LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 14

2019

Bate Stamp Numbers
00932034 – 00933747

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Longhorn Army Ammunition Plant

1976 – 2019

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

VOLUME 14

2019

A. Title: (cont'd) Report – Quarterly Evaluation Report, 4th Quarter (October-December) 2018, Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas, June 2019
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers, Tulsa District
Date: June 20, 2019
Bate Stamp: 00932034 – 00933747

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010805.D
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Inj Date : 08-JAN-2019 12:32
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : 180315V9;WATER;0;1;
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Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

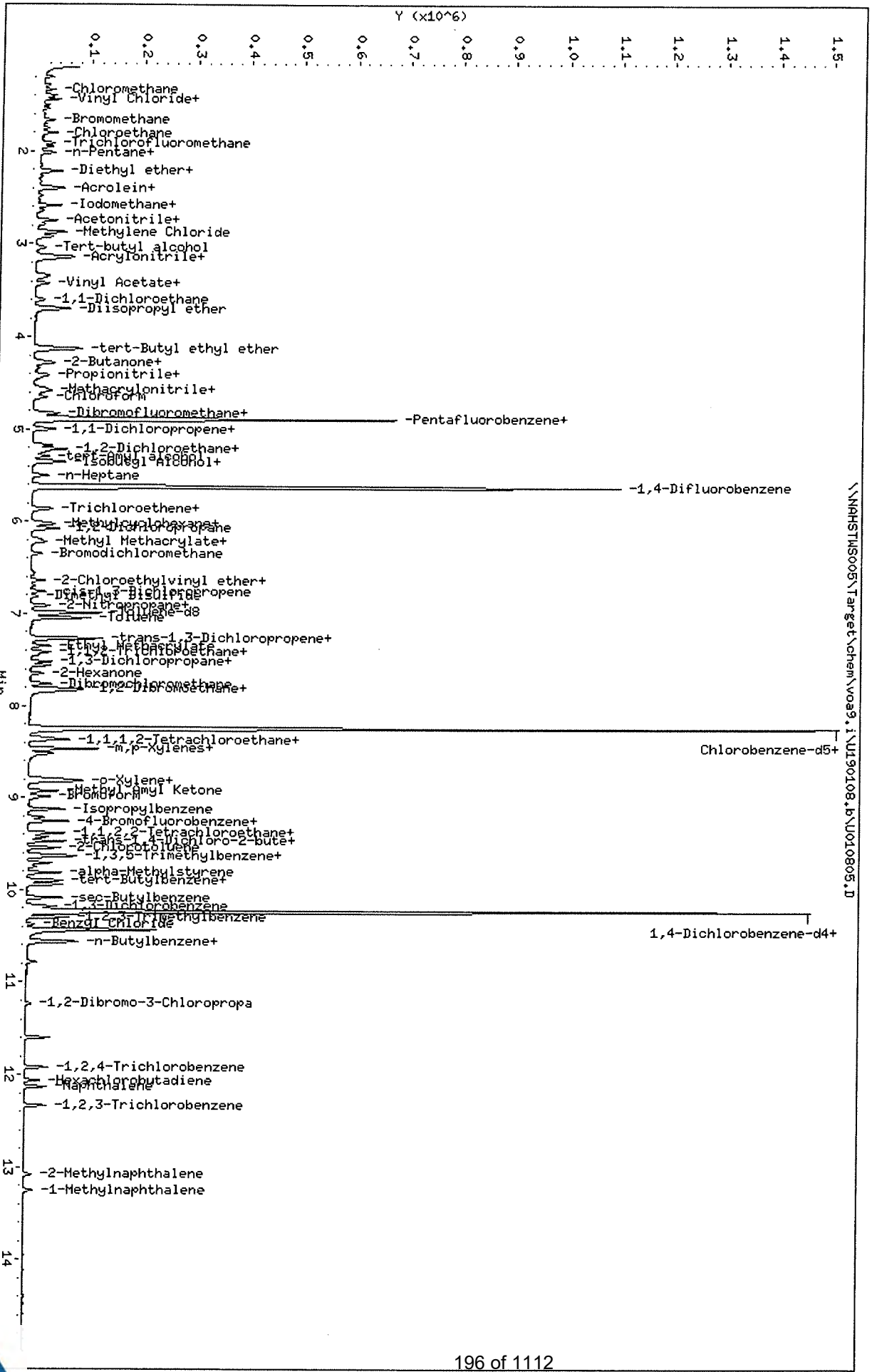
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	411388	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	781780	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	711339	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	327173	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.826	(0.986)	16204	2.00000	1.96(a)
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	22691	2.00000	1.67(a)
$ 48 Toluene-d8	98	6.986	6.986	(0.847)	65875	2.00000	1.28(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	23062	2.00000	1.56(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	8129	2.00000	1.89(a)
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	12397	2.00000	1.83(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	15238	2.00000	1.71(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	8646	2.00000	1.98(a)
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	18128	2.00000	1.93(a)
11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	8089	2.00000	2.03(a)
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	14077	2.00000	1.94(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	11082	2.00000	1.90(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	14015	2.00000	1.77(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	10799	2.00000	1.83(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	32293	2.00000	1.87(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	1607	2.00000	3.40(a)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	9729	2.00000	1.96(a)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	19936	2.00000	2.00(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010805.D Page 2
Report Date: 01-Feb-2019 15:43

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	15308	2.00000	2.02(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	10932	2.00000	1.94(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	31100	2.00000	1.85(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	19150	2.00000	1.94(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	18409	2.00000	1.96(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	20771	2.00000	1.98(a)
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	10615	2.00000	1.89(a)
24 2-Butanone	43	4.343	4.343	(0.887)	10679	4.00000	3.75(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	30026	2.00000	1.93(a)
52 2-Hexanone	43	7.649	7.649	(0.927)	14671	4.00000	3.57(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	35027	2.00000	1.93(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	32429	2.00000	1.86(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	21707	4.00000	3.66(a)
10 Acetone	43	2.476	2.476	(0.506)	8715	4.00000	3.33(a)
37 Benzene	78	5.216	5.216	(0.927)	42681	2.00000	1.98(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	9942	2.00000	1.94(a)
29 Bromochloromethane	128	4.549	4.549	(0.930)	4787	2.00000	2.11(a)
39 Bromodichloromethane	83	6.348	6.348	(1.129)	11132	2.00000	1.83(aM)
66 Bromoform	173	8.984	8.984	(1.089)	4283	2.00000	3.12(Ta)
6 Bromomethane	94	1.670	1.670	(0.341)	8201	2.00000	3.38(a)
19 Carbon Disulfide	76	2.585	2.585	(0.528)	54864	4.00000	3.89(a)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	9328	2.00000	1.78(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	28361	2.00000	1.99(a)
7 Chloroethane	64	1.749	1.749	(0.357)	8411	2.00000	2.26(aM)
28 Chloroform	83	4.654	4.654	(0.951)	17506	2.00000	1.97(a)
3 Chloromethane	50	1.336	1.336	(0.273)	11251	2.00000	4.40(a)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	10808	2.00000	1.92(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	13084	2.00000	2.70(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	6755	2.00000	2.61(a)
44 Dibromomethane	93	6.187	6.187	(1.100)	6107	2.00000	1.85(aM)
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	10985	2.00000	2.02(a)
61 Ethylbenzene	106	8.369	8.369	(1.015)	13549	2.00000	1.89(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	4288	2.00000	2.38(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	39125	2.00000	1.91(a)
62 m,p-Xylenes	106	8.470	8.470	(1.027)	33013	4.00000	3.78(a)
17 Methylene Chloride	84	2.870	2.870	(0.586)	11877	2.00000	1.76(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	32867	2.00000	1.94(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	48396	2.00000	1.91(a)
92 Naphthalene	128	12.133	12.133	(1.185)	27018	2.00000	2.04(a)
63 o-Xylene	106	8.811	8.811	(1.068)	17076	2.00000	1.91(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	40095	2.00000	1.93(a)
64 Styrene	104	8.823	8.823	(1.070)	27152	2.00000	1.83(a)
78 tert-Butylbenzene	119	9.898	9.898	(0.967)	28296	2.00000	1.95(a)
56 Tetrachloroethene	164	7.522	7.522	(0.912)	7657	2.00000	2.04(a)
50 Toluene	91	7.046	7.046	(0.854)	42945	2.00000	1.96(a)
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	9537	2.00000	1.90(a)
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	10454	2.00000	2.88(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	9990	2.00000	2.00(a)
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	13385	2.00000	1.94(a)
5 Vinyl Chloride	62	1.415	1.415	(0.289)	11713	2.00000	1.91(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.



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Sample Info: VSTD002;VSTD002;1;4;
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Column phase: DB624

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

\\NAHSTWS005\Target\chem\voa9,i\U190108,b\U010805.D

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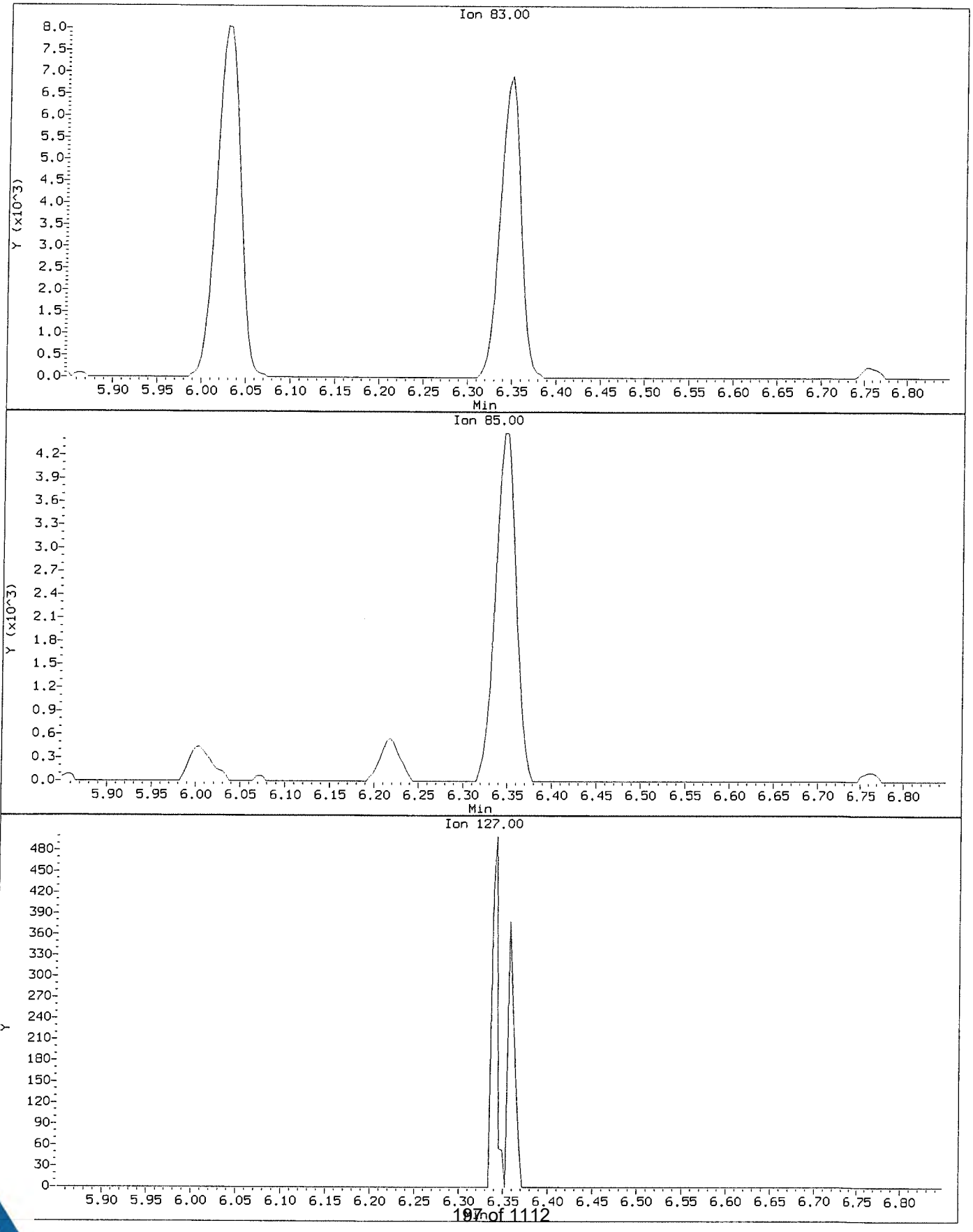
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Bromodichloromethane
CAS Number: 75-27-4



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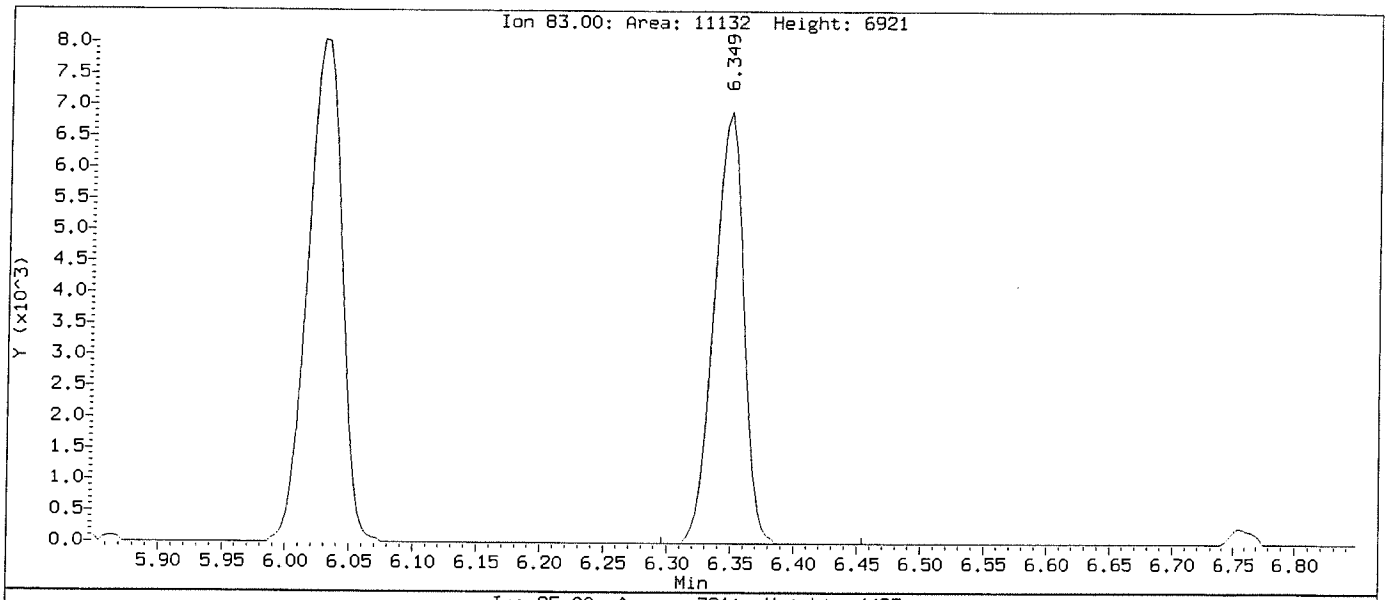
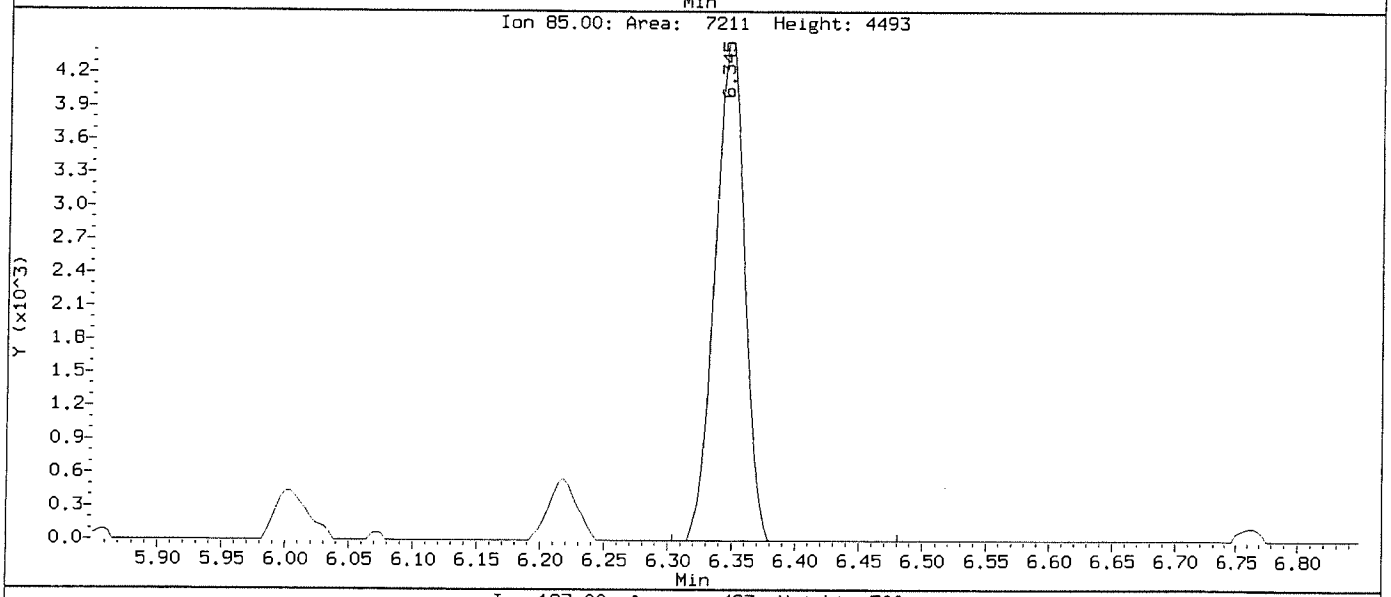
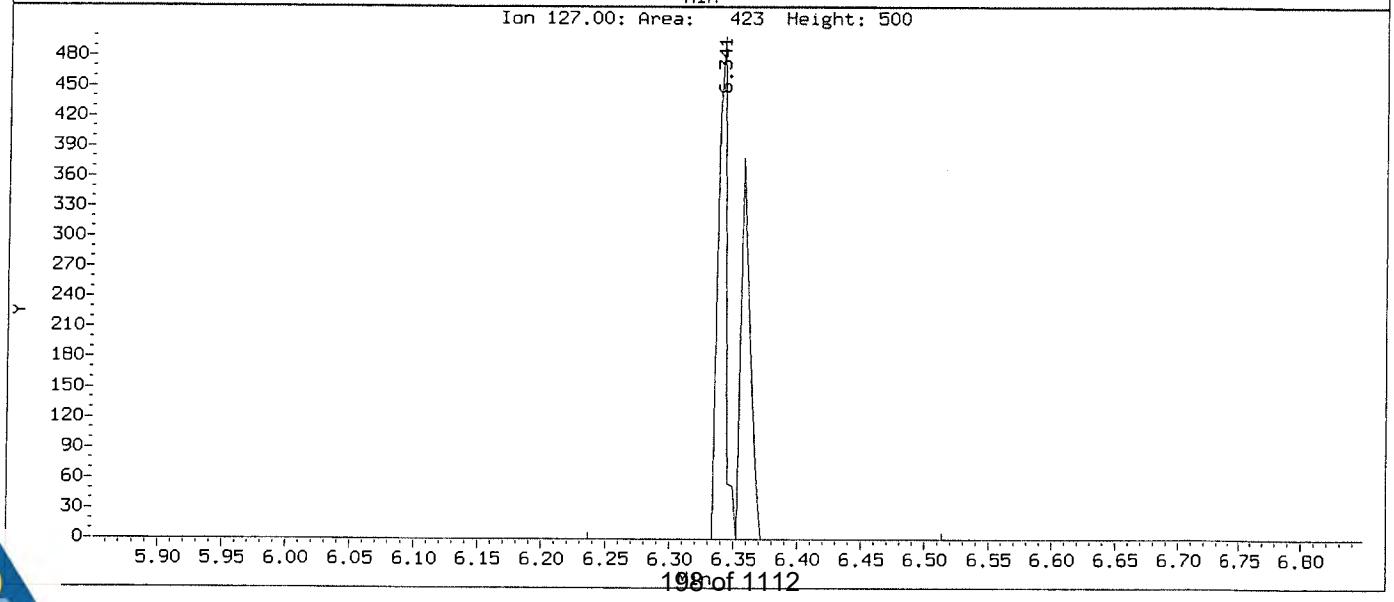
Compound: Bromodichloromethane
CAS Number: 75-27-4







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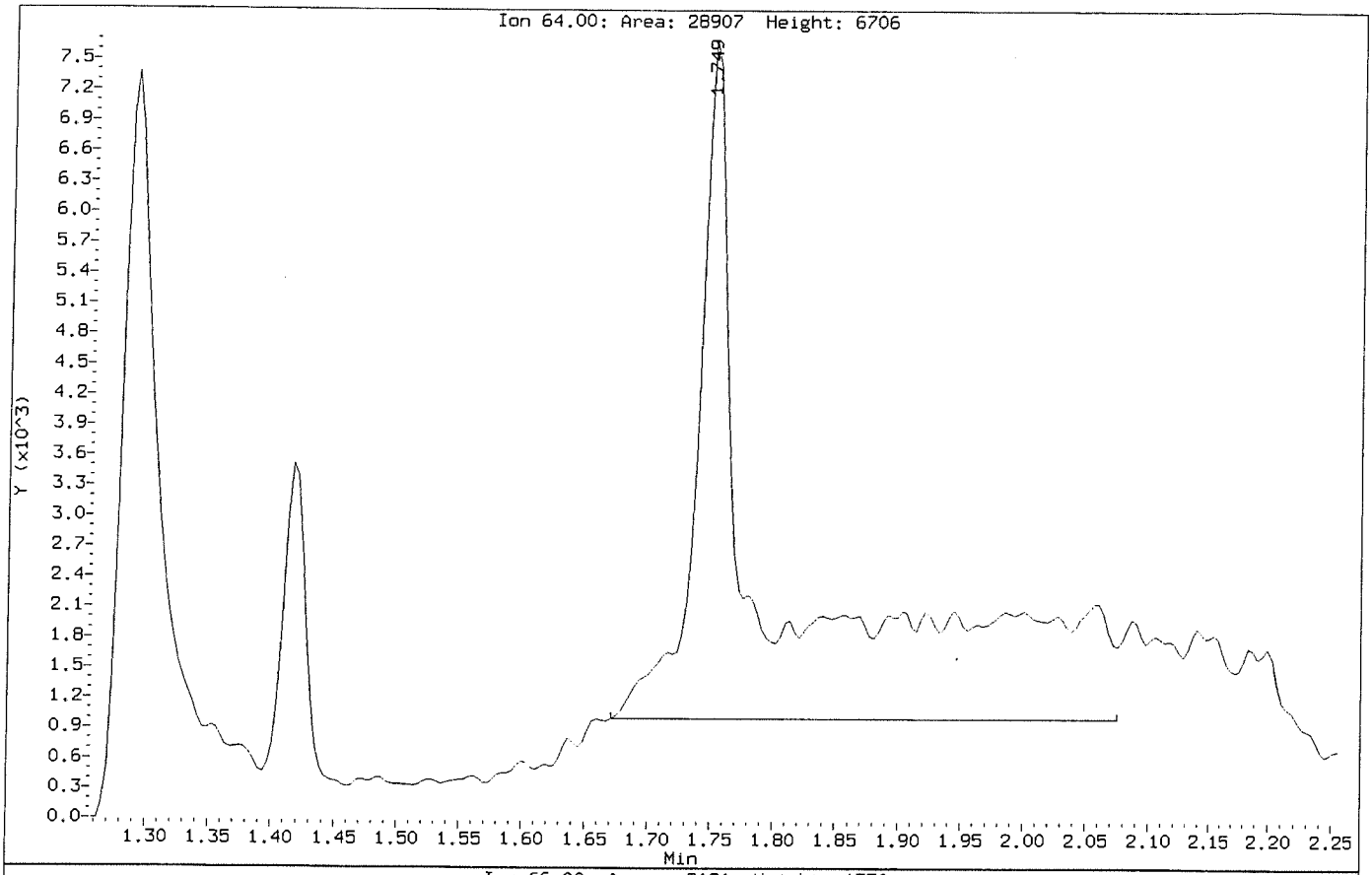
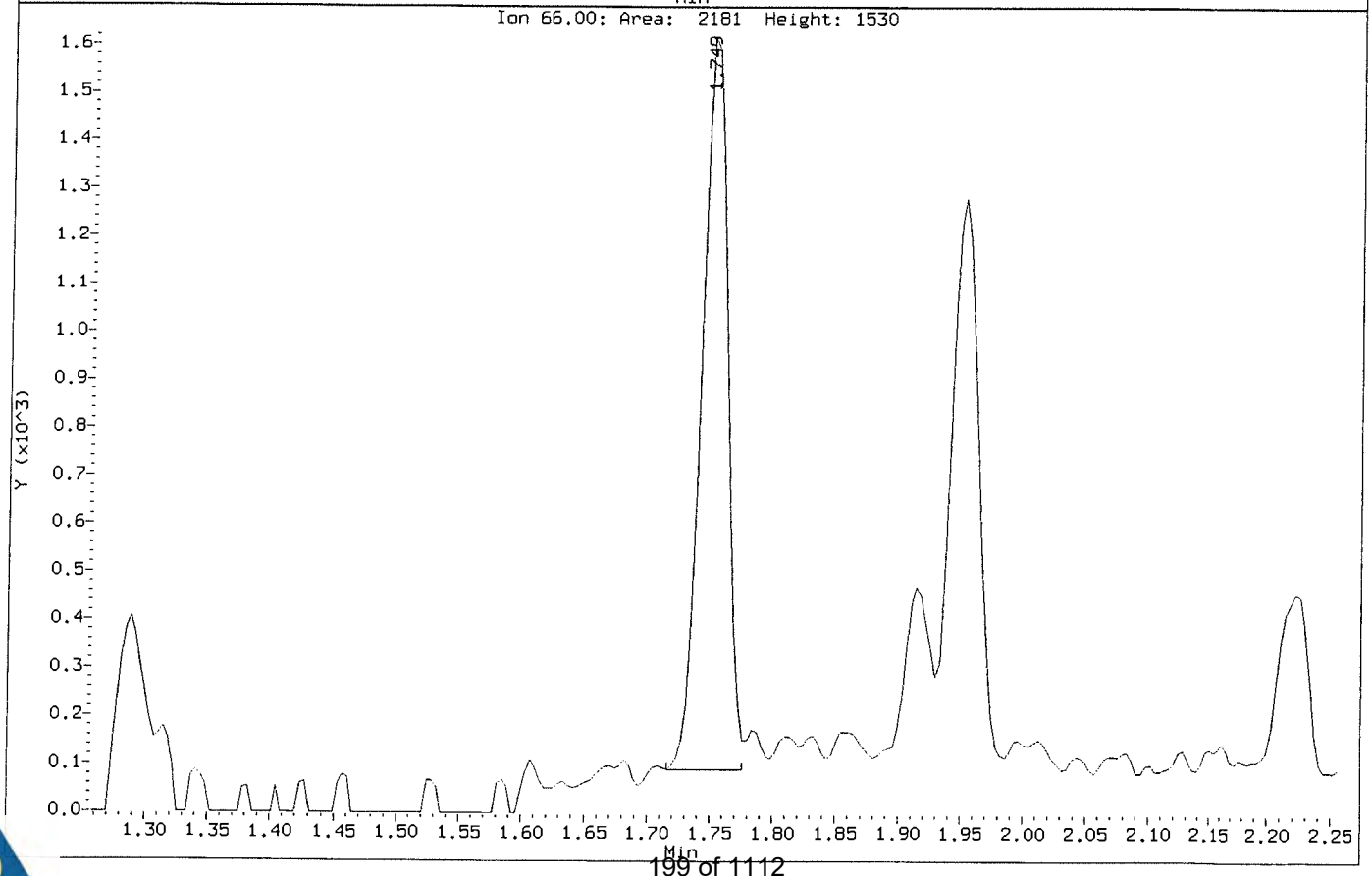
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3





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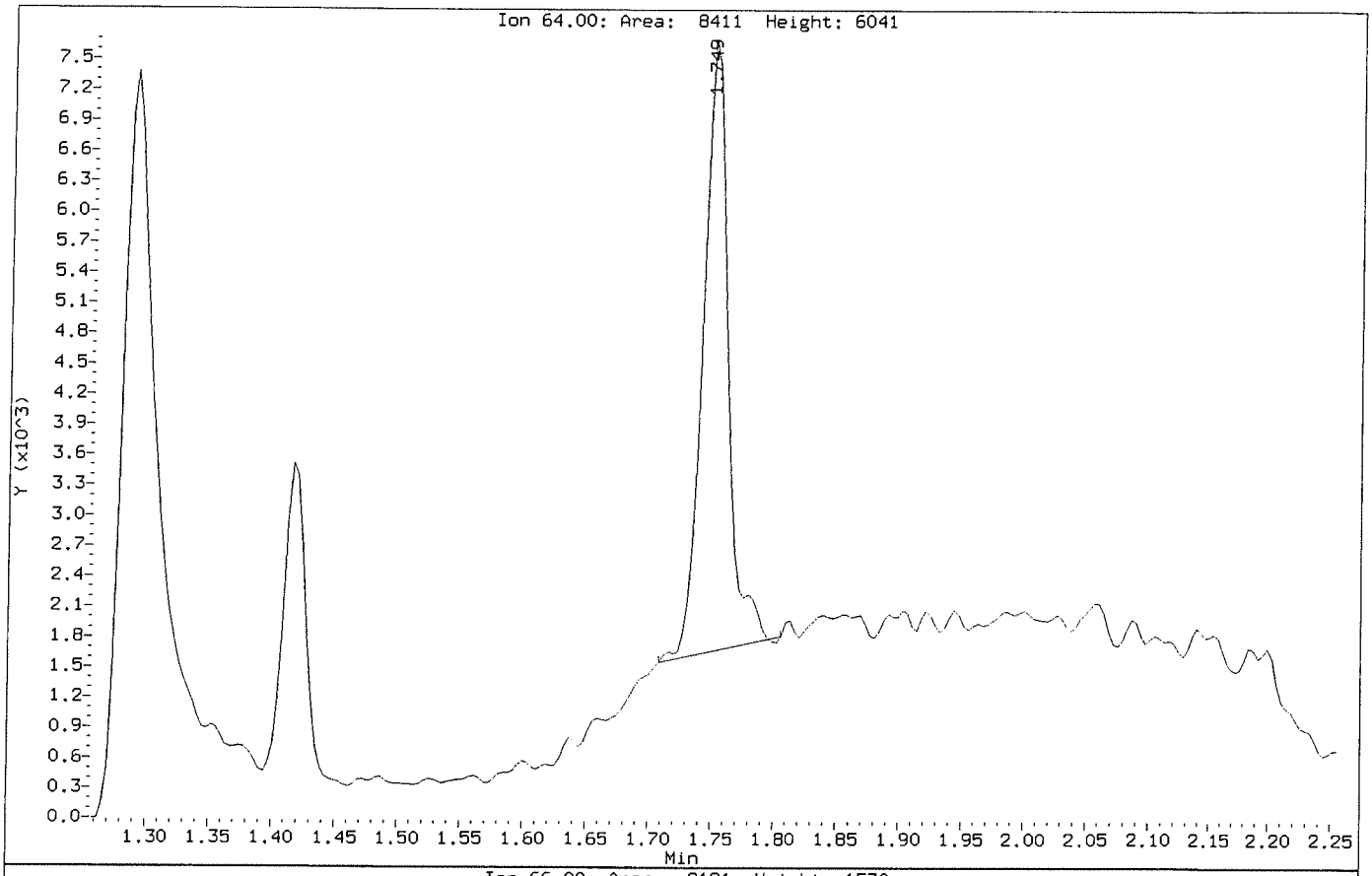
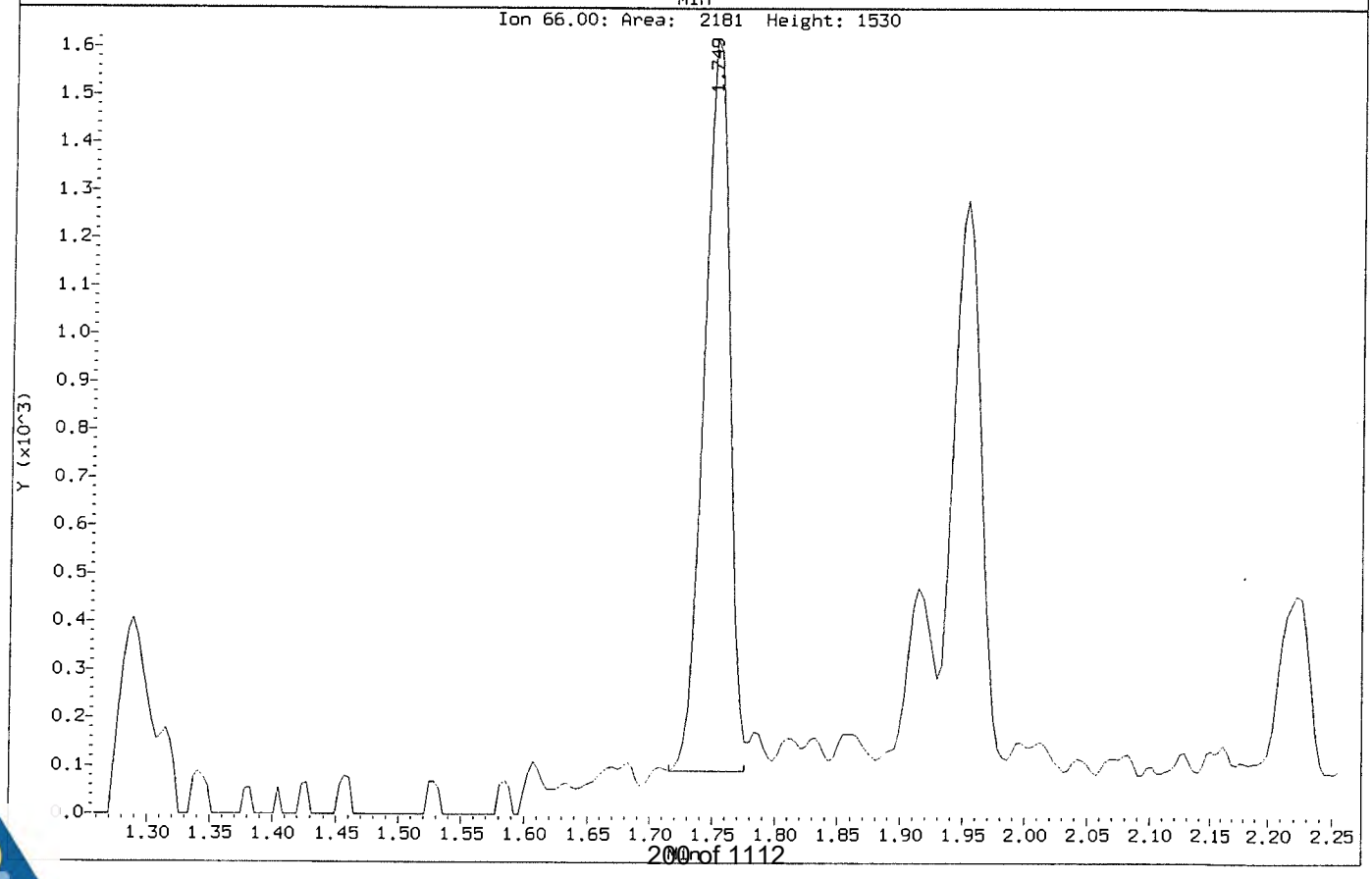
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3





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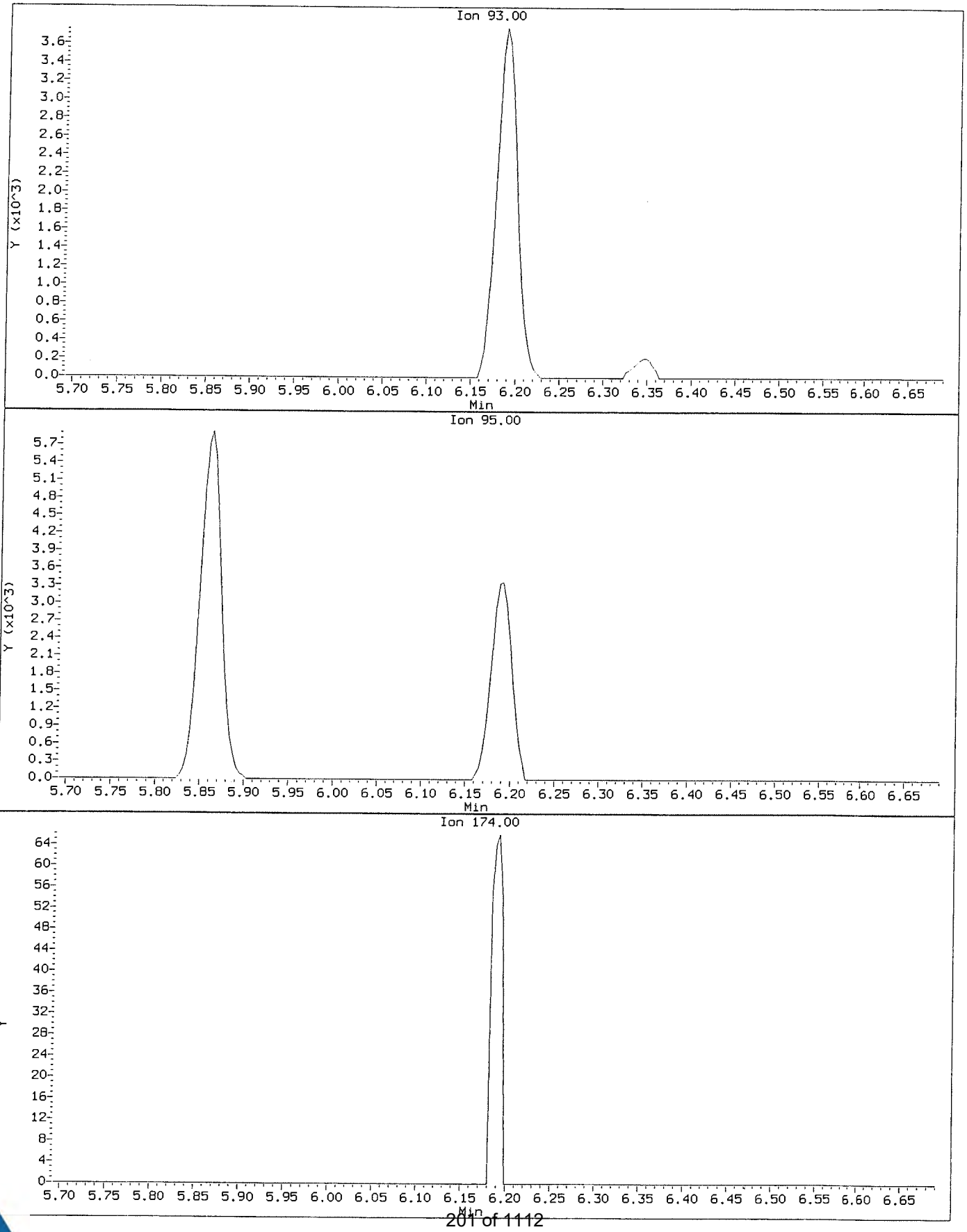
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3



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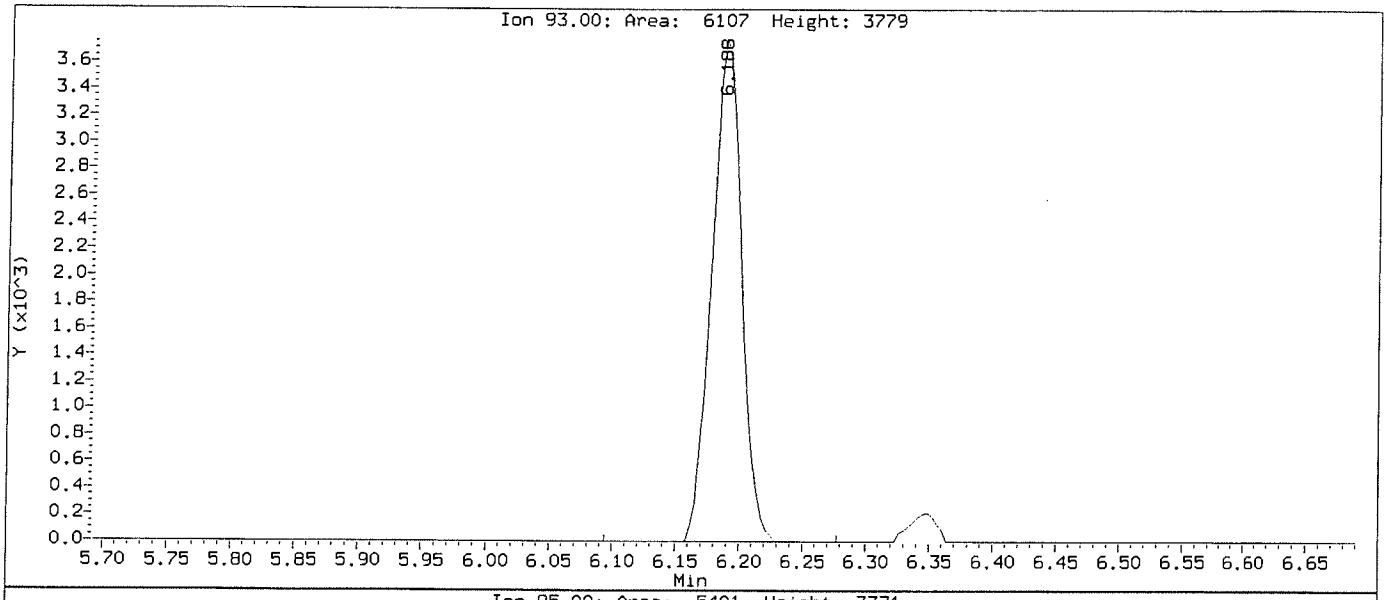
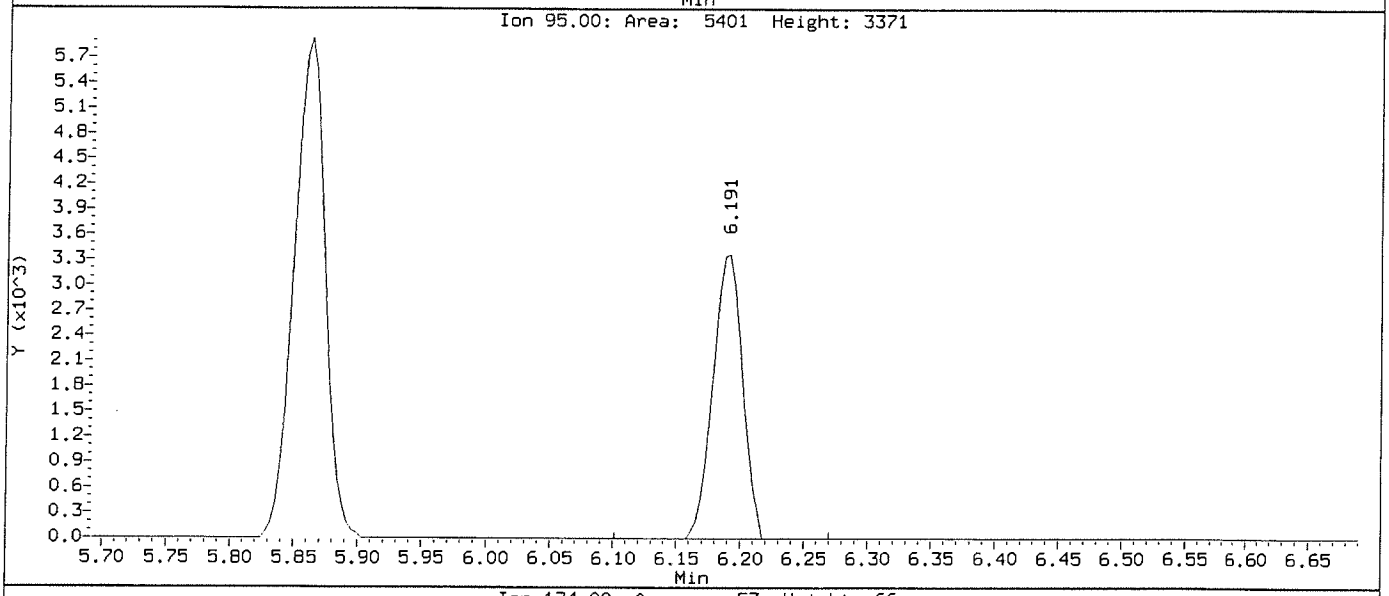
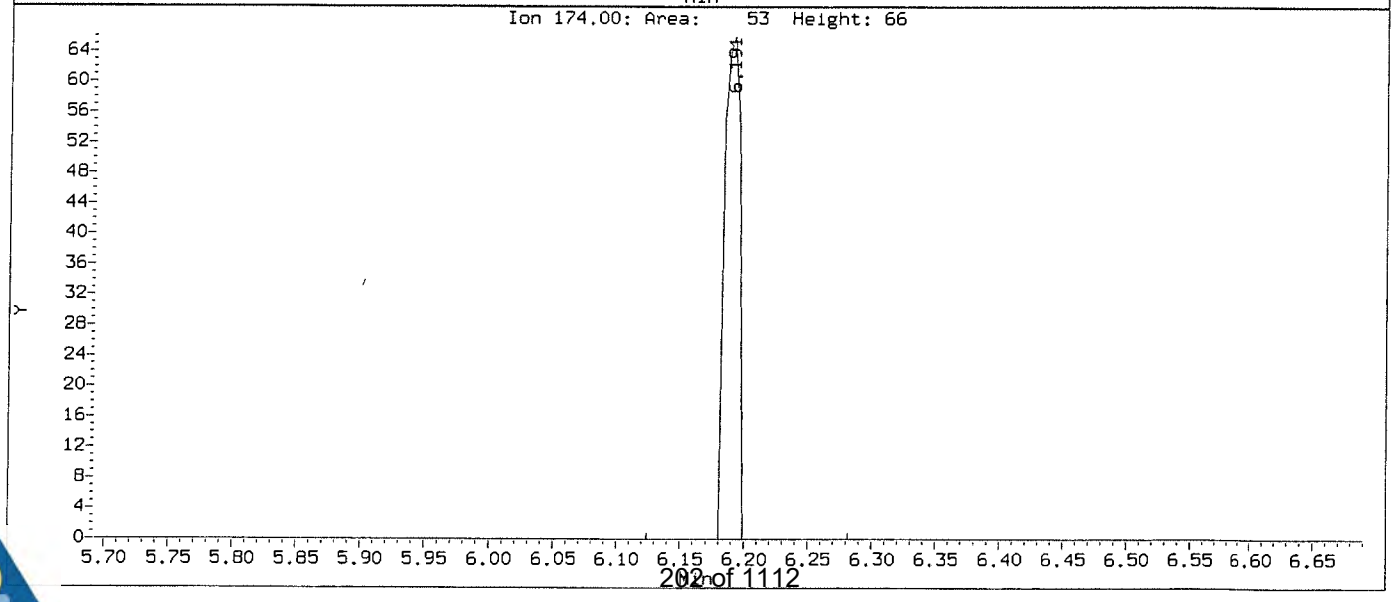
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3







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Report Date: 01-Feb-2019 15:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D
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Inj Date : 08-JAN-2019 12:56
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 12:32 Cal File: U010805.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

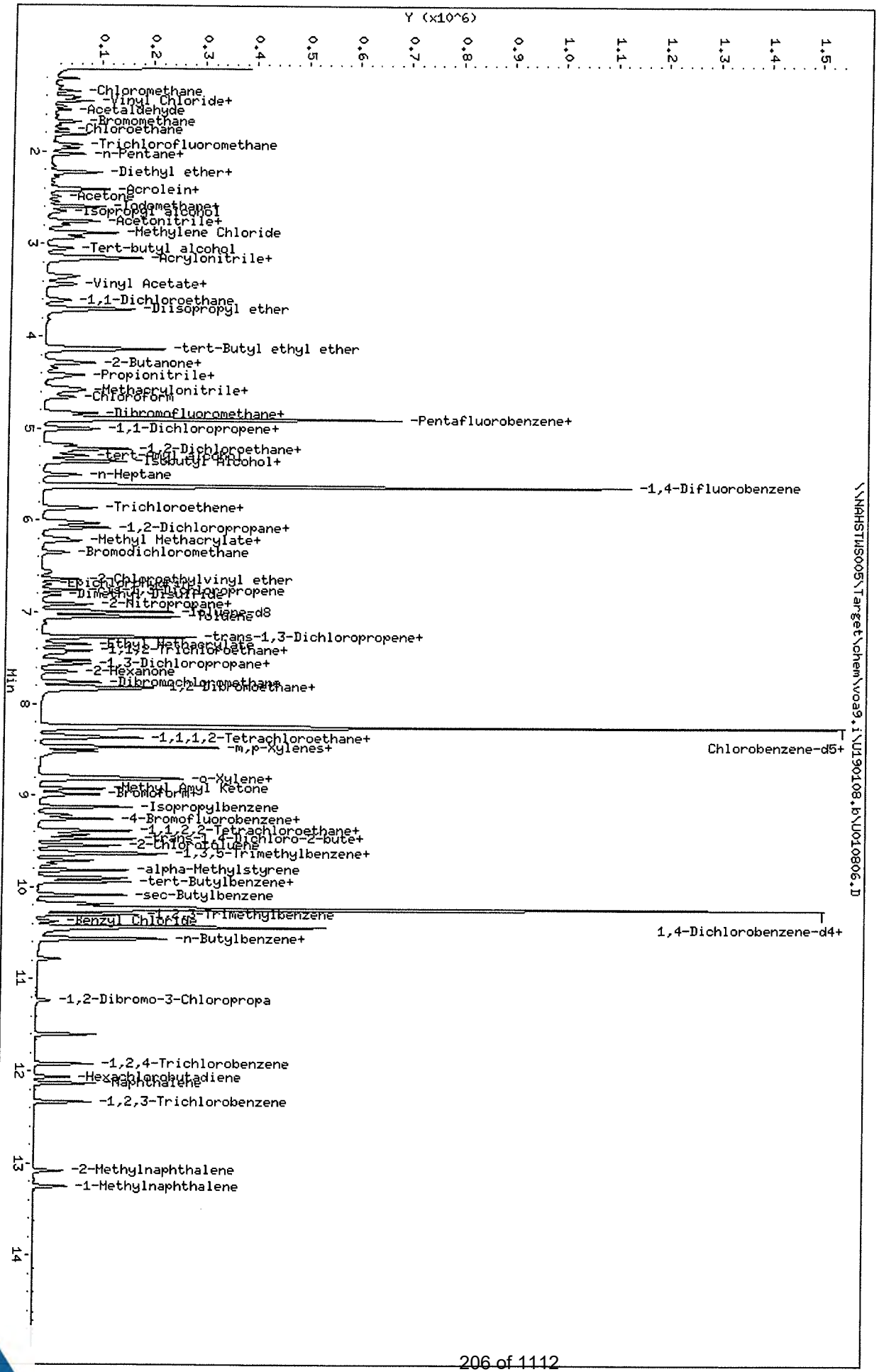
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	405638	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	777213	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	712128	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	333957	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	29602	5.00000	5.02
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	40286	5.00000	4.80(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	119933	5.00000	4.34(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	43652	5.00000	4.61(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	19854	5.00000	4.61(a)
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	32499	5.00000	4.89(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	38499	5.00000	4.78(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	22485	5.00000	5.15
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	46642	5.00000	5.05
11 1,1-Dichloroethene	96	2.409	2.409	(0.492)	19649	5.00000	5.02
32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	34745	5.00000	4.83(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	28573	5.00000	4.80(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	38197	5.00000	4.73(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	30102	5.00000	5.00
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	88744	5.00000	5.05
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	4313	5.00000	5.55
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	24841	5.00000	5.00
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	50465	5.00000	4.97(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	38061	5.00000	5.06
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	27875	5.00000	4.98(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	85261	5.00000	4.97(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	50290	5.00000	4.99(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	48349	5.00000	5.14
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	52430	5.00000	4.91(a)
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	25547	5.00000	4.62(a)
24 2-Butanone	43	4.347	4.347	(0.887)	27636	10.0000	9.84
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	79748	5.00000	5.02
52 2-Hexanone	43	7.649	7.649	(0.927)	39211	10.0000	9.54
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	93282	5.00000	5.05
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	85940	5.00000	4.83(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	57873	10.0000	9.77
10 Acetone	43	2.487	2.487	(0.508)	20388	10.0000	10.16
37 Benzene	78	5.220	5.220	(0.927)	107806	5.00000	5.04
74 Bromobenzene	156	9.381	9.381	(0.917)	25880	5.00000	4.96(a)
29 Bromochloromethane	128	4.557	4.557	(0.930)	12768	5.00000	5.72
39 Bromodichloromethane	83	6.348	6.348	(1.128)	28624	5.00000	4.75(a)
66 Bromoform	173	8.984	8.984	(1.089)	11809	5.00000	5.45(T)
6 Bromomethane	94	1.681	1.681	(0.343)	18180	5.00000	6.66
19 Carbon Disulfide	76	2.596	2.596	(0.530)	134704	10.0000	9.70
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	23952	5.00000	4.60(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	71313	5.00000	5.02
7 Chloroethane	64	1.760	1.760	(0.359)	17395	5.00000	4.75(aM)
28 Chloroform	83	4.662	4.662	(0.952)	44943	5.00000	5.13
3 Chloromethane	50	1.348	1.348	(0.275)	26856	5.00000	7.17
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	27531	5.00000	4.96(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.200)	36876	5.00000	5.27
55 Dibromochloromethane	129	7.758	7.758	(0.940)	19557	5.00000	5.22
44 Dibromomethane	93	6.191	6.191	(1.100)	16911	5.00000	5.17(M)
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	25193	5.00000	4.69(a)
61 Ethylbenzene	106	8.369	8.369	(1.015)	35660	5.00000	4.97(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	10485	5.00000	5.23
67 Isopropylbenzene	105	9.126	9.126	(1.106)	103615	5.00000	5.06
62 m,p-Xylenes	106	8.474	8.474	(1.027)	87243	10.0000	9.97
17 Methylene Chloride	84	2.877	2.877	(0.587)	29083	5.00000	5.12
87 n-Butylbenzene	91	10.554	10.554	(1.031)	85817	5.00000	4.96(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	128144	5.00000	4.96(a)
92 Naphthalene	128	12.133	12.133	(1.185)	81349	5.00000	4.64(a)
63 o-Xylene	106	8.811	8.811	(1.068)	44232	5.00000	4.95(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	104968	5.00000	4.97(a)
64 Styrene	104	8.823	8.823	(1.070)	73947	5.00000	4.97(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	72849	5.00000	4.93(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	18354	5.00000	4.90(a)
50 Toluene	91	7.049	7.049	(0.855)	110149	5.00000	5.03
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	25017	5.00000	5.05
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	29527	5.00000	5.25
38 Trichloroethene	130	5.865	5.865	(1.042)	25110	5.00000	5.07
8 Trichlorofluoromethane	101	1.962	1.962	(0.401)	32396	5.00000	4.77(a)
5 Vinyl Chloride	62	1.426	1.426	(0.291)	28725	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.



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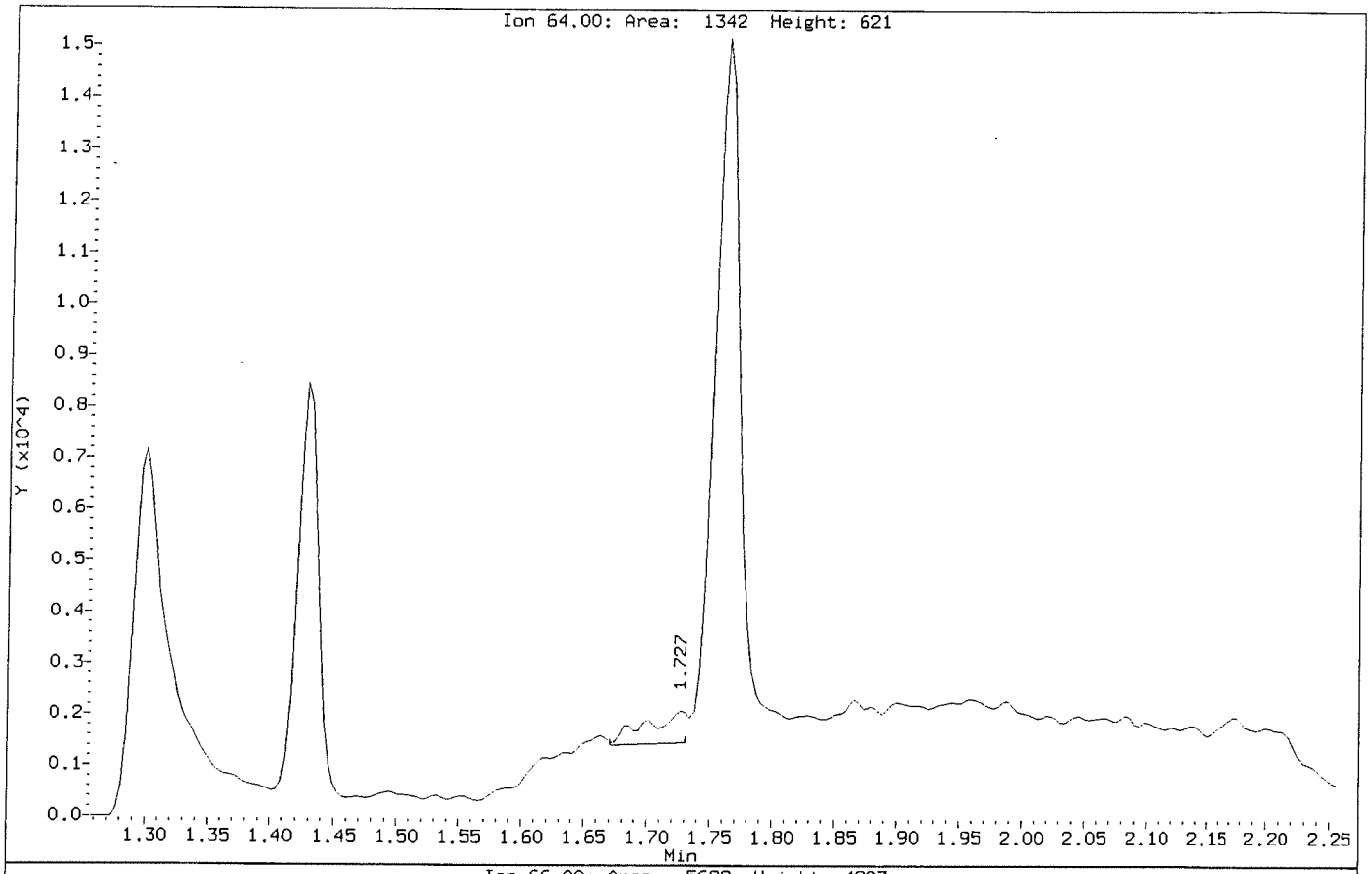
Date : 08-JAN-2019 12:56
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

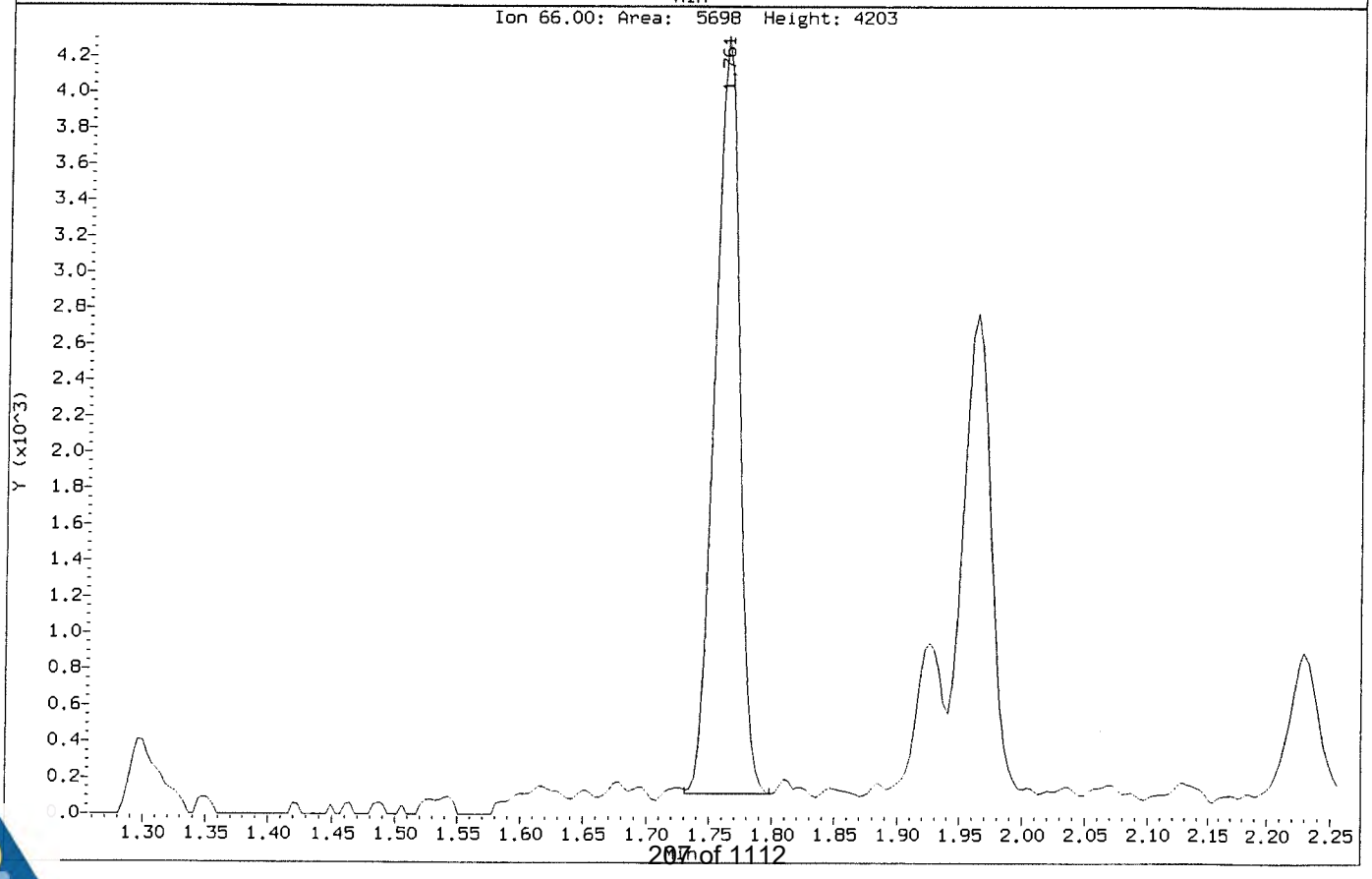
\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010806.D
Injection Date: 08-JAN-2019 12:56
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3





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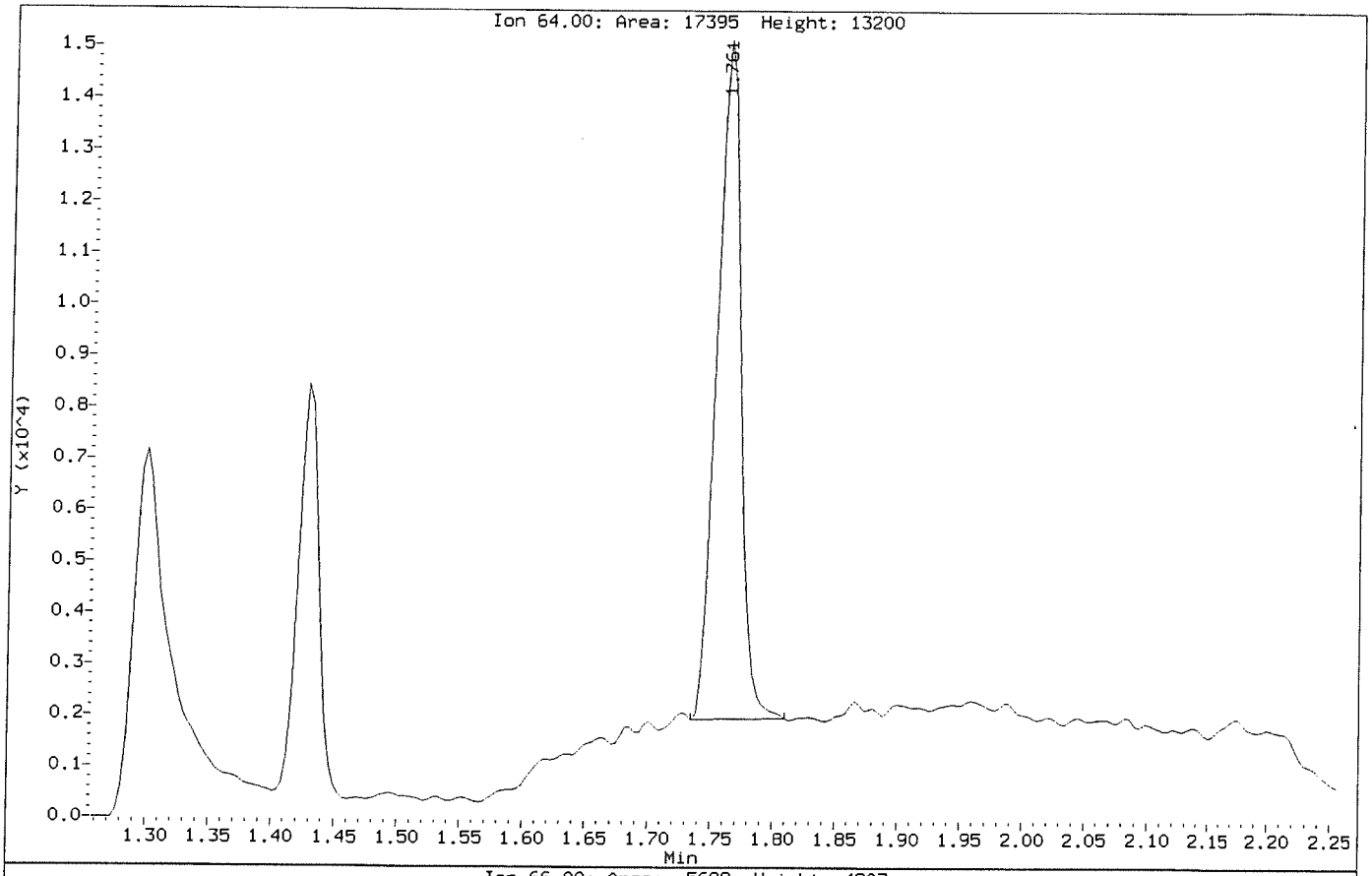
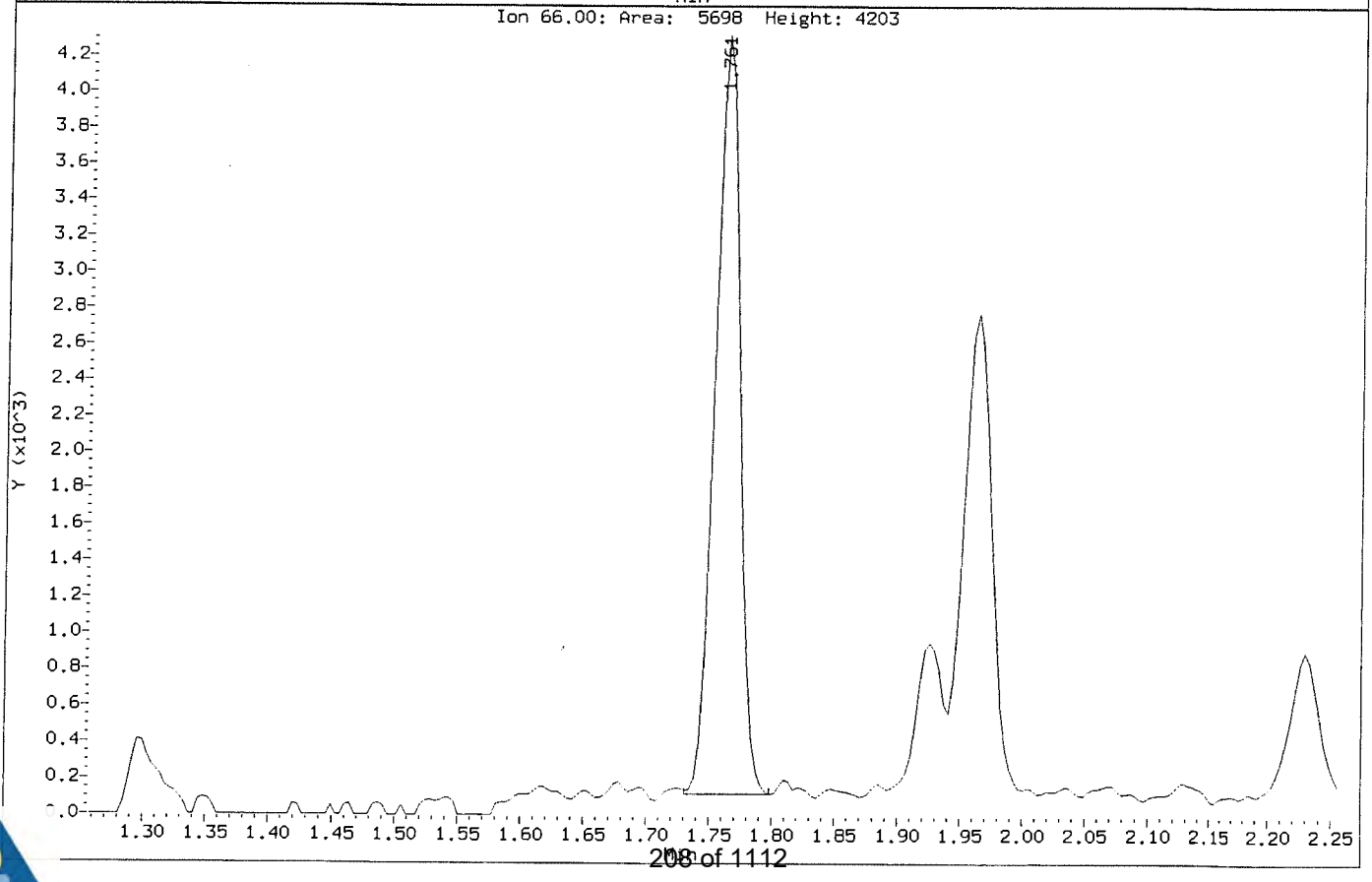
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3





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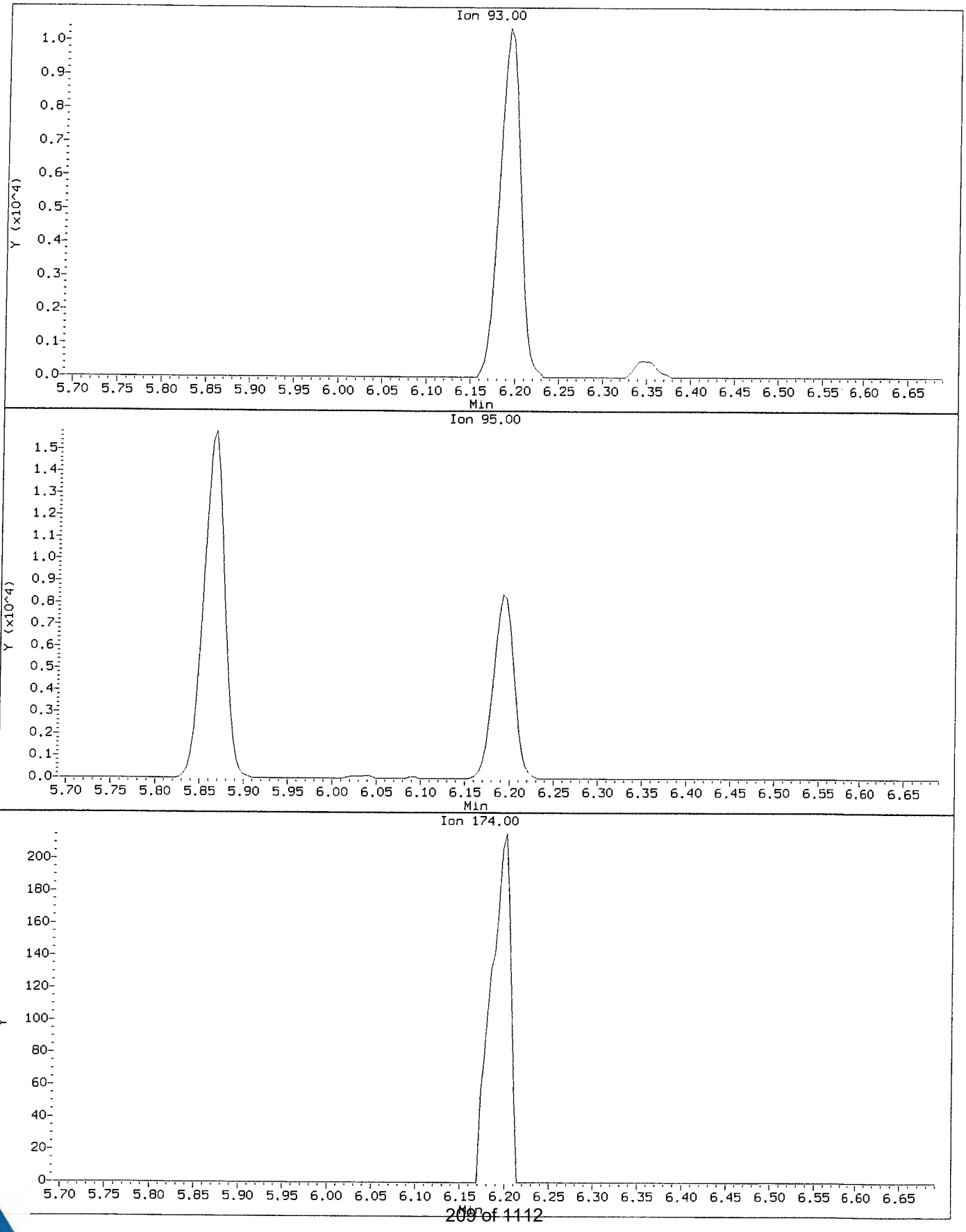
Injection Date: 08-JAN-2019 12:56
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



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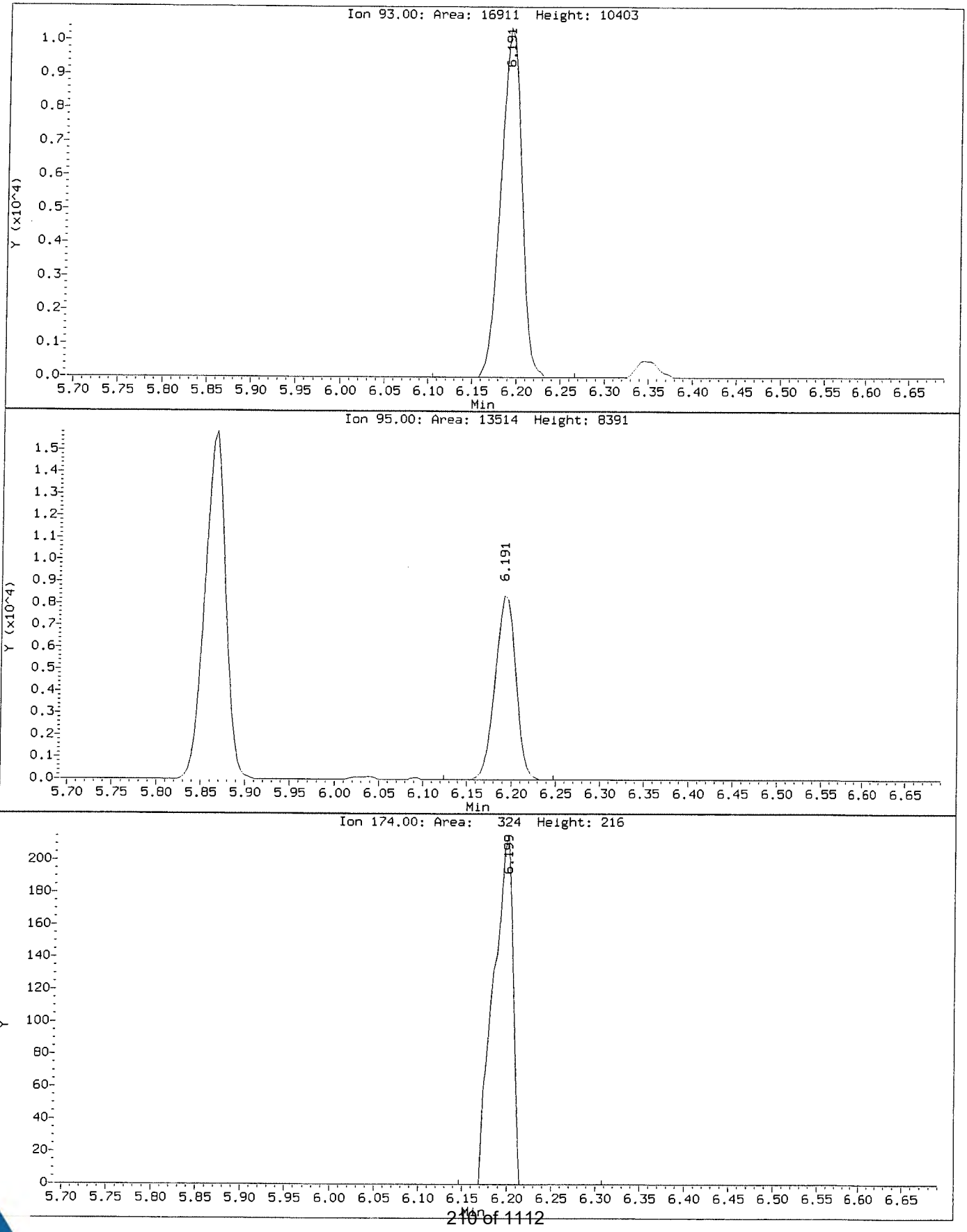
Injection Date: 08-JAN-2019 12:56
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010807.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 08-JAN-2019 13:21
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 12:56 Cal File: U010806.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

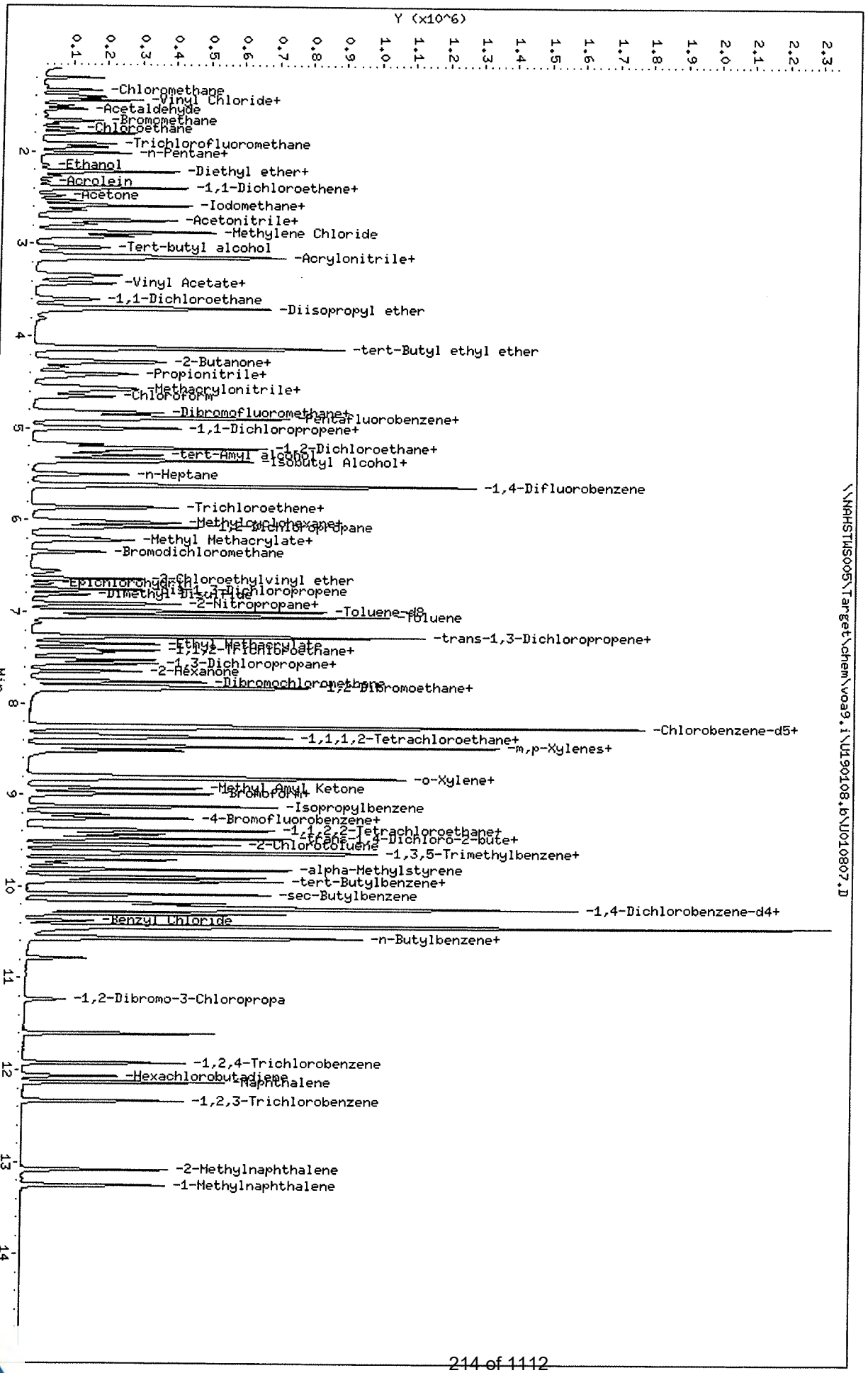
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	408412	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	770613	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	706222	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.235	10.235	(1.000)	336174	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.826	(0.986)	96372	20.0000	19.92
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	129430	20.0000	20.22
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	399583	20.0000	20.38
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	148618	20.0000	20.38
60 1,1,1,2-Tetrachloroethane	131	8.346	8.346	(1.012)	85911	20.0000	20.13
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	132087	20.0000	19.74
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	157201	20.0000	20.50
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	87262	20.0000	20.18
22 1,1-Dichloroethane	63	3.600	3.600	(0.736)	183036	20.0000	19.71
11 1,1-Dichloroethene	96	2.393	2.393	(0.489)	72998	20.0000	18.52
32 1,1-Dichloropropene	75	5.002	5.002	(0.889)	138272	20.0000	19.40
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	120642	20.0000	20.13
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	164112	20.0000	20.19
90 1,2,4-Trichlorobenzene	180	11.922	11.922	(1.165)	122692	20.0000	20.25
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	369135	20.0000	20.90
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	21582	20.0000	19.35
57 1,2-Dibromoethane	107	7.851	7.851	(0.952)	101296	20.0000	20.57
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	199304	20.0000	19.52

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010807.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	149925	20.0000	20.10
42 1,2-Dichloropropane	63	6.078	6.078	(1.081)	111568	20.0000	20.11
75 1,3,5-Trimethylbenzene	105	9.624	9.624	(0.940)	356170	20.0000	20.65
83 1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	197740	20.0000	19.49
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	189420	20.0000	20.31
84 1,4-Dichlorobenzene	146	10.254	10.254	(1.002)	206094	20.0000	19.17
26 2,2-Dichloropropane	77	4.271	4.271	(0.873)	106586	20.0000	19.17
24 2-Butanone	43	4.335	4.335	(0.886)	115875	40.0000	41.00
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	320757	20.0000	20.06
52 2-Hexanone	43	7.649	7.649	(0.927)	177225	40.0000	43.51
77 4-Chlorotoluene	91	9.639	9.639	(0.942)	377240	20.0000	20.29
82 p-Isopropyltoluene	119	10.209	10.209	(0.997)	374090	20.0000	20.89
45 4-Methyl-2-Pentanone	43	6.910	6.910	(0.838)	251751	40.0000	42.86
10 Acetone	43	2.476	2.476	(0.506)	79871	40.0000	44.29
37 Benzene	78	5.216	5.216	(0.927)	420661	20.0000	19.83
74 Bromobenzene	156	9.381	9.381	(0.917)	103837	20.0000	19.80
29 Bromochloromethane	128	4.552	4.552	(0.930)	48718	20.0000	21.70
39 Bromodichloromethane	83	6.344	6.344	(1.128)	119391	20.0000	19.98
66 Bromoform	173	8.983	8.983	(1.089)	53545	20.0000	18.54(T)
6 Bromomethane	94	1.666	1.666	(0.341)	59235	20.0000	19.88
19 Carbon Disulfide	76	2.584	2.584	(0.528)	552263	40.0000	39.51
34 Carbon Tetrachloride	117	4.991	4.991	(0.887)	103163	20.0000	19.99
59 Chlorobenzene	112	8.275	8.275	(1.003)	275304	20.0000	19.55
7 Chloroethane	64	1.748	1.748	(0.357)	70548	20.0000	19.16(M)
28 Chloroform	83	4.654	4.654	(0.951)	176811	20.0000	20.04
3 Chloromethane	50	1.336	1.336	(0.273)	106870	20.0000	21.10
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	110851	20.0000	19.84
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	160416	20.0000	18.72
55 Dibromochloromethane	129	7.758	7.758	(0.940)	85941	20.0000	18.94
44 Dibromomethane	93	6.187	6.187	(1.100)	65082	20.0000	20.10
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	101679	20.0000	18.83
61 Ethylbenzene	106	8.369	8.369	(1.015)	140051	20.0000	19.71
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	43278	20.0000	20.26
67 Isopropylbenzene	105	9.126	9.126	(1.106)	423334	20.0000	20.86
62 m,p-Xylenes	106	8.474	8.474	(1.027)	355496	40.0000	41.00
17 Methylene Chloride	84	2.866	2.866	(0.586)	108486	20.0000	20.35
87 n-Butylbenzene	91	10.554	10.554	(1.031)	350744	20.0000	20.15
73 n-Propylbenzene	91	9.474	9.474	(0.926)	531172	20.0000	20.44
92 Naphthalene	128	12.132	12.132	(1.185)	393536	20.0000	19.63
63 o-Xylene	106	8.811	8.811	(1.068)	180697	20.0000	20.42
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	435570	20.0000	20.49
64 Styrene	104	8.826	8.826	(1.070)	307465	20.0000	20.87
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	303148	20.0000	20.41
56 Tetrachloroethene	164	7.521	7.521	(0.912)	68828	20.0000	18.55
50 Toluene	91	7.045	7.045	(0.854)	437406	20.0000	20.14
20 trans-1,2-Dichloroethene	96	3.139	3.139	(0.642)	97245	20.0000	19.51
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	135765	20.0000	18.55
38 Trichloroethene	130	5.861	5.861	(1.042)	97355	20.0000	19.84
8 Trichlorofluoromethane	101	1.947	1.947	(0.398)	130134	20.0000	19.04
5 Vinyl Chloride	62	1.415	1.415	(0.289)	116217	20.0000	19.17

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



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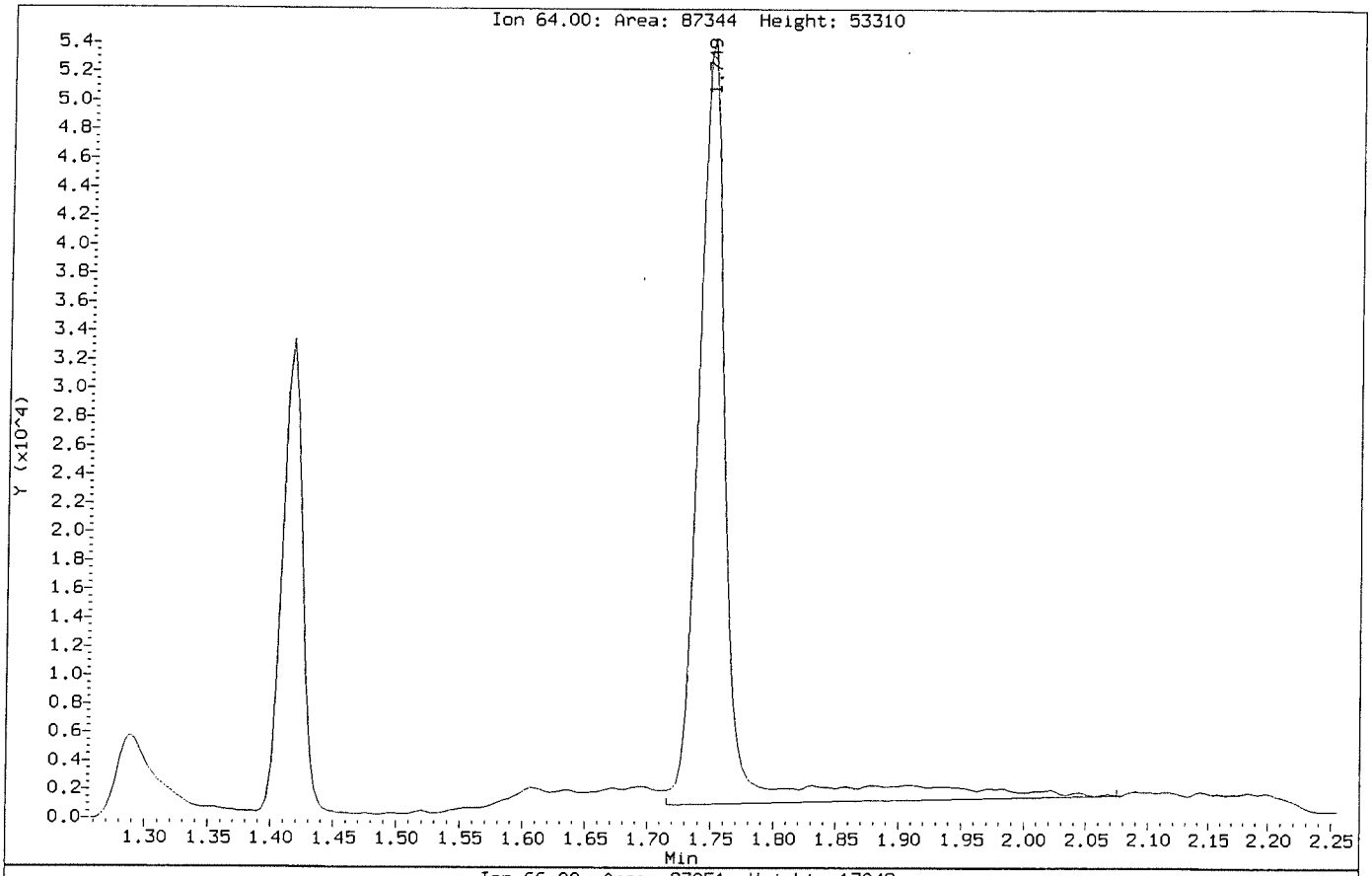
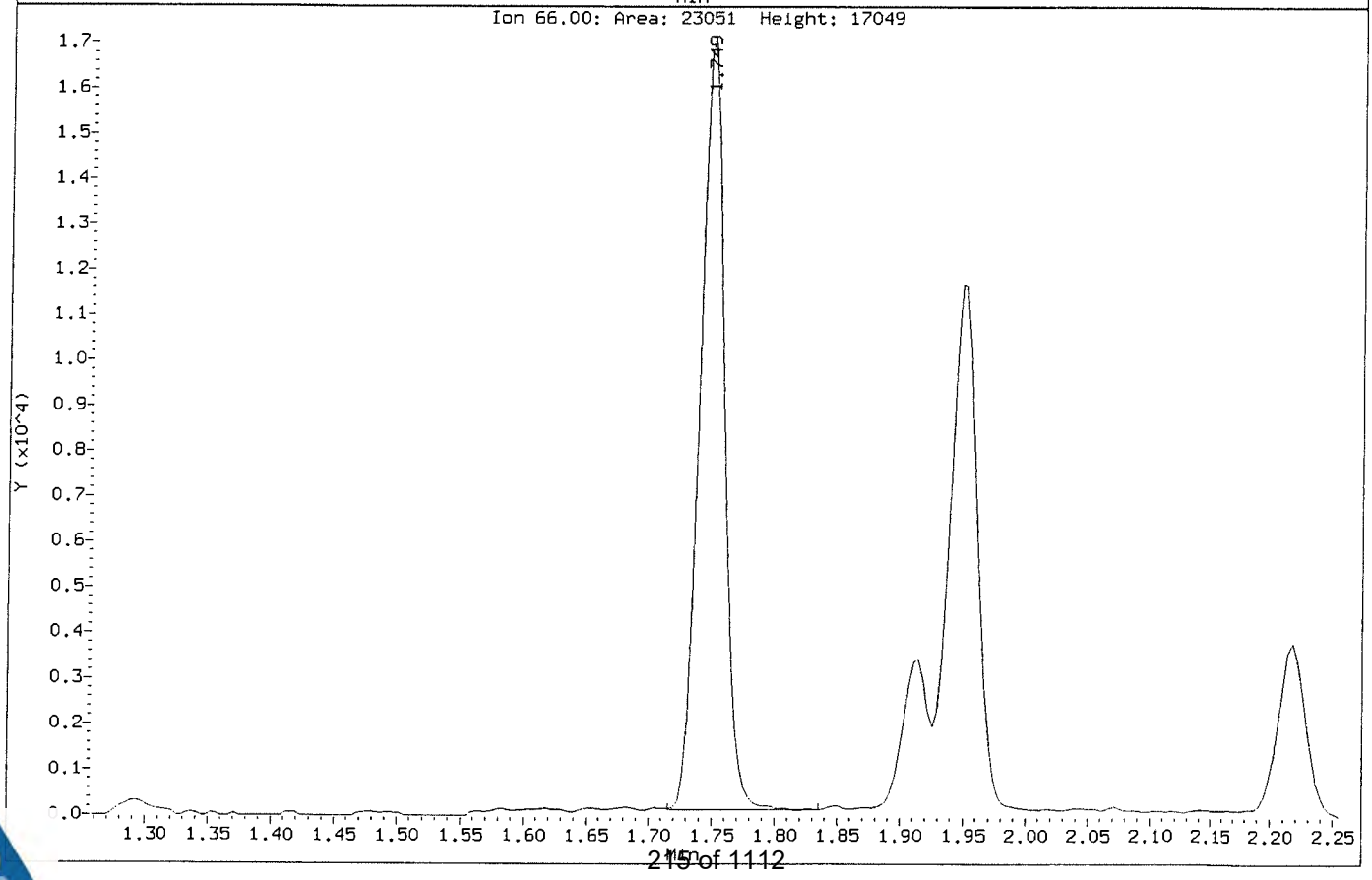
Date : 08-JAN-2019 13:21
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;16;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010807.D
Injection Date: 08-JAN-2019 13:21
Instrument: VOA9.i
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3





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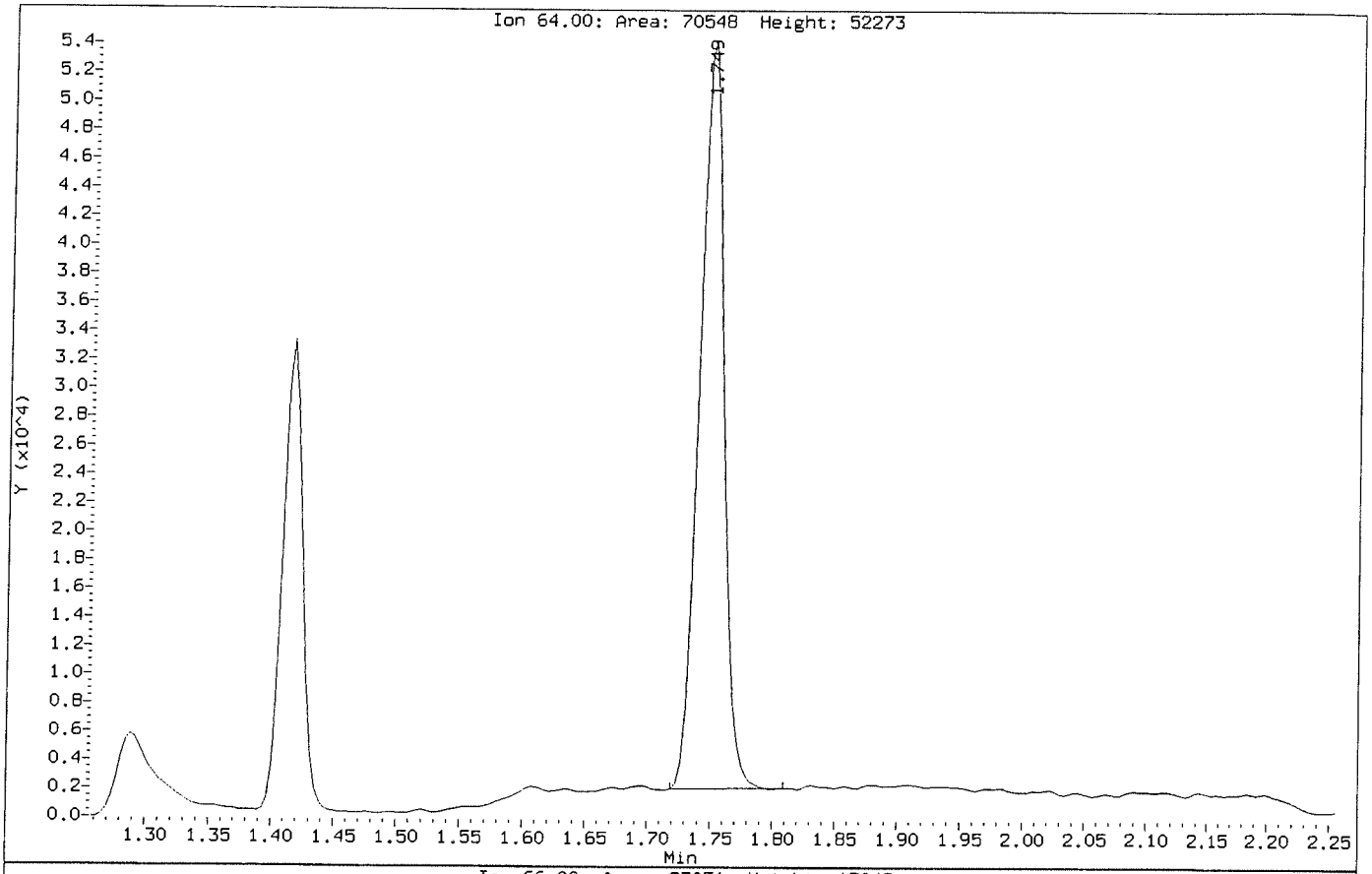
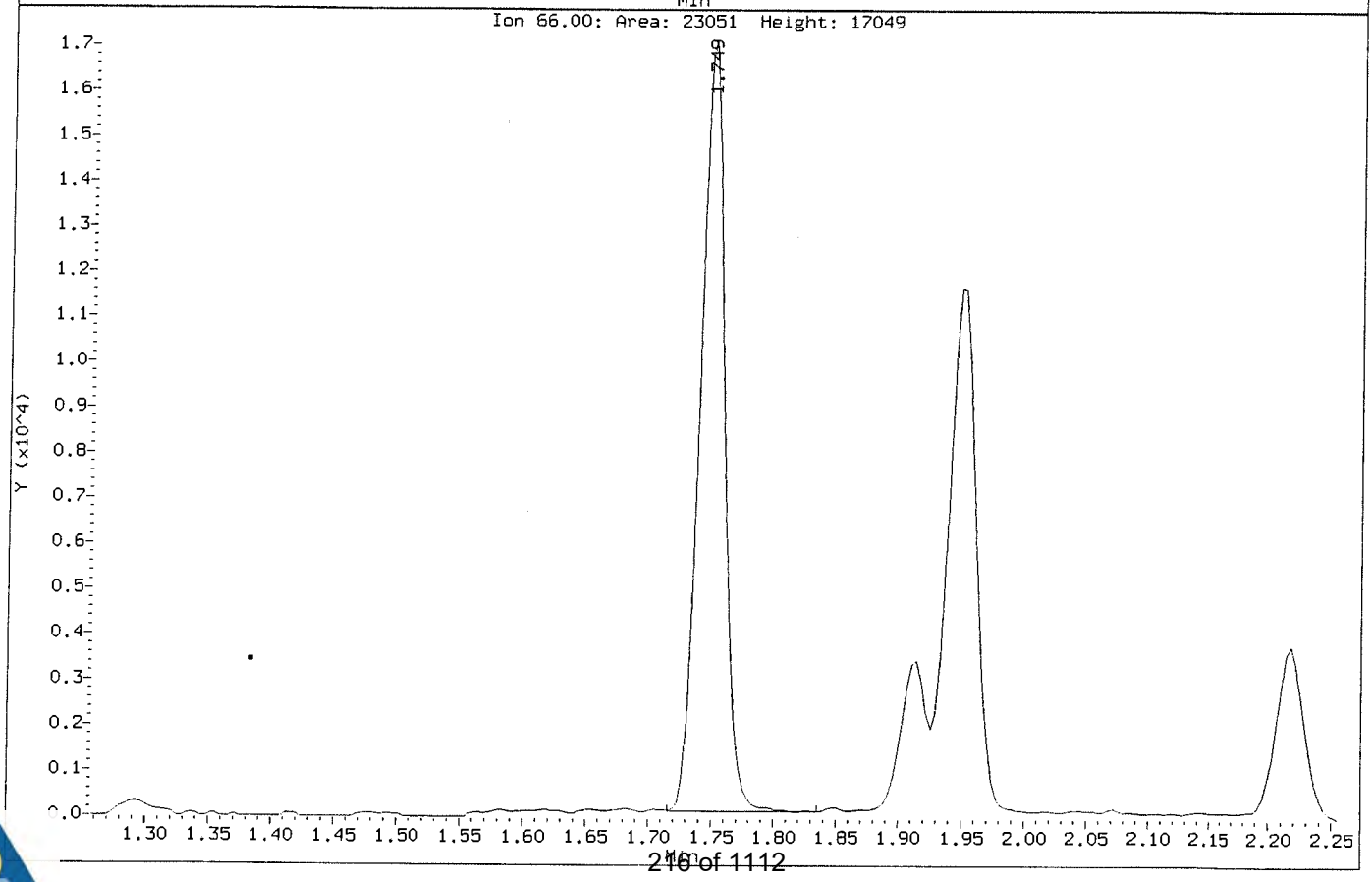
Compound: Chloroethane
CAS Number: 75-00-3





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D
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Inj Date : 08-JAN-2019 13:45
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;1;7;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 13:21 Cal File: U010807.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

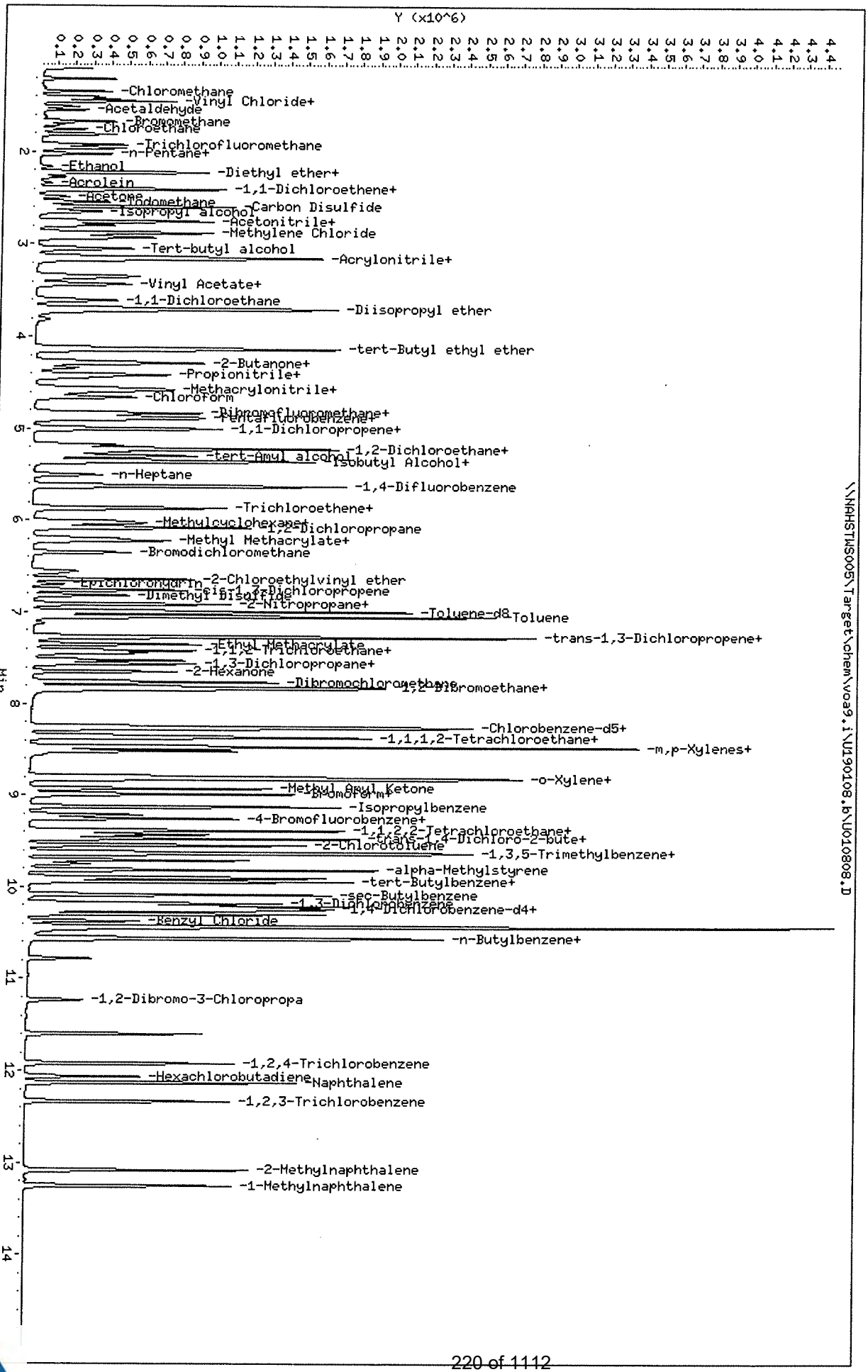
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	414347	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	776802	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	713069	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	338482	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	233946	50.0000	50.02
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	310401	50.0000	50.84
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	963061	50.0000	52.06
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	358290	50.0000	51.25
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	221211	50.0000	51.34
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	331736	50.0000	48.88
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	386140	50.0000	50.54
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	214927	50.0000	49.25
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	451089	50.0000	47.89
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	182121	50.0000	45.56
32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	333700	50.0000	46.46
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	301189	50.0000	49.93
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	422281	50.0000	51.61
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	307395	50.0000	50.40
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	896480	50.0000	50.43
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	55985	50.0000	46.57
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	252046	50.0000	50.70
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	489667	50.0000	47.64

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.933)	363631	50.0000	48.37
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	275994	50.0000	49.35
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	857361	50.0000	49.38
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	486555	50.0000	47.65
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	463080	50.0000	49.18
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	499101	50.0000	46.11
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	272467	50.0000	48.30
24 2-Butanone	43	4.339	4.339	(0.886)	291898	100.000	101.80
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	778719	50.0000	48.39
52 2-Hexanone	43	7.649	7.649	(0.927)	438000	100.000	106.50
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	904919	50.0000	48.34
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	890116	50.0000	49.37
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	623060	100.000	105.06
10 Acetone	43	2.487	2.487	(0.508)	179800	100.000	100.27
37 Benzene	78	5.220	5.220	(0.927)	1030161	50.0000	48.19
74 Bromobenzene	156	9.381	9.381	(0.917)	260209	50.0000	49.30
29 Bromochloromethane	128	4.557	4.557	(0.930)	122545	50.0000	53.80
39 Bromodichloromethane	83	6.348	6.348	(1.128)	306984	50.0000	50.97
66 Bromoform	173	8.984	8.984	(1.089)	144409	50.0000	46.54(T)
6 Bromomethane	94	1.674	1.674	(0.342)	136129	50.0000	44.08
19 Carbon Disulfide	76	2.596	2.596	(0.530)	1378159	100.000	97.20
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	253682	50.0000	48.77
59 Chlorobenzene	112	8.275	8.275	(1.003)	677236	50.0000	47.63
7 Chloroethane	64	1.756	1.756	(0.359)	171276	50.0000	45.86(M)
28 Chloroform	83	4.661	4.661	(0.952)	430908	50.0000	48.16
3 Chloromethane	50	1.344	1.344	(0.274)	245400	50.0000	44.67
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	273726	50.0000	48.29
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	428865	50.0000	47.50
55 Dibromochloromethane	129	7.758	7.758	(0.940)	229139	50.0000	48.00
44 Dibromomethane	93	6.191	6.191	(1.100)	161716	50.0000	49.55
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	250329	50.0000	45.71
61 Ethylbenzene	106	8.373	8.373	(1.015)	346744	50.0000	48.35
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	101106	50.0000	46.13
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1002931	50.0000	48.96
62 m,p-Xylenes	106	8.474	8.474	(1.027)	862970	100.000	98.57
17 Methylene Chloride	84	2.877	2.877	(0.587)	264627	50.0000	49.63
87 n-Butylbenzene	91	10.554	10.554	(1.031)	828759	50.0000	47.30
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1268447	50.0000	48.48
92 Naphthalene	128	12.133	12.133	(1.185)	1013970	50.0000	49.17
63 o-Xylene	106	8.811	8.811	(1.068)	439304	50.0000	49.19
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1037873	50.0000	48.49
64 Styrene	104	8.826	8.826	(1.070)	765954	50.0000	51.51
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	716058	50.0000	47.89
56 Tetrachloroethene	164	7.525	7.525	(0.912)	165995	50.0000	44.31
50 Toluene	91	7.049	7.049	(0.855)	1073622	50.0000	48.97
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	237541	50.0000	46.99
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	367494	50.0000	47.13
38 Trichloroethene	130	5.865	5.865	(1.042)	239064	50.0000	48.33
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	315299	50.0000	45.48
5 Vinyl Chloride	62	1.426	1.426	(0.291)	280091	50.0000	45.55

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



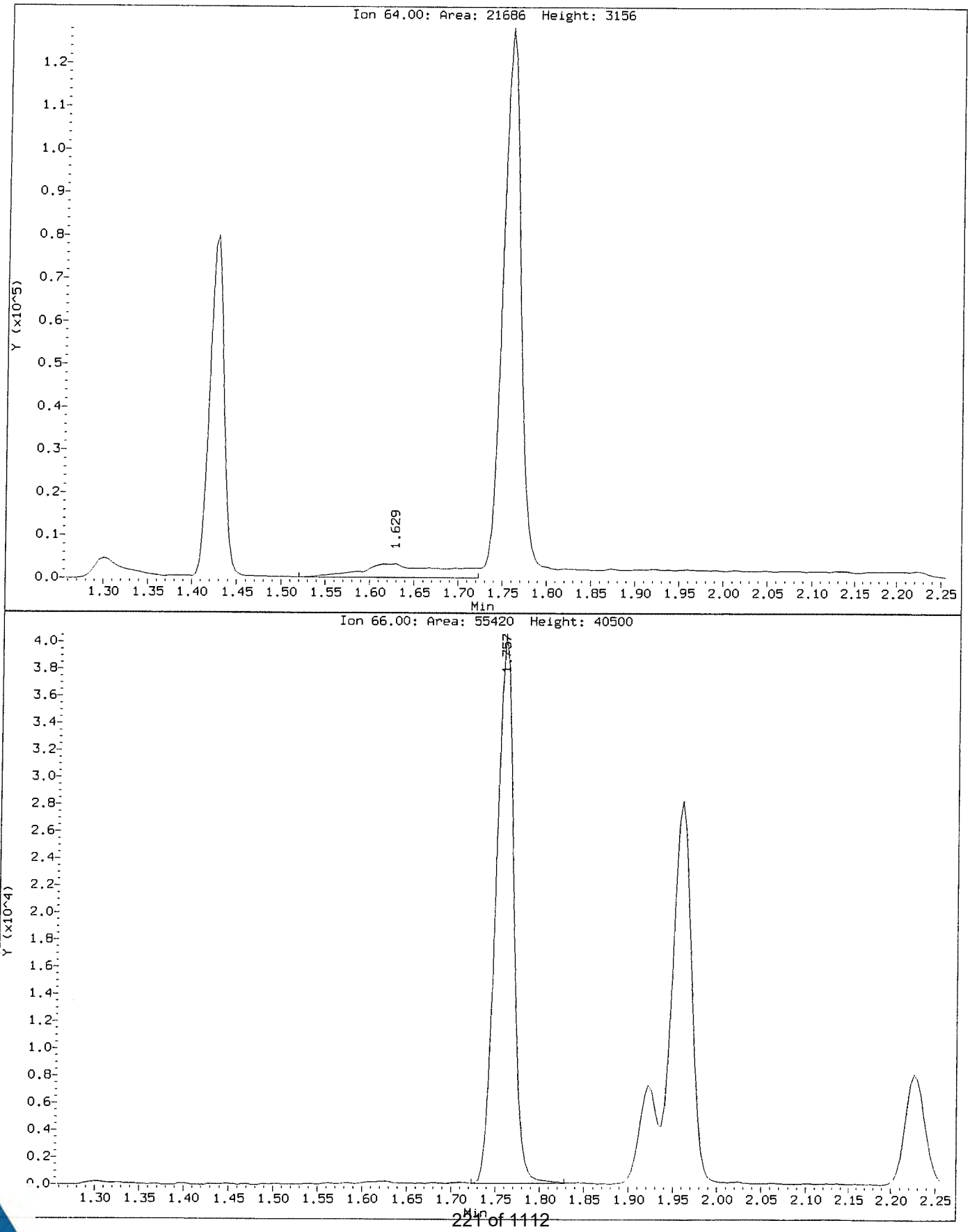
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D
Date : 08-JAN-2019 13:45
Client ID: VSTD050
Sample Info: VSTD050;VSTD050!1;7;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010808.D
Injection Date: 08-JAN-2019 13:45
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



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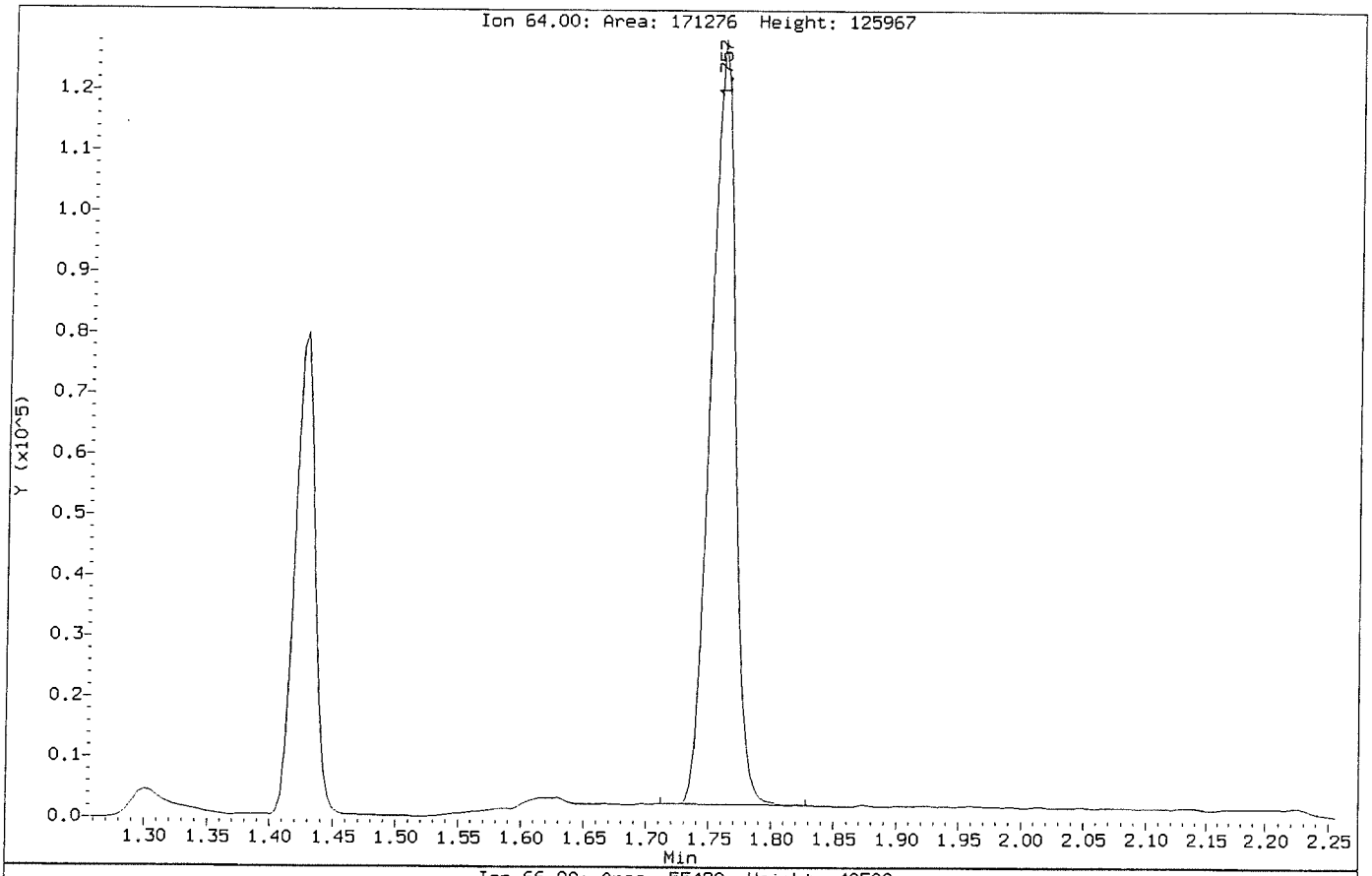
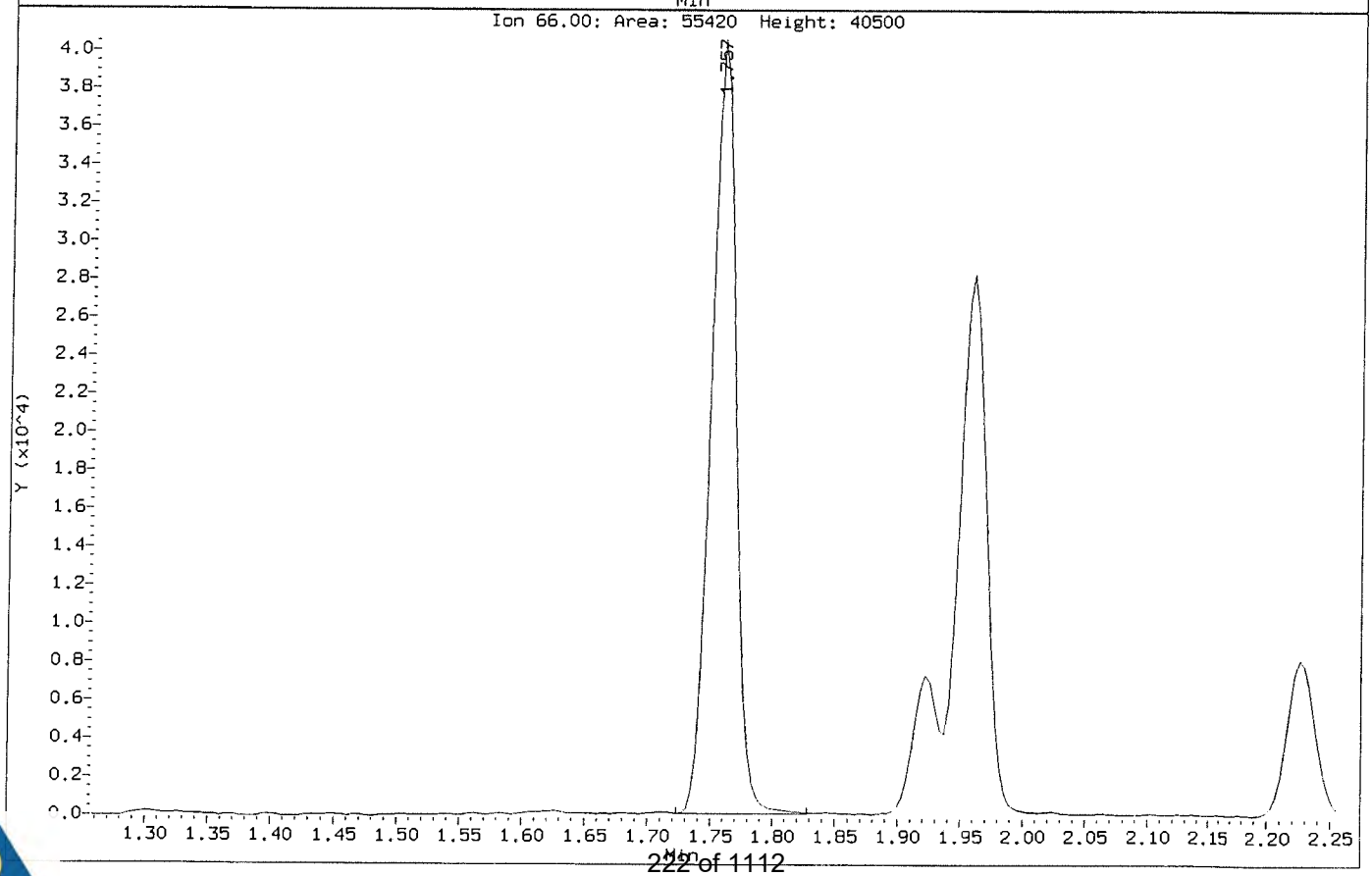
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010809.D
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Inj Date : 08-JAN-2019 14:10
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 13:45 Cal File: U010808.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

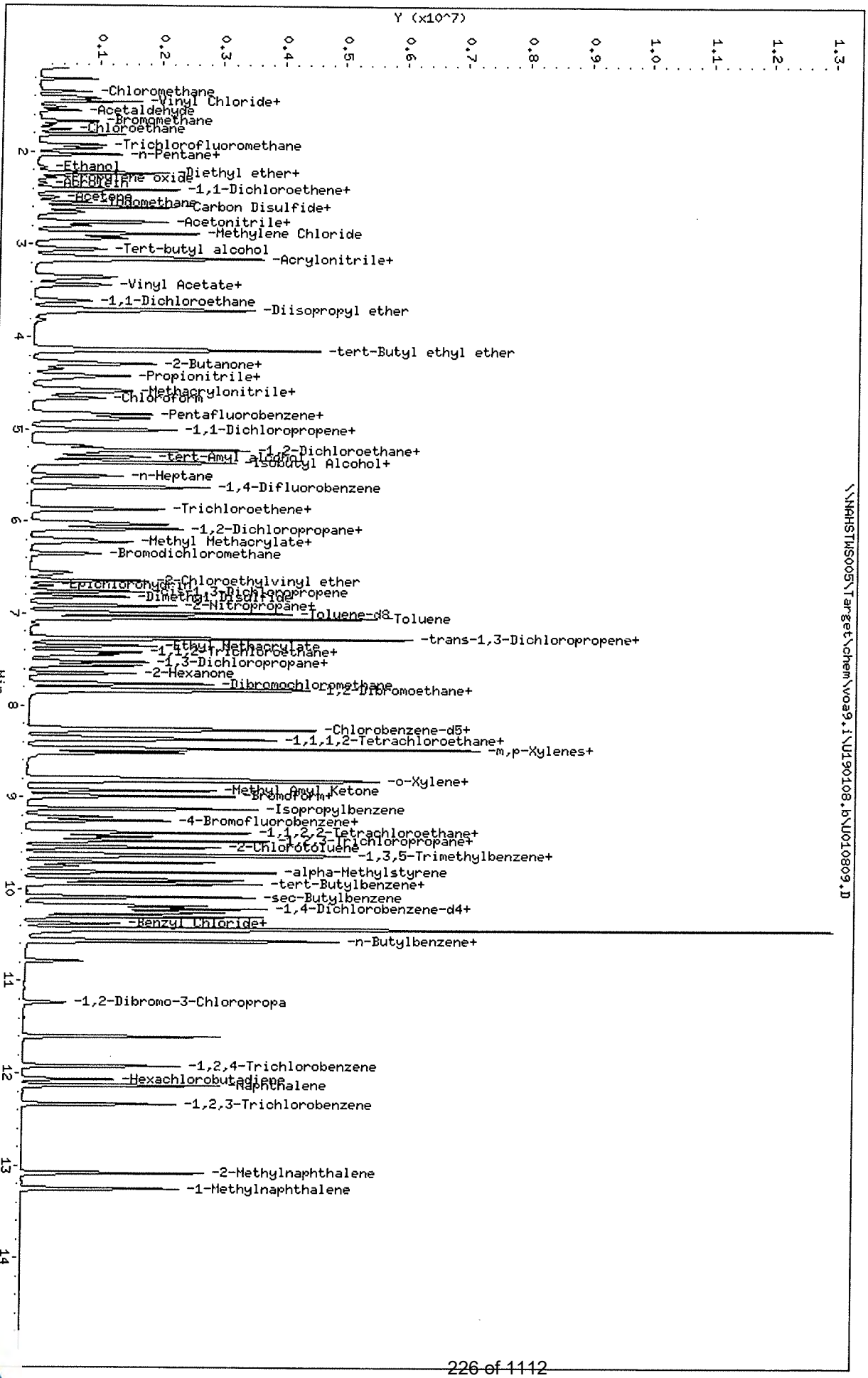
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	421162	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	790870	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.253	(1.000)	736125	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	349513	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	464059	100.000	99.44
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	607717	100.000	100.00
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	1896057	100.000	101.52
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	714768	100.000	100.78
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	472198	100.000	106.17
31 1,1,1-Trichloroethane	97	4.834	4.834	(0.987)	725193	100.000	105.13
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	791393	100.000	100.67
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.899)	438628	100.000	97.36
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	942325	100.000	98.43
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	394650	100.000	97.14
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	725797	100.000	99.25
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	650560	100.000	104.45
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	883225	100.000	104.54
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	673602	100.000	106.97
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	1876622	100.000	102.23
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	123999	100.000	97.52
57 1,2-Dibromoethane	107	7.852	7.852	(0.951)	517332	100.000	100.81
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	1023463	100.000	96.44

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010809.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	735470	100.000	96.10
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	570835	100.000	100.25
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	1870258	100.000	104.32
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1034507	100.000	98.12
54 1,3-Dichloropropane	76	7.567	7.567	(0.917)	952005	100.000	97.95
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	1056308	100.000	94.52
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	602840	100.000	105.14
24 2-Butanone	43	4.343	4.343	(0.887)	595792	200.000	204.43(A)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	1639232	100.000	98.65
52 2-Hexanone	43	7.653	7.653	(0.927)	931571	200.000	219.42(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	1912542	100.000	98.95
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	1976899	100.000	106.18
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1312369	200.000	214.36(A)
10 Acetone	43	2.491	2.491	(0.509)	376346	200.000	208.23(A)
37 Benzene	78	5.224	5.224	(0.928)	2132651	100.000	97.99
74 Bromobenzene	156	9.381	9.381	(0.917)	550328	100.000	100.97
29 Bromochloromethane	128	4.560	4.560	(0.931)	233959	100.000	101.06
39 Bromodichloromethane	83	6.348	6.348	(1.128)	650240	100.000	106.05
66 Bromoform	173	8.984	8.984	(1.089)	321354	100.000	98.27(T)
6 Bromomethane	94	1.670	1.670	(0.341)	307120	100.000	96.91
19 Carbon Disulfide	76	2.600	2.600	(0.531)	2926603	200.000	203.08(A)
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	580173	100.000	109.55
59 Chlorobenzene	112	8.275	8.275	(1.003)	1405423	100.000	95.76
7 Chloroethane	64	1.756	1.756	(0.359)	365339	100.000	96.23(M)
28 Chloroform	83	4.661	4.661	(0.952)	891596	100.000	98.03
3 Chloromethane	50	1.348	1.348	(0.275)	515965	100.000	89.77
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	567776	100.000	98.56
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	926076	100.000	99.29
55 Dibromochloromethane	129	7.758	7.758	(0.940)	491650	100.000	98.45
44 Dibromomethane	93	6.191	6.191	(1.100)	331611	100.000	99.81
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	546194	100.000	98.13
61 Ethylbenzene	106	8.373	8.373	(1.015)	748694	100.000	101.13
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	235659	100.000	101.50
67 Isopropylbenzene	105	9.126	9.126	(1.106)	2188066	100.000	103.47
62 m,p-Xylenes	106	8.474	8.474	(1.027)	1848649	200.000	204.56(A)
17 Methylene Chloride	84	2.877	2.877	(0.587)	540514	100.000	100.25
87 n-Butylbenzene	91	10.558	10.558	(1.031)	1831040	100.000	101.22
73 n-Propylbenzene	91	9.475	9.475	(0.926)	2755541	100.000	101.99
92 Naphthalene	128	12.133	12.133	(1.185)	2158340	100.000	100.73
63 o-Xylene	106	8.811	8.811	(1.068)	931273	100.000	101.01
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	2314669	100.000	104.74
64 Styrene	104	8.826	8.826	(1.069)	1608460	100.000	104.78
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	1536739	100.000	99.54
56 Tetrachloroethene	164	7.525	7.525	(0.912)	369314	100.000	95.50
50 Toluene	91	7.049	7.049	(0.854)	2230274	100.000	98.55
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	502759	100.000	97.85
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	801236	100.000	99.11
38 Trichloroethene	130	5.865	5.865	(1.042)	488802	100.000	97.07
8 Trichlorofluoromethane	101	1.962	1.962	(0.401)	691347	100.000	98.12
5 Vinyl Chloride	62	1.426	1.426	(0.291)	621317	100.000	99.40

QC Flag Legend

T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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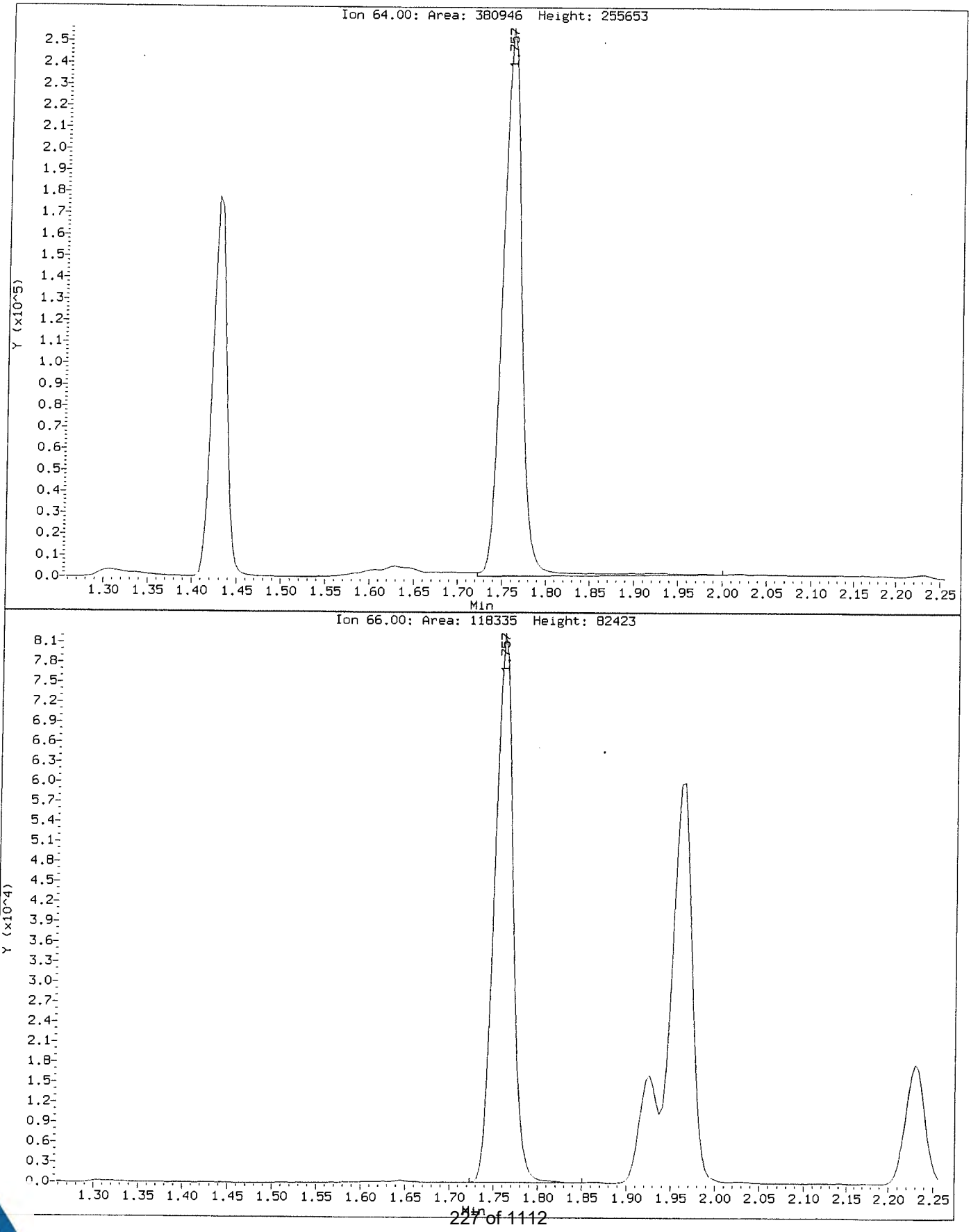
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010809.D
Injection Date: 08-JAN-2019 14:10
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3



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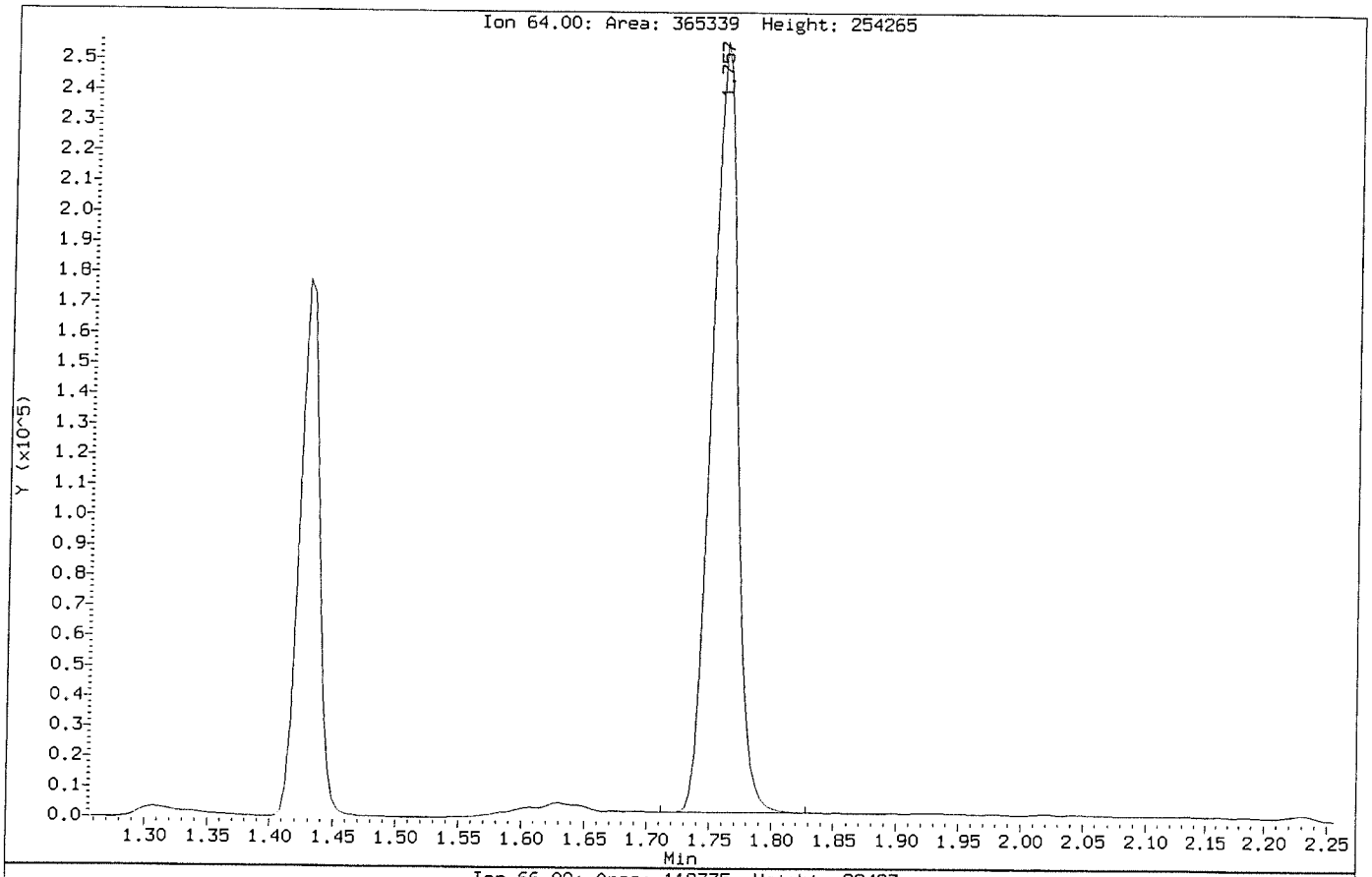
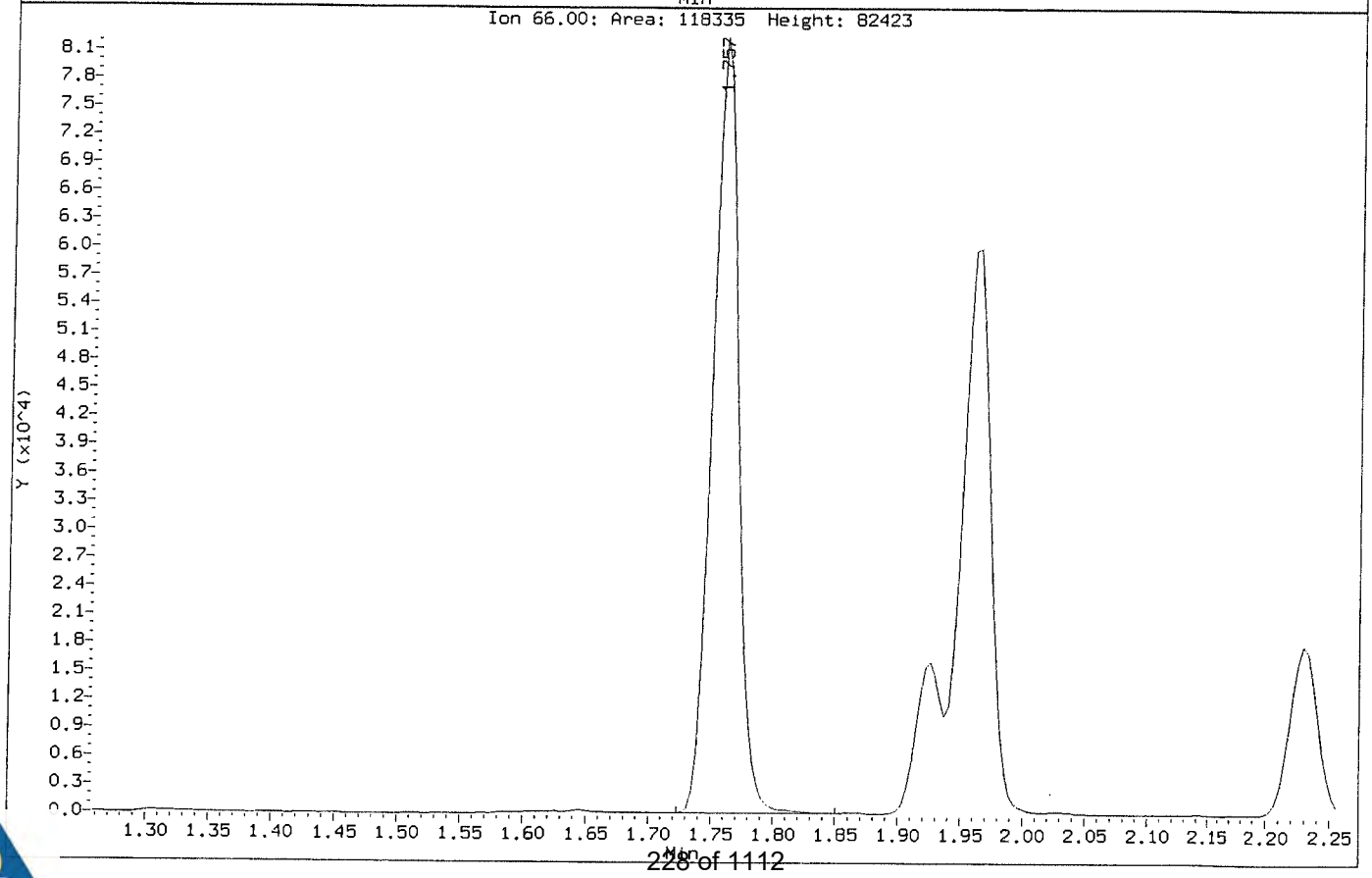
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010810.D
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Inj Date : 08-JAN-2019 14:34
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:10 Cal File: U010809.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

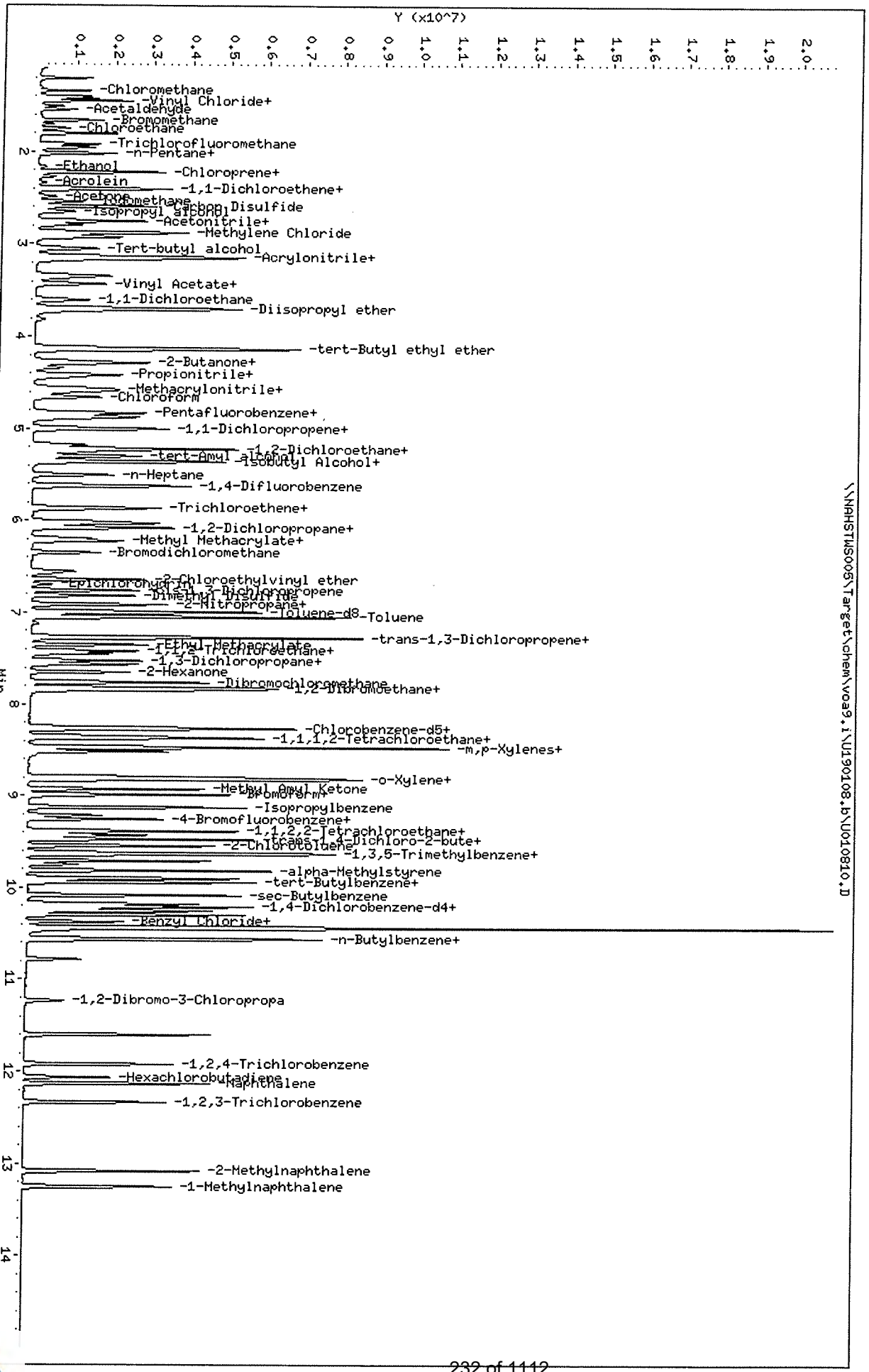
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	421886	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	800287	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	746796	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	352073	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	699083	150.000	150.76
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	910863	150.000	150.73
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	2828636	150.000	150.44
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	1067232	150.000	149.22
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	733799	150.000	162.63
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	1125782	150.000	162.93
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1181566	150.000	149.39
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	666579	150.000	145.84
22 1,1-Dichloroethane	63	3.604	3.604	(0.736)	1438222	150.000	149.97
11 1,1-Dichloroethene	96	2.401	2.401	(0.490)	606646	150.000	149.06
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	1107792	150.000	149.71
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	997739	150.000	159.03
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1361534	150.000	159.99
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	1038733	150.000	163.75
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	2881082	150.000	155.82
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	188865	150.000	146.39
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	788311	150.000	151.43
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	1550379	150.000	145.03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	1110306	150.000	143.38
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	870571	150.000	151.10
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	2834428	150.000	156.95
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1575358	150.000	148.33
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1445134	150.000	146.57
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	1608865	150.000	142.91
26 2,2-Dichloropropane	77	4.275	4.275	(0.873)	928351	150.000	161.64
24 2-Butanone	43	4.339	4.339	(0.886)	875837	300.000	300.00(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	2482833	150.000	148.33
52 2-Hexanone	43	7.653	7.653	(0.928)	1403558	300.000	325.87(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	2889930	150.000	148.43
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	2965061	150.000	158.11
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1970058	300.000	317.19(A)
10 Acetone	43	2.484	2.484	(0.507)	504121	300.000	279.00(A)
37 Benzene	78	5.220	5.220	(0.928)	3240723	150.000	147.15
74 Bromobenzene	156	9.385	9.385	(0.917)	842882	150.000	153.53
29 Bromochloromethane	128	4.557	4.557	(0.930)	342313	150.000	147.61
39 Bromodichloromethane	83	6.348	6.348	(1.129)	1008643	150.000	162.58
66 Bromoform	173	8.984	8.984	(1.089)	502752	150.000	150.57
6 Bromomethane	94	1.663	1.663	(0.340)	488763	150.000	153.52
19 Carbon Disulfide	76	2.592	2.592	(0.529)	3988539	300.000	276.30(A)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	897860	150.000	167.55
59 Chlorobenzene	112	8.275	8.275	(1.003)	2143923	150.000	143.99
7 Chloroethane	64	1.749	1.749	(0.357)	563792	150.000	148.26(M)
28 Chloroform	83	4.658	4.658	(0.951)	1353118	150.000	148.53
3 Chloromethane	50	1.340	1.340	(0.274)	861673	150.000	148.03
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.875)	865247	150.000	149.94
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.202)	1431850	150.000	151.03
55 Dibromochloromethane	129	7.758	7.758	(0.940)	772060	150.000	151.72
44 Dibromomethane	93	6.191	6.191	(1.101)	505820	150.000	150.45
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	835318	150.000	149.83
61 Ethylbenzene	106	8.373	8.373	(1.015)	1138800	150.000	151.63
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	361569	150.000	151.28
67 Isopropylbenzene	105	9.126	9.126	(1.106)	3302960	150.000	153.97
62 m,p-Xylenes	106	8.474	8.474	(1.027)	2795974	300.000	304.96(A)
17 Methylene Chloride	84	2.873	2.873	(0.587)	814401	150.000	151.04
87 n-Butylbenzene	91	10.558	10.558	(1.031)	2752533	150.000	151.06
73 n-Propylbenzene	91	9.479	9.479	(0.926)	4111490	150.000	151.08
92 Naphthalene	128	12.133	12.133	(1.185)	3241704	150.000	150.02
63 o-Xylene	106	8.811	8.811	(1.068)	1419753	150.000	151.79
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	3466750	150.000	155.74
64 Styrene	104	8.826	8.826	(1.070)	2437657	150.000	156.52
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	2394976	150.000	154.00
56 Tetrachloroethene	164	7.525	7.525	(0.912)	569750	150.000	145.23
50 Toluene	91	7.049	7.049	(0.855)	3364863	150.000	146.56
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	764493	150.000	148.54
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	1237749	150.000	150.46
38 Trichloroethene	130	5.861	5.861	(1.042)	785531	150.000	154.17
8 Trichlorofluoromethane	101	1.955	1.955	(0.399)	1050633	150.000	148.85
5 Vinyl Chloride	62	1.423	1.423	(0.291)	956094	150.000	152.70

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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

\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010810.D

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

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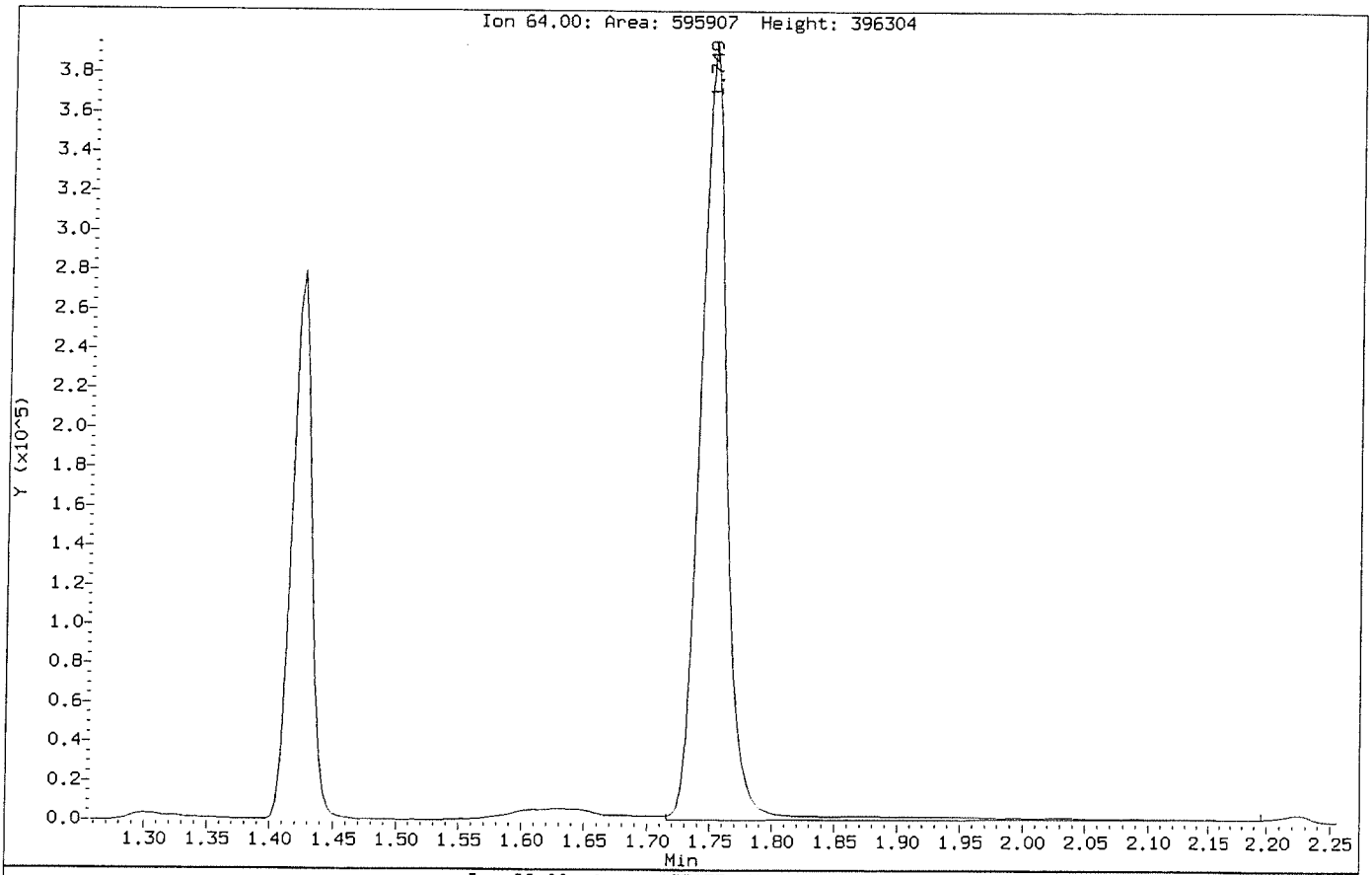
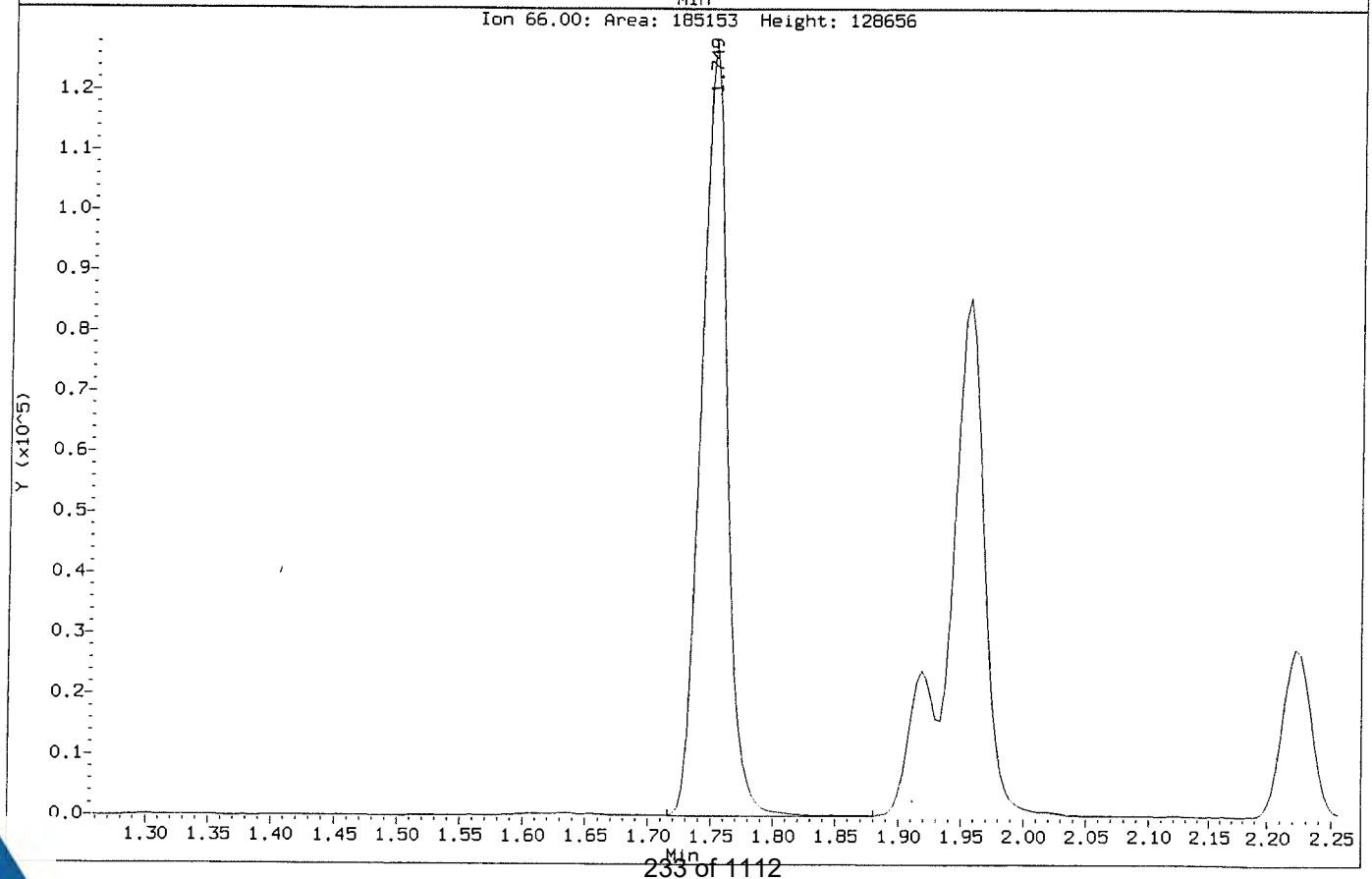
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: Chloroethane
CAS Number: 75-00-3





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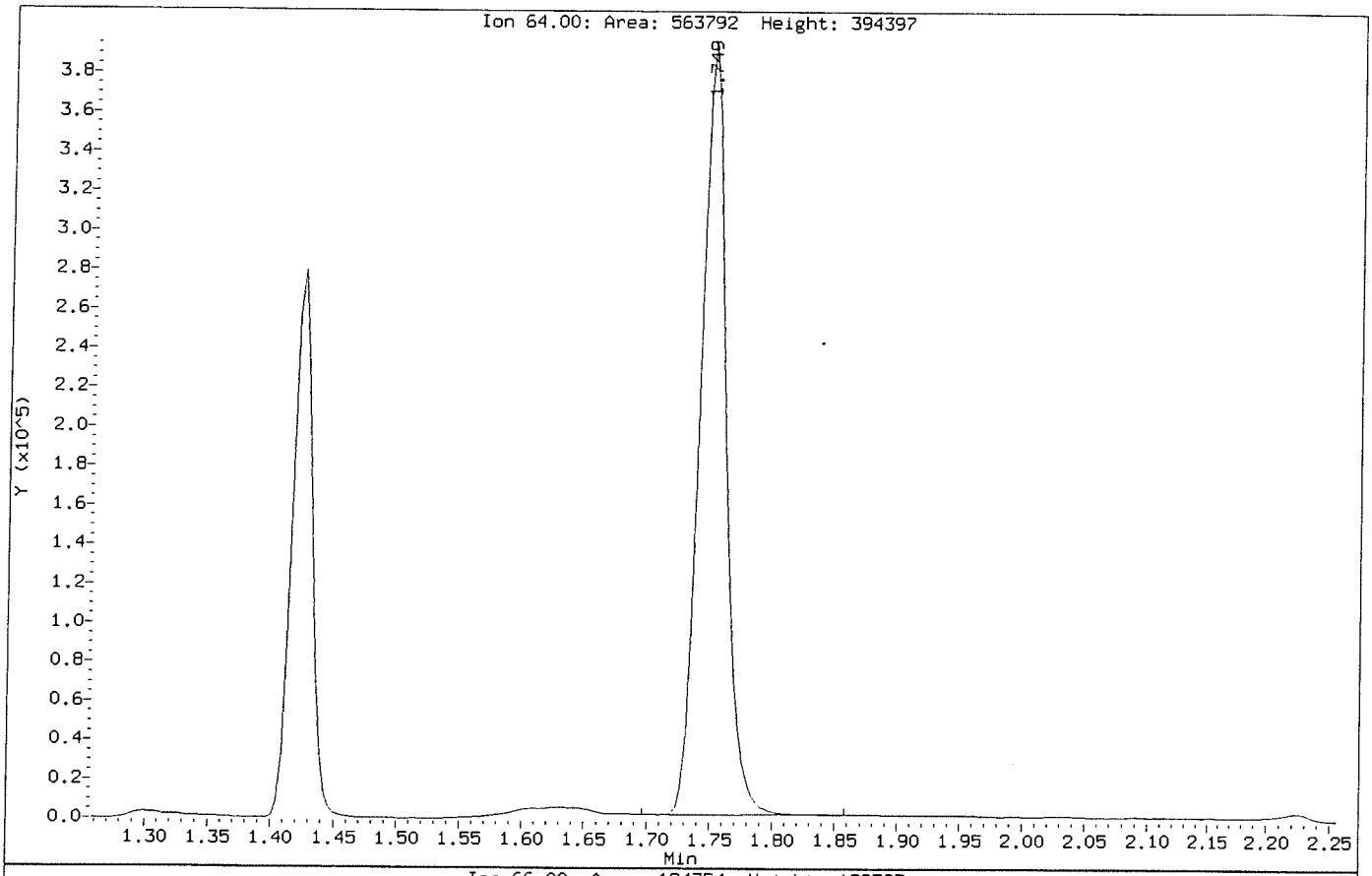
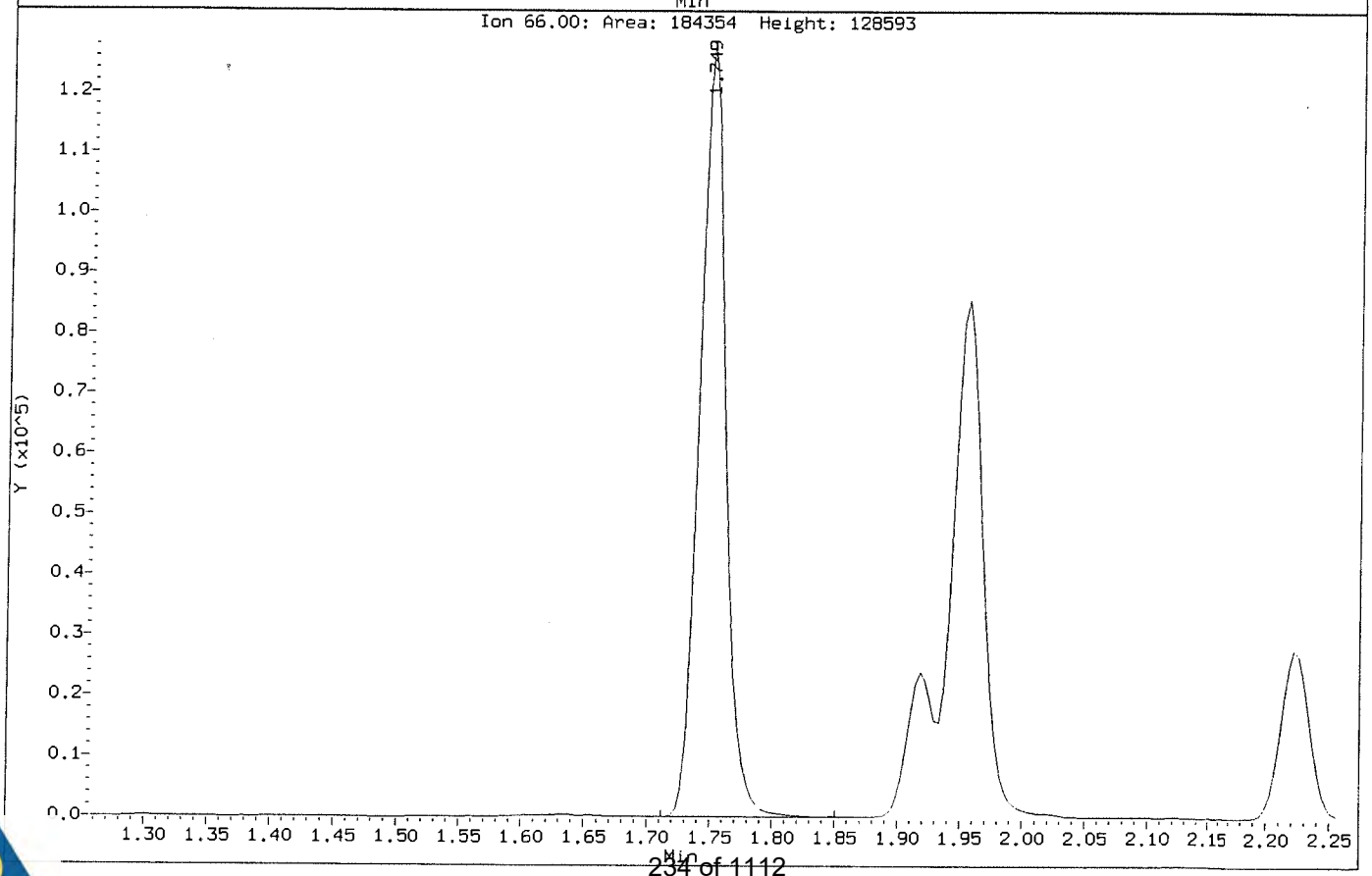
Client Sample ID: VSTD150

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D Page 1
Report Date: 01-Feb-2019 15:44

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 08-JAN-2019 14:59
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:34 Cal File: U010810.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

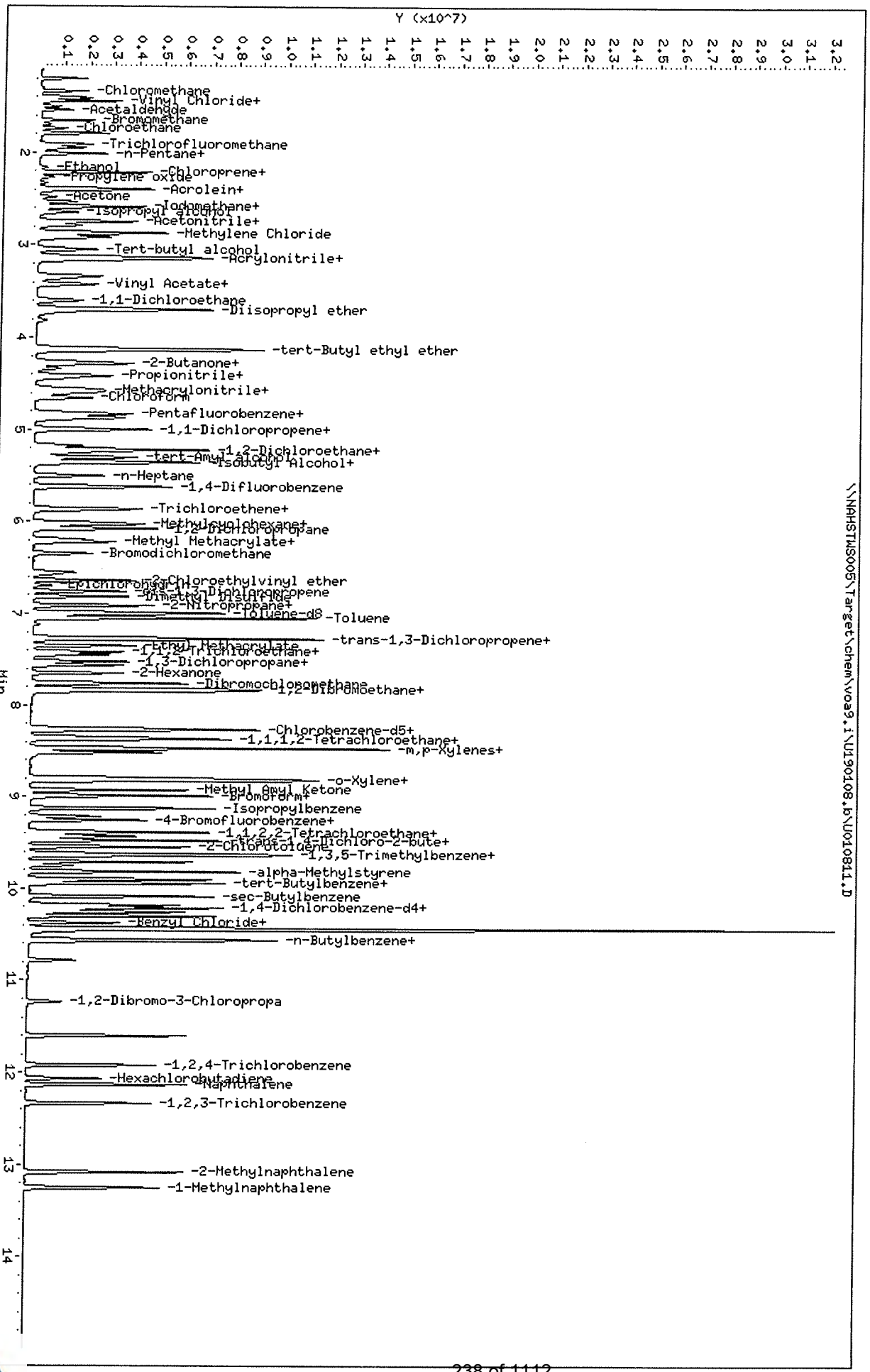
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	429927	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	808219	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	761406	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	355794	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	938870	200.000	199.70
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	1222427	200.000	199.21
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	3786858	200.000	198.31
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	1452643	200.000	199.83
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	984879	200.000	214.09(A)
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	1505349	200.000	213.79(A)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1597058	200.000	199.93
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	895818	200.000	192.24
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	1889553	200.000	193.35
11 1,1-Dichloroethene	96	2.393	2.393	(0.489)	823517	200.000	198.57
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	1465844	200.000	196.15
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	1348801	200.000	212.74(A)
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1870824	200.000	217.53(A)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	1398348	200.000	218.14(A)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	3800889	200.000	203.41(A)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	267735	200.000	204.51(A)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	1052363	200.000	198.27
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	2060137	200.000	190.70

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	1467861	200.000	187.69
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	1146745	200.000	197.08
75 1,3,5-Trimethylbenzene	105	9.628	9.628	(0.941)	3747524	200.000	205.34(A)
83 1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	2100365	200.000	195.69
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1923251	200.000	191.32
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	2142590	200.000	188.33
26 2,2-Dichloropropane	77	4.272	4.272	(0.873)	1232463	200.000	210.58(A)
24 2-Butanone	43	4.335	4.335	(0.886)	1216697	400.000	408.96(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	3297612	200.000	194.95
52 2-Hexanone	43	7.653	7.653	(0.928)	1936963	400.000	441.09(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	3826594	200.000	194.48
82 p-Isopropyltoluene	119	10.213	10.213	(0.998)	3919599	200.000	206.82(A)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	2707197	400.000	427.51(A)
10 Acetone	43	2.480	2.480	(0.507)	752770	400.000	409.58(A)
37 Benzene	78	5.216	5.216	(0.927)	4245482	200.000	190.88
74 Bromobenzene	156	9.385	9.385	(0.917)	1128976	200.000	203.49(A)
29 Bromochloromethane	128	4.553	4.553	(0.930)	439869	200.000	186.13
39 Bromodichloromethane	83	6.348	6.348	(1.129)	1348130	200.000	215.17(A)
66 Bromoform	173	8.984	8.984	(1.089)	687286	200.000	201.28(A)
6 Bromomethane	94	1.655	1.655	(0.338)	585977	200.000	180.48
19 Carbon Disulfide	76	2.585	2.585	(0.528)	5745653	400.000	390.57(A)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	1203648	200.000	222.41(A)
59 Chlorobenzene	112	8.275	8.275	(1.003)	2838218	200.000	186.97
7 Chloroethane	64	1.737	1.737	(0.355)	753381	200.000	194.41(M)
28 Chloroform	83	4.658	4.658	(0.952)	1774825	200.000	191.17
3 Chloromethane	50	1.336	1.336	(0.273)	1231855	200.000	206.67(A)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	1145016	200.000	194.71
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.202)	1921305	200.000	200.24(A)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1039615	200.000	199.99
44 Dibromomethane	93	6.191	6.191	(1.101)	674252	200.000	198.59
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	1134745	200.000	199.73
61 Ethylbenzene	106	8.373	8.373	(1.015)	1527436	200.000	199.48
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	491406	200.000	199.11
67 Isopropylbenzene	105	9.126	9.126	(1.106)	4368746	200.000	199.74
62 m,p-Xylenes	106	8.474	8.474	(1.027)	3708605	400.000	396.75(A)
17 Methylene Chloride	84	2.866	2.866	(0.586)	1093304	200.000	199.13
87 n-Butylbenzene	91	10.558	10.558	(1.031)	3656443	200.000	198.57
73 n-Propylbenzene	91	9.478	9.478	(0.926)	5413907	200.000	196.86
92 Naphthalene	128	12.133	12.133	(1.185)	4364184	200.000	199.85
63 o-Xylene	106	8.811	8.811	(1.068)	1887398	200.000	197.92
81 sec-Butylbenzene	105	10.090	10.090	(0.986)	4586325	200.000	203.88(A)
64 Styrene	104	8.826	8.826	(1.070)	3221123	200.000	202.86(A)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	3165126	200.000	201.39(A)
56 Tetrachloroethene	164	7.525	7.525	(0.912)	765741	200.000	191.45
50 Toluene	91	7.049	7.049	(0.855)	4399106	200.000	187.93
20 trans-1,2-Dichloroethene	96	3.136	3.136	(0.641)	1011119	200.000	192.78
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	1672981	200.000	200.84(A)
38 Trichloroethene	130	5.861	5.861	(1.042)	1053661	200.000	204.76(A)
8 Trichlorofluoromethane	101	1.947	1.947	(0.398)	1422198	200.000	197.73
5 Vinyl Chloride	62	1.415	1.415	(0.289)	1280236	200.000	200.65(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D

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

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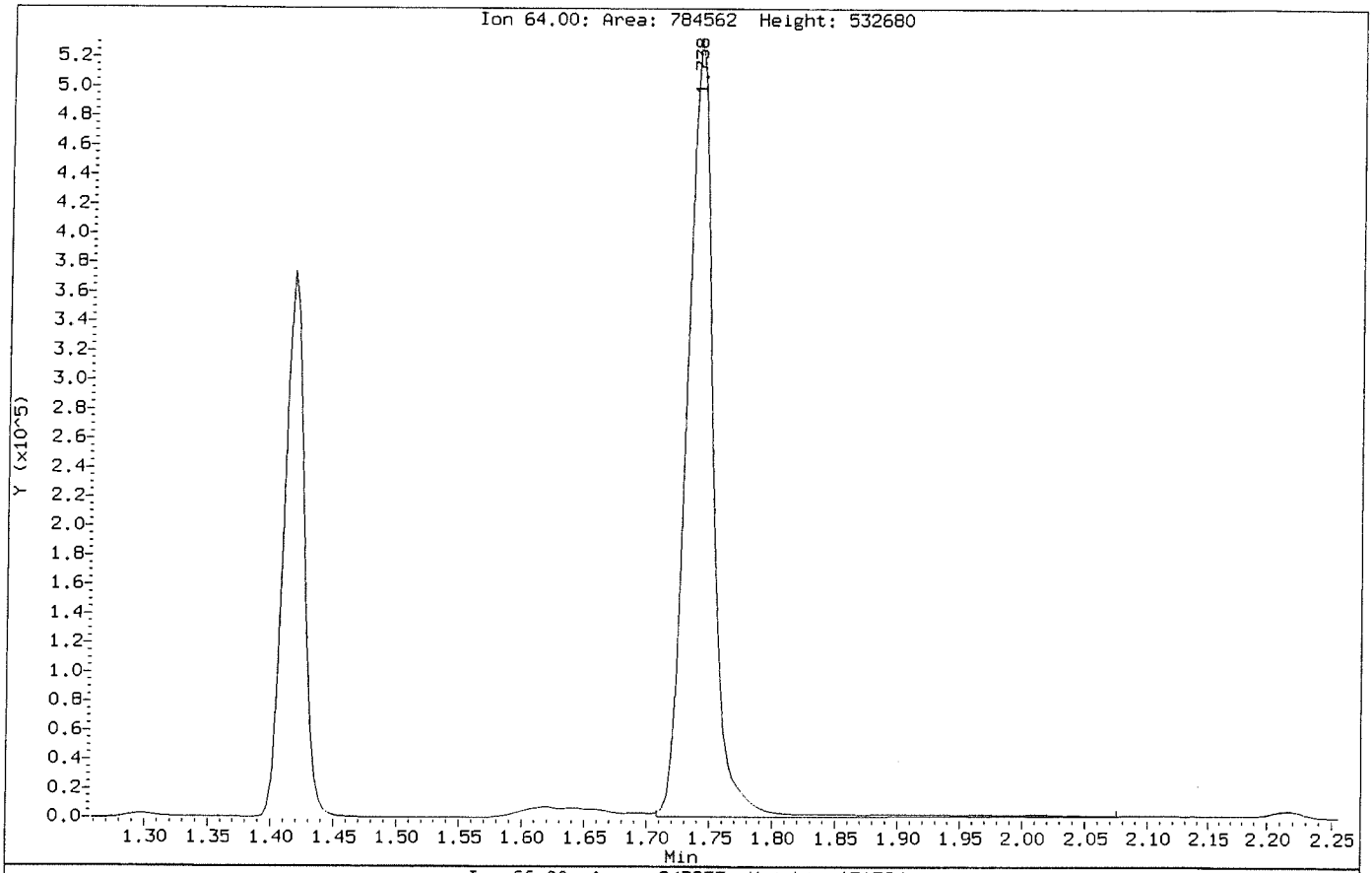
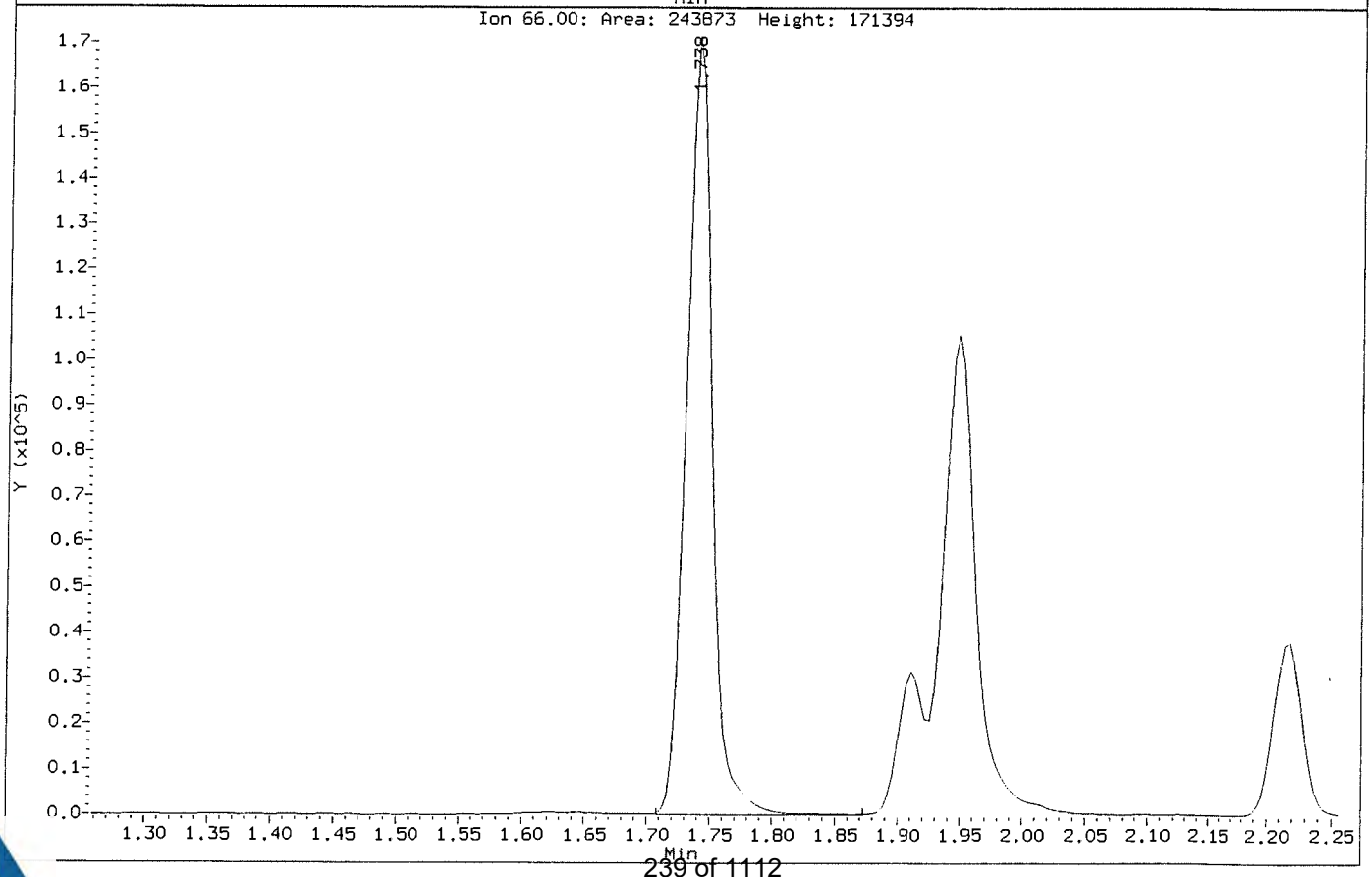
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





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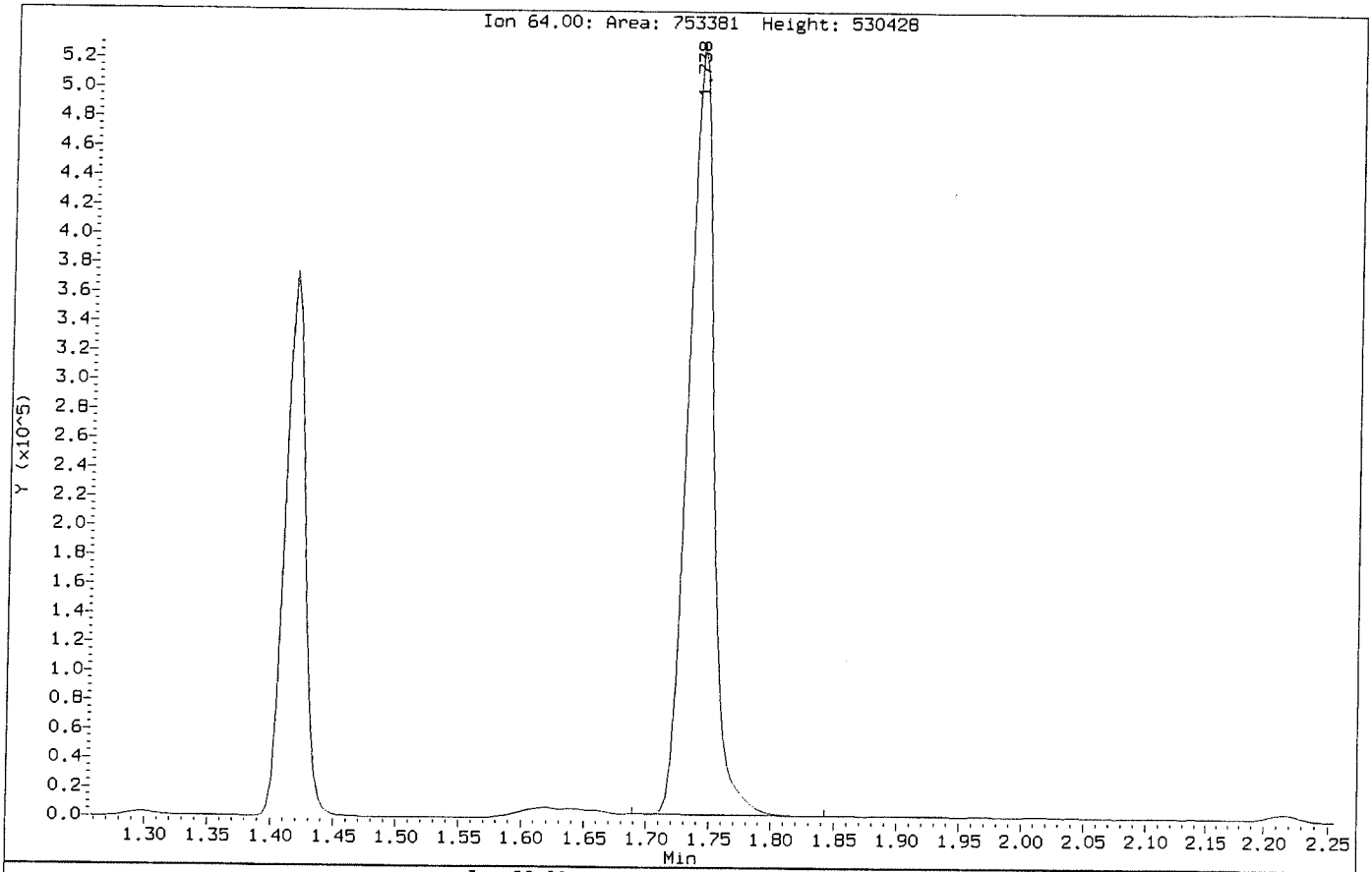
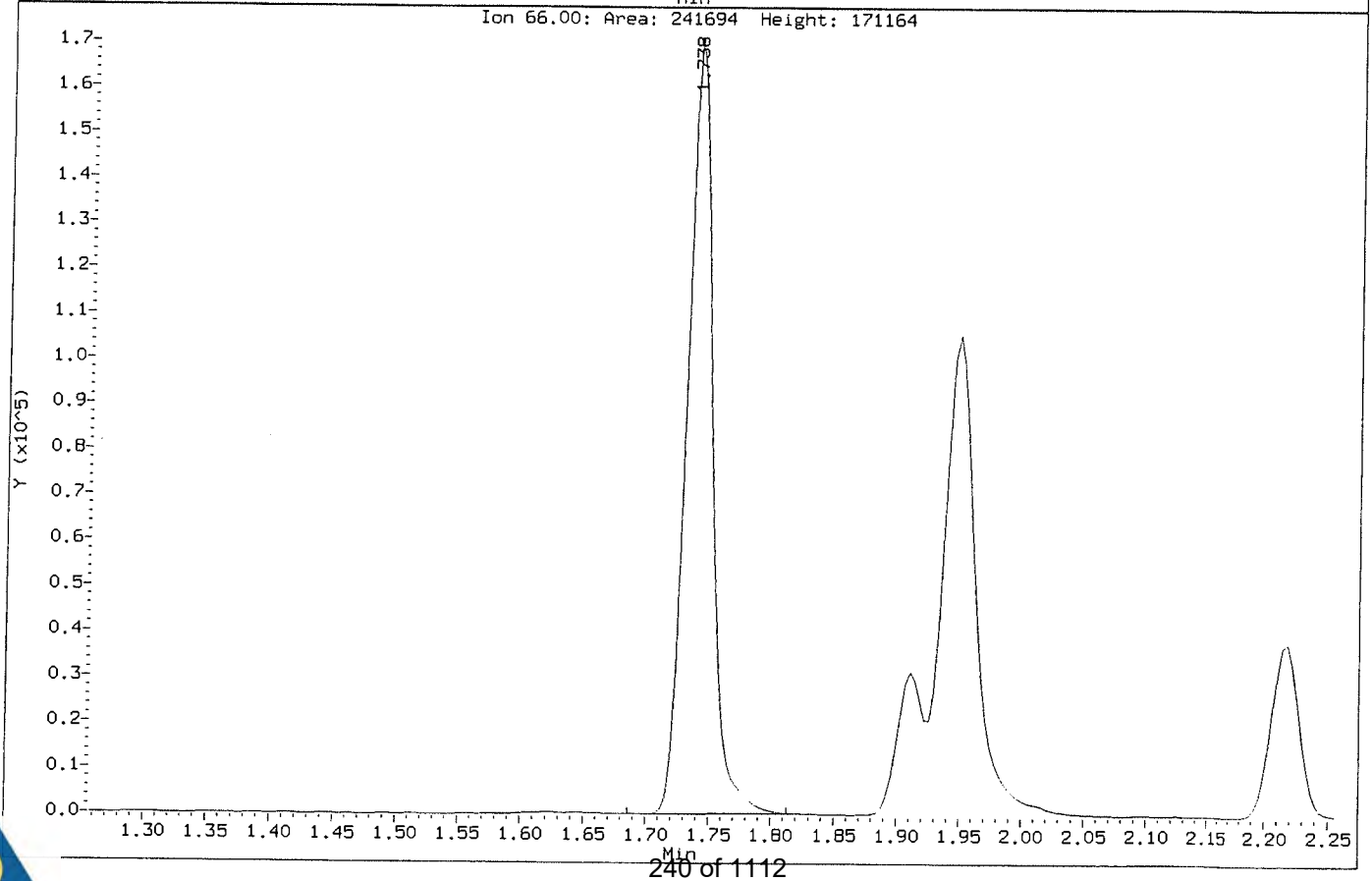
Compound: Chloroethane
CAS Number: 75-00-3





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Smp Info : VSTD050;VSTD050;2;;ICV
Misc Info : 180315V9;WATER;0;1;
Comment :
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Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

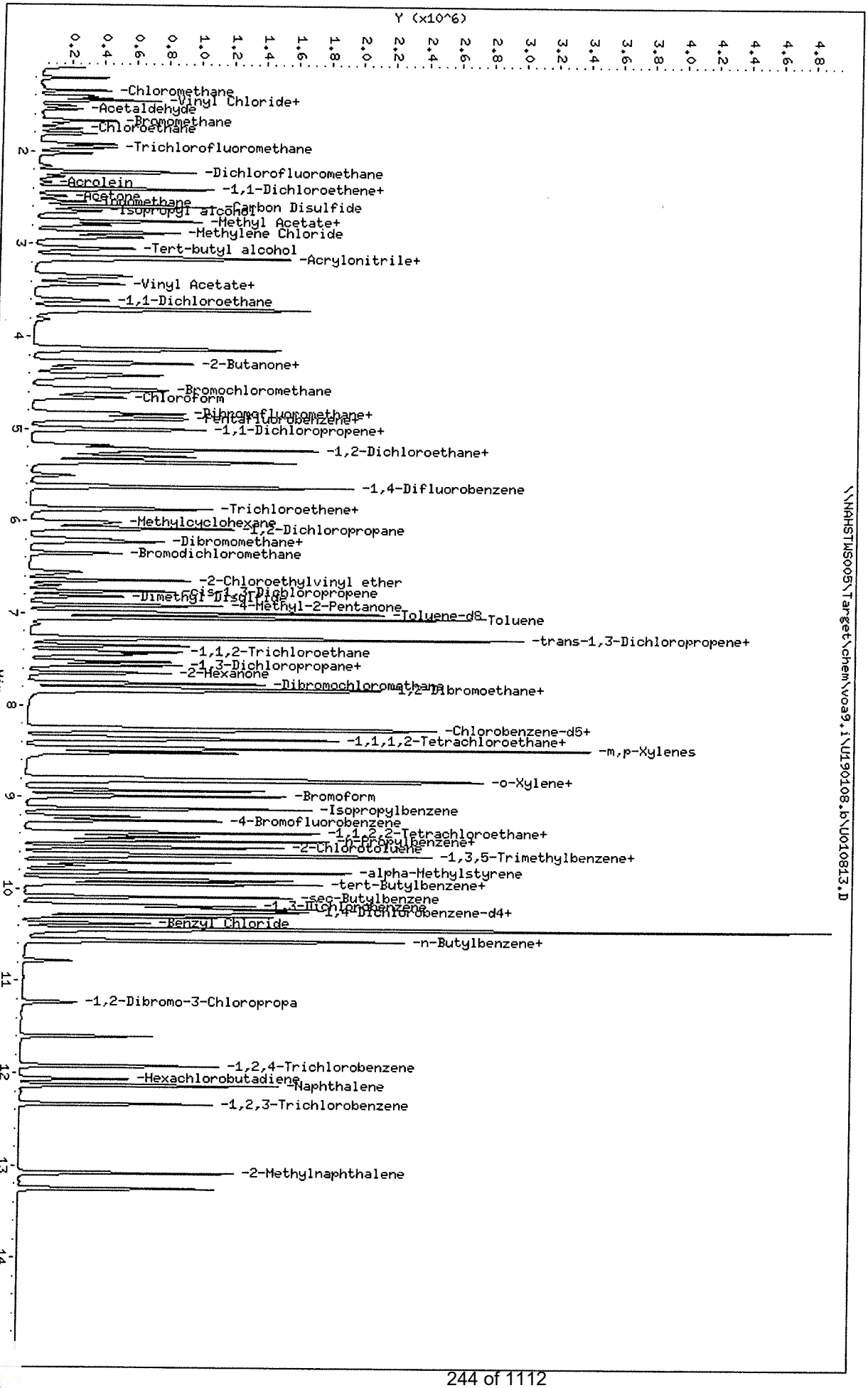
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	430548	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	797004	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	736491	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	345661	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	239269	50.0000	49.21
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	314304	50.0000	49.49
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	974246	50.0000	50.94
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	367815	50.0000	50.93
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	226050	50.0000	50.80
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	337056	50.0000	47.80
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	403909	50.0000	51.77
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	223064	50.0000	49.48
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	458068	50.0000	46.80
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	187340	50.0000	45.10
32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	336995	50.0000	45.73
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	308927	50.0000	50.15
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	450600	50.0000	53.93
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	320108	50.0000	51.40
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	918581	50.0000	50.60
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	61712	50.0000	50.11
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	262149	50.0000	51.06
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	502063	50.0000	47.83

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.933)	369789	50.0000	47.94
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	282197	50.0000	49.18
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	872265	50.0000	49.19
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	502149	50.0000	48.15
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	481086	50.0000	49.47
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	515943	50.0000	46.68
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	305623	50.0000	52.14
24 2-Butanone	43	4.339	4.339	(0.886)	313100	100.000	105.08
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	801797	50.0000	48.79
52 2-Hexanone	43	7.649	7.649	(0.927)	474501	100.000	111.71
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	931854	50.0000	48.74
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	890763	50.0000	48.38
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	670625	100.000	109.48
10 Acetone	43	2.483	2.483	(0.507)	186681	100.000	100.19
37 Benzene	78	5.220	5.220	(0.927)	1041442	50.0000	47.48
74 Bromobenzene	156	9.381	9.381	(0.917)	269447	50.0000	49.99
29 Bromochloromethane	128	4.557	4.557	(0.930)	125415	50.0000	52.99
39 Bromodichloromethane	83	6.348	6.348	(1.128)	313432	50.0000	50.72
66 Bromoform	173	8.984	8.984	(1.089)	153603	50.0000	47.88(T)
6 Bromomethane	94	1.670	1.670	(0.341)	164593	50.0000	51.16
19 Carbon Disulfide	76	2.596	2.596	(0.530)	1390922	100.000	94.41
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	260150	50.0000	48.74
59 Chlorobenzene	112	8.275	8.275	(1.003)	694010	50.0000	47.26
7 Chloroethane	64	1.756	1.756	(0.359)	171448	50.0000	44.17(M)
28 Chloroform	83	4.661	4.661	(0.952)	438854	50.0000	47.20
3 Chloromethane	50	1.344	1.344	(0.274)	267263	50.0000	46.70
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	277790	50.0000	47.17
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.200)	452822	50.0000	48.85
55 Dibromochloromethane	129	7.758	7.758	(0.940)	238591	50.0000	48.38
44 Dibromomethane	93	6.191	6.191	(1.100)	165264	50.0000	49.36
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	250516	50.0000	44.03
61 Ethylbenzene	106	8.369	8.369	(1.015)	350049	50.0000	47.26
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	105872	50.0000	47.27
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1025574	50.0000	48.47
62 m,p-Xylenes	106	8.474	8.474	(1.027)	888998	100.000	98.32
17 Methylene Chloride	84	2.877	2.877	(0.587)	268195	50.0000	48.39
87 n-Butylbenzene	91	10.554	10.554	(1.031)	822061	50.0000	45.95
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1282894	50.0000	48.01
92 Naphthalene	128	12.133	12.133	(1.185)	1070210	50.0000	50.80
63 o-Xylene	106	8.811	8.811	(1.068)	452391	50.0000	49.04
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1015099	50.0000	46.44
64 Styrene	104	8.826	8.826	(1.070)	785930	50.0000	51.17
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	718649	50.0000	47.06
56 Tetrachloroethene	164	7.525	7.525	(0.912)	170507	50.0000	44.07
50 Toluene	91	7.049	7.049	(0.855)	1095105	50.0000	48.36
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	241088	50.0000	45.90
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.290)	389510	50.0000	48.64
38 Trichloroethene	130	5.865	5.865	(1.042)	246948	50.0000	48.66
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	310344	50.0000	43.08
5 Vinyl Chloride	62	1.423	1.423	(0.291)	284020	50.0000	44.45

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



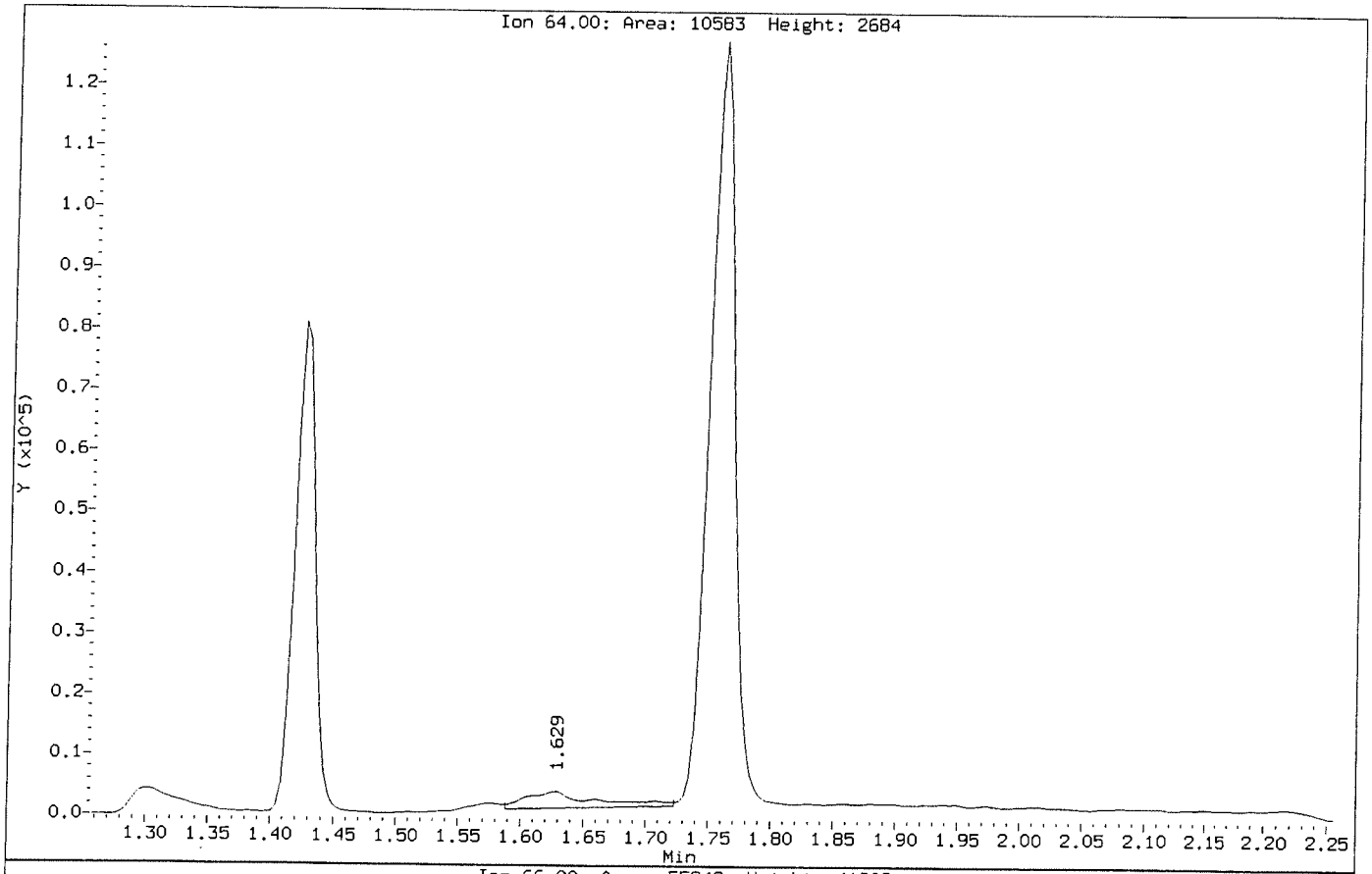
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D
Date : 08-JAN-2019 15:48
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;2;ICV
Purge Volume: 5.0
Column phase: DB624

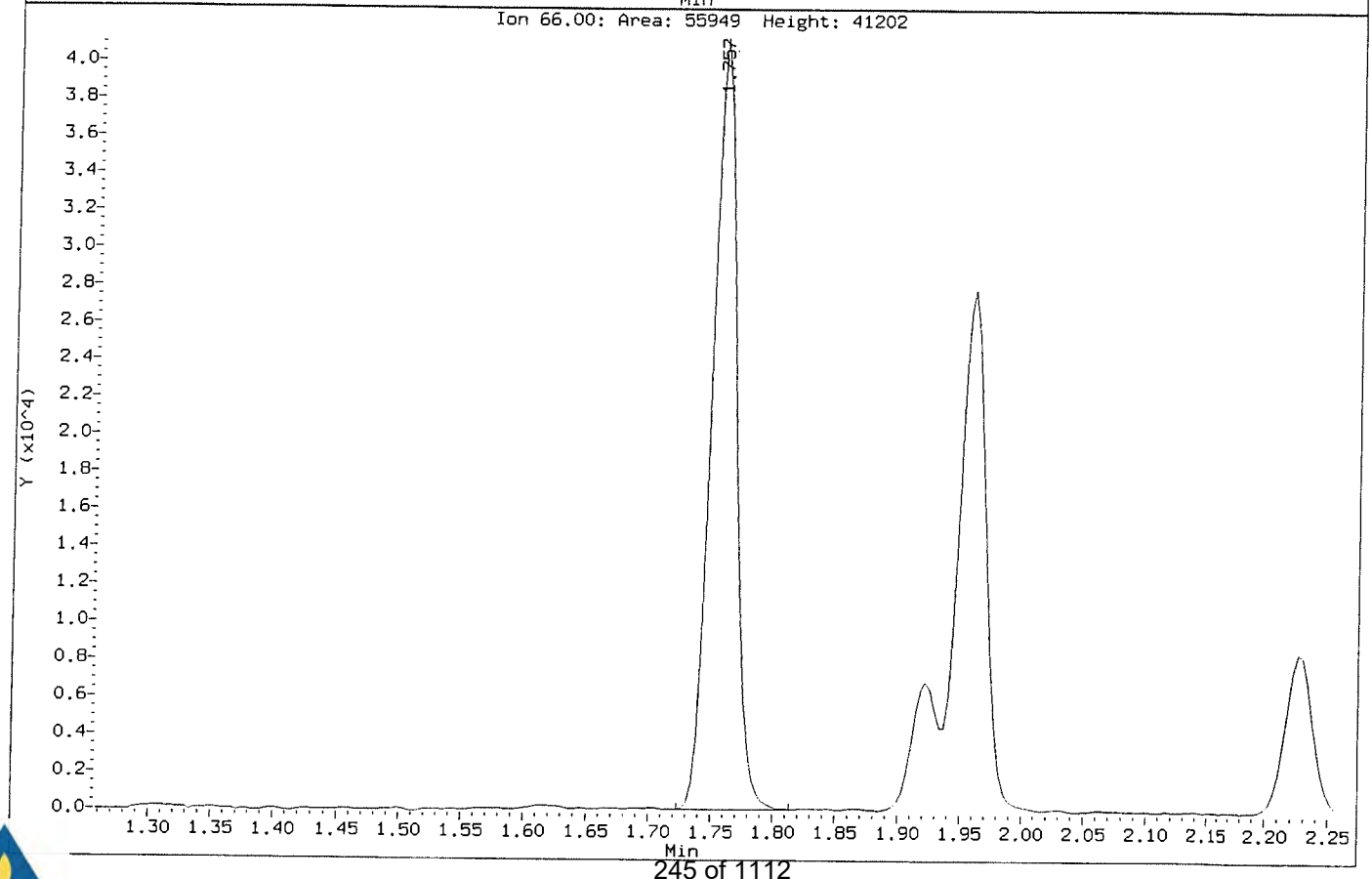
\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010813.D
Injection Date: 08-JAN-2019 15:48
Instrument: VOA9.i
Client Sample ID: VSTD050

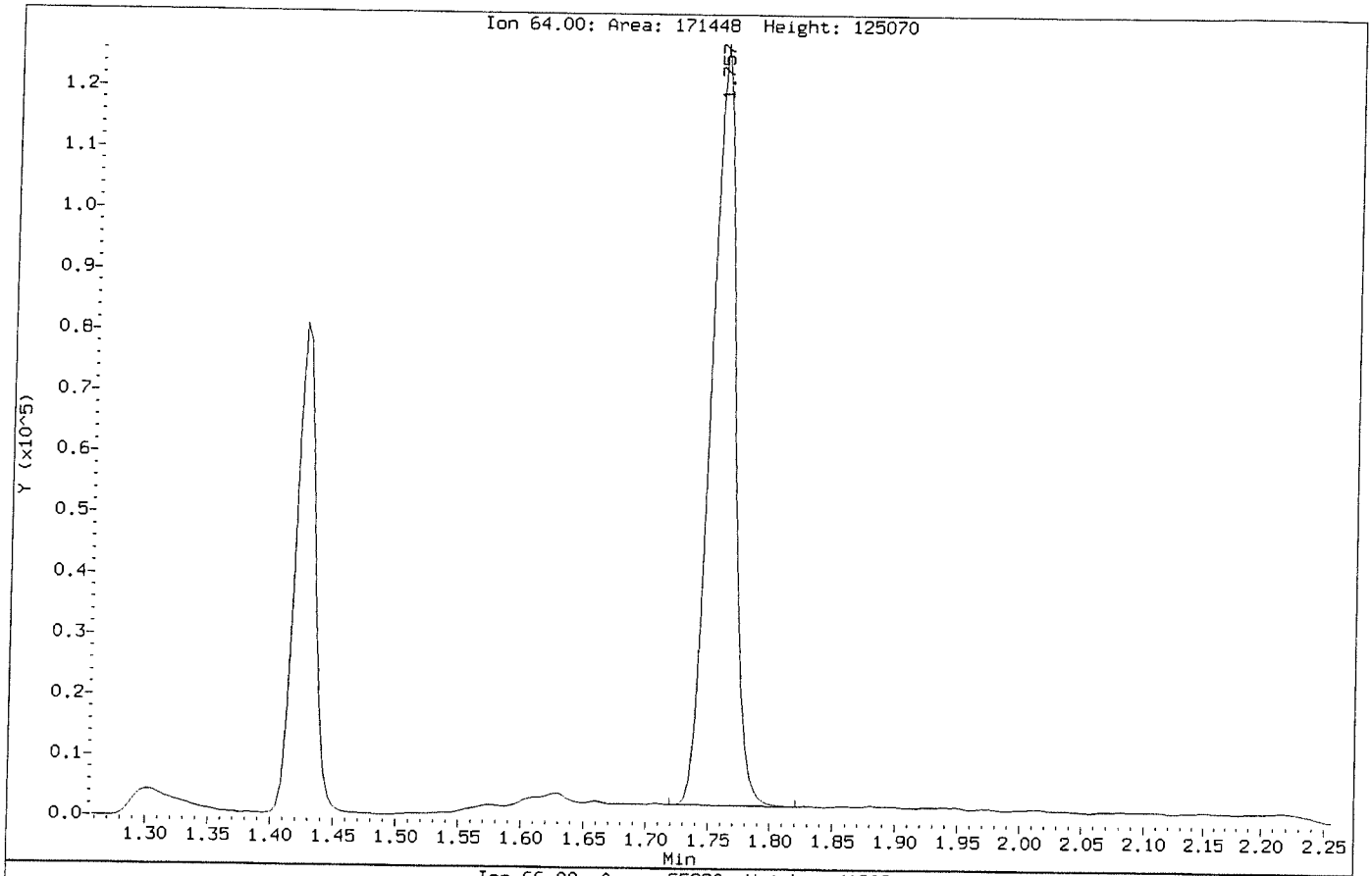
Compound: Chloroethane
CAS Number: 75-00-3

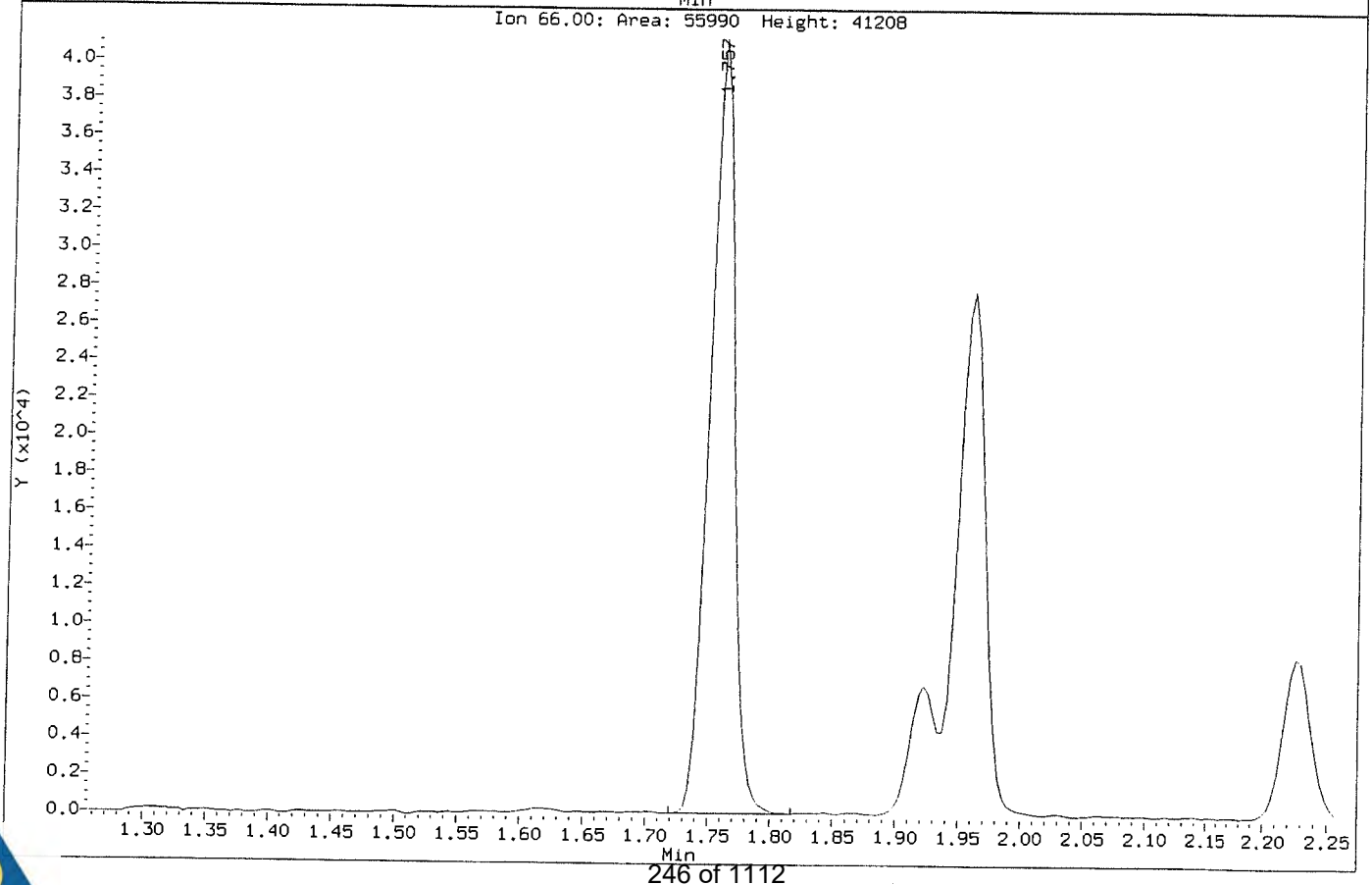




Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D
Injection Date: 08-JAN-2019 15:48
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





MSVOA09 -Logbook

Batch: 34079
Date: 01-10-2019
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	01-10-2019 10:09 am	1.00	50 mL	50 mL	V011001.D	Liquid	Y	r
	Auto find/ purged									
2	VSTD050	CCV	01-10-2019 10:33 am	1.00	50 mL	50 mL	V011002.D	Liquid	Y	r
	10 uL cal std/50 mL DI									
3	VSTD050	CCV	01-10-2019 10:58 am	1.00	50 mL	50 mL	V011003.D	Liquid	Y	r
	10 uL cal std/50 mL DI									
4	CCB	SAMP	01-10-2019 11:22 am	1.00	50 mL	50 mL	V011004.D	Liquid	Y	r
5	VLCSW-190108	LCS	01-10-2019 11:47 am	1.00	50 mL	50 mL	V011005.D	Liquid	Y	r
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	01-10-2019 12:11 pm	1.00	50 mL	50 mL	V011006.D	Liquid	Y	r
7	BLANK	SAMP	01-10-2019 12:36 pm	1.00	50 mL	50 mL	V011007.D	Liquid	Y	r
8	VBLKW-190108	MBLK	01-10-2019 01:00 pm	1.00	50 mL	50 mL	V011008.D	Liquid	Y	r
9	HS18121558-04	SAMP	01-10-2019 01:25 pm	1.00	50 mL	50 mL	V011009.D	Liquid	Y	>
10	HS19010248-05	SAMP	01-10-2019 01:50 pm	1.00	50 mL	50 mL	V011010.D	Liquid	Y	>
11	HS18121558-01	SAMP	01-10-2019 02:14 pm	1.00	50 mL	50 mL	V011011.D	Liquid	Y	>
12	HS18121558-03	SAMP	01-10-2019 02:39 pm	1.00	50 mL	50 mL	V011012.D	Liquid	Y	>
13	HS18121558-03DL	SAMP	01-10-2019 03:06 pm	5.00	10 mL	50 mL	V011013.D	Liquid	Y	>
14	HS18121558-02	SAMP	01-10-2019 03:33 pm	10.00	5 mL	50 mL	V011014.D	Liquid	Y	>
15	HS18121558-02DL	SAMP	01-10-2019 04:01 pm	100.0(	500 µL	50 mL	V011015.D	Liquid	Y	>
16	HS18121558-01MS	MS	01-10-2019 04:25 pm	1.00	50 mL	50 mL	V011016.D	Liquid	Y	>
	3.5 uL cal std/43 mL samp									
17	HS18121558-01MSD	MSD	01-10-2019 04:50 pm	1.00	50 mL	50 mL	V011017.D	Liquid	Y	>
	3.5 uL cal std/43 mL samp									
18	HS19010396-05	SAMP	01-10-2019 05:15 pm	1.00	50 mL	50 mL	V011018.D	Liquid	Y	>
19	HS19010396-15	SAMP	01-10-2019 05:39 pm	1.00	50 mL	50 mL	V011019.D	Liquid	Y	>
20	HS19010248-02	SAMP	01-10-2019 06:04 pm	1.00	50 mL	50 mL	V011020.D	Liquid	Y	>
21	HS19010248-02DL	SAMP	01-10-2019 06:31 pm	10.00	5 mL	50 mL	V011021.D	Liquid	Y	>
22	HS19010248-03	SAMP	01-10-2019 06:56 pm	1.00	50 mL	50 mL	V011022.D	Liquid	Y	>
23	HS19010248-03DL	SAMP	01-10-2019 07:23 pm	25.00	2 mL	50 mL	V011023.D	Liquid	Y	>
24	HS19010248-04	SAMP	01-10-2019 07:48 pm	1.00	50 mL	50 mL	V011024.D	Liquid	Y	>
25	HS19010248-04DL	SAMP	01-10-2019 08:15 pm	25.00	2 mL	50 mL	V011025.D	Liquid	Y	>
26	CCV_END	CCV	01-10-2019 08:40 pm	1.00	50 mL	50 mL	V011026.D	Liquid	Y	r
	10 uL cal std/50 mL DI									

Chemical	Value
SURR SPK ID	30502-57-03
IS ID	30502-57-04
ICV STD ID	30603-49-01
LCS/MS ID	30603-49-01
CAL STD ID	30502-59-01/02
BFB ID	30502-57-03
pH Paper	634-40-13

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-190108	104	99	105	106	0
02	VBLKW-190108	98	92	106	102	0
03	HS18121558-0	100	92	106	102	0
04	HS18121558-0	100	93	105	102	0
05	HS18121558-0	98	91	106	101	0
06	HS18121558-0	100	93	107	100	0
07	HS18121558-0	108	96	106	100	0
08	HS18121558-0	108	97	105	98	0
09	HS18121558-0	107	97	107	106	0
10	HS18121558-0	104	97	107	107	0
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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-190108

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

Lab File ID: V011008 Lab Sample ID: VBLKW-190108

Date Analyzed: 01/10/19 Time Analyzed: 1300

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-190108	VLCSW-190108	V011005	1147
02	HS18121558-0	HS18121558-04	V011009	1325
03	HS18121558-0	HS18121558-01	V011011	1414
04	HS18121558-0	HS18121558-03	V011012	1439
05	HS18121558-0	HS18121558-03D	V011013	1506
06	HS18121558-0	HS18121558-02	V011014	1533
07	HS18121558-0	HS18121558-02D	V011015	1601
08	HS18121558-0	HS18121558-01M	V011016	1625
09	HS18121558-0	HS18121558-01M	V011017	1650
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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.: HS18121558

Lab File ID: V011001 BFB Injection Date: 01/10/19

Instrument ID: VOA9 BFB Injection Time: 1009

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	20.5
75	30.0 - 60.0% of mass 95	51.2
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 (0.7)1
174	Greater than 50.0% of mass 95	64.6
175	5.0 - 9.0% of mass 174	5.3 (8.3)1
176	95.0 - 101.0% of mass 174	62.0 (96.0)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	V011003	01/10/19	1058
02	VLCSW-190108	VLCSW-190108	V011005	01/10/19	1147
03	VBLKW-190108	VBLKW-190108	V011008	01/10/19	1300
04	HS18121558-0	HS18121558-04	V011009	01/10/19	1325
05	HS18121558-0	HS18121558-01	V011011	01/10/19	1414
06	HS18121558-0	HS18121558-03	V011012	01/10/19	1439
07	HS18121558-0	HS18121558-03D	V011013	01/10/19	1506
08	HS18121558-0	HS18121558-02	V011014	01/10/19	1533
09	HS18121558-0	HS18121558-02D	V011015	01/10/19	1601
10	HS18121558-0	HS18121558-01M	V011016	01/10/19	1625
11	HS18121558-0	HS18121558-01M	V011017	01/10/19	1650
12	CCV_END	CCV_END	V011026	01/10/19	2040
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

Instrument ID: VOA9 Calibration Date: 01/10/19 Time: 1058

Lab File ID: V011003 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
cis-1,3-Dichloropropene	51.05	50.00	LINR	2.1	20.0
trans-1,3-Dichloropropene	50.23	50.00	LINR	0.4	20.0
1,3-Dichlorobenzene	51.06	50.00	AVRG	2.1	20.0
2,2-Dichloropropane	57.78	50.00	AVRG	15.5	20.0
1,1-Dichloropropene	51.85	50.00	AVRG	3.7	20.0
Dibromomethane	50.02	50.00	AVRG	0.0	20.0
1,2-Dibromoethane	51.08	50.00	AVRG	2.1	20.0
trans-1,2-Dichloroethene	49.59	50.00	AVRG	0.8	20.0
1,1,1,2-Tetrachloroethane	53.64	50.00	AVRG	7.2	20.0
1,1,1-Trichloroethane	53.68	50.00	AVRG	7.3	20.0
1,1,2,2-Tetrachloroethane	49.45	50.00	LINR	1.1	20.0
1,1,2-Trichloroethane	50.72	50.00	AVRG	1.4	20.0
1,1-Dichloroethane	50.81	50.00	AVRG	1.6	20.0
1,1-Dichloroethene	49.50	50.00	AVRG	1.0	20.0
Trichloroethene	50.90	50.00	AVRG	1.8	20.0
1,2,3-Trichlorobenzene	51.65	50.00	AVRG	3.3	20.0
Trichlorofluoromethane	47.40	50.00	AVRG	5.2	20.0
1,2,4-Trichlorobenzene	54.70	50.00	AVRG	9.4	20.0
1,2,4-Trimethylbenzene	55.88	50.00	AVRG	11.7	20.0
Tetrachloroethene	49.36	50.00	AVRG	1.2	20.0
1,2-Dichlorobenzene	50.46	50.00	AVRG	0.9	20.0
1,2-Dichloroethane	50.43	50.00	AVRG	0.8	20.0
1,2-Dichloropropane	52.57	50.00	AVRG	5.1	20.0
1,3,5-Trimethylbenzene	55.52	50.00	AVRG	11.0	20.0
1,3-Dichloropropane	51.25	50.00	AVRG	2.5	20.0
1,4-Dichlorobenzene	49.62	50.00	AVRG	0.7	20.0
Toluene	52.10	50.00	AVRG	4.2	20.0
2-Butanone	90.72	100.00	AVRG	9.2	20.0
2-Chlorotoluene	53.18	50.00	AVRG	6.3	20.0
2-Hexanone	95.17	100.00	AVRG	4.8	20.0
4-Chlorotoluene	53.72	50.00	AVRG	7.4	20.0
tert-Butylbenzene	54.45	50.00	AVRG	8.9	20.0
4-Methyl-2-Pentanone	97.42	100.00	AVRG	2.5	20.0
Acetone	85.60	100.00	LINR	14.4	20.0
Benzene	50.99	50.00	AVRG	1.9	20.0
Bromobenzene	51.86	50.00	AVRG	3.7	20.0
Bromochloromethane	54.66	50.00	AVRG	9.3	20.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

Instrument ID: VOA9 Calibration Date: 01/10/19 Time: 1058

Lab File ID: V011003 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Bromodichloromethane	54.03	50.00	AVRG	8.0	20.0
Bromoform	46.21	50.00	LINR	7.5	20.0
Bromomethane	45.67	50.00	LINR	8.6	20.0
Carbon Disulfide	107.24	100.00	AVRG	7.2	20.0
Carbon Tetrachloride	55.09	50.00	AVRG	10.1	20.0
Chlorobenzene	49.84	50.00	AVRG	0.3	20.0
Chloroethane	45.27	50.00	AVRG	9.4	20.0
Chloroform	50.63	50.00	AVRG	1.2	20.0
Chloromethane	47.42	50.00	LINR	5.1	20.0
cis-1,2-Dichloroethene	50.05	50.00	AVRG	0.0	20.0
Dibromochloromethane	49.76	50.00	LINR	0.4	20.0
Dichlorodifluoromethane	50.89	50.00	AVRG	1.7	20.0
Ethylbenzene	52.49	50.00	AVRG	4.9	20.0
Hexachlorobutadiene	54.89	50.00	2ORDR	9.7	20.0
Isopropylbenzene	54.67	50.00	AVRG	9.3	20.0
m,p-Xylenes	106.21	100.00	AVRG	6.2	20.0
Methylene Chloride	51.59	50.00	LINR	3.1	20.0
n-Butylbenzene	56.04	50.00	AVRG	12.0	20.0
n-Propylbenzene	55.48	50.00	AVRG	10.9	20.0
Naphthalene	47.30	50.00	2ORDR	5.4	20.0
o-Xylene	52.63	50.00	AVRG	5.2	20.0
sec-Butylbenzene	56.66	50.00	AVRG	13.3	20.0
Styrene	54.30	50.00	AVRG	8.6	20.0
Vinyl Chloride	49.14	50.00	AVRG	1.7	20.0
1,2,3-Trichloropropane	49.79	50.00	AVRG	0.4	20.0
p-Isopropyltoluene	57.19	50.00	AVRG	14.3	20.0
1,2-Dibromo-3-Chloropropane	42.09	50.00	LINR	15.8	20.0
1,2-Dichloroethane-d4	49.59	50.00	LINR	0.8	20.0
Dibromofluoromethane	49.83	50.00	2ORDR	0.3	20.0
Toluene-d8	52.45	50.00	LINR	4.9	20.0
4-Bromofluorobenzene	52.64	50.00	LINR	5.2	20.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

Instrument ID: VOA9 Calibration Date: 01/10/19 Time: 2040

Lab File ID: V011026 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
cis-1,3-Dichloropropene	63.24	50.00	LINR	26.4	50.0
trans-1,3-Dichloropropene	62.41	50.00	LINR	24.8	50.0
1,3-Dichlorobenzene	64.18	50.00	AVRG	28.3	50.0
2,2-Dichloropropane	59.39	50.00	AVRG	18.7	50.0
1,1-Dichloropropene	70.90	50.00	AVRG	41.8	50.0
Dibromomethane	67.54	50.00	AVRG	35.0	50.0
1,2-Dibromoethane	66.93	50.00	AVRG	33.8	50.0
trans-1,2-Dichloroethene	65.62	50.00	AVRG	31.2	50.0
1,1,1,2-Tetrachloroethane	67.68	50.00	AVRG	35.3	50.0
1,1,1-Trichloroethane	71.97	50.00	AVRG	43.9	50.0
1,1,2,2-Tetrachloroethane	67.83	50.00	LINR	35.6	50.0
1,1,2-Trichloroethane	67.26	50.00	AVRG	34.5	50.0
1,1-Dichloroethane	68.92	50.00	AVRG	37.8	50.0
1,1-Dichloroethene	71.00	50.00	AVRG	42.0	50.0
Trichloroethene	70.51	50.00	AVRG	41.0	50.0
1,2,3-Trichlorobenzene	62.65	50.00	AVRG	25.3	50.0
Trichlorofluoromethane	72.65	50.00	AVRG	45.3	50.0
1,2,4-Trichlorobenzene	64.07	50.00	AVRG	28.1	50.0
1,2,4-Trimethylbenzene	72.19	50.00	AVRG	44.3	50.0
Tetrachloroethene	63.05	50.00	AVRG	26.1	50.0
1,2-Dichlorobenzene	63.03	50.00	AVRG	26.0	50.0
1,2-Dichloroethane	68.47	50.00	AVRG	36.9	50.0
1,2-Dichloropropane	70.62	50.00	AVRG	41.2	50.0
1,3,5-Trimethylbenzene	72.33	50.00	AVRG	44.6	50.0
1,3-Dichloropropane	68.70	50.00	AVRG	37.4	50.0
1,4-Dichlorobenzene	61.78	50.00	AVRG	23.5	50.0
Toluene	70.02	50.00	AVRG	40.0	50.0
2-Butanone	136.00	100.00	AVRG	36.0	50.0
2-Chlorotoluene	70.33	50.00	AVRG	40.6	50.0
2-Hexanone	144.12	100.00	AVRG	44.1	50.0
4-Chlorotoluene	70.09	50.00	AVRG	40.1	50.0
tert-Butylbenzene	71.46	50.00	AVRG	42.9	50.0
4-Methyl-2-Pentanone	143.91	100.00	AVRG	43.9	50.0
Acetone	139.26	100.00	LINR	39.2	50.0
Benzene	68.79	50.00	AVRG	37.5	50.0
Bromobenzene	64.44	50.00	AVRG	28.8	50.0
Bromochloromethane	70.23	50.00	AVRG	40.4	50.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

Instrument ID: VOA9 Calibration Date: 01/10/19 Time: 2040

Lab File ID: V011026 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d	
Bromodichloromethane	71.12	50.00	AVRG	42.2	50.0	
Bromoform	56.97	50.00	LINR	13.9	50.0	
Bromomethane	67.23	50.00	LINR	34.4	50.0	
Carbon Disulfide	143.26	100.00	AVRG	43.2	50.0	
Carbon Tetrachloride	74.33	50.00	AVRG	48.6	50.0	
Chlorobenzene	65.27	50.00	AVRG	30.5	50.0	
Chloroethane	84.84	50.00	AVRG	69.6	50.0	<-
Chloroform	67.64	50.00	AVRG	35.2	50.0	
Chloromethane	68.00	50.00	LINR	36.0	50.0	
cis-1,2-Dichloroethene	65.31	50.00	AVRG	30.6	50.0	
Dibromochloromethane	62.19	50.00	LINR	24.3	50.0	
Dichlorodifluoromethane	69.02	50.00	AVRG	38.0	50.0	
Ethylbenzene	69.63	50.00	AVRG	39.2	50.0	
Hexachlorobutadiene	62.00	50.00	2ORDR	24.0	50.0	
Isopropylbenzene	73.25	50.00	AVRG	46.5	50.0	
m,p-Xylenes	141.15	100.00	AVRG	41.1	50.0	
Methylene Chloride	68.77	50.00	LINR	37.5	50.0	
n-Butylbenzene	73.43	50.00	AVRG	46.8	50.0	
n-Propylbenzene	73.52	50.00	AVRG	47.0	50.0	
Naphthalene	62.15	50.00	2ORDR	24.3	50.0	
o-Xylene	69.27	50.00	AVRG	38.5	50.0	
sec-Butylbenzene	74.16	50.00	AVRG	48.3	50.0	
Styrene	70.94	50.00	AVRG	41.8	50.0	
Vinyl Chloride	73.50	50.00	AVRG	47.0	50.0	
1,2,3-Trichloropropane	66.56	50.00	AVRG	33.1	50.0	
p-Isopropyltoluene	73.13	50.00	AVRG	46.2	50.0	
1,2-Dibromo-3-Chloropropane	56.50	50.00	LINR	13.0	50.0	
1,2-Dichloroethane-d4	51.46	50.00	LINR	2.9	50.0	
Dibromofluoromethane	49.04	50.00	2ORDR	1.9	50.0	
Toluene-d8	54.24	50.00	LINR	8.4	50.0	
4-Bromofluorobenzene	54.19	50.00	LINR	8.3	50.0	

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.: HS18121558

Lab File ID (Standard): V011003 Date Analyzed: 01/10/19

Instrument ID: VOA9 Time Analyzed: 1058

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

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	672751	8.25	737678	5.63	314733	10.24
	UPPER LIMIT	1345502	8.75	1475356	6.13	629466	10.74
	LOWER LIMIT	336376	7.75	368839	5.13	157367	9.74
	CLIENT SAMPLE NO.						
01	VLCSW-190108	603356	8.25	664579	5.63	310059	10.24
02	VBLKW-190108	531280	8.25	574805	5.63	250640	10.24
03	HS18121558-0	516950	8.25	561028	5.63	241034	10.24
04	HS18121558-0	523964	8.25	573204	5.63	239861	10.24
05	HS18121558-0	510253	8.25	559823	5.62	234318	10.24
06	HS18121558-0	475175	8.25	522306	5.63	215387	10.24
07	HS18121558-0	428163	8.25	465566	5.62	194133	10.24
08	HS18121558-0	436873	8.25	476263	5.63	191351	10.24
09	HS18121558-0	440448	8.25	474689	5.63	209172	10.24
10	HS18121558-0	462915	8.25	498564	5.63	219863	10.24
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

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

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 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

Lab File ID (Standard): V011003 Date Analyzed: 01/10/19

Instrument ID: VOA9 Time Analyzed: 1058

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

	CLIENT SAMPLE NO.	IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	394425	4.89				
	UPPER LIMIT	788850	5.39				
	LOWER LIMIT	197213	4.39				
01	VLCSW-190108	351736	4.89				
02	VBLKW-190108	314577	4.89				
03	HS18121558-0	305458	4.89				
04	HS18121558-0	312779	4.89				
05	HS18121558-0	311423	4.89				
06	HS18121558-0	287511	4.90				
07	HS18121558-0	249415	4.89				
08	HS18121558-0	253925	4.90				
09	HS18121558-0	249817	4.90				
10	HS18121558-0	271734	4.90				
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.

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011001.D

Date : 10-JAN-2019 10:09

Client ID: BFB

Instrument: VOA9.i

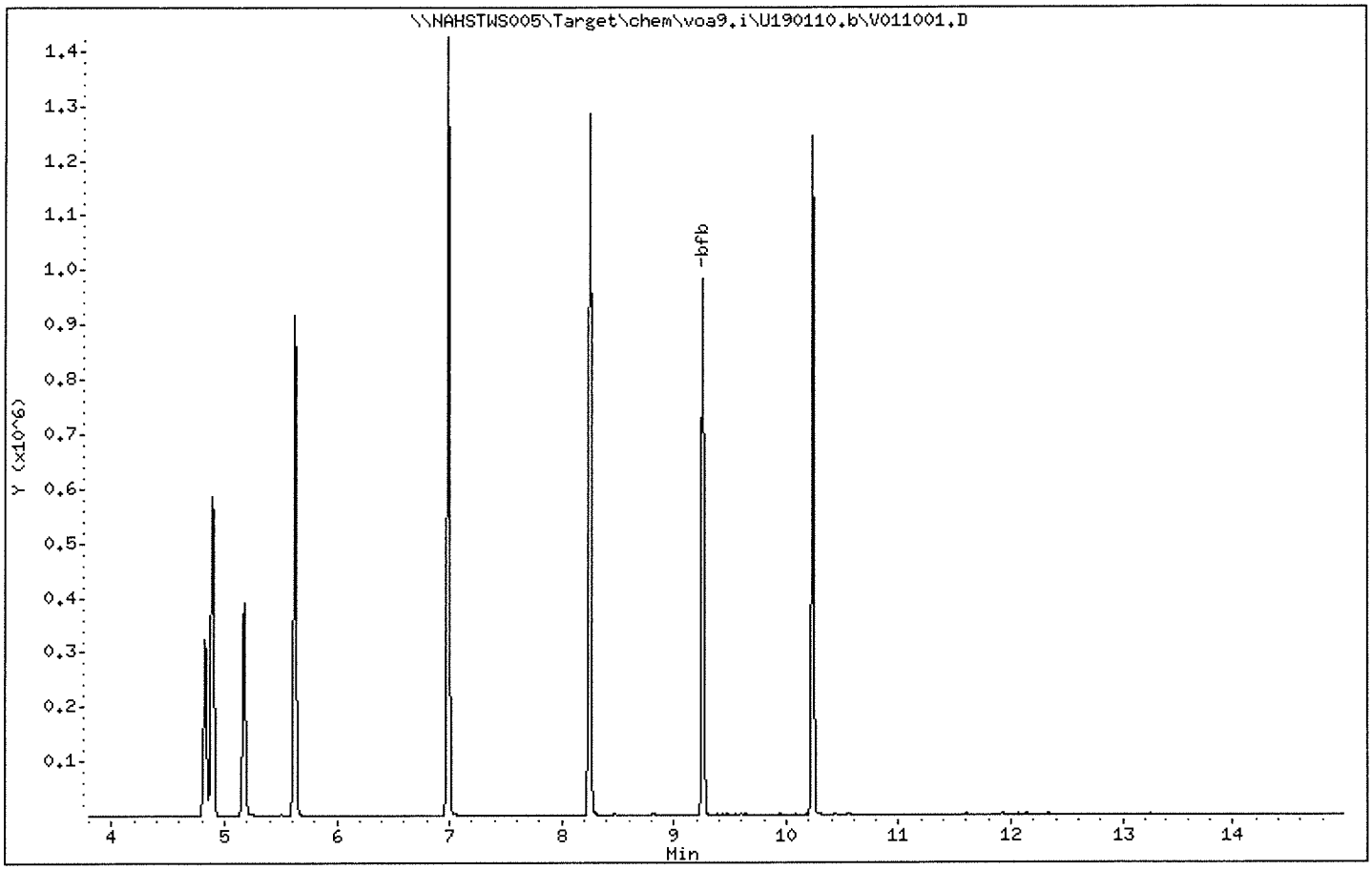
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011001.D

Date : 10-JAN-2019 10:09

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

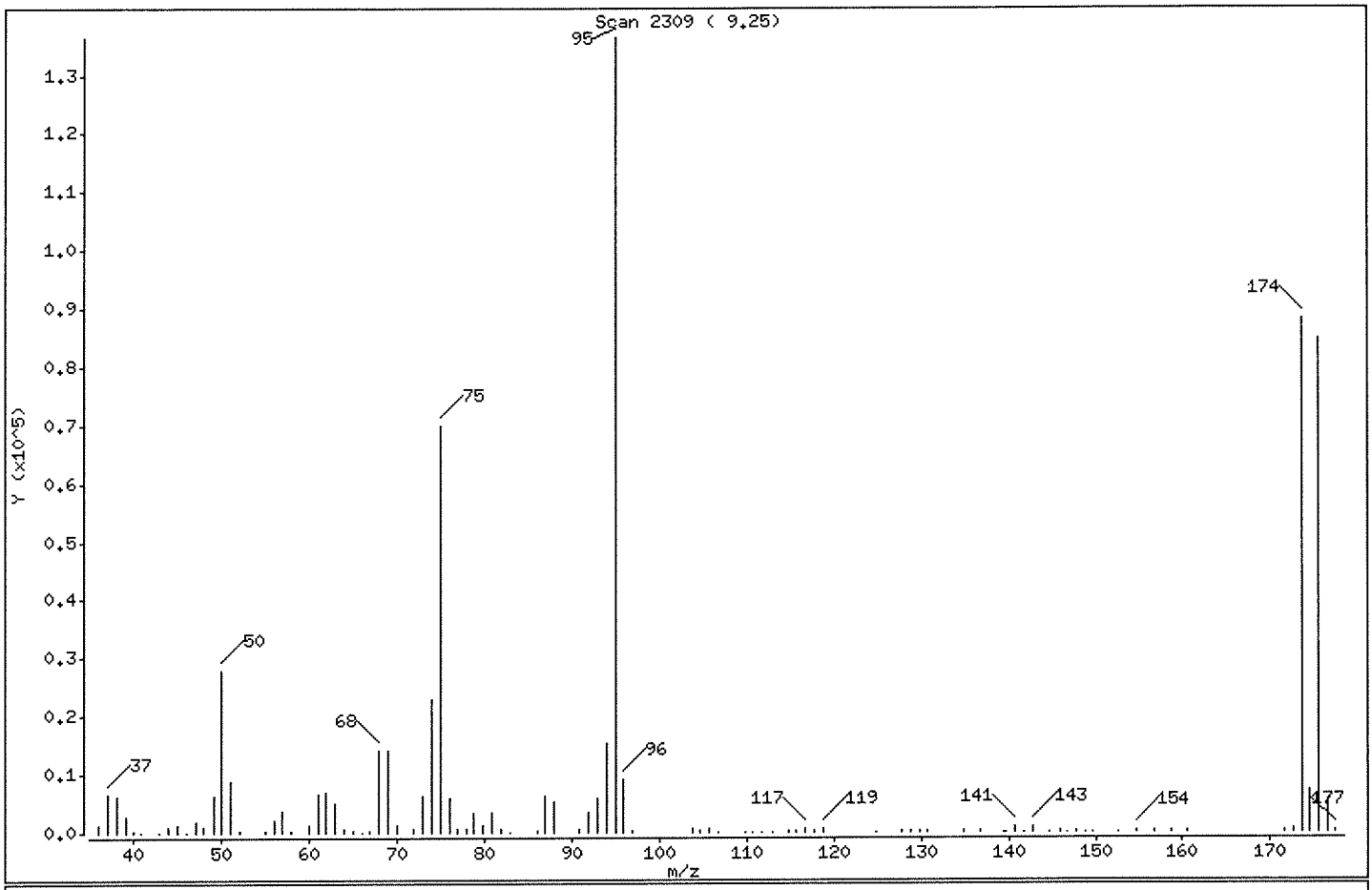
Volume Injected (uL): 2.0

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	20.46
75	30.00 - 60.00% of mass 95	51.23
96	5.00 - 9.00% of mass 95	6.76
173	Less than 2.00% of mass 174	0.45 (0.70)
174	Greater than 50.00% of mass 95	64.61
175	5.00 - 9.00% of mass 174	5.34 (8.26)
176	95.00 - 101.00% of mass 174	62.04 (96.03)
177	5.00 - 9.00% of mass 176	4.11 (6.62)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011001.D

Date : 10-JAN-2019 10:09

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: V011001.D
Spectrum: Scan 2309 (9.25)
Location of Maximum: 94.90
Number of points: 96

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	1163	65.00	361	94.90	136448	140.70	1001
37.00	6599	65.90	56	95.90	9227	141.60	121
38.00	6166	66.90	376	96.90	295	142.70	1095
39.00	2670	67.90	14174	103.80	558	144.50	127
39.90	249	68.90	14119	104.60	173	145.80	165
40.80	63	69.90	1102	105.70	476	146.70	66
42.80	92	71.90	752	106.70	124	147.70	281
43.90	978	72.90	6320	109.70	70	148.70	55
45.00	1273	73.90	22952	110.70	143	149.70	154
45.90	65	74.90	69896	111.60	69	152.60	72
47.00	1740	75.90	5996	112.80	101	154.60	257
47.90	927	76.90	771	114.70	171	156.70	188
49.00	6184	77.90	559	115.70	379	158.70	175
50.00	27920	78.80	3346	116.70	724	160.60	159
51.00	8758	79.80	1117	117.70	354	171.70	395
51.90	332	80.80	3412	118.80	537	172.80	616
54.90	372	81.80	706	124.70	52	173.70	88160
55.90	2084	82.80	66	127.70	401	174.70	7280
56.90	3658	85.90	256	128.70	253	175.70	84656
57.90	186	86.80	6323	129.70	389	176.70	5605
59.90	1313	87.80	5401	130.60	161	177.60	217
60.90	6558	90.80	521	134.80	178		
61.90	6932	91.90	3432	136.70	198		
62.90	4918	92.90	5844	139.40	53		
63.90	573	93.90	15313	139.70	61		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011003.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 10-JAN-2019 10:58
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

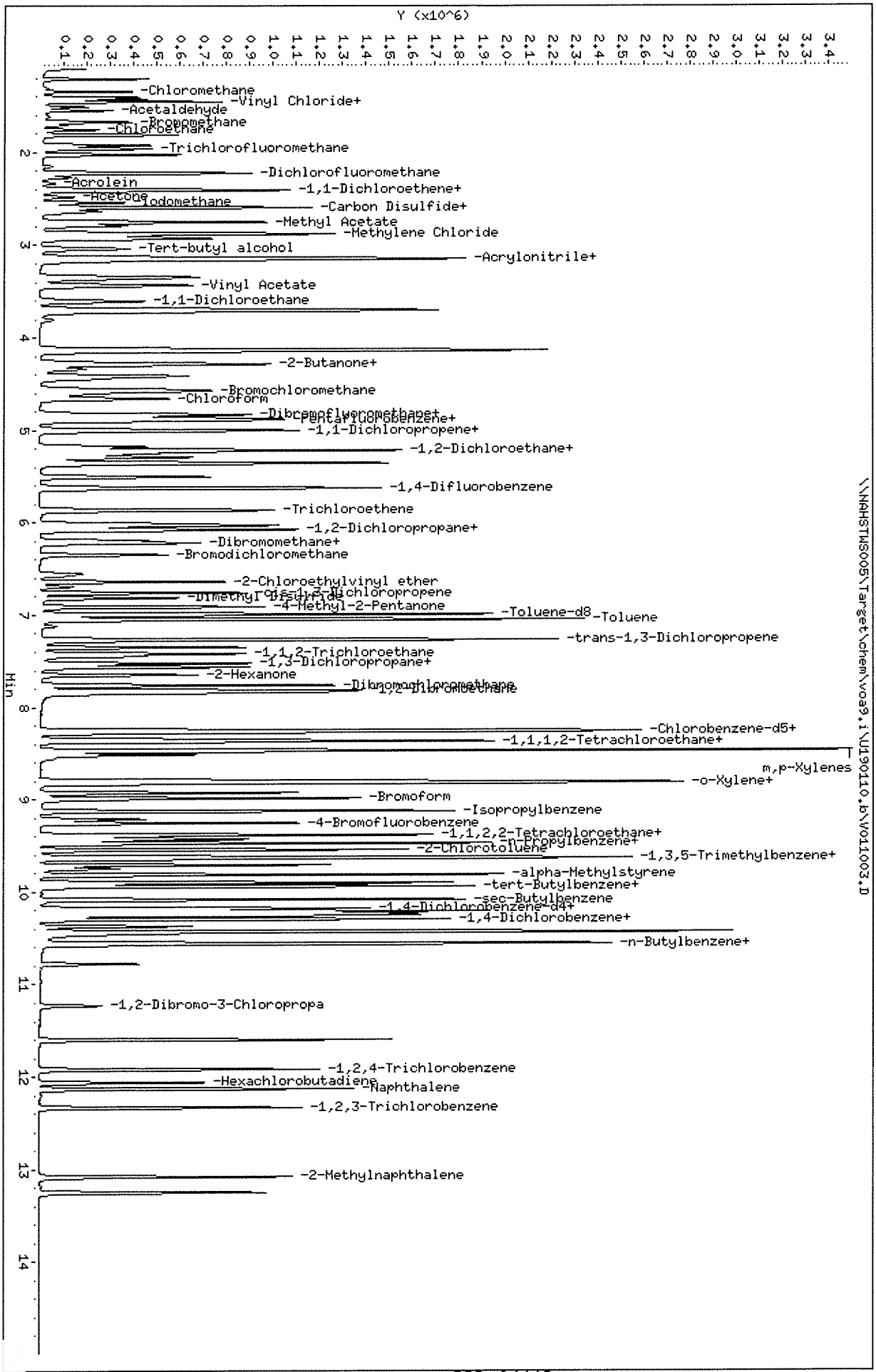
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	394425	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	737678	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	672751	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	314733	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	221864	50.0000	49.83
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	288523	50.0000	49.59
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	915098	50.0000	52.45
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	346888	50.0000	52.64
60 1,1,1,2-Tetrachloroethane	131	8.347	8.347	(1.012)	218049	50.0000	53.64
31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	346761	50.0000	53.68
68 1,1,2,2-Tetrachloroethane	83	9.389	9.389	(0.917)	351350	50.0000	49.45
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	208856	50.0000	50.72
22 1,1-Dichloroethane	63	3.605	3.605	(0.737)	455570	50.0000	50.81
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	188345	50.0000	49.50
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	353678	50.0000	51.85
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	289708	50.0000	51.65
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	378838	50.0000	49.79
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	310186	50.0000	54.70
79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	923718	50.0000	55.88
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	46814	50.0000	42.09
57 1,2-Dibromoethane	107	7.848	7.848	(0.951)	239556	50.0000	51.08
88 1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	482232	50.0000	50.46

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011003.D Page 2
Report Date: 01-Feb-2019 17:47

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	359985	50.0000	50.43
42 1,2-Dichloropropane	63	6.079	6.079	(1.081)	279231	50.0000	52.57
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	896419	50.0000	55.52
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	484785	50.0000	51.06
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	455201	50.0000	51.25
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	499369	50.0000	49.62
26 2,2-Dichloropropane	77	4.276	4.276	(0.874)	310269	50.0000	57.78
24 2-Butanone	43	4.336	4.336	(0.886)	247610	100.000	90.72
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	795723	50.0000	53.18
52 2-Hexanone	43	7.649	7.649	(0.927)	369281	100.000	95.17
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	935082	50.0000	53.72
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	958830	50.0000	57.19
45 4-Methyl-2-Pentanone	43	6.911	6.911	(0.838)	545077	100.000	97.42
10 Acetone	43	2.480	2.480	(0.507)	146523	100.000	85.60
37 Benzene	78	5.216	5.216	(0.927)	1035200	50.0000	50.99
74 Bromobenzene	156	9.381	9.381	(0.917)	254556	50.0000	51.86
29 Bromochloromethane	128	4.557	4.557	(0.931)	118512	50.0000	54.66
39 Bromodichloromethane	83	6.349	6.349	(1.129)	308989	50.0000	54.03
66 Bromoform	173	8.984	8.984	(1.089)	135228	50.0000	46.21(T)
6 Bromomethane	94	1.674	1.674	(0.342)	134363	50.0000	45.67
19 Carbon Disulfide	76	2.592	2.592	(0.530)	1447342	100.000	107.24
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	272117	50.0000	55.09
59 Chlorobenzene	112	8.272	8.272	(1.003)	668485	50.0000	49.84
7 Chloroethane	64	1.756	1.756	(0.359)	160962	50.0000	45.27(M)
28 Chloroform	83	4.658	4.658	(0.952)	431261	50.0000	50.63
3 Chloromethane	50	1.340	1.340	(0.274)	248849	50.0000	47.42
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	270063	50.0000	50.05
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	438482	50.0000	51.05
55 Dibromochloromethane	129	7.758	7.758	(0.940)	224278	50.0000	49.76
44 Dibromomethane	93	6.191	6.191	(1.101)	155027	50.0000	50.02
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	265277	50.0000	50.89
61 Ethylbenzene	106	8.369	8.369	(1.015)	355130	50.0000	52.49
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	112387	50.0000	54.89
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1056601	50.0000	54.67
62 m,p-Xylenes	106	8.470	8.470	(1.027)	877260	100.000	106.21
17 Methylene Chloride	84	2.874	2.874	(0.587)	261742	50.0000	51.59
87 n-Butylbenzene	91	10.555	10.555	(1.031)	912883	50.0000	56.04
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1349809	50.0000	55.48
92 Naphthalene	128	12.133	12.133	(1.185)	906481	50.0000	47.30
63 o-Xylene	106	8.811	8.811	(1.068)	443468	50.0000	52.63
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1127474	50.0000	56.66
64 Styrene	104	8.823	8.823	(1.070)	761839	50.0000	54.30
78 tert-Butylbenzene	119	9.899	9.899	(0.967)	757067	50.0000	54.45
56 Tetrachloroethene	164	7.522	7.522	(0.912)	174444	50.0000	49.36
50 Toluene	91	7.046	7.046	(0.854)	1077649	50.0000	52.10
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	238618	50.0000	49.59
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	372709	50.0000	50.23
38 Trichloroethene	130	5.861	5.861	(1.042)	239093	50.0000	50.90
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	312790	50.0000	47.40
5 Vinyl Chloride	62	1.423	1.423	(0.291)	287643	50.0000	49.14

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

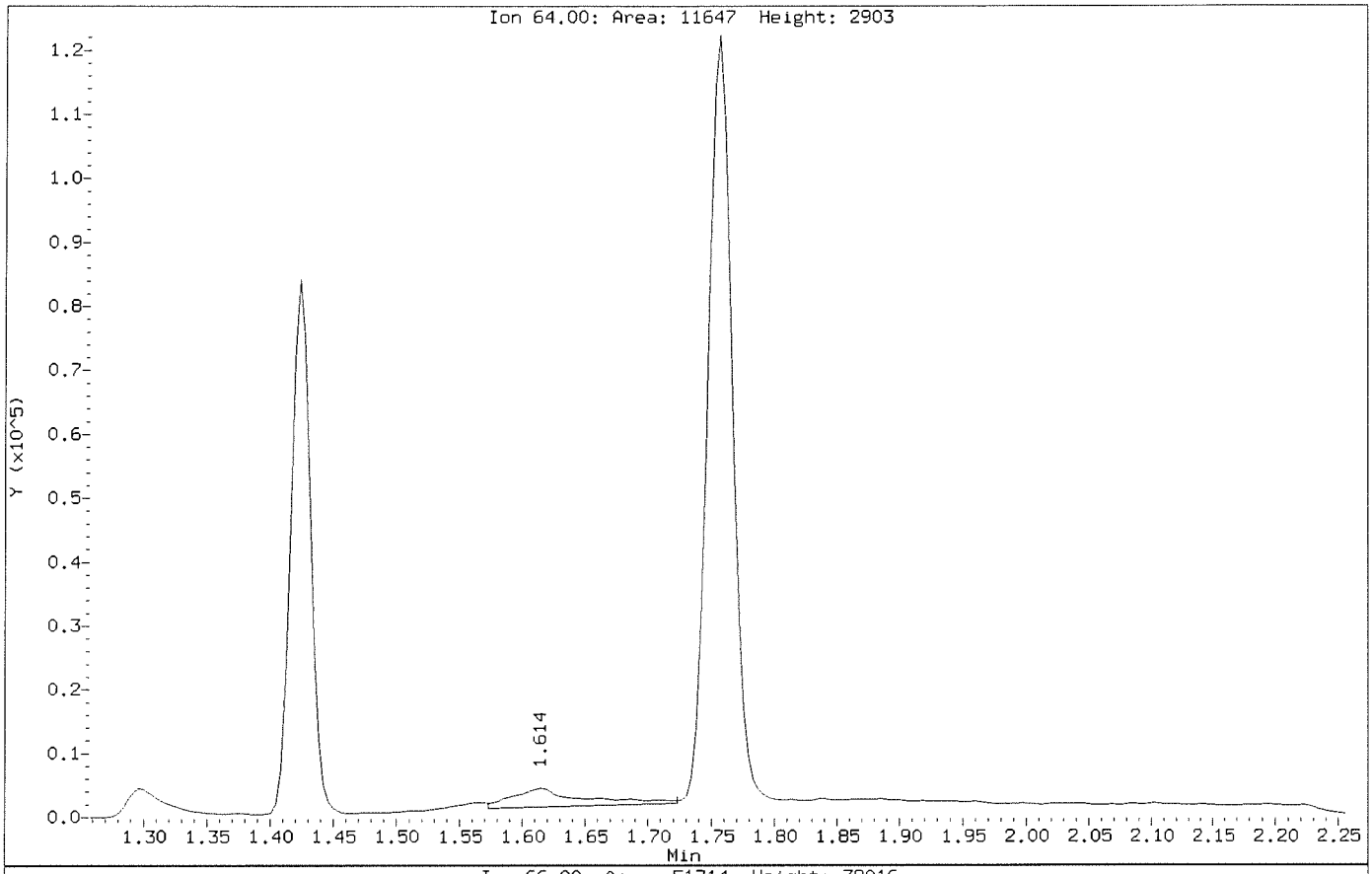


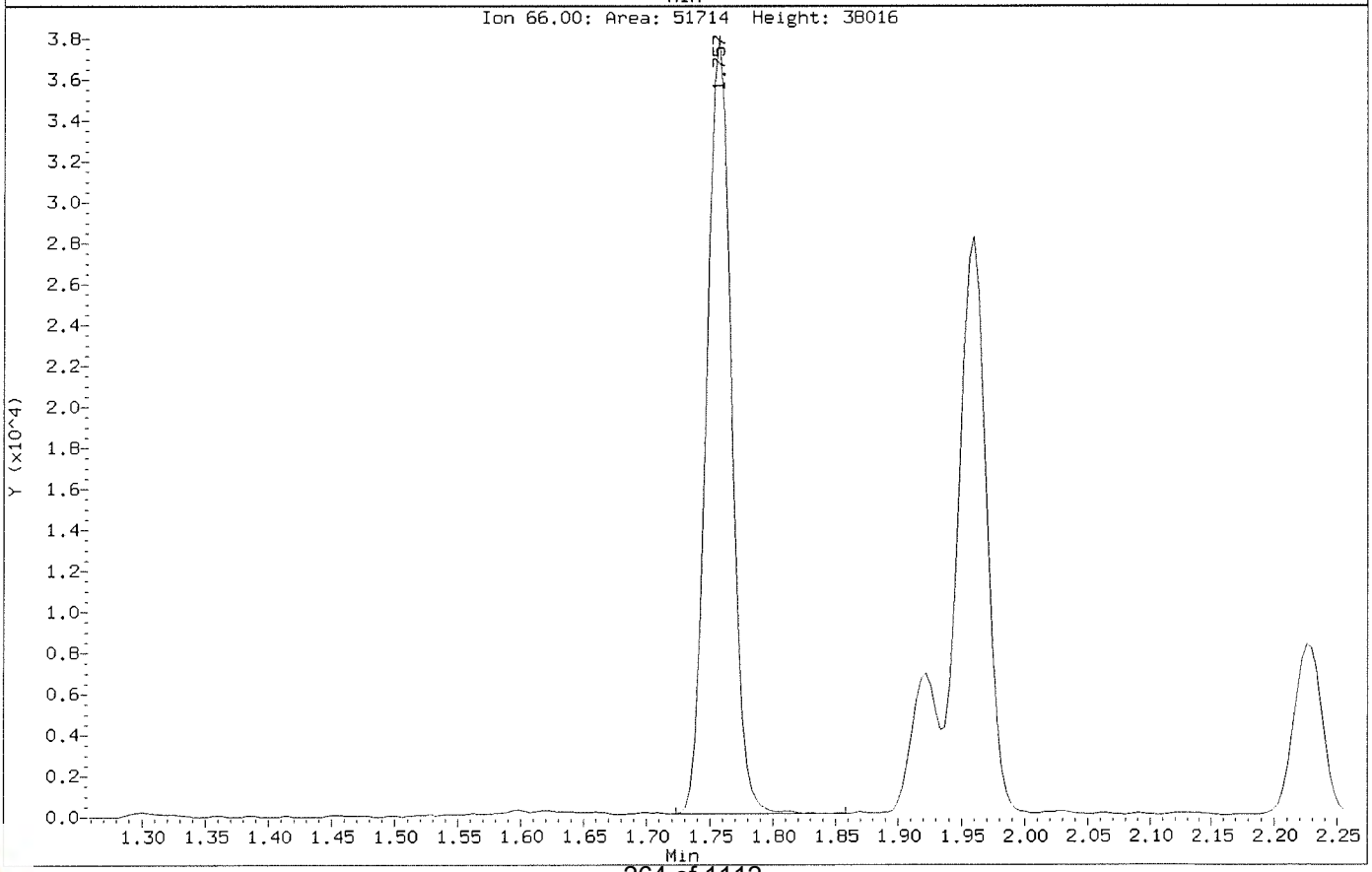
Data File: \\NAHSTWS005\Target\chem\voa9,i\U190110,b\W011003,D
Date : 10-JAN-2019 10:58
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\Before\V011003.D
Injection Date: 10-JAN-2019 10:58
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





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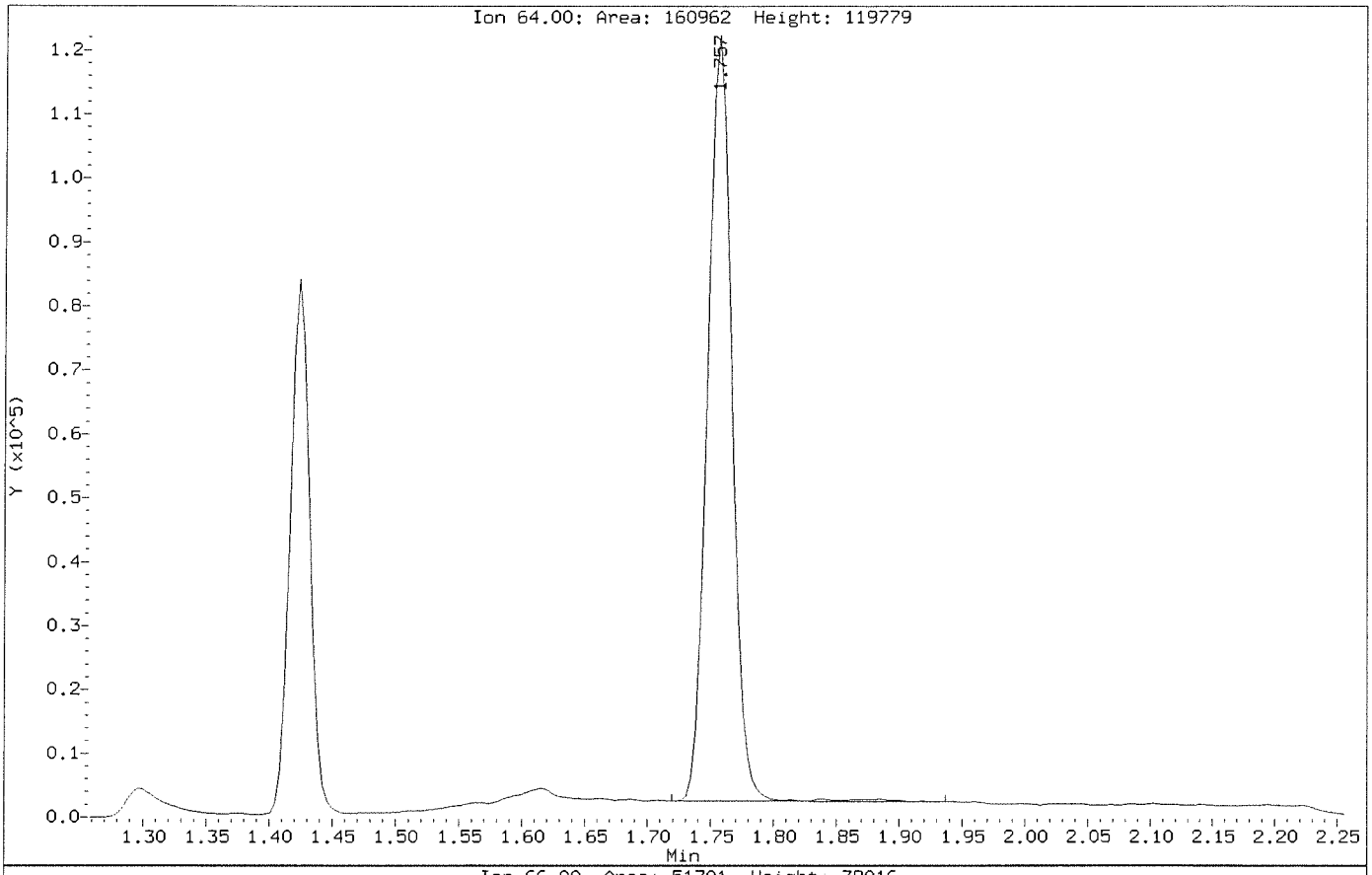
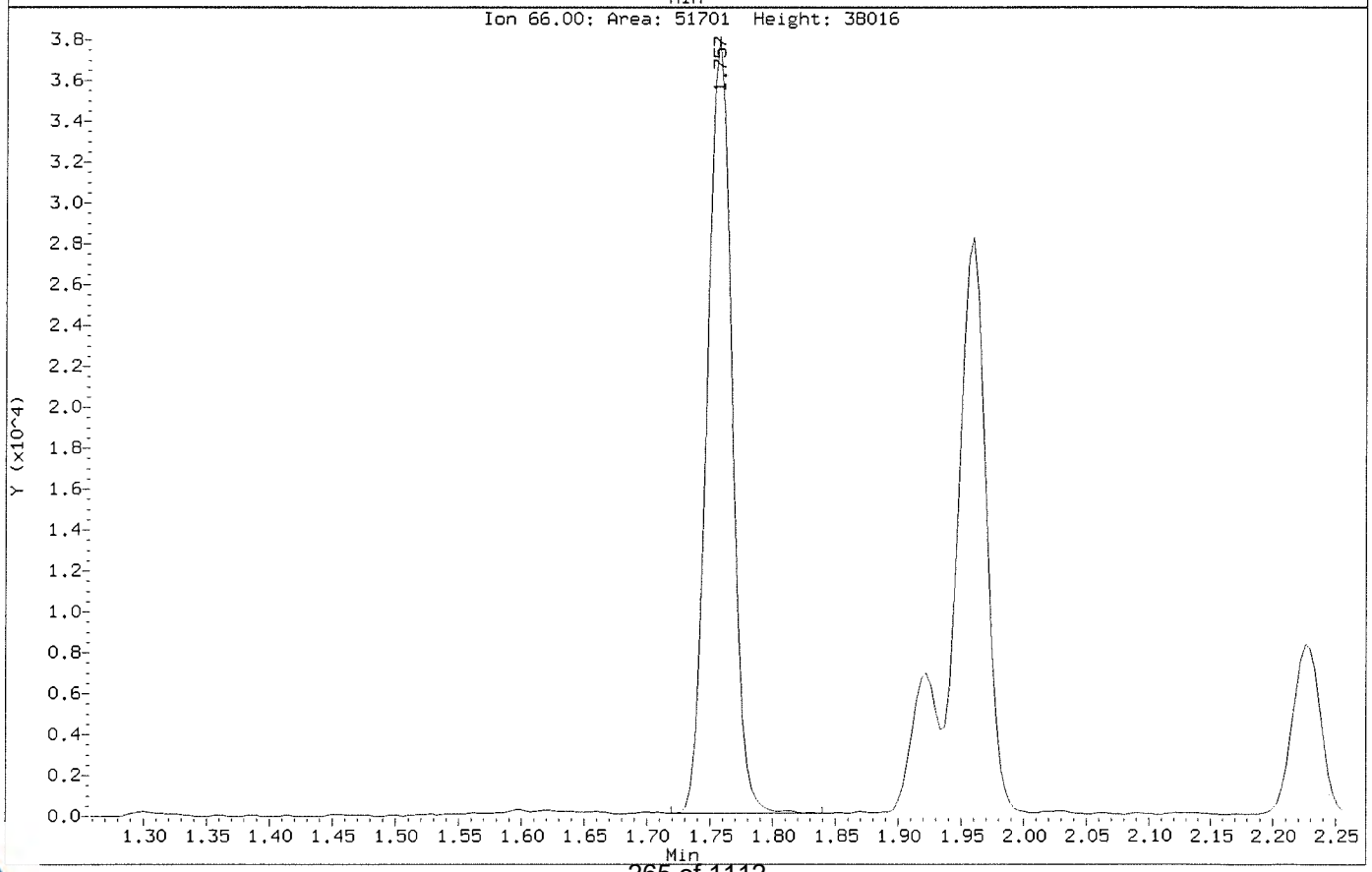
Injection Date: 10-JAN-2019 10:58
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011005.D
Lab Smp Id: VLCSW-190108 Client Smp ID: VLCSW-190108
Inj Date : 10-JAN-2019 11:47
Operator : PC Inst ID: VOA9.i
Smp Info : VLCSW-190108;VLCSW-190108;3;;LCS
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

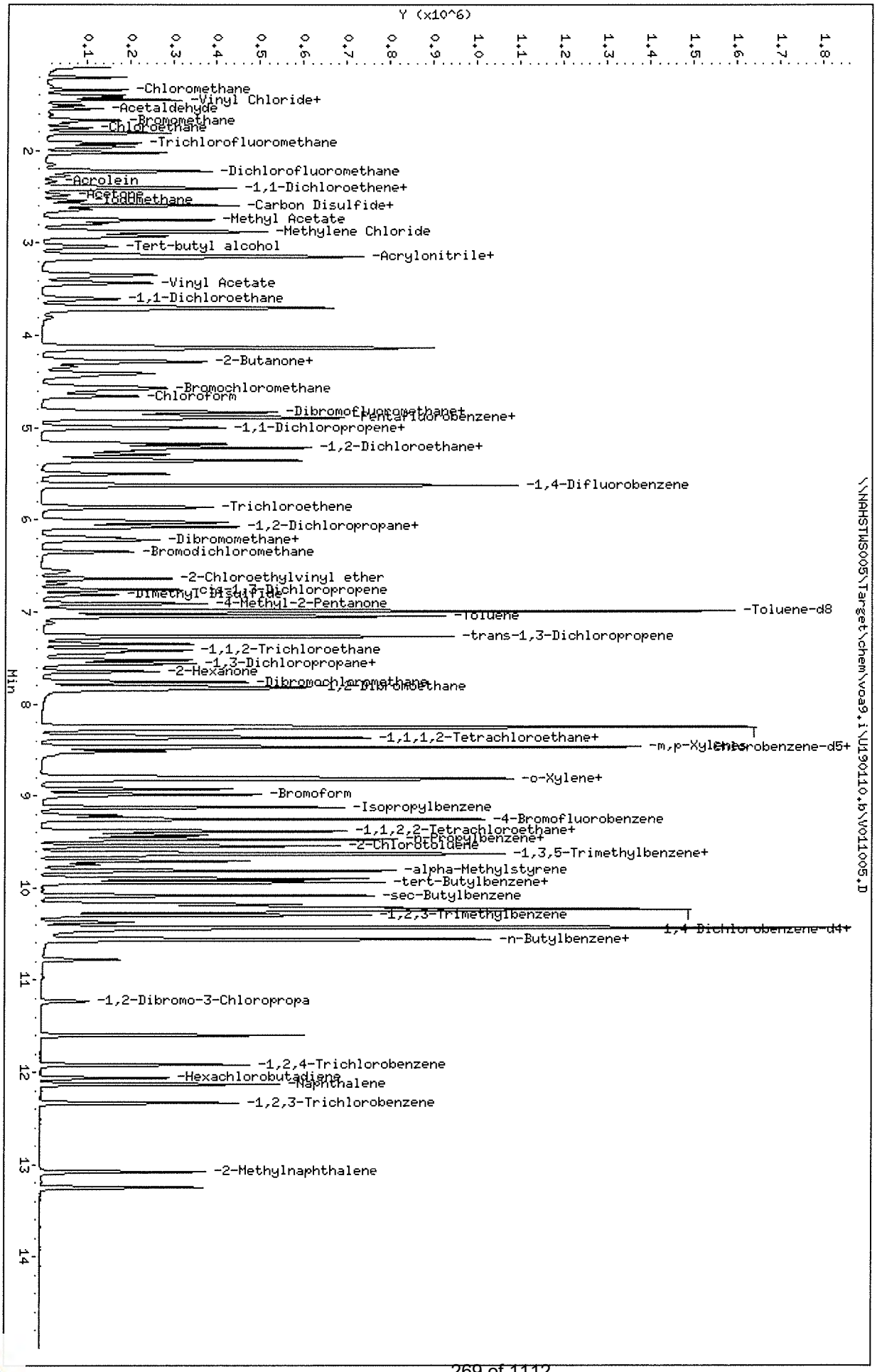
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	351736	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	664579	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	603356	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	310059	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	197449	49.7293	49.72
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	270582	52.2724	52.27
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	818772	52.3248	52.32
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	313141	53.0034	53.00
60 1,1,1,2-Tetrachloroethane	131	8.347	8.347	(1.012)	82251	22.5635	22.56
31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	129546	22.4883	22.48
68 1,1,2,2-Tetrachloroethane	83	9.389	9.389	(0.917)	148777	21.0475	21.04
53 1,1,2-Trichloroethane	83	7.417	7.421	(0.899)	80687	21.8514	21.85
22 1,1-Dichloroethane	63	3.605	3.605	(0.737)	177072	22.1470	22.14
11 1,1-Dichloroethene	96	2.401	2.405	(0.491)	75171	22.1552	22.15
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	135314	22.0209	22.02
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	119604	21.6474	21.64
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	156158	20.8363	20.83
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	123628	22.1313	22.13
79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	390487	23.9808	23.98
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	18860	18.4461	18.44
57 1,2-Dibromoethane	107	7.848	7.848	(0.951)	92530	22.0002	22.00
88 1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	203201	21.5841	21.58

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011005.D Page 2
Report Date: 01-Feb-2019 17:47

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	5.250	5.254	(0.933)	145671	22.6527	22.65
42	1,2-Dichloropropane	63	6.079	6.079	(1.081)	107323	22.4317	22.43
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	376521	23.6752	23.67
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	204472	21.8614	21.86
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	176997	22.2200	22.22
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	211244	21.3078	21.30
26	2,2-Dichloropropane	77	4.276	4.276	(0.874)	109782	22.9280	22.92
24	2-Butanone	43	4.335	4.336	(0.886)	100752	41.3939	41.39
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	341168	23.1451	23.14
52	2-Hexanone	43	7.649	7.649	(0.927)	152275	43.7605	43.76
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	396482	23.1233	23.12
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	396005	23.9782	23.97
45	4-Methyl-2-Pentanone	43	6.911	6.911	(0.838)	219876	43.8177	43.81
10	Acetone	43	2.480	2.480	(0.507)	62326	39.9786	39.97
37	Benzene	78	5.216	5.216	(0.927)	397587	21.7397	21.73
74	Bromobenzene	156	9.381	9.381	(0.917)	102972	21.2979	21.29
29	Bromochloromethane	128	4.553	4.557	(0.930)	45570	23.5697	23.56
39	Bromodichloromethane	83	6.345	6.349	(1.128)	116528	22.6184	22.61
66	Bromoform	173	8.984	8.984	(1.089)	47271	19.1078	19.10
6	Bromomethane	94	1.674	1.674	(0.342)	61178	23.6937	23.69
19	Carbon Disulfide	76	2.592	2.592	(0.530)	549474	45.6555	45.65
34	Carbon Tetrachloride	117	4.995	4.995	(0.888)	100207	22.5187	22.51
59	Chlorobenzene	112	8.272	8.272	(1.003)	259487	21.5720	21.57
7	Chloroethane	64	1.753	1.756	(0.358)	72938	23.0062	23.00(M)
28	Chloroform	83	4.658	4.658	(0.952)	167140	22.0061	22.00
3	Chloromethane	50	1.340	1.340	(0.274)	112699	25.2962	25.29
27	cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	103745	21.5645	21.56
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	157507	21.1420	21.14
55	Dibromochloromethane	129	7.758	7.758	(0.940)	80762	20.7152	20.71
44	Dibromomethane	93	6.187	6.191	(1.100)	60604	21.7082	21.70
2	Dichlorodifluoromethane	85	1.205	1.209	(0.246)	108530	23.3494	23.34
61	Ethylbenzene	106	8.369	8.369	(1.015)	134274	22.1295	22.12
91	Hexachlorobutadiene	225	12.062	12.065	(1.178)	46164	23.3609	23.36
67	Isopropylbenzene	105	9.126	9.126	(1.106)	405840	23.4162	23.41
62	m,p-Xylenes	106	8.470	8.470	(1.027)	338570	45.7087	45.70
17	Methylene Chloride	84	2.874	2.874	(0.587)	103410	22.5774	22.57
87	n-Butylbenzene	91	10.555	10.555	(1.031)	380549	23.7151	23.71
73	n-Propylbenzene	91	9.475	9.475	(0.926)	569428	23.7600	23.76
92	Naphthalene	128	12.133	12.133	(1.185)	372665	20.1411	20.14
63	o-Xylene	106	8.808	8.811	(1.068)	168041	22.2382	22.23
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	471433	24.0487	24.04
64	Styrene	104	8.823	8.823	(1.070)	291823	23.1935	23.19
78	tert-Butylbenzene	119	9.899	9.899	(0.967)	317325	23.1700	23.17
56	Tetrachloroethene	164	7.522	7.522	(0.912)	64085	20.2201	20.22
50	Toluene	91	7.046	7.046	(0.854)	416201	22.4385	22.43
20	trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	91760	21.3850	21.38
51	trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	132909	20.8515	20.85
38	Trichloroethene	130	5.861	5.861	(1.042)	89327	21.1116	21.11
8	Trichlorofluoromethane	101	1.955	1.959	(0.400)	132541	22.5240	22.52
5	Vinyl Chloride	62	1.423	1.423	(0.291)	114392	21.9149	21.91

QC Flag Legend

M - Compound response manually integrated.



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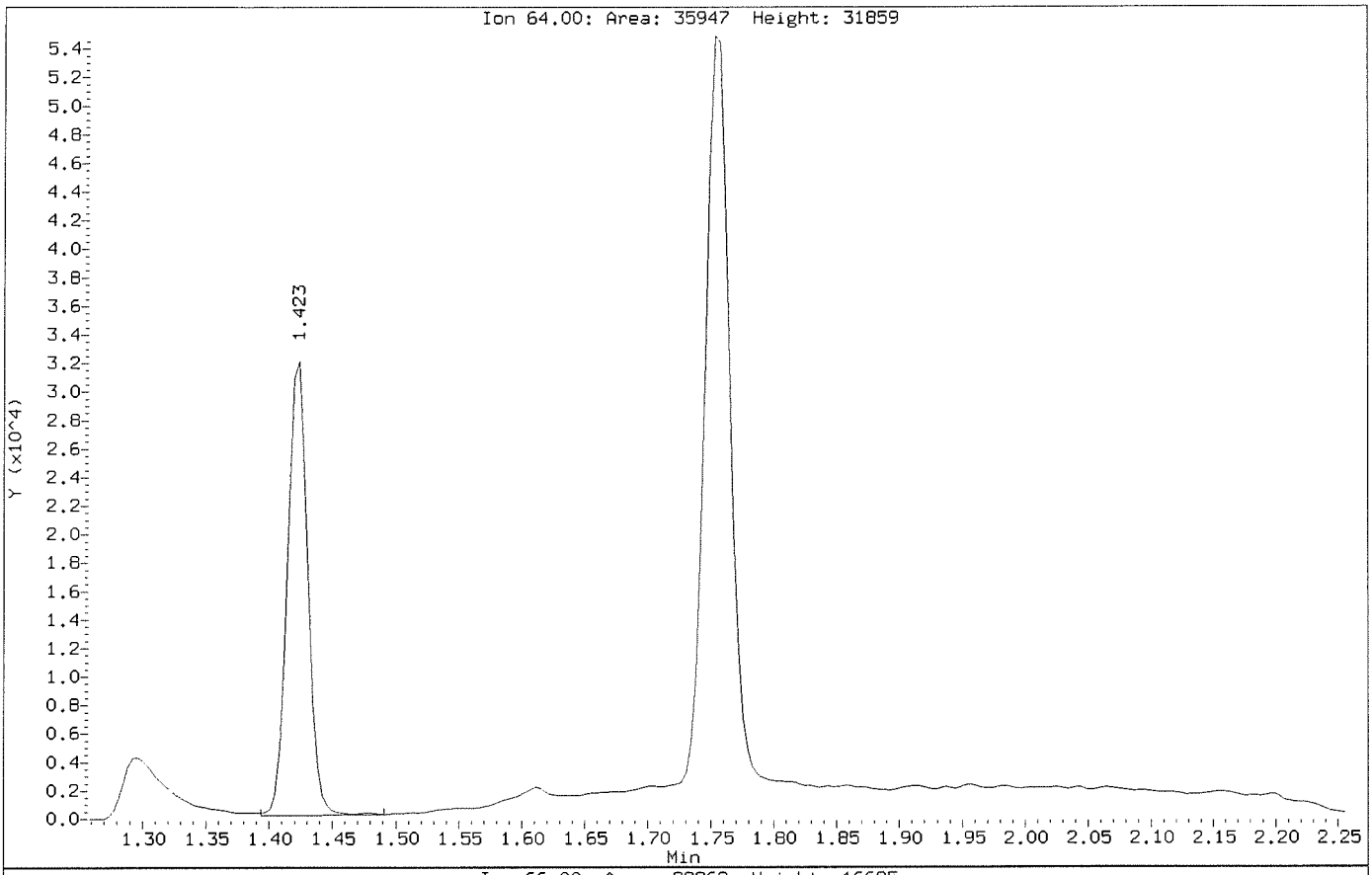
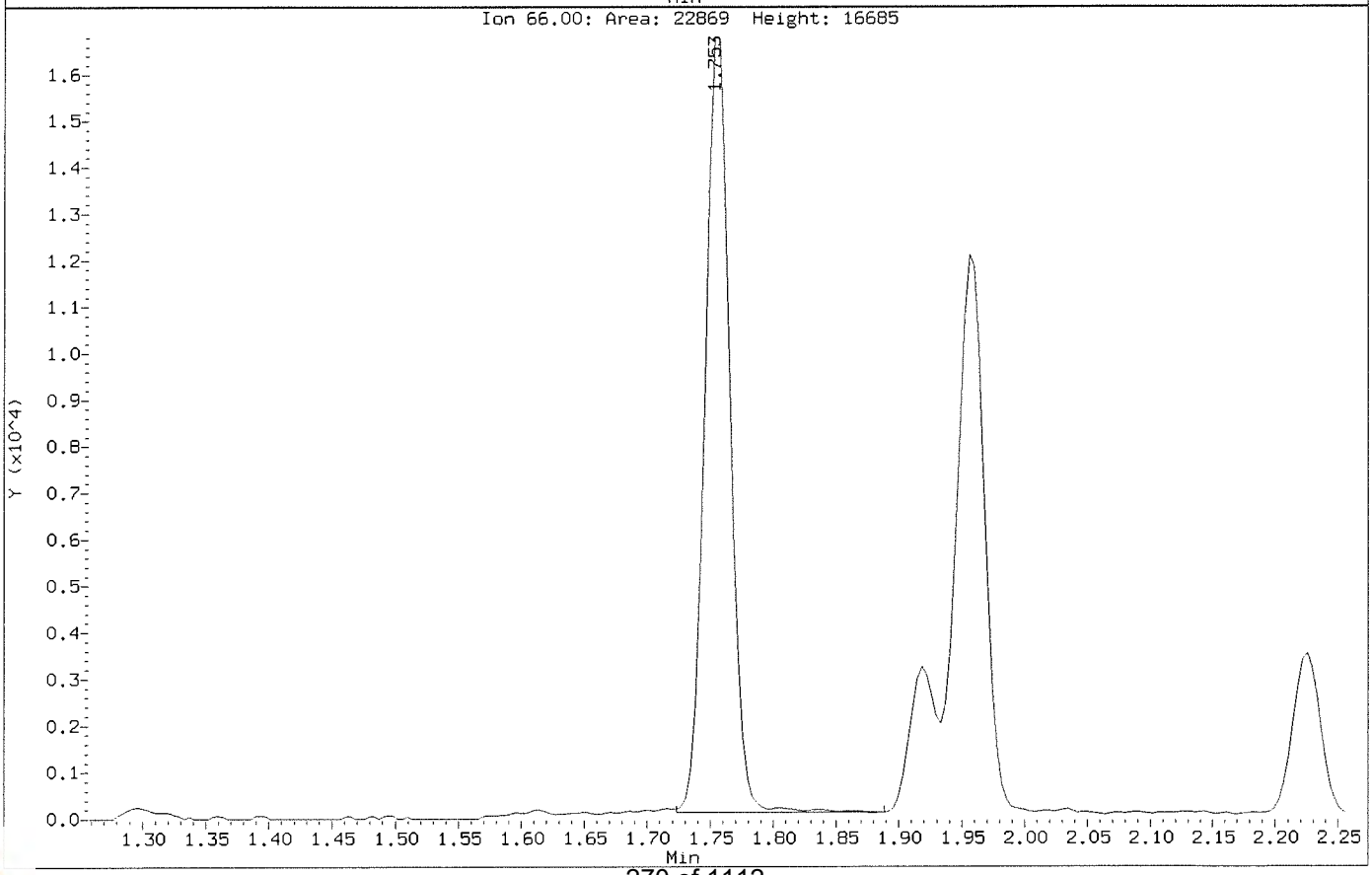
Date : 10-JAN-2019 11:47
Client ID: VLCSW-190108
Sample Info: VLCSW-190108;VLCSW-190108;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\Before\V011005.D
Injection Date: 10-JAN-2019 11:47
Instrument: VOA9.i
Client Sample ID: VLCSW-190108

Compound: Chloroethane
CAS Number: 75-00-3





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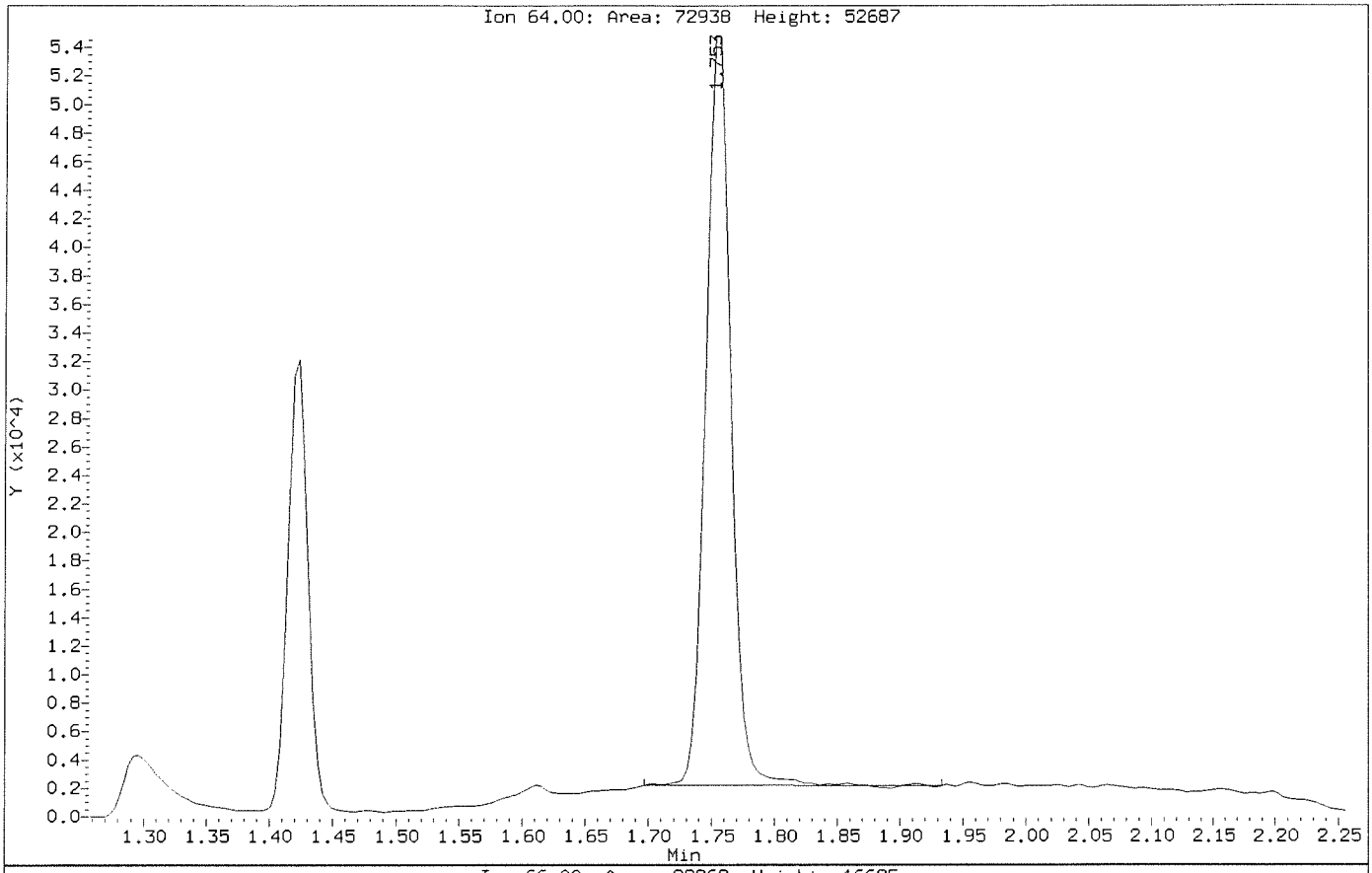
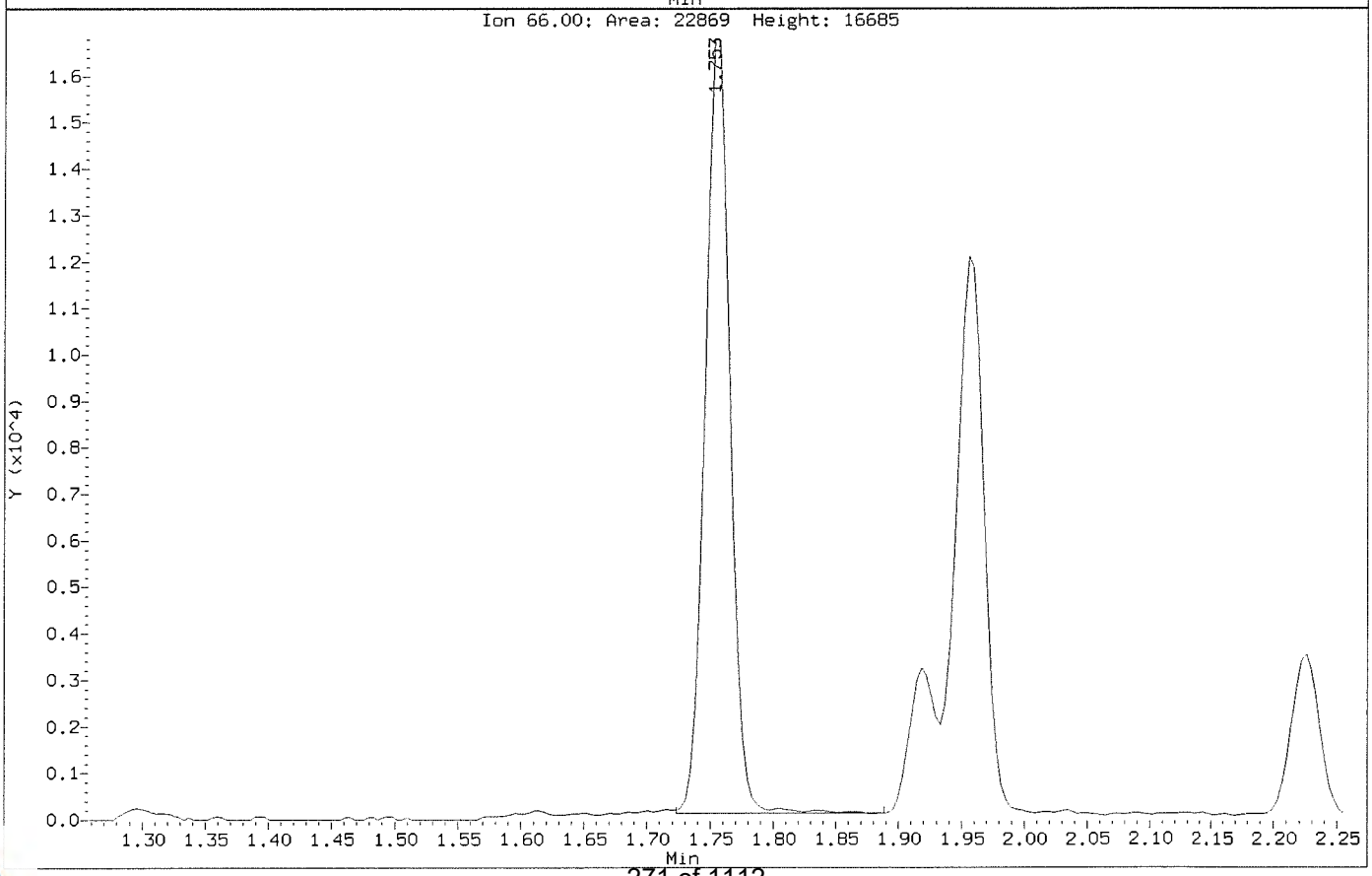
Injection Date: 10-JAN-2019 11:47
Instrument: VOA9.i
Client Sample ID: VLCSW-190108

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011008.D Page 1
Report Date: 01-Feb-2019 17:47

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011008.D
Lab Smp Id: VBLKW-190108 Client Smp ID: VBLKW-190108
Inj Date : 10-JAN-2019 13:00
Operator : PC Inst ID: VOA9.i
Smp Info : VBLKW-190108;VBLKW-190108;3;;BLANK
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

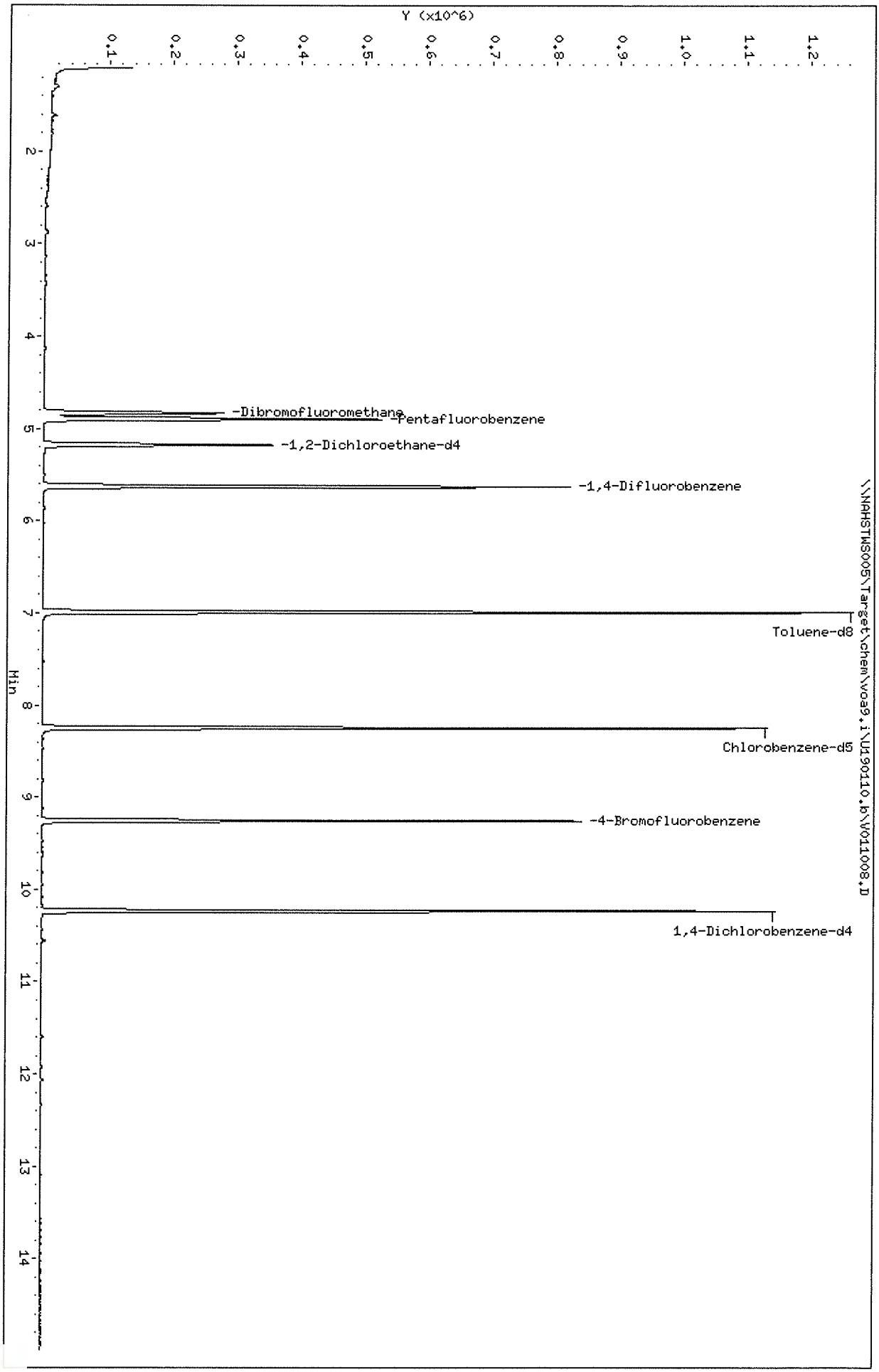
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	314577	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	574805	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	531280	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	250640	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	163818	46.0053	46.00
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	227459	48.9983	48.99
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	730206	53.0271	53.02
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	266989	51.2632	51.26

Data File: \\NAHSTWS005\Target\chem\voa9,i\U190110,b\V011008.D
Date : 10-JAN-2019 13:00
Client ID: VBLKW-190108
Sample Info: VBLKW-190108;VBLKW-190108;3;;BLANK
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\U190110.b\V011009.D
Lab Smp Id: HS18121558-04 Client Smp ID: HS18121558-04
Inj Date : 10-JAN-2019 13:25
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-04;HS18121558-04;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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)	305458	50.0000	
*	36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	561028	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	516950	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	241034	50.0000	
$	30 Dibromofluoromethane	113	4.830	4.830	(0.987)	158431	45.8137	45.81
$	35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	225732	50.1271	50.12
$	48 Toluene-d8	98	6.990	6.990	(0.847)	707668	52.8051	52.80
$	69 4-Bromofluorobenzene	95	9.258	9.257	(1.122)	258814	51.0641	51.06

00932116

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011009.D

Page 2

Date : 10-JAN-2019 13:25

Client ID: HS18121558-04

Instrument: VOA9.i

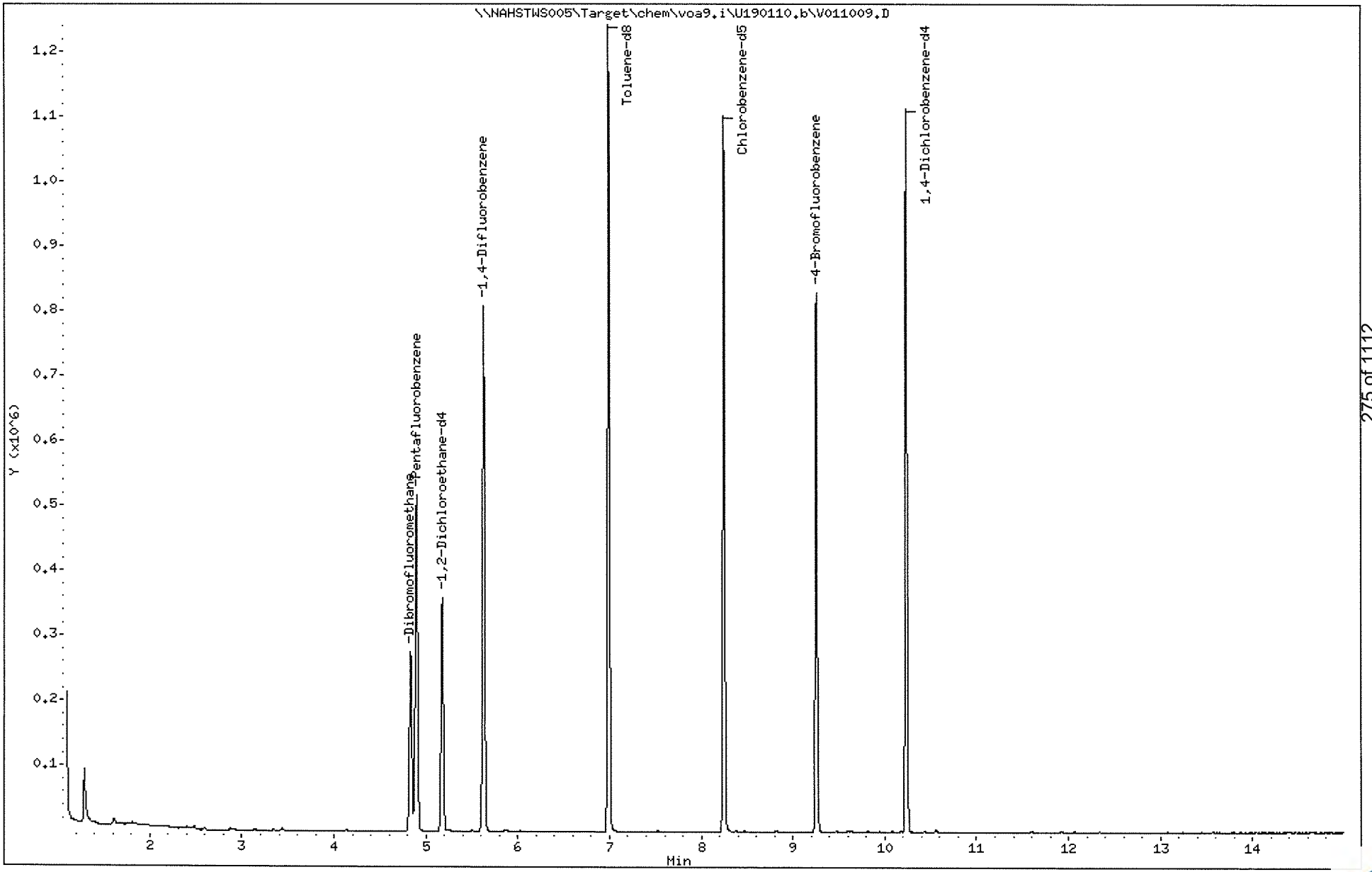
Sample Info: HS18121558-04;HS18121558-04;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011011.D
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Inj Date : 10-JAN-2019 14:14
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-01;HS18121558-01;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

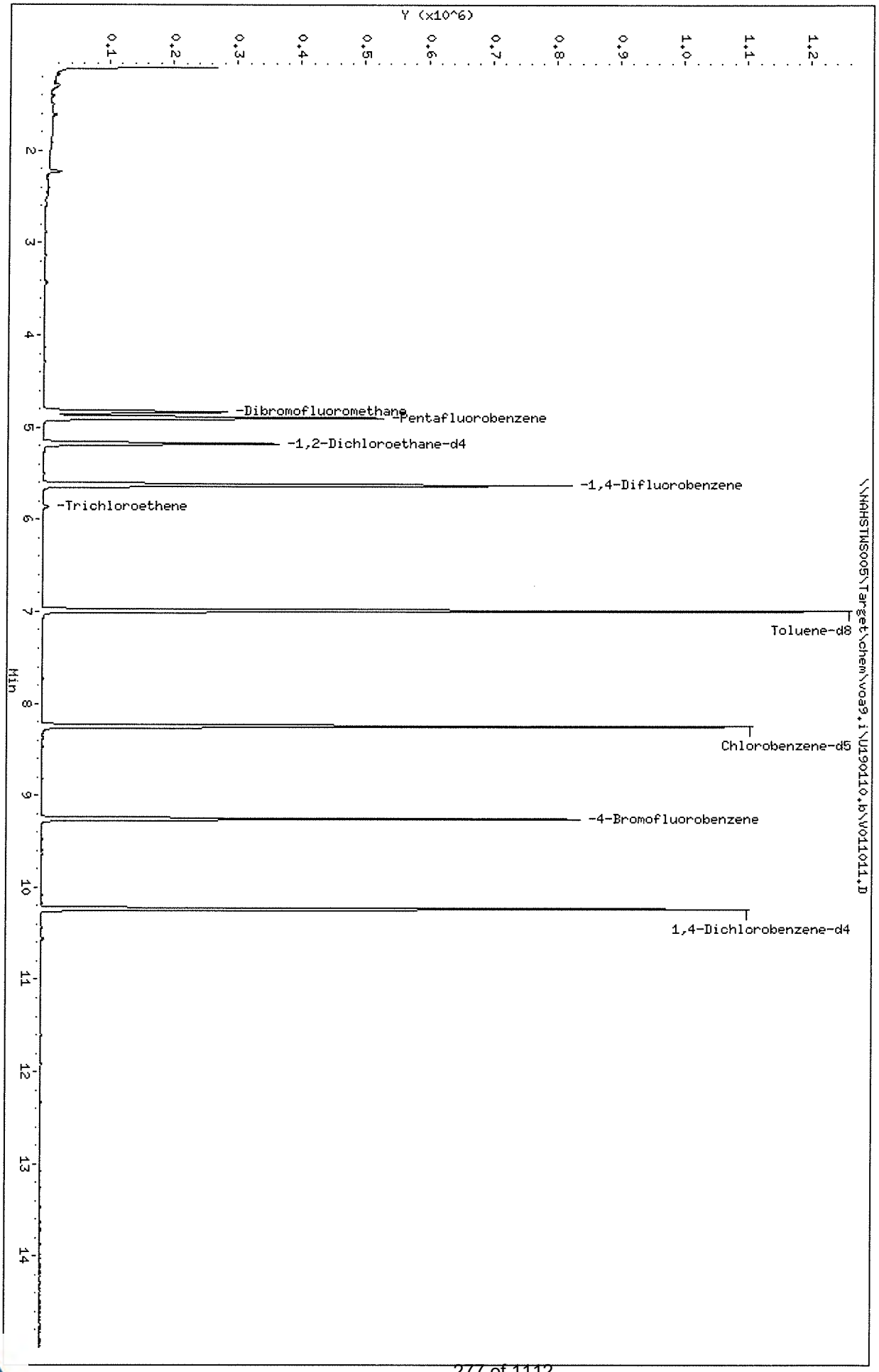
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.894	4.898	(1.000)	312779	50.0000	
*	36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	573204	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	523964	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	239861	50.0000	
$	30 Dibromofluoromethane	113	4.830	4.830	(0.987)	164976	46.6194	46.61
$	35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	231241	50.1494	50.14
$	48 Toluene-d8	98	6.989	6.990	(0.847)	716088	52.7141	52.71
$	69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	261999	50.9982	50.99
	38 Trichloroethene	130	5.861	5.861	(1.042)	2001	0.54831	0.54(a)

QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\voa9,i\U190110,b\V011011.D
Date : 10-JAN-2019 14:14
Client ID: HS181121558-01
Sample Info: HS181121558-01;HS181121558-01;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011011.D

Date : 10-JAN-2019 14:14

Client ID: HS18121558-01

Instrument: VOA9.i

Sample Info: HS18121558-01;HS18121558-01;;;

Purge Volume: 5.0

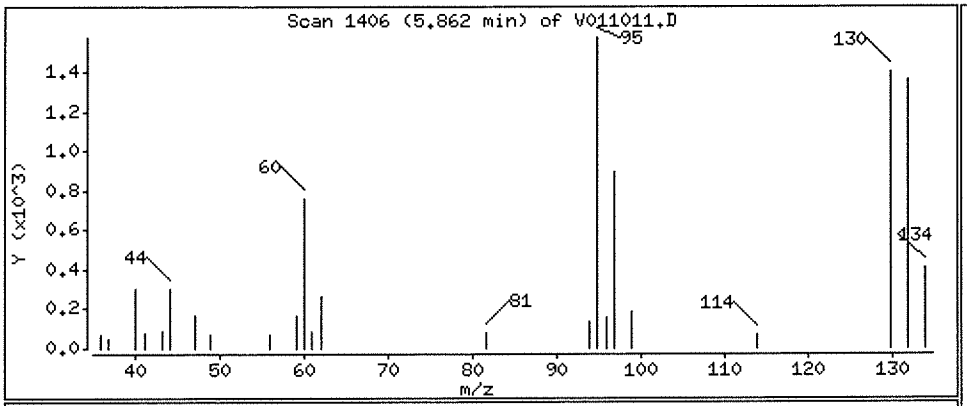
Operator: PC

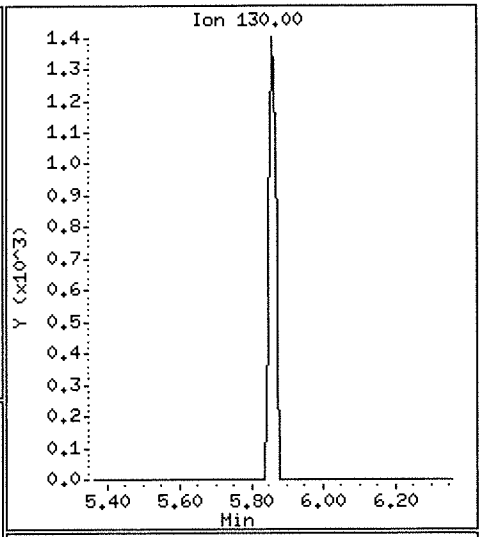
Column phase: DB624

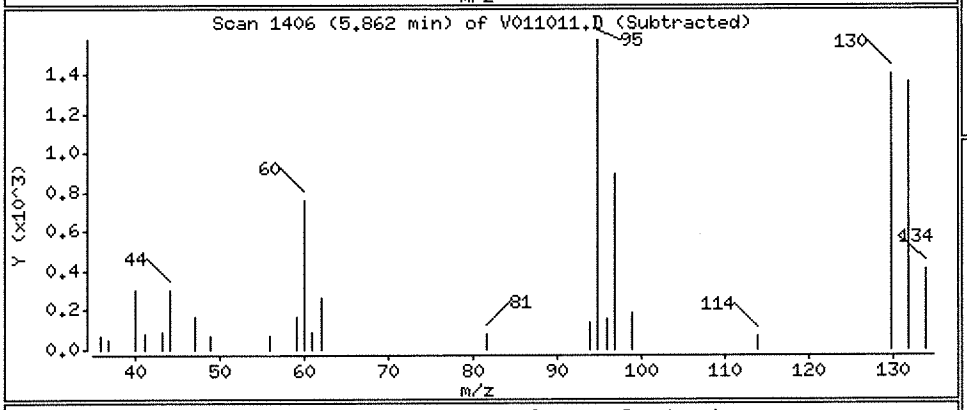
Column diameter: 0.18

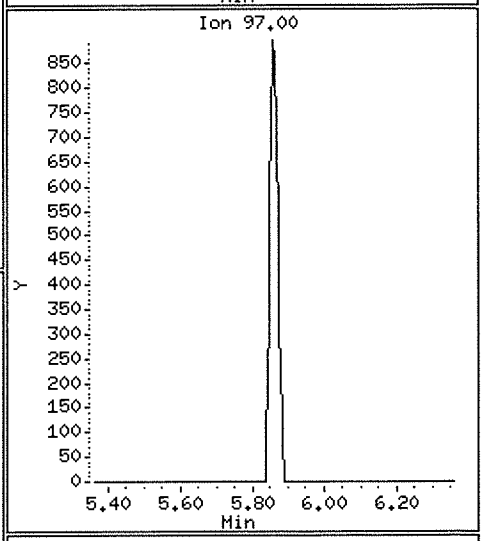
38 Trichloroethene

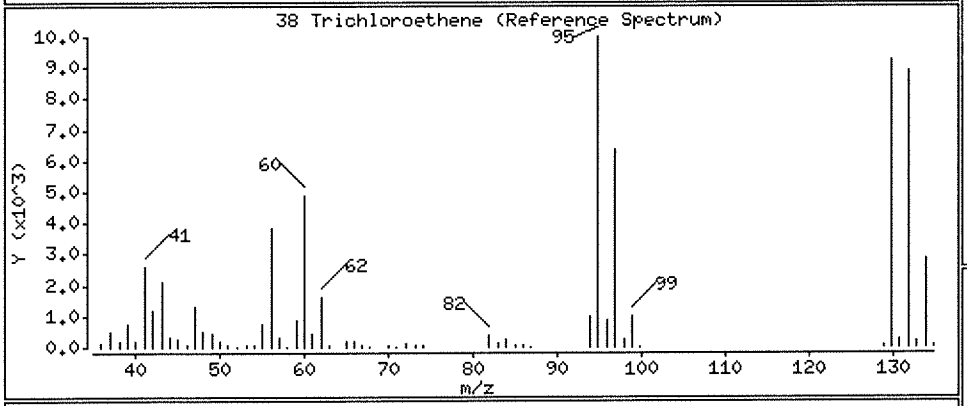
Concentration: 0.54 ug/l

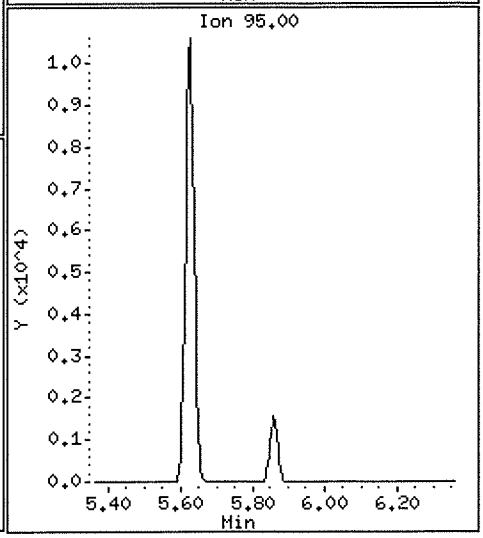


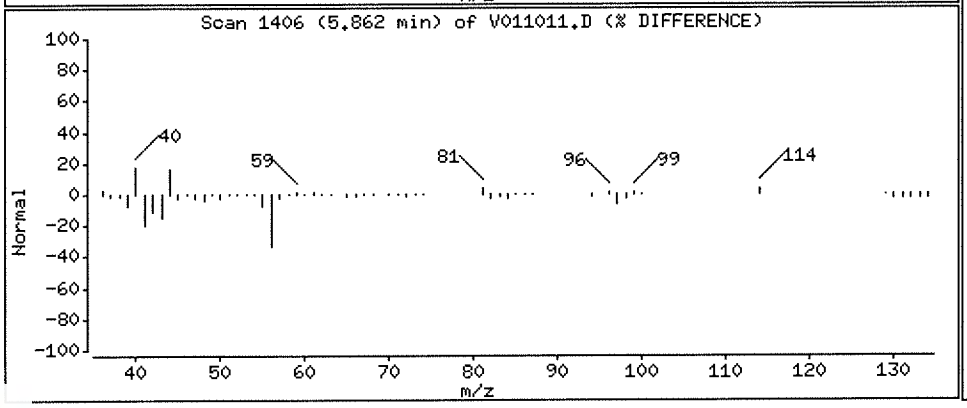












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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011012.D
Lab Smp Id: HS18121558-03 Client Smp ID: HS18121558-03
Inj Date : 10-JAN-2019 14:39
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-03;HS18121558-03;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

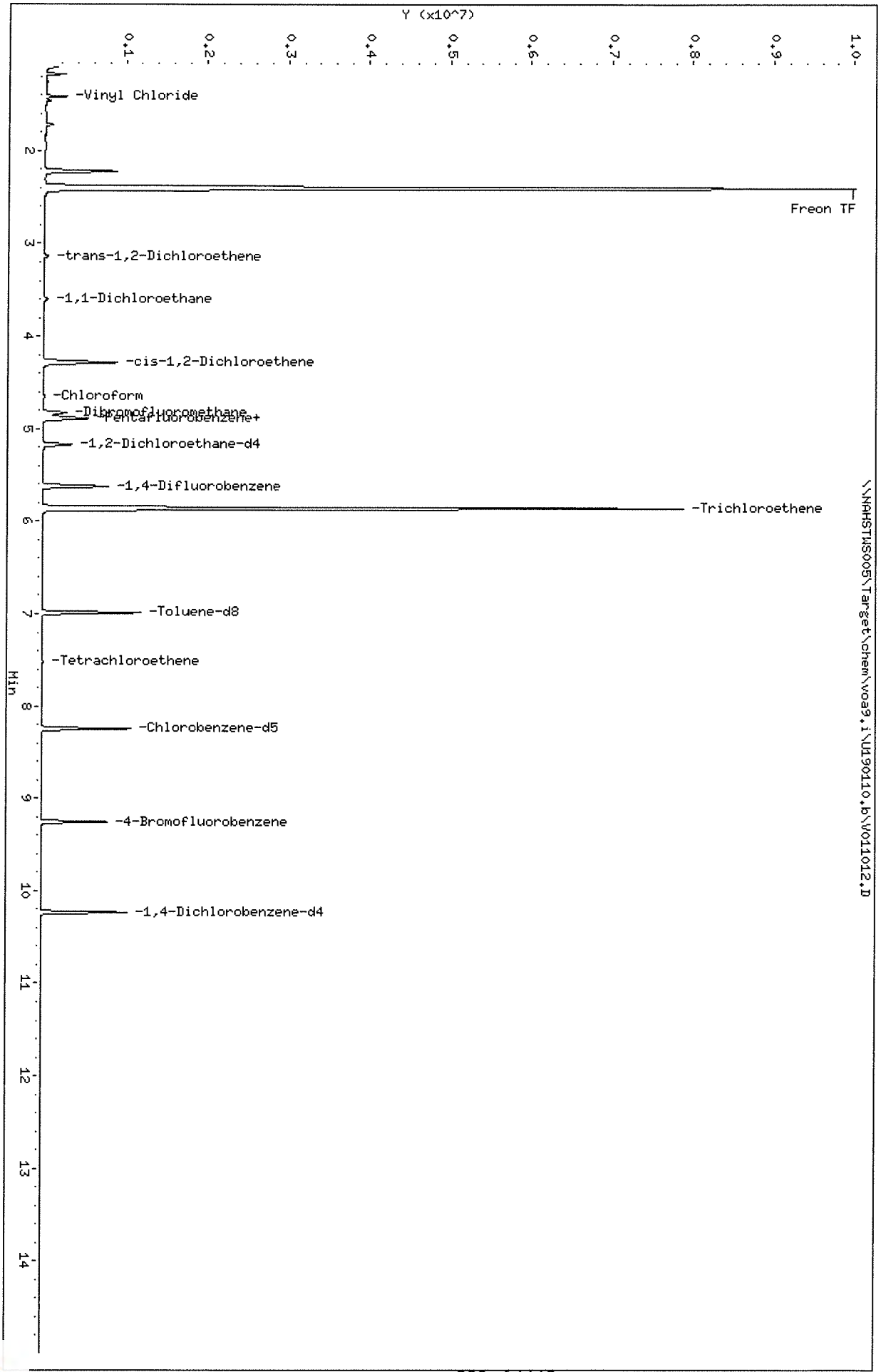
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.890	4.898	(1.000)	311423	50.0000	
* 36 1,4-Difluorobenzene	114	5.621	5.625	(1.000)	559823	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	510253	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	234318	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.830	(0.987)	161248	45.7322	45.73
$ 35 1,2-Dichloroethane-d4	65	5.171	5.175	(1.057)	224680	48.8849	48.88
$ 48 Toluene-d8	98	6.986	6.990	(0.847)	701580	53.0488	53.04
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	253103	50.5755	50.57
22 1,1-Dichloroethane	63	3.601	3.608	(0.736)	45229	6.38922	6.38
28 Chloroform	83	4.654	4.662	(0.952)	13558	2.01616	2.01(a)
27 cis-1,2-Dichloroethene	96	4.283	4.290	(0.876)	413990	97.1917	97.19
56 Tetrachloroethene	164	7.522	7.526	(0.912)	4619	1.72331	1.72(a)
20 trans-1,2-Dichloroethene	96	3.139	3.147	(0.642)	17627	4.63981	4.63(a)
38 Trichloroethene	130	5.861	5.861	(1.043)	2264930	635.462	635.46(A)
5 Vinyl Chloride	62	1.415	1.426	(0.289)	168471	36.4532	36.45

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.

