	2000	
Pb	208	1	nogas	0.438	0.438	4.32	15156	0.00	2000	
U	238	1	nogas	4.411	4.411	5.01	107191	0.00	2000	
[Pb]	206	1	nogas	0.472	0.472	0.92	4031	0.01	2000	
[Pb]	207	1	nogas	0.420	0.420	15.14	3167	0.01	2000	
Na	23	2	He	508647.139	508647.139	1.24	806045375	0.06	200000	>LDR
Mg	24	2	He	172593.226	172593.226	0.57	153379474	0.11	200000	
Al	27	2	He	344.168	344.168	6.41	174226	0.20	2000	
K	39	2	He	3380.898	3380.898	1.09	3370778	0.10	200000	
Ca	43	2	He	432615.784	432615.784	1.13	1152117	37.55	200000	>LDR
Ca	44	2	He	418379.720	418379.720	1.29	18942089	2.21	200000	>LDR
V	51	2	He	1.291	1.291	3.87	13796	0.01	2000	
Cr	52	2	He	4.460	4.460	3.70	36704	0.01	2000	
Mn	55	2	He	22.375	22.375	2.17	116362	0.02	2000	
Fe	56	2	He	648.468	648.468	1.57	4039711	0.02	200000	
Co	59	2	He	0.387	0.387	0.99	4147	0.01	2000	
Ni	60	2	He	9.013	9.013	0.84	23792	0.04	2000	
Cu	63	2	He	-2.316	-2.316	-2.42	10423	-0.02	2000	
Zn	66	2	He	5.102	5.102	6.53	9042	0.06	2000	
As	75	2	He	1.100	1.100	5.00	1993	0.06	2000	
Se	78	2	He	2.721	2.721	14.70	525	0.52	2000	
B	11	1	nogas	38.502	38.502	1.64	181066	0.02	2000	
Si	28	1	nogas	216261.017	216261.017	1.08	239919330	0.09	2000	>LDR
Ca	43	1	nogas	428056.865	428056.865	1.93	16229095	2.64	200000	>LDR
Ca	44	1	nogas	445261.907	445261.907	1.45	264589249	0.17	200000	>LDR
Fe	56	1	nogas	653.444	653.444	1.24	18538469	0.00	200000	
Se	77	1	nogas	85.360	85.360	4.52	39329	0.22	2000	
Se	82	1	nogas	11.387	11.387	6.24	3764	0.30	2000	

Sample Report

Mo	95	1	nogas	0.173	0.173	5.79	1357	0.01	2000	
Sn	118	1	nogas	0.065	0.065	9.94	1670	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	254.249	254.249	0.78	1078903	0.02	2000	
Sb	121	2	He	0.241	0.241	4.10	1723	0.01	2000	
La	139	1	nogas	5167.774	5167.774	0.95	17793	29.04	2000	>LDR
Au	197	1	nogas	-71.281	-71.281	-572.11	17	-427.68	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1073661	2.54	1229805	87.30	70	125	
Ge	72	1	nogas	3441817	2.04	3541557	97.18	70	125	
In	115	1	nogas	2996970	2.52	3006327	99.69	70	125	
Bi	209	1	nogas	2057080	3.33	2153140	95.54	70	125	
Ge	72	2	He	885029	1.07	993327	89.10	70	125	

Sample Report

Sample Table

Sample Name	HS18120114-07
Data File Name	114SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\121
Acq Date Time	2018-12-10T20:42:54-06:00
Sample Type	Sample
Dilution	1
Comment	DISS B135382
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.033	0.033	15.08	300	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	117617.948	117617.948	2.20	2189431782	0.01	200000	
Al	27	1	nogas	131.229	131.229	14.53	2805429	0.00	2000	
K	39	1	nogas	2300.777	2300.777	2.50	58583418	0.00	200000	
Ti	47	1	nogas	5.236	5.236	2.52	11867	0.04	2000	
V	51	1	nogas	3.014	3.014	9.19	314130	0.00	2000	
Cr	52	1	nogas	1.980	1.980	3.94	93284	0.00	2000	
Mn	55	1	nogas	27.898	27.898	4.35	888473	0.00	2000	
Co	59	1	nogas	0.826	0.826	3.91	23979	0.00	2000	
Ni	60	1	nogas	6.947	6.947	2.68	41774	0.02	2000	
Cu	63	1	nogas	-2.260	-2.260	-4.17	49266	0.00	2000	
Zn	66	1	nogas	29.400	29.400	0.82	144878	0.02	2000	
As	75	1	nogas	10.991	10.991	3.86	122629	0.01	2000	
Sr	88	1	nogas	3413.166	3413.166	2.71	107135002	0.00	2000	>LDR
Ag	107	1	nogas	0.011	0.011	49.17	313	0.00	2000	
Cd	111	1	nogas	0.108	0.108	3.66	403	0.03	2000	
Sb	121	1	nogas	0.197	0.197	7.00	4194	0.00	2000	
Tl	205	1	nogas	0.015	0.015	19.50	707	0.00	2000	
Pb	208	1	nogas	0.126	0.126	6.37	7237	0.00	2000	
U	238	1	nogas	15.639	15.639	3.75	404114	0.00	2000	
[Pb]	206	1	nogas	0.106	0.106	14.73	1857	0.01	2000	
[Pb]	207	1	nogas	0.095	0.095	7.18	1447	0.01	2000	
Na	23	2	He	554038.515	554038.515	1.98	960606466	0.06	200000	>LDR
Mg	24	2	He	123685.842	123685.842	0.25	120245885	0.10	200000	
Al	27	2	He	119.400	119.400	3.50	66826	0.18	2000	
K	39	2	He	2605.689	2605.689	0.77	2649670	0.10	200000	
Ca	43	2	He	313253.858	313253.858	0.30	912540	34.33	200000	>LDR
Ca	44	2	He	304188.698	304188.698	0.70	15065988	2.02	200000	>LDR
V	51	2	He	0.595	0.595	6.45	10125	0.01	2000	
Cr	52	2	He	1.911	1.911	2.26	20622	0.01	2000	
Mn	55	2	He	26.373	26.373	1.08	149534	0.02	2000	
Fe	56	2	He	447.707	447.707	1.47	3055349	0.01	200000	
Co	59	2	He	0.426	0.426	5.19	4954	0.01	2000	
Ni	60	2	He	1.595	1.595	4.81	5874	0.03	2000	
Cu	63	2	He	-2.634	-2.634	-1.67	9166	-0.03	2000	
Zn	66	2	He	26.986	26.986	4.09	47238	0.06	2000	
As	75	2	He	0.623	0.623	4.30	1382	0.05	2000	
Se	78	2	He	0.133	0.133	38.81	224	0.06	2000	
B	11	1	nogas	162.183	162.183	3.62	778397	0.02	2000	
Si	28	1	nogas	200188.981	200188.981	2.48	238426416	0.08	2000	>LDR
Ca	43	1	nogas	314768.227	314768.227	2.42	12807341	2.46	200000	>LDR
Ca	44	1	nogas	314745.066	314745.066	3.64	200822744	0.16	200000	>LDR
Fe	56	1	nogas	455.345	455.345	4.53	14569918	0.00	200000	
Se	77	1	nogas	70.229	70.229	3.16	37960	0.19	2000	
Se	82	1	nogas	5.077	5.077	14.07	2010	0.25	2000	