Data File: \\NAHSTWS005\Target\chem\voa9,i\U190110,b\V011012,D
Date : 10-JAN-2019 14:39
Client ID: HS18121558-03
Sample Info: HS18121558-03;HS18121558-03;;;
Purge Volume: 5.0
Column phase: DB624

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



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Date : 10-JAN-2019 14:39

Client ID: HS18121558-03

Instrument: VOA9.i

Sample Info: HS18121558-03;HS18121558-03;;;

Purge Volume: 5.0

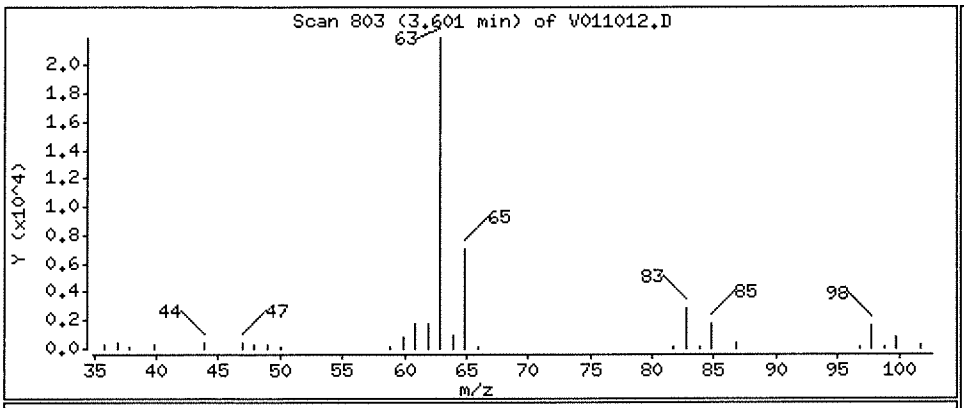
Operator: PC

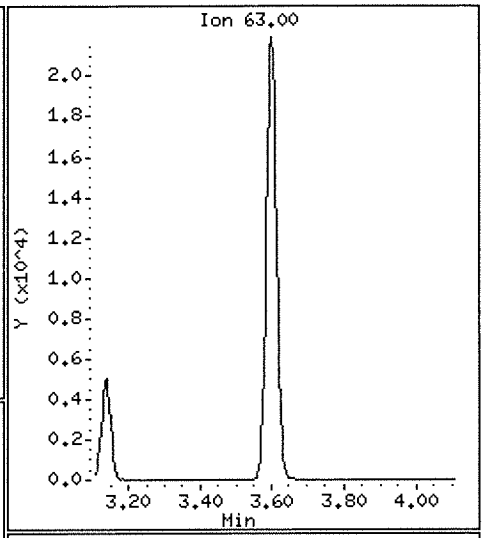
Column phase: DB624

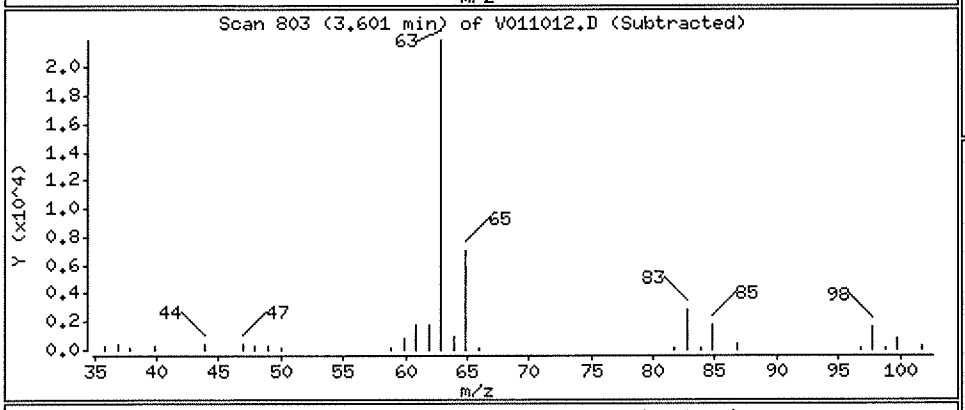
Column diameter: 0.18

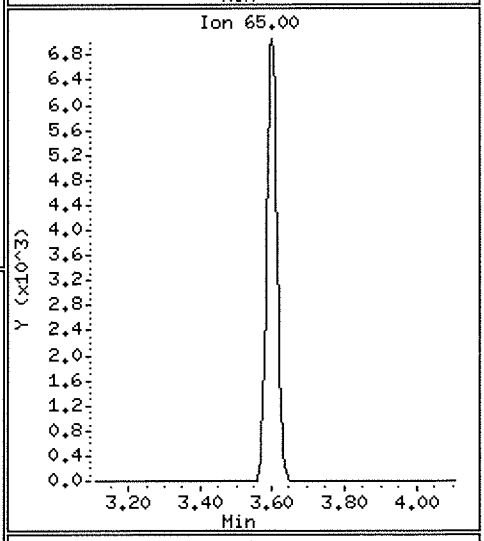
22 1,1-Dichloroethane

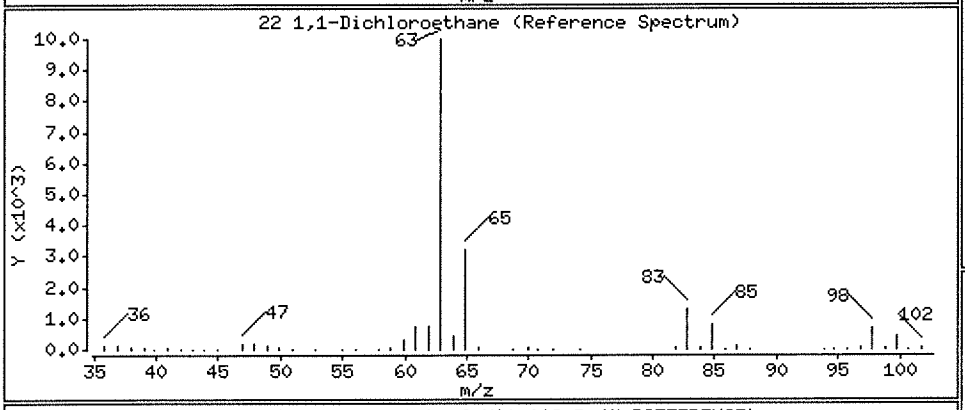
Concentration: 6.38 ug/l

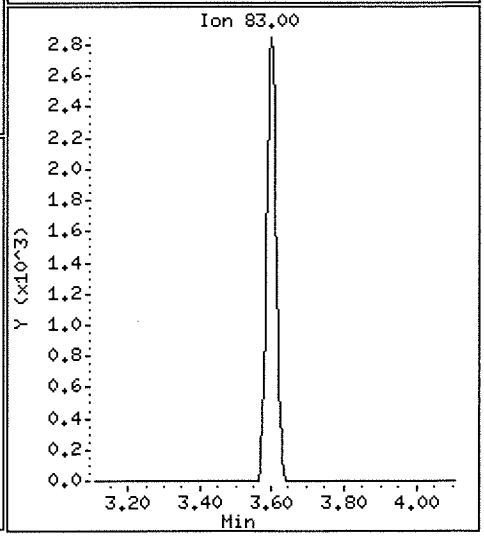


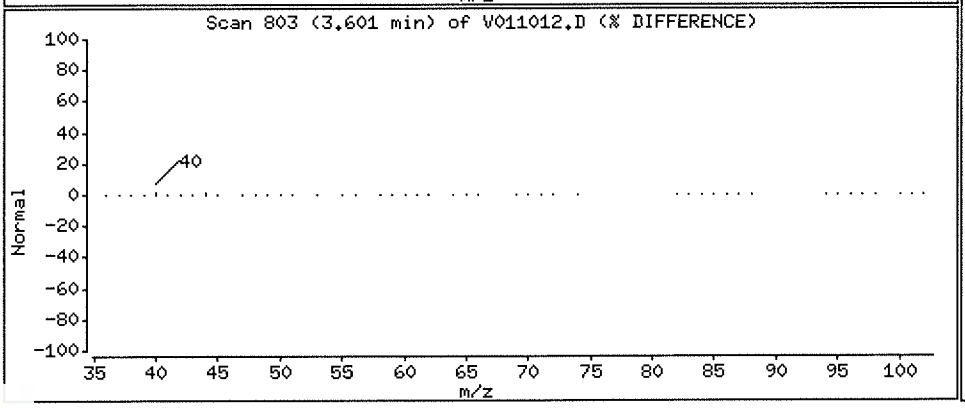












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011012.D

Date : 10-JAN-2019 14:39

Client ID: HS18121558-03

Instrument: VOA9.i

Sample Info: HS18121558-03;HS18121558-03;;;

Purge Volume: 5.0

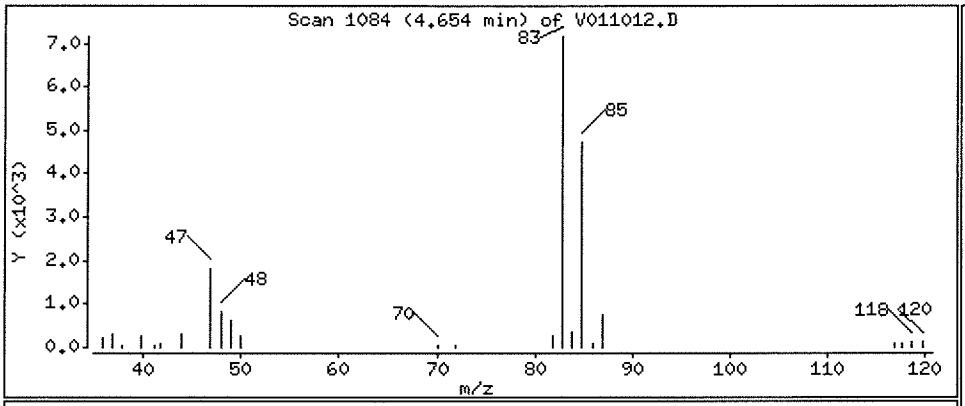
Operator: PC

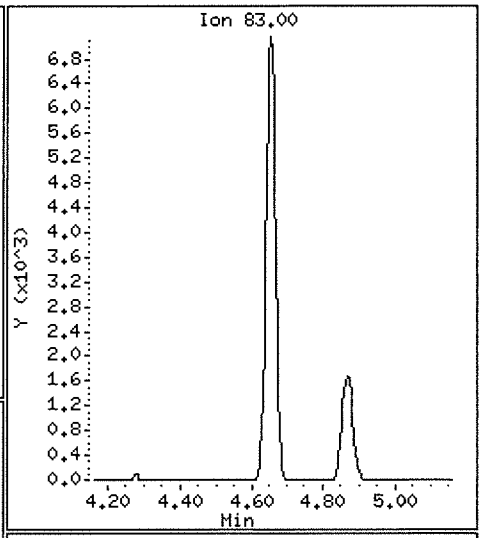
Column phase: DB624

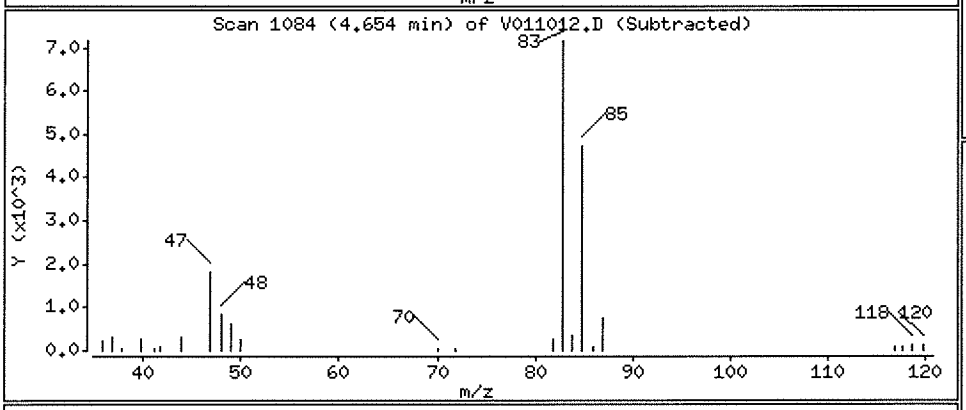
Column diameter: 0.18

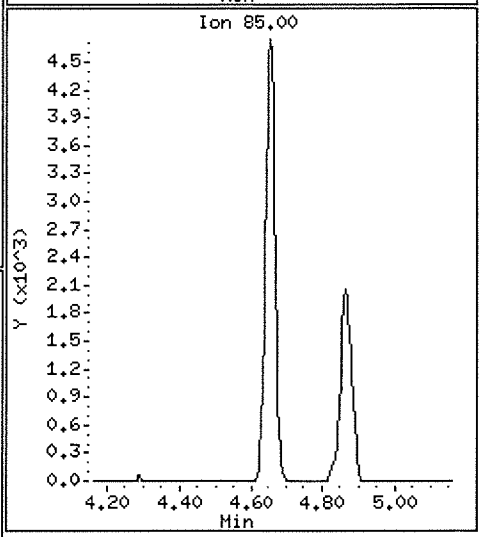
28 Chloroform

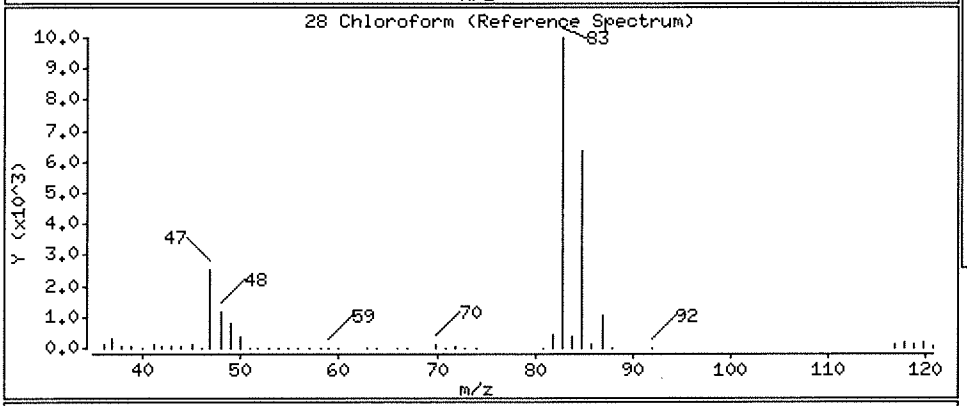
Concentration: 2.01 ug/l

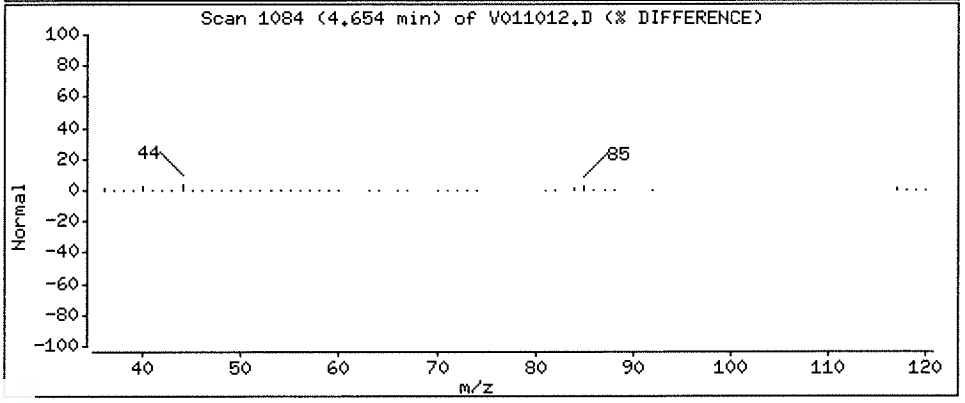












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011012.D

Date : 10-JAN-2019 14:39

Client ID: HS18121558-03

Instrument: VOA9.i

Sample Info: HS18121558-03;HS18121558-03;;;

Purge Volume: 5.0

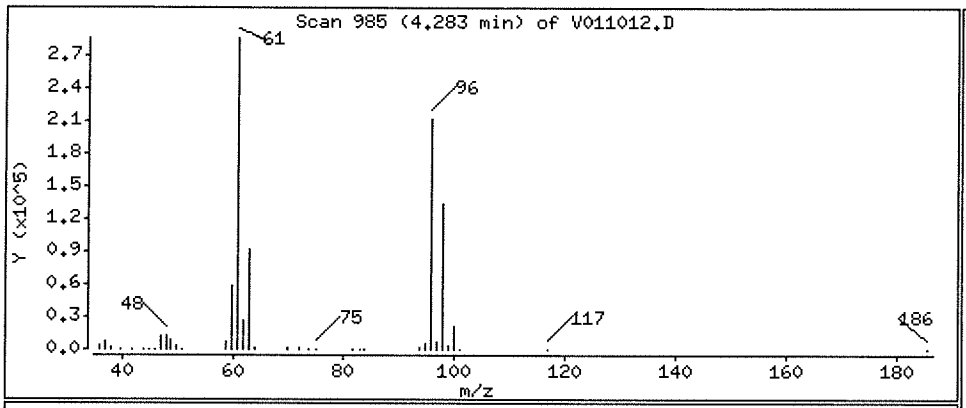
Operator: PC

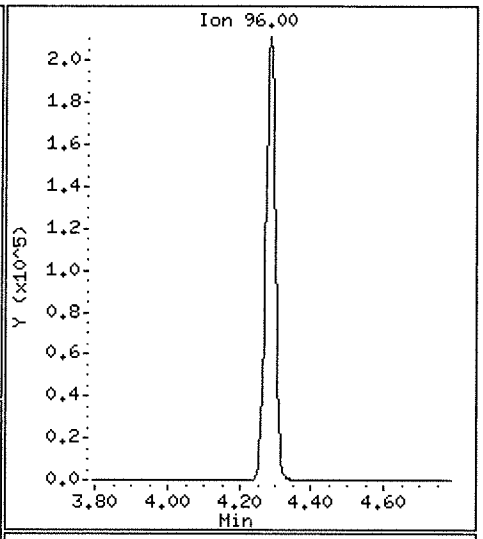
Column phase: DB624

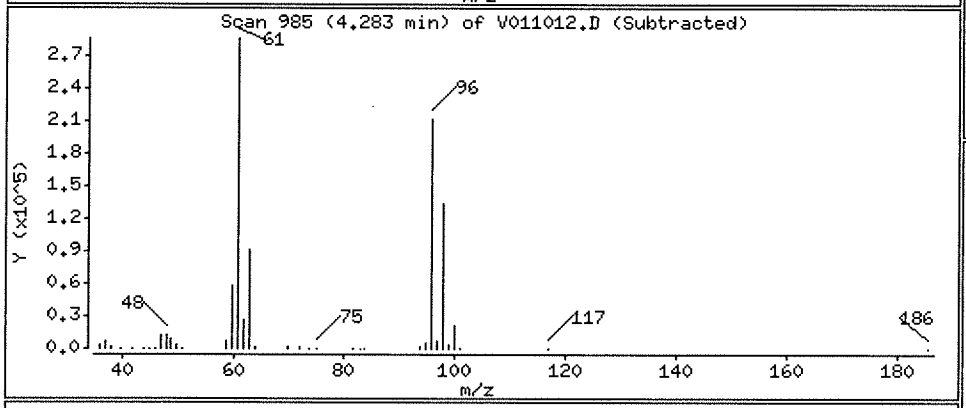
Column diameter: 0.18

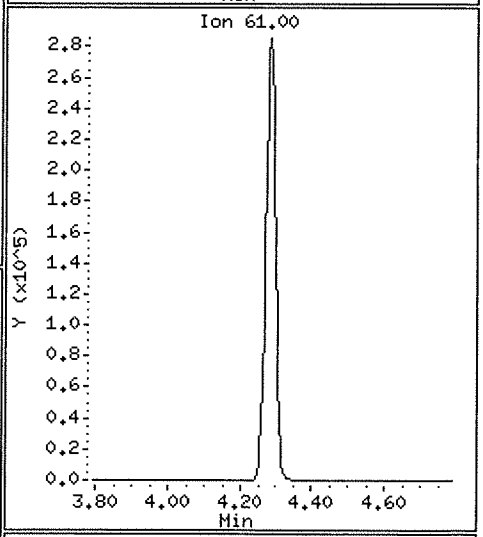
27 cis-1,2-Dichloroethene

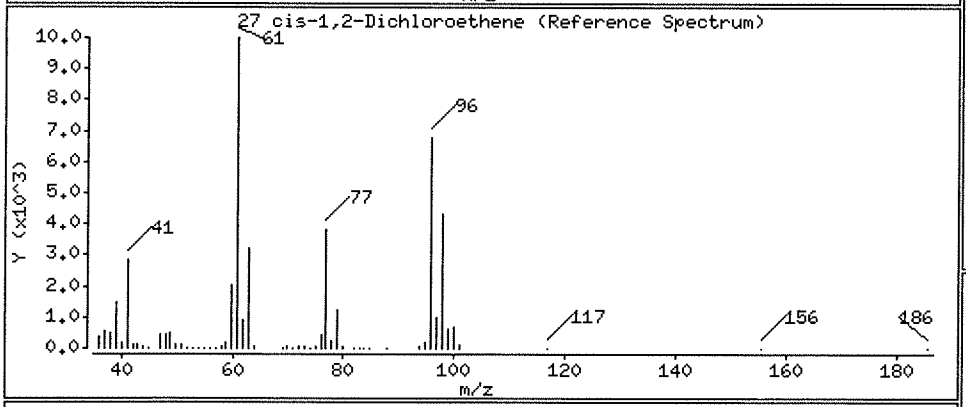
Concentration: 97.19 ug/l

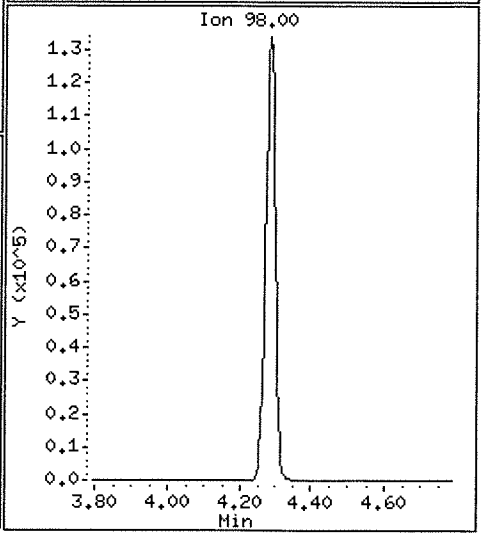


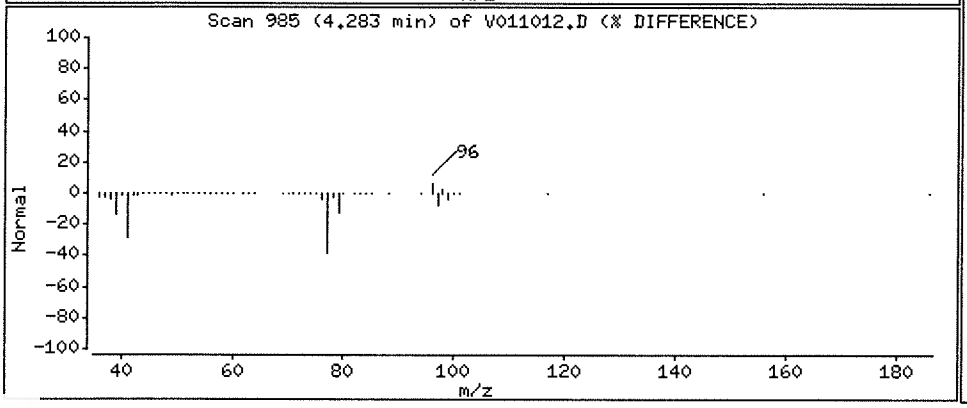












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011012.D

Date : 10-JAN-2019 14:39

Client ID: HS18121558-03

Instrument: VOA9.i

Sample Info: HS18121558-03;HS18121558-03;;;

Purge Volume: 5.0

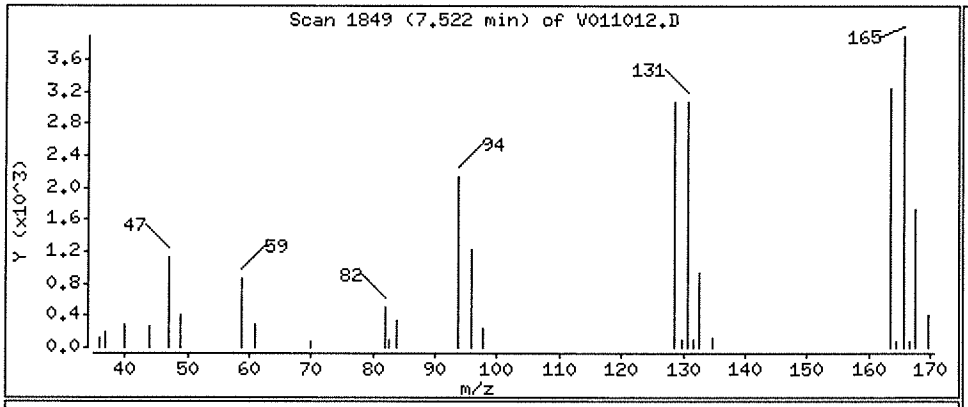
Operator: PC

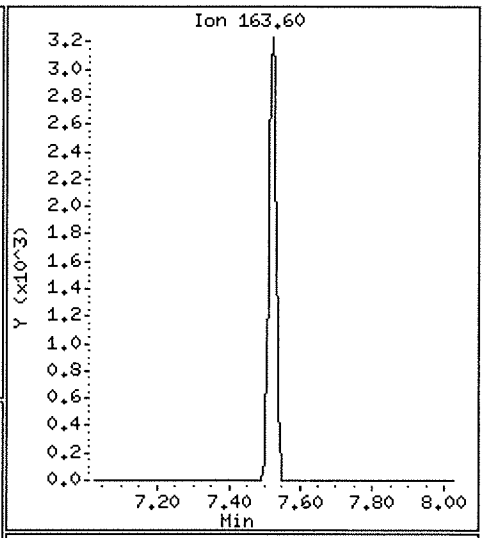
Column phase: DB624

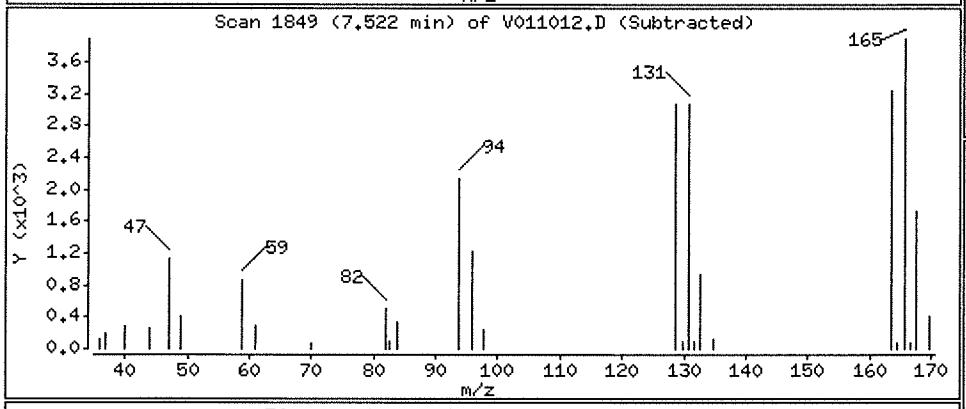
Column diameter: 0.18

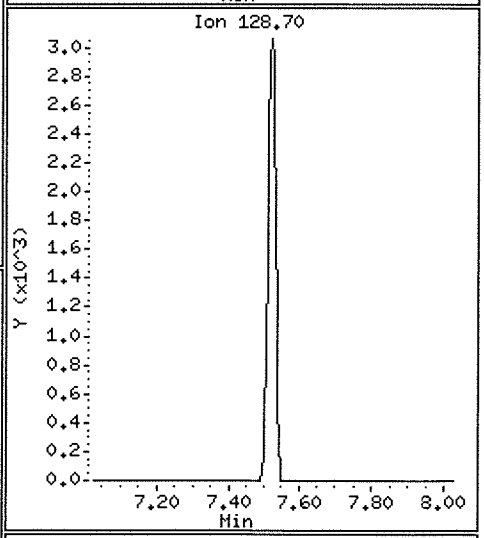
56 Tetrachloroethene

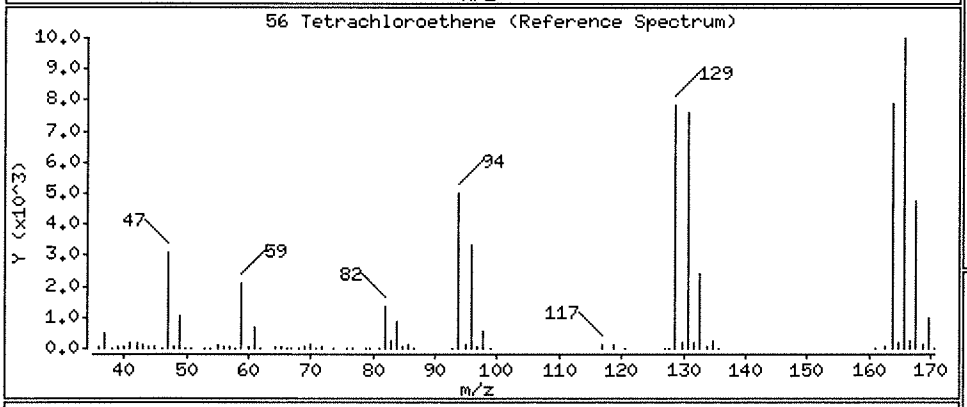
Concentration: 1.72 ug/l

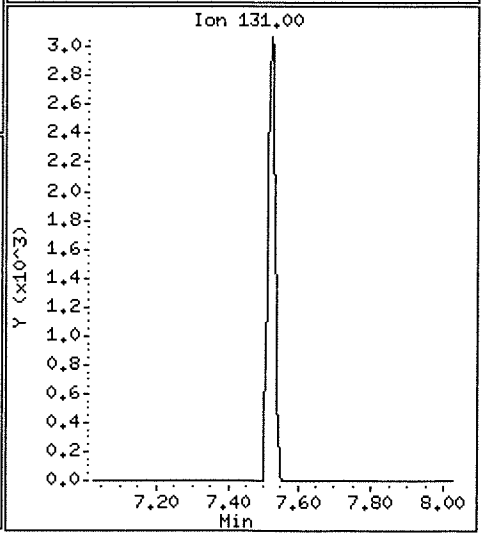


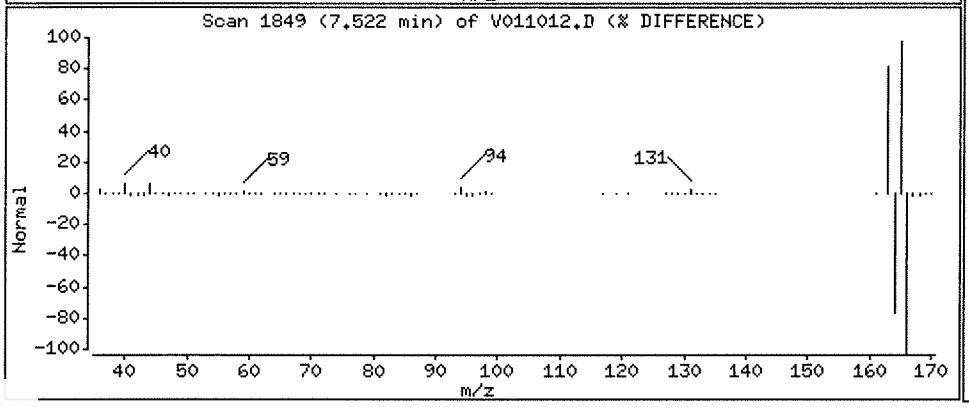












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011012.D

Date : 10-JAN-2019 14:39

Client ID: HS18121558-03

Instrument: VOA9.i

Sample Info: HS18121558-03;HS18121558-03;;;

Purge Volume: 5.0

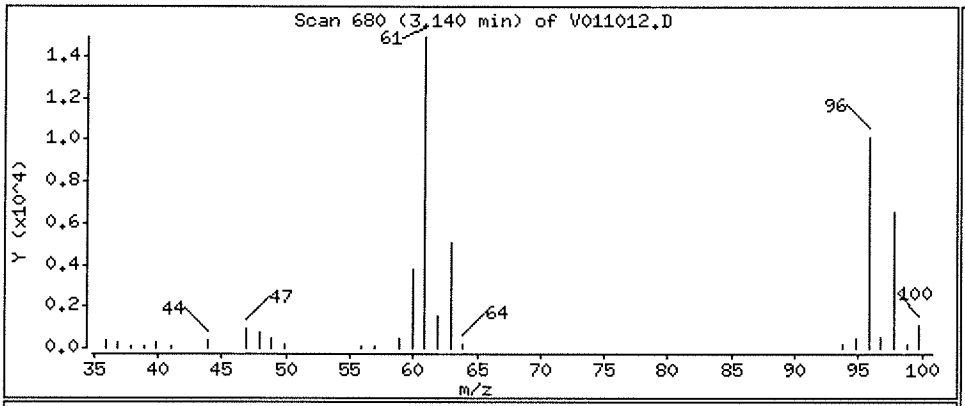
Operator: PC

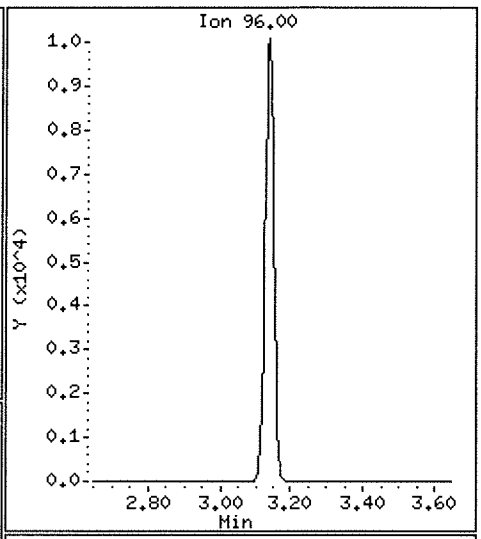
Column phase: DB624

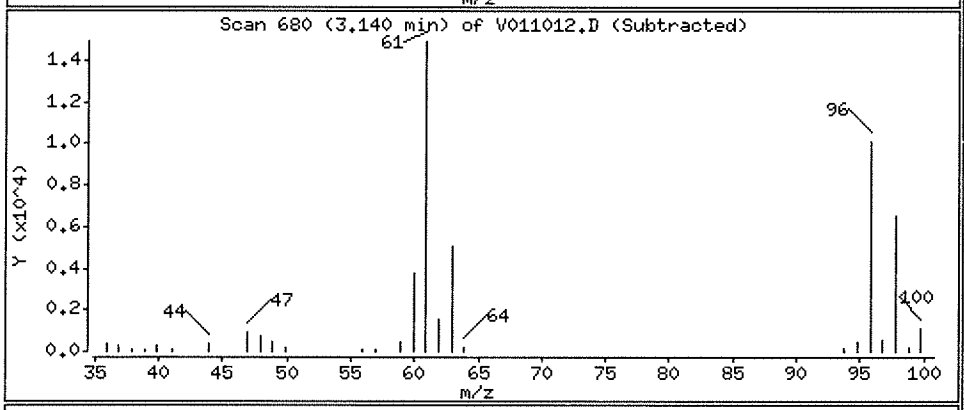
Column diameter: 0.18

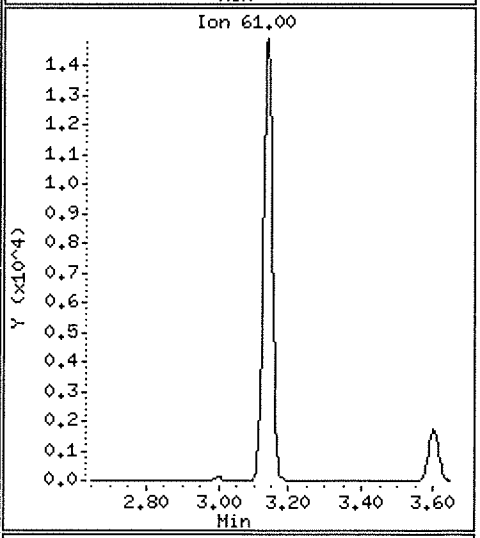
20 trans-1,2-Dichloroethene

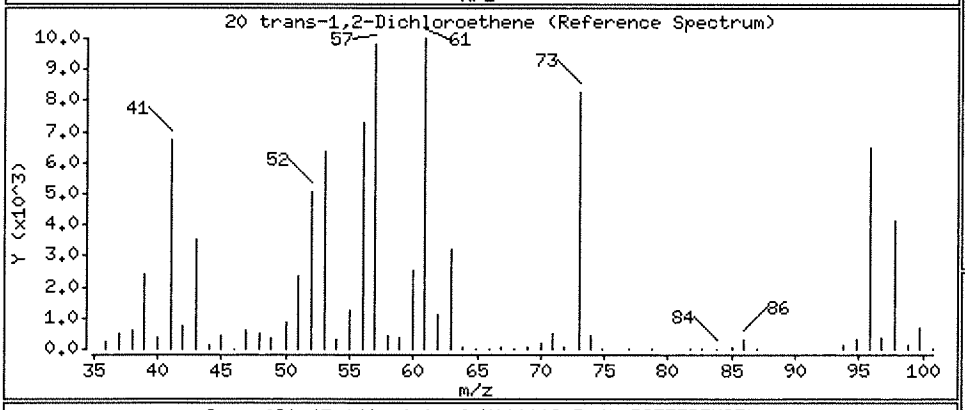
Concentration: 4.63 ug/l

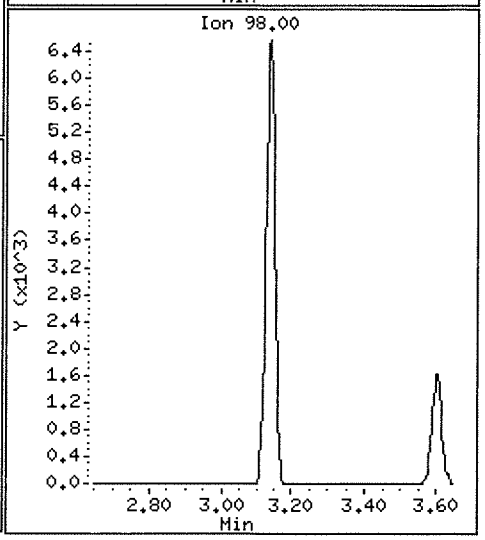


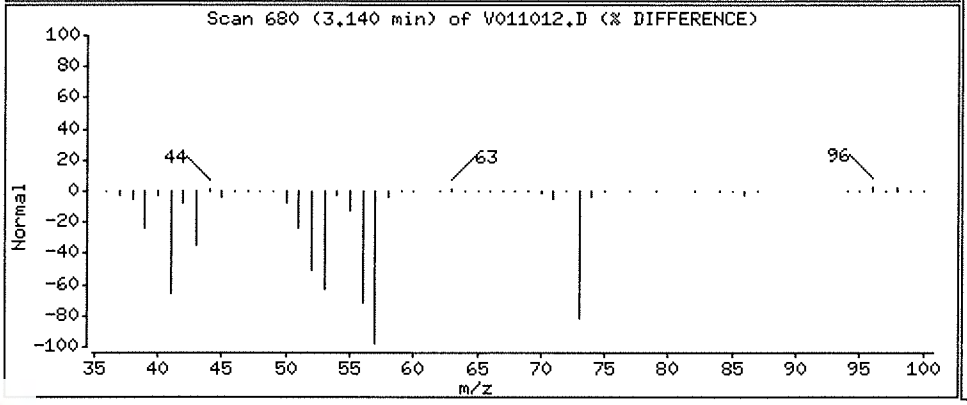












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Date : 10-JAN-2019 14:39

Client ID: HS18121558-03

Instrument: VOA9.i

Sample Info: HS18121558-03;HS18121558-03;;;

Purge Volume: 5.0

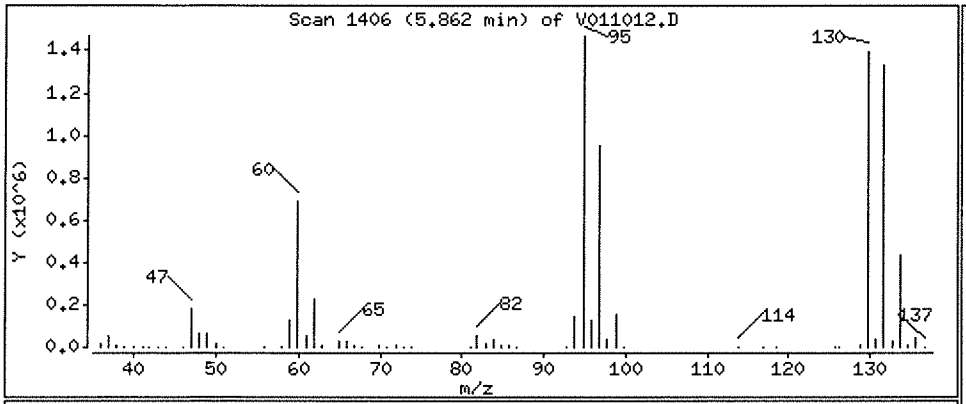
Operator: PC

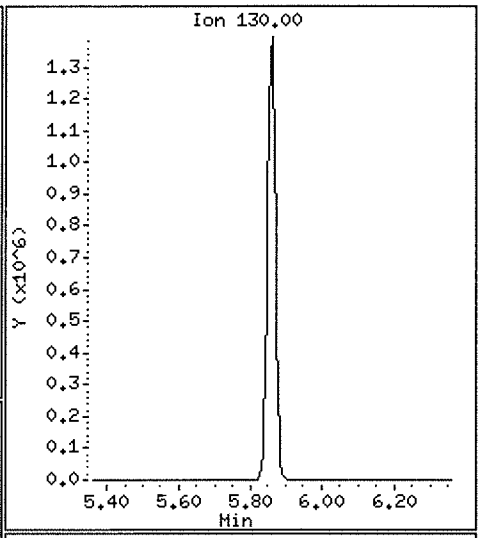
Column phase: DB624

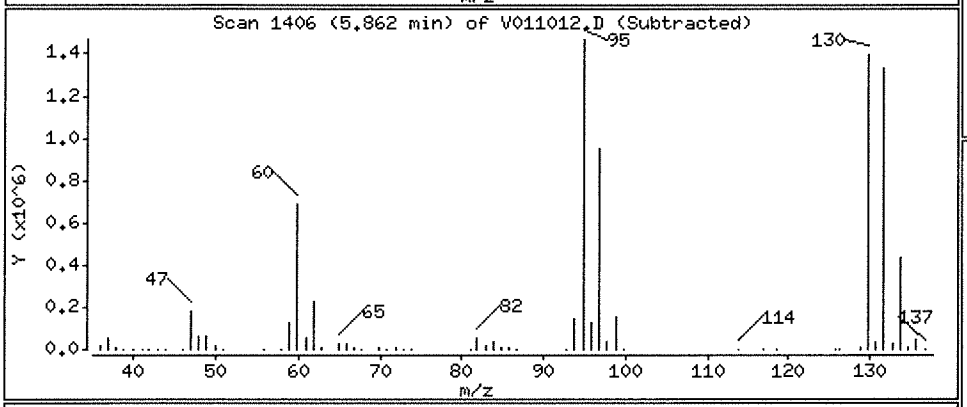
Column diameter: 0.18

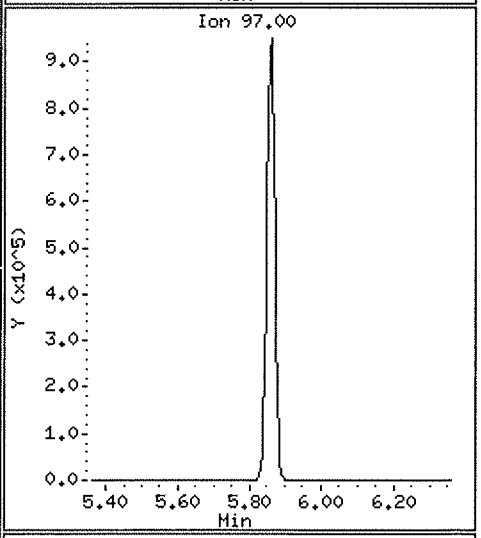
38 Trichloroethene

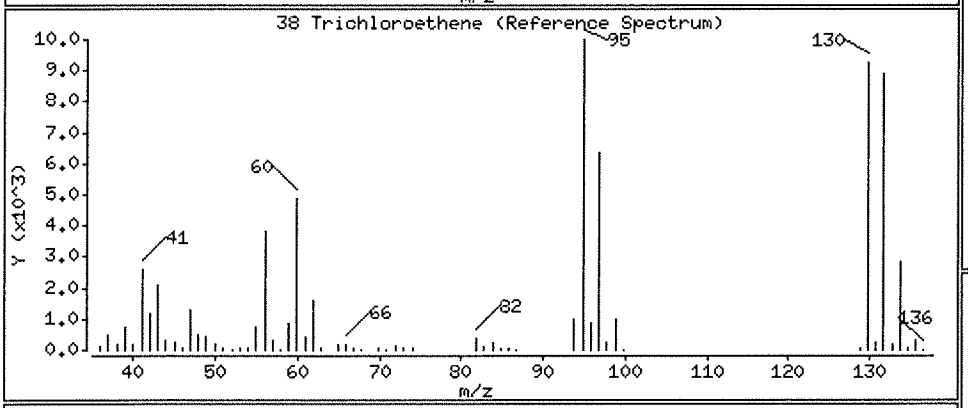
Concentration: 635.46 ug/l

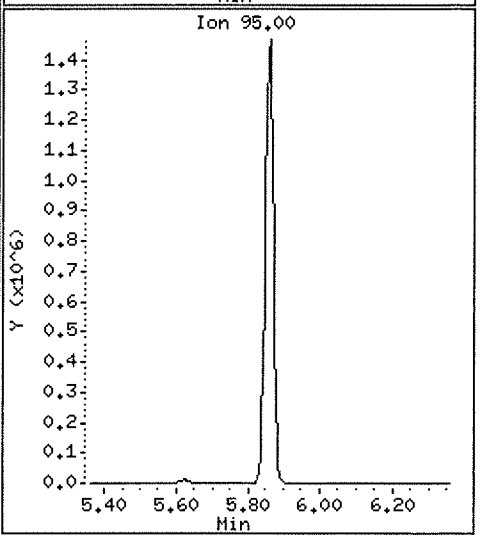


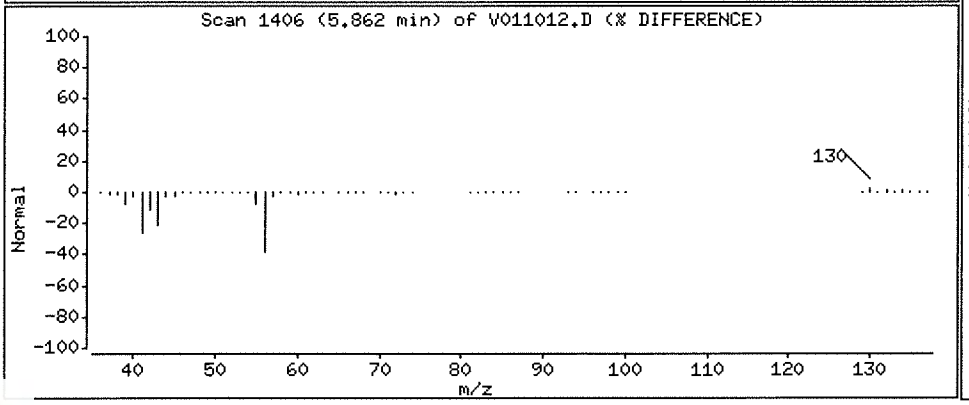












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Date : 10-JAN-2019 14:39

Client ID: HS18121558-03

Instrument: VOA9.i

Sample Info: HS18121558-03;HS18121558-03;;;

Purge Volume: 5.0

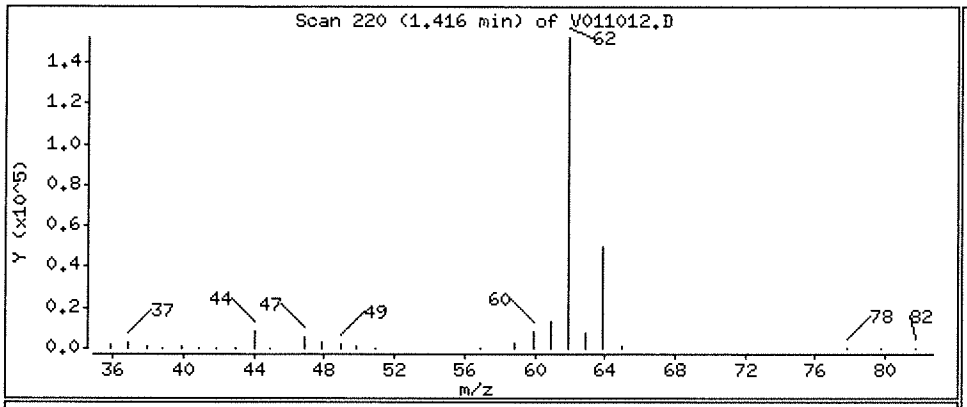
Operator: PC

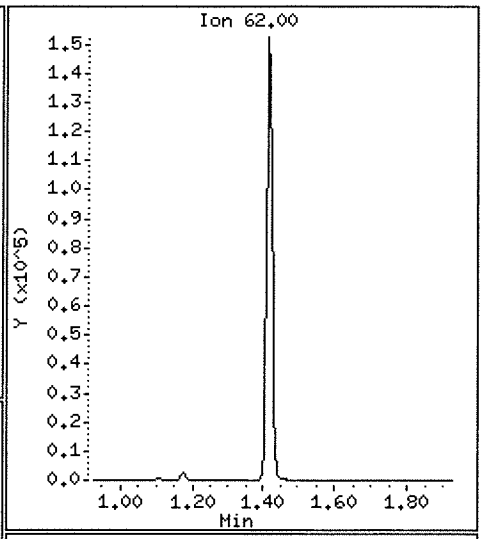
Column phase: DB624

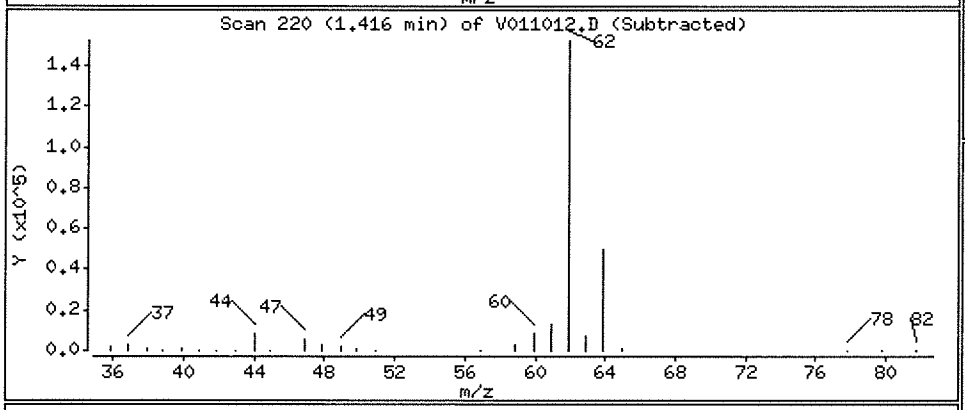
Column diameter: 0.18

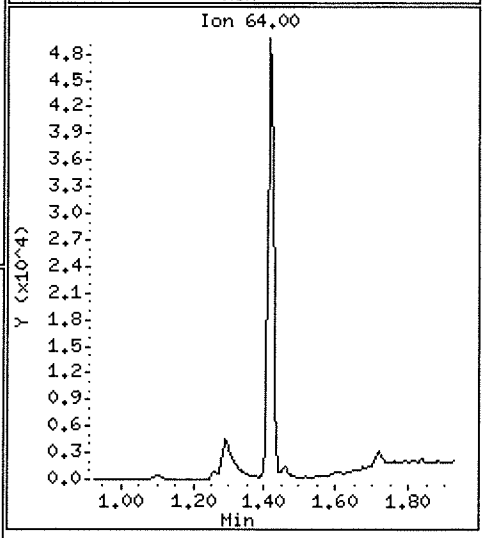
5 Vinyl Chloride

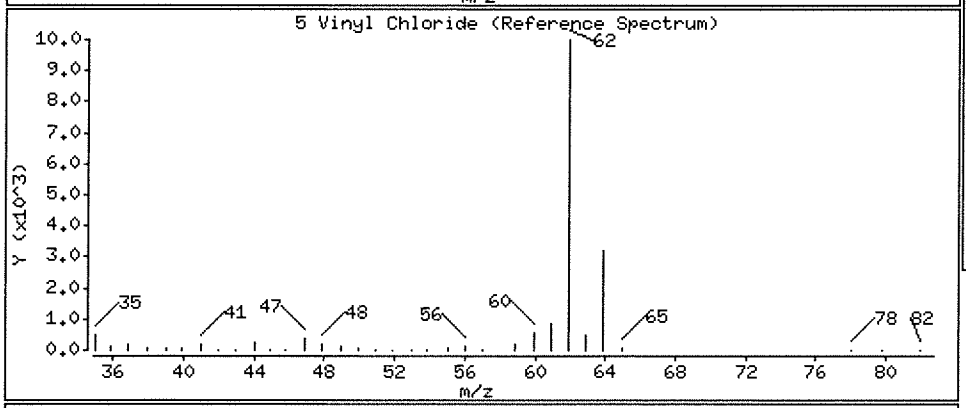
Concentration: 36.45 ug/l

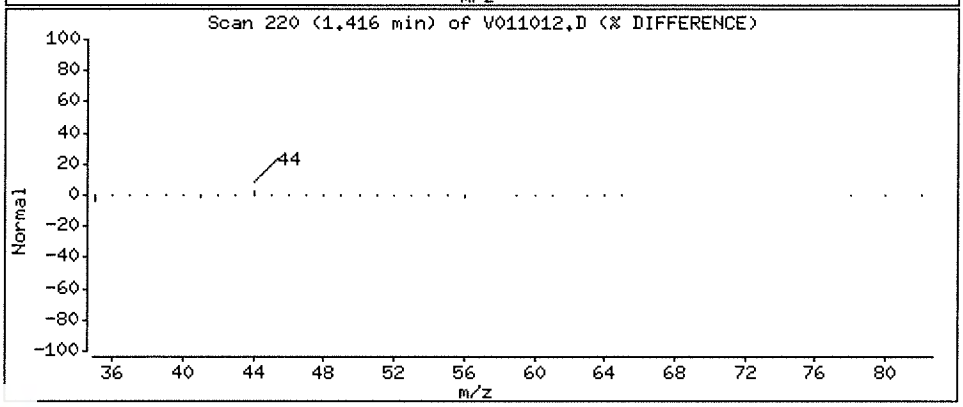












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011013.D
Lab Smp Id: HS18121558-03DL Client Smp ID: HS18121558-03DL
Inj Date : 10-JAN-2019 15:06
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-03;HS18121558-03;;;
Misc Info : 180315V9;WATER;0;5;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 12
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

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

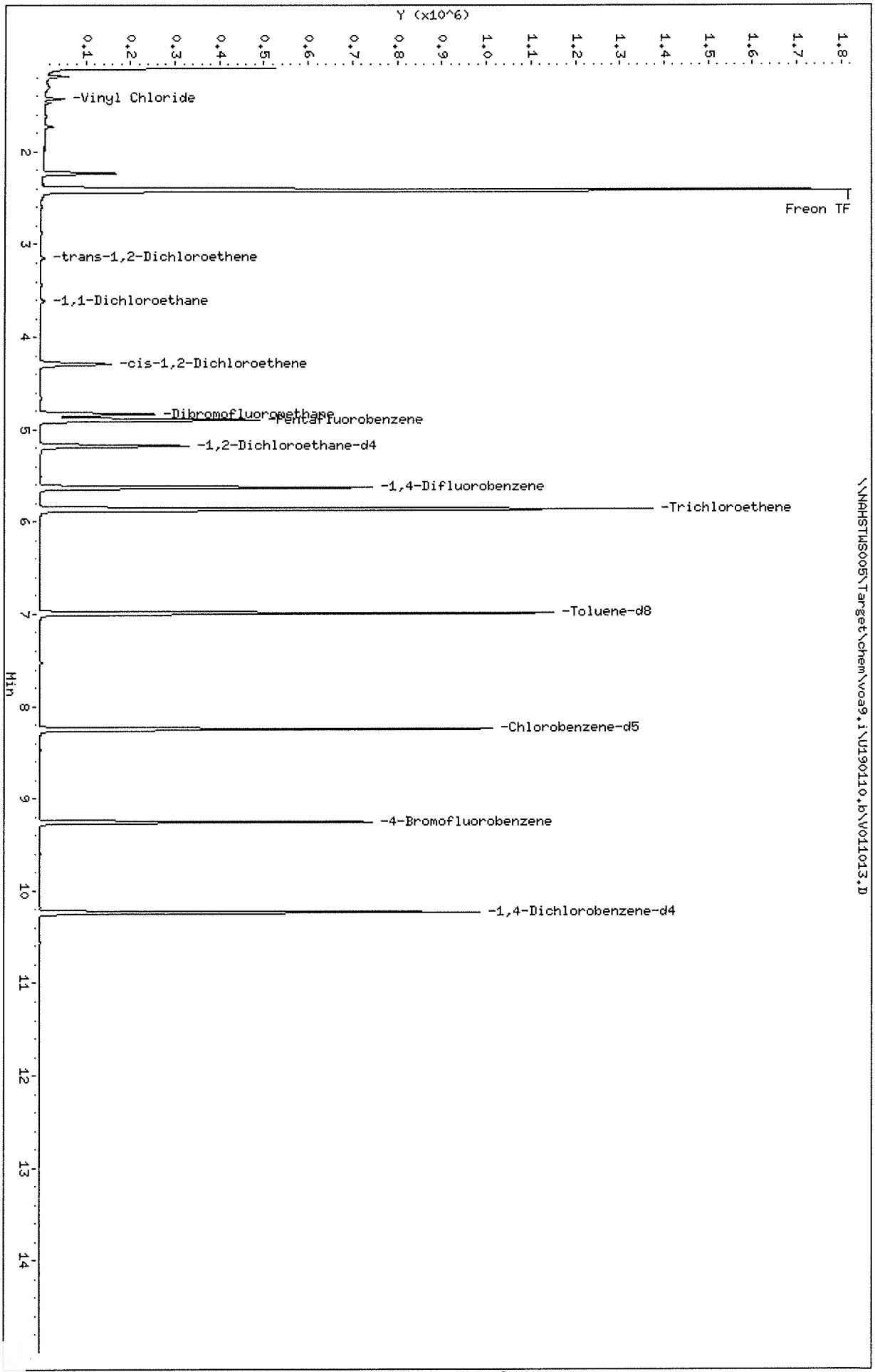
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	287511	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	522306	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	475175	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	215387	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.830	(0.987)	150929	46.3899	46.38
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	212323	50.0910	50.09
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	656569	53.3224	53.32
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	234355	50.2756	50.27
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	8274	1.26603	6.33(a)
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	73680	18.7364	93.68
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	3184	0.90780	4.53(a)
38 Trichloroethene	130	5.865	5.861	(1.042)	402316	120.984	604.91
5 Vinyl Chloride	62	1.426	1.426	(0.291)	30302	7.10196	35.50

QC Flag Legend

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011013.D
Date : 10-JAN-2019 15:06
Client ID: HS181215S8-03DL
Sample Info: HS181215S8-03;HS181215S8-03;;;
Purge Volume: 5.0
Column phase: DB624

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



\\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011013.D

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011013.D

Date : 10-JAN-2019 15:06

Client ID: HS18121558-03DL

Instrument: VOA9.i

Sample Info: HS18121558-03;HS18121558-03;;;

Purge Volume: 5.0

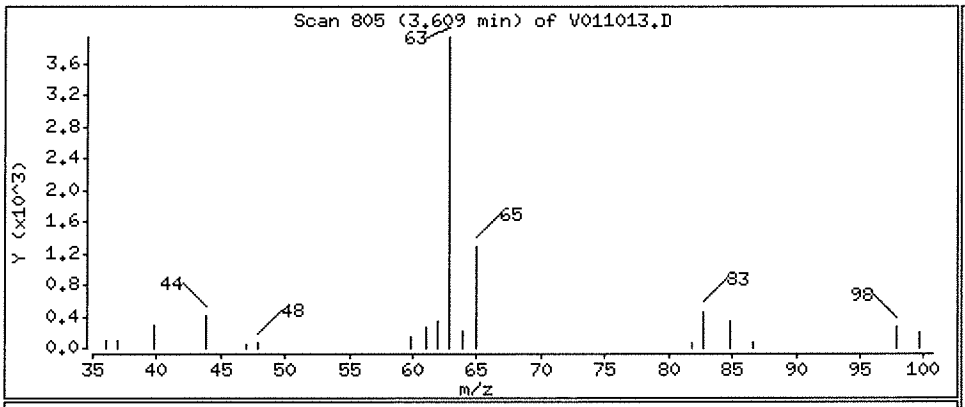
Operator: PC

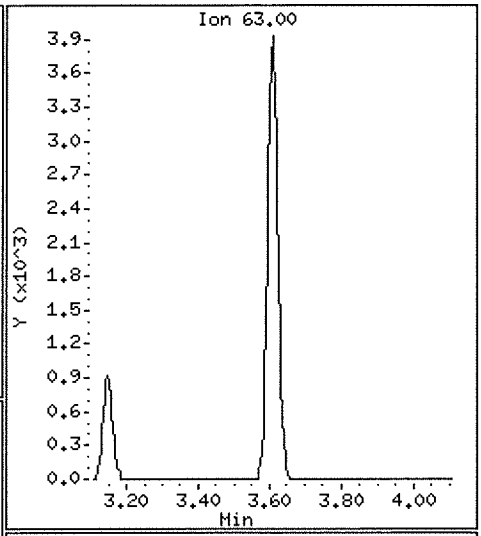
Column phase: DB624

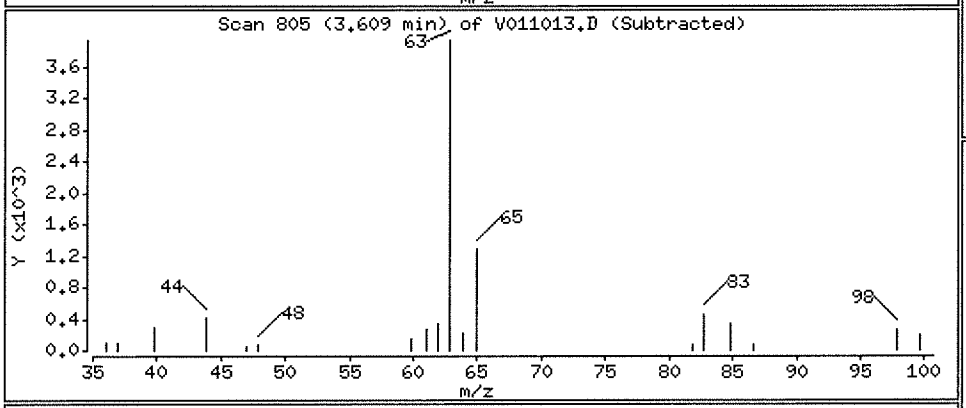
Column diameter: 0.18

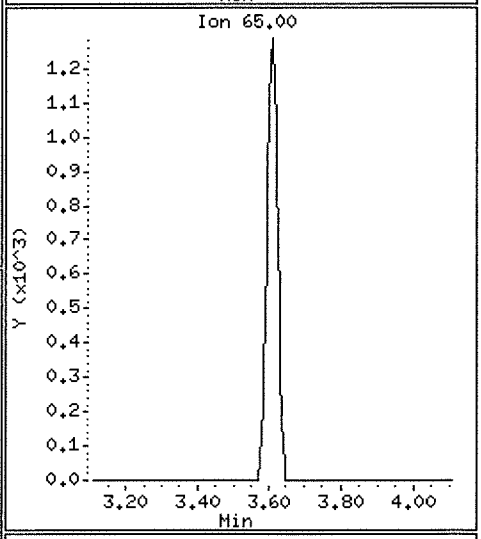
22 1,1-Dichloroethane

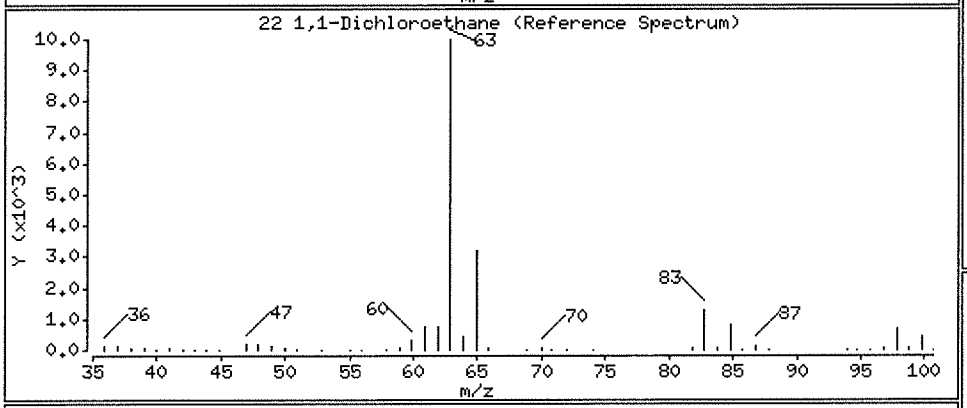
Concentration: 6.33 ug/l

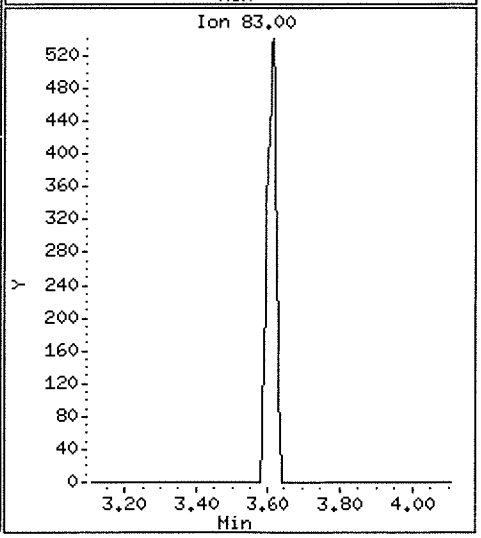


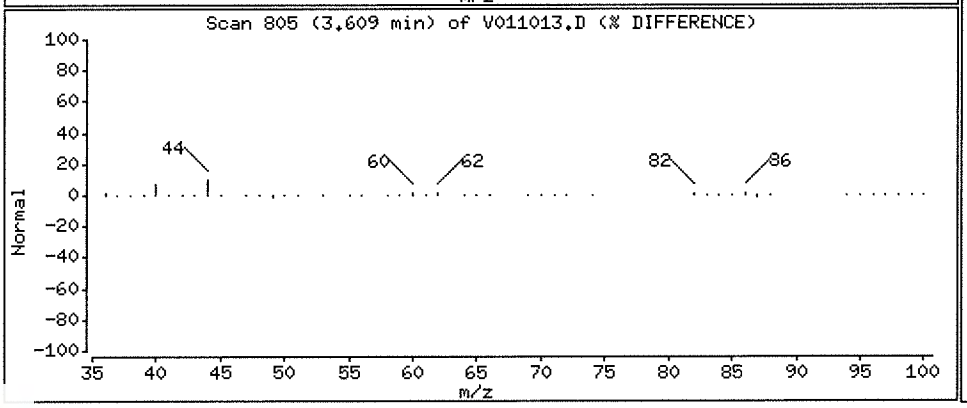












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011013.D Page 4

Date : 10-JAN-2019 15:06

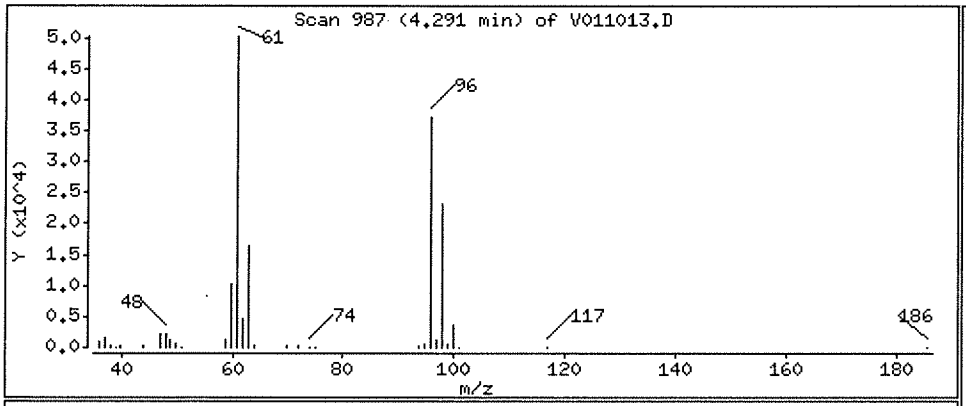
Client ID: HS18121558-03DL Instrument: VOA9.i

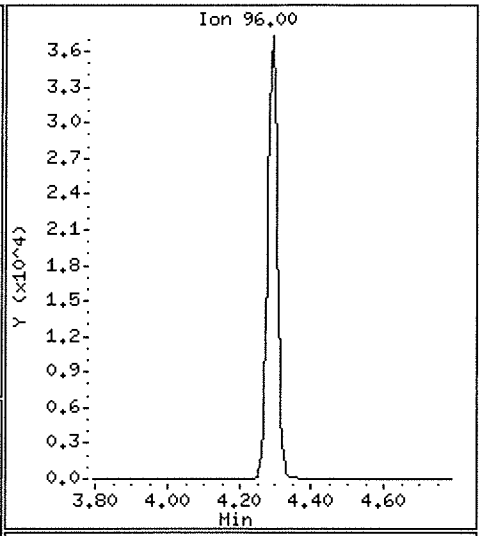
Sample Info: HS18121558-03;HS18121558-03;;;

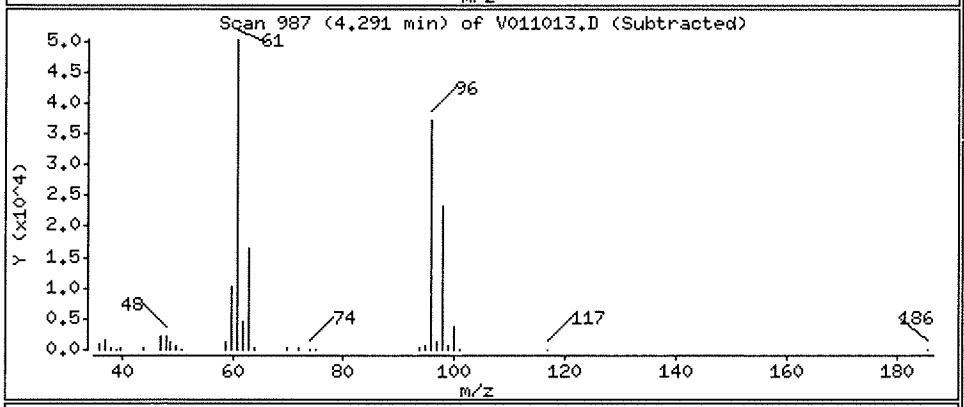
Purge Volume: 5.0 Operator: PC

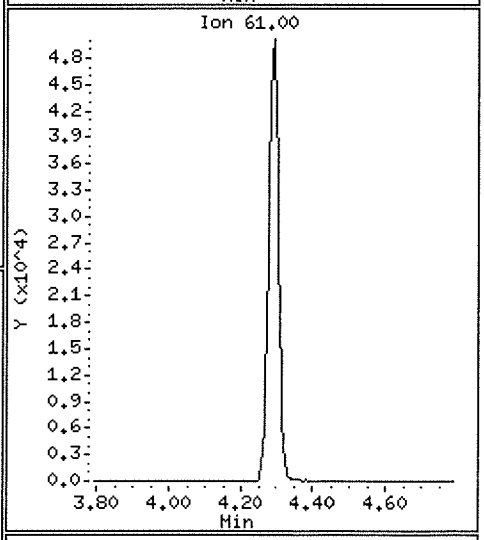
Column phase: DB624 Column diameter: 0.18

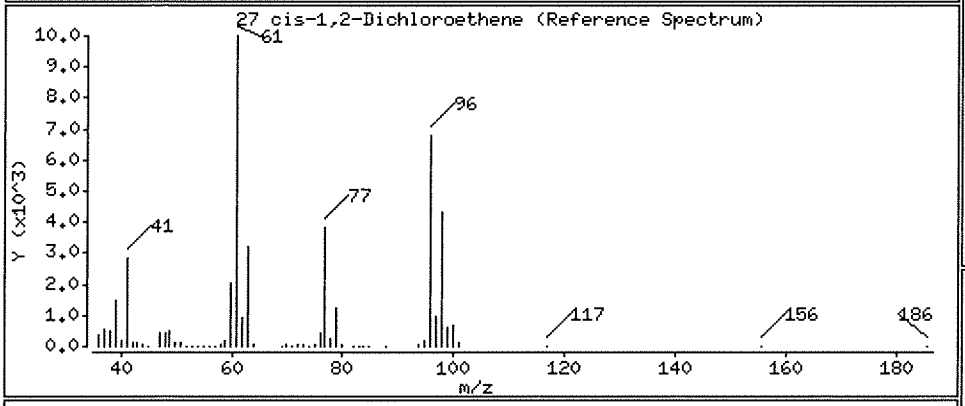
27 cis-1,2-Dichloroethene Concentration: 93.68 ug/l

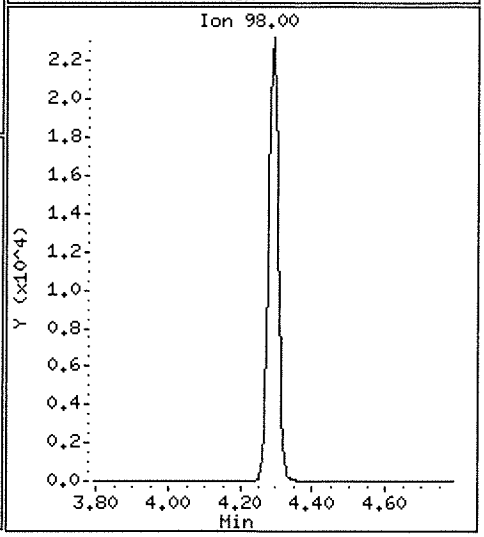


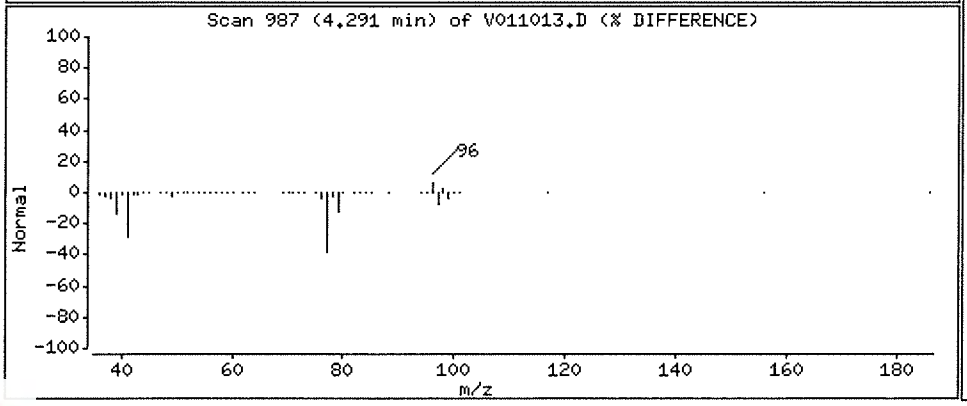












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011013.D Page 5

Date : 10-JAN-2019 15:06

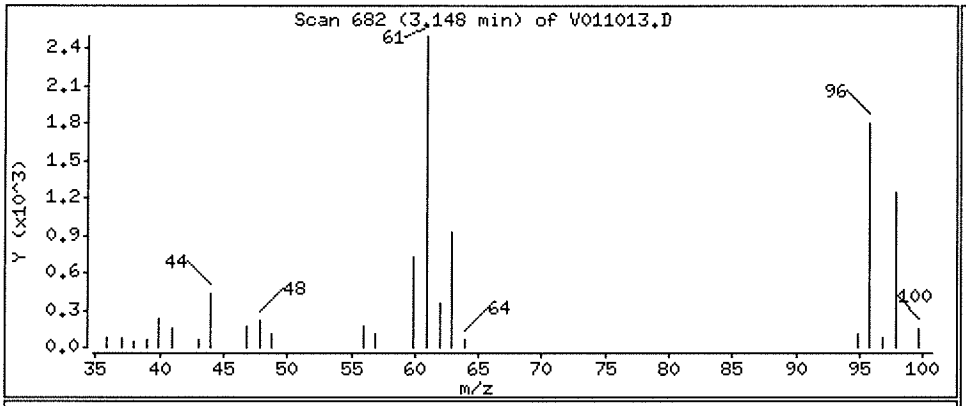
Client ID: HS18121558-03DL Instrument: VOA9.i

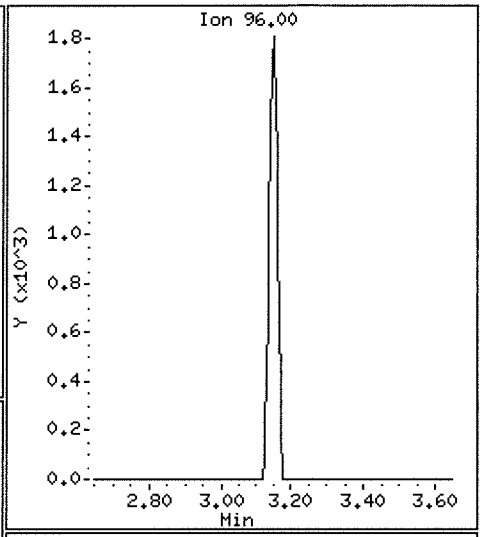
Sample Info: HS18121558-03;HS18121558-03;;;

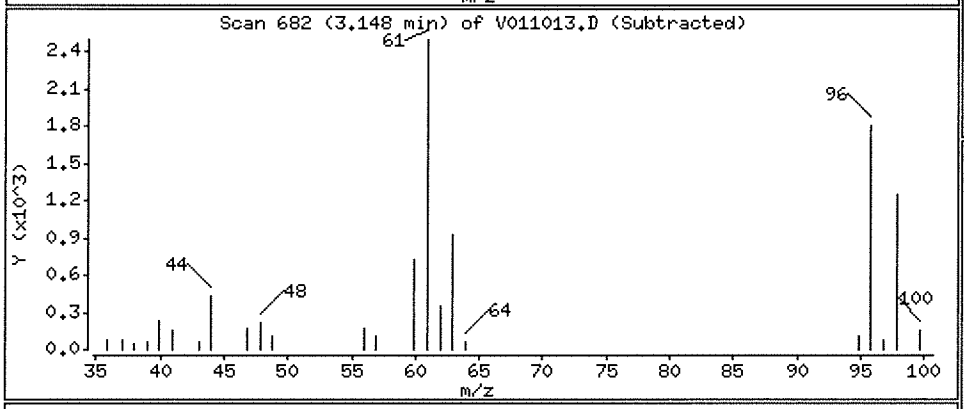
Purge Volume: 5.0 Operator: PC

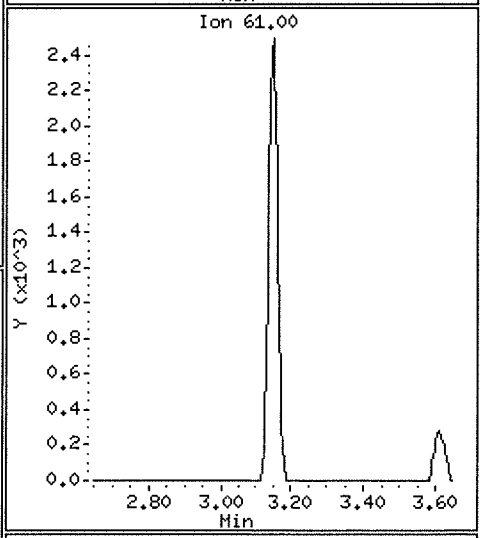
Column phase: DB624 Column diameter: 0.18

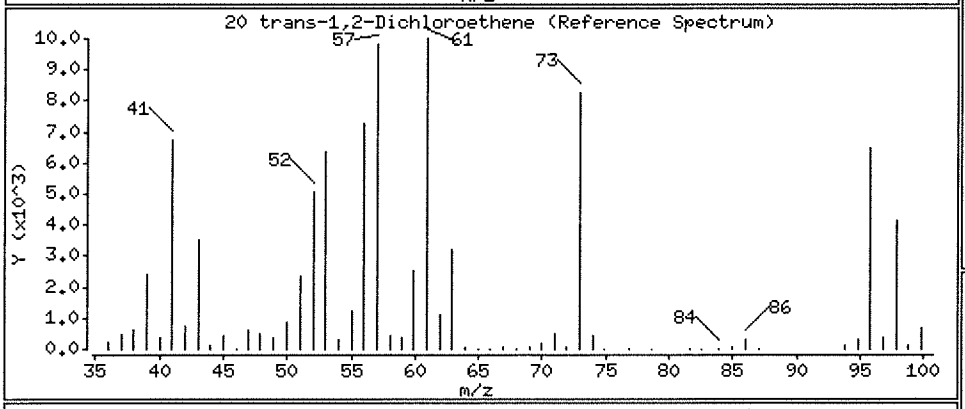
20 trans-1,2-Dichloroethene Concentration: 4.53 ug/l

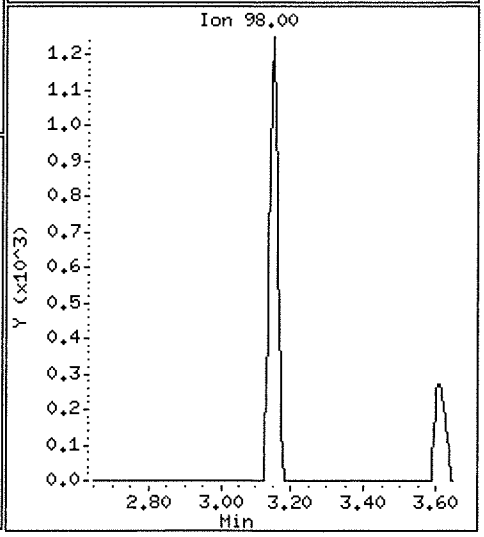


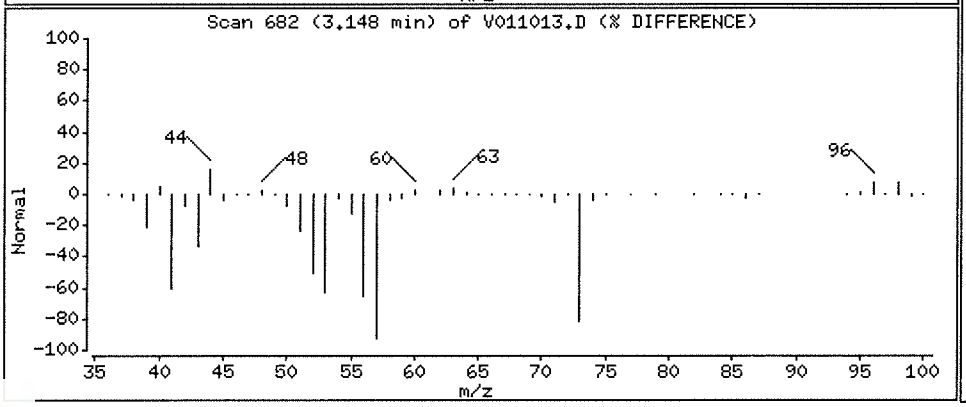












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011013.D Page 6

Date : 10-JAN-2019 15:06

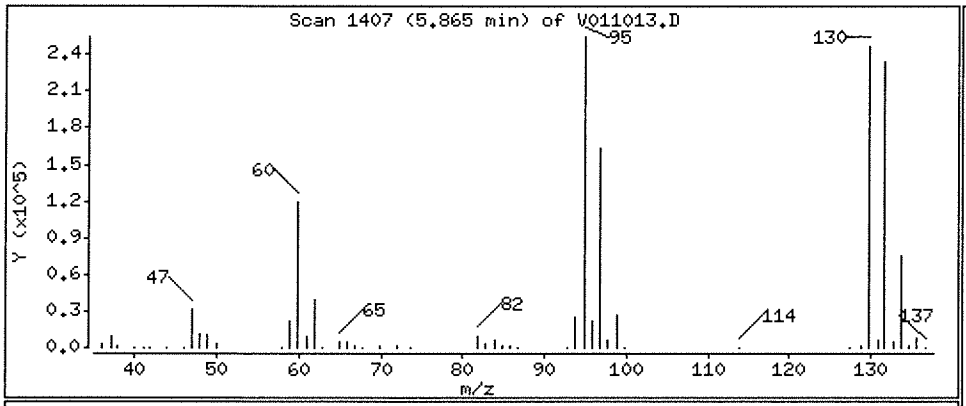
Client ID: HS18121558-03DL Instrument: VOA9.i

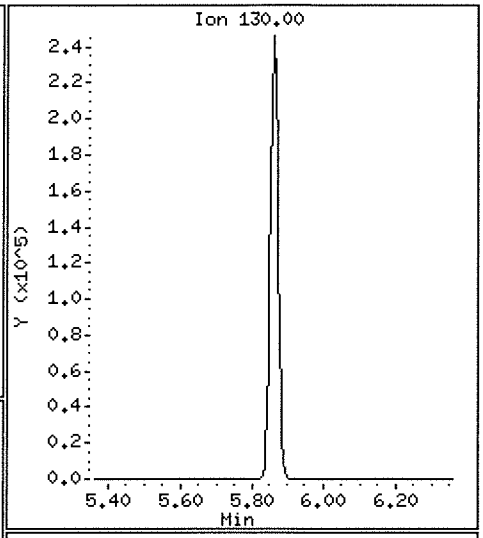
Sample Info: HS18121558-03;HS18121558-03;;;

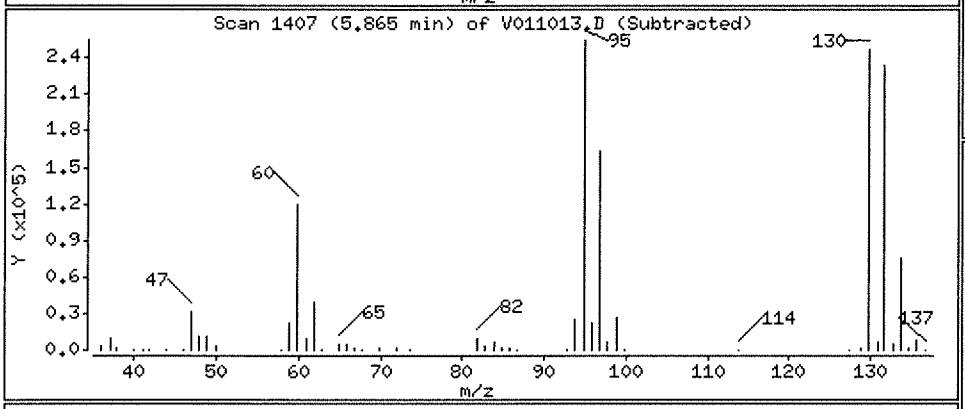
Purge Volume: 5.0 Operator: PC

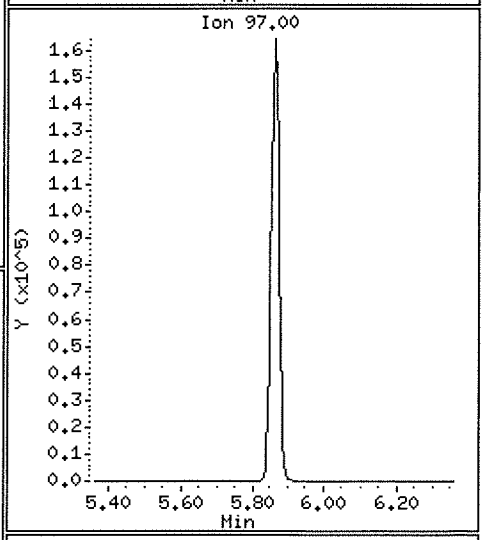
Column phase: DB624 Column diameter: 0.18

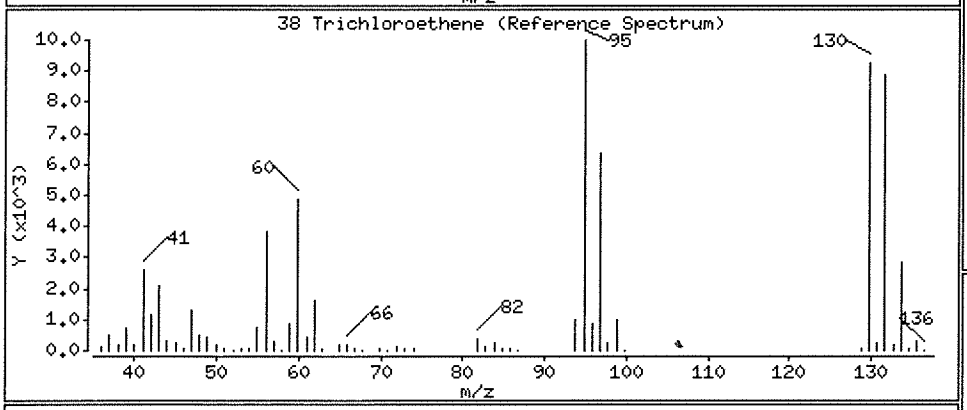
38 Trichloroethene Concentration: 604.91 ug/l

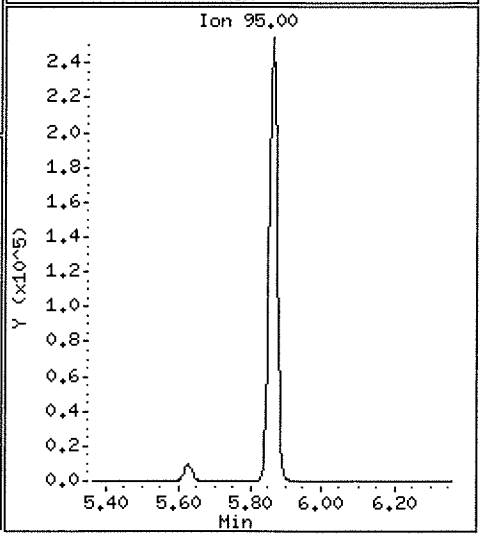


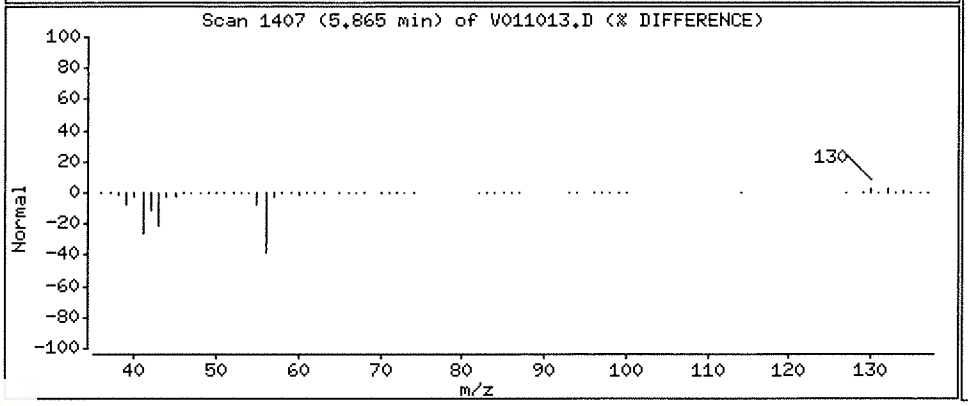












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Date : 10-JAN-2019 15:06

Client ID: HS18121558-03DL

Instrument: VOA9.i

Sample Info: HS18121558-03;HS18121558-03;;;

Purge Volume: 5.0

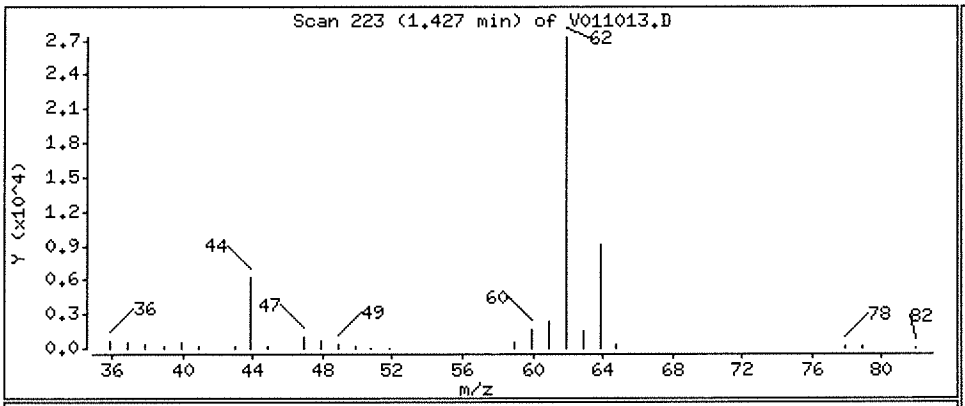
Operator: PC

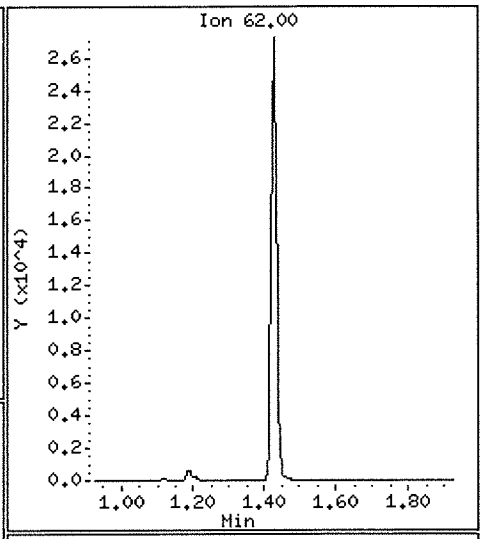
Column phase: DB624

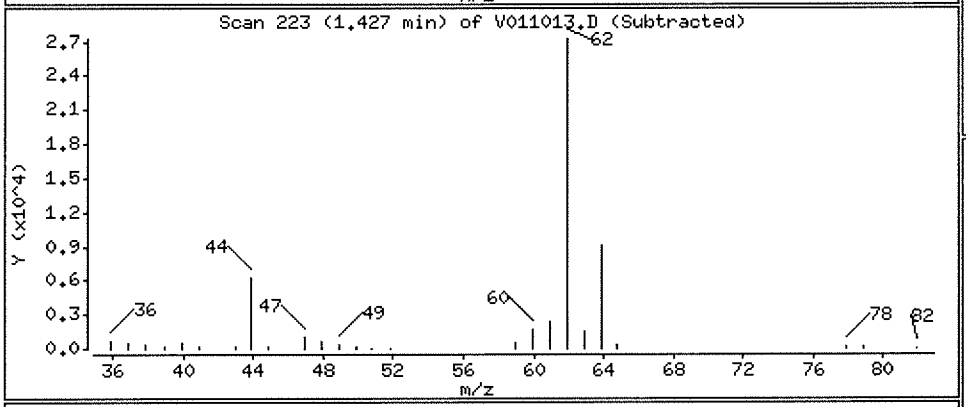
Column diameter: 0.18

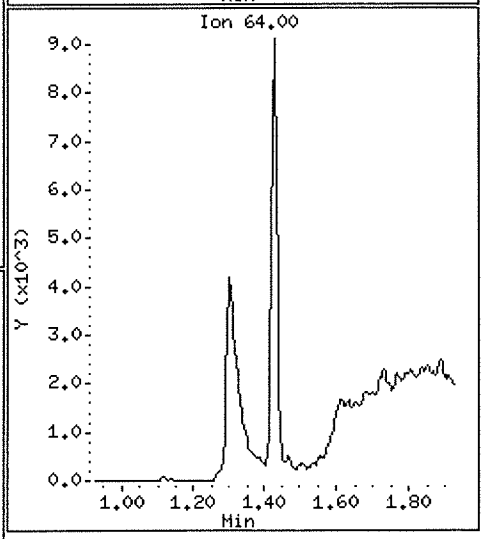
5 Vinyl Chloride

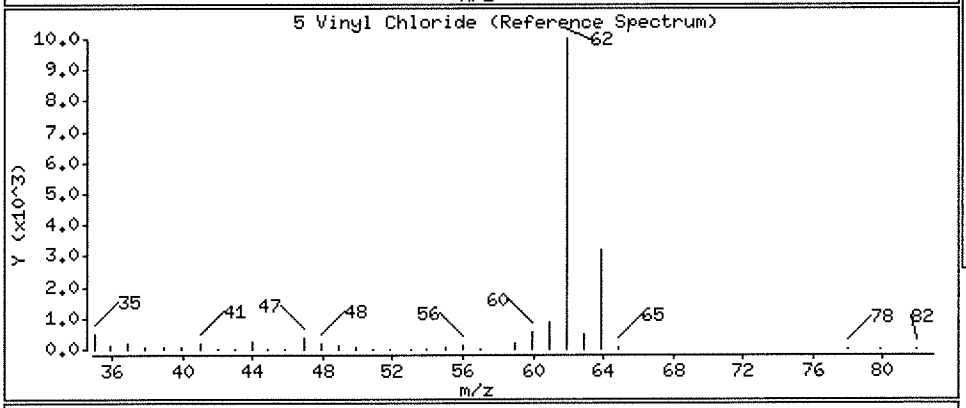
Concentration: 35.50 ug/l

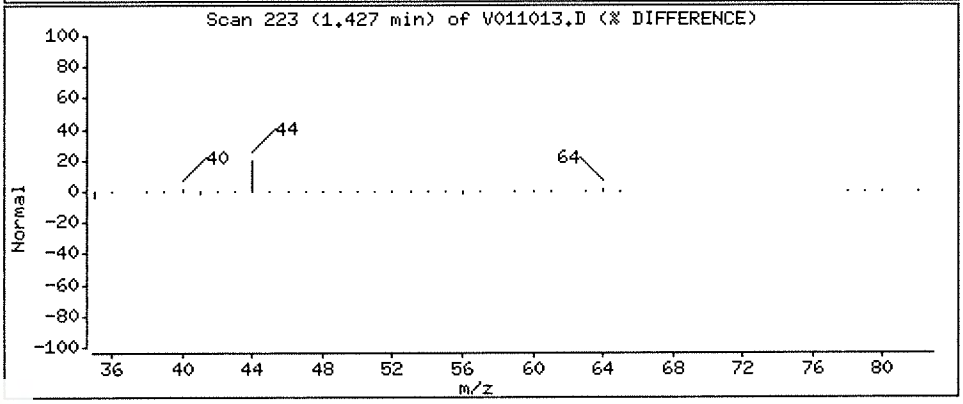












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011014.D
Lab Smp Id: HS18121558-02 Client Smp ID: HS18121558-02
Inj Date : 10-JAN-2019 15:33
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-02;HS18121558-02;;;
Misc Info : 180315V9;WATER;0;10;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 13
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

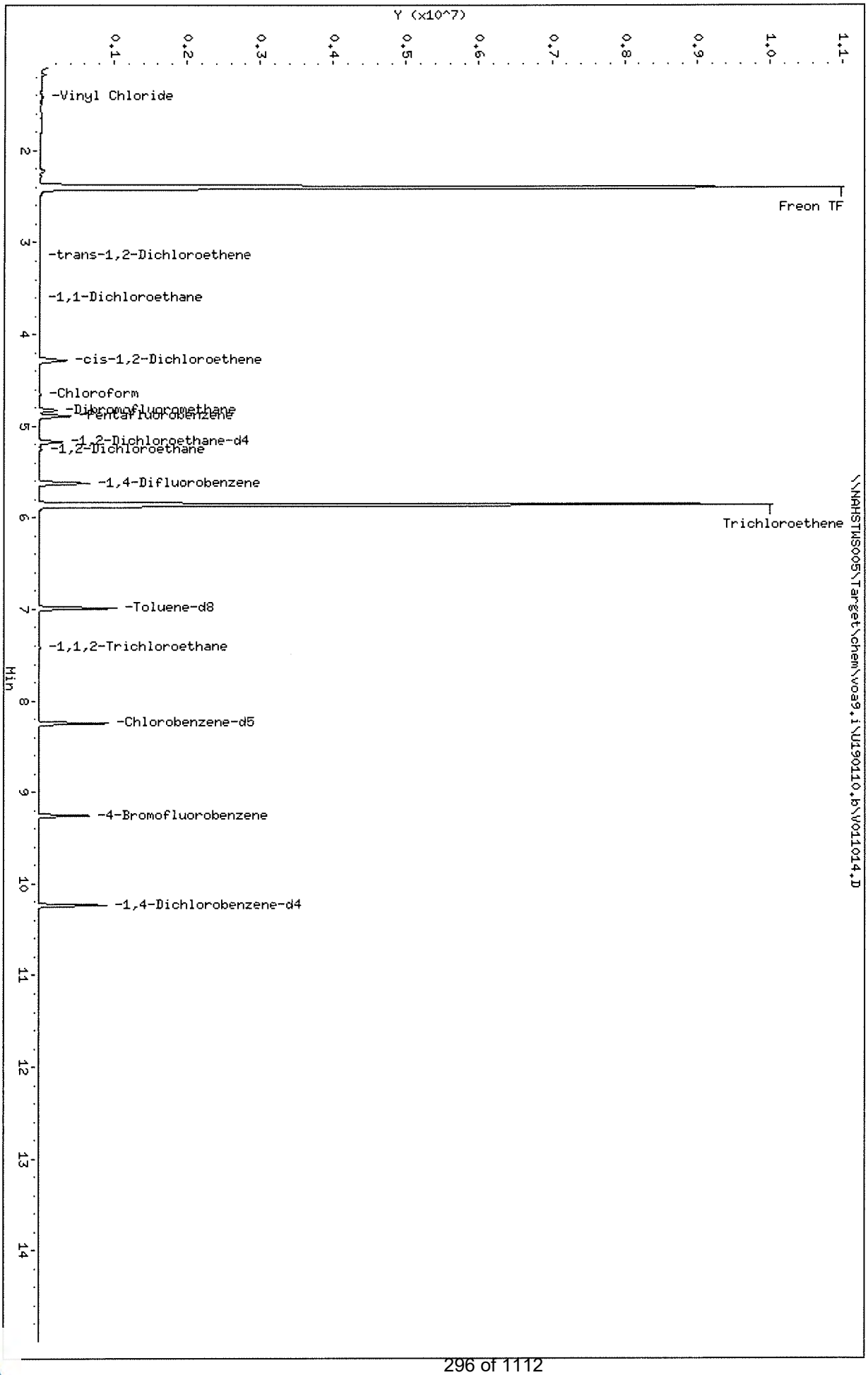
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	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	4.890	4.898	(1.000)	249415	50.0000	
* 36 1,4-Difluorobenzene	114	5.621	5.625	(1.000)	465566	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	428163	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	194133	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.830	(0.987)	134830	47.8239	47.82
$ 35 1,2-Dichloroethane-d4	65	5.171	5.175	(1.057)	198114	54.0463	54.04
$ 48 Toluene-d8	98	6.986	6.990	(0.847)	587172	52.9039	52.90
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	210195	50.0351	50.03
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	3734	1.42500	14.24(a)
22 1,1-Dichloroethane	63	3.597	3.608	(0.736)	2504	0.44167	4.41(a)
33 1,2-Dichloroethane	62	5.250	5.254	(0.934)	21137	4.69198	46.91(a)
28 Chloroform	83	4.654	4.662	(0.952)	9429	1.75074	17.50(a)
27 cis-1,2-Dichloroethene	96	4.283	4.290	(0.876)	167703	49.1596	491.59
20 trans-1,2-Dichloroethene	96	3.136	3.147	(0.641)	2875	0.94490	9.44(a)
38 Trichloroethene	130	5.861	5.861	(1.043)	2818082	950.731	9507.31(A)
5 Vinyl Chloride	62	1.415	1.426	(0.289)	15706	4.24331	42.43(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 : 10-JAN-2019 15:33
Client ID: HS18121558-02
Sample Info: HS18121558-02;HS18121558-02;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011014.D

Date : 10-JAN-2019 15:33

Client ID: HS18121558-02

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

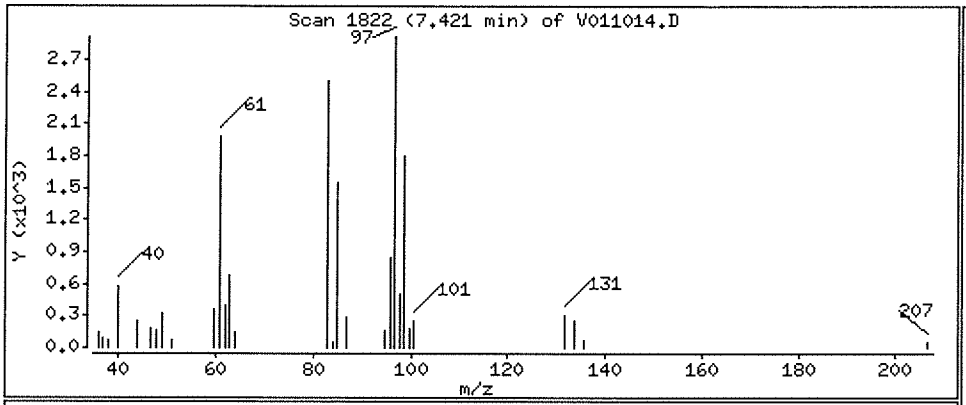
Operator: PC

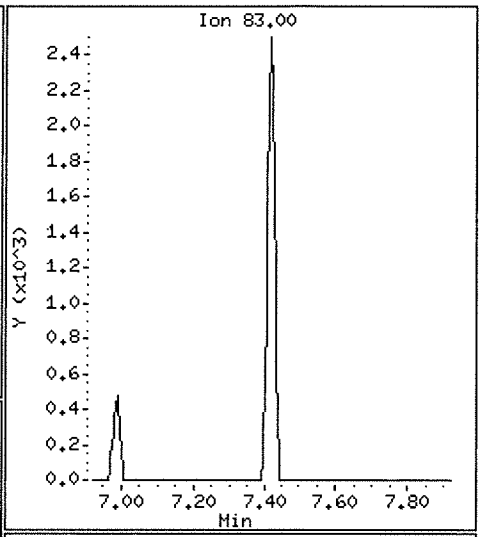
Column phase: DB624

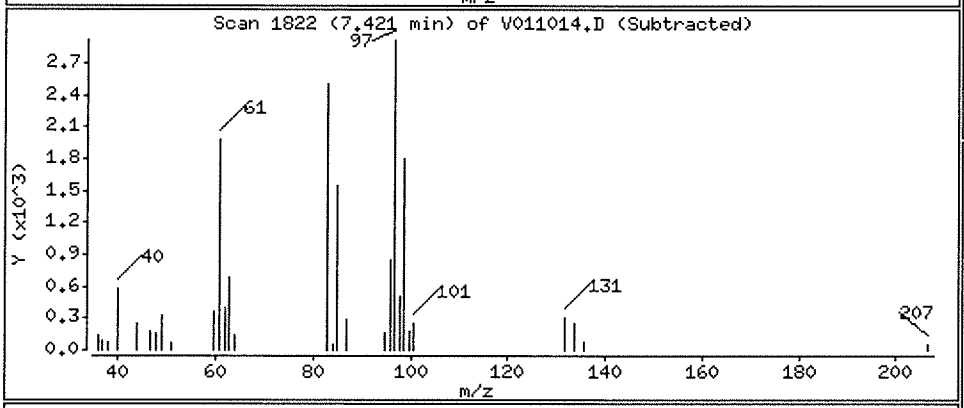
Column diameter: 0.18

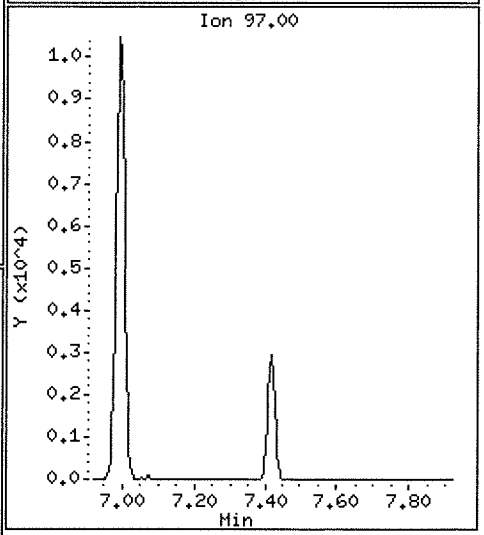
53 1,1,2-Trichloroethane

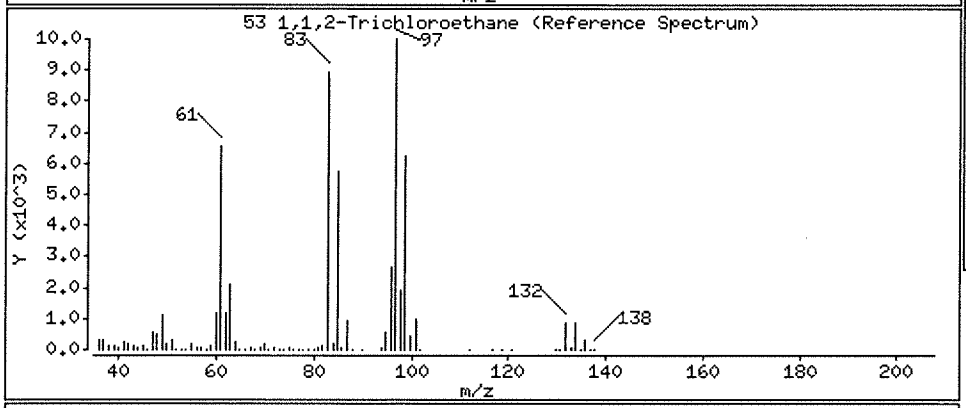
Concentration: 14.24 ug/l

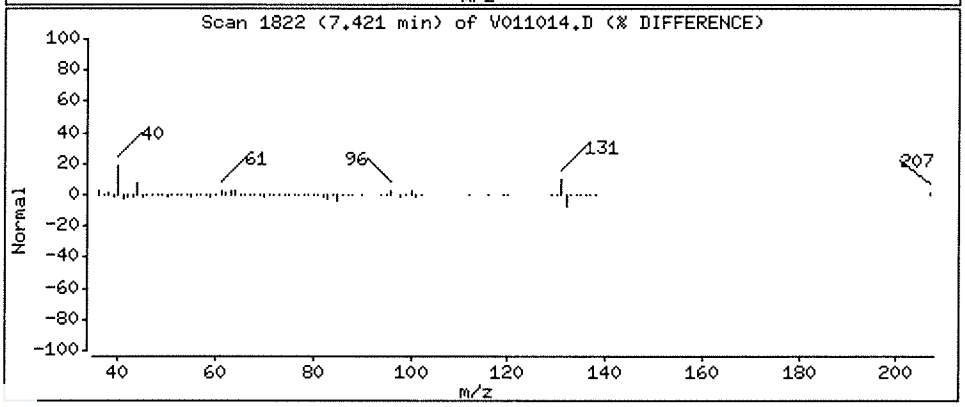












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Date : 10-JAN-2019 15:33

Client ID: HS18121558-02

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

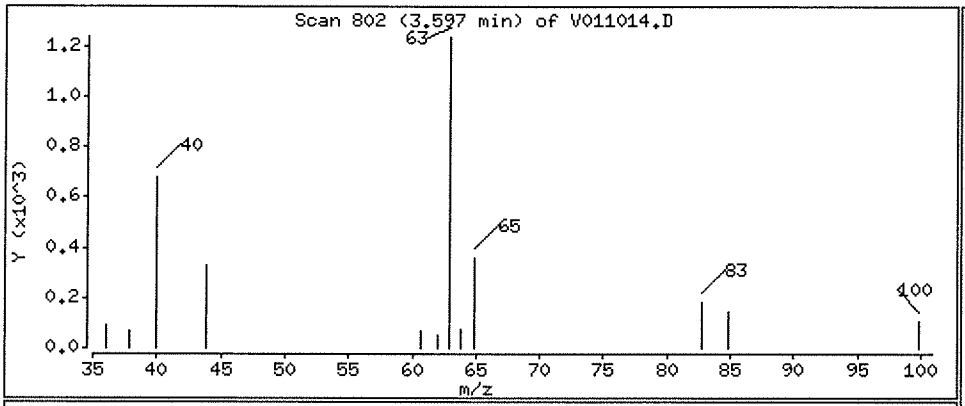
Operator: PC

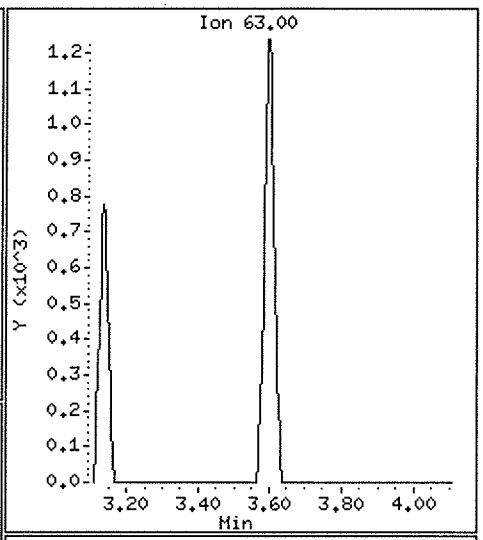
Column phase: DB624

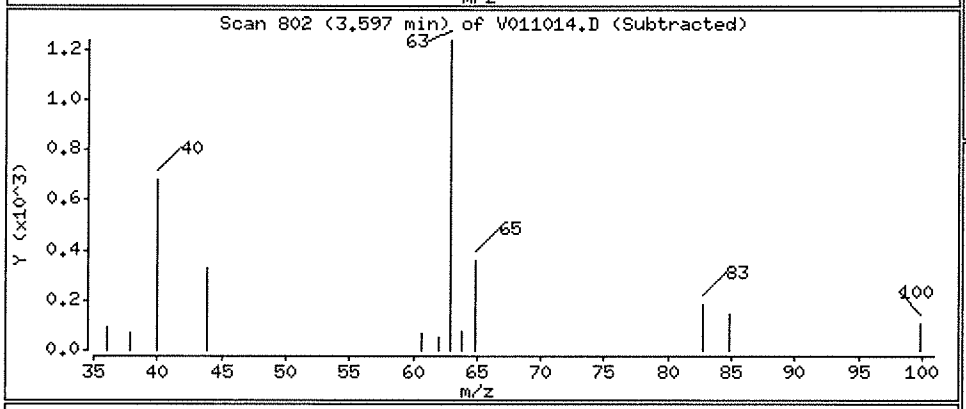
Column diameter: 0.18

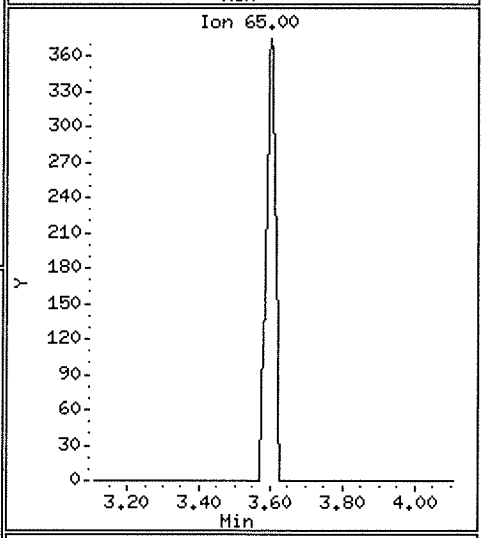
22 1,1-Dichloroethane

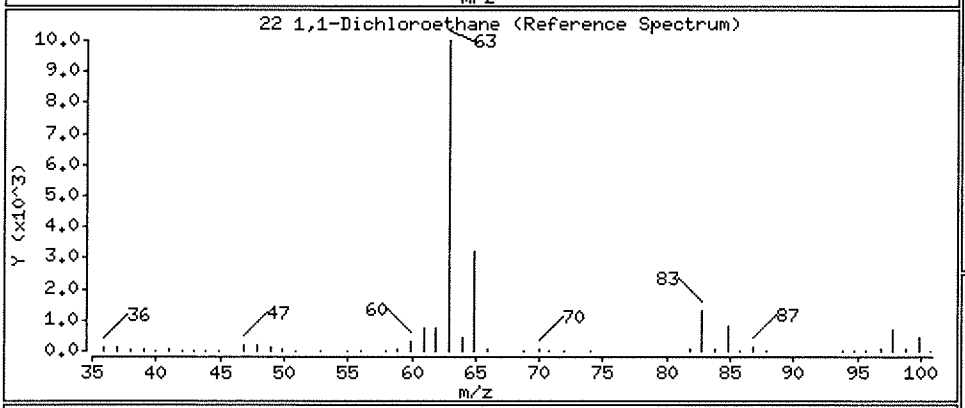
Concentration: 4.41 ug/l

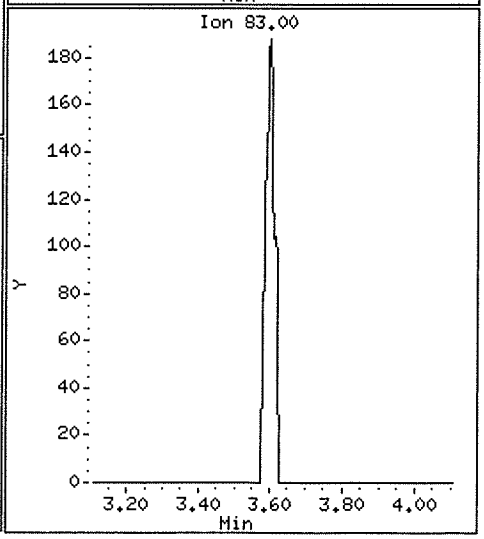


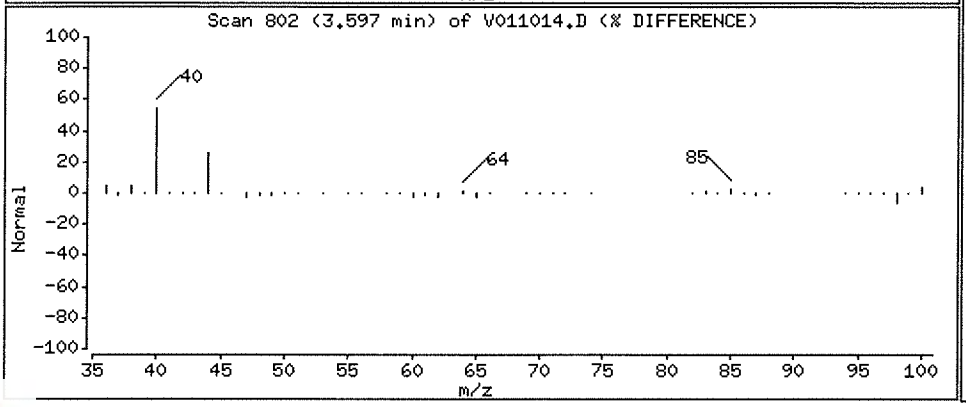












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Date : 10-JAN-2019 15:33

Client ID: HS18121558-02

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

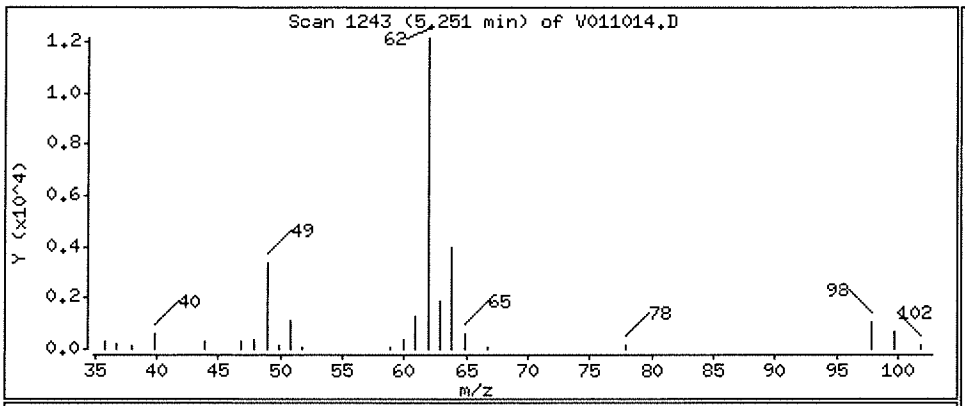
Operator: PC

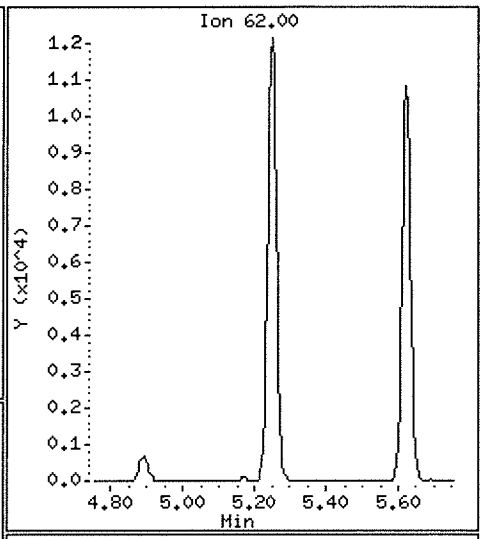
Column phase: DB624

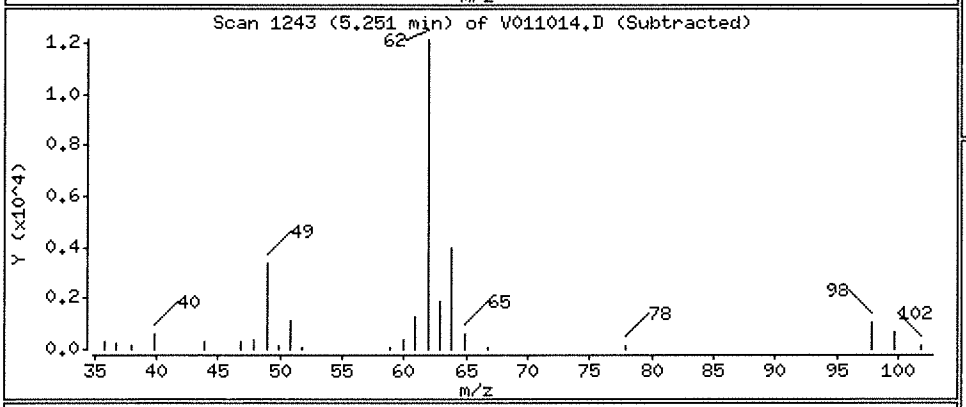
Column diameter: 0.18

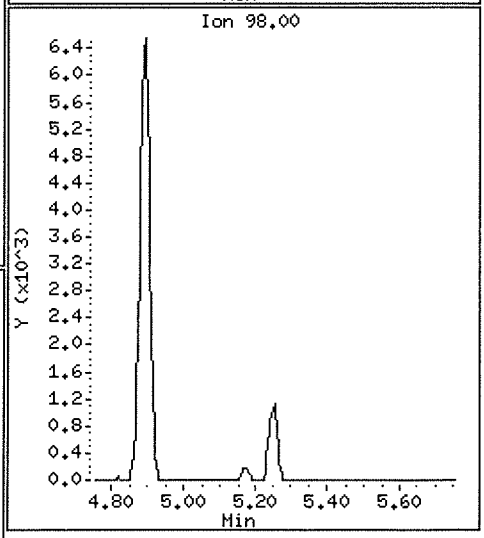
33 1,2-Dichloroethane

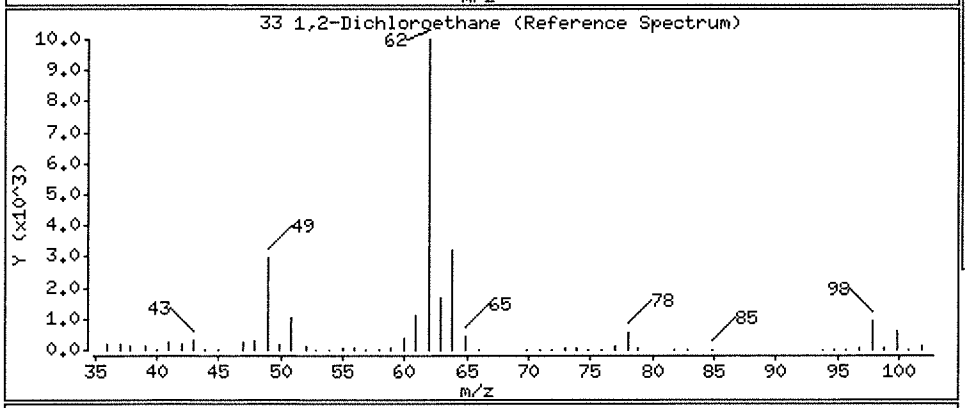
Concentration: 46.91 ug/l

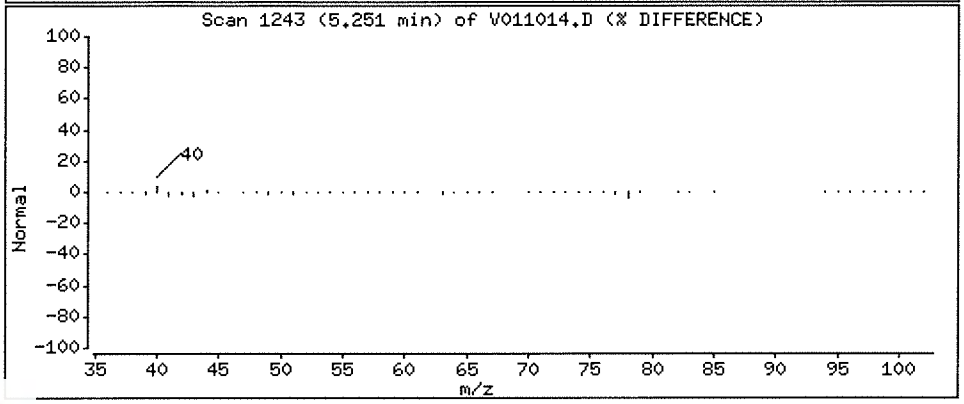












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011014.D

Date : 10-JAN-2019 15:33

Client ID: HS18121558-02

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

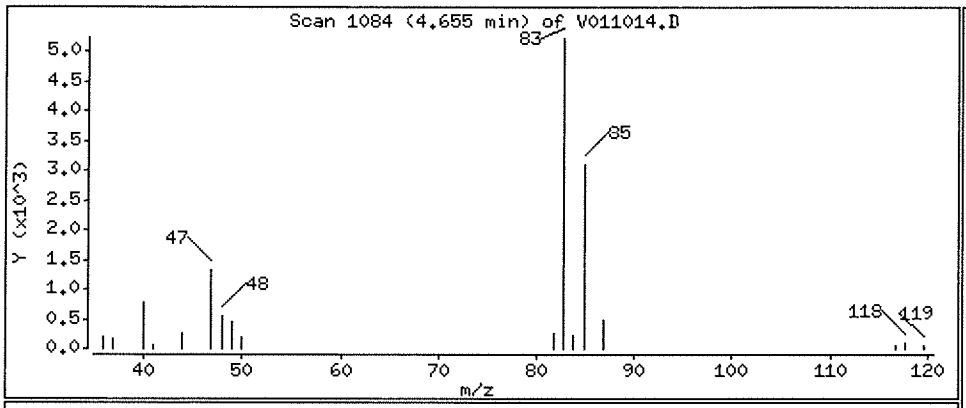
Operator: PC

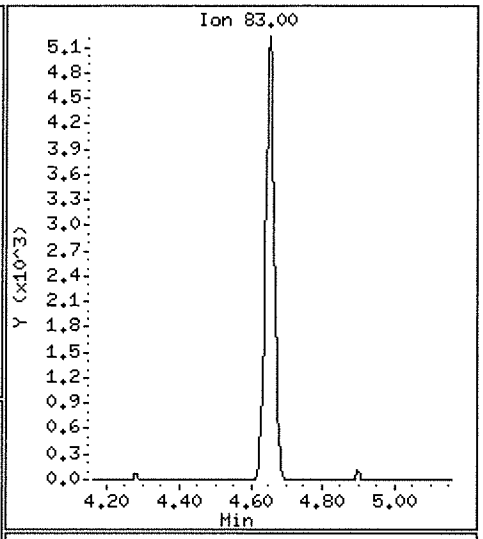
Column phase: DB624

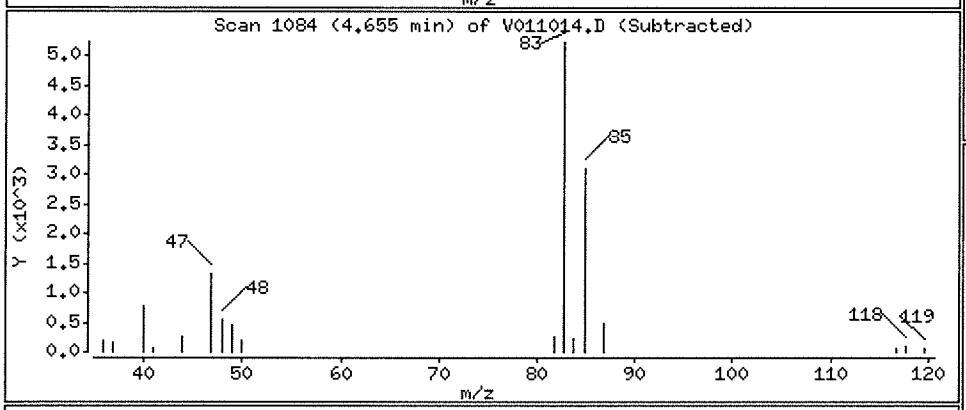
Column diameter: 0.18

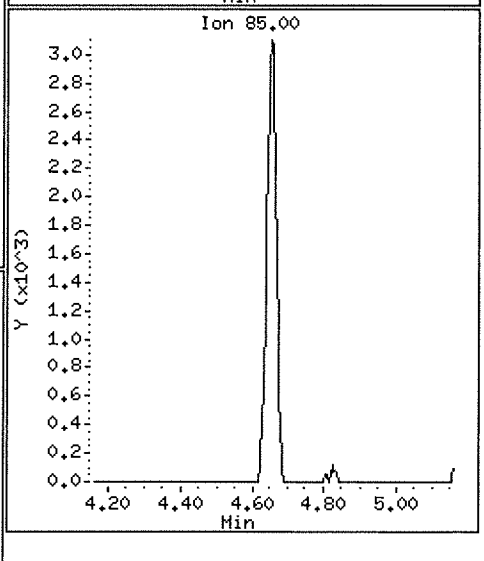
28 Chloroform

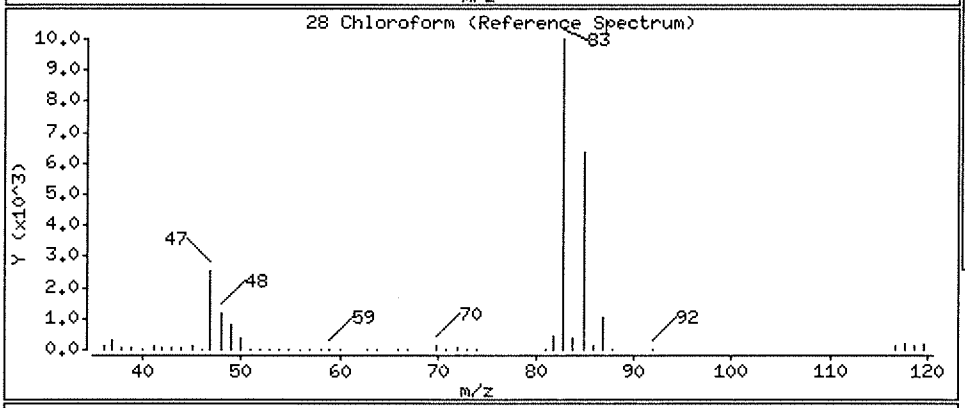
Concentration: 17.50 ug/l

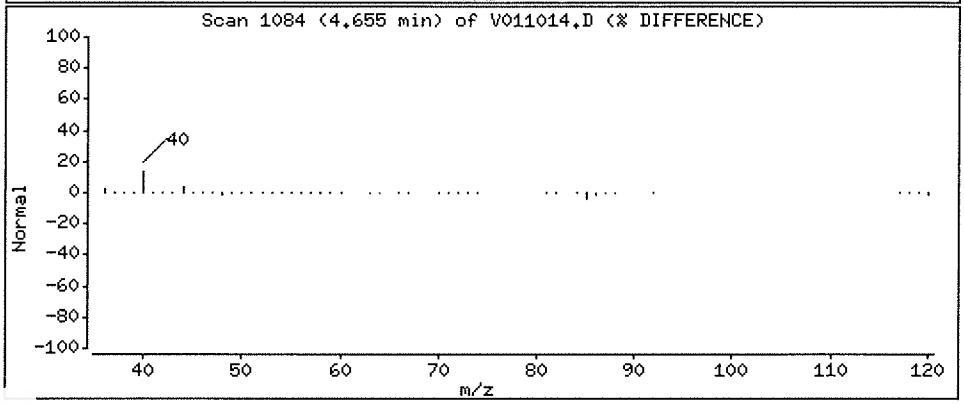












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011014.D Page 7

Date : 10-JAN-2019 15:33

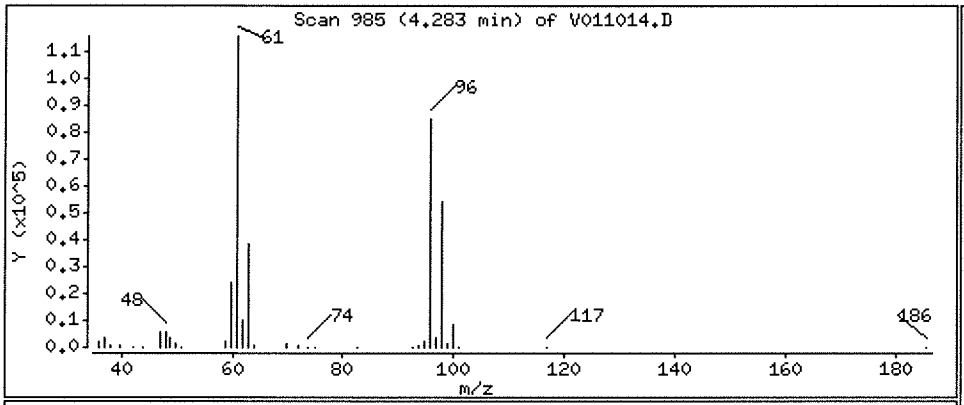
Client ID: HS18121558-02 Instrument: VOA9.i

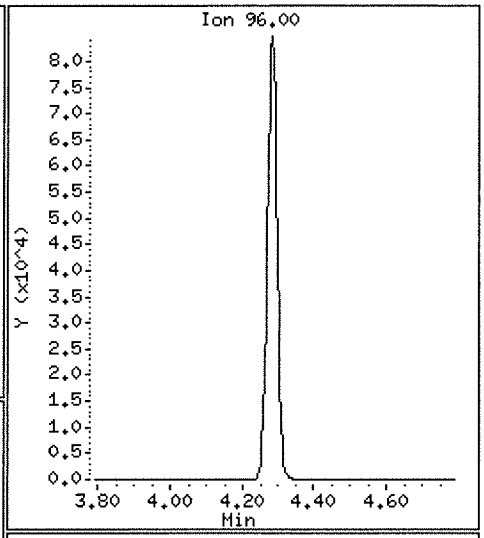
Sample Info: HS18121558-02;HS18121558-02;;;

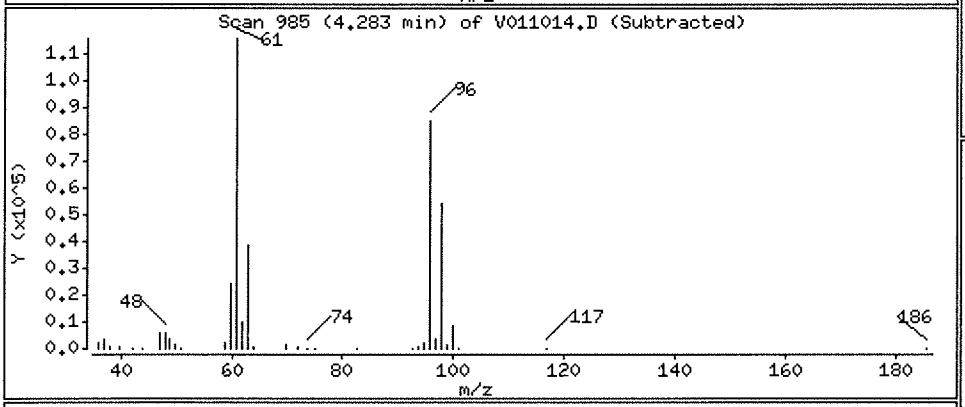
Purge Volume: 5.0 Operator: PC

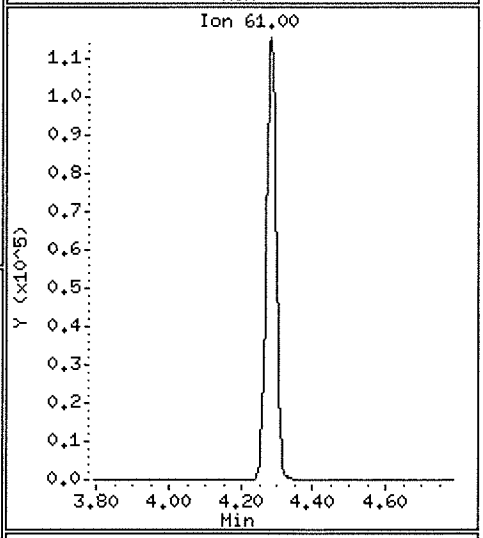
Column phase: DB624 Column diameter: 0.18

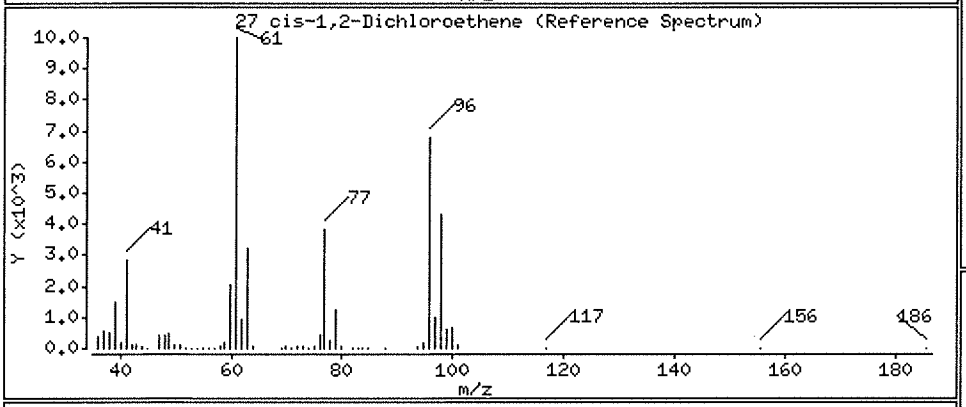
27 cis-1,2-Dichloroethene Concentration: 491.59 ug/l

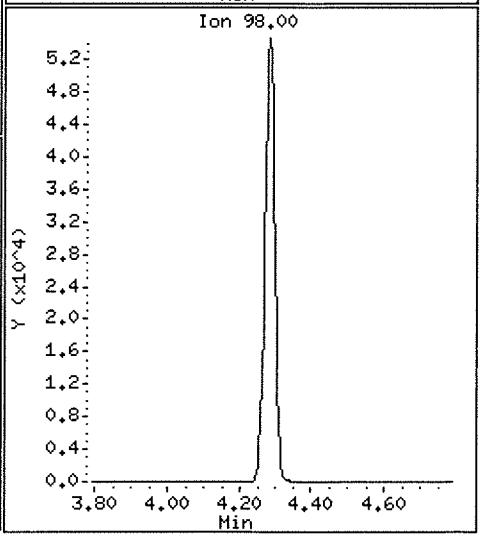


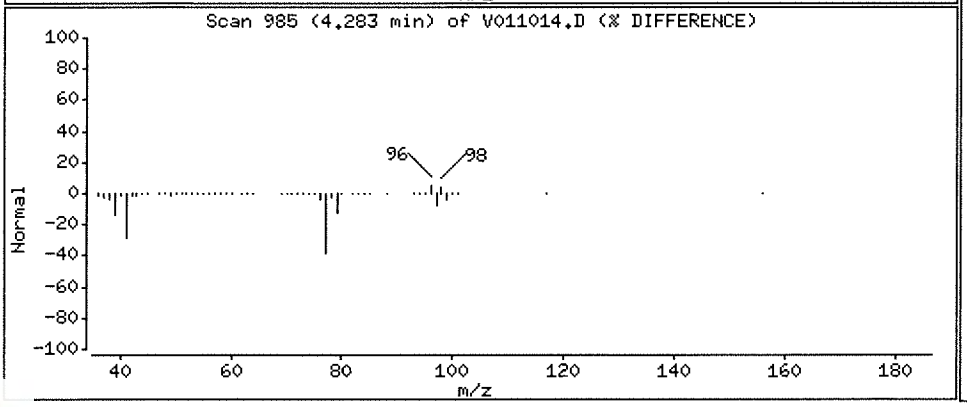












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Date : 10-JAN-2019 15:33

Client ID: HS18121558-02

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

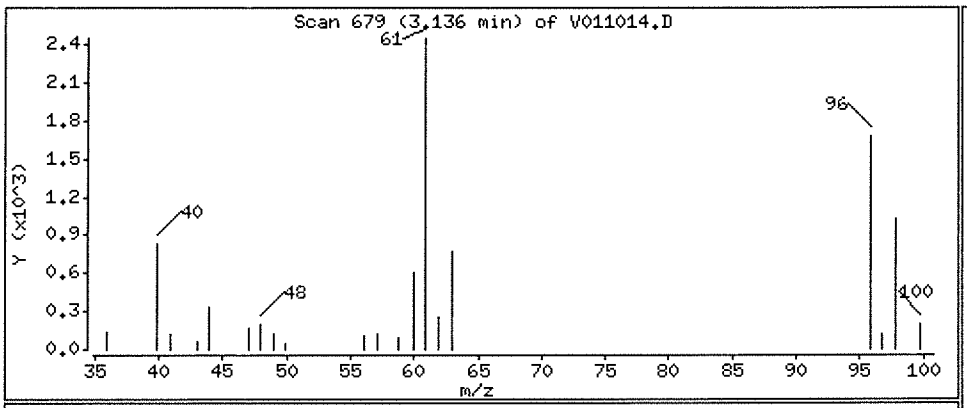
Operator: PC

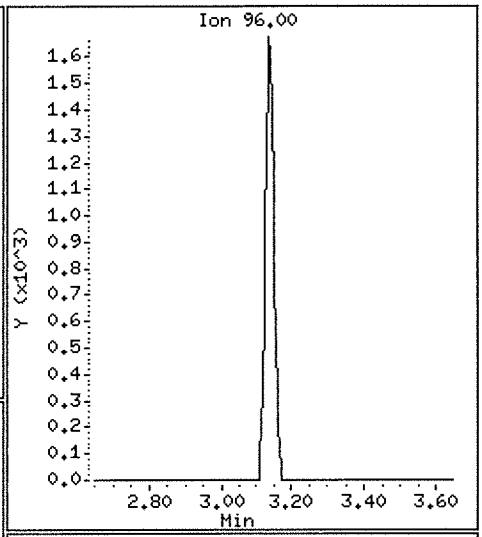
Column phase: DB624

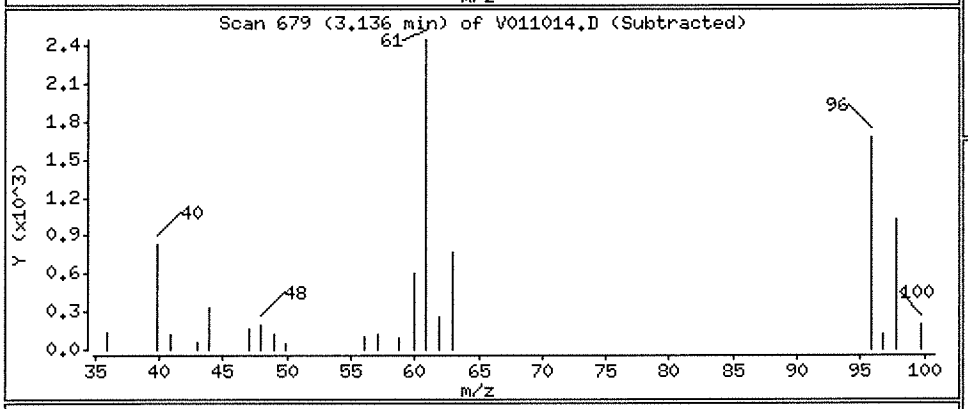
Column diameter: 0.18

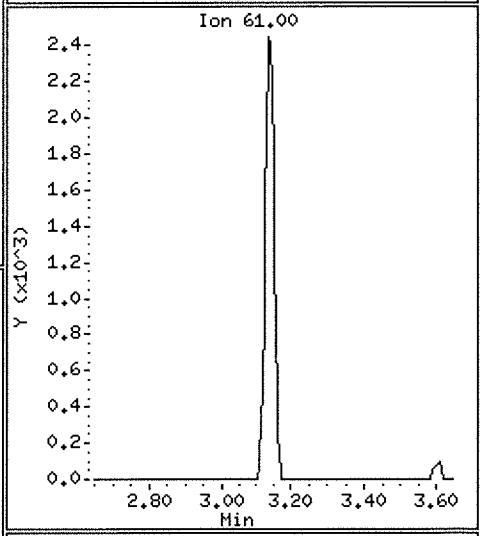
20 trans-1,2-Dichloroethene

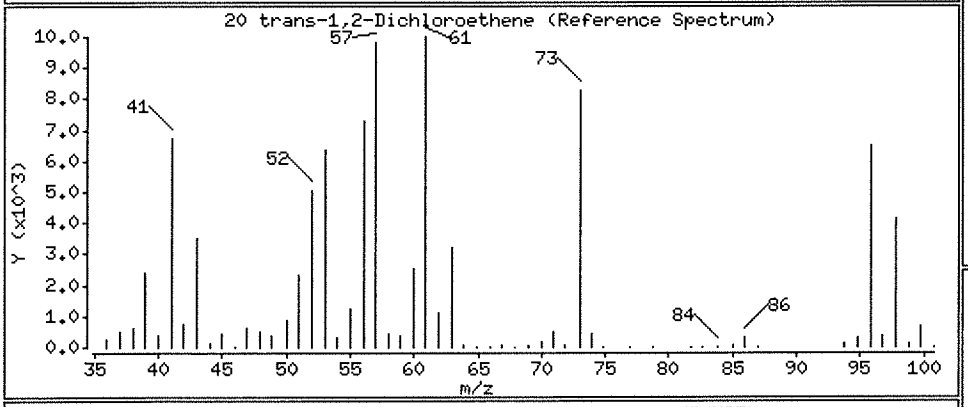
Concentration: 9.44 ug/l

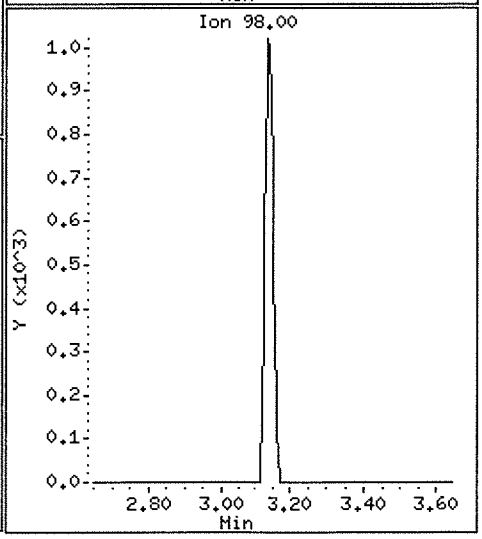


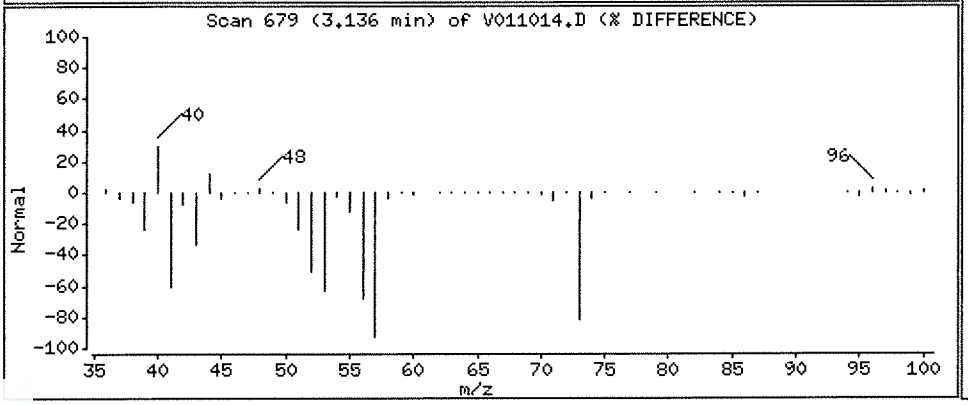












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Date : 10-JAN-2019 15:33

Client ID: HS18121558-02

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

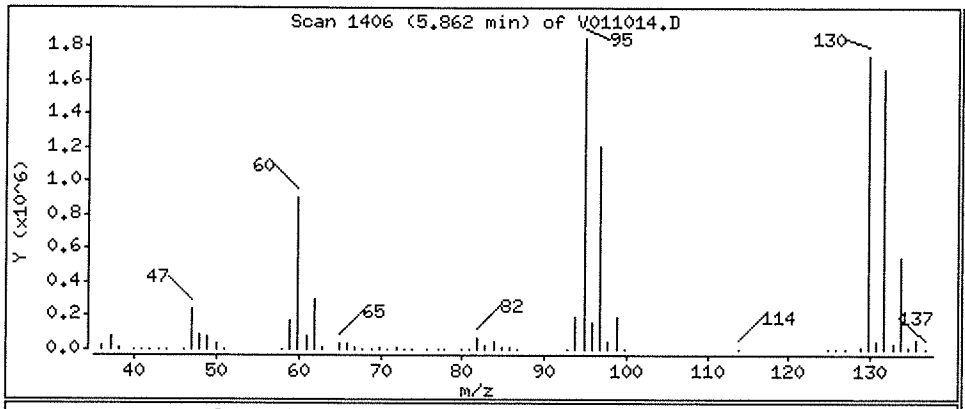
Operator: PC

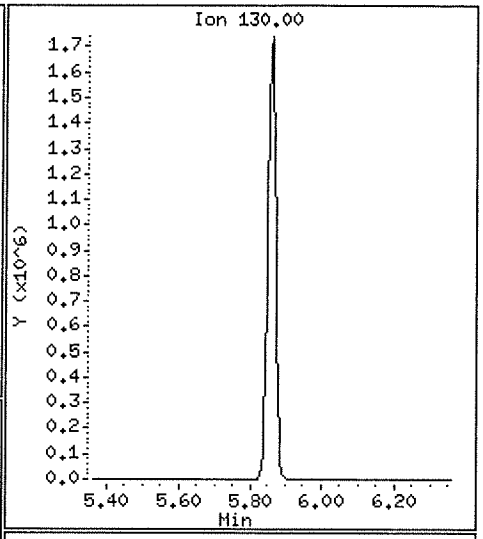
Column phase: DB624

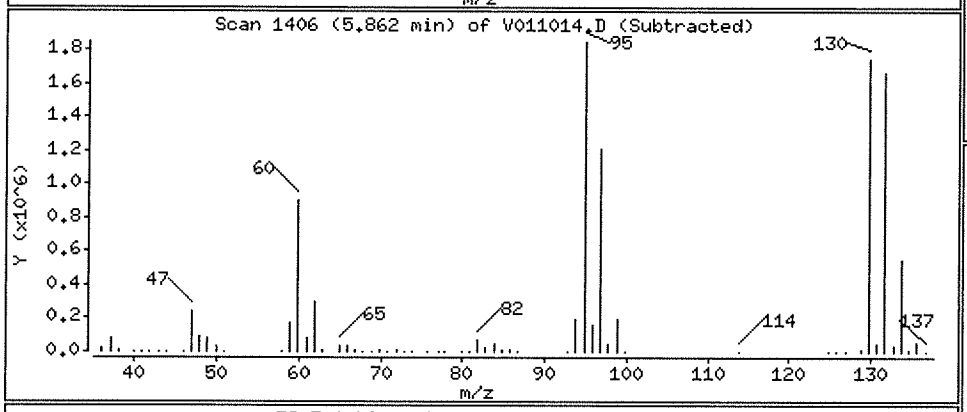
Column diameter: 0.18

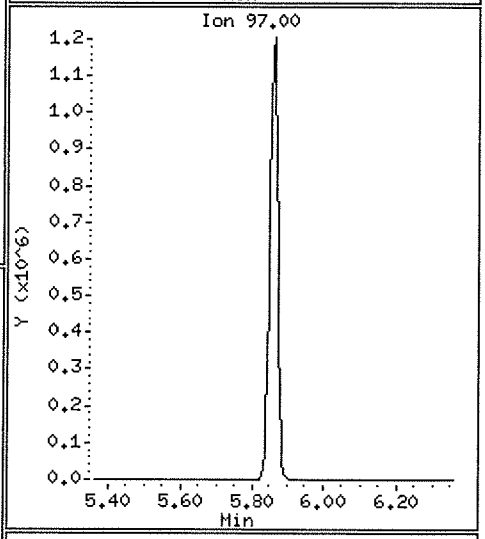
38 Trichloroethene

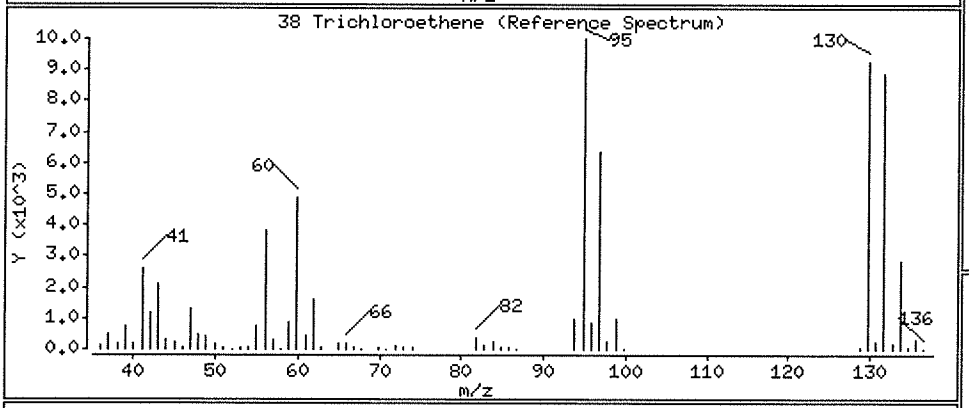
Concentration: 9507.31 ug/l

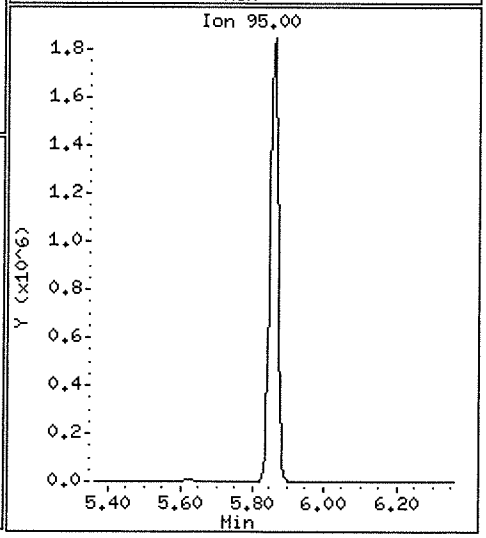


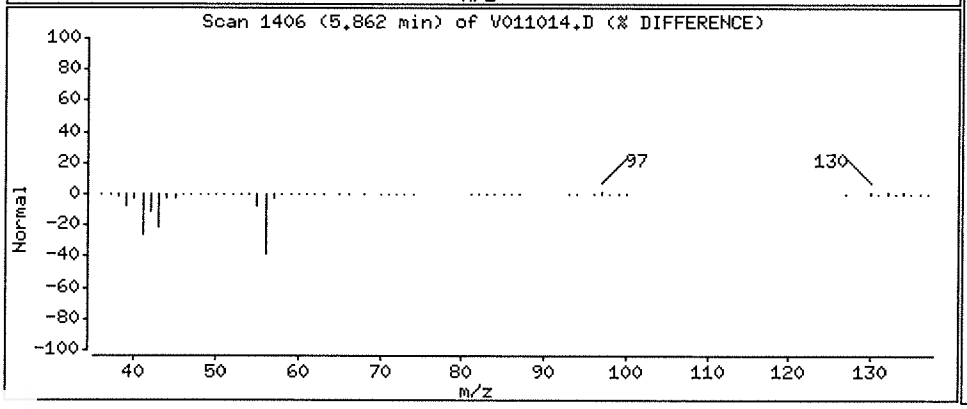












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Date : 10-JAN-2019 15:33

Client ID: HS18121558-02

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

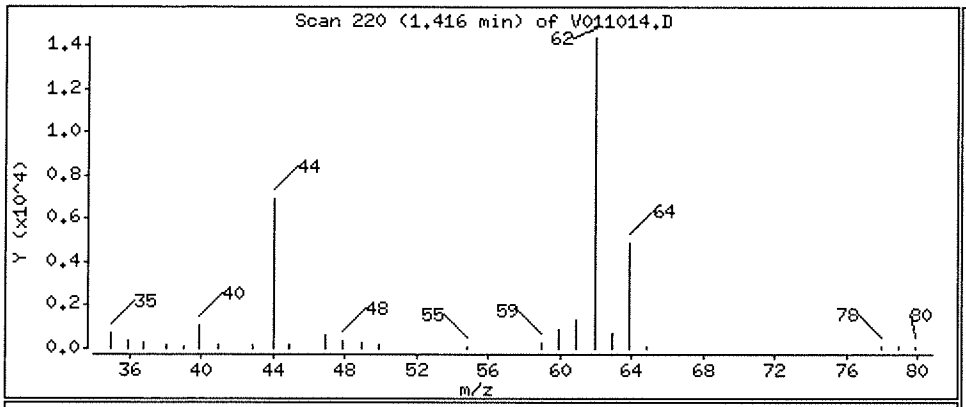
Operator: PC

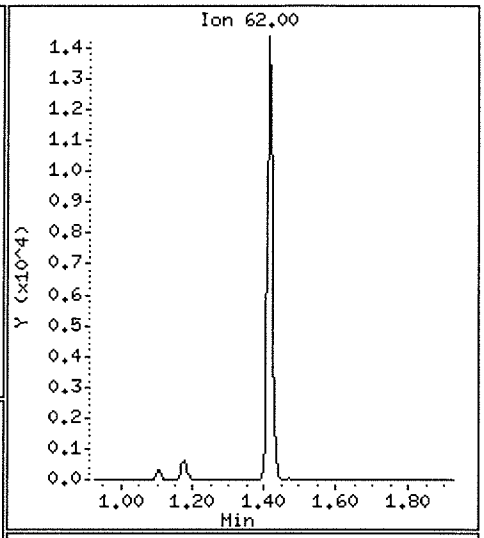
Column phase: DB624

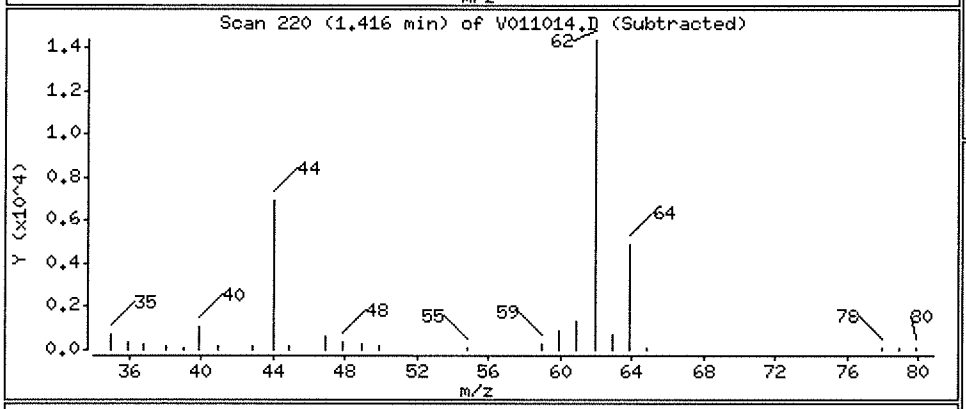
Column diameter: 0.18

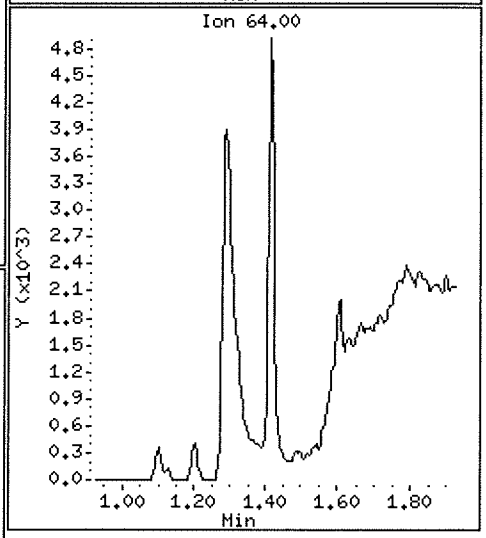
5 Vinyl Chloride

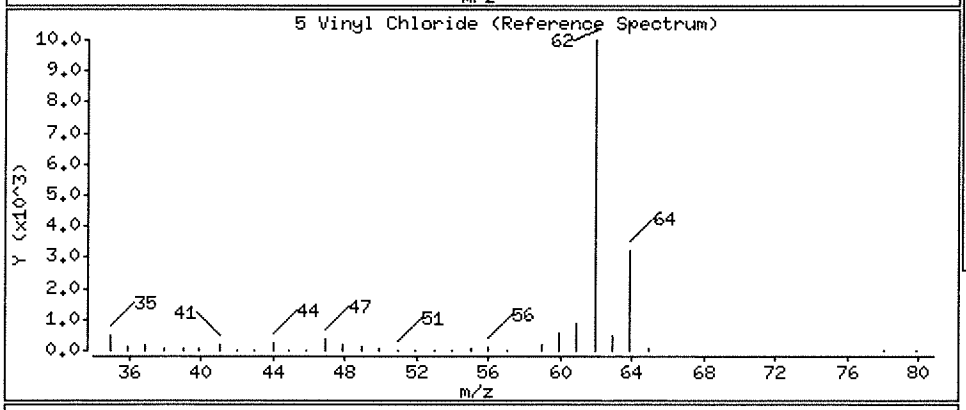
Concentration: 42.43 ug/l

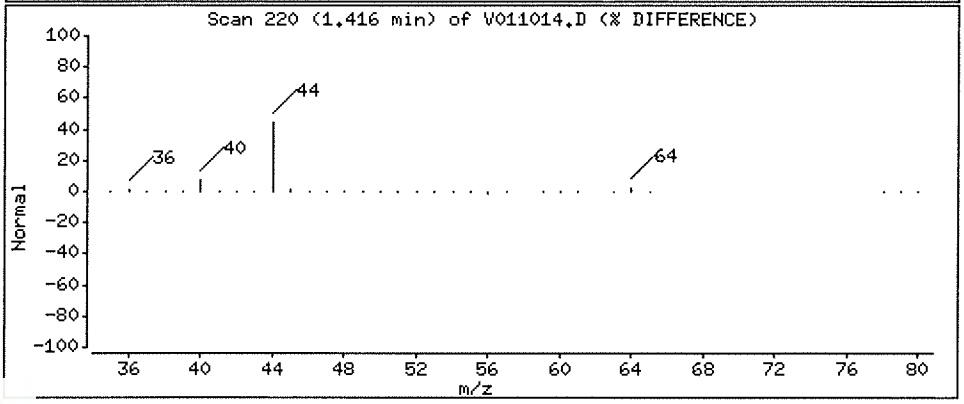












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Report Date: 01-Feb-2019 18:18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011015.D
Lab Smp Id: HS18121558-02DL Client Smp ID: HS18121558-02DL
Inj Date : 10-JAN-2019 16:01
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-02;HS18121558-02;;;
Misc Info : 180315V9;WATER;0;100;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 13
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

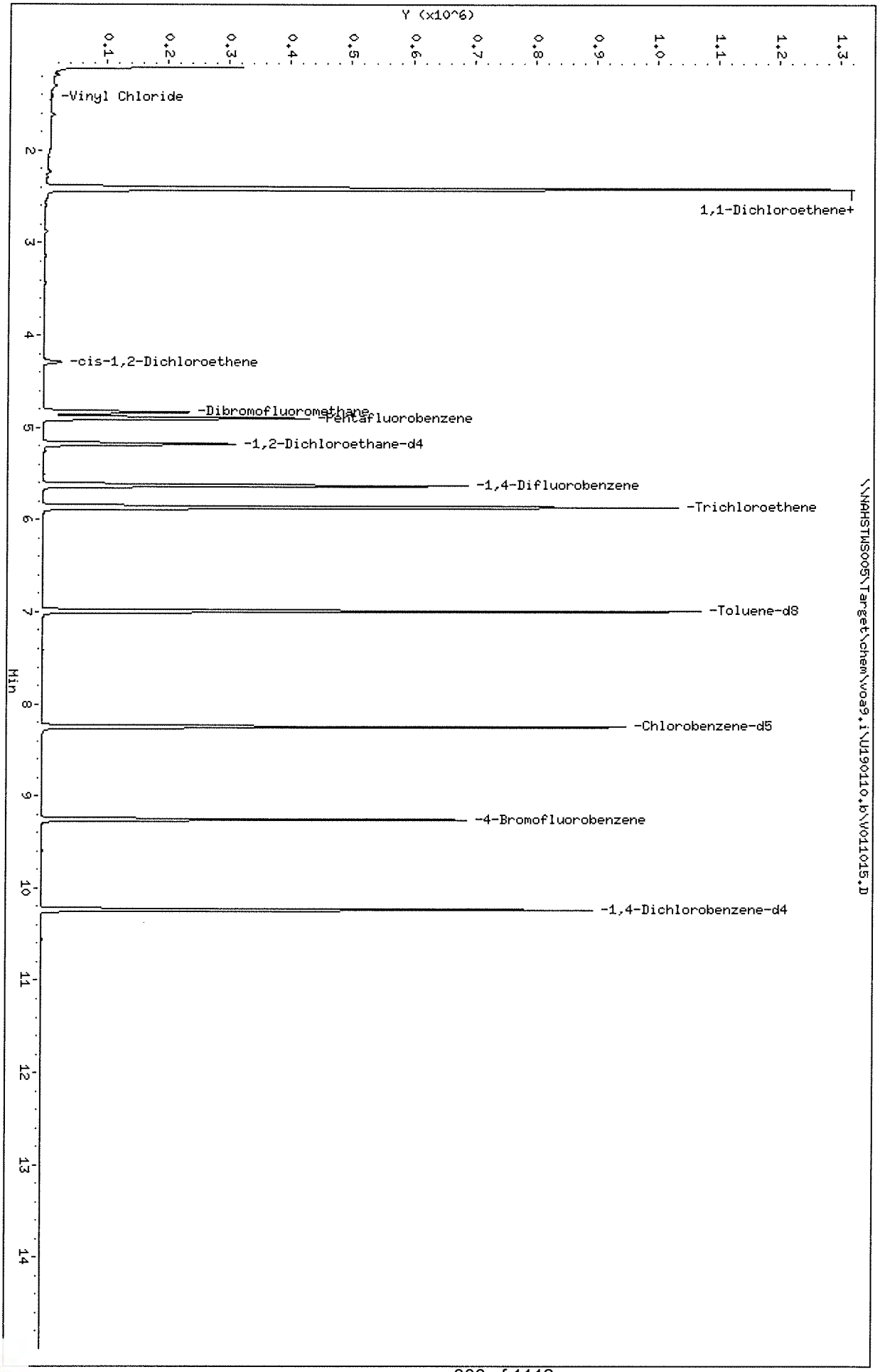
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	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)	253925	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	476263	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	436873	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	191351	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	138685	48.3358	48.33
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	201471	53.9834	53.98
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	596564	52.6680	52.66
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	210729	49.1296	49.12
11 1,1-Dichloroethene	96	2.412	2.405	(0.493)	2212	0.90307	90.30(a)
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	12449	3.58442	358.44(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	295823	97.5597	9755.96
5 Vinyl Chloride	62	1.426	1.426	(0.291)	1529	0.40575	40.57(a)

QC Flag Legend

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



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Date : 10-JAN-2019 16:01
Client ID: HS18121558-02DL
Sample Info: HS18121558-02;HS18121558-02;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011015.D

Date : 10-JAN-2019 16:01

Client ID: HS18121558-02DL

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

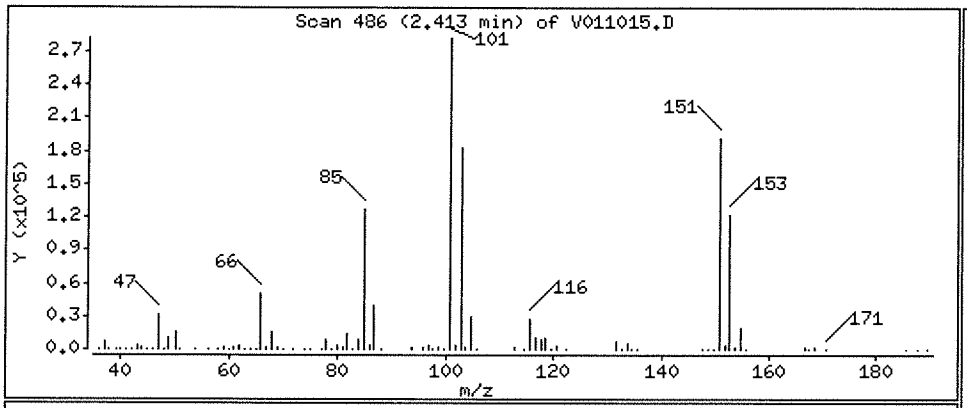
Operator: PC

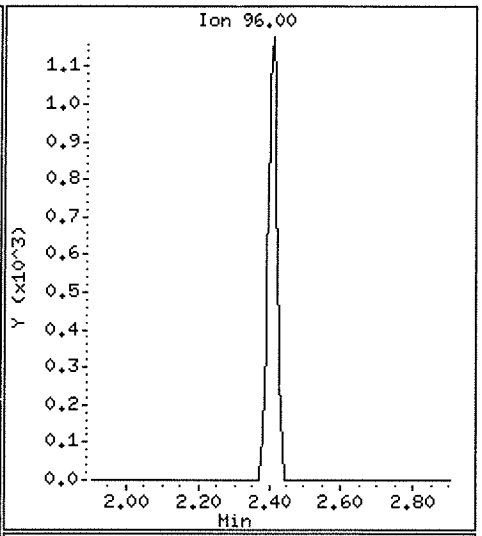
Column phase: DB624

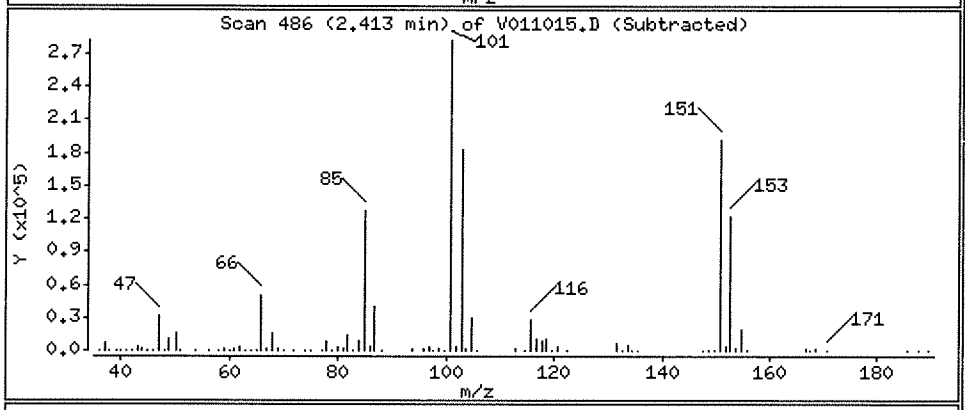
Column diameter: 0.18

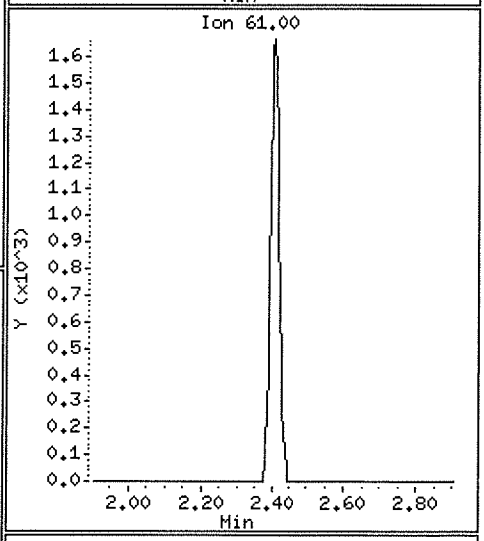
11 1,1-Dichloroethene

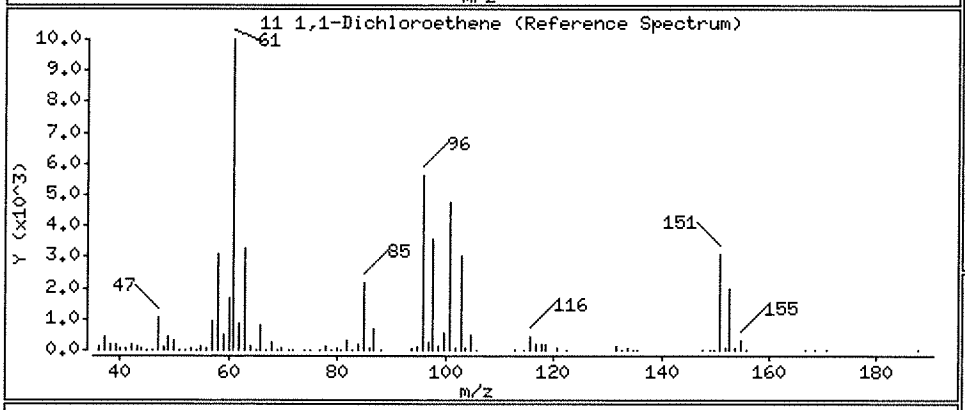
Concentration: 90.30 ug/l

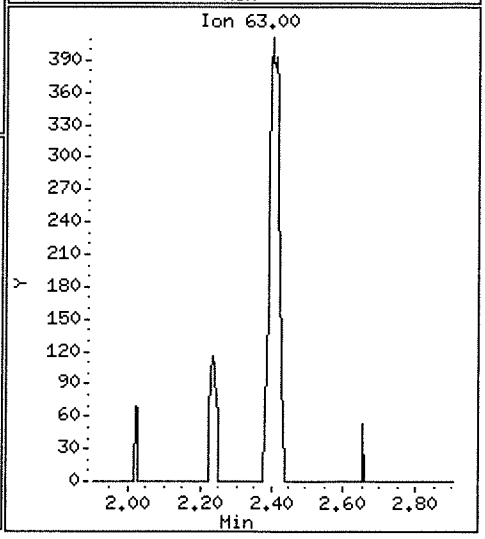


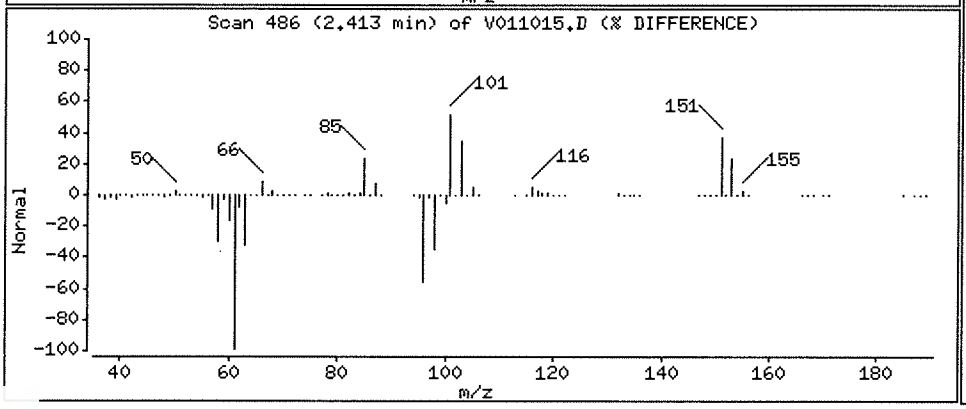












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011015.D

Date : 10-JAN-2019 16:01

Client ID: HS18121558-02DL

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

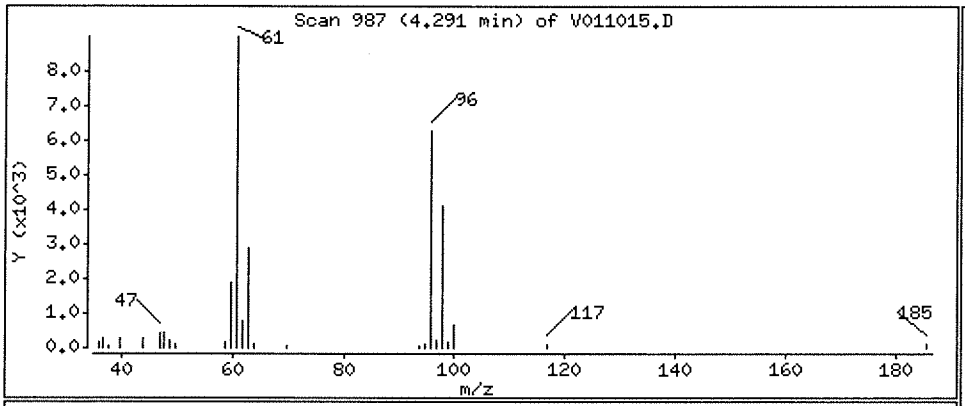
Operator: PC

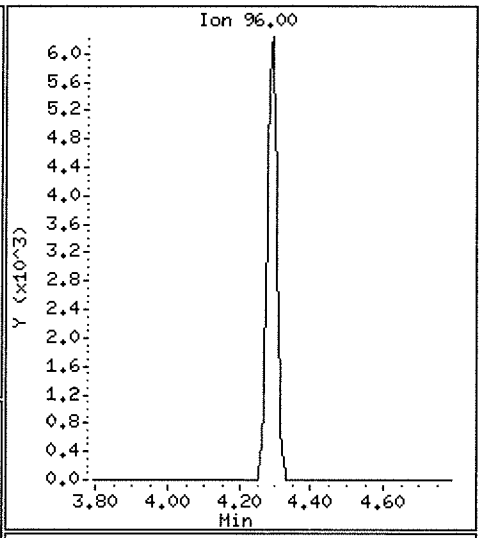
Column phase: DB624

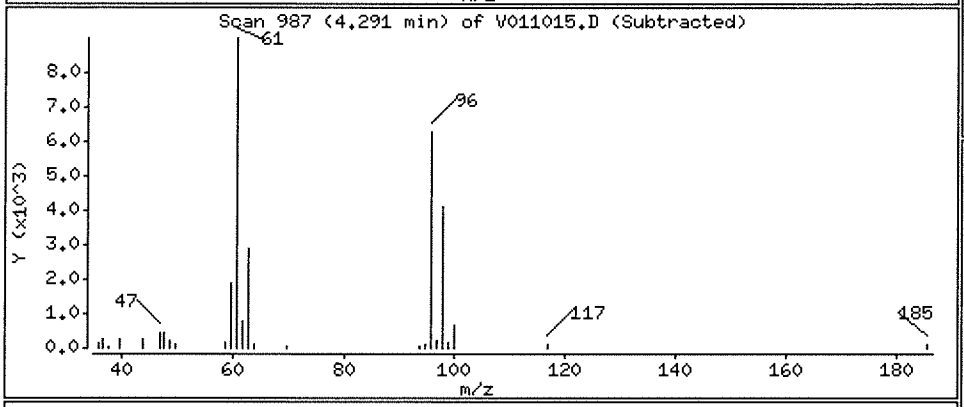
Column diameter: 0.18

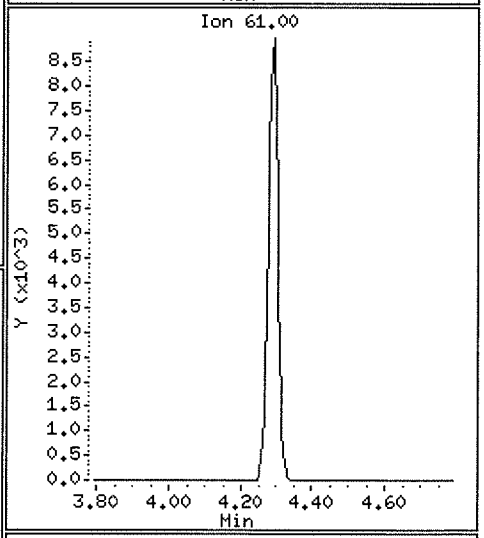
27 cis-1,2-Dichloroethene

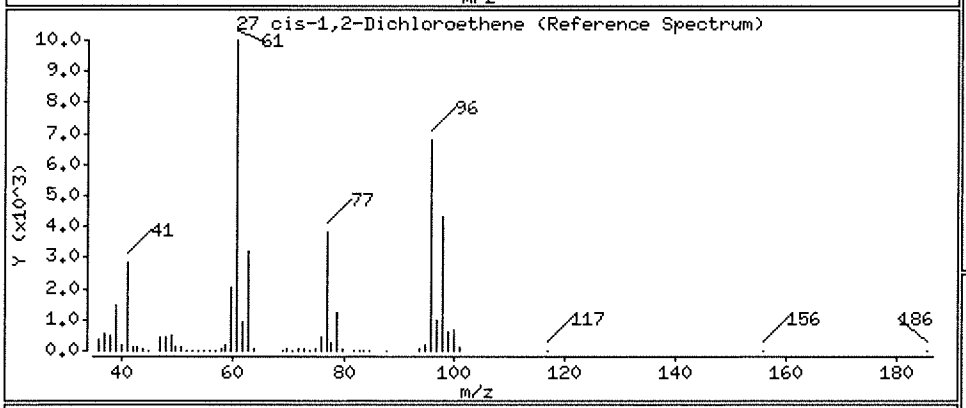
Concentration: 358.44 ug/l

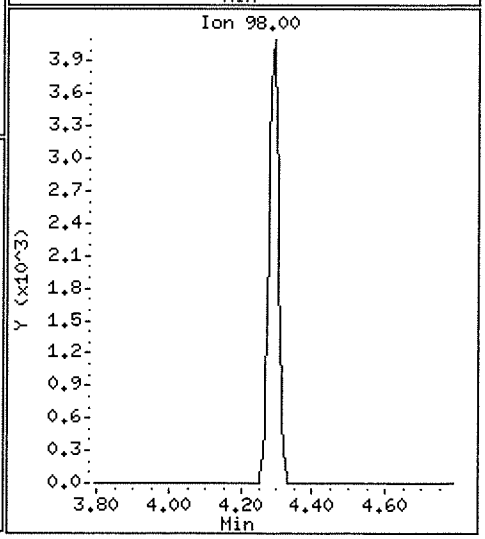


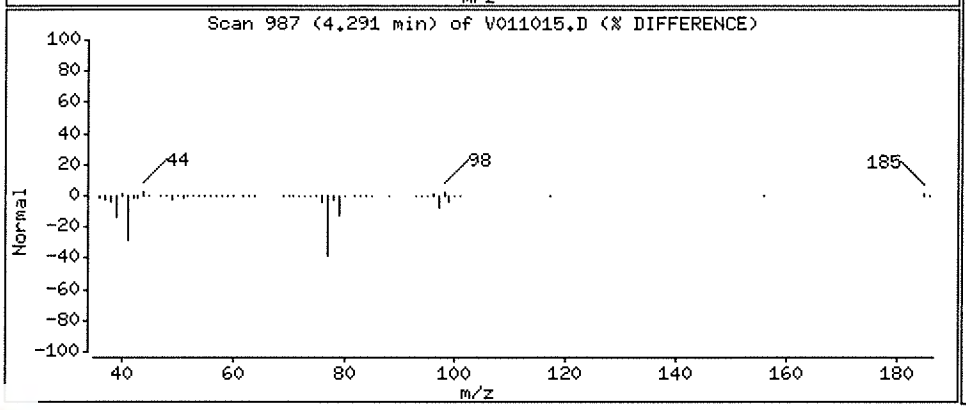












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011015.D

Date : 10-JAN-2019 16:01

Client ID: HS18121558-02DL

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

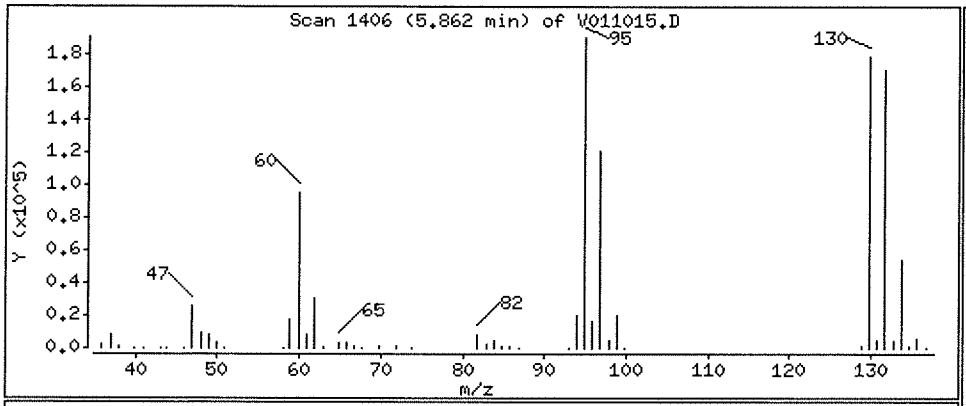
Operator: PC

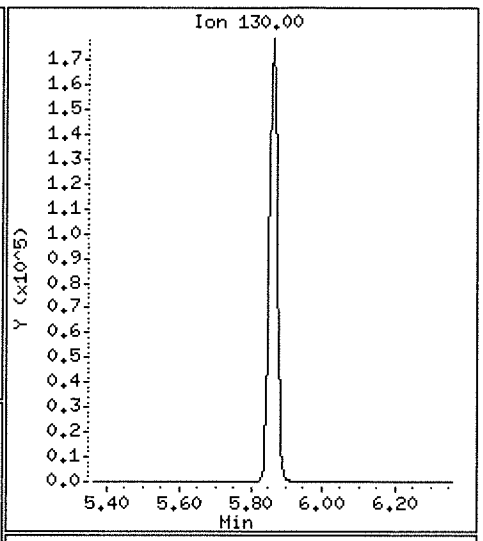
Column phase: DB624

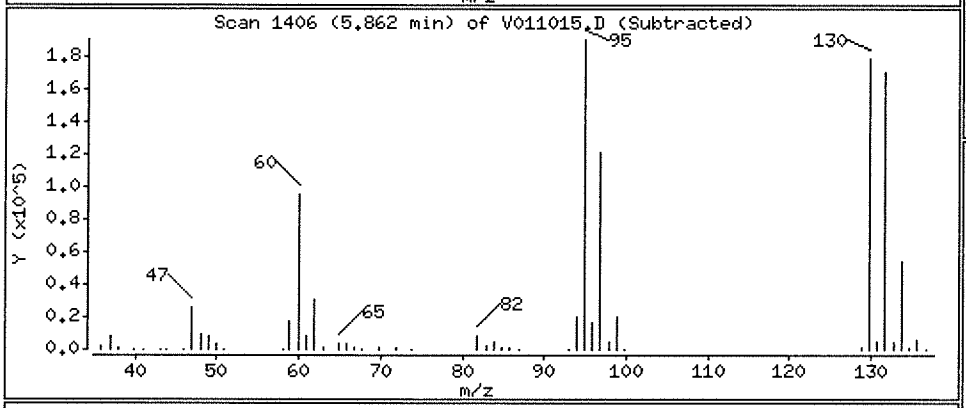
Column diameter: 0.18

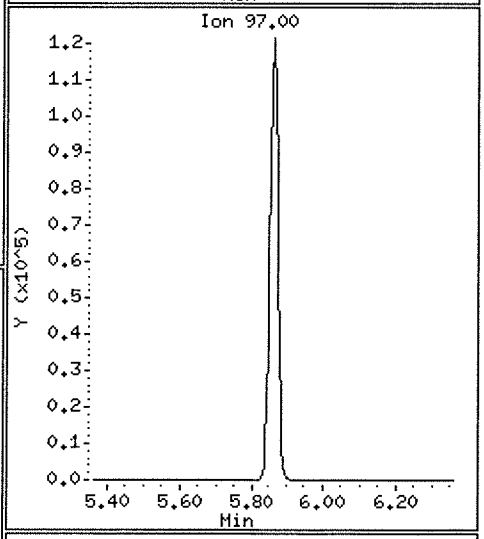
38 Trichloroethene

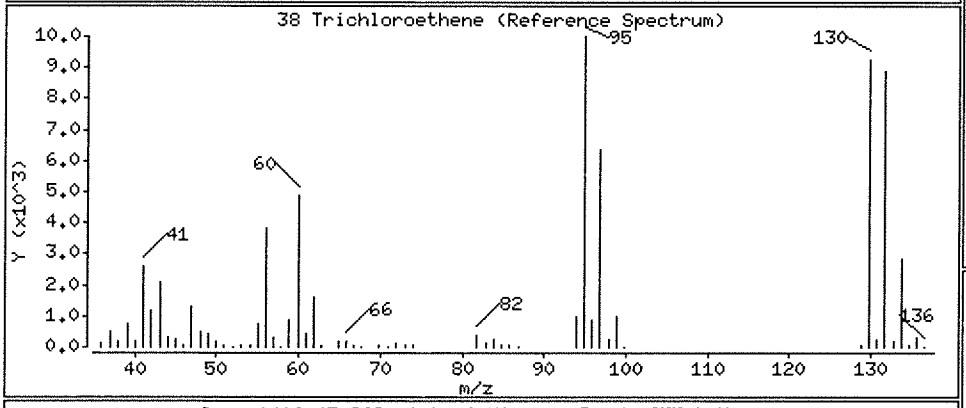
Concentration: 9755.96 ug/l

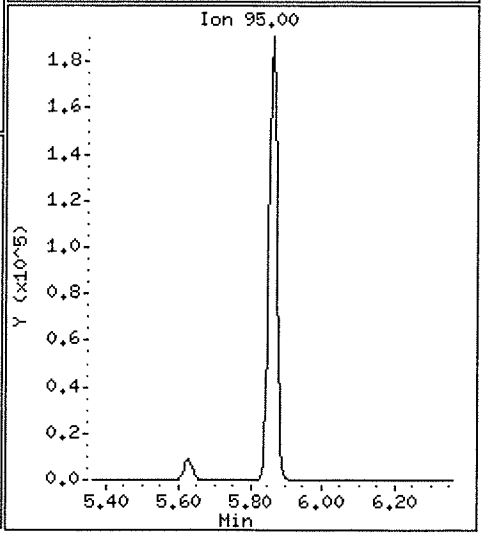


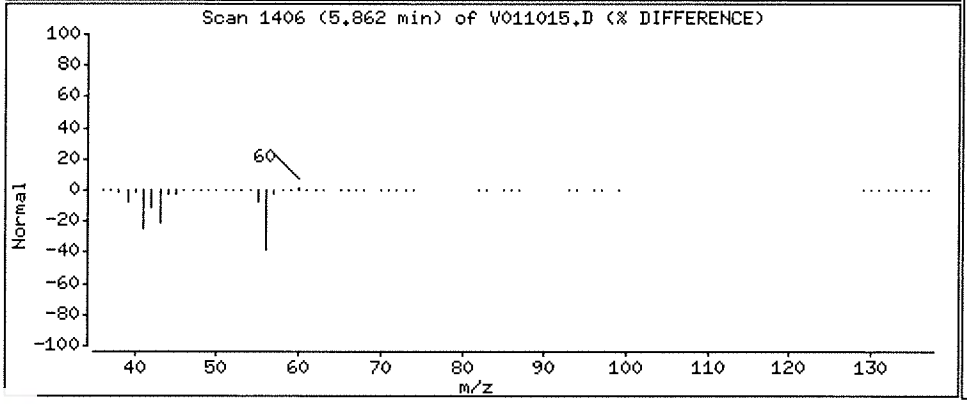












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011015.D

Date : 10-JAN-2019 16:01

Client ID: HS18121558-02DL

Instrument: VOA9.i

Sample Info: HS18121558-02;HS18121558-02;;;

Purge Volume: 5.0

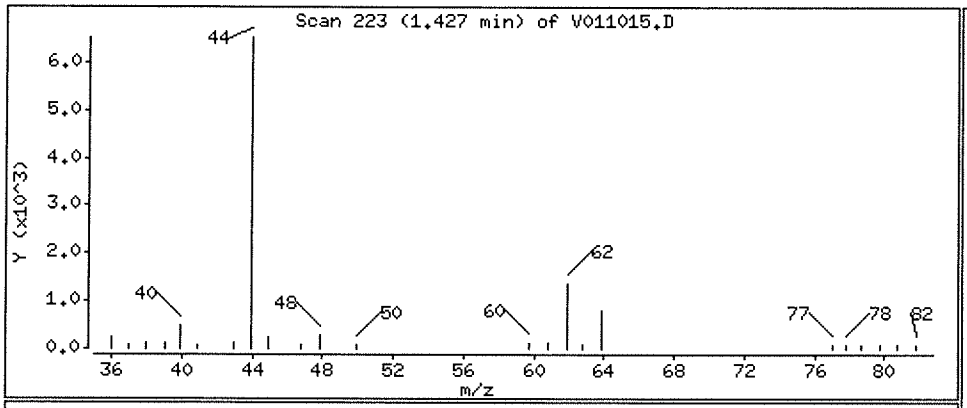
Operator: PC

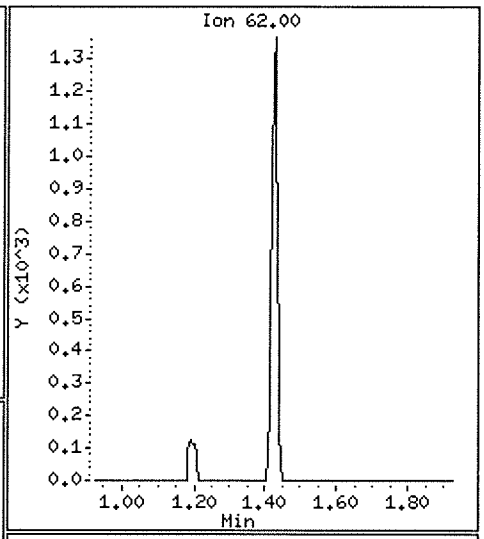
Column phase: DB624

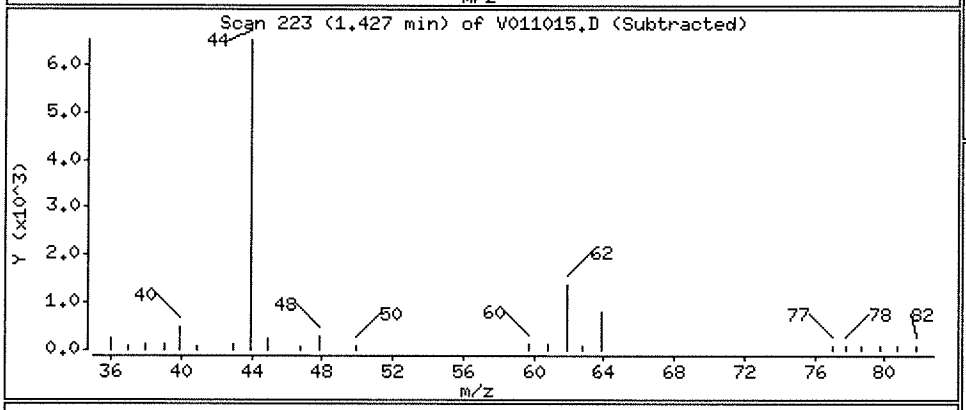
Column diameter: 0.18

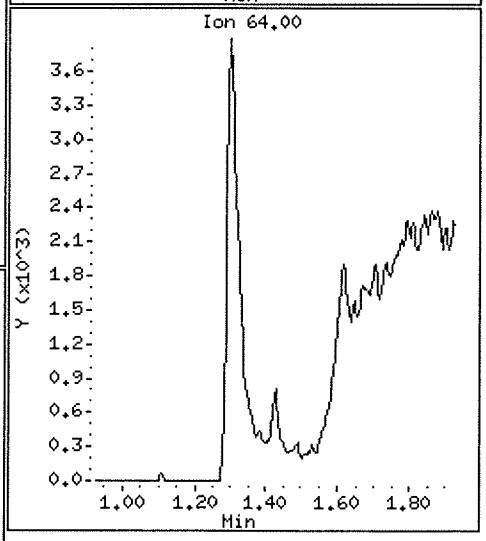
5 Vinyl Chloride

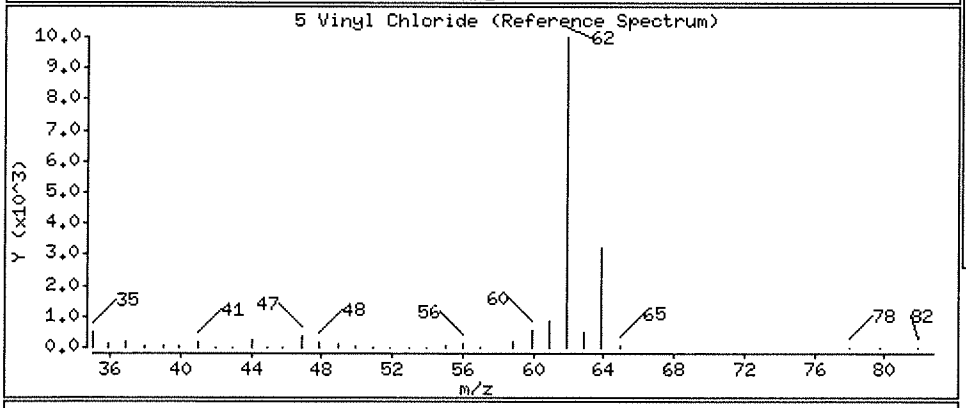
Concentration: 40.57 ug/l

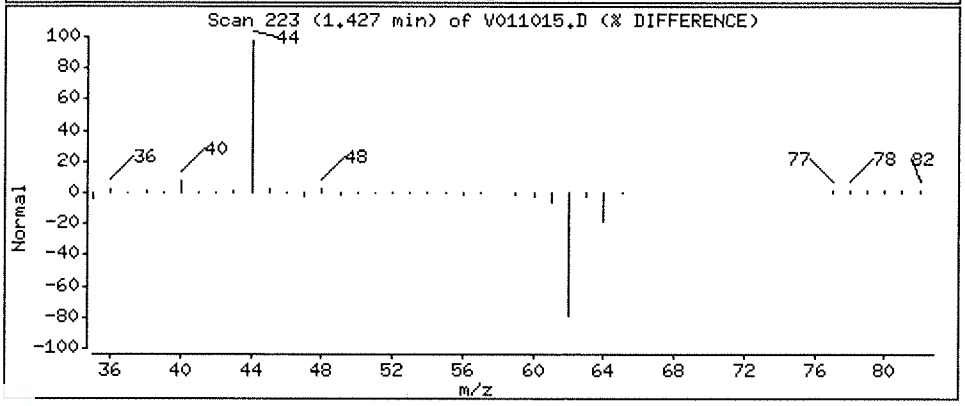












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011016.D
Lab Smp Id: HS18121558-01MS Client Smp ID: HS18121558-01MS
Inj Date : 10-JAN-2019 16:25
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-01MS;HS18121558-01MS;3;;MS
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 14 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

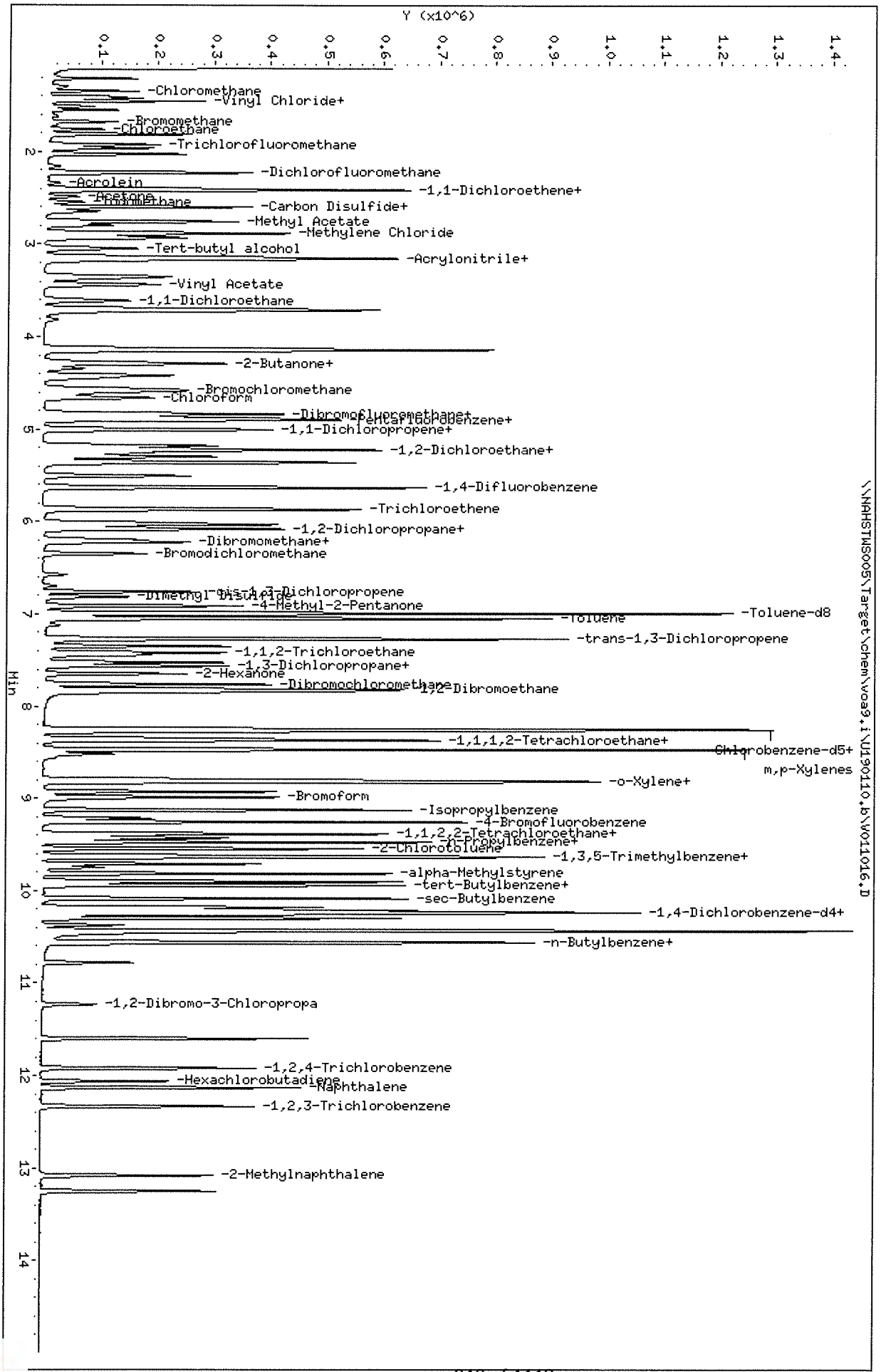
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.894	(1.000)	249817	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	474689	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	440448	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	209172	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.830	(0.987)	137240	48.6290	48.62
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	197161	53.6855	53.68
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	608870	53.3485	53.34
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	229659	53.2595	53.25
60 1,1,1,2-Tetrachloroethane	131	8.350	8.347	(1.012)	72461	27.2300	27.23
31 1,1,1-Trichloroethane	97	4.830	4.827	(0.986)	117883	28.8124	28.81
68 1,1,2,2-Tetrachloroethane	83	9.392	9.389	(0.918)	129632	27.2904	27.29
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	74275	27.5547	27.55
22 1,1-Dichloroethane	63	3.608	3.605	(0.737)	151353	26.6533	26.65
11 1,1-Dichloroethene	96	2.409	2.405	(0.492)	69082	28.6672	28.66
32 1,1-Dichloropropene	75	5.007	5.003	(0.889)	129350	29.4711	29.47
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	93812	25.1686	25.16
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	132107	26.1290	26.12
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	95784	25.4170	25.41
79 1,2,4-Trimethylbenzene	105	9.944	9.940	(0.971)	319437	29.0793	29.07
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	15389	21.8744	21.87
57 1,2-Dibromoethane	107	7.852	7.848	(0.952)	84147	27.4070	27.40
88 1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	163512	25.7454	25.74

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011016.D Page 2
Report Date: 01-Feb-2019 17:47

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	5.254	5.254	(0.933)	132884	28.9306	28.93
42	1,2-Dichloropropane	63	6.082	6.079	(1.081)	99349	29.0717	29.07
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	309377	28.8359	28.83
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	163875	25.9715	25.97
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	162233	27.8995	27.89
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	169297	25.3131	25.31
26	2,2-Dichloropropane	77	4.279	4.276	(0.874)	85913	25.2633	25.26
24	2-Butanone	43	4.343	4.336	(0.887)	87776	50.7754	50.77
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	282308	28.3892	28.38
52	2-Hexanone	43	7.649	7.649	(0.927)	140938	55.4831	55.48
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	331269	28.6383	28.63
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	322248	28.9233	28.92
45	4-Methyl-2-Pentanone	43	6.915	6.911	(0.838)	206116	56.2681	56.26
10	Acetone	43	2.487	2.480	(0.508)	60145	54.9066	54.90
37	Benzene	78	5.220	5.216	(0.927)	374607	28.6770	28.67
74	Bromobenzene	156	9.381	9.381	(0.917)	84686	25.9640	25.96
29	Bromochloromethane	128	4.557	4.557	(0.930)	38660	28.1534	28.15
39	Bromodichloromethane	83	6.349	6.349	(1.128)	103151	28.0313	28.03
66	Bromoform	173	8.984	8.984	(1.089)	42015	22.8747	22.87
6	Bromomethane	94	1.678	1.674	(0.343)	57791	31.2628	31.26
19	Carbon Disulfide	76	2.596	2.592	(0.530)	447845	52.3924	52.39
34	Carbon Tetrachloride	117	4.999	4.995	(0.888)	95303	29.9840	29.98
59	Chlorobenzene	112	8.275	8.272	(1.003)	235665	26.8379	26.83
7	Chloroethane	64	1.760	1.756	(0.359)	78587	34.9009	34.90
28	Chloroform	83	4.662	4.658	(0.952)	145740	27.0169	27.01
3	Chloromethane	50	1.348	1.340	(0.275)	96310	29.9372	29.93
27	cis-1,2-Dichloroethene	96	4.291	4.287	(0.876)	90181	26.3926	26.39
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.200)	134289	24.9827	24.98
55	Dibromochloromethane	129	7.758	7.758	(0.940)	71008	24.6986	24.69
44	Dibromomethane	93	6.191	6.191	(1.100)	55561	27.8632	27.86
2	Dichlorodifluoromethane	85	1.213	1.209	(0.248)	86741	26.2751	26.27
61	Ethylbenzene	106	8.369	8.369	(1.015)	124233	28.0476	28.04
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	33212	24.8760	24.87
67	Isopropylbenzene	105	9.126	9.126	(1.106)	372208	29.4189	29.41
62	m,p-Xylenes	106	8.470	8.470	(1.027)	308549	57.0629	57.06
17	Methylene Chloride	84	2.877	2.874	(0.588)	85382	26.3283	26.32
87	n-Butylbenzene	91	10.555	10.555	(1.031)	313037	28.9168	28.91
73	n-Propylbenzene	91	9.475	9.475	(0.926)	476235	29.4557	29.45
92	Naphthalene	128	12.133	12.133	(1.185)	305120	24.2950	24.29
63	o-Xylene	106	8.811	8.811	(1.068)	156673	28.4026	28.40
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	391760	29.6232	29.62
64	Styrene	104	8.823	8.823	(1.070)	261772	28.5003	28.50
78	tert-Butylbenzene	119	9.902	9.899	(0.967)	263962	28.5696	28.56
56	Tetrachloroethene	164	7.526	7.522	(0.912)	58368	25.2279	25.22
50	Toluene	91	7.050	7.046	(0.855)	386830	28.5687	28.56
20	trans-1,2-Dichloroethene	96	3.147	3.143	(0.643)	80418	26.3879	26.38
51	trans-1,3-Dichloropropene	75	7.259	7.259	(1.290)	114672	24.8540	24.85
38	Trichloroethene	130	5.865	5.861	(1.042)	136603	45.1998	45.19
8	Trichlorofluoromethane	101	1.963	1.959	(0.401)	120706	28.8814	28.88
5	Vinyl Chloride	62	1.427	1.423	(0.291)	105353	28.4175	28.41



Data File: \\NAHSTWS005\Target\chem\voa9,i\U190110,b\W011016.D
Date : 10-JAN-2019 16:25
Client ID: HS18121558-01HS
Sample Info: HS18121558-01HS;HS18121558-01HS;3;;HS
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\U190110.b\V011017.D
Lab Smp Id: HS18121558-01MSD Client Smp ID: HS18121558-01MSD
Inj Date : 10-JAN-2019 16:50
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-01MSD;HS18121558-01MSD;3;;MSD
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 14 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

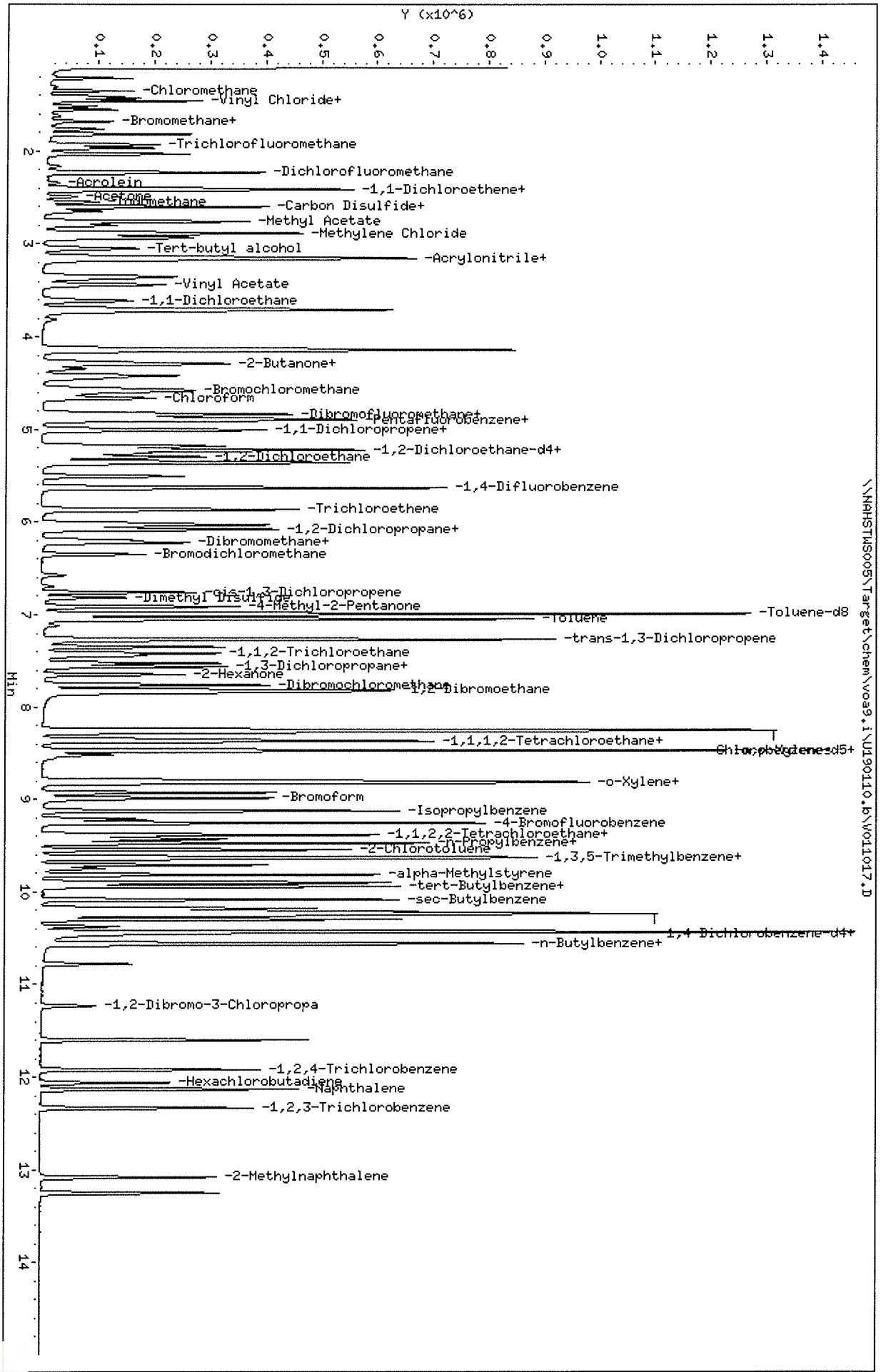
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	271734	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	498564	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	462915	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	219863	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.830	(0.987)	149088	48.5641	48.56
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	207537	51.8809	51.88
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	641176	53.4573	53.45
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	242506	53.5181	53.51
60 1,1,1,2-Tetrachloroethane	131	8.350	8.347	(1.012)	71934	25.7200	25.72
31 1,1,1-Trichloroethane	97	4.834	4.827	(0.987)	118516	26.6307	26.63
68 1,1,2,2-Tetrachloroethane	83	9.392	9.389	(0.918)	129550	25.9291	25.92
53 1,1,2-Trichloroethane	83	7.420	7.421	(0.900)	74739	26.3812	26.38
22 1,1-Dichloroethane	63	3.612	3.605	(0.737)	163244	26.4286	26.42
11 1,1-Dichloroethene	96	2.412	2.405	(0.493)	71559	27.3000	27.30
32 1,1-Dichloropropene	75	5.010	5.003	(0.890)	126902	27.5287	27.52
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	94273	24.0624	24.06
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	135354	25.4694	25.46
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	96647	24.3989	24.39
79 1,2,4-Trimethylbenzene	105	9.943	9.940	(0.971)	317548	27.5017	27.50
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	15382	20.9034	20.90
57 1,2-Dibromoethane	107	7.852	7.848	(0.952)	84003	26.0322	26.03
88 1,2-Dichlorobenzene	146	10.569	10.570	(1.033)	163069	24.4271	24.42

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011017.D Page 2
Report Date: 01-Feb-2019 17:48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	5.257	5.254	(0.934)	133446	27.6617	27.66
42	1,2-Dichloropropane	63	6.082	6.079	(1.081)	98869	27.5458	27.54
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	309286	27.4256	27.42
83	1,3-Dichlorobenzene	146	10.179	10.180	(0.995)	161177	24.3018	24.30
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	163490	26.7511	26.75
84	1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	169153	24.0617	24.06
26	2,2-Dichloropropane	77	4.279	4.276	(0.874)	89849	24.2897	24.28
24	2-Butanone	43	4.343	4.336	(0.887)	95556	50.8176	50.81
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	278880	26.6808	26.68
52	2-Hexanone	43	7.649	7.649	(0.927)	143007	53.5652	53.56
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	329916	27.1345	27.13
82	p-Isopropyltoluene	119	10.209	10.210	(0.997)	319688	27.2983	27.29
45	4-Methyl-2-Pentanone	43	6.914	6.911	(0.838)	206386	53.6073	53.60
10	Acetone	43	2.487	2.480	(0.508)	62537	52.4133	52.41
37	Benzene	78	5.224	5.216	(0.928)	363385	26.4858	26.48
74	Bromobenzene	156	9.381	9.381	(0.917)	84585	24.6720	24.67
29	Bromochloromethane	128	4.560	4.557	(0.931)	40379	27.0335	27.03
39	Bromodichloromethane	83	6.348	6.349	(1.128)	104086	26.9309	26.93
66	Bromoform	173	8.984	8.984	(1.089)	41341	21.5298	21.52
6	Bromomethane	94	1.681	1.674	(0.343)	54086	27.0046	27.00
19	Carbon Disulfide	76	2.600	2.592	(0.531)	486518	52.3260	52.32
34	Carbon Tetrachloride	117	4.999	4.995	(0.888)	93323	27.9551	27.95
59	Chlorobenzene	112	8.275	8.272	(1.003)	231584	25.0932	25.09
7	Chloroethane	64	1.621	1.756	(0.331)	25018	10.2145	10.21
28	Chloroform	83	4.661	4.658	(0.952)	153026	26.0796	26.07
3	Chloromethane	50	1.351	1.340	(0.276)	94148	27.1538	27.15
27	cis-1,2-Dichloroethene	96	4.294	4.287	(0.877)	95197	25.6135	25.61
46	cis-1,3-Dichloropropene	75	6.761	6.757	(1.201)	134860	23.9449	23.94
55	Dibromochloromethane	129	7.758	7.758	(0.940)	71794	23.8067	23.80
44	Dibromomethane	93	6.191	6.191	(1.100)	55129	26.3226	26.32
2	Dichlorodifluoromethane	85	1.216	1.209	(0.248)	85471	23.8022	23.80
61	Ethylbenzene	106	8.373	8.369	(1.015)	124058	26.6488	26.64
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	34605	24.6640	24.66
67	Isopropylbenzene	105	9.126	9.126	(1.106)	369117	27.7586	27.75
62	m,p-Xylenes	106	8.474	8.470	(1.027)	305273	53.7170	53.71
17	Methylene Chloride	84	2.881	2.874	(0.588)	92691	26.2758	26.27
87	n-Butylbenzene	91	10.554	10.555	(1.031)	314733	27.6597	27.65
73	n-Propylbenzene	91	9.475	9.475	(0.926)	472073	27.7785	27.77
92	Naphthalene	128	12.133	12.133	(1.185)	307954	23.3561	23.35
63	o-Xylene	106	8.811	8.811	(1.068)	153246	26.4330	26.43
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	390229	28.0726	28.07
64	Styrene	104	8.822	8.823	(1.070)	260183	26.9525	26.95
78	tert-Butylbenzene	119	9.902	9.899	(0.967)	262356	27.0150	27.01
56	Tetrachloroethene	164	7.525	7.522	(0.912)	58284	23.9689	23.96
50	Toluene	91	7.049	7.046	(0.855)	382606	26.8853	26.88
20	trans-1,2-Dichloroethene	96	3.151	3.143	(0.643)	83638	25.2309	25.23
51	trans-1,3-Dichloropropene	75	7.263	7.259	(1.290)	116589	24.1106	24.11
38	Trichloroethene	130	5.865	5.861	(1.042)	108288	34.1150	34.11
8	Trichlorofluoromethane	101	1.966	1.959	(0.401)	125393	27.5830	27.58
5	Vinyl Chloride	62	1.430	1.423	(0.292)	104974	26.0315	26.03



Data File: \\NAHSTWS005\Target\chem\voa9,i\U190110,b\V011017,D
Date : 10-JAN-2019 16:50
Client ID: HS18121558-01HSD
Sample Info: HS18121558-01HSD;HS18121558-01HSD;3;;HSD
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\U190110.b\V011026.D
Lab Smp Id: CCV_END Client Smp ID: CCV_END
Inj Date : 10-JAN-2019 20:40
Operator : PC Inst ID: VOA9.i
Smp Info : CCV_END;CCV_END;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:48 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 20 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

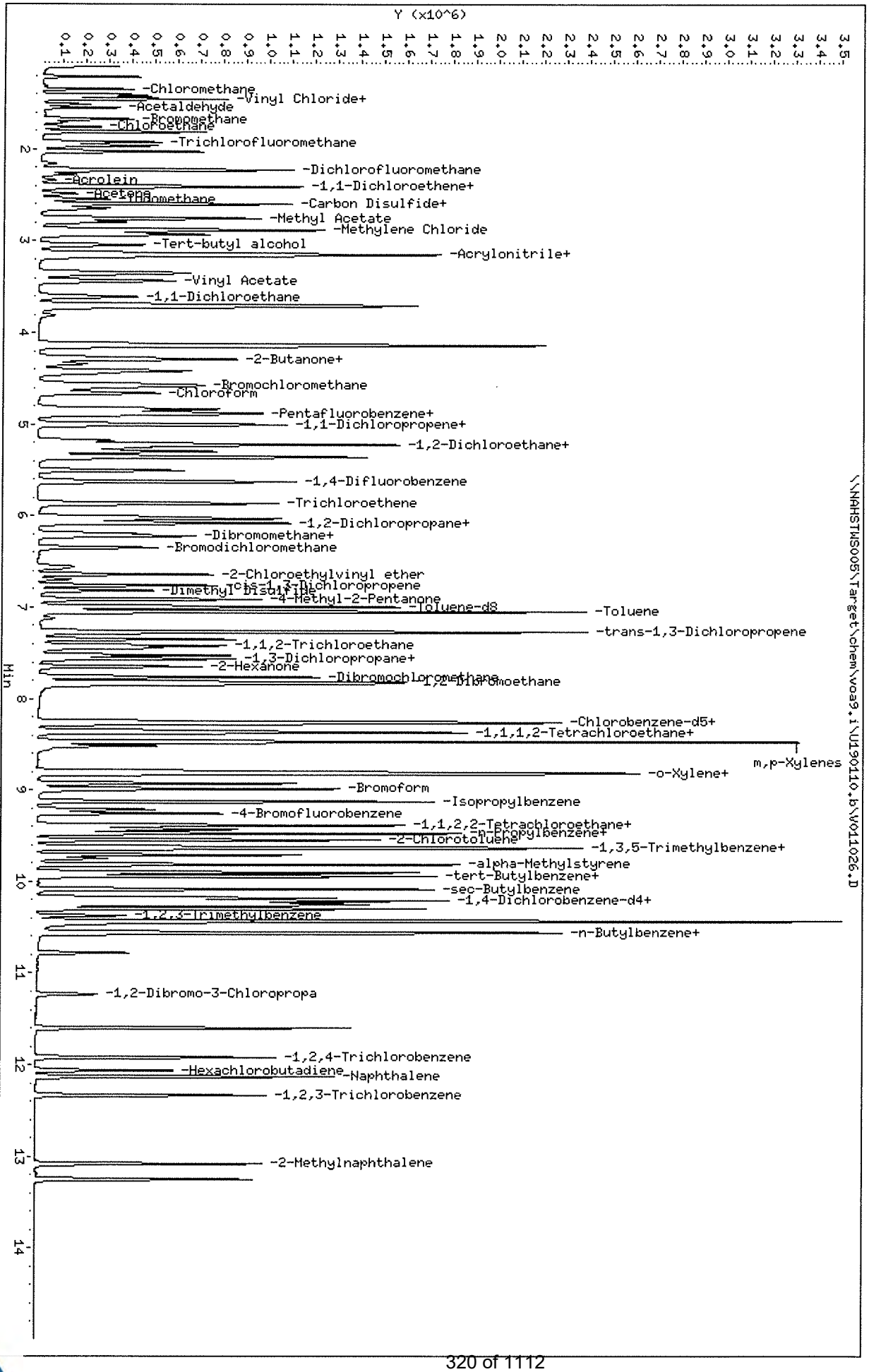
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	276147	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	515348	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	471054	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	223978	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	152951	50.0000	49.04
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	209298	50.0000	51.46
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	661651	50.0000	54.24
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	249775	50.0000	54.19
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	192641	50.0000	67.68
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	325528	50.0000	71.97
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	342327	50.0000	67.83
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	193926	50.0000	67.26
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	432662	50.0000	68.92
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	189140	50.0000	71.00
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	337852	50.0000	70.90
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	250067	50.0000	62.65
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	360385	50.0000	66.56
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	258575	50.0000	64.07
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	849205	50.0000	72.19
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	45309	50.0000	56.50
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	219773	50.0000	66.93
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	428657	50.0000	63.03

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011026.D Page 2
Report Date: 01-Feb-2019 17:48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	5.254	5.254	(0.934)	341457	50.0000	68.47
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	262032	50.0000	70.62
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	830996	50.0000	72.33
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	433695	50.0000	64.18
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	427249	50.0000	68.70
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	442447	50.0000	61.78
26	2,2-Dichloropropane	77	4.279	4.279	(0.874)	223259	50.0000	59.39
24	2-Butanone	43	4.339	4.339	(0.886)	259892	100.000	136.00
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	748882	50.0000	70.33
52	2-Hexanone	43	7.649	7.649	(0.927)	391546	100.000	144.12
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	868235	50.0000	70.09
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	872513	50.0000	73.13
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	563824	100.000	143.91
10	Acetone	43	2.484	2.484	(0.507)	165671	100.000	139.26
37	Benzene	78	5.220	5.220	(0.928)	975640	50.0000	68.79
74	Bromobenzene	156	9.381	9.381	(0.917)	225088	50.0000	64.44
29	Bromochloromethane	128	4.557	4.557	(0.930)	106606	50.0000	70.23
39	Bromodichloromethane	83	6.348	6.348	(1.129)	284142	50.0000	71.12
66	Bromoform	173	8.984	8.984	(1.089)	117628	50.0000	56.97(T)
6	Bromomethane	94	1.674	1.674	(0.342)	139224	50.0000	67.23
19	Carbon Disulfide	76	2.596	2.596	(0.530)	1353715	100.000	143.26
34	Carbon Tetrachloride	117	4.999	4.999	(0.889)	256510	50.0000	74.33
59	Chlorobenzene	112	8.275	8.275	(1.003)	613000	50.0000	65.27
7	Chloroethane	64	1.756	1.756	(0.359)	211179	50.0000	84.84
28	Chloroform	83	4.662	4.662	(0.952)	403364	50.0000	67.64
3	Chloromethane	50	1.344	1.344	(0.274)	253968	50.0000	68.00
27	cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	246712	50.0000	65.31
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	381419	50.0000	63.24
55	Dibromochloromethane	129	7.758	7.758	(0.940)	197261	50.0000	62.19
44	Dibromomethane	93	6.191	6.191	(1.101)	146233	50.0000	67.54
2	Dichlorodifluoromethane	85	1.213	1.213	(0.248)	251884	50.0000	69.02
61	Ethylbenzene	106	8.369	8.369	(1.015)	329867	50.0000	69.63
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	90640	50.0000	62.00
67	Isopropylbenzene	105	9.126	9.126	(1.106)	991169	50.0000	73.25
62	m,p-Xylenes	106	8.474	8.474	(1.027)	816307	100.000	141.15
17	Methylene Chloride	84	2.877	2.877	(0.587)	243690	50.0000	68.77
87	n-Butylbenzene	91	10.555	10.555	(1.031)	851235	50.0000	73.43
73	n-Propylbenzene	91	9.475	9.475	(0.926)	1272870	50.0000	73.52
92	Naphthalene	128	12.133	12.133	(1.185)	850341	50.0000	62.15
63	o-Xylene	106	8.811	8.811	(1.068)	408679	50.0000	69.27
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	1050233	50.0000	74.16
64	Styrene	104	8.823	8.823	(1.070)	696852	50.0000	70.94
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	707059	50.0000	71.46
56	Tetrachloroethene	164	7.526	7.526	(0.912)	156026	50.0000	63.05
50	Toluene	91	7.049	7.049	(0.855)	1014003	50.0000	70.02
20	trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	221057	50.0000	65.62
51	trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	325606	50.0000	62.41
38	Trichloroethene	130	5.861	5.861	(1.042)	231363	50.0000	70.51
8	Trichlorofluoromethane	101	1.959	1.959	(0.400)	335655	50.0000	72.65
5	Vinyl Chloride	62	1.426	1.426	(0.291)	301220	50.0000	73.50

QC Flag Legend

T - Target compound detected outside RT window.



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011026.D
Date : 10-JAN-2019 20:40
Client ID: CCV_END
Sample Info: CCV_END;CCV_END;2;;
Purge Volume: 5.0
Column phase: DB624

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

Metals Raw Data

ALS WO# HS18121558

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

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: 19-Jan-19

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 10-Jan-2019 13:30 End Date: 10-Jan-2019 15:30

Batch ID: 136505
Prep Code: Hg_WPr
Method: SW7470
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18121558-02	MW21_122818	Groundwater		10	10	1
HS18121558-03	MW3_122818	Groundwater		10	10	1
HS19010248-03MS				10	10	1
HS19010248-03MSD				10	10	1
LCS-136505				10	10	1
MBLK-136505				10	10	1

ALS Houston, US

Date: 19-Jan-19

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 02-Jan-2019 13:00 End Date: 02-Jan-2019 17:00

Batch ID: 136231
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18121117-01MS				10	10	1
HS18121117-01MSD				10	10	1
HS18121117-01PDS				10	10	1
HS18121117-01SD				10	10	1
HS18121558-02	MW21_122818	Groundwater		10	10	1
HS18121558-03	MW3_122818	Groundwater		10	10	1
LCS-136231				10	10	1
MBLK-136231				10	10	1

ALS Houston, US

Date: 19-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 10-Jan-2019 End Date: 10-Jan-2019

Run ID:HG03_330807
Instrument:HG03
Method:E245.1

Sample No.	D/F	Time	FileID	Analytes
ICCV 1	1	10-Jan-2019 13:32	HG03_330807 Raw Data_4903435	HG
ICV	1	10-Jan-2019 13:34		HG
ICB	1	10-Jan-2019 13:36		HG
CRA	1	10-Jan-2019 13:37		HG
CCV 2	1	10-Jan-2019 13:58		HG
CCB 1	1	10-Jan-2019 14:00		HG
CCV 3	1	10-Jan-2019 14:19		HG
CCB 2	1	10-Jan-2019 14:20		HG
CCV 4	1	10-Jan-2019 14:38		HG
CCB 3	1	10-Jan-2019 14:40		HG
CCV 5	1	10-Jan-2019 15:06		HG
CCB 4	1	10-Jan-2019 15:08		HG
CCV 6	1	10-Jan-2019 15:27		HG
CCB 5	1	10-Jan-2019 15:29		HG
CCV 7	1	10-Jan-2019 15:54		HG
CCB 6	1	10-Jan-2019 15:56		HG
CCV 8	1	10-Jan-2019 16:13		HG
CCB 7	1	10-Jan-2019 16:15		HG
CCV 9	1	10-Jan-2019 16:30		HG
CCB 8	1	10-Jan-2019 16:32		HG
CCV 10	1	10-Jan-2019 18:05		HG
CCB 9	1	10-Jan-2019 18:06		HG
CCV 11	1	10-Jan-2019 18:25		HG
CCB 10	1	10-Jan-2019 18:27		HG
CCV 12	1	10-Jan-2019 18:49		HG
CCB 11	1	10-Jan-2019 18:50		HG
MBLK-136505	1	10-Jan-2019 18:52		HG
LCS-136505	1	10-Jan-2019 18:54		HG
ZZZZZZMS	1	10-Jan-2019 18:57		HG
ZZZZZZMSD	1	10-Jan-2019 18:59		HG
CCV 13	1	10-Jan-2019 19:09		HG
CCB 12	1	10-Jan-2019 19:11		HG
MW21_122818	1	10-Jan-2019 19:16		HG
MW3_122818	1	10-Jan-2019 19:18		HG
CCV 14	1	10-Jan-2019 19:30		HG
CCB 13	1	10-Jan-2019 19:32		HG
CCV 15	1	10-Jan-2019 19:39		HG
CCB 14	1	10-Jan-2019 19:41		HG

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 08-Jan-2019 End Date: 09-Jan-2019

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_330637_Tune	1	08-Jan-2019 00:00	ICPMS05_330637_Tune_1	
CAL BLK	1	08-Jan-2019 12:02	030CALB.d_4899011	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 12:04	031CALS.d_4899012	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 12:06	032CALS.d_4899013	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 12:08	033CALS.d_4899014	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 12:10	034CALS.d_4899015	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 12:12	035CALS.d_4899016	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICV	1	08-Jan-2019 12:16	037_ICV.d_4899018	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV2	1	08-Jan-2019 12:18	038SMPL.d_4899019	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV5	1	08-Jan-2019 12:20	039LICV.d_4899020	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICB	1	08-Jan-2019 12:22	040_ICB.d_4899021	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	08-Jan-2019 12:34	042ICSA.d_4899267	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	08-Jan-2019 12:36	043ICSB.d_4899268	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 1	1	08-Jan-2019 13:03	056_CCB.d_4899281	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 1	1	08-Jan-2019 13:08	058_CCV.d_4899283	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 2	1	08-Jan-2019 13:29	068_CCV.d_4899293	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 2	1	08-Jan-2019 13:31	069_CCB.d_4899294	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	08-Jan-2019 13:44	075CALB.d_4899363	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 13:46	076CALS.d_4899364	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 13:48	077CALS.d_4899365	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 13:50	078CALS.d_4899366	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 13:52	079CALS.d_4899367	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 13:54	080CALS.d_4899368	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 3	1	08-Jan-2019 13:58	082_ICV.d_4899370	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	08-Jan-2019 14:02	084SMPL.d_4899372	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 3	1	08-Jan-2019 14:04	085_ICB.d_4899373	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	08-Jan-2019 14:06	086LICV.d_4899374	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 4	1	08-Jan-2019 14:26	096_CCV.d_4899384	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 4	1	08-Jan-2019 14:28	097_CCB.d_4899385	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 5	1	08-Jan-2019 14:50	108_CCV.d_4899571	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 5	1	08-Jan-2019 14:52	109_CCB.d_4899572	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 6	1	08-Jan-2019 15:14	120_CCV.d_4899583	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 08-Jan-2019 End Date: 09-Jan-2019

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 6	1	08-Jan-2019 15:16	121_CCB.d_4899584	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 7	1	08-Jan-2019 15:39	131_CCV.d_4899598	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 7	1	08-Jan-2019 15:41	132_CCB.d_4899601	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	08-Jan-2019 15:53	138CALB.d_4899738	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 15:55	139CALS.d_4899739	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 15:57	140CALS.d_4899740	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 15:59	141CALS.d_4899741	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 16:01	142CALS.d_4899742	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 16:03	143CALS.d_4899743	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 8	1	08-Jan-2019 16:07	145_ICV.d_4899745	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	08-Jan-2019 16:09	146LICV.d_4899746	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	08-Jan-2019 16:11	147SMPL.d_4899747	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 8	1	08-Jan-2019 16:13	148_ICB.d_4899748	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MBLK-136231	1	08-Jan-2019 16:34	155SMPL.d_4899851	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LCS-136231	1	08-Jan-2019 16:36	156SMPL.d_4899857	AG AL AS BA BE CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZSD	5	08-Jan-2019 16:40	158SMPL.d_4899859	AG AL AS BA BE CA CD CO CR CU FE K MG MN NI PB SB SE TL V ZN
CCB 9	1	08-Jan-2019 16:44	160_CCB.d_4899861	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 9	1	08-Jan-2019 16:46	161_CCV.d_4899862	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZMS	1	08-Jan-2019 16:49	162SMPL.d_4899863	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZMSD	1	08-Jan-2019 16:51	163SMPL.d_4899864	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZPDS	1	08-Jan-2019 16:53	164SMPL.d_4899865	AG AL AS BA BE CA CD CO CR CU FE K MG MN NI PB SB SE TL V ZN
CCV 10	1	08-Jan-2019 17:09	172_CCV.d_4899873	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 10	1	08-Jan-2019 17:11	173_CCB.d_4899874	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 11	1	08-Jan-2019 17:33	184_CCV.d_4899885	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 11	1	08-Jan-2019 17:35	185_CCB.d_4899886	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MW21_122818	1	08-Jan-2019 17:37	186SMPL.d_4899887	AG AL AS BE CD CO CR CU FE K MG NI PB SB SE TL V ZN
MW3_122818	1	08-Jan-2019 17:39	187SMPL.d_4899888	AG AL AS BA BE CA CD CO CR CU FE K MG NI PB SB SE TL V ZN
CCV 12	1	08-Jan-2019 17:49	192_CCV.d_4899897	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 12	1	08-Jan-2019 17:51	193_CCB.d_4899898	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	08-Jan-2019 19:26	215CALB.d_4900154	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 19:28	216CALS.d_4900155	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 19:30	217CALS.d_4900156	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 08-Jan-2019 End Date: 09-Jan-2019

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
10/50/1000	1	08-Jan-2019 19:32	218CALS.d_4900157	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 19:34	219CALS.d_4900158	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 19:36	220CALS.d_4900159	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	08-Jan-2019 19:42	223LICV.d_4900162	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	08-Jan-2019 19:44	224SMPL.d_4900163	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 13	1	08-Jan-2019 19:46	225_ICV.d_4900164	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 13	1	08-Jan-2019 19:48	226_ICB.d_4900165	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 14	1	08-Jan-2019 20:06	235_CCV.d_4900174	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 14	1	08-Jan-2019 20:07	236_CCB.d_4900175	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 15	1	08-Jan-2019 20:29	247_CCV.d_4900186	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 15	1	08-Jan-2019 20:31	248_CCB.d_4900187	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 16	1	08-Jan-2019 20:51	258_CCV.d_4900197	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 16	1	08-Jan-2019 20:53	259_CCB.d_4900198	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	08-Jan-2019 21:41	273CALB.d_4900278	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 21:43	274CALS.d_4900279	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 21:45	275CALS.d_4900280	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 21:47	276CALS.d_4900281	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 21:49	277CALS.d_4900282	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 21:51	278CALS.d_4900283	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	08-Jan-2019 21:57	281LICV.d_4900286	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	08-Jan-2019 21:59	282SMPL.d_4900287	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 17	1	08-Jan-2019 22:01	283_ICV.d_4900288	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 17	1	08-Jan-2019 22:03	284_ICB.d_4900289	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 18	1	08-Jan-2019 22:17	290_CCV.d_4900295	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 18	1	08-Jan-2019 22:19	291_CCB.d_4900296	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 19	1	08-Jan-2019 22:31	297_CCV.d_4900302	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 19	1	08-Jan-2019 22:33	298_CCB.d_4900303	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 20	1	08-Jan-2019 22:55	309_CCV.d_4900314	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 20	1	08-Jan-2019 22:57	310_CCB.d_4900315	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 21	1	08-Jan-2019 23:18	321_CCV.d_4900326	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 21	1	08-Jan-2019 23:20	322_CCB.d_4900327	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 22	1	08-Jan-2019 23:36	330_CCV.d_4900335	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 08-Jan-2019 End Date: 09-Jan-2019

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 22	1	08-Jan-2019 23:38	331_CCB.d_4900336	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 23	1	09-Jan-2019 00:00	342_CCV.d_4900347	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 23	1	09-Jan-2019 00:02	343_CCB.d_4900348	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 24	1	09-Jan-2019 00:18	351_CCV.d_4900356	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 24	1	09-Jan-2019 00:19	352_CCB.d_4900357	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	09-Jan-2019 00:21	353LICV.d_4900358	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	09-Jan-2019 00:23	354SMPL.d_4900359	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	09-Jan-2019 00:25	355ICSA.d_4900360	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	09-Jan-2019 00:27	356ICSB.d_4900361	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 09-Jan-2019 End Date: 10-Jan-2019

Run ID:ICPMS05_330716
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_330716_Tune	1	09-Jan-2019 00:00	ICPMS05_330716_Tune_1	
CAL BLK	1	09-Jan-2019 11:53	017CALB.d_4901063	BA CA MN NA
2/10/200	1	09-Jan-2019 11:55	018CALS.d_4901064	BA CA MN NA
5/25/500	1	09-Jan-2019 11:57	019CALS.d_4901065	BA CA MN NA
10/50/1000	1	09-Jan-2019 11:59	020CALS.d_4901066	BA CA MN NA
100/500/10K	1	09-Jan-2019 12:01	021CALS.d_4901067	BA CA MN NA
200/1000/20K	1	09-Jan-2019 12:03	022CALS.d_4901068	BA CA MN NA
LLICV2	1	09-Jan-2019 12:09	025SMPL.d_4901071	BA CA MN NA
LLICV5	1	09-Jan-2019 12:11	026LICV.d_4901072	BA CA MN NA
ICB	1	09-Jan-2019 12:13	027_ICB.d_4901073	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICV	1	09-Jan-2019 12:15	028_ICV.d_4901074	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	09-Jan-2019 12:17	029ICSA.d_4901075	BA CA MN NA
ICSAB	1	09-Jan-2019 12:19	030ICSB.d_4901076	BA CA MN NA
CCV 1	1	09-Jan-2019 12:43	042_CCV.d_4901088	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 1	1	09-Jan-2019 12:45	043_CCB.d_4901089	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 2	1	09-Jan-2019 13:07	054_CCV.d_4901100	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 2	1	09-Jan-2019 13:09	055_CCB.d_4901101	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 3	1	09-Jan-2019 13:27	064_CCV.d_4901110	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 3	1	09-Jan-2019 13:29	065_CCB.d_4901111	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	09-Jan-2019 13:41	070CALB.d_4901183	BA CA MN NA
2/10/200	1	09-Jan-2019 13:43	071CALS.d_4901184	BA CA MN NA
5/25/500	1	09-Jan-2019 13:45	072CALS.d_4901185	BA CA MN NA
10/50/1000	1	09-Jan-2019 13:47	073CALS.d_4901186	BA CA MN NA
100/500/10K	1	09-Jan-2019 13:49	074CALS.d_4901187	BA CA MN NA
200/1000/20K	1	09-Jan-2019 13:51	075CALS.d_4901188	BA CA MN NA
ICCV 4	1	09-Jan-2019 13:55	077_ICV.d_4901190	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	09-Jan-2019 13:57	078LICV.d_4901191	BA CA MN NA
LLCCV2	1	09-Jan-2019 13:59	079SMPL.d_4901192	BA CA MN NA
ICCB 4	1	09-Jan-2019 14:01	080_ICB.d_4901193	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 5	1	09-Jan-2019 14:21	090_CCV.d_4901203	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 5	1	09-Jan-2019 14:23	091_CCB.d_4901204	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LCS-136231	1	09-Jan-2019 14:34	097SMPL.d_4901335	CA
ZZZZZZSD	100	09-Jan-2019 14:38	099SMPL.d_4901337	NA
CCV 6	1	09-Jan-2019 14:44	102_CCV.d_4901340	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 6	1	09-Jan-2019 14:46	103_CCB.d_4901341	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 7	1	09-Jan-2019 14:51	105_CCV.d_4901344	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 8	1	09-Jan-2019 15:12	115_CCV.d_4901358	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 7	1	09-Jan-2019 15:14	116_CCB.d_4901359	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MW21_122818	50	09-Jan-2019 15:18	118SMPL.d_4901361	BA CA MN NA
MW3_122818	20	09-Jan-2019 15:20	119SMPL.d_4901362	MN NA
CCV 9	1	09-Jan-2019 15:35	127_CCV.d_4901506	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 09-Jan-2019 End Date: 10-Jan-2019

Run ID:ICPMS05_330716
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 8	1	09-Jan-2019 15:37	128_CCB.d_4901507	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZPDS	20	09-Jan-2019 15:53	136SMPL.d_4901515	NA
CCV 10	1	09-Jan-2019 15:59	139_CCV.d_4901518	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 9	1	09-Jan-2019 16:01	140_CCB.d_4901519	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 10	1	09-Jan-2019 16:25	152_CCB.d_4901551	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 11	1	09-Jan-2019 16:29	154_CCV.d_4901553	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 12	1	09-Jan-2019 16:50	164_CCV.d_4901706	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 11	1	09-Jan-2019 16:52	165_CCB.d_4901707	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 13	1	09-Jan-2019 17:14	176_CCV.d_4901718	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 12	1	09-Jan-2019 17:16	177_CCB.d_4901719	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 14	1	09-Jan-2019 17:35	187_CCV.d_4901795	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 13	1	09-Jan-2019 17:37	188_CCB.d_4901796	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 15	1	09-Jan-2019 17:53	196_CCV.d_4901804	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 14	1	09-Jan-2019 17:55	197_CCB.d_4901805	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 16	1	09-Jan-2019 18:17	208_CCV.d_4901919	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 15	1	09-Jan-2019 18:19	209_CCB.d_4901920	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 17	1	09-Jan-2019 18:27	213_CCV.d_4901924	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 16	1	09-Jan-2019 18:29	214_CCB.d_4901925	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	09-Jan-2019 19:12	221CALB.d_4902035	BA CA MN NA
2/10/200	1	09-Jan-2019 19:14	222CALS.d_4902036	BA CA MN NA
5/25/500	1	09-Jan-2019 19:16	223CALS.d_4902037	BA CA MN NA
10/50/1000	1	09-Jan-2019 19:18	224CALS.d_4902038	BA CA MN NA
200/1000/20K	1	09-Jan-2019 19:22	226CALS.d_4902040	BA CA MN NA
100/500/10K	1	09-Jan-2019 19:24	227CALS.d_4902041	BA CA MN NA
ICCV 18	1	09-Jan-2019 19:28	229_ICV.d_4902043	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	09-Jan-2019 19:30	230LICV.d_4902044	BA CA MN NA
LLCCV2	1	09-Jan-2019 19:32	231SMPL.d_4902045	BA CA MN NA
ICCB 17	1	09-Jan-2019 19:34	232_ICB.d_4902046	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 19	1	09-Jan-2019 19:46	238_CCV.d_4902121	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 18	1	09-Jan-2019 19:48	239_CCB.d_4902122	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 20	1	09-Jan-2019 20:02	246_CCV.d_4902181	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 19	1	09-Jan-2019 20:04	247_CCB.d_4902182	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 21	1	09-Jan-2019 20:25	258_CCV.d_4902193	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 20	1	09-Jan-2019 20:27	259_CCB.d_4902194	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 22	1	09-Jan-2019 20:43	267_CCV.d_4902202	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558
Start Date: 09-Jan-2019 End Date: 10-Jan-2019

Run ID:ICPMS05_330716
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 21	1	09-Jan-2019 20:45	268_CCB.d_4902203	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 23	1	09-Jan-2019 21:01	276_CCV.d_4902211	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 22	1	09-Jan-2019 21:03	277_CCB.d_4902212	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 24	1	09-Jan-2019 21:25	288_CCV.d_4902223	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 23	1	09-Jan-2019 21:27	289_CCB.d_4902224	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 25	1	09-Jan-2019 21:44	298_CCV.d_4902233	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 24	1	09-Jan-2019 21:46	299_CCB.d_4902234	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 26	1	09-Jan-2019 22:06	309_CCV.d_4902244	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 25	1	09-Jan-2019 22:08	310_CCB.d_4902245	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 27	1	09-Jan-2019 22:20	316_CCV.d_4902251	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 26	1	09-Jan-2019 22:22	317_CCB.d_4902252	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 27	1	09-Jan-2019 22:42	327_CCB.d_4902299	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 28	1	09-Jan-2019 22:47	329_CCV.d_4902301	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 29	1	09-Jan-2019 23:07	339_CCV.d_4902311	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 28	1	09-Jan-2019 23:09	340_CCB.d_4902312	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 30	1	09-Jan-2019 23:29	350_CCV.d_4902341	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 29	1	09-Jan-2019 23:31	351_CCB.d_4902342	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 31	1	09-Jan-2019 23:52	362_CCV.d_4902353	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 30	1	09-Jan-2019 23:54	363_CCB.d_4902354	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 32	1	10-Jan-2019 00:16	374_CCV.d_4902365	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 31	1	10-Jan-2019 00:18	375_CCB.d_4902366	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 33	1	10-Jan-2019 00:34	383_CCV.d_4902605	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 32	1	10-Jan-2019 00:36	384_CCB.d_4902606	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 34	1	10-Jan-2019 00:58	395_CCV.d_4902617	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 33	1	10-Jan-2019 01:00	396_CCB.d_4902618	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 35	1	10-Jan-2019 01:02	397_CCV.d_4902619	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 34	1	10-Jan-2019 01:04	398_CCB.d_4902620	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	10-Jan-2019 01:06	399LICV.d_4902621	BA CA MN NA
LLCCV2	1	10-Jan-2019 01:08	400SMPL.d_4902622	BA CA MN NA
ICSA	1	10-Jan-2019 01:10	401ICSA.d_4902623	BA CA MN NA
ICSAB	1	10-Jan-2019 01:12	402ICSB.d_4902624	BA CA MN NA

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc. Run ID: HG03_330807
Project: LHAAP 18/24 Instrument: HG03
WorkOrder: HS18121558 Method: E245.1

ICCV1 Date: 10-Jan-2019 13:32 Seq: 4903435 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.19	104	90-110	

ICV Date: 10-Jan-2019 13:34 Seq: 4903436 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.14	103	90-110	

CCV2 Date: 10-Jan-2019 13:58 Seq: 4903445 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.24	105	90-110	

CCV3 Date: 10-Jan-2019 14:19 Seq: 4903457 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.24	105	90-110	

CCV4 Date: 10-Jan-2019 14:38 Seq: 4903468 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.19	104	90-110	

CCV5 Date: 10-Jan-2019 15:06 Seq: 4903480 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.04	101	90-110	

CCV6 Date: 10-Jan-2019 15:27 Seq: 4903492 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.08	102	90-110	

CCV7 Date: 10-Jan-2019 15:54 Seq: 4903527 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.06	101	90-110	

CCV8 Date: 10-Jan-2019 16:13 Seq: 4903538 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.09	102	90-110	

CCV9 Date: 10-Jan-2019 16:30 Seq: 4903579 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.11	102	90-110	

CCV10 Date: 10-Jan-2019 18:05 Seq: 4903819 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.07	101	90-110	

CCV11 Date: 10-Jan-2019 18:25 Seq: 4903831 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.19	104	90-110	

CCV12 Date: 10-Jan-2019 18:49 Seq: 4903865 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.08	102	90-110	

CCV13 Date: 10-Jan-2019 19:09 Seq: 4903877 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.03	101	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: HG03_330807
Instrument: HG03
Method: E245.1

CCV14 Date: 10-Jan-2019 19:30 Seq: 4903889 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.04	101	90-110	

CCV15 Date: 10-Jan-2019 19:39 Seq: 4903894 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.99	100	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICV Date: 08-Jan-2019 12:16 Seq: 4899018 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.49	100	90-110	
Antimony	100	101.605	102	90-110	
Arsenic	100	101.68	102	90-110	
Barium	100	96.038	96	90-110	
Beryllium	100	94.819	95	90-110	
Cadmium	100	96.979	97	90-110	
Calcium	10000	10242.492	102	90-110	
Chromium	100	101.322	101	90-110	
Cobalt	100	102.489	102	90-110	
Copper	100	103.268	103	90-110	
Iron	10000	10034.015	100	90-110	
Lead	100	104.989	105	90-110	
Magnesium	10000	10227.564	102	90-110	
Manganese	100	102.563	103	90-110	
Nickel	100	103.192	103	90-110	
Potassium	10000	9497.549	95	90-110	
Selenium	100	103.022	103	90-110	
Silver	100	93.768	94	90-110	
Sodium	10000	10157.006	102	90-110	
Thallium	100	97.324	97	90-110	
Vanadium	100	100.681	101	90-110	
Zinc	100	94.978	95	90-110	

CCV1 Date: 08-Jan-2019 13:08 Seq: 4899283 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.744	103	90-110	
Antimony	100	99.588	100	90-110	
Arsenic	100	99.634	100	90-110	
Barium	100	96.414	96	90-110	
Beryllium	100	94.23	94	90-110	
Cadmium	100	93.052	93	90-110	
Calcium	10000	10471.408	105	90-110	
Chromium	100	98.885	99	90-110	
Cobalt	100	99.968	100	90-110	
Copper	100	103.855	104	90-110	
Iron	10000	10113.527	101	90-110	
Lead	100	104.075	104	90-110	
Magnesium	10000	10555.922	106	90-110	
Manganese	100	99.706	100	90-110	
Nickel	100	102.053	102	90-110	
Potassium	10000	9768.093	98	90-110	
Selenium	100	96.482	97	90-110	
Silver	100	90.748	91	90-110	
Sodium	10000	10334.403	103	90-110	
Thallium	100	92.42	92	90-110	
Vanadium	100	100.741	101	90-110	
Zinc	100	96.048	96	90-110	

CCV2 Date: 08-Jan-2019 13:29 Seq: 4899293 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	104.598	105	90-110	
Antimony	100	99.676	100	90-110	
Arsenic	100	100.341	100	90-110	
Barium	100	104.409	104	90-110	
Beryllium	100	100.149	100	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV2 Date: 08-Jan-2019 13:29 Seq: 4899293 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	102.306	102	90-110	
Calcium	10000	10790.195	108	90-110	
Chromium	100	103.257	103	90-110	
Cobalt	100	101.806	102	90-110	
Copper	100	103.814	104	90-110	
Iron	10000	10437.697	104	90-110	
Lead	100	85.841	86	90-110	S
Magnesium	10000	10679.648	107	90-110	
Manganese	100	103.238	103	90-110	
Nickel	100	103.282	103	90-110	
Potassium	10000	10004.209	100	90-110	
Selenium	100	95.824	96	90-110	
Silver	100	91.55	92	90-110	
Sodium	10000	10745.924	107	90-110	
Thallium	100	107.704	108	90-110	
Vanadium	100	105.911	106	90-110	
Zinc	100	94.972	95	90-110	

ICCV3 Date: 08-Jan-2019 13:58 Seq: 4899370 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.896	102	90-110	
Antimony	100	108.13	108	90-110	
Arsenic	100	102.595	103	90-110	
Barium	100	99.401	99	90-110	
Beryllium	100	105.784	106	90-110	
Cadmium	100	100.495	100	90-110	
Calcium	10000	10365.12	104	90-110	
Chromium	100	103.477	103	90-110	
Cobalt	100	101.886	102	90-110	
Copper	100	102.912	103	90-110	
Iron	10000	10770.2	108	90-110	
Lead	100	107.89	108	90-110	
Magnesium	10000	10833.633	108	90-110	
Manganese	100	103.994	104	90-110	
Nickel	100	102.444	102	90-110	
Potassium	10000	11058.641	111	90-110	S
Selenium	100	101.409	101	90-110	
Silver	100	105.36	105	90-110	
Sodium	10000	10862.277	109	90-110	
Thallium	100	93.223	93	90-110	
Vanadium	100	101.07	101	90-110	
Zinc	100	104.57	105	90-110	

CCV4 Date: 08-Jan-2019 14:26 Seq: 4899384 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	98.752	99	90-110	
Antimony	100	95.76	96	90-110	
Arsenic	100	95.992	96	90-110	
Barium	100	95.671	96	90-110	
Beryllium	100	103.17	103	90-110	
Cadmium	100	97.642	98	90-110	
Calcium	10000	9651.291	97	90-110	
Chromium	100	98.844	99	90-110	
Cobalt	100	98.462	99	90-110	
Copper	100	99.114	99	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV4 Date: 08-Jan-2019 14:26 Seq: 4899384 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Iron	10000	9965.505	100	90-110	
Lead	100	95.252	95	90-110	
Magnesium	10000	10037.586	100	90-110	
Manganese	100	98.154	98	90-110	
Nickel	100	98.539	99	90-110	
Potassium	10000	10146.382	101	90-110	
Selenium	100	94.187	94	90-110	
Silver	100	101.661	102	90-110	
Sodium	10000	10124.443	101	90-110	
Thallium	100	97.469	98	90-110	
Vanadium	100	98.207	98	90-110	
Zinc	100	102.03	102	90-110	

CCV5 Date: 08-Jan-2019 14:50 Seq: 4899571 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.425	100	90-110	
Antimony	100	95.574	96	90-110	
Arsenic	100	94.527	95	90-110	
Barium	100	96.514	97	90-110	
Beryllium	100	95.919	96	90-110	
Cadmium	100	99.631	100	90-110	
Calcium	10000	9661.674	97	90-110	
Chromium	100	97.838	98	90-110	
Cobalt	100	97.322	97	90-110	
Copper	100	98.79	99	90-110	
Iron	10000	9920.473	99	90-110	
Lead	100	96.426	96	90-110	
Magnesium	10000	9930.525	99	90-110	
Manganese	100	97.324	97	90-110	
Nickel	100	98.054	98	90-110	
Potassium	10000	10415.44	104	90-110	
Selenium	100	92.208	92	90-110	
Silver	100	105.469	105	90-110	
Sodium	10000	10011.592	100	90-110	
Thallium	100	88.402	88	90-110	S
Vanadium	100	96.301	96	90-110	
Zinc	100	103.63	104	90-110	

CCV6 Date: 08-Jan-2019 15:14 Seq: 4899583 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	96.168	96	90-110	
Antimony	100	93.183	93	90-110	
Arsenic	100	92.642	93	90-110	
Barium	100	95.604	96	90-110	
Beryllium	100	101.383	101	90-110	
Cadmium	100	96.198	96	90-110	
Calcium	10000	9552.166	96	90-110	
Chromium	100	96.716	97	90-110	
Cobalt	100	95.141	95	90-110	
Copper	100	94.919	95	90-110	
Iron	10000	9631.241	96	90-110	
Lead	100	94.52	95	90-110	
Magnesium	10000	9379.152	94	90-110	
Manganese	100	95.212	95	90-110	
Nickel	100	95.219	95	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV6 Date: 08-Jan-2019 15:14 Seq: 4899583 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Potassium	10000	9618.682	96	90-110	
Selenium	100	89.804	90	90-110	S
Silver	100	100.074	100	90-110	
Sodium	10000	9585.55	96	90-110	
Thallium	100	94.944	95	90-110	
Vanadium	100	93.602	94	90-110	
Zinc	100	97.345	97	90-110	

CCV7 Date: 08-Jan-2019 15:39 Seq: 4899598 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	105.153	105	90-110	
Antimony	100	105.763	106	90-110	
Arsenic	100	99.417	99	90-110	
Barium	100	95.276	95	90-110	
Beryllium	100	104.416	104	90-110	
Cadmium	100	95.864	96	90-110	
Calcium	10000	10913.933	109	90-110	
Chromium	100	103.276	103	90-110	
Cobalt	100	100.837	101	90-110	
Copper	100	105.64	106	90-110	
Iron	10000	10490.393	105	90-110	
Lead	100	99.226	99	90-110	
Magnesium	10000	10637.498	106	90-110	
Manganese	100	102.114	102	90-110	
Nickel	100	102.667	103	90-110	
Potassium	10000	10430.912	104	90-110	
Selenium	100	96.217	96	90-110	
Silver	100	99.964	100	90-110	
Sodium	10000	10805.476	108	90-110	
Thallium	100	99.735	100	90-110	
Vanadium	100	100.748	101	90-110	
Zinc	100	99.517	100	90-110	

ICCV8 Date: 08-Jan-2019 16:07 Seq: 4899745 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	108.136	108	90-110	
Antimony	100	105.926	106	90-110	
Arsenic	100	103.001	103	90-110	
Barium	100	96.528	97	90-110	
Beryllium	100	103.091	103	90-110	
Cadmium	100	94.412	94	90-110	
Calcium	10000	10774.582	108	90-110	
Chromium	100	102.493	102	90-110	
Cobalt	100	104.589	105	90-110	
Copper	100	104.122	104	90-110	
Iron	10000	10863.142	109	90-110	
Lead	100	106.757	107	90-110	
Magnesium	10000	10977.381	110	90-110	
Manganese	100	104.273	104	90-110	
Nickel	100	103.674	104	90-110	
Potassium	10000	9978.313	100	90-110	
Selenium	100	102.129	102	90-110	
Silver	100	99.813	100	90-110	
Sodium	10000	10836.875	108	90-110	
Thallium	100	95.451	96	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICCV8 Date: 08-Jan-2019 16:07 Seq: 4899745 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Vanadium	100	102.94	103	90-110	
Zinc	100	96.42	96	90-110	

CCV9 Date: 08-Jan-2019 16:46 Seq: 4899862 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	105.59	106	90-110	
Antimony	100	101.515	102	90-110	
Arsenic	100	101.058	101	90-110	
Barium	100	101.681	102	90-110	
Beryllium	100	108.097	108	90-110	
Cadmium	100	100.167	100	90-110	
Calcium	10000	10173.147	102	90-110	
Chromium	100	100.49	100	90-110	
Cobalt	100	104.01	104	90-110	
Copper	100	99.683	100	90-110	
Iron	10000	10379.026	104	90-110	
Lead	100	98.775	99	90-110	
Magnesium	10000	10457.718	105	90-110	
Manganese	100	100.947	101	90-110	
Nickel	100	103.505	104	90-110	
Potassium	10000	10277.671	103	90-110	
Selenium	100	104.595	105	90-110	
Silver	100	104.943	105	90-110	
Sodium	10000	10425.837	104	90-110	
Thallium	100	104.754	105	90-110	
Vanadium	100	101.742	102	90-110	
Zinc	100	103.268	103	90-110	

CCV10 Date: 08-Jan-2019 17:09 Seq: 4899873 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.585	103	90-110	
Antimony	100	101.784	102	90-110	
Arsenic	100	102.078	102	90-110	
Barium	100	101.168	101	90-110	
Beryllium	100	105.76	106	90-110	
Cadmium	100	98.834	99	90-110	
Calcium	10000	10274.155	103	90-110	
Chromium	100	103.101	103	90-110	
Cobalt	100	103.395	103	90-110	
Copper	100	100.551	101	90-110	
Iron	10000	10309.773	103	90-110	
Lead	100	98.988	99	90-110	
Magnesium	10000	10428.062	104	90-110	
Manganese	100	103.564	104	90-110	
Nickel	100	102.59	103	90-110	
Potassium	10000	10158.724	102	90-110	
Selenium	100	102.099	102	90-110	
Silver	100	102.415	102	90-110	
Sodium	10000	10598.014	106	90-110	
Thallium	100	107.045	107	90-110	
Vanadium	100	103.99	104	90-110	
Zinc	100	100.675	101	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV11 Date: 08-Jan-2019 17:33 Seq: 4899885 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.874	101	90-110	
Antimony	100	100.687	101	90-110	
Arsenic	100	99.728	100	90-110	
Barium	100	96.516	97	90-110	
Beryllium	100	99.831	100	90-110	
Cadmium	100	91.917	92	90-110	
Calcium	10000	10271.287	103	90-110	
Chromium	100	100.293	100	90-110	
Cobalt	100	101.338	101	90-110	
Copper	100	101.684	102	90-110	
Iron	10000	10195.128	102	90-110	
Lead	100	92.843	93	90-110	
Magnesium	10000	10307.629	103	90-110	
Manganese	100	103.428	103	90-110	
Nickel	100	99.261	99	90-110	
Potassium	10000	9290.834	93	90-110	
Selenium	100	102.839	103	90-110	
Silver	100	94.668	95	90-110	
Sodium	10000	10229.351	102	90-110	
Thallium	100	99.996	100	90-110	
Vanadium	100	101.224	101	90-110	
Zinc	100	93.168	93	90-110	

CCV12 Date: 08-Jan-2019 17:49 Seq: 4899897 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.437	101	90-110	
Antimony	100	101.041	101	90-110	
Arsenic	100	100.813	101	90-110	
Barium	100	91.346	91	90-110	
Beryllium	100	98.239	98	90-110	
Cadmium	100	92.101	92	90-110	
Calcium	10000	10109.754	101	90-110	
Chromium	100	98.527	99	90-110	
Cobalt	100	101.674	102	90-110	
Copper	100	100.056	100	90-110	
Iron	10000	10312.768	103	90-110	
Lead	100	115.553	116	90-110	S
Magnesium	10000	10458.185	105	90-110	
Manganese	100	100.826	101	90-110	
Nickel	100	101.749	102	90-110	
Potassium	10000	9574.37	96	90-110	
Selenium	100	104.571	105	90-110	
Silver	100	97.823	98	90-110	
Sodium	10000	10204.047	102	90-110	
Thallium	100	96.989	97	90-110	
Vanadium	100	100.643	101	90-110	
Zinc	100	96.361	96	90-110	

ICCV13 Date: 08-Jan-2019 19:46 Seq: 4900164 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	105.43	105	90-110	
Antimony	100	99.311	99	90-110	
Arsenic	100	101.98	102	90-110	
Barium	100	98.151	98	90-110	
Beryllium	100	87.337	87	90-110	S

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICCV13	Date: 08-Jan-2019 19:46		Seq: 4900164	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Cadmium	100	99.569	100	90-110	
Calcium	10000	10282.365	103	90-110	
Chromium	100	103.775	104	90-110	
Cobalt	100	101.986	102	90-110	
Copper	100	101.913	102	90-110	
Iron	10000	10403.171	104	90-110	
Lead	100	102.097	102	90-110	
Magnesium	10000	10330.365	103	90-110	
Manganese	100	104.258	104	90-110	
Nickel	100	101.887	102	90-110	
Potassium	10000	9868.062	99	90-110	
Selenium	100	103.429	103	90-110	
Silver	100	99.637	100	90-110	
Sodium	10000	10325.384	103	90-110	
Thallium	100	98.44	98	90-110	
Vanadium	100	102.106	102	90-110	
Zinc	100	97.896	98	90-110	

CCV14	Date: 08-Jan-2019 20:06		Seq: 4900174	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	101.732	102	90-110	
Antimony	100	98.583	99	90-110	
Arsenic	100	100.469	100	90-110	
Barium	100	97.97	98	90-110	
Beryllium	100	92.354	92	90-110	
Cadmium	100	98.514	99	90-110	
Calcium	10000	10135.144	101	90-110	
Chromium	100	99.933	100	90-110	
Cobalt	100	100.082	100	90-110	
Copper	100	100.774	101	90-110	
Iron	10000	10053.253	101	90-110	
Lead	100	100.02	100	90-110	
Magnesium	10000	10079.438	101	90-110	
Manganese	100	103.488	103	90-110	
Nickel	100	101.025	101	90-110	
Potassium	10000	9969.058	100	90-110	
Selenium	100	100.578	101	90-110	
Silver	100	100.57	101	90-110	
Sodium	10000	10167.761	102	90-110	
Thallium	100	98.417	98	90-110	
Vanadium	100	99.691	100	90-110	
Zinc	100	98.884	99	90-110	

CCV15	Date: 08-Jan-2019 20:29		Seq: 4900186	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	103.163	103	90-110	
Antimony	100	97.893	98	90-110	
Arsenic	100	100.839	101	90-110	
Barium	100	97.334	97	90-110	
Beryllium	100	94.279	94	90-110	
Cadmium	100	96.829	97	90-110	
Calcium	10000	10504.197	105	90-110	
Chromium	100	99.674	100	90-110	
Cobalt	100	98.96	99	90-110	
Copper	100	99.914	100	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV15 Date: 08-Jan-2019 20:29 Seq: 4900186 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Iron	10000	10068.435	101	90-110	
Lead	100	96.374	96	90-110	
Magnesium	10000	10191.922	102	90-110	
Manganese	100	102.443	102	90-110	
Nickel	100	99.316	99	90-110	
Potassium	10000	9899.367	99	90-110	
Selenium	100	102.765	103	90-110	
Silver	100	98.381	98	90-110	
Sodium	10000	10757.114	108	90-110	
Thallium	100	99.933	100	90-110	
Vanadium	100	101.077	101	90-110	
Zinc	100	96.489	97	90-110	

CCV16 Date: 08-Jan-2019 20:51 Seq: 4900197 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	106.379	106	90-110	
Antimony	100	93.311	93	90-110	
Arsenic	100	99.541	100	90-110	
Barium	100	95.926	96	90-110	
Beryllium	100	96.912	97	90-110	
Cadmium	100	99.601	100	90-110	
Calcium	10000	10948.347	109	90-110	
Chromium	100	105.81	106	90-110	
Cobalt	100	102.58	103	90-110	
Copper	100	102.007	102	90-110	
Iron	10000	10521.604	105	90-110	
Lead	100	155.462	155	90-110	S
Magnesium	10000	10641.966	106	90-110	
Manganese	100	106.039	106	90-110	
Nickel	100	103.847	104	90-110	
Potassium	10000	10500.888	105	90-110	
Selenium	100	106.687	107	90-110	
Silver	100	98.473	99	90-110	
Sodium	10000	12263.844	123	90-110	S
Thallium	100	101.173	101	90-110	
Vanadium	100	106.238	106	90-110	
Zinc	100	99.325	99	90-110	

ICCV17 Date: 08-Jan-2019 22:01 Seq: 4900288 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.871	101	90-110	
Antimony	100	101.124	101	90-110	
Arsenic	100	99.311	99	90-110	
Barium	100	105.983	106	90-110	
Beryllium	100	96.854	97	90-110	
Cadmium	100	108.762	109	90-110	
Calcium	10000	9852.67	99	90-110	
Chromium	100	101.382	101	90-110	
Cobalt	100	101.125	101	90-110	
Copper	100	103.245	103	90-110	
Iron	10000	10173.218	102	90-110	
Lead	100	109.824	110	90-110	
Magnesium	10000	10110.626	101	90-110	
Manganese	100	100.731	101	90-110	
Nickel	100	102.972	103	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICCV17 Date: 08-Jan-2019 22:01 Seq: 4900288 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Potassium	10000	10303.558	103	90-110	
Selenium	100	98.697	99	90-110	
Silver	100	107.755	108	90-110	
Sodium	10000	9992.799	100	90-110	
Thallium	100	103.859	104	90-110	
Vanadium	100	100.233	100	90-110	
Zinc	100	107.171	107	90-110	

CCV18 Date: 08-Jan-2019 22:17 Seq: 4900295 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.787	100	90-110	
Antimony	100	103.185	103	90-110	
Arsenic	100	100.631	101	90-110	
Barium	100	97.702	98	90-110	
Beryllium	100	92.004	92	90-110	
Cadmium	100	97.876	98	90-110	
Calcium	10000	10207.467	102	90-110	
Chromium	100	103.177	103	90-110	
Cobalt	100	102.144	102	90-110	
Copper	100	104.005	104	90-110	
Iron	10000	10337.206	103	90-110	
Lead	100	107.575	108	90-110	
Magnesium	10000	10215.256	102	90-110	
Manganese	100	102.869	103	90-110	
Nickel	100	103.994	104	90-110	
Potassium	10000	9756.231	98	90-110	
Selenium	100	100.397	100	90-110	
Silver	100	99.919	100	90-110	
Sodium	10000	10088.871	101	90-110	
Thallium	100	95.707	96	90-110	
Vanadium	100	101.079	101	90-110	
Zinc	100	99.772	100	90-110	

CCV19 Date: 08-Jan-2019 22:31 Seq: 4900302 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.753	100	90-110	
Antimony	100	99.957	100	90-110	
Arsenic	100	99.625	100	90-110	
Barium	100	97.287	97	90-110	
Beryllium	100	94.413	94	90-110	
Cadmium	100	98.3	98	90-110	
Calcium	10000	9957.336	100	90-110	
Chromium	100	101.635	102	90-110	
Cobalt	100	101.412	101	90-110	
Copper	100	102.699	103	90-110	
Iron	10000	10206.903	102	90-110	
Lead	100	110.813	111	90-110	S
Magnesium	10000	10094.908	101	90-110	
Manganese	100	102.706	103	90-110	
Nickel	100	102.312	102	90-110	
Potassium	10000	9800.96	98	90-110	
Selenium	100	98.812	99	90-110	
Silver	100	100.093	100	90-110	
Sodium	10000	10049.603	100	90-110	
Thallium	100	95.276	95	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV19 Date: 08-Jan-2019 22:31 Seq: 4900302 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Vanadium	100	100.723	101	90-110	
Zinc	100	98.058	98	90-110	

CCV20 Date: 08-Jan-2019 22:55 Seq: 4900314 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.718	102	90-110	
Antimony	100	98.904	99	90-110	
Arsenic	100	99.812	100	90-110	
Barium	100	93.69	94	90-110	
Beryllium	100	93.857	94	90-110	
Cadmium	100	98.437	98	90-110	
Calcium	10000	9954.949	100	90-110	
Chromium	100	102.005	102	90-110	
Cobalt	100	101.291	101	90-110	
Copper	100	102.898	103	90-110	
Iron	10000	10296.154	103	90-110	
Lead	100	120.128	120	90-110	S
Magnesium	10000	10364.164	104	90-110	
Manganese	100	102.835	103	90-110	
Nickel	100	101.973	102	90-110	
Potassium	10000	10037.713	100	90-110	
Selenium	100	102.354	102	90-110	
Silver	100	101.383	101	90-110	
Sodium	10000	10262.171	103	90-110	
Thallium	100	92.924	93	90-110	
Vanadium	100	101.685	102	90-110	
Zinc	100	98.705	99	90-110	

CCV21 Date: 08-Jan-2019 23:18 Seq: 4900326 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	98.591	99	90-110	
Antimony	100	100.324	100	90-110	
Arsenic	100	98.028	98	90-110	
Barium	100	104.083	104	90-110	
Beryllium	100	94.734	95	90-110	
Cadmium	100	106.672	107	90-110	
Calcium	10000	9802.358	98	90-110	
Chromium	100	100.039	100	90-110	
Cobalt	100	100.275	100	90-110	
Copper	100	100.981	101	90-110	
Iron	10000	10095.805	101	90-110	
Lead	100	112.537	113	90-110	S
Magnesium	10000	10008.484	100	90-110	
Manganese	100	99.991	100	90-110	
Nickel	100	102.565	103	90-110	
Potassium	10000	10322.581	103	90-110	
Selenium	100	96.749	97	90-110	
Silver	100	106.042	106	90-110	
Sodium	10000	9954.337	100	90-110	
Thallium	100	103.967	104	90-110	
Vanadium	100	99.776	100	90-110	
Zinc	100	104.407	104	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV22 Date: 08-Jan-2019 23:36 Seq: 4900335 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.432	102	90-110	
Antimony	100	98.38	98	90-110	
Arsenic	100	97.437	97	90-110	
Barium	100	110.882	111	90-110	S
Beryllium	100	97.622	98	90-110	
Cadmium	100	110.404	110	90-110	
Calcium	10000	10122.183	101	90-110	
Chromium	100	101.395	101	90-110	
Cobalt	100	100.267	100	90-110	
Copper	100	104.042	104	90-110	
Iron	10000	10103.98	101	90-110	
Lead	100	102.183	102	90-110	
Magnesium	10000	10445.022	104	90-110	
Manganese	100	103.077	103	90-110	
Nickel	100	101.826	102	90-110	
Potassium	10000	10864.536	109	90-110	
Selenium	100	95.748	96	90-110	
Silver	100	107.262	107	90-110	
Sodium	10000	10613.356	106	90-110	
Thallium	100	107.18	107	90-110	
Vanadium	100	101.724	102	90-110	
Zinc	100	109.131	109	90-110	

CCV23 Date: 09-Jan-2019 00:00 Seq: 4900347 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	103.066	103	90-110	
Antimony	100	94.216	94	90-110	
Arsenic	100	97.611	98	90-110	
Barium	100	112.381	112	90-110	S
Beryllium	100	101.611	102	90-110	
Cadmium	100	110.688	111	90-110	S
Calcium	10000	10310.198	103	90-110	
Chromium	100	102.316	102	90-110	
Cobalt	100	100.637	101	90-110	
Copper	100	101.704	102	90-110	
Iron	10000	10139.683	101	90-110	
Lead	100	97.379	97	90-110	
Magnesium	10000	10546.991	105	90-110	
Manganese	100	101.658	102	90-110	
Nickel	100	102.106	102	90-110	
Potassium	10000	11089.214	111	90-110	S
Selenium	100	95.68	96	90-110	
Silver	100	104.451	104	90-110	
Sodium	10000	11321.14	113	90-110	S
Thallium	100	106.359	106	90-110	
Vanadium	100	102.622	103	90-110	
Zinc	100	108.265	108	90-110	

CCV24 Date: 09-Jan-2019 00:18 Seq: 4900356 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	98.885	99	90-110	
Antimony	100	97.826	98	90-110	
Arsenic	100	99.676	100	90-110	
Barium	100	98.731	99	90-110	
Beryllium	100	89.125	89	90-110	S

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV24 | Date: 09-Jan-2019 00:18 | Seq: 4900356 | CCV | Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	100.442	100	90-110	
Calcium	10000	10062.95	101	90-110	
Chromium	100	102.261	102	90-110	
Cobalt	100	101.197	101	90-110	
Copper	100	105.069	105	90-110	
Iron	10000	10110.496	101	90-110	
Lead	100	108.44	108	90-110	
Magnesium	10000	10097.006	101	90-110	
Manganese	100	101.091	101	90-110	
Nickel	100	103.126	103	90-110	
Potassium	10000	9820.681	98	90-110	
Selenium	100	100.592	101	90-110	
Silver	100	97.323	97	90-110	
Sodium	10000	10339.292	103	90-110	
Thallium	100	91.062	91	90-110	
Vanadium	100	101.743	102	90-110	
Zinc	100	98.311	98	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

ICV	Date: 09-Jan-2019 12:15		Seq: 4901074	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	99.961	100	90-110	
Calcium	10000	9892.007	99	90-110	
Manganese	100	101.241	101	90-110	
Sodium	10000	10216.592	102	90-110	

CCV1	Date: 09-Jan-2019 12:43		Seq: 4901088	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	103.791	104	90-110	
Calcium	10000	10102.69	101	90-110	
Manganese	100	96.729	97	90-110	
Sodium	10000	9956.132	100	90-110	

CCV2	Date: 09-Jan-2019 13:07		Seq: 4901100	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	100.967	101	90-110	
Calcium	10000	9964.709	100	90-110	
Manganese	100	97.121	97	90-110	
Sodium	10000	10002.52	100	90-110	

CCV3	Date: 09-Jan-2019 13:27		Seq: 4901110	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	103.396	103	90-110	
Calcium	10000	9973.428	100	90-110	
Manganese	100	99.504	100	90-110	
Sodium	10000	10032.393	100	90-110	

ICCV4	Date: 09-Jan-2019 13:55		Seq: 4901190	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	101.147	101	90-110	
Calcium	10000	10229.973	102	90-110	
Manganese	100	101.359	101	90-110	
Sodium	10000	10310.67	103	90-110	

CCV5	Date: 09-Jan-2019 14:21		Seq: 4901203	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	96.555	97	90-110	
Calcium	10000	10261.536	103	90-110	
Manganese	100	104.221	104	90-110	
Sodium	10000	10426.397	104	90-110	

CCV6	Date: 09-Jan-2019 14:44		Seq: 4901340	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	110.246	110	90-110	
Calcium	10000	10268.77	103	90-110	
Manganese	100	102.179	102	90-110	
Sodium	10000	10378.779	104	90-110	

CCV7	Date: 09-Jan-2019 14:51		Seq: 4901344	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	106.872	107	90-110	
Calcium	10000	10630.808	106	90-110	
Manganese	100	104.495	104	90-110	
Sodium	10000	10507.816	105	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV8 Date: 09-Jan-2019 15:12 Seq: 4901358 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	97.616	98	90-110	
Calcium	10000	10110.273	101	90-110	
Manganese	100	100.462	100	90-110	
Sodium	10000	10204.331	102	90-110	

CCV9 Date: 09-Jan-2019 15:35 Seq: 4901506 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	100.953	101	90-110	
Calcium	10000	10491.564	105	90-110	
Manganese	100	103.266	103	90-110	
Sodium	10000	10128.735	101	90-110	

CCV10 Date: 09-Jan-2019 15:59 Seq: 4901518 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	97.834	98	90-110	
Calcium	10000	10117.767	101	90-110	
Manganese	100	100.552	101	90-110	
Sodium	10000	10279.956	103	90-110	

CCV11 Date: 09-Jan-2019 16:29 Seq: 4901553 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	99.698	100	90-110	
Calcium	10000	10016.144	100	90-110	
Manganese	100	99.216	99	90-110	
Sodium	10000	10004.697	100	90-110	

CCV12 Date: 09-Jan-2019 16:50 Seq: 4901706 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	95.781	96	90-110	
Calcium	10000	9964.873	100	90-110	
Manganese	100	99.245	99	90-110	
Sodium	10000	10246.542	102	90-110	

CCV13 Date: 09-Jan-2019 17:14 Seq: 4901718 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	100.668	101	90-110	
Calcium	10000	9756.209	98	90-110	
Manganese	100	98.903	99	90-110	
Sodium	10000	9661.529	97	90-110	

CCV14 Date: 09-Jan-2019 17:35 Seq: 4901795 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	98.679	99	90-110	
Calcium	10000	9731.52	97	90-110	
Manganese	100	98.695	99	90-110	
Sodium	10000	9365.115	94	90-110	

CCV15 Date: 09-Jan-2019 17:53 Seq: 4901804 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	102.371	102	90-110	
Calcium	10000	9906.353	99	90-110	
Manganese	100	99.834	100	90-110	
Sodium	10000	9705.659	97	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV16 Date: 09-Jan-2019 18:17 Seq: 4901919 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	103.727	104	90-110	
Calcium	10000	9637.71	96	90-110	
Manganese	100	96.696	97	90-110	
Sodium	10000	9397.619	94	90-110	

CCV17 Date: 09-Jan-2019 18:27 Seq: 4901924 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	96.679	97	90-110	
Calcium	10000	9685.007	97	90-110	
Manganese	100	98.047	98	90-110	
Sodium	10000	9378.091	94	90-110	

ICCV18 Date: 09-Jan-2019 19:28 Seq: 4902043 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	98.366	98	90-110	
Calcium	10000	9963.214	100	90-110	
Manganese	100	100.801	101	90-110	
Sodium	10000	10278.577	103	90-110	

CCV19 Date: 09-Jan-2019 19:46 Seq: 4902121 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	102.288	102	90-110	
Calcium	10000	9847.064	99	90-110	
Manganese	100	100.897	101	90-110	
Sodium	10000	10315.06	103	90-110	

CCV20 Date: 09-Jan-2019 20:02 Seq: 4902181 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	103.636	104	90-110	
Calcium	10000	10166.824	102	90-110	
Manganese	100	101.852	102	90-110	
Sodium	10000	10540.021	105	90-110	

CCV21 Date: 09-Jan-2019 20:25 Seq: 4902193 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	104.257	104	90-110	
Calcium	10000	10020.185	100	90-110	
Manganese	100	100.508	101	90-110	
Sodium	10000	10351.401	104	90-110	

CCV22 Date: 09-Jan-2019 20:43 Seq: 4902202 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	102.724	103	90-110	
Calcium	10000	9828.264	98	90-110	
Manganese	100	98.924	99	90-110	
Sodium	10000	10045.106	100	90-110	

CCV23 Date: 09-Jan-2019 21:01 Seq: 4902211 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	101.556	102	90-110	
Calcium	10000	9924.528	99	90-110	
Manganese	100	99.143	99	90-110	
Sodium	10000	10058.463	101	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV24 Date: 09-Jan-2019 21:25 Seq: 4902223 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	100.112	100	90-110	
Calcium	10000	9916.612	99	90-110	
Manganese	100	100.188	100	90-110	
Sodium	10000	10106.073	101	90-110	

CCV25 Date: 09-Jan-2019 21:44 Seq: 4902233 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	100.08	100	90-110	
Calcium	10000	9872.997	99	90-110	
Manganese	100	101.296	101	90-110	
Sodium	10000	10081.074	101	90-110	

CCV26 Date: 09-Jan-2019 22:06 Seq: 4902244 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	98.295	98	90-110	
Calcium	10000	9707.852	97	90-110	
Manganese	100	99.976	100	90-110	
Sodium	10000	9993.583	100	90-110	

CCV27 Date: 09-Jan-2019 22:20 Seq: 4902251 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	103.642	104	90-110	
Calcium	10000	9416.24	94	90-110	
Manganese	100	99.099	99	90-110	
Sodium	10000	9924.536	99	90-110	

CCV28 Date: 09-Jan-2019 22:47 Seq: 4902301 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	105.249	105	90-110	
Calcium	10000	10004.72	100	90-110	
Manganese	100	101.65	102	90-110	
Sodium	10000	9886.342	99	90-110	

CCV29 Date: 09-Jan-2019 23:07 Seq: 4902311 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	108.091	108	90-110	
Calcium	10000	9851.025	99	90-110	
Manganese	100	100.931	101	90-110	
Sodium	10000	10147.585	101	90-110	

CCV30 Date: 09-Jan-2019 23:29 Seq: 4902341 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	105.87	106	90-110	
Calcium	10000	9219.603	92	90-110	
Manganese	100	95.064	95	90-110	
Sodium	10000	9315.504	93	90-110	

CCV31 Date: 09-Jan-2019 23:52 Seq: 4902353 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	104.916	105	90-110	
Calcium	10000	9719.431	97	90-110	
Manganese	100	101.389	101	90-110	
Sodium	10000	9763.152	98	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV32 Date: 10-Jan-2019 00:16 Seq: 4902365 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	100.141	100	90-110	
Calcium	10000	9462.835	95	90-110	
Manganese	100	97.967	98	90-110	
Sodium	10000	9415.681	94	90-110	

CCV33 Date: 10-Jan-2019 00:34 Seq: 4902605 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	98.973	99	90-110	
Calcium	10000	9196.918	92	90-110	
Manganese	100	97.629	98	90-110	
Sodium	10000	9210.56	92	90-110	

CCV34 Date: 10-Jan-2019 00:58 Seq: 4902617 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	103.875	104	90-110	
Calcium	10000	9249.971	93	90-110	
Manganese	100	95.25	95	90-110	
Sodium	10000	8995.108	90	90-110	

CCV35 Date: 10-Jan-2019 01:02 Seq: 4902619 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	102.056	102	90-110	
Calcium	10000	9232.172	92	90-110	
Manganese	100	94.643	95	90-110	
Sodium	10000	8935.714	89	90-110	S

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: HG03_330807
Instrument: HG03
Method: SW7470

ICB	Date: 10-Jan-2019 13:36		Seq: 4903437	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.031	0.03	0.2	J	

CCB1	Date: 10-Jan-2019 14:00		Seq: 4903446	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB2	Date: 10-Jan-2019 14:20		Seq: 4903458	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB3	Date: 10-Jan-2019 14:40		Seq: 4903469	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB4	Date: 10-Jan-2019 15:08		Seq: 4903481	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB5	Date: 10-Jan-2019 15:29		Seq: 4903493	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB6	Date: 10-Jan-2019 15:56		Seq: 4903528	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB7	Date: 10-Jan-2019 16:15		Seq: 4903539	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.033	0.03	0.2	J	

CCB8	Date: 10-Jan-2019 16:32		Seq: 4903580	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB9	Date: 10-Jan-2019 18:06		Seq: 4903820	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.033	0.03	0.2	J	

CCB10	Date: 10-Jan-2019 18:27		Seq: 4903832	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.034	0.03	0.2	J	

CCB11	Date: 10-Jan-2019 18:50		Seq: 4903866	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.034	0.03	0.2	J	

MBLK-136505	Date: 10-Jan-2019 18:52		Seq: 4903867	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.043	0.03	0.2	J	

CCB12	Date: 10-Jan-2019 19:11		Seq: 4903878	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.04	0.03	0.2	J	

CCB13	Date: 10-Jan-2019 19:32		Seq: 4903890	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.035	0.03	0.2	J	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: HG03_330807
Instrument: HG03
Method: SW7470

CCB14 | Date: 10-Jan-2019 19:41 | Seq: 4903895 | CCB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Mercury	0.036	0.03	0.2	J

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICB | Date: 08-Jan-2019 12:22 | Seq: 4899021 | ICB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	28.02	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	200	14	200	U
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB1 | Date: 08-Jan-2019 13:03 | Seq: 4899281 | CCB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	3.499	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	40.02	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	24.55	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	35.5	14	200	J
Thallium	1.147	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB2 | Date: 08-Jan-2019 13:31 | Seq: 4899294 | CCB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	2.935	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB2	Date: 08-Jan-2019 13:31		Seq: 4899294	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	22.53	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	75.66	14	200	J	
Thallium	1.194	0.2	2	J	
Vanadium	0.631	0.6	5	J	
Zinc	4	2	4	U	

ICCB3	Date: 08-Jan-2019 14:04		Seq: 4899373	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-40.86	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-18.16	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	-1.868	0.6	5	J	
Zinc	4	2	4	U	

CCB4	Date: 08-Jan-2019 14:28		Seq: 4899385	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	1.491	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB4	Date: 08-Jan-2019 14:28		Seq: 4899385	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	29.48	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	27.25	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	-1.807	0.6	5	J	
Zinc	4	2	4	U	

CCB5	Date: 08-Jan-2019 14:52		Seq: 4899572	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	1.358	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-19.18	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	-1.999	0.6	5	J	
Zinc	4	2	4	U	

CCB6	Date: 08-Jan-2019 15:16		Seq: 4899584	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	1.435	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB6	Date: 08-Jan-2019 15:16		Seq: 4899584	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Potassium	-48.5	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	-2.19	0.6	5	J	
Zinc	4	2	4	U	

CCB7	Date: 08-Jan-2019 15:41		Seq: 4899601	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-18.24	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-14.88	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	-2.263	0.6	5	J	
Zinc	4	2	4	U	

ICCB8	Date: 08-Jan-2019 16:13		Seq: 4899748	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-36.13	18	200	J	
Selenium	-1.211	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICCB8	Date: 08-Jan-2019 16:13		Seq: 4899748	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Vanadium	-0.895	0.6	5	J	
Zinc	4	2	4	U	

MBLK-136231	Date: 08-Jan-2019 16:34		Seq: 4899851	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	4.269	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	11.38	10	200	J	
Manganese	0.911	0.7	5	J	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB9	Date: 08-Jan-2019 16:44		Seq: 4899861	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-36.01	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	27.96	14	200	J	
Thallium	0.218	0.2	2	J	
Vanadium	-0.818	0.6	5	J	
Zinc	4	2	4	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB10 Date: 08-Jan-2019 17:11 Seq: 4899874 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	1.05	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	-36.47	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	94.22	14	200	J
Thallium	0.255	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB11 Date: 08-Jan-2019 17:35 Seq: 4899886 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	1.068	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	-37.88	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	120.6	14	200	J
Thallium	0.266	0.2	2	J
Vanadium	-1.065	0.6	5	J
Zinc	4	2	4	U

CCB12 Date: 08-Jan-2019 17:51 Seq: 4899898 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.947	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB12	Date: 08-Jan-2019 17:51		Seq: 4899898	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-66.14	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	55.11	14	200	J	
Thallium	0.229	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

ICCB13	Date: 08-Jan-2019 19:48		Seq: 4900165	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.806	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	0.266	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB14	Date: 08-Jan-2019 20:07		Seq: 4900175	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	1.009	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB14 Date: 08-Jan-2019 20:07 Seq: 4900175 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	0.791	0.7	5	J
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	15.02	14	200	J
Thallium	0.4	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB15 Date: 08-Jan-2019 20:31 Seq: 4900187 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.707	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	39.34	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	11.71	10	200	J
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	267.2	14	200	
Thallium	0.377	0.2	2	J
Vanadium	1.347	0.6	5	J
Zinc	4	2	4	U

CCB16 Date: 08-Jan-2019 20:53 Seq: 4900198 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.673	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	40.02	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB16	Date: 08-Jan-2019 20:53		Seq: 4900198	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	1473	14	200		
Thallium	0.397	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

ICCB17	Date: 08-Jan-2019 22:03		Seq: 4900289	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.799	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	0.342	0.2	2	J	
Vanadium	-0.808	0.6	5	J	
Zinc	4	2	4	U	

CCB18	Date: 08-Jan-2019 22:19		Seq: 4900296	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.583	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-42.34	14	200	J	
Thallium	0.35	0.2	2	J	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB18	Date: 08-Jan-2019 22:19		Seq: 4900296	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Vanadium	-0.826	0.6	5	J	
Zinc	4	2	4	U	

CCB19	Date: 08-Jan-2019 22:33		Seq: 4900303	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.755	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	39.45	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-33.42	14	200	J	
Thallium	0.393	0.2	2	J	
Vanadium	-0.91	0.6	5	J	
Zinc	4	2	4	U	

CCB20	Date: 08-Jan-2019 22:57		Seq: 4900315	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.53	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-20.86	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	0.299	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB21 Date: 08-Jan-2019 23:20 Seq: 4900327 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.588	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	-30.47	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	-46.74	14	200	J
Thallium	0.408	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB22 Date: 08-Jan-2019 23:38 Seq: 4900336 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.685	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	41.64	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	20.15	10	200	J
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	82.27	14	200	J
Thallium	0.469	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB23 Date: 09-Jan-2019 00:02 Seq: 4900348 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.484	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB23	Date: 09-Jan-2019 00:02		Seq: 4900348	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	23.56	10	200	J	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	462.9	14	200		
Thallium	0.395	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB24	Date: 09-Jan-2019 00:19		Seq: 4900357	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.613	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	14.61	10	200	J	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	115.5	14	200	J	
Thallium	0.5	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

ICB	Date: 09-Jan-2019 12:13		Seq: 4901073	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	200	14	200	U	

CCB1	Date: 09-Jan-2019 12:45		Seq: 4901089	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	47.44	14	200	J	

CCB2	Date: 09-Jan-2019 13:09		Seq: 4901101	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	46.99	14	200	J	

CCB3	Date: 09-Jan-2019 13:29		Seq: 4901111	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	39	14	200	J	

ICCB4	Date: 09-Jan-2019 14:01		Seq: 4901193	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	200	14	200	U	

CCB5	Date: 09-Jan-2019 14:23		Seq: 4901204	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	15.13	14	200	J	

CCB6	Date: 09-Jan-2019 14:46		Seq: 4901341	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	200	14	200	U	

CCB7	Date: 09-Jan-2019 15:14		Seq: 4901359	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	200	14	200	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB8	Date: 09-Jan-2019 15:37		Seq: 4901507	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	200	14	200	U	

CCB9	Date: 09-Jan-2019 16:01		Seq: 4901519	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	45.74	14	200	J	

CCB10	Date: 09-Jan-2019 16:25		Seq: 4901551	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	54.44	14	200	J	

CCB11	Date: 09-Jan-2019 16:52		Seq: 4901707	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	108.8	14	200	J	

CCB12	Date: 09-Jan-2019 17:16		Seq: 4901719	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	49.17	14	200	J	

CCB13	Date: 09-Jan-2019 17:37		Seq: 4901796	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	14.84	14	200	J	

CCB14	Date: 09-Jan-2019 17:55		Seq: 4901805	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	200	14	200	U	

CCB15	Date: 09-Jan-2019 18:19		Seq: 4901920	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	128.1	14	200	J	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB16	Date: 09-Jan-2019 18:29		Seq: 4901925	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	50.77	14	200	J	

ICCB17	Date: 09-Jan-2019 19:34		Seq: 4902046	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	200	14	200	U	

CCB18	Date: 09-Jan-2019 19:48		Seq: 4902122	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	112.9	14	200	J	

CCB19	Date: 09-Jan-2019 20:04		Seq: 4902182	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	193.1	14	200	J	

CCB20	Date: 09-Jan-2019 20:27		Seq: 4902194	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	59.7	14	200	J	

CCB21	Date: 09-Jan-2019 20:45		Seq: 4902203	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	27.78	14	200	J	

CCB22	Date: 09-Jan-2019 21:03		Seq: 4902212	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	16	14	200	J	

CCB23	Date: 09-Jan-2019 21:27		Seq: 4902224	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	16.4	14	200	J	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB24	Date: 09-Jan-2019 21:46		Seq: 4902234	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	200	14	200	U	

CCB25	Date: 09-Jan-2019 22:08		Seq: 4902245	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	22.46	14	200	J	

CCB26	Date: 09-Jan-2019 22:22		Seq: 4902252	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	200	14	200	U	

CCB27	Date: 09-Jan-2019 22:42		Seq: 4902299	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	22.58	14	200	J	

CCB28	Date: 09-Jan-2019 23:09		Seq: 4902312	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	66.79	14	200	J	

CCB29	Date: 09-Jan-2019 23:31		Seq: 4902342	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	44.42	14	200	J	

CCB30	Date: 09-Jan-2019 23:54		Seq: 4902354	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	49.07	14	200	J	

CCB31	Date: 10-Jan-2019 00:18		Seq: 4902366	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	40.47	14	200	J	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB32	Date: 10-Jan-2019 00:36		Seq: 4902606	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	39.58	14	200	J	

CCB33	Date: 10-Jan-2019 01:00		Seq: 4902618	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	18.95	14	200	J	

CCB34	Date: 10-Jan-2019 01:04		Seq: 4902620	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Calcium	500	34	500	U	
Manganese	5	0.7	5	U	
Sodium	16.83	14	200	J	

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS05_330637

Project: LHAAP 18/24 Instrument:ICPMS05

WorkOrder: HS18121558 Method:SW6020

ICSA	Date: 08-Jan-2019 12:34	Seq: 4899267	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	97360	97.4	
Antimony		0.105	0	
Arsenic		0.154	0	
Barium		0.145	0	
Beryllium		0.004	0	
Cadmium		1.982	0	
Calcium	100000	100400	100	
Chromium		0.252	0	
Cobalt		0.283	0	
Copper		-0.064	0	
Iron	100000	99670	99.7	
Lead		0.071	0	
Magnesium	100000	100200	100	
Manganese		0.381	0	
Nickel		0.276	0	
Potassium	100000	103000	103	
Selenium		0.392	0	
Silver		-0.165	0	
Sodium	100000	100700	101	
Thallium		-0.013	0	
Vanadium		-0.446	0	
Zinc		2.128	0	

ICSAB	Date: 08-Jan-2019 12:36	Seq: 4899268	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	95850	95.4	
Antimony	100	115.1	115	
Arsenic	100	113.2	113	
Barium	100	110.4	110	
Beryllium	100	110.5	110	
Cadmium	100	112.3	112	
Calcium	110000	110900	101	
Chromium	100	112.3	112	
Cobalt	100	114.9	115	
Copper	100	112.5	112	
Iron	110000	110400	100	
Lead	100	112.5	113	
Magnesium	110000	109100	99.2	
Manganese	100	112.2	112	
Nickel	100	114.1	114	
Potassium	110000	103600	94.2	
Selenium	100	114.8	115	
Silver	100	101.9	102	
Sodium	110000	109600	99.6	
Thallium	100	104	104	
Vanadium	100	113.1	113	
Zinc	100	107.9	108	

ICSA	Date: 09-Jan-2019 00:25	Seq: 4900360	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	100300	100	
Antimony		0.243	0	
Arsenic		0.092	0	
Barium		0.302	0	

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS05_330637

Project: LHAAP 18/24 Instrument:ICPMS05

WorkOrder: HS18121558 Method:SW6020

ICSA	Date: 09-Jan-2019 00:25	Seq: 4900360	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Beryllium		0.011	0	
Cadmium		2.533	0	
Calcium	100000	103400	103	
Chromium		0.275	0	
Cobalt		0.306	0	
Copper		0.492	0	
Iron	100000	107800	108	
Lead		0.078	0	
Magnesium	100000	105300	105	
Manganese		0.284	0	
Nickel		0.174	0	
Potassium	100000	104700	105	
Selenium		0.041	0	
Silver		0.013	0	
Sodium	100000	106700	107	
Thallium		0.026	0	
Vanadium		-0.377	0	
Zinc		1.332	0	

ICSAB	Date: 09-Jan-2019 00:27	Seq: 4900361	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	97400	96.9	
Antimony	100	115.9	116	
Arsenic	100	116.2	116	
Barium	100	124.7	125	
Beryllium	100	108.4	108	
Cadmium	100	127.9	128	
Calcium	110000	110700	101	
Chromium	100	113.1	113	
Cobalt	100	113.8	114	
Copper	100	116.2	116	
Iron	110000	116200	106	
Lead	100	112.9	113	
Magnesium	110000	113200	103	
Manganese	100	112.8	113	
Nickel	100	115.4	115	
Potassium	110000	121700	111	
Selenium	100	115	115	
Silver	100	117.9	118	
Sodium	110000	114200	104	
Thallium	100	114.6	115	
Vanadium	100	115.3	115	
Zinc	100	123.9	124	

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Run ID:ICPMS05_330716
Instrument:ICPMS05
Method:SW6020

ICSA	Date: 09-Jan-2019 12:17	Seq: 4901075	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium		0.244	0	
Calcium	100000	101700	102	
Manganese		0.306	0	
Sodium	100000	106100	106	
ICSAB	Date: 09-Jan-2019 12:19	Seq: 4901076	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium	100	123.7	124	
Calcium	110000	115500	105	
Manganese	100	116.4	116	
Sodium	110000	117200	107	
ICSA	Date: 10-Jan-2019 01:10	Seq: 4902623	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium		0.156	0	
Calcium	100000	93910	93.9	
Manganese		0.07	0	
Sodium	100000	96520	96.5	
ICSAB	Date: 10-Jan-2019 01:12	Seq: 4902624	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium	100	119.1	119	
Calcium	110000	104400	94.9	
Manganese	100	108.6	109	
Sodium	110000	105900	96.3	

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Date Analyzed: 10-Jan-2019 18:59
Date Extracted: 10-Jan-2019 13:30
Units: ug/L

Matrix Spike: HS19010248-03MS
Client Sample ID:

Analysis Method: SW7470

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Mercury	0.03200	5.130	5.000	102	5.060	5.000	101	75-125	1.37	20

ALS Houston, US

Date: 19-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Date Analyzed: 08-Jan-2019 16:51
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Matrix Spike: HS18121117-01MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aluminum	24.80	163.1	100.0	138	165.4	100.0	141	80-120	1.42	20
Antimony	2.000	56.56	50.00	113	58.07	50.00	116	80-120	2.63	20
Arsenic	1.232	53.99	50.00	106	57.10	50.00	112	80-120	5.59	20
Barium	784.0	833.4	50.00	98.8	855.9	50.00	144	80-120	2.67	20
Beryllium	2.000	60.61	50.00	121	60.62	50.00	121	80-120	0.00990	20
Cadmium	2.000	48.54	50.00	96.7	49.75	50.00	99.1	80-120	2.46	20
Calcium	65420	68510	5000	61.8	72350	5000	139	80-120	5.46	20
Chromium	11.31	62.41	50.00	102	65.18	50.00	108	80-120	4.34	20
Cobalt	3.152	55.52	50.00	105	57.02	50.00	108	80-120	2.67	20
Copper	2.000	52.05	50.00	105	53.76	50.00	108	80-120	3.24	20
Iron	1744	7021	5000	106	7316	5000	111	80-120	4.11	20
Lead	2.000	51.16	50.00	102	51.34	50.00	103	80-120	0.361	20
Magnesium	42080	45430	5000	67.0	46670	5000	91.8	80-120	2.69	20
Manganese	601.3	641.4	50.00	80.1	658.7	50.00	115	80-120	2.67	20
Nickel	8.904	60.54	50.00	103	63.05	50.00	108	80-120	4.05	20
Potassium	49190	57380	5000	164	52460	5000	65.5	80-120	8.96	20
Selenium	2.000	54.16	50.00	109	54.98	50.00	111	80-120	1.50	20
Silver	2.000	51.82	50.00	104	48.94	50.00	97.8	80-120	5.72	20
Sodium	272500	276700	5000	84.0	277800	5000	107	80-120	0.408	20
Thallium	0.7070	43.94	50.00	86.5	49.92	50.00	98.4	80-120	12.7	20
Vanadium	5.000	52.51	50.00	106	56.22	50.00	113	80-120	6.84	20
Zinc	13.71	65.40	50.00	103	61.88	50.00	96.3	80-120	5.52	20

ALS Houston, US

Date: 19-Jan-19

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Date Analyzed: 08-Jan-2019 16:53
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: HS18121117-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Aluminum	24.8	143	100	118	75-125
Antimony	0	121	100	121	75-125
Arsenic	1.232	122.7	100	121	75-125
Barium	784	923.9	100	140	75-125
Beryllium	0	134.3	100	134	75-125
Cadmium	0	113.6	100	113	75-125
Calcium	65420	76720	10000	113	75-125
Chromium	11.31	131.2	100	120	75-125
Cobalt	3.152	124	100	121	75-125
Copper	0	117.1	100	117	75-125
Iron	1744	14310	10000	126	75-125
Lead	0	110	100	110	75-125
Magnesium	42080	52700	10000	106	75-125
Manganese	601.3	749.6	100	148	75-125
Nickel	8.904	127.5	100	119	75-125
Potassium	49190	60420	10000	112	75-125
Selenium	0	125.7	100	126	75-125
Silver	0	107	100	107	75-125
Thallium	0.707	114.7	100	114	75-125
Vanadium	0	122.5	100	123	75-125
Zinc	13.71	124	100	110	75-125

ALS Houston, US

Date: 19-Jan-19

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Date Analyzed: 09-Jan-2019 15:53
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: HS18121117-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Sodium	248900	477900	200000	115	75-125

ALS Houston, US

Date: 19-Jan-19

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Date Analyzed: 10-Jan-2019 18:54
Date Extracted: 10-Jan-2019 13:30
Units: ug/L

Lab Sample ID: LCS-136505

Analysis Method: SW7470

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Mercury	5	5.09	102	80-120

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Date Analyzed: 08-Jan-2019 16:36
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: LCS-136231 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Aluminum	100	115.7	116	80-120
Antimony	50	58.35	117	80-120
Arsenic	50	55.51	111	80-120
Barium	50	54.9	110	80-120
Beryllium	50	57.64	115	80-120
Cadmium	50	54.38	109	80-120
Chromium	50	56.22	112	80-120
Cobalt	50	57.35	115	80-120
Copper	50	56.38	113	80-120
Iron	5000	5789	116	80-120
Lead	50	59.41	119	80-120
Magnesium	5000	5938	119	80-120
Manganese	50	55.43	111	80-120
Nickel	50	57.26	115	80-120
Potassium	5000	5839	117	80-120
Selenium	50	55.85	112	80-120
Silver	50	57.81	116	80-120
Sodium	5000	5817	116	80-120
Thallium	50	55.07	110	80-120
Vanadium	50	56.2	112	80-120
Zinc	50	59.15	118	80-120

ALS Houston, US

Date: 19-Jan-19

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Date Analyzed: 09-Jan-2019 14:34
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: LCS-136231

Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Calcium	5000	5955	119	80-120

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Date Analyzed: 08-Jan-2019 16:40
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: HS18121117-01SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Aluminum	24.8		32.48	J	31	
Antimony	0	U	0	U	0	
Arsenic	1.232	J	0	U	0	
Barium	784		756.7		3	
Beryllium	0	U	0	U	0	
Cadmium	0	U	0	U	0	
Calcium	65420		61970		5	
Chromium	11.31		11.08	J	2	
Cobalt	3.152	J	3.171	J	1	
Copper	0	U	0	U	0	
Iron	1744		1587		9	
Lead	0	U	0	U	0	
Magnesium	42080		39200		7	
Manganese	601.3		565.8		6	
Nickel	8.904		5.621	J	37	
Potassium	49190		50600		3	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	
Thallium	0.707	J	0	U	0	
Vanadium	0	U	0	U	0	
Zinc	13.71		18.87	J	38	

ALS Houston, US

Date: 19-Jan-19

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Date Analyzed: 09-Jan-2019 14:38
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: HS18121117-01SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Sodium	248900		270300		9	

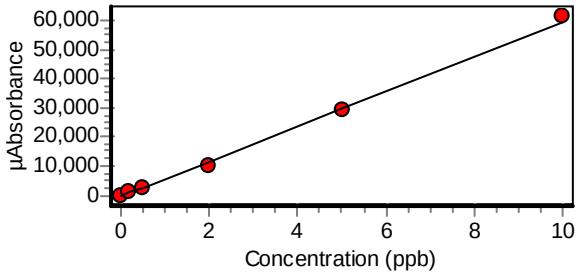
Report Generated By CETAC QuickTrace
Analyst: ALSHS.NoUser
Worksheet file: C:\Program Files (x86)\QuickTrace\Worksheets\011019AW.wsz
Date Started: 1/10/2019 1:01:32 PM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank					STD	01/10/19 01:18:25 pm	0.000	74	11.84	
Replicates	79.1	79.3	61.1	77.1						
Standard #1 (0.2 ppb)					STD	01/10/19 01:20:06 pm	0.200	1238	0.69	
Replicates	1231.9	1246.8	1229.8	1244.0						
Standard #2 (0.5 ppb)					STD	01/10/19 01:21:48 pm	0.500	2450	0.39	
Replicates	2441.4	2453.0	2443.3	2462.0						
Standard #3 (2.0 ppb)					STD	01/10/19 01:23:31 pm	2.000	10345	0.94	
Replicates	10226.3	10316.5	10383.7	10455.2						
Standard #4 (5.0 ppb)					STD	01/10/19 01:25:14 pm	5.000	29128	1.00	
Replicates	28751.2	29070.3	29265.5	29426.3						
Standard #5 (10.0 ppb)					STD	01/10/19 01:29:46 pm	10.000	61333	0.53	
Replicates	60927.2	61250.0	61462.0	61693.8						

Calibration

Equation: A = -160.449 + 5972.530C
R2: 0.99801
SEE: 1200.6000
Flags:



ICCV					UNK	01/10/19 01:32:51 pm	5.190	30866	0.30	
Replicates	30743.8	30846.8	30915.8	30958.8						
ICV					UNK	01/10/19 01:34:32 pm	5.140	30516	0.34	
Replicates	30386.5	30481.5	30575.5	30618.5						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
ICB					UNK	01/10/19 01:36:14 pm	0.031	26	21.20	
	Replicates	34.0	22.2	27.2	22.2					
CRA					UNK	01/10/19 01:37:55 pm	0.235	1245	1.07	
	Replicates	1234.6	1248.4	1233.6	1261.9					
MBLK-136484					UNK	01/10/19 01:48:14 pm	0.043	94	9.44	s
	Replicates	82.1	100.7	91.2	100.4					
LCS-136484					UNK	01/10/19 01:49:56 pm	5.250	31203	0.15	
	Replicates	31141.6	31201.8	31215.0	31251.8					
HS19010243-02					UNK	01/10/19 01:51:39 pm	0.030	20	90.83	
	Replicates	-6.7	27.8	25.0	33.8					
HS19010243-02MS					UNK	01/10/19 01:53:22 pm	5.180	30769	0.49	
	Replicates	30580.6	30712.7	30875.0	30905.7					
HS19010243-01MSD					UNK	01/10/19 01:55:05 pm	5.240	31153	0.30	
	Replicates	31043.2	31122.2	31180.9	31263.7					
MBLKT1-136484					UNK	01/10/19 01:56:48 pm	0.025	-13	176.07	
	Replicates	-2.5	-45.7	-13.5	8.5					
CCV					CCV	01/10/19 01:58:32 pm	5.240	31129	0.18	
	Replicates	31047.8	31131.0	31155.7	31180.0					
	% Recovery	104.78								
CCB					CCB	01/10/19 02:00:16 pm	0.023	-22	76.11	
	Replicates	-13.3	-46.8	-17.1	-10.8					
HS18121466-01					UNK	01/10/19 02:02:00 pm	0.035	48	25.79	
	Replicates	34.2	64.0	45.5	46.7					
HS18121471-01					UNK	01/10/19 02:03:44 pm	0.053	155	4.12	
	Replicates	156.5	162.4	156.1	146.9					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121486-01					UNK	01/10/19 02:05:25 pm	1.020	5928	1.67	
Replicates	5810.2	5889.8	5976.3	6037.0						
HS19010069-01					UNK	01/10/19 02:07:05 pm	0.020	-39	20.51	
Replicates	-44.6	-47.1	-32.4	-31.9						
HS19010108-01					UNK	01/10/19 02:08:47 pm	0.022	-29	46.91	
Replicates	-37.0	-11.3	-26.5	-42.5						
HS19010108-02					UNK	01/10/19 02:10:28 pm	0.025	-9	206.78	
Replicates	17.6	-23.9	-8.6	-22.4						
HS19010132-01					UNK	01/10/19 02:12:10 pm	0.034	42	17.26	
Replicates	46.9	44.0	31.5	46.8						
HS19010134-01					UNK	01/10/19 02:13:52 pm	0.029	15	84.33	
Replicates	18.1	-2.6	26.9	16.6						
HS19010243-01					UNK	01/10/19 02:15:34 pm	0.026	-5	271.73	
Replicates	-13.3	14.6	-8.2	-12.4						
HS19010255-01					UNK	01/10/19 02:17:16 pm	0.028	6	314.28	
Replicates	16.2	17.2	-19.8	8.4						
CCV					CCV	01/10/19 02:19:00 pm	5.240	31148	0.20	
Replicates	31076.7	31120.7	31172.4	31221.2						
% Recovery	104.84									
CCB					CCB	01/10/19 02:20:45 pm	0.022	-30	50.91	
Replicates	-42.5	-12.2	-23.0	-44.2						
HS19010255-02					UNK	01/10/19 02:22:27 pm	0.026	-4	42.32	
Replicates	-1.6	-4.3	-3.8	-5.3						
HS19010324-01					UNK	01/10/19 02:24:11 pm	0.029	10	59.24	
Replicates	8.9	14.9	1.9	12.7						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010330-01					UNK	01/10/19 02:25:54 pm	0.025	-13	88.91	
Replicates	-24.8	-2.4	-19.6	-3.9						
HS19010344-01					UNK	01/10/19 02:27:38 pm	0.026	-3	507.66	
Replicates	2.8	3.2	7.4	-25.3						
HS18121484-01					UNK	01/10/19 02:29:19 pm	5.970	35470	2.12	
Replicates	34620.1	35158.3	35736.0	36366.0						
HS19010133-01					UNK	01/10/19 02:30:59 pm	0.042	92	9.36	s
Replicates	103.5	89.0	94.0	83.0						
HS19010170-01					UNK	01/10/19 02:32:41 pm	0.024	-20	35.24	
Replicates	-18.6	-10.9	-26.7	-24.9						
HS19010170-02					UNK	01/10/19 02:34:22 pm	0.022	-26	33.32	
Replicates	-15.9	-32.1	-35.1	-22.6						
HS19010170-03					UNK	01/10/19 02:36:04 pm	0.045	111	19.10	s
Replicates	89.4	105.9	107.7	139.9						
CCV					CCV	01/10/19 02:38:50 pm	5.190	30813	0.56	
Replicates	30566.5	30827.7	30908.5	30950.2						
% Recovery	103.72									
CCB					CCB	01/10/19 02:40:35 pm	0.019	-46	24.85	
Replicates	-32.4	-59.1	-41.9	-49.9						
MBLK-136485					UNK	01/10/19 02:49:44 pm	0.027	-1	096.31	
Replicates	0.7	-6.8	27.9	-26.1						
LCS-136485					UNK	01/10/19 02:51:27 pm	5.250	31209	0.18	
Replicates	31147.6	31192.9	31214.4	31280.7						
HS19010249-03					UNK	01/10/19 02:53:09 pm	0.036	54	26.25	s
Replicates	46.0	38.4	64.9	67.4						

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010249-03MS				UNK	01/10/19 02:54:52 pm	5.230	31103	0.12	
Replicates	31054.6	31095.2	31129.9	31132.2					
HS19010249-03MSD				UNK	01/10/19 02:56:35 pm	5.170	30727	0.61	
Replicates	30512.6	30654.7	30792.5	30948.5					
MBLKT1-136485				UNK	01/10/19 02:58:19 pm	0.021	-37	30.32	
Replicates	-20.4	-41.6	-45.4	-39.6					
HS18120382-09				UNK	01/10/19 03:00:03 pm	0.060	201	1.09	
Replicates	203.0	198.6	199.1	202.1					
HS19010223-01				UNK	01/10/19 03:01:44 pm	0.035	49	22.93	
Replicates	54.3	53.4	32.4	56.6					
HS19010240-01				UNK	01/10/19 03:03:25 pm	0.067	242	2.73	
Replicates	242.6	242.7	233.0	249.0					
HS19010249-01				UNK	01/10/19 03:05:06 pm	0.161	803	1.94	
Replicates	797.2	783.9	815.6	816.1					
CCV				CCV	01/10/19 03:06:49 pm	5.040	29912	0.24	
Replicates	29826.3	29903.7	29918.5	29998.0					
% Recovery	100.70								
CCB				CCB	01/10/19 03:08:33 pm	0.028	4	128.18	
Replicates	3.0	-2.7	6.5	8.3					
HS19010249-02				UNK	01/10/19 03:10:15 pm	0.062	210	7.81	s
Replicates	218.6	196.0	195.8	228.3					
HS19010249-04				UNK	01/10/19 03:11:57 pm	0.028	8	104.78	
Replicates	-3.2	8.0	17.2	10.2					
HS19010249-05				UNK	01/10/19 03:13:39 pm	0.022	-28	46.56	
Replicates	-39.4	-26.0	-35.3	-10.3					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010249-06				UNK	01/10/19 03:15:21 pm	0.028	6	89.92	
Replicates	3.4	2.8	14.3	3.8					
HS19010250-01				UNK	01/10/19 03:17:04 pm	0.026	-6	381.52	
Replicates	-6.1	2.4	16.6	-36.4					
HS19010250-02				UNK	01/10/19 03:18:47 pm	0.024	-17	175.95	
Replicates	-26.9	20.2	-50.3	-10.3					
HS19010250-03				UNK	01/10/19 03:20:30 pm	0.025	-10	93.99	
Replicates	-21.4	0.9	-7.6	-11.1					
HS19010251-01				UNK	01/10/19 03:22:13 pm	0.033	37	47.61	
Replicates	21.9	57.2	22.7	47.2					
HS19010252-01				UNK	01/10/19 03:23:57 pm	0.034	40	63.20	
Replicates	46.3	66.0	5.5	41.8					
HS19010264-01				UNK	01/10/19 03:25:38 pm	0.461	2593	0.68	
Replicates	2586.0	2577.3	2591.5	2618.3					
CCV				CCV	01/10/19 03:27:22 pm	5.080	30158	0.10	
Replicates	30118.6	30182.2	30177.7	30153.2					
% Recovery	101.53								
CCB				CCB	01/10/19 03:29:06 pm	0.029	12	89.49	
Replicates	25.9	-0.8	13.7	10.2					
HS19010277-01				UNK	01/10/19 03:30:48 pm	0.027	0	769.67	
Replicates	-7.8	10.8	-0.2	-3.9					
HS19010293-01				UNK	01/10/19 03:32:29 pm	0.020	-40	60.36	
Replicates	-31.8	-68.7	-48.5	-11.7					
HS19010299-02				UNK	01/10/19 03:34:11 pm	0.021	-37	47.54	
Replicates	-13.1	-42.1	-36.9	-54.9					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010246-01				UNK	01/10/19 03:35:52 pm	0.026	-4	523.03	
Replicates	-15.3	2.8	21.0	-23.7					
HS19010262-01				UNK	01/10/19 03:37:34 pm	0.234	1235	1.37	
Replicates	1224.4	1227.5	1260.2	1227.7					
MBLK-136498				UNK	01/10/19 03:45:55 pm	0.035	52	18.58	s
Replicates	60.3	38.0	55.3	53.8					
LCS-136498				UNK	01/10/19 03:47:38 pm	5.070	30124	0.36	
Replicates	29980.3	30104.0	30176.5	30234.5					
HS18121504-01				UNK	01/10/19 03:49:21 pm	0.028	4	341.56	
Replicates	-2.3	-1.9	27.3	-5.2					
HS18121504-01MS				UNK	01/10/19 03:51:04 pm	5.080	30202	0.42	
Replicates	30057.2	30153.1	30250.1	30349.3					
HS18121504-01MSD				UNK	01/10/19 03:52:48 pm	4.970	29531	0.63	
Replicates	29303.9	29480.4	29603.1	29738.1					
CCV				CCV	01/10/19 03:54:32 pm	5.060	30081	0.36	
Replicates	29956.0	30025.6	30154.1	30187.8					
% Recovery	101.27								
CCB				CCB	01/10/19 03:56:16 pm	0.025	-8	133.48	
Replicates	-0.1	-5.3	-23.3	-2.8					
HS18121503-01				UNK	01/10/19 03:58:00 pm	0.031	26	46.14	
Replicates	27.6	38.2	9.5	29.2					
HS18121504-02				UNK	01/10/19 03:59:41 pm	0.024	-17	33.89	
Replicates	-22.5	-15.7	-9.7	-21.2					
HS18121504-03				UNK	01/10/19 04:01:24 pm	0.038	67	7.48	s
Replicates	66.0	70.2	60.2	71.2					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010338-01					UNK	01/10/19 04:03:05 pm	0.381	2115	0.84	
Replicates	2129.7	2115.8	2124.8	2089.8						
HS19010338-02					UNK	01/10/19 04:04:47 pm	0.030	16	135.44	
Replicates	3.8	14.4	-0.9	48.1						
HS19010338-03					UNK	01/10/19 04:06:29 pm	0.031	26	44.12	
Replicates	15.0	39.6	18.1	31.1						
HS19010338-04					UNK	01/10/19 04:08:11 pm	0.428	2396	0.89	
Replicates	2418.9	2389.0	2405.5	2369.8						
HS19010338-06					UNK	01/10/19 04:09:53 pm	0.020	-41	43.31	
Replicates	-35.0	-32.0	-68.0	-30.2						
HS19010338-08					UNK	01/10/19 04:11:35 pm	0.032	33	34.78	
Replicates	18.5	31.0	46.0	35.0						
CCV					CCV	01/10/19 04:13:19 pm	5.090	30231	0.43	
Replicates	30060.4	30211.8	30288.5	30362.3						
% Recovery	101.77									
CCB					CCB	01/10/19 04:15:03 pm	0.033	39	28.88	
Replicates	24.0	45.4	37.4	49.6						
MBLK-136499					UNK	01/10/19 04:19:28 pm	0.035	51	24.34	s
Replicates	34.8	63.9	57.2	49.4						
LCS-136499					UNK	01/10/19 04:21:12 pm	5.120	30405	0.44	
Replicates	30219.0	30393.9	30497.9	30508.6						
HS18120382-09					UNK	01/10/19 04:22:55 pm	0.026	-5	118.67	
Replicates	-9.2	0.3	0.0	-9.8						
HS18120382-09MS					UNK	01/10/19 04:24:39 pm	5.130	30455	0.48	
Replicates	30261.0	30431.9	30537.1	30588.9						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18120382-09MSD					UNK	01/10/19 04:26:22 pm	5.110	30366	0.31	
Replicates	30235.7	30362.5	30430.3	30434.0						
MBLKP1-136499					UNK	01/10/19 04:28:04 pm	0.036	57	20.60	s
Replicates	53.4	54.6	73.6	46.1						
CCV					CCV	01/10/19 04:30:44 pm	5.110	30351	0.38	
Replicates	30208.2	30321.7	30398.0	30476.0						
% Recovery	102.17									
CCB					CCB	01/10/19 04:32:29 pm	0.027	1	233.42	
Replicates	-12.1	12.5	3.7	-0.8						
MBLK-136500					UNK	01/10/19 05:48:04 pm	0.039	71	6.29	s
Replicates	72.5	64.0	72.0	73.8						
LCS-136500					UNK	01/10/19 05:49:46 pm	5.060	30066	0.49	
Replicates	29865.6	30062.2	30124.7	30209.9						
HS19010287-01					UNK	01/10/19 05:51:29 pm	0.039	74	20.64	s
Replicates	89.9	57.9	64.4	83.6						
HS19010287-01MS					UNK	01/10/19 05:53:11 pm	5.090	30269	0.36	
Replicates	30128.9	30238.6	30329.9	30377.4						
HS19010287-01MSD					UNK	01/10/19 05:54:53 pm	5.060	30044	0.56	
Replicates	29850.6	29984.1	30098.1	30243.1						
HS18121567-01					UNK	01/10/19 05:56:35 pm	0.043	98	6.39	s
Replicates	97.3	105.4	90.2	98.7						
HS19010001-01					UNK	01/10/19 05:58:18 pm	0.031	27	32.33	
Replicates	19.8	24.9	40.2	24.7						
HS19010001-02					UNK	01/10/19 06:00:02 pm	0.036	58	28.59	s
Replicates	53.2	77.7	61.9	38.2						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010282-05					UNK	01/10/19 06:01:45 pm	0.035	47	34.68	
Replicates	54.1	65.8	31.8	34.8						
HS19010286-01					UNK	01/10/19 06:03:29 pm	0.042	93	16.53	s
Replicates	98.8	101.6	100.8	69.8						
CCV					CCV	01/10/19 06:05:13 pm	5.070	30132	0.18	
Replicates	30062.1	30115.2	30175.7	30173.7						
% Recovery	101.44									
CCB					CCB	01/10/19 06:06:57 pm	0.033	35	51.93	
Replicates	9.4	52.7	39.2	40.2						
HS19010287-02					UNK	01/10/19 06:08:39 pm	0.049	133	11.91	s
Replicates	110.8	132.2	142.4	145.9						
HS19010358-01					UNK	01/10/19 06:10:22 pm	0.097	417	3.37	
Replicates	401.1	434.4	411.7	419.7						
HS19010361-01					UNK	01/10/19 06:12:04 pm	0.068	245	3.24	
Replicates	233.8	251.1	250.1	243.6						
HS19010398-01					UNK	01/10/19 06:13:47 pm	0.053	154	7.55	s
Replicates	161.1	146.2	166.7	142.4						
MBLK-136504					UNK	01/10/19 06:15:29 pm	0.041	86	19.90	s
Replicates	76.8	66.1	99.1	100.8						
LCS-136504					UNK	01/10/19 06:17:12 pm	5.050	30013	0.42	
Replicates	29851.8	29982.2	30065.7	30150.9						
HS18121500-01					UNK	01/10/19 06:18:54 pm	0.034	44	48.67	
Replicates	57.8	63.9	17.9	34.9						
HS18121500-01MS					UNK	01/10/19 06:20:37 pm	5.060	30070	0.62	
Replicates	29826.3	30029.7	30163.0	30259.5						

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121500-01MSD				UNK	01/10/19 06:22:19 pm	5.090	30236	0.49	
Replicates	30053.9	30195.5	30296.2	30399.7					
HS18121500-02				UNK	01/10/19 06:24:03 pm	0.035	51	22.93	s
Replicates	61.9	35.7	48.2	57.9					
CCV				CCV	01/10/19 06:25:46 pm	5.190	30809	0.40	
Replicates	30636.9	30812.6	30879.1	30909.1					
% Recovery	103.71								
CCB				CCB	01/10/19 06:27:31 pm	0.034	39	51.45	
Replicates	49.1	30.5	62.0	16.0					
HS18121500-03				UNK	01/10/19 06:29:14 pm	0.043	96	17.82	s
Replicates	95.5	78.6	119.1	89.9					
HS18121500-04				UNK	01/10/19 06:30:58 pm	0.048	123	11.91	s
Replicates	111.1	135.8	109.5	135.5					
HS18121500-05				UNK	01/10/19 06:32:41 pm	0.031	23	43.77	
Replicates	21.8	30.0	30.0	9.0					
HS18121500-06				UNK	01/10/19 06:34:23 pm	0.087	358	4.03	
Replicates	348.2	366.0	374.2	343.7					
HS18121500-07				UNK	01/10/19 06:36:06 pm	0.035	48	24.90	
Replicates	55.5	34.8	61.1	42.1					
HS18121524-01				UNK	01/10/19 06:37:48 pm	0.070	258	4.02	
Replicates	248.5	250.4	262.4	270.4					
HS18121536-01				UNK	01/10/19 06:39:31 pm	0.044	100	10.24	s
Replicates	112.1	87.2	102.7	99.7					
HS19010225-01				UNK	01/10/19 06:41:14 pm	0.030	19	127.90	
Replicates	15.0	54.5	3.5	3.0					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCV					CCV	01/10/19 06:49:04 pm	5.080	30200	0.36	
	Replicates	30048.2	30198.6	30252.6	30299.6					
	% Recovery	101.67								
CCB					CCB	01/10/19 06:50:48 pm	0.034	42	37.10	
	Replicates	53.3	20.1	42.6	53.6					
MBLK-136505					UNK	01/10/19 06:52:31 pm	0.043	95	20.62	s
	Replicates	114.6	95.3	102.5	68.3					
LCS-136505					UNK	01/10/19 06:54:13 pm	5.090	30226	0.45	
	Replicates	30049.2	30210.0	30276.8	30369.8					
HS19010248-03					UNK	01/10/19 06:55:56 pm	0.032	31	12.47	
	Replicates	33.7	25.8	33.8	29.5					
HS19010248-03MS					UNK	01/10/19 06:57:39 pm	5.130	30486	0.81	
	Replicates	30171.6	30423.2	30598.0	30749.2					
HS19010248-03MSD					UNK	01/10/19 06:59:23 pm	5.060	30058	0.55	
	Replicates	29863.2	29999.6	30117.3	30253.1					
HS18121544-07					UNK	01/10/19 07:01:06 pm	0.075	287	3.28	
	Replicates	278.7	300.0	281.7	286.2					
HS18121544-08					UNK	01/10/19 07:02:49 pm	0.199	1027	1.31	
	Replicates	1007.2	1035.6	1035.8	1028.3					
HS18121544-09					UNK	01/10/19 07:04:32 pm	0.052	152	6.89	s
	Replicates	157.2	150.0	161.8	137.8					
HS18121544-10					UNK	01/10/19 07:06:15 pm	0.041	83	15.11	s
	Replicates	90.4	64.1	85.8	89.8					
HS18121544-11					UNK	01/10/19 07:07:58 pm	0.065	228	8.50	s
	Replicates	210.6	213.4	235.7	251.4					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCV					CCV	01/10/19 07:09:42 pm	5.030	29889	1.56	
	Replicates	29270.5	29814.4	30125.9	30344.9					
	% Recovery	100.63								
CCB					CCB	01/10/19 07:11:26 pm	0.040	77	26.05	s
	Replicates	72.9	105.2	57.4	72.9					
HS18121544-13					UNK	01/10/19 07:13:09 pm	0.111	500	5.15	s
	Replicates	475.1	490.3	500.6	535.8					
HS18121544-14					UNK	01/10/19 07:14:52 pm	0.080	318	3.37	
	Replicates	302.3	325.4	324.4	318.4					
HS18121558-02					UNK	01/10/19 07:16:35 pm	0.042	90	21.87	s
	Replicates	62.2	93.7	108.2	97.0					
HS18121558-03					UNK	01/10/19 07:18:17 pm	0.030	22	64.47	
	Replicates	26.3	18.7	4.5	38.2					
HS18121566-01					UNK	01/10/19 07:20:00 pm	0.332	1820	1.37	
	Replicates	1786.3	1825.1	1822.1	1846.3					
HS18121566-02					UNK	01/10/19 07:21:43 pm	0.030	22	71.90	
	Replicates	9.0	28.3	9.0	41.0					
HS18121566-03					UNK	01/10/19 07:23:27 pm	0.035	49	24.28	
	Replicates	53.0	31.9	59.4	52.4					
HS19010248-04					UNK	01/10/19 07:25:10 pm	0.034	41	26.90	
	Replicates	47.9	52.4	27.7	37.2					
HS19010258-09					UNK	01/10/19 07:26:54 pm	0.034	40	40.81	
	Replicates	59.3	39.2	42.0	19.5					
HS19010258-10					UNK	01/10/19 07:28:37 pm	0.027	1	812.07	
	Replicates	-10.7	-3.0	36.8	-17.7					

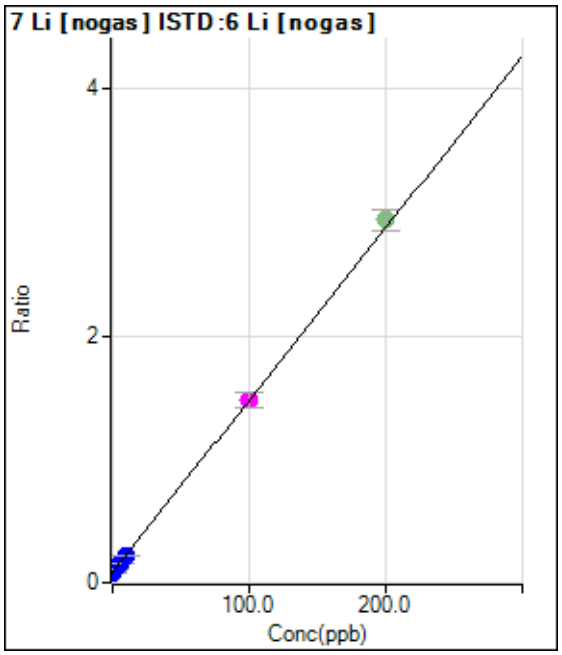
Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCV					CCV	01/10/19 07:30:21 pm	5.040	29929	0.34	
	Replicates	29782.6	29944.5	29969.5	30019.0					
	% Recovery	100.76								
CCB					CCB	01/10/19 07:32:05 pm	0.035	46	44.66	
	Replicates	69.4	20.9	40.2	52.7					
HS19010295-01					UNK	01/10/19 07:33:48 pm	0.036	57	45.16	s
	Replicates	63.4	42.3	89.5	31.5					
HS19010299-01					UNK	01/10/19 07:35:32 pm	0.027	3	406.28	
	Replicates	0.4	9.9	-12.1	12.7					
HS19010355-01					UNK	01/10/19 07:37:15 pm	0.053	156	5.07	s
	Replicates	155.9	149.7	152.5	167.7					
CCV					CCV	01/10/19 07:39:24 pm	4.990	29656	0.48	
	Replicates	29474.3	29630.1	29708.1	29812.6					
	% Recovery	99.85								
CCB					CCB	01/10/19 07:41:09 pm	0.036	53	22.76	s
	Replicates	51.0	66.9	56.7	37.9					

Calibration for 037_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 22:05:28
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	030CALB.d	CAL BLK	2019-01-08 12:02:20
2	031CALS.d	2/10/200	2019-01-08 12:04:21
3	032CALS.d	5/25/500	2019-01-08 12:06:18
4	033CALS.d	10/50/1000	2019-01-08 12:08:18
5	034CALS.d	100/500/10K	2019-01-08 12:10:17
6	035CALS.d	200/1000/20K	2019-01-08 12:12:13
7			

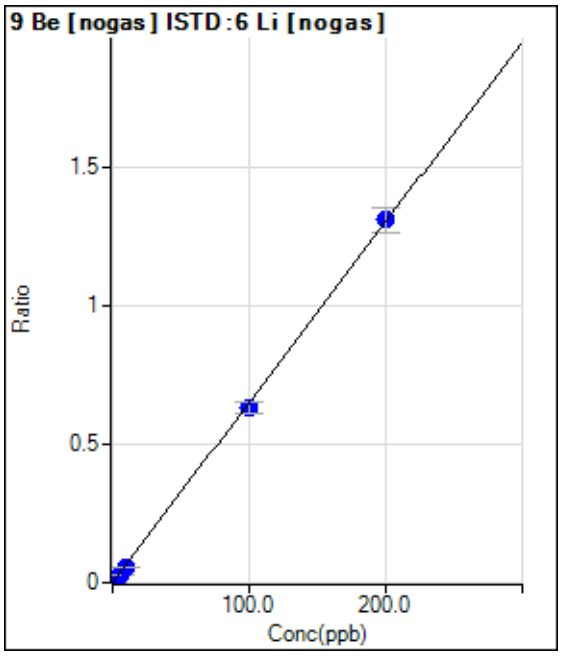
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70121.92	0.0848	P	3.2
2	☐	2.000	1.859	89348.53	0.1107	P	1.3
3	☐	5.000	4.837	117105.45	0.1523	P	1.9
4	☐	10.000	9.247	167940.97	0.2137	P	2.1
5	☐	100.000	100.086	1084849.88	1.4802	M	8.2
6	☑	200.000		2069056.90	2.9404	A	6.1
7	☐	1.000					

y = 0.0139 * x + 0.0848
R = 1.0000
DL = 0.5833
BEC = 6.085

Weight: <None>
Min Conc: <None>

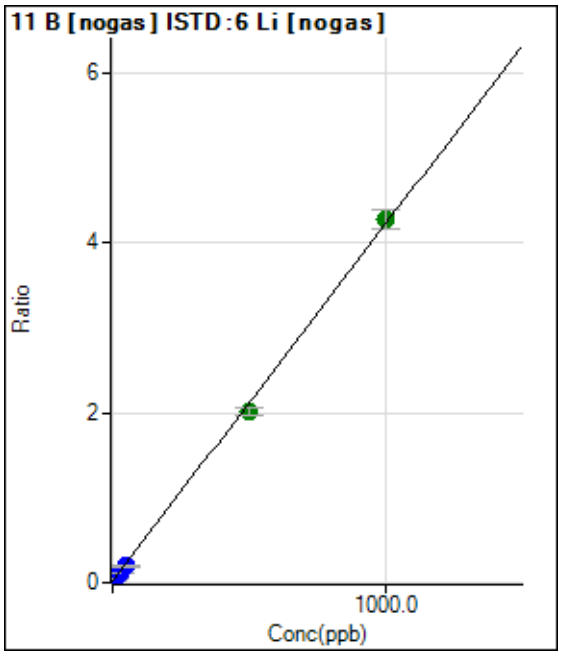


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	37.4
2	☐	2.000	1.676	8875.51	0.0110	P	2.8
3	☐	5.000	4.470	22410.02	0.0292	P	6.5
4	☐	10.000	8.713	44658.64	0.0568	P	1.3
5	☐	100.000	97.477	465547.28	0.6348	P	6.6
6	☐	200.000	201.342	922231.34	1.3111	P	6.8
7	☐	1.000					

y = 0.0065 * x + 8.4600E-005
R = 0.9999
DL = 0.01458
BEC = 0.01299

Weight: <None>
Min Conc: <None>

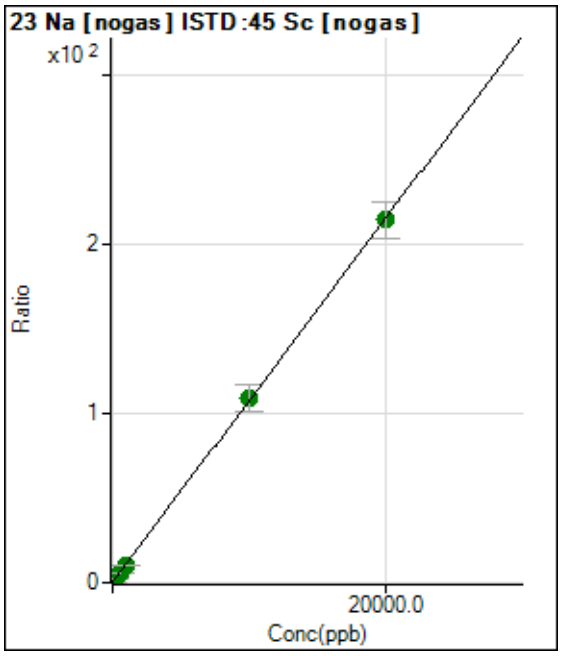
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14689.19	0.0178	P	3.0
2	☐	10.000	7.969	41324.83	0.0512	P	2.5
3	☐	25.000	21.084	81597.40	0.1062	P	5.6
4	☐	50.000	41.794	151760.13	0.1931	P	2.3
5	☐	500.000	477.292	1483117.89	2.0206	A	4.5
6	☐	1000.000	1011.882	3000594.54	4.2639	A	5.4
7	☐	5.000					

y = 0.0042 * x + 0.0178
R = 0.9997
DL = 0.375
BEC = 4.235

Weight: <None>
Min Conc: <None>

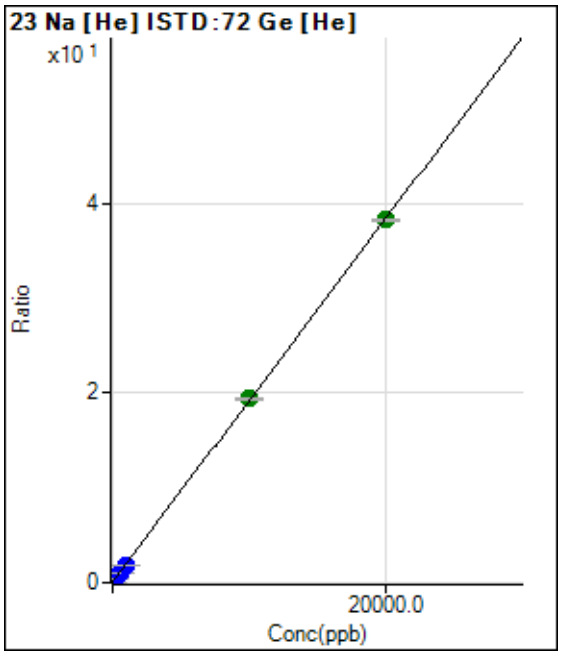


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	289129.92	0.1959	P	1.2
2	☐	200.000	191.632	3326080.54	2.2568	A	2.9
3	☐	500.000	518.915	7781921.79	5.7765	A	12.6
4	☐	1000.000	958.181	14827119.60	10.5006	A	3.3
5	☐	10000.00	10145.991	148901428.3	109.310	A	15.0
6	☐	20000.00	19928.706	297120448.3	214.518	A	10.4
7	☐	100.000					

y = 0.0108 * x + 0.1959
R = 1.0000
DL = 0.6712
BEC = 18.21

Weight: <None>
Min Conc: <None>

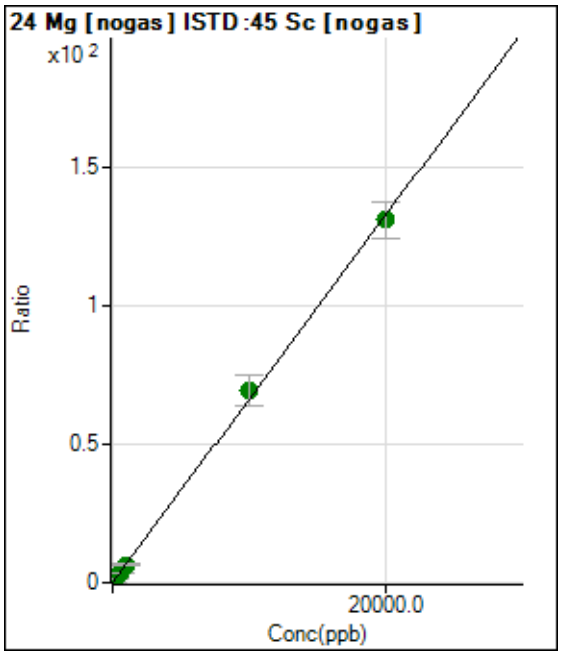
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31346.07	0.0604	P	2.3
2	☐	200.000	193.719	224961.31	0.4312	P	1.6
3	☐	500.000	487.457	516577.66	0.9934	P	0.8
4	☐	1000.000	958.261	987595.32	1.8945	P	1.2
5	☐	10000.00	10103.371	10024189.23	19.3982	A	1.1
6	☐	20000.00	19950.778	19306984.71	38.2461	A	0.3
7	☐	100.000					

y = 0.0019 * x + 0.0604
R = 1.0000
DL = 2.162
BEC = 31.56

Weight: <None>
Min Conc: <None>

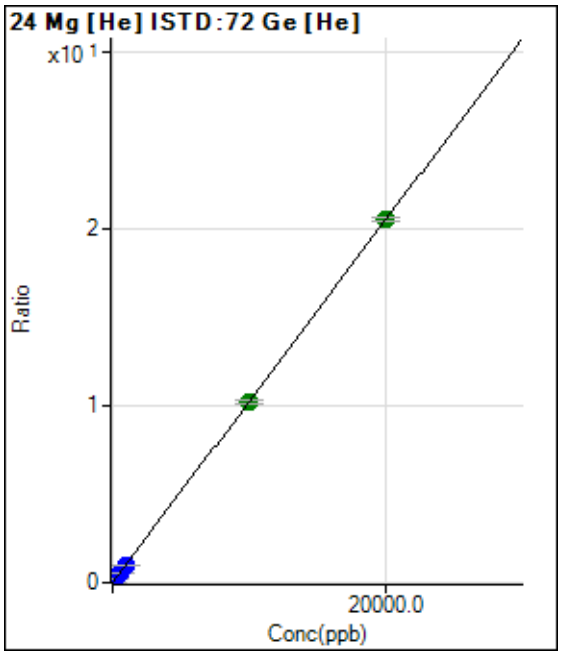


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16042.36	0.0109	P	17.6
2	☐	200.000	199.849	1966312.02	1.3346	A	1.7
3	☐	500.000	524.290	4688941.38	3.4836	A	13.6
4	☐	1000.000	983.874	9216626.77	6.5277	A	3.5
5	☐	10000.00	10471.116	94480393.78	69.3682	A	15.1
6	☐	20000.00	19764.643	181395512.3	130.925	A	10.0
7	☐	100.000					

y = 0.0066 * x + 0.0109
R = 0.9996
DL = 0.8692
BEC = 1.643

Weight: <None>
Min Conc: <None>

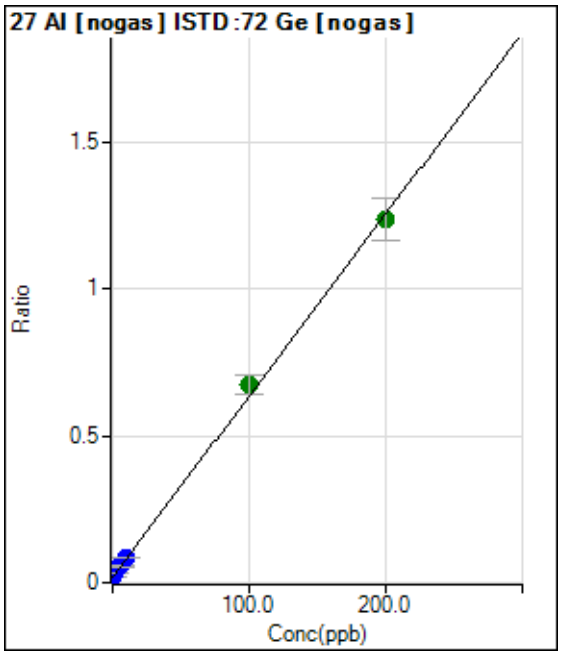
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	933.37	0.0018	P	15.9
2	☐	200.000	199.945	107841.91	0.2067	P	2.2
3	☐	500.000	497.741	266193.56	0.5119	P	1.4
4	☐	1000.000	972.279	520336.54	0.9982	P	2.0
5	☐	10000.00	9983.400	5287951.17	10.2331	A	1.5
6	☐	20000.00	20009.743	10352786.30	20.5084	A	1.0
7	☐	100.000					

y = 0.0010 * x + 0.0018
R = 1.0000
DL = 0.8369
BEC = 1.756

Weight: <None>
Min Conc: <None>

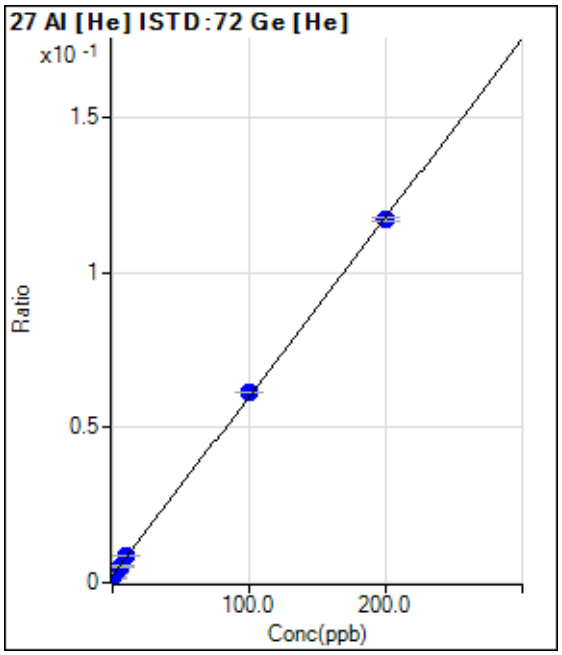


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33583.53	0.0179	P	6.2
2	☐	2.000	2.211	59721.30	0.0316	P	5.0
3	☐	5.000	6.383	100144.56	0.0574	P	9.8
4	☐	10.000	10.542	158459.59	0.0831	P	2.3
5	☐	100.000	105.892	1211415.66	0.6730	A	9.6
6	☐	200.000	196.990	2196130.80	1.2365	A	11.8
7	☐	1.000					

y = 0.0062 * x + 0.0179
R = 0.9994
DL = 0.5362
BEC = 2.894

Weight: <None>
Min Conc: <None>

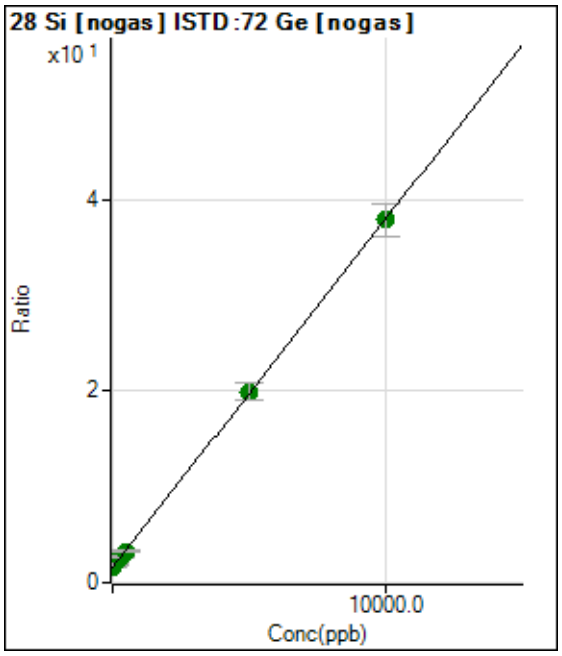
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.125	876.70	0.0017	P	17.7
2	☐	2.000	1.065	1540.09	0.0030	P	4.9
3	☐	5.000	5.041	2726.91	0.0052	P	7.8
4	☐	10.000	10.849	4477.27	0.0086	P	4.8
5	☐	100.000	102.408	31700.01	0.0613	P	0.2
6	☐	200.000	198.762	58988.67	0.1169	P	1.1
7	☐	1.000					

y = 5.7615E-004 * x + 0.0023
R = 0.9998
DL = 1.561
BEC = 4.061

Weight: <None>
Min Conc: <None>

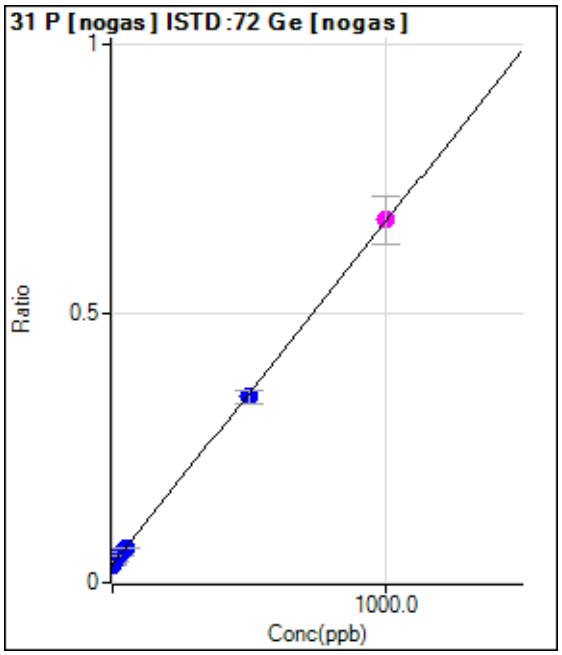


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2988508.29	1.5926	A	4.5
2	☐	100.000	88.539	3621399.22	1.9143	A	2.8
3	☐	250.000	286.255	4597909.52	2.6326	A	8.2
4	☐	500.000	463.045	6242705.53	3.2750	A	2.7
5	☐	5000.000	5043.257	35851291.13	19.9160	A	9.6
6	☐	10000.00	9979.427	67341304.00	37.8504	A	8.8
7	☐	5.000					

y = 0.0036 * x + 1.5926
R = 1.0000
DL = 58.95
BEC = 438.3

Weight: <None>
Min Conc: <None>

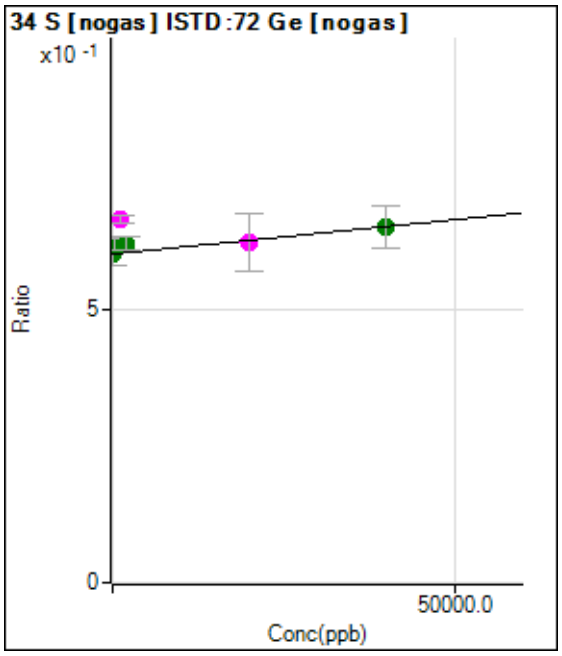
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63499.74	0.0338	P	2.9
2	☐	10.000	8.691	74472.50	0.0394	P	3.1
3	☐	25.000	30.111	92518.23	0.0530	P	10.0
4	☐	50.000	48.383	123271.38	0.0647	P	2.8
5	☐	500.000	489.279	622927.15	0.3457	P	7.7
6	☐	1000.000	1005.327	1197004.36	0.6747	M	13.5
7	☐	5.000					

y = 6.3744E-004 * x + 0.0338
R = 0.9999
DL = 4.595
BEC = 53.07

Weight: <None>
Min Conc: <None>

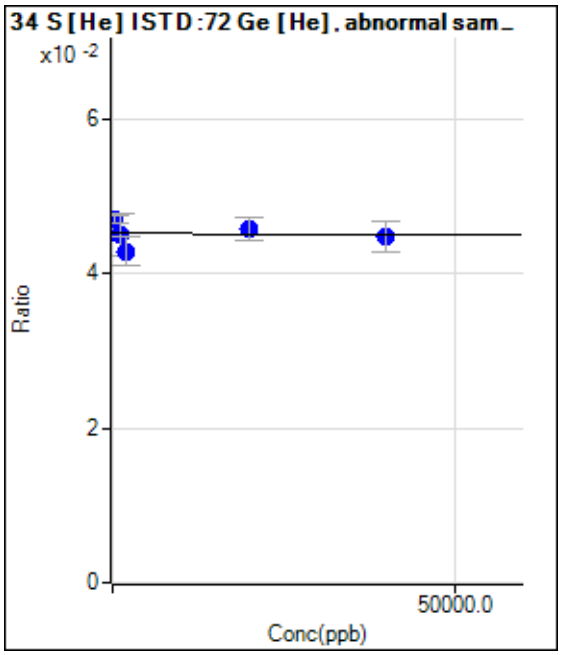


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1125789.02	0.6001	A	7.3
2	☐	400.000	14774.253	1170286.68	0.6186	A	3.1
3	☐	1000.000	49635.707	1160575.06	0.6623	M	2.0
4	☐	2000.000	14716.398	1179025.58	0.6186	A	4.1
5	☐	20000.00	16292.045	1112553.93	0.6205	M	17.0
6	☐	40000.00	39858.522	1154244.39	0.6500	A	12.2
7	☐	100.000					

y = 1.2521E-006 * x + 0.6001
R = 0.3818
DL = 1.049E+05
BEC = 4.793E+05

Weight: <None>
Min Conc: <None>

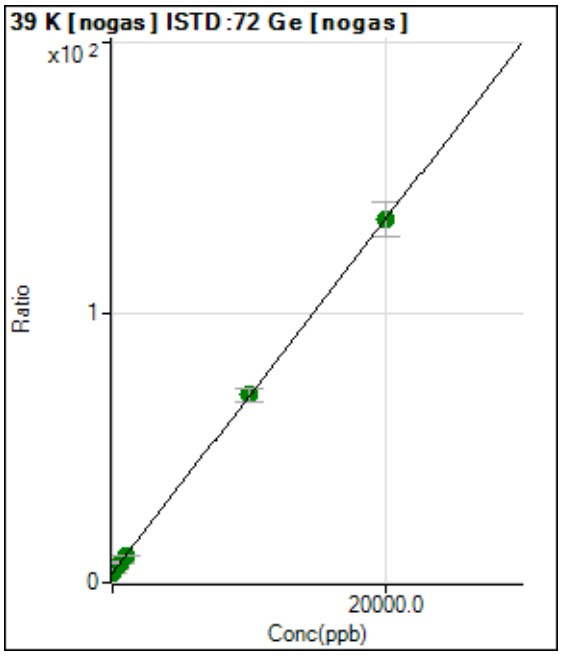
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23451.35	0.0452	P	2.9
2	☐	400.000	-602879.22	24486.10	0.0469	P	2.0
3	☐	1000.000	70732.064	23384.36	0.0450	P	11.9
4	☐	2000.000	787470.95	22383.17	0.0429	P	8.9
5	☐	20000.00	-199896.13	23651.83	0.0458	P	6.3
6	☐	40000.00	114964.01	22650.81	0.0449	P	8.9
7	☐	100.000					

y = -2.9003E-009 * x + 0.0452
R = -0.0055
DL = -1.357E+06
BEC = -1.558E+07

Weight: <None>
Min Conc: <None>

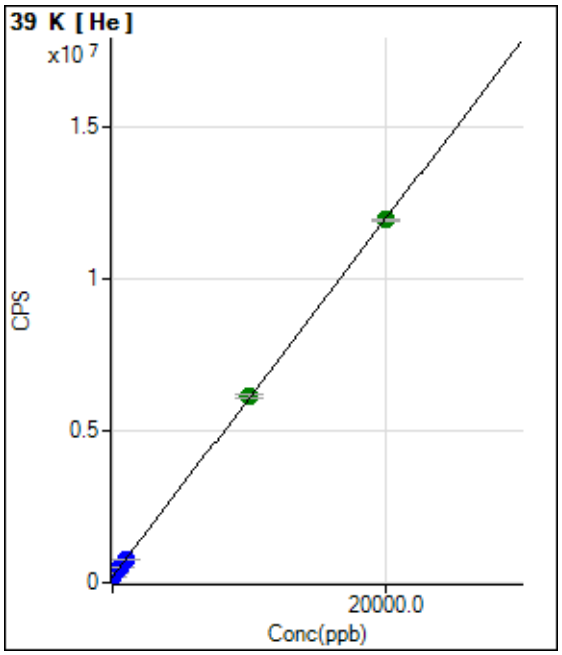


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6864279.58	3.6574	A	3.3
2	☐	200.000	188.609	9256871.82	4.8929	A	2.5
3	☐	500.000	548.396	12662283.87	7.2497	A	8.1
4	☐	1000.000	961.711	18972057.19	9.9571	A	4.5
5	☐	10000.00	10060.746	125430344.4	69.5604	A	6.3
6	☐	20000.00	19970.446	239214855.3	134.474	A	9.4
7	☐	100.000					

y = 0.0066 * x + 3.6574
R = 1.0000
DL = 55.46
BEC = 558.3

Weight: <None>
Min Conc: <None>

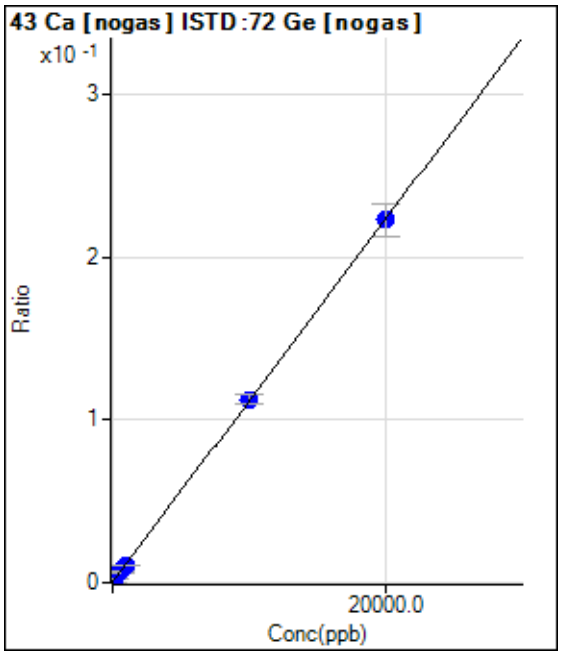
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190358.59		P	0.4
2	☐	200.000	204.893	310887.96		P	0.5
3	☐	500.000	510.218	490497.48		P	1.4
4	☐	1000.000	1005.057	781588.92		P	1.0
5	☐	10000.00	10088.213	6124808.24		A	2.7
6	☐	20000.00	19955.336	11929200.65		A	0.7
7	☐	100.000					

y = 588.2558 * x + 190358.5867
R = 1.0000
DL = 3.531
BEC = 323.6

Weight: <None>
Min Conc: <None>

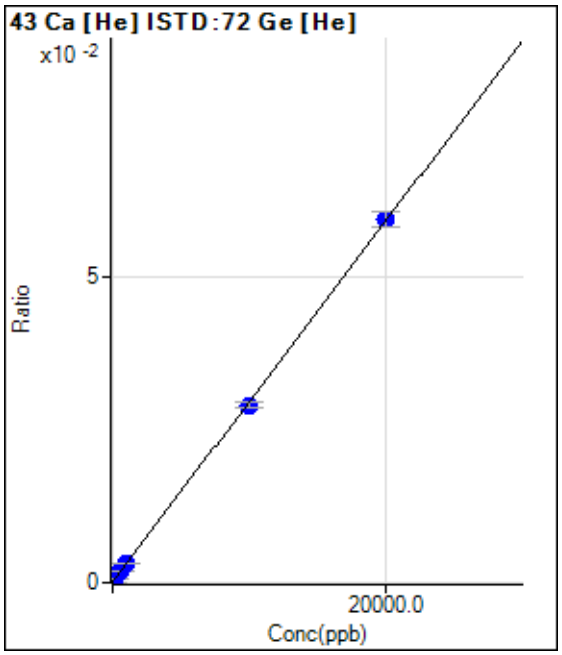


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	566.69	0.0003	P	5.3
2	☐	200.000	184.930	4473.93	0.0024	P	2.5
3	☐	500.000	558.139	11397.00	0.0065	P	8.8
4	☐	1000.000	951.045	20795.14	0.0109	P	3.2
5	☐	10000.00	10067.598	203196.20	0.1126	P	4.9
6	☐	20000.00	19967.346	396770.80	0.2230	P	8.9
7	☐	100.000					

y = 1.1155E-005 * x + 3.0198E-004
R = 1.0000
DL = 4.297
BEC = 27.07

Weight: <None>
Min Conc: <None>

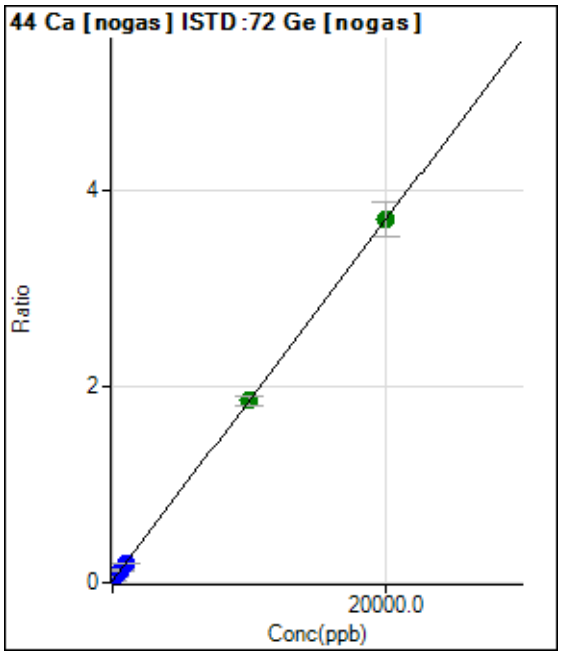
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0001	P	76.0
2	☐	200.000	181.610	326.68	0.0006	P	13.1
3	☐	500.000	572.945	926.71	0.0018	P	3.6
4	☐	1000.000	1048.042	1660.10	0.0032	P	2.5
5	☐	10000.00	9815.092	15019.64	0.0291	P	3.1
6	☐	20000.00	20088.412	29987.67	0.0594	P	4.2
7	☐	100.000					

y = 2.9523E-006 * x + 9.0224E-005
R = 0.9999
DL = 69.71
BEC = 30.56

Weight: <None>
Min Conc: <None>

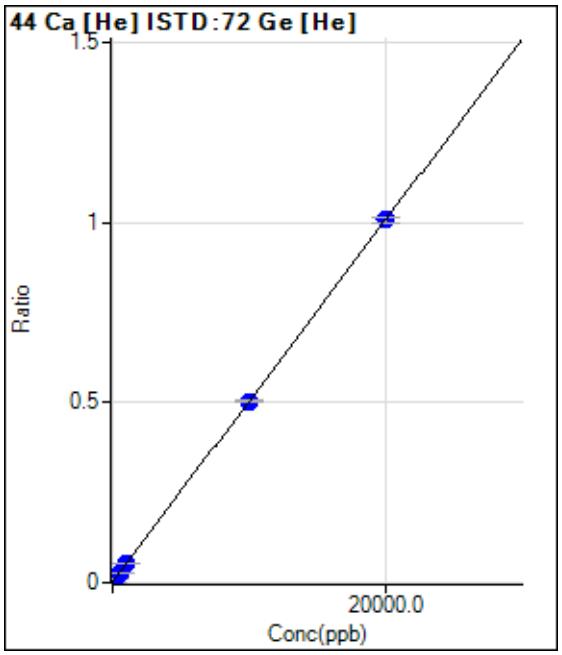


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42729.09	0.0228	P	2.0
2	☐	200.000	190.817	109558.92	0.0579	P	0.5
3	☐	500.000	548.656	216204.96	0.1238	P	7.9
4	☐	1000.000	910.672	363014.16	0.1904	P	1.9
5	☐	10000.00	9973.558	3352957.03	1.8587	A	5.6
6	☐	20000.00	20016.563	6593824.28	3.7074	A	9.6
7	☐	100.000					

y = 1.8408E-004 * x + 0.0228
R = 1.0000
DL = 7.411
BEC = 123.6

Weight: <None>
Min Conc: <None>

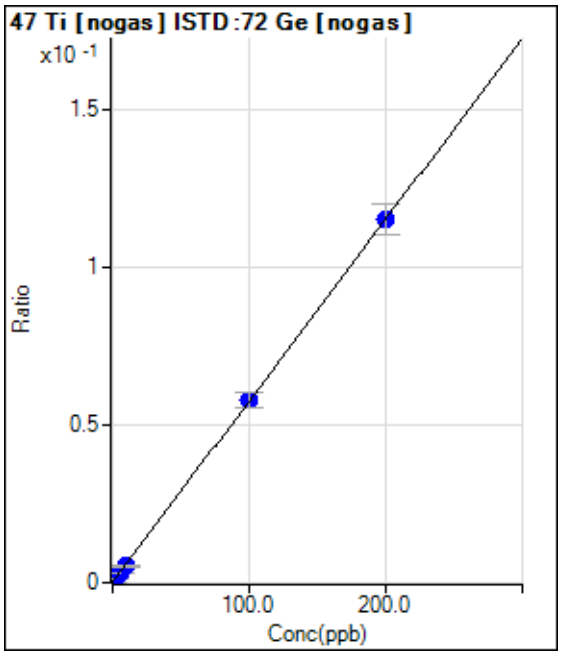
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	930.04	0.0018	P	15.1
2	☐	200.000	202.195	6237.80	0.0119	P	3.5
3	☐	500.000	533.082	14859.50	0.0286	P	1.9
4	☐	1000.000	989.565	26852.90	0.0515	P	0.8
5	☐	10000.00	9972.577	259831.59	0.5028	P	1.0
6	☐	20000.00	20013.384	508448.03	1.0072	P	1.9
7	☐	100.000					

y = 5.0239E-005 * x + 0.0018
R = 1.0000
DL = 16.19
BEC = 35.65

Weight: <None>
Min Conc: <None>

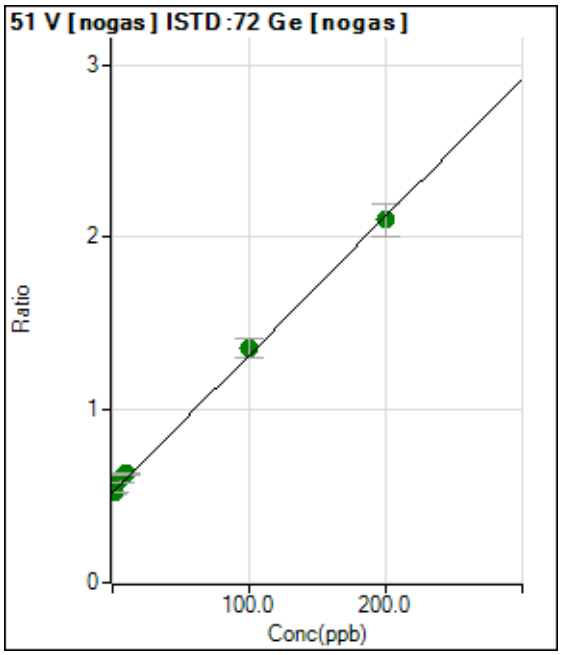


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243.33	0.0001	P	15.8
2	☐	2.000	1.909	2323.51	0.0012	P	7.1
3	☐	5.000	5.039	5300.83	0.0030	P	4.8
4	☐	10.000	8.912	9999.50	0.0052	P	3.9
5	☐	100.000	100.382	104047.02	0.0578	P	8.0
6	☐	200.000	199.863	204384.95	0.1149	P	8.6
7	☐	1.000					

y = 5.7404E-004 * x + 1.2981E-004
R = 1.0000
DL = 0.1071
BEC = 0.2261

Weight: <None>
Min Conc: <None>

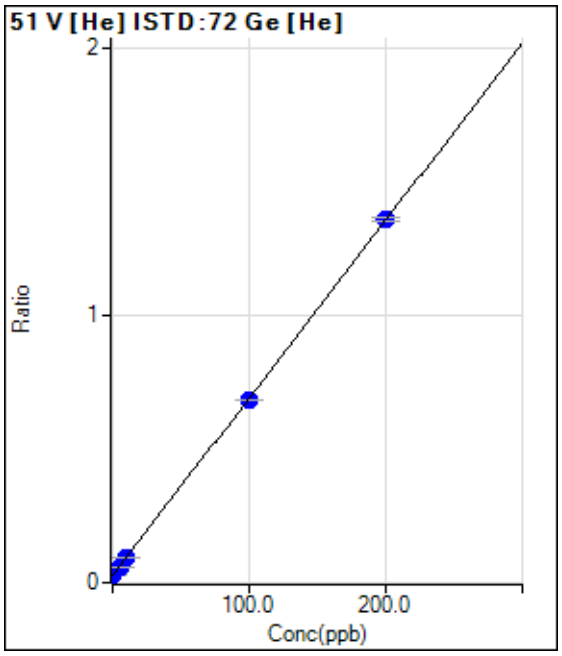
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	973352.01	0.5186	A	3.6
2	☐	2.000	0.726	992743.81	0.5244	A	0.5
3	☐	5.000	10.179	1049303.90	0.6002	A	6.9
4	☐	10.000	13.993	1202722.23	0.6308	A	1.5
5	☐	100.000	104.470	2443220.95	1.3560	A	7.9
6	☐	200.000	197.449	3738628.21	2.1013	A	8.9
7	☐	1.000					

y = 0.0080 * x + 0.5186
R = 0.9993
DL = 6.928
BEC = 64.7

Weight: <None>
Min Conc: <None>

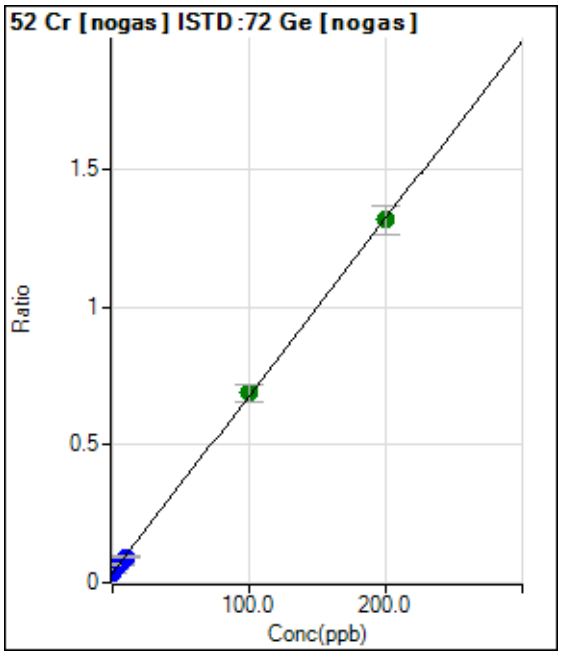


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.276	15040.75	0.0290	P	1.5
2	☐	2.000	2.104	21447.62	0.0411	P	1.4
3	☐	5.000	4.907	31047.74	0.0597	P	1.9
4	☐	10.000	10.126	49171.78	0.0943	P	1.9
5	☐	100.000	99.185	354062.86	0.6851	P	0.4
6	☐	200.000	200.403	684827.94	1.3566	P	0.9
7	☐	1.000					

y = 0.0066 * x + 0.0272
R = 1.0000
DL = 0.1988
BEC = 4.093

Weight: <None>
Min Conc: <None>

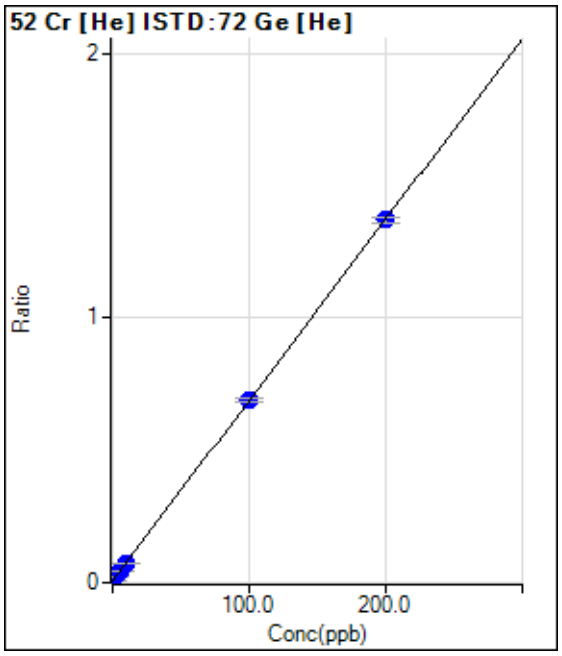
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66739.61	0.0356	P	2.4
2	☐	2.000	1.738	88416.23	0.0467	P	3.6
3	☐	5.000	5.139	119858.17	0.0686	P	8.5
4	☐	10.000	9.086	179237.09	0.0940	P	3.5
5	☐	100.000	101.626	1241556.41	0.6896	A	9.5
6	☐	200.000	199.232	2345522.93	1.3178	A	8.2
7	☐	1.000					

y = 0.0064 * x + 0.0356
R = 0.9999
DL = 0.4027
BEC = 5.524

Weight: <None>
Min Conc: <None>

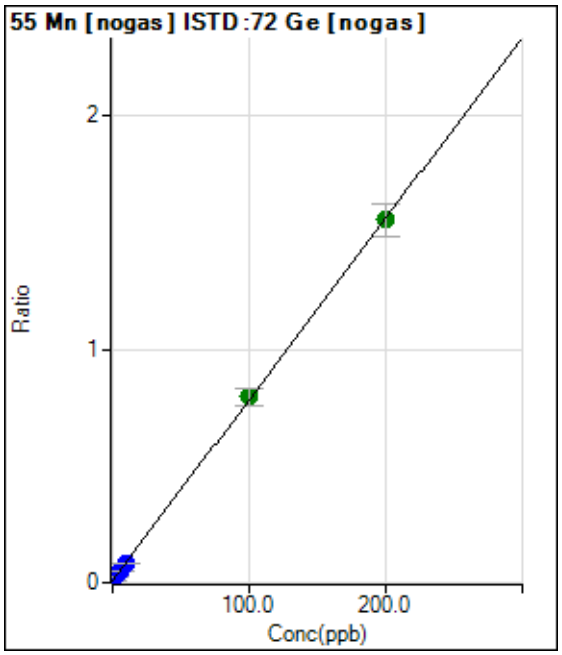


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3415.36	0.0066	P	2.4
2	☐	2.000	1.985	10503.13	0.0201	P	3.7
3	☐	5.000	5.021	21249.10	0.0409	P	2.5
4	☐	10.000	9.670	37855.72	0.0726	P	2.9
5	☐	100.000	100.347	357538.18	0.6919	P	1.6
6	☐	200.000	199.843	692221.06	1.3714	P	1.5
7	☐	1.000					

y = 0.0068 * x + 0.0066
R = 1.0000
DL = 0.06953
BEC = 0.9635

Weight: <None>
Min Conc: <None>

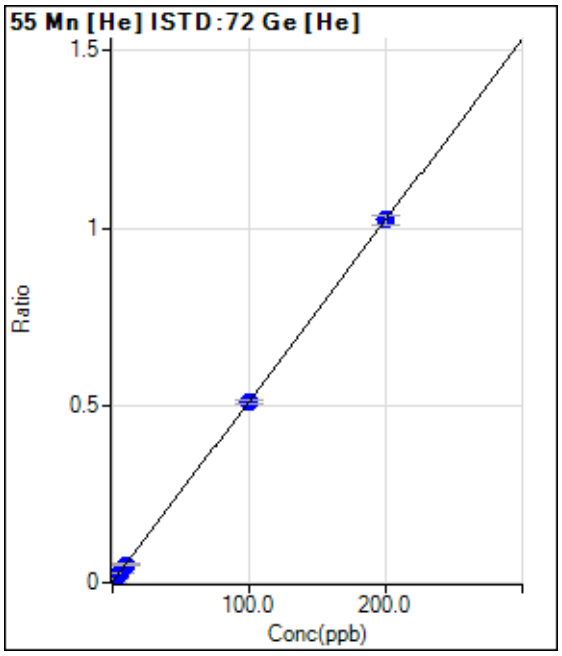
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17158.12	0.0091	P	2.3
2	☐	2.000	1.960	46037.52	0.0243	P	1.8
3	☐	5.000	5.320	87862.00	0.0504	P	10.8
4	☐	10.000	9.474	157405.88	0.0826	P	2.8
5	☐	100.000	101.464	1432237.27	0.7956	A	9.8
6	☐	200.000	199.287	2764379.44	1.5538	A	8.8
7	☐	1.000					

y = 0.0078 * x + 0.0091
R = 1.0000
DL = 0.08273
BEC = 1.179

Weight: <None>
Min Conc: <None>

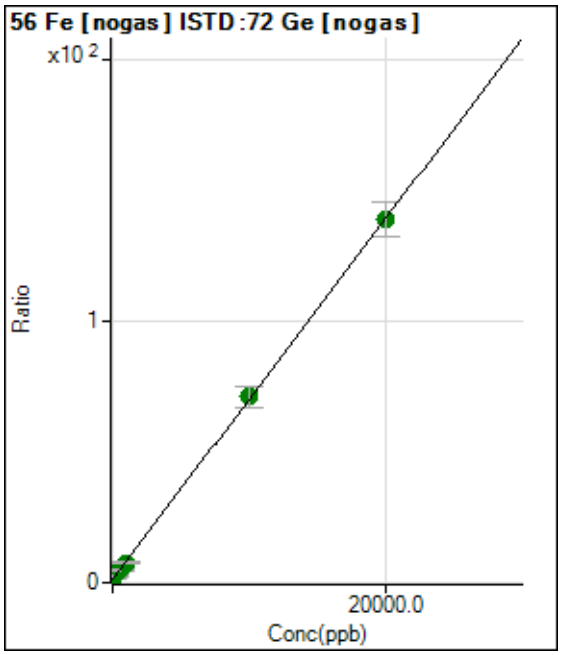


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	660.02	0.0013	P	13.6
2	☐	2.000	2.007	6011.09	0.0115	P	3.6
3	☐	5.000	5.179	14402.41	0.0277	P	3.2
4	☐	10.000	9.798	26719.73	0.0513	P	2.5
5	☐	100.000	99.645	263358.30	0.5097	P	3.1
6	☐	200.000	200.183	516137.23	1.0226	P	2.5
7	☐	1.000					

y = 0.0051 * x + 0.0013
R = 1.0000
DL = 0.1021
BEC = 0.2495

Weight: <None>
Min Conc: <None>

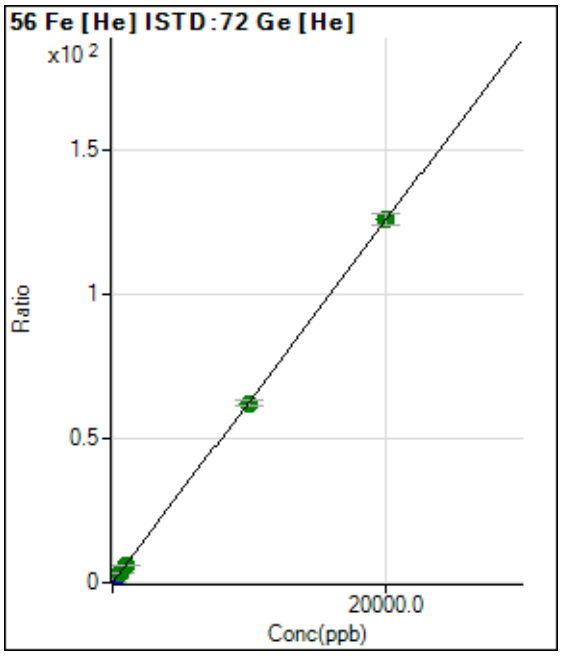
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2476830.65	1.3197	A	3.3
2	☐	200.000	183.257	4885262.74	2.5816	A	1.4
3	☐	500.000	510.670	8443879.36	4.8361	A	8.7
4	☐	1000.000	915.735	14537134.18	7.6253	A	4.1
5	☐	10000.00	10121.957	127746352.8	71.0184	A	10.9
6	☐	20000.00	19943.135	246578680.5	138.646	A	9.5
7	☐	100.000					

y = 0.0069 * x + 1.3197
R = 1.0000
DL = 19.2
BEC = 191.7

Weight: <None>
Min Conc: <None>

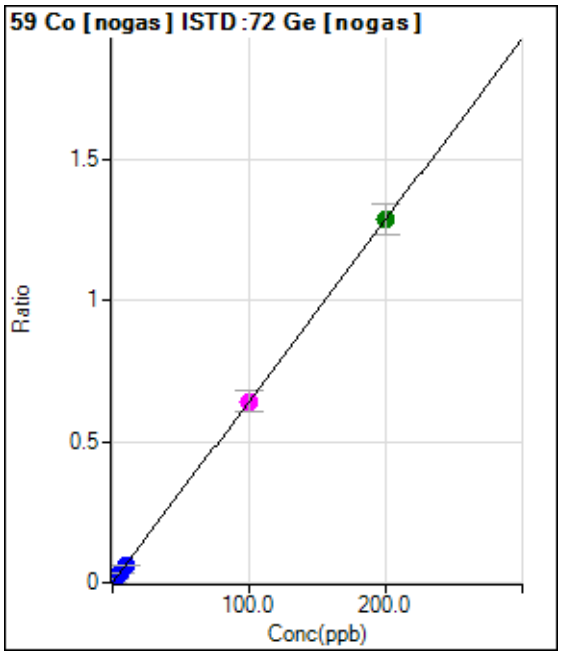


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17485.07	0.0337	P	3.4
2	☐	200.000	192.973	649848.27	1.2456	P	2.1
3	☐	500.000	498.893	1646848.05	3.1668	A	1.0
4	☐	1000.000	970.909	3195893.60	6.1312	A	2.1
5	☐	10000.00	9926.651	32232500.35	62.3749	A	4.0
6	☐	20000.00	20038.227	63531460.72	125.877	A	3.1
7	☐	100.000					

y = 0.0063 * x + 0.0337
R = 1.0000
DL = 0.541
BEC = 5.365

Weight: <None>
Min Conc: <None>

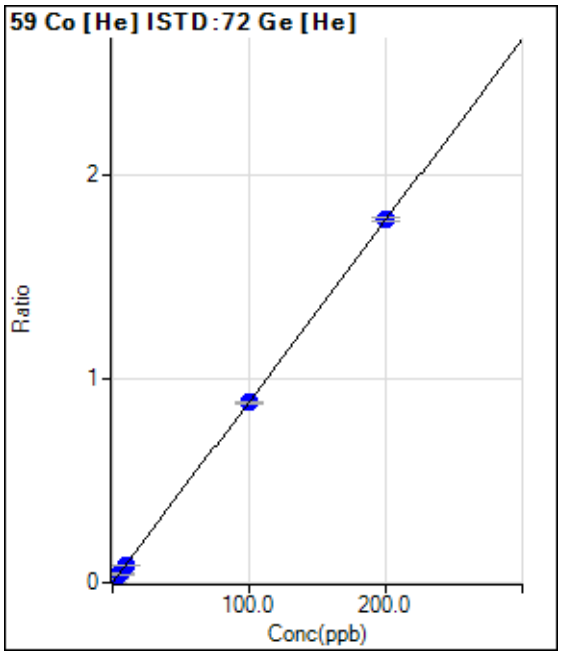
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.01	0.0003	P	14.1
2	☐	2.000	1.921	23889.06	0.0126	P	4.4
3	☐	5.000	5.159	58473.54	0.0335	P	8.3
4	☐	10.000	9.346	115204.37	0.0604	P	3.0
5	☐	100.000	100.065	1158451.81	0.6444	M	12.0
6	☐	200.000	199.997	2291259.55	1.2877	A	8.6
7	☐	1.000					

y = 0.0064 * x + 2.6589E-004
R = 1.0000
DL = 0.0175
BEC = 0.04131

Weight: <None>
Min Conc: <None>

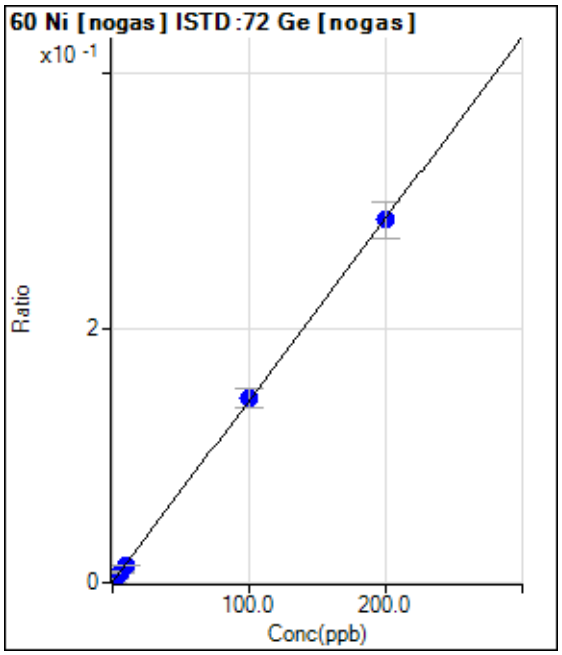


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	36.8
2	☐	2.000	2.029	9482.54	0.0182	P	2.8
3	☐	5.000	4.851	22497.32	0.0433	P	5.8
4	☐	10.000	9.821	45600.08	0.0875	P	1.5
5	☐	100.000	99.481	457212.52	0.8847	P	1.6
6	☐	200.000	200.272	899016.42	1.7810	P	1.1
7	☐	1.000					

y = 0.0089 * x + 1.3462E-004
R = 1.0000
DL = 0.01673
BEC = 0.01514

Weight: <None>
Min Conc: <None>

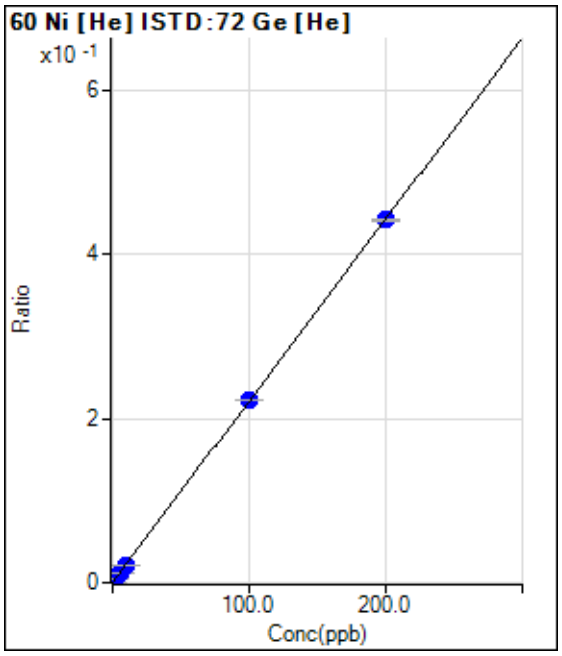
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.072	673.35	0.0004	P	5.5
2	☐	2.000	1.818	5784.32	0.0031	P	6.4
3	☐	5.000	5.334	14125.59	0.0081	P	7.4
4	☐	10.000	9.122	25721.66	0.0135	P	2.0
5	☐	100.000	101.523	261778.15	0.1455	P	9.9
6	☐	200.000	199.276	506789.40	0.2851	P	10.1
7	☐	1.000					

y = 0.0014 * x + 4.6197E-004
R = 0.9999
DL = 0.04163
BEC = 0.3235

Weight: <None>
Min Conc: <None>

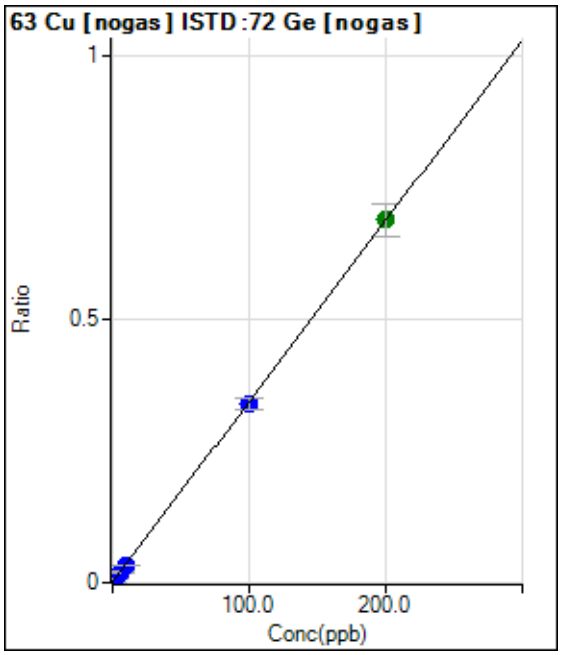


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.042	113.33	0.0002	P	21.5
2	☐	2.000	2.091	2580.22	0.0049	P	11.3
3	☐	5.000	5.010	5927.71	0.0114	P	1.3
4	☐	10.000	9.684	11333.58	0.0217	P	2.7
5	☐	100.000	100.483	115082.74	0.2227	P	0.9
6	☐	200.000	199.773	223360.56	0.4424	P	0.8
7	☐	1.000					

y = 0.0022 * x + 3.1067E-004
R = 1.0000
DL = 0.06368
BEC = 0.1404

Weight: <None>
Min Conc: <None>

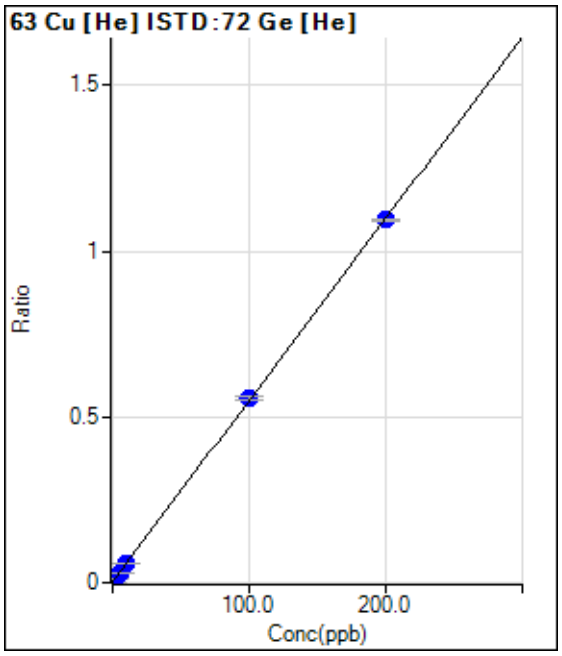
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2193.50	0.0012	P	4.3
2	☐	2.000	1.930	14726.02	0.0078	P	1.6
3	☐	5.000	5.350	34075.36	0.0195	P	7.1
4	☐	10.000	9.358	63340.02	0.0332	P	3.3
5	☐	100.000	99.082	614355.38	0.3407	P	6.3
6	☐	200.000	200.483	1223838.81	0.6881	A	9.3
7	☐	1.000					

y = 0.0034 * x + 0.0012
R = 1.0000
DL = 0.04365
BEC = 0.3409

Weight: <None>
Min Conc: <None>

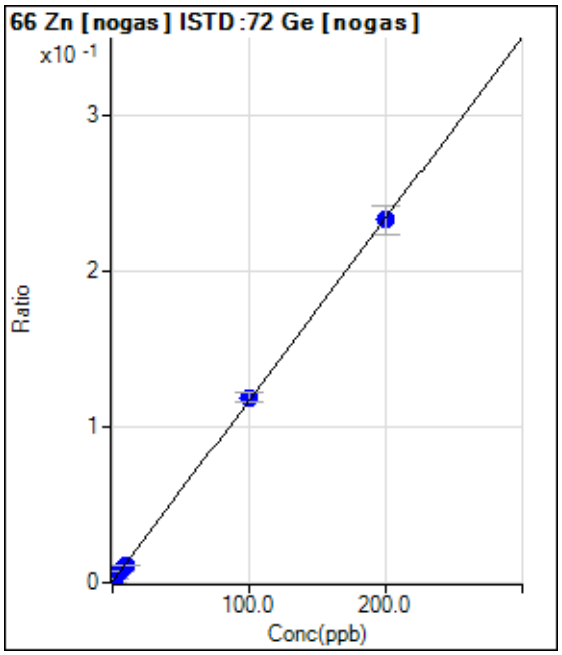


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.183	806.70	0.0016	P	5.3
2	☐	2.000	1.826	6551.25	0.0125	P	2.5
3	☐	5.000	4.926	15353.26	0.0295	P	1.8
4	☐	10.000	9.836	29400.50	0.0564	P	2.6
5	☐	100.000	101.167	287558.28	0.5565	P	2.0
6	☐	200.000	199.428	552505.11	1.0945	P	0.7
7	☐	1.000					

y = 0.0055 * x + 0.0026
R = 1.0000
DL = 0.04537
BEC = 0.4664

Weight: <None>
Min Conc: <None>

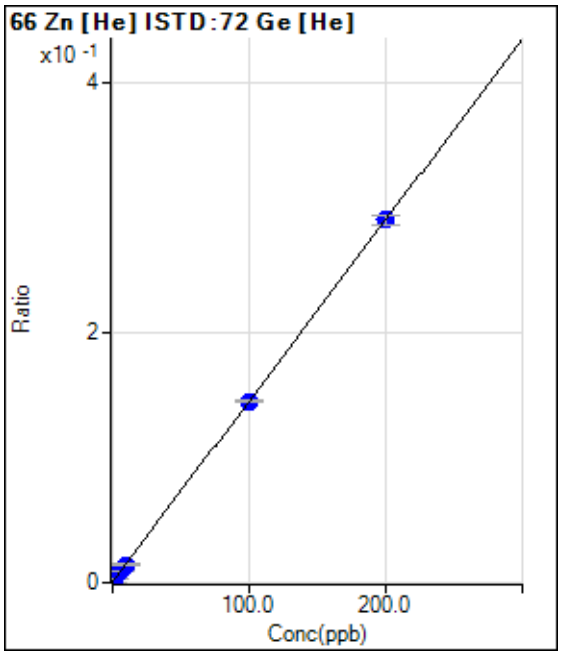
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.212	726.69	0.0004	P	13.3
2	☐	2.000	1.710	4960.74	0.0026	P	6.0
3	☐	5.000	5.494	12291.01	0.0070	P	5.7
4	☐	10.000	9.170	21562.99	0.0113	P	2.0
5	☐	100.000	101.612	214462.06	0.1189	P	6.1
6	☐	200.000	199.226	413931.83	0.2325	P	8.0
7	☐	1.000					

y = 0.0012 * x + 6.3315E-004
R = 0.9999
DL = 0.1327
BEC = 0.5439

Weight: <None>
Min Conc: <None>

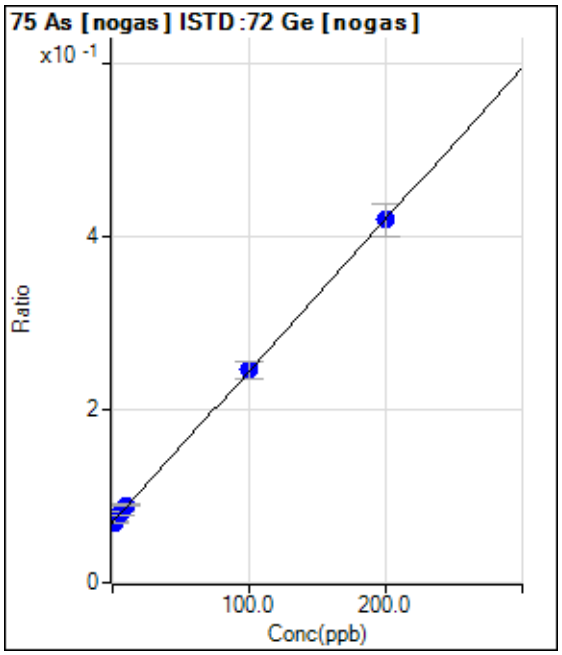


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.126	220.01	0.0004	P	23.2
2	☐	2.000	2.011	1836.79	0.0035	P	8.3
3	☐	5.000	5.593	4530.62	0.0087	P	3.9
4	☐	10.000	9.588	7558.32	0.0145	P	2.0
5	☐	100.000	99.854	75094.49	0.1453	P	1.5
6	☐	200.000	200.079	146647.77	0.2905	P	2.9
7	☐	1.000					

y = 0.0014 * x + 6.0547E-004
R = 1.0000
DL = 0.2037
BEC = 0.4178

Weight: <None>
Min Conc: <None>

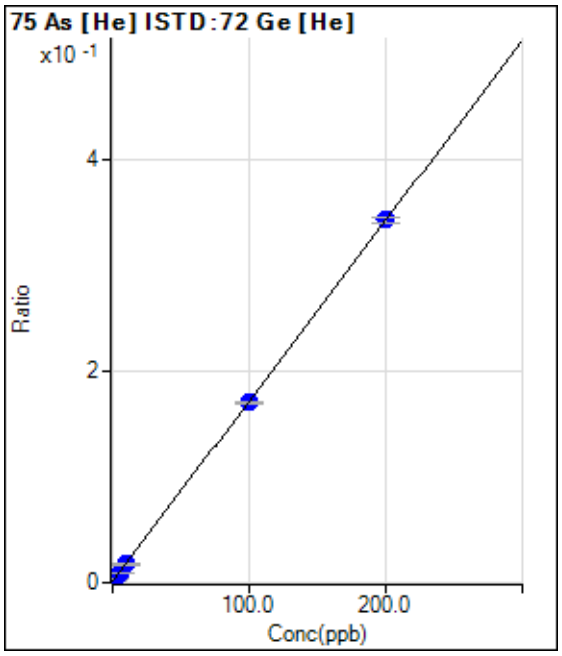
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.609	129079.57	0.0688	P	0.9
2	☐	2.000	0.132	132547.00	0.0701	P	1.9
3	☐	5.000	5.877	140049.46	0.0801	P	6.6
4	☐	10.000	11.280	170831.95	0.0896	P	3.0
5	☐	100.000	100.775	444200.19	0.2465	P	7.9
6	☐	200.000	199.545	746818.32	0.4197	P	8.7
7	☐	1.000					

y = 0.0018 * x + 0.0698
R = 0.9999
DL = 1.085
BEC = 39.82

Weight: <None>
Min Conc: <None>

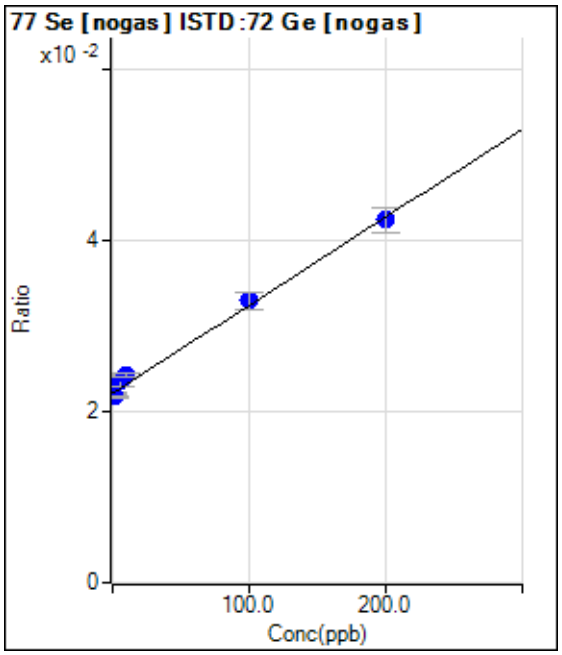


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	578.90	0.0011	P	19.3
2	☐	2.000	1.897	2270.15	0.0044	P	5.8
3	☐	5.000	4.964	4980.70	0.0096	P	5.3
4	☐	10.000	9.556	9075.61	0.0174	P	2.0
5	☐	100.000	99.121	87913.76	0.1701	P	1.8
6	☐	200.000	200.464	173107.76	0.3429	P	1.8
7	☐	1.000					

y = 0.0017 * x + 0.0011
R = 1.0000
DL = 0.3801
BEC = 0.6551

Weight: <None>
Min Conc: <None>

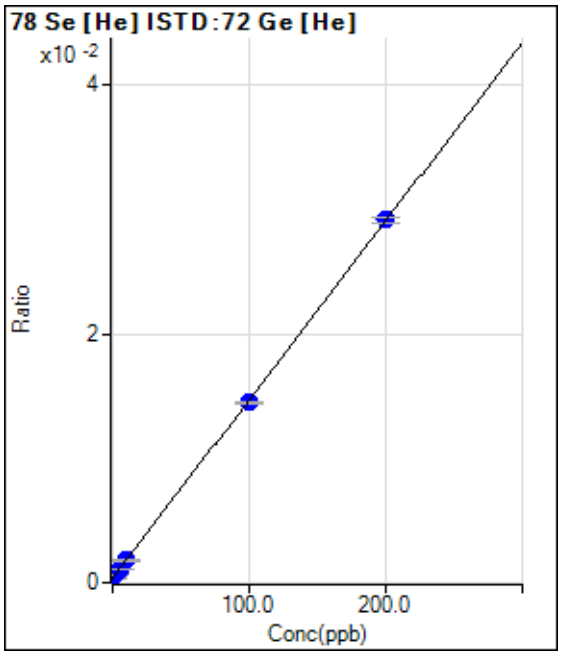
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41564.34	0.0221	P	0.8
2	☐	2.000	-3.979	41126.58	0.0217	P	0.6
3	☐	5.000	14.895	41417.39	0.0237	P	5.5
4	☐	10.000	21.462	46419.13	0.0243	P	1.9
5	☐	100.000	104.935	59423.58	0.0329	P	5.8
6	☐	200.000	196.772	75489.12	0.0424	P	7.2
7	☐	1.000					

y = 1.0293E-004 * x + 0.0221
R = 0.9964
DL = 5.234
BEC = 215

Weight: <None>
Min Conc: <None>

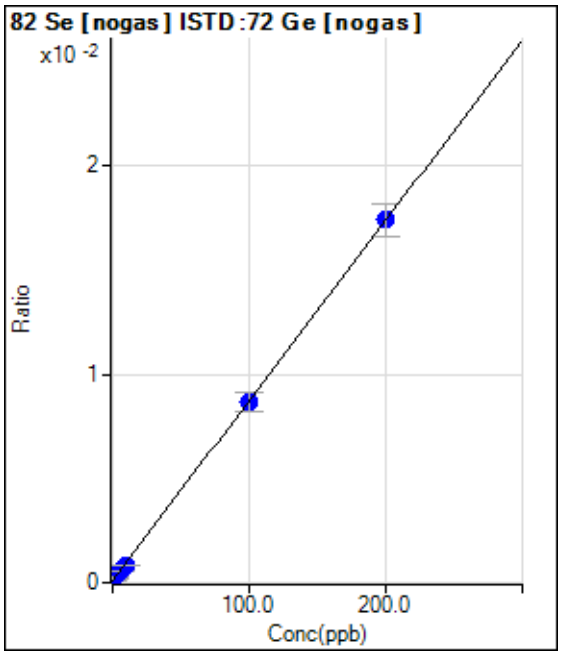


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.270	202.00	0.0004	P	12.2
2	☐	2.000	2.279	353.34	0.0007	P	11.3
3	☐	5.000	5.201	570.01	0.0011	P	5.0
4	☐	10.000	10.042	933.36	0.0018	P	2.2
5	☐	100.000	98.437	7475.55	0.0145	P	1.0
6	☐	200.000	200.772	14708.61	0.0291	P	1.9
7	☐	1.000					

y = 1.4339E-004 * x + 3.5057E-004
R = 1.0000
DL = 0.9909
BEC = 2.445

Weight: <None>
Min Conc: <None>

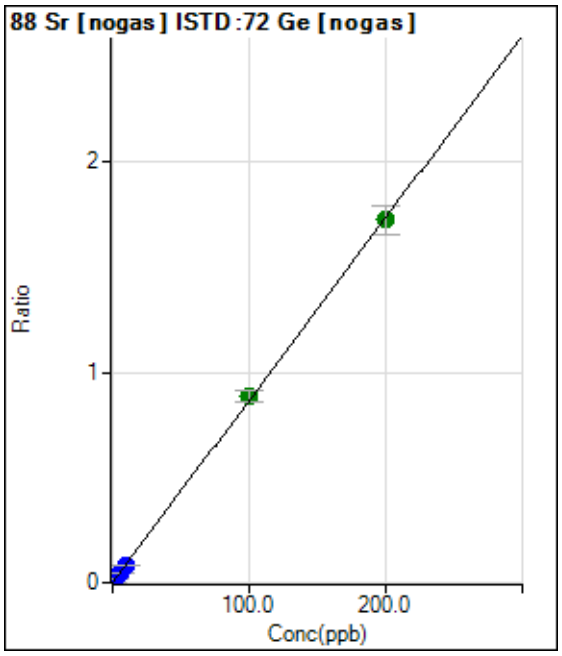
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	176.67	0.0001	P	18.2
2	☐	2.000	1.814	476.68	0.0003	P	16.9
3	☐	5.000	4.959	916.70	0.0005	P	1.3
4	☐	10.000	8.703	1616.76	0.0008	P	6.5
5	☐	100.000	99.435	15640.24	0.0087	P	10.3
6	☐	200.000	200.350	30963.39	0.0174	P	9.2
7	☐	1.000					

y = 8.6417E-005 * x + 9.4285E-005
R = 1.0000
DL = 0.5945
BEC = 1.091

Weight: <None>
Min Conc: <None>

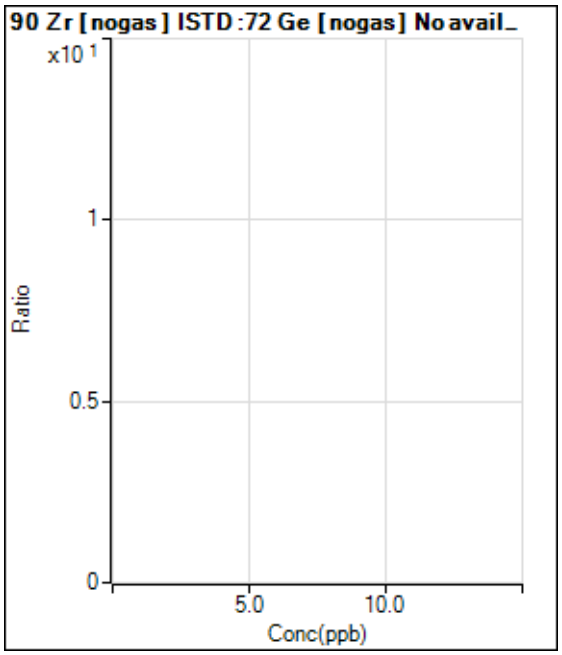


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1106.72	0.0006	P	9.0
2	☐	2.000	1.905	32342.81	0.0171	P	3.8
3	☐	5.000	5.159	79077.47	0.0453	P	9.0
4	☐	10.000	9.119	151812.40	0.0796	P	2.6
5	☐	100.000	102.130	1596452.06	0.8856	A	6.9
6	☐	200.000	198.976	3070311.62	1.7249	A	8.2
7	☐	1.000					

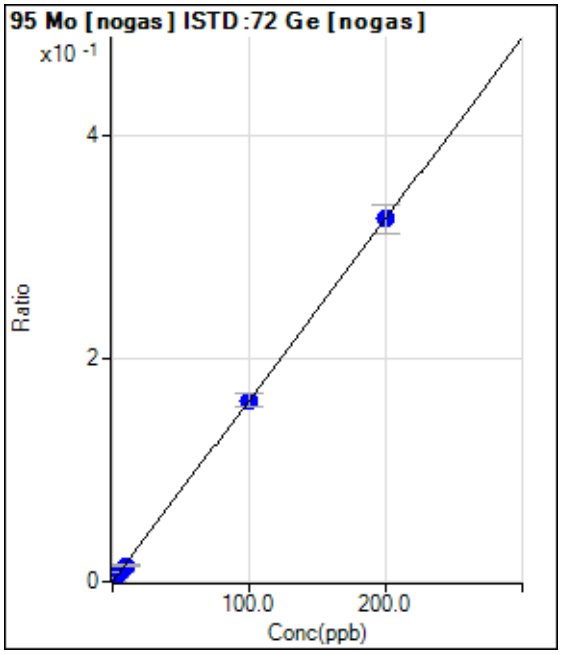
y = 0.0087 * x + 5.8970E-004
R = 0.9999
DL = 0.01828
BEC = 0.06805

Weight: <None>
Min Conc: <None>

Calibration for 037_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					

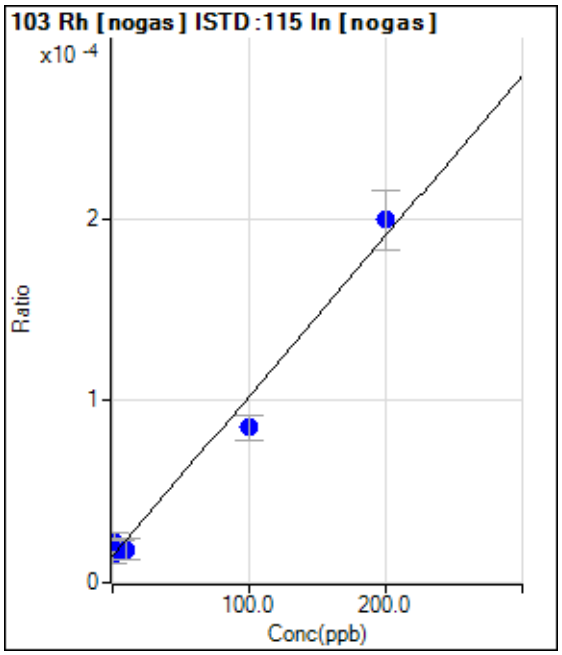


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	293.34	0.0002	P	14.4
2	☐	2.000	1.883	6081.15	0.0032	P	5.9
3	☐	5.000	4.986	14429.35	0.0083	P	7.4
4	☐	10.000	8.872	27781.92	0.0146	P	4.3
5	☐	100.000	100.120	293413.28	0.1629	P	8.2
6	☐	200.000	199.998	578753.78	0.3252	P	8.3
7	☐	1.000					

y = 0.0016 * x + 1.5600E-004
R = 1.0000
DL = 0.0414
BEC = 0.09599

Weight: <None>
Min Conc: <None>

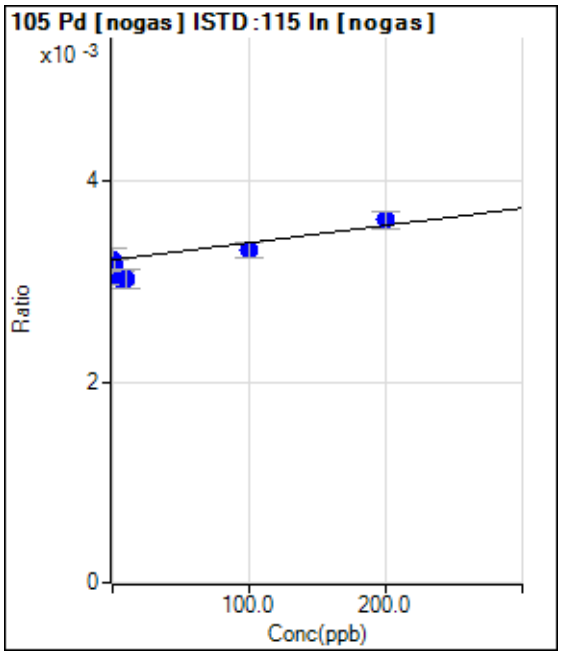
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	49.2
2	☐	2.000	8.814	36.67	0.0000	P	43.4
3	☐	5.000	5.945	30.00	0.0000	P	32.4
4	☐	10.000	3.970	30.00	0.0000	P	64.2
5	☐	100.000	80.491	130.00	0.0001	P	15.7
6	☐	200.000	209.964	303.34	0.0002	P	16.8
7	☐	1.000					

y = 8.8107E-007 * x + 1.4580E-005
R = 0.9921
DL = 24.44
BEC = 16.55

Weight: <None>
Min Conc: <None>

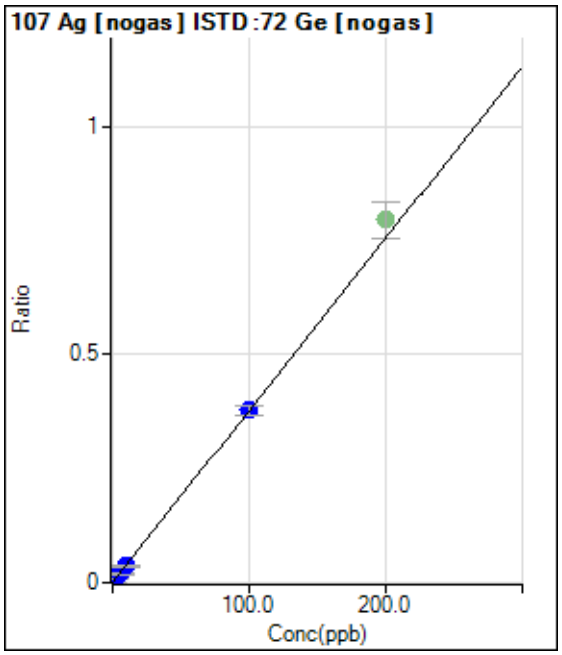


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5137.51	0.0032	P	7.6
2	☐	2.000	-37.326	5207.53	0.0032	P	4.4
3	☐	5.000	-104.611	4617.33	0.0030	P	3.9
4	☐	10.000	-108.722	4940.78	0.0030	P	5.9
5	☐	100.000	54.967	5007.46	0.0033	P	4.7
6	☐	200.000	231.586	5514.28	0.0036	P	4.6
7	☐	1.000					

y = 1.7200E-006 * x + 0.0032
R = 0.9299
DL = 427.4
BEC = 1869

Weight: <None>
Min Conc: <None>

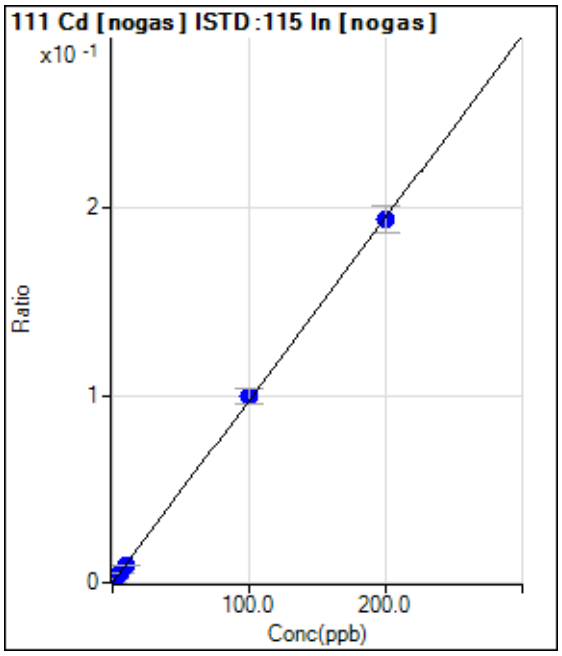
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1356.74	0.0007	P	8.3
2	☐	2.000	1.710	13538.66	0.0072	P	5.3
3	☐	5.000	4.923	33602.33	0.0193	P	10.2
4	☐	10.000	9.342	68436.02	0.0359	P	2.9
5	☐	100.000	100.075	680705.95	0.3775	P	6.3
6	☑	200.000		1412684.98	0.7945	A	10.0
7	☐	1.000					

y = 0.0038 * x + 7.2341E-004
R = 1.0000
DL = 0.0476
BEC = 0.1921

Weight: <None>
Min Conc: <None>

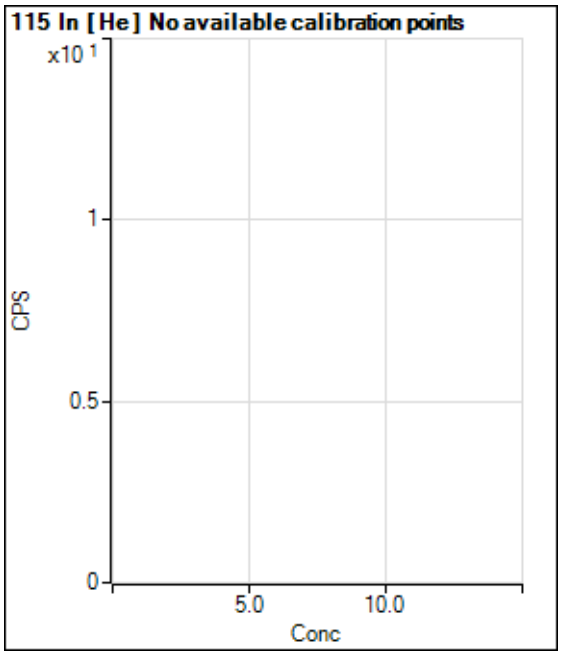


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	36.2
2	☐	2.000	1.858	3010.30	0.0018	P	8.1
3	☐	5.000	5.180	7635.07	0.0051	P	14.3
4	☐	10.000	9.260	14723.02	0.0090	P	1.1
5	☐	100.000	102.369	149928.74	0.0999	P	8.7
6	☐	200.000	198.849	294697.88	0.1940	P	7.3
7	☐	1.000					

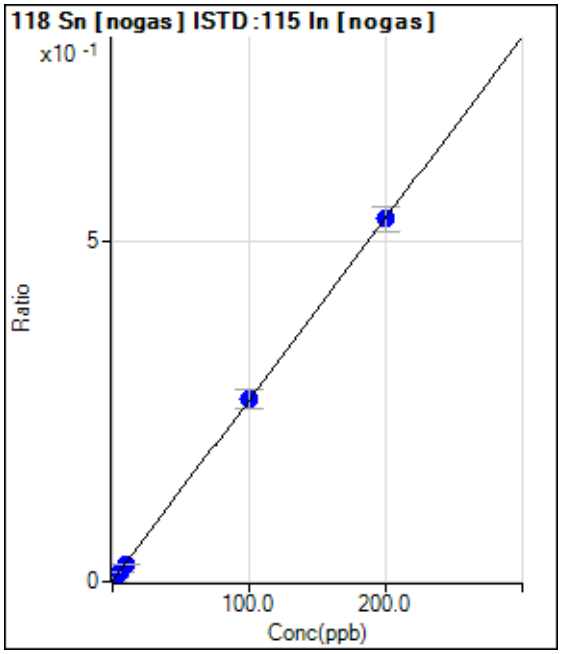
y = 9.7542E-004 * x + 1.0487E-005
R = 0.9999
DL = 0.01167
BEC = 0.01075

Weight: <None>
Min Conc: <None>

Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			665907.86		P	1.4
2	☐			674499.80		P	2.0
3	☐			684267.03		P	2.1
4	☐			678346.22		P	0.9
5	☐			656280.76		P	1.3
6	☐			642562.83		P	1.2
7	☐						

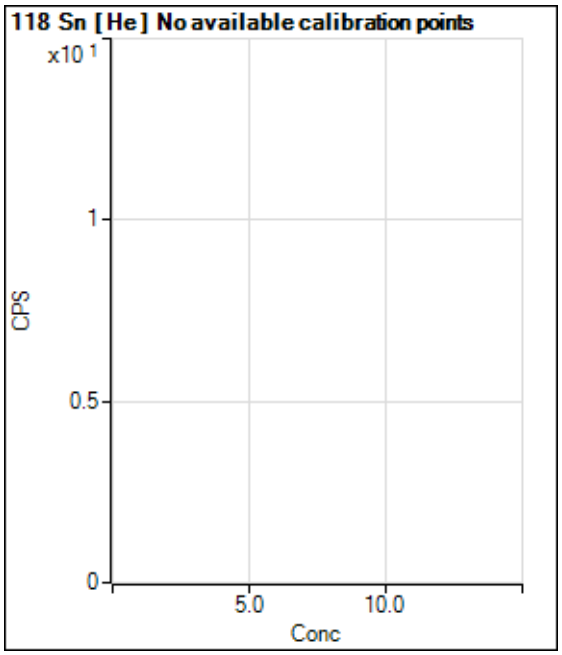


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1167.04	0.0007	P	49.2
2	☐	2.000	1.713	8752.31	0.0053	P	4.3
3	☐	5.000	5.059	21446.86	0.0142	P	13.6
4	☐	10.000	8.995	40210.03	0.0247	P	4.4
5	☐	100.000	100.705	404027.42	0.2693	P	10.3
6	☐	200.000	199.699	810644.75	0.5334	P	6.9
7	☐	1.000					

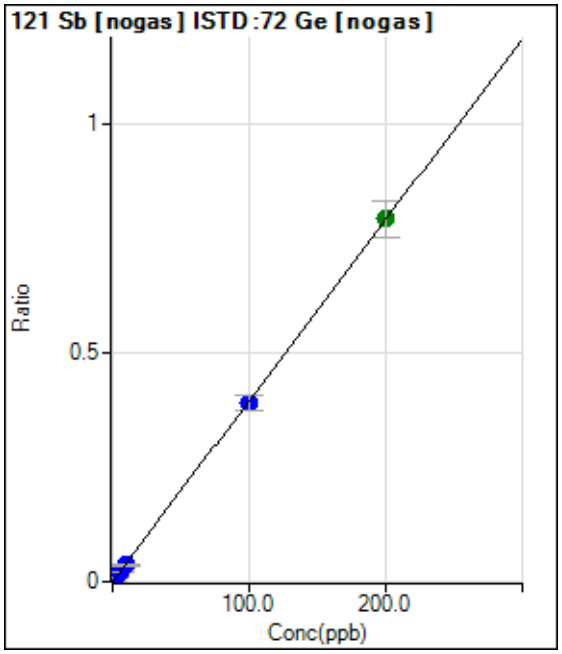
y = 0.0027 * x + 7.2560E-004
R = 1.0000
DL = 0.4016
BEC = 0.272

Weight: <None>
Min Conc: <None>

Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			390.01		P	7.7
2	☐			3787.14		P	0.7
3	☐			9872.96		P	2.7
4	☐			18660.15		P	1.2
5	☐			183964.87		P	2.1
6	☐			362158.38		P	1.6
7	☐						

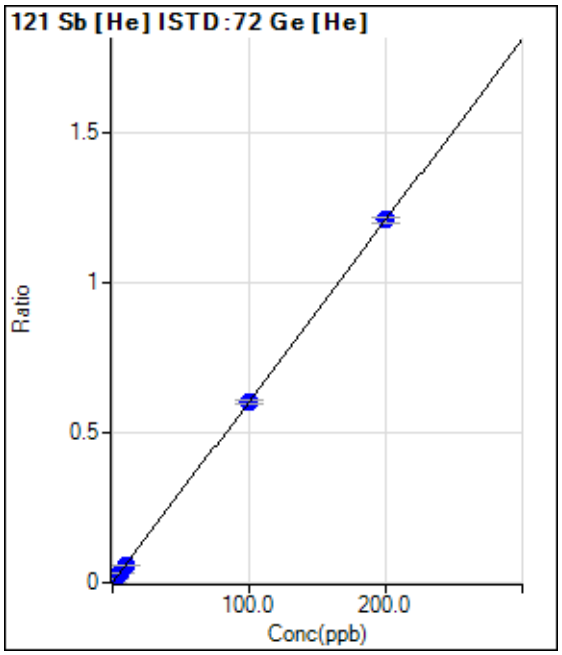


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	780.03	0.0004	P	4.2
2	☐	2.000	1.742	13812.31	0.0073	P	4.7
3	☐	5.000	4.877	34424.20	0.0197	P	7.5
4	☐	10.000	8.985	68538.26	0.0359	P	2.0
5	☐	100.000	98.819	704796.21	0.3912	P	8.0
6	☐	200.000	200.647	1411708.10	0.7939	A	9.8
7	☐	1.000					

y = 0.0040 * x + 4.1565E-004
R = 1.0000
DL = 0.01317
BEC = 0.1051

Weight: <None>
Min Conc: <None>

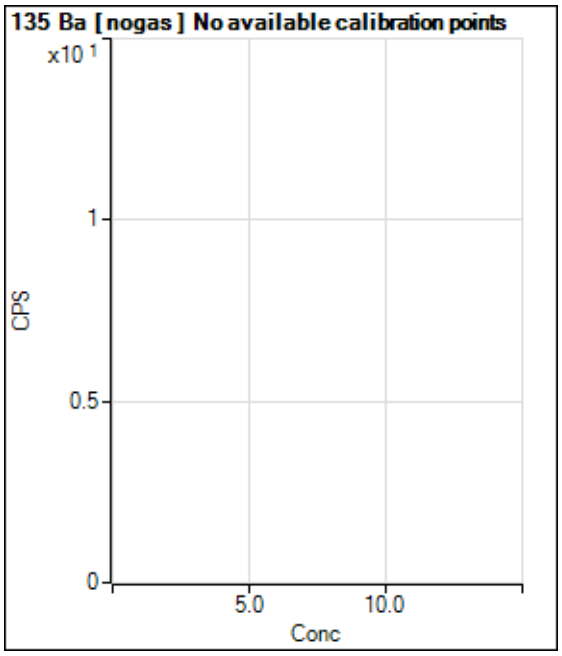
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.01	0.0007	P	4.8
2	☐	2.000	1.848	6181.20	0.0119	P	4.5
3	☐	5.000	4.798	15406.99	0.0296	P	1.7
4	☐	10.000	9.513	30256.43	0.0580	P	1.4
5	☐	100.000	99.557	310412.42	0.6007	P	1.4
6	☐	200.000	200.252	609499.08	1.2075	P	1.8
7	☐	1.000					

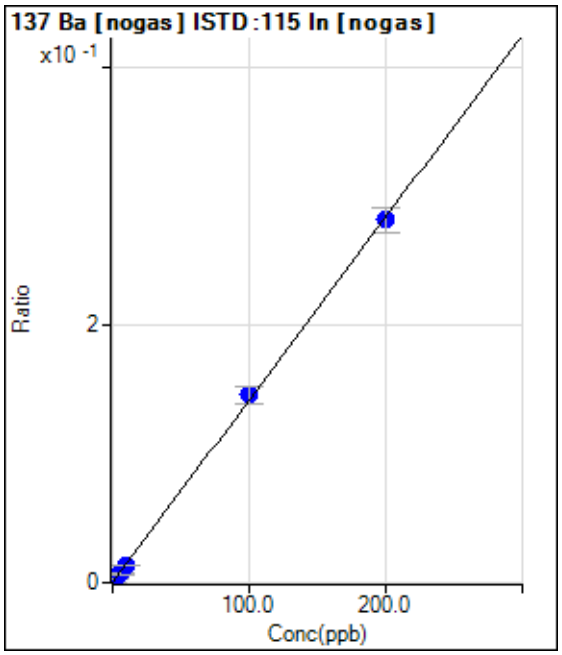
y = 0.0060 * x + 7.1277E-004
R = 1.0000
DL = 0.01694
BEC = 0.1183

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			176.67		P	56.7
2	☐			2633.57		P	1.6
3	☐			6477.98		P	4.2
4	☐			12604.77		P	3.9
5	☐			127713.08		P	1.5
6	☐			248026.74		P	1.0
7	☐						

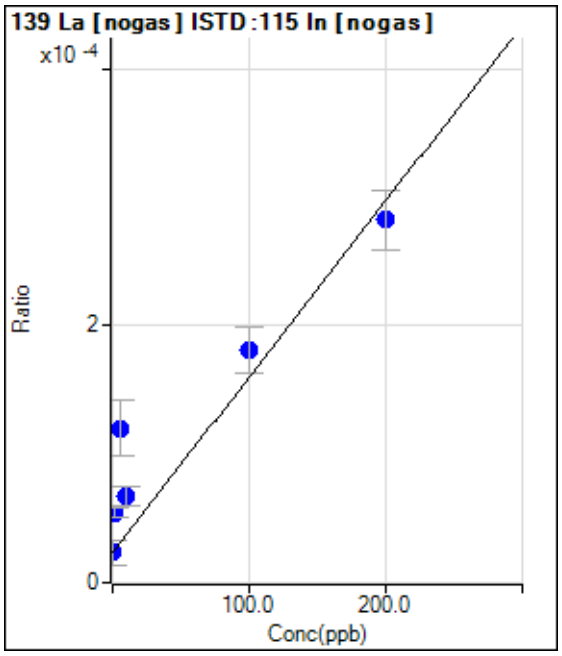
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	270.01	0.0002	P	25.3
2	☐	2.000	1.788	4470.65	0.0027	P	2.8
3	☐	5.000	4.889	10720.14	0.0071	P	11.9
4	☐	10.000	9.090	21226.57	0.0131	P	4.4
5	☐	100.000	102.730	218709.74	0.1458	P	9.7
6	☐	200.000	198.685	428231.79	0.2817	P	6.7
7	☐	1.000					

y = 0.0014 * x + 1.6888E-004
R = 0.9998
DL = 0.0904
BEC = 0.1192

Weight: <None>
Min Conc: <None>

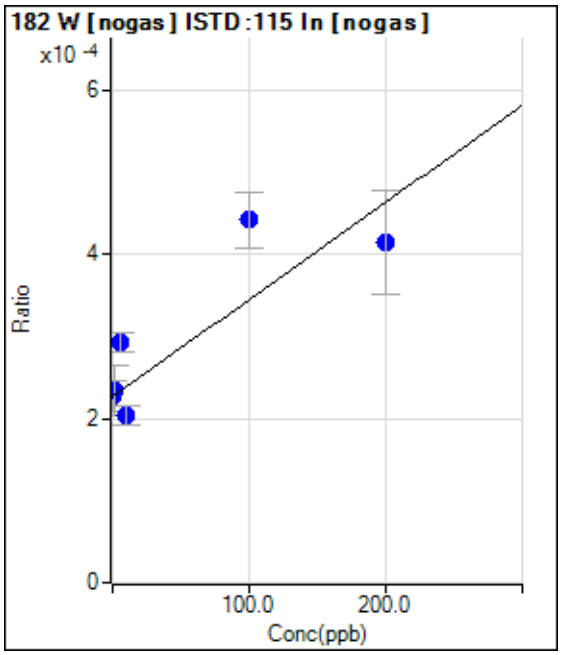


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	84.5
2	☐	2.000	22.910	90.00	0.0001	P	13.9
3	☐	5.000	71.061	180.00	0.0001	P	35.4
4	☐	10.000	32.071	110.00	0.0001	P	23.3
5	☐	100.000	115.377	270.01	0.0002	P	20.3
6	☐	200.000	189.347	433.35	0.0003	P	16.7
7	☐	1.000					

y = 1.3681E-006 * x + 2.3212E-005
R = 0.9505
DL = 43
BEC = 16.97

Weight: <None>
Min Conc: <None>

Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	363.34	0.0002	P	17.2
2	☐	2.000	6.546	386.68	0.0002	P	25.9
3	☐	5.000	55.474	446.68	0.0003	P	7.8
4	☐	10.000	-19.639	333.34	0.0002	P	12.2
5	☐	100.000	181.876	673.36	0.0004	P	15.5
6	☐	200.000	159.236	626.69	0.0004	P	30.5
7	☐	1.000					

y = 1.1845E-006 * x + 2.2716E-004

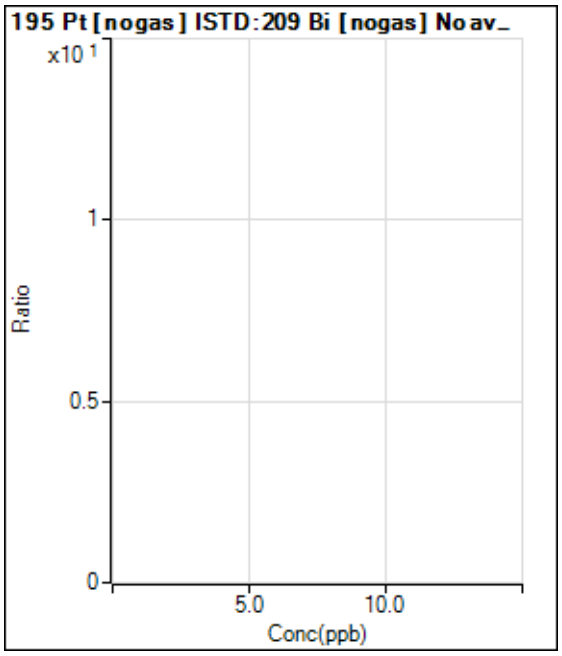
R = 0.8450

DL = 98.81

BEC = 191.8

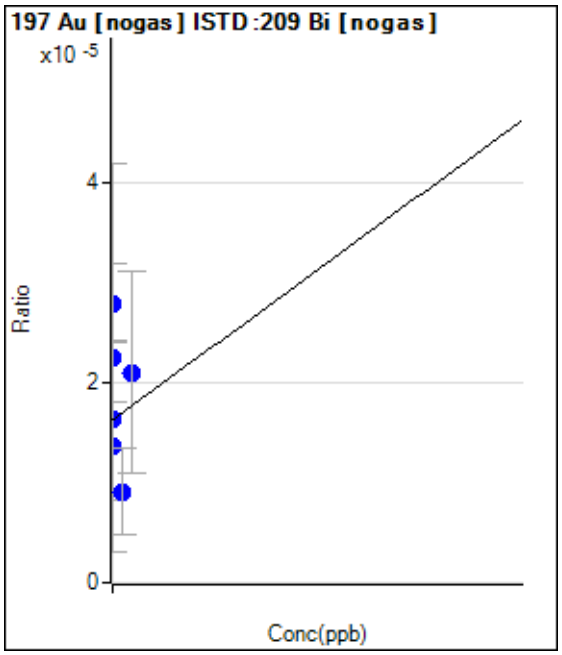
Weight: <None>

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					

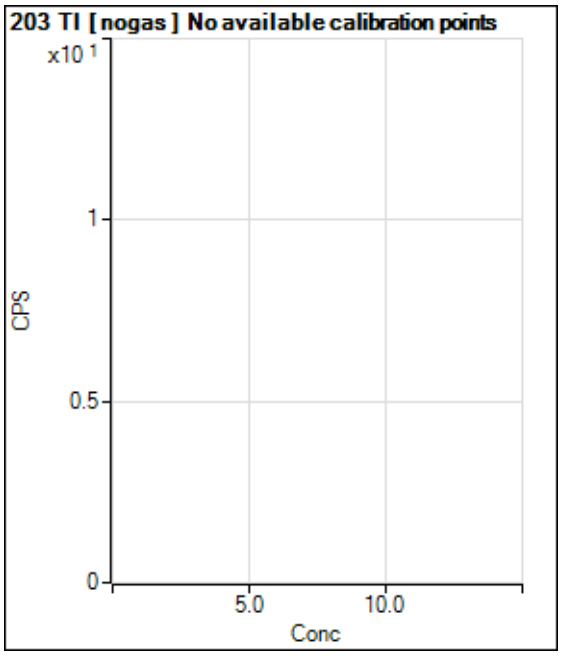
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	98.4
2	☐	2.000	-395.234	16.67	0.0000	P	66.1
3	☐	5.000	1705.538	30.00	0.0000	P	28.3
4	☐	10.000	902.778	26.67	0.0000	P	173.
5	☐	100.000	-1045.009	10.00	0.0000	P	94.9
6	☐	200.000	689.325	23.33	0.0000	P	96.0
7	☐	1.000					

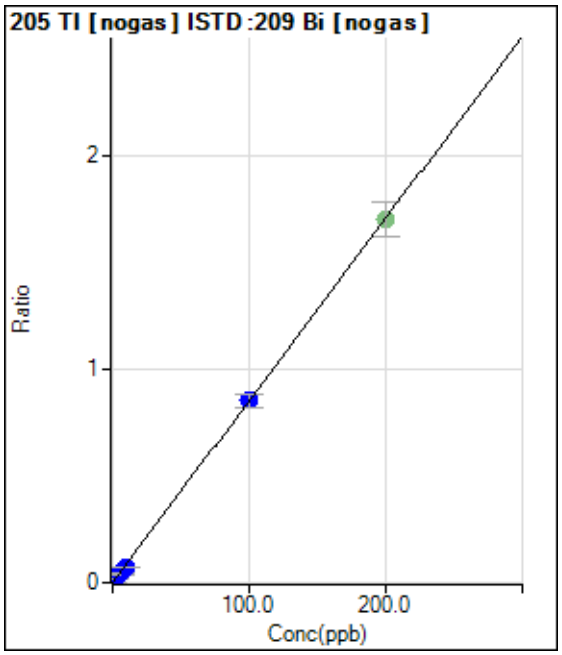
y = 6.8328E-009 * x + 1.6248E-005
R = -0.1190
DL = 7016
BEC = 2378

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			150.00		P	13.3
2	☐			7501.83		P	1.9
3	☐			19044.69		P	2.9
4	☐			36628.21		P	5.6
5	☐			387442.38		P	0.6
6	☐			765767.49		P	1.5
7	☐						

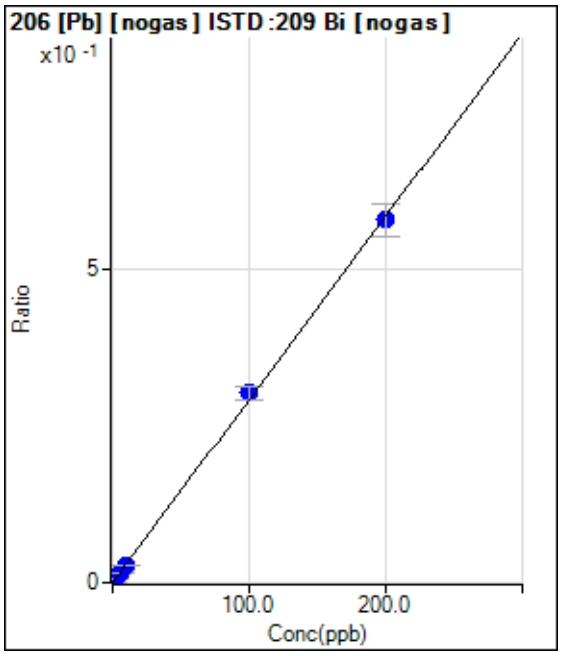
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	466.68	0.0004	P	25.6
2	☐	2.000	1.697	18030.17	0.0149	P	5.7
3	☐	5.000	4.900	44658.26	0.0422	P	9.2
4	☐	10.000	8.659	89140.06	0.0743	P	6.1
5	☐	100.000	100.145	924218.06	0.8550	P	7.1
6	☑	200.000		1853604.71	1.7013	A	9.5
7	☐	1.000					

y = 0.0085 * x + 3.8216E-004
R = 0.9999
DL = 0.03441
BEC = 0.04478

Weight: <None>
Min Conc: <None>

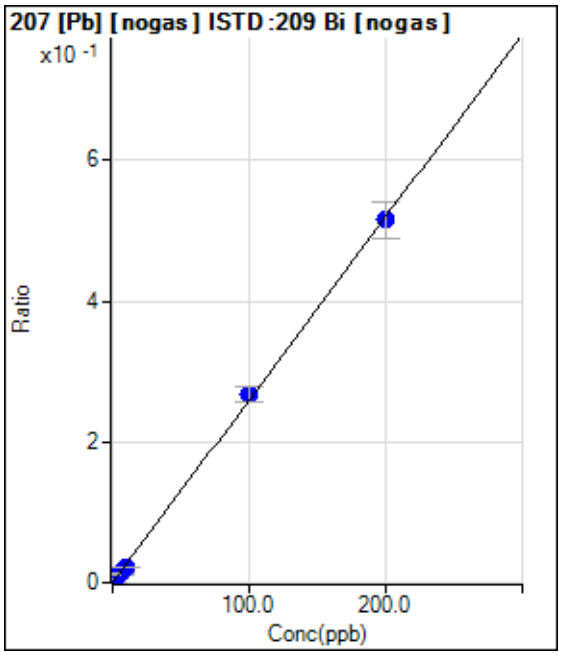


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0001	P	22.1
2	☐	2.000	1.850	6678.14	0.0055	P	6.7
3	☐	5.000	5.225	16208.27	0.0153	P	11.1
4	☐	10.000	9.222	32375.92	0.0270	P	4.8
5	☐	100.000	103.703	326772.18	0.3022	P	6.6
6	☐	200.000	198.183	629482.73	0.5775	P	8.9
7	☐	1.000					

y = 0.0029 * x + 1.1258E-004
R = 0.9997
DL = 0.02557
BEC = 0.03864

Weight: <None>
Min Conc: <None>

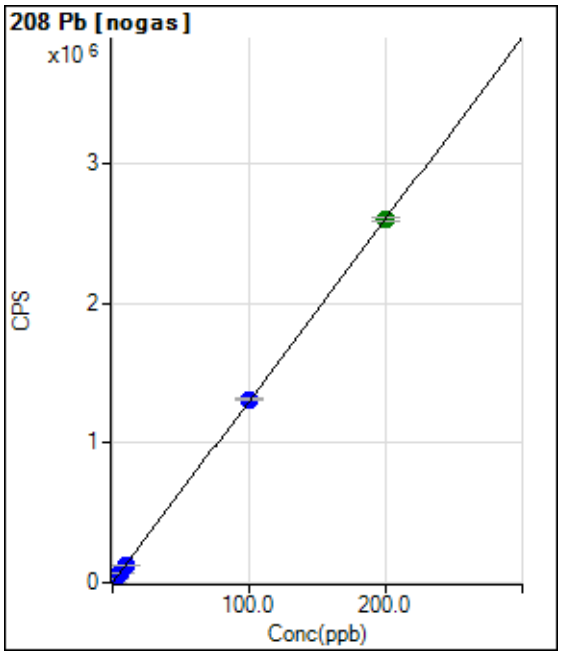
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0001	P	25.2
2	☐	2.000	1.870	5954.51	0.0049	P	7.2
3	☐	5.000	4.970	13706.01	0.0130	P	11.0
4	☐	10.000	8.655	27032.75	0.0225	P	6.1
5	☐	100.000	103.066	289196.73	0.2677	P	8.2
6	☐	200.000	198.536	561697.48	0.5156	P	9.9
7	☐	1.000					

y = 0.0026 * x + 5.5075E-005
R = 0.9998
DL = 0.01604
BEC = 0.02121

Weight: <None>
Min Conc: <None>

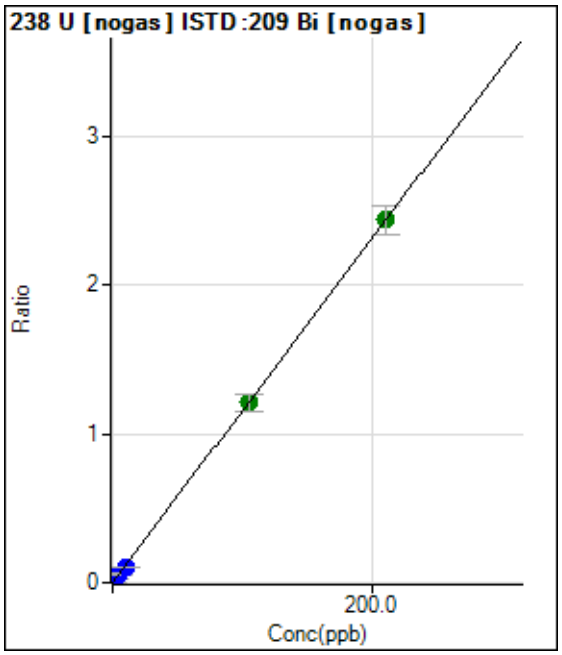


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	323.33		P	4.7
2	☐	2.000	2.018	26545.42		P	1.8
3	☐	5.000	4.878	63696.50		P	2.4
4	☐	10.000	9.718	126580.56		P	3.8
5	☐	100.000	100.846	1310460.49		P	0.7
6	☐	200.000	199.594	2593356.80		A	1.0
7	☐	1.000					

y = 12991.5277 * x + 323.3333
R = 1.0000
DL = 0.003527
BEC = 0.02489

Weight: <None>
Min Conc: <None>

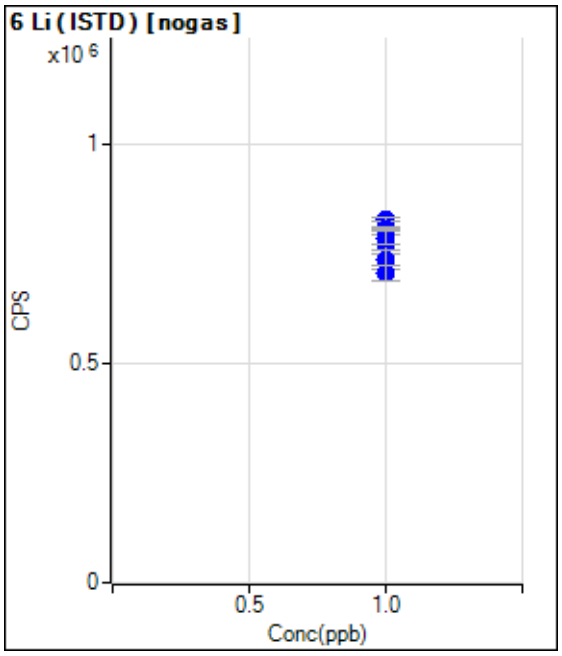
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0001	P	15.8
2	☐	2.000	1.717	24288.85	0.0200	P	4.8
3	☐	5.000	4.938	60706.38	0.0573	P	8.3
4	☐	10.000	8.671	120704.18	0.1006	P	4.3
5	☐	105.000	104.385	1305934.85	1.2095	A	9.2
6	☐	210.000	210.375	2657602.36	2.4374	A	8.2
7	☐	1.000					

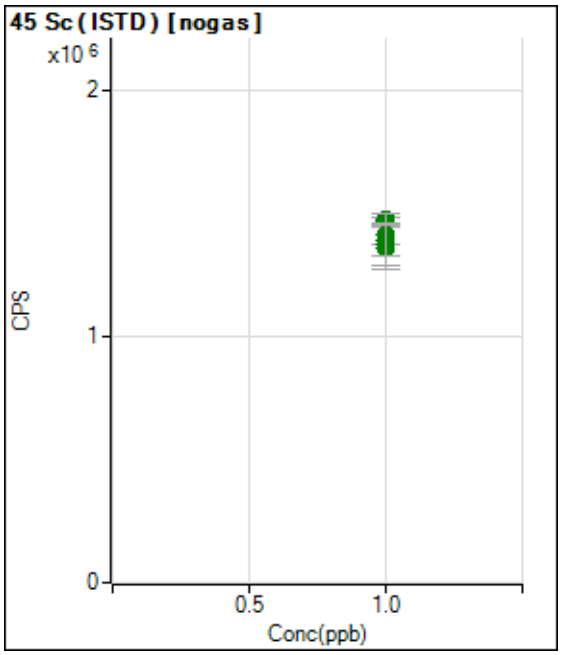
y = 0.0116 * x + 1.2083E-004
R = 1.0000
DL = 0.004948
BEC = 0.01043

Weight: <None>
Min Conc: <None>

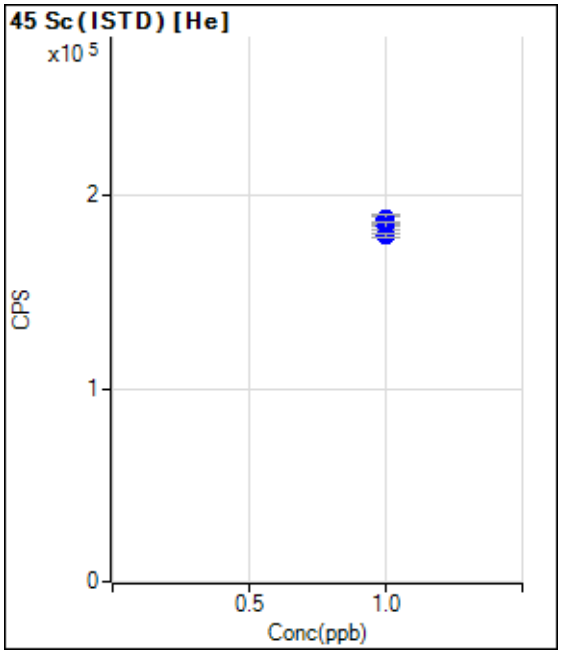


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		826647.96		P	1.1
2	☐	1.000		806856.59		P	0.7
3	☐	1.000		769673.54		P	5.9
4	☐	1.000		786176.10		P	4.3
5	☐	1.000		735287.30		P	6.1
6	☐	1.000		704975.19		P	5.0
7	☐	1.000					

Calibration for 037_ICV.d

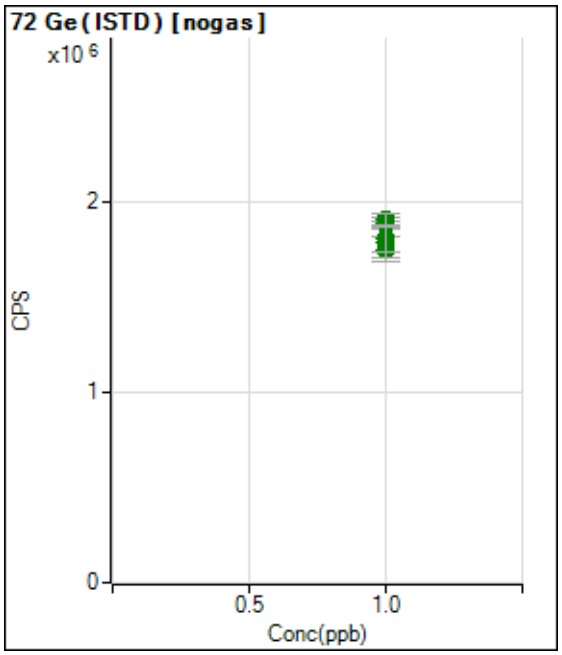


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1475779.25		A	1.9
2	☐	1.000		1473933.78		A	3.7
3	☐	1.000		1360965.84		A	12.2
4	☐	1.000		1413750.19		A	5.6
5	☐	1.000		1379496.96		A	12.6
6	☐	1.000		1394281.43		A	9.5
7	☐	1.000					

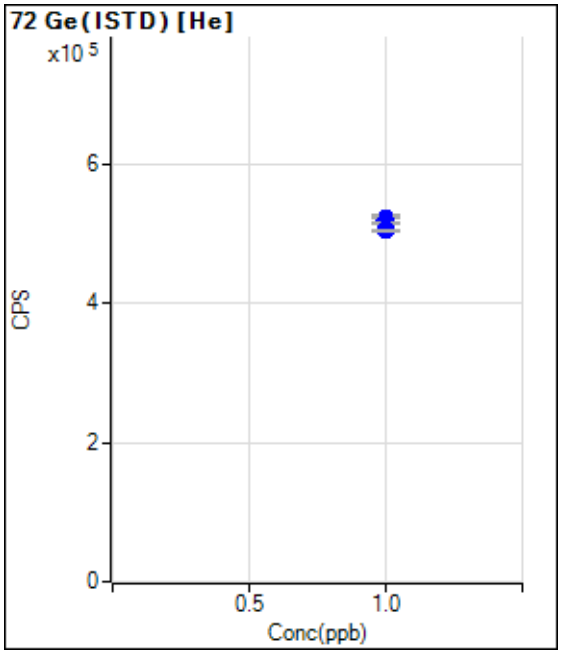


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		185753.03		P	0.5
2	☐	1.000		185897.33		P	0.6
3	☐	1.000		186831.50		P	2.4
4	☐	1.000		187875.87		P	2.1
5	☐	1.000		184061.96		P	2.0
6	☐	1.000		179280.95		P	0.9
7	☐	1.000					

Calibration for 037_ICV.d

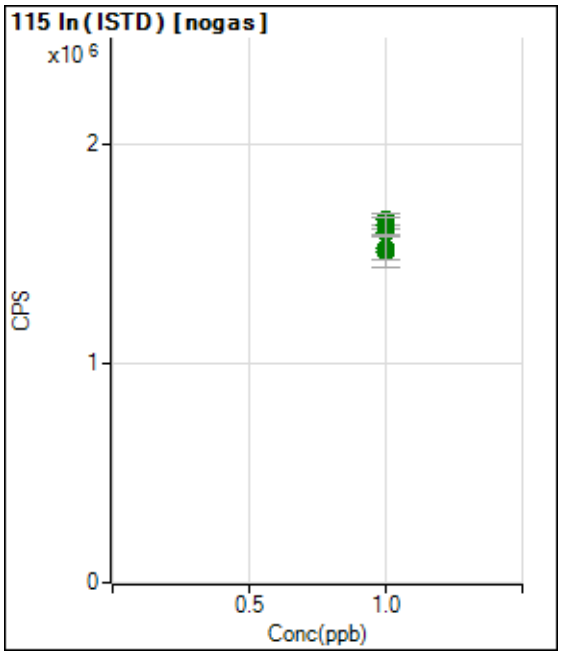


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1877763.93		A	2.3
2	☐	1.000		1892790.65		A	2.9
3	☐	1.000		1753628.98		A	7.5
4	☐	1.000		1907356.22		A	3.4
5	☐	1.000		1809278.15		A	8.0
6	☐	1.000		1788355.18		A	8.8
7	☐	1.000					

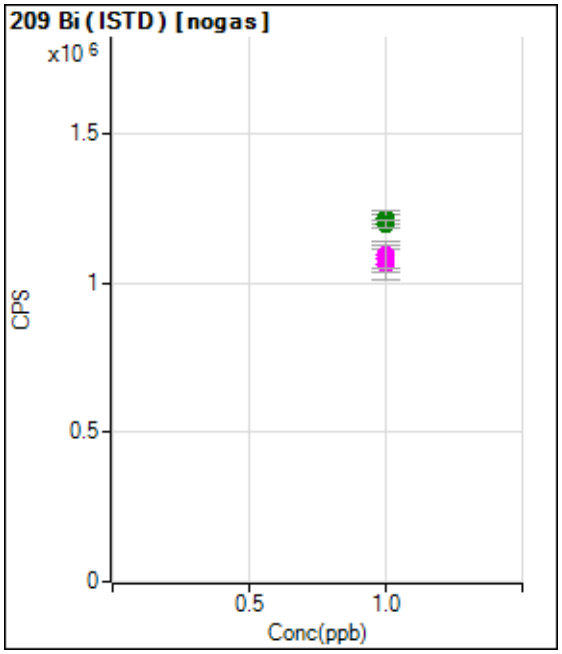


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		519023.12		P	1.2
2	☐	1.000		521848.11		P	2.1
3	☐	1.000		520028.77		P	0.8
4	☐	1.000		521349.59		P	1.3
5	☐	1.000		516775.86		P	0.5
6	☐	1.000		504821.02		P	1.1
7	☐	1.000					

Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1597661.51		A	2.3
2	☐	1.000		1654239.53		A	3.1
3	☐	1.000		1524655.66		A	11.8
4	☐	1.000		1628728.75		A	4.8
5	☐	1.000		1509275.42		A	9.0
6	☐	1.000		1524410.79		A	6.9
7	☐	1.000					



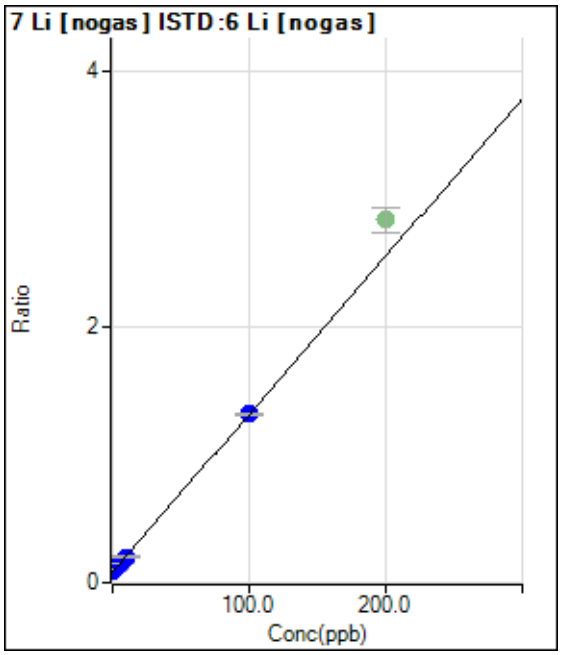
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1215842.35		A	2.7
2	☐	1.000		1215072.35		A	4.4
3	☐	1.000		1064647.90		M	9.8
4	☐	1.000		1200776.28		A	2.0
5	☐	1.000		1085117.35		M	8.3
6	☐	1.000		1095607.35		M	8.8
7	☐	1.000					

Calibration for 082_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 22:05:28
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	075CALB.d	CAL BLK	2019-01-08 13:44:58
2	076CALS.d	2/10/200	2019-01-08 13:46:56
3	077CALS.d	5/25/500	2019-01-08 13:48:56
4	078CALS.d	10/50/1000	2019-01-08 13:50:56
5	079CALS.d	100/500/10K	2019-01-08 13:52:54
6	080CALS.d	200/1000/20K	2019-01-08 13:54:52
7			

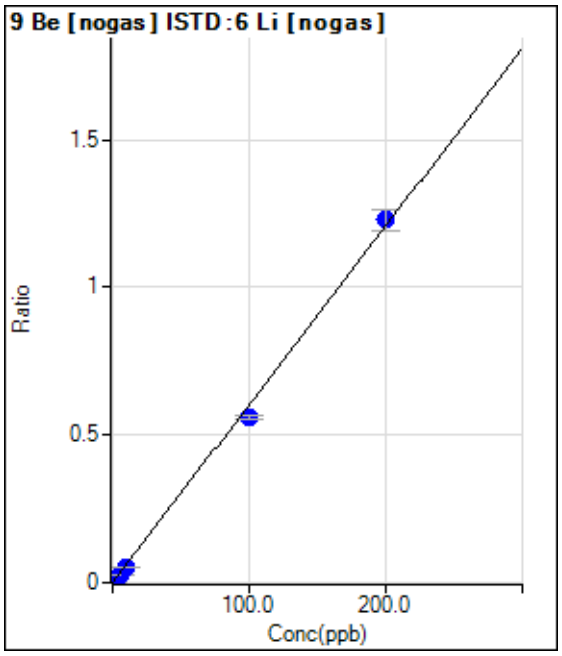
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57115.74	0.0851	P	3.4
2	☐	2.000	1.610	72393.16	0.1050	P	2.7
3	☐	5.000	4.884	97428.30	0.1454	P	1.5
4	☐	10.000	9.414	137221.54	0.2014	P	3.5
5	☐	100.000	100.072	848720.17	1.3207	P	0.9
6	☑	200.000		1732064.77	2.8408	A	7.1
7	☐	1.000					

y = 0.0123 * x + 0.0851
R = 1.0000
DL = 0.7008
BEC = 6.895

Weight: <None>
Min Conc: <None>

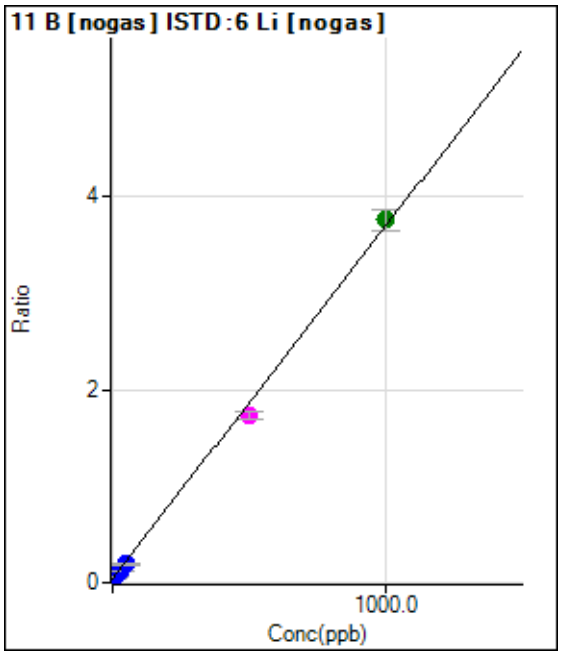


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	40.3
2	☐	2.000	1.744	7331.52	0.0106	P	2.0
3	☐	5.000	4.649	18822.77	0.0281	P	5.7
4	☐	10.000	8.528	35122.47	0.0515	P	3.0
5	☐	100.000	92.868	359952.01	0.5600	P	1.4
6	☐	200.000	203.651	748980.35	1.2279	P	6.1
7	☐	1.000					

y = 0.0060 * x + 1.2053E-004
R = 0.9991
DL = 0.02415
BEC = 0.01999

Weight: <None>
Min Conc: <None>

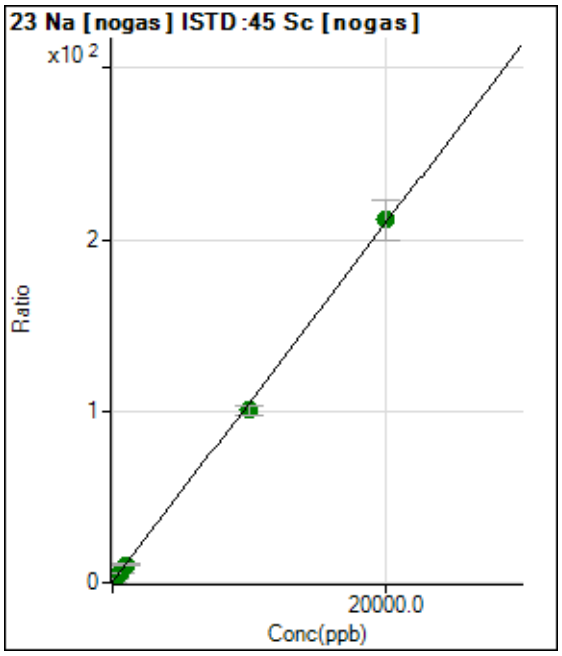
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27456.59	0.0409	P	2.5
2	☐	10.000	7.421	46897.54	0.0680	P	2.2
3	☐	25.000	21.450	79772.40	0.1193	P	5.8
4	☐	50.000	41.378	130955.91	0.1922	P	3.0
5	☐	500.000	464.452	1118157.07	1.7385	M	4.7
6	☐	1000.000	1018.320	2296029.08	3.7630	A	5.6
7	☐	5.000					

y = 0.0037 * x + 0.0409
R = 0.9992
DL = 0.843
BEC = 11.19

Weight: <None>
Min Conc: <None>

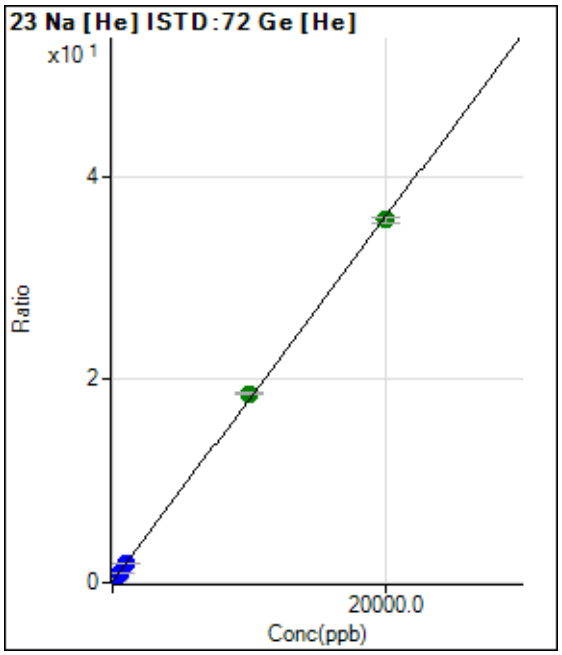


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	423105.84	0.3845	P	2.8
2	☐	200.000	188.545	2690696.28	2.3550	A	2.3
3	☐	500.000	524.542	6224997.40	5.8667	A	10.0
4	☐	1000.000	981.561	11865032.56	10.6432	A	7.7
5	☐	10000.00	9598.269	113153727.5	100.700	A	5.3
6	☐	20000.00	20201.289	231400346.8	211.518	A	11.2
7	☐	100.000					

y = 0.0105 * x + 0.3845
R = 0.9997
DL = 3.097
BEC = 36.78

Weight: <None>
Min Conc: <None>

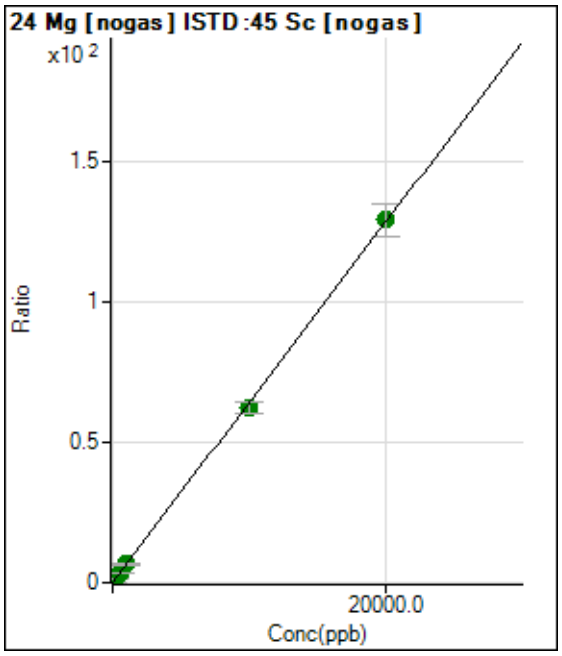
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40580.02	0.1005	P	1.7
2	☐	200.000	193.173	183026.43	0.4470	P	1.2
3	☐	500.000	502.914	414093.12	1.0025	P	3.2
4	☐	1000.000	968.240	759608.77	1.8371	P	2.1
5	☐	10000.00	10326.898	7528608.01	18.6226	A	1.4
6	☐	20000.00	19838.134	14602653.53	35.6818	A	1.2
7	☐	100.000					

y = 0.0018 * x + 0.1005
R = 0.9998
DL = 2.935
BEC = 56.05

Weight: <None>
Min Conc: <None>

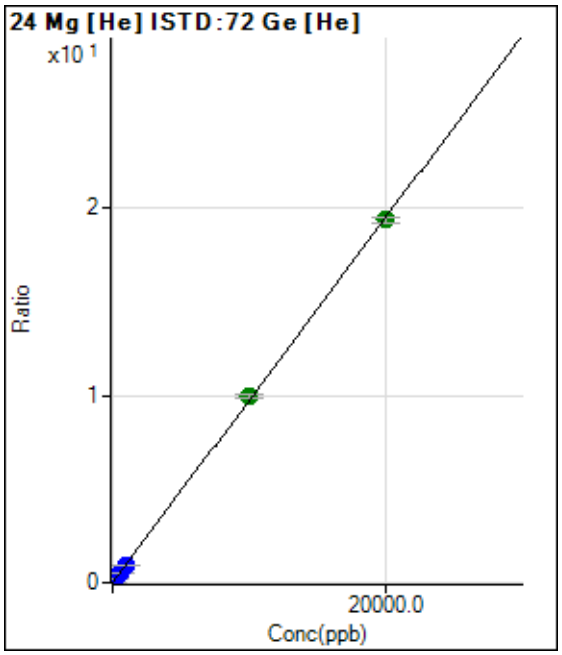


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7369.32	0.0067	P	7.1
2	☐	200.000	198.494	1465321.39	1.2825	A	3.3
3	☐	500.000	546.959	3732605.03	3.5223	A	12.3
4	☐	1000.000	1024.615	7343054.85	6.5925	A	9.4
5	☐	10000.00	9722.739	70211601.57	62.5005	A	6.2
6	☐	20000.00	20136.241	141771886.5	129.434	A	9.2
7	☐	100.000					

y = 0.0064 * x + 0.0067
R = 0.9999
DL = 0.222
BEC = 1.038

Weight: <None>
Min Conc: <None>

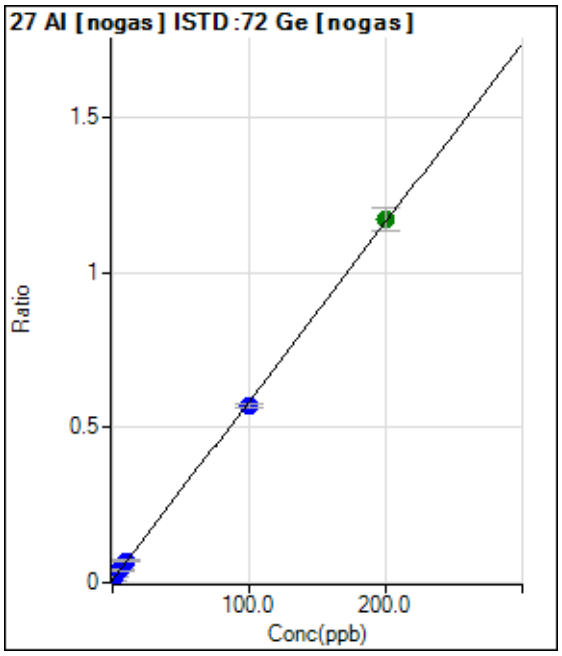
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	450.01	0.0011	P	16.3
2	☐	200.000	202.388	81233.25	0.1984	P	3.9
3	☐	500.000	514.660	207716.54	0.5029	P	3.7
4	☐	1000.000	977.720	394649.27	0.9544	P	0.5
5	☐	10000.00	10225.166	4029917.96	9.9710	A	2.9
6	☐	20000.00	19888.140	7936318.84	19.3926	A	1.3
7	☐	100.000					

y = 9.7503E-004 * x + 0.0011
R = 0.9999
DL = 0.5581
BEC = 1.141

Weight: <None>
Min Conc: <None>

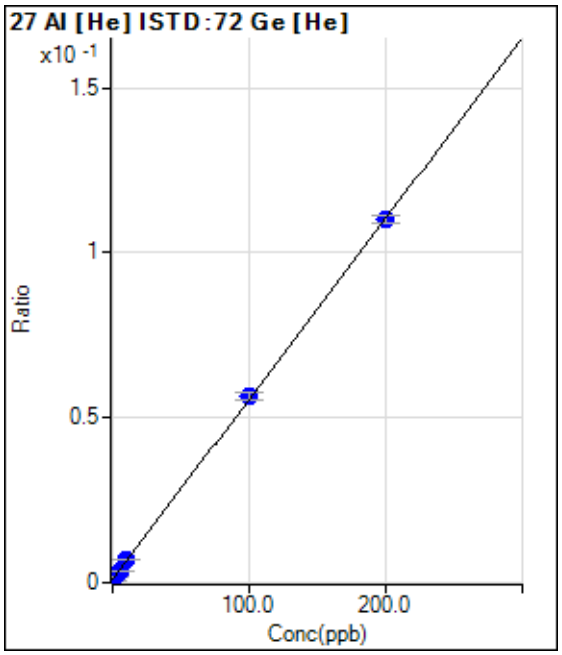


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11783.85	0.0080	P	9.0
2	☐	2.000	2.016	29486.61	0.0196	P	2.9
3	☐	5.000	5.701	58045.84	0.0409	P	12.6
4	☐	10.000	10.876	102494.53	0.0708	P	7.0
5	☐	100.000	97.129	835223.92	0.5688	P	2.4
6	☐	200.000	201.374	1728710.91	1.1706	A	6.4
7	☐	1.000					

y = 0.0058 * x + 0.0080
R = 0.9998
DL = 0.3765
BEC = 1.387

Weight: <None>
Min Conc: <None>

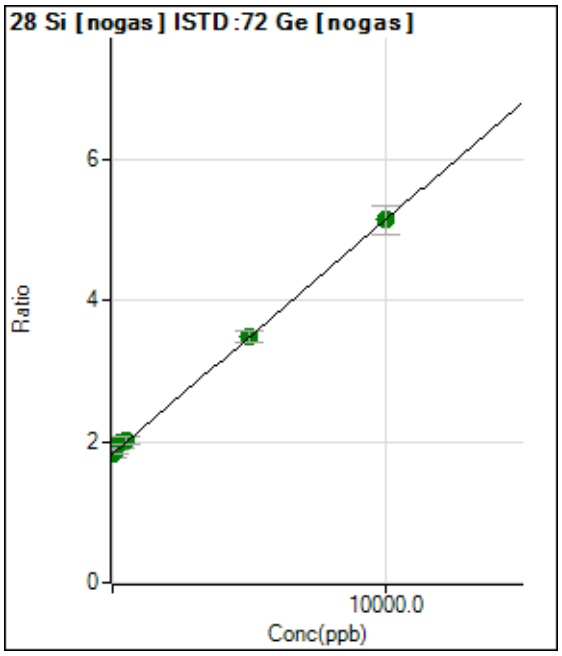
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.406	333.34	0.0008	P	7.7
2	☐	2.000	1.422	746.69	0.0018	P	9.8
3	☐	5.000	4.605	1473.41	0.0036	P	4.8
4	☐	10.000	10.649	2840.26	0.0069	P	3.2
5	☐	100.000	101.495	22844.07	0.0565	P	3.2
6	☐	200.000	199.236	44997.11	0.1100	P	2.0
7	☐	1.000					

y = 5.4660E-004 * x + 0.0010
R = 0.9999
DL = 0.3505
BEC = 1.916

Weight: <None>
Min Conc: <None>

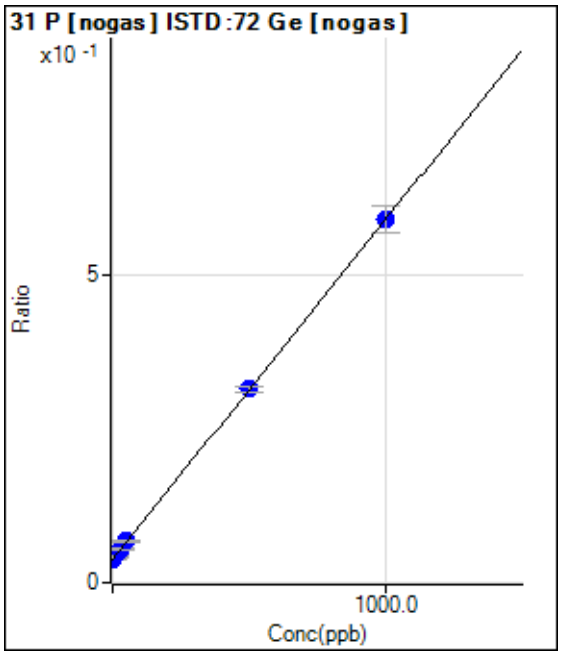


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2687573.40	1.8248	A	6.4
2	☐	100.000	74.194	2775368.81	1.8494	A	2.2
3	☐	250.000	481.179	2820944.02	1.9846	A	8.2
4	☐	500.000	601.694	2932057.04	2.0246	A	5.9
5	☐	5000.000	4992.046	5111263.15	3.4826	A	4.4
6	☐	10000.00	9993.371	7590137.39	5.1436	A	7.8
7	☐	5.000					

y = 3.3210E-004 * x + 1.8248
R = 0.9997
DL = 1051
BEC = 5495

Weight: <None>
Min Conc: <None>

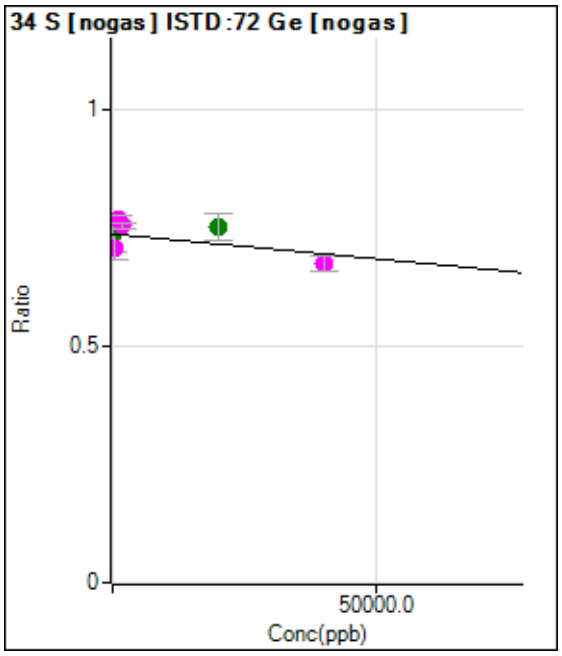
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55310.53	0.0375	P	5.8
2	☐	10.000	8.776	63630.04	0.0424	P	2.6
3	☐	25.000	30.989	77738.76	0.0547	P	8.6
4	☐	50.000	55.274	98726.22	0.0681	P	4.5
5	☐	500.000	501.060	462218.81	0.3149	P	3.3
6	☐	1000.000	999.069	871522.04	0.5905	P	7.4
7	☐	5.000					

y = 5.5346E-004 * x + 0.0375
R = 1.0000
DL = 11.73
BEC = 67.84

Weight: <None>
Min Conc: <None>

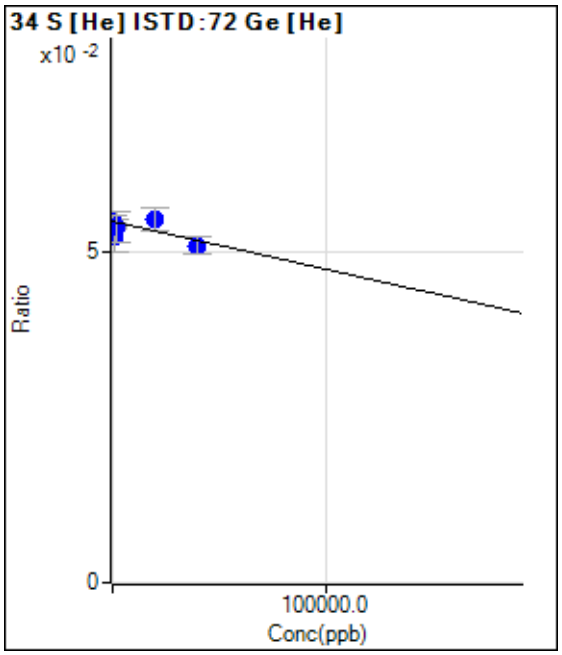


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1084231.47	0.7370	A	10.3
2	☐	400.000	27922.754	1062011.00	0.7077	M	7.6
3	☐	1000.000	-28453.420	1093970.56	0.7668	M	2.7
4	☐	2000.000	-16451.370	1094247.22	0.7542	M	1.8
5	☐	20000.00	-13825.153	1101754.06	0.7514	A	7.8
6	☐	40000.00	58296.253	1000353.12	0.6759	M	4.6
7	☐	100.000					

y = -1.0470E-006 * x + 0.7370
R = -0.6431
DL = -2.174E+05
BEC = -7.039E+05

Weight: <None>
Min Conc: <None>

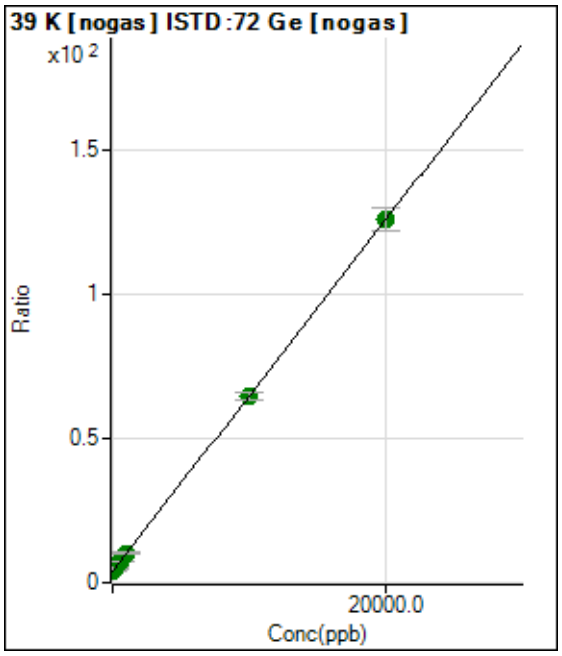
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22083.29	0.0547	P	3.3
2	☐	400.000	10998.764	22082.91	0.0539	P	1.5
3	☐	1000.000	30299.890	21682.62	0.0525	P	9.8
4	☐	2000.000	10517.108	22316.66	0.0540	P	8.8
5	☐	20000.00	-3048.478	22216.62	0.0549	P	6.2
6	☐	40000.00	50259.899	20914.53	0.0511	P	5.6
7	☐	100.000					

y = -7.2407E-008 * x + 0.0547
R = -0.5794
DL = -7.561E+04
BEC = -7.557E+05

Weight: <None>
Min Conc: <None>

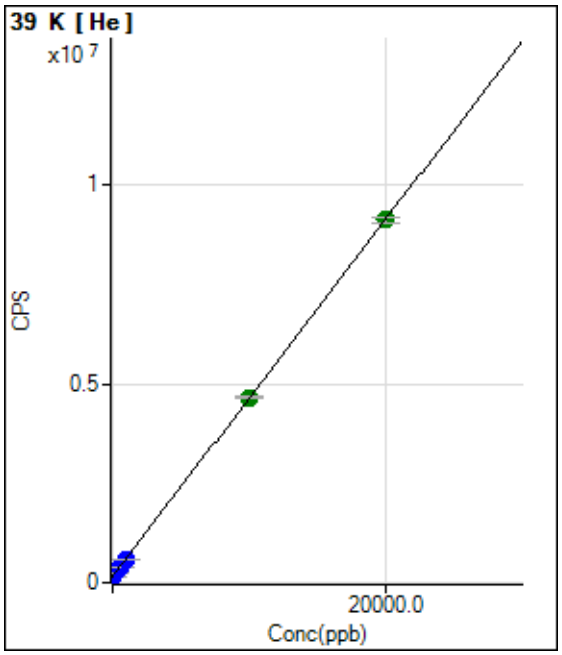


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5711736.72	3.8778	A	6.2
2	☐	200.000	177.482	7439017.87	4.9572	A	2.3
3	☐	500.000	563.610	10389976.28	7.3054	A	7.2
4	☐	1000.000	1020.354	14607389.91	10.0832	A	4.9
5	☐	10000.00	9982.562	94796587.54	64.5873	A	3.8
6	☐	20000.00	20006.336	185404599.9	125.547	A	6.2
7	☐	100.000					

y = 0.0061 * x + 3.8778
R = 1.0000
DL = 118.2
BEC = 637.6

Weight: <None>
Min Conc: <None>

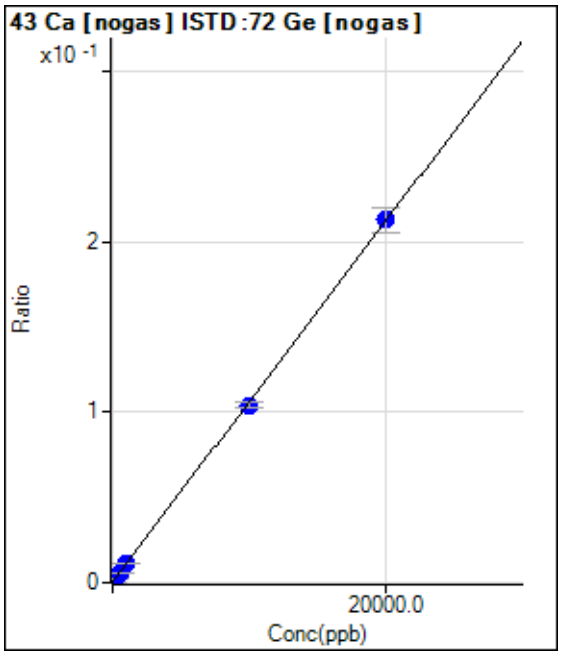
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	157324.39		P	0.3
2	☐	200.000	193.772	244295.80		P	0.4
3	☐	500.000	500.537	381982.90		P	1.2
4	☐	1000.000	984.182	599059.31		P	0.7
5	☐	10000.00	10038.720	4663048.78		A	0.9
6	☐	20000.00	19981.480	9125702.37		A	1.3
7	☐	100.000					

y = 448.8345 * x + 157324.3867
R = 1.0000
DL = 3.064
BEC = 350.5

Weight: <None>
Min Conc: <None>

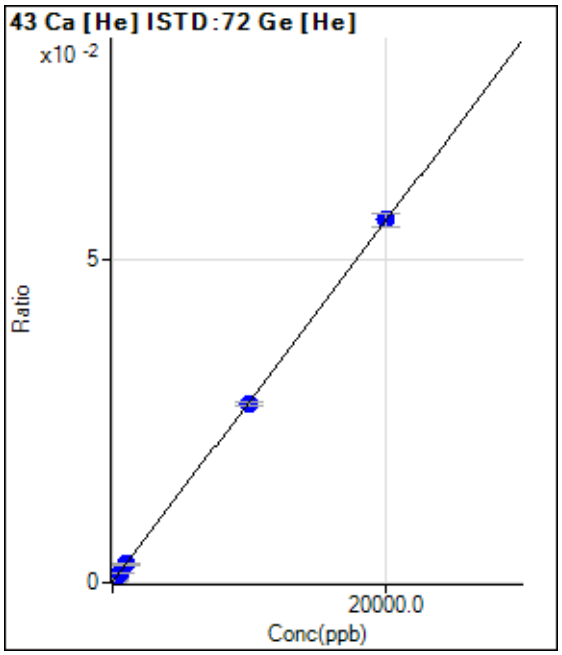


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.34	0.0003	P	18.7
2	☐	200.000	192.378	3463.71	0.0023	P	6.3
3	☐	500.000	541.258	8542.09	0.0060	P	5.3
4	☐	1000.000	1013.398	15930.39	0.0110	P	5.0
5	☐	10000.00	9832.471	153136.10	0.1043	P	3.4
6	☐	20000.00	20082.140	314191.65	0.2128	P	6.6
7	☐	100.000					

y = 1.0582E-005 * x + 2.7286E-004
R = 0.9999
DL = 14.5
BEC = 25.78

Weight: <None>
Min Conc: <None>

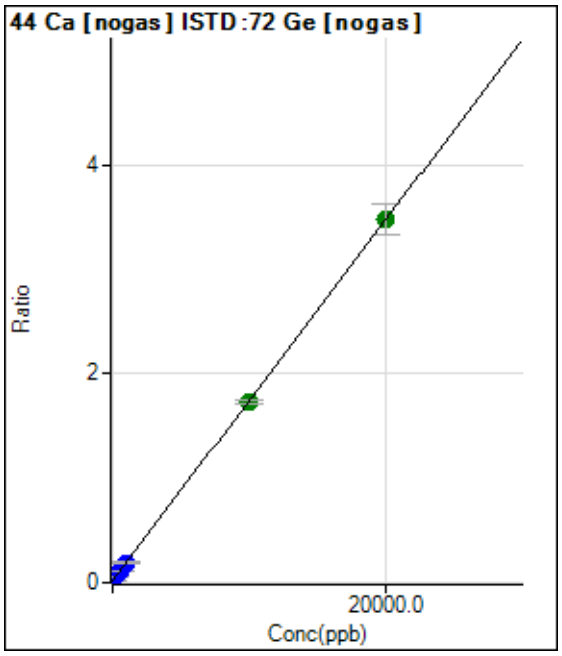
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0001	P	88.7
2	☐	200.000	168.713	216.67	0.0005	P	39.1
3	☐	500.000	498.468	600.02	0.0015	P	8.0
4	☐	1000.000	999.164	1180.05	0.0029	P	2.9
5	☐	10000.00	9858.377	11180.19	0.0276	P	2.0
6	☐	20000.00	20071.205	23007.71	0.0562	P	3.7
7	☐	100.000					

y = 2.7986E-006 * x + 5.7843E-005
R = 1.0000
DL = 55.02
BEC = 20.67

Weight: <None>
Min Conc: <None>

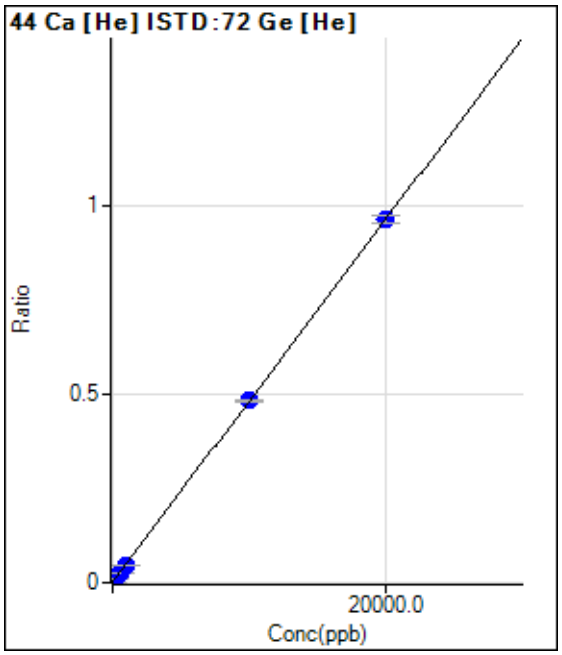


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28124.67	0.0191	P	7.5
2	☐	200.000	190.847	78132.66	0.0521	P	2.0
3	☐	500.000	528.326	156733.47	0.1103	P	9.7
4	☐	1000.000	997.002	277053.11	0.1913	P	5.6
5	☐	10000.00	9963.633	2554807.57	1.7399	A	2.1
6	☐	20000.00	20017.717	5127967.63	3.4763	A	8.5
7	☐	100.000					

y = 1.7270E-004 * x + 0.0191
R = 1.0000
DL = 24.97
BEC = 110.6

Weight: <None>
Min Conc: <None>

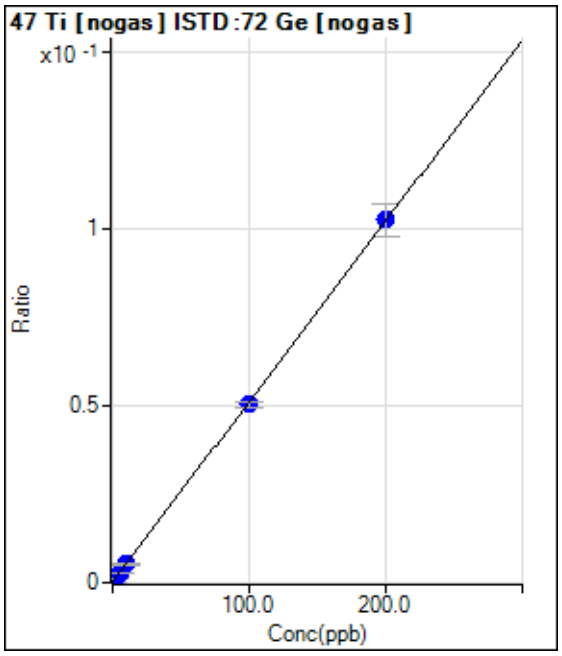
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0013	P	10.8
2	☐	200.000	198.388	4440.60	0.0108	P	3.8
3	☐	500.000	503.829	10539.79	0.0255	P	5.8
4	☐	1000.000	953.134	19480.46	0.0471	P	1.4
5	☐	10000.00	10019.461	195169.87	0.4828	P	1.0
6	☐	20000.00	19992.533	393661.99	0.9620	P	2.1
7	☐	100.000					

y = 4.8052E-005 * x + 0.0013
R = 1.0000
DL = 8.864
BEC = 27.34

Weight: <None>
Min Conc: <None>

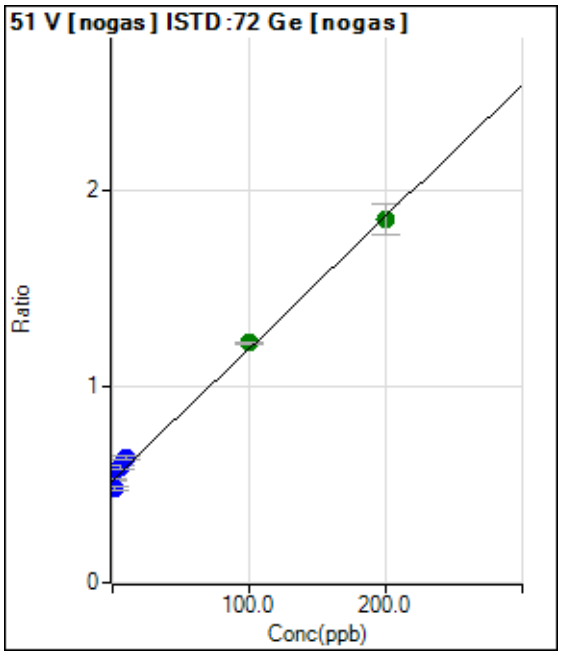


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.33	0.0001	P	51.9
2	☐	2.000	1.879	1576.76	0.0011	P	2.7
3	☐	5.000	5.075	3817.12	0.0027	P	5.7
4	☐	10.000	10.128	7625.00	0.0053	P	5.2
5	☐	100.000	98.577	74047.86	0.0504	P	3.2
6	☐	200.000	200.704	151120.82	0.1025	P	9.0
7	☐	1.000					

y = 5.1006E-004 * x + 9.2108E-005
R = 1.0000
DL = 0.2811
BEC = 0.1806

Weight: <None>
Min Conc: <None>

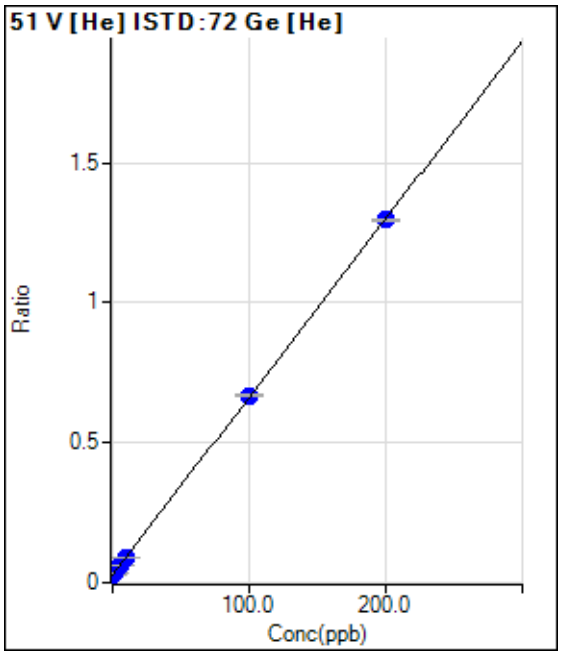
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	770104.56	0.5219	P	1.5
2	☐	2.000	-6.120	721610.68	0.4808	P	3.2
3	☐	5.000	10.146	841064.50	0.5900	P	2.7
4	☐	10.000	17.123	923330.26	0.6368	P	2.6
5	☐	100.000	104.472	1796770.09	1.2231	A	0.7
6	☐	200.000	197.360	2724212.69	1.8466	A	8.4
7	☐	1.000					

y = 0.0067 * x + 0.5219
R = 0.9975
DL = 3.53
BEC = 77.75

Weight: <None>
Min Conc: <None>

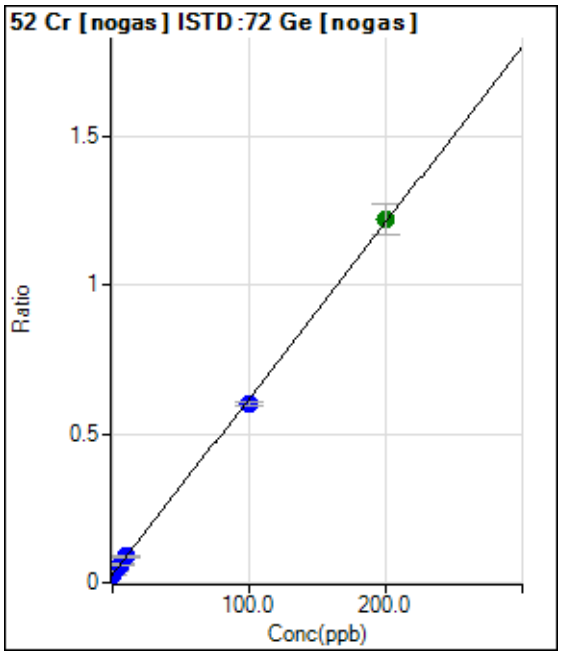


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.059	11054.62	0.0274	P	2.0
2	☐	2.000	1.588	15193.52	0.0371	P	2.8
3	☐	5.000	5.107	24571.45	0.0595	P	2.0
4	☐	10.000	9.809	36955.77	0.0894	P	1.4
5	☐	100.000	100.852	270119.32	0.6682	P	1.3
6	☐	200.000	199.585	530364.46	1.2959	P	0.7
7	☐	1.000					

y = 0.0064 * x + 0.0270
R = 1.0000
DL = 0.2546
BEC = 4.249

Weight: <None>
Min Conc: <None>

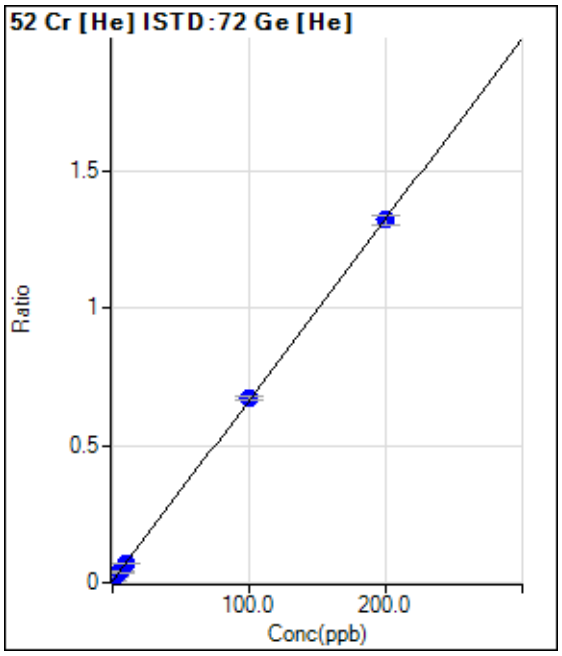
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40427.57	0.0274	P	4.1
2	☐	2.000	1.580	55171.93	0.0368	P	2.3
3	☐	5.000	5.499	85298.83	0.0599	P	5.8
4	☐	10.000	10.403	128750.73	0.0889	P	6.7
5	☐	100.000	96.867	881496.13	0.6001	P	2.3
6	☐	200.000	201.538	1797923.72	1.2189	A	8.6
7	☐	1.000					

y = 0.0059 * x + 0.0274
R = 0.9998
DL = 0.5675
BEC = 4.639

Weight: <None>
Min Conc: <None>

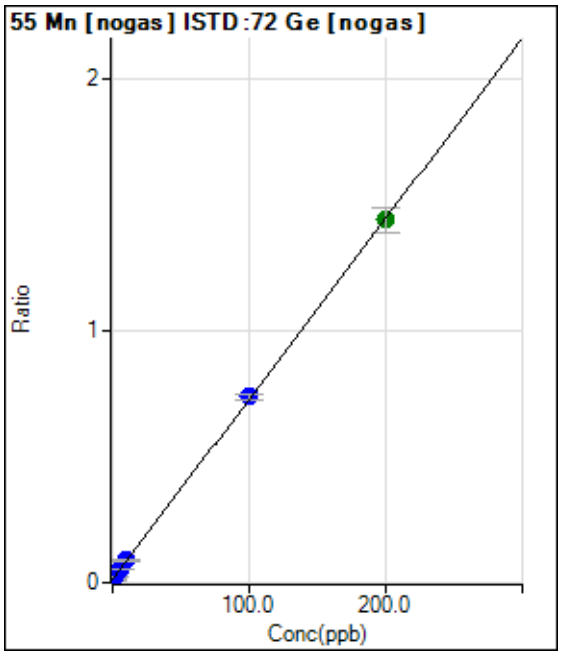


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2306.85	0.0057	P	5.9
2	☐	2.000	1.914	7508.33	0.0183	P	1.6
3	☐	5.000	5.011	16007.14	0.0388	P	6.5
4	☐	10.000	9.785	29046.37	0.0702	P	3.0
5	☐	100.000	100.823	271095.87	0.6707	P	1.8
6	☐	200.000	199.600	541011.62	1.3221	P	2.5
7	☐	1.000					

y = 0.0066 * x + 0.0057
R = 1.0000
DL = 0.1539
BEC = 0.8663

Weight: <None>
Min Conc: <None>

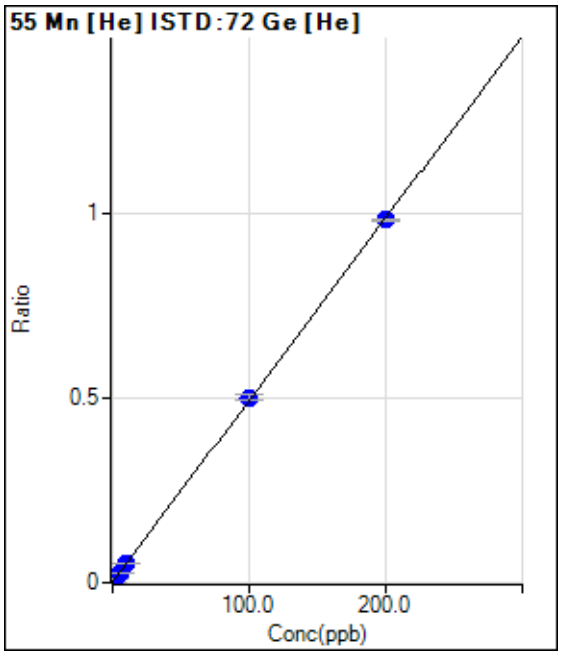
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16927.92	0.0115	P	11.3
2	☐	2.000	1.938	38142.90	0.0254	P	2.7
3	☐	5.000	5.596	73435.55	0.0516	P	7.7
4	☐	10.000	10.729	128137.91	0.0885	P	5.2
5	☐	100.000	101.211	1082308.63	0.7374	P	3.8
6	☐	200.000	199.344	2127614.71	1.4412	A	6.9
7	☐	1.000					

y = 0.0072 * x + 0.0115
R = 1.0000
DL = 0.5432
BEC = 1.606

Weight: <None>
Min Conc: <None>

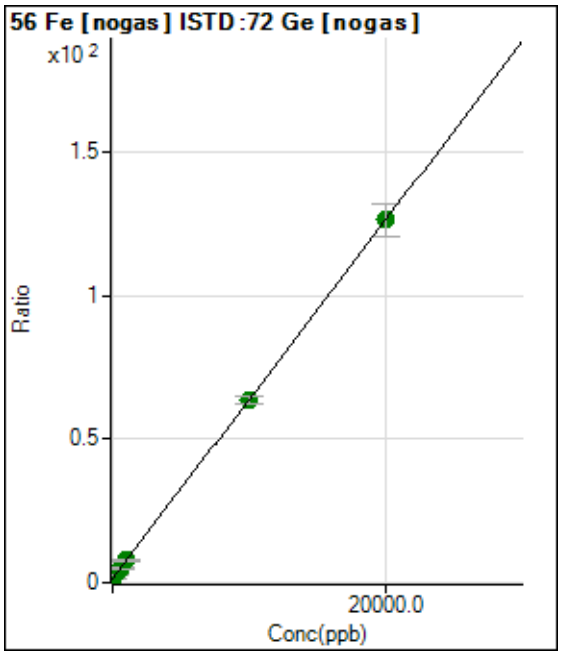


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513.35	0.0013	P	9.7
2	☐	2.000	2.090	4734.00	0.0116	P	5.0
3	☐	5.000	5.063	10819.99	0.0262	P	2.4
4	☐	10.000	10.002	20871.97	0.0505	P	1.8
5	☐	100.000	101.678	202706.56	0.5015	P	2.8
6	☐	200.000	199.158	401552.29	0.9811	P	0.8
7	☐	1.000					

y = 0.0049 * x + 0.0013
R = 1.0000
DL = 0.07488
BEC = 0.2582

Weight: <None>
Min Conc: <None>

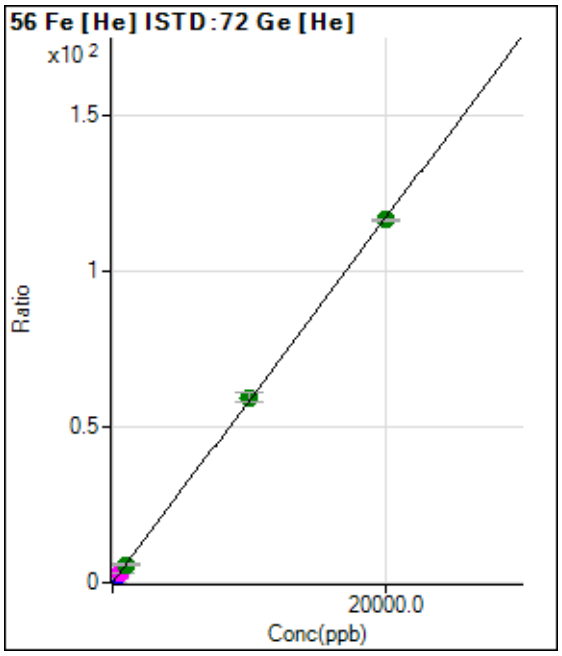
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2078495.95	1.4097	A	3.7
2	☐	200.000	186.923	3868161.02	2.5775	A	1.8
3	☐	500.000	552.993	6910398.59	4.8647	A	9.5
4	☐	1000.000	1038.255	11430657.03	7.8965	A	7.3
5	☐	10000.00	9954.803	93341806.25	63.6053	A	4.3
6	☐	20000.00	20019.492	186517866.6	126.487	A	9.2
7	☐	100.000					

y = 0.0062 * x + 1.4097
R = 1.0000
DL = 24.84
BEC = 225.6

Weight: <None>
Min Conc: <None>

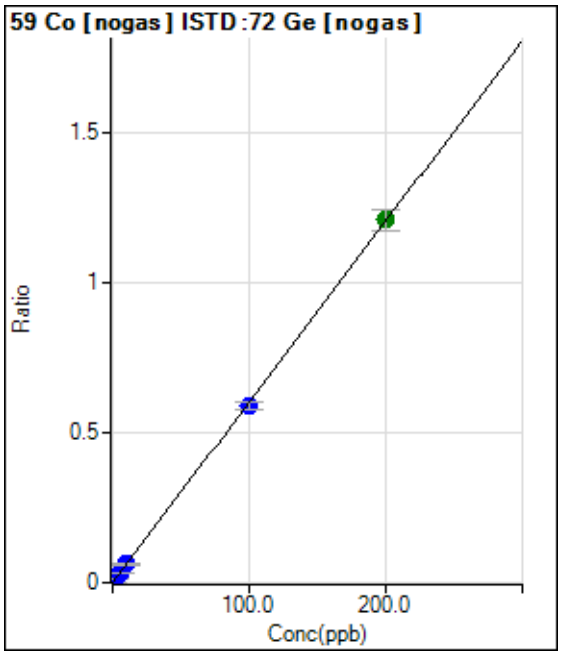


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9569.25	0.0237	P	3.5
2	☐	200.000	197.449	483416.79	1.1807	P	1.4
3	☐	500.000	505.198	1232790.21	2.9839	M	3.1
4	☐	1000.000	997.306	2426056.68	5.8674	A	2.3
5	☐	10000.00	10181.157	24116035.47	59.6803	A	4.3
6	☐	20000.00	19909.452	47757012.62	116.683	A	0.6
7	☐	100.000					

y = 0.0059 * x + 0.0237
R = 0.9999
DL = 0.4276
BEC = 4.046

Weight: <None>
Min Conc: <None>

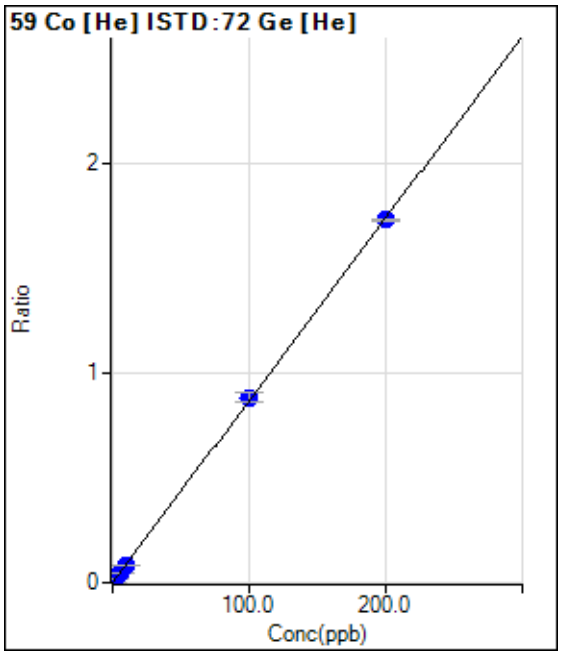
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.34	0.0002	P	10.2
2	☐	2.000	1.900	17521.91	0.0117	P	3.2
3	☐	5.000	5.318	45807.27	0.0322	P	9.4
4	☐	10.000	10.236	89594.40	0.0618	P	5.2
5	☐	100.000	98.344	868977.93	0.5921	P	4.2
6	☐	200.000	200.809	1785765.96	1.2088	A	5.6
7	☐	1.000					

y = 0.0060 * x + 2.4025E-004
R = 0.9999
DL = 0.01218
BEC = 0.03992

Weight: <None>
Min Conc: <None>

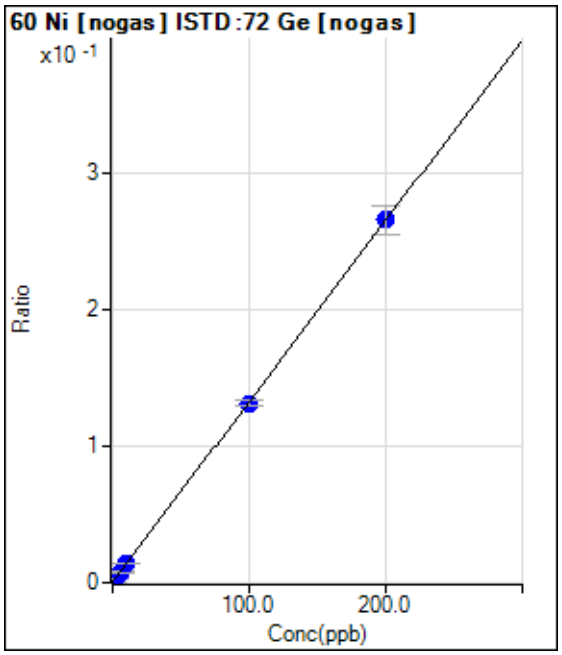


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0002	P	28.7
2	☐	2.000	2.038	7311.55	0.0179	P	6.3
3	☐	5.000	4.968	17868.91	0.0433	P	6.4
4	☐	10.000	9.802	35223.90	0.0852	P	1.5
5	☐	100.000	101.641	356143.35	0.8815	P	5.2
6	☐	200.000	199.190	706938.82	1.7273	P	0.6
7	☐	1.000					

y = 0.0087 * x + 1.9045E-004
R = 1.0000
DL = 0.01894
BEC = 0.02196

Weight: <None>
Min Conc: <None>

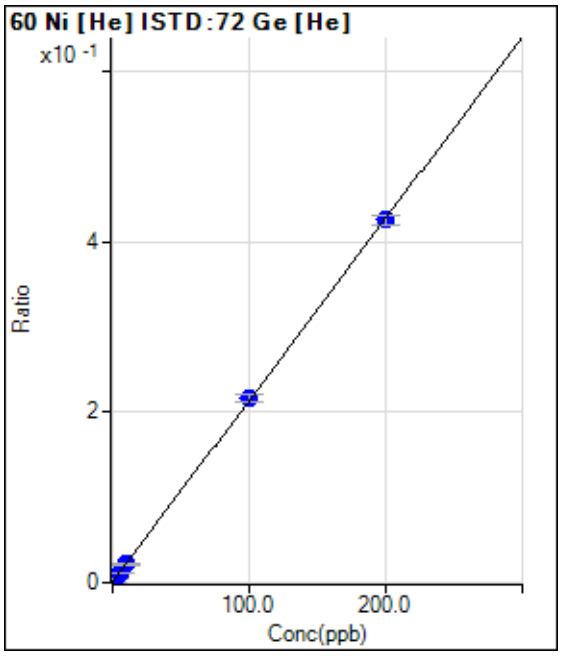
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.088	466.68	0.0003	P	30.6
2	☐	2.000	1.978	4577.30	0.0031	P	5.7
3	☐	5.000	5.402	10763.34	0.0076	P	11.2
4	☐	10.000	10.269	20321.51	0.0140	P	3.8
5	☐	100.000	98.925	192812.04	0.1313	P	3.6
6	☐	200.000	200.514	392160.79	0.2657	P	7.7
7	☐	1.000					

y = 0.0013 * x + 4.3452E-004
R = 1.0000
DL = 0.2201
BEC = 0.3284

Weight: <None>
Min Conc: <None>

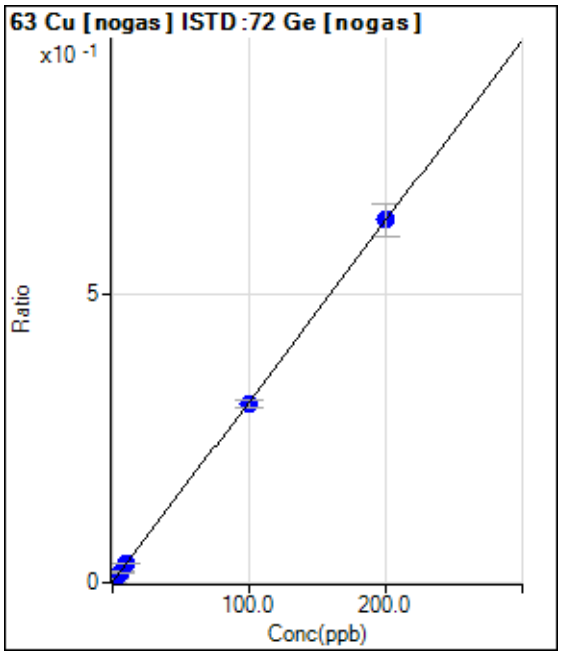


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.222	53.33	0.0001	P	48.6
2	☐	2.000	1.913	1916.79	0.0047	P	6.2
3	☐	5.000	4.785	4467.27	0.0108	P	6.0
4	☐	10.000	9.880	8958.98	0.0217	P	2.3
5	☐	100.000	101.263	87488.15	0.2165	P	3.6
6	☐	200.000	199.381	174187.86	0.4257	P	2.3
7	☐	1.000					

y = 0.0021 * x + 6.0504E-004
R = 1.0000
DL = 0.09086
BEC = 0.2838

Weight: <None>
Min Conc: <None>

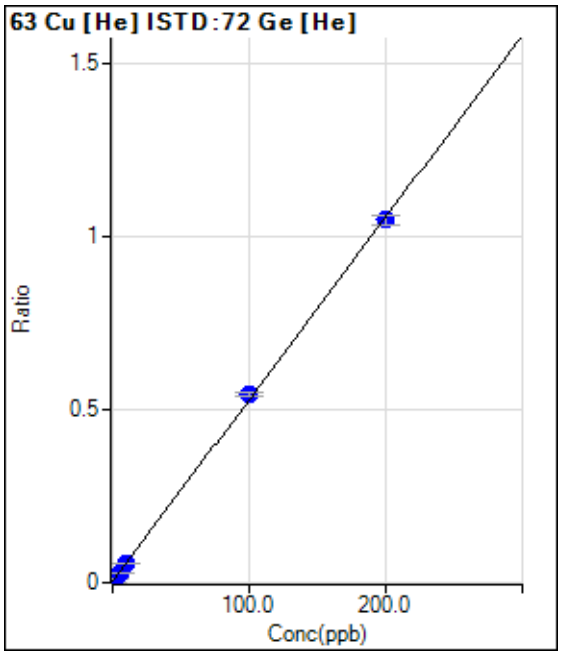
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1403.41	0.0010	P	4.0
2	☐	2.000	2.022	10933.38	0.0073	P	2.2
3	☐	5.000	5.475	25765.09	0.0181	P	5.9
4	☐	10.000	10.327	48226.95	0.0333	P	6.3
5	☐	100.000	98.843	456124.81	0.3106	P	4.2
6	☐	200.000	200.550	928023.06	0.6292	P	8.9
7	☐	1.000					

y = 0.0031 * x + 9.5066E-004
R = 1.0000
DL = 0.03617
BEC = 0.3034

Weight: <None>
Min Conc: <None>

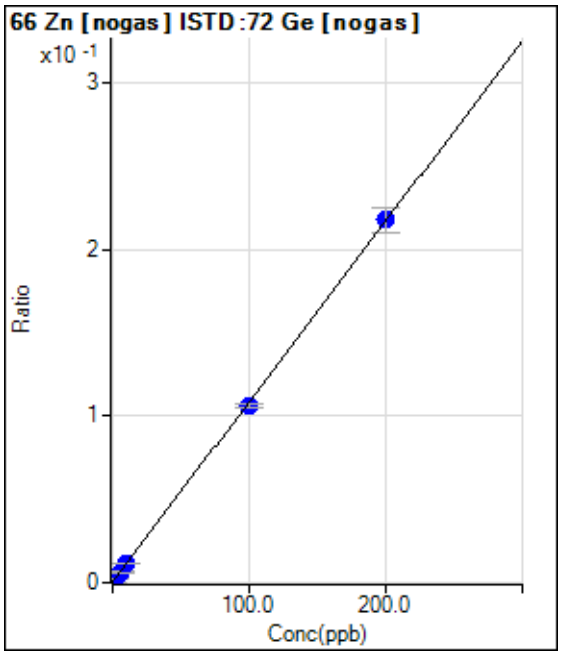


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.407	453.34	0.0011	P	23.2
2	☐	2.000	1.603	4794.02	0.0117	P	3.7
3	☐	5.000	4.737	11657.18	0.0282	P	3.4
4	☐	10.000	9.698	22467.35	0.0543	P	0.8
5	☐	100.000	102.685	219871.06	0.5440	P	2.0
6	☐	200.000	198.683	429425.77	1.0494	P	2.7
7	☐	1.000					

y = 0.0053 * x + 0.0033
R = 0.9999
DL = 0.1488
BEC = 0.6205

Weight: <None>
Min Conc: <None>

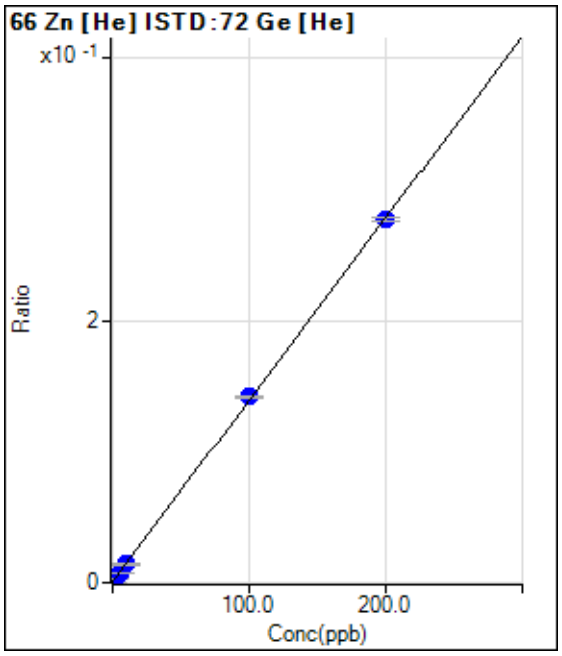
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.055	443.34	0.0003	P	8.3
2	☐	2.000	1.903	3450.38	0.0023	P	7.7
3	☐	5.000	5.603	8952.31	0.0063	P	10.7
4	☐	10.000	10.483	16787.95	0.0116	P	5.1
5	☐	100.000	97.990	156138.54	0.1063	P	2.6
6	☐	200.000	200.967	321547.31	0.2178	P	6.9
7	☐	1.000					

y = 0.0011 * x + 2.4077E-004
R = 0.9999
DL = 0.06861
BEC = 0.2224

Weight: <None>
Min Conc: <None>

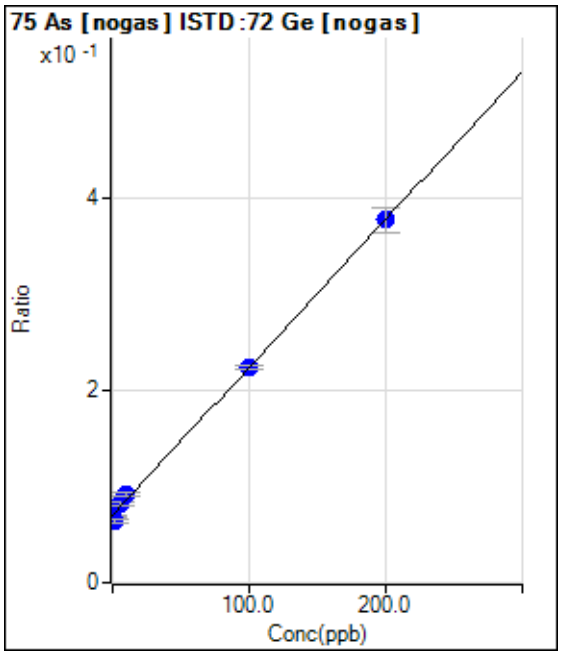


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.372	63.33	0.0002	P	31.9
2	☐	2.000	1.617	1193.39	0.0029	P	6.9
3	☐	5.000	5.158	3233.67	0.0078	P	5.6
4	☐	10.000	9.689	5830.99	0.0141	P	3.4
5	☐	100.000	101.786	57316.76	0.1418	P	0.9
6	☐	200.000	199.122	113247.74	0.2767	P	1.1
7	☐	1.000					

y = 0.0014 * x + 6.7210E-004
R = 0.9999
DL = 0.108
BEC = 0.4848

Weight: <None>
Min Conc: <None>

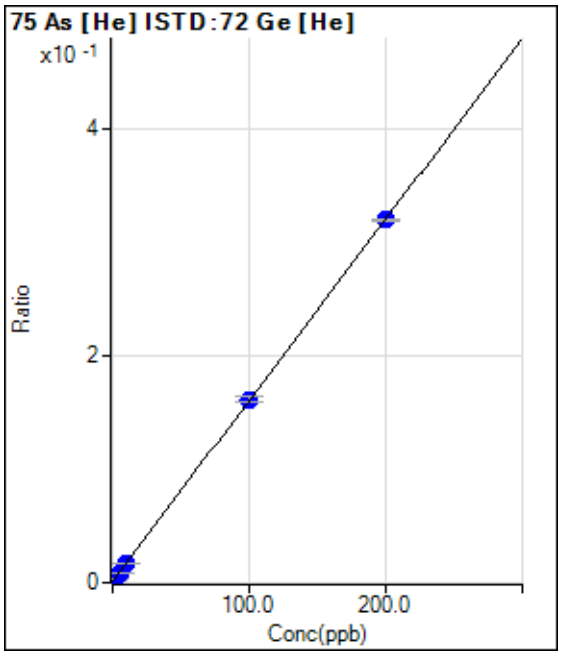
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.718	102419.24	0.0694	P	3.3
2	☐	2.000	-3.714	97278.72	0.0648	P	5.6
3	☐	5.000	7.530	117083.82	0.0822	P	3.1
4	☐	10.000	13.997	133555.26	0.0921	P	2.6
5	☐	100.000	100.222	330345.56	0.2249	P	2.2
6	☐	200.000	199.683	558356.89	0.3782	P	6.6
7	☐	1.000					

y = 0.0015 * x + 0.0706
R = 0.9992
DL = 4.482
BEC = 45.8

Weight: <None>
Min Conc: <None>

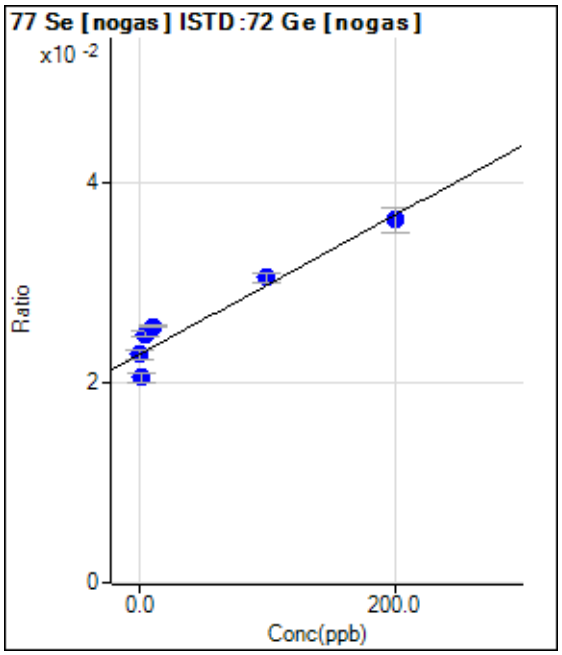


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	421.12	0.0010	P	7.8
2	☐	2.000	1.968	1714.53	0.0042	P	4.6
3	☐	5.000	4.876	3649.27	0.0088	P	3.1
4	☐	10.000	9.557	6746.83	0.0163	P	1.3
5	☐	100.000	100.526	65347.29	0.1617	P	2.6
6	☐	200.000	199.763	131070.61	0.3202	P	0.4
7	☐	1.000					

y = 0.0016 * x + 0.0010
R = 1.0000
DL = 0.1521
BEC = 0.6533

Weight: <None>
Min Conc: <None>

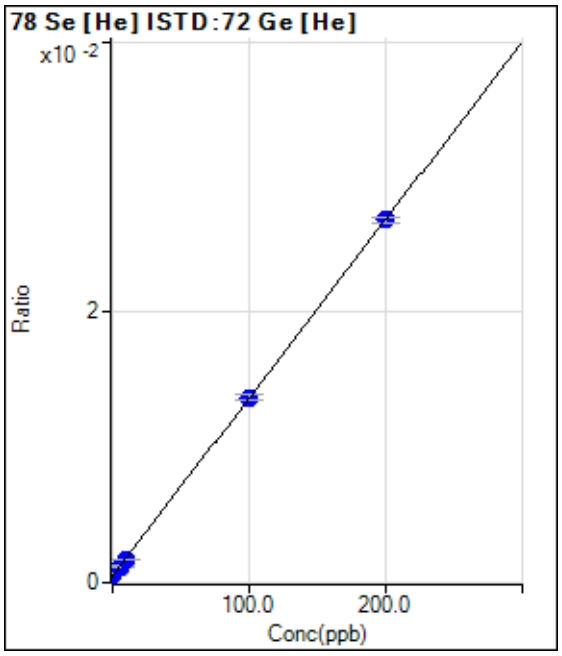
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33607.84	0.0228	P	3.9
2	☐	2.000	-33.709	30696.12	0.0205	P	3.9
3	☐	5.000	29.479	35411.49	0.0248	P	2.8
4	☐	10.000	39.959	37114.63	0.0256	P	0.8
5	☐	100.000	109.966	44691.66	0.0304	P	2.8
6	☐	200.000	193.264	53455.21	0.0362	P	7.1
7	☐	1.000					

y = 6.9416E-005 * x + 0.0228
R = 0.9579
DL = 38.77
BEC = 328.4

Weight: <None>
Min Conc: <None>

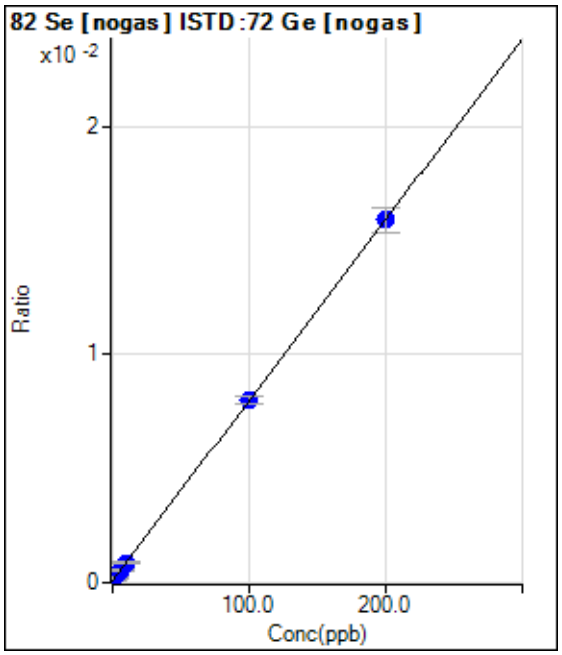


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.289	214.00	0.0005	P	5.6
2	☐	2.000	2.238	322.00	0.0008	P	9.9
3	☐	5.000	4.976	474.01	0.0011	P	12.2
4	☐	10.000	9.373	714.02	0.0017	P	4.7
5	☐	100.000	100.190	5534.19	0.0137	P	2.9
6	☐	200.000	199.935	10979.31	0.0268	P	1.7
7	☐	1.000					

y = 1.3173E-004 * x + 4.9232E-004
R = 1.0000
DL = 0.6756
BEC = 3.737

Weight: <None>
Min Conc: <None>

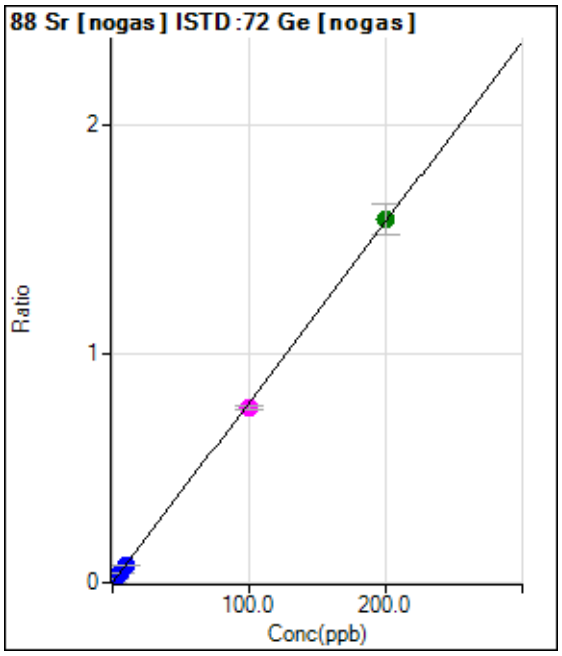
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0001	P	59.8
2	☐	2.000	2.033	360.01	0.0002	P	26.3
3	☐	5.000	5.753	760.03	0.0005	P	8.2
4	☐	10.000	9.957	1260.07	0.0009	P	12.4
5	☐	100.000	100.045	11740.59	0.0080	P	3.9
6	☐	200.000	199.961	23485.42	0.0159	P	7.1
7	☐	1.000					

y = 7.9172E-005 * x + 7.8439E-005
R = 1.0000
DL = 1.778
BEC = 0.9907

Weight: <None>
Min Conc: <None>

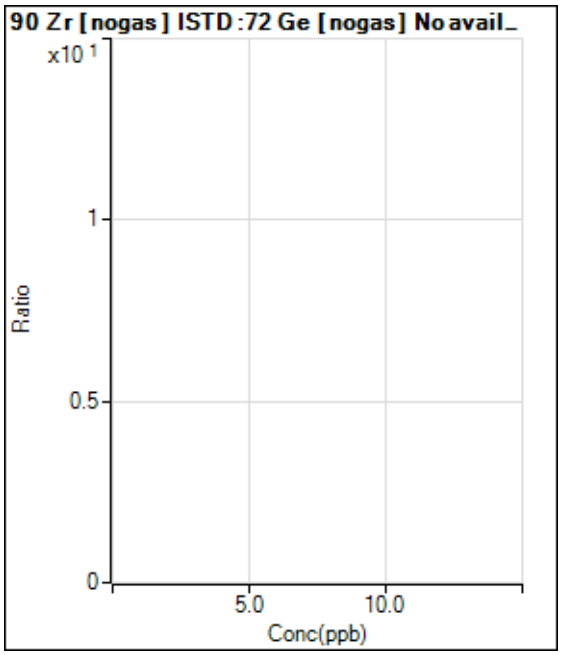


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.02	0.0003	P	5.7
2	☐	2.000	1.907	23068.41	0.0154	P	2.2
3	☐	5.000	5.263	59458.72	0.0418	P	8.9
4	☐	10.000	9.902	113664.20	0.0784	P	3.7
5	☐	100.000	97.425	1128659.12	0.7687	M	2.5
6	☐	200.000	201.287	2342306.47	1.5879	A	8.5
7	☐	1.000					

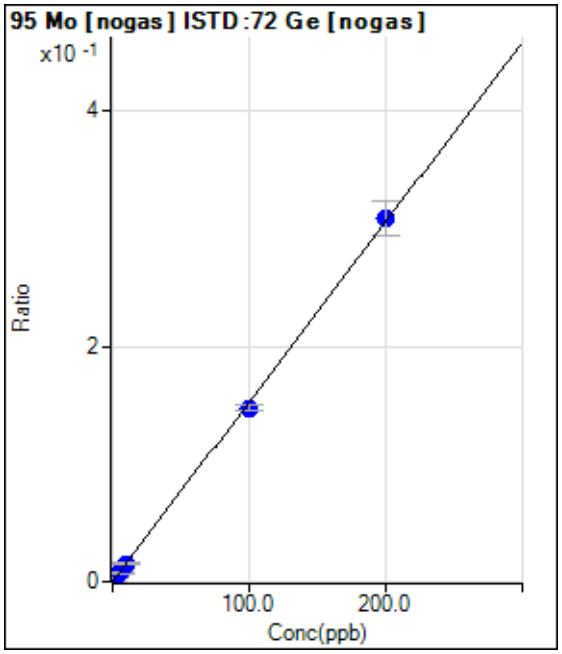
y = 0.0079 * x + 3.3128E-004
R = 0.9999
DL = 0.007136
BEC = 0.042

Weight: <None>
Min Conc: <None>

Calibration for 082_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					

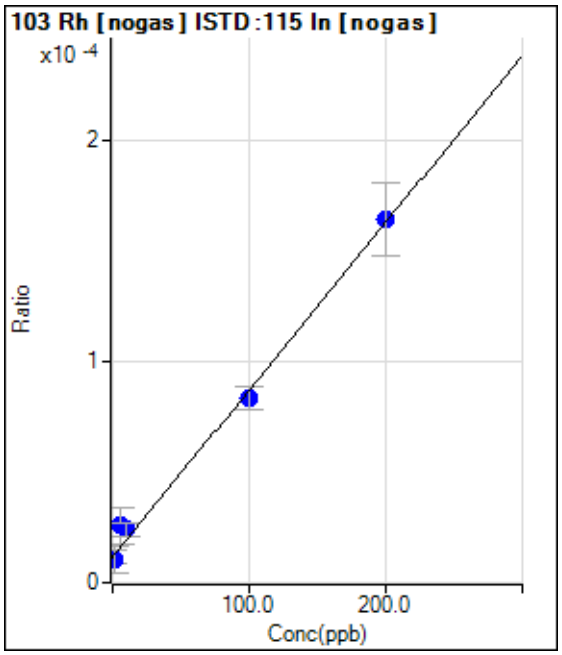


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.67	0.0001	P	43.6
2	☐	2.000	1.904	4487.30	0.0030	P	6.3
3	☐	5.000	4.979	10910.16	0.0077	P	10.3
4	☐	10.000	9.982	22204.19	0.0153	P	4.9
5	☐	100.000	96.431	216309.83	0.1473	P	3.1
6	☐	200.000	201.787	454174.38	0.3081	P	9.6
7	☐	1.000					

y = 0.0015 * x + 8.4593E-005
R = 0.9998
DL = 0.0725
BEC = 0.05543

Weight: <None>
Min Conc: <None>

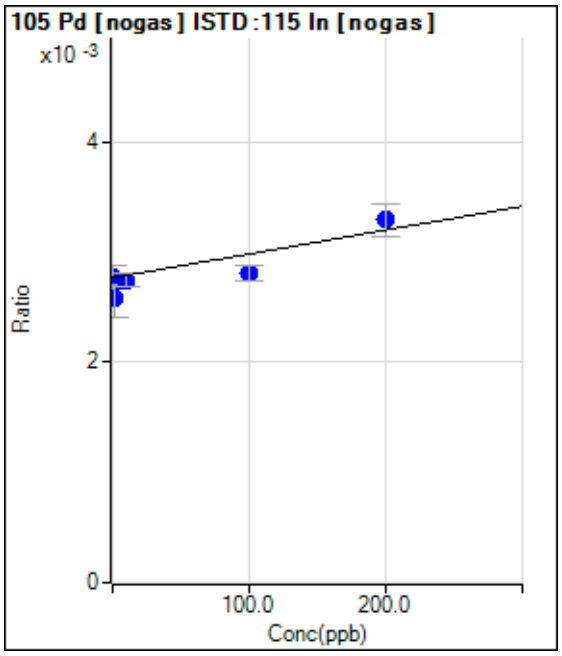
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	53.1
2	☐	2.000	-1.658	13.33	0.0000	P	115.
3	☐	5.000	18.698	30.00	0.0000	P	61.9
4	☐	10.000	16.388	30.00	0.0000	P	25.4
5	☐	100.000	95.290	106.67	0.0001	P	12.4
6	☐	200.000	201.730	196.67	0.0002	P	20.1
7	☐	1.000					

y = 7.5451E-007 * x + 1.1579E-005
R = 0.9966
DL = 24.43
BEC = 15.35

Weight: <None>
Min Conc: <None>

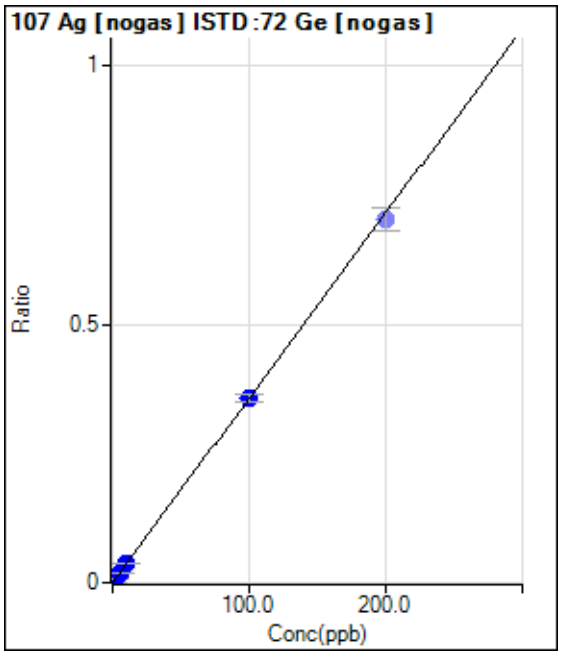


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3267.01	0.0028	P	7.6
2	☐	2.000	-86.905	3343.70	0.0026	P	13.0
3	☐	5.000	-13.462	3283.70	0.0027	P	2.1
4	☐	10.000	-9.979	3377.05	0.0027	P	4.6
5	☐	100.000	19.959	3563.74	0.0028	P	5.1
6	☐	200.000	242.370	3970.51	0.0033	P	9.0
7	☐	1.000					

y = 2.1647E-006 * x + 0.0028
R = 0.9171
DL = 291.4
BEC = 1277

Weight: <None>
Min Conc: <None>

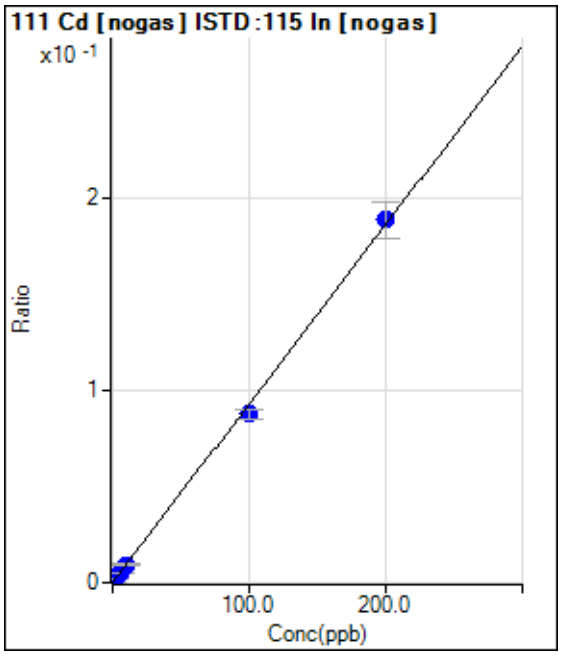
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	64.2
2	☐	2.000	2.016	10843.47	0.0072	P	0.2
3	☐	5.000	5.452	27712.01	0.0195	P	8.0
4	☐	10.000	10.270	53173.55	0.0367	P	4.6
5	☐	100.000	99.950	523694.54	0.3569	P	5.0
6	☑	200.000		1035856.60	0.7015	P	6.4
7	☐	1.000					

y = 0.0036 * x + 2.6469E-005
R = 1.0000
DL = 0.01428
BEC = 0.007413

Weight: <None>
Min Conc: <None>

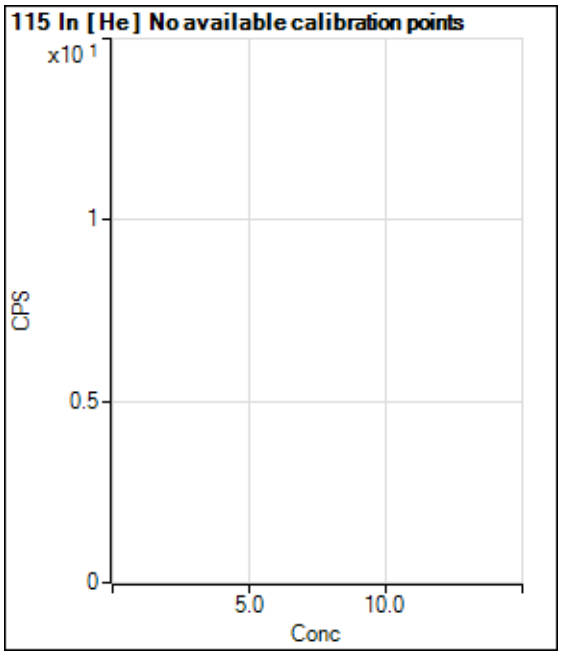


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	83.0
2	☐	2.000	2.054	2506.89	0.0019	P	3.7
3	☐	5.000	5.236	5817.71	0.0049	P	15.5
4	☐	10.000	9.733	11153.76	0.0091	P	10.0
5	☐	100.000	94.307	111430.40	0.0879	P	5.6
6	☐	200.000	202.854	227229.56	0.1891	P	9.9
7	☐	1.000					

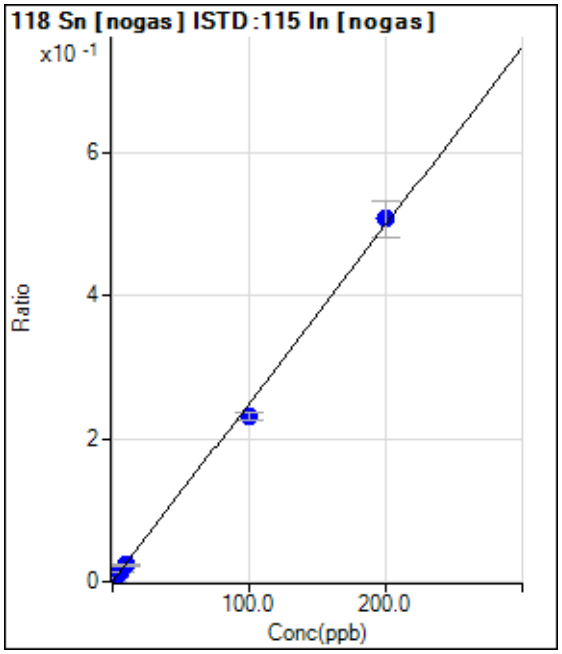
y = 9.3214E-004 * x + 1.6578E-005
R = 0.9994
DL = 0.04428
BEC = 0.01778

Weight: <None>
Min Conc: <None>

Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			535844.53		P	1.6
2	☐			528983.01		P	2.8
3	☐			542641.29		P	2.2
4	☐			537545.91		P	0.8
5	☐			516594.15		P	1.0
6	☐			515804.79		P	0.5
7	☐						

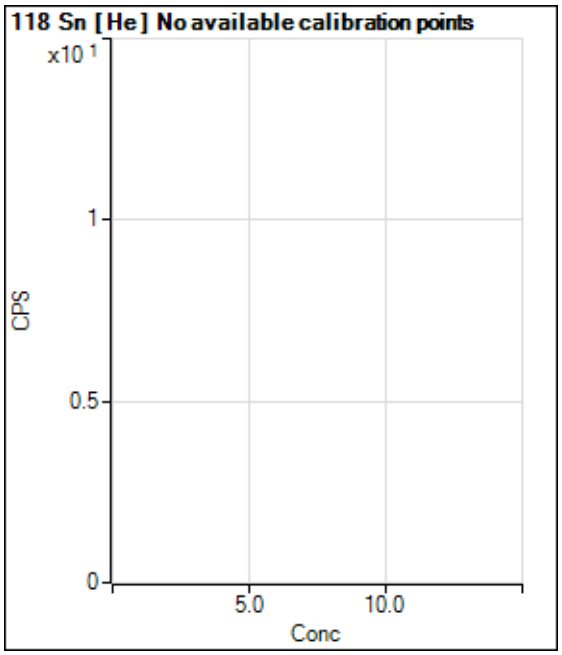


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0003	P	13.8
2	☐	2.000	1.747	6047.80	0.0047	P	6.7
3	☐	5.000	5.140	15613.95	0.0131	P	12.6
4	☐	10.000	9.354	28947.61	0.0236	P	13.0
5	☐	100.000	93.036	294589.07	0.2324	P	4.8
6	☐	200.000	203.513	610124.41	0.5079	P	10.3
7	☐	1.000					

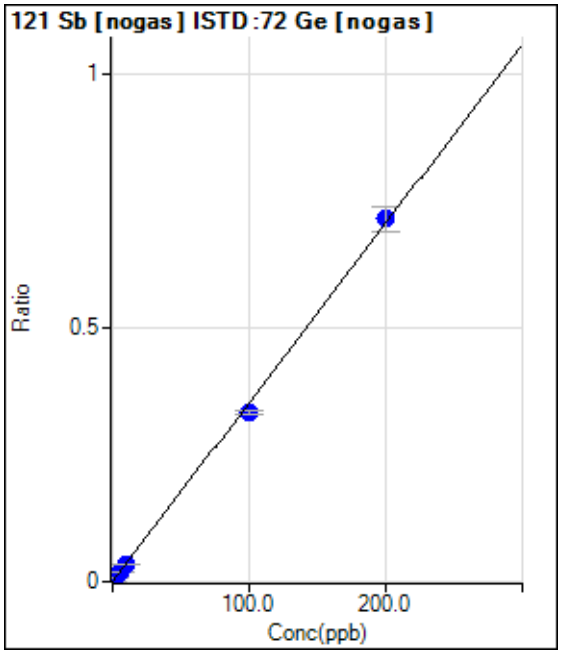
y = 0.0025 * x + 3.0195E-004
R = 0.9992
DL = 0.05009
BEC = 0.1211

Weight: <None>
Min Conc: <None>

Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			180.00		P	5.6
2	☐			2673.58		P	6.8
3	☐			6978.16		P	3.0
4	☐			13565.46		P	1.3
5	☐			131737.08		P	1.3
6	☐			268898.02		P	0.5
7	☐						

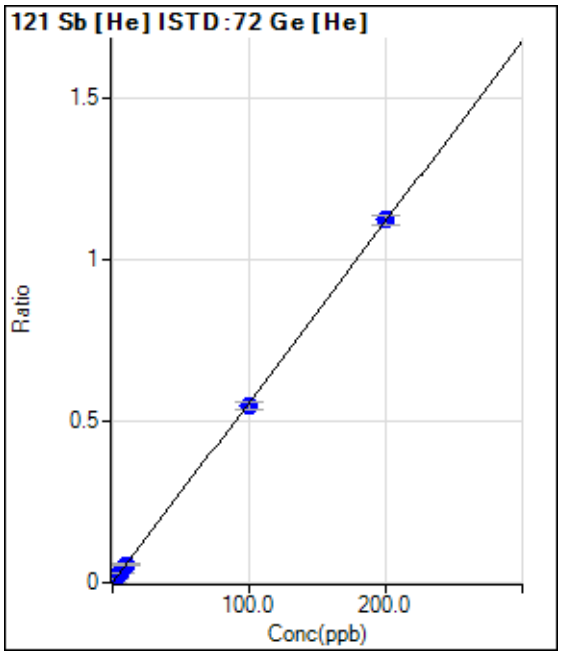


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0002	P	8.7
2	☐	2.000	1.960	10600.03	0.0071	P	0.9
3	☐	5.000	5.152	26046.29	0.0183	P	7.2
4	☐	10.000	9.863	50596.66	0.0349	P	4.6
5	☐	100.000	94.734	490689.17	0.3341	P	1.8
6	☐	200.000	202.636	1054661.02	0.7144	P	6.9
7	☐	1.000					

y = 0.0035 * x + 1.5368E-004
R = 0.9995
DL = 0.01135
BEC = 0.0436

Weight: <None>
Min Conc: <None>

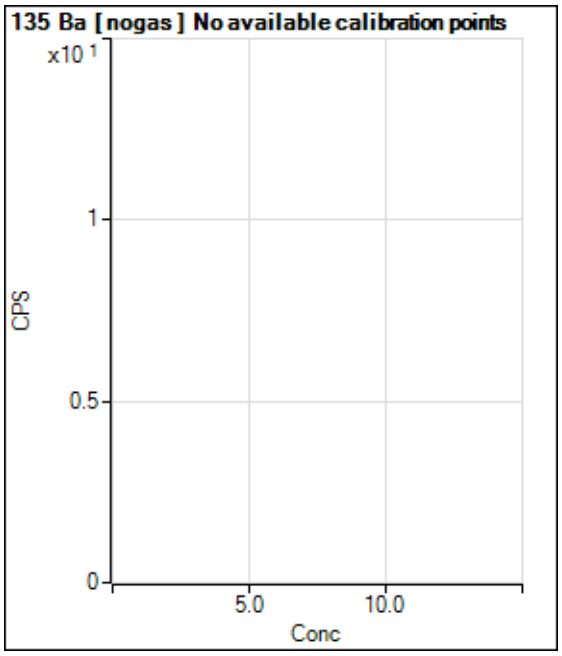
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0002	P	28.0
2	☐	2.000	1.950	4560.66	0.0111	P	4.3
3	☐	5.000	4.889	11377.19	0.0275	P	0.5
4	☐	10.000	10.020	23225.74	0.0562	P	5.2
5	☐	100.000	98.031	221202.73	0.5474	P	4.4
6	☐	200.000	200.987	459164.08	1.1221	P	2.6
7	☐	1.000					

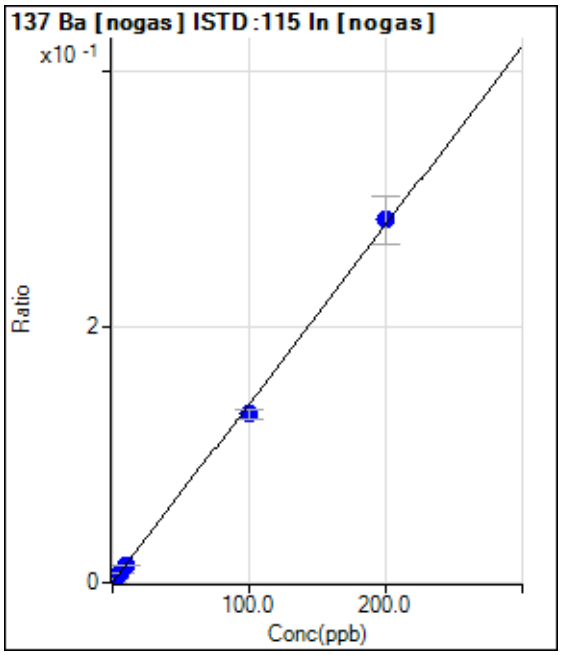
y = 0.0056 * x + 2.4834E-004
R = 0.9999
DL = 0.03737
BEC = 0.04449

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			36.67		P	15.7
2	☐			2033.49		P	6.6
3	☐			5164.17		P	3.4
4	☐			9849.59		P	3.8
5	☐			97004.59		P	1.6
6	☐			199842.75		P	1.3
7	☐						

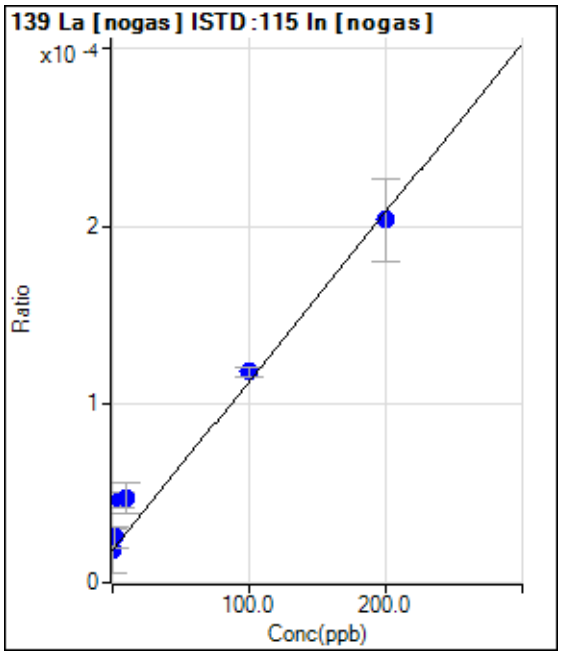
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	70.4
2	☐	2.000	1.779	3323.71	0.0026	P	2.0
3	☐	5.000	5.300	8932.42	0.0075	P	8.6
4	☐	10.000	9.555	16491.39	0.0134	P	9.5
5	☐	100.000	94.196	166962.19	0.1318	P	6.4
6	☐	200.000	202.919	340266.14	0.2838	P	12.9
7	☐	1.000					

y = 0.0014 * x + 7.3098E-005
R = 0.9994
DL = 0.1103
BEC = 0.05228

Weight: <None>
Min Conc: <None>

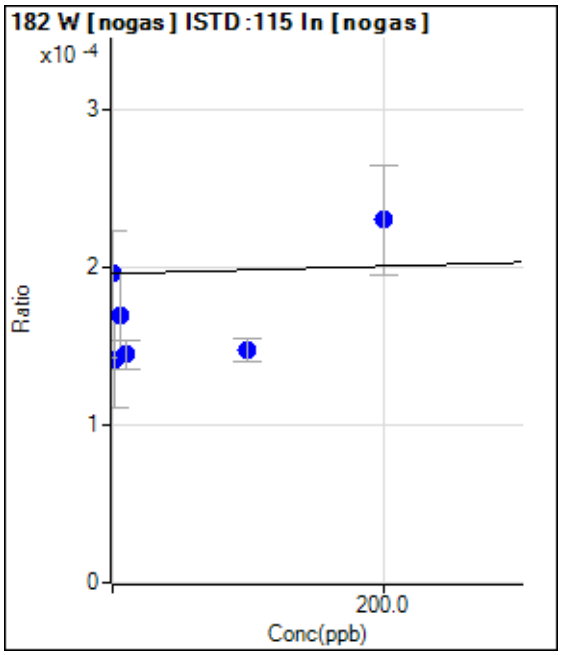


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	137.
2	☐	2.000	7.884	33.33	0.0000	P	45.7
3	☐	5.000	30.013	56.67	0.0000	P	18.3
4	☐	10.000	30.939	60.00	0.0000	P	38.2
5	☐	100.000	105.464	150.00	0.0001	P	4.9
6	☐	200.000	195.537	250.01	0.0002	P	22.9
7	☐	1.000					

y = 9.4764E-007 * x + 1.8211E-005
R = 0.9921
DL = 79.06
BEC = 19.22

Weight: <None>
Min Conc: <None>

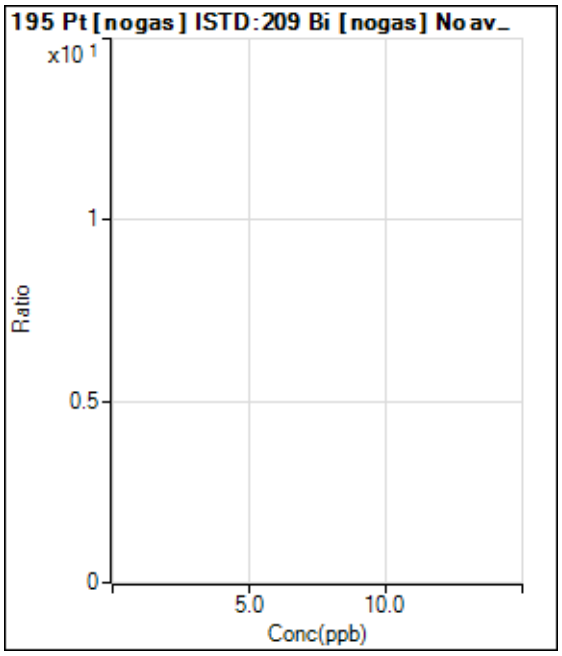
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.01	0.0002	P	27.1
2	☐	2.000	-2308.337	183.34	0.0001	P	43.1
3	☐	5.000	-1103.018	203.34	0.0002	P	31.7
4	☐	10.000	-2158.113	180.00	0.0001	P	12.9
5	☐	100.000	-2057.477	186.67	0.0001	P	10.3
6	☐	200.000	1437.948	273.34	0.0002	P	30.5
7	☐	1.000					

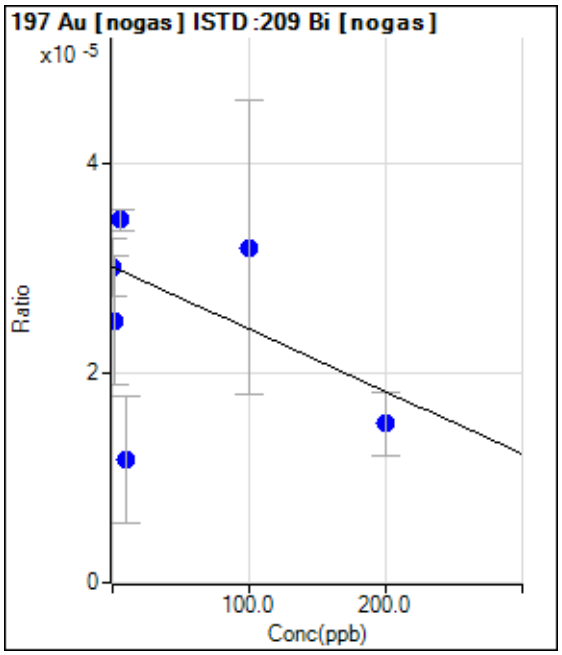
y = 2.3735E-008 * x + 1.9632E-004
R = 0.6190
DL = 6731
BEC = 8271

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					

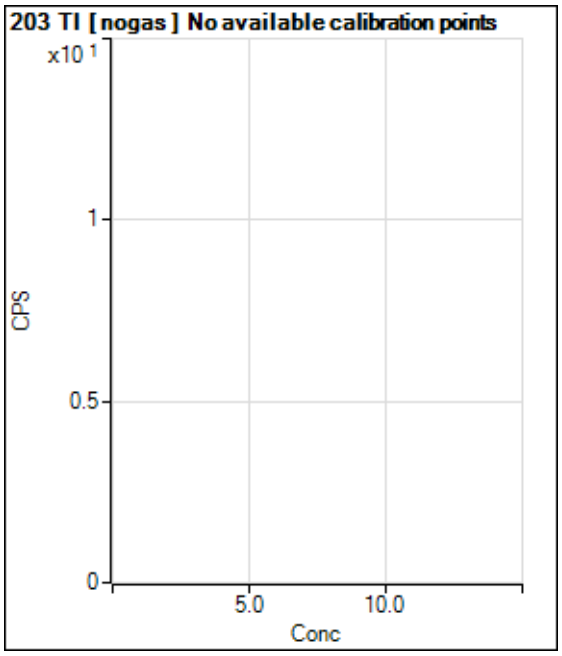
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	18.4
2	☐	2.000	85.934	23.33	0.0000	P	49.3
3	☐	5.000	-75.192	30.00	0.0000	P	6.1
4	☐	10.000	309.676	10.00	0.0000	P	102.
5	☐	100.000	-30.977	30.00	0.0000	P	88.0
6	☐	200.000	251.670	13.33	0.0000	P	40.3
7	☐	1.000					

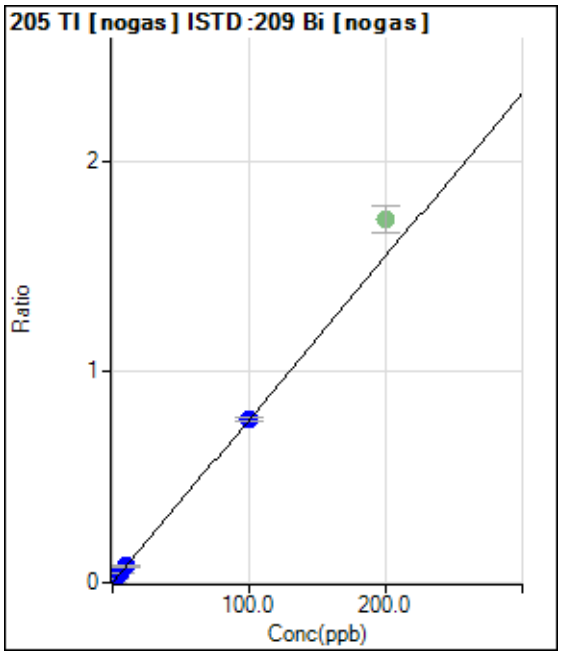
y = -5.9384E-008 * x + 3.0077E-005
R = -0.3342
DL = -279.4
BEC = -506.5

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			100.00		P	30.0
2	☐			6161.26		P	1.5
3	☐			15147.25		P	2.7
4	☐			30138.15		P	1.8
5	☐			308677.10		P	1.3
6	☐			620386.12		P	1.7
7	☐						

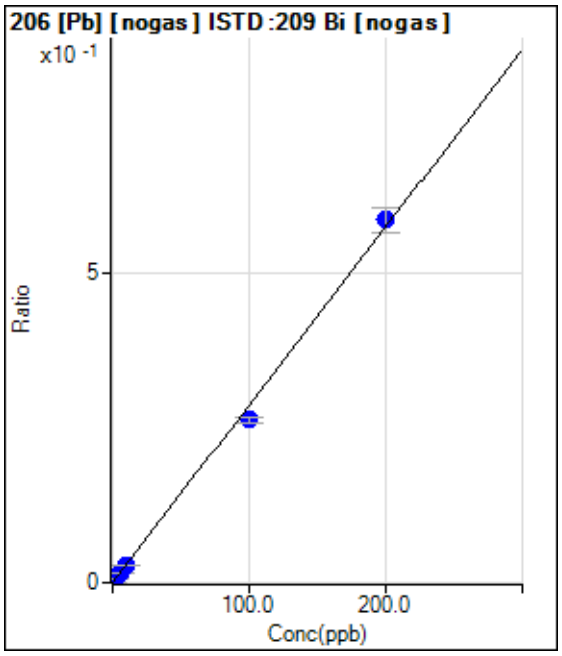
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.00	0.0003	P	20.7
2	☐	2.000	1.954	14356.50	0.0154	P	5.0
3	☐	5.000	5.489	37156.04	0.0428	P	5.4
4	☐	10.000	10.083	70261.59	0.0783	P	7.1
5	☐	100.000	99.968	735229.29	0.7740	P	2.5
6	☑	200.000		1503663.68	1.7212	A	7.3
7	☐	1.000					

y = 0.0077 * x + 2.7154E-004
R = 1.0000
DL = 0.02178
BEC = 0.03508

Weight: <None>
Min Conc: <None>

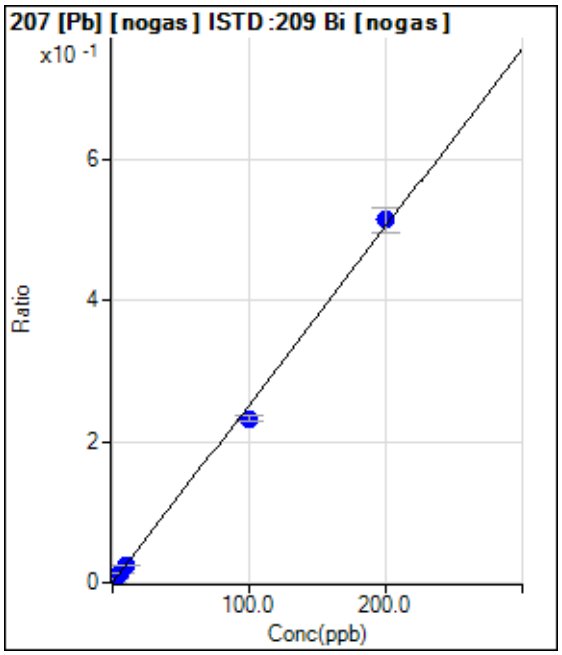


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	30.5
2	☐	2.000	1.935	5224.24	0.0056	P	4.6
3	☐	5.000	5.356	13402.35	0.0154	P	6.9
4	☐	10.000	9.804	25316.62	0.0282	P	7.1
5	☐	100.000	91.736	250438.75	0.2637	P	3.6
6	☐	200.000	204.134	512641.34	0.5867	P	6.8
7	☐	1.000					

y = 0.0029 * x + 4.1502E-005
R = 0.9988
DL = 0.01323
BEC = 0.01444

Weight: <None>
Min Conc: <None>

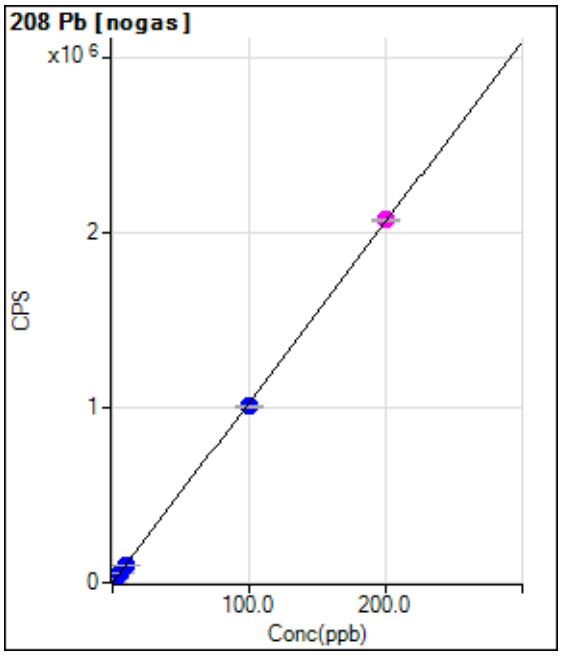
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	60.9
2	☐	2.000	1.877	4454.01	0.0048	P	1.6
3	☐	5.000	5.164	11340.79	0.0131	P	6.2
4	☐	10.000	9.749	22108.54	0.0246	P	4.7
5	☐	100.000	92.349	221086.20	0.2328	P	3.3
6	☐	200.000	203.835	448929.82	0.5137	P	6.7
7	☐	1.000					

y = 0.0025 * x + 4.2226E-005
R = 0.9990
DL = 0.03059
BEC = 0.01676

Weight: <None>
Min Conc: <None>

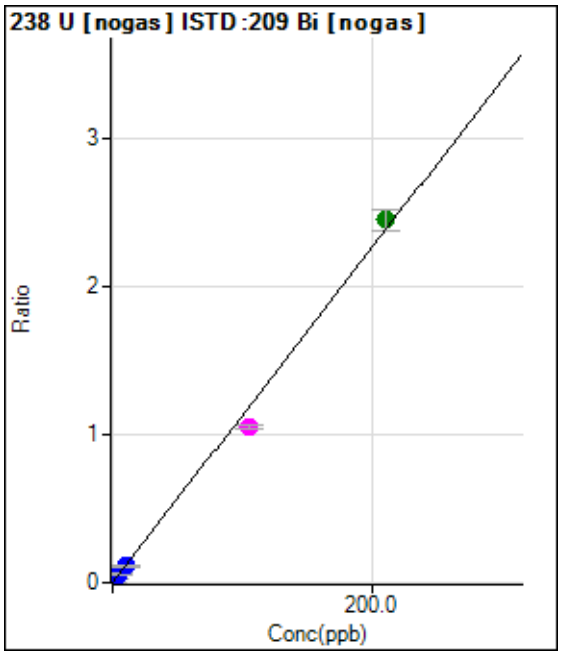


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.33		P	4.3
2	☐	2.000	1.976	20512.01		P	1.1
3	☐	5.000	5.086	52580.63		P	1.2
4	☐	10.000	9.885	102070.51		P	2.3
5	☐	100.000	97.668	1007331.21		P	1.7
6	☐	200.000	201.170	2074701.77		M	0.8
7	☐	1.000					

y = 10312.5105 * x + 133.3333
R = 0.9999
DL = 0.00168
BEC = 0.01293

Weight: <None>
Min Conc: <None>

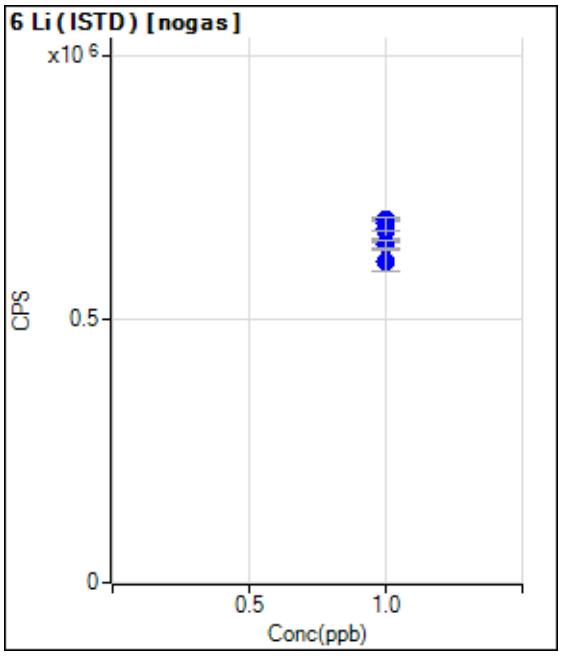
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	40.9
2	☐	2.000	1.900	20109.62	0.0216	P	5.5
3	☐	5.000	5.063	49865.06	0.0574	P	4.3
4	☐	10.000	9.800	99590.00	0.1110	P	7.2
5	☐	105.000	92.870	998791.49	1.0516	M	3.3
6	☐	210.000	216.074	2138716.32	2.4465	A	5.6
7	☐	1.000					

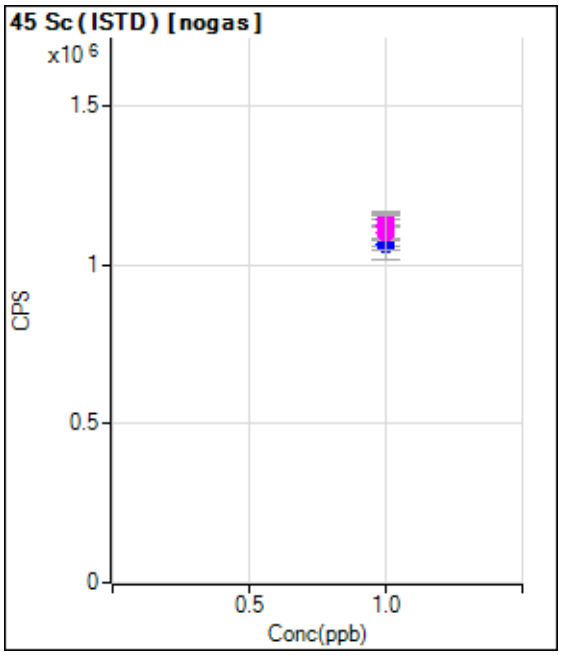
y = 0.0113 * x + 4.4860E-005
R = 0.9977
DL = 0.004857
BEC = 0.003962

Weight: <None>
Min Conc: <None>

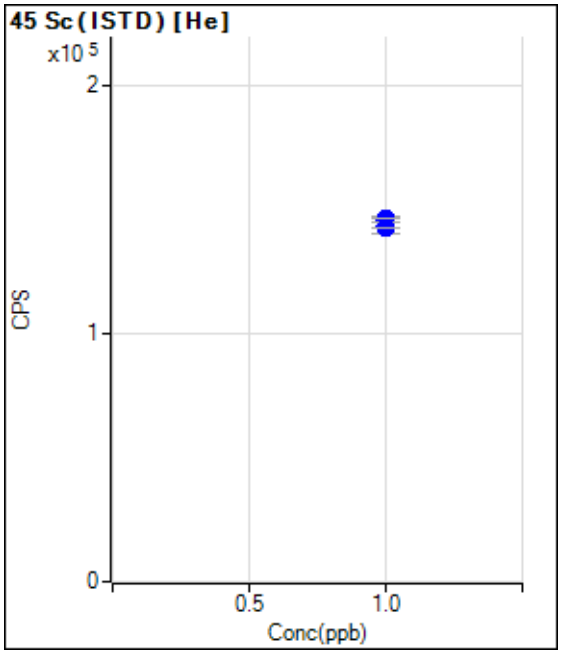


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		671259.72		P	5.3
2	☐	1.000		689388.65		P	1.0
3	☐	1.000		670301.51		P	6.8
4	☐	1.000		682008.37		P	3.6
5	☐	1.000		642630.85		P	2.7
6	☐	1.000		611712.60		P	6.9
7	☐	1.000					

Calibration for 082_ICV.d

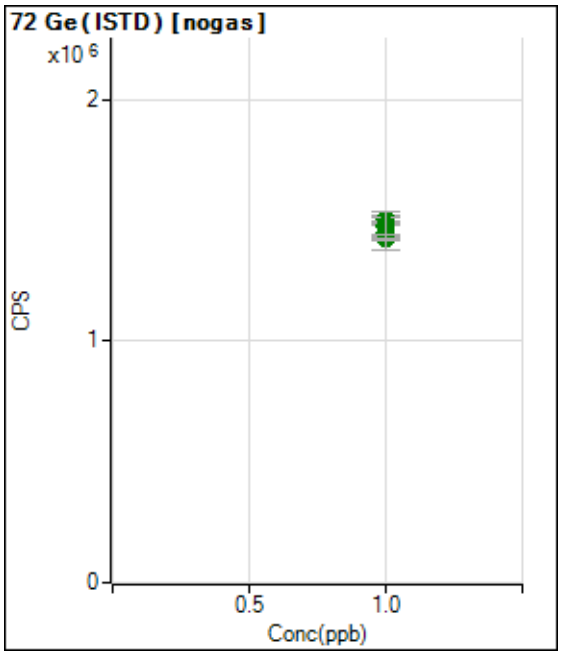


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1102075.87		M	7.5
2	☐	1.000		1142944.36		M	2.8
3	☐	1.000		1068008.97		P	9.8
4	☐	1.000		1119160.92		M	7.6
5	☐	1.000		1126598.91		M	7.6
6	☐	1.000		1101830.30		M	9.6
7	☐	1.000					

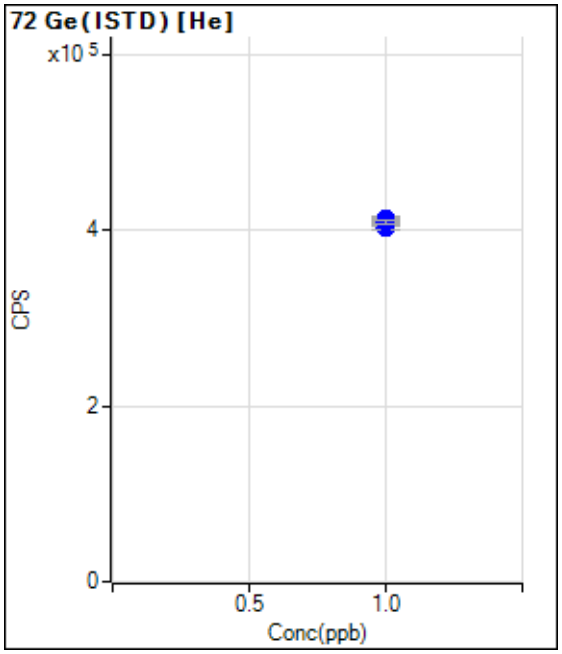


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		145951.31		P	2.0
2	☐	1.000		142935.91		P	4.2
3	☐	1.000		146041.33		P	1.4
4	☐	1.000		145342.61		P	1.3
5	☐	1.000		142305.61		P	0.2
6	☐	1.000		142372.58		P	0.4
7	☐	1.000					

Calibration for 082_ICV.d

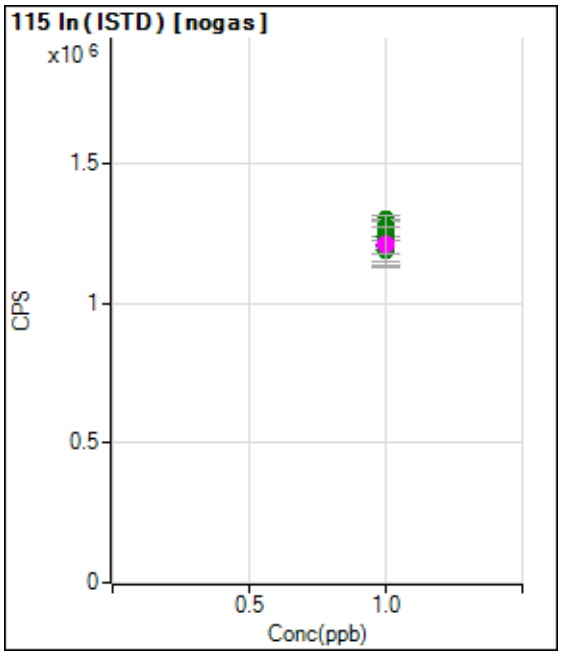


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1476428.16		A	5.8
2	☐	1.000		1501014.30		A	1.6
3	☐	1.000		1427398.24		A	7.6
4	☐	1.000		1451110.24		A	5.1
5	☐	1.000		1469237.74		A	4.1
6	☐	1.000		1481278.52		A	7.3
7	☐	1.000					

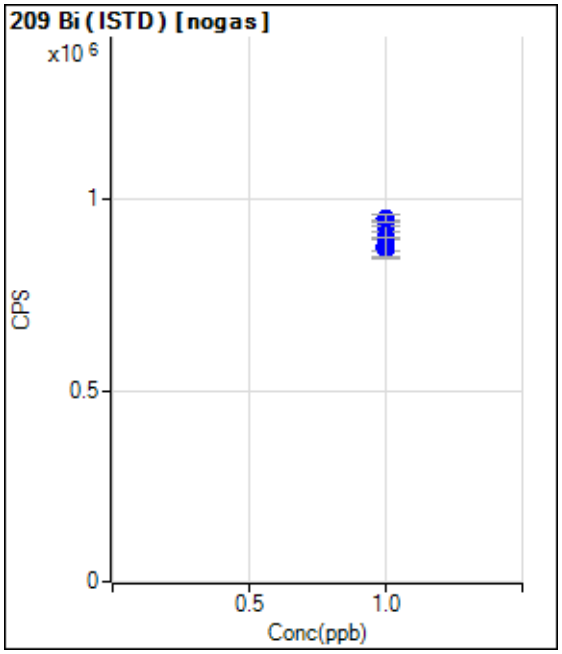


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		403705.63		P	1.5
2	☐	1.000		409504.71		P	1.6
3	☐	1.000		413173.26		P	1.6
4	☐	1.000		413507.24		P	0.8
5	☐	1.000		404323.67		P	2.1
6	☐	1.000		409287.48		P	1.2
7	☐	1.000					

Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1187104.91		A	8.5
2	☐	1.000		1297947.89		A	0.7
3	☐	1.000		1202085.84		A	12.1
4	☐	1.000		1234983.65		A	9.5
5	☐	1.000		1270625.00		A	6.9
6	☐	1.000		1209695.51		M	10.2
7	☐	1.000					



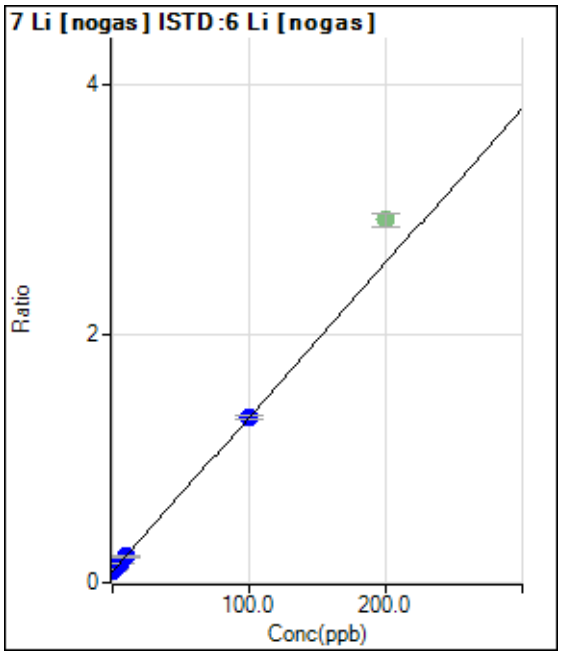
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		882577.28		P	4.0
2	☐	1.000		933264.73		P	3.2
3	☐	1.000		870660.14		P	6.1
4	☐	1.000		900264.89		P	7.2
5	☐	1.000		950215.45		P	2.2
6	☐	1.000		876085.12		P	5.9
7	☐	1.000					

Calibration for 149_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 16:20:35
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	138CALB.d	CAL BLK	2019-01-08 15:53:31
2	139CALS.d	2/10/200	2019-01-08 15:55:30
3	140CALS.d	5/25/500	2019-01-08 15:57:29
4	141CALS.d	10/50/1000	2019-01-08 15:59:29
5	142CALS.d	100/500/10K	2019-01-08 16:01:27
6	143CALS.d	200/1000/20K	2019-01-08 16:03:24
7			

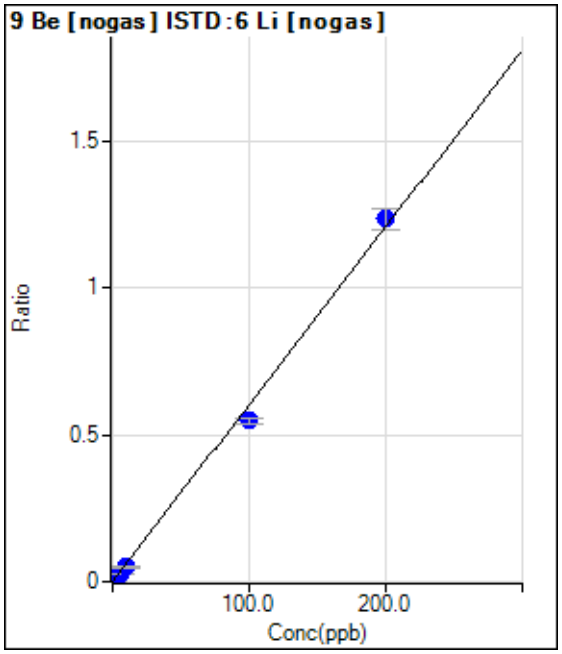
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56487.26	0.0903	P	1.4
2	☐	2.000	1.881	73152.86	0.1136	P	2.0
3	☐	5.000	4.983	95517.39	0.1521	P	1.5
4	☐	10.000	9.551	132047.69	0.2087	P	2.3
5	☐	100.000	100.048	799870.33	1.3310	P	3.1
6	☑	200.000		1620070.65	2.9147	A	3.8
7	☐	1.000					

y = 0.0124 * x + 0.0903
R = 1.0000
DL = 0.3062

Weight: <None>
Min Conc: <None>

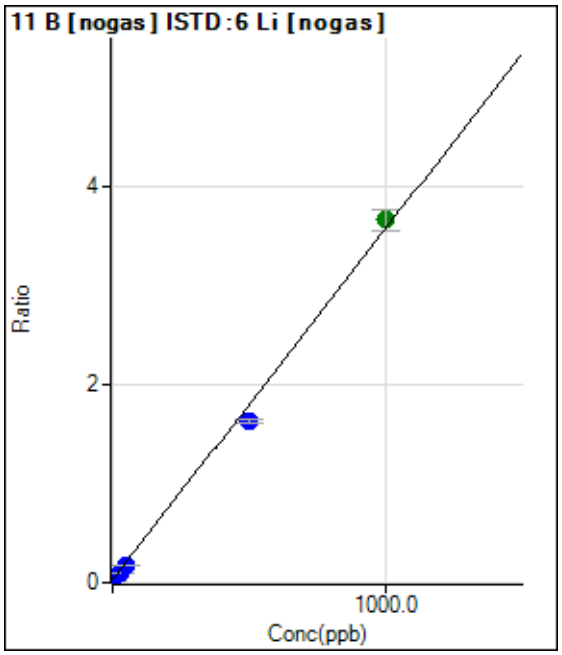


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0002	P	25.2
2	☐	2.000	1.693	6664.58	0.0104	P	0.7
3	☐	5.000	4.275	16273.74	0.0259	P	2.4
4	☐	10.000	8.324	31803.28	0.0503	P	5.6
5	☐	100.000	90.814	328908.39	0.5474	P	3.5
6	☐	200.000	204.698	685347.31	1.2336	P	6.0
7	☐	1.000					

y = 0.0060 * x + 1.5024E-004
R = 0.9986
DL = 0.01887

Weight: <None>
Min Conc: <None>

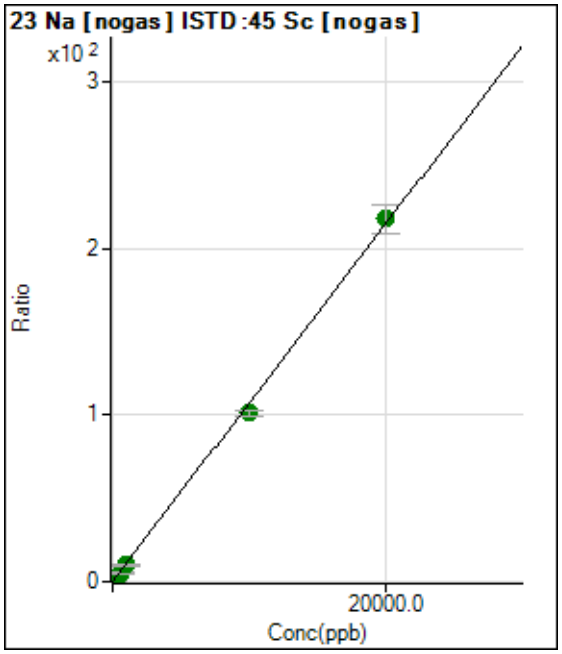
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18549.15	0.0297	P	5.0
2	☐	10.000	7.572	36401.34	0.0566	P	2.8
3	☐	25.000	20.549	64427.90	0.1026	P	2.5
4	☐	50.000	40.440	109569.22	0.1732	P	1.5
5	☐	500.000	450.198	978104.26	1.6271	P	2.3
6	☐	1000.000	1025.515	2037681.64	3.6685	A	5.8
7	☐	5.000					

y = 0.0035 * x + 0.0297
R = 0.9983
DL = 1.26

Weight: <None>
Min Conc: <None>

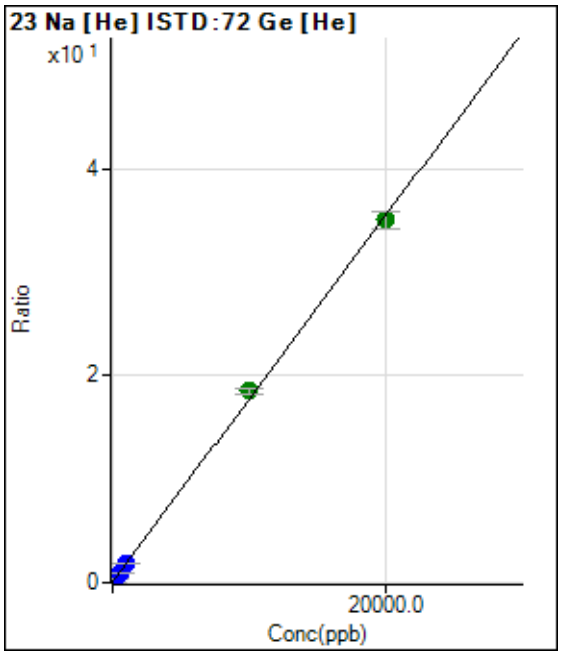


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	198309.49	0.1891	P	7.0
2	☐	200.000	184.993	2450894.65	2.1716	A	5.4
3	☐	500.000	452.235	5651123.43	5.0356	A	8.1
4	☐	1000.000	916.239	10839581.23	10.0083	A	4.5
5	☐	10000.00	9408.907	108646319.1	101.022	A	3.6
6	☐	20000.00	20301.079	217129238.1	217.752	A	8.1
7	☐	100.000					

y = 0.0107 * x + 0.1891
R = 0.9994
DL = 3.722

Weight: <None>
Min Conc: <None>

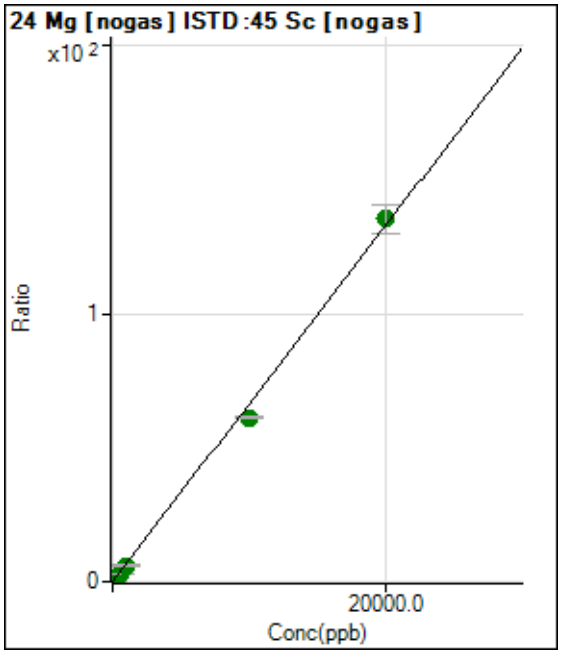
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24382.41	0.0636	P	1.7
2	☐	200.000	198.382	160487.29	0.4146	P	1.3
3	☐	500.000	509.064	366886.14	0.9643	P	0.8
4	☐	1000.000	985.009	684957.77	1.8064	P	0.9
5	☐	10000.00	10446.976	6951300.94	18.5477	A	2.8
6	☐	20000.00	19777.051	13523761.47	35.0557	A	5.0
7	☐	100.000					

y = 0.0018 * x + 0.0636
R = 0.9996
DL = 1.817

Weight: <None>
Min Conc: <None>

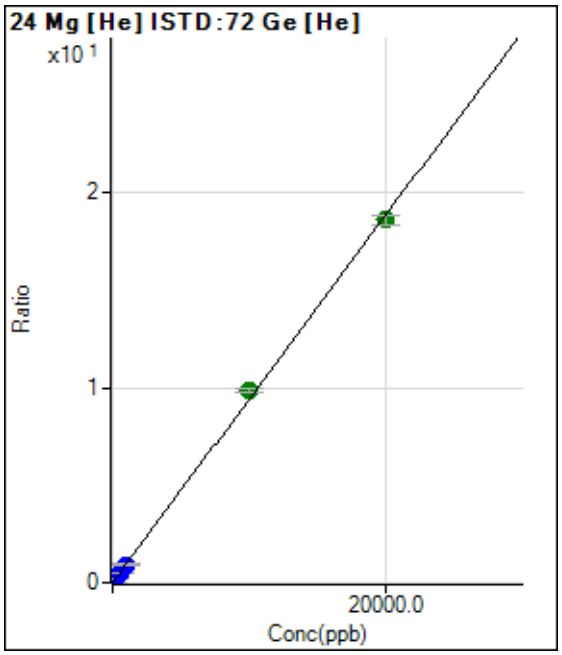


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4434.61	0.0042	P	20.2
2	☐	200.000	189.577	1424398.86	1.2620	A	5.2
3	☐	500.000	464.226	3459758.67	3.0842	A	8.8
4	☐	1000.000	908.163	6529955.36	6.0296	A	5.1
5	☐	10000.00	9225.390	65885049.39	61.2128	A	0.7
6	☐	20000.00	20392.895	134970428.0	135.307	A	7.9
7	☐	100.000					

y = 0.0066 * x + 0.0042
R = 0.9990
DL = 0.3787

Weight: <None>
Min Conc: <None>

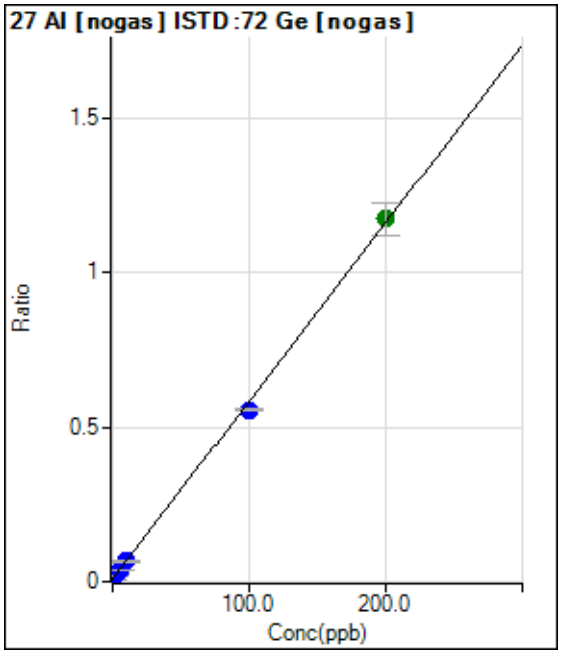
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	366.68	0.0010	P	22.4
2	☐	200.000	203.031	74345.10	0.1921	P	2.4
3	☐	500.000	519.456	186389.66	0.4899	P	1.2
4	☐	1000.000	988.289	353016.52	0.9312	P	3.2
5	☐	10000.00	10479.906	3697815.15	9.8654	A	1.8
6	☐	20000.00	19760.116	7177156.77	18.6006	A	2.9
7	☐	100.000					

y = 9.4127E-004 * x + 9.5703E-004
R = 0.9996
DL = 0.6821

Weight: <None>
Min Conc: <None>

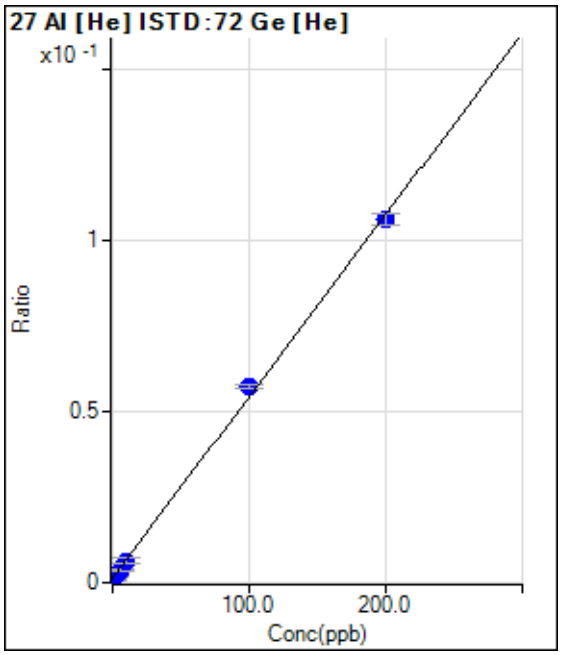


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11113.40	0.0081	P	6.9
2	☐	2.000	2.163	29466.68	0.0206	P	4.2
3	☐	5.000	5.258	55752.27	0.0384	P	1.8
4	☐	10.000	9.983	93343.08	0.0655	P	4.4
5	☐	100.000	95.247	790793.69	0.5561	P	1.8
6	☐	200.000	202.369	1606129.77	1.1723	A	9.0
7	☐	1.000					

y = 0.0058 * x + 0.0081
R = 0.9996
DL = 0.2905

Weight: <None>
Min Conc: <None>

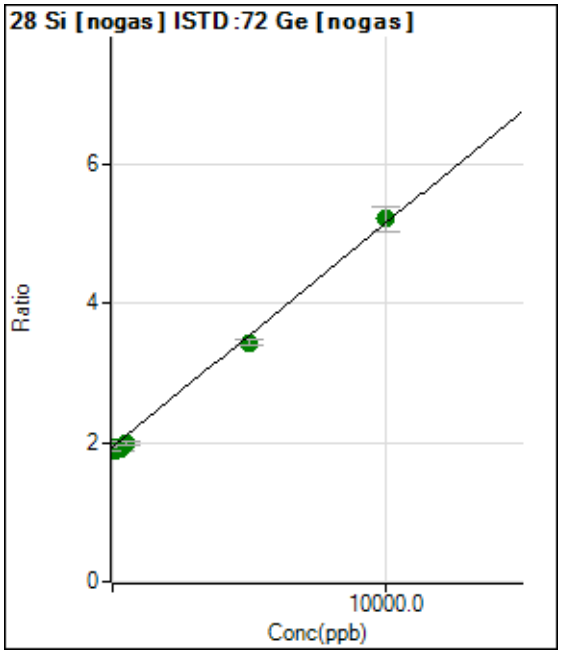
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.819	333.34	0.0009	P	11.7
2	☐	2.000	0.903	690.03	0.0018	P	14.1
3	☐	5.000	4.413	1386.74	0.0036	P	7.6
4	☐	10.000	9.681	2433.53	0.0064	P	18.9
5	☐	100.000	105.561	21462.36	0.0573	P	2.0
6	☐	200.000	197.261	40851.01	0.1059	P	3.2
7	☐	1.000					

y = 5.3010E-004 * x + 0.0013
R = 0.9994
DL = 0.5738

Weight: <None>
Min Conc: <None>

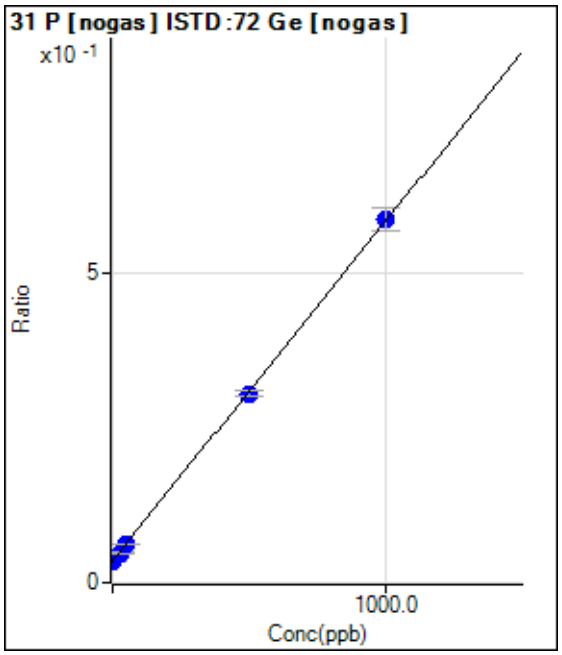


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2656866.79	1.9394	A	7.2
2	☐	100.000	-192.958	2691988.40	1.8773	A	2.3
3	☐	250.000	-115.435	2762877.46	1.9022	A	2.6
4	☐	500.000	187.453	2848858.81	1.9997	A	2.9
5	☐	5000.000	4675.019	4896375.97	3.4442	A	2.7
6	☐	10000.00	10190.183	7156750.93	5.2195	A	6.9
7	☐	5.000					

y = 3.2189E-004 * x + 1.9394
R = 0.9991
DL = 1308

Weight: <None>
Min Conc: <None>

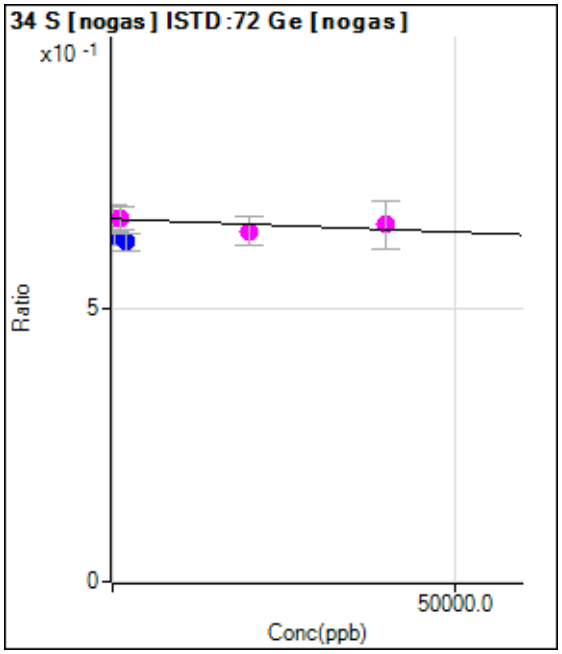
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48792.94	0.0356	P	7.3
2	☐	10.000	8.569	57818.04	0.0403	P	2.4
3	☐	25.000	22.692	69828.13	0.0481	P	0.7
4	☐	50.000	48.672	88757.10	0.0623	P	2.7
5	☐	500.000	491.793	433922.74	0.3052	P	2.7
6	☐	1000.000	1004.242	803854.81	0.5861	P	6.3
7	☐	5.000					

y = 5.4813E-004 * x + 0.0356
R = 1.0000
DL = 14.28

Weight: <None>
Min Conc: <None>

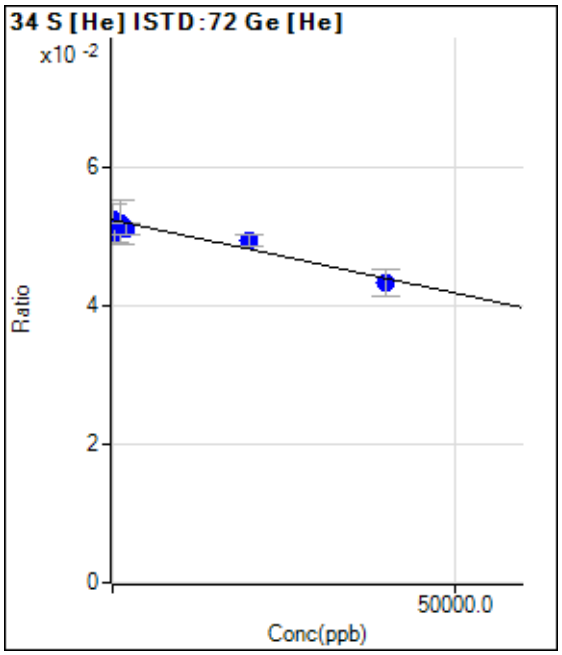


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	912326.25	0.6655	M	7.8
2	☐	400.000	73117.438	903490.58	0.6303	P	4.1
3	☐	1000.000	168.193	967561.64	0.6655	M	6.5
4	☐	2000.000	87742.083	887174.27	0.6232	P	5.2
5	☐	20000.00	46439.832	913930.36	0.6431	M	8.4
6	☐	40000.00	21786.601	895793.18	0.6550	M	13.5
7	☐	100.000					

y = -4.8250E-007 * x + 0.6655
R = 0.1373
DL = -3.209E+05

Weight: <None>
Min Conc: <None>

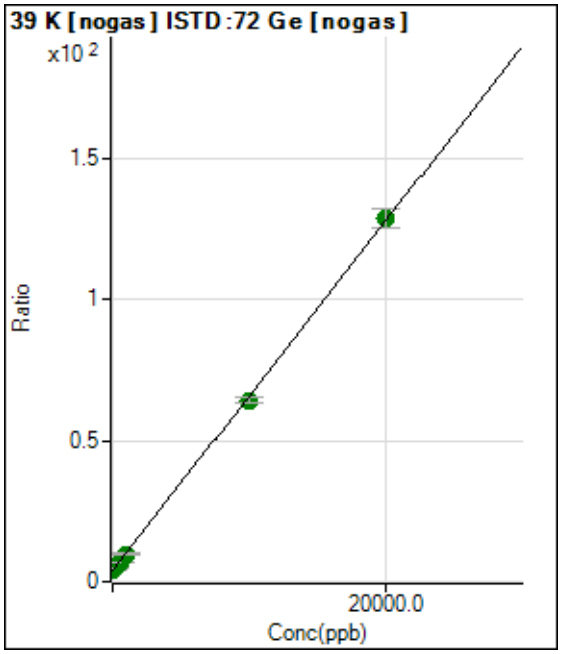
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20114.46	0.0525	P	8.4
2	☐	400.000	8431.674	19613.48	0.0507	P	6.1
3	☐	1000.000	1581.523	19846.95	0.0521	P	12.3
4	☐	2000.000	6355.675	19379.86	0.0511	P	3.3
5	☐	20000.00	14084.265	18545.48	0.0495	P	2.9
6	☐	40000.00	42645.229	16777.05	0.0435	P	9.2
7	☐	100.000					

y = -2.1106E-007 * x + 0.0525
R = -0.9579
DL = -6.286E+04

Weight: <None>
Min Conc: <None>

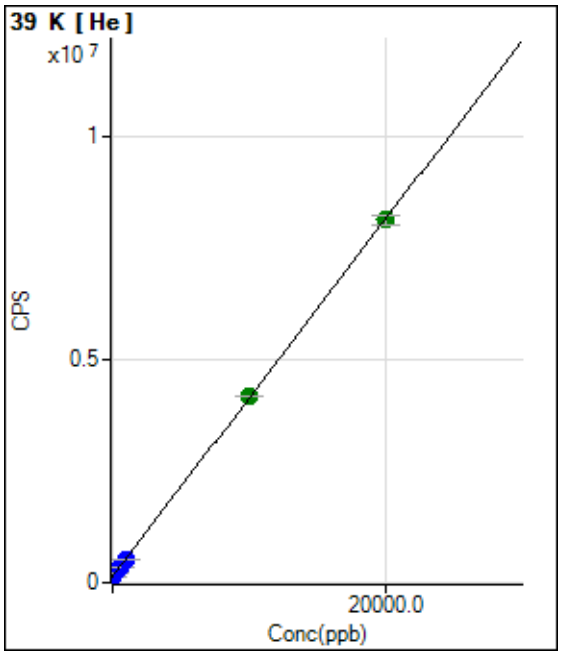


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5358642.18	3.9107	A	6.6
2	☐	200.000	169.678	7112122.55	4.9598	A	2.1
3	☐	500.000	431.039	9550691.88	6.5757	A	2.7
4	☐	1000.000	927.014	13725955.51	9.6421	A	5.1
5	☐	10000.00	9755.597	91307520.79	64.2258	A	3.9
6	☐	20000.00	20127.878	176125591.4	128.353	A	5.4
7	☐	100.000					

y = 0.0062 * x + 3.9107
R = 0.9999
DL = 124.8

Weight: <None>
Min Conc: <None>

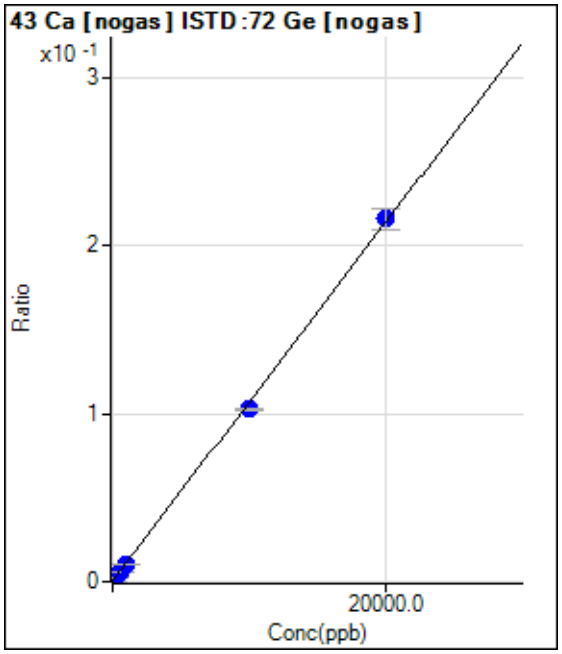
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	139939.10		P	1.2
2	☐	200.000	213.562	225584.16		P	1.5
3	☐	500.000	509.092	344101.43		P	0.0
4	☐	1000.000	984.362	534700.04		P	1.4
5	☐	10000.00	10083.533	4183759.94		A	0.7
6	☐	20000.00	19958.652	8144000.09		A	2.6
7	☐	100.000					

y = 401.0321 * x + 139939.1033
R = 1.0000
DL = 12.17

Weight: <None>
Min Conc: <None>

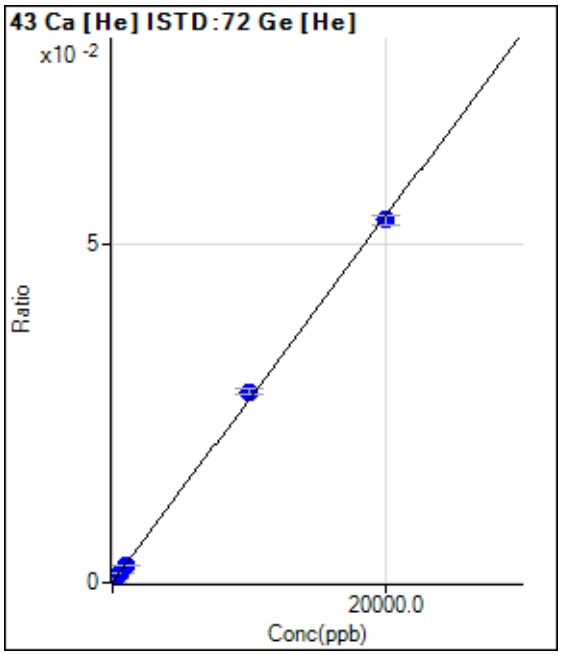


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	413.34	0.0003	P	9.9
2	☐	200.000	183.672	3247.00	0.0023	P	11.0
3	☐	500.000	468.203	7701.72	0.0053	P	2.5
4	☐	1000.000	898.279	14098.85	0.0099	P	1.6
5	☐	10000.00	9596.099	146092.08	0.1027	P	1.5
6	☐	20000.00	20207.995	296449.05	0.2160	P	5.5
7	☐	100.000					

y = 1.0675E-005 * x + 3.0190E-004
R = 0.9997
DL = 8.367

Weight: <None>
Min Conc: <None>

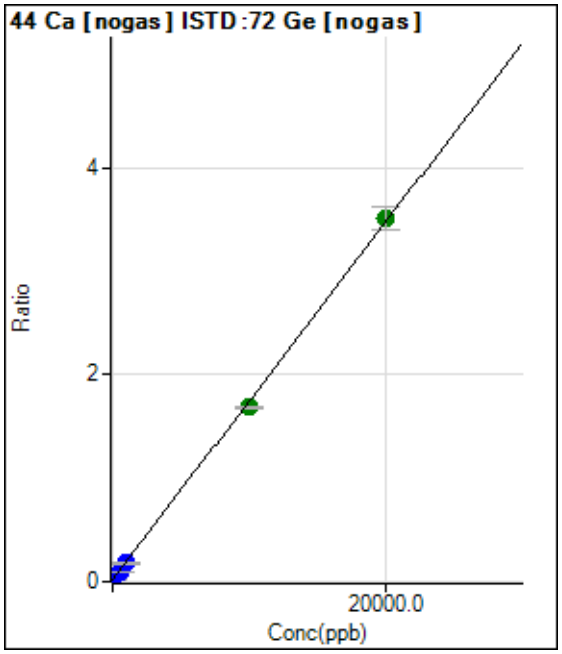
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.0
2	☐	200.000	239.128	263.34	0.0007	P	28.7
3	☐	500.000	496.790	523.35	0.0014	P	11.0
4	☐	1000.000	939.385	973.37	0.0026	P	5.8
5	☐	10000.00	10399.613	10526.47	0.0281	P	3.0
6	☐	20000.00	19802.913	20631.69	0.0535	P	2.6
7	☐	100.000					

y = 2.6975E-006 * x + 3.4749E-005
R = 0.9997
DL = 16.61

Weight: <None>
Min Conc: <None>

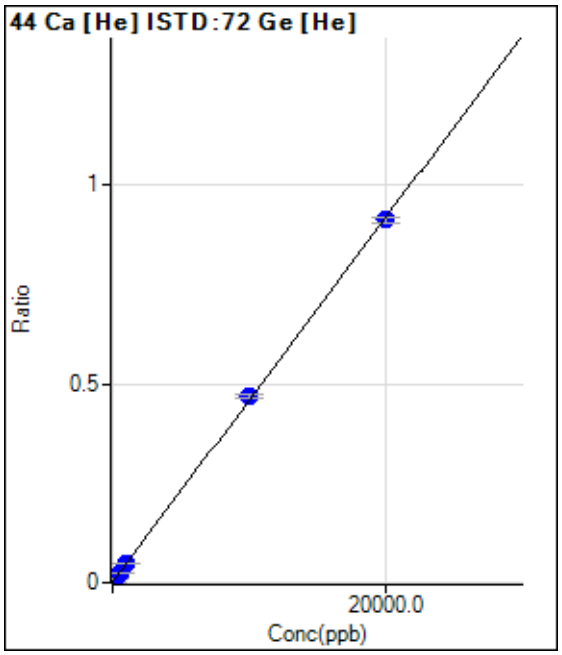


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25964.97	0.0190	P	7.3
2	☐	200.000	188.687	73912.05	0.0515	P	0.6
3	☐	500.000	464.609	144078.00	0.0992	P	2.2
4	☐	1000.000	915.267	252158.97	0.1770	P	2.4
5	☐	10000.00	9630.101	2391145.49	1.6813	A	1.4
6	☐	20000.00	20190.184	4808732.74	3.5043	A	6.3
7	☐	100.000					

y = 1.7262E-004 * x + 0.0190
R = 0.9998
DL = 24.19

Weight: <None>
Min Conc: <None>

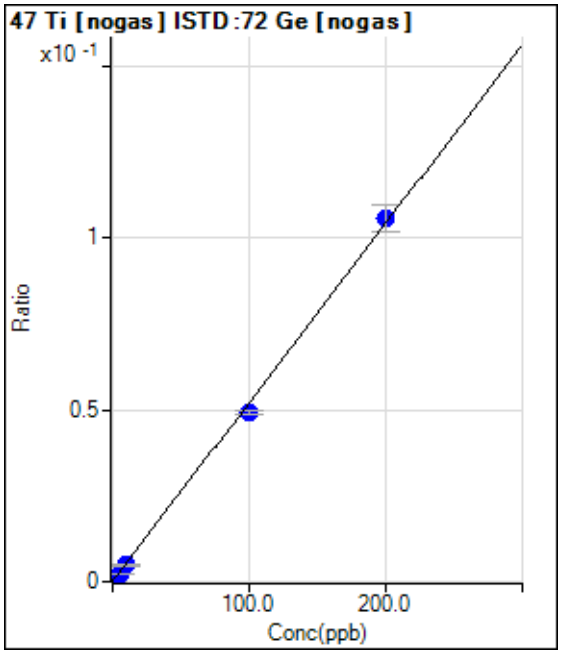
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.35	0.0013	P	23.6
2	☐	200.000	219.350	4377.24	0.0113	P	13.8
3	☐	500.000	532.337	9759.37	0.0256	P	0.8
4	☐	1000.000	1003.801	17908.81	0.0473	P	4.9
5	☐	10000.00	10216.703	175935.09	0.4694	P	1.8
6	☐	20000.00	19890.456	352169.16	0.9126	P	1.6
7	☐	100.000					

y = 4.5816E-005 * x + 0.0013
R = 0.9999
DL = 19.43

Weight: <None>
Min Conc: <None>

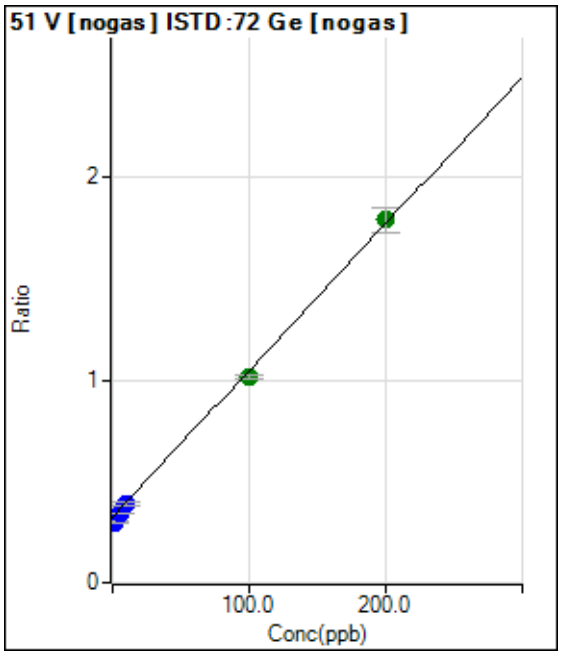


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0001	P	19.2
2	☐	2.000	1.814	1510.09	0.0011	P	7.3
3	☐	5.000	4.428	3503.72	0.0024	P	8.4
4	☐	10.000	9.112	6904.73	0.0049	P	5.5
5	☐	100.000	94.737	70236.24	0.0494	P	2.0
6	☐	200.000	202.692	144764.24	0.1056	P	7.4
7	☐	1.000					

y = 5.2026E-004 * x + 1.0996E-004
R = 0.9995
DL = 0.1216

Weight: <None>
Min Conc: <None>

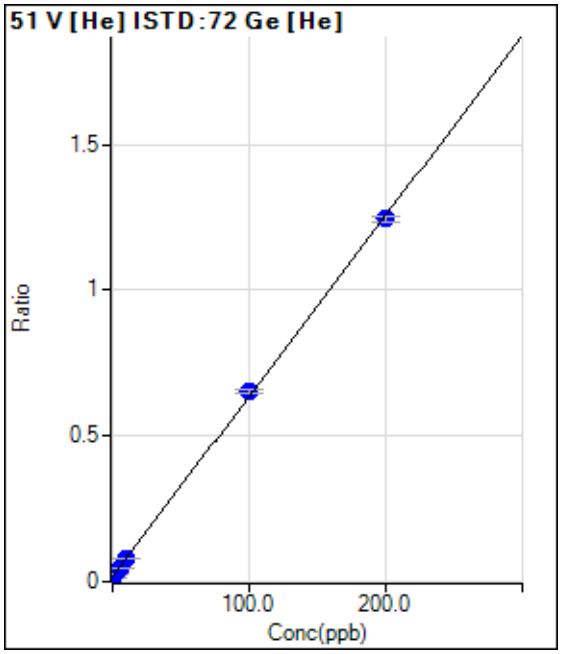
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	445243.60	0.3247	P	4.9
2	☐	2.000	-3.842	426004.31	0.2969	P	2.0
3	☐	5.000	2.255	495596.30	0.3410	P	1.9
4	☐	10.000	8.831	553475.01	0.3886	P	3.4
5	☐	100.000	95.304	1442823.57	1.0144	A	2.5
6	☐	200.000	202.534	2455531.17	1.7904	A	6.8
7	☐	1.000					

y = 0.0072 * x + 0.3247
R = 0.9995
DL = 6.634

Weight: <None>
Min Conc: <None>

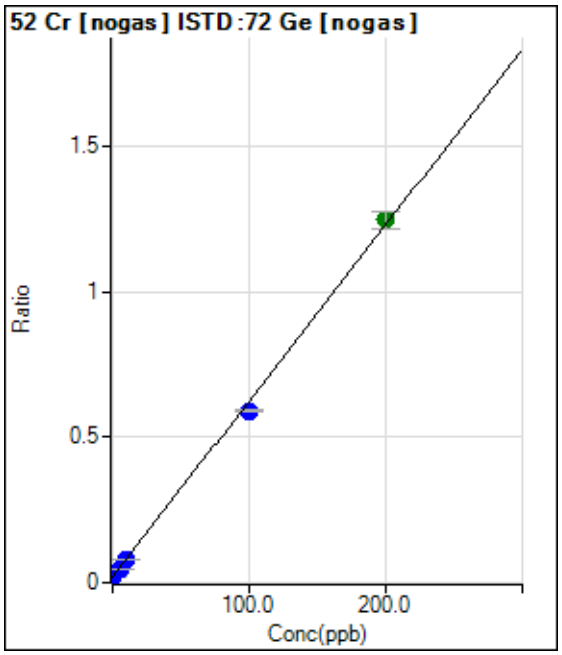


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.347	5806.25	0.0151	P	1.1
2	☐	2.000	1.426	10105.41	0.0261	P	1.7
3	☐	5.000	4.732	17713.08	0.0466	P	0.8
4	☐	10.000	9.562	28980.46	0.0764	P	0.9
5	☐	100.000	103.185	245667.99	0.6555	P	1.9
6	☐	200.000	198.442	480308.08	1.2446	P	1.4
7	☐	1.000					

y = 0.0062 * x + 0.0173
R = 0.9998
DL = 0.08343

Weight: <None>
Min Conc: <None>

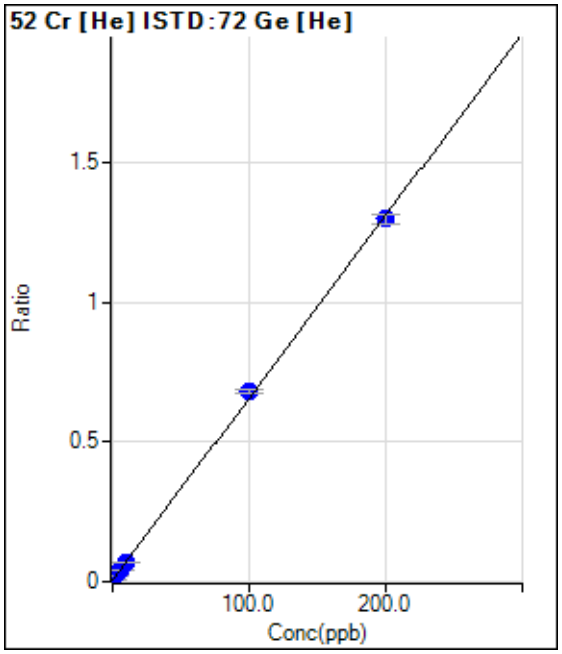
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28018.05	0.0205	P	7.6
2	☐	2.000	1.639	43544.63	0.0304	P	0.4
3	☐	5.000	4.645	70466.72	0.0485	P	2.3
4	☐	10.000	9.615	111862.61	0.0785	P	3.2
5	☐	100.000	94.123	837675.38	0.5889	P	1.4
6	☐	200.000	202.970	1710582.11	1.2464	A	4.8
7	☐	1.000					

y = 0.0060 * x + 0.0205
R = 0.9994
DL = 0.769

Weight: <None>
Min Conc: <None>

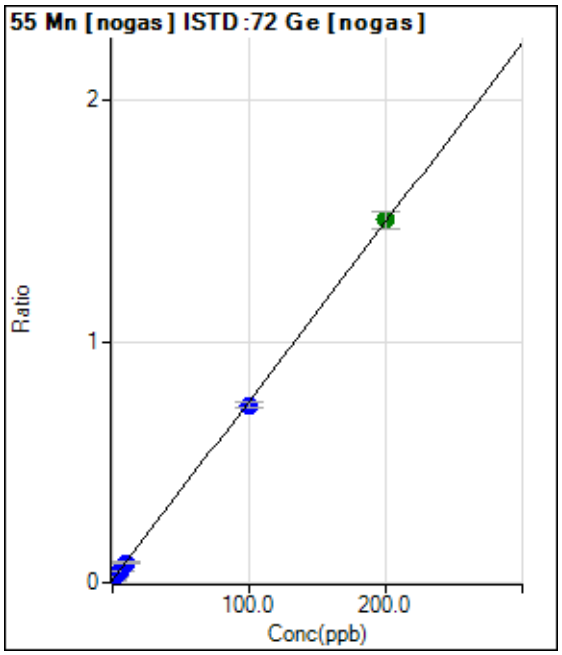


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1923.46	0.0050	P	10.0
2	☐	2.000	2.015	7028.08	0.0182	P	1.6
3	☐	5.000	5.207	14829.47	0.0390	P	3.8
4	☐	10.000	9.699	25881.66	0.0683	P	1.8
5	☐	100.000	103.487	254810.15	0.6799	P	2.2
6	☐	200.000	198.266	500865.88	1.2979	P	2.5
7	☐	1.000					

y = 0.0065 * x + 0.0050
R = 0.9998
DL = 0.2303

Weight: <None>
Min Conc: <None>

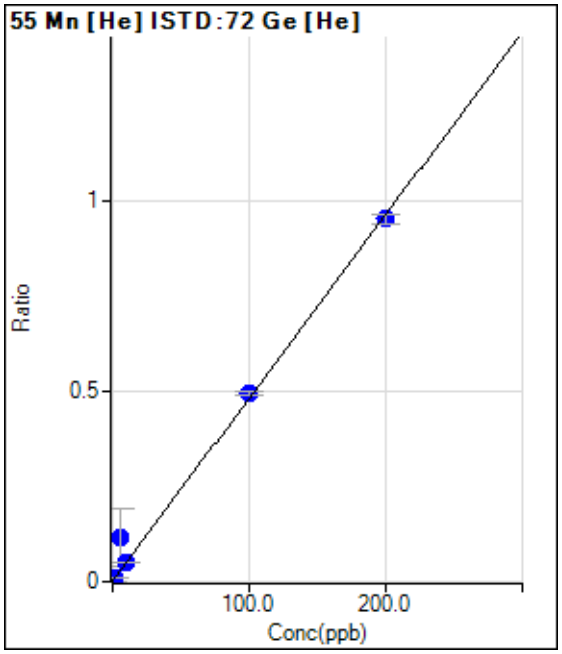
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15833.63	0.0116	P	8.1
2	☐	2.000	1.912	36950.56	0.0258	P	0.8
3	☐	5.000	4.918	69821.50	0.0481	P	1.8
4	☐	10.000	9.687	118853.07	0.0835	P	4.1
5	☐	100.000	97.594	1046208.71	0.7359	P	3.4
6	☐	200.000	201.221	2065901.74	1.5051	A	4.7
7	☐	1.000					

y = 0.0074 * x + 0.0116
R = 0.9999
DL = 0.3792

Weight: <None>
Min Conc: <None>

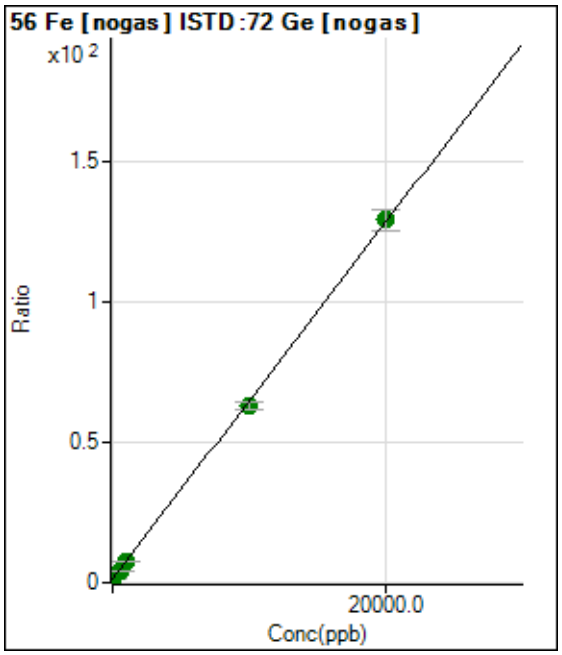


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.35	0.0013	P	27.3
2	☐	2.000	2.057	4317.23	0.0112	P	2.7
3	☐	5.000	23.712	43387.77	0.1150	P	132.
4	☐	10.000	10.223	19083.38	0.0503	P	0.4
5	☐	100.000	103.128	185892.00	0.4959	P	2.0
6	☐	200.000	197.957	366827.62	0.9507	P	2.9
7	☐	1.000					

y = 0.0048 * x + 0.0013
R = 0.9958
DL = 0.2194

Weight: <None>
Min Conc: <None>

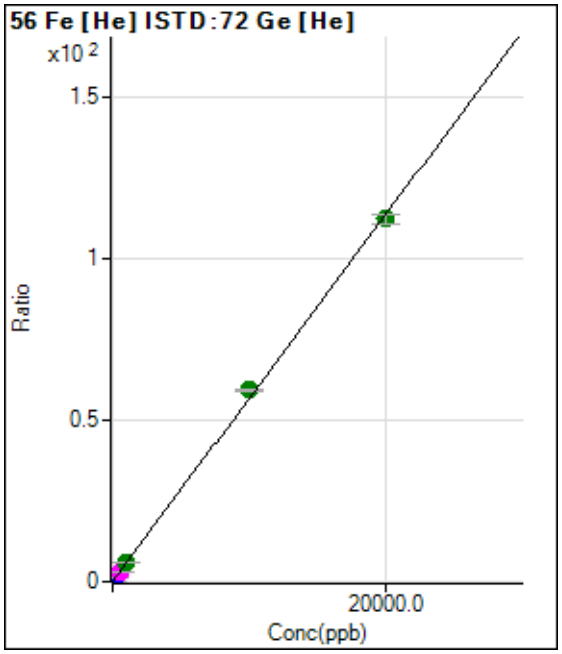
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1782816.84	1.3022	A	8.5
2	☐	200.000	192.906	3621176.25	2.5247	A	2.8
3	☐	500.000	480.053	6310952.88	4.3446	A	2.0
4	☐	1000.000	961.791	10535363.26	7.3977	A	3.8
5	☐	10000.00	9723.947	89470927.00	62.9292	A	3.6
6	☐	20000.00	20140.506	176872928.9	128.945	A	6.1
7	☐	100.000					

y = 0.0063 * x + 1.3022
R = 0.9999
DL = 52.66

Weight: <None>
Min Conc: <None>

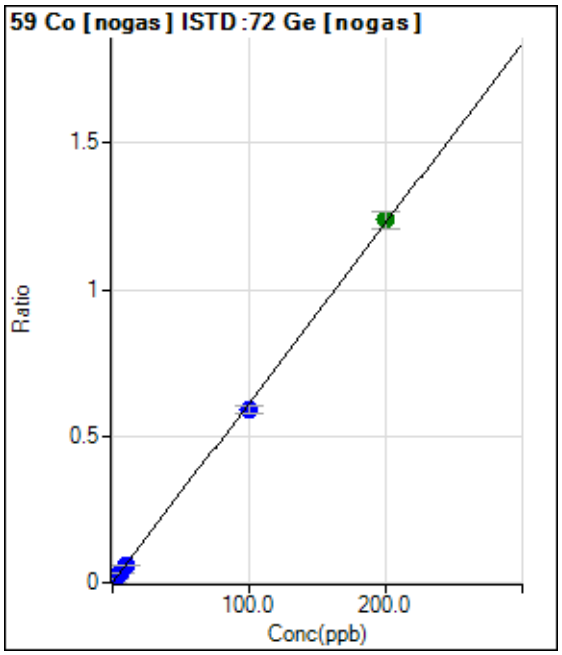


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8215.27	0.0214	P	5.5
2	☐	200.000	204.677	458060.78	1.1834	P	2.3
3	☐	500.000	524.349	1140132.46	2.9982	M	8.2
4	☐	1000.000	1024.251	2212806.79	5.8361	A	1.4
5	☐	10000.00	10433.565	22212840.50	59.2531	A	1.2
6	☐	20000.00	19781.349	43340751.02	112.320	A	2.6
7	☐	100.000					

y = 0.0057 * x + 0.0214
R = 0.9997
DL = 0.6217

Weight: <None>
Min Conc: <None>

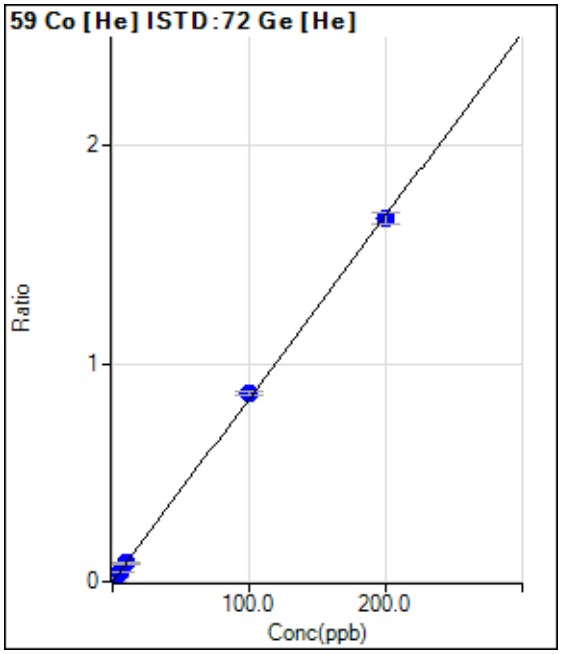
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	480.02	0.0004	P	7.8
2	☐	2.000	1.962	17768.86	0.0124	P	2.9
3	☐	5.000	4.799	43251.29	0.0298	P	1.6
4	☐	10.000	9.495	83405.62	0.0586	P	4.1
5	☐	100.000	96.329	840143.29	0.5910	P	3.9
6	☐	200.000	201.866	1699921.54	1.2381	A	5.0
7	☐	1.000					

y = 0.0061 * x + 3.5010E-004
R = 0.9998
DL = 0.01336

Weight: <None>
Min Conc: <None>

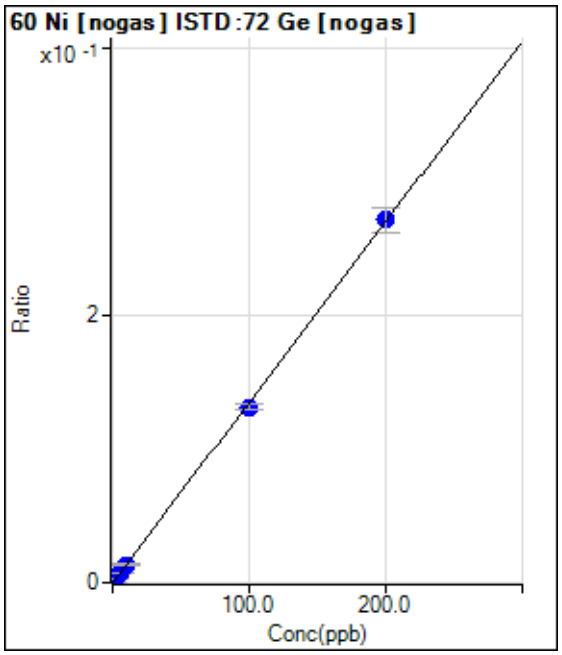


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0002	P	21.9
2	☐	2.000	2.023	6651.33	0.0172	P	0.3
3	☐	5.000	5.294	16974.68	0.0446	P	2.5
4	☐	10.000	9.980	31807.61	0.0839	P	4.6
5	☐	100.000	103.301	324916.61	0.8668	P	1.7
6	☐	200.000	198.343	642115.60	1.6642	P	3.1
7	☐	1.000					

y = 0.0084 * x + 2.0873E-004
R = 0.9998
DL = 0.01632

Weight: <None>
Min Conc: <None>

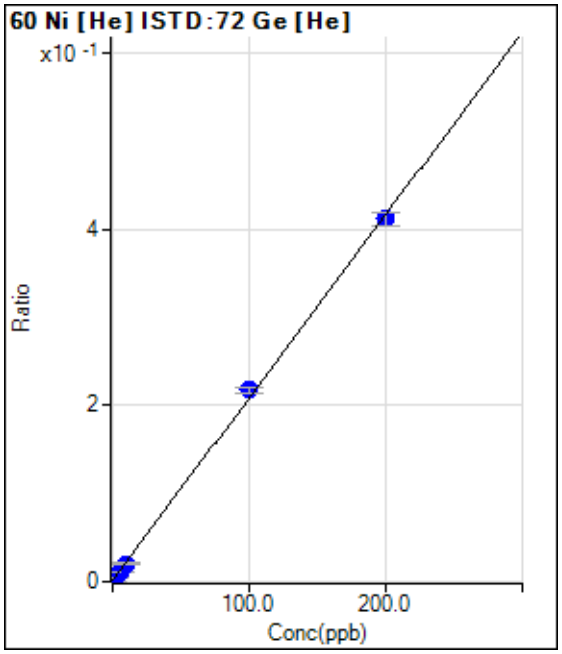
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.398	320.01	0.0002	P	21.9
2	☐	2.000	2.420	4250.54	0.0030	P	3.9
3	☐	5.000	5.157	9679.33	0.0067	P	2.7
4	☐	10.000	10.243	19256.92	0.0135	P	5.3
5	☐	100.000	97.605	187036.89	0.1315	P	3.8
6	☐	200.000	201.177	372090.15	0.2713	P	7.1
7	☐	1.000					

y = 0.0014 * x - 3.0312E-004
R = 0.9999
DL = 0.114

Weight: <None>
Min Conc: <None>

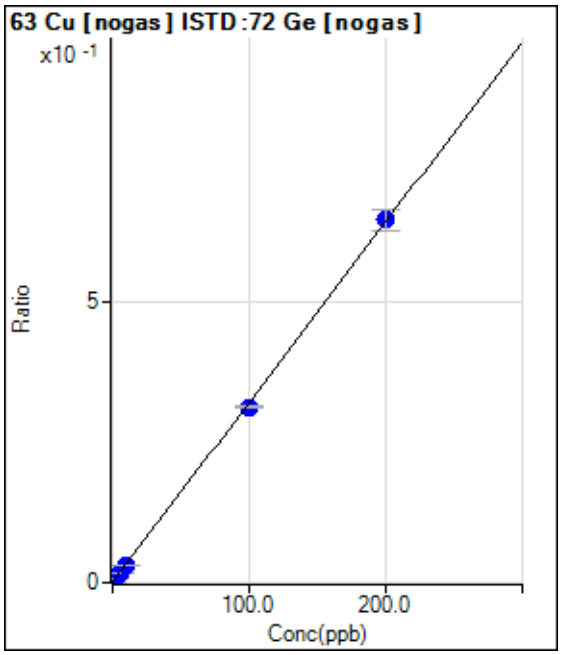


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.557	80.00	0.0002	P	37.1
2	☐	2.000	1.451	1693.43	0.0044	P	8.4
3	☐	5.000	4.708	4237.21	0.0111	P	2.6
4	☐	10.000	9.188	7755.06	0.0204	P	3.9
5	☐	100.000	104.313	81667.72	0.2179	P	3.0
6	☐	200.000	197.897	159029.01	0.4122	P	4.0
7	☐	1.000					

y = 0.0021 * x + 0.0014
R = 0.9996
DL = 0.1119

Weight: <None>
Min Conc: <None>

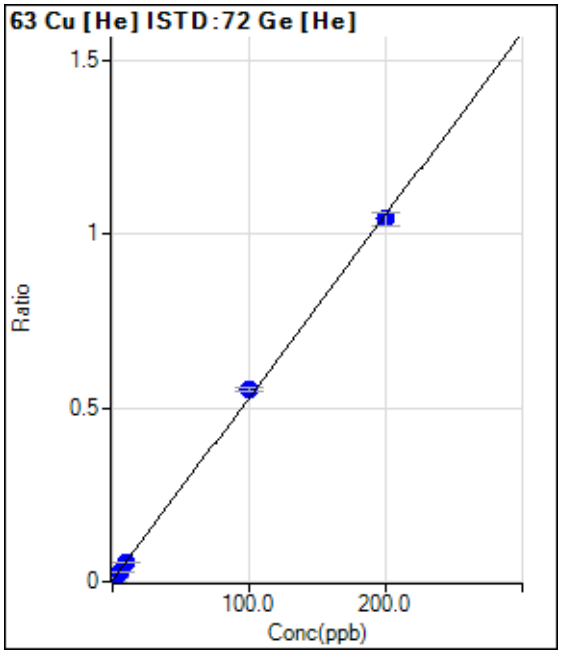
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1050.04	0.0008	P	7.3
2	☐	2.000	2.013	10333.03	0.0072	P	4.1
3	☐	5.000	4.826	23562.05	0.0162	P	0.9
4	☐	10.000	9.482	44334.07	0.0311	P	3.3
5	☐	100.000	97.408	444635.70	0.3126	P	1.9
6	☐	200.000	201.326	885305.61	0.6453	P	5.7
7	☐	1.000					

y = 0.0032 * x + 7.6512E-004
R = 0.9999
DL = 0.05201

Weight: <None>
Min Conc: <None>

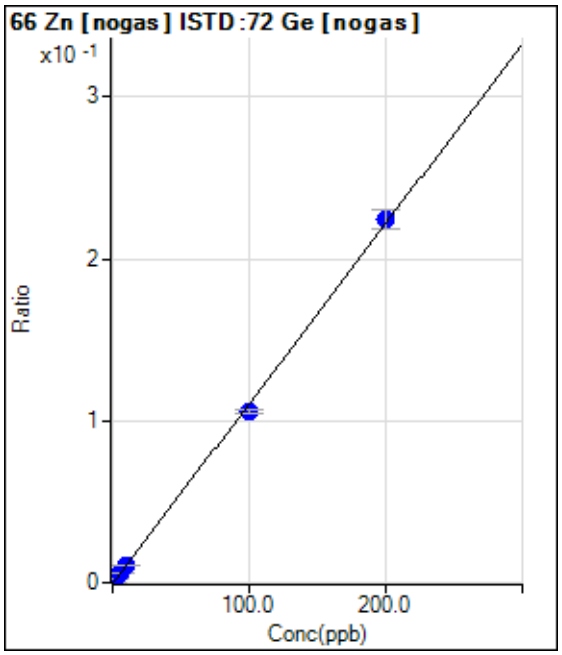


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.655	333.34	0.0009	P	8.2
2	☐	2.000	1.379	4477.27	0.0116	P	6.0
3	☐	5.000	4.670	10983.39	0.0289	P	2.7
4	☐	10.000	9.424	20428.41	0.0539	P	2.7
5	☐	100.000	104.277	207141.27	0.5526	P	1.7
6	☐	200.000	197.905	403180.76	1.0450	P	3.6
7	☐	1.000					

y = 0.0053 * x + 0.0043
R = 0.9996
DL = 0.04051

Weight: <None>
Min Conc: <None>

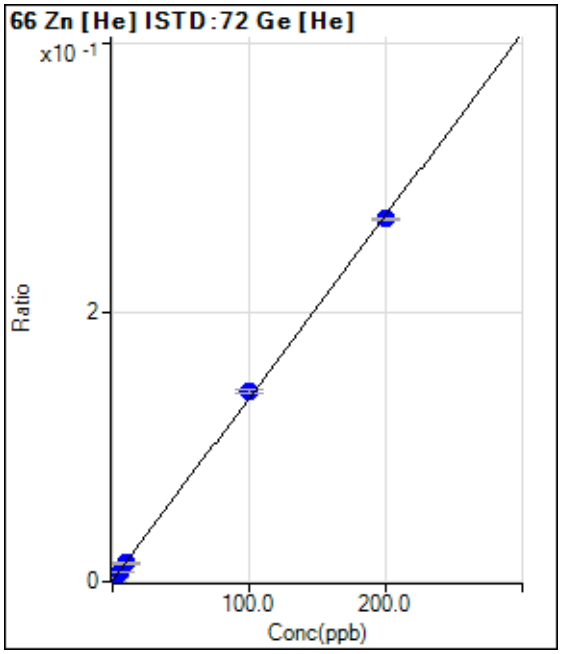
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.794	326.68	0.0002	P	19.3
2	☐	2.000	2.666	3322.01	0.0023	P	1.4
3	☐	5.000	5.695	8251.98	0.0057	P	1.7
4	☐	10.000	10.183	15203.12	0.0107	P	5.3
5	☐	100.000	95.391	149731.37	0.1053	P	2.6
6	☐	200.000	202.271	307378.24	0.2240	P	5.2
7	☐	1.000					

y = 0.0011 * x - 6.4533E-004
R = 0.9996
DL = 0.1233

Weight: <None>
Min Conc: <None>

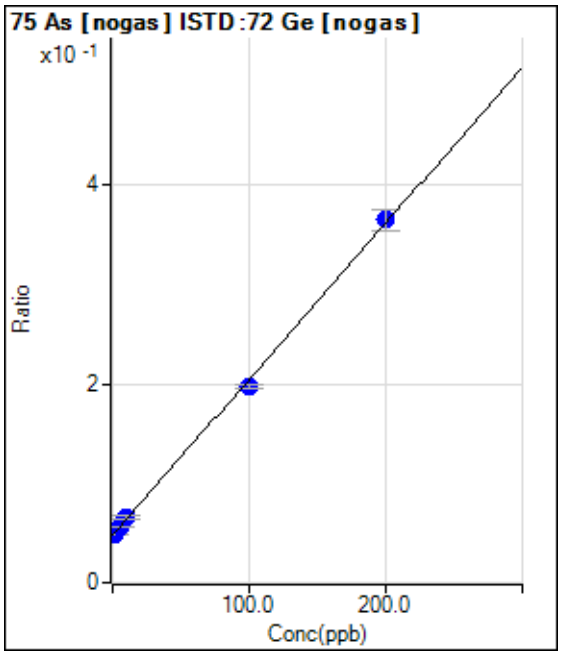


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.491	90.00	0.0002	P	59.3
2	☐	2.000	1.671	1226.73	0.0032	P	7.8
3	☐	5.000	4.490	2660.22	0.0070	P	6.6
4	☐	10.000	9.442	5197.47	0.0137	P	4.2
5	☐	100.000	103.687	53060.39	0.1415	P	2.0
6	☐	200.000	198.201	104094.50	0.2697	P	0.8
7	☐	1.000					

y = 0.0014 * x + 9.0179E-004
R = 0.9997
DL = 0.3088

Weight: <None>
Min Conc: <None>

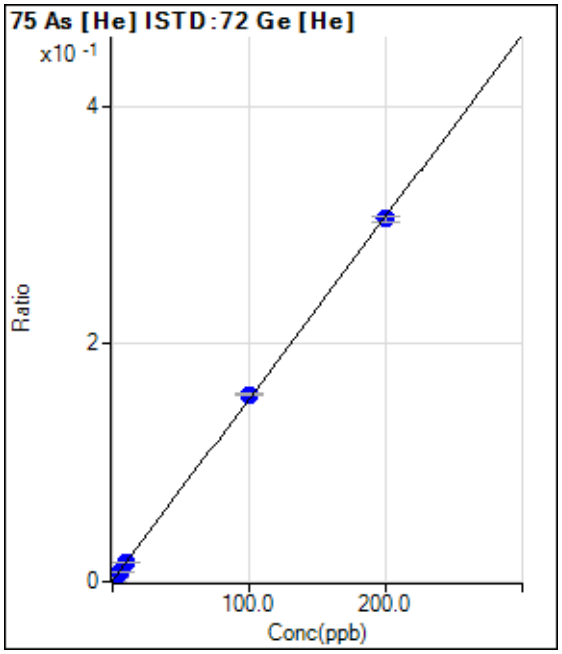
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	2.292	70526.15	0.0514	P	3.1
2	☐	2.000	0.280	69200.95	0.0482	P	1.9
3	☐	5.000	5.178	81270.23	0.0559	P	2.3
4	☐	10.000	11.511	93867.25	0.0659	P	3.3
5	☐	100.000	95.605	281441.50	0.1979	P	1.5
6	☐	200.000	202.135	501141.41	0.3652	P	5.6
7	☐	1.000					

y = 0.0016 * x + 0.0478
R = 0.9995
DL = 3.064

Weight: <None>
Min Conc: <None>

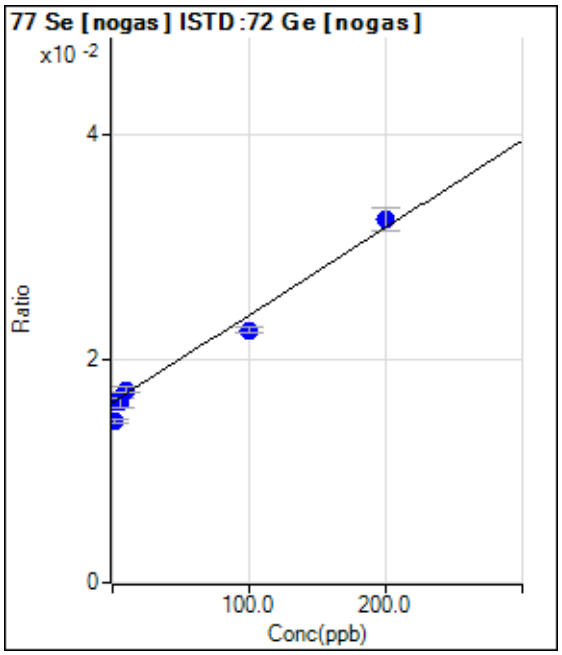


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	268.89	0.0007	P	20.5
2	☐	2.000	1.926	1414.51	0.0037	P	6.6
3	☐	5.000	5.068	3223.63	0.0085	P	5.8
4	☐	10.000	9.994	6073.26	0.0160	P	3.4
5	☐	100.000	102.403	59105.13	0.1577	P	1.0
6	☐	200.000	198.798	117871.80	0.3055	P	1.9
7	☐	1.000					

y = 0.0015 * x + 7.0148E-004
R = 0.9999
DL = 0.2813

Weight: <None>
Min Conc: <None>

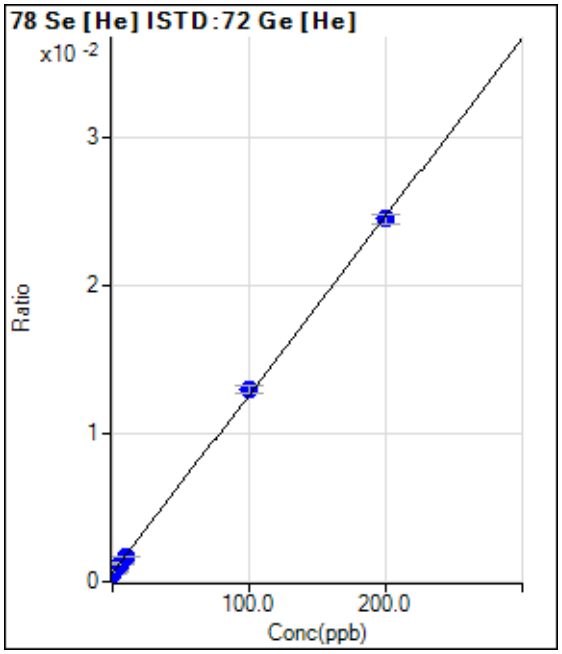
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22100.36	0.0161	P	4.3
2	☐	2.000	-21.402	20722.10	0.0144	P	2.5
3	☐	5.000	-0.357	23388.64	0.0161	P	5.4
4	☐	10.000	14.580	24576.87	0.0172	P	2.4
5	☐	100.000	82.789	32111.76	0.0226	P	1.9
6	☐	200.000	208.744	44437.61	0.0324	P	6.3
7	☐	1.000					

y = 7.8037E-005 * x + 0.0161
R = 0.9906
DL = 26.4

Weight: <None>
Min Conc: <None>

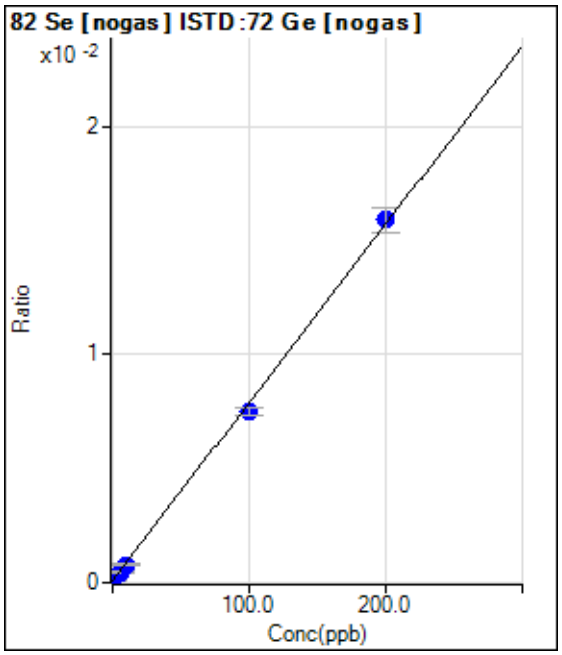


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.334	209.33	0.0005	P	2.6
2	☐	2.000	1.494	296.67	0.0008	P	13.6
3	☐	5.000	5.178	460.68	0.0012	P	4.8
4	☐	10.000	9.164	641.35	0.0017	P	5.7
5	☐	100.000	102.910	4872.66	0.0130	P	3.2
6	☐	200.000	198.587	9468.47	0.0245	P	2.4
7	☐	1.000					

y = 1.2061E-004 * x + 5.8626E-004
R = 0.9998
DL = 0.3467

Weight: <None>
Min Conc: <None>

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.67	0.0001	P	9.9
2	☐	2.000	1.854	340.01	0.0002	P	5.2
3	☐	5.000	4.611	656.69	0.0005	P	10.6
4	☐	10.000	9.036	1140.06	0.0008	P	6.5
5	☐	100.000	94.990	10683.32	0.0075	P	5.3
6	☐	200.000	202.564	21826.76	0.0159	P	6.8
7	☐	1.000					

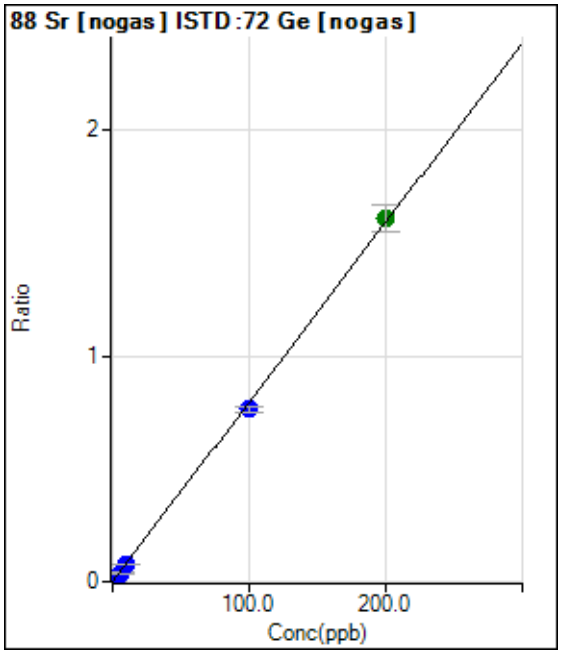
y = 7.8123E-005 * x + 9.2380E-005

R = 0.9996

DL = 0.3524

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	446.68	0.0003	P	16.8
2	☐	2.000	1.925	22417.71	0.0156	P	3.2
3	☐	5.000	4.744	55302.23	0.0381	P	4.8
4	☐	10.000	9.383	106870.97	0.0750	P	1.8
5	☐	100.000	95.905	1085234.62	0.7633	P	3.5
6	☐	200.000	202.085	2203983.30	1.6080	A	7.6
7	☐	1.000					

y = 0.0080 * x + 3.2361E-004

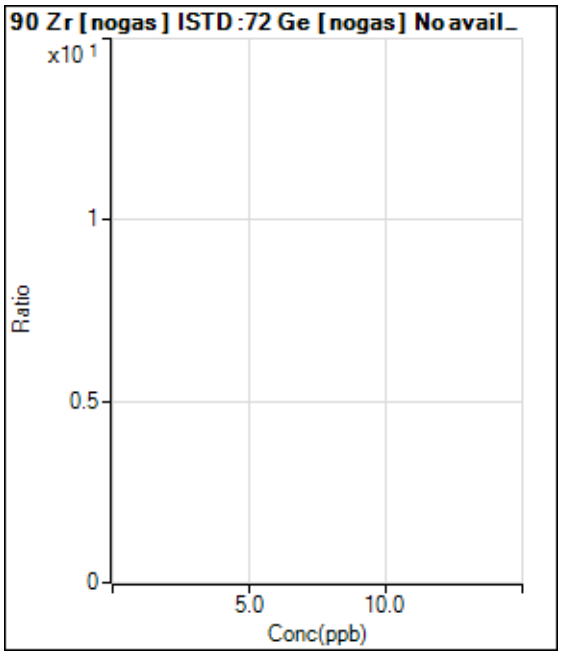
R = 0.9997

DL = 0.02051

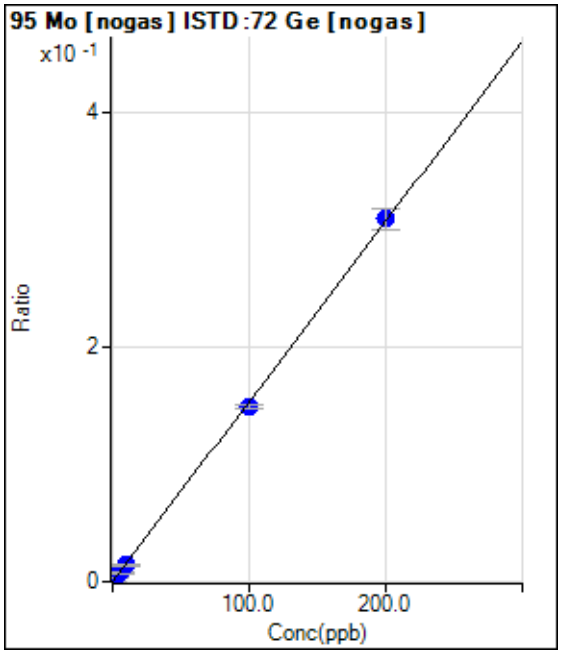
Weight: <None>

Min Conc: <None>

Calibration for 149_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					

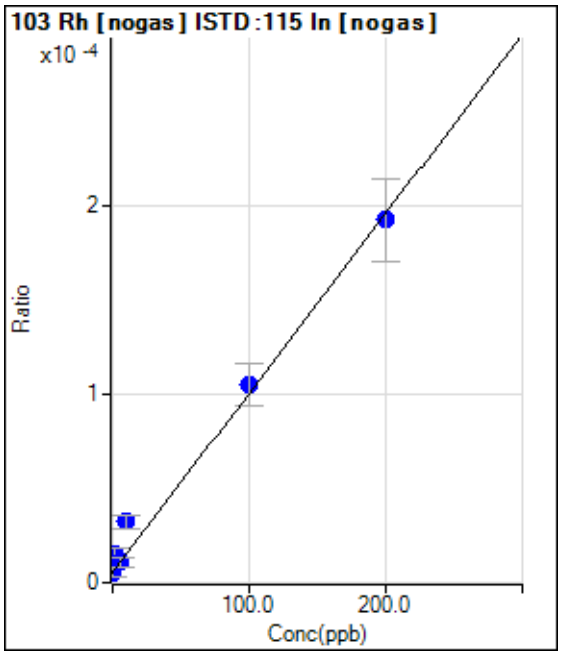


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	51.2
2	☐	2.000	1.857	4137.21	0.0029	P	5.8
3	☐	5.000	4.858	10883.49	0.0075	P	6.5
4	☐	10.000	9.175	20118.29	0.0141	P	4.2
5	☐	100.000	97.026	211849.93	0.1490	P	2.3
6	☐	200.000	201.533	424590.32	0.3095	P	5.5
7	☐	1.000					

y = 0.0015 * x + 3.6142E-005
R = 0.9998
DL = 0.03614

Weight: <None>
Min Conc: <None>

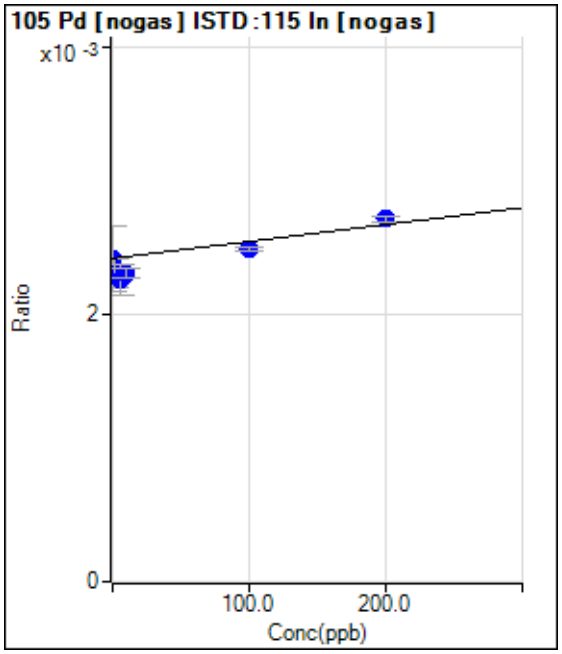
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	2.000	10.287	20.00	0.0000	P	44.4
3	☐	5.000	5.636	13.33	0.0000	P	41.8
4	☐	10.000	28.127	40.00	0.0000	P	24.8
5	☐	100.000	104.777	126.67	0.0001	P	20.4
6	☐	200.000	196.606	220.01	0.0002	P	22.8
7	☐	1.000					

y = 9.5203E-007 * x + 5.3912E-006
R = 0.9962
DL = 14.72

Weight: <None>
Min Conc: <None>

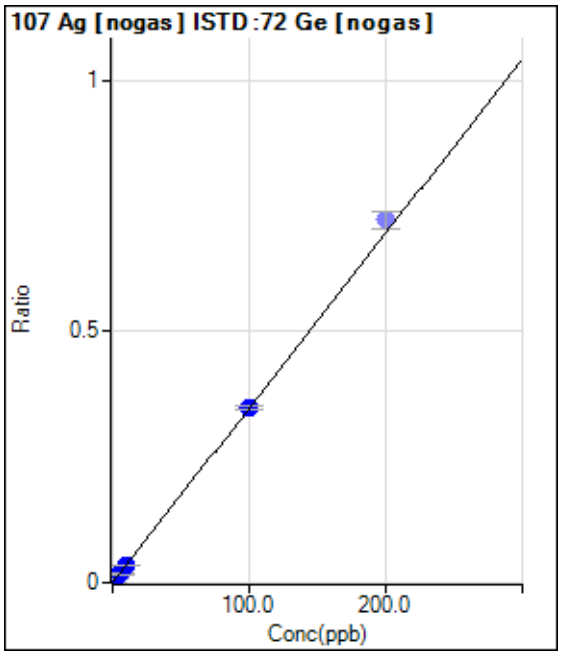


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2786.94	0.0024	P	20.0
2	☐	2.000	-84.398	2976.97	0.0023	P	9.2
3	☐	5.000	-123.496	2786.92	0.0023	P	10.2
4	☐	10.000	-88.614	2866.95	0.0023	P	3.0
5	☐	100.000	51.020	3000.30	0.0025	P	1.1
6	☐	200.000	233.497	3063.64	0.0027	P	1.8
7	☐	1.000					

y = 1.2647E-006 * x + 0.0024
R = 0.9402
DL = 1146

Weight: <None>
Min Conc: <None>

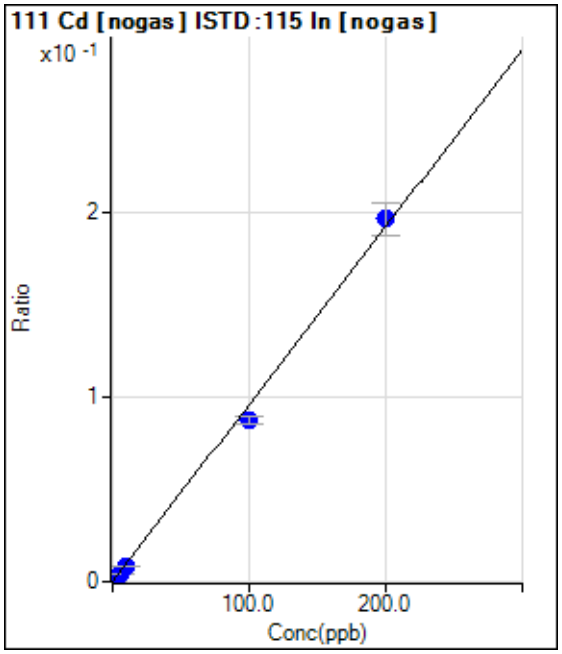
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	41.9
2	☐	2.000	1.921	9602.73	0.0067	P	6.2
3	☐	5.000	4.999	25274.97	0.0174	P	4.1
4	☐	10.000	9.828	48687.45	0.0342	P	4.6
5	☐	100.000	100.019	494498.12	0.3478	P	2.8
6	☑	200.000		991979.86	0.7228	P	5.0
7	☐	1.000					

y = 0.0035 * x + 1.9382E-005
R = 1.0000
DL = 0.007008

Weight: <None>
Min Conc: <None>

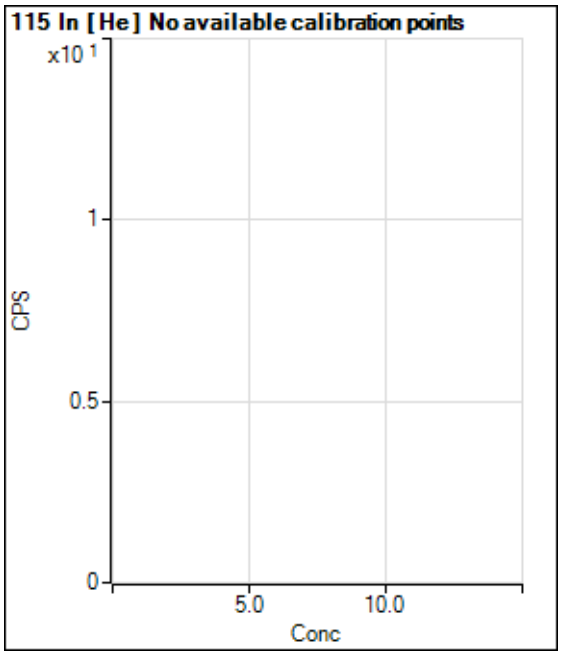


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	39.2
2	☐	2.000	1.703	2126.83	0.0016	P	4.2
3	☐	5.000	4.611	5487.60	0.0044	P	6.2
4	☐	10.000	8.413	10083.06	0.0081	P	4.2
5	☐	100.000	91.031	105752.76	0.0876	P	4.0
6	☐	200.000	204.577	221277.63	0.1968	P	9.4
7	☐	1.000					

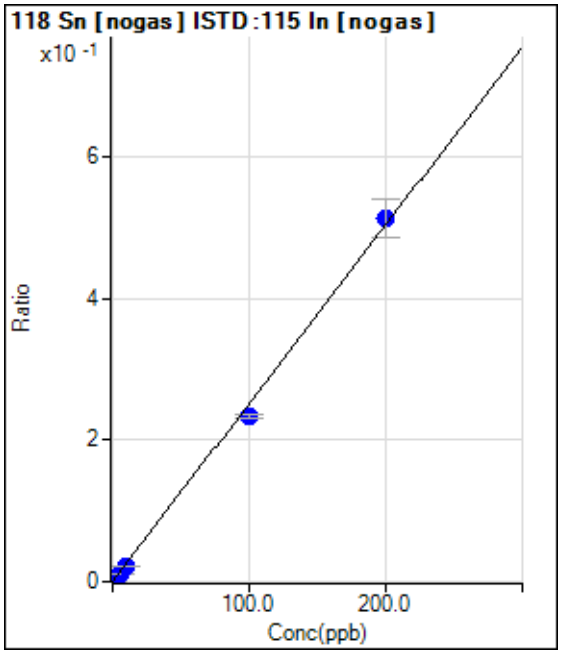
y = 9.6180E-004 * x + 1.1409E-005
R = 0.9986
DL = 0.01394

Weight: <None>
Min Conc: <None>

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			493811.36		P	1.4
2	☐			491013.79		P	1.4
3	☐			491476.80		P	1.8
4	☐			492195.32		P	2.2
5	☐			479986.38		P	1.0
6	☐			482622.22		P	0.6
7	☐						

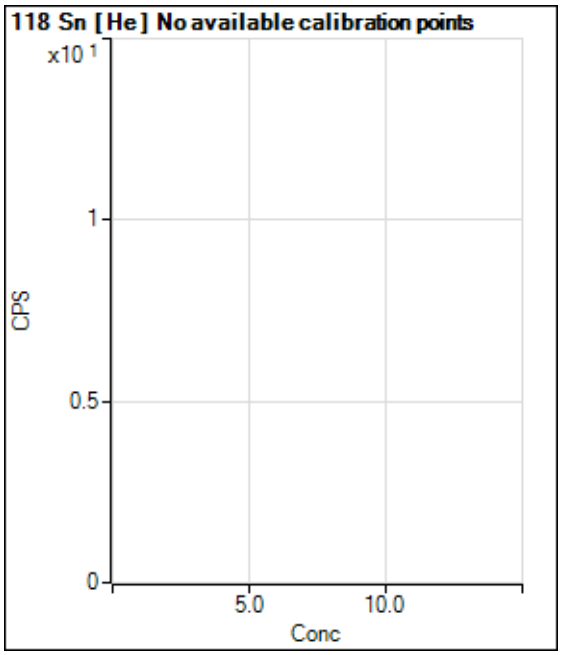


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	330.01	0.0003	P	43.5
2	☐	2.000	1.748	6044.49	0.0047	P	5.0
3	☐	5.000	4.491	14312.67	0.0116	P	1.7
4	☐	10.000	8.747	27678.92	0.0223	P	4.1
5	☐	100.000	92.979	282624.74	0.2338	P	1.8
6	☐	200.000	203.588	575037.92	0.5116	P	10.6
7	☐	1.000					

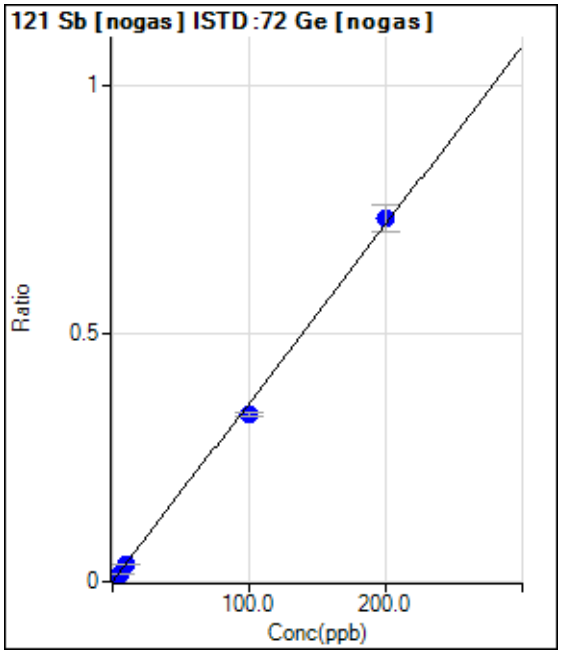
y = 0.0025 * x + 2.9282E-004
R = 0.9992
DL = 0.1522

Weight: <None>
Min Conc: <None>

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			153.33		P	32.8
2	☐			2586.89		P	8.5
3	☐			6524.63		P	4.5
4	☐			11860.83		P	1.5
5	☐			122364.54		P	1.4
6	☐			245623.81		P	1.6
7	☐						

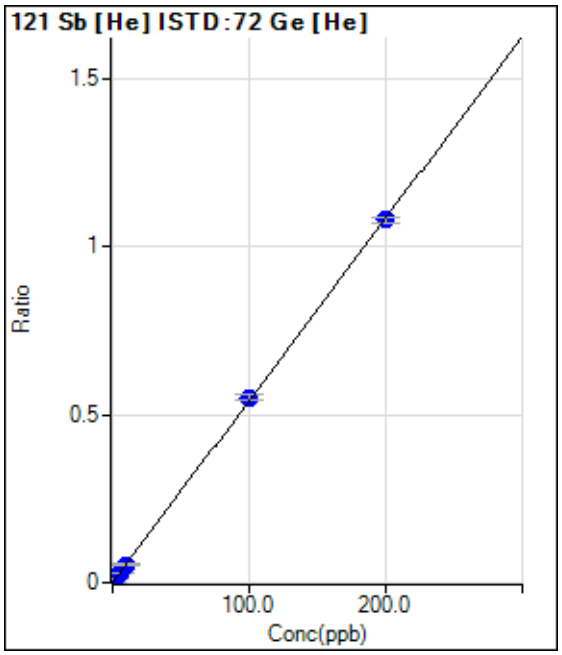


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	316.68	0.0002	P	17.3
2	☐	2.000	1.919	10223.13	0.0071	P	0.3
3	☐	5.000	4.586	24297.14	0.0167	P	5.0
4	☐	10.000	9.446	48714.84	0.0342	P	2.0
5	☐	100.000	93.638	479048.33	0.3368	P	3.0
6	☐	200.000	203.220	1001804.96	0.7307	P	7.5
7	☐	1.000					

y = 0.0036 * x + 2.2901E-004
R = 0.9993
DL = 0.03299

Weight: <None>
Min Conc: <None>

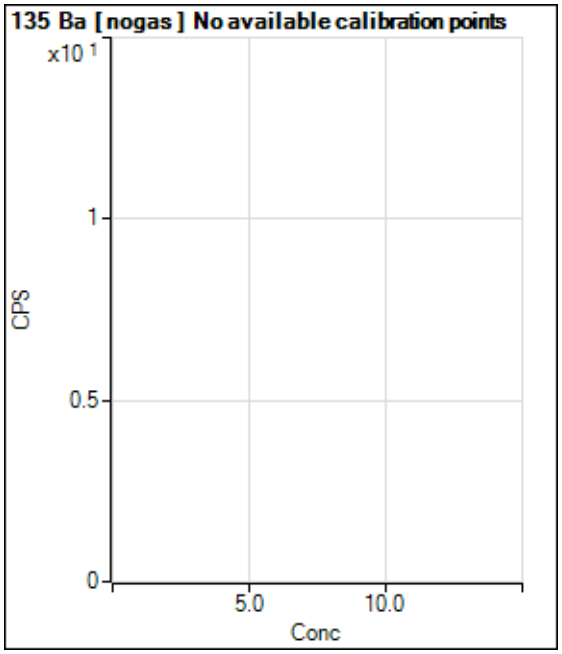
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.33	0.0004	P	26.8
2	☐	2.000	1.916	4167.22	0.0108	P	3.2
3	☐	5.000	5.215	10883.49	0.0286	P	1.7
4	☐	10.000	9.916	20475.57	0.0540	P	6.2
5	☐	100.000	101.437	205737.06	0.5490	P	3.1
6	☐	200.000	199.281	416059.19	1.0781	P	1.7
7	☐	1.000					

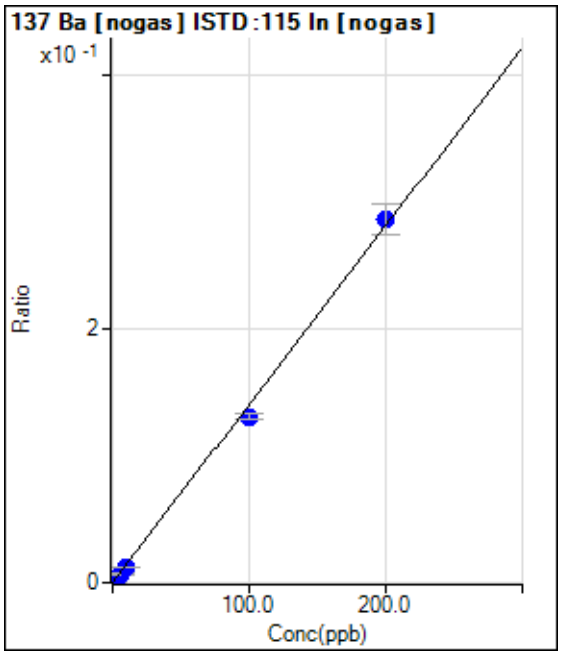
y = 0.0054 * x + 4.0023E-004
R = 1.0000
DL = 0.05945

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			46.67		P	53.9
2	☐			1616.77		P	7.4
3	☐			4794.08		P	3.4
4	☐			9035.82		P	7.0
5	☐			92255.85		P	2.4
6	☐			189288.26		P	0.6
7	☐						

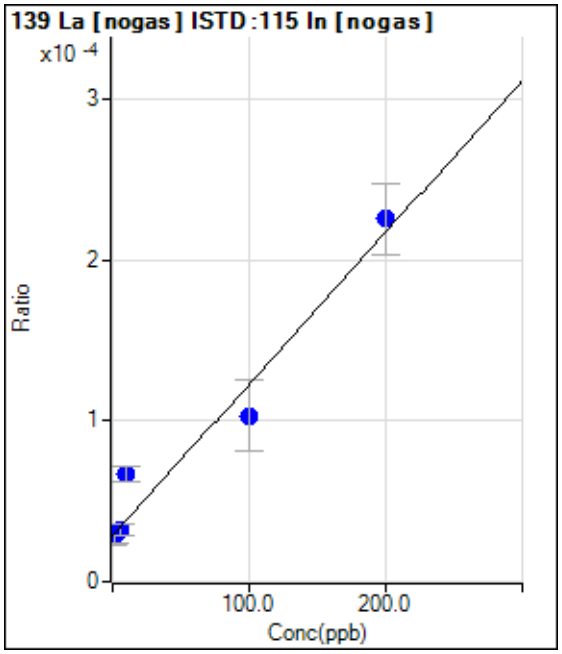
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0000	P	76.0
2	☐	2.000	1.760	3253.69	0.0025	P	5.5
3	☐	5.000	4.777	8348.83	0.0068	P	4.8
4	☐	10.000	8.778	15397.05	0.0124	P	1.1
5	☐	100.000	93.203	158269.37	0.1310	P	3.0
6	☐	200.000	203.468	321599.40	0.2859	P	8.4
7	☐	1.000					

y = 0.0014 * x + 4.8492E-005
R = 0.9992
DL = 0.07864

Weight: <None>
Min Conc: <None>

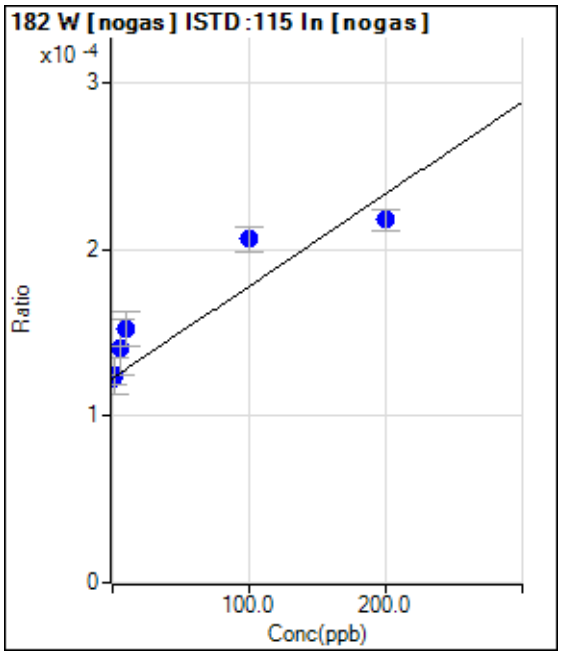


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	40.8
2	☐	2.000	0.302	36.67	0.0000	P	38.2
3	☐	5.000	3.838	40.00	0.0000	P	21.7
4	☐	10.000	40.878	83.33	0.0001	P	14.8
5	☐	100.000	79.272	123.33	0.0001	P	41.9
6	☐	200.000	208.866	253.34	0.0002	P	19.4
7	☐	1.000					

y = 9.4239E-007 * x + 2.8556E-005
R = 0.9786
DL = 37.13

Weight: <None>
Min Conc: <None>

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0001	P	6.2
2	☐	2.000	2.640	160.00	0.0001	P	18.1
3	☐	5.000	33.335	176.67	0.0001	P	23.5
4	☐	10.000	53.535	190.00	0.0002	P	14.3
5	☐	100.000	150.660	250.01	0.0002	P	7.3
6	☐	200.000	171.779	246.67	0.0002	P	6.1
7	☐	1.000					

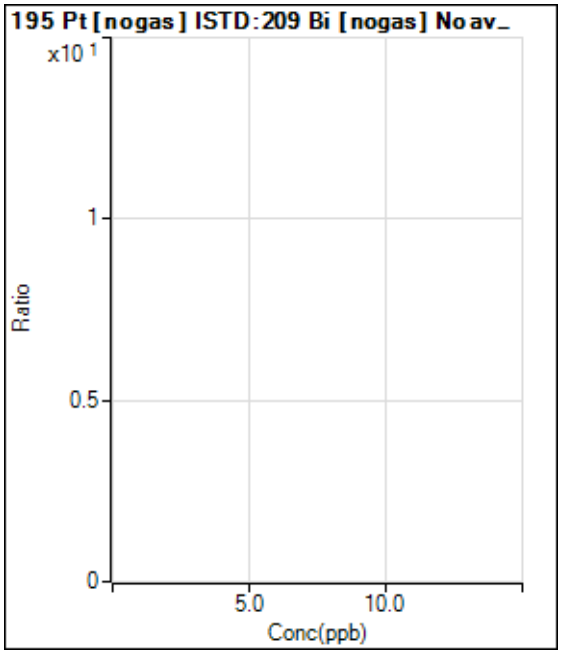
y = 5.5330E-007 * x + 1.2292E-004

R = 0.9293

DL = 41.1

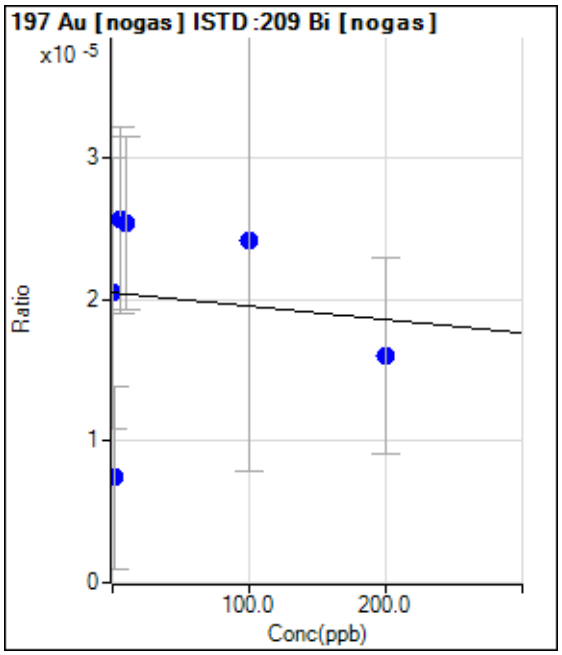
Weight: <None>

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 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	93.7
2	☐	2.000	1374.964	6.67	0.0000	P	173.
3	☐	5.000	-541.218	23.33	0.0000	P	51.5
4	☐	10.000	-519.482	23.33	0.0000	P	47.8
5	☐	100.000	-382.125	23.33	0.0000	P	134.
6	☐	200.000	467.462	13.33	0.0000	P	86.8
7	☐	1.000					

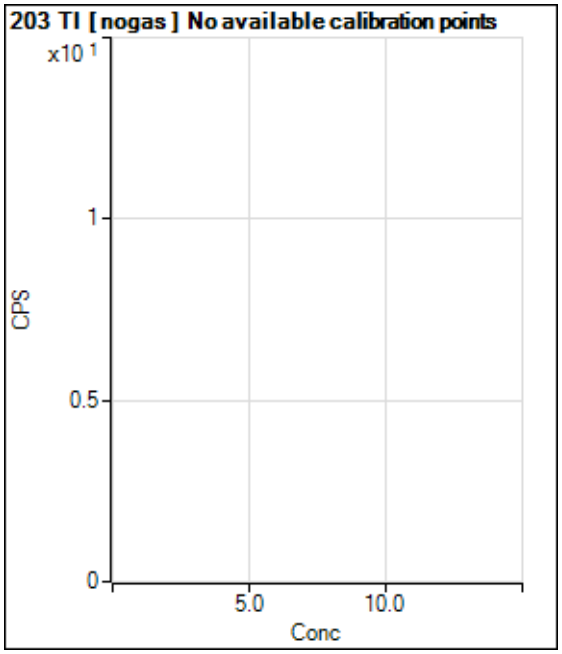
y = -9.5020E-009 * x + 2.0500E-005

R = -0.0951

DL = -6063

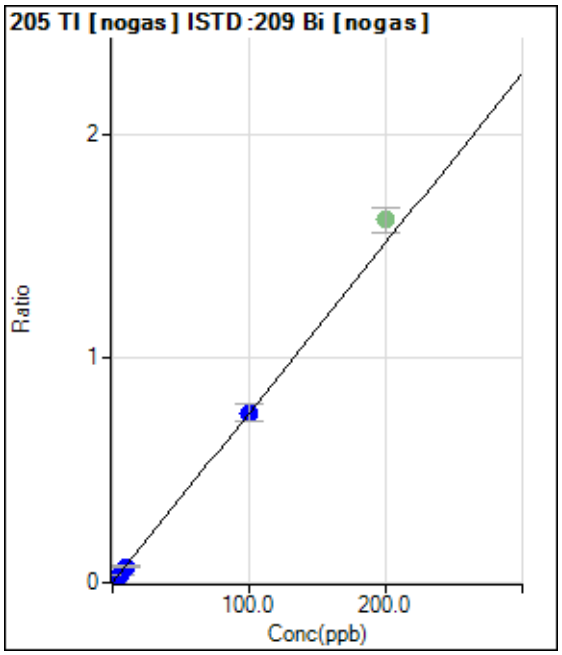
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			60.00		P	44.1
2	☐			5894.49		P	5.7
3	☐			13685.91		P	0.7
4	☐			27837.22		P	1.1
5	☐			291768.58		P	3.7
6	☐			588421.28		P	1.7
7	☐						

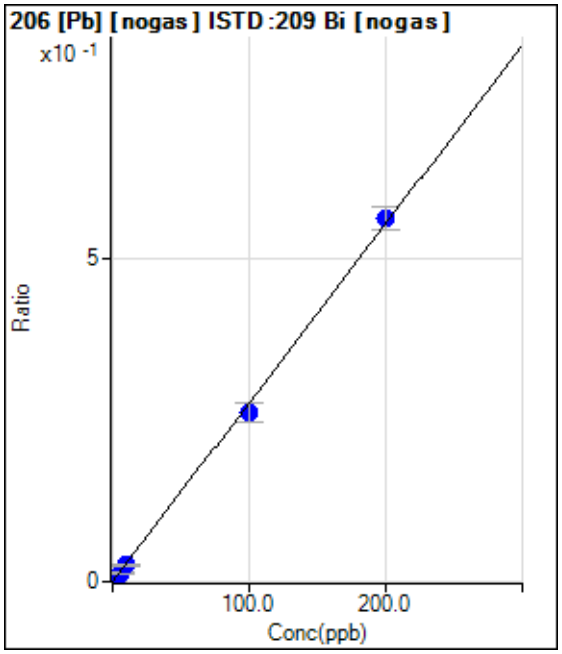
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	20.3
2	☐	2.000	1.984	13909.43	0.0151	P	7.0
3	☐	5.000	4.807	33605.08	0.0365	P	5.7
4	☐	10.000	9.529	65518.62	0.0722	P	6.2
5	☐	100.000	100.057	690690.22	0.7573	P	10.2
6	☑	200.000		1382875.71	1.6172	A	6.7
7	☐	1.000					

y = 0.0076 * x + 1.2666E-004
R = 1.0000
DL = 0.0102

Weight: <None>
Min Conc: <None>

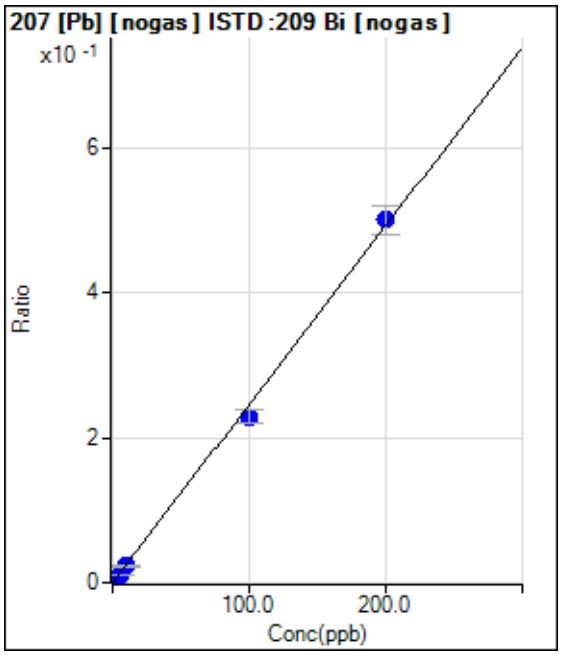


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	43.3
2	☐	2.000	1.895	4874.14	0.0053	P	8.7
3	☐	5.000	4.724	12084.65	0.0131	P	5.9
4	☐	10.000	9.187	23093.21	0.0255	P	6.6
5	☐	100.000	94.315	237768.88	0.2608	P	10.9
6	☐	200.000	202.891	479782.44	0.5609	P	6.2
7	☐	1.000					

y = 0.0028 * x + 6.8298E-005
R = 0.9994
DL = 0.03212

Weight: <None>
Min Conc: <None>

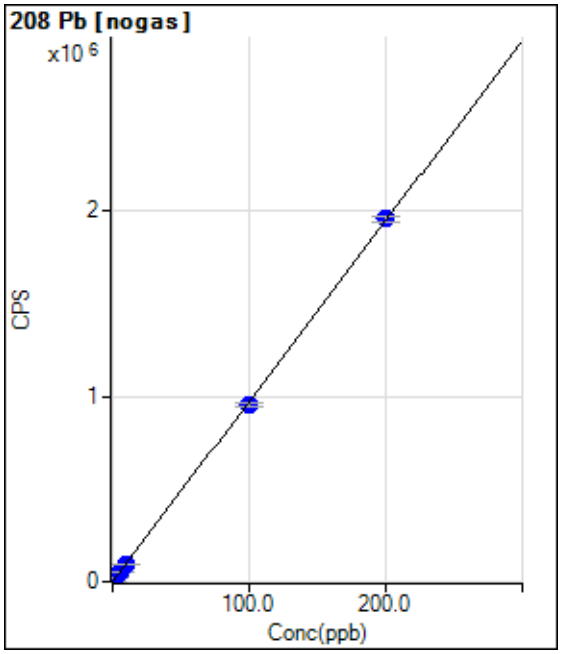
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	50.4
2	☐	2.000	1.882	4283.98	0.0046	P	4.0
3	☐	5.000	4.575	10370.13	0.0113	P	8.0
4	☐	10.000	9.294	20723.41	0.0229	P	8.4
5	☐	100.000	93.162	208991.25	0.2289	P	8.4
6	☐	200.000	203.466	427330.87	0.5000	P	7.9
7	☐	1.000					

y = 0.0025 * x + 2.3907E-005
R = 0.9992
DL = 0.0147

Weight: <None>
Min Conc: <None>

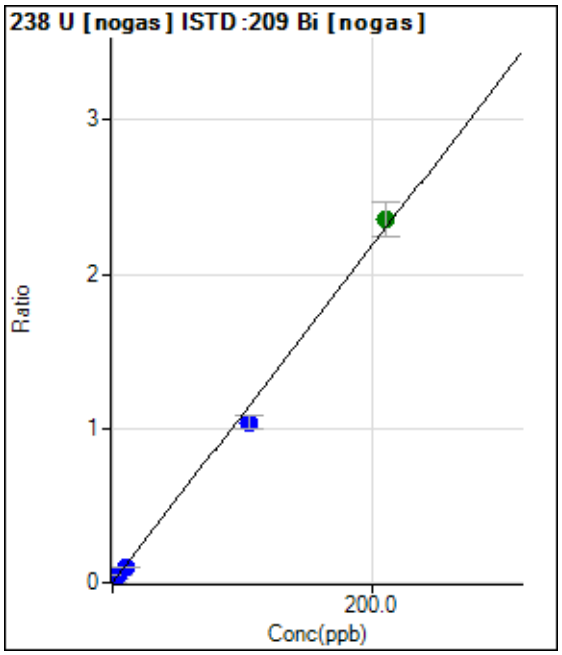


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00		P	33.1
2	☐	2.000	1.980	19411.51		P	3.4
3	☐	5.000	4.934	48128.66		P	2.6
4	☐	10.000	9.598	93468.96		P	2.9
5	☐	100.000	97.874	951685.88		P	2.0
6	☐	200.000	201.085	1955106.57		P	1.9
7	☐	1.000					

y = 9721.9841 * x + 160.0000
R = 0.9999
DL = 0.01633

Weight: <None>
Min Conc: <None>

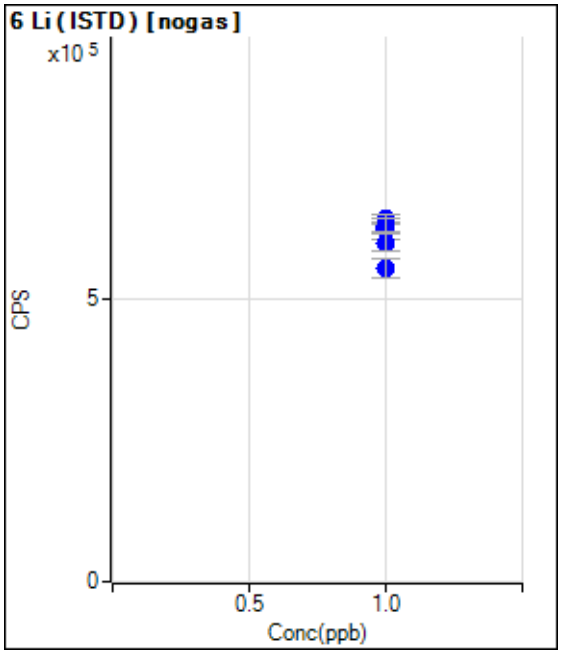
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	6.4
2	☐	2.000	1.808	18197.35	0.0198	P	9.4
3	☐	5.000	4.583	46197.40	0.0502	P	7.1
4	☐	10.000	9.093	90339.18	0.0995	P	4.1
5	☐	105.000	95.036	949108.61	1.0400	P	8.7
6	☐	210.000	215.037	2009692.37	2.3530	A	9.6
7	☐	1.000					

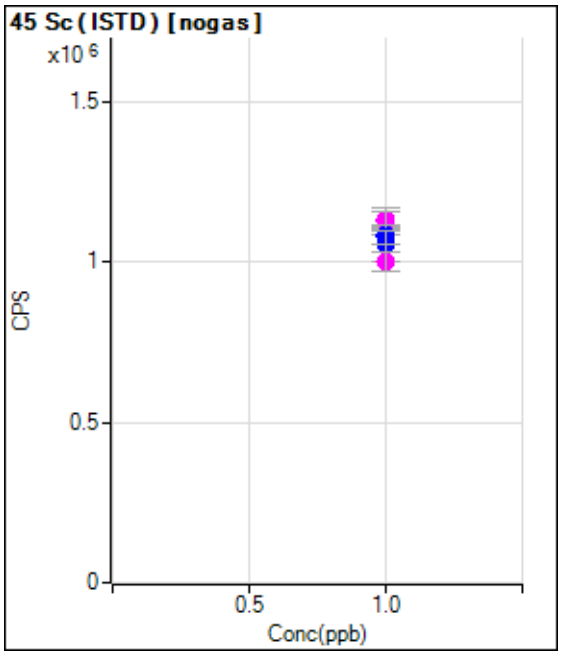
y = 0.0109 * x + 4.7472E-005
R = 0.9985
DL = 0.0008312

Weight: <None>
Min Conc: <None>

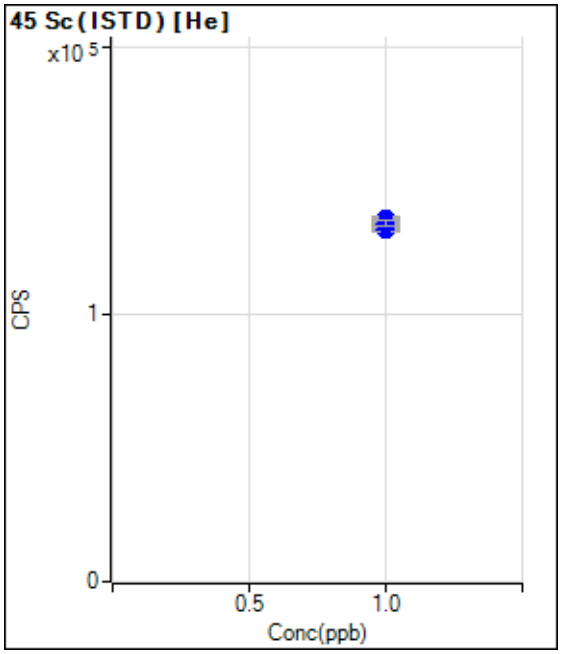


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		625644.70		P	5.7
2	☐	1.000		643849.53		P	2.6
3	☐	1.000		628264.19		P	3.6
4	☐	1.000		632859.48		P	3.5
5	☐	1.000		601531.99		P	4.9
6	☐	1.000		556640.84		P	5.9
7	☐	1.000					

Calibration for 149_ICV.d

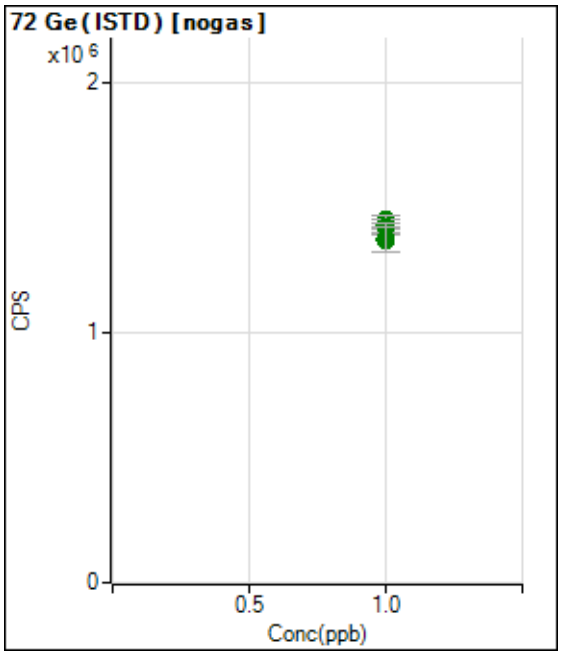


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1053566.81		P	10.0
2	☐	1.000		1130561.86		M	4.8
3	☐	1.000		1126536.76		M	7.6
4	☐	1.000		1084779.02		P	5.5
5	☐	1.000		1076496.31		P	4.0
6	☐	1.000		1000504.93		M	6.5
7	☐	1.000					

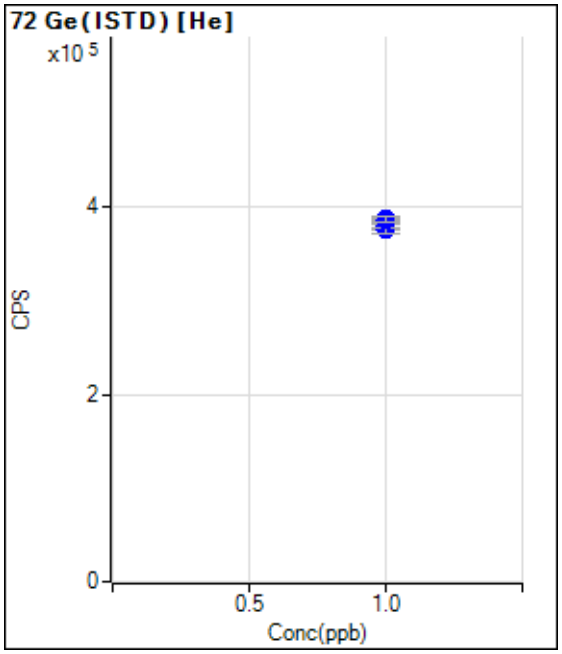


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		135658.03		P	1.7
2	☐	1.000		134145.91		P	2.2
3	☐	1.000		133188.15		P	2.0
4	☐	1.000		133252.89		P	1.2
5	☐	1.000		131781.67		P	1.2
6	☐	1.000		134093.01		P	1.6
7	☐	1.000					

Calibration for 149_ICV.d

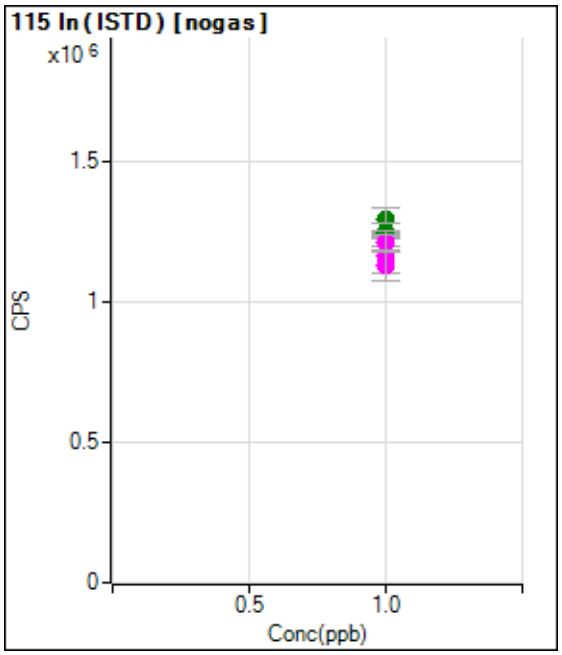


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1374265.32		A	6.8
2	☐	1.000		1434480.60		A	2.6
3	☐	1.000		1452982.01		A	2.2
4	☐	1.000		1425835.76		A	4.7
5	☐	1.000		1422284.36		A	2.7
6	☐	1.000		1375523.68		A	7.0
7	☐	1.000					

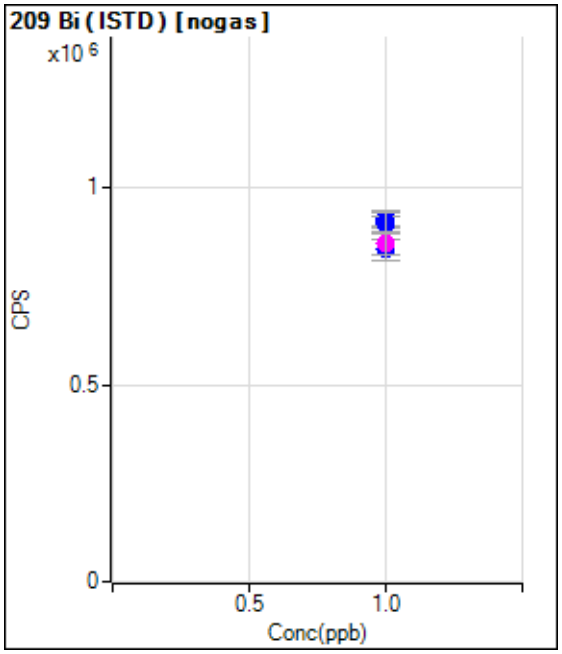


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		383404.47		P	0.5
2	☐	1.000		387102.76		P	0.4
3	☐	1.000		380491.28		P	1.1
4	☐	1.000		379235.50		P	2.3
5	☐	1.000		374873.99		P	1.4
6	☐	1.000		385968.76		P	1.5
7	☐	1.000					

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1163835.21		M	11.0
2	☐	1.000		1291434.68		A	6.7
3	☐	1.000		1237331.74		A	6.4
4	☐	1.000		1243698.39		A	1.9
5	☐	1.000		1209338.18		M	5.1
6	☐	1.000		1130791.43		M	9.5
7	☐	1.000					



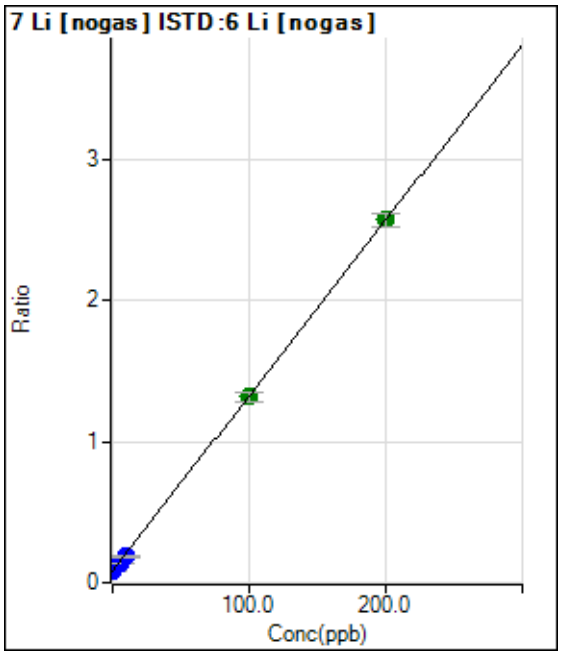
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		844864.93		P	6.3
2	☐	1.000		920507.41		P	5.1
3	☐	1.000		921939.80		P	3.8
4	☐	1.000		908519.18		P	4.0
5	☐	1.000		916010.66		P	6.4
6	☐	1.000		857677.78		M	6.7
7	☐	1.000					

Calibration for 225_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 22:05:29
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	215CALB.d	CAL BLK	2019-01-08 19:26:43
2	216CALS.d	2/10/200	2019-01-08 19:28:43
3	217CALS.d	5/25/500	2019-01-08 19:30:41
4	218CALS.d	10/50/1000	2019-01-08 19:32:39
5	219CALS.d	100/500/10K	2019-01-08 19:34:37
6	220CALS.d	200/1000/20K	2019-01-08 19:36:32
7			

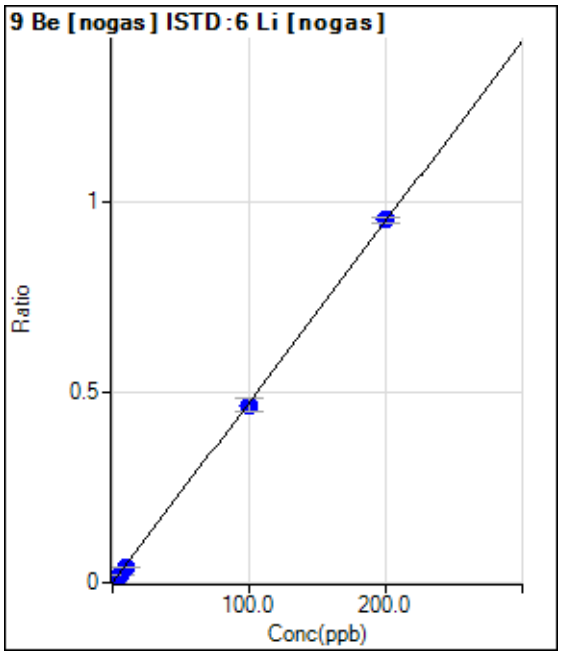
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90289.58	0.0839	P	2.6
2	☐	2.000	1.572	114952.42	0.1034	P	1.5
3	☐	5.000	4.070	152428.41	0.1345	P	5.4
4	☐	10.000	8.151	211647.34	0.1851	P	1.8
5	☐	100.000	99.635	1298658.86	1.3209	A	5.3
6	☐	200.000	200.302	2439773.82	2.5707	A	3.4
7	☐	1.000					

y = 0.0124 * x + 0.0839
R = 1.0000
DL = 0.5195
BEC = 6.76

Weight: <None>
Min Conc: <None>

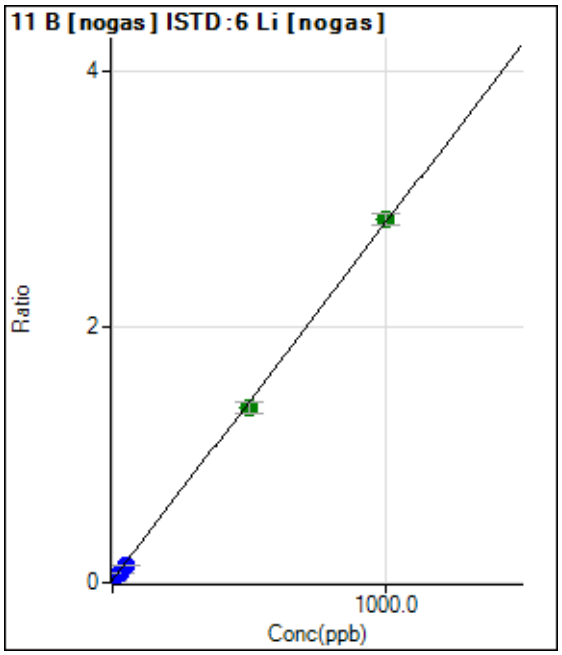


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.33	0.0001	P	45.0
2	☐	2.000	1.718	9182.31	0.0083	P	7.7
3	☐	5.000	4.184	22650.17	0.0200	P	4.8
4	☐	10.000	8.441	45938.07	0.0402	P	2.9
5	☐	100.000	98.462	459513.53	0.4676	P	6.7
6	☐	200.000	200.870	905391.50	0.9537	P	1.7
7	☐	1.000					

y = 0.0047 * x + 1.1554E-004
R = 0.9999
DL = 0.03283
BEC = 0.02434

Weight: <None>
Min Conc: <None>

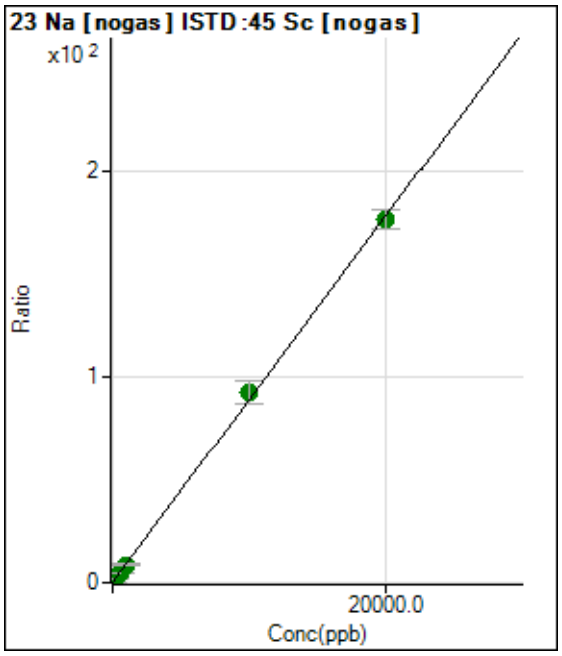
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20871.52	0.0194	P	5.9
2	☐	10.000	7.985	46322.39	0.0417	P	2.7
3	☐	25.000	19.815	84648.34	0.0747	P	6.3
4	☐	50.000	40.414	151022.14	0.1321	P	3.1
5	☐	500.000	484.015	1345555.87	1.3692	A	6.5
6	☐	1000.000	1008.622	2688007.88	2.8322	A	3.3
7	☐	5.000					

y = 0.0028 * x + 0.0194
R = 0.9998
DL = 1.224
BEC = 6.964

Weight: <None>
Min Conc: <None>

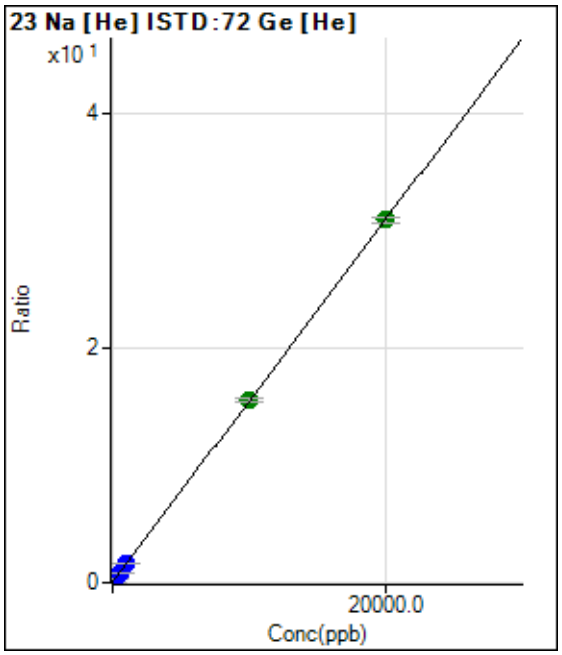


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	209647.11	0.1169	P	3.3
2	☐	200.000	205.724	3507621.69	1.9468	A	3.9
3	☐	500.000	492.842	8304111.38	4.5006	A	4.4
4	☐	1000.000	965.744	16187855.05	8.7068	A	4.9
5	☐	10000.00	10386.998	161826841.1	92.5050	A	11.2
6	☐	20000.00	19808.335	317662398.7	176.303	A	5.2
7	☐	100.000					

y = 0.0089 * x + 0.1169
R = 0.9997
DL = 1.321
BEC = 13.15

Weight: <None>
Min Conc: <None>

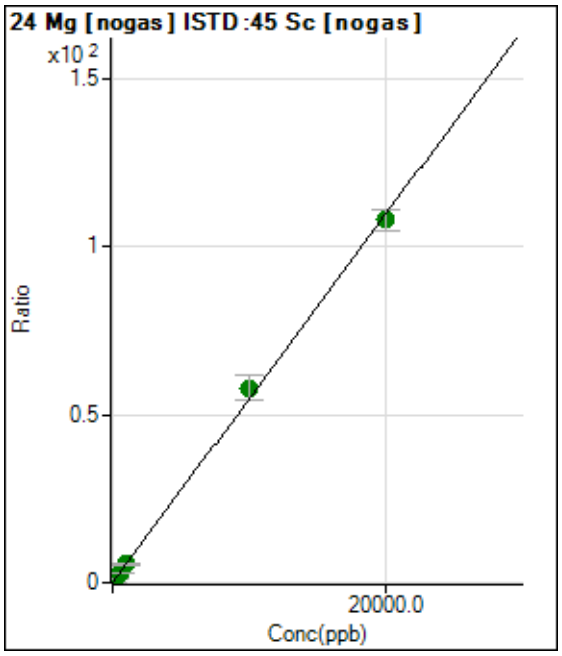
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20988.45	0.0340	P	1.5
2	☐	200.000	202.620	215741.99	0.3467	P	0.7
3	☐	500.000	497.626	504314.81	0.8020	P	0.3
4	☐	1000.000	994.818	985977.88	1.5693	P	0.5
5	☐	10000.00	10011.948	9671617.56	15.4852	A	2.1
6	☐	20000.00	19994.318	18891702.22	30.8907	A	1.8
7	☐	100.000					

y = 0.0015 * x + 0.0340
R = 1.0000
DL = 0.9697
BEC = 22.02

Weight: <None>
Min Conc: <None>

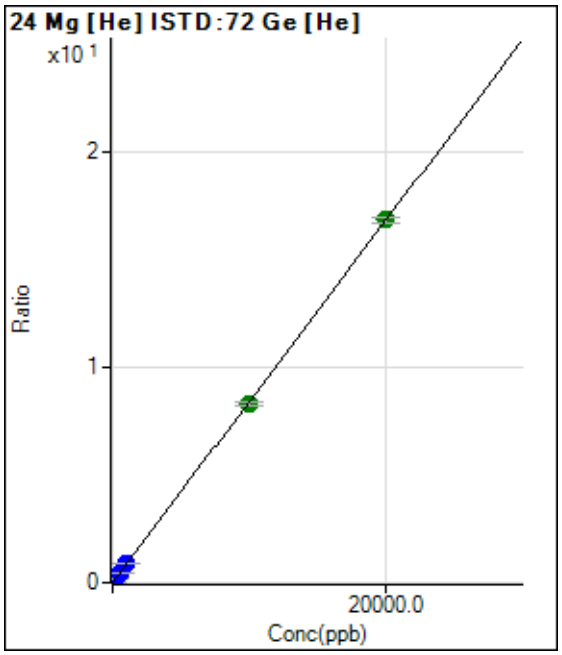


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8836.85	0.0050	P	18.7
2	☐	200.000	213.250	2112678.83	1.1721	A	2.0
3	☐	500.000	512.904	5183735.66	2.8122	A	6.9
4	☐	1000.000	1006.371	10242869.24	5.5130	A	6.6
5	☐	10000.00	10579.191	101185525.1	57.9070	A	13.2
6	☐	20000.00	19709.631	194295621.0	107.879	A	6.1
7	☐	100.000					

y = 0.0055 * x + 0.0050
R = 0.9994
DL = 0.508
BEC = 0.9053

Weight: <None>
Min Conc: <None>

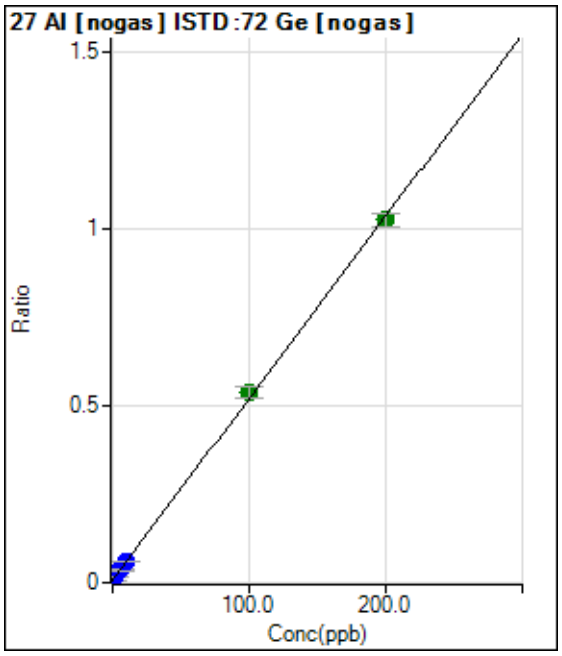
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540.01	0.0009	P	7.8
2	☐	200.000	209.296	109901.55	0.1766	P	2.0
3	☐	500.000	507.148	268312.87	0.4267	P	1.4
4	☐	1000.000	1011.642	534220.90	0.8502	P	0.1
5	☐	10000.00	9886.060	5184529.61	8.3012	A	1.9
6	☐	20000.00	20056.116	10298505.68	16.8400	A	1.9
7	☐	100.000					

y = 8.3960E-004 * x + 8.7416E-004
R = 1.0000
DL = 0.2447
BEC = 1.041

Weight: <None>
Min Conc: <None>

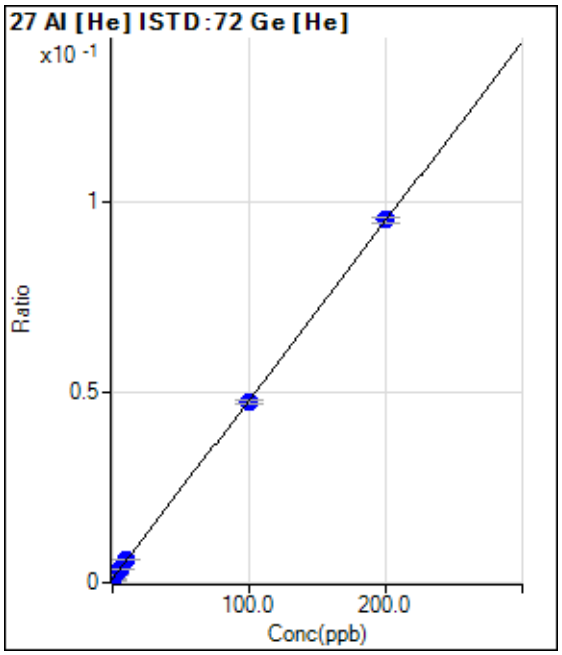


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17321.39	0.0073	P	1.9
2	☐	2.000	2.239	44869.77	0.0188	P	1.9
3	☐	5.000	5.463	85291.11	0.0354	P	2.6
4	☐	10.000	10.399	147678.54	0.0608	P	2.5
5	☐	100.000	103.664	1227839.33	0.5401	A	6.3
6	☐	200.000	198.134	2395303.72	1.0257	A	3.9
7	☐	1.000					

y = 0.0051 * x + 0.0073
R = 0.9998
DL = 0.08222
BEC = 1.421

Weight: <None>
Min Conc: <None>

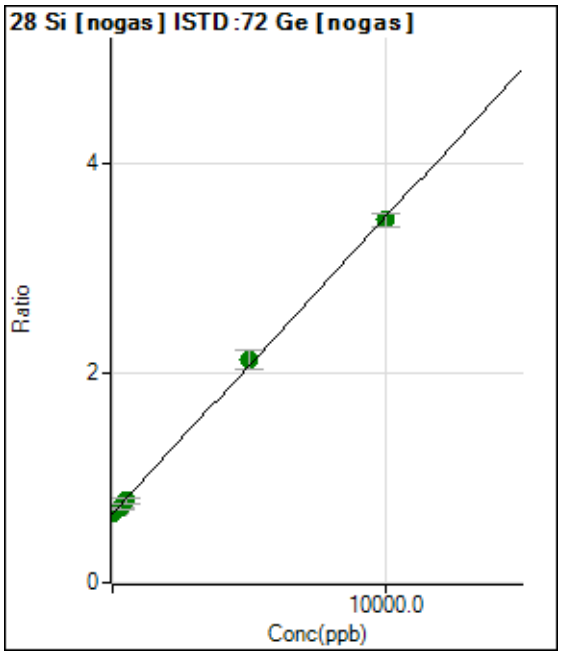
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.486	463.35	0.0008	P	6.2
2	☐	2.000	2.005	1193.39	0.0019	P	14.9
3	☐	5.000	5.464	2226.83	0.0035	P	5.3
4	☐	10.000	10.709	3770.43	0.0060	P	1.3
5	☐	100.000	98.710	29529.90	0.0473	P	2.4
6	☐	200.000	200.598	58145.60	0.0951	P	1.7
7	☐	1.000					

y = 4.6906E-004 * x + 9.7811E-004
R = 1.0000
DL = 0.2973
BEC = 2.085

Weight: <None>
Min Conc: <None>

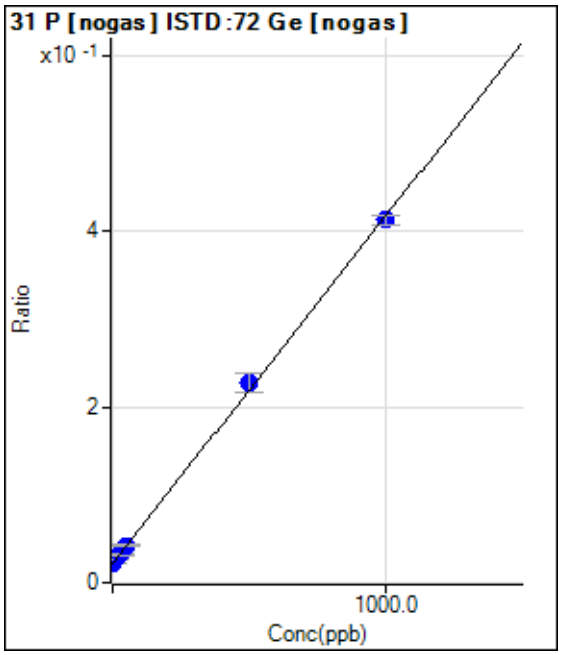


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1564902.48	0.6607	A	5.0
2	☐	100.000	37.584	1601289.14	0.6714	A	2.0
3	☐	250.000	187.665	1720703.73	0.7140	A	3.2
4	☐	500.000	439.284	1907310.86	0.7853	A	5.9
5	☐	5000.000	5206.590	4850570.86	2.1372	A	8.6
6	☐	10000.00	9901.923	8097618.42	3.4686	A	3.6
7	☐	5.000					

y = 2.8357E-004 * x + 0.6607
R = 0.9996
DL = 351.8
BEC = 2330

Weight: <None>
Min Conc: <None>

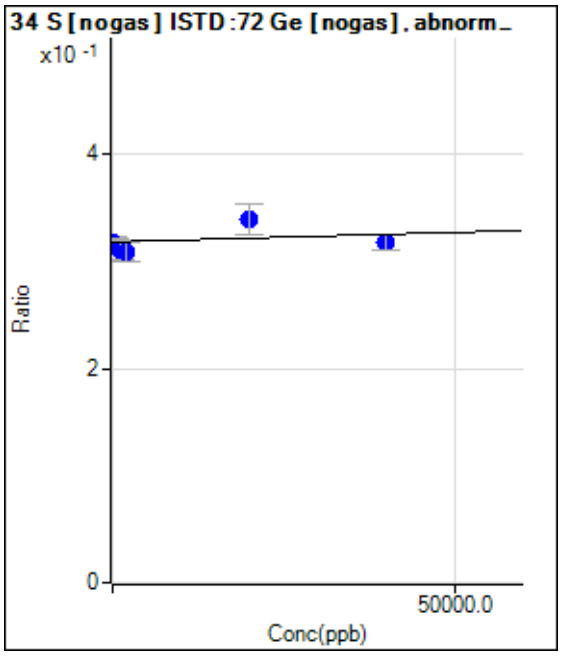
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	51433.44	0.0217	P	4.3
2	☐	10.000	9.861	61081.81	0.0256	P	1.5
3	☐	25.000	25.874	76996.09	0.0319	P	1.5
4	☐	50.000	51.038	101751.64	0.0419	P	4.5
5	☐	500.000	520.294	515842.61	0.2273	P	9.4
6	☐	1000.000	989.780	964100.77	0.4129	P	2.6
7	☐	5.000					

y = 3.9521E-004 * x + 0.0217
R = 0.9997
DL = 7.055
BEC = 54.94

Weight: <None>
Min Conc: <None>

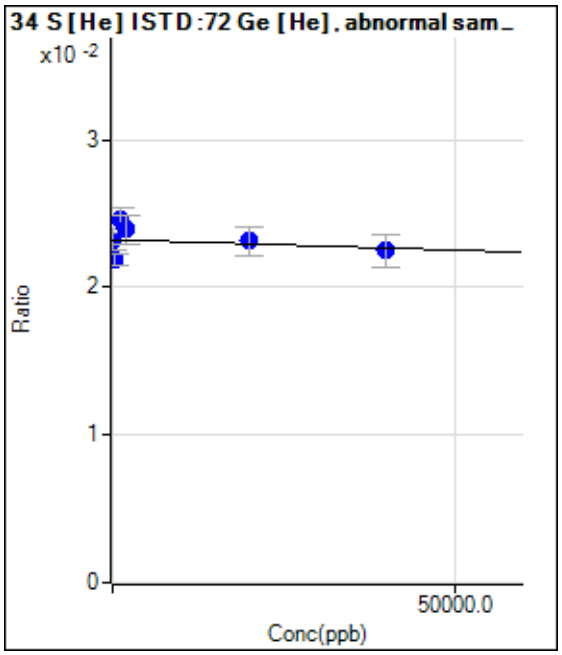


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	753557.91	0.3180	P	2.8
2	☐	400.000	-9512.732	754171.91	0.3163	P	2.6
3	☐	1000.000	-40602.675	748589.31	0.3107	P	5.5
4	☐	2000.000	-55604.469	748175.28	0.3081	P	5.7
5	☐	20000.00	115057.99	768304.80	0.3385	P	8.7
6	☐	40000.00	-3509.581	740727.16	0.3174	P	4.9
7	☐	100.000					

y = 1.7852E-007 * x + 0.3180
R = 0.3956
DL = 1.518E+05
BEC = 1.781E+06

Weight: <None>
Min Conc: <None>

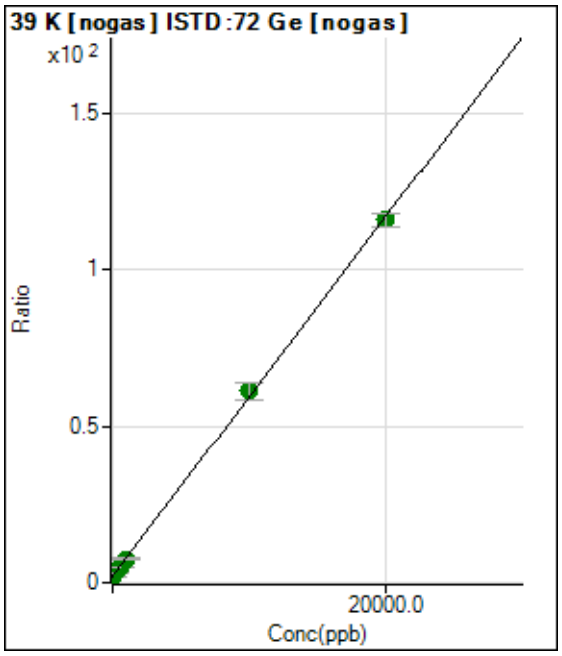
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14340.98	0.0232	P	5.8
2	☐	400.000	96592.115	13607.00	0.0219	P	3.4
3	☐	1000.000	-93956.827	15442.81	0.0246	P	7.2
4	☐	2000.000	-46756.905	15008.25	0.0239	P	8.6
5	☐	20000.00	7372.917	14440.77	0.0231	P	8.8
6	☐	40000.00	50163.386	13774.39	0.0225	P	9.8
7	☐	100.000					

y = -1.4184E-008 * x + 0.0232
R = -0.3371
DL = -2.827E+05
BEC = -1.638E+06

Weight: <None>
Min Conc: <None>

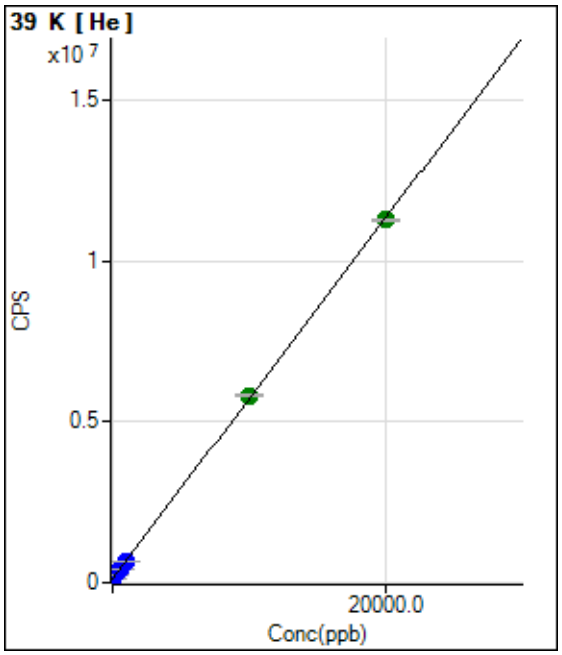


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4817556.75	2.0340	A	4.7
2	☐	200.000	196.970	7546315.27	3.1641	A	1.2
3	☐	500.000	493.612	11729722.40	4.8660	A	1.8
4	☐	1000.000	963.526	18376307.18	7.5621	A	3.5
5	☐	10000.00	10314.438	138949932.2	61.2112	A	9.0
6	☐	20000.00	19844.795	270535622.7	115.889	A	3.9
7	☐	100.000					

y = 0.0057 * x + 2.0340
R = 0.9998
DL = 50.16
BEC = 354.5

Weight: <None>
Min Conc: <None>

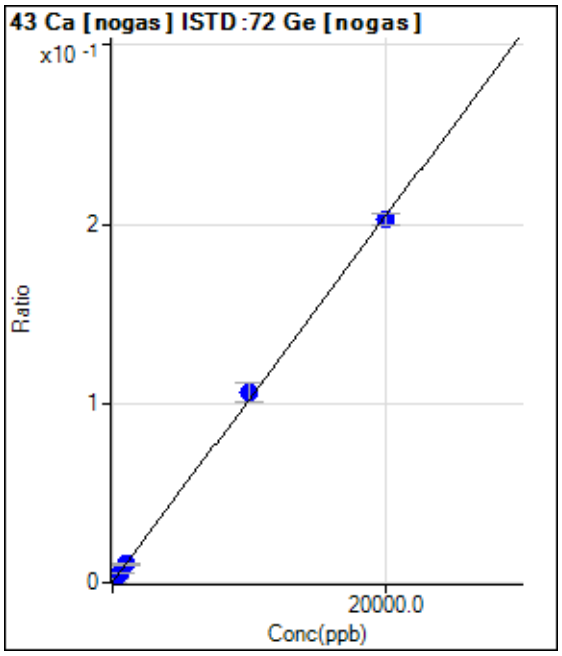
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113987.39		P	1.4
2	☐	200.000	205.540	229343.28		P	0.8
3	☐	500.000	508.450	399345.72		P	0.5
4	☐	1000.000	1010.340	681022.93		P	0.4
5	☐	10000.00	10182.085	5828500.96		A	1.4
6	☐	20000.00	19908.174	11287094.83		A	0.4
7	☐	100.000					

y = 561.2322 * x + 113987.3933
R = 0.9999
DL = 8.557
BEC = 203.1

Weight: <None>
Min Conc: <None>

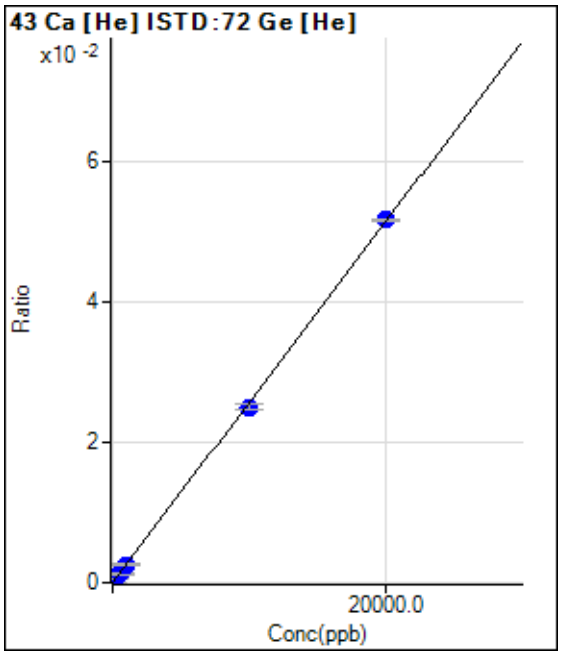


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	376.68	0.0002	P	27.9
2	☐	200.000	202.394	5314.17	0.0022	P	2.9
3	☐	500.000	498.323	12651.11	0.0052	P	6.6
4	☐	1000.000	993.063	25043.65	0.0103	P	2.3
5	☐	10000.00	10388.783	241174.10	0.1063	P	9.6
6	☐	20000.00	19805.973	472679.91	0.2024	P	3.0
7	☐	100.000					

y = 1.0213E-005 * x + 1.5995E-004
R = 0.9997
DL = 13.12
BEC = 15.66

Weight: <None>
Min Conc: <None>

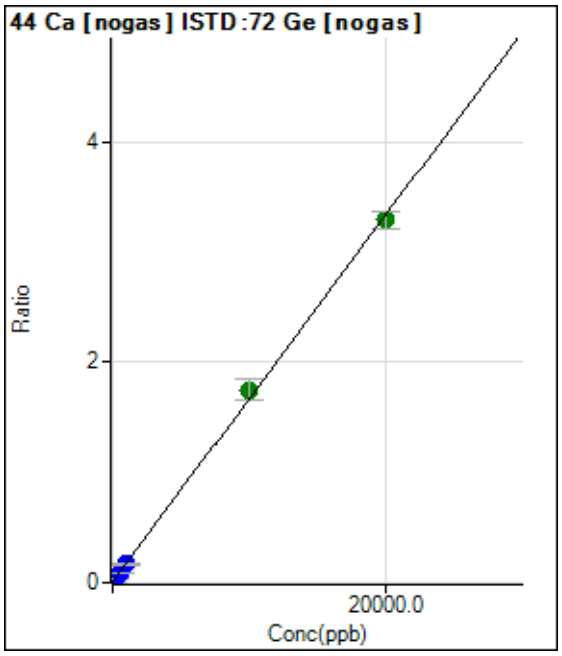
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	114.
2	☐	200.000	245.754	406.68	0.0007	P	2.9
3	☐	500.000	480.096	790.03	0.0013	P	11.2
4	☐	1000.000	1000.051	1630.09	0.0026	P	6.8
5	☐	10000.00	9754.420	15686.70	0.0251	P	2.6
6	☐	20000.00	20122.828	31673.72	0.0518	P	0.3
7	☐	100.000					

y = 2.5725E-006 * x + 2.1453E-005
R = 0.9999
DL = 28.57
BEC = 8.339

Weight: <None>
Min Conc: <None>

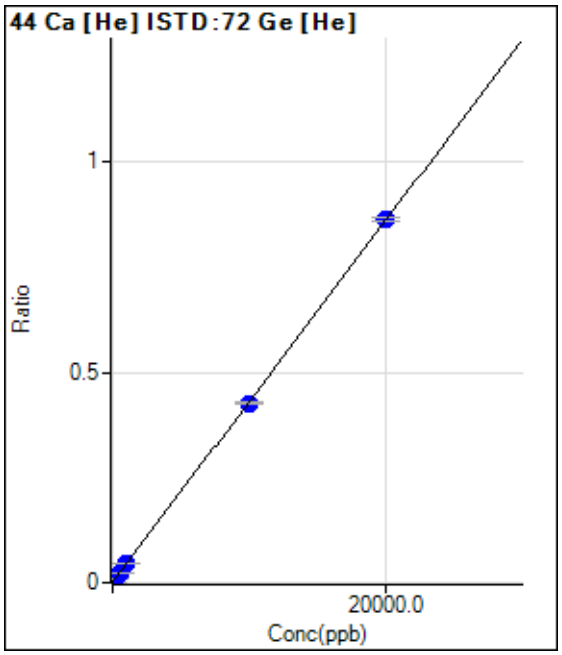


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16127.19	0.0068	P	5.3
2	☐	200.000	193.223	92785.69	0.0389	P	2.5
3	☐	500.000	490.667	212936.93	0.0883	P	1.5
4	☐	1000.000	957.958	403411.63	0.1660	P	2.6
5	☐	10000.00	10492.239	3968217.86	1.7501	A	10.7
6	☐	20000.00	19756.284	7677339.68	3.2892	A	4.8
7	☐	100.000					

y = 1.6615E-004 * x + 0.0068
R = 0.9996
DL = 6.475
BEC = 40.99

Weight: <None>
Min Conc: <None>

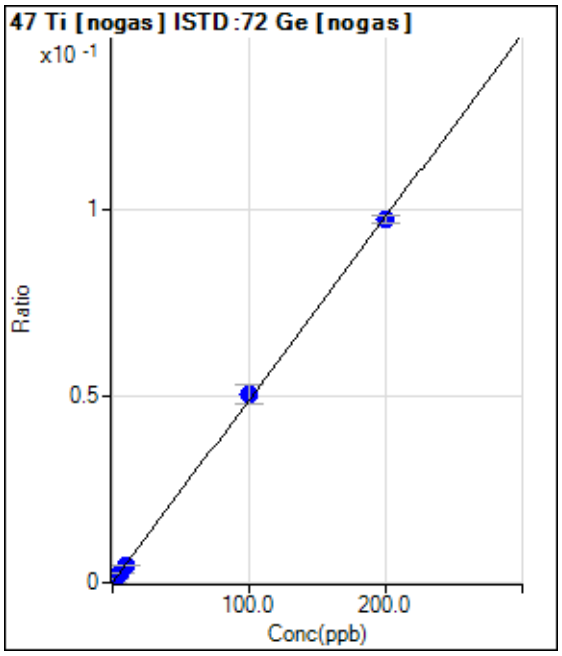
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.02	0.0009	P	7.2
2	☐	200.000	194.481	5764.30	0.0093	P	4.0
3	☐	500.000	492.665	13885.35	0.0221	P	1.4
4	☐	1000.000	998.530	27533.84	0.0438	P	1.0
5	☐	10000.00	9917.843	266775.97	0.4272	P	1.4
6	☐	20000.00	20041.391	527341.82	0.8622	P	1.0
7	☐	100.000					

y = 4.2978E-005 * x + 9.0718E-004
R = 1.0000
DL = 4.578
BEC = 21.11

Weight: <None>
Min Conc: <None>

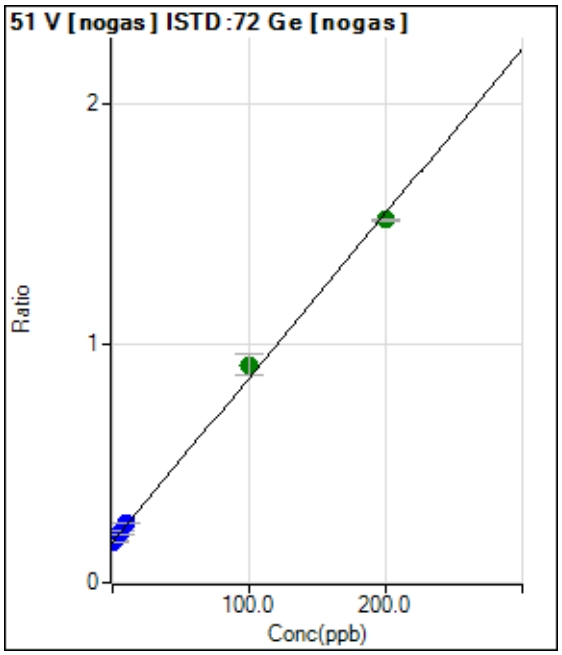


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0000	P	56.0
2	☐	2.000	1.909	2336.85	0.0010	P	6.2
3	☐	5.000	4.995	6011.05	0.0025	P	3.3
4	☐	10.000	9.617	11580.42	0.0048	P	1.9
5	☐	100.000	103.328	115093.98	0.0507	P	10.1
6	☐	200.000	198.356	227388.34	0.0974	P	2.0
7	☐	1.000					

y = 4.9061E-004 * x + 4.3602E-005
R = 0.9998
DL = 0.1493
BEC = 0.08887

Weight: <None>
Min Conc: <None>

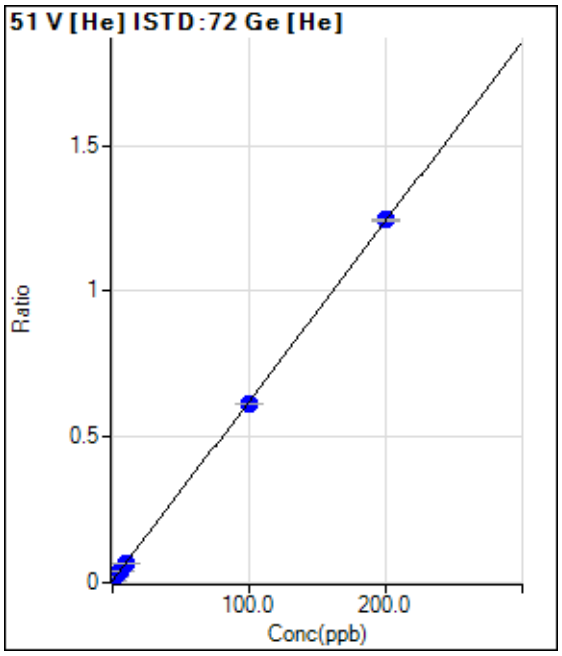
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403019.21	0.1698	P	4.5
2	☐	2.000	0.681	416239.73	0.1745	P	1.9
3	☐	5.000	5.818	506057.06	0.2098	P	4.7
4	☐	10.000	11.718	608854.20	0.2504	P	1.3
5	☐	100.000	107.920	2068404.73	0.9119	A	9.7
6	☐	200.000	195.947	3544244.48	1.5171	A	0.8
7	☐	1.000					

y = 0.0069 * x + 0.1698
R = 0.9988
DL = 3.345
BEC = 24.7

Weight: <None>
Min Conc: <None>

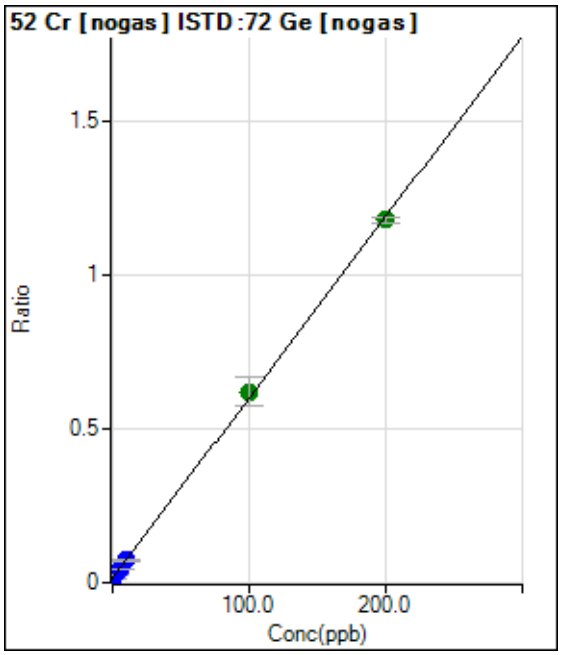


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.289	4788.63	0.0078	P	0.9
2	☐	2.000	2.240	12310.74	0.0198	P	2.7
3	☐	5.000	5.205	23943.98	0.0381	P	0.8
4	☐	10.000	10.113	42940.43	0.0683	P	1.0
5	☐	100.000	98.332	382504.80	0.6124	P	0.6
6	☐	200.000	200.821	761139.19	1.2445	P	0.7
7	☐	1.000					

y = 0.0062 * x + 0.0060
R = 0.9999
DL = 0.03331
BEC = 0.9683

Weight: <None>
Min Conc: <None>

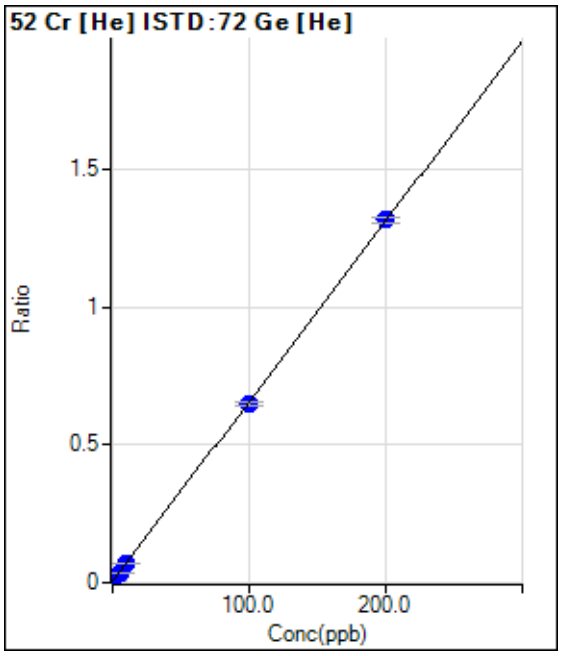
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34061.46	0.0144	P	2.3
2	☐	2.000	1.943	61478.00	0.0258	P	1.7
3	☐	5.000	5.045	106047.55	0.0440	P	1.8
4	☐	10.000	9.855	175516.38	0.0722	P	3.2
5	☐	100.000	103.279	1405385.39	0.6207	A	15.0
6	☐	200.000	198.367	2753677.25	1.1789	A	1.7
7	☐	1.000					

y = 0.0059 * x + 0.0144
R = 0.9998
DL = 0.1658
BEC = 2.448

Weight: <None>
Min Conc: <None>

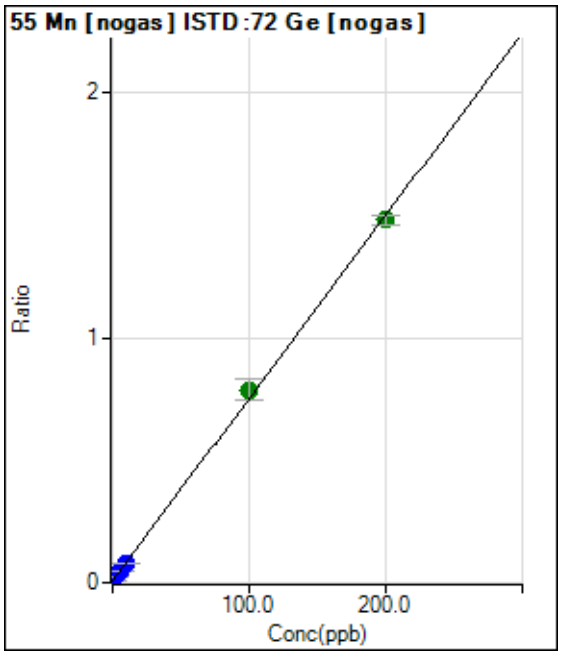


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2430.19	0.0039	P	3.0
2	☐	2.000	2.153	11200.18	0.0180	P	2.1
3	☐	5.000	5.056	23238.08	0.0370	P	0.9
4	☐	10.000	9.808	42719.20	0.0680	P	1.2
5	☐	100.000	98.502	404215.71	0.6472	P	1.4
6	☐	200.000	200.755	804224.96	1.3150	P	1.3
7	☐	1.000					

y = 0.0065 * x + 0.0039
R = 1.0000
DL = 0.05424
BEC = 0.6027

Weight: <None>
Min Conc: <None>

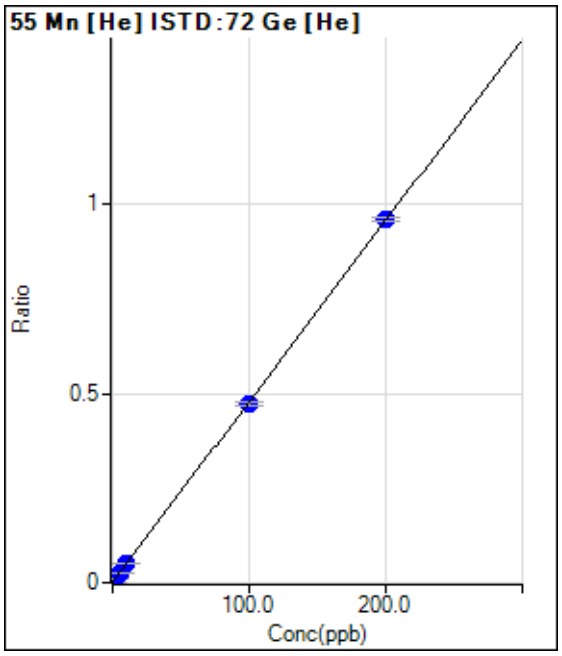
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16480.86	0.0070	P	3.2
2	☐	2.000	2.051	53066.02	0.0223	P	2.7
3	☐	5.000	5.116	108750.47	0.0451	P	2.3
4	☐	10.000	9.903	196465.42	0.0808	P	2.5
5	☐	100.000	104.601	1785128.72	0.7871	A	10.8
6	☐	200.000	197.701	3459145.37	1.4815	A	2.8
7	☐	1.000					

y = 0.0075 * x + 0.0070
R = 0.9996
DL = 0.08939
BEC = 0.9326

Weight: <None>
Min Conc: <None>

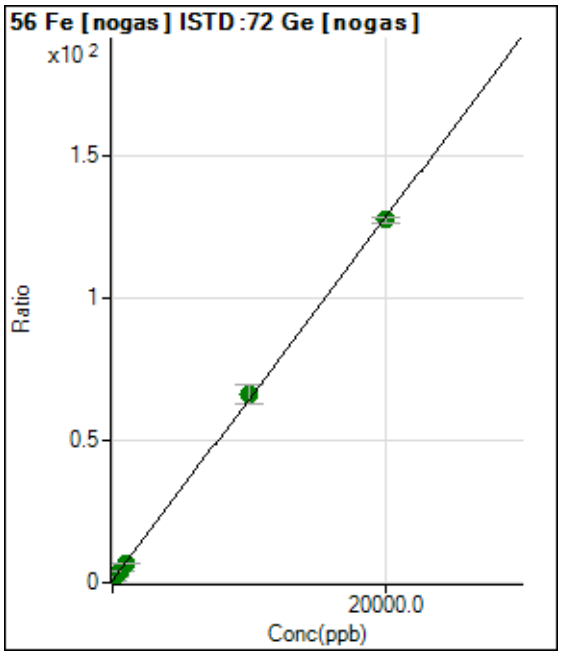


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	663.36	0.0011	P	22.6
2	☐	2.000	2.102	6921.41	0.0111	P	7.8
3	☐	5.000	5.043	15830.32	0.0252	P	3.0
4	☐	10.000	10.251	31453.69	0.0501	P	0.8
5	☐	100.000	99.080	296372.32	0.4745	P	1.9
6	☐	200.000	200.446	586479.85	0.9589	P	1.0
7	☐	1.000					

y = 0.0048 * x + 0.0011
R = 1.0000
DL = 0.1524
BEC = 0.2247

Weight: <None>
Min Conc: <None>

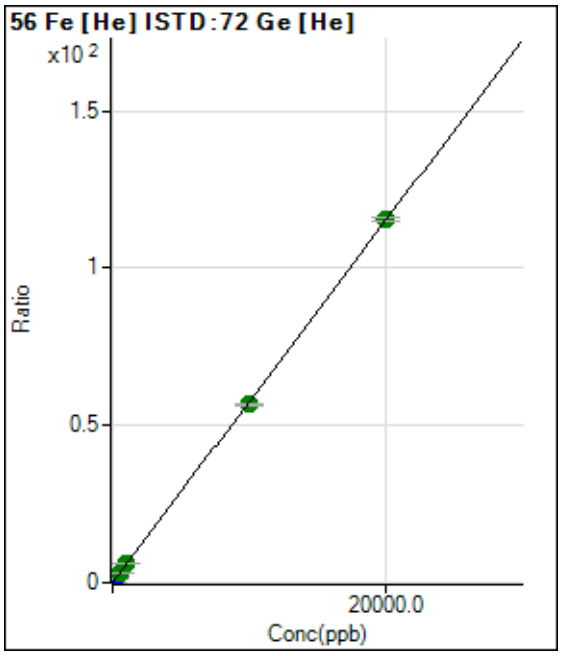
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1816794.51	0.7670	A	4.6
2	☐	200.000	194.655	4787148.03	2.0071	A	0.8
3	☐	500.000	495.767	9461886.15	3.9253	A	2.2
4	☐	1000.000	961.609	16752026.94	6.8929	A	3.0
5	☐	10000.00	10256.937	149943803.3	66.1087	A	10.4
6	☐	20000.00	19873.610	297522223.3	127.371	A	1.4
7	☐	100.000					

y = 0.0064 * x + 0.7670
R = 0.9999
DL = 16.54
BEC = 120.4

Weight: <None>
Min Conc: <None>

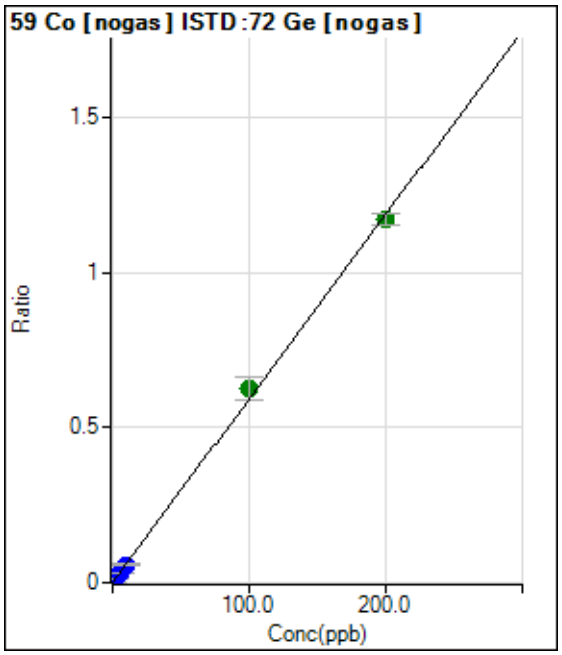


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8885.59	0.0144	P	4.3
2	☐	200.000	202.299	732265.04	1.1767	P	2.8
3	☐	500.000	510.683	1854227.63	2.9486	A	1.4
4	☐	1000.000	1022.532	3700469.94	5.8896	A	0.8
5	☐	10000.00	9874.396	35443834.47	56.7502	A	0.9
6	☐	20000.00	20061.385	70504553.95	115.282	A	1.1
7	☐	100.000					

y = 0.0057 * x + 0.0144
R = 1.0000
DL = 0.3195
BEC = 2.504

Weight: <None>
Min Conc: <None>

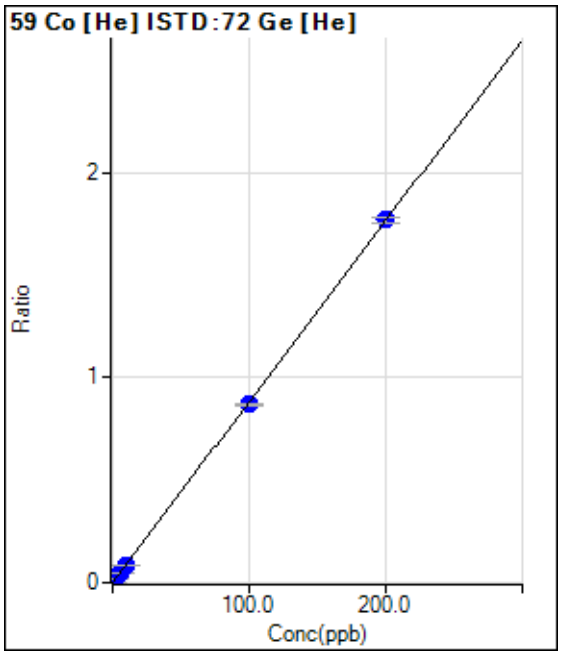
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	420.01	0.0002	P	30.4
2	☐	2.000	2.056	29483.80	0.0124	P	3.1
3	☐	5.000	5.123	73663.24	0.0305	P	1.2
4	☐	10.000	9.904	143140.37	0.0589	P	2.8
5	☐	100.000	105.436	1417108.47	0.6253	A	11.8
6	☐	200.000	197.283	2731303.71	1.1698	A	3.0
7	☐	1.000					

y = 0.0059 * x + 1.7809E-004
R = 0.9995
DL = 0.02738
BEC = 0.03004

Weight: <None>
Min Conc: <None>

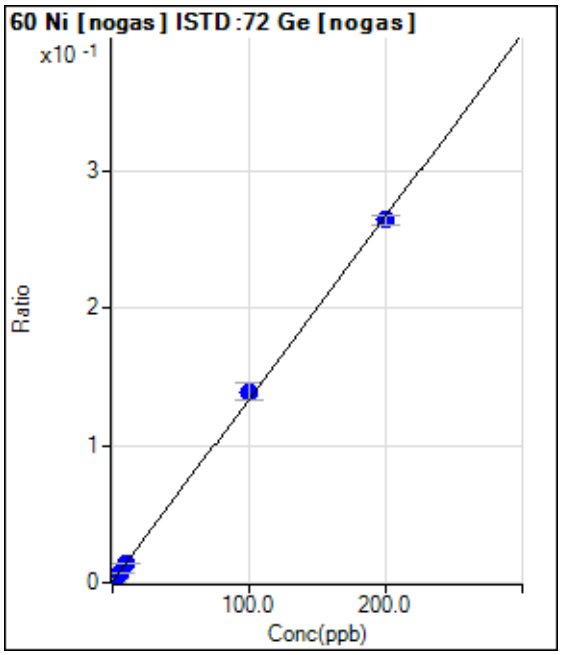


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	73.5
2	☐	2.000	2.034	11210.26	0.0180	P	3.3
3	☐	5.000	4.938	27423.86	0.0436	P	2.1
4	☐	10.000	9.918	54978.56	0.0875	P	2.4
5	☐	100.000	98.721	543469.93	0.8702	P	1.0
6	☐	200.000	200.645	1081530.90	1.7685	P	1.9
7	☐	1.000					

y = 0.0088 * x + 9.1533E-005
R = 1.0000
DL = 0.0229
BEC = 0.01039

Weight: <None>
Min Conc: <None>

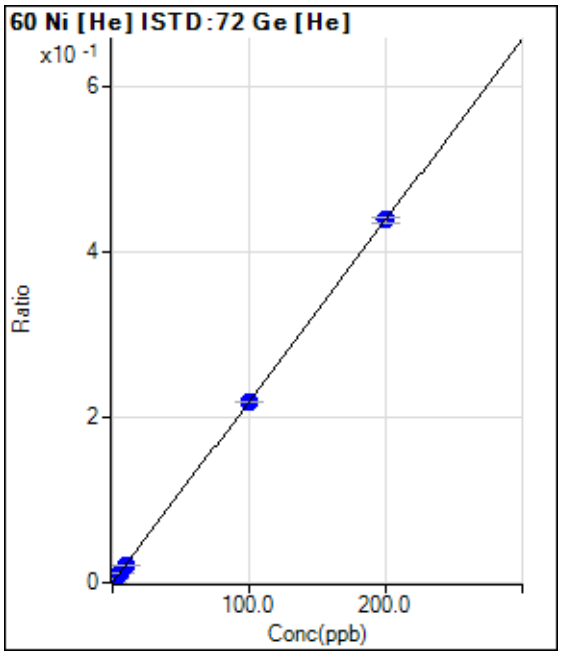
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.486	403.34	0.0002	P	9.7
2	☐	2.000	1.462	6574.61	0.0028	P	3.9
3	☐	5.000	4.591	16657.72	0.0069	P	4.6
4	☐	10.000	9.492	32632.37	0.0134	P	1.6
5	☐	100.000	103.800	314650.89	0.1387	P	9.3
6	☐	200.000	198.141	616454.65	0.2640	P	2.6
7	☐	1.000					

y = 0.0013 * x + 8.1548E-004
R = 0.9997
DL = 0.0372
BEC = 0.614

Weight: <None>
Min Conc: <None>

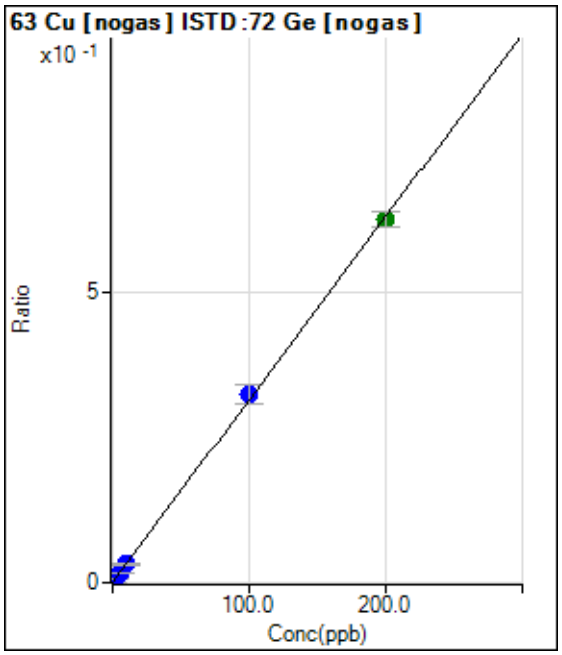


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.026	130.00	0.0002	P	27.0
2	☐	2.000	2.145	3026.97	0.0049	P	5.4
3	☐	5.000	5.179	7244.84	0.0115	P	6.2
4	☐	10.000	9.781	13585.16	0.0216	P	2.7
5	☐	100.000	99.727	136823.79	0.2191	P	0.9
6	☐	200.000	200.142	268786.77	0.4395	P	1.6
7	☐	1.000					

y = 0.0022 * x + 1.5228E-004
R = 1.0000
DL = 0.07769
BEC = 0.06937

Weight: <None>
Min Conc: <None>

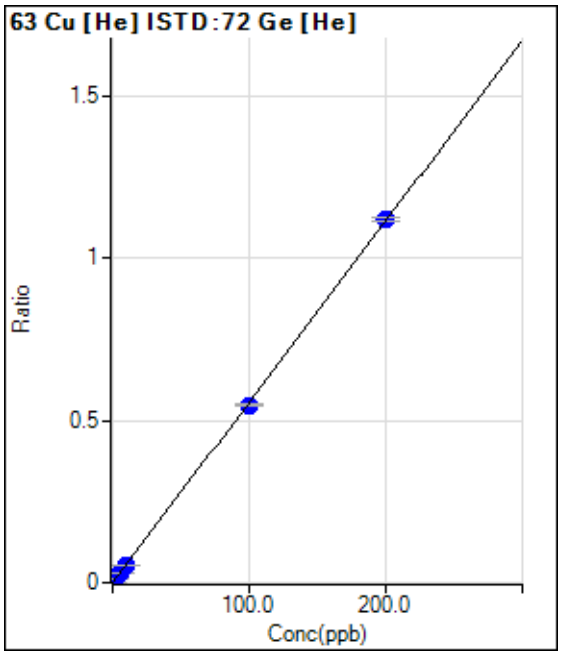
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	963.37	0.0004	P	4.6
2	☐	2.000	1.994	15877.04	0.0067	P	6.3
3	☐	5.000	4.997	38787.84	0.0161	P	1.4
4	☐	10.000	9.969	77034.16	0.0317	P	3.0
5	☐	100.000	103.140	735086.03	0.3241	P	10.3
6	☐	200.000	198.432	1454920.24	0.6232	A	4.1
7	☐	1.000					

y = 0.0031 * x + 4.0637E-004
R = 0.9998
DL = 0.0179
BEC = 0.1295

Weight: <None>
Min Conc: <None>

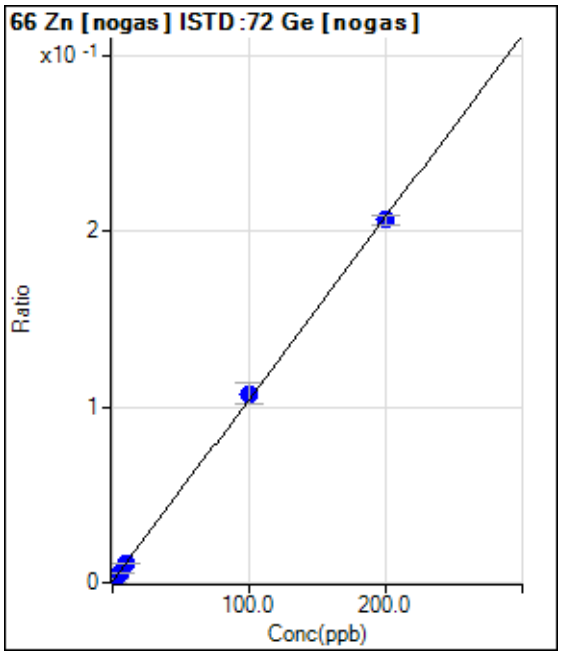


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.181	350.01	0.0006	P	17.1
2	☐	2.000	2.232	7461.60	0.0120	P	2.3
3	☐	5.000	5.290	18245.89	0.0290	P	4.8
4	☐	10.000	10.079	34986.77	0.0557	P	1.4
5	☐	100.000	98.463	342141.85	0.5478	P	1.4
6	☐	200.000	200.755	683421.14	1.1174	P	1.2
7	☐	1.000					

y = 0.0056 * x - 4.3916E-004
R = 1.0000
DL = 0.05215
BEC = -0.07887

Weight: <None>
Min Conc: <None>

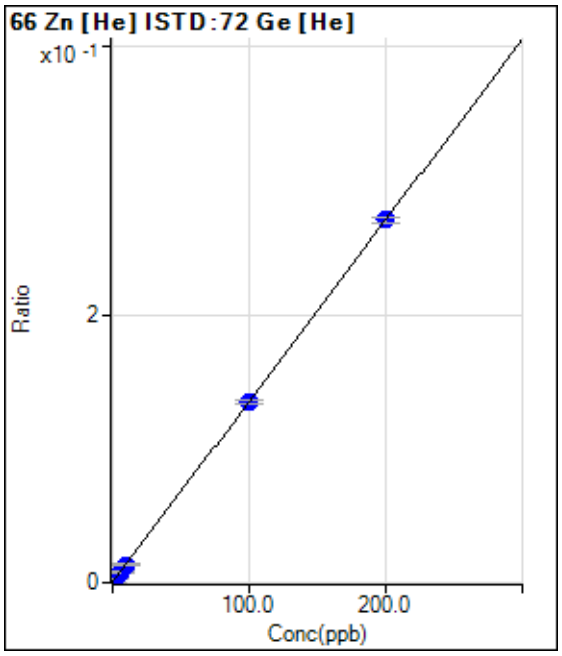
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.532	550.02	0.0002	P	1.4
2	☐	2.000	1.521	5617.61	0.0024	P	7.7
3	☐	5.000	4.762	13782.03	0.0057	P	2.8
4	☐	10.000	9.685	26272.29	0.0108	P	3.3
5	☐	100.000	103.074	243773.11	0.1075	P	11.0
6	☐	200.000	198.490	481725.83	0.2063	P	2.6
7	☐	1.000					

y = 0.0010 * x + 7.8300E-004
R = 0.9998
DL = 0.009629
BEC = 0.7563

Weight: <None>
Min Conc: <None>

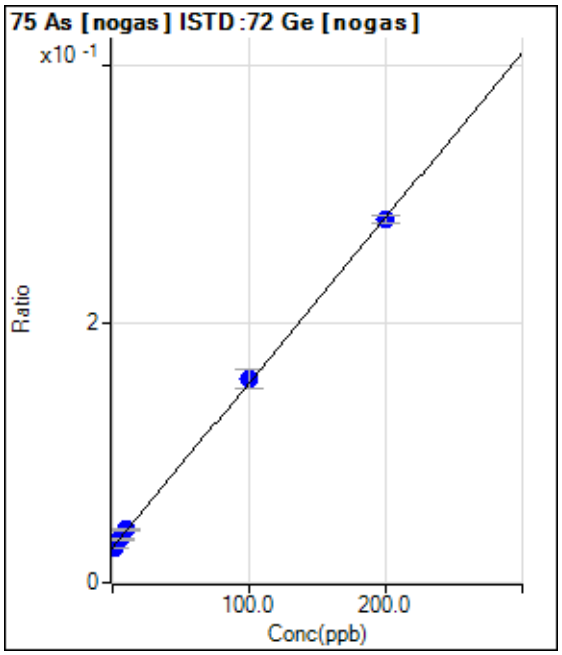


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.003	163.34	0.0003	P	36.6
2	☐	2.000	1.984	1833.45	0.0029	P	6.0
3	☐	5.000	5.542	4874.05	0.0078	P	3.8
4	☐	10.000	9.729	8422.05	0.0134	P	4.7
5	☐	100.000	99.499	84065.34	0.1346	P	1.4
6	☐	200.000	200.251	165535.98	0.2706	P	1.8
7	☐	1.000					

y = 0.0014 * x + 2.6951E-004
R = 1.0000
DL = 0.2151
BEC = 0.1996

Weight: <None>
Min Conc: <None>

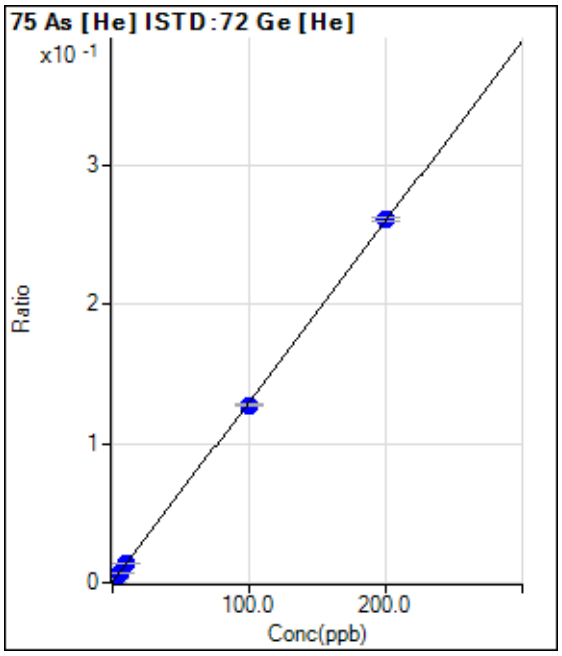
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.263	63337.22	0.0267	P	5.0
2	☐	2.000	-0.108	64173.11	0.0269	P	0.5
3	☐	5.000	5.141	81026.50	0.0336	P	2.5
4	☐	10.000	10.903	99553.92	0.0410	P	1.8
5	☐	100.000	102.710	358758.52	0.1581	P	9.3
6	☐	200.000	198.618	654952.18	0.2805	P	2.3
7	☐	1.000					

y = 0.0013 * x + 0.0270
R = 0.9998
DL = 3.146
BEC = 21.19

Weight: <None>
Min Conc: <None>

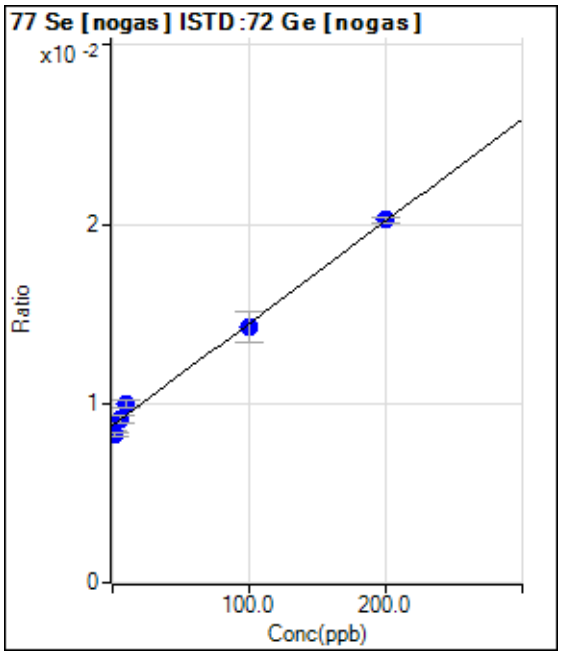


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	203.34	0.0003	P	13.8
2	☐	2.000	2.019	1831.21	0.0029	P	8.6
3	☐	5.000	4.882	4180.49	0.0066	P	3.3
4	☐	10.000	9.936	8286.35	0.0132	P	1.1
5	☐	100.000	98.073	79480.42	0.1273	P	0.9
6	☐	200.000	200.969	159273.44	0.2604	P	1.1
7	☐	1.000					

y = 0.0013 * x + 3.2909E-004
R = 0.9999
DL = 0.1051
BEC = 0.2543

Weight: <None>
Min Conc: <None>

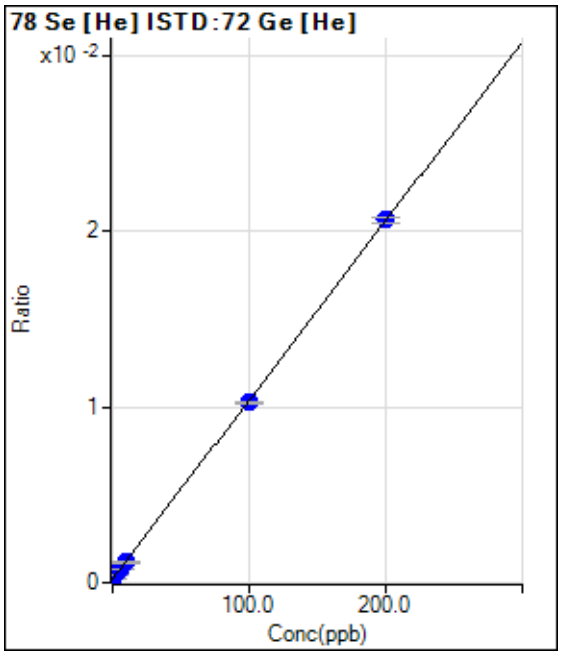
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20848.96	0.0088	P	8.0
2	☐	2.000	-9.073	19724.29	0.0083	P	2.6
3	☐	5.000	6.641	22093.70	0.0092	P	4.8
4	☐	10.000	20.908	24256.57	0.0100	P	3.5
5	☐	100.000	96.930	32439.16	0.0143	P	12.1
6	☐	200.000	201.059	47301.47	0.0202	P	1.7
7	☐	1.000					

y = 5.7013E-005 * x + 0.0088
R = 0.9962
DL = 36.91
BEC = 154

Weight: <None>
Min Conc: <None>

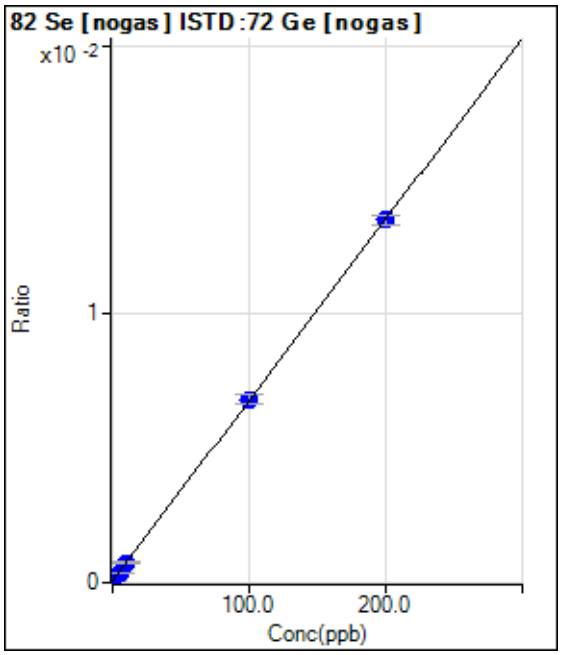


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.135	135.33	0.0002	P	13.8
2	☐	2.000	2.465	284.00	0.0005	P	4.3
3	☐	5.000	5.665	492.01	0.0008	P	1.3
4	☐	10.000	9.392	730.02	0.0012	P	5.4
5	☐	100.000	98.666	6405.14	0.0103	P	1.2
6	☐	200.000	200.676	12625.71	0.0206	P	1.3
7	☐	1.000					

y = 1.0185E-004 * x + 2.0536E-004
R = 1.0000
DL = 0.8877
BEC = 2.016

Weight: <None>
Min Conc: <None>

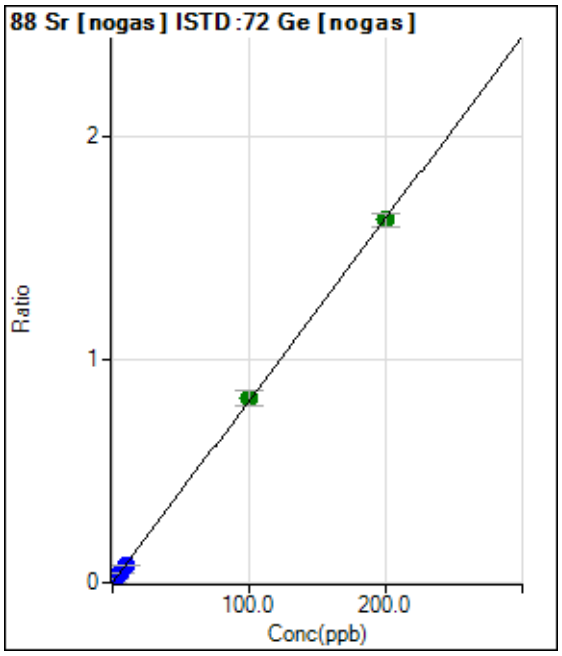
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	156.67	0.0001	P	24.2
2	☐	2.000	1.990	476.68	0.0002	P	5.1
3	☐	5.000	4.692	920.04	0.0004	P	6.0
4	☐	10.000	10.027	1803.45	0.0007	P	10.5
5	☐	100.000	100.507	15520.14	0.0068	P	5.1
6	☐	200.000	199.753	31534.34	0.0135	P	2.4
7	☐	1.000					

y = 6.7275E-005 * x + 6.5884E-005
R = 1.0000
DL = 0.7103
BEC = 0.9793

Weight: <None>
Min Conc: <None>

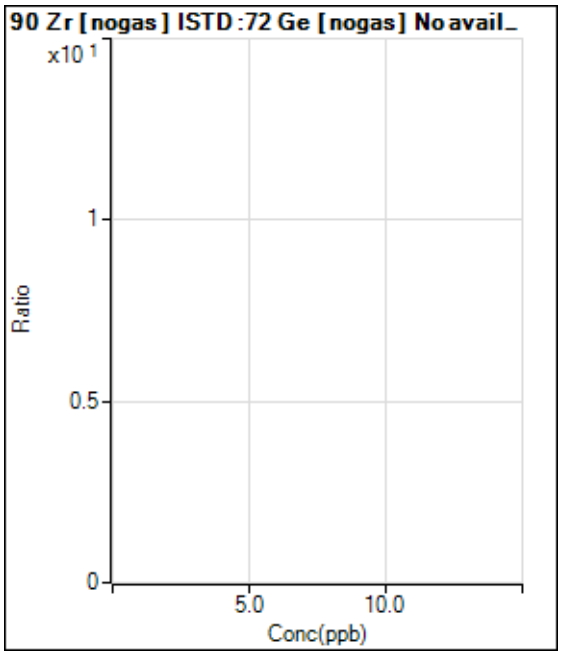


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	723.36	0.0003	P	9.6
2	☐	2.000	1.990	39393.45	0.0165	P	0.5
3	☐	5.000	4.984	98602.59	0.0409	P	3.4
4	☐	10.000	9.676	192259.85	0.0791	P	4.0
5	☐	100.000	101.430	1876905.80	0.8266	A	9.0
6	☐	200.000	199.302	3791538.38	1.6238	A	3.7
7	☐	1.000					

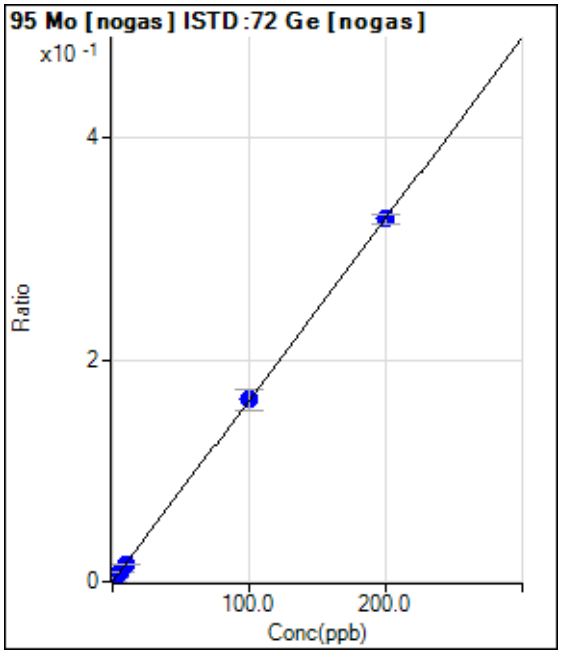
y = 0.0081 * x + 3.0545E-004
R = 1.0000
DL = 0.01084
BEC = 0.0375

Weight: <None>
Min Conc: <None>

Calibration for 225_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					

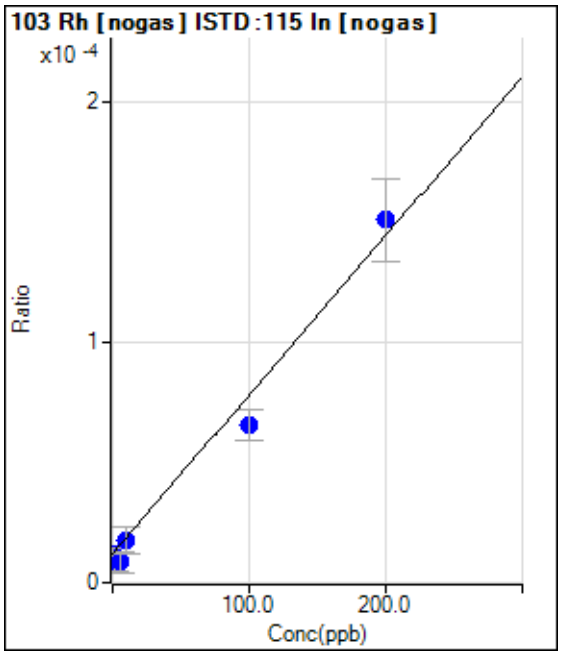


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.34	0.0001	P	46.5
2	☐	2.000	1.850	7344.94	0.0031	P	7.5
3	☐	5.000	4.878	19370.74	0.0080	P	2.6
4	☐	10.000	9.607	38338.12	0.0158	P	4.4
5	☐	100.000	100.184	372040.61	0.1640	P	11.2
6	☐	200.000	199.932	764434.16	0.3273	P	2.9
7	☐	1.000					

y = 0.0016 * x + 5.1825E-005
R = 1.0000
DL = 0.04417
BEC = 0.03166

Weight: <None>
Min Conc: <None>

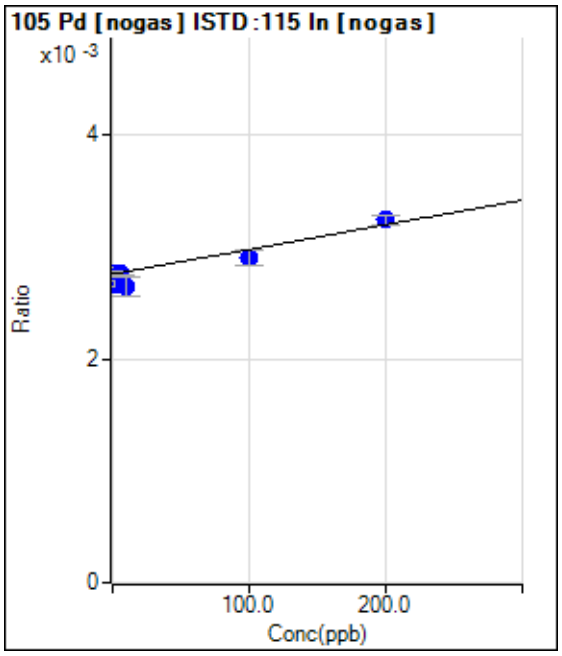
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	41.7
2	☐	2.000	-6.919	16.67	0.0000	P	74.6
3	☐	5.000	-5.160	20.00	0.0000	P	100.
4	☐	10.000	8.362	40.00	0.0000	P	65.5
5	☐	100.000	80.897	136.67	0.0001	P	20.4
6	☐	200.000	209.976	323.34	0.0002	P	22.5
7	☐	1.000					

y = 6.6065E-007 * x + 1.2009E-005
R = 0.9942
DL = 22.74
BEC = 18.18

Weight: <None>
Min Conc: <None>

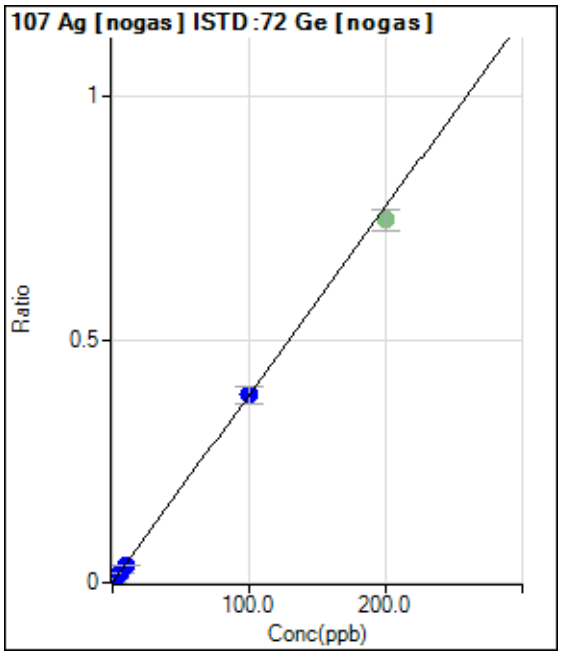


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6121.16	0.0028	P	4.9
2	☐	2.000	-39.570	6134.47	0.0027	P	1.6
3	☐	5.000	2.219	6271.20	0.0028	P	1.6
4	☐	10.000	-50.436	5954.42	0.0026	P	6.6
5	☐	100.000	68.266	6121.21	0.0029	P	4.7
6	☐	200.000	219.374	6984.81	0.0032	P	2.7
7	☐	1.000					

y = 2.2045E-006 * x + 0.0028
R = 0.9662
DL = 183.3
BEC = 1251

Weight: <None>
Min Conc: <None>

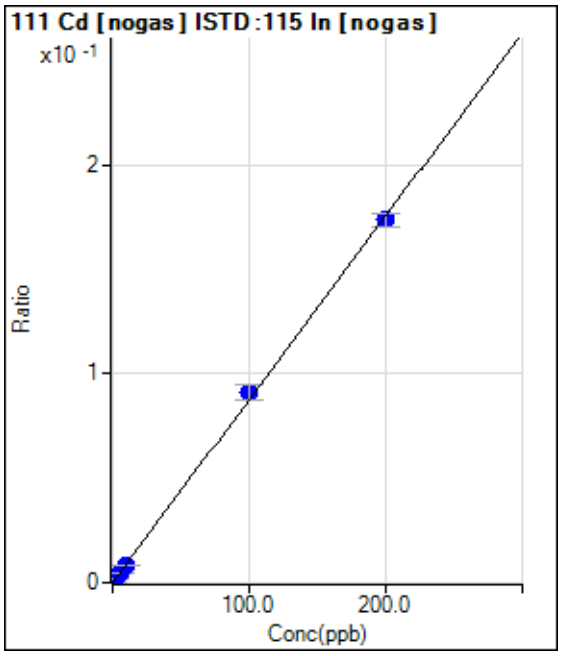
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0000	P	58.8
2	☐	2.000	1.938	17932.66	0.0075	P	3.8
3	☐	5.000	4.954	46270.75	0.0192	P	2.5
4	☐	10.000	9.460	89026.39	0.0366	P	1.9
5	☐	100.000	100.058	878296.52	0.3871	P	9.3
6	☑	200.000		1743115.60	0.7470	A	6.1
7	☐	1.000					

y = 0.0039 * x + 2.4228E-005
R = 1.0000
DL = 0.01104
BEC = 0.006263

Weight: <None>
Min Conc: <None>

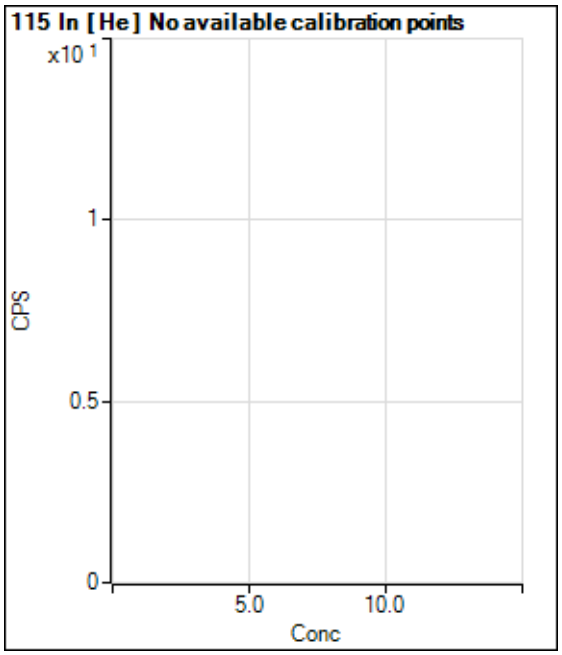


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.8
2	☐	2.000	1.941	3910.48	0.0017	P	6.5
3	☐	5.000	5.053	10063.04	0.0044	P	0.8
4	☐	10.000	9.471	18713.43	0.0083	P	2.6
5	☐	100.000	103.967	191187.62	0.0912	P	8.0
6	☐	200.000	198.042	374218.08	0.1737	P	3.7
7	☐	1.000					

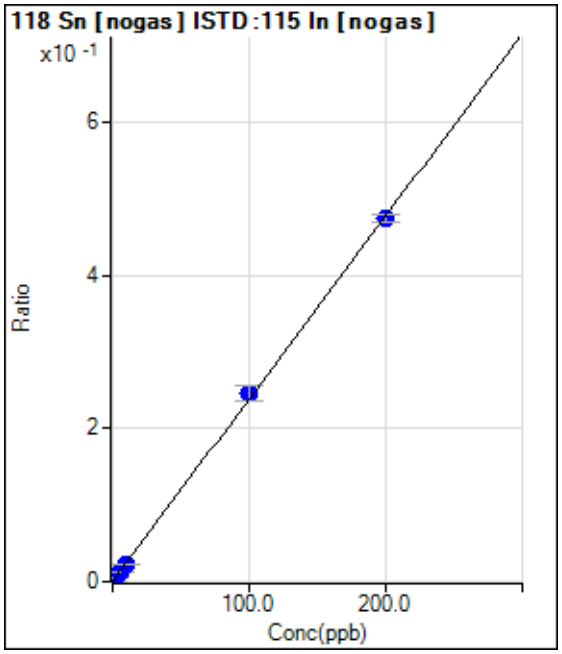
y = 8.7715E-004 * x + 3.0937E-006
R = 0.9997
DL = 0.009189
BEC = 0.003527

Weight: <None>
Min Conc: <None>

Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			855781.23		P	1.2
2	☐			868855.16		P	0.9
3	☐			868948.85		P	1.1
4	☐			864503.20		P	0.7
5	☐			837572.60		P	0.9
6	☐			825670.09		P	1.3
7	☐						

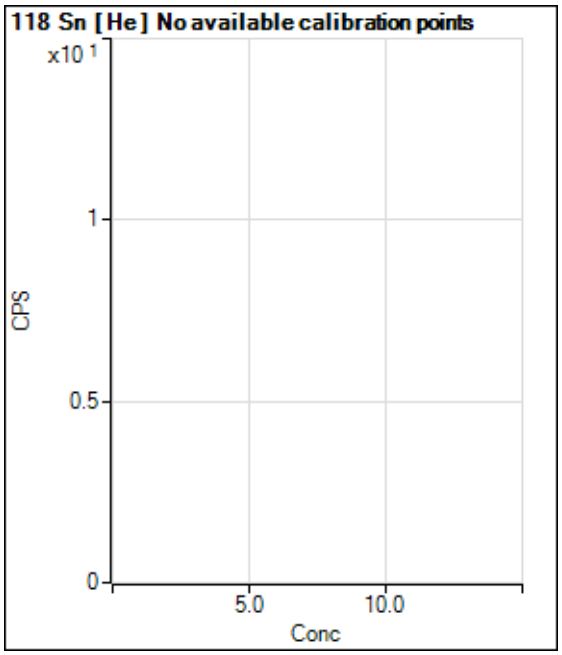


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	686.69	0.0003	P	6.6
2	☐	2.000	1.904	11096.99	0.0048	P	9.3
3	☐	5.000	4.877	27057.90	0.0119	P	1.4
4	☐	10.000	9.582	52020.85	0.0231	P	5.4
5	☐	100.000	102.812	514197.66	0.2452	P	8.4
6	☐	200.000	198.619	1020333.58	0.4735	P	2.0
7	☐	1.000					

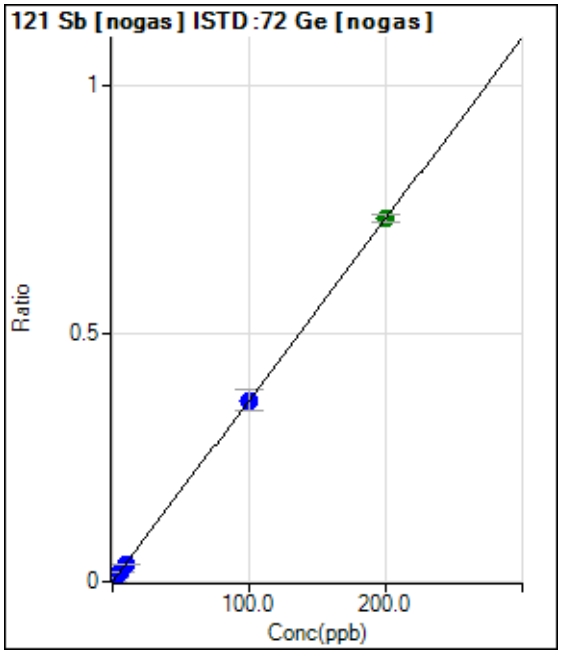
y = 0.0024 * x + 3.1073E-004
R = 0.9999
DL = 0.02572
BEC = 0.1304

Weight: <None>
Min Conc: <None>

Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			316.68		P	10.2
2	☐			4617.34		P	4.4
3	☐			11437.23		P	3.2
4	☐			21720.29		P	1.6
5	☐			218128.10		P	1.4
6	☐			439019.56		P	1.6
7	☐						

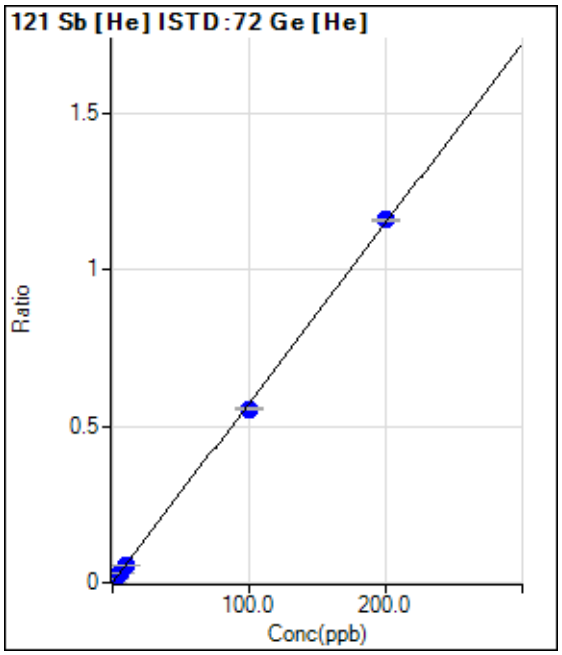


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	570.02	0.0002	P	13.8
2	☐	2.000	1.921	17318.83	0.0073	P	2.1
3	☐	5.000	4.851	43330.47	0.0180	P	3.5
4	☐	10.000	9.559	85511.21	0.0352	P	3.6
5	☐	100.000	100.039	830221.52	0.3660	P	11.1
6	☐	200.000	200.007	1709277.32	0.7316	A	2.2
7	☐	1.000					

y = 0.0037 * x + 2.3951E-004
R = 1.0000
DL = 0.02703
BEC = 0.0655

Weight: <None>
Min Conc: <None>

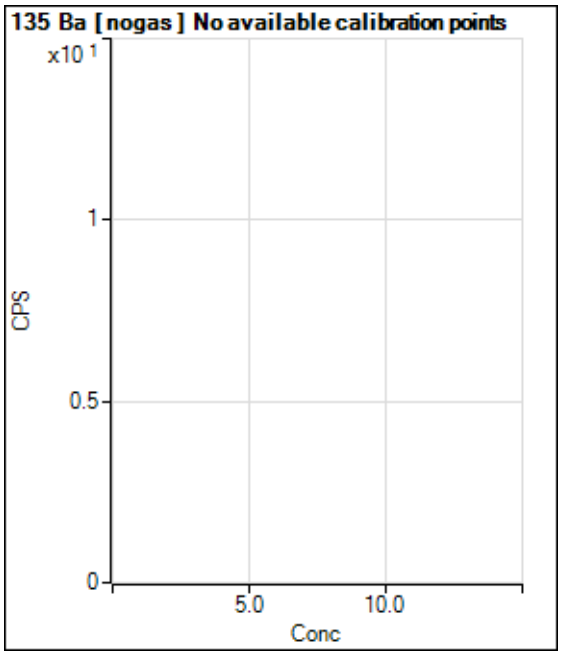
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0005	P	1.0
2	☐	2.000	1.871	7021.50	0.0113	P	5.7
3	☐	5.000	4.868	17922.82	0.0285	P	1.3
4	☐	10.000	9.448	34434.01	0.0548	P	1.9
5	☐	100.000	96.361	345994.12	0.5540	P	0.9
6	☐	200.000	201.852	709375.51	1.1599	P	0.7
7	☐	1.000					

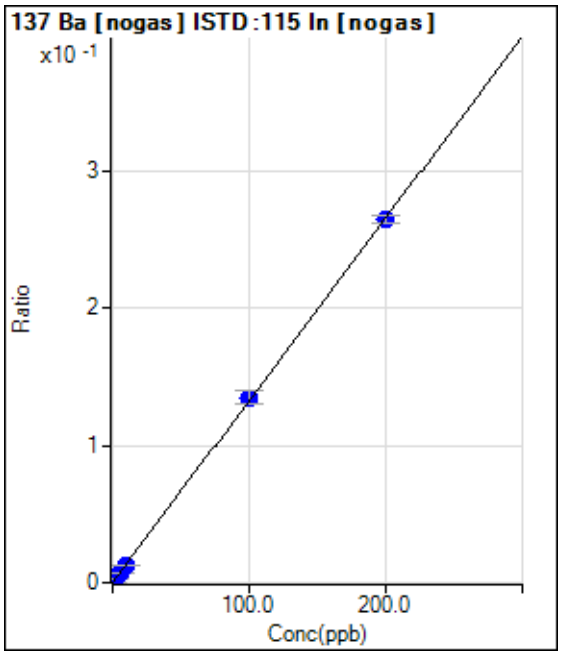
y = 0.0057 * x + 5.3975E-004
R = 0.9998
DL = 0.002793
BEC = 0.09398

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			60.00		P	28.9
2	☐			3200.35		P	8.5
3	☐			8685.61		P	4.6
4	☐			17195.44		P	4.3
5	☐			164140.95		P	5.3
6	☐			333627.11		P	1.1
7	☐						

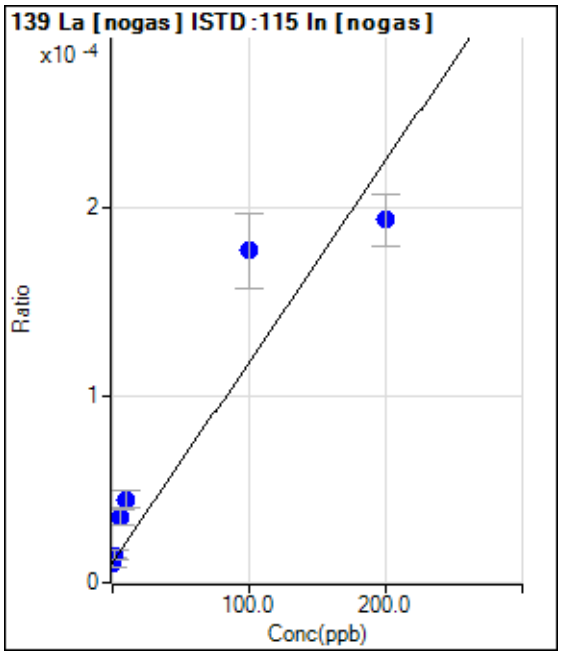
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.33	0.0001	P	13.7
2	☐	2.000	1.911	5957.78	0.0026	P	4.4
3	☐	5.000	4.779	14526.32	0.0064	P	1.8
4	☐	10.000	9.525	28573.76	0.0127	P	4.7
5	☐	100.000	101.638	283064.58	0.1350	P	7.7
6	☐	200.000	199.211	570045.28	0.2645	P	2.2
7	☐	1.000					

y = 0.0013 * x + 6.0483E-005
R = 0.9999
DL = 0.01867
BEC = 0.04556

Weight: <None>
Min Conc: <None>

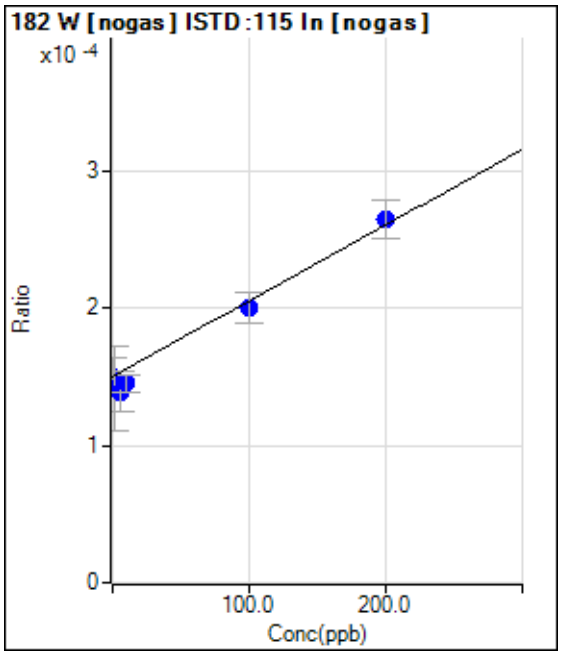


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	51.0
2	☐	2.000	3.777	33.33	0.0000	P	37.7
3	☐	5.000	22.793	80.00	0.0000	P	21.5
4	☐	10.000	31.713	100.00	0.0000	P	21.3
5	☐	100.000	155.459	370.01	0.0002	P	22.5
6	☐	200.000	170.722	416.68	0.0002	P	14.0
7	☐	1.000					

y = 1.0732E-006 * x + 1.0614E-005
R = 0.9388
DL = 15.13
BEC = 9.891

Weight: <None>
Min Conc: <None>

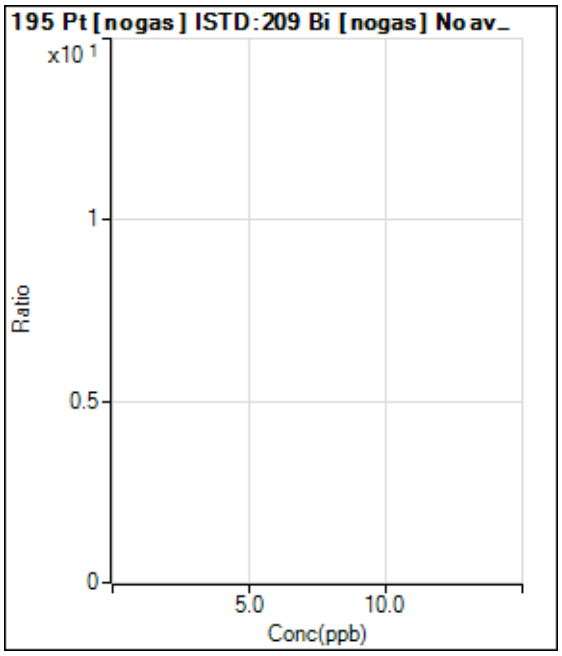
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0002	P	18.6
2	☐	2.000	-15.792	320.01	0.0001	P	43.5
3	☐	5.000	-20.465	316.68	0.0001	P	20.8
4	☐	10.000	-9.456	326.68	0.0001	P	7.9
5	☐	100.000	90.332	420.01	0.0002	P	11.4
6	☐	200.000	206.621	570.02	0.0003	P	10.7
7	☐	1.000					

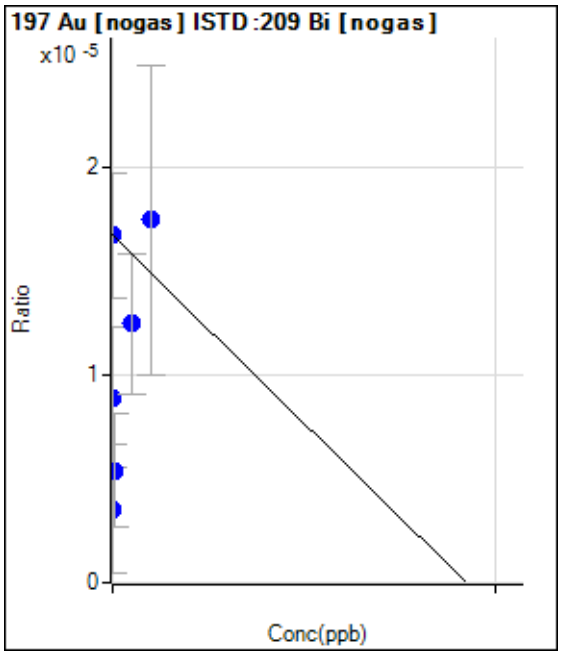
y = 5.5127E-007 * x + 1.5004E-004
R = 0.9951
DL = 151.8
BEC = 272.2

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					

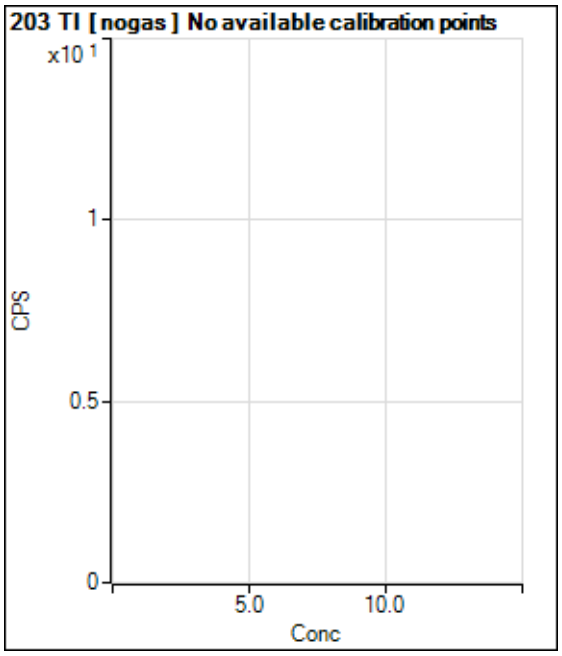
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	35.7
2	☐	2.000	1452.690	6.67	0.0000	P	173.
3	☐	5.000	862.594	16.67	0.0000	P	75.8
4	☐	10.000	1249.613	10.00	0.0000	P	101.
5	☐	100.000	469.181	20.00	0.0000	P	53.7
6	☐	200.000	-82.518	30.00	0.0000	P	85.0
7	☐	1.000					

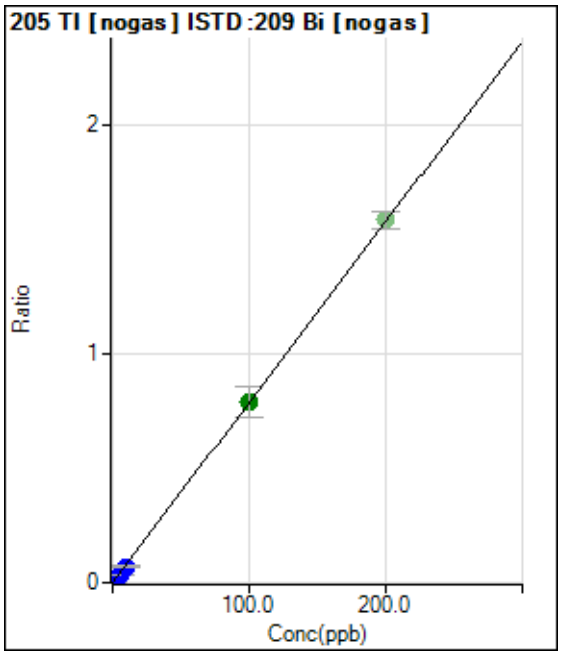
y = -9.0772E-009 * x + 1.6739E-005
R = 0.6079
DL = -1974
BEC = -1844

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			136.67		P	33.0
2	☐			11384.10		P	2.8
3	☐			27636.94		P	4.7
4	☐			54306.79		P	4.1
5	☐			564095.61		P	3.9
6	☐			1104627.59		A	3.0
7	☐						

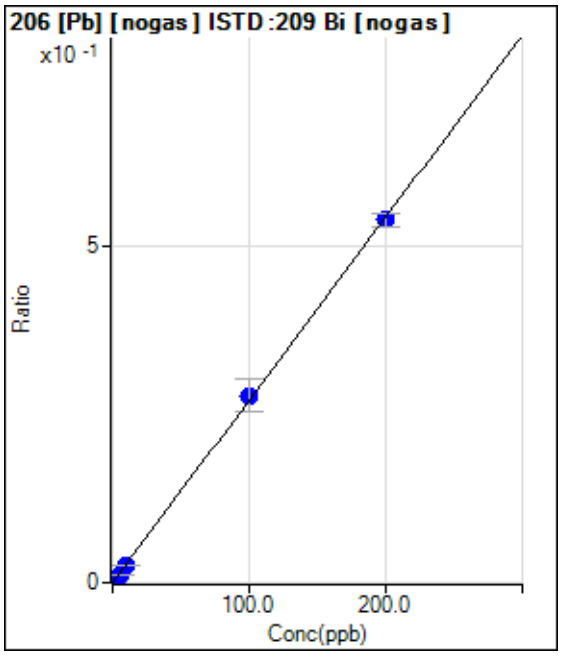
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	256.67	0.0001	P	13.9
2	☐	2.000	1.815	26197.79	0.0145	P	6.2
3	☐	5.000	4.337	65942.95	0.0343	P	13.4
4	☐	10.000	8.977	130602.61	0.0709	P	4.4
5	☐	100.000	100.139	1292535.06	0.7898	A	17.3
6	☑	200.000		2674486.00	1.5861	A	5.0
7	☐	1.000					

y = 0.0079 * x + 1.4224E-004
R = 1.0000
DL = 0.007527
BEC = 0.01804

Weight: <None>
Min Conc: <None>

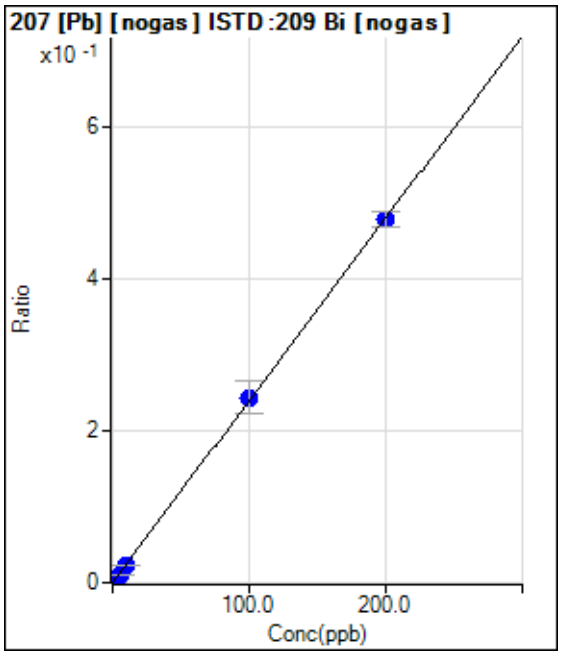


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0000	P	24.7
2	☐	2.000	1.913	9439.58	0.0052	P	10.6
3	☐	5.000	4.400	22923.03	0.0119	P	13.6
4	☐	10.000	9.210	45951.55	0.0249	P	2.9
5	☐	100.000	102.597	454290.38	0.2775	P	16.9
6	☐	200.000	198.757	906715.90	0.5376	P	3.9
7	☐	1.000					

y = 0.0027 * x + 4.0489E-005
R = 0.9999
DL = 0.01108
BEC = 0.01497

Weight: <None>
Min Conc: <None>

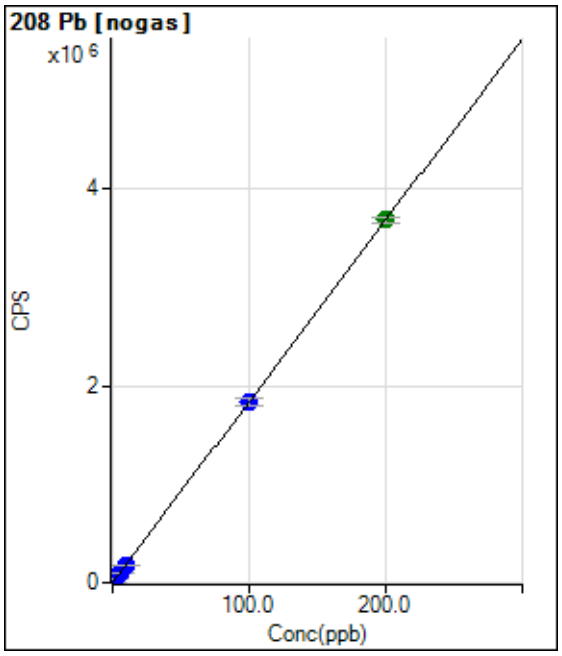
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0000	P	8.3
2	☐	2.000	1.832	8022.08	0.0044	P	7.3
3	☐	5.000	4.358	20132.78	0.0105	P	12.8
4	☐	10.000	9.185	40637.44	0.0221	P	0.4
5	☐	100.000	101.765	399411.22	0.2440	P	17.1
6	☐	200.000	199.176	805468.53	0.4776	P	4.2
7	☐	1.000					

y = 0.0024 * x + 3.1479E-005
R = 0.9999
DL = 0.00326
BEC = 0.01313

Weight: <None>
Min Conc: <None>

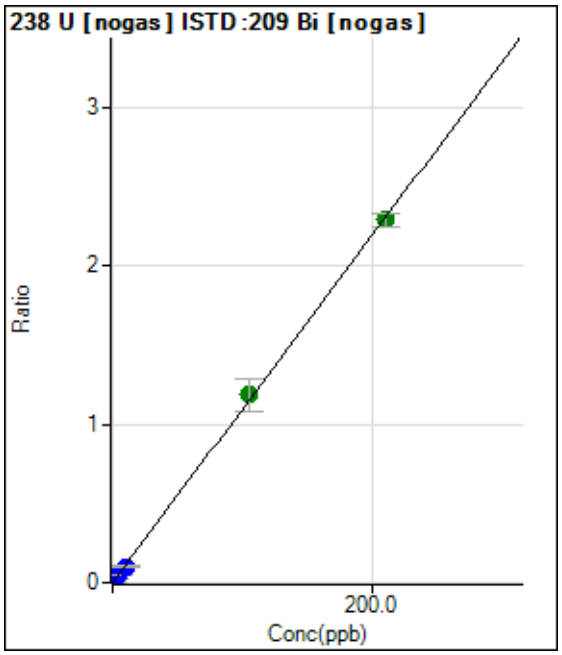


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.00		P	11.5
2	☐	2.000	2.011	37197.12		P	1.8
3	☐	5.000	5.042	92912.10		P	1.1
4	☐	10.000	9.977	183613.22		P	0.3
5	☐	100.000	99.454	1828327.97		P	4.4
6	☐	200.000	200.273	3681516.74		A	1.8
7	☐	1.000					

y = 18381.3426 * x + 230.0000
R = 1.0000
DL = 0.004318
BEC = 0.01251

Weight: <None>
Min Conc: <None>

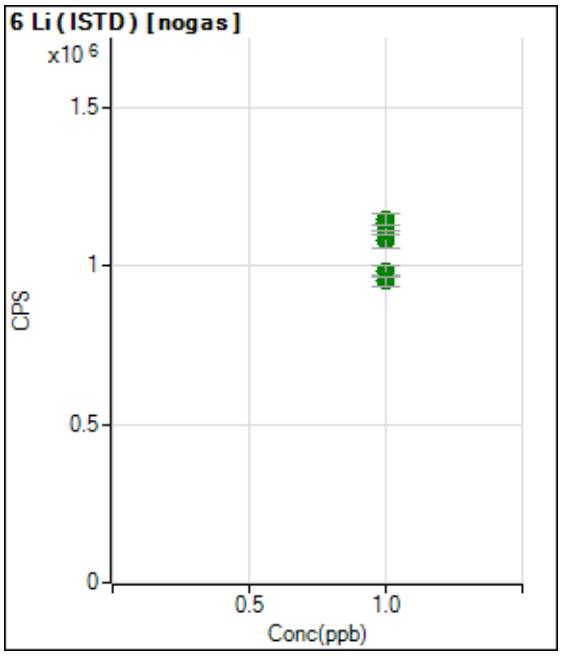
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0000	P	25.8
2	☐	2.000	1.858	37033.29	0.0204	P	4.2
3	☐	5.000	4.479	94362.42	0.0492	P	13.8
4	☐	10.000	9.182	185427.80	0.1007	P	5.5
5	☐	105.000	107.859	1936906.43	1.1829	A	16.7
6	☐	210.000	208.623	3859870.25	2.2880	A	4.0
7	☐	1.000					

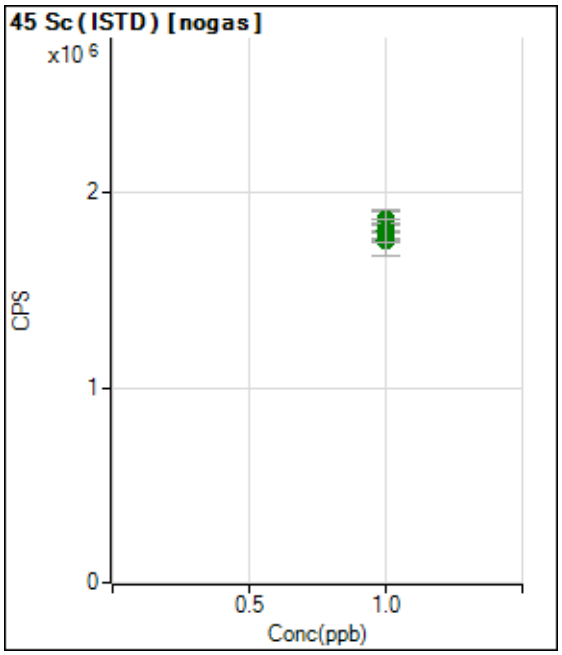
y = 0.0110 * x + 4.0589E-005
R = 0.9999
DL = 0.002869
BEC = 0.003701

Weight: <None>
Min Conc: <None>

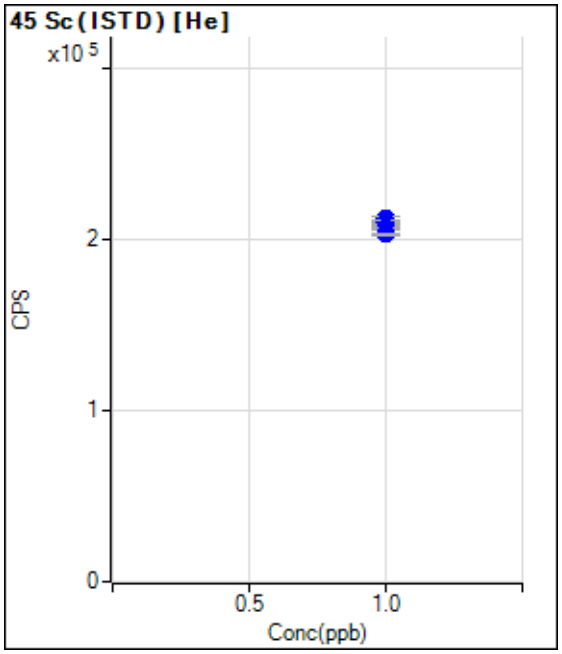


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1076308.82		A	4.2
2	☐	1.000		1111485.37		A	2.8
3	☐	1.000		1135377.52		A	4.6
4	☐	1.000		1143719.04		A	3.1
5	☐	1.000		983805.30		A	2.7
6	☐	1.000		949657.04		A	3.1
7	☐	1.000					

Calibration for 225_ICV.d

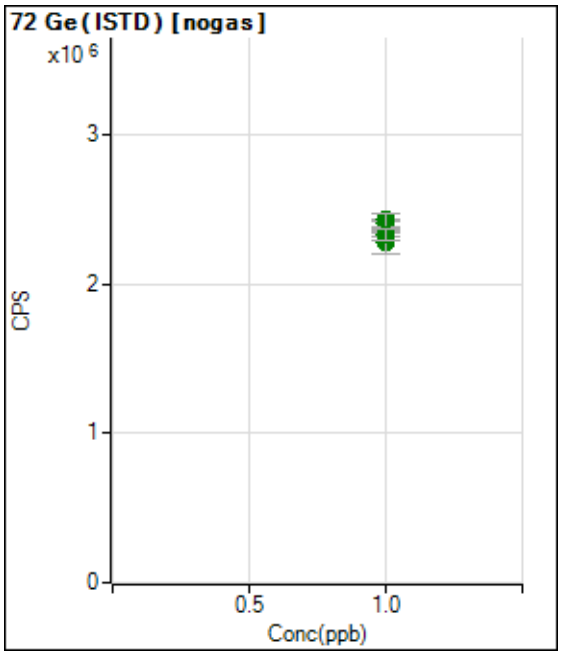


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1793297.58		A	4.4
2	☐	1.000		1803375.13		A	3.9
3	☐	1.000		1848263.20		A	5.8
4	☐	1.000		1862938.82		A	6.1
5	☐	1.000		1761878.05		A	9.6
6	☐	1.000		1805658.05		A	6.3
7	☐	1.000					

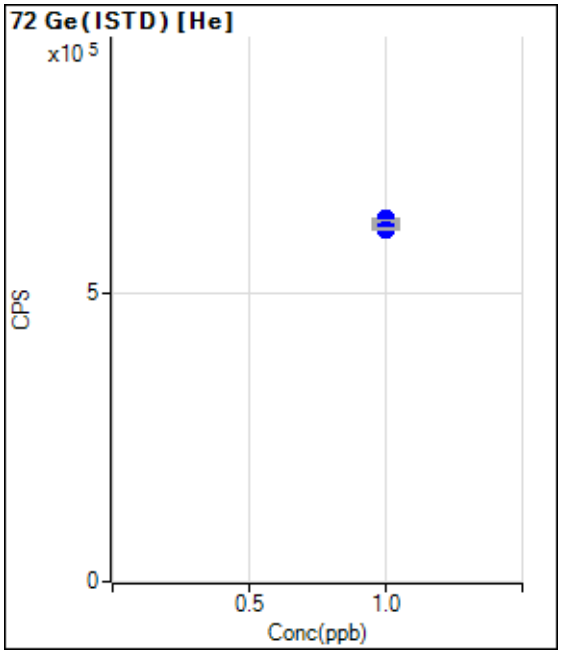


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		208011.27		P	0.6
2	☐	1.000		211721.30		P	1.1
3	☐	1.000		208849.03		P	0.6
4	☐	1.000		209841.02		P	1.4
5	☐	1.000		206219.73		P	0.4
6	☐	1.000		202692.90		P	0.9
7	☐	1.000					

Calibration for 225_ICV.d

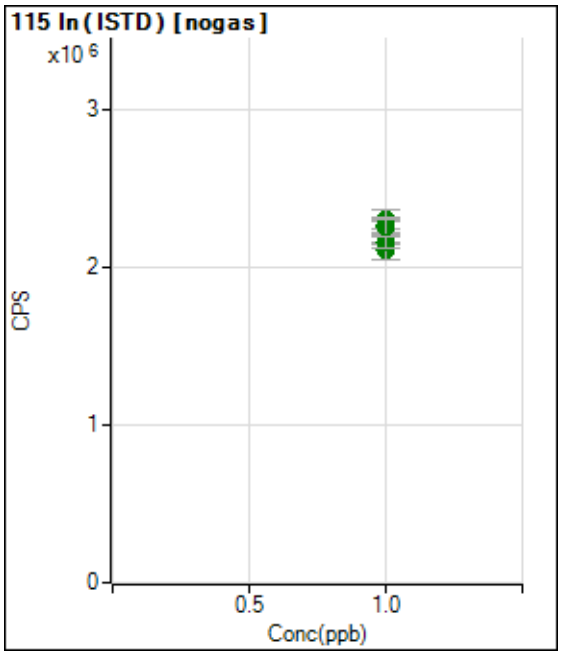


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2371436.79		A	4.0
2	☐	1.000		2385497.67		A	2.8
3	☐	1.000		2411200.90		A	2.5
4	☐	1.000		2432240.90		A	3.9
5	☐	1.000		2278187.57		A	6.8
6	☐	1.000		2336391.27		A	3.3
7	☐	1.000					

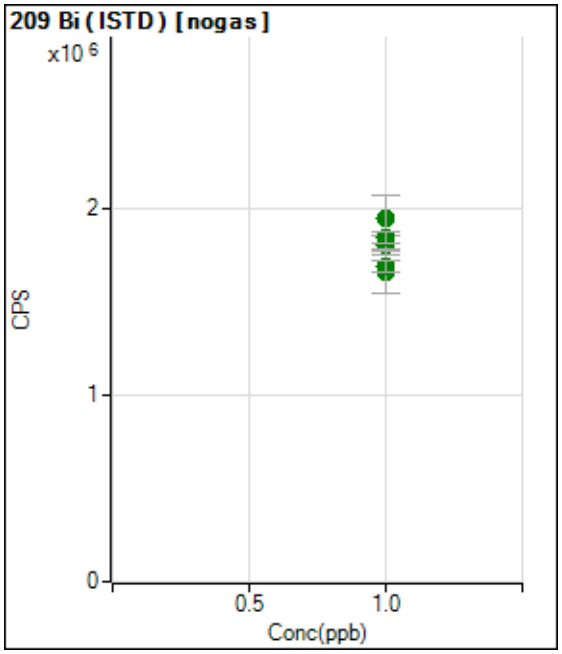


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		617556.72		P	0.8
2	☐	1.000		622344.34		P	1.5
3	☐	1.000		628857.79		P	0.3
4	☐	1.000		628310.77		P	0.3
5	☐	1.000		624576.57		P	0.6
6	☐	1.000		611621.78		P	0.9
7	☐	1.000					

Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2215793.12		A	6.1
2	☐	1.000		2297192.68		A	5.2
3	☐	1.000		2268786.10		A	4.4
4	☐	1.000		2251640.11		A	4.1
5	☐	1.000		2101806.51		A	5.3
6	☐	1.000		2156018.53		A	3.5
7	☐	1.000					



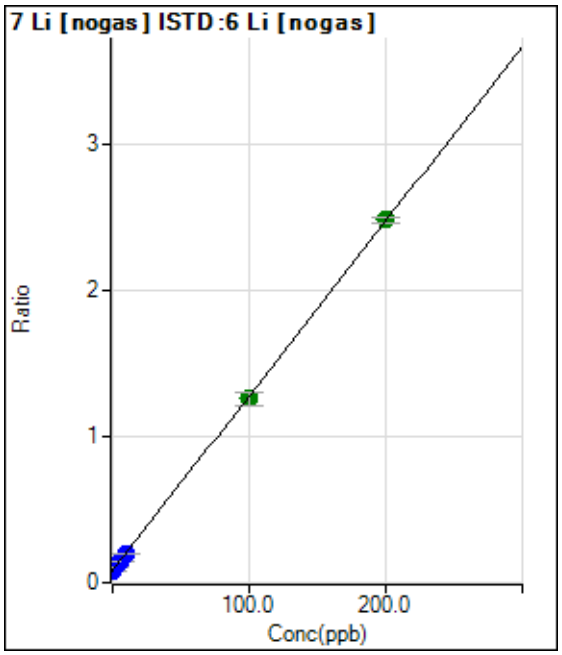
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1799697.37		A	5.8
2	☐	1.000		1815254.40		A	3.8
3	☐	1.000		1942653.93		A	13.0
4	☐	1.000		1842923.57		A	3.2
5	☐	1.000		1662519.61		A	13.6
6	☐	1.000		1688240.65		A	3.6
7	☐	1.000					

Calibration for 283_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 22:05:29
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	273CALB.d	CAL BLK	2019-01-08 21:41:36
2	274CALS.d	2/10/200	2019-01-08 21:43:36
3	275CALS.d	5/25/500	2019-01-08 21:45:38
4	276CALS.d	10/50/1000	2019-01-08 21:47:39
5	277CALS.d	100/500/10K	2019-01-08 21:49:40
6	278CALS.d	200/1000/20K	2019-01-08 21:51:37
7			

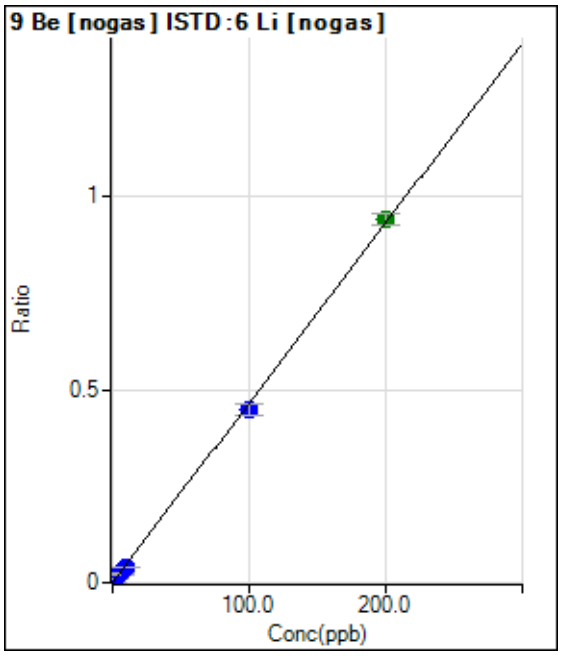
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130241.76	0.0835	P	3.4
2	☐	2.000	1.695	164122.42	0.1037	P	2.7
3	☐	5.000	5.163	213328.10	0.1451	P	4.7
4	☐	10.000	9.311	292075.26	0.1945	P	1.4
5	☐	100.000	98.457	1767732.99	1.2573	A	7.0
6	☐	200.000	200.805	3259921.10	2.4775	A	1.8
7	☐	1.000					

y = 0.0119 * x + 0.0835
R = 1.0000
DL = 0.7244
BEC = 7.006

Weight: <None>
Min Conc: <None>

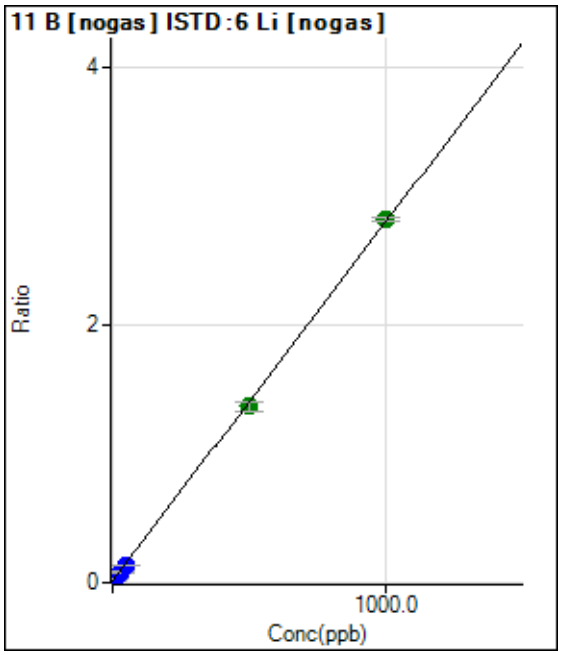


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	60.4
2	☐	2.000	1.777	13188.00	0.0083	P	2.3
3	☐	5.000	4.851	33268.89	0.0227	P	7.5
4	☐	10.000	8.873	62166.70	0.0414	P	1.5
5	☐	100.000	96.420	631856.37	0.4493	P	6.2
6	☐	200.000	201.852	1237472.40	0.9406	A	3.1
7	☐	1.000					

y = 0.0047 * x + 5.2402E-005
R = 0.9998
DL = 0.02037
BEC = 0.01125

Weight: <None>
Min Conc: <None>

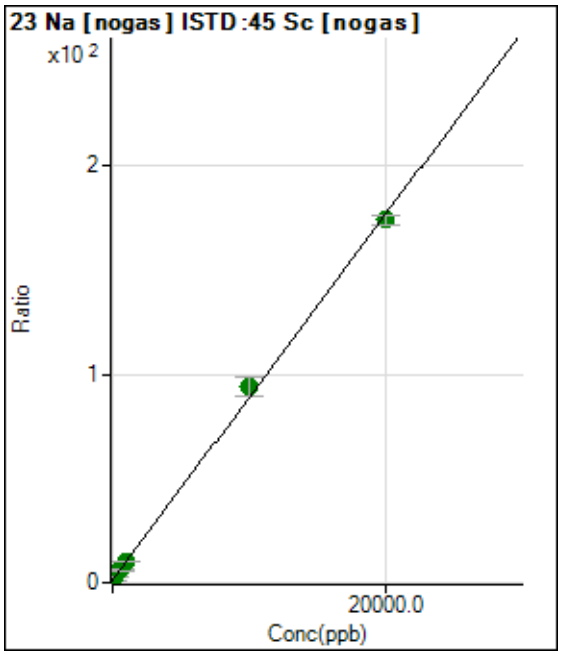
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21769.20	0.0140	P	8.8
2	☐	10.000	8.193	58284.59	0.0368	P	1.3
3	☐	25.000	23.392	116224.17	0.0792	P	9.1
4	☐	50.000	43.846	204537.64	0.1362	P	0.4
5	☐	500.000	487.384	1930705.08	1.3727	A	5.8
6	☐	1000.000	1006.674	3711451.82	2.8204	A	1.1
7	☐	5.000					

y = 0.0028 * x + 0.0140
R = 0.9999
DL = 1.329
BEC = 5.019

Weight: <None>
Min Conc: <None>

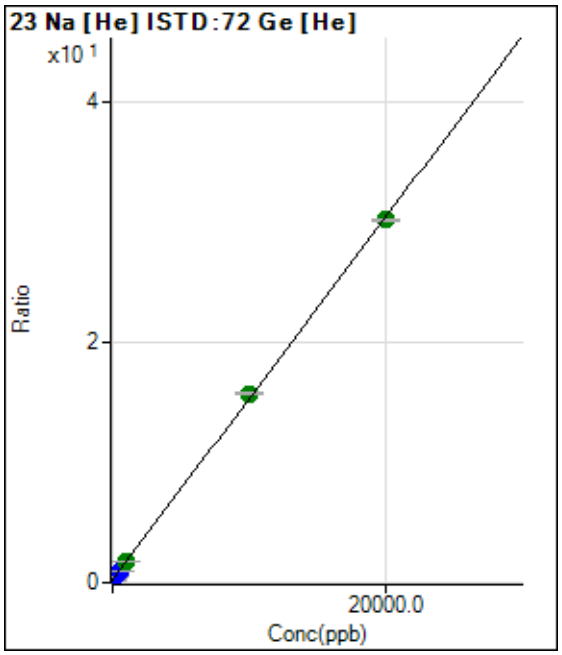


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3503206.98	1.2607	A	9.1
2	☐	200.000	191.306	8367845.76	2.9402	A	4.1
3	☐	500.000	547.133	15862124.83	6.0641	A	9.6
4	☐	1000.000	1008.255	27174075.61	10.1123	A	4.9
5	☐	10000.00	10581.908	239433022.0	94.1613	A	9.7
6	☐	20000.00	19707.542	455973760.1	174.277	A	2.4
7	☐	100.000					

y = 0.0088 * x + 1.2607
R = 0.9994
DL = 39.33
BEC = 143.6

Weight: <None>
Min Conc: <None>

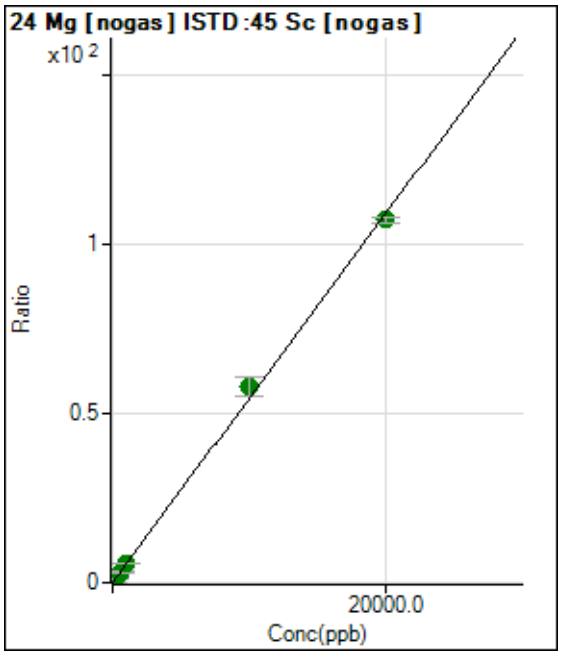
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	218340.82	0.2390	P	2.6
2	☐	200.000	205.128	509185.80	0.5485	P	2.0
3	☐	500.000	526.856	937824.15	1.0338	P	0.9
4	☐	1000.000	1015.472	1606899.25	1.7710	A	0.7
5	☐	10000.00	10277.037	13872806.46	15.7439	A	0.5
6	☐	20000.00	19859.985	26489877.10	30.2016	A	0.8
7	☐	100.000					

y = 0.0015 * x + 0.2390
R = 0.9999
DL = 12.21
BEC = 158.4

Weight: <None>
Min Conc: <None>

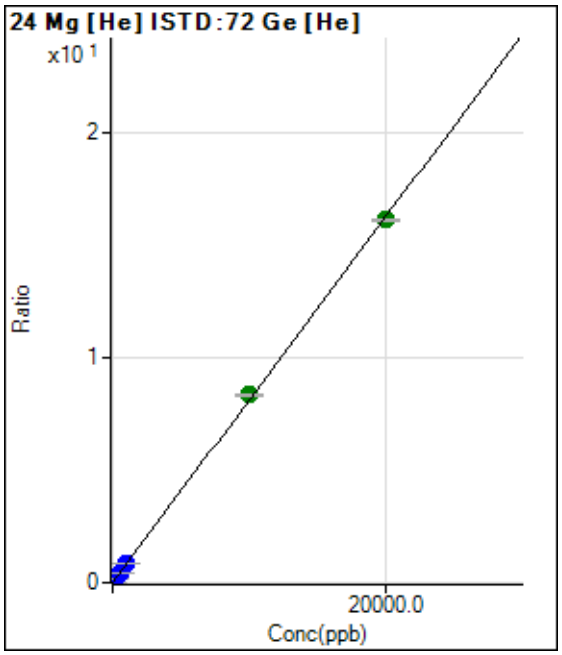


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32699.81	0.0118	P	11.8
2	☐	200.000	205.282	3219726.05	1.1313	A	4.0
3	☐	500.000	555.028	7943948.10	3.0386	A	10.5
4	☐	1000.000	1016.796	14930068.04	5.5568	A	5.4
5	☐	10000.00	10639.588	147522953.2	58.0340	A	10.3
6	☐	20000.00	19677.938	280848172.9	107.323	A	1.2
7	☐	100.000					

y = 0.0055 * x + 0.0118
R = 0.9993
DL = 0.7661
BEC = 2.161

Weight: <None>
Min Conc: <None>

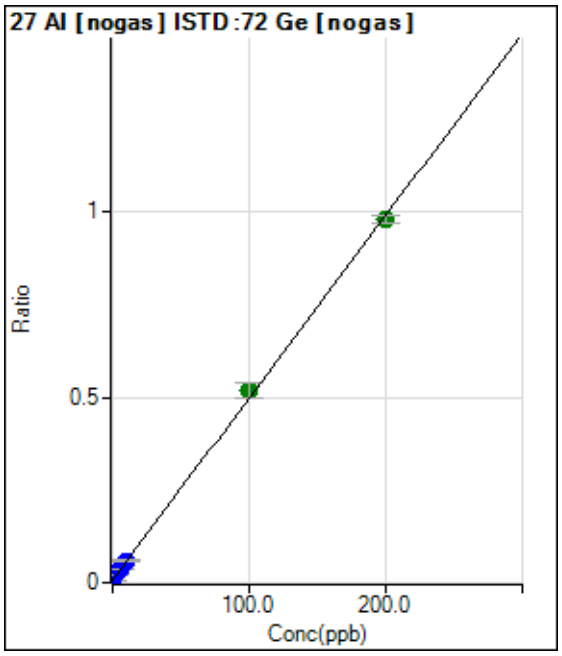
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1790.11	0.0020	P	7.5
2	☐	200.000	216.800	165175.94	0.1779	P	2.6
3	☐	500.000	537.858	397781.68	0.4385	P	1.8
4	☐	1000.000	1009.897	745385.56	0.8216	P	1.5
5	☐	10000.00	10289.000	7360312.18	8.3530	A	0.8
6	☐	20000.00	19853.891	14135847.71	16.1163	A	0.4
7	☐	100.000					

y = 8.1165E-004 * x + 0.0020
R = 0.9999
DL = 0.5412
BEC = 2.415

Weight: <None>
Min Conc: <None>

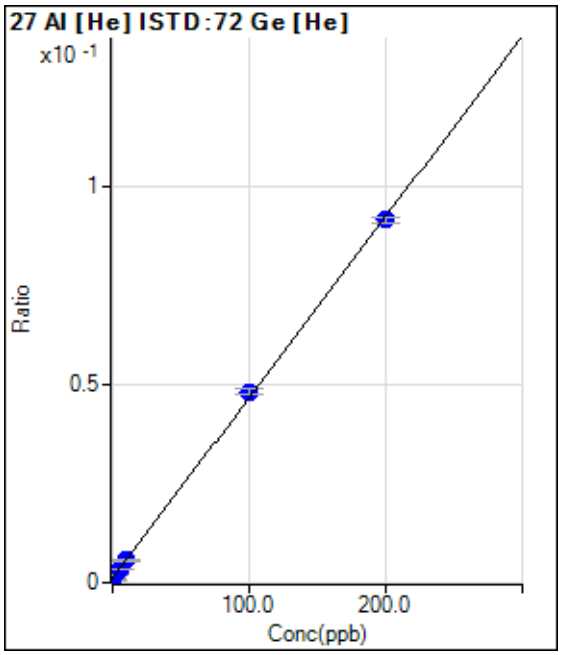


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26612.29	0.0071	P	3.5
2	☐	2.000	2.355	69775.01	0.0187	P	0.4
3	☐	5.000	6.054	129398.41	0.0369	P	7.4
4	☐	10.000	10.667	212888.51	0.0596	P	1.9
5	☐	100.000	104.413	1786075.39	0.5204	A	7.6
6	☐	200.000	197.730	3358567.55	0.9792	A	2.2
7	☐	1.000					

y = 0.0049 * x + 0.0071
R = 0.9997
DL = 0.1544
BEC = 1.453

Weight: <None>
Min Conc: <None>

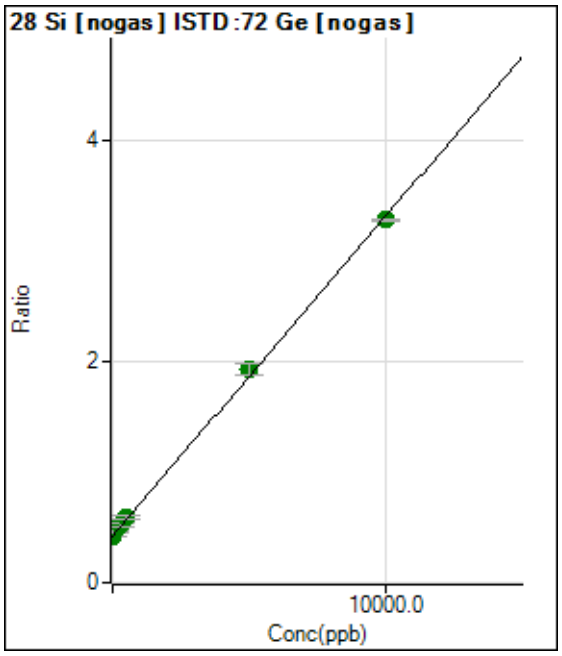
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.907	663.35	0.0007	P	1.8
2	☐	2.000	1.510	1700.10	0.0018	P	10.5
3	☐	5.000	4.899	3063.62	0.0034	P	5.3
4	☐	10.000	9.783	5090.77	0.0056	P	8.8
5	☐	100.000	103.394	42611.67	0.0484	P	2.3
6	☐	200.000	198.321	80446.32	0.0917	P	1.3
7	☐	1.000					

y = 4.5670E-004 * x + 0.0011
R = 0.9998
DL = 0.08681
BEC = 2.497

Weight: <None>
Min Conc: <None>

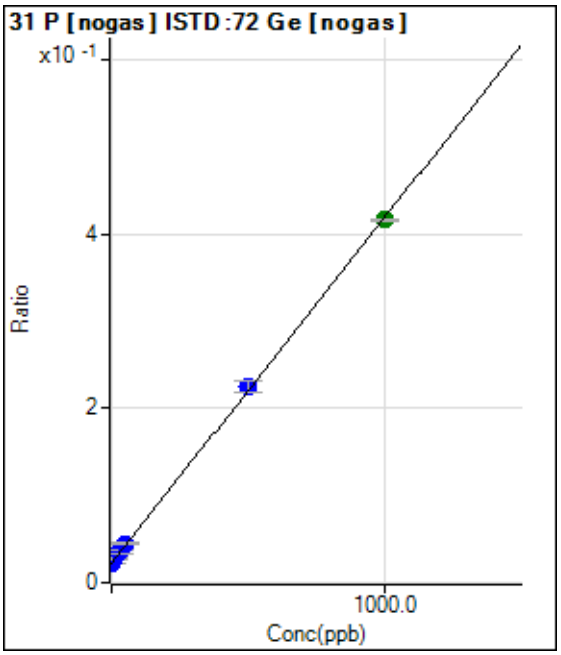


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1568632.79	0.4209	A	1.8
2	☐	100.000	136.692	1714785.86	0.4604	A	5.9
3	☐	250.000	356.477	1835428.72	0.5238	A	8.6
4	☐	500.000	573.492	2094473.46	0.5864	A	4.6
5	☐	5000.000	5203.693	6601083.86	1.9227	A	5.5
6	☐	10000.00	9891.450	11236243.58	3.2756	A	0.7
7	☐	5.000					

y = 2.8861E-004 * x + 0.4209
R = 0.9997
DL = 76.63
BEC = 1458

Weight: <None>
Min Conc: <None>

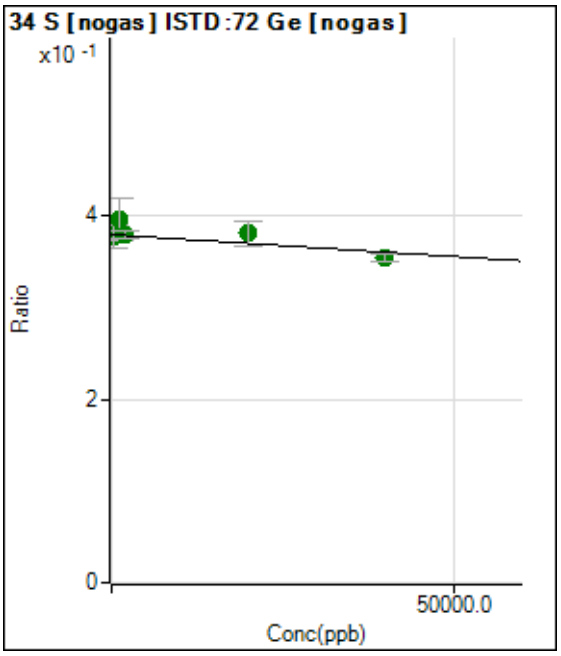
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83473.60	0.0224	P	2.4
2	☐	10.000	12.416	101788.41	0.0273	P	1.9
3	☐	25.000	32.834	124076.48	0.0354	P	8.7
4	☐	50.000	56.748	160301.86	0.0449	P	3.4
5	☐	500.000	512.002	773304.20	0.2253	P	5.9
6	☐	1000.000	993.442	1427175.08	0.4160	A	0.9
7	☐	5.000					

y = 3.9624E-004 * x + 0.0224
R = 0.9999
DL = 4.073
BEC = 56.52

Weight: <None>
Min Conc: <None>

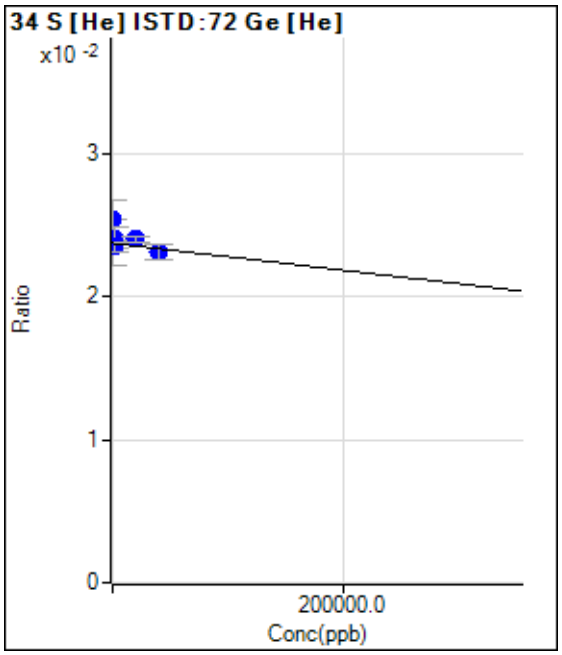


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1415986.36	0.3800	A	2.0
2	☐	400.000	5527.777	1405464.36	0.3773	A	6.6
3	☐	1000.000	-33953.440	1386106.02	0.3961	A	11.6
4	☐	2000.000	325.576	1356890.33	0.3798	A	2.2
5	☐	20000.00	-3008.623	1308608.56	0.3814	A	7.5
6	☐	40000.00	52410.591	1218122.75	0.3551	A	2.3
7	☐	100.000					

y = -4.7509E-007 * x + 0.3800
R = -0.7837
DL = -4.859E+04
BEC = -7.998E+05

Weight: <None>
Min Conc: <None>

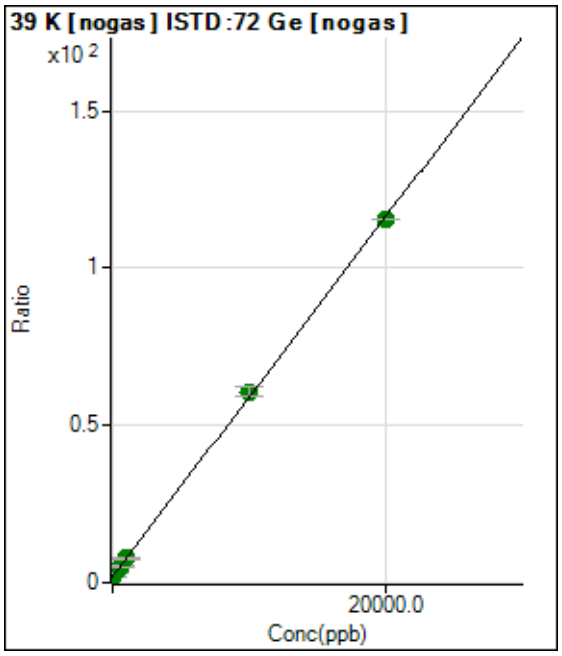
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21682.63	0.0238	P	13.6
2	☐	400.000	-173319.24	23552.45	0.0254	P	11.2
3	☐	1000.000	-38469.951	21882.59	0.0241	P	6.0
4	☐	2000.000	27170.547	21315.12	0.0235	P	2.8
5	☐	20000.00	-30526.132	21181.99	0.0240	P	2.0
6	☐	40000.00	66728.480	20280.21	0.0231	P	4.3
7	☐	100.000					

y = -9.4252E-009 * x + 0.0238
R = -0.5306
DL = -1.028E+06
BEC = -2.52E+06

Weight: <None>
Min Conc: <None>

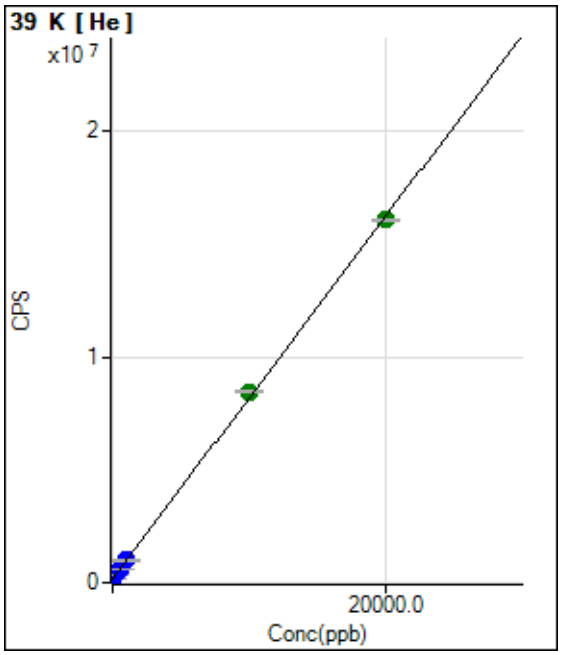


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7232153.81	1.9406	A	1.8
2	☐	200.000	208.162	11662633.60	3.1303	A	3.1
3	☐	500.000	555.159	17930374.88	5.1135	A	7.2
4	☐	1000.000	1016.779	27686544.37	7.7518	A	3.4
5	☐	10000.00	10301.273	208873788.0	60.8162	A	4.2
6	☐	20000.00	19847.064	395774275.5	115.374	A	0.1
7	☐	100.000					

y = 0.0057 * x + 1.9406
R = 0.9998
DL = 18.62
BEC = 339.5

Weight: <None>
Min Conc: <None>

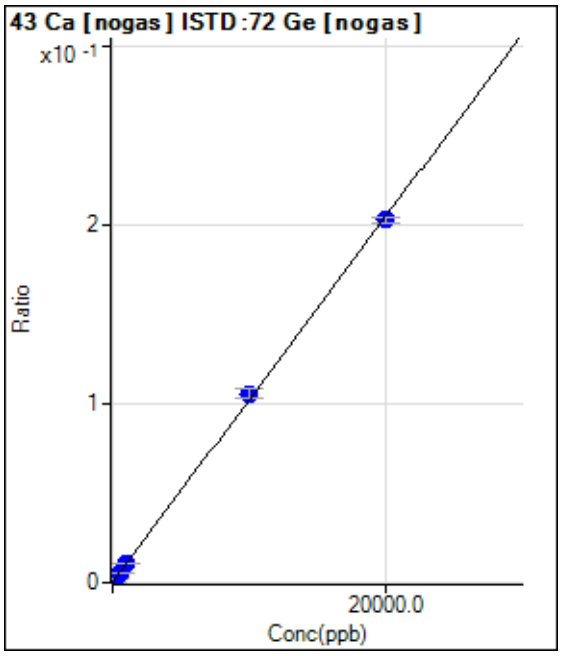
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160463.01		P	1.0
2	☐	200.000	217.797	335355.91		P	0.4
3	☐	500.000	534.865	589964.42		P	0.4
4	☐	1000.000	1020.999	980335.30		P	0.8
5	☐	10000.00	10357.055	8477277.17		A	1.9
6	☐	20000.00	19819.373	16075608.93		A	0.6
7	☐	100.000					

y = 803.0096 * x + 160463.0133
R = 0.9998
DL = 6.237
BEC = 199.8

Weight: <None>
Min Conc: <None>

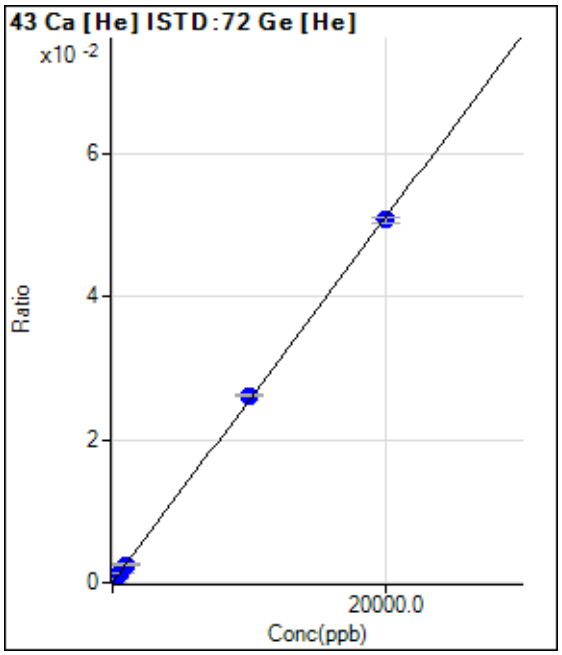


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513.35	0.0001	P	13.9
2	☐	200.000	199.557	8118.54	0.0022	P	5.0
3	☐	500.000	517.436	19019.87	0.0054	P	10.4
4	☐	1000.000	1009.070	37400.84	0.0105	P	1.7
5	☐	10000.00	10327.336	363319.97	0.1058	P	4.9
6	☐	20000.00	19835.447	696633.24	0.2031	P	1.3
7	☐	100.000					

y = 1.0232E-005 * x + 1.3783E-004
R = 0.9998
DL = 5.602
BEC = 13.47

Weight: <None>
Min Conc: <None>

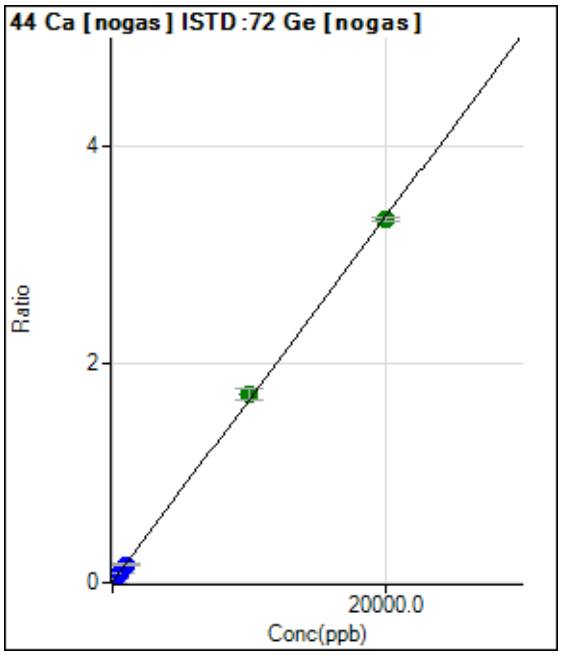
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	49.2
2	☐	200.000	227.654	563.35	0.0006	P	17.8
3	☐	500.000	505.860	1193.39	0.0013	P	10.0
4	☐	1000.000	963.986	2253.50	0.0025	P	6.7
5	☐	10000.00	10256.137	23074.44	0.0262	P	1.6
6	☐	20000.00	19873.309	44489.82	0.0507	P	1.7
7	☐	100.000					

y = 2.5509E-006 * x + 2.5484E-005
R = 0.9999
DL = 14.73
BEC = 9.99

Weight: <None>
Min Conc: <None>

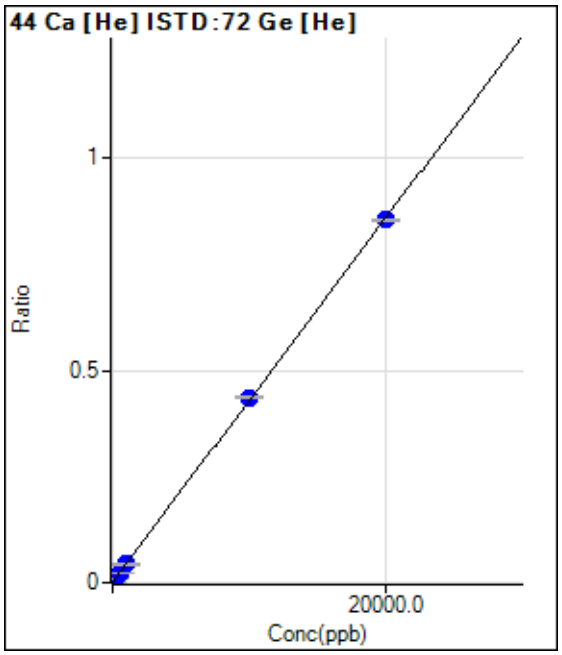


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18856.40	0.0051	P	4.5
2	☐	200.000	197.904	141973.71	0.0381	P	2.2
3	☐	500.000	523.113	323798.33	0.0924	P	8.4
4	☐	1000.000	968.417	595724.89	0.1667	P	1.7
5	☐	10000.00	10309.777	5925872.62	1.7262	A	5.8
6	☐	20000.00	19846.134	11382074.41	3.3182	A	1.2
7	☐	100.000					

y = 1.6694E-004 * x + 0.0051
R = 0.9998
DL = 4.127
BEC = 30.32

Weight: <None>
Min Conc: <None>

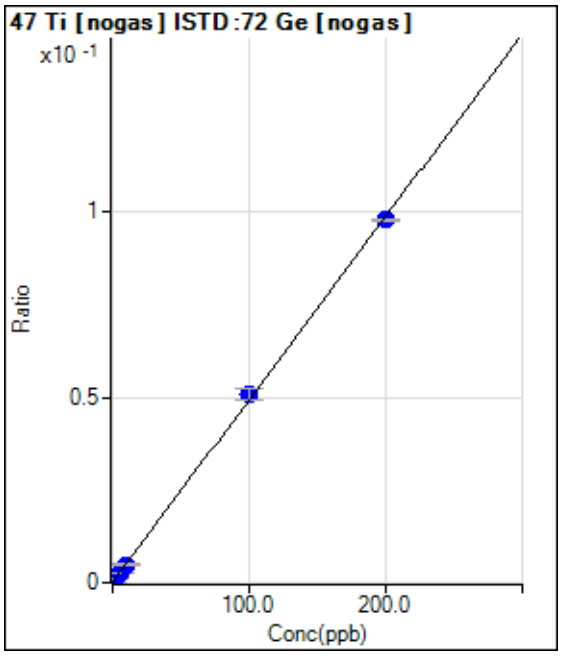
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	633.35	0.0007	P	13.1
2	☐	200.000	199.065	8562.09	0.0092	P	2.0
3	☐	500.000	536.711	21485.94	0.0237	P	3.9
4	☐	1000.000	1000.150	39505.14	0.0435	P	3.1
5	☐	10000.00	10165.664	384381.15	0.4362	P	0.6
6	☐	20000.00	19916.252	749028.74	0.8540	P	0.8
7	☐	100.000					

y = 4.2844E-005 * x + 6.9381E-004
R = 1.0000
DL = 6.384
BEC = 16.19

Weight: <None>
Min Conc: <None>

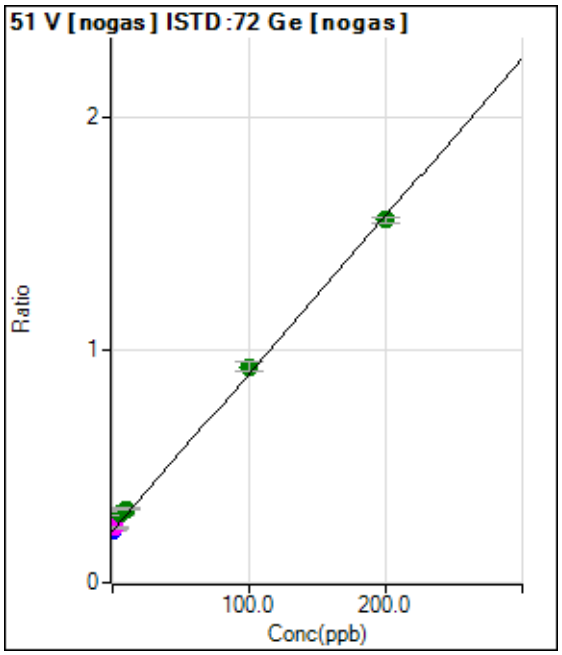


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	223.34	0.0001	P	12.0
2	☐	2.000	1.929	3763.78	0.0010	P	8.5
3	☐	5.000	5.241	9262.43	0.0026	P	9.0
4	☐	10.000	9.695	17288.32	0.0048	P	4.1
5	☐	100.000	103.306	175033.10	0.0510	P	5.9
6	☐	200.000	198.357	335652.90	0.0979	P	0.8
7	☐	1.000					

y = 4.9301E-004 * x + 5.9801E-005
R = 0.9998
DL = 0.04359
BEC = 0.1213

Weight: <None>
Min Conc: <None>

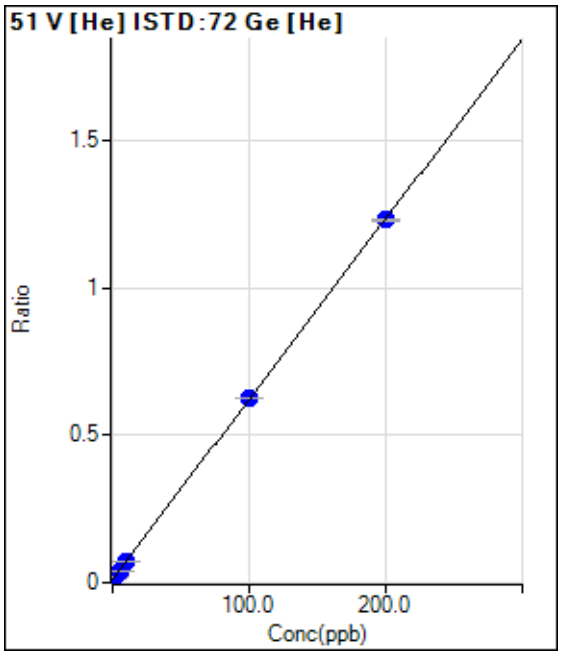
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	829456.86	0.2225	P	0.5
2	☐	2.000	2.119	882487.00	0.2368	M	2.8
3	☐	5.000	11.093	1043791.04	0.2976	A	7.2
4	☐	10.000	13.855	1130461.35	0.3163	A	1.5
5	☐	100.000	104.453	3191693.43	0.9296	A	5.2
6	☐	200.000	197.427	5347263.53	1.5589	A	1.7
7	☐	1.000					

y = 0.0068 * x + 0.2225
R = 0.9993
DL = 0.4629
BEC = 32.87

Weight: <None>
Min Conc: <None>

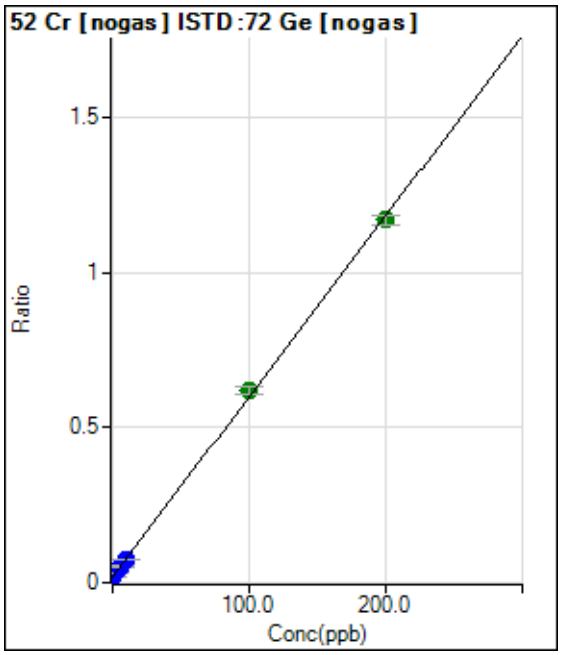


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.070	9677.86	0.0106	P	1.6
2	☐	2.000	1.867	20822.91	0.0224	P	0.4
3	☐	5.000	5.097	38250.32	0.0422	P	1.0
4	☐	10.000	9.660	63553.41	0.0701	P	1.0
5	☐	100.000	100.860	552862.38	0.6274	P	0.3
6	☐	200.000	199.586	1079523.71	1.2308	P	0.9
7	☐	1.000					

y = 0.0061 * x + 0.0110
R = 1.0000
DL = 0.0809
BEC = 1.802

Weight: <None>
Min Conc: <None>

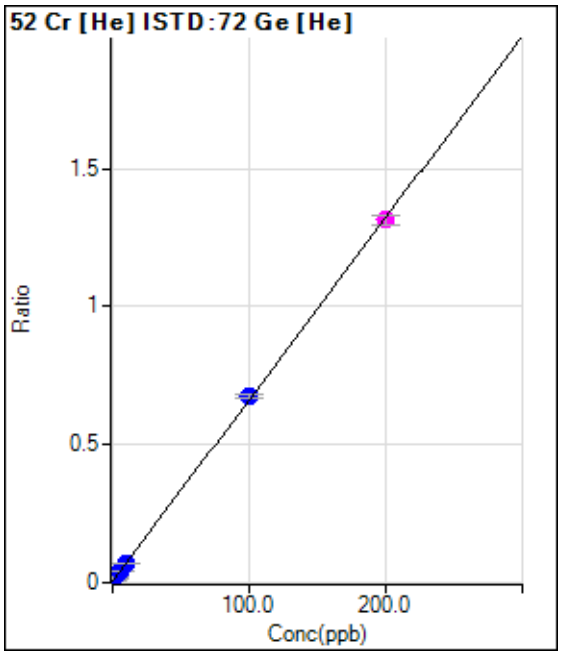
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	67625.71	0.0181	P	0.9
2	☐	2.000	1.954	109999.46	0.0295	P	1.3
3	☐	5.000	5.723	180349.52	0.0515	P	8.3
4	☐	10.000	10.046	273819.05	0.0766	P	1.3
5	☐	100.000	103.829	2138474.81	0.6226	A	4.4
6	☐	200.000	198.066	4017181.29	1.1712	A	2.8
7	☐	1.000					

y = 0.0058 * x + 0.0181
R = 0.9997
DL = 0.08787
BEC = 3.116

Weight: <None>
Min Conc: <None>

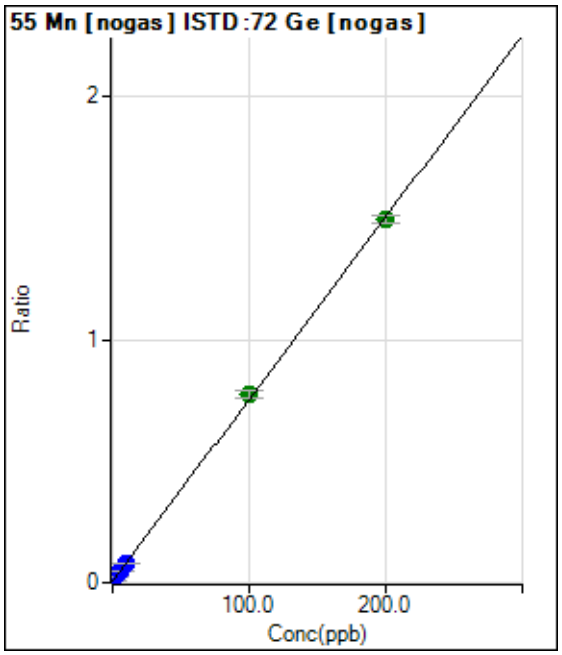


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3733.76	0.0041	P	6.2
2	☐	2.000	2.052	16340.74	0.0176	P	2.6
3	☐	5.000	5.255	35106.81	0.0387	P	1.1
4	☐	10.000	9.851	62578.68	0.0690	P	0.9
5	☐	100.000	102.108	596239.24	0.6767	P	2.4
6	☐	200.000	198.947	1152916.94	1.3146	M	2.5
7	☐	1.000					

y = 0.0066 * x + 0.0041
R = 0.9999
DL = 0.116
BEC = 0.6202

Weight: <None>
Min Conc: <None>

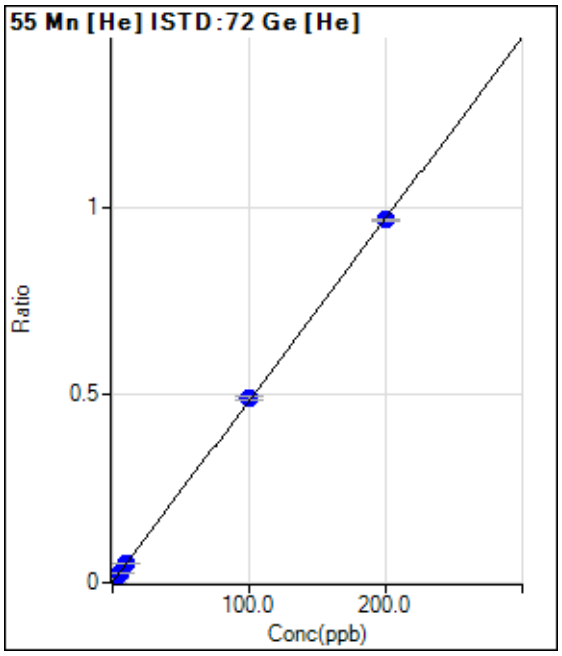
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19984.26	0.0054	P	3.2
2	☐	2.000	2.093	78348.48	0.0210	P	2.9
3	☐	5.000	5.515	163577.99	0.0467	P	7.5
4	☐	10.000	10.045	287871.03	0.0806	P	1.8
5	☐	100.000	102.782	2660856.73	0.7749	A	4.9
6	☐	200.000	198.593	5118570.65	1.4922	A	2.1
7	☐	1.000					

y = 0.0075 * x + 0.0054
R = 0.9999
DL = 0.06951
BEC = 0.7161

Weight: <None>
Min Conc: <None>

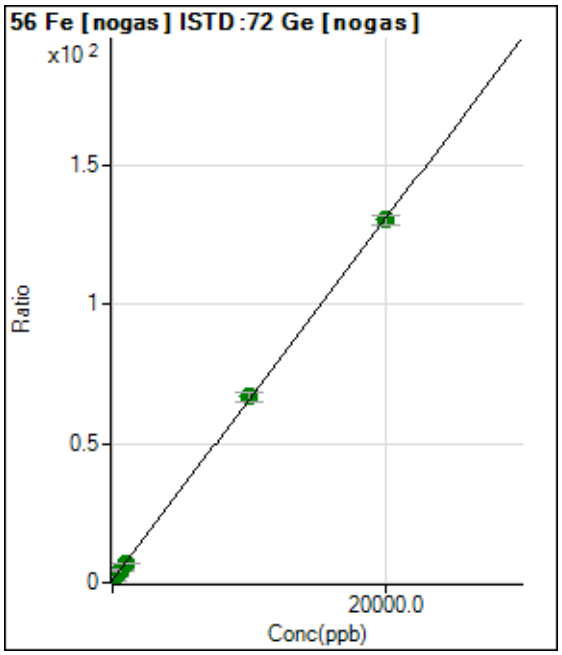


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	903.37	0.0010	P	26.3
2	☐	2.000	2.005	9939.45	0.0107	P	1.8
3	☐	5.000	5.226	23858.97	0.0263	P	2.4
4	☐	10.000	9.997	44824.50	0.0494	P	1.9
5	☐	100.000	101.179	432693.65	0.4911	P	2.2
6	☐	200.000	199.405	847982.96	0.9668	P	0.8
7	☐	1.000					

y = 0.0048 * x + 9.8978E-004
R = 1.0000
DL = 0.1612
BEC = 0.2043

Weight: <None>
Min Conc: <None>

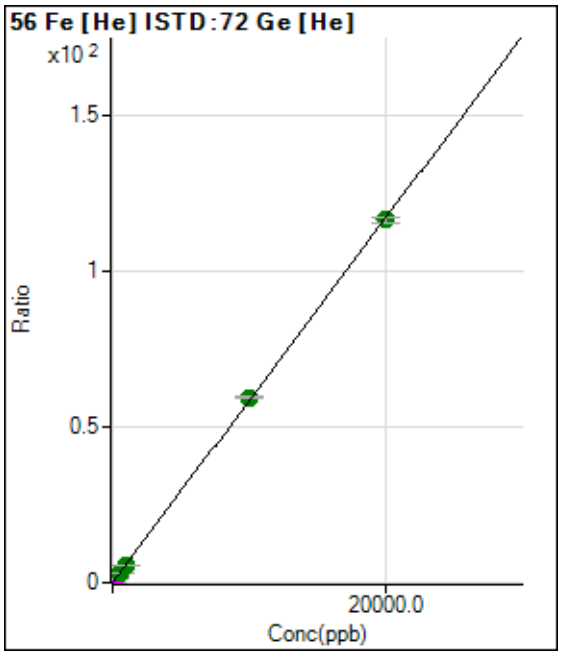
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3475326.64	0.9327	A	2.7
2	☐	200.000	197.690	8253109.82	2.2149	A	2.5
3	☐	500.000	525.808	15227973.26	4.3431	A	7.4
4	☐	1000.000	963.734	25667364.64	7.1836	A	1.5
5	☐	10000.00	10132.800	228862805.1	66.6556	A	5.2
6	☐	20000.00	19934.791	446697409.9	130.232	A	2.3
7	☐	100.000					

y = 0.0065 * x + 0.9327
R = 1.0000
DL = 11.68
BEC = 143.8

Weight: <None>
Min Conc: <None>

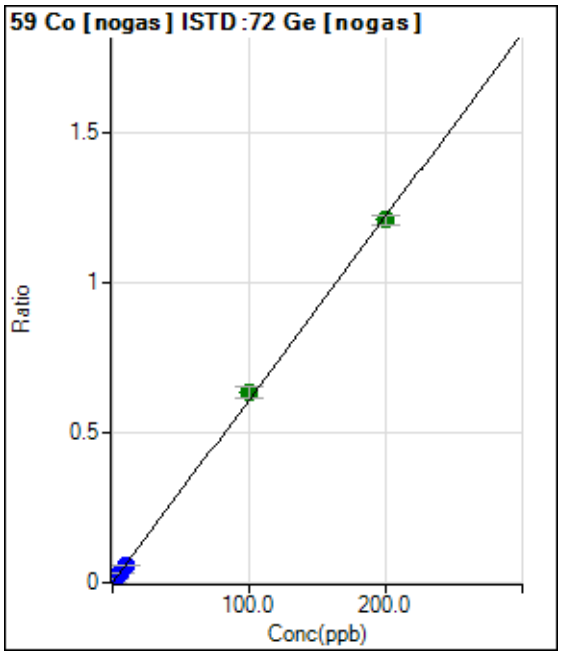


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13418.38	0.0147	P	3.5
2	☐	200.000	204.407	1124419.54	1.2111	M	2.2
3	☐	500.000	519.921	2773818.50	3.0578	A	0.6
4	☐	1000.000	983.525	5235604.61	5.7713	A	2.3
5	☐	10000.00	10176.200	52494760.89	59.5762	A	1.4
6	☐	20000.00	19912.181	102232328.4	116.561	A	1.7
7	☐	100.000					

y = 0.0059 * x + 0.0147
R = 0.9999
DL = 0.2624
BEC = 2.509

Weight: <None>
Min Conc: <None>

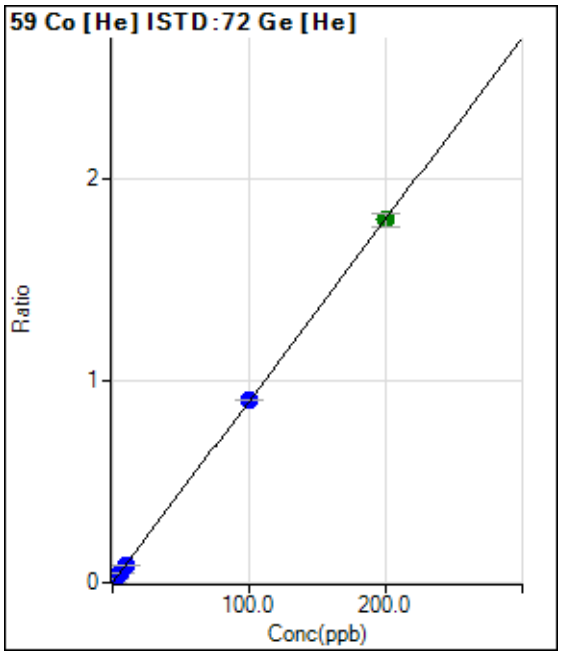
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	433.34	0.0001	P	11.4
2	☐	2.000	2.006	46030.96	0.0124	P	3.0
3	☐	5.000	5.262	113034.25	0.0322	P	6.3
4	☐	10.000	9.887	216017.69	0.0604	P	0.6
5	☐	100.000	103.725	2172840.02	0.6330	A	6.0
6	☐	200.000	198.136	4146868.27	1.2090	A	2.8
7	☐	1.000					

y = 0.0061 * x + 1.1616E-004
R = 0.9998
DL = 0.006534
BEC = 0.01904

Weight: <None>
Min Conc: <None>

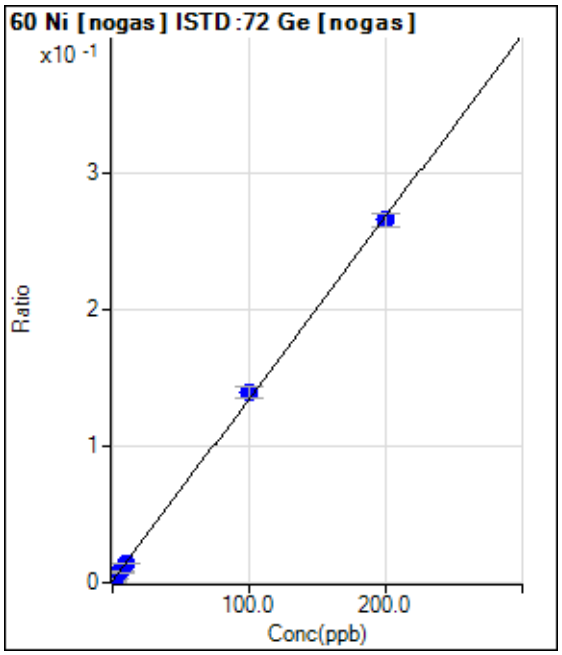


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0001	P	33.6
2	☐	2.000	2.022	16978.04	0.0183	P	1.9
3	☐	5.000	5.199	42546.04	0.0469	P	4.4
4	☐	10.000	9.722	79517.32	0.0876	P	1.0
5	☐	100.000	100.621	798769.18	0.9065	P	0.6
6	☐	200.000	199.698	1577889.30	1.7990	A	3.6
7	☐	1.000					

y = 0.0090 * x + 6.5665E-005
R = 1.0000
DL = 0.007344
BEC = 0.007289

Weight: <None>
Min Conc: <None>

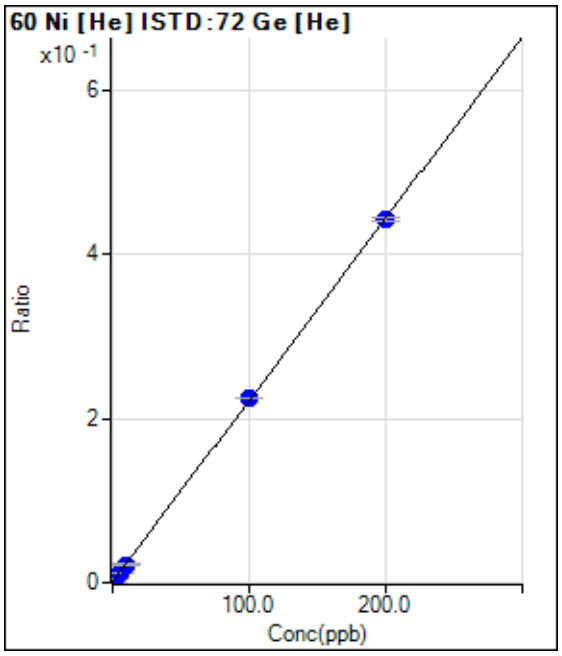
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.548	2590.23	0.0007	P	16.2
2	☐	2.000	1.540	12968.08	0.0035	P	2.4
3	☐	5.000	4.806	27420.70	0.0078	P	9.9
4	☐	10.000	9.427	49974.48	0.0140	P	2.3
5	☐	100.000	103.476	478360.58	0.1393	P	5.3
6	☐	200.000	198.300	911285.30	0.2657	P	3.5
7	☐	1.000					

y = 0.0013 * x + 0.0014
R = 0.9998
DL = 0.254
BEC = 1.069

Weight: <None>
Min Conc: <None>

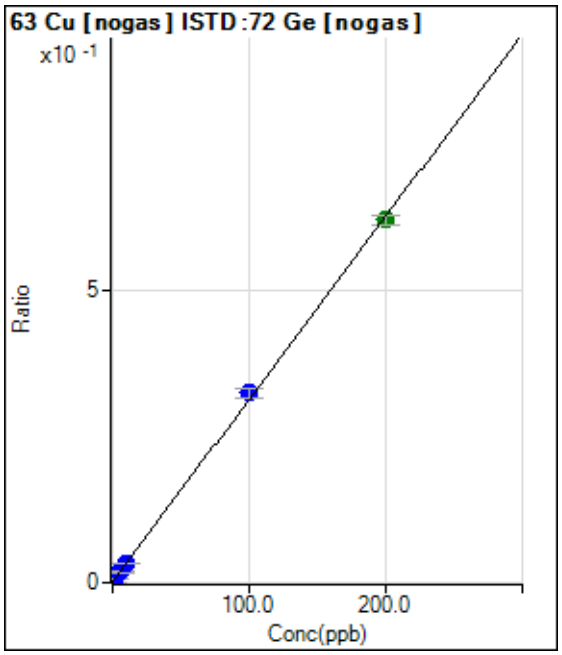


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.200	196.67	0.0002	P	39.6
2	☐	2.000	1.841	4400.59	0.0047	P	1.6
3	☐	5.000	5.060	10769.94	0.0119	P	4.6
4	☐	10.000	9.625	19954.29	0.0220	P	3.4
5	☐	100.000	101.309	198408.76	0.2252	P	0.8
6	☐	200.000	199.364	388082.55	0.4425	P	1.1
7	☐	1.000					

y = 0.0022 * x + 6.5873E-004
R = 1.0000
DL = 0.1151
BEC = 0.2972

Weight: <None>
Min Conc: <None>

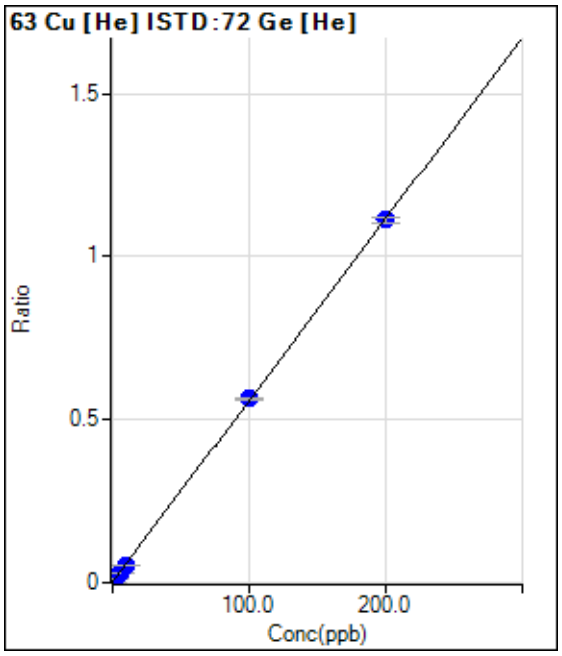
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5360.86	0.0014	P	8.8
2	☐	2.000	2.031	29029.70	0.0078	P	0.8
3	☐	5.000	5.517	65452.99	0.0187	P	10.2
4	☐	10.000	10.059	117459.38	0.0329	P	4.6
5	☐	100.000	103.381	1115155.17	0.3247	P	4.9
6	☐	200.000	198.293	2131900.59	0.6216	A	2.9
7	☐	1.000					

y = 0.0031 * x + 0.0014
R = 0.9998
DL = 0.121
BEC = 0.4596

Weight: <None>
Min Conc: <None>

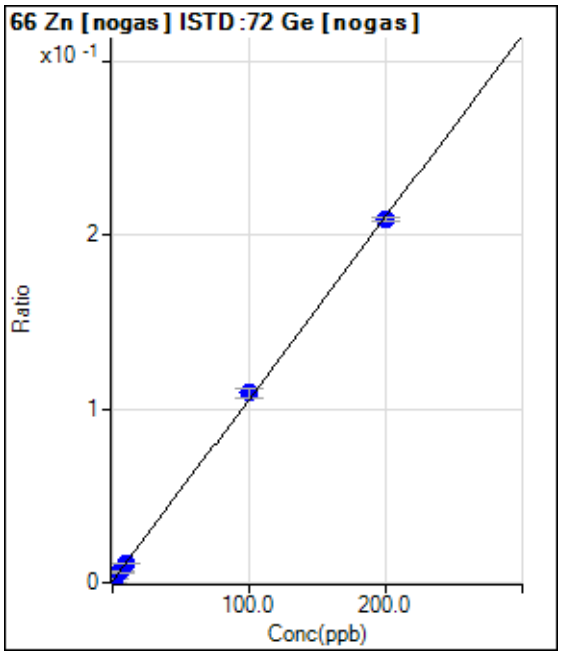


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.216	956.70	0.0010	P	5.5
2	☐	2.000	1.887	11827.29	0.0127	P	5.9
3	☐	5.000	5.216	28362.03	0.0313	P	1.0
4	☐	10.000	9.638	50693.36	0.0559	P	0.4
5	☐	100.000	100.923	496766.39	0.5638	P	0.6
6	☐	200.000	199.552	975789.31	1.1125	P	1.7
7	☐	1.000					

y = 0.0056 * x + 0.0022
R = 1.0000
DL = 0.0313
BEC = 0.4037

Weight: <None>
Min Conc: <None>

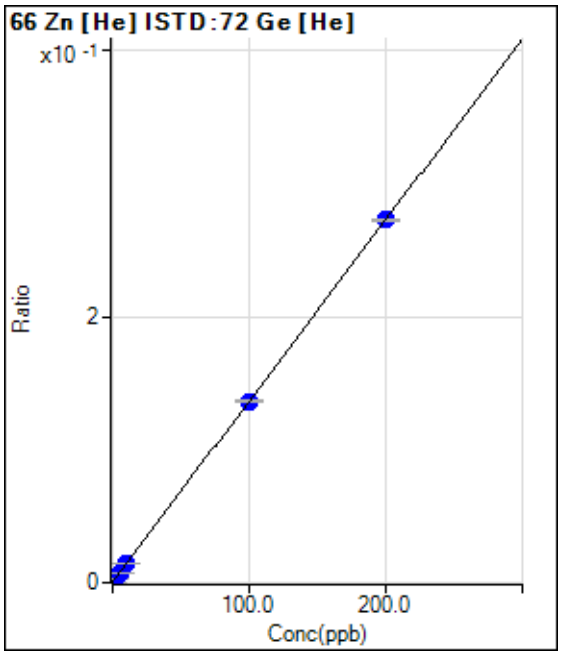
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.645	796.70	0.0002	P	17.2
2	☐	2.000	1.400	8792.23	0.0024	P	1.5
3	☐	5.000	5.010	21572.87	0.0061	P	4.5
4	☐	10.000	9.613	39222.15	0.0110	P	1.3
5	☐	100.000	103.193	374583.39	0.1091	P	5.5
6	☐	200.000	198.429	716838.06	0.2090	P	1.2
7	☐	1.000					

y = 0.0010 * x + 8.9032E-004
R = 0.9998
DL = 0.1052
BEC = 0.849

Weight: <None>
Min Conc: <None>

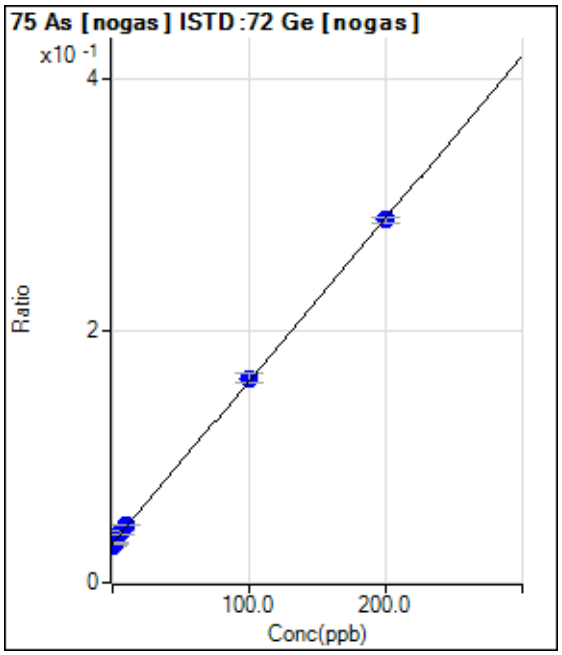


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.097	253.34	0.0003	P	17.7
2	☐	2.000	1.985	2890.29	0.0031	P	5.5
3	☐	5.000	5.214	6811.36	0.0075	P	3.9
4	☐	10.000	10.015	12744.56	0.0140	P	1.8
5	☐	100.000	99.779	120093.60	0.1363	P	1.5
6	☐	200.000	200.104	239369.65	0.2729	P	0.6
7	☐	1.000					

y = 0.0014 * x + 4.0965E-004
R = 1.0000
DL = 0.1083
BEC = 0.3008

Weight: <None>
Min Conc: <None>

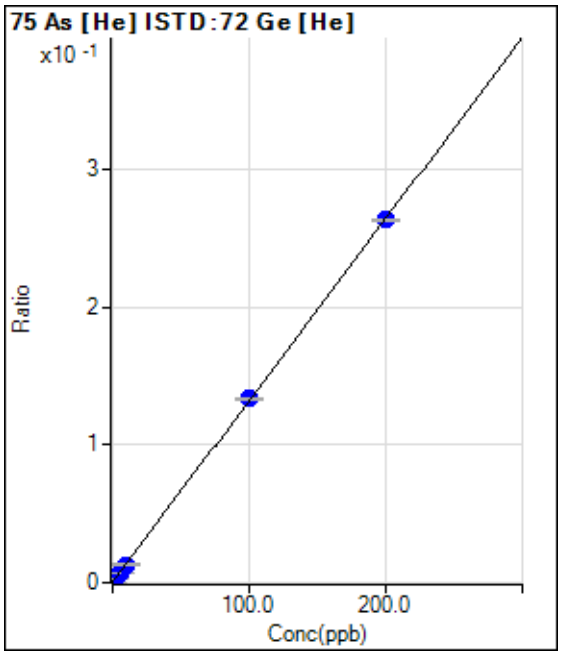
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.636	108294.63	0.0290	P	4.6
2	☐	2.000	-0.077	115816.81	0.0311	P	3.4
3	☐	5.000	6.604	139361.03	0.0397	P	5.3
4	☐	10.000	11.351	163779.53	0.0458	P	1.8
5	☐	100.000	101.688	558382.75	0.1626	P	4.9
6	☐	200.000	199.069	989617.87	0.2885	P	1.7
7	☐	1.000					

y = 0.0013 * x + 0.0312
R = 0.9998
DL = 3.095
BEC = 24.1

Weight: <None>
Min Conc: <None>

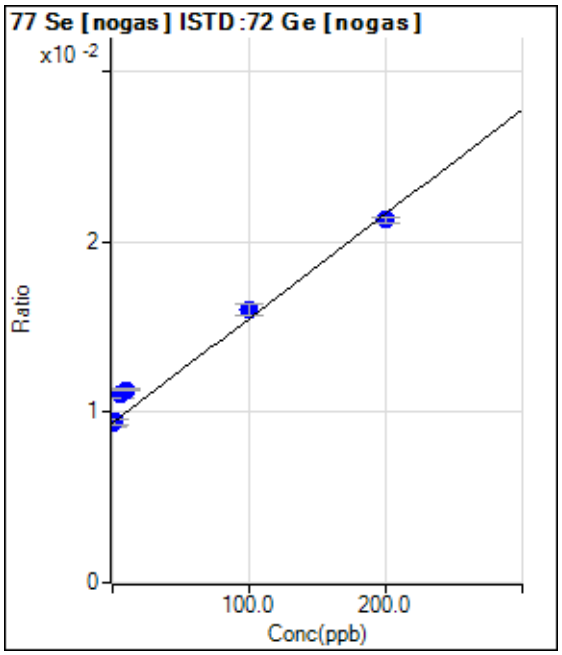


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	352.23	0.0004	P	9.8
2	☐	2.000	2.019	2826.90	0.0030	P	2.6
3	☐	5.000	5.079	6418.92	0.0071	P	2.4
4	☐	10.000	9.650	11880.56	0.0131	P	3.6
5	☐	100.000	100.971	117549.20	0.1334	P	0.8
6	☐	200.000	199.530	230899.31	0.2633	P	0.4
7	☐	1.000					

y = 0.0013 * x + 3.8520E-004
R = 1.0000
DL = 0.08625
BEC = 0.2924

Weight: <None>
Min Conc: <None>

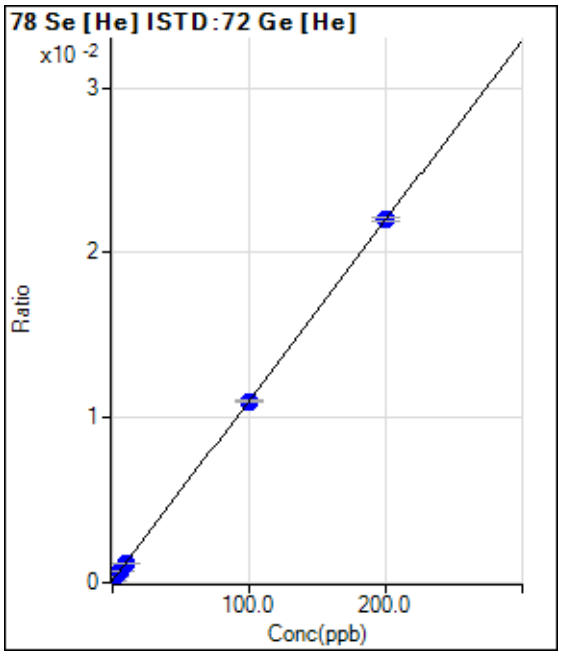
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34970.98	0.0094	P	5.5
2	☐	2.000	0.763	35141.27	0.0094	P	4.4
3	☐	5.000	27.981	38938.87	0.0111	P	4.8
4	☐	10.000	31.751	40462.25	0.0113	P	1.5
5	☐	100.000	108.496	55029.90	0.0160	P	3.9
6	☐	200.000	194.102	72942.53	0.0213	P	1.4
7	☐	1.000					

y = 6.1257E-005 * x + 0.0094
R = 0.9901
DL = 25.27
BEC = 153

Weight: <None>
Min Conc: <None>

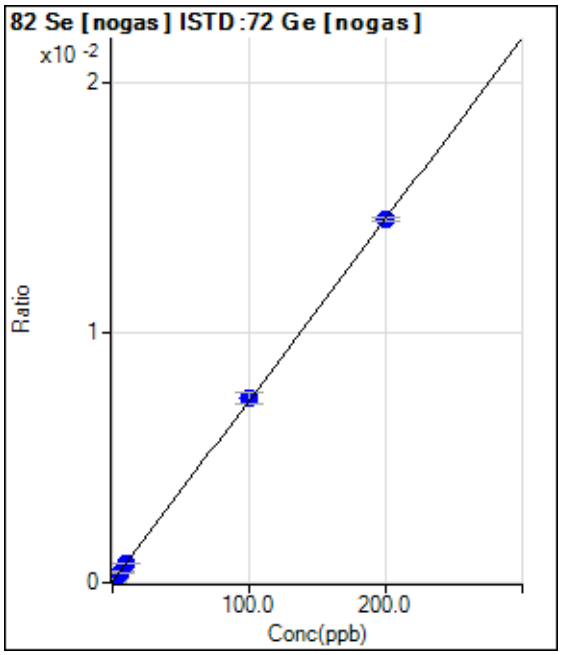


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.071	132.00	0.0001	P	18.1
2	☐	2.000	2.354	365.34	0.0004	P	6.2
3	☐	5.000	5.043	623.34	0.0007	P	6.4
4	☐	10.000	9.706	1085.37	0.0012	P	1.7
5	☐	100.000	99.629	9705.93	0.0110	P	1.5
6	☐	200.000	200.195	19292.19	0.0220	P	1.1
7	☐	1.000					

y = 1.0919E-004 * x + 1.3651E-004
R = 1.0000
DL = 0.719
BEC = 1.25

Weight: <None>
Min Conc: <None>

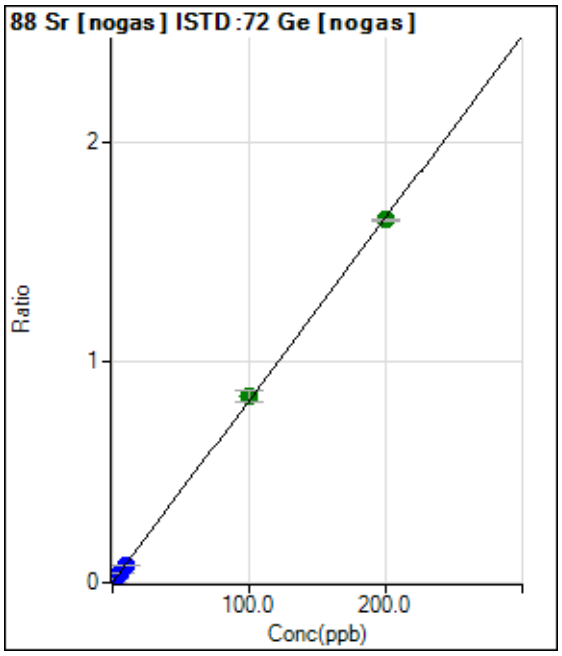
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0000	P	22.8
2	☐	2.000	1.835	640.02	0.0002	P	4.3
3	☐	5.000	5.025	1406.74	0.0004	P	18.4
4	☐	10.000	9.940	2716.92	0.0008	P	3.7
5	☐	100.000	100.886	25267.83	0.0074	P	6.2
6	☐	200.000	199.561	49821.99	0.0145	P	0.9
7	☐	1.000					

y = 7.2587E-005 * x + 3.8485E-005
R = 1.0000
DL = 0.3619
BEC = 0.5302

Weight: <None>
Min Conc: <None>

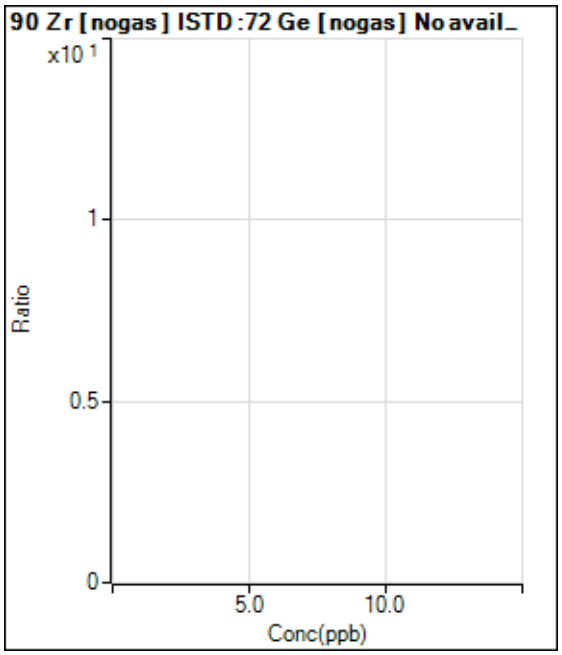


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2760.26	0.0007	P	4.5
2	☐	2.000	1.966	63361.86	0.0170	P	2.7
3	☐	5.000	5.153	152059.01	0.0434	P	7.0
4	☐	10.000	9.705	289433.34	0.0810	P	2.1
5	☐	100.000	102.200	2904729.75	0.8461	A	5.7
6	☐	200.000	198.911	5646506.38	1.6460	A	0.3
7	☐	1.000					

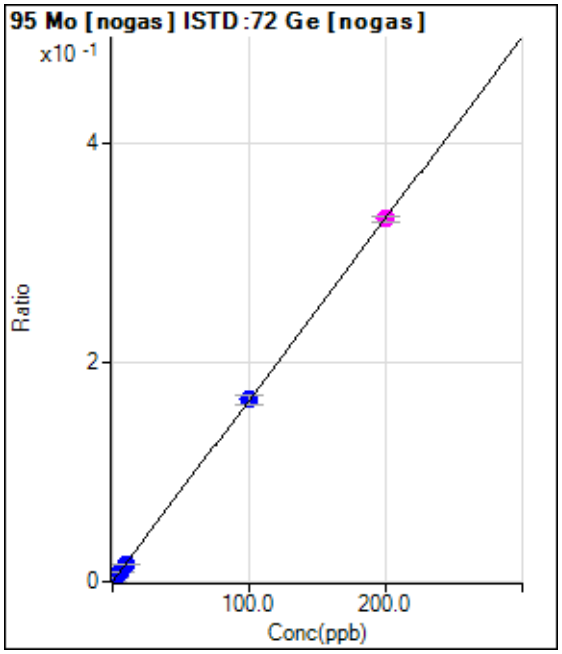
y = 0.0083 * x + 7.4004E-004
R = 0.9999
DL = 0.01204
BEC = 0.08947

Weight: <None>
Min Conc: <None>

Calibration for 283_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					

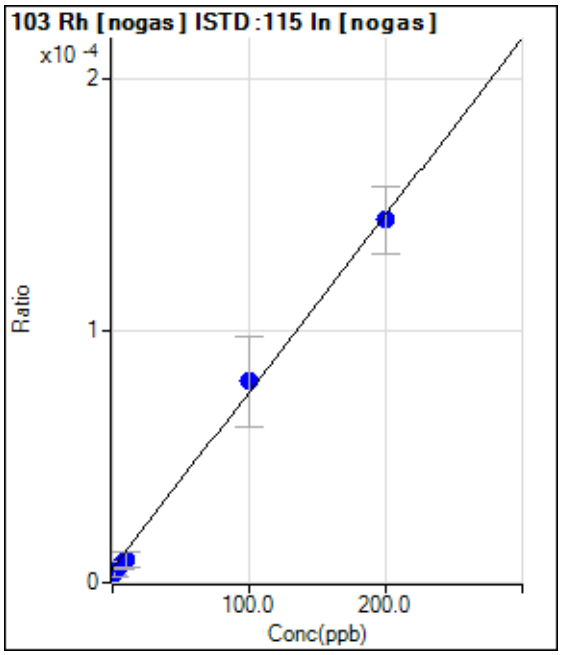


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0000	P	34.4
2	☐	2.000	1.900	11867.42	0.0032	P	1.6
3	☐	5.000	5.108	29761.68	0.0085	P	9.8
4	☐	10.000	9.304	55215.29	0.0154	P	1.9
5	☐	100.000	100.466	571471.84	0.1665	P	5.4
6	☐	200.000	199.800	1135329.64	0.3310	M	1.7
7	☐	1.000					

y = 0.0017 * x + 3.6451E-005
R = 1.0000
DL = 0.02273
BEC = 0.02201

Weight: <None>
Min Conc: <None>

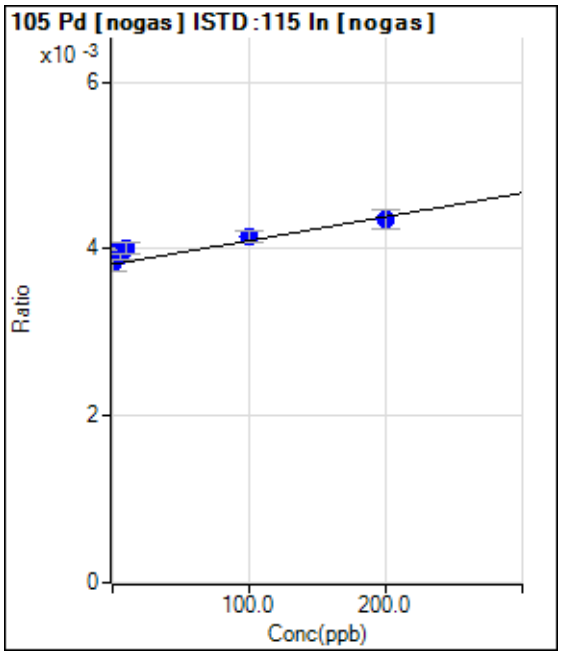
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	86.7
2	☐	2.000	-2.486	13.33	0.0000	P	86.6
3	☐	5.000	2.028	23.33	0.0000	P	44.0
4	☐	10.000	4.931	30.00	0.0000	P	64.1
5	☐	100.000	106.215	250.00	0.0001	P	44.8
6	☐	200.000	197.265	473.35	0.0001	P	18.2
7	☐	1.000					

y = 7.0262E-007 * x + 5.5800E-006
R = 0.9988
DL = 20.66
BEC = 7.942

Weight: <None>
Min Conc: <None>

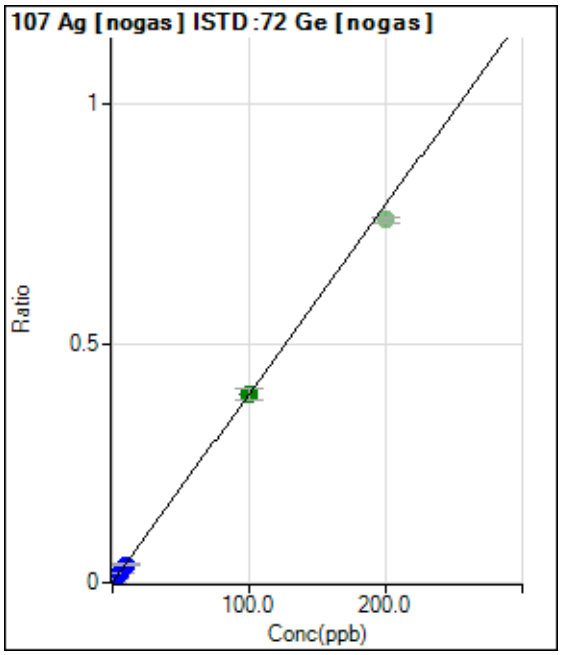


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13325.19	0.0038	P	4.3
2	☐	2.000	58.329	13992.44	0.0040	P	1.9
3	☐	5.000	39.737	12728.11	0.0039	P	2.6
4	☐	10.000	66.393	13265.21	0.0040	P	3.2
5	☐	100.000	118.235	12998.32	0.0042	P	3.5
6	☐	200.000	186.631	14272.65	0.0043	P	5.3
7	☐	1.000					

y = 2.8546E-006 * x + 0.0038
R = 0.9459
DL = 173.9
BEC = 1336

Weight: <None>
Min Conc: <None>

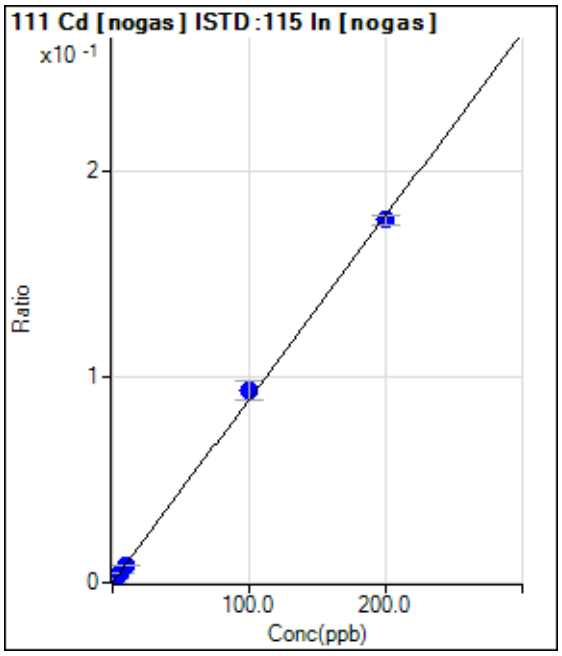
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.36	0.0000	P	96.3
2	☐	2.000	1.893	28002.38	0.0075	P	2.7
3	☐	5.000	5.035	69777.37	0.0199	P	8.9
4	☐	10.000	9.627	135810.18	0.0380	P	5.0
5	☐	100.000	100.038	1355344.56	0.3948	A	6.1
6	☑	200.000		2601707.98	0.7585	A	1.4
7	☐	1.000					

y = 0.0039 * x + 4.4411E-005
R = 1.0000
DL = 0.0325
BEC = 0.01125

Weight: <None>
Min Conc: <None>

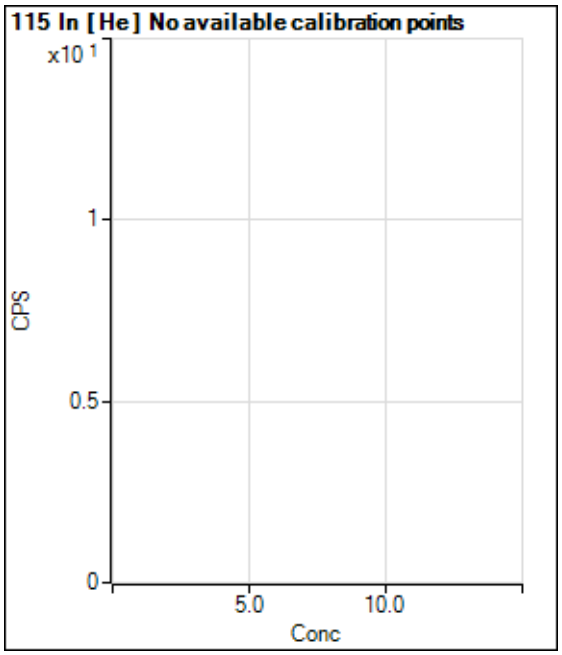


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	31.9
2	☐	2.000	1.911	6007.77	0.0017	P	3.3
3	☐	5.000	5.289	15210.16	0.0047	P	9.2
4	☐	10.000	9.689	28583.48	0.0086	P	3.6
5	☐	100.000	104.429	289802.88	0.0929	P	10.2
6	☐	200.000	197.795	577562.62	0.1760	P	2.7
7	☐	1.000					

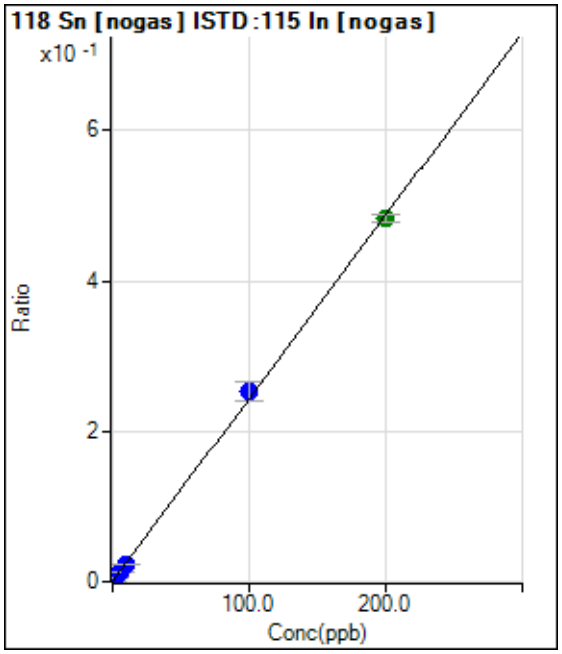
y = 8.8983E-004 * x + 8.5518E-006
R = 0.9996
DL = 0.009197
BEC = 0.009611

Weight: <None>
Min Conc: <None>

Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1304341.71		A	0.8
2	☐			1326196.52		A	1.0
3	☐			1303085.08		A	2.1
4	☐			1256180.38		A	0.9
5	☐			1216230.08		A	2.1
6	☐			1232509.45		A	1.8
7	☐						

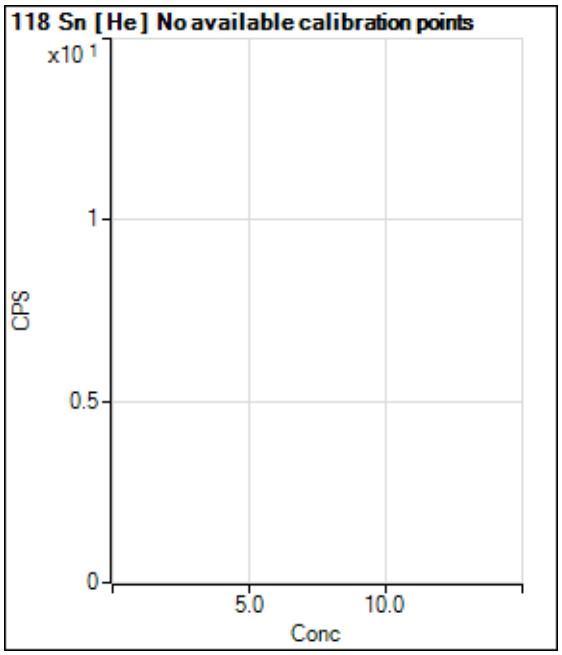


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	996.71	0.0003	P	3.2
2	☐	2.000	1.819	16558.05	0.0047	P	5.3
3	☐	5.000	5.117	41068.38	0.0127	P	10.1
4	☐	10.000	9.592	78315.03	0.0236	P	1.6
5	☐	100.000	103.696	787913.56	0.2526	P	9.9
6	☐	200.000	198.171	1583321.33	0.4825	A	2.3
7	☐	1.000					

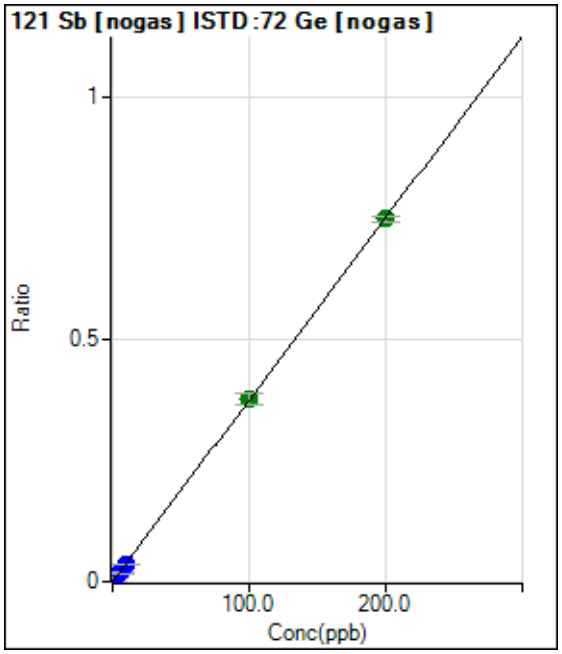
y = 0.0024 * x + 2.8548E-004
R = 0.9997
DL = 0.01128
BEC = 0.1173

Weight: <None>
Min Conc: <None>

Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			406.68		P	12.4
2	☐			6728.07		P	2.6
3	☐			16841.59		P	4.0
4	☐			31137.93		P	3.4
5	☐			312781.85		P	1.4
6	☐			630668.49		P	1.0
7	☐						

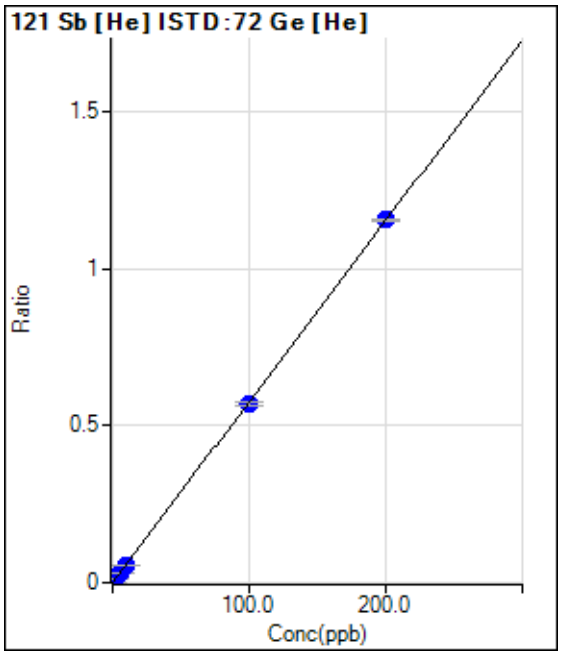


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.68	0.0001	P	11.6
2	☐	2.000	1.888	26693.96	0.0072	P	4.2
3	☐	5.000	4.924	65067.39	0.0186	P	8.1
4	☐	10.000	9.419	126611.04	0.0354	P	1.5
5	☐	100.000	100.817	1299039.09	0.3785	A	6.7
6	☐	200.000	199.623	2570602.72	0.7493	A	1.3
7	☐	1.000					

y = 0.0038 * x + 7.9642E-005
R = 1.0000
DL = 0.007399
BEC = 0.02122

Weight: <None>
Min Conc: <None>

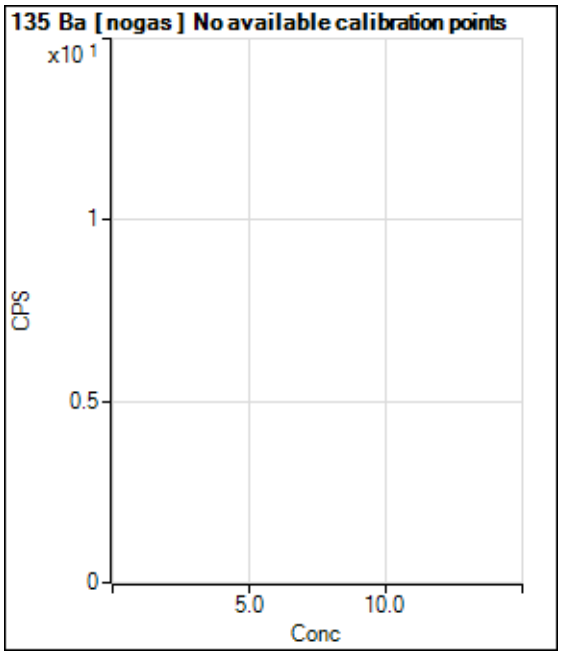
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	13.4
2	☐	2.000	1.980	10690.09	0.0115	P	1.5
3	☐	5.000	4.976	26089.78	0.0288	P	2.2
4	☐	10.000	9.300	48667.95	0.0536	P	1.8
5	☐	100.000	98.793	501163.47	0.5688	P	1.3
6	☐	200.000	200.639	1013013.06	1.1550	P	0.6
7	☐	1.000					

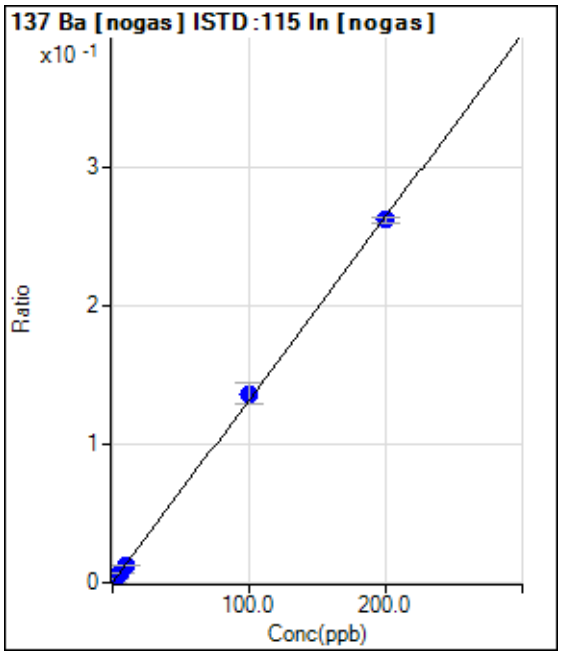
y = 0.0058 * x + 1.1664E-004
R = 1.0000
DL = 0.008155
BEC = 0.02026

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			143.33		P	32.2
2	☐			5160.85		P	1.4
3	☐			12998.45		P	3.0
4	☐			24484.27		P	2.6
5	☐			248379.44		P	0.9
6	☐			490069.47		P	1.9
7	☐						

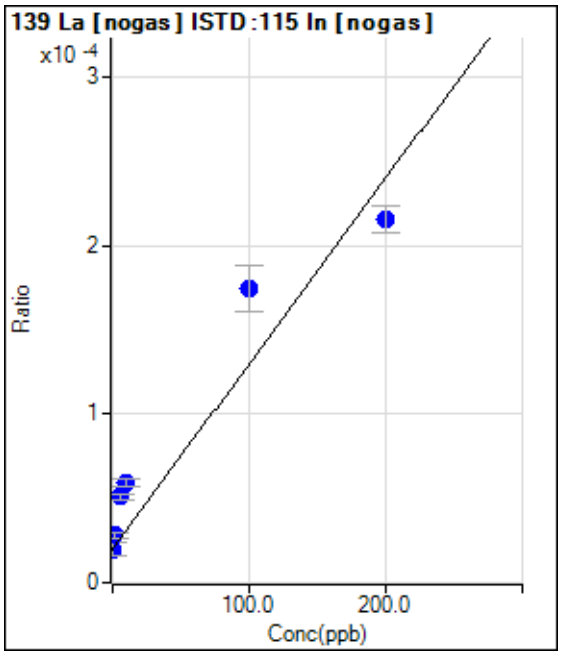
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0001	P	25.8
2	☐	2.000	1.874	8909.11	0.0025	P	5.1
3	☐	5.000	5.264	22548.33	0.0070	P	12.3
4	☐	10.000	9.525	41774.19	0.0126	P	5.7
5	☐	100.000	103.315	424775.18	0.1363	P	11.0
6	☐	200.000	198.361	858584.13	0.2616	P	1.5
7	☐	1.000					

y = 0.0013 * x + 6.4296E-005
R = 0.9998
DL = 0.03768
BEC = 0.04877

Weight: <None>
Min Conc: <None>

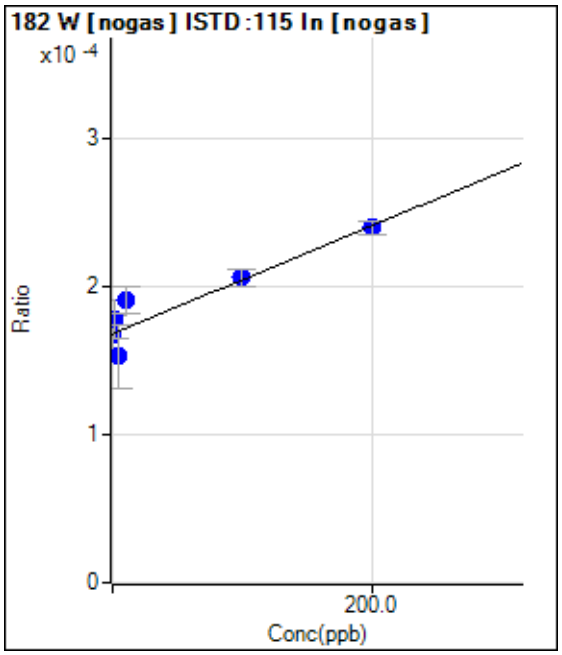


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	41.7
2	☐	2.000	7.787	100.00	0.0000	P	11.8
3	☐	5.000	28.464	166.67	0.0001	P	7.1
4	☐	10.000	35.987	196.67	0.0001	P	8.3
5	☐	100.000	140.830	543.35	0.0002	P	15.5
6	☐	200.000	177.641	706.69	0.0002	P	7.4
7	☐	1.000					

y = 1.0994E-006 * x + 1.9919E-005
R = 0.9625
DL = 22.68
BEC = 18.12

Weight: <None>
Min Conc: <None>

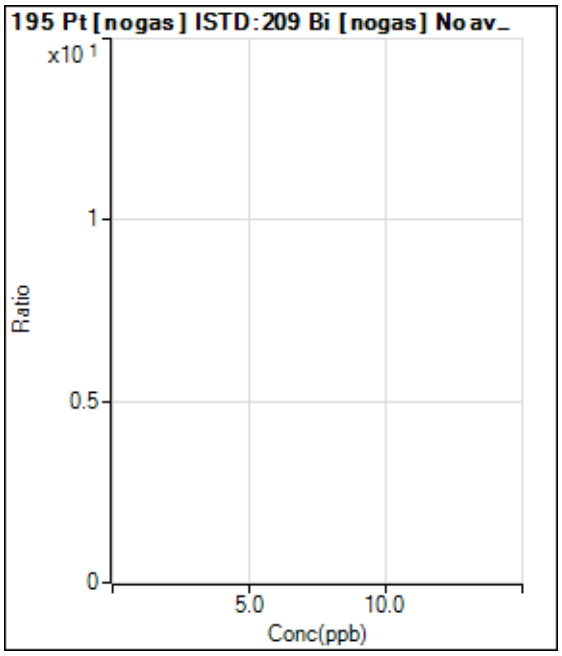
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	583.36	0.0002	P	14.2
2	☐	2.000	26.827	623.36	0.0002	P	14.7
3	☐	5.000	-41.847	503.35	0.0002	P	27.9
4	☐	10.000	62.378	630.02	0.0002	P	9.9
5	☐	100.000	103.671	643.35	0.0002	P	6.1
6	☐	200.000	196.469	786.70	0.0002	P	4.0
7	☐	1.000					

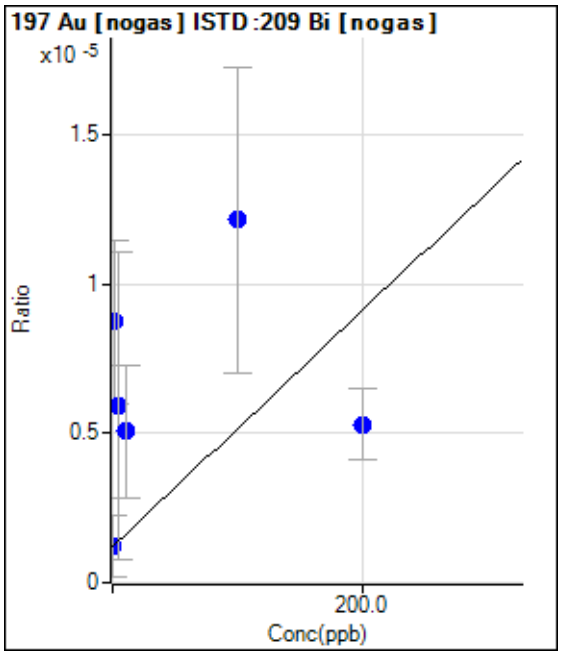
y = 3.6486E-007 * x + 1.6785E-004
R = 0.9218
DL = 196
BEC = 460

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					

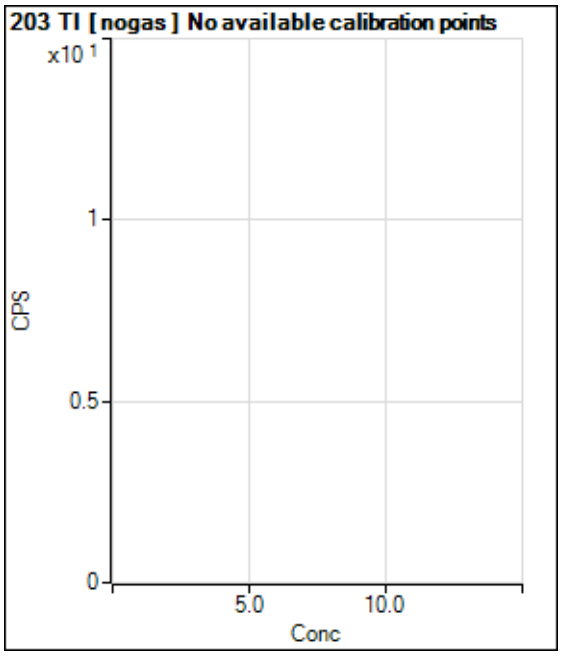
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	189.504	23.33	0.0000	P	62.6
3	☐	5.000	118.783	13.33	0.0000	P	173.
4	☐	10.000	96.996	13.33	0.0000	P	86.9
5	☐	100.000	275.410	30.00	0.0000	P	84.2
6	☐	200.000	103.225	13.33	0.0000	P	45.5
7	☐	1.000					

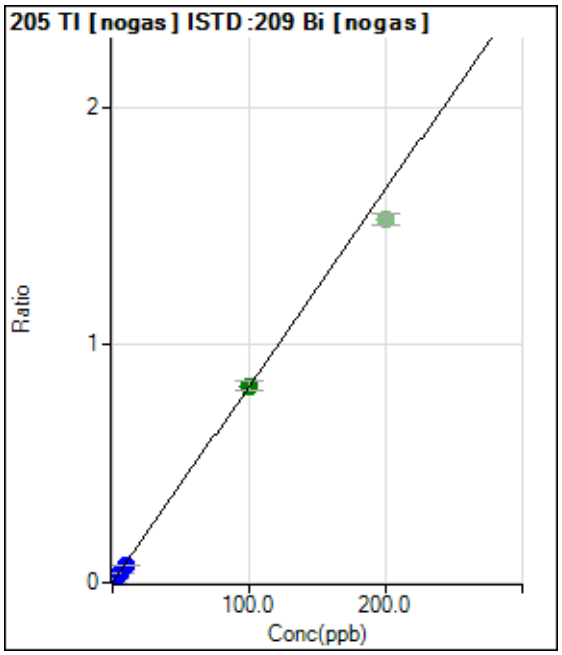
y = 3.9731E-008 * x + 1.2028E-006
R = 0.2286
DL = 157.3
BEC = 30.27

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			66.67		P	37.7
2	☐			17119.25		P	2.8
3	☐			41579.91		P	1.2
4	☐			79597.06		P	3.6
5	☐			821817.88		P	4.1
6	☐			1671901.90		A	2.3
7	☐						

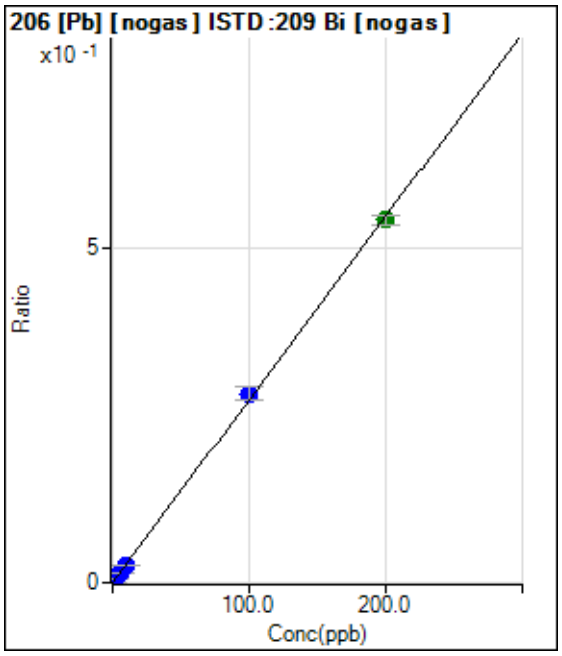
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193.34	0.0001	P	18.8
2	☐	2.000	1.851	40740.99	0.0154	P	5.0
3	☐	5.000	5.037	100588.81	0.0417	P	6.0
4	☐	10.000	8.893	190015.75	0.0736	P	8.8
5	☐	100.000	100.112	1979502.47	0.8282	A	5.4
6	☑	200.000		3861400.36	1.5275	A	3.2
7	☐	1.000					

y = 0.0083 * x + 7.2553E-005
R = 0.9999
DL = 0.00495
BEC = 0.008771

Weight: <None>
Min Conc: <None>

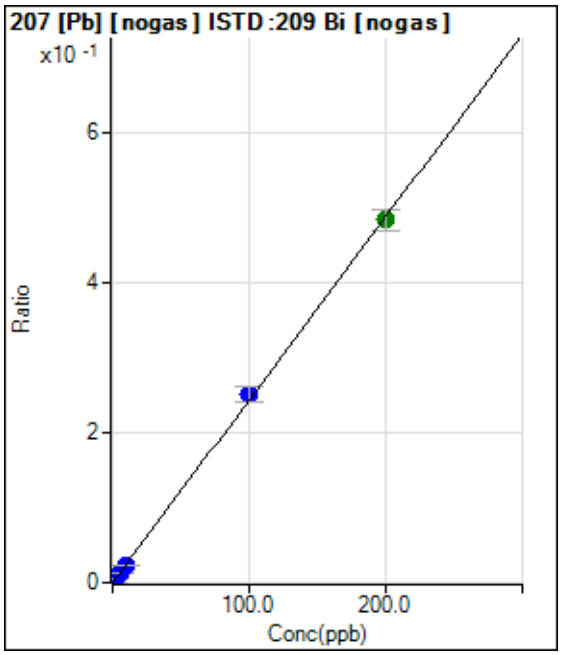


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	58.0
2	☐	2.000	1.960	14263.03	0.0054	P	2.4
3	☐	5.000	5.302	35021.14	0.0145	P	4.2
4	☐	10.000	9.532	67342.04	0.0261	P	6.4
5	☐	100.000	103.488	675581.37	0.2828	P	6.5
6	☐	200.000	198.272	1369804.36	0.5418	A	2.7
7	☐	1.000					

y = 0.0027 * x + 2.5234E-005
R = 0.9998
DL = 0.01606
BEC = 0.009235

Weight: <None>
Min Conc: <None>

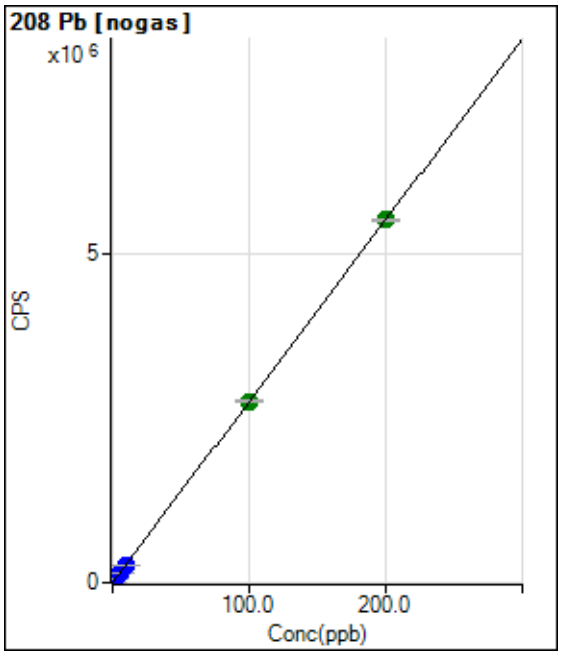
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0000	P	40.8
2	☐	2.000	1.997	13005.38	0.0049	P	3.2
3	☐	5.000	5.232	30866.07	0.0128	P	5.1
4	☐	10.000	9.306	58752.44	0.0227	P	6.3
5	☐	100.000	102.978	599927.82	0.2513	P	8.3
6	☐	200.000	198.540	1224342.85	0.4846	A	5.6
7	☐	1.000					

y = 0.0024 * x + 3.3877E-005
R = 0.9998
DL = 0.01698
BEC = 0.01388

Weight: <None>
Min Conc: <None>

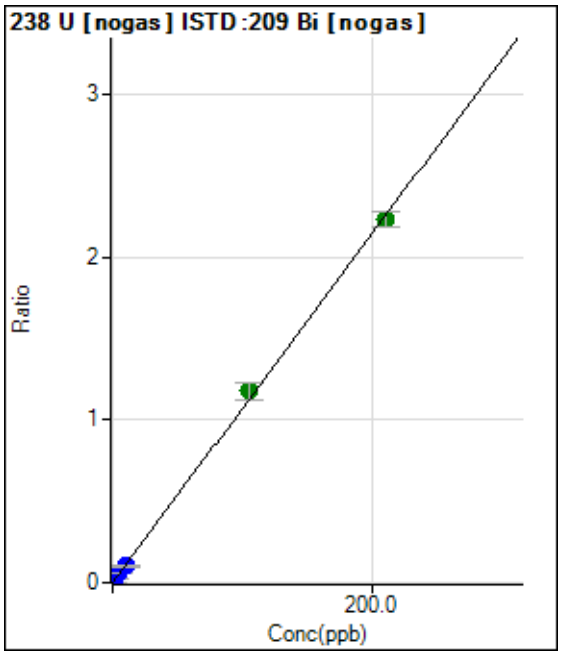


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	306.67		P	12.3
2	☐	2.000	2.069	57352.99		P	2.1
3	☐	5.000	5.109	141171.14		P	0.4
4	☐	10.000	9.703	267837.44		P	0.6
5	☐	100.000	99.748	2750600.00		A	1.1
6	☐	200.000	200.137	5518582.89		A	0.8
7	☐	1.000					

y = 27572.4291 * x + 306.6667
R = 1.0000
DL = 0.004119
BEC = 0.01112

Weight: <None>
Min Conc: <None>

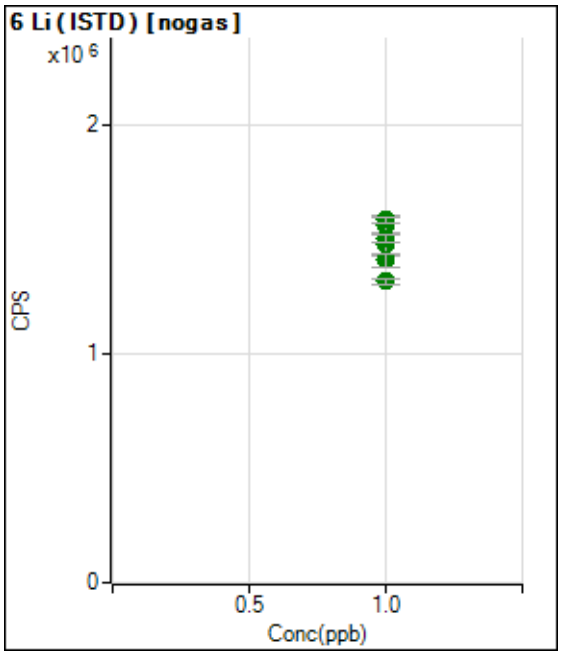
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	76.6
2	☐	2.000	1.982	56471.05	0.0213	P	3.2
3	☐	5.000	5.422	140377.29	0.0583	P	6.9
4	☐	10.000	9.636	267280.05	0.1035	P	7.5
5	☐	105.000	109.840	2814542.25	1.1797	A	9.3
6	☐	210.000	207.587	5635326.58	2.2296	A	4.1
7	☐	1.000					

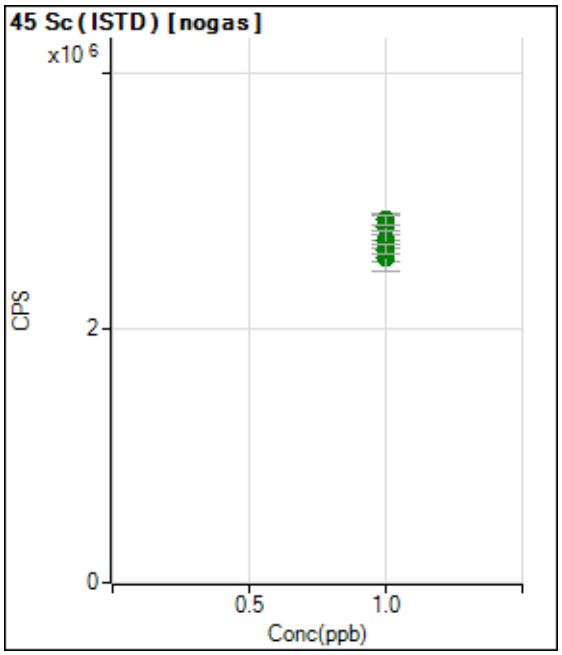
y = 0.0107 * x + 2.6312E-005
R = 0.9996
DL = 0.005626
BEC = 0.00245

Weight: <None>
Min Conc: <None>

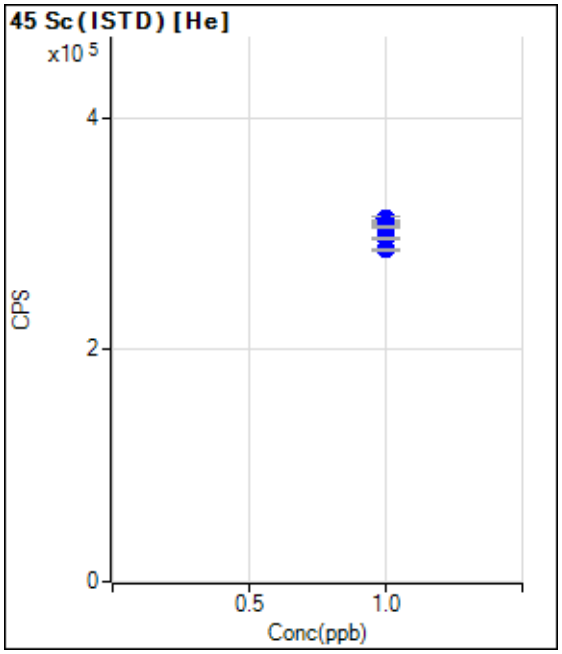


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1561049.21		A	5.6
2	☐	1.000		1582672.72		A	1.9
3	☐	1.000		1473574.63		A	7.0
4	☐	1.000		1501518.35		A	1.7
5	☐	1.000		1408609.05		A	4.1
6	☐	1.000		1316097.75		A	2.0
7	☐	1.000					

Calibration for 283_ICV.d

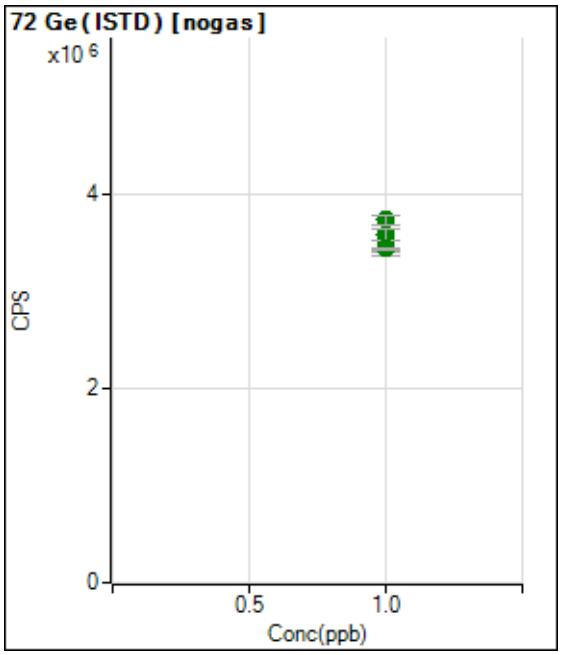


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2792104.23		A	7.8
2	☐	1.000		2848253.29		A	2.9
3	☐	1.000		2629538.29		A	8.3
4	☐	1.000		2691751.83		A	5.1
5	☐	1.000		2556439.28		A	8.3
6	☐	1.000		2617377.67		A	2.5
7	☐	1.000					

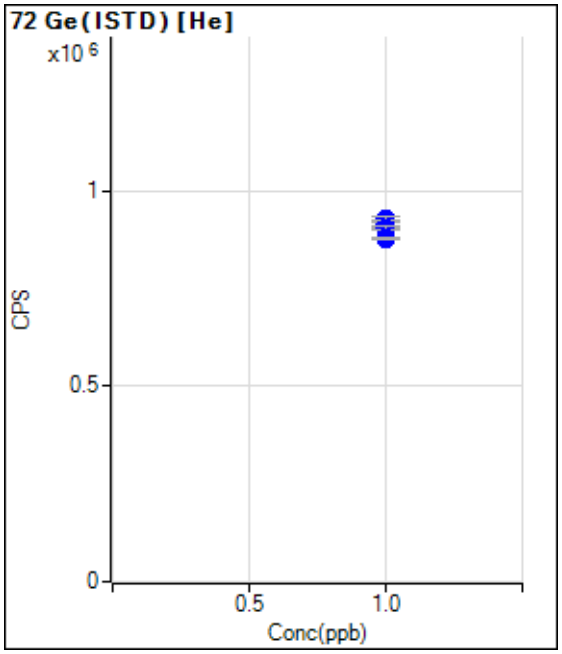


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		310721.29		P	0.4
2	☐	1.000		312837.78		P	1.7
3	☐	1.000		307894.91		P	0.7
4	☐	1.000		305644.45		P	0.5
5	☐	1.000		296519.14		P	0.4
6	☐	1.000		286195.62		P	0.5
7	☐	1.000					

Calibration for 283_ICV.d

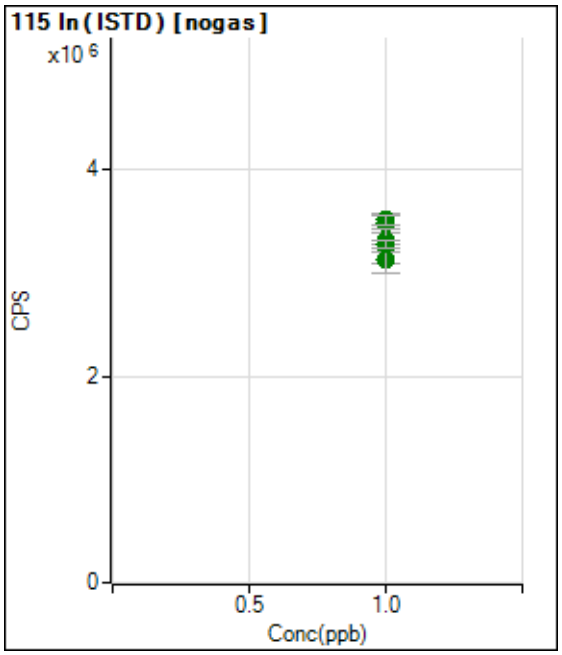


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3727881.30		A	2.5
2	☐	1.000		3727478.59		A	2.3
3	☐	1.000		3518477.97		A	7.1
4	☐	1.000		3574184.01		A	3.2
5	☐	1.000		3438831.09		A	4.5
6	☐	1.000		3430381.93		A	0.8
7	☐	1.000					

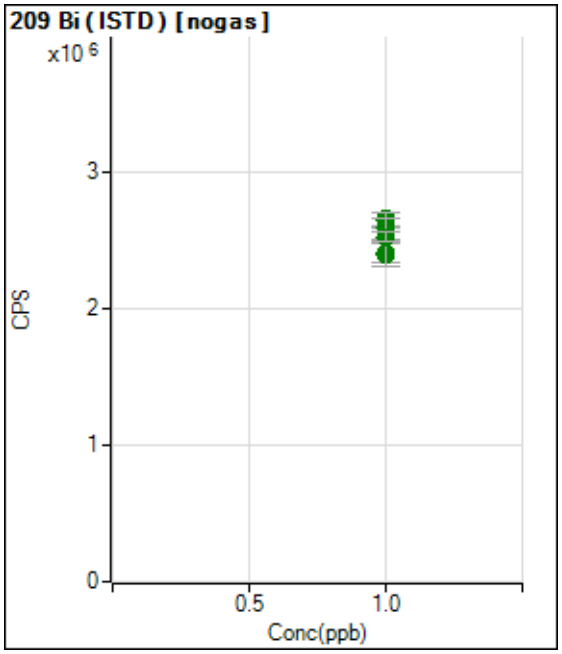


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		913805.84		P	1.2
2	☐	1.000		928507.20		P	1.1
3	☐	1.000		907153.56		P	0.7
4	☐	1.000		907296.55		P	1.1
5	☐	1.000		881144.99		P	0.4
6	☐	1.000		877109.31		P	0.6
7	☐	1.000					

Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3493075.68		A	5.4
2	☐	1.000		3516344.70		A	2.4
3	☐	1.000		3243733.85		A	9.2
4	☐	1.000		3317166.57		A	6.3
5	☐	1.000		3137443.23		A	8.9
6	☐	1.000		3282583.35		A	2.1
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2658884.91		A	3.8
2	☐	1.000		2651686.57		A	3.9
3	☐	1.000		2415811.32		A	5.9
4	☐	1.000		2589500.90		A	5.9
5	☐	1.000		2396302.57		A	7.2
6	☐	1.000		2529566.32		A	3.1
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	030CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:02:20-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	70	53.99
Na	23	1	nogas	289130	0.00
Mg	24	1	nogas	16042	0.11
Al	27	1	nogas	33584	0.01
K	39	1	nogas	6864280	0.00
Ti	47	1	nogas	243	5.93
V	51	1	nogas	973352	0.00
Cr	52	1	nogas	66740	0.00
Mn	55	1	nogas	17158	0.01
Co	59	1	nogas	500	3.12
Ni	60	1	nogas	673	0.89
Cu	63	1	nogas	2193	0.23
Zn	66	1	nogas	727	1.91
As	75	1	nogas	129080	0.00
Sr	88	1	nogas	1107	0.74
Ag	107	1	nogas	1357	0.46
Cd	111	1	nogas	17	207.85
Sb	121	1	nogas	780	0.28
Tl	205	1	nogas	467	6.10
Pb	208	1	nogas	323	1.46
[Pb]	206	1	nogas	137	15.46
[Pb]	207	1	nogas	67	34.37
Na	23	2	He	31346	0.01
Mg	24	2	He	933	1.66
Al	27	2	He	877	1.89
K	39	2	He	190359	0.00
Ca	43	2	He	47	161.26
Ca	44	2	He	930	1.70
V	51	2	He	15041	0.00
Cr	52	2	He	3415	0.09
Mn	55	2	He	660	1.88
Fe	56	2	He	17485	0.02
Co	59	2	He	70	53.99
Ni	60	2	He	113	19.59
Cu	63	2	He	807	0.62
Zn	66	2	He	220	10.93
As	75	2	He	579	3.13
Se	78	2	He	202	5.96
B	11	1	nogas	14689	0.01
Si	28	1	nogas	2988508	0.00
Ca	43	1	nogas	567	0.65
Ca	44	1	nogas	42729	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2476831	0.00
Se	77	1	nogas	41564	0.01
Se	82	1	nogas	177	9.25
Mo	95	1	nogas	293	5.37
Sn	118	1	nogas	1167	4.42
Ba	137	1	nogas	270	9.50
Sb	121	2	He	370	1.46
Li	7	1	nogas	70122	0.00
P	31	1	nogas	63500	0.00
La	139	1	nogas	37	227.24

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	826648	1.09
Ge	72	1	nogas	1877764	2.28
In	115	1	nogas	1597662	2.25
Bi	209	1	nogas	1215842	2.65
Ge	72	2	He	519023	1.20

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	031CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:04:21-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	8876	0.03
Na	23	1	nogas	3326081	0.00
Mg	24	1	nogas	1966312	0.00
Al	27	1	nogas	59721	0.00
K	39	1	nogas	9256872	0.00
Ti	47	1	nogas	2324	0.42
V	51	1	nogas	992744	0.00
Cr	52	1	nogas	88416	0.00
Mn	55	1	nogas	46038	0.00
Co	59	1	nogas	23889	0.01
Ni	60	1	nogas	5784	0.09
Cu	63	1	nogas	14726	0.01
Zn	66	1	nogas	4961	0.08
As	75	1	nogas	132547	0.00
Sr	88	1	nogas	32343	0.00
Ag	107	1	nogas	13539	0.02
Cd	111	1	nogas	3010	0.17
Sb	121	1	nogas	13812	0.01
Tl	205	1	nogas	18030	0.01
Pb	208	1	nogas	26545	0.01
[Pb]	206	1	nogas	6678	0.08
[Pb]	207	1	nogas	5955	0.05
Na	23	2	He	224961	0.00
Mg	24	2	He	107842	0.00
Al	27	2	He	1540	0.18
K	39	2	He	310888	0.00
Ca	43	2	He	327	3.79
Ca	44	2	He	6238	0.08
V	51	2	He	21448	0.00
Cr	52	2	He	10503	0.01
Mn	55	2	He	6011	0.10
Fe	56	2	He	649848	0.00
Co	59	2	He	9483	0.03
Ni	60	2	He	2580	0.51
Cu	63	2	He	6551	0.07
Zn	66	2	He	1837	0.45
As	75	2	He	2270	0.24
Se	78	2	He	353	3.07
B	11	1	nogas	41325	0.01
Si	28	1	nogas	3621399	0.00

Calibration Standard Report

Ca	43	1	nogas	4474	0.01
Ca	44	1	nogas	109559	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	4885263	0.00
Se	77	1	nogas	41127	0.01
Se	82	1	nogas	477	4.07
Mo	95	1	nogas	6081	0.05
Sn	118	1	nogas	8752	0.03
Ba	137	1	nogas	4471	0.10
Sb	121	2	He	6181	0.05
P	31	1	nogas	74473	0.00
La	139	1	nogas	90	12.35

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	806857	0.65	826648	97.61	70	125	
Ge	72	1	nogas	1892791	2.89	1877764	100.80	70	125	
In	115	1	nogas	1654240	3.11	1597662	103.54	70	125	
Bi	209	1	nogas	1215072	4.38	1215842	99.94	70	125	
Ge	72	2	He	521848	2.13	519023	100.54	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	032CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:06:18-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	22410	0.01
Na	23	1	nogas	7781922	0.00
Mg	24	1	nogas	4688941	0.00
Al	27	1	nogas	100145	0.00
K	39	1	nogas	12662284	0.00
Ti	47	1	nogas	5301	0.17
V	51	1	nogas	1049304	0.00
Cr	52	1	nogas	119858	0.00
Mn	55	1	nogas	87862	0.00
Co	59	1	nogas	58474	0.00
Ni	60	1	nogas	14126	0.03
Cu	63	1	nogas	34075	0.00
Zn	66	1	nogas	12291	0.02
As	75	1	nogas	140049	0.00
Sr	88	1	nogas	79077	0.00
Ag	107	1	nogas	33602	0.01
Cd	111	1	nogas	7635	0.06
Sb	121	1	nogas	34424	0.00
Tl	205	1	nogas	44658	0.00
Pb	208	1	nogas	63696	0.00
[Pb]	206	1	nogas	16208	0.01
[Pb]	207	1	nogas	13706	0.03
Na	23	2	He	516578	0.00
Mg	24	2	He	266194	0.00
Al	27	2	He	2727	0.28
K	39	2	He	490497	0.00
Ca	43	2	He	927	0.47
Ca	44	2	He	14860	0.02
V	51	2	He	31048	0.01
Cr	52	2	He	21249	0.01
Mn	55	2	He	14402	0.02
Fe	56	2	He	1646848	0.00
Co	59	2	He	22497	0.02
Ni	60	2	He	5928	0.01
Cu	63	2	He	15353	0.01
Zn	66	2	He	4531	0.10
As	75	2	He	4981	0.09
Se	78	2	He	570	0.74
B	11	1	nogas	81597	0.00
Si	28	1	nogas	4597910	0.00

Calibration Standard Report

Ca	43	1	nogas	11397	0.01
Ca	44	1	nogas	216205	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8443879	0.00
Se	77	1	nogas	41417	0.01
Se	82	1	nogas	917	0.81
Mo	95	1	nogas	14429	0.00
Sn	118	1	nogas	21447	0.01
Ba	137	1	nogas	10720	0.01
Sb	121	2	He	15407	0.01
P	31	1	nogas	92518	0.00
La	139	1	nogas	180	16.04

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	769674	5.86	826648	93.11	70	125	
Ge	72	1	nogas	1753629	7.48	1877764	93.39	70	125	
In	115	1	nogas	1524656	11.79	1597662	95.43	70	125	
Bi	209	1	nogas	1064648	9.80	1215842	87.56	70	125	
Ge	72	2	He	520029	0.78	519023	100.19	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	033CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:08:18-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	44659	0.01
Na	23	1	nogas	14827120	0.00
Mg	24	1	nogas	9216627	0.00
Al	27	1	nogas	158460	0.00
K	39	1	nogas	18972057	0.00
Ti	47	1	nogas	10000	0.03
V	51	1	nogas	1202722	0.00
Cr	52	1	nogas	179237	0.00
Mn	55	1	nogas	157406	0.00
Co	59	1	nogas	115204	0.00
Ni	60	1	nogas	25722	0.01
Cu	63	1	nogas	63340	0.00
Zn	66	1	nogas	21563	0.02
As	75	1	nogas	170832	0.00
Sr	88	1	nogas	151812	0.00
Ag	107	1	nogas	68436	0.00
Cd	111	1	nogas	14723	0.03
Sb	121	1	nogas	68538	0.00
Tl	205	1	nogas	89140	0.01
Pb	208	1	nogas	126581	0.00
[Pb]	206	1	nogas	32376	0.01
[Pb]	207	1	nogas	27033	0.02
Na	23	2	He	987595	0.00
Mg	24	2	He	520337	0.00
Al	27	2	He	4477	0.09
K	39	2	He	781589	0.00
Ca	43	2	He	1660	0.16
Ca	44	2	He	26853	0.01
V	51	2	He	49172	0.00
Cr	52	2	He	37856	0.01
Mn	55	2	He	26720	0.00
Fe	56	2	He	3195894	0.00
Co	59	2	He	45600	0.00
Ni	60	2	He	11334	0.01
Cu	63	2	He	29401	0.00
Zn	66	2	He	7558	0.01
As	75	2	He	9076	0.01
Se	78	2	He	933	0.21
B	11	1	nogas	151760	0.00
Si	28	1	nogas	6242706	0.00

Calibration Standard Report

Ca	43	1	nogas	20795	0.00
Ca	44	1	nogas	363014	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	14537134	0.00
Se	77	1	nogas	46419	0.01
Se	82	1	nogas	1617	0.62
Mo	95	1	nogas	27782	0.01
Sn	118	1	nogas	40210	0.01
Ba	137	1	nogas	21227	0.00
Sb	121	2	He	30256	0.00
P	31	1	nogas	123271	0.00
La	139	1	nogas	110	24.79

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	786176	4.27	826648	95.10	70	125	
Ge	72	1	nogas	1907356	3.43	1877764	101.58	70	125	
In	115	1	nogas	1628729	4.82	1597662	101.94	70	125	
Bi	209	1	nogas	1200776	2.03	1215842	98.76	70	125	
Ge	72	2	He	521350	1.34	519023	100.45	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	034CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:10:17-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	465547	0.00
Na	23	1	nogas	148901428	0.00
Mg	24	1	nogas	94480394	0.00
Al	27	1	nogas	1211416	0.00
K	39	1	nogas	125430344	0.00
Ti	47	1	nogas	104047	0.00
V	51	1	nogas	2443221	0.00
Cr	52	1	nogas	1241556	0.00
Mn	55	1	nogas	1432237	0.00
Co	59	1	nogas	1158452	0.00
Ni	60	1	nogas	261778	0.00
Cu	63	1	nogas	614355	0.00
Zn	66	1	nogas	214462	0.00
As	75	1	nogas	444200	0.00
Sr	88	1	nogas	1596452	0.00
Ag	107	1	nogas	680706	0.00
Cd	111	1	nogas	149929	0.00
Sb	121	1	nogas	704796	0.00
Tl	205	1	nogas	924218	0.00
Pb	208	1	nogas	1310460	0.00
[Pb]	206	1	nogas	326772	0.00
[Pb]	207	1	nogas	289197	0.00
Na	23	2	He	10024189	0.00
Mg	24	2	He	5287951	0.00
Al	27	2	He	31700	0.00
K	39	2	He	6124808	0.00
Ca	43	2	He	15020	0.02
Ca	44	2	He	259832	0.00
V	51	2	He	354063	0.00
Cr	52	2	He	357538	0.00
Mn	55	2	He	263358	0.00
Fe	56	2	He	32232500	0.00
Co	59	2	He	457213	0.00
Ni	60	2	He	115083	0.00
Cu	63	2	He	287558	0.00
Zn	66	2	He	75094	0.00
As	75	2	He	87914	0.00
Se	78	2	He	7476	0.02
B	11	1	nogas	1483118	0.00
Si	28	1	nogas	35851291	0.00

Calibration Standard Report

Ca	43	1	nogas	203196	0.00
Ca	44	1	nogas	3352957	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	127746353	0.00
Se	77	1	nogas	59424	0.01
Se	82	1	nogas	15640	0.03
Mo	95	1	nogas	293413	0.00
Sn	118	1	nogas	404027	0.00
Ba	137	1	nogas	218710	0.00
Sb	121	2	He	310412	0.00
P	31	1	nogas	622927	0.00
La	139	1	nogas	270	4.11

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	735287	6.14	826648	88.95	70	125	
Ge	72	1	nogas	1809278	7.98	1877764	96.35	70	125	
In	115	1	nogas	1509275	9.03	1597662	94.47	70	125	
Bi	209	1	nogas	1085117	8.29	1215842	89.25	70	125	
Ge	72	2	He	516776	0.49	519023	99.57	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	035CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:12:13-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	922231	0.00
Na	23	1	nogas	297120448	0.00
Mg	24	1	nogas	181395512	0.00
Al	27	1	nogas	2196131	0.00
K	39	1	nogas	239214855	0.00
Ti	47	1	nogas	204385	0.00
V	51	1	nogas	3738628	0.00
Cr	52	1	nogas	2345523	0.00
Mn	55	1	nogas	2764379	0.00
Co	59	1	nogas	2291260	0.00
Ni	60	1	nogas	506789	0.00
Cu	63	1	nogas	1223839	0.00
Zn	66	1	nogas	413932	0.00
As	75	1	nogas	746818	0.00
Sr	88	1	nogas	3070312	0.00
Ag	107	1	nogas	1412685	0.00
Cd	111	1	nogas	294698	0.00
Sb	121	1	nogas	1411708	0.00
Tl	205	1	nogas	1853605	0.00
Pb	208	1	nogas	2593357	0.00
[Pb]	206	1	nogas	629483	0.00
[Pb]	207	1	nogas	561697	0.00
Na	23	2	He	19306985	0.00
Mg	24	2	He	10352786	0.00
Al	27	2	He	58989	0.00
K	39	2	He	11929201	0.00
Ca	43	2	He	29988	0.02
Ca	44	2	He	508448	0.00
V	51	2	He	684828	0.00
Cr	52	2	He	692221	0.00
Mn	55	2	He	516137	0.00
Fe	56	2	He	63531461	0.00
Co	59	2	He	899016	0.00
Ni	60	2	He	223361	0.00
Cu	63	2	He	552505	0.00
Zn	66	2	He	146648	0.00
As	75	2	He	173108	0.00
Se	78	2	He	14709	0.01
B	11	1	nogas	3000595	0.00
Si	28	1	nogas	67341304	0.00

Calibration Standard Report

Ca	43	1	nogas	396771	0.00
Ca	44	1	nogas	6593824	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	246578681	0.00
Se	77	1	nogas	75489	0.00
Se	82	1	nogas	30963	0.00
Mo	95	1	nogas	578754	0.00
Sn	118	1	nogas	810645	0.00
Ba	137	1	nogas	428232	0.00
Sb	121	2	He	609499	0.00
P	31	1	nogas	1197004	0.00
La	139	1	nogas	433	5.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	704975	4.99	826648	85.28	70	125	
Ge	72	1	nogas	1788355	8.79	1877764	95.24	70	125	
In	115	1	nogas	1524411	6.94	1597662	95.42	70	125	
Bi	209	1	nogas	1095607	8.78	1215842	90.11	70	125	
Ge	72	2	He	504821	1.06	519023	97.26	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	037_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:16:13-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	94.819	4.969	476488	1.06	100	94.8	90	110	
Na	23	1	nogas	9506.017	4.381	156502124	0.54	10000	95.1	90	110	
Mg	24	1	nogas	9497.477	1.935	96201044	2.29	10000	95.0	90	110	
Al	27	1	nogas	93.413	1.386	1173079	3.60	100	93.4	90	110	
K	39	1	nogas	9497.549	3.978	129599257	1.10	10000	95.0	90	110	
Ti	47	1	nogas	101.853	1.635	115334	1.32	100	101.9	90	110	
V	51	1	nogas	76.668	6.970	2229549	1.49	100	76.7	90	110	ICV Main CR1 Failed
Cr	52	1	nogas	93.771	2.446	1258104	3.25	100	93.8	90	110	
Mn	55	1	nogas	96.832	0.155	1495691	2.84	100	96.8	90	110	
Co	59	1	nogas	97.182	1.796	1232272	3.72	100	97.2	90	110	
Ni	60	1	nogas	94.391	0.836	266349	3.44	100	94.4	90	110	
Cu	63	1	nogas	93.738	0.722	634667	3.12	100	93.7	90	110	
Zn	66	1	nogas	94.978	1.570	218950	3.80	100	95.0	90	110	
As	75	1	nogas	83.350	2.087	425107	1.31	100	83.3	90	110	ICV Main CR1 Failed
Sr	88	1	nogas	98.229	3.263	1676088	0.82	100	98.2	90	110	
Ag	107	1	nogas	93.768	1.582	726367	1.75	100	93.8	90	110	
Cd	111	1	nogas	96.979	3.275	159122	1.87	100	97.0	90	110	
Sb	121	1	nogas	91.266	1.293	711226	1.53	100	91.3	90	110	
Tl	205	1	nogas	97.324	5.402	989526	2.02	100	97.3	90	110	
Pb	208	1	nogas	104.989	2.184	1364297	2.18	100	105.0	90	110	
U	238	1	nogas	100.816	6.795	1394471	3.42	100	100.8	90	110	
[Pb]	206	1	nogas	100.891	4.915	351177	1.64	100	100.9	90	110	
[Pb]	207	1	nogas	94.974	5.816	294531	2.43	100	95.0	90	110	
Na	23	2	He	10157.006	1.410	10322060	1.68	10000	101.6	90	110	
Mg	24	2	He	10227.564	0.863	5549556	2.21	10000	102.3	90	110	
Al	27	2	He	99.490	1.177	31580	1.54	100	99.5	90	110	
K	39	2	He	10687.765	0.275	6477498	0.27	10000	106.9	90	110	
Ca	43	2	He	10242.492	2.538	16050	1.35	10000	102.4	90	110	
Ca	44	2	He	10108.805	1.801	269734	0.87	10000	101.1	90	110	
V	51	2	He	100.681	1.789	367863	0.22	100	100.7	90	110	
Cr	52	2	He	101.322	0.215	369772	1.81	100	101.3	90	110	
Mn	55	2	He	102.563	0.563	277658	1.57	100	102.6	90	110	
Fe	56	2	He	10034.015	1.078	33371385	0.91	10000	100.3	90	110	
Co	59	2	He	102.489	2.713	482350	1.16	100	102.5	90	110	
Ni	60	2	He	103.192	3.542	121008	1.66	100	103.2	90	110	
Cu	63	2	He	103.268	2.116	300588	0.85	100	103.3	90	110	
Zn	66	2	He	101.299	0.938	78023	1.48	100	101.3	90	110	
As	75	2	He	101.680	1.359	92355	0.88	100	101.7	90	110	
Se	78	2	He	103.022	3.257	8002	1.44	100	103.0	90	110	
B	11	1	nogas	441.806	5.583	1444080	1.78	500	88.4	90	110	ICV Main CR1 Failed
Si	28	1	nogas	463.247	4.110	6446891	1.13	5000	9.3	90	110	ICV Main CR1 Failed
Ca	43	1	nogas	9438.072	1.277	207833	2.15	10000	94.4	90	110	
Ca	44	1	nogas	9424.910	2.893	3458807	0.51	10000	94.2	90	110	
Fe	56	1	nogas	9400.401	2.098	130067770	4.29	10000	94.0	90	110	
Se	77	1	nogas	27.518	27.460	49130	0.70	100	27.5	90	110	ICV Main CR1 Failed
Se	82	1	nogas	95.837	0.372	16491	2.80	100	95.8	90	110	
Mo	95	1	nogas	98.672	2.837	315864	0.11	100	98.7	90	110	
Sn	118	1	nogas	100.342	2.954	451635	4.27	100	100.3	90	110	
Ba	137	1	nogas	96.038	3.937	229171	1.83	100	96.0	90	110	
Sb	121	2	He	101.605	3.577	324367	1.89	100	101.6	90	110	
Li	7	1	nogas	99.224	4.421	1153726	1.04	100	99.2	90	110	
P	31	1	nogas	435.213	2.184	612579	0.97	500	87.0	90	110	ICV Main CR1 Failed
La	139	1	nogas	134.430	38.416	350	35.69	100	134.4	90	110	ICV Main CR1 Failed
Au	197	1	nogas	2919.663	120.904	43	66.62	100	2919.7	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	772631	3.87	826648	93.47	70	125	
Ge	72	1	nogas	1968785	2.70	1877764	104.85	70	125	
In	115	1	nogas	1683650	4.77	1597662	105.38	70	125	
Bi	209	1	nogas	1195631	3.43	1215842	98.34	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	529364	1.94	519023	101.99	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	038SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:18:10-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	030CALB.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	1.750	1.750	3.53	9472	0.02	2000	
Na	23	1	nogas	196.782	196.782	4.41	3478713	0.01	200000	
Mg	24	1	nogas	204.162	204.162	5.01	2050172	0.01	200000	
Al	27	1	nogas	2.010	2.010	15.51	57471	0.00	2000	
K	39	1	nogas	212.878	212.878	20.78	9571354	0.00	200000	
Ti	47	1	nogas	2.017	2.017	5.33	2440	0.08	2000	
V	51	1	nogas	-13.045	-13.045	-6.11	785447	0.00	2000	
Cr	52	1	nogas	1.176	1.176	14.25	81786	0.00	2000	
Mn	55	1	nogas	2.097	2.097	9.23	48116	0.00	2000	
Co	59	1	nogas	2.021	2.021	5.09	25161	0.01	2000	
Ni	60	1	nogas	1.921	1.921	1.55	6081	0.03	2000	
Cu	63	1	nogas	2.056	2.056	7.56	15553	0.01	2000	
Zn	66	1	nogas	1.833	1.833	9.79	5241	0.03	2000	
As	75	1	nogas	-4.184	-4.184	-5.10	118567	0.00	2000	
Sr	88	1	nogas	2.066	2.066	8.23	35021	0.01	2000	
Ag	107	1	nogas	1.774	1.774	4.10	14583	0.01	2000	
Cd	111	1	nogas	1.858	1.858	4.91	3010	0.06	2000	
Sb	121	1	nogas	1.982	1.982	2.19	15654	0.01	2000	
Tl	205	1	nogas	2.590	2.590	20.00	26312	0.01	2000	
Pb	208	1	nogas	2.135	2.135	1.60	28063	0.01	2000	
U	238	1	nogas	2.031	2.031	7.76	27875	0.01	2000	
[Pb]	206	1	nogas	1.962	1.962	4.75	6892	0.03	2000	
[Pb]	207	1	nogas	2.028	2.028	10.08	6271	0.03	2000	
Na	23	2	He	197.805	197.805	1.96	235068	0.08	200000	
Mg	24	2	He	203.858	203.858	2.84	112834	0.18	200000	
Al	27	2	He	1.085	1.085	55.21	1587	0.07	2000	
K	39	2	He	210.691	210.691	1.15	314299	0.07	200000	
Ca	43	2	He	222.573	222.573	16.23	400	55.64	200000	
Ca	44	2	He	206.189	206.189	5.03	6505	3.17	200000	
V	51	2	He	1.127	1.127	2.25	18545	0.01	2000	
Cr	52	2	He	1.991	1.991	4.39	10803	0.02	2000	
Mn	55	2	He	2.042	2.042	5.56	6258	0.03	2000	
Fe	56	2	He	201.097	201.097	0.91	694348	0.03	200000	
Co	59	2	He	2.043	2.043	2.21	9799	0.02	2000	
Ni	60	2	He	2.051	2.051	4.42	2597	0.08	2000	
Cu	63	2	He	1.837	1.837	5.27	6751	0.03	2000	
Zn	66	2	He	1.941	1.941	9.99	1830	0.11	2000	
As	75	2	He	1.847	1.847	4.39	2285	0.08	2000	
Se	78	2	He	1.811	1.811	23.93	327	0.55	2000	
B	11	1	nogas	17.344	17.344	5.51	74706	0.02	2000	

Sample Report

Si	28	1	nogas	83.379	83.379	28.76	3592573	0.00	2000	
Ca	43	1	nogas	213.157	213.157	6.13	5077	4.20	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ca	44	1	nogas	198.790	198.790	8.98	112462	0.18	200000	
Fe	56	1	nogas	169.049	169.049	15.10	4703975	0.00	200000	
Se	77	1	nogas	-26.985	-26.985	-10.01	36734	-0.07	2000	
Se	82	1	nogas	2.281	2.281	29.58	550	0.41	2000	
Mo	95	1	nogas	2.302	2.302	7.11	7382	0.03	2000	
Sn	118	1	nogas	2.120	2.120	11.56	10510	0.02	2000	
Ba	137	1	nogas	1.888	1.888	5.96	4697	0.04	2000	
Sb	121	2	He	1.944	1.944	2.48	6655	0.03	2000	
La	139	1	nogas	17.691	17.691	74.99	80	22.11	2000	
Au	197	1	nogas	152.301	152.301	914.41	20	761.50	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	825436	2.05	826648	99.85	70	125	
Ge	72	1	nogas	1897790	4.38	1877764	101.07	70	125	
In	115	1	nogas	1655491	7.59	1597662	103.62	70	125	
Bi	209	1	nogas	1182378	5.89	1215842	97.25	70	125	
Ge	72	2	He	535484	0.79	519023	103.17	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	039LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:20:11-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	4.200	1.845	23118	1.58	5	84.0	70	130	
Na	23	1	nogas	482.909	9.060	8039540	1.55	500	96.6	70	130	
Mg	24	1	nogas	488.798	7.499	4849940	2.60	500	97.8	70	130	
Al	27	1	nogas	6.340	18.728	110905	14.29	5	126.8	70	130	
K	39	1	nogas	480.635	9.358	13189963	1.02	500	96.1	70	130	
Ti	47	1	nogas	4.689	6.655	5468	4.17	5	93.8	70	130	
V	51	1	nogas	-6.175	-31.315	909749	3.54	5	-123.5	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.035	11.134	119224	0.59	5	80.7	70	130	
Mn	55	1	nogas	4.965	7.717	92237	1.80	5	99.3	70	130	
Co	59	1	nogas	4.864	6.374	61169	3.60	5	97.3	70	130	
Ni	60	1	nogas	4.837	2.401	14296	3.30	5	96.7	70	130	
Cu	63	1	nogas	4.898	5.014	34787	0.80	5	98.0	70	130	
Zn	66	1	nogas	5.135	5.129	12818	4.60	5	102.7	70	130	
As	75	1	nogas	0.194	651.558	136033	2.43	5	3.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.819	3.094	82115	2.32	5	96.4	70	130	
Ag	107	1	nogas	4.433	1.659	35179	3.79	5	88.7	70	130	
Cd	111	1	nogas	4.408	7.135	7332	4.07	5	88.2	70	130	
Sb	121	1	nogas	4.624	5.182	36241	1.92	5	92.5	70	130	
Tl	205	1	nogas	4.258	5.604	47082	1.31	5	85.2	70	130	
Pb	208	1	nogas	5.130	4.228	66975	4.21	5	102.6	70	130	
U	238	1	nogas	4.430	6.261	66118	2.03	5	88.6	70	130	
[Pb]	206	1	nogas	4.466	10.452	16849	6.04	5	89.3	70	130	
[Pb]	207	1	nogas	4.415	11.280	14784	6.95	5	88.3	70	130	
Na	23	2	He	487.609	2.722	529881	0.81	500	97.5	70	130	
Mg	24	2	He	504.236	3.355	276493	1.56	500	100.8	70	130	
Al	27	2	He	5.360	8.370	2894	2.98	5	107.2	70	130	
K	39	2	He	513.149	1.321	492221	0.81	500	102.6	70	130	
Ca	43	2	He	578.836	3.666	960	5.21	500	115.8	70	130	
Ca	44	2	He	529.307	2.031	15143	3.64	500	105.9	70	130	
V	51	2	He	4.509	3.158	30432	0.31	5	90.2	70	130	
Cr	52	2	He	4.966	6.099	21589	3.72	5	99.3	70	130	
Mn	55	2	He	5.249	1.627	14963	1.79	5	105.0	70	130	
Fe	56	2	He	503.407	2.028	1704288	2.47	500	100.7	70	130	
Co	59	2	He	5.109	3.351	24300	2.83	5	102.2	70	130	
Ni	60	2	He	5.208	4.933	6311	3.48	5	104.2	70	130	
Cu	63	2	He	4.958	1.592	15840	1.68	5	99.2	70	130	
Zn	66	2	He	5.400	6.287	4494	4.26	5	108.0	70	130	
As	75	2	He	5.000	1.870	5144	3.41	5	100.0	70	130	
Se	78	2	He	5.056	5.864	574	5.74	5	101.1	70	130	
B	11	1	nogas	24.772	5.454	102516	2.71	25	99.1	70	130	
Si	28	1	nogas	206.694	15.035	4541152	0.33	25	826.8	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	494.033	3.872	11280	6.07	500	98.8	70	130	
Ca	44	1	nogas	483.053	3.921	216537	2.20	500	96.6	70	130	
Fe	56	1	nogas	452.350	9.286	8588287	1.99	500	90.5	70	130	
Se	77	1	nogas	-15.086	-16.956	39961	6.07	5	-301.7	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.550	17.064	947	15.68	5	91.0	70	130	
Mo	95	1	nogas	4.715	5.565	15147	0.54	5	94.3	70	130	
Sn	118	1	nogas	4.613	9.232	22131	1.27	5	92.3	70	130	
Ba	137	1	nogas	4.496	4.863	11130	2.60	5	89.9	70	130	
Sb	121	2	He	4.918	1.735	16188	2.35	5	98.4	70	130	
Li	7	1	nogas	4.573	0.474	126255	2.16	5	91.5	70	130	
P	31	1	nogas	27.347	16.878	99299	0.92	25	109.4	70	130	
La	139	1	nogas	33.612	57.232	117	35.69	5	672.2	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	1404.994	123.886	33	45.83	5	28099.9	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	842758	2.09	826648	101.95	70	125	
Ge	72	1	nogas	1940819	5.01	1877764	103.36	70	125	
In	115	1	nogas	1705739	7.17	1597662	106.76	70	125	
Bi	209	1	nogas	1287726	4.44	1215842	105.91	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	533415	1.82	519023	102.77	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	040_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:22:11-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	0.019	62.2	167	33.0	1	
Na	23	1	nogas	0.099	811.6	269784	5.4	100	
Mg	24	1	nogas	0.077	482.0	15442	12.7	100	
Al	27	1	nogas	0.003	18623.5	32525	11.1	5	
K	39	1	nogas	28.025	116.8	7002069	0.4	100	
Ti	47	1	nogas	0.002	4125.6	240	33.3	2.5	
V	51	1	nogas	-3.299	-99.6	897638	3.4	2.5	
Cr	52	1	nogas	0.092	151.1	65974	3.5	2.5	
Mn	55	1	nogas	0.176	71.5	19120	3.3	2.5	
Co	59	1	nogas	0.000	521.8	490	4.1	2.5	
Ni	60	1	nogas	-0.146	-20.6	460	14.3	2.5	
Cu	63	1	nogas	0.013	408.6	2203	10.4	1	
Zn	66	1	nogas	0.166	49.0	1503	6.0	2.5	
As	75	1	nogas	-0.173	-747.6	126868	3.5	2.5	
Sr	88	1	nogas	-0.002	-298.2	1040	12.0	2.5	
Ag	107	1	nogas	-0.165	-5.0	133	43.9	2.5	
Cd	111	1	nogas	0.014	127.9	37	68.6	1	
Sb	121	1	nogas	-0.031	-19.6	537	2.8	2.5	
Tl	205	1	nogas	0.069	66.9	1160	41.2	1	
Pb	208	1	nogas	0.009	23.4	447	6.5	2.5	
U	238	1	nogas	0.011	59.6	300	32.1	2.5	
[Pb]	206	1	nogas	-0.006	-226.5	113	35.7	2.5	
[Pb]	207	1	nogas	0.027	31.2	150	17.6	2.5	
Na	23	2	He	-1.389	-24.5	30725	1.3	100	
Mg	24	2	He	-0.020	-408.2	947	5.8	100	
Al	27	2	He	-1.201	-5.6	877	2.4	5	
K	39	2	He	3.948	46.3	192681	0.6	100	
Ca	43	2	He	-3.029	-310.9	43	35.3	100	
Ca	44	2	He	3.218	149.7	1040	13.5	100	
V	51	2	He	-0.166	-14.3	13863	1.2	2.5	
Cr	52	2	He	-0.051	-141.8	3317	9.4	2.5	
Mn	55	2	He	0.058	118.7	833	21.0	2.5	
Fe	56	2	He	-0.206	-36.2	17242	1.5	100	
Co	59	2	He	0.001	496.9	77	32.8	2.5	
Ni	60	2	He	-0.002	-1654.4	163	19.7	2.5	
Cu	63	2	He	-0.145	-25.8	937	12.7	1	
Zn	66	2	He	0.260	17.2	523	8.0	2.5	
As	75	2	He	-0.035	-257.2	562	12.9	2.5	
Se	78	2	He	0.218	147.2	203	12.8	1	
B	11	1	nogas	3.249	10.3	24773	0.1	10	
Si	28	1	nogas	0.576	6047.8	2904631	2.3	5	
Ca	43	1	nogas	12.182	34.0	797	5.1	100	
Ca	44	1	nogas	9.463	115.0	44623	2.2	100	
Fe	56	1	nogas	-7.137	-118.0	2317780	3.1	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	3.043	318.6	40953	3.2	2.5	ICB Main CR1 Failed
Se	82	1	nogas	-0.283	-66.2	127	19.9	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.002	450.6	290	3.4	2.5	
Sn	118	1	nogas	-0.013	-787.3	1083	36.8	5	
Ba	137	1	nogas	-0.020	-127.6	220	19.8	2.5	
Sb	121	2	He	-0.050	-49.3	220	36.4	2.5	
P	31	1	nogas	8.170	40.0	71174	1.4	10	
La	139	1	nogas	22.248	69.8	83	36.7	2.5	ICB Main CR1 Failed
Au	197	1	nogas	96.160	1366.2	20	50.0	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	806219	4.27	826648	97.53	70	125	
Ge	72	1	nogas	1827067	5.99	1877764	97.30	70	125	
In	115	1	nogas	1574084	6.21	1597662	98.52	70	125	
Bi	209	1	nogas	1194821	3.75	1215842	98.27	70	125	
Ge	72	2	He	532151	1.44	519023	102.53	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	042ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:34:49-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	200.9	83	42.1	0	ICSA Main CR1 Failed
Na	23	1	nogas	103222.475	8.1	1464431266	1.5	0	
Mg	24	1	nogas	103012.463	9.4	899198587	1.1	0	
Al	27	1	nogas	93404.051	3.4	1012799345	0.2	0	
K	39	1	nogas	102973.731	4.0	1188574360	0.8	0	
Ti	47	1	nogas	2169.792	6.2	2184096	5.9	0	
V	51	1	nogas	-8.892	-7.9	784484	2.1	0	ICSA Main CR1 Failed
Cr	52	1	nogas	1.023	24.8	73856	1.1	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.553	13.7	23532	2.3	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.516	7.5	6281	4.0	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.139	2.4	3664	4.8	0	ICSA Main CR1 Failed
Cu	63	1	nogas	1.480	5.8	10933	1.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	2.128	7.6	5454	5.8	0	ICSA Main CR1 Failed
As	75	1	nogas	1.918	38.1	128324	1.8	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.821	1.1	13509	2.9	0	ICSA Main CR1 Failed
Ag	107	1	nogas	-0.165	-1.0	133	8.7	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.982	10.9	2814	4.2	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.123	6.1	1583	3.0	0	ICSA Main CR1 Failed
Tl	205	1	nogas	-0.013	-48.4	283	15.9	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.071	5.1	1247	3.8	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.063	36.3	310	22.6	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.076	35.6	260	19.2	0	ICSA Main CR1 Failed
Na	23	2	He	100703.790	0.3	96340465	1.3	0	
Mg	24	2	He	100192.884	0.9	51305259	1.0	0	
Al	27	2	He	97356.648	1.3	28028978	1.7	0	
K	39	2	He	101386.214	0.7	59831386	0.7	0	
Ca	43	2	He	100440.385	2.2	148187	1.2	0	
Ca	44	2	He	102835.848	0.2	2582378	1.1	0	
V	51	2	He	-0.446	-5.4	12089	0.5	0	ICSA Main CR1 Failed
Cr	52	2	He	0.252	11.5	4147	1.4	0	ICSA Main CR1 Failed
Mn	55	2	He	0.381	2.3	1607	1.6	0	ICSA Main CR1 Failed
Fe	56	2	He	99674.361	1.5	312770949	1.0	0	
Co	59	2	He	0.283	3.4	1327	4.2	0	ICSA Main CR1 Failed
Ni	60	2	He	0.276	12.5	460	7.8	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.064	-103.5	1100	16.2	0	ICSA Main CR1 Failed
Zn	66	2	He	0.828	39.4	903	27.1	0	ICSA Main CR1 Failed
As	75	2	He	0.154	49.2	690	10.1	0	ICSA Main CR1 Failed
Se	78	2	He	0.392	119.1	203	16.8	0	ICSA Main CR1 Failed
B	11	1	nogas	0.841	56.6	16060	3.0	0	ICSA Main CR1 Failed
Si	28	1	nogas	79.400	29.1	3296658	2.0	0	
Ca	43	1	nogas	104278.263	1.6	2040171	1.7	0	
Ca	44	1	nogas	101411.285	4.5	32753381	1.3	0	
Fe	56	1	nogas	100788.574	1.7	1219249261	1.6	0	
Se	77	1	nogas	11.233	21.2	40849	2.6	0	
Se	82	1	nogas	-0.052	-464.0	157	20.5	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2066.697	4.0	5888341	2.8	0	
Sn	118	1	nogas	-0.017	-162.4	990	9.9	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.145	9.9	543	2.8	0	ICSA Main CR1 Failed
Sb	121	2	He	0.105	16.5	673	6.9	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	96001.101	2.9	107333048	0.4	0	
La	139	1	nogas	50.306	13.6	133	4.3	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	762598	6.12	826648	92.25	70	125	
Ge	72	1	nogas	1754104	3.29	1877764	93.41	70	125	
In	115	1	nogas	1455990	8.04	1597662	91.13	70	125	
Bi	209	1	nogas	1047110	9.51	1215842	86.12	70	125	
Ge	72	2	He	499665	1.00	519023	96.27	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	043ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:36:52-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	110.493	3.420	518096	1.51	100	110.5	80	120	
Na	23	1	nogas	103099.892	3.646	1604849236	1.55	100	103099.9	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	102454.910	4.505	981788755	0.41	100	102454.9	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	87507.282	1.677	1007047745	0.48	100	87507.3	80	120	ICSB Main CR1 Failed
K	39	1	nogas	103604.233	1.874	1269290595	0.87	100	103604.2	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2133.109	2.014	2278023	0.24	100	2133.1	80	120	ICSB Main CR1 Failed
V	51	1	nogas	104.846	1.685	2528434	1.15	100	104.8	80	120	
Cr	52	1	nogas	104.592	2.993	1318242	1.20	100	104.6	80	120	
Mn	55	1	nogas	105.780	1.882	1542206	0.39	100	105.8	80	120	
Co	59	1	nogas	109.751	1.639	1315038	2.61	100	109.8	80	120	
Ni	60	1	nogas	108.190	1.293	288317	1.10	100	108.2	80	120	
Cu	63	1	nogas	106.099	1.421	678470	1.07	100	106.1	80	120	
Zn	66	1	nogas	107.880	1.555	234866	3.09	100	107.9	80	120	
As	75	1	nogas	108.721	1.331	484596	1.28	100	108.7	80	120	
Sr	88	1	nogas	109.186	0.830	1761471	1.37	100	109.2	80	120	
Ag	107	1	nogas	101.852	1.378	745593	0.89	100	101.9	80	120	
Cd	111	1	nogas	112.295	2.077	170719	0.47	100	112.3	80	120	
Sb	121	1	nogas	106.590	1.652	784949	1.34	100	106.6	80	120	
Tl	205	1	nogas	104.045	5.992	1015540	2.77	100	104.0	80	120	
Pb	208	1	nogas	112.516	1.778	1462078	1.78	100	112.5	80	120	
U	238	1	nogas	116.196	2.297	1545362	3.96	100	116.2	80	120	
[Pb]	206	1	nogas	108.902	4.206	363985	0.91	100	108.9	80	120	
[Pb]	207	1	nogas	107.497	2.678	320284	0.79	100	107.5	80	120	
Na	23	2	He	109609.550	1.322	105670635	0.47	100	109609.6	80	120	
Mg	24	2	He	109096.721	2.001	56297929	1.15	100	109096.7	80	120	
Al	27	2	He	95848.297	0.723	27809712	0.16	100	95848.3	80	120	ICSB Main CR1 Failed
K	39	2	He	111027.519	0.396	65502939	0.39	100	111027.5	80	120	
Ca	43	2	He	110899.071	1.743	164909	1.27	100	110899.1	80	120	
Ca	44	2	He	110585.666	3.718	2798666	3.76	100	110585.7	80	120	ICSB Main CR1 Failed
V	51	2	He	113.106	0.780	391522	0.56	100	113.1	80	120	
Cr	52	2	He	112.280	1.104	389434	0.41	100	112.3	80	120	
Mn	55	2	He	112.169	1.822	288803	1.06	100	112.2	80	120	
Fe	56	2	He	110449.875	2.434	349278248	1.60	100	110449.9	80	120	
Co	59	2	He	114.910	1.650	514585	0.79	100	114.9	80	120	
Ni	60	2	He	114.131	2.159	127345	1.46	100	114.1	80	120	
Cu	63	2	He	112.487	2.598	311404	1.96	100	112.5	80	120	
Zn	66	2	He	113.831	2.559	83363	1.77	100	113.8	80	120	
As	75	2	He	113.219	1.645	97771	0.78	100	113.2	80	120	
Se	78	2	He	114.808	0.823	8467	0.83	100	114.8	80	120	
B	11	1	nogas	566.033	3.051	1642755	0.51	100	566.0	80	120	
Si	28	1	nogas	5395.849	1.814	39432399	0.48	100	5395.8	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	110174.661	2.491	2286858	2.28	100	110174.7	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	105457.045	2.678	36152707	1.60	100	105457.0	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	103474.043	1.502	1327954330	0.66	100	103474.0	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	122.617	3.189	64664	1.41	100	122.6	80	120	
Se	82	1	nogas	109.608	3.111	17792	0.92	100	109.6	80	120	
Mo	95	1	nogas	2036.255	0.692	6157668	1.85	100	2036.3	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	107.619	1.674	448515	0.91	100	107.6	80	120	
Ba	137	1	nogas	110.402	2.444	244121	2.23	100	110.4	80	120	
Sb	121	2	He	115.105	1.967	349637	1.20	100	115.1	80	120	
La	139	1	nogas	170.335	13.598	400	13.92	100	170.3	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	720548	3.60	826648	87.17	70	125	
Ge	72	1	nogas	1860720	2.15	1877764	99.09	70	125	
In	115	1	nogas	1558929	2.37	1597662	97.58	70	125	
Bi	209	1	nogas	1147884	3.30	1215842	94.41	70	125	
Ge	72	2	He	503585	0.87	519023	97.03	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	056_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:03:45-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	8.3	403	1.4	1	
Na	23	1	nogas	38.917	13.4	904804	2.3	100	
Mg	24	1	nogas	7.893	36.0	92113	22.7	100	
Al	27	1	nogas	3.797	7.5	79049	2.0	5	
K	39	1	nogas	24.548	140.3	7287195	0.4	100	
Ti	47	1	nogas	0.071	104.9	323	18.9	2.5	
V	51	1	nogas	-1.262	-235.1	974538	10.4	2.5	
Cr	52	1	nogas	-0.914	-21.4	56663	1.9	2.5	
Mn	55	1	nogas	0.266	42.7	21373	3.1	2.5	
Co	59	1	nogas	0.050	46.0	1113	18.7	2.5	
Ni	60	1	nogas	0.028	157.8	957	8.9	2.5	
Cu	63	1	nogas	0.094	14.0	2850	3.1	2	
Zn	66	1	nogas	0.592	10.2	2527	5.7	2.5	
As	75	1	nogas	-3.869	-28.1	120472	4.1	2.5	
Sr	88	1	nogas	0.223	17.8	4794	7.4	2.5	
Ag	107	1	nogas	-0.133	-10.8	380	21.5	2.5	
Cd	111	1	nogas	0.027	41.2	57	27.0	1	
Sb	121	1	nogas	0.110	36.3	1617	12.2	2.5	
Tl	205	1	nogas	1.147	74.2	12704	74.8	1	CCB Main CR1 Failed
Pb	208	1	nogas	0.076	28.3	1313	21.3	2.5	
U	238	1	nogas	0.131	63.0	2044	61.5	2.5	
[Pb]	206	1	nogas	0.052	35.7	327	20.8	2.5	
[Pb]	207	1	nogas	0.071	47.6	300	40.4	2.5	
Na	23	2	He	35.505	2.4	67643	1.9	100	
Mg	24	2	He	5.607	16.2	3970	10.3	100	
Al	27	2	He	3.499	7.6	2297	5.5	5	
K	39	2	He	9.870	23.1	196165	0.7	100	
Ca	43	2	He	40.023	40.1	110	24.1	100	
Ca	44	2	He	38.199	21.7	1953	10.1	100	
V	51	2	He	-0.083	-171.5	14012	1.4	2.5	
Cr	52	2	He	-0.180	-26.1	2817	4.6	2.5	
Mn	55	2	He	0.168	7.9	1123	3.7	2.5	
Fe	56	2	He	3.987	5.7	30956	3.2	100	
Co	59	2	He	0.032	34.6	220	25.3	2.5	
Ni	60	2	He	-0.017	-62.8	143	8.1	2.5	
Cu	63	2	He	-0.096	-66.3	1067	14.9	2	
Zn	66	2	He	0.412	18.8	633	8.7	2.5	
As	75	2	He	-0.034	-174.8	558	8.5	2.5	
Se	78	2	He	0.064	1155.1	189	29.0	2	
B	11	1	nogas	11.013	20.7	51025	9.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-41.793	-66.3	2748580	0.8	5	
Ca	43	1	nogas	44.631	18.0	1523	5.3	100	
Ca	44	1	nogas	17.034	56.4	49415	2.3	100	
Fe	56	1	nogas	8.153	175.6	2624516	1.0	100	
Se	77	1	nogas	-20.322	-35.7	38307	4.7	2.5	
Se	82	1	nogas	-0.047	-246.9	173	16.7	2	
Mo	95	1	nogas	0.389	67.4	1477	47.3	2.5	
Sn	118	1	nogas	0.210	59.8	1987	23.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.216	23.3	737	15.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.060	25.7	567	7.3	2.5	
P	31	1	nogas	7.026	36.7	73161	2.1	10	
La	139	1	nogas	25.931	89.9	90	50.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-817.558	-221.1	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	829602	5.26	826648	100.36	70	125	
Ge	72	1	nogas	1913060	5.99	1877764	101.88	70	125	
In	115	1	nogas	1550842	3.36	1597662	97.07	70	125	
Bi	209	1	nogas	1236713	3.96	1215842	101.72	70	125	
Ge	72	2	He	527050	2.14	519023	101.55	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	058_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:08:24-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	94.230	1.965	483078	0.47	100	94.2	90	110	
Na	23	1	nogas	9957.737	3.536	160106199	1.78	10000	99.6	90	110	
Mg	24	1	nogas	9972.929	2.550	98635569	3.11	10000	99.7	90	110	
Al	27	1	nogas	95.082	3.197	1176781	2.57	100	95.1	90	110	
K	39	1	nogas	9768.093	3.139	131312649	0.41	10000	97.7	90	110	
Ti	47	1	nogas	94.102	2.852	105133	2.18	100	94.1	90	110	
V	51	1	nogas	119.574	4.070	2867633	0.81	100	119.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	92.873	3.309	1230171	4.47	100	92.9	90	110	
Mn	55	1	nogas	95.183	1.157	1450412	1.68	100	95.2	90	110	
Co	59	1	nogas	93.778	3.802	1172685	3.72	100	93.8	90	110	
Ni	60	1	nogas	94.677	1.805	263434	0.84	100	94.7	90	110	
Cu	63	1	nogas	92.896	1.514	620350	1.93	100	92.9	90	110	
Zn	66	1	nogas	96.048	1.959	218349	2.42	100	96.0	90	110	
As	75	1	nogas	106.971	3.012	499749	0.68	100	107.0	90	110	
Sr	88	1	nogas	93.730	2.576	1578023	0.41	100	93.7	90	110	
Ag	107	1	nogas	90.748	1.275	693614	2.21	100	90.7	90	110	
Cd	111	1	nogas	93.052	1.107	152832	1.75	100	93.1	90	110	
Sb	121	1	nogas	91.682	2.941	704686	1.49	100	91.7	90	110	
Tl	205	1	nogas	92.420	8.618	979856	3.67	100	92.4	90	110	
Pb	208	1	nogas	104.075	0.179	1352414	0.18	100	104.1	90	110	
U	238	1	nogas	94.744	7.193	1367456	1.22	100	94.7	90	110	
[Pb]	206	1	nogas	95.949	7.179	348356	1.45	100	95.9	90	110	
[Pb]	207	1	nogas	89.365	6.287	289230	0.27	100	89.4	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10334.403	0.733	10170313	1.40	10000	103.3	90	110	
Mg	24	2	He	10555.922	1.593	5547275	3.06	10000	105.6	90	110	
Al	27	2	He	102.744	2.198	31557	4.24	100	102.7	90	110	
K	39	2	He	10502.183	2.375	6368329	2.30	10000	105.0	90	110	
Ca	43	2	He	10471.408	0.922	15894	1.82	10000	104.7	90	110	
Ca	44	2	He	10225.651	2.285	264202	0.47	10000	102.3	90	110	
V	51	2	He	100.741	1.475	356478	1.21	100	100.7	90	110	
Cr	52	2	He	98.885	3.007	349433	0.93	100	98.9	90	110	
Mn	55	2	He	99.706	3.135	261327	1.37	100	99.7	90	110	
Fe	56	2	He	10113.527	2.510	32569059	1.41	10000	101.1	90	110	
Co	59	2	He	99.968	2.055	455656	0.21	100	100.0	90	110	
Ni	60	2	He	102.053	1.538	115928	1.16	100	102.1	90	110	
Cu	63	2	He	103.855	1.519	292770	1.19	100	103.9	90	110	
Zn	66	2	He	103.439	3.716	77166	4.73	100	103.4	90	110	
As	75	2	He	99.634	2.028	87641	0.13	100	99.6	90	110	
Se	78	2	He	96.482	1.803	7271	2.10	100	96.5	90	110	
B	11	1	nogas	473.104	4.801	1502855	2.61	500	94.6	90	110	
Si	28	1	nogas	442.771	5.874	6214550	0.34	5000	8.9	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9628.764	4.070	209045	1.42	10000	96.3	90	110	
Ca	44	1	nogas	9657.195	4.759	3494915	3.43	10000	96.6	90	110	
Fe	56	1	nogas	9589.342	2.092	130772903	1.44	10000	95.9	90	110	
Se	77	1	nogas	167.130	3.590	76423	4.03	100	167.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	93.786	5.051	15911	2.35	100	93.8	90	110	
Mo	95	1	nogas	93.689	2.656	295899	0.21	100	93.7	90	110	
Sn	118	1	nogas	94.042	3.066	423397	1.00	100	94.0	90	110	
Ba	137	1	nogas	96.414	1.692	230362	2.90	100	96.4	90	110	
Sb	121	2	He	99.588	2.250	307939	0.14	100	99.6	90	110	
Li	7	1	nogas	104.013	1.755	1230363	1.10	100	104.0	90	110	
P	31	1	nogas	438.604	3.291	608415	0.36	500	87.7	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	164.030	5.868	417	3.67	100	164.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	2607.214	100.415	43	58.08	100	2607.2	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	787429	2.26	826648	95.26	70	125	
Ge	72	1	nogas	1942257	2.64	1877764	103.43	70	125	
In	115	1	nogas	1683820	2.29	1597662	105.39	70	125	
Bi	209	1	nogas	1249411	6.27	1215842	102.76	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	512659	2.13	519023	98.77	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	068_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:29:07-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	100.149	8.852	406311	0.95	100	100.1	90	110	
Na	23	1	nogas	11463.147	13.790	133740907	1.76	10000	114.6	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11350.729	11.760	81569612	0.57	10000	113.5	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	98.584	16.143	979996	0.36	100	98.6	90	110	
K	39	1	nogas	10004.209	18.619	107764077	2.33	10000	100.0	90	110	
Ti	47	1	nogas	96.527	15.426	86735	0.65	100	96.5	90	110	
V	51	1	nogas	177.530	16.550	3045696	5.78	100	177.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	94.573	17.220	1005040	0.36	100	94.6	90	110	
Mn	55	1	nogas	96.921	17.641	1185114	2.61	100	96.9	90	110	
Co	59	1	nogas	96.081	15.620	966003	0.35	100	96.1	90	110	
Ni	60	1	nogas	97.677	13.911	218958	3.03	100	97.7	90	110	
Cu	63	1	nogas	94.828	15.221	509321	1.39	100	94.8	90	110	
Zn	66	1	nogas	94.972	16.968	173370	1.62	100	95.0	90	110	
As	75	1	nogas	134.866	20.560	478084	0.09	100	134.9	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	101.545	7.609	1388478	10.16	100	101.5	90	110	
Ag	107	1	nogas	91.550	13.814	563714	2.35	100	91.5	90	110	
Cd	111	1	nogas	102.306	14.068	123065	1.45	100	102.3	90	110	
Sb	121	1	nogas	94.293	15.251	583044	0.96	100	94.3	90	110	
Tl	205	1	nogas	107.704	7.992	806990	0.93	100	107.7	90	110	
Pb	208	1	nogas	85.841	0.697	1115531	0.70	100	85.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	106.168	7.938	1082819	2.92	100	106.2	90	110	
[Pb]	206	1	nogas	112.024	7.531	287385	0.92	100	112.0	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	103.189	7.679	235895	0.78	100	103.2	90	110	
Na	23	2	He	10745.924	1.480	8604490	1.48	10000	107.5	90	110	
Mg	24	2	He	10679.648	2.509	4565255	0.81	10000	106.8	90	110	
Al	27	2	He	104.598	3.233	26108	1.79	100	104.6	90	110	
K	39	2	He	8628.098	1.362	5265887	1.31	10000	86.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10790.195	4.582	13328	5.25	10000	107.9	90	110	
Ca	44	2	He	10526.855	1.040	221353	1.29	10000	105.3	90	110	
V	51	2	He	105.911	2.574	304366	1.51	100	105.9	90	110	
Cr	52	2	He	103.257	0.641	296926	2.03	100	103.3	90	110	
Mn	55	2	He	103.238	1.168	220240	1.47	100	103.2	90	110	
Fe	56	2	He	10437.697	2.074	27355052	1.51	10000	104.4	90	110	
Co	59	2	He	101.806	2.162	377615	0.54	100	101.8	90	110	
Ni	60	2	He	103.282	2.073	95466	0.80	100	103.3	90	110	
Cu	63	2	He	103.814	2.594	238170	2.82	100	103.8	90	110	
Zn	66	2	He	103.681	0.824	62935	2.34	100	103.7	90	110	
As	75	2	He	100.341	2.589	71823	1.54	100	100.3	90	110	
Se	78	2	He	95.824	2.386	5877	1.27	100	95.8	90	110	
B	11	1	nogas	464.068	16.556	1164806	11.82	500	92.8	90	110	
Si	28	1	nogas	531.826	31.785	5491462	1.72	5000	10.6	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	10179.687	18.320	177223	2.56	10000	101.8	90	110	
Ca	44	1	nogas	10253.428	14.117	2989343	3.59	10000	102.5	90	110	
Fe	56	1	nogas	9868.551	16.846	108036015	0.68	10000	98.7	90	110	
Se	77	1	nogas	317.391	27.219	85499	1.13	100	317.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	92.479	18.690	12585	2.84	100	92.5	90	110	
Mo	95	1	nogas	95.426	15.995	242263	0.20	100	95.4	90	110	
Sn	118	1	nogas	106.999	14.638	352579	1.70	100	107.0	90	110	
Ba	137	1	nogas	104.409	12.616	182920	2.16	100	104.4	90	110	
Sb	121	2	He	99.676	1.662	250844	1.21	100	99.7	90	110	
Li	7	1	nogas	109.495	6.758	1023608	2.70	100	109.5	90	110	
P	31	1	nogas	438.085	18.232	488404	0.83	500	87.6	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	117.600	17.792	227	2.55	100	117.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	3102.322	72.726	33	45.83	100	3102.3	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	626198	8.74	826648	75.75	70	125	
Ge	72	1	nogas	1589305	17.02	1877764	84.64	70	125	
In	115	1	nogas	1248522	13.39	1597662	78.15	70	125	
Bi	209	1	nogas	883482	7.30	1215842	72.66	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	417167	1.73	519023	80.38	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	069_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:31:04-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	33.0	363	27.7	1	
Na	23	1	nogas	77.233	11.5	1266449	1.4	100	
Mg	24	1	nogas	5.908	34.9	61144	18.9	100	
Al	27	1	nogas	3.673	2.1	63818	3.2	5	
K	39	1	nogas	22.528	97.0	5973432	0.8	100	
Ti	47	1	nogas	0.073	30.7	270	9.8	2.5	
V	51	1	nogas	9.846	20.3	939663	6.6	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.911	-16.1	46619	1.4	2.5	
Mn	55	1	nogas	0.451	18.7	19834	1.0	2.5	
Co	59	1	nogas	0.053	62.1	947	30.8	2.5	
Ni	60	1	nogas	0.083	23.7	913	6.7	2.5	
Cu	63	1	nogas	0.064	30.6	2180	2.8	2	
Zn	66	1	nogas	0.375	19.5	1683	10.9	2.5	
As	75	1	nogas	5.397	19.6	124525	2.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.129	18.6	2680	8.1	2.5	
Ag	107	1	nogas	-0.142	-5.2	263	17.9	2.5	
Cd	111	1	nogas	0.059	67.5	93	55.0	1	
Sb	121	1	nogas	0.058	57.3	1010	16.4	2.5	
Tl	205	1	nogas	1.194	65.8	10651	65.1	1	CCB Main CR1 Failed
Pb	208	1	nogas	0.047	59.0	930	38.5	2.5	
U	238	1	nogas	0.156	65.8	1950	63.3	2.5	
[Pb]	206	1	nogas	0.034	110.3	213	53.3	2.5	
[Pb]	207	1	nogas	0.060	86.5	213	65.7	2.5	
Na	23	2	He	75.657	4.0	87733	0.9	100	
Mg	24	2	He	4.912	7.8	2920	3.7	100	
Al	27	2	He	2.935	5.5	1723	1.5	5	
K	39	2	He	-44.275	-6.0	164313	0.9	100	
Ca	43	2	He	-1.567	-565.1	37	31.5	100	
Ca	44	2	He	29.631	10.1	1403	6.4	100	
V	51	2	He	0.631	8.5	13400	1.2	2.5	
Cr	52	2	He	-0.144	-26.5	2394	3.5	2.5	
Mn	55	2	He	0.175	25.0	927	9.8	2.5	
Fe	56	2	He	3.528	8.0	23879	1.6	100	
Co	59	2	He	0.030	75.8	170	48.2	2.5	
Ni	60	2	He	-0.002	-3738.6	130	53.8	2.5	
Cu	63	2	He	-0.213	-16.2	593	11.8	2	
Zn	66	2	He	0.480	12.9	557	8.9	2.5	
As	75	2	He	0.013	531.1	487	9.4	2.5	
Se	78	2	He	1.024	43.5	213	12.8	2	
B	11	1	nogas	12.458	14.0	47743	10.1	10	CCB Main CR1 Failed
Si	28	1	nogas	33.409	60.9	2690365	0.1	5	CCB Main CR1 Failed
Ca	43	1	nogas	29.123	12.1	983	2.1	100	
Ca	44	1	nogas	9.911	43.1	38603	1.1	100	
Fe	56	1	nogas	13.114	104.8	2211966	3.0	100	
Se	77	1	nogas	32.879	18.1	40108	5.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.046	905.9	153	33.5	2	
Mo	95	1	nogas	0.394	56.1	1237	41.2	2.5	
Sn	118	1	nogas	0.244	53.1	1877	22.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.141	29.3	503	13.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.030	153.2	383	32.4	2.5	
P	31	1	nogas	3.873	64.3	56976	1.1	10	
La	139	1	nogas	32.884	12.2	93	6.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	3945.633	57.2	43	35.3	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	706406	0.29	826648	85.45	70	125	
Ge	72	1	nogas	1571558	4.23	1877764	83.69	70	125	
In	115	1	nogas	1370263	3.48	1597662	85.77	70	125	
Bi	209	1	nogas	1003386	1.69	1215842	82.53	70	125	
Ge	72	2	He	427698	2.07	519023	82.40	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	075CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:44:58-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	80	46.88
Na	23	1	nogas	423106	0.00
Mg	24	1	nogas	7369	0.17
Al	27	1	nogas	11784	0.03
K	39	1	nogas	5711737	0.00
Ti	47	1	nogas	133	34.37
V	51	1	nogas	770105	0.00
Cr	52	1	nogas	40428	0.00
Mn	55	1	nogas	16928	0.03
Co	59	1	nogas	353	1.22
Ni	60	1	nogas	467	6.45
Cu	63	1	nogas	1403	0.48
Zn	66	1	nogas	443	2.51
As	75	1	nogas	102419	0.00
Sr	88	1	nogas	490	2.20
Ag	107	1	nogas	40	165.36
Cd	111	1	nogas	20	433.01
Sb	121	1	nogas	227	4.05
Tl	205	1	nogas	240	9.19
Pb	208	1	nogas	133	3.25
[Pb]	206	1	nogas	37	85.89
[Pb]	207	1	nogas	37	154.83
Na	23	2	He	40580	0.00
Mg	24	2	He	450	3.92
Al	27	2	He	333	2.75
K	39	2	He	157324	0.00
Ca	43	2	He	23	382.35
Ca	44	2	He	530	1.85
V	51	2	He	11055	0.01
Cr	52	2	He	2307	0.28
Mn	55	2	He	513	2.16
Fe	56	2	He	9569	0.03
Co	59	2	He	77	35.42
Ni	60	2	He	53	88.47
Cu	63	2	He	453	4.87
Zn	66	2	He	63	51.90
As	75	2	He	421	1.51
Se	78	2	He	214	1.90
B	11	1	nogas	27457	0.02
Si	28	1	nogas	2687573	0.00
Ca	43	1	nogas	403	5.23
Ca	44	1	nogas	28125	0.01

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2078496	0.00
Se	77	1	nogas	33608	0.01
Se	82	1	nogas	113	47.57
Mo	95	1	nogas	127	37.57
Sn	118	1	nogas	360	5.56
Ba	137	1	nogas	83	73.90
Sb	121	2	He	100	26.46
Li	7	1	nogas	57116	0.01
P	31	1	nogas	55311	0.00
La	139	1	nogas	20	661.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	671260	5.26
Ge	72	1	nogas	1476428	5.75
In	115	1	nogas	1187105	8.52
Bi	209	1	nogas	882577	3.99
Ge	72	2	He	403706	1.48

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	076CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:46:56-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	7332	0.02
Na	23	1	nogas	2690696	0.00
Mg	24	1	nogas	1465321	0.00
Al	27	1	nogas	29487	0.01
K	39	1	nogas	7439018	0.00
Ti	47	1	nogas	1577	0.23
V	51	1	nogas	721611	0.00
Cr	52	1	nogas	55172	0.00
Mn	55	1	nogas	38143	0.01
Co	59	1	nogas	17522	0.01
Ni	60	1	nogas	4577	0.09
Cu	63	1	nogas	10933	0.01
Zn	66	1	nogas	3450	0.18
As	75	1	nogas	97279	0.01
Sr	88	1	nogas	23068	0.01
Ag	107	1	nogas	10843	0.01
Cd	111	1	nogas	2507	0.16
Sb	121	1	nogas	10600	0.02
Tl	205	1	nogas	14357	0.01
Pb	208	1	nogas	20512	0.01
[Pb]	206	1	nogas	5224	0.06
[Pb]	207	1	nogas	4454	0.06
Na	23	2	He	183026	0.00
Mg	24	2	He	81233	0.00
Al	27	2	He	747	1.19
K	39	2	He	244296	0.00
Ca	43	2	He	217	17.86
Ca	44	2	He	4441	0.07
V	51	2	He	15194	0.01
Cr	52	2	He	7508	0.03
Mn	55	2	He	4734	0.14
Fe	56	2	He	483417	0.00
Co	59	2	He	7312	0.08
Ni	60	2	He	1917	0.26
Cu	63	2	He	4794	0.06
Zn	66	2	He	1193	0.65
As	75	2	He	1715	0.18
Se	78	2	He	322	2.55
B	11	1	nogas	46898	0.00
Si	28	1	nogas	2775369	0.00

Calibration Standard Report

Ca	43	1	nogas	3464	0.15
Ca	44	1	nogas	78133	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3868161	0.00
Se	77	1	nogas	30696	0.01
Se	82	1	nogas	360	7.60
Mo	95	1	nogas	4487	0.13
Sn	118	1	nogas	6048	0.12
Ba	137	1	nogas	3324	0.08
Sb	121	2	He	4561	0.13
P	31	1	nogas	63630	0.00
La	139	1	nogas	33	137.48

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	689389	1.02	671260	102.70	70	125	
Ge	72	1	nogas	1501014	1.58	1476428	101.67	70	125	
In	115	1	nogas	1297948	0.70	1187105	109.34	70	125	
Bi	209	1	nogas	933265	3.15	882577	105.74	70	125	
Ge	72	2	He	409505	1.57	403706	101.44	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	077CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:48:56-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	18823	0.02
Na	23	1	nogas	6224997	0.00
Mg	24	1	nogas	3732605	0.00
Al	27	1	nogas	58046	0.01
K	39	1	nogas	10389976	0.00
Ti	47	1	nogas	3817	0.12
V	51	1	nogas	841065	0.00
Cr	52	1	nogas	85299	0.00
Mn	55	1	nogas	73436	0.00
Co	59	1	nogas	45807	0.00
Ni	60	1	nogas	10763	0.04
Cu	63	1	nogas	25765	0.01
Zn	66	1	nogas	8952	0.03
As	75	1	nogas	117084	0.00
Sr	88	1	nogas	59459	0.00
Ag	107	1	nogas	27712	0.00
Cd	111	1	nogas	5818	0.09
Sb	121	1	nogas	26046	0.00
Tl	205	1	nogas	37156	0.01
Pb	208	1	nogas	52581	0.00
[Pb]	206	1	nogas	13402	0.02
[Pb]	207	1	nogas	11341	0.02
Na	23	2	He	414093	0.00
Mg	24	2	He	207717	0.00
Al	27	2	He	1473	0.44
K	39	2	He	381983	0.00
Ca	43	2	He	600	1.21
Ca	44	2	He	10540	0.04
V	51	2	He	24571	0.00
Cr	52	2	He	16007	0.03
Mn	55	2	He	10820	0.04
Fe	56	2	He	1232790	0.00
Co	59	2	He	17869	0.03
Ni	60	2	He	4467	0.17
Cu	63	2	He	11657	0.04
Zn	66	2	He	3234	0.22
As	75	2	He	3649	0.05
Se	78	2	He	474	2.46
B	11	1	nogas	79772	0.00
Si	28	1	nogas	2820944	0.00

Calibration Standard Report

Ca	43	1	nogas	8542	0.03
Ca	44	1	nogas	156733	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	6910399	0.00
Se	77	1	nogas	35411	0.01
Se	82	1	nogas	760	0.90
Mo	95	1	nogas	10910	0.03
Sn	118	1	nogas	15614	0.00
Ba	137	1	nogas	8932	0.05
Sb	121	2	He	11377	0.01
P	31	1	nogas	77739	0.00
La	139	1	nogas	57	47.57

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	670302	6.84	671260	99.86	70	125	
Ge	72	1	nogas	1427398	7.63	1476428	96.68	70	125	
In	115	1	nogas	1202086	12.09	1187105	101.26	70	125	
Bi	209	1	nogas	870660	6.11	882577	98.65	70	125	
Ge	72	2	He	413173	1.59	403706	102.35	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	078CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:50:56-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	35122	0.00
Na	23	1	nogas	11865033	0.00
Mg	24	1	nogas	7343055	0.00
Al	27	1	nogas	102495	0.00
K	39	1	nogas	14607390	0.00
Ti	47	1	nogas	7625	0.08
V	51	1	nogas	923330	0.00
Cr	52	1	nogas	128751	0.00
Mn	55	1	nogas	128138	0.00
Co	59	1	nogas	89594	0.00
Ni	60	1	nogas	20322	0.01
Cu	63	1	nogas	48227	0.00
Zn	66	1	nogas	16788	0.00
As	75	1	nogas	133555	0.00
Sr	88	1	nogas	113664	0.00
Ag	107	1	nogas	53174	0.00
Cd	111	1	nogas	11154	0.00
Sb	121	1	nogas	50597	0.00
Tl	205	1	nogas	70262	0.00
Pb	208	1	nogas	102071	0.00
[Pb]	206	1	nogas	25317	0.00
[Pb]	207	1	nogas	22109	0.01
Na	23	2	He	759609	0.00
Mg	24	2	He	394649	0.00
Al	27	2	He	2840	0.14
K	39	2	He	599059	0.00
Ca	43	2	He	1180	0.19
Ca	44	2	He	19480	0.00
V	51	2	He	36956	0.00
Cr	52	2	He	29046	0.01
Mn	55	2	He	20872	0.01
Fe	56	2	He	2426057	0.00
Co	59	2	He	35224	0.01
Ni	60	2	He	8959	0.02
Cu	63	2	He	22467	0.01
Zn	66	2	He	5831	0.05
As	75	2	He	6747	0.03
Se	78	2	He	714	0.61
B	11	1	nogas	130956	0.00
Si	28	1	nogas	2932057	0.00

Calibration Standard Report

Ca	43	1	nogas	15930	0.00
Ca	44	1	nogas	277053	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	11430657	0.00
Se	77	1	nogas	37115	0.02
Se	82	1	nogas	1260	1.20
Mo	95	1	nogas	22204	0.02
Sn	118	1	nogas	28948	0.01
Ba	137	1	nogas	16491	0.01
Sb	121	2	He	23226	0.02
P	31	1	nogas	98726	0.00
La	139	1	nogas	60	73.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	682008	3.57	671260	101.60	70	125	
Ge	72	1	nogas	1451110	5.13	1476428	98.29	70	125	
In	115	1	nogas	1234984	9.52	1187105	104.03	70	125	
Bi	209	1	nogas	900265	7.23	882577	102.00	70	125	
Ge	72	2	He	413507	0.78	403706	102.43	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	079CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:52:54-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	359952	0.00
Na	23	1	nogas	113153728	0.00
Mg	24	1	nogas	70211602	0.00
Al	27	1	nogas	835224	0.00
K	39	1	nogas	94796588	0.00
Ti	47	1	nogas	74048	0.01
V	51	1	nogas	1796770	0.00
Cr	52	1	nogas	881496	0.00
Mn	55	1	nogas	1082309	0.00
Co	59	1	nogas	868978	0.00
Ni	60	1	nogas	192812	0.00
Cu	63	1	nogas	456125	0.00
Zn	66	1	nogas	156139	0.00
As	75	1	nogas	330346	0.00
Sr	88	1	nogas	1128659	0.00
Ag	107	1	nogas	523695	0.00
Cd	111	1	nogas	111430	0.00
Sb	121	1	nogas	490689	0.00
Tl	205	1	nogas	735229	0.00
Pb	208	1	nogas	1007331	0.00
[Pb]	206	1	nogas	250439	0.00
[Pb]	207	1	nogas	221086	0.00
Na	23	2	He	7528608	0.00
Mg	24	2	He	4029918	0.00
Al	27	2	He	22844	0.00
K	39	2	He	4663049	0.00
Ca	43	2	He	11180	0.03
Ca	44	2	He	195170	0.00
V	51	2	He	270119	0.00
Cr	52	2	He	271096	0.00
Mn	55	2	He	202707	0.00
Fe	56	2	He	24116035	0.00
Co	59	2	He	356143	0.00
Ni	60	2	He	87488	0.00
Cu	63	2	He	219871	0.00
Zn	66	2	He	57317	0.00
As	75	2	He	65347	0.00
Se	78	2	He	5534	0.05
B	11	1	nogas	1118157	0.00
Si	28	1	nogas	5111263	0.00

Calibration Standard Report

Ca	43	1	nogas	153136	0.00
Ca	44	1	nogas	2554808	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	93341806	0.00
Se	77	1	nogas	44692	0.01
Se	82	1	nogas	11741	0.01
Mo	95	1	nogas	216310	0.00
Sn	118	1	nogas	294589	0.00
Ba	137	1	nogas	166962	0.00
Sb	121	2	He	221203	0.00
P	31	1	nogas	462219	0.00
La	139	1	nogas	150	4.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	642631	2.65	671260	95.74	70	125	
Ge	72	1	nogas	1469238	4.13	1476428	99.51	70	125	
In	115	1	nogas	1270625	6.89	1187105	107.04	70	125	
Bi	209	1	nogas	950215	2.18	882577	107.66	70	125	
Ge	72	2	He	404324	2.13	403706	100.15	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	080CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:54:52-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	748980	0.00
Na	23	1	nogas	231400347	0.00
Mg	24	1	nogas	141771887	0.00
Al	27	1	nogas	1728711	0.00
K	39	1	nogas	185404600	0.00
Ti	47	1	nogas	151121	0.00
V	51	1	nogas	2724213	0.00
Cr	52	1	nogas	1797924	0.00
Mn	55	1	nogas	2127615	0.00
Co	59	1	nogas	1785766	0.00
Ni	60	1	nogas	392161	0.00
Cu	63	1	nogas	928023	0.00
Zn	66	1	nogas	321547	0.00
As	75	1	nogas	558357	0.00
Sr	88	1	nogas	2342306	0.00
Ag	107	1	nogas	1035857	0.00
Cd	111	1	nogas	227230	0.00
Sb	121	1	nogas	1054661	0.00
Tl	205	1	nogas	1503664	0.00
Pb	208	1	nogas	2074702	0.00
[Pb]	206	1	nogas	512641	0.00
[Pb]	207	1	nogas	448930	0.00
Na	23	2	He	14602654	0.00
Mg	24	2	He	7936319	0.00
Al	27	2	He	44997	0.00
K	39	2	He	9125702	0.00
Ca	43	2	He	23008	0.01
Ca	44	2	He	393662	0.00
V	51	2	He	530364	0.00
Cr	52	2	He	541012	0.00
Mn	55	2	He	401552	0.00
Fe	56	2	He	47757013	0.00
Co	59	2	He	706939	0.00
Ni	60	2	He	174188	0.00
Cu	63	2	He	429426	0.00
Zn	66	2	He	113248	0.00
As	75	2	He	131071	0.00
Se	78	2	He	10979	0.01
B	11	1	nogas	2296029	0.00
Si	28	1	nogas	7590137	0.00

Calibration Standard Report

Ca	43	1	nogas	314192	0.00
Ca	44	1	nogas	5127968	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	186517867	0.00
Se	77	1	nogas	53455	0.00
Se	82	1	nogas	23485	0.01
Mo	95	1	nogas	454174	0.00
Sn	118	1	nogas	610124	0.00
Ba	137	1	nogas	340266	0.00
Sb	121	2	He	459164	0.00
P	31	1	nogas	871522	0.00
La	139	1	nogas	250	12.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	611713	6.88	671260	91.13	70	125	
Ge	72	1	nogas	1481279	7.35	1476428	100.33	70	125	
In	115	1	nogas	1209696	10.20	1187105	101.90	70	125	
Bi	209	1	nogas	876085	5.88	882577	99.26	70	125	
Ge	72	2	He	409287	1.25	403706	101.38	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	082_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:58:50-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	98.159	3.267	392693	1.84	100	98.2	90	110	
Na	23	1	nogas	10149.202	2.625	127335049	0.15	10000	101.5	90	110	
Mg	24	1	nogas	10442.587	3.823	80273683	1.14	10000	104.4	90	110	
Al	27	1	nogas	102.813	7.798	896167	1.01	100	102.8	90	110	
K	39	1	nogas	11058.641	6.523	106058379	2.68	10000	110.6	90	110	ICV Main CR1 Failed
Ti	47	1	nogas	103.074	6.936	78489	1.56	100	103.1	90	110	
V	51	1	nogas	66.764	4.903	1451440	8.86	100	66.8	90	110	ICV Main CR1 Failed
Cr	52	1	nogas	101.077	8.548	930773	0.32	100	101.1	90	110	
Mn	55	1	nogas	106.755	7.012	1158194	1.36	100	106.8	90	110	
Co	59	1	nogas	104.328	4.819	937174	3.40	100	104.3	90	110	
Ni	60	1	nogas	107.389	4.340	212715	4.18	100	107.4	90	110	
Cu	63	1	nogas	106.854	5.317	500745	2.97	100	106.9	90	110	
Zn	66	1	nogas	104.570	7.958	168974	0.58	100	104.6	90	110	
As	75	1	nogas	88.864	9.779	309240	1.82	100	88.9	90	110	ICV Main CR1 Failed
Sr	88	1	nogas	96.742	3.141	1142687	9.79	100	96.7	90	110	
Ag	107	1	nogas	105.360	6.512	552892	1.86	100	105.4	90	110	
Cd	111	1	nogas	100.495	5.987	122382	2.48	100	100.5	90	110	
Sb	121	1	nogas	109.383	7.147	574740	1.24	100	109.4	90	110	
Tl	205	1	nogas	93.223	14.694	826527	2.49	100	93.2	90	110	
Pb	208	1	nogas	107.890	1.890	1112749	1.89	100	107.9	90	110	
U	238	1	nogas	90.319	13.042	1076824	0.68	100	90.3	90	110	
[Pb]	206	1	nogas	93.883	13.422	284059	1.88	100	93.9	90	110	
[Pb]	207	1	nogas	89.562	15.333	237220	3.16	100	89.6	90	110	ICV Main CR1 Failed
Na	23	2	He	10862.277	2.491	8284060	1.99	10000	108.6	90	110	
Mg	24	2	He	10833.633	1.564	4469130	1.25	10000	108.3	90	110	
Al	27	2	He	101.896	1.190	24005	0.81	100	101.9	90	110	
K	39	2	He	10960.496	1.261	5076773	1.22	10000	109.6	90	110	
Ca	43	2	He	10365.120	2.711	12294	1.35	10000	103.7	90	110	
Ca	44	2	He	10562.860	1.290	215280	1.10	10000	105.6	90	110	
V	51	2	He	101.070	2.748	283219	1.32	100	101.1	90	110	
Cr	52	2	He	103.477	2.549	291079	1.00	100	103.5	90	110	
Mn	55	2	He	103.994	2.463	216989	2.20	100	104.0	90	110	
Fe	56	2	He	10770.200	1.965	26712625	2.95	10000	107.7	90	110	
Co	59	2	He	101.886	2.907	373765	2.05	100	101.9	90	110	
Ni	60	2	He	102.444	3.669	92629	2.45	100	102.4	90	110	
Cu	63	2	He	102.912	2.086	230597	0.58	100	102.9	90	110	
Zn	66	2	He	102.124	0.793	60182	1.64	100	102.1	90	110	
As	75	2	He	102.595	2.478	69785	1.00	100	102.6	90	110	
Se	78	2	He	101.409	3.871	5858	2.11	100	101.4	90	110	
B	11	1	nogas	481.359	8.800	1192876	5.12	500	96.3	90	110	
Si	28	1	nogas	4913.480	14.825	5151181	1.61	5000	98.3	90	110	
Ca	43	1	nogas	10871.103	7.315	171830	1.96	10000	108.7	90	110	
Ca	44	1	nogas	10675.333	1.230	2785143	7.25	10000	106.8	90	110	
Fe	56	1	nogas	10849.024	6.770	103132419	1.61	10000	108.5	90	110	
Se	77	1	nogas	-21.293	-41.433	31848	5.91	100	-21.3	90	110	ICV Main CR1 Failed
Se	82	1	nogas	104.685	10.191	12448	1.85	100	104.7	90	110	
Mo	95	1	nogas	97.481	5.309	222045	2.91	100	97.5	90	110	
Sn	118	1	nogas	97.763	6.211	318889	2.43	100	97.8	90	110	
Ba	137	1	nogas	99.401	6.657	181556	1.61	100	99.4	90	110	
Sb	121	2	He	108.130	2.882	255390	1.50	100	108.1	90	110	
Li	7	1	nogas	91.098	1.701	872057	2.28	100	91.1	90	110	
P	31	1	nogas	507.859	7.477	474948	2.03	500	101.6	90	110	
La	139	1	nogas	156.651	16.763	217	7.05	100	156.7	90	110	ICV Main CR1 Failed
Au	197	1	nogas	174.723	109.584	20	50.00	100	174.7	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	663889	3.42	671260	98.90	70	125	
Ge	72	1	nogas	1495768	7.94	1476428	101.31	70	125	
In	115	1	nogas	1310392	8.03	1187105	110.39	70	125	
Bi	209	1	nogas	1065305	13.35	882577	120.70	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	423094	1.66	403706	104.80	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	084SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:02:47-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	075CALB.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	1.743	1.743	5.55	7708	0.02	2000	
Na	23	1	nogas	183.907	183.907	7.25	2742225	0.01	200000	
Mg	24	1	nogas	202.690	202.690	2.56	1558296	0.01	200000	
Al	27	1	nogas	2.003	2.003	3.58	31350	0.01	2000	
K	39	1	nogas	140.395	140.395	8.28	7579543	0.00	200000	
Ti	47	1	nogas	1.942	1.942	20.51	1733	0.11	2000	
V	51	1	nogas	-39.003	-39.003	-4.29	416699	-0.01	2000	
Cr	52	1	nogas	0.335	0.335	16.19	47100	0.00	2000	
Mn	55	1	nogas	1.894	1.894	3.22	40207	0.00	2000	
Co	59	1	nogas	1.952	1.952	2.88	19204	0.01	2000	
Ni	60	1	nogas	1.822	1.822	3.93	4557	0.04	2000	
Cu	63	1	nogas	1.885	1.885	5.90	10983	0.02	2000	
Zn	66	1	nogas	1.955	1.955	7.71	3777	0.05	2000	
As	75	1	nogas	-16.603	-16.603	-6.83	72055	-0.02	2000	
Sr	88	1	nogas	1.938	1.938	2.88	25011	0.01	2000	
Ag	107	1	nogas	1.925	1.925	2.76	10897	0.02	2000	
Cd	111	1	nogas	1.970	1.970	11.20	2517	0.08	2000	
Sb	121	1	nogas	2.262	2.262	3.06	13018	0.02	2000	
Tl	205	1	nogas	1.766	1.766	8.23	16248	0.01	2000	
Pb	208	1	nogas	2.099	2.099	4.10	21779	0.01	2000	
U	238	1	nogas	1.713	1.713	7.45	20847	0.01	2000	
[Pb]	206	1	nogas	1.686	1.686	3.20	5251	0.03	2000	
[Pb]	207	1	nogas	1.739	1.739	13.89	4737	0.04	2000	
Na	23	2	He	181.447	181.447	3.01	184262	0.10	200000	
Mg	24	2	He	203.720	203.720	2.71	86402	0.24	200000	
Al	27	2	He	1.496	1.496	13.93	807	0.19	2000	
K	39	2	He	193.144	193.144	1.57	244014	0.08	200000	
Ca	43	2	He	213.363	213.363	4.38	283	75.30	200000	
Ca	44	2	He	194.819	194.819	9.54	4617	4.22	200000	
V	51	2	He	-0.292	-0.292	-30.87	10884	0.00	2000	
Cr	52	2	He	1.971	1.971	2.75	8095	0.02	2000	
Mn	55	2	He	2.065	2.065	3.58	4944	0.04	2000	
Fe	56	2	He	195.903	195.903	2.32	506800	0.04	200000	
Co	59	2	He	2.014	2.014	1.21	7635	0.03	2000	
Ni	60	2	He	1.769	1.769	7.74	1893	0.09	2000	
Cu	63	2	He	1.756	1.756	0.72	5414	0.03	2000	
Zn	66	2	He	1.844	1.844	18.33	1397	0.13	2000	
As	75	2	He	1.692	1.692	5.66	1621	0.10	2000	
Se	78	2	He	1.491	1.491	17.28	298	0.50	2000	
B	11	1	nogas	12.456	12.456	12.70	62639	0.02	2000	
Si	28	1	nogas	-461.333	-461.333	-8.15	2677691	-0.02	2000	
Ca	43	1	nogas	190.380	190.380	9.56	3664	5.20	200000	

Sample Report

Ca	44	1	nogas	176.725	176.725	2.08	79495	0.22	200000	
Fe	56	1	nogas	133.900	133.900	4.61	3598231	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-130.026	-130.026	-7.76	22064	-0.59	2000	
Se	82	1	nogas	2.031	2.031	43.17	383	0.53	2000	
Mo	95	1	nogas	2.023	2.023	6.63	5081	0.04	2000	
Sn	118	1	nogas	2.000	2.000	3.38	7188	0.03	2000	
Ba	137	1	nogas	1.845	1.845	1.46	3607	0.05	2000	
Sb	121	2	He	2.305	2.305	2.22	5674	0.04	2000	
La	139	1	nogas	-0.991	-0.991	-520.20	23	-4.25	2000	
Au	197	1	nogas	174.584	174.584	259.07	20	872.92	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	726119	4.64	671260	108.17	70	125	
Ge	72	1	nogas	1601858	0.52	1476428	108.50	70	125	
In	115	1	nogas	1359222	3.48	1187105	114.50	70	125	
Bi	209	1	nogas	1075816	6.76	882577	121.89	70	125	
Ge	72	2	He	432601	0.50	403706	107.16	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	085_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:04:45-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	85.9	140	31.1	1	
Na	23	1	nogas	-14.897	-3.7	282594	2.8	100	
Mg	24	1	nogas	0.301	88.1	10571	15.1	100	
Al	27	1	nogas	0.283	39.2	15350	3.0	5	
K	39	1	nogas	-40.858	-47.0	5781070	0.7	100	
Ti	47	1	nogas	-0.022	-230.3	130	35.3	2.5	
V	51	1	nogas	-34.018	-7.6	467837	6.3	2.5	
Cr	52	1	nogas	-1.035	-10.4	33948	2.7	2.5	
Mn	55	1	nogas	-0.101	-72.1	17178	1.4	2.5	
Co	59	1	nogas	0.011	108.6	490	21.3	2.5	
Ni	60	1	nogas	-0.103	-49.7	473	19.1	2.5	
Cu	63	1	nogas	-0.073	-7.6	1153	4.8	1	
Zn	66	1	nogas	0.006	852.6	393	21.2	2.5	
As	75	1	nogas	-13.962	-12.5	78194	6.9	2.5	
Sr	88	1	nogas	0.011	44.1	660	5.2	2.5	
Ag	107	1	nogas	0.003	220.3	57	56.7	2.5	
Cd	111	1	nogas	-0.006	-195.9	17	91.7	1	
Sb	121	1	nogas	0.292	11.4	1880	7.0	2.5	
Tl	205	1	nogas	0.015	94.7	417	32.4	1	
Pb	208	1	nogas	0.017	34.0	310	19.4	2.5	
U	238	1	nogas	0.011	38.8	180	28.9	2.5	
[Pb]	206	1	nogas	0.013	118.9	83	59.2	2.5	
[Pb]	207	1	nogas	0.010	34.6	70	14.3	2.5	
Na	23	2	He	-18.163	-10.3	29560	2.0	100	
Mg	24	2	He	0.399	88.7	657	26.1	100	
Al	27	2	He	-0.105	-224.0	430	10.7	5	
K	39	2	He	-9.164	-54.7	153211	1.5	100	
Ca	43	2	He	-9.829	-43.4	13	43.3	100	
Ca	44	2	He	0.849	59.3	590	4.5	100	
V	51	2	He	-1.868	-1.7	6592	2.3	2.5	
Cr	52	2	He	-0.153	-23.5	2050	6.3	2.5	
Mn	55	2	He	-0.004	-1048.1	543	14.3	2.5	
Fe	56	2	He	0.027	589.8	10403	7.6	100	
Co	59	2	He	0.001	565.6	87	24.0	2.5	
Ni	60	2	He	-0.202	-13.7	77	37.7	2.5	
Cu	63	2	He	-0.429	-3.5	440	9.9	1	
Zn	66	2	He	-0.270	-15.3	130	20.4	2.5	
As	75	2	He	-0.205	-10.4	312	6.2	2.5	
Se	78	2	He	-0.296	-78.8	197	6.6	1	
B	11	1	nogas	2.428	18.5	35887	1.8	10	
Si	28	1	nogas	-534.730	-43.5	2622839	1.2	5	
Ca	43	1	nogas	-0.575	-1251.1	427	30.9	100	
Ca	44	1	nogas	-7.545	-40.8	28355	0.9	100	
Fe	56	1	nogas	-45.691	-6.3	1791436	2.2	100	
Se	77	1	nogas	-102.664	-6.3	24974	3.7	2.5	
Se	82	1	nogas	0.249	91.4	157	19.5	1	

Initial Calibration Blank (ICB) Report

Mo	95	1	nogas	0.035	56.0	220	18.2	2.5	
Sn	118	1	nogas	0.043	59.7	583	12.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.015	-158.6	73	64.4	2.5	
Sb	121	2	He	0.319	2.6	883	1.7	2.5	
P	31	1	nogas	-3.147	-92.4	57012	0.9	10	
La	139	1	nogas	10.673	86.1	40	25.0	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-32.285	-250.9	33	17.3	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	721074	1.55	671260	107.42	70	125	
Ge	72	1	nogas	1594130	3.71	1476428	107.97	70	125	
In	115	1	nogas	1428034	6.02	1187105	120.30	70	125	
Bi	209	1	nogas	1039662	2.31	882577	117.80	70	125	
Ge	72	2	He	435477	3.63	403706	107.87	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	086LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:06:55-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	4.277	8.416	18739	5.48	5	85.5	70	130	
Na	23	1	nogas	454.734	3.297	6204415	0.81	500	90.9	70	130	
Mg	24	1	nogas	486.971	3.564	3787929	0.11	500	97.4	70	130	
Al	27	1	nogas	5.225	3.071	59370	1.25	5	104.5	70	130	
K	39	1	nogas	474.703	6.627	10520104	0.71	500	94.9	70	130	
Ti	47	1	nogas	4.832	6.785	3974	4.50	5	96.6	70	130	
V	51	1	nogas	-24.783	-10.201	553246	5.74	5	-495.7	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.050	3.833	79922	3.15	5	81.0	70	130	
Mn	55	1	nogas	5.129	3.271	75119	1.59	5	102.6	70	130	
Co	59	1	nogas	4.915	1.725	46382	0.50	5	98.3	70	130	
Ni	60	1	nogas	5.055	4.235	11077	2.71	5	101.1	70	130	
Cu	63	1	nogas	5.117	3.023	26409	1.08	5	102.3	70	130	
Zn	66	1	nogas	5.077	2.967	8929	4.72	5	101.5	70	130	
As	75	1	nogas	-7.145	-36.403	92618	6.50	5	-142.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.808	5.251	59462	3.18	5	96.2	70	130	
Ag	107	1	nogas	5.016	4.008	27505	3.53	5	100.3	70	130	
Cd	111	1	nogas	4.792	8.839	6034	6.56	5	95.8	70	130	
Sb	121	1	nogas	5.107	1.476	28243	2.14	5	102.1	70	130	
Tl	205	1	nogas	4.285	9.257	38299	1.61	5	85.7	70	130	
Pb	208	1	nogas	5.093	2.349	52650	2.34	5	101.9	70	130	
U	238	1	nogas	4.326	8.925	51597	0.83	5	86.5	70	130	
[Pb]	206	1	nogas	4.406	11.582	13356	4.64	5	88.1	70	130	
[Pb]	207	1	nogas	4.442	11.830	11804	2.87	5	88.8	70	130	
Na	23	2	He	471.980	1.834	408555	1.57	500	94.4	70	130	
Mg	24	2	He	488.841	0.868	206097	0.82	500	97.8	70	130	
Al	27	2	He	4.983	6.130	1627	4.36	5	99.7	70	130	
K	39	2	He	502.463	1.289	382847	0.76	500	100.5	70	130	
Ca	43	2	He	495.725	14.084	623	13.36	500	99.1	70	130	
Ca	44	2	He	496.395	1.613	10857	1.48	500	99.3	70	130	
V	51	2	He	3.138	2.731	20261	1.34	5	62.8	70	130	LLICV Main CR1 Failed
Cr	52	2	He	4.951	2.739	16551	2.48	5	99.0	70	130	
Mn	55	2	He	4.946	2.640	11047	2.71	5	98.9	70	130	
Fe	56	2	He	491.802	1.861	1253356	1.65	500	98.4	70	130	
Co	59	2	He	4.790	0.255	17999	0.46	5	95.8	70	130	
Ni	60	2	He	4.563	3.557	4457	3.28	5	91.3	70	130	
Cu	63	2	He	4.651	1.544	11974	1.39	5	93.0	70	130	
Zn	66	2	He	4.972	7.782	3264	7.28	5	99.4	70	130	
As	75	2	He	4.669	3.609	3669	3.35	5	93.4	70	130	
Se	78	2	He	5.109	5.277	503	3.04	5	102.2	70	130	
B	11	1	nogas	21.368	6.736	86163	0.95	25	85.5	70	130	
Si	28	1	nogas	-52.262	-295.603	2810797	0.72	25	-209.0	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	497.358	3.515	8609	1.35	500	99.5	70	130	
Ca	44	1	nogas	472.461	3.958	156608	1.96	500	94.5	70	130	
Fe	56	1	nogas	455.422	3.589	6617911	1.17	500	91.1	70	130	
Se	77	1	nogas	-75.390	-19.551	27334	6.97	5	-1507.8	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.021	15.557	740	12.39	5	100.4	70	130	
Mo	95	1	nogas	4.750	2.882	11407	1.82	5	95.0	70	130	
Sn	118	1	nogas	4.563	1.691	15744	2.61	5	91.3	70	130	
Ba	137	1	nogas	4.592	7.189	8739	3.84	5	91.8	70	130	
Sb	121	2	He	4.987	5.207	12114	5.00	5	99.7	70	130	
Li	7	1	nogas	4.094	8.083	101713	4.38	5	81.9	70	130	
P	31	1	nogas	25.659	11.565	80470	1.18	25	102.6	70	130	
La	139	1	nogas	35.747	25.202	70	14.29	5	714.9	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	90.985	149.784	27	43.30	5	1819.7	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	724747	3.64	671260	107.97	70	125	
Ge	72	1	nogas	1555772	2.17	1476428	105.37	70	125	
In	115	1	nogas	1348172	4.24	1187105	113.57	70	125	
Bi	209	1	nogas	1058562	9.60	882577	119.94	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	431395	0.21	403706	106.86	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\010
Acq Date Time	2019-01-08T14:26:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	95.733	1.593	349992	1.71	100	95.7	90	110	
Na	23	1	nogas	10173.492	3.301	111155311	1.04	10000	101.7	90	110	
Mg	24	1	nogas	10264.524	3.289	68728672	0.63	10000	102.6	90	110	
Al	27	1	nogas	100.157	1.668	813618	0.90	100	100.2	90	110	
K	39	1	nogas	10146.382	1.360	91024752	1.02	10000	101.5	90	110	
Ti	47	1	nogas	102.359	2.854	72582	2.09	100	102.4	90	110	
V	51	1	nogas	92.696	6.858	1587323	1.56	100	92.7	90	110	
Cr	52	1	nogas	101.386	3.894	869705	2.25	100	101.4	90	110	
Mn	55	1	nogas	103.786	3.593	1048883	2.54	100	103.8	90	110	
Co	59	1	nogas	100.579	1.245	840598	2.16	100	100.6	90	110	
Ni	60	1	nogas	103.641	0.642	190979	2.74	100	103.6	90	110	
Cu	63	1	nogas	102.806	2.275	448332	2.01	100	102.8	90	110	
Zn	66	1	nogas	102.030	1.617	153636	1.46	100	102.0	90	110	
As	75	1	nogas	89.042	2.083	288304	1.11	100	89.0	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	100.464	2.688	1099929	0.42	100	100.5	90	110	
Ag	107	1	nogas	101.661	1.143	496736	1.26	100	101.7	90	110	
Cd	111	1	nogas	97.642	1.792	108678	0.46	100	97.6	90	110	
Sb	121	1	nogas	98.708	3.242	483000	1.99	100	98.7	90	110	
Tl	205	1	nogas	97.469	1.652	708481	2.91	100	97.5	90	110	
Pb	208	1	nogas	95.252	2.179	982419	2.18	100	95.3	90	110	
U	238	1	nogas	102.496	2.904	999978	1.69	100	102.5	90	110	
[Pb]	206	1	nogas	98.489	1.817	243991	2.52	100	98.5	90	110	
[Pb]	207	1	nogas	98.723	1.165	214480	2.23	100	98.7	90	110	
Na	23	2	He	10124.443	1.353	7054520	1.06	10000	101.2	90	110	
Mg	24	2	He	10037.586	1.703	3781482	1.16	10000	100.4	90	110	
Al	27	2	He	98.752	1.157	21262	2.25	100	98.8	90	110	
K	39	2	He	9202.311	0.631	4287639	0.61	10000	92.0	90	110	
Ca	43	2	He	9651.291	2.619	10460	3.46	10000	96.5	90	110	
Ca	44	2	He	9728.023	3.656	181077	2.84	10000	97.3	90	110	
V	51	2	He	98.207	0.621	251673	1.24	100	98.2	90	110	
Cr	52	2	He	98.844	3.711	254033	3.04	100	98.8	90	110	
Mn	55	2	He	98.154	2.180	187050	1.07	100	98.2	90	110	
Fe	56	2	He	9965.505	2.982	22565886	1.96	10000	99.7	90	110	
Co	59	2	He	98.462	2.021	329886	0.95	100	98.5	90	110	
Ni	60	2	He	98.539	2.702	81387	1.65	100	98.5	90	110	
Cu	63	2	He	99.114	1.195	202885	0.24	100	99.1	90	110	
Zn	66	2	He	98.486	1.266	53007	0.51	100	98.5	90	110	
As	75	2	He	95.992	1.939	59659	0.86	100	96.0	90	110	
Se	78	2	He	94.187	1.951	4983	1.28	100	94.2	90	110	
B	11	1	nogas	462.877	0.678	1050567	0.63	500	92.6	90	110	
Si	28	1	nogas	5227.836	5.935	4941073	0.66	5000	104.6	90	110	
Ca	43	1	nogas	10212.600	2.128	150355	0.34	10000	102.1	90	110	
Ca	44	1	nogas	10300.733	4.436	2494706	2.81	10000	103.0	90	110	
Fe	56	1	nogas	10062.567	3.645	89194369	2.37	10000	100.6	90	110	
Se	77	1	nogas	34.925	29.843	35027	5.17	100	34.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.680	9.720	10617	8.59	100	95.7	90	110	
Mo	95	1	nogas	100.548	3.537	213036	1.29	100	100.5	90	110	
Sn	118	1	nogas	96.655	3.438	288105	1.34	100	96.7	90	110	
Ba	137	1	nogas	95.671	0.912	159835	3.07	100	95.7	90	110	
Sb	121	2	He	95.760	1.606	206602	1.39	100	95.8	90	110	
Li	7	1	nogas	120.974	7.175	1040618	6.01	100	121.0	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	490.866	1.961	429146	0.56	500	98.2	90	110	
La	139	1	nogas	131.055	17.859	170	15.56	100	131.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	113.249	346.654	20	100.00	100	113.2	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	606323	1.25	671260	90.33	70	125	
Ge	72	1	nogas	1388191	2.30	1476428	94.02	70	125	
In	115	1	nogas	1194144	2.18	1187105	100.59	70	125	
Bi	209	1	nogas	861848	1.25	882577	97.65	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	386373	1.12	403706	95.71	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\010
Acq Date Time	2019-01-08T14:28:42-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	8.3	363	4.2	1	
Na	23	1	nogas	44.103	37.8	867600	6.1	100	
Mg	24	1	nogas	7.004	45.7	52081	25.8	100	
Al	27	1	nogas	0.668	73.5	15847	11.0	5	
K	39	1	nogas	29.479	259.5	5474208	1.0	100	
Ti	47	1	nogas	0.420	47.5	417	36.0	2.5	
V	51	1	nogas	-29.020	-14.2	442613	5.3	2.5	
Cr	52	1	nogas	-1.031	-34.4	28816	2.7	2.5	
Mn	55	1	nogas	0.211	102.7	17572	2.1	2.5	
Co	59	1	nogas	0.060	30.7	813	15.5	2.5	
Ni	60	1	nogas	0.040	72.2	660	5.5	2.5	
Cu	63	1	nogas	0.047	93.1	1480	5.9	2	
Zn	66	1	nogas	0.574	31.8	1153	13.0	2.5	
As	75	1	nogas	-12.590	-21.7	69205	4.1	2.5	
Sr	88	1	nogas	0.120	22.9	1713	6.8	2.5	
Ag	107	1	nogas	0.047	33.1	257	17.6	2.5	
Cd	111	1	nogas	0.056	56.9	80	45.1	1	
Sb	121	1	nogas	2.310	30.6	11027	17.0	2.5	
Tl	205	1	nogas	0.128	62.0	1117	41.7	1	
Pb	208	1	nogas	0.064	25.1	790	20.8	2.5	
U	238	1	nogas	0.100	49.9	973	39.6	2.5	
[Pb]	206	1	nogas	0.059	59.3	177	39.8	2.5	
[Pb]	207	1	nogas	0.074	21.0	193	10.8	2.5	
Na	23	2	He	27.253	4.1	59432	1.0	100	
Mg	24	2	He	4.273	7.5	2100	6.0	100	
Al	27	2	He	-0.002	-10204.2	417	13.6	5	
K	39	2	He	-29.008	-2.7	144305	0.2	100	
Ca	43	2	He	30.189	15.0	57	10.2	100	
Ca	44	2	He	12.831	40.1	767	10.9	100	
V	51	2	He	-1.807	-6.7	6174	3.2	2.5	
Cr	52	2	He	-0.145	-59.4	1893	11.7	2.5	
Mn	55	2	He	0.007	1067.5	517	25.2	2.5	
Fe	56	2	He	3.331	6.5	17191	1.5	100	
Co	59	2	He	0.023	44.8	153	21.0	2.5	
Ni	60	2	He	-0.174	-22.1	93	34.4	2.5	
Cu	63	2	He	-0.385	-0.6	493	1.2	2	
Zn	66	2	He	-0.044	-7.1	243	2.4	2.5	
As	75	2	He	-0.181	-14.2	300	4.4	2.5	
Se	78	2	He	-0.176	-90.4	187	5.4	2	
B	11	1	nogas	13.952	23.4	57446	6.8	10	CCB Main CR1 Failed
Si	28	1	nogas	94.902	665.6	2505074	1.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	24.277	41.1	710	7.8	100	
Ca	44	1	nogas	28.524	78.8	32301	3.9	100	
Fe	56	1	nogas	-11.807	-221.8	1801586	1.3	100	
Se	77	1	nogas	-89.926	-18.4	22424	6.0	2.5	
Se	82	1	nogas	0.985	34.3	213	23.1	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.251	50.0	617	28.5	2.5	
Sn	118	1	nogas	0.332	35.2	1310	19.3	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.032	63.6	137	22.4	2.5	
Sb	121	2	He	1.491	10.8	3407	9.6	2.5	
P	31	1	nogas	0.373	2154.2	50925	0.7	10	
La	139	1	nogas	11.250	108.9	33	34.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-57.779	-1377.1	30	145.3	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	654454	6.67	671260	97.50	70	125	
Ge	72	1	nogas	1361671	11.89	1476428	92.23	70	125	
In	115	1	nogas	1177467	11.86	1187105	99.19	70	125	
Bi	209	1	nogas	850798	8.58	882577	96.40	70	125	
Ge	72	2	He	397838	2.06	403706	98.55	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\010
Acq Date Time	2019-01-08T14:50:33-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	95.919	4.582	351932	3.66	100	95.9	90	110	
Na	23	1	nogas	10180.284	12.219	111429244	1.31	10000	101.8	90	110	
Mg	24	1	nogas	10269.047	13.268	68836766	2.53	10000	102.7	90	110	
Al	27	1	nogas	102.622	8.256	824736	1.94	100	102.6	90	110	
K	39	1	nogas	10415.440	8.871	92318356	2.22	10000	104.2	90	110	
Ti	47	1	nogas	103.269	5.338	72555	0.84	100	103.3	90	110	
V	51	1	nogas	80.626	7.308	1464838	6.95	100	80.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.380	7.976	869274	2.77	100	102.4	90	110	
Mn	55	1	nogas	105.284	7.368	1053382	2.11	100	105.3	90	110	
Co	59	1	nogas	103.305	6.936	854708	0.86	100	103.3	90	110	
Ni	60	1	nogas	105.429	7.347	192259	1.26	100	105.4	90	110	
Cu	63	1	nogas	106.032	8.409	457530	2.53	100	106.0	90	110	
Zn	66	1	nogas	103.630	8.438	154403	2.49	100	103.6	90	110	
As	75	1	nogas	90.057	11.277	287559	2.27	100	90.1	90	110	
Sr	88	1	nogas	95.975	8.844	1047013	14.31	100	96.0	90	110	
Ag	107	1	nogas	105.469	7.810	510103	2.79	100	105.5	90	110	
Cd	111	1	nogas	99.631	8.956	110978	2.28	100	99.6	90	110	
Sb	121	1	nogas	100.913	6.658	489045	0.77	100	100.9	90	110	
Tl	205	1	nogas	88.402	4.135	721162	1.44	100	88.4	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	96.426	2.100	994528	2.10	100	96.4	90	110	
U	238	1	nogas	93.268	4.960	1021450	2.35	100	93.3	90	110	
[Pb]	206	1	nogas	88.101	3.569	244993	0.94	100	88.1	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	88.536	4.985	215854	2.38	100	88.5	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10011.592	5.108	7183984	4.10	10000	100.1	90	110	
Mg	24	2	He	9930.525	2.281	3853318	1.31	10000	99.3	90	110	
Al	27	2	He	100.425	0.411	22263	1.36	100	100.4	90	110	
K	39	2	He	9336.014	0.810	4347650	0.78	10000	93.4	90	110	
Ca	43	2	He	9661.674	2.029	10783	1.67	10000	96.6	90	110	
Ca	44	2	He	9632.397	1.761	184711	1.17	10000	96.3	90	110	
V	51	2	He	96.301	2.871	254367	1.78	100	96.3	90	110	
Cr	52	2	He	97.838	1.536	259048	0.57	100	97.8	90	110	
Mn	55	2	He	97.324	0.815	191064	0.21	100	97.3	90	110	
Fe	56	2	He	9920.473	0.496	23142807	0.52	10000	99.2	90	110	
Co	59	2	He	97.322	2.914	335849	1.98	100	97.3	90	110	
Ni	60	2	He	98.054	1.783	83432	1.69	100	98.1	90	110	
Cu	63	2	He	98.790	0.774	208313	0.84	100	98.8	90	110	
Zn	66	2	He	97.858	3.029	54267	3.94	100	97.9	90	110	
As	75	2	He	94.527	1.743	60522	0.94	100	94.5	90	110	
Se	78	2	He	92.208	2.091	5029	1.50	100	92.2	90	110	
B	11	1	nogas	476.608	2.885	1086653	2.05	500	95.3	90	110	
Si	28	1	nogas	5384.216	18.666	4960067	3.01	5000	107.7	90	110	
Ca	43	1	nogas	10262.282	6.737	149621	0.99	10000	102.6	90	110	
Ca	44	1	nogas	10024.146	3.783	2408602	3.10	10000	100.2	90	110	
Fe	56	1	nogas	10323.107	8.121	90529060	1.73	10000	103.2	90	110	
Se	77	1	nogas	19.191	169.324	33130	4.03	100	19.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.635	12.628	10817	6.95	100	98.6	90	110	
Mo	95	1	nogas	102.870	7.655	215806	1.50	100	102.9	90	110	
Sn	118	1	nogas	97.958	7.649	292442	0.89	100	98.0	90	110	
Ba	137	1	nogas	96.514	8.062	161424	3.35	100	96.5	90	110	
Sb	121	2	He	95.574	0.239	212408	0.97	100	95.6	90	110	
Li	7	1	nogas	99.827	3.080	864062	0.71	100	99.8	90	110	
P	31	1	nogas	505.619	7.569	436233	2.08	500	101.1	90	110	
La	139	1	nogas	99.350	31.698	133	21.65	100	99.3	90	110	
Au	197	1	nogas	217.545	44.543	17	34.64	100	217.5	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	656003	2.18	671260	97.73	70	125	
Ge	72	1	nogas	1377983	6.00	1476428	93.33	70	125	
In	115	1	nogas	1199518	6.71	1187105	101.05	70	125	
Bi	209	1	nogas	968089	2.76	882577	109.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	397978	0.98	403706	98.58	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\010
Acq Date Time	2019-01-08T14:52:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	25.0	340	14.7	1	
Na	23	1	nogas	1.419	345.2	435238	2.2	100	
Mg	24	1	nogas	6.380	37.8	51211	20.4	100	
Al	27	1	nogas	0.432	62.9	15108	5.2	5	
K	39	1	nogas	-19.179	-312.4	5429471	0.9	100	
Ti	47	1	nogas	0.114	40.7	217	10.7	2.5	
V	51	1	nogas	-35.345	-5.3	412250	5.1	2.5	
Cr	52	1	nogas	-1.310	-21.7	28432	1.3	2.5	
Mn	55	1	nogas	0.212	90.3	18806	2.3	2.5	
Co	59	1	nogas	0.054	21.5	813	9.4	2.5	
Ni	60	1	nogas	-0.037	-186.7	553	15.4	2.5	
Cu	63	1	nogas	0.027	226.2	1487	9.0	2	
Zn	66	1	nogas	0.039	125.9	407	13.5	2.5	
As	75	1	nogas	-15.570	-10.6	67405	4.4	2.5	
Sr	88	1	nogas	0.114	23.0	1767	7.1	2.5	
Ag	107	1	nogas	0.039	41.9	233	26.2	2.5	
Cd	111	1	nogas	0.058	17.8	87	13.3	1	
Sb	121	1	nogas	2.075	26.0	10673	15.6	2.5	
Tl	205	1	nogas	0.131	44.0	1223	27.6	1	
Pb	208	1	nogas	0.079	26.9	943	23.1	2.5	
U	238	1	nogas	0.109	44.9	1133	35.5	2.5	
[Pb]	206	1	nogas	0.078	45.4	237	32.8	2.5	
[Pb]	207	1	nogas	0.070	29.9	197	21.2	2.5	
Na	23	2	He	-4.020	-12.6	37567	0.8	100	
Mg	24	2	He	4.499	10.1	2213	7.8	100	
Al	27	2	He	-0.385	-97.2	337	24.2	5	
K	39	2	He	-37.784	-17.7	140365	2.1	100	
Ca	43	2	He	0.051	10102.0	23	24.7	100	
Ca	44	2	He	17.648	94.1	870	36.8	100	
V	51	2	He	-1.999	-1.6	5758	1.6	2.5	
Cr	52	2	He	-0.123	-26.4	1973	4.6	2.5	
Mn	55	2	He	0.169	32.3	847	13.0	2.5	
Fe	56	2	He	4.157	1.7	19350	1.0	100	
Co	59	2	He	0.030	41.9	180	24.2	2.5	
Ni	60	2	He	-0.198	-23.7	73	55.1	2.5	
Cu	63	2	He	-0.418	-9.2	430	19.0	2	
Zn	66	2	He	-0.252	-25.8	130	27.7	2.5	
As	75	2	He	-0.211	-11.5	284	5.3	2.5	
Se	78	2	He	0.022	127.7	199	0.6	2	
B	11	1	nogas	14.698	26.0	62004	9.2	10	CCB Main CR1 Failed
Si	28	1	nogas	-283.373	-178.7	2498307	2.0	5	
Ca	43	1	nogas	11.988	53.1	580	18.6	100	
Ca	44	1	nogas	2.732	243.6	28328	4.2	100	
Fe	56	1	nogas	-30.612	-62.9	1759415	3.6	100	
Se	77	1	nogas	-113.182	-14.2	21596	2.1	2.5	
Se	82	1	nogas	0.346	36.1	153	10.0	2	
Mo	95	1	nogas	0.323	47.6	820	30.9	2.5	
Sn	118	1	nogas	0.397	37.7	1567	16.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.022	95.8	127	16.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.358	3.0	3150	3.0	2.5	
P	31	1	nogas	-2.489	-221.1	52249	1.5	10	
La	139	1	nogas	16.939	166.0	40	66.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-55.291	-340.3	30	33.3	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	686416	4.84	671260	102.26	70	125	
Ge	72	1	nogas	1452276	9.39	1476428	98.36	70	125	
In	115	1	nogas	1239072	11.16	1187105	104.38	70	125	
Bi	209	1	nogas	904072	7.01	882577	102.44	70	125	
Ge	72	2	He	402554	0.25	403706	99.71	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\010
Acq Date Time	2019-01-08T15:14:18-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	101.383	5.545	350245	2.16	100	101.4	90	110	
Na	23	1	nogas	9402.598	9.413	109156986	0.83	10000	94.0	90	110	
Mg	24	1	nogas	9445.146	10.744	67123185	1.39	10000	94.5	90	110	
Al	27	1	nogas	96.834	4.381	815071	0.62	100	96.8	90	110	
K	39	1	nogas	9618.682	5.260	89639142	0.69	10000	96.2	90	110	
Ti	47	1	nogas	98.923	3.108	72685	1.72	100	98.9	90	110	
V	51	1	nogas	76.528	9.590	1488302	0.28	100	76.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	97.990	5.624	871845	1.46	100	98.0	90	110	
Mn	55	1	nogas	100.855	3.221	1056646	1.85	100	100.9	90	110	
Co	59	1	nogas	98.140	4.489	849335	1.27	100	98.1	90	110	
Ni	60	1	nogas	100.742	5.068	192199	2.01	100	100.7	90	110	
Cu	63	1	nogas	100.245	4.640	452757	1.31	100	100.2	90	110	
Zn	66	1	nogas	97.345	4.627	151822	1.95	100	97.3	90	110	
As	75	1	nogas	81.654	6.479	282242	1.19	100	81.7	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	97.136	4.057	1102019	2.94	100	97.1	90	110	
Ag	107	1	nogas	100.074	5.687	506209	1.75	100	100.1	90	110	
Cd	111	1	nogas	96.198	8.220	109945	1.87	100	96.2	90	110	
Sb	121	1	nogas	94.451	3.098	478924	1.72	100	94.5	90	110	
Tl	205	1	nogas	94.944	5.817	710518	2.19	100	94.9	90	110	
Pb	208	1	nogas	94.520	1.400	974868	1.40	100	94.5	90	110	
U	238	1	nogas	97.622	5.282	981041	1.55	100	97.6	90	110	
[Pb]	206	1	nogas	96.109	4.477	245227	0.90	100	96.1	90	110	
[Pb]	207	1	nogas	95.245	3.019	213213	1.87	100	95.2	90	110	
Na	23	2	He	9585.550	2.797	7011534	1.44	10000	95.9	90	110	
Mg	24	2	He	9379.152	0.882	3709581	2.29	10000	93.8	90	110	
Al	27	2	He	96.168	1.533	21746	2.86	100	96.2	90	110	
K	39	2	He	9482.293	1.825	4413305	1.76	10000	94.8	90	110	
Ca	43	2	He	9552.166	4.618	10860	2.98	10000	95.5	90	110	
Ca	44	2	He	9285.803	2.645	181447	1.17	10000	92.9	90	110	
V	51	2	He	93.602	3.180	252220	1.40	100	93.6	90	110	
Cr	52	2	He	96.716	2.914	260933	1.37	100	96.7	90	110	
Mn	55	2	He	95.212	0.486	190505	1.78	100	95.2	90	110	
Fe	56	2	He	9631.241	1.629	22894060	0.78	10000	96.3	90	110	
Co	59	2	He	95.141	2.926	334544	1.48	100	95.1	90	110	
Ni	60	2	He	95.219	4.261	82539	2.73	100	95.2	90	110	
Cu	63	2	He	94.919	2.596	203969	0.92	100	94.9	90	110	
Zn	66	2	He	92.227	2.042	52115	0.40	100	92.2	90	110	
As	75	2	He	92.642	1.920	60452	1.22	100	92.6	90	110	
Se	78	2	He	89.804	5.038	4995	3.23	100	89.8	90	110	CCV Main CR1-2 Failed
B	11	1	nogas	489.765	5.382	1050563	0.52	500	98.0	90	110	
Si	28	1	nogas	4816.816	9.940	4921706	0.43	5000	96.3	90	110	
Ca	43	1	nogas	9603.964	5.569	146418	0.74	10000	96.0	90	110	
Ca	44	1	nogas	9785.517	3.532	2457287	1.45	10000	97.9	90	110	
Fe	56	1	nogas	9859.852	3.667	90602185	2.20	10000	98.6	90	110	
Se	77	1	nogas	-0.486	-1382.687	32743	2.75	100	-0.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.156	7.366	11160	3.20	100	97.2	90	110	
Mo	95	1	nogas	98.850	4.387	216979	0.99	100	98.9	90	110	
Sn	118	1	nogas	92.937	5.754	284866	2.13	100	92.9	90	110	
Ba	137	1	nogas	95.604	10.276	163756	2.62	100	95.6	90	110	
Sb	121	2	He	93.183	0.532	211037	1.20	100	93.2	90	110	
Li	7	1	nogas	103.625	2.937	843264	2.60	100	103.6	90	110	
P	31	1	nogas	468.659	5.496	426740	0.57	500	93.7	90	110	
La	139	1	nogas	109.033	24.785	150	24.04	100	109.0	90	110	
Au	197	1	nogas	316.117	59.038	10	100.00	100	316.1	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	618516	5.09	671260	92.14	70	125	
Ge	72	1	nogas	1439333	4.73	1476428	97.49	70	125	
In	115	1	nogas	1230909	7.69	1187105	103.69	70	125	
Bi	209	1	nogas	888698	3.80	882577	100.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	405572	1.69	403706	100.46	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\010
Acq Date Time	2019-01-08T15:16:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	0.063	6.5	327	6.4	1	
Na	23	1	nogas	-10.046	-41.6	337933	8.4	100	
Mg	24	1	nogas	5.697	31.1	52082	19.3	100	
Al	27	1	nogas	0.452	35.8	16301	8.6	5	
K	39	1	nogas	-48.496	-2.3	5500705	0.7	100	
Ti	47	1	nogas	0.075	104.0	200	30.4	2.5	
V	51	1	nogas	-40.030	-4.7	388789	5.4	2.5	
Cr	52	1	nogas	-1.509	-6.1	28405	3.1	2.5	
Mn	55	1	nogas	-0.035	-145.6	17292	2.5	2.5	
Co	59	1	nogas	0.071	33.5	1027	21.9	2.5	
Ni	60	1	nogas	-0.084	-49.6	497	16.8	2.5	
Cu	63	1	nogas	-0.038	-77.0	1277	11.8	2	
Zn	66	1	nogas	0.079	63.8	500	16.4	2.5	
As	75	1	nogas	-18.873	-7.1	63685	5.1	2.5	
Sr	88	1	nogas	0.083	40.6	1510	26.8	2.5	
Ag	107	1	nogas	0.040	46.4	257	39.0	2.5	
Cd	111	1	nogas	0.039	70.5	73	56.8	1	
Sb	121	1	nogas	2.262	26.5	12472	25.8	2.5	
Tl	205	1	nogas	0.159	68.0	1633	61.1	1	
Pb	208	1	nogas	0.070	51.3	857	43.3	2.5	
U	238	1	nogas	0.131	53.7	1547	56.6	2.5	
[Pb]	206	1	nogas	0.063	40.8	223	38.1	2.5	
[Pb]	207	1	nogas	0.053	54.1	177	45.4	2.5	
Na	23	2	He	-13.270	-10.8	31092	2.1	100	
Mg	24	2	He	4.100	11.9	2073	11.0	100	
Al	27	2	He	-0.007	-2728.0	423	12.1	5	
K	39	2	He	-30.002	-12.2	143858	1.1	100	
Ca	43	2	He	-0.151	-3111.8	23	24.7	100	
Ca	44	2	He	5.166	63.7	633	10.5	100	
V	51	2	He	-2.190	-2.6	5306	1.2	2.5	
Cr	52	2	He	-0.146	-57.5	1923	10.1	2.5	
Mn	55	2	He	0.071	50.4	657	12.2	2.5	
Fe	56	2	He	4.022	4.2	19160	1.3	100	
Co	59	2	He	0.037	80.8	210	52.4	2.5	
Ni	60	2	He	-0.153	-15.9	113	20.4	2.5	
Cu	63	2	He	-0.357	-0.5	563	1.0	2	
Zn	66	2	He	-0.283	-10.2	113	13.5	2.5	
As	75	2	He	-0.200	-40.4	293	17.2	2.5	
Se	78	2	He	-0.012	-3663.3	199	10.7	2	
B	11	1	nogas	10.492	16.8	52836	7.4	10	CCB Main CR1 Failed
Si	28	1	nogas	-502.530	-26.8	2545696	3.5	5	
Ca	43	1	nogas	12.385	35.4	620	11.3	100	
Ca	44	1	nogas	-2.557	-159.6	28649	3.6	100	
Fe	56	1	nogas	-39.730	-19.7	1783006	4.0	100	
Se	77	1	nogas	-133.848	-5.7	20735	3.9	2.5	
Se	82	1	nogas	0.629	51.5	197	19.3	2	
Mo	95	1	nogas	0.411	33.8	1093	29.6	2.5	
Sn	118	1	nogas	0.283	38.2	1353	20.7	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.036	51.3	167	13.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.435	3.4	3347	4.6	2.5	
P	31	1	nogas	-8.494	-21.8	50417	2.4	10	
La	139	1	nogas	20.474	78.1	50	34.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	393.985	24.8	7	86.6	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	691096	2.41	671260	102.96	70	125	
Ge	72	1	nogas	1535286	0.78	1476428	103.99	70	125	
In	115	1	nogas	1359862	8.37	1187105	114.55	70	125	
Bi	209	1	nogas	994978	4.63	882577	112.74	70	125	
Ge	72	2	He	405338	1.67	403706	100.40	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\010
Acq Date Time	2019-01-08T15:39:34-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	104.416	4.079	359234	1.86	100	104.4	90	110	
Na	23	1	nogas	10213.581	2.383	121774907	2.29	10000	102.1	90	110	
Mg	24	1	nogas	10352.697	1.136	75648689	1.43	10000	103.5	90	110	
Al	27	1	nogas	100.265	1.757	880927	2.58	100	100.3	90	110	
K	39	1	nogas	10430.912	1.805	101022142	0.33	10000	104.3	90	110	
Ti	47	1	nogas	95.968	4.618	73589	3.76	100	96.0	90	110	
V	51	1	nogas	67.862	2.778	1467158	2.26	100	67.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	96.194	1.496	894638	0.55	100	96.2	90	110	
Mn	55	1	nogas	101.945	1.654	1114876	2.93	100	101.9	90	110	
Co	59	1	nogas	100.205	1.786	905634	2.54	100	100.2	90	110	
Ni	60	1	nogas	100.757	0.785	200748	1.01	100	100.8	90	110	
Cu	63	1	nogas	100.314	1.649	473072	0.11	100	100.3	90	110	
Zn	66	1	nogas	99.517	1.771	162055	1.65	100	99.5	90	110	
As	75	1	nogas	79.076	1.464	288753	1.80	100	79.1	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	94.255	4.322	1115804	2.63	100	94.3	90	110	
Ag	107	1	nogas	99.964	1.338	528178	1.04	100	100.0	90	110	
Cd	111	1	nogas	95.864	1.137	115288	1.60	100	95.9	90	110	
Sb	121	1	nogas	99.910	1.672	528745	0.94	100	99.9	90	110	
Tl	205	1	nogas	99.735	4.271	768680	1.86	100	99.7	90	110	
Pb	208	1	nogas	99.226	1.327	1023398	1.33	100	99.2	90	110	
U	238	1	nogas	97.118	3.823	1005156	1.73	100	97.1	90	110	
[Pb]	206	1	nogas	100.328	2.615	263666	1.84	100	100.3	90	110	
[Pb]	207	1	nogas	95.926	2.447	221080	1.64	100	95.9	90	110	
Na	23	2	He	10805.476	1.206	7650213	1.92	10000	108.1	90	110	
Mg	24	2	He	10637.498	1.105	4073057	0.51	10000	106.4	90	110	
Al	27	2	He	105.153	1.535	22981	1.54	100	105.2	90	110	
K	39	2	He	10027.507	1.765	4658016	1.71	10000	100.3	90	110	
Ca	43	2	He	10913.933	0.910	12017	1.73	10000	109.1	90	110	
Ca	44	2	He	10335.042	0.538	195537	1.55	10000	103.4	90	110	
V	51	2	He	100.748	1.122	262111	0.21	100	100.7	90	110	
Cr	52	2	He	103.276	0.500	269713	1.27	100	103.3	90	110	
Mn	55	2	He	102.114	0.378	197782	0.66	100	102.1	90	110	
Fe	56	2	He	10490.393	1.326	24144977	0.32	10000	104.9	90	110	
Co	59	2	He	100.837	2.261	343362	1.40	100	100.8	90	110	
Ni	60	2	He	102.667	1.275	86189	1.74	100	102.7	90	110	
Cu	63	2	He	105.640	1.624	219728	2.38	100	105.6	90	110	
Zn	66	2	He	103.424	1.337	56567	1.89	100	103.4	90	110	
As	75	2	He	99.417	0.660	62792	1.26	100	99.4	90	110	
Se	78	2	He	96.217	1.680	5170	1.47	100	96.2	90	110	
B	11	1	nogas	495.621	4.152	1058577	2.56	500	99.1	90	110	
Si	28	1	nogas	4589.631	3.113	5026185	0.36	5000	91.8	90	110	
Ca	43	1	nogas	10367.753	2.052	165057	0.33	10000	103.7	90	110	
Ca	44	1	nogas	10480.760	5.137	2744181	3.47	10000	104.8	90	110	
Fe	56	1	nogas	10308.725	0.874	98789296	1.53	10000	103.1	90	110	
Se	77	1	nogas	-36.951	-12.549	30372	2.86	100	-37.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.551	2.167	11470	0.62	100	95.6	90	110	
Mo	95	1	nogas	89.760	2.412	205721	1.54	100	89.8	90	110	CCV Main CR1-2 Failed
Sn	118	1	nogas	92.584	0.301	298296	1.98	100	92.6	90	110	
Ba	137	1	nogas	95.276	2.032	171900	1.30	100	95.3	90	110	
Sb	121	2	He	105.763	1.342	231916	1.68	100	105.8	90	110	
Li	7	1	nogas	100.327	0.920	814434	1.42	100	100.3	90	110	
P	31	1	nogas	462.253	1.193	440337	0.83	500	92.5	90	110	
La	139	1	nogas	223.581	30.889	297	28.07	100	223.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	131.123	288.499	20	100.00	100	131.1	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	615264	2.27	671260	91.66	70	125	
Ge	72	1	nogas	1501052	1.74	1476428	101.67	70	125	
In	115	1	nogas	1289999	1.70	1187105	108.67	70	125	
Bi	209	1	nogas	914676	2.86	882577	103.64	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	392686	1.02	403706	97.27	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\010
Acq Date Time	2019-01-08T15:41:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	0.056	73.3	287	48.4	1	
Na	23	1	nogas	-11.066	-20.7	294554	2.6	100	
Mg	24	1	nogas	4.347	39.6	37446	22.9	100	
Al	27	1	nogas	1.940	148.1	26416	79.3	5	
K	39	1	nogas	-18.239	-313.9	5370279	0.6	100	
Ti	47	1	nogas	0.066	144.1	177	33.2	2.5	
V	51	1	nogas	-39.556	-4.9	366458	4.1	2.5	
Cr	52	1	nogas	-1.549	-21.4	26025	3.3	2.5	
Mn	55	1	nogas	0.063	209.9	17075	1.5	2.5	
Co	59	1	nogas	0.050	36.4	763	12.1	2.5	
Ni	60	1	nogas	-0.079	-9.8	473	8.5	2.5	
Cu	63	1	nogas	-0.052	-46.9	1123	3.4	2	
Zn	66	1	nogas	0.046	124.7	417	22.7	2.5	
As	75	1	nogas	-17.685	-9.7	61872	3.6	2.5	
Sr	88	1	nogas	0.049	22.7	1027	4.9	2.5	
Ag	107	1	nogas	0.036	8.8	220	15.7	2.5	
Cd	111	1	nogas	0.028	15.9	53	10.8	1	
Sb	121	1	nogas	0.152	24.6	977	10.7	2.5	
Tl	205	1	nogas	0.170	68.3	1493	53.5	1	
Pb	208	1	nogas	0.066	20.3	810	17.0	2.5	
U	238	1	nogas	0.134	44.5	1373	39.0	2.5	
[Pb]	206	1	nogas	0.071	25.5	217	19.2	2.5	
[Pb]	207	1	nogas	0.067	48.6	187	38.0	2.5	
Na	23	2	He	-14.879	-1.5	29533	0.7	100	
Mg	24	2	He	3.236	4.5	1707	3.2	100	
Al	27	2	He	-0.086	-437.5	400	20.5	5	
K	39	2	He	-33.369	-15.6	142347	1.6	100	
Ca	43	2	He	15.077	157.0	40	66.1	100	
Ca	44	2	He	7.536	122.0	670	26.2	100	
V	51	2	He	-2.263	-3.9	5050	4.7	2.5	
Cr	52	2	He	-0.119	-25.4	1970	3.8	2.5	
Mn	55	2	He	0.069	35.9	643	7.3	2.5	
Fe	56	2	He	3.626	6.9	17979	3.2	100	
Co	59	2	He	0.011	31.6	113	10.2	2.5	
Ni	60	2	He	-0.120	-35.7	140	25.8	2.5	
Cu	63	2	He	-0.397	-9.1	470	16.1	2	
Zn	66	2	He	-0.202	-37.2	157	26.6	2.5	
As	75	2	He	-0.189	-18.8	297	7.9	2.5	
Se	78	2	He	0.338	310.1	215	25.7	2	
B	11	1	nogas	8.147	31.6	45765	8.4	10	
Si	28	1	nogas	-150.063	-334.1	2530264	1.0	5	
Ca	43	1	nogas	11.814	50.1	567	10.8	100	
Ca	44	1	nogas	-1.364	-638.4	26933	4.1	100	
Fe	56	1	nogas	-40.501	-40.1	1651150	5.2	100	
Se	77	1	nogas	-125.388	-7.2	20151	4.6	2.5	
Se	82	1	nogas	0.643	121.8	183	45.7	2	
Mo	95	1	nogas	0.334	31.7	840	18.9	2.5	
Sn	118	1	nogas	0.313	18.1	1333	8.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.011	286.7	107	42.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.118	15.3	363	11.1	2.5	
P	31	1	nogas	-3.081	-154.4	51156	1.7	10	
La	139	1	nogas	8.442	237.2	33	75.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	195.108	105.5	17	69.3	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	670144	4.32	671260	99.83	70	125	
Ge	72	1	nogas	1433809	9.23	1476428	97.11	70	125	
In	115	1	nogas	1238221	6.54	1187105	104.31	70	125	
Bi	209	1	nogas	890217	3.88	882577	100.87	70	125	
Ge	72	2	He	399923	0.22	403706	99.06	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	138CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:53:31-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	93	23.90
Na	23	1	nogas	198309	0.00
Mg	24	1	nogas	4435	0.64
Al	27	1	nogas	11113	0.02
K	39	1	nogas	5358642	0.00
Ti	47	1	nogas	150	8.89
V	51	1	nogas	445244	0.00
Cr	52	1	nogas	28018	0.00
Mn	55	1	nogas	15834	0.01
Co	59	1	nogas	480	1.30
Ni	60	1	nogas	320	6.40
Cu	63	1	nogas	1050	0.74
Zn	66	1	nogas	327	7.80
As	75	1	nogas	70526	0.01
Sr	88	1	nogas	447	4.92
Ag	107	1	nogas	27	162.38
Cd	111	1	nogas	13	324.76
Sb	121	1	nogas	317	7.35
Tl	205	1	nogas	107	18.30
Pb	208	1	nogas	160	20.67
[Pb]	206	1	nogas	57	64.83
[Pb]	207	1	nogas	20	250.00
Na	23	2	He	24382	0.01
Mg	24	2	He	367	5.97
Al	27	2	He	333	3.64
K	39	2	He	139939	0.00
Ca	43	2	He	13	324.76
Ca	44	2	He	483	4.96
V	51	2	He	5806	0.02
Cr	52	2	He	1923	0.49
Mn	55	2	He	493	5.55
Fe	56	2	He	8215	0.07
Co	59	2	He	80	27.06
Ni	60	2	He	80	46.88
Cu	63	2	He	333	2.60
Zn	66	2	He	90	65.33
As	75	2	He	269	7.58
Se	78	2	He	209	1.32
B	11	1	nogas	18549	0.02
Si	28	1	nogas	2656867	0.00
Ca	43	1	nogas	413	1.47
Ca	44	1	nogas	25965	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	1782817	0.00
Se	77	1	nogas	22100	0.01
Se	82	1	nogas	127	7.20
Mo	95	1	nogas	50	105.83
Sn	118	1	nogas	330	9.67
Ba	137	1	nogas	53	123.46
Sb	121	2	He	153	17.19
Li	7	1	nogas	56487	0.01
P	31	1	nogas	48793	0.00
La	139	1	nogas	33	137.48

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	625645	5.69
Ge	72	1	nogas	1374265	6.84
In	115	1	nogas	1163835	11.04
Bi	209	1	nogas	844865	6.28
Ge	72	2	He	383404	0.52

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	139CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:55:30-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	6665	0.04
Na	23	1	nogas	2450895	0.00
Mg	24	1	nogas	1424399	0.00
Al	27	1	nogas	29467	0.01
K	39	1	nogas	7112123	0.00
Ti	47	1	nogas	1510	0.39
V	51	1	nogas	426004	0.00
Cr	52	1	nogas	43545	0.01
Mn	55	1	nogas	36951	0.01
Co	59	1	nogas	17769	0.03
Ni	60	1	nogas	4251	0.03
Cu	63	1	nogas	10333	0.01
Zn	66	1	nogas	3322	0.12
As	75	1	nogas	69201	0.01
Sr	88	1	nogas	22418	0.00
Ag	107	1	nogas	9603	0.05
Cd	111	1	nogas	2127	0.14
Sb	121	1	nogas	10223	0.03
Tl	205	1	nogas	13909	0.03
Pb	208	1	nogas	19412	0.02
[Pb]	206	1	nogas	4874	0.11
[Pb]	207	1	nogas	4284	0.21
Na	23	2	He	160487	0.00
Mg	24	2	He	74345	0.00
Al	27	2	He	690	2.07
K	39	2	He	225584	0.00
Ca	43	2	He	263	11.01
Ca	44	2	He	4377	0.31
V	51	2	He	10105	0.02
Cr	52	2	He	7028	0.02
Mn	55	2	He	4317	0.05
Fe	56	2	He	458061	0.00
Co	59	2	He	6651	0.00
Ni	60	2	He	1693	0.47
Cu	63	2	He	4477	0.13
Zn	66	2	He	1227	0.65
As	75	2	He	1415	0.44
Se	78	2	He	297	4.55
B	11	1	nogas	36401	0.00
Si	28	1	nogas	2691988	0.00

Calibration Standard Report

Ca	43	1	nogas	3247	0.37
Ca	44	1	nogas	73912	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3621176	0.00
Se	77	1	nogas	20722	0.02
Se	82	1	nogas	340	0.87
Mo	95	1	nogas	4137	0.09
Sn	118	1	nogas	6044	0.11
Ba	137	1	nogas	3254	0.21
Sb	121	2	He	4167	0.09
P	31	1	nogas	57818	0.00
La	139	1	nogas	37	85.89

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	643850	2.61	625645	102.91	70	125	
Ge	72	1	nogas	1434481	2.55	1374265	104.38	70	125	
In	115	1	nogas	1291435	6.70	1163835	110.96	70	125	
Bi	209	1	nogas	920507	5.06	844865	108.95	70	125	
Ge	72	2	He	387103	0.42	383404	100.96	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	140CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:57:29-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	16274	0.02
Na	23	1	nogas	5651123	0.00
Mg	24	1	nogas	3459759	0.00
Al	27	1	nogas	55752	0.01
K	39	1	nogas	9550692	0.00
Ti	47	1	nogas	3504	0.20
V	51	1	nogas	495596	0.00
Cr	52	1	nogas	70467	0.00
Mn	55	1	nogas	69822	0.00
Co	59	1	nogas	43251	0.00
Ni	60	1	nogas	9679	0.05
Cu	63	1	nogas	23562	0.01
Zn	66	1	nogas	8252	0.03
As	75	1	nogas	81270	0.01
Sr	88	1	nogas	55302	0.01
Ag	107	1	nogas	25275	0.01
Cd	111	1	nogas	5488	0.01
Sb	121	1	nogas	24297	0.03
Tl	205	1	nogas	33605	0.01
Pb	208	1	nogas	48129	0.01
[Pb]	206	1	nogas	12085	0.02
[Pb]	207	1	nogas	10370	0.06
Na	23	2	He	366886	0.00
Mg	24	2	He	186390	0.00
Al	27	2	He	1387	0.63
K	39	2	He	344101	0.00
Ca	43	2	He	523	2.23
Ca	44	2	He	9759	0.01
V	51	2	He	17713	0.01
Cr	52	2	He	14829	0.03
Mn	55	2	He	43388	0.30
Fe	56	2	He	1140132	0.00
Co	59	2	He	16975	0.01
Ni	60	2	He	4237	0.05
Cu	63	2	He	10983	0.01
Zn	66	2	He	2660	0.25
As	75	2	He	3224	0.19
Se	78	2	He	461	1.03
B	11	1	nogas	64428	0.00
Si	28	1	nogas	2762877	0.00

Calibration Standard Report

Ca	43	1	nogas	7702	0.05
Ca	44	1	nogas	144078	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	6310953	0.00
Se	77	1	nogas	23389	0.03
Se	82	1	nogas	657	1.32
Mo	95	1	nogas	10883	0.05
Sn	118	1	nogas	14313	0.04
Ba	137	1	nogas	8349	0.02
Sb	121	2	He	10883	0.02
P	31	1	nogas	69828	0.00
La	139	1	nogas	40	62.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	628264	3.55	625645	100.42	70	125	
Ge	72	1	nogas	1452982	2.22	1374265	105.73	70	125	
In	115	1	nogas	1237332	6.40	1163835	106.32	70	125	
Bi	209	1	nogas	921940	3.80	844865	109.12	70	125	
Ge	72	2	He	380491	1.08	383404	99.24	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	141CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:59:29-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	31803	0.01
Na	23	1	nogas	10839581	0.00
Mg	24	1	nogas	6529955	0.00
Al	27	1	nogas	93343	0.00
K	39	1	nogas	13725956	0.00
Ti	47	1	nogas	6905	0.02
V	51	1	nogas	553475	0.00
Cr	52	1	nogas	111863	0.00
Mn	55	1	nogas	118853	0.00
Co	59	1	nogas	83406	0.00
Ni	60	1	nogas	19257	0.01
Cu	63	1	nogas	44334	0.01
Zn	66	1	nogas	15203	0.04
As	75	1	nogas	93867	0.00
Sr	88	1	nogas	106871	0.00
Ag	107	1	nogas	48687	0.00
Cd	111	1	nogas	10083	0.06
Sb	121	1	nogas	48715	0.01
Tl	205	1	nogas	65519	0.00
Pb	208	1	nogas	93469	0.00
[Pb]	206	1	nogas	23093	0.01
[Pb]	207	1	nogas	20723	0.02
Na	23	2	He	684958	0.00
Mg	24	2	He	353017	0.00
Al	27	2	He	2434	0.67
K	39	2	He	534700	0.00
Ca	43	2	He	973	0.40
Ca	44	2	He	17909	0.02
V	51	2	He	28980	0.01
Cr	52	2	He	25882	0.00
Mn	55	2	He	19083	0.01
Fe	56	2	He	2212807	0.00
Co	59	2	He	31808	0.01
Ni	60	2	He	7755	0.08
Cu	63	2	He	20428	0.02
Zn	66	2	He	5197	0.08
As	75	2	He	6073	0.02
Se	78	2	He	641	0.87
B	11	1	nogas	109569	0.00
Si	28	1	nogas	2848859	0.00

Calibration Standard Report

Ca	43	1	nogas	14099	0.03
Ca	44	1	nogas	252159	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	10535363	0.00
Se	77	1	nogas	24577	0.01
Se	82	1	nogas	1140	0.93
Mo	95	1	nogas	20118	0.02
Sn	118	1	nogas	27679	0.01
Ba	137	1	nogas	15397	0.01
Sb	121	2	He	20476	0.02
P	31	1	nogas	88757	0.00
La	139	1	nogas	83	16.63

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	632859	3.53	625645	101.15	70	125	
Ge	72	1	nogas	1425836	4.70	1374265	103.75	70	125	
In	115	1	nogas	1243698	1.89	1163835	106.86	70	125	
Bi	209	1	nogas	908519	4.01	844865	107.53	70	125	
Ge	72	2	He	379236	2.31	383404	98.91	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	142CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:01:27-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	328908	0.00
Na	23	1	nogas	108646319	0.00
Mg	24	1	nogas	65885049	0.00
Al	27	1	nogas	790794	0.00
K	39	1	nogas	91307521	0.00
Ti	47	1	nogas	70236	0.00
V	51	1	nogas	1442824	0.00
Cr	52	1	nogas	837675	0.00
Mn	55	1	nogas	1046209	0.00
Co	59	1	nogas	840143	0.00
Ni	60	1	nogas	187037	0.00
Cu	63	1	nogas	444636	0.00
Zn	66	1	nogas	149731	0.00
As	75	1	nogas	281441	0.00
Sr	88	1	nogas	1085235	0.00
Ag	107	1	nogas	494498	0.00
Cd	111	1	nogas	105753	0.00
Sb	121	1	nogas	479048	0.00
Tl	205	1	nogas	690690	0.00
Pb	208	1	nogas	951686	0.00
[Pb]	206	1	nogas	237769	0.00
[Pb]	207	1	nogas	208991	0.00
Na	23	2	He	6951301	0.00
Mg	24	2	He	3697815	0.00
Al	27	2	He	21462	0.00
K	39	2	He	4183760	0.00
Ca	43	2	He	10526	0.02
Ca	44	2	He	175935	0.00
V	51	2	He	245668	0.00
Cr	52	2	He	254810	0.00
Mn	55	2	He	185892	0.00
Fe	56	2	He	22212841	0.00
Co	59	2	He	324917	0.00
Ni	60	2	He	81668	0.00
Cu	63	2	He	207141	0.00
Zn	66	2	He	53060	0.01
As	75	2	He	59105	0.00
Se	78	2	He	4873	0.07
B	11	1	nogas	978104	0.00
Si	28	1	nogas	4896376	0.00

Calibration Standard Report

Ca	43	1	nogas	146092	0.00
Ca	44	1	nogas	2391145	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	89470927	0.00
Se	77	1	nogas	32112	0.01
Se	82	1	nogas	10683	0.05
Mo	95	1	nogas	211850	0.00
Sn	118	1	nogas	282625	0.00
Ba	137	1	nogas	158269	0.00
Sb	121	2	He	205737	0.00
P	31	1	nogas	433923	0.00
La	139	1	nogas	123	31.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	601532	4.86	625645	96.15	70	125	
Ge	72	1	nogas	1422284	2.71	1374265	103.49	70	125	
In	115	1	nogas	1209338	5.10	1163835	103.91	70	125	
Bi	209	1	nogas	916011	6.37	844865	108.42	70	125	
Ge	72	2	He	374874	1.41	383404	97.78	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	143CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:03:24-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	685347	0.00
Na	23	1	nogas	217129238	0.00
Mg	24	1	nogas	134970428	0.00
Al	27	1	nogas	1606130	0.00
K	39	1	nogas	176125591	0.00
Ti	47	1	nogas	144764	0.00
V	51	1	nogas	2455531	0.00
Cr	52	1	nogas	1710582	0.00
Mn	55	1	nogas	2065902	0.00
Co	59	1	nogas	1699922	0.00
Ni	60	1	nogas	372090	0.00
Cu	63	1	nogas	885306	0.00
Zn	66	1	nogas	307378	0.00
As	75	1	nogas	501141	0.00
Sr	88	1	nogas	2203983	0.00
Ag	107	1	nogas	991980	0.00
Cd	111	1	nogas	221278	0.00
Sb	121	1	nogas	1001805	0.00
Tl	205	1	nogas	1382876	0.00
Pb	208	1	nogas	1955107	0.00
[Pb]	206	1	nogas	479782	0.00
[Pb]	207	1	nogas	427331	0.00
Na	23	2	He	13523761	0.00
Mg	24	2	He	7177157	0.00
Al	27	2	He	40851	0.00
K	39	2	He	8144000	0.00
Ca	43	2	He	20632	0.01
Ca	44	2	He	352169	0.00
V	51	2	He	480308	0.00
Cr	52	2	He	500866	0.00
Mn	55	2	He	366828	0.00
Fe	56	2	He	43340751	0.00
Co	59	2	He	642116	0.00
Ni	60	2	He	159029	0.00
Cu	63	2	He	403181	0.00
Zn	66	2	He	104095	0.00
As	75	2	He	117872	0.00
Se	78	2	He	9468	0.01
B	11	1	nogas	2037682	0.00
Si	28	1	nogas	7156751	0.00

Calibration Standard Report

Ca	43	1	nogas	296449	0.00
Ca	44	1	nogas	4808733	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	176872929	0.00
Se	77	1	nogas	44438	0.00
Se	82	1	nogas	21827	0.01
Mo	95	1	nogas	424590	0.00
Sn	118	1	nogas	575038	0.00
Ba	137	1	nogas	321599	0.00
Sb	121	2	He	416059	0.00
P	31	1	nogas	803855	0.00
La	139	1	nogas	253	6.30

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	556641	5.87	625645	88.97	70	125	
Ge	72	1	nogas	1375524	7.02	1374265	100.09	70	125	
In	115	1	nogas	1130791	9.50	1163835	97.16	70	125	
Bi	209	1	nogas	857678	6.68	844865	101.52	70	125	
Ge	72	2	He	385969	1.52	383404	100.67	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	145_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:07:21-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	103.091	1.201	354409	1.92	100	103.1	90	110	
Na	23	1	nogas	9639.243	6.878	119071848	0.74	10000	96.4	90	110	
Mg	24	1	nogas	9664.814	3.019	73931041	4.79	10000	96.6	90	110	
Al	27	1	nogas	99.040	3.787	864980	4.25	100	99.0	90	110	
K	39	1	nogas	9978.313	2.590	98175056	1.86	10000	99.8	90	110	
Ti	47	1	nogas	95.714	2.686	74710	3.91	100	95.7	90	110	
V	51	1	nogas	83.613	5.036	1391754	3.98	100	83.6	90	110	ICV Main CR1 Failed
Cr	52	1	nogas	95.774	4.642	896271	4.14	100	95.8	90	110	
Mn	55	1	nogas	98.255	5.756	1108594	5.25	100	98.3	90	110	
Co	59	1	nogas	95.135	4.064	873314	3.08	100	95.1	90	110	
Ni	60	1	nogas	98.374	3.607	198307	2.56	100	98.4	90	110	
Cu	63	1	nogas	97.352	2.811	467524	1.54	100	97.4	90	110	
Zn	66	1	nogas	96.420	3.048	159342	4.15	100	96.4	90	110	
As	75	1	nogas	89.478	5.482	281812	3.82	100	89.5	90	110	ICV Main CR1 Failed
Sr	88	1	nogas	92.336	3.874	1099605	2.91	100	92.3	90	110	
Ag	107	1	nogas	99.813	3.263	535704	2.73	100	99.8	90	110	
Cd	111	1	nogas	94.412	3.157	115312	4.54	100	94.4	90	110	
Sb	121	1	nogas	98.996	4.258	532747	3.10	100	99.0	90	110	
Tl	205	1	nogas	95.451	11.877	773728	2.80	100	95.5	90	110	
Pb	208	1	nogas	106.757	3.332	1038049	3.33	100	106.8	90	110	
U	238	1	nogas	90.819	13.836	1007996	4.92	100	90.8	90	110	
[Pb]	206	1	nogas	95.222	11.806	267384	2.70	100	95.2	90	110	
[Pb]	207	1	nogas	88.498	12.470	220779	3.41	100	88.5	90	110	ICV Main CR1 Failed
Na	23	2	He	10836.875	2.451	7604062	1.17	10000	108.4	90	110	
Mg	24	2	He	10977.381	1.504	4084951	0.51	10000	109.8	90	110	
Al	27	2	He	108.136	3.120	23178	3.17	100	108.1	90	110	
K	39	2	He	11121.695	1.257	4600096	1.22	10000	111.2	90	110	ICV Main CR1 Failed
Ca	43	2	He	10774.582	0.994	11504	0.61	10000	107.7	90	110	
Ca	44	2	He	10592.458	1.460	192347	0.86	10000	105.9	90	110	
V	51	2	He	102.940	0.990	258520	0.73	100	102.9	90	110	
Cr	52	2	He	102.493	2.243	266170	0.77	100	102.5	90	110	
Mn	55	2	He	104.273	2.490	198182	1.34	100	104.3	90	110	
Fe	56	2	He	10863.142	1.758	24386888	0.86	10000	108.6	90	110	
Co	59	2	He	104.589	0.922	346952	0.66	100	104.6	90	110	
Ni	60	2	He	103.674	2.798	85622	3.00	100	103.7	90	110	
Cu	63	2	He	104.122	2.738	218113	1.26	100	104.1	90	110	
Zn	66	2	He	102.917	1.009	55541	1.48	100	102.9	90	110	
As	75	2	He	103.001	0.874	62700	1.11	100	103.0	90	110	
Se	78	2	He	102.129	4.365	5100	3.19	100	102.1	90	110	
B	11	1	nogas	507.002	3.228	1035648	3.37	500	101.4	90	110	
Si	28	1	nogas	4230.493	8.318	4939110	1.65	5000	84.6	90	110	ICV Main CR1 Failed
Ca	43	1	nogas	10014.470	3.338	160446	3.18	10000	100.1	90	110	
Ca	44	1	nogas	10349.788	3.765	2701561	2.40	10000	103.5	90	110	
Fe	56	1	nogas	10015.037	5.573	96939338	5.37	10000	100.2	90	110	
Se	77	1	nogas	28.955	30.699	27494	3.60	100	29.0	90	110	ICV Main CR1 Failed
Se	82	1	nogas	93.680	6.253	11087	5.05	100	93.7	90	110	
Mo	95	1	nogas	90.555	3.306	208131	2.98	100	90.6	90	110	
Sn	118	1	nogas	92.438	3.792	295070	3.80	100	92.4	90	110	
Ba	137	1	nogas	96.528	4.529	172142	2.95	100	96.5	90	110	
Sb	121	2	He	105.926	0.153	226643	1.59	100	105.9	90	110	
Li	7	1	nogas	99.231	0.736	830353	1.16	100	99.2	90	110	
P	31	1	nogas	472.376	3.591	440776	2.47	500	94.5	90	110	
La	139	1	nogas	262.093	22.237	350	20.60	100	262.1	90	110	ICV Main CR1 Failed
Au	197	1	nogas	392.846	335.850	17	69.28	100	392.8	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	628641	0.98	625645	100.48	70	125	
Ge	72	1	nogas	1496923	2.42	1374265	108.93	70	125	
In	115	1	nogas	1271577	7.35	1163835	109.26	70	125	
Bi	209	1	nogas	1023472	9.78	844865	121.14	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	395365	1.56	383404	103.12	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	146LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:09:20-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	4.457	4.218	16968	1.58	5	89.1	70	130	
Na	23	1	nogas	470.153	6.159	5995601	2.27	500	94.0	70	130	
Mg	24	1	nogas	471.535	8.022	3589344	2.14	500	94.3	70	130	
Al	27	1	nogas	5.039	3.291	56113	2.45	5	100.8	70	130	
K	39	1	nogas	428.989	8.538	9922175	0.75	500	85.8	70	130	
Ti	47	1	nogas	4.791	1.456	3937	3.27	5	95.8	70	130	
V	51	1	nogas	-10.384	-11.725	377728	6.33	5	-207.7	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.110	4.193	68483	2.39	5	82.2	70	130	
Mn	55	1	nogas	4.865	3.755	72097	2.03	5	97.3	70	130	
Co	59	1	nogas	4.772	3.180	44768	1.26	5	95.4	70	130	
Ni	60	1	nogas	5.274	6.999	10300	3.84	5	105.5	70	130	
Cu	63	1	nogas	4.909	3.884	24917	0.84	5	98.2	70	130	
Zn	66	1	nogas	5.960	4.027	9029	1.40	5	119.2	70	130	
As	75	1	nogas	-0.463	-101.535	71239	5.40	5	-9.3	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.825	2.084	58542	2.20	5	96.5	70	130	
Ag	107	1	nogas	4.973	2.902	26998	1.47	5	99.5	70	130	
Cd	111	1	nogas	4.592	3.409	5761	4.28	5	91.8	70	130	
Sb	121	1	nogas	5.390	3.911	29635	0.71	5	107.8	70	130	
Tl	205	1	nogas	4.909	5.358	39398	1.13	5	98.2	70	130	
Pb	208	1	nogas	5.396	3.097	52624	3.09	5	107.9	70	130	
U	238	1	nogas	4.783	7.060	52494	3.15	5	95.7	70	130	
[Pb]	206	1	nogas	4.779	11.568	13276	5.51	5	95.6	70	130	
[Pb]	207	1	nogas	4.747	9.987	11698	4.50	5	94.9	70	130	
Na	23	2	He	492.018	0.776	378609	0.37	500	98.4	70	130	
Mg	24	2	He	506.441	2.223	193580	1.48	500	101.3	70	130	
Al	27	2	He	4.290	14.839	1450	9.48	5	85.8	70	130	
K	39	2	He	519.438	0.940	348250	0.56	500	103.9	70	130	
Ca	43	2	He	536.292	24.644	600	23.63	500	107.3	70	130	
Ca	44	2	He	518.691	3.665	10143	3.65	500	103.7	70	130	
V	51	2	He	3.897	1.198	16775	0.55	5	77.9	70	130	
Cr	52	2	He	5.030	4.737	15327	3.45	5	100.6	70	130	
Mn	55	2	He	5.083	3.675	10400	2.61	5	101.7	70	130	
Fe	56	2	He	502.491	4.668	1164661	3.92	500	100.5	70	130	
Co	59	2	He	5.014	2.980	17135	3.10	5	100.3	70	130	
Ni	60	2	He	4.614	6.794	4434	5.42	5	92.3	70	130	
Cu	63	2	He	4.395	1.703	11117	1.85	5	87.9	70	130	
Zn	66	2	He	4.640	6.360	2917	6.18	5	92.8	70	130	
As	75	2	He	4.828	5.497	3284	4.32	5	96.6	70	130	
Se	78	2	He	4.195	5.822	443	2.65	5	83.9	70	130	
B	11	1	nogas	36.600	9.990	101289	4.28	25	146.4	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	-546.962	-46.625	2665001	0.59	25	-2187.8	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	475.841	2.764	8145	5.36	500	95.2	70	130	
Ca	44	1	nogas	462.974	3.717	149551	3.34	500	92.6	70	130	
Fe	56	1	nogas	434.724	5.606	6133586	1.08	500	86.9	70	130	
Se	77	1	nogas	-31.225	-35.983	20725	10.10	5	-624.5	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.287	9.212	763	4.00	5	105.7	70	130	
Mo	95	1	nogas	5.058	9.168	11777	4.99	5	101.2	70	130	
Sn	118	1	nogas	4.995	6.658	16682	3.20	5	99.9	70	130	
Ba	137	1	nogas	4.601	0.467	8479	4.93	5	92.0	70	130	
Sb	121	2	He	5.699	2.634	12651	1.84	5	114.0	70	130	
Li	7	1	nogas	5.037	1.338	105834	3.59	5	100.7	70	130	
P	31	1	nogas	24.257	14.789	73947	0.29	25	97.0	70	130	
La	139	1	nogas	40.591	19.410	87	6.66	5	811.8	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	94.668	975.474	20	50.00	5	1893.4	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	692851	3.86	625645	110.74	70	125	
Ge	72	1	nogas	1513269	4.11	1374265	110.11	70	125	
In	115	1	nogas	1302010	5.34	1163835	111.87	70	125	
Bi	209	1	nogas	1004809	6.47	844865	118.93	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	405320	0.89	383404	105.72	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	147SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:11:20-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	138CALB.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	1.898	1.898	5.11	7245	0.03	2000	
Na	23	1	nogas	189.684	189.684	4.20	2596287	0.01	200000	
Mg	24	1	nogas	192.480	192.480	3.77	1497093	0.01	200000	
Al	27	1	nogas	2.069	2.069	12.48	31150	0.01	2000	
K	39	1	nogas	115.128	115.128	22.49	7203936	0.00	200000	
Ti	47	1	nogas	1.750	1.750	7.36	1590	0.11	2000	
V	51	1	nogas	-16.152	-16.152	-8.96	323895	0.00	2000	
Cr	52	1	nogas	1.037	1.037	17.67	41634	0.00	2000	
Mn	55	1	nogas	1.804	1.804	13.71	38848	0.00	2000	
Co	59	1	nogas	1.822	1.822	2.24	17966	0.01	2000	
Ni	60	1	nogas	2.301	2.301	2.47	4377	0.05	2000	
Cu	63	1	nogas	1.864	1.864	11.55	10470	0.02	2000	
Zn	66	1	nogas	2.780	2.780	6.60	3800	0.07	2000	
As	75	1	nogas	-5.658	-5.658	-19.73	60648	-0.01	2000	
Sr	88	1	nogas	1.835	1.835	3.71	23259	0.01	2000	
Ag	107	1	nogas	1.937	1.937	2.76	10857	0.02	2000	
Cd	111	1	nogas	1.703	1.703	10.67	2170	0.08	2000	
Sb	121	1	nogas	2.076	2.076	8.61	11974	0.02	2000	
Tl	205	1	nogas	2.007	2.007	6.19	15631	0.01	2000	
Pb	208	1	nogas	2.149	2.149	1.56	21049	0.01	2000	
U	238	1	nogas	1.920	1.920	4.00	20410	0.01	2000	
[Pb]	206	1	nogas	2.009	2.009	10.64	5438	0.04	2000	
[Pb]	207	1	nogas	1.876	1.876	8.92	4487	0.04	2000	
Na	23	2	He	197.593	197.593	2.41	163388	0.12	200000	
Mg	24	2	He	209.963	209.963	2.24	78525	0.27	200000	
Al	27	2	He	0.847	0.847	19.25	693	0.12	2000	
K	39	2	He	201.719	201.719	0.77	220835	0.09	200000	
Ca	43	2	He	196.029	196.029	21.06	223	87.77	200000	
Ca	44	2	He	210.656	210.656	3.91	4314	4.88	200000	
V	51	2	He	0.863	0.863	6.28	8948	0.01	2000	
Cr	52	2	He	2.005	2.005	6.31	7152	0.03	2000	
Mn	55	2	He	2.158	2.158	3.17	4601	0.05	2000	
Fe	56	2	He	204.570	204.570	1.65	467727	0.04	200000	
Co	59	2	He	2.065	2.065	3.30	6935	0.03	2000	
Ni	60	2	He	1.488	1.488	22.79	1763	0.08	2000	
Cu	63	2	He	1.548	1.548	4.55	4924	0.03	2000	
Zn	66	2	He	1.411	1.411	5.76	1113	0.13	2000	
As	75	2	He	1.880	1.880	1.88	1417	0.13	2000	
Se	78	2	He	1.259	1.259	18.02	292	0.43	2000	
B	11	1	nogas	14.369	14.369	9.61	51954	0.03	2000	
Si	28	1	nogas	-876.880	-876.880	-19.45	2582838	-0.03	2000	
Ca	43	1	nogas	181.282	181.282	4.63	3487	5.20	200000	
Ca	44	1	nogas	170.132	170.132	6.76	75298	0.23	200000	
Fe	56	1	nogas	134.404	134.404	7.43	3357465	0.00	200000	

Sample Report

Se	77	1	nogas	-55.489	-55.489	-19.18	18363	-0.30	2000	
Se	82	1	nogas	1.814	1.814	40.60	367	0.49	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.931	1.931	7.97	4671	0.04	2000	
Sn	118	1	nogas	1.899	1.899	5.52	6668	0.03	2000	
Ba	137	1	nogas	1.795	1.795	4.87	3387	0.05	2000	
Sb	121	2	He	2.358	2.358	2.78	5201	0.05	2000	
La	139	1	nogas	4.370	4.370	263.78	43	10.09	2000	
Au	197	1	nogas	1079.054	1079.054	101.87	10	10790.54	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	688450	2.71	625645	110.04	70	125	
Ge	72	1	nogas	1560125	4.66	1374265	113.52	70	125	
In	115	1	nogas	1319846	5.87	1163835	113.40	70	125	
Bi	209	1	nogas	969952	4.08	844865	114.81	70	125	
Ge	72	2	He	395502	1.63	383404	103.16	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	148_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:13:20-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	0.017	139.8	160	49.6	1	
Na	23	1	nogas	2.028	41.4	232462	1.8	100	
Mg	24	1	nogas	1.628	77.8	16344	53.3	100	
Al	27	1	nogas	0.467	22.7	15813	2.8	5	
K	39	1	nogas	-36.128	-42.7	5404793	0.7	100	
Ti	47	1	nogas	0.034	118.0	187	15.5	2.5	
V	51	1	nogas	-11.117	-7.6	358034	2.3	2.5	
Cr	52	1	nogas	-0.374	-26.9	26669	0.2	2.5	
Mn	55	1	nogas	0.025	173.8	17221	0.4	2.5	
Co	59	1	nogas	0.004	302.0	547	16.6	2.5	
Ni	60	1	nogas	0.460	6.6	467	11.8	2.5	
Cu	63	1	nogas	0.023	119.0	1227	7.4	1	
Zn	66	1	nogas	1.129	4.6	890	6.8	2.5	
As	75	1	nogas	-1.878	-21.9	65759	3.5	2.5	
Sr	88	1	nogas	0.019	109.7	690	32.0	2.5	
Ag	107	1	nogas	0.025	61.8	160	49.6	2.5	
Cd	111	1	nogas	0.009	264.1	23	107.9	1	
Sb	121	1	nogas	0.202	17.4	1397	11.6	2.5	
Tl	205	1	nogas	0.030	63.7	330	40.8	1	
Pb	208	1	nogas	0.019	60.1	340	31.8	2.5	
U	238	1	nogas	0.019	13.9	227	11.1	2.5	
[Pb]	206	1	nogas	0.016	47.9	100	17.3	2.5	
[Pb]	207	1	nogas	0.021	72.2	67	48.2	2.5	
Na	23	2	He	-0.783	-138.2	24589	2.5	100	
Mg	24	2	He	0.397	69.9	527	20.5	100	
Al	27	2	He	-0.245	-185.3	463	19.6	5	
K	39	2	He	-7.192	-46.1	137055	1.0	100	
Ca	43	2	He	21.651	110.3	37	68.6	100	
Ca	44	2	He	10.039	25.8	680	7.6	100	
V	51	2	He	-0.895	-3.6	4646	2.1	2.5	
Cr	52	2	He	-0.008	-275.8	1963	2.8	2.5	
Mn	55	2	He	0.132	33.1	760	11.8	2.5	
Fe	56	2	He	0.281	84.3	9099	5.3	100	
Co	59	2	He	0.000	1753.0	83	18.3	2.5	
Ni	60	2	He	-0.519	-3.8	113	13.5	2.5	
Cu	63	2	He	-0.601	-4.1	457	12.1	1	
Zn	66	2	He	-0.136	-71.3	283	18.1	2.5	
As	75	2	He	-0.027	-189.4	261	12.1	2.5	
Se	78	2	He	-1.211	-12.3	174	4.0	1	
B	11	1	nogas	4.098	24.8	28461	3.5	10	
Si	28	1	nogas	-540.529	-40.9	2587237	2.3	5	
Ca	43	1	nogas	7.859	116.2	563	22.5	100	
Ca	44	1	nogas	-3.651	-116.7	26856	1.7	100	
Fe	56	1	nogas	-38.602	-11.8	1550261	2.2	100	
Se	77	1	nogas	-21.300	-22.8	21183	2.1	2.5	
Se	82	1	nogas	0.076	478.8	143	26.4	1	

Initial Calibration Blank (ICB) Report

Mo	95	1	nogas	0.061	4.3	190	0.0	2.5	
Sn	118	1	nogas	0.085	51.3	623	15.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.037	56.4	123	24.8	2.5	
Sb	121	2	He	0.186	14.3	557	10.8	2.5	
P	31	1	nogas	0.647	161.7	52747	1.7	10	
La	139	1	nogas	35.474	23.7	77	7.5	2.5	ICB Main CR1 Failed
Au	197	1	nogas	1372.277	49.5	7	86.6	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	666791	4.14	625645	106.58	70	125	
Ge	72	1	nogas	1466542	3.12	1374265	106.71	70	125	
In	115	1	nogas	1242999	6.23	1163835	106.80	70	125	
Bi	209	1	nogas	900635	1.36	844865	106.60	70	125	
Ge	72	2	He	395310	0.93	383404	103.11	70	125	

Sample Report

Sample Table

Sample Name	MBLK-136231
Data File Name	155SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:34:10-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136231
ISTD Ref FileName	138CALB.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	210.13	107	0.00	2000	
Na	23	1	nogas	1.533	1.533	10.52	233876	0.00	200000	
Mg	24	1	nogas	10.560	10.560	3.98	84403	0.01	200000	
Al	27	1	nogas	4.964	4.964	5.20	53639	0.01	2000	
K	39	1	nogas	-52.867	-52.867	-26.91	5243680	0.00	200000	
Ti	47	1	nogas	0.039	0.039	187.19	190	0.02	2000	
V	51	1	nogas	-7.297	-7.297	-9.10	397956	0.00	2000	
Cr	52	1	nogas	-0.237	-0.237	-21.95	27841	0.00	2000	
Mn	55	1	nogas	0.412	0.412	9.02	21399	0.00	2000	
Co	59	1	nogas	-0.014	-0.014	-109.68	387	0.00	2000	
Ni	60	1	nogas	0.412	0.412	7.17	370	0.11	2000	
Cu	63	1	nogas	-0.008	-0.008	-182.99	1080	0.00	2000	
Zn	66	1	nogas	1.065	1.065	6.96	787	0.14	2000	
As	75	1	nogas	-0.173	-0.173	-287.67	69552	0.00	2000	
Sr	88	1	nogas	0.001	0.001	597.39	483	0.00	2000	
Ag	107	1	nogas	0.000	0.000	-770.37	27	0.00	2000	
Cd	111	1	nogas	-0.003	-0.003	-470.07	10	-0.03	2000	
Sb	121	1	nogas	0.103	0.103	7.48	880	0.01	2000	
Tl	205	1	nogas	0.009	0.009	98.22	180	0.01	2000	
Pb	208	1	nogas	0.002	0.002	229.13	180	0.00	2000	
U	238	1	nogas	0.004	0.004	114.14	80	0.00	2000	
[Pb]	206	1	nogas	0.002	0.002	128.71	67	0.00	2000	
[Pb]	207	1	nogas	0.010	0.010	74.43	43	0.02	2000	
Na	23	2	He	0.439	0.439	135.63	25457	0.00	200000	
Mg	24	2	He	11.379	11.379	2.07	4614	0.25	200000	
Al	27	2	He	4.269	4.269	7.67	1410	0.30	2000	
K	39	2	He	-5.156	-5.156	-71.53	137871	0.00	200000	
Ca	43	2	He	18.361	18.361	78.35	33	55.08	200000	
Ca	44	2	He	6.178	6.178	20.53	610	1.01	200000	
V	51	2	He	-0.734	-0.734	-6.29	5041	-0.01	2000	
Cr	52	2	He	0.071	0.071	54.20	2167	0.00	2000	
Mn	55	2	He	0.911	0.911	8.56	2237	0.04	2000	
Fe	56	2	He	5.573	5.573	4.62	20986	0.03	200000	
Co	59	2	He	0.000	0.000	763.38	83	0.00	2000	
Ni	60	2	He	-0.503	-0.503	-5.51	127	-0.40	2000	
Cu	63	2	He	-0.619	-0.619	-4.31	420	-0.15	2000	
Zn	66	2	He	-0.124	-0.124	-106.46	290	-0.04	2000	
As	75	2	He	0.001	0.001	4902.09	278	0.00	2000	
Se	78	2	He	-0.637	-0.637	-56.97	201	-0.32	2000	
B	11	1	nogas	-0.142	-0.142	-251.31	19480	0.00	2000	
Si	28	1	nogas	597.556	597.556	15.51	3119551	0.02	2000	
Ca	43	1	nogas	-1.837	-1.837	-63.95	413	-0.44	200000	
Ca	44	1	nogas	-4.837	-4.837	-22.45	26519	-0.02	200000	
Fe	56	1	nogas	-30.583	-30.583	-25.55	1621448	0.00	200000	

Sample Report

Se	77	1	nogas	-14.026	-14.026	-31.91	21983	-0.06	2000	
Se	82	1	nogas	0.274	0.274	39.83	167	0.16	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.095	0.095	21.33	267	0.04	2000	
Sn	118	1	nogas	0.022	0.022	83.00	440	0.01	2000	
Ba	137	1	nogas	0.042	0.042	40.13	137	0.03	2000	
Sb	121	2	He	0.104	0.104	37.87	380	0.03	2000	
La	139	1	nogas	-18.740	-18.740	-72.56	13	-140.55	2000	
Au	197	1	nogas	-551.751	-551.751	-236.63	23	-2364.65	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	666457	1.84	625645	106.52	70	125	
Ge	72	1	nogas	1463543	1.72	1374265	106.50	70	125	
In	115	1	nogas	1267364	4.64	1163835	108.90	70	125	
Bi	209	1	nogas	899752	2.33	844865	106.50	70	125	
Ge	72	2	He	395484	1.20	383404	103.15	70	125	

Sample Report

Sample Table

Sample Name	LCS-136231
Data File Name	156SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:36:10-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136231
ISTD Ref FileName	138CALB.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	57.643	57.643	5.19	201059	0.03	2000	
Na	23	1	nogas	5334.026	5334.026	8.22	66053737	0.01	200000	
Mg	24	1	nogas	5396.680	5396.680	7.69	41252001	0.01	200000	
Al	27	1	nogas	115.824	115.824	12.36	970227	0.01	2000	
K	39	1	nogas	5839.352	5839.352	14.43	57522447	0.01	200000	
Ti	47	1	nogas	174.509	174.509	15.16	130449	0.13	2000	
V	51	1	nogas	44.900	44.900	6.85	941816	0.00	2000	
Cr	52	1	nogas	56.064	56.064	14.67	515857	0.01	2000	
Mn	55	1	nogas	56.882	56.882	13.42	623625	0.01	2000	
Co	59	1	nogas	56.405	56.405	12.74	497827	0.01	2000	
Ni	60	1	nogas	58.690	58.690	12.09	113576	0.05	2000	
Cu	63	1	nogas	59.474	59.474	11.94	275095	0.02	2000	
Zn	66	1	nogas	59.153	59.153	11.63	93616	0.06	2000	
As	75	1	nogas	54.999	54.999	18.07	193107	0.03	2000	
Sr	88	1	nogas	112.466	112.466	5.64	1294736	0.01	2000	
Ag	107	1	nogas	57.815	57.815	12.84	298140	0.02	2000	
Cd	111	1	nogas	54.376	54.376	13.09	63969	0.09	2000	
Sb	121	1	nogas	57.957	57.957	13.51	299687	0.02	2000	
Tl	205	1	nogas	55.069	55.069	2.11	404719	0.01	2000	
Pb	208	1	nogas	59.411	59.411	1.55	577753	0.01	2000	
U	238	1	nogas	110.999	110.999	2.32	1118260	0.01	2000	
[Pb]	206	1	nogas	57.041	57.041	2.04	145220	0.04	2000	
[Pb]	207	1	nogas	55.704	55.704	1.59	126013	0.04	2000	
Na	23	2	He	5817.450	5817.450	3.48	4159948	0.14	200000	
Mg	24	2	He	5938.326	5938.326	0.52	2246266	0.26	200000	
Al	27	2	He	115.680	115.680	2.09	25167	0.46	2000	
K	39	2	He	6298.441	6298.441	1.49	2665817	0.24	200000	
Ca	43	2	He	6041.438	6041.438	7.36	6558	92.12	200000	
Ca	44	2	He	5749.746	5749.746	1.30	106341	5.41	200000	
V	51	2	He	56.200	56.200	1.88	146585	0.04	2000	
Cr	52	2	He	56.216	56.216	1.67	149291	0.04	2000	
Mn	55	2	He	55.427	55.427	2.72	107301	0.05	2000	
Fe	56	2	He	5789.346	5789.346	2.78	13210884	0.04	200000	
Co	59	2	He	57.346	57.346	1.93	193367	0.03	2000	
Ni	60	2	He	57.258	57.258	2.76	48317	0.12	2000	
Cu	63	2	He	56.381	56.381	0.46	120853	0.05	2000	
Zn	66	2	He	56.678	56.678	4.83	31237	0.18	2000	
As	75	2	He	55.509	55.509	1.87	34467	0.16	2000	
Se	78	2	He	55.846	55.846	3.84	2941	1.90	2000	
B	11	1	nogas	620.850	620.850	11.95	1279104	0.05	2000	
Si	28	1	nogas	56981.940	56981.940	14.99	29142330	0.20	2000	>LDR
Ca	43	1	nogas	5823.022	5823.022	11.81	89896	6.48	200000	
Ca	44	1	nogas	5726.250	5726.250	5.85	1457662	0.39	200000	
Fe	56	1	nogas	5816.056	5816.056	14.62	54817322	0.01	200000	
Se	77	1	nogas	40.797	40.797	54.30	27841	0.15	2000	
Se	82	1	nogas	56.745	56.745	17.91	6481	0.88	2000	

Sample Report

Mo	95	1	nogas	56.715	56.715	12.93	125247	0.05	2000	
Sn	118	1	nogas	115.269	115.269	13.69	354234	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	54.900	54.900	11.04	94553	0.06	2000	
Sb	121	2	He	58.348	58.348	0.94	126961	0.05	2000	
La	139	1	nogas	41.838	41.838	33.76	83	50.21	2000	
Au	197	1	nogas	1028.501	1028.501	108.91	10	10285.01	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	638709	5.09	625645	102.09	70	125	
Ge	72	1	nogas	1453382	12.54	1374265	105.76	70	125	
In	115	1	nogas	1236053	12.22	1163835	106.21	70	125	
Bi	209	1	nogas	920604	1.93	844865	108.96	70	125	
Ge	72	2	He	401806	1.48	383404	104.80	70	125	

Sample Report

Sample Table

Sample Name	HS18121117-01SD
Data File Name	158SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:40:11-06:00
Sample Type	Sample
Dilution	5
Comment	TW B136231
ISTD Ref FileName	138CALB.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	0.000	-0.001	-10123.47	97	0.00	2000	
Na	23	1	nogas	50868.308	254341.541	6.25	601806247	0.01	200000	
Mg	24	1	nogas	7374.065	36870.324	7.49	53971389	0.01	200000	
Al	27	1	nogas	7.016	35.078	6.52	71612	0.01	2000	
K	39	1	nogas	10119.901	50599.504	5.40	98236704	0.01	200000	
Ti	47	1	nogas	0.295	1.476	11.00	390	0.08	2000	
V	51	1	nogas	0.702	3.511	90.08	487877	0.00	2000	
Cr	52	1	nogas	2.147	10.735	12.13	49399	0.00	2000	
Mn	55	1	nogas	111.731	558.654	2.54	1243588	0.01	2000	
Co	59	1	nogas	0.561	2.807	5.22	5608	0.01	2000	
Ni	60	1	nogas	2.508	12.541	6.89	4554	0.06	2000	
Cu	63	1	nogas	0.387	1.933	13.53	2957	0.01	2000	
Zn	66	1	nogas	3.774	18.868	7.80	5234	0.07	2000	
As	75	1	nogas	3.073	15.366	42.21	77792	0.00	2000	
Sr	88	1	nogas	372.193	1860.965	6.78	4372890	0.01	2000	
Ag	107	1	nogas	0.007	0.036	83.23	67	0.01	2000	
Cd	111	1	nogas	0.025	0.125	100.96	43	0.06	2000	
Sb	121	1	nogas	0.115	0.574	17.68	947	0.01	2000	
Tl	205	1	nogas	0.075	0.376	4.02	633	0.01	2000	
Pb	208	1	nogas	0.011	0.053	24.35	263	0.00	2000	
U	238	1	nogas	0.047	0.233	19.82	483	0.01	2000	
[Pb]	206	1	nogas	-0.004	-0.019	-113.41	50	-0.01	2000	
[Pb]	207	1	nogas	0.034	0.170	57.34	93	0.04	2000	
Na	23	2	He	52882.098	264410.489	1.17	37993601	0.14	200000	
Mg	24	2	He	7840.209	39201.043	1.27	2995000	0.26	200000	
Al	27	2	He	6.496	32.482	9.19	1927	0.34	2000	
K	39	2	He	11606.741	58033.704	1.18	4794615	0.24	200000	
Ca	43	2	He	12393.859	61969.296	1.76	13582	91.25	200000	
Ca	44	2	He	11731.831	58659.156	1.26	218624	5.37	200000	
V	51	2	He	-0.169	-0.845	-44.05	6590	0.00	2000	
Cr	52	2	He	2.215	11.077	9.29	7898	0.03	2000	
Mn	55	2	He	113.165	565.826	2.28	220734	0.05	2000	
Fe	56	2	He	317.437	1587.184	0.88	739985	0.04	200000	
Co	59	2	He	0.634	3.171	6.37	2243	0.03	2000	
Ni	60	2	He	1.124	5.621	7.18	1500	0.07	2000	
Cu	63	2	He	-0.495	-2.473	-12.75	697	-0.07	2000	
Zn	66	2	He	2.603	13.017	8.62	1800	0.14	2000	
As	75	2	He	0.202	1.012	50.08	410	0.05	2000	
Se	78	2	He	-0.829	-4.145	-33.08	197	-0.42	2000	
B	11	1	nogas	18.307	91.534	10.10	56119	0.03	2000	
Si	28	1	nogas	32934.862	164674.309	5.70	18531486	0.18	2000	>LDR
Ca	43	1	nogas	11204.965	56024.823	4.94	177205	6.32	200000	
Ca	44	1	nogas	11440.760	57203.799	6.46	2944772	0.39	200000	
Fe	56	1	nogas	303.038	1515.189	6.90	4763224	0.01	200000	
Se	77	1	nogas	10.363	51.817	108.00	25007	0.04	2000	
Se	82	1	nogas	0.158	0.788	273.00	153	0.10	2000	

Sample Report

Mo	95	1	nogas	0.088	0.438	9.42	253	0.03	2000	
Sn	118	1	nogas	0.119	0.597	21.59	727	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	151.330	756.652	7.90	259906	0.06	2000	
Sb	121	2	He	0.145	0.724	6.24	480	0.03	2000	
La	139	1	nogas	229.581	1147.905	8.94	300	76.52	2000	
Au	197	1	nogas	-1437.711	-7188.553	-244.58	30	-4792.37	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	638153	4.42	625645	102.00	70	125	
Ge	72	1	nogas	1480079	5.16	1374265	107.70	70	125	
In	115	1	nogas	1226849	7.47	1163835	105.41	70	125	
Bi	209	1	nogas	870934	3.37	844865	103.09	70	125	
Ge	72	2	He	405834	1.50	383404	105.85	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	160_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:44:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	21.4	267	15.2	1	
Na	23	1	nogas	30.921	20.5	573432	2.3	100	
Mg	24	1	nogas	4.145	32.6	34503	16.9	100	
Al	27	1	nogas	0.220	67.7	13372	2.5	5	
K	39	1	nogas	-36.008	-167.5	5254019	1.2	100	
Ti	47	1	nogas	0.013	544.4	170	38.6	2.5	
V	51	1	nogas	-12.059	-18.4	339049	4.6	2.5	
Cr	52	1	nogas	-0.447	-57.9	25324	2.7	2.5	
Mn	55	1	nogas	-0.098	-146.3	15447	3.8	2.5	
Co	59	1	nogas	0.022	58.3	687	5.1	2.5	
Ni	60	1	nogas	0.536	11.0	597	13.5	2.5	
Cu	63	1	nogas	0.023	114.8	1200	10.1	2	
Zn	66	1	nogas	0.875	6.4	467	21.1	2.5	
As	75	1	nogas	-3.789	-48.2	59741	4.3	2.5	
Sr	88	1	nogas	0.059	50.5	1110	19.4	2.5	
Ag	107	1	nogas	0.026	32.1	163	27.6	2.5	
Cd	111	1	nogas	0.049	122.5	70	89.2	1	
Sb	121	1	nogas	0.101	39.0	837	12.3	2.5	
Tl	205	1	nogas	0.218	56.9	1633	45.6	1	
Pb	208	1	nogas	0.048	37.1	630	27.7	2.5	
U	238	1	nogas	0.115	57.1	1147	47.5	2.5	
[Pb]	206	1	nogas	0.037	100.5	150	52.9	2.5	
[Pb]	207	1	nogas	0.056	42.9	143	29.0	2.5	
Na	23	2	He	27.963	7.0	43914	2.5	100	
Mg	24	2	He	3.333	20.2	1590	15.4	100	
Al	27	2	He	-0.856	-54.0	330	28.9	5	
K	39	2	He	-0.142	-1397.7	139882	0.6	100	
Ca	43	2	He	12.441	231.9	27	114.6	100	
Ca	44	2	He	8.660	5.6	643	0.9	100	
V	51	2	He	-0.818	-9.7	4751	4.8	2.5	
Cr	52	2	He	0.042	178.8	2057	9.7	2.5	
Mn	55	2	He	0.059	33.6	610	5.9	2.5	
Fe	56	2	He	3.350	6.7	15707	2.4	100	
Co	59	2	He	0.020	55.2	147	23.9	2.5	
Ni	60	2	He	-0.451	-5.4	167	12.5	2.5	
Cu	63	2	He	-0.613	-7.6	423	21.8	2	
Zn	66	2	He	-0.437	-7.5	120	14.4	2.5	
As	75	2	He	-0.042	-46.3	248	5.4	2.5	
Se	78	2	He	-0.037	-1151.5	226	8.7	2	
B	11	1	nogas	10.671	25.5	41879	10.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-300.856	-235.1	2620693	1.3	5	
Ca	43	1	nogas	8.343	84.1	553	7.5	100	
Ca	44	1	nogas	-6.107	-164.9	25511	1.7	100	
Fe	56	1	nogas	-25.958	-72.2	1620435	1.7	100	
Se	77	1	nogas	-36.585	-48.0	18883	1.3	2.5	
Se	82	1	nogas	0.005	7342.6	133	37.0	2	
Mo	95	1	nogas	0.277	41.0	647	28.7	2.5	
Sn	118	1	nogas	0.231	40.1	1090	15.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.040	68.2	130	27.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.067	68.0	297	32.4	2.5	
P	31	1	nogas	-3.004	-237.0	48355	0.5	10	
La	139	1	nogas	6.132	206.5	43	35.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-257.322	-816.3	20	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	658822	3.17	625645	105.30	70	125	
Ge	72	1	nogas	1434922	10.68	1374265	104.41	70	125	
In	115	1	nogas	1271375	10.21	1163835	109.24	70	125	
Bi	209	1	nogas	898097	7.03	844865	106.30	70	125	
Ge	72	2	He	388419	0.85	383404	101.31	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	161_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:46:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	108.097	6.758	342988	1.73	100	108.1	90	110	
Na	23	1	nogas	10025.789	12.629	108460994	1.59	10000	100.3	90	110	
Mg	24	1	nogas	10113.574	11.746	67674608	2.56	10000	101.1	90	110	
Al	27	1	nogas	104.315	5.465	811953	2.78	100	104.3	90	110	
K	39	1	nogas	10277.671	6.667	90005304	1.91	10000	102.8	90	110	
Ti	47	1	nogas	103.637	5.861	72116	3.10	100	103.6	90	110	
V	51	1	nogas	102.527	11.792	1421833	0.40	100	102.5	90	110	
Cr	52	1	nogas	103.096	8.504	857280	0.36	100	103.1	90	110	
Mn	55	1	nogas	102.798	10.123	1031550	2.05	100	102.8	90	110	
Co	59	1	nogas	101.370	7.851	829111	0.44	100	101.4	90	110	
Ni	60	1	nogas	104.116	8.019	187013	0.49	100	104.1	90	110	
Cu	63	1	nogas	104.079	8.284	445183	0.85	100	104.1	90	110	
Zn	66	1	nogas	103.268	7.789	152057	1.08	100	103.3	90	110	
As	75	1	nogas	103.381	8.251	280390	1.88	100	103.4	90	110	
Sr	88	1	nogas	103.331	7.263	1096704	0.65	100	103.3	90	110	
Ag	107	1	nogas	104.943	8.133	501721	0.22	100	104.9	90	110	
Cd	111	1	nogas	100.167	12.909	105678	1.22	100	100.2	90	110	
Sb	121	1	nogas	100.172	6.189	480753	1.66	100	100.2	90	110	
Tl	205	1	nogas	104.754	3.503	698402	3.39	100	104.8	90	110	
Pb	208	1	nogas	98.775	0.767	960448	0.77	100	98.8	90	110	
U	238	1	nogas	106.388	3.773	972053	1.52	100	106.4	90	110	
[Pb]	206	1	nogas	104.442	5.125	241001	0.77	100	104.4	90	110	
[Pb]	207	1	nogas	101.698	6.130	208508	1.03	100	101.7	90	110	
Na	23	2	He	10425.837	2.287	7034597	1.73	10000	104.3	90	110	
Mg	24	2	He	10457.718	3.310	3741123	2.77	10000	104.6	90	110	
Al	27	2	He	105.590	5.186	21766	4.67	100	105.6	90	110	
K	39	2	He	10344.934	1.177	4288590	1.14	10000	103.4	90	110	
Ca	43	2	He	10173.147	1.621	10443	1.68	10000	101.7	90	110	
Ca	44	2	He	10263.627	1.313	179212	1.91	10000	102.6	90	110	
V	51	2	He	101.742	1.619	245718	1.39	100	101.7	90	110	
Cr	52	2	He	100.490	0.912	250966	1.15	100	100.5	90	110	
Mn	55	2	He	100.947	2.727	184478	2.23	100	100.9	90	110	
Fe	56	2	He	10379.026	2.574	22400263	1.97	10000	103.8	90	110	
Co	59	2	He	104.010	1.702	331700	1.36	100	104.0	90	110	
Ni	60	2	He	103.505	0.320	82180	0.58	100	103.5	90	110	
Cu	63	2	He	99.683	1.109	200866	1.47	100	99.7	90	110	
Zn	66	2	He	99.621	2.516	51700	2.98	100	99.6	90	110	
As	75	2	He	101.058	0.936	59144	0.56	100	101.1	90	110	
Se	78	2	He	104.595	1.112	5017	1.06	100	104.6	90	110	
B	11	1	nogas	536.781	5.900	1011578	2.78	500	107.4	90	110	
Si	28	1	nogas	5397.886	16.580	4902265	0.88	5000	108.0	90	110	
Ca	43	1	nogas	10375.239	5.397	148256	2.58	10000	103.8	90	110	
Ca	44	1	nogas	10589.477	6.401	2464306	1.62	10000	105.9	90	110	
Fe	56	1	nogas	10210.746	8.777	87978354	0.68	10000	102.1	90	110	
Se	77	1	nogas	97.214	13.294	31654	3.72	100	97.2	90	110	
Se	82	1	nogas	106.119	9.585	11167	1.60	100	106.1	90	110	
Mo	95	1	nogas	103.753	6.640	212567	1.26	100	103.8	90	110	
Sn	118	1	nogas	102.658	12.880	283140	1.80	100	102.7	90	110	
Ba	137	1	nogas	101.681	13.367	156683	0.33	100	101.7	90	110	
Sb	121	2	He	101.515	1.381	208797	0.78	100	101.5	90	110	
Li	7	1	nogas	104.832	6.003	807081	1.33	100	104.8	90	110	
P	31	1	nogas	513.511	8.468	422833	0.46	500	102.7	90	110	
La	139	1	nogas	95.838	50.867	130	38.46	100	95.8	90	110	
Au	197	1	nogas	477.317	152.021	13	43.30	100	477.3	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	581939	6.65	625645	93.01	70	125	
Ge	72	1	nogas	1338518	7.56	1374265	97.40	70	125	
In	115	1	nogas	1108697	12.52	1163835	95.26	70	125	
Bi	209	1	nogas	836044	5.11	844865	98.96	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	380069	0.60	383404	99.13	70	125	

Sample Report

Sample Table

Sample Name	HS18121117-01MS
Data File Name	162SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:49:00-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136231
ISTD Ref FileName	138CALB.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	60.611	60.611	0.80	181834	0.03	2000	
Na	23	1	nogas	253637.404	253637.404	3.54	2920574065	0.01	200000	>LDR
Mg	24	1	nogas	40512.727	40512.727	1.40	288919315	0.01	200000	
Al	27	1	nogas	165.522	165.522	10.37	1294094	0.01	2000	
K	39	1	nogas	57384.153	57384.153	6.78	483343594	0.01	200000	
Ti	47	1	nogas	160.321	160.321	6.05	112606	0.14	2000	
V	51	1	nogas	49.019	49.019	9.51	920447	0.01	2000	
Cr	52	1	nogas	62.050	62.050	4.83	533019	0.01	2000	
Mn	55	1	nogas	634.140	634.140	4.71	6362948	0.01	2000	
Co	59	1	nogas	54.516	54.516	5.91	451029	0.01	2000	
Ni	60	1	nogas	61.919	61.919	6.82	112225	0.06	2000	
Cu	63	1	nogas	54.430	54.430	7.11	235838	0.02	2000	
Zn	66	1	nogas	65.397	65.397	5.77	97046	0.07	2000	
As	75	1	nogas	56.219	56.219	6.62	183560	0.03	2000	
Sr	88	1	nogas	2042.752	2042.752	5.22	21909162	0.01	2000	>LDR
Ag	107	1	nogas	51.824	51.824	6.50	250470	0.02	2000	
Cd	111	1	nogas	48.542	48.542	3.64	55715	0.09	2000	
Sb	121	1	nogas	55.813	55.813	6.56	270603	0.02	2000	
Tl	205	1	nogas	43.937	43.937	22.22	328278	0.01	2000	
Pb	208	1	nogas	51.160	51.160	2.42	497541	0.01	2000	
U	238	1	nogas	95.732	95.732	19.40	983997	0.01	2000	
[Pb]	206	1	nogas	47.521	47.521	19.91	123387	0.04	2000	
[Pb]	207	1	nogas	47.049	47.049	19.68	108583	0.04	2000	
Na	23	2	He	276704.509	276704.509	1.36	180411184	0.15	200000	>LDR
Mg	24	2	He	45431.140	45431.140	0.77	15755399	0.29	200000	
Al	27	2	He	163.102	163.102	1.69	32338	0.50	2000	
K	39	2	He	57223.994	57223.994	1.47	23088600	0.25	200000	
Ca	43	2	He	68509.761	68509.761	1.61	68107	100.59	200000	
Ca	44	2	He	66314.643	66314.643	0.95	1119840	5.92	200000	
V	51	2	He	52.506	52.506	2.12	126004	0.04	2000	
Cr	52	2	He	62.408	62.408	0.90	151787	0.04	2000	
Mn	55	2	He	641.363	641.363	0.44	1133730	0.06	2000	
Fe	56	2	He	7021.028	7021.028	0.52	14692941	0.05	200000	
Co	59	2	He	55.519	55.519	1.77	171667	0.03	2000	
Ni	60	2	He	60.545	60.545	1.78	46803	0.13	2000	
Cu	63	2	He	52.048	52.048	0.53	102422	0.05	2000	
Zn	66	2	He	65.666	65.666	0.84	33144	0.20	2000	
As	75	2	He	53.994	53.994	0.75	30755	0.18	2000	
Se	78	2	He	54.158	54.158	2.78	2622	2.07	2000	
B	11	1	nogas	707.475	707.475	3.52	1254813	0.06	2000	
Si	28	1	nogas	228089.972	228089.972	7.36	101529018	0.22	2000	>LDR
Ca	43	1	nogas	63575.360	63575.360	5.27	915370	6.95	200000	
Ca	44	1	nogas	63561.340	63561.340	4.80	14821316	0.43	200000	
Fe	56	1	nogas	6908.845	6908.845	4.79	60804037	0.01	200000	
Se	77	1	nogas	52.479	52.479	29.11	27271	0.19	2000	
Se	82	1	nogas	53.903	53.903	11.45	5788	0.93	2000	

Sample Report

Mo	95	1	nogas	52.253	52.253	4.23	108268	0.05	2000	
Sn	118	1	nogas	101.771	101.771	1.39	305422	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	833.350	833.350	6.84	1397840	0.06	2000	
Sb	121	2	He	56.561	56.561	2.95	112859	0.05	2000	
La	139	1	nogas	1111.009	1111.009	5.34	1283	86.57	2000	
Au	197	1	nogas	1139.558	1139.558	80.26	10	11395.58	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	548529	1.00	625645	87.67	70	125	
Ge	72	1	nogas	1351547	7.17	1374265	98.35	70	125	
In	115	1	nogas	1193742	2.41	1163835	102.57	70	125	
Bi	209	1	nogas	964738	20.38	844865	114.19	70	125	
Ge	72	2	He	368430	0.89	383404	96.09	70	125	

Sample Report

Sample Table

Sample Name	HS18121117-01MSD
Data File Name	163SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:51:03-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136231
ISTD Ref FileName	138CALB.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	60.617	60.617	1.82	178965	0.03	2000	
Na	23	1	nogas	241285.560	241285.560	2.72	2859820797	0.01	200000	>LDR
Mg	24	1	nogas	39231.579	39231.579	0.75	287948890	0.01	200000	
Al	27	1	nogas	142.326	142.326	6.98	1203084	0.01	2000	
K	39	1	nogas	52460.512	52460.512	2.87	477889461	0.01	200000	
Ti	47	1	nogas	155.780	155.780	1.21	118221	0.13	2000	
V	51	1	nogas	50.992	50.992	3.75	1010391	0.01	2000	
Cr	52	1	nogas	57.059	57.059	1.71	531783	0.01	2000	
Mn	55	1	nogas	573.583	573.583	1.22	6216074	0.01	2000	
Co	59	1	nogas	49.807	49.807	1.15	445199	0.01	2000	
Ni	60	1	nogas	57.317	57.317	0.36	112275	0.05	2000	
Cu	63	1	nogas	50.485	50.485	0.88	236486	0.02	2000	
Zn	66	1	nogas	61.881	61.881	1.24	99138	0.06	2000	
As	75	1	nogas	54.294	54.294	0.27	193781	0.03	2000	
Sr	88	1	nogas	1881.118	1881.118	0.79	21793896	0.01	2000	>LDR
Ag	107	1	nogas	48.940	48.940	2.87	255657	0.02	2000	
Cd	111	1	nogas	49.753	49.753	2.58	55762	0.09	2000	
Sb	121	1	nogas	50.944	50.944	2.34	266964	0.02	2000	
Tl	205	1	nogas	49.919	49.919	6.36	344850	0.01	2000	
Pb	208	1	nogas	51.345	51.345	2.43	499334	0.01	2000	
U	238	1	nogas	103.371	103.371	6.04	978894	0.01	2000	
[Pb]	206	1	nogas	52.020	52.020	4.48	124527	0.04	2000	
[Pb]	207	1	nogas	51.174	51.174	4.19	108876	0.05	2000	
Na	23	2	He	277834.597	277834.597	1.79	181376591	0.15	200000	>LDR
Mg	24	2	He	46667.963	46667.963	1.53	16206014	0.29	200000	
Al	27	2	He	165.433	165.433	0.74	32835	0.50	2000	
K	39	2	He	58187.984	58187.984	0.34	23475190	0.25	200000	
Ca	43	2	He	72353.336	72353.336	2.05	72025	100.46	200000	
Ca	44	2	He	69864.897	69864.897	4.05	1181381	5.91	200000	
V	51	2	He	56.225	56.225	0.97	134673	0.04	2000	
Cr	52	2	He	65.177	65.177	0.96	158655	0.04	2000	
Mn	55	2	He	658.717	658.717	2.83	1165997	0.06	2000	
Fe	56	2	He	7315.676	7315.676	2.71	15329719	0.05	200000	
Co	59	2	He	57.022	57.022	2.02	176559	0.03	2000	
Ni	60	2	He	63.048	63.048	0.99	48788	0.13	2000	
Cu	63	2	He	53.761	53.761	1.88	105884	0.05	2000	
Zn	66	2	He	67.531	67.531	2.57	34122	0.20	2000	
As	75	2	He	57.098	57.098	1.27	32551	0.18	2000	
Se	78	2	He	54.976	54.976	4.79	2662	2.07	2000	
B	11	1	nogas	673.480	673.480	3.30	1175831	0.06	2000	
Si	28	1	nogas	209666.568	209666.568	2.64	101079908	0.21	2000	>LDR
Ca	43	1	nogas	58761.320	58761.320	0.58	914005	6.43	200000	
Ca	44	1	nogas	59491.694	59491.694	1.28	14982107	0.40	200000	
Fe	56	1	nogas	6300.990	6300.990	2.13	60061470	0.01	200000	
Se	77	1	nogas	60.980	60.980	8.88	30402	0.20	2000	
Se	82	1	nogas	47.971	47.971	4.71	5594	0.86	2000	

Sample Report

Mo	95	1	nogas	49.068	49.068	3.34	109729	0.04	2000	
Sn	118	1	nogas	104.100	104.100	4.16	304735	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	855.884	855.884	3.86	1400767	0.06	2000	
Sb	121	2	He	58.071	58.071	2.00	116009	0.05	2000	
La	139	1	nogas	1287.586	1287.586	6.55	1447	89.00	2000	
Au	197	1	nogas	-287.705	-287.705	-744.71	20	-1438.53	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	539884	1.42	625645	86.29	70	125	
Ge	72	1	nogas	1456443	2.48	1374265	105.98	70	125	
In	115	1	nogas	1165342	3.90	1163835	100.13	70	125	
Bi	209	1	nogas	866252	2.47	844865	102.53	70	125	
Ge	72	2	He	368940	0.53	383404	96.23	70	125	

Sample Report

Sample Table

Sample Name	HS18121117-01PDS
Data File Name	164SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:53:06-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136231
ISTD Ref FileName	138CALB.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	134.324	134.324	2.97	402450	0.03	2000	
Na	23	1	nogas	241165.071	241165.071	0.65	2788181862	0.01	200000	>LDR
Mg	24	1	nogas	45421.707	45421.707	0.97	325080457	0.01	200000	
Al	27	1	nogas	131.032	131.032	1.83	1055280	0.01	2000	
K	39	1	nogas	60420.616	60420.616	2.75	522661028	0.01	200000	
Ti	47	1	nogas	118.538	118.538	2.89	85541	0.14	2000	
V	51	1	nogas	111.225	111.225	4.29	1563988	0.01	2000	
Cr	52	1	nogas	120.413	120.413	1.61	1035627	0.01	2000	
Mn	55	1	nogas	650.151	650.151	1.28	6699853	0.01	2000	
Co	59	1	nogas	111.771	111.771	2.75	949397	0.01	2000	
Ni	60	1	nogas	118.724	118.724	2.50	221581	0.05	2000	
Cu	63	1	nogas	112.795	112.795	2.43	501180	0.02	2000	
Zn	66	1	nogas	123.960	123.960	3.13	189717	0.07	2000	
As	75	1	nogas	117.537	117.537	2.55	321814	0.04	2000	
Sr	88	1	nogas	1904.302	1904.302	4.20	20971043	0.01	2000	>LDR
Ag	107	1	nogas	106.999	106.999	2.08	531437	0.02	2000	
Cd	111	1	nogas	113.595	113.595	0.80	122174	0.09	2000	
Sb	121	1	nogas	109.218	109.218	1.84	544012	0.02	2000	
Tl	205	1	nogas	114.706	114.706	0.13	764243	0.02	2000	
Pb	208	1	nogas	110.029	110.029	0.37	1069855	0.01	2000	
U	238	1	nogas	0.362	0.362	30.08	3350	0.01	2000	
[Pb]	206	1	nogas	115.978	115.978	0.66	267656	0.04	2000	
[Pb]	207	1	nogas	114.315	114.315	1.23	234487	0.05	2000	
Na	23	2	He	283674.206	283674.206	3.94	185067091	0.15	200000	>LDR
Mg	24	2	He	52698.536	52698.536	3.16	18291523	0.29	200000	
Al	27	2	He	143.046	143.046	6.95	28425	0.50	2000	
K	39	2	He	65033.013	65033.013	1.45	26220267	0.25	200000	
Ca	43	2	He	76717.454	76717.454	3.40	76319	100.52	200000	
Ca	44	2	He	79763.212	79763.212	3.23	1347967	5.92	200000	
V	51	2	He	122.521	122.521	2.59	285838	0.04	2000	
Cr	52	2	He	131.182	131.182	3.25	317275	0.04	2000	
Mn	55	2	He	749.597	749.597	5.91	1325437	0.06	2000	
Fe	56	2	He	14306.889	14306.889	3.70	29953519	0.05	200000	
Co	59	2	He	124.017	124.017	3.90	383655	0.03	2000	
Ni	60	2	He	127.456	127.456	4.32	98040	0.13	2000	
Cu	63	2	He	117.135	117.135	3.57	228695	0.05	2000	
Zn	66	2	He	131.540	131.540	1.55	66136	0.20	2000	
As	75	2	He	122.706	122.706	3.31	69617	0.18	2000	
Se	78	2	He	125.726	125.726	1.91	5809	2.16	2000	
B	11	1	nogas	90.543	90.543	4.40	174577	0.05	2000	
Si	28	1	nogas	164230.494	164230.494	3.53	75871916	0.22	2000	>LDR
Ca	43	1	nogas	66293.603	66293.603	1.52	980597	6.76	200000	
Ca	44	1	nogas	68293.531	68293.531	4.72	16344909	0.42	200000	
Fe	56	1	nogas	12832.523	12832.523	0.94	114467711	0.01	200000	

Sample Report

Se	77	1	nogas	128.901	128.901	4.31	36250	0.36	2000	
Se	82	1	nogas	112.849	112.849	1.76	12341	0.91	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	114.672	114.672	2.43	243889	0.05	2000	
Sn	118	1	nogas	0.522	0.522	32.82	1787	0.03	2000	
Ba	137	1	nogas	923.947	923.947	1.49	1451397	0.06	2000	
Sb	121	2	He	120.966	120.966	3.18	241364	0.05	2000	
La	139	1	nogas	1209.097	1209.097	12.91	1307	92.53	2000	
Au	197	1	nogas	55.606	55.606	1312.46	17	333.63	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	548025	1.10	625645	87.59	70	125	
Ge	72	1	nogas	1385477	3.30	1374265	100.82	70	125	
In	115	1	nogas	1118156	2.12	1163835	96.08	70	125	
Bi	209	1	nogas	834741	0.74	844865	98.80	70	125	
Ge	72	2	He	368948	2.80	383404	96.23	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	172_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:09:18-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	105.760	10.764	335903	2.63	100	105.8	90	110	
Na	23	1	nogas	10249.342	13.610	110197527	0.82	10000	102.5	90	110	
Mg	24	1	nogas	10100.945	13.167	67147177	0.42	10000	101.0	90	110	
Al	27	1	nogas	101.977	10.973	806200	0.21	100	102.0	90	110	
K	39	1	nogas	10158.724	15.040	90225221	3.01	10000	101.6	90	110	
Ti	47	1	nogas	100.550	11.956	71002	0.94	100	100.5	90	110	
V	51	1	nogas	124.609	17.524	1660113	2.07	100	124.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.493	12.213	841695	1.16	100	99.5	90	110	
Mn	55	1	nogas	100.763	12.428	1028434	1.73	100	100.8	90	110	
Co	59	1	nogas	100.399	11.838	834304	1.01	100	100.4	90	110	
Ni	60	1	nogas	103.005	12.568	187900	2.17	100	103.0	90	110	
Cu	63	1	nogas	102.838	10.830	447349	1.42	100	102.8	90	110	
Zn	66	1	nogas	100.675	11.089	150656	1.44	100	100.7	90	110	
As	75	1	nogas	109.782	14.587	298349	0.40	100	109.8	90	110	
Sr	88	1	nogas	101.985	11.440	1099690	0.59	100	102.0	90	110	
Ag	107	1	nogas	102.415	11.246	497733	0.29	100	102.4	90	110	
Cd	111	1	nogas	98.834	12.263	106753	2.15	100	98.8	90	110	
Sb	121	1	nogas	98.657	9.928	481300	1.50	100	98.7	90	110	
Tl	205	1	nogas	107.045	9.861	691592	0.81	100	107.0	90	110	
Pb	208	1	nogas	98.988	0.605	962524	0.60	100	99.0	90	110	
U	238	1	nogas	108.119	9.342	957984	0.58	100	108.1	90	110	
[Pb]	206	1	nogas	107.259	8.498	240242	0.90	100	107.3	90	110	
[Pb]	207	1	nogas	105.466	9.220	209872	0.28	100	105.5	90	110	
Na	23	2	He	10598.014	2.187	7030766	2.21	10000	106.0	90	110	
Mg	24	2	He	10428.062	0.969	3668264	1.07	10000	104.3	90	110	
Al	27	2	He	102.585	1.773	20808	1.93	100	102.6	90	110	
K	39	2	He	10205.557	1.817	4232695	1.76	10000	102.1	90	110	
Ca	43	2	He	10274.155	3.058	10370	3.21	10000	102.7	90	110	
Ca	44	2	He	10350.716	1.222	177684	1.41	10000	103.5	90	110	
V	51	2	He	103.990	0.825	246791	0.95	100	104.0	90	110	
Cr	52	2	He	103.101	2.402	253111	2.43	100	103.1	90	110	
Mn	55	2	He	103.564	1.577	186079	1.35	100	103.6	90	110	
Fe	56	2	He	10309.773	1.290	21878836	1.22	10000	103.1	90	110	
Co	59	2	He	103.395	1.245	324210	1.26	100	103.4	90	110	
Ni	60	2	He	102.590	0.240	80088	0.38	100	102.6	90	110	
Cu	63	2	He	100.551	2.818	199197	2.97	100	100.6	90	110	
Zn	66	2	He	100.681	1.378	51362	1.16	100	100.7	90	110	
As	75	2	He	102.078	1.290	58737	1.51	100	102.1	90	110	
Se	78	2	He	102.099	1.776	4821	1.88	100	102.1	90	110	
B	11	1	nogas	525.726	8.983	992583	1.10	500	105.1	90	110	
Si	28	1	nogas	5285.107	21.821	4936915	0.79	5000	105.7	90	110	
Ca	43	1	nogas	10212.951	11.335	148141	0.29	10000	102.1	90	110	
Ca	44	1	nogas	10269.047	10.703	2429004	1.08	10000	102.7	90	110	
Fe	56	1	nogas	10134.704	12.217	88756650	0.93	10000	101.3	90	110	
Se	77	1	nogas	152.457	24.728	37980	2.39	100	152.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.808	10.833	11024	5.77	100	102.8	90	110	
Mo	95	1	nogas	102.393	11.554	213050	1.25	100	102.4	90	110	
Sn	118	1	nogas	100.842	16.143	283725	1.53	100	100.8	90	110	
Ba	137	1	nogas	101.168	14.791	159306	0.82	100	101.2	90	110	
Sb	121	2	He	101.784	3.208	205846	3.33	100	101.8	90	110	
Li	7	1	nogas	104.454	9.842	805482	0.85	100	104.5	90	110	
P	31	1	nogas	494.053	11.947	415438	0.48	500	98.8	90	110	
La	139	1	nogas	119.087	27.811	157	7.37	100	119.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-2162.537	-33.403	33	17.32	100	-2162.5	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	584223	8.16	625645	93.38	70	125	
Ge	72	1	nogas	1365682	10.36	1374265	99.38	70	125	
In	115	1	nogas	1135612	13.73	1163835	97.58	70	125	
Bi	209	1	nogas	814224	8.93	844865	96.37	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	373679	0.22	383404	97.46	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	173_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:11:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	38.2	290	24.1	1	
Na	23	1	nogas	93.349	4.4	1276549	1.4	100	
Mg	24	1	nogas	6.002	38.6	46969	32.3	100	
Al	27	1	nogas	0.251	37.8	13512	5.9	5	
K	39	1	nogas	-36.466	-12.6	5209827	0.7	100	
Ti	47	1	nogas	0.080	142.1	213	37.9	2.5	
V	51	1	nogas	1.454	101.4	473812	2.5	2.5	
Cr	52	1	nogas	0.015	395.0	29050	1.7	2.5	
Mn	55	1	nogas	0.022	219.2	16581	2.9	2.5	
Co	59	1	nogas	0.032	35.2	770	11.5	2.5	
Ni	60	1	nogas	0.708	8.7	923	12.5	2.5	
Cu	63	1	nogas	0.102	50.1	1543	13.9	2	
Zn	66	1	nogas	0.893	6.1	490	17.4	2.5	
As	75	1	nogas	2.028	55.0	72055	3.2	2.5	
Sr	88	1	nogas	0.082	33.6	1377	22.5	2.5	
Ag	107	1	nogas	0.034	62.3	200	52.9	2.5	
Cd	111	1	nogas	0.039	56.1	60	44.1	1	
Sb	121	1	nogas	1.546	22.7	8175	21.4	2.5	
Tl	205	1	nogas	0.255	44.0	1907	44.0	1	
Pb	208	1	nogas	0.063	40.3	770	31.9	2.5	
U	238	1	nogas	0.151	66.7	1503	67.7	2.5	
[Pb]	206	1	nogas	0.076	53.9	247	43.7	2.5	
[Pb]	207	1	nogas	0.060	30.4	150	29.1	2.5	
Na	23	2	He	94.218	2.6	84834	2.2	100	
Mg	24	2	He	3.830	9.6	1680	7.2	100	
Al	27	2	He	-0.802	-44.4	323	21.1	5	
K	39	2	He	8.717	47.8	143435	1.2	100	
Ca	43	2	He	24.047	105.3	37	68.6	100	
Ca	44	2	He	12.208	21.0	670	6.5	100	
V	51	2	He	0.054	184.7	6491	3.1	2.5	
Cr	52	2	He	0.076	92.5	2030	7.9	2.5	
Mn	55	2	He	0.054	37.8	570	6.1	2.5	
Fe	56	2	He	3.928	3.2	16107	2.0	100	
Co	59	2	He	0.029	70.5	167	38.1	2.5	
Ni	60	2	He	-0.548	-6.9	83	34.6	2.5	
Cu	63	2	He	-0.581	-3.6	463	9.0	2	
Zn	66	2	He	-0.485	-12.2	90	33.3	2.5	
As	75	2	He	-0.011	-840.4	252	19.6	2.5	
Se	78	2	He	-0.644	-35.6	187	5.0	2	
B	11	1	nogas	10.649	14.6	41058	6.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-127.550	-110.3	2683224	0.9	5	
Ca	43	1	nogas	-2.184	-157.0	393	11.7	100	
Ca	44	1	nogas	-7.219	-19.2	25037	1.2	100	
Fe	56	1	nogas	-12.104	-54.8	1731985	2.1	100	
Se	77	1	nogas	-4.675	-164.4	22257	2.9	2.5	
Se	82	1	nogas	0.478	14.4	183	3.2	2	
Mo	95	1	nogas	0.342	50.4	793	46.5	2.5	
Sn	118	1	nogas	0.344	51.5	1420	37.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.050	5.9	147	3.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.050	12.9	2240	12.4	2.5	
P	31	1	nogas	-4.228	-23.1	47095	3.1	10	
La	139	1	nogas	-7.355	-131.5	27	43.3	2.5	
Au	197	1	nogas	-653.883	-113.9	23	24.7	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	645159	1.26	625645	103.12	70	125	
Ge	72	1	nogas	1413803	1.52	1374265	102.88	70	125	
In	115	1	nogas	1229585	1.04	1163835	105.65	70	125	
Bi	209	1	nogas	876094	2.72	844865	103.70	70	125	
Ge	72	2	He	368349	0.42	383404	96.07	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\010
Acq Date Time	2019-01-08T17:33:27-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	99.831	1.560	318755	1.08	100	99.8	90	110	
Na	23	1	nogas	9318.136	2.677	102753102	1.32	10000	93.2	90	110	
Mg	24	1	nogas	9095.234	1.562	61995797	2.21	10000	91.0	90	110	
Al	27	1	nogas	92.849	2.582	743863	2.53	100	92.8	90	110	
K	39	1	nogas	9290.834	1.690	84163150	1.64	10000	92.9	90	110	
Ti	47	1	nogas	91.921	2.152	65750	1.73	100	91.9	90	110	
V	51	1	nogas	86.549	3.303	1304600	2.15	100	86.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	91.014	2.978	782128	2.70	100	91.0	90	110	
Mn	55	1	nogas	96.415	1.556	997537	1.52	100	96.4	90	110	
Co	59	1	nogas	92.699	2.372	780190	2.62	100	92.7	90	110	
Ni	60	1	nogas	94.543	1.812	174713	2.10	100	94.5	90	110	
Cu	63	1	nogas	94.363	1.549	415464	1.16	100	94.4	90	110	
Zn	66	1	nogas	93.168	2.126	141055	1.86	100	93.2	90	110	
As	75	1	nogas	89.250	2.182	257827	1.46	100	89.2	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	95.471	0.810	1042341	1.21	100	95.5	90	110	
Ag	107	1	nogas	94.668	1.034	465769	1.32	100	94.7	90	110	
Cd	111	1	nogas	91.917	1.608	100472	1.99	100	91.9	90	110	
Sb	121	1	nogas	90.513	1.096	446605	0.77	100	90.5	90	110	
Tl	205	1	nogas	99.996	4.007	656899	2.28	100	100.0	90	110	
Pb	208	1	nogas	92.843	0.818	902782	0.82	100	92.8	90	110	
U	238	1	nogas	98.438	3.671	886582	1.97	100	98.4	90	110	
[Pb]	206	1	nogas	99.493	3.020	226427	1.33	100	99.5	90	110	
[Pb]	207	1	nogas	97.891	2.638	198027	1.21	100	97.9	90	110	
Na	23	2	He	10229.351	1.833	6560485	1.39	10000	102.3	90	110	
Mg	24	2	He	10307.629	1.083	3504928	0.48	10000	103.1	90	110	
Al	27	2	He	100.874	1.723	19787	1.82	100	100.9	90	110	
K	39	2	He	9673.771	1.605	4019432	1.55	10000	96.7	90	110	
Ca	43	2	He	10271.287	4.957	10019	4.48	10000	102.7	90	110	
Ca	44	2	He	10198.714	2.506	169228	1.90	10000	102.0	90	110	
V	51	2	He	101.224	1.025	232378	0.38	100	101.2	90	110	
Cr	52	2	He	100.293	0.965	238053	0.41	100	100.3	90	110	
Mn	55	2	He	103.428	0.477	179649	0.89	100	103.4	90	110	
Fe	56	2	He	10195.128	1.325	20913949	0.83	10000	102.0	90	110	
Co	59	2	He	101.338	0.958	307164	0.38	100	101.3	90	110	
Ni	60	2	He	99.261	0.456	74922	0.34	100	99.3	90	110	
Cu	63	2	He	101.684	2.097	194690	1.47	100	101.7	90	110	
Zn	66	2	He	101.525	2.767	50069	3.15	100	101.5	90	110	
As	75	2	He	99.728	1.153	55475	0.58	100	99.7	90	110	
Se	78	2	He	102.839	1.761	4692	1.21	100	102.8	90	110	
B	11	1	nogas	479.677	2.000	910973	1.52	500	95.9	90	110	
Si	28	1	nogas	5060.272	1.063	4894935	0.82	5000	101.2	90	110	
Ca	43	1	nogas	9262.137	1.825	136045	1.42	10000	92.6	90	110	
Ca	44	1	nogas	9498.869	1.411	2275356	1.33	10000	95.0	90	110	
Fe	56	1	nogas	9413.571	2.961	83628958	3.00	10000	94.1	90	110	
Se	77	1	nogas	63.601	8.859	28910	1.82	100	63.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.294	1.991	10340	2.36	100	95.3	90	110	
Mo	95	1	nogas	95.630	2.267	201466	2.04	100	95.6	90	110	
Sn	118	1	nogas	92.850	1.921	265300	0.73	100	92.9	90	110	
Ba	137	1	nogas	96.516	3.175	154111	1.75	100	96.5	90	110	
Sb	121	2	He	100.687	1.495	196835	1.39	100	100.7	90	110	
Li	7	1	nogas	102.159	0.270	792582	2.18	100	102.2	90	110	
P	31	1	nogas	449.010	1.256	386489	1.05	500	89.8	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	102.944	53.547	143	42.63	100	102.9	90	110	
Au	197	1	nogas	-1264.186	-214.384	27	78.06	100	-1264.2	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	584018	2.43	625645	93.35	70	125	
Ge	72	1	nogas	1371799	0.41	1374265	99.82	70	125	
In	115	1	nogas	1136550	2.60	1163835	97.66	70	125	
Bi	209	1	nogas	823412	1.76	844865	97.46	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	361229	0.62	383404	94.22	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\010
Acq Date Time	2019-01-08T17:35:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	23.4	280	12.9	1	
Na	23	1	nogas	123.205	10.0	1590979	4.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.830	36.9	58671	29.1	100	
Al	27	1	nogas	0.324	17.2	13672	3.8	5	
K	39	1	nogas	-37.880	-67.4	5036111	0.5	100	
Ti	47	1	nogas	0.099	88.0	220	24.1	2.5	
V	51	1	nogas	-14.182	-4.8	304311	1.5	2.5	
Cr	52	1	nogas	-0.647	-8.2	22697	4.6	2.5	
Mn	55	1	nogas	0.103	53.9	16898	2.1	2.5	
Co	59	1	nogas	0.051	24.0	907	7.7	2.5	
Ni	60	1	nogas	0.768	6.3	1007	10.9	2.5	
Cu	63	1	nogas	0.192	17.1	1890	3.8	2	
Zn	66	1	nogas	0.942	9.1	547	19.6	2.5	
As	75	1	nogas	-5.492	-2.1	53706	4.0	2.5	
Sr	88	1	nogas	0.157	37.5	2137	25.7	2.5	
Ag	107	1	nogas	0.041	66.0	227	55.2	2.5	
Cd	111	1	nogas	0.047	126.9	67	99.9	1	
Sb	121	1	nogas	1.524	27.4	7779	22.5	2.5	
Tl	205	1	nogas	0.266	54.4	2017	55.7	1	
Pb	208	1	nogas	0.067	42.2	807	33.8	2.5	
U	238	1	nogas	0.170	58.5	1713	61.5	2.5	
[Pb]	206	1	nogas	0.060	63.2	210	49.7	2.5	
[Pb]	207	1	nogas	0.071	52.1	177	50.7	2.5	
Na	23	2	He	120.573	2.1	103884	2.4	100	CCB Main CR1 Failed
Mg	24	2	He	6.210	11.4	2550	8.8	100	
Al	27	2	He	-0.549	-39.5	380	12.1	5	
K	39	2	He	-5.952	-12.0	137552	0.2	100	
Ca	43	2	He	16.903	155.7	30	88.2	100	
Ca	44	2	He	12.474	32.2	687	9.7	100	
V	51	2	He	-1.065	-6.5	4012	3.5	2.5	
Cr	52	2	He	0.039	200.9	1977	9.1	2.5	
Mn	55	2	He	0.163	14.9	777	6.5	2.5	
Fe	56	2	He	6.364	8.4	21590	5.3	100	
Co	59	2	He	0.030	43.1	173	24.0	2.5	
Ni	60	2	He	-0.521	-13.9	107	53.3	2.5	
Cu	63	2	He	-0.541	-5.7	550	10.1	2	
Zn	66	2	He	-0.351	-18.8	160	21.7	2.5	
As	75	2	He	-0.098	-18.3	207	5.8	2.5	
Se	78	2	He	-0.486	-112.2	198	13.1	2	
B	11	1	nogas	8.187	44.5	35674	17.9	10	
Si	28	1	nogas	-24.494	-1293.7	2645146	1.5	5	
Ca	43	1	nogas	9.354	138.9	547	31.2	100	
Ca	44	1	nogas	-0.825	-931.4	25761	4.4	100	
Fe	56	1	nogas	-25.390	-64.3	1561446	5.2	100	
Se	77	1	nogas	-41.828	-5.3	17612	2.4	2.5	
Se	82	1	nogas	0.404	13.4	170	5.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.371	43.4	823	37.1	2.5	
Sn	118	1	nogas	0.345	49.6	1373	35.8	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.129	7.7	273	5.6	2.5	
Sb	121	2	He	1.068	9.1	2317	9.1	2.5	
P	31	1	nogas	-4.384	-39.2	45528	2.3	10	
La	139	1	nogas	-0.276	-9416.7	33	86.6	2.5	
Au	197	1	nogas	964.560	126.9	10	100.0	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	641629	3.16	625645	102.55	70	125	
Ge	72	1	nogas	1371263	3.72	1374265	99.78	70	125	
In	115	1	nogas	1187706	1.82	1163835	102.05	70	125	
Bi	209	1	nogas	883392	4.44	844865	104.56	70	125	
Ge	72	2	He	375102	0.94	383404	97.83	70	125	

Sample Report

Sample Table

Sample Name	HS18121558-02
Data File Name	186SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:37:24-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136231
ISTD Ref FileName	138CALB.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	0.305	0.305	21.21	1007	0.03	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	142400.602	142400.602	1.91	1030738456	0.01	200000	
Al	27	1	nogas	25.481	25.481	4.32	209069	0.01	2000	
K	39	1	nogas	2511.920	2511.920	4.29	26270772	0.01	200000	
Ti	47	1	nogas	2.346	2.346	2.85	1800	0.13	2000	
V	51	1	nogas	1.102	1.102	375.87	449760	0.00	2000	
Cr	52	1	nogas	503.796	503.796	3.55	4140709	0.01	2000	
Mn	55	1	nogas	1899.414	1899.414	0.98	19079419	0.01	2000	>LDR
Co	59	1	nogas	69.421	69.421	3.05	575805	0.01	2000	
Ni	60	1	nogas	574.478	574.478	4.45	1047570	0.05	2000	
Cu	63	1	nogas	69.709	69.709	3.86	302644	0.02	2000	
Zn	66	1	nogas	26.468	26.468	4.24	38845	0.07	2000	
As	75	1	nogas	13.355	13.355	21.29	93030	0.01	2000	
Sr	88	1	nogas	3942.442	3942.442	1.90	42404264	0.01	2000	>LDR
Ag	107	1	nogas	0.066	0.066	24.30	347	0.02	2000	
Cd	111	1	nogas	0.669	0.669	3.71	737	0.09	2000	
Sb	121	1	nogas	0.426	0.426	17.19	2370	0.02	2000	
Tl	205	1	nogas	0.075	0.075	5.33	607	0.01	2000	
Pb	208	1	nogas	0.569	0.569	4.75	5690	0.01	2000	
U	238	1	nogas	0.325	0.325	15.32	3017	0.01	2000	
[Pb]	206	1	nogas	0.565	0.565	11.83	1367	0.04	2000	
[Pb]	207	1	nogas	0.610	0.610	7.51	1287	0.05	2000	
Na	23	2	He	572753.430	572753.430	0.97	366907701	0.16	200000	>LDR
Mg	24	2	He	166878.577	166878.577	1.67	56866001	0.29	200000	
Al	27	2	He	27.644	27.644	4.30	5778	0.48	2000	
K	39	2	He	2521.187	2521.187	0.65	1151016	0.22	200000	
Ca	43	2	He	220378.792	220378.792	1.56	215226	102.39	200000	>LDR
Ca	44	2	He	221785.140	221785.140	1.74	3679626	6.03	200000	>LDR
V	51	2	He	2.838	2.838	2.63	12612	0.02	2000	
Cr	52	2	He	551.724	551.724	0.79	1304432	0.04	2000	
Mn	55	2	He	2043.885	2043.885	1.52	3549536	0.06	2000	>LDR
Fe	56	2	He	5253.585	5253.585	0.72	10805796	0.05	200000	
Co	59	2	He	75.262	75.262	1.77	228674	0.03	2000	
Ni	60	2	He	608.697	608.697	2.20	457948	0.13	2000	
Cu	63	2	He	70.026	70.026	2.62	134867	0.05	2000	
Zn	66	2	He	26.707	26.707	3.22	13438	0.20	2000	
As	75	2	He	1.159	1.159	11.37	897	0.13	2000	
Se	78	2	He	0.326	0.326	242.47	227	0.14	2000	
B	11	1	nogas	12.994	12.994	4.17	39521	0.03	2000	
Si	28	1	nogas	280078.955	280078.955	3.97	124435911	0.23	2000	>LDR
Ca	43	1	nogas	201892.360	201892.360	4.85	2911647	6.93	200000	>LDR
Ca	44	1	nogas	199505.702	199505.702	4.83	46545781	0.43	200000	>LDR
Fe	56	1	nogas	4726.913	4726.913	2.54	42266680	0.01	200000	
Se	77	1	nogas	69.210	69.210	27.33	29087	0.24	2000	
Se	82	1	nogas	4.812	4.812	8.69	633	0.76	2000	

Sample Report

Mo	95	1	nogas	17.823	17.823	4.10	37039	0.05	2000	
Sn	118	1	nogas	0.277	0.277	3.12	1110	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	7600.781	7600.781	4.49	11991124	0.06	2000	>LDR
Sb	121	2	He	0.449	0.449	11.56	1023	0.04	2000	
La	139	1	nogas	29262.017	29262.017	1.70	31028	94.31	2000	>LDR
Au	197	1	nogas	-2812.468	-2812.468	-74.13	40	-7031.17	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	555576	2.60	625645	88.80	70	125	
Ge	72	1	nogas	1352588	4.16	1374265	98.42	70	125	
In	115	1	nogas	1123908	3.30	1163835	96.57	70	125	
Bi	209	1	nogas	841863	6.09	844865	99.64	70	125	
Ge	72	2	He	362062	1.06	383404	94.43	70	125	

Sample Report

Sample Table

Sample Name	HS18121558-03
Data File Name	187SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:39:24-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136231
ISTD Ref FileName	138CALB.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	-0.008	-0.008	-188.74	60	-0.01	2000	
Na	23	1	nogas	234661.722	234661.722	4.80	2657703526	0.01	200000	>LDR
Mg	24	1	nogas	16379.382	16379.382	7.69	114728840	0.01	200000	
Al	27	1	nogas	6.687	6.687	6.61	61671	0.01	2000	
K	39	1	nogas	1684.659	1684.659	8.78	18952181	0.01	200000	
Ti	47	1	nogas	1.967	1.967	13.68	1500	0.13	2000	
V	51	1	nogas	22.943	22.943	13.84	649649	0.00	2000	
Cr	52	1	nogas	1.008	1.008	20.13	35137	0.00	2000	
Mn	55	1	nogas	2183.279	2183.279	4.54	21466717	0.01	2000	>LDR
Co	59	1	nogas	7.672	7.672	5.25	62710	0.01	2000	
Ni	60	1	nogas	7.149	7.149	7.99	12361	0.06	2000	
Cu	63	1	nogas	2.410	2.410	3.99	11227	0.02	2000	
Zn	66	1	nogas	6.614	6.614	1.87	8876	0.07	2000	
As	75	1	nogas	16.520	16.520	13.59	97599	0.02	2000	
Sr	88	1	nogas	492.501	492.501	4.63	5186274	0.01	2000	
Ag	107	1	nogas	0.006	0.006	113.61	53	0.01	2000	
Cd	111	1	nogas	0.236	0.236	29.80	267	0.09	2000	
Sb	121	1	nogas	0.215	0.215	13.71	1323	0.02	2000	
Tl	205	1	nogas	0.044	0.044	32.80	393	0.01	2000	
Pb	208	1	nogas	0.022	0.022	13.32	377	0.01	2000	
U	238	1	nogas	1.037	1.037	5.09	9323	0.01	2000	
[Pb]	206	1	nogas	0.021	0.021	91.70	103	0.02	2000	
[Pb]	207	1	nogas	0.017	0.017	61.76	53	0.03	2000	
Na	23	2	He	257078.567	257078.567	0.04	168084831	0.15	200000	>LDR
Mg	24	2	He	17424.793	17424.793	0.04	6060394	0.29	200000	
Al	27	2	He	6.699	6.699	7.56	1793	0.37	2000	
K	39	2	He	1642.196	1642.196	0.74	798513	0.21	200000	
Ca	43	2	He	30528.942	30528.942	1.34	30442	100.29	200000	
Ca	44	2	He	29586.532	29586.532	1.80	501285	5.90	200000	
V	51	2	He	1.298	1.298	8.71	9354	0.01	2000	
Cr	52	2	He	0.326	0.326	12.22	2640	0.01	2000	
Mn	55	2	He	2222.655	2222.655	0.51	3939023	0.06	2000	>LDR
Fe	56	2	He	420.887	420.887	0.48	890768	0.05	200000	
Co	59	2	He	7.886	7.886	2.45	24523	0.03	2000	
Ni	60	2	He	5.057	5.057	8.46	4384	0.12	2000	
Cu	63	2	He	0.365	0.365	24.61	2304	0.02	2000	
Zn	66	2	He	5.714	5.714	3.47	3197	0.18	2000	
As	75	2	He	0.445	0.445	21.12	511	0.09	2000	
Se	78	2	He	0.239	0.239	204.42	227	0.11	2000	
B	11	1	nogas	12.222	12.222	6.00	39297	0.03	2000	
Si	28	1	nogas	255838.630	255838.630	4.43	111589725	0.23	2000	>LDR
Ca	43	1	nogas	29222.223	29222.223	4.64	413307	7.07	200000	
Ca	44	1	nogas	29149.614	29149.614	4.24	6686507	0.44	200000	
Fe	56	1	nogas	408.235	408.235	8.74	5146775	0.01	200000	

Sample Report

Se	77	1	nogas	96.808	96.808	13.28	31337	0.31	2000	
Se	82	1	nogas	0.857	0.857	57.75	210	0.41	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.468	0.468	21.62	993	0.05	2000	
Sn	118	1	nogas	0.086	0.086	38.83	570	0.02	2000	
Ba	137	1	nogas	484.457	484.457	6.12	765900	0.06	2000	
Sb	121	2	He	0.211	0.211	24.93	570	0.04	2000	
La	139	1	nogas	629.596	629.596	7.13	700	89.94	2000	
Au	197	1	nogas	7.966	7.966	9605.67	17	47.80	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	572369	2.49	625645	91.48	70	125	
Ge	72	1	nogas	1325538	4.75	1374265	96.45	70	125	
In	115	1	nogas	1127531	5.30	1163835	96.88	70	125	
Bi	209	1	nogas	818621	2.68	844865	96.89	70	125	
Ge	72	2	He	369482	0.54	383404	96.37	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\010
Acq Date Time	2019-01-08T17:49:23-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	98.239	0.938	391197	1.03	100	98.2	90	110	
Na	23	1	nogas	8737.860	2.182	129951649	1.24	10000	87.4	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	8748.206	3.270	80400458	3.25	10000	87.5	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	95.569	1.514	943193	2.83	100	95.6	90	110	
K	39	1	nogas	9574.370	2.715	106657388	2.12	10000	95.7	90	110	
Ti	47	1	nogas	93.891	0.252	82757	1.54	100	93.9	90	110	
V	51	1	nogas	102.037	2.064	1796827	0.62	100	102.0	90	110	
Cr	52	1	nogas	93.338	1.114	987595	2.30	100	93.3	90	110	
Mn	55	1	nogas	97.216	0.441	1239245	1.46	100	97.2	90	110	
Co	59	1	nogas	95.215	1.280	987312	0.67	100	95.2	90	110	
Ni	60	1	nogas	98.005	2.514	223128	0.90	100	98.0	90	110	
Cu	63	1	nogas	95.773	1.156	519551	0.64	100	95.8	90	110	
Zn	66	1	nogas	96.361	1.727	179851	3.32	100	96.4	90	110	
As	75	1	nogas	98.343	0.662	341875	2.09	100	98.3	90	110	
Sr	88	1	nogas	95.944	1.905	1290943	3.21	100	95.9	90	110	
Ag	107	1	nogas	97.823	1.062	593000	0.65	100	97.8	90	110	
Cd	111	1	nogas	92.101	4.452	126562	2.43	100	92.1	90	110	
Sb	121	1	nogas	92.505	2.439	562545	3.67	100	92.5	90	110	
Tl	205	1	nogas	96.989	7.025	819100	2.35	100	97.0	90	110	
Pb	208	1	nogas	115.553	2.174	1123569	2.17	100	115.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	96.387	6.542	1116140	1.88	100	96.4	90	110	
[Pb]	206	1	nogas	96.708	6.888	282924	2.30	100	96.7	90	110	
[Pb]	207	1	nogas	94.858	6.824	246667	2.38	100	94.9	90	110	
Na	23	2	He	10204.047	2.785	8320489	2.94	10000	102.0	90	110	
Mg	24	2	He	10458.185	1.571	4521085	1.62	10000	104.6	90	110	
Al	27	2	He	101.437	3.155	25297	3.93	100	101.4	90	110	
K	39	2	He	12185.040	2.176	5026532	2.12	10000	121.9	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10109.754	2.930	12541	3.44	10000	101.1	90	110	
Ca	44	2	He	10242.539	0.995	216076	0.36	10000	102.4	90	110	
V	51	2	He	100.643	0.808	293776	0.30	100	100.6	90	110	
Cr	52	2	He	98.527	0.467	297362	0.93	100	98.5	90	110	
Mn	55	2	He	100.826	1.264	222658	1.44	100	100.8	90	110	
Fe	56	2	He	10312.768	1.829	26895516	1.78	10000	103.1	90	110	
Co	59	2	He	101.674	2.546	391765	1.92	100	101.7	90	110	
Ni	60	2	He	101.749	2.320	97615	1.84	100	101.7	90	110	
Cu	63	2	He	100.056	1.806	243580	1.13	100	100.1	90	110	
Zn	66	2	He	99.204	1.320	62202	1.31	100	99.2	90	110	
As	75	2	He	100.813	1.041	71293	1.09	100	100.8	90	110	
Se	78	2	He	104.571	2.571	6060	1.59	100	104.6	90	110	
B	11	1	nogas	514.217	2.782	1216612	3.61	500	102.8	90	110	
Si	28	1	nogas	3939.405	5.155	5421045	1.47	5000	78.8	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9601.796	1.712	173805	3.13	10000	96.0	90	110	
Ca	44	1	nogas	9783.143	3.766	2886579	3.78	10000	97.8	90	110	
Fe	56	1	nogas	9597.468	1.495	105037334	3.04	10000	96.0	90	110	
Se	77	1	nogas	114.452	2.051	42336	2.16	100	114.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	94.570	4.948	12641	4.20	100	94.6	90	110	
Mo	95	1	nogas	94.740	1.409	245992	2.94	100	94.7	90	110	
Sn	118	1	nogas	92.095	4.518	330894	3.06	100	92.1	90	110	
Ba	137	1	nogas	91.346	1.109	183507	1.35	100	91.3	90	110	
Sb	121	2	He	101.041	0.500	251123	0.84	100	101.0	90	110	
Li	7	1	nogas	96.171	0.994	934200	0.97	100	96.2	90	110	
P	31	1	nogas	475.176	1.940	500450	1.54	500	95.0	90	110	
La	139	1	nogas	108.596	20.093	187	13.48	100	108.6	90	110	
Au	197	1	nogas	-1178.009	-272.459	33	96.44	100	-1178.0	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	728230	1.42	625645	116.40	70	125	
Ge	72	1	nogas	1690407	1.59	1374265	123.00	70	125	
In	115	1	nogas	1429494	2.34	1163835	122.83	70	125	
Bi	209	1	nogas	1060405	4.73	844865	125.51	70	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	459242	0.97	383404	119.78	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\010
Acq Date Time	2019-01-08T17:51:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	0.047	22.8	310	11.6	1	
Na	23	1	nogas	46.603	10.9	1015587	7.4	100	
Mg	24	1	nogas	4.120	33.3	46402	28.2	100	
Al	27	1	nogas	0.229	34.1	16427	0.8	5	
K	39	1	nogas	-66.144	-32.8	6103452	1.0	100	
Ti	47	1	nogas	0.112	55.9	293	20.6	2.5	
V	51	1	nogas	-3.510	-116.2	520716	5.7	2.5	
Cr	52	1	nogas	-0.101	-188.8	34576	1.6	2.5	
Mn	55	1	nogas	-0.081	-123.8	19087	2.2	2.5	
Co	59	1	nogas	0.021	101.9	840	31.1	2.5	
Ni	60	1	nogas	0.524	7.6	703	10.0	2.5	
Cu	63	1	nogas	0.096	28.0	1873	12.1	2	
Zn	66	1	nogas	0.863	3.1	547	10.1	2.5	
As	75	1	nogas	-0.431	-745.8	81941	6.3	2.5	
Sr	88	1	nogas	0.072	25.9	1560	13.6	2.5	
Ag	107	1	nogas	0.024	39.8	187	35.7	2.5	
Cd	111	1	nogas	0.037	69.3	77	49.4	1	
Sb	121	1	nogas	1.450	24.1	9560	27.4	2.5	
Tl	205	1	nogas	0.229	65.1	2274	60.0	1	
Pb	208	1	nogas	0.062	54.4	763	43.0	2.5	
U	238	1	nogas	0.125	77.2	1643	73.7	2.5	
[Pb]	206	1	nogas	0.040	90.1	210	54.9	2.5	
[Pb]	207	1	nogas	0.045	32.0	157	25.8	2.5	
Na	23	2	He	55.109	4.5	74124	4.4	100	
Mg	24	2	He	3.542	28.0	1980	24.0	100	
Al	27	2	He	-0.602	-21.4	453	9.2	5	
K	39	2	He	49.722	9.7	159879	1.2	100	
Ca	43	2	He	16.549	51.9	37	31.5	100	
Ca	44	2	He	2.172	222.3	627	18.5	100	
V	51	2	He	-0.273	-4.7	7176	1.8	2.5	
Cr	52	2	He	-0.017	-100.5	2257	2.3	2.5	
Mn	55	2	He	0.096	20.5	803	5.9	2.5	
Fe	56	2	He	3.278	10.5	18419	5.9	100	
Co	59	2	He	0.012	88.6	143	29.0	2.5	
Ni	60	2	He	-0.553	-1.8	100	10.0	2.5	
Cu	63	2	He	-0.619	-1.5	487	5.2	2	
Zn	66	2	He	-0.388	-11.3	173	17.6	2.5	
As	75	2	He	-0.010	-414.4	316	9.8	2.5	
Se	78	2	He	-0.958	-95.6	216	22.2	2	
B	11	1	nogas	5.407	56.8	35434	16.9	10	
Si	28	1	nogas	-1007.014	-23.2	2815030	2.1	5	
Ca	43	1	nogas	3.177	279.3	590	32.3	100	
Ca	44	1	nogas	-24.630	-21.3	25614	2.2	100	
Fe	56	1	nogas	-45.308	-34.9	1776183	14.3	100	
Se	77	1	nogas	-15.170	-146.6	25959	7.3	2.5	
Se	82	1	nogas	-0.013	-1124.3	160	16.5	2	
Mo	95	1	nogas	0.394	44.5	1133	46.1	2.5	
Sn	118	1	nogas	0.279	39.2	1643	25.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.057	46.3	213	26.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.947	4.0	2540	5.2	2.5	
P	31	1	nogas	-0.666	-492.2	61430	0.5	10	
La	139	1	nogas	-13.371	-52.2	27	43.3	2.5	
Au	197	1	nogas	78.529	1682.5	23	65.5	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	758795	3.94	625645	121.28	70	125	
Ge	72	1	nogas	1744969	4.55	1374265	126.97	70	125	ISTD Failed
In	115	1	nogas	1663062	2.73	1163835	142.89	70	125	ISTD Failed
Bi	209	1	nogas	1171758	1.98	844865	138.69	70	125	ISTD Failed
Ge	72	2	He	459999	2.19	383404	119.98	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	215CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:26:43-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	123	33.74
Na	23	1	nogas	209647	0.00
Mg	24	1	nogas	8837	0.16
Al	27	1	nogas	17321	0.02
K	39	1	nogas	4817557	0.00
Ti	47	1	nogas	103	54.88
V	51	1	nogas	403019	0.00
Cr	52	1	nogas	34061	0.01
Mn	55	1	nogas	16481	0.01
Co	59	1	nogas	420	6.54
Ni	60	1	nogas	403	3.03
Cu	63	1	nogas	963	0.55
Zn	66	1	nogas	550	0.57
As	75	1	nogas	63337	0.01
Sr	88	1	nogas	723	1.17
Ag	107	1	nogas	57	100.11
Cd	111	1	nogas	7	1299.04
Sb	121	1	nogas	570	3.08
Tl	205	1	nogas	257	6.85
Pb	208	1	nogas	230	5.00
[Pb]	206	1	nogas	73	38.71
[Pb]	207	1	nogas	57	17.98
Na	23	2	He	20988	0.01
Mg	24	2	He	540	1.57
Al	27	2	He	463	1.50
K	39	2	He	113987	0.00
Ca	43	2	He	13	859.23
Ca	44	2	He	560	1.15
V	51	2	He	4789	0.04
Cr	52	2	He	2430	0.09
Mn	55	2	He	663	3.44
Fe	56	2	He	8886	0.04
Co	59	2	He	57	129.65
Ni	60	2	He	130	21.33
Cu	63	2	He	350	5.10
Zn	66	2	He	163	21.97
As	75	2	He	203	7.03
Se	78	2	He	135	10.15
B	11	1	nogas	20872	0.01
Si	28	1	nogas	1564902	0.00
Ca	43	1	nogas	377	6.32
Ca	44	1	nogas	16127	0.01

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	1816795	0.00
Se	77	1	nogas	20849	0.05
Se	82	1	nogas	157	16.47
Mo	95	1	nogas	123	38.52
Sn	118	1	nogas	687	0.12
Ba	137	1	nogas	133	6.50
Sb	121	2	He	333	0.52
Li	7	1	nogas	90290	0.00
P	31	1	nogas	51433	0.00
La	139	1	nogas	23	212.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1076309	4.24
Ge	72	1	nogas	2371437	3.97
In	115	1	nogas	2215793	6.13
Bi	209	1	nogas	1799697	5.78
Ge	72	2	He	617557	0.84

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	216CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:28:43-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	9182	0.06
Na	23	1	nogas	3507622	0.00
Mg	24	1	nogas	2112679	0.00
Al	27	1	nogas	44870	0.00
K	39	1	nogas	7546315	0.00
Ti	47	1	nogas	2337	0.21
V	51	1	nogas	416240	0.00
Cr	52	1	nogas	61478	0.00
Mn	55	1	nogas	53066	0.00
Co	59	1	nogas	29484	0.01
Ni	60	1	nogas	6575	0.03
Cu	63	1	nogas	15877	0.02
Zn	66	1	nogas	5618	0.09
As	75	1	nogas	64173	0.00
Sr	88	1	nogas	39393	0.01
Ag	107	1	nogas	17933	0.01
Cd	111	1	nogas	3910	0.07
Sb	121	1	nogas	17319	0.01
Tl	205	1	nogas	26198	0.01
Pb	208	1	nogas	37197	0.00
[Pb]	206	1	nogas	9440	0.07
[Pb]	207	1	nogas	8022	0.07
Na	23	2	He	215742	0.00
Mg	24	2	He	109902	0.00
Al	27	2	He	1193	1.20
K	39	2	He	229343	0.00
Ca	43	2	He	407	0.35
Ca	44	2	He	5764	0.05
V	51	2	He	12311	0.01
Cr	52	2	He	11200	0.02
Mn	55	2	He	6921	0.12
Fe	56	2	He	732265	0.00
Co	59	2	He	11210	0.02
Ni	60	2	He	3027	0.21
Cu	63	2	He	7462	0.02
Zn	66	2	He	1833	0.25
As	75	2	He	1831	0.48
Se	78	2	He	284	1.24
B	11	1	nogas	46322	0.00
Si	28	1	nogas	1601289	0.00

Calibration Standard Report

Ca	43	1	nogas	5314	0.09
Ca	44	1	nogas	92786	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	4787148	0.00
Se	77	1	nogas	19724	0.03
Se	82	1	nogas	477	1.41
Mo	95	1	nogas	7345	0.09
Sn	118	1	nogas	11097	0.04
Ba	137	1	nogas	5958	0.05
Sb	121	2	He	7021	0.08
P	31	1	nogas	61082	0.00
La	139	1	nogas	33	103.92

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1111485	2.78	1076309	103.27	70	125	
Ge	72	1	nogas	2385498	2.80	2371437	100.59	70	125	
In	115	1	nogas	2297193	5.19	2215793	103.67	70	125	
Bi	209	1	nogas	1815254	3.81	1799697	100.86	70	125	
Ge	72	2	He	622344	1.52	617557	100.78	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	217CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:30:41-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	22650	0.00
Na	23	1	nogas	8304111	0.00
Mg	24	1	nogas	5183736	0.00
Al	27	1	nogas	85291	0.00
K	39	1	nogas	11729722	0.00
Ti	47	1	nogas	6011	0.01
V	51	1	nogas	506057	0.00
Cr	52	1	nogas	106048	0.00
Mn	55	1	nogas	108750	0.00
Co	59	1	nogas	73663	0.00
Ni	60	1	nogas	16658	0.02
Cu	63	1	nogas	38788	0.01
Zn	66	1	nogas	13782	0.04
As	75	1	nogas	81027	0.01
Sr	88	1	nogas	98603	0.00
Ag	107	1	nogas	46271	0.01
Cd	111	1	nogas	10063	0.04
Sb	121	1	nogas	43330	0.01
Tl	205	1	nogas	65943	0.00
Pb	208	1	nogas	92912	0.00
[Pb]	206	1	nogas	22923	0.01
[Pb]	207	1	nogas	20133	0.01
Na	23	2	He	504315	0.00
Mg	24	2	He	268313	0.00
Al	27	2	He	2227	0.23
K	39	2	He	399346	0.00
Ca	43	2	He	790	1.40
Ca	44	2	He	13885	0.01
V	51	2	He	23944	0.00
Cr	52	2	He	23238	0.00
Mn	55	2	He	15830	0.02
Fe	56	2	He	1854228	0.00
Co	59	2	He	27424	0.01
Ni	60	2	He	7245	0.08
Cu	63	2	He	18246	0.03
Zn	66	2	He	4874	0.07
As	75	2	He	4180	0.08
Se	78	2	He	492	0.30
B	11	1	nogas	84648	0.00
Si	28	1	nogas	1720704	0.00

Calibration Standard Report

Ca	43	1	nogas	12651	0.05
Ca	44	1	nogas	212937	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	9461886	0.00
Se	77	1	nogas	22094	0.03
Se	82	1	nogas	920	0.74
Mo	95	1	nogas	19371	0.00
Sn	118	1	nogas	27058	0.01
Ba	137	1	nogas	14526	0.03
Sb	121	2	He	17923	0.01
P	31	1	nogas	76996	0.00
La	139	1	nogas	80	31.25

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1135378	4.62	1076309	105.49	70	125	
Ge	72	1	nogas	2411201	2.47	2371437	101.68	70	125	
In	115	1	nogas	2268786	4.41	2215793	102.39	70	125	
Bi	209	1	nogas	1942654	13.04	1799697	107.94	70	125	
Ge	72	2	He	628858	0.32	617557	101.83	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	218CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:32:39-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	45938	0.00
Na	23	1	nogas	16187855	0.00
Mg	24	1	nogas	10242869	0.00
Al	27	1	nogas	147679	0.00
K	39	1	nogas	18376307	0.00
Ti	47	1	nogas	11580	0.03
V	51	1	nogas	608854	0.00
Cr	52	1	nogas	175516	0.00
Mn	55	1	nogas	196465	0.00
Co	59	1	nogas	143140	0.00
Ni	60	1	nogas	32632	0.01
Cu	63	1	nogas	77034	0.00
Zn	66	1	nogas	26272	0.01
As	75	1	nogas	99554	0.00
Sr	88	1	nogas	192260	0.00
Ag	107	1	nogas	89026	0.00
Cd	111	1	nogas	18713	0.03
Sb	121	1	nogas	85511	0.00
Tl	205	1	nogas	130603	0.00
Pb	208	1	nogas	183613	0.00
[Pb]	206	1	nogas	45952	0.00
[Pb]	207	1	nogas	40637	0.01
Na	23	2	He	985978	0.00
Mg	24	2	He	534221	0.00
Al	27	2	He	3770	0.03
K	39	2	He	681023	0.00
Ca	43	2	He	1630	0.43
Ca	44	2	He	27534	0.00
V	51	2	He	42940	0.00
Cr	52	2	He	42719	0.00
Mn	55	2	He	31454	0.00
Fe	56	2	He	3700470	0.00
Co	59	2	He	54979	0.00
Ni	60	2	He	13585	0.02
Cu	63	2	He	34987	0.00
Zn	66	2	He	8422	0.06
As	75	2	He	8286	0.02
Se	78	2	He	730	0.72
B	11	1	nogas	151022	0.00
Si	28	1	nogas	1907311	0.00

Calibration Standard Report

Ca	43	1	nogas	25044	0.01
Ca	44	1	nogas	403412	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	16752027	0.00
Se	77	1	nogas	24257	0.02
Se	82	1	nogas	1803	0.71
Mo	95	1	nogas	38338	0.01
Sn	118	1	nogas	52021	0.00
Ba	137	1	nogas	28574	0.00
Sb	121	2	He	34434	0.01
P	31	1	nogas	101752	0.00
La	139	1	nogas	100	17.32

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1143719	3.09	1076309	106.26	70	125	
Ge	72	1	nogas	2432241	3.94	2371437	102.56	70	125	
In	115	1	nogas	2251640	4.08	2215793	101.62	70	125	
Bi	209	1	nogas	1842924	3.20	1799697	102.40	70	125	
Ge	72	2	He	628311	0.35	617557	101.74	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	219CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:34:37-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	459514	0.00
Na	23	1	nogas	161826841	0.00
Mg	24	1	nogas	101185525	0.00
Al	27	1	nogas	1227839	0.00
K	39	1	nogas	138949932	0.00
Ti	47	1	nogas	115094	0.00
V	51	1	nogas	2068405	0.00
Cr	52	1	nogas	1405385	0.00
Mn	55	1	nogas	1785129	0.00
Co	59	1	nogas	1417108	0.00
Ni	60	1	nogas	314651	0.00
Cu	63	1	nogas	735086	0.00
Zn	66	1	nogas	243773	0.00
As	75	1	nogas	358759	0.00
Sr	88	1	nogas	1876906	0.00
Ag	107	1	nogas	878297	0.00
Cd	111	1	nogas	191188	0.00
Sb	121	1	nogas	830222	0.00
Tl	205	1	nogas	1292535	0.00
Pb	208	1	nogas	1828328	0.00
[Pb]	206	1	nogas	454290	0.00
[Pb]	207	1	nogas	399411	0.00
Na	23	2	He	9671618	0.00
Mg	24	2	He	5184530	0.00
Al	27	2	He	29530	0.01
K	39	2	He	5828501	0.00
Ca	43	2	He	15687	0.02
Ca	44	2	He	266776	0.00
V	51	2	He	382505	0.00
Cr	52	2	He	404216	0.00
Mn	55	2	He	296372	0.00
Fe	56	2	He	35443834	0.00
Co	59	2	He	543470	0.00
Ni	60	2	He	136824	0.00
Cu	63	2	He	342142	0.00
Zn	66	2	He	84065	0.00
As	75	2	He	79480	0.00
Se	78	2	He	6405	0.03
B	11	1	nogas	1345556	0.00
Si	28	1	nogas	4850571	0.00

Calibration Standard Report

Ca	43	1	nogas	241174	0.00
Ca	44	1	nogas	3968218	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	149943803	0.00
Se	77	1	nogas	32439	0.02
Se	82	1	nogas	15520	0.02
Mo	95	1	nogas	372041	0.00
Sn	118	1	nogas	514198	0.00
Ba	137	1	nogas	283065	0.00
Sb	121	2	He	345994	0.00
P	31	1	nogas	515843	0.00
La	139	1	nogas	370	4.56

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	983805	2.73	1076309	91.41	70	125	
Ge	72	1	nogas	2278188	6.82	2371437	96.07	70	125	
In	115	1	nogas	2101807	5.28	2215793	94.86	70	125	
Bi	209	1	nogas	1662520	13.59	1799697	92.38	70	125	
Ge	72	2	He	624577	0.63	617557	101.14	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	220CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:36:32-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	905391	0.00
Na	23	1	nogas	317662399	0.00
Mg	24	1	nogas	194295621	0.00
Al	27	1	nogas	2395304	0.00
K	39	1	nogas	270535623	0.00
Ti	47	1	nogas	227388	0.00
V	51	1	nogas	3544244	0.00
Cr	52	1	nogas	2753677	0.00
Mn	55	1	nogas	3459145	0.00
Co	59	1	nogas	2731304	0.00
Ni	60	1	nogas	616455	0.00
Cu	63	1	nogas	1454920	0.00
Zn	66	1	nogas	481726	0.00
As	75	1	nogas	654952	0.00
Sr	88	1	nogas	3791538	0.00
Ag	107	1	nogas	1743116	0.00
Cd	111	1	nogas	374218	0.00
Sb	121	1	nogas	1709277	0.00
Tl	205	1	nogas	2674486	0.00
Pb	208	1	nogas	3681517	0.00
[Pb]	206	1	nogas	906716	0.00
[Pb]	207	1	nogas	805469	0.00
Na	23	2	He	18891702	0.00
Mg	24	2	He	10298506	0.00
Al	27	2	He	58146	0.00
K	39	2	He	11287095	0.00
Ca	43	2	He	31674	0.00
Ca	44	2	He	527342	0.00
V	51	2	He	761139	0.00
Cr	52	2	He	804225	0.00
Mn	55	2	He	586480	0.00
Fe	56	2	He	70504554	0.00
Co	59	2	He	1081531	0.00
Ni	60	2	He	268787	0.00
Cu	63	2	He	683421	0.00
Zn	66	2	He	165536	0.00
As	75	2	He	159273	0.00
Se	78	2	He	12626	0.00
B	11	1	nogas	2688008	0.00
Si	28	1	nogas	8097618	0.00

Calibration Standard Report

Ca	43	1	nogas	472680	0.00
Ca	44	1	nogas	7677340	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	297522223	0.00
Se	77	1	nogas	47301	0.01
Se	82	1	nogas	31534	0.00
Mo	95	1	nogas	764434	0.00
Sn	118	1	nogas	1020334	0.00
Ba	137	1	nogas	570045	0.00
Sb	121	2	He	709376	0.00
P	31	1	nogas	964101	0.00
La	139	1	nogas	417	2.60

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	949657	3.12	1076309	88.23	70	125	
Ge	72	1	nogas	2336391	3.30	2371437	98.52	70	125	
In	115	1	nogas	2156019	3.46	2215793	97.30	70	125	
Bi	209	1	nogas	1688241	3.57	1799697	93.81	70	125	
Ge	72	2	He	611622	0.90	617557	99.04	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	223LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:42:27-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	4.334	3.336	23117	3.33	5	86.7	70	130	
Na	23	1	nogas	515.209	5.538	8600106	2.21	500	103.0	70	130	
Mg	24	1	nogas	532.461	5.538	5341531	1.55	500	106.5	70	130	
Al	27	1	nogas	5.423	0.951	85906	1.69	5	108.5	70	130	
K	39	1	nogas	491.070	2.960	11844861	1.18	500	98.2	70	130	
Ti	47	1	nogas	4.776	3.085	5828	2.61	5	95.5	70	130	
V	51	1	nogas	-0.494	-45.800	406443	2.84	5	-9.9	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.695	3.280	102377	1.25	5	93.9	70	130	
Mn	55	1	nogas	5.076	2.455	109408	1.19	5	101.5	70	130	
Co	59	1	nogas	5.096	2.647	74182	0.34	5	101.9	70	130	
Ni	60	1	nogas	4.696	2.696	17218	1.01	5	93.9	70	130	
Cu	63	1	nogas	5.027	1.694	39516	2.49	5	100.5	70	130	
Zn	66	1	nogas	4.765	2.144	13956	1.30	5	95.3	70	130	
As	75	1	nogas	0.897	32.792	68820	2.11	5	17.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.015	3.945	100445	1.73	5	100.3	70	130	
Ag	107	1	nogas	5.120	2.446	47076	0.65	5	102.4	70	130	
Cd	111	1	nogas	4.755	7.587	9556	3.69	5	95.1	70	130	
Sb	121	1	nogas	5.262	2.471	47558	0.90	5	105.2	70	130	
Tl	205	1	nogas	5.040	6.850	74740	2.09	5	100.8	70	130	
Pb	208	1	nogas	5.330	1.299	98204	1.30	5	106.6	70	130	
U	238	1	nogas	5.020	4.841	102854	1.35	5	100.4	70	130	
[Pb]	206	1	nogas	4.889	12.284	24682	6.13	5	97.8	70	130	
[Pb]	207	1	nogas	4.690	6.061	21040	2.02	5	93.8	70	130	
Na	23	2	He	509.999	0.595	514963	0.73	500	102.0	70	130	
Mg	24	2	He	511.221	1.253	269747	0.96	500	102.2	70	130	
Al	27	2	He	5.153	12.444	2130	9.35	5	103.1	70	130	
K	39	2	He	510.344	0.715	400409	0.51	500	102.1	70	130	
Ca	43	2	He	487.608	6.040	800	5.45	500	97.5	70	130	
Ca	44	2	He	507.720	3.802	14252	2.84	500	101.5	70	130	
V	51	2	He	5.001	1.061	23088	0.75	5	100.0	70	130	
Cr	52	2	He	5.072	1.589	23245	1.58	5	101.4	70	130	
Mn	55	2	He	5.333	1.032	16658	1.71	5	106.7	70	130	
Fe	56	2	He	528.796	0.859	1914680	1.14	500	105.8	70	130	
Co	59	2	He	5.039	0.421	27915	1.02	5	100.8	70	130	
Ni	60	2	He	5.316	1.377	7415	2.15	5	106.3	70	130	
Cu	63	2	He	5.429	0.917	18686	1.30	5	108.6	70	130	
Zn	66	2	He	5.406	8.751	4746	7.95	5	108.1	70	130	
As	75	2	He	4.926	2.868	4205	3.10	5	98.5	70	130	
Se	78	2	He	4.465	18.973	414	12.97	5	89.3	70	130	
B	11	1	nogas	31.367	4.257	119437	3.54	25	125.5	70	130	
Si	28	1	nogas	87.740	148.942	1672979	3.12	25	351.0	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	502.664	1.626	12931	3.99	500	100.5	70	130	
Ca	44	1	nogas	488.642	2.344	214866	2.51	500	97.7	70	130	
Fe	56	1	nogas	491.041	3.914	9508645	1.86	500	98.2	70	130	
Se	77	1	nogas	-28.330	-4.703	17505	3.46	5	-566.6	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.812	16.843	950	12.63	5	96.2	70	130	
Mo	95	1	nogas	5.285	7.927	21230	5.73	5	105.7	70	130	
Sn	118	1	nogas	5.209	6.654	29118	0.72	5	104.2	70	130	
Ba	137	1	nogas	5.063	2.240	15567	6.26	5	101.3	70	130	
Sb	121	2	He	5.239	3.719	19207	2.80	5	104.8	70	130	
Li	7	1	nogas	4.339	2.583	153971	1.36	5	86.8	70	130	
P	31	1	nogas	26.618	6.591	78689	0.48	25	106.5	70	130	
La	139	1	nogas	36.549	46.832	113	33.41	5	731.0	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	452.047	203.062	23	65.47	5	9040.9	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	1117320	0.61	1076309	103.81	70	125	
Ge	72	1	nogas	2442113	2.42	2371437	102.98	70	125	
In	115	1	nogas	2296149	6.85	2215793	103.63	70	125	
Bi	209	1	nogas	1870618	6.22	1799697	103.94	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	627212	0.94	617557	101.56	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	224SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:44:25-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	215CALB.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	1.700	1.700	1.76	9366	0.02	2000	
Na	23	1	nogas	193.424	193.424	0.94	3518404	0.01	200000	
Mg	24	1	nogas	198.386	198.386	2.33	2088509	0.01	200000	
Al	27	1	nogas	2.180	2.180	1.76	45815	0.00	2000	
K	39	1	nogas	182.676	182.676	4.11	7628322	0.00	200000	
Ti	47	1	nogas	1.980	1.980	11.02	2514	0.08	2000	
V	51	1	nogas	-4.547	-4.547	-8.24	342957	0.00	2000	
Cr	52	1	nogas	1.566	1.566	2.54	58331	0.00	2000	
Mn	55	1	nogas	1.919	1.919	2.00	52641	0.00	2000	
Co	59	1	nogas	2.026	2.026	1.22	30172	0.01	2000	
Ni	60	1	nogas	1.510	1.510	5.81	6981	0.02	2000	
Cu	63	1	nogas	2.002	2.002	2.58	16558	0.01	2000	
Zn	66	1	nogas	1.408	1.408	4.72	5548	0.03	2000	
As	75	1	nogas	-2.785	-2.785	-26.46	58136	0.00	2000	
Sr	88	1	nogas	1.975	1.975	0.89	40576	0.00	2000	
Ag	107	1	nogas	1.994	1.994	1.10	18623	0.01	2000	
Cd	111	1	nogas	1.846	1.846	6.62	3807	0.05	2000	
Sb	121	1	nogas	2.106	2.106	5.06	19655	0.01	2000	
Tl	205	1	nogas	2.041	2.041	3.92	29166	0.01	2000	
Pb	208	1	nogas	2.117	2.117	1.56	39146	0.01	2000	
U	238	1	nogas	1.993	1.993	1.21	39169	0.01	2000	
[Pb]	206	1	nogas	2.014	2.014	6.79	9813	0.02	2000	
[Pb]	207	1	nogas	1.969	1.969	6.79	8496	0.02	2000	
Na	23	2	He	202.582	202.582	1.96	219474	0.09	200000	
Mg	24	2	He	203.847	203.847	0.92	108930	0.19	200000	
Al	27	2	He	2.071	2.071	27.31	1233	0.17	2000	
K	39	2	He	200.039	200.039	2.51	226256	0.09	200000	
Ca	43	2	He	235.110	235.110	14.45	397	59.27	200000	
Ca	44	2	He	197.581	197.581	2.65	5951	3.32	200000	
V	51	2	He	1.923	1.923	0.33	11293	0.02	2000	
Cr	52	2	He	2.099	2.099	4.56	11174	0.02	2000	
Mn	55	2	He	2.075	2.075	4.25	6958	0.03	2000	
Fe	56	2	He	204.016	204.016	1.36	751337	0.03	200000	
Co	59	2	He	2.057	2.057	3.19	11537	0.02	2000	
Ni	60	2	He	2.020	2.020	4.77	2904	0.07	2000	
Cu	63	2	He	2.228	2.228	2.86	7578	0.03	2000	
Zn	66	2	He	2.027	2.027	8.29	1903	0.11	2000	
As	75	2	He	1.936	1.936	2.28	1795	0.11	2000	
Se	78	2	He	2.275	2.275	25.66	277	0.82	2000	
B	11	1	nogas	12.024	12.024	2.71	60578	0.02	2000	
Si	28	1	nogas	-146.338	-146.338	-36.84	1532919	-0.01	2000	
Ca	43	1	nogas	199.606	199.606	5.01	5441	3.67	200000	

Sample Report

Ca	44	1	nogas	193.727	193.727	2.31	96517	0.20	200000	
Fe	56	1	nogas	178.280	178.280	1.70	4709478	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-33.632	-33.632	-11.81	16995	-0.20	2000	
Se	82	1	nogas	1.823	1.823	7.98	467	0.39	2000	
Mo	95	1	nogas	2.047	2.047	3.87	8422	0.02	2000	
Sn	118	1	nogas	2.092	2.092	5.14	12425	0.02	2000	
Ba	137	1	nogas	1.870	1.870	4.42	5971	0.03	2000	
Sb	121	2	He	2.170	2.170	4.07	8232	0.03	2000	
La	139	1	nogas	21.991	21.991	57.00	80	27.49	2000	
Au	197	1	nogas	819.875	819.875	113.72	17	4919.25	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	1144196	1.72	1076309	106.31	70	125	
Ge	72	1	nogas	2475237	0.87	2371437	104.38	70	125	
In	115	1	nogas	2348301	2.20	2215793	105.98	70	125	
Bi	209	1	nogas	1789157	1.34	1799697	99.41	70	125	
Ge	72	2	He	633235	0.99	617557	102.54	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	225_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:46:24-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	87.337	1.828	464947	0.99	100	87.3	90	110	ICV Main CR1 Failed
Na	23	1	nogas	10091.578	3.216	163300833	0.64	10000	100.9	90	110	
Mg	24	1	nogas	10484.361	1.340	104317140	2.33	10000	104.8	90	110	
Al	27	1	nogas	96.878	5.860	1244293	5.94	100	96.9	90	110	
K	39	1	nogas	9868.062	4.142	144356241	1.19	10000	98.7	90	110	
Ti	47	1	nogas	97.280	0.466	117662	2.78	100	97.3	90	110	
V	51	1	nogas	94.768	4.132	2022208	1.65	100	94.8	90	110	
Cr	52	1	nogas	98.966	1.262	1466102	1.68	100	99.0	90	110	
Mn	55	1	nogas	99.518	1.353	1845135	2.39	100	99.5	90	110	
Co	59	1	nogas	101.272	0.805	1479123	2.19	100	101.3	90	110	
Ni	60	1	nogas	96.672	3.593	318111	2.34	100	96.7	90	110	
Cu	63	1	nogas	96.934	1.985	750107	1.41	100	96.9	90	110	
Zn	66	1	nogas	97.896	2.123	251485	1.24	100	97.9	90	110	
As	75	1	nogas	93.683	3.192	360863	0.77	100	93.7	90	110	
Sr	88	1	nogas	97.003	4.376	1946569	4.29	100	97.0	90	110	
Ag	107	1	nogas	99.637	2.847	922794	0.50	100	99.6	90	110	
Cd	111	1	nogas	99.569	0.904	195524	2.21	100	99.6	90	110	
Sb	121	1	nogas	95.435	3.125	859615	0.67	100	95.4	90	110	
Tl	205	1	nogas	98.440	5.505	1382824	2.29	100	98.4	90	110	
Pb	208	1	nogas	102.097	1.068	1876905	1.07	100	102.1	90	110	
U	238	1	nogas	101.839	3.823	1981191	0.82	100	101.8	90	110	
[Pb]	206	1	nogas	97.520	6.173	467569	1.92	100	97.5	90	110	
[Pb]	207	1	nogas	96.643	5.419	410869	1.22	100	96.6	90	110	
Na	23	2	He	10325.384	1.006	9886410	1.13	10000	103.3	90	110	
Mg	24	2	He	10330.365	0.685	5370163	0.40	10000	103.3	90	110	
Al	27	2	He	105.430	3.853	31219	3.43	100	105.4	90	110	
K	39	2	He	10403.932	1.179	5953008	1.16	10000	104.0	90	110	
Ca	43	2	He	10282.365	5.063	16387	4.73	10000	102.8	90	110	
Ca	44	2	He	10257.913	1.954	273489	1.63	10000	102.6	90	110	
V	51	2	He	102.106	1.626	393552	1.34	100	102.1	90	110	
Cr	52	2	He	103.775	0.321	422018	0.63	100	103.8	90	110	
Mn	55	2	He	104.258	1.392	309106	1.12	100	104.3	90	110	
Fe	56	2	He	10403.171	1.571	37015189	1.63	10000	104.0	90	110	
Co	59	2	He	101.986	0.782	556536	0.48	100	102.0	90	110	
Ni	60	2	He	101.887	1.855	138564	1.79	100	101.9	90	110	
Cu	63	2	He	101.913	1.515	351045	1.33	100	101.9	90	110	
Zn	66	2	He	100.549	2.833	84206	2.52	100	100.5	90	110	
As	75	2	He	101.980	1.136	81916	1.12	100	102.0	90	110	
Se	78	2	He	103.429	3.143	6649	2.73	100	103.4	90	110	
B	11	1	nogas	455.375	2.823	1445781	3.60	500	91.1	90	110	
Si	28	1	nogas	4694.155	3.435	4904264	0.96	5000	93.9	90	110	
Ca	43	1	nogas	9730.949	3.730	245023	0.88	10000	97.3	90	110	
Ca	44	1	nogas	9806.217	2.808	4027890	0.83	10000	98.1	90	110	
Fe	56	1	nogas	9683.988	2.242	153815216	2.63	10000	96.8	90	110	
Se	77	1	nogas	72.416	5.432	31798	2.85	100	72.4	90	110	ICV Main CR1 Failed
Se	82	1	nogas	97.271	4.407	16267	1.54	100	97.3	90	110	
Mo	95	1	nogas	96.020	1.742	387216	2.40	100	96.0	90	110	
Sn	118	1	nogas	99.612	1.217	531839	1.07	100	99.6	90	110	
Ba	137	1	nogas	98.151	1.487	291852	2.71	100	98.2	90	110	
Sb	121	2	He	99.311	0.810	353465	0.88	100	99.3	90	110	
Li	7	1	nogas	88.622	1.024	1327601	0.03	100	88.6	90	110	ICV Main CR1 Failed
P	31	1	nogas	481.971	2.641	522434	0.72	500	96.4	90	110	
La	139	1	nogas	94.292	13.163	250	10.58	100	94.3	90	110	
Au	197	1	nogas	1423.649	51.147	7	173.21	100	1423.6	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	1121188	0.96	1076309	104.17	70	125	
Ge	72	1	nogas	2463168	2.86	2371437	103.87	70	125	
In	115	1	nogas	2238682	2.09	2215793	101.03	70	125	
Bi	209	1	nogas	1775838	4.44	1799697	98.67	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	619102	0.35	617557	100.25	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	226_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:48:20-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	56.5	403	33.0	1	
Na	23	1	nogas	5.132	45.0	296447	5.7	100	
Mg	24	1	nogas	3.716	36.5	45696	20.7	100	
Al	27	1	nogas	0.549	24.5	23989	1.3	5	
K	39	1	nogas	5.381	355.9	4892888	1.0	100	
Ti	47	1	nogas	0.107	57.9	227	30.0	2.5	
V	51	1	nogas	-3.894	-30.1	338998	2.8	2.5	
Cr	52	1	nogas	-0.061	-228.2	33200	0.9	2.5	
Mn	55	1	nogas	0.142	54.4	18980	1.6	2.5	
Co	59	1	nogas	0.026	58.2	783	20.6	2.5	
Ni	60	1	nogas	-0.389	-14.5	703	20.7	2.5	
Cu	63	1	nogas	0.084	21.4	1587	2.4	1	
Zn	66	1	nogas	-0.249	-20.5	1243	5.2	2.5	
As	75	1	nogas	-2.611	-22.3	56220	2.8	2.5	
Sr	88	1	nogas	0.056	34.0	1793	14.8	2.5	
Ag	107	1	nogas	0.029	47.9	313	33.5	2.5	
Cd	111	1	nogas	0.032	73.1	70	62.3	1	
Sb	121	1	nogas	1.134	21.0	10333	13.8	2.5	
Tl	205	1	nogas	0.266	41.5	3811	32.2	1	
Pb	208	1	nogas	0.052	26.6	1177	21.4	2.5	
U	238	1	nogas	0.105	53.1	2000	44.6	2.5	
[Pb]	206	1	nogas	0.044	64.8	270	41.7	2.5	
[Pb]	207	1	nogas	0.055	56.1	277	38.6	2.5	
Na	23	2	He	3.110	23.5	24403	2.2	100	
Mg	24	2	He	2.643	1.7	1947	2.3	100	
Al	27	2	He	-0.268	-102.1	537	15.8	5	
K	39	2	He	-1.238	-255.8	113292	1.6	100	
Ca	43	2	He	12.333	78.6	33	45.8	100	
Ca	44	2	He	0.234	839.8	577	7.8	100	
V	51	2	He	0.096	11.4	4129	2.3	2.5	
Cr	52	2	He	0.073	53.2	2777	7.2	2.5	
Mn	55	2	He	0.150	44.7	1127	17.2	2.5	
Fe	56	2	He	3.123	12.6	20335	5.7	100	
Co	59	2	He	0.017	36.5	150	24.0	2.5	
Ni	60	2	He	0.075	38.8	200	21.8	2.5	
Cu	63	2	He	0.252	8.9	607	14.0	1	
Zn	66	2	He	0.338	16.4	457	11.2	2.5	
As	75	2	He	0.055	123.4	252	21.9	2.5	
Se	78	2	He	0.428	38.5	157	7.0	1	
B	11	1	nogas	8.537	22.9	48682	7.4	10	
Si	28	1	nogas	-90.032	-143.2	1504996	1.4	5	
Ca	43	1	nogas	11.740	50.0	660	17.2	100	
Ca	44	1	nogas	6.249	65.4	18573	2.8	100	
Fe	56	1	nogas	-3.734	-330.6	1757575	4.6	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-19.751	-33.6	18146	2.2	2.5	
Se	82	1	nogas	-0.240	-99.5	117	26.2	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.268	42.4	1150	32.0	2.5	
Sn	118	1	nogas	0.341	33.4	2544	15.7	5	
Ba	137	1	nogas	0.063	30.4	333	22.5	2.5	
Sb	121	2	He	0.806	12.5	3250	9.8	2.5	
P	31	1	nogas	1.825	197.2	53138	0.4	10	
La	139	1	nogas	31.835	26.0	103	24.4	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-68.787	-3983.0	30	145.3	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	1130944	5.05	1076309	105.08	70	125	
Ge	72	1	nogas	2374409	5.81	2371437	100.13	70	125	
In	115	1	nogas	2296311	8.17	2215793	103.63	70	125	
Bi	209	1	nogas	1719275	6.13	1799697	95.53	70	125	
Ge	72	2	He	629287	1.52	617557	101.90	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	235_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:06:02-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	92.354	0.945	458494	1.20	100	92.4	90	110	
Na	23	1	nogas	9887.787	4.609	160683258	2.08	10000	98.9	90	110	
Mg	24	1	nogas	10182.576	7.576	101565742	1.33	10000	101.8	90	110	
Al	27	1	nogas	99.302	5.971	1240368	2.82	100	99.3	90	110	
K	39	1	nogas	9969.058	2.720	142009562	1.53	10000	99.7	90	110	
Ti	47	1	nogas	98.254	2.631	115687	2.16	100	98.3	90	110	
V	51	1	nogas	106.605	1.865	2165289	2.70	100	106.6	90	110	
Cr	52	1	nogas	100.743	1.393	1453387	4.13	100	100.7	90	110	
Mn	55	1	nogas	100.685	2.487	1817889	3.71	100	100.7	90	110	
Co	59	1	nogas	99.628	4.698	1416155	2.98	100	99.6	90	110	
Ni	60	1	nogas	98.456	3.083	315463	1.73	100	98.5	90	110	
Cu	63	1	nogas	99.488	3.094	749514	1.09	100	99.5	90	110	
Zn	66	1	nogas	98.884	3.252	247294	0.94	100	98.9	90	110	
As	75	1	nogas	101.531	3.122	375440	1.57	100	101.5	90	110	
Sr	88	1	nogas	98.230	5.242	1917981	1.54	100	98.2	90	110	
Ag	107	1	nogas	100.570	4.014	906785	0.22	100	100.6	90	110	
Cd	111	1	nogas	98.514	5.892	190966	1.02	100	98.5	90	110	
Sb	121	1	nogas	97.947	1.682	859467	2.44	100	97.9	90	110	
Tl	205	1	nogas	98.417	4.218	1341672	5.33	100	98.4	90	110	
Pb	208	1	nogas	100.020	2.855	1838723	2.85	100	100.0	90	110	
U	238	1	nogas	100.206	3.309	1890931	4.33	100	100.2	90	110	
[Pb]	206	1	nogas	98.444	2.051	458108	3.00	100	98.4	90	110	
[Pb]	207	1	nogas	98.249	2.509	405295	3.09	100	98.2	90	110	
Na	23	2	He	10167.761	1.720	9796220	2.18	10000	101.7	90	110	
Mg	24	2	He	10079.438	1.297	5272290	1.78	10000	100.8	90	110	
Al	27	2	He	101.732	4.319	30338	4.71	100	101.7	90	110	
K	39	2	He	10332.828	0.695	5913103	0.68	10000	103.3	90	110	
Ca	43	2	He	10135.144	0.606	16254	0.34	10000	101.4	90	110	
Ca	44	2	He	10097.774	0.804	270891	0.36	10000	101.0	90	110	
V	51	2	He	99.691	0.637	386717	1.11	100	99.7	90	110	
Cr	52	2	He	99.933	1.498	408963	1.01	100	99.9	90	110	
Mn	55	2	He	103.488	2.240	308706	1.81	100	103.5	90	110	
Fe	56	2	He	10053.253	1.094	35989612	0.77	10000	100.5	90	110	
Co	59	2	He	100.082	0.965	549527	1.25	100	100.1	90	110	
Ni	60	2	He	101.025	0.388	138238	0.27	100	101.0	90	110	
Cu	63	2	He	100.774	0.490	349270	0.97	100	100.8	90	110	
Zn	66	2	He	100.386	0.697	84594	1.16	100	100.4	90	110	
As	75	2	He	100.469	0.112	81202	0.58	100	100.5	90	110	
Se	78	2	He	100.578	2.739	6509	2.24	100	100.6	90	110	
B	11	1	nogas	468.210	2.965	1385756	4.18	500	93.6	90	110	
Si	28	1	nogas	5162.695	6.902	5091503	1.27	5000	103.3	90	110	
Ca	43	1	nogas	9927.806	2.187	243538	2.47	10000	99.3	90	110	
Ca	44	1	nogas	9888.790	1.613	3957850	3.92	10000	98.9	90	110	
Fe	56	1	nogas	9894.848	3.559	152949483	1.86	10000	98.9	90	110	
Se	77	1	nogas	118.665	10.950	37255	0.63	100	118.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.085	3.994	16301	3.16	100	100.1	90	110	
Mo	95	1	nogas	97.567	2.240	383096	1.99	100	97.6	90	110	
Sn	118	1	nogas	99.038	3.967	522453	2.32	100	99.0	90	110	
Ba	137	1	nogas	97.970	6.373	287510	1.35	100	98.0	90	110	
Sb	121	2	He	98.583	0.629	353038	0.90	100	98.6	90	110	
Li	7	1	nogas	92.290	1.531	1285835	2.76	100	92.3	90	110	
P	31	1	nogas	491.166	3.839	517358	1.01	500	98.2	90	110	
La	139	1	nogas	127.889	10.615	327	7.70	100	127.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	346.783	112.309	23	24.74	100	346.8	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	1045557	1.82	1076309	97.14	70	125	
Ge	72	1	nogas	2399321	4.08	2371437	101.18	70	125	
In	115	1	nogas	2215132	6.12	2215793	99.97	70	125	
Bi	209	1	nogas	1720253	1.20	1799697	95.59	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	622914	0.49	617557	100.87	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	236_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:07:57-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	0.083	48.0	583	37.3	1	
Na	23	1	nogas	15.851	14.7	491916	5.1	100	
Mg	24	1	nogas	6.304	27.5	74995	21.0	100	
Al	27	1	nogas	0.362	26.7	22270	3.0	5	
K	39	1	nogas	-4.278	-341.1	4881553	1.7	100	
Ti	47	1	nogas	0.162	19.6	300	14.5	2.5	
V	51	1	nogas	1.171	47.1	432341	2.6	2.5	
Cr	52	1	nogas	-0.031	-368.4	34466	2.4	2.5	
Mn	55	1	nogas	0.566	9.0	27174	4.4	2.5	
Co	59	1	nogas	0.063	29.2	1330	17.0	2.5	
Ni	60	1	nogas	-0.406	-10.1	670	18.1	2.5	
Cu	63	1	nogas	0.111	29.7	1833	12.5	2	
Zn	66	1	nogas	-0.467	-7.3	727	9.2	2.5	
As	75	1	nogas	-2.660	-28.4	57501	5.9	2.5	
Sr	88	1	nogas	0.064	15.0	2007	9.5	2.5	
Ag	107	1	nogas	0.056	21.3	570	16.7	2.5	
Cd	111	1	nogas	0.063	26.6	137	22.4	1	
Sb	121	1	nogas	1.410	21.0	13078	17.9	2.5	
Tl	205	1	nogas	0.400	48.1	6265	55.5	1	
Pb	208	1	nogas	0.079	36.3	1683	31.3	2.5	
U	238	1	nogas	0.158	50.2	3361	58.8	2.5	
[Pb]	206	1	nogas	0.071	41.4	437	43.0	2.5	
[Pb]	207	1	nogas	0.070	36.1	373	39.2	2.5	
Na	23	2	He	15.025	6.5	35914	1.3	100	
Mg	24	2	He	4.792	2.0	3077	2.2	100	
Al	27	2	He	0.200	162.8	673	14.0	5	
K	39	2	He	-2.409	-114.9	112635	1.4	100	
Ca	43	2	He	16.416	65.4	40	43.3	100	
Ca	44	2	He	1.978	184.3	623	15.8	100	
V	51	2	He	0.517	4.1	5754	1.1	2.5	
Cr	52	2	He	0.029	132.0	2590	6.2	2.5	
Mn	55	2	He	0.791	2.7	3050	2.9	2.5	
Fe	56	2	He	6.142	4.2	31220	4.2	100	
Co	59	2	He	0.051	23.2	340	20.6	2.5	
Ni	60	2	He	0.047	70.7	160	27.2	2.5	
Cu	63	2	He	0.246	7.6	587	12.0	2	
Zn	66	2	He	0.048	70.5	210	14.3	2.5	
As	75	2	He	0.034	118.4	234	13.5	2.5	
Se	78	2	He	0.339	43.1	151	5.4	2	
B	11	1	nogas	10.083	12.0	54327	7.4	10	CCB Main CR1 Failed
Si	28	1	nogas	-83.997	-21.9	1548274	2.4	5	
Ca	43	1	nogas	9.138	42.4	617	17.2	100	
Ca	44	1	nogas	4.927	43.0	18529	2.0	100	
Fe	56	1	nogas	4.224	271.7	1927055	6.6	100	
Se	77	1	nogas	-20.667	-17.6	18493	5.2	2.5	
Se	82	1	nogas	-0.103	-142.4	143	17.6	2	
Mo	95	1	nogas	0.495	51.1	2080	45.1	2.5	
Sn	118	1	nogas	0.380	32.7	2844	20.7	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.107	48.4	473	30.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.009	8.4	3981	7.3	2.5	
P	31	1	nogas	-1.781	-90.4	51052	2.0	10	
La	139	1	nogas	17.975	27.7	70	14.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	1452.454	23.6	7	86.6	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	1142606	0.40	1076309	106.16	70	125	
Ge	72	1	nogas	2430952	2.58	2371437	102.51	70	125	
In	115	1	nogas	2351113	3.69	2215793	106.11	70	125	
Bi	209	1	nogas	1843128	9.40	1799697	102.41	70	125	
Ge	72	2	He	628299	1.35	617557	101.74	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	247_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:29:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	94.279	1.301	442504	0.17	100	94.3	90	110	
Na	23	1	nogas	10644.717	4.696	167453208	0.64	10000	106.4	90	110	
Mg	24	1	nogas	10282.162	6.428	99357129	1.13	10000	102.8	90	110	
Al	27	1	nogas	102.984	1.431	1253492	4.32	100	103.0	90	110	
K	39	1	nogas	9899.367	4.376	137266282	1.49	10000	99.0	90	110	
Ti	47	1	nogas	96.906	2.259	111076	1.12	100	96.9	90	110	
V	51	1	nogas	134.400	5.664	2552243	2.19	100	134.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.667	3.189	1399190	2.08	100	99.7	90	110	
Mn	55	1	nogas	97.826	1.041	1720010	3.10	100	97.8	90	110	
Co	59	1	nogas	101.237	2.548	1401273	0.74	100	101.2	90	110	
Ni	60	1	nogas	97.669	2.670	304679	1.08	100	97.7	90	110	
Cu	63	1	nogas	98.057	3.253	719147	0.48	100	98.1	90	110	
Zn	66	1	nogas	96.489	2.224	235003	0.93	100	96.5	90	110	
As	75	1	nogas	115.640	3.114	407487	0.41	100	115.6	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	103.086	5.484	1959623	2.68	100	103.1	90	110	
Ag	107	1	nogas	98.381	2.035	863935	1.00	100	98.4	90	110	
Cd	111	1	nogas	96.829	1.960	183396	1.15	100	96.8	90	110	
Sb	121	1	nogas	96.153	3.073	821066	0.74	100	96.2	90	110	
Tl	205	1	nogas	99.933	2.741	1306004	3.40	100	99.9	90	110	
Pb	208	1	nogas	96.374	1.069	1771718	1.07	100	96.4	90	110	
U	238	1	nogas	101.335	1.654	1833087	1.50	100	101.3	90	110	
[Pb]	206	1	nogas	99.588	0.854	444301	0.76	100	99.6	90	110	
[Pb]	207	1	nogas	98.049	2.062	387753	1.05	100	98.0	90	110	
Na	23	2	He	10757.114	1.312	9941736	1.50	10000	107.6	90	110	
Mg	24	2	He	10191.922	1.367	5114542	1.52	10000	101.9	90	110	
Al	27	2	He	103.163	2.154	29503	2.09	100	103.2	90	110	
K	39	2	He	9963.263	1.883	5705691	1.85	10000	99.6	90	110	
Ca	43	2	He	10504.197	3.220	16160	2.88	10000	105.0	90	110	
Ca	44	2	He	10254.918	0.502	263936	0.56	10000	102.5	90	110	
V	51	2	He	101.077	1.624	376118	1.58	100	101.1	90	110	
Cr	52	2	He	99.674	0.239	391368	0.37	100	99.7	90	110	
Mn	55	2	He	102.443	1.040	293220	1.51	100	102.4	90	110	
Fe	56	2	He	10068.435	0.723	34582549	1.18	10000	100.7	90	110	
Co	59	2	He	98.960	2.580	521297	2.56	100	99.0	90	110	
Ni	60	2	He	99.316	2.688	130378	2.35	100	99.3	90	110	
Cu	63	2	He	99.914	2.223	332218	2.16	100	99.9	90	110	
Zn	66	2	He	99.277	2.435	80268	2.82	100	99.3	90	110	
As	75	2	He	100.839	0.913	78191	0.60	100	100.8	90	110	
Se	78	2	He	102.765	1.351	6378	1.14	100	102.8	90	110	
B	11	1	nogas	502.858	1.690	1405385	1.91	500	100.6	90	110	
Si	28	1	nogas	5206.059	6.225	4986218	1.59	5000	104.1	90	110	
Ca	43	1	nogas	10043.460	1.396	239847	1.75	10000	100.4	90	110	
Ca	44	1	nogas	9911.157	0.467	3861267	3.03	10000	99.1	90	110	
Fe	56	1	nogas	9772.598	1.920	147121995	1.62	10000	97.7	90	110	
Se	77	1	nogas	235.719	4.883	51861	0.90	100	235.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.272	5.632	15737	4.08	100	99.3	90	110	
Mo	95	1	nogas	96.207	2.993	367661	0.28	100	96.2	90	110	
Sn	118	1	nogas	98.227	1.638	505945	1.47	100	98.2	90	110	
Ba	137	1	nogas	97.334	2.947	279097	1.25	100	97.3	90	110	
Sb	121	2	He	97.893	0.241	336339	0.71	100	97.9	90	110	
Li	7	1	nogas	97.071	2.004	1274259	2.25	100	97.1	90	110	
P	31	1	nogas	486.751	3.111	499643	0.39	500	97.4	90	110	
La	139	1	nogas	116.932	19.340	293	16.11	100	116.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	508.726	130.141	20	50.00	100	508.7	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	988529	1.40	1076309	91.84	70	125	
Ge	72	1	nogas	2335190	3.00	2371437	98.47	70	125	
In	115	1	nogas	2160069	3.07	2215793	97.49	70	125	
Bi	209	1	nogas	1649506	1.15	1799697	91.65	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	597629	0.50	617557	96.77	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	248_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:31:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	41.8	317	28.3	1	
Na	23	1	nogas	287.060	9.0	4918559	5.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	13.498	14.9	145038	10.5	100	
Al	27	1	nogas	0.302	15.0	21132	1.0	5	
K	39	1	nogas	8.523	193.7	4966669	1.1	100	
Ti	47	1	nogas	0.099	37.5	220	20.8	2.5	
V	51	1	nogas	18.594	2.0	710442	3.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.483	8.0	41066	2.8	2.5	
Mn	55	1	nogas	0.065	81.9	17745	2.2	2.5	
Co	59	1	nogas	0.037	43.2	943	20.2	2.5	
Ni	60	1	nogas	-0.145	-14.0	1487	5.4	2.5	
Cu	63	1	nogas	0.794	9.1	6908	4.4	2	
Zn	66	1	nogas	-0.403	-3.3	873	4.8	2.5	
As	75	1	nogas	8.977	1.4	91886	3.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.876	9.3	17729	5.4	2.5	
Ag	107	1	nogas	0.043	25.7	443	19.4	2.5	
Cd	111	1	nogas	0.055	15.9	113	10.2	1	
Sb	121	1	nogas	1.040	31.1	9586	25.8	2.5	
Tl	205	1	nogas	0.377	57.3	5728	62.2	1	
Pb	208	1	nogas	0.056	43.8	1267	35.8	2.5	
U	238	1	nogas	0.142	55.2	2934	61.6	2.5	
[Pb]	206	1	nogas	0.046	39.8	297	37.1	2.5	
[Pb]	207	1	nogas	0.052	29.7	280	31.1	2.5	
Na	23	2	He	267.232	2.3	278992	1.7	100	CCB Main CR1 Failed
Mg	24	2	He	11.714	3.4	6695	3.8	100	
Al	27	2	He	-0.142	-100.5	570	8.0	5	
K	39	2	He	4.972	59.6	116778	1.4	100	
Ca	43	2	He	39.338	8.9	77	7.5	100	
Ca	44	2	He	29.631	10.0	1363	6.7	100	
V	51	2	He	1.347	2.2	8926	2.1	2.5	
Cr	52	2	He	0.009	589.1	2497	9.2	2.5	
Mn	55	2	He	0.128	27.9	1053	9.5	2.5	
Fe	56	2	He	4.507	4.8	25177	2.6	100	
Co	59	2	He	0.038	36.6	267	28.6	2.5	
Ni	60	2	He	0.050	46.2	163	18.7	2.5	
Cu	63	2	He	0.794	7.5	2487	7.8	2	
Zn	66	2	He	0.144	55.9	290	24.1	2.5	
As	75	2	He	0.152	38.0	329	14.8	2.5	
Se	78	2	He	0.402	85.9	154	14.5	2	
B	11	1	nogas	20.163	9.6	79704	4.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-186.240	-56.9	1449485	1.6	5	
Ca	43	1	nogas	40.209	14.9	1360	9.4	100	
Ca	44	1	nogas	36.124	20.5	30519	6.5	100	
Fe	56	1	nogas	28.497	51.8	2259096	6.4	100	
Se	77	1	nogas	61.734	3.3	29361	3.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.105	250.0	173	21.8	2	
Mo	95	1	nogas	0.422	69.5	1750	61.2	2.5	
Sn	118	1	nogas	0.368	29.9	2594	16.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.248	16.7	857	11.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.707	1.4	2877	1.7	2.5	
P	31	1	nogas	-3.823	-53.1	48178	0.7	10	
La	139	1	nogas	35.170	28.4	107	23.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	1653.903	19.9	3	173.2	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	1054977	3.13	1076309	98.02	70	125	
Ge	72	1	nogas	2386904	3.38	2371437	100.65	70	125	
In	115	1	nogas	2204706	5.70	2215793	99.50	70	125	
Bi	209	1	nogas	1782668	7.58	1799697	99.05	70	125	
Ge	72	2	He	625030	0.80	617557	101.21	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	258_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:51:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	96.912	2.910	758198	0.15	100	96.9	90	110	
Na	23	1	nogas	11203.633	4.045	332267816	1.47	10000	112.0	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	9987.686	3.170	182097292	0.58	10000	99.9	90	110	
Al	27	1	nogas	103.161	0.675	2246218	1.09	100	103.2	90	110	
K	39	1	nogas	10500.888	1.202	260250997	1.61	10000	105.0	90	110	
Ti	47	1	nogas	102.048	0.995	209380	1.03	100	102.0	90	110	
V	51	1	nogas	116.052	3.198	4044036	2.92	100	116.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.425	2.655	2547853	2.30	100	101.4	90	110	
Mn	55	1	nogas	100.008	0.929	3145712	0.56	100	100.0	90	110	
Co	59	1	nogas	104.656	1.442	2593287	1.31	100	104.7	90	110	
Ni	60	1	nogas	103.659	0.786	578700	0.95	100	103.7	90	110	
Cu	63	1	nogas	115.646	0.612	1518318	0.93	100	115.6	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	99.325	0.484	432968	0.93	100	99.3	90	110	
As	75	1	nogas	105.980	0.595	678017	0.41	100	106.0	90	110	
Sr	88	1	nogas	100.866	1.305	3434677	1.54	100	100.9	90	110	
Ag	107	1	nogas	98.473	1.269	1548018	1.69	100	98.5	90	110	
Cd	111	1	nogas	99.601	0.930	328259	0.44	100	99.6	90	110	
Sb	121	1	nogas	92.386	1.061	1412556	1.43	100	92.4	90	110	
Tl	205	1	nogas	101.173	5.848	2040892	2.03	100	101.2	90	110	
Pb	208	1	nogas	155.462	1.258	2857836	1.26	100	155.5	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	102.984	4.212	2877251	1.32	100	103.0	90	110	
[Pb]	206	1	nogas	101.707	6.740	700328	2.89	100	101.7	90	110	
[Pb]	207	1	nogas	101.787	4.086	621777	0.93	100	101.8	90	110	
Na	23	2	He	12263.844	0.626	19676278	0.95	10000	122.6	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10641.966	1.673	9272451	0.91	10000	106.4	90	110	
Al	27	2	He	106.379	2.034	52797	2.09	100	106.4	90	110	
K	39	2	He	19058.172	0.889	10810047	0.88	10000	190.6	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10948.347	2.418	29246	1.68	10000	109.5	90	110	
Ca	44	2	He	10925.395	1.003	488245	1.77	10000	109.3	90	110	
V	51	2	He	106.238	1.227	686111	0.59	100	106.2	90	110	
Cr	52	2	He	105.810	1.127	721146	0.35	100	105.8	90	110	
Mn	55	2	He	106.039	1.830	526941	1.31	100	106.0	90	110	
Fe	56	2	He	10521.604	1.583	62748067	1.11	10000	105.2	90	110	
Co	59	2	He	102.580	0.535	938310	0.28	100	102.6	90	110	
Ni	60	2	He	103.847	0.986	236720	0.31	100	103.8	90	110	
Cu	63	2	He	102.007	0.292	589001	1.07	100	102.0	90	110	
Zn	66	2	He	101.205	1.532	142085	2.24	100	101.2	90	110	
As	75	2	He	99.541	1.198	134027	0.51	100	99.5	90	110	
Se	78	2	He	106.687	1.885	11489	1.50	100	106.7	90	110	
B	11	1	nogas	518.371	2.452	2414196	1.94	500	103.7	90	110	
Si	28	1	nogas	4578.727	0.960	8186331	0.90	5000	91.6	90	110	
Ca	43	1	nogas	10390.810	0.927	444125	1.39	10000	103.9	90	110	
Ca	44	1	nogas	10438.769	1.614	7275853	2.03	10000	104.4	90	110	
Fe	56	1	nogas	9984.858	0.492	268994156	0.68	10000	99.8	90	110	
Se	77	1	nogas	160.992	1.197	75048	0.43	100	161.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.949	0.961	28653	1.10	100	100.9	90	110	
Mo	95	1	nogas	95.722	1.299	654932	0.85	100	95.7	90	110	
Sn	118	1	nogas	97.007	0.801	869428	0.63	100	97.0	90	110	
Ba	137	1	nogas	95.926	0.883	478743	1.55	100	95.9	90	110	
Sb	121	2	He	93.311	0.734	556709	0.28	100	93.3	90	110	
Li	7	1	nogas	97.527	1.578	2133818	1.81	100	97.5	90	110	
P	31	1	nogas	513.954	0.589	939479	0.93	500	102.8	90	110	
La	139	1	nogas	131.513	11.877	570	10.67	100	131.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	551.330	73.654	30	33.33	100	551.3	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	1648517	2.98	1076309	153.16	70	125	ISTD Failed
Ge	72	1	nogas	4178518	0.47	2371437	176.20	70	125	ISTD Failed
In	115	1	nogas	3757369	0.84	2215793	169.57	70	125	ISTD Failed
Bi	209	1	nogas	2550152	3.86	1799697	141.70	70	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1037757	0.77	617557	168.04	70	125	ISTD Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	259_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:53:47-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	0.050	23.1	620	12.2	1	
Na	23	1	nogas	1392.906	7.0	40625274	2.5	100	CCB Main CR1 Failed
Mg	24	1	nogas	10.385	33.5	199409	26.3	100	
Al	27	1	nogas	0.484	10.8	39692	1.2	5	
K	39	1	nogas	4.016	294.8	8334963	1.3	100	
Ti	47	1	nogas	0.252	17.9	677	9.5	2.5	
V	51	1	nogas	1.726	28.8	736761	4.3	2.5	
Cr	52	1	nogas	0.263	51.2	64461	1.3	2.5	
Mn	55	1	nogas	-0.109	-59.1	24850	4.5	2.5	
Co	59	1	nogas	0.059	47.1	2137	28.1	2.5	
Ni	60	1	nogas	1.225	5.6	9896	2.7	2.5	
Cu	63	1	nogas	8.971	0.9	115805	3.3	2	CCB Main CR1 Failed
Zn	66	1	nogas	-0.231	-22.6	2200	7.3	2.5	
As	75	1	nogas	0.146	608.1	110365	4.8	2.5	
Sr	88	1	nogas	1.272	25.5	42994	21.0	2.5	
Ag	107	1	nogas	0.093	12.3	1513	8.7	2.5	
Cd	111	1	nogas	0.060	10.7	210	4.8	1	
Sb	121	1	nogas	1.044	29.9	16352	24.7	2.5	
Tl	205	1	nogas	0.397	63.4	9087	63.1	1	
Pb	208	1	nogas	0.120	39.2	2443	35.5	2.5	
U	238	1	nogas	0.174	61.7	5385	63.0	2.5	
[Pb]	206	1	nogas	0.077	36.0	680	32.9	2.5	
[Pb]	207	1	nogas	0.069	28.3	540	26.1	2.5	
Na	23	2	He	1473.404	0.7	2412275	0.5	100	CCB Main CR1 Failed
Mg	24	2	He	8.091	2.8	8015	2.8	100	
Al	27	2	He	-0.229	-25.2	910	3.3	5	
K	39	2	He	139.906	2.3	192507	0.9	100	CCB Main CR1 Failed
Ca	43	2	He	40.021	16.4	130	13.3	100	
Ca	44	2	He	29.365	83.7	2265	48.4	100	
V	51	2	He	0.457	3.4	9187	0.9	2.5	
Cr	52	2	He	0.059	67.2	4517	5.7	2.5	
Mn	55	2	He	0.146	31.8	1850	12.7	2.5	
Fe	56	2	He	5.155	7.0	46007	5.0	100	
Co	59	2	He	0.032	11.4	390	8.9	2.5	
Ni	60	2	He	0.057	74.6	290	34.0	2.5	
Cu	63	2	He	0.467	2.9	2257	3.6	2	
Zn	66	2	He	0.301	19.5	707	11.4	2.5	
As	75	2	He	0.086	8.8	460	1.9	2.5	
Se	78	2	He	-0.445	-57.3	167	16.2	2	
B	11	1	nogas	13.477	15.9	99670	6.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-707.367	-17.8	1862426	4.1	5	
Ca	43	1	nogas	25.761	25.9	1710	13.2	100	
Ca	44	1	nogas	18.755	47.5	40110	11.2	100	
Fe	56	1	nogas	23.036	66.4	3696026	7.0	100	
Se	77	1	nogas	-0.262	-2289.2	35549	5.3	2.5	
Se	82	1	nogas	0.149	141.8	307	16.1	2	
Mo	95	1	nogas	0.475	59.9	3317	52.3	2.5	
Sn	118	1	nogas	0.439	34.8	5114	21.1	5	
Ba	137	1	nogas	0.087	33.4	667	16.0	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.673	4.7	4604	3.9	2.5	
P	31	1	nogas	12.623	26.1	108147	1.2	10	CCB Main CR1 Failed
La	139	1	nogas	23.882	43.4	137	25.7	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	623.132	115.2	30	57.7	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	1752630	3.45	1076309	162.84	70	125	ISTD Failed
Ge	72	1	nogas	4054894	3.62	2371437	170.99	70	125	ISTD Failed
In	115	1	nogas	3809054	5.39	2215793	171.90	70	125	ISTD Failed
Bi	209	1	nogas	2733314	2.65	1799697	151.88	70	125	ISTD Failed
Ge	72	2	He	1045261	0.33	617557	169.26	70	125	ISTD Failed

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	273CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:41:36-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	80	68.11
Na	23	1	nogas	3503207	0.00
Mg	24	1	nogas	32700	0.01
Al	27	1	nogas	26612	0.01
K	39	1	nogas	7232154	0.00
Ti	47	1	nogas	223	6.45
V	51	1	nogas	829457	0.00
Cr	52	1	nogas	67626	0.00
Mn	55	1	nogas	19984	0.02
Co	59	1	nogas	433	2.93
Ni	60	1	nogas	2590	0.64
Cu	63	1	nogas	5361	0.18
Zn	66	1	nogas	797	2.14
As	75	1	nogas	108295	0.01
Sr	88	1	nogas	2760	0.24
Ag	107	1	nogas	163	57.62
Cd	111	1	nogas	30	111.11
Sb	121	1	nogas	297	3.65
Tl	205	1	nogas	193	10.81
Pb	208	1	nogas	307	4.03
[Pb]	206	1	nogas	67	85.18
[Pb]	207	1	nogas	90	44.51
Na	23	2	He	218341	0.00
Mg	24	2	He	1790	0.36
Al	27	2	He	663	0.13
K	39	2	He	160463	0.00
Ca	43	2	He	23	212.09
Ca	44	2	He	633	1.90
V	51	2	He	9678	0.03
Cr	52	2	He	3734	0.18
Mn	55	2	He	903	2.83
Fe	56	2	He	13418	0.02
Co	59	2	He	60	55.56
Ni	60	2	He	197	20.74
Cu	63	2	He	957	0.63
Zn	66	2	He	253	7.20
As	75	2	He	352	3.09
Se	78	2	He	132	14.34
B	11	1	nogas	21769	0.01
Si	28	1	nogas	1568633	0.00
Ca	43	1	nogas	513	2.58
Ca	44	1	nogas	18856	0.01

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3475327	0.00
Se	77	1	nogas	34971	0.02
Se	82	1	nogas	143	15.65
Mo	95	1	nogas	137	26.95
Sn	118	1	nogas	997	0.50
Ba	137	1	nogas	227	13.67
Sb	121	2	He	107	13.43
Li	7	1	nogas	130242	0.00
P	31	1	nogas	83474	0.00
La	139	1	nogas	70	61.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1561049	5.63
Ge	72	1	nogas	3727881	2.52
In	115	1	nogas	3493076	5.41
Bi	209	1	nogas	2658885	3.77
Ge	72	2	He	913806	1.24

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	274CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:43:36-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	13188	0.01
Na	23	1	nogas	8367846	0.00
Mg	24	1	nogas	3219726	0.00
Al	27	1	nogas	69775	0.00
K	39	1	nogas	11662634	0.00
Ti	47	1	nogas	3764	0.17
V	51	1	nogas	882487	0.00
Cr	52	1	nogas	109999	0.00
Mn	55	1	nogas	78348	0.00
Co	59	1	nogas	46031	0.00
Ni	60	1	nogas	12968	0.04
Cu	63	1	nogas	29030	0.01
Zn	66	1	nogas	8792	0.03
As	75	1	nogas	115817	0.00
Sr	88	1	nogas	63362	0.00
Ag	107	1	nogas	28002	0.00
Cd	111	1	nogas	6008	0.06
Sb	121	1	nogas	26694	0.01
Tl	205	1	nogas	40741	0.00
Pb	208	1	nogas	57353	0.00
[Pb]	206	1	nogas	14263	0.02
[Pb]	207	1	nogas	13005	0.02
Na	23	2	He	509186	0.00
Mg	24	2	He	165176	0.00
Al	27	2	He	1700	0.68
K	39	2	He	335356	0.00
Ca	43	2	He	563	3.31
Ca	44	2	He	8562	0.01
V	51	2	He	20823	0.00
Cr	52	2	He	16341	0.01
Mn	55	2	He	9939	0.03
Fe	56	2	He	1124420	0.00
Co	59	2	He	16978	0.02
Ni	60	2	He	4401	0.04
Cu	63	2	He	11827	0.04
Zn	66	2	He	2890	0.19
As	75	2	He	2827	0.09
Se	78	2	He	365	1.50
B	11	1	nogas	58285	0.00
Si	28	1	nogas	1714786	0.00

Calibration Standard Report

Ca	43	1	nogas	8119	0.03
Ca	44	1	nogas	141974	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8253110	0.00
Se	77	1	nogas	35141	0.02
Se	82	1	nogas	640	0.88
Mo	95	1	nogas	11867	0.02
Sn	118	1	nogas	16558	0.03
Ba	137	1	nogas	8909	0.05
Sb	121	2	He	10690	0.00
P	31	1	nogas	101788	0.00
La	139	1	nogas	100	10.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1582673	1.88	1561049	101.39	70	125	
Ge	72	1	nogas	3727479	2.35	3727881	99.99	70	125	
In	115	1	nogas	3516345	2.40	3493076	100.67	70	125	
Bi	209	1	nogas	2651687	3.89	2658885	99.73	70	125	
Ge	72	2	He	928507	1.06	913806	101.61	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	275CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:45:38-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	33269	0.00
Na	23	1	nogas	15862125	0.00
Mg	24	1	nogas	7943948	0.00
Al	27	1	nogas	129398	0.00
K	39	1	nogas	17930375	0.00
Ti	47	1	nogas	9262	0.02
V	51	1	nogas	1043791	0.00
Cr	52	1	nogas	180350	0.00
Mn	55	1	nogas	163578	0.00
Co	59	1	nogas	113034	0.00
Ni	60	1	nogas	27421	0.01
Cu	63	1	nogas	65453	0.00
Zn	66	1	nogas	21573	0.01
As	75	1	nogas	139361	0.00
Sr	88	1	nogas	152059	0.00
Ag	107	1	nogas	69777	0.00
Cd	111	1	nogas	15210	0.01
Sb	121	1	nogas	65067	0.00
Tl	205	1	nogas	100589	0.00
Pb	208	1	nogas	141171	0.00
[Pb]	206	1	nogas	35021	0.01
[Pb]	207	1	nogas	30866	0.01
Na	23	2	He	937824	0.00
Mg	24	2	He	397782	0.00
Al	27	2	He	3064	0.17
K	39	2	He	589964	0.00
Ca	43	2	He	1193	0.81
Ca	44	2	He	21486	0.02
V	51	2	He	38250	0.00
Cr	52	2	He	35107	0.01
Mn	55	2	He	23859	0.01
Fe	56	2	He	2773819	0.00
Co	59	2	He	42546	0.01
Ni	60	2	He	10770	0.04
Cu	63	2	He	28362	0.00
Zn	66	2	He	6811	0.05
As	75	2	He	6419	0.04
Se	78	2	He	623	1.01
B	11	1	nogas	116224	0.00
Si	28	1	nogas	1835429	0.00

Calibration Standard Report

Ca	43	1	nogas	19020	0.02
Ca	44	1	nogas	323798	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	15227973	0.00
Se	77	1	nogas	38939	0.01
Se	82	1	nogas	1407	0.79
Mo	95	1	nogas	29762	0.01
Sn	118	1	nogas	41068	0.01
Ba	137	1	nogas	22548	0.01
Sb	121	2	He	26090	0.01
P	31	1	nogas	124076	0.00
La	139	1	nogas	167	9.06

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1473575	7.00	1561049	94.40	70	125	
Ge	72	1	nogas	3518478	7.09	3727881	94.38	70	125	
In	115	1	nogas	3243734	9.22	3493076	92.86	70	125	
Bi	209	1	nogas	2415811	5.90	2658885	90.86	70	125	
Ge	72	2	He	907154	0.74	913806	99.27	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	276CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:47:39-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	62167	0.01
Na	23	1	nogas	27174076	0.00
Mg	24	1	nogas	14930068	0.00
Al	27	1	nogas	212889	0.00
K	39	1	nogas	27686544	0.00
Ti	47	1	nogas	17288	0.02
V	51	1	nogas	1130461	0.00
Cr	52	1	nogas	273819	0.00
Mn	55	1	nogas	287871	0.00
Co	59	1	nogas	216018	0.00
Ni	60	1	nogas	49974	0.00
Cu	63	1	nogas	117459	0.00
Zn	66	1	nogas	39222	0.01
As	75	1	nogas	163780	0.00
Sr	88	1	nogas	289433	0.00
Ag	107	1	nogas	135810	0.00
Cd	111	1	nogas	28583	0.01
Sb	121	1	nogas	126611	0.00
Tl	205	1	nogas	190016	0.00
Pb	208	1	nogas	267837	0.00
[Pb]	206	1	nogas	67342	0.00
[Pb]	207	1	nogas	58752	0.00
Na	23	2	He	1606899	0.00
Mg	24	2	He	745386	0.00
Al	27	2	He	5091	0.19
K	39	2	He	980335	0.00
Ca	43	2	He	2254	0.27
Ca	44	2	He	39505	0.01
V	51	2	He	63553	0.00
Cr	52	2	He	62579	0.00
Mn	55	2	He	44825	0.00
Fe	56	2	He	5235605	0.00
Co	59	2	He	79517	0.00
Ni	60	2	He	19954	0.02
Cu	63	2	He	50693	0.00
Zn	66	2	He	12745	0.01
As	75	2	He	11881	0.02
Se	78	2	He	1085	0.15
B	11	1	nogas	204538	0.00
Si	28	1	nogas	2094473	0.00

Calibration Standard Report

Ca	43	1	nogas	37401	0.01
Ca	44	1	nogas	595725	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	25667365	0.00
Se	77	1	nogas	40462	0.01
Se	82	1	nogas	2717	0.20
Mo	95	1	nogas	55215	0.01
Sn	118	1	nogas	78315	0.01
Ba	137	1	nogas	41774	0.01
Sb	121	2	He	48668	0.00
P	31	1	nogas	160302	0.00
La	139	1	nogas	197	1.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1501518	1.70	1561049	96.19	70	125	
Ge	72	1	nogas	3574184	3.16	3727881	95.88	70	125	
In	115	1	nogas	3317167	6.32	3493076	94.96	70	125	
Bi	209	1	nogas	2589501	5.92	2658885	97.39	70	125	
Ge	72	2	He	907297	1.14	913806	99.29	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	277CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:49:40-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	631856	0.00
Na	23	1	nogas	239433022	0.00
Mg	24	1	nogas	147522953	0.00
Al	27	1	nogas	1786075	0.00
K	39	1	nogas	208873788	0.00
Ti	47	1	nogas	175033	0.00
V	51	1	nogas	3191693	0.00
Cr	52	1	nogas	2138475	0.00
Mn	55	1	nogas	2660857	0.00
Co	59	1	nogas	2172840	0.00
Ni	60	1	nogas	478361	0.00
Cu	63	1	nogas	1115155	0.00
Zn	66	1	nogas	374583	0.00
As	75	1	nogas	558383	0.00
Sr	88	1	nogas	2904730	0.00
Ag	107	1	nogas	1355345	0.00
Cd	111	1	nogas	289803	0.00
Sb	121	1	nogas	1299039	0.00
Tl	205	1	nogas	1979502	0.00
Pb	208	1	nogas	2750600	0.00
[Pb]	206	1	nogas	675581	0.00
[Pb]	207	1	nogas	599928	0.00
Na	23	2	He	13872806	0.00
Mg	24	2	He	7360312	0.00
Al	27	2	He	42612	0.01
K	39	2	He	8477277	0.00
Ca	43	2	He	23074	0.01
Ca	44	2	He	384381	0.00
V	51	2	He	552862	0.00
Cr	52	2	He	596239	0.00
Mn	55	2	He	432694	0.00
Fe	56	2	He	52494761	0.00
Co	59	2	He	798769	0.00
Ni	60	2	He	198409	0.00
Cu	63	2	He	496766	0.00
Zn	66	2	He	120094	0.00
As	75	2	He	117549	0.00
Se	78	2	He	9706	0.02
B	11	1	nogas	1930705	0.00
Si	28	1	nogas	6601084	0.00

Calibration Standard Report

Ca	43	1	nogas	363320	0.00
Ca	44	1	nogas	5925873	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	228862805	0.00
Se	77	1	nogas	55030	0.00
Se	82	1	nogas	25268	0.01
Mo	95	1	nogas	571472	0.00
Sn	118	1	nogas	787914	0.00
Ba	137	1	nogas	424775	0.00
Sb	121	2	He	501163	0.00
P	31	1	nogas	773304	0.00
La	139	1	nogas	543	1.19

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1408609	4.13	1561049	90.23	70	125	
Ge	72	1	nogas	3438831	4.52	3727881	92.25	70	125	
In	115	1	nogas	3137443	8.92	3493076	89.82	70	125	
Bi	209	1	nogas	2396303	7.22	2658885	90.12	70	125	
Ge	72	2	He	881145	0.36	913806	96.43	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	278CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:51:37-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1237472	0.00
Na	23	1	nogas	455973760	0.00
Mg	24	1	nogas	280848173	0.00
Al	27	1	nogas	3358568	0.00
K	39	1	nogas	395774276	0.00
Ti	47	1	nogas	335653	0.00
V	51	1	nogas	5347264	0.00
Cr	52	1	nogas	4017181	0.00
Mn	55	1	nogas	5118571	0.00
Co	59	1	nogas	4146868	0.00
Ni	60	1	nogas	911285	0.00
Cu	63	1	nogas	2131901	0.00
Zn	66	1	nogas	716838	0.00
As	75	1	nogas	989618	0.00
Sr	88	1	nogas	5646506	0.00
Ag	107	1	nogas	2601708	0.00
Cd	111	1	nogas	577563	0.00
Sb	121	1	nogas	2570603	0.00
Tl	205	1	nogas	3861400	0.00
Pb	208	1	nogas	5518583	0.00
[Pb]	206	1	nogas	1369804	0.00
[Pb]	207	1	nogas	1224343	0.00
Na	23	2	He	26489877	0.00
Mg	24	2	He	14135848	0.00
Al	27	2	He	80446	0.00
K	39	2	He	16075609	0.00
Ca	43	2	He	44490	0.01
Ca	44	2	He	749029	0.00
V	51	2	He	1079524	0.00
Cr	52	2	He	1152917	0.00
Mn	55	2	He	847983	0.00
Fe	56	2	He	102232328	0.00
Co	59	2	He	1577889	0.00
Ni	60	2	He	388083	0.00
Cu	63	2	He	975789	0.00
Zn	66	2	He	239370	0.00
As	75	2	He	230899	0.00
Se	78	2	He	19292	0.00
B	11	1	nogas	3711452	0.00
Si	28	1	nogas	11236244	0.00

Calibration Standard Report

Ca	43	1	nogas	696633	0.00
Ca	44	1	nogas	11382074	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	446697410	0.00
Se	77	1	nogas	72943	0.00
Se	82	1	nogas	49822	0.00
Mo	95	1	nogas	1135330	0.00
Sn	118	1	nogas	1583321	0.00
Ba	137	1	nogas	858584	0.00
Sb	121	2	He	1013013	0.00
P	31	1	nogas	1427175	0.00
La	139	1	nogas	707	1.16

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1316098	1.98	1561049	84.31	70	125	
Ge	72	1	nogas	3430382	0.84	3727881	92.02	70	125	
In	115	1	nogas	3282583	2.07	3493076	93.97	70	125	
Bi	209	1	nogas	2529566	3.09	2658885	95.14	70	125	
Ge	72	2	He	877109	0.59	913806	95.98	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	281LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:57:33-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	4.593	5.639	31656	1.73	5	91.9	70	130	
Na	23	1	nogas	588.909	21.384	16002607	2.02	500	117.8	70	130	
Mg	24	1	nogas	560.621	17.279	7637157	1.99	500	112.1	70	130	
Al	27	1	nogas	5.969	11.318	124850	0.31	5	119.4	70	130	
K	39	1	nogas	534.233	16.283	17080017	0.52	500	106.8	70	130	
Ti	47	1	nogas	5.250	13.524	9039	3.72	5	105.0	70	130	
V	51	1	nogas	-7.366	-18.201	592108	3.97	5	-147.3	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.682	17.481	155221	1.75	5	93.6	70	130	
Mn	55	1	nogas	5.529	10.898	159950	1.41	5	110.6	70	130	
Co	59	1	nogas	5.490	8.544	115059	0.86	5	109.8	70	130	
Ni	60	1	nogas	4.820	8.980	26890	2.92	5	96.4	70	130	
Cu	63	1	nogas	5.507	10.722	63824	1.52	5	110.1	70	130	
Zn	66	1	nogas	5.117	9.909	21416	0.88	5	102.3	70	130	
As	75	1	nogas	-2.136	-52.986	97414	4.93	5	-42.7	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.495	10.712	157927	1.82	5	109.9	70	130	
Ag	107	1	nogas	5.517	10.334	72291	2.61	5	110.3	70	130	
Cd	111	1	nogas	5.391	13.920	15607	3.93	5	107.8	70	130	
Sb	121	1	nogas	5.514	9.768	71061	0.68	5	110.3	70	130	
Tl	205	1	nogas	5.846	4.799	115959	1.08	5	116.9	70	130	
Pb	208	1	nogas	5.474	1.350	151225	1.35	5	109.5	70	130	
U	238	1	nogas	5.595	7.327	153163	2.24	5	111.9	70	130	
[Pb]	206	1	nogas	5.393	3.987	37664	2.65	5	107.9	70	130	
[Pb]	207	1	nogas	5.327	6.300	33221	1.24	5	106.5	70	130	
Na	23	2	He	525.866	0.408	937742	0.27	500	105.2	70	130	
Mg	24	2	He	521.771	1.034	386451	0.47	500	104.4	70	130	
Al	27	2	He	31.456	144.728	14022	133.80	5	629.1	70	130	LLICV Main CR1 Failed
K	39	2	He	500.342	1.392	562242	0.99	500	100.1	70	130	
Ca	43	2	He	587.188	38.756	1384	38.12	500	117.4	70	130	
Ca	44	2	He	526.497	2.116	21119	1.49	500	105.3	70	130	
V	51	2	He	4.215	1.456	33403	0.83	5	84.3	70	130	
Cr	52	2	He	5.183	1.524	34726	1.42	5	103.7	70	130	
Mn	55	2	He	5.202	2.649	23785	2.12	5	104.0	70	130	
Fe	56	2	He	531.478	2.210	2839251	2.74	500	106.3	70	130	
Co	59	2	He	5.110	1.167	41874	1.49	5	102.2	70	130	
Ni	60	2	He	5.001	3.209	10667	3.22	5	100.0	70	130	
Cu	63	2	He	5.223	2.043	28436	1.35	5	104.5	70	130	
Zn	66	2	He	5.503	3.255	7178	2.61	5	110.1	70	130	
As	75	2	He	4.857	2.279	6162	1.99	5	97.1	70	130	
Se	78	2	He	4.886	4.870	609	4.38	5	97.7	70	130	
B	11	1	nogas	29.483	8.770	141844	3.62	25	117.9	70	130	
Si	28	1	nogas	277.949	63.890	1713972	2.86	25	1111.8	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	528.532	9.293	18983	3.10	500	105.7	70	130	
Ca	44	1	nogas	530.549	10.567	320237	0.98	500	106.1	70	130	
Fe	56	1	nogas	505.403	12.033	14406738	0.04	500	101.1	70	130	
Se	77	1	nogas	-30.002	-22.007	25852	4.26	5	-600.0	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.942	7.134	1610	2.85	5	118.8	70	130	
Mo	95	1	nogas	5.698	14.180	32323	4.52	5	114.0	70	130	
Sn	118	1	nogas	5.694	17.084	45800	2.99	5	113.9	70	130	
Ba	137	1	nogas	5.432	14.704	23453	1.31	5	108.6	70	130	
Sb	121	2	He	5.446	0.734	28580	0.19	5	108.9	70	130	
Li	7	1	nogas	5.450	1.517	219392	3.40	5	109.0	70	130	
P	31	1	nogas	34.042	22.254	122852	1.39	25	136.2	70	130	LLICV Main CR1 Failed
La	139	1	nogas	19.752	77.596	133	30.31	5	395.0	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	197.938	75.021	23	65.47	5	3958.8	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	1477505	3.82	1561049	94.65	70	125	
Ge	72	1	nogas	3440609	8.95	3727881	92.29	70	125	
In	115	1	nogas	3287638	13.31	3493076	94.12	70	125	
Bi	209	1	nogas	2554112	5.04	2658885	96.06	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	908361	0.56	913806	99.40	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	282SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:59:33-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	273CALB.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	1.882	1.882	10.13	12834	0.01	2000	
Na	23	1	nogas	258.532	258.532	27.33	8771618	0.00	200000	
Mg	24	1	nogas	228.919	228.919	15.40	3137817	0.01	200000	
Al	27	1	nogas	2.667	2.667	21.40	69437	0.00	2000	
K	39	1	nogas	212.741	212.741	27.05	10846974	0.00	200000	
Ti	47	1	nogas	2.180	2.180	15.35	3887	0.06	2000	
V	51	1	nogas	-12.253	-12.253	-19.63	479266	0.00	2000	
Cr	52	1	nogas	1.360	1.360	35.91	89524	0.00	2000	
Mn	55	1	nogas	2.241	2.241	14.42	76072	0.00	2000	
Co	59	1	nogas	2.215	2.215	10.02	46880	0.00	2000	
Ni	60	1	nogas	1.375	1.375	20.16	11187	0.01	2000	
Cu	63	1	nogas	2.130	2.130	14.33	27805	0.01	2000	
Zn	66	1	nogas	1.688	1.688	15.59	9146	0.02	2000	
As	75	1	nogas	-6.690	-6.690	-19.36	77510	-0.01	2000	
Sr	88	1	nogas	2.179	2.179	11.70	64445	0.00	2000	
Ag	107	1	nogas	2.288	2.288	12.56	30176	0.01	2000	
Cd	111	1	nogas	2.243	2.243	15.45	6491	0.03	2000	
Sb	121	1	nogas	2.241	2.241	12.48	29148	0.01	2000	
Tl	205	1	nogas	2.203	2.203	10.20	44882	0.00	2000	
Pb	208	1	nogas	2.262	2.262	1.21	62682	0.00	2000	
U	238	1	nogas	2.225	2.225	6.53	62621	0.00	2000	
[Pb]	206	1	nogas	2.157	2.157	8.58	15484	0.01	2000	
[Pb]	207	1	nogas	2.105	2.105	6.26	13539	0.02	2000	
Na	23	2	He	205.074	205.074	1.31	515054	0.04	200000	
Mg	24	2	He	207.710	207.710	2.17	160189	0.13	200000	
Al	27	2	He	1.366	1.366	3.37	1657	0.08	2000	
K	39	2	He	191.097	191.097	1.28	313916	0.06	200000	
Ca	43	2	He	221.062	221.062	22.37	553	39.95	200000	
Ca	44	2	He	204.611	204.611	1.29	8886	2.30	200000	
V	51	2	He	1.074	1.074	3.54	16510	0.01	2000	
Cr	52	2	He	2.033	2.033	2.17	16417	0.01	2000	
Mn	55	2	He	2.044	2.044	3.16	10230	0.02	2000	
Fe	56	2	He	203.162	203.162	2.15	1130652	0.02	200000	
Co	59	2	He	2.039	2.039	3.83	17312	0.01	2000	
Ni	60	2	He	1.935	1.935	2.04	4647	0.04	2000	
Cu	63	2	He	1.934	1.934	1.97	12214	0.02	2000	
Zn	66	2	He	1.920	1.920	3.60	2840	0.07	2000	
As	75	2	He	1.807	1.807	1.35	2598	0.07	2000	
Se	78	2	He	2.065	2.065	2.38	340	0.61	2000	
B	11	1	nogas	12.141	12.141	6.81	69742	0.02	2000	
Si	28	1	nogas	5.162	5.162	3419.13	1450520	0.00	2000	
Ca	43	1	nogas	216.542	216.542	12.83	8082	2.68	200000	

Sample Report

Ca	44	1	nogas	210.579	210.579	14.08	138021	0.15	200000	
Fe	56	1	nogas	190.571	190.571	18.70	7451503	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-46.033	-46.033	-20.60	22558	-0.20	2000	
Se	82	1	nogas	2.019	2.019	18.14	637	0.32	2000	
Mo	95	1	nogas	2.166	2.166	10.69	12455	0.02	2000	
Sn	118	1	nogas	2.252	2.252	19.64	18593	0.01	2000	
Ba	137	1	nogas	2.177	2.177	14.40	9503	0.02	2000	
Sb	121	2	He	2.112	2.112	3.92	11527	0.02	2000	
La	139	1	nogas	19.507	19.507	17.92	137	14.27	2000	
Au	197	1	nogas	200.745	200.745	84.02	23	860.34	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	1460618	6.02	1561049	93.57	70	125	
Ge	72	1	nogas	3461736	10.52	3727881	92.86	70	125	
In	115	1	nogas	3284379	14.77	3493076	94.03	70	125	
Bi	209	1	nogas	2626794	7.81	2658885	98.79	70	125	
Ge	72	2	He	939238	0.29	913806	102.78	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	283_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:01:33-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	96.854	7.249	625960	1.56	100	96.9	90	110	
Na	23	1	nogas	10714.423	15.789	238664672	1.75	10000	107.1	90	110	
Mg	24	1	nogas	10781.353	14.927	147319482	1.14	10000	107.8	90	110	
Al	27	1	nogas	105.321	10.068	1802466	1.04	100	105.3	90	110	
K	39	1	nogas	10303.558	9.996	208917263	0.82	10000	103.0	90	110	
Ti	47	1	nogas	104.672	9.936	177414	1.03	100	104.7	90	110	
V	51	1	nogas	96.157	13.594	2998969	1.26	100	96.2	90	110	
Cr	52	1	nogas	106.621	8.969	2195423	1.49	100	106.6	90	110	
Mn	55	1	nogas	108.495	9.996	2807877	1.05	100	108.5	90	110	
Co	59	1	nogas	105.324	10.282	2206815	1.67	100	105.3	90	110	
Ni	60	1	nogas	105.632	10.425	488213	1.40	100	105.6	90	110	
Cu	63	1	nogas	107.142	11.473	1154600	2.46	100	107.1	90	110	
Zn	66	1	nogas	107.171	9.059	389208	0.20	100	107.2	90	110	
As	75	1	nogas	97.308	11.165	539271	0.18	100	97.3	90	110	
Sr	88	1	nogas	106.925	8.026	3043343	2.39	100	106.9	90	110	
Ag	107	1	nogas	111.226	8.605	1461609	0.72	100	111.2	90	110	ICV Main CR1 Failed
Cd	111	1	nogas	108.762	12.607	317708	0.78	100	108.8	90	110	
Sb	121	1	nogas	106.311	8.409	1371713	1.32	100	106.3	90	110	
Tl	205	1	nogas	110.635	7.941	2134125	1.24	100	110.6	90	110	ICV Main CR1 Failed
Pb	208	1	nogas	109.824	0.436	3028431	0.44	100	109.8	90	110	
U	238	1	nogas	115.723	9.936	3084104	2.11	100	115.7	90	110	ICV Main CR1 Failed
[Pb]	206	1	nogas	109.286	8.474	741577	0.96	100	109.3	90	110	
[Pb]	207	1	nogas	108.686	8.788	658576	0.41	100	108.7	90	110	
Na	23	2	He	9992.799	1.427	13981433	1.15	10000	99.9	90	110	
Mg	24	2	He	10110.626	0.501	7493572	0.26	10000	101.1	90	110	
Al	27	2	He	100.871	1.673	43099	1.87	100	100.9	90	110	
K	39	2	He	10415.551	1.023	8524250	1.00	10000	104.2	90	110	
Ca	43	2	He	9852.670	2.829	22968	2.65	10000	98.5	90	110	
Ca	44	2	He	10109.023	0.320	396048	0.82	10000	101.1	90	110	
V	51	2	He	100.233	0.490	569327	0.95	100	100.2	90	110	
Cr	52	2	He	101.382	1.123	613401	0.96	100	101.4	90	110	
Mn	55	2	He	100.731	0.518	446323	0.26	100	100.7	90	110	
Fe	56	2	He	10173.218	1.439	54373076	1.34	10000	101.7	90	110	
Co	59	2	He	101.125	0.880	831745	1.16	100	101.1	90	110	
Ni	60	2	He	102.972	0.092	208934	0.45	100	103.0	90	110	
Cu	63	2	He	103.245	1.080	526496	1.39	100	103.2	90	110	
Zn	66	2	He	100.751	0.865	125636	1.37	100	100.8	90	110	
As	75	2	He	99.311	0.393	119798	0.75	100	99.3	90	110	
Se	78	2	He	98.697	1.755	9963	1.22	100	98.7	90	110	
B	11	1	nogas	495.260	5.611	1935632	1.89	500	99.1	90	110	
Si	28	1	nogas	5083.411	12.607	6483909	0.96	5000	101.7	90	110	
Ca	43	1	nogas	10494.668	10.152	369183	1.58	10000	104.9	90	110	
Ca	44	1	nogas	10306.491	10.013	5925717	1.11	10000	103.1	90	110	
Fe	56	1	nogas	10607.792	11.415	239294605	2.33	10000	106.1	90	110	
Se	77	1	nogas	71.035	23.150	47208	2.05	100	71.0	90	110	ICV Main CR1 Failed
Se	82	1	nogas	104.936	9.418	26299	1.68	100	104.9	90	110	
Mo	95	1	nogas	106.333	9.216	605231	1.10	100	106.3	90	110	
Sn	118	1	nogas	105.794	12.659	845879	0.72	100	105.8	90	110	
Ba	137	1	nogas	105.983	13.224	458658	1.08	100	106.0	90	110	
Sb	121	2	He	101.124	0.888	531479	0.49	100	101.1	90	110	
Li	7	1	nogas	100.239	6.135	1774169	0.16	100	100.2	90	110	
P	31	1	nogas	504.214	10.443	763214	0.54	500	100.8	90	110	
La	139	1	nogas	141.711	16.958	587	23.27	100	141.7	90	110	ICV Main CR1 Failed
Au	197	1	nogas	217.861	104.359	23	89.21	100	217.9	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	1390517	5.50	1561049	89.08	70	125	
Ge	72	1	nogas	3453248	8.42	3727881	92.63	70	125	
In	115	1	nogas	3314089	11.37	3493076	94.88	70	125	
Bi	209	1	nogas	2495691	8.97	2658885	93.86	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	912949	0.52	913806	99.91	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	284_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:03:31-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.065	58.6	497	43.4	1	
Na	23	1	nogas	20.311	161.9	3538294	6.4	100	
Mg	24	1	nogas	4.233	43.1	85139	14.6	100	
Al	27	1	nogas	0.627	36.9	34441	1.6	5	
K	39	1	nogas	4.216	847.4	6621017	1.8	100	
Ti	47	1	nogas	0.088	7.5	350	9.9	2.5	
V	51	1	nogas	-12.381	-10.5	468649	4.0	2.5	
Cr	52	1	nogas	-0.649	-35.0	48453	1.4	2.5	
Mn	55	1	nogas	0.111	85.6	20855	2.1	2.5	
Co	59	1	nogas	0.039	45.6	1180	20.0	2.5	
Ni	60	1	nogas	-0.718	-1.3	1590	11.0	2.5	
Cu	63	1	nogas	-0.045	-130.3	4361	4.2	1	
Zn	66	1	nogas	-0.268	-30.7	2050	8.1	2.5	
As	75	1	nogas	-7.096	-18.2	74220	3.2	2.5	
Sr	88	1	nogas	0.052	45.5	3914	6.2	2.5	
Ag	107	1	nogas	0.034	18.6	607	5.3	2.5	
Cd	111	1	nogas	0.029	109.7	107	69.1	1	
Sb	121	1	nogas	0.994	29.8	12675	18.8	2.5	
Tl	205	1	nogas	0.364	64.3	7329	55.5	1	
Pb	208	1	nogas	0.059	29.3	1943	24.7	2.5	
U	238	1	nogas	0.126	47.6	3514	39.1	2.5	
[Pb]	206	1	nogas	0.050	31.6	413	19.4	2.5	
[Pb]	207	1	nogas	0.056	30.2	437	16.6	2.5	
Na	23	2	He	-7.911	-12.0	210036	0.5	100	
Mg	24	2	He	2.504	18.6	3694	9.6	100	
Al	27	2	He	-0.389	-96.0	890	17.6	5	
K	39	2	He	-17.844	-17.5	146134	1.7	100	
Ca	43	2	He	14.015	114.3	57	66.8	100	
Ca	44	2	He	6.765	25.5	910	7.7	100	
V	51	2	He	-0.808	-3.4	5619	2.8	2.5	
Cr	52	2	He	-0.003	-500.6	3760	2.3	2.5	
Mn	55	2	He	0.148	15.9	1580	6.7	2.5	
Fe	56	2	He	3.762	8.2	33957	5.1	100	
Co	59	2	He	0.037	31.0	367	25.8	2.5	
Ni	60	2	He	-0.143	-43.4	317	40.0	2.5	
Cu	63	2	He	-0.125	-7.4	1433	3.2	1	
Zn	66	2	He	0.215	15.7	650	6.7	2.5	
As	75	2	He	-0.037	-100.1	311	14.6	2.5	
Se	78	2	He	0.129	45.3	139	4.4	1	
B	11	1	nogas	6.388	26.8	45350	9.1	10	
Si	28	1	nogas	-44.923	-342.1	1374457	1.6	5	
Ca	43	1	nogas	11.876	37.1	870	8.0	100	
Ca	44	1	nogas	8.366	58.8	21730	2.3	100	
Fe	56	1	nogas	-18.584	-94.5	2730232	3.6	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-36.831	-26.0	24026	2.5	2.5	
Se	82	1	nogas	0.229	19.4	187	8.2	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.331	50.3	1927	36.4	2.5	
Sn	118	1	nogas	0.344	30.0	3630	8.4	5	
Ba	137	1	nogas	0.057	73.8	443	25.2	2.5	
Sb	121	2	He	0.799	3.9	4364	3.8	2.5	
P	31	1	nogas	8.560	86.7	86845	1.1	10	
La	139	1	nogas	32.961	31.0	183	16.7	2.5	ICB Main CR1 Failed
Au	197	1	nogas	66.702	11.0	10	0.0	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	1434353	5.88	1561049	91.88	70	125	
Ge	72	1	nogas	3393392	10.00	3727881	91.03	70	125	
In	115	1	nogas	3298862	13.78	3493076	94.44	70	125	
Bi	209	1	nogas	2605275	7.52	2658885	97.98	70	125	
Ge	72	2	He	925073	0.18	913806	101.23	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	290_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:17:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	92.004	2.856	619250	1.27	100	92.0	90	110	
Na	23	1	nogas	9798.859	4.270	239569389	0.42	10000	98.0	90	110	
Mg	24	1	nogas	9787.426	4.197	146527345	0.43	10000	97.9	90	110	
Al	27	1	nogas	99.845	1.027	1824954	1.20	100	99.8	90	110	
K	39	1	nogas	9756.231	0.432	211457096	0.20	10000	97.6	90	110	
Ti	47	1	nogas	95.943	0.744	173562	0.61	100	95.9	90	110	
V	51	1	nogas	87.840	0.368	2994486	0.26	100	87.8	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	97.675	0.777	2150347	0.95	100	97.7	90	110	
Mn	55	1	nogas	99.940	1.007	2761858	1.27	100	99.9	90	110	
Co	59	1	nogas	98.526	1.888	2203422	1.62	100	98.5	90	110	
Ni	60	1	nogas	98.199	0.242	484824	0.07	100	98.2	90	110	
Cu	63	1	nogas	99.701	0.697	1147948	0.96	100	99.7	90	110	
Zn	66	1	nogas	99.772	0.681	386698	0.44	100	99.8	90	110	
As	75	1	nogas	90.100	0.664	541039	0.67	100	90.1	90	110	
Sr	88	1	nogas	99.412	1.883	3016234	2.15	100	99.4	90	110	
Ag	107	1	nogas	99.919	0.744	1445304	0.87	100	99.9	90	110	
Cd	111	1	nogas	97.876	0.830	309507	1.55	100	97.9	90	110	
Sb	121	1	nogas	99.423	2.354	1367860	2.60	100	99.4	90	110	
Tl	205	1	nogas	95.707	1.610	2150890	1.79	100	95.7	90	110	
Pb	208	1	nogas	107.575	0.984	2966418	0.98	100	107.6	90	110	
U	238	1	nogas	105.111	3.469	3066942	3.64	100	105.1	90	110	
[Pb]	206	1	nogas	97.667	0.267	725053	0.28	100	97.7	90	110	
[Pb]	207	1	nogas	97.507	1.140	646531	1.34	100	97.5	90	110	
Na	23	2	He	10088.871	0.576	14121248	0.49	10000	100.9	90	110	
Mg	24	2	He	10215.256	0.494	7575356	1.25	10000	102.2	90	110	
Al	27	2	He	99.787	1.808	42665	0.93	100	99.8	90	110	
K	39	2	He	10482.512	1.770	8578021	1.74	10000	104.8	90	110	
Ca	43	2	He	10207.467	1.167	23809	1.96	10000	102.1	90	110	
Ca	44	2	He	10105.743	0.874	396126	1.29	10000	101.1	90	110	
V	51	2	He	101.079	0.765	574325	0.55	100	101.1	90	110	
Cr	52	2	He	103.177	0.955	624506	0.20	100	103.2	90	110	
Mn	55	2	He	102.869	1.038	455999	0.55	100	102.9	90	110	
Fe	56	2	He	10337.206	1.303	55278294	1.34	10000	103.4	90	110	
Co	59	2	He	102.144	2.143	840453	1.23	100	102.1	90	110	
Ni	60	2	He	103.994	1.737	211091	0.79	100	104.0	90	110	
Cu	63	2	He	104.005	0.360	530621	0.73	100	104.0	90	110	
Zn	66	2	He	102.921	0.513	128395	0.66	100	102.9	90	110	
As	75	2	He	100.631	0.989	121443	0.20	100	100.6	90	110	
Se	78	2	He	100.397	2.624	10137	1.93	100	100.4	90	110	
B	11	1	nogas	484.349	2.229	1970514	0.59	500	96.9	90	110	
Si	28	1	nogas	4667.669	0.138	6479301	0.16	5000	93.4	90	110	
Ca	43	1	nogas	9745.450	0.949	365936	1.18	10000	97.5	90	110	
Ca	44	1	nogas	9783.323	0.805	6004049	1.03	10000	97.8	90	110	
Fe	56	1	nogas	9827.455	1.269	237016072	1.27	10000	98.3	90	110	
Se	77	1	nogas	59.216	9.587	47649	2.59	100	59.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.916	0.200	25922	0.47	100	96.9	90	110	
Mo	95	1	nogas	98.916	1.331	600605	1.59	100	98.9	90	110	
Sn	118	1	nogas	95.845	1.081	829645	0.53	100	95.8	90	110	
Ba	137	1	nogas	97.702	2.249	457872	1.11	100	97.7	90	110	
Sb	121	2	He	103.185	1.655	542558	0.81	100	103.2	90	110	
Li	7	1	nogas	97.789	1.053	1804903	1.44	100	97.8	90	110	
P	31	1	nogas	466.081	0.828	758883	1.01	500	93.2	90	110	
La	139	1	nogas	124.512	12.767	557	9.89	100	124.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	278.513	19.022	33	17.32	100	278.5	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	1444770	1.97	1561049	92.55	70	125	
Ge	72	1	nogas	3664722	0.27	3727881	98.31	70	125	
In	115	1	nogas	3553395	1.32	3493076	101.73	70	125	
Bi	209	1	nogas	2716523	0.22	2658885	102.17	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	913436	0.97	913806	99.96	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	291_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:19:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.088	21.0	717	14.0	1	
Na	23	1	nogas	-31.199	-39.6	2708905	4.5	100	
Mg	24	1	nogas	5.514	26.7	114528	13.0	100	
Al	27	1	nogas	0.414	33.4	33623	3.0	5	
K	39	1	nogas	-15.571	-152.4	6785357	2.8	100	
Ti	47	1	nogas	0.116	61.2	427	26.7	2.5	
V	51	1	nogas	-14.994	-5.6	443789	1.6	2.5	
Cr	52	1	nogas	-0.860	-5.6	48206	2.6	2.5	
Mn	55	1	nogas	0.010	722.5	19908	5.6	2.5	
Co	59	1	nogas	0.064	26.1	1853	16.5	2.5	
Ni	60	1	nogas	-0.731	-3.0	1657	7.5	2.5	
Cu	63	1	nogas	-0.044	-125.6	4751	8.8	2	
Zn	66	1	nogas	-0.409	-16.2	1687	11.7	2.5	
As	75	1	nogas	-9.560	-5.5	68986	3.8	2.5	
Sr	88	1	nogas	0.074	20.6	4967	9.5	2.5	
Ag	107	1	nogas	0.051	37.0	900	25.2	2.5	
Cd	111	1	nogas	0.055	26.1	210	21.8	1	
Sb	121	1	nogas	0.850	21.8	11938	16.5	2.5	
Tl	205	1	nogas	0.350	45.4	7996	38.1	1	
Pb	208	1	nogas	0.076	28.7	2390	25.0	2.5	
U	238	1	nogas	0.137	34.5	4061	27.5	2.5	
[Pb]	206	1	nogas	0.070	39.8	590	29.4	2.5	
[Pb]	207	1	nogas	0.066	44.1	527	30.4	2.5	
Na	23	2	He	-42.342	-5.9	164347	1.7	100	
Mg	24	2	He	4.120	8.7	4977	4.9	100	
Al	27	2	He	-0.389	-26.7	903	5.2	5	
K	39	2	He	-16.721	-14.4	147036	1.3	100	
Ca	43	2	He	20.591	81.2	73	55.1	100	
Ca	44	2	He	8.419	24.5	990	8.8	100	
V	51	2	He	-0.826	-3.6	5599	2.8	2.5	
Cr	52	2	He	0.021	272.1	3967	9.0	2.5	
Mn	55	2	He	0.041	27.5	1117	4.6	2.5	
Fe	56	2	He	5.347	7.0	43160	4.5	100	
Co	59	2	He	0.050	35.0	487	31.2	2.5	
Ni	60	2	He	-0.132	-15.6	343	13.1	2.5	
Cu	63	2	He	-0.116	-8.9	1500	3.1	2	
Zn	66	2	He	0.109	11.3	523	2.9	2.5	
As	75	2	He	-0.053	-42.8	296	9.1	2.5	
Se	78	2	He	0.077	125.2	136	6.7	2	
B	11	1	nogas	5.919	23.4	47385	8.1	10	
Si	28	1	nogas	-129.152	-57.5	1406622	1.3	5	
Ca	43	1	nogas	13.181	9.7	1000	0.0	100	
Ca	44	1	nogas	8.510	35.4	23755	3.8	100	
Fe	56	1	nogas	-23.630	-42.4	2855431	3.8	100	
Se	77	1	nogas	-55.038	-6.0	22027	1.4	2.5	
Se	82	1	nogas	0.352	77.3	233	27.6	2	
Mo	95	1	nogas	0.294	23.5	1910	16.8	2.5	
Sn	118	1	nogas	0.403	22.6	4574	10.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.074	12.0	587	2.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.583	2.9	3257	2.5	2.5	
P	31	1	nogas	2.497	120.7	85754	0.3	10	
La	139	1	nogas	30.809	18.5	197	17.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	63.080	144.3	10	100.0	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	1559746	4.44	1561049	99.92	70	125	
Ge	72	1	nogas	3672855	4.68	3727881	98.52	70	125	
In	115	1	nogas	3638093	6.61	3493076	104.15	70	125	
Bi	209	1	nogas	2743448	6.17	2658885	103.18	70	125	
Ge	72	2	He	938641	0.62	913806	102.72	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	297_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:31:16-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	94.413	3.076	643890	0.17	100	94.4	90	110	
Na	23	1	nogas	9752.621	3.283	247247581	1.35	10000	97.5	90	110	
Mg	24	1	nogas	9794.303	1.037	152091258	1.86	10000	97.9	90	110	
Al	27	1	nogas	101.562	2.175	1917300	0.56	100	101.6	90	110	
K	39	1	nogas	9800.960	3.382	219384013	0.73	10000	98.0	90	110	
Ti	47	1	nogas	97.628	2.638	182438	0.49	100	97.6	90	110	
V	51	1	nogas	85.926	3.052	3044540	0.48	100	85.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	97.898	2.904	2226172	0.20	100	97.9	90	110	
Mn	55	1	nogas	99.004	3.679	2825941	1.02	100	99.0	90	110	
Co	59	1	nogas	100.158	3.364	2314110	2.57	100	100.2	90	110	
Ni	60	1	nogas	98.848	2.138	504151	0.53	100	98.8	90	110	
Cu	63	1	nogas	100.036	1.339	1190177	2.08	100	100.0	90	110	
Zn	66	1	nogas	98.058	2.114	392735	1.72	100	98.1	90	110	
As	75	1	nogas	88.664	2.657	551922	0.55	100	88.7	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	100.072	0.393	3137595	2.25	100	100.1	90	110	
Ag	107	1	nogas	100.093	0.807	1496428	3.21	100	100.1	90	110	
Cd	111	1	nogas	98.300	2.245	317603	1.75	100	98.3	90	110	
Sb	121	1	nogas	100.153	2.419	1423860	3.19	100	100.2	90	110	
Tl	205	1	nogas	95.276	2.732	2185260	0.40	100	95.3	90	110	
Pb	208	1	nogas	110.813	0.231	3055697	0.23	100	110.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	105.654	3.474	3145891	1.51	100	105.7	90	110	
[Pb]	206	1	nogas	98.786	2.372	748516	0.79	100	98.8	90	110	
[Pb]	207	1	nogas	97.662	3.105	660846	0.77	100	97.7	90	110	
Na	23	2	He	10049.603	0.419	14690690	0.12	10000	100.5	90	110	
Mg	24	2	He	10094.908	0.570	7817608	0.45	10000	100.9	90	110	
Al	27	2	He	99.753	1.468	44546	1.75	100	99.8	90	110	
K	39	2	He	10933.021	1.091	8939784	1.07	10000	109.3	90	110	
Ca	43	2	He	9957.336	1.773	24253	1.43	10000	99.6	90	110	
Ca	44	2	He	10076.295	0.668	412465	0.28	10000	100.8	90	110	
V	51	2	He	100.723	0.295	597708	0.13	100	100.7	90	110	
Cr	52	2	He	101.635	0.466	642526	0.62	100	101.6	90	110	
Mn	55	2	He	102.706	0.725	475471	0.52	100	102.7	90	110	
Fe	56	2	He	10206.903	0.576	57001112	0.61	10000	102.1	90	110	
Co	59	2	He	101.412	0.297	871514	0.23	100	101.4	90	110	
Ni	60	2	He	102.312	0.175	216910	0.30	100	102.3	90	110	
Cu	63	2	He	102.699	1.251	547195	1.06	100	102.7	90	110	
Zn	66	2	He	101.270	1.001	131940	0.73	100	101.3	90	110	
As	75	2	He	99.625	0.418	125565	0.15	100	99.6	90	110	
Se	78	2	He	98.812	1.237	10422	1.42	100	98.8	90	110	
B	11	1	nogas	487.776	1.577	2011551	2.93	500	97.6	90	110	
Si	28	1	nogas	4687.903	3.727	6715075	0.20	5000	93.8	90	110	
Ca	43	1	nogas	9777.537	0.775	379377	1.84	10000	97.8	90	110	
Ca	44	1	nogas	9695.130	2.432	6146677	0.26	10000	97.0	90	110	
Fe	56	1	nogas	9816.197	4.173	244503764	1.54	10000	98.2	90	110	
Se	77	1	nogas	46.603	7.515	46322	3.44	100	46.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.067	1.658	26556	3.06	100	96.1	90	110	
Mo	95	1	nogas	98.678	1.026	619096	1.60	100	98.7	90	110	
Sn	118	1	nogas	97.039	3.249	858120	1.48	100	97.0	90	110	
Ba	137	1	nogas	97.287	4.142	465713	1.18	100	97.3	90	110	
Sb	121	2	He	99.957	1.337	548951	1.76	100	100.0	90	110	
Li	7	1	nogas	98.657	0.929	1844622	3.05	100	98.7	90	110	
P	31	1	nogas	465.451	2.707	783023	0.73	500	93.1	90	110	
La	139	1	nogas	105.025	20.143	490	14.29	100	105.0	90	110	
Au	197	1	nogas	149.834	57.254	20	50.00	100	149.8	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	1464294	2.87	1561049	93.80	70	125	
Ge	72	1	nogas	3787437	2.61	3727881	101.60	70	125	
In	115	1	nogas	3632501	3.67	3493076	103.99	70	125	
Bi	209	1	nogas	2773860	2.80	2658885	104.32	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	953904	0.42	913806	104.39	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	298_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:33:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.089	3.4	750	3.5	1	
Na	23	1	nogas	-11.574	-193.1	3198581	5.5	100	
Mg	24	1	nogas	7.295	19.2	142516	3.8	100	
Al	27	1	nogas	0.444	15.3	34702	1.9	5	
K	39	1	nogas	-9.753	-145.5	7014125	1.1	100	
Ti	47	1	nogas	0.059	53.8	330	16.9	2.5	
V	51	1	nogas	-16.637	-2.4	409353	4.8	2.5	
Cr	52	1	nogas	-0.952	-9.0	46899	1.5	2.5	
Mn	55	1	nogas	0.005	946.0	20078	1.4	2.5	
Co	59	1	nogas	0.062	17.3	1837	8.1	2.5	
Ni	60	1	nogas	-0.714	-5.7	1760	8.9	2.5	
Cu	63	1	nogas	-0.019	-229.6	5121	6.9	2	
Zn	66	1	nogas	-0.400	-17.6	1743	10.1	2.5	
As	75	1	nogas	-10.467	-4.9	65706	7.5	2.5	
Sr	88	1	nogas	0.073	20.6	4981	5.2	2.5	
Ag	107	1	nogas	0.053	20.5	943	12.4	2.5	
Cd	111	1	nogas	0.076	35.1	273	29.3	1	
Sb	121	1	nogas	1.026	16.1	14570	10.2	2.5	
Tl	205	1	nogas	0.393	43.5	8986	36.5	1	
Pb	208	1	nogas	0.082	11.3	2573	9.9	2.5	
U	238	1	nogas	0.139	38.7	4114	31.8	2.5	
[Pb]	206	1	nogas	0.078	21.6	650	13.1	2.5	
[Pb]	207	1	nogas	0.080	14.0	630	8.8	2.5	
Na	23	2	He	-33.419	-4.6	183187	2.6	100	
Mg	24	2	He	5.972	5.3	6615	5.0	100	
Al	27	2	He	-0.392	-15.3	933	2.2	5	
K	39	2	He	-6.198	-29.3	155486	0.9	100	
Ca	43	2	He	39.449	111.7	123	90.4	100	
Ca	44	2	He	5.678	34.8	910	8.7	100	
V	51	2	He	-0.910	-2.5	5295	3.3	2.5	
Cr	52	2	He	-0.013	-182.5	3887	3.4	2.5	
Mn	55	2	He	0.081	42.8	1343	10.8	2.5	
Fe	56	2	He	6.372	1.9	50499	2.8	100	
Co	59	2	He	0.053	21.3	527	17.6	2.5	
Ni	60	2	He	-0.105	-16.3	413	7.8	2.5	
Cu	63	2	He	-0.094	-10.2	1673	2.1	2	
Zn	66	2	He	0.110	30.0	543	7.4	2.5	
As	75	2	He	-0.044	-25.7	318	4.2	2.5	
Se	78	2	He	0.094	149.8	143	11.8	2	
B	11	1	nogas	4.773	32.2	43526	9.7	10	
Si	28	1	nogas	-96.941	-105.8	1460834	3.3	5	
Ca	43	1	nogas	12.275	22.9	980	10.1	100	
Ca	44	1	nogas	9.772	37.0	24867	3.6	100	
Fe	56	1	nogas	-23.924	-44.2	2888754	3.3	100	
Se	77	1	nogas	-60.832	-1.3	21056	5.7	2.5	
Se	82	1	nogas	0.168	76.5	190	22.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.334	27.3	2177	19.9	2.5	
Sn	118	1	nogas	0.369	24.0	4231	6.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.109	30.9	743	10.8	2.5	
Sb	121	2	He	0.755	8.7	4334	9.2	2.5	
P	31	1	nogas	3.232	97.1	88087	1.5	10	
La	139	1	nogas	21.407	44.8	157	25.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	118.934	79.8	17	69.3	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	1604293	5.81	1561049	102.77	70	125	
Ge	72	1	nogas	3727044	5.29	3727881	99.98	70	125	
In	115	1	nogas	3619291	10.75	3493076	103.61	70	125	
Bi	209	1	nogas	2751550	6.11	2658885	103.49	70	125	
Ge	72	2	He	971376	1.43	913806	106.30	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	309_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:55:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	93.857	0.767	743570	1.41	100	93.9	90	110	
Na	23	1	nogas	9890.383	4.071	286632498	2.32	10000	98.9	90	110	
Mg	24	1	nogas	9824.437	3.346	174380458	1.58	10000	98.2	90	110	
Al	27	1	nogas	101.551	2.219	2153122	0.91	100	101.6	90	110	
K	39	1	nogas	10037.713	3.110	252169247	1.42	10000	100.4	90	110	
Ti	47	1	nogas	97.577	2.555	204797	0.93	100	97.6	90	110	
V	51	1	nogas	110.769	9.100	4132239	5.36	100	110.8	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.722	2.143	2545717	0.79	100	99.7	90	110	
Mn	55	1	nogas	101.615	2.234	3257799	0.65	100	101.6	90	110	
Co	59	1	nogas	100.151	2.908	2598655	1.39	100	100.2	90	110	
Ni	60	1	nogas	99.751	3.307	571256	1.53	100	99.8	90	110	
Cu	63	1	nogas	101.294	1.950	1353149	0.34	100	101.3	90	110	
Zn	66	1	nogas	98.705	2.645	443916	1.37	100	98.7	90	110	
As	75	1	nogas	99.980	4.667	681936	2.03	100	100.0	90	110	
Sr	88	1	nogas	96.172	2.125	3385737	1.20	100	96.2	90	110	
Ag	107	1	nogas	101.383	2.609	1701448	1.05	100	101.4	90	110	
Cd	111	1	nogas	98.437	0.611	356999	0.49	100	98.4	90	110	
Sb	121	1	nogas	95.652	0.158	1527256	1.82	100	95.7	90	110	
Tl	205	1	nogas	92.924	2.871	2391329	0.53	100	92.9	90	110	
Pb	208	1	nogas	120.128	2.116	3312540	2.12	100	120.1	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	100.667	3.045	3363951	2.60	100	100.7	90	110	
[Pb]	206	1	nogas	95.345	4.912	810211	2.11	100	95.3	90	110	
[Pb]	207	1	nogas	94.287	4.742	715638	1.95	100	94.3	90	110	
Na	23	2	He	10262.171	1.560	16540718	1.17	10000	102.6	90	110	
Mg	24	2	He	10364.164	0.893	8852666	0.69	10000	103.6	90	110	
Al	27	2	He	101.718	1.751	50086	2.96	100	101.7	90	110	
K	39	2	He	12326.427	0.565	10058702	0.56	10000	123.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9954.949	3.274	26746	3.41	10000	99.5	90	110	
Ca	44	2	He	10090.655	0.439	455615	1.08	10000	100.9	90	110	
V	51	2	He	101.685	1.096	665434	0.23	100	101.7	90	110	
Cr	52	2	He	102.005	0.751	711254	0.58	100	102.0	90	110	
Mn	55	2	He	102.835	1.057	525088	0.32	100	102.8	90	110	
Fe	56	2	He	10296.154	1.738	63415629	0.48	10000	103.0	90	110	
Co	59	2	He	101.291	1.796	960035	0.52	100	101.3	90	110	
Ni	60	2	He	101.973	2.364	238426	1.08	100	102.0	90	110	
Cu	63	2	He	102.898	0.868	604731	0.89	100	102.9	90	110	
Zn	66	2	He	100.992	1.735	145129	1.48	100	101.0	90	110	
As	75	2	He	99.812	1.792	138745	0.50	100	99.8	90	110	
Se	78	2	He	102.354	1.293	11902	0.39	100	102.4	90	110	
B	11	1	nogas	479.347	1.210	2296012	2.94	500	95.9	90	110	
Si	28	1	nogas	4708.822	4.063	7567462	1.36	5000	94.2	90	110	
Ca	43	1	nogas	9823.500	1.830	427994	0.24	10000	98.2	90	110	
Ca	44	1	nogas	9939.000	3.439	7075890	1.89	10000	99.4	90	110	
Fe	56	1	nogas	9919.806	1.990	277565773	0.93	10000	99.2	90	110	
Se	77	1	nogas	122.248	14.497	71671	4.76	100	122.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.341	1.936	30209	0.48	100	97.3	90	110	
Mo	95	1	nogas	96.433	1.828	679493	2.10	100	96.4	90	110	
Sn	118	1	nogas	94.156	2.107	934740	1.11	100	94.2	90	110	
Ba	137	1	nogas	93.690	1.663	503728	2.57	100	93.7	90	110	
Sb	121	2	He	98.904	1.413	599049	0.12	100	98.9	90	110	
Li	7	1	nogas	99.423	2.817	2156852	2.34	100	99.4	90	110	
P	31	1	nogas	485.256	2.742	912782	0.78	500	97.1	90	110	
La	139	1	nogas	152.303	14.785	763	12.93	100	152.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	265.798	114.014	37	103.25	100	265.8	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	1700160	2.07	1561049	108.91	70	125	
Ge	72	1	nogas	4253169	1.76	3727881	114.09	70	125	
In	115	1	nogas	4075464	1.09	3493076	116.67	70	125	
Bi	209	1	nogas	3112354	2.83	2658885	117.05	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1052204	1.29	913806	115.15	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	310_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:57:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.074	47.8	683	36.0	1	
Na	23	1	nogas	8.949	232.0	4214329	5.1	100	
Mg	24	1	nogas	7.510	32.1	164952	16.0	100	
Al	27	1	nogas	0.382	9.4	37370	3.7	5	
K	39	1	nogas	-20.855	-45.4	7542578	1.3	100	
Ti	47	1	nogas	0.080	109.8	407	39.5	2.5	
V	51	1	nogas	-10.402	-1.4	630285	4.1	2.5	
Cr	52	1	nogas	-0.737	-10.5	57369	1.9	2.5	
Mn	55	1	nogas	0.013	249.9	22611	0.9	2.5	
Co	59	1	nogas	0.053	37.8	1800	24.7	2.5	
Ni	60	1	nogas	-0.627	-4.2	2440	2.1	2.5	
Cu	63	1	nogas	0.009	582.4	6054	7.2	2	
Zn	66	1	nogas	-0.430	-0.3	1820	3.8	2.5	
As	75	1	nogas	-8.582	-5.5	83188	6.6	2.5	
Sr	88	1	nogas	0.091	18.0	6171	5.8	2.5	
Ag	107	1	nogas	0.045	25.4	917	16.6	2.5	
Cd	111	1	nogas	0.055	34.2	227	22.2	1	
Sb	121	1	nogas	0.777	20.5	12365	16.6	2.5	
Tl	205	1	nogas	0.299	47.3	7639	42.8	1	
Pb	208	1	nogas	0.075	21.9	2373	19.1	2.5	
U	238	1	nogas	0.126	39.4	4161	35.4	2.5	
[Pb]	206	1	nogas	0.056	27.9	540	20.9	2.5	
[Pb]	207	1	nogas	0.057	35.1	520	25.0	2.5	
Na	23	2	He	-7.348	-36.1	238257	1.1	100	
Mg	24	2	He	5.652	6.9	6845	4.6	100	
Al	27	2	He	-0.792	-18.6	813	7.9	5	
K	39	2	He	6.705	65.3	165847	2.1	100	
Ca	43	2	He	16.328	140.7	70	86.9	100	
Ca	44	2	He	4.802	59.5	940	13.1	100	
V	51	2	He	-0.556	-6.2	7962	2.0	2.5	
Cr	52	2	He	-0.001	-3874.2	4267	5.4	2.5	
Mn	55	2	He	0.092	15.9	1503	5.7	2.5	
Fe	56	2	He	5.033	5.2	46154	3.1	100	
Co	59	2	He	0.046	26.1	503	22.0	2.5	
Ni	60	2	He	-0.163	-11.3	310	14.1	2.5	
Cu	63	2	He	-0.071	-45.2	1937	9.3	2	
Zn	66	2	He	0.141	44.6	630	15.1	2.5	
As	75	2	He	-0.049	-37.1	336	8.3	2.5	
Se	78	2	He	-0.029	-454.2	139	10.4	2	
B	11	1	nogas	3.326	46.0	40473	13.0	10	
Si	28	1	nogas	-267.433	-18.9	1422949	0.8	5	
Ca	43	1	nogas	11.958	12.0	1077	1.9	100	
Ca	44	1	nogas	8.480	39.2	26786	4.8	100	
Fe	56	1	nogas	-13.845	-48.0	3488609	1.7	100	
Se	77	1	nogas	-46.089	-9.6	27174	7.5	2.5	
Se	82	1	nogas	0.221	37.0	227	14.2	2	
Mo	95	1	nogas	0.301	29.3	2200	23.9	2.5	
Sn	118	1	nogas	0.353	37.1	4544	21.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.070	27.9	623	10.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.530	5.7	3314	5.0	2.5	
P	31	1	nogas	2.521	91.4	96860	1.0	10	
La	139	1	nogas	28.263	37.3	203	18.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	80.369	119.4	13	86.6	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	1750846	5.16	1561049	112.16	70	125	
Ge	72	1	nogas	4144033	3.67	3727881	111.16	70	125	
In	115	1	nogas	4020470	7.01	3493076	115.10	70	125	
Bi	209	1	nogas	3030652	3.45	2658885	113.98	70	125	
Ge	72	2	He	1045538	0.82	913806	114.42	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	321_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:18:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	94.734	8.039	646058	1.38	100	94.7	90	110	
Na	23	1	nogas	10616.446	12.848	249209714	0.54	10000	106.2	90	110	
Mg	24	1	nogas	10657.109	13.589	153246628	1.53	10000	106.6	90	110	
Al	27	1	nogas	105.761	8.264	1902981	0.97	100	105.8	90	110	
K	39	1	nogas	10322.581	8.469	220014872	0.41	10000	103.2	90	110	
Ti	47	1	nogas	102.355	8.871	182344	1.01	100	102.4	90	110	
V	51	1	nogas	110.663	11.628	3506603	1.11	100	110.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	106.275	8.429	2299279	0.74	100	106.3	90	110	
Mn	55	1	nogas	104.986	8.216	2857385	0.57	100	105.0	90	110	
Co	59	1	nogas	104.090	8.311	2293325	0.41	100	104.1	90	110	
Ni	60	1	nogas	103.702	8.722	504017	0.72	100	103.7	90	110	
Cu	63	1	nogas	106.324	10.477	1204375	2.49	100	106.3	90	110	
Zn	66	1	nogas	104.407	8.766	398435	1.23	100	104.4	90	110	
As	75	1	nogas	103.783	9.863	596955	0.43	100	103.8	90	110	
Sr	88	1	nogas	104.964	7.582	3138413	1.28	100	105.0	90	110	
Ag	107	1	nogas	106.042	9.233	1510400	1.62	100	106.0	90	110	
Cd	111	1	nogas	106.672	12.479	324043	1.27	100	106.7	90	110	
Sb	121	1	nogas	104.102	10.038	1409684	2.23	100	104.1	90	110	
Tl	205	1	nogas	103.967	6.052	2275117	1.30	100	104.0	90	110	
Pb	208	1	nogas	112.537	1.461	3103214	1.46	100	112.5	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	113.935	8.912	3232994	2.68	100	113.9	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	104.885	4.595	758716	2.68	100	104.9	90	110	
[Pb]	207	1	nogas	104.874	5.066	677422	2.20	100	104.9	90	110	
Na	23	2	He	9954.337	1.150	14355296	0.75	10000	99.5	90	110	
Mg	24	2	He	10008.484	0.407	7645587	1.19	10000	100.1	90	110	
Al	27	2	He	98.591	1.513	43436	0.76	100	98.6	90	110	
K	39	2	He	10657.217	1.847	8718310	1.81	10000	106.6	90	110	
Ca	43	2	He	9802.358	3.161	23548	2.44	10000	98.0	90	110	
Ca	44	2	He	9875.563	1.432	398765	1.40	10000	98.8	90	110	
V	51	2	He	99.776	0.499	584132	0.34	100	99.8	90	110	
Cr	52	2	He	100.039	0.426	623884	0.37	100	100.0	90	110	
Mn	55	2	He	99.991	0.446	456632	0.58	100	100.0	90	110	
Fe	56	2	He	10095.805	1.198	55613954	1.27	10000	101.0	90	110	
Co	59	2	He	100.275	0.869	850007	0.57	100	100.3	90	110	
Ni	60	2	He	102.565	1.085	214480	0.48	100	102.6	90	110	
Cu	63	2	He	100.981	1.111	530752	0.80	100	101.0	90	110	
Zn	66	2	He	100.242	0.476	128831	0.76	100	100.2	90	110	
As	75	2	He	98.028	0.878	121878	0.96	100	98.0	90	110	
Se	78	2	He	96.749	1.267	10069	1.64	100	96.7	90	110	
B	11	1	nogas	494.134	9.510	2035063	2.52	500	98.8	90	110	
Si	28	1	nogas	4884.811	11.899	6606395	1.23	5000	97.7	90	110	
Ca	43	1	nogas	10210.973	8.953	377572	1.29	10000	102.1	90	110	
Ca	44	1	nogas	10256.647	8.129	6200654	0.29	10000	102.6	90	110	
Fe	56	1	nogas	10398.755	10.307	246639122	2.23	10000	104.0	90	110	
Se	77	1	nogas	118.786	10.741	60227	3.13	100	118.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.500	9.828	27244	2.39	100	103.5	90	110	
Mo	95	1	nogas	104.044	6.930	622774	1.06	100	104.0	90	110	
Sn	118	1	nogas	103.447	12.212	860384	0.95	100	103.4	90	110	
Ba	137	1	nogas	104.083	10.253	469426	1.36	100	104.1	90	110	
Sb	121	2	He	100.324	1.296	543438	1.07	100	100.3	90	110	
Li	7	1	nogas	99.418	8.277	1856929	1.15	100	99.4	90	110	
P	31	1	nogas	497.222	9.720	791973	0.81	500	99.4	90	110	
La	139	1	nogas	148.395	21.123	623	12.25	100	148.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	90.736	151.780	13	114.56	100	90.7	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	1468622	6.73	1561049	94.08	70	125	
Ge	72	1	nogas	3625448	7.57	3727881	97.25	70	125	
In	115	1	nogas	3444059	10.66	3493076	98.60	70	125	
Bi	209	1	nogas	2652726	7.04	2658885	99.77	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	940939	0.79	913806	102.97	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	322_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:20:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.064	24.4	577	18.7	1	
Na	23	1	nogas	-33.614	-32.9	2757959	7.4	100	
Mg	24	1	nogas	6.015	29.4	127083	18.6	100	
Al	27	1	nogas	0.527	41.7	37763	12.5	5	
K	39	1	nogas	-30.473	-17.8	6847835	1.5	100	
Ti	47	1	nogas	0.193	76.3	603	48.4	2.5	
V	51	1	nogas	-9.934	-1.5	601950	1.9	2.5	
Cr	52	1	nogas	-0.693	-6.0	54697	0.9	2.5	
Mn	55	1	nogas	-0.002	-1969.8	20725	3.7	2.5	
Co	59	1	nogas	0.053	30.0	1703	20.8	2.5	
Ni	60	1	nogas	-0.803	-1.6	1377	5.2	2.5	
Cu	63	1	nogas	-0.018	-301.6	5351	11.0	2	
Zn	66	1	nogas	-0.444	-8.3	1647	7.8	2.5	
As	75	1	nogas	-7.444	-8.5	83504	5.2	2.5	
Sr	88	1	nogas	0.084	22.0	5568	9.6	2.5	
Ag	107	1	nogas	0.044	18.6	850	13.6	2.5	
Cd	111	1	nogas	0.062	47.5	240	39.7	1	
Sb	121	1	nogas	0.850	27.9	12645	26.0	2.5	
Tl	205	1	nogas	0.408	57.4	10361	58.3	1	
Pb	208	1	nogas	0.089	30.5	2770	27.1	2.5	
U	238	1	nogas	0.169	48.9	5528	50.2	2.5	
[Pb]	206	1	nogas	0.079	26.6	723	26.2	2.5	
[Pb]	207	1	nogas	0.079	25.2	677	23.8	2.5	
Na	23	2	He	-46.745	-3.6	159107	0.4	100	
Mg	24	2	He	4.838	1.6	5561	1.6	100	
Al	27	2	He	-0.670	-40.9	787	13.4	5	
K	39	2	He	-15.170	-6.0	148282	0.5	100	
Ca	43	2	He	14.907	27.3	60	16.7	100	
Ca	44	2	He	7.351	27.7	953	9.7	100	
V	51	2	He	-0.508	-9.3	7472	2.3	2.5	
Cr	52	2	He	-0.016	-85.4	3757	1.4	2.5	
Mn	55	2	He	0.041	50.0	1123	9.3	2.5	
Fe	56	2	He	5.968	3.8	46883	4.2	100	
Co	59	2	He	0.050	19.5	490	15.4	2.5	
Ni	60	2	He	-0.127	-42.8	357	33.4	2.5	
Cu	63	2	He	-0.098	-34.1	1607	12.6	2	
Zn	66	2	He	0.174	28.8	610	10.2	2.5	
As	75	2	He	0.005	399.3	370	8.0	2.5	
Se	78	2	He	0.132	60.4	143	6.9	2	
B	11	1	nogas	6.459	23.3	52358	10.5	10	
Si	28	1	nogas	-271.383	-16.3	1327775	2.4	5	
Ca	43	1	nogas	11.328	13.3	983	5.2	100	
Ca	44	1	nogas	7.655	28.3	24566	4.4	100	
Fe	56	1	nogas	-18.216	-56.3	3155986	7.0	100	
Se	77	1	nogas	-39.088	-7.9	27071	4.0	2.5	
Se	82	1	nogas	0.109	59.5	180	11.1	2	
Mo	95	1	nogas	0.409	47.8	2757	44.2	2.5	
Sn	118	1	nogas	0.377	33.2	4521	23.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.078	17.6	630	9.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.588	2.5	3307	3.1	2.5	
P	31	1	nogas	1.085	161.4	88473	1.7	10	
La	139	1	nogas	37.481	35.5	230	23.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	82.870	62.2	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	1640311	3.20	1561049	105.08	70	125	
Ge	72	1	nogas	3877098	1.39	3727881	104.00	70	125	
In	115	1	nogas	3768632	1.43	3493076	107.89	70	125	
Bi	209	1	nogas	2984097	2.35	2658885	112.23	70	125	
Ge	72	2	He	944634	1.74	913806	103.37	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	330_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:36:33-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	97.622	9.969	618205	2.41	100	97.6	90	110	
Na	23	1	nogas	11522.028	15.037	247847139	1.96	10000	115.2	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11157.128	14.081	147367907	1.67	10000	111.6	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	111.801	12.876	1793107	3.46	100	111.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10864.536	12.538	206289513	2.17	10000	108.6	90	110	
Ti	47	1	nogas	108.349	12.072	172284	2.03	100	108.3	90	110	
V	51	1	nogas	127.299	15.245	3492962	2.30	100	127.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	110.932	11.481	2140260	1.53	100	110.9	90	110	CCV Main CR1-2 Failed
Mn	55	1	nogas	110.978	12.197	2694112	2.08	100	111.0	90	110	CCV Main CR1-2 Failed
Co	59	1	nogas	107.827	11.184	2121176	1.34	100	107.8	90	110	
Ni	60	1	nogas	110.397	11.682	478743	1.80	100	110.4	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	111.525	11.700	1128648	2.29	100	111.5	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	109.131	11.734	371673	1.74	100	109.1	90	110	
As	75	1	nogas	117.205	13.980	588691	1.54	100	117.2	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	112.548	11.699	3002333	1.82	100	112.5	90	110	CCV Main CR1-2 Failed
Ag	107	1	nogas	107.262	9.324	1366304	0.68	100	107.3	90	110	
Cd	111	1	nogas	110.404	13.885	293033	2.01	100	110.4	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	109.402	12.350	1323188	3.91	100	109.4	90	110	
Tl	205	1	nogas	107.180	11.217	2011295	2.52	100	107.2	90	110	
Pb	208	1	nogas	102.183	1.319	2817742	1.32	100	102.2	90	110	
U	238	1	nogas	118.486	12.006	2885239	2.89	100	118.5	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	111.470	10.874	691071	1.48	100	111.5	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	110.700	11.242	612852	2.17	100	110.7	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10613.356	1.204	13787141	1.88	10000	106.1	90	110	
Mg	24	2	He	10445.022	1.468	7194386	2.53	10000	104.5	90	110	
Al	27	2	He	102.432	3.152	40647	2.48	100	102.4	90	110	
K	39	2	He	9751.749	1.932	7991211	1.89	10000	97.5	90	110	
Ca	43	2	He	10122.183	1.603	21930	2.88	10000	101.2	90	110	
Ca	44	2	He	10177.563	0.969	370510	1.49	10000	101.8	90	110	
V	51	2	He	101.724	1.061	536749	1.27	100	101.7	90	110	
Cr	52	2	He	101.395	1.243	570055	1.23	100	101.4	90	110	
Mn	55	2	He	103.077	0.869	424396	1.68	100	103.1	90	110	
Fe	56	2	He	10103.980	1.696	50184401	2.27	10000	101.0	90	110	
Co	59	2	He	100.267	0.714	766367	1.85	100	100.3	90	110	
Ni	60	2	He	101.826	0.971	192009	2.12	100	101.8	90	110	
Cu	63	2	He	104.042	0.486	493022	1.84	100	104.0	90	110	
Zn	66	2	He	101.494	1.702	117617	2.89	100	101.5	90	110	
As	75	2	He	97.437	0.759	109228	1.54	100	97.4	90	110	
Se	78	2	He	95.748	2.012	8986	2.61	100	95.7	90	110	
B	11	1	nogas	494.803	9.756	1893640	1.71	500	99.0	90	110	
Si	28	1	nogas	6950.119	29.677	7917792	29.93	5000	139.0	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11086.471	11.731	365979	1.79	10000	110.9	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11060.783	11.506	5967506	1.71	10000	110.6	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	10923.055	13.267	231107472	3.15	10000	109.2	90	110	
Se	77	1	nogas	190.300	26.386	67649	4.61	100	190.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.110	14.333	24670	4.31	100	105.1	90	110	
Mo	95	1	nogas	109.294	11.951	583407	1.85	100	109.3	90	110	
Sn	118	1	nogas	110.506	15.385	801926	3.49	100	110.5	90	110	CCV Main CR1-2 Failed
Ba	137	1	nogas	110.882	13.746	436273	1.79	100	110.9	90	110	CCV Main CR1-2 Failed
Sb	121	2	He	98.380	0.803	480518	2.01	100	98.4	90	110	
Li	7	1	nogas	100.946	9.461	1749776	0.86	100	100.9	90	110	
P	31	1	nogas	522.259	11.694	739553	0.67	500	104.5	90	110	
La	139	1	nogas	143.324	7.735	533	9.62	100	143.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	197.497	67.264	20	50.00	100	197.5	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	1365732	7.68	1561049	87.49	70	125	
Ge	72	1	nogas	3246444	9.49	3727881	87.09	70	125	
In	115	1	nogas	3014246	11.39	3493076	86.29	70	125	
Bi	209	1	nogas	2283338	8.90	2658885	85.88	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	848367	1.41	913806	92.84	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	331_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:38:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.116	18.8	847	17.2	1	
Na	23	1	nogas	104.731	26.1	5626085	6.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	20.962	11.2	326331	10.3	100	
Al	27	1	nogas	0.501	43.5	32562	0.6	5	
K	39	1	nogas	4.726	650.8	6681472	1.6	100	
Ti	47	1	nogas	0.175	59.5	487	23.8	2.5	
V	51	1	nogas	-3.013	-150.4	683477	4.7	2.5	
Cr	52	1	nogas	-0.403	-73.3	53584	1.6	2.5	
Mn	55	1	nogas	0.181	51.5	22784	2.0	2.5	
Co	59	1	nogas	0.069	27.1	1843	25.3	2.5	
Ni	60	1	nogas	-0.398	-37.9	3014	13.5	2.5	
Cu	63	1	nogas	0.371	21.2	8822	5.2	2	
Zn	66	1	nogas	-0.406	-11.7	1583	11.9	2.5	
As	75	1	nogas	-2.675	-132.4	93592	6.3	2.5	
Sr	88	1	nogas	0.488	8.4	16244	5.1	2.5	
Ag	107	1	nogas	0.058	21.0	927	10.0	2.5	
Cd	111	1	nogas	0.060	39.7	203	38.2	1	
Sb	121	1	nogas	0.963	14.6	12718	22.6	2.5	
Tl	205	1	nogas	0.469	49.1	10398	56.3	1	
Pb	208	1	nogas	0.084	27.7	2613	24.4	2.5	
U	238	1	nogas	0.161	46.7	4591	54.1	2.5	
[Pb]	206	1	nogas	0.091	30.8	693	29.1	2.5	
[Pb]	207	1	nogas	0.077	18.0	563	18.0	2.5	
Na	23	2	He	82.269	5.3	321576	0.9	100	
Mg	24	2	He	20.151	2.2	16224	2.5	100	
Al	27	2	He	-0.794	-40.1	690	20.3	5	
K	39	2	He	-18.242	-13.7	145815	1.4	100	
Ca	43	2	He	41.642	5.8	117	4.9	100	
Ca	44	2	He	23.410	13.1	1503	8.4	100	
V	51	2	He	-0.314	-13.4	8061	4.4	2.5	
Cr	52	2	He	-0.019	-141.0	3507	3.4	2.5	
Mn	55	2	He	0.234	8.7	1880	5.1	2.5	
Fe	56	2	He	6.882	2.1	48684	1.0	100	
Co	59	2	He	0.056	16.1	503	14.1	2.5	
Ni	60	2	He	-0.124	-8.1	340	5.1	2.5	
Cu	63	2	He	0.133	18.5	2644	5.4	2	
Zn	66	2	He	0.116	63.9	503	19.1	2.5	
As	75	2	He	-0.008	-546.8	331	14.7	2.5	
Se	78	2	He	0.326	53.7	153	12.7	2	
B	11	1	nogas	8.412	11.4	53465	10.2	10	
Si	28	1	nogas	7.999	1914.3	1435858	2.0	5	CCB Main CR1 Failed
Ca	43	1	nogas	25.687	8.6	1370	12.8	100	
Ca	44	1	nogas	25.425	16.3	31637	3.6	100	
Fe	56	1	nogas	-3.546	-250.4	3096284	6.0	100	
Se	77	1	nogas	-6.160	-329.9	30463	4.6	2.5	
Se	82	1	nogas	0.434	82.1	233	26.2	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.419	34.5	2530	39.5	2.5	
Sn	118	1	nogas	0.456	20.9	4581	24.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.121	20.7	723	11.6	2.5	
Sb	121	2	He	0.685	6.8	3594	5.3	2.5	
P	31	1	nogas	2.079	246.9	78857	1.6	10	
La	139	1	nogas	24.012	35.0	150	20.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	38.664	157.6	7	86.6	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	1427544	6.78	1561049	91.45	70	125	
Ge	72	1	nogas	3415863	9.88	3727881	91.63	70	125	
In	115	1	nogas	3258286	12.34	3493076	93.28	70	125	
Bi	209	1	nogas	2556748	12.81	2658885	96.16	70	125	
Ge	72	2	He	885782	1.58	913806	96.93	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	342_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:00:18-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	101.611	7.967	654358	1.08	100	101.6	90	110	
Na	23	1	nogas	12074.111	13.724	270198631	0.50	10000	120.7	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11284.440	14.897	154877049	1.90	10000	112.8	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	113.985	12.576	1882984	1.60	100	114.0	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11089.214	11.707	216901555	0.97	10000	110.9	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	108.174	11.713	177238	0.84	100	108.2	90	110	
V	51	1	nogas	137.417	20.633	3813646	6.02	100	137.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	112.815	10.294	2243104	0.85	100	112.8	90	110	CCV Main CR1-2 Failed
Mn	55	1	nogas	112.009	9.677	2805930	1.97	100	112.0	90	110	CCV Main CR1-2 Failed
Co	59	1	nogas	107.627	11.711	2180403	1.46	100	107.6	90	110	
Ni	60	1	nogas	108.580	11.845	485128	2.18	100	108.6	90	110	
Cu	63	1	nogas	109.570	10.698	1143142	0.37	100	109.6	90	110	
Zn	66	1	nogas	108.265	12.241	379745	1.22	100	108.3	90	110	
As	75	1	nogas	118.428	16.324	610875	2.70	100	118.4	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	110.586	11.123	3040227	0.98	100	110.6	90	110	CCV Main CR1-2 Failed
Ag	107	1	nogas	104.451	10.818	1369458	0.50	100	104.5	90	110	
Cd	111	1	nogas	110.688	14.087	294742	1.52	100	110.7	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	103.477	10.383	1290820	2.01	100	103.5	90	110	
Tl	205	1	nogas	106.359	10.640	1955163	0.53	100	106.4	90	110	
Pb	208	1	nogas	97.379	0.897	2685294	0.90	100	97.4	90	110	
U	238	1	nogas	114.695	10.624	2737490	0.63	100	114.7	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	108.216	9.611	657618	0.87	100	108.2	90	110	
[Pb]	207	1	nogas	107.617	9.371	584212	1.32	100	107.6	90	110	
Na	23	2	He	11321.140	0.748	15460433	1.28	10000	113.2	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10546.991	1.016	7642937	0.13	10000	105.5	90	110	
Al	27	2	He	103.066	0.869	43036	1.19	100	103.1	90	110	
K	39	2	He	10479.383	1.031	8575507	1.01	10000	104.8	90	110	
Ca	43	2	He	10310.198	1.506	23498	0.73	10000	103.1	90	110	
Ca	44	2	He	10455.623	2.717	400494	2.72	10000	104.6	90	110	
V	51	2	He	102.622	2.141	569630	1.14	100	102.6	90	110	
Cr	52	2	He	102.316	1.428	605227	0.43	100	102.3	90	110	
Mn	55	2	He	101.658	1.798	440385	1.19	100	101.7	90	110	
Fe	56	2	He	10139.683	1.535	52986889	0.87	10000	101.4	90	110	
Co	59	2	He	100.637	1.706	809251	0.73	100	100.6	90	110	
Ni	60	2	He	102.106	0.526	202585	1.42	100	102.1	90	110	
Cu	63	2	He	101.704	0.748	507125	0.76	100	101.7	90	110	
Zn	66	2	He	99.894	1.045	121795	0.82	100	99.9	90	110	
As	75	2	He	97.611	1.318	115128	0.41	100	97.6	90	110	
Se	78	2	He	95.680	0.881	9448	1.78	100	95.7	90	110	
B	11	1	nogas	589.207	7.932	2289342	0.98	500	117.8	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5828.307	15.207	6979013	1.22	5000	116.6	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11150.304	12.439	379007	1.84	10000	111.5	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11103.934	13.429	6163278	2.46	10000	111.0	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	10860.935	10.151	237239897	1.72	10000	108.6	90	110	
Se	77	1	nogas	207.872	27.624	73178	4.89	100	207.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.338	11.166	25041	1.23	100	103.3	90	110	
Mo	95	1	nogas	104.495	11.391	574858	1.35	100	104.5	90	110	
Sn	118	1	nogas	108.722	13.810	792659	2.82	100	108.7	90	110	
Ba	137	1	nogas	112.381	12.674	444031	0.82	100	112.4	90	110	CCV Main CR1-2 Failed
Sb	121	2	He	94.216	0.866	484173	0.37	100	94.2	90	110	
Li	7	1	nogas	109.830	9.775	1923782	2.16	100	109.8	90	110	
P	31	1	nogas	527.474	13.319	768008	1.09	500	105.5	90	110	
La	139	1	nogas	173.773	19.472	630	6.92	100	173.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	185.500	90.830	20	86.60	100	185.5	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	1386829	6.73	1561049	88.84	70	125	
Ge	72	1	nogas	3346720	10.36	3727881	89.78	70	125	
In	115	1	nogas	3027012	12.33	3493076	86.66	70	125	
Bi	209	1	nogas	2237996	10.03	2658885	84.17	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	892677	1.00	913806	97.69	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	343_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:02:15-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	31.1	770	27.6	1	
Na	23	1	nogas	440.439	4.0	14428566	0.9	100	CCB Main CR1 Failed
Mg	24	1	nogas	23.167	13.0	388198	9.7	100	
Al	27	1	nogas	0.472	19.2	35183	2.3	5	
K	39	1	nogas	-8.577	-101.4	7035792	1.4	100	
Ti	47	1	nogas	0.081	30.5	370	9.7	2.5	
V	51	1	nogas	-4.045	-28.7	725993	4.6	2.5	
Cr	52	1	nogas	-0.602	-19.5	54430	3.0	2.5	
Mn	55	1	nogas	0.070	64.8	21893	3.4	2.5	
Co	59	1	nogas	0.067	21.6	1953	14.5	2.5	
Ni	60	1	nogas	-0.184	-33.3	4391	7.0	2.5	
Cu	63	1	nogas	0.520	5.0	11400	1.9	2	
Zn	66	1	nogas	-0.366	-12.7	1880	7.2	2.5	
As	75	1	nogas	-4.379	-14.3	94837	3.0	2.5	
Sr	88	1	nogas	0.514	8.4	18563	5.7	2.5	
Ag	107	1	nogas	0.069	9.1	1173	10.1	2.5	
Cd	111	1	nogas	0.050	12.1	190	9.1	1	
Sb	121	1	nogas	0.726	20.5	10403	17.8	2.5	
Tl	205	1	nogas	0.395	52.0	8673	51.1	1	
Pb	208	1	nogas	0.079	30.2	2497	26.4	2.5	
U	238	1	nogas	0.149	39.1	4207	38.6	2.5	
[Pb]	206	1	nogas	0.079	22.7	627	20.6	2.5	
[Pb]	207	1	nogas	0.078	38.7	583	33.1	2.5	
Na	23	2	He	462.879	1.7	858978	0.3	100	CCB Main CR1 Failed
Mg	24	2	He	23.562	3.4	19323	3.3	100	
Al	27	2	He	-0.585	-26.3	800	7.6	5	
K	39	2	He	-4.111	-52.2	157162	1.1	100	
Ca	43	2	He	21.408	71.0	73	47.9	100	
Ca	44	2	He	30.250	9.7	1823	6.0	100	
V	51	2	He	-0.235	-6.0	8775	0.4	2.5	
Cr	52	2	He	0.057	61.0	4087	4.2	2.5	
Mn	55	2	He	0.157	18.3	1607	8.7	2.5	
Fe	56	2	He	7.663	4.7	54564	3.3	100	
Co	59	2	He	0.058	26.0	537	23.0	2.5	
Ni	60	2	He	-0.145	-22.7	310	22.6	2.5	
Cu	63	2	He	0.206	13.7	3107	4.3	2	
Zn	66	2	He	0.100	38.1	500	8.7	2.5	
As	75	2	He	0.017	112.9	373	6.7	2.5	
Se	78	2	He	0.184	151.3	143	18.6	2	
B	11	1	nogas	57.137	4.1	279747	3.8	10	CCB Main CR1 Failed
Si	28	1	nogas	7.354	859.5	1573108	2.5	5	CCB Main CR1 Failed
Ca	43	1	nogas	31.980	17.7	1727	10.0	100	
Ca	44	1	nogas	28.020	10.2	36212	2.6	100	
Fe	56	1	nogas	-6.608	-103.0	3308291	2.5	100	
Se	77	1	nogas	-19.114	-16.9	30529	3.7	2.5	
Se	82	1	nogas	0.357	41.3	240	18.2	2	
Mo	95	1	nogas	0.336	29.1	2200	25.1	2.5	
Sn	118	1	nogas	0.289	36.9	3510	24.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.532	9.7	2724	7.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.484	8.5	2657	7.3	2.5	
P	31	1	nogas	-4.110	-24.1	77260	2.1	10	
La	139	1	nogas	24.376	31.5	167	19.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	130.772	84.0	17	69.3	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	1614401	0.17	1561049	103.42	70	125	
Ge	72	1	nogas	3721029	2.56	3727881	99.82	70	125	
In	115	1	nogas	3561546	1.40	3493076	101.96	70	125	
Bi	209	1	nogas	2593220	1.17	2658885	97.53	70	125	
Ge	72	2	He	916492	1.01	913806	100.29	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	351_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:18:00-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	89.125	1.922	644274	0.58	100	89.1	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10031.334	6.667	254362906	0.39	10000	100.3	90	110	
Mg	24	1	nogas	9815.292	5.586	152522978	1.39	10000	98.2	90	110	
Al	27	1	nogas	98.703	2.084	1895449	2.84	100	98.7	90	110	
K	39	1	nogas	9820.681	2.893	223469247	0.64	10000	98.2	90	110	
Ti	47	1	nogas	96.342	2.764	183015	0.67	100	96.3	90	110	
V	51	1	nogas	106.456	3.000	3629865	1.06	100	106.5	90	110	
Cr	52	1	nogas	100.706	2.194	2326690	2.57	100	100.7	90	110	
Mn	55	1	nogas	99.361	2.930	2883400	0.35	100	99.4	90	110	
Co	59	1	nogas	96.855	1.413	2276208	3.87	100	96.9	90	110	
Ni	60	1	nogas	97.933	0.878	507972	2.51	100	97.9	90	110	
Cu	63	1	nogas	100.373	1.076	1214071	2.69	100	100.4	90	110	
Zn	66	1	nogas	98.311	2.078	400242	1.20	100	98.3	90	110	
As	75	1	nogas	98.723	2.465	611153	1.38	100	98.7	90	110	
Sr	88	1	nogas	97.897	0.476	3121106	3.61	100	97.9	90	110	
Ag	107	1	nogas	97.323	5.372	1477595	2.76	100	97.3	90	110	
Cd	111	1	nogas	100.442	4.464	319497	1.95	100	100.4	90	110	
Sb	121	1	nogas	94.428	0.563	1365128	3.66	100	94.4	90	110	
Tl	205	1	nogas	91.062	5.279	2107681	2.34	100	91.1	90	110	
Pb	208	1	nogas	108.440	0.727	2990258	0.73	100	108.4	90	110	
U	238	1	nogas	100.538	4.693	3021304	1.31	100	100.5	90	110	
[Pb]	206	1	nogas	95.756	4.102	732270	0.69	100	95.8	90	110	
[Pb]	207	1	nogas	94.719	3.805	646988	0.39	100	94.7	90	110	
Na	23	2	He	10339.292	1.132	14897336	1.22	10000	103.4	90	110	
Mg	24	2	He	10097.006	1.366	7710141	1.04	10000	101.0	90	110	
Al	27	2	He	98.885	0.844	43550	0.37	100	98.9	90	110	
K	39	2	He	10899.677	1.022	8913008	1.00	10000	109.0	90	110	
Ca	43	2	He	10062.950	2.527	24169	2.55	10000	100.6	90	110	
Ca	44	2	He	10157.896	1.285	410000	0.82	10000	101.6	90	110	
V	51	2	He	101.743	1.134	595242	0.90	100	101.7	90	110	
Cr	52	2	He	102.261	1.204	637429	0.77	100	102.3	90	110	
Mn	55	2	He	101.091	1.089	461481	0.70	100	101.1	90	110	
Fe	56	2	He	10110.496	0.812	55676139	0.77	10000	101.1	90	110	
Co	59	2	He	101.197	0.539	857560	0.80	100	101.2	90	110	
Ni	60	2	He	103.126	0.581	215589	0.84	100	103.1	90	110	
Cu	63	2	He	105.069	1.347	551965	0.88	100	105.1	90	110	
Zn	66	2	He	101.438	2.097	130312	1.63	100	101.4	90	110	
As	75	2	He	99.676	0.282	123880	0.35	100	99.7	90	110	
Se	78	2	He	100.592	2.920	10459	2.42	100	100.6	90	110	
B	11	1	nogas	480.855	1.129	2101652	2.31	500	96.2	90	110	
Si	28	1	nogas	4766.561	4.167	6913226	0.74	5000	95.3	90	110	
Ca	43	1	nogas	9691.220	1.836	382207	1.49	10000	96.9	90	110	
Ca	44	1	nogas	9821.271	2.002	6330186	1.26	10000	98.2	90	110	
Fe	56	1	nogas	9723.672	3.556	246265797	0.86	10000	97.2	90	110	
Se	77	1	nogas	121.484	5.302	64722	1.00	100	121.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	93.320	2.046	26223	2.07	100	93.3	90	110	
Mo	95	1	nogas	96.979	2.084	618424	1.18	100	97.0	90	110	
Sn	118	1	nogas	97.330	4.162	847647	2.24	100	97.3	90	110	
Ba	137	1	nogas	98.731	4.655	465535	2.71	100	98.7	90	110	
Sb	121	2	He	97.826	1.857	529723	1.53	100	97.8	90	110	
Li	7	1	nogas	96.213	1.530	1909058	1.32	100	96.2	90	110	
P	31	1	nogas	464.272	3.226	794117	0.54	500	92.9	90	110	
La	139	1	nogas	130.670	5.102	587	10.27	100	130.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	209.920	50.334	27	43.30	100	209.9	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	1551675	2.49	1561049	99.40	70	125	
Ge	72	1	nogas	3850588	3.21	3727881	103.29	70	125	
In	115	1	nogas	3581086	6.30	3493076	102.52	70	125	
Bi	209	1	nogas	2800951	3.46	2658885	105.34	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	940617	0.46	913806	102.93	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	352_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:19:59-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.097	24.2	843	20.2	1	
Na	23	1	nogas	132.083	21.0	6848638	6.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	17.249	17.2	299122	11.2	100	
Al	27	1	nogas	0.518	14.8	36743	2.5	5	
K	39	1	nogas	-10.423	-88.7	7136780	1.5	100	
Ti	47	1	nogas	0.124	46.0	460	24.2	2.5	
V	51	1	nogas	-4.043	-19.9	740364	1.8	2.5	
Cr	52	1	nogas	-0.439	-6.8	59154	1.3	2.5	
Mn	55	1	nogas	0.020	203.0	20902	4.6	2.5	
Co	59	1	nogas	0.083	24.1	2367	19.0	2.5	
Ni	60	1	nogas	-0.538	-9.9	2687	10.7	2.5	
Cu	63	1	nogas	0.847	16.9	15493	10.1	2	
Zn	66	1	nogas	-0.397	-10.4	1797	8.6	2.5	
As	75	1	nogas	-3.733	-18.3	99913	3.2	2.5	
Sr	88	1	nogas	0.277	19.3	11494	13.4	2.5	
Ag	107	1	nogas	0.073	22.6	1263	18.6	2.5	
Cd	111	1	nogas	0.076	47.8	280	37.8	1	
Sb	121	1	nogas	0.858	25.5	12521	24.4	2.5	
Tl	205	1	nogas	0.500	58.2	12233	62.6	1	
Pb	208	1	nogas	0.100	34.2	3074	30.8	2.5	
U	238	1	nogas	0.192	48.5	6038	53.4	2.5	
[Pb]	206	1	nogas	0.097	16.6	827	18.1	2.5	
[Pb]	207	1	nogas	0.092	35.0	747	36.3	2.5	
Na	23	2	He	115.492	1.9	386882	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	14.609	7.9	12935	6.3	100	
Al	27	2	He	-0.240	-278.4	963	28.6	5	
K	39	2	He	-7.785	-25.2	154212	1.0	100	
Ca	43	2	He	16.622	54.5	63	32.9	100	
Ca	44	2	He	14.722	8.2	1240	3.7	100	
V	51	2	He	-0.229	-1.4	9001	1.8	2.5	
Cr	52	2	He	0.013	283.6	3904	5.2	2.5	
Mn	55	2	He	0.103	12.4	1397	5.8	2.5	
Fe	56	2	He	7.978	1.9	57483	3.1	100	
Co	59	2	He	0.055	11.3	530	11.3	2.5	
Ni	60	2	He	-0.095	-19.5	420	8.2	2.5	
Cu	63	2	He	0.546	4.5	4944	1.0	2	
Zn	66	2	He	0.092	53.6	500	11.1	2.5	
As	75	2	He	-0.001	-2585.9	359	8.8	2.5	
Se	78	2	He	0.183	59.4	147	9.3	2	
B	11	1	nogas	22.753	11.4	129948	5.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-112.871	-41.7	1473432	2.7	5	
Ca	43	1	nogas	18.337	35.7	1233	19.5	100	
Ca	44	1	nogas	17.270	20.9	30135	6.5	100	
Fe	56	1	nogas	-1.475	-684.7	3500936	5.7	100	
Se	77	1	nogas	-17.498	-12.9	31508	1.1	2.5	
Se	82	1	nogas	0.375	56.4	250	25.0	2	
Mo	95	1	nogas	0.469	55.5	3077	52.0	2.5	
Sn	118	1	nogas	0.439	27.8	4988	17.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.321	26.2	1797	17.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.613	4.3	3410	2.5	2.5	
P	31	1	nogas	-2.434	-66.8	81314	1.8	10	
La	139	1	nogas	23.972	54.6	170	27.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	119.038	48.1	17	34.6	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	1683073	5.17	1561049	107.82	70	125	
Ge	72	1	nogas	3795159	1.53	3727881	101.80	70	125	
In	115	1	nogas	3708595	4.67	3493076	106.17	70	125	
Bi	209	1	nogas	2848876	5.41	2658885	107.15	70	125	
Ge	72	2	He	936328	1.66	913806	102.46	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	353LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:21:57-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	4.268	7.980	31596	1.38	5	85.4	70	130	
Na	23	1	nogas	585.975	6.196	17749542	1.02	500	117.2	70	130	
Mg	24	1	nogas	519.932	2.875	7894854	1.75	500	104.0	70	130	
Al	27	1	nogas	5.442	3.809	127266	1.63	5	108.8	70	130	
K	39	1	nogas	479.631	6.999	17572864	0.35	500	95.9	70	130	
Ti	47	1	nogas	4.916	4.361	9322	2.00	5	98.3	70	130	
V	51	1	nogas	6.353	24.947	996818	2.87	5	127.1	70	130	
Cr	52	1	nogas	4.766	5.694	172278	1.89	5	95.3	70	130	
Mn	55	1	nogas	5.113	4.511	163803	0.32	5	102.3	70	130	
Co	59	1	nogas	5.014	3.490	115287	1.60	5	100.3	70	130	
Ni	60	1	nogas	4.581	6.382	28255	1.72	5	91.6	70	130	
Cu	63	1	nogas	5.748	4.213	72880	1.89	5	115.0	70	130	
Zn	66	1	nogas	4.740	2.617	22020	4.11	5	94.8	70	130	
As	75	1	nogas	3.874	12.362	135862	3.79	5	77.5	70	130	
Sr	88	1	nogas	5.098	3.524	161081	1.32	5	102.0	70	130	
Ag	107	1	nogas	5.043	4.739	74858	0.77	5	100.9	70	130	
Cd	111	1	nogas	4.889	3.933	15434	1.77	5	97.8	70	130	
Sb	121	1	nogas	5.120	3.123	72453	1.15	5	102.4	70	130	
Tl	205	1	nogas	4.578	7.559	107345	4.29	5	91.6	70	130	
Pb	208	1	nogas	5.472	1.413	151170	1.41	5	109.4	70	130	
U	238	1	nogas	4.962	4.789	150940	1.47	5	99.2	70	130	
[Pb]	206	1	nogas	4.963	5.079	38469	3.71	5	99.3	70	130	
[Pb]	207	1	nogas	4.783	4.314	33141	0.19	5	95.7	70	130	
Na	23	2	He	582.491	2.236	1037210	0.69	500	116.5	70	130	
Mg	24	2	He	525.437	1.281	397567	0.77	500	105.1	70	130	
Al	27	2	He	4.806	13.802	3097	10.19	5	96.1	70	130	
K	39	2	He	516.973	0.405	575597	0.29	500	103.4	70	130	
Ca	43	2	He	508.546	13.399	1227	12.35	500	101.7	70	130	
Ca	44	2	He	507.679	3.198	20825	2.10	500	101.5	70	130	
V	51	2	He	4.957	1.329	38334	0.39	5	99.1	70	130	
Cr	52	2	He	5.154	1.334	35300	1.51	5	103.1	70	130	
Mn	55	2	He	5.268	2.878	24597	2.15	5	105.4	70	130	
Fe	56	2	He	519.939	0.459	2837818	1.11	500	104.0	70	130	
Co	59	2	He	5.143	1.772	43050	0.65	5	102.9	70	130	
Ni	60	2	He	5.018	5.893	10927	4.66	5	100.4	70	130	
Cu	63	2	He	5.657	6.087	31287	5.00	5	113.1	70	130	
Zn	66	2	He	5.507	3.264	7338	2.45	5	110.1	70	130	
As	75	2	He	5.033	2.262	6510	1.29	5	100.7	70	130	
Se	78	2	He	5.376	4.828	671	3.68	5	107.5	70	130	
B	11	1	nogas	40.109	9.516	199321	1.39	25	160.4	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	76.639	71.363	1663677	3.35	25	306.6	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	512.646	5.178	20201	1.51	500	102.5	70	130	
Ca	44	1	nogas	493.343	3.200	328222	0.98	500	98.7	70	130	
Fe	56	1	nogas	482.828	4.634	15258147	1.33	500	96.6	70	130	
Se	77	1	nogas	8.729	63.200	37239	5.46	5	174.6	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.338	9.906	1597	5.02	5	106.8	70	130	
Mo	95	1	nogas	4.914	2.789	30703	2.81	5	98.3	70	130	
Sn	118	1	nogas	4.879	6.592	43006	2.44	5	97.6	70	130	
Ba	137	1	nogas	5.092	1.424	24020	4.77	5	101.8	70	130	
Sb	121	2	He	5.231	2.572	28046	2.06	5	104.6	70	130	
Li	7	1	nogas	5.743	14.058	241071	1.48	5	114.9	70	130	
P	31	1	nogas	22.756	12.854	117918	0.59	25	91.0	70	130	
La	139	1	nogas	20.616	51.016	150	24.04	5	412.3	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	175.414	73.411	23	65.47	5	3508.3	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	1590839	7.30	1561049	101.91	70	125	
Ge	72	1	nogas	3757426	3.92	3727881	100.79	70	125	
In	115	1	nogas	3543591	3.89	3493076	101.45	70	125	
Bi	209	1	nogas	2834193	4.06	2658885	106.59	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	928037	1.14	913806	101.56	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	354SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:23:55-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	273CALB.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	1.681	1.681	4.51	12237	0.01	2000	
Na	23	1	nogas	251.379	251.379	11.72	9808416	0.00	200000	
Mg	24	1	nogas	204.999	204.999	5.06	3198061	0.01	200000	
Al	27	1	nogas	2.205	2.205	5.00	67346	0.00	2000	
K	39	1	nogas	178.370	178.370	9.10	11085437	0.00	200000	
Ti	47	1	nogas	1.917	1.917	4.42	3764	0.05	2000	
V	51	1	nogas	1.109	1.109	252.80	862416	0.00	2000	
Cr	52	1	nogas	1.596	1.596	12.60	102725	0.00	2000	
Mn	55	1	nogas	1.940	1.940	5.28	74475	0.00	2000	
Co	59	1	nogas	1.973	1.973	1.10	45536	0.00	2000	
Ni	60	1	nogas	1.321	1.321	4.53	11934	0.01	2000	
Cu	63	1	nogas	2.400	2.400	4.74	33487	0.01	2000	
Zn	66	1	nogas	1.553	1.553	10.27	9429	0.02	2000	
As	75	1	nogas	-0.778	-0.778	-38.24	112991	0.00	2000	
Sr	88	1	nogas	2.041	2.041	3.21	66021	0.00	2000	
Ag	107	1	nogas	1.974	1.974	2.88	29355	0.01	2000	
Cd	111	1	nogas	1.980	1.980	6.41	6348	0.03	2000	
Sb	121	1	nogas	2.019	2.019	3.90	28677	0.01	2000	
Tl	205	1	nogas	1.867	1.867	4.85	43358	0.00	2000	
Pb	208	1	nogas	2.172	2.172	2.33	60188	0.00	2000	
U	238	1	nogas	1.957	1.957	5.82	58779	0.00	2000	
[Pb]	206	1	nogas	1.908	1.908	3.20	14640	0.01	2000	
[Pb]	207	1	nogas	1.920	1.920	3.19	13186	0.01	2000	
Na	23	2	He	250.746	250.746	1.23	572583	0.04	200000	
Mg	24	2	He	208.076	208.076	1.40	158473	0.13	200000	
Al	27	2	He	1.356	1.356	30.16	1633	0.08	2000	
K	39	2	He	191.156	191.156	1.60	313963	0.06	200000	
Ca	43	2	He	180.396	180.396	16.52	450	40.09	200000	
Ca	44	2	He	212.784	212.784	17.23	9104	2.34	200000	
V	51	2	He	1.761	1.761	1.39	20200	0.01	2000	
Cr	52	2	He	2.025	2.025	3.49	16164	0.01	2000	
Mn	55	2	He	2.147	2.147	0.66	10566	0.02	2000	
Fe	56	2	He	206.134	206.134	4.84	1132456	0.02	200000	
Co	59	2	He	2.006	2.006	2.94	16818	0.01	2000	
Ni	60	2	He	1.860	1.860	3.85	4434	0.04	2000	
Cu	63	2	He	2.318	2.318	3.21	14046	0.02	2000	
Zn	66	2	He	2.018	2.018	9.33	2930	0.07	2000	
As	75	2	He	1.927	1.927	4.80	2711	0.07	2000	
Se	78	2	He	1.639	1.639	13.61	293	0.56	2000	
B	11	1	nogas	25.920	25.920	2.76	133897	0.02	2000	
Si	28	1	nogas	-38.263	-38.263	-45.86	1535556	0.00	2000	
Ca	43	1	nogas	199.758	199.758	4.63	8172	2.44	200000	

Sample Report

Ca	44	1	nogas	192.243	192.243	2.73	139172	0.14	200000	
Fe	56	1	nogas	183.243	183.243	3.75	7945772	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-7.990	-7.990	-50.80	33288	-0.02	2000	
Se	82	1	nogas	1.962	1.962	20.65	677	0.29	2000	
Mo	95	1	nogas	1.923	1.923	4.20	12064	0.02	2000	
Sn	118	1	nogas	1.928	1.928	1.41	17846	0.01	2000	
Ba	137	1	nogas	2.016	2.016	3.43	9766	0.02	2000	
Sb	121	2	He	2.033	2.033	1.45	10960	0.02	2000	
La	139	1	nogas	2.158	2.158	307.37	80	2.70	2000	
Au	197	1	nogas	240.131	240.131	110.07	30	800.44	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	1553161	3.46	1561049	99.49	70	125	
Ge	72	1	nogas	3747428	3.02	3727881	100.52	70	125	
In	115	1	nogas	3586812	1.54	3493076	102.68	70	125	
Bi	209	1	nogas	2796455	3.99	2658885	105.17	70	125	
Ge	72	2	He	927628	1.06	913806	101.51	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	355ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:25:53-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.011	67.4	140	32.7	0	ICSA Main CR1 Failed
Na	23	1	nogas	105817.134	8.7	2296406985	0.7	0	
Mg	24	1	nogas	105511.159	8.0	1420939032	0.1	0	
Al	27	1	nogas	98836.200	6.4	1646791975	0.9	0	
K	39	1	nogas	104682.395	5.6	2034995245	0.3	0	
Ti	47	1	nogas	2316.706	7.7	3869689	2.4	0	
V	51	1	nogas	-4.609	-42.5	648248	1.4	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.591	39.4	73153	0.8	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.242	32.3	24296	2.6	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.540	7.7	11554	2.9	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.829	15.1	8575	3.4	0	ICSA Main CR1 Failed
Cu	63	1	nogas	2.165	4.9	27851	3.5	0	
Zn	66	1	nogas	1.332	17.2	7752	8.7	0	ICSA Main CR1 Failed
As	75	1	nogas	0.191	624.1	106507	2.7	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.900	2.9	27805	5.0	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.013	86.1	323	45.9	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.533	7.1	7048	0.6	0	
Sb	121	1	nogas	0.238	12.1	3287	5.8	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.026	39.7	667	23.8	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.078	12.4	2453	10.9	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.093	17.8	657	20.8	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.073	20.3	497	19.8	0	ICSA Main CR1 Failed
Na	23	2	He	106696.426	1.6	133935405	0.2	0	
Mg	24	2	He	105277.205	0.7	70998657	0.8	0	
Al	27	2	He	100306.749	1.4	38061891	0.9	0	
K	39	2	He	100962.396	0.8	81234232	0.8	0	
Ca	43	2	He	103354.995	2.3	219055	1.3	0	
Ca	44	2	He	109024.745	0.6	3881773	1.1	0	
V	51	2	He	-0.377	-7.2	7237	0.6	0	ICSA Main CR1 Failed
Cr	52	2	He	0.275	23.0	4897	5.6	0	ICSA Main CR1 Failed
Mn	55	2	He	0.284	6.2	1963	2.5	0	ICSA Main CR1 Failed
Fe	56	2	He	107810.031	2.4	524224339	1.0	0	
Co	59	2	He	0.306	8.7	2340	7.1	0	ICSA Main CR1 Failed
Ni	60	2	He	0.174	43.1	867	15.3	0	ICSA Main CR1 Failed
Cu	63	2	He	0.492	6.5	4141	3.6	0	ICSA Main CR1 Failed
Zn	66	2	He	0.415	17.2	810	11.1	0	ICSA Main CR1 Failed
As	75	2	He	0.092	45.1	420	9.4	0	ICSA Main CR1 Failed
Se	78	2	He	0.041	575.7	117	19.8	0	ICSA Main CR1 Failed
B	11	1	nogas	16.489	7.0	82787	3.2	0	ICSA Main CR1 Failed
Si	28	1	nogas	408.719	14.1	1828547	2.4	0	
Ca	43	1	nogas	105103.767	7.5	3643910	2.0	0	
Ca	44	1	nogas	104821.583	6.7	59322176	1.3	0	
Fe	56	1	nogas	106515.597	6.3	2344856319	0.8	0	
Se	77	1	nogas	13.729	50.4	34653	1.4	0	
Se	82	1	nogas	0.346	47.4	217	21.8	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2165.063	3.9	12165959	1.6	0	
Sn	118	1	nogas	0.063	10.1	1367	6.0	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.302	11.5	1440	3.7	0	ICSA Main CR1 Failed
Sb	121	2	He	0.243	10.8	1257	8.7	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	96836.874	6.4	130126675	0.9	0	
La	139	1	nogas	59.734	9.6	267	2.2	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	1381963	3.00	1561049	88.53	70	125	
Ge	72	1	nogas	3397067	5.35	3727881	91.13	70	125	
In	115	1	nogas	3125131	6.49	3493076	89.47	70	125	
Bi	209	1	nogas	2331255	5.24	2658885	87.68	70	125	
Ge	72	2	He	830939	1.50	913806	90.93	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	356ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:27:55-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	108.381	5.569	652898	0.45	100	108.4	80	120	
Na	23	1	nogas	122438.368	11.249	2497577856	0.78	100	122438.4	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	121738.136	12.681	1539016068	1.33	100	121738.1	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	102898.400	7.712	1607512243	0.86	100	102898.4	80	120	ICSB Main CR1 Failed
K	39	1	nogas	121661.993	8.019	2215619050	1.48	100	121662.0	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2537.730	9.509	3972185	1.30	100	2537.7	80	120	ICSB Main CR1 Failed
V	51	1	nogas	123.436	8.470	3364297	1.85	100	123.4	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	121.593	9.435	2305256	0.59	100	121.6	80	120	ICSB Main CR1 Failed
Mn	55	1	nogas	121.610	9.029	2908720	1.72	100	121.6	80	120	ICSB Main CR1 Failed
Co	59	1	nogas	121.885	8.964	2362145	1.38	100	121.9	80	120	ICSB Main CR1 Failed
Ni	60	1	nogas	120.988	9.065	516572	0.68	100	121.0	80	120	ICSB Main CR1 Failed
Cu	63	1	nogas	123.505	7.638	1232075	1.15	100	123.5	80	120	ICSB Main CR1 Failed
Zn	66	1	nogas	123.872	7.787	415643	0.99	100	123.9	80	120	ICSB Main CR1 Failed
As	75	1	nogas	124.953	8.594	612524	1.55	100	125.0	80	120	ICSB Main CR1 Failed
Sr	88	1	nogas	123.537	8.505	3248139	0.39	100	123.5	80	120	ICSB Main CR1 Failed
Ag	107	1	nogas	117.864	8.434	1477782	1.06	100	117.9	80	120	
Cd	111	1	nogas	127.873	11.183	333648	2.28	100	127.9	80	120	ICSB Main CR1 Failed
Sb	121	1	nogas	126.260	8.189	1505824	1.05	100	126.3	80	120	ICSB Main CR1 Failed
Tl	205	1	nogas	114.612	4.774	2147521	1.92	100	114.6	80	120	
Pb	208	1	nogas	112.910	0.960	3113507	0.96	100	112.9	80	120	
U	238	1	nogas	137.771	7.834	3347091	1.94	100	137.8	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	122.644	4.115	759308	2.29	100	122.6	80	120	ICSB Main CR1 Failed
[Pb]	207	1	nogas	123.589	5.952	682870	0.81	100	123.6	80	120	ICSB Main CR1 Failed
Na	23	2	He	114163.379	1.886	143566115	0.48	100	114163.4	80	120	ICSB Main CR1 Failed
Mg	24	2	He	113215.261	3.048	76479849	1.42	100	113215.3	80	120	ICSB Main CR1 Failed
Al	27	2	He	97397.833	2.696	37024066	1.45	100	97397.8	80	120	ICSB Main CR1 Failed
K	39	2	He	109193.581	1.704	87843952	1.70	100	109193.6	80	120	
Ca	43	2	He	110724.816	2.670	235107	1.19	100	110724.8	80	120	ICSB Main CR1 Failed
Ca	44	2	He	114296.788	3.378	4076140	1.95	100	114296.8	80	120	ICSB Main CR1 Failed
V	51	2	He	115.264	1.687	595552	0.15	100	115.3	80	120	
Cr	52	2	He	113.079	2.150	623395	0.57	100	113.1	80	120	
Mn	55	2	He	112.751	1.794	455409	0.53	100	112.8	80	120	
Fe	56	2	He	116161.241	2.871	565875738	1.17	100	116161.2	80	120	
Co	59	2	He	113.773	2.733	853099	1.17	100	113.8	80	120	
Ni	60	2	He	115.384	2.936	213366	1.28	100	115.4	80	120	
Cu	63	2	He	116.173	2.742	539858	1.38	100	116.2	80	120	
Zn	66	2	He	114.720	2.523	130369	0.85	100	114.7	80	120	
As	75	2	He	116.194	1.848	127740	0.56	100	116.2	80	120	
Se	78	2	He	114.967	2.859	10562	1.30	100	115.0	80	120	
B	11	1	nogas	562.709	5.695	2045895	0.29	100	562.7	80	120	
Si	28	1	nogas	6378.763	10.208	7185685	1.17	100	6378.8	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	122293.542	7.871	3976687	1.48	100	122293.5	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	121810.607	8.316	64617672	0.47	100	121810.6	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	122428.165	8.504	2525383590	0.34	100	122428.2	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	152.211	12.687	59470	2.48	100	152.2	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	124.856	9.906	28897	3.49	100	124.9	80	120	ICSB Main CR1 Failed
Mo	95	1	nogas	2392.037	7.067	12596027	1.49	100	2392.0	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	123.466	11.937	881122	1.12	100	123.5	80	120	ICSB Main CR1 Failed
Ba	137	1	nogas	124.702	12.427	481746	0.49	100	124.7	80	120	ICSB Main CR1 Failed
Sb	121	2	He	115.853	1.612	555168	0.08	100	115.9	80	120	
La	139	1	nogas	204.840	13.776	723	15.29	100	204.8	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	1295425	5.72	1561049	82.98	70	125	
Ge	72	1	nogas	3191339	8.22	3727881	85.61	70	125	
In	115	1	nogas	2959278	12.39	3493076	84.72	70	125	
Bi	209	1	nogas	2269507	6.42	2658885	85.36	70	125	
Ge	72	2	He	832550	1.68	913806	91.11	70	125	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\010819B.b
Report Comment
Instrument Name G3281A JP11080910

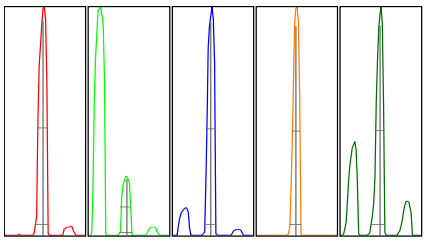
[nogas]

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		8830				NaN	-	
24		19492				NaN	-	
59		20225				NaN	-	
115		19661				NaN	-	
208		11949				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	0.95	5.00				
24	0.80	5.00				
59	0.94	5.00				
115	1.36	5.00				
208	0.84	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	8701	8836	8812	8874	8925
24	19369	19710	19556	19320	19505
59	20522	20294	20153	20035	20120
115	19410	19393	19656	20011	19837
208	11779	12002	12003	12024	11939

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	2470.94	8.95	8.9 - 9.1		0.37	0.470	0.750	
24	5420.88	23.95	23.9 - 24.1		0.37	0.454	0.750	
59	6047.90	58.95	58.9 - 59.1		0.33	0.440	0.750	
115	6148.94	115.00	114.9 - 115.1		0.31	0.444	0.750	
208	3516.20	208.00	207.9 - 208.1		0.33	0.524	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	0.38 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		172				NaN	-	
24		1519				NaN	-	
59		9856				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	7.23	5.00	[F]			
24	0.91	5.00				
59	0.84	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	162	187	162	184	165
24	1536	1520	1522	1498	1519
59	9909	9903	9810	9732	9927

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	47.72	8.95	8.9 - 9.1		0.35	0.485	0.750	
24	421.45	23.95	23.9 - 24.1		0.37	0.445	0.750	
59	3057.46	58.95	58.9 - 59.1		0.32	0.433	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	0.38 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

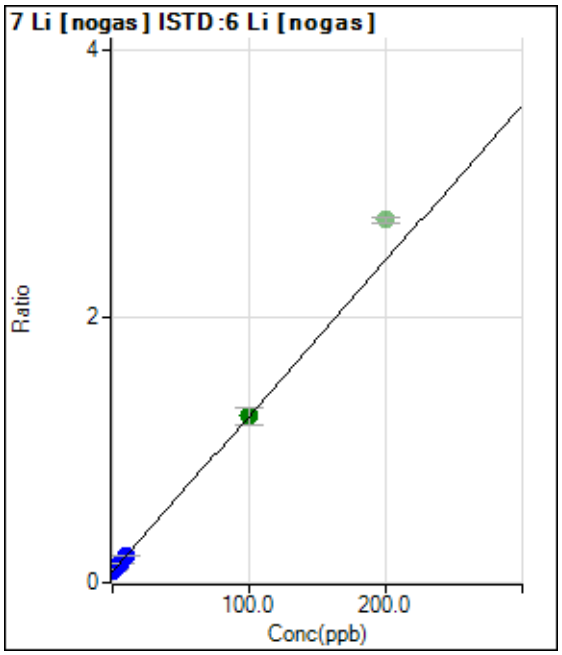
OctP Bias	-18.0 V	He Flow	4.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration for 028_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010919B.b\
Analysis File: 010919B.batch.bin
DA Date-Time: 2019-01-09 19:23:29
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	017CALB.d	CAL BLK	2019-01-09 11:53:39
2	018CALS.d	2/10/200	2019-01-09 11:55:37
3	019CALS.d	5/25/500	2019-01-09 11:57:36
4	020CALS.d	10/50/1000	2019-01-09 11:59:34
5	021CALS.d	100/500/10K	2019-01-09 12:01:32
6	022CALS.d	200/1000/20K	2019-01-09 12:03:29
7			

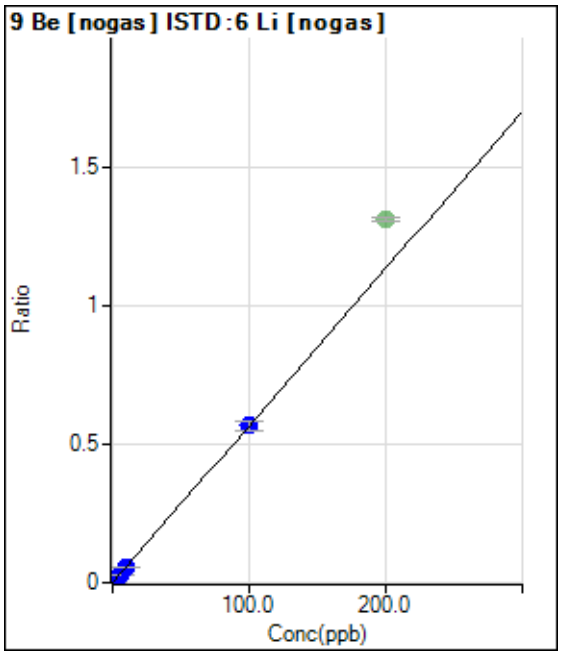
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106994.00	0.0846	P	4.3
2	☐	2.000	2.035	137820.85	0.1084	P	2.5
3	☐	5.000	5.268	185173.66	0.1462	P	5.2
4	☐	10.000	10.366	265590.43	0.2058	P	1.4
5	☐	100.000	99.949	1556520.60	1.2535	A	10.2
6	☑	200.000		3018752.04	2.7281	A	1.4
7	☐	1.000					

y = 0.0117 * x + 0.0846
R = 1.0000
DL = 0.9363
BEC = 7.229

Weight: <None>
Min Conc: <None>

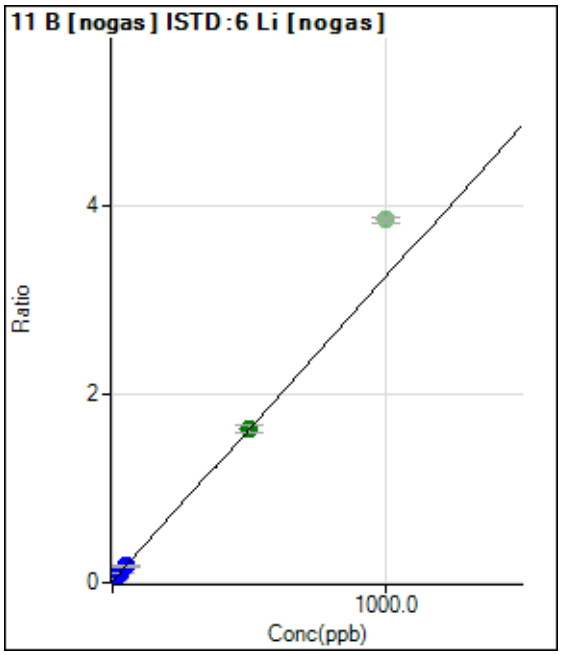


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0002	P	62.7
2	☐	2.000	1.952	14235.48	0.0112	P	6.0
3	☐	5.000	5.044	36348.13	0.0287	P	8.0
4	☐	10.000	9.888	72463.63	0.0562	P	2.2
5	☐	100.000	100.010	704529.23	0.5665	P	5.4
6	☑	200.000		1447760.45	1.3083	A	1.2
7	☐	1.000					

y = 0.0057 * x + 1.5619E-004
R = 1.0000
DL = 0.05191
BEC = 0.02758

Weight: <None>
Min Conc: <None>

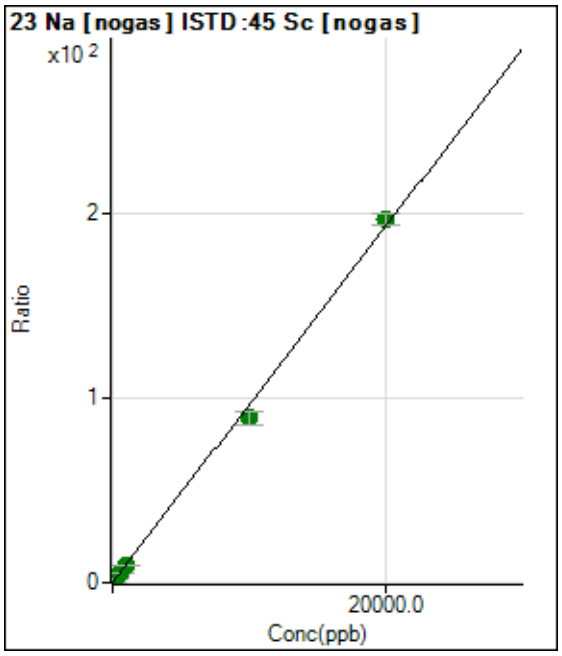
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24339.13	0.0193	P	8.7
2	☐	10.000	9.715	64218.04	0.0506	P	5.0
3	☐	25.000	24.319	123613.63	0.0976	P	6.9
4	☐	50.000	48.300	225701.64	0.1749	P	4.8
5	☐	500.000	500.210	2027888.57	1.6312	A	5.7
6	☑	1000.000		4258091.92	3.8475	A	1.6
7	☐	5.000					

y = 0.0032 * x + 0.0193
R = 1.0000
DL = 1.561
BEC = 5.985

Weight: <None>
Min Conc: <None>

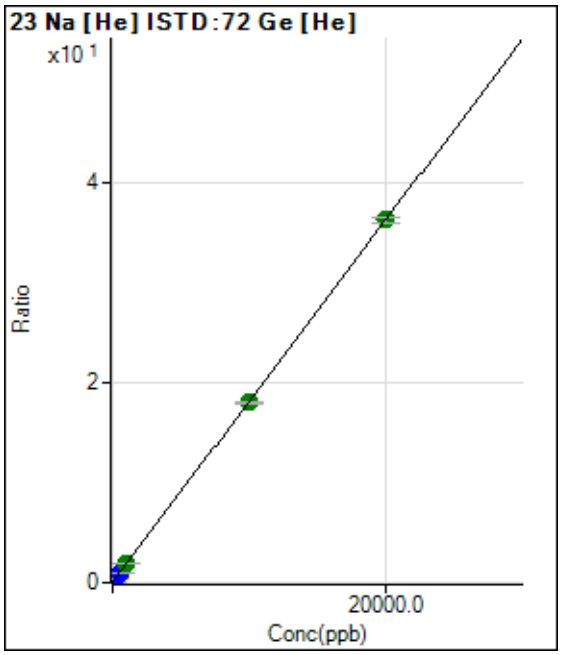


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400158.56	0.1793	P	11.6
2	☐	200.000	207.888	4906227.58	2.1769	A	7.4
3	☐	500.000	506.242	11845798.18	5.0437	A	8.1
4	☐	1000.000	974.010	22632956.76	9.5385	A	2.5
5	☐	10000.00	9231.683	222214671.6	88.8859	A	8.2
6	☐	20000.00	20385.223	452199093.4	196.059	A	3.3
7	☐	100.000					

y = 0.0096 * x + 0.1793
R = 0.9990
DL = 6.494
BEC = 18.66

Weight: <None>
Min Conc: <None>

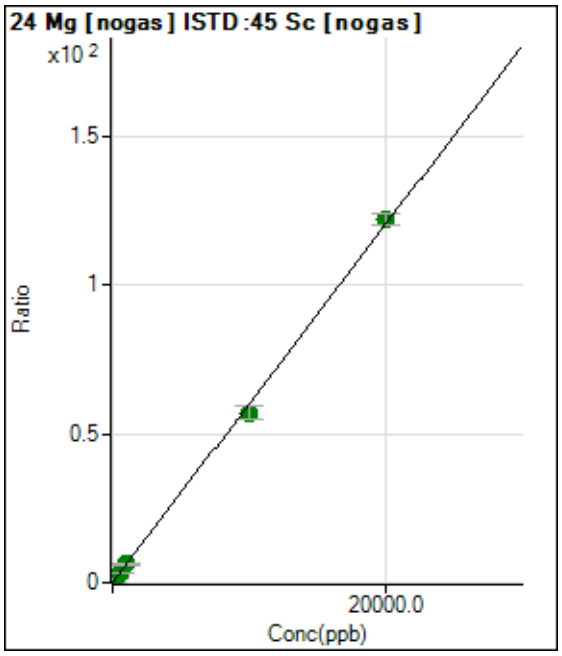
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49474.50	0.0466	P	2.1
2	☐	200.000	200.750	435180.16	0.4093	P	2.3
3	☐	500.000	509.117	1025528.06	0.9666	P	0.2
4	☐	1000.000	1038.261	2032190.75	1.9228	A	1.8
5	☐	10000.00	9945.713	19203630.55	18.0191	A	1.4
6	☐	20000.00	20024.995	37686065.27	36.2329	A	1.6
7	☐	100.000					

y = 0.0018 * x + 0.0466
R = 1.0000
DL = 1.63
BEC = 25.77

Weight: <None>
Min Conc: <None>

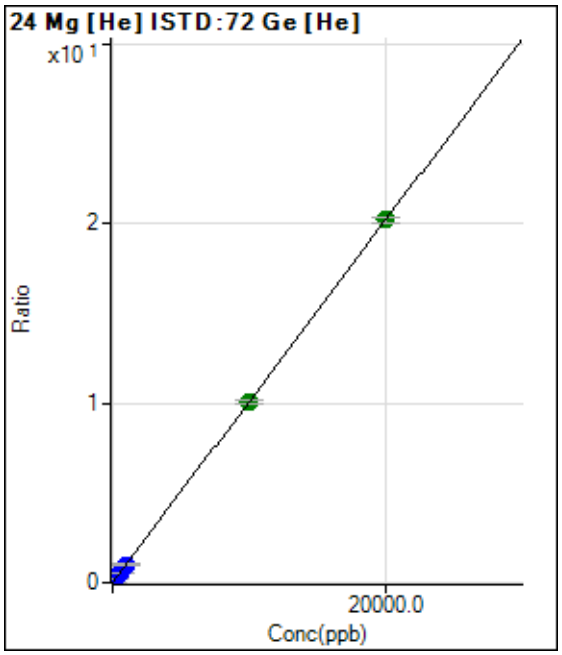


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13941.15	0.0062	P	15.8
2	☐	200.000	224.218	3047284.83	1.3533	A	9.9
3	☐	500.000	541.055	7652662.67	3.2567	A	7.1
4	☐	1000.000	1024.165	14603968.56	6.1591	A	4.9
5	☐	10000.00	9458.330	142076244.8	56.8291	A	8.0
6	☐	20000.00	20268.358	280689981.2	121.772	A	3.2
7	☐	100.000					

y = 0.0060 * x + 0.0062
R = 0.9995
DL = 0.4925
BEC = 1.039

Weight: <None>
Min Conc: <None>

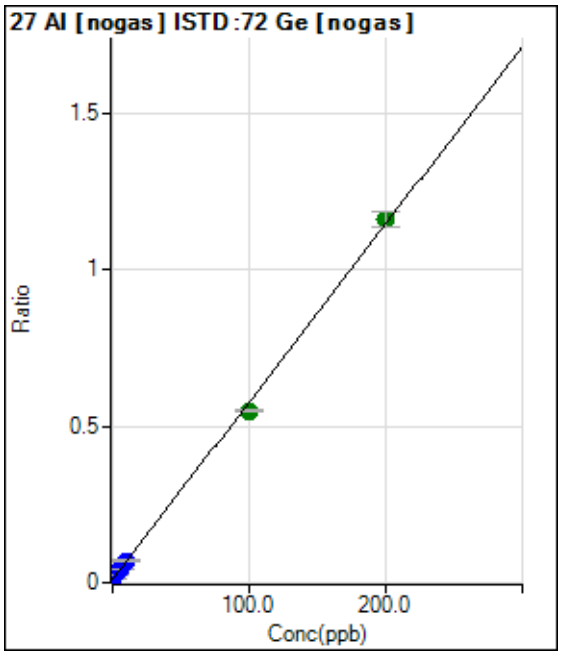
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1110.05	0.0010	P	15.8
2	☐	200.000	204.422	220412.04	0.2073	P	2.5
3	☐	500.000	506.450	543331.54	0.5121	P	0.4
4	☐	1000.000	1002.851	1070663.55	1.0130	P	1.4
5	☐	10000.00	9951.557	10702248.59	10.0429	A	2.3
6	☐	20000.00	20023.874	21017040.11	20.2065	A	1.7
7	☐	100.000					

y = 0.0010 * x + 0.0010
R = 1.0000
DL = 0.4921
BEC = 1.035

Weight: <None>
Min Conc: <None>

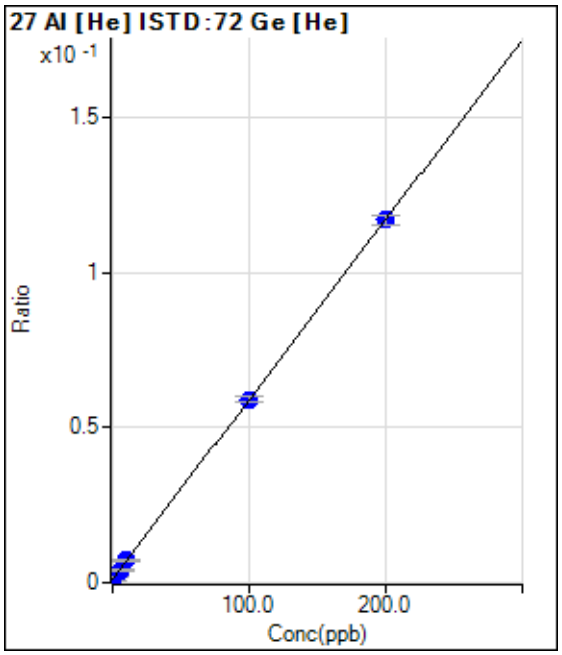


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28508.35	0.0098	P	6.8
2	☐	2.000	2.398	68862.03	0.0234	P	7.0
3	☐	5.000	5.905	128951.61	0.0433	P	4.9
4	☐	10.000	10.535	216877.32	0.0696	P	3.1
5	☐	100.000	94.909	1634964.09	0.5482	A	1.5
6	☐	200.000	202.492	3427008.91	1.1584	A	4.1
7	☐	1.000					

y = 0.0057 * x + 0.0098
R = 0.9995
DL = 0.3549
BEC = 1.733

Weight: <None>
Min Conc: <None>

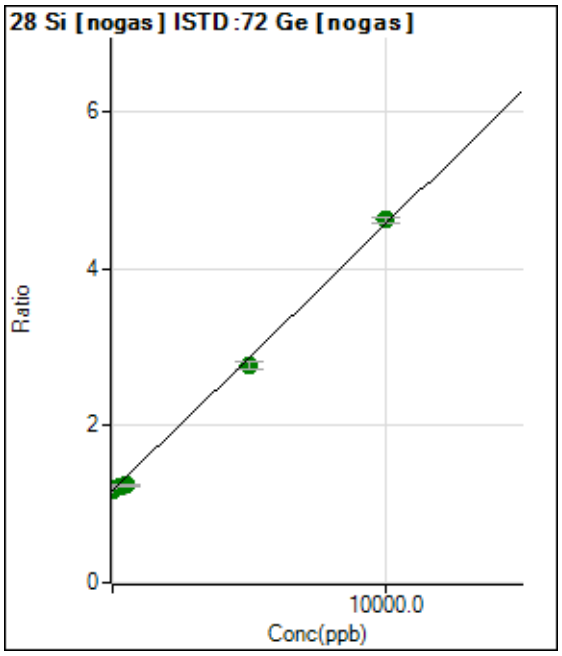
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.450	896.71	0.0008	P	9.2
2	☐	2.000	1.964	2383.52	0.0022	P	6.5
3	☐	5.000	5.007	4247.19	0.0040	P	5.3
4	☐	10.000	10.499	7591.66	0.0072	P	2.9
5	☐	100.000	100.010	62887.53	0.0590	P	3.2
6	☐	200.000	199.970	121580.96	0.1169	P	2.3
7	☐	1.000					

y = 5.7904E-004 * x + 0.0011
R = 1.0000
DL = 0.4003
BEC = 1.907

Weight: <None>
Min Conc: <None>

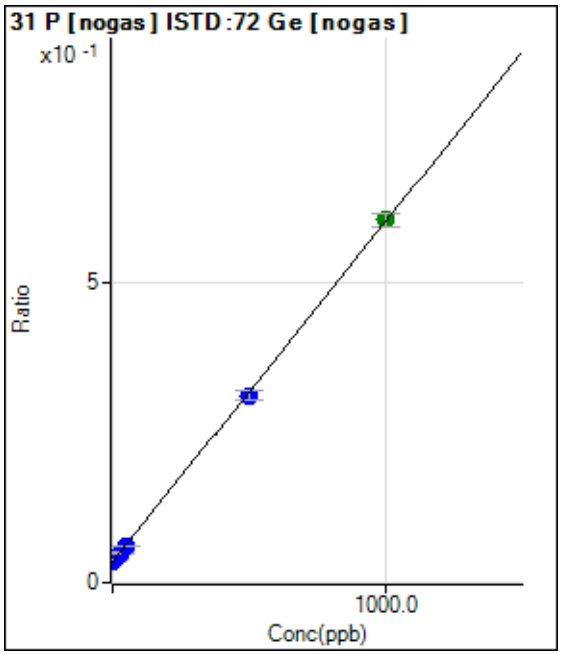


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3401955.99	1.1735	A	7.2
2	☐	100.000	74.335	3522573.38	1.1988	A	7.4
3	☐	250.000	171.864	3668181.30	1.2320	A	3.5
4	☐	500.000	217.159	3887677.75	1.2474	A	1.9
5	☐	5000.000	4717.310	8281308.42	2.7780	A	3.4
6	☐	10000.00	10157.697	13695396.88	4.6283	A	1.4
7	☐	5.000					

y = 3.4011E-004 * x + 1.1735
R = 0.9993
DL = 743.9
BEC = 3450

Weight: <None>
Min Conc: <None>

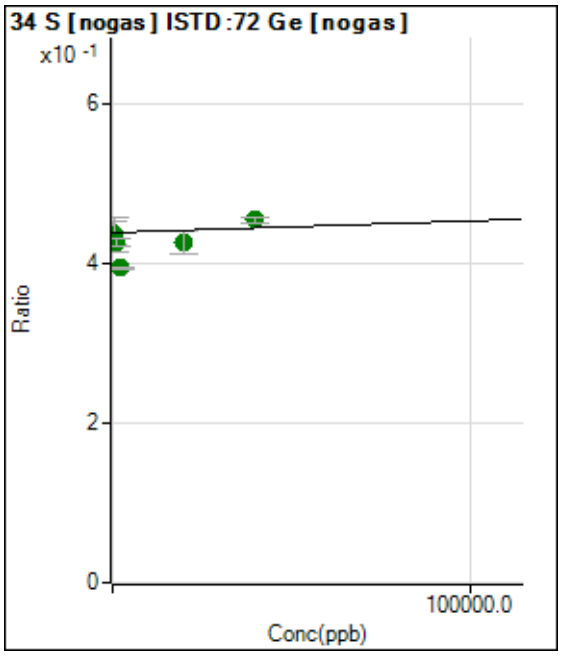
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	101148.91	0.0349	P	5.5
2	☐	10.000	9.138	117777.00	0.0401	P	5.9
3	☐	25.000	24.508	145211.68	0.0488	P	5.0
4	☐	50.000	45.071	188481.92	0.0605	P	2.0
5	☐	500.000	489.640	933041.16	0.3130	P	4.7
6	☐	1000.000	1005.447	1792962.37	0.6061	A	4.0
7	☐	5.000					

y = 5.6811E-004 * x + 0.0349
R = 0.9999
DL = 10.17
BEC = 61.38

Weight: <None>
Min Conc: <None>

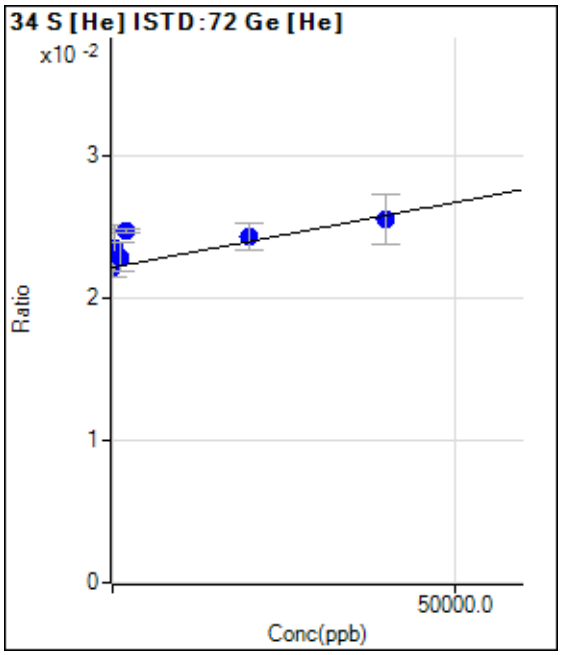


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1271822.81	0.4384	A	6.3
2	☐	400.000	-21304.000	1277741.86	0.4353	A	10.1
3	☐	1000.000	-77662.506	1272000.71	0.4270	A	2.1
4	☐	2000.000	-302025.08	1228202.79	0.3939	A	1.1
5	☐	20000.00	-80536.127	1272182.32	0.4266	A	6.4
6	☐	40000.00	107652.92	1344244.89	0.4543	A	1.6
7	☐	100.000					

y = 1.4726E-007 * x + 0.4384
R = 0.5360
DL = 5.652E+05
BEC = 2.977E+06

Weight: <None>
Min Conc: <None>

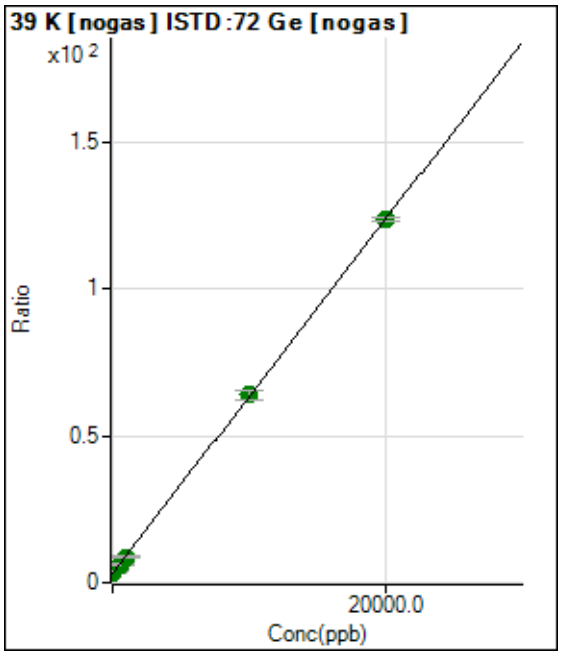
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23585.07	0.0222	P	6.3
2	☐	400.000	14510.876	24988.03	0.0235	P	14.0
3	☐	1000.000	7967.978	24319.72	0.0229	P	8.9
4	☐	2000.000	28689.161	26222.72	0.0248	P	1.2
5	☐	20000.00	23590.425	25954.95	0.0243	P	7.3
6	☐	40000.00	36555.021	26524.06	0.0255	P	13.7
7	☐	100.000					

y = 9.1275E-008 * x + 0.0222
R = 0.7460
DL = 4.589E+04
BEC = 2.431E+05

Weight: <None>
Min Conc: <None>

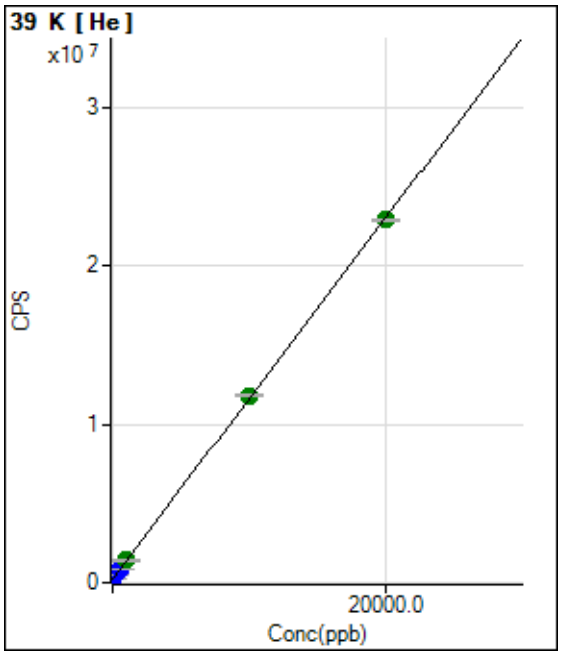


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9182958.80	3.1668	A	6.4
2	☐	200.000	195.005	12758610.44	4.3425	A	7.6
3	☐	500.000	501.550	18431656.66	6.1908	A	3.7
4	☐	1000.000	921.686	27185956.86	8.7239	A	3.2
5	☐	10000.00	10075.649	190492687.5	63.9153	A	4.5
6	☐	20000.00	19966.102	365605774.8	123.547	A	1.2
7	☐	100.000					

y = 0.0060 * x + 3.1668
R = 1.0000
DL = 101.6
BEC = 525.2

Weight: <None>
Min Conc: <None>

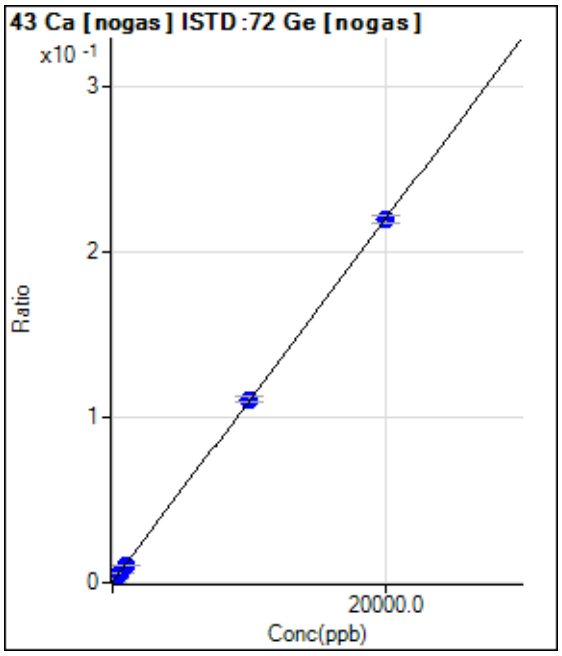
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216445.12		P	1.6
2	☐	200.000	203.986	448890.76		P	0.4
3	☐	500.000	520.431	809486.63		P	1.1
4	☐	1000.000	1041.326	1403057.01		A	2.6
5	☐	10000.00	10187.092	11824843.16		A	0.8
6	☐	20000.00	19903.837	22897270.49		A	0.7
7	☐	100.000					

y = 1139.5203 * x + 216445.1233
R = 0.9999
DL = 8.84
BEC = 189.9

Weight: <None>
Min Conc: <None>

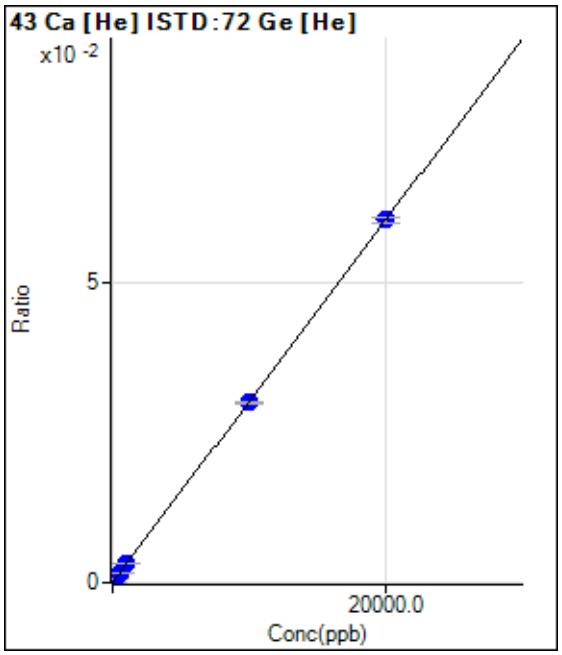


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1063.38	0.0004	P	5.4
2	☐	200.000	192.385	7288.20	0.0025	P	3.1
3	☐	500.000	499.616	17391.72	0.0058	P	7.0
4	☐	1000.000	932.927	33042.89	0.0106	P	2.3
5	☐	10000.00	10083.780	330952.75	0.1110	P	3.3
6	☐	20000.00	19961.549	649171.18	0.2194	P	2.1
7	☐	100.000					

y = 1.0973E-005 * x + 3.6506E-004
R = 1.0000
DL = 5.422
BEC = 33.27

Weight: <None>
Min Conc: <None>

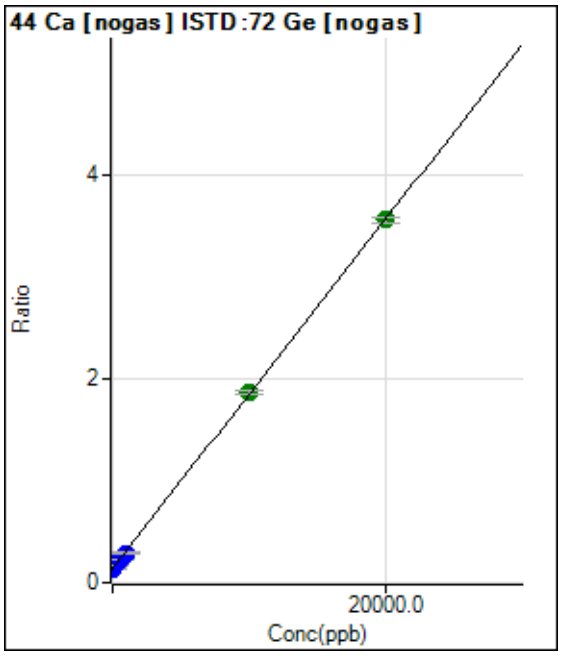
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	12.8
2	☐	200.000	196.763	676.69	0.0006	P	17.0
3	☐	500.000	500.396	1646.76	0.0016	P	1.6
4	☐	1000.000	1052.981	3400.38	0.0032	P	3.3
5	☐	10000.00	9939.253	31977.57	0.0300	P	1.5
6	☐	20000.00	20027.747	62835.38	0.0604	P	1.8
7	☐	100.000					

y = 3.0140E-006 * x + 4.3930E-005
R = 1.0000
DL = 5.581
BEC = 14.57

Weight: <None>
Min Conc: <None>

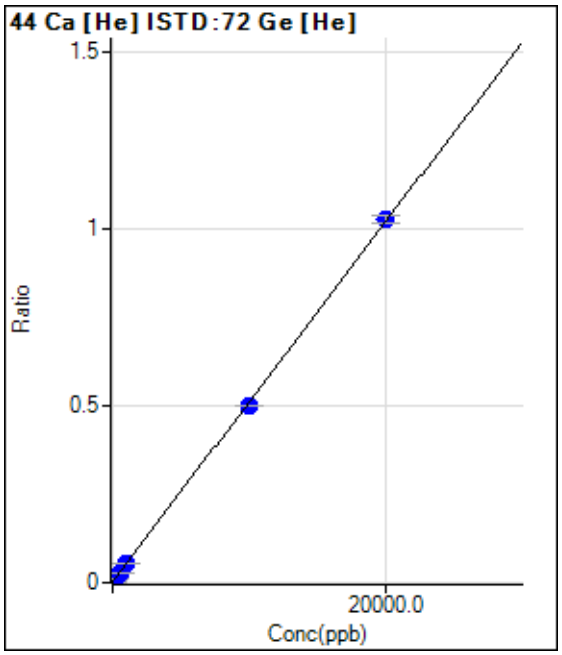


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	401093.39	0.1383	P	5.4
2	☐	200.000	186.838	500522.99	0.1702	P	5.3
3	☐	500.000	487.912	659911.34	0.2217	P	4.5
4	☐	1000.000	891.713	906184.86	0.2908	P	2.8
5	☐	10000.00	10083.886	5555000.75	1.8627	A	2.3
6	☐	20000.00	19963.905	10511568.17	3.5523	A	1.4
7	☐	100.000					

y = 1.7101E-004 * x + 0.1383
R = 1.0000
DL = 130.6
BEC = 808.5

Weight: <None>
Min Conc: <None>

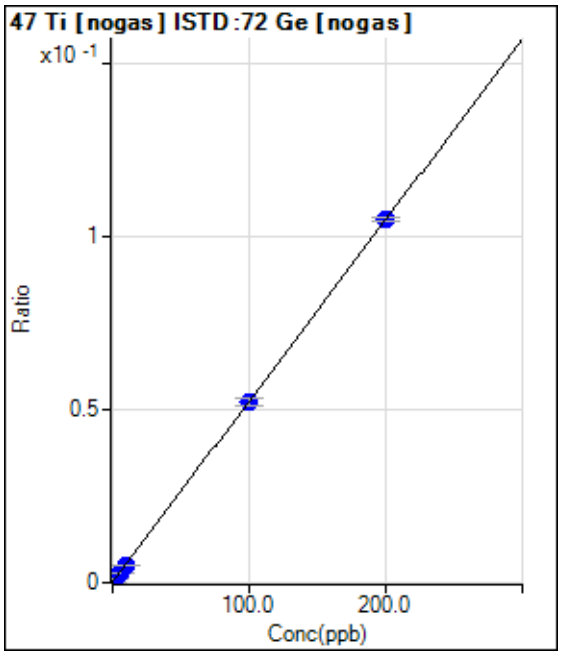
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2816.93	0.0027	P	5.5
2	☐	200.000	203.281	13818.70	0.0130	P	0.7
3	☐	500.000	512.650	30491.87	0.0287	P	4.7
4	☐	1000.000	999.769	56579.23	0.0535	P	1.5
5	☐	10000.00	9758.445	532138.54	0.4993	P	0.3
6	☐	20000.00	20120.440	1067785.30	1.0266	P	2.1
7	☐	100.000					

y = 5.0892E-005 * x + 0.0027
R = 0.9999
DL = 8.637
BEC = 52.1

Weight: <None>
Min Conc: <None>

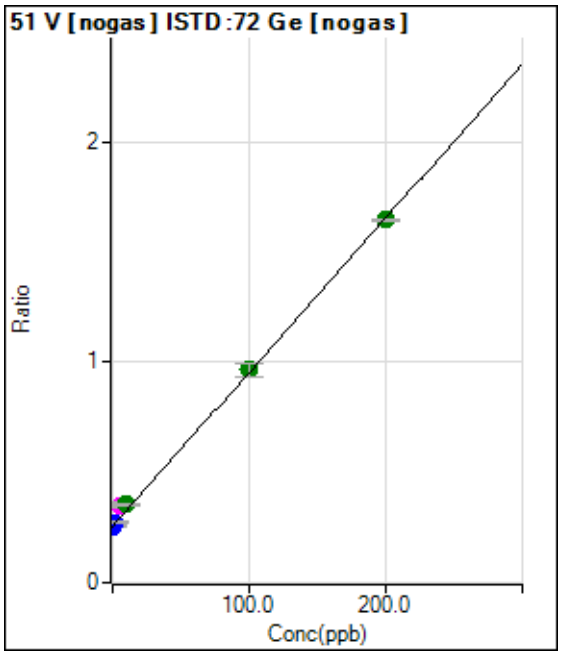


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	423.36	0.0001	P	28.3
2	☐	2.000	1.984	3467.04	0.0012	P	15.5
3	☐	5.000	5.183	8495.41	0.0029	P	4.3
4	☐	10.000	9.495	15923.70	0.0051	P	3.5
5	☐	100.000	99.816	155818.36	0.0523	P	3.9
6	☐	200.000	200.113	309703.23	0.1047	P	1.1
7	☐	1.000					

y = 5.2223E-004 * x + 1.4720E-004
R = 1.0000
DL = 0.2391
BEC = 0.2819

Weight: <None>
Min Conc: <None>

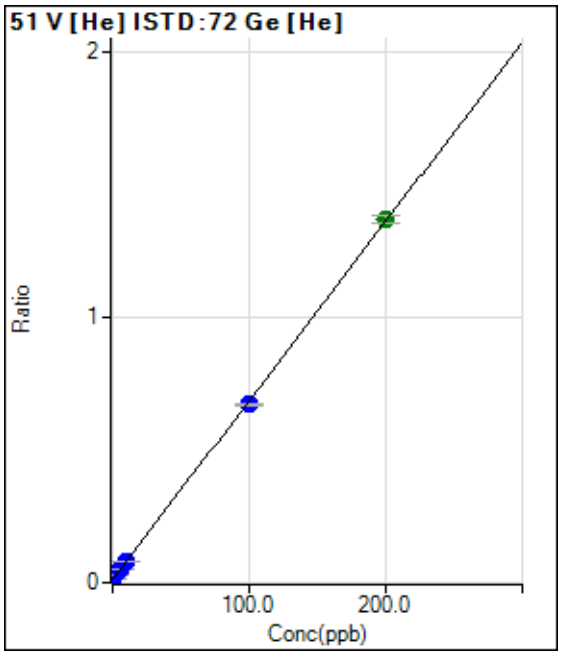
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	743041.29	0.2560	P	4.2
2	☐	2.000	2.613	807108.56	0.2743	P	3.7
3	☐	5.000	13.866	1051372.84	0.3530	M	6.3
4	☐	10.000	14.161	1106503.31	0.3551	A	3.9
5	☐	100.000	101.372	2875995.77	0.9653	A	6.2
6	☐	200.000	198.878	4875490.86	1.6475	A	0.3
7	☐	1.000					

y = 0.0070 * x + 0.2560
R = 0.9992
DL = 4.648
BEC = 36.59

Weight: <None>
Min Conc: <None>

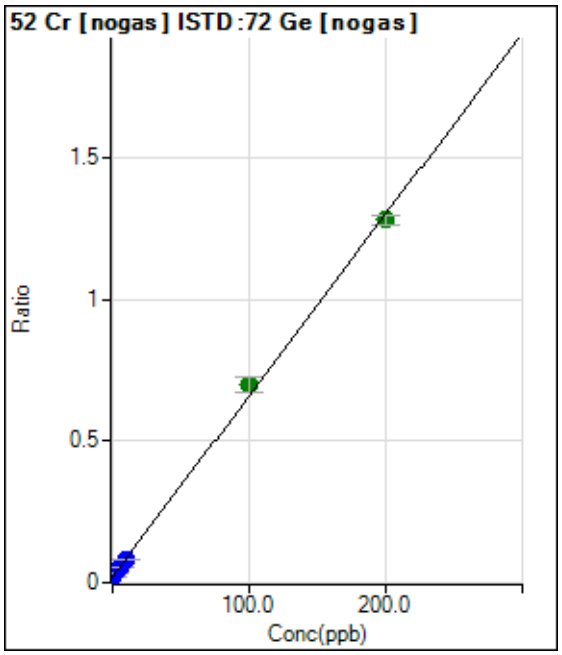


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.258	13795.11	0.0130	P	2.2
2	☐	2.000	2.285	28339.45	0.0267	P	1.6
3	☐	5.000	5.444	50891.64	0.0480	P	1.4
4	☐	10.000	10.020	83324.39	0.0788	P	2.4
5	☐	100.000	98.016	716682.94	0.6725	P	1.4
6	☐	200.000	200.977	1422120.42	1.3671	A	2.2
7	☐	1.000					

y = 0.0067 * x + 0.0112
R = 0.9999
DL = 0.1242
BEC = 1.666

Weight: <None>
Min Conc: <None>

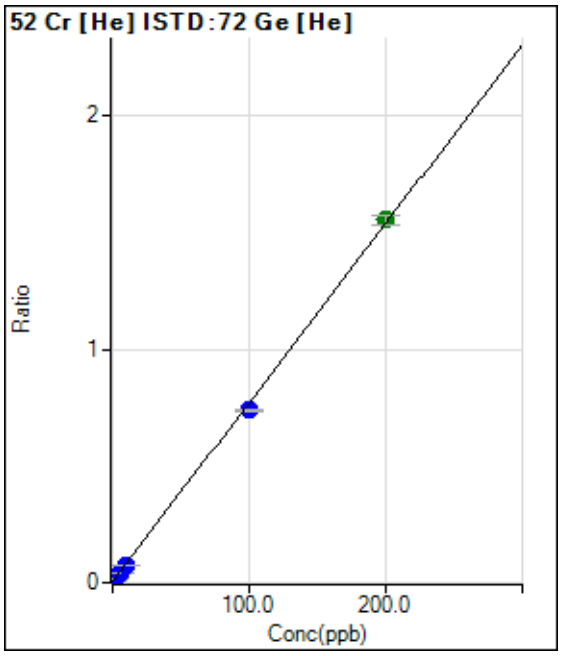
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61113.98	0.0211	P	7.5
2	☐	2.000	1.818	96188.81	0.0327	P	5.0
3	☐	5.000	5.036	158516.98	0.0533	P	6.3
4	☐	10.000	9.214	249261.96	0.0800	P	2.5
5	☐	100.000	106.029	2081526.43	0.6989	A	7.9
6	☐	200.000	197.026	3789212.65	1.2806	A	2.7
7	☐	1.000					

y = 0.0064 * x + 0.0211
R = 0.9993
DL = 0.7438
BEC = 3.298

Weight: <None>
Min Conc: <None>

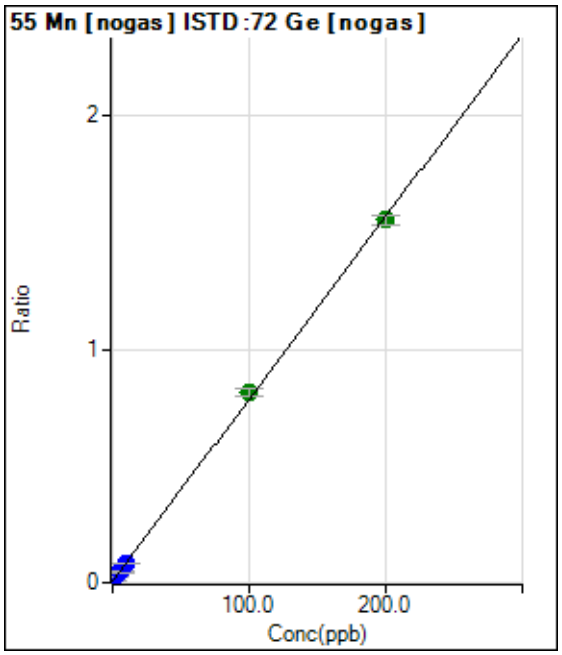


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5257.49	0.0049	P	5.7
2	☐	2.000	1.935	21028.98	0.0198	P	1.9
3	☐	5.000	4.818	44413.48	0.0419	P	1.7
4	☐	10.000	9.482	82027.39	0.0776	P	0.6
5	☐	100.000	95.646	786313.09	0.7378	P	0.2
6	☐	200.000	202.208	1616576.07	1.5542	A	2.6
7	☐	1.000					

y = 0.0077 * x + 0.0049
R = 0.9997
DL = 0.1101
BEC = 0.6456

Weight: <None>
Min Conc: <None>

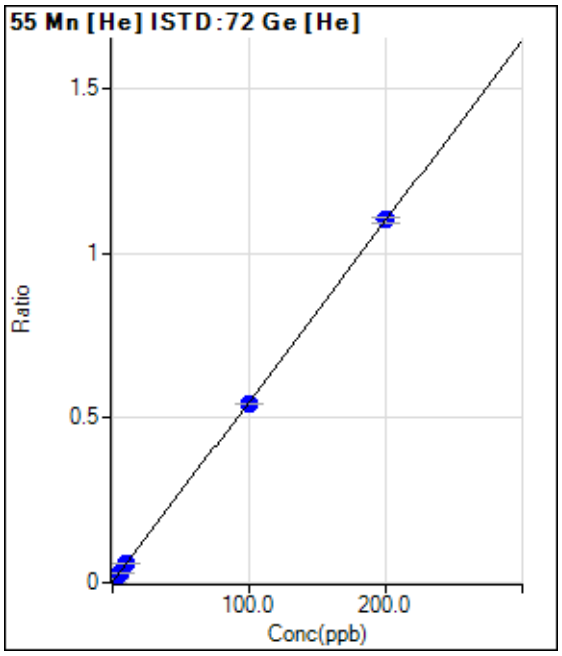
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16514.24	0.0057	P	5.8
2	☐	2.000	2.045	63719.98	0.0217	P	6.1
3	☐	5.000	5.124	136115.59	0.0457	P	4.9
4	☐	10.000	9.680	253503.46	0.0813	P	2.3
5	☐	100.000	103.387	2424969.23	0.8136	A	4.3
6	☐	200.000	198.319	4602395.56	1.5555	A	2.7
7	☐	1.000					

y = 0.0078 * x + 0.0057
R = 0.9998
DL = 0.1276
BEC = 0.7285

Weight: <None>
Min Conc: <None>

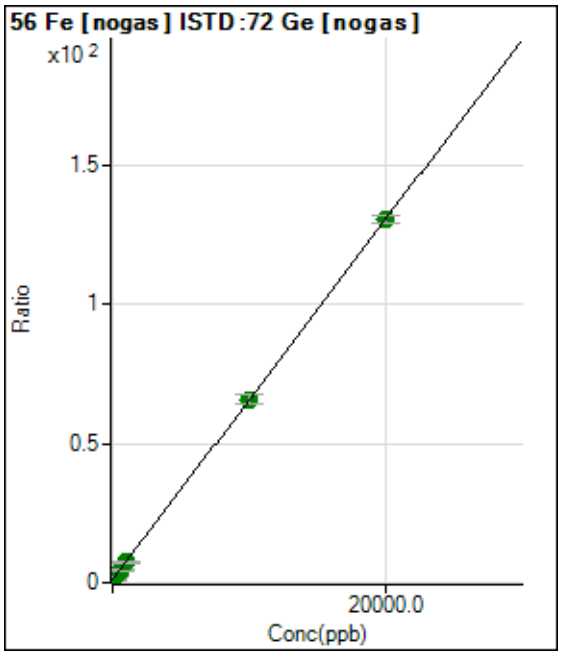


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1403.41	0.0013	P	6.5
2	☐	2.000	2.114	13748.59	0.0129	P	1.0
3	☐	5.000	5.215	31794.30	0.0300	P	2.0
4	☐	10.000	10.371	61599.44	0.0583	P	2.3
5	☐	100.000	98.766	579600.25	0.5438	P	1.0
6	☐	200.000	200.592	1147320.40	1.1031	P	1.6
7	☐	1.000					

y = 0.0055 * x + 0.0013
R = 1.0000
DL = 0.04656
BEC = 0.2404

Weight: <None>
Min Conc: <None>

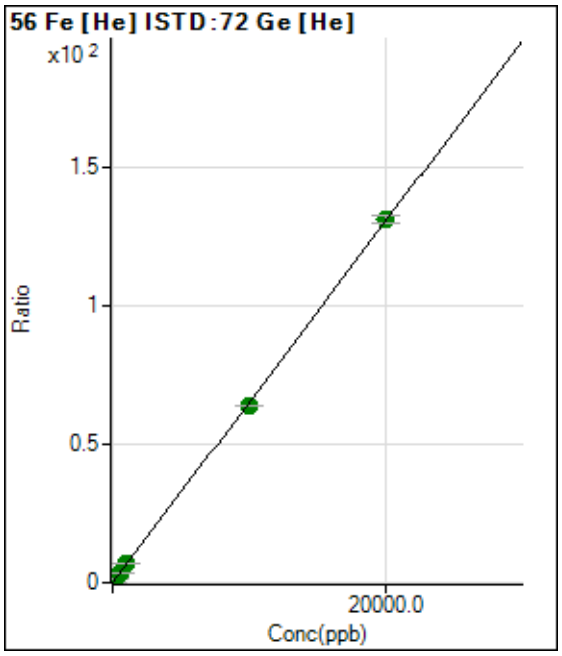
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3061494.79	1.0563	A	7.7
2	☐	200.000	208.935	7072857.19	2.4060	A	6.1
3	☐	500.000	521.216	13170591.44	4.4233	A	3.4
4	☐	1000.000	964.720	22713720.82	7.2882	A	2.5
5	☐	10000.00	10033.482	196313425.2	65.8708	A	5.6
6	☐	20000.00	19984.403	385151641.9	130.152	A	2.2
7	☐	100.000					

y = 0.0065 * x + 1.0563
R = 1.0000
DL = 37.65
BEC = 163.5

Weight: <None>
Min Conc: <None>

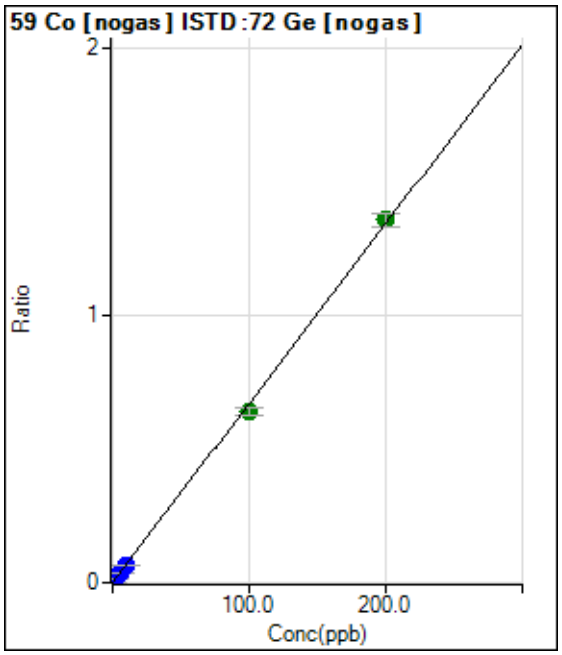


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18970.02	0.0179	P	3.6
2	☐	200.000	207.057	1451797.58	1.3655	A	1.6
3	☐	500.000	509.489	3537292.76	3.3339	A	1.0
4	☐	1000.000	1023.752	7060975.73	6.6810	A	2.8
5	☐	10000.00	9803.739	68025277.32	63.8259	A	0.3
6	☐	20000.00	20096.635	136067977.9	130.817	A	2.0
7	☐	100.000					

y = 0.0065 * x + 0.0179
R = 0.9999
DL = 0.2941
BEC = 2.743

Weight: <None>
Min Conc: <None>

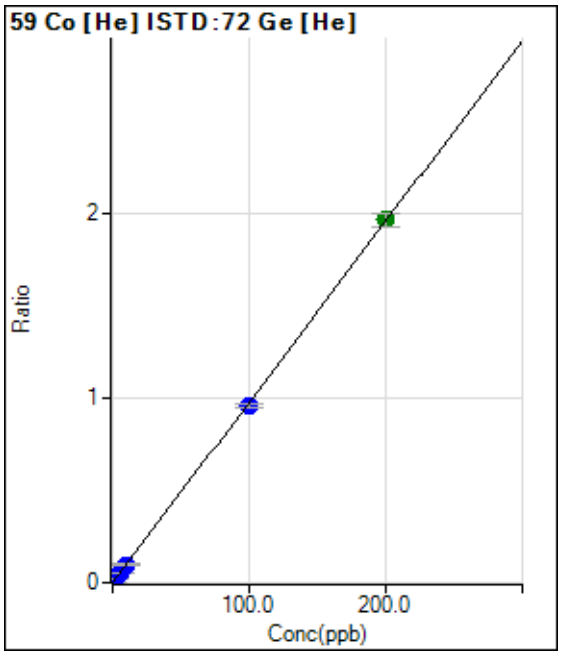
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	823.37	0.0003	P	11.2
2	☐	2.000	2.074	41781.19	0.0142	P	5.0
3	☐	5.000	5.127	103299.85	0.0347	P	4.5
4	☐	10.000	9.615	202014.35	0.0648	P	2.4
5	☐	100.000	95.399	1912202.32	0.6407	A	3.7
6	☐	200.000	202.316	4018670.04	1.3584	A	3.5
7	☐	1.000					

y = 0.0067 * x + 2.8259E-004
R = 0.9996
DL = 0.01419
BEC = 0.0421

Weight: <None>
Min Conc: <None>

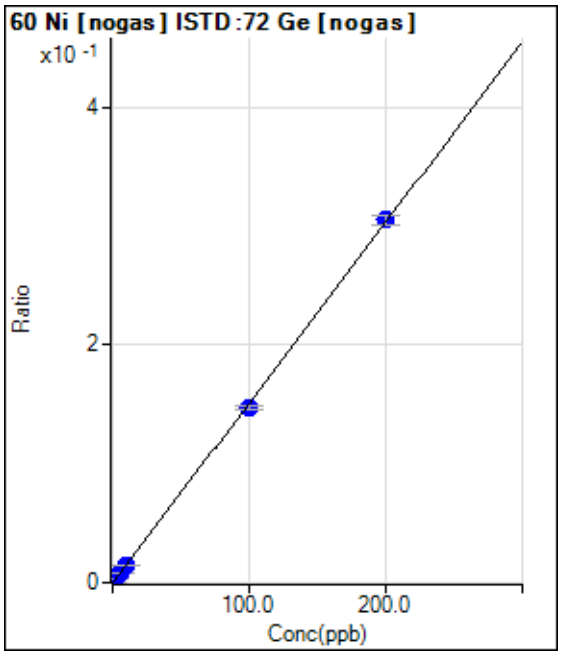


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.67	0.0002	P	5.9
2	☐	2.000	2.018	21215.88	0.0200	P	1.9
3	☐	5.000	4.997	52137.32	0.0491	P	1.9
4	☐	10.000	10.056	104317.43	0.0987	P	3.6
5	☐	100.000	98.093	1024543.92	0.9614	P	1.6
6	☐	200.000	200.951	2047924.76	1.9692	A	4.1
7	☐	1.000					

y = 0.0098 * x + 1.7564E-004
R = 0.9999
DL = 0.003194
BEC = 0.01792

Weight: <None>
Min Conc: <None>

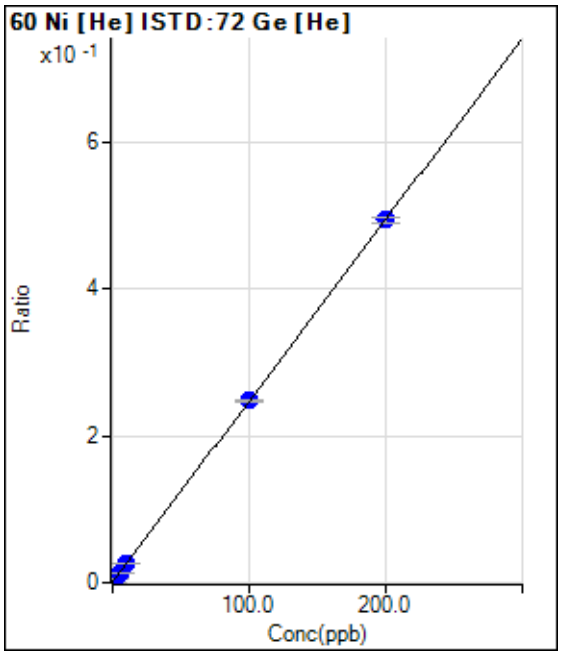
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.448	550.02	0.0002	P	25.5
2	☐	2.000	2.500	9719.39	0.0033	P	4.0
3	☐	5.000	5.742	24476.64	0.0082	P	2.9
4	☐	10.000	9.719	44410.78	0.0142	P	2.1
5	☐	100.000	97.202	438056.41	0.1469	P	2.8
6	☐	200.000	201.390	902154.28	0.3049	P	2.8
7	☐	1.000					

y = 0.0015 * x - 4.8842E-004
R = 0.9998
DL = 0.09622
BEC = -0.3221

Weight: <None>
Min Conc: <None>

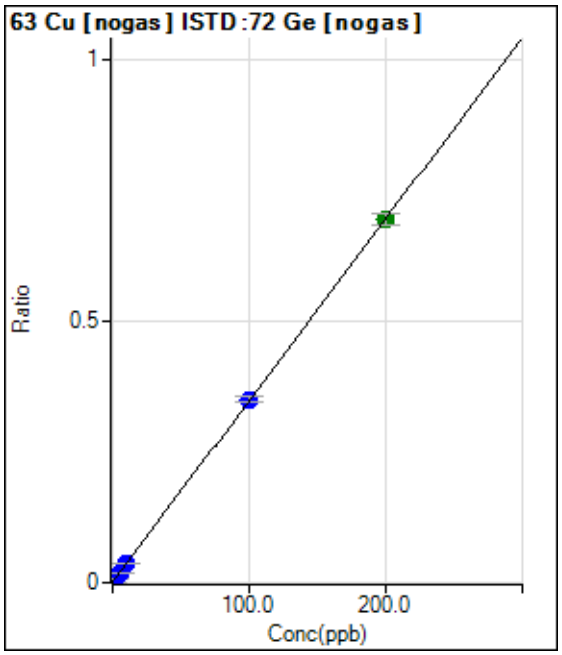


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.110	203.33	0.0002	P	18.0
2	☐	2.000	1.934	5564.25	0.0052	P	6.6
3	☐	5.000	5.116	13882.04	0.0131	P	0.9
4	☐	10.000	10.027	26629.64	0.0252	P	2.7
5	☐	100.000	100.073	263576.10	0.2473	P	2.0
6	☐	200.000	199.960	513546.32	0.4937	P	1.5
7	☐	1.000					

y = 0.0025 * x + 4.6217E-004
R = 1.0000
DL = 0.04196
BEC = 0.1874

Weight: <None>
Min Conc: <None>

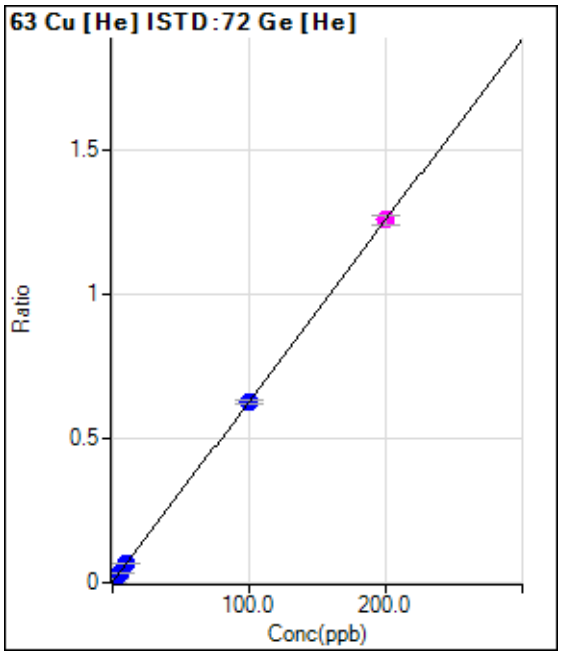
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2896.95	0.0010	P	10.6
2	☐	2.000	2.109	24416.61	0.0083	P	6.6
3	☐	5.000	5.382	58514.20	0.0196	P	3.1
4	☐	10.000	9.874	109741.63	0.0352	P	1.2
5	☐	100.000	100.803	1044266.55	0.3502	P	2.5
6	☐	200.000	199.594	2049869.97	0.6925	A	3.3
7	☐	1.000					

y = 0.0035 * x + 9.9924E-004
R = 1.0000
DL = 0.0921
BEC = 0.2884

Weight: <None>
Min Conc: <None>

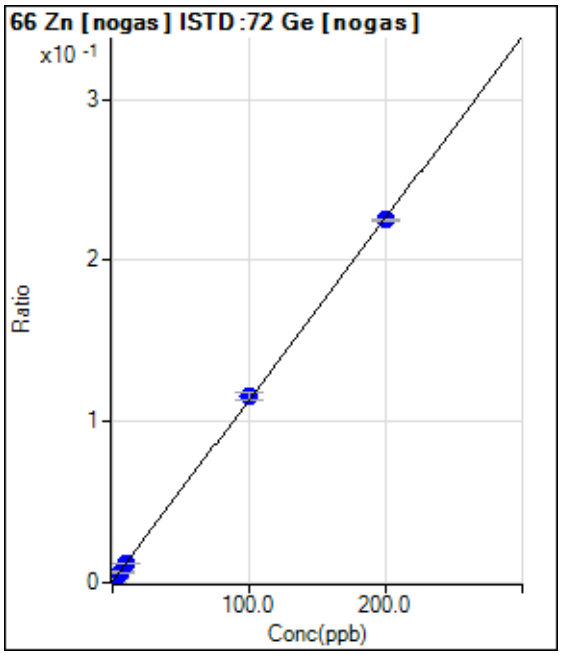


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.066	1036.71	0.0010	P	10.9
2	☐	2.000	1.984	14679.39	0.0138	P	1.0
3	☐	5.000	5.159	35735.11	0.0337	P	3.2
4	☐	10.000	10.229	69150.26	0.0654	P	1.8
5	☐	100.000	99.418	664732.91	0.6238	P	2.7
6	☐	200.000	200.276	1305411.47	1.2552	M	2.9
7	☐	1.000					

y = 0.0063 * x + 0.0014
R = 1.0000
DL = 0.05117
BEC = 0.2213

Weight: <None>
Min Conc: <None>

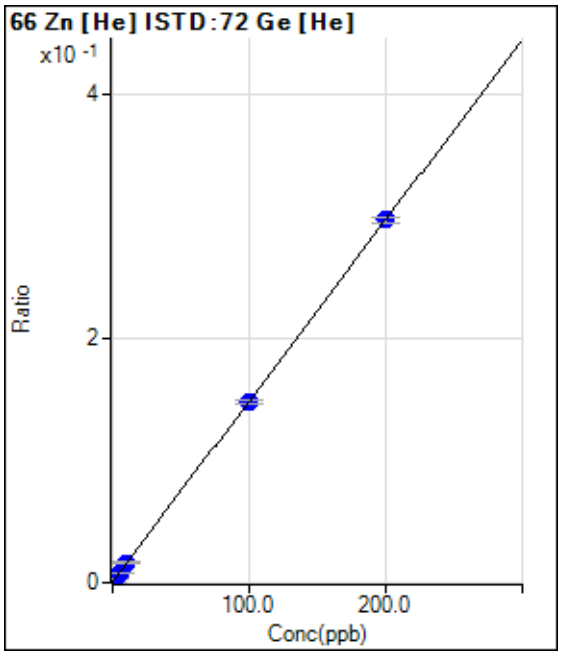
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.456	880.03	0.0003	P	3.5
2	☐	2.000	1.674	7955.18	0.0027	P	5.5
3	☐	5.000	5.053	19363.89	0.0065	P	7.8
4	☐	10.000	9.701	36633.65	0.0118	P	0.6
5	☐	100.000	102.022	345186.43	0.1158	P	3.7
6	☐	200.000	199.006	666163.86	0.2251	P	0.8
7	☐	1.000					

y = 0.0011 * x + 8.1705E-004
R = 0.9999
DL = 0.028
BEC = 0.725

Weight: <None>
Min Conc: <None>

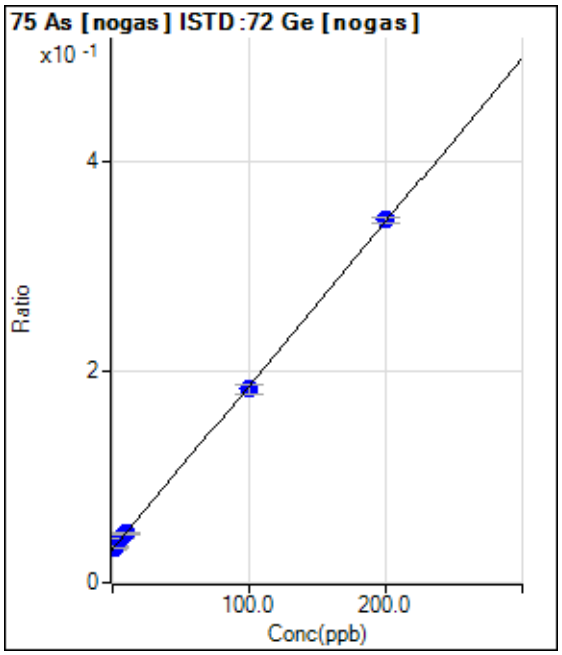


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.241	316.68	0.0003	P	20.5
2	☐	2.000	1.962	3787.11	0.0036	P	4.6
3	☐	5.000	5.014	8572.13	0.0081	P	8.4
4	☐	10.000	10.556	17215.01	0.0163	P	3.8
5	☐	100.000	99.473	157723.67	0.1480	P	1.6
6	☐	200.000	200.236	309181.40	0.2972	P	1.3
7	☐	1.000					

y = 0.0015 * x + 6.5435E-004
R = 1.0000
DL = 0.1235
BEC = 0.4418

Weight: <None>
Min Conc: <None>

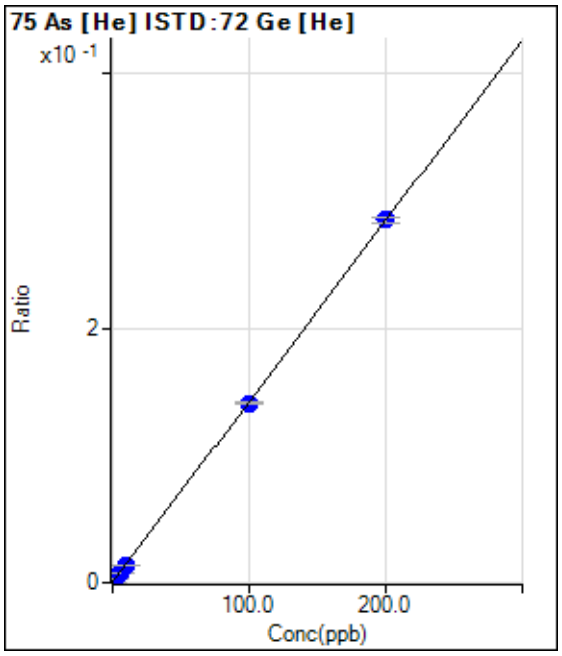
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.462	93833.47	0.0323	P	4.1
2	☐	2.000	1.178	98386.97	0.0334	P	4.0
3	☐	5.000	6.662	124890.53	0.0420	P	4.1
4	☐	10.000	9.903	146425.51	0.0470	P	2.2
5	☐	100.000	97.648	546018.13	0.1832	P	4.0
6	☐	200.000	201.147	1017420.11	0.3438	P	1.8
7	☐	1.000					

y = 0.0016 * x + 0.0316
R = 0.9998
DL = 2.554
BEC = 20.37

Weight: <None>
Min Conc: <None>

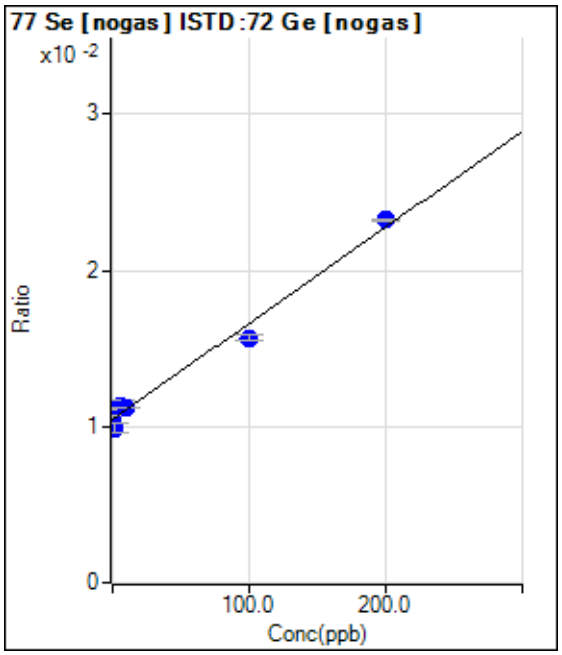


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	414.45	0.0004	P	11.8
2	☐	2.000	1.859	3216.97	0.0030	P	4.8
3	☐	5.000	4.983	7910.64	0.0075	P	2.7
4	☐	10.000	9.626	14837.16	0.0140	P	2.9
5	☐	100.000	98.917	149901.26	0.1407	P	0.9
6	☐	200.000	200.562	296210.76	0.2848	P	1.7
7	☐	1.000					

y = 0.0014 * x + 3.9011E-004
R = 1.0000
DL = 0.09721
BEC = 0.2751

Weight: <None>
Min Conc: <None>

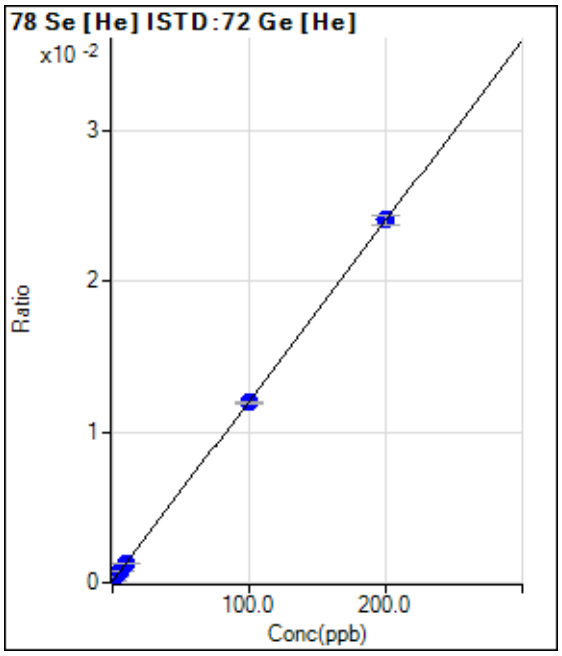
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30408.91	0.0105	P	4.4
2	☐	2.000	-9.694	29049.99	0.0099	P	6.1
3	☐	5.000	14.352	33804.99	0.0114	P	5.5
4	☐	10.000	11.649	34896.99	0.0112	P	0.5
5	☐	100.000	84.579	46753.49	0.0157	P	2.2
6	☐	200.000	207.511	68783.13	0.0232	P	0.7
7	☐	1.000					

y = 6.1519E-005 * x + 0.0105
R = 0.9928
DL = 22.53
BEC = 170.3

Weight: <None>
Min Conc: <None>

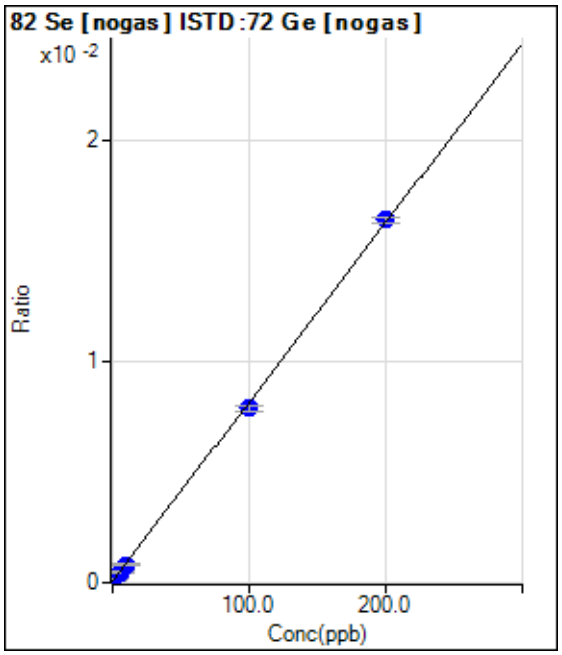


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.275	144.67	0.0001	P	12.2
2	☐	2.000	2.116	378.68	0.0004	P	3.3
3	☐	5.000	5.195	768.69	0.0007	P	5.5
4	☐	10.000	9.877	1357.39	0.0013	P	1.2
5	☐	100.000	99.076	12736.46	0.0120	P	0.8
6	☐	200.000	200.462	25037.16	0.0241	P	2.4
7	☐	1.000					

y = 1.1957E-004 * x + 1.0323E-004
R = 1.0000
DL = 0.417
BEC = 0.8633

Weight: <None>
Min Conc: <None>

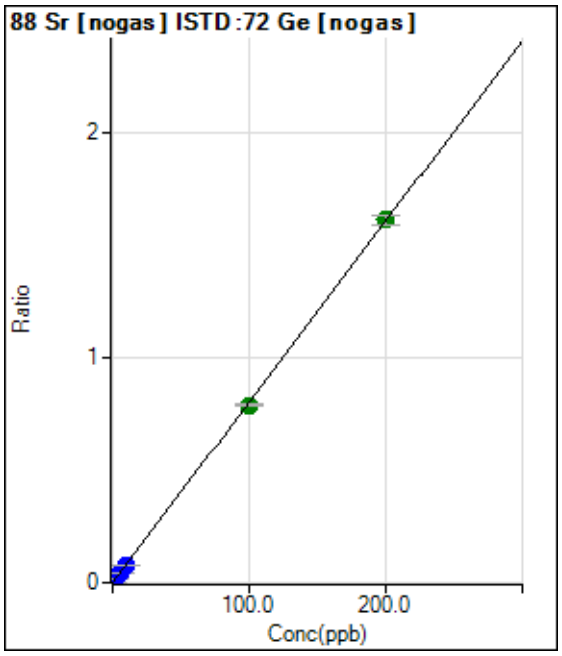
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	12.8
2	☐	2.000	2.016	680.02	0.0002	P	19.3
3	☐	5.000	4.986	1406.74	0.0005	P	5.5
4	☐	10.000	9.286	2560.22	0.0008	P	3.4
5	☐	100.000	96.666	23535.57	0.0079	P	3.5
6	☐	200.000	201.703	48525.20	0.0164	P	1.8
7	☐	1.000					

y = 8.0959E-005 * x + 6.9048E-005
R = 0.9998
DL = 0.3285
BEC = 0.8529

Weight: <None>
Min Conc: <None>

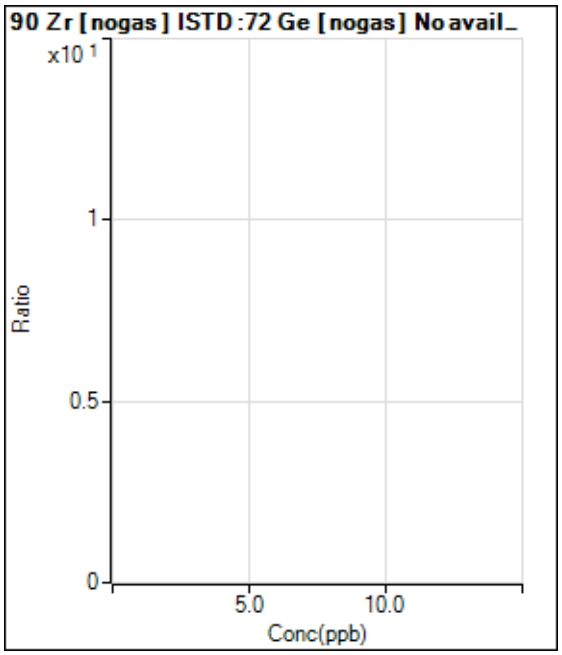


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1060.05	0.0004	P	4.6
2	☐	2.000	2.054	49388.07	0.0168	P	9.0
3	☐	5.000	5.059	121744.99	0.0409	P	3.7
4	☐	10.000	9.711	243564.64	0.0782	P	4.8
5	☐	100.000	98.374	2351530.75	0.7885	A	1.5
6	☐	200.000	200.825	4762020.24	1.6092	A	2.6
7	☐	1.000					

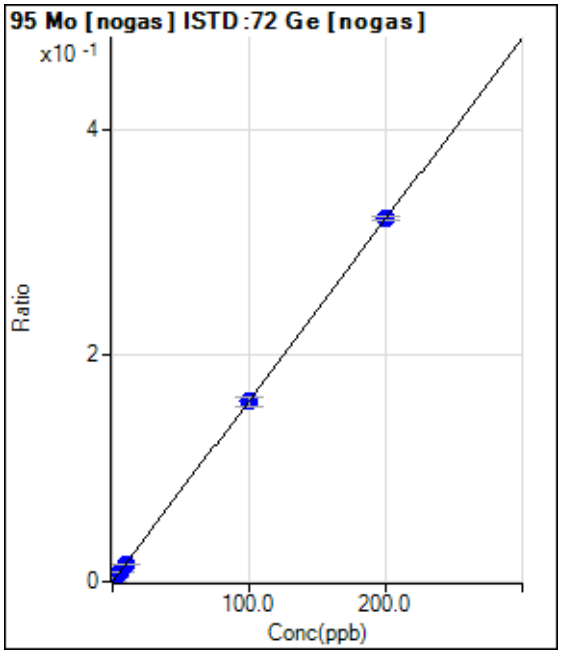
y = 0.0080 * x + 3.6512E-004
R = 1.0000
DL = 0.006337
BEC = 0.04558

Weight: <None>
Min Conc: <None>

Calibration for 028_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					

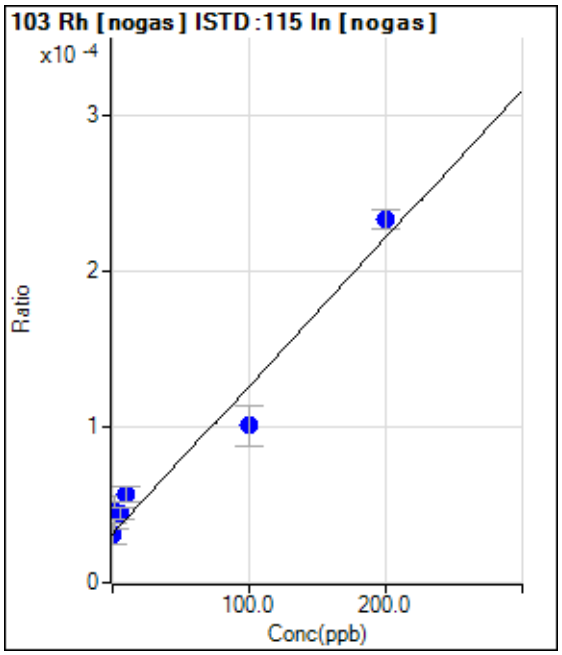


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	26.1
2	☐	2.000	1.976	9519.37	0.0032	P	5.8
3	☐	5.000	4.905	23609.17	0.0079	P	4.7
4	☐	10.000	9.591	48125.25	0.0154	P	5.0
5	☐	100.000	99.646	476266.07	0.1598	P	5.4
6	☐	200.000	200.200	949882.62	0.3210	P	1.0
7	☐	1.000					

y = 0.0016 * x + 6.9519E-005
R = 1.0000
DL = 0.0339
BEC = 0.04337

Weight: <None>
Min Conc: <None>

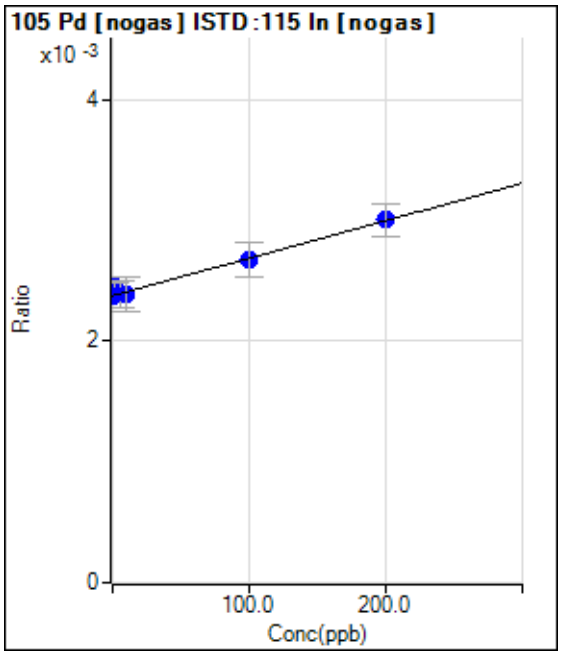
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0000	P	43.7
2	☐	2.000	14.822	116.67	0.0000	P	46.4
3	☐	5.000	14.075	120.00	0.0000	P	17.7
4	☐	10.000	27.220	153.33	0.0001	P	17.8
5	☐	100.000	73.381	276.68	0.0001	P	25.5
6	☐	200.000	212.093	616.69	0.0002	P	5.4
7	☐	1.000					

y = 9.5145E-007 * x + 3.1397E-005
R = 0.9804
DL = 43.29
BEC = 33

Weight: <None>
Min Conc: <None>

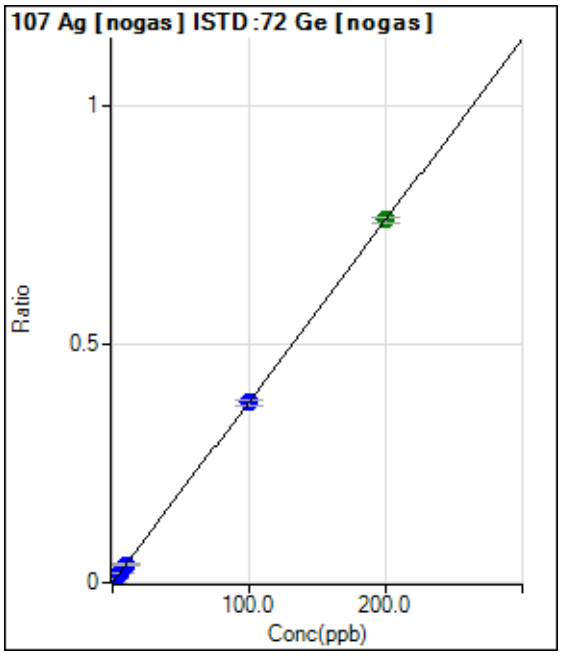


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6187.87	0.0024	P	2.1
2	☐	2.000	25.273	6477.98	0.0025	P	2.8
3	☐	5.000	3.684	6354.60	0.0024	P	8.9
4	☐	10.000	1.767	6384.60	0.0024	P	12.1
5	☐	100.000	96.564	7331.69	0.0027	P	10.7
6	☐	200.000	201.930	7951.97	0.0030	P	9.1
7	☐	1.000					

y = 3.1110E-006 * x + 0.0024
R = 0.9909
DL = 47.68
BEC = 764.4

Weight: <None>
Min Conc: <None>

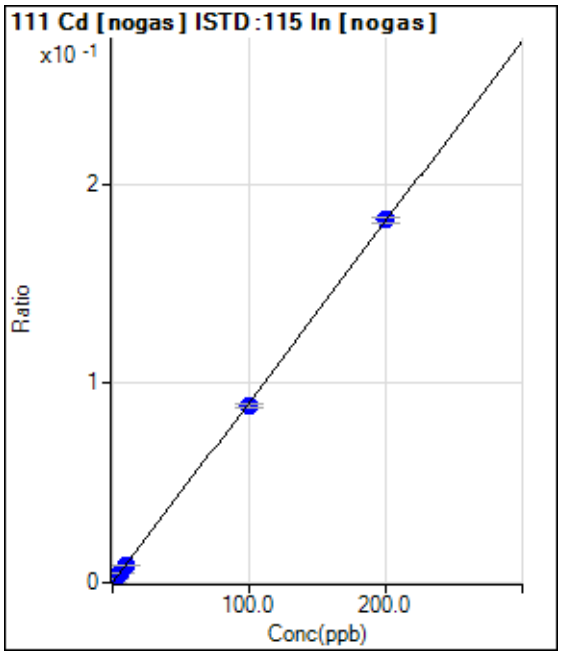
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.00	0.0000	P	34.1
2	☐	2.000	2.074	23345.66	0.0079	P	4.6
3	☐	5.000	5.242	59540.65	0.0200	P	4.1
4	☐	10.000	10.010	118894.83	0.0381	P	2.1
5	☐	100.000	99.568	1130301.21	0.3791	P	2.9
6	☐	200.000	200.209	2256172.52	0.7623	A	1.6
7	☐	1.000					

y = 0.0038 * x + 3.7764E-005
R = 1.0000
DL = 0.01013
BEC = 0.009919

Weight: <None>
Min Conc: <None>

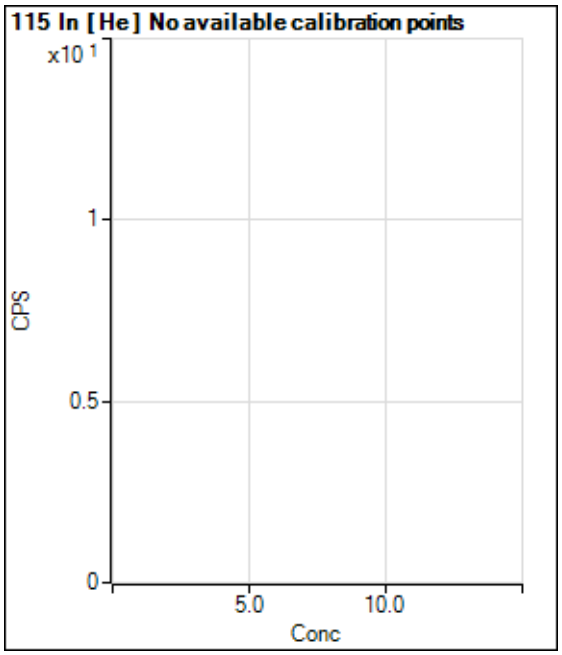


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	43.9
2	☐	2.000	2.068	4947.44	0.0019	P	7.4
3	☐	5.000	5.237	12641.36	0.0048	P	8.5
4	☐	10.000	9.942	24173.58	0.0090	P	2.3
5	☐	100.000	98.139	243834.17	0.0889	P	2.8
6	☐	200.000	200.927	481596.95	0.1821	P	1.2
7	☐	1.000					

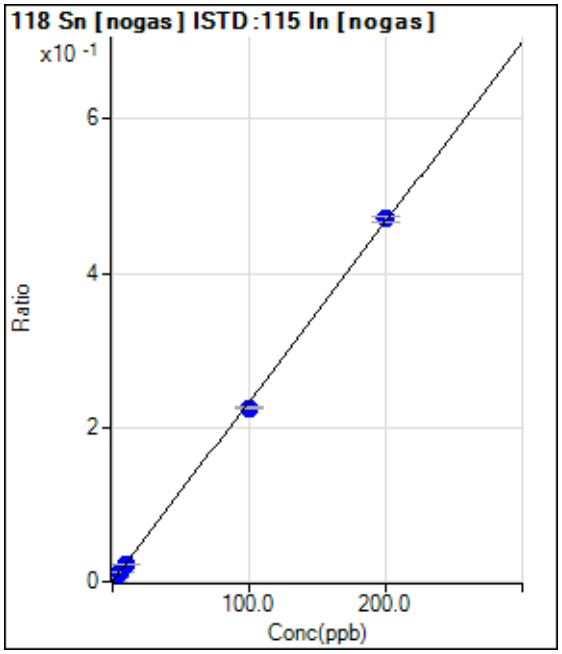
y = 9.0621E-004 * x + 7.5203E-006
R = 0.9999
DL = 0.01093
BEC = 0.008299

Weight: <None>
Min Conc: <None>

Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1484817.94		A	2.9
2	☐			1494913.49		A	2.7
3	☐			1473868.25		A	2.4
4	☐			1465491.49		A	2.2
5	☐			1420355.36		A	1.4
6	☐			1430930.30		A	2.7
7	☐						

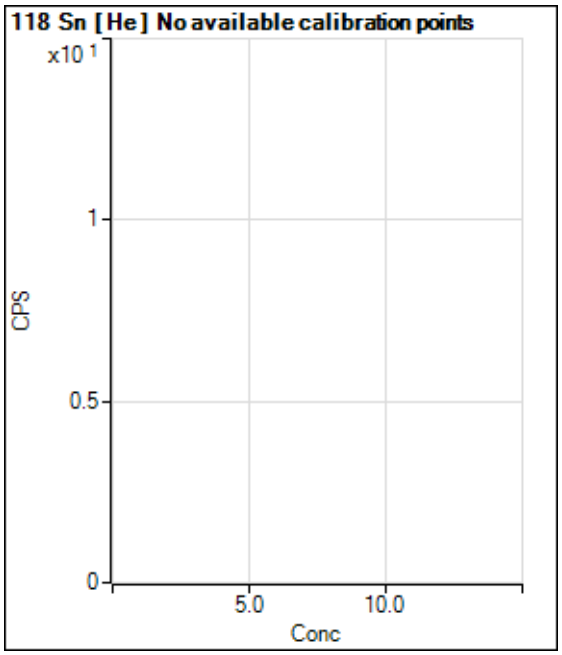


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1220.06	0.0005	P	6.8
2	☐	2.000	2.006	13508.77	0.0051	P	8.3
3	☐	5.000	5.109	32834.86	0.0124	P	11.6
4	☐	10.000	9.787	62374.77	0.0233	P	0.1
5	☐	100.000	96.626	618378.34	0.2256	P	1.6
6	☐	200.000	201.695	1243986.73	0.4703	P	1.5
7	☐	1.000					

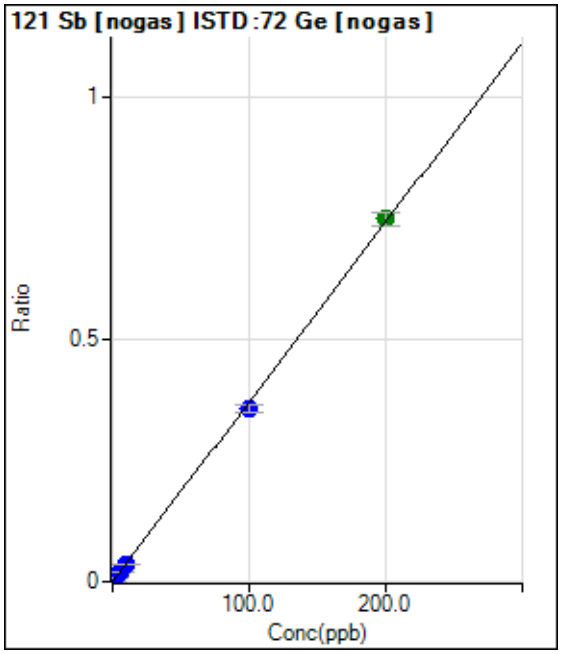
y = 0.0023 * x + 4.6988E-004
R = 0.9998
DL = 0.04096
BEC = 0.2017

Weight: <None>
Min Conc: <None>

Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			606.69		P	14.9
2	☐			7695.14		P	1.9
3	☐			19003.86		P	2.3
4	☐			35479.57		P	0.2
5	☐			361784.55		P	1.1
6	☐			723545.04		P	1.0
7	☐						

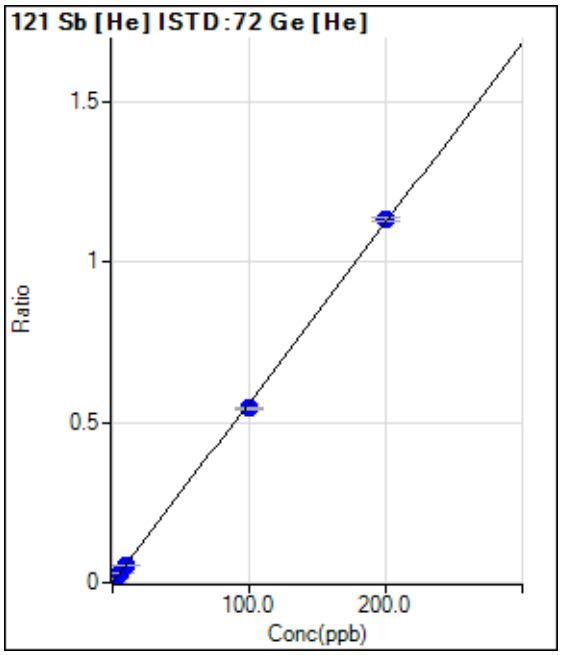


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0002	P	16.0
2	☐	2.000	1.999	22291.06	0.0076	P	5.6
3	☐	5.000	4.958	55116.92	0.0185	P	6.4
4	☐	10.000	9.318	108006.59	0.0347	P	2.0
5	☐	100.000	96.148	1060601.47	0.3559	P	4.8
6	☐	200.000	201.961	2210877.62	0.7473	A	3.7
7	☐	1.000					

y = 0.0037 * x + 1.8343E-004
R = 0.9997
DL = 0.02381
BEC = 0.04958

Weight: <None>
Min Conc: <None>

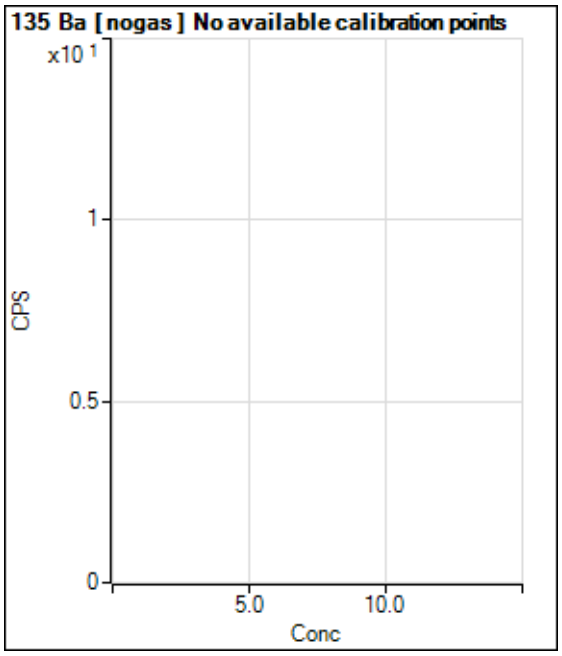
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	326.68	0.0003	P	9.5
2	☐	2.000	1.875	11497.28	0.0108	P	3.6
3	☐	5.000	4.925	29595.28	0.0279	P	2.0
4	☐	10.000	9.619	57277.15	0.0542	P	2.4
5	☐	100.000	96.788	578196.53	0.5425	P	1.2
6	☐	200.000	201.628	1175196.49	1.1298	P	1.2
7	☐	1.000					

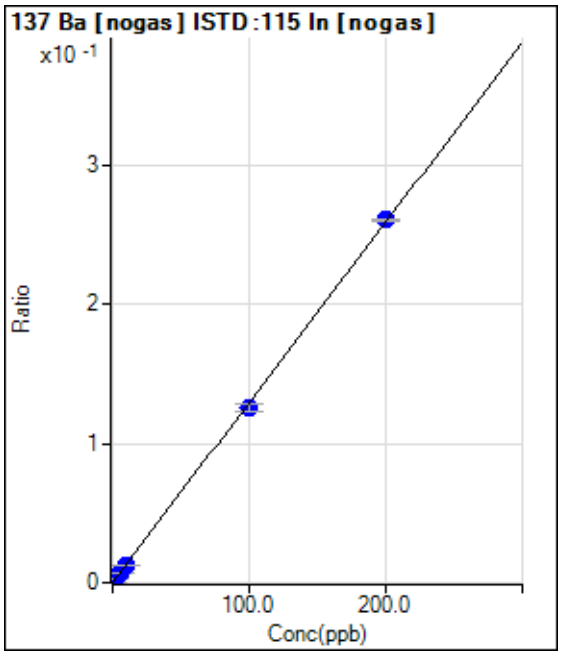
y = 0.0056 * x + 3.0753E-004
R = 0.9998
DL = 0.01572
BEC = 0.0549

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			143.33		P	10.7
2	☐			4390.64		P	2.2
3	☐			10163.17		P	2.2
4	☐			20375.64		P	2.1
5	☐			199174.44		P	3.1
6	☐			403355.81		P	1.2
7	☐						

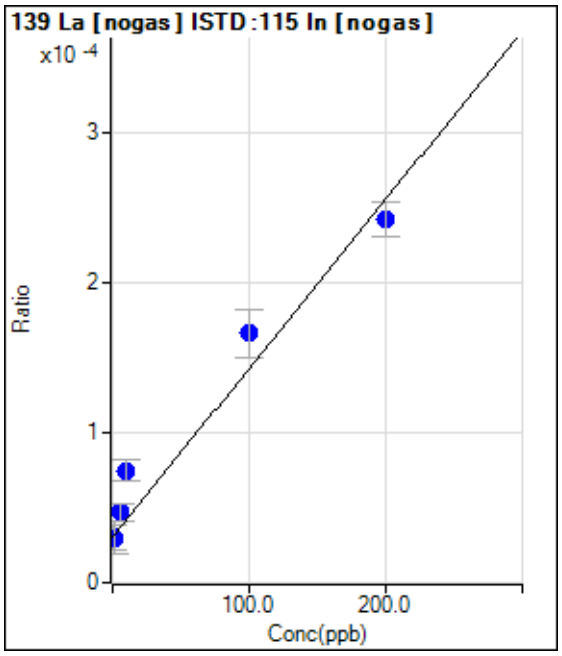
Calibration for 028_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243.34	0.0001	P	7.3
2	☐	2.000	1.990	7001.54	0.0027	P	12.5
3	☐	5.000	5.347	18670.29	0.0070	P	8.6
4	☐	10.000	10.038	35113.01	0.0131	P	0.5
5	☐	100.000	97.166	345389.27	0.1260	P	4.3
6	☐	200.000	201.407	690463.69	0.2611	P	0.4
7	☐	1.000					

y = 0.0013 * x + 9.3240E-005
R = 0.9999
DL = 0.01566
BEC = 0.07196

Weight: <None>
Min Conc: <None>

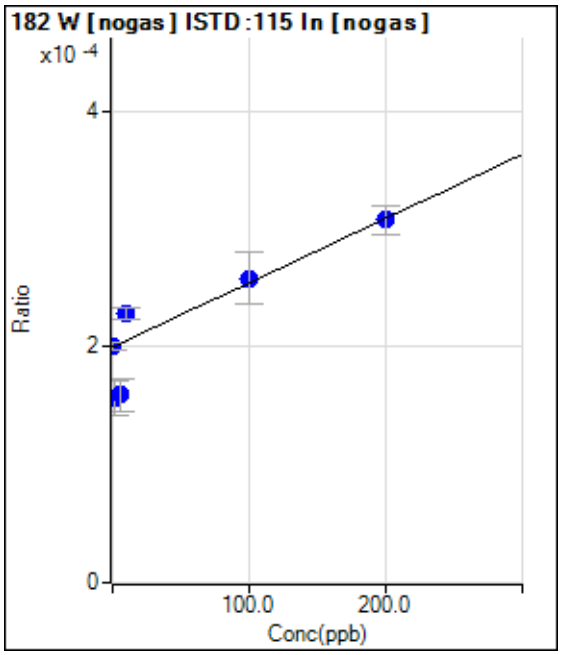


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	53.5
2	☐	2.000	-0.229	80.00	0.0000	P	71.0
3	☐	5.000	14.601	123.33	0.0000	P	23.0
4	☐	10.000	39.420	200.00	0.0001	P	19.5
5	☐	100.000	120.630	456.68	0.0002	P	19.4
6	☐	200.000	187.996	640.02	0.0002	P	9.6
7	☐	1.000					

y = 1.1255E-006 * x + 3.0387E-005
R = 0.9828
DL = 43.36
BEC = 27

Weight: <None>
Min Conc: <None>

Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	520.02	0.0002	P	3.2
2	☐	2.000	-78.769	410.01	0.0002	P	18.9
3	☐	5.000	-73.901	423.35	0.0002	P	17.2
4	☐	10.000	51.101	610.02	0.0002	P	4.1
5	☐	100.000	106.197	706.70	0.0003	P	17.0
6	☐	200.000	197.627	813.37	0.0003	P	7.9
7	☐	1.000					

y = 5.4533E-007 * x + 1.9972E-004

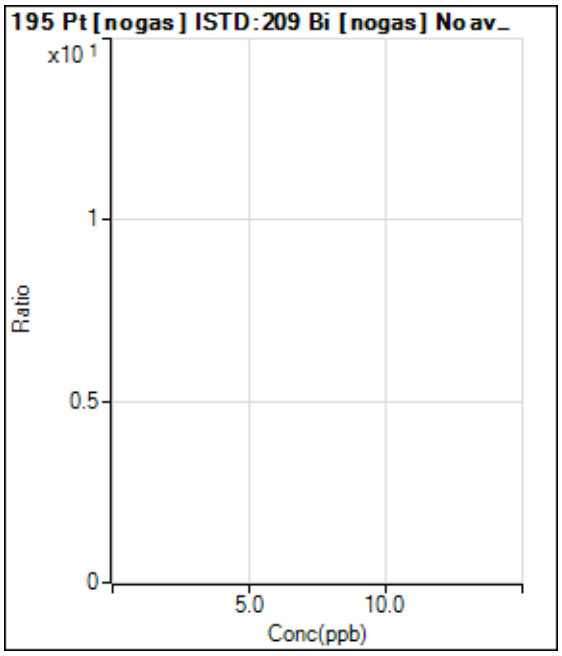
R = 0.8980

DL = 35.3

BEC = 366.2

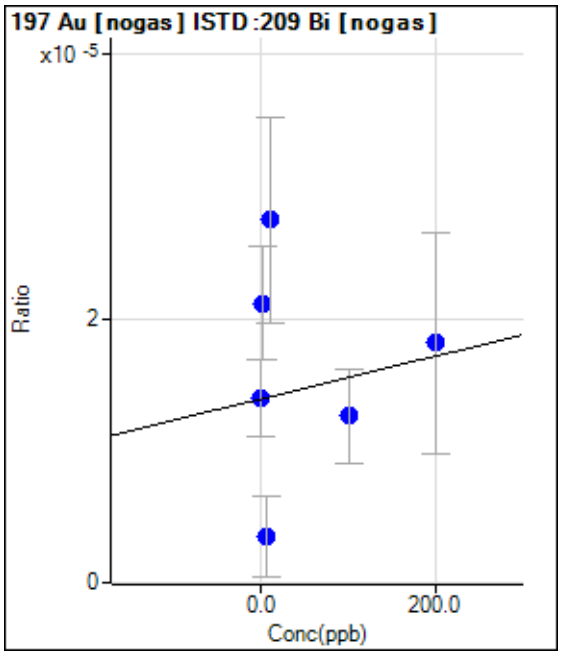
Weight: <None>

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					

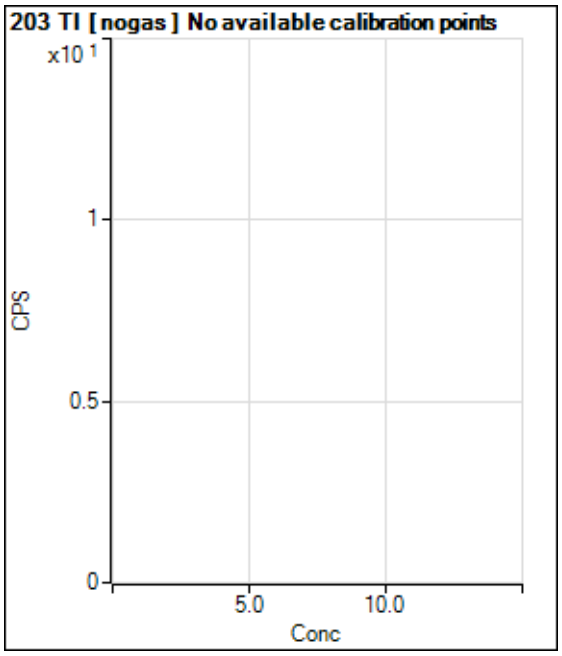
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	41.7
2	☐	2.000	449.136	40.00	0.0000	P	41.0
3	☐	5.000	-643.164	6.67	0.0000	P	173.
4	☐	10.000	838.419	53.33	0.0000	P	56.8
5	☐	100.000	-80.228	26.67	0.0000	P	57.1
6	☐	200.000	260.426	33.33	0.0000	P	92.6
7	☐	1.000					

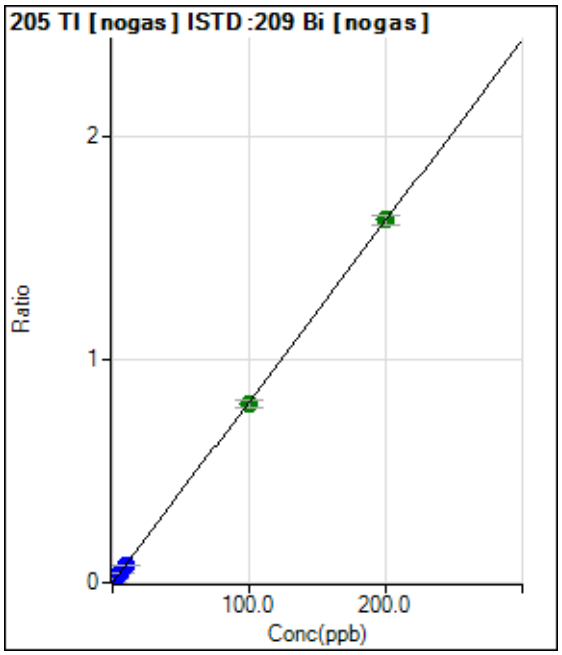
y = 1.6156E-008 * x + 1.3921E-005
R = 0.0318
DL = 1078
BEC = 861.7

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			170.00		P	45.9
2	☐			13325.67		P	5.2
3	☐			31791.39		P	3.4
4	☐			64043.33		P	4.1
5	☐			632547.80		P	2.9
6	☐			1274268.81		P	1.2
7	☐						

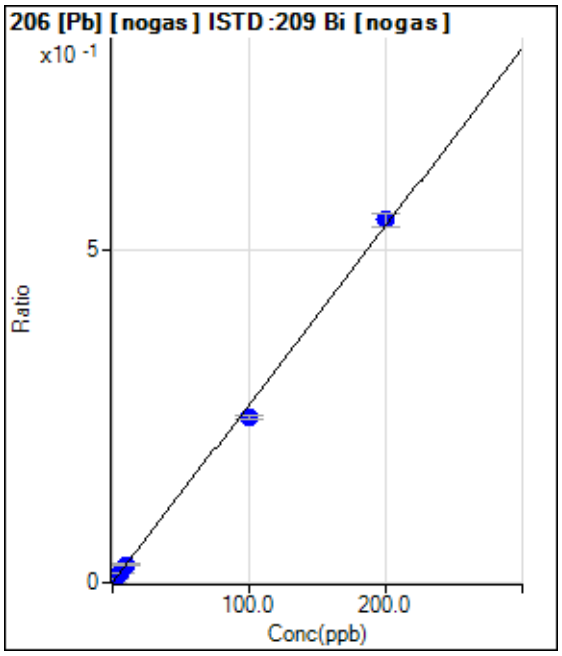
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	433.34	0.0002	P	11.0
2	☐	2.000	2.048	31577.73	0.0168	P	1.3
3	☐	5.000	5.076	77910.72	0.0413	P	7.0
4	☐	10.000	9.490	149757.25	0.0770	P	3.8
5	☐	100.000	98.987	1699141.64	0.8015	A	3.8
6	☐	200.000	200.530	3051749.22	1.6235	A	2.5
7	☐	1.000					

y = 0.0081 * x + 2.2746E-004
R = 1.0000
DL = 0.009277
BEC = 0.0281

Weight: <None>
Min Conc: <None>

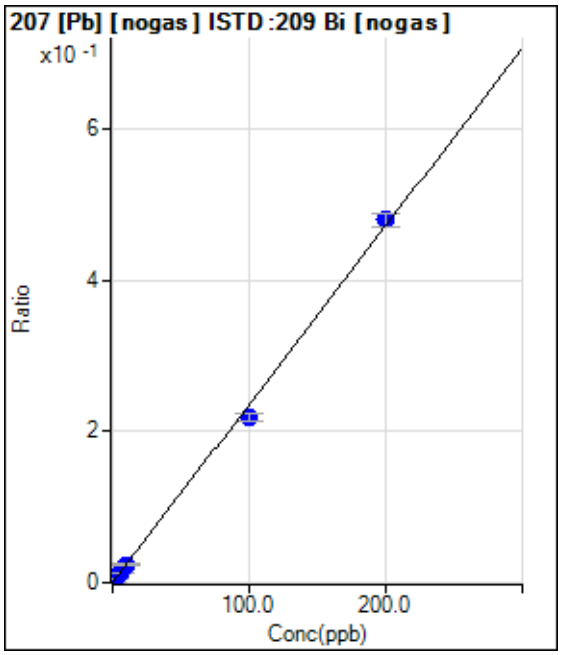


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0001	P	14.5
2	☐	2.000	2.117	10817.12	0.0058	P	5.5
3	☐	5.000	5.416	27553.70	0.0146	P	7.5
4	☐	10.000	10.151	53090.45	0.0273	P	5.8
5	☐	100.000	92.786	527528.18	0.2491	P	3.4
6	☐	200.000	203.588	1026681.16	0.5464	P	4.1
7	☐	1.000					

y = 0.0027 * x + 8.3685E-005
R = 0.9991
DL = 0.01357
BEC = 0.03119

Weight: <None>
Min Conc: <None>

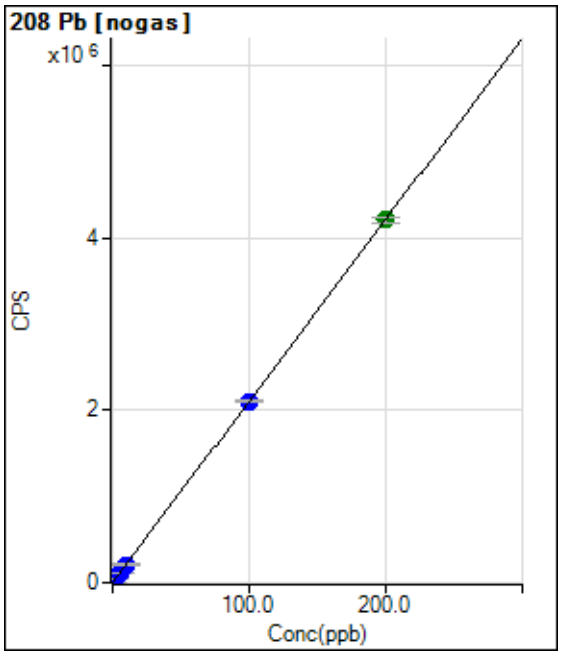
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0001	P	21.7
2	☐	2.000	2.084	9386.16	0.0050	P	8.0
3	☐	5.000	5.312	23811.11	0.0126	P	6.7
4	☐	10.000	10.164	46794.67	0.0241	P	5.6
5	☐	100.000	92.907	464688.32	0.2195	P	4.3
6	☐	200.000	203.530	903392.70	0.4806	P	3.5
7	☐	1.000					

y = 0.0024 * x + 8.3802E-005
R = 0.9991
DL = 0.02316
BEC = 0.03549

Weight: <None>
Min Conc: <None>

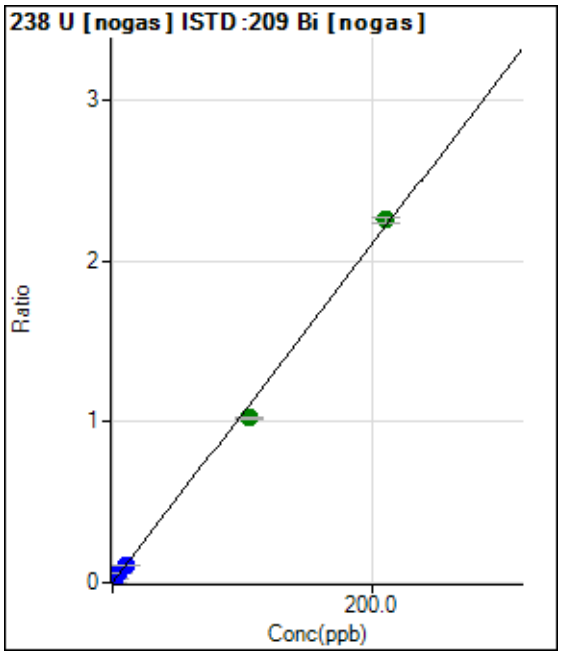


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	526.67		P	18.2
2	☐	2.000	2.023	43133.25		P	1.7
3	☐	5.000	5.104	108007.31		P	1.1
4	☐	10.000	10.043	212021.61		P	1.5
5	☐	100.000	100.057	2107554.67		P	1.8
6	☐	200.000	199.966	4211457.42		A	1.7
7	☐	1.000					

y = 21058.2001 * x + 526.6733
R = 1.0000
DL = 0.01369
BEC = 0.02501

Weight: <None>
Min Conc: <None>

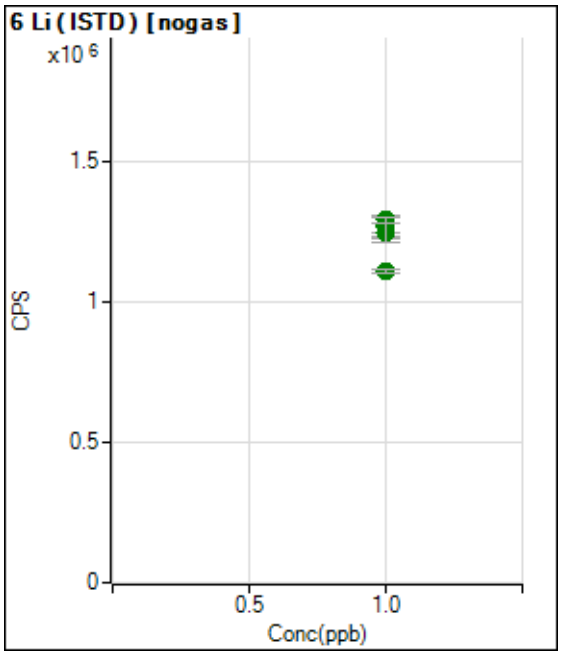
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	196.67	0.0001	P	18.1
2	☐	2.000	2.157	42848.15	0.0228	P	6.5
3	☐	5.000	5.268	105068.07	0.0556	P	3.5
4	☐	10.000	9.877	202710.24	0.1042	P	0.5
5	☐	105.000	96.992	2166271.27	1.0226	A	1.7
6	☐	210.000	214.002	4241301.50	2.2561	A	1.9
7	☐	1.000					

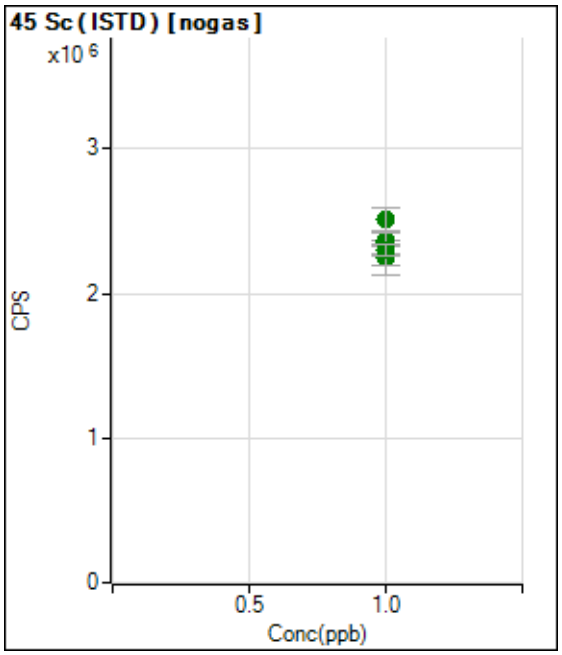
y = 0.0105 * x + 1.0343E-004
R = 0.9990
DL = 0.005314
BEC = 0.009811

Weight: <None>
Min Conc: <None>

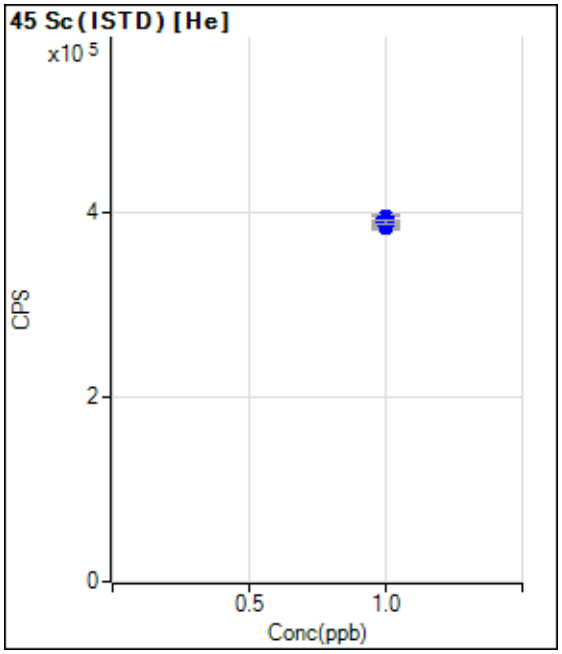


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1267062.36		A	6.8
2	☐	1.000		1271057.89		A	4.3
3	☐	1.000		1269593.34		A	6.3
4	☐	1.000		1290761.54		A	1.8
5	☐	1.000		1245616.57		A	5.1
6	☐	1.000		1106604.65		A	1.0
7	☐	1.000					

Calibration for 028_ICV.d

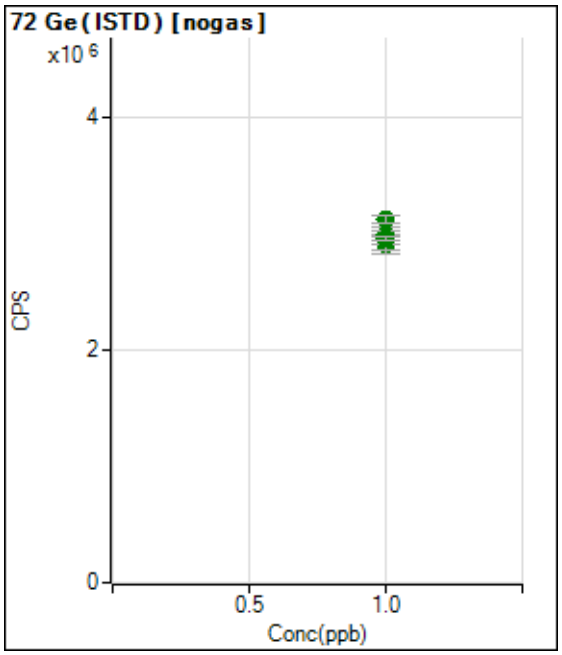


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2250601.27		A	10.9
2	☐	1.000		2260091.11		A	5.6
3	☐	1.000		2357293.56		A	6.9
4	☐	1.000		2374087.15		A	3.8
5	☐	1.000		2509380.96		A	7.0
6	☐	1.000		2306574.76		A	3.4
7	☐	1.000					

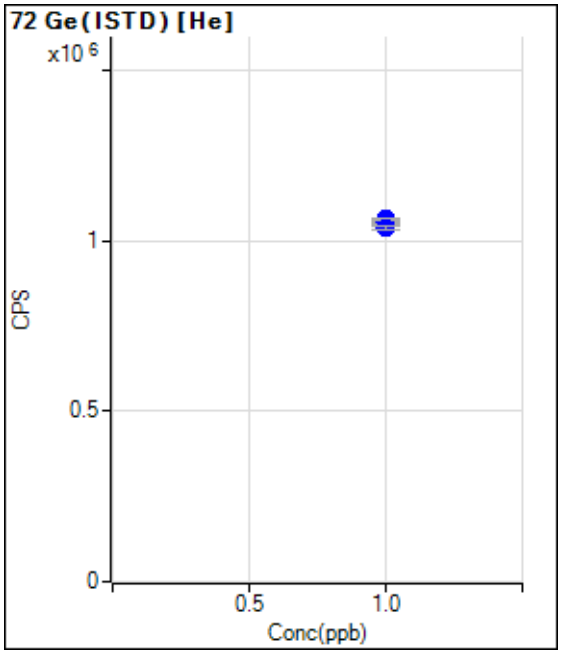


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		386126.10		P	2.1
2	☐	1.000		392737.56		P	2.0
3	☐	1.000		393297.70		P	2.5
4	☐	1.000		388638.34		P	1.3
5	☐	1.000		387218.05		P	1.9
6	☐	1.000		389969.96		P	1.0
7	☐	1.000					

Calibration for 028_ICV.d

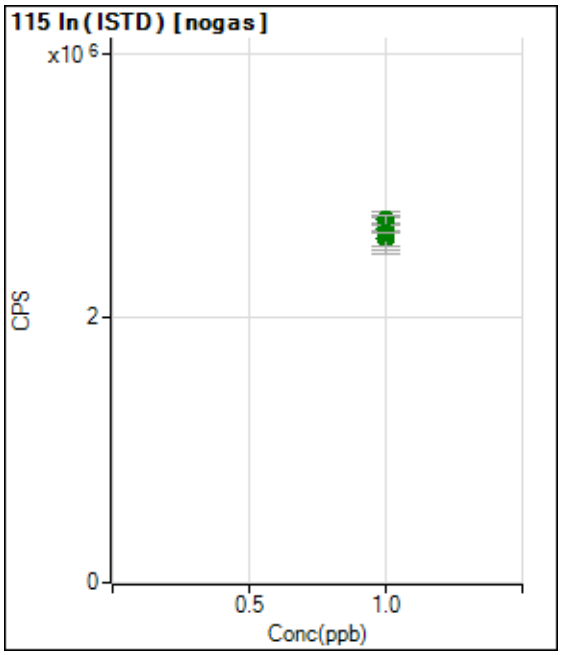


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2907309.33		A	6.0
2	☐	1.000		2946465.58		A	5.6
3	☐	1.000		2980652.35		A	4.6
4	☐	1.000		3117445.37		A	2.1
5	☐	1.000		2982906.10		A	2.8
6	☐	1.000		2959445.06		A	1.4
7	☐	1.000					

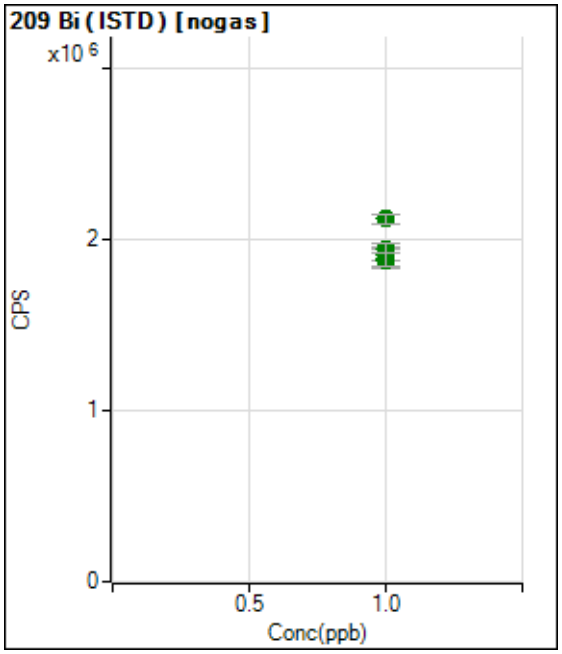


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1062701.31		P	0.7
2	☐	1.000		1063284.25		P	0.8
3	☐	1.000		1061003.50		P	0.4
4	☐	1.000		1057039.28		P	1.1
5	☐	1.000		1065790.98		P	0.8
6	☐	1.000		1040244.31		P	1.2
7	☐	1.000					

Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2598911.99		A	8.7
2	☐	1.000		2640658.23		A	9.4
3	☐	1.000		2674431.47		A	10.1
4	☐	1.000		2680380.57		A	1.4
5	☐	1.000		2742092.04		A	2.6
6	☐	1.000		2644771.13		A	0.3
7	☐	1.000					



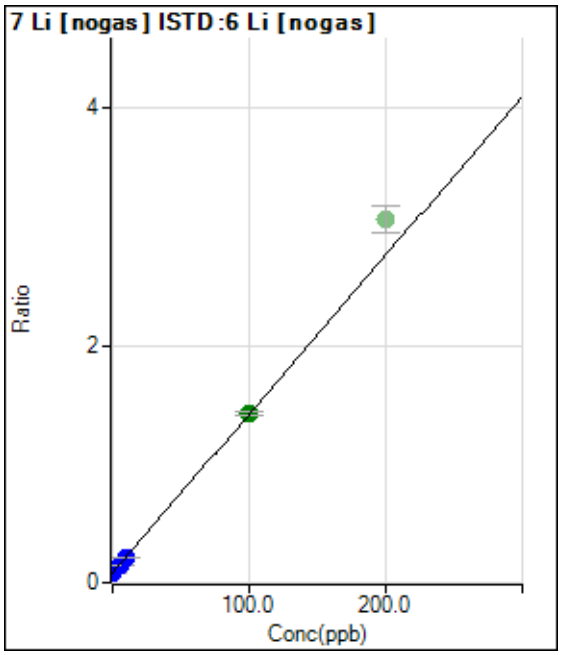
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1908674.66		A	3.1
2	☐	1.000		1879436.69		A	4.3
3	☐	1.000		1891457.58		A	6.9
4	☐	1.000		1945018.25		A	2.8
5	☐	1.000		2119037.31		A	2.5
6	☐	1.000		1880818.15		A	3.7
7	☐	1.000					

Calibration for 077_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010919B.b\
Analysis File: 010919B.batch.bin
DA Date-Time: 2019-01-09 19:23:30
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	070CALB.d	CAL BLK	2019-01-09 13:41:25
2	071CALS.d	2/10/200	2019-01-09 13:43:25
3	072CALS.d	5/25/500	2019-01-09 13:45:22
4	073CALS.d	10/50/1000	2019-01-09 13:47:20
5	074CALS.d	100/500/10K	2019-01-09 13:49:18
6	075CALS.d	200/1000/20K	2019-01-09 13:51:19
7			

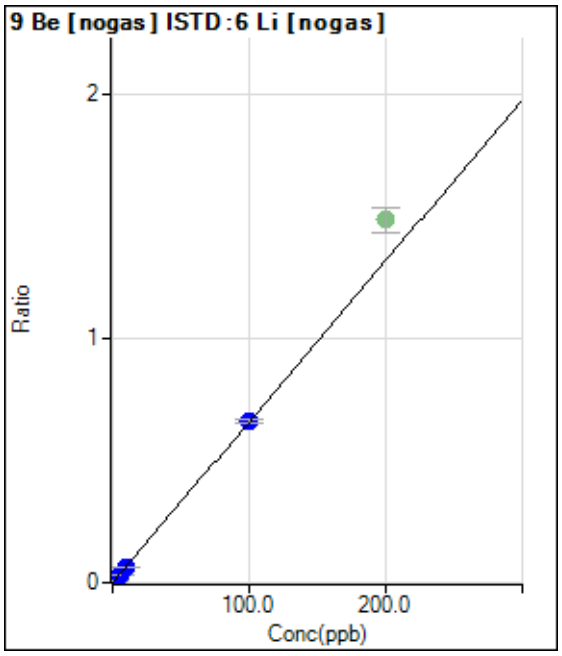
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	107910.50	0.0842	P	0.8
2	☐	2.000	1.743	137663.75	0.1075	P	0.5
3	☐	5.000	4.568	189211.91	0.1453	P	2.6
4	☐	10.000	9.383	263400.18	0.2098	P	2.4
5	☐	100.000	100.088	1635930.55	1.4241	A	2.7
6	☑	200.000		3075285.27	3.0601	A	7.3
7	☐	1.000					

y = 0.0134 * x + 0.0842
R = 1.0000
DL = 0.1423
BEC = 6.287

Weight: <None>
Min Conc: <None>

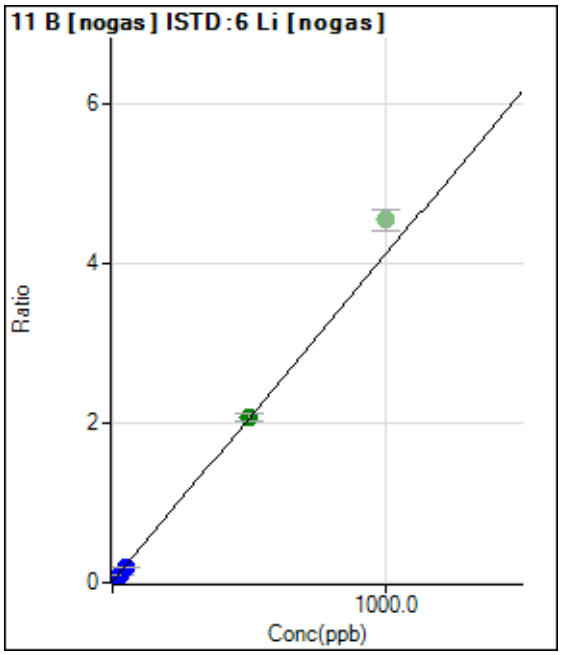


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0001	P	7.0
2	☐	2.000	1.808	15363.06	0.0120	P	7.1
3	☐	5.000	4.399	37894.34	0.0291	P	1.9
4	☐	10.000	9.054	75120.63	0.0598	P	1.5
5	☐	100.000	100.129	759168.37	0.6608	P	2.3
6	☑	200.000		1495626.18	1.4880	A	6.9
7	☐	1.000					

y = 0.0066 * x + 8.0671E-005
R = 1.0000
DL = 0.002558
BEC = 0.01223

Weight: <None>
Min Conc: <None>

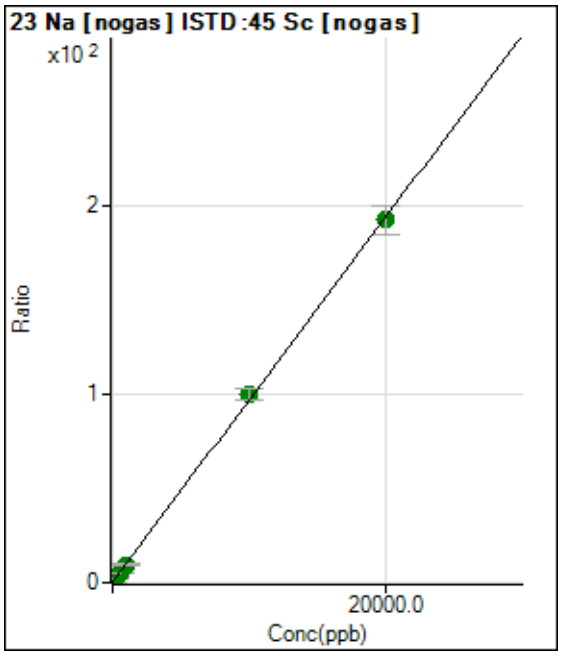
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19226.65	0.0150	P	5.5
2	☐	10.000	8.420	63398.42	0.0495	P	2.9
3	☐	25.000	21.589	134752.51	0.1035	P	3.2
4	☐	50.000	44.837	249616.38	0.1988	P	2.0
5	☐	500.000	500.718	2374732.68	2.0679	A	5.0
6	☑	1000.000		4576882.33	4.5501	A	6.1
7	☐	5.000					

y = 0.0041 * x + 0.0150
R = 1.0000
DL = 0.6078
BEC = 3.661

Weight: <None>
Min Conc: <None>

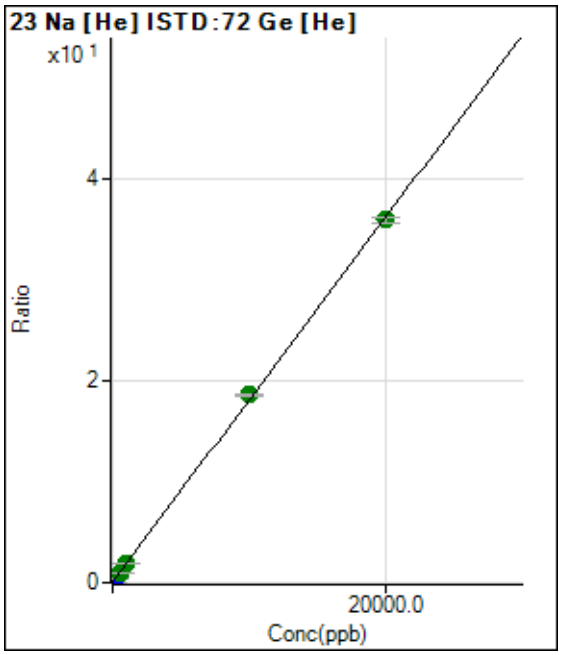


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	773666.70	0.2608	P	3.2
2	☐	200.000	217.621	6712318.38	2.3621	A	9.5
3	☐	500.000	485.533	14934755.54	4.9488	A	4.2
4	☐	1000.000	970.484	28015169.37	9.6312	A	3.1
5	☐	10000.00	10273.157	274654589.4	99.4521	A	6.4
6	☐	20000.00	19865.083	505797144.6	192.065	A	7.7
7	☐	100.000					

y = 0.0097 * x + 0.2608
R = 0.9999
DL = 2.572
BEC = 27.01

Weight: <None>
Min Conc: <None>

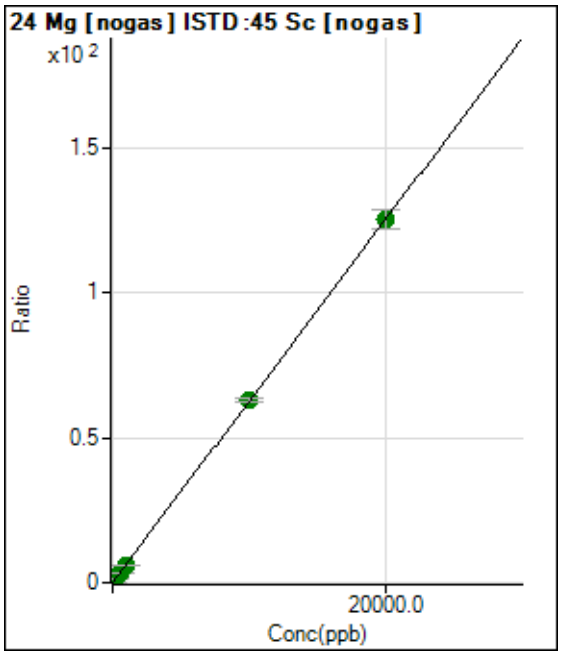
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80114.44	0.0608	P	1.5
2	☐	200.000	211.205	589153.63	0.4420	P	2.6
3	☐	500.000	523.954	1305962.51	1.0064	A	4.0
4	☐	1000.000	1014.801	2392101.16	1.8921	A	2.2
5	☐	10000.00	10260.632	22733625.49	18.5770	A	1.6
6	☐	20000.00	19868.233	42820309.36	35.9147	A	1.8
7	☐	100.000					

y = 0.0018 * x + 0.0608
R = 0.9999
DL = 1.517
BEC = 33.72

Weight: <None>
Min Conc: <None>

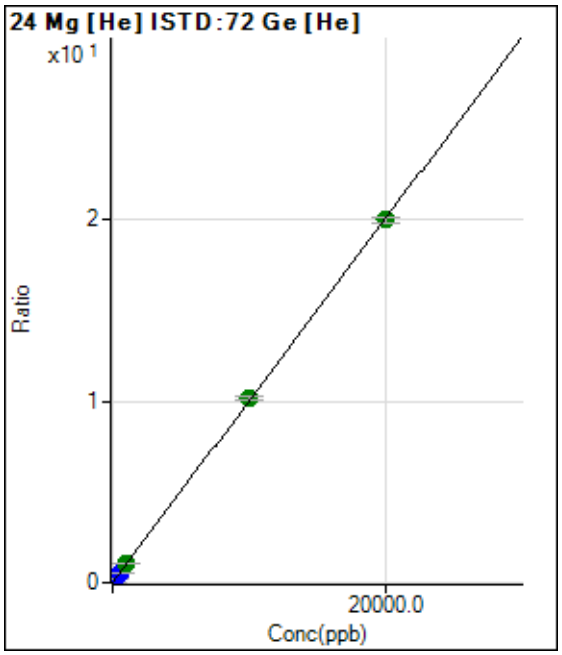


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17578.36	0.0059	P	9.5
2	☐	200.000	209.505	3739704.51	1.3159	A	9.2
3	☐	500.000	490.476	9272721.56	3.0728	A	4.6
4	☐	1000.000	984.799	17926517.07	6.1637	A	4.0
5	☐	10000.00	10031.968	173502891.3	62.7339	A	2.2
6	☐	20000.00	19984.919	329468065.7	124.967	A	5.2
7	☐	100.000					

y = 0.0063 * x + 0.0059
R = 1.0000
DL = 0.2691
BEC = 0.9478

Weight: <None>
Min Conc: <None>

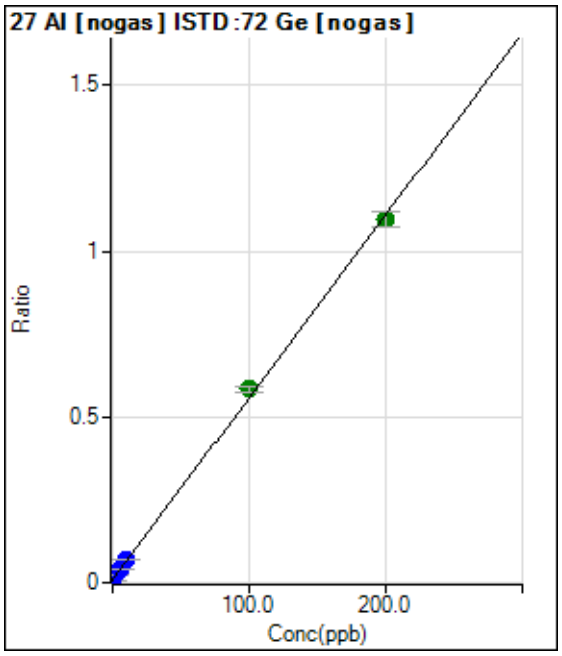
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1776.78	0.0013	P	13.5
2	☐	200.000	196.581	264699.65	0.1986	P	3.3
3	☐	500.000	514.441	671604.05	0.5175	P	3.6
4	☐	1000.000	1034.788	1314597.17	1.0397	A	1.7
5	☐	10000.00	10134.041	12446127.73	10.1698	A	1.8
6	☐	20000.00	19930.913	23846852.14	19.9999	A	1.9
7	☐	100.000					

y = 0.0010 * x + 0.0013
R = 1.0000
DL = 0.5458
BEC = 1.344

Weight: <None>
Min Conc: <None>

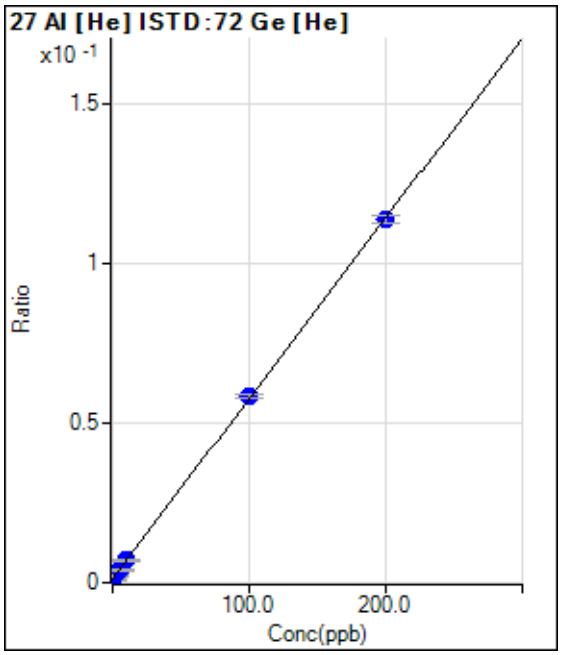


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33062.73	0.0085	P	4.6
2	☐	2.000	2.740	88164.04	0.0236	P	8.6
3	☐	5.000	5.759	156311.26	0.0402	P	4.0
4	☐	10.000	11.162	257708.26	0.0699	P	3.4
5	☐	100.000	104.860	2112403.77	0.5849	A	3.0
6	☐	200.000	197.486	3851404.21	1.0941	A	4.2
7	☐	1.000					

y = 0.0055 * x + 0.0085
R = 0.9996
DL = 0.2137
BEC = 1.545

Weight: <None>
Min Conc: <None>

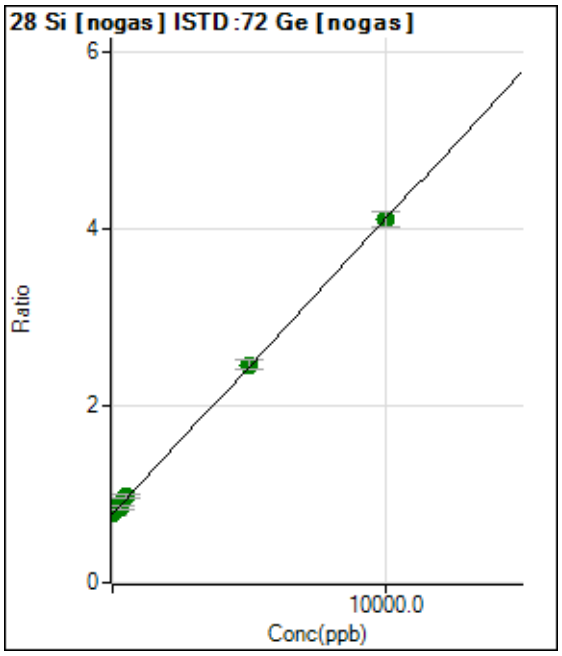
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.553	1186.72	0.0009	P	17.2
2	☐	2.000	1.682	2890.26	0.0022	P	5.6
3	☐	5.000	4.799	5097.43	0.0039	P	1.7
4	☐	10.000	10.281	8878.88	0.0070	P	5.5
5	☐	100.000	101.593	71735.52	0.0586	P	1.9
6	☐	200.000	199.198	135645.44	0.1138	P	2.2
7	☐	1.000					

y = 5.6504E-004 * x + 0.0012
R = 0.9999
DL = 0.8229
BEC = 2.151

Weight: <None>
Min Conc: <None>

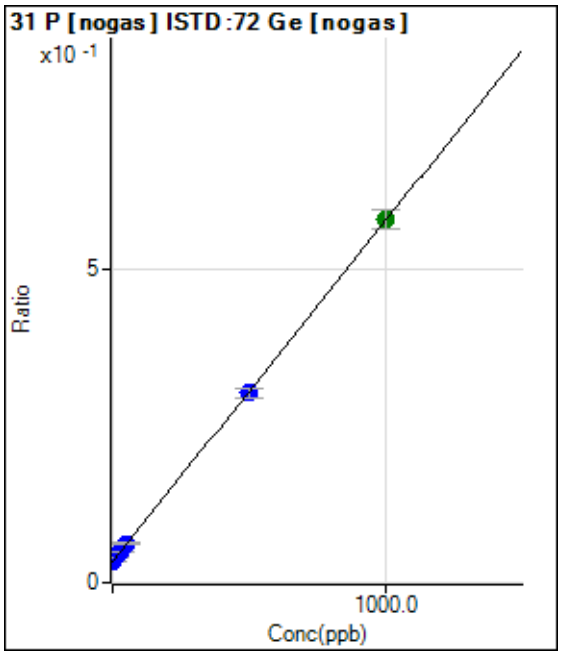


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3029602.77	0.7780	A	1.7
2	☐	100.000	195.426	3161212.45	0.8432	A	2.5
3	☐	250.000	231.403	3328855.58	0.8552	A	4.6
4	☐	500.000	588.199	3594030.99	0.9743	A	3.7
5	☐	5000.000	5058.342	8895870.08	2.4659	A	4.8
6	☐	10000.00	9965.930	14440967.29	4.1035	A	4.1
7	☐	5.000					

y = 3.3368E-004 * x + 0.7780
R = 0.9999
DL = 121.5
BEC = 2332

Weight: <None>
Min Conc: <None>

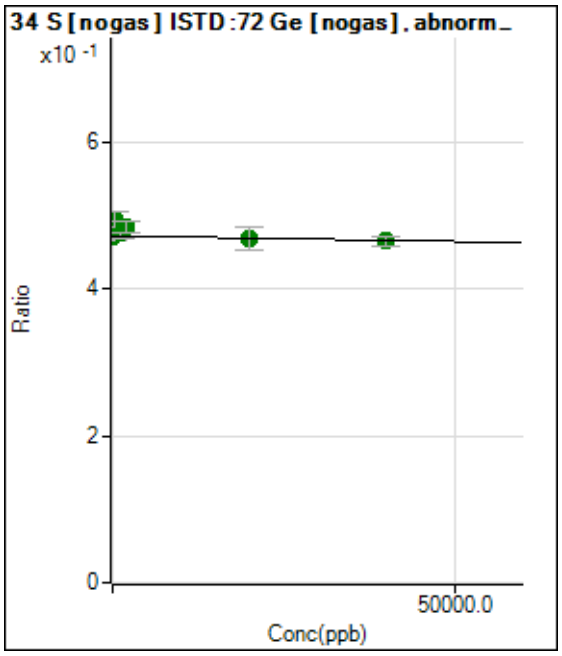
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130238.79	0.0334	P	1.3
2	☐	10.000	11.880	149478.51	0.0399	P	6.2
3	☐	25.000	29.339	192523.35	0.0495	P	4.5
4	☐	50.000	53.547	231233.75	0.0627	P	2.4
5	☐	500.000	494.695	1094218.21	0.3034	P	5.8
6	☐	1000.000	1002.348	2042378.61	0.5805	A	5.3
7	☐	5.000					

y = 5.4575E-004 * x + 0.0334
R = 1.0000
DL = 2.434
BEC = 61.28

Weight: <None>
Min Conc: <None>

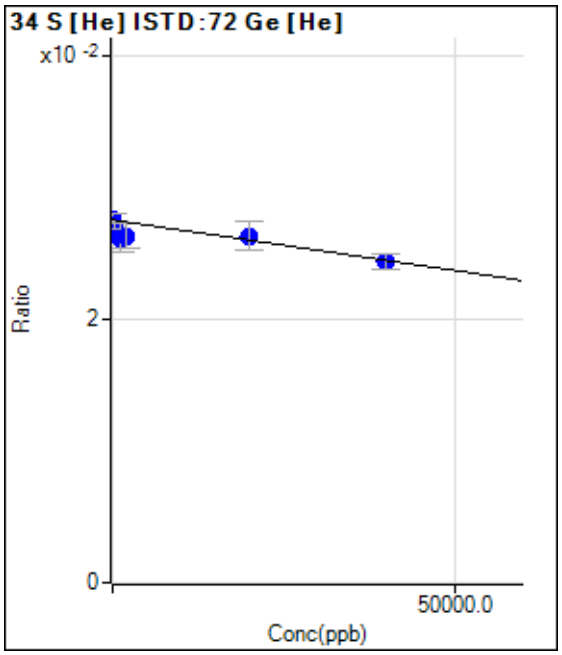


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1840899.45	0.4727	A	2.8
2	☐	400.000	-144565.88	1852452.19	0.4945	A	4.5
3	☐	1000.000	-23735.257	1854657.40	0.4763	A	3.3
4	☐	2000.000	-79647.947	1788187.73	0.4847	A	3.7
5	☐	20000.00	22967.931	1692000.56	0.4693	A	6.6
6	☐	40000.00	44666.472	1640322.92	0.4660	A	3.0
7	☐	100.000					

y = -1.5042E-007 * x + 0.4727
R = -0.6781
DL = -2.604E+05
BEC = -3.143E+06

Weight: <None>
Min Conc: <None>

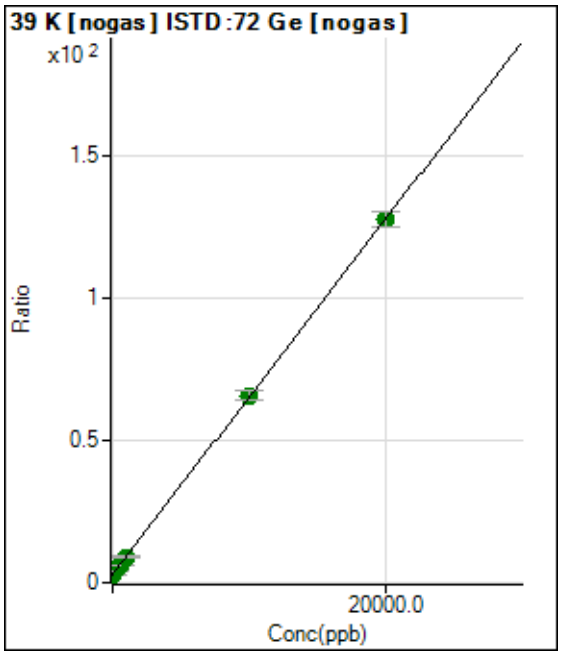
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36307.91	0.0276	P	3.8
2	☐	400.000	5213.380	36209.18	0.0272	P	2.3
3	☐	1000.000	17578.832	34003.16	0.0262	P	8.8
4	☐	2000.000	15567.728	33335.91	0.0264	P	6.8
5	☐	20000.00	15878.700	32232.93	0.0263	P	8.7
6	☐	40000.00	40919.659	29127.89	0.0244	P	5.1
7	☐	100.000					

y = -7.6653E-008 * x + 0.0276
R = -0.8669
DL = -4.048E+04
BEC = -3.596E+05

Weight: <None>
Min Conc: <None>

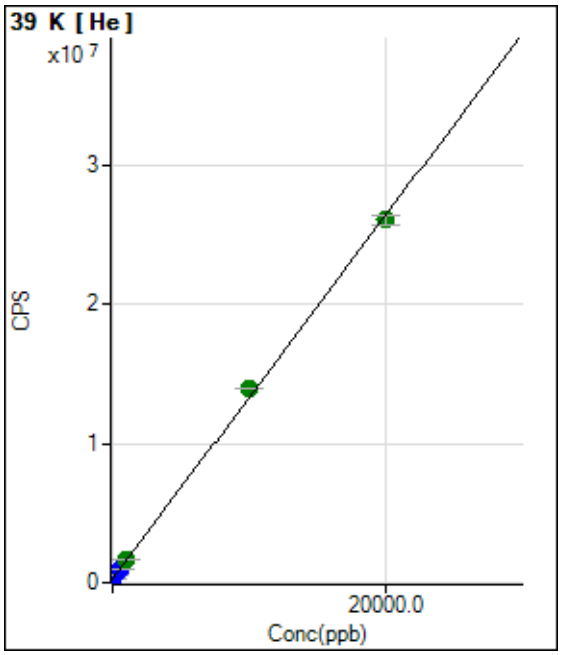


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11181446.60	2.8714	A	1.5
2	☐	200.000	215.406	15790872.75	4.2159	A	4.9
3	☐	500.000	506.564	23486986.46	6.0332	A	4.1
4	☐	1000.000	993.539	33477730.96	9.0727	A	2.5
5	☐	10000.00	10077.022	237275705.3	65.7684	A	4.9
6	☐	20000.00	19961.494	448562160.0	127.463	A	4.1
7	☐	100.000					

y = 0.0062 * x + 2.8714
R = 1.0000
DL = 20.72
BEC = 460

Weight: <None>
Min Conc: <None>

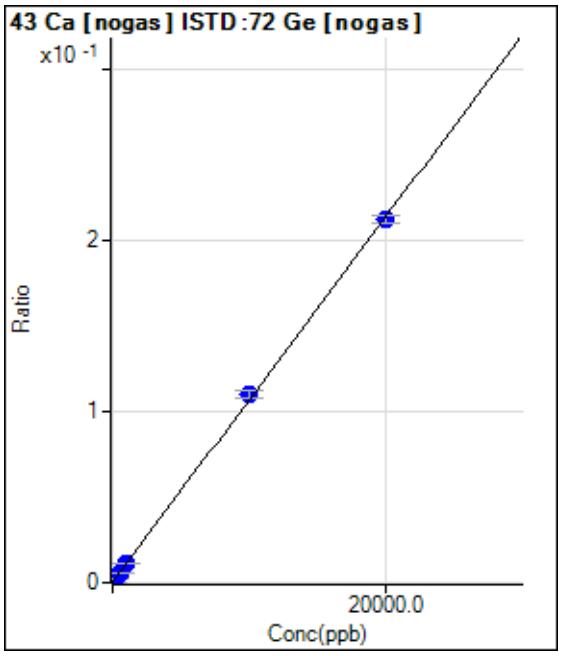
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	259703.25		P	0.5
2	☐	200.000	209.964	533829.22		P	0.6
3	☐	500.000	544.169	970162.30		P	0.1
4	☐	1000.000	1067.333	1653198.10		A	1.0
5	☐	10000.00	10473.080	13933214.37		A	0.7
6	☐	20000.00	19758.889	26056640.44		A	2.4
7	☐	100.000					

y = 1305.5864 * x + 259703.2500
R = 0.9996
DL = 2.837
BEC = 198.9

Weight: <None>
Min Conc: <None>

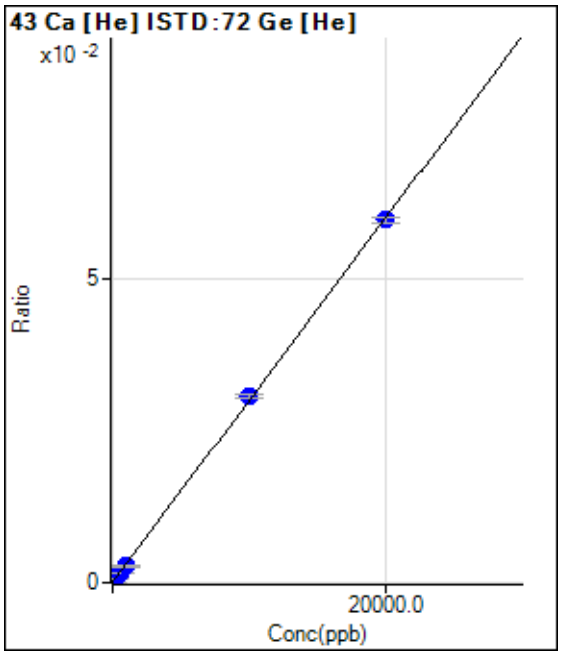


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1060.05	0.0003	P	4.0
2	☐	200.000	219.065	9779.38	0.0026	P	4.3
3	☐	500.000	498.967	21803.01	0.0056	P	2.4
4	☐	1000.000	1013.448	40876.06	0.0111	P	6.4
5	☐	10000.00	10281.623	397001.54	0.1100	P	4.3
6	☐	20000.00	19858.351	747071.71	0.2122	P	2.2
7	☐	100.000					

y = 1.0673E-005 * x + 2.7225E-004
R = 0.9999
DL = 3.057
BEC = 25.51

Weight: <None>
Min Conc: <None>

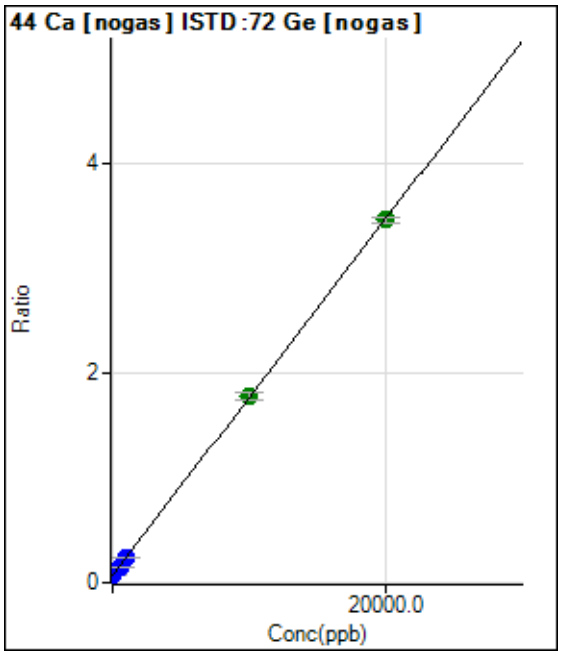
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	36.5
2	☐	200.000	193.909	843.36	0.0006	P	5.9
3	☐	500.000	525.948	2110.15	0.0016	P	8.1
4	☐	1000.000	926.470	3567.07	0.0028	P	10.6
5	☐	10000.00	10197.339	37391.11	0.0306	P	2.0
6	☐	20000.00	19904.419	71038.43	0.0596	P	1.8
7	☐	100.000					

y = 2.9907E-006 * x + 5.2940E-005
R = 0.9999
DL = 19.37
BEC = 17.7

Weight: <None>
Min Conc: <None>

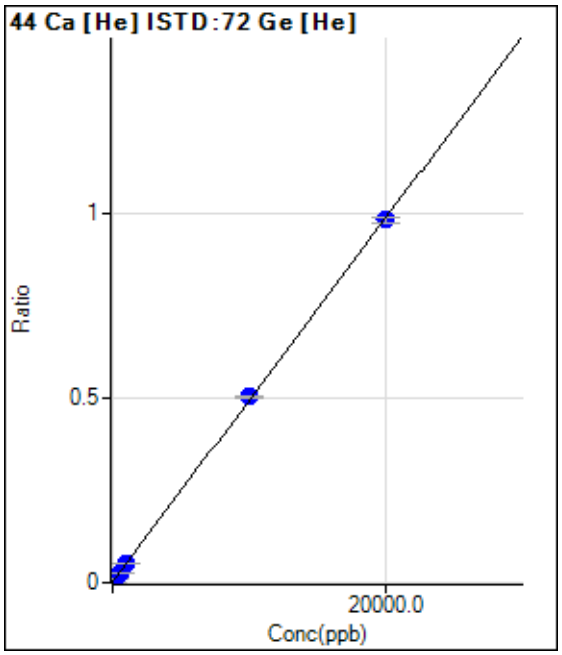


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	268025.19	0.0688	P	0.4
2	☐	200.000	216.856	395977.39	0.1057	P	3.9
3	☐	500.000	485.264	589260.67	0.1513	P	2.4
4	☐	1000.000	1023.446	895462.57	0.2428	P	4.0
5	☐	10000.00	10091.029	6438344.07	1.7839	A	4.1
6	☐	20000.00	19953.513	12181591.49	3.4601	A	1.9
7	☐	100.000					

y = 1.6996E-004 * x + 0.0688
R = 1.0000
DL = 5.347
BEC = 404.9

Weight: <None>
Min Conc: <None>

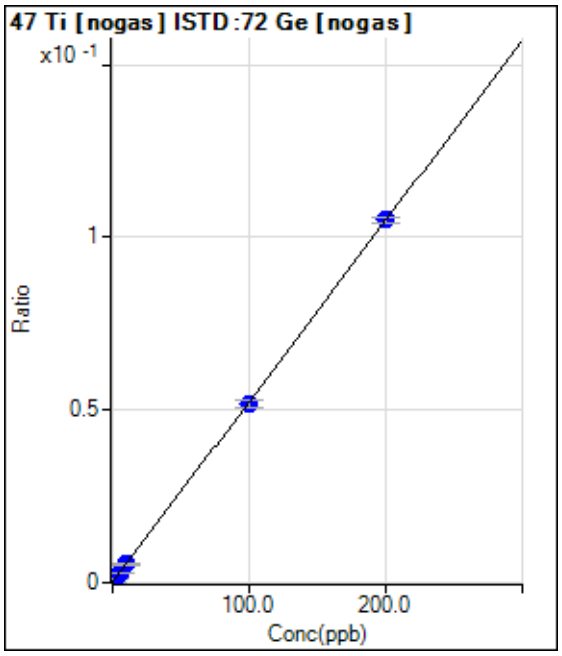
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2473.55	0.0019	P	7.2
2	☐	200.000	198.122	15513.32	0.0116	P	6.2
3	☐	500.000	513.295	35263.56	0.0272	P	4.5
4	☐	1000.000	992.988	64243.97	0.0508	P	0.8
5	☐	10000.00	10169.939	615610.68	0.5030	P	0.2
6	☐	20000.00	19915.068	1172323.16	0.9832	P	1.3
7	☐	100.000					

y = 4.9277E-005 * x + 0.0019
R = 0.9999
DL = 8.281
BEC = 38.15

Weight: <None>
Min Conc: <None>

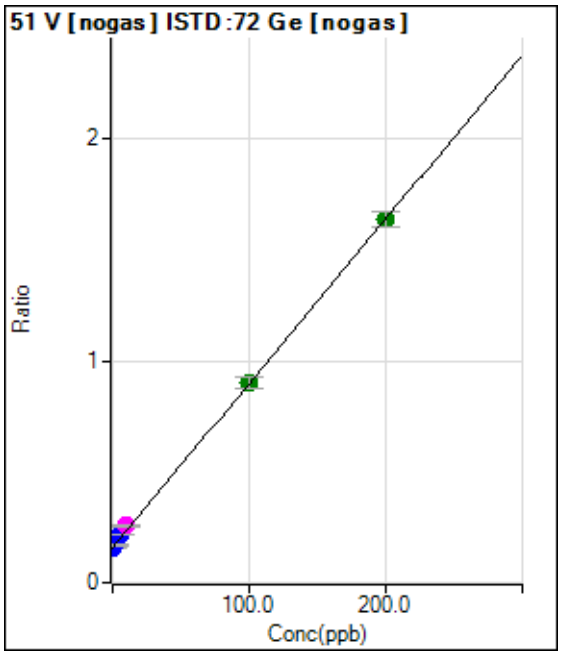


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	496.68	0.0001	P	8.7
2	☐	2.000	1.877	4153.87	0.0011	P	5.9
3	☐	5.000	4.811	10303.00	0.0026	P	0.9
4	☐	10.000	9.980	19724.07	0.0053	P	4.6
5	☐	100.000	98.848	187024.68	0.0518	P	4.4
6	☐	200.000	200.583	369920.21	0.1050	P	1.9
7	☐	1.000					

y = 5.2307E-004 * x + 1.2761E-004
R = 1.0000
DL = 0.06361
BEC = 0.244

Weight: <None>
Min Conc: <None>

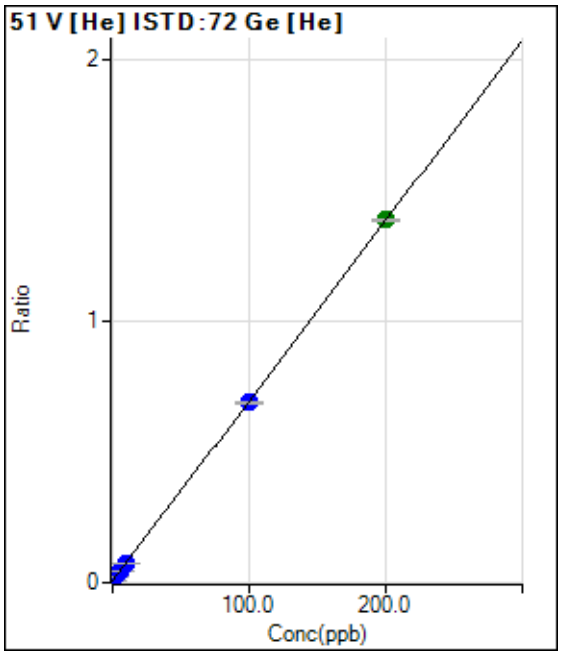
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	617617.80	0.1586	P	1.4
2	☐	2.000	1.575	638110.87	0.1702	P	4.4
3	☐	5.000	7.871	844415.94	0.2169	P	3.4
4	☐	10.000	13.538	955757.35	0.2588	M	2.8
5	☐	100.000	100.386	3253842.32	0.9020	A	5.0
6	☐	200.000	199.563	5759198.96	1.6365	A	4.2
7	☐	1.000					

y = 0.0074 * x + 0.1586
R = 0.9998
DL = 0.8745
BEC = 21.41

Weight: <None>
Min Conc: <None>

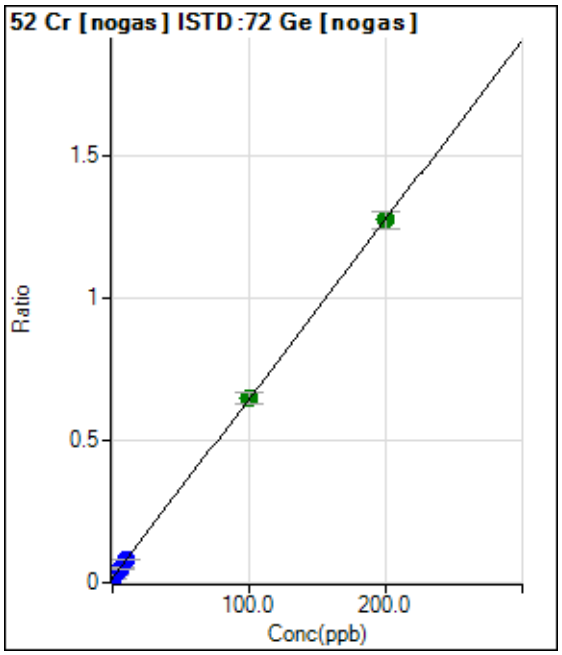


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.218	10333.54	0.0079	P	2.9
2	☐	2.000	1.983	26648.32	0.0200	P	0.5
3	☐	5.000	5.283	55399.89	0.0427	P	1.9
4	☐	10.000	9.964	94659.81	0.0749	P	1.7
5	☐	100.000	99.113	841917.40	0.6880	P	1.4
6	☐	200.000	200.438	1651182.46	1.3848	A	0.7
7	☐	1.000					

y = 0.0069 * x + 0.0063
R = 1.0000
DL = 0.09888
BEC = 0.9231

Weight: <None>
Min Conc: <None>

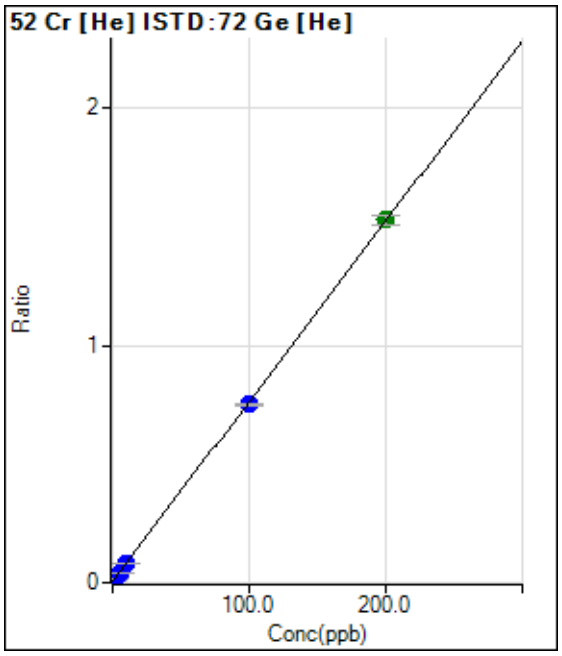
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63455.38	0.0163	P	2.7
2	☐	2.000	2.040	109264.31	0.0292	P	5.9
3	☐	5.000	5.288	193262.71	0.0497	P	5.2
4	☐	10.000	10.055	294213.69	0.0797	P	3.4
5	☐	100.000	100.451	2345027.46	0.6502	A	5.5
6	☐	200.000	199.764	4493024.10	1.2769	A	5.0
7	☐	1.000					

y = 0.0063 * x + 0.0163
R = 1.0000
DL = 0.2111
BEC = 2.582

Weight: <None>
Min Conc: <None>

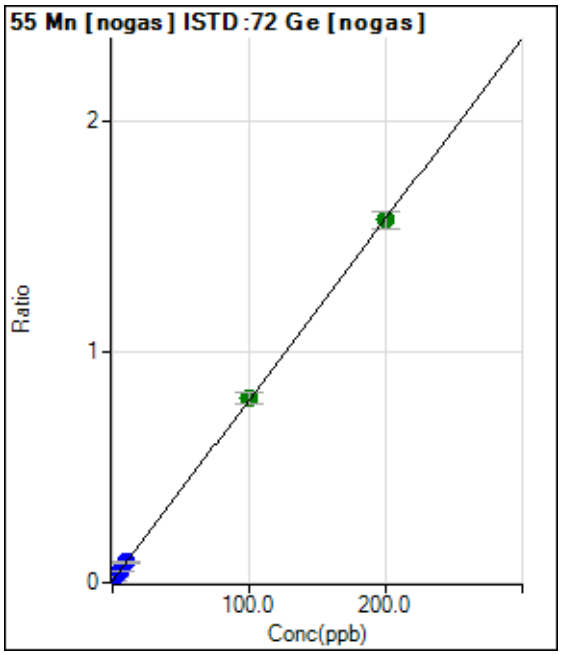


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6324.51	0.0048	P	5.0
2	☐	2.000	1.862	25267.53	0.0190	P	3.4
3	☐	5.000	5.093	56472.97	0.0435	P	2.7
4	☐	10.000	9.914	101316.34	0.0801	P	1.7
5	☐	100.000	98.399	920903.84	0.7525	P	1.6
6	☐	200.000	200.804	1824949.97	1.5307	A	2.5
7	☐	1.000					

y = 0.0076 * x + 0.0048
R = 1.0000
DL = 0.09571
BEC = 0.6322

Weight: <None>
Min Conc: <None>

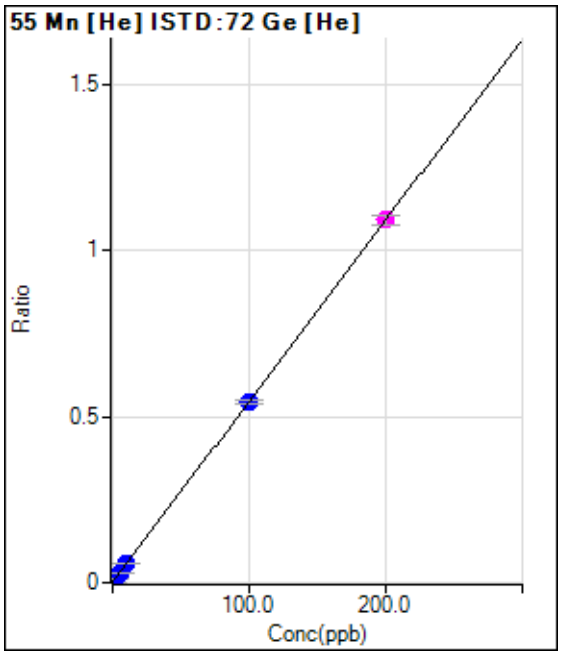
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31330.00	0.0080	P	2.8
2	☐	2.000	2.161	93468.86	0.0250	P	4.8
3	☐	5.000	5.221	190276.90	0.0489	P	5.3
4	☐	10.000	10.248	325361.28	0.0882	P	4.8
5	☐	100.000	100.838	2874382.46	0.7969	A	6.6
6	☐	200.000	199.561	5522971.58	1.5693	A	4.8
7	☐	1.000					

y = 0.0078 * x + 0.0080
R = 1.0000
DL = 0.08573
BEC = 1.028

Weight: <None>
Min Conc: <None>

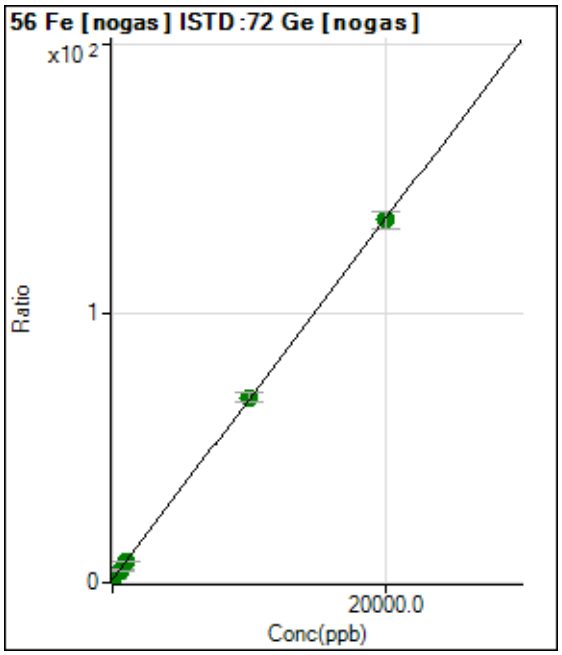


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1763.44	0.0013	P	4.2
2	☐	2.000	1.942	15887.08	0.0119	P	2.7
3	☐	5.000	5.233	38720.74	0.0298	P	3.1
4	☐	10.000	10.122	71371.29	0.0564	P	2.2
5	☐	100.000	99.385	663858.54	0.5424	P	1.7
6	☐	200.000	200.296	1301799.31	1.0919	M	2.9
7	☐	1.000					

y = 0.0054 * x + 0.0013
R = 1.0000
DL = 0.03116
BEC = 0.246

Weight: <None>
Min Conc: <None>

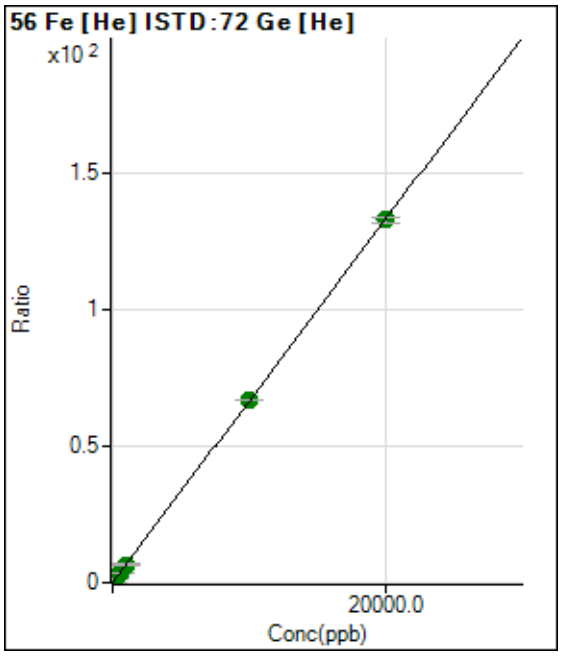
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4466501.66	1.1470	A	1.4
2	☐	200.000	223.778	9914939.28	2.6453	A	4.3
3	☐	500.000	514.628	17879960.30	4.5927	A	4.6
4	☐	1000.000	995.313	28815545.44	7.8111	A	3.5
5	☐	10000.00	10085.824	247743930.5	68.6769	A	4.9
6	☐	20000.00	19956.719	474237110.6	134.767	A	5.0
7	☐	100.000					

y = 0.0067 * x + 1.1470
R = 1.0000
DL = 7.309
BEC = 171.3

Weight: <None>
Min Conc: <None>

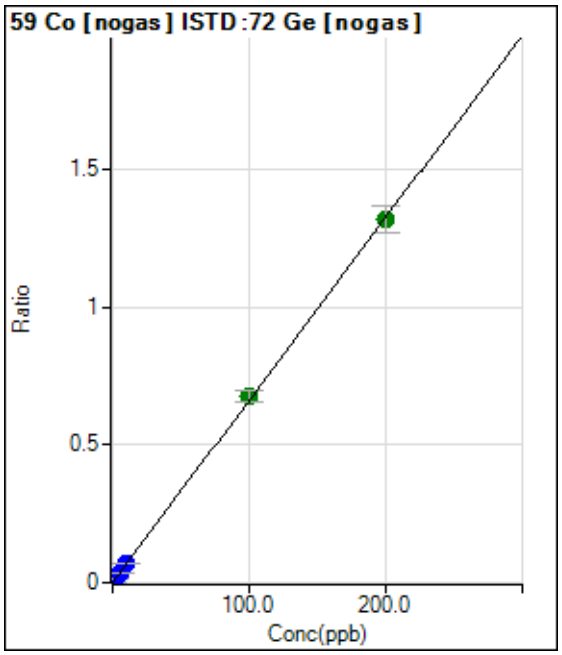


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27263.59	0.0207	P	2.1
2	☐	200.000	198.350	1785923.77	1.3398	A	2.7
3	☐	500.000	508.488	4415974.20	3.4023	A	1.9
4	☐	1000.000	994.832	8390843.00	6.6367	A	3.2
5	☐	10000.00	10061.134	81910415.44	66.9305	A	0.5
6	☐	20000.00	19969.496	158366634.3	132.824	A	1.3
7	☐	100.000					

y = 0.0067 * x + 0.0207
R = 1.0000
DL = 0.197
BEC = 3.114

Weight: <None>
Min Conc: <None>

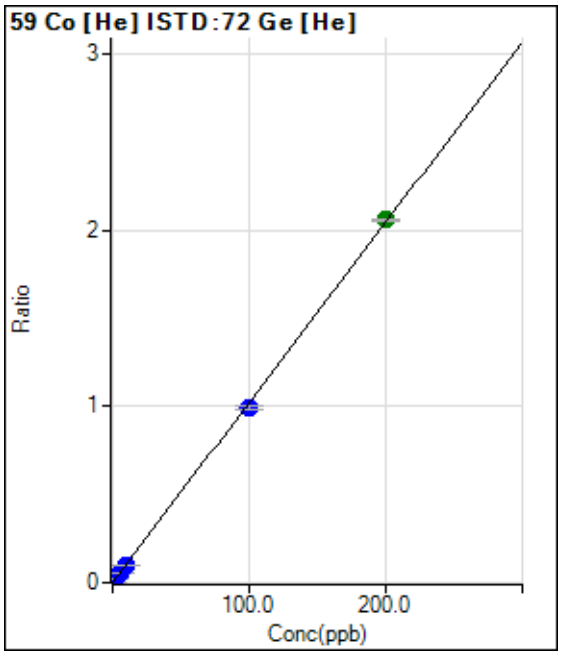
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	800.03	0.0002	P	20.6
2	☐	2.000	2.153	54217.48	0.0145	P	5.9
3	☐	5.000	5.170	134298.41	0.0345	P	2.7
4	☐	10.000	10.152	249051.50	0.0675	P	2.5
5	☐	100.000	102.259	2445519.44	0.6780	A	5.3
6	☐	200.000	198.857	4636870.14	1.3183	A	7.3
7	☐	1.000					

y = 0.0066 * x + 2.0568E-004
R = 0.9999
DL = 0.0192
BEC = 0.03103

Weight: <None>
Min Conc: <None>

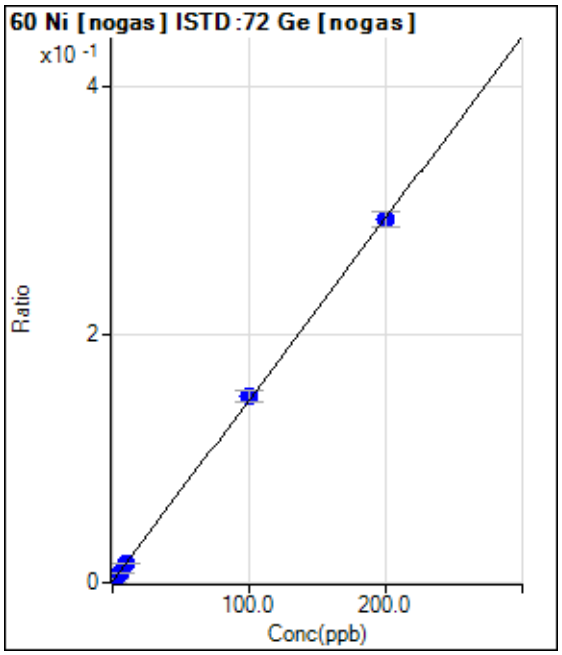


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.67	0.0001	P	25.3
2	☐	2.000	1.915	26278.96	0.0197	P	3.6
3	☐	5.000	5.066	67377.17	0.0519	P	1.9
4	☐	10.000	9.662	125015.46	0.0989	P	1.3
5	☐	100.000	97.213	1215961.80	0.9936	P	1.5
6	☐	200.000	201.410	2454301.47	2.0584	A	0.4
7	☐	1.000					

y = 0.0102 * x + 1.4142E-004
R = 0.9999
DL = 0.01049
BEC = 0.01384

Weight: <None>
Min Conc: <None>

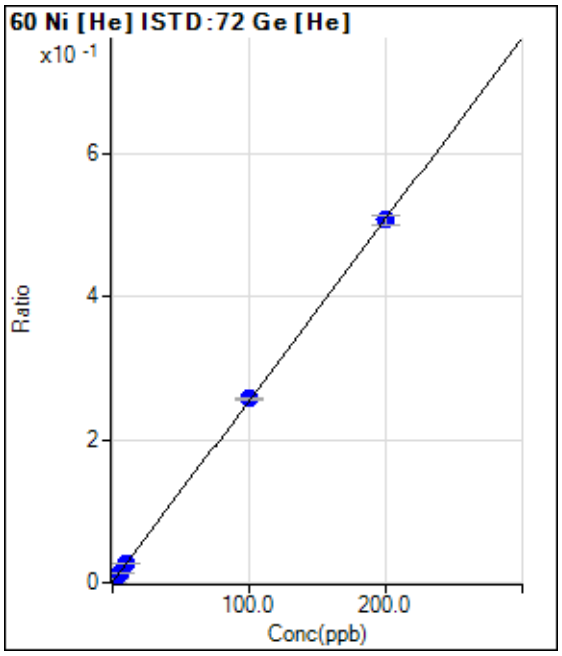
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.431	920.04	0.0002	P	5.3
2	☐	2.000	1.708	12627.88	0.0034	P	4.6
3	☐	5.000	4.897	31320.40	0.0080	P	4.1
4	☐	10.000	9.785	56119.35	0.0152	P	3.0
5	☐	100.000	102.049	542522.66	0.1504	P	6.1
6	☐	200.000	198.991	1029513.37	0.2925	P	4.2
7	☐	1.000					

y = 0.0015 * x + 8.6784E-004
R = 0.9999
DL = 0.02559
BEC = 0.5921

Weight: <None>
Min Conc: <None>

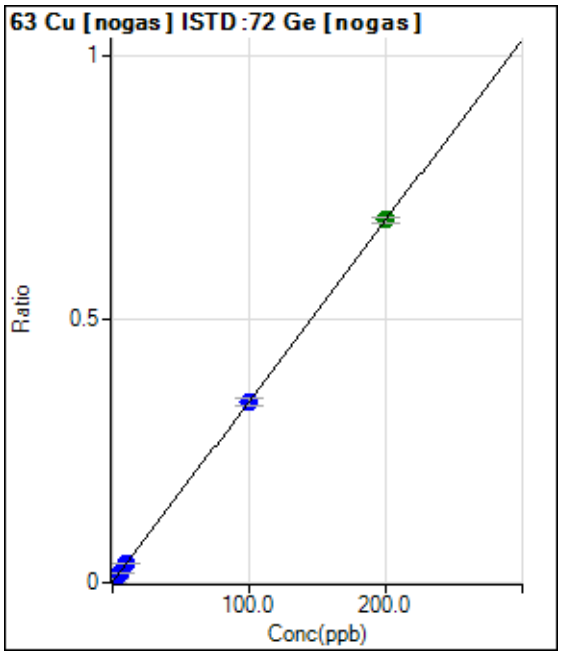


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.219	260.00	0.0002	P	17.2
2	☐	2.000	1.793	7068.14	0.0053	P	6.0
3	☐	5.000	5.009	17478.63	0.0135	P	4.7
4	☐	10.000	9.977	32976.61	0.0261	P	1.3
5	☐	100.000	100.875	314310.48	0.2568	P	0.5
6	☐	200.000	199.565	604889.20	0.5074	P	2.5
7	☐	1.000					

y = 0.0025 * x + 7.5337E-004
R = 1.0000
DL = 0.0402
BEC = 0.2968

Weight: <None>
Min Conc: <None>

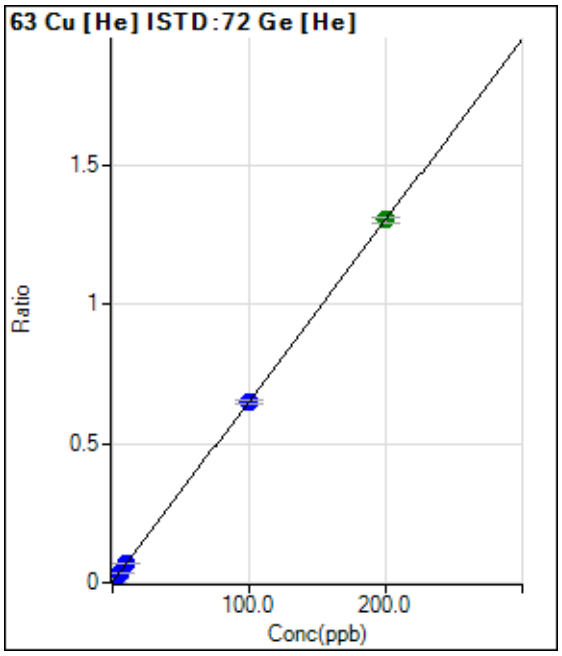
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3517.06	0.0009	P	4.1
2	☐	2.000	2.048	29671.07	0.0079	P	6.2
3	☐	5.000	5.181	72695.88	0.0187	P	2.8
4	☐	10.000	10.383	134733.00	0.0365	P	0.8
5	☐	100.000	99.362	1232660.55	0.3415	P	4.0
6	☐	200.000	200.295	2421020.17	0.6876	A	1.9
7	☐	1.000					

y = 0.0034 * x + 9.0284E-004
R = 1.0000
DL = 0.03256
BEC = 0.2633

Weight: <None>
Min Conc: <None>

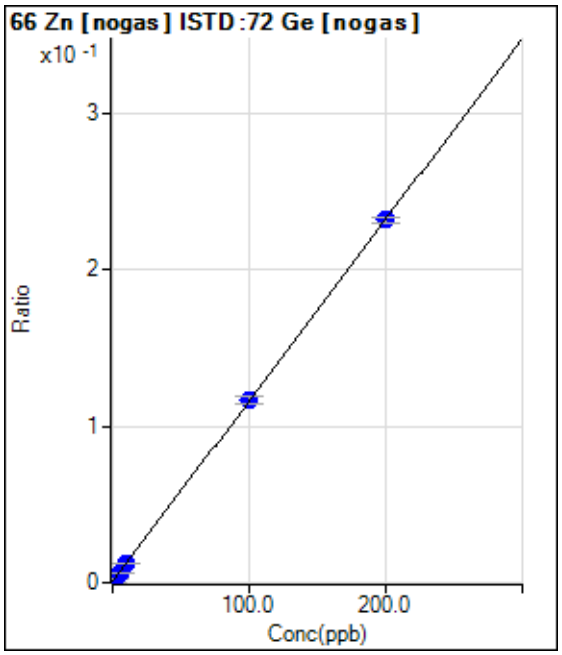


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.102	1390.08	0.0011	P	3.4
2	☐	2.000	1.799	17862.30	0.0134	P	6.4
3	☐	5.000	5.257	46562.78	0.0359	P	1.6
4	☐	10.000	10.203	85970.93	0.0680	P	3.3
5	☐	100.000	99.712	794865.82	0.6495	P	1.8
6	☐	200.000	200.129	1552361.07	1.3019	A	1.6
7	☐	1.000					

y = 0.0065 * x + 0.0017
R = 1.0000
DL = 0.01682
BEC = 0.2642

Weight: <None>
Min Conc: <None>

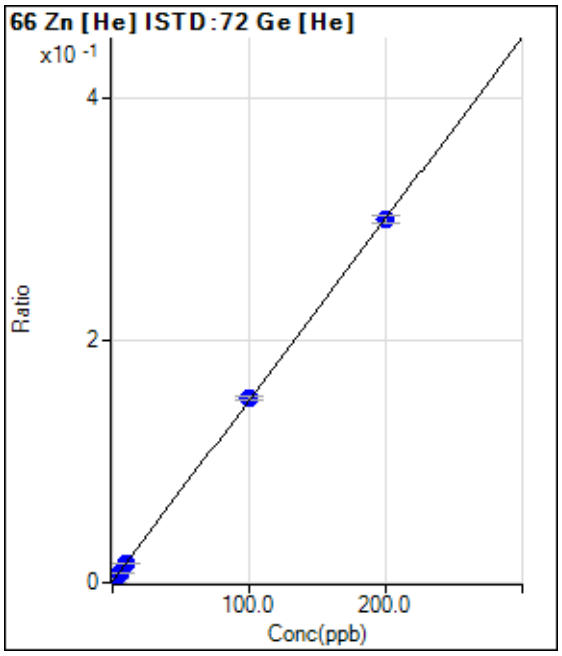
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.156	1690.10	0.0004	P	7.7
2	☐	2.000	2.103	11410.46	0.0030	P	4.5
3	☐	5.000	4.974	24763.84	0.0064	P	3.5
4	☐	10.000	9.997	44899.14	0.0122	P	1.1
5	☐	100.000	100.164	419829.46	0.1163	P	4.1
6	☐	200.000	199.918	815277.62	0.2316	P	1.5
7	☐	1.000					

y = 0.0012 * x + 6.1416E-004
R = 1.0000
DL = 0.08629
BEC = 0.5317

Weight: <None>
Min Conc: <None>

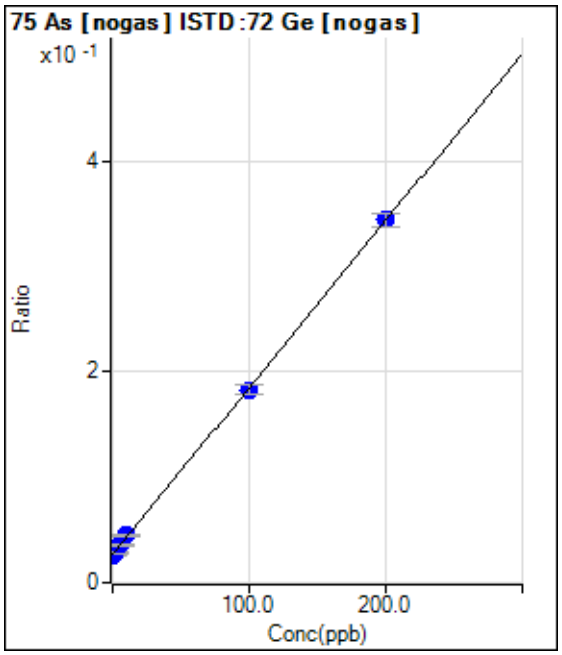


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.343	646.69	0.0005	P	14.8
2	☐	2.000	1.818	4967.42	0.0037	P	1.4
3	☐	5.000	4.941	10903.40	0.0084	P	3.8
4	☐	10.000	9.921	20047.89	0.0159	P	1.5
5	☐	100.000	101.312	186831.36	0.1527	P	2.5
6	☐	200.000	199.351	357024.02	0.2994	P	2.0
7	☐	1.000					

y = 0.0015 * x + 0.0010
R = 1.0000
DL = 0.1457
BEC = 0.6709

Weight: <None>
Min Conc: <None>

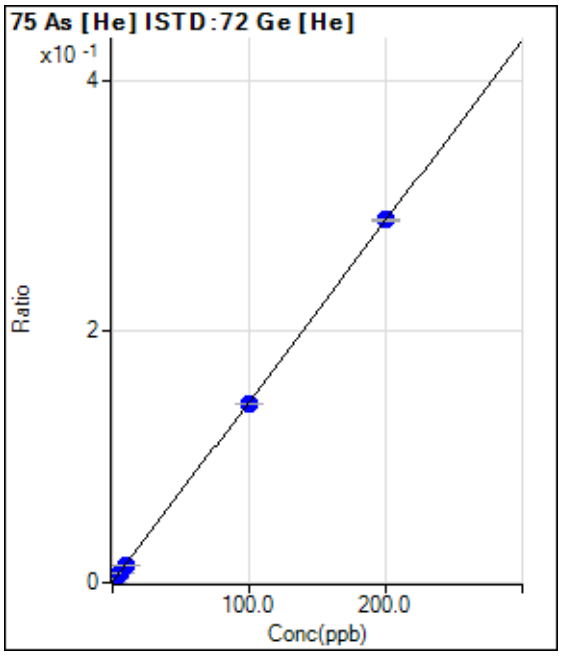
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.698	99889.22	0.0256	P	3.0
2	☐	2.000	0.888	105516.46	0.0282	P	4.1
3	☐	5.000	5.964	140913.10	0.0362	P	3.6
4	☐	10.000	11.499	165910.20	0.0450	P	1.9
5	☐	100.000	98.870	661229.59	0.1832	P	4.1
6	☐	200.000	200.477	1210986.70	0.3441	P	3.7
7	☐	1.000					

y = 0.0016 * x + 0.0268
R = 0.9999
DL = 1.482
BEC = 16.9

Weight: <None>
Min Conc: <None>

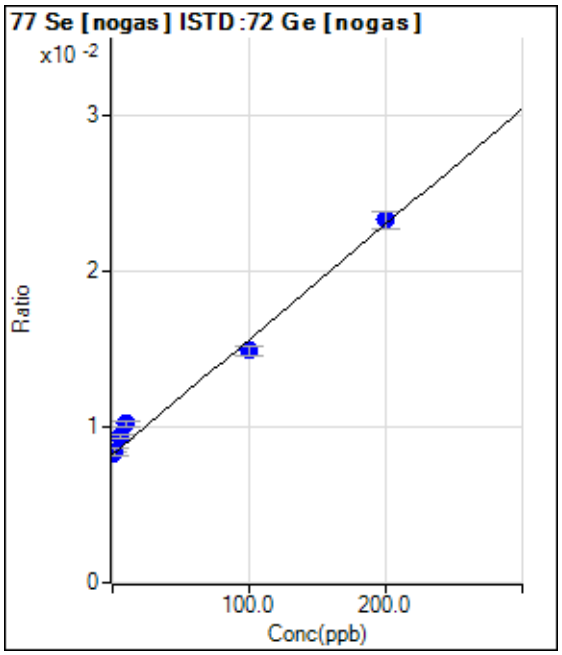


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0003	P	4.0
2	☐	2.000	1.936	4113.81	0.0031	P	4.2
3	☐	5.000	4.929	9592.56	0.0074	P	1.4
4	☐	10.000	9.651	17928.83	0.0142	P	1.1
5	☐	100.000	98.849	174292.90	0.1424	P	0.8
6	☐	200.000	200.595	344224.69	0.2887	P	0.6
7	☐	1.000					

y = 0.0014 * x + 3.0386E-004
R = 1.0000
DL = 0.02512
BEC = 0.2114

Weight: <None>
Min Conc: <None>

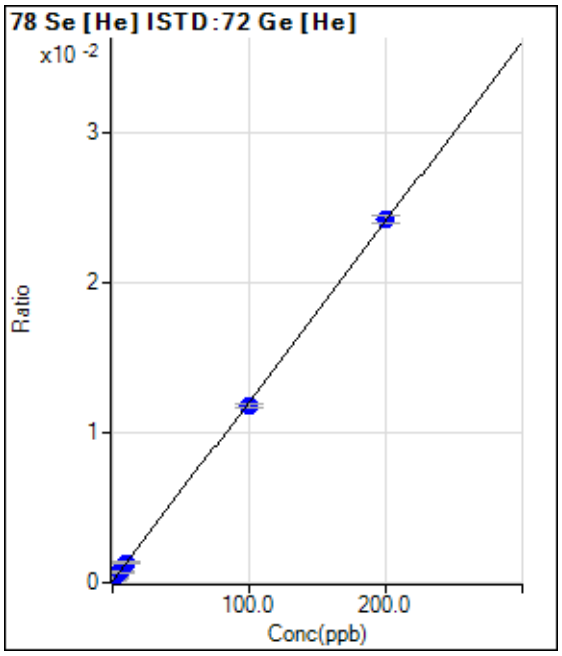
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32128.59	0.0082	P	2.8
2	☐	2.000	1.578	31330.55	0.0084	P	5.9
3	☐	5.000	15.136	36496.76	0.0094	P	2.8
4	☐	10.000	26.870	37792.91	0.0102	P	3.3
5	☐	100.000	90.578	53993.51	0.0150	P	4.2
6	☐	200.000	203.618	82124.56	0.0233	P	5.0
7	☐	1.000					

y = 7.4112E-005 * x + 0.0082
R = 0.9939
DL = 9.508
BEC = 111.3

Weight: <None>
Min Conc: <None>

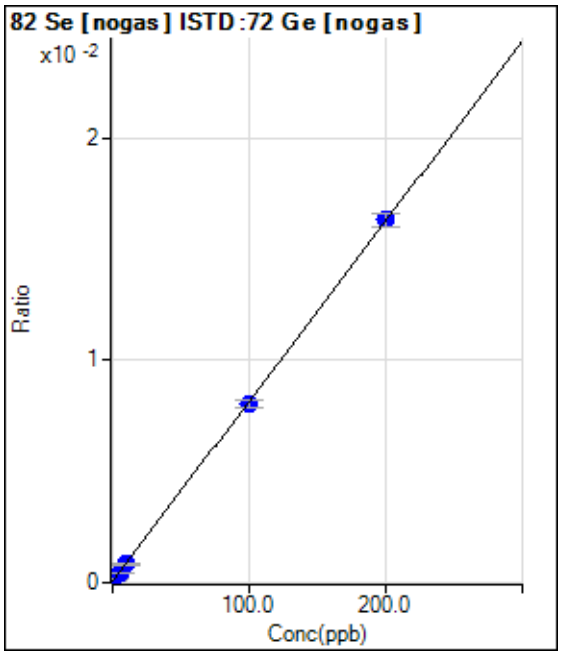


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.343	160.67	0.0001	P	24.3
2	☐	2.000	2.043	435.34	0.0003	P	12.3
3	☐	5.000	5.288	926.69	0.0007	P	11.6
4	☐	10.000	10.325	1666.08	0.0013	P	5.1
5	☐	100.000	98.050	14471.10	0.0118	P	2.3
6	☐	200.000	200.951	28791.30	0.0241	P	2.2
7	☐	1.000					

y = 1.1977E-004 * x + 8.1322E-005
R = 0.9999
DL = 0.7433
BEC = 0.679

Weight: <None>
Min Conc: <None>

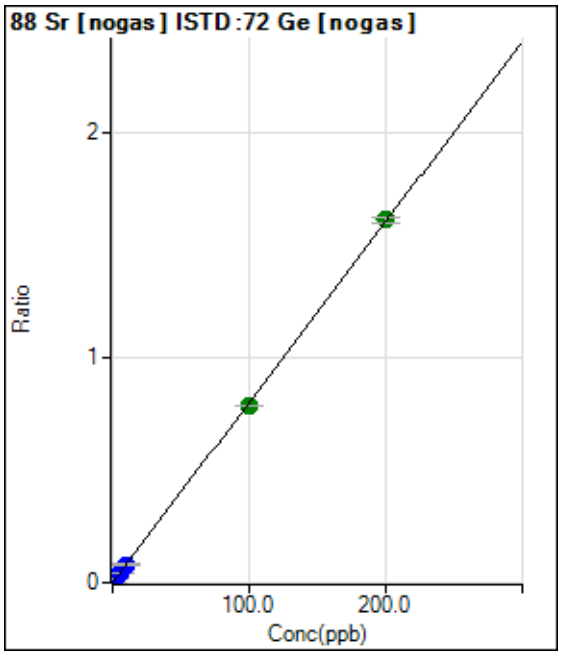
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	206.67	0.0001	P	20.6
2	☐	2.000	2.059	823.37	0.0002	P	8.6
3	☐	5.000	4.616	1666.77	0.0004	P	11.1
4	☐	10.000	9.772	3116.99	0.0008	P	7.0
5	☐	100.000	98.583	29043.71	0.0080	P	3.9
6	☐	200.000	200.729	57505.31	0.0163	P	3.7
7	☐	1.000					

y = 8.1102E-005 * x + 5.3141E-005
R = 1.0000
DL = 0.4052
BEC = 0.6552

Weight: <None>
Min Conc: <None>

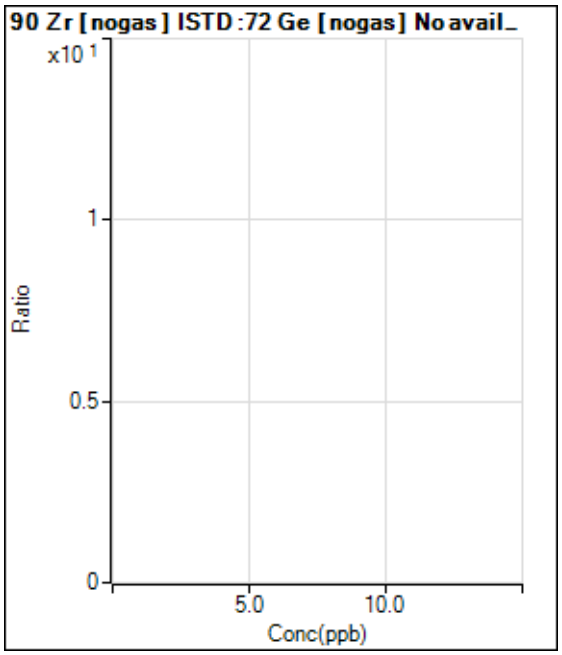


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1666.96	0.0004	P	34.0
2	☐	2.000	2.093	64407.22	0.0172	P	4.1
3	☐	5.000	4.972	156751.16	0.0403	P	3.2
4	☐	10.000	9.961	295819.14	0.0802	P	4.4
5	☐	100.000	97.762	2830311.41	0.7834	A	0.5
6	☐	200.000	201.121	5672429.29	1.6111	A	1.6
7	☐	1.000					

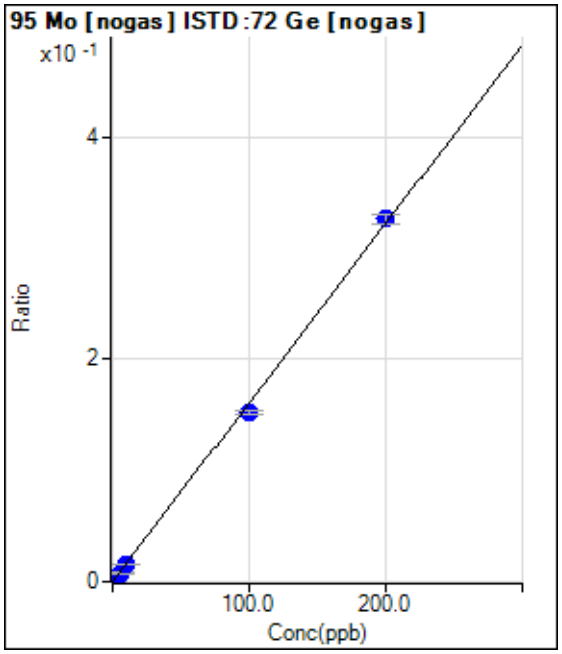
y = 0.0080 * x + 4.2898E-004
R = 0.9999
DL = 0.05464
BEC = 0.05356

Weight: <None>
Min Conc: <None>

Calibration for 077_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					

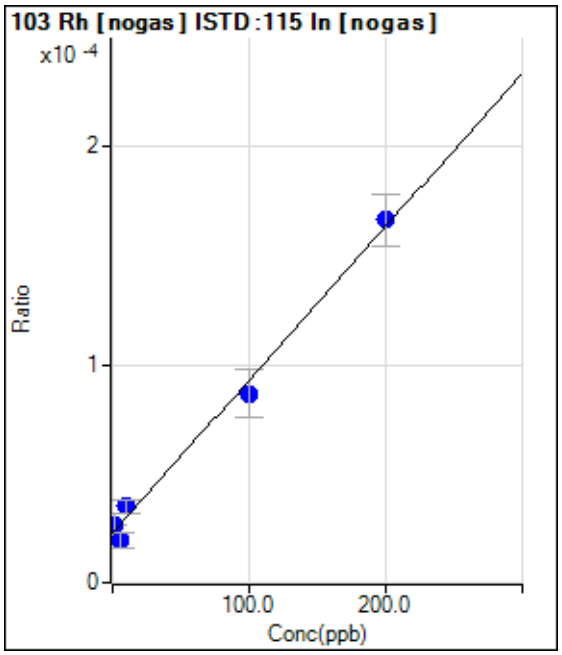


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	210.01	0.0001	P	26.3
2	☐	2.000	1.998	12247.69	0.0033	P	4.9
3	☐	5.000	4.742	29919.06	0.0077	P	3.2
4	☐	10.000	9.646	57433.05	0.0156	P	5.7
5	☐	100.000	94.402	548549.72	0.1520	P	2.7
6	☐	200.000	202.823	1149008.68	0.3264	P	2.9
7	☐	1.000					

y = 0.0016 * x + 5.4022E-005
R = 0.9995
DL = 0.0265
BEC = 0.03357

Weight: <None>
Min Conc: <None>

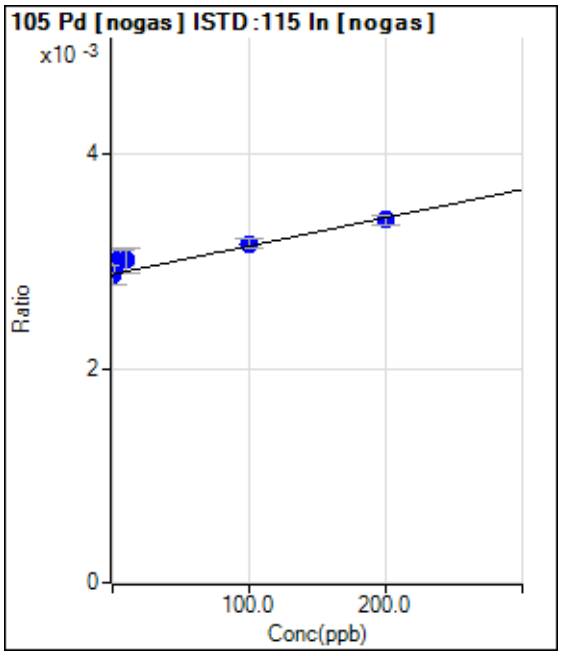
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0000	P	30.2
2	☐	2.000	5.672	90.00	0.0000	P	34.6
3	☐	5.000	-5.172	70.00	0.0000	P	36.7
4	☐	10.000	17.214	116.67	0.0000	P	16.9
5	☐	100.000	91.036	270.01	0.0001	P	25.4
6	☐	200.000	204.339	500.02	0.0002	P	14.4
7	☐	1.000					

y = 7.0339E-007 * x + 2.2751E-005
R = 0.9961
DL = 29.26
BEC = 32.34

Weight: <None>
Min Conc: <None>

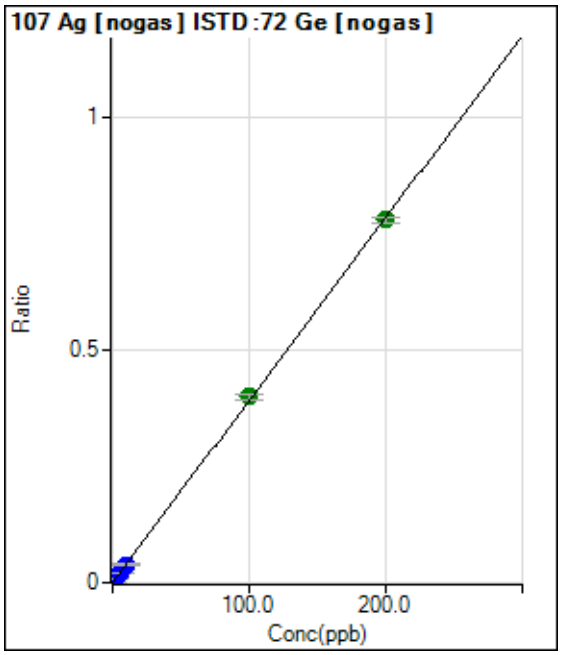


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10026.36	0.0029	P	6.4
2	☐	2.000	19.822	9943.04	0.0029	P	3.2
3	☐	5.000	59.972	11063.67	0.0030	P	4.8
4	☐	10.000	48.919	10116.45	0.0030	P	7.7
5	☐	100.000	109.135	9896.29	0.0032	P	2.6
6	☐	200.000	191.934	10133.13	0.0034	P	3.0
7	☐	1.000					

y = 2.6420E-006 * x + 0.0029
R = 0.9619
DL = 209.2
BEC = 1090

Weight: <None>
Min Conc: <None>

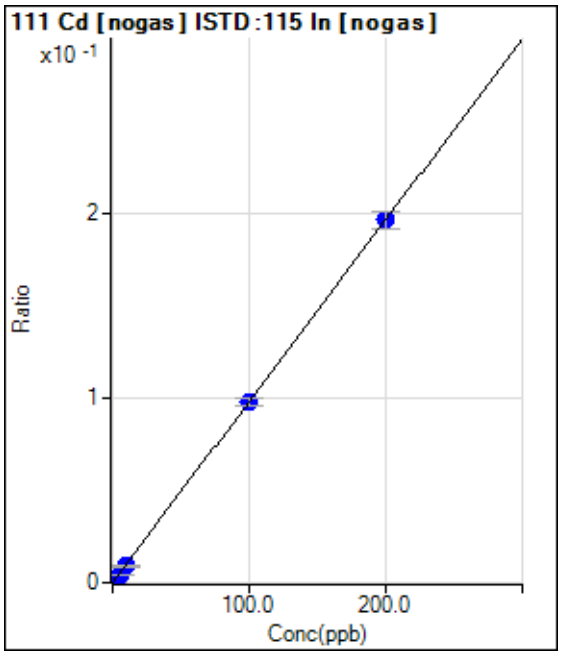
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.00	0.0000	P	39.8
2	☐	2.000	2.086	30703.83	0.0082	P	3.4
3	☐	5.000	5.042	76881.08	0.0198	P	5.3
4	☐	10.000	9.847	142197.06	0.0385	P	3.5
5	☐	100.000	101.985	1439920.92	0.3988	A	2.5
6	☐	200.000	199.013	2740582.56	0.7782	A	1.6
7	☐	1.000					

y = 0.0039 * x + 3.5983E-005
R = 0.9999
DL = 0.011
BEC = 0.009202

Weight: <None>
Min Conc: <None>

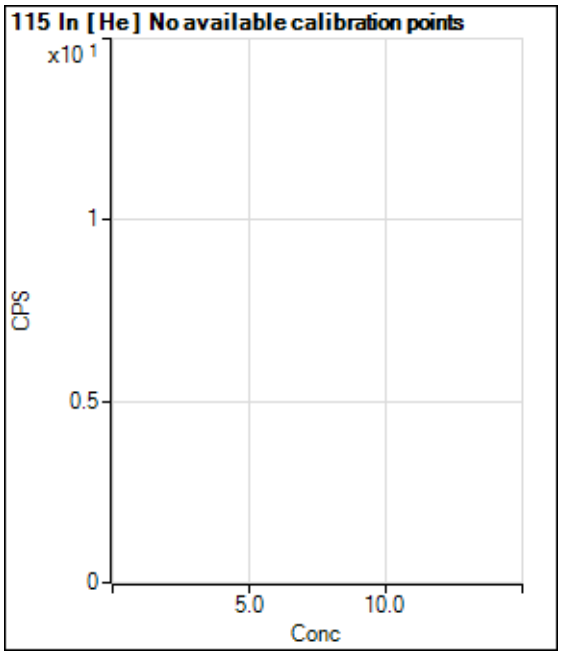


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	56.2
2	☐	2.000	1.994	6648.04	0.0020	P	3.8
3	☐	5.000	4.511	16167.73	0.0044	P	1.1
4	☐	10.000	9.135	30129.43	0.0090	P	5.3
5	☐	100.000	99.847	305990.20	0.0980	P	4.4
6	☐	200.000	200.132	587523.79	0.1964	P	4.6
7	☐	1.000					

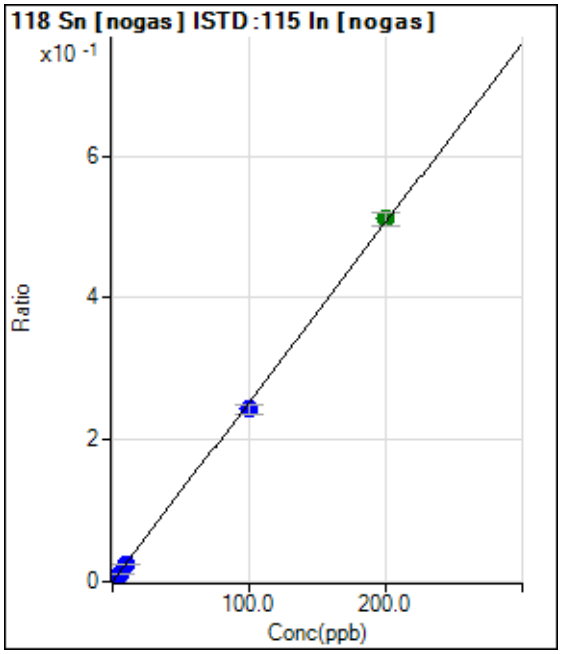
y = 9.8153E-004 * x + 7.5438E-006
R = 1.0000
DL = 0.01296
BEC = 0.007686

Weight: <None>
Min Conc: <None>

Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1813495.03		A	0.3
2	☐			1789090.96		A	1.2
3	☐			1802685.08		A	2.8
4	☐			1728779.80		A	3.5
5	☐			1641805.32		A	2.4
6	☐			1554824.85		A	2.2
7	☐						

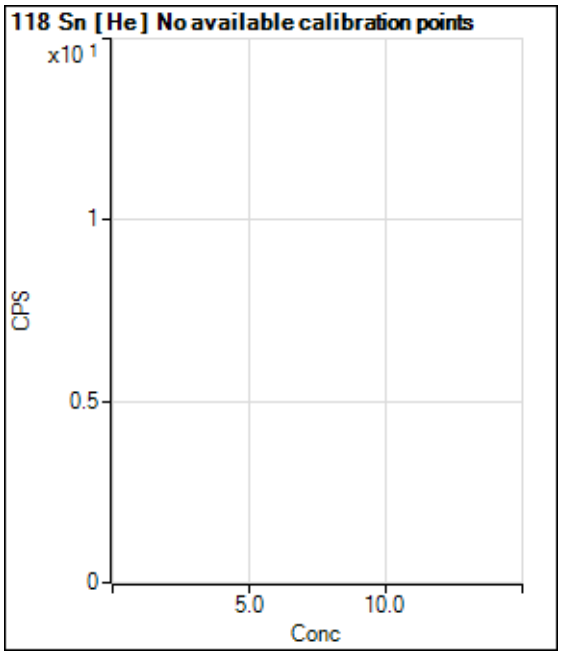


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1420.08	0.0004	P	6.4
2	☐	2.000	1.852	17218.72	0.0051	P	3.9
3	☐	5.000	4.413	42114.51	0.0116	P	4.0
4	☐	10.000	9.068	78386.11	0.0233	P	0.8
5	☐	100.000	95.965	758165.12	0.2429	P	4.9
6	☐	200.000	202.080	1528738.88	0.5111	A	4.0
7	☐	1.000					

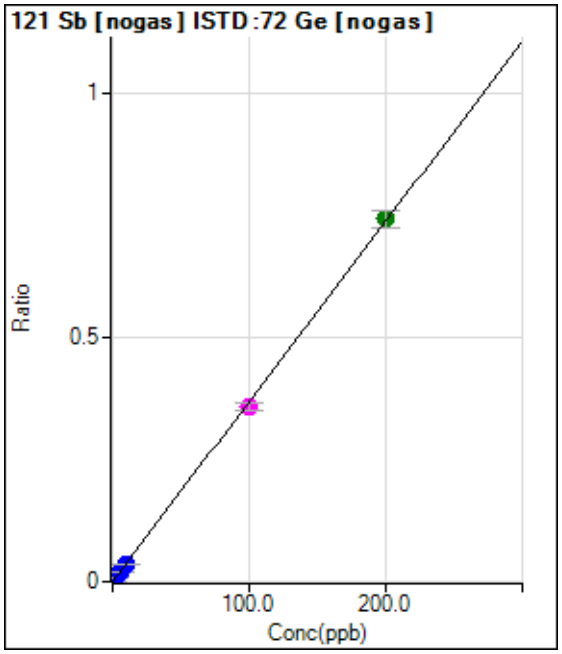
y = 0.0025 * x + 4.0806E-004
R = 0.9997
DL = 0.03084
BEC = 0.1615

Weight: <None>
Min Conc: <None>

Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			740.03		P	8.9
2	☐			9252.57		P	7.3
3	☐			23359.19		P	2.1
4	☐			42799.21		P	1.5
5	☐			411337.12		P	2.1
6	☐			821307.88		P	1.8
7	☐						

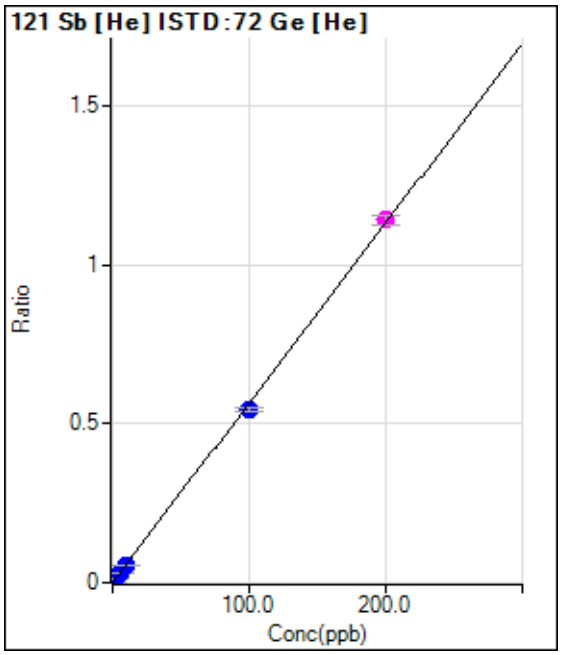


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1130.05	0.0003	P	2.2
2	☐	2.000	1.948	27989.43	0.0075	P	5.3
3	☐	5.000	4.841	70637.00	0.0181	P	2.6
4	☐	10.000	9.676	132758.70	0.0360	P	2.3
5	☐	100.000	97.091	1292480.92	0.3583	M	4.8
6	☐	200.000	201.475	2615017.56	0.7431	A	4.9
7	☐	1.000					

y = 0.0037 * x + 2.9013E-004
R = 0.9999
DL = 0.005155
BEC = 0.07869

Weight: <None>
Min Conc: <None>

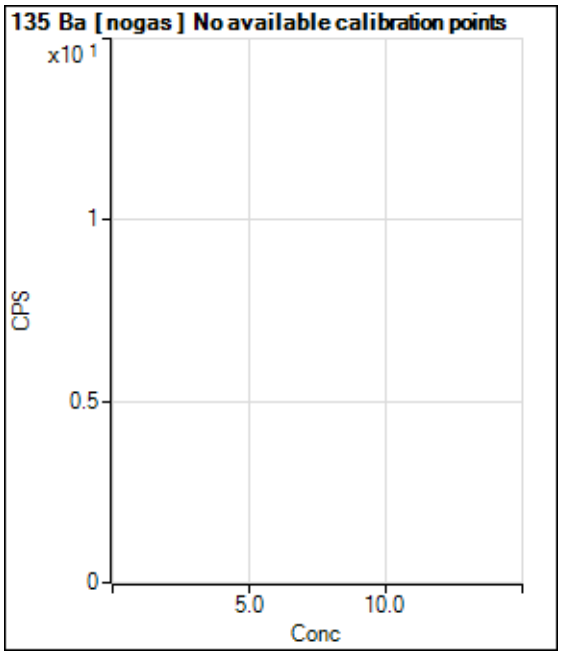
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	690.03	0.0005	P	9.0
2	☐	2.000	1.851	14649.68	0.0110	P	3.0
3	☐	5.000	4.834	36161.01	0.0279	P	2.9
4	☐	10.000	9.498	68561.03	0.0542	P	2.6
5	☐	100.000	96.105	665673.30	0.5440	P	1.9
6	☐	200.000	201.978	1362317.90	1.1426	M	3.0
7	☐	1.000					

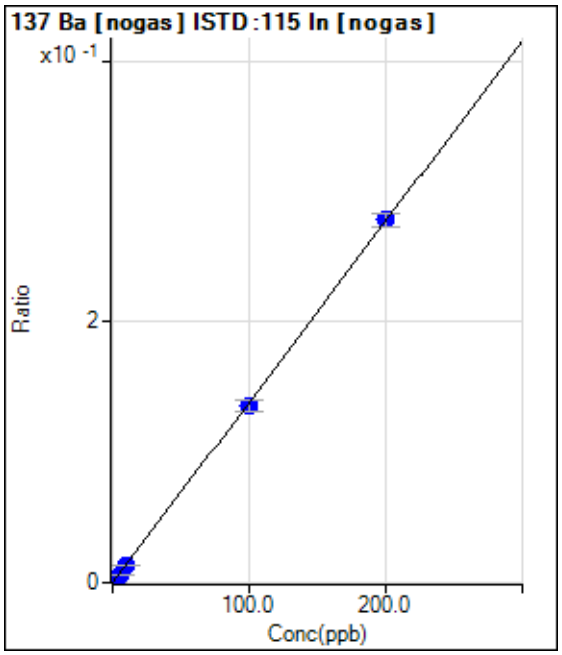
y = 0.0057 * x + 5.2453E-004
R = 0.9997
DL = 0.02505
BEC = 0.09276

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			206.67		P	36.3
2	☐			5170.87		P	3.3
3	☐			13588.89		P	2.0
4	☐			24884.92		P	0.9
5	☐			244431.33		P	2.9
6	☐			474808.48		P	0.5
7	☐						

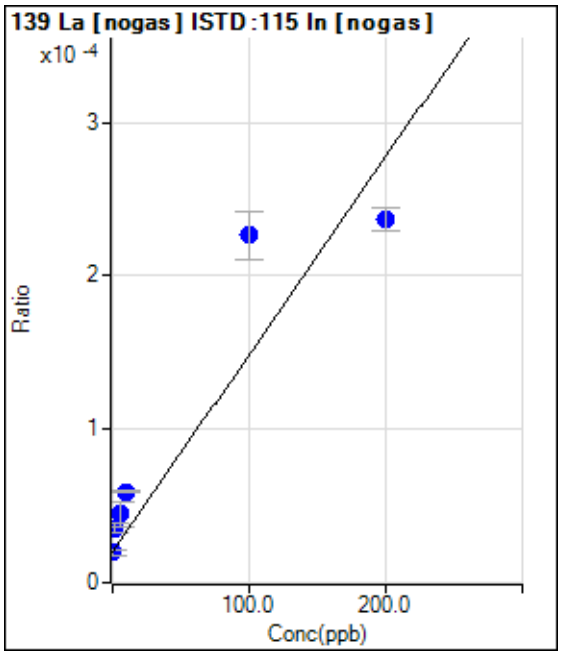
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	343.34	0.0001	P	18.0
2	☐	2.000	1.990	9646.20	0.0029	P	4.9
3	☐	5.000	4.549	23276.06	0.0064	P	4.6
4	☐	10.000	9.285	43452.07	0.0129	P	4.7
5	☐	100.000	98.139	423807.77	0.1359	P	5.9
6	☐	200.000	200.978	831970.59	0.2781	P	4.0
7	☐	1.000					

y = 0.0014 * x + 9.8721E-005
R = 0.9999
DL = 0.03857
BEC = 0.07136

Weight: <None>
Min Conc: <None>

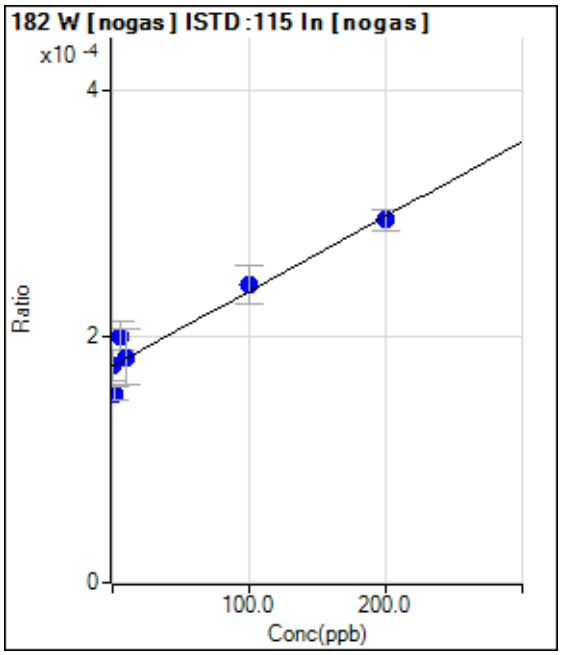


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	19.3
2	☐	2.000	11.935	120.00	0.0000	P	18.2
3	☐	5.000	19.345	163.33	0.0000	P	36.2
4	☐	10.000	30.751	200.00	0.0001	P	2.9
5	☐	100.000	160.553	710.03	0.0002	P	13.9
6	☐	200.000	168.228	706.69	0.0002	P	6.4
7	☐	1.000					

y = 1.2864E-006 * x + 1.9944E-005
R = 0.9303
DL = 8.981
BEC = 15.5

Weight: <None>
Min Conc: <None>

Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	616.69	0.0002	P	14.0
2	☐	2.000	-37.149	520.01	0.0002	P	7.4
3	☐	5.000	40.423	733.36	0.0002	P	11.2
4	☐	10.000	11.984	613.36	0.0002	P	24.2
5	☐	100.000	108.583	753.36	0.0002	P	12.4
6	☐	200.000	195.115	883.37	0.0003	P	6.1
7	☐	1.000					

y = 6.0867E-007 * x + 1.7613E-004

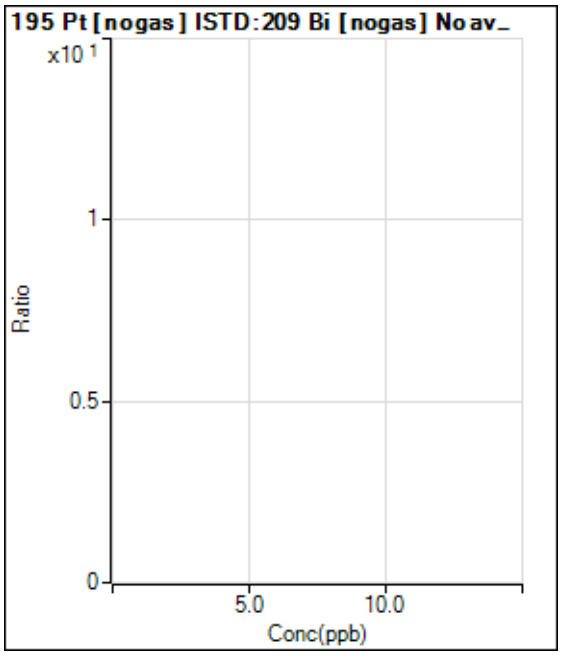
R = 0.9591

DL = 121.6

BEC = 289.4

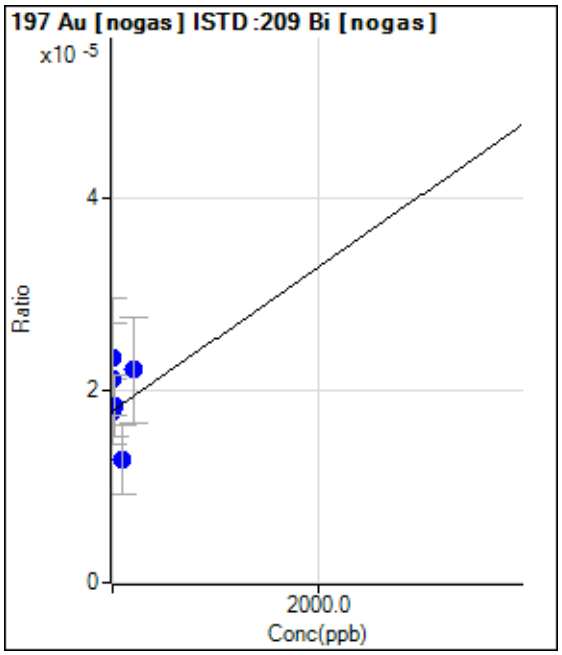
Weight: <None>

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					

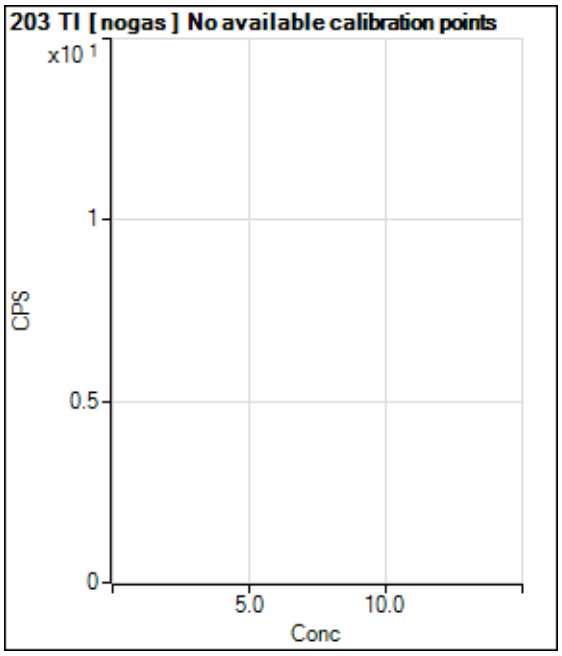
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	38.2
2	☐	2.000	749.078	56.67	0.0000	P	52.3
3	☐	5.000	432.298	53.33	0.0000	P	56.4
4	☐	10.000	70.941	43.33	0.0000	P	34.3
5	☐	100.000	-678.351	30.00	0.0000	P	56.0
6	☐	200.000	567.975	46.67	0.0000	P	49.5
7	☐	1.000					

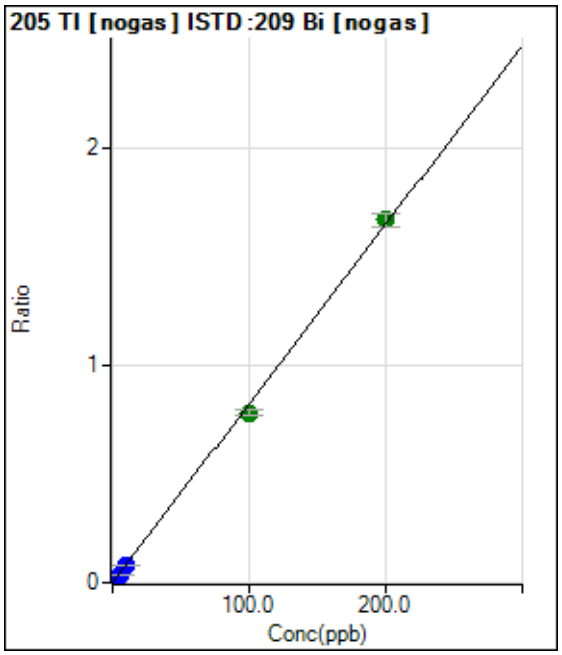
y = 7.4868E-009 * x + 1.7874E-005
R = -0.0486
DL = 2738
BEC = 2387

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			310.01		P	25.8
2	☐			16635.35		P	3.2
3	☐			39648.96		P	2.0
4	☐			75971.07		P	4.9
5	☐			772962.10		P	1.9
6	☐			1522149.66		A	3.6
7	☐						

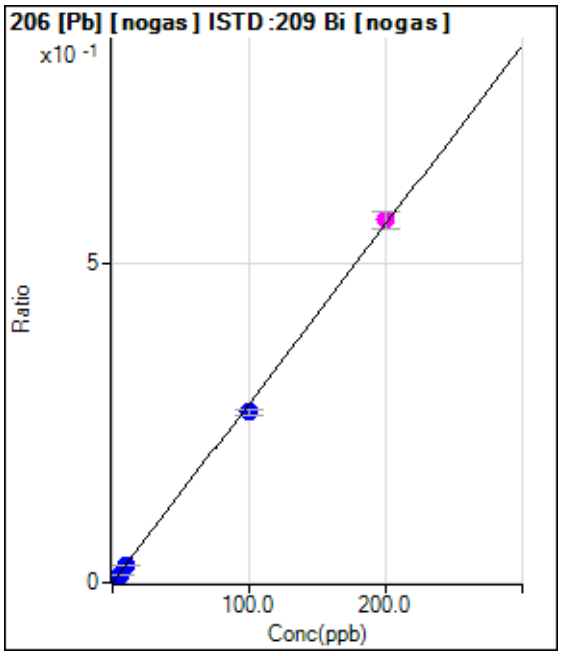
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	620.02	0.0003	P	24.1
2	☐	2.000	1.917	38426.03	0.0160	P	2.0
3	☐	5.000	4.563	94350.61	0.0378	P	4.8
4	☐	10.000	9.374	181730.20	0.0774	P	3.6
5	☐	100.000	94.758	1817947.84	0.7802	A	3.9
6	☐	200.000	202.664	3570214.22	1.6683	A	4.0
7	☐	1.000					

y = 0.0082 * x + 2.5432E-004
R = 0.9995
DL = 0.02234
BEC = 0.0309

Weight: <None>
Min Conc: <None>

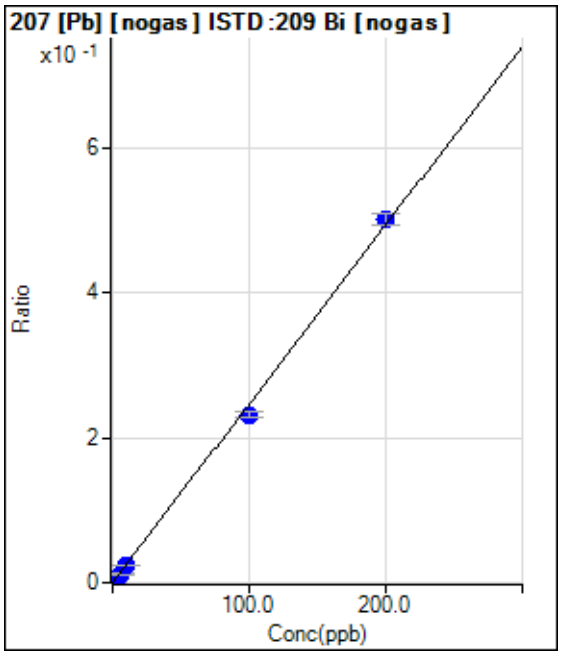


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.34	0.0001	P	22.6
2	☐	2.000	1.923	13142.23	0.0055	P	2.8
3	☐	5.000	4.600	32402.79	0.0130	P	7.4
4	☐	10.000	9.724	64284.04	0.0274	P	1.6
5	☐	100.000	94.997	621379.19	0.2667	P	4.1
6	☐	200.000	202.526	1216365.48	0.5684	M	4.5
7	☐	1.000					

y = 0.0028 * x + 8.7815E-005
R = 0.9996
DL = 0.02121
BEC = 0.03129

Weight: <None>
Min Conc: <None>

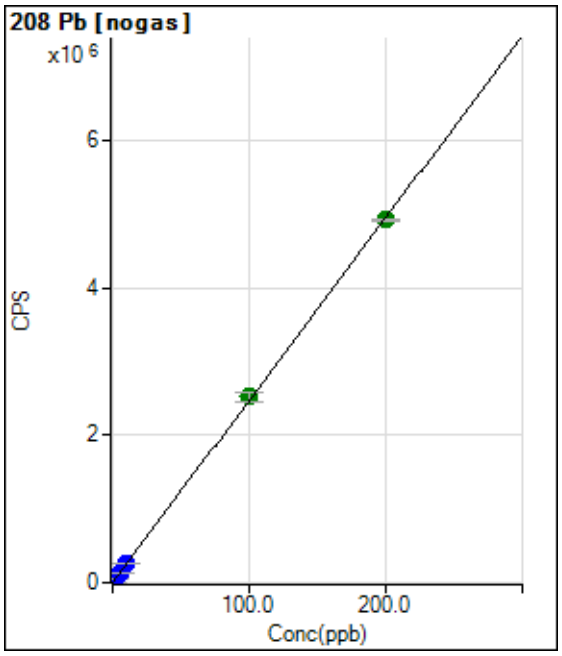
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0001	P	14.4
2	☐	2.000	1.925	11520.97	0.0048	P	4.2
3	☐	5.000	4.641	28655.69	0.0115	P	8.9
4	☐	10.000	9.421	54679.41	0.0233	P	2.5
5	☐	100.000	94.013	540139.12	0.2318	P	3.9
6	☐	200.000	203.032	1071282.69	0.5006	P	3.3
7	☐	1.000					

y = 0.0025 * x + 5.8957E-005
R = 0.9994
DL = 0.01032
BEC = 0.02392

Weight: <None>
Min Conc: <None>

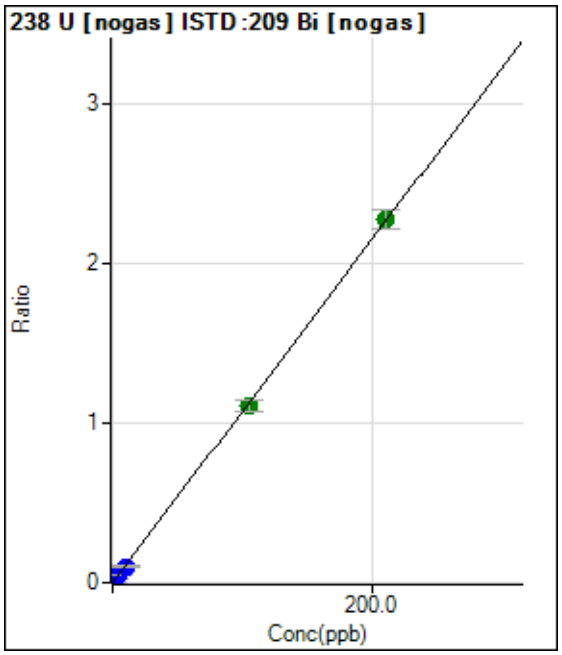


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	606.68		P	9.4
2	☐	2.000	2.118	52904.88		P	1.3
3	☐	5.000	5.300	131495.48		P	2.8
4	☐	10.000	10.140	251043.44		P	1.1
5	☐	100.000	101.876	2516640.03		A	4.5
6	☐	200.000	199.046	4916479.22		A	0.3
7	☐	1.000					

y = 24697.1065 * x + 606.6833
R = 0.9999
DL = 0.006908
BEC = 0.02456

Weight: <None>
Min Conc: <None>

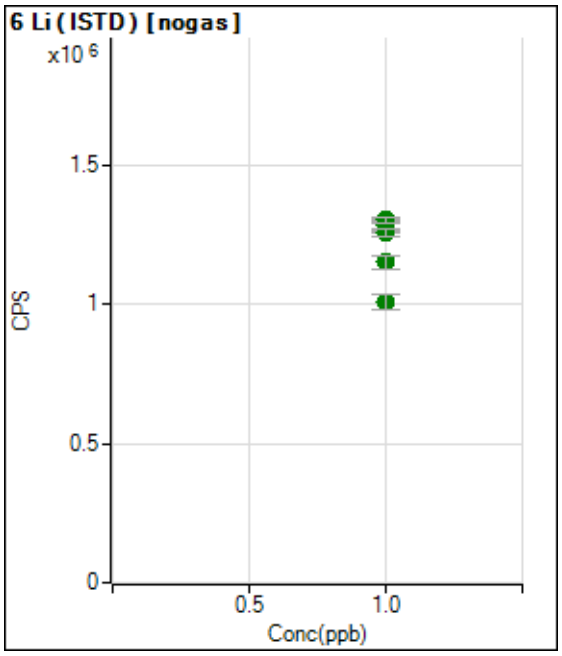
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0000	P	15.1
2	☐	2.000	1.888	48910.04	0.0204	P	7.2
3	☐	5.000	4.911	132360.52	0.0530	P	3.9
4	☐	10.000	9.449	239305.43	0.1019	P	4.0
5	☐	105.000	103.001	2586883.19	1.1106	A	5.8
6	☐	210.000	211.029	4867270.45	2.2754	A	5.5
7	☐	1.000					

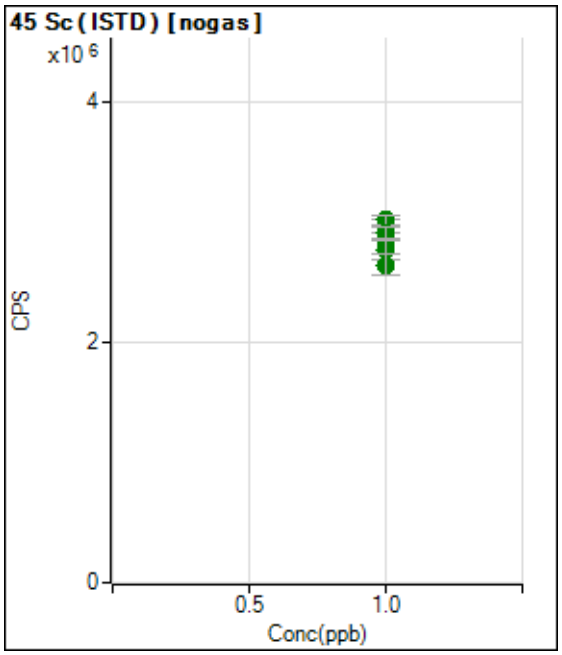
y = 0.0108 * x + 4.9243E-005
R = 0.9999
DL = 0.00207
BEC = 0.004567

Weight: <None>
Min Conc: <None>

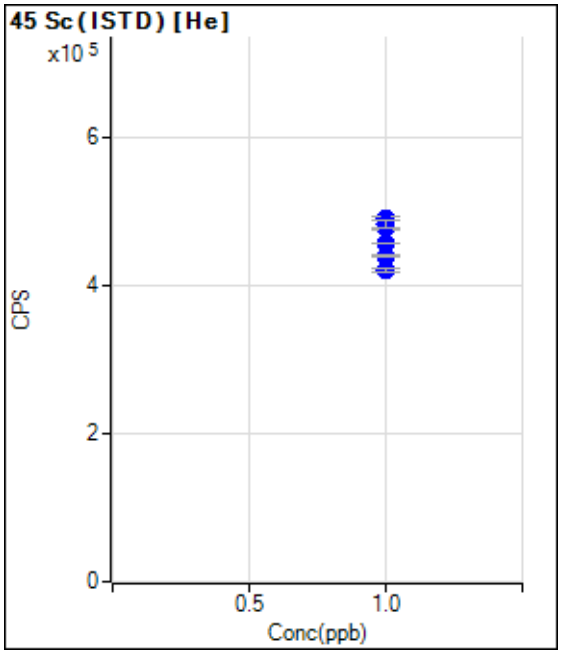


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1282255.12		A	3.6
2	☐	1.000		1280489.50		A	2.4
3	☐	1.000		1302121.40		A	1.7
4	☐	1.000		1255823.35		A	2.6
5	☐	1.000		1149486.02		A	4.2
6	☐	1.000		1007704.95		A	5.6
7	☐	1.000					

Calibration for 077_ICV.d

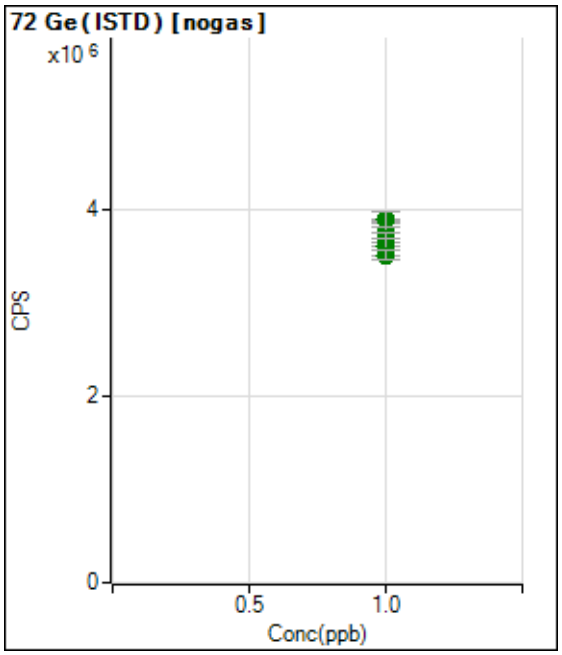


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2968203.29		A	3.4
2	☐	1.000		2855821.52		A	8.0
3	☐	1.000		3019990.06		A	2.8
4	☐	1.000		2910610.79		A	3.0
5	☐	1.000		2767853.29		A	5.4
6	☐	1.000		2642384.49		A	6.7
7	☐	1.000					

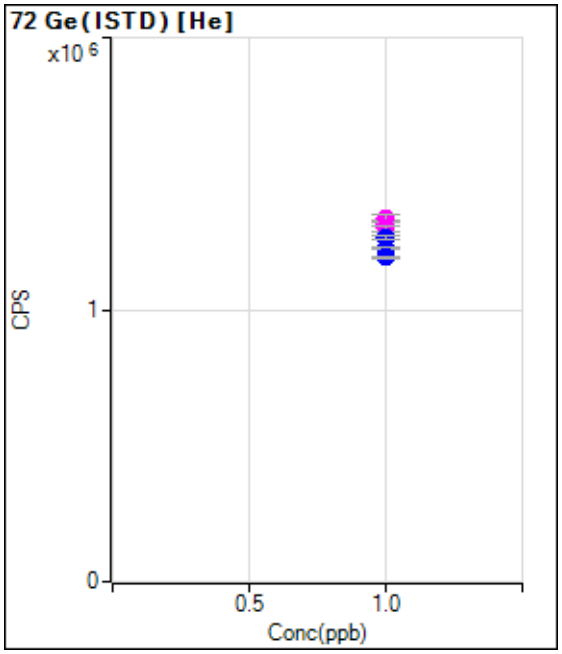


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		477492.30		P	0.7
2	☐	1.000		490555.23		P	1.0
3	☐	1.000		483264.12		P	2.5
4	☐	1.000		457424.08		P	0.3
5	☐	1.000		439891.84		P	0.7
6	☐	1.000		420289.21		P	1.2
7	☐	1.000					

Calibration for 077_ICV.d

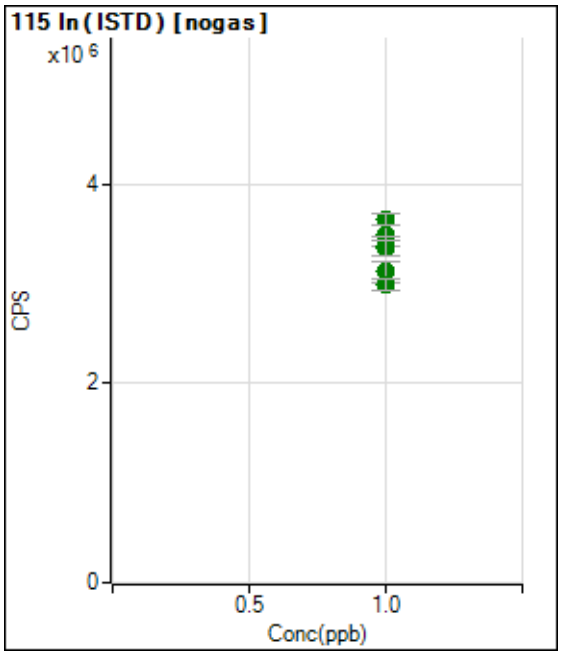


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3894466.92		A	1.0
2	☐	1.000		3752143.59		A	5.4
3	☐	1.000		3897281.92		A	4.1
4	☐	1.000		3692187.55		A	3.7
5	☐	1.000		3613377.44		A	5.1
6	☐	1.000		3521868.59		A	2.9
7	☐	1.000					

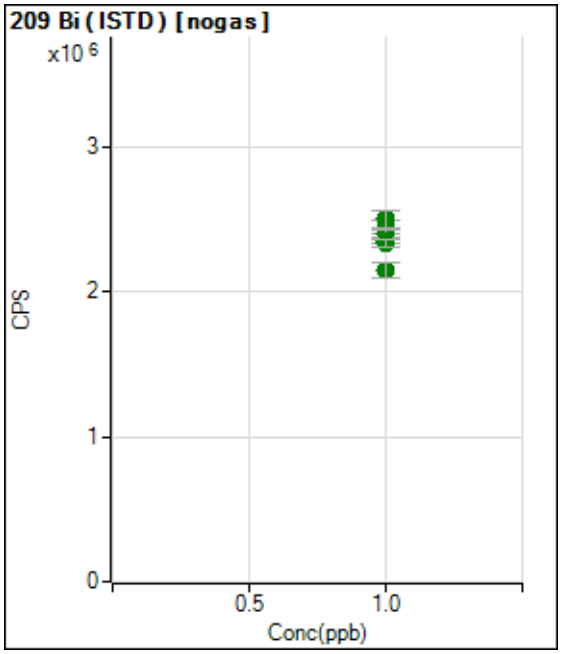


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1316691.70		M	1.8
2	☐	1.000		1333436.96		M	2.0
3	☐	1.000		1298118.16		M	1.4
4	☐	1.000		1264455.79		P	1.4
5	☐	1.000		1223833.89		P	0.7
6	☐	1.000		1192351.34		P	0.6
7	☐	1.000					

Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3488791.32		A	5.9
2	☐	1.000		3388629.20		A	5.7
3	☐	1.000		3645641.59		A	3.3
4	☐	1.000		3361504.00		A	4.3
5	☐	1.000		3127838.66		A	6.9
6	☐	1.000		2994726.25		A	4.3
7	☐	1.000					



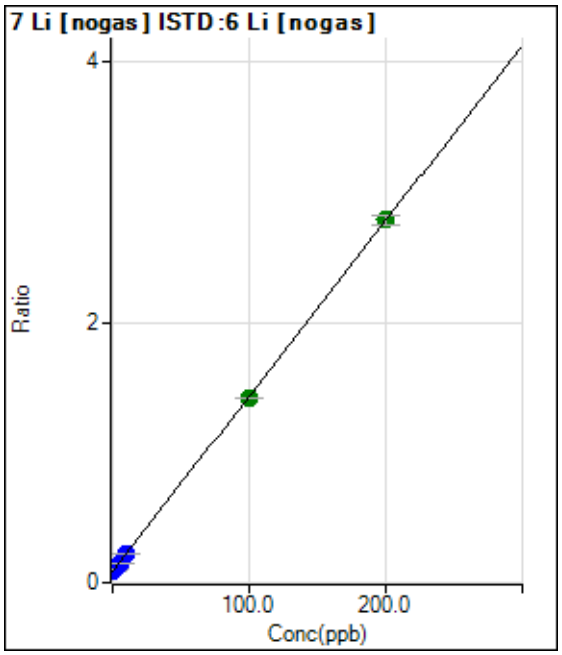
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2439864.23		A	3.8
2	☐	1.000		2397681.37		A	2.0
3	☐	1.000		2499074.39		A	4.9
4	☐	1.000		2348628.51		A	1.8
5	☐	1.000		2331004.76		A	2.0
6	☐	1.000		2142228.62		A	4.7
7	☐	1.000					

Calibration for 229_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010919B.b\
Analysis File: 010919B.batch.bin
DA Date-Time: 2019-01-09 19:29:29
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	221CALB.d	CAL BLK	2019-01-09 19:12:49
2	222CALS.d	2/10/200	2019-01-09 19:14:47
3	223CALS.d	5/25/500	2019-01-09 19:16:46
4	224CALS.d	10/50/1000	2019-01-09 19:18:43
5	227CALS.d	100/500/10K	2019-01-09 19:24:37
6	226CALS.d	200/1000/20K	2019-01-09 19:22:39
7			

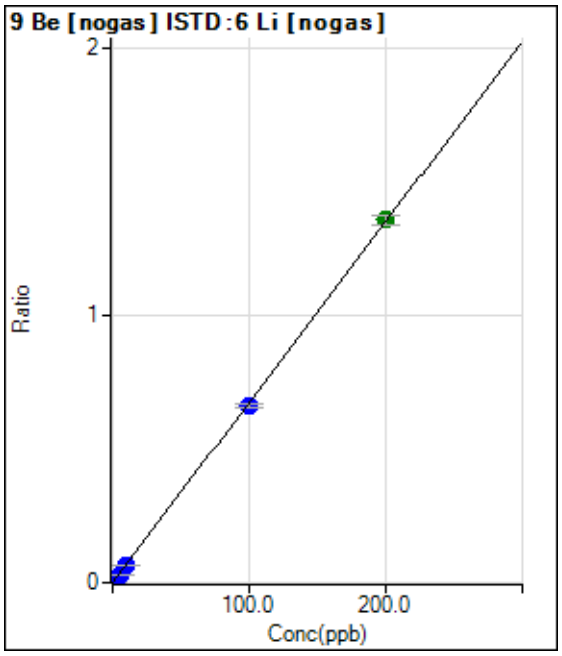
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96916.32	0.0867	P	3.1
2	☐	2.000	1.748	124716.95	0.1102	P	3.0
3	☐	5.000	4.688	163138.42	0.1498	P	1.4
4	☐	10.000	10.131	228477.20	0.2231	P	5.2
5	☐	100.000	98.899	1482584.14	1.4187	A	0.5
6	☐	200.000	200.554	2884029.23	2.7878	A	2.3
7	☐	1.000					

y = 0.0135 * x + 0.0867
R = 1.0000
DL = 0.5973
BEC = 6.437

Weight: <None>
Min Conc: <None>

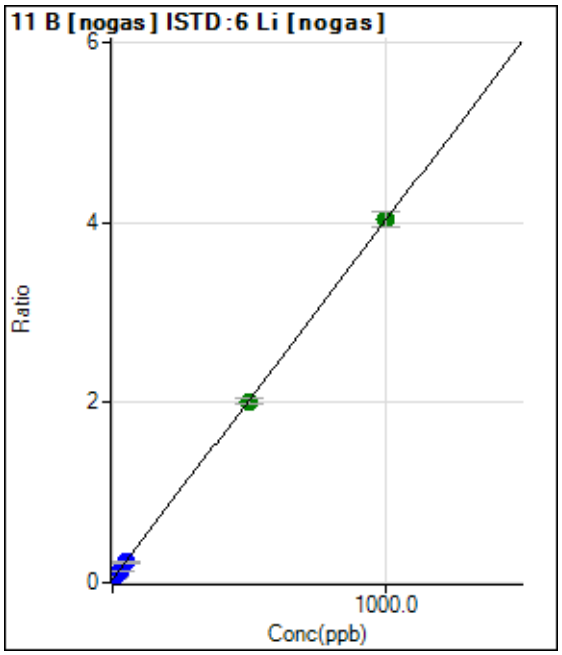


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.01	0.0002	P	13.2
2	☐	2.000	1.668	12951.20	0.0115	P	9.2
3	☐	5.000	4.386	32414.54	0.0298	P	1.1
4	☐	10.000	9.246	64063.68	0.0625	P	3.1
5	☐	100.000	97.634	687770.64	0.6583	P	2.2
6	☐	200.000	201.239	1403212.95	1.3566	A	2.6
7	☐	1.000					

y = 0.0067 * x + 2.0528E-004
R = 0.9999
DL = 0.01208
BEC = 0.03046

Weight: <None>
Min Conc: <None>

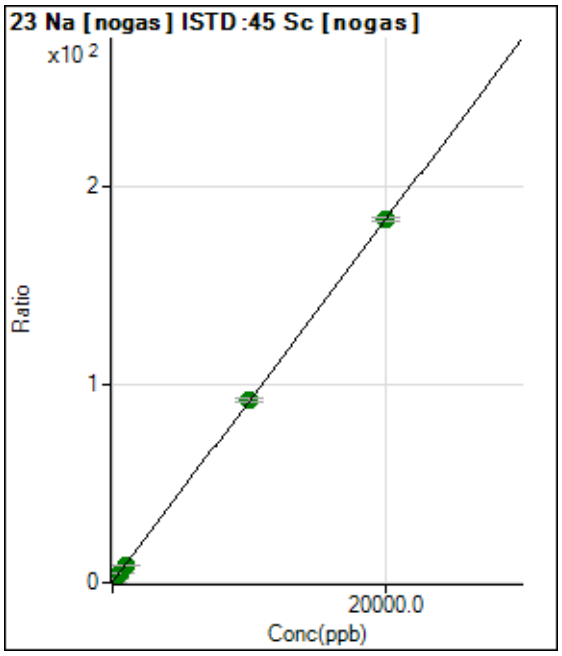
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42865.14	0.0384	P	8.0
2	☐	10.000	7.566	77493.50	0.0685	P	3.9
3	☐	25.000	21.429	134649.52	0.1237	P	3.6
4	☐	50.000	47.008	230915.71	0.2255	P	4.6
5	☐	500.000	496.482	2104502.99	2.0143	A	2.7
6	☐	1000.000	1002.022	4165630.67	4.0264	A	4.1
7	☐	5.000					

y = 0.0040 * x + 0.0384
R = 1.0000
DL = 2.305
BEC = 9.645

Weight: <None>
Min Conc: <None>

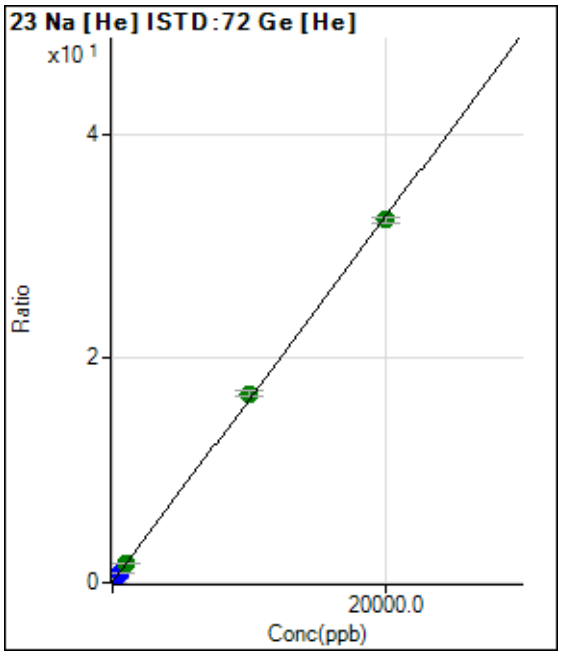


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	568424.57	0.2180	P	5.3
2	☐	200.000	191.118	5161578.63	1.9679	A	0.8
3	☐	500.000	473.619	12048278.65	4.5545	A	2.3
4	☐	1000.000	932.624	22966980.72	8.7572	A	4.3
5	☐	10000.00	10016.709	238148871.9	91.9315	A	2.2
6	☐	20000.00	19995.763	466021727.0	183.300	A	1.0
7	☐	100.000					

y = 0.0092 * x + 0.2180
R = 1.0000
DL = 3.807
BEC = 23.81

Weight: <None>
Min Conc: <None>

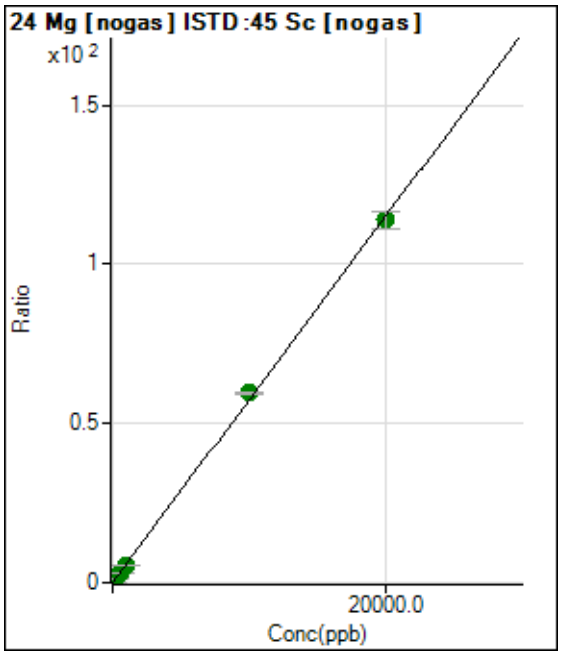
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56680.95	0.0476	P	0.8
2	☐	200.000	201.698	454872.16	0.3762	P	0.9
3	☐	500.000	514.887	1064301.18	0.8865	P	1.1
4	☐	1000.000	1017.934	2003125.85	1.7060	A	0.7
5	☐	10000.00	10337.290	19792255.54	16.8887	A	3.1
6	☐	20000.00	19830.069	37186881.11	32.3539	A	1.8
7	☐	100.000					

y = 0.0016 * x + 0.0476
R = 0.9998
DL = 0.7166
BEC = 29.23

Weight: <None>
Min Conc: <None>

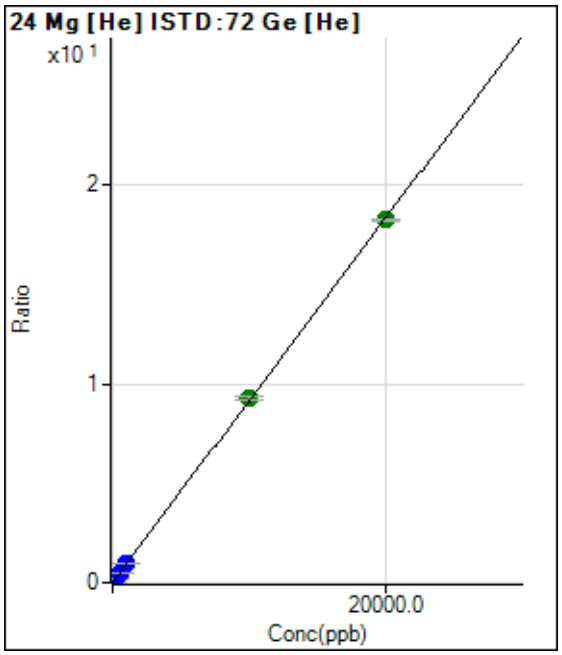


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34770.78	0.0133	P	6.0
2	☐	200.000	200.811	3062202.80	1.1675	A	1.1
3	☐	500.000	493.571	7538755.64	2.8502	A	3.0
4	☐	1000.000	966.733	14609241.99	5.5697	A	3.6
5	☐	10000.00	10364.265	154345107.6	59.5831	A	0.4
6	☐	20000.00	19819.683	289321281.4	113.929	A	5.0
7	☐	100.000					

y = 0.0057 * x + 0.0133
R = 0.9998
DL = 0.4142
BEC = 2.32

Weight: <None>
Min Conc: <None>

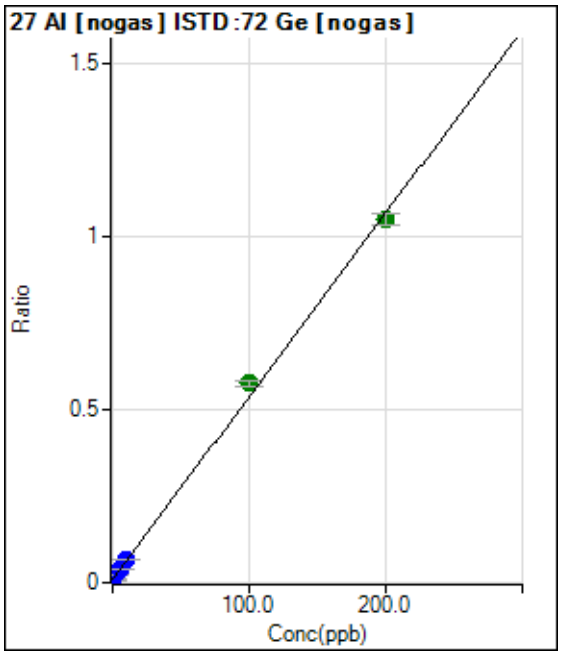
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2590.22	0.0022	P	2.1
2	☐	200.000	202.754	227154.01	0.1879	P	0.8
3	☐	500.000	519.712	574076.77	0.4782	P	1.5
4	☐	1000.000	1008.198	1086799.15	0.9256	P	0.5
5	☐	10000.00	10162.798	10911672.34	9.3103	A	1.8
6	☐	20000.00	19917.671	20972272.60	18.2449	A	0.8
7	☐	100.000					

y = 9.1591E-004 * x + 0.0022
R = 1.0000
DL = 0.1488
BEC = 2.377

Weight: <None>
Min Conc: <None>

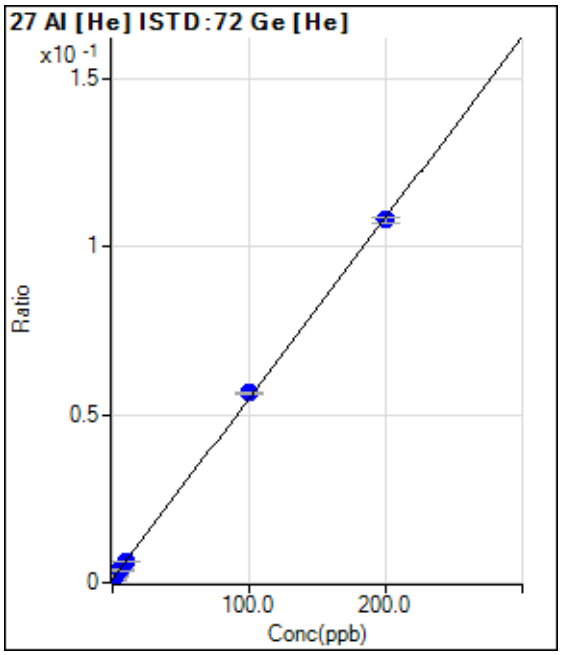


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28582.11	0.0084	P	5.2
2	☐	2.000	2.245	70137.31	0.0203	P	2.7
3	☐	5.000	5.522	129950.90	0.0377	P	1.9
4	☐	10.000	10.617	217773.77	0.0647	P	0.5
5	☐	100.000	107.063	1929165.07	0.5762	A	3.1
6	☐	200.000	196.422	3519046.20	1.0500	A	3.2
7	☐	1.000					

y = 0.0053 * x + 0.0084
R = 0.9991
DL = 0.2494
BEC = 1.588

Weight: <None>
Min Conc: <None>

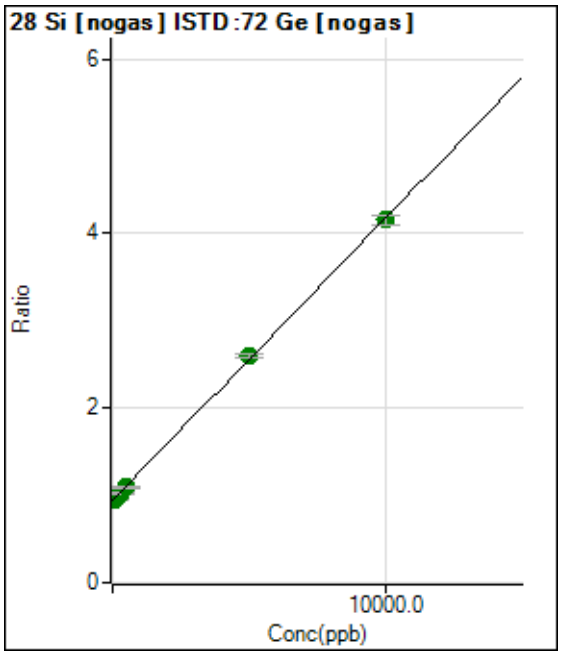
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.508	1026.71	0.0009	P	3.5
2	☐	2.000	1.590	2406.85	0.0020	P	4.2
3	☐	5.000	4.946	4560.63	0.0038	P	8.5
4	☐	10.000	9.573	7378.20	0.0063	P	2.4
5	☐	100.000	102.743	66091.91	0.0564	P	0.8
6	☐	200.000	198.655	124093.64	0.1080	P	1.9
7	☐	1.000					

y = 5.3778E-004 * x + 0.0011
R = 0.9999
DL = 0.1684
BEC = 2.111

Weight: <None>
Min Conc: <None>

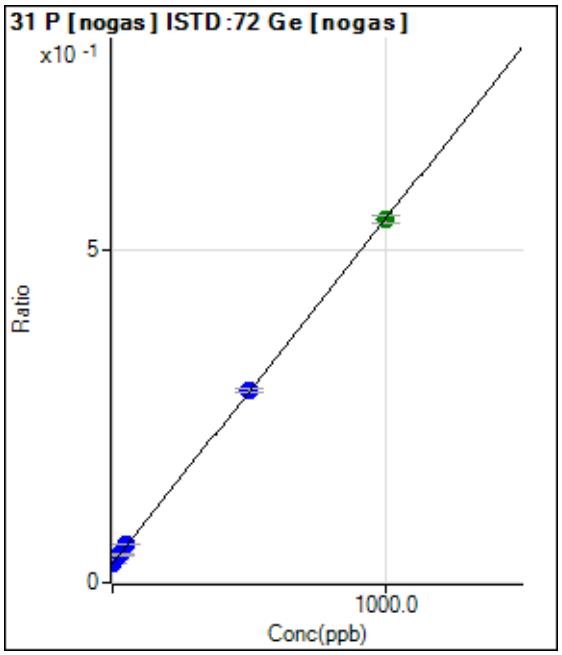


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3213274.12	0.9462	A	1.0
2	☐	100.000	28.030	3296194.12	0.9553	A	2.5
3	☐	250.000	226.115	3513153.07	1.0193	A	1.7
4	☐	500.000	475.811	3700907.34	1.1000	A	1.7
5	☐	5000.000	5137.412	8728679.87	2.6066	A	1.7
6	☐	10000.00	9933.820	13931646.88	4.1569	A	2.5
7	☐	5.000					

y = 3.2320E-004 * x + 0.9462
R = 0.9998
DL = 90.7
BEC = 2928

Weight: <None>
Min Conc: <None>

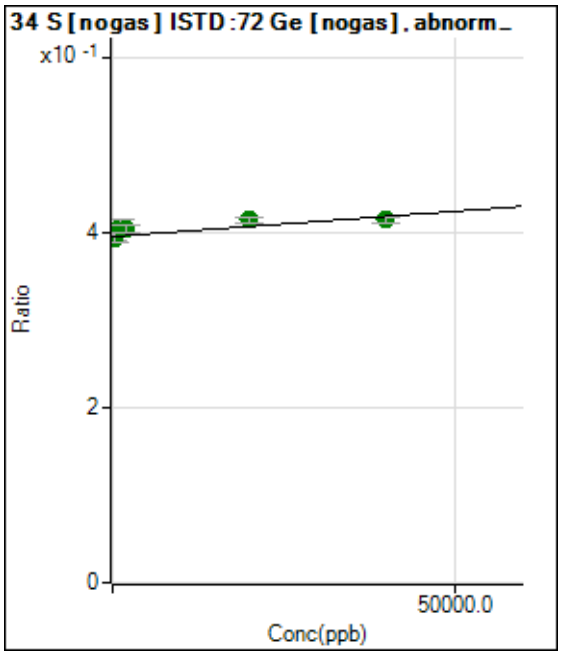
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96779.74	0.0285	P	0.9
2	☐	10.000	9.973	116174.65	0.0337	P	2.0
3	☐	25.000	25.966	144588.14	0.0419	P	0.1
4	☐	50.000	54.416	190748.30	0.0567	P	0.9
5	☐	500.000	503.157	968398.58	0.2892	P	2.1
6	☐	1000.000	998.177	1828985.08	0.5456	A	2.0
7	☐	5.000					

y = 5.1807E-004 * x + 0.0285
R = 1.0000
DL = 1.507
BEC = 55.01

Weight: <None>
Min Conc: <None>

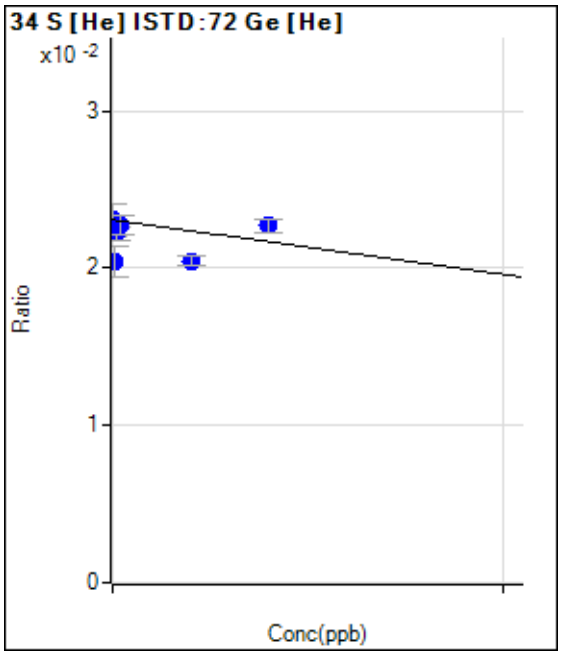


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1344045.80	0.3958	A	2.1
2	☐	400.000	-3333.139	1359273.63	0.3939	A	2.6
3	☐	1000.000	20834.498	1405675.58	0.4078	A	3.3
4	☐	2000.000	15752.616	1362181.38	0.4049	A	2.4
5	☐	20000.00	32942.259	1389118.00	0.4148	A	1.6
6	☐	40000.00	32382.708	1389784.73	0.4145	A	1.7
7	☐	100.000					

y = 5.7589E-007 * x + 0.3958
R = 0.7588
DL = 4.308E+04
BEC = 6.873E+05

Weight: <None>
Min Conc: <None>

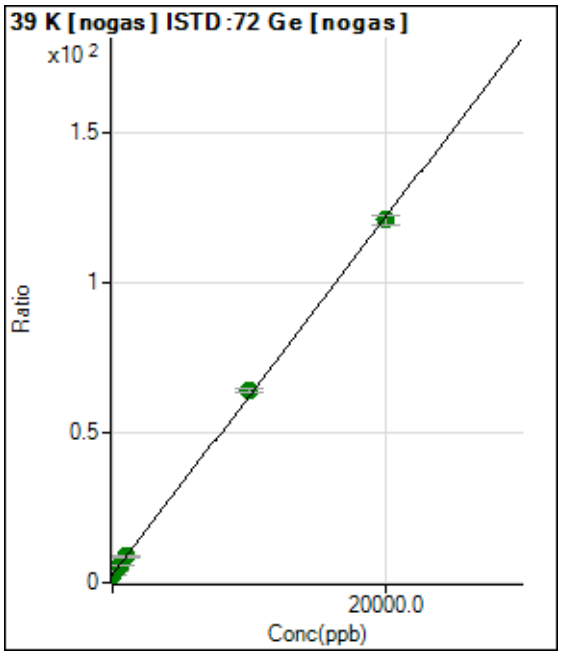
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27458.02	0.0231	P	9.3
2	☐	400.000	76177.818	24686.98	0.0204	P	9.4
3	☐	1000.000	24785.165	26657.34	0.0222	P	3.8
4	☐	2000.000	9514.923	26690.27	0.0227	P	5.4
5	☐	20000.00	75871.909	23952.28	0.0204	P	3.0
6	☐	40000.00	10335.892	26089.91	0.0227	P	3.9
7	☐	100.000					

y = -3.4522E-008 * x + 0.0231
R = 0.0260
DL = -1.869E+05
BEC = -6.678E+05

Weight: <None>
Min Conc: <None>

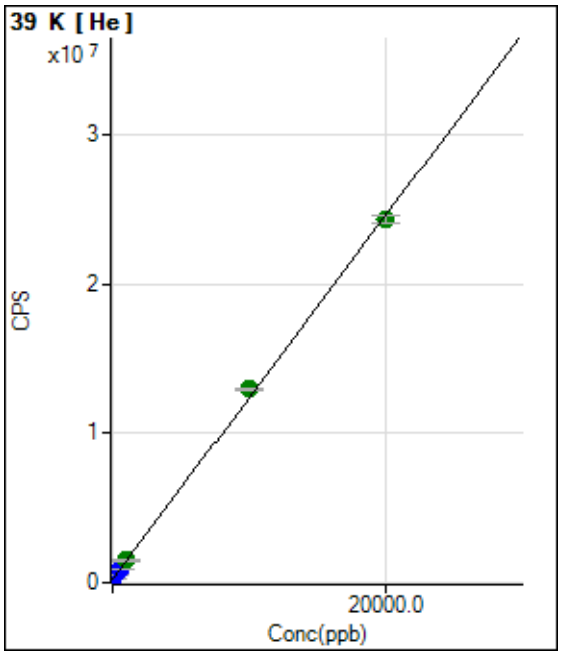


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9206419.22	2.7109	A	0.7
2	☐	200.000	188.596	13234495.87	3.8348	A	1.0
3	☐	500.000	477.440	19150063.45	5.5561	A	1.5
4	☐	1000.000	1007.040	29317766.28	8.7122	A	1.9
5	☐	10000.00	10283.102	214283563.1	63.9916	A	1.8
6	☐	20000.00	19858.775	405749434.0	121.056	A	2.8
7	☐	100.000					

y = 0.0060 * x + 2.7109
R = 0.9999
DL = 9.994
BEC = 454.9

Weight: <None>
Min Conc: <None>

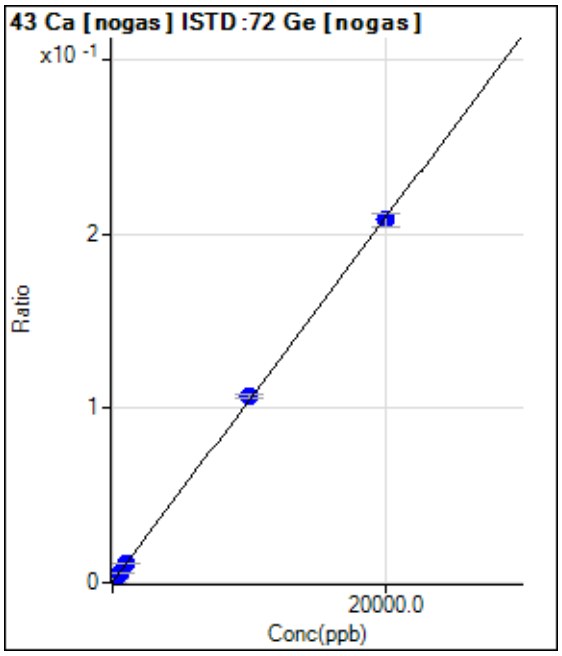
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	222826.97		P	1.2
2	☐	200.000	206.792	474435.02		P	1.3
3	☐	500.000	513.438	847538.87		P	0.8
4	☐	1000.000	1037.103	1484694.25		A	1.5
5	☐	10000.00	10457.977	12947290.64		A	0.9
6	☐	20000.00	19768.752	24275927.14		A	2.0
7	☐	100.000					

y = 1216.7232 * x + 222826.9700
R = 0.9996
DL = 6.343
BEC = 183.1

Weight: <None>
Min Conc: <None>

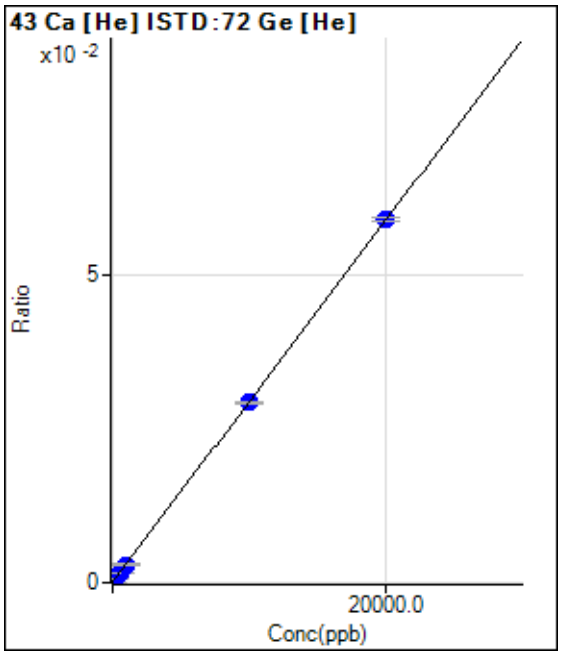


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1040.05	0.0003	P	5.5
2	☐	200.000	193.336	8028.52	0.0023	P	3.9
3	☐	500.000	499.488	19040.00	0.0055	P	1.2
4	☐	1000.000	988.644	35781.44	0.0106	P	2.7
5	☐	10000.00	10221.645	358579.49	0.1071	P	2.1
6	☐	20000.00	19889.825	697231.32	0.2081	P	3.5
7	☐	100.000					

y = 1.0446E-005 * x + 3.0642E-004
R = 0.9999
DL = 4.86
BEC = 29.33

Weight: <None>
Min Conc: <None>

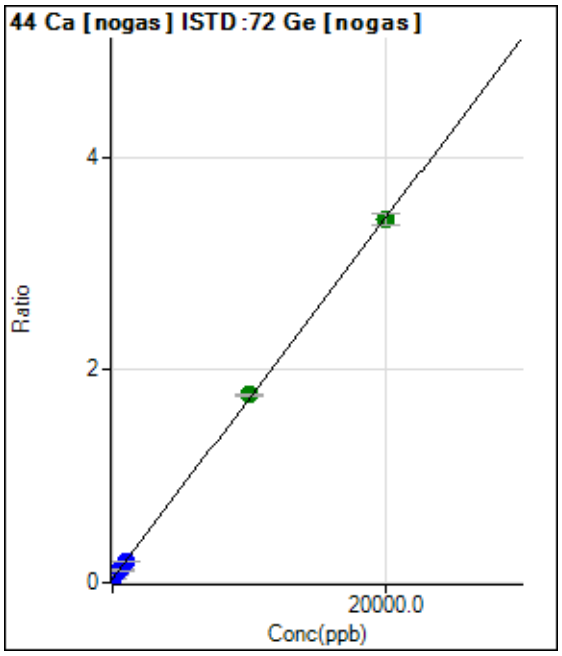
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	31.0
2	☐	200.000	187.685	740.03	0.0006	P	16.4
3	☐	500.000	508.295	1866.79	0.0016	P	4.7
4	☐	1000.000	980.776	3453.70	0.0029	P	5.3
5	☐	10000.00	9924.529	34224.93	0.0292	P	0.7
6	☐	20000.00	20038.612	67699.41	0.0589	P	1.0
7	☐	100.000					

y = 2.9362E-006 * x + 6.1570E-005
R = 1.0000
DL = 19.48
BEC = 20.97

Weight: <None>
Min Conc: <None>

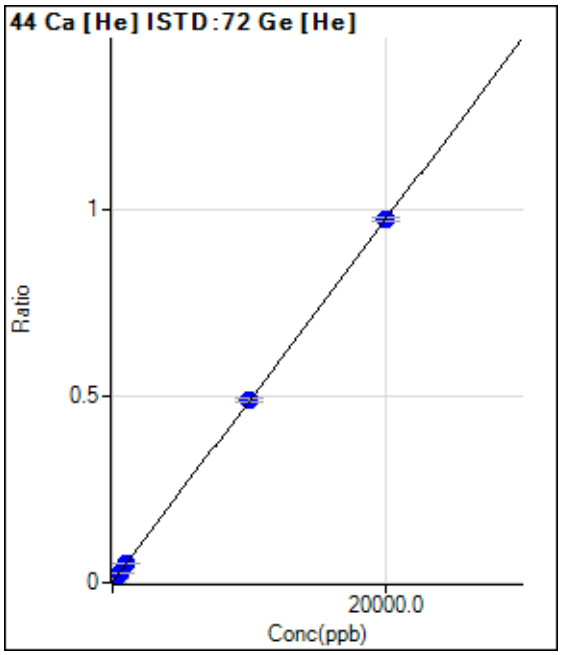


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120199.39	0.0354	P	1.9
2	☐	200.000	187.757	231917.85	0.0672	P	2.0
3	☐	500.000	488.296	407153.00	0.1181	P	1.3
4	☐	1000.000	980.192	677819.99	0.2015	P	1.9
5	☐	10000.00	10190.039	5900134.70	1.7618	A	1.1
6	☐	20000.00	19906.386	11421220.66	3.4080	A	3.1
7	☐	100.000					

y = 1.6942E-004 * x + 0.0354
R = 0.9999
DL = 11.89
BEC = 208.9

Weight: <None>
Min Conc: <None>

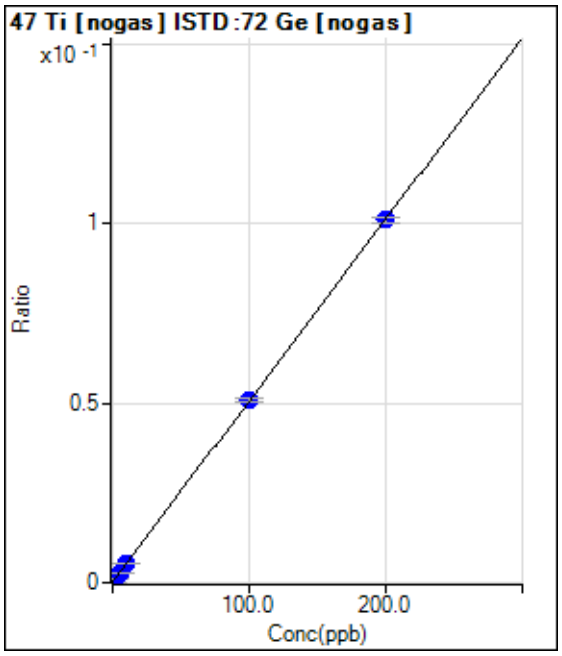
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1716.77	0.0014	P	3.9
2	☐	200.000	198.452	13395.03	0.0111	P	6.6
3	☐	500.000	498.689	30805.65	0.0257	P	3.2
4	☐	1000.000	1011.897	59394.50	0.0506	P	1.1
5	☐	10000.00	10015.897	571756.66	0.4879	P	2.2
6	☐	20000.00	19991.505	1117615.29	0.9723	P	1.1
7	☐	100.000					

y = 4.8566E-005 * x + 0.0014
R = 1.0000
DL = 3.473
BEC = 29.71

Weight: <None>
Min Conc: <None>

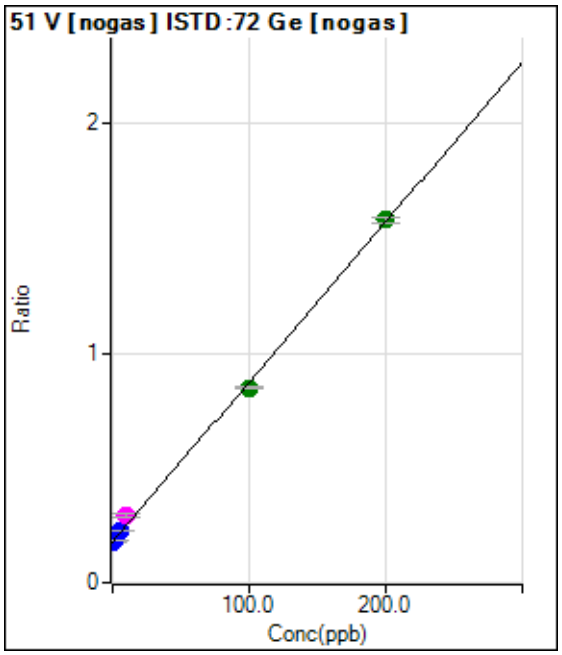


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406.68	0.0001	P	36.4
2	☐	2.000	1.904	3723.77	0.0011	P	12.8
3	☐	5.000	4.984	9078.99	0.0026	P	7.9
4	☐	10.000	10.140	17618.63	0.0052	P	0.5
5	☐	100.000	100.436	170134.96	0.0508	P	1.2
6	☐	200.000	199.776	338296.69	0.1009	P	1.3
7	☐	1.000					

y = 5.0459E-004 * x + 1.1928E-004
R = 1.0000
DL = 0.2581
BEC = 0.2364

Weight: <None>
Min Conc: <None>

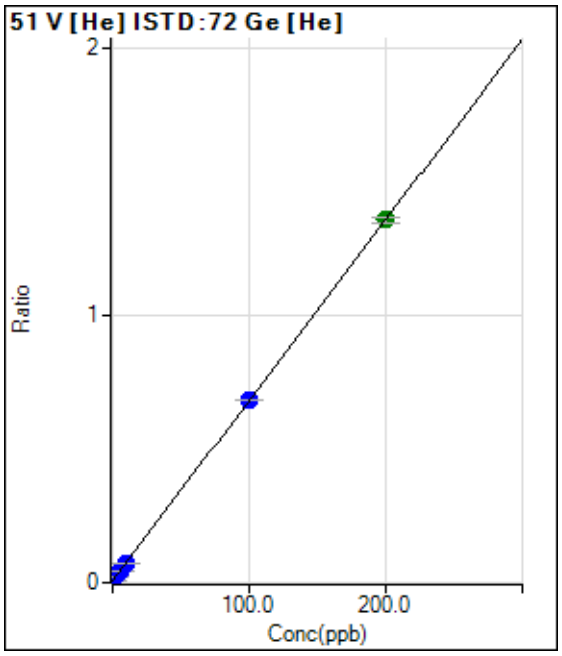
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	605010.33	0.1782	P	3.9
2	☐	2.000	0.519	627480.50	0.1818	P	1.0
3	☐	5.000	6.688	774816.93	0.2248	P	1.3
4	☐	10.000	16.546	988003.93	0.2935	M	6.1
5	☐	100.000	96.500	2848398.05	0.8505	A	1.3
6	☐	200.000	201.395	5299412.23	1.5812	A	1.5
7	☐	1.000					

y = 0.0070 * x + 0.1782
R = 0.9991
DL = 2.971
BEC = 25.58

Weight: <None>
Min Conc: <None>

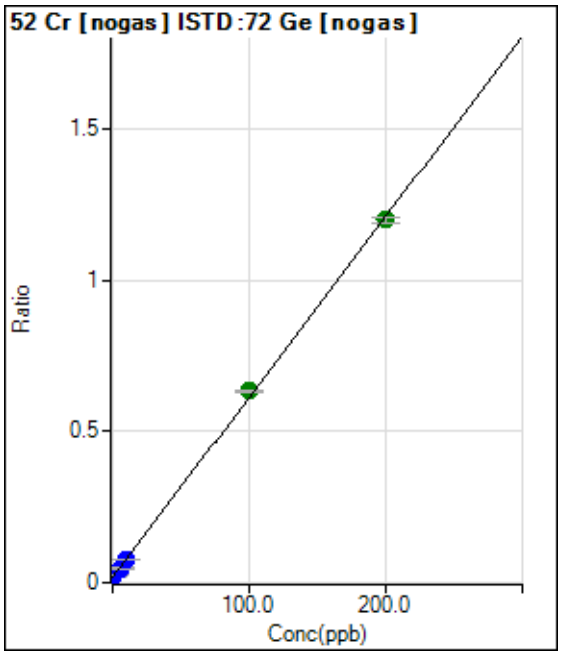


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.122	9695.20	0.0081	P	3.4
2	☐	2.000	1.919	24526.06	0.0203	P	1.9
3	☐	5.000	4.976	49152.37	0.0409	P	0.5
4	☐	10.000	9.959	87588.16	0.0746	P	0.7
5	☐	100.000	100.040	800663.75	0.6831	P	0.2
6	☐	200.000	199.983	1561300.83	1.3583	A	1.5
7	☐	1.000					

y = 0.0068 * x + 0.0073
R = 1.0000
DL = 0.1242
BEC = 1.084

Weight: <None>
Min Conc: <None>

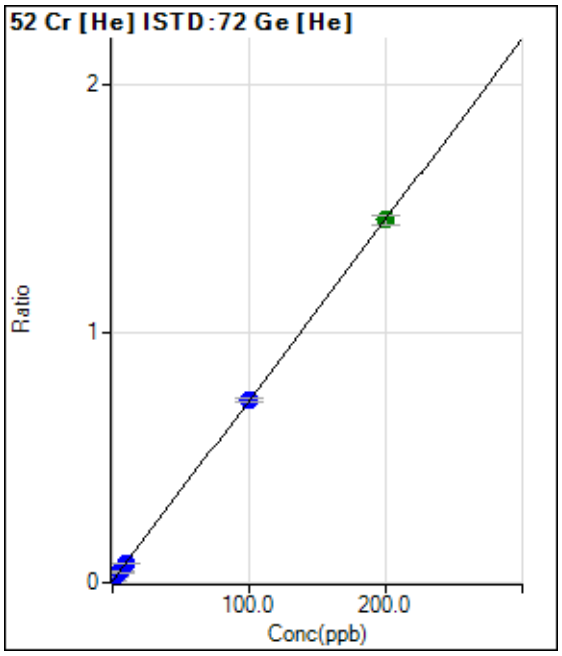
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61174.23	0.0180	P	2.7
2	☐	2.000	1.795	99013.46	0.0287	P	2.4
3	☐	5.000	4.936	163293.84	0.0474	P	1.4
4	☐	10.000	10.181	264415.54	0.0786	P	0.4
5	☐	100.000	103.202	2116404.19	0.6319	A	1.8
6	☐	200.000	198.394	4015507.65	1.1981	A	1.5
7	☐	1.000					

y = 0.0059 * x + 0.0180
R = 0.9998
DL = 0.2409
BEC = 3.029

Weight: <None>
Min Conc: <None>

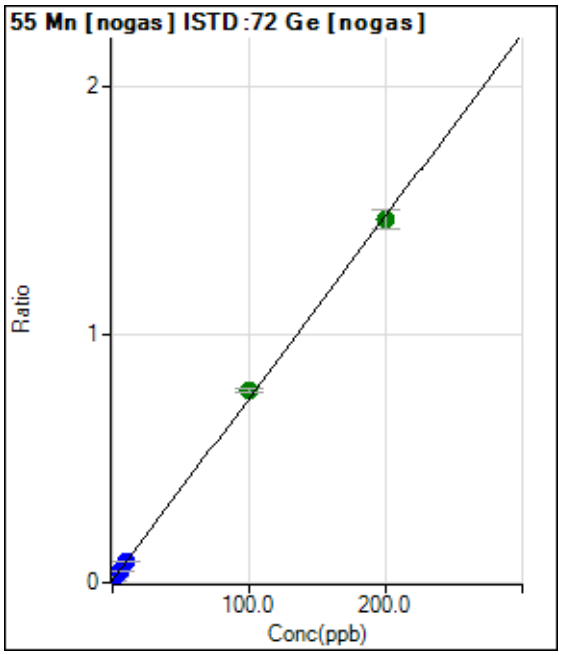


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7561.66	0.0064	P	5.4
2	☐	2.000	1.993	25150.78	0.0208	P	0.9
3	☐	5.000	5.096	51963.27	0.0433	P	4.5
4	☐	10.000	9.854	91311.79	0.0778	P	1.7
5	☐	100.000	100.424	860412.72	0.7341	P	2.6
6	☐	200.000	199.793	1671404.82	1.4543	A	2.7
7	☐	1.000					

y = 0.0072 * x + 0.0064
R = 1.0000
DL = 0.1413
BEC = 0.8772

Weight: <None>
Min Conc: <None>

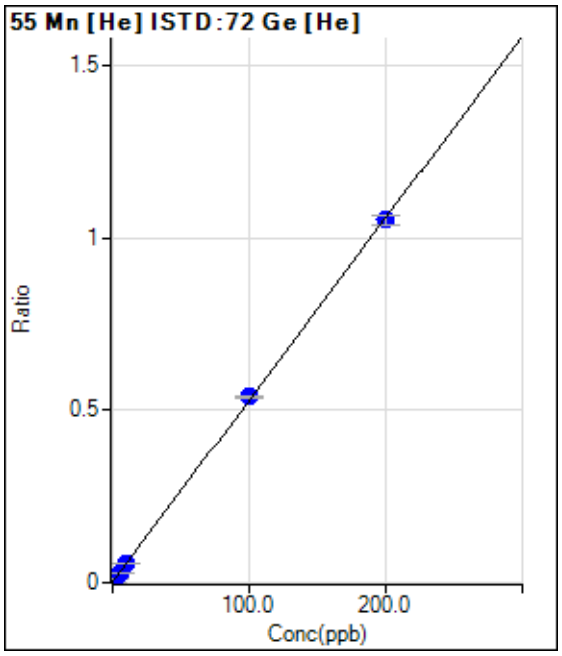
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31847.65	0.0094	P	3.5
2	☐	2.000	1.931	81311.42	0.0236	P	1.9
3	☐	5.000	4.935	157221.41	0.0456	P	2.1
4	☐	10.000	10.463	290106.77	0.0862	P	2.2
5	☐	100.000	104.146	2592008.81	0.7740	A	1.7
6	☐	200.000	197.906	4899043.78	1.4625	A	5.3
7	☐	1.000					

y = 0.0073 * x + 0.0094
R = 0.9997
DL = 0.1351
BEC = 1.277

Weight: <None>
Min Conc: <None>

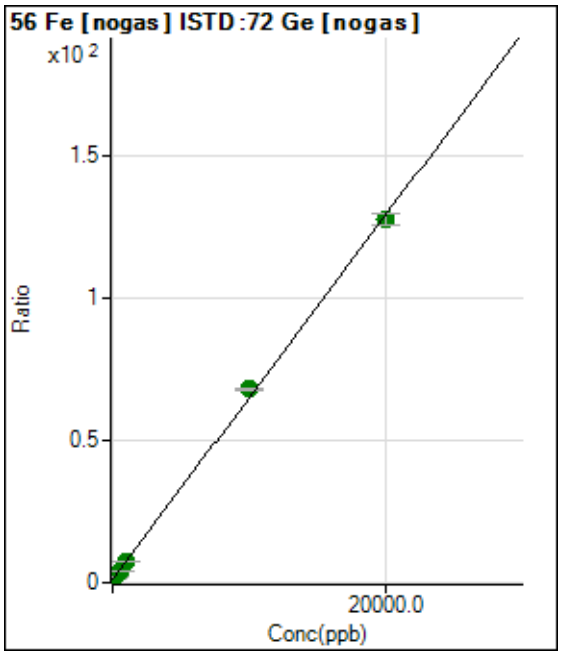


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2273.51	0.0019	P	2.4
2	☐	2.000	1.888	14352.43	0.0119	P	1.2
3	☐	5.000	4.912	33403.82	0.0278	P	2.0
4	☐	10.000	10.043	64448.93	0.0549	P	1.5
5	☐	100.000	101.779	631535.68	0.5389	P	0.8
6	☐	200.000	199.111	1209500.45	1.0523	P	2.4
7	☐	1.000					

y = 0.0053 * x + 0.0019
R = 0.9999
DL = 0.02566
BEC = 0.3622

Weight: <None>
Min Conc: <None>

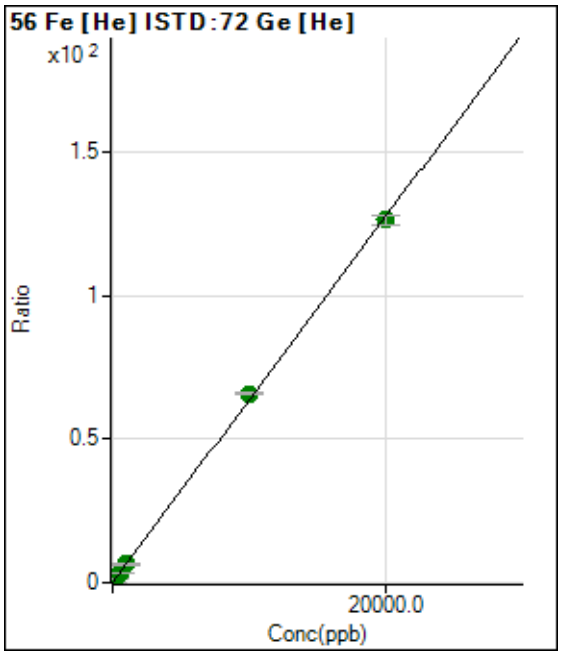
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3548189.01	1.0448	A	1.9
2	☐	200.000	200.513	8030861.12	2.3269	A	0.4
3	☐	500.000	481.332	14208574.80	4.1224	A	1.9
4	☐	1000.000	1019.209	25443533.38	7.5616	A	1.6
5	☐	10000.00	10494.586	228214013.4	68.1474	A	1.0
6	☐	20000.00	19752.208	426678526.2	127.340	A	3.3
7	☐	100.000					

y = 0.0064 * x + 1.0448
R = 0.9996
DL = 9.392
BEC = 163.4

Weight: <None>
Min Conc: <None>

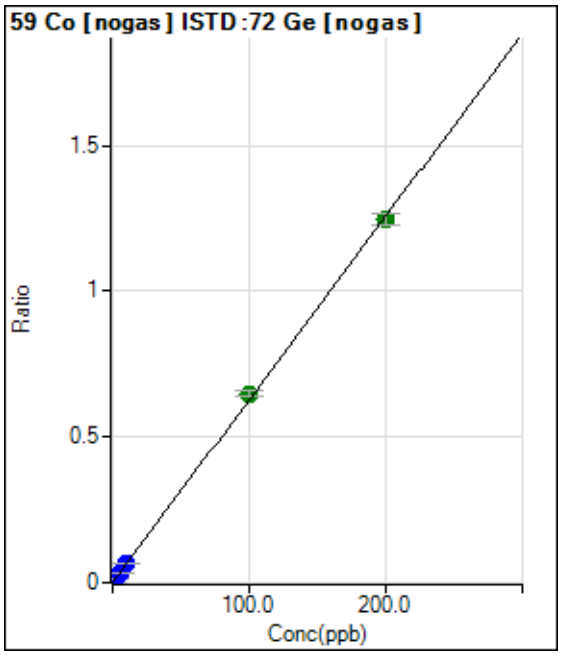


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34034.87	0.0286	P	1.7
2	☐	200.000	198.939	1568239.77	1.2973	A	2.8
3	☐	500.000	496.120	3833080.36	3.1926	A	3.3
4	☐	1000.000	1002.159	7537682.18	6.4199	A	2.3
5	☐	10000.00	10330.848	77250812.18	65.9140	A	1.1
6	☐	20000.00	19834.576	145423011.1	126.524	A	2.5
7	☐	100.000					

y = 0.0064 * x + 0.0286
R = 0.9998
DL = 0.2337
BEC = 4.485

Weight: <None>
Min Conc: <None>

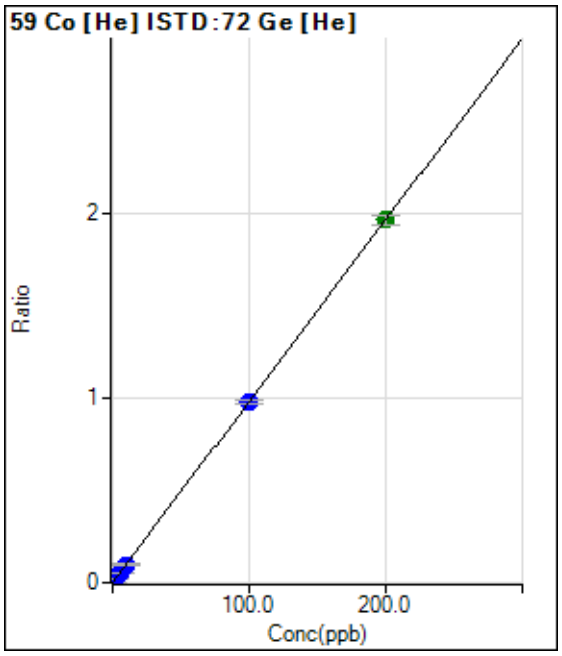
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	850.03	0.0003	P	3.9
2	☐	2.000	2.040	45032.09	0.0130	P	2.1
3	☐	5.000	5.063	110360.71	0.0320	P	0.4
4	☐	10.000	10.327	218864.92	0.0651	P	2.2
5	☐	100.000	103.375	2173098.51	0.6489	A	3.1
6	☐	200.000	198.294	4171223.06	1.2445	A	3.2
7	☐	1.000					

y = 0.0063 * x + 2.5038E-004
R = 0.9998
DL = 0.004609
BEC = 0.0399

Weight: <None>
Min Conc: <None>

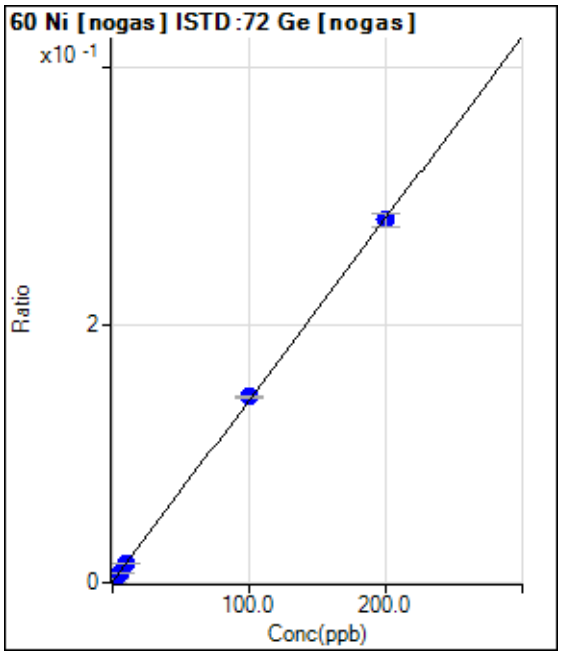


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0002	P	38.5
2	☐	2.000	1.950	23368.39	0.0193	P	3.6
3	☐	5.000	4.959	58697.59	0.0489	P	3.8
4	☐	10.000	10.020	115806.88	0.0986	P	1.7
5	☐	100.000	99.852	1150183.24	0.9814	P	1.6
6	☐	200.000	200.075	2259984.13	1.9663	A	2.5
7	☐	1.000					

y = 0.0098 * x + 1.6785E-004
R = 1.0000
DL = 0.01972
BEC = 0.01708

Weight: <None>
Min Conc: <None>

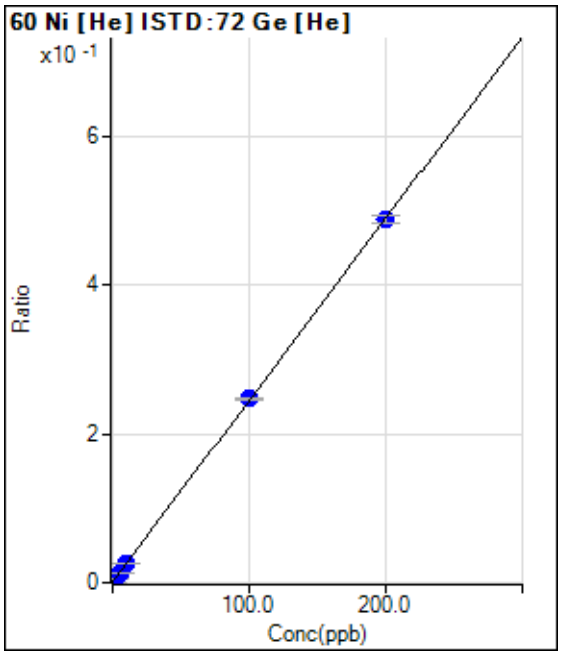
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.301	876.70	0.0003	P	19.8
2	☐	2.000	1.652	10399.77	0.0030	P	6.0
3	☐	5.000	4.814	25755.12	0.0075	P	3.2
4	☐	10.000	9.970	49600.76	0.0147	P	3.4
5	☐	100.000	101.712	482613.35	0.1441	P	1.3
6	☐	200.000	199.154	943418.01	0.2815	P	3.9
7	☐	1.000					

y = 0.0014 * x + 6.8356E-004
R = 0.9999
DL = 0.109
BEC = 0.4847

Weight: <None>
Min Conc: <None>

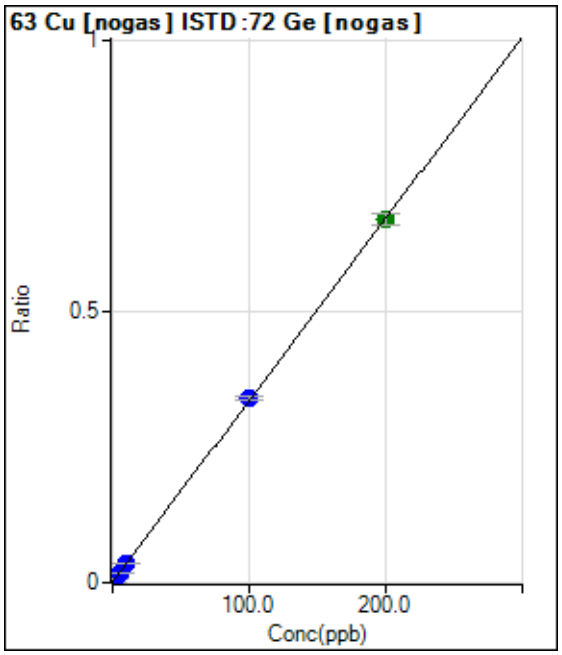


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.253	236.67	0.0002	P	26.1
2	☐	2.000	1.724	6081.10	0.0050	P	4.6
3	☐	5.000	4.958	15510.06	0.0129	P	4.7
4	☐	10.000	9.937	29447.33	0.0251	P	2.0
5	☐	100.000	101.255	290728.38	0.2481	P	1.1
6	☐	200.000	199.379	560479.47	0.4877	P	2.1
7	☐	1.000					

y = 0.0024 * x + 8.1781E-004
R = 1.0000
DL = 0.06381
BEC = 0.3349

Weight: <None>
Min Conc: <None>

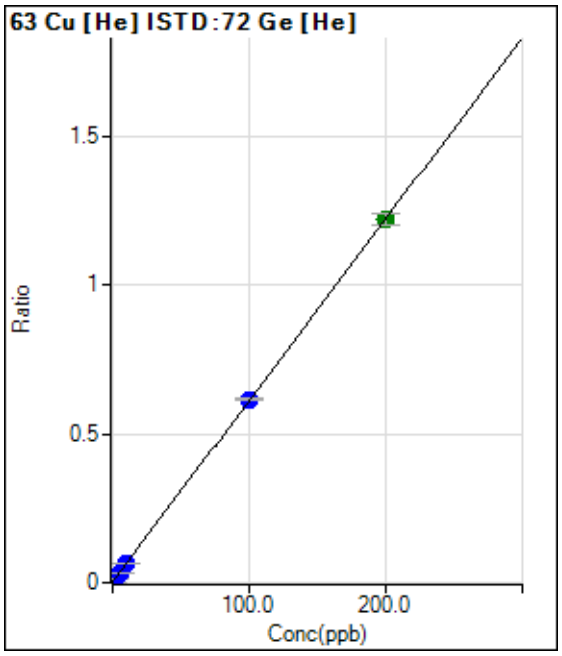
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2633.57	0.0008	P	6.6
2	☐	2.000	2.079	26676.46	0.0077	P	2.7
3	☐	5.000	5.251	63232.96	0.0183	P	2.1
4	☐	10.000	10.028	115481.81	0.0343	P	2.7
5	☐	100.000	101.144	1135761.88	0.3392	P	2.4
6	☐	200.000	199.419	2238243.66	0.6680	A	3.3
7	☐	1.000					

y = 0.0033 * x + 7.7595E-004
R = 1.0000
DL = 0.04602
BEC = 0.2319

Weight: <None>
Min Conc: <None>

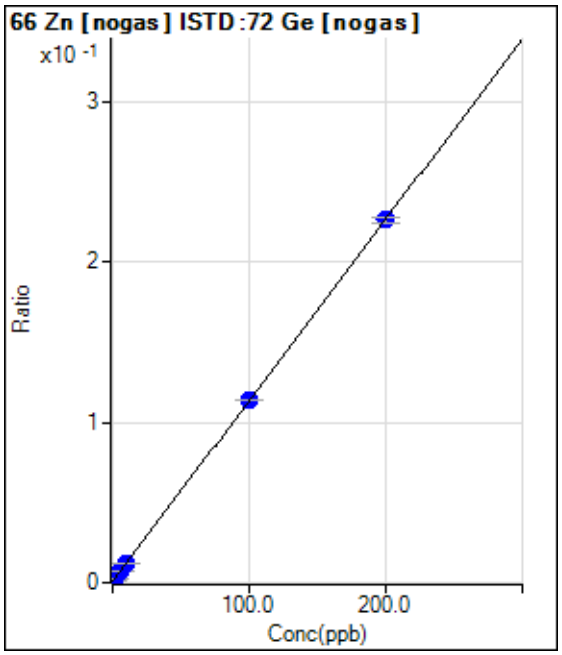


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.231	1466.75	0.0012	P	5.0
2	☐	2.000	1.888	17084.82	0.0141	P	2.7
3	☐	5.000	4.883	38851.62	0.0324	P	1.9
4	☐	10.000	10.085	75173.81	0.0640	P	1.1
5	☐	100.000	100.751	721750.72	0.6158	P	0.4
6	☐	200.000	199.624	1399280.40	1.2176	A	3.1
7	☐	1.000					

y = 0.0061 * x + 0.0026
R = 1.0000
DL = 0.03053
BEC = 0.4338

Weight: <None>
Min Conc: <None>

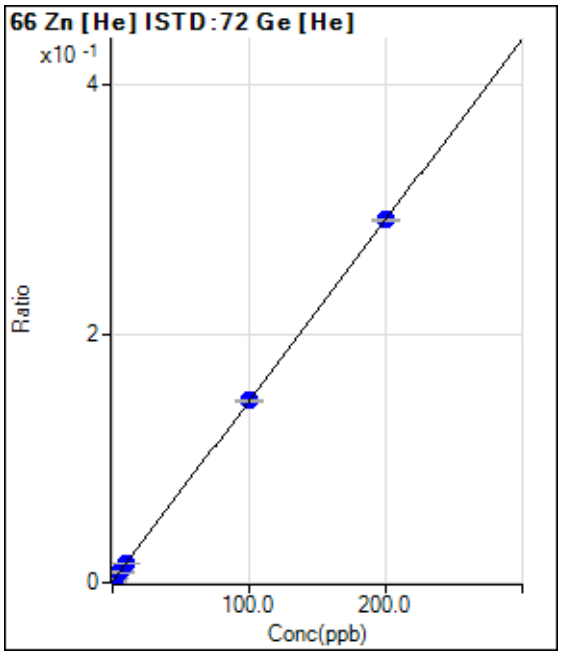
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.050	2586.89	0.0008	P	4.4
2	☐	2.000	1.725	9149.12	0.0027	P	4.5
3	☐	5.000	5.296	23024.90	0.0067	P	0.3
4	☐	10.000	9.849	39760.10	0.0118	P	0.8
5	☐	100.000	100.153	380747.35	0.1137	P	0.4
6	☐	200.000	199.926	758318.35	0.2262	P	1.4
7	☐	1.000					

y = 0.0011 * x + 7.0527E-004
R = 1.0000
DL = 0.08955
BEC = 0.6252

Weight: <None>
Min Conc: <None>

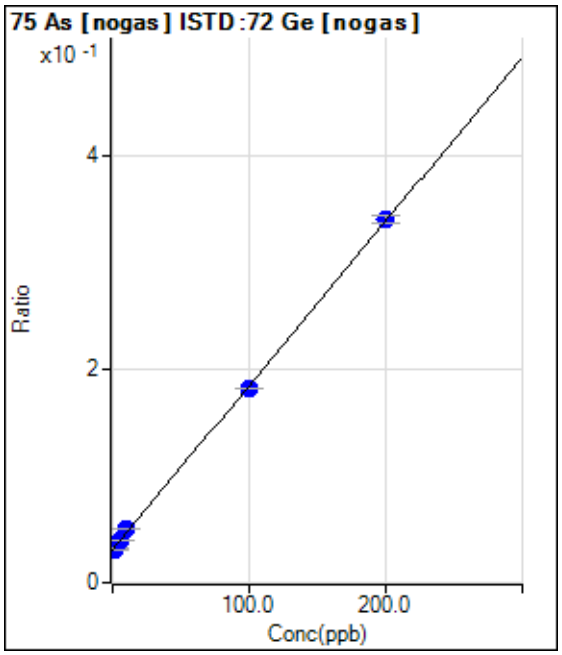


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.062	896.70	0.0008	P	14.6
2	☐	2.000	1.768	4127.20	0.0034	P	6.0
3	☐	5.000	5.424	10486.49	0.0087	P	7.2
4	☐	10.000	9.864	17825.55	0.0152	P	2.0
5	☐	100.000	100.015	171340.82	0.1462	P	1.5
6	☐	200.000	199.991	335066.83	0.2915	P	0.6
7	☐	1.000					

y = 0.0015 * x + 8.4457E-004
R = 1.0000
DL = 0.2272
BEC = 0.5811

Weight: <None>
Min Conc: <None>

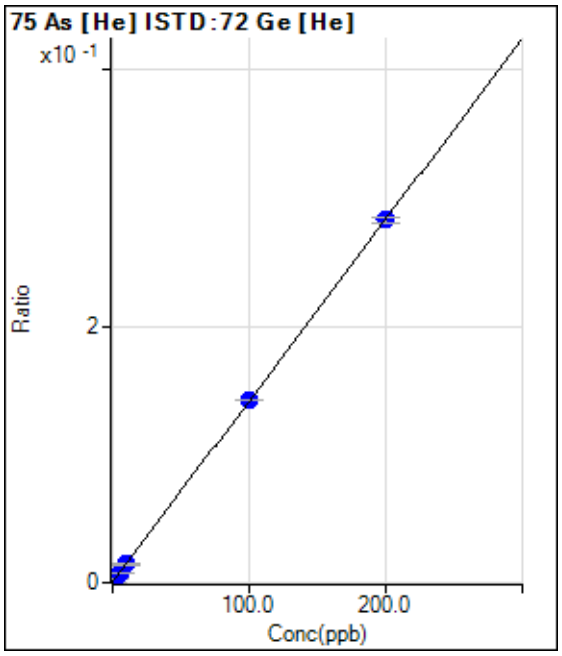
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.071	104709.27	0.0308	P	5.3
2	☐	2.000	0.200	107917.97	0.0313	P	1.6
3	☐	5.000	5.617	136418.51	0.0396	P	1.5
4	☐	10.000	12.378	168099.71	0.0500	P	0.5
5	☐	100.000	97.986	607323.13	0.1813	P	0.4
6	☐	200.000	200.890	1137029.36	0.3393	P	2.1
7	☐	1.000					

y = 0.0015 * x + 0.0310
R = 0.9998
DL = 3.199
BEC = 20.17

Weight: <None>
Min Conc: <None>

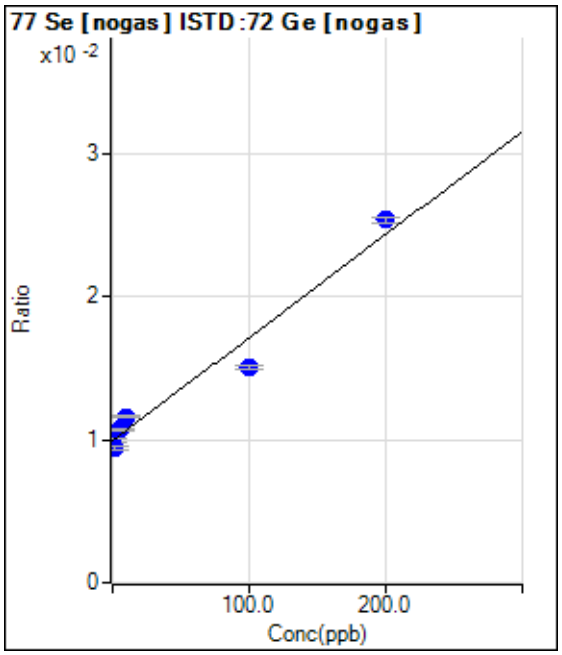


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	468.90	0.0004	P	15.8
2	☐	2.000	1.911	3740.41	0.0031	P	3.4
3	☐	5.000	4.960	8886.64	0.0074	P	3.5
4	☐	10.000	9.860	16823.34	0.0143	P	3.3
5	☐	100.000	100.215	166408.57	0.1420	P	0.1
6	☐	200.000	199.902	325080.89	0.2828	P	1.6
7	☐	1.000					

y = 0.0014 * x + 3.9448E-004
R = 1.0000
DL = 0.1321
BEC = 0.2792

Weight: <None>
Min Conc: <None>

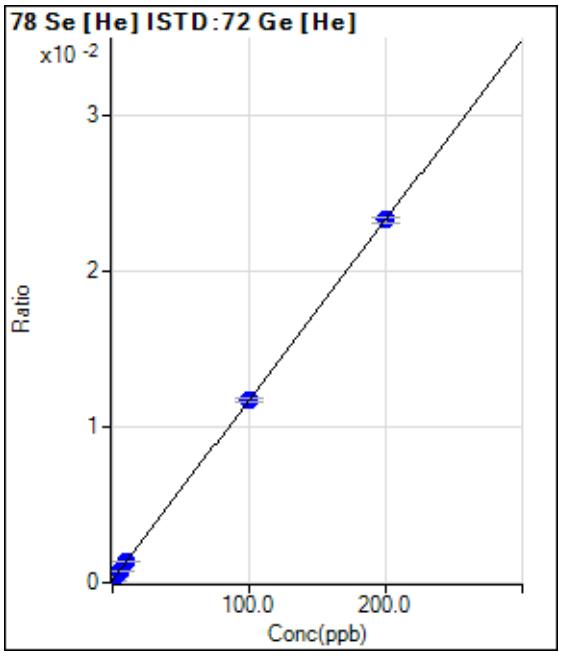
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33758.32	0.0099	P	3.1
2	☐	2.000	-7.277	32509.45	0.0094	P	2.7
3	☐	5.000	10.692	36924.49	0.0107	P	1.1
4	☐	10.000	23.421	39138.92	0.0116	P	0.2
5	☐	100.000	70.454	50306.18	0.0150	P	1.6
6	☐	200.000	214.053	85051.33	0.0254	P	1.9
7	☐	1.000					

y = 7.2113E-005 * x + 0.0099
R = 0.9806
DL = 12.62
BEC = 137.9

Weight: <None>
Min Conc: <None>

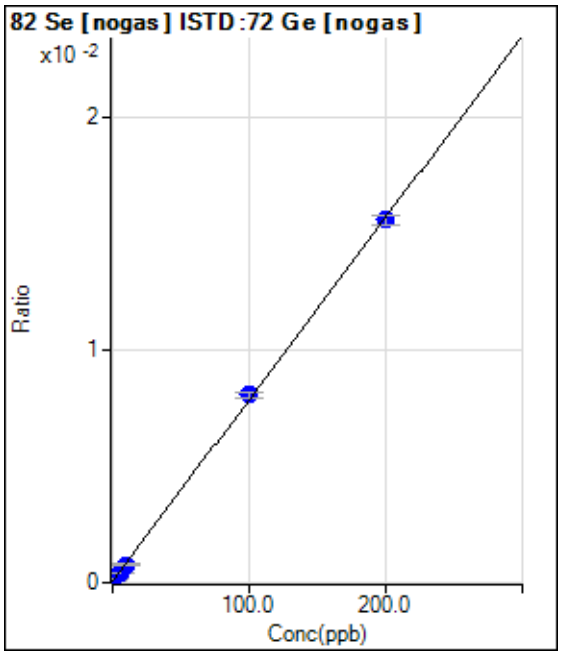


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.009	212.67	0.0002	P	6.3
2	☐	2.000	1.686	450.01	0.0004	P	13.5
3	☐	5.000	4.827	882.69	0.0007	P	8.3
4	☐	10.000	10.490	1632.08	0.0014	P	4.1
5	☐	100.000	100.010	13752.53	0.0117	P	2.0
6	☐	200.000	199.978	26765.58	0.0233	P	1.8
7	☐	1.000					

y = 1.1556E-004 * x + 1.7769E-004
R = 1.0000
DL = 0.2936
BEC = 1.538

Weight: <None>
Min Conc: <None>

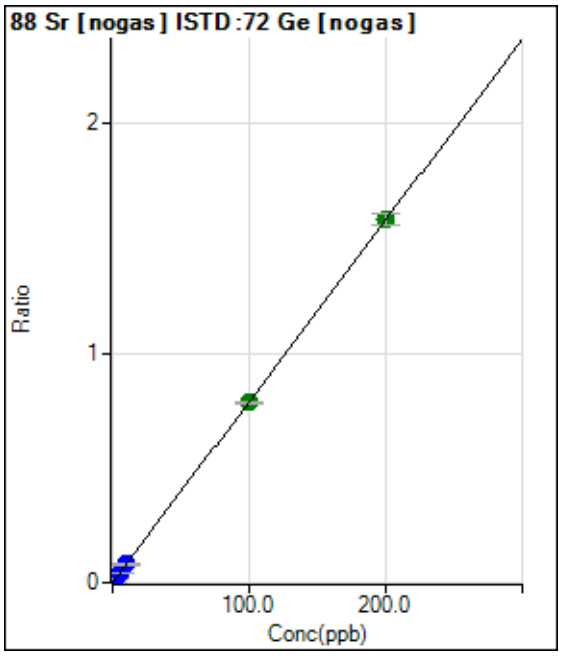
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	14.9
2	☐	2.000	2.055	756.69	0.0002	P	13.9
3	☐	5.000	4.620	1446.75	0.0004	P	13.1
4	☐	10.000	9.128	2596.89	0.0008	P	4.8
5	☐	100.000	102.442	26990.46	0.0081	P	3.5
6	☐	200.000	198.832	52235.34	0.0156	P	2.9
7	☐	1.000					

y = 7.8104E-005 * x + 5.8881E-005
R = 0.9999
DL = 0.3378
BEC = 0.7539

Weight: <None>
Min Conc: <None>

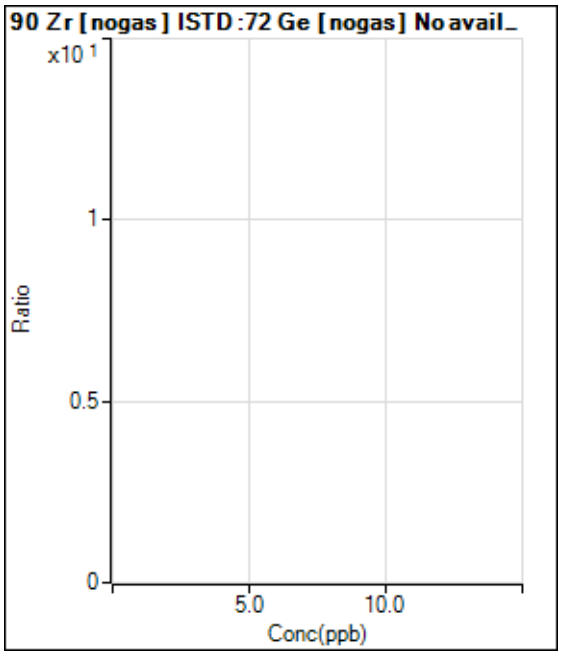


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1570.10	0.0005	P	6.1
2	☐	2.000	1.997	55907.66	0.0162	P	4.4
3	☐	5.000	4.935	135701.35	0.0394	P	1.2
4	☐	10.000	10.101	269473.84	0.0801	P	2.2
5	☐	100.000	99.388	2626097.10	0.7841	A	1.8
6	☐	200.000	200.303	5293077.21	1.5797	A	3.3
7	☐	1.000					

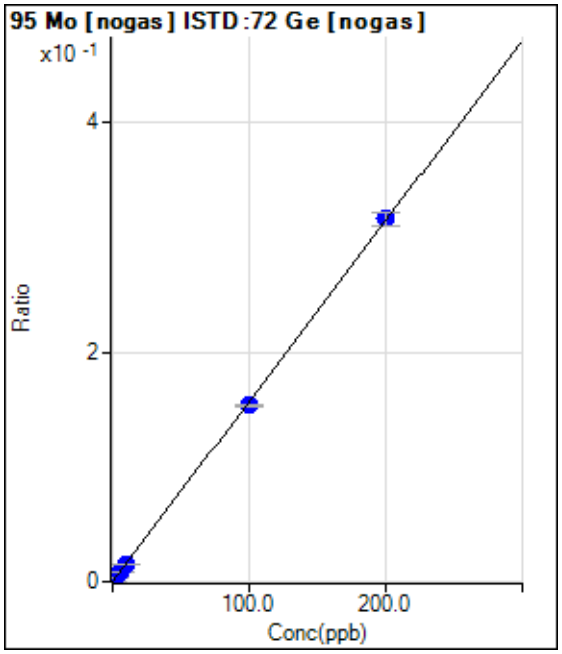
y = 0.0079 * x + 4.6256E-004
R = 1.0000
DL = 0.01077
BEC = 0.05867

Weight: <None>
Min Conc: <None>

Calibration for 229_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					

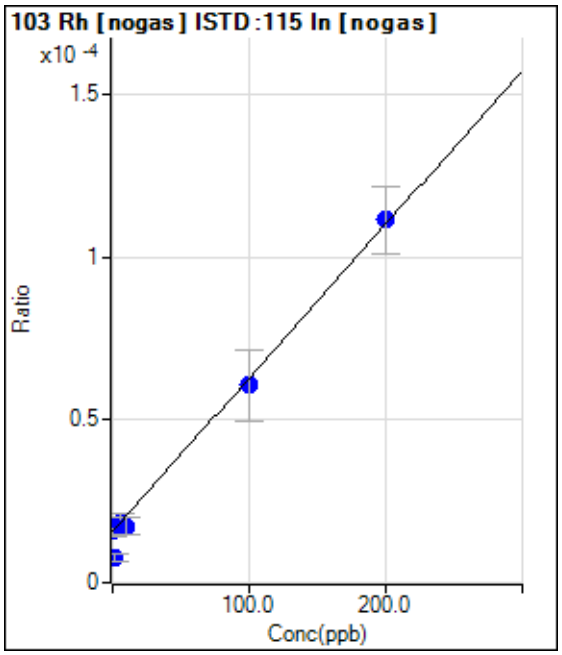


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	440.01	0.0001	P	27.4
2	☐	2.000	1.940	10966.87	0.0032	P	2.9
3	☐	5.000	4.861	26767.10	0.0078	P	2.1
4	☐	10.000	9.790	52173.96	0.0155	P	2.7
5	☐	100.000	97.685	514330.28	0.1536	P	1.8
6	☐	200.000	201.172	1059180.38	0.3161	P	3.9
7	☐	1.000					

y = 0.0016 * x + 1.2990E-004
R = 0.9999
DL = 0.06793
BEC = 0.0827

Weight: <None>
Min Conc: <None>

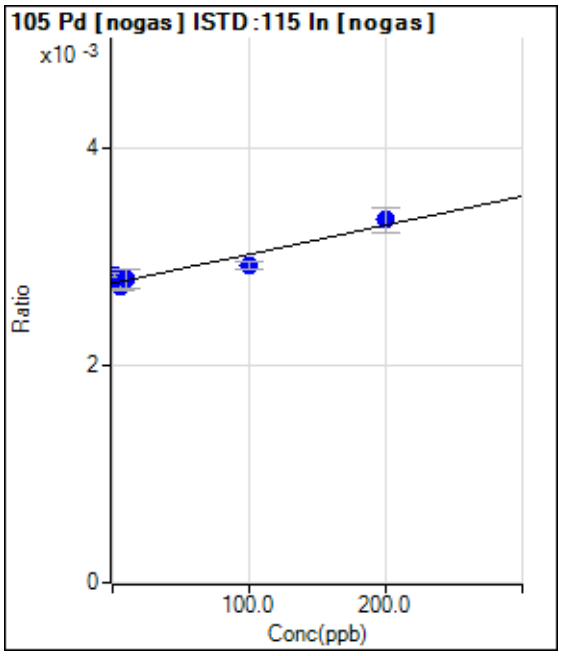
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	18.3
2	☐	2.000	-17.181	23.33	0.0000	P	26.5
3	☐	5.000	5.035	56.67	0.0000	P	36.4
4	☐	10.000	3.403	53.33	0.0000	P	29.6
5	☐	100.000	95.361	186.67	0.0001	P	35.8
6	☐	200.000	202.840	336.68	0.0001	P	18.6
7	☐	1.000					

y = 4.7250E-007 * x + 1.5764E-005
R = 0.9966
DL = 18.33
BEC = 33.36

Weight: <None>
Min Conc: <None>

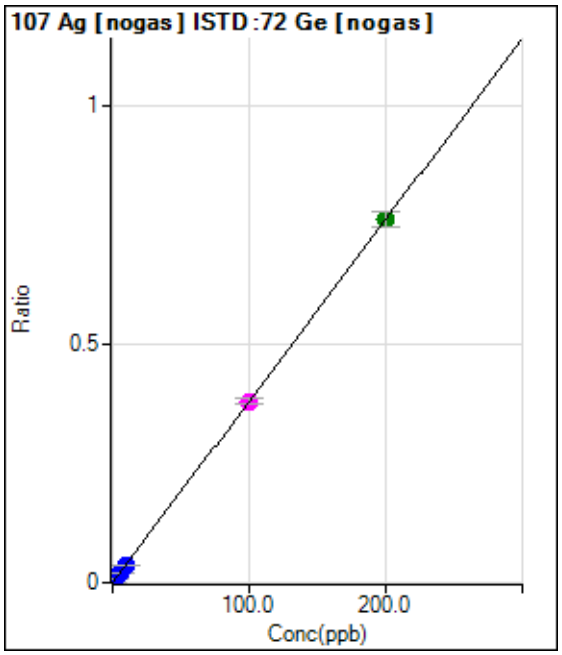


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8705.61	0.0028	P	2.5
2	☐	2.000	29.473	8658.93	0.0028	P	1.1
3	☐	5.000	-13.329	8465.50	0.0027	P	2.6
4	☐	10.000	14.055	8575.57	0.0028	P	6.0
5	☐	100.000	63.961	8975.77	0.0029	P	2.3
6	☐	200.000	218.000	10013.02	0.0033	P	7.1
7	☐	1.000					

y = 2.6735E-006 * x + 0.0028
R = 0.9621
DL = 77.85
BEC = 1029

Weight: <None>
Min Conc: <None>

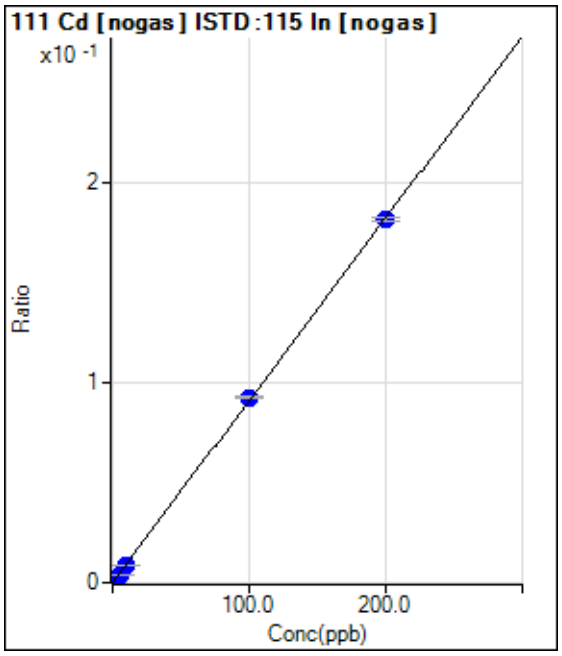
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	11.3
2	☐	2.000	2.023	26723.95	0.0077	P	3.0
3	☐	5.000	4.929	64756.15	0.0188	P	0.9
4	☐	10.000	9.821	125791.82	0.0374	P	3.0
5	☐	100.000	100.095	1273754.17	0.3804	M	3.6
6	☐	200.000	199.963	2546001.26	0.7598	A	4.3
7	☐	1.000					

y = 0.0038 * x + 5.8952E-005
R = 1.0000
DL = 0.00527
BEC = 0.01552

Weight: <None>
Min Conc: <None>

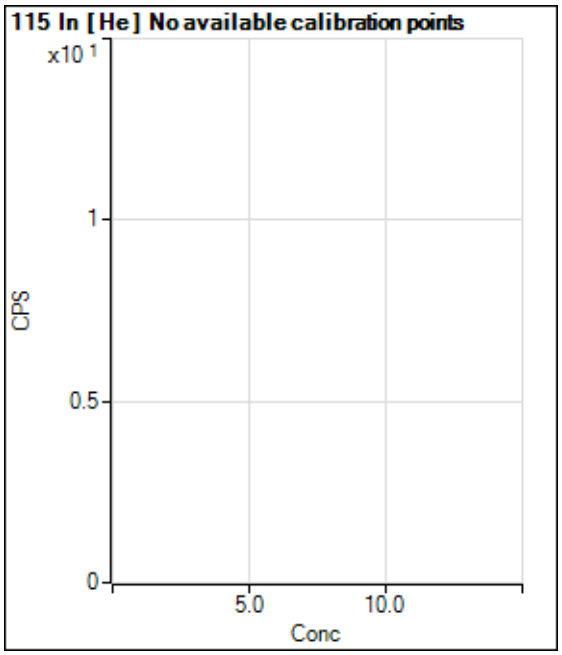


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0000	P	26.1
2	☐	2.000	2.002	5634.34	0.0018	P	0.8
3	☐	5.000	4.581	13065.02	0.0042	P	2.9
4	☐	10.000	9.663	27121.38	0.0088	P	2.8
5	☐	100.000	101.727	284735.46	0.0927	P	1.3
6	☐	200.000	199.164	545439.64	0.1814	P	1.2
7	☐	1.000					

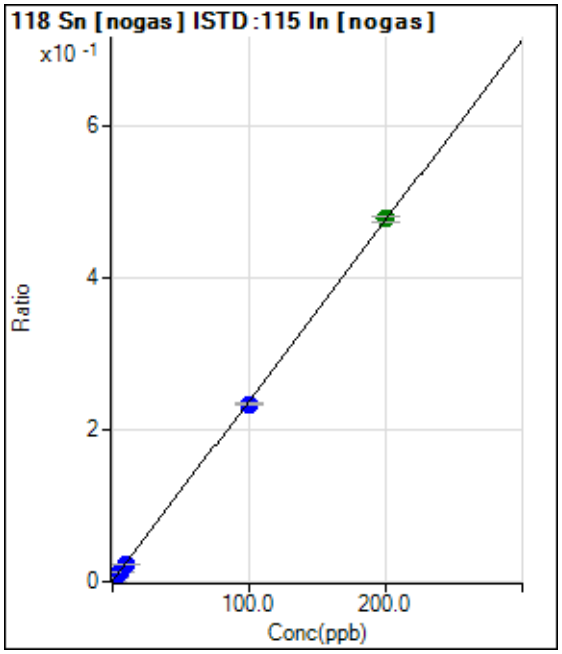
y = 9.1076E-004 * x + 1.7857E-005
R = 0.9999
DL = 0.01533
BEC = 0.01961

Weight: <None>
Min Conc: <None>

Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1649018.64		A	3.5
2	☐			1638547.48		A	6.3
3	☐			1630179.03		A	1.0
4	☐			1631832.54		A	0.8
5	☐			1592477.04		A	0.1
6	☐			1536279.75		A	0.3
7	☐						

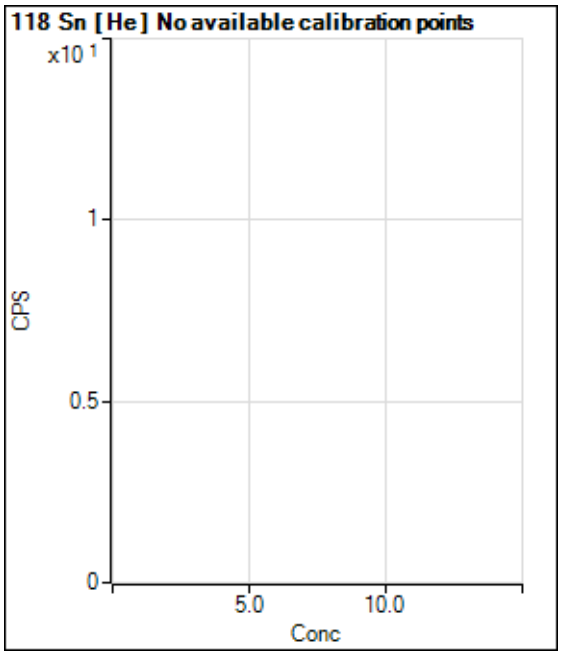


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1440.08	0.0005	P	14.4
2	☐	2.000	1.848	14799.75	0.0048	P	1.9
3	☐	5.000	4.941	37951.57	0.0122	P	3.5
4	☐	10.000	9.149	68110.64	0.0222	P	4.3
5	☐	100.000	98.300	717658.14	0.2336	P	0.8
6	☐	200.000	200.896	1433929.30	0.4769	A	1.4
7	☐	1.000					

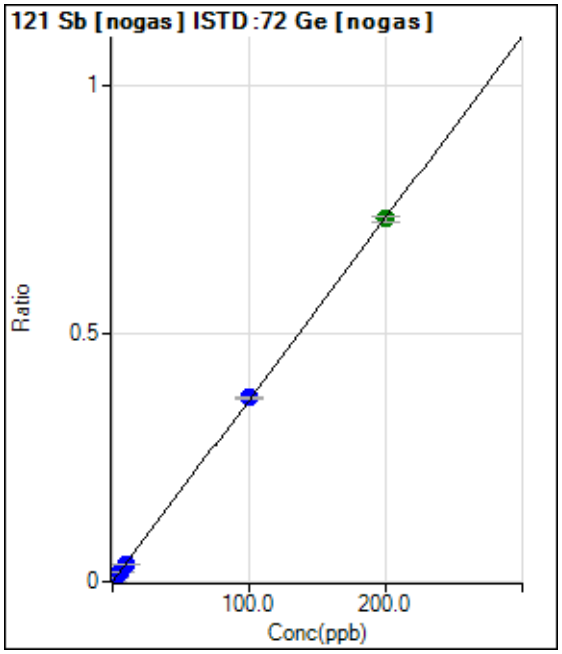
y = 0.0024 * x + 4.5583E-004
R = 0.9999
DL = 0.08294
BEC = 0.1922

Weight: <None>
Min Conc: <None>

Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			810.03		P	7.7
2	☐			8708.97		P	5.1
3	☐			21339.93		P	4.1
4	☐			40396.95		P	0.6
5	☐			417720.67		P	0.4
6	☐			797679.73		P	1.2
7	☐						

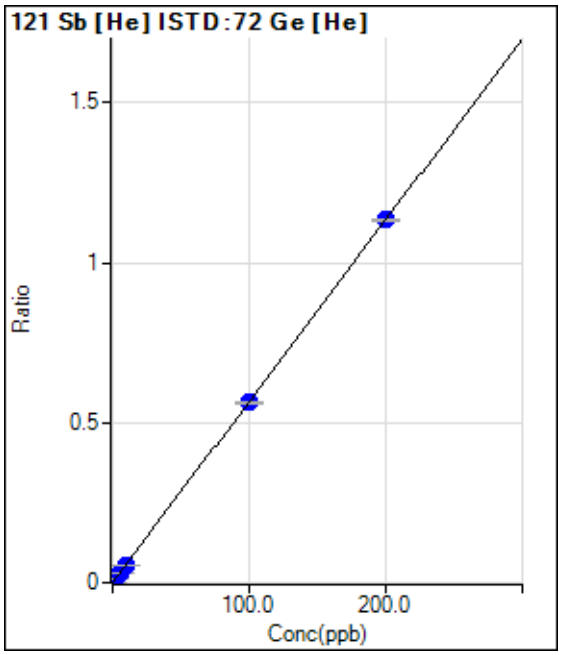


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0001	P	11.9
2	☐	2.000	1.948	25091.65	0.0073	P	0.4
3	☐	5.000	4.921	62619.22	0.0182	P	2.6
4	☐	10.000	9.439	116824.32	0.0347	P	4.1
5	☐	100.000	101.035	1240755.06	0.3705	P	1.1
6	☐	200.000	199.513	2451600.69	0.7315	A	1.8
7	☐	1.000					

y = 0.0037 * x + 1.2859E-004
R = 1.0000
DL = 0.01253
BEC = 0.03508

Weight: <None>
Min Conc: <None>

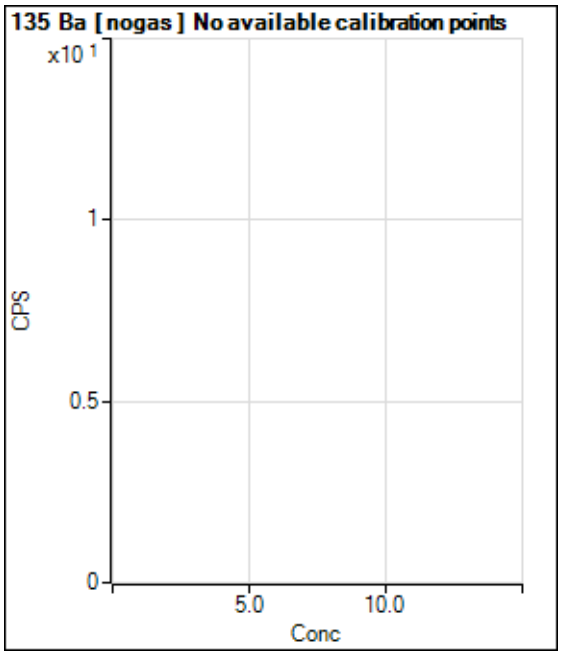
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.01	0.0002	P	18.2
2	☐	2.000	1.938	13512.11	0.0112	P	2.0
3	☐	5.000	4.847	33205.24	0.0276	P	4.0
4	☐	10.000	9.621	64181.04	0.0547	P	2.0
5	☐	100.000	99.664	661302.70	0.5643	P	1.2
6	☐	200.000	200.191	1302570.45	1.1332	P	0.7
7	☐	1.000					

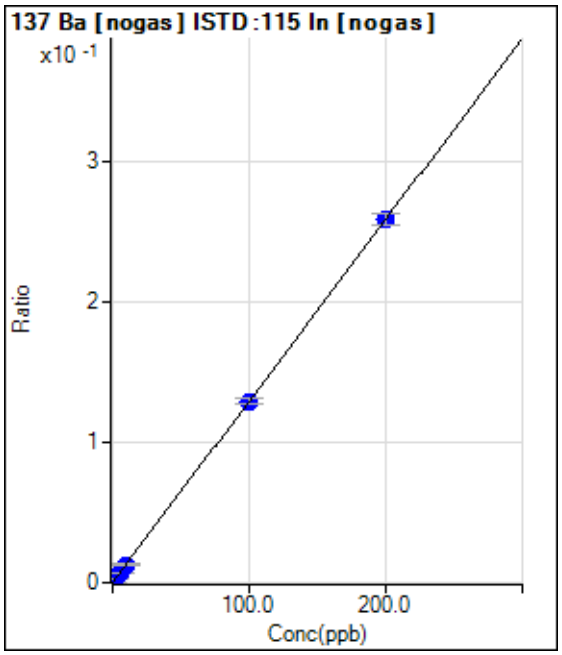
y = 0.0057 * x + 2.1011E-004
R = 1.0000
DL = 0.02028
BEC = 0.03712

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			236.67		P	35.9
2	☐			4860.75		P	2.0
3	☐			11991.01		P	1.4
4	☐			22945.56		P	2.2
5	☐			231224.19		P	1.3
6	☐			442596.22		P	1.1
7	☐						

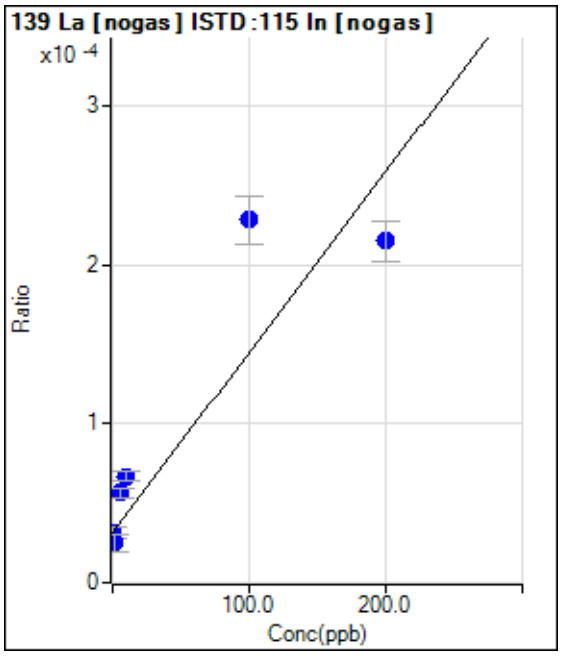
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0001	P	25.0
2	☐	2.000	1.965	8232.10	0.0027	P	2.9
3	☐	5.000	5.083	20959.77	0.0067	P	4.0
4	☐	10.000	9.951	40040.45	0.0130	P	4.6
5	☐	100.000	100.076	397997.91	0.1296	P	2.5
6	☐	200.000	199.963	777655.53	0.2587	P	3.2
7	☐	1.000					

y = 0.0013 * x + 1.4884E-004
R = 1.0000
DL = 0.08627
BEC = 0.1151

Weight: <None>
Min Conc: <None>

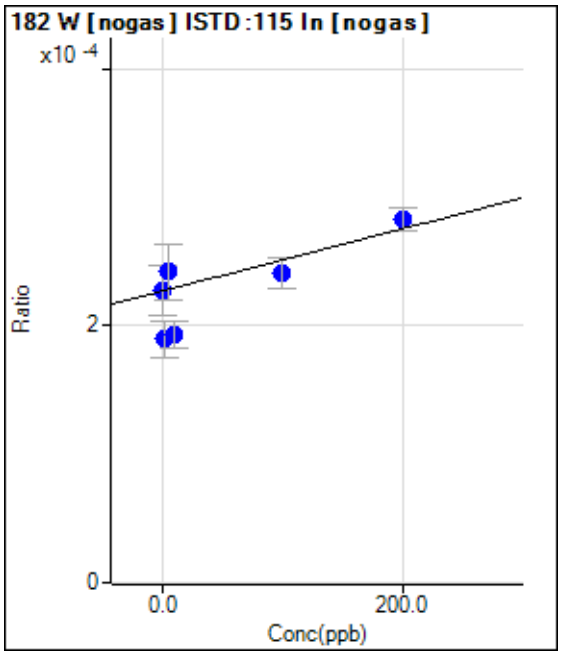


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0000	P	24.4
2	☐	2.000	-5.652	76.67	0.0000	P	41.6
3	☐	5.000	22.051	176.67	0.0001	P	11.8
4	☐	10.000	31.450	206.67	0.0001	P	9.9
5	☐	100.000	173.505	703.36	0.0002	P	13.3
6	☐	200.000	161.825	646.69	0.0002	P	11.6
7	☐	1.000					

y = 1.1363E-006 * x + 3.1464E-005
R = 0.8960
DL = 20.3
BEC = 27.69

Weight: <None>
Min Conc: <None>

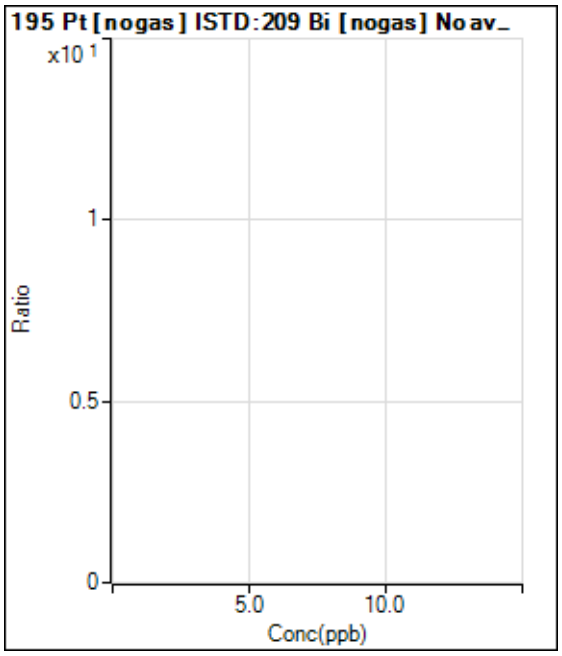
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	716.69	0.0002	P	17.2
2	☐	2.000	-154.819	580.02	0.0002	P	15.0
3	☐	5.000	62.739	753.36	0.0002	P	17.8
4	☐	10.000	-140.265	593.35	0.0002	P	11.2
5	☐	100.000	58.016	740.03	0.0002	P	9.7
6	☐	200.000	228.630	850.04	0.0003	P	6.4
7	☐	1.000					

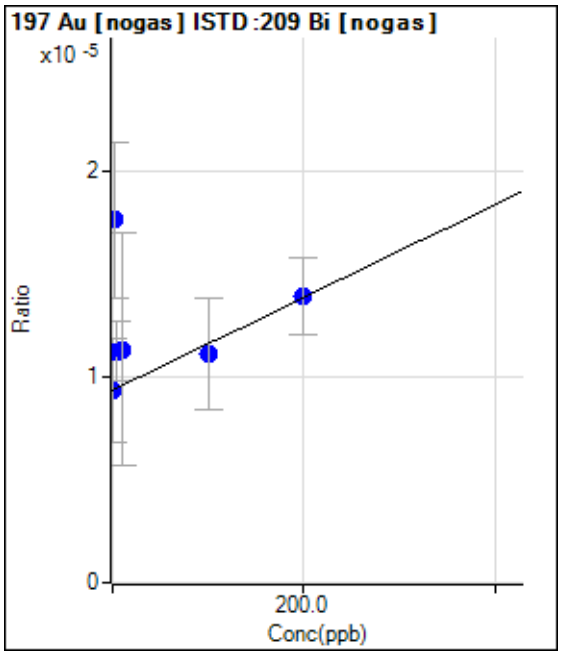
y = 2.4244E-007 * x + 2.2704E-004
R = 0.8071
DL = 483.8
BEC = 936.5

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					

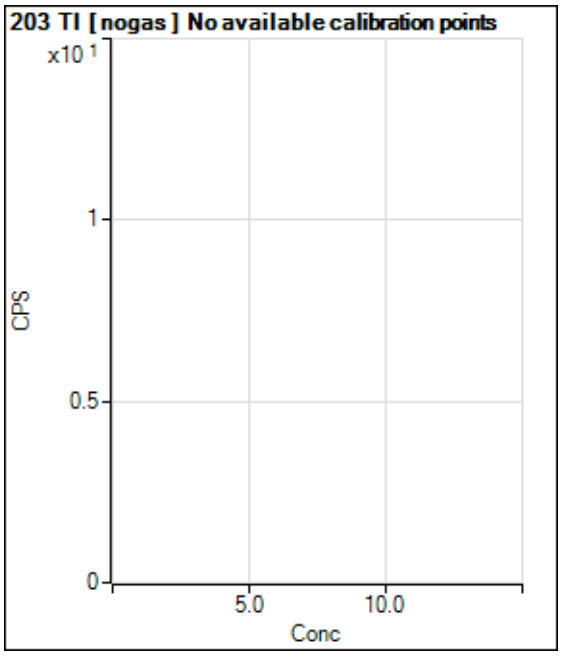
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	53.2
2	☐	2.000	366.912	36.67	0.0000	P	43.1
3	☐	5.000	83.709	23.33	0.0000	P	25.8
4	☐	10.000	88.383	23.33	0.0000	P	99.1
5	☐	100.000	77.518	23.33	0.0000	P	48.9
6	☐	200.000	201.705	30.00	0.0000	P	27.2
7	☐	1.000					

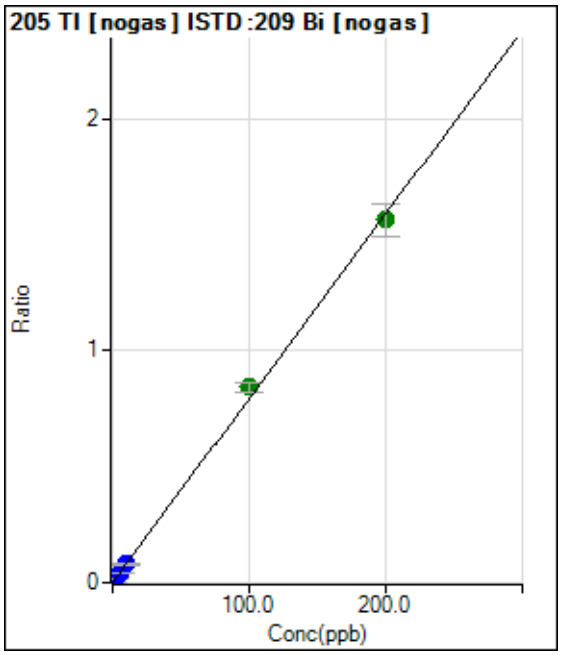
y = 2.2527E-008 * x + 9.3481E-006
R = 0.1299
DL = 662.5
BEC = 415

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			456.68		P	10.8
2	☐			14583.49		P	3.8
3	☐			35245.32		P	0.2
4	☐			69803.40		P	1.3
5	☐			749851.42		P	0.9
6	☐			1412990.35		A	0.6
7	☐						

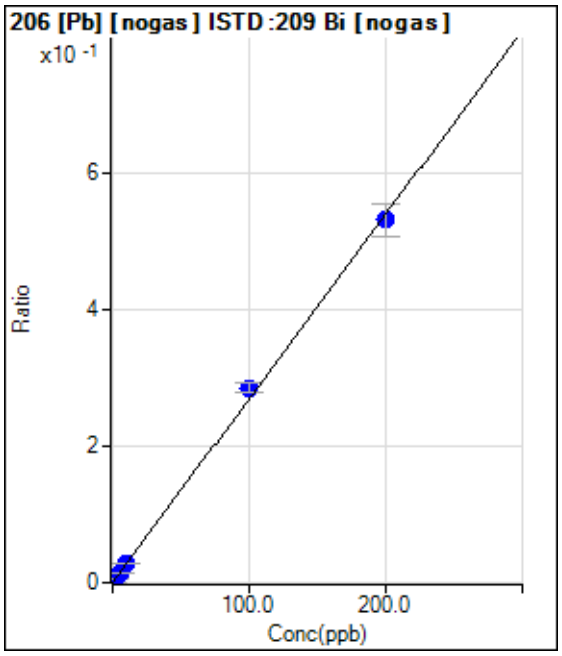
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	753.37	0.0003	P	8.7
2	☐	2.000	1.969	33284.63	0.0160	P	8.0
3	☐	5.000	5.119	85234.56	0.0410	P	1.8
4	☐	10.000	9.938	163093.01	0.0792	P	2.8
5	☐	100.000	106.015	1761425.96	0.8416	A	4.9
6	☐	200.000	196.993	3325558.39	1.5635	A	9.0
7	☐	1.000					

y = 0.0079 * x + 3.4980E-004
R = 0.9994
DL = 0.01144
BEC = 0.04408

Weight: <None>
Min Conc: <None>

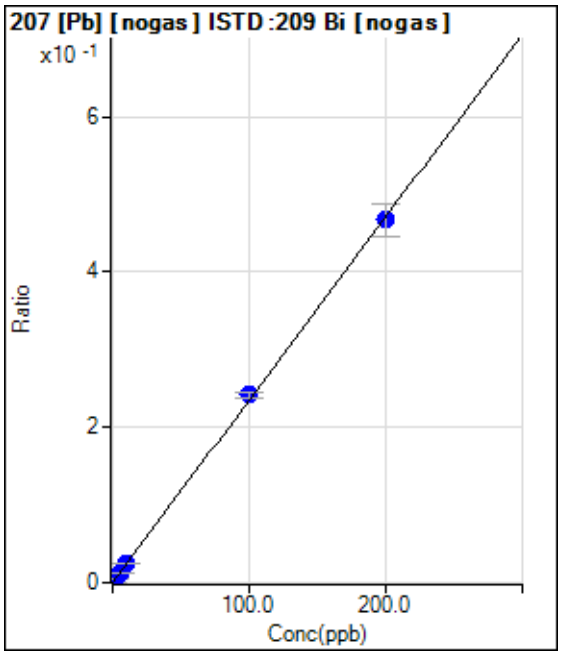


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0001	P	30.2
2	☐	2.000	2.032	11584.34	0.0056	P	6.2
3	☐	5.000	5.165	29133.36	0.0140	P	4.5
4	☐	10.000	10.046	55979.97	0.0272	P	2.3
5	☐	100.000	105.665	597041.44	0.2853	P	5.0
6	☐	200.000	197.161	1132147.22	0.5323	P	8.9
7	☐	1.000					

y = 0.0027 * x + 6.6802E-005
R = 0.9994
DL = 0.0224
BEC = 0.02475

Weight: <None>
Min Conc: <None>

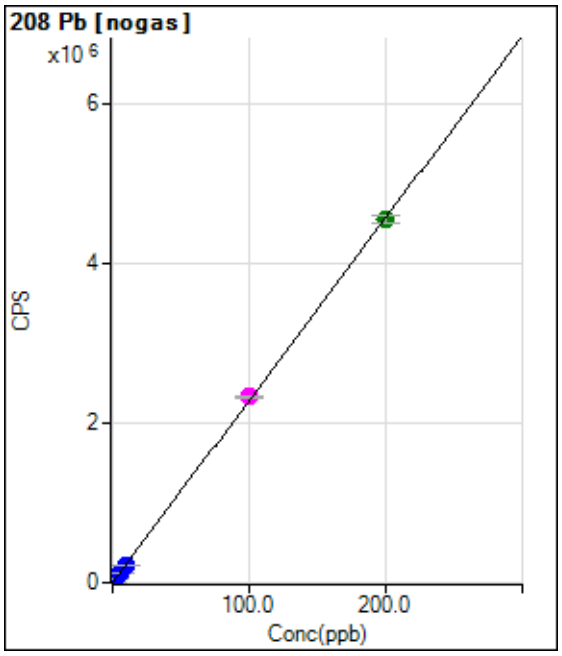
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.33	0.0001	P	14.1
2	☐	2.000	1.979	9826.48	0.0047	P	4.2
3	☐	5.000	5.216	25657.38	0.0123	P	4.2
4	☐	10.000	10.022	48653.66	0.0236	P	0.6
5	☐	100.000	102.780	506127.38	0.2418	P	3.4
6	☐	200.000	198.604	993724.28	0.4671	P	8.7
7	☐	1.000					

y = 0.0024 * x + 5.7260E-005
R = 0.9999
DL = 0.01027
BEC = 0.02435

Weight: <None>
Min Conc: <None>

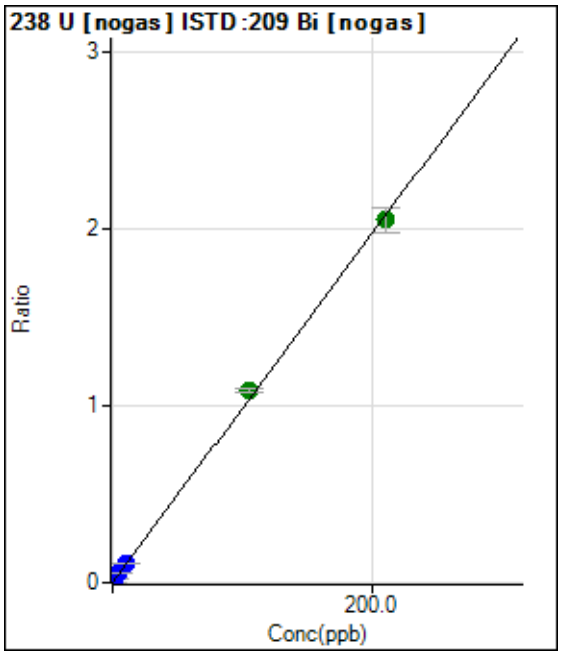


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.00		P	3.9
2	☐	2.000	1.976	45619.20		P	3.5
3	☐	5.000	5.054	115890.05		P	3.5
4	☐	10.000	9.833	224997.83		P	0.8
5	☐	100.000	101.873	2326179.24		M	1.4
6	☐	200.000	199.071	4545095.11		A	2.2
7	☐	1.000					

y = 22829.0200 * x + 510.0033
R = 0.9999
DL = 0.002628
BEC = 0.02234

Weight: <None>
Min Conc: <None>

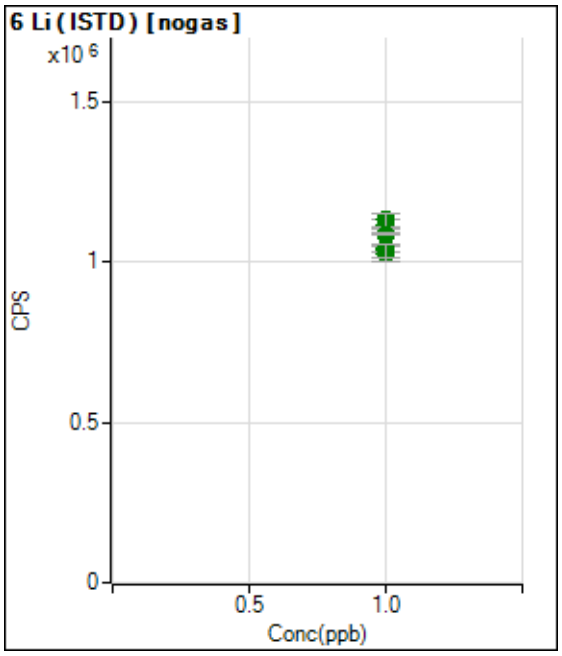
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0001	P	13.4
2	☐	2.000	2.158	44653.46	0.0214	P	2.0
3	☐	5.000	5.177	106568.86	0.0512	P	3.7
4	☐	10.000	10.697	217864.80	0.1058	P	1.7
5	☐	105.000	109.889	2274671.32	1.0862	A	2.8
6	☐	210.000	207.516	4366426.29	2.0511	A	7.2
7	☐	1.000					

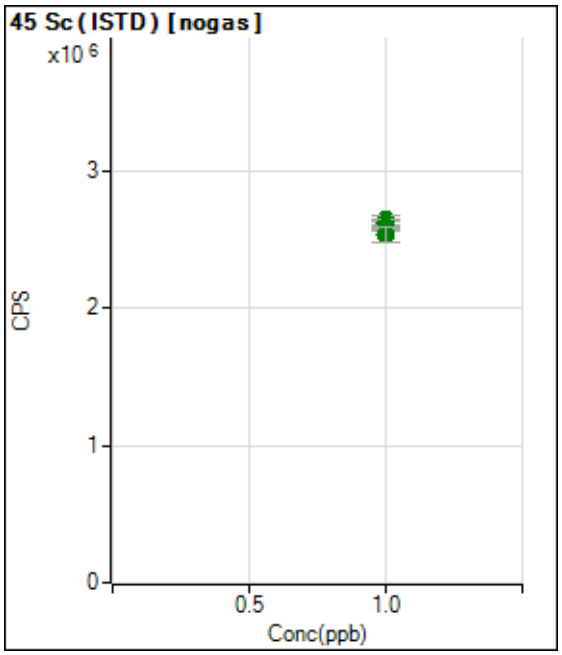
y = 0.0099 * x + 6.8151E-005
R = 0.9996
DL = 0.002766
BEC = 0.006895

Weight: <None>
Min Conc: <None>

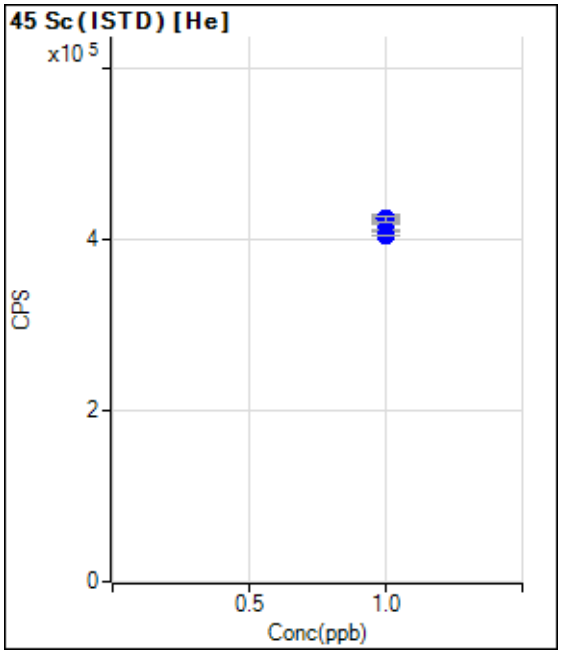


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1118107.82		A	2.4
2	☐	1.000		1132002.70		A	3.6
3	☐	1.000		1088809.33		A	0.9
4	☐	1.000		1025689.15		A	5.1
5	☐	1.000		1045106.71		A	2.0
6	☐	1.000		1035061.10		A	3.9
7	☐	1.000					

Calibration for 229_ICV.d

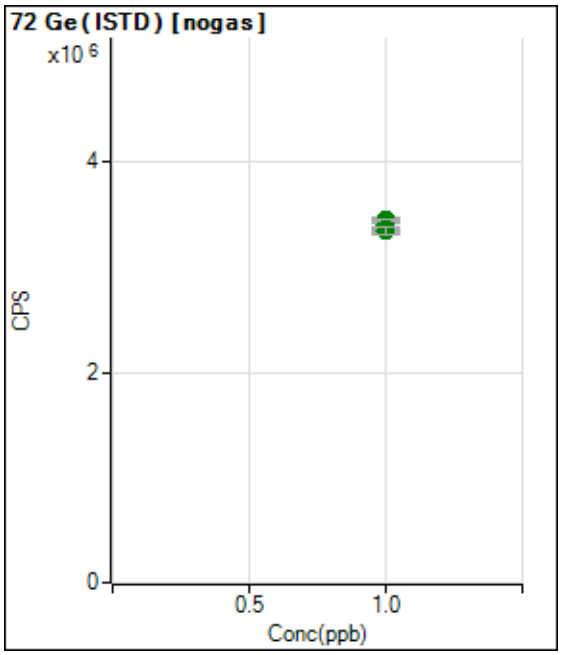


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2610153.14		A	3.5
2	☐	1.000		2622962.88		A	1.0
3	☐	1.000		2646547.57		A	3.0
4	☐	1.000		2624362.93		A	2.3
5	☐	1.000		2590429.80		A	0.2
6	☐	1.000		2542686.78		A	4.2
7	☐	1.000					

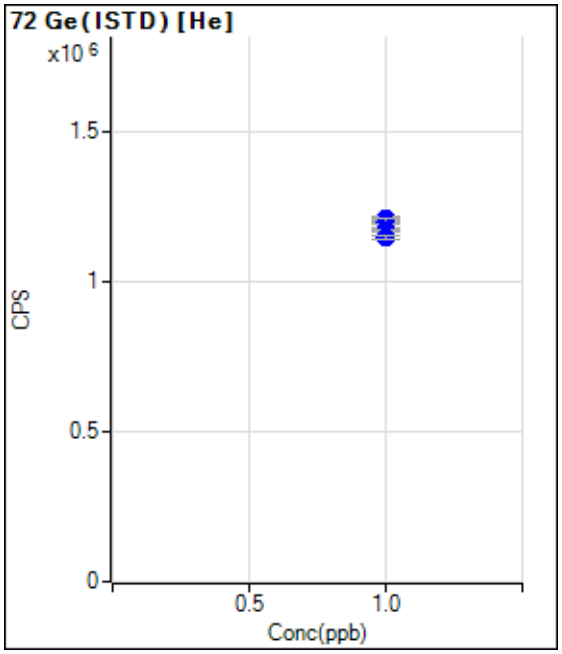


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		423249.89		P	2.9
2	☐	1.000		420397.44		P	1.9
3	☐	1.000		419873.33		P	1.1
4	☐	1.000		423041.48		P	1.2
5	☐	1.000		409286.99		P	0.3
6	☐	1.000		403557.49		P	0.4
7	☐	1.000					

Calibration for 229_ICV.d

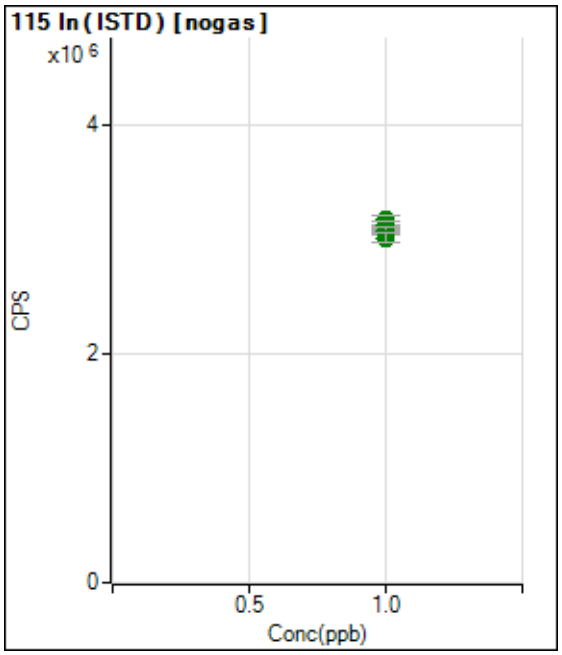


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3396393.49		A	1.8
2	☐	1.000		3451423.28		A	1.5
3	☐	1.000		3446696.83		A	0.2
4	☐	1.000		3365060.06		A	1.5
5	☐	1.000		3349000.16		A	1.0
6	☐	1.000		3352289.95		A	2.2
7	☐	1.000					

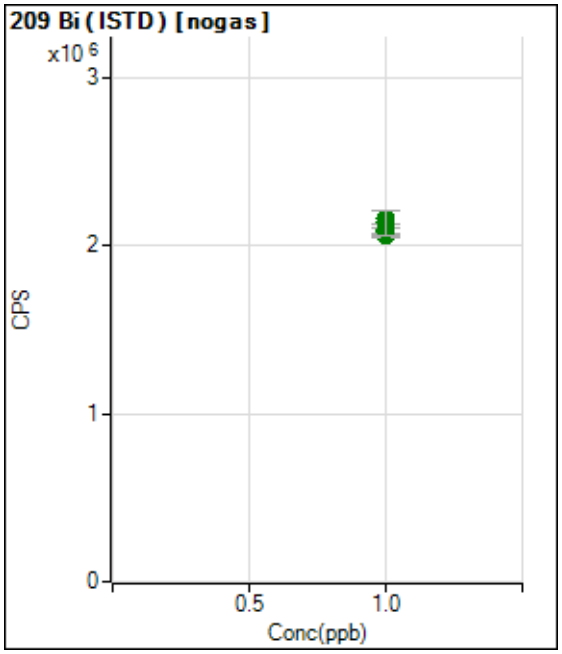


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1189985.92		P	1.3
2	☐	1.000		1209004.80		P	1.0
3	☐	1.000		1200717.82		P	1.5
4	☐	1.000		1174177.48		P	0.7
5	☐	1.000		1172038.42		P	0.6
6	☐	1.000		1149473.58		P	1.0
7	☐	1.000					

Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3166421.36		A	2.7
2	☐	1.000		3060259.63		A	1.8
3	☐	1.000		3119463.11		A	2.6
4	☐	1.000		3075127.45		A	0.9
5	☐	1.000		3072752.95		A	2.0
6	☐	1.000		3007420.05		A	3.0
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2159119.29		A	4.4
2	☐	1.000		2087427.73		A	3.8
3	☐	1.000		2080979.71		A	2.6
4	☐	1.000		2059322.47		A	0.8
5	☐	1.000		2095006.90		A	3.5
6	☐	1.000		2135782.63		A	6.9
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	017CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T11:53:39-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	200	33.64
Na	23	1	nogas	400159	0.00
Mg	24	1	nogas	13941	0.08
Al	27	1	nogas	28508	0.00
K	39	1	nogas	9182959	0.00
Ti	47	1	nogas	423	5.19
V	51	1	nogas	743041	0.00
Cr	52	1	nogas	61114	0.00
Mn	55	1	nogas	16514	0.01
Co	59	1	nogas	823	1.87
Ni	60	1	nogas	550	3.75
Cu	63	1	nogas	2897	0.28
Zn	66	1	nogas	880	0.47
As	75	1	nogas	93833	0.00
Sr	88	1	nogas	1060	0.39
Ag	107	1	nogas	110	33.06
Cd	111	1	nogas	20	250.00
Sb	121	1	nogas	530	1.88
Tl	205	1	nogas	433	2.02
Pb	208	1	nogas	527	3.46
[Pb]	206	1	nogas	160	10.34
[Pb]	207	1	nogas	160	14.08
Na	23	2	He	49475	0.00
Mg	24	2	He	1110	1.41
Al	27	2	He	897	1.09
K	39	2	He	216445	0.00
Ca	43	2	He	47	26.51
Ca	44	2	He	2817	0.18
V	51	2	He	13795	0.01
Cr	52	2	He	5257	0.12
Mn	55	2	He	1403	0.48
Fe	56	2	He	18970	0.02
Co	59	2	He	187	3.31
Ni	60	2	He	203	9.16
Cu	63	2	He	1037	1.09
Zn	66	2	He	317	6.64
As	75	2	He	414	2.76
Se	78	2	He	145	8.88
B	11	1	nogas	24339	0.01
Si	28	1	nogas	3401956	0.00
Ca	43	1	nogas	1063	1.03
Ca	44	1	nogas	401093	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3061495	0.00
Se	77	1	nogas	30409	0.01
Se	82	1	nogas	200	5.00
Mo	95	1	nogas	200	10.00
Sn	118	1	nogas	1220	0.83
Ba	137	1	nogas	243	6.39
Sb	121	2	He	327	2.71
Li	7	1	nogas	106994	0.00
P	31	1	nogas	101149	0.00
La	139	1	nogas	77	59.75

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1267062	6.78
Ge	72	1	nogas	2907309	6.05
In	115	1	nogas	2598912	8.71
Bi	209	1	nogas	1908675	3.11
Ge	72	2	He	1062701	0.68

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	018CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T11:55:37-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	14235	0.03
Na	23	1	nogas	4906228	0.00
Mg	24	1	nogas	3047285	0.00
Al	27	1	nogas	68862	0.00
K	39	1	nogas	12758610	0.00
Ti	47	1	nogas	3467	0.28
V	51	1	nogas	807109	0.00
Cr	52	1	nogas	96189	0.00
Mn	55	1	nogas	63720	0.00
Co	59	1	nogas	41781	0.00
Ni	60	1	nogas	9719	0.03
Cu	63	1	nogas	24417	0.01
Zn	66	1	nogas	7955	0.06
As	75	1	nogas	98387	0.00
Sr	88	1	nogas	49388	0.01
Ag	107	1	nogas	23346	0.01
Cd	111	1	nogas	4947	0.09
Sb	121	1	nogas	22291	0.01
Tl	205	1	nogas	31578	0.01
Pb	208	1	nogas	43133	0.00
[Pb]	206	1	nogas	10817	0.01
[Pb]	207	1	nogas	9386	0.04
Na	23	2	He	435180	0.00
Mg	24	2	He	220412	0.00
Al	27	2	He	2384	0.30
K	39	2	He	448891	0.00
Ca	43	2	He	677	2.41
Ca	44	2	He	13819	0.00
V	51	2	He	28339	0.00
Cr	52	2	He	21029	0.01
Mn	55	2	He	13749	0.01
Fe	56	2	He	1451798	0.00
Co	59	2	He	21216	0.01
Ni	60	2	He	5564	0.12
Cu	63	2	He	14679	0.01
Zn	66	2	He	3787	0.14
As	75	2	He	3217	0.14
Se	78	2	He	379	0.66
B	11	1	nogas	64218	0.00
Si	28	1	nogas	3522573	0.00

Calibration Standard Report

Ca	43	1	nogas	7288	0.05
Ca	44	1	nogas	500523	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	7072857	0.00
Se	77	1	nogas	29050	0.01
Se	82	1	nogas	680	2.06
Mo	95	1	nogas	9519	0.01
Sn	118	1	nogas	13509	0.01
Ba	137	1	nogas	7002	0.05
Sb	121	2	He	11497	0.03
P	31	1	nogas	117777	0.00
La	139	1	nogas	80	87.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1271058	4.26	1267062	100.32	70	125	
Ge	72	1	nogas	2946466	5.62	2907309	101.35	70	125	
In	115	1	nogas	2640658	9.45	2598912	101.61	70	125	
Bi	209	1	nogas	1879437	4.32	1908675	98.47	70	125	
Ge	72	2	He	1063284	0.79	1062701	100.05	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	019CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T11:57:36-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	36348	0.01
Na	23	1	nogas	11845798	0.00
Mg	24	1	nogas	7652663	0.00
Al	27	1	nogas	128952	0.00
K	39	1	nogas	18431657	0.00
Ti	47	1	nogas	8495	0.00
V	51	1	nogas	1051373	0.00
Cr	52	1	nogas	158517	0.00
Mn	55	1	nogas	136116	0.00
Co	59	1	nogas	103300	0.00
Ni	60	1	nogas	24477	0.01
Cu	63	1	nogas	58514	0.01
Zn	66	1	nogas	19364	0.02
As	75	1	nogas	124891	0.00
Sr	88	1	nogas	121745	0.00
Ag	107	1	nogas	59541	0.00
Cd	111	1	nogas	12641	0.02
Sb	121	1	nogas	55117	0.00
Tl	205	1	nogas	77911	0.00
Pb	208	1	nogas	108007	0.00
[Pb]	206	1	nogas	27554	0.01
[Pb]	207	1	nogas	23811	0.01
Na	23	2	He	1025528	0.00
Mg	24	2	He	543332	0.00
Al	27	2	He	4247	0.12
K	39	2	He	809487	0.00
Ca	43	2	He	1647	0.08
Ca	44	2	He	30492	0.01
V	51	2	He	50892	0.00
Cr	52	2	He	44413	0.00
Mn	55	2	He	31794	0.01
Fe	56	2	He	3537293	0.00
Co	59	2	He	52137	0.00
Ni	60	2	He	13882	0.01
Cu	63	2	He	35735	0.01
Zn	66	2	He	8572	0.09
As	75	2	He	7911	0.04
Se	78	2	He	769	0.76
B	11	1	nogas	123614	0.00
Si	28	1	nogas	3668181	0.00

Calibration Standard Report

Ca	43	1	nogas	17392	0.01
Ca	44	1	nogas	659911	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	13170591	0.00
Se	77	1	nogas	33805	0.00
Se	82	1	nogas	1407	0.16
Mo	95	1	nogas	23609	0.01
Sn	118	1	nogas	32835	0.01
Ba	137	1	nogas	18670	0.01
Sb	121	2	He	29595	0.01
P	31	1	nogas	145212	0.00
La	139	1	nogas	123	10.04

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1269593	6.28	1267062	100.20	70	125	
Ge	72	1	nogas	2980652	4.58	2907309	102.52	70	125	
In	115	1	nogas	2674431	10.10	2598912	102.91	70	125	
Bi	209	1	nogas	1891458	6.91	1908675	99.10	70	125	
Ge	72	2	He	1061004	0.38	1062701	99.84	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	020CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T11:59:34-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	72464	0.00
Na	23	1	nogas	22632957	0.00
Mg	24	1	nogas	14603969	0.00
Al	27	1	nogas	216877	0.00
K	39	1	nogas	27185957	0.00
Ti	47	1	nogas	15924	0.03
V	51	1	nogas	1106503	0.00
Cr	52	1	nogas	249262	0.00
Mn	55	1	nogas	253503	0.00
Co	59	1	nogas	202014	0.00
Ni	60	1	nogas	44411	0.00
Cu	63	1	nogas	109742	0.00
Zn	66	1	nogas	36634	0.01
As	75	1	nogas	146426	0.00
Sr	88	1	nogas	243565	0.00
Ag	107	1	nogas	118895	0.00
Cd	111	1	nogas	24174	0.01
Sb	121	1	nogas	108007	0.00
Tl	205	1	nogas	149757	0.00
Pb	208	1	nogas	212022	0.00
[Pb]	206	1	nogas	53090	0.01
[Pb]	207	1	nogas	46795	0.01
Na	23	2	He	2032191	0.00
Mg	24	2	He	1070664	0.00
Al	27	2	He	7592	0.03
K	39	2	He	1403057	0.00
Ca	43	2	He	3400	0.07
Ca	44	2	He	56579	0.00
V	51	2	He	83324	0.00
Cr	52	2	He	82027	0.00
Mn	55	2	He	61599	0.00
Fe	56	2	He	7060976	0.00
Co	59	2	He	104317	0.00
Ni	60	2	He	26630	0.01
Cu	63	2	He	69150	0.00
Zn	66	2	He	17215	0.02
As	75	2	He	14837	0.01
Se	78	2	He	1357	0.08
B	11	1	nogas	225702	0.00
Si	28	1	nogas	3887678	0.00

Calibration Standard Report

Ca	43	1	nogas	33043	0.01
Ca	44	1	nogas	906185	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	22713721	0.00
Se	77	1	nogas	34897	0.01
Se	82	1	nogas	2560	0.21
Mo	95	1	nogas	48125	0.01
Sn	118	1	nogas	62375	0.00
Ba	137	1	nogas	35113	0.01
Sb	121	2	He	57277	0.00
P	31	1	nogas	188482	0.00
La	139	1	nogas	200	9.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1290762	1.80	1267062	101.87	70	125	
Ge	72	1	nogas	3117445	2.08	2907309	107.23	70	125	
In	115	1	nogas	2680381	1.44	2598912	103.13	70	125	
Bi	209	1	nogas	1945018	2.80	1908675	101.90	70	125	
Ge	72	2	He	1057039	1.10	1062701	99.47	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	021CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:01:32-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	704529	0.00
Na	23	1	nogas	222214672	0.00
Mg	24	1	nogas	142076245	0.00
Al	27	1	nogas	1634964	0.00
K	39	1	nogas	190492688	0.00
Ti	47	1	nogas	155818	0.00
V	51	1	nogas	2875996	0.00
Cr	52	1	nogas	2081526	0.00
Mn	55	1	nogas	2424969	0.00
Co	59	1	nogas	1912202	0.00
Ni	60	1	nogas	438056	0.00
Cu	63	1	nogas	1044267	0.00
Zn	66	1	nogas	345186	0.00
As	75	1	nogas	546018	0.00
Sr	88	1	nogas	2351531	0.00
Ag	107	1	nogas	1130301	0.00
Cd	111	1	nogas	243834	0.00
Sb	121	1	nogas	1060601	0.00
Tl	205	1	nogas	1699142	0.00
Pb	208	1	nogas	2107555	0.00
[Pb]	206	1	nogas	527528	0.00
[Pb]	207	1	nogas	464688	0.00
Na	23	2	He	19203631	0.00
Mg	24	2	He	10702249	0.00
Al	27	2	He	62888	0.00
K	39	2	He	11824843	0.00
Ca	43	2	He	31978	0.01
Ca	44	2	He	532139	0.00
V	51	2	He	716683	0.00
Cr	52	2	He	786313	0.00
Mn	55	2	He	579600	0.00
Fe	56	2	He	68025277	0.00
Co	59	2	He	1024544	0.00
Ni	60	2	He	263576	0.00
Cu	63	2	He	664733	0.00
Zn	66	2	He	157724	0.00
As	75	2	He	149901	0.00
Se	78	2	He	12736	0.01
B	11	1	nogas	2027889	0.00
Si	28	1	nogas	8281308	0.00

Calibration Standard Report

Ca	43	1	nogas	330953	0.00
Ca	44	1	nogas	5555001	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	196313425	0.00
Se	77	1	nogas	46753	0.00
Se	82	1	nogas	23536	0.01
Mo	95	1	nogas	476266	0.00
Sn	118	1	nogas	618378	0.00
Ba	137	1	nogas	345389	0.00
Sb	121	2	He	578197	0.00
P	31	1	nogas	933041	0.00
La	139	1	nogas	457	4.71

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1245617	5.09	1267062	98.31	70	125	
Ge	72	1	nogas	2982906	2.85	2907309	102.60	70	125	
In	115	1	nogas	2742092	2.62	2598912	105.51	70	125	
Bi	209	1	nogas	2119037	2.49	1908675	111.02	70	125	
Ge	72	2	He	1065791	0.83	1062701	100.29	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	022CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:03:29-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1447760	0.00
Na	23	1	nogas	452199093	0.00
Mg	24	1	nogas	280689981	0.00
Al	27	1	nogas	3427009	0.00
K	39	1	nogas	365605775	0.00
Ti	47	1	nogas	309703	0.00
V	51	1	nogas	4875491	0.00
Cr	52	1	nogas	3789213	0.00
Mn	55	1	nogas	4602396	0.00
Co	59	1	nogas	4018670	0.00
Ni	60	1	nogas	902154	0.00
Cu	63	1	nogas	2049870	0.00
Zn	66	1	nogas	666164	0.00
As	75	1	nogas	1017420	0.00
Sr	88	1	nogas	4762020	0.00
Ag	107	1	nogas	2256173	0.00
Cd	111	1	nogas	481597	0.00
Sb	121	1	nogas	2210878	0.00
Tl	205	1	nogas	3051749	0.00
Pb	208	1	nogas	4211457	0.00
[Pb]	206	1	nogas	1026681	0.00
[Pb]	207	1	nogas	903393	0.00
Na	23	2	He	37686065	0.00
Mg	24	2	He	21017040	0.00
Al	27	2	He	121581	0.00
K	39	2	He	22897270	0.00
Ca	43	2	He	62835	0.00
Ca	44	2	He	1067785	0.00
V	51	2	He	1422120	0.00
Cr	52	2	He	1616576	0.00
Mn	55	2	He	1147320	0.00
Fe	56	2	He	136067978	0.00
Co	59	2	He	2047925	0.00
Ni	60	2	He	513546	0.00
Cu	63	2	He	1305411	0.00
Zn	66	2	He	309181	0.00
As	75	2	He	296211	0.00
Se	78	2	He	25037	0.00
B	11	1	nogas	4258092	0.00
Si	28	1	nogas	13695397	0.00

Calibration Standard Report

Ca	43	1	nogas	649171	0.00
Ca	44	1	nogas	10511568	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	385151642	0.00
Se	77	1	nogas	68783	0.00
Se	82	1	nogas	48525	0.00
Mo	95	1	nogas	949883	0.00
Sn	118	1	nogas	1243987	0.00
Ba	137	1	nogas	690464	0.00
Sb	121	2	He	1175196	0.00
P	31	1	nogas	1792962	0.00
La	139	1	nogas	640	1.52

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1106605	0.98	1267062	87.34	70	125	
Ge	72	1	nogas	2959445	1.42	2907309	101.79	70	125	
In	115	1	nogas	2644771	0.34	2598912	101.76	70	125	
Bi	209	1	nogas	1880818	3.68	1908675	98.54	70	125	
Ge	72	2	He	1040244	1.21	1062701	97.89	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	025SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:09:27-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	017CALB.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	1.778	1.778	9.69	14422	0.01	2000	
Na	23	1	nogas	197.825	197.825	2.77	4981130	0.00	200000	
Mg	24	1	nogas	208.445	208.445	2.29	3013980	0.01	200000	
Al	27	1	nogas	2.201	2.201	3.87	67775	0.00	2000	
K	39	1	nogas	188.555	188.555	6.22	13066669	0.00	200000	
Ti	47	1	nogas	1.881	1.881	3.43	3430	0.05	2000	
V	51	1	nogas	-13.404	-13.404	-3.79	492745	0.00	2000	
Cr	52	1	nogas	1.171	1.171	4.33	86745	0.00	2000	
Mn	55	1	nogas	2.004	2.004	2.14	64850	0.00	2000	
Co	59	1	nogas	2.043	2.043	1.26	42510	0.00	2000	
Ni	60	1	nogas	2.464	2.464	1.31	9863	0.02	2000	
Cu	63	1	nogas	2.095	2.095	2.12	25067	0.01	2000	
Zn	66	1	nogas	1.661	1.661	6.09	8162	0.02	2000	
As	75	1	nogas	-3.526	-3.526	-1.51	79375	0.00	2000	
Sr	88	1	nogas	2.038	2.038	3.80	50682	0.00	2000	
Ag	107	1	nogas	2.038	2.038	1.43	23673	0.01	2000	
Cd	111	1	nogas	1.948	1.948	1.43	4984	0.04	2000	
Sb	121	1	nogas	2.119	2.119	3.80	24357	0.01	2000	
Tl	205	1	nogas	2.582	2.582	13.07	42260	0.01	2000	
Pb	208	1	nogas	2.076	2.076	2.28	44244	0.00	2000	
U	238	1	nogas	2.095	2.095	1.46	44279	0.00	2000	
[Pb]	206	1	nogas	2.098	2.098	3.44	11394	0.02	2000	
[Pb]	207	1	nogas	2.028	2.028	2.84	9720	0.02	2000	
Na	23	2	He	204.670	204.670	2.23	445908	0.05	200000	
Mg	24	2	He	204.491	204.491	1.38	222097	0.09	200000	
Al	27	2	He	1.723	1.723	13.23	2250	0.08	2000	
K	39	2	He	211.581	211.581	0.62	457546	0.05	200000	
Ca	43	2	He	190.900	190.900	16.18	663	28.78	200000	
Ca	44	2	He	204.072	204.072	4.69	13959	1.46	200000	
V	51	2	He	1.456	1.456	2.63	22552	0.01	2000	
Cr	52	2	He	2.018	2.018	0.99	21853	0.01	2000	
Mn	55	2	He	1.978	1.978	4.35	13045	0.02	2000	
Fe	56	2	He	208.278	208.278	1.29	1470761	0.01	200000	
Co	59	2	He	2.023	2.023	2.79	21416	0.01	2000	
Ni	60	2	He	1.907	1.907	5.89	5534	0.03	2000	
Cu	63	2	He	2.019	2.019	1.53	15023	0.01	2000	
Zn	66	2	He	1.796	1.796	6.89	3550	0.05	2000	
As	75	2	He	1.938	1.938	3.53	3360	0.06	2000	
Se	78	2	He	2.268	2.268	18.53	401	0.57	2000	
B	11	1	nogas	19.322	19.322	15.33	114225	0.02	2000	
Si	28	1	nogas	-7.915	-7.915	-839.47	3554822	0.00	2000	
Ca	43	1	nogas	189.568	189.568	5.65	7422	2.55	200000	
Ca	44	1	nogas	80.751	80.751	9.60	461749	0.02	200000	
Fe	56	1	nogas	203.676	203.676	7.93	7199964	0.00	200000	
Se	77	1	nogas	-47.357	-47.357	-3.59	22968	-0.21	2000	
Se	82	1	nogas	1.912	1.912	16.50	680	0.28	2000	

Sample Report

Mo	95	1	nogas	2.431	2.431	7.94	12034	0.02	2000	
Sn	118	1	nogas	2.199	2.199	10.42	15684	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	1.913	1.913	3.06	7225	0.03	2000	
Sb	121	2	He	2.066	2.066	2.55	12721	0.02	2000	
La	139	1	nogas	-0.462	-0.462	-2279.86	83	-0.55	2000	
Au	197	1	nogas	-244.365	-244.365	-121.45	20	-1221.82	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	1261778	5.66	1267062	99.58	70	125	
Ge	72	1	nogas	3036671	1.44	2907309	104.45	70	125	
In	115	1	nogas	2812215	4.46	2598912	108.21	70	125	
Bi	209	1	nogas	1995306	2.68	1908675	104.54	70	125	
Ge	72	2	He	1070927	0.87	1062701	100.77	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	026LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:11:28-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	5.104	4.352	35540	3.83	5	102.1	70	130	
Na	23	1	nogas	525.237	13.151	11804103	3.34	500	105.0	70	130	
Mg	24	1	nogas	564.129	12.522	7669174	2.69	500	112.8	70	130	
Al	27	1	nogas	6.590	24.380	135815	10.27	5	131.8	70	130	LLICV Main CR1 Failed
K	39	1	nogas	536.827	16.219	18533396	0.53	500	107.4	70	130	
Ti	47	1	nogas	4.993	16.192	7942	6.44	5	99.9	70	130	
V	51	1	nogas	-1.920	-177.082	701486	1.19	5	-38.4	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.966	14.782	152839	0.74	5	99.3	70	130	
Mn	55	1	nogas	5.404	10.491	138641	1.23	5	108.1	70	130	
Co	59	1	nogas	5.318	7.925	104160	1.60	5	106.4	70	130	
Ni	60	1	nogas	5.824	6.702	24163	1.64	5	116.5	70	130	
Cu	63	1	nogas	5.563	10.362	58628	2.80	5	111.3	70	130	
Zn	66	1	nogas	5.276	7.407	19597	3.15	5	105.5	70	130	
As	75	1	nogas	3.494	50.873	107233	1.27	5	69.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.315	7.496	124336	1.18	5	106.3	70	130	
Ag	107	1	nogas	5.395	7.844	59564	0.79	5	107.9	70	130	
Cd	111	1	nogas	5.097	9.863	12328	0.95	5	101.9	70	130	
Sb	121	1	nogas	5.034	8.105	54449	2.60	5	100.7	70	130	
Tl	205	1	nogas	5.066	7.444	78164	1.29	5	101.3	70	130	
Pb	208	1	nogas	5.181	0.989	109626	0.98	5	103.6	70	130	
U	238	1	nogas	5.191	6.300	103980	1.41	5	103.8	70	130	
[Pb]	206	1	nogas	5.383	11.717	27480	5.09	5	107.7	70	130	
[Pb]	207	1	nogas	5.309	6.438	23938	3.19	5	106.2	70	130	
Na	23	2	He	510.344	1.904	1033291	1.13	500	102.1	70	130	
Mg	24	2	He	511.641	1.213	551785	0.18	500	102.3	70	130	
Al	27	2	He	5.826	17.326	4774	12.48	5	116.5	70	130	
K	39	2	He	516.101	0.356	804553	0.26	500	103.2	70	130	
Ca	43	2	He	505.847	1.993	1673	3.07	500	101.2	70	130	
Ca	44	2	He	510.478	1.978	30542	2.44	500	102.1	70	130	
V	51	2	He	4.642	2.737	45391	1.29	5	92.8	70	130	
Cr	52	2	He	4.974	2.750	45924	1.46	5	99.5	70	130	
Mn	55	2	He	5.008	3.923	30743	2.63	5	100.2	70	130	
Fe	56	2	He	502.559	4.746	3507079	3.79	500	100.5	70	130	
Co	59	2	He	5.017	2.545	52615	1.38	5	100.3	70	130	
Ni	60	2	He	5.038	4.694	13745	3.59	5	100.8	70	130	
Cu	63	2	He	5.071	3.474	35331	2.30	5	101.4	70	130	
Zn	66	2	He	4.864	2.163	8382	0.83	5	97.3	70	130	
As	75	2	He	4.870	1.037	7783	2.10	5	97.4	70	130	
Se	78	2	He	5.072	11.144	757	8.72	5	101.4	70	130	
B	11	1	nogas	30.915	7.284	145265	1.30	25	123.7	70	130	
Si	28	1	nogas	322.341	99.579	3713200	0.26	25	1289.4	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	525.180	12.718	17702	4.10	500	105.0	70	130	
Ca	44	1	nogas	430.970	23.080	613542	0.87	500	86.2	70	130	
Fe	56	1	nogas	526.785	12.271	12898371	1.19	500	105.4	70	130	
Se	77	1	nogas	-11.033	-140.967	28336	1.58	5	-220.7	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.378	13.342	1237	17.65	5	87.6	70	130	
Mo	95	1	nogas	5.047	10.787	23586	2.07	5	100.9	70	130	
Sn	118	1	nogas	5.207	15.153	33462	3.75	5	104.1	70	130	
Ba	137	1	nogas	5.153	12.223	18013	2.62	5	103.1	70	130	
Sb	121	2	He	4.844	5.158	29262	3.98	5	96.9	70	130	
Li	7	1	nogas	5.421	5.761	181113	5.38	5	108.4	70	130	
P	31	1	nogas	26.763	24.478	144987	1.25	25	107.1	70	130	
La	139	1	nogas	16.844	40.232	133	22.91	5	336.9	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	362.501	234.702	37	68.63	5	7250.0	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	1224352	5.41	1267062	96.63	70	125	
Ge	72	1	nogas	2907400	8.26	2907309	100.00	70	125	
In	115	1	nogas	2682214	10.11	2598912	103.21	70	125	
Bi	209	1	nogas	1902059	7.25	1908675	99.65	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	1066708	1.17	1062701	100.38	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	027_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:13:25-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	442.7	193	7.9	1	
Na	23	1	nogas	1.201	192.2	408732	1.0	100	
Mg	24	1	nogas	1.019	39.2	26389	10.4	100	
Al	27	1	nogas	0.552	35.8	36997	2.5	5	
K	39	1	nogas	6.244	621.4	9150573	0.5	100	
Ti	47	1	nogas	-0.046	-35.9	353	12.8	2.5	
V	51	1	nogas	-4.668	-34.6	638595	3.2	2.5	
Cr	52	1	nogas	-0.179	-99.8	56991	2.9	2.5	
Mn	55	1	nogas	0.104	78.7	18563	3.1	2.5	
Co	59	1	nogas	0.004	56.9	887	10.2	2.5	
Ni	60	1	nogas	0.471	2.9	643	3.2	2.5	
Cu	63	1	nogas	0.022	33.5	3077	7.0	1	
Zn	66	1	nogas	-0.152	-31.8	1843	3.5	2.5	
As	75	1	nogas	-0.695	-113.6	87335	3.7	2.5	
Sr	88	1	nogas	0.015	26.5	1380	4.4	2.5	
Ag	107	1	nogas	0.005	72.1	163	18.7	2.5	
Cd	111	1	nogas	0.016	89.5	53	57.3	1	
Sb	121	1	nogas	0.033	40.7	873	15.6	2.5	
Tl	205	1	nogas	0.074	52.9	1400	26.8	1	
Pb	208	1	nogas	0.003	150.0	600	18.3	2.5	
U	238	1	nogas	0.012	54.2	393	19.4	2.5	
[Pb]	206	1	nogas	0.001	1021.5	150	35.3	2.5	
[Pb]	207	1	nogas	-0.001	-2437.9	140	31.1	2.5	
Na	23	2	He	-0.330	-46.6	49130	1.1	100	
Mg	24	2	He	0.637	46.9	1807	19.1	100	
Al	27	2	He	0.047	334.2	1210	8.9	5	
K	39	2	He	2.050	74.5	218781	0.8	100	
Ca	43	2	He	-1.110	-176.7	43	13.3	100	
Ca	44	2	He	5.075	62.5	3110	5.9	100	
V	51	2	He	-0.006	-928.9	11971	2.3	2.5	
Cr	52	2	He	-0.042	-54.4	4941	2.7	2.5	
Mn	55	2	He	0.098	22.9	1987	7.9	2.5	
Fe	56	2	He	0.608	20.0	23322	4.6	100	
Co	59	2	He	0.002	150.2	213	17.7	2.5	
Ni	60	2	He	-0.086	-24.9	267	20.7	2.5	
Cu	63	2	He	-0.020	-101.6	1343	9.1	1	
Zn	66	2	He	0.061	29.1	797	3.8	2.5	
As	75	2	He	-0.012	-85.2	399	2.6	2.5	
Se	78	2	He	0.180	13.4	133	2.3	1	
B	11	1	nogas	3.440	23.2	36412	1.2	10	
Si	28	1	nogas	93.134	294.9	3440835	0.2	5	ICB Main CR1 Failed
Ca	43	1	nogas	2.265	317.1	1107	12.5	100	
Ca	44	1	nogas	-96.058	-49.5	348012	0.9	100	
Fe	56	1	nogas	1.282	1069.8	3038665	1.7	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-6.613	-192.7	28750	0.6	2.5	
Se	82	1	nogas	0.144	92.3	230	7.5	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.033	18.5	350	7.6	2.5	
Sn	118	1	nogas	0.024	52.0	1333	12.2	5	
Ba	137	1	nogas	0.021	101.0	300	10.0	2.5	
Sb	121	2	He	0.021	132.8	453	37.0	2.5	
P	31	1	nogas	0.309	1466.3	100076	1.4	10	
La	139	1	nogas	37.059	65.4	187	48.0	2.5	ICB Main CR1 Failed
Au	197	1	nogas	145.355	605.6	27	78.1	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	1203664	7.05	1267062	95.00	70	125	
Ge	72	1	nogas	2865773	7.30	2907309	98.57	70	125	
In	115	1	nogas	2538431	12.98	2598912	97.67	70	125	
Bi	209	1	nogas	1749131	11.12	1908675	91.64	70	125	
Ge	72	2	He	1068926	1.28	1062701	100.59	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	028_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:15:26-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	107.456	9.212	721308	3.60	100	107.5	90	110	
Na	23	1	nogas	9336.373	4.923	226365847	1.22	10000	93.4	90	110	
Mg	24	1	nogas	9535.292	3.426	144364487	2.86	10000	95.4	90	110	
Al	27	1	nogas	96.690	9.926	1638039	3.54	100	96.7	90	110	
K	39	1	nogas	10325.826	4.527	192415771	2.15	10000	103.3	90	110	
Ti	47	1	nogas	101.332	7.548	155848	1.24	100	101.3	90	110	
V	51	1	nogas	103.600	8.826	2882026	0.74	100	103.6	90	110	
Cr	52	1	nogas	112.488	9.516	2176673	8.03	100	112.5	90	110	ICV Main CR1 Failed
Mn	55	1	nogas	107.271	4.029	2486278	7.16	100	107.3	90	110	
Co	59	1	nogas	99.897	0.941	1977445	7.39	100	99.9	90	110	
Ni	60	1	nogas	102.211	8.346	453924	4.57	100	102.2	90	110	
Cu	63	1	nogas	103.461	6.994	1056067	2.23	100	103.5	90	110	
Zn	66	1	nogas	103.663	5.100	345912	1.90	100	103.7	90	110	
As	75	1	nogas	99.279	7.003	545872	1.19	100	99.3	90	110	
Sr	88	1	nogas	96.694	2.814	2283768	7.16	100	96.7	90	110	
Ag	107	1	nogas	102.390	6.946	1145252	0.72	100	102.4	90	110	
Cd	111	1	nogas	101.693	5.585	247176	2.85	100	101.7	90	110	
Sb	121	1	nogas	98.206	7.125	1067871	2.01	100	98.2	90	110	
Tl	205	1	nogas	99.521	6.436	1674291	8.14	100	99.5	90	110	
Pb	208	1	nogas	99.439	1.142	2094531	1.14	100	99.4	90	110	
U	238	1	nogas	100.292	6.392	2195626	7.12	100	100.3	90	110	
[Pb]	206	1	nogas	92.566	1.257	515792	0.81	100	92.6	90	110	
[Pb]	207	1	nogas	93.618	0.713	459069	1.85	100	93.6	90	110	
Na	23	2	He	10216.592	0.821	19504676	0.19	10000	102.2	90	110	
Mg	24	2	He	10244.397	0.838	10894927	0.71	10000	102.4	90	110	
Al	27	2	He	100.362	1.712	62402	0.99	100	100.4	90	110	
K	39	2	He	10207.821	1.400	11848464	1.37	10000	102.1	90	110	
Ca	43	2	He	9892.007	3.739	31464	3.35	10000	98.9	90	110	
Ca	44	2	He	10042.847	2.180	541372	1.49	10000	100.4	90	110	
V	51	2	He	100.559	2.062	726756	1.75	100	100.6	90	110	
Cr	52	2	He	97.863	0.815	795438	1.47	100	97.9	90	110	
Mn	55	2	He	101.241	1.146	587377	0.52	100	101.2	90	110	
Fe	56	2	He	10191.912	2.364	69918542	1.69	10000	101.9	90	110	
Co	59	2	He	100.513	2.910	1038018	2.33	100	100.5	90	110	
Ni	60	2	He	101.065	2.094	263205	1.52	100	101.1	90	110	
Cu	63	2	He	100.399	1.389	663812	0.71	100	100.4	90	110	
Zn	66	2	He	101.051	1.560	158419	0.91	100	101.1	90	110	
As	75	2	He	100.566	1.930	150682	1.54	100	100.6	90	110	
Se	78	2	He	100.196	2.515	12734	2.05	100	100.2	90	110	
B	11	1	nogas	516.550	6.670	1997507	2.12	500	103.3	90	110	
Si	28	1	nogas	4906.615	12.589	8348413	1.28	5000	98.1	90	110	
Ca	43	1	nogas	9993.614	6.232	323312	0.64	10000	99.9	90	110	
Ca	44	1	nogas	10061.783	9.187	5457448	2.39	10000	100.6	90	110	
Fe	56	1	nogas	10368.860	5.145	200043038	1.67	10000	103.7	90	110	
Se	77	1	nogas	86.921	22.064	46476	1.19	100	86.9	90	110	ICV Main CR1 Failed
Se	82	1	nogas	99.342	6.766	23833	0.86	100	99.3	90	110	
Mo	95	1	nogas	100.423	4.241	473854	4.07	100	100.4	90	110	
Sn	118	1	nogas	99.132	6.368	620422	2.69	100	99.1	90	110	
Ba	137	1	nogas	99.961	6.912	347412	2.40	100	100.0	90	110	
Sb	121	2	He	99.384	0.280	587061	0.56	100	99.4	90	110	
Li	7	1	nogas	103.464	0.517	1542193	9.26	100	103.5	90	110	
P	31	1	nogas	493.326	6.333	926316	1.24	500	98.7	90	110	
La	139	1	nogas	103.990	18.720	393	7.34	100	104.0	90	110	
Au	197	1	nogas	-170.826	-259.749	23	65.47	100	-170.8	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	1191007	8.98	1267062	94.00	70	125	
Ge	72	1	nogas	2946601	6.56	2907309	101.35	70	125	
In	115	1	nogas	2690095	8.30	2598912	103.51	70	125	
Bi	209	1	nogas	2076069	1.86	1908675	108.77	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	1053859	0.68	1062701	99.17	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	029ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:17:24-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	0.009	141.8	233	32.2	0	ICSA Main CR1 Failed
Na	23	1	nogas	108755.864	8.2	2228807916	2.3	0	
Mg	24	1	nogas	112175.931	8.8	1436329365	0.1	0	
Al	27	1	nogas	100286.944	5.0	1639173256	1.3	0	
K	39	1	nogas	105954.747	5.1	1849863841	1.4	0	
Ti	47	1	nogas	2263.513	6.0	3406188	3.2	0	
V	51	1	nogas	-12.703	-5.8	481846	1.0	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.784	38.2	75152	3.8	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.344	12.3	24153	2.1	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.516	8.0	10783	3.7	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.603	3.9	5604	5.8	0	ICSA Main CR1 Failed
Cu	63	1	nogas	1.362	9.6	16528	11.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.382	12.0	6838	4.2	0	ICSA Main CR1 Failed
As	75	1	nogas	0.230	268.7	92165	0.9	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.933	2.9	22608	1.2	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.043	31.1	580	21.2	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.666	8.0	3800	11.6	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.552	13.9	6405	8.9	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.310	51.7	4631	44.2	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.093	11.5	2480	9.1	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.101	41.0	603	30.1	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.086	38.9	490	26.7	0	ICSA Main CR1 Failed
Na	23	2	He	106055.946	1.0	190350837	0.3	0	
Mg	24	2	He	104492.517	1.2	104703022	1.0	0	
Al	27	2	He	97585.015	0.5	56114292	1.1	0	
K	39	2	He	101456.944	0.3	115828688	0.3	0	
Ca	43	2	He	101679.810	1.6	304360	1.3	0	
Ca	44	2	He	101322.075	0.5	5123310	1.1	0	
V	51	2	He	-0.402	-5.5	8467	1.2	0	ICSA Main CR1 Failed
Cr	52	2	He	0.254	25.0	6845	7.3	0	ICSA Main CR1 Failed
Mn	55	2	He	0.306	11.0	2980	5.5	0	ICSA Main CR1 Failed
Fe	56	2	He	106096.337	1.0	685765750	1.7	0	
Co	59	2	He	0.317	2.4	3260	2.9	0	ICSA Main CR1 Failed
Ni	60	2	He	0.214	4.3	983	2.6	0	ICSA Main CR1 Failed
Cu	63	2	He	0.349	12.1	3544	7.5	0	ICSA Main CR1 Failed
Zn	66	2	He	0.236	23.1	997	8.1	0	ICSA Main CR1 Failed
As	75	2	He	0.126	31.0	564	9.6	0	ICSA Main CR1 Failed
Se	78	2	He	0.518	24.0	164	8.5	0	ICSA Main CR1 Failed
B	11	1	nogas	8.806	31.7	53373	15.2	0	ICSA Main CR1 Failed
Si	28	1	nogas	474.265	35.8	3847105	1.3	0	
Ca	43	1	nogas	104310.650	4.0	3300266	2.0	0	
Ca	44	1	nogas	103300.480	4.3	51330468	3.6	0	
Fe	56	1	nogas	107550.966	5.3	2004844911	1.6	0	
Se	77	1	nogas	1.428	251.6	30466	2.1	0	ICSA Main CR1 Failed
Se	82	1	nogas	0.528	30.4	323	14.6	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2126.847	4.3	9825829	0.5	0	
Sn	118	1	nogas	0.260	32.1	2674	13.0	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.244	17.1	1020	11.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.428	11.2	2684	9.2	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	98962.007	4.2	162138181	1.4	0	
La	139	1	nogas	45.749	45.8	203	24.8	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	1124826	4.46	1267062	88.77	70	125	
Ge	72	1	nogas	2885116	3.81	2907309	99.24	70	125	
In	115	1	nogas	2501944	5.70	2598912	96.27	70	125	
Bi	209	1	nogas	1709165	3.29	1908675	89.55	70	125	
Ge	72	2	He	993030	0.68	1062701	93.44	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\010
Acq Date Time	2019-01-09T12:19:25-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	134.339	4.719	807533	1.39	100	134.3	80	120	ICSB Main CR1 Failed
Na	23	1	nogas	118532.511	6.820	2526710256	1.59	100	118532.5	80	120	
Mg	24	1	nogas	122613.795	5.396	1634701770	0.69	100	122613.8	80	120	
Al	27	1	nogas	102502.331	3.323	1659433842	1.34	100	102502.3	80	120	ICSB Main CR1 Failed
K	39	1	nogas	122704.648	0.819	2121624514	2.67	100	122704.6	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2426.506	2.058	3618911	3.21	100	2426.5	80	120	ICSB Main CR1 Failed
V	51	1	nogas	125.208	1.056	3233593	4.06	100	125.2	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	118.326	0.877	2220112	2.70	100	118.3	80	120	
Mn	55	1	nogas	117.685	2.851	2641384	1.63	100	117.7	80	120	
Co	59	1	nogas	117.674	3.300	2255472	2.15	100	117.7	80	120	
Ni	60	1	nogas	116.147	3.641	501263	1.29	100	116.1	80	120	
Cu	63	1	nogas	120.086	4.333	1189877	0.99	100	120.1	80	120	
Zn	66	1	nogas	122.033	3.622	394815	0.74	100	122.0	80	120	ICSB Main CR1 Failed
As	75	1	nogas	127.088	3.084	653337	1.38	100	127.1	80	120	ICSB Main CR1 Failed
Sr	88	1	nogas	120.909	4.877	2764665	2.05	100	120.9	80	120	
Ag	107	1	nogas	115.725	3.079	1257557	0.43	100	115.7	80	120	
Cd	111	1	nogas	126.019	5.671	281489	1.53	100	126.0	80	120	ICSB Main CR1 Failed
Sb	121	1	nogas	118.026	2.426	1246867	1.07	100	118.0	80	120	
Tl	205	1	nogas	119.595	4.600	1653933	2.63	100	119.6	80	120	
Pb	208	1	nogas	110.160	2.565	2320302	2.56	100	110.2	80	120	
U	238	1	nogas	131.219	6.895	2360269	0.73	100	131.2	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	125.064	5.040	573178	1.32	100	125.1	80	120	ICSB Main CR1 Failed
[Pb]	207	1	nogas	125.754	2.878	507562	3.26	100	125.8	80	120	ICSB Main CR1 Failed
Na	23	2	He	117208.862	0.742	214815683	0.78	100	117208.9	80	120	
Mg	24	2	He	115645.382	1.386	118323305	0.72	100	115645.4	80	120	
Al	27	2	He	99253.852	0.676	58277444	0.49	100	99253.9	80	120	ICSB Main CR1 Failed
K	39	2	He	116247.908	2.182	132683291	2.18	100	116247.9	80	120	ICSB Main CR1 Failed
Ca	43	2	He	115514.238	1.684	353064	1.12	100	115514.2	80	120	ICSB Main CR1 Failed
Ca	44	2	He	113319.150	1.445	5850221	0.85	100	113319.2	80	120	
V	51	2	He	118.031	0.703	818827	0.63	100	118.0	80	120	
Cr	52	2	He	115.304	1.083	900829	1.11	100	115.3	80	120	
Mn	55	2	He	116.417	0.292	649730	0.93	100	116.4	80	120	
Fe	56	2	He	119576.892	1.201	789165082	0.87	100	119576.9	80	120	ICSB Main CR1 Failed
Co	59	2	He	117.105	0.225	1163745	0.73	100	117.1	80	120	
Ni	60	2	He	117.031	1.101	293210	1.09	100	117.0	80	120	
Cu	63	2	He	115.783	1.245	736373	0.47	100	115.8	80	120	
Zn	66	2	He	116.040	1.236	174944	0.70	100	116.0	80	120	
As	75	2	He	119.601	1.031	172355	0.38	100	119.6	80	120	
Se	78	2	He	121.551	0.403	14843	0.89	100	121.6	80	120	ICSB Main CR1 Failed
B	11	1	nogas	680.302	7.357	2345148	2.84	100	680.3	80	120	ICSB Main CR1 Failed
Si	28	1	nogas	6373.412	5.699	9535092	1.27	100	6373.4	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	116091.366	5.017	3634941	1.57	100	116091.4	80	120	
Ca	44	1	nogas	117730.402	3.775	57847422	0.47	100	117730.4	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	121426.550	2.450	2242160850	1.61	100	121426.5	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	178.613	5.035	61270	0.93	100	178.6	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	116.665	3.696	27154	2.03	100	116.7	80	120	
Mo	95	1	nogas	2285.315	2.270	10457615	1.34	100	2285.3	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	122.980	6.015	707169	0.44	100	123.0	80	120	ICSB Main CR1 Failed
Ba	137	1	nogas	123.669	6.088	395102	0.59	100	123.7	80	120	ICSB Main CR1 Failed
Sb	121	2	He	117.432	1.468	667349	0.92	100	117.4	80	120	
La	139	1	nogas	197.302	19.371	627	21.67	100	197.3	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	1062780	4.60	1267062	83.88	70	125	
Ge	72	1	nogas	2856088	3.49	2907309	98.24	70	125	
In	115	1	nogas	2469610	5.41	2598912	95.02	70	125	
Bi	209	1	nogas	1710911	6.06	1908675	89.64	70	125	
Ge	72	2	He	1014018	0.77	1062701	95.42	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	042_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:43:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	114.036	4.533	696997	1.48	100	114.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10189.414	12.322	237554730	3.63	10000	101.9	90	110	
Mg	24	1	nogas	10304.164	11.286	150022228	1.74	10000	103.0	90	110	
Al	27	1	nogas	101.044	5.704	1870795	2.53	100	101.0	90	110	
K	39	1	nogas	10269.691	4.332	208916217	0.85	10000	102.7	90	110	
Ti	47	1	nogas	102.380	6.884	171974	3.06	100	102.4	90	110	
V	51	1	nogas	89.108	10.037	2821268	3.91	100	89.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.816	5.146	2135980	1.96	100	100.8	90	110	
Mn	55	1	nogas	103.455	4.732	2613241	2.10	100	103.5	90	110	
Co	59	1	nogas	98.190	4.956	2116634	2.98	100	98.2	90	110	
Ni	60	1	nogas	97.973	3.065	475468	1.11	100	98.0	90	110	
Cu	63	1	nogas	101.081	3.584	1127411	0.56	100	101.1	90	110	
Zn	66	1	nogas	104.805	4.781	381703	1.25	100	104.8	90	110	
As	75	1	nogas	97.046	5.147	585001	1.18	100	97.0	90	110	
Sr	88	1	nogas	104.607	7.294	2689019	3.42	100	104.6	90	110	
Ag	107	1	nogas	101.046	3.991	1234986	0.66	100	101.0	90	110	
Cd	111	1	nogas	106.128	7.571	267540	1.72	100	106.1	90	110	
Sb	121	1	nogas	100.587	5.199	1194700	1.52	100	100.6	90	110	
Tl	205	1	nogas	103.398	1.154	1608725	3.22	100	103.4	90	110	
Pb	208	1	nogas	104.140	0.492	2193530	0.49	100	104.1	90	110	
U	238	1	nogas	107.701	8.390	2177242	4.08	100	107.7	90	110	
[Pb]	206	1	nogas	105.704	2.641	544946	1.71	100	105.7	90	110	
[Pb]	207	1	nogas	105.825	3.702	479908	0.55	100	105.8	90	110	
Na	23	2	He	9956.132	1.426	20546781	1.33	10000	99.6	90	110	
Mg	24	2	He	9712.781	1.846	11164586	1.13	10000	97.1	90	110	
Al	27	2	He	96.337	2.244	64794	1.45	100	96.3	90	110	
K	39	2	He	10970.318	1.049	12717344	1.03	10000	109.7	90	110	
Ca	43	2	He	10102.690	2.229	34733	1.55	10000	101.0	90	110	
Ca	44	2	He	9873.160	2.093	575347	1.61	10000	98.7	90	110	
V	51	2	He	99.031	0.157	773859	0.96	100	99.0	90	110	
Cr	52	2	He	96.798	1.396	850411	0.51	100	96.8	90	110	
Mn	55	2	He	96.729	2.031	606634	1.14	100	96.7	90	110	
Fe	56	2	He	9835.915	0.887	72941047	0.36	10000	98.4	90	110	
Co	59	2	He	99.402	1.660	1109629	0.90	100	99.4	90	110	
Ni	60	2	He	101.720	0.141	286371	1.09	100	101.7	90	110	
Cu	63	2	He	101.312	0.356	724100	1.28	100	101.3	90	110	
Zn	66	2	He	100.880	1.376	170976	2.32	100	100.9	90	110	
As	75	2	He	99.002	1.566	160347	1.18	100	99.0	90	110	
Se	78	2	He	98.120	0.546	13482	0.90	100	98.1	90	110	
B	11	1	nogas	602.943	4.379	2118314	3.73	500	120.6	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4324.831	9.058	8486721	1.62	5000	86.5	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9931.299	3.097	351072	1.76	10000	99.3	90	110	
Ca	44	1	nogas	9910.558	4.410	5884738	2.10	10000	99.1	90	110	
Fe	56	1	nogas	10275.139	2.089	216599488	3.01	10000	102.8	90	110	
Se	77	1	nogas	69.774	7.117	47435	2.30	100	69.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.338	4.653	26293	0.80	100	100.3	90	110	
Mo	95	1	nogas	101.142	4.236	520624	0.88	100	101.1	90	110	
Sn	118	1	nogas	103.879	6.006	675022	2.76	100	103.9	90	110	
Ba	137	1	nogas	103.791	5.440	374649	0.79	100	103.8	90	110	
Sb	121	2	He	98.245	1.274	627252	0.49	100	98.2	90	110	
Li	7	1	nogas	114.373	5.087	1534766	2.34	100	114.4	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	473.621	4.065	975711	0.35	500	94.7	90	110	
La	139	1	nogas	84.499	32.809	347	18.32	100	84.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	102.565	296.393	30	33.33	100	102.6	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	1080128	3.33	1267062	85.25	70	125	
Ge	72	1	nogas	3213163	3.78	2907309	110.52	70	125	
In	115	1	nogas	2789924	6.01	2598912	107.35	70	125	
Bi	209	1	nogas	1922002	4.21	1908675	100.70	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1139134	0.95	1062701	107.19	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	043_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:45:04-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	0.071	10.2	687	10.5	1	
Na	23	1	nogas	60.189	8.1	1964764	3.6	100	
Mg	24	1	nogas	8.630	20.4	150328	15.5	100	
Al	27	1	nogas	0.378	15.4	39178	3.3	5	
K	39	1	nogas	-40.473	-17.3	9557476	0.7	100	
Ti	47	1	nogas	0.118	49.4	683	14.7	2.5	
V	51	1	nogas	-21.679	-1.6	341228	2.8	2.5	
Cr	52	1	nogas	-1.067	-6.0	46635	2.2	2.5	
Mn	55	1	nogas	0.593	5.4	33774	1.7	2.5	
Co	59	1	nogas	0.062	26.6	2290	15.6	2.5	
Ni	60	1	nogas	0.673	5.3	1740	9.4	2.5	
Cu	63	1	nogas	0.192	20.6	5448	8.1	2	
Zn	66	1	nogas	-0.175	-29.0	2027	8.6	2.5	
As	75	1	nogas	-6.538	-5.9	70195	3.1	2.5	
Sr	88	1	nogas	0.126	9.4	4487	6.7	2.5	
Ag	107	1	nogas	0.065	35.6	927	30.6	2.5	
Cd	111	1	nogas	0.063	20.0	190	19.0	1	
Sb	121	1	nogas	0.836	13.7	10710	12.5	2.5	
Tl	205	1	nogas	0.622	56.6	11222	55.2	1	
Pb	208	1	nogas	0.080	42.2	2203	32.1	2.5	
U	238	1	nogas	0.147	46.3	3527	44.6	2.5	
[Pb]	206	1	nogas	0.084	46.4	657	34.9	2.5	
[Pb]	207	1	nogas	0.054	59.9	450	37.4	2.5	
Na	23	2	He	47.443	2.6	153612	2.5	100	
Mg	24	2	He	6.822	1.7	9206	1.5	100	
Al	27	2	He	-0.131	-83.4	1193	5.1	5	
K	39	2	He	12.682	29.9	230897	1.9	100	
Ca	43	2	He	6.399	138.5	73	41.7	100	
Ca	44	2	He	6.048	52.0	3434	3.7	100	
V	51	2	He	-0.843	-3.4	6446	3.7	2.5	
Cr	52	2	He	-0.023	-170.2	5534	5.4	2.5	
Mn	55	2	He	0.182	10.5	2690	2.8	2.5	
Fe	56	2	He	6.971	1.3	73409	1.8	100	
Co	59	2	He	0.047	19.4	740	15.3	2.5	
Ni	60	2	He	-0.059	-20.0	367	8.3	2.5	
Cu	63	2	He	0.067	27.1	2097	5.5	2	
Zn	66	2	He	-0.028	-277.4	710	17.6	2.5	
As	75	2	He	0.015	275.7	478	14.0	2.5	
Se	78	2	He	0.595	26.0	203	11.9	2	
B	11	1	nogas	12.947	10.3	74925	8.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-659.686	-4.6	3103897	0.8	5	
Ca	43	1	nogas	10.844	39.0	1583	10.0	100	
Ca	44	1	nogas	-242.120	-2.5	316724	0.5	100	
Fe	56	1	nogas	-0.363	-2228.3	3446172	4.6	100	
Se	77	1	nogas	-58.483	-4.4	22494	1.7	2.5	
Se	82	1	nogas	0.255	29.7	293	7.1	2	
Mo	95	1	nogas	0.453	38.7	2597	34.9	2.5	
Sn	118	1	nogas	0.427	42.0	4321	27.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.216	33.1	1100	23.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.817	9.1	5668	7.0	2.5	
P	31	1	nogas	-8.028	-16.2	99108	2.0	10	
La	139	1	nogas	13.044	64.8	133	21.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-281.838	-100.5	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	1227550	3.67	1267062	96.88	70	125	
Ge	72	1	nogas	3270250	0.77	2907309	112.48	70	125	
In	115	1	nogas	2955980	1.82	2598912	113.74	70	125	
Bi	209	1	nogas	2122741	2.17	1908675	111.22	70	125	
Ge	72	2	He	1161151	1.77	1062701	109.26	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\010
Acq Date Time	2019-01-09T13:07:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	115.401	5.714	697291	0.28	100	115.4	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9748.090	3.231	246162714	0.97	10000	97.5	90	110	
Mg	24	1	nogas	9922.999	1.111	156440295	1.56	10000	99.2	90	110	
Al	27	1	nogas	96.785	2.390	1907202	4.49	100	96.8	90	110	
K	39	1	nogas	9964.169	0.882	215750788	1.68	10000	99.6	90	110	
Ti	47	1	nogas	97.503	2.499	174169	1.17	100	97.5	90	110	
V	51	1	nogas	89.851	2.793	3018461	3.30	100	89.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	94.628	3.986	2134715	2.46	100	94.6	90	110	
Mn	55	1	nogas	97.763	4.517	2624143	2.10	100	97.8	90	110	
Co	59	1	nogas	94.824	4.947	2171273	3.22	100	94.8	90	110	
Ni	60	1	nogas	94.845	3.124	488819	0.77	100	94.8	90	110	
Cu	63	1	nogas	98.132	1.167	1163132	1.41	100	98.1	90	110	
Zn	66	1	nogas	101.982	1.480	394925	2.77	100	102.0	90	110	
As	75	1	nogas	97.821	3.175	625674	0.96	100	97.8	90	110	
Sr	88	1	nogas	97.448	4.111	2663067	1.66	100	97.4	90	110	
Ag	107	1	nogas	97.790	1.801	1270007	0.69	100	97.8	90	110	
Cd	111	1	nogas	103.150	2.196	274528	0.53	100	103.1	90	110	
Sb	121	1	nogas	95.370	2.393	1203960	1.11	100	95.4	90	110	
Tl	205	1	nogas	98.103	8.497	1603087	4.55	100	98.1	90	110	
Pb	208	1	nogas	103.720	0.583	2184684	0.58	100	103.7	90	110	
U	238	1	nogas	101.195	2.014	2157655	4.18	100	101.2	90	110	
[Pb]	206	1	nogas	100.283	6.656	543434	2.18	100	100.3	90	110	
[Pb]	207	1	nogas	99.646	5.958	475258	1.86	100	99.6	90	110	
Na	23	2	He	10002.520	2.327	21285952	0.95	10000	100.0	90	110	
Mg	24	2	He	9810.133	2.074	11629044	0.64	10000	98.1	90	110	
Al	27	2	He	97.746	1.439	67785	0.46	100	97.7	90	110	
K	39	2	He	11212.557	1.068	12993381	1.05	10000	112.1	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9964.709	0.861	35337	1.54	10000	99.6	90	110	
Ca	44	2	He	9706.836	1.241	583438	0.55	10000	97.1	90	110	
V	51	2	He	99.208	2.497	799340	0.90	100	99.2	90	110	
Cr	52	2	He	97.119	1.803	879899	0.18	100	97.1	90	110	
Mn	55	2	He	97.121	1.968	628153	0.55	100	97.1	90	110	
Fe	56	2	He	9882.783	2.632	75571897	1.15	10000	98.8	90	110	
Co	59	2	He	99.196	3.713	1141768	2.29	100	99.2	90	110	
Ni	60	2	He	101.444	1.655	294505	0.05	100	101.4	90	110	
Cu	63	2	He	101.428	0.789	747675	1.96	100	101.4	90	110	
Zn	66	2	He	100.795	0.830	176172	1.46	100	100.8	90	110	
As	75	2	He	100.597	1.156	168027	0.53	100	100.6	90	110	
Se	78	2	He	98.479	2.689	13953	1.58	100	98.5	90	110	
B	11	1	nogas	613.525	4.844	2130279	0.66	500	122.7	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4013.635	3.989	8658522	0.45	5000	80.3	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9483.037	2.611	356143	1.63	10000	94.8	90	110	
Ca	44	1	nogas	9387.748	1.671	5947809	1.06	10000	93.9	90	110	
Fe	56	1	nogas	9901.563	4.142	221688755	1.65	10000	99.0	90	110	
Se	77	1	nogas	103.943	7.078	57541	1.21	100	103.9	90	110	
Se	82	1	nogas	97.877	1.789	27264	0.99	100	97.9	90	110	
Mo	95	1	nogas	95.478	1.681	522295	1.06	100	95.5	90	110	
Sn	118	1	nogas	100.592	2.601	689807	3.52	100	100.6	90	110	
Ba	137	1	nogas	100.967	3.830	384401	2.11	100	101.0	90	110	
Sb	121	2	He	96.946	3.047	638243	1.63	100	96.9	90	110	
Li	7	1	nogas	113.464	7.155	1505336	1.34	100	113.5	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	473.432	2.231	1036297	0.56	500	94.7	90	110	
La	139	1	nogas	99.847	23.361	420	19.49	100	99.8	90	110	
Au	197	1	nogas	-149.945	-232.810	23	49.49	100	-149.9	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	1068940	5.34	1267062	84.36	70	125	
Ge	72	1	nogas	3411913	2.50	2907309	117.36	70	125	
In	115	1	nogas	2937401	1.74	2598912	113.02	70	125	
Bi	209	1	nogas	2022928	4.65	1908675	105.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1174886	1.61	1062701	110.56	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\010
Acq Date Time	2019-01-09T13:09:55-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	60.8	460	37.1	1	
Na	23	1	nogas	55.145	4.6	1865889	3.3	100	
Mg	24	1	nogas	4.720	33.0	90975	26.5	100	
Al	27	1	nogas	-0.407	-11.3	25277	3.4	5	
K	39	1	nogas	-12.266	-48.1	10387861	0.4	100	
Ti	47	1	nogas	0.051	13.6	583	2.6	2.5	
V	51	1	nogas	-17.542	-2.4	447718	2.8	2.5	
Cr	52	1	nogas	-0.867	-4.4	52194	0.9	2.5	
Mn	55	1	nogas	0.571	7.1	34108	2.6	2.5	
Co	59	1	nogas	0.040	24.8	1860	11.4	2.5	
Ni	60	1	nogas	0.681	5.0	1830	10.1	2.5	
Cu	63	1	nogas	0.171	10.5	5344	3.6	2	
Zn	66	1	nogas	-0.423	-3.7	1143	4.5	2.5	
As	75	1	nogas	-3.617	-4.9	87318	0.4	2.5	
Sr	88	1	nogas	0.077	13.3	3307	8.2	2.5	
Ag	107	1	nogas	0.038	35.0	610	27.1	2.5	
Cd	111	1	nogas	0.068	8.5	220	4.5	1	
Sb	121	1	nogas	0.380	24.8	5338	21.3	2.5	
Tl	205	1	nogas	0.487	58.3	8703	53.6	1	
Pb	208	1	nogas	0.063	29.5	1850	21.1	2.5	
U	238	1	nogas	0.100	52.6	2407	46.3	2.5	
[Pb]	206	1	nogas	0.059	11.2	507	6.0	2.5	
[Pb]	207	1	nogas	0.045	49.0	400	26.3	2.5	
Na	23	2	He	46.992	1.6	155618	1.2	100	
Mg	24	2	He	3.548	5.8	5474	4.6	100	
Al	27	2	He	91.145	174.4	63740	170.8	5	CCB Main CR1 Failed
K	39	2	He	28.217	4.4	248599	0.6	100	
Ca	43	2	He	-0.562	-494.4	50	20.0	100	
Ca	44	2	He	-5.253	-95.0	2822	10.8	100	
V	51	2	He	-0.663	-2.1	8007	1.2	2.5	
Cr	52	2	He	0.014	400.7	5984	8.6	2.5	
Mn	55	2	He	0.096	15.7	2190	4.4	2.5	
Fe	56	2	He	3.560	7.5	48557	4.4	100	
Co	59	2	He	0.025	39.0	503	23.0	2.5	
Ni	60	2	He	-0.093	-8.5	277	8.3	2.5	
Cu	63	2	He	0.006	176.1	1687	5.0	2	
Zn	66	2	He	-0.183	-26.6	453	18.8	2.5	
As	75	2	He	0.003	52.4	467	0.7	2.5	
Se	78	2	He	0.338	39.8	170	11.2	2	
B	11	1	nogas	5.811	17.2	45832	9.1	10	
Si	28	1	nogas	-744.384	-5.3	3091330	1.5	5	
Ca	43	1	nogas	5.087	148.9	1413	19.7	100	
Ca	44	1	nogas	-273.427	-0.9	307333	0.3	100	
Fe	56	1	nogas	8.173	54.6	3724827	1.9	100	
Se	77	1	nogas	-32.578	-2.5	28459	1.1	2.5	
Se	82	1	nogas	0.152	145.9	273	22.4	2	
Mo	95	1	nogas	0.254	50.1	1597	42.1	2.5	
Sn	118	1	nogas	0.190	56.5	2884	24.1	5	
Ba	137	1	nogas	0.053	71.3	513	27.3	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.272	21.3	2167	17.9	2.5	
P	31	1	nogas	0.597	49.7	118260	1.1	10	
La	139	1	nogas	4.826	167.0	113	22.2	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-70.858	-502.2	27	43.3	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	1206025	3.90	1267062	95.18	70	125	
Ge	72	1	nogas	3358863	0.70	2907309	115.53	70	125	
In	115	1	nogas	3180305	3.04	2598912	122.37	70	125	
Bi	209	1	nogas	2096794	1.86	1908675	109.86	70	125	
Ge	72	2	He	1183602	0.17	1062701	111.38	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\010
Acq Date Time	2019-01-09T13:27:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	118.954	0.880	808760	1.16	100	119.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10478.573	6.206	288430548	2.22	10000	104.8	90	110	
Mg	24	1	nogas	10664.562	7.993	183050646	0.93	10000	106.6	90	110	
Al	27	1	nogas	96.634	2.427	2147620	2.76	100	96.6	90	110	
K	39	1	nogas	10069.903	2.695	245840422	2.07	10000	100.7	90	110	
Ti	47	1	nogas	101.265	1.993	204080	1.02	100	101.3	90	110	
V	51	1	nogas	96.614	1.844	3587143	1.94	100	96.6	90	110	
Cr	52	1	nogas	103.172	2.467	2619149	1.52	100	103.2	90	110	
Mn	55	1	nogas	103.506	3.244	3134559	2.43	100	103.5	90	110	
Co	59	1	nogas	99.518	3.481	2571674	2.55	100	99.5	90	110	
Ni	60	1	nogas	97.982	1.887	570003	1.97	100	98.0	90	110	
Cu	63	1	nogas	100.660	1.096	1345951	0.18	100	100.7	90	110	
Zn	66	1	nogas	118.192	3.068	515724	2.16	100	118.2	90	110	CCV Main CR1-2 Failed
As	75	1	nogas	99.513	1.220	716163	0.65	100	99.5	90	110	
Sr	88	1	nogas	102.674	1.504	3166993	0.61	100	102.7	90	110	
Ag	107	1	nogas	102.707	5.616	1504580	4.65	100	102.7	90	110	
Cd	111	1	nogas	103.886	2.988	315838	0.80	100	103.9	90	110	
Sb	121	1	nogas	103.298	5.338	1471005	4.36	100	103.3	90	110	
Tl	205	1	nogas	97.585	10.636	1938360	6.39	100	97.6	90	110	
Pb	208	1	nogas	130.492	5.378	2748450	5.38	100	130.5	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.547	1.957	2711159	3.76	100	104.5	90	110	
[Pb]	206	1	nogas	100.098	5.183	660147	1.45	100	100.1	90	110	
[Pb]	207	1	nogas	102.584	3.110	595669	1.91	100	102.6	90	110	
Na	23	2	He	10032.393	4.321	23911679	1.06	10000	100.3	90	110	
Mg	24	2	He	9755.214	3.549	12956237	2.46	10000	97.6	90	110	
Al	27	2	He	99.620	7.568	77370	7.14	100	99.6	90	110	
K	39	2	He	12416.727	1.898	14365557	1.87	10000	124.2	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9973.428	8.187	39556	3.30	10000	99.7	90	110	
Ca	44	2	He	9755.502	4.541	656593	0.36	10000	97.6	90	110	
V	51	2	He	99.401	4.645	896921	0.36	100	99.4	90	110	
Cr	52	2	He	98.281	3.932	997340	1.73	100	98.3	90	110	
Mn	55	2	He	99.504	4.579	720703	1.46	100	99.5	90	110	
Fe	56	2	He	10147.913	4.593	86916345	2.05	10000	101.5	90	110	
Co	59	2	He	105.542	2.439	1361943	3.77	100	105.5	90	110	
Ni	60	2	He	103.892	5.605	337635	0.83	100	103.9	90	110	
Cu	63	2	He	102.311	3.050	844808	1.91	100	102.3	90	110	
Zn	66	2	He	111.322	2.760	217894	2.07	100	111.3	90	110	CCV Main CR1-2 Failed
As	75	2	He	100.158	4.478	187344	0.98	100	100.2	90	110	
Se	78	2	He	99.046	4.914	15713	0.08	100	99.0	90	110	
B	11	1	nogas	638.420	0.837	2492662	1.60	500	127.7	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	3649.368	0.428	9294002	1.05	5000	73.0	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9696.631	0.581	410914	1.25	10000	97.0	90	110	
Ca	44	1	nogas	9486.880	1.040	6776510	1.51	10000	94.9	90	110	
Fe	56	1	nogas	10368.868	2.979	261824581	2.19	10000	103.7	90	110	
Se	77	1	nogas	105.377	2.180	65273	0.92	100	105.4	90	110	
Se	82	1	nogas	99.989	0.924	31421	0.77	100	100.0	90	110	
Mo	95	1	nogas	100.455	0.532	620021	0.48	100	100.5	90	110	
Sn	118	1	nogas	103.454	2.035	810274	1.83	100	103.5	90	110	
Ba	137	1	nogas	103.396	3.704	449691	1.24	100	103.4	90	110	
Sb	121	2	He	98.080	4.173	723280	1.13	100	98.1	90	110	
Li	7	1	nogas	118.656	4.407	1767676	4.87	100	118.7	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	471.210	1.065	1164463	0.30	500	94.2	90	110	
La	139	1	nogas	165.537	62.909	733	56.51	100	165.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	138.117	147.062	40	25.00	100	138.1	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	1200357	0.83	1267062	94.74	70	125	
Ge	72	1	nogas	3848848	0.97	2907309	132.39	70	125	ISTD Failed
In	115	1	nogas	3357044	3.66	2598912	129.17	70	125	ISTD Failed
Bi	209	1	nogas	2461000	5.09	1908675	128.94	70	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1317344	4.73	1062701	123.96	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\010
Acq Date Time	2019-01-09T13:29:43-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
Sample QC Pass/Fail	Pass
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	0.044	9.6	533	3.9	1	
Na	23	1	nogas	58.037	11.6	2193242	8.2	100	
Mg	24	1	nogas	6.323	14.3	131520	10.8	100	
Al	27	1	nogas	0.022	689.3	40086	7.7	5	
K	39	1	nogas	-43.646	-58.3	11684609	0.8	100	
Ti	47	1	nogas	0.065	25.2	730	1.4	2.5	
V	51	1	nogas	-16.811	-3.5	557341	2.3	2.5	
Cr	52	1	nogas	-0.799	-13.3	64315	2.5	2.5	
Mn	55	1	nogas	0.409	22.3	35748	3.7	2.5	
Co	59	1	nogas	0.039	17.4	2200	7.5	2.5	
Ni	60	1	nogas	0.711	1.8	2377	3.1	2.5	
Cu	63	1	nogas	0.145	5.1	6048	2.8	2	
Zn	66	1	nogas	0.676	19.4	6345	5.0	2.5	
As	75	1	nogas	-4.039	-12.0	102067	2.8	2.5	
Sr	88	1	nogas	0.151	35.2	6348	27.0	2.5	
Ag	107	1	nogas	0.040	29.4	760	22.1	2.5	
Cd	111	1	nogas	0.044	63.1	160	43.8	1	
Sb	121	1	nogas	0.391	19.9	6535	12.9	2.5	
Tl	205	1	nogas	0.452	53.7	9173	45.1	1	
Pb	208	1	nogas	0.068	18.3	1963	13.4	2.5	
U	238	1	nogas	0.111	51.2	3017	41.1	2.5	
[Pb]	206	1	nogas	0.043	31.1	473	12.2	2.5	
[Pb]	207	1	nogas	0.043	42.0	440	17.2	2.5	
Na	23	2	He	39.000	5.1	163957	0.9	100	
Mg	24	2	He	4.002	8.0	7118	4.2	100	
Al	27	2	He	-0.400	-72.2	1220	17.2	5	
K	39	2	He	41.631	10.3	263885	1.8	100	
Ca	43	2	He	2.813	136.6	73	20.8	100	
Ca	44	2	He	-9.555	-13.1	3034	2.4	100	
V	51	2	He	-0.665	-3.3	9465	0.7	2.5	
Cr	52	2	He	-0.037	-112.1	6538	8.6	2.5	
Mn	55	2	He	0.073	51.0	2410	10.1	2.5	
Fe	56	2	He	4.240	2.9	63706	3.1	100	
Co	59	2	He	0.022	27.2	553	13.3	2.5	
Ni	60	2	He	-0.092	-23.2	330	24.8	2.5	
Cu	63	2	He	0.015	147.3	2070	7.8	2	
Zn	66	2	He	0.702	6.0	2374	2.8	2.5	
As	75	2	He	-0.008	-141.9	531	6.3	2.5	
Se	78	2	He	-0.038	-325.7	139	17.2	2	
B	11	1	nogas	5.658	29.6	49562	11.3	10	
Si	28	1	nogas	-1254.766	-8.2	3005654	0.5	5	
Ca	43	1	nogas	2.372	144.0	1573	7.8	100	

Continuing Calibration Blank (CCB) Report

Ca	44	1	nogas	-370.138	-5.4	301724	0.5	100	
Fe	56	1	nogas	-0.092	-11409.7	4247062	2.1	100	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Se	77	1	nogas	-35.010	-7.1	33528	2.7	2.5	
Se	82	1	nogas	-0.097	-169.4	247	23.1	2	
Mo	95	1	nogas	0.273	37.9	2027	28.0	2.5	
Sn	118	1	nogas	0.262	45.3	3747	18.3	5	
Ba	137	1	nogas	0.094	3.3	757	10.3	2.5	
Sb	121	2	He	0.256	19.2	2444	18.0	2.5	
P	31	1	nogas	4.857	63.2	151450	0.5	10	
La	139	1	nogas	-0.960	-1267.8	100	36.1	2.5	
Au	197	1	nogas	-195.571	-248.6	27	78.1	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	1324835	2.96	1267062	104.56	70	125	
Ge	72	1	nogas	4030436	4.45	2907309	138.63	70	125	ISTD Failed
In	115	1	nogas	3515432	9.73	2598912	135.27	70	125	ISTD Failed
Bi	209	1	nogas	2408875	6.06	1908675	126.21	70	125	ISTD Failed
Ge	72	2	He	1401573	2.23	1062701	131.89	70	125	ISTD Failed

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	070CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:41:25-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	103	5.41
Na	23	1	nogas	773667	0.00
Mg	24	1	nogas	17578	0.05
Al	27	1	nogas	33063	0.01
K	39	1	nogas	11181447	0.00
Ti	47	1	nogas	497	1.53
V	51	1	nogas	617618	0.00
Cr	52	1	nogas	63455	0.01
Mn	55	1	nogas	31330	0.01
Co	59	1	nogas	800	2.46
Ni	60	1	nogas	920	0.52
Cu	63	1	nogas	3517	0.15
Zn	66	1	nogas	1690	0.40
As	75	1	nogas	99889	0.00
Sr	88	1	nogas	1667	1.97
Ag	107	1	nogas	140	28.41
Cd	111	1	nogas	27	214.81
Sb	121	1	nogas	1130	0.28
Tl	205	1	nogas	620	3.83
Pb	208	1	nogas	607	1.55
[Pb]	206	1	nogas	213	9.15
[Pb]	207	1	nogas	143	7.44
Na	23	2	He	80114	0.00
Mg	24	2	He	1777	0.80
Al	27	2	He	1187	1.29
K	39	2	He	259703	0.00
Ca	43	2	He	70	53.99
Ca	44	2	He	2474	0.23
V	51	2	He	10334	0.01
Cr	52	2	He	6325	0.08
Mn	55	2	He	1763	0.27
Fe	56	2	He	27264	0.01
Co	59	2	He	187	14.16
Ni	60	2	He	260	5.92
Cu	63	2	He	1390	0.14
Zn	66	2	He	647	2.22
As	75	2	He	400	0.91
Se	78	2	He	161	13.95
B	11	1	nogas	19227	0.02
Si	28	1	nogas	3029603	0.00
Ca	43	1	nogas	1060	0.31
Ca	44	1	nogas	268025	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	4466502	0.00
Se	77	1	nogas	32129	0.01
Se	82	1	nogas	207	9.46
Mo	95	1	nogas	210	12.00
Sn	118	1	nogas	1420	0.05
Ba	137	1	nogas	343	4.67
Sb	121	2	He	690	1.11
Li	7	1	nogas	107910	0.00
P	31	1	nogas	130239	0.00
La	139	1	nogas	70	35.35

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1282255	3.64
Ge	72	1	nogas	3894467	1.03
In	115	1	nogas	3488791	5.94
Bi	209	1	nogas	2439864	3.82
Ge	72	2	He	1316692	1.83

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	071CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:43:25-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	15363	0.04
Na	23	1	nogas	6712318	0.00
Mg	24	1	nogas	3739705	0.00
Al	27	1	nogas	88164	0.01
K	39	1	nogas	15790873	0.00
Ti	47	1	nogas	4154	0.02
V	51	1	nogas	638111	0.00
Cr	52	1	nogas	109264	0.00
Mn	55	1	nogas	93469	0.00
Co	59	1	nogas	54217	0.00
Ni	60	1	nogas	12628	0.01
Cu	63	1	nogas	29671	0.00
Zn	66	1	nogas	11410	0.04
As	75	1	nogas	105516	0.00
Sr	88	1	nogas	64407	0.00
Ag	107	1	nogas	30704	0.01
Cd	111	1	nogas	6648	0.03
Sb	121	1	nogas	27989	0.00
Tl	205	1	nogas	38426	0.00
Pb	208	1	nogas	52905	0.00
[Pb]	206	1	nogas	13142	0.01
[Pb]	207	1	nogas	11521	0.05
Na	23	2	He	589154	0.00
Mg	24	2	He	264700	0.00
Al	27	2	He	2890	0.25
K	39	2	He	533829	0.00
Ca	43	2	He	843	0.53
Ca	44	2	He	15513	0.03
V	51	2	He	26648	0.01
Cr	52	2	He	25268	0.01
Mn	55	2	He	15887	0.02
Fe	56	2	He	1785924	0.00
Co	59	2	He	26279	0.01
Ni	60	2	He	7068	0.07
Cu	63	2	He	17862	0.03
Zn	66	2	He	4967	0.02
As	75	2	He	4114	0.07
Se	78	2	He	435	3.17
B	11	1	nogas	63398	0.00
Si	28	1	nogas	3161212	0.00

Calibration Standard Report

Ca	43	1	nogas	9779	0.01
Ca	44	1	nogas	395977	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	9914939	0.00
Se	77	1	nogas	31331	0.01
Se	82	1	nogas	823	0.43
Mo	95	1	nogas	12248	0.01
Sn	118	1	nogas	17219	0.01
Ba	137	1	nogas	9646	0.03
Sb	121	2	He	14650	0.02
P	31	1	nogas	149479	0.00
La	139	1	nogas	120	18.37

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1280490	2.45	1282255	99.86	70	125	
Ge	72	1	nogas	3752144	5.37	3894467	96.35	70	125	
In	115	1	nogas	3388629	5.71	3488791	97.13	70	125	
Bi	209	1	nogas	2397681	2.05	2439864	98.27	70	125	
Ge	72	2	He	1333437	1.99	1316692	101.27	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	072CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:45:22-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	37894	0.00
Na	23	1	nogas	14934756	0.00
Mg	24	1	nogas	9272722	0.00
Al	27	1	nogas	156311	0.00
K	39	1	nogas	23486986	0.00
Ti	47	1	nogas	10303	0.03
V	51	1	nogas	844416	0.00
Cr	52	1	nogas	193263	0.00
Mn	55	1	nogas	190277	0.00
Co	59	1	nogas	134298	0.00
Ni	60	1	nogas	31320	0.00
Cu	63	1	nogas	72696	0.00
Zn	66	1	nogas	24764	0.01
As	75	1	nogas	140913	0.00
Sr	88	1	nogas	156751	0.00
Ag	107	1	nogas	76881	0.00
Cd	111	1	nogas	16168	0.02
Sb	121	1	nogas	70637	0.00
Tl	205	1	nogas	94351	0.00
Pb	208	1	nogas	131495	0.00
[Pb]	206	1	nogas	32403	0.01
[Pb]	207	1	nogas	28656	0.02
Na	23	2	He	1305963	0.00
Mg	24	2	He	671604	0.00
Al	27	2	He	5097	0.03
K	39	2	He	970162	0.00
Ca	43	2	He	2110	0.37
Ca	44	2	He	35264	0.01
V	51	2	He	55400	0.00
Cr	52	2	He	56473	0.01
Mn	55	2	He	38721	0.01
Fe	56	2	He	4415974	0.00
Co	59	2	He	67377	0.00
Ni	60	2	He	17479	0.02
Cu	63	2	He	46563	0.00
Zn	66	2	He	10903	0.03
As	75	2	He	9593	0.01
Se	78	2	He	927	1.11
B	11	1	nogas	134753	0.00
Si	28	1	nogas	3328856	0.00

Calibration Standard Report

Ca	43	1	nogas	21803	0.01
Ca	44	1	nogas	589261	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	17879960	0.00
Se	77	1	nogas	36497	0.01
Se	82	1	nogas	1667	0.73
Mo	95	1	nogas	29919	0.00
Sn	118	1	nogas	42115	0.01
Ba	137	1	nogas	23276	0.01
Sb	121	2	He	36161	0.01
P	31	1	nogas	192523	0.00
La	139	1	nogas	163	21.96

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1302121	1.72	1282255	101.55	70	125	
Ge	72	1	nogas	3897282	4.14	3894467	100.07	70	125	
In	115	1	nogas	3645642	3.29	3488791	104.50	70	125	
Bi	209	1	nogas	2499074	4.90	2439864	102.43	70	125	
Ge	72	2	He	1298118	1.38	1316692	98.59	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	073CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:47:20-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	75121	0.00
Na	23	1	nogas	28015169	0.00
Mg	24	1	nogas	17926517	0.00
Al	27	1	nogas	257708	0.00
K	39	1	nogas	33477731	0.00
Ti	47	1	nogas	19724	0.01
V	51	1	nogas	955757	0.00
Cr	52	1	nogas	294214	0.00
Mn	55	1	nogas	325361	0.00
Co	59	1	nogas	249051	0.00
Ni	60	1	nogas	56119	0.00
Cu	63	1	nogas	134733	0.00
Zn	66	1	nogas	44899	0.01
As	75	1	nogas	165910	0.00
Sr	88	1	nogas	295819	0.00
Ag	107	1	nogas	142197	0.00
Cd	111	1	nogas	30129	0.01
Sb	121	1	nogas	132759	0.00
Tl	205	1	nogas	181730	0.00
Pb	208	1	nogas	251043	0.00
[Pb]	206	1	nogas	64284	0.00
[Pb]	207	1	nogas	54679	0.00
Na	23	2	He	2392101	0.00
Mg	24	2	He	1314597	0.00
Al	27	2	He	8879	0.05
K	39	2	He	1653198	0.00
Ca	43	2	He	3567	0.26
Ca	44	2	He	64244	0.00
V	51	2	He	94660	0.00
Cr	52	2	He	101316	0.00
Mn	55	2	He	71371	0.00
Fe	56	2	He	8390843	0.00
Co	59	2	He	125015	0.00
Ni	60	2	He	32977	0.01
Cu	63	2	He	85971	0.00
Zn	66	2	He	20048	0.00
As	75	2	He	17929	0.01
Se	78	2	He	1666	0.28
B	11	1	nogas	249616	0.00
Si	28	1	nogas	3594031	0.00

Calibration Standard Report

Ca	43	1	nogas	40876	0.01
Ca	44	1	nogas	895463	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	28815545	0.00
Se	77	1	nogas	37793	0.01
Se	82	1	nogas	3117	0.10
Mo	95	1	nogas	57433	0.01
Sn	118	1	nogas	78386	0.00
Ba	137	1	nogas	43452	0.00
Sb	121	2	He	68561	0.00
P	31	1	nogas	231234	0.00
La	139	1	nogas	200	2.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1255823	2.61	1282255	97.94	70	125	
Ge	72	1	nogas	3692188	3.69	3894467	94.81	70	125	
In	115	1	nogas	3361504	4.30	3488791	96.35	70	125	
Bi	209	1	nogas	2348629	1.83	2439864	96.26	70	125	
Ge	72	2	He	1264456	1.42	1316692	96.03	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	074CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:49:18-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	759168	0.00
Na	23	1	nogas	274654589	0.00
Mg	24	1	nogas	173502891	0.00
Al	27	1	nogas	2112404	0.00
K	39	1	nogas	237275705	0.00
Ti	47	1	nogas	187025	0.00
V	51	1	nogas	3253842	0.00
Cr	52	1	nogas	2345027	0.00
Mn	55	1	nogas	2874382	0.00
Co	59	1	nogas	2445519	0.00
Ni	60	1	nogas	542523	0.00
Cu	63	1	nogas	1232661	0.00
Zn	66	1	nogas	419829	0.00
As	75	1	nogas	661230	0.00
Sr	88	1	nogas	2830311	0.00
Ag	107	1	nogas	1439921	0.00
Cd	111	1	nogas	305990	0.00
Sb	121	1	nogas	1292481	0.00
Tl	205	1	nogas	1817948	0.00
Pb	208	1	nogas	2516640	0.00
[Pb]	206	1	nogas	621379	0.00
[Pb]	207	1	nogas	540139	0.00
Na	23	2	He	22733625	0.00
Mg	24	2	He	12446128	0.00
Al	27	2	He	71736	0.00
K	39	2	He	13933214	0.00
Ca	43	2	He	37391	0.01
Ca	44	2	He	615611	0.00
V	51	2	He	841917	0.00
Cr	52	2	He	920904	0.00
Mn	55	2	He	663859	0.00
Fe	56	2	He	81910415	0.00
Co	59	2	He	1215962	0.00
Ni	60	2	He	314310	0.00
Cu	63	2	He	794866	0.00
Zn	66	2	He	186831	0.00
As	75	2	He	174293	0.00
Se	78	2	He	14471	0.02
B	11	1	nogas	2374733	0.00
Si	28	1	nogas	8895870	0.00

Calibration Standard Report

Ca	43	1	nogas	397002	0.00
Ca	44	1	nogas	6438344	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	247743931	0.00
Se	77	1	nogas	53994	0.00
Se	82	1	nogas	29044	0.00
Mo	95	1	nogas	548550	0.00
Sn	118	1	nogas	758165	0.00
Ba	137	1	nogas	423808	0.00
Sb	121	2	He	665673	0.00
P	31	1	nogas	1094218	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	1149486	4.16	1282255	89.65	70	125	
Ge	72	1	nogas	3613377	5.09	3894467	92.78	70	125	
In	115	1	nogas	3127839	6.94	3488791	89.65	70	125	
Bi	209	1	nogas	2331005	2.01	2439864	95.54	70	125	
Ge	72	2	He	1223834	0.67	1316692	92.95	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	075CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:51:19-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1495626	0.00
Na	23	1	nogas	505797145	0.00
Mg	24	1	nogas	329468066	0.00
Al	27	1	nogas	3851404	0.00
K	39	1	nogas	448562160	0.00
Ti	47	1	nogas	369920	0.00
V	51	1	nogas	5759199	0.00
Cr	52	1	nogas	4493024	0.00
Mn	55	1	nogas	5522972	0.00
Co	59	1	nogas	4636870	0.00
Ni	60	1	nogas	1029513	0.00
Cu	63	1	nogas	2421020	0.00
Zn	66	1	nogas	815278	0.00
As	75	1	nogas	1210987	0.00
Sr	88	1	nogas	5672429	0.00
Ag	107	1	nogas	2740583	0.00
Cd	111	1	nogas	587524	0.00
Sb	121	1	nogas	2615018	0.00
Tl	205	1	nogas	3570214	0.00
Pb	208	1	nogas	4916479	0.00
[Pb]	206	1	nogas	1216365	0.00
[Pb]	207	1	nogas	1071283	0.00
Na	23	2	He	42820309	0.00
Mg	24	2	He	23846852	0.00
Al	27	2	He	135645	0.00
K	39	2	He	26056640	0.00
Ca	43	2	He	71038	0.00
Ca	44	2	He	1172323	0.00
V	51	2	He	1651182	0.00
Cr	52	2	He	1824950	0.00
Mn	55	2	He	1301799	0.00
Fe	56	2	He	158366634	0.00
Co	59	2	He	2454301	0.00
Ni	60	2	He	604889	0.00
Cu	63	2	He	1552361	0.00
Zn	66	2	He	357024	0.00
As	75	2	He	344225	0.00
Se	78	2	He	28791	0.01
B	11	1	nogas	4576882	0.00
Si	28	1	nogas	14440967	0.00

Calibration Standard Report

Ca	43	1	nogas	747072	0.00
Ca	44	1	nogas	12181591	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	474237111	0.00
Se	77	1	nogas	82125	0.00
Se	82	1	nogas	57505	0.01
Mo	95	1	nogas	1149009	0.00
Sn	118	1	nogas	1528739	0.00
Ba	137	1	nogas	831971	0.00
Sb	121	2	He	1362318	0.00
P	31	1	nogas	2042379	0.00
La	139	1	nogas	707	0.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1007705	5.62	1282255	78.59	70	125	
Ge	72	1	nogas	3521869	2.85	3894467	90.43	70	125	
In	115	1	nogas	2994726	4.34	3488791	85.84	70	125	
Bi	209	1	nogas	2142229	4.73	2439864	87.80	70	125	
Ge	72	2	He	1192351	0.55	1316692	90.56	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	077_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:55:17-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	96.859	9.309	711637	1.36	100	96.9	90	110	
Na	23	1	nogas	10152.861	9.545	251025114	3.10	10000	101.5	90	110	
Mg	24	1	nogas	10033.193	8.081	160360841	2.86	10000	100.3	90	110	
Al	27	1	nogas	107.183	14.222	2001698	8.69	100	107.2	90	110	
K	39	1	nogas	10238.644	4.624	224473538	1.69	10000	102.4	90	110	
Ti	47	1	nogas	98.345	3.344	173434	2.92	100	98.3	90	110	
V	51	1	nogas	94.739	4.675	2896547	7.00	100	94.7	90	110	
Cr	52	1	nogas	99.826	6.816	2179396	11.21	100	99.8	90	110	
Mn	55	1	nogas	99.012	3.664	2637741	8.67	100	99.0	90	110	
Co	59	1	nogas	99.751	2.087	2225468	4.21	100	99.8	90	110	
Ni	60	1	nogas	101.535	6.643	502752	1.23	100	101.5	90	110	
Cu	63	1	nogas	97.487	9.388	1127647	9.77	100	97.5	90	110	
Zn	66	1	nogas	101.515	5.170	396184	1.92	100	101.5	90	110	
As	75	1	nogas	99.172	6.098	617398	1.01	100	99.2	90	110	
Sr	88	1	nogas	98.681	2.035	2660645	4.10	100	98.7	90	110	
Ag	107	1	nogas	96.579	7.031	1273014	10.54	100	96.6	90	110	
Cd	111	1	nogas	100.428	6.903	280463	0.98	100	100.4	90	110	
Sb	121	1	nogas	100.720	7.370	1249819	6.84	100	100.7	90	110	
Tl	205	1	nogas	102.259	6.164	1714080	7.24	100	102.3	90	110	
Pb	208	1	nogas	96.300	2.401	2378935	2.40	100	96.3	90	110	
U	238	1	nogas	98.673	6.435	2164791	6.05	100	98.7	90	110	
[Pb]	206	1	nogas	105.349	5.044	601325	1.35	100	105.3	90	110	
[Pb]	207	1	nogas	102.275	7.021	512546	3.06	100	102.3	90	110	
Na	23	2	He	10310.670	0.923	21519081	0.62	10000	103.1	90	110	
Mg	24	2	He	10158.446	1.469	11751535	1.17	10000	101.6	90	110	
Al	27	2	He	101.824	1.931	67725	1.69	100	101.8	90	110	
K	39	2	He	9913.009	1.443	13201993	1.41	10000	99.1	90	110	
Ca	43	2	He	10229.973	0.838	35331	0.99	10000	102.3	90	110	
Ca	44	2	He	10266.902	2.246	585410	2.50	10000	102.7	90	110	
V	51	2	He	98.683	0.356	789670	0.12	100	98.7	90	110	
Cr	52	2	He	98.043	0.715	864375	0.41	100	98.0	90	110	
Mn	55	2	He	101.359	0.960	637717	1.05	100	101.4	90	110	
Fe	56	2	He	10143.624	0.847	77789276	0.91	10000	101.4	90	110	
Co	59	2	He	98.867	0.674	1164871	0.43	100	98.9	90	110	
Ni	60	2	He	100.497	0.979	294966	1.26	100	100.5	90	110	
Cu	63	2	He	98.663	1.036	740911	1.04	100	98.7	90	110	
Zn	66	2	He	101.537	1.944	176398	2.17	100	101.5	90	110	
As	75	2	He	102.038	0.955	169466	1.27	100	102.0	90	110	
Se	78	2	He	102.099	0.325	14190	0.63	100	102.1	90	110	
B	11	1	nogas	488.438	13.148	2210271	9.26	500	97.7	90	110	
Si	28	1	nogas	5190.878	9.720	8429948	0.97	5000	103.8	90	110	
Ca	43	1	nogas	10393.633	8.337	373234	2.94	10000	103.9	90	110	
Ca	44	1	nogas	10432.843	8.459	6182452	2.46	10000	104.3	90	110	
Fe	56	1	nogas	10152.590	6.151	232260947	2.58	10000	101.5	90	110	
Se	77	1	nogas	86.771	14.049	49313	0.71	100	86.8	90	110	ICV Main CR1 Failed
Se	82	1	nogas	104.293	5.996	28596	1.69	100	104.3	90	110	
Mo	95	1	nogas	96.736	4.926	523295	0.97	100	96.7	90	110	
Sn	118	1	nogas	100.537	7.398	723774	1.06	100	100.5	90	110	
Ba	137	1	nogas	101.147	6.961	398419	2.11	100	101.1	90	110	
Sb	121	2	He	97.838	0.732	638380	1.05	100	97.8	90	110	
Li	7	1	nogas	93.710	8.589	1468418	6.34	100	93.7	90	110	
P	31	1	nogas	501.983	6.629	1032717	0.75	500	100.4	90	110	
La	139	1	nogas	158.873	26.130	633	18.16	100	158.9	90	110	ICV Main CR1 Failed
Au	197	1	nogas	2652.142	19.111	77	7.53	100	2652.1	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	1015418	7.69	1282255	79.19	70	125	
Ge	72	1	nogas	3367443	6.04	3894467	86.47	70	125	
In	115	1	nogas	2855722	8.15	3488791	81.85	70	125	
Bi	209	1	nogas	2036073	3.85	2439864	83.45	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	1152790	0.32	1316692	87.55	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	078LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:57:20-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	4.637	2.787	35273	2.17	5	92.7	70	130	
Na	23	1	nogas	505.524	9.864	12468224	1.77	500	101.1	70	130	
Mg	24	1	nogas	519.324	9.409	7887976	1.37	500	103.9	70	130	
Al	27	1	nogas	5.749	9.770	130986	2.08	5	115.0	70	130	
K	39	1	nogas	533.888	13.780	20268785	0.70	500	106.8	70	130	
Ti	47	1	nogas	4.922	2.697	8849	4.74	5	98.4	70	130	
V	51	1	nogas	1.585	61.775	557310	3.09	5	31.7	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.777	8.186	151883	2.84	5	95.5	70	130	
Mn	55	1	nogas	5.237	10.406	160042	1.28	5	104.7	70	130	
Co	59	1	nogas	5.100	7.150	111120	0.62	5	102.0	70	130	
Ni	60	1	nogas	4.808	9.389	25849	1.18	5	96.2	70	130	
Cu	63	1	nogas	5.324	6.918	62621	2.79	5	106.5	70	130	
Zn	66	1	nogas	5.289	13.318	21920	4.68	5	105.8	70	130	
As	75	1	nogas	4.095	36.104	108597	0.41	5	81.9	70	130	
Sr	88	1	nogas	5.105	7.421	134976	0.53	5	102.1	70	130	
Ag	107	1	nogas	5.101	7.835	65278	1.12	5	102.0	70	130	
Cd	111	1	nogas	5.033	11.920	13902	2.49	5	100.7	70	130	
Sb	121	1	nogas	5.103	6.585	62446	1.53	5	102.1	70	130	
Tl	205	1	nogas	5.297	6.030	88206	2.12	5	105.9	70	130	
Pb	208	1	nogas	4.619	3.510	114675	3.49	5	92.4	70	130	
U	238	1	nogas	5.130	6.301	111347	1.93	5	102.6	70	130	
[Pb]	206	1	nogas	4.979	3.668	28312	3.27	5	99.6	70	130	
[Pb]	207	1	nogas	4.972	2.924	24803	3.62	5	99.4	70	130	
Na	23	2	He	489.716	0.873	1114820	0.52	500	97.9	70	130	
Mg	24	2	He	492.510	0.258	584860	0.88	500	98.5	70	130	
Al	27	2	He	4.357	10.341	4341	7.20	5	87.1	70	130	
K	39	2	He	461.404	0.884	862106	0.62	500	92.3	70	130	
Ca	43	2	He	537.525	3.397	1960	3.99	500	107.5	70	130	
Ca	44	2	He	492.246	1.486	30846	1.09	500	98.4	70	130	
V	51	2	He	4.862	2.004	46952	1.65	5	97.2	70	130	
Cr	52	2	He	4.899	4.342	49600	3.14	5	98.0	70	130	
Mn	55	2	He	4.858	0.821	32799	1.24	5	97.2	70	130	
Fe	56	2	He	491.641	0.821	3883242	0.24	500	98.3	70	130	
Co	59	2	He	4.824	0.559	58356	1.27	5	96.5	70	130	
Ni	60	2	He	4.854	1.093	15433	1.39	5	97.1	70	130	
Cu	63	2	He	4.923	0.504	39777	0.71	5	98.5	70	130	
Zn	66	2	He	4.851	4.740	9756	4.19	5	97.0	70	130	
As	75	2	He	4.993	1.328	8831	1.87	5	99.9	70	130	
Se	78	2	He	4.876	4.485	785	4.31	5	97.5	70	130	
B	11	1	nogas	29.754	2.348	153794	1.41	25	119.0	70	130	
Si	28	1	nogas	688.863	34.573	3292077	0.51	25	2755.5	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	533.695	9.045	19487	1.26	500	106.7	70	130	
Ca	44	1	nogas	544.802	13.509	527276	0.45	500	109.0	70	130	
Fe	56	1	nogas	478.369	10.723	14208240	0.58	500	95.7	70	130	
Se	77	1	nogas	2.794	141.340	27681	3.86	5	55.9	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.591	12.344	1653	5.97	5	111.8	70	130	
Mo	95	1	nogas	5.197	6.846	27508	1.93	5	103.9	70	130	
Sn	118	1	nogas	5.093	13.952	37260	2.39	5	101.9	70	130	
Ba	137	1	nogas	5.067	9.951	20002	2.14	5	101.3	70	130	
Sb	121	2	He	4.920	0.622	33456	0.33	5	98.4	70	130	
Li	7	1	nogas	5.164	1.530	166458	0.41	5	103.3	70	130	
P	31	1	nogas	28.125	24.133	159392	0.20	25	112.5	70	130	
La	139	1	nogas	27.555	33.627	157	24.17	5	551.1	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	667.093	231.422	47	53.93	5	13341.9	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	1043969	1.06	1282255	81.42	70	125	
Ge	72	1	nogas	3278794	7.23	3894467	84.19	70	125	
In	115	1	nogas	2832818	10.46	3488791	81.20	70	125	
Bi	209	1	nogas	2015193	4.83	2439864	82.59	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	1180261	0.71	1316692	89.64	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	079SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:59:19-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	070CALB.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	1.789	1.789	3.98	15253	0.01	2000	
Na	23	1	nogas	193.643	193.643	6.33	5689034	0.00	200000	
Mg	24	1	nogas	203.279	203.279	5.28	3410143	0.01	200000	
Al	27	1	nogas	2.515	2.515	16.24	78317	0.00	2000	
K	39	1	nogas	224.965	224.965	12.80	15024903	0.00	200000	
Ti	47	1	nogas	2.024	2.024	4.37	4171	0.05	2000	
V	51	1	nogas	-2.063	-2.063	-27.23	503897	0.00	2000	
Cr	52	1	nogas	1.766	1.766	6.41	96450	0.00	2000	
Mn	55	1	nogas	2.090	2.090	5.31	85745	0.00	2000	
Co	59	1	nogas	2.079	2.079	4.03	49156	0.00	2000	
Ni	60	1	nogas	1.638	1.638	5.12	11494	0.01	2000	
Cu	63	1	nogas	2.013	2.013	5.14	27431	0.01	2000	
Zn	66	1	nogas	1.741	1.741	4.70	9232	0.02	2000	
As	75	1	nogas	-0.532	-0.532	-13.27	91146	0.00	2000	
Sr	88	1	nogas	2.075	2.075	2.97	59934	0.00	2000	
Ag	107	1	nogas	2.046	2.046	5.92	28237	0.01	2000	
Cd	111	1	nogas	1.824	1.824	4.09	5871	0.03	2000	
Sb	121	1	nogas	2.008	2.008	4.48	27031	0.01	2000	
Tl	205	1	nogas	1.915	1.915	4.82	37627	0.01	2000	
Pb	208	1	nogas	1.990	1.990	0.92	49748	0.00	2000	
U	238	1	nogas	1.866	1.866	5.38	47382	0.00	2000	
[Pb]	206	1	nogas	1.778	1.778	3.01	11931	0.01	2000	
[Pb]	207	1	nogas	1.895	1.895	6.06	11111	0.02	2000	
Na	23	2	He	190.265	190.265	1.98	496008	0.04	200000	
Mg	24	2	He	197.385	197.385	2.35	244699	0.08	200000	
Al	27	2	He	1.834	1.834	36.20	2764	0.07	2000	
K	39	2	He	185.182	185.182	1.14	501474	0.04	200000	
Ca	43	2	He	191.245	191.245	10.40	767	24.94	200000	
Ca	44	2	He	197.796	197.796	3.29	14269	1.39	200000	
V	51	2	He	1.888	1.888	2.45	23728	0.01	2000	
Cr	52	2	He	1.978	1.978	3.46	24340	0.01	2000	
Mn	55	2	He	1.948	1.948	1.46	14659	0.01	2000	
Fe	56	2	He	202.338	202.338	0.80	1676715	0.01	200000	
Co	59	2	He	1.913	1.913	2.86	24163	0.01	2000	
Ni	60	2	He	1.742	1.742	4.43	6351	0.03	2000	
Cu	63	2	He	1.867	1.867	5.15	16995	0.01	2000	
Zn	66	2	He	1.671	1.671	8.51	4304	0.04	2000	
As	75	2	He	1.987	1.987	2.18	3878	0.05	2000	
Se	78	2	He	2.274	2.274	2.60	434	0.52	2000	
B	11	1	nogas	12.463	12.463	4.02	82022	0.02	2000	
Si	28	1	nogas	374.187	374.187	38.07	3172086	0.01	2000	
Ca	43	1	nogas	206.077	206.077	4.86	8685	2.37	200000	
Ca	44	1	nogas	198.527	198.527	11.08	360481	0.06	200000	
Fe	56	1	nogas	180.984	180.984	8.60	8289914	0.00	200000	

Sample Report

Se	77	1	nogas	-9.708	-9.708	-22.03	26476	-0.04	2000	
Se	82	1	nogas	2.301	2.301	9.46	843	0.27	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	2.001	2.001	4.34	11504	0.02	2000	
Sn	118	1	nogas	1.850	1.850	3.11	16605	0.01	2000	
Ba	137	1	nogas	1.804	1.804	6.72	8469	0.02	2000	
Sb	121	2	He	1.859	1.859	1.58	13546	0.01	2000	
La	139	1	nogas	11.529	11.529	31.39	113	10.17	2000	
Au	197	1	nogas	-289.283	-289.283	-416.47	37	-788.95	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	1165078	2.67	1282255	90.86	70	125	
Ge	72	1	nogas	3517994	3.91	3894467	90.33	70	125	
In	115	1	nogas	3269289	3.52	3488791	93.71	70	125	
Bi	209	1	nogas	2352887	5.33	2439864	96.44	70	125	
Ge	72	2	He	1227185	0.36	1316692	93.20	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	080_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:01:17-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.007	59.0	143	21.3	1	
Na	23	1	nogas	-4.661	-19.5	557341	2.9	100	
Mg	24	1	nogas	1.156	38.1	33903	19.3	100	
Al	27	1	nogas	0.549	9.8	40380	1.5	5	
K	39	1	nogas	7.334	164.0	10231598	0.7	100	
Ti	47	1	nogas	0.002	1699.3	450	8.9	2.5	
V	51	1	nogas	-0.843	-21.4	534550	2.8	2.5	
Cr	52	1	nogas	-0.124	-14.9	54413	2.1	2.5	
Mn	55	1	nogas	0.125	25.6	31657	0.9	2.5	
Co	59	1	nogas	0.006	86.9	867	16.2	2.5	
Ni	60	1	nogas	-0.437	-5.1	797	13.4	2.5	
Cu	63	1	nogas	0.003	1128.3	3194	8.9	1	
Zn	66	1	nogas	0.121	94.7	2640	15.7	2.5	
As	75	1	nogas	-0.468	-106.7	91230	1.3	2.5	
Sr	88	1	nogas	0.004	78.6	1610	6.2	2.5	
Ag	107	1	nogas	0.007	51.1	227	24.3	2.5	
Cd	111	1	nogas	0.009	53.1	53	28.6	1	
Sb	121	1	nogas	-0.002	-221.2	993	7.3	2.5	
Tl	205	1	nogas	0.048	51.0	1450	32.5	1	
Pb	208	1	nogas	0.002	38.5	667	3.5	2.5	
U	238	1	nogas	0.009	49.0	337	34.3	2.5	
[Pb]	206	1	nogas	-0.001	-277.9	187	12.4	2.5	
[Pb]	207	1	nogas	0.000	2191.5	133	34.6	2.5	
Na	23	2	He	-7.571	-2.6	56383	1.1	100	
Mg	24	2	He	0.421	33.4	2117	8.1	100	
Al	27	2	He	-0.325	-40.2	1233	7.7	5	
K	39	2	He	-20.431	-18.8	233029	2.2	100	
Ca	43	2	He	0.946	445.6	67	22.9	100	
Ca	44	2	He	0.812	332.3	2294	6.4	100	
V	51	2	He	0.143	23.0	8764	2.7	2.5	
Cr	52	2	He	0.028	61.1	5994	2.9	2.5	
Mn	55	2	He	0.074	11.1	2080	2.2	2.5	
Fe	56	2	He	0.347	26.9	27504	2.1	100	
Co	59	2	He	0.001	201.4	187	18.8	2.5	
Ni	60	2	He	-0.228	-9.1	210	29.7	2.5	
Cu	63	2	He	-0.088	-12.7	1367	6.8	1	
Zn	66	2	He	-0.138	-17.0	953	4.2	2.5	
As	75	2	He	0.033	90.3	419	11.7	2.5	
Se	78	2	He	0.425	20.7	158	8.3	1	
B	11	1	nogas	2.857	9.9	30942	3.4	10	
Si	28	1	nogas	228.138	17.2	2996186	0.5	5	ICB Main CR1 Failed
Ca	43	1	nogas	5.805	94.5	1170	15.6	100	
Ca	44	1	nogas	-6.297	-113.0	237660	0.1	100	
Fe	56	1	nogas	-18.723	-20.9	3583504	1.7	100	
Se	77	1	nogas	2.984	142.6	29718	4.0	2.5	ICB Main CR1 Failed
Se	82	1	nogas	0.130	16.9	223	2.6	1	
Mo	95	1	nogas	0.036	19.2	393	10.3	2.5	
Sn	118	1	nogas	0.024	79.8	1497	8.8	5	

Initial Calibration Blank (ICB) Report

Ba	137	1	nogas	0.019	63.2	400	10.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	-0.014	-18.3	533	2.9	2.5	
P	31	1	nogas	-2.383	-69.1	112727	0.9	10	
La	139	1	nogas	24.307	31.6	163	18.7	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-985.322	-71.2	23	49.5	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	1158152	0.95	1282255	90.32	70	125	
Ge	72	1	nogas	3508500	1.90	3894467	90.09	70	125	
In	115	1	nogas	3191457	3.04	3488791	91.48	70	125	
Bi	209	1	nogas	2230516	2.12	2439864	91.42	70	125	
Ge	72	2	He	1194902	0.59	1316692	90.75	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\010
Acq Date Time	2019-01-09T14:21:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	101.090	2.623	715181	3.58	100	101.1	90	110	
Na	23	1	nogas	10303.886	1.299	250718431	1.17	10000	103.0	90	110	
Mg	24	1	nogas	10135.441	2.181	159304391	1.97	10000	101.4	90	110	
Al	27	1	nogas	105.346	4.476	1949504	3.00	100	105.3	90	110	
K	39	1	nogas	10289.458	4.929	222519988	1.16	10000	102.9	90	110	
Ti	47	1	nogas	100.105	1.810	174214	2.25	100	100.1	90	110	
V	51	1	nogas	98.785	3.455	2953594	1.20	100	98.8	90	110	
Cr	52	1	nogas	102.484	4.033	2199245	0.10	100	102.5	90	110	
Mn	55	1	nogas	102.253	3.391	2680880	1.64	100	102.3	90	110	
Co	59	1	nogas	102.271	4.686	2248839	1.14	100	102.3	90	110	
Ni	60	1	nogas	101.268	4.460	495176	0.41	100	101.3	90	110	
Cu	63	1	nogas	101.927	2.745	1162509	1.54	100	101.9	90	110	
Zn	66	1	nogas	103.135	0.810	397570	3.25	100	103.1	90	110	
As	75	1	nogas	98.546	3.922	606261	1.25	100	98.5	90	110	
Sr	88	1	nogas	100.617	2.521	2675525	2.08	100	100.6	90	110	
Ag	107	1	nogas	101.009	4.205	1310223	0.26	100	101.0	90	110	
Cd	111	1	nogas	99.349	3.169	289080	1.20	100	99.3	90	110	
Sb	121	1	nogas	98.609	0.928	1208095	3.59	100	98.6	90	110	
Tl	205	1	nogas	103.622	7.146	1761948	3.69	100	103.6	90	110	
Pb	208	1	nogas	93.278	1.727	2304307	1.73	100	93.3	90	110	
U	238	1	nogas	105.670	5.306	2354076	1.78	100	105.7	90	110	
[Pb]	206	1	nogas	100.401	5.859	582152	1.73	100	100.4	90	110	
[Pb]	207	1	nogas	96.761	5.948	492825	1.86	100	96.8	90	110	
Na	23	2	He	10426.397	1.627	21268615	2.12	10000	104.3	90	110	
Mg	24	2	He	10430.643	1.955	11793301	1.89	10000	104.3	90	110	
Al	27	2	He	104.409	0.871	67841	1.41	100	104.4	90	110	
K	39	2	He	9704.498	0.841	12929764	0.82	10000	97.0	90	110	
Ca	43	2	He	10261.536	0.167	34639	1.50	10000	102.6	90	110	
Ca	44	2	He	10459.499	0.845	582838	1.26	10000	104.6	90	110	
V	51	2	He	101.295	2.454	791945	1.66	100	101.3	90	110	
Cr	52	2	He	100.982	0.073	870035	1.54	100	101.0	90	110	
Mn	55	2	He	104.221	1.107	640856	1.58	100	104.2	90	110	
Fe	56	2	He	10383.202	0.799	77829169	1.81	10000	103.8	90	110	
Co	59	2	He	100.562	0.335	1158066	1.25	100	100.6	90	110	
Ni	60	2	He	102.757	2.951	294728	2.65	100	102.8	90	110	
Cu	63	2	He	100.511	2.932	737696	3.18	100	100.5	90	110	
Zn	66	2	He	104.234	1.139	176963	2.07	100	104.2	90	110	
As	75	2	He	100.957	1.318	163870	1.12	100	101.0	90	110	
Se	78	2	He	98.599	1.266	13398	2.43	100	98.6	90	110	
B	11	1	nogas	479.938	4.039	2124448	2.74	500	96.0	90	110	
Si	28	1	nogas	5256.349	5.694	8398987	0.87	5000	105.1	90	110	
Ca	43	1	nogas	10442.212	3.109	370703	2.03	10000	104.4	90	110	
Ca	44	1	nogas	10289.247	4.074	6029071	0.30	10000	102.9	90	110	
Fe	56	1	nogas	10191.741	3.825	230182797	1.30	10000	101.9	90	110	
Se	77	1	nogas	85.764	9.980	48445	1.03	100	85.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.119	3.074	26580	1.44	100	98.1	90	110	
Mo	95	1	nogas	97.078	1.400	518677	2.64	100	97.1	90	110	
Sn	118	1	nogas	94.387	2.113	708537	3.00	100	94.4	90	110	
Ba	137	1	nogas	96.555	3.859	396160	0.48	100	96.6	90	110	
Sb	121	2	He	100.696	1.924	642170	2.46	100	100.7	90	110	
Li	7	1	nogas	101.273	5.917	1543498	5.75	100	101.3	90	110	
P	31	1	nogas	485.540	4.019	990029	0.91	500	97.1	90	110	
La	139	1	nogas	143.002	25.792	603	22.50	100	143.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1306.757	-57.928	17	69.28	100	-1306.8	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	1072050	2.59	1282255	83.61	70	125	
Ge	72	1	nogas	3320630	4.05	3894467	85.27	70	125	
In	115	1	nogas	2966861	4.17	3488791	85.04	70	125	
Bi	209	1	nogas	2069010	4.22	2439864	84.80	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1126760	1.49	1316692	85.58	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\010
Acq Date Time	2019-01-09T14:23:03-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	31.1	497	23.9	1	
Na	23	1	nogas	23.069	9.7	1211946	2.1	100	
Mg	24	1	nogas	5.635	21.8	103037	17.1	100	
Al	27	1	nogas	-0.140	-42.5	25418	3.1	5	
K	39	1	nogas	6.253	201.2	9577927	0.9	100	
Ti	47	1	nogas	0.089	62.4	573	17.2	2.5	
V	51	1	nogas	-5.604	-4.0	385461	2.7	2.5	
Cr	52	1	nogas	-0.267	-38.7	48066	3.6	2.5	
Mn	55	1	nogas	0.179	27.6	31086	2.8	2.5	
Co	59	1	nogas	0.062	31.0	2017	18.8	2.5	
Ni	60	1	nogas	-0.288	-3.7	1467	4.2	2.5	
Cu	63	1	nogas	0.072	21.4	3777	2.8	2	
Zn	66	1	nogas	0.523	6.8	4010	2.2	2.5	
As	75	1	nogas	-2.402	-2.9	75556	2.4	2.5	
Sr	88	1	nogas	0.057	26.4	2920	11.9	2.5	
Ag	107	1	nogas	0.042	9.8	657	6.2	2.5	
Cd	111	1	nogas	0.041	35.6	143	34.4	1	
Sb	121	1	nogas	0.291	24.5	4481	17.5	2.5	
Tl	205	1	nogas	0.643	65.8	11929	65.6	1	
Pb	208	1	nogas	0.052	22.6	1897	15.4	2.5	
U	238	1	nogas	0.152	53.7	3617	55.1	2.5	
[Pb]	206	1	nogas	0.050	19.1	487	12.4	2.5	
[Pb]	207	1	nogas	0.049	24.1	383	17.0	2.5	
Na	23	2	He	15.129	8.1	100948	3.1	100	
Mg	24	2	He	3.640	3.1	5728	3.2	100	
Al	27	2	He	-0.961	-4.5	770	2.2	5	
K	39	2	He	-21.439	-7.2	231713	0.9	100	
Ca	43	2	He	3.717	388.8	73	67.3	100	
Ca	44	2	He	4.022	22.3	2380	3.4	100	
V	51	2	He	-0.014	-39.2	7159	1.9	2.5	
Cr	52	2	He	0.053	127.3	5954	8.7	2.5	
Mn	55	2	He	0.061	23.7	1913	4.4	2.5	
Fe	56	2	He	4.688	5.8	59429	4.6	100	
Co	59	2	He	0.029	14.7	497	10.1	2.5	
Ni	60	2	He	-0.179	-9.2	343	13.1	2.5	
Cu	63	2	He	-0.043	-55.1	1650	12.1	2	
Zn	66	2	He	0.238	46.2	1560	13.5	2.5	
As	75	2	He	0.065	34.2	454	6.9	2.5	
Se	78	2	He	0.563	39.9	171	19.3	2	
B	11	1	nogas	7.588	18.0	53215	10.5	10	
Si	28	1	nogas	405.209	19.5	3005349	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	3.177	125.3	1007	12.6	100	
Ca	44	1	nogas	-18.759	-34.9	216030	0.7	100	
Fe	56	1	nogas	-14.070	-62.9	3463700	4.1	100	
Se	77	1	nogas	-8.582	-25.1	25064	2.9	2.5	
Se	82	1	nogas	0.119	41.6	207	5.6	2	
Mo	95	1	nogas	0.401	50.7	2287	45.2	2.5	
Sn	118	1	nogas	0.343	38.7	3751	24.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.058	53.6	527	21.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.259	14.0	2277	9.0	2.5	
P	31	1	nogas	-1.593	-107.5	107195	1.6	10	
La	139	1	nogas	9.277	118.9	93	43.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-298.434	-430.1	33	62.4	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	1155377	1.74	1282255	90.11	70	125	
Ge	72	1	nogas	3292046	1.99	3894467	84.53	70	125	
In	115	1	nogas	2953646	4.68	3488791	84.66	70	125	
Bi	209	1	nogas	2124593	3.03	2439864	87.08	70	125	
Ge	72	2	He	1145141	1.47	1316692	86.97	70	125	

Sample Report

Sample Table

Sample Name	LCS-136231
Data File Name	097SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:34:55-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136231Ca
ISTD Ref FileName	070CALB.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	56.321	56.321	3.26	397944	0.01	2000	
Na	23	1	nogas	5869.464	5869.464	1.17	139872866	0.00	200000	
Mg	24	1	nogas	5870.567	5870.567	1.44	90206015	0.01	200000	
Al	27	1	nogas	116.374	116.374	3.28	2181759	0.01	2000	
K	39	1	nogas	5447.630	5447.630	0.32	124119086	0.00	200000	
Ti	47	1	nogas	170.062	170.062	4.26	299784	0.06	2000	
V	51	1	nogas	61.041	61.041	3.82	2055033	0.00	2000	
Cr	52	1	nogas	55.064	55.064	5.43	1224066	0.00	2000	
Mn	55	1	nogas	57.008	57.008	3.53	1528029	0.00	2000	
Co	59	1	nogas	55.187	55.187	2.30	1231826	0.00	2000	
Ni	60	1	nogas	56.484	56.484	1.33	281578	0.02	2000	
Cu	63	1	nogas	57.449	57.449	1.58	665926	0.01	2000	
Zn	66	1	nogas	56.824	56.824	1.34	222999	0.03	2000	
As	75	1	nogas	53.635	53.635	4.48	375784	0.01	2000	
Sr	88	1	nogas	114.248	114.248	4.71	3080669	0.00	2000	
Ag	107	1	nogas	55.669	55.669	3.11	732733	0.01	2000	
Cd	111	1	nogas	55.086	55.086	1.37	155945	0.04	2000	
Sb	121	1	nogas	55.447	55.447	3.37	688983	0.01	2000	
Tl	205	1	nogas	52.258	52.258	11.02	898198	0.01	2000	
Pb	208	1	nogas	51.891	51.891	0.45	1282157	0.00	2000	
U	238	1	nogas	109.517	109.517	8.62	2468012	0.00	2000	
[Pb]	206	1	nogas	55.169	55.169	8.52	323714	0.02	2000	
[Pb]	207	1	nogas	54.149	54.149	8.31	279116	0.02	2000	
Na	23	2	He	5959.024	5959.024	1.36	11746770	0.05	200000	
Mg	24	2	He	5917.818	5917.818	1.17	6451643	0.09	200000	
Al	27	2	He	118.297	118.297	1.92	73924	0.16	2000	
K	39	2	He	5301.510	5301.510	0.99	7181283	0.07	200000	
Ca	43	2	He	5955.440	5955.440	3.07	19404	30.69	200000	
Ca	44	2	He	6062.525	6062.525	0.80	326542	1.86	200000	
V	51	2	He	56.991	56.991	0.49	432632	0.01	2000	
Cr	52	2	He	57.697	57.697	2.13	481412	0.01	2000	
Mn	55	2	He	58.072	58.072	1.31	344881	0.02	2000	
Fe	56	2	He	5798.934	5798.934	2.35	41908707	0.01	200000	
Co	59	2	He	56.599	56.599	1.49	628394	0.01	2000	
Ni	60	2	He	58.476	58.476	0.52	162061	0.04	2000	
Cu	63	2	He	58.564	58.564	1.10	415141	0.01	2000	
Zn	66	2	He	59.048	59.048	0.55	97117	0.06	2000	
As	75	2	He	56.550	56.550	0.87	88640	0.06	2000	
Se	78	2	He	55.746	55.746	1.66	7341	0.76	2000	
B	11	1	nogas	558.830	558.830	3.63	2468793	0.02	2000	
Si	28	1	nogas	53873.109	53873.109	2.05	63128184	0.09	2000	>LDR
Ca	43	1	nogas	5664.760	5664.760	2.19	204405	2.77	200000	
Ca	44	1	nogas	5638.418	5638.418	3.34	3456695	0.16	200000	
Fe	56	1	nogas	5558.460	5558.460	2.89	129120157	0.00	200000	

Sample Report

Se	77	1	nogas	55.361	55.361	17.09	41564	0.13	2000	
Se	82	1	nogas	55.028	55.028	1.65	15200	0.36	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	53.572	53.572	3.88	290291	0.02	2000	
Sn	118	1	nogas	109.488	109.488	2.12	799136	0.01	2000	
Ba	137	1	nogas	55.271	55.271	0.14	220789	0.03	2000	
Sb	121	2	He	56.086	56.086	1.86	345035	0.02	2000	
La	139	1	nogas	33.872	33.872	26.82	183	18.48	2000	
Au	197	1	nogas	2052.456	2052.456	48.45	70	2932.08	2000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1071589	4.51	1282255	83.57	70	125	
Ge	72	1	nogas	3366022	0.92	3894467	86.43	70	125	
In	115	1	nogas	2883920	0.85	3488791	82.66	70	125	
Bi	209	1	nogas	2099630	8.26	2439864	86.06	70	125	
Ge	72	2	He	1086251	0.80	1316692	82.50	70	125	

Sample Report

Sample Table

Sample Name	HS18121117-01SD
Data File Name	099SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:38:52-06:00
Sample Type	Sample
Dilution	100
Comment	TW B136231 Na
ISTD Ref FileName	070CALB.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	0.005	0.545	187.62	120	0.00	2000	
Na	23	1	nogas	2963.353	296335.284	11.54	66510364	0.00	200000	
Mg	24	1	nogas	444.109	44410.914	11.70	6409622	0.01	200000	
Al	27	1	nogas	1.341	134.095	20.64	49506	0.00	2000	
K	39	1	nogas	587.586	58758.615	12.69	20430118	0.00	200000	
Ti	47	1	nogas	-0.003	-0.341	-1664.61	390	0.00	2000	
V	51	1	nogas	7.900	790.019	23.51	678554	0.00	2000	
Cr	52	1	nogas	0.455	45.518	55.97	59840	0.00	2000	
Mn	55	1	nogas	7.314	731.397	8.73	203864	0.00	2000	
Co	59	1	nogas	0.042	4.180	13.38	1517	0.00	2000	
Ni	60	1	nogas	-0.334	-33.393	-4.22	1187	-0.03	2000	
Cu	63	1	nogas	0.032	3.177	50.81	3164	0.00	2000	
Zn	66	1	nogas	0.508	50.789	5.79	3764	0.01	2000	
As	75	1	nogas	2.298	229.774	41.04	95050	0.00	2000	
Sr	88	1	nogas	21.475	2147.489	8.76	538254	0.00	2000	
Ag	107	1	nogas	-0.002	-0.177	-144.97	90	0.00	2000	
Cd	111	1	nogas	-0.002	-0.169	-410.02	17	-0.01	2000	
Sb	121	1	nogas	-0.021	-2.058	-70.54	667	0.00	2000	
Tl	205	1	nogas	0.041	4.086	25.94	1080	0.00	2000	
Pb	208	1	nogas	-0.009	-0.864	-15.07	393	0.00	2000	
U	238	1	nogas	0.013	1.272	40.61	340	0.00	2000	
[Pb]	206	1	nogas	-0.011	-1.089	-39.58	107	-0.01	2000	
[Pb]	207	1	nogas	-0.009	-0.939	-37.68	67	-0.01	2000	
Na	23	2	He	2703.109	270310.930	1.10	5584039	0.05	200000	
Mg	24	2	He	395.833	39583.283	1.82	450576	0.09	200000	
Al	27	2	He	0.296	29.642	128.06	1563	0.02	2000	
K	39	2	He	465.424	46542.416	0.38	867355	0.05	200000	
Ca	43	2	He	632.066	63206.552	5.33	2197	28.77	200000	
Ca	44	2	He	608.238	60823.800	4.77	36018	1.69	200000	
V	51	2	He	0.489	48.940	3.58	10983	0.00	2000	
Cr	52	2	He	0.175	17.452	12.39	6931	0.00	2000	
Mn	55	2	He	6.404	640.437	0.93	40939	0.02	2000	
Fe	56	2	He	27.853	2785.328	72.97	233168	0.01	200000	
Co	59	2	He	0.036	3.608	16.58	577	0.01	2000	
Ni	60	2	He	-0.116	-11.558	-21.88	520	-0.02	2000	
Cu	63	2	He	-0.107	-10.727	-13.94	1153	-0.01	2000	
Zn	66	2	He	0.328	32.767	19.88	1690	0.02	2000	
As	75	2	He	0.071	7.089	47.12	459	0.02	2000	
Se	78	2	He	0.355	35.512	20.76	140	0.25	2000	
B	11	1	nogas	4.081	408.082	27.81	32294	0.01	2000	
Si	28	1	nogas	2213.720	221371.988	16.61	4736801	0.05	2000	>LDR
Ca	43	1	nogas	630.411	63041.077	11.65	21830	2.89	200000	
Ca	44	1	nogas	603.684	60368.409	14.47	535206	0.11	200000	
Fe	56	1	nogas	49.026	4902.611	36.47	4607010	0.00	200000	

Sample Report

Se	77	1	nogas	20.153	2015.276	24.32	30496	0.07	2000	
Se	82	1	nogas	0.128	12.804	270.47	203	0.06	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.082	8.151	23.75	580	0.01	2000	
Sn	118	1	nogas	0.048	4.770	54.10	1423	0.00	2000	
Ba	137	1	nogas	8.467	846.658	13.92	31709	0.03	2000	
Sb	121	2	He	-0.021	-2.131	-101.63	457	0.00	2000	
La	139	1	nogas	13.685	1368.497	49.55	100	13.68	2000	
Au	197	1	nogas	1082.067	108206.744	173.69	47	2318.72	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	1027847	10.43	1282255	80.16	70	125	
Ge	72	1	nogas	3135068	7.21	3894467	80.50	70	125	
In	115	1	nogas	2716144	12.59	3488791	77.85	70	125	
Bi	209	1	nogas	1846820	11.00	2439864	75.69	70	125	
Ge	72	2	He	1130666	0.59	1316692	85.87	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\010
Acq Date Time	2019-01-09T14:44:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	112.020	11.904	725204	0.69	100	112.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	11728.643	16.197	257456731	1.49	10000	117.3	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11485.226	16.093	162914487	1.65	10000	114.9	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	116.791	10.555	1998979	2.86	100	116.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11127.141	7.132	222629238	1.60	10000	111.3	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	109.459	7.957	176540	1.07	100	109.5	90	110	
V	51	1	nogas	111.521	10.559	3027448	1.72	100	111.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	113.502	9.691	2252149	2.65	100	113.5	90	110	CCV Main CR1-2 Failed
Mn	55	1	nogas	113.688	10.280	2758240	3.01	100	113.7	90	110	CCV Main CR1-2 Failed
Co	59	1	nogas	114.495	7.816	2335558	1.17	100	114.5	90	110	CCV Main CR1-2 Failed
Ni	60	1	nogas	114.362	8.214	518304	0.80	100	114.4	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	114.232	5.870	1208812	1.70	100	114.2	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	111.246	7.579	397349	1.65	100	111.2	90	110	CCV Main CR1-2 Failed
As	75	1	nogas	109.671	8.941	616408	0.53	100	109.7	90	110	
Sr	88	1	nogas	109.375	6.948	2697441	0.95	100	109.4	90	110	
Ag	107	1	nogas	111.017	10.762	1333863	3.22	100	111.0	90	110	CCV Main CR1-2 Failed
Cd	111	1	nogas	111.602	15.098	288988	0.90	100	111.6	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	111.349	6.419	1264881	1.25	100	111.3	90	110	CCV Main CR1-2 Failed
Tl	205	1	nogas	118.095	11.485	1841688	1.20	100	118.1	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	97.749	1.510	2414716	1.51	100	97.7	90	110	
U	238	1	nogas	115.542	10.730	2361146	0.82	100	115.5	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	116.620	11.090	620210	0.56	100	116.6	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	112.350	10.132	525227	1.58	100	112.3	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10378.779	0.582	20919843	2.05	10000	103.8	90	110	
Mg	24	2	He	10416.445	1.146	11636533	1.30	10000	104.2	90	110	
Al	27	2	He	102.223	1.917	65654	2.14	100	102.2	90	110	
K	39	2	He	9537.676	2.114	12711963	2.07	10000	95.4	90	110	
Ca	43	2	He	10268.770	2.464	34245	2.27	10000	102.7	90	110	
Ca	44	2	He	10571.067	0.932	581988	1.42	10000	105.7	90	110	
V	51	2	He	101.404	0.482	783579	2.78	100	101.4	90	110	
Cr	52	2	He	100.066	2.481	851658	0.82	100	100.1	90	110	
Mn	55	2	He	102.179	3.252	620616	1.52	100	102.2	90	110	
Fe	56	2	He	10349.620	1.894	76634692	0.79	10000	103.5	90	110	
Co	59	2	He	101.200	1.378	1151486	1.98	100	101.2	90	110	
Ni	60	2	He	104.273	1.165	295528	2.02	100	104.3	90	110	
Cu	63	2	He	102.341	0.099	742203	2.38	100	102.3	90	110	
Zn	66	2	He	103.910	1.160	174311	2.32	100	103.9	90	110	
As	75	2	He	100.328	0.686	160927	2.14	100	100.3	90	110	
Se	78	2	He	99.390	1.219	13344	2.46	100	99.4	90	110	
B	11	1	nogas	540.174	12.088	2187268	1.06	500	108.0	90	110	
Si	28	1	nogas	5859.002	13.101	8402637	2.05	5000	117.2	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11635.389	6.744	383110	1.35	10000	116.4	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11418.046	8.531	6183035	3.47	10000	114.2	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	11273.803	9.497	235596447	1.96	10000	112.7	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	111.029	18.463	50664	1.82	100	111.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	109.097	4.115	27434	3.24	100	109.1	90	110	
Mo	95	1	nogas	106.273	7.829	526299	1.46	100	106.3	90	110	
Sn	118	1	nogas	110.103	14.480	735426	0.88	100	110.1	90	110	CCV Main CR1-2 Failed
Ba	137	1	nogas	110.246	14.225	402892	0.79	100	110.2	90	110	CCV Main CR1-2 Failed
Sb	121	2	He	100.625	2.181	633898	0.70	100	100.6	90	110	
Li	7	1	nogas	110.195	8.310	1534955	4.87	100	110.2	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	545.849	8.744	1019401	0.53	500	109.2	90	110	
La	139	1	nogas	165.855	4.908	623	13.64	100	165.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-766.665	-126.540	23	65.47	100	-766.7	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	990519	12.12	1282255	77.25	70	125	
Ge	72	1	nogas	3088146	7.15	3894467	79.30	70	125	
In	115	1	nogas	2675231	13.91	3488791	76.68	70	125	
Bi	209	1	nogas	1908786	10.00	2439864	78.23	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1113395	2.33	1316692	84.56	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\010
Acq Date Time	2019-01-09T14:46:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	34.2	497	25.9	1	
Na	23	1	nogas	4.227	56.9	748809	4.1	100	
Mg	24	1	nogas	6.325	29.3	112358	21.4	100	
Al	27	1	nogas	-0.124	-76.6	26248	3.4	5	
K	39	1	nogas	5.949	297.2	9782568	0.6	100	
Ti	47	1	nogas	0.049	72.0	517	15.5	2.5	
V	51	1	nogas	-4.249	-11.8	427752	3.1	2.5	
Cr	52	1	nogas	-0.176	-36.4	51087	2.3	2.5	
Mn	55	1	nogas	0.110	39.8	29971	1.6	2.5	
Co	59	1	nogas	0.057	32.8	1960	18.0	2.5	
Ni	60	1	nogas	-0.380	-12.3	1040	19.3	2.5	
Cu	63	1	nogas	0.033	120.7	3407	10.1	2	
Zn	66	1	nogas	-0.042	-99.0	1900	5.2	2.5	
As	75	1	nogas	-1.283	-28.0	83243	4.9	2.5	
Sr	88	1	nogas	0.065	21.4	3197	8.4	2.5	
Ag	107	1	nogas	0.042	22.8	673	15.5	2.5	
Cd	111	1	nogas	0.048	52.8	163	46.0	1	
Sb	121	1	nogas	0.289	24.5	4547	16.0	2.5	
Tl	205	1	nogas	0.650	68.0	12220	66.2	1	
Pb	208	1	nogas	0.054	25.3	1930	17.4	2.5	
U	238	1	nogas	0.160	62.1	3871	61.7	2.5	
[Pb]	206	1	nogas	0.036	34.9	413	19.4	2.5	
[Pb]	207	1	nogas	0.058	6.1	440	3.9	2.5	
Na	23	2	He	0.509	102.0	68801	0.5	100	
Mg	24	2	He	4.406	10.2	6425	6.9	100	
Al	27	2	He	-0.744	-22.1	887	12.7	5	
K	39	2	He	-30.843	-7.8	219435	1.4	100	
Ca	43	2	He	-4.668	-208.7	43	74.2	100	
Ca	44	2	He	-3.603	-29.7	1897	4.0	100	
V	51	2	He	0.025	79.5	7261	3.0	2.5	
Cr	52	2	He	0.055	57.4	5814	4.4	2.5	
Mn	55	2	He	0.012	169.9	1563	8.7	2.5	
Fe	56	2	He	5.038	9.1	60379	5.0	100	
Co	59	2	He	0.039	20.6	600	14.5	2.5	
Ni	60	2	He	-0.181	-18.9	327	29.7	2.5	
Cu	63	2	He	-0.090	-7.8	1260	4.2	2	
Zn	66	2	He	-0.281	-15.0	650	11.6	2.5	
As	75	2	He	0.066	42.9	444	9.5	2.5	
Se	78	2	He	0.590	32.2	169	15.2	2	
B	11	1	nogas	7.276	19.8	52586	11.6	10	
Si	28	1	nogas	320.359	32.1	2976243	0.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	9.209	76.7	1243	17.8	100	
Ca	44	1	nogas	-62.667	-20.9	195657	0.4	100	
Fe	56	1	nogas	-13.487	-79.0	3551535	3.3	100	
Se	77	1	nogas	-1.844	-210.9	27318	5.6	2.5	
Se	82	1	nogas	0.167	121.9	223	22.5	2	
Mo	95	1	nogas	0.393	49.4	2287	42.5	2.5	
Sn	118	1	nogas	0.317	37.8	3594	21.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.248	131.9	1289	99.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.283	6.5	2367	4.0	2.5	
P	31	1	nogas	3.914	224.1	119443	10.4	10	
La	139	1	nogas	13.145	53.6	110	24.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-955.608	-97.9	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	1174372	2.29	1282255	91.59	70	125	
Ge	72	1	nogas	3366412	3.57	3894467	86.44	70	125	
In	115	1	nogas	2990085	3.50	3488791	85.71	70	125	
Bi	209	1	nogas	2171653	1.46	2439864	89.01	70	125	
Ge	72	2	He	1113970	1.01	1316692	84.60	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	105_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:51:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	102.672	6.561	740690	2.00	100	102.7	90	110	
Na	23	1	nogas	11463.225	8.329	257648031	3.79	10000	114.6	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11110.950	9.046	161203737	0.85	10000	111.1	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	110.049	9.478	2005041	4.38	100	110.0	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10592.210	4.218	225907897	2.54	10000	105.9	90	110	
Ti	47	1	nogas	104.998	7.507	180010	1.13	100	105.0	90	110	
V	51	1	nogas	102.060	6.722	2992509	0.92	100	102.1	90	110	
Cr	52	1	nogas	105.724	5.474	2236878	1.12	100	105.7	90	110	
Mn	55	1	nogas	106.230	5.679	2746265	1.91	100	106.2	90	110	
Co	59	1	nogas	108.275	5.455	2349413	0.91	100	108.3	90	110	
Ni	60	1	nogas	107.125	7.939	516198	1.54	100	107.1	90	110	
Cu	63	1	nogas	105.732	7.943	1188168	2.56	100	105.7	90	110	
Zn	66	1	nogas	105.573	5.838	401156	2.64	100	105.6	90	110	
As	75	1	nogas	102.251	7.597	616969	0.82	100	102.3	90	110	
Sr	88	1	nogas	105.543	3.982	2769426	2.48	100	105.5	90	110	
Ag	107	1	nogas	103.332	5.602	1322430	0.72	100	103.3	90	110	
Cd	111	1	nogas	107.290	10.048	291765	0.53	100	107.3	90	110	
Sb	121	1	nogas	103.973	7.138	1254737	1.41	100	104.0	90	110	
Tl	205	1	nogas	112.573	10.677	1793622	3.75	100	112.6	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	96.261	1.845	2377977	1.84	100	96.3	90	110	
U	238	1	nogas	115.321	10.660	2405433	2.81	100	115.3	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	112.605	9.773	611749	1.12	100	112.6	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	108.878	9.261	519772	1.34	100	108.9	90	110	
Na	23	2	He	10507.816	1.659	21406676	1.05	10000	105.1	90	110	
Mg	24	2	He	10434.217	1.329	11783366	1.00	10000	104.3	90	110	
Al	27	2	He	104.913	0.731	68079	0.57	100	104.9	90	110	
K	39	2	He	9805.563	0.792	13061714	0.78	10000	98.1	90	110	
Ca	43	2	He	10630.808	1.040	35838	0.42	10000	106.3	90	110	
Ca	44	2	He	10688.766	1.240	594850	1.15	10000	106.9	90	110	
V	51	2	He	101.666	0.523	793968	0.25	100	101.7	90	110	
Cr	52	2	He	103.097	0.442	887048	0.79	100	103.1	90	110	
Mn	55	2	He	104.495	0.415	641762	0.67	100	104.5	90	110	
Fe	56	2	He	10547.594	0.884	78961440	0.82	10000	105.5	90	110	
Co	59	2	He	101.018	0.958	1161924	1.20	100	101.0	90	110	
Ni	60	2	He	103.751	1.802	297238	1.74	100	103.8	90	110	
Cu	63	2	He	102.939	0.400	754560	0.78	100	102.9	90	110	
Zn	66	2	He	104.058	0.614	176445	0.80	100	104.1	90	110	
As	75	2	He	101.453	0.346	164485	0.57	100	101.5	90	110	
Se	78	2	He	100.630	1.711	13654	1.24	100	100.6	90	110	
B	11	1	nogas	501.427	4.075	2268320	6.32	500	100.3	90	110	
Si	28	1	nogas	5509.491	10.377	8556476	1.03	5000	110.2	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	10858.714	7.638	379875	2.15	10000	108.6	90	110	
Ca	44	1	nogas	10688.747	8.779	6164252	3.19	10000	106.9	90	110	
Fe	56	1	nogas	10643.695	6.320	236977147	3.12	10000	106.4	90	110	
Se	77	1	nogas	95.893	13.622	50243	1.55	100	95.9	90	110	
Se	82	1	nogas	102.332	6.254	27328	1.04	100	102.3	90	110	
Mo	95	1	nogas	100.745	4.761	530860	1.67	100	100.7	90	110	
Sn	118	1	nogas	104.346	10.592	731355	0.39	100	104.3	90	110	
Ba	137	1	nogas	106.872	9.000	410174	1.67	100	106.9	90	110	
Sb	121	2	He	101.263	2.207	644995	2.38	100	101.3	90	110	
Li	7	1	nogas	104.898	7.540	1626814	2.05	100	104.9	90	110	
P	31	1	nogas	513.916	6.886	1027074	0.57	500	102.8	90	110	
La	139	1	nogas	163.159	17.114	637	12.79	100	163.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-20.607	-7378.798	33	62.45	100	-20.6	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	1095989	6.19	1282255	85.47	70	125	
Ge	72	1	nogas	3280062	6.15	3894467	84.22	70	125	
In	115	1	nogas	2789604	10.30	3488791	79.96	70	125	
Bi	209	1	nogas	1948394	10.29	2439864	79.86	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1125377	0.63	1316692	85.47	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	115_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:12:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	101.583	15.487	700377	2.22	100	101.6	90	110	
Na	23	1	nogas	10273.964	6.868	241202472	2.15	10000	102.7	90	110	
Mg	24	1	nogas	10387.349	3.423	157728254	2.98	10000	103.9	90	110	
Al	27	1	nogas	105.401	8.666	1880580	0.93	100	105.4	90	110	
K	39	1	nogas	10239.775	9.957	213499988	0.92	10000	102.4	90	110	
Ti	47	1	nogas	100.302	10.444	168056	2.11	100	100.3	90	110	
V	51	1	nogas	104.886	14.443	2986010	3.13	100	104.9	90	110	
Cr	52	1	nogas	107.047	12.521	2208249	3.39	100	107.0	90	110	
Mn	55	1	nogas	104.232	9.066	2633738	2.21	100	104.2	90	110	
Co	59	1	nogas	106.347	7.462	2256744	1.64	100	106.3	90	110	
Ni	60	1	nogas	103.712	8.023	489159	0.73	100	103.7	90	110	
Cu	63	1	nogas	103.040	9.605	1132173	1.25	100	103.0	90	110	
Zn	66	1	nogas	101.724	9.910	377559	1.38	100	101.7	90	110	
As	75	1	nogas	98.894	8.613	586664	1.78	100	98.9	90	110	
Sr	88	1	nogas	103.601	10.091	2652985	1.42	100	103.6	90	110	
Ag	107	1	nogas	101.041	9.076	1263529	0.37	100	101.0	90	110	
Cd	111	1	nogas	98.138	11.529	274641	1.89	100	98.1	90	110	
Sb	121	1	nogas	101.268	9.823	1194394	1.28	100	101.3	90	110	
Tl	205	1	nogas	106.559	6.617	1756712	1.41	100	106.6	90	110	
Pb	208	1	nogas	92.844	1.107	2293575	1.11	100	92.8	90	110	
U	238	1	nogas	106.866	9.079	2305198	3.19	100	106.9	90	110	
[Pb]	206	1	nogas	104.328	7.615	586076	0.27	100	104.3	90	110	
[Pb]	207	1	nogas	100.220	7.373	494689	1.75	100	100.2	90	110	
Na	23	2	He	10204.331	1.338	20016438	0.65	10000	102.0	90	110	
Mg	24	2	He	10242.226	1.231	11136196	1.25	10000	102.4	90	110	
Al	27	2	He	103.889	4.018	64898	2.45	100	103.9	90	110	
K	39	2	He	9209.655	1.588	12283704	1.55	10000	92.1	90	110	
Ca	43	2	He	10110.273	2.303	32813	0.69	10000	101.1	90	110	
Ca	44	2	He	10210.482	0.731	547176	0.93	10000	102.1	90	110	
V	51	2	He	100.036	1.691	752196	0.20	100	100.0	90	110	
Cr	52	2	He	100.084	1.273	829172	0.56	100	100.1	90	110	
Mn	55	2	He	100.462	1.087	594058	0.54	100	100.5	90	110	
Fe	56	2	He	10152.970	1.650	73171807	0.33	10000	101.5	90	110	
Co	59	2	He	98.483	3.062	1090323	1.54	100	98.5	90	110	
Ni	60	2	He	101.738	1.710	280616	1.00	100	101.7	90	110	
Cu	63	2	He	100.281	1.767	707676	0.43	100	100.3	90	110	
Zn	66	2	He	101.635	0.828	165945	1.01	100	101.6	90	110	
As	75	2	He	98.319	1.924	153461	0.69	100	98.3	90	110	
Se	78	2	He	96.899	1.642	12661	0.80	100	96.9	90	110	
B	11	1	nogas	472.385	13.597	2042523	0.50	500	94.5	90	110	
Si	28	1	nogas	5305.747	12.307	8151613	0.80	5000	106.1	90	110	
Ca	43	1	nogas	10529.401	9.429	360144	0.68	10000	105.3	90	110	
Ca	44	1	nogas	10286.728	10.975	5805725	1.75	10000	102.9	90	110	
Fe	56	1	nogas	10244.847	8.607	223086622	0.56	10000	102.4	90	110	
Se	77	1	nogas	91.206	17.403	48027	0.96	100	91.2	90	110	
Se	82	1	nogas	98.774	8.294	25799	1.39	100	98.8	90	110	
Mo	95	1	nogas	97.050	8.471	499746	2.13	100	97.0	90	110	
Sn	118	1	nogas	96.816	11.613	698687	2.82	100	96.8	90	110	
Ba	137	1	nogas	97.616	12.143	385084	0.89	100	97.6	90	110	
Sb	121	2	He	98.200	1.207	602187	1.05	100	98.2	90	110	
Li	7	1	nogas	105.855	13.475	1572132	1.14	100	105.9	90	110	
P	31	1	nogas	487.742	9.065	958666	0.93	500	97.5	90	110	
La	139	1	nogas	158.407	14.071	643	17.19	100	158.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1018.320	-75.000	20	50.00	100	-1018.3	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	1058388	12.51	1282255	82.54	70	125	
Ge	72	1	nogas	3213815	8.32	3894467	82.52	70	125	
In	115	1	nogas	2878319	12.38	3488791	82.50	70	125	
Bi	209	1	nogas	2009487	8.03	2439864	82.36	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1083554	1.61	1316692	82.29	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	116_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:14:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	33.3	527	26.6	1	
Na	23	1	nogas	1.884	104.9	676192	4.2	100	
Mg	24	1	nogas	5.468	25.9	96975	19.4	100	
Al	27	1	nogas	-0.124	-71.5	24626	6.3	5	
K	39	1	nogas	12.255	76.7	9296411	0.4	100	
Ti	47	1	nogas	0.035	119.3	460	15.2	2.5	
V	51	1	nogas	-3.507	-2.6	418279	1.5	2.5	
Cr	52	1	nogas	-0.178	-21.9	47845	3.2	2.5	
Mn	55	1	nogas	0.145	15.3	28970	2.8	2.5	
Co	59	1	nogas	0.049	17.1	1663	8.7	2.5	
Ni	60	1	nogas	-0.408	-3.8	850	8.2	2.5	
Cu	63	1	nogas	-0.003	-347.0	2810	2.8	2	
Zn	66	1	nogas	-0.148	-59.4	1393	21.3	2.5	
As	75	1	nogas	-0.444	-101.0	82154	2.3	2.5	
Sr	88	1	nogas	0.066	25.3	3010	13.2	2.5	
Ag	107	1	nogas	0.036	27.1	553	19.9	2.5	
Cd	111	1	nogas	0.059	25.8	190	21.1	1	
Sb	121	1	nogas	0.191	21.9	3137	15.1	2.5	
Tl	205	1	nogas	0.584	65.6	10758	64.1	1	
Pb	208	1	nogas	0.050	44.5	1840	29.8	2.5	
U	238	1	nogas	0.160	48.2	3764	48.8	2.5	
[Pb]	206	1	nogas	0.043	28.1	440	18.0	2.5	
[Pb]	207	1	nogas	0.050	80.0	387	55.6	2.5	
Na	23	2	He	-1.647	-34.2	62910	1.6	100	
Mg	24	2	He	5.147	25.2	7081	20.1	100	
Al	27	2	He	-0.800	-29.9	830	17.8	5	
K	39	2	He	-34.791	-8.3	214280	1.8	100	
Ca	43	2	He	5.883	30.6	77	7.5	100	
Ca	44	2	He	-1.185	-250.5	1980	8.1	100	
V	51	2	He	0.045	50.9	7235	2.5	2.5	
Cr	52	2	He	0.034	135.6	5504	6.8	2.5	
Mn	55	2	He	-0.005	-254.4	1423	5.9	2.5	
Fe	56	2	He	4.999	7.7	58643	4.7	100	
Co	59	2	He	0.035	18.6	547	13.5	2.5	
Ni	60	2	He	-0.168	-16.7	357	21.8	2.5	
Cu	63	2	He	-0.084	-13.7	1273	6.4	2	
Zn	66	2	He	-0.296	-5.4	610	4.3	2.5	
As	75	2	He	0.076	33.4	449	9.0	2.5	
Se	78	2	He	0.376	61.7	137	21.9	2	
B	11	1	nogas	6.888	23.4	49204	11.4	10	
Si	28	1	nogas	482.068	10.3	2960897	0.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.102	12.8	997	1.5	100	
Ca	44	1	nogas	-73.287	-8.8	177764	0.7	100	
Fe	56	1	nogas	-10.964	-95.1	3384551	5.3	100	
Se	77	1	nogas	2.743	146.6	26653	2.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.529	30.7	303	14.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.381	56.9	2094	50.8	2.5	
Sn	118	1	nogas	0.312	38.4	3480	23.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.065	21.2	550	8.3	2.5	
Sb	121	2	He	0.154	4.2	1517	2.5	2.5	
P	31	1	nogas	0.736	222.2	106722	1.4	10	
La	139	1	nogas	11.027	57.0	100	26.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-42.630	-5259.7	37	95.8	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	1141888	3.74	1282255	89.05	70	125	
Ge	72	1	nogas	3154284	1.73	3894467	80.99	70	125	
In	115	1	nogas	2918242	2.58	3488791	83.65	70	125	
Bi	209	1	nogas	2108802	1.78	2439864	86.43	70	125	
Ge	72	2	He	1086993	0.13	1316692	82.55	70	125	

Sample Report

Sample Table

Sample Name	HS18121558-02
Data File Name	118SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:18:09-06:00
Sample Type	Sample
Dilution	50
Comment	TW B136231 BaCaMnNa
ISTD Ref FileName	070CALB.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	0.007	0.367	44.06	143	0.01	2000	
Na	23	1	nogas	11717.353	585867.674	4.89	281286448	0.00	200000	
Mg	24	1	nogas	3346.079	167303.951	5.28	51922620	0.01	200000	
Al	27	1	nogas	1.238	61.903	6.46	49395	0.00	2000	
K	39	1	nogas	52.571	2628.541	4.82	10330407	0.00	200000	
Ti	47	1	nogas	0.036	1.812	236.26	473	0.01	2000	
V	51	1	nogas	1.816	90.792	43.09	555522	0.00	2000	
Cr	52	1	nogas	10.953	547.649	3.89	275798	0.00	2000	
Mn	55	1	nogas	42.598	2129.901	0.53	1102009	0.00	2000	
Co	59	1	nogas	1.611	80.566	2.39	35144	0.00	2000	
Ni	60	1	nogas	12.521	626.034	2.99	62062	0.02	2000	
Cu	63	1	nogas	1.503	75.139	1.83	19551	0.01	2000	
Zn	66	1	nogas	0.354	17.690	29.33	3304	0.01	2000	
As	75	1	nogas	1.596	79.809	39.74	94547	0.00	2000	
Sr	88	1	nogas	89.373	4468.634	1.76	2312469	0.00	2000	
Ag	107	1	nogas	0.001	0.042	148.71	127	0.00	2000	
Cd	111	1	nogas	0.027	1.372	32.16	100	0.03	2000	
Sb	121	1	nogas	-0.019	-0.955	-78.85	710	0.00	2000	
Tl	205	1	nogas	0.002	0.117	227.53	557	0.00	2000	
Pb	208	1	nogas	0.004	0.209	33.52	710	0.00	2000	
U	238	1	nogas	0.009	0.432	20.56	290	0.00	2000	
[Pb]	206	1	nogas	-0.003	-0.164	-157.97	160	0.00	2000	
[Pb]	207	1	nogas	0.007	0.327	65.23	153	0.00	2000	
Na	23	2	He	12056.741	602837.061	1.98	23778242	0.05	200000	
Mg	24	2	He	3477.115	173855.764	1.51	3803937	0.09	200000	
Al	27	2	He	0.633	31.631	34.04	1713	0.04	2000	
K	39	2	He	14.923	746.159	7.79	279187	0.01	200000	
Ca	43	2	He	4449.460	222473.024	2.91	14566	30.55	200000	
Ca	44	2	He	4412.694	220634.683	2.26	239110	1.85	200000	
V	51	2	He	0.341	17.059	18.94	9475	0.00	2000	
Cr	52	2	He	11.176	558.779	2.82	97781	0.01	2000	
Mn	55	2	He	42.683	2134.149	2.77	254715	0.02	2000	
Fe	56	2	He	104.954	5247.678	1.04	783304	0.01	200000	
Co	59	2	He	1.518	75.889	2.54	17058	0.01	2000	
Ni	60	2	He	12.595	629.734	1.38	35668	0.04	2000	
Cu	63	2	He	1.413	70.659	7.53	11874	0.01	2000	
Zn	66	2	He	0.253	12.636	15.30	1507	0.02	2000	
As	75	2	He	0.066	3.294	23.28	434	0.02	2000	
Se	78	2	He	0.454	22.712	18.08	148	0.31	2000	
B	11	1	nogas	1.056	52.781	16.81	21439	0.00	2000	
Si	28	1	nogas	5903.497	295174.839	2.77	8871811	0.07	2000	>LDR
Ca	43	1	nogas	4435.464	221773.210	0.86	153727	2.89	200000	
Ca	44	1	nogas	4266.089	213304.453	3.27	2563424	0.17	200000	
Fe	56	1	nogas	100.822	5041.085	5.23	5882865	0.00	200000	

Sample Report

Se	77	1	nogas	16.951	847.532	25.79	30696	0.06	2000	
Se	82	1	nogas	0.274	13.706	16.67	243	0.11	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.401	20.044	5.06	2257	0.02	2000	
Sn	118	1	nogas	-0.023	-1.136	-59.80	1017	0.00	2000	
Ba	137	1	nogas	150.651	7532.530	3.36	603180	0.02	2000	
Sb	121	2	He	-0.017	-0.851	-33.65	467	0.00	2000	
La	139	1	nogas	448.313	22415.653	2.85	1727	25.96	2000	
Au	197	1	nogas	701.725	35086.265	308.69	47	1503.70	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	1108756	2.73	1282255	86.47	70	125	
Ge	72	1	nogas	3228741	0.66	3894467	82.91	70	125	
In	115	1	nogas	2894571	2.77	3488791	82.97	70	125	
Bi	209	1	nogas	2040985	3.18	2439864	83.65	70	125	
Ge	72	2	He	1090012	1.35	1316692	82.78	70	125	

Sample Report

Sample Table

Sample Name	HS18121558-03
Data File Name	119SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:20:08-06:00
Sample Type	Sample
Dilution	20
Comment	TW B136231 MnNa
ISTD Ref FileName	070CALB.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	0.002	0.035	149.52	103	0.00	2000	
Na	23	1	nogas	12249.390	244987.806	9.04	292745140	0.00	200000	
Mg	24	1	nogas	808.655	16173.099	8.70	12505214	0.01	200000	
Al	27	1	nogas	0.923	18.456	5.68	45181	0.00	2000	
K	39	1	nogas	65.824	1316.482	10.00	10931703	0.00	200000	
Ti	47	1	nogas	0.091	1.810	66.53	583	0.02	2000	
V	51	1	nogas	5.748	114.965	13.85	669893	0.00	2000	
Cr	52	1	nogas	0.151	3.029	13.20	57443	0.00	2000	
Mn	55	1	nogas	103.301	2066.018	3.47	2718726	0.00	2000	
Co	59	1	nogas	0.361	7.216	6.53	8649	0.00	2000	
Ni	60	1	nogas	-0.161	-3.227	-14.71	2103	-0.01	2000	
Cu	63	1	nogas	0.054	1.070	51.78	3617	0.00	2000	
Zn	66	1	nogas	0.183	3.659	22.32	2750	0.01	2000	
As	75	1	nogas	1.873	37.453	25.07	98977	0.00	2000	
Sr	88	1	nogas	22.320	446.396	0.98	596811	0.00	2000	
Ag	107	1	nogas	-0.004	-0.082	-29.86	67	-0.01	2000	
Cd	111	1	nogas	0.012	0.238	76.85	57	0.02	2000	
Sb	121	1	nogas	-0.033	-0.651	-21.70	567	-0.01	2000	
Tl	205	1	nogas	-0.004	-0.080	-59.72	460	0.00	2000	
Pb	208	1	nogas	-0.009	-0.170	-42.94	397	0.00	2000	
U	238	1	nogas	0.046	0.930	8.76	1143	0.00	2000	
[Pb]	206	1	nogas	-0.014	-0.280	-94.62	100	-0.01	2000	
[Pb]	207	1	nogas	0.001	0.015	1390.37	127	0.00	2000	
Na	23	2	He	11991.946	239838.925	2.43	24577921	0.05	200000	
Mg	24	2	He	786.062	15721.246	1.92	894739	0.09	200000	
Al	27	2	He	0.226	4.525	120.49	1520	0.01	2000	
K	39	2	He	41.515	830.307	1.77	313905	0.01	200000	
Ca	43	2	He	1351.873	27037.453	6.55	4637	29.15	200000	
Ca	44	2	He	1310.648	26212.957	2.46	75288	1.74	200000	
V	51	2	He	0.431	8.610	2.02	10544	0.00	2000	
Cr	52	2	He	0.060	1.193	83.19	5958	0.00	2000	
Mn	55	2	He	101.510	2030.201	1.22	627451	0.02	2000	
Fe	56	2	He	18.684	373.674	0.82	164181	0.01	200000	
Co	59	2	He	0.354	7.078	7.45	4254	0.01	2000	
Ni	60	2	He	0.005	0.094	1218.82	867	0.00	2000	
Cu	63	2	He	-0.086	-1.715	-15.34	1313	-0.01	2000	
Zn	66	2	He	0.031	0.611	203.62	1190	0.00	2000	
As	75	2	He	0.051	1.013	33.31	427	0.01	2000	
Se	78	2	He	0.599	11.984	10.11	173	0.35	2000	
B	11	1	nogas	0.739	14.776	17.35	20178	0.00	2000	
Si	28	1	nogas	11301.291	226025.818	0.84	15151758	0.07	2000	>LDR
Ca	43	1	nogas	1340.207	26804.141	1.47	48550	2.76	200000	
Ca	44	1	nogas	1232.423	24648.458	3.27	926818	0.13	200000	
Fe	56	1	nogas	31.111	622.218	23.64	4513582	0.00	200000	

Sample Report

Se	77	1	nogas	16.411	328.222	38.90	31524	0.05	2000	
Se	82	1	nogas	0.159	3.188	124.16	220	0.07	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.023	0.461	41.46	303	0.01	2000	
Sn	118	1	nogas	-0.037	-0.740	-52.69	937	0.00	2000	
Ba	137	1	nogas	21.235	424.692	3.53	87549	0.02	2000	
Sb	121	2	He	-0.035	-0.700	-6.58	370	-0.01	2000	
La	139	1	nogas	23.923	478.466	51.11	150	15.95	2000	
Au	197	1	nogas	181.048	3620.954	930.25	40	452.62	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	1118649	1.73	1282255	87.24	70	125	
Ge	72	1	nogas	3330813	0.96	3894467	85.53	70	125	
In	115	1	nogas	2972221	2.76	3488791	85.19	70	125	
Bi	209	1	nogas	2078083	1.49	2439864	85.17	70	125	
Ge	72	2	He	1132646	1.29	1316692	86.02	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\010
Acq Date Time	2019-01-09T15:35:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	103.359	0.577	696780	1.04	100	103.4	90	110	
Na	23	1	nogas	10623.840	5.096	245421030	2.43	10000	106.2	90	110	
Mg	24	1	nogas	10548.063	2.655	157519537	2.71	10000	105.5	90	110	
Al	27	1	nogas	107.265	3.171	1921923	1.04	100	107.3	90	110	
K	39	1	nogas	10317.326	5.824	216027071	2.66	10000	103.2	90	110	
Ti	47	1	nogas	100.173	3.270	168767	1.50	100	100.2	90	110	
V	51	1	nogas	98.702	6.802	2857118	3.40	100	98.7	90	110	
Cr	52	1	nogas	104.216	5.866	2164809	3.92	100	104.2	90	110	
Mn	55	1	nogas	107.235	3.663	2721638	2.64	100	107.2	90	110	
Co	59	1	nogas	104.313	5.046	2222116	3.95	100	104.3	90	110	
Ni	60	1	nogas	104.756	3.806	496043	0.70	100	104.8	90	110	
Cu	63	1	nogas	104.816	3.544	1157399	1.47	100	104.8	90	110	
Zn	66	1	nogas	102.710	3.574	383144	0.52	100	102.7	90	110	
As	75	1	nogas	98.055	4.125	584562	0.17	100	98.1	90	110	
Sr	88	1	nogas	102.912	5.505	2648325	2.82	100	102.9	90	110	
Ag	107	1	nogas	101.173	3.020	1271473	2.34	100	101.2	90	110	
Cd	111	1	nogas	100.048	3.549	274385	1.50	100	100.0	90	110	
Sb	121	1	nogas	103.154	0.173	1223788	3.39	100	103.2	90	110	
Tl	205	1	nogas	105.014	3.080	1712688	2.79	100	105.0	90	110	
Pb	208	1	nogas	94.622	1.272	2337487	1.27	100	94.6	90	110	
U	238	1	nogas	108.471	3.060	2316719	2.27	100	108.5	90	110	
[Pb]	206	1	nogas	104.798	2.392	582770	2.57	100	104.8	90	110	
[Pb]	207	1	nogas	103.645	1.185	506280	1.30	100	103.6	90	110	
Na	23	2	He	10128.735	1.409	19980403	0.79	10000	101.3	90	110	
Mg	24	2	He	10365.725	1.819	11333127	1.19	10000	103.7	90	110	
Al	27	2	He	102.991	1.813	64727	1.31	100	103.0	90	110	
K	39	2	He	9262.504	2.423	12352702	2.37	10000	92.6	90	110	
Ca	43	2	He	10491.564	1.359	34245	1.43	10000	104.9	90	110	
Ca	44	2	He	10476.531	0.921	564545	1.24	10000	104.8	90	110	
V	51	2	He	100.177	1.748	757527	1.45	100	100.2	90	110	
Cr	52	2	He	100.737	1.055	839249	0.37	100	100.7	90	110	
Mn	55	2	He	103.266	1.197	614028	0.73	100	103.3	90	110	
Fe	56	2	He	10398.603	1.978	75364122	1.31	10000	104.0	90	110	
Co	59	2	He	100.112	3.340	1114717	2.82	100	100.1	90	110	
Ni	60	2	He	103.539	2.494	287176	2.04	100	103.5	90	110	
Cu	63	2	He	101.784	1.819	722315	1.17	100	101.8	90	110	
Zn	66	2	He	102.608	0.418	168463	0.28	100	102.6	90	110	
As	75	2	He	99.763	1.790	156596	1.36	100	99.8	90	110	
Se	78	2	He	97.290	3.233	12782	2.52	100	97.3	90	110	
B	11	1	nogas	487.425	1.746	2056530	1.00	500	97.5	90	110	
Si	28	1	nogas	5493.633	5.856	8388122	1.65	5000	109.9	90	110	
Ca	43	1	nogas	10581.544	4.458	363614	1.17	10000	105.8	90	110	
Ca	44	1	nogas	10242.715	5.316	5811591	1.69	10000	102.4	90	110	
Fe	56	1	nogas	10536.370	3.161	230352863	0.90	10000	105.4	90	110	
Se	77	1	nogas	83.967	9.077	46526	4.74	100	84.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.517	4.959	26874	1.70	100	102.5	90	110	
Mo	95	1	nogas	96.911	6.840	500879	4.26	100	96.9	90	110	
Sn	118	1	nogas	98.206	1.903	694716	1.69	100	98.2	90	110	
Ba	137	1	nogas	100.953	4.884	390415	3.03	100	101.0	90	110	
Sb	121	2	He	100.958	1.391	622546	0.72	100	101.0	90	110	
Li	7	1	nogas	103.718	1.779	1504238	0.31	100	103.7	90	110	
P	31	1	nogas	501.639	5.695	986623	1.74	500	100.3	90	110	
La	139	1	nogas	156.261	14.353	617	11.51	100	156.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-812.561	-49.202	23	24.74	100	-812.6	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	1021571	1.51	1282255	79.67	70	125	
Ge	72	1	nogas	3215245	3.47	3894467	82.56	70	125	
In	115	1	nogas	2795315	2.12	3488791	80.12	70	125	
Bi	209	1	nogas	1981102	1.06	2439864	81.20	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1089571	0.69	1316692	82.75	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\010
Acq Date Time	2019-01-09T15:37:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.071	19.9	613	19.7	1	
Na	23	1	nogas	2.053	147.1	692988	6.8	100	
Mg	24	1	nogas	6.510	26.2	114808	19.2	100	
Al	27	1	nogas	-0.088	-64.3	26189	0.5	5	
K	39	1	nogas	-1.837	-885.1	9350668	1.0	100	
Ti	47	1	nogas	0.063	176.0	523	35.6	2.5	
V	51	1	nogas	-3.996	-7.9	421934	2.3	2.5	
Cr	52	1	nogas	-0.226	-17.0	48644	4.2	2.5	
Mn	55	1	nogas	0.106	37.3	29033	3.2	2.5	
Co	59	1	nogas	0.063	12.4	2043	9.4	2.5	
Ni	60	1	nogas	-0.352	-5.4	1150	8.6	2.5	
Cu	63	1	nogas	0.015	137.3	3114	3.5	2	
Zn	66	1	nogas	-0.175	-34.7	1343	15.7	2.5	
As	75	1	nogas	-1.514	-44.4	79637	2.8	2.5	
Sr	88	1	nogas	0.075	23.1	3374	12.6	2.5	
Ag	107	1	nogas	0.042	13.9	653	8.7	2.5	
Cd	111	1	nogas	0.062	10.2	200	8.7	1	
Sb	121	1	nogas	0.212	31.0	3504	21.8	2.5	
Tl	205	1	nogas	0.598	66.7	10775	62.5	1	
Pb	208	1	nogas	0.060	34.0	2090	24.2	2.5	
U	238	1	nogas	0.164	53.0	3804	50.6	2.5	
[Pb]	206	1	nogas	0.054	44.7	500	28.0	2.5	
[Pb]	207	1	nogas	0.083	51.4	550	38.7	2.5	
Na	23	2	He	-0.593	-109.4	65529	2.0	100	
Mg	24	2	He	5.048	5.9	7031	4.8	100	
Al	27	2	He	-0.757	-17.2	863	9.3	5	
K	39	2	He	-35.017	-1.1	213986	0.2	100	
Ca	43	2	He	-5.507	-146.3	40	66.1	100	
Ca	44	2	He	-1.127	-184.8	2000	5.9	100	
V	51	2	He	0.093	37.0	7659	3.6	2.5	
Cr	52	2	He	0.085	16.7	5971	2.0	2.5	
Mn	55	2	He	0.032	19.1	1657	2.4	2.5	
Fe	56	2	He	6.553	2.0	70474	1.1	100	
Co	59	2	He	0.045	21.1	660	16.4	2.5	
Ni	60	2	He	-0.131	-6.9	460	5.8	2.5	
Cu	63	2	He	-0.082	-18.5	1300	8.5	2	
Zn	66	2	He	-0.326	-12.3	567	11.7	2.5	
As	75	2	He	0.054	52.5	419	10.5	2.5	
Se	78	2	He	0.383	45.0	139	16.0	2	
B	11	1	nogas	8.287	19.6	54245	12.3	10	
Si	28	1	nogas	453.231	30.7	3037013	1.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	8.080	27.8	1173	8.3	100	
Ca	44	1	nogas	-88.986	-14.2	175551	0.5	100	
Fe	56	1	nogas	-4.463	-155.9	3652537	2.7	100	
Se	77	1	nogas	-4.599	-111.1	25849	0.7	2.5	
Se	82	1	nogas	0.126	92.6	207	12.2	2	
Mo	95	1	nogas	0.386	47.6	2207	44.2	2.5	
Sn	118	1	nogas	0.308	30.8	3460	18.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.071	47.3	573	21.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.132	15.7	1393	9.4	2.5	
P	31	1	nogas	-1.415	-81.9	106867	2.6	10	
La	139	1	nogas	8.325	109.2	90	40.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-461.611	-484.4	30	115.5	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	1109761	4.65	1282255	86.55	70	125	
Ge	72	1	nogas	3272594	4.04	3894467	84.03	70	125	
In	115	1	nogas	2924332	2.11	3488791	83.82	70	125	
Bi	209	1	nogas	2094853	1.99	2439864	85.86	70	125	
Ge	72	2	He	1096191	0.28	1316692	83.25	70	125	

Sample Report

Sample Table

Sample Name	HS18121117-01PDS
Data File Name	136SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:53:52-06:00
Sample Type	Sample
Dilution	20
Comment	TW B136231 Na
ISTD Ref FileName	070CALB.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	104.124	2082.478	3.69	796541	0.01	2000	
Na	23	1	nogas	24814.120	496282.405	5.00	599176447	0.00	200000	
Mg	24	1	nogas	13065.501	261310.026	3.91	204142359	0.01	200000	
Al	27	1	nogas	117.681	2353.615	1.85	2124016	0.01	2000	
K	39	1	nogas	13656.555	273131.105	4.05	285439290	0.00	200000	
Ti	47	1	nogas	117.069	2341.371	2.11	198845	0.06	2000	
V	51	1	nogas	117.890	2357.797	2.29	3343447	0.00	2000	
Cr	52	1	nogas	115.559	2311.171	2.09	2416138	0.00	2000	
Mn	55	1	nogas	145.147	2902.947	2.53	3707491	0.00	2000	
Co	59	1	nogas	117.867	2357.335	4.74	2531545	0.00	2000	
Ni	60	1	nogas	116.652	2333.042	5.32	556651	0.02	2000	
Cu	63	1	nogas	118.972	2379.448	2.47	1324986	0.01	2000	
Zn	66	1	nogas	114.126	2282.518	0.56	429310	0.03	2000	
As	75	1	nogas	113.253	2265.069	2.55	667581	0.02	2000	
Sr	88	1	nogas	102.140	2042.801	3.12	2652031	0.00	2000	
Ag	107	1	nogas	109.752	2195.042	0.49	1391393	0.01	2000	
Cd	111	1	nogas	107.542	2150.833	2.13	307805	0.03	2000	
Sb	121	1	nogas	108.364	2167.287	1.52	1295800	0.01	2000	
Tl	205	1	nogas	114.766	2295.317	5.01	1914997	0.01	2000	
Pb	208	1	nogas	104.163	2083.253	3.95	2573123	0.00	2000	
U	238	1	nogas	0.005	0.092	85.68	200	0.00	2000	
[Pb]	206	1	nogas	113.014	2260.275	2.31	643177	0.02	2000	
[Pb]	207	1	nogas	113.174	2263.487	2.76	565998	0.02	2000	
Na	23	2	He	23897.238	477944.752	1.86	49562728	0.05	200000	
Mg	24	2	He	12767.133	255342.659	1.12	14706081	0.09	200000	
Al	27	2	He	109.544	2190.888	1.46	72445	0.15	2000	
K	39	2	He	13036.706	260734.115	0.62	17280249	0.08	200000	
Ca	43	2	He	13672.149	273442.976	3.87	46976	29.10	200000	
Ca	44	2	He	13941.810	278836.209	2.18	790562	1.76	200000	
V	51	2	He	107.818	2156.365	2.46	858217	0.01	2000	
Cr	52	2	He	106.967	2139.338	2.56	938264	0.01	2000	
Mn	55	2	He	139.072	2781.444	3.42	870345	0.02	2000	
Fe	56	2	He	11089.724	221794.486	2.37	84664272	0.01	200000	
Co	59	2	He	105.721	2114.417	2.62	1240111	0.01	2000	
Ni	60	2	He	109.274	2185.479	2.36	319192	0.03	2000	
Cu	63	2	He	108.629	2172.579	1.89	811921	0.01	2000	
Zn	66	2	He	111.451	2229.026	1.67	192646	0.06	2000	
As	75	2	He	106.713	2134.268	2.53	176403	0.06	2000	
Se	78	2	He	107.511	2150.215	3.75	14866	0.72	2000	
B	11	1	nogas	3.111	62.211	6.24	32188	0.01	2000	
Si	28	1	nogas	8731.839	174636.771	1.96	11964047	0.07	2000	>LDR
Ca	43	1	nogas	14663.087	293261.731	1.56	508092	2.89	200000	
Ca	44	1	nogas	14287.981	285759.619	0.59	8094063	0.18	200000	
Fe	56	1	nogas	11527.451	230549.024	1.69	253867972	0.00	200000	
Se	77	1	nogas	125.418	2508.356	5.58	56859	0.22	2000	
Se	82	1	nogas	114.018	2280.352	3.11	30162	0.38	2000	

Sample Report

Mo	95	1	nogas	111.333	2226.661	2.23	580757	0.02	2000	
Sn	118	1	nogas	0.035	0.696	63.01	1447	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	145.685	2913.701	1.18	587994	0.02	2000	
Sb	121	2	He	99.699	1993.978	3.71	647407	0.02	2000	
La	139	1	nogas	148.030	2960.600	19.90	613	24.13	2000	
Au	197	1	nogas	-840.100	-16801.999	-124.04	23	-3600.43	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	1159775	2.06	1282255	90.45	70	125	
Ge	72	1	nogas	3241594	2.46	3894467	83.24	70	125	
In	115	1	nogas	2916057	0.64	3488791	83.58	70	125	
Bi	209	1	nogas	2028202	2.15	2439864	83.13	70	125	
Ge	72	2	He	1147999	2.46	1316692	87.19	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	139_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:59:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	102.288	5.040	838896	1.71	100	102.3	90	110	
Na	23	1	nogas	10772.460	4.223	304614982	2.49	10000	107.7	90	110	
Mg	24	1	nogas	10302.740	1.737	188288279	1.96	10000	103.0	90	110	
Al	27	1	nogas	103.717	2.108	2286895	0.51	100	103.7	90	110	
K	39	1	nogas	9992.751	3.494	257836422	2.57	10000	99.9	90	110	
Ti	47	1	nogas	98.260	2.825	203604	0.83	100	98.3	90	110	
V	51	1	nogas	98.761	6.320	3515902	3.46	100	98.8	90	110	
Cr	52	1	nogas	100.004	5.961	2557959	4.95	100	100.0	90	110	
Mn	55	1	nogas	99.499	4.027	3107318	2.04	100	99.5	90	110	
Co	59	1	nogas	101.823	2.960	2668751	3.55	100	101.8	90	110	
Ni	60	1	nogas	99.154	2.479	577796	1.50	100	99.2	90	110	
Cu	63	1	nogas	100.916	2.653	1370736	0.75	100	100.9	90	110	
Zn	66	1	nogas	101.124	2.002	464172	2.32	100	101.1	90	110	
As	75	1	nogas	97.437	3.928	715120	1.62	100	97.4	90	110	
Sr	88	1	nogas	101.976	1.511	3229905	2.07	100	102.0	90	110	
Ag	107	1	nogas	97.202	0.869	1502582	1.59	100	97.2	90	110	
Cd	111	1	nogas	99.252	3.259	332323	2.28	100	99.3	90	110	
Sb	121	1	nogas	102.159	3.048	1489559	1.24	100	102.2	90	110	
Tl	205	1	nogas	100.728	2.601	2022677	1.47	100	100.7	90	110	
Pb	208	1	nogas	111.586	2.283	2756461	2.28	100	111.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	99.905	6.861	2625262	4.18	100	99.9	90	110	
[Pb]	206	1	nogas	100.403	4.056	687402	3.47	100	100.4	90	110	
[Pb]	207	1	nogas	97.999	4.725	589164	2.76	100	98.0	90	110	
Na	23	2	He	10279.956	0.753	25178104	1.03	10000	102.8	90	110	
Mg	24	2	He	10113.223	0.780	13728983	0.35	10000	101.1	90	110	
Al	27	2	He	103.851	9.301	81007	8.71	100	103.9	90	110	
K	39	2	He	11376.952	0.419	15113297	0.41	10000	113.8	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10117.767	3.153	41002	2.69	10000	101.2	90	110	
Ca	44	2	He	10307.000	2.017	689581	1.61	10000	103.1	90	110	
V	51	2	He	98.416	0.677	924200	0.98	100	98.4	90	110	
Cr	52	2	He	98.913	1.521	1023254	1.23	100	98.9	90	110	
Mn	55	2	He	100.552	1.753	742378	1.39	100	100.6	90	110	
Fe	56	2	He	10072.440	0.681	90642645	0.34	10000	100.7	90	110	
Co	59	2	He	100.585	1.486	1390790	1.93	100	100.6	90	110	
Ni	60	2	He	100.466	0.617	346025	0.59	100	100.5	90	110	
Cu	63	2	He	99.436	0.932	876246	1.01	100	99.4	90	110	
Zn	66	2	He	101.382	1.022	206687	1.47	100	101.4	90	110	
As	75	2	He	99.318	0.736	193571	0.84	100	99.3	90	110	
Se	78	2	He	100.097	1.215	16327	1.15	100	100.1	90	110	
B	11	1	nogas	496.325	5.337	2547122	1.00	500	99.3	90	110	
Si	28	1	nogas	4811.137	2.110	9420233	0.93	5000	96.2	90	110	
Ca	43	1	nogas	10112.800	2.223	427606	0.26	10000	101.1	90	110	
Ca	44	1	nogas	9778.321	1.893	6840026	0.24	10000	97.8	90	110	
Fe	56	1	nogas	9975.916	3.110	268465906	1.04	10000	99.8	90	110	
Se	77	1	nogas	93.417	3.208	59972	1.48	100	93.4	90	110	
Se	82	1	nogas	100.438	4.147	32393	2.11	100	100.4	90	110	
Mo	95	1	nogas	95.084	3.487	604759	1.93	100	95.1	90	110	
Sn	118	1	nogas	97.236	4.990	839033	1.40	100	97.2	90	110	
Ba	137	1	nogas	97.834	6.122	461563	2.21	100	97.8	90	110	
Sb	121	2	He	100.571	0.962	770012	0.79	100	100.6	90	110	
Li	7	1	nogas	100.429	3.440	1776770	3.00	100	100.4	90	110	
P	31	1	nogas	491.448	2.594	1192467	3.10	500	98.3	90	110	
La	139	1	nogas	178.045	14.208	847	8.71	100	178.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-926.487	-92.104	27	57.28	100	-926.5	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	1245314	6.24	1282255	97.12	70	125	
Ge	72	1	nogas	3953111	2.06	3894467	101.51	70	125	
In	115	1	nogas	3414984	5.48	3488791	97.88	70	125	
Bi	209	1	nogas	2440379	3.56	2439864	100.02	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1352786	0.45	1316692	102.74	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	140_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:01:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	24.7	597	20.0	1	
Na	23	1	nogas	80.669	30.2	2731682	8.9	100	
Mg	24	1	nogas	6.488	17.5	123223	7.4	100	
Al	27	1	nogas	-0.085	-158.0	28238	4.6	5	
K	39	1	nogas	15.747	401.9	10412308	1.0	100	
Ti	47	1	nogas	0.078	65.5	590	4.5	2.5	
V	51	1	nogas	-4.717	-41.6	434232	2.1	2.5	
Cr	52	1	nogas	-0.197	-163.7	52762	0.8	2.5	
Mn	55	1	nogas	0.096	161.7	30832	2.0	2.5	
Co	59	1	nogas	0.054	21.4	1990	12.6	2.5	
Ni	60	1	nogas	-0.151	-32.3	2274	3.1	2.5	
Cu	63	1	nogas	0.137	40.2	4817	3.2	2	
Zn	66	1	nogas	-0.103	-64.6	1737	7.2	2.5	
As	75	1	nogas	-1.025	-210.2	88102	2.0	2.5	
Sr	88	1	nogas	0.368	13.9	11861	2.3	2.5	
Ag	107	1	nogas	0.048	20.5	783	6.3	2.5	
Cd	111	1	nogas	0.050	25.0	177	14.2	1	
Sb	121	1	nogas	0.233	14.3	4054	10.4	2.5	
Tl	205	1	nogas	0.497	56.9	9854	48.7	1	
Pb	208	1	nogas	0.060	20.1	2083	14.3	2.5	
U	238	1	nogas	0.117	39.2	2980	34.2	2.5	
[Pb]	206	1	nogas	0.051	27.9	517	2.2	2.5	
[Pb]	207	1	nogas	0.072	32.3	527	12.2	2.5	
Na	23	2	He	45.736	14.7	177413	3.1	100	
Mg	24	2	He	4.574	8.6	7355	3.0	100	
Al	27	2	He	-0.810	-18.6	940	11.7	5	
K	39	2	He	-14.224	-2.1	241132	0.2	100	
Ca	43	2	He	6.118	202.5	90	57.7	100	
Ca	44	2	He	-1.095	-184.0	2264	4.5	100	
V	51	2	He	-0.049	-53.1	7454	3.2	2.5	
Cr	52	2	He	0.035	149.3	6298	10.8	2.5	
Mn	55	2	He	0.024	122.3	1817	7.3	2.5	
Fe	56	2	He	4.502	14.1	62688	4.4	100	
Co	59	2	He	0.032	12.9	583	14.6	2.5	
Ni	60	2	He	-0.205	-6.1	287	10.7	2.5	
Cu	63	2	He	-0.034	-91.0	1843	8.4	2	
Zn	66	2	He	-0.244	-45.3	787	21.4	2.5	
As	75	2	He	0.016	113.4	406	4.5	2.5	
Se	78	2	He	0.389	11.1	159	4.4	2	
B	11	1	nogas	5.700	26.1	49472	12.3	10	
Si	28	1	nogas	230.801	158.6	2995195	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	8.668	59.3	1277	2.0	100	
Ca	44	1	nogas	-83.849	-50.1	191383	0.5	100	
Fe	56	1	nogas	-17.076	-119.8	3622405	3.6	100	
Se	77	1	nogas	-3.701	-359.7	27988	1.5	2.5	
Se	82	1	nogas	0.160	85.4	233	16.2	2	
Mo	95	1	nogas	0.310	31.9	1960	28.8	2.5	
Sn	118	1	nogas	0.258	37.1	3330	17.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.070	11.8	623	17.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.130	23.5	1557	8.5	2.5	
P	31	1	nogas	5.065	184.0	126858	1.1	10	
La	139	1	nogas	7.888	219.1	93	65.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-61.212	-2611.2	37	63.0	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	1295944	8.88	1282255	101.07	70	125	
Ge	72	1	nogas	3551982	14.56	3894467	91.21	70	125	
In	115	1	nogas	3199514	21.25	3488791	91.71	70	125	
Bi	209	1	nogas	2294587	18.03	2439864	94.05	70	125	
Ge	72	2	He	1241188	5.52	1316692	94.27	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	152_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:25:41-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.073	30.3	743	23.2	1	
Na	23	1	nogas	85.274	20.1	3108309	6.5	100	
Mg	24	1	nogas	7.659	20.2	154218	10.8	100	
Al	27	1	nogas	-0.178	-24.7	29056	3.4	5	
K	39	1	nogas	-11.804	-166.7	10814451	0.8	100	
Ti	47	1	nogas	0.081	51.0	657	9.2	2.5	
V	51	1	nogas	-4.294	-7.6	490405	2.3	2.5	
Cr	52	1	nogas	-0.187	-52.6	58422	0.8	2.5	
Mn	55	1	nogas	0.067	105.9	33106	2.8	2.5	
Co	59	1	nogas	0.055	31.2	2210	17.6	2.5	
Ni	60	1	nogas	-0.101	-26.4	2784	6.7	2.5	
Cu	63	1	nogas	0.146	20.5	5418	3.8	2	
Zn	66	1	nogas	-0.098	-37.8	1937	5.7	2.5	
As	75	1	nogas	-1.284	-8.4	95647	3.3	2.5	
Sr	88	1	nogas	0.129	14.8	5658	6.9	2.5	
Ag	107	1	nogas	0.051	23.0	913	16.6	2.5	
Cd	111	1	nogas	0.053	20.5	203	15.0	1	
Sb	121	1	nogas	0.540	13.1	8809	8.5	2.5	
Tl	205	1	nogas	0.428	42.8	9143	34.9	1	
Pb	208	1	nogas	0.070	10.8	2337	8.0	2.5	
U	238	1	nogas	0.107	38.8	2907	32.0	2.5	
[Pb]	206	1	nogas	0.061	30.9	630	16.7	2.5	
[Pb]	207	1	nogas	0.057	3.2	490	5.4	2.5	
Na	23	2	He	54.438	8.4	213996	3.5	100	
Mg	24	2	He	5.781	7.0	9619	5.1	100	
Al	27	2	He	-0.955	-3.5	910	4.4	5	
K	39	2	He	-8.645	-15.1	248416	0.7	100	
Ca	43	2	He	3.817	28.3	87	6.7	100	
Ca	44	2	He	-6.269	-38.2	2113	6.7	100	
V	51	2	He	-0.062	-13.4	7972	1.6	2.5	
Cr	52	2	He	0.015	227.1	6615	4.2	2.5	
Mn	55	2	He	-0.008	-122.1	1740	4.1	2.5	
Fe	56	2	He	4.905	3.8	71756	0.6	100	
Co	59	2	He	0.041	21.0	757	15.0	2.5	
Ni	60	2	He	-0.183	-20.1	390	33.5	2.5	
Cu	63	2	He	-0.038	-28.5	1977	5.7	2	
Zn	66	2	He	-0.290	-22.5	767	17.2	2.5	
As	75	2	He	0.040	33.8	487	3.8	2.5	
Se	78	2	He	0.321	28.7	161	10.7	2	
B	11	1	nogas	5.908	26.9	51614	13.2	10	
Si	28	1	nogas	-35.286	-289.3	2961846	0.9	5	
Ca	43	1	nogas	9.216	49.1	1430	9.8	100	
Ca	44	1	nogas	-112.080	-8.1	192462	0.6	100	
Fe	56	1	nogas	-20.287	-41.1	3907501	1.8	100	
Se	77	1	nogas	-0.985	-315.9	31618	0.8	2.5	
Se	82	1	nogas	0.399	36.0	330	10.9	2	
Mo	95	1	nogas	0.287	22.5	1990	17.3	2.5	
Sn	118	1	nogas	0.264	31.5	3694	14.6	5	
Ba	137	1	nogas	0.068	9.9	663	1.7	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.412	6.8	3840	6.0	2.5	
P	31	1	nogas	1.659	133.6	132796	0.6	10	
La	139	1	nogas	5.855	153.1	97	46.6	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-1484.582	-105.3	17	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	1321262	4.32	1282255	103.04	70	125	
Ge	72	1	nogas	3869467	3.56	3894467	99.36	70	125	
In	115	1	nogas	3458789	6.37	3488791	99.14	70	125	
Bi	209	1	nogas	2452585	5.21	2439864	100.52	70	125	
Ge	72	2	He	1345941	1.73	1316692	102.22	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	154_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:29:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	103.684	5.038	850086	2.33	100	103.7	90	110	
Na	23	1	nogas	10436.162	10.369	295258315	3.39	10000	104.4	90	110	
Mg	24	1	nogas	10464.724	9.588	191314921	2.52	10000	104.6	90	110	
Al	27	1	nogas	110.438	7.290	2327262	2.30	100	110.4	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10483.343	4.669	258471606	2.07	10000	104.8	90	110	
Ti	47	1	nogas	103.747	6.901	205652	1.95	100	103.7	90	110	
V	51	1	nogas	101.731	5.747	3450274	0.59	100	101.7	90	110	
Cr	52	1	nogas	101.161	4.780	2476869	0.79	100	101.2	90	110	
Mn	55	1	nogas	104.378	6.184	3118725	2.06	100	104.4	90	110	
Co	59	1	nogas	108.536	7.368	2720205	2.46	100	108.5	90	110	
Ni	60	1	nogas	107.116	5.530	597127	0.58	100	107.1	90	110	
Cu	63	1	nogas	110.870	5.047	1441401	1.51	100	110.9	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	105.018	4.929	461274	0.68	100	105.0	90	110	
As	75	1	nogas	100.617	7.227	703415	1.27	100	100.6	90	110	
Sr	88	1	nogas	107.073	5.440	3245115	0.68	100	107.1	90	110	
Ag	107	1	nogas	104.912	4.125	1552540	0.98	100	104.9	90	110	
Cd	111	1	nogas	101.814	7.753	340902	1.58	100	101.8	90	110	
Sb	121	1	nogas	105.323	6.271	1469601	1.66	100	105.3	90	110	
Tl	205	1	nogas	107.540	6.443	2082262	0.87	100	107.5	90	110	
Pb	208	1	nogas	113.251	1.687	2797574	1.69	100	113.3	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.738	6.473	2757477	0.94	100	108.7	90	110	
[Pb]	206	1	nogas	107.201	7.258	707478	1.69	100	107.2	90	110	
[Pb]	207	1	nogas	104.602	7.062	606456	1.62	100	104.6	90	110	
Na	23	2	He	10004.697	1.338	24550530	1.31	10000	100.0	90	110	
Mg	24	2	He	10083.329	1.938	13713366	1.76	10000	100.8	90	110	
Al	27	2	He	100.271	2.394	78419	0.63	100	100.3	90	110	
K	39	2	He	11436.996	0.630	15191689	0.62	10000	114.4	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10016.144	0.695	40678	2.70	10000	100.2	90	110	
Ca	44	2	He	10157.609	0.538	680944	1.51	10000	101.6	90	110	
V	51	2	He	98.555	1.752	927143	1.46	100	98.6	90	110	
Cr	52	2	He	98.293	1.819	1018675	0.57	100	98.3	90	110	
Mn	55	2	He	99.216	3.799	733626	1.75	100	99.2	90	110	
Fe	56	2	He	9956.145	3.169	89735919	1.21	10000	99.6	90	110	
Co	59	2	He	98.439	0.311	1363726	2.08	100	98.4	90	110	
Ni	60	2	He	100.160	2.009	345561	0.35	100	100.2	90	110	
Cu	63	2	He	98.338	0.755	868212	1.34	100	98.3	90	110	
Zn	66	2	He	99.957	0.223	204193	2.04	100	100.0	90	110	
As	75	2	He	97.713	2.209	190768	0.39	100	97.7	90	110	
Se	78	2	He	98.741	1.976	16135	0.17	100	98.7	90	110	
B	11	1	nogas	503.239	8.445	2577821	1.09	500	100.6	90	110	
Si	28	1	nogas	5115.401	8.699	9397614	1.05	5000	102.3	90	110	
Ca	43	1	nogas	10945.184	5.082	442928	0.48	10000	109.5	90	110	
Ca	44	1	nogas	10651.003	6.445	7106238	2.09	10000	106.5	90	110	
Fe	56	1	nogas	10496.759	3.980	270328323	1.88	10000	105.0	90	110	
Se	77	1	nogas	98.590	11.210	58845	0.76	100	98.6	90	110	
Se	82	1	nogas	105.220	5.094	32483	0.16	100	105.2	90	110	
Mo	95	1	nogas	100.457	7.449	611231	2.67	100	100.5	90	110	
Sn	118	1	nogas	97.408	10.343	839776	1.57	100	97.4	90	110	
Ba	137	1	nogas	99.698	8.301	470697	1.89	100	99.7	90	110	
Sb	121	2	He	98.081	0.843	752381	1.44	100	98.1	90	110	
Li	7	1	nogas	105.034	5.361	1851523	2.30	100	105.0	90	110	
P	31	1	nogas	506.830	6.330	1172665	0.79	500	101.4	90	110	
La	139	1	nogas	199.304	7.858	943	4.78	100	199.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1269.046	-41.530	20	50.00	100	-1269.0	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	1245359	7.17	1282255	97.12	70	125	
Ge	72	1	nogas	3789019	4.77	3894467	97.29	70	125	
In	115	1	nogas	3426666	8.86	3488791	98.22	70	125	
Bi	209	1	nogas	2357286	5.41	2439864	96.62	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1355439	2.03	1316692	102.94	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	164_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:50:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	100.838	3.379	703310	0.95	100	100.8	90	110	
Na	23	1	nogas	10168.551	1.064	250581739	1.95	10000	101.7	90	110	
Mg	24	1	nogas	9900.038	1.156	157582137	1.73	10000	99.0	90	110	
Al	27	1	nogas	102.126	0.219	1904828	1.75	100	102.1	90	110	
K	39	1	nogas	9864.149	2.681	215310846	0.79	10000	98.6	90	110	
Ti	47	1	nogas	98.186	1.878	172121	3.71	100	98.2	90	110	
V	51	1	nogas	123.507	9.420	3590782	10.01	100	123.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.055	1.872	2143310	1.35	100	99.1	90	110	
Mn	55	1	nogas	99.188	4.087	2619154	2.17	100	99.2	90	110	
Co	59	1	nogas	98.749	3.135	2187477	1.29	100	98.7	90	110	
Ni	60	1	nogas	98.306	1.826	484390	0.22	100	98.3	90	110	
Cu	63	1	nogas	100.508	2.389	1154424	1.46	100	100.5	90	110	
Zn	66	1	nogas	97.084	1.960	376826	1.38	100	97.1	90	110	
As	75	1	nogas	105.721	0.441	648744	2.22	100	105.7	90	110	
Sr	88	1	nogas	98.208	0.851	2630257	2.24	100	98.2	90	110	
Ag	107	1	nogas	95.181	1.753	1243868	0.80	100	95.2	90	110	
Cd	111	1	nogas	94.878	1.833	273646	0.95	100	94.9	90	110	
Sb	121	1	nogas	97.412	2.541	1201062	1.05	100	97.4	90	110	
Tl	205	1	nogas	101.395	2.541	1725064	0.40	100	101.4	90	110	
Pb	208	1	nogas	93.612	0.762	2312563	0.76	100	93.6	90	110	
U	238	1	nogas	97.741	0.587	2178505	1.74	100	97.7	90	110	
[Pb]	206	1	nogas	100.357	3.155	582083	1.24	100	100.4	90	110	
[Pb]	207	1	nogas	99.581	2.559	507398	0.56	100	99.6	90	110	
Na	23	2	He	10246.542	2.541	20872464	1.11	10000	102.5	90	110	
Mg	24	2	He	9932.043	3.091	11213447	1.67	10000	99.3	90	110	
Al	27	2	He	101.598	2.876	65958	1.84	100	101.6	90	110	
K	39	2	He	9356.604	1.484	12475558	1.45	10000	93.6	90	110	
Ca	43	2	He	9964.873	1.346	33594	0.27	10000	99.6	90	110	
Ca	44	2	He	10250.253	1.656	570475	1.06	10000	102.5	90	110	
V	51	2	He	100.053	2.541	781311	1.12	100	100.1	90	110	
Cr	52	2	He	97.628	3.253	840026	1.87	100	97.6	90	110	
Mn	55	2	He	99.245	1.325	609533	0.73	100	99.2	90	110	
Fe	56	2	He	9807.710	1.412	73425421	2.00	10000	98.1	90	110	
Co	59	2	He	96.968	0.113	1115334	1.35	100	97.0	90	110	
Ni	60	2	He	98.893	1.791	283317	0.48	100	98.9	90	110	
Cu	63	2	He	98.320	2.273	720638	1.02	100	98.3	90	110	
Zn	66	2	He	98.675	1.742	167358	1.33	100	98.7	90	110	
As	75	2	He	97.436	1.412	157971	1.00	100	97.4	90	110	
Se	78	2	He	96.445	0.955	13090	1.28	100	96.4	90	110	
B	11	1	nogas	482.500	5.535	2105715	2.81	500	96.5	90	110	
Si	28	1	nogas	5082.735	1.123	8268521	1.43	5000	101.7	90	110	
Ca	43	1	nogas	10093.904	2.189	360882	0.79	10000	100.9	90	110	
Ca	44	1	nogas	9918.439	1.536	5863497	1.36	10000	99.2	90	110	
Fe	56	1	nogas	9891.078	4.905	225048055	3.00	10000	98.9	90	110	
Se	77	1	nogas	163.700	11.808	68175	8.76	100	163.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.881	2.421	26163	1.79	100	95.9	90	110	
Mo	95	1	nogas	93.523	1.584	503047	0.38	100	93.5	90	110	
Sn	118	1	nogas	93.277	2.247	693729	1.00	100	93.3	90	110	
Ba	137	1	nogas	95.781	2.766	389595	2.00	100	95.8	90	110	
Sb	121	2	He	99.234	1.018	632033	1.06	100	99.2	90	110	
Li	7	1	nogas	99.299	3.817	1493957	1.57	100	99.3	90	110	
P	31	1	nogas	464.481	1.817	958898	1.39	500	92.9	90	110	
La	139	1	nogas	168.869	8.247	697	6.78	100	168.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	414.476	242.234	43	35.25	100	414.5	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	1057489	2.69	1282255	82.47	70	125	
Ge	72	1	nogas	3342371	1.96	3894467	85.82	70	125	
In	115	1	nogas	2938687	1.53	3488791	84.23	70	125	
Bi	209	1	nogas	2067199	2.21	2439864	84.73	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1125378	1.44	1316692	85.47	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	165_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:52:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	36.9	520	28.3	1	
Na	23	1	nogas	153.119	23.7	4262362	5.7	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.667	26.8	164299	25.3	100	
Al	27	1	nogas	-0.064	-264.7	25458	0.5	5	
K	39	1	nogas	22.896	249.3	9426530	0.1	100	
Ti	47	1	nogas	0.048	149.7	473	12.9	2.5	
V	51	1	nogas	1.234	161.1	525860	4.2	2.5	
Cr	52	1	nogas	0.031	968.2	51589	3.3	2.5	
Mn	55	1	nogas	0.226	73.6	30662	1.5	2.5	
Co	59	1	nogas	0.059	34.5	1857	10.4	2.5	
Ni	60	1	nogas	-0.071	-72.8	2390	1.9	2.5	
Cu	63	1	nogas	0.153	48.2	4441	6.4	2	
Zn	66	1	nogas	-0.054	-138.3	1723	8.5	2.5	
As	75	1	nogas	2.854	65.0	97982	3.1	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.100	35.3	3804	11.0	2.5	
Ag	107	1	nogas	0.052	27.0	740	10.7	2.5	
Cd	111	1	nogas	0.051	55.3	160	34.8	1	
Sb	121	1	nogas	0.207	20.1	3284	3.3	2.5	
Tl	205	1	nogas	0.523	61.6	8713	49.1	1	
Pb	208	1	nogas	0.046	11.4	1753	7.4	2.5	
U	238	1	nogas	0.123	40.1	2674	28.8	2.5	
[Pb]	206	1	nogas	0.048	46.4	433	20.8	2.5	
[Pb]	207	1	nogas	0.060	37.4	403	16.9	2.5	
Na	23	2	He	108.831	3.2	298471	2.8	100	CCB Main CR1 Failed
Mg	24	2	He	18.825	117.1	23509	109.4	100	
Al	27	2	He	9.357	189.0	7558	153.7	5	CCB Main CR1 Failed
K	39	2	He	-30.974	-9.3	219265	1.7	100	
Ca	43	2	He	7.291	127.9	87	37.1	100	
Ca	44	2	He	-2.590	-106.2	2033	8.1	100	
V	51	2	He	0.098	22.3	8144	2.0	2.5	
Cr	52	2	He	0.017	181.3	5721	4.4	2.5	
Mn	55	2	He	-0.011	-209.8	1487	9.4	2.5	
Fe	56	2	He	5.168	20.2	63916	12.9	100	
Co	59	2	He	0.041	1.1	653	0.9	2.5	
Ni	60	2	He	-0.181	-6.9	340	10.6	2.5	
Cu	63	2	He	-0.025	-37.7	1807	4.3	2	
Zn	66	2	He	-0.272	-15.6	693	11.0	2.5	
As	75	2	He	0.044	37.5	426	6.1	2.5	
Se	78	2	He	0.708	11.0	193	5.2	2	
B	11	1	nogas	7.916	22.2	52252	9.9	10	
Si	28	1	nogas	533.877	65.1	2989479	0.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	9.847	56.8	1177	4.3	100	
Ca	44	1	nogas	-95.075	-38.4	164703	0.5	100	
Fe	56	1	nogas	9.594	245.6	3784457	1.2	100	
Se	77	1	nogas	24.059	52.0	31441	3.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.335	56.5	250	8.0	2	
Mo	95	1	nogas	0.288	45.2	1583	27.8	2.5	
Sn	118	1	nogas	0.235	47.2	2810	14.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.065	75.6	527	24.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.135	26.2	1497	15.6	2.5	
P	31	1	nogas	-0.489	-1412.8	103790	1.4	10	
La	139	1	nogas	2.937	207.2	67	22.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-1709.654	-3.9	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	1106923	6.55	1282255	86.33	70	125	
Ge	72	1	nogas	3154791	11.08	3894467	81.01	70	125	
In	115	1	nogas	2873466	12.73	3488791	82.36	70	125	
Bi	209	1	nogas	1983456	9.69	2439864	81.29	70	125	
Ge	72	2	He	1160200	0.45	1316692	88.11	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	176_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:14:03-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	103.972	9.738	759622	1.33	100	104.0	90	110	
Na	23	1	nogas	11062.807	12.931	268029506	1.43	10000	110.6	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10614.219	13.302	166104304	1.24	10000	106.1	90	110	
Al	27	1	nogas	106.890	8.217	2037619	2.75	100	106.9	90	110	
K	39	1	nogas	10261.958	5.604	228970180	0.09	10000	102.6	90	110	
Ti	47	1	nogas	101.687	6.699	182397	3.55	100	101.7	90	110	
V	51	1	nogas	133.920	10.274	3931131	3.50	100	133.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	104.840	6.991	2318364	2.38	100	104.8	90	110	
Mn	55	1	nogas	101.962	6.882	2755426	1.65	100	102.0	90	110	
Co	59	1	nogas	105.268	3.520	2389597	2.18	100	105.3	90	110	
Ni	60	1	nogas	101.851	4.349	513974	2.05	100	101.9	90	110	
Cu	63	1	nogas	106.092	3.403	1248461	2.47	100	106.1	90	110	
Zn	66	1	nogas	103.299	5.618	410350	1.01	100	103.3	90	110	
As	75	1	nogas	109.921	8.041	686425	1.55	100	109.9	90	110	
Sr	88	1	nogas	106.490	5.977	2918736	0.63	100	106.5	90	110	
Ag	107	1	nogas	103.592	1.662	1388296	4.73	100	103.6	90	110	
Cd	111	1	nogas	100.226	9.794	296863	1.53	100	100.2	90	110	
Sb	121	1	nogas	103.760	5.100	1310139	1.56	100	103.8	90	110	
Tl	205	1	nogas	107.808	7.331	1918523	1.91	100	107.8	90	110	
Pb	208	1	nogas	103.350	1.948	2553051	1.95	100	103.3	90	110	
U	238	1	nogas	110.597	7.073	2578241	2.62	100	110.6	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	106.158	12.423	642154	3.01	100	106.2	90	110	
[Pb]	207	1	nogas	102.581	10.960	545565	1.77	100	102.6	90	110	
Na	23	2	He	9661.529	3.170	20481524	1.70	10000	96.6	90	110	
Mg	24	2	He	9540.336	2.956	11208114	1.49	10000	95.4	90	110	
Al	27	2	He	97.506	0.944	65935	0.64	100	97.5	90	110	
K	39	2	He	9451.608	0.909	12599594	0.89	10000	94.5	90	110	
Ca	43	2	He	9756.209	4.585	34215	3.22	10000	97.6	90	110	
Ca	44	2	He	10022.023	2.834	580350	1.37	10000	100.2	90	110	
V	51	2	He	99.089	2.093	805271	0.87	100	99.1	90	110	
Cr	52	2	He	96.976	2.588	868339	1.16	100	97.0	90	110	
Mn	55	2	He	98.903	1.805	632030	0.56	100	98.9	90	110	
Fe	56	2	He	9791.807	1.886	76265224	0.52	10000	97.9	90	110	
Co	59	2	He	96.412	1.467	1153755	0.23	100	96.4	90	110	
Ni	60	2	He	98.542	0.729	293817	1.81	100	98.5	90	110	
Cu	63	2	He	97.089	2.673	740478	1.51	100	97.1	90	110	
Zn	66	2	He	98.815	2.167	174395	2.09	100	98.8	90	110	
As	75	2	He	97.502	2.356	164467	0.91	100	97.5	90	110	
Se	78	2	He	97.060	3.250	13704	2.07	100	97.1	90	110	
B	11	1	nogas	512.690	8.835	2346230	3.97	500	102.5	90	110	
Si	28	1	nogas	5173.665	7.984	8568595	1.38	5000	103.5	90	110	
Ca	43	1	nogas	10439.965	3.589	382390	1.77	10000	104.4	90	110	
Ca	44	1	nogas	10272.190	3.730	6212862	2.16	10000	102.7	90	110	
Fe	56	1	nogas	10161.073	5.614	236682947	0.12	10000	101.6	90	110	
Se	77	1	nogas	177.380	8.542	73210	1.35	100	177.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.568	2.752	27838	3.07	100	99.6	90	110	
Mo	95	1	nogas	98.150	6.659	540298	1.67	100	98.2	90	110	
Sn	118	1	nogas	98.241	11.212	749648	1.73	100	98.2	90	110	
Ba	137	1	nogas	100.668	10.314	420364	1.05	100	100.7	90	110	
Sb	121	2	He	101.007	2.577	669287	1.26	100	101.0	90	110	
Li	7	1	nogas	105.768	11.401	1660020	2.66	100	105.8	90	110	
P	31	1	nogas	484.046	5.844	1018319	0.33	500	96.8	90	110	
La	139	1	nogas	163.842	35.635	687	22.62	100	163.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-107.919	-458.011	37	15.75	100	-107.9	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	1113379	8.83	1282255	86.83	70	125	
Ge	72	1	nogas	3427843	5.25	3894467	88.02	70	125	
In	115	1	nogas	3035013	8.97	3488791	86.99	70	125	
Bi	209	1	nogas	2170811	8.80	2439864	88.97	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1171015	1.48	1316692	88.94	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	177_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:16:04-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.060	11.4	567	9.1	1	
Na	23	1	nogas	73.996	23.0	2434616	6.4	100	
Mg	24	1	nogas	7.157	20.7	126380	7.8	100	
Al	27	1	nogas	6.814	175.8	156779	143.8	5	CCB Main CR1 Failed
K	39	1	nogas	6.774	344.8	9849950	1.0	100	
Ti	47	1	nogas	0.081	55.8	573	11.2	2.5	
V	51	1	nogas	20.951	6.9	1062899	7.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.652	30.5	68948	1.2	2.5	
Mn	55	1	nogas	0.218	28.5	32973	2.6	2.5	
Co	59	1	nogas	0.057	19.4	1973	9.0	2.5	
Ni	60	1	nogas	-0.241	-23.8	1733	12.8	2.5	
Cu	63	1	nogas	0.143	36.6	4697	9.5	2	
Zn	66	1	nogas	-0.137	-5.1	1543	5.2	2.5	
As	75	1	nogas	8.844	7.3	137870	2.4	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.160	5.5	5774	2.4	2.5	
Ag	107	1	nogas	0.047	7.6	737	2.1	2.5	
Cd	111	1	nogas	0.058	19.4	197	17.9	1	
Sb	121	1	nogas	0.157	17.0	2937	6.8	2.5	
Tl	205	1	nogas	0.426	58.1	8143	50.4	1	
Pb	208	1	nogas	0.054	22.9	1950	15.8	2.5	
U	238	1	nogas	0.139	40.9	3367	35.7	2.5	
[Pb]	206	1	nogas	0.052	41.7	510	22.1	2.5	
[Pb]	207	1	nogas	0.057	53.3	437	36.7	2.5	
Na	23	2	He	49.172	6.0	176504	3.3	100	
Mg	24	2	He	5.323	6.0	7895	4.9	100	
Al	27	2	He	-0.907	-28.5	830	21.4	5	
K	39	2	He	-30.968	-9.0	219271	1.7	100	
Ca	43	2	He	1.229	937.1	67	60.6	100	
Ca	44	2	He	-2.427	-82.9	2077	5.0	100	
V	51	2	He	0.947	4.9	15173	1.8	2.5	
Cr	52	2	He	0.110	161.2	6665	24.5	2.5	
Mn	55	2	He	0.006	655.4	1620	16.3	2.5	
Fe	56	2	He	5.567	16.7	68149	11.2	100	
Co	59	2	He	0.044	21.6	700	16.5	2.5	
Ni	60	2	He	-0.156	-19.8	420	21.4	2.5	
Cu	63	2	He	-0.006	-148.6	1980	3.5	2	
Zn	66	2	He	-0.354	-19.7	560	22.3	2.5	
As	75	2	He	0.124	36.3	569	13.6	2.5	
Se	78	2	He	0.627	9.2	185	5.1	2	
B	11	1	nogas	12.854	11.2	80500	5.7	10	CCB Main CR1 Failed
Si	28	1	nogas	255.826	68.4	2917268	2.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	12.129	24.2	1357	3.1	100	
Ca	44	1	nogas	-133.895	-7.3	155806	1.7	100	
Fe	56	1	nogas	0.755	1520.3	3892481	2.0	100	
Se	77	1	nogas	68.851	8.6	45163	1.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.206	108.8	237	26.8	2	
Mo	95	1	nogas	0.256	29.5	1563	20.9	2.5	
Sn	118	1	nogas	0.243	39.0	3094	16.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.110	39.8	760	18.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.117	17.3	1397	10.0	2.5	
P	31	1	nogas	0.576	543.5	114112	1.0	10	
La	139	1	nogas	12.249	76.0	110	36.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	486.884	286.2	47	44.6	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	1191128	3.28	1282255	92.89	70	125	
Ge	72	1	nogas	3385953	4.87	3894467	86.94	70	125	
In	115	1	nogas	3056719	6.50	3488791	87.62	70	125	
Bi	209	1	nogas	2195685	3.93	2439864	89.99	70	125	
Ge	72	2	He	1180062	0.70	1316692	89.62	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	187_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:35:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	101.764	2.583	822137	1.79	100	101.8	90	110	
Na	23	1	nogas	10285.583	7.018	282154848	2.32	10000	102.9	90	110	
Mg	24	1	nogas	10088.449	4.519	178973617	3.54	10000	100.9	90	110	
Al	27	1	nogas	104.821	1.875	2195362	3.44	100	104.8	90	110	
K	39	1	nogas	9899.892	5.999	242457930	1.28	10000	99.0	90	110	
Ti	47	1	nogas	99.465	3.812	195691	2.03	100	99.5	90	110	
V	51	1	nogas	114.421	6.476	3772206	1.48	100	114.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.964	7.173	2496219	2.00	100	103.0	90	110	
Mn	55	1	nogas	101.981	3.812	3023979	2.42	100	102.0	90	110	
Co	59	1	nogas	99.533	4.127	2475724	1.26	100	99.5	90	110	
Ni	60	1	nogas	100.208	5.770	554049	2.27	100	100.2	90	110	
Cu	63	1	nogas	101.174	4.107	1304630	1.30	100	101.2	90	110	
Zn	66	1	nogas	100.819	3.249	439349	2.07	100	100.8	90	110	
As	75	1	nogas	103.015	6.623	711712	1.32	100	103.0	90	110	
Sr	88	1	nogas	102.907	7.319	3089879	2.03	100	102.9	90	110	
Ag	107	1	nogas	100.427	5.461	1472882	1.97	100	100.4	90	110	
Cd	111	1	nogas	97.377	3.822	317189	0.40	100	97.4	90	110	
Sb	121	1	nogas	103.034	4.289	1426189	1.22	100	103.0	90	110	
Tl	205	1	nogas	106.360	4.235	2099581	1.24	100	106.4	90	110	
Pb	208	1	nogas	113.598	0.293	2806144	0.29	100	113.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.729	6.570	2705933	2.71	100	104.7	90	110	
[Pb]	206	1	nogas	102.796	3.038	692057	1.41	100	102.8	90	110	
[Pb]	207	1	nogas	99.603	2.251	589246	2.88	100	99.6	90	110	
Na	23	2	He	9365.115	1.236	21439405	1.72	10000	93.7	90	110	
Mg	24	2	He	9507.859	0.911	12061203	1.77	10000	95.1	90	110	
Al	27	2	He	95.633	1.406	69845	2.22	100	95.6	90	110	
K	39	2	He	10282.540	3.038	13684447	2.98	10000	102.8	90	110	
Ca	43	2	He	9731.520	2.367	36860	3.24	10000	97.3	90	110	
Ca	44	2	He	9928.402	1.752	620723	0.94	10000	99.3	90	110	
V	51	2	He	97.256	1.368	853528	2.23	100	97.3	90	110	
Cr	52	2	He	95.098	0.851	919517	1.44	100	95.1	90	110	
Mn	55	2	He	98.695	0.736	680885	0.36	100	98.7	90	110	
Fe	56	2	He	9862.499	1.427	82927649	1.19	10000	98.6	90	110	
Co	59	2	He	96.201	1.008	1242765	0.49	100	96.2	90	110	
Ni	60	2	He	97.701	0.567	314437	0.35	100	97.7	90	110	
Cu	63	2	He	96.106	0.494	791382	0.43	100	96.1	90	110	
Zn	66	2	He	98.721	1.751	188065	0.96	100	98.7	90	110	
As	75	2	He	97.528	0.667	177624	1.54	100	97.5	90	110	
Se	78	2	He	97.546	0.330	14870	1.04	100	97.5	90	110	
B	11	1	nogas	477.435	3.083	2414326	1.44	500	95.5	90	110	
Si	28	1	nogas	4858.930	8.263	8996519	0.34	5000	97.2	90	110	
Ca	43	1	nogas	10122.982	6.678	405969	1.43	10000	101.2	90	110	
Ca	44	1	nogas	9984.792	7.091	6618989	2.73	10000	99.8	90	110	
Fe	56	1	nogas	9999.599	6.199	255341881	2.30	10000	100.0	90	110	
Se	77	1	nogas	143.152	11.852	70687	1.79	100	143.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.428	5.166	30139	1.97	100	98.4	90	110	
Mo	95	1	nogas	97.808	6.395	590202	2.44	100	97.8	90	110	
Sn	118	1	nogas	97.759	5.733	820675	1.46	100	97.8	90	110	
Ba	137	1	nogas	98.679	5.642	453094	1.40	100	98.7	90	110	
Sb	121	2	He	102.284	0.925	731716	0.70	100	102.3	90	110	
Li	7	1	nogas	100.620	6.713	1752642	6.68	100	100.6	90	110	
P	31	1	nogas	468.581	6.244	1084305	0.63	500	93.7	90	110	
La	139	1	nogas	171.191	8.022	797	5.66	100	171.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-340.457	-107.750	37	15.75	100	-340.5	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	1225042	4.18	1282255	95.54	70	125	
Ge	72	1	nogas	3756868	5.24	3894467	96.47	70	125	
In	115	1	nogas	3321849	4.13	3488791	95.21	70	125	
Bi	209	1	nogas	2400134	3.79	2439864	98.37	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1264016	0.88	1316692	96.00	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	188_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:37:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	29.2	620	17.4	1	
Na	23	1	nogas	34.587	30.8	1519927	4.9	100	
Mg	24	1	nogas	6.666	34.2	120482	17.0	100	
Al	27	1	nogas	-0.061	-268.9	27981	2.2	5	
K	39	1	nogas	9.972	407.9	10080521	0.5	100	
Ti	47	1	nogas	0.021	345.2	473	23.7	2.5	
V	51	1	nogas	8.096	25.7	751652	2.2	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.469	44.5	66211	2.2	2.5	
Mn	55	1	nogas	0.126	78.3	31050	2.2	2.5	
Co	59	1	nogas	0.061	24.7	2077	7.3	2.5	
Ni	60	1	nogas	-0.342	-6.0	1263	9.8	2.5	
Cu	63	1	nogas	0.062	54.8	3824	1.7	2	
Zn	66	1	nogas	-0.090	-97.5	1743	11.8	2.5	
As	75	1	nogas	5.704	28.7	123066	2.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.122	72.5	4711	40.7	2.5	
Ag	107	1	nogas	0.052	30.2	817	16.7	2.5	
Cd	111	1	nogas	0.057	21.4	200	8.7	1	
Sb	121	1	nogas	0.377	13.0	5764	1.8	2.5	
Tl	205	1	nogas	0.519	55.4	10348	49.0	1	
Pb	208	1	nogas	0.059	22.2	2070	15.7	2.5	
U	238	1	nogas	0.125	42.8	3190	38.2	2.5	
[Pb]	206	1	nogas	0.053	18.9	543	10.5	2.5	
[Pb]	207	1	nogas	0.057	16.5	460	15.2	2.5	
Na	23	2	He	14.843	1.5	110605	2.0	100	
Mg	24	2	He	4.782	6.8	7755	4.5	100	
Al	27	2	He	-0.946	-8.6	860	7.3	5	
K	39	2	He	-26.735	-5.6	224798	0.9	100	
Ca	43	2	He	-0.974	-375.1	63	24.1	100	
Ca	44	2	He	-6.969	-26.2	1940	7.1	100	
V	51	2	He	0.297	13.7	10582	1.2	2.5	
Cr	52	2	He	0.000	-31541.9	6061	0.6	2.5	
Mn	55	2	He	-0.020	-97.6	1553	6.2	2.5	
Fe	56	2	He	4.728	1.5	65834	3.1	100	
Co	59	2	He	0.045	5.7	757	2.8	2.5	
Ni	60	2	He	-0.195	-4.7	327	9.8	2.5	
Cu	63	2	He	-0.020	-121.5	2000	9.0	2	
Zn	66	2	He	-0.308	-7.0	687	8.0	2.5	
As	75	2	He	0.107	14.5	578	3.8	2.5	
Se	78	2	He	0.622	14.9	197	7.4	2	
B	11	1	nogas	7.338	30.2	58096	10.7	10	
Si	28	1	nogas	198.732	121.5	2899797	0.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	6.635	81.1	1173	7.7	100	
Ca	44	1	nogas	-144.025	-14.7	152428	0.8	100	
Fe	56	1	nogas	-5.382	-276.9	3816707	0.3	100	
Se	77	1	nogas	41.355	28.1	38905	2.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.182	150.9	233	32.7	2	
Mo	95	1	nogas	0.321	38.1	1933	26.2	2.5	
Sn	118	1	nogas	0.255	44.2	3290	16.8	5	
Ba	137	1	nogas	0.054	59.2	543	12.5	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.322	14.9	2964	12.5	2.5	
P	31	1	nogas	5.795	91.2	125835	1.0	10	
La	139	1	nogas	0.970	992.3	70	65.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-1802.184	-33.3	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	1303896	9.48	1282255	101.69	70	125	
Ge	72	1	nogas	3453187	8.54	3894467	88.67	70	125	
In	115	1	nogas	3189815	11.84	3488791	91.43	70	125	
Bi	209	1	nogas	2307547	4.04	2439864	94.58	70	125	
Ge	72	2	He	1262213	2.41	1316692	95.86	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	196_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:53:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	100.385	5.187	804393	1.32	100	100.4	90	110	
Na	23	1	nogas	10728.841	6.562	275697789	1.93	10000	107.3	90	110	
Mg	24	1	nogas	10660.439	10.872	176566691	2.71	10000	106.6	90	110	
Al	27	1	nogas	102.718	5.758	2133353	1.10	100	102.7	90	110	
K	39	1	nogas	9812.289	5.986	238649264	1.92	10000	98.1	90	110	
Ti	47	1	nogas	98.281	6.683	191756	2.11	100	98.3	90	110	
V	51	1	nogas	116.181	6.769	3793067	2.44	100	116.2	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.175	4.342	2438017	0.54	100	101.2	90	110	
Mn	55	1	nogas	100.174	5.502	2947053	0.81	100	100.2	90	110	
Co	59	1	nogas	101.134	8.870	2493294	4.22	100	101.1	90	110	
Ni	60	1	nogas	98.225	7.558	538797	3.08	100	98.2	90	110	
Cu	63	1	nogas	99.808	5.047	1277178	0.98	100	99.8	90	110	
Zn	66	1	nogas	100.817	4.064	435969	0.62	100	100.8	90	110	
As	75	1	nogas	103.599	6.311	709951	0.80	100	103.6	90	110	
Sr	88	1	nogas	103.212	9.253	3074715	4.60	100	103.2	90	110	
Ag	107	1	nogas	100.318	6.310	1459934	1.78	100	100.3	90	110	
Cd	111	1	nogas	100.478	3.799	312976	0.47	100	100.5	90	110	
Sb	121	1	nogas	100.543	7.653	1380292	4.10	100	100.5	90	110	
Tl	205	1	nogas	104.160	2.974	1983450	2.83	100	104.2	90	110	
Pb	208	1	nogas	110.778	2.601	2736500	2.60	100	110.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	107.095	4.968	2670509	4.41	100	107.1	90	110	
[Pb]	206	1	nogas	104.656	0.731	679484	0.91	100	104.7	90	110	
[Pb]	207	1	nogas	102.173	1.722	582700	1.50	100	102.2	90	110	
Na	23	2	He	9705.659	0.719	21415171	1.02	10000	97.1	90	110	
Mg	24	2	He	9879.341	1.666	12079742	1.49	10000	98.8	90	110	
Al	27	2	He	99.997	0.192	70328	0.71	100	100.0	90	110	
K	39	2	He	9993.036	0.934	13306476	0.92	10000	99.9	90	110	
Ca	43	2	He	9906.353	0.694	36165	1.39	10000	99.1	90	110	
Ca	44	2	He	10044.847	1.114	605437	1.81	10000	100.4	90	110	
V	51	2	He	98.917	1.592	836571	0.97	100	98.9	90	110	
Cr	52	2	He	97.104	1.732	904855	0.96	100	97.1	90	110	
Mn	55	2	He	99.834	0.301	663921	0.49	100	99.8	90	110	
Fe	56	2	He	10054.786	1.428	81504627	1.95	10000	100.5	90	110	
Co	59	2	He	98.116	1.281	1221823	0.59	100	98.1	90	110	
Ni	60	2	He	99.611	1.508	309005	0.86	100	99.6	90	110	
Cu	63	2	He	96.556	2.171	766364	1.41	100	96.6	90	110	
Zn	66	2	He	98.228	2.065	180389	1.44	100	98.2	90	110	
As	75	2	He	98.830	0.997	173495	1.03	100	98.8	90	110	
Se	78	2	He	96.679	2.776	14206	2.00	100	96.7	90	110	
B	11	1	nogas	471.321	4.129	2365242	0.29	500	94.3	90	110	
Si	28	1	nogas	4777.480	7.160	8831602	0.70	5000	95.5	90	110	
Ca	43	1	nogas	10035.484	6.378	399594	2.08	10000	100.4	90	110	
Ca	44	1	nogas	9841.129	6.887	6479651	2.02	10000	98.4	90	110	
Fe	56	1	nogas	10049.763	4.613	254808889	0.77	10000	100.5	90	110	
Se	77	1	nogas	149.018	10.717	71801	1.76	100	149.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	94.746	7.112	28790	3.14	100	94.7	90	110	
Mo	95	1	nogas	95.937	7.210	574493	2.80	100	95.9	90	110	
Sn	118	1	nogas	99.177	6.150	796123	2.64	100	99.2	90	110	
Ba	137	1	nogas	102.371	4.203	449659	0.63	100	102.4	90	110	
Sb	121	2	He	103.184	0.823	711553	0.60	100	103.2	90	110	
Li	7	1	nogas	99.628	3.027	1724125	4.85	100	99.6	90	110	
P	31	1	nogas	462.400	5.404	1064026	0.39	500	92.5	90	110	
La	139	1	nogas	175.938	12.345	780	7.69	100	175.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-650.008	-156.472	30	57.74	100	-650.0	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	1215936	4.09	1282255	94.83	70	125	
Ge	72	1	nogas	3728420	4.58	3894467	95.74	70	125	
In	115	1	nogas	3176162	3.66	3488791	91.04	70	125	
Bi	209	1	nogas	2313005	0.73	2439864	94.80	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1218471	0.79	1316692	92.54	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	197_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:55:45-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	47.9	563	32.7	1	
Na	23	1	nogas	17.096	51.4	1043759	7.6	100	
Mg	24	1	nogas	7.078	26.2	122725	10.9	100	
Al	27	1	nogas	-0.103	-143.5	26789	3.1	5	
K	39	1	nogas	6.451	565.3	9853289	0.6	100	
Ti	47	1	nogas	0.051	28.2	523	2.2	2.5	
V	51	1	nogas	9.990	19.4	787701	2.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.501	40.1	65867	1.8	2.5	
Mn	55	1	nogas	0.122	99.7	30415	3.3	2.5	
Co	59	1	nogas	0.059	12.9	2017	2.0	2.5	
Ni	60	1	nogas	-0.388	-5.8	1013	9.4	2.5	
Cu	63	1	nogas	0.041	17.4	3547	7.1	2	
Zn	66	1	nogas	-0.142	-25.3	1523	3.0	2.5	
As	75	1	nogas	6.711	13.2	126758	4.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.074	27.1	3450	8.3	2.5	
Ag	107	1	nogas	0.054	9.1	837	1.8	2.5	
Cd	111	1	nogas	0.048	39.3	163	25.5	1	
Sb	121	1	nogas	0.176	11.9	3174	1.0	2.5	
Tl	205	1	nogas	0.479	66.3	9204	56.8	1	
Pb	208	1	nogas	0.061	30.5	2110	21.8	2.5	
U	238	1	nogas	0.134	41.6	3304	34.2	2.5	
[Pb]	206	1	nogas	0.055	48.9	537	25.4	2.5	
[Pb]	207	1	nogas	0.067	63.4	493	41.0	2.5	
Na	23	2	He	2.593	63.9	81503	2.9	100	
Mg	24	2	He	6.774	56.4	10238	50.5	100	
Al	27	2	He	0.083	2108.6	1599	81.8	5	
K	39	2	He	-31.315	-6.5	218819	1.2	100	
Ca	43	2	He	0.341	1221.3	67	17.3	100	
Ca	44	2	He	-10.167	-16.5	1720	10.5	100	
V	51	2	He	0.377	28.9	11103	3.0	2.5	
Cr	52	2	He	0.017	234.3	6134	6.2	2.5	
Mn	55	2	He	-0.036	-15.5	1423	2.7	2.5	
Fe	56	2	He	4.931	8.2	66556	4.2	100	
Co	59	2	He	0.041	10.4	690	3.8	2.5	
Ni	60	2	He	-0.195	-4.3	323	9.9	2.5	
Cu	63	2	He	-0.067	-50.8	1603	22.0	2	
Zn	66	2	He	-0.317	-4.9	660	9.5	2.5	
As	75	2	He	0.110	30.8	573	5.2	2.5	
Se	78	2	He	0.667	28.5	200	10.4	2	
B	11	1	nogas	6.252	27.6	50320	9.2	10	
Si	28	1	nogas	236.291	72.7	2901203	0.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	5.624	61.0	1123	5.7	100	
Ca	44	1	nogas	-145.209	-11.9	149471	1.1	100	
Fe	56	1	nogas	-9.108	-123.9	3676579	0.4	100	
Se	77	1	nogas	49.518	12.3	40412	3.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.116	164.0	210	17.2	2	
Mo	95	1	nogas	0.271	27.8	1647	17.1	2.5	
Sn	118	1	nogas	0.250	33.9	3114	11.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.079	59.5	620	23.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.089	17.9	1273	5.0	2.5	
P	31	1	nogas	5.437	85.1	123262	0.4	10	
La	139	1	nogas	10.316	70.6	100	26.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	31.291	3797.9	40	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	1249703	8.20	1282255	97.46	70	125	
Ge	72	1	nogas	3396272	6.90	3894467	87.21	70	125	
In	115	1	nogas	3034418	9.11	3488791	86.98	70	125	
Bi	209	1	nogas	2248391	6.53	2439864	92.15	70	125	
Ge	72	2	He	1245471	5.23	1316692	94.59	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\010
Acq Date Time	2019-01-09T18:17:27-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	98.037	5.381	838446	3.46	100	98.0	90	110	
Na	23	1	nogas	10880.408	7.348	307196899	1.87	10000	108.8	90	110	
Mg	24	1	nogas	10527.198	9.673	191831438	3.59	10000	105.3	90	110	
Al	27	1	nogas	105.602	6.508	2330140	3.65	100	105.6	90	110	
K	39	1	nogas	9877.857	5.006	255317914	1.50	10000	98.8	90	110	
Ti	47	1	nogas	97.907	4.917	203159	2.42	100	97.9	90	110	
V	51	1	nogas	126.907	9.511	4343235	4.86	100	126.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.711	4.062	2629576	0.82	100	102.7	90	110	
Mn	55	1	nogas	104.516	5.567	3266806	2.40	100	104.5	90	110	
Co	59	1	nogas	101.668	6.888	2666062	3.61	100	101.7	90	110	
Ni	60	1	nogas	100.070	5.312	583798	2.60	100	100.1	90	110	
Cu	63	1	nogas	101.845	7.053	1384481	3.79	100	101.8	90	110	
Zn	66	1	nogas	98.680	5.651	453404	2.32	100	98.7	90	110	
As	75	1	nogas	111.094	6.011	801641	2.62	100	111.1	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	102.091	4.370	3237198	1.33	100	102.1	90	110	
Ag	107	1	nogas	98.957	5.390	1531554	3.76	100	99.0	90	110	
Cd	111	1	nogas	98.446	5.181	325935	0.79	100	98.4	90	110	
Sb	121	1	nogas	103.932	2.922	1518152	1.52	100	103.9	90	110	
Tl	205	1	nogas	98.445	3.412	2028629	0.90	100	98.4	90	110	
Pb	208	1	nogas	114.974	1.014	2840142	1.01	100	115.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	105.985	4.754	2860067	3.00	100	106.0	90	110	
[Pb]	206	1	nogas	99.480	3.840	698816	0.18	100	99.5	90	110	
[Pb]	207	1	nogas	99.523	3.848	614119	0.38	100	99.5	90	110	
Na	23	2	He	9397.619	0.863	23336094	1.15	10000	94.0	90	110	
Mg	24	2	He	9335.668	0.168	12845536	0.45	10000	93.4	90	110	
Al	27	2	He	95.931	1.294	75989	1.49	100	95.9	90	110	
K	39	2	He	10952.987	2.644	14559774	2.60	10000	109.5	90	110	
Ca	43	2	He	9637.710	3.734	39595	4.00	10000	96.4	90	110	
Ca	44	2	He	9823.715	0.599	666303	0.57	10000	98.2	90	110	
V	51	2	He	95.588	1.385	910052	1.53	100	95.6	90	110	
Cr	52	2	He	92.815	1.028	973619	1.13	100	92.8	90	110	
Mn	55	2	He	96.696	0.433	723682	0.58	100	96.7	90	110	
Fe	56	2	He	9570.953	0.983	87300422	1.22	10000	95.7	90	110	
Co	59	2	He	94.917	2.947	1330182	3.14	100	94.9	90	110	
Ni	60	2	He	95.247	1.613	332557	1.88	100	95.2	90	110	
Cu	63	2	He	93.817	0.634	838069	0.78	100	93.8	90	110	
Zn	66	2	He	95.759	0.740	197941	1.00	100	95.8	90	110	
As	75	2	He	94.853	0.551	187394	0.69	100	94.9	90	110	
Se	78	2	He	93.526	1.248	15470	1.43	100	93.5	90	110	
B	11	1	nogas	462.074	7.368	2474037	5.51	500	92.4	90	110	
Si	28	1	nogas	4822.998	4.928	9450017	1.35	5000	96.5	90	110	
Ca	43	1	nogas	10198.852	6.236	431645	2.93	10000	102.0	90	110	
Ca	44	1	nogas	9921.436	5.415	6944019	2.11	10000	99.2	90	110	
Fe	56	1	nogas	10180.914	5.950	274202214	2.55	10000	101.8	90	110	
Se	77	1	nogas	178.339	12.929	84891	4.98	100	178.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.645	5.800	32503	2.82	100	100.6	90	110	
Mo	95	1	nogas	95.043	5.072	605302	1.81	100	95.0	90	110	
Sn	118	1	nogas	99.202	5.215	847034	2.66	100	99.2	90	110	
Ba	137	1	nogas	103.727	6.405	484133	1.73	100	103.7	90	110	
Sb	121	2	He	97.294	0.856	755041	0.72	100	97.3	90	110	
Li	7	1	nogas	98.537	4.913	1819643	4.62	100	98.5	90	110	
P	31	1	nogas	463.673	5.387	1133745	2.40	500	92.7	90	110	
La	139	1	nogas	185.573	17.988	870	13.06	100	185.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-97.673	-1072.327	43	48.04	100	-97.7	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	1296953	2.59	1282255	101.15	70	125	
Ge	72	1	nogas	3960913	3.20	3894467	101.71	70	125	
In	115	1	nogas	3378141	4.59	3488791	96.83	70	125	
Bi	209	1	nogas	2504953	3.80	2439864	102.67	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1371106	0.31	1316692	104.13	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	209_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:19:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.065	18.6	640	5.6	1	
Na	23	1	nogas	182.661	18.2	5341927	3.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	15.477	19.7	270395	6.6	100	
Al	27	1	nogas	-0.120	-119.1	28178	2.0	5	
K	39	1	nogas	-4.019	-1373.0	10227416	1.4	100	
Ti	47	1	nogas	0.109	48.0	663	7.6	2.5	
V	51	1	nogas	7.201	26.3	764322	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.333	75.8	66251	2.2	2.5	
Mn	55	1	nogas	0.103	115.7	31844	1.8	2.5	
Co	59	1	nogas	0.070	12.5	2424	3.7	2.5	
Ni	60	1	nogas	-0.006	-542.8	3107	7.6	2.5	
Cu	63	1	nogas	0.711	30.2	11921	11.8	2	
Zn	66	1	nogas	-0.069	-53.0	1927	2.7	2.5	
As	75	1	nogas	5.362	35.5	126935	2.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.336	10.6	11230	1.8	2.5	
Ag	107	1	nogas	0.054	11.5	897	7.2	2.5	
Cd	111	1	nogas	0.064	20.3	227	17.8	1	
Sb	121	1	nogas	0.166	20.9	3244	3.4	2.5	
Tl	205	1	nogas	0.517	54.2	10004	41.9	1	
Pb	208	1	nogas	0.066	20.9	2237	15.2	2.5	
U	238	1	nogas	0.144	33.0	3604	23.5	2.5	
[Pb]	206	1	nogas	0.058	28.5	570	9.8	2.5	
[Pb]	207	1	nogas	0.064	34.4	490	16.7	2.5	
Na	23	2	He	128.052	1.6	367704	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	11.715	1.1	16507	1.8	100	
Al	27	2	He	-0.948	-11.0	857	8.6	5	
K	39	2	He	-29.722	-1.0	220899	0.2	100	
Ca	43	2	He	18.614	42.7	137	21.1	100	
Ca	44	2	He	3.726	107.9	2600	10.2	100	
V	51	2	He	0.302	9.5	10611	2.6	2.5	
Cr	52	2	He	0.025	119.1	6288	4.3	2.5	
Mn	55	2	He	0.010	389.1	1753	14.7	2.5	
Fe	56	2	He	6.383	4.6	79547	2.5	100	
Co	59	2	He	0.048	13.9	790	10.0	2.5	
Ni	60	2	He	-0.160	-4.0	437	5.3	2.5	
Cu	63	2	He	0.259	17.8	4281	8.0	2	
Zn	66	2	He	-0.267	-26.6	760	16.8	2.5	
As	75	2	He	0.099	19.8	561	5.5	2.5	
Se	78	2	He	0.726	15.6	212	8.4	2	
B	11	1	nogas	6.262	35.3	51103	12.1	10	
Si	28	1	nogas	156.707	200.1	2982687	2.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	15.250	5.4	1577	10.9	100	
Ca	44	1	nogas	-20.507	-1022.1	237312	57.0	100	
Fe	56	1	nogas	6.230	331.5	4272779	2.1	100	
Se	77	1	nogas	40.092	26.4	40479	5.1	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.180	123.3	243	25.1	2	
Mo	95	1	nogas	0.285	40.7	1810	25.2	2.5	
Sn	118	1	nogas	0.278	39.8	3547	16.6	5	
Ba	137	1	nogas	0.302	10.0	1667	2.4	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.086	4.5	1273	1.8	2.5	
P	31	1	nogas	1.675	462.6	123430	1.7	10	
La	139	1	nogas	17.102	29.3	137	22.4	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-1066.767	-73.1	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	1273668	9.68	1282255	99.33	70	125	
Ge	72	1	nogas	3623117	10.25	3894467	93.03	70	125	
In	115	1	nogas	3241182	10.03	3488791	92.90	70	125	
Bi	209	1	nogas	2287895	8.92	2439864	93.77	70	125	
Ge	72	2	He	1259650	0.90	1316692	95.67	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	213_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:27:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	99.208	4.300	783290	1.63	100	99.2	90	110	
Na	23	1	nogas	9956.954	0.832	268644298	1.55	10000	99.6	90	110	
Mg	24	1	nogas	9985.212	3.382	173984100	2.89	10000	99.9	90	110	
Al	27	1	nogas	103.310	3.708	2125480	3.96	100	103.3	90	110	
K	39	1	nogas	9835.636	2.768	236922205	2.22	10000	98.4	90	110	
Ti	47	1	nogas	99.207	3.430	191758	2.14	100	99.2	90	110	
V	51	1	nogas	114.690	4.221	3715574	2.50	100	114.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	103.345	1.026	2464543	0.56	100	103.3	90	110	
Mn	55	1	nogas	101.960	2.480	2970768	2.52	100	102.0	90	110	
Co	59	1	nogas	103.228	1.026	2523550	1.24	100	103.2	90	110	
Ni	60	1	nogas	101.598	0.662	552269	0.91	100	101.6	90	110	
Cu	63	1	nogas	101.748	3.653	1289804	4.62	100	101.7	90	110	
Zn	66	1	nogas	98.265	0.861	420815	1.40	100	98.3	90	110	
As	75	1	nogas	103.954	1.301	705303	0.85	100	104.0	90	110	
Sr	88	1	nogas	103.350	1.364	3053460	1.76	100	103.4	90	110	
Ag	107	1	nogas	100.355	2.735	1446757	1.31	100	100.4	90	110	
Cd	111	1	nogas	95.369	1.287	313802	1.03	100	95.4	90	110	
Sb	121	1	nogas	102.796	2.462	1398349	1.41	100	102.8	90	110	
Tl	205	1	nogas	99.063	2.193	1923118	2.08	100	99.1	90	110	
Pb	208	1	nogas	107.143	1.535	2646722	1.53	100	107.1	90	110	
U	238	1	nogas	102.861	4.220	2613945	1.81	100	102.9	90	110	
[Pb]	206	1	nogas	100.005	4.772	661493	2.11	100	100.0	90	110	
[Pb]	207	1	nogas	97.580	4.373	567020	1.51	100	97.6	90	110	
Na	23	2	He	9378.091	1.567	21525486	0.64	10000	93.8	90	110	
Mg	24	2	He	9422.415	1.266	11984608	1.13	10000	94.2	90	110	
Al	27	2	He	95.962	1.162	70263	0.60	100	96.0	90	110	
K	39	2	He	10330.926	1.858	13747620	1.82	10000	103.3	90	110	
Ca	43	2	He	9685.007	1.951	36780	2.11	10000	96.9	90	110	
Ca	44	2	He	9972.782	0.538	625322	1.99	10000	99.7	90	110	
V	51	2	He	97.804	2.065	860441	0.40	100	97.8	90	110	
Cr	52	2	He	93.716	1.949	908618	1.16	100	93.7	90	110	
Mn	55	2	He	98.047	1.670	678259	1.14	100	98.0	90	110	
Fe	56	2	He	9870.355	1.062	83224274	1.22	10000	98.7	90	110	
Co	59	2	He	97.565	3.492	1263512	1.80	100	97.6	90	110	
Ni	60	2	He	98.417	1.659	317585	0.78	100	98.4	90	110	
Cu	63	2	He	96.476	1.197	796577	0.73	100	96.5	90	110	
Zn	66	2	He	99.094	0.850	189330	2.25	100	99.1	90	110	
As	75	2	He	97.743	1.443	178481	0.38	100	97.7	90	110	
Se	78	2	He	96.576	0.830	14763	1.03	100	96.6	90	110	
B	11	1	nogas	451.711	3.784	2234009	1.85	500	90.3	90	110	
Si	28	1	nogas	4912.676	1.576	8912951	1.28	5000	98.3	90	110	
Ca	43	1	nogas	10423.744	2.790	411160	2.41	10000	104.2	90	110	
Ca	44	1	nogas	10047.484	2.553	6549189	1.54	10000	100.5	90	110	
Fe	56	1	nogas	10165.844	1.359	255210897	1.96	10000	101.7	90	110	
Se	77	1	nogas	139.638	2.712	68572	1.16	100	139.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.032	0.619	29812	1.54	100	99.0	90	110	
Mo	95	1	nogas	96.496	1.054	572726	1.88	100	96.5	90	110	
Sn	118	1	nogas	93.788	1.117	795923	2.29	100	93.8	90	110	
Ba	137	1	nogas	96.679	1.274	448647	1.02	100	96.7	90	110	
Sb	121	2	He	99.553	0.898	714191	1.44	100	99.6	90	110	
Li	7	1	nogas	100.557	7.768	1709943	3.73	100	100.6	90	110	
P	31	1	nogas	459.621	1.780	1048173	1.58	500	91.9	90	110	
La	139	1	nogas	207.299	8.428	960	6.34	100	207.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1616.505	-55.998	13	114.56	100	-1616.5	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	1198015	4.94	1282255	93.43	70	125	
Ge	72	1	nogas	3687390	1.56	3894467	94.68	70	125	
In	115	1	nogas	3352680	2.27	3488791	96.10	70	125	
Bi	209	1	nogas	2359125	3.91	2439864	96.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1267581	1.73	1316692	96.27	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	214_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:29:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.071	38.0	707	28.9	1	
Na	23	1	nogas	80.765	18.1	2909590	8.7	100	
Mg	24	1	nogas	8.408	21.5	163284	14.5	100	
Al	27	1	nogas	-0.156	-16.3	28802	2.1	5	
K	39	1	nogas	-44.026	-6.4	9795311	0.7	100	
Ti	47	1	nogas	0.072	102.0	623	22.5	2.5	
V	51	1	nogas	4.879	23.3	734625	4.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.109	22.7	64044	1.9	2.5	
Mn	55	1	nogas	0.010	572.7	30642	5.0	2.5	
Co	59	1	nogas	0.068	6.3	2484	3.8	2.5	
Ni	60	1	nogas	-0.283	-10.9	1710	10.1	2.5	
Cu	63	1	nogas	0.174	12.0	5651	4.0	2	
Zn	66	1	nogas	-0.107	-33.4	1850	8.6	2.5	
As	75	1	nogas	3.495	29.3	121794	5.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.103	10.9	4724	6.6	2.5	
Ag	107	1	nogas	0.059	10.4	1000	8.2	2.5	
Cd	111	1	nogas	0.069	9.7	257	2.2	1	
Sb	121	1	nogas	0.150	23.9	3180	15.4	2.5	
Tl	205	1	nogas	0.632	64.3	13661	65.9	1	
Pb	208	1	nogas	0.082	24.6	2637	18.9	2.5	
U	238	1	nogas	0.153	43.7	4227	46.8	2.5	
[Pb]	206	1	nogas	0.060	35.5	637	28.5	2.5	
[Pb]	207	1	nogas	0.074	16.2	597	13.5	2.5	
Na	23	2	He	50.767	5.9	197975	2.6	100	
Mg	24	2	He	6.064	7.2	9649	4.1	100	
Al	27	2	He	-0.971	-5.9	867	5.8	5	
K	39	2	He	-27.625	-5.6	223637	0.9	100	
Ca	43	2	He	-2.213	-243.4	60	33.3	100	
Ca	44	2	He	-6.334	-65.4	2040	15.1	100	
V	51	2	He	0.290	3.8	10835	2.5	2.5	
Cr	52	2	He	-0.031	-126.4	5941	8.6	2.5	
Mn	55	2	He	-0.025	-15.5	1560	1.3	2.5	
Fe	56	2	He	6.329	5.3	81532	1.5	100	
Co	59	2	He	0.051	8.4	857	7.9	2.5	
Ni	60	2	He	-0.187	-13.6	360	22.0	2.5	
Cu	63	2	He	0.049	63.9	2647	10.8	2	
Zn	66	2	He	-0.295	-9.8	730	6.0	2.5	
As	75	2	He	0.111	30.9	602	10.4	2.5	
Se	78	2	He	0.623	40.4	203	19.6	2	
B	11	1	nogas	6.200	20.8	52309	10.1	10	
Si	28	1	nogas	30.784	186.2	2973304	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.549	11.5	1210	0.8	100	
Ca	44	1	nogas	-178.323	-1.9	145288	0.6	100	
Fe	56	1	nogas	-16.006	-45.0	3921997	4.1	100	
Se	77	1	nogas	28.069	11.8	38969	2.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.162	38.1	250	6.9	2	
Mo	95	1	nogas	0.388	46.7	2560	42.5	2.5	
Sn	118	1	nogas	0.316	49.2	4067	25.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.101	15.1	813	8.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.121	16.2	1570	8.1	2.5	
P	31	1	nogas	-5.978	-7.6	113843	0.3	10	
La	139	1	nogas	14.473	50.7	133	31.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	241.215	1088.0	50	103.9	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	1297118	3.19	1282255	101.16	70	125	
Ge	72	1	nogas	3772455	1.01	3894467	96.87	70	125	
In	115	1	nogas	3421466	6.78	3488791	98.07	70	125	
Bi	209	1	nogas	2465753	5.10	2439864	101.06	70	125	
Ge	72	2	He	1298978	2.11	1316692	98.65	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	221CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:12:49-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	230	6.82
Na	23	1	nogas	568425	0.00
Mg	24	1	nogas	34771	0.01
Al	27	1	nogas	28582	0.01
K	39	1	nogas	9206419	0.00
Ti	47	1	nogas	407	9.39
V	51	1	nogas	605010	0.00
Cr	52	1	nogas	61174	0.00
Mn	55	1	nogas	31848	0.01
Co	59	1	nogas	850	0.28
Ni	60	1	nogas	877	2.15
Cu	63	1	nogas	2634	0.19
Zn	66	1	nogas	2587	0.22
As	75	1	nogas	104709	0.00
Sr	88	1	nogas	1570	0.31
Ag	107	1	nogas	200	5.00
Cd	111	1	nogas	57	47.57
Sb	121	1	nogas	437	2.69
Tl	205	1	nogas	753	0.57
Pb	208	1	nogas	510	0.77
[Pb]	206	1	nogas	143	19.67
[Pb]	207	1	nogas	123	10.04
Na	23	2	He	56681	0.00
Mg	24	2	He	2590	0.03
Al	27	2	He	1027	0.47
K	39	2	He	222827	0.00
Ca	43	2	He	73	42.94
Ca	44	2	He	1717	0.20
V	51	2	He	9695	0.03
Cr	52	2	He	7562	0.06
Mn	55	2	He	2274	0.04
Fe	56	2	He	34035	0.00
Co	59	2	He	200	19.53
Ni	60	2	He	237	10.91
Cu	63	2	He	1467	0.26
Zn	66	2	He	897	1.58
As	75	2	He	469	3.15
Se	78	2	He	213	3.14
B	11	1	nogas	42865	0.01
Si	28	1	nogas	3213274	0.00
Ca	43	1	nogas	1040	0.37
Ca	44	1	nogas	120199	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3548189	0.00
Se	77	1	nogas	33758	0.01
Se	82	1	nogas	200	7.50
Mo	95	1	nogas	440	5.96
Sn	118	1	nogas	1440	0.86
Ba	137	1	nogas	473	5.81
Sb	121	2	He	250	7.33
Li	7	1	nogas	96916	0.00
P	31	1	nogas	96780	0.00
La	139	1	nogas	100	26.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1118108	2.38
Ge	72	1	nogas	3396393	1.78
In	115	1	nogas	3166421	2.68
Bi	209	1	nogas	2159119	4.45
Ge	72	2	He	1189986	1.34

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	222CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:14:47-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	12951	0.07
Na	23	1	nogas	5161579	0.00
Mg	24	1	nogas	3062203	0.00
Al	27	1	nogas	70137	0.00
K	39	1	nogas	13234496	0.00
Ti	47	1	nogas	3724	0.31
V	51	1	nogas	627480	0.00
Cr	52	1	nogas	99013	0.00
Mn	55	1	nogas	81311	0.00
Co	59	1	nogas	45032	0.00
Ni	60	1	nogas	10400	0.06
Cu	63	1	nogas	26676	0.00
Zn	66	1	nogas	9149	0.04
As	75	1	nogas	107918	0.00
Sr	88	1	nogas	55908	0.01
Ag	107	1	nogas	26724	0.01
Cd	111	1	nogas	5634	0.03
Sb	121	1	nogas	25092	0.01
Tl	205	1	nogas	33285	0.01
Pb	208	1	nogas	45619	0.01
[Pb]	206	1	nogas	11584	0.05
[Pb]	207	1	nogas	9826	0.04
Na	23	2	He	454872	0.00
Mg	24	2	He	227154	0.00
Al	27	2	He	2407	0.18
K	39	2	He	474435	0.00
Ca	43	2	He	740	2.11
Ca	44	2	He	13395	0.05
V	51	2	He	24526	0.00
Cr	52	2	He	25151	0.00
Mn	55	2	He	14352	0.01
Fe	56	2	He	1568240	0.00
Co	59	2	He	23368	0.01
Ni	60	2	He	6081	0.09
Cu	63	2	He	17085	0.02
Zn	66	2	He	4127	0.14
As	75	2	He	3740	0.06
Se	78	2	He	450	2.77
B	11	1	nogas	77493	0.00
Si	28	1	nogas	3296194	0.00

Calibration Standard Report

Ca	43	1	nogas	8029	0.05
Ca	44	1	nogas	231918	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8030861	0.00
Se	77	1	nogas	32509	0.01
Se	82	1	nogas	757	1.75
Mo	95	1	nogas	10967	0.04
Sn	118	1	nogas	14800	0.00
Ba	137	1	nogas	8232	0.03
Sb	121	2	He	13512	0.01
P	31	1	nogas	116175	0.00
La	139	1	nogas	77	54.69

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1132003	3.61	1118108	101.24	70	125	
Ge	72	1	nogas	3451423	1.51	3396393	101.62	70	125	
In	115	1	nogas	3060260	1.77	3166421	96.65	70	125	
Bi	209	1	nogas	2087428	3.76	2159119	96.68	70	125	
Ge	72	2	He	1209005	1.03	1189986	101.60	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	223CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:16:46-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	32415	0.00
Na	23	1	nogas	12048279	0.00
Mg	24	1	nogas	7538756	0.00
Al	27	1	nogas	129951	0.00
K	39	1	nogas	19150063	0.00
Ti	47	1	nogas	9079	0.09
V	51	1	nogas	774817	0.00
Cr	52	1	nogas	163294	0.00
Mn	55	1	nogas	157221	0.00
Co	59	1	nogas	110361	0.00
Ni	60	1	nogas	25755	0.01
Cu	63	1	nogas	63233	0.00
Zn	66	1	nogas	23025	0.00
As	75	1	nogas	136419	0.00
Sr	88	1	nogas	135701	0.00
Ag	107	1	nogas	64756	0.00
Cd	111	1	nogas	13065	0.00
Sb	121	1	nogas	62619	0.00
Tl	205	1	nogas	85235	0.00
Pb	208	1	nogas	115890	0.00
[Pb]	206	1	nogas	29133	0.01
[Pb]	207	1	nogas	25657	0.02
Na	23	2	He	1064301	0.00
Mg	24	2	He	574077	0.00
Al	27	2	He	4561	0.22
K	39	2	He	847539	0.00
Ca	43	2	He	1867	0.33
Ca	44	2	He	30806	0.01
V	51	2	He	49152	0.00
Cr	52	2	He	51963	0.01
Mn	55	2	He	33404	0.00
Fe	56	2	He	3833080	0.00
Co	59	2	He	58698	0.00
Ni	60	2	He	15510	0.02
Cu	63	2	He	38852	0.00
Zn	66	2	He	10486	0.08
As	75	2	He	8887	0.03
Se	78	2	He	883	0.84
B	11	1	nogas	134650	0.00
Si	28	1	nogas	3513153	0.00

Calibration Standard Report

Ca	43	1	nogas	19040	0.01
Ca	44	1	nogas	407153	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	14208575	0.00
Se	77	1	nogas	36924	0.00
Se	82	1	nogas	1447	0.91
Mo	95	1	nogas	26767	0.01
Sn	118	1	nogas	37952	0.00
Ba	137	1	nogas	20960	0.01
Sb	121	2	He	33205	0.02
P	31	1	nogas	144588	0.00
La	139	1	nogas	177	8.06

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1088809	0.87	1118108	97.38	70	125	
Ge	72	1	nogas	3446697	0.22	3396393	101.48	70	125	
In	115	1	nogas	3119463	2.58	3166421	98.52	70	125	
Bi	209	1	nogas	2080980	2.61	2159119	96.38	70	125	
Ge	72	2	He	1200718	1.49	1189986	100.90	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	224CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:18:43-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	64064	0.00
Na	23	1	nogas	22966981	0.00
Mg	24	1	nogas	14609242	0.00
Al	27	1	nogas	217774	0.00
K	39	1	nogas	29317766	0.00
Ti	47	1	nogas	17619	0.01
V	51	1	nogas	988004	0.00
Cr	52	1	nogas	264416	0.00
Mn	55	1	nogas	290107	0.00
Co	59	1	nogas	218865	0.00
Ni	60	1	nogas	49601	0.01
Cu	63	1	nogas	115482	0.00
Zn	66	1	nogas	39760	0.00
As	75	1	nogas	168100	0.00
Sr	88	1	nogas	269474	0.00
Ag	107	1	nogas	125792	0.00
Cd	111	1	nogas	27121	0.01
Sb	121	1	nogas	116824	0.00
Tl	205	1	nogas	163093	0.00
Pb	208	1	nogas	224998	0.00
[Pb]	206	1	nogas	55980	0.00
[Pb]	207	1	nogas	48654	0.00
Na	23	2	He	2003126	0.00
Mg	24	2	He	1086799	0.00
Al	27	2	He	7378	0.03
K	39	2	He	1484694	0.00
Ca	43	2	He	3454	0.16
Ca	44	2	He	59395	0.00
V	51	2	He	87588	0.00
Cr	52	2	He	91312	0.00
Mn	55	2	He	64449	0.00
Fe	56	2	He	7537682	0.00
Co	59	2	He	115807	0.00
Ni	60	2	He	29447	0.00
Cu	63	2	He	75174	0.00
Zn	66	2	He	17826	0.01
As	75	2	He	16823	0.02
Se	78	2	He	1632	0.27
B	11	1	nogas	230916	0.00
Si	28	1	nogas	3700907	0.00

Calibration Standard Report

Ca	43	1	nogas	35781	0.01
Ca	44	1	nogas	677820	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	25443533	0.00
Se	77	1	nogas	39139	0.00
Se	82	1	nogas	2597	0.18
Mo	95	1	nogas	52174	0.00
Sn	118	1	nogas	68111	0.01
Ba	137	1	nogas	40040	0.01
Sb	121	2	He	64181	0.00
P	31	1	nogas	190748	0.00
La	139	1	nogas	207	4.87

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1025689	5.07	1118108	91.73	70	125	
Ge	72	1	nogas	3365060	1.54	3396393	99.08	70	125	
In	115	1	nogas	3075127	0.90	3166421	97.12	70	125	
Bi	209	1	nogas	2059322	0.85	2159119	95.38	70	125	
Ge	72	2	He	1174177	0.70	1189986	98.67	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	226CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:22:39-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1403213	0.00
Na	23	1	nogas	466021727	0.00
Mg	24	1	nogas	289321281	0.00
Al	27	1	nogas	3519046	0.00
K	39	1	nogas	405749434	0.00
Ti	47	1	nogas	338297	0.00
V	51	1	nogas	5299412	0.00
Cr	52	1	nogas	4015508	0.00
Mn	55	1	nogas	4899044	0.00
Co	59	1	nogas	4171223	0.00
Ni	60	1	nogas	943418	0.00
Cu	63	1	nogas	2238244	0.00
Zn	66	1	nogas	758318	0.00
As	75	1	nogas	1137029	0.00
Sr	88	1	nogas	5293077	0.00
Ag	107	1	nogas	2546001	0.00
Cd	111	1	nogas	545440	0.00
Sb	121	1	nogas	2451601	0.00
Tl	205	1	nogas	3325558	0.00
Pb	208	1	nogas	4545095	0.00
[Pb]	206	1	nogas	1132147	0.00
[Pb]	207	1	nogas	993724	0.00
Na	23	2	He	37186881	0.00
Mg	24	2	He	20972273	0.00
Al	27	2	He	124094	0.00
K	39	2	He	24275927	0.00
Ca	43	2	He	67699	0.00
Ca	44	2	He	1117615	0.00
V	51	2	He	1561301	0.00
Cr	52	2	He	1671405	0.00
Mn	55	2	He	1209500	0.00
Fe	56	2	He	145423011	0.00
Co	59	2	He	2259984	0.00
Ni	60	2	He	560479	0.00
Cu	63	2	He	1399280	0.00
Zn	66	2	He	335067	0.00
As	75	2	He	325081	0.00
Se	78	2	He	26766	0.01
B	11	1	nogas	4165631	0.00
Si	28	1	nogas	13931647	0.00

Calibration Standard Report

Ca	43	1	nogas	697231	0.00
Ca	44	1	nogas	11421221	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	426678526	0.00
Se	77	1	nogas	85051	0.00
Se	82	1	nogas	52235	0.00
Mo	95	1	nogas	1059180	0.00
Sn	118	1	nogas	1433929	0.00
Ba	137	1	nogas	777656	0.00
Sb	121	2	He	1302570	0.00
P	31	1	nogas	1828985	0.00
La	139	1	nogas	647	1.54

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1035061	3.92	1118108	92.57	70	125	
Ge	72	1	nogas	3352290	2.22	3396393	98.70	70	125	
In	115	1	nogas	3007420	2.98	3166421	94.98	70	125	
Bi	209	1	nogas	2135783	6.85	2159119	98.92	70	125	
Ge	72	2	He	1149474	1.01	1189986	96.60	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\010
Acq Date Time	2019-01-09T19:24:37-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	687771	0.00
Na	23	1	nogas	238148872	0.00
Mg	24	1	nogas	154345108	0.00
Al	27	1	nogas	1929165	0.00
K	39	1	nogas	214283563	0.00
Ti	47	1	nogas	170135	0.00
V	51	1	nogas	2848398	0.00
Cr	52	1	nogas	2116404	0.00
Mn	55	1	nogas	2592009	0.00
Co	59	1	nogas	2173099	0.00
Ni	60	1	nogas	482613	0.00
Cu	63	1	nogas	1135762	0.00
Zn	66	1	nogas	380747	0.00
As	75	1	nogas	607323	0.00
Sr	88	1	nogas	2626097	0.00
Ag	107	1	nogas	1273754	0.00
Cd	111	1	nogas	284735	0.00
Sb	121	1	nogas	1240755	0.00
Tl	205	1	nogas	1761426	0.00
Pb	208	1	nogas	2326179	0.00
[Pb]	206	1	nogas	597041	0.00
[Pb]	207	1	nogas	506127	0.00
Na	23	2	He	19792256	0.00
Mg	24	2	He	10911672	0.00
Al	27	2	He	66092	0.00
K	39	2	He	12947291	0.00
Ca	43	2	He	34225	0.00
Ca	44	2	He	571757	0.00
V	51	2	He	800664	0.00
Cr	52	2	He	860413	0.00
Mn	55	2	He	631536	0.00
Fe	56	2	He	77250812	0.00
Co	59	2	He	1150183	0.00
Ni	60	2	He	290728	0.00
Cu	63	2	He	721751	0.00
Zn	66	2	He	171341	0.00
As	75	2	He	166409	0.00
Se	78	2	He	13753	0.01
B	11	1	nogas	2104503	0.00
Si	28	1	nogas	8728680	0.00

Calibration Standard Report

Ca	43	1	nogas	358579	0.00
Ca	44	1	nogas	5900135	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	228214013	0.00
Se	77	1	nogas	50306	0.00
Se	82	1	nogas	26990	0.01
Mo	95	1	nogas	514330	0.00
Sn	118	1	nogas	717658	0.00
Ba	137	1	nogas	397998	0.00
Sb	121	2	He	661303	0.00
P	31	1	nogas	968399	0.00
La	139	1	nogas	703	2.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1045107	2.00	1118108	93.47	70	125	
Ge	72	1	nogas	3349000	0.99	3396393	98.60	70	125	
In	115	1	nogas	3072753	2.02	3166421	97.04	70	125	
Bi	209	1	nogas	2095007	3.46	2159119	97.03	70	125	
Ge	72	2	He	1172038	0.59	1189986	98.49	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	229_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:28:33-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	92.729	4.528	676655	2.61	100	92.7	90	110	
Na	23	1	nogas	10541.582	6.868	233990530	0.79	10000	105.4	90	110	
Mg	24	1	nogas	10895.691	7.181	151487349	1.01	10000	109.0	90	110	
Al	27	1	nogas	102.785	6.013	1899734	3.92	100	102.8	90	110	
K	39	1	nogas	9986.797	4.610	213617055	2.20	10000	99.9	90	110	
Ti	47	1	nogas	97.195	5.172	168727	2.00	100	97.2	90	110	
V	51	1	nogas	91.642	9.410	2802429	5.50	100	91.6	90	110	
Cr	52	1	nogas	101.742	5.520	2139847	4.50	100	101.7	90	110	
Mn	55	1	nogas	104.133	4.710	2656696	2.22	100	104.1	90	110	
Co	59	1	nogas	102.981	3.061	2219971	2.38	100	103.0	90	110	
Ni	60	1	nogas	100.250	5.363	487473	1.44	100	100.3	90	110	
Cu	63	1	nogas	98.736	5.138	1136420	1.99	100	98.7	90	110	
Zn	66	1	nogas	98.861	2.740	385403	1.54	100	98.9	90	110	
As	75	1	nogas	94.566	3.150	604789	2.24	100	94.6	90	110	
Sr	88	1	nogas	99.857	3.269	2705056	2.10	100	99.9	90	110	
Ag	107	1	nogas	101.880	1.481	1330006	2.83	100	101.9	90	110	
Cd	111	1	nogas	98.816	1.818	282030	1.23	100	98.8	90	110	
Sb	121	1	nogas	99.039	4.238	1246659	0.19	100	99.0	90	110	
Tl	205	1	nogas	103.503	6.858	1728249	5.96	100	103.5	90	110	
Pb	208	1	nogas	101.569	2.043	2319223	2.04	100	101.6	90	110	
U	238	1	nogas	110.997	2.706	2308936	3.30	100	111.0	90	110	ICV Main CR1 Failed
[Pb]	206	1	nogas	104.350	3.362	592748	2.60	100	104.4	90	110	
[Pb]	207	1	nogas	102.103	3.410	505312	2.56	100	102.1	90	110	
Na	23	2	He	10278.577	2.048	19793995	0.92	10000	102.8	90	110	
Mg	24	2	He	10280.681	2.424	11100969	1.21	10000	102.8	90	110	
Al	27	2	He	101.984	2.305	65985	1.41	100	102.0	90	110	
K	39	2	He	10426.376	0.775	12908841	0.76	10000	104.3	90	110	
Ca	43	2	He	9963.214	3.865	34556	3.60	10000	99.6	90	110	
Ca	44	2	He	10228.149	1.382	587248	0.82	10000	102.3	90	110	
V	51	2	He	100.624	1.725	809883	0.58	100	100.6	90	110	
Cr	52	2	He	101.630	2.237	875627	1.08	100	101.6	90	110	
Mn	55	2	He	100.801	1.725	629074	0.53	100	100.8	90	110	
Fe	56	2	He	10178.561	0.698	76556302	0.59	10000	101.8	90	110	
Co	59	2	He	97.927	1.547	1134520	0.49	100	97.9	90	110	
Ni	60	2	He	99.594	1.668	287618	0.57	100	99.6	90	110	
Cu	63	2	He	102.069	1.305	735378	0.75	100	102.1	90	110	
Zn	66	2	He	101.265	0.779	174480	0.47	100	101.3	90	110	
As	75	2	He	99.768	1.840	166615	0.85	100	99.8	90	110	
Se	78	2	He	100.050	2.433	13837	1.24	100	100.0	90	110	
B	11	1	nogas	479.142	3.203	2109948	7.74	500	95.8	90	110	
Si	28	1	nogas	4805.341	5.955	8580173	0.45	5000	96.1	90	110	
Ca	43	1	nogas	9970.126	4.413	358619	2.71	10000	99.7	90	110	
Ca	44	1	nogas	9700.981	4.956	5762692	1.96	10000	97.0	90	110	
Fe	56	1	nogas	10257.669	5.444	228646038	1.33	10000	102.6	90	110	
Se	77	1	nogas	67.903	13.541	50935	1.56	100	67.9	90	110	ICV Main CR1 Failed
Se	82	1	nogas	100.527	6.855	27134	2.83	100	100.5	90	110	
Mo	95	1	nogas	94.529	2.762	510332	1.34	100	94.5	90	110	
Sn	118	1	nogas	95.511	1.631	711077	0.96	100	95.5	90	110	
Ba	137	1	nogas	98.366	2.277	399020	1.77	100	98.4	90	110	
Sb	121	2	He	100.143	0.949	668339	0.30	100	100.1	90	110	
Li	7	1	nogas	102.449	3.826	1591252	8.64	100	102.4	90	110	
P	31	1	nogas	486.998	3.481	964125	0.94	500	97.4	90	110	
La	139	1	nogas	134.302	7.785	577	6.09	100	134.3	90	110	ICV Main CR1 Failed
Au	197	1	nogas	285.887	82.326	33	34.64	100	285.9	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	1083938	5.62	1118108	96.94	70	125	
Ge	72	1	nogas	3436493	4.11	3396393	101.18	70	125	
In	115	1	nogas	3133575	1.59	3166421	98.96	70	125	
Bi	209	1	nogas	2104399	1.45	2159119	97.47	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	1178892	1.23	1189986	99.07	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	230LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:30:31-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	4.424	2.711	33740	3.79	5	88.5	70	130	
Na	23	1	nogas	480.985	3.264	12117002	1.65	500	96.2	70	130	
Mg	24	1	nogas	501.130	1.873	7587281	1.15	500	100.2	70	130	
Al	27	1	nogas	5.700	2.953	132051	2.22	5	114.0	70	130	
K	39	1	nogas	500.224	9.541	19435982	2.18	500	100.0	70	130	
Ti	47	1	nogas	4.940	8.117	8922	7.12	5	98.8	70	130	
V	51	1	nogas	-0.927	-45.948	586888	2.13	5	-18.5	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.347	3.616	149944	3.63	5	86.9	70	130	
Mn	55	1	nogas	5.042	1.079	158550	2.09	5	100.8	70	130	
Co	59	1	nogas	5.141	2.266	111068	1.10	5	102.8	70	130	
Ni	60	1	nogas	5.026	2.979	26549	1.14	5	100.5	70	130	
Cu	63	1	nogas	5.291	4.736	63099	1.62	5	105.8	70	130	
Zn	66	1	nogas	5.050	4.717	21867	2.20	5	101.0	70	130	
As	75	1	nogas	2.026	40.369	116358	0.82	5	40.5	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.110	3.085	139213	1.08	5	102.2	70	130	
Ag	107	1	nogas	5.006	3.200	65177	0.29	5	100.1	70	130	
Cd	111	1	nogas	4.758	3.689	13732	1.21	5	95.2	70	130	
Sb	121	1	nogas	5.080	1.844	64068	1.29	5	101.6	70	130	
Tl	205	1	nogas	5.496	7.158	95029	6.73	5	109.9	70	130	
Pb	208	1	nogas	5.156	2.670	118225	2.66	5	103.1	70	130	
U	238	1	nogas	5.346	2.886	114379	1.94	5	106.9	70	130	
[Pb]	206	1	nogas	4.914	5.374	28816	4.56	5	98.3	70	130	
[Pb]	207	1	nogas	5.085	4.466	25971	3.43	5	101.7	70	130	
Na	23	2	He	516.678	3.131	1052127	0.82	500	103.3	70	130	
Mg	24	2	He	513.430	2.087	558958	0.61	500	102.7	70	130	
Al	27	2	He	4.929	12.138	4477	7.31	5	98.6	70	130	
K	39	2	He	498.107	0.817	828885	0.60	500	99.6	70	130	
Ca	43	2	He	491.482	9.293	1780	8.65	500	98.3	70	130	
Ca	44	2	He	502.234	3.694	30559	0.95	500	100.4	70	130	
V	51	2	He	4.696	2.064	46197	0.96	5	93.9	70	130	
Cr	52	2	He	4.939	4.802	49858	2.42	5	98.8	70	130	
Mn	55	2	He	5.039	2.227	33711	0.61	5	100.8	70	130	
Fe	56	2	He	505.976	1.714	3852005	1.00	500	101.2	70	130	
Co	59	2	He	4.980	3.395	58089	1.00	5	99.6	70	130	
Ni	60	2	He	4.871	2.470	15046	3.36	5	97.4	70	130	
Cu	63	2	He	5.056	4.193	39523	1.56	5	101.1	70	130	
Zn	66	2	He	5.241	6.033	10010	4.87	5	104.8	70	130	
As	75	2	He	4.919	3.131	8689	0.64	5	98.4	70	130	
Se	78	2	He	5.056	10.347	902	8.78	5	101.1	70	130	
B	11	1	nogas	28.299	6.670	169662	4.63	25	113.2	70	130	
Si	28	1	nogas	202.569	54.380	3455527	1.08	25	810.3	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	512.401	8.092	19314	4.73	500	102.5	70	130	
Ca	44	1	nogas	500.535	3.257	410661	1.02	500	100.1	70	130	
Fe	56	1	nogas	490.756	0.969	14294640	2.43	500	98.2	70	130	
Se	77	1	nogas	-13.834	-43.226	30546	2.43	5	-276.7	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.921	7.472	1517	9.36	5	98.4	70	130	
Mo	95	1	nogas	5.229	1.990	28517	3.41	5	104.6	70	130	
Sn	118	1	nogas	5.134	1.759	39876	1.31	5	102.7	70	130	
Ba	137	1	nogas	5.166	7.113	21554	5.95	5	103.3	70	130	
Sb	121	2	He	5.052	3.083	34070	1.52	5	101.0	70	130	
Li	7	1	nogas	4.734	3.753	169048	1.42	5	94.7	70	130	
P	31	1	nogas	26.660	5.898	144558	1.07	25	106.6	70	130	
La	139	1	nogas	24.377	30.793	187	13.48	5	487.5	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	203.177	176.906	30	57.74	5	4063.5	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	1123701	1.52	1118108	100.50	70	125	
Ge	72	1	nogas	3417921	2.91	3396393	100.63	70	125	
In	115	1	nogas	3157998	2.63	3166421	99.73	70	125	
Bi	209	1	nogas	2162178	1.02	2159119	100.14	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	1183578	2.61	1189986	99.46	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	231SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:32:29-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	221CALB.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	1.730	1.730	5.49	13568	0.01	2000	
Na	23	1	nogas	183.674	183.674	3.31	5080891	0.00	200000	
Mg	24	1	nogas	203.660	203.660	1.93	3167524	0.01	200000	
Al	27	1	nogas	2.249	2.249	3.95	69766	0.00	2000	
K	39	1	nogas	186.288	186.288	7.51	13102989	0.00	200000	
Ti	47	1	nogas	2.036	2.036	3.17	3934	0.05	2000	
V	51	1	nogas	-5.515	-5.515	-3.88	479498	0.00	2000	
Cr	52	1	nogas	1.288	1.288	7.62	88069	0.00	2000	
Mn	55	1	nogas	1.833	1.833	6.47	78292	0.00	2000	
Co	59	1	nogas	2.039	2.039	2.86	44725	0.00	2000	
Ni	60	1	nogas	1.726	1.726	4.15	10690	0.02	2000	
Cu	63	1	nogas	1.998	1.998	2.10	25592	0.01	2000	
Zn	66	1	nogas	1.740	1.740	3.60	9152	0.02	2000	
As	75	1	nogas	-2.639	-2.639	-6.40	92299	0.00	2000	
Sr	88	1	nogas	1.969	1.969	2.36	54834	0.00	2000	
Ag	107	1	nogas	2.037	2.037	1.75	26744	0.01	2000	
Cd	111	1	nogas	1.901	1.901	4.11	5468	0.03	2000	
Sb	121	1	nogas	2.004	2.004	2.11	25639	0.01	2000	
Tl	205	1	nogas	2.062	2.062	4.02	36501	0.01	2000	
Pb	208	1	nogas	2.045	2.045	2.68	47188	0.00	2000	
U	238	1	nogas	2.068	2.068	0.77	44827	0.00	2000	
[Pb]	206	1	nogas	1.959	1.959	7.65	11688	0.02	2000	
[Pb]	207	1	nogas	2.028	2.028	9.97	10527	0.02	2000	
Na	23	2	He	198.032	198.032	1.70	443078	0.04	200000	
Mg	24	2	He	201.677	201.677	1.12	223664	0.09	200000	
Al	27	2	He	1.371	1.371	14.38	2240	0.06	2000	
K	39	2	He	194.109	194.109	0.15	459004	0.04	200000	
Ca	43	2	He	192.739	192.739	13.59	750	25.70	200000	
Ca	44	2	He	193.992	193.992	2.15	13001	1.49	200000	
V	51	2	He	1.684	1.684	1.10	22379	0.01	2000	
Cr	52	2	He	1.775	1.775	7.05	22995	0.01	2000	
Mn	55	2	He	1.831	1.831	1.87	13845	0.01	2000	
Fe	56	2	He	201.847	201.847	0.63	1575047	0.01	200000	
Co	59	2	He	1.978	1.978	1.72	23462	0.01	2000	
Ni	60	2	He	1.747	1.747	5.53	6081	0.03	2000	
Cu	63	2	He	1.723	1.723	2.64	15717	0.01	2000	
Zn	66	2	He	1.795	1.795	12.63	4134	0.04	2000	
As	75	2	He	1.829	1.829	6.99	3563	0.05	2000	
Se	78	2	He	1.606	1.606	12.10	435	0.37	2000	
B	11	1	nogas	10.219	10.219	10.02	90383	0.01	2000	
Si	28	1	nogas	67.879	67.879	39.38	3320765	0.00	2000	
Ca	43	1	nogas	195.947	195.947	5.64	8072	2.43	200000	

Sample Report

Ca	44	1	nogas	196.446	196.446	2.62	235576	0.08	200000	
Fe	56	1	nogas	173.428	173.428	9.48	7383343	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-27.971	-27.971	-6.62	27181	-0.10	2000	
Se	82	1	nogas	1.811	1.811	13.05	687	0.26	2000	
Mo	95	1	nogas	1.980	1.980	3.57	11114	0.02	2000	
Sn	118	1	nogas	1.948	1.948	0.90	15868	0.01	2000	
Ba	137	1	nogas	1.996	1.996	3.61	8529	0.02	2000	
Sb	121	2	He	2.034	2.034	1.02	14029	0.01	2000	
La	139	1	nogas	2.248	2.248	559.36	107	2.11	2000	
Au	197	1	nogas	808.616	808.616	29.94	60	1347.69	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	1145286	5.17	1118108	102.43	70	125	
Ge	72	1	nogas	3429968	1.61	3396393	100.99	70	125	
In	115	1	nogas	3126326	2.61	3166421	98.73	70	125	
Bi	209	1	nogas	2185811	3.15	2159119	101.24	70	125	
Ge	72	2	He	1196870	1.62	1189986	100.58	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	232_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:34:26-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.007	118.4	293	26.0	1	
Na	23	1	nogas	-2.204	-6.7	517542	1.0	100	
Mg	24	1	nogas	-0.102	-153.8	33334	6.4	100	
Al	27	1	nogas	1.740	4.4	59217	3.6	5	
K	39	1	nogas	0.798	1337.2	9109182	0.2	100	
Ti	47	1	nogas	-0.020	-289.2	367	25.3	2.5	
V	51	1	nogas	-2.754	-35.8	533287	2.5	2.5	
Cr	52	1	nogas	-0.354	-24.2	53377	2.3	2.5	
Mn	55	1	nogas	-0.074	-51.9	29627	1.1	2.5	
Co	59	1	nogas	0.008	70.1	1007	12.8	2.5	
Ni	60	1	nogas	-0.329	-8.3	737	19.5	2.5	
Cu	63	1	nogas	0.011	76.5	2730	2.4	1	
Zn	66	1	nogas	0.006	1189.0	2387	9.9	2.5	
As	75	1	nogas	-1.424	-47.6	96494	1.4	2.5	
Sr	88	1	nogas	0.005	75.7	1673	4.5	2.5	
Ag	107	1	nogas	0.004	101.8	247	18.3	2.5	
Cd	111	1	nogas	-0.006	-170.1	40	75.0	1	
Sb	121	1	nogas	0.030	10.2	807	5.9	2.5	
Tl	205	1	nogas	0.027	54.1	1223	20.3	1	
Pb	208	1	nogas	0.004	34.4	603	5.3	2.5	
U	238	1	nogas	0.013	12.7	420	8.2	2.5	
[Pb]	206	1	nogas	0.001	884.7	150	26.7	2.5	
[Pb]	207	1	nogas	0.005	81.7	150	13.3	2.5	
Na	23	2	He	-3.168	-8.6	50384	0.3	100	
Mg	24	2	He	-0.080	-151.6	2497	6.0	100	
Al	27	2	He	1.202	11.2	2113	3.2	5	
K	39	2	He	-8.326	-38.0	212696	1.8	100	
Ca	43	2	He	2.932	488.9	83	60.4	100	
Ca	44	2	He	1.843	230.0	1817	12.6	100	
V	51	2	He	-0.054	-23.1	8253	1.2	2.5	
Cr	52	2	He	-0.183	-23.4	5971	5.2	2.5	
Mn	55	2	He	-0.042	-46.6	2003	7.1	2.5	
Fe	56	2	He	-0.402	-11.3	30899	0.2	100	
Co	59	2	He	0.008	51.6	293	16.8	2.5	
Ni	60	2	He	-0.243	-4.0	267	11.5	2.5	
Cu	63	2	He	-0.225	-8.4	1510	9.4	1	
Zn	66	2	He	-0.057	-129.4	903	13.8	2.5	
As	75	2	He	-0.021	-158.2	433	11.9	2.5	
Se	78	2	He	-0.099	-160.0	197	11.4	1	
B	11	1	nogas	-0.261	-233.7	43069	1.9	10	
Si	28	1	nogas	-40.607	-136.0	3130058	0.3	5	
Ca	43	1	nogas	0.510	257.0	1047	6.5	100	
Ca	44	1	nogas	2.821	215.4	120333	1.0	100	
Fe	56	1	nogas	-11.795	-37.8	3251363	0.8	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-7.214	-67.4	31601	2.2	2.5	
Se	82	1	nogas	0.038	530.1	207	22.9	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	-0.011	-148.2	377	23.8	2.5	
Sn	118	1	nogas	0.004	595.3	1503	12.5	5	
Ba	137	1	nogas	-0.001	-1099.4	477	8.5	2.5	
Sb	121	2	He	0.019	53.2	377	18.1	2.5	
P	31	1	nogas	1.170	167.0	97610	1.5	10	
La	139	1	nogas	22.278	50.2	183	22.0	2.5	ICB Main CR1 Failed
Au	197	1	nogas	127.924	331.9	27	78.1	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	1155604	4.68	1118108	103.35	70	125	
Ge	72	1	nogas	3355498	2.19	3396393	98.80	70	125	
In	115	1	nogas	3230501	0.68	3166421	102.02	70	125	
Bi	209	1	nogas	2179116	0.84	2159119	100.93	70	125	
Ge	72	2	He	1186499	0.95	1189986	99.71	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	238_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:46:13-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	94.652	3.331	735650	2.14	100	94.7	90	110	
Na	23	1	nogas	10208.475	0.389	255319539	1.35	10000	102.1	90	110	
Mg	24	1	nogas	10442.036	2.130	163635116	3.67	10000	104.4	90	110	
Al	27	1	nogas	111.617	6.209	2057688	5.75	100	111.6	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10467.954	1.234	223163572	1.17	10000	104.7	90	110	
Ti	47	1	nogas	101.615	1.881	176197	2.04	100	101.6	90	110	
V	51	1	nogas	115.340	2.349	3365509	1.66	100	115.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.227	3.844	2125256	1.55	100	101.2	90	110	
Mn	55	1	nogas	103.403	2.782	2634620	1.74	100	103.4	90	110	
Co	59	1	nogas	104.545	3.856	2249298	2.74	100	104.5	90	110	
Ni	60	1	nogas	104.443	4.889	507029	2.77	100	104.4	90	110	
Cu	63	1	nogas	103.953	3.256	1194695	0.93	100	104.0	90	110	
Zn	66	1	nogas	100.320	1.628	390391	0.75	100	100.3	90	110	
As	75	1	nogas	106.865	2.714	668335	0.38	100	106.9	90	110	
Sr	88	1	nogas	103.489	1.460	2799018	1.87	100	103.5	90	110	
Ag	107	1	nogas	98.488	2.213	1283066	1.63	100	98.5	90	110	
Cd	111	1	nogas	101.376	2.072	288732	1.23	100	101.4	90	110	
Sb	121	1	nogas	103.979	2.758	1306923	0.54	100	104.0	90	110	
Tl	205	1	nogas	105.357	1.343	1828832	1.46	100	105.4	90	110	
Pb	208	1	nogas	108.063	2.560	2467484	2.56	100	108.1	90	110	
U	238	1	nogas	109.886	3.267	2374269	0.62	100	109.9	90	110	
[Pb]	206	1	nogas	105.440	3.888	622204	1.13	100	105.4	90	110	
[Pb]	207	1	nogas	104.018	5.464	534638	2.71	100	104.0	90	110	
Na	23	2	He	10315.060	2.796	20495661	0.50	10000	103.2	90	110	
Mg	24	2	He	10275.773	2.435	11449612	0.56	10000	102.8	90	110	
Al	27	2	He	99.628	1.946	66553	1.16	100	99.6	90	110	
K	39	2	He	10588.129	2.068	13105649	2.03	10000	105.9	90	110	
Ca	43	2	He	9847.064	3.062	35240	1.96	10000	98.5	90	110	
Ca	44	2	He	10127.280	3.552	599846	1.10	10000	101.3	90	110	
V	51	2	He	97.583	2.019	810730	0.46	100	97.6	90	110	
Cr	52	2	He	99.086	1.922	881193	0.86	100	99.1	90	110	
Mn	55	2	He	100.897	1.834	649785	0.77	100	100.9	90	110	
Fe	56	2	He	9958.596	2.214	77284236	0.79	10000	99.6	90	110	
Co	59	2	He	96.771	2.872	1156727	0.74	100	96.8	90	110	
Ni	60	2	He	99.543	4.152	296565	2.37	100	99.5	90	110	
Cu	63	2	He	101.872	3.263	757185	0.82	100	101.9	90	110	
Zn	66	2	He	100.207	1.964	178163	0.48	100	100.2	90	110	
As	75	2	He	98.521	1.697	169795	0.76	100	98.5	90	110	
Se	78	2	He	99.147	3.810	14149	1.94	100	99.1	90	110	
B	11	1	nogas	459.328	3.486	2152130	3.58	500	91.9	90	110	
Si	28	1	nogas	5106.281	4.664	8899868	1.23	5000	102.1	90	110	
Ca	43	1	nogas	10595.018	1.601	380475	0.91	10000	106.0	90	110	
Ca	44	1	nogas	10533.076	1.632	6239089	0.84	10000	105.3	90	110	
Fe	56	1	nogas	10439.225	3.669	232355789	2.13	10000	104.4	90	110	
Se	77	1	nogas	142.768	1.089	69389	1.77	100	142.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.870	1.520	27214	2.16	100	100.9	90	110	
Mo	95	1	nogas	98.646	3.233	531526	1.22	100	98.6	90	110	
Sn	118	1	nogas	99.274	0.453	737594	1.12	100	99.3	90	110	
Ba	137	1	nogas	102.288	1.366	414073	0.94	100	102.3	90	110	
Sb	121	2	He	100.759	2.604	693791	0.35	100	100.8	90	110	
Li	7	1	nogas	97.384	1.608	1612301	2.00	100	97.4	90	110	
P	31	1	nogas	499.152	3.212	984022	1.04	500	99.8	90	110	
La	139	1	nogas	162.759	18.292	677	15.52	100	162.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	127.221	186.904	27	43.30	100	127.2	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	1153405	3.31	1118108	103.16	70	125	
Ge	72	1	nogas	3428974	2.28	3396393	100.96	70	125	
In	115	1	nogas	3127035	1.21	3166421	98.76	70	125	
Bi	209	1	nogas	2187241	2.80	2159119	101.30	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1216718	2.40	1189986	102.25	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	239_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:48:13-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.098	31.6	1030	22.4	1	
Na	23	1	nogas	138.195	8.1	4047730	7.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	22.309	7.1	386287	7.2	100	
Al	27	1	nogas	-0.209	-23.5	26309	1.6	5	
K	39	1	nogas	-5.436	-201.0	9639916	0.7	100	
Ti	47	1	nogas	0.085	76.0	583	20.7	2.5	
V	51	1	nogas	-1.664	-68.8	599575	3.7	2.5	
Cr	52	1	nogas	-0.300	-35.0	58422	2.8	2.5	
Mn	55	1	nogas	-0.019	-154.3	33263	0.8	2.5	
Co	59	1	nogas	0.082	11.5	2764	8.9	2.5	
Ni	60	1	nogas	0.055	85.6	2740	8.0	2.5	
Cu	63	1	nogas	0.792	9.2	12328	6.3	2	
Zn	66	1	nogas	-0.188	-22.3	1777	10.5	2.5	
As	75	1	nogas	-0.119	-683.2	110762	3.2	2.5	
Sr	88	1	nogas	0.531	7.7	16721	4.7	2.5	
Ag	107	1	nogas	0.074	5.0	1230	5.1	2.5	
Cd	111	1	nogas	0.092	19.7	333	18.1	1	
Sb	121	1	nogas	0.598	12.0	8349	11.2	2.5	
Tl	205	1	nogas	0.646	58.9	12460	57.3	1	
Pb	208	1	nogas	0.112	15.9	3064	13.2	2.5	
U	238	1	nogas	0.194	41.5	4504	42.2	2.5	
[Pb]	206	1	nogas	0.096	22.3	737	19.8	2.5	
[Pb]	207	1	nogas	0.102	25.8	673	21.0	2.5	
Na	23	2	He	112.861	4.7	282389	2.9	100	CCB Main CR1 Failed
Mg	24	2	He	19.484	5.5	24419	3.5	100	
Al	27	2	He	-0.703	-56.0	923	27.2	5	
K	39	2	He	3.215	98.9	226739	1.7	100	
Ca	43	2	He	16.285	23.1	133	8.7	100	
Ca	44	2	He	19.195	15.6	2897	5.2	100	
V	51	2	He	0.021	169.4	9104	2.3	2.5	
Cr	52	2	He	-0.122	-13.0	6678	3.0	2.5	
Mn	55	2	He	0.015	90.9	2427	4.5	2.5	
Fe	56	2	He	8.140	5.6	98210	2.2	100	
Co	59	2	He	0.066	8.5	997	8.4	2.5	
Ni	60	2	He	-0.193	-5.4	423	8.3	2.5	
Cu	63	2	He	0.252	15.0	5094	4.2	2	
Zn	66	2	He	-0.229	-21.0	623	13.0	2.5	
As	75	2	He	0.073	17.7	607	4.1	2.5	
Se	78	2	He	0.026	359.0	221	7.6	2	
B	11	1	nogas	3.783	48.9	63713	9.7	10	
Si	28	1	nogas	-263.182	-20.5	3099425	0.6	5	
Ca	43	1	nogas	18.042	21.9	1780	6.9	100	
Ca	44	1	nogas	14.260	48.9	136084	1.5	100	
Fe	56	1	nogas	7.823	41.0	3941620	2.9	100	
Se	77	1	nogas	-4.068	-123.0	34730	3.5	2.5	
Se	82	1	nogas	0.280	64.3	290	15.0	2	
Mo	95	1	nogas	0.417	36.8	2827	31.5	2.5	
Sn	118	1	nogas	0.313	28.5	3931	19.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.106	36.7	937	19.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.509	5.1	3770	3.7	2.5	
P	31	1	nogas	3.697	26.8	109468	0.6	10	
La	139	1	nogas	-5.258	-109.6	83	25.0	2.5	
Au	197	1	nogas	44.743	272.8	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	1196659	4.17	1118108	107.03	70	125	
Ge	72	1	nogas	3600273	2.25	3396393	106.00	70	125	
In	115	1	nogas	3275886	2.42	3166421	103.46	70	125	
Bi	209	1	nogas	2259851	2.21	2159119	104.67	70	125	
Ge	72	2	He	1220192	1.62	1189986	102.54	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	246_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:02:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.917	4.209	706690	3.82	100	99.9	90	110	
Na	23	1	nogas	10593.080	1.583	252514347	1.49	10000	105.9	90	110	
Mg	24	1	nogas	10587.152	1.252	158106241	1.32	10000	105.9	90	110	
Al	27	1	nogas	106.960	3.883	1984379	3.57	100	107.0	90	110	
K	39	1	nogas	10236.100	0.655	219671980	1.60	10000	102.4	90	110	
Ti	47	1	nogas	99.882	1.385	174179	1.79	100	99.9	90	110	
V	51	1	nogas	127.120	6.631	3667580	5.55	100	127.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.483	5.604	2143673	5.92	100	101.5	90	110	
Mn	55	1	nogas	104.487	3.477	2677054	3.00	100	104.5	90	110	
Co	59	1	nogas	103.742	2.859	2244727	1.56	100	103.7	90	110	
Ni	60	1	nogas	103.841	2.396	507152	1.14	100	103.8	90	110	
Cu	63	1	nogas	102.505	0.848	1185128	1.17	100	102.5	90	110	
Zn	66	1	nogas	100.911	1.104	394920	1.36	100	100.9	90	110	
As	75	1	nogas	110.268	1.004	690211	0.62	100	110.3	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	99.789	2.722	2713595	1.42	100	99.8	90	110	
Ag	107	1	nogas	99.131	0.875	1298791	0.47	100	99.1	90	110	
Cd	111	1	nogas	101.474	1.665	279034	1.45	100	101.5	90	110	
Sb	121	1	nogas	101.095	0.364	1278229	1.36	100	101.1	90	110	
Tl	205	1	nogas	101.430	2.602	1690234	3.14	100	101.4	90	110	
Pb	208	1	nogas	100.542	3.195	2295780	3.19	100	100.5	90	110	
U	238	1	nogas	107.882	3.257	2237655	1.66	100	107.9	90	110	
[Pb]	206	1	nogas	103.076	4.287	583799	1.32	100	103.1	90	110	
[Pb]	207	1	nogas	102.881	2.796	507843	0.79	100	102.9	90	110	
Na	23	2	He	10540.021	3.280	20651744	2.14	10000	105.4	90	110	
Mg	24	2	He	10407.417	3.182	11435130	1.99	10000	104.1	90	110	
Al	27	2	He	103.255	3.755	67962	2.84	100	103.3	90	110	
K	39	2	He	10720.535	1.076	13266751	1.06	10000	107.2	90	110	
Ca	43	2	He	10166.824	2.076	35881	1.48	10000	101.7	90	110	
Ca	44	2	He	10259.221	1.416	599404	0.90	10000	102.6	90	110	
V	51	2	He	99.629	2.566	816029	1.36	100	99.6	90	110	
Cr	52	2	He	100.024	1.489	877143	0.65	100	100.0	90	110	
Mn	55	2	He	101.852	1.038	646873	1.15	100	101.9	90	110	
Fe	56	2	He	10233.399	1.789	78318219	0.82	10000	102.3	90	110	
Co	59	2	He	98.425	0.877	1160496	1.36	100	98.4	90	110	
Ni	60	2	He	99.302	1.947	291827	0.99	100	99.3	90	110	
Cu	63	2	He	100.321	1.773	735548	1.06	100	100.3	90	110	
Zn	66	2	He	99.717	1.861	174853	1.64	100	99.7	90	110	
As	75	2	He	99.069	2.086	168361	0.89	100	99.1	90	110	
Se	78	2	He	98.405	1.714	13853	0.68	100	98.4	90	110	
B	11	1	nogas	534.380	5.299	2272329	6.13	500	106.9	90	110	
Si	28	1	nogas	4913.260	3.771	8735726	1.04	5000	98.3	90	110	
Ca	43	1	nogas	10402.272	1.502	375711	1.82	10000	104.0	90	110	
Ca	44	1	nogas	10159.118	1.020	6056514	1.66	10000	101.6	90	110	
Fe	56	1	nogas	10469.533	0.470	234402214	0.90	10000	104.7	90	110	
Se	77	1	nogas	164.591	3.704	75195	1.64	100	164.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.812	5.653	27615	5.18	100	101.8	90	110	
Mo	95	1	nogas	95.487	1.944	517545	1.50	100	95.5	90	110	
Sn	118	1	nogas	102.037	0.782	731823	0.48	100	102.0	90	110	
Ba	137	1	nogas	103.636	1.982	405011	1.60	100	103.6	90	110	
Sb	121	2	He	97.931	2.211	665050	1.41	100	97.9	90	110	
Li	7	1	nogas	100.178	2.004	1506911	3.63	100	100.2	90	110	
P	31	1	nogas	491.601	2.179	976255	1.42	500	98.3	90	110	
La	139	1	nogas	159.831	12.938	643	11.25	100	159.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	294.783	88.299	33	34.64	100	294.8	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	1049407	2.88	1118108	93.86	70	125	
Ge	72	1	nogas	3447881	1.35	3396393	101.52	70	125	
In	115	1	nogas	3018746	0.38	3166421	95.34	70	125	
Bi	209	1	nogas	2099593	3.04	2159119	97.24	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1199655	1.18	1189986	100.81	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	247_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:04:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	7.9	880	5.2	1	
Na	23	1	nogas	190.857	3.5	5366463	4.5	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.941	5.6	192583	7.7	100	
Al	27	1	nogas	-0.176	-9.0	26175	1.5	5	
K	39	1	nogas	-2.925	-379.5	9413407	0.4	100	
Ti	47	1	nogas	0.040	54.5	487	6.3	2.5	
V	51	1	nogas	4.084	26.9	722390	3.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.197	-30.5	58863	1.0	2.5	
Mn	55	1	nogas	-0.071	-48.2	30946	0.9	2.5	
Co	59	1	nogas	0.076	0.4	2550	2.4	2.5	
Ni	60	1	nogas	-0.015	-202.4	2314	6.8	2.5	
Cu	63	1	nogas	0.352	16.7	6825	9.8	2	
Zn	66	1	nogas	-0.072	-101.8	2177	11.4	2.5	
As	75	1	nogas	2.337	43.3	120720	3.2	2.5	
Sr	88	1	nogas	0.221	5.6	7708	3.1	2.5	
Ag	107	1	nogas	0.072	22.4	1163	17.9	2.5	
Cd	111	1	nogas	0.063	18.8	243	17.1	1	
Sb	121	1	nogas	0.201	8.3	3027	7.2	2.5	
Tl	205	1	nogas	0.518	59.7	10121	57.0	1	
Pb	208	1	nogas	0.106	24.3	2920	20.1	2.5	
U	238	1	nogas	0.167	27.8	3881	28.9	2.5	
[Pb]	206	1	nogas	0.094	21.3	723	19.2	2.5	
[Pb]	207	1	nogas	0.100	15.3	657	13.8	2.5	
Na	23	2	He	193.051	3.3	431356	1.8	100	CCB Main CR1 Failed
Mg	24	2	He	9.786	4.0	13271	3.1	100	
Al	27	2	He	-0.733	-14.4	883	7.5	5	
K	39	2	He	1.813	120.5	225033	1.2	100	
Ca	43	2	He	1.982	510.3	80	43.3	100	
Ca	44	2	He	4.683	50.4	1990	7.0	100	
V	51	2	He	0.289	3.2	11054	1.6	2.5	
Cr	52	2	He	-0.121	-18.0	6531	3.5	2.5	
Mn	55	2	He	-0.102	-19.6	1633	6.7	2.5	
Fe	56	2	He	6.421	5.9	82848	2.6	100	
Co	59	2	He	0.059	4.7	890	3.0	2.5	
Ni	60	2	He	-0.201	-2.2	390	4.4	2.5	
Cu	63	2	He	-0.010	-248.9	3070	4.6	2	
Zn	66	2	He	-0.177	-48.9	700	22.5	2.5	
As	75	2	He	0.109	48.9	653	12.4	2.5	
Se	78	2	He	0.153	105.0	233	8.8	2	
B	11	1	nogas	27.114	4.1	170239	4.1	10	CCB Main CR1 Failed
Si	28	1	nogas	-148.260	-54.2	3139247	0.8	5	
Ca	43	1	nogas	7.934	52.4	1360	10.3	100	
Ca	44	1	nogas	2.749	215.4	125336	0.7	100	
Fe	56	1	nogas	10.976	43.7	3897080	2.0	100	
Se	77	1	nogas	12.356	44.2	37863	2.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.137	119.5	243	19.0	2	
Mo	95	1	nogas	0.296	43.7	2077	33.3	2.5	
Sn	118	1	nogas	0.235	20.1	3254	8.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.072	23.9	780	9.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.159	4.5	1323	4.2	2.5	
P	31	1	nogas	2.024	97.3	103250	1.5	10	
La	139	1	nogas	-2.891	-356.5	90	38.5	2.5	
Au	197	1	nogas	188.116	376.1	30	115.5	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	1163440	1.31	1118108	104.05	70	125	
Ge	72	1	nogas	3496133	2.09	3396393	102.94	70	125	
In	115	1	nogas	3218222	2.95	3166421	101.64	70	125	
Bi	209	1	nogas	2250216	2.49	2159119	104.22	70	125	
Ge	72	2	He	1191431	1.46	1189986	100.12	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	258_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:25:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.648	1.767	676172	0.58	100	99.6	90	110	
Na	23	1	nogas	10356.154	6.539	237940397	2.12	10000	103.6	90	110	
Mg	24	1	nogas	10676.284	5.550	153719808	2.30	10000	106.8	90	110	
Al	27	1	nogas	105.347	3.508	1862793	1.36	100	105.3	90	110	
K	39	1	nogas	10499.409	2.872	214471188	0.63	10000	105.0	90	110	
Ti	47	1	nogas	103.361	2.751	171864	4.75	100	103.4	90	110	
V	51	1	nogas	108.131	1.375	3061942	3.27	100	108.1	90	110	
Cr	52	1	nogas	106.329	0.213	2137956	2.24	100	106.3	90	110	
Mn	55	1	nogas	105.837	2.458	2584866	3.24	100	105.8	90	110	
Co	59	1	nogas	105.096	4.327	2166958	2.34	100	105.1	90	110	
Ni	60	1	nogas	102.808	3.917	478564	2.81	100	102.8	90	110	
Cu	63	1	nogas	103.755	1.675	1143343	1.78	100	103.8	90	110	
Zn	66	1	nogas	101.466	1.129	378467	1.02	100	101.5	90	110	
As	75	1	nogas	101.191	1.983	612052	0.57	100	101.2	90	110	
Sr	88	1	nogas	102.542	1.195	2658332	1.49	100	102.5	90	110	
Ag	107	1	nogas	106.727	3.265	1332409	1.34	100	106.7	90	110	
Cd	111	1	nogas	103.384	3.237	277022	0.85	100	103.4	90	110	
Sb	121	1	nogas	104.494	3.072	1258879	1.14	100	104.5	90	110	
Tl	205	1	nogas	102.321	3.960	1708194	1.39	100	102.3	90	110	
Pb	208	1	nogas	104.106	1.232	2377154	1.23	100	104.1	90	110	
U	238	1	nogas	112.060	6.799	2327415	2.79	100	112.1	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	102.553	5.924	581900	1.25	100	102.6	90	110	
[Pb]	207	1	nogas	103.741	3.984	513197	1.19	100	103.7	90	110	
Na	23	2	He	10351.401	0.528	19372984	1.35	10000	103.5	90	110	
Mg	24	2	He	10318.546	0.701	10828367	0.98	10000	103.2	90	110	
Al	27	2	He	100.008	2.419	62911	2.69	100	100.0	90	110	
K	39	2	He	10087.386	0.712	12496384	0.70	10000	100.9	90	110	
Ca	43	2	He	10020.185	3.501	33771	3.38	10000	100.2	90	110	
Ca	44	2	He	10157.713	1.336	566721	0.95	10000	101.6	90	110	
V	51	2	He	98.883	0.762	773561	0.75	100	98.9	90	110	
Cr	52	2	He	99.165	0.606	830503	0.84	100	99.2	90	110	
Mn	55	2	He	100.508	0.214	609573	0.73	100	100.5	90	110	
Fe	56	2	He	10091.526	0.327	73755922	0.77	10000	100.9	90	110	
Co	59	2	He	99.654	0.115	1121957	0.72	100	99.7	90	110	
Ni	60	2	He	101.690	0.315	285372	0.85	100	101.7	90	110	
Cu	63	2	He	102.145	0.656	715118	0.29	100	102.1	90	110	
Zn	66	2	He	100.158	1.459	167700	1.29	100	100.2	90	110	
As	75	2	He	99.323	0.680	161194	0.49	100	99.3	90	110	
Se	78	2	He	99.208	1.543	13335	0.79	100	99.2	90	110	
B	11	1	nogas	509.907	2.898	2080982	2.01	500	102.0	90	110	
Si	28	1	nogas	5236.491	3.246	8669852	0.40	5000	104.7	90	110	
Ca	43	1	nogas	10457.184	3.790	359856	1.99	10000	104.6	90	110	
Ca	44	1	nogas	10336.334	1.871	5870482	0.34	10000	103.4	90	110	
Fe	56	1	nogas	10547.435	0.639	225072288	1.68	10000	105.5	90	110	
Se	77	1	nogas	98.319	4.269	55966	0.75	100	98.3	90	110	
Se	82	1	nogas	102.492	3.268	26496	2.59	100	102.5	90	110	
Mo	95	1	nogas	96.915	1.133	500745	2.08	100	96.9	90	110	
Sn	118	1	nogas	102.086	3.294	713573	2.31	100	102.1	90	110	
Ba	137	1	nogas	104.257	4.589	396921	1.69	100	104.3	90	110	
Sb	121	2	He	101.192	2.493	656316	3.02	100	101.2	90	110	
Li	7	1	nogas	100.116	1.361	1444368	0.48	100	100.1	90	110	
P	31	1	nogas	493.206	1.708	933269	1.03	500	98.6	90	110	
La	139	1	nogas	159.773	11.246	627	9.21	100	159.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	799.033	107.581	57	66.81	100	799.0	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	1006618	1.69	1118108	90.03	70	125	
Ge	72	1	nogas	3286668	2.15	3396393	96.77	70	125	
In	115	1	nogas	2943483	3.17	3166421	92.96	70	125	
Bi	209	1	nogas	2105666	4.89	2159119	97.52	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1145505	0.83	1189986	96.26	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	259_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:27:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	23.2	940	16.7	1	
Na	23	1	nogas	69.729	4.6	2242653	3.2	100	
Mg	24	1	nogas	11.126	14.8	202383	12.4	100	
Al	27	1	nogas	-0.052	-184.7	27641	5.8	5	
K	39	1	nogas	9.201	34.8	9389066	0.6	100	
Ti	47	1	nogas	0.153	51.1	667	20.4	2.5	
V	51	1	nogas	-1.479	-84.7	570106	5.7	2.5	
Cr	52	1	nogas	-0.336	-23.4	54370	3.2	2.5	
Mn	55	1	nogas	-0.087	-29.2	29661	2.0	2.5	
Co	59	1	nogas	0.094	5.2	2844	3.1	2.5	
Ni	60	1	nogas	-0.171	-18.1	1503	10.2	2.5	
Cu	63	1	nogas	0.385	23.2	7001	13.9	2	
Zn	66	1	nogas	-0.163	-7.2	1770	2.0	2.5	
As	75	1	nogas	-0.499	-127.1	102510	3.7	2.5	
Sr	88	1	nogas	0.204	1.2	7041	0.4	2.5	
Ag	107	1	nogas	0.090	13.4	1360	10.9	2.5	
Cd	111	1	nogas	0.057	17.9	217	9.6	1	
Sb	121	1	nogas	0.235	16.5	3360	13.8	2.5	
Tl	205	1	nogas	0.626	59.4	11485	56.4	1	
Pb	208	1	nogas	0.112	13.5	3067	11.3	2.5	
U	238	1	nogas	0.193	34.0	4264	33.6	2.5	
[Pb]	206	1	nogas	0.126	17.5	877	11.2	2.5	
[Pb]	207	1	nogas	0.090	18.0	580	14.1	2.5	
Na	23	2	He	59.701	1.0	170692	1.5	100	
Mg	24	2	He	8.690	1.9	11941	0.8	100	
Al	27	2	He	-0.681	-7.9	907	5.4	5	
K	39	2	He	-5.179	-15.5	216525	0.5	100	
Ca	43	2	He	5.109	155.4	90	29.4	100	
Ca	44	2	He	5.273	102.4	2000	14.9	100	
V	51	2	He	0.052	59.5	9041	1.0	2.5	
Cr	52	2	He	-0.137	-15.6	6321	4.0	2.5	
Mn	55	2	He	-0.113	-14.5	1547	7.9	2.5	
Fe	56	2	He	7.346	3.1	88903	3.0	100	
Co	59	2	He	0.071	10.7	1023	8.9	2.5	
Ni	60	2	He	-0.200	-18.7	387	25.9	2.5	
Cu	63	2	He	0.012	265.8	3194	7.1	2	
Zn	66	2	He	-0.157	-26.0	727	11.0	2.5	
As	75	2	He	0.032	45.8	518	6.1	2.5	
Se	78	2	He	0.158	116.1	231	9.5	2	
B	11	1	nogas	14.308	16.0	109970	6.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-78.025	-51.4	3126748	1.9	5	
Ca	43	1	nogas	10.349	55.8	1407	14.2	100	
Ca	44	1	nogas	3.621	60.1	122253	1.1	100	
Fe	56	1	nogas	7.478	50.1	3708975	1.6	100	
Se	77	1	nogas	-4.943	-92.8	32546	4.0	2.5	
Se	82	1	nogas	0.177	90.4	247	16.9	2	
Mo	95	1	nogas	0.360	42.0	2357	33.6	2.5	
Sn	118	1	nogas	0.404	36.2	4404	21.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.096	27.4	850	8.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.178	4.5	1437	5.4	2.5	
P	31	1	nogas	2.753	11.0	101588	0.6	10	
La	139	1	nogas	3.166	155.0	110	18.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-212.757	-95.4	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	1156022	4.35	1118108	103.39	70	125	
Ge	72	1	nogas	3394857	0.55	3396393	99.95	70	125	
In	115	1	nogas	3129690	3.49	3166421	98.84	70	125	
Bi	209	1	nogas	2160310	3.23	2159119	100.06	70	125	
Ge	72	2	He	1178134	1.74	1189986	99.00	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	267_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:43:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	97.132	1.476	675697	2.40	100	97.1	90	110	
Na	23	1	nogas	10025.169	0.918	237562555	0.44	10000	100.3	90	110	
Mg	24	1	nogas	10185.742	1.214	151187803	0.35	10000	101.9	90	110	
Al	27	1	nogas	109.389	2.858	1939926	2.46	100	109.4	90	110	
K	39	1	nogas	10147.861	0.698	208328417	2.01	10000	101.5	90	110	
Ti	47	1	nogas	100.572	4.419	167618	2.50	100	100.6	90	110	
V	51	1	nogas	109.875	1.261	3110919	1.35	100	109.9	90	110	
Cr	52	1	nogas	104.096	1.244	2101087	2.71	100	104.1	90	110	
Mn	55	1	nogas	104.810	1.613	2568685	3.46	100	104.8	90	110	
Co	59	1	nogas	100.919	3.252	2087858	1.40	100	100.9	90	110	
Ni	60	1	nogas	101.223	2.444	472767	1.05	100	101.2	90	110	
Cu	63	1	nogas	102.059	2.157	1128192	1.54	100	102.1	90	110	
Zn	66	1	nogas	101.377	0.501	379413	2.21	100	101.4	90	110	
As	75	1	nogas	99.350	1.628	604808	2.19	100	99.4	90	110	
Sr	88	1	nogas	99.913	3.208	2597743	1.47	100	99.9	90	110	
Ag	107	1	nogas	100.539	1.489	1259761	2.58	100	100.5	90	110	
Cd	111	1	nogas	101.516	2.980	276645	2.08	100	101.5	90	110	
Sb	121	1	nogas	100.369	1.294	1213369	0.81	100	100.4	90	110	
Tl	205	1	nogas	103.269	10.451	1749616	6.38	100	103.3	90	110	
Pb	208	1	nogas	102.612	0.976	2343044	0.98	100	102.6	90	110	
U	238	1	nogas	108.827	4.051	2299693	0.23	100	108.8	90	110	
[Pb]	206	1	nogas	102.938	7.101	593659	2.94	100	102.9	90	110	
[Pb]	207	1	nogas	100.663	5.971	505966	1.88	100	100.7	90	110	
Na	23	2	He	10045.106	1.367	18895103	1.21	10000	100.5	90	110	
Mg	24	2	He	9990.473	1.434	10536822	1.29	10000	99.9	90	110	
Al	27	2	He	98.107	1.071	62048	1.08	100	98.1	90	110	
K	39	2	He	9726.480	2.002	12057261	1.96	10000	97.3	90	110	
Ca	43	2	He	9828.264	0.898	33293	0.79	10000	98.3	90	110	
Ca	44	2	He	9861.936	1.572	553071	1.70	10000	98.6	90	110	
V	51	2	He	97.196	1.232	764342	1.08	100	97.2	90	110	
Cr	52	2	He	99.103	0.823	834175	0.85	100	99.1	90	110	
Mn	55	2	He	98.924	1.095	603016	0.96	100	98.9	90	110	
Fe	56	2	He	9957.163	2.428	73139074	2.28	10000	99.6	90	110	
Co	59	2	He	97.036	1.993	1097962	1.84	100	97.0	90	110	
Ni	60	2	He	97.856	1.556	276027	1.42	100	97.9	90	110	
Cu	63	2	He	98.606	1.463	693941	1.51	100	98.6	90	110	
Zn	66	2	He	100.162	1.553	168554	1.43	100	100.2	90	110	
As	75	2	He	97.758	2.017	159461	1.87	100	97.8	90	110	
Se	78	2	He	95.633	1.432	12927	1.40	100	95.6	90	110	
B	11	1	nogas	483.195	3.421	2022916	1.39	500	96.6	90	110	
Si	28	1	nogas	5071.221	2.754	8522085	0.85	5000	101.4	90	110	
Ca	43	1	nogas	10326.702	1.490	356618	0.50	10000	103.3	90	110	
Ca	44	1	nogas	10177.069	4.136	5798728	2.15	10000	101.8	90	110	
Fe	56	1	nogas	10536.171	3.039	225564038	3.56	10000	105.4	90	110	
Se	77	1	nogas	94.251	5.585	55197	3.58	100	94.3	90	110	
Se	82	1	nogas	100.542	3.433	26076	2.05	100	100.5	90	110	
Mo	95	1	nogas	97.603	1.397	505839	0.84	100	97.6	90	110	
Sn	118	1	nogas	98.875	1.005	702921	0.90	100	98.9	90	110	
Ba	137	1	nogas	102.724	2.932	397862	2.06	100	102.7	90	110	
Sb	121	2	He	100.452	1.403	654729	1.25	100	100.5	90	110	
Li	7	1	nogas	96.688	3.893	1432505	2.39	100	96.7	90	110	
P	31	1	nogas	497.225	0.683	943222	1.50	500	99.4	90	110	
La	139	1	nogas	188.898	27.309	737	23.91	100	188.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	556.734	60.593	47	32.73	100	556.7	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	1031893	2.64	1118108	92.29	70	125	
Ge	72	1	nogas	3297088	1.89	3396393	97.08	70	125	
In	115	1	nogas	2992173	1.15	3166421	94.50	70	125	
Bi	209	1	nogas	2140292	4.20	2159119	99.13	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1151266	0.16	1189986	96.75	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	268_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:45:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	16.1	863	8.7	1	
Na	23	1	nogas	37.360	5.7	1428686	4.6	100	
Mg	24	1	nogas	9.413	8.1	172045	7.4	100	
Al	27	1	nogas	-0.061	-163.7	26924	7.0	5	
K	39	1	nogas	13.779	40.9	9282423	0.3	100	
Ti	47	1	nogas	0.109	63.2	580	21.0	2.5	
V	51	1	nogas	-0.376	-395.1	583572	5.9	2.5	
Cr	52	1	nogas	-0.317	-28.8	53624	3.8	2.5	
Mn	55	1	nogas	-0.061	-15.6	29684	0.9	2.5	
Co	59	1	nogas	0.083	10.5	2574	7.8	2.5	
Ni	60	1	nogas	-0.210	-14.1	1287	11.9	2.5	
Cu	63	1	nogas	0.226	31.7	5091	16.0	2	
Zn	66	1	nogas	-0.108	-51.4	1937	10.3	2.5	
As	75	1	nogas	-0.307	-365.5	101314	5.3	2.5	
Sr	88	1	nogas	0.159	4.2	5714	3.2	2.5	
Ag	107	1	nogas	0.187	104.0	2566	96.7	2.5	
Cd	111	1	nogas	0.079	4.9	277	2.1	1	
Sb	121	1	nogas	0.290	14.8	3964	12.9	2.5	
Tl	205	1	nogas	0.562	57.7	10568	54.6	1	
Pb	208	1	nogas	0.107	7.4	2963	6.1	2.5	
U	238	1	nogas	0.154	26.6	3484	26.4	2.5	
[Pb]	206	1	nogas	0.083	15.8	640	13.6	2.5	
[Pb]	207	1	nogas	0.103	22.1	657	16.8	2.5	
Na	23	2	He	27.784	5.0	106301	3.3	100	
Mg	24	2	He	7.531	2.6	10383	2.2	100	
Al	27	2	He	-0.639	-22.8	907	10.6	5	
K	39	2	He	-7.333	-50.0	213904	2.1	100	
Ca	43	2	He	-0.094	-17791.0	70	79.5	100	
Ca	44	2	He	6.105	21.8	1990	3.5	100	
V	51	2	He	0.074	11.4	8947	0.8	2.5	
Cr	52	2	He	-0.128	-24.7	6214	3.6	2.5	
Mn	55	2	He	-0.088	-36.1	1657	11.4	2.5	
Fe	56	2	He	7.030	4.0	84041	3.3	100	
Co	59	2	He	0.069	17.4	973	14.2	2.5	
Ni	60	2	He	-0.183	-5.0	423	5.5	2.5	
Cu	63	2	He	-0.063	-36.8	2584	7.0	2	
Zn	66	2	He	-0.056	-16.1	873	2.4	2.5	
As	75	2	He	0.059	69.7	547	13.0	2.5	
Se	78	2	He	-0.041	-431.5	198	12.2	2	
B	11	1	nogas	6.154	14.4	73498	4.7	10	
Si	28	1	nogas	-88.730	-35.6	3049377	0.2	5	
Ca	43	1	nogas	10.041	13.3	1367	2.2	100	
Ca	44	1	nogas	-4.753	-82.3	114974	2.0	100	
Fe	56	1	nogas	7.310	38.0	3627654	1.0	100	
Se	77	1	nogas	-4.188	-228.0	32032	6.6	2.5	
Se	82	1	nogas	0.123	374.0	227	51.1	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.260	42.0	1790	32.2	2.5	
Sn	118	1	nogas	0.240	18.4	3150	11.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.092	0.8	823	2.5	2.5	
Sb	121	2	He	0.220	15.6	1667	14.1	2.5	
P	31	1	nogas	4.520	17.4	102496	1.0	10	
La	139	1	nogas	0.861	818.9	100	26.5	2.5	
Au	197	1	nogas	333.816	133.1	37	56.8	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	1169668	3.38	1118108	104.61	70	125	
Ge	72	1	nogas	3323785	1.20	3396393	97.86	70	125	
In	115	1	nogas	3073916	2.19	3166421	97.08	70	125	
Bi	209	1	nogas	2194286	2.41	2159119	101.63	70	125	
Ge	72	2	He	1144195	0.85	1189986	96.15	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	276_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:01:30-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	97.341	3.307	678450	2.01	100	97.3	90	110	
Na	23	1	nogas	9914.967	2.048	234715330	0.70	10000	99.1	90	110	
Mg	24	1	nogas	10151.362	4.783	150457095	2.40	10000	101.5	90	110	
Al	27	1	nogas	105.572	3.035	1901029	0.32	100	105.6	90	110	
K	39	1	nogas	10179.711	2.022	212067380	1.38	10000	101.8	90	110	
Ti	47	1	nogas	100.155	3.180	169464	0.81	100	100.2	90	110	
V	51	1	nogas	96.833	1.694	2853916	1.94	100	96.8	90	110	
Cr	52	1	nogas	101.813	3.614	2086132	1.19	100	101.8	90	110	
Mn	55	1	nogas	105.017	1.419	2611898	2.07	100	105.0	90	110	
Co	59	1	nogas	106.064	5.150	2226288	2.03	100	106.1	90	110	
Ni	60	1	nogas	103.277	4.221	489400	1.23	100	103.3	90	110	
Cu	63	1	nogas	101.077	3.529	1133856	0.76	100	101.1	90	110	
Zn	66	1	nogas	99.365	2.514	377442	1.84	100	99.4	90	110	
As	75	1	nogas	96.386	1.809	598683	2.05	100	96.4	90	110	
Sr	88	1	nogas	98.542	4.459	2600145	2.16	100	98.5	90	110	
Ag	107	1	nogas	101.128	2.226	1285891	1.04	100	101.1	90	110	
Cd	111	1	nogas	100.923	0.948	276908	2.81	100	100.9	90	110	
Sb	121	1	nogas	104.809	5.975	1284978	2.88	100	104.8	90	110	
Tl	205	1	nogas	104.426	3.417	1752107	2.56	100	104.4	90	110	
Pb	208	1	nogas	105.215	2.387	2402457	2.39	100	105.2	90	110	
U	238	1	nogas	111.336	0.449	2326875	2.40	100	111.3	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	106.652	4.329	608433	2.20	100	106.7	90	110	
[Pb]	207	1	nogas	104.159	4.918	517631	2.25	100	104.2	90	110	
Na	23	2	He	10058.463	0.858	18956786	0.57	10000	100.6	90	110	
Mg	24	2	He	9971.526	0.747	10537148	0.10	10000	99.7	90	110	
Al	27	2	He	100.767	0.707	63817	0.17	100	100.8	90	110	
K	39	2	He	9959.561	1.315	12340856	1.29	10000	99.6	90	110	
Ca	43	2	He	9924.528	3.134	33681	2.62	10000	99.2	90	110	
Ca	44	2	He	9864.749	2.873	554221	2.09	10000	98.6	90	110	
V	51	2	He	97.433	0.319	767678	0.48	100	97.4	90	110	
Cr	52	2	He	98.974	1.045	834716	1.20	100	99.0	90	110	
Mn	55	2	He	99.143	0.929	605502	0.21	100	99.1	90	110	
Fe	56	2	He	9982.886	2.133	73465362	1.42	10000	99.8	90	110	
Co	59	2	He	98.078	2.068	1111841	1.37	100	98.1	90	110	
Ni	60	2	He	100.388	1.715	283681	1.16	100	100.4	90	110	
Cu	63	2	He	101.048	1.543	712386	0.76	100	101.0	90	110	
Zn	66	2	He	100.701	1.640	169779	1.16	100	100.7	90	110	
As	75	2	He	98.290	1.094	160633	0.31	100	98.3	90	110	
Se	78	2	He	97.681	2.176	13224	1.38	100	97.7	90	110	
B	11	1	nogas	479.555	4.535	2012145	2.14	500	95.9	90	110	
Si	28	1	nogas	5094.853	6.788	8671812	1.21	5000	101.9	90	110	
Ca	43	1	nogas	10167.768	3.559	356315	0.38	10000	101.7	90	110	
Ca	44	1	nogas	9966.350	4.029	5766141	0.94	10000	99.7	90	110	
Fe	56	1	nogas	10347.555	2.145	224879272	1.12	10000	103.5	90	110	
Se	77	1	nogas	79.456	7.154	52439	1.84	100	79.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.058	2.540	26870	2.13	100	102.1	90	110	
Mo	95	1	nogas	96.652	3.588	508281	0.77	100	96.7	90	110	
Sn	118	1	nogas	99.820	2.871	714040	1.14	100	99.8	90	110	
Ba	137	1	nogas	101.556	0.977	396015	2.69	100	101.6	90	110	
Sb	121	2	He	102.564	0.558	669788	0.28	100	102.6	90	110	
Li	7	1	nogas	95.747	3.631	1422571	1.62	100	95.7	90	110	
P	31	1	nogas	488.312	3.780	941572	0.28	500	97.7	90	110	
La	139	1	nogas	153.625	7.227	620	4.27	100	153.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	219.918	198.577	30	66.67	100	219.9	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	1034848	5.02	1118108	92.55	70	125	
Ge	72	1	nogas	3347572	3.24	3396393	98.56	70	125	
In	115	1	nogas	3011679	1.93	3166421	95.11	70	125	
Bi	209	1	nogas	2114562	2.82	2159119	97.94	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1153517	0.78	1189986	96.94	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	277_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:03:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.113	2.3	1103	5.2	1	
Na	23	1	nogas	19.891	14.7	1016459	2.8	100	
Mg	24	1	nogas	9.912	7.9	178601	2.4	100	
Al	27	1	nogas	-0.119	-90.5	26636	6.2	5	
K	39	1	nogas	-2.516	-357.8	9222153	0.3	100	
Ti	47	1	nogas	0.079	75.8	543	17.5	2.5	
V	51	1	nogas	-5.200	-17.6	485592	3.3	2.5	
Cr	52	1	nogas	-0.505	-11.7	51355	0.9	2.5	
Mn	55	1	nogas	-0.118	-60.2	29106	4.3	2.5	
Co	59	1	nogas	0.092	17.6	2820	11.9	2.5	
Ni	60	1	nogas	-0.222	-11.2	1267	9.7	2.5	
Cu	63	1	nogas	0.173	12.6	4631	3.4	2	
Zn	66	1	nogas	-0.150	-18.4	1837	7.8	2.5	
As	75	1	nogas	-2.645	-21.5	92035	3.6	2.5	
Sr	88	1	nogas	0.118	4.5	4761	1.7	2.5	
Ag	107	1	nogas	0.089	28.8	1360	24.5	2.5	
Cd	111	1	nogas	0.098	12.9	330	8.0	1	
Sb	121	1	nogas	0.677	11.7	8922	10.5	2.5	
Tl	205	1	nogas	0.619	40.0	11632	42.1	1	
Pb	208	1	nogas	0.112	9.5	3070	7.9	2.5	
U	238	1	nogas	0.176	30.5	3994	34.5	2.5	
[Pb]	206	1	nogas	0.111	12.1	800	7.8	2.5	
[Pb]	207	1	nogas	0.111	6.1	697	2.2	2.5	
Na	23	2	He	15.996	6.2	84148	1.4	100	
Mg	24	2	He	8.751	6.0	11637	3.8	100	
Al	27	2	He	-0.726	-22.6	850	10.5	5	
K	39	2	He	-9.377	-10.6	211418	0.6	100	
Ca	43	2	He	-1.202	-975.9	67	60.6	100	
Ca	44	2	He	6.576	43.8	2013	8.7	100	
V	51	2	He	-0.088	-42.1	7680	2.3	2.5	
Cr	52	2	He	-0.103	-21.4	6405	1.6	2.5	
Mn	55	2	He	-0.087	-16.9	1660	5.5	2.5	
Fe	56	2	He	8.303	7.8	93113	3.9	100	
Co	59	2	He	0.074	15.5	1017	12.3	2.5	
Ni	60	2	He	-0.181	-9.8	430	10.1	2.5	
Cu	63	2	He	-0.118	-25.2	2194	8.5	2	
Zn	66	2	He	-0.157	-55.7	703	19.9	2.5	
As	75	2	He	0.030	90.2	500	9.9	2.5	
Se	78	2	He	0.139	128.3	221	10.9	2	
B	11	1	nogas	6.570	31.8	73475	7.5	10	
Si	28	1	nogas	-101.452	-29.9	3125024	1.1	5	
Ca	43	1	nogas	3.592	23.5	1177	2.6	100	
Ca	44	1	nogas	-12.199	-34.6	114021	1.0	100	
Fe	56	1	nogas	-2.852	-198.9	3511218	2.2	100	
Se	77	1	nogas	-18.159	-30.6	29524	3.2	2.5	
Se	82	1	nogas	0.294	7.4	280	0.0	2	
Mo	95	1	nogas	0.331	31.8	2224	25.3	2.5	
Sn	118	1	nogas	0.326	24.3	3790	12.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.117	9.1	927	1.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.562	7.8	3870	6.2	2.5	
P	31	1	nogas	1.365	119.6	99899	1.6	10	
La	139	1	nogas	-9.646	-36.7	63	18.2	2.5	
Au	197	1	nogas	124.647	85.9	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	1143537	5.14	1118108	102.27	70	125	
Ge	72	1	nogas	3421762	2.07	3396393	100.75	70	125	
In	115	1	nogas	3095910	3.27	3166421	97.77	70	125	
Bi	209	1	nogas	2188409	4.77	2159119	101.36	70	125	
Ge	72	2	He	1142138	1.44	1189986	95.98	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	288_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:25:12-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	105.039	2.889	676915	2.63	100	105.0	90	110	
Na	23	1	nogas	9923.560	3.089	233046922	3.45	10000	99.2	90	110	
Mg	24	1	nogas	10344.017	2.621	152118712	1.14	10000	103.4	90	110	
Al	27	1	nogas	105.947	3.481	1924446	2.20	100	105.9	90	110	
K	39	1	nogas	10220.885	1.757	214739505	0.40	10000	102.2	90	110	
Ti	47	1	nogas	99.461	2.362	169834	3.05	100	99.5	90	110	
V	51	1	nogas	103.160	4.783	3028251	4.79	100	103.2	90	110	
Cr	52	1	nogas	101.493	3.154	2099279	4.22	100	101.5	90	110	
Mn	55	1	nogas	103.190	3.698	2590124	4.93	100	103.2	90	110	
Co	59	1	nogas	100.415	1.207	2127851	1.64	100	100.4	90	110	
Ni	60	1	nogas	99.434	0.836	475684	1.81	100	99.4	90	110	
Cu	63	1	nogas	99.805	2.328	1129687	1.19	100	99.8	90	110	
Zn	66	1	nogas	99.777	2.132	382315	1.55	100	99.8	90	110	
As	75	1	nogas	95.795	1.881	600854	2.18	100	95.8	90	110	
Sr	88	1	nogas	99.775	0.665	2656996	0.78	100	99.8	90	110	
Ag	107	1	nogas	99.617	3.590	1277680	2.79	100	99.6	90	110	
Cd	111	1	nogas	99.370	1.651	275101	0.96	100	99.4	90	110	
Sb	121	1	nogas	100.849	0.804	1248462	1.51	100	100.8	90	110	
Tl	205	1	nogas	103.208	3.078	1743242	3.22	100	103.2	90	110	
Pb	208	1	nogas	102.614	1.962	2343086	1.96	100	102.6	90	110	
U	238	1	nogas	107.207	7.295	2252593	5.21	100	107.2	90	110	
[Pb]	206	1	nogas	102.688	3.198	589695	0.55	100	102.7	90	110	
[Pb]	207	1	nogas	101.147	3.758	506043	1.53	100	101.1	90	110	
Na	23	2	He	10106.073	1.151	18805815	0.86	10000	101.1	90	110	
Mg	24	2	He	10131.170	2.127	10569694	1.04	10000	101.3	90	110	
Al	27	2	He	101.323	1.597	63367	2.95	100	101.3	90	110	
K	39	2	He	9906.095	0.389	12275803	0.38	10000	99.1	90	110	
Ca	43	2	He	9916.612	2.013	33230	1.26	10000	99.2	90	110	
Ca	44	2	He	10053.895	1.220	557741	0.71	10000	100.5	90	110	
V	51	2	He	98.617	2.289	766990	0.91	100	98.6	90	110	
Cr	52	2	He	99.784	0.494	830901	1.37	100	99.8	90	110	
Mn	55	2	He	100.188	1.186	604152	1.04	100	100.2	90	110	
Fe	56	2	He	10152.078	1.623	73768219	0.71	10000	101.5	90	110	
Co	59	2	He	99.884	2.744	1117870	1.14	100	99.9	90	110	
Ni	60	2	He	100.217	3.409	279559	1.71	100	100.2	90	110	
Cu	63	2	He	101.665	1.554	707661	0.53	100	101.7	90	110	
Zn	66	2	He	102.594	1.659	170775	1.52	100	102.6	90	110	
As	75	2	He	99.908	2.094	161194	0.42	100	99.9	90	110	
Se	78	2	He	98.214	2.026	13129	2.02	100	98.2	90	110	
B	11	1	nogas	519.856	1.232	2014710	2.45	500	104.0	90	110	
Si	28	1	nogas	4908.468	2.243	8548625	0.07	5000	98.2	90	110	
Ca	43	1	nogas	10178.338	1.711	359937	1.43	10000	101.8	90	110	
Ca	44	1	nogas	10020.153	0.924	5850183	1.14	10000	100.2	90	110	
Fe	56	1	nogas	10201.190	1.238	223710713	1.45	10000	102.0	90	110	
Se	77	1	nogas	73.463	3.064	51443	0.84	100	73.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.660	1.261	27264	0.76	100	102.7	90	110	
Mo	95	1	nogas	96.379	0.244	511512	1.36	100	96.4	90	110	
Sn	118	1	nogas	98.361	0.151	710346	0.91	100	98.4	90	110	
Ba	137	1	nogas	100.112	1.981	393916	1.55	100	100.1	90	110	
Sb	121	2	He	100.710	2.343	649309	1.28	100	100.7	90	110	
Li	7	1	nogas	103.575	4.448	1416448	4.52	100	103.6	90	110	
P	31	1	nogas	482.088	1.650	939242	1.16	500	96.4	90	110	
La	139	1	nogas	165.375	9.064	667	7.55	100	165.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	544.790	138.459	47	81.13	100	544.8	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	956088	2.53	1118108	85.51	70	125	
Ge	72	1	nogas	3375815	1.37	3396393	99.39	70	125	
In	115	1	nogas	3039351	0.80	3166421	95.99	70	125	
Bi	209	1	nogas	2128241	2.85	2159119	98.57	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1139069	1.86	1189986	95.72	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	289_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:27:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.100	28.7	970	22.5	1	
Na	23	1	nogas	23.345	12.8	1109265	7.3	100	
Mg	24	1	nogas	12.518	10.9	219040	9.5	100	
Al	27	1	nogas	0.348	28.4	35084	7.0	5	
K	39	1	nogas	4.209	233.1	9343065	0.6	100	
Ti	47	1	nogas	0.067	100.8	523	22.4	2.5	
V	51	1	nogas	-4.679	-15.1	497164	1.4	2.5	
Cr	52	1	nogas	-0.503	-6.1	51311	0.8	2.5	
Mn	55	1	nogas	-0.086	-10.1	29868	1.6	2.5	
Co	59	1	nogas	0.111	4.0	3227	2.9	2.5	
Ni	60	1	nogas	-0.187	-14.1	1437	10.3	2.5	
Cu	63	1	nogas	0.161	9.2	4494	5.5	2	
Zn	66	1	nogas	-0.112	-53.1	1973	10.3	2.5	
As	75	1	nogas	-2.300	-36.1	93639	3.1	2.5	
Sr	88	1	nogas	0.148	15.3	5554	9.7	2.5	
Ag	107	1	nogas	0.095	4.7	1440	5.9	2.5	
Cd	111	1	nogas	0.099	25.7	337	22.3	1	
Sb	121	1	nogas	0.262	20.9	3724	20.2	2.5	
Tl	205	1	nogas	0.585	54.7	10898	54.7	1	
Pb	208	1	nogas	0.133	19.0	3537	16.2	2.5	
U	238	1	nogas	0.182	26.9	4051	29.8	2.5	
[Pb]	206	1	nogas	0.123	11.9	863	12.8	2.5	
[Pb]	207	1	nogas	0.121	22.7	740	22.7	2.5	
Na	23	2	He	16.402	5.2	85404	3.0	100	
Mg	24	2	He	9.511	6.4	12508	5.8	100	
Al	27	2	He	-0.380	-77.6	1070	17.8	5	
K	39	2	He	-6.971	-22.8	214345	0.9	100	
Ca	43	2	He	9.594	122.4	103	39.1	100	
Ca	44	2	He	10.153	11.3	2224	3.0	100	
V	51	2	He	-0.023	-27.5	8231	1.4	2.5	
Cr	52	2	He	-0.166	-16.6	5918	3.6	2.5	
Mn	55	2	He	-0.092	-36.2	1637	13.2	2.5	
Fe	56	2	He	9.623	7.8	103383	6.5	100	
Co	59	2	He	0.090	12.4	1210	10.7	2.5	
Ni	60	2	He	-0.149	-6.2	520	3.8	2.5	
Cu	63	2	He	-0.113	-18.9	2240	5.4	2	
Zn	66	2	He	-0.118	-48.7	773	12.4	2.5	
As	75	2	He	0.037	70.4	513	8.7	2.5	
Se	78	2	He	-0.046	-137.8	198	5.3	2	
B	11	1	nogas	2.263	42.6	52433	8.9	10	
Si	28	1	nogas	-119.035	-31.6	3100191	1.1	5	
Ca	43	1	nogas	11.707	41.2	1463	11.0	100	
Ca	44	1	nogas	-15.477	-9.3	111949	1.5	100	
Fe	56	1	nogas	0.028	6515.3	3569323	2.0	100	
Se	77	1	nogas	-15.916	-17.4	30032	0.7	2.5	
Se	82	1	nogas	-0.031	-421.4	193	19.6	2	
Mo	95	1	nogas	0.303	43.3	2070	34.7	2.5	
Sn	118	1	nogas	0.257	35.0	3330	21.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.128	17.6	980	10.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.203	13.8	1560	12.2	2.5	
P	31	1	nogas	1.271	109.4	99561	0.5	10	
La	139	1	nogas	12.712	54.5	143	17.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	421.858	133.7	40	66.1	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	1106025	1.71	1118108	98.92	70	125	
Ge	72	1	nogas	3415815	1.93	3396393	100.57	70	125	
In	115	1	nogas	3120508	1.51	3166421	98.55	70	125	
Bi	209	1	nogas	2157146	3.70	2159119	99.91	70	125	
Ge	72	2	He	1148523	1.19	1189986	96.52	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	298_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:44:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	97.137	7.435	688737	0.91	100	97.1	90	110	
Na	23	1	nogas	9979.681	0.618	236170780	1.77	10000	99.8	90	110	
Mg	24	1	nogas	10091.735	1.952	149563528	0.19	10000	100.9	90	110	
Al	27	1	nogas	104.055	5.185	1941578	3.62	100	104.1	90	110	
K	39	1	nogas	9996.165	2.851	215912146	1.45	10000	100.0	90	110	
Ti	47	1	nogas	95.708	2.826	167858	2.74	100	95.7	90	110	
V	51	1	nogas	91.487	1.715	2827578	0.79	100	91.5	90	110	
Cr	52	1	nogas	97.273	1.768	2069187	3.22	100	97.3	90	110	
Mn	55	1	nogas	98.552	3.092	2542299	4.40	100	98.6	90	110	
Co	59	1	nogas	99.647	5.342	2169608	6.27	100	99.6	90	110	
Ni	60	1	nogas	98.247	1.038	482803	1.87	100	98.2	90	110	
Cu	63	1	nogas	99.411	0.544	1156114	2.06	100	99.4	90	110	
Zn	66	1	nogas	99.106	1.129	390129	1.85	100	99.1	90	110	
As	75	1	nogas	95.259	3.034	614173	1.08	100	95.3	90	110	
Sr	88	1	nogas	99.071	3.731	2710896	5.01	100	99.1	90	110	
Ag	107	1	nogas	99.231	3.095	1307477	2.90	100	99.2	90	110	
Cd	111	1	nogas	100.384	2.564	283137	0.45	100	100.4	90	110	
Sb	121	1	nogas	102.098	3.840	1298724	5.23	100	102.1	90	110	
Tl	205	1	nogas	102.087	4.697	1738327	4.30	100	102.1	90	110	
Pb	208	1	nogas	104.202	0.927	2379330	0.93	100	104.2	90	110	
U	238	1	nogas	110.505	2.611	2342953	1.80	100	110.5	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	103.337	2.397	598487	1.89	100	103.3	90	110	
[Pb]	207	1	nogas	101.420	2.172	511758	1.37	100	101.4	90	110	
Na	23	2	He	10081.074	1.451	19037937	0.57	10000	100.8	90	110	
Mg	24	2	He	9851.863	1.884	10431819	1.17	10000	98.5	90	110	
Al	27	2	He	99.584	2.036	63222	2.62	100	99.6	90	110	
K	39	2	He	10066.119	0.514	12470508	0.50	10000	100.7	90	110	
Ca	43	2	He	9872.997	2.019	33577	1.52	10000	98.7	90	110	
Ca	44	2	He	10080.228	2.396	567507	1.99	10000	100.8	90	110	
V	51	2	He	99.987	1.298	789189	0.80	100	100.0	90	110	
Cr	52	2	He	100.243	1.329	847029	0.47	100	100.2	90	110	
Mn	55	2	He	101.296	0.858	619893	0.04	100	101.3	90	110	
Fe	56	2	He	10225.236	1.360	75409177	1.07	10000	102.3	90	110	
Co	59	2	He	100.557	1.457	1142358	1.07	100	100.6	90	110	
Ni	60	2	He	101.902	1.185	288554	0.80	100	101.9	90	110	
Cu	63	2	He	101.715	1.316	718562	0.44	100	101.7	90	110	
Zn	66	2	He	101.879	0.208	172122	0.74	100	101.9	90	110	
As	75	2	He	100.698	0.715	164904	0.61	100	100.7	90	110	
Se	78	2	He	99.385	1.611	13480	0.74	100	99.4	90	110	
B	11	1	nogas	484.296	6.709	2068945	3.36	500	96.9	90	110	
Si	28	1	nogas	4694.455	5.079	8539584	1.61	5000	93.9	90	110	
Ca	43	1	nogas	10181.486	1.341	369833	1.08	10000	101.8	90	110	
Ca	44	1	nogas	9906.968	1.323	5942288	0.63	10000	99.1	90	110	
Fe	56	1	nogas	9943.565	2.523	224045672	1.59	10000	99.4	90	110	
Se	77	1	nogas	67.672	5.138	51396	2.15	100	67.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.336	1.745	27104	1.01	100	99.3	90	110	
Mo	95	1	nogas	95.901	1.697	522744	1.11	100	95.9	90	110	
Sn	118	1	nogas	97.370	3.470	716474	3.08	100	97.4	90	110	
Ba	137	1	nogas	100.080	2.336	401238	1.41	100	100.1	90	110	
Sb	121	2	He	103.561	0.795	677746	1.47	100	103.6	90	110	
Li	7	1	nogas	100.133	5.414	1511363	3.27	100	100.1	90	110	
P	31	1	nogas	474.868	3.668	951581	1.81	500	95.0	90	110	
La	139	1	nogas	139.353	26.435	587	20.83	100	139.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	619.406	100.599	50	60.00	100	619.4	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	1055890	8.21	1118108	94.44	70	125	
Ge	72	1	nogas	3467583	1.52	3396393	102.10	70	125	
In	115	1	nogas	3097507	2.30	3166421	97.82	70	125	
Bi	209	1	nogas	2145313	0.83	2159119	99.36	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1155922	0.87	1189986	97.14	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	299_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:46:59-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.124	21.6	1150	14.0	1	
Na	23	1	nogas	15.817	8.6	943674	3.5	100	
Mg	24	1	nogas	9.979	15.3	183629	10.8	100	
Al	27	1	nogas	-0.064	-99.6	27654	2.9	5	
K	39	1	nogas	2.050	305.3	9318032	0.3	100	
Ti	47	1	nogas	0.179	18.8	717	8.9	2.5	
V	51	1	nogas	-5.489	-4.8	478977	1.4	2.5	
Cr	52	1	nogas	-0.517	-6.2	51134	1.8	2.5	
Mn	55	1	nogas	-0.121	-9.9	29067	2.3	2.5	
Co	59	1	nogas	0.095	19.9	2904	12.8	2.5	
Ni	60	1	nogas	-0.233	-17.3	1213	15.2	2.5	
Cu	63	1	nogas	0.137	33.7	4221	11.3	2	
Zn	66	1	nogas	-0.184	-19.6	1703	9.1	2.5	
As	75	1	nogas	-3.228	-10.9	89006	3.3	2.5	
Sr	88	1	nogas	0.128	14.7	5037	9.6	2.5	
Ag	107	1	nogas	0.088	10.9	1343	8.6	2.5	
Cd	111	1	nogas	0.062	37.1	237	25.5	1	
Sb	121	1	nogas	0.664	13.3	8766	11.3	2.5	
Tl	205	1	nogas	0.666	52.0	12593	47.8	1	
Pb	208	1	nogas	0.121	27.3	3270	23.0	2.5	
U	238	1	nogas	0.178	34.9	4084	32.6	2.5	
[Pb]	206	1	nogas	0.117	41.4	860	33.4	2.5	
[Pb]	207	1	nogas	0.123	29.8	777	23.9	2.5	
Na	23	2	He	11.575	5.8	77433	2.5	100	
Mg	24	2	He	8.036	4.7	11103	2.0	100	
Al	27	2	He	-0.705	-15.3	880	6.3	5	
K	39	2	He	-6.846	-18.1	214498	0.7	100	
Ca	43	2	He	2.413	320.5	80	33.1	100	
Ca	44	2	He	3.167	19.3	1860	3.8	100	
V	51	2	He	-0.110	-25.2	7661	1.8	2.5	
Cr	52	2	He	-0.151	-30.8	6128	4.7	2.5	
Mn	55	2	He	-0.098	-13.4	1623	3.6	2.5	
Fe	56	2	He	7.718	2.9	90635	2.2	100	
Co	59	2	He	0.072	13.4	1020	12.2	2.5	
Ni	60	2	He	-0.160	-26.2	497	22.3	2.5	
Cu	63	2	He	-0.114	-21.4	2267	8.6	2	
Zn	66	2	He	-0.227	-18.6	600	13.2	2.5	
As	75	2	He	0.016	75.5	486	5.5	2.5	
Se	78	2	He	0.019	751.8	209	7.8	2	
B	11	1	nogas	4.059	36.7	60163	7.5	10	
Si	28	1	nogas	-82.336	-59.2	3146625	0.6	5	
Ca	43	1	nogas	4.624	47.2	1213	5.4	100	
Ca	44	1	nogas	-18.439	-7.1	110443	0.6	100	
Fe	56	1	nogas	-0.822	-732.6	3556492	2.5	100	
Se	77	1	nogas	-24.721	-3.1	27925	1.9	2.5	
Se	82	1	nogas	0.382	26.4	303	7.6	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.391	45.0	2540	35.9	2.5	
Sn	118	1	nogas	0.318	24.3	3847	11.9	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.108	29.0	917	10.9	2.5	
Sb	121	2	He	0.516	9.1	3650	10.0	2.5	
P	31	1	nogas	2.170	14.9	101370	0.7	10	
La	139	1	nogas	0.655	1165.4	103	29.6	2.5	
Au	197	1	nogas	244.429	48.9	33	17.3	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	1105831	3.53	1118108	98.90	70	125	
Ge	72	1	nogas	3422241	1.24	3396393	100.76	70	125	
In	115	1	nogas	3190685	3.07	3166421	100.77	70	125	
Bi	209	1	nogas	2247073	3.49	2159119	104.07	70	125	
Ge	72	2	He	1164676	1.89	1189986	97.87	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	309_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:06:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	96.812	9.299	686240	1.86	100	96.8	90	110	
Na	23	1	nogas	9730.935	4.491	237579239	1.50	10000	97.3	90	110	
Mg	24	1	nogas	10008.832	6.297	152961574	1.89	10000	100.1	90	110	
Al	27	1	nogas	101.513	13.919	1841873	7.27	100	101.5	90	110	
K	39	1	nogas	10122.589	7.424	212999884	2.69	10000	101.2	90	110	
Ti	47	1	nogas	98.508	6.209	168400	1.37	100	98.5	90	110	
V	51	1	nogas	109.698	9.531	3183278	2.34	100	109.7	90	110	
Cr	52	1	nogas	105.537	4.740	2184914	4.15	100	105.5	90	110	
Mn	55	1	nogas	104.174	3.016	2622954	6.57	100	104.2	90	110	
Co	59	1	nogas	101.542	1.826	2162545	8.88	100	101.5	90	110	
Ni	60	1	nogas	100.698	10.654	481255	3.17	100	100.7	90	110	
Cu	63	1	nogas	100.433	9.589	1136632	2.82	100	100.4	90	110	
Zn	66	1	nogas	99.789	6.856	382765	1.32	100	99.8	90	110	
As	75	1	nogas	97.557	8.262	610507	0.89	100	97.6	90	110	
Sr	88	1	nogas	102.154	2.136	2732624	8.12	100	102.2	90	110	
Ag	107	1	nogas	97.083	2.783	1249384	5.50	100	97.1	90	110	
Cd	111	1	nogas	97.394	5.632	278445	3.82	100	97.4	90	110	
Sb	121	1	nogas	100.688	7.996	1246876	0.59	100	100.7	90	110	
Tl	205	1	nogas	102.580	1.545	1822321	7.63	100	102.6	90	110	
Pb	208	1	nogas	106.776	5.003	2438107	5.00	100	106.8	90	110	
U	238	1	nogas	104.990	1.019	2324615	9.14	100	105.0	90	110	
[Pb]	206	1	nogas	99.496	9.214	598425	1.47	100	99.5	90	110	
[Pb]	207	1	nogas	98.091	8.681	514229	2.20	100	98.1	90	110	
Na	23	2	He	9993.583	3.808	18517911	2.05	10000	99.9	90	110	
Mg	24	2	He	9962.643	2.411	10352254	0.49	10000	99.6	90	110	
Al	27	2	He	98.056	2.209	61102	0.50	100	98.1	90	110	
K	39	2	He	9827.826	2.474	12180571	2.43	10000	98.3	90	110	
Ca	43	2	He	9707.852	2.987	32398	1.24	10000	97.1	90	110	
Ca	44	2	He	9939.622	2.419	549161	0.20	10000	99.4	90	110	
V	51	2	He	98.800	2.389	765361	0.97	100	98.8	90	110	
Cr	52	2	He	98.764	1.223	819215	1.36	100	98.8	90	110	
Mn	55	2	He	99.976	1.538	600484	1.02	100	100.0	90	110	
Fe	56	2	He	10159.367	1.571	73533726	1.27	10000	101.6	90	110	
Co	59	2	He	99.503	1.321	1109438	1.14	100	99.5	90	110	
Ni	60	2	He	101.629	1.539	282440	1.04	100	101.6	90	110	
Cu	63	2	He	101.734	2.752	705237	0.67	100	101.7	90	110	
Zn	66	2	He	99.936	0.786	165736	1.68	100	99.9	90	110	
As	75	2	He	99.153	1.776	159365	1.40	100	99.2	90	110	
Se	78	2	He	96.824	4.233	12890	2.47	100	96.8	90	110	
B	11	1	nogas	473.502	9.289	2021495	0.99	500	94.7	90	110	
Si	28	1	nogas	4821.182	13.926	8454652	1.57	5000	96.4	90	110	
Ca	43	1	nogas	10110.793	9.760	357417	2.43	10000	101.1	90	110	
Ca	44	1	nogas	9988.479	12.832	5822387	5.44	10000	99.9	90	110	
Fe	56	1	nogas	10158.262	9.370	222750488	2.30	10000	101.6	90	110	
Se	77	1	nogas	85.770	23.841	54461	4.67	100	85.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.120	7.205	26620	2.29	100	100.1	90	110	
Mo	95	1	nogas	96.739	7.226	513780	0.68	100	96.7	90	110	
Sn	118	1	nogas	96.312	7.909	717226	1.26	100	96.3	90	110	
Ba	137	1	nogas	98.295	9.699	398433	0.87	100	98.3	90	110	
Sb	121	2	He	101.667	3.425	652774	1.53	100	101.7	90	110	
Li	7	1	nogas	92.161	4.975	1400456	5.79	100	92.2	90	110	
P	31	1	nogas	486.397	8.581	947299	0.70	500	97.3	90	110	
La	139	1	nogas	155.760	10.912	653	5.38	100	155.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	255.715	69.629	33	17.32	100	255.7	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	1056734	8.51	1118108	94.51	70	125	
Ge	72	1	nogas	3389787	7.14	3396393	99.81	70	125	
In	115	1	nogas	3147909	8.44	3166421	99.42	70	125	
Bi	209	1	nogas	2238956	8.32	2159119	103.70	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1134661	2.34	1189986	95.35	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	310_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:08:54-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.100	26.4	1000	19.7	1	
Na	23	1	nogas	30.764	4.5	1289399	3.7	100	
Mg	24	1	nogas	11.072	6.7	198666	6.8	100	
Al	27	1	nogas	-0.062	-34.3	27140	2.4	5	
K	39	1	nogas	19.461	35.7	9479028	0.5	100	
Ti	47	1	nogas	0.194	39.9	730	19.2	2.5	
V	51	1	nogas	-0.329	-564.2	589645	6.4	2.5	
Cr	52	1	nogas	-0.352	-38.2	53380	3.8	2.5	
Mn	55	1	nogas	-0.114	-37.3	28629	2.8	2.5	
Co	59	1	nogas	0.100	15.6	2937	11.3	2.5	
Ni	60	1	nogas	-0.194	-20.6	1377	14.9	2.5	
Cu	63	1	nogas	0.162	24.6	4417	8.7	2	
Zn	66	1	nogas	-0.155	-4.7	1780	1.9	2.5	
As	75	1	nogas	-0.733	-155.0	100007	4.7	2.5	
Sr	88	1	nogas	0.151	11.4	5534	7.6	2.5	
Ag	107	1	nogas	0.079	13.4	1200	12.4	2.5	
Cd	111	1	nogas	0.098	6.3	330	6.1	1	
Sb	121	1	nogas	0.251	7.1	3514	7.4	2.5	
Tl	205	1	nogas	0.672	54.5	12656	53.3	1	
Pb	208	1	nogas	0.121	11.6	3274	9.8	2.5	
U	238	1	nogas	0.189	32.9	4291	34.1	2.5	
[Pb]	206	1	nogas	0.114	1.4	827	2.5	2.5	
[Pb]	207	1	nogas	0.117	12.9	737	11.7	2.5	
Na	23	2	He	22.456	1.5	95143	2.4	100	
Mg	24	2	He	8.675	2.6	11437	3.4	100	
Al	27	2	He	-0.685	-10.1	867	4.8	5	
K	39	2	He	-7.461	-32.5	213749	1.4	100	
Ca	43	2	He	2.248	634.5	77	60.2	100	
Ca	44	2	He	4.547	46.5	1880	7.0	100	
V	51	2	He	0.052	92.0	8667	2.4	2.5	
Cr	52	2	He	-0.154	-25.5	5914	3.7	2.5	
Mn	55	2	He	-0.101	-25.8	1560	11.9	2.5	
Fe	56	2	He	8.137	1.8	90956	3.0	100	
Co	59	2	He	0.070	9.8	970	9.8	2.5	
Ni	60	2	He	-0.182	-13.0	423	15.7	2.5	
Cu	63	2	He	-0.110	-7.1	2224	1.6	2	
Zn	66	2	He	-0.147	-24.9	713	8.5	2.5	
As	75	2	He	0.063	50.0	547	9.1	2.5	
Se	78	2	He	0.193	62.6	226	7.2	2	
B	11	1	nogas	2.131	52.8	53255	9.1	10	
Si	28	1	nogas	-82.255	-105.4	3083233	1.8	5	
Ca	43	1	nogas	9.200	5.8	1350	2.7	100	
Ca	44	1	nogas	-20.309	-24.7	107151	1.7	100	
Fe	56	1	nogas	9.549	55.9	3708993	3.8	100	
Se	77	1	nogas	-3.437	-229.7	32499	5.0	2.5	
Se	82	1	nogas	0.279	65.0	270	16.1	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.305	41.8	2047	33.5	2.5	
Sn	118	1	nogas	0.255	30.9	3270	18.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.112	33.3	903	16.7	2.5	
Sb	121	2	He	0.169	1.5	1320	0.8	2.5	
P	31	1	nogas	5.251	26.6	104678	1.6	10	
La	139	1	nogas	9.409	101.0	130	26.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-10.580	-3780.4	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	1136659	0.61	1118108	101.66	70	125	
Ge	72	1	nogas	3353618	1.31	3396393	98.74	70	125	
In	115	1	nogas	3078991	0.93	3166421	97.24	70	125	
Bi	209	1	nogas	2209346	2.59	2159119	102.33	70	125	
Ge	72	2	He	1129734	1.87	1189986	94.94	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\010
Acq Date Time	2019-01-09T22:20:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	1.797	690086	2.73	100	100.2	90	110	
Na	23	1	nogas	9990.652	3.857	240538755	2.57	10000	99.9	90	110	
Mg	24	1	nogas	10312.386	3.286	155584162	3.80	10000	103.1	90	110	
Al	27	1	nogas	106.793	5.885	1947739	4.35	100	106.8	90	110	
K	39	1	nogas	10076.388	3.446	212750480	2.19	10000	100.8	90	110	
Ti	47	1	nogas	99.231	1.079	170216	2.91	100	99.2	90	110	
V	51	1	nogas	103.176	1.386	3041892	2.77	100	103.2	90	110	
Cr	52	1	nogas	100.604	2.249	2089776	0.42	100	100.6	90	110	
Mn	55	1	nogas	102.223	1.909	2576536	1.49	100	102.2	90	110	
Co	59	1	nogas	100.741	1.765	2143960	0.30	100	100.7	90	110	
Ni	60	1	nogas	100.138	3.311	480995	1.65	100	100.1	90	110	
Cu	63	1	nogas	101.868	4.379	1157772	2.52	100	101.9	90	110	
Zn	66	1	nogas	100.597	2.461	387125	1.39	100	100.6	90	110	
As	75	1	nogas	95.603	2.361	602425	1.06	100	95.6	90	110	
Sr	88	1	nogas	98.831	1.609	2643438	1.06	100	98.8	90	110	
Ag	107	1	nogas	100.994	2.350	1301792	4.07	100	101.0	90	110	
Cd	111	1	nogas	100.494	3.411	275948	1.64	100	100.5	90	110	
Sb	121	1	nogas	101.229	4.500	1258114	2.67	100	101.2	90	110	
Tl	205	1	nogas	101.273	4.753	1750249	2.81	100	101.3	90	110	
Pb	208	1	nogas	104.433	1.979	2384602	1.98	100	104.4	90	110	
U	238	1	nogas	106.582	1.549	2294568	0.74	100	106.6	90	110	
[Pb]	206	1	nogas	101.800	4.110	598512	2.99	100	101.8	90	110	
[Pb]	207	1	nogas	100.324	2.807	514002	2.42	100	100.3	90	110	
Na	23	2	He	9924.536	0.894	18569955	0.44	10000	99.2	90	110	
Mg	24	2	He	9893.091	0.906	10378731	0.21	10000	98.9	90	110	
Al	27	2	He	97.594	1.601	61403	1.37	100	97.6	90	110	
K	39	2	He	9574.033	1.809	11871776	1.77	10000	95.7	90	110	
Ca	43	2	He	9416.240	1.735	31734	2.27	10000	94.2	90	110	
Ca	44	2	He	9881.678	2.135	551261	2.47	10000	98.8	90	110	
V	51	2	He	96.622	1.578	755842	1.32	100	96.6	90	110	
Cr	52	2	He	98.377	1.218	823753	1.59	100	98.4	90	110	
Mn	55	2	He	99.099	0.879	600899	1.29	100	99.1	90	110	
Fe	56	2	He	10037.055	1.412	73333172	0.72	10000	100.4	90	110	
Co	59	2	He	98.481	3.498	1108293	2.90	100	98.5	90	110	
Ni	60	2	He	99.672	3.958	279614	3.46	100	99.7	90	110	
Cu	63	2	He	100.369	1.721	702511	1.10	100	100.4	90	110	
Zn	66	2	He	99.167	1.420	166013	1.75	100	99.2	90	110	
As	75	2	He	98.493	1.787	159804	1.53	100	98.5	90	110	
Se	78	2	He	95.886	1.838	12893	1.91	100	95.9	90	110	
B	11	1	nogas	493.126	1.180	2043622	2.00	500	98.6	90	110	
Si	28	1	nogas	4769.024	3.865	8433348	1.37	5000	95.4	90	110	
Ca	43	1	nogas	10153.873	2.571	360647	1.93	10000	101.5	90	110	
Ca	44	1	nogas	9963.711	1.066	5845108	2.90	10000	99.6	90	110	
Fe	56	1	nogas	10217.729	3.412	225014488	2.25	10000	102.2	90	110	
Se	77	1	nogas	89.480	9.671	55572	2.28	100	89.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.213	1.234	26213	2.48	100	98.2	90	110	
Mo	95	1	nogas	95.730	1.330	510293	1.19	100	95.7	90	110	
Sn	118	1	nogas	98.071	1.449	702699	2.22	100	98.1	90	110	
Ba	137	1	nogas	103.642	5.918	404242	3.01	100	103.6	90	110	
Sb	121	2	He	98.891	1.414	641175	1.72	100	98.9	90	110	
Li	7	1	nogas	100.490	2.710	1470662	2.51	100	100.5	90	110	
P	31	1	nogas	485.191	2.886	948722	1.04	500	97.0	90	110	
La	139	1	nogas	150.750	20.119	613	19.72	100	150.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	466.074	65.252	43	35.25	100	466.1	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	1021243	0.93	1118108	91.34	70	125	
Ge	72	1	nogas	3391016	1.86	3396393	99.84	70	125	
In	115	1	nogas	3016115	2.90	3166421	95.25	70	125	
Bi	209	1	nogas	2178522	2.22	2159119	100.90	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1145187	0.73	1189986	96.24	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\010
Acq Date Time	2019-01-09T22:22:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	33.0	637	20.9	1	
Na	23	1	nogas	7.588	21.4	751217	3.7	100	
Mg	24	1	nogas	5.122	24.7	111620	15.4	100	
Al	27	1	nogas	-0.630	-5.5	16995	2.0	5	
K	39	1	nogas	11.731	81.0	9308573	0.4	100	
Ti	47	1	nogas	0.076	37.1	527	7.9	2.5	
V	51	1	nogas	-1.397	-66.1	563973	3.4	2.5	
Cr	52	1	nogas	-0.356	-15.7	53216	0.6	2.5	
Mn	55	1	nogas	-0.205	-2.8	26356	1.8	2.5	
Co	59	1	nogas	0.053	19.2	1957	12.0	2.5	
Ni	60	1	nogas	-0.286	-5.7	940	9.7	2.5	
Cu	63	1	nogas	0.047	72.4	3127	12.3	2	
Zn	66	1	nogas	-0.354	-5.5	1023	7.6	2.5	
As	75	1	nogas	-0.701	-101.5	100043	3.6	2.5	
Sr	88	1	nogas	0.031	14.5	2367	4.1	2.5	
Ag	107	1	nogas	0.042	8.1	733	7.5	2.5	
Cd	111	1	nogas	0.061	71.8	227	55.5	1	
Sb	121	1	nogas	0.173	26.1	2550	21.0	2.5	
Tl	205	1	nogas	0.605	66.9	11422	60.9	1	
Pb	208	1	nogas	0.071	34.1	2140	25.9	2.5	
U	238	1	nogas	0.150	48.9	3444	45.2	2.5	
[Pb]	206	1	nogas	0.064	47.9	530	33.2	2.5	
[Pb]	207	1	nogas	0.075	44.9	517	31.9	2.5	
Na	23	2	He	2.678	59.8	59032	4.3	100	
Mg	24	2	He	2.429	16.8	4997	7.9	100	
Al	27	2	He	-1.325	-8.7	480	14.6	5	
K	39	2	He	-14.956	-7.2	204629	0.6	100	
Ca	43	2	He	-8.934	-59.3	40	43.3	100	
Ca	44	2	He	-6.132	-26.7	1300	6.2	100	
V	51	2	He	-0.026	-87.3	8115	0.9	2.5	
Cr	52	2	He	-0.204	-32.7	5541	8.8	2.5	
Mn	55	2	He	-0.207	-7.7	930	9.7	2.5	
Fe	56	2	He	3.020	19.3	54340	7.0	100	
Co	59	2	He	0.033	20.1	557	13.2	2.5	
Ni	60	2	He	-0.252	-19.0	230	57.5	2.5	
Cu	63	2	He	-0.230	-5.8	1407	7.8	2	
Zn	66	2	He	-0.356	-17.0	370	25.8	2.5	
As	75	2	He	0.017	93.6	476	5.1	2.5	
Se	78	2	He	-0.084	-112.4	191	5.3	2	
B	11	1	nogas	0.169	673.7	44115	10.5	10	
Si	28	1	nogas	-90.753	-45.6	3069462	0.9	5	
Ca	43	1	nogas	-4.272	-48.3	877	8.7	100	
Ca	44	1	nogas	-32.448	-3.0	100110	1.4	100	
Fe	56	1	nogas	1.495	329.2	3529618	2.6	100	
Se	77	1	nogas	-1.329	-337.9	32964	3.2	2.5	
Se	82	1	nogas	0.112	87.6	227	12.7	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.227	56.8	1630	41.6	2.5	
Sn	118	1	nogas	0.257	51.8	3277	25.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.016	-189.0	393	27.2	2.5	
Sb	121	2	He	0.119	10.1	1003	7.1	2.5	
P	31	1	nogas	4.797	28.3	103713	0.7	10	
La	139	1	nogas	-11.618	-9.3	57	10.2	2.5	
Au	197	1	nogas	651.402	79.7	53	47.2	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	1130560	2.74	1118108	101.11	70	125	
Ge	72	1	nogas	3348205	1.64	3396393	98.58	70	125	
In	115	1	nogas	3098047	3.66	3166421	97.84	70	125	
Bi	209	1	nogas	2226338	3.30	2159119	103.11	70	125	
Ge	72	2	He	1135739	1.25	1189986	95.44	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	327_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:42:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.089	16.1	857	14.7	1	
Na	23	1	nogas	35.394	16.4	1295654	5.2	100	
Mg	24	1	nogas	7.655	19.9	136998	12.2	100	
Al	27	1	nogas	0.995	252.7	42195	96.1	5	
K	39	1	nogas	63.032	25.0	9591475	1.3	100	
Ti	47	1	nogas	0.159	144.8	617	56.7	2.5	
V	51	1	nogas	-2.422	-46.4	501556	5.3	2.5	
Cr	52	1	nogas	-0.300	-20.5	50442	0.5	2.5	
Mn	55	1	nogas	-0.109	-23.7	26666	1.2	2.5	
Co	59	1	nogas	0.078	3.1	2304	2.5	2.5	
Ni	60	1	nogas	-0.199	-9.2	1253	5.6	2.5	
Cu	63	1	nogas	0.300	29.2	5524	15.2	2	
Zn	66	1	nogas	-0.344	-15.2	983	16.9	2.5	
As	75	1	nogas	-0.619	-132.9	93271	4.1	2.5	
Sr	88	1	nogas	0.101	8.8	3917	7.3	2.5	
Ag	107	1	nogas	0.064	31.8	937	24.3	2.5	
Cd	111	1	nogas	0.064	26.0	217	17.5	1	
Sb	121	1	nogas	0.550	5.1	6675	6.3	2.5	
Tl	205	1	nogas	0.695	41.8	11692	40.8	1	
Pb	208	1	nogas	0.079	26.6	2323	20.8	2.5	
U	238	1	nogas	0.160	18.5	3287	19.2	2.5	
[Pb]	206	1	nogas	0.095	30.4	640	24.6	2.5	
[Pb]	207	1	nogas	0.080	24.3	490	20.1	2.5	
Na	23	2	He	22.585	9.5	96801	4.6	100	
Mg	24	2	He	4.406	11.4	7125	8.1	100	
Al	27	2	He	-0.654	-134.5	901	60.8	5	
K	39	2	He	6.924	29.2	231251	1.1	100	
Ca	43	2	He	-5.118	-35.8	53	10.8	100	
Ca	44	2	He	-4.273	-31.3	1417	5.9	100	
V	51	2	He	-0.131	-14.3	7379	1.8	2.5	
Cr	52	2	He	-0.194	-4.7	5678	1.2	2.5	
Mn	55	2	He	-0.183	-8.4	1083	9.2	2.5	
Fe	56	2	He	4.380	5.5	64827	3.4	100	
Co	59	2	He	0.099	90.2	1301	76.2	2.5	
Ni	60	2	He	-0.241	-9.0	263	22.9	2.5	
Cu	63	2	He	-0.104	-46.7	2304	14.6	2	
Zn	66	2	He	-0.399	-10.4	303	21.9	2.5	
As	75	2	He	0.009	98.5	467	3.7	2.5	
Se	78	2	He	-0.159	-77.6	183	8.8	2	
B	11	1	nogas	4.618	44.4	59999	11.2	10	
Si	28	1	nogas	319.892	39.4	3261441	2.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.422	160.3	1093	19.3	100	
Ca	44	1	nogas	-12.185	-51.3	103585	1.4	100	
Fe	56	1	nogas	12.480	23.1	3495780	2.0	100	
Se	77	1	nogas	-5.478	-131.1	29675	5.3	2.5	
Se	82	1	nogas	0.470	53.2	297	19.2	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.340	29.1	2063	22.5	2.5	
Sn	118	1	nogas	0.322	14.6	3480	7.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.027	18.0	523	1.1	2.5	
Sb	121	2	He	0.430	7.4	3034	7.0	2.5	
P	31	1	nogas	9.017	12.7	103093	0.8	10	
La	139	1	nogas	-6.133	-85.4	70	24.7	2.5	
Au	197	1	nogas	555.922	103.1	43	58.1	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	1060079	3.39	1118108	94.81	70	125	
Ge	72	1	nogas	3108690	1.81	3396393	91.53	70	125	
In	115	1	nogas	2855647	2.97	3166421	90.19	70	125	
Bi	209	1	nogas	1985683	1.50	2159119	91.97	70	125	
Ge	72	2	He	1146487	0.71	1189986	96.34	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	329_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:47:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	96.973	1.909	681280	2.43	100	97.0	90	110	
Na	23	1	nogas	10232.894	4.055	228941513	0.85	10000	102.3	90	110	
Mg	24	1	nogas	10680.283	3.513	149701958	0.70	10000	106.8	90	110	
Al	27	1	nogas	103.687	2.972	1870117	0.33	100	103.7	90	110	
K	39	1	nogas	10203.661	3.512	212784205	1.71	10000	102.0	90	110	
Ti	47	1	nogas	99.499	2.469	168626	2.09	100	99.5	90	110	
V	51	1	nogas	99.787	3.872	2925601	0.45	100	99.8	90	110	
Cr	52	1	nogas	101.752	4.464	2087282	1.25	100	101.8	90	110	
Mn	55	1	nogas	102.263	3.379	2546512	0.55	100	102.3	90	110	
Co	59	1	nogas	103.183	2.317	2170241	1.76	100	103.2	90	110	
Ni	60	1	nogas	101.499	3.522	481738	0.91	100	101.5	90	110	
Cu	63	1	nogas	101.392	2.634	1139135	1.04	100	101.4	90	110	
Zn	66	1	nogas	101.039	1.986	384298	1.61	100	101.0	90	110	
As	75	1	nogas	99.849	3.096	617146	0.99	100	99.8	90	110	
Sr	88	1	nogas	100.220	3.544	2648231	0.66	100	100.2	90	110	
Ag	107	1	nogas	104.406	1.972	1329447	1.47	100	104.4	90	110	
Cd	111	1	nogas	104.303	2.074	283538	0.99	100	104.3	90	110	
Sb	121	1	nogas	101.752	3.979	1249716	0.86	100	101.8	90	110	
Tl	205	1	nogas	101.427	8.319	1702340	3.20	100	101.4	90	110	
Pb	208	1	nogas	104.149	1.287	2378128	1.29	100	104.1	90	110	
U	238	1	nogas	111.041	3.914	2325190	4.24	100	111.0	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	102.819	7.620	586991	1.88	100	102.8	90	110	
[Pb]	207	1	nogas	103.914	7.768	516845	2.18	100	103.9	90	110	
Na	23	2	He	9886.342	0.552	18301841	0.58	10000	98.9	90	110	
Mg	24	2	He	9983.728	0.530	10362768	1.18	10000	99.8	90	110	
Al	27	2	He	101.077	1.103	62874	1.61	100	101.1	90	110	
K	39	2	He	9929.403	0.544	12304162	0.53	10000	99.3	90	110	
Ca	43	2	He	10004.720	1.187	33353	1.86	10000	100.0	90	110	
Ca	44	2	He	10120.019	0.636	558485	1.14	10000	101.2	90	110	
V	51	2	He	100.968	1.000	781073	1.17	100	101.0	90	110	
Cr	52	2	He	100.417	2.059	831648	1.57	100	100.4	90	110	
Mn	55	2	He	101.650	2.994	609681	2.64	100	101.6	90	110	
Fe	56	2	He	10123.778	2.304	73177429	1.92	10000	101.2	90	110	
Co	59	2	He	102.173	1.268	1137690	0.85	100	102.2	90	110	
Ni	60	2	He	103.963	0.779	288539	0.94	100	104.0	90	110	
Cu	63	2	He	104.419	0.876	722980	0.73	100	104.4	90	110	
Zn	66	2	He	102.635	0.854	169956	1.38	100	102.6	90	110	
As	75	2	He	102.213	1.063	164053	0.50	100	102.2	90	110	
Se	78	2	He	101.380	1.498	13474	1.06	100	101.4	90	110	
B	11	1	nogas	477.850	3.503	2020817	1.03	500	95.6	90	110	
Si	28	1	nogas	5047.704	5.718	8633740	0.50	5000	101.0	90	110	
Ca	43	1	nogas	10202.026	2.578	358108	1.89	10000	102.0	90	110	
Ca	44	1	nogas	9808.907	2.387	5686925	1.74	10000	98.1	90	110	
Fe	56	1	nogas	10320.344	3.675	224526280	0.52	10000	103.2	90	110	
Se	77	1	nogas	85.550	8.290	53984	2.74	100	85.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.904	2.642	26864	1.41	100	101.9	90	110	
Mo	95	1	nogas	98.644	3.630	519480	1.62	100	98.6	90	110	
Sn	118	1	nogas	100.116	1.969	709862	0.64	100	100.1	90	110	
Ba	137	1	nogas	105.249	1.773	406737	2.89	100	105.2	90	110	
Sb	121	2	He	105.513	1.322	676798	1.56	100	105.5	90	110	
Li	7	1	nogas	100.001	3.965	1493508	3.39	100	100.0	90	110	
P	31	1	nogas	492.105	3.760	949514	1.68	500	98.4	90	110	
La	139	1	nogas	137.386	2.033	560	3.57	100	137.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	294.149	123.589	33	45.83	100	294.1	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	1042462	3.94	1118108	93.23	70	125	
Ge	72	1	nogas	3352046	3.18	3396393	98.69	70	125	
In	115	1	nogas	2984897	1.95	3166421	94.27	70	125	
Bi	209	1	nogas	2120533	5.59	2159119	98.21	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1132975	0.71	1189986	95.21	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	339_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:07:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	106.777	12.612	807001	1.50	100	106.8	90	110	
Na	23	1	nogas	11097.102	12.256	291707040	1.17	10000	111.0	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11052.733	13.641	181826987	2.34	10000	110.5	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	111.836	12.563	2308108	2.61	100	111.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10770.566	8.707	257389797	2.50	10000	107.7	90	110	
Ti	47	1	nogas	105.936	11.219	205722	0.89	100	105.9	90	110	
V	51	1	nogas	118.689	14.102	3858634	1.89	100	118.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	107.002	12.459	2511724	1.81	100	107.0	90	110	
Mn	55	1	nogas	109.444	12.112	3120142	1.67	100	109.4	90	110	
Co	59	1	nogas	112.285	11.197	2706559	1.37	100	112.3	90	110	CCV Main CR1-2 Failed
Ni	60	1	nogas	110.801	10.735	602842	0.63	100	110.8	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	110.034	10.901	1417020	1.32	100	110.0	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	108.047	11.710	470650	2.12	100	108.0	90	110	
As	75	1	nogas	110.358	12.784	769550	2.02	100	110.4	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	110.021	11.683	3331717	1.30	100	110.0	90	110	CCV Main CR1-2 Failed
Ag	107	1	nogas	108.918	14.160	1586387	4.14	100	108.9	90	110	
Cd	111	1	nogas	110.405	14.805	352527	3.04	100	110.4	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	109.189	10.550	1538327	1.41	100	109.2	90	110	
Tl	205	1	nogas	114.833	16.566	2128710	3.55	100	114.8	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	128.012	1.601	2922887	1.60	100	128.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	119.683	14.343	2768723	0.49	100	119.7	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	115.252	16.141	726936	2.80	100	115.3	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	114.398	14.500	629674	0.71	100	114.4	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10147.585	2.272	22396617	1.87	10000	101.5	90	110	
Mg	24	2	He	9808.598	1.356	12138869	0.86	10000	98.1	90	110	
Al	27	2	He	97.813	2.414	72595	2.34	100	97.8	90	110	
K	39	2	He	11556.491	1.200	14283878	1.18	10000	115.6	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9851.025	2.059	39155	1.35	10000	98.5	90	110	
Ca	44	2	He	9929.514	2.006	653389	1.70	10000	99.3	90	110	
V	51	2	He	100.971	0.968	931341	0.50	100	101.0	90	110	
Cr	52	2	He	101.102	2.453	998347	1.99	100	101.1	90	110	
Mn	55	2	He	100.931	2.571	721911	2.59	100	100.9	90	110	
Fe	56	2	He	10154.344	3.081	87522175	2.96	10000	101.5	90	110	
Co	59	2	He	101.797	2.038	1351716	2.55	100	101.8	90	110	
Ni	60	2	He	103.581	0.647	342783	0.10	100	103.6	90	110	
Cu	63	2	He	105.184	2.057	868304	1.33	100	105.2	90	110	
Zn	66	2	He	103.940	1.950	205194	1.40	100	103.9	90	110	
As	75	2	He	102.454	0.875	196078	0.28	100	102.5	90	110	
Se	78	2	He	103.971	2.307	16471	2.49	100	104.0	90	110	
B	11	1	nogas	545.165	11.570	2477654	2.23	500	109.0	90	110	
Si	28	1	nogas	6053.276	44.752	11008871	19.18	5000	121.1	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11031.305	13.297	443086	3.06	10000	110.3	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	10769.038	13.183	7133973	2.53	10000	107.7	90	110	
Fe	56	1	nogas	10693.060	10.987	266629014	1.07	10000	106.9	90	110	
Se	77	1	nogas	126.644	22.369	73284	2.79	100	126.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	108.530	9.165	32823	1.88	100	108.5	90	110	
Mo	95	1	nogas	110.031	9.385	665009	1.15	100	110.0	90	110	CCV Main CR1-2 Failed
Sn	118	1	nogas	106.786	12.826	890834	1.07	100	106.8	90	110	
Ba	137	1	nogas	108.091	14.592	490604	3.16	100	108.1	90	110	
Sb	121	2	He	104.505	1.137	799250	0.42	100	104.5	90	110	
Li	7	1	nogas	110.536	14.154	1765439	2.93	100	110.5	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	535.963	11.770	1176078	0.77	500	107.2	90	110	
La	139	1	nogas	178.509	20.102	837	26.48	100	178.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	387.947	53.216	43	35.25	100	387.9	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	1131622	11.23	1118108	101.21	70	125	
Ge	72	1	nogas	3868365	9.82	3396393	113.90	70	125	
In	115	1	nogas	3548100	12.23	3166421	112.05	70	125	
Bi	209	1	nogas	2372635	14.27	2159119	109.89	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1350949	0.72	1189986	113.53	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	340_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:09:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.077	23.6	877	19.4	1	
Na	23	1	nogas	91.294	5.9	3203718	4.0	100	
Mg	24	1	nogas	22.853	116.0	440011	105.4	100	
Al	27	1	nogas	-0.273	-215.1	27869	42.7	5	
K	39	1	nogas	29.893	45.8	11605451	0.9	100	
Ti	47	1	nogas	0.091	77.5	663	20.5	2.5	
V	51	1	nogas	4.144	13.9	832326	3.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.077	-18.3	70554	1.5	2.5	
Mn	55	1	nogas	-0.284	-5.1	29310	1.6	2.5	
Co	59	1	nogas	0.047	26.4	2193	12.6	2.5	
Ni	60	1	nogas	-0.035	-145.4	2547	9.3	2.5	
Cu	63	1	nogas	0.979	25.4	16238	18.6	2	
Zn	66	1	nogas	-0.231	-16.3	1790	10.9	2.5	
As	75	1	nogas	0.446	42.0	127164	2.3	2.5	
Sr	88	1	nogas	0.181	4.3	7595	4.4	2.5	
Ag	107	1	nogas	0.046	18.5	940	11.8	2.5	
Cd	111	1	nogas	0.059	38.9	270	30.3	1	
Sb	121	1	nogas	0.196	13.1	3397	10.2	2.5	
Tl	205	1	nogas	0.642	54.8	14358	52.9	1	
Pb	208	1	nogas	0.091	9.6	2583	7.7	2.5	
U	238	1	nogas	0.132	38.5	3607	38.1	2.5	
[Pb]	206	1	nogas	0.069	5.1	663	5.7	2.5	
[Pb]	207	1	nogas	0.069	23.5	573	15.6	2.5	
Na	23	2	He	66.788	4.8	218288	2.6	100	
Mg	24	2	He	4.623	10.3	8942	5.4	100	
Al	27	2	He	-1.241	-10.6	653	15.3	5	
K	39	2	He	28.897	1.0	257986	0.1	100	
Ca	43	2	He	4.303	126.3	103	20.1	100	
Ca	44	2	He	7.496	43.9	2520	7.8	100	
V	51	2	He	0.210	11.2	12195	0.4	2.5	
Cr	52	2	He	-0.212	-3.0	6725	1.5	2.5	
Mn	55	2	He	-0.196	-12.8	1227	16.5	2.5	
Fe	56	2	He	3.650	14.2	72388	5.7	100	
Co	59	2	He	0.036	7.3	727	3.5	2.5	
Ni	60	2	He	-0.219	-5.9	397	12.7	2.5	
Cu	63	2	He	0.179	6.9	5208	3.1	2	
Zn	66	2	He	-0.338	-13.8	493	19.5	2.5	
As	75	2	He	-0.013	-96.8	526	3.8	2.5	
Se	78	2	He	-0.005	-6047.9	247	20.1	2	
B	11	1	nogas	1.192	26.6	52099	4.0	10	
Si	28	1	nogas	-503.908	-14.5	3146659	1.1	5	
Ca	43	1	nogas	12.489	37.2	1753	9.4	100	
Ca	44	1	nogas	-35.021	-15.3	118368	2.0	100	
Fe	56	1	nogas	13.630	39.2	4547106	1.4	100	
Se	77	1	nogas	0.451	1056.6	40095	4.8	2.5	
Se	82	1	nogas	0.001	14925.4	237	12.9	2	
Mo	95	1	nogas	0.901	21.5	6195	17.8	2.5	
Sn	118	1	nogas	0.213	44.5	3594	21.8	5	
Ba	137	1	nogas	0.038	48.8	740	10.7	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.125	14.7	1283	11.9	2.5	
P	31	1	nogas	8.867	14.7	132947	0.5	10	
La	139	1	nogas	-14.386	-46.9	57	50.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	90.963	317.6	30	57.7	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	1208004	2.88	1118108	108.04	70	125	
Ge	72	1	nogas	4018562	1.95	3396393	118.32	70	125	
In	115	1	nogas	3746906	1.54	3166421	118.33	70	125	
Bi	209	1	nogas	2627176	2.33	2159119	121.68	70	125	
Ge	72	2	He	1395681	1.56	1189986	117.29	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\010
Acq Date Time	2019-01-09T23:29:04-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.570	2.088	796412	1.30	100	99.6	90	110	
Na	23	1	nogas	9591.486	2.827	273205998	1.72	10000	95.9	90	110	
Mg	24	1	nogas	9711.585	0.972	173290433	0.99	10000	97.1	90	110	
Al	27	1	nogas	101.501	3.067	2173427	3.80	100	101.5	90	110	
K	39	1	nogas	10251.203	2.435	253575689	0.85	10000	102.5	90	110	
Ti	47	1	nogas	100.295	2.455	201646	2.52	100	100.3	90	110	
V	51	1	nogas	103.521	5.057	3574261	3.16	100	103.5	90	110	
Cr	52	1	nogas	101.507	7.010	2470077	5.19	100	101.5	90	110	
Mn	55	1	nogas	104.384	6.242	3082355	4.86	100	104.4	90	110	
Co	59	1	nogas	101.589	3.320	2534080	1.10	100	101.6	90	110	
Ni	60	1	nogas	102.871	4.568	579086	2.37	100	102.9	90	110	
Cu	63	1	nogas	105.000	2.982	1399190	0.88	100	105.0	90	110	
Zn	66	1	nogas	101.294	2.185	456987	1.06	100	101.3	90	110	
As	75	1	nogas	101.050	3.664	739384	1.42	100	101.1	90	110	
Sr	88	1	nogas	102.191	1.223	3204509	1.10	100	102.2	90	110	
Ag	107	1	nogas	103.479	3.836	1562577	1.87	100	103.5	90	110	
Cd	111	1	nogas	104.482	2.208	339184	1.85	100	104.5	90	110	
Sb	121	1	nogas	107.518	1.370	1567402	2.09	100	107.5	90	110	
Tl	205	1	nogas	104.118	3.231	2077019	2.72	100	104.1	90	110	
Pb	208	1	nogas	124.083	0.248	2833208	0.25	100	124.1	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	111.798	3.324	2776870	2.55	100	111.8	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	104.647	0.952	710060	0.17	100	104.6	90	110	
[Pb]	207	1	nogas	102.976	1.865	608752	1.21	100	103.0	90	110	
Na	23	2	He	9315.504	1.645	21618214	0.43	10000	93.2	90	110	
Mg	24	2	He	9243.573	0.658	12026642	1.25	10000	92.4	90	110	
Al	27	2	He	93.327	4.167	72863	2.53	100	93.3	90	110	
K	39	2	He	11531.417	1.121	14253370	1.10	10000	115.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9219.603	2.799	38527	2.16	10000	92.2	90	110	
Ca	44	2	He	9421.036	1.729	651752	0.45	10000	94.2	90	110	
V	51	2	He	94.239	2.156	914387	1.20	100	94.2	90	110	
Cr	52	2	He	93.955	2.027	975882	0.74	100	94.0	90	110	
Mn	55	2	He	95.064	2.632	714795	1.18	100	95.1	90	110	
Fe	56	2	He	9523.691	2.117	86283399	0.53	10000	95.2	90	110	
Co	59	2	He	94.746	1.526	1322548	2.18	100	94.7	90	110	
Ni	60	2	He	96.683	2.887	336413	2.68	100	96.7	90	110	
Cu	63	2	He	98.128	2.181	851803	1.57	100	98.1	90	110	
Zn	66	2	He	98.396	0.673	204298	1.94	100	98.4	90	110	
As	75	2	He	97.672	2.409	196498	0.89	100	97.7	90	110	
Se	78	2	He	97.290	2.600	16215	0.98	100	97.3	90	110	
B	11	1	nogas	490.973	4.374	2362823	2.18	500	98.2	90	110	
Si	28	1	nogas	4668.054	4.217	9757269	1.65	5000	93.4	90	110	
Ca	43	1	nogas	10297.046	3.151	428769	2.75	10000	103.0	90	110	
Ca	44	1	nogas	10111.583	2.220	6950257	1.81	10000	101.1	90	110	
Fe	56	1	nogas	10390.836	5.841	268123673	4.32	10000	103.9	90	110	
Se	77	1	nogas	90.094	11.977	65310	2.46	100	90.1	90	110	
Se	82	1	nogas	106.457	2.472	33281	1.22	100	106.5	90	110	
Mo	95	1	nogas	99.000	1.965	618624	1.00	100	99.0	90	110	
Sn	118	1	nogas	99.775	1.278	844914	1.56	100	99.8	90	110	
Ba	137	1	nogas	105.870	1.243	488464	0.93	100	105.9	90	110	
Sb	121	2	He	101.330	2.487	814557	1.02	100	101.3	90	110	
Li	7	1	nogas	103.294	2.234	1753292	1.56	100	103.3	90	110	
P	31	1	nogas	508.793	5.217	1161034	4.57	500	101.8	90	110	
La	139	1	nogas	127.049	2.563	627	2.44	100	127.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-179.073	-151.630	13	114.56	100	-179.1	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	1186832	3.15	1118108	106.15	70	125	
Ge	72	1	nogas	3975796	2.34	3396393	117.06	70	125	
In	115	1	nogas	3563934	0.36	3166421	112.55	70	125	
Bi	209	1	nogas	2513303	0.82	2159119	116.40	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1420244	1.60	1189986	119.35	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\010
Acq Date Time	2019-01-09T23:31:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.100	31.6	1100	23.7	1	
Na	23	1	nogas	66.171	8.5	2476278	5.2	100	
Mg	24	1	nogas	10.204	29.6	215904	22.7	100	
Al	27	1	nogas	-0.561	-7.2	21854	3.5	5	
K	39	1	nogas	-0.364	-3283.4	10868386	1.1	100	
Ti	47	1	nogas	0.095	50.7	670	13.3	2.5	
V	51	1	nogas	-1.676	-35.5	668368	2.9	2.5	
Cr	52	1	nogas	-0.359	-26.6	63706	2.4	2.5	
Mn	55	1	nogas	-0.231	-28.0	30809	4.8	2.5	
Co	59	1	nogas	0.076	34.2	2910	21.1	2.5	
Ni	60	1	nogas	-0.059	-62.5	2407	7.7	2.5	
Cu	63	1	nogas	0.438	31.5	8989	19.5	2	
Zn	66	1	nogas	-0.329	-18.4	1340	19.4	2.5	
As	75	1	nogas	-2.345	-22.1	109788	2.5	2.5	
Sr	88	1	nogas	0.074	29.8	4194	15.4	2.5	
Ag	107	1	nogas	0.064	21.9	1213	16.2	2.5	
Cd	111	1	nogas	0.090	17.0	373	12.1	1	
Sb	121	1	nogas	0.630	12.0	9773	10.3	2.5	
Tl	205	1	nogas	0.754	52.4	16283	51.8	1	
Pb	208	1	nogas	0.108	31.3	2980	25.9	2.5	
U	238	1	nogas	0.147	44.6	3911	44.7	2.5	
[Pb]	206	1	nogas	0.077	20.3	700	17.6	2.5	
[Pb]	207	1	nogas	0.107	36.2	790	31.8	2.5	
Na	23	2	He	44.423	8.1	165874	2.9	100	
Mg	24	2	He	4.109	7.2	8215	4.5	100	
Al	27	2	He	-1.051	-7.7	790	10.8	5	
K	39	2	He	14.045	16.8	239915	1.2	100	
Ca	43	2	He	4.450	112.8	103	20.1	100	
Ca	44	2	He	1.027	92.1	2067	6.6	100	
V	51	2	He	-0.026	-90.6	9886	2.7	2.5	
Cr	52	2	He	-0.268	-2.5	6111	2.7	2.5	
Mn	55	2	He	-0.164	-20.0	1447	14.8	2.5	
Fe	56	2	He	4.369	14.5	78045	5.5	100	
Co	59	2	He	0.049	18.1	897	11.0	2.5	
Ni	60	2	He	-0.216	-10.1	400	17.5	2.5	
Cu	63	2	He	-0.068	-23.3	3084	4.6	2	
Zn	66	2	He	-0.317	-16.1	530	16.8	2.5	
As	75	2	He	-0.018	-106.6	511	9.7	2.5	
Se	78	2	He	-0.234	-47.7	208	5.8	2	
B	11	1	nogas	1.287	66.4	54382	6.8	10	
Si	28	1	nogas	-464.509	-12.6	3194539	1.9	5	
Ca	43	1	nogas	118.205	151.9	6259	122.8	100	CCB Main CR1 Failed
Ca	44	1	nogas	-43.144	-14.5	112687	2.2	100	
Fe	56	1	nogas	-7.105	-106.0	4008925	3.3	100	
Se	77	1	nogas	-15.013	-35.8	35552	4.1	2.5	
Se	82	1	nogas	-0.137	-73.9	193	15.8	2	
Mo	95	1	nogas	0.382	31.2	2927	24.5	2.5	
Sn	118	1	nogas	0.283	33.2	4214	18.1	5	
Ba	137	1	nogas	0.003	1142.6	570	26.0	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.546	8.8	4561	7.8	2.5	
P	31	1	nogas	6.374	15.1	127608	0.1	10	
La	139	1	nogas	-5.024	-103.3	97	23.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	158.571	242.0	33	69.3	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	1250742	2.19	1118108	111.86	70	125	
Ge	72	1	nogas	4013510	1.66	3396393	118.17	70	125	
In	115	1	nogas	3746751	2.14	3166421	118.33	70	125	
Bi	209	1	nogas	2554870	2.33	2159119	118.33	70	125	
Ge	72	2	He	1383631	3.76	1189986	116.27	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\010
Acq Date Time	2019-01-09T23:52:46-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.164	3.211	812200	1.92	100	99.2	90	110	
Na	23	1	nogas	10267.875	3.027	277980990	2.46	10000	102.7	90	110	
Mg	24	1	nogas	10394.068	0.619	176302646	1.45	10000	103.9	90	110	
Al	27	1	nogas	105.472	1.931	2176232	2.43	100	105.5	90	110	
K	39	1	nogas	10117.880	2.233	241509047	2.23	10000	101.2	90	110	
Ti	47	1	nogas	103.192	2.057	200031	1.80	100	103.2	90	110	
V	51	1	nogas	114.413	3.231	3737998	2.52	100	114.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.280	2.441	2400938	2.23	100	102.3	90	110	
Mn	55	1	nogas	102.174	2.191	2911441	2.15	100	102.2	90	110	
Co	59	1	nogas	102.466	1.287	2465313	0.73	100	102.5	90	110	
Ni	60	1	nogas	103.358	1.306	561304	1.30	100	103.4	90	110	
Cu	63	1	nogas	103.687	1.297	1332690	1.17	100	103.7	90	110	
Zn	66	1	nogas	102.286	1.579	444975	0.99	100	102.3	90	110	
As	75	1	nogas	102.840	1.678	723693	1.82	100	102.8	90	110	
Sr	88	1	nogas	102.636	2.709	3103199	2.20	100	102.6	90	110	
Ag	107	1	nogas	100.632	1.447	1465940	2.05	100	100.6	90	110	
Cd	111	1	nogas	102.952	2.251	322850	0.06	100	103.0	90	110	
Sb	121	1	nogas	104.000	0.761	1461881	1.34	100	104.0	90	110	
Tl	205	1	nogas	103.233	3.217	2018237	1.04	100	103.2	90	110	
Pb	208	1	nogas	120.568	1.583	2752966	1.58	100	120.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.853	4.497	2649137	1.73	100	108.9	90	110	
[Pb]	206	1	nogas	103.885	2.874	690795	0.47	100	103.9	90	110	
[Pb]	207	1	nogas	103.256	4.066	598075	1.12	100	103.3	90	110	
Na	23	2	He	9763.152	0.727	20528010	0.68	10000	97.6	90	110	
Mg	24	2	He	9676.989	0.494	11407557	0.44	10000	96.8	90	110	
Al	27	2	He	97.816	1.179	69149	1.14	100	97.8	90	110	
K	39	2	He	11022.359	2.203	13633988	2.17	10000	110.2	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9719.431	3.248	36800	3.13	10000	97.2	90	110	
Ca	44	2	He	9934.975	0.897	622717	0.92	10000	99.3	90	110	
V	51	2	He	99.495	0.886	874287	0.96	100	99.5	90	110	
Cr	52	2	He	99.036	1.252	931720	1.25	100	99.0	90	110	
Mn	55	2	He	101.389	0.735	690721	0.69	100	101.4	90	110	
Fe	56	2	He	10075.935	1.937	82722370	1.85	10000	100.8	90	110	
Co	59	2	He	102.486	3.252	1296133	3.28	100	102.5	90	110	
Ni	60	2	He	101.702	1.060	320597	0.97	100	101.7	90	110	
Cu	63	2	He	102.974	0.888	809810	0.77	100	103.0	90	110	
Zn	66	2	He	101.593	0.731	191069	0.67	100	101.6	90	110	
As	75	2	He	101.181	0.785	184453	0.68	100	101.2	90	110	
Se	78	2	He	102.124	0.814	15414	0.80	100	102.1	90	110	
B	11	1	nogas	494.233	3.419	2435903	1.27	500	98.8	90	110	
Si	28	1	nogas	4808.788	0.755	9584087	0.34	5000	96.2	90	110	
Ca	43	1	nogas	10290.364	2.359	413246	2.91	10000	102.9	90	110	
Ca	44	1	nogas	10049.989	3.761	6663164	4.27	10000	100.5	90	110	
Fe	56	1	nogas	10212.984	2.111	254301931	1.91	10000	102.1	90	110	
Se	77	1	nogas	112.371	8.487	69174	4.12	100	112.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.043	2.571	31074	2.47	100	103.0	90	110	
Mo	95	1	nogas	100.594	1.818	606127	1.26	100	100.6	90	110	
Sn	118	1	nogas	99.885	2.434	817181	2.70	100	99.9	90	110	
Ba	137	1	nogas	104.916	1.878	467733	2.82	100	104.9	90	110	
Sb	121	2	He	103.958	0.627	757322	0.51	100	104.0	90	110	
Li	7	1	nogas	101.395	3.411	1764448	2.62	100	101.4	90	110	
P	31	1	nogas	518.693	0.887	1139205	0.21	500	103.7	90	110	
La	139	1	nogas	124.688	6.909	597	7.56	100	124.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-237.187	-73.407	10	100.00	100	-237.2	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	1215471	3.20	1118108	108.71	70	125	
Ge	72	1	nogas	3833046	0.60	3396393	112.86	70	125	
In	115	1	nogas	3443670	2.21	3166421	108.76	70	125	
Bi	209	1	nogas	2464423	3.23	2159119	114.14	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1286756	0.11	1189986	108.13	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\010
Acq Date Time	2019-01-09T23:54:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	15.2	920	10.0	1	
Na	23	1	nogas	59.257	11.1	2251309	5.9	100	
Mg	24	1	nogas	6.143	20.8	143814	12.9	100	
Al	27	1	nogas	-0.590	-12.4	20318	4.5	5	
K	39	1	nogas	15.409	90.2	10769915	0.2	100	
Ti	47	1	nogas	0.090	64.8	633	18.2	2.5	
V	51	1	nogas	1.615	67.6	728193	3.8	2.5	
Cr	52	1	nogas	-0.102	-78.1	66890	0.6	2.5	
Mn	55	1	nogas	-0.204	-17.3	30272	0.9	2.5	
Co	59	1	nogas	0.057	28.3	2334	16.6	2.5	
Ni	60	1	nogas	-0.052	-19.9	2347	4.7	2.5	
Cu	63	1	nogas	0.350	30.5	7462	15.9	2	
Zn	66	1	nogas	-0.316	-8.4	1340	6.4	2.5	
As	75	1	nogas	0.611	151.7	122580	3.7	2.5	
Sr	88	1	nogas	0.060	21.8	3584	8.9	2.5	
Ag	107	1	nogas	0.048	29.2	930	19.9	2.5	
Cd	111	1	nogas	0.039	54.2	190	36.8	1	
Sb	121	1	nogas	0.190	24.3	3167	18.5	2.5	
Tl	205	1	nogas	0.724	59.5	15413	57.7	1	
Pb	208	1	nogas	0.095	18.3	2670	14.8	2.5	
U	238	1	nogas	0.138	38.0	3627	37.8	2.5	
[Pb]	206	1	nogas	0.071	22.5	653	17.9	2.5	
[Pb]	207	1	nogas	0.071	5.9	567	5.7	2.5	
Na	23	2	He	49.073	2.3	165067	0.9	100	
Mg	24	2	He	3.200	5.5	6608	2.4	100	
Al	27	2	He	-1.117	-30.2	693	34.7	5	
K	39	2	He	7.531	52.5	231990	2.1	100	
Ca	43	2	He	-3.421	-44.7	67	8.7	100	
Ca	44	2	He	-2.910	-105.8	1683	11.0	100	
V	51	2	He	0.066	69.0	10051	4.0	2.5	
Cr	52	2	He	-0.236	-10.9	6011	4.7	2.5	
Mn	55	2	He	-0.138	-4.4	1533	2.9	2.5	
Fe	56	2	He	3.361	10.3	64750	4.6	100	
Co	59	2	He	0.036	14.7	677	9.8	2.5	
Ni	60	2	He	-0.243	-5.7	290	15.0	2.5	
Cu	63	2	He	-0.128	-12.9	2410	4.7	2	
Zn	66	2	He	-0.293	-22.4	543	23.5	2.5	
As	75	2	He	0.009	249.2	527	7.8	2.5	
Se	78	2	He	-0.079	-243.6	218	12.3	2	
B	11	1	nogas	-0.593	-148.5	46507	8.7	10	
Si	28	1	nogas	-395.443	-28.8	3143986	2.0	5	
Ca	43	1	nogas	2.905	90.9	1297	11.1	100	
Ca	44	1	nogas	-47.502	-12.1	105087	0.8	100	
Fe	56	1	nogas	4.153	167.0	4116333	2.1	100	
Se	77	1	nogas	3.776	241.5	39259	6.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.022	-1430.7	220	43.4	2	
Mo	95	1	nogas	0.255	51.9	2033	37.1	2.5	
Sn	118	1	nogas	0.181	45.0	3150	21.4	5	
Ba	137	1	nogas	0.010	98.7	577	6.6	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.153	8.5	1390	6.9	2.5	
P	31	1	nogas	11.684	13.1	132802	2.0	10	CCB Main CR1 Failed
La	139	1	nogas	-11.198	-34.7	67	22.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	584.523	34.7	57	20.4	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	1291863	1.99	1118108	115.54	70	125	
Ge	72	1	nogas	3845084	3.16	3396393	113.21	70	125	
In	115	1	nogas	3560316	2.86	3166421	112.44	70	125	
Bi	209	1	nogas	2516914	1.82	2159119	116.57	70	125	
Ge	72	2	He	1293958	0.87	1189986	108.74	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	374_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:16:31-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	96.531	3.865	800431	0.98	100	96.5	90	110	
Na	23	1	nogas	10097.510	0.723	267885756	2.28	10000	101.0	90	110	
Mg	24	1	nogas	10251.142	1.206	170325937	0.72	10000	102.5	90	110	
Al	27	1	nogas	102.180	5.095	2103016	3.82	100	102.2	90	110	
K	39	1	nogas	10116.051	1.777	240829530	0.92	10000	101.2	90	110	
Ti	47	1	nogas	99.843	2.210	193037	0.73	100	99.8	90	110	
V	51	1	nogas	109.866	3.532	3606659	1.44	100	109.9	90	110	
Cr	52	1	nogas	102.134	0.890	2391665	1.56	100	102.1	90	110	
Mn	55	1	nogas	101.166	0.823	2875841	1.55	100	101.2	90	110	
Co	59	1	nogas	100.698	3.269	2416323	2.52	100	100.7	90	110	
Ni	60	1	nogas	101.500	4.155	549744	3.35	100	101.5	90	110	
Cu	63	1	nogas	100.370	3.018	1286701	2.26	100	100.4	90	110	
Zn	66	1	nogas	99.834	1.957	433256	1.38	100	99.8	90	110	
As	75	1	nogas	102.220	1.885	718159	1.40	100	102.2	90	110	
Sr	88	1	nogas	100.843	3.097	3040723	1.51	100	100.8	90	110	
Ag	107	1	nogas	101.330	2.193	1472169	1.92	100	101.3	90	110	
Cd	111	1	nogas	99.188	0.350	315190	1.45	100	99.2	90	110	
Sb	121	1	nogas	103.386	2.238	1449257	0.69	100	103.4	90	110	
Tl	205	1	nogas	101.673	2.144	2011365	2.12	100	101.7	90	110	
Pb	208	1	nogas	122.167	2.838	2789474	2.84	100	122.2	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.017	1.718	2660707	1.65	100	108.0	90	110	
[Pb]	206	1	nogas	103.617	2.642	697107	2.13	100	103.6	90	110	
[Pb]	207	1	nogas	104.006	3.775	609624	3.26	100	104.0	90	110	
Na	23	2	He	9415.681	0.823	19930945	0.89	10000	94.2	90	110	
Mg	24	2	He	9515.161	1.287	11291279	1.37	10000	95.2	90	110	
Al	27	2	He	93.676	1.016	66724	0.96	100	93.7	90	110	
K	39	2	He	10550.869	2.077	13060315	2.04	10000	105.5	90	110	
Ca	43	2	He	9462.835	1.638	36068	1.59	10000	94.6	90	110	
Ca	44	2	He	9576.692	1.397	604301	1.32	10000	95.8	90	110	
V	51	2	He	96.948	0.608	857794	0.52	100	96.9	90	110	
Cr	52	2	He	96.933	1.571	918156	1.57	100	96.9	90	110	
Mn	55	2	He	97.967	1.165	671911	1.09	100	98.0	90	110	
Fe	56	2	He	9777.644	1.658	80807135	1.63	10000	97.8	90	110	
Co	59	2	He	97.868	0.844	1245928	0.78	100	97.9	90	110	
Ni	60	2	He	98.523	0.984	312670	0.94	100	98.5	90	110	
Cu	63	2	He	99.631	0.910	788829	0.89	100	99.6	90	110	
Zn	66	2	He	98.585	0.995	186673	0.95	100	98.6	90	110	
As	75	2	He	98.001	0.282	179856	0.33	100	98.0	90	110	
Se	78	2	He	99.298	2.107	15093	2.00	100	99.3	90	110	
B	11	1	nogas	479.484	3.862	2394268	1.39	500	95.9	90	110	
Si	28	1	nogas	4597.885	3.275	9297839	0.56	5000	92.0	90	110	
Ca	43	1	nogas	10077.340	2.530	403566	0.94	10000	100.8	90	110	
Ca	44	1	nogas	9795.146	3.867	6478131	2.39	10000	98.0	90	110	
Fe	56	1	nogas	10314.699	0.944	256144014	0.99	10000	103.1	90	110	
Se	77	1	nogas	110.736	9.481	68542	4.27	100	110.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.776	1.362	30019	1.14	100	99.8	90	110	
Mo	95	1	nogas	100.142	2.244	601821	1.04	100	100.1	90	110	
Sn	118	1	nogas	100.183	1.928	830247	1.38	100	100.2	90	110	
Ba	137	1	nogas	100.141	0.598	452245	0.63	100	100.1	90	110	
Sb	121	2	He	102.725	0.562	753305	0.51	100	102.7	90	110	
Li	7	1	nogas	96.686	4.802	1707868	1.57	100	96.7	90	110	
P	31	1	nogas	504.114	2.107	1107311	0.48	500	100.8	90	110	
La	139	1	nogas	112.733	22.655	557	18.44	100	112.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	178.559	56.329	33	17.32	100	178.6	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	1230797	3.04	1118108	110.08	70	125	
Ge	72	1	nogas	3823584	1.76	3396393	112.58	70	125	
In	115	1	nogas	3488291	1.13	3166421	110.17	70	125	
Bi	209	1	nogas	2492069	0.52	2159119	115.42	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1295284	0.08	1189986	108.85	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	375_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:18:29-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.071	39.5	957	29.8	1	
Na	23	1	nogas	57.186	5.9	2215212	4.1	100	
Mg	24	1	nogas	7.044	34.0	160743	25.7	100	
Al	27	1	nogas	-0.574	-10.6	21459	4.2	5	
K	39	1	nogas	2.124	459.0	10875165	0.6	100	
Ti	47	1	nogas	0.070	84.3	617	17.3	2.5	
V	51	1	nogas	2.034	39.6	768686	5.0	2.5	
Cr	52	1	nogas	-0.124	-34.0	69015	1.9	2.5	
Mn	55	1	nogas	-0.248	-22.4	30162	3.3	2.5	
Co	59	1	nogas	0.062	34.6	2537	19.3	2.5	
Ni	60	1	nogas	-0.121	-19.4	2050	7.0	2.5	
Cu	63	1	nogas	0.409	37.0	8542	21.7	2	
Zn	66	1	nogas	-0.335	-1.7	1307	4.2	2.5	
As	75	1	nogas	-0.011	-2493.5	123601	3.2	2.5	
Sr	88	1	nogas	0.060	40.5	3720	18.5	2.5	
Ag	107	1	nogas	0.059	29.4	1123	21.4	2.5	
Cd	111	1	nogas	0.052	56.6	240	39.7	1	
Sb	121	1	nogas	0.185	16.6	3224	12.1	2.5	
Tl	205	1	nogas	0.754	60.3	16564	58.0	1	
Pb	208	1	nogas	0.105	29.7	2900	24.5	2.5	
U	238	1	nogas	0.177	48.2	4751	47.5	2.5	
[Pb]	206	1	nogas	0.081	46.6	743	36.9	2.5	
[Pb]	207	1	nogas	0.080	26.8	643	21.0	2.5	
Na	23	2	He	40.470	7.7	153484	1.3	100	
Mg	24	2	He	3.540	12.5	7322	5.0	100	
Al	27	2	He	-0.688	-115.4	1031	54.7	5	
K	39	2	He	5.610	70.1	229652	2.1	100	
Ca	43	2	He	-4.232	-239.3	67	60.6	100	
Ca	44	2	He	-5.843	-31.4	1567	6.4	100	
V	51	2	He	0.040	103.0	10267	0.8	2.5	
Cr	52	2	He	-0.092	-269.2	7648	27.9	2.5	
Mn	55	2	He	0.050	658.8	3002	83.5	2.5	
Fe	56	2	He	4.383	22.4	76768	15.4	100	
Co	59	2	He	0.045	8.4	823	3.1	2.5	
Ni	60	2	He	-0.234	-4.6	333	11.4	2.5	
Cu	63	2	He	-0.133	-20.6	2484	11.7	2	
Zn	66	2	He	-0.321	-14.8	510	16.1	2.5	
As	75	2	He	0.021	186.6	571	8.9	2.5	
Se	78	2	He	-0.172	-29.7	213	0.5	2	
B	11	1	nogas	-1.457	-41.9	45281	9.8	10	
Si	28	1	nogas	-512.477	-10.4	3116810	0.7	5	
Ca	43	1	nogas	-2.923	-157.2	1100	15.9	100	
Ca	44	1	nogas	-63.774	-9.6	98169	2.0	100	
Fe	56	1	nogas	3.821	165.1	4268363	1.6	100	
Se	77	1	nogas	1.593	374.1	40188	6.0	2.5	
Se	82	1	nogas	0.049	303.8	250	17.4	2	
Mo	95	1	nogas	0.289	51.5	2320	38.2	2.5	
Sn	118	1	nogas	0.201	34.4	3450	16.5	5	
Ba	137	1	nogas	0.007	330.9	583	18.2	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.128	14.1	1263	7.1	2.5	
P	31	1	nogas	11.552	15.8	137677	0.6	10	CCB Main CR1 Failed
La	139	1	nogas	-9.471	-39.2	77	19.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	547.375	62.9	57	36.7	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	1388223	3.75	1118108	124.16	70	125	
Ge	72	1	nogas	3994259	2.24	3396393	117.60	70	125	
In	115	1	nogas	3706785	1.20	3166421	117.07	70	125	
Bi	209	1	nogas	2609786	1.76	2159119	120.87	70	125	
Ge	72	2	He	1353196	4.18	1189986	113.72	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	383_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:34:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	93.688	2.173	769239	2.67	100	93.7	90	110	
Na	23	1	nogas	9961.182	5.916	261454564	1.98	10000	99.6	90	110	
Mg	24	1	nogas	10085.439	1.420	166060475	3.86	10000	100.9	90	110	
Al	27	1	nogas	101.979	1.285	2087976	2.55	100	102.0	90	110	
K	39	1	nogas	10031.458	3.641	237479072	1.85	10000	100.3	90	110	
Ti	47	1	nogas	99.264	1.420	190895	3.09	100	99.3	90	110	
V	51	1	nogas	102.093	1.928	3381091	2.03	100	102.1	90	110	
Cr	52	1	nogas	98.472	0.170	2295232	1.71	100	98.5	90	110	
Mn	55	1	nogas	102.036	3.112	2882763	1.42	100	102.0	90	110	
Co	59	1	nogas	97.988	1.657	2337984	0.35	100	98.0	90	110	
Ni	60	1	nogas	98.529	2.927	530680	1.85	100	98.5	90	110	
Cu	63	1	nogas	98.134	5.031	1250565	3.73	100	98.1	90	110	
Zn	66	1	nogas	98.043	1.511	423088	0.35	100	98.0	90	110	
As	75	1	nogas	97.961	0.823	689280	1.98	100	98.0	90	110	
Sr	88	1	nogas	101.839	1.792	3054345	2.80	100	101.8	90	110	
Ag	107	1	nogas	101.014	2.451	1459010	1.37	100	101.0	90	110	
Cd	111	1	nogas	100.339	3.110	319696	0.35	100	100.3	90	110	
Sb	121	1	nogas	103.598	1.654	1444120	1.65	100	103.6	90	110	
Tl	205	1	nogas	102.424	3.719	1982499	1.63	100	102.4	90	110	
Pb	208	1	nogas	117.829	0.759	2690423	0.76	100	117.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	106.277	2.076	2561968	0.35	100	106.3	90	110	
[Pb]	206	1	nogas	103.243	4.125	679611	1.96	100	103.2	90	110	
[Pb]	207	1	nogas	101.778	4.092	583729	1.97	100	101.8	90	110	
Na	23	2	He	9210.560	0.445	19246415	0.77	10000	92.1	90	110	
Mg	24	2	He	9122.884	1.873	10685964	1.86	10000	91.2	90	110	
Al	27	2	He	91.467	0.579	64342	0.12	100	91.5	90	110	
K	39	2	He	10379.387	1.716	12851669	1.69	10000	103.8	90	110	
Ca	43	2	He	9196.918	3.673	34602	3.40	10000	92.0	90	110	
Ca	44	2	He	9544.392	1.242	594494	1.24	10000	95.4	90	110	
V	51	2	He	94.335	1.014	824172	1.35	100	94.3	90	110	
Cr	52	2	He	94.917	1.502	887652	1.91	100	94.9	90	110	
Mn	55	2	He	97.629	0.934	660972	1.24	100	97.6	90	110	
Fe	56	2	He	9669.032	1.313	78879230	1.48	10000	96.7	90	110	
Co	59	2	He	96.864	2.217	1217194	2.07	100	96.9	90	110	
Ni	60	2	He	97.627	1.007	305831	0.79	100	97.6	90	110	
Cu	63	2	He	99.058	1.169	774209	1.58	100	99.1	90	110	
Zn	66	2	He	96.972	1.324	181274	1.76	100	97.0	90	110	
As	75	2	He	96.542	0.939	174903	1.36	100	96.5	90	110	
Se	78	2	He	98.094	0.931	14721	1.29	100	98.1	90	110	
B	11	1	nogas	463.372	1.293	2292391	1.47	500	92.7	90	110	
Si	28	1	nogas	4705.135	2.957	9377162	1.56	5000	94.1	90	110	
Ca	43	1	nogas	10009.533	1.755	398627	1.60	10000	100.1	90	110	
Ca	44	1	nogas	9868.402	0.416	6490694	1.77	10000	98.7	90	110	
Fe	56	1	nogas	10220.557	3.154	252322664	1.48	10000	102.2	90	110	
Se	77	1	nogas	91.539	6.770	62889	2.94	100	91.5	90	110	
Se	82	1	nogas	101.998	1.096	30506	0.78	100	102.0	90	110	
Mo	95	1	nogas	97.959	0.727	585512	2.40	100	98.0	90	110	
Sn	118	1	nogas	96.570	3.858	802555	1.89	100	96.6	90	110	
Ba	137	1	nogas	98.973	1.237	448378	2.03	100	99.0	90	110	
Sb	121	2	He	102.942	1.225	745157	1.39	100	102.9	90	110	
Li	7	1	nogas	99.146	4.040	1731136	2.78	100	99.1	90	110	
P	31	1	nogas	490.130	2.867	1073357	1.17	500	98.0	90	110	
La	139	1	nogas	115.384	11.399	570	12.28	100	115.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	73.052	303.396	27	43.30	100	73.1	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	1217901	2.39	1118108	108.93	70	125	
Ge	72	1	nogas	3801632	1.69	3396393	111.93	70	125	
In	115	1	nogas	3499841	3.04	3166421	110.53	70	125	
Bi	209	1	nogas	2439559	2.17	2159119	112.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1278561	0.46	1189986	107.44	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	384_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:36:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.111	13.9	1180	14.4	1	
Na	23	1	nogas	54.767	14.0	2074385	7.6	100	
Mg	24	1	nogas	8.454	29.8	178328	22.0	100	
Al	27	1	nogas	-0.487	-16.6	22334	5.2	5	
K	39	1	nogas	-12.110	-90.7	10101036	0.3	100	
Ti	47	1	nogas	0.107	7.8	663	3.1	2.5	
V	51	1	nogas	-1.803	-70.4	633932	3.8	2.5	
Cr	52	1	nogas	-0.296	-37.8	62217	2.1	2.5	
Mn	55	1	nogas	-0.292	-10.4	27694	2.1	2.5	
Co	59	1	nogas	0.075	30.5	2770	19.8	2.5	
Ni	60	1	nogas	-0.132	-6.0	1907	3.5	2.5	
Cu	63	1	nogas	0.259	38.4	6298	20.9	2	
Zn	66	1	nogas	-0.314	-11.9	1343	9.6	2.5	
As	75	1	nogas	-2.066	-42.5	106355	3.4	2.5	
Sr	88	1	nogas	0.097	23.6	4717	15.5	2.5	
Ag	107	1	nogas	0.051	23.9	973	19.0	2.5	
Cd	111	1	nogas	0.065	30.7	270	23.1	1	
Sb	121	1	nogas	0.625	8.2	9266	8.7	2.5	
Tl	205	1	nogas	0.783	57.8	16514	53.5	1	
Pb	208	1	nogas	0.099	33.4	2767	27.3	2.5	
U	238	1	nogas	0.161	43.4	4181	40.4	2.5	
[Pb]	206	1	nogas	0.090	25.8	783	19.2	2.5	
[Pb]	207	1	nogas	0.084	34.1	643	25.2	2.5	
Na	23	2	He	39.582	4.2	144328	1.3	100	
Mg	24	2	He	4.617	1.4	8249	2.1	100	
Al	27	2	He	-1.198	-19.4	633	26.2	5	
K	39	2	He	-2.189	-163.7	220164	2.0	100	
Ca	43	2	He	-5.072	-190.0	60	60.1	100	
Ca	44	2	He	-8.821	-11.2	1307	5.7	100	
V	51	2	He	-0.028	-99.5	9188	1.7	2.5	
Cr	52	2	He	-0.247	-15.5	5881	7.2	2.5	
Mn	55	2	He	-0.166	-8.2	1330	6.0	2.5	
Fe	56	2	He	4.259	5.7	71813	3.7	100	
Co	59	2	He	0.052	13.6	877	9.7	2.5	
Ni	60	2	He	-0.209	-21.0	397	35.0	2.5	
Cu	63	2	He	-0.145	-8.3	2264	4.1	2	
Zn	66	2	He	-0.332	-14.2	467	19.3	2.5	
As	75	2	He	-0.028	-55.4	457	5.1	2.5	
Se	78	2	He	-0.213	-102.5	197	17.2	2	
B	11	1	nogas	2.113	15.0	57620	5.5	10	
Si	28	1	nogas	-343.431	-28.7	3196873	2.3	5	
Ca	43	1	nogas	2.858	54.9	1287	2.4	100	
Ca	44	1	nogas	-72.143	-7.7	88703	2.6	100	
Fe	56	1	nogas	-0.452	-762.8	3989701	2.8	100	
Se	77	1	nogas	-14.252	-44.3	34126	4.5	2.5	
Se	82	1	nogas	-0.008	-1006.7	223	12.9	2	
Mo	95	1	nogas	0.334	33.0	2510	26.8	2.5	
Sn	118	1	nogas	0.244	40.0	3617	21.1	5	
Ba	137	1	nogas	0.020	96.6	613	14.6	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.534	4.6	4164	5.5	2.5	
P	31	1	nogas	5.255	19.0	119528	0.9	10	
La	139	1	nogas	-17.621	-14.9	40	25.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	117.992	658.2	30	145.3	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	1230863	3.57	1118108	110.08	70	125	
Ge	72	1	nogas	3829630	2.55	3396393	112.76	70	125	
In	115	1	nogas	3501645	1.77	3166421	110.59	70	125	
Bi	209	1	nogas	2526667	1.14	2159119	117.02	70	125	
Ge	72	2	He	1287566	1.20	1189986	108.20	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	395_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:58:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.873	0.747	743836	2.72	100	99.9	90	110	
Na	23	1	nogas	9694.940	1.436	249922389	0.38	10000	96.9	90	110	
Mg	24	1	nogas	9838.528	4.049	158806958	2.29	10000	98.4	90	110	
Al	27	1	nogas	101.835	4.566	2021439	3.65	100	101.8	90	110	
K	39	1	nogas	9819.289	4.119	225652255	2.30	10000	98.2	90	110	
Ti	47	1	nogas	98.607	2.450	183874	2.45	100	98.6	90	110	
V	51	1	nogas	105.614	5.985	3367406	2.37	100	105.6	90	110	
Cr	52	1	nogas	96.404	2.749	2180323	2.17	100	96.4	90	110	
Mn	55	1	nogas	95.435	5.851	2615448	2.35	100	95.4	90	110	
Co	59	1	nogas	97.297	4.805	2250877	3.49	100	97.3	90	110	
Ni	60	1	nogas	97.536	5.796	509075	1.13	100	97.5	90	110	
Cu	63	1	nogas	98.426	4.017	1216323	0.70	100	98.4	90	110	
Zn	66	1	nogas	98.382	1.915	411868	3.23	100	98.4	90	110	
As	75	1	nogas	98.595	4.508	671754	1.49	100	98.6	90	110	
Sr	88	1	nogas	97.542	5.773	2834078	1.47	100	97.5	90	110	
Ag	107	1	nogas	98.698	5.766	1382504	5.29	100	98.7	90	110	
Cd	111	1	nogas	99.488	0.473	299056	1.29	100	99.5	90	110	
Sb	121	1	nogas	98.698	5.433	1333177	1.67	100	98.7	90	110	
Tl	205	1	nogas	96.613	5.817	1843799	1.83	100	96.6	90	110	
Pb	208	1	nogas	114.031	1.987	2603734	1.99	100	114.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.078	7.496	2568284	5.16	100	108.1	90	110	
[Pb]	206	1	nogas	100.187	8.089	649663	2.41	100	100.2	90	110	
[Pb]	207	1	nogas	100.840	5.799	570238	1.49	100	100.8	90	110	
Na	23	2	He	8995.108	1.484	18034046	0.73	10000	90.0	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	8898.645	2.191	10000021	1.69	10000	89.0	90	110	CCV Main CR1-2 Failed
Al	27	2	He	91.923	1.301	62032	0.62	100	91.9	90	110	
K	39	2	He	9631.473	2.866	11941664	2.81	10000	96.3	90	110	
Ca	43	2	He	9249.971	1.499	33390	0.71	10000	92.5	90	110	
Ca	44	2	He	9313.558	1.282	556606	0.49	10000	93.1	90	110	
V	51	2	He	94.043	1.763	788269	1.31	100	94.0	90	110	
Cr	52	2	He	94.175	2.198	844945	1.47	100	94.2	90	110	
Mn	55	2	He	95.250	1.575	618718	0.90	100	95.2	90	110	
Fe	56	2	He	9454.776	2.554	73994434	1.77	10000	94.5	90	110	
Co	59	2	He	95.155	1.319	1147216	0.75	100	95.2	90	110	
Ni	60	2	He	96.509	1.702	290072	1.35	100	96.5	90	110	
Cu	63	2	He	97.945	0.265	734480	0.55	100	97.9	90	110	
Zn	66	2	He	96.719	0.192	173467	0.78	100	96.7	90	110	
As	75	2	He	95.443	1.242	165895	0.85	100	95.4	90	110	
Se	78	2	He	96.128	2.279	13845	2.28	100	96.1	90	110	
B	11	1	nogas	497.534	2.608	2229693	3.49	500	99.5	90	110	
Si	28	1	nogas	4585.382	8.658	8944611	1.48	5000	91.7	90	110	
Ca	43	1	nogas	10086.355	5.762	389192	1.84	10000	100.9	90	110	
Ca	44	1	nogas	9730.553	7.403	6199013	2.59	10000	97.3	90	110	
Fe	56	1	nogas	9825.808	3.467	235397689	1.31	10000	98.3	90	110	
Se	77	1	nogas	98.467	8.188	62815	1.86	100	98.5	90	110	
Se	82	1	nogas	99.294	6.032	28777	1.32	100	99.3	90	110	
Mo	95	1	nogas	96.920	2.202	561777	2.44	100	96.9	90	110	
Sn	118	1	nogas	99.060	1.688	776618	1.37	100	99.1	90	110	
Ba	137	1	nogas	103.875	2.704	443738	2.65	100	103.9	90	110	
Sb	121	2	He	101.257	1.200	703258	1.62	100	101.3	90	110	
Li	7	1	nogas	104.515	3.463	1651204	5.16	100	104.5	90	110	
P	31	1	nogas	481.683	4.640	1024515	1.19	500	96.3	90	110	
La	139	1	nogas	145.091	19.548	647	14.70	100	145.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	20.053	673.284	23	24.74	100	20.1	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	1104559	2.05	1118108	98.79	70	125	
Ge	72	1	nogas	3689339	4.60	3396393	108.63	70	125	
In	115	1	nogas	3300004	1.76	3166421	104.22	70	125	
Bi	209	1	nogas	2409369	6.05	2159119	111.59	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1226726	0.80	1189986	103.09	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	396_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:00:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.074	24.9	867	21.3	1	
Na	23	1	nogas	31.812	19.7	1446649	8.7	100	
Mg	24	1	nogas	7.133	35.2	153933	24.0	100	
Al	27	1	nogas	-0.603	-4.6	19534	4.6	5	
K	39	1	nogas	-0.256	-2007.5	10128145	0.8	100	
Ti	47	1	nogas	0.067	55.1	573	13.3	2.5	
V	51	1	nogas	2.513	48.5	731353	2.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.274	-34.7	61231	2.0	2.5	
Mn	55	1	nogas	-0.274	-5.9	27544	2.6	2.5	
Co	59	1	nogas	0.068	39.7	2534	26.9	2.5	
Ni	60	1	nogas	-0.274	-2.6	1110	3.9	2.5	
Cu	63	1	nogas	0.544	38.1	9736	28.4	2	
Zn	66	1	nogas	-0.321	-16.5	1287	18.7	2.5	
As	75	1	nogas	-0.982	-108.2	110037	3.9	2.5	
Sr	88	1	nogas	0.075	21.1	3957	13.3	2.5	
Ag	107	1	nogas	0.061	13.7	1083	11.5	2.5	
Cd	111	1	nogas	0.074	47.8	297	37.1	1	
Sb	121	1	nogas	0.186	24.9	3040	22.6	2.5	
Tl	205	1	nogas	0.726	54.8	15363	53.9	1	
Pb	208	1	nogas	0.096	14.6	2710	11.9	2.5	
U	238	1	nogas	0.153	47.7	3961	48.0	2.5	
[Pb]	206	1	nogas	0.088	32.0	763	27.2	2.5	
[Pb]	207	1	nogas	0.079	8.4	607	8.5	2.5	
Na	23	2	He	18.947	1.6	97206	1.3	100	
Mg	24	2	He	5.433	47.6	8871	33.9	100	
Al	27	2	He	-1.186	-11.5	617	15.1	5	
K	39	2	He	-8.426	-15.1	212574	0.7	100	
Ca	43	2	He	-5.369	-208.5	57	71.3	100	
Ca	44	2	He	-10.372	-23.7	1163	13.0	100	
V	51	2	He	0.119	12.1	10059	1.1	2.5	
Cr	52	2	He	-0.273	-14.3	5421	5.8	2.5	
Mn	55	2	He	-0.182	-9.9	1177	9.4	2.5	
Fe	56	2	He	3.771	9.4	65215	4.7	100	
Co	59	2	He	0.043	29.0	737	21.3	2.5	
Ni	60	2	He	-0.250	-7.7	257	22.8	2.5	
Cu	63	2	He	-0.102	-6.2	2504	2.2	2	
Zn	66	2	He	-0.296	-11.5	513	11.4	2.5	
As	75	2	He	-0.002	-1599.5	486	9.3	2.5	
Se	78	2	He	-0.172	-176.1	195	21.6	2	
B	11	1	nogas	-0.238	-155.5	45912	7.4	10	
Si	28	1	nogas	-337.529	-16.8	3128917	0.7	5	
Ca	43	1	nogas	-3.902	-43.6	993	7.3	100	
Ca	44	1	nogas	-82.896	-1.8	79826	1.3	100	
Fe	56	1	nogas	7.838	28.5	4093623	2.3	100	
Se	77	1	nogas	-6.114	-123.6	35502	4.3	2.5	
Se	82	1	nogas	0.009	2104.6	223	26.2	2	
Mo	95	1	nogas	0.280	58.5	2137	46.7	2.5	
Sn	118	1	nogas	0.197	45.6	3220	22.4	5	
Ba	137	1	nogas	0.008	477.2	553	29.0	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.158	15.5	1367	12.3	2.5	
P	31	1	nogas	6.668	17.8	119434	0.6	10	
La	139	1	nogas	-16.769	-23.1	43	35.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	178.689	64.1	33	17.3	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	1225555	4.68	1118108	109.61	70	125	
Ge	72	1	nogas	3738676	1.72	3396393	110.08	70	125	
In	115	1	nogas	3492581	1.29	3166421	110.30	70	125	
Bi	209	1	nogas	2498589	2.37	2159119	115.72	70	125	
Ge	72	2	He	1238329	0.69	1189986	104.06	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	397_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:02:05-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	94.814	3.270	738444	2.63	100	94.8	90	110	
Na	23	1	nogas	9829.590	1.329	249609206	1.84	10000	98.3	90	110	
Mg	24	1	nogas	10151.150	1.421	161450241	1.27	10000	101.5	90	110	
Al	27	1	nogas	101.032	2.616	1994329	2.39	100	101.0	90	110	
K	39	1	nogas	9948.937	0.922	227233222	1.01	10000	99.5	90	110	
Ti	47	1	nogas	97.638	0.902	181003	1.10	100	97.6	90	110	
V	51	1	nogas	102.335	3.403	3265981	2.89	100	102.3	90	110	
Cr	52	1	nogas	97.355	2.126	2188445	2.23	100	97.4	90	110	
Mn	55	1	nogas	99.658	2.488	2716169	2.56	100	99.7	90	110	
Co	59	1	nogas	98.663	2.041	2269913	2.13	100	98.7	90	110	
Ni	60	1	nogas	98.746	0.266	512867	0.04	100	98.7	90	110	
Cu	63	1	nogas	98.538	2.217	1211168	2.29	100	98.5	90	110	
Zn	66	1	nogas	97.812	3.097	406996	3.11	100	97.8	90	110	
As	75	1	nogas	97.630	1.193	662639	1.01	100	97.6	90	110	
Sr	88	1	nogas	101.197	0.383	2925891	0.61	100	101.2	90	110	
Ag	107	1	nogas	101.846	1.677	1418469	1.50	100	101.8	90	110	
Cd	111	1	nogas	99.382	2.797	301433	1.77	100	99.4	90	110	
Sb	121	1	nogas	100.920	0.615	1356389	0.81	100	100.9	90	110	
Tl	205	1	nogas	99.279	4.674	1892328	2.12	100	99.3	90	110	
Pb	208	1	nogas	113.797	2.054	2598377	2.05	100	113.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.518	2.706	2576726	2.21	100	108.5	90	110	
[Pb]	206	1	nogas	100.195	2.718	649754	0.63	100	100.2	90	110	
[Pb]	207	1	nogas	100.148	2.881	565834	0.96	100	100.1	90	110	
Na	23	2	He	8935.714	0.792	18046205	1.06	10000	89.4	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	8872.234	2.462	10046110	3.88	10000	88.7	90	110	CCV Main CR1-2 Failed
Al	27	2	He	91.653	3.179	62289	1.68	100	91.7	90	110	
K	39	2	He	9629.782	1.378	11939606	1.35	10000	96.3	90	110	
Ca	43	2	He	9232.172	2.395	33564	0.96	10000	92.3	90	110	
Ca	44	2	He	9567.336	6.636	575569	5.19	10000	95.7	90	110	
V	51	2	He	93.542	1.114	789801	0.59	100	93.5	90	110	
Cr	52	2	He	93.515	1.614	845181	1.08	100	93.5	90	110	
Mn	55	2	He	94.643	1.034	619272	1.00	100	94.6	90	110	
Fe	56	2	He	9415.832	1.073	74233237	1.41	10000	94.2	90	110	
Co	59	2	He	95.402	1.462	1158543	1.35	100	95.4	90	110	
Ni	60	2	He	96.517	2.032	292180	1.24	100	96.5	90	110	
Cu	63	2	He	97.484	2.193	736221	0.86	100	97.5	90	110	
Zn	66	2	He	95.854	2.425	173141	1.28	100	95.9	90	110	
As	75	2	He	95.693	0.954	167532	0.53	100	95.7	90	110	
Se	78	2	He	95.105	0.940	13799	1.45	100	95.1	90	110	
B	11	1	nogas	467.081	4.500	2190669	1.19	500	93.4	90	110	
Si	28	1	nogas	4603.558	0.161	8920981	0.19	5000	92.1	90	110	
Ca	43	1	nogas	9800.471	0.704	376344	0.88	10000	98.0	90	110	
Ca	44	1	nogas	9661.553	0.515	6129037	0.74	10000	96.6	90	110	
Fe	56	1	nogas	9791.171	2.028	233277655	2.01	10000	97.9	90	110	
Se	77	1	nogas	95.101	9.376	61571	3.68	100	95.1	90	110	
Se	82	1	nogas	99.912	2.885	28817	2.98	100	99.9	90	110	
Mo	95	1	nogas	96.863	2.611	558096	2.37	100	96.9	90	110	
Sn	118	1	nogas	96.381	1.201	762896	3.30	100	96.4	90	110	
Ba	137	1	nogas	102.056	5.091	439749	2.99	100	102.1	90	110	
Sb	121	2	He	101.530	1.914	710145	0.52	100	101.5	90	110	
Li	7	1	nogas	96.560	4.069	1601919	1.36	100	96.6	90	110	
P	31	1	nogas	484.537	0.483	1024447	0.48	500	96.9	90	110	
La	139	1	nogas	117.604	5.224	550	5.45	100	117.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	144.883	233.888	30	57.74	100	144.9	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	1156058	4.45	1118108	103.39	70	125	
Ge	72	1	nogas	3665019	0.24	3396393	107.91	70	125	
In	115	1	nogas	3331011	2.81	3166421	105.20	70	125	
Bi	209	1	nogas	2402943	2.50	2159119	111.29	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1235655	1.43	1189986	103.84	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	398_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:04:05-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.089	23.9	1037	13.9	1	
Na	23	1	nogas	26.031	8.7	1306350	5.2	100	
Mg	24	1	nogas	6.840	20.6	150764	16.0	100	
Al	27	1	nogas	-0.569	-5.7	20028	2.2	5	
K	39	1	nogas	0.812	730.5	10069029	0.4	100	
Ti	47	1	nogas	0.052	56.3	540	9.3	2.5	
V	51	1	nogas	-0.446	-156.2	649385	3.8	2.5	
Cr	52	1	nogas	-0.342	-19.0	59261	2.2	2.5	
Mn	55	1	nogas	-0.301	-1.2	26569	0.6	2.5	
Co	59	1	nogas	0.074	21.1	2657	12.9	2.5	
Ni	60	1	nogas	-0.230	-7.2	1330	6.0	2.5	
Cu	63	1	nogas	0.164	46.7	4901	18.3	2	
Zn	66	1	nogas	-0.366	-8.7	1083	11.6	2.5	
As	75	1	nogas	-1.245	-21.5	107716	2.4	2.5	
Sr	88	1	nogas	0.073	26.8	3850	13.9	2.5	
Ag	107	1	nogas	0.065	18.3	1127	13.8	2.5	
Cd	111	1	nogas	0.060	28.4	253	19.9	1	
Sb	121	1	nogas	0.203	19.8	3227	16.0	2.5	
Tl	205	1	nogas	0.684	50.1	14742	52.2	1	
Pb	208	1	nogas	0.101	17.4	2817	14.3	2.5	
U	238	1	nogas	0.153	43.7	4037	47.3	2.5	
[Pb]	206	1	nogas	0.081	22.0	717	19.6	2.5	
[Pb]	207	1	nogas	0.092	26.4	693	26.0	2.5	
Na	23	2	He	16.832	5.5	93166	1.9	100	
Mg	24	2	He	3.811	8.8	7038	6.1	100	
Al	27	2	He	-1.279	-13.0	557	21.3	5	
K	39	2	He	-9.469	-16.9	211306	0.9	100	
Ca	43	2	He	-5.457	-101.2	57	36.7	100	
Ca	44	2	He	-10.687	-5.7	1147	2.2	100	
V	51	2	He	-0.003	-1236.6	9064	2.0	2.5	
Cr	52	2	He	-0.256	-14.7	5591	7.6	2.5	
Mn	55	2	He	-0.181	-14.8	1190	16.2	2.5	
Fe	56	2	He	4.028	8.0	67436	5.4	100	
Co	59	2	He	0.051	7.7	830	4.3	2.5	
Ni	60	2	He	-0.228	-16.3	323	33.1	2.5	
Cu	63	2	He	-0.184	-7.4	1890	6.9	2	
Zn	66	2	He	-0.330	-10.3	453	14.7	2.5	
As	75	2	He	-0.020	-87.6	456	8.2	2.5	
Se	78	2	He	-0.014	-2327.3	219	20.8	2	
B	11	1	nogas	-0.382	-392.6	47453	10.3	10	
Si	28	1	nogas	-317.130	-17.1	3128020	1.1	5	
Ca	43	1	nogas	-3.134	-187.8	1013	21.4	100	
Ca	44	1	nogas	-82.732	-2.3	79274	0.6	100	
Fe	56	1	nogas	-3.275	-208.8	3795403	3.3	100	
Se	77	1	nogas	-8.714	-72.0	34547	5.8	2.5	
Se	82	1	nogas	0.006	1010.5	220	7.9	2	
Mo	95	1	nogas	0.251	53.1	1937	39.0	2.5	
Sn	118	1	nogas	0.230	42.7	3517	22.2	5	
Ba	137	1	nogas	0.017	128.8	600	15.3	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.156	20.4	1353	15.0	2.5	
P	31	1	nogas	7.901	14.4	120833	0.8	10	
La	139	1	nogas	-11.036	-23.2	67	17.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	351.276	57.7	43	26.6	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	1294828	5.55	1118108	115.81	70	125	
Ge	72	1	nogas	3708002	0.99	3396393	109.17	70	125	
In	115	1	nogas	3516489	1.83	3166421	111.06	70	125	
Bi	209	1	nogas	2510267	5.23	2159119	116.26	70	125	
Ge	72	2	He	1241509	1.60	1189986	104.33	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	399LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:06:03-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	4.174	6.282	36004	3.38	5	83.5	70	130	
Na	23	1	nogas	480.603	4.755	13163745	0.25	500	96.1	70	130	
Mg	24	1	nogas	488.426	3.786	8042383	2.07	500	97.7	70	130	
Al	27	1	nogas	6.121	20.483	153387	14.47	5	122.4	70	130	
K	39	1	nogas	466.024	7.625	20621796	2.66	500	93.2	70	130	
Ti	47	1	nogas	4.931	2.715	9799	2.01	5	98.6	70	130	
V	51	1	nogas	5.712	14.050	819363	2.78	5	114.2	70	130	
Cr	52	1	nogas	4.392	4.729	165879	2.38	5	87.8	70	130	
Mn	55	1	nogas	4.845	1.583	168960	1.30	5	96.9	70	130	
Co	59	1	nogas	5.060	1.997	120270	1.21	5	101.2	70	130	
Ni	60	1	nogas	4.714	4.329	27544	1.87	5	94.3	70	130	
Cu	63	1	nogas	5.039	3.639	66264	1.65	5	100.8	70	130	
Zn	66	1	nogas	4.918	4.070	23499	2.11	5	98.4	70	130	
As	75	1	nogas	3.214	17.185	134881	1.31	5	64.3	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.076	3.865	152105	1.99	5	101.5	70	130	
Ag	107	1	nogas	5.028	3.788	72011	2.53	5	100.6	70	130	
Cd	111	1	nogas	4.716	5.009	15210	4.94	5	94.3	70	130	
Sb	121	1	nogas	4.837	5.559	67119	4.79	5	96.7	70	130	
Tl	205	1	nogas	4.824	2.897	93990	2.01	5	96.5	70	130	
Pb	208	1	nogas	5.731	2.153	131345	2.15	5	114.6	70	130	
U	238	1	nogas	5.183	1.671	124829	0.66	5	103.7	70	130	
[Pb]	206	1	nogas	5.012	3.174	33081	2.60	5	100.2	70	130	
[Pb]	207	1	nogas	5.052	2.880	29050	1.90	5	101.0	70	130	
Na	23	2	He	471.264	0.261	1014247	0.82	500	94.3	70	130	
Mg	24	2	He	465.144	0.385	532650	1.30	500	93.0	70	130	
Al	27	2	He	4.268	1.856	4267	0.98	5	85.4	70	130	
K	39	2	He	472.159	1.195	797314	0.86	500	94.4	70	130	
Ca	43	2	He	456.270	5.850	1743	6.32	500	91.3	70	130	
Ca	44	2	He	458.949	3.525	29517	2.92	500	91.8	70	130	
V	51	2	He	4.587	1.311	47652	0.51	5	91.7	70	130	
Cr	52	2	He	4.363	1.238	47237	0.27	5	87.3	70	130	
Mn	55	2	He	4.710	1.380	33290	2.19	5	94.2	70	130	
Fe	56	2	He	469.787	1.597	3762733	2.51	500	94.0	70	130	
Co	59	2	He	4.773	0.990	58550	1.40	5	95.5	70	130	
Ni	60	2	He	4.692	2.564	15267	1.48	5	93.8	70	130	
Cu	63	2	He	4.844	4.020	39944	2.85	5	96.9	70	130	
Zn	66	2	He	5.023	2.002	10130	0.85	5	100.5	70	130	
As	75	2	He	4.498	3.708	8395	2.99	5	90.0	70	130	
Se	78	2	He	4.464	4.697	863	3.59	5	89.3	70	130	
B	11	1	nogas	17.332	9.445	136404	2.99	25	69.3	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	-49.732	-171.332	3495080	1.31	25	-198.9	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	468.726	4.723	19547	2.75	500	93.7	70	130	
Ca	44	1	nogas	396.289	1.490	385397	1.10	500	79.3	70	130	
Fe	56	1	nogas	490.209	2.997	15705144	0.64	500	98.0	70	130	
Se	77	1	nogas	-3.042	-70.450	36540	0.49	5	-60.8	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.755	14.959	1617	12.52	5	95.1	70	130	
Mo	95	1	nogas	4.733	2.353	28440	3.72	5	94.7	70	130	
Sn	118	1	nogas	4.806	0.110	41797	0.49	5	96.1	70	130	
Ba	137	1	nogas	5.152	4.520	24021	4.10	5	103.0	70	130	
Sb	121	2	He	5.019	3.488	35590	2.64	5	100.4	70	130	
Li	7	1	nogas	4.813	5.328	192669	1.76	5	96.3	70	130	
P	31	1	nogas	28.416	10.550	162386	1.73	25	113.7	70	130	
La	139	1	nogas	21.416	48.084	197	20.55	5	428.3	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	255.307	85.606	37	31.49	5	5106.1	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	1272160	3.45	1118108	113.78	70	125	
Ge	72	1	nogas	3759055	2.08	3396393	110.68	70	125	
In	115	1	nogas	3526537	0.44	3166421	111.37	70	125	
Bi	209	1	nogas	2433603	1.02	2159119	112.71	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	1243887	0.94	1189986	104.53	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	400SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:08:01-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	221CALB.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	1.793	1.793	4.69	15059	0.01	2000	
Na	23	1	nogas	201.251	201.251	4.83	5820482	0.00	200000	
Mg	24	1	nogas	194.261	194.261	5.61	3190878	0.01	200000	
Al	27	1	nogas	2.054	2.054	3.91	73086	0.00	2000	
K	39	1	nogas	172.522	172.522	3.99	14148749	0.00	200000	
Ti	47	1	nogas	1.838	1.838	14.11	3960	0.05	2000	
V	51	1	nogas	0.354	0.354	170.55	683669	0.00	2000	
Cr	52	1	nogas	1.373	1.373	7.33	99064	0.00	2000	
Mn	55	1	nogas	1.661	1.661	3.13	81633	0.00	2000	
Co	59	1	nogas	4.932	4.932	104.05	118167	0.00	2000	
Ni	60	1	nogas	1.782	1.782	11.98	12098	0.01	2000	
Cu	63	1	nogas	1.928	1.928	4.03	27351	0.01	2000	
Zn	66	1	nogas	1.773	1.773	0.51	10236	0.02	2000	
As	75	1	nogas	-1.474	-1.474	-47.47	108585	0.00	2000	
Sr	88	1	nogas	1.998	1.998	1.26	61362	0.00	2000	
Ag	107	1	nogas	2.013	2.013	3.48	29171	0.01	2000	
Cd	111	1	nogas	1.864	1.864	5.61	5861	0.03	2000	
Sb	121	1	nogas	1.949	1.949	2.30	27525	0.01	2000	
Tl	205	1	nogas	2.026	2.026	2.32	39505	0.01	2000	
Pb	208	1	nogas	2.314	2.314	3.27	53339	0.00	2000	
U	238	1	nogas	2.058	2.058	1.68	49093	0.00	2000	
[Pb]	206	1	nogas	2.059	2.059	2.91	13526	0.02	2000	
[Pb]	207	1	nogas	2.013	2.013	6.42	11531	0.02	2000	
Na	23	2	He	194.223	194.223	3.13	452627	0.04	200000	
Mg	24	2	He	186.117	186.117	2.09	214645	0.09	200000	
Al	27	2	He	1.353	1.353	20.89	2314	0.06	2000	
K	39	2	He	182.712	182.712	0.58	445137	0.04	200000	
Ca	43	2	He	170.415	170.415	9.75	700	24.34	200000	
Ca	44	2	He	172.236	172.236	5.27	12191	1.41	200000	
V	51	2	He	1.731	1.731	4.52	23636	0.01	2000	
Cr	52	2	He	1.555	1.555	12.62	21890	0.01	2000	
Mn	55	2	He	1.712	1.712	4.68	13602	0.01	2000	
Fe	56	2	He	193.627	193.627	3.58	1570444	0.01	200000	
Co	59	2	He	1.971	1.971	1.88	24296	0.01	2000	
Ni	60	2	He	1.731	1.731	11.87	6264	0.03	2000	
Cu	63	2	He	1.766	1.766	5.27	16641	0.01	2000	
Zn	66	2	He	1.730	1.730	6.33	4174	0.04	2000	
As	75	2	He	1.848	1.848	10.02	3733	0.05	2000	
Se	78	2	He	1.697	1.697	6.92	465	0.37	2000	
B	11	1	nogas	4.966	4.966	10.25	71287	0.01	2000	
Si	28	1	nogas	-300.186	-300.186	-11.45	3213379	-0.01	2000	
Ca	43	1	nogas	188.775	188.775	1.72	8622	2.19	200000	
Ca	44	1	nogas	106.372	106.372	3.86	202152	0.05	200000	
Fe	56	1	nogas	187.453	187.453	3.26	8489433	0.00	200000	

Sample Report

Se	77	1	nogas	-19.416	-19.416	-26.32	32322	-0.06	2000	
Se	82	1	nogas	1.716	1.716	20.69	730	0.24	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.981	1.981	2.22	12268	0.02	2000	
Sn	118	1	nogas	1.945	1.945	2.38	17336	0.01	2000	
Ba	137	1	nogas	2.105	2.105	4.57	9816	0.02	2000	
Sb	121	2	He	1.996	1.996	4.70	14299	0.01	2000	
La	139	1	nogas	1.454	1.454	542.99	113	1.28	2000	
Au	197	1	nogas	136.003	136.003	227.90	30	453.34	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	1227017	3.83	1118108	109.74	70	125	
Ge	72	1	nogas	3784180	0.29	3396393	111.42	70	125	
In	115	1	nogas	3421235	3.37	3166421	108.05	70	125	
Bi	209	1	nogas	2405558	2.50	2159119	111.41	70	125	
Ge	72	2	He	1243762	2.80	1189986	104.52	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	401ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:10:00-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	-38.5	140	25.8	0	ICSA Main CR1 Failed
Na	23	1	nogas	100489.350	4.4	2511571189	2.0	0	
Mg	24	1	nogas	101904.760	3.3	1598832002	1.5	0	
Al	27	1	nogas	98077.453	2.8	1885985412	1.7	0	
K	39	1	nogas	103628.580	1.1	2249893117	2.2	0	
Ti	47	1	nogas	2208.152	1.2	4041507	1.2	0	
V	51	1	nogas	5.300	6.2	780387	2.7	0	
Cr	52	1	nogas	0.998	2.2	86863	1.3	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.079	65.5	36112	3.2	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.485	1.9	11947	3.5	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.916	4.3	7165	4.1	0	ICSA Main CR1 Failed
Cu	63	1	nogas	1.816	9.5	24867	9.8	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.346	3.1	8065	0.5	0	ICSA Main CR1 Failed
As	75	1	nogas	2.852	5.9	128160	1.3	0	ICSA Main CR1 Failed
Sr	88	1	nogas	7.768	133.4	227090	133.2	0	
Ag	107	1	nogas	0.013	50.9	400	25.4	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.027	2.4	5984	2.3	0	
Sb	121	1	nogas	0.182	11.6	2890	11.4	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.014	136.2	1027	32.5	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.076	12.2	2240	9.4	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.068	16.0	563	11.3	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.071	11.6	500	9.2	0	ICSA Main CR1 Failed
Na	23	2	He	96516.591	0.8	189425544	0.7	0	
Mg	24	2	He	94552.800	1.6	104297625	1.5	0	
Al	27	2	He	90569.867	2.5	58661654	2.6	0	
K	39	2	He	101950.212	1.1	124268018	1.1	0	
Ca	43	2	He	93906.066	1.0	332137	1.1	0	
Ca	44	2	He	95718.098	0.5	5600152	0.1	0	
V	51	2	He	0.263	14.8	10960	2.5	0	ICSA Main CR1 Failed
Cr	52	2	He	-0.017	-378.9	7508	7.1	0	ICSA Main CR1 Failed
Mn	55	2	He	0.070	7.5	2744	1.1	0	ICSA Main CR1 Failed
Fe	56	2	He	101523.895	0.5	779806362	0.7	0	
Co	59	2	He	0.282	7.1	3540	7.0	0	ICSA Main CR1 Failed
Ni	60	2	He	0.028	41.6	1067	3.0	0	ICSA Main CR1 Failed
Cu	63	2	He	0.270	18.4	5161	6.7	0	ICSA Main CR1 Failed
Zn	66	2	He	0.127	31.1	1240	5.8	0	ICSA Main CR1 Failed
As	75	2	He	0.066	25.6	588	4.9	0	ICSA Main CR1 Failed
Se	78	2	He	0.201	68.0	242	7.6	0	ICSA Main CR1 Failed
B	11	1	nogas	-3.550	-5.6	27574	2.2	0	ICSA Main CR1 Failed
Si	28	1	nogas	225.948	11.9	3696596	0.9	0	
Ca	43	1	nogas	98943.545	2.6	3750650	3.7	0	
Ca	44	1	nogas	99289.900	3.3	61162547	4.7	0	
Fe	56	1	nogas	106113.896	2.2	2464789322	2.7	0	
Se	77	1	nogas	19.103	4.0	41060	2.0	0	
Se	82	1	nogas	-0.002	-6236.6	213	17.7	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2109.646	3.6	12015571	1.9	0	
Sn	118	1	nogas	0.048	22.5	1827	4.4	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.156	22.0	1127	13.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.199	7.6	1607	6.3	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	96201.637	2.0	180845531	1.1	0	
La	139	1	nogas	41.790	42.8	253	25.4	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	1136970	1.17	1118108	101.69	70	125	
Ge	72	1	nogas	3627214	1.72	3396393	106.80	70	125	
In	115	1	nogas	3211330	0.45	3166421	101.42	70	125	
Bi	209	1	nogas	2240668	0.83	2159119	103.78	70	125	
Ge	72	2	He	1204330	0.37	1189986	101.21	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	402ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:12:04-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	115.467	2.386	808297	1.35	100	115.5	80	120	
Na	23	1	nogas	111243.922	1.821	2822944263	1.60	100	111243.9	80	120	
Mg	24	1	nogas	113444.526	5.447	1805471307	2.61	100	113444.5	80	120	
Al	27	1	nogas	97556.589	0.713	1896704985	1.77	100	97556.6	80	120	ICSB Main CR1 Failed
K	39	1	nogas	115218.523	1.018	2527124723	1.01	100	115218.5	80	120	
Ti	47	1	nogas	2385.589	1.168	4413249	0.87	100	2385.6	80	120	ICSB Main CR1 Failed
V	51	1	nogas	128.410	1.937	3932410	0.62	100	128.4	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	117.428	2.201	2626324	0.44	100	117.4	80	120	
Mn	55	1	nogas	116.616	2.877	3172755	1.62	100	116.6	80	120	
Co	59	1	nogas	116.619	1.551	2683699	1.99	100	116.6	80	120	
Ni	60	1	nogas	114.576	2.726	594719	0.95	100	114.6	80	120	
Cu	63	1	nogas	114.269	0.283	1404606	1.90	100	114.3	80	120	
Zn	66	1	nogas	115.499	1.074	480307	2.12	100	115.5	80	120	
As	75	1	nogas	119.246	0.983	784519	1.89	100	119.2	80	120	
Sr	88	1	nogas	115.028	2.072	3326319	1.86	100	115.0	80	120	
Ag	107	1	nogas	113.854	2.375	1586209	2.61	100	113.9	80	120	
Cd	111	1	nogas	118.253	2.948	351458	0.94	100	118.3	80	120	
Sb	121	1	nogas	118.110	3.745	1587186	1.78	100	118.1	80	120	
Tl	205	1	nogas	116.860	3.329	2091082	2.28	100	116.9	80	120	
Pb	208	1	nogas	127.731	0.610	2916478	0.61	100	127.7	80	120	ICSB Main CR1 Failed
U	238	1	nogas	130.147	1.034	2900391	0.43	100	130.1	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	118.058	1.237	718621	0.71	100	118.1	80	120	
[Pb]	207	1	nogas	119.552	2.382	633957	1.03	100	119.6	80	120	
Na	23	2	He	105934.603	0.945	211759004	2.76	100	105934.6	80	120	
Mg	24	2	He	103869.316	0.610	116692162	2.28	100	103869.3	80	120	
Al	27	2	He	88339.673	0.901	58269912	2.03	100	88339.7	80	120	ICSB Main CR1 Failed
K	39	2	He	113250.265	0.723	138017055	0.72	100	113250.3	80	120	
Ca	43	2	He	104401.214	1.629	375978	0.27	100	104401.2	80	120	
Ca	44	2	He	107639.714	3.016	6411179	1.26	100	107639.7	80	120	
V	51	2	He	111.421	1.331	932086	1.53	100	111.4	80	120	
Cr	52	2	He	109.776	1.445	983393	0.44	100	109.8	80	120	
Mn	55	2	He	108.636	0.324	705304	2.16	100	108.6	80	120	
Fe	56	2	He	109119.037	0.585	853527374	1.35	100	109119.0	80	120	ICSB Main CR1 Failed
Co	59	2	He	111.889	0.899	1348873	2.50	100	111.9	80	120	
Ni	60	2	He	110.554	4.400	332025	3.94	100	110.6	80	120	
Cu	63	2	He	115.072	3.030	861930	1.65	100	115.1	80	120	
Zn	66	2	He	114.768	1.839	205567	0.74	100	114.8	80	120	
As	75	2	He	113.390	0.956	196955	1.14	100	113.4	80	120	
Se	78	2	He	115.017	2.287	16516	1.44	100	115.0	80	120	
B	11	1	nogas	574.328	4.707	2412098	1.97	100	574.3	80	120	
Si	28	1	nogas	5950.627	2.678	10518442	0.42	100	5950.6	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	111096.631	2.591	4254893	1.09	100	111096.6	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	113432.259	1.990	70575976	0.87	100	113432.3	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	118212.531	1.983	2774440062	0.28	100	118212.5	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	149.517	3.613	75991	3.10	100	149.5	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	121.709	1.295	35065	1.14	100	121.7	80	120	ICSB Main CR1 Failed
Mo	95	1	nogas	2228.594	1.811	12832846	0.73	100	2228.6	80	120	
Sn	118	1	nogas	114.743	1.897	889704	3.03	100	114.7	80	120	
Ba	137	1	nogas	119.087	4.904	502762	2.04	100	119.1	80	120	
Sb	121	2	He	117.359	1.443	814773	0.95	100	117.4	80	120	
La	139	1	nogas	183.816	17.393	787	17.86	100	183.8	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	1038910	3.66	1118108	92.92	70	125	
Ge	72	1	nogas	3666483	1.97	3396393	107.95	70	125	
In	115	1	nogas	3265183	3.84	3166421	103.12	70	125	
Bi	209	1	nogas	2254821	1.34	2159119	104.43	70	125	
Ge	72	2	He	1226516	1.83	1189986	103.07	70	125	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\010919B.b
Report Comment
Instrument Name G3281A JP11080910

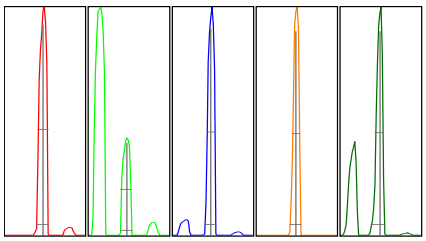
[nogas]

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		20613				NaN	-	
24		43768				NaN	-	
59		43814				NaN	-	
115		45963				NaN	-	
208		22219				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	1.71	5.00				
24	1.63	5.00				
59	0.95	5.00				
115	1.80	5.00				
208	1.62	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	20032	20766	20736	20576	20955
24	42525	44209	43795	44150	44161
59	43227	43917	44210	43563	44154
115	44616	46127	46820	45901	46351
208	21838	22109	22719	21979	22452

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	5934.71	8.95	8.9 - 9.1		0.35	0.444	0.750	
24	12416.60	23.95	23.9 - 24.1		0.37	0.443	0.750	
59	13588.52	58.95	58.9 - 59.1		0.32	0.432	0.750	
115	15304.89	115.00	114.9 - 115.1		0.28	0.433	0.750	
208	7019.43	208.00	207.9 - 208.1		0.30	0.507	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		461				NaN	-	
24		3449				NaN	-	
59		23338				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	5.24	5.00 [F]				
24	6.59	5.00 [F]				
59	0.76	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	493	464	441	434	474
24	3385	3310	3448	3266	3836
59	23502	23391	23090	23226	23483

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	131.53	8.95	8.9 - 9.1		0.36	0.452	0.750	
24	952.59	23.95	23.9 - 24.1		0.38	0.443	0.750	
59	7429.48	58.95	58.9 - 59.1		0.31	0.422	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	0.45 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 %		

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Work Order: HS19010248

LHAAP 18 / 24

BHATE Environmental

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

January 23, 2019

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS19010248**

Laboratory Results for: **LHAAP 18/24**

Dear Marcia,

ALS Environmental received 5 sample(s) on Jan 08, 2019 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS19010248

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19010248-01	18CPTMW16_010719	Groundwater		07-Jan-2019 09:20	08-Jan-2019 08:55	☐
HS19010248-02	MW8_010719	Groundwater		07-Jan-2019 10:30	08-Jan-2019 08:55	☐
HS19010248-03	18CPTMW14_010719	Groundwater		07-Jan-2019 11:25	08-Jan-2019 08:55	☐
HS19010248-04	18CPTMW14_010719-a	Groundwater		07-Jan-2019 11:25	08-Jan-2019 08:55	☐
HS19010248-05	Trip Blank	Water	ALS-112818-38	07-Jan-2019 00:00	08-Jan-2019 08:55	☐

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS19010248

CASE NARRATIVE

Work Order Comments

- The analysis for Perchlorate was subcontracted to ALS Environmental in SLC, Utah. Final Report attached.

GCMS Volatiles by Method SW8260

Batch ID: R330796

Sample ID: HS18121558-01MS

- MS and MSD are for an unrelated sample

Metals by Method SW6020

Batch ID: 136717

Sample ID: HS19010627-01MS

- MS and MSD are for an unrelated sample

Metals by Method SW7470

Batch ID: 136505

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW16_010719
Collection Date: 07-Jan-2019 09:20

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	22-Jan-2019 18:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW8_010719
Collection Date: 07-Jan-2019 10:30

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,1-Dichloroethene	**0.50**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 18:04
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,2,3-Trichloropropane	5.0	U	0.50	5.0	1.0	UG/L	1	10-Jan-2019 18:04
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,2-Dichloroethane	**7.1**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 18:04
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:04
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 18:04
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	10-Jan-2019 18:04
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:04
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	10-Jan-2019 18:04
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	10-Jan-2019 18:04
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	10-Jan-2019 18:04
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Chloroform	**0.85**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 18:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW8_010719
Collection Date: 07-Jan-2019 10:30

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
cis-1,2-Dichloroethene	**18**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 18:04
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	10-Jan-2019 18:04
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 18:04
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	10-Jan-2019 18:04
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:04
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Trichloroethene	**480**		**2.0**	**5.0**	**10**	**UG/L**	10	10-Jan-2019 18:31
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:04
Surr: 1,2-Dichloroethane-d4	*108*			**0**	*81-118*	*%REC*	*1*	*10-Jan-2019 18:04*
Surr: 1,2-Dichloroethane-d4	*112*			**0**	*81-118*	*%REC*	*10*	*10-Jan-2019 18:31*
Surr: 4-Bromofluorobenzene	*100*			**0**	*85-114*	*%REC*	*1*	*10-Jan-2019 18:04*
Surr: 4-Bromofluorobenzene	*99.3*			**0**	*85-114*	*%REC*	*10*	*10-Jan-2019 18:31*
Surr: Dibromofluoromethane	*95.7*			**0**	*80-119*	*%REC*	*1*	*10-Jan-2019 18:04*
Surr: Dibromofluoromethane	*98.0*			**0**	*80-119*	*%REC*	*10*	*10-Jan-2019 18:31*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*10-Jan-2019 18:04*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*10*	*10-Jan-2019 18:31*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	22-Jan-2019 18:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW14_010719
Collection Date: 07-Jan-2019 11:25

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,2,3-Trichloropropane	5.0	U	0.50	5.0	1.0	UG/L	1	10-Jan-2019 18:56
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,2-Dichloroethane	**8.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 18:56
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:56
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 18:56
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	10-Jan-2019 18:56
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:56
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	10-Jan-2019 18:56
Acetone	**4.1**		**0.40**	**1.0**	**2.0**	**UG/L**	1	10-Jan-2019 18:56
Benzene	**0.66**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 18:56
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	10-Jan-2019 18:56
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Chloroform	**15**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 18:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW14_010719
Collection Date: 07-Jan-2019 11:25

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
cis-1,2-Dichloroethene	**4.9**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 18:56
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	10-Jan-2019 18:56
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 18:56
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	10-Jan-2019 18:56
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 18:56
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Tetrachloroethene	**1.6**		**0.30**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 18:56
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Trichloroethene	**1,100**		**5.0**	**12**	**25**	**UG/L**	25	10-Jan-2019 19:23
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 18:56
Surr: 1,2-Dichloroethane-d4	*109*			**0**	*81-118*	*%REC*	*25*	*10-Jan-2019 19:23*
Surr: 1,2-Dichloroethane-d4	*109*			**0**	*81-118*	*%REC*	*1*	*10-Jan-2019 18:56*
Surr: 4-Bromofluorobenzene	*104*			**0**	*85-114*	*%REC*	*1*	*10-Jan-2019 18:56*
Surr: 4-Bromofluorobenzene	*99.4*			**0**	*85-114*	*%REC*	*25*	*10-Jan-2019 19:23*
Surr: Dibromofluoromethane	*95.8*			**0**	*80-119*	*%REC*	*25*	*10-Jan-2019 19:23*
Surr: Dibromofluoromethane	*96.8*			**0**	*80-119*	*%REC*	*1*	*10-Jan-2019 18:56*
Surr: Toluene-d8	*98.9*			**0**	*89-112*	*%REC*	*1*	*10-Jan-2019 18:56*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*25*	*10-Jan-2019 19:23*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW14_010719
Collection Date: 07-Jan-2019 11:25

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 17-Jan-2019		Analyst: JHD
Aluminum	**1.68**		**0.00180**	**0.000500**	**0.0100**	**mg/L**	1	22-Jan-2019 16:56
Antimony	**0.000493**	J	**0.000400**	**0.000500**	**0.00200**	**mg/L**	1	22-Jan-2019 16:56
Arsenic	**0.00266**		**0.000400**	**0.000500**	**0.00200**	**mg/L**	1	22-Jan-2019 16:56
Barium	**2.61**		**0.0380**	**0.0500**	**0.0800**	**mg/L**	20	22-Jan-2019 17:10
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	22-Jan-2019 16:56
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	22-Jan-2019 16:56
Calcium	**390**		**0.680**	**1.00**	**10.0**	**mg/L**	20	22-Jan-2019 17:10
Chromium	**0.0292**		**0.000400**	**0.000500**	**0.00400**	**mg/L**	1	22-Jan-2019 16:56
Cobalt	**0.00196**	J	**0.000200**	**0.000500**	**0.00500**	**mg/L**	1	22-Jan-2019 16:56
Copper	**0.00193**	J	**0.00100**	**0.00100**	**0.00200**	**mg/L**	1	22-Jan-2019 16:56
Iron	**0.857**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	22-Jan-2019 16:56
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	22-Jan-2019 16:56
Magnesium	**56.0**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	22-Jan-2019 16:56
Manganese	**0.0921**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	22-Jan-2019 16:56
Nickel	**0.00304**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	22-Jan-2019 16:56
Potassium	**19.8**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	22-Jan-2019 16:56
Selenium	0.00250	U	0.00110	0.00250	0.00200	mg/L	1	22-Jan-2019 16:56
Silver	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	22-Jan-2019 16:56
Sodium	**479**		**0.280**	**1.00**	**4.00**	**mg/L**	20	22-Jan-2019 17:10
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	22-Jan-2019 16:56
Vanadium	**0.00482**	J	**0.000600**	**0.000500**	**0.00500**	**mg/L**	1	22-Jan-2019 16:56
Zinc	**0.00536**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	22-Jan-2019 16:56
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 10-Jan-2019		Analyst: OFO
Mercury	**0.0000320**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	10-Jan-2019 18:55
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	22-Jan-2019 18:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW14_010719-a
Collection Date: 07-Jan-2019 11:25

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,2,3-Trichloropropane	5.0	U	0.50	5.0	1.0	UG/L	1	10-Jan-2019 19:48
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,2-Dichloroethane	**8.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 19:48
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 19:48
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 19:48
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	10-Jan-2019 19:48
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 19:48
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	10-Jan-2019 19:48
Acetone	**8.6**		**0.40**	**1.0**	**2.0**	**UG/L**	1	10-Jan-2019 19:48
Benzene	**0.61**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 19:48
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	10-Jan-2019 19:48
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Chloroform	**15**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 19:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW14_010719-a
Collection Date: 07-Jan-2019 11:25

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
cis-1,2-Dichloroethene	**5.0**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 19:48
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	10-Jan-2019 19:48
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 19:48
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	10-Jan-2019 19:48
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 19:48
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Tetrachloroethene	**1.6**		**0.30**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 19:48
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Trichloroethene	**1,100**		**5.0**	**12**	**25**	**UG/L**	25	10-Jan-2019 20:15
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 19:48
Surr: 1,2-Dichloroethane-d4	*111*			**0**	*81-118*	*%REC*	*1*	*10-Jan-2019 19:48*
Surr: 1,2-Dichloroethane-d4	*108*			**0**	*81-118*	*%REC*	*25*	*10-Jan-2019 20:15*
Surr: 4-Bromofluorobenzene	*98.8*			**0**	*85-114*	*%REC*	*1*	*10-Jan-2019 19:48*
Surr: 4-Bromofluorobenzene	*99.4*			**0**	*85-114*	*%REC*	*25*	*10-Jan-2019 20:15*
Surr: Dibromofluoromethane	*99.7*			**0**	*80-119*	*%REC*	*1*	*10-Jan-2019 19:48*
Surr: Dibromofluoromethane	*95.6*			**0**	*80-119*	*%REC*	*25*	*10-Jan-2019 20:15*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*10-Jan-2019 19:48*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*25*	*10-Jan-2019 20:15*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW14_010719-a
Collection Date: 07-Jan-2019 11:25

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 17-Jan-2019		Analyst: JHD
Aluminum	**1.50**		**0.00180**	**0.000500**	**0.0100**	**mg/L**	1	22-Jan-2019 16:58
Antimony	**0.000527**	J	**0.000400**	**0.000500**	**0.00200**	**mg/L**	1	22-Jan-2019 16:58
Arsenic	**0.00260**		**0.000400**	**0.000500**	**0.00200**	**mg/L**	1	22-Jan-2019 16:58
Barium	**2.45**		**0.0380**	**0.0500**	**0.0800**	**mg/L**	20	22-Jan-2019 17:12
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	22-Jan-2019 16:58
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	22-Jan-2019 16:58
Calcium	**381**		**0.680**	**1.00**	**10.0**	**mg/L**	20	22-Jan-2019 17:12
Chromium	**0.0290**		**0.000400**	**0.000500**	**0.00400**	**mg/L**	1	22-Jan-2019 16:58
Cobalt	**0.00189**	J	**0.000200**	**0.000500**	**0.00500**	**mg/L**	1	22-Jan-2019 16:58
Copper	**0.00194**	J	**0.00100**	**0.00100**	**0.00200**	**mg/L**	1	22-Jan-2019 16:58
Iron	**0.857**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	22-Jan-2019 16:58
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	22-Jan-2019 16:58
Magnesium	**55.7**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	22-Jan-2019 16:58
Manganese	**0.0918**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	22-Jan-2019 16:58
Nickel	**0.00292**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	22-Jan-2019 16:58
Potassium	**19.5**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	22-Jan-2019 16:58
Selenium	0.00250	U	0.00110	0.00250	0.00200	mg/L	1	22-Jan-2019 16:58
Silver	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	22-Jan-2019 16:58
Sodium	**464**		**0.280**	**1.00**	**4.00**	**mg/L**	20	22-Jan-2019 17:12
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	22-Jan-2019 16:58
Vanadium	**0.00468**	J	**0.000600**	**0.000500**	**0.00500**	**mg/L**	1	22-Jan-2019 16:58
Zinc	**0.00513**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	22-Jan-2019 16:58
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 10-Jan-2019		Analyst: OFO
Mercury	**0.0000340**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	10-Jan-2019 19:25
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	22-Jan-2019 18:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: Trip Blank
Collection Date: 07-Jan-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-05
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,2,3-Trichloropropane	5.0	U	0.50	5.0	1.0	UG/L	1	10-Jan-2019 13:50
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:50
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 13:50
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	10-Jan-2019 13:50
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:50
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	10-Jan-2019 13:50
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	10-Jan-2019 13:50
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	10-Jan-2019 13:50
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: Trip Blank
Collection Date: 07-Jan-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19010248
Lab ID:HS19010248-05
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	10-Jan-2019 13:50
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 13:50
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	10-Jan-2019 13:50
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:50
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:50
Surr: 1,2-Dichloroethane-d4	*106*			**0**	*81-118*	*%REC*	*1*	*10-Jan-2019 13:50*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*10-Jan-2019 13:50*
Surr: Dibromofluoromethane	*93.6*			**0**	*80-119*	*%REC*	*1*	*10-Jan-2019 13:50*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*10-Jan-2019 13:50*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Jan-19

WEIGHT LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Batch ID: 136505 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19010248-03	1	10 (mL)	10 (mL)	1
HS19010248-04	1	10 (mL)	10 (mL)	1

Batch ID: 136717 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19010248-03	1	10	10 (mL)	1
HS19010248-04	1	10	10 (mL)	1

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 136505	**Test Name :** MERCURY BY SW7470A			**Matrix:** Groundwater		
HS19010248-03	18CPTMW14_010719	07 Jan 2019 11:25		10 Jan 2019 13:30	10 Jan 2019 18:55	1
HS19010248-04	18CPTMW14_010719-a	07 Jan 2019 11:25		10 Jan 2019 13:30	10 Jan 2019 19:25	1
Batch ID 136717	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Groundwater		
HS19010248-03	18CPTMW14_010719	07 Jan 2019 11:25		17 Jan 2019 08:30	22 Jan 2019 17:10	20
HS19010248-03	18CPTMW14_010719	07 Jan 2019 11:25		17 Jan 2019 08:30	22 Jan 2019 16:56	1
HS19010248-04	18CPTMW14_010719-a	07 Jan 2019 11:25		17 Jan 2019 08:30	22 Jan 2019 17:12	20
HS19010248-04	18CPTMW14_010719-a	07 Jan 2019 11:25		17 Jan 2019 08:30	22 Jan 2019 16:58	1
Batch ID R330796	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C			**Matrix:** Water		
HS19010248-05	Trip Blank	07 Jan 2019 00:00			10 Jan 2019 13:50	1
Batch ID R330796	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C			**Matrix:** Groundwater		
HS19010248-02	MW8_010719	07 Jan 2019 10:30			10 Jan 2019 18:31	10
HS19010248-02	MW8_010719	07 Jan 2019 10:30			10 Jan 2019 18:04	1
HS19010248-03	18CPTMW14_010719	07 Jan 2019 11:25			10 Jan 2019 19:23	25
HS19010248-03	18CPTMW14_010719	07 Jan 2019 11:25			10 Jan 2019 18:56	1
HS19010248-04	18CPTMW14_010719-a	07 Jan 2019 11:25			10 Jan 2019 20:15	25
HS19010248-04	18CPTMW14_010719-a	07 Jan 2019 11:25			10 Jan 2019 19:48	1
Batch ID R331540	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			**Matrix:** Groundwater		
HS19010248-01	18CPTMW16_010719	07 Jan 2019 09:20			22 Jan 2019 18:10	1
HS19010248-02	MW8_010719	07 Jan 2019 10:30			22 Jan 2019 18:10	1
HS19010248-03	18CPTMW14_010719	07 Jan 2019 11:25			22 Jan 2019 18:10	1
HS19010248-04	18CPTMW14_010719-a	07 Jan 2019 11:25			22 Jan 2019 18:10	1

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: 136505 **Instrument: HG03** **Method: SW7470**

MBLK Sample ID: **MBLK-136505** Units: **mg/L** Analysis Date: **10-Jan-2019 18:52**
Client ID: Run ID: **HG03_330807** SeqNo: **4903867** PrepDate: **10-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000043	0.000200								J

LCS Sample ID: **LCS-136505** Units: **mg/L** Analysis Date: **10-Jan-2019 18:54**
Client ID: Run ID: **HG03_330807** SeqNo: **4903868** PrepDate: **10-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00509	0.000200	0.005	0	102	80 - 120				

MS Sample ID: **HS19010248-03MS** Units: **mg/L** Analysis Date: **10-Jan-2019 18:57**
Client ID: **18CPTMW14_010719** Run ID: **HG03_330807** SeqNo: **4903870** PrepDate: **10-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00513	0.000200	0.005	0.000032	102	75 - 125				

MSD Sample ID: **HS19010248-03MSD** Units: **mg/L** Analysis Date: **10-Jan-2019 18:59**
Client ID: **18CPTMW14_010719** Run ID: **HG03_330807** SeqNo: **4903871** PrepDate: **10-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00506	0.000200	0.005	0.000032	101	75 - 125	0.00513	1.37	20	

The following samples were analyzed in this batch: HS19010248-03 HS19010248-04

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: 136717 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-136717** Units: **mg/L** Analysis Date: **22-Jan-2019 16:33**
Client ID: Run ID: **ICPMS05_331472** SeqNo: **4920121** PrepDate: **17-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.004917	0.0100								J
Antimony	0.000500	0.00200								U
Arsenic	0.000500	0.00200								U
Barium	0.00250	0.00400								U
Beryllium	0.00250	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.000500	0.00400								U
Cobalt	0.000500	0.00500								U
Copper	0.00100	0.00200								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00200								U
Magnesium	0.0500	0.200								U
Manganese	0.00100	0.00500								U
Nickel	0.00100	0.00200								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00200								U
Silver	0.000500	0.00200								U
Sodium	0.0500	0.200								U
Thallium	0.00100	0.00200								U
Vanadium	0.000500	0.00500								U
Zinc	0.00250	0.00400								U

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: 136717 **Instrument: ICPMS05** **Method: SW6020**

LCS Sample ID: **LCS-136717** Units: **mg/L** Analysis Date: **22-Jan-2019 16:35**
Client ID: Run ID: **ICPMS05_331472** SeqNo: **4920122** PrepDate: **17-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1121	0.0100	0.1	0	112	80 - 120				
Antimony	0.04974	0.00200	0.05	0	99.5	80 - 120				
Arsenic	0.05211	0.00200	0.05	0	104	80 - 120				
Barium	0.05198	0.00400	0.05	0	104	80 - 120				
Beryllium	0.05363	0.00200	0.05	0	107	80 - 120				
Cadmium	0.05429	0.00200	0.05	0	109	80 - 120				
Calcium	5.553	0.500	5	0	111	80 - 120				
Chromium	0.05155	0.00400	0.05	0	103	80 - 120				
Cobalt	0.05267	0.00500	0.05	0	105	80 - 120				
Copper	0.05342	0.00200	0.05	0	107	80 - 120				
Iron	5.355	0.200	5	0	107	80 - 120				
Lead	0.05367	0.00200	0.05	0	107	80 - 120				
Magnesium	5.461	0.200	5	0	109	80 - 120				
Manganese	0.05296	0.00500	0.05	0	106	80 - 120				
Nickel	0.05296	0.00200	0.05	0	106	80 - 120				
Potassium	5.353	0.200	5	0	107	80 - 120				
Selenium	0.05346	0.00200	0.05	0	107	80 - 120				
Silver	0.05339	0.00200	0.05	0	107	80 - 120				
Sodium	5.421	0.200	5	0	108	80 - 120				
Thallium	0.05195	0.00200	0.05	0	104	80 - 120				
Vanadium	0.0513	0.00500	0.05	0	103	80 - 120				
Zinc	0.05383	0.00400	0.05	0	108	80 - 120				

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: 136717 **Instrument: ICPMS05** **Method: SW6020**

MS Sample ID: **HS19010627-01MS** Units: **mg/L** Analysis Date: **22-Jan-2019 16:41**
Client ID: Run ID: **ICPMS05_331472** SeqNo: **4920125** PrepDate: **17-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.3912	0.0100	0.1	0.2848	106	80 - 120				
Antimony	0.04832	0.00200	0.05	0	96.6	80 - 120				
Arsenic	0.05757	0.00200	0.05	0.003203	109	80 - 120				
Barium	0.05517	0.00400	0.05	0.003934	102	80 - 120				
Beryllium	0.05443	0.00200	0.05	0	109	80 - 120				
Cadmium	0.05318	0.00200	0.05	0.000374	106	80 - 120				
Calcium	37.83	0.500	5	31.76	121	80 - 120				SO
Chromium	0.05149	0.00400	0.05	0	103	80 - 120				
Cobalt	0.05205	0.00500	0.05	0	104	80 - 120				
Copper	0.05186	0.00200	0.05	0	104	80 - 120				
Iron	5.312	0.200	5	0	106	80 - 120				
Lead	0.04375	0.00200	0.05	0	87.5	80 - 120				
Magnesium	5.804	0.200	5	0.2444	111	80 - 120				
Manganese	0.05468	0.00500	0.05	0.002753	104	80 - 120				
Nickel	0.05209	0.00200	0.05	0.000608	103	80 - 120				
Potassium	27.61	0.200	5	22.27	107	80 - 120				O
Selenium	0.0603	0.00200	0.05	0.005057	110	80 - 120				
Silver	0.04778	0.00200	0.05	0	95.6	80 - 120				
Sodium	578.6	0.200	5	572.4	123	80 - 120				SEO
Thallium	0.05401	0.00200	0.05	0.000323	107	80 - 120				
Vanadium	0.05536	0.00500	0.05	0.001792	107	80 - 120				
Zinc	0.05375	0.00400	0.05	0.002262	103	80 - 120				

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: 136717 **Instrument: ICPMS05** **Method: SW6020**

MSD Sample ID: **HS19010627-01MSD** Units: **mg/L** Analysis Date: **22-Jan-2019 16:42**
Client ID: Run ID: **ICPMS05_331472** SeqNo: **4920126** PrepDate: **17-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4023	0.0100	0.1	0.2848	117	80 - 120	0.3912	2.79	20	
Antimony	0.04828	0.00200	0.05	0	96.6	80 - 120	0.04832	0.0807	20	
Arsenic	0.0581	0.00200	0.05	0.003203	110	80 - 120	0.05757	0.92	20	
Barium	0.05437	0.00400	0.05	0.003934	101	80 - 120	0.05517	1.46	20	
Beryllium	0.05504	0.00200	0.05	0	110	80 - 120	0.05443	1.1	20	
Cadmium	0.05351	0.00200	0.05	0.000374	106	80 - 120	0.05318	0.628	20	
Calcium	38.2	0.500	5	31.76	129	80 - 120	37.83	0.965	20	SO
Chromium	0.05182	0.00400	0.05	0	104	80 - 120	0.05149	0.641	20	
Cobalt	0.05228	0.00500	0.05	0	105	80 - 120	0.05205	0.433	20	
Copper	0.0522	0.00200	0.05	0	104	80 - 120	0.05186	0.655	20	
Iron	5.346	0.200	5	0	107	80 - 120	5.312	0.654	20	
Lead	0.04683	0.00200	0.05	0	93.7	80 - 120	0.04375	6.81	20	
Magnesium	5.784	0.200	5	0.2444	111	80 - 120	5.804	0.337	20	
Manganese	0.05713	0.00500	0.05	0.002753	109	80 - 120	0.05468	4.38	20	
Nickel	0.05235	0.00200	0.05	0.000608	103	80 - 120	0.05209	0.5	20	
Potassium	28.8	0.200	5	22.27	131	80 - 120	27.61	4.22	20	SO
Selenium	0.06142	0.00200	0.05	0.005057	113	80 - 120	0.0603	1.83	20	
Silver	0.0487	0.00200	0.05	0	97.4	80 - 120	0.04778	1.89	20	
Sodium	593.2	0.200	5	572.4	416	80 - 120	578.6	2.5	20	SEO
Thallium	0.05344	0.00200	0.05	0.000323	106	80 - 120	0.05401	1.06	20	
Vanadium	0.05604	0.00500	0.05	0.001792	108	80 - 120	0.05536	1.21	20	
Zinc	0.05419	0.00400	0.05	0.002262	104	80 - 120	0.05375	0.817	20	

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: 136717 **Instrument: ICPMS05** **Method: SW6020**

PDS Sample ID: **HS19010627-01PDS** Units: **mg/L** Analysis Date: **22-Jan-2019 16:44**
Client ID: Run ID: **ICPMS05_331472** SeqNo: **4920127** PrepDate: **17-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.3743	0.0100	0.1	0.2848	89.4	75 - 125				
Antimony	0.08712	0.00200	0.1	0.000254	86.9	75 - 125				
Arsenic	0.1073	0.00200	0.1	0.003203	104	75 - 125				
Barium	0.1022	0.00400	0.1	0.003934	98.2	75 - 125				
Beryllium	0.1023	0.00200	0.1	0.000043	102	75 - 125				
Cadmium	0.1023	0.00200	0.1	0.000374	102	75 - 125				
Calcium	40.58	0.500	10	31.76	88.2	75 - 125				
Chromium	0.09886	0.00400	0.1	-0.000179	99.0	75 - 125				
Cobalt	0.0993	0.00500	0.1	0.000044	99.3	75 - 125				
Copper	0.09768	0.00200	0.1	0.000465	97.2	75 - 125				
Iron	10.15	0.200	10	0.003686	102	75 - 125				
Lead	0.08872	0.00200	0.1	0.000038	88.7	75 - 125				
Magnesium	10.96	0.200	10	0.2444	107	75 - 125				
Manganese	0.1024	0.00500	0.1	0.002753	99.7	75 - 125				
Nickel	0.09992	0.00200	0.1	0.000608	99.3	75 - 125				
Potassium	32.69	0.200	10	22.27	104	75 - 125				
Selenium	0.1112	0.00200	0.1	0.005057	106	75 - 125				
Silver	0.09336	0.00200	0.1	0.000002	93.4	75 - 125				
Thallium	0.1042	0.00200	0.1	0.000323	104	75 - 125				
Vanadium	0.1047	0.00500	0.1	0.001792	103	75 - 125				
Zinc	0.1031	0.00400	0.1	0.002262	101	75 - 125				

PDS Sample ID: **HS19010627-01PDS** Units: **mg/L** Analysis Date: **22-Jan-2019 17:20**
Client ID: Run ID: **ICPMS05_331472** SeqNo: **4920163** PrepDate: **17-Jan-2019** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	1151	10.0	500	602.6	110	75 - 125				

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: 136717 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS19010627-01SD** Units: **mg/L** Analysis Date: **22-Jan-2019 16:39**
Client ID: Run ID: **ICPMS05_331472** SeqNo: **4920124** PrepDate: **17-Jan-2019** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.2886	0.0500					0.2848	1.32	10	
Antimony	0.00250	0.0100					0.000254	0	10	U
Arsenic	0.003007	0.0100					0.003203	0	10	J
Barium	0.0125	0.0200					0.003934	0	10	U
Beryllium	0.0125	0.0100					0.000043	0	10	U
Cadmium	0.00250	0.0100					0.000374	0	10	U
Calcium	33.46	2.50					31.76	5.36	10	
Chromium	0.00250	0.0200					-0.000179	0	10	U
Cobalt	0.00250	0.0250					0.000044	0	10	U
Copper	0.00500	0.0100					0.000465	0	10	U
Iron	0.250	1.00					0.003686	0	10	U
Lead	0.00500	0.0100					0.000038	0	10	U
Magnesium	0.2482	1.00					0.2444	0	10	J
Manganese	0.00500	0.0250					0.002753	0	10	U
Nickel	0.00500	0.0100					0.000608	0	10	U
Potassium	23.8	1.00					22.27	6.9	10	
Selenium	0.006942	0.0100					0.005057	0	10	J
Silver	0.00250	0.0100					0.000002	0	10	U
Thallium	0.00500	0.0100					0.000323	0	10	U
Vanadium	0.004634	0.0250					0.001792	0	10	J
Zinc	0.0125	0.0200					0.002262	0	10	U

SD Sample ID: **HS19010627-01SD** Units: **mg/L** Analysis Date: **22-Jan-2019 17:18**
Client ID: Run ID: **ICPMS05_331472** SeqNo: **4920162** PrepDate: **17-Jan-2019** DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Sodium	656.5	50.0					602.6	8.94	10	

The following samples were analyzed in this batch: HS19010248-03 HS19010248-04

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MBLK Sample ID: **VBLKW-190108** Units: **UG/L** Analysis Date: **10-Jan-2019 13:00**
Client ID: Run ID: **VOA9_330796** SeqNo: **4903250** 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-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	5.0	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	0.50	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	1.0	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
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MBLK Sample ID: **VBLKW-190108** Units: **UG/L** Analysis Date: **10-Jan-2019 13:00**
Client ID: Run ID: **VOA9_330796** SeqNo: **4903250** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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	*49*	*1.0*	*50*	*0*	*98.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.26*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*46.01*	*1.0*	*50*	*0*	*92.0*	*80 - 119*				
Surr: Toluene-d8	*53.03*	*1.0*	*50*	*0*	*106*	*89 - 112*				

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

LCS Sample ID: **VLCSW-190108** Units: **UG/L** Analysis Date: **10-Jan-2019 11:47**
Client ID: Run ID: **VOA9_330796** SeqNo: **4903249** 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	22.56	1.0	20	0	113	78 - 124				
1,1,1-Trichloroethane	22.49	1.0	20	0	112	74 - 131				
1,1,2,2-Tetrachloroethane	21.05	1.0	20	0	105	71 - 121				
1,1,2-Trichloroethane	21.85	1.0	20	0	109	80 - 119				
1,1-Dichloroethane	22.15	1.0	20	0	111	77 - 125				
1,1-Dichloroethene	22.16	1.0	20	0	111	71 - 131				
1,1-Dichloropropene	22.02	1.0	20	0	110	78 - 125				
1,2,3-Trichlorobenzene	21.65	1.0	20	0	108	69 - 129				
1,2,3-Trichloropropane	20.84	1.0	20	0	104	73 - 122				
1,2,4-Trichlorobenzene	22.13	1.0	20	0	111	69 - 130				
1,2,4-Trimethylbenzene	23.98	1.0	20	0	120	76 - 124				
1,2-Dibromo-3-chloropropane	18.45	1.0	20	0	92.2	62 - 128				
1,2-Dibromoethane	22	1.0	20	0	110	77 - 121				
1,2-Dichlorobenzene	21.58	1.0	20	0	108	80 - 119				
1,2-Dichloroethane	22.65	1.0	20	0	113	73 - 128				
1,2-Dichloropropane	22.43	1.0	20	0	112	78 - 122				
1,3,5-Trimethylbenzene	23.68	1.0	20	0	118	75 - 124				
1,3-Dichlorobenzene	21.86	1.0	20	0	109	80 - 119				
1,3-Dichloropropane	22.22	1.0	20	0	111	80 - 119				
1,4-Dichlorobenzene	21.31	1.0	20	0	107	79 - 118				
2,2-Dichloropropane	22.93	1.0	20	0	115	60 - 139				
2-Butanone	41.39	2.0	40	0	103	56 - 143				
2-Chlorotoluene	23.15	1.0	20	0	116	79 - 122				
2-Hexanone	43.76	2.0	40	0	109	57 - 139				
4-Chlorotoluene	23.12	1.0	20	0	116	78 - 122				
4-Isopropyltoluene	23.98	1.0	20	0	120	77 - 127				
4-Methyl-2-pentanone	43.82	2.0	40	0	110	67 - 130				
Acetone	39.98	2.0	40	0	99.9	39 - 160				
Benzene	21.74	1.0	20	0	109	79 - 120				
Bromobenzene	21.3	1.0	20	0	106	80 - 120				
Bromochloromethane	23.57	1.0	20	0	118	78 - 123				
Bromodichloromethane	22.62	1.0	20	0	113	79 - 125				
Bromoform	19.11	1.0	20	0	95.5	66 - 130				
Bromomethane	23.69	1.0	20	0	118	53 - 141				

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

LCS Sample ID: **VLCSW-190108** Units: **UG/L** Analysis Date: **10-Jan-2019 11:47**
Client ID: Run ID: **VOA9_330796** SeqNo: **4903249** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	45.66	2.0	40	0	114	64 - 133				
Carbon tetrachloride	22.52	1.0	20	0	113	72 - 136				
Chlorobenzene	21.57	1.0	20	0	108	82 - 118				
Chloroethane	23.01	1.0	20	0	115	60 - 138				
Chloroform	22.01	1.0	20	0	110	79 - 124				
Chloromethane	25.3	1.0	20	0	126	50 - 139				
cis-1,2-Dichloroethene	21.56	1.0	20	0	108	78 - 123				
cis-1,3-Dichloropropene	21.14	1.0	20	0	106	75 - 124				
Dibromochloromethane	20.72	1.0	20	0	104	74 - 126				
Dibromomethane	21.71	1.0	20	0	109	79 - 123				
Dichlorodifluoromethane	23.35	1.0	20	0	117	32 - 152				
Ethylbenzene	22.13	1.0	20	0	111	79 - 121				
Hexachlorobutadiene	23.36	1.0	20	0	117	66 - 134				
Isopropylbenzene	23.42	1.0	20	0	117	72 - 131				
m,p-Xylene	45.71	2.0	40	0	114	80 - 121				
Methylene chloride	22.58	2.0	20	0	113	74 - 124				
Naphthalene	20.14	1.0	20	0	101	61 - 128				
n-Butylbenzene	23.72	1.0	20	0	119	75 - 128				
n-Propylbenzene	23.76	1.0	20	0	119	76 - 126				
o-Xylene	22.24	1.0	20	0	111	78 - 122				
sec-Butylbenzene	24.05	1.0	20	0	120	77 - 126				
Styrene	23.19	1.0	20	0	116	78 - 123				
tert-Butylbenzene	23.17	1.0	20	0	116	78 - 124				
Tetrachloroethene	20.22	1.0	20	0	101	74 - 129				
Toluene	22.44	1.0	20	0	112	80 - 121				
trans-1,2-Dichloroethene	21.39	1.0	20	0	107	75 - 124				
trans-1,3-Dichloropropene	20.85	1.0	20	0	104	73 - 127				
Trichloroethene	21.11	1.0	20	0	106	79 - 123				
Trichlorofluoromethane	22.52	1.0	20	0	113	65 - 141				
Vinyl chloride	21.91	1.0	20	0	110	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.27*	*1.0*	*50*	*0*	*105*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*53*	*1.0*	*50*	*0*	*106*	*85 - 114*				
Surr: Dibromofluoromethane	*49.73*	*1.0*	*50*	*0*	*99.5*	*80 - 119*				
Surr: Toluene-d8	*52.32*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MS Sample ID: **HS18121558-01MS** Units: **UG/L** Analysis Date: **10-Jan-2019 16:25**
Client ID: Run ID: **VOA9_330796** SeqNo: **4904251** 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	27.23	1.0	20	0	136	78 - 124			S
1,1,1-Trichloroethane	28.81	1.0	20	0	144	74 - 131			S
1,1,2,2-Tetrachloroethane	27.29	1.0	20	0	136	71 - 121			S
1,1,2-Trichloroethane	27.55	1.0	20	0	138	80 - 119			S
1,1-Dichloroethane	26.65	1.0	20	0	133	77 - 125			S
1,1-Dichloroethene	28.67	1.0	20	0	143	71 - 131			S
1,1-Dichloropropene	29.47	1.0	20	0	147	78 - 125			S
1,2,3-Trichlorobenzene	25.17	1.0	20	0	126	69 - 129			
1,2,3-Trichloropropane	26.13	1.0	20	0	131	73 - 122			S
1,2,4-Trichlorobenzene	25.42	1.0	20	0	127	69 - 130			
1,2,4-Trimethylbenzene	29.08	1.0	20	0	145	76 - 124			S
1,2-Dibromo-3-chloropropane	21.87	1.0	20	0	109	62 - 128			
1,2-Dibromoethane	27.41	1.0	20	0	137	77 - 121			S
1,2-Dichlorobenzene	25.75	1.0	20	0	129	80 - 119			S
1,2-Dichloroethane	28.93	1.0	20	0	145	73 - 128			S
1,2-Dichloropropane	29.07	1.0	20	0	145	78 - 122			S
1,3,5-Trimethylbenzene	28.84	1.0	20	0	144	75 - 124			S
1,3-Dichlorobenzene	25.97	1.0	20	0	130	80 - 119			S
1,3-Dichloropropane	27.9	1.0	20	0	139	80 - 119			S
1,4-Dichlorobenzene	25.31	1.0	20	0	127	79 - 118			S
2,2-Dichloropropane	25.26	1.0	20	0	126	60 - 139			
2-Butanone	50.78	2.0	40	0	127	56 - 143			
2-Chlorotoluene	28.39	1.0	20	0	142	79 - 122			S
2-Hexanone	55.48	2.0	40	0	139	57 - 139			
4-Chlorotoluene	28.64	1.0	20	0	143	78 - 122			S
4-Isopropyltoluene	28.92	1.0	20	0	145	77 - 127			S
4-Methyl-2-pentanone	56.27	2.0	40	0	141	67 - 130			S
Acetone	54.91	2.0	40	0	137	39 - 160			
Benzene	28.68	1.0	20	0	143	79 - 120			S
Bromobenzene	25.96	1.0	20	0	130	80 - 120			S
Bromochloromethane	28.15	1.0	20	0	141	78 - 123			S
Bromodichloromethane	28.03	1.0	20	0	140	79 - 125			S
Bromoform	22.87	1.0	20	0	114	66 - 130			
Bromomethane	31.26	1.0	20	0	156	53 - 141			S

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MS Sample ID: **HS18121558-01MS** Units: **UG/L** Analysis Date: **10-Jan-2019 16:25**
Client ID: Run ID: **VOA9_330796** SeqNo: **4904251** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Carbon disulfide	52.39	2.0	40	0	131	64 - 133			
Carbon tetrachloride	29.98	1.0	20	0	150	72 - 136			S
Chlorobenzene	26.84	1.0	20	0	134	82 - 118			S
Chloroethane	34.9	1.0	20	0	175	60 - 138			S
Chloroform	27.02	1.0	20	0	135	79 - 124			S
Chloromethane	29.94	1.0	20	0	150	50 - 139			S
cis-1,2-Dichloroethene	26.39	1.0	20	0	132	78 - 123			S
cis-1,3-Dichloropropene	24.98	1.0	20	0	125	75 - 124			S
Dibromochloromethane	24.7	1.0	20	0	123	74 - 126			
Dibromomethane	27.86	1.0	20	0	139	79 - 123			S
Dichlorodifluoromethane	26.28	1.0	20	0	131	32 - 152			
Ethylbenzene	28.05	1.0	20	0	140	79 - 121			S
Hexachlorobutadiene	24.88	1.0	20	0	124	66 - 134			
Isopropylbenzene	29.42	1.0	20	0	147	72 - 131			S
m,p-Xylene	57.06	2.0	40	0	143	80 - 121			S
Methylene chloride	26.33	2.0	20	0	132	74 - 124			S
Naphthalene	24.3	1.0	20	0	121	61 - 128			
n-Butylbenzene	28.92	1.0	20	0	145	75 - 128			S
n-Propylbenzene	29.46	1.0	20	0	147	76 - 126			S
o-Xylene	28.4	1.0	20	0	142	78 - 122			S
sec-Butylbenzene	29.62	1.0	20	0	148	77 - 126			S
Styrene	28.5	1.0	20	0	143	78 - 123			S
tert-Butylbenzene	28.57	1.0	20	0	143	78 - 124			S
Tetrachloroethene	25.23	1.0	20	0	126	74 - 129			
Toluene	28.57	1.0	20	0	143	80 - 121			S
trans-1,2-Dichloroethene	26.39	1.0	20	0	132	75 - 124			S
trans-1,3-Dichloropropene	24.85	1.0	20	0	124	73 - 127			
Trichloroethene	45.2	1.0	20	0.5483	223	79 - 123			S
Trichlorofluoromethane	28.88	1.0	20	0	144	65 - 141			S
Vinyl chloride	28.42	1.0	20	0	142	58 - 137			S
Surr: 1,2-Dichloroethane-d4	*53.69*	*1.0*	*50*	*0*	*107*	*81 - 118*			
Surr: 4-Bromofluorobenzene	*53.26*	*1.0*	*50*	*0*	*107*	*85 - 114*			
Surr: Dibromofluoromethane	*48.63*	*1.0*	*50*	*0*	*97.3*	*80 - 119*			
Surr: Toluene-d8	*53.35*	*1.0*	*50*	*0*	*107*	*89 - 112*			

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MSD Sample ID: **HS18121558-01MSD** Units: **UG/L** Analysis Date: **10-Jan-2019 16:50**
Client ID: Run ID: **VOA9_330796** SeqNo: **4904252** 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	25.72	1.0	20	0	129	78 - 124	27.23	5.7	20	S
1,1,1-Trichloroethane	26.63	1.0	20	0	133	74 - 131	28.81	7.87	20	S
1,1,2,2-Tetrachloroethane	25.93	1.0	20	0	130	71 - 121	27.29	5.12	20	S
1,1,2-Trichloroethane	26.38	1.0	20	0	132	80 - 119	27.55	4.35	20	S
1,1-Dichloroethane	26.43	1.0	20	0	132	77 - 125	26.65	0.846	20	S
1,1-Dichloroethene	27.3	1.0	20	0	136	71 - 131	28.67	4.89	20	S
1,1-Dichloropropene	27.53	1.0	20	0	138	78 - 125	29.47	6.82	20	S
1,2,3-Trichlorobenzene	24.06	1.0	20	0	120	69 - 129	25.17	4.49	20	
1,2,3-Trichloropropane	25.47	1.0	20	0	127	73 - 122	26.13	2.56	20	S
1,2,4-Trichlorobenzene	24.4	1.0	20	0	122	69 - 130	25.42	4.09	20	
1,2,4-Trimethylbenzene	27.5	1.0	20	0	138	76 - 124	29.08	5.58	20	S
1,2-Dibromo-3-chloropropane	20.9	1.0	20	0	105	62 - 128	21.87	4.54	20	
1,2-Dibromoethane	26.03	1.0	20	0	130	77 - 121	27.41	5.15	20	S
1,2-Dichlorobenzene	24.43	1.0	20	0	122	80 - 119	25.75	5.25	20	S
1,2-Dichloroethane	27.66	1.0	20	0	138	73 - 128	28.93	4.48	20	S
1,2-Dichloropropane	27.55	1.0	20	0	138	78 - 122	29.07	5.39	20	S
1,3,5-Trimethylbenzene	27.43	1.0	20	0	137	75 - 124	28.84	5.01	20	S
1,3-Dichlorobenzene	24.3	1.0	20	0	122	80 - 119	25.97	6.64	20	S
1,3-Dichloropropane	26.75	1.0	20	0	134	80 - 119	27.9	4.2	20	S
1,4-Dichlorobenzene	24.06	1.0	20	0	120	79 - 118	25.31	5.07	20	S
2,2-Dichloropropane	24.29	1.0	20	0	121	60 - 139	25.26	3.93	20	
2-Butanone	50.82	2.0	40	0	127	56 - 143	50.78	0.0829	20	
2-Chlorotoluene	26.68	1.0	20	0	133	79 - 122	28.39	6.2	20	S
2-Hexanone	53.57	2.0	40	0	134	57 - 139	55.48	3.52	20	
4-Chlorotoluene	27.13	1.0	20	0	136	78 - 122	28.64	5.39	20	S
4-Isopropyltoluene	27.3	1.0	20	0	136	77 - 127	28.92	5.78	20	S
4-Methyl-2-pentanone	53.61	2.0	40	0	134	67 - 130	56.27	4.84	20	S
Acetone	52.41	2.0	40	0	131	39 - 160	54.91	4.65	20	
Benzene	26.49	1.0	20	0	132	79 - 120	28.68	7.94	20	S
Bromobenzene	24.67	1.0	20	0	123	80 - 120	25.96	5.1	20	S
Bromochloromethane	27.03	1.0	20	0	135	78 - 123	28.15	4.06	20	S
Bromodichloromethane	26.93	1.0	20	0	135	79 - 125	28.03	4	20	S
Bromoform	21.53	1.0	20	0	108	66 - 130	22.87	6.06	20	
Bromomethane	27	1.0	20	0	135	53 - 141	31.26	14.6	20	

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MSD Sample ID: **HS18121558-01MSD** Units: **UG/L** Analysis Date: **10-Jan-2019 16:50**
Client ID: Run ID: **VOA9_330796** SeqNo: **4904252** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	52.33	2.0	40	0	131	64 - 133	52.39	0.127	20	
Carbon tetrachloride	27.96	1.0	20	0	140	72 - 136	29.98	7	20	S
Chlorobenzene	25.09	1.0	20	0	125	82 - 118	26.84	6.72	20	S
Chloroethane	10.21	1.0	20	0	51.1	60 - 138	34.9	109	20	SR
Chloroform	26.08	1.0	20	0	130	79 - 124	27.02	3.53	20	S
Chloromethane	27.15	1.0	20	0	136	50 - 139	29.94	9.75	20	
cis-1,2-Dichloroethene	25.61	1.0	20	0	128	78 - 123	26.39	3	20	S
cis-1,3-Dichloropropene	23.94	1.0	20	0	120	75 - 124	24.98	4.24	20	
Dibromochloromethane	23.81	1.0	20	0	119	74 - 126	24.7	3.68	20	
Dibromomethane	26.32	1.0	20	0	132	79 - 123	27.86	5.69	20	S
Dichlorodifluoromethane	23.8	1.0	20	0	119	32 - 152	26.28	9.88	20	
Ethylbenzene	26.65	1.0	20	0	133	79 - 121	28.05	5.11	20	S
Hexachlorobutadiene	24.66	1.0	20	0	123	66 - 134	24.88	0.856	20	
Isopropylbenzene	27.76	1.0	20	0	139	72 - 131	29.42	5.81	20	S
m,p-Xylene	53.72	2.0	40	0	134	80 - 121	57.06	6.04	20	S
Methylene chloride	26.28	2.0	20	0	131	74 - 124	26.33	0.2	20	S
Naphthalene	23.36	1.0	20	0	117	61 - 128	24.3	3.94	20	
n-Butylbenzene	27.66	1.0	20	0	138	75 - 128	28.92	4.44	20	S
n-Propylbenzene	27.78	1.0	20	0	139	76 - 126	29.46	5.86	20	S
o-Xylene	26.43	1.0	20	0	132	78 - 122	28.4	7.18	20	S
sec-Butylbenzene	28.07	1.0	20	0	140	77 - 126	29.62	5.38	20	S
Styrene	26.95	1.0	20	0	135	78 - 123	28.5	5.58	20	S
tert-Butylbenzene	27.02	1.0	20	0	135	78 - 124	28.57	5.59	20	S
Tetrachloroethene	23.97	1.0	20	0	120	74 - 129	25.23	5.12	20	
Toluene	26.89	1.0	20	0	134	80 - 121	28.57	6.07	20	S
trans-1,2-Dichloroethene	25.23	1.0	20	0	126	75 - 124	26.39	4.48	20	S
trans-1,3-Dichloropropene	24.11	1.0	20	0	121	73 - 127	24.85	3.04	20	
Trichloroethene	34.11	1.0	20	0.5483	168	79 - 123	45.2	28	20	SR
Trichlorofluoromethane	27.58	1.0	20	0	138	65 - 141	28.88	4.6	20	
Vinyl chloride	26.03	1.0	20	0	130	58 - 137	28.42	8.76	20	
Surr: 1,2-Dichloroethane-d4	*51.88*	*1.0*	*50*	*0*	*104*	*81 - 118*	*53.69*	*3.42*	*20*	
Surr: 4-Bromofluorobenzene	*53.52*	*1.0*	*50*	*0*	*107*	*85 - 114*	*53.26*	*0.484*	*20*	
Surr: Dibromofluoromethane	*48.56*	*1.0*	*50*	*0*	*97.1*	*80 - 119*	*48.63*	*0.134*	*20*	
Surr: Toluene-d8	*53.46*	*1.0*	*50*	*0*	*107*	*89 - 112*	*53.35*	*0.204*	*20*	

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

The following samples were analyzed in this batch:	HS19010248-02	HS19010248-03	HS19010248-04	HS19010248-05

ALS Houston, US Date: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: **HS19010248**

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
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: 23-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS19010248

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS19010248-01	18CPTMW16_010719	Login	1/8/2019 1:21:24 PM	NDR	Sub
HS19010248-01	18CPTMW16_010719	Login	1/8/2019 1:21:24 PM	NDR	VOA075
HS19010248-02	MW8_010719	Login	1/8/2019 1:21:24 PM	NDR	Sub
HS19010248-02	MW8_010719	Login	1/8/2019 1:21:24 PM	NDR	MET059
HS19010248-02	MW8_010719	Login	1/8/2019 1:21:24 PM	NDR	VOA075
HS19010248-03	18CPTMW14_010719	Login	1/8/2019 1:21:24 PM	NDR	Sub
HS19010248-03	18CPTMW14_010719	Login	1/8/2019 1:21:24 PM	NDR	MET059
HS19010248-03	18CPTMW14_010719	Login	1/8/2019 1:21:24 PM	NDR	VOA075

ALS Houston, US Date: 23-Jan-19

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS19010248
Date/Time Received: **08-Jan-2019 08:55**
Received by: **RPG**

Checklist completed by: *Nilesh D. Ranchod* eSignature 8-Jan-2019 Date
Reviewed by: *Corey Grandits* eSignature 8-Jan-2019 Date

Matrices: **WATER**
Carrier name: **FedEx Priority Overnight**

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):	0.2C/0.6C UC/C	IR # 11	
Cooler(s)/Kit(s):	44533		
Date/Time sample(s) sent to storage:	01/08/2019 2:00pm		
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:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate ENVIRONMENTAL ASSOCIATES, INC.

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PEACH/LOCATE	TOTAL METALS	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
18SPTmw16_010719		JAN07 2019	0920	-	N		WG	1		X					
MW8_010719		JAN 07 2019	1030	-	N		WG	4	X	X					
18SPTmw14_010719		07 JAN 2019	1125	-	N		WG	5	X	X	X				
18SPTmw14_010719_a		07 JAN 2019	1125		FD		WG	5	X	X	X				
Trip Blank		07 JAN 2019			TB		W	2	X						
				-											
				-											
				-											
				-											
				-											
				-											

Sample Analysis Requested (5) | Quality Assurance Samples (6)

COMMENTS: Cooler 44633 0.2 IR11 +0.4

HS19010248

Bhate Environmental Associates, Inc.
LHAAP 18/24

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	1/7/19	1300	1. R. Gilka	01/08/19	08:55
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped ____ No.:

Method of Shipment: ____

Fed Ex ____ Airbill Number: ____

Analytical Lab: ALS 10450 Stancliff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)
2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-t) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-a)
3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)
4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks
5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.
6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

44533

CUSTODY SEAL

Date: 1/7/19 Time: 1300
Name: Scott Beesinger
Company: Shate

Seal Broken By: SM
Date: 1/08/19

44533 JAN 08 2019

Must Deliver Next Business Day
Time and Tempature Sensitive!

44533

ORIGIN ID:SGRA (903) 930-6193
SCOTT BEESINER
SHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE. PMB202

MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 19JUL18
ACTWGT: 1.00 LB MAN
CAD: 3001130/CAFE3111
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP 58 - RJ

RMA:

FedEx Express

TRK# 0221 4380 9530 9401

TUE - 08 JAN 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

FID 162785 07JAN19 GGGA 563C2/D74C/0C0A

Case Narrative

Method: 6850
Analysis: Perchlorate
Analysis SOP: LC-MS-CLO4
ALS WO ID(s): 1900961

Client: ALS Laboratories (Houston, TX)
Matrix: Water
ELMS Batch (HBN): 2198 (231077)

General Set Information: There were four field samples in this Work Order. 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 sample 1900961002 was analyzed and reported from a 1:1,000 dilution. Field samples 1900961003/04 were analyzed and reported from 1:100 dilutions. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 636214) was less than 1/2 the CRDL. The recovery for the LCS (636215) was within acceptable parameters.

MS/MSD Analysis: MS/MSD was performed on sample 1900961001 (Client ID: 18CPTMW16_010719). 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. The Reporting Limit Verification Standard (RLVS – 636212) is reported from the analysis of the Laboratory Control Sample (LCS – 636215) at a level 4.0µg/L.

Thomas Bosch January 22, 2019
Analyst Date

ANALYTICAL REPORT

Report Date: January 22, 2019

RJ Modashia
ALS Environmental (Houston)
10450 Stancliff Road
Suite 210
Houston, TX 77099

Phone: 281 530-5656

E-mail: RJ.Modashia@ALSGlobal.com

Workorder: **34-1900961**
Project ID: HS19010248
Purchase Order: HS19010248
Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
18CPTMW16_010719	1900961001	01/07/19	01/09/19	
MW8_010719	1900961002	01/07/19	01/09/19	
18CPTMW14_010719	1900961003	01/07/19	01/09/19	
18CPTMW14_010719-a	1900961004	01/07/19	01/09/19	

ANALYTICAL REPORT

Workorder: 34-1900961
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **18CPTMW16_010719** | Sampling Site: NA | Collected: 01/07/2019
Lab ID: 1900961001 | Media: 125 mL Nalgene | Received: 01/09/2019
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/2198 (HBN: 231077) | **Percent Solid:** NA
Analyzed: 01/15/2019 14:44 | **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: **MW8_010719** | Sampling Site: NA | Collected: 01/07/2019
Lab ID: 1900961002 | Media: 125 mL Nalgene | Received: 01/09/2019
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/2198 (HBN: 231077) | **Percent Solid:** NA
Analyzed: 01/15/2019 15:25 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**6700**	1000	2000	4000	1000	

Sample ID: **18CPTMW14_010719** | Sampling Site: NA | Collected: 01/07/2019
Lab ID: 1900961003 | Media: 125 mL Nalgene | Received: 01/09/2019
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/2198 (HBN: 231077) | **Percent Solid:** NA
Analyzed: 01/15/2019 15:39 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**1200**	100	200	400	100	

Sample ID: **18CPTMW14_010719-a** | Sampling Site: NA | Collected: 01/07/2019
Lab ID: 1900961004 | Media: 125 mL Nalgene | Received: 01/09/2019
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/2198 (HBN: 231077) | **Percent Solid:** NA
Analyzed: 01/15/2019 15:53 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**1200**	100	200	400	100	

ANALYTICAL REPORT

Workorder: 34-1900961
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Comments

Quality Control: **EPA 6850, DoD QSM - (HBN: 231077)**

Field sample 1900961002 was analyzed and reported from a 1:1,000 dilution. Field samples 1900961003/04 were analyzed and reported from 1:100 dilutions. 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 01/18/2019 11:37	/S/ Lyle Edwards 01/22/2019 09:42

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: 34-1900961
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: 1900961

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850, DoD QSM
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2198 (HBN: 231077)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

Blank

LMB: 636214
Analyzed: 01/15/2019 14:16
Units: ug/L

Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 636215
Analyzed: 01/15/2019 13:49
Dilution: 1
Units: ug/L

Analyte	Result	Target	% Rec	QC Limits	
Perchlorate	4.29	4.00	107	78.8	123.8

Matrix Spike - Matrix Spike Duplicate

Sample:	1900961001	**MS:**	636216				**MSD:**	636217			
Analyzed:	01/15/2019 14:44	**Analyzed:**	01/15/2019 14:58				**Analyzed:**	01/15/2019 15:12			
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	4.32	4	108	78.8	123.8	4.36	109	0.875	0.0	20.0

Continuing Calibration Verification

CCV:	636211			**CCV:**	636218	
Analyzed:	01/15/2019 13:31			**Analyzed:**	01/15/2019 16:07	
Units:	ug/L			**Units:**	ug/L	
Criteria:	± 15%			**Criteria:**	± 15%	

Analyte	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	26.3	25.0	105	26.0	25.0	104

Interference Check Sample

ICSA: 636213
Analyzed: 01/15/2019 14:30
Units: ug/L
Criteria: ± 30%

Analyte	Result	Target	% Rec.
Perchlorate	4.29	4.00	107

Comments

Field sample 1900961002 was analyzed and reported from a 1:1,000 dilution. Field samples 1900961003/04 were analyzed and reported from 1:100 dilutions. The reporting limits have been adjusted accordingly.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1900961**

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850, DoD QSM
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2198 (HBN: 231077)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

QC Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Analyst	Peer Review
/S/ Thomas Bosch	/S/ Lyle Edwards
01/18/2019 14:15	01/22/2019 09:42

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

18698/#2

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

W 1900961

Subcontract Chain of Custody

COC ID: 10561

1900961

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: HS19010248
TSR: Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS19010248-01**	**18CPTMW16_010719**	**Groundwater**	**07 Jan 2019 09:20**
	SUB_Perch-6850			22 Jan 2019
2.	**HS19010248-02**	**MW8_010719**	**Groundwater**	**07 Jan 2019 10:30**
	SUB_Perch-6850			22 Jan 2019
3.	**HS19010248-03**	**18CPTMW14_010719**	**Groundwater**	**07 Jan 2019 11:25**
	SUB_Perch-6850			22 Jan 2019
4.	**HS19010248-04**	**18CPTMW14_010719-a**	**Groundwater**	**07 Jan 2019 11:25**
	SUB_Perch-6850			22 Jan 2019

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: Polly Mains Date/Time: 1-8-19 18:00
Received By: [signature] Date/Time: 1/9/19 / 905
Cooler ID(s): 9080 Temperature(s): 3

ALS-SALT LAKE CITY-RELATED INFORMATION REPORT (CRIR)

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: ALS Houston
Project/Task/Site: 1900961
Date/Time of Receipt: 1/7/19/905
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	C19 9080	3 °C	4	C19	°C	7	C19	°C
2	C19	°C	5	C19	°C	8	C19	°C
3	C19	°C	6	C19	°C	9	C19	°C

Taken By: [signature] (Signature) Meredith Evans (Printed Name) 1/7/19 (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: _____

CRIR.doc Revised 01/01/2018



ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 08JAN19
ACTWGT: 17.40 LB
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL
960 W. LEVOY DRIVE

SALT LAKE CITY UT 84123
(801) 266-7700
REF: HS19010248 RM

FedEx Express

WED - 09 JAN 3:00P
STANDARD OVERNIGHT

TRK# 0201 4380 9536 1174

AX BTFA

84123
UT-US SLC

Seal Broken By:
Date:

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: HS19010248	***Split:***	**Workorder ID:** 1900961	**Level:** ENV_LVL4
Client: ALS Environmental (Houston)		**Account:** 8101	**Type:** 125Poly
Comments:			**Preservatives**

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Requested Analysis: EPA 6850, DoD QSM
1	01/07/2019 09:20	18CPTMW16_010719	1900961001		Water	A	1	A
2	01/07/2019 10:30	MW8_010719	1900961002		Water	A	1	A
3	01/07/2019 11:25	18CPTMW14_010719	1900961003		Water	A	1	A
4	01/07/2019 11:25	18CPTMW14_010719-a	1900961004		Water	A	1	A
5								
6								
7								
8								
9								
10								

COOL

Page 2 of 115

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Warath, Julie	01/09/2019 09:05	ALS Sample Receiving	Sample Login
Julie Warath	1/9/19 1400	4B	storage
R.33.1	1-14-19/13:45	T. Booth	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

00933004

Batch Worklist

Batch: ELMS/ 2198 **Created:** 1/15/2019 07:39 **Instrument:** **HBN:** 231077

Rule: EPA 6850, DoD QSM Water **Analyst:** T. Bosch **Status:** WP

Workorder: 1900961 [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	636211	CCV for HBN 231077 [ELMS/2198]				CCV	3		E685041C3Q	5311		1/22/2019	
2	636212	RLVS for HBN 231077 [ELMS/2198				RLVS	3		E685041C3Q	5311		1/22/2019	
3	636213	ICS for HBN 231077 [ELMS/2198]				ICS	3		E6850..D3Q	5311		1/22/2019	
4	636214	LMB for HBN 231077 [ELMS/2198]				LMB	3		E6850Q413Q	5311		1/22/2019	
5	636215	LCS for HBN 231077 [ELMS/2198]				LCS	3		E6850Q413Q	5311		1/22/2019	
6	1900961001	18CPTMW16_010719				SAMPLE	3	1900961001-A	E6850Q41.3	5480	2/4/2019	1/22/2019	
7	636216	18CPTMW16_010719(1900961001MS)				MS	3		E6850Q413Q	5311		1/22/2019	
8	636217	18CPTMW16_01...(1900961001MSD)				MSD	3		E6850Q413Q	5311		1/22/2019	
9	1900961002	MW8_010719				SAMPLE	3	1900961002-A	E6850Q41.3	5480	2/4/2019	1/22/2019	
10	1900961003	18CPTMW14_010719				SAMPLE	3	1900961003-A	E6850Q41.3	5480	2/4/2019	1/22/2019	
11	1900961004	18CPTMW14_010719-a				SAMPLE	3	1900961004-A	E6850Q41.3	5480	2/4/2019	1/22/2019	
12	636218	CCV for HBN 231077 [ELMS/2198]				CCV	3		E685041C3Q	5311		1/22/2019	

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS Work Order #'s & Sample #( )'s: 1900961 (001-04)
ELMS Batch/HBN ID: 2198 (231077)
Prep Date: 01/15/2019 Analysis Date: 01/15/2019 Analyst: T. Bosch
Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
Sequence: \\HPCHEM\1\SEQUENCE\CLO4\2019\JAN\15JAN19D.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 636215; Target = 5.0µg/L. ASTM type II water was used for LMB 636214.

MS/MSD: MS/MSD were performed on sample 1900961001 (Client ID's: 18CPTMW16_010719). 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 sample 1900961002 was analyzed and reported from a 1:1,000 dilution. Field samples 1900961003/04 were analyzed and reported from 1:100 dilutions. 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\2019\JAN\HBN# or through NuGenesis\Tree\PrintData\LCMS\DefaultView.
4) Notebook: \\alsltws013\ORGANIC\BOSCH\LCMS\Perchlorates\Waters\2019\231077-DoD-ALS-Hstn LCMS4 or through \\ALSLTWS013\DATAREVIEW\HBN#
5) The Reporting Limit Verification Standard (RLVS – 636212) is reported from the analysis of the Laboratory Control Sample (LCS – 636215) at a level 4.0µg/L.

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: 2198 HBN: 231077 Sample Set IDs if Applicable: 1900961	Analyst Initials	Reviewer Initials
Calibration standards analyzed and meets criteria	TB	
Standards traceability checked and meets criteria	TB	
Standard curve coefficients evaluated and meet criteria	TB	
ICVs analyzed and meet acceptance criteria	TB	
CCVs analyzed and meet acceptance criteria	TB	
Method Blanks analyzed and meet acceptance criteria	TB	
Retention Time Windows checked	TB	
For method 8081A, Endrin/DDT Breakdown is checked for compliance	—	NA
Surrogate recoveries checked and appropriately addressed	—	NA
Method Preparation Blanks analyzed and meet acceptance criteria	TB	
MSs, MSDs, and/or MDs analyzed and calculations checked; applicable flags applied on QC reports; LCSs analyzed and meet acceptance criteria when performed	TB	
RLVS analyzed	TB	
Preparation and analysis hold times met	TB	
Preparation deviations and re-preparations noted when performed	TB	
Analysis deviations and re-analyses noted when performed	TB	
Sample dilution factors noted on reports	TB	
Electronic records in HBN transcription accuracy and completeness checked	TB	
Preparation and analysis calculations checked	TB	
NCRs are completed as necessary NC/CAR# NA	—	NA
Report forms are complete and accurate	TB	
Manual integrations checked	TB	

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*

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

GHS

Signal Word: None

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

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

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

00933024

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
*	636211 C	Vial 71	1	Control	1	2.58792e6	9.634	26.26346
*	636212 Q	Vial 72	1	Control	2	5.79317e5	9.612	4.29058
*	636214 L	Vial 74	1	Control	4	0.00000	0.000	0.00000
*	636213 I	Vial 73	1	Control	5	4.88678e5	9.638	4.29103
*	1900961001	Vial 75	1	Sample	6	0.00000	0.000	0.00000
*	636216 0	Vial 76	1	Sample	7	4.54078e5	9.558	4.32173
*	636217 0	Vial 77	1	Sample	8	5.55243e5	9.550	4.35967
*	1900961002	Vial 78	1	Sample	9	1.31467e6	9.655	6655.07009
*	1900961003	Vial 79	1	Sample	10	1.93019e6	9.640	1161.71670
*	1900961004	Vial 80	1	Sample	11	1.88261e6	9.654	1230.32049
*	636218 C	Vial 71	1	Control	12	2.75980e6	9.655	26.03505

#	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
*	636211 C	Vial 71	1	Control	1	7.44312e5	9.651	25.07499
*	636212 Q	Vial 72	1	Control	2	1.83480e5	9.630	4.44796
*	636214 L	Vial 74	1	Control	4	0.00000	0.000	0.00000
*	636213 I	Vial 73	1	Control	5	1.53351e5	9.655	4.40879
*	1900961001	Vial 75	1	Sample	6	0.00000	0.000	0.00000
*	636216 0	Vial 76	1	Sample	7	1.47212e5	9.575	4.58382
*	636217 0	Vial 77	1	Sample	8	1.71347e5	9.566	4.40901
*	1900961002	Vial 78	1	Sample	9	3.92863e5	9.671	6578.59590
*	1900961003	Vial 79	1	Sample	10	5.61125e5	9.655	1123.38550
*	1900961004	Vial 80	1	Sample	11	5.53175e5	9.671	1202.25980
*	636218 C	Vial 71	1	Control	12	7.87071e5	9.670	24.66205

#	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
*	636211 C	Vial 71	1	Control	1	2.93354e5	9.659	5.00000
*	636212 Q	Vial 72	1	Control	2	4.35596e5	9.639	5.00000
*	636214 L	Vial 74	1	Control	4	3.69544e5	9.648	5.00000
*	636213 I	Vial 73	1	Control	5	3.67402e5	9.663	5.00000
*	1900961001	Vial 75	1	Sample	6	3.80195e5	9.570	5.00000
*	636216 0	Vial 76	1	Sample	7	3.38822e5	9.587	5.00000
*	636217 0	Vial 77	1	Sample	8	4.10495e5	9.576	5.00000
*	1900961002	Vial 78	1	Sample	9	6.23316e5	9.681	5000.00000
*	1900961003	Vial 79	1	Sample	10	5.12589e5	9.659	500.00000
*	1900961004	Vial 80	1	Sample	11	4.71024e5	9.678	500.00000
*	636218 C	Vial 71	1	Control	12	3.15729e5	9.682	5.00000

*** End of Report ***

Sequence Table:

Method and Injection Info Part:

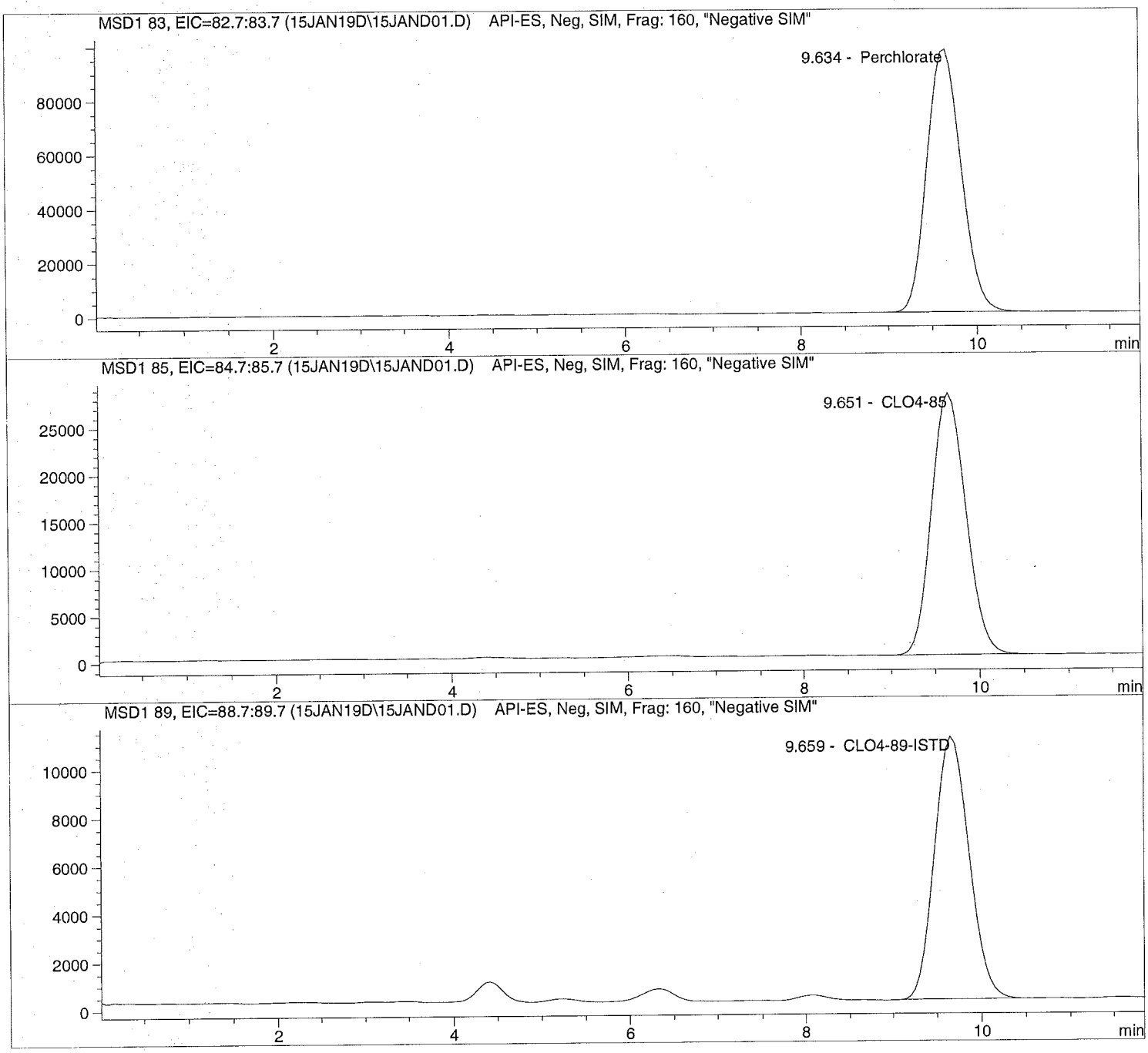
Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	636211 CCV@25	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	636212 QC@4.0	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	636213 ICS@4.0	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	636214 LMB	CLO4-AQN	1	Ctrl Samp		
5	Vial 73	636213 ICS@4.0	CLO4-AQN	1	Ctrl Samp		
6	Vial 75	1900961001	CLO4-AQN	1	Sample		
7	Vial 76	636216 09611MS	CLO4-AQN	1	Sample		
8	Vial 77	636217 09611SD	CLO4-AQN	1	Sample		
9	Vial 78	1900961002 1K	CLO4-AQN	1	Sample		
10	Vial 79	1900961003 100	CLO4-AQN	1	Sample		
11	Vial 80	1900961004 100	CLO4-AQN	1	Sample		
12	Vial 71	636218 CCV@25	CLO4-AQN	1	Ctrl Samp		

Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND01.D Sample Name: 636211 CCV@25

Injection Date:	1/15/2019 13:31:49	Seq Line:	1
Sample Name:	636211 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\15JAN19D\15JAND01.D Sample Name: 636211 CCV@25

Injection Date:	1/15/2019 13:31:49	Seq Line:	1
Sample Name:	636211 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
9.634	PBA	2587920.5	26.2635	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.651	PBA	744312.2	25.0750	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.659	PBA	293354.2	5.0000	CLO4-89-ISTD

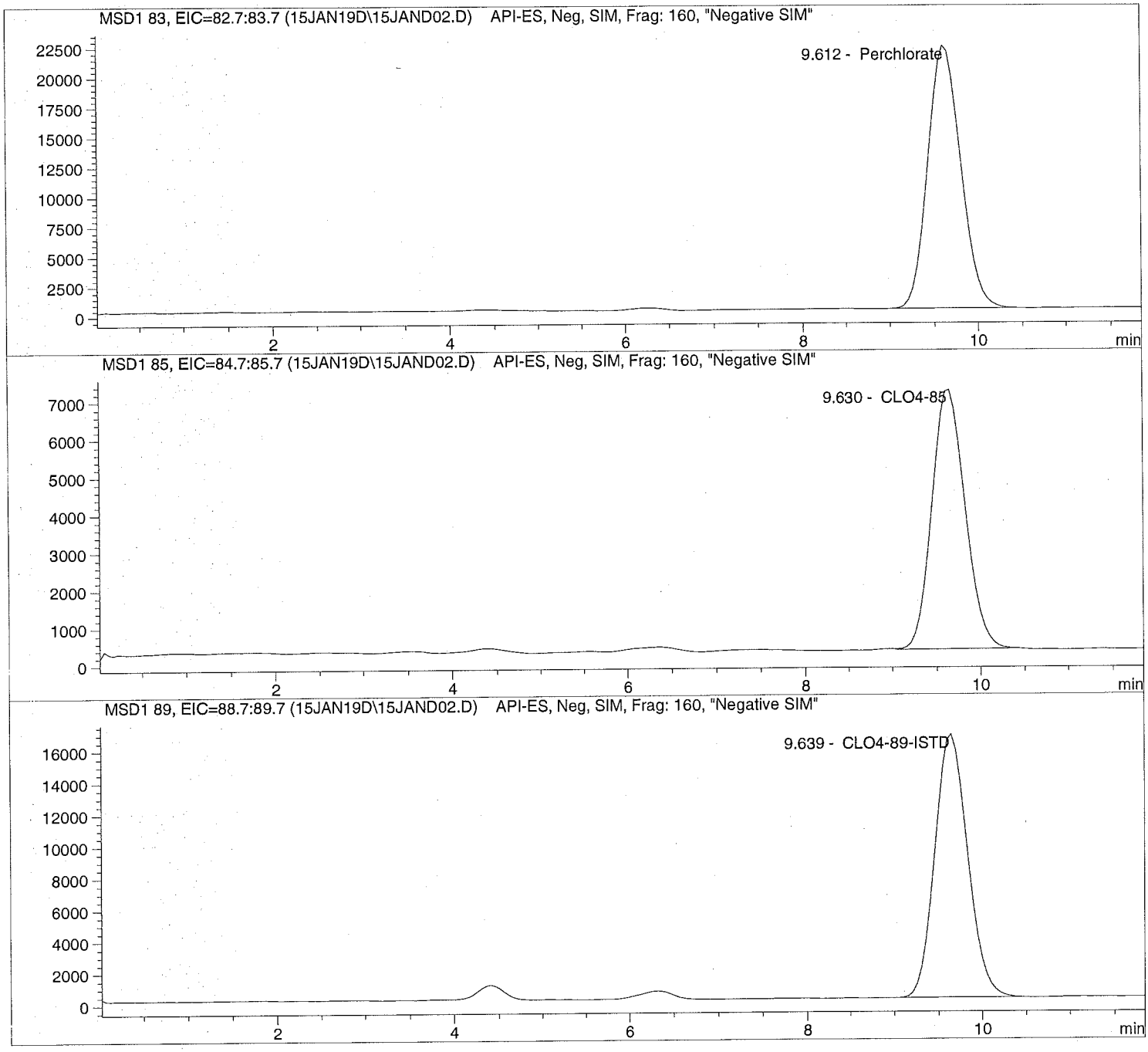
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND02.D Sample Name: 636212 QC@4.0

Injection Date:	1/15/2019 13:49:11	Seq Line:	2
Sample Name:	636212 QC@4.0	Location:	Vial 72
Acq Operator:	TNB +RLVS	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\15JAN19D\15JAND02.D Sample Name: 636212 QC@4.0

Injection Date:	1/15/2019 13:49:11	Seq Line:	2
Sample Name:	636212 QC@4.0	Location:	Vial 72
Acq Operator:	TNB +RLVS	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:	4.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.612	PBA	579316.8	4.2906	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.630	BBA	183480.2	4.4480	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.639	BBA	435595.6	5.0000	CLO4-89-ISTD

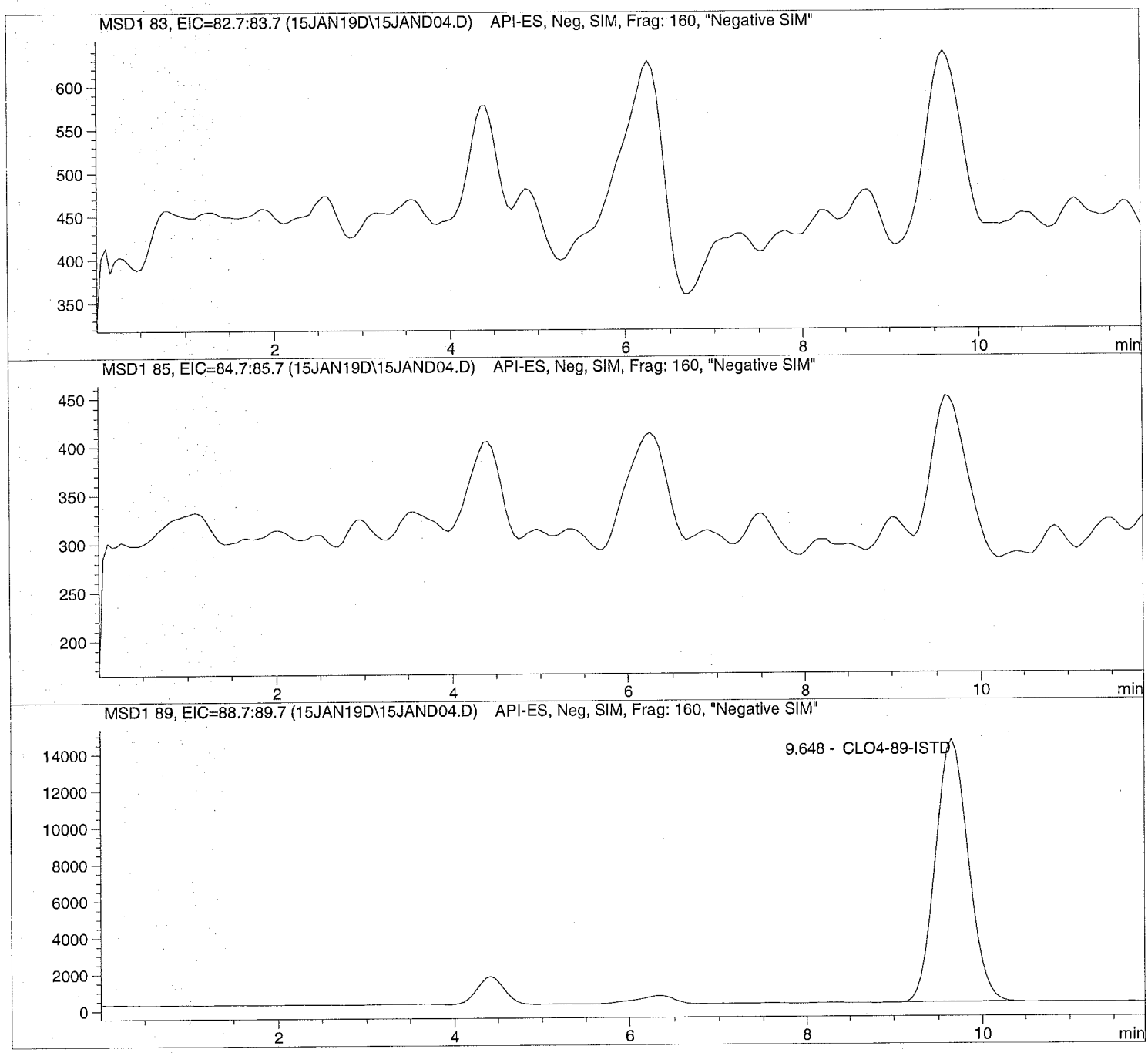
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND04.D Sample Name: 636214 LMB

Injection Date:	1/15/2019 14:16:48	Seq Line:	4
Sample Name:	636214 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\15JAN19D\15JAND04.D Sample Name: 636214 LMB

Injection Date:	1/15/2019 14:16:48	Seq Line:	4
Sample Name:	636214 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
9.648	PBA	369544.3	5.0000	CLO4-89-ISTD

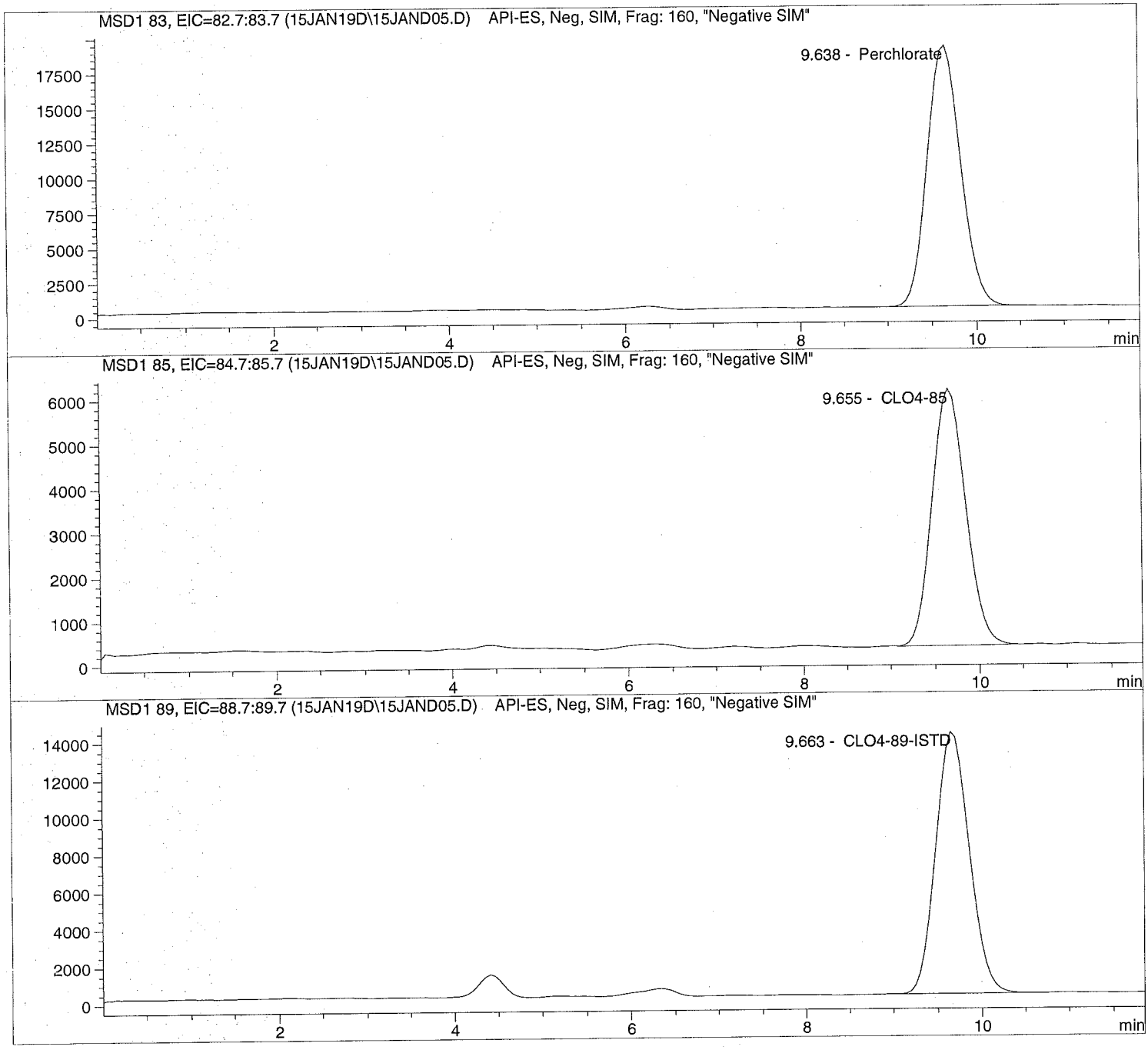
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND05.D Sample Name: 636213 ICS@4.0

Injection Date:	1/15/2019 14:30:39	Seq Line:	5
Sample Name:	636213 ICS@4.0	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\15JAN19D\15JAND05.D Sample Name: 636213 ICS@4.0

Injection Date:	1/15/2019 14:30:39	Seq Line:	5
Sample Name:	636213 ICS@4.0	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:	4.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.638	PBA	488678.0	4.2910	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.655	BBA	153351.1	4.4088	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.663	BBA	367401.6	5.0000	CLO4-89-ISTD

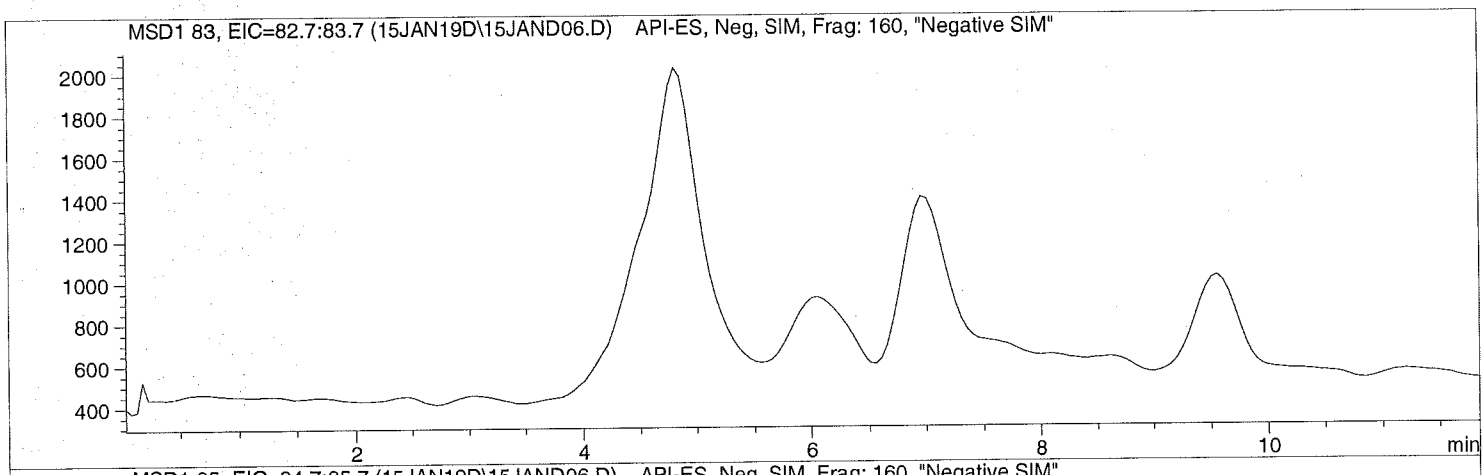
*** End of Report ***

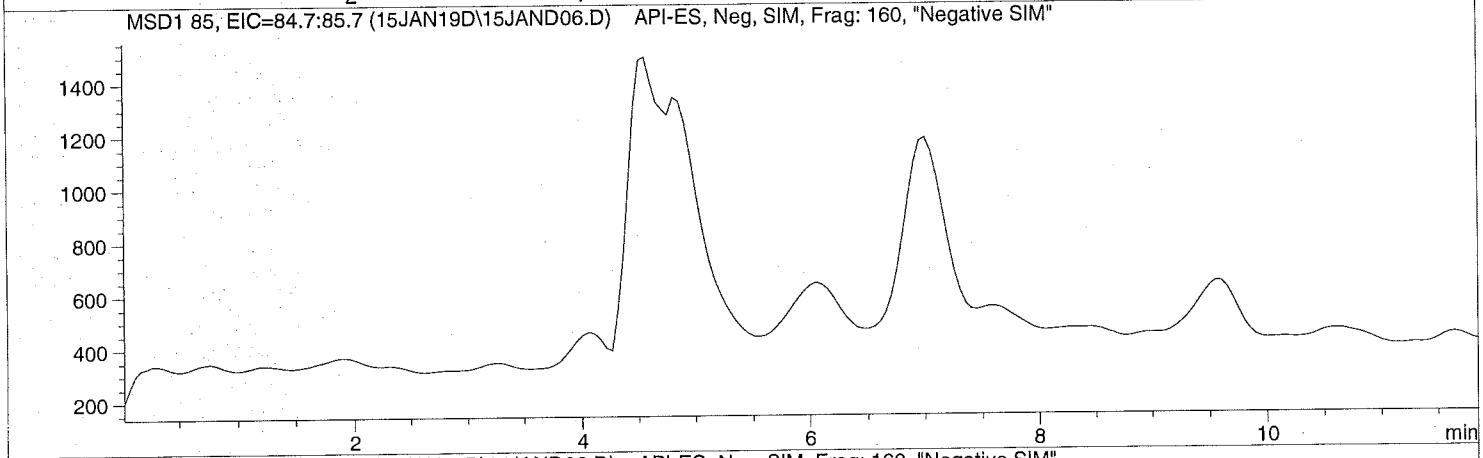
Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND06.D Sample Name: 1900961001

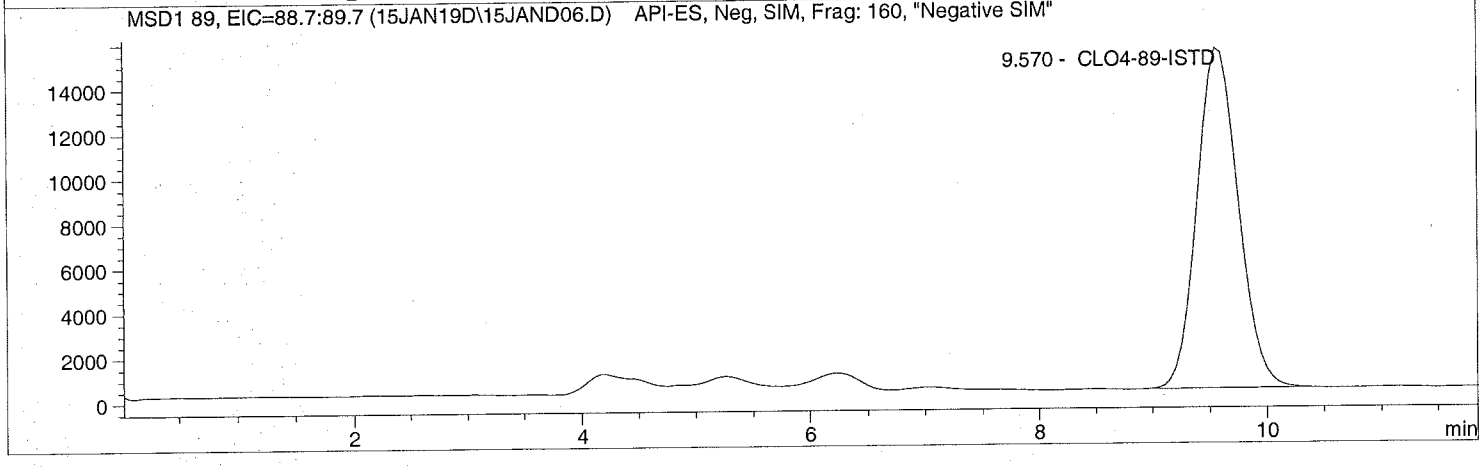
Injection Date:	1/15/2019 14:44:32	Seq Line:	6
Sample Name:	1900961001	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

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\15JAN19D\15JAND06.D Sample Name: 1900961001

Injection Date:	1/15/2019 14:44:32	Seq Line:	6
Sample Name:	1900961001	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:	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
9.570	PBA	380195.1	5.0000	CLO4-89-ISTD

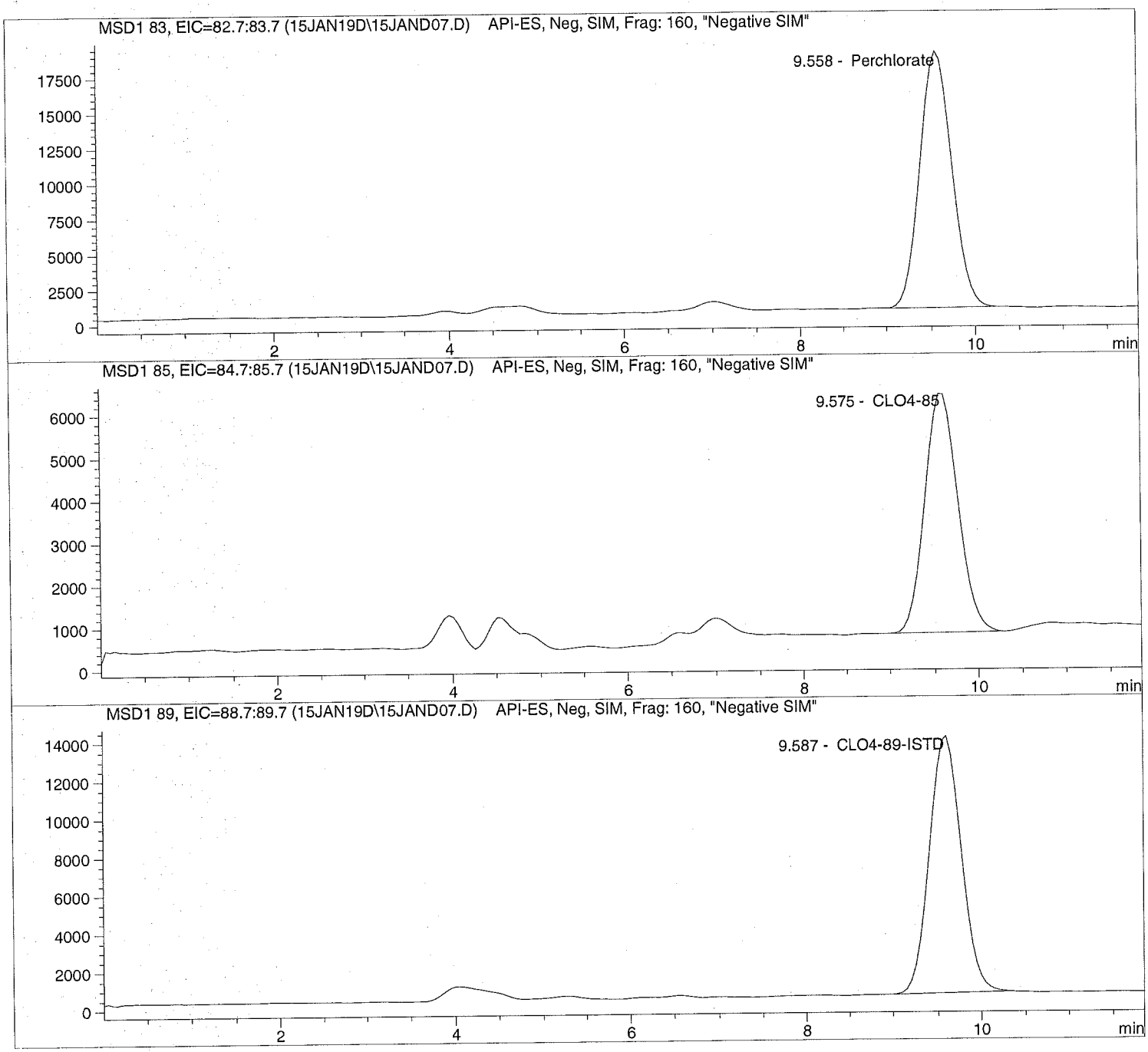
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND07.D Sample Name: 636216 09611MS

Injection Date:	1/15/2019 14:58:18	Seq Line:	7
Sample Name:	636216 09611MS	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\15JAN19D\15JAND07.D Sample Name: 636216 09611MS

Injection Date:	1/15/2019 14:58:18	Seq Line:	7
Sample Name:	636216 09611MS	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
9.558	BBA	454077.7	4.3217	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.575	BBA	147212.1	4.5838	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.587	PBA	338822.1	5.0000	CLO4-89-ISTD

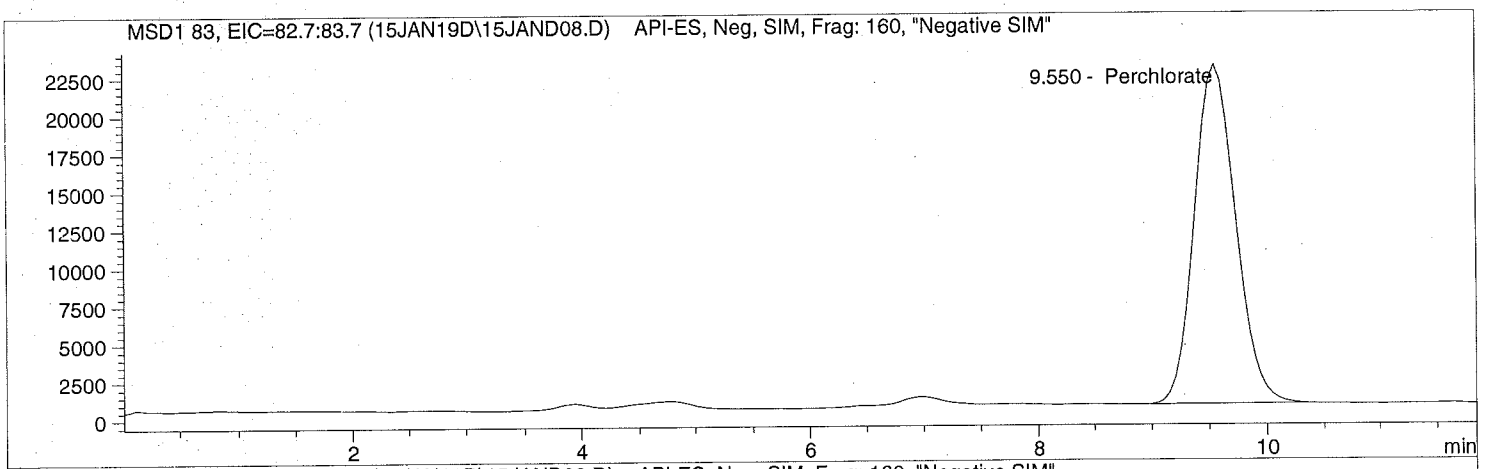
*** End of Report ***

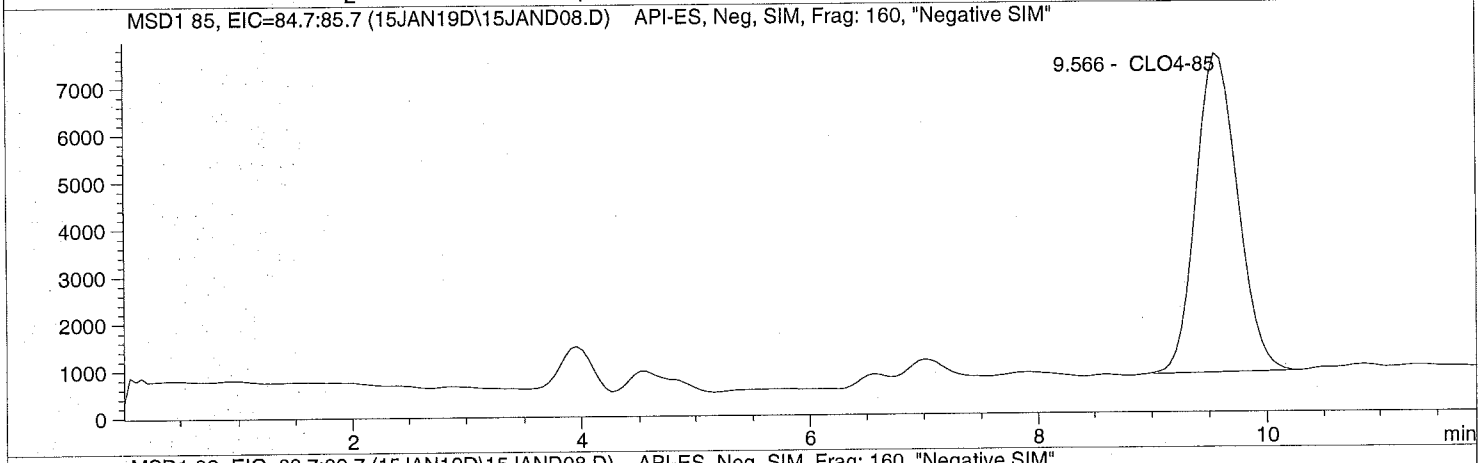
Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND08.D Sample Name: 636217 09611SD

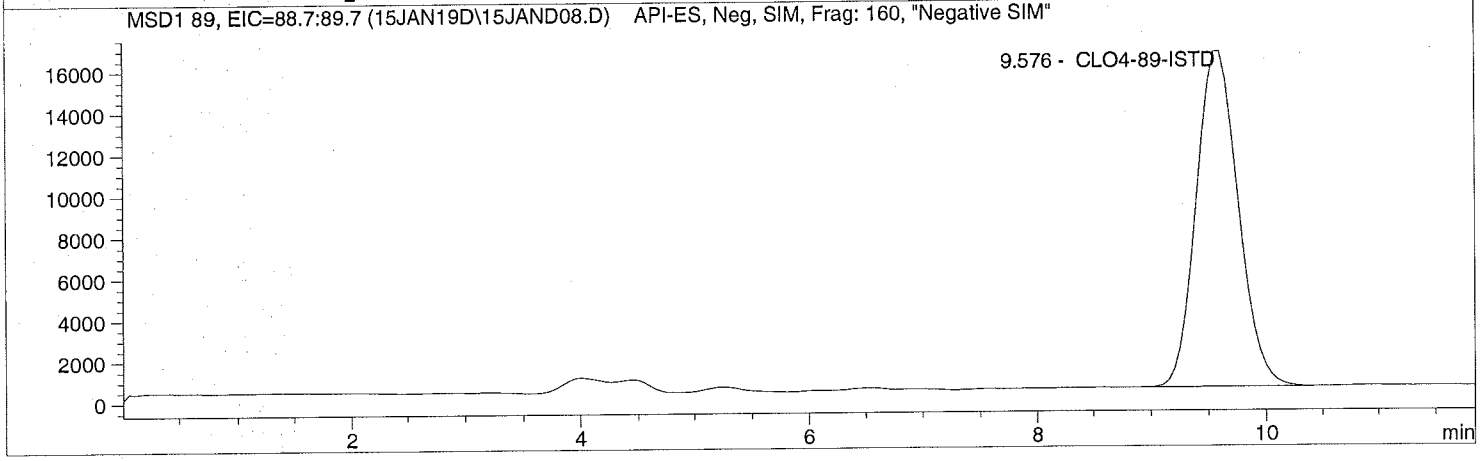
Injection Date:	1/15/2019 15:12:10	Seq Line:	8
Sample Name:	636217 09611SD	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

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\15JAN19D\15JAND08.D Sample Name: 636217 09611SD

Injection Date:	1/15/2019 15:12:10	Seq Line:	8
Sample Name:	636217 09611SD	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
9.550	PBA	555242.9	4.3597	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.566	BBA	171346.8	4.4090	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.576	BBA	410494.7	5.0000	CLO4-89-ISTD

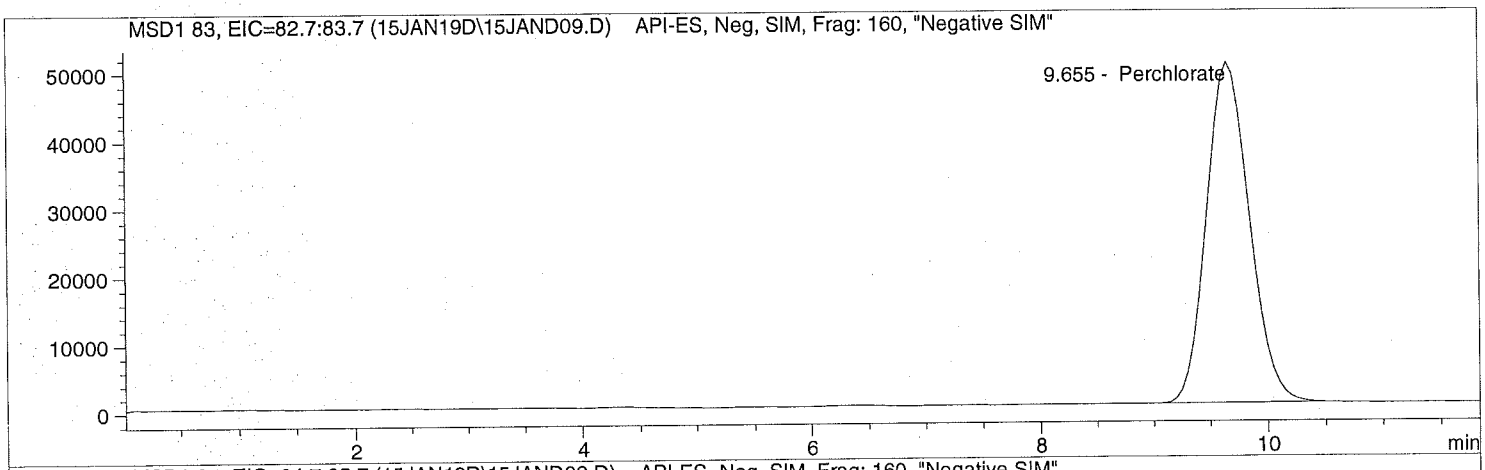
*** End of Report ***

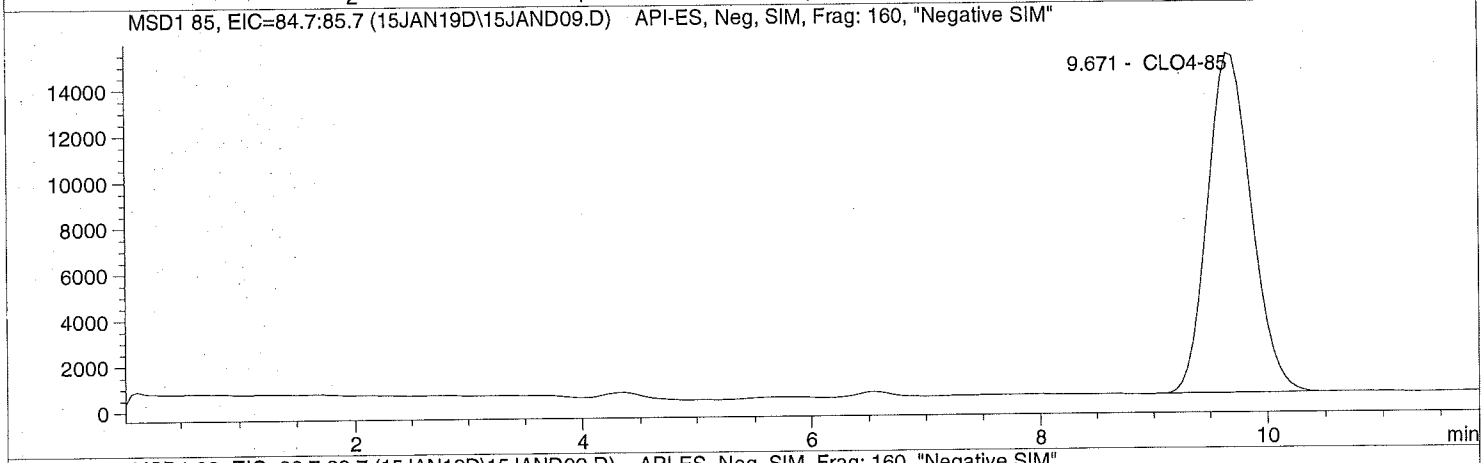
Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND09.D Sample Name: 1900961002 1K

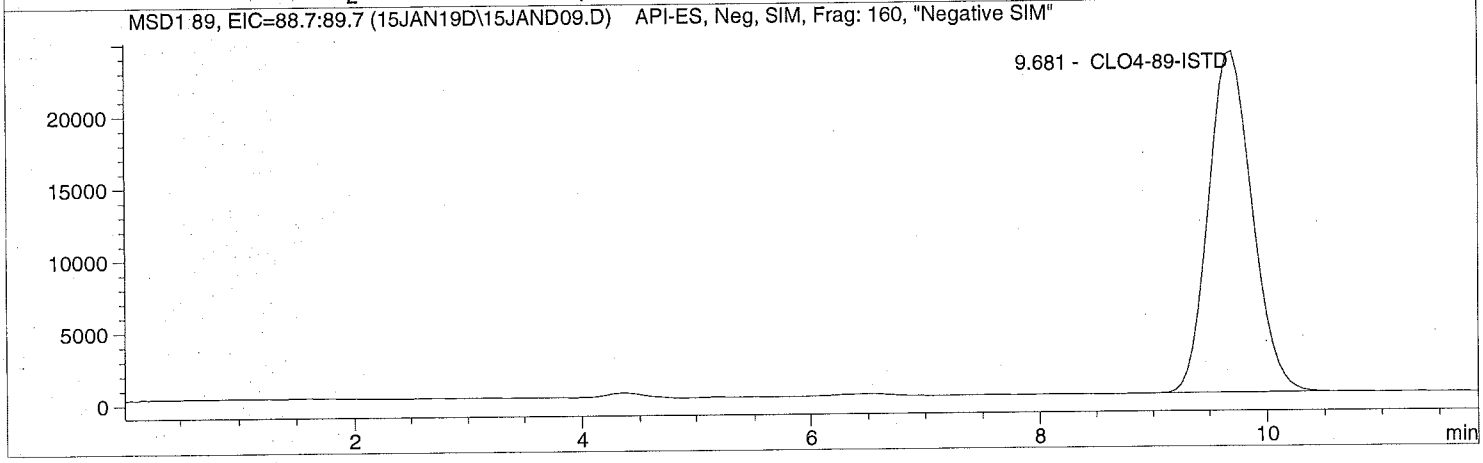
Injection Date:	1/15/2019 15:25:59	Seq Line:	9
Sample Name:	1900961002 1K	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

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\15JAN19D\15JAND09.D Sample Name: 1900961002 1K

Injection Date:	1/15/2019 15:25:59	Seq Line:	9
Sample Name:	1900961002 1K	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:	1000.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.655	BBA	1314672.4	6655.0701	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.671	PBA	392863.1	6578.5959	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.681	BBA	623315.5	5000.0000	CLO4-89-ISTD

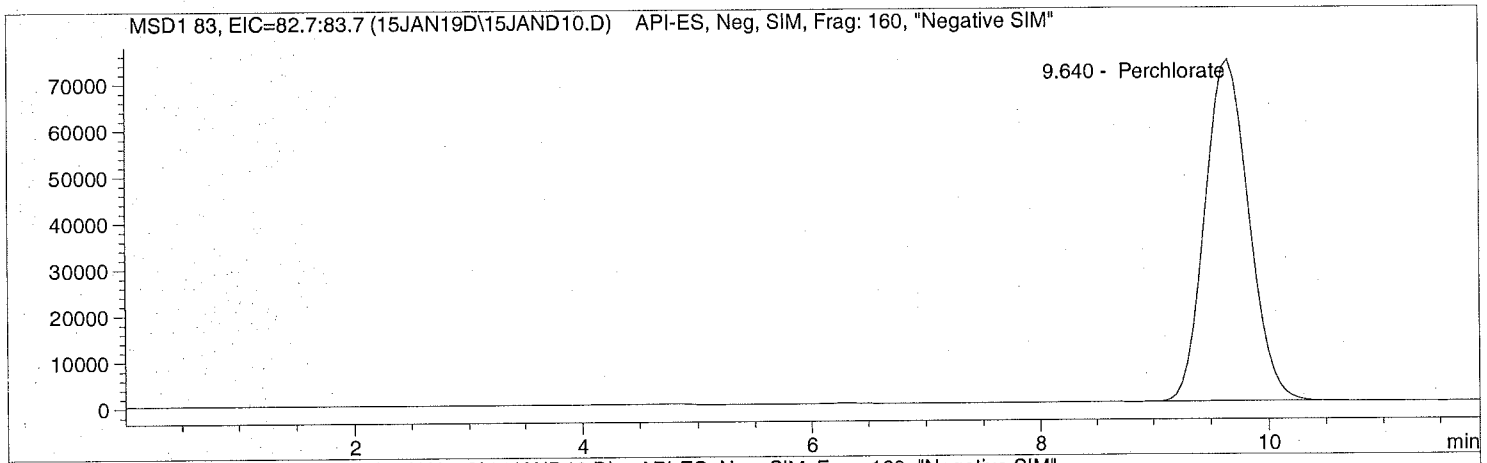
*** End of Report ***

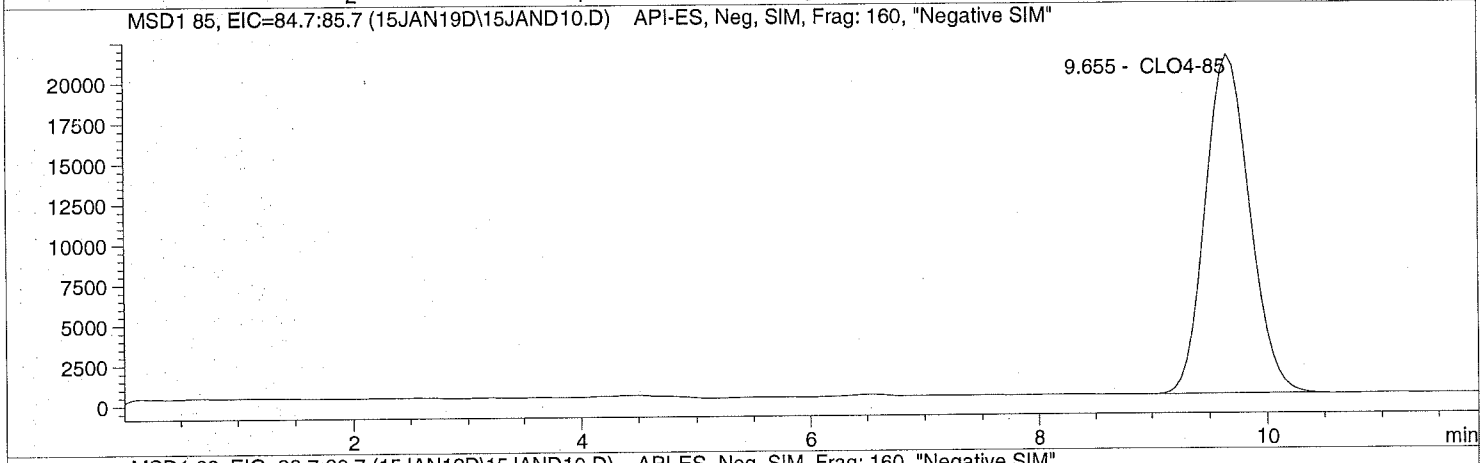
Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND10.D Sample Name: 1900961003 100

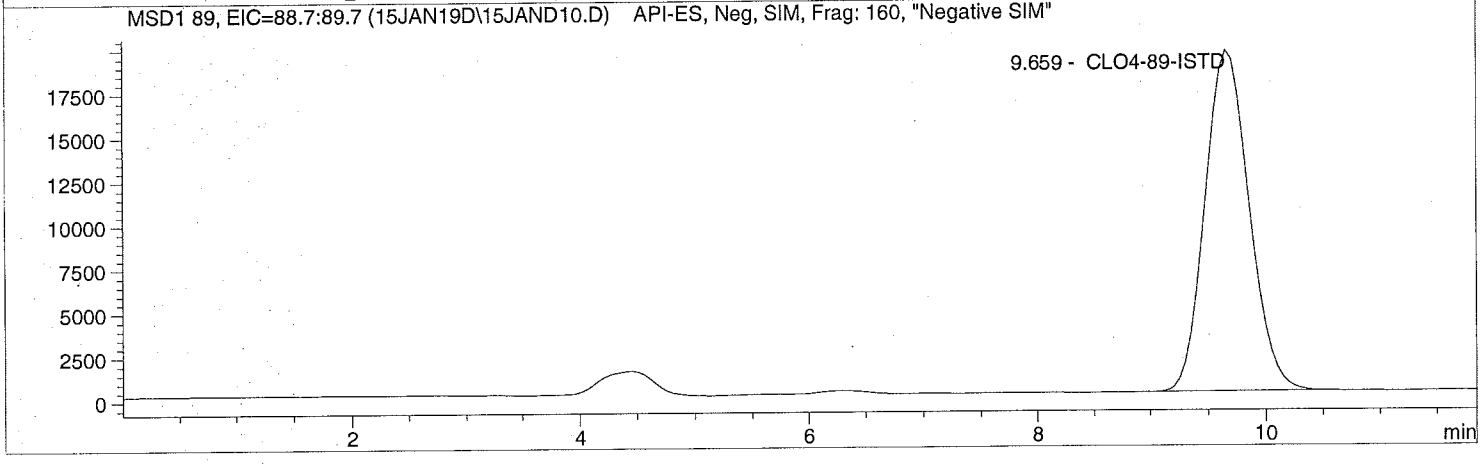
Injection Date:	1/15/2019 15:39:47	Seq Line:	10
Sample Name:	1900961003 100	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

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\15JAN19D\15JAND10.D Sample Name: 1900961003 100

Injection Date:	1/15/2019 15:39:47	Seq Line:	10
Sample Name:	1900961003 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
9.640	PBA	1930193.4	1161.7167	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.655	PBA	561124.9	1123.3855	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.659	BBA	512589.4	500.0000	CLO4-89-ISTD

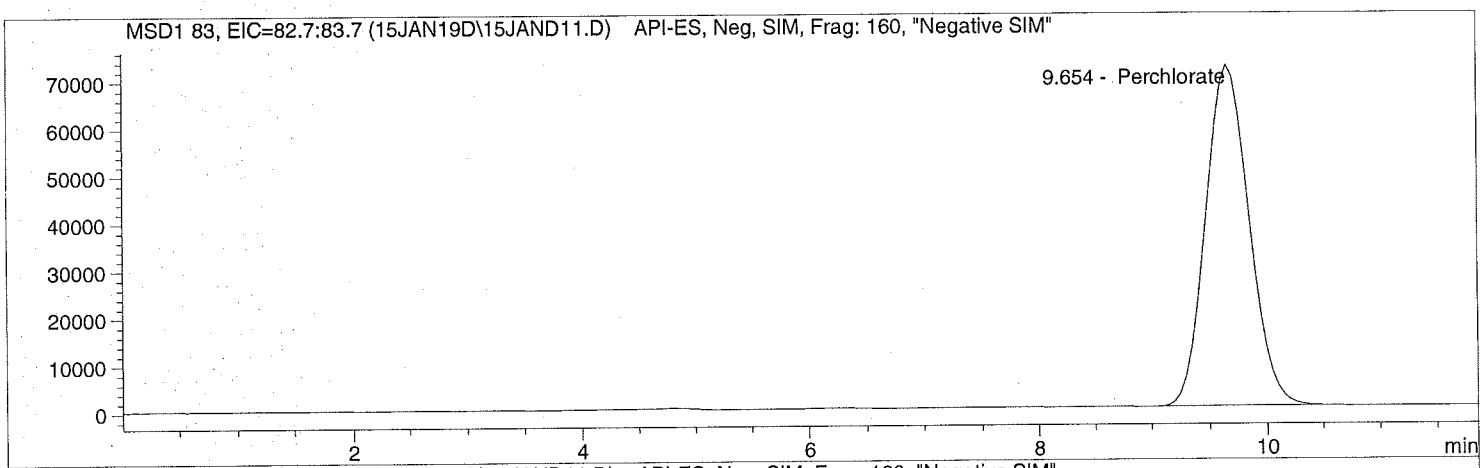
*** End of Report ***

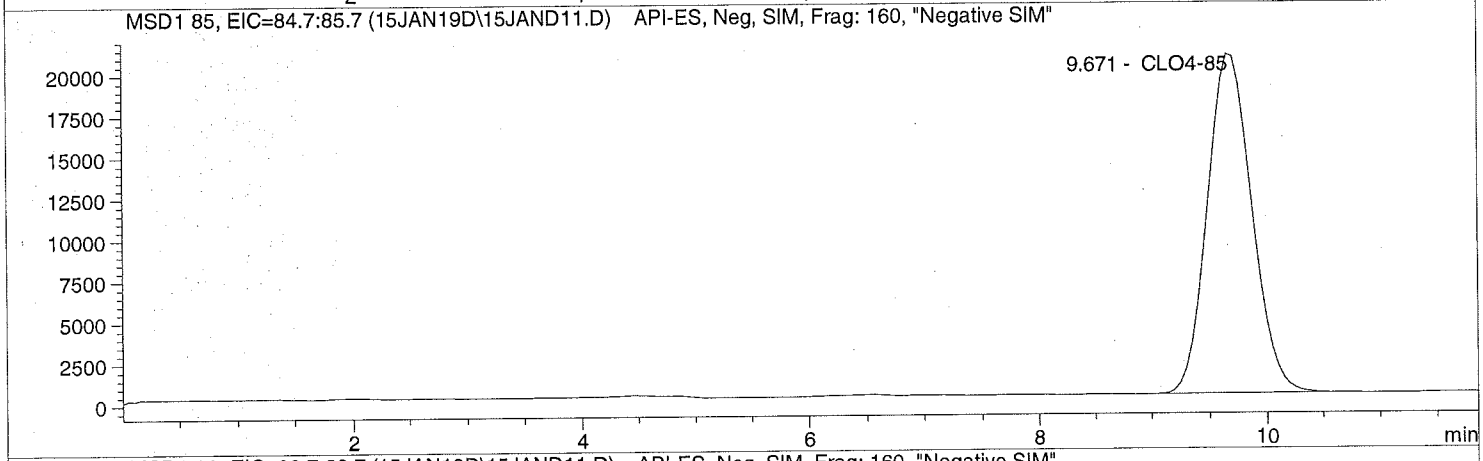
Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND11.D Sample Name: 1900961004 100

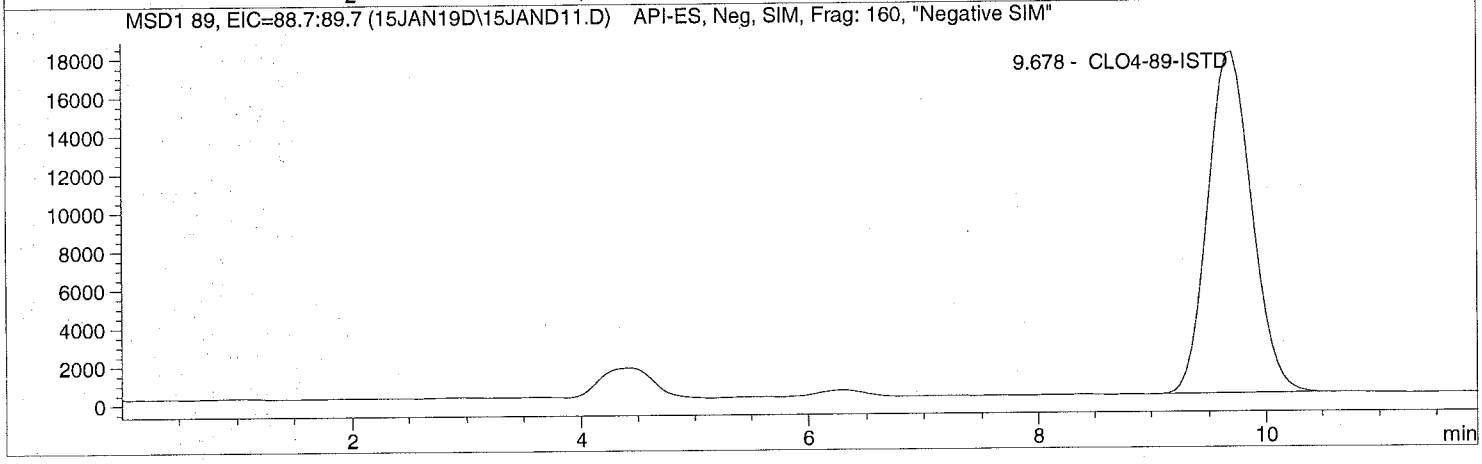
Injection Date:	1/15/2019 15:53:36	Seq Line:	11
Sample Name:	1900961004 100	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

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\15JAN19D\15JAND11.D Sample Name: 1900961004 100

Injection Date:	1/15/2019 15:53:36	Seq Line:	11
Sample Name:	1900961004 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
9.654	PBA	1882607.6	1230.3205	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.671	PBA	553174.6	1202.2598	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.678	PBA	471024.3	500.0000	CLO4-89-ISTD

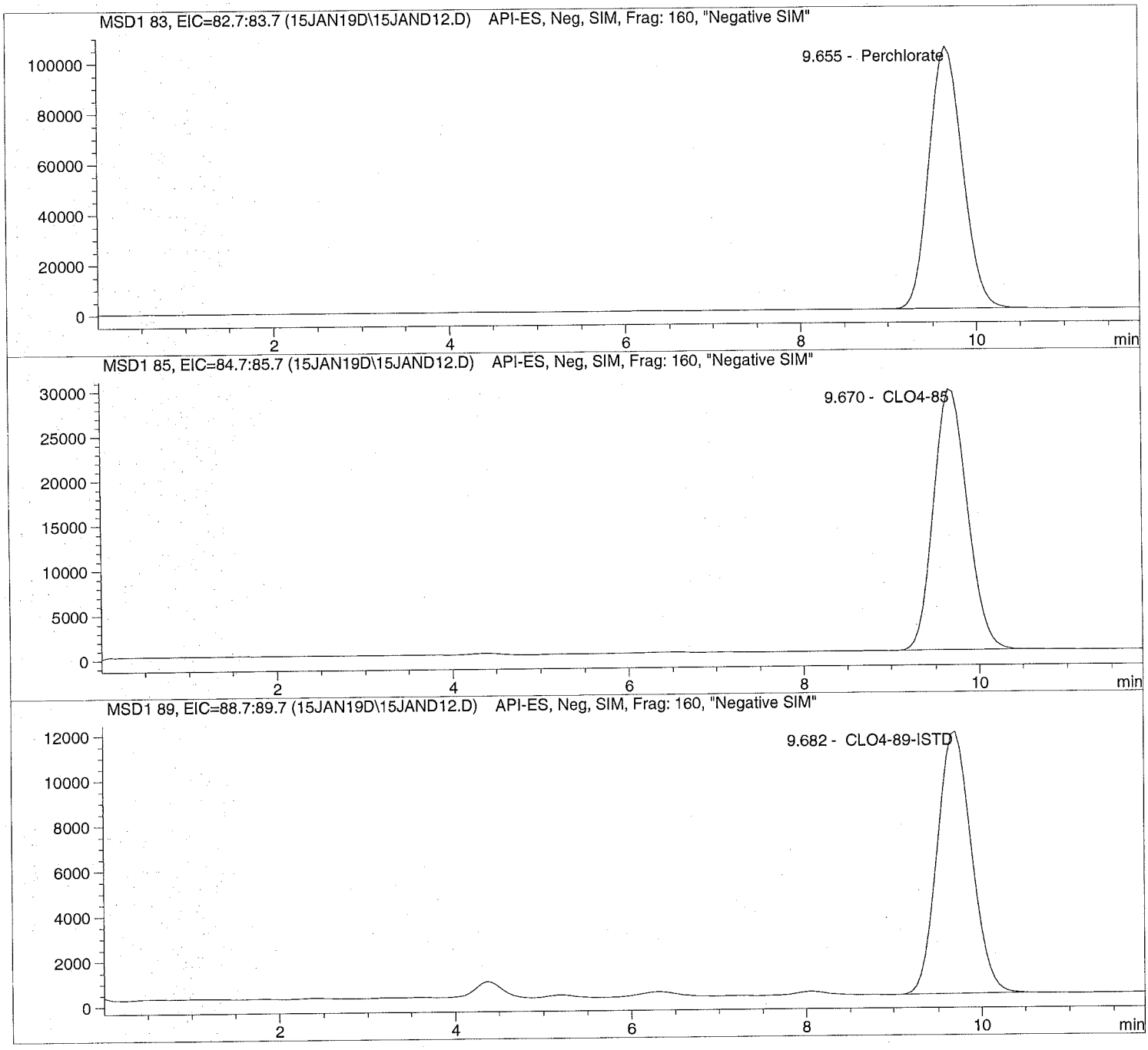
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\15JAN19D\15JAND12.D Sample Name: 636218 CCV@25

Injection Date:	1/15/2019 16:07:23	Seq Line:	12
Sample Name:	636218 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\15JAN19D\15JAND12.D Sample Name: 636218 CCV@25

Injection Date:	1/15/2019 16:07:23	Seq Line:	12
Sample Name:	636218 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
9.655	PBA	2759801.5	26.0350	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.670	PBA	787070.9	24.6621	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.682	PBA	315728.7	5.0000	CLO4-89-ISTD

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Initial Calibration

Batch 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 ***

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			

Method 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

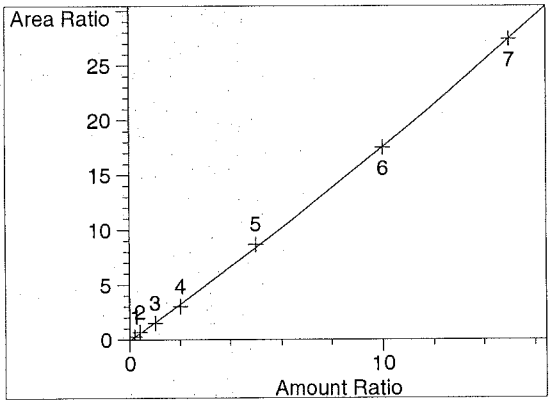
Compound: CLO4-89-ISTD
- Time Window : From 7.207 min To 11.192 min
- Curve Type : Linear
- Origin : Included
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 1
  - Level 3 : 1
  - Level 4 : 1
  - Level 5 : 1
  - Level 6 : 1
  - Level 7 : 1

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

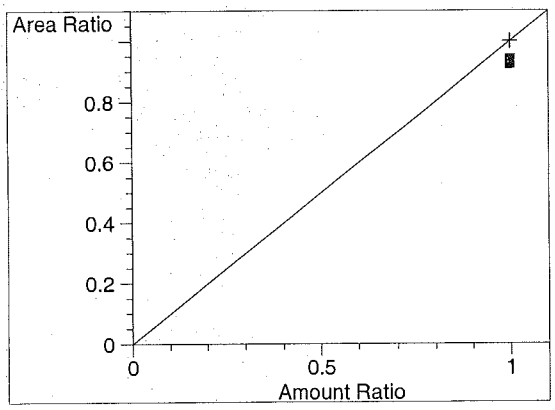
Peak Sum Table

No Entries in table

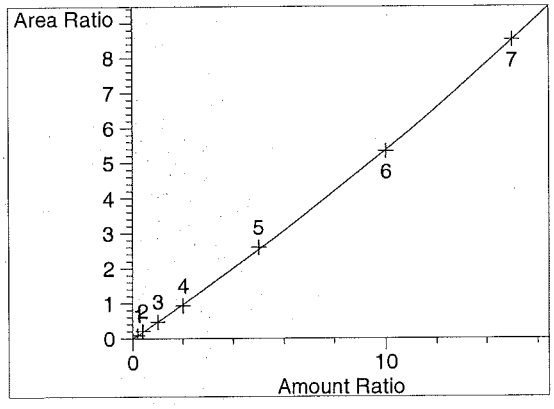
Calibration Curves



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

Sequence Table:

Method and Injection Info Part:

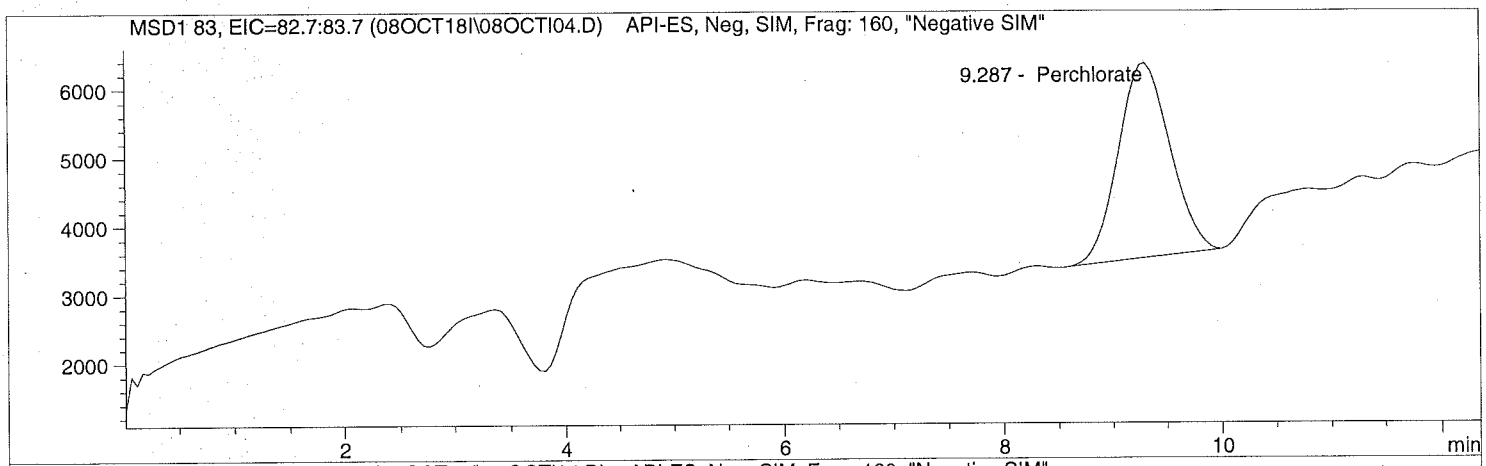
Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	CLO4@ .10ug/L	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	CLO4@ .20ug/L	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	CLO4@ 0.5ug/L	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	CLO4@ 1.0ug/L	CLO4-AQN	1	Ctrl Samp		
5	Vial 75	CLO4@ 2.0ug/L	CLO4-AQN	1	Ctrl Samp		
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		

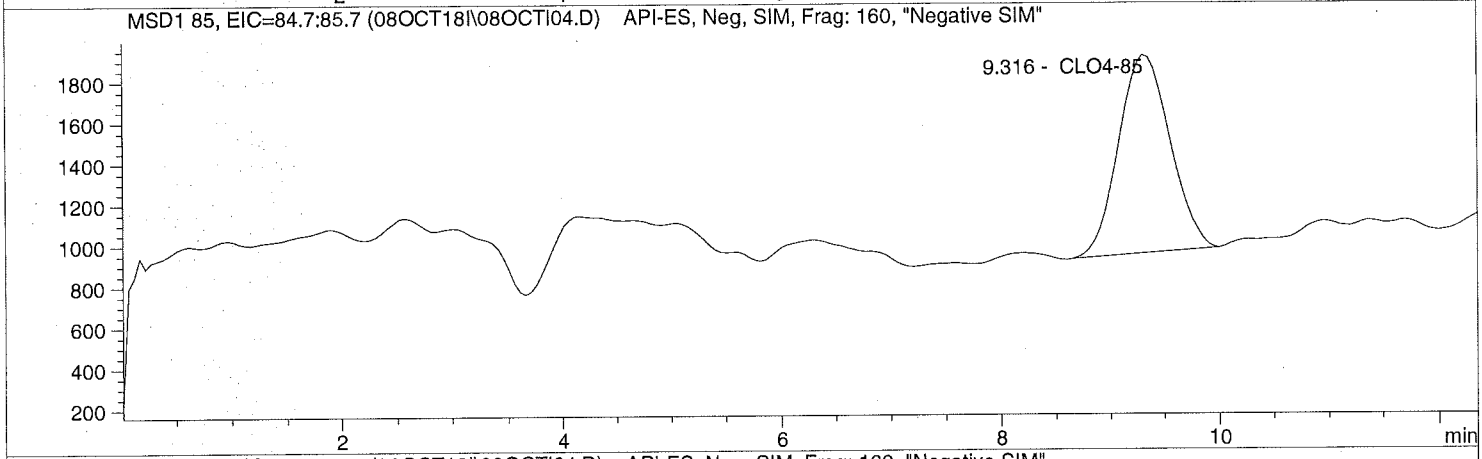
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI04.D Sample Name: CLO4@ 1.0ug/L

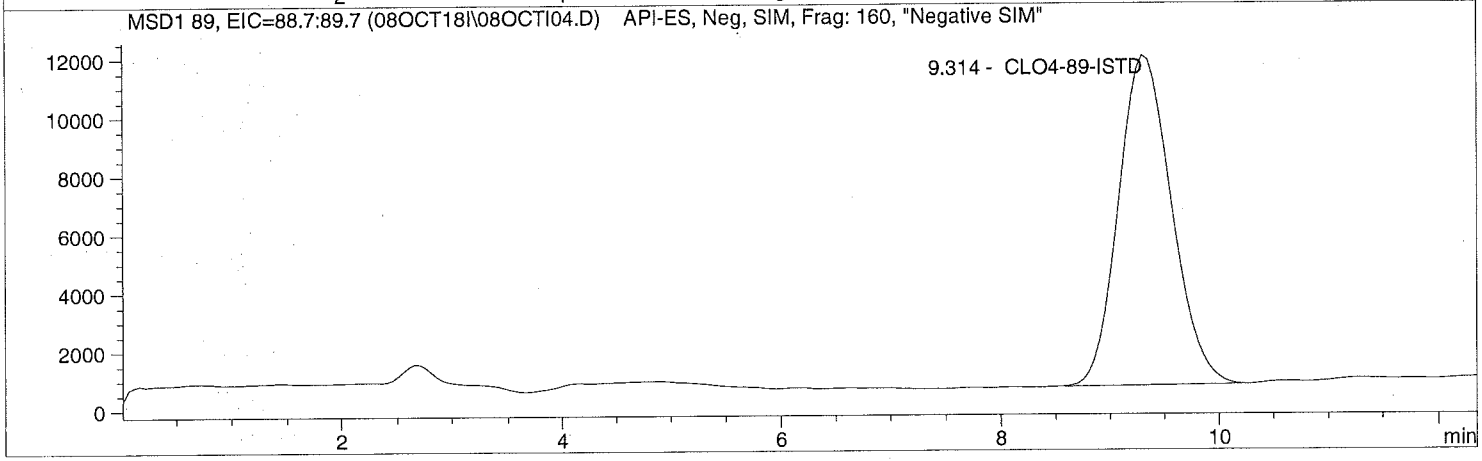
Injection Date:	10/08/2018 11:37:35	Seq Line:	4
Sample Name:	CLO4@ 1.0ug/L	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

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

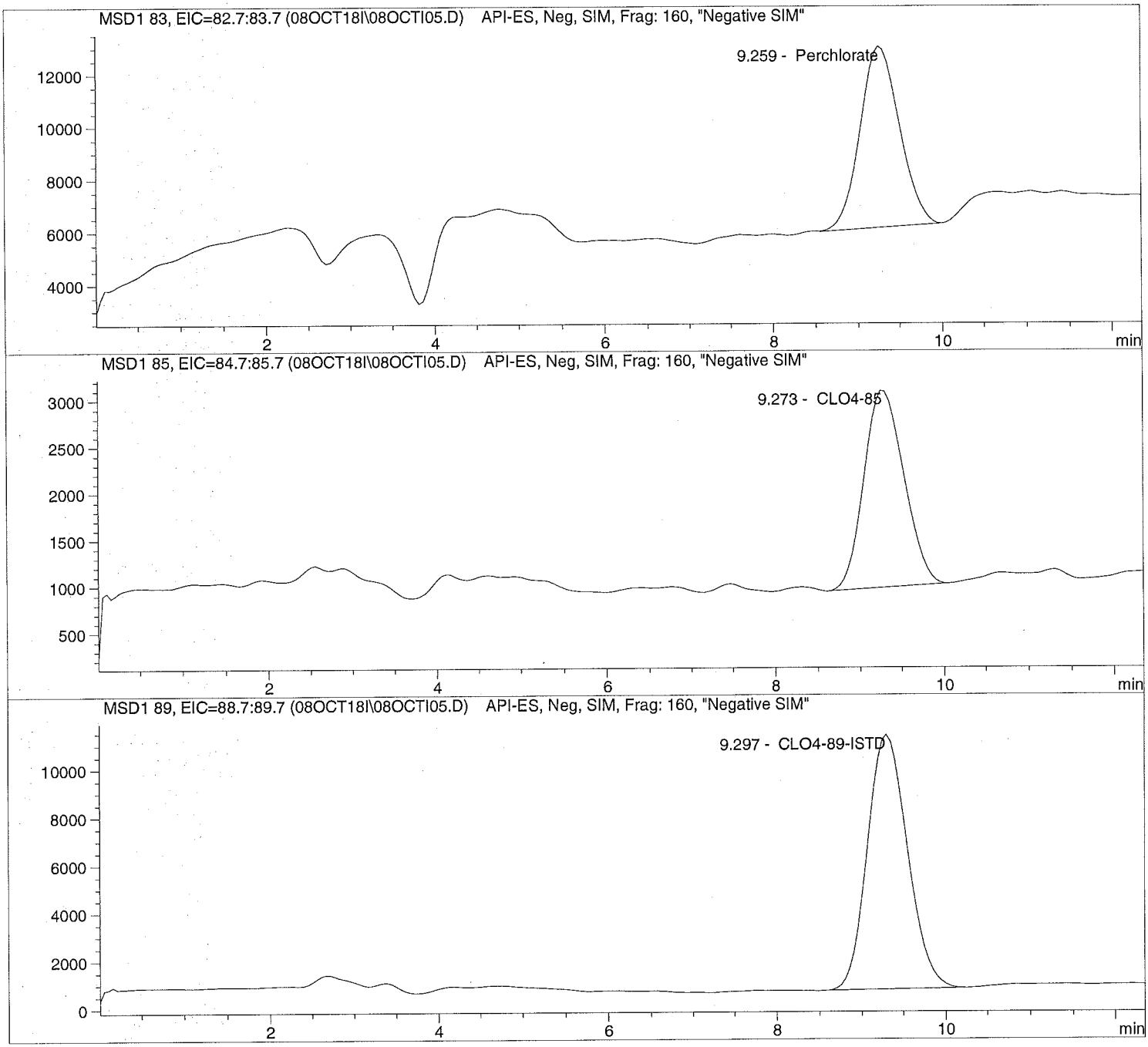
*** End of Report ***

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

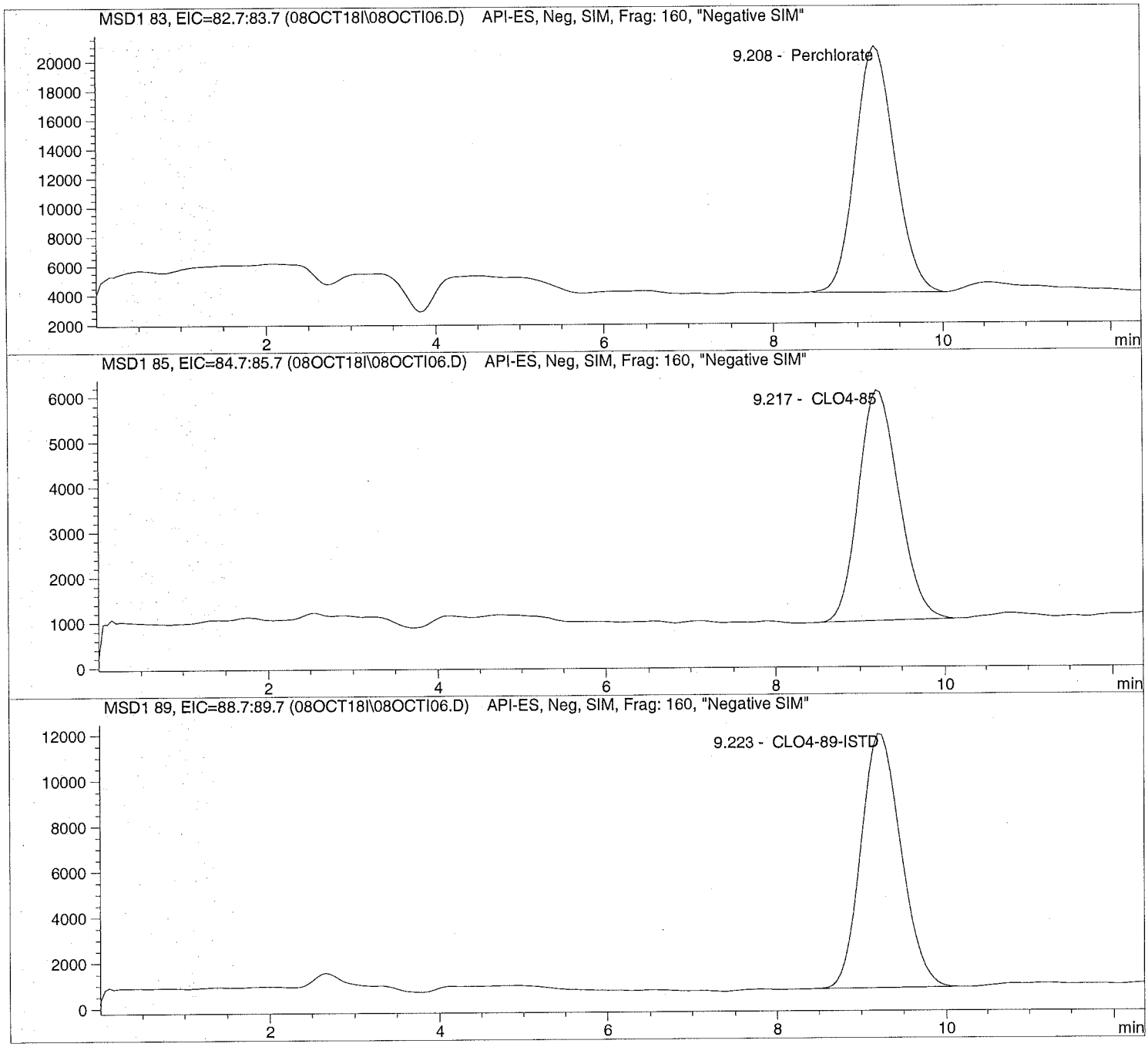
*** End of Report ***

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

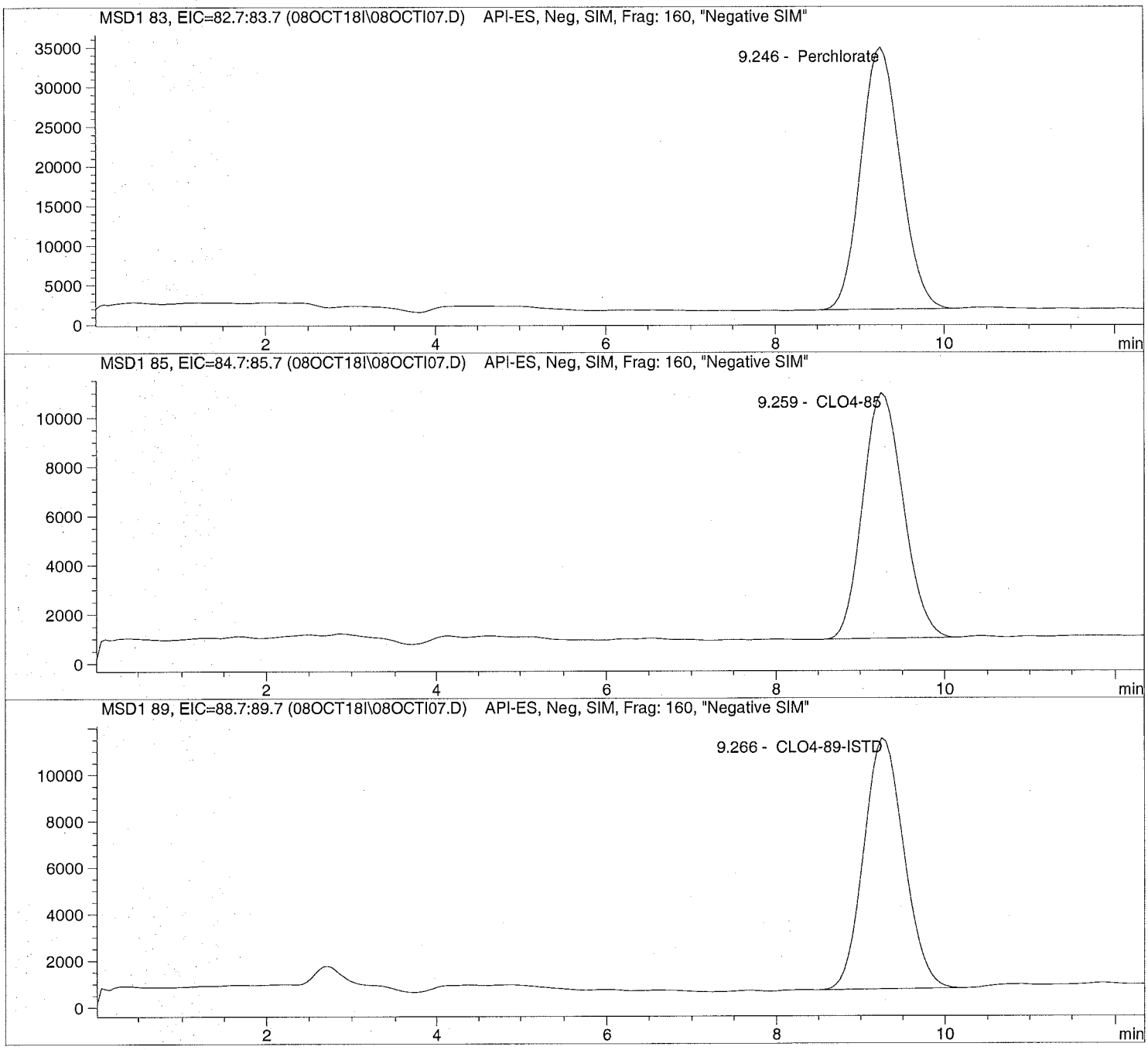
*** End of Report ***

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

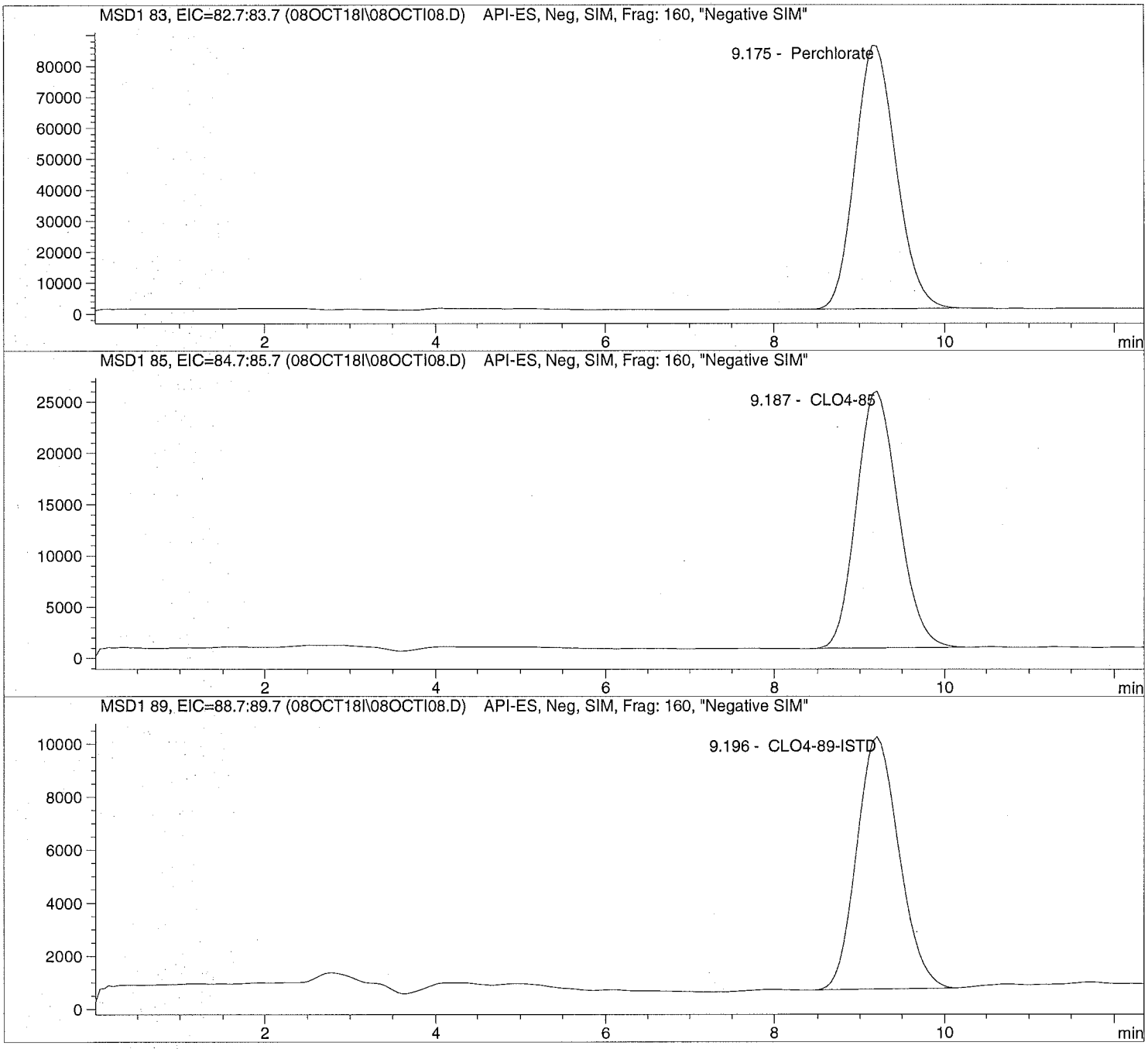
*** End of Report ***

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

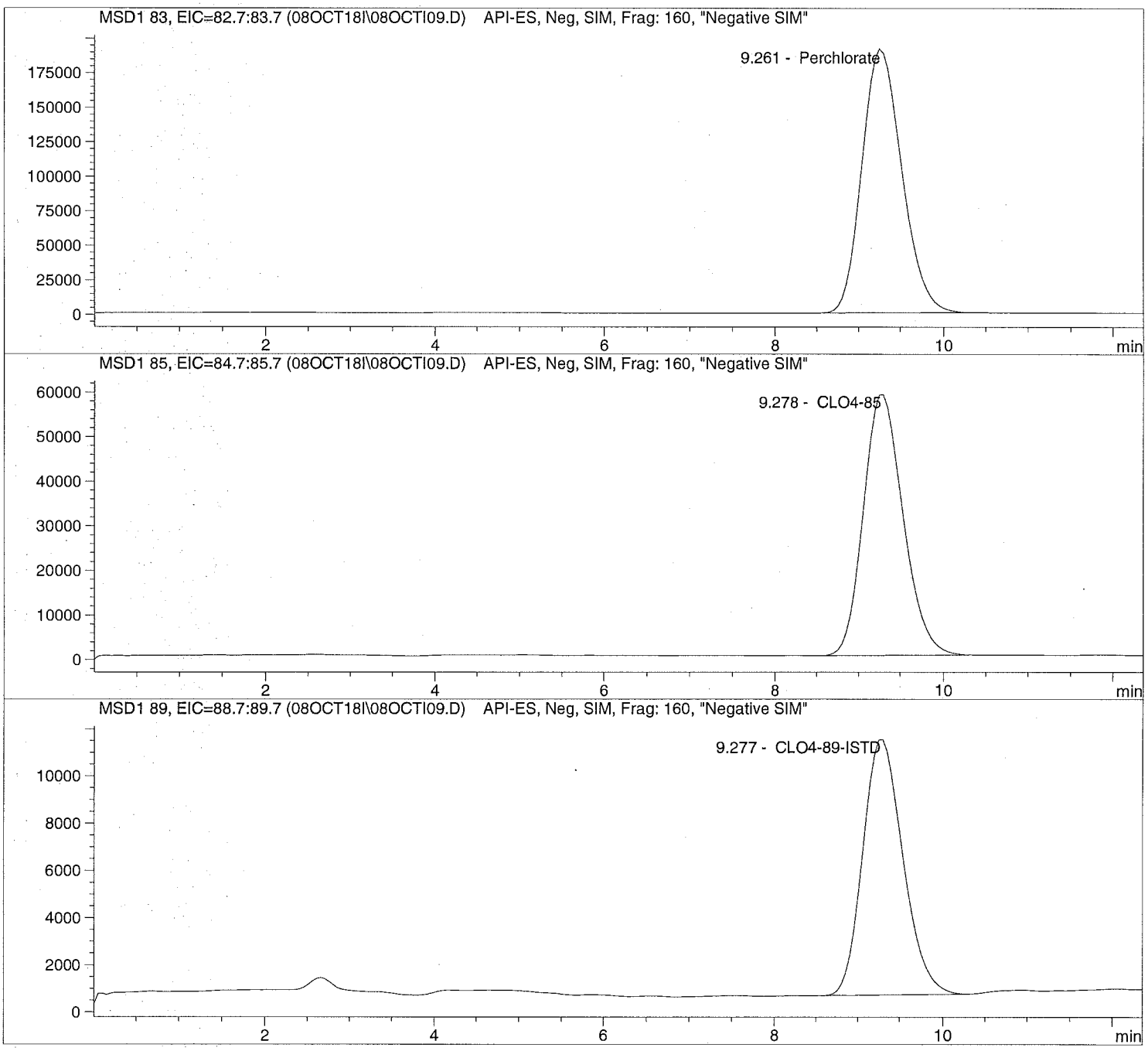
*** End of Report ***

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



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

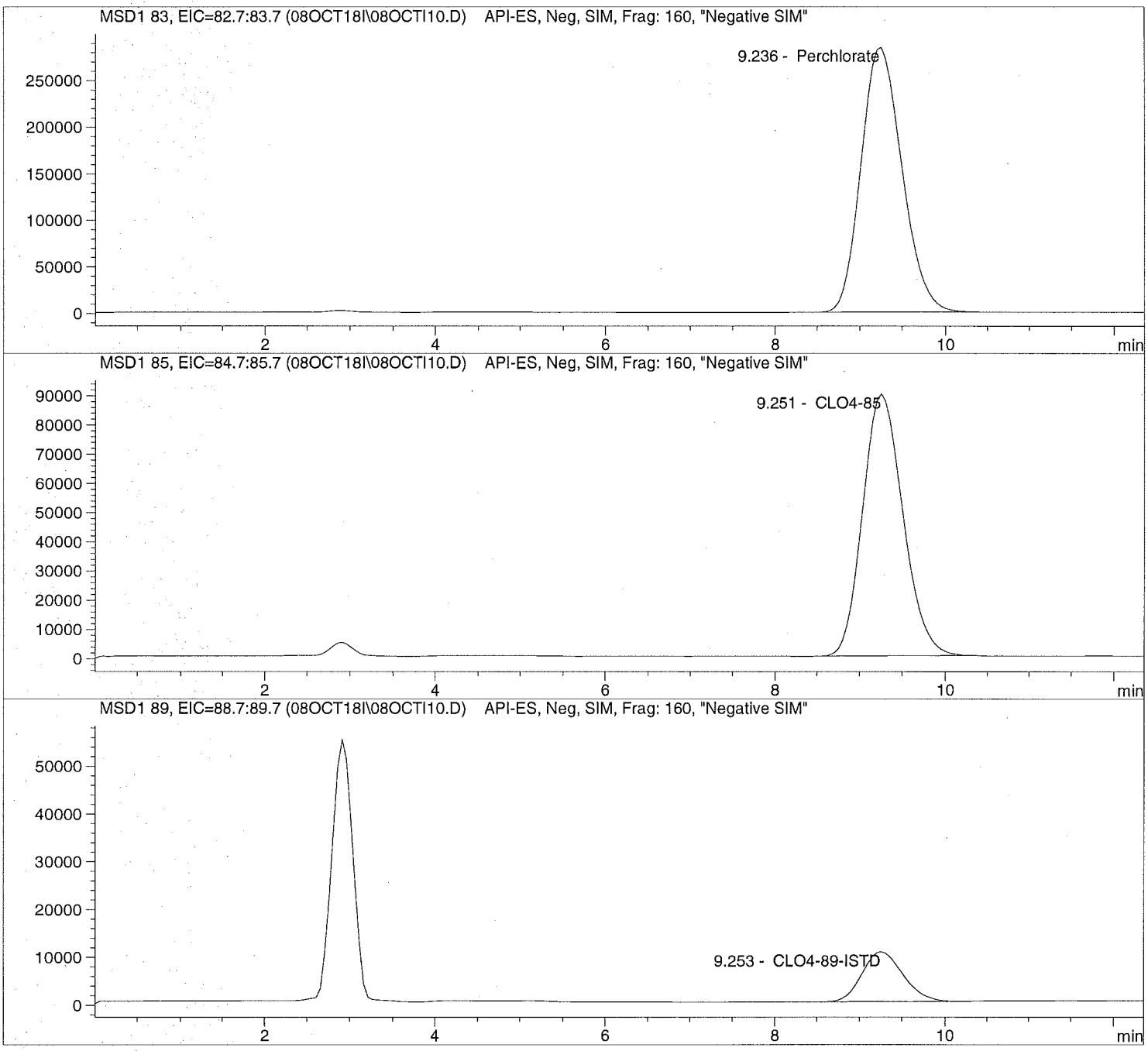
*** End of Report ***

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

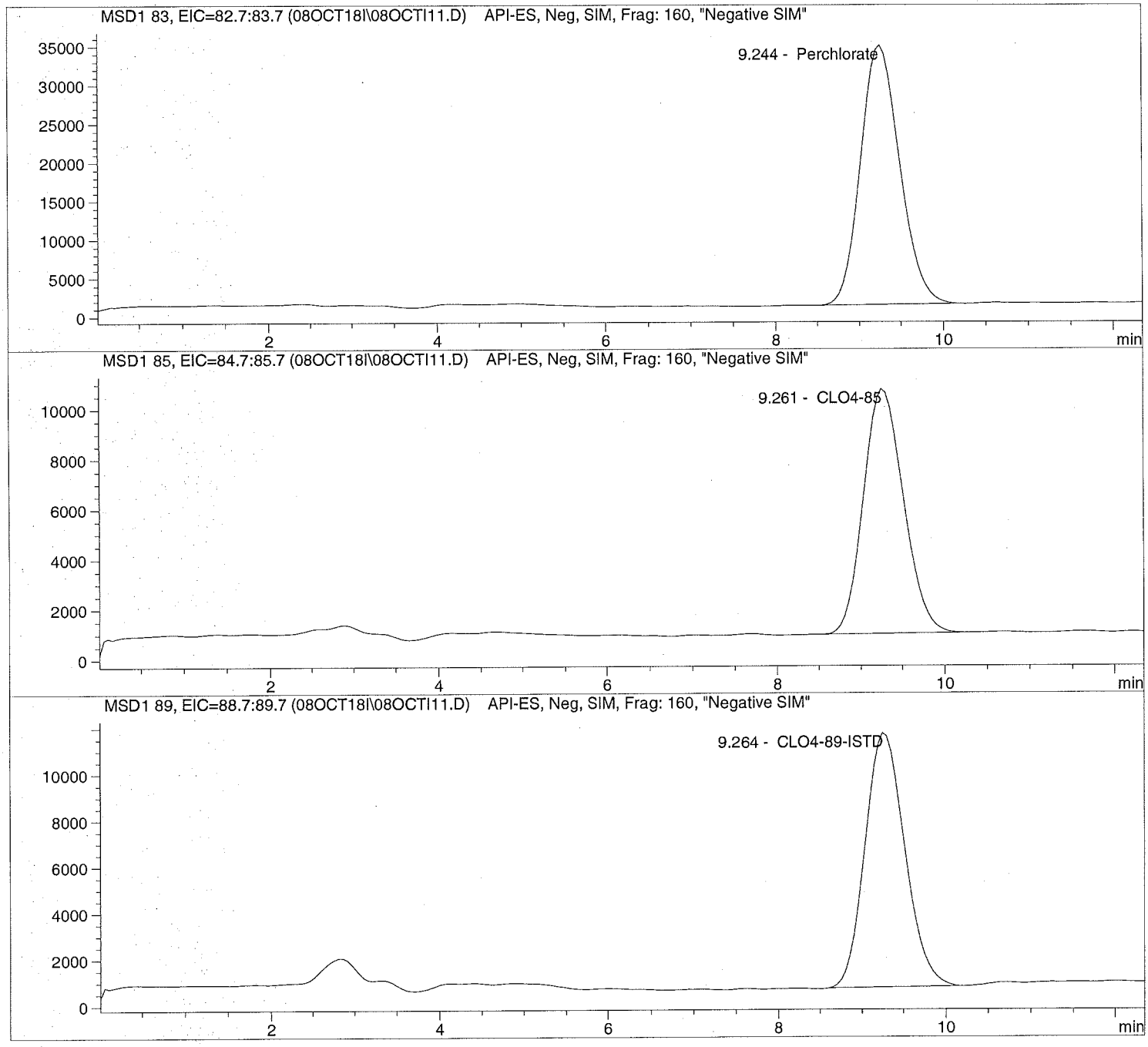
*** End of Report ***

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



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 ***

HS19010248 Volatiles Raw Data

ALS WO# HS19010248

MSVOA09 -Logbook

Batch: 34078
Date: 01-08-2019
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	01-08-2019 10:29 am	1.00	50 mL	50 mL	U010801.D	Liquid	Y	N
2	*Auto find/ purged* VSTD000.25	ICAL1	01-08-2019 10:54 am	1.00	50 mL	50 mL	U010802.D	Liquid	Y	N
3	*0.1 uL cal std/100 mL DI* VSTD000.5	ICAL2	01-08-2019 11:18 am	1.00	50 mL	50 mL	U010803.D	Liquid	Y	N
4	*0.1 uL cal std/50 mL DI* VSTD001	ICAL3	01-08-2019 12:07 pm	1.00	50 mL	50 mL	U010804.D	Liquid	Y	N
5	*0.2 uL cal std/50 mL DI* VSTD002	ICAL4	01-08-2019 12:32 pm	1.00	50 mL	50 mL	U010805.D	Liquid	Y	N
6	*0.4 uL cal std/50 mL DI* VSTD005	ICAL5	01-08-2019 12:56 pm	1.00	50 mL	50 mL	U010806.D	Liquid	Y	N
7	*1.0 uL cal std/50 mL DI* VSTD020	ICAL6	01-08-2019 01:21 pm	1.00	50 mL	50 mL	U010807.D	Liquid	Y	N
8	*4.0 uL cal std/50 mL DI* VSTD050	ICAL7	01-08-2019 01:45 pm	1.00	50 mL	50 mL	U010808.D	Liquid	Y	N
9	*10 uL cal std/50 mL DI* VSTD100	ICAL8	01-08-2019 02:10 pm	1.00	50 mL	50 mL	U010809.D	Liquid	Y	N
10	*20 uL cal std/50 mL DI* VSTD150	ICAL9	01-08-2019 02:34 pm	1.00	50 mL	50 mL	U010810.D	Liquid	Y	N
11	*30 uL cal std/50 mL DI* VSTD200	ICAL	01-08-2019 02:59 pm	1.00	50 mL	50 mL	U010811.D	Liquid	Y	N
12	*40 uL cal std/50 mL DI* BLANK	SAMP	01-08-2019 03:24 pm	1.00	50 mL	50 mL	U010812.D	Liquid	Y	N
13	*clean up blank* VSTD050	ICV	01-08-2019 03:48 pm	1.00	50 mL	50 mL	U010813.D	Liquid	Y	N
14	*10 uL ical std/50 mL DI* Blank	SAMP	01-08-2019 04:13 pm	1.00	50 mL	50 mL	U010814.D	Liquid	Y	N
15	BFB	TUNE	01-08-2019 04:38 pm	1.00	50 mL	50 mL	V010801.D	Liquid	Y	N
16	*Auto find/ purged* VSTD050	CCV	01-08-2019 05:03 pm	1.00	50 mL	50 mL	V010802.D	Liquid	Y	r
17	*10 uL cal std/50 mL DI* VSTD050	CCV	01-08-2019 05:27 pm	1.00	50 mL	50 mL	V010803.D	Liquid	Y	r
18	*10 uL cal std/50 mL DI* VLCSW-190108	LCS	01-08-2019 05:52 pm	1.00	50 mL	50 mL	V010804.D	Liquid	Y	r
19	*4.0 uL cal std/50 mL DI* BLANK	SAMP	01-08-2019 06:17 pm	1.00	50 mL	50 mL	V010805.D	Liquid	Y	r
20	BLANK	SAMP	01-08-2019 06:42 pm	1.00	50 mL	50 mL	V010806.D	Liquid	Y	r
21	VBLKW-190108	MBLK	01-08-2019 07:06 pm	1.00	50 mL	50 mL	V010807.D	Liquid	Y	r
22	HS18121523-07	SAMP	01-08-2019 07:31 pm	1.00	50 mL	50 mL	V010808.D	Liquid	Y	>
23	HS18121520-09	SAMP	01-08-2019 07:56 pm	5.00	10 mL	50 mL	V010809.D	Liquid	Y	>
24	HS18121520-09DL	SAMP	01-08-2019 08:21 pm	50.00	1 mL	50 mL	V010810.D	Liquid	Y	>
25	HS18121520-09MS	MS	01-08-2019 08:46 pm	1.00	50 mL	50 mL	V010811.D	Liquid	Y	>
26	*305 uL cal std/43 mL samp* HS18121520-09MSD	MSD	01-08-2019 09:10 pm	1.00	50 mL	50 mL	V010812.D	Liquid	Y	>
27	*305 uL cal std/43 mL samp* HS18121520-06DL	SAMP	01-08-2019 09:35 pm	25.00	2 mL	50 mL	V010813.D	Liquid	Y	>
28	BLANK	SAMP	01-08-2019 10:00 pm	1.00	50 mL	50 mL	V010814.D	Liquid	Y	r
29	BLANK	SAMP	01-08-2019 10:24 pm	1.00	50 mL	50 mL	V010815.D	Liquid	Y	r
30	HS18121520-05	SAMP	01-08-2019 10:49 pm	1.00	50 mL	50 mL	V010816.D	Liquid	Y	>
31	HS18121520-07	SAMP	01-08-2019 11:14 pm	1.00	50 mL	50 mL	V010817.D	Liquid	Y	>

MSVOA09 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
32	HS18121520-08	SAMP	01-08-2019 11:39 pm	1.00	50 mL	50 mL	V010818.D	Liquid	Y	>
33	HS18121523-03	SAMP	01-09-2019 12:03 am	1.00	50 mL	50 mL	V010819.D	Liquid	Y	>
34	HS18121523-04	SAMP	01-09-2019 12:28 am	1.00	50 mL	50 mL	V010820.D	Liquid	Y	>
35	HS18121523-05	SAMP	01-09-2019 12:53 am	1.00	50 mL	50 mL	V010821.D	Liquid	Y	>
36	HS18121523-02	SAMP	01-09-2019 01:17 am	1.00	50 mL	50 mL	V010822.D	Liquid	Y	>
37	HS18121523-06	SAMP	01-09-2019 01:42 am	5.00	10 mL	50 mL	V010823.D	Liquid	Y	>
38	HS18121523-01	SAMP	01-09-2019 02:07 am	1.00	50 mL	50 mL	V010824.D	Liquid	Y	>
39	HS18121523-01DL	SAMP	01-09-2019 02:31 am	5.00	10 mL	50 mL	V010825.D	Liquid	Y	>
40	VSTD050-END	CCV	01-09-2019 02:56 am	1.00	50 mL	50 mL	V010826.D	Liquid	Y	>
41	VSTD050-END	CCV	01-09-2019 03:20 am	1.00	50 mL	50 mL	V010827.D	Liquid	Y	r
42	*10 uL cal std/50 mL DI* BLANK	SAMP	01-09-2019 03:45 am	1.00	50 mL	50 mL	V010828.D	Liquid	Y	>

Chemical	Value
SURR SPK ID	30502-57-03
IS ID	30502-57-04
ICV STD ID	30603-49-01
LCS/MS ID	30603-49-01
CAL STD ID	30502-59-01/02
BFB ID	30502-57-03
pH Paper	634-40-13

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	48.85	98	80-120
trans-1,3-Dichloroprope	50.00	48.64	97	80-120
1,3-Dichlorobenzene	50.00	48.15	96	80-120
2,2-Dichloropropane	50.00	52.14	104	80-120
1,1-Dichloropropene	50.00	45.73	91	80-120
Dibromomethane	50.00	49.36	99	80-120
1,2-Dibromoethane	50.00	51.06	102	80-120
trans-1,2-Dichloroethen	50.00	45.90	92	80-120
1,1,1,2-Tetrachloroetha	50.00	50.80	102	80-120
1,1,1-Trichloroethane	50.00	47.80	96	80-120
1,1,2,2-Tetrachloroetha	50.00	51.77	104	80-120
1,1,2-Trichloroethane	50.00	49.48	99	80-120
1,1-Dichloroethane	50.00	46.80	94	80-120
1,1-Dichloroethene	50.00	45.10	90	80-120
Trichloroethene	50.00	48.66	97	80-120
1,2,3-Trichlorobenzene	50.00	50.15	100	80-120
Trichlorofluoromethane	50.00	43.08	86	80-120
1,2,4-Trichlorobenzene	50.00	51.40	103	80-120
1,2,4-Trimethylbenzene	50.00	50.60	101	80-120
Tetrachloroethene	50.00	44.07	88	80-120
1,2-Dichlorobenzene	50.00	47.83	96	80-120
1,2-Dichloroethane	50.00	47.94	96	80-120
1,2-Dichloropropane	50.00	49.18	98	80-120
1,3,5-Trimethylbenzene	50.00	49.19	98	80-120
1,3-Dichloropropane	50.00	49.47	99	80-120
1,4-Dichlorobenzene	50.00	46.68	93	80-120
Toluene	50.00	48.36	97	80-120
2-Butanone	100.00	105.08	105	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	48.79	98	80-120
2-Hexanone	100.00	111.71	112	80-120
4-Chlorotoluene	50.00	48.74	97	80-120
tert-Butylbenzene	50.00	47.06	94	80-120
4-Methyl-2-Pentanone	100.00	109.48	109	80-120
Acetone	100.00	100.19	100	80-120
Benzene	50.00	47.48	95	80-120
Bromobenzene	50.00	49.99	100	80-120
Bromochloromethane	50.00	52.99	106	80-120
Bromodichloromethane	50.00	50.72	101	80-120
Bromoform	50.00	47.88	96	80-120
Bromomethane	50.00	51.16	102	80-120
Carbon Disulfide	100.00	94.41	94	80-120
Carbon Tetrachloride	50.00	48.74	97	80-120
Chlorobenzene	50.00	47.26	94	80-120
Chloroethane	50.00	44.17	88	80-120
Chloroform	50.00	47.20	94	80-120
Chloromethane	50.00	46.70	93	80-120
cis-1,2-Dichloroethene	50.00	47.17	94	80-120
Dibromochloromethane	50.00	48.38	97	80-120
Dichlorodifluoromethane	50.00	44.03	88	80-120
Ethylbenzene	50.00	47.26	94	80-120
Hexachlorobutadiene	50.00	47.27	94	80-120
Isopropylbenzene	50.00	48.47	97	80-120
m,p-Xylenes	100.00	98.32	98	80-120
Methylene Chloride	50.00	48.39	97	80-120
n-Butylbenzene	50.00	45.95	92	80-120
n-Propylbenzene	50.00	48.01	96	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	50.80	102	80-120
o-Xylene	50.00	49.04	98	80-120
sec-Butylbenzene	50.00	46.44	93	80-120
Styrene	50.00	51.17	102	80-120
Vinyl Chloride	50.00	44.45	89	80-120
1,2,3-Trichloropropane	50.00	53.93	108	80-120
p-Isopropyltoluene	50.00	48.38	97	80-120
1,2-Dibromo-3-Chloropro	50.00	50.11	100	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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.: HS19010248

Lab File ID: U010801 BFB Injection Date: 01/08/19

Instrument ID: VOA9 BFB Injection Time: 1029

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	50.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.6 (0.9)1
174	Greater than 50.0% of mass 95	65.9
175	5.0 - 9.0% of mass 174	5.0 (7.6)1
176	95.0 - 101.0% of mass 174	63.3 (96.1)1
177	5.0 - 9.0% of mass 176	4.5 (7.1)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	U010802	01/08/19	1054
02	VSTD000.5	VSTD000.5	U010803	01/08/19	1118
03	VSTD001	VSTD001	U010804	01/08/19	1207
04	VSTD002	VSTD002	U010805	01/08/19	1232
05	VSTD005	VSTD005	U010806	01/08/19	1256
06	VSTD020	VSTD020	U010807	01/08/19	1321
07	VSTD050	VSTD050	U010808	01/08/19	1345
08	VSTD100	VSTD100	U010809	01/08/19	1410
09	VSTD150	VSTD150	U010810	01/08/19	1434
10	VSTD200	VSTD200	U010811	01/08/19	1459
11	VSTD050	VSTD050	U010813	01/08/19	1548
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF0.25: U010802 RF0.5: U010803 RF1: U010804
RF2: U010805 RF5: U010806 RF20: U010807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		2839	7156	13084	36876	160416
trans-1,3-Dichloropropene		2396	5824	10454	29527	135765
1,3-Dichlorobenzene		1.485	1.765	1.463	1.506	1.470
2,2-Dichloropropane		0.630	0.745	0.645	0.630	0.652
1,1-Dichloropropene		0.465	0.547	0.450	0.447	0.448
Dibromomethane		0.194	0.236	0.195	0.218	0.211
1,2-Dibromoethane		0.308	0.377	0.342	0.349	0.358
trans-1,2-Dichloroethene		0.618	0.718	0.580	0.617	0.595
1,1,1,2-Tetrachloroethane		0.254	0.315	0.286	0.279	0.304
1,1,1-Trichloroethane		0.669	0.912	0.753	0.801	0.808
1,1,2,2-Tetrachloroethane		3672	8453	15238	38499	157201
1,1,2-Trichloroethane		0.281	0.353	0.304	0.316	0.309
1,1-Dichloroethane		1.123	1.292	1.102	1.150	1.120
1,1-Dichloroethene		0.463	0.588	0.492	0.484	0.447
Trichloroethene		0.240	0.397	0.319	0.323	0.316
1,2,3-Trichlorobenzene		0.830	0.876	0.847	0.856	0.897
Trichlorofluoromethane		0.904	0.976	0.813	0.799	0.796
1,2,4-Trichlorobenzene		0.692	0.939	0.825	0.901	0.912
1,2,4-Trimethylbenzene		2.218	2.812	2.468	2.657	2.745
Tetrachloroethene		0.288	0.316	0.269	0.258	0.244
1,2-Dichlorobenzene		1.582	1.739	1.523	1.511	1.482
1,2-Dichloroethane		0.472	0.566	0.490	0.490	0.486
1,2-Dichloropropane		0.327	0.409	0.350	0.359	0.362
1,3,5-Trimethylbenzene		2.249	2.729	2.376	2.553	2.649
1,3-Dichloropropane		0.611	0.761	0.647	0.679	0.670
1,4-Dichlorobenzene		1.748	1.936	1.587	1.570	1.533
Toluene		1.519	1.744	1.509	1.547	1.548
2-Butanone		0.320	0.369	0.324	0.341	0.355
2-Chlorotoluene		2.260	2.752	2.294	2.388	2.385
2-Hexanone		0.233	0.261	0.258	0.275	0.314
4-Chlorotoluene		2.613	3.163	2.676	2.793	2.805
tert-Butylbenzene		2.045	2.428	2.162	2.181	2.254
4-Methyl-2-Pentanone		0.337	0.405	0.381	0.406	0.446
Acetone		3350	5926	8715	20388	79871
Benzene		1.297	1.632	1.365	1.387	1.365
Bromobenzene		0.727	0.836	0.760	0.775	0.772
Bromochloromethane		0.218	0.252	0.291	0.315	0.298
Bromodichloromethane		0.330	0.403	0.356	0.368	0.387
Bromoform		1047	2493	4283	11809	53545
Bromomethane		2378	5371	8201	18180	59235
Carbon Disulfide		1.730	2.003	1.667	1.660	1.690
Carbon Tetrachloride		0.287	0.345	0.298	0.308	0.335
Chlorobenzene		0.999	1.207	0.997	1.001	0.974
Chloroethane		0.445	0.508	0.511	0.429	0.432

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1901024

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF0.25: U010802 RF0.5: U010803 RF1: U010804
RF2: U010805 RF5: U010806 RF20: U010807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		1.007	1.256	1.064	1.108	1.082
Chloromethane		3056	6743	11251	26856	106870
cis-1,2-Dichloroethene		0.660	0.797	0.657	0.679	0.678
Dibromochloromethane		1574	3605	6755	19557	85941
Dichlorodifluoromethane		0.643	0.820	0.668	0.621	0.622
Ethylbenzene		0.477	0.571	0.476	0.501	0.496
Hexachlorobutadiene		1632	2244	4288	10485	43278
Isopropylbenzene		1.262	1.534	1.375	1.455	1.498
m,p-Xylenes		0.548	0.688	0.580	0.612	0.629
Methylene Chloride		3706	7653	11877	29083	108486
n-Butylbenzene		2.580	2.776	2.511	2.570	2.608
n-Propylbenzene		3.605	4.306	3.698	3.837	3.950
Naphthalene		5534	13707	27018	81349	393536
o-Xylene		0.597	0.676	0.600	0.621	0.640
sec-Butylbenzene		2.751	3.371	3.064	3.143	3.239
Styrene		0.892	1.099	0.954	1.038	1.088
Vinyl Chloride		0.753	0.880	0.712	0.708	0.711
1,2,3-Trichloropropane		1.074	1.253	1.071	1.144	1.220
p-Isopropyltoluene		2.346	2.770	2.478	2.573	2.782
1,2-Dibromo-3-Chloropropane		320	881	1607	4313	21582
1,2-Dichloroethane-d4		14011	17198	22691	40286	129430
Dibromofluoromethane		9792	12087	16204	29602	96372
Toluene-d8		40255	48097	65875	119933	399583
4-Bromofluorobenzene		13542	17004	23062	43652	148618

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1901024

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF50: U010808 RF100: U010809 RF150: U010810
RF200: U010811

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	428865	926076	1431850	1921305
trans-1,3-Dichloropropene	367494	801236	1237749	1672981
1,3-Dichlorobenzene	1.437	1.480	1.492	1.476
2,2-Dichloropropane	0.658	0.716	0.733	0.717
1,1-Dichloropropene	0.430	0.459	0.461	0.453
Dibromomethane	0.208	0.210	0.211	0.208
1,2-Dibromoethane	0.353	0.351	0.352	0.346
trans-1,2-Dichloroethene	0.573	0.597	0.604	0.588
1,1,1,2-Tetrachloroethane	0.310	0.321	0.328	0.323
1,1,1-Trichloroethane	0.801	0.861	0.889	0.875
1,1,2,2-Tetrachloroethane	386140	791393	1181566	1597058
1,1,2-Trichloroethane	0.301	0.298	0.298	0.294
1,1-Dichloroethane	1.089	1.119	1.136	1.099
1,1-Dichloroethene	0.440	0.468	0.479	0.479
Trichloroethene	0.308	0.309	0.327	0.326
1,2,3-Trichlorobenzene	0.890	0.931	0.945	0.948
Trichlorofluoromethane	0.761	0.821	0.830	0.827
1,2,4-Trichlorobenzene	0.908	0.964	0.983	0.982
1,2,4-Trimethylbenzene	2.648	2.685	2.728	2.671
Tetrachloroethene	0.233	0.251	0.254	0.251
1,2-Dichlorobenzene	1.447	1.464	1.468	1.448
1,2-Dichloroethane	0.468	0.465	0.462	0.454
1,2-Dichloropropane	0.355	0.361	0.363	0.355
1,3,5-Trimethylbenzene	2.533	2.676	2.684	2.633
1,3-Dichloropropane	0.649	0.647	0.645	0.631
1,4-Dichlorobenzene	1.474	1.511	1.523	1.505
Toluene	1.506	1.515	1.502	1.444
2-Butanone	0.352	0.354	0.346	0.354
2-Chlorotoluene	2.301	2.345	2.351	2.317
2-Hexanone	0.307	0.316	0.313	0.318
4-Chlorotoluene	2.673	2.736	2.736	2.689
tert-Butylbenzene	2.115	2.198	2.267	2.224
4-Methyl-2-Pentanone	0.437	0.446	0.440	0.444
Acetone	179800	376346	504121	752770
Benzene	1.326	1.348	1.350	1.313
Bromobenzene	0.769	0.787	0.798	0.793
Bromochloromethane	0.296	0.278	0.270	0.256
Bromodichloromethane	0.395	0.411	0.420	0.417
Bromoform	144409	321354	502752	687286
Bromomethane	136129	307120	488763	
Carbon Disulfide	1.663	1.737	1.576	1.670
Carbon Tetrachloride	0.326	0.367	0.374	0.372
Chlorobenzene	0.950	0.955	0.957	0.932
Chloroethane	0.413	0.434	0.445	0.438

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1901024

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF50: U010808 RF100: U010809 RF150: U010810
RF200: U010811

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	1.040	1.058	1.069	1.032
Chloromethane	245400	515965	861673	1231855
cis-1,2-Dichloroethene	0.661	0.674	0.684	0.666
Dibromochloromethane	229139	491650	772060	1039615
Dichlorodifluoromethane	0.604	0.648	0.660	0.660
Ethylbenzene	0.486	0.508	0.508	0.502
Hexachlorobutadiene	101106	235659	361569	491406
Isopropylbenzene	1.406	1.486	1.474	1.434
m,p-Xylenes	0.605	0.628	0.624	0.609
Methylene Chloride	264627	540514	814401	1093304
n-Butylbenzene	2.448	2.619	2.606	2.569
n-Propylbenzene	3.747	3.942	3.893	3.804
Naphthalene	1013970	2158340	3241704	4364184
o-Xylene	0.616	0.632	0.634	0.620
sec-Butylbenzene	3.066	3.311	3.282	3.222
Styrene	1.074	1.092	1.088	1.058
Vinyl Chloride	0.676	0.738	0.755	0.744
1,2,3-Trichloropropane	1.248	1.264	1.289	1.314
p-Isopropyltoluene	2.630	2.828	2.807	2.754
1,2-Dibromo-3-Chloropropane	55985	123999	188865	267735
1,2-Dichloroethane-d4	310401	607717	910863	1222427
Dibromofluoromethane	233946	464059	699083	938870
Toluene-d8	963061	1896057	2828636	3786858
4-Bromofluorobenzene	358290	714768	1067232	1452643

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1901024

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	LINR	2.618e-002	1.67366707		0.9997199	0.9900000
trans-1,3-Dichloropropene	LINR	3.204e-002	1.92505347		0.9996270	0.9900000
1,3-Dichlorobenzene	AVRG		1.50827962		6.499	20.000
2,2-Dichloropropane	AVRG		0.68064032		6.802	20.000
1,1-Dichloropropene	AVRG		0.46230796		7.217	20.000
Dibromomethane	AVRG		0.21003901		5.832	20.000
1,2-Dibromoethane	AVRG		0.34854004		5.196	20.000
trans-1,2-Dichloroethene	AVRG		0.60995415		7.097	20.000
1,1,1,2-Tetrachloroethane	AVRG		0.30208673		8.145	20.000
1,1,1-Trichloroethane	AVRG		0.81887889		9.270	20.000
1,1,2,2-Tetrachloroethane	LINR	-7.28e-003	0.89245816		0.9999625	0.9900000
1,1,2-Trichloroethane	AVRG		0.30600009		6.601	20.000
1,1-Dichloroethane	AVRG		1.13654996		5.390	20.000
1,1-Dichloroethene	AVRG		0.48231156		8.974	20.000
Trichloroethene	AVRG		0.31833521		12.546	20.000
1,2,3-Trichlorobenzene	AVRG		0.89097608		4.832	20.000
Trichlorofluoromethane	AVRG		0.83648482		7.776	20.000
1,2,4-Trichlorobenzene	AVRG		0.90081437		10.269	20.000
1,2,4-Trimethylbenzene	AVRG		2.62584086		6.832	20.000
Tetrachloroethene	AVRG		0.26264510		9.628	20.000
1,2-Dichlorobenzene	AVRG		1.51815666		6.146	20.000
1,2-Dichloroethane	AVRG		0.48381139		6.925	20.000
1,2-Dichloropropane	AVRG		0.35996009		5.952	20.000
1,3,5-Trimethylbenzene	AVRG		2.56461066		6.180	20.000
1,3-Dichloropropane	AVRG		0.66011231		6.457	20.000
1,4-Dichlorobenzene	AVRG		1.59871556		9.361	20.000
Toluene	AVRG		1.53711184		5.415	20.000
2-Butanone	AVRG		0.34599533		4.487	20.000
2-Chlorotoluene	AVRG		2.37703625		6.178	20.000
2-Hexanone	AVRG		0.28836532		11.101	20.000
4-Chlorotoluene	AVRG		2.76503221		5.822	20.000
tert-Butylbenzene	AVRG		2.20853232		4.867	20.000
4-Methyl-2-Pentanone	AVRG		0.41583873		8.982	20.000
Acetone	LINR	-3.28e-002	4.69723658		0.9965084	0.9900000
Benzene	AVRG		1.37594921		7.265	20.000
Bromobenzene	AVRG		0.77966353		3.820	20.000
Bromochloromethane	AVRG		0.27483919		10.753	20.000
Bromodichloromethane	AVRG		0.38760640		7.866	20.000
Bromoform	LINR	3.586e-002	4.42000955		0.9994245	0.9900000
Bromomethane	LINR	1.517e-002	2.63724913		0.9970358	0.9900000
Carbon Disulfide	AVRG		1.71083309		6.962	20.000
Carbon Tetrachloride	AVRG		0.33479382		9.693	20.000
Chlorobenzene	AVRG		0.99683220		8.270	20.000
Chloroethane	AVRG		0.45067377		7.732	20.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1901024

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		1.07966958		6.700	20.000
Chloromethane	LINR	4.919e-002	1.42548161		0.9953511	0.9900000
cis-1,2-Dichloroethene	AVRG		0.68388027		6.359	20.000
Dibromochloromethane	LINR	2.459e-002	2.91148315		0.9997087	0.9900000
Dichlorodifluoromethane	AVRG		0.66073584		9.597	20.000
Ethylbenzene	AVRG		0.50282436		5.670	20.000
Hexachlorobutadiene	2ORDR	6.967e-003	3.11700195	-0.1728941	0.9995370	0.9900000
Isopropylbenzene	AVRG		1.43626598		5.658	20.000
m,p-Xylenes	AVRG		0.61382645		6.203	20.000
Methylene Chloride	LINR	-1.01e-002	1.57011846		0.9999481	0.9900000
n-Butylbenzene	AVRG		2.58768821		3.438	20.000
n-Propylbenzene	AVRG		3.86471690		5.193	20.000
Naphthalene	2ORDR	1.418e-002	0.32320338	1.226e-004	0.9999571	0.9900000
o-Xylene	AVRG		0.62619866		3.785	20.000
sec-Butylbenzene	AVRG		3.16121754		5.894	20.000
Styrene	AVRG		1.04267437		6.920	20.000
Vinyl Chloride	AVRG		0.74200768		7.796	20.000
1,2,3-Trichloropropane	AVRG		1.20856468		7.494	20.000
p-Isopropyltoluene	AVRG		2.66323199		6.305	20.000
1,2-Dibromo-3-Chloropropane	LINR	4.165e-002	5.38034837		0.9986325	0.9900000
1,2-Dichloroethane-d4	LINR	-4.46e-002	1.41695556		0.9999507	0.9900000
Dibromofluoromethane	2ORDR	-3.27e-002	1.82520597	8.571e-003	0.9999773	0.9900000
Toluene-d8	LINR	-4.91e-002	0.80738118		0.9997380	0.9900000
4-Bromofluorobenzene	LINR	-3.73e-002	2.11447014		0.9999203	0.9900000

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010801.D

Date : 08-JAN-2019 10:29

Client ID: BFB

Instrument: VOA9.i

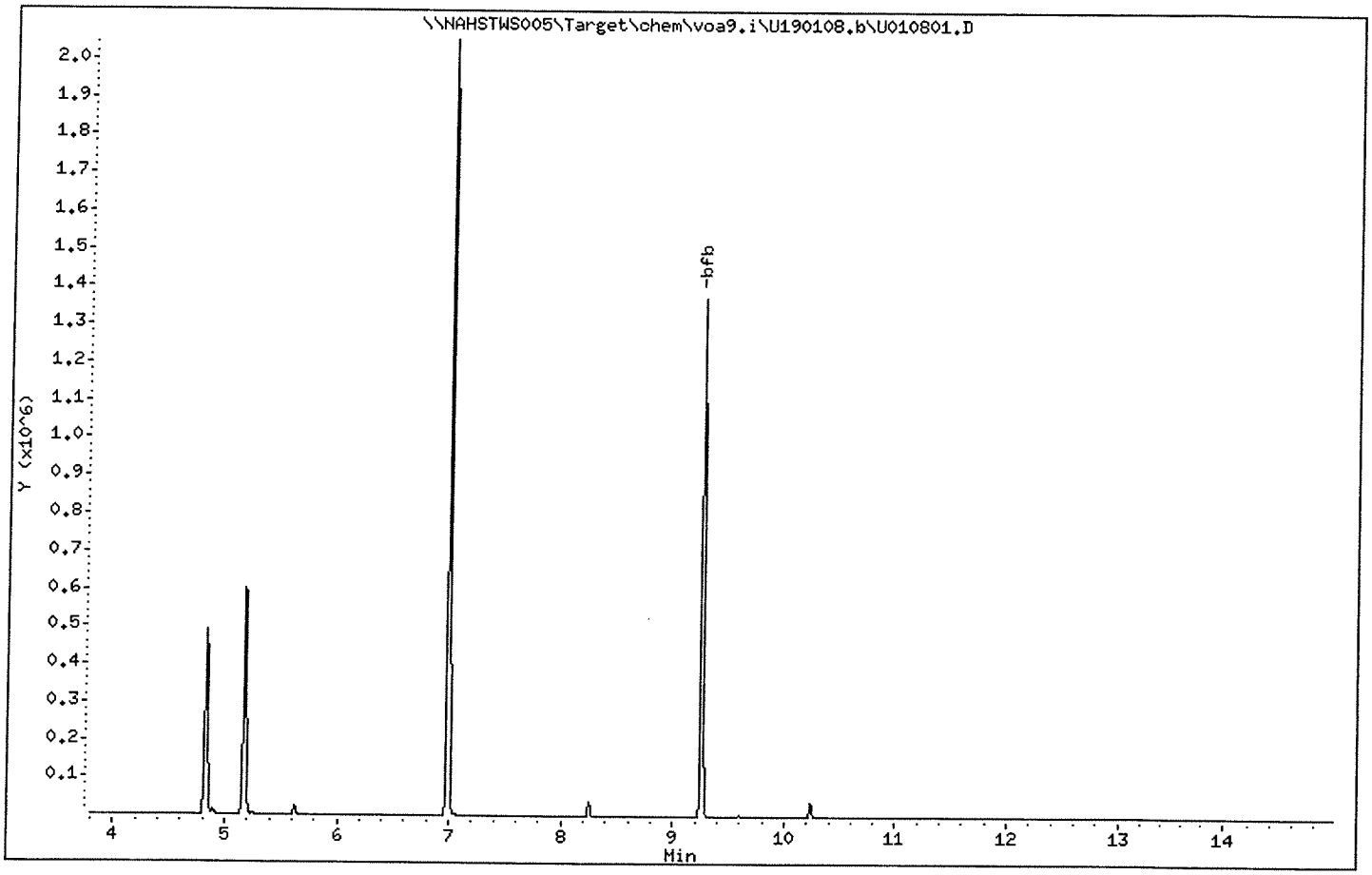
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010801.D

Date : 08-JAN-2019 10:29

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

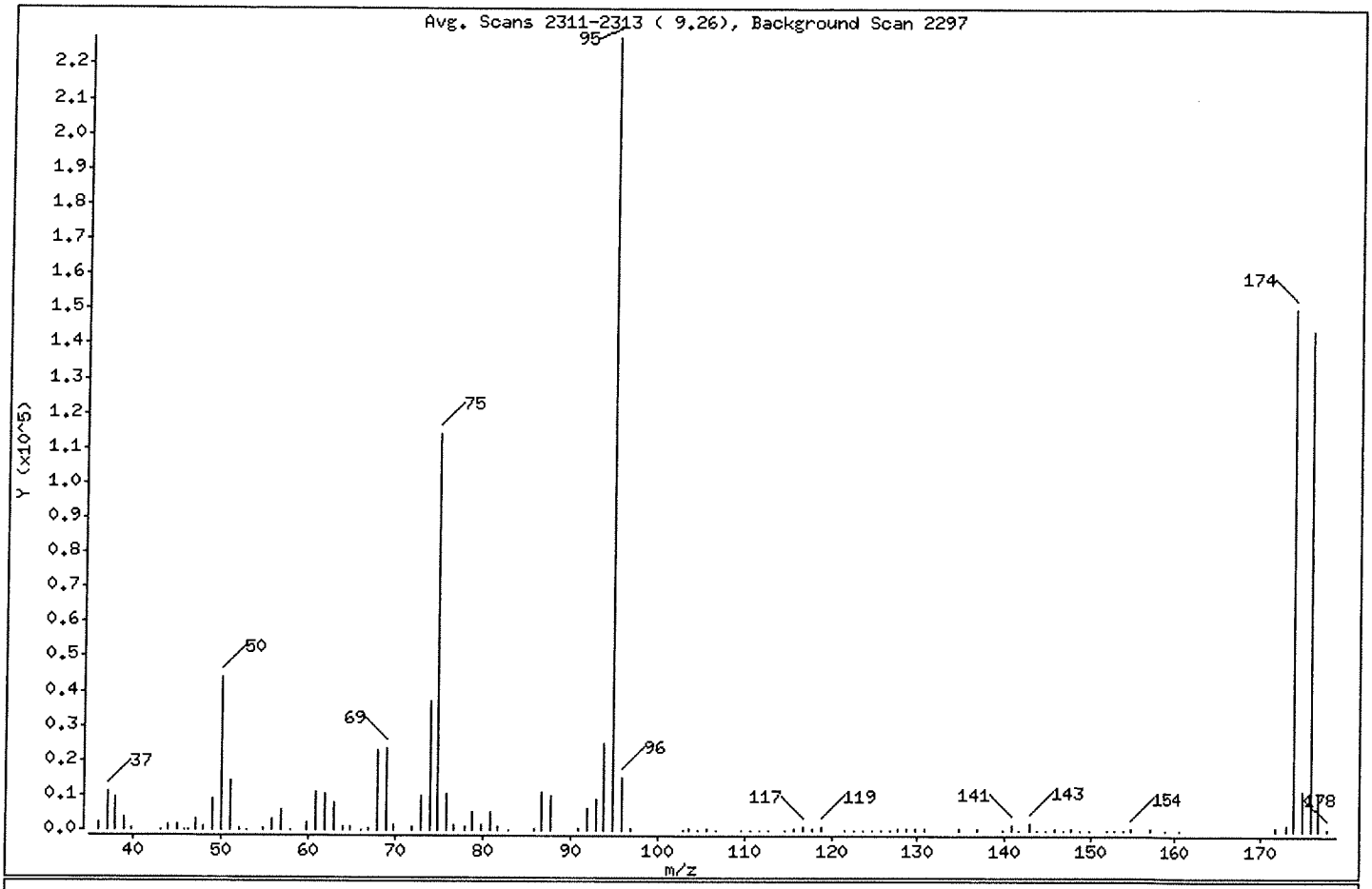
Volume Injected (uL): 2.0

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	19.39
75	30.00 - 60.00% of mass 95	50.13
96	5.00 - 9.00% of mass 95	6.68
173	Less than 2.00% of mass 174	0.60 (0.92)
174	Greater than 50.00% of mass 95	65.89
175	5.00 - 9.00% of mass 174	4.99 (7.58)
176	95.00 - 101.00% of mass 174	63.30 (96.07)
177	5.00 - 9.00% of mass 176	4.50 (7.11)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010801.D

Date : 08-JAN-2019 10:29

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: U010801.D

Spectrum: Avg. Scans 2311-2313 (9.26), Background Scan 2297

Location of Maximum: 94.90

Number of points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1986	66.00	138	103.00	68	140.70	1551
37.00	10801	66.90	527	103.70	735	141.60	240
38.00	9538	67.90	22840	104.70	257	142.80	1891
39.00	3843	68.90	23312	105.70	768	143.70	108
39.90	449	69.90	1766	106.80	205	144.70	247
43.10	127	71.90	1182	109.60	57	145.70	284
43.90	1449	72.90	10041	110.80	122	146.70	122
45.00	1813	73.90	36984	111.70	120	147.70	349
45.80	151	74.90	114080	112.70	98	148.60	105
46.20	155	75.90	10414	114.70	153	149.70	200
47.00	2935	76.80	1428	115.70	663	151.70	84
47.90	1253	77.90	1020	116.80	1034	152.60	159
49.00	9128	78.80	5133	117.70	610	153.70	83
50.00	44128	79.90	1706	118.80	1033	154.60	412
51.00	14080	80.80	4985	121.60	57	156.70	332
52.00	563	81.80	1126	122.60	101	158.70	186
52.90	96	82.90	83	123.70	95	160.60	183
54.90	552	85.90	288	124.70	60	171.70	931
55.90	3174	86.80	10773	125.70	88	172.80	1375
57.00	5880	87.80	10129	126.80	56	173.70	149952
57.90	256	90.80	703	127.70	648	174.70	11366
59.90	2096	91.90	6061	128.70	324	175.70	144064
60.90	10835	92.90	9060	129.70	662	176.70	10245
61.90	10429	93.90	24920	130.70	275	177.70	362
63.00	7875	94.90	227584	134.70	277		
63.90	878	95.90	15199	136.70	280		
64.90	939	96.90	450	139.70	138		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010802.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 08-JAN-2019 10:54
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 10:54 Cal File: U010802.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14

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

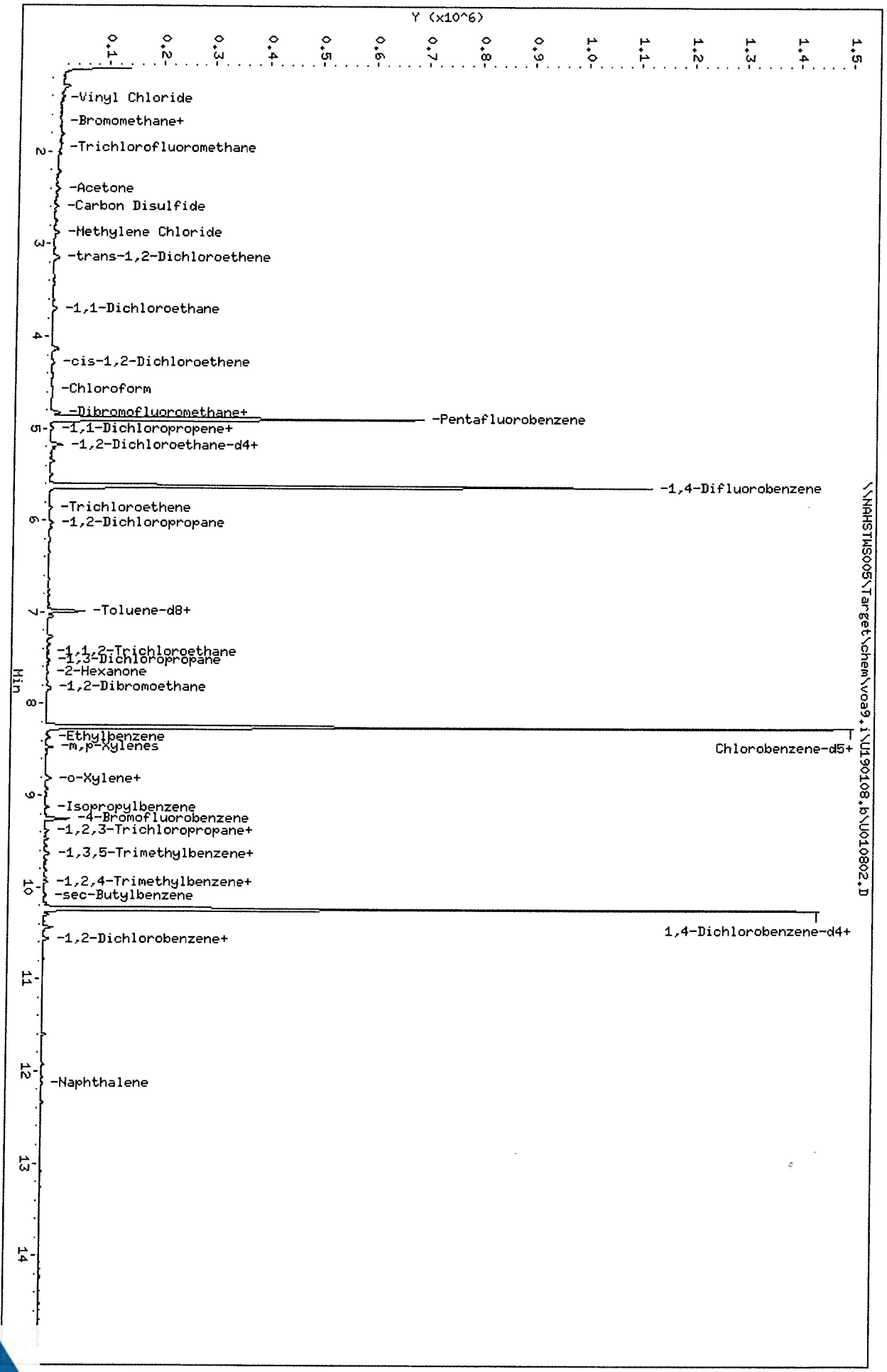
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	424745	50.0000	
* 36 1,4-Difluorobenzene	114	5.624	5.629	(1.000)	798067	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	719919	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.235	10.236	(1.000)	320219	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	9655	0.25000	0.43(a)
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	13907	0.25000	0.09(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	38067	0.25000	(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	14081	0.25000	0.20(a)
31 1,1,1-Trichloroethane	97	4.826	4.830	(0.986)	1231	0.25000	0.17(a)
53 1,1,2-Trichloroethane	83	7.424	7.421	(0.900)	788	0.25000	0.17(a)
22 1,1-Dichloroethane	63	3.604	3.608	(0.737)	1975	0.25000	0.20(Ta)
32 1,1-Dichloropropene	75	5.002	5.006	(0.889)	1755	0.25000	0.23(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	1231	0.25000	0.15(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	3167	0.25000	0.18(a)
57 1,2-Dibromoethane	107	7.851	7.852	(0.952)	1065	0.25000	0.21(a)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	2083	0.25000	0.21(a)
33 1,2-Dichloroethane	62	5.253	5.254	(0.934)	1729	0.25000	0.22(a)
42 1,2-Dichloropropane	63	6.078	6.082	(1.081)	1106	0.25000	0.19(a)
75 1,3,5-Trimethylbenzene	105	9.624	9.625	(0.940)	3077	0.25000	0.18(a)
83 1,3-Dichlorobenzene	146	10.179	10.180	(0.995)	2239	0.25000	0.23(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1921	0.25000	0.20(a)
84 1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	2639	0.25000	0.25(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	3069	0.25000	0.20(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010802.D Page 2
Report Date: 01-Feb-2019 16:05

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
52 2-Hexanone	43	7.653	7.649	(0.928)	1351	0.50000	0.32(a)
77 4-Chlorotoluene	91	9.639	9.640	(0.942)	3693	0.25000	0.20(a)
82 p-Isopropyltoluene	119	10.209	10.210	(0.997)	3183	0.25000	0.18(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1899	0.50000	0.31(a)
10 Acetone	43	2.479	2.483	(0.507)	2084	0.50000	(a)
37 Benzene	78	5.216	5.220	(0.927)	4558	0.25000	0.20(a)
6 Bromomethane	94	1.673	1.670	(0.342)	1077	0.25000	1.09(a)
19 Carbon Disulfide	76	2.588	2.596	(0.529)	7148	0.50000	0.49(a)
34 Carbon Tetrachloride	117	4.995	4.999	(0.888)	888	0.25000	0.16(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	3240	0.25000	0.22(a)
7 Chloroethane	64	1.756	1.756	(0.359)	1803	0.25000	0.47(a)
28 Chloroform	83	4.657	4.661	(0.952)	1851	0.25000	0.20(a)
27 cis-1,2-Dichloroethene	96	4.286	4.290	(0.876)	1161	0.25000	0.19(a)
61 Ethylbenzene	106	8.372	8.369	(1.015)	1453	0.25000	0.20(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	3728	0.25000	0.18(a)
62 m,p-Xylenes	106	8.470	8.474	(1.027)	3376	0.50000	0.38(a)
17 Methylene Chloride	84	2.873	2.877	(0.587)	2013	0.25000	(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	3517	0.25000	0.21(a)
73 n-Propylbenzene	91	9.474	9.475	(0.926)	4941	0.25000	0.19(a)
92 Naphthalene	128	12.132	12.133	(1.185)	1922	0.25000	0.80(a)
63 o-Xylene	106	8.811	8.811	(1.068)	1707	0.25000	0.18(a)
81 sec-Butylbenzene	105	10.085	10.086	(0.985)	3564	0.25000	0.17(a)
64 Styrene	104	8.826	8.826	(1.070)	2965	0.25000	0.19(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	2365	0.25000	0.16(a)
50 Toluene	91	7.049	7.049	(0.855)	4622	0.25000	0.20(a)
20 trans-1,2-Dichloroethene	96	3.143	3.147	(0.642)	977	0.25000	0.18(a)
38 Trichloroethene	130	5.861	5.865	(1.042)	931	0.25000	0.18(a)
8 Trichlorofluoromethane	101	1.955	1.959	(0.399)	1385	0.25000	0.19(a)
5 Vinyl Chloride	62	1.422	1.423	(0.291)	1416	0.25000	0.22(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010802.D
Date : 08-JAN-2019 10:54
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

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010803.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 08-JAN-2019 11:18
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 10:54 Cal File: U010802.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

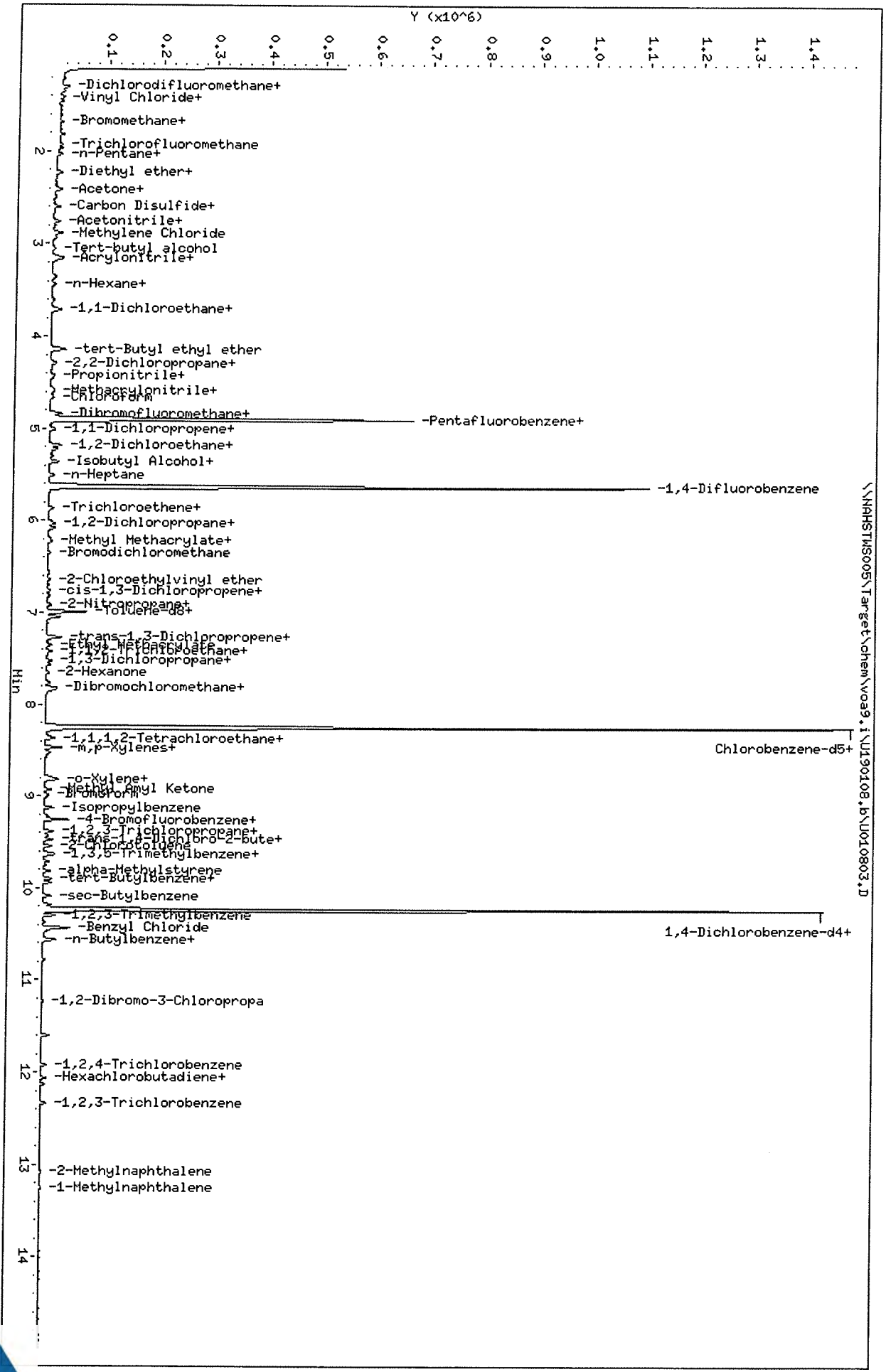
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	406983	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	776981	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	707085	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	318699	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	9792	0.50000	0.56(a)
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	14011	0.50000	0.20(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	40255	0.50000	(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	13542	0.50000	0.15(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	1793	0.50000	0.41(a)
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	2722	0.50000	0.40(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	3672	0.50000	0.15(aM)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	1988	0.50000	0.45(a)
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	4569	0.50000	0.49(Ta)
11 1,1-Dichloroethene	96	2.412	2.412	(0.493)	1886	0.50000	0.48(a)
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	3611	0.50000	0.50(a)
93 1,2,3-Trichlorobenzene	180	12.339	12.339	(1.205)	2646	0.50000	0.46(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	3423	0.50000	0.44(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	2205	0.50000	0.38(aM)
79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	7070	0.50000	0.42(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	320	0.50000	2.35(aM)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	2180	0.50000	0.44(a)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	5041	0.50000	0.52(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	3672	0.50000	0.48(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	2540	0.50000	0.45(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	7169	0.50000	0.43(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	4734	0.50000	0.49(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	4321	0.50000	0.46(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	5570	0.50000	0.54(a)
26 2,2-Dichloropropane	77	4.283	4.283	(0.874)	2565	0.50000	0.46(a)
24 2-Butanone	43	4.358	4.358	(0.890)	2603	1.00000	0.92(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	7203	0.50000	0.47(a)
52 2-Hexanone	43	7.653	7.653	(0.928)	3297	1.00000	0.80(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	8328	0.50000	0.47(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	7478	0.50000	0.44(a)
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	4770	1.00000	0.81(a)
10 Acetone	43	2.491	2.491	(0.509)	3350	1.00000	0.29(a)
37 Benzene	78	5.224	5.224	(0.928)	10081	0.50000	0.47(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	2317	0.50000	0.46(a)
29 Bromochloromethane	128	4.557	4.557	(0.930)	887	0.50000	0.39(a)
39 Bromodichloromethane	83	6.348	6.348	(1.128)	2566	0.50000	0.42(aM)
66 Bromoform	173	8.984	8.984	(1.089)	1047	0.50000	2.12(TaM)
6 Bromomethane	94	1.681	1.681	(0.343)	2378	0.50000	1.52(a)
19 Carbon Disulfide	76	2.600	2.600	(0.531)	14084	1.00000	1.01(a)
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	2233	0.50000	0.42(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	7063	0.50000	0.50(a)
7 Chloroethane	64	1.764	1.764	(0.360)	1812	0.50000	0.49(aM)
28 Chloroform	83	4.662	4.662	(0.952)	4099	0.50000	0.46(a)
3 Chloromethane	50	1.351	1.351	(0.276)	3056	0.50000	2.99(a)
27 cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	2685	0.50000	0.48(a)
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	2839	0.50000	1.61(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1574	0.50000	1.55(a)
44 Dibromomethane	93	6.195	6.195	(1.101)	1505	0.50000	0.46(aM)
2 Dichlorodifluoromethane	85	1.217	1.217	(0.248)	2617	0.50000	0.48(a)
61 Ethylbenzene	106	8.369	8.369	(1.015)	3370	0.50000	0.47(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	1632	0.50000	1.14(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	8923	0.50000	0.43(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	7756	1.00000	0.89(a)
17 Methylene Chloride	84	2.881	2.881	(0.588)	3706	0.50000	0.21(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	8223	0.50000	0.49(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	11489	0.50000	0.46(a)
92 Naphthalene	128	12.133	12.133	(1.185)	5534	0.50000	0.98(a)
63 o-Xylene	106	8.811	8.811	(1.068)	4219	0.50000	0.47(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	8769	0.50000	0.43(a)
64 Styrene	104	8.826	8.826	(1.070)	6305	0.50000	0.42(a)
78 tert-Butylbenzene	119	9.898	9.898	(0.967)	6518	0.50000	0.46(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	2039	0.50000	0.54(a)
50 Toluene	91	7.049	7.049	(0.855)	10739	0.50000	0.49(a)
20 trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	2514	0.50000	0.50(a)
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	2396	0.50000	1.89(a)
38 Trichloroethene	130	5.865	5.865	(1.042)	1862	0.50000	0.37(aM)
8 Trichlorofluoromethane	101	1.966	1.966	(0.402)	3681	0.50000	0.54(a)
5 Vinyl Chloride	62	1.430	1.430	(0.292)	3065	0.50000	0.50(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.



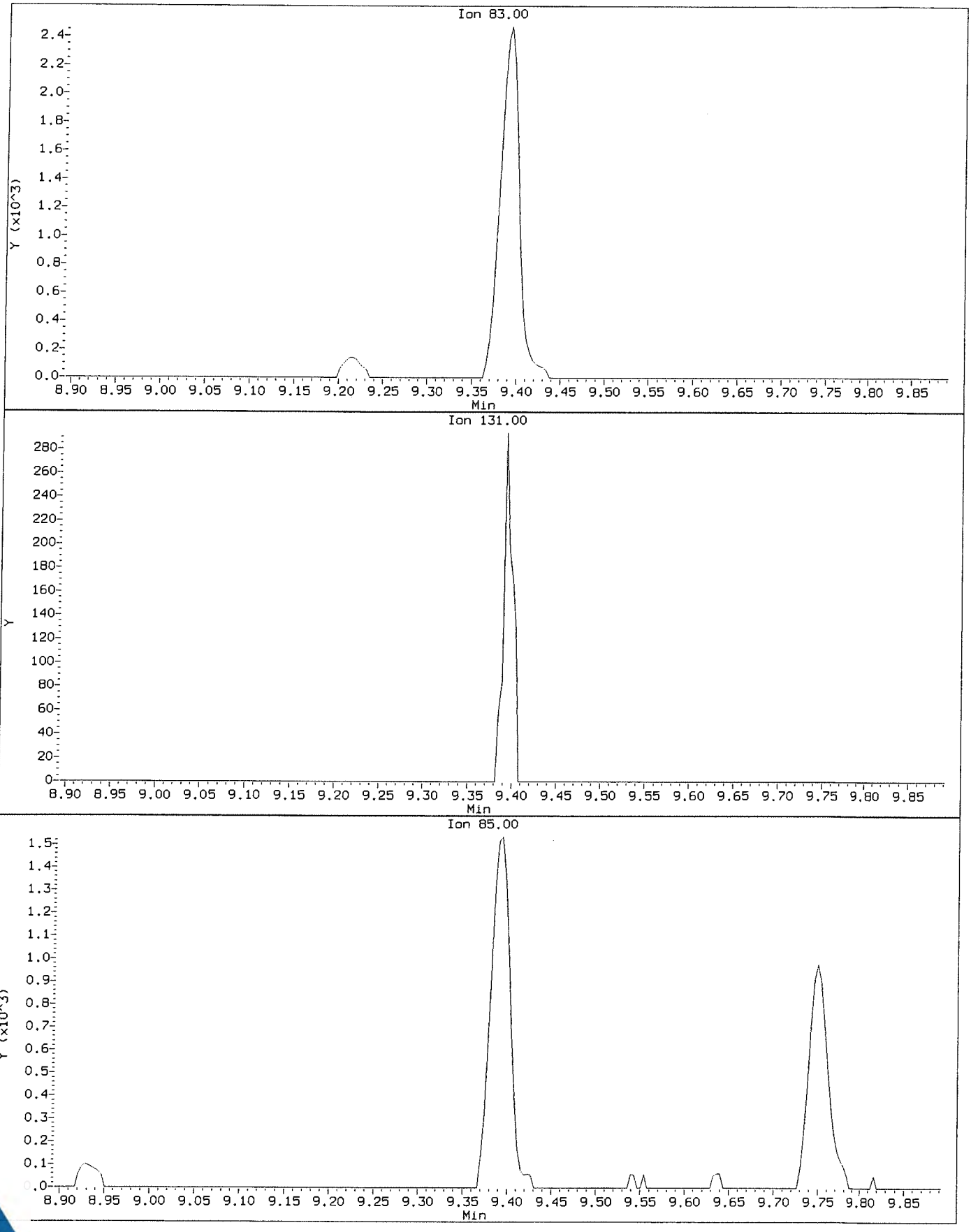
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010803.D
Date : 08-JAN-2019 11:18
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010803.D

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010803.D
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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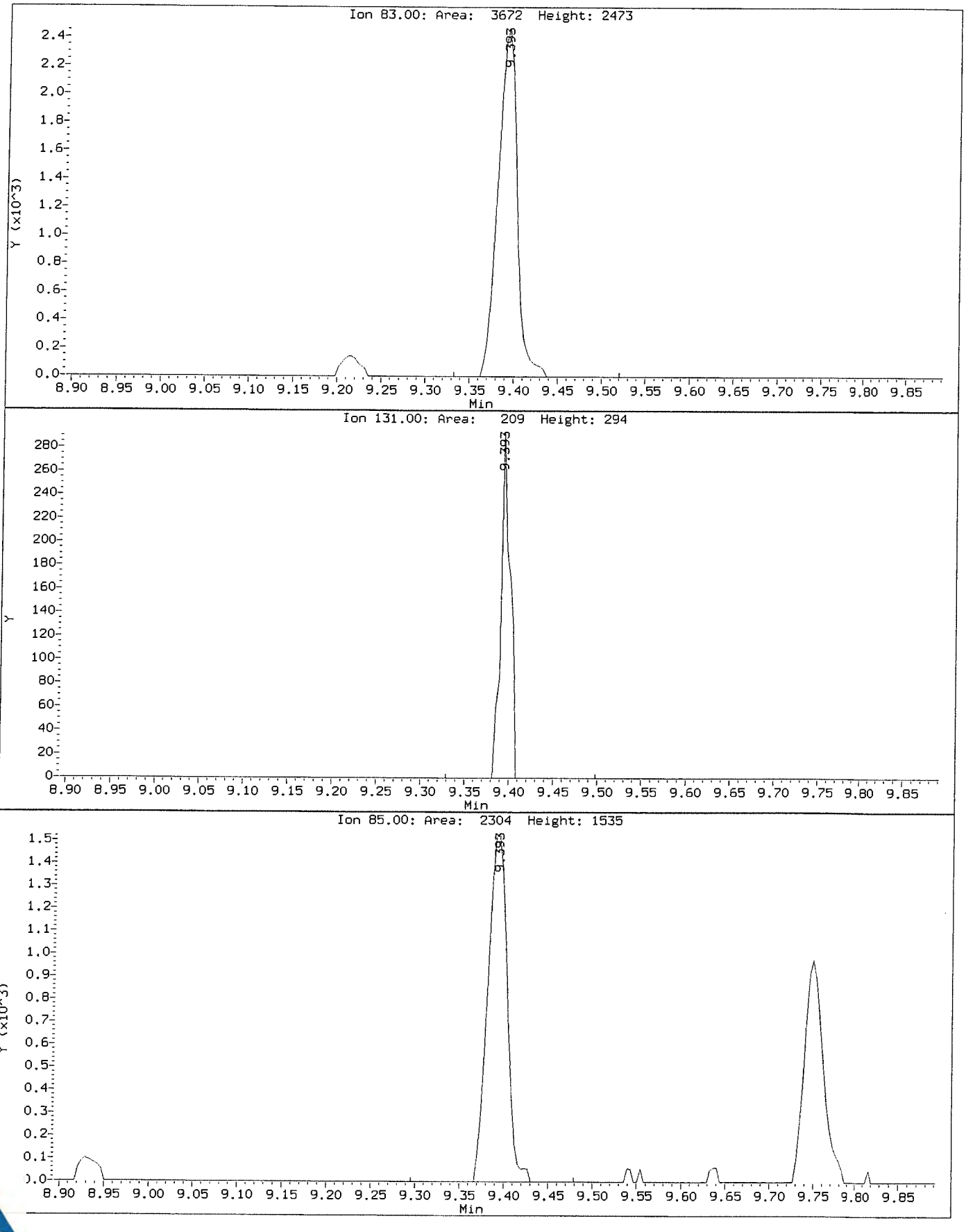
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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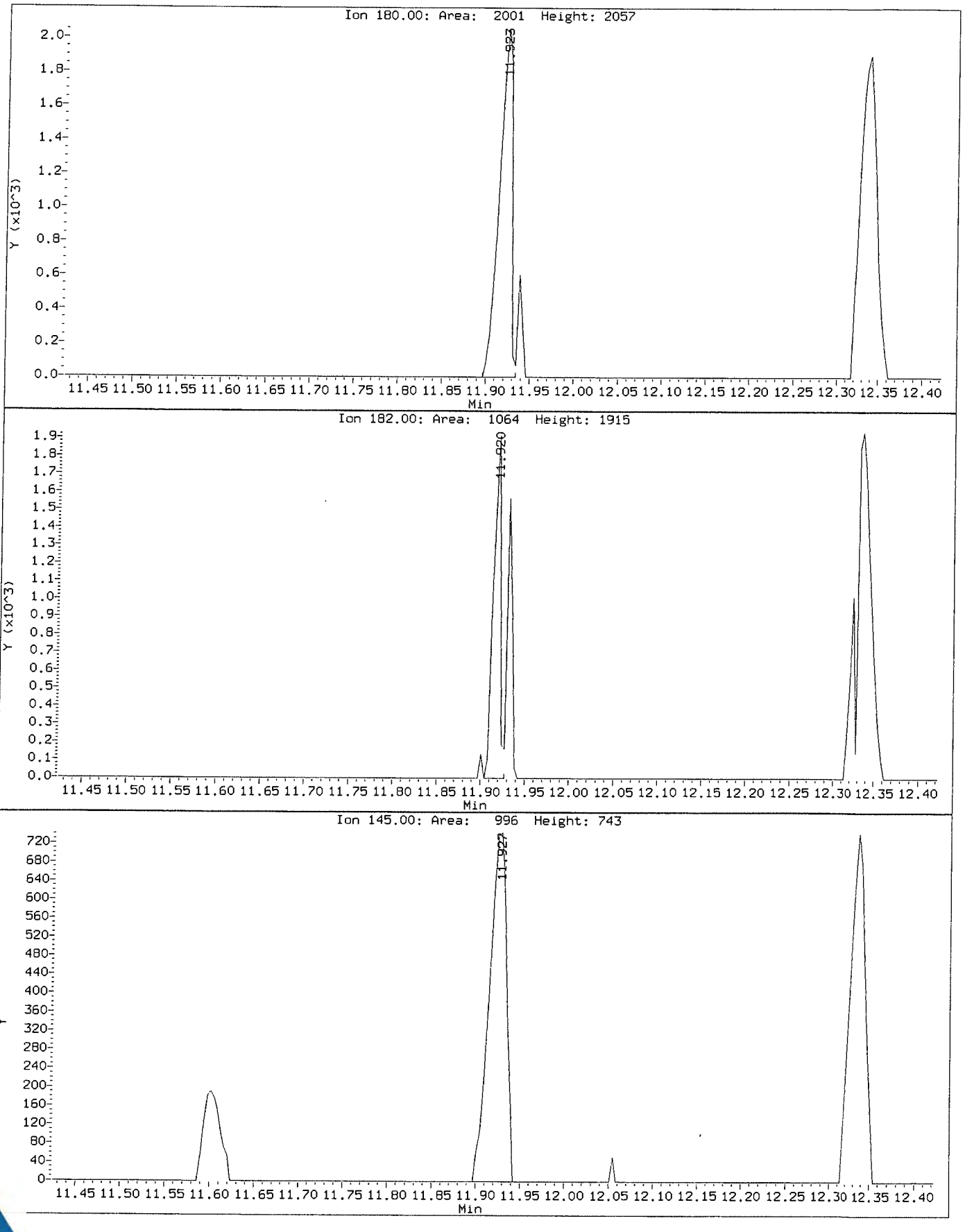
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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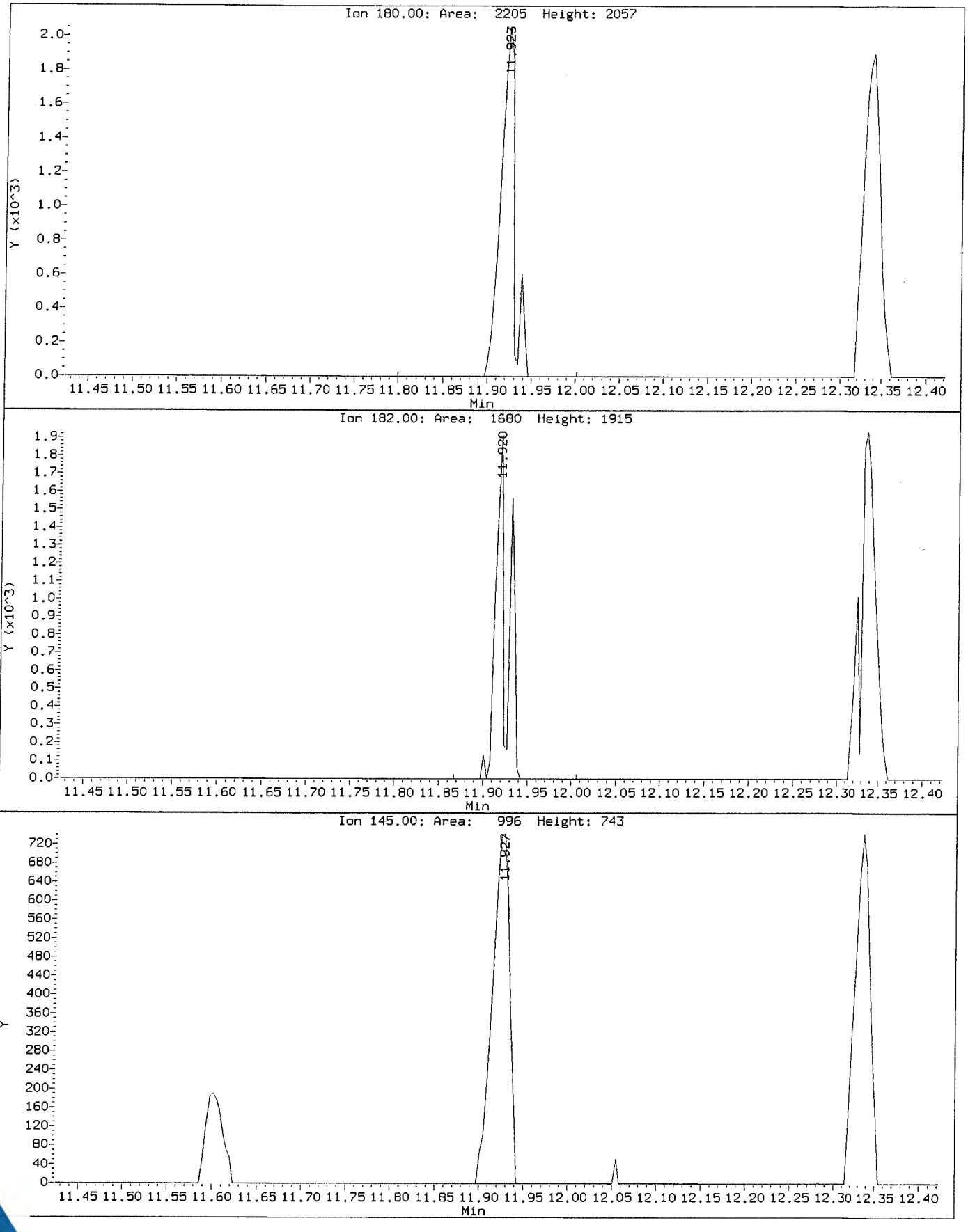
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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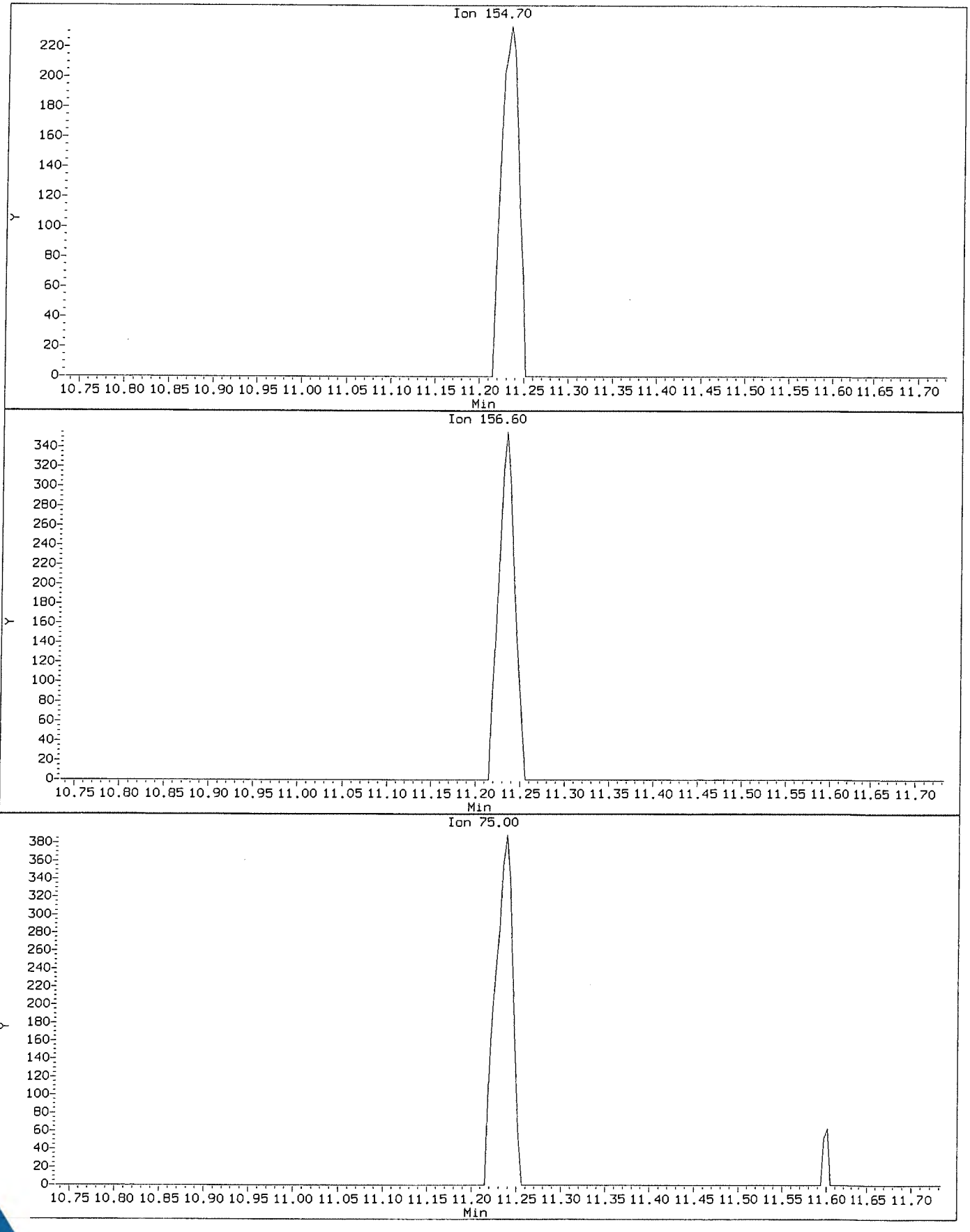
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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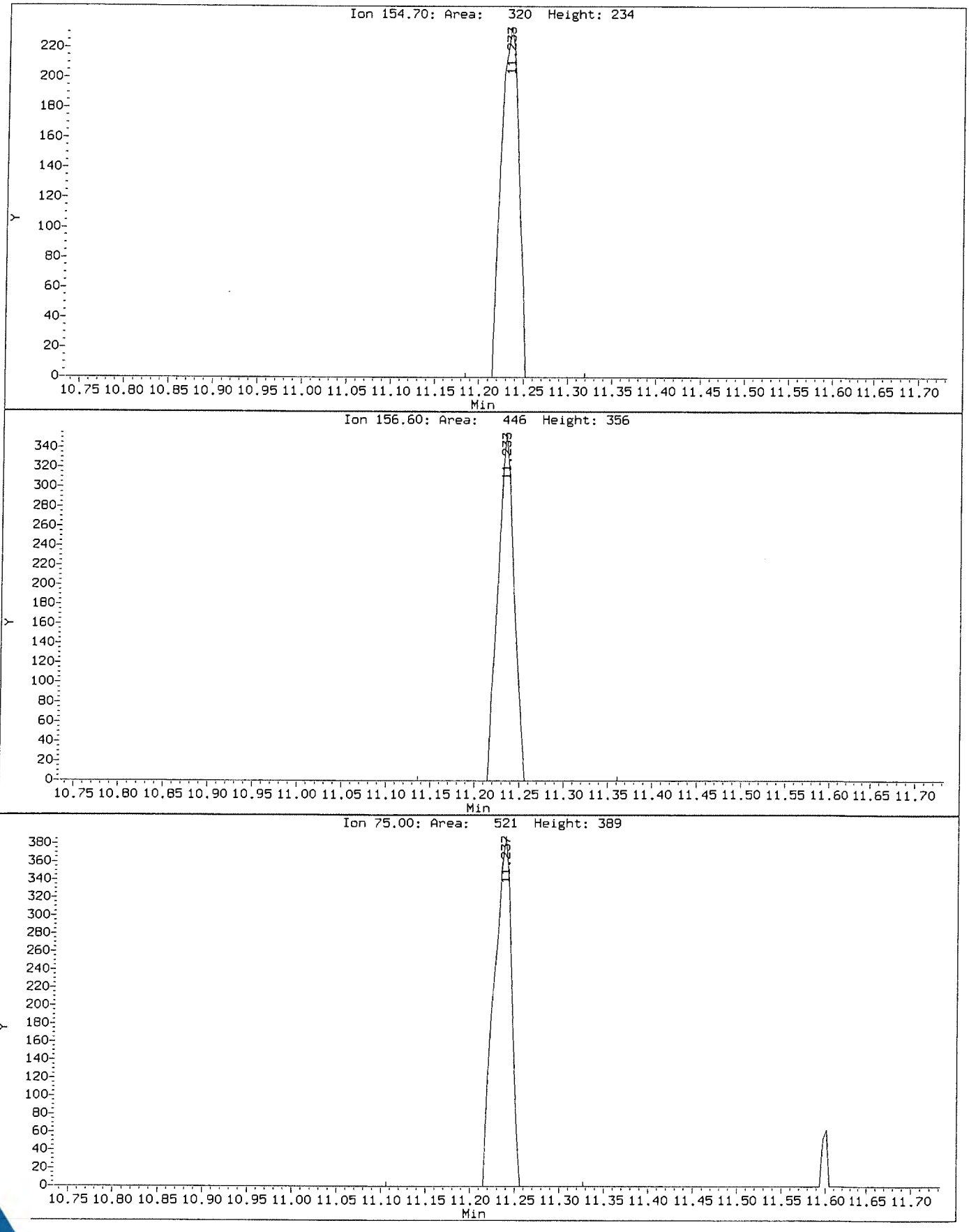
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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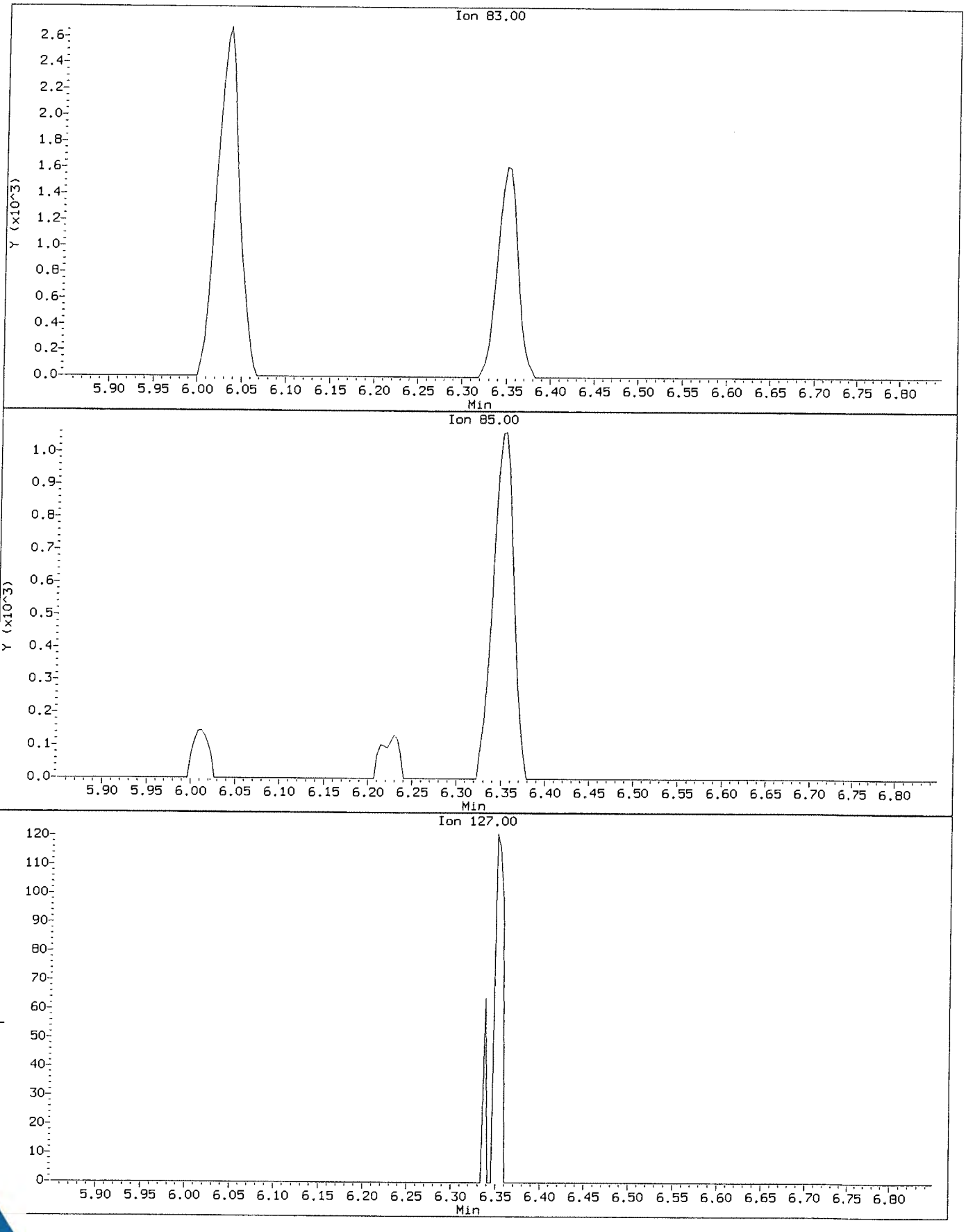
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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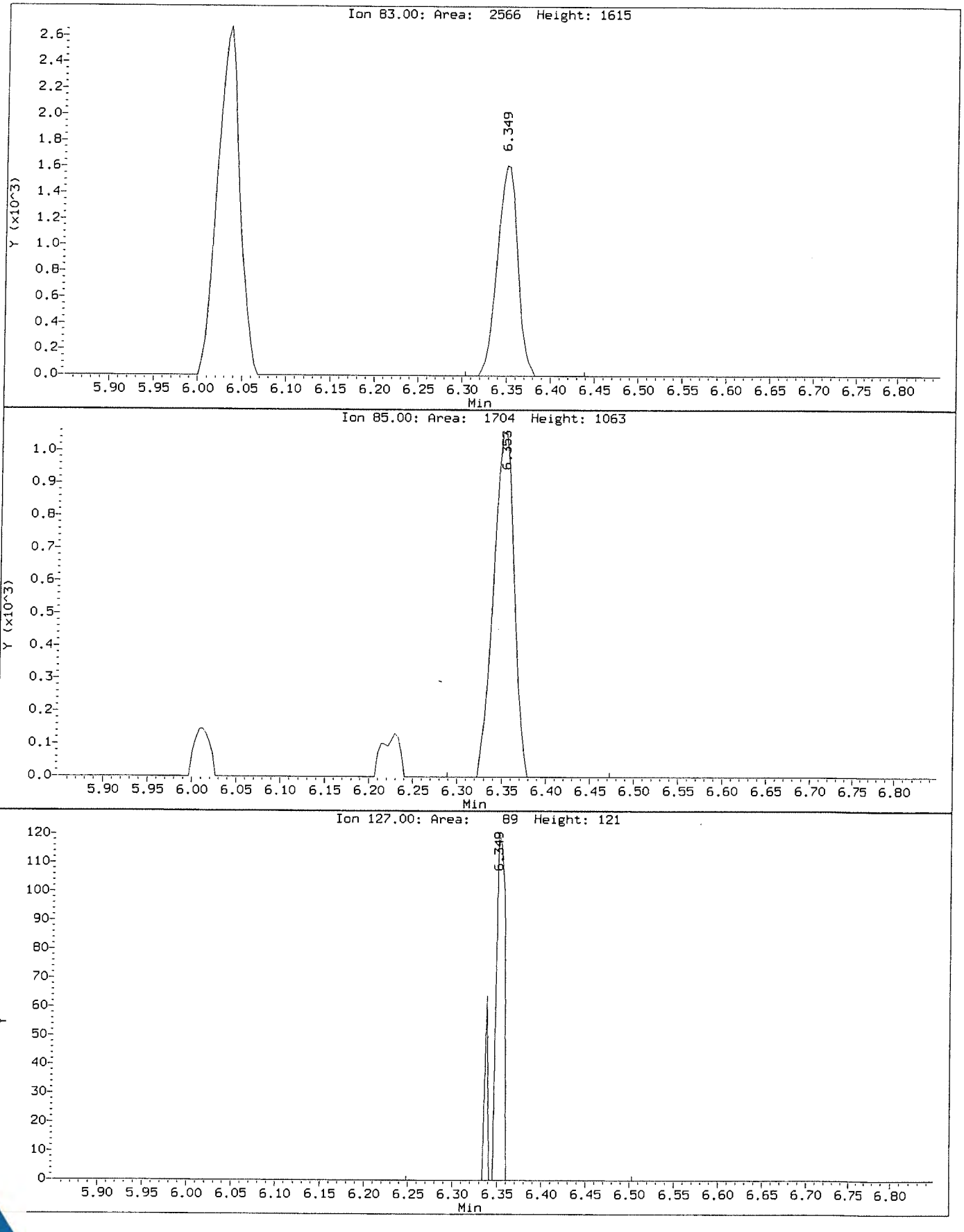
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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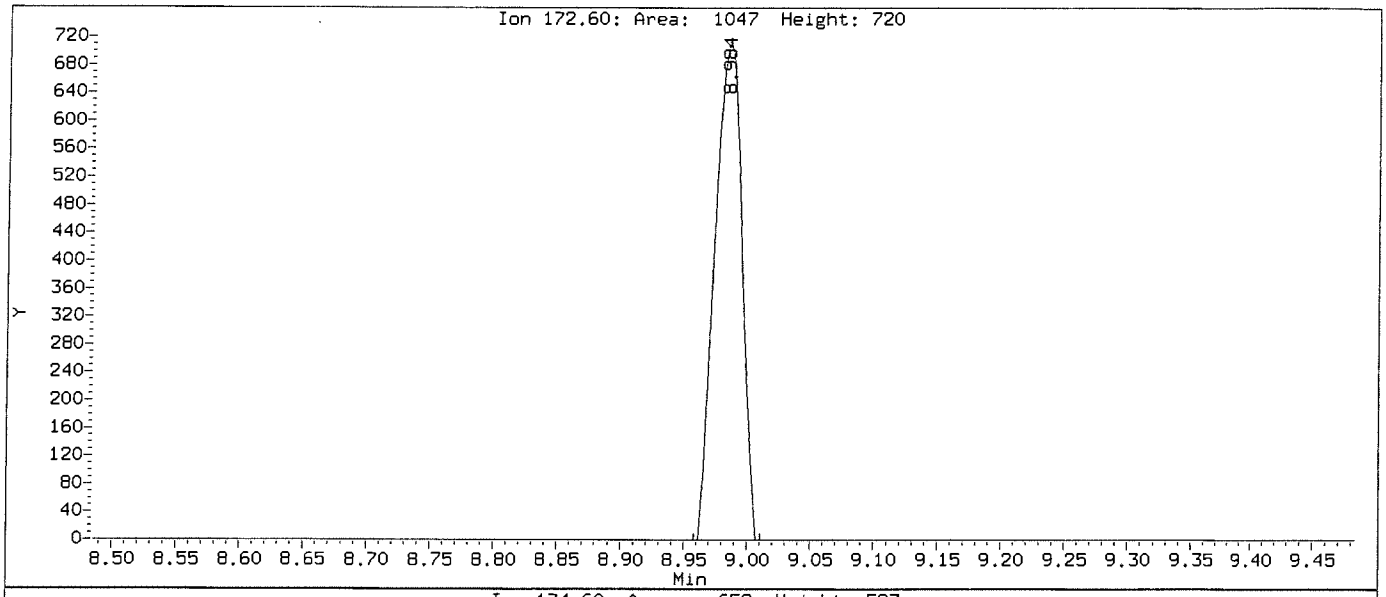
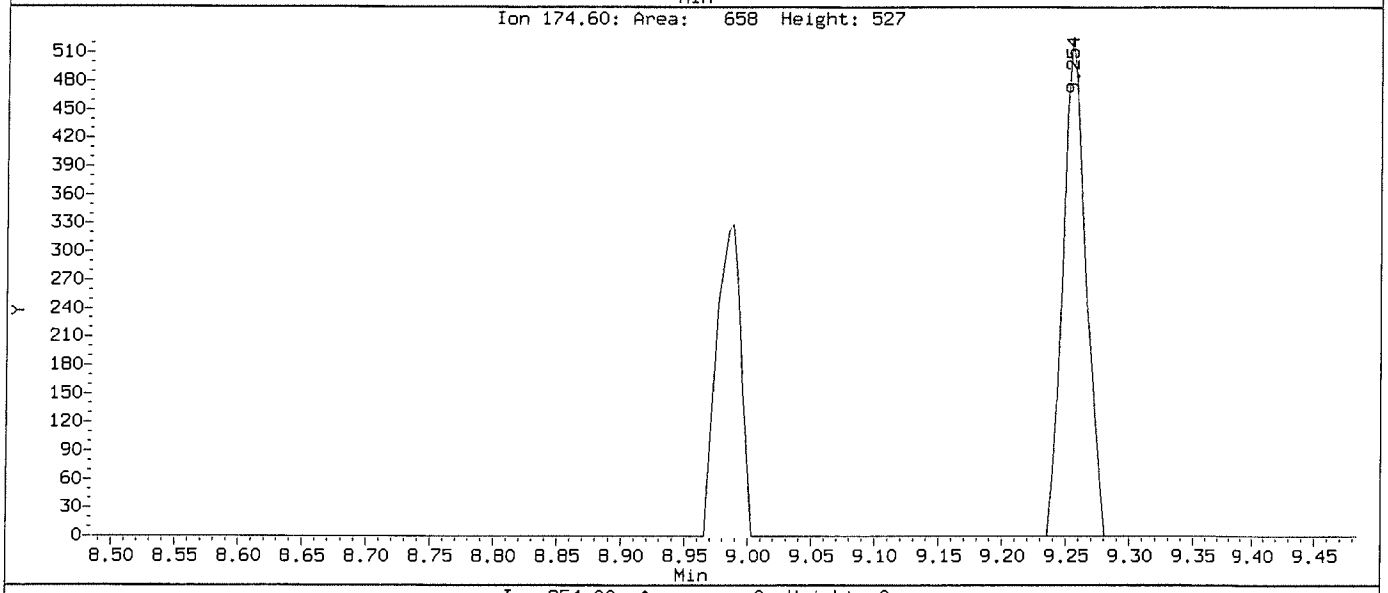
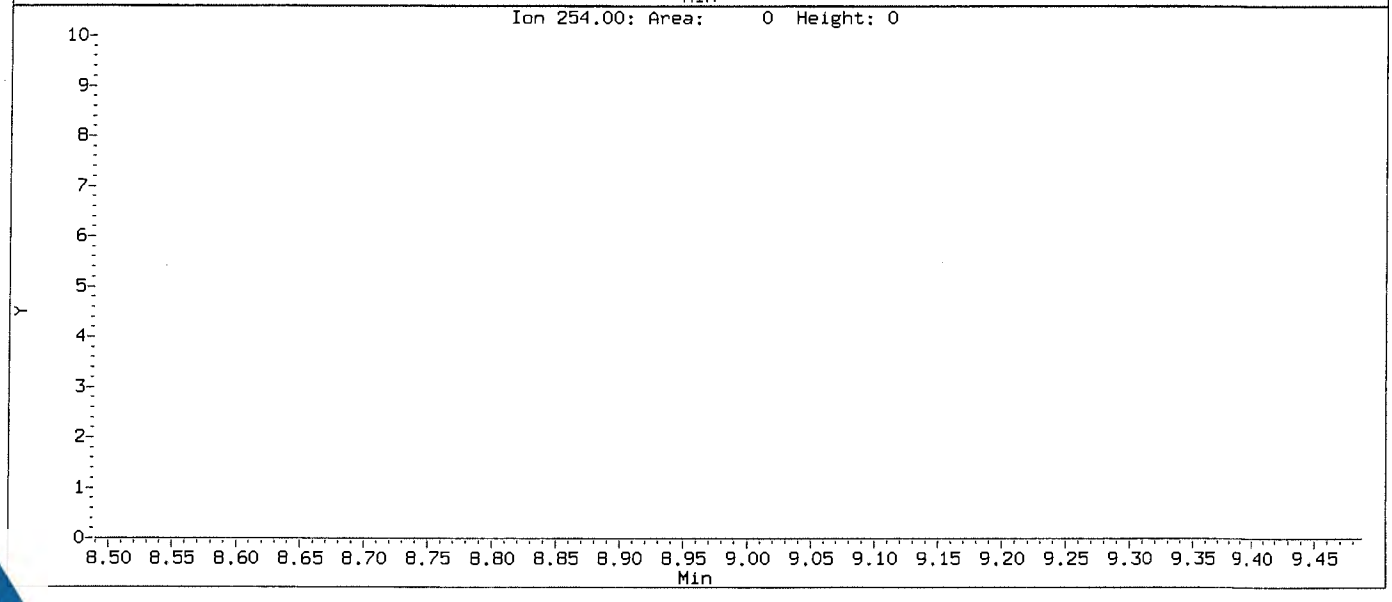
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2







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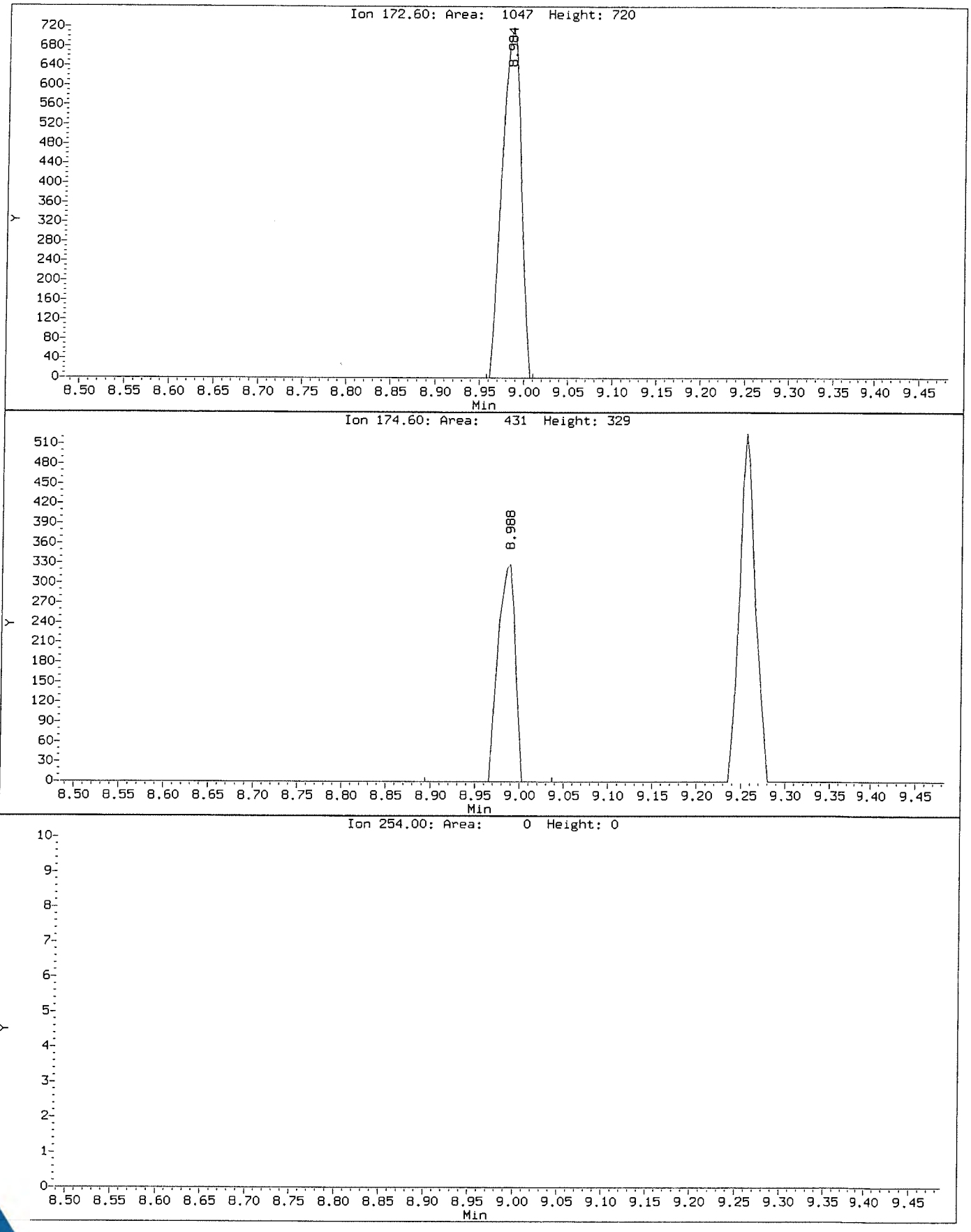
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



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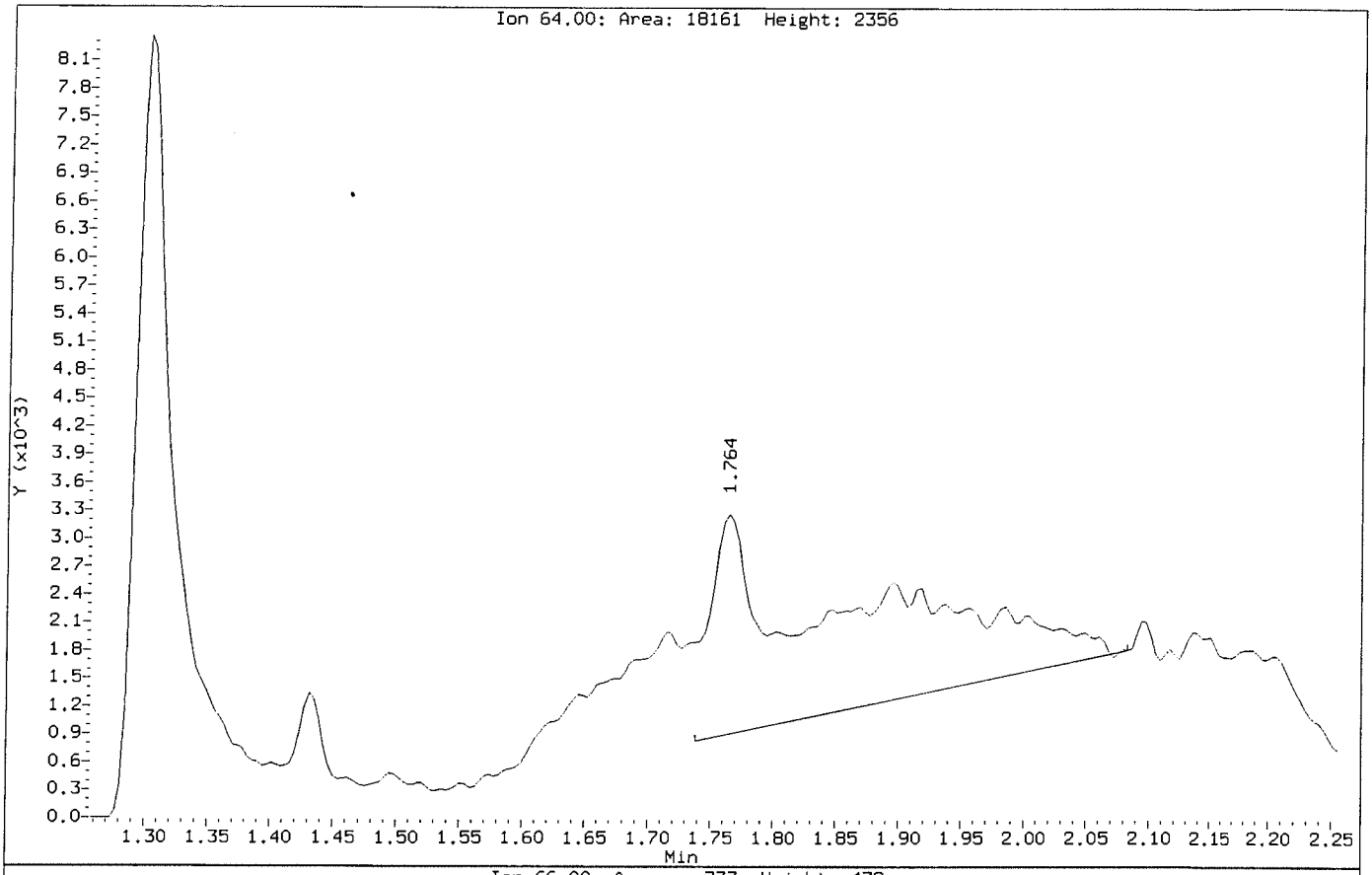
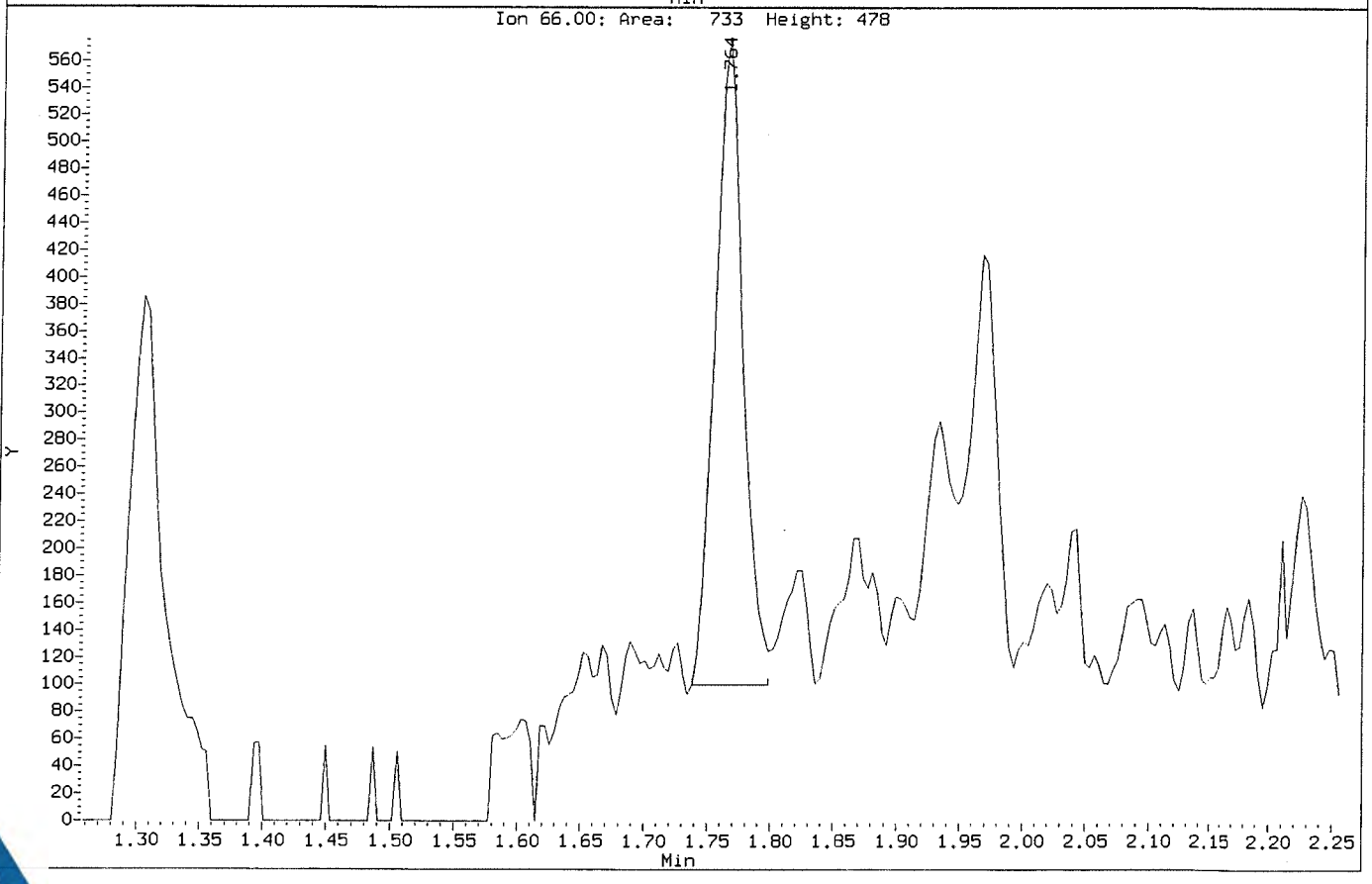
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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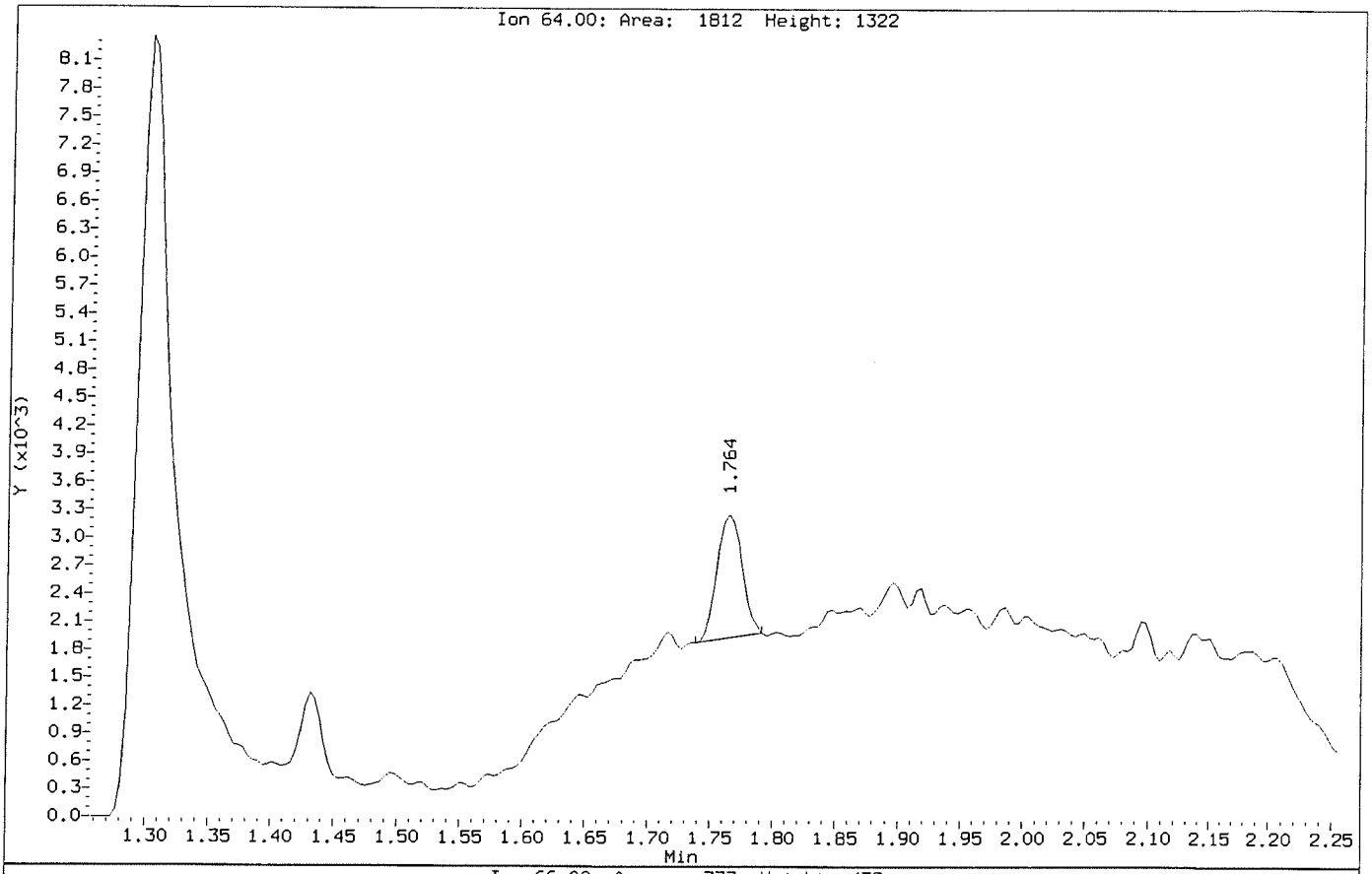
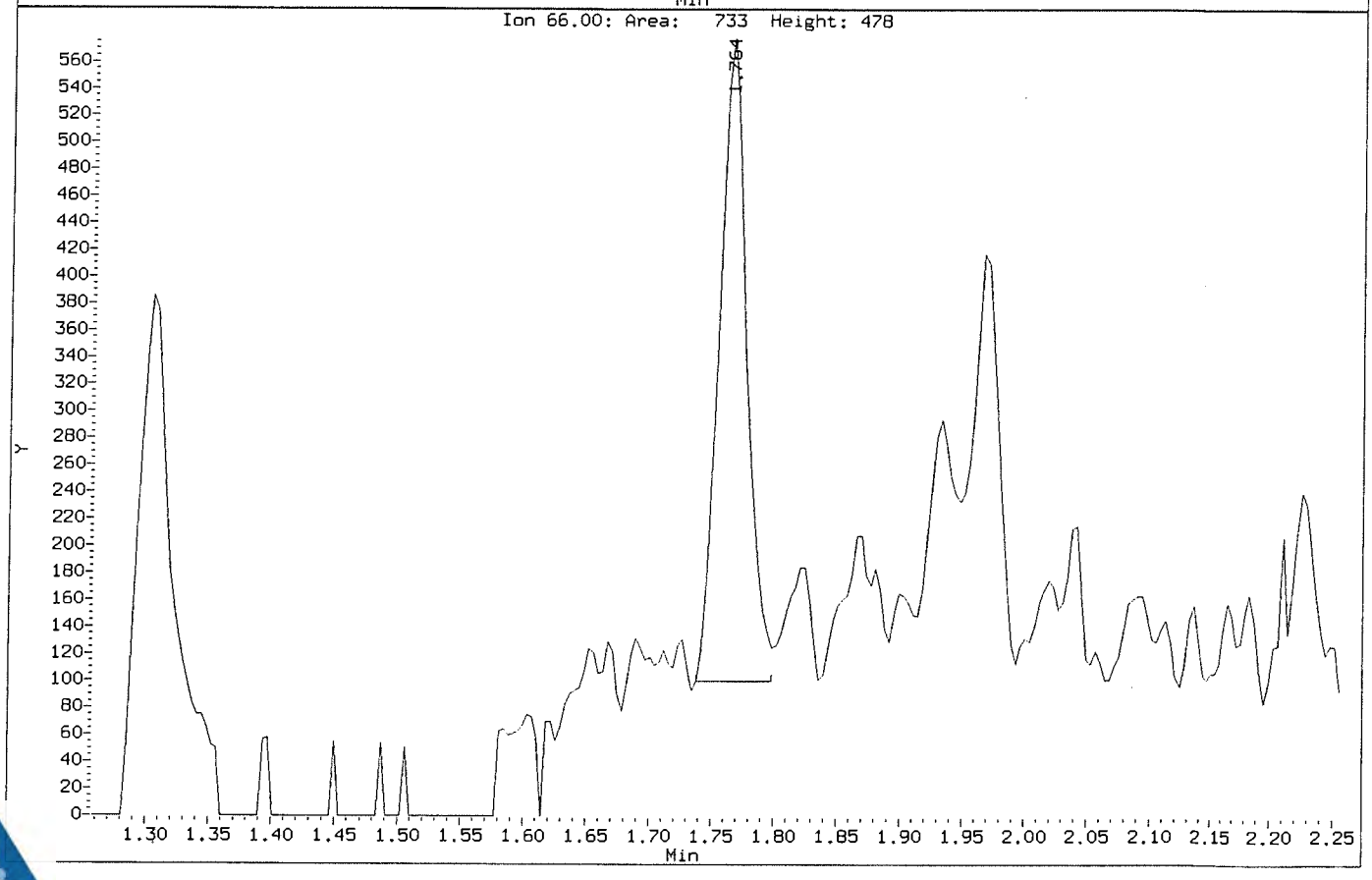
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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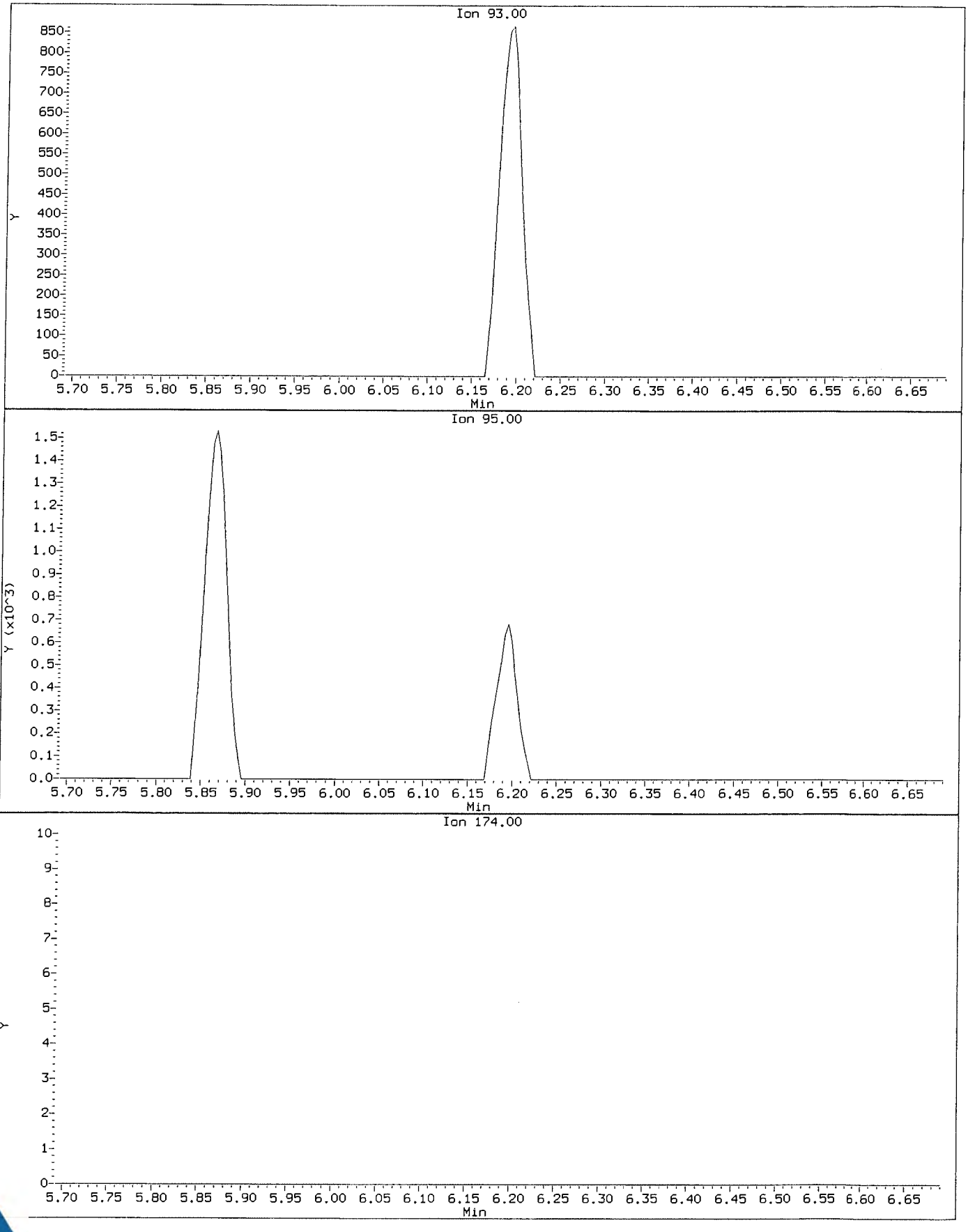
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Dibromomethane
CAS Number: 74-95-3



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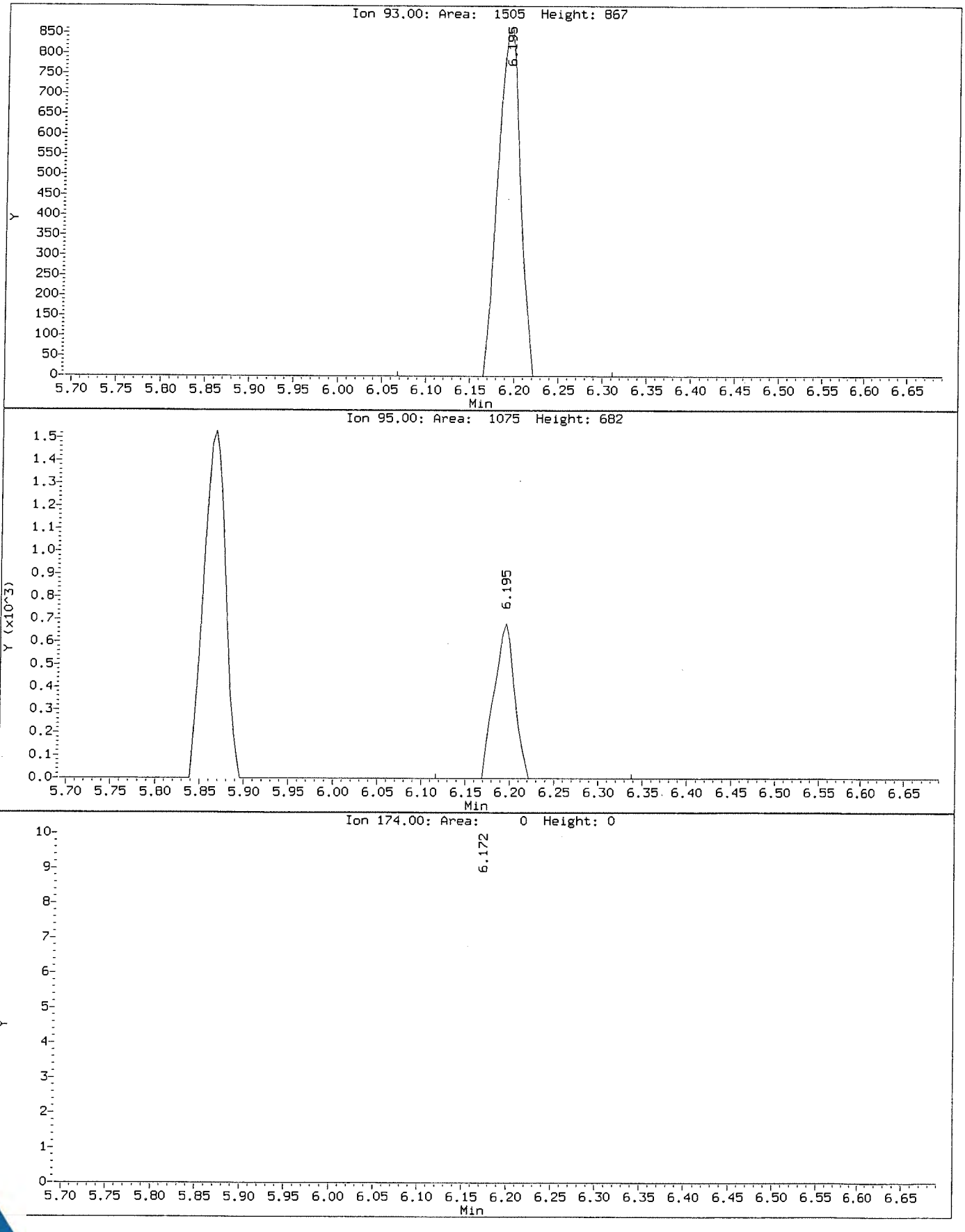
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Dibromomethane
CAS Number: 74-95-3



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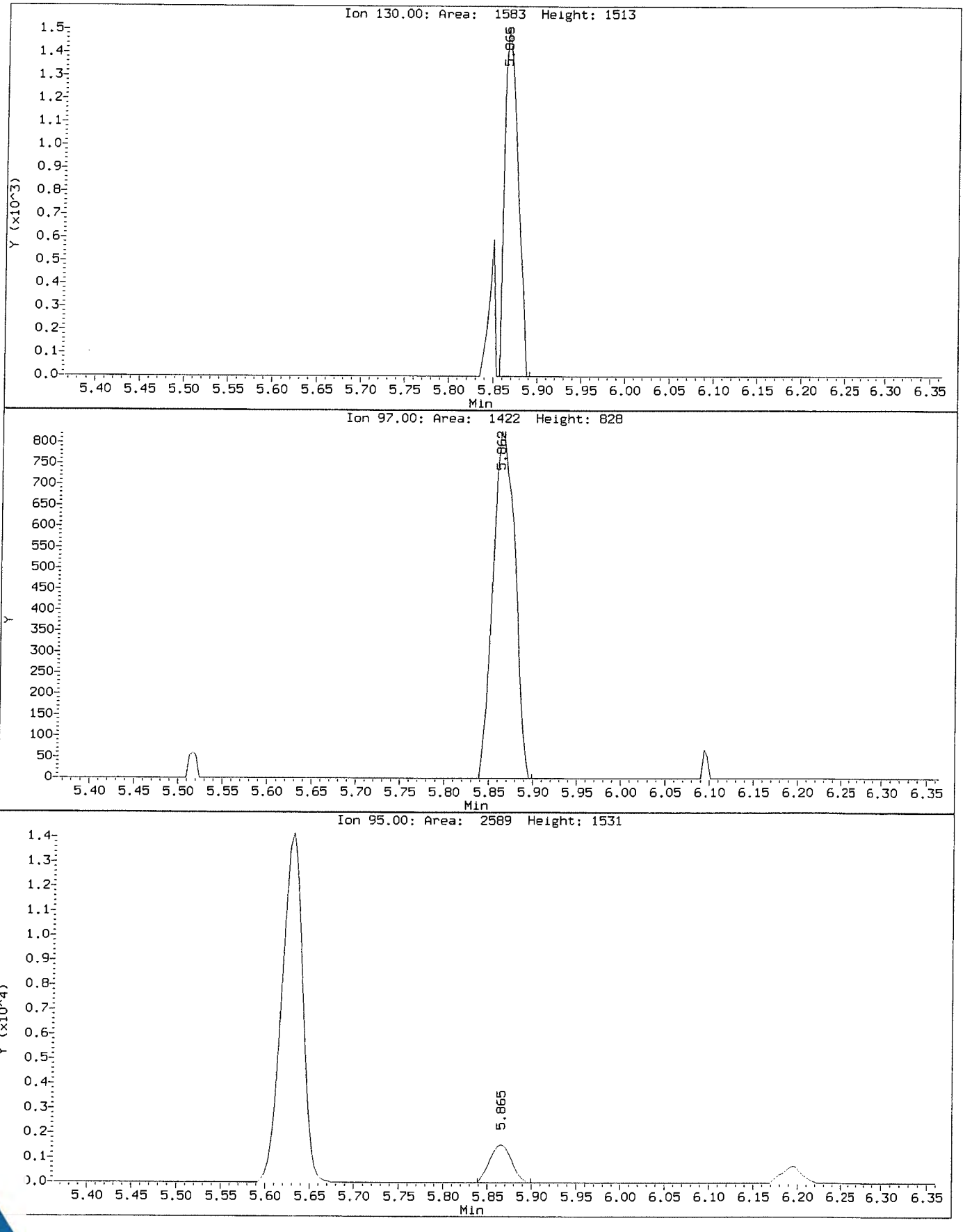
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6



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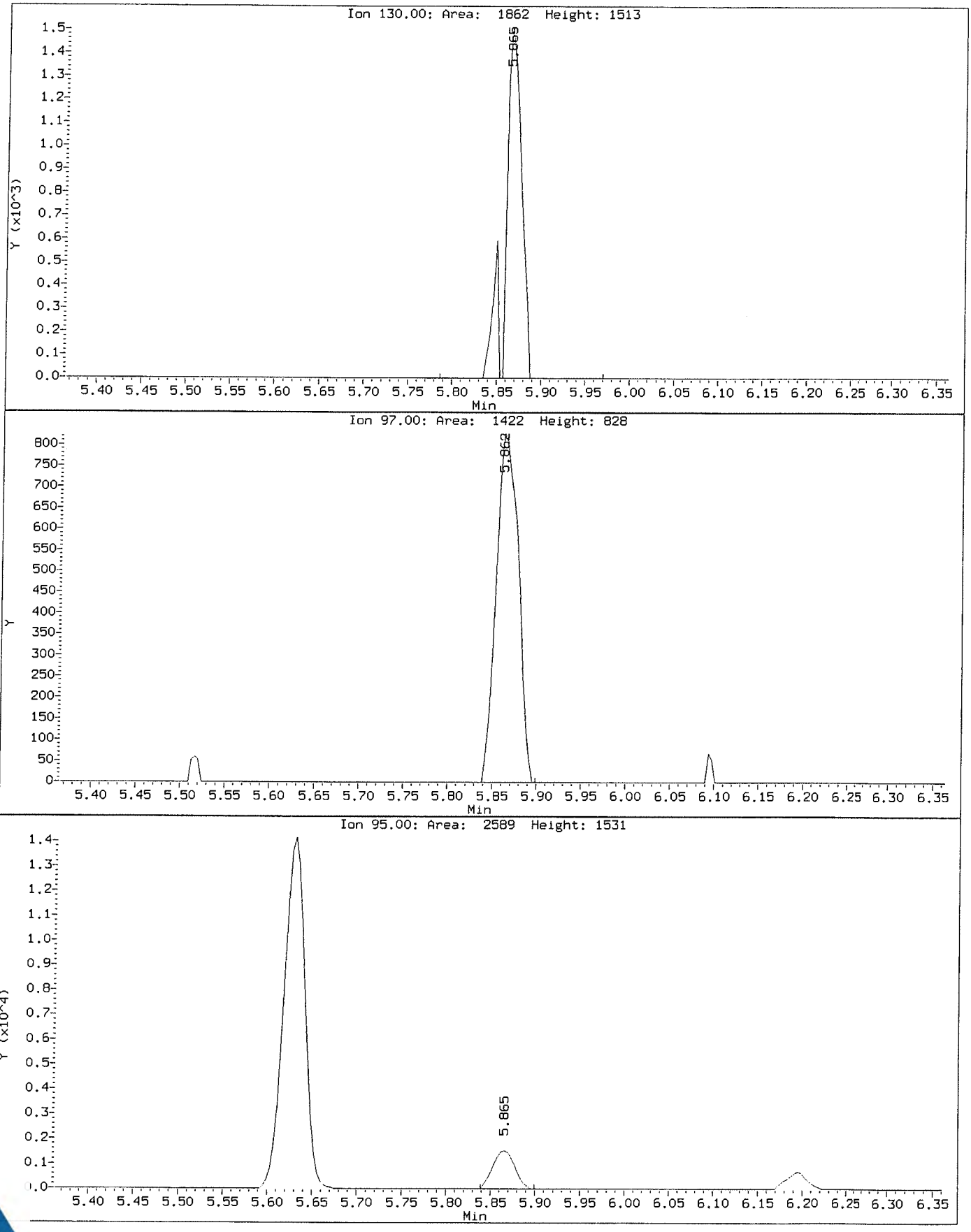
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010804.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 08-JAN-2019 12:07
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

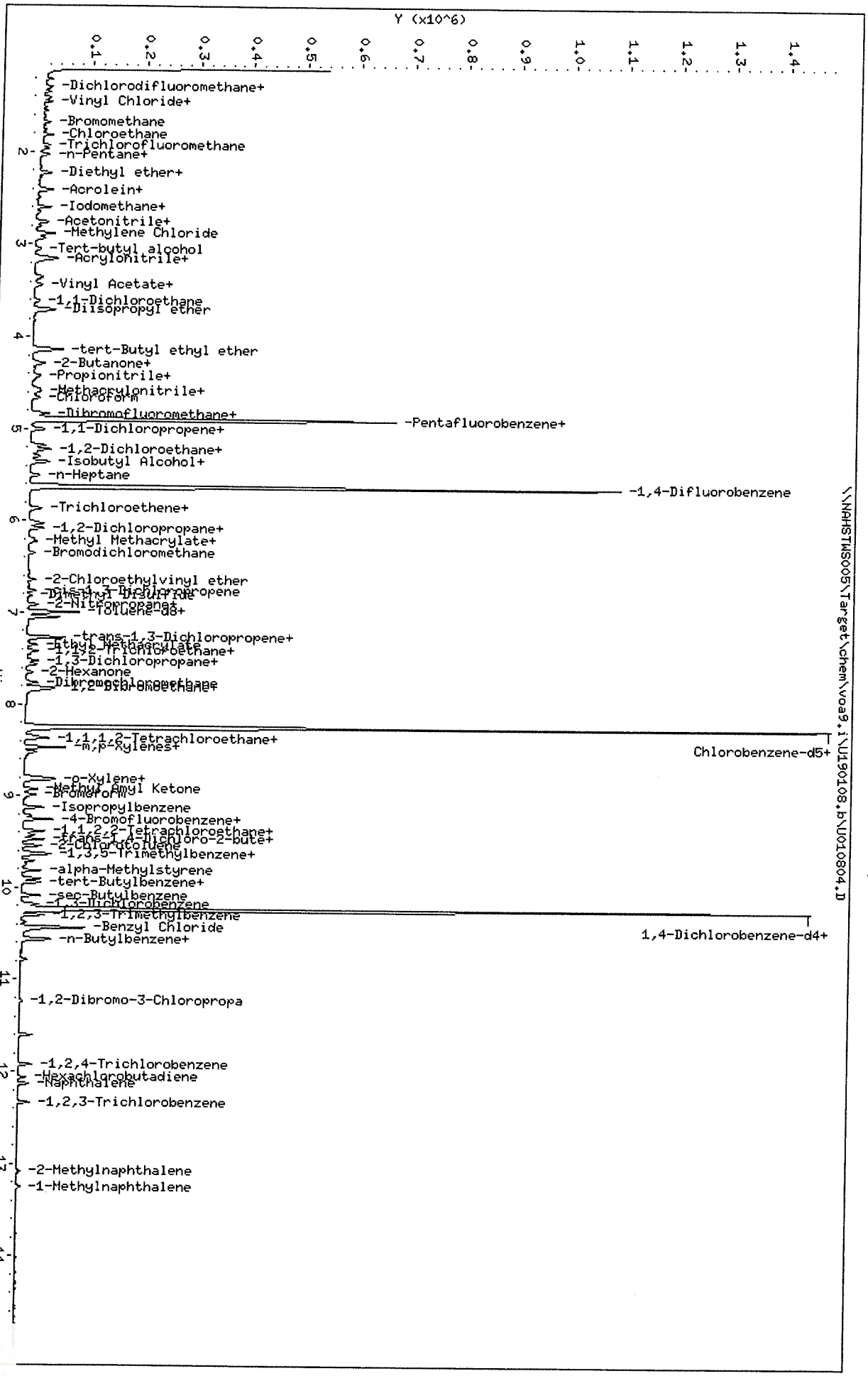
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	404016	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	770704	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	704578	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	321134	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	12087	1.00000	1.09(a)
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	17198	1.00000	0.78(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	48097	1.00000	0.29(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	17004	1.00000	0.68(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	4435	1.00000	1.04(a)
31 1,1,1-Trichloroethane	97	4.834	4.834	(0.987)	7366	1.00000	1.11(a)
68 1,1,2,2-Tetrachloroethane	83	9.389	9.389	(0.917)	8453	1.00000	0.81(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	4979	1.00000	1.15(a)
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	10439	1.00000	1.13(a)
11 1,1-Dichloroethene	96	2.412	2.412	(0.493)	4754	1.00000	1.21(a)
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	8431	1.00000	1.18(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	5627	1.00000	0.98(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	8049	1.00000	1.03(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	6029	1.00000	1.04(a)
79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	18064	1.00000	1.07(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	881	1.00000	2.82(a)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	5312	1.00000	1.08(a)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	11168	1.00000	1.14(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010804.D Page 2
Report Date: 01-Feb-2019 15:43

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	8732	1.00000	1.17(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	6305	1.00000	1.13(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	17525	1.00000	1.06(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	11334	1.00000	1.17(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	10722	1.00000	1.15(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	12438	1.00000	1.21(a)
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	6018	1.00000	1.09(a)
24 2-Butanone	43	4.350	4.350	(0.888)	5959	2.00000	2.13(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	17676	1.00000	1.15(a)
52 2-Hexanone	43	7.653	7.653	(0.928)	7345	2.00000	1.80(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	20313	1.00000	1.14(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	17792	1.00000	1.04(a)
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	11419	2.00000	1.94(a)
10 Acetone	43	2.491	2.491	(0.509)	5926	2.00000	1.80(a)
37 Benzene	78	5.220	5.220	(0.927)	25155	1.00000	1.18(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	5368	1.00000	1.07(a)
29 Bromochloromethane	128	4.560	4.560	(0.931)	2036	1.00000	0.91(a)
39 Bromodichloromethane	83	6.348	6.348	(1.128)	6215	1.00000	1.04(aM)
66 Bromoform	173	8.984	8.984	(1.089)	2493	1.00000	2.57(Ta)
6 Bromomethane	94	1.681	1.681	(0.343)	5371	1.00000	2.51(a)
19 Carbon Disulfide	76	2.600	2.600	(0.531)	32370	2.00000	2.34(a)
34 Carbon Tetrachloride	117	5.003	5.003	(0.889)	5317	1.00000	1.03(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	17004	1.00000	1.21(a)
7 Chloroethane	64	1.764	1.764	(0.360)	4108	1.00000	1.12(aM)
28 Chloroform	83	4.662	4.662	(0.952)	10150	1.00000	1.16(a)
3 Chloromethane	50	1.348	1.348	(0.275)	6743	1.00000	3.64(a)
27 cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	6440	1.00000	1.16(a)
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	7156	1.00000	2.08(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	3605	1.00000	1.97(a)
44 Dibromomethane	93	6.191	6.191	(1.100)	3631	1.00000	1.12(aM)
2 Dichlorodifluoromethane	85	1.217	1.217	(0.248)	6627	1.00000	1.24(a)
61 Ethylbenzene	106	8.373	8.373	(1.015)	8053	1.00000	1.13(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	2244	1.00000	1.43(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	21622	1.00000	1.06(a)
62 m,p-Xylenes	106	8.470	8.470	(1.027)	19399	2.00000	2.24(a)
17 Methylene Chloride	84	2.881	2.881	(0.588)	7653	1.00000	0.98(a)
87 n-Butylbenzene	91	10.555	10.555	(1.031)	17832	1.00000	1.07(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	27656	1.00000	1.11(a)
92 Naphthalene	128	12.133	12.133	(1.185)	13707	1.00000	1.39(a)
63 o-Xylene	106	8.811	8.811	(1.068)	9528	1.00000	1.07(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	21651	1.00000	1.06(a)
64 Styrene	104	8.826	8.826	(1.070)	15486	1.00000	1.05(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	15596	1.00000	1.09(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	4447	1.00000	1.20(a)
50 Toluene	91	7.049	7.049	(0.855)	24575	1.00000	1.13(a)
20 trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	5803	1.00000	1.17(a)
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	5824	1.00000	2.32(a)
38 Trichloroethene	130	5.865	5.865	(1.042)	6121	1.00000	1.24(a)
8 Trichlorofluoromethane	101	1.966	1.966	(0.402)	7890	1.00000	1.16(a)
5 Vinyl Chloride	62	1.430	1.430	(0.292)	7112	1.00000	1.18(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.



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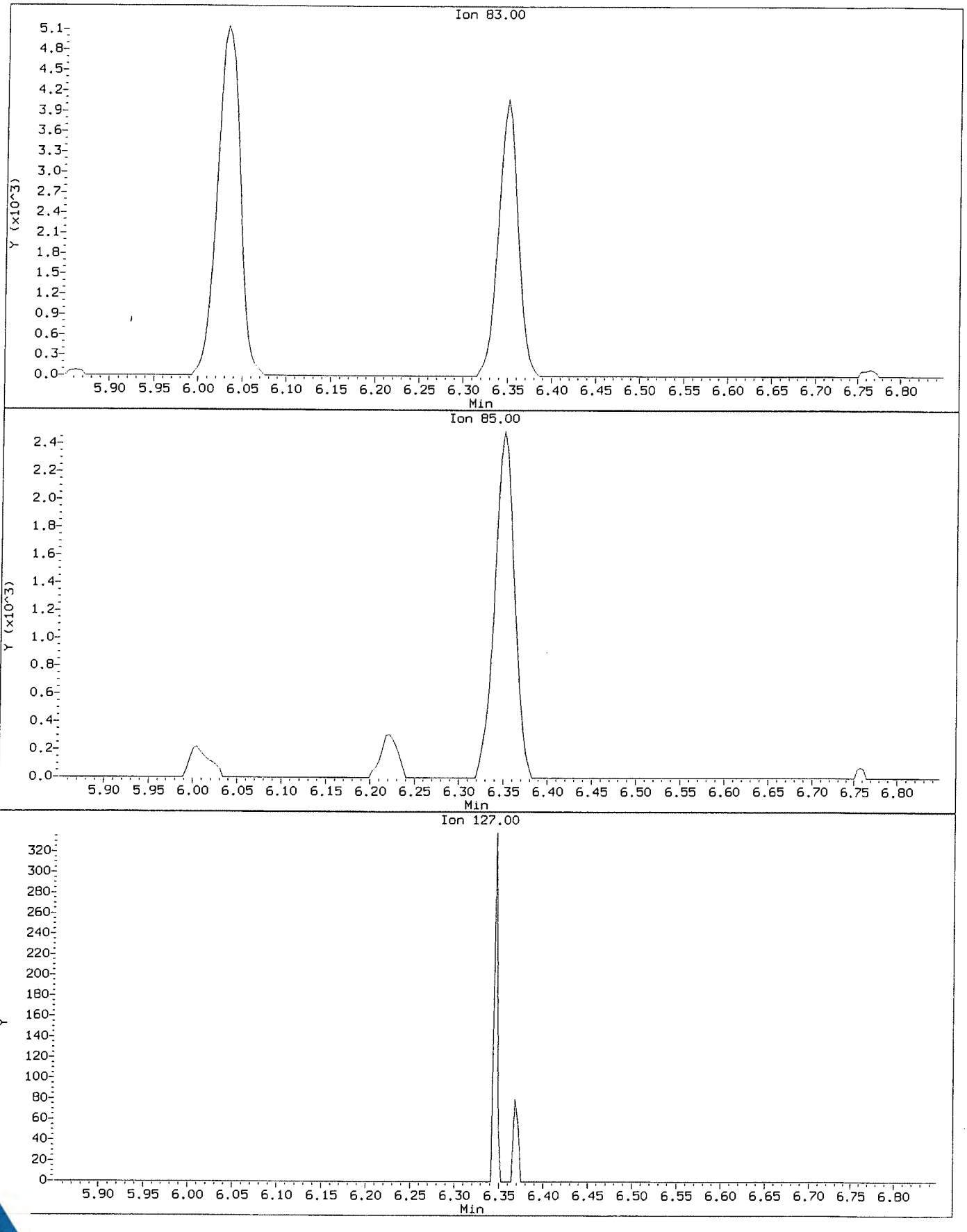
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9,i\U190108,b\U010804.D

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010804.D
Injection Date: 08-JAN-2019 12:07
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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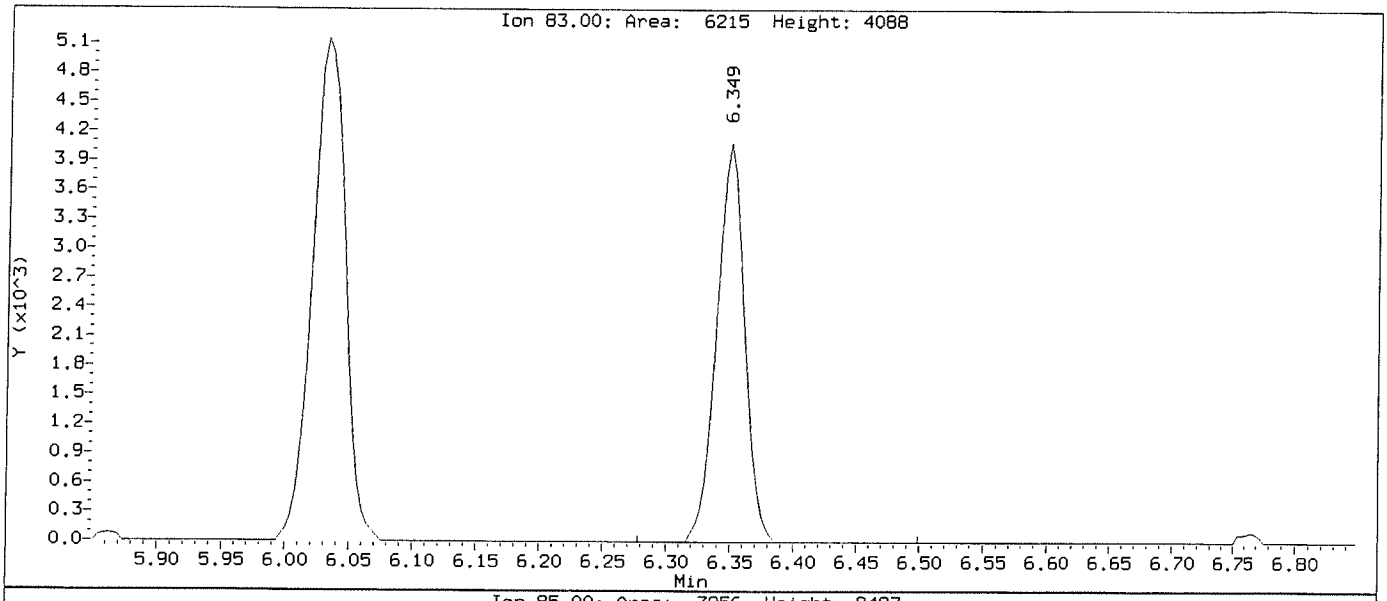
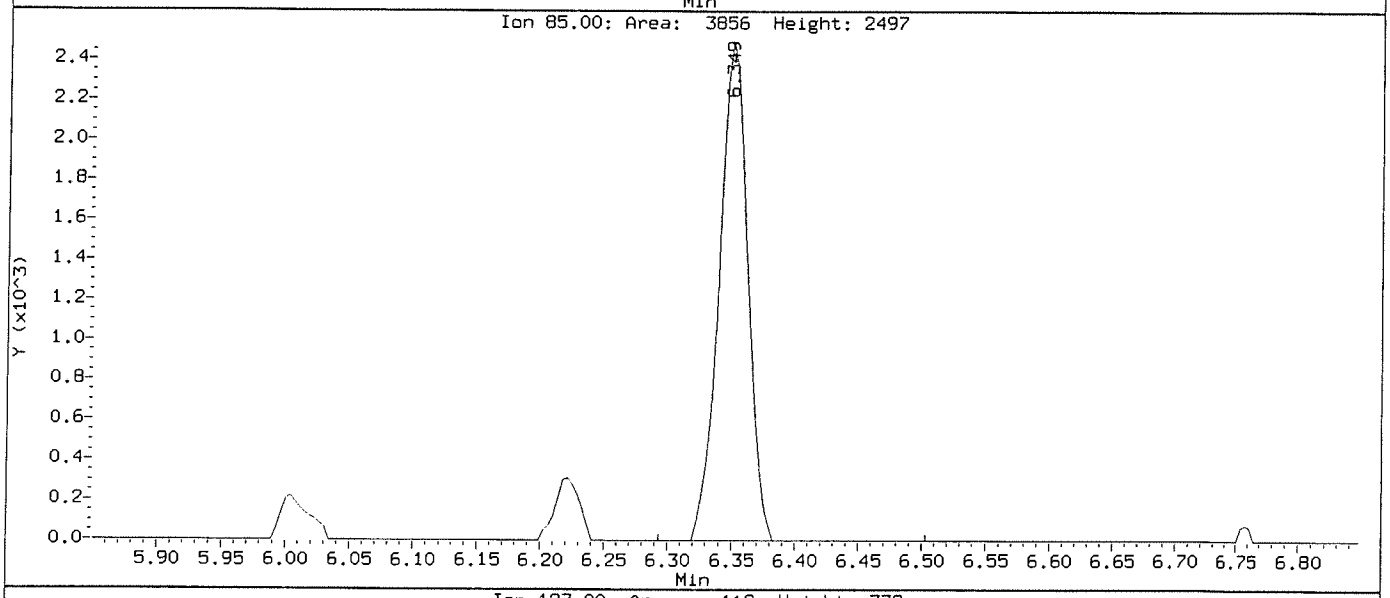
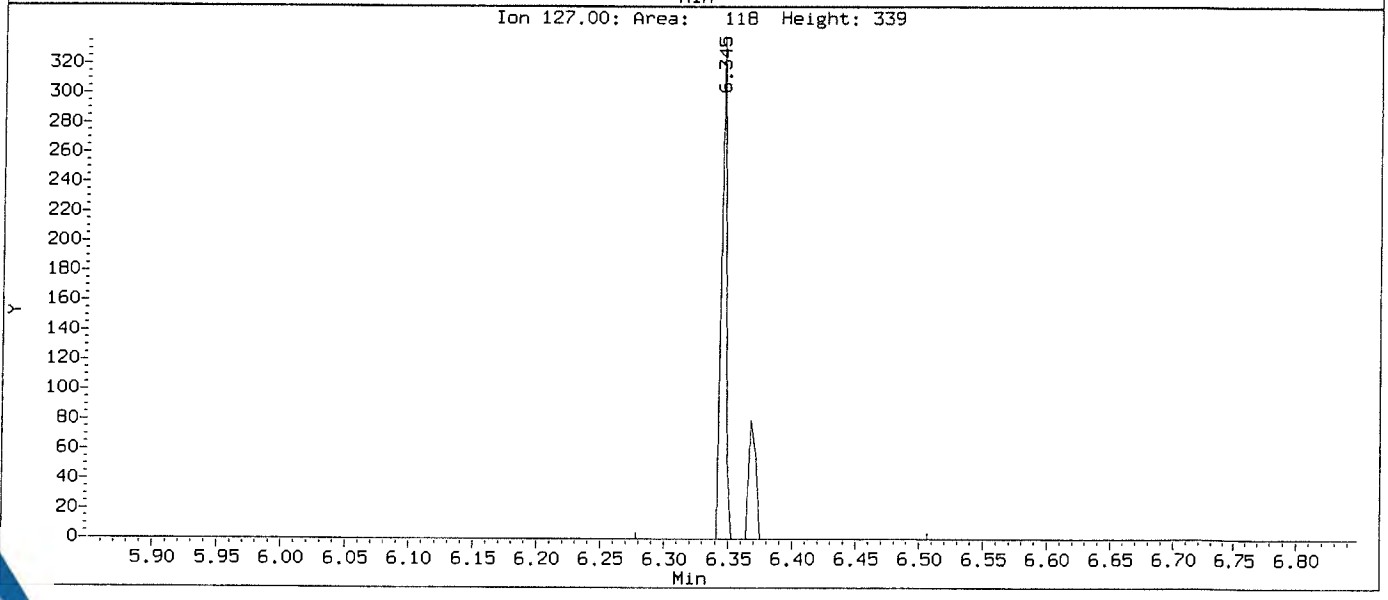
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4







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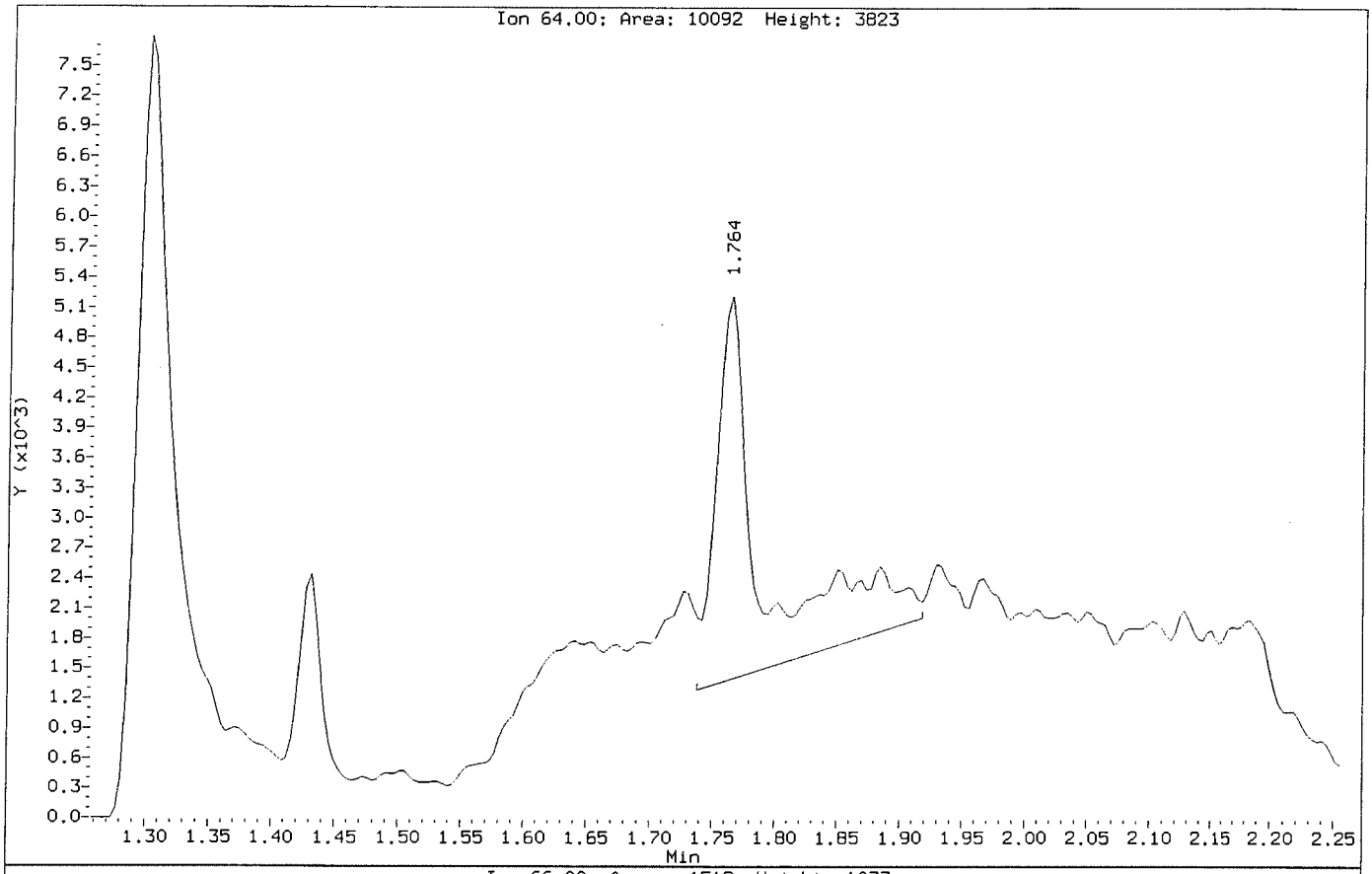
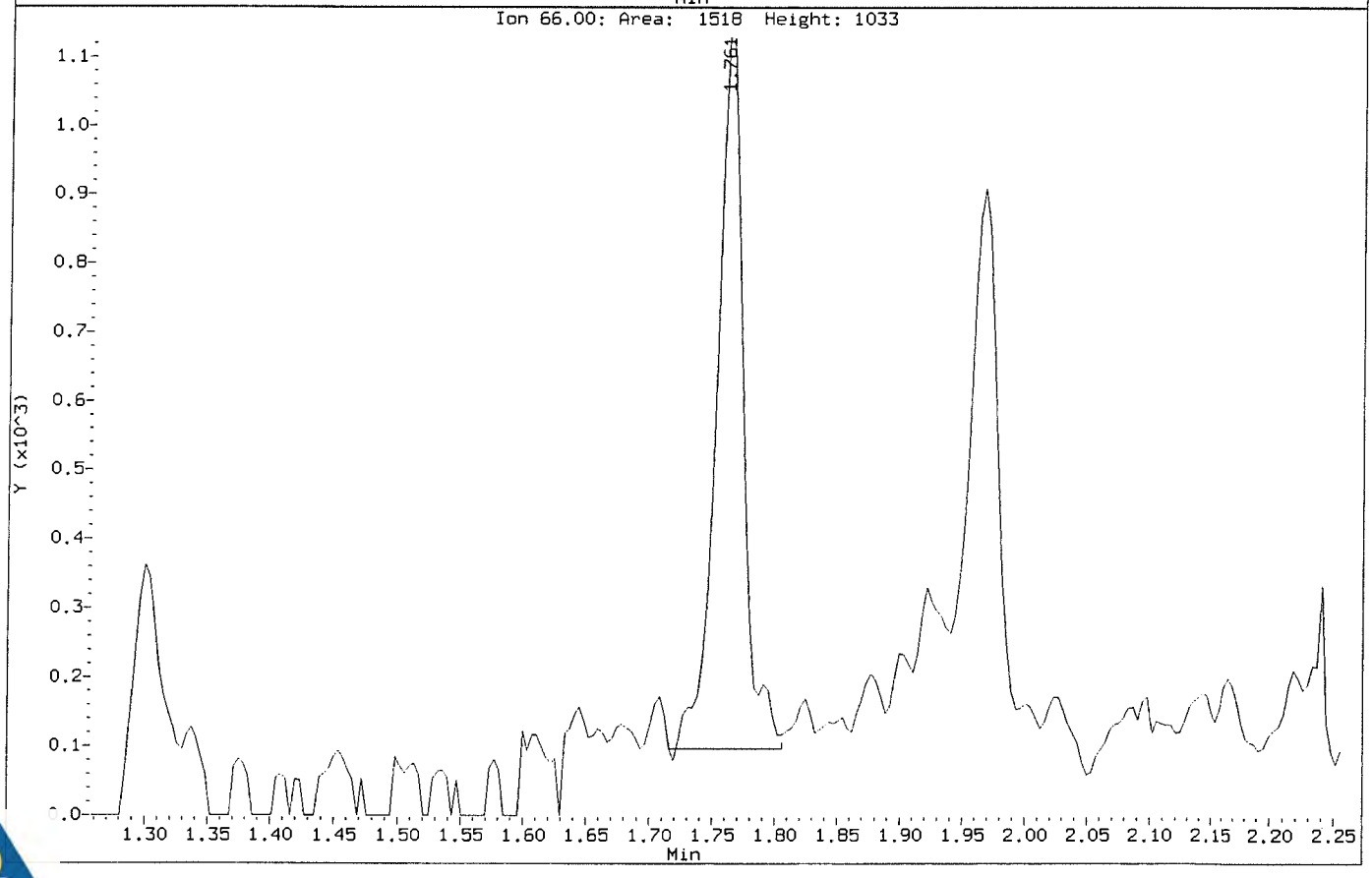
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3





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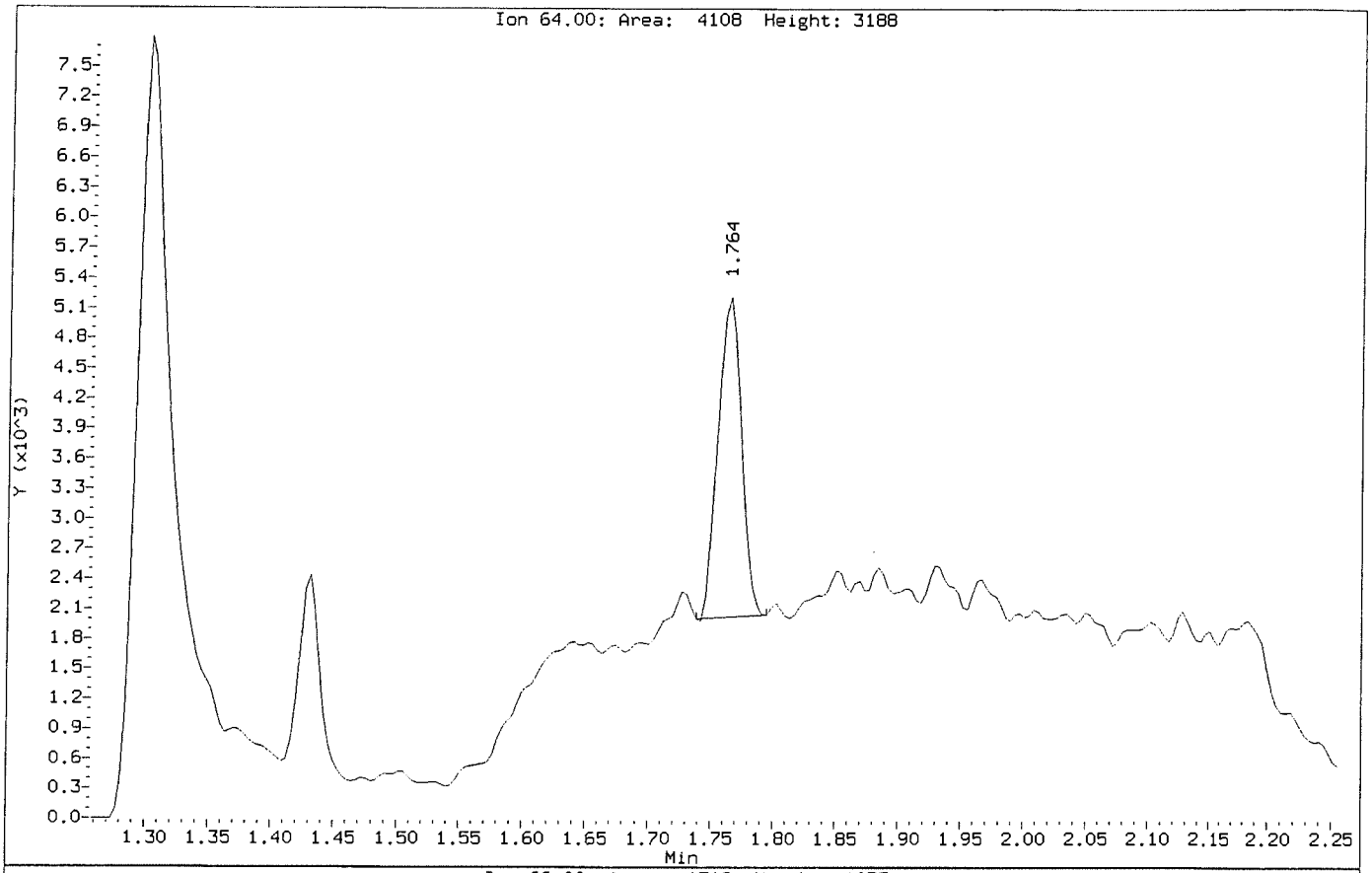
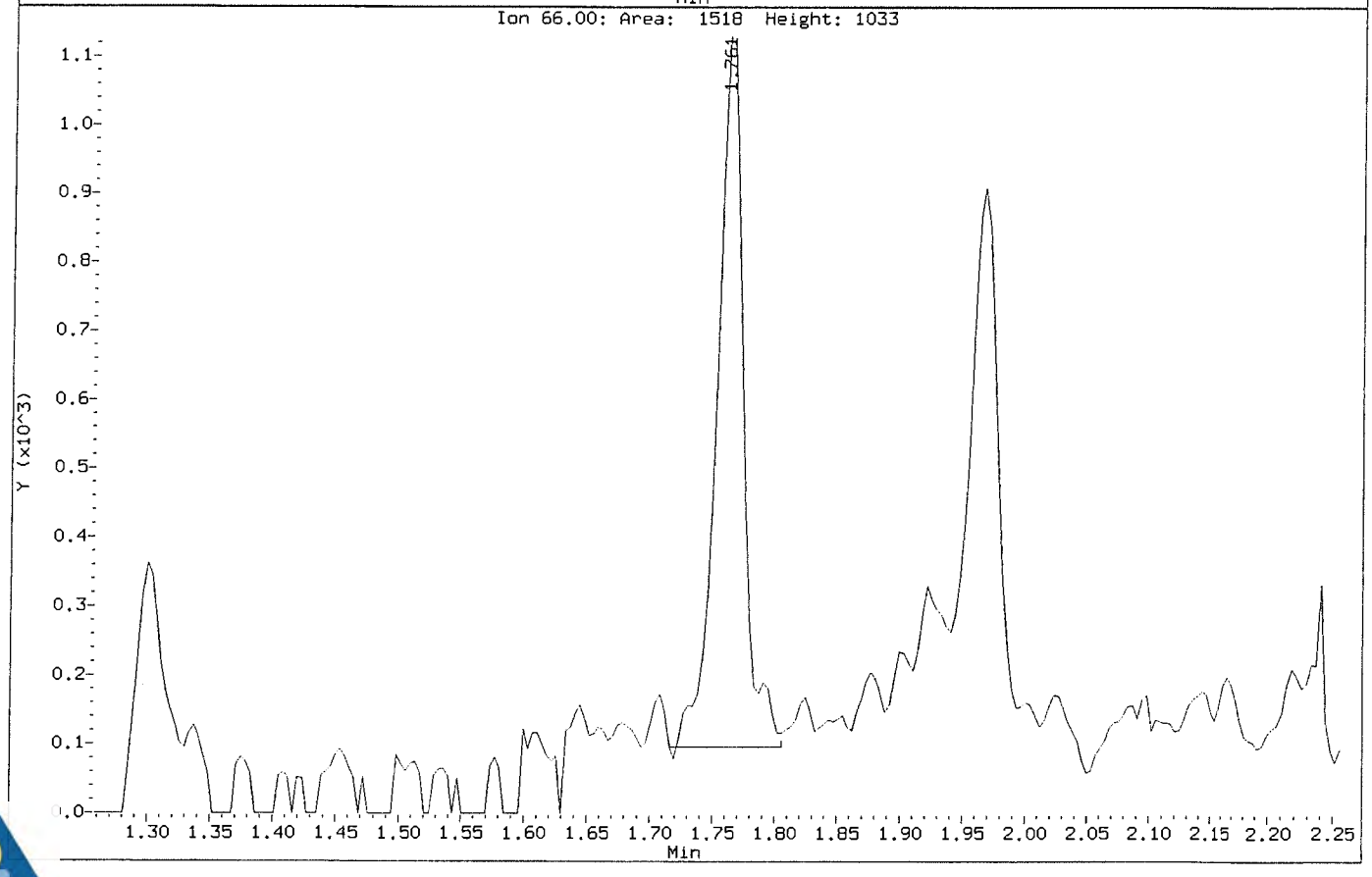
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3





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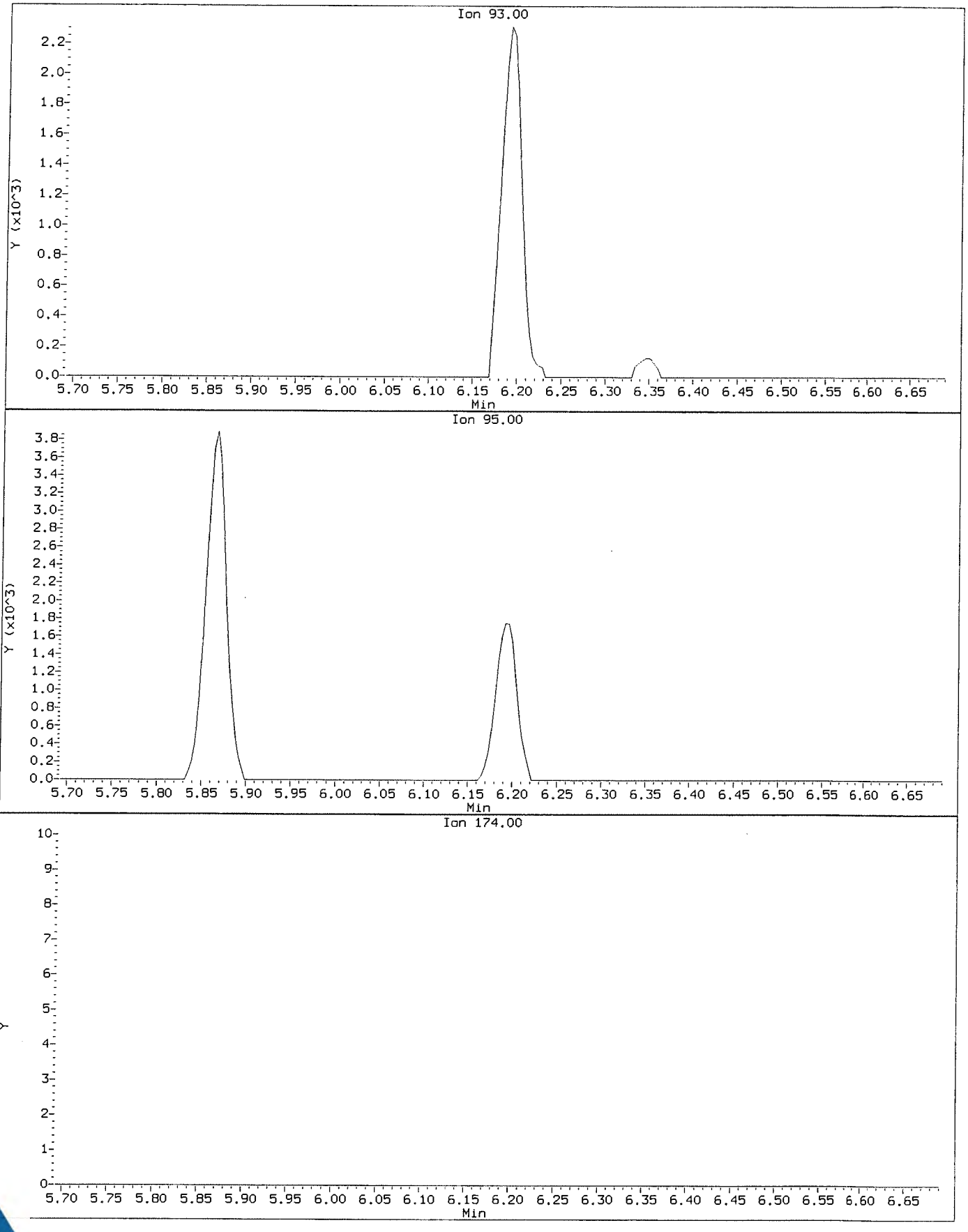
Injection Date: 08-JAN-2019 12:07
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3



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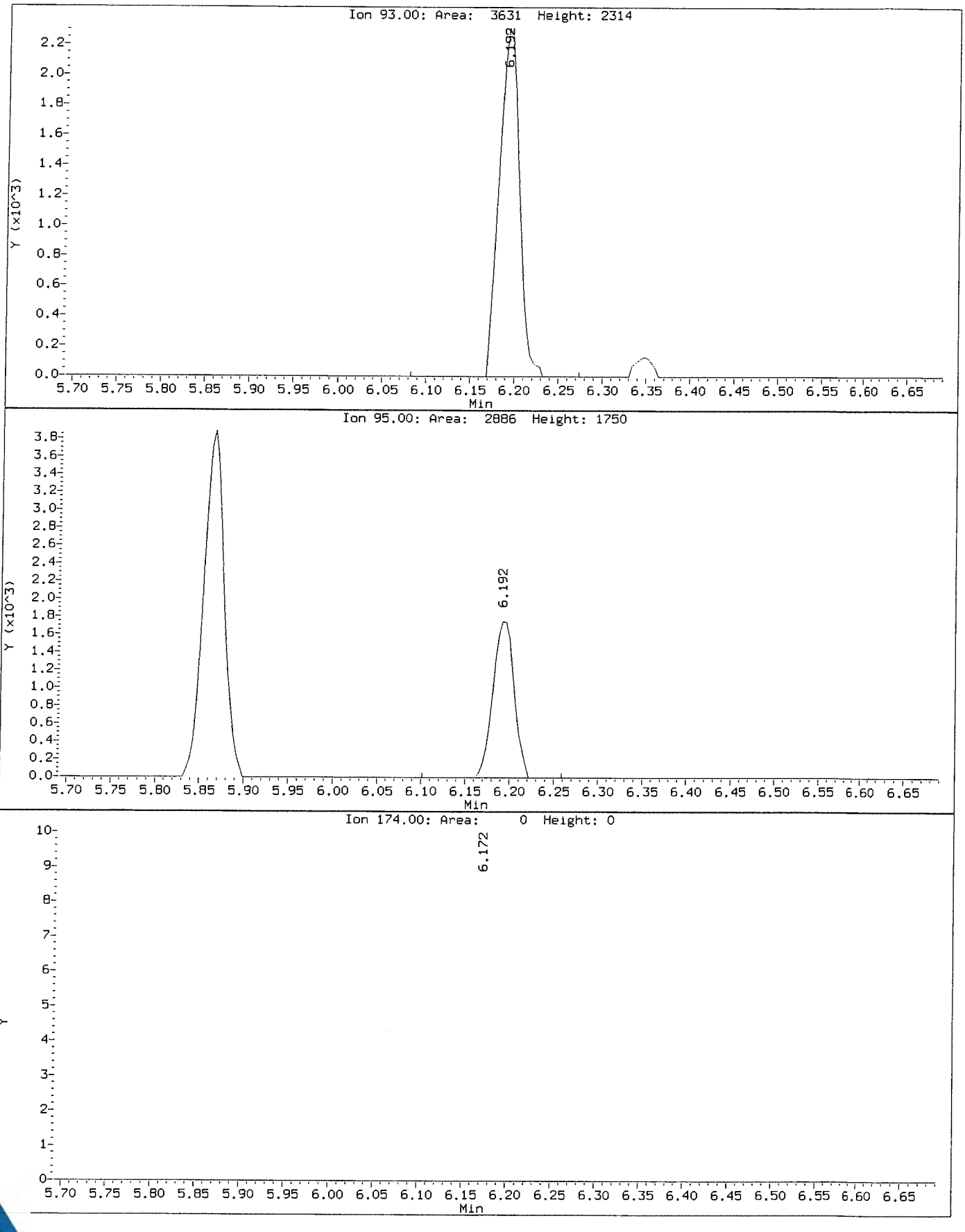
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010805.D Page 1
Report Date: 01-Feb-2019 15:43

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010805.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 08-JAN-2019 12:32
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 12:07 Cal File: U010804.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

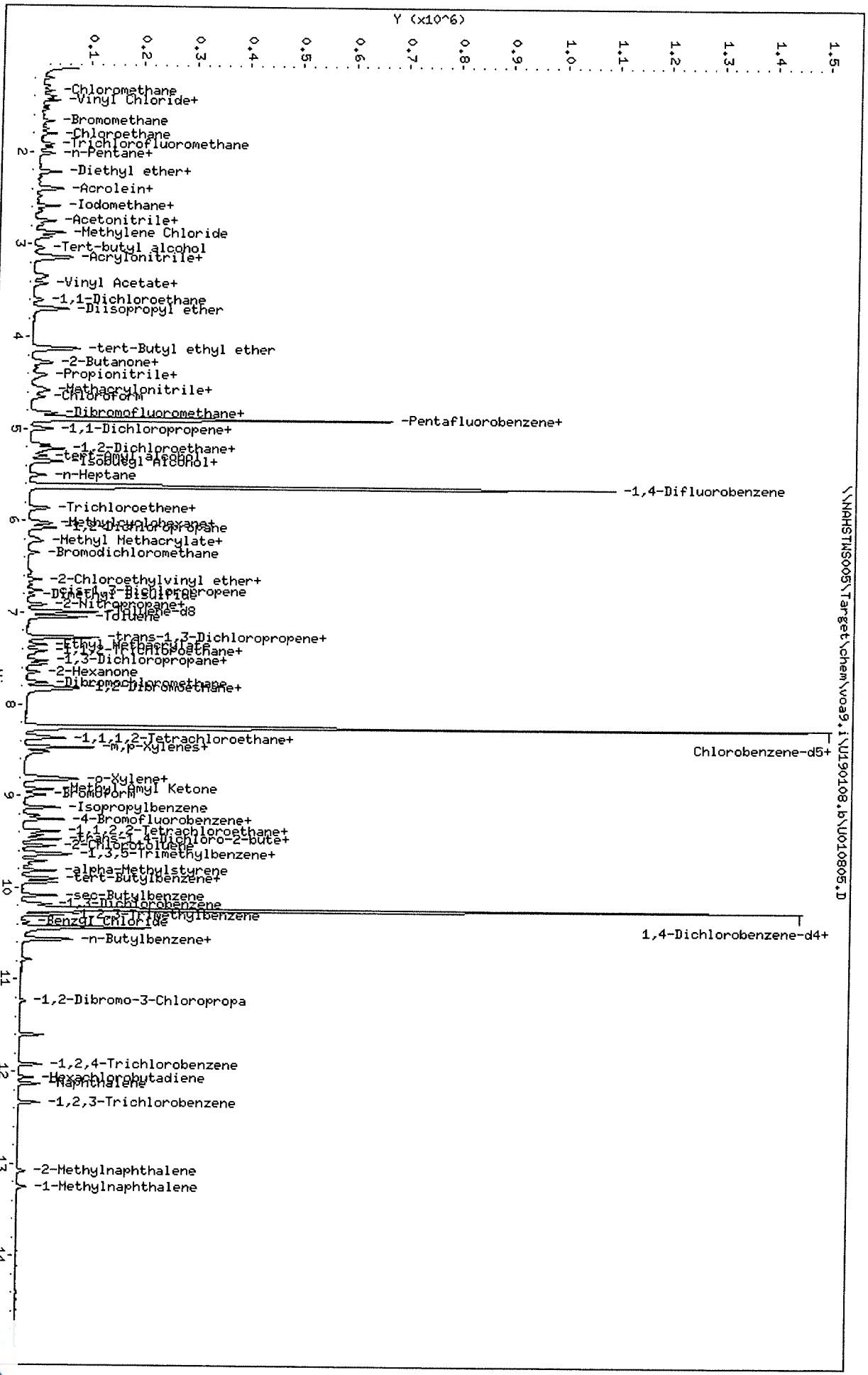
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	411388	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	781780	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	711339	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	327173	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.826	(0.986)	16204	2.00000	1.96(a)
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	22691	2.00000	1.67(a)
$ 48 Toluene-d8	98	6.986	6.986	(0.847)	65875	2.00000	1.28(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	23062	2.00000	1.56(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	8129	2.00000	1.89(a)
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	12397	2.00000	1.83(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	15238	2.00000	1.71(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	8646	2.00000	1.98(a)
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	18128	2.00000	1.93(a)
11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	8089	2.00000	2.03(a)
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	14077	2.00000	1.94(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	11082	2.00000	1.90(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	14015	2.00000	1.77(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	10799	2.00000	1.83(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	32293	2.00000	1.87(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	1607	2.00000	3.40(a)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	9729	2.00000	1.96(a)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	19936	2.00000	2.00(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	15308	2.00000	2.02(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	10932	2.00000	1.94(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	31100	2.00000	1.85(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	19150	2.00000	1.94(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	18409	2.00000	1.96(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	20771	2.00000	1.98(a)
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	10615	2.00000	1.89(a)
24 2-Butanone	43	4.343	4.343	(0.887)	10679	4.00000	3.75(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	30026	2.00000	1.93(a)
52 2-Hexanone	43	7.649	7.649	(0.927)	14671	4.00000	3.57(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	35027	2.00000	1.93(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	32429	2.00000	1.86(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	21707	4.00000	3.66(a)
10 Acetone	43	2.476	2.476	(0.506)	8715	4.00000	3.33(a)
37 Benzene	78	5.216	5.216	(0.927)	42681	2.00000	1.98(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	9942	2.00000	1.94(a)
29 Bromochloromethane	128	4.549	4.549	(0.930)	4787	2.00000	2.11(a)
39 Bromodichloromethane	83	6.348	6.348	(1.129)	11132	2.00000	1.83(aM)
66 Bromoform	173	8.984	8.984	(1.089)	4283	2.00000	3.12(Ta)
6 Bromomethane	94	1.670	1.670	(0.341)	8201	2.00000	3.38(a)
19 Carbon Disulfide	76	2.585	2.585	(0.528)	54864	4.00000	3.89(a)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	9328	2.00000	1.78(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	28361	2.00000	1.99(a)
7 Chloroethane	64	1.749	1.749	(0.357)	8411	2.00000	2.26(aM)
28 Chloroform	83	4.654	4.654	(0.951)	17506	2.00000	1.97(a)
3 Chloromethane	50	1.336	1.336	(0.273)	11251	2.00000	4.40(a)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	10808	2.00000	1.92(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	13084	2.00000	2.70(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	6755	2.00000	2.61(a)
44 Dibromomethane	93	6.187	6.187	(1.100)	6107	2.00000	1.85(aM)
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	10985	2.00000	2.02(a)
61 Ethylbenzene	106	8.369	8.369	(1.015)	13549	2.00000	1.89(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	4288	2.00000	2.38(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	39125	2.00000	1.91(a)
62 m,p-Xylenes	106	8.470	8.470	(1.027)	33013	4.00000	3.78(a)
17 Methylene Chloride	84	2.870	2.870	(0.586)	11877	2.00000	1.76(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	32867	2.00000	1.94(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	48396	2.00000	1.91(a)
92 Naphthalene	128	12.133	12.133	(1.185)	27018	2.00000	2.04(a)
63 o-Xylene	106	8.811	8.811	(1.068)	17076	2.00000	1.91(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	40095	2.00000	1.93(a)
64 Styrene	104	8.823	8.823	(1.070)	27152	2.00000	1.83(a)
78 tert-Butylbenzene	119	9.898	9.898	(0.967)	28296	2.00000	1.95(a)
56 Tetrachloroethene	164	7.522	7.522	(0.912)	7657	2.00000	2.04(a)
50 Toluene	91	7.046	7.046	(0.854)	42945	2.00000	1.96(a)
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	9537	2.00000	1.90(a)
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	10454	2.00000	2.88(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	9990	2.00000	2.00(a)
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	13385	2.00000	1.94(a)
5 Vinyl Chloride	62	1.415	1.415	(0.289)	11713	2.00000	1.91(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.



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Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010805.D

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010805.D
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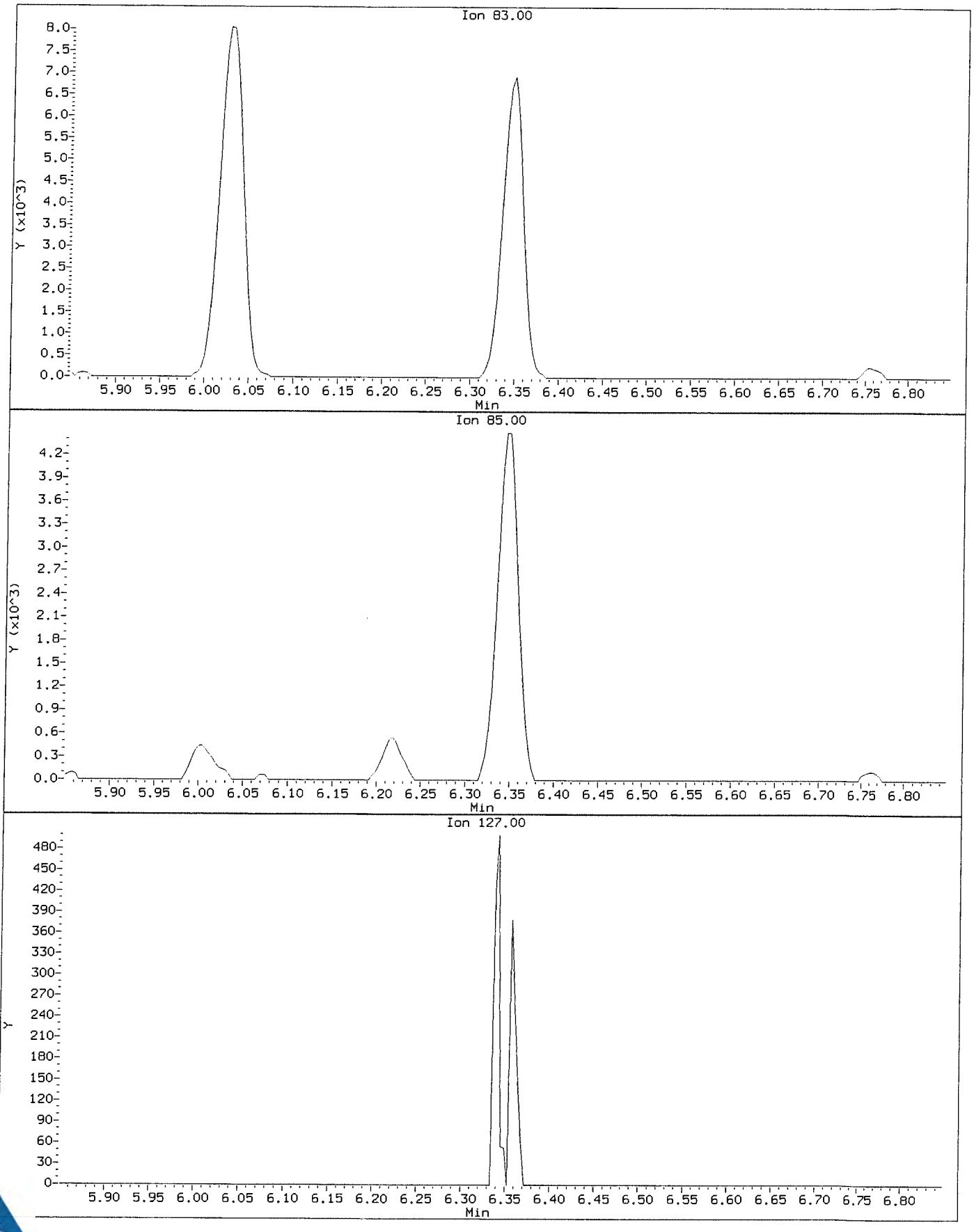
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Bromodichloromethane
CAS Number: 75-27-4



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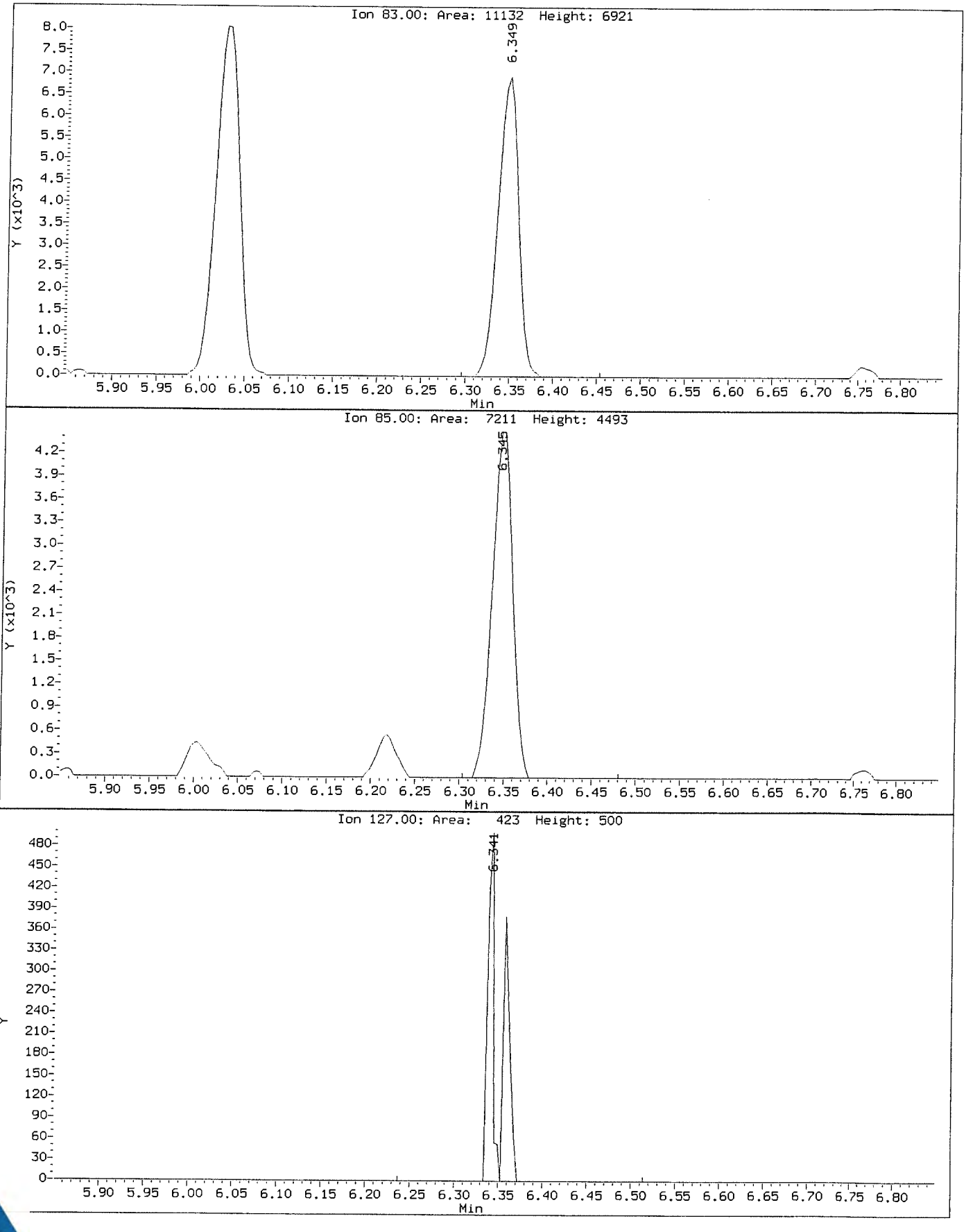
Compound: Bromodichloromethane
CAS Number: 75-27-4



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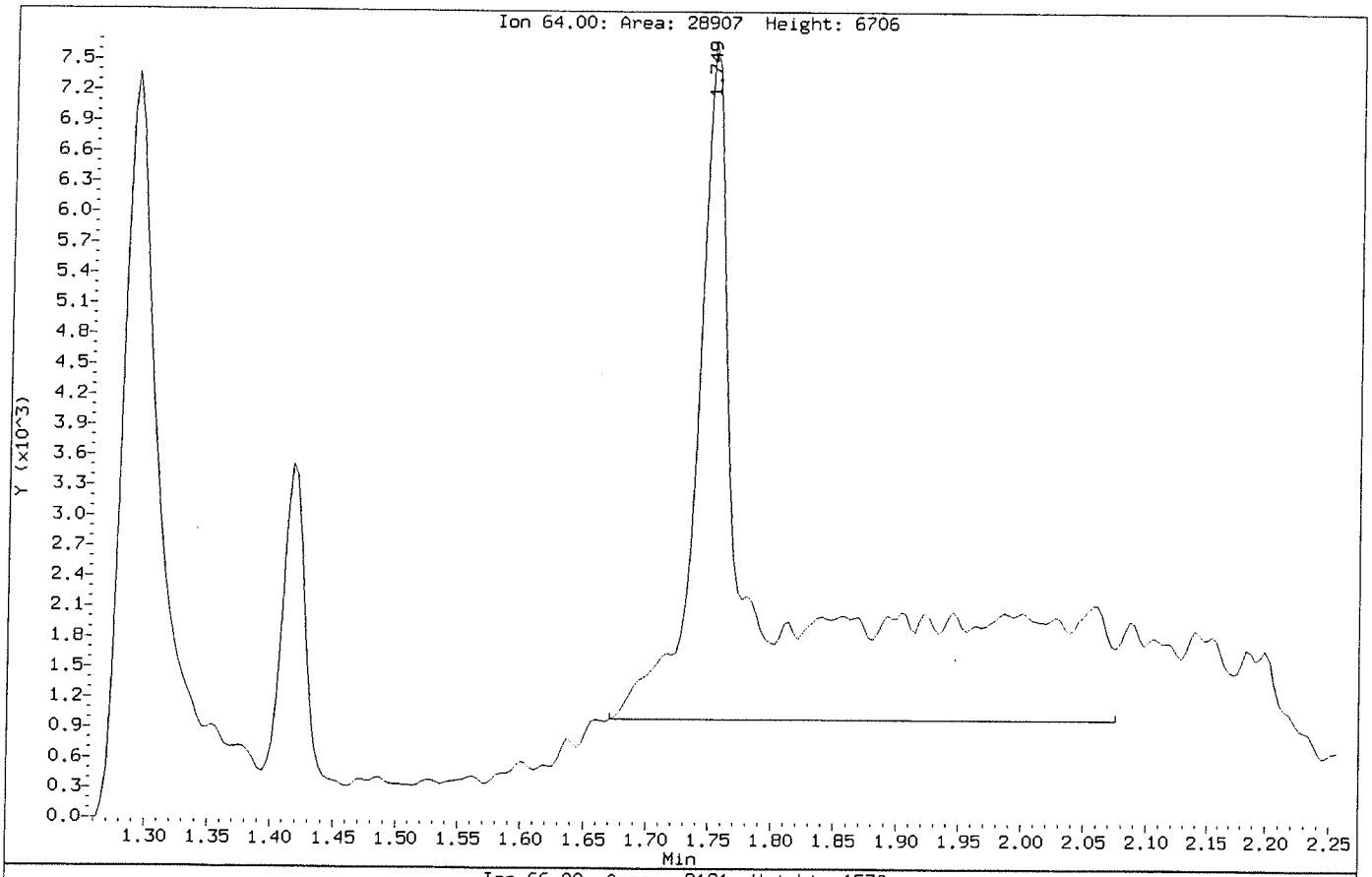
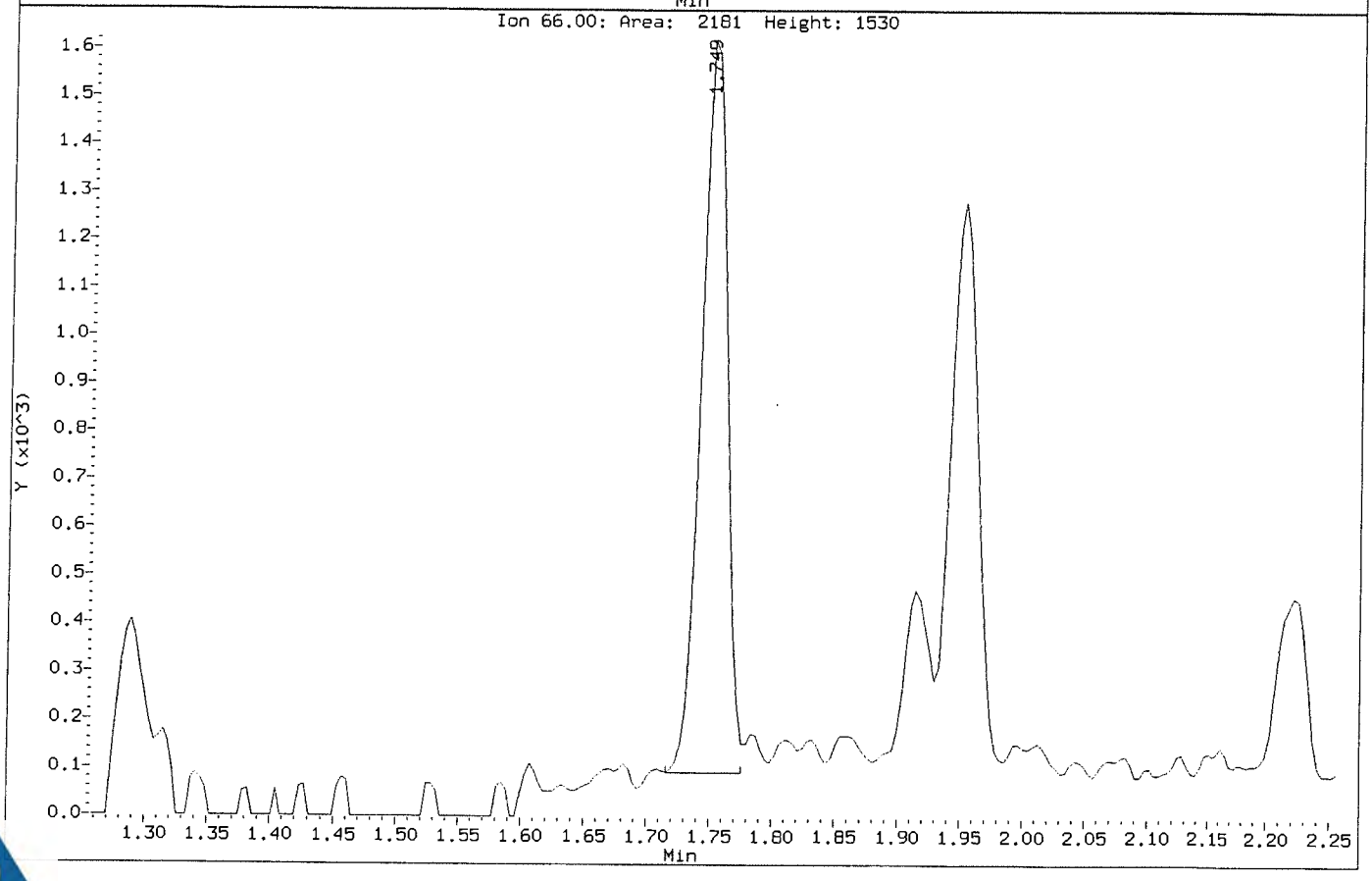
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3





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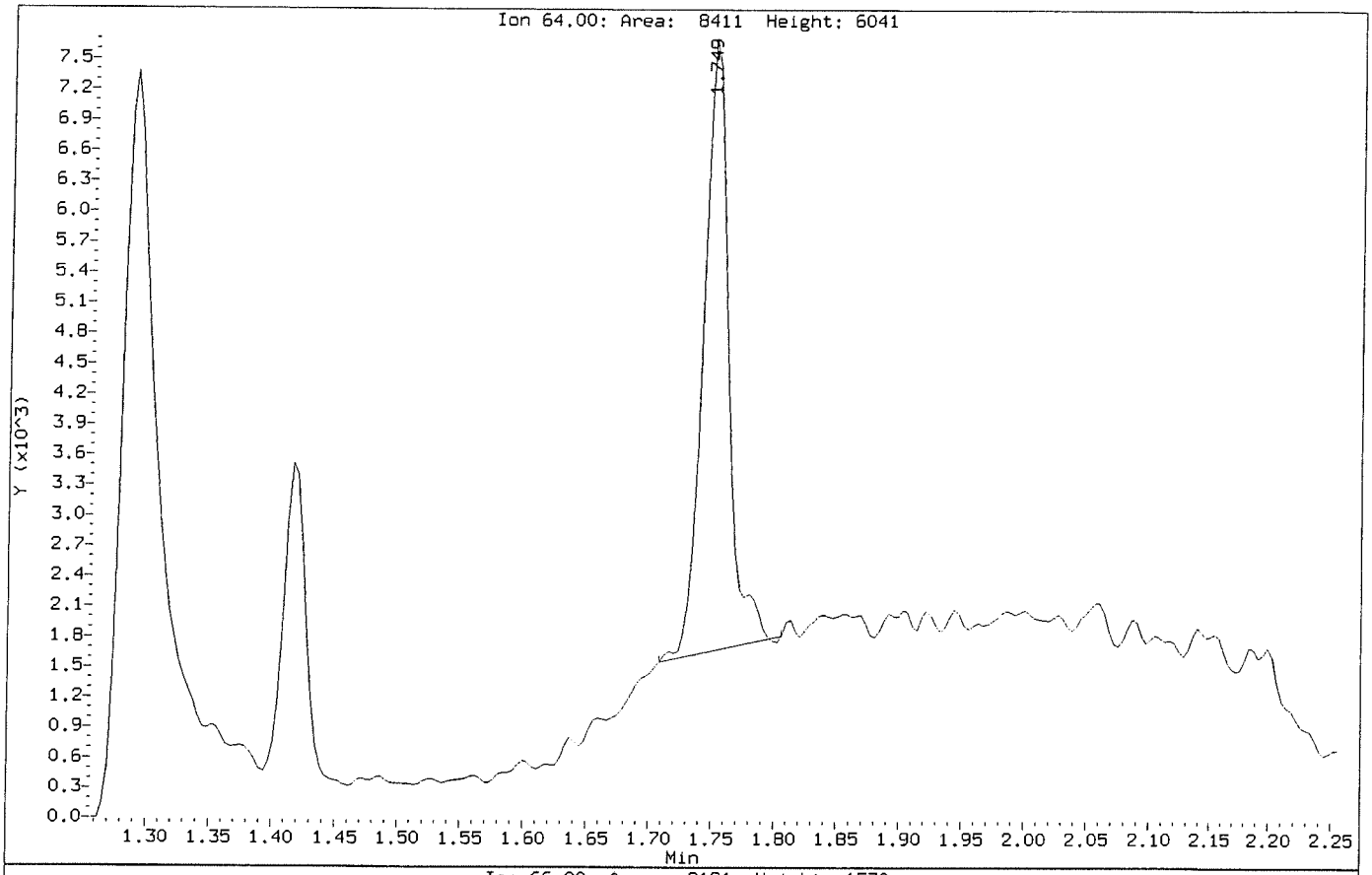
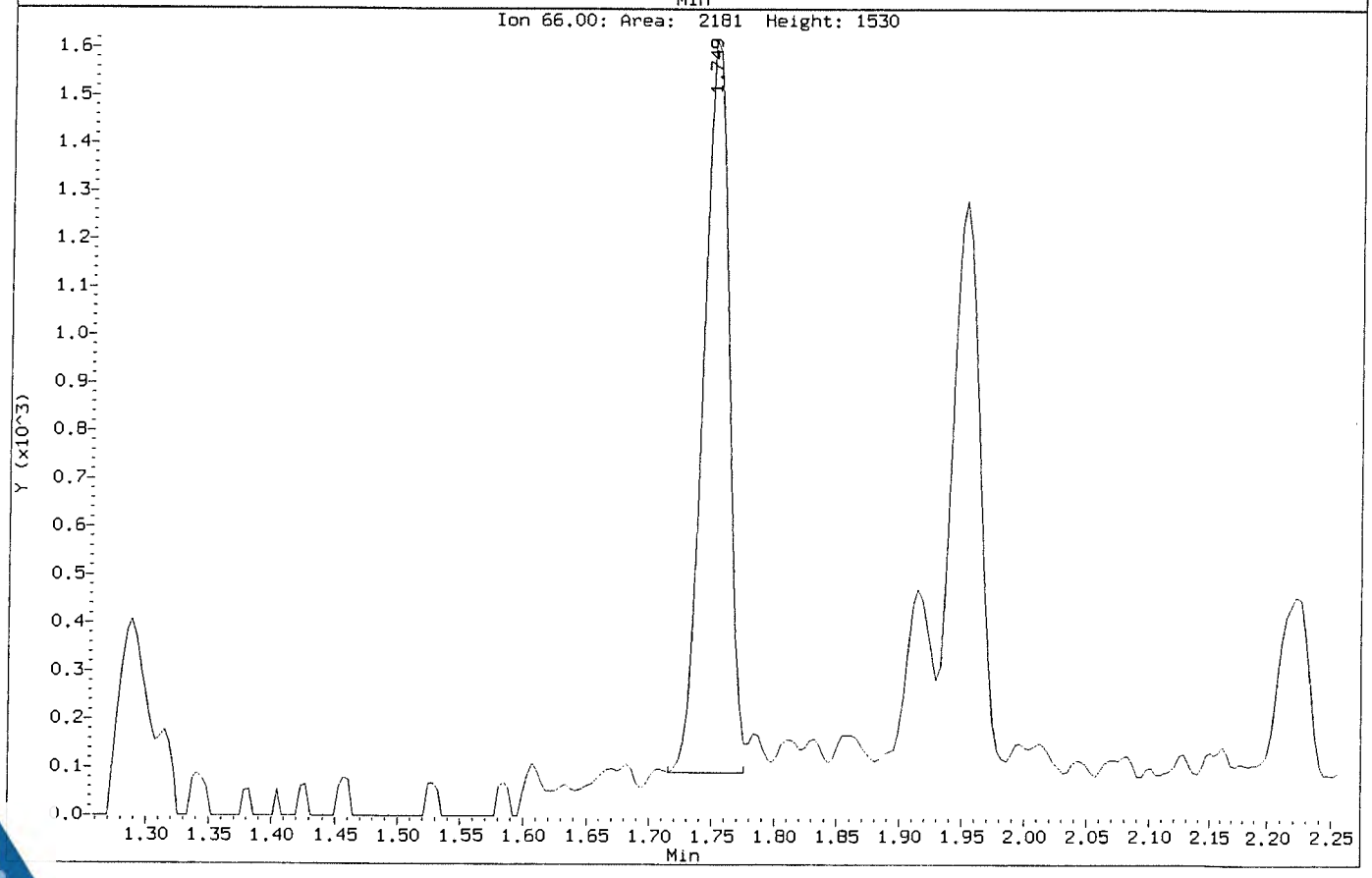
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3





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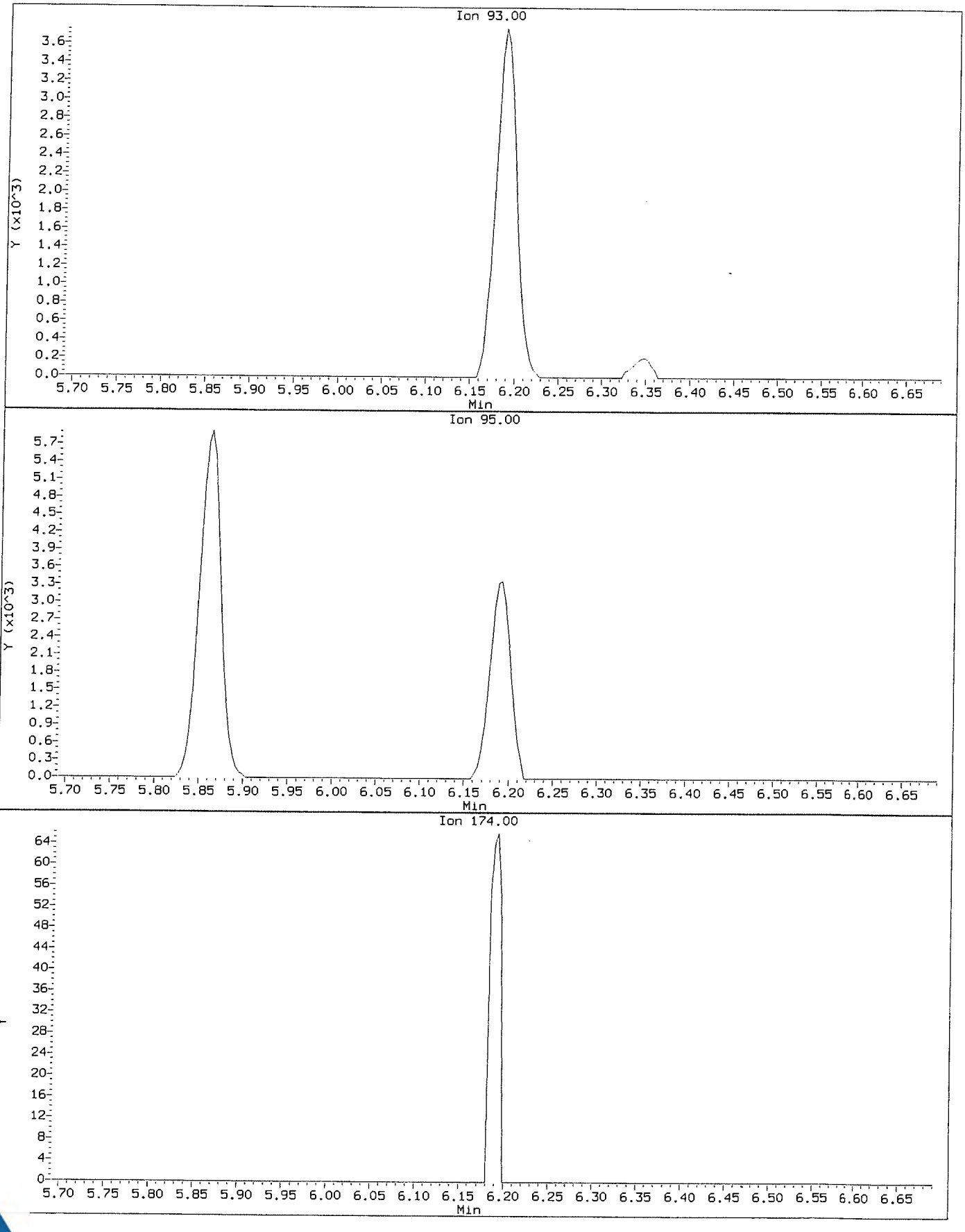
Injection Date: 08-JAN-2019 12:32
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3



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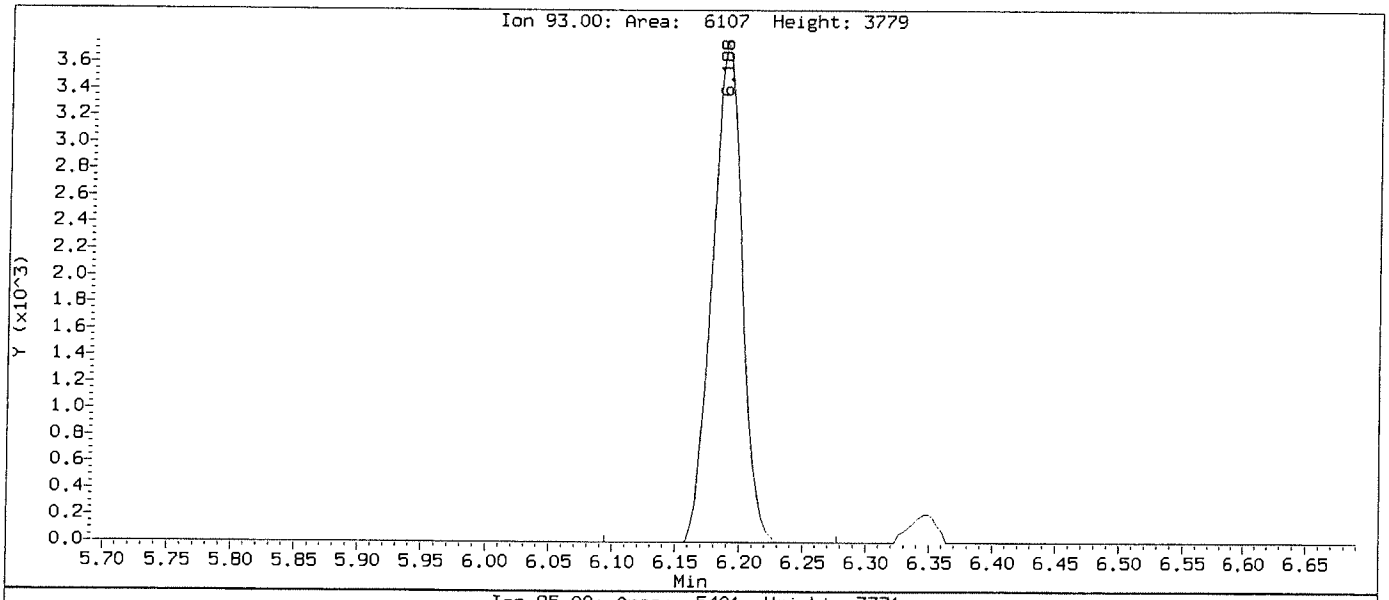
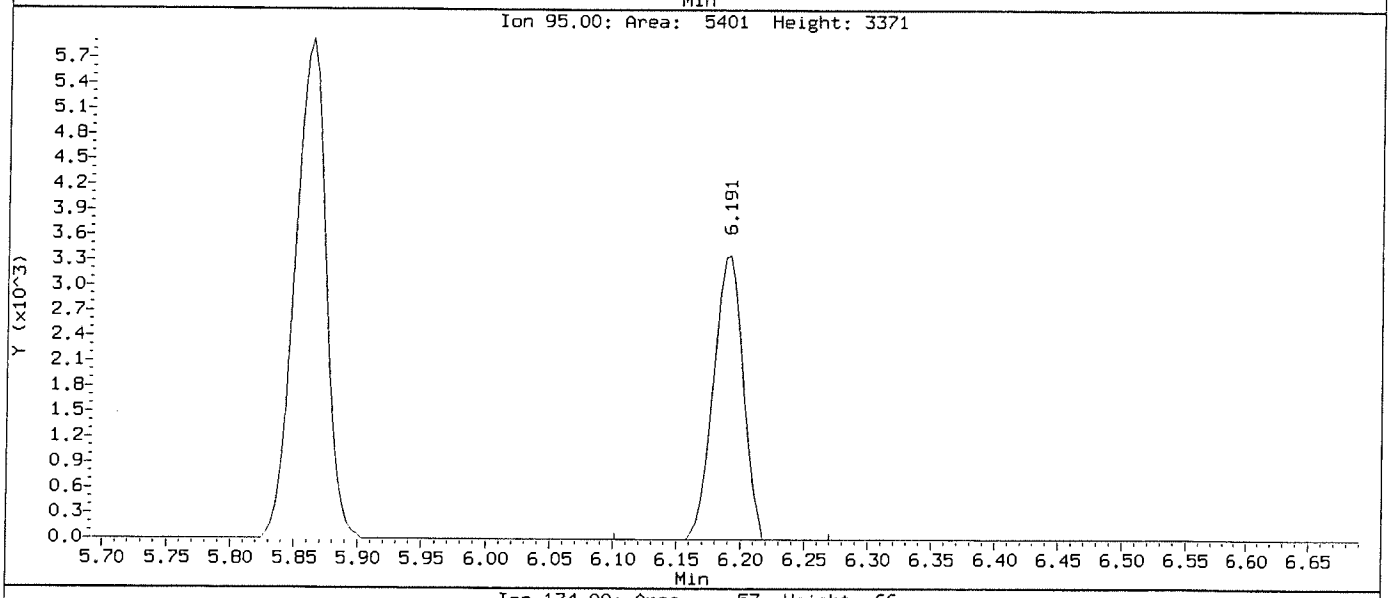
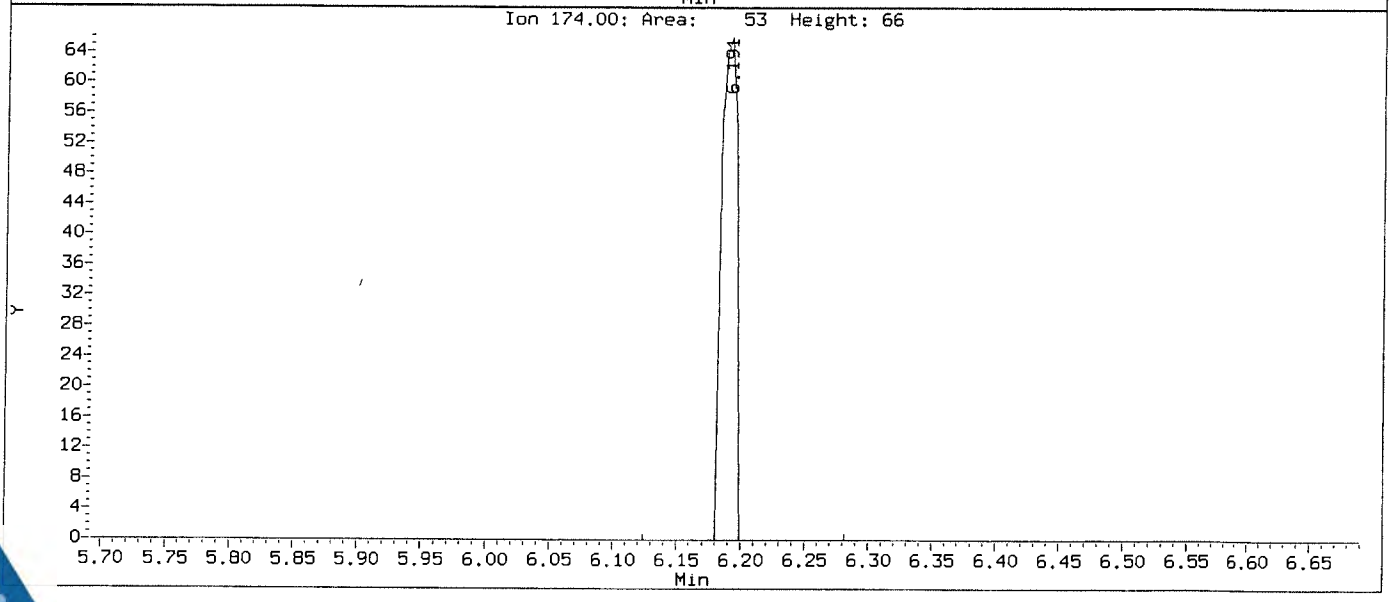
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3







Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D Page 1
Report Date: 01-Feb-2019 15:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D
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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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 12:32 Cal File: U010805.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

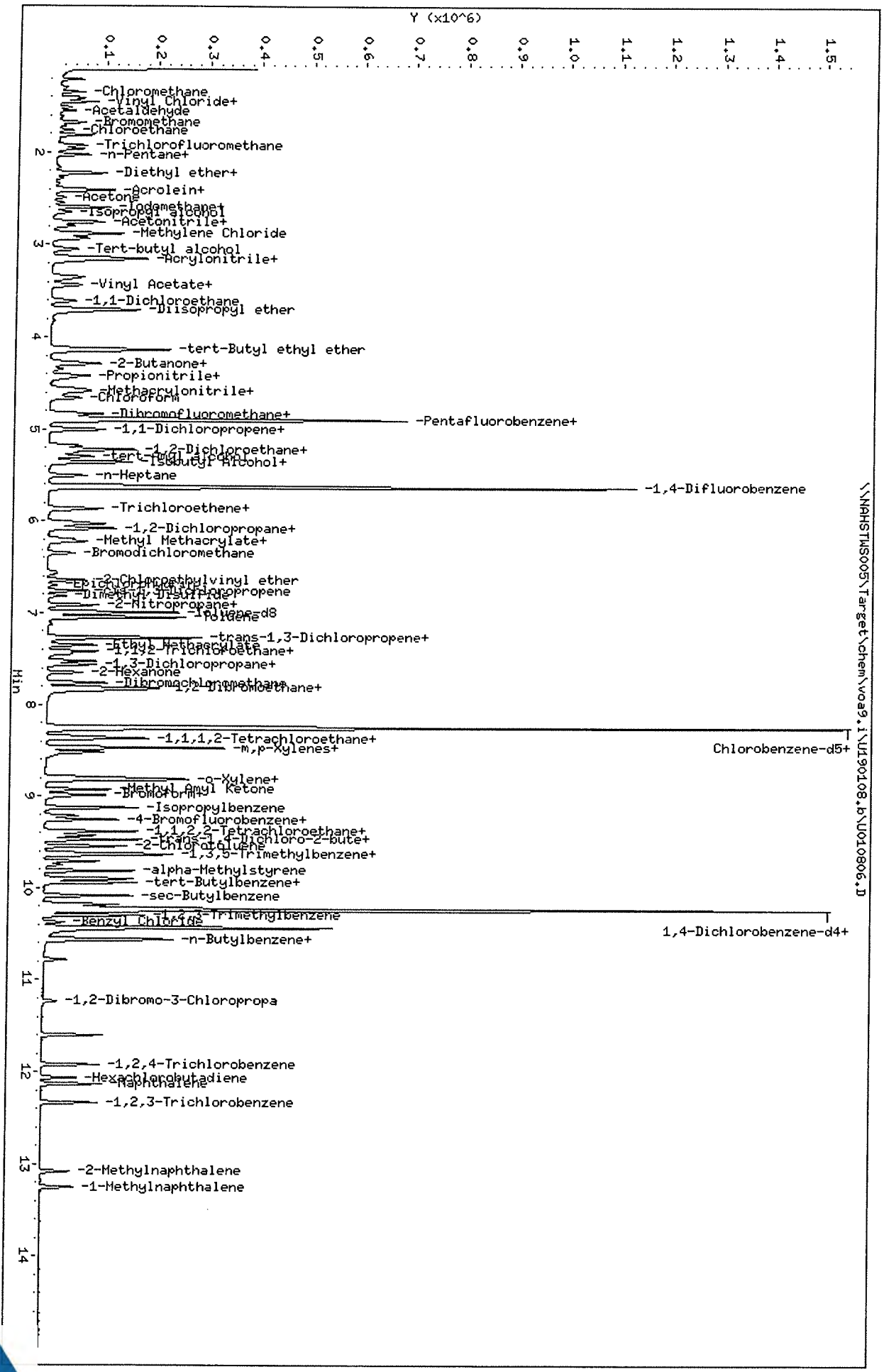
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	405638	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	777213	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	712128	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	333957	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	29602	5.00000	5.02
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	40286	5.00000	4.80(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	119933	5.00000	4.34(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	43652	5.00000	4.61(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	19854	5.00000	4.61(a)
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	32499	5.00000	4.89(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	38499	5.00000	4.78(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	22485	5.00000	5.15
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	46642	5.00000	5.05
11 1,1-Dichloroethene	96	2.409	2.409	(0.492)	19649	5.00000	5.02
32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	34745	5.00000	4.83(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	28573	5.00000	4.80(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	38197	5.00000	4.73(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	30102	5.00000	5.00
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	88744	5.00000	5.05
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	4313	5.00000	5.55
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	24841	5.00000	5.00
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	50465	5.00000	4.97(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	38061	5.00000	5.06
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	27875	5.00000	4.98(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	85261	5.00000	4.97(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	50290	5.00000	4.99(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	48349	5.00000	5.14
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	52430	5.00000	4.91(a)
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	25547	5.00000	4.62(a)
24 2-Butanone	43	4.347	4.347	(0.887)	27636	10.0000	9.84
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	79748	5.00000	5.02
52 2-Hexanone	43	7.649	7.649	(0.927)	39211	10.0000	9.54
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	93282	5.00000	5.05
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	85940	5.00000	4.83(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	57873	10.0000	9.77
10 Acetone	43	2.487	2.487	(0.508)	20388	10.0000	10.16
37 Benzene	78	5.220	5.220	(0.927)	107806	5.00000	5.04
74 Bromobenzene	156	9.381	9.381	(0.917)	25880	5.00000	4.96(a)
29 Bromochloromethane	128	4.557	4.557	(0.930)	12768	5.00000	5.72
39 Bromodichloromethane	83	6.348	6.348	(1.128)	28624	5.00000	4.75(a)
66 Bromoform	173	8.984	8.984	(1.089)	11809	5.00000	5.45(T)
6 Bromomethane	94	1.681	1.681	(0.343)	18180	5.00000	6.66
19 Carbon Disulfide	76	2.596	2.596	(0.530)	134704	10.0000	9.70
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	23952	5.00000	4.60(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	71313	5.00000	5.02
7 Chloroethane	64	1.760	1.760	(0.359)	17395	5.00000	4.75(aM)
28 Chloroform	83	4.662	4.662	(0.952)	44943	5.00000	5.13
3 Chloromethane	50	1.348	1.348	(0.275)	26856	5.00000	7.17
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	27531	5.00000	4.96(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.200)	36876	5.00000	5.27
55 Dibromochloromethane	129	7.758	7.758	(0.940)	19557	5.00000	5.22
44 Dibromomethane	93	6.191	6.191	(1.100)	16911	5.00000	5.17(M)
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	25193	5.00000	4.69(a)
61 Ethylbenzene	106	8.369	8.369	(1.015)	35660	5.00000	4.97(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	10485	5.00000	5.23
67 Isopropylbenzene	105	9.126	9.126	(1.106)	103615	5.00000	5.06
62 m,p-Xylenes	106	8.474	8.474	(1.027)	87243	10.0000	9.97
17 Methylene Chloride	84	2.877	2.877	(0.587)	29083	5.00000	5.12
87 n-Butylbenzene	91	10.554	10.554	(1.031)	85817	5.00000	4.96(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	128144	5.00000	4.96(a)
92 Naphthalene	128	12.133	12.133	(1.185)	81349	5.00000	4.64(a)
63 o-Xylene	106	8.811	8.811	(1.068)	44232	5.00000	4.95(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	104968	5.00000	4.97(a)
64 Styrene	104	8.823	8.823	(1.070)	73947	5.00000	4.97(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	72849	5.00000	4.93(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	18354	5.00000	4.90(a)
50 Toluene	91	7.049	7.049	(0.855)	110149	5.00000	5.03
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	25017	5.00000	5.05
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	29527	5.00000	5.25
38 Trichloroethene	130	5.865	5.865	(1.042)	25110	5.00000	5.07
8 Trichlorofluoromethane	101	1.962	1.962	(0.401)	32396	5.00000	4.77(a)
5 Vinyl Chloride	62	1.426	1.426	(0.291)	28725	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.



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Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010806.D
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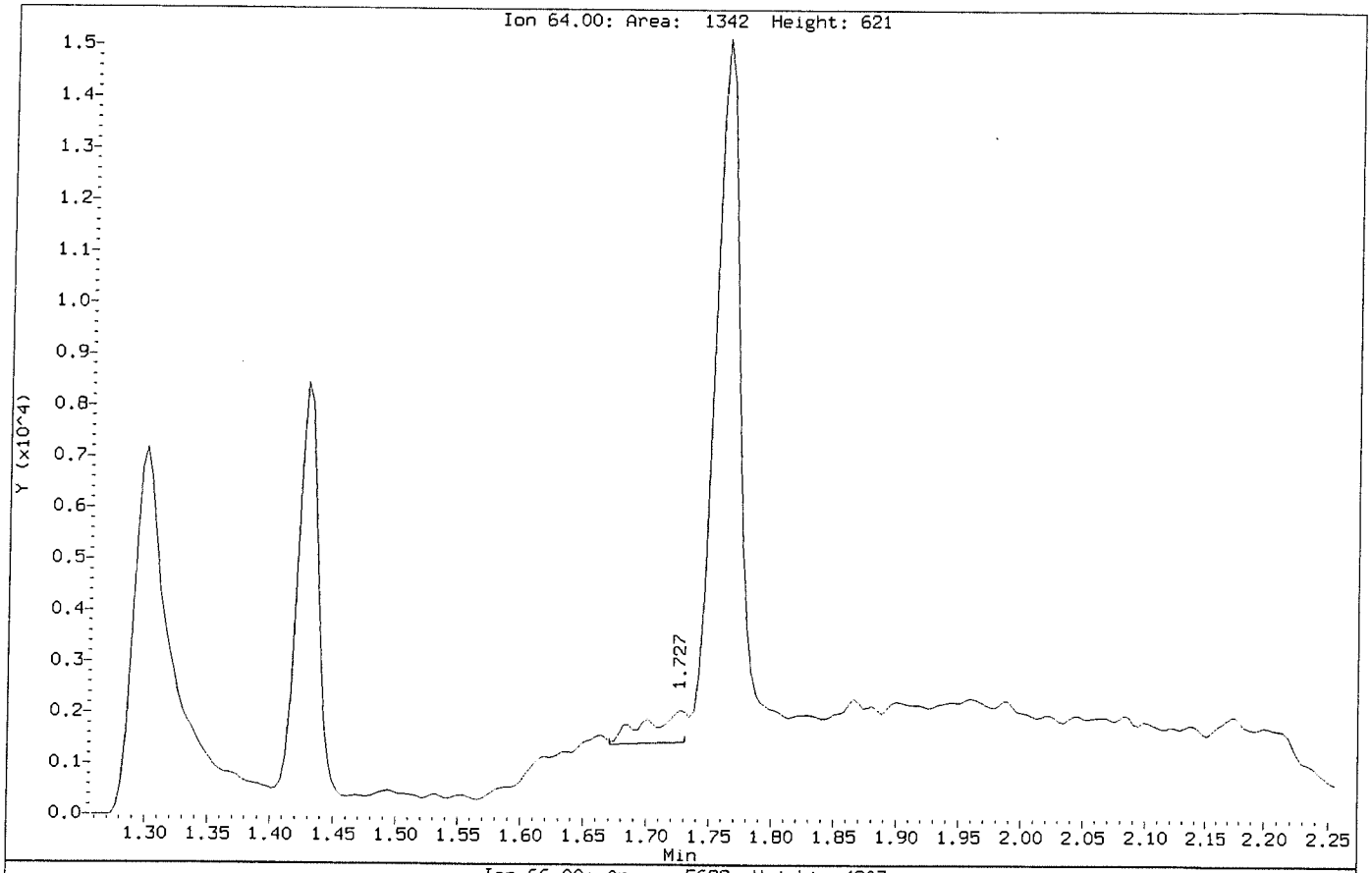
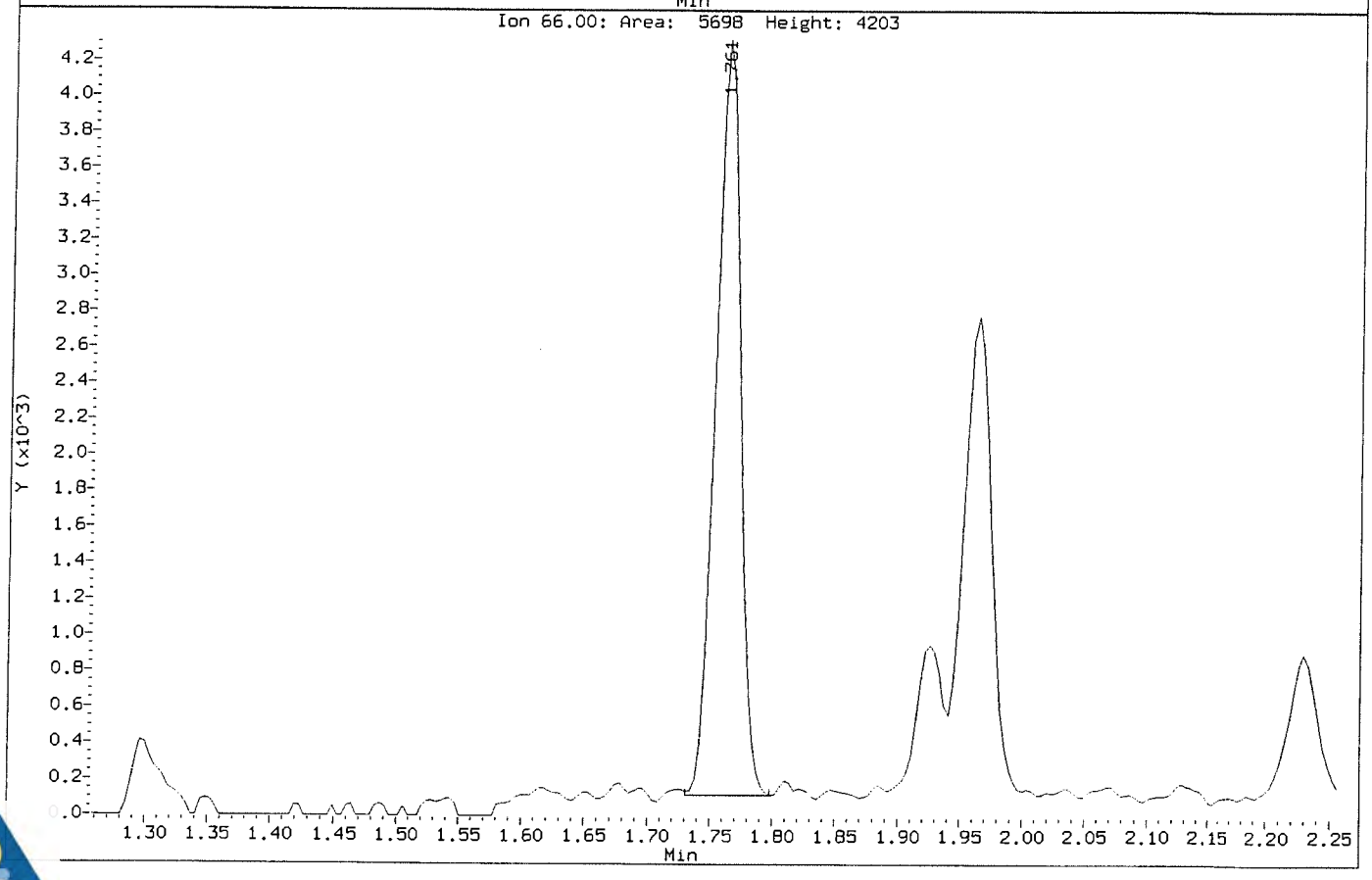
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3





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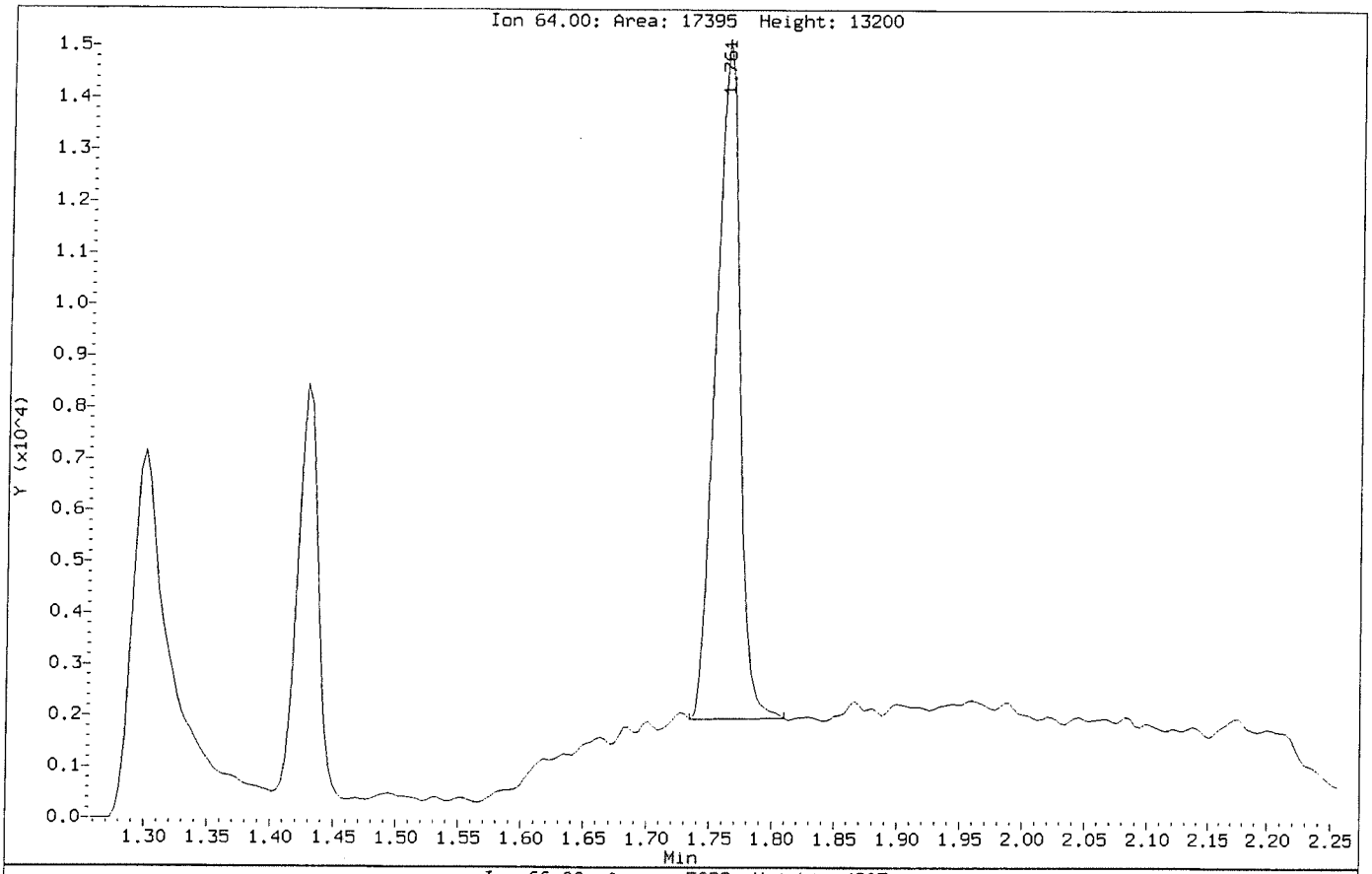
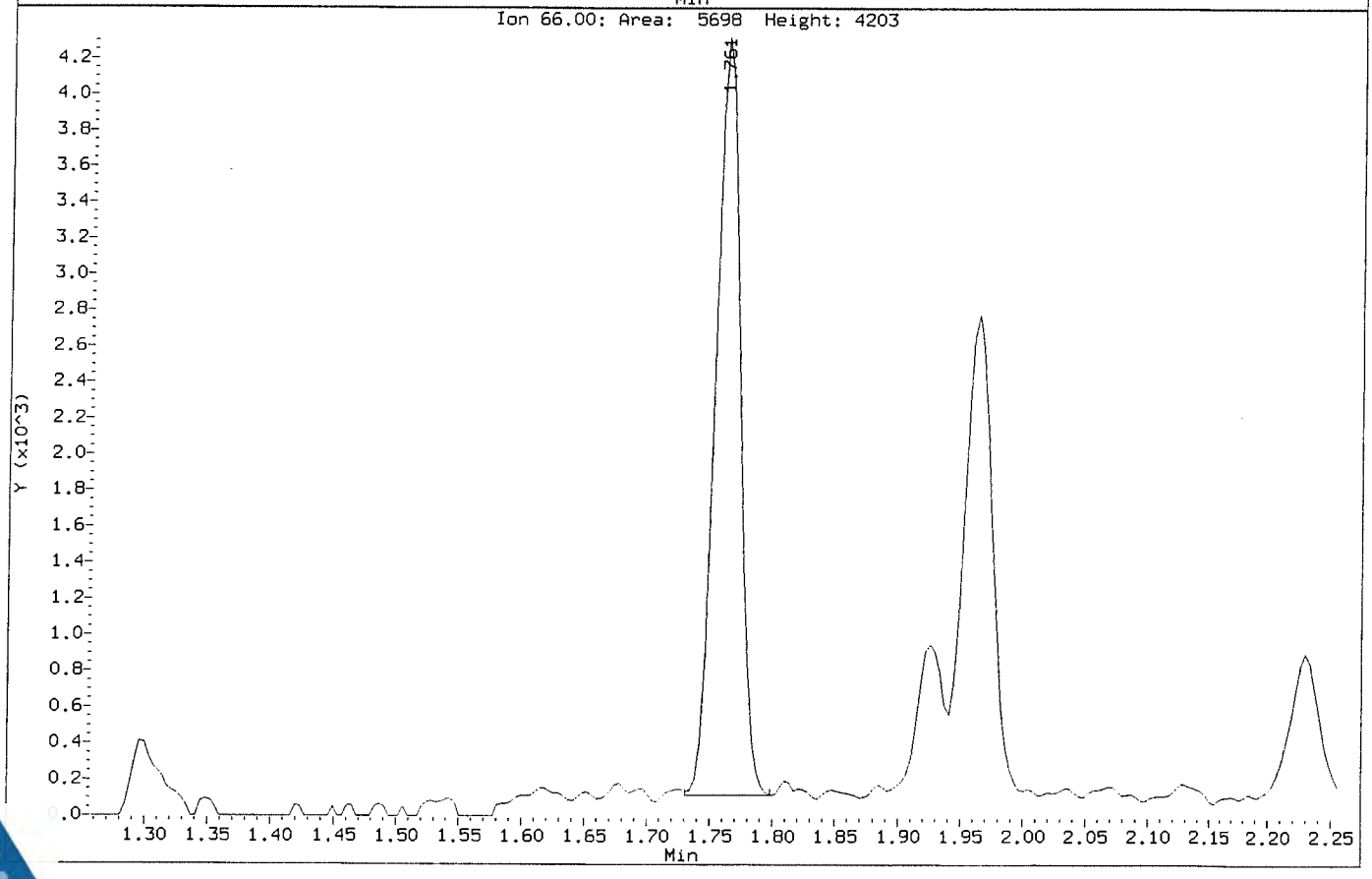
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3





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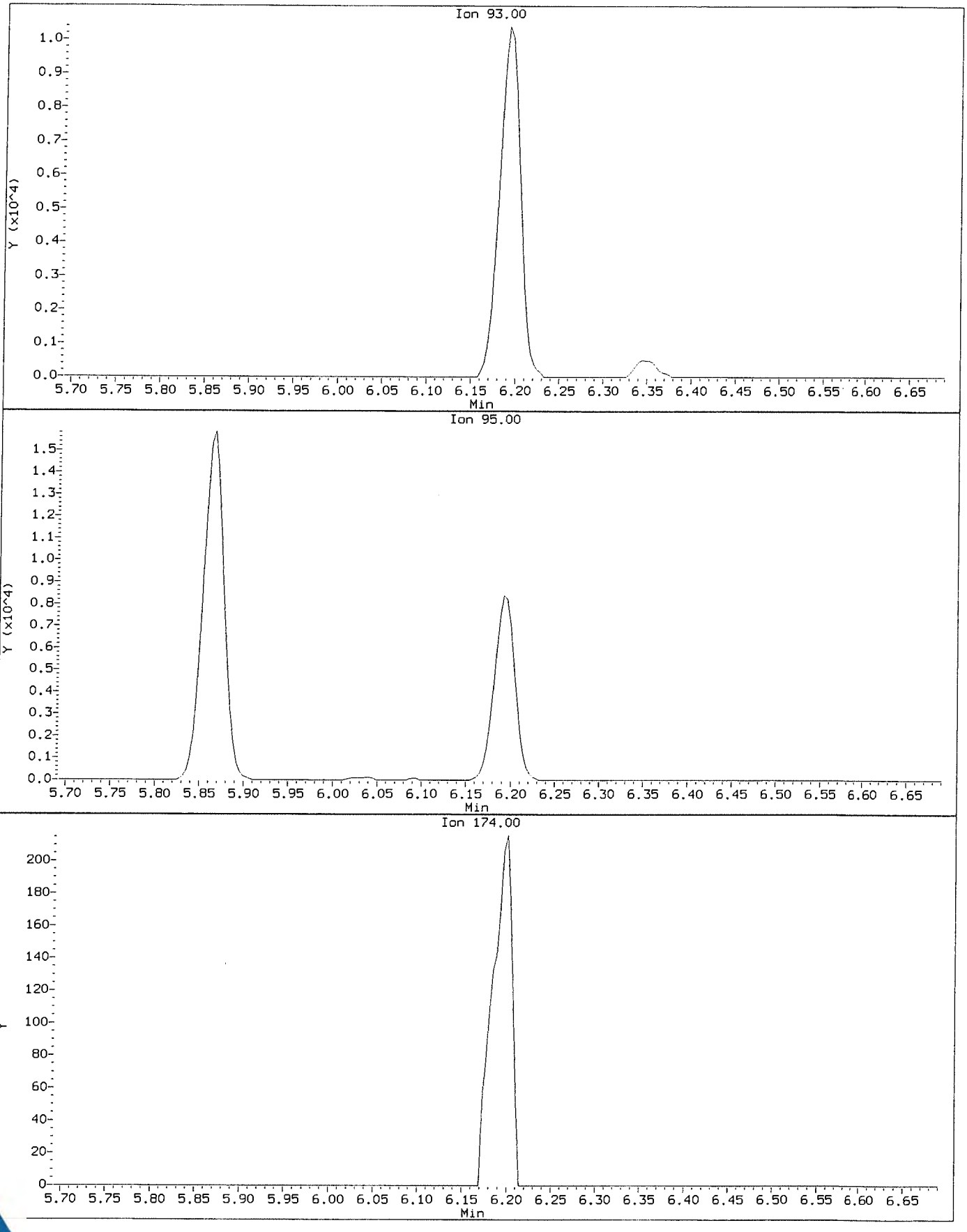
Injection Date: 08-JAN-2019 12:56
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



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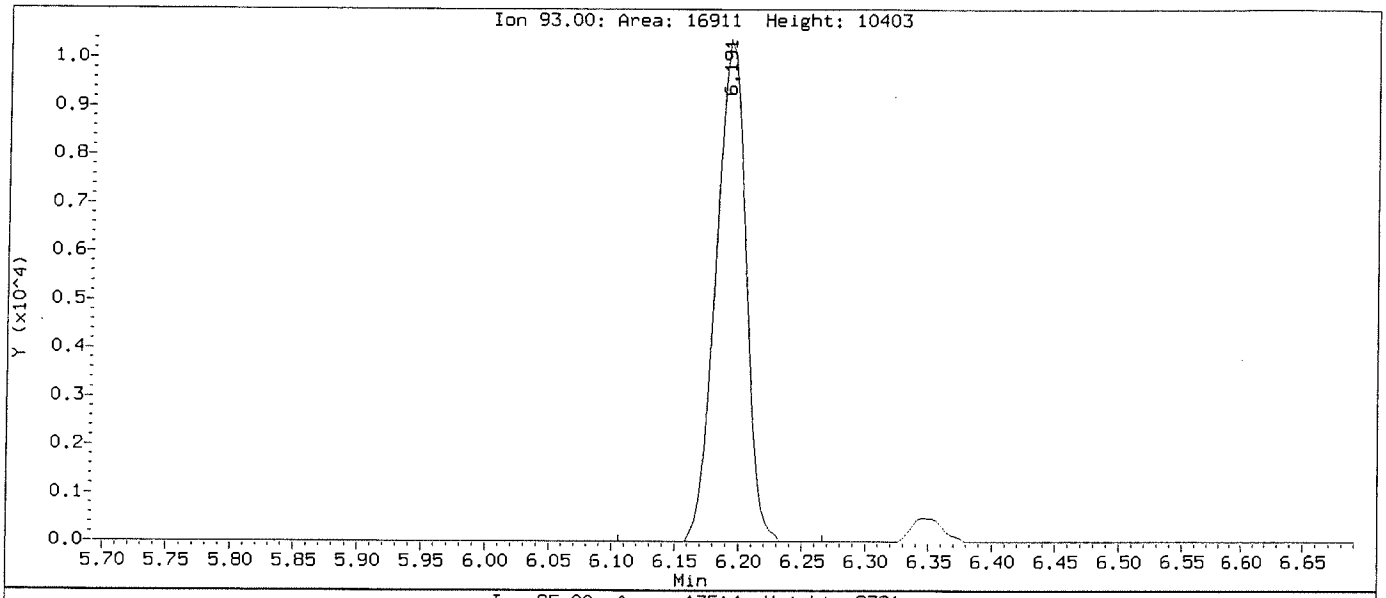
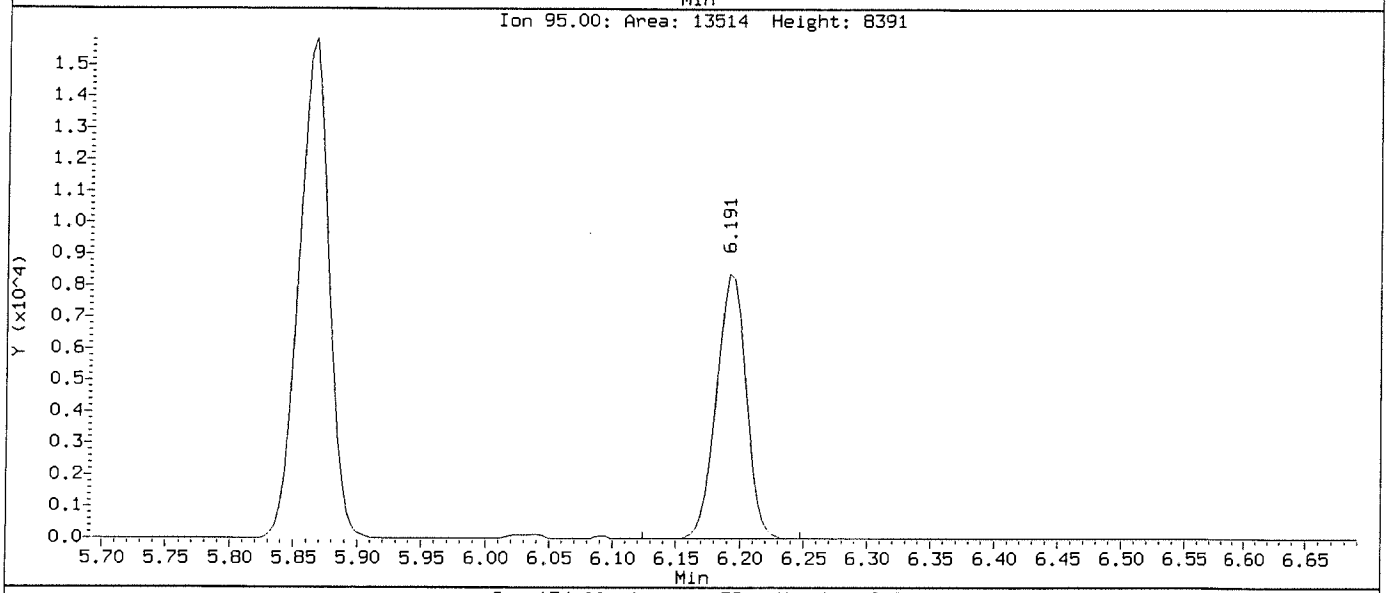
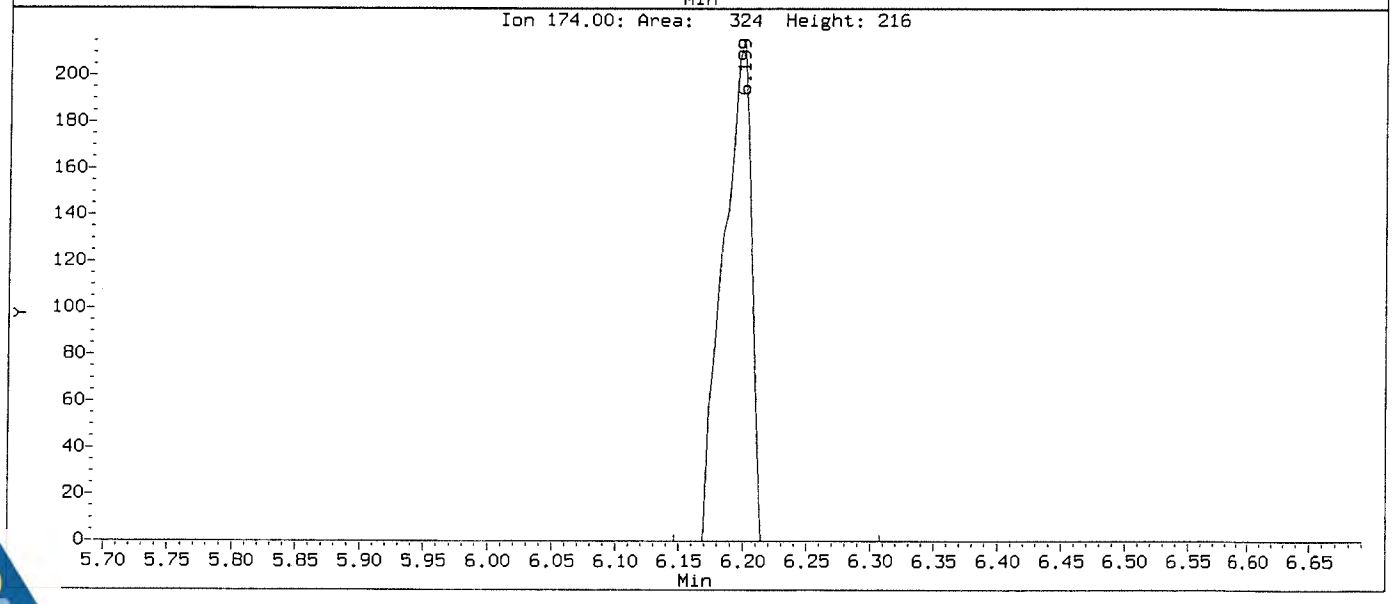
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3







ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010807.D
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Inj Date : 08-JAN-2019 13:21
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : 180315V9;WATER;0;1;
Comment :
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Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 12:56 Cal File: U010806.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

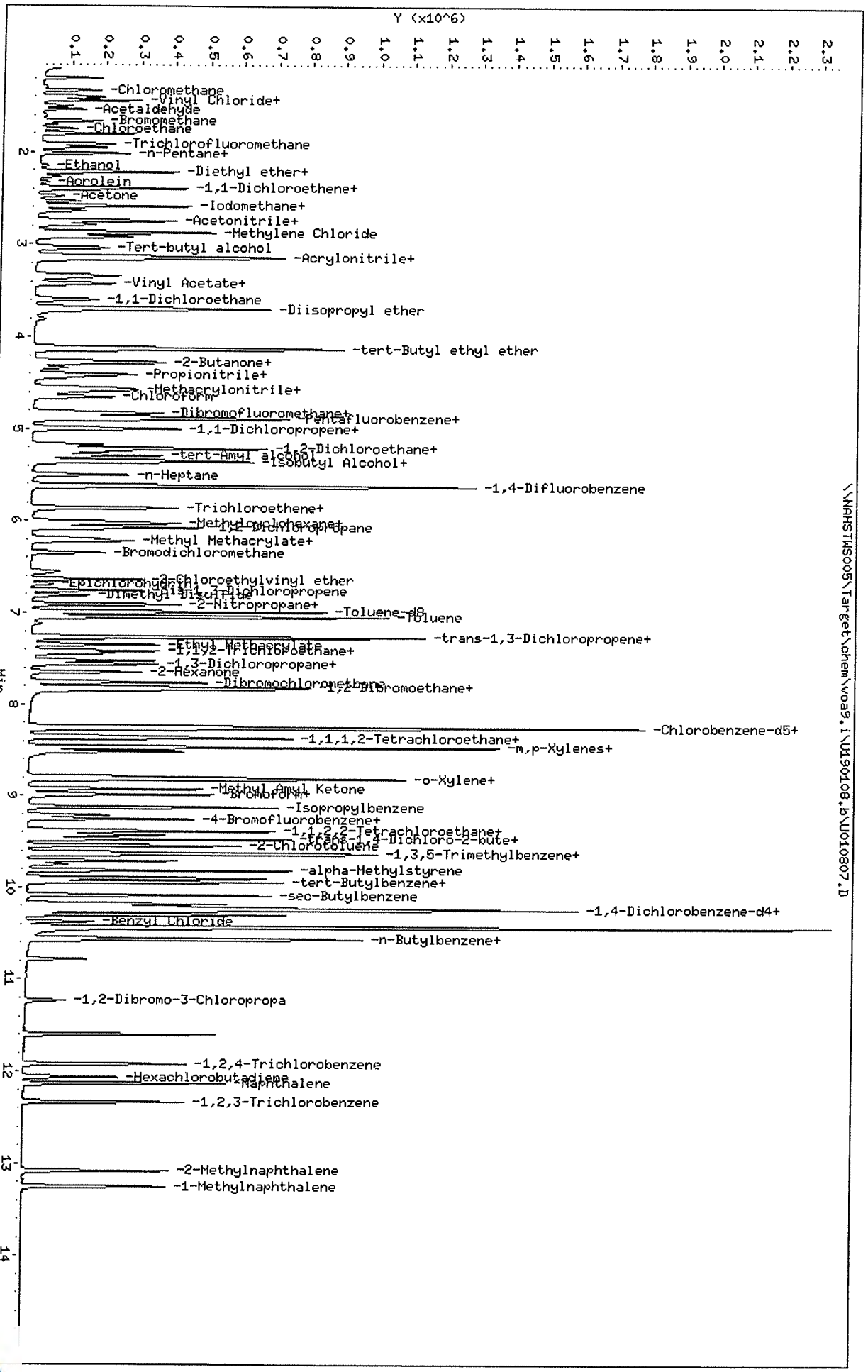
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	408412	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	770613	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	706222	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.235	10.235	(1.000)	336174	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.826	(0.986)	96372	20.0000	19.92
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	129430	20.0000	20.22
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	399583	20.0000	20.38
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	148618	20.0000	20.38
60 1,1,1,2-Tetrachloroethane	131	8.346	8.346	(1.012)	85911	20.0000	20.13
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	132087	20.0000	19.74
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	157201	20.0000	20.50
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	87262	20.0000	20.18
22 1,1-Dichloroethane	63	3.600	3.600	(0.736)	183036	20.0000	19.71
11 1,1-Dichloroethene	96	2.393	2.393	(0.489)	72998	20.0000	18.52
32 1,1-Dichloropropene	75	5.002	5.002	(0.889)	138272	20.0000	19.40
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	120642	20.0000	20.13
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	164112	20.0000	20.19
90 1,2,4-Trichlorobenzene	180	11.922	11.922	(1.165)	122692	20.0000	20.25
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	369135	20.0000	20.90
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	21582	20.0000	19.35
57 1,2-Dibromoethane	107	7.851	7.851	(0.952)	101296	20.0000	20.57
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	199304	20.0000	19.52

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010807.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	149925	20.0000	20.10
42 1,2-Dichloropropane	63	6.078	6.078	(1.081)	111568	20.0000	20.11
75 1,3,5-Trimethylbenzene	105	9.624	9.624	(0.940)	356170	20.0000	20.65
83 1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	197740	20.0000	19.49
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	189420	20.0000	20.31
84 1,4-Dichlorobenzene	146	10.254	10.254	(1.002)	206094	20.0000	19.17
26 2,2-Dichloropropane	77	4.271	4.271	(0.873)	106586	20.0000	19.17
24 2-Butanone	43	4.335	4.335	(0.886)	115875	40.0000	41.00
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	320757	20.0000	20.06
52 2-Hexanone	43	7.649	7.649	(0.927)	177225	40.0000	43.51
77 4-Chlorotoluene	91	9.639	9.639	(0.942)	377240	20.0000	20.29
82 p-Isopropyltoluene	119	10.209	10.209	(0.997)	374090	20.0000	20.89
45 4-Methyl-2-Pentanone	43	6.910	6.910	(0.838)	251751	40.0000	42.86
10 Acetone	43	2.476	2.476	(0.506)	79871	40.0000	44.29
37 Benzene	78	5.216	5.216	(0.927)	420661	20.0000	19.83
74 Bromobenzene	156	9.381	9.381	(0.917)	103837	20.0000	19.80
29 Bromochloromethane	128	4.552	4.552	(0.930)	48718	20.0000	21.70
39 Bromodichloromethane	83	6.344	6.344	(1.128)	119391	20.0000	19.98
66 Bromoform	173	8.983	8.983	(1.089)	53545	20.0000	18.54(T)
6 Bromomethane	94	1.666	1.666	(0.341)	59235	20.0000	19.88
19 Carbon Disulfide	76	2.584	2.584	(0.528)	552263	40.0000	39.51
34 Carbon Tetrachloride	117	4.991	4.991	(0.887)	103163	20.0000	19.99
59 Chlorobenzene	112	8.275	8.275	(1.003)	275304	20.0000	19.55
7 Chloroethane	64	1.748	1.748	(0.357)	70548	20.0000	19.16(M)
28 Chloroform	83	4.654	4.654	(0.951)	176811	20.0000	20.04
3 Chloromethane	50	1.336	1.336	(0.273)	106870	20.0000	21.10
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	110851	20.0000	19.84
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	160416	20.0000	18.72
55 Dibromochloromethane	129	7.758	7.758	(0.940)	85941	20.0000	18.94
44 Dibromomethane	93	6.187	6.187	(1.100)	65082	20.0000	20.10
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	101679	20.0000	18.83
61 Ethylbenzene	106	8.369	8.369	(1.015)	140051	20.0000	19.71
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	43278	20.0000	20.26
67 Isopropylbenzene	105	9.126	9.126	(1.106)	423334	20.0000	20.86
62 m,p-Xylenes	106	8.474	8.474	(1.027)	355496	40.0000	41.00
17 Methylene Chloride	84	2.866	2.866	(0.586)	108486	20.0000	20.35
87 n-Butylbenzene	91	10.554	10.554	(1.031)	350744	20.0000	20.15
73 n-Propylbenzene	91	9.474	9.474	(0.926)	531172	20.0000	20.44
92 Naphthalene	128	12.132	12.132	(1.185)	393536	20.0000	19.63
63 o-Xylene	106	8.811	8.811	(1.068)	180697	20.0000	20.42
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	435570	20.0000	20.49
64 Styrene	104	8.826	8.826	(1.070)	307465	20.0000	20.87
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	303148	20.0000	20.41
56 Tetrachloroethene	164	7.521	7.521	(0.912)	68828	20.0000	18.55
50 Toluene	91	7.045	7.045	(0.854)	437406	20.0000	20.14
20 trans-1,2-Dichloroethene	96	3.139	3.139	(0.642)	97245	20.0000	19.51
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	135765	20.0000	18.55
38 Trichloroethene	130	5.861	5.861	(1.042)	97355	20.0000	19.84
8 Trichlorofluoromethane	101	1.947	1.947	(0.398)	130134	20.0000	19.04
5 Vinyl Chloride	62	1.415	1.415	(0.289)	116217	20.0000	19.17

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

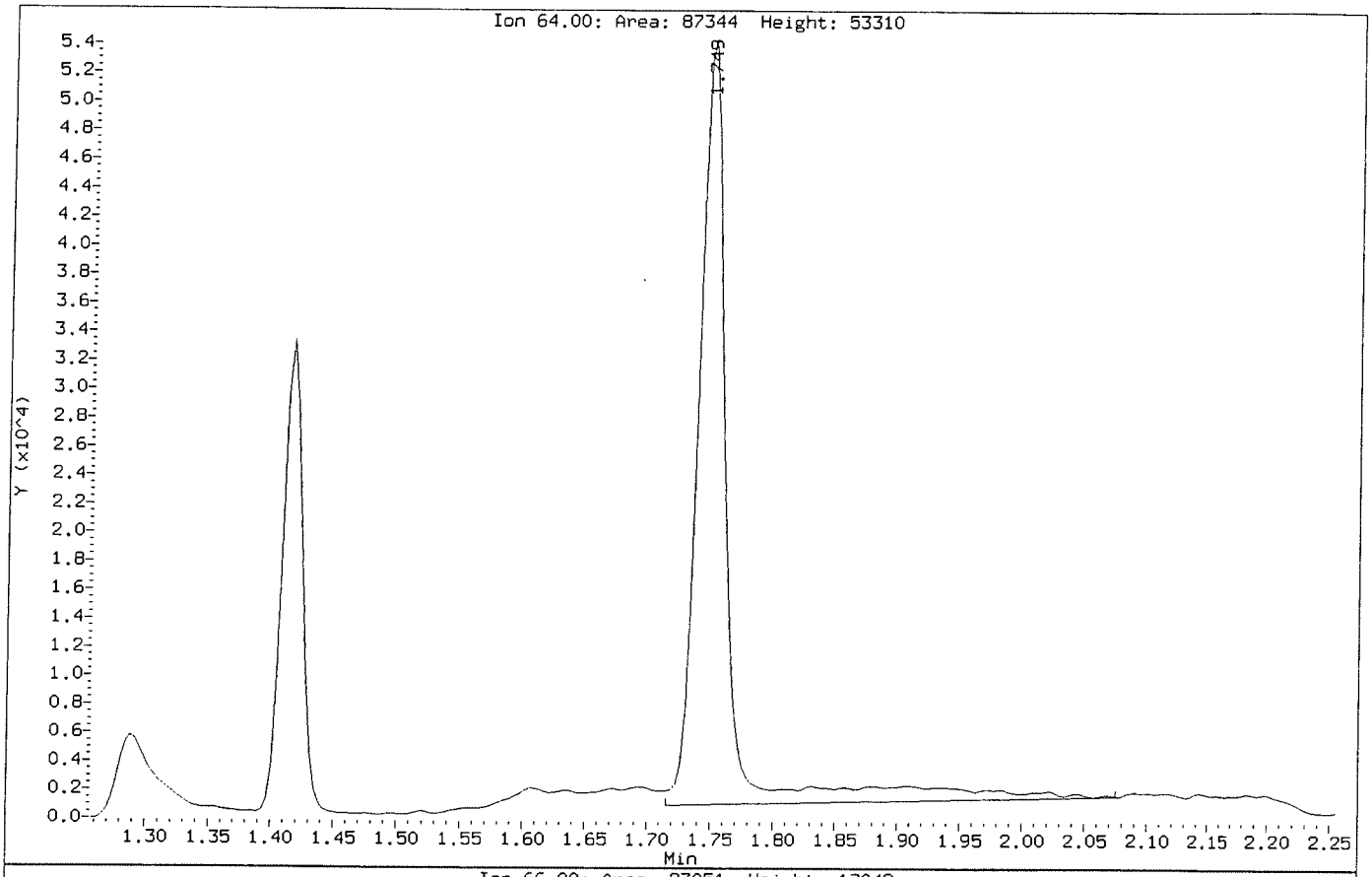


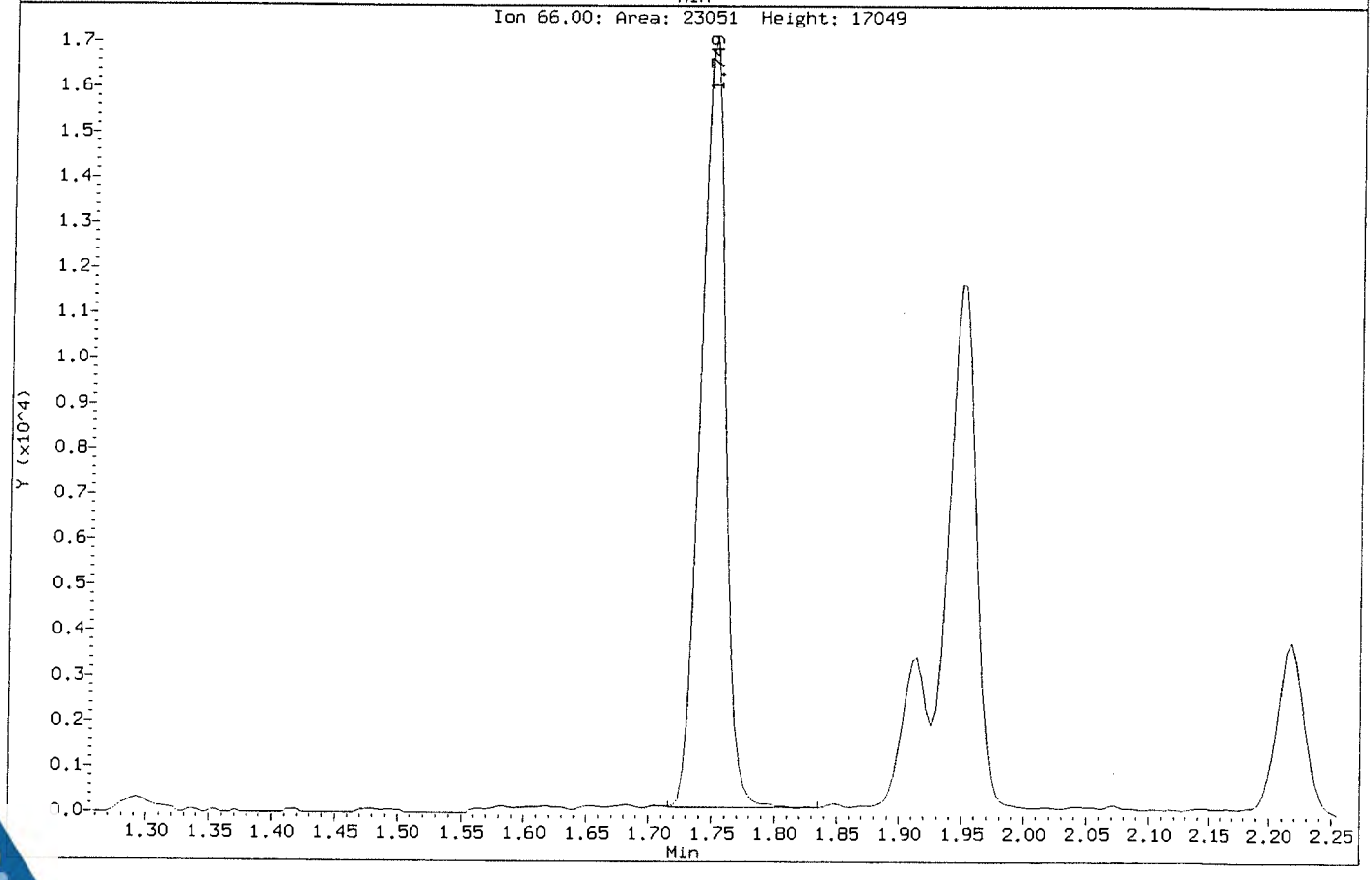
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010807.D
Date : 08-JAN-2019 13:21
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010807.D
Injection Date: 08-JAN-2019 13:21
Instrument: VOA9.i
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3





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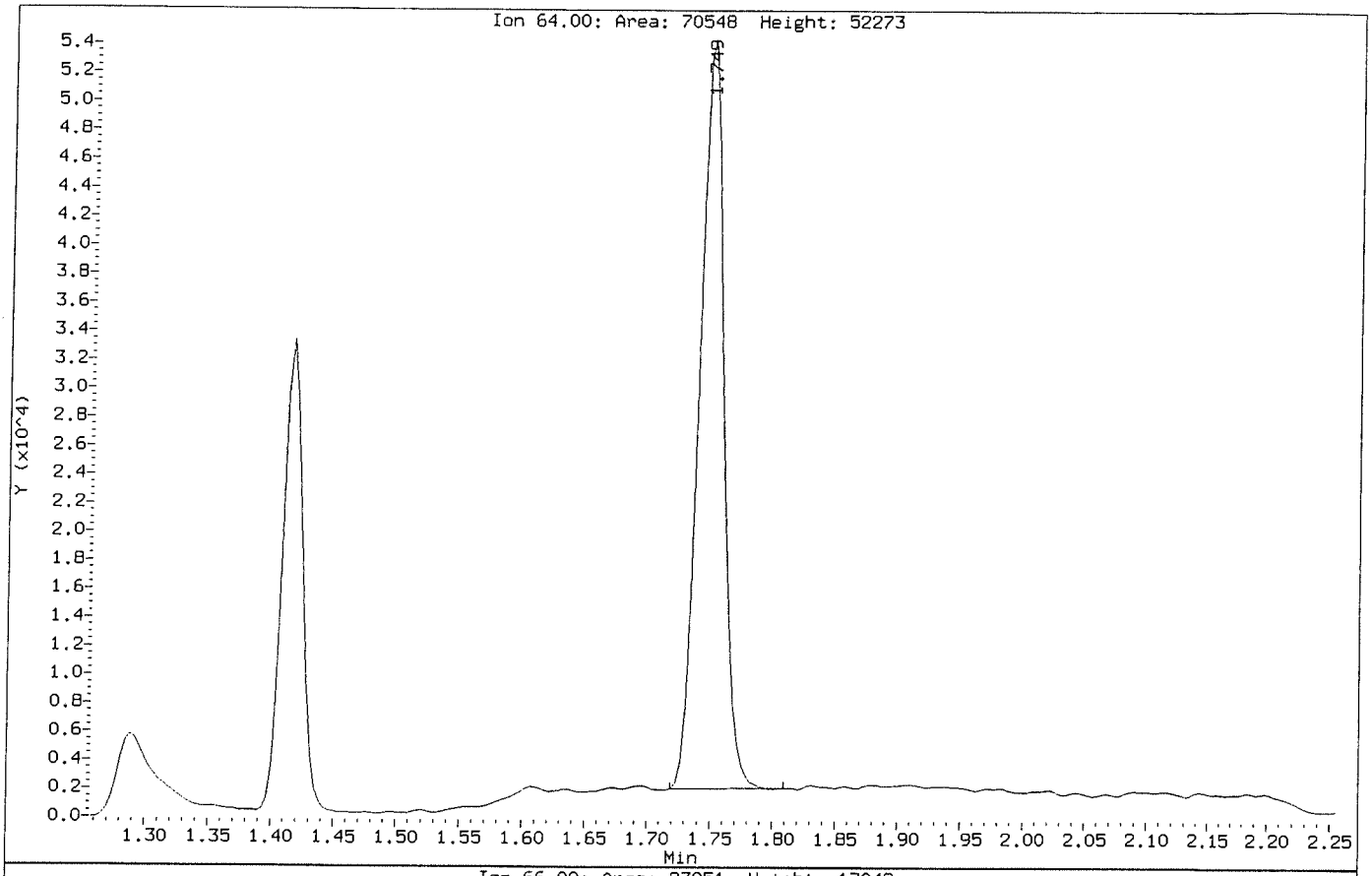
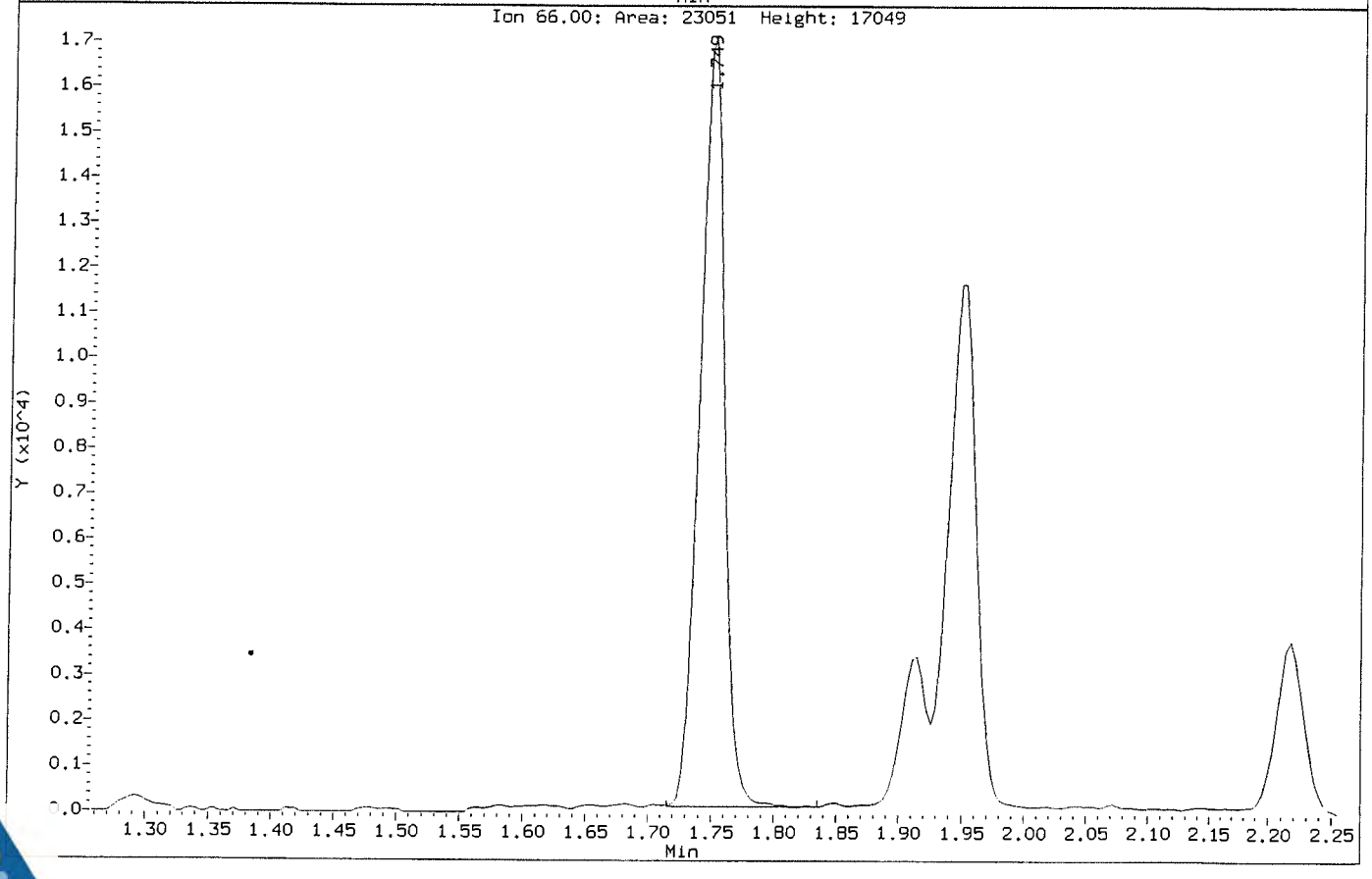
Instrument: VOA9.i
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D Page 1
Report Date: 01-Feb-2019 15:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 08-JAN-2019 13:45
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;1;7;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 13:21 Cal File: U010807.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

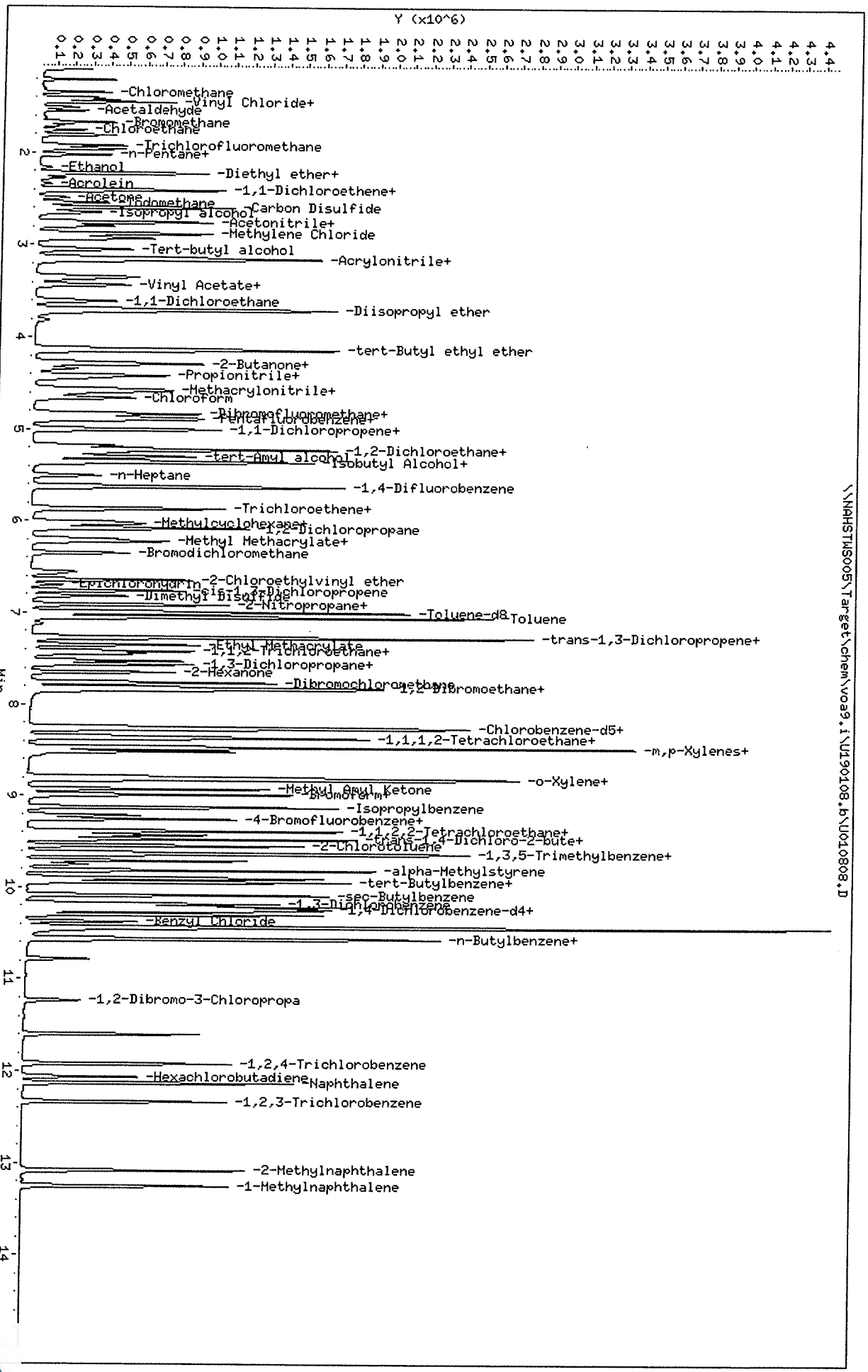
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	414347	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	776802	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	713069	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	338482	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	233946	50.0000	50.02
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	310401	50.0000	50.84
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	963061	50.0000	52.06
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	358290	50.0000	51.25
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	221211	50.0000	51.34
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	331736	50.0000	48.88
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	386140	50.0000	50.54
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	214927	50.0000	49.25
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	451089	50.0000	47.89
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	182121	50.0000	45.56
32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	333700	50.0000	46.46
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	301189	50.0000	49.93
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	422281	50.0000	51.61
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	307395	50.0000	50.40
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	896480	50.0000	50.43
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	55985	50.0000	46.57
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	252046	50.0000	50.70
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	489667	50.0000	47.64

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.933)	363631	50.0000	48.37
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	275994	50.0000	49.35
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	857361	50.0000	49.38
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	486555	50.0000	47.65
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	463080	50.0000	49.18
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	499101	50.0000	46.11
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	272467	50.0000	48.30
24 2-Butanone	43	4.339	4.339	(0.886)	291898	100.000	101.80
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	778719	50.0000	48.39
52 2-Hexanone	43	7.649	7.649	(0.927)	438000	100.000	106.50
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	904919	50.0000	48.34
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	890116	50.0000	49.37
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	623060	100.000	105.06
10 Acetone	43	2.487	2.487	(0.508)	179800	100.000	100.27
37 Benzene	78	5.220	5.220	(0.927)	1030161	50.0000	48.19
74 Bromobenzene	156	9.381	9.381	(0.917)	260209	50.0000	49.30
29 Bromochloromethane	128	4.557	4.557	(0.930)	122545	50.0000	53.80
39 Bromodichloromethane	83	6.348	6.348	(1.128)	306984	50.0000	50.97
66 Bromoform	173	8.984	8.984	(1.089)	144409	50.0000	46.54(T)
6 Bromomethane	94	1.674	1.674	(0.342)	136129	50.0000	44.08
19 Carbon Disulfide	76	2.596	2.596	(0.530)	1378159	100.000	97.20
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	253682	50.0000	48.77
59 Chlorobenzene	112	8.275	8.275	(1.003)	677236	50.0000	47.63
7 Chloroethane	64	1.756	1.756	(0.359)	171276	50.0000	45.86(M)
28 Chloroform	83	4.661	4.661	(0.952)	430908	50.0000	48.16
3 Chloromethane	50	1.344	1.344	(0.274)	245400	50.0000	44.67
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	273726	50.0000	48.29
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	428865	50.0000	47.50
55 Dibromochloromethane	129	7.758	7.758	(0.940)	229139	50.0000	48.00
44 Dibromomethane	93	6.191	6.191	(1.100)	161716	50.0000	49.55
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	250329	50.0000	45.71
61 Ethylbenzene	106	8.373	8.373	(1.015)	346744	50.0000	48.35
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	101106	50.0000	46.13
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1002931	50.0000	48.96
62 m,p-Xylenes	106	8.474	8.474	(1.027)	862970	100.000	98.57
17 Methylene Chloride	84	2.877	2.877	(0.587)	264627	50.0000	49.63
87 n-Butylbenzene	91	10.554	10.554	(1.031)	828759	50.0000	47.30
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1268447	50.0000	48.48
92 Naphthalene	128	12.133	12.133	(1.185)	1013970	50.0000	49.17
63 o-Xylene	106	8.811	8.811	(1.068)	439304	50.0000	49.19
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1037873	50.0000	48.49
64 Styrene	104	8.826	8.826	(1.070)	765954	50.0000	51.51
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	716058	50.0000	47.89
56 Tetrachloroethene	164	7.525	7.525	(0.912)	165995	50.0000	44.31
50 Toluene	91	7.049	7.049	(0.855)	1073622	50.0000	48.97
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	237541	50.0000	46.99
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	367494	50.0000	47.13
38 Trichloroethene	130	5.865	5.865	(1.042)	239064	50.0000	48.33
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	315299	50.0000	45.48
5 Vinyl Chloride	62	1.426	1.426	(0.291)	280091	50.0000	45.55

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



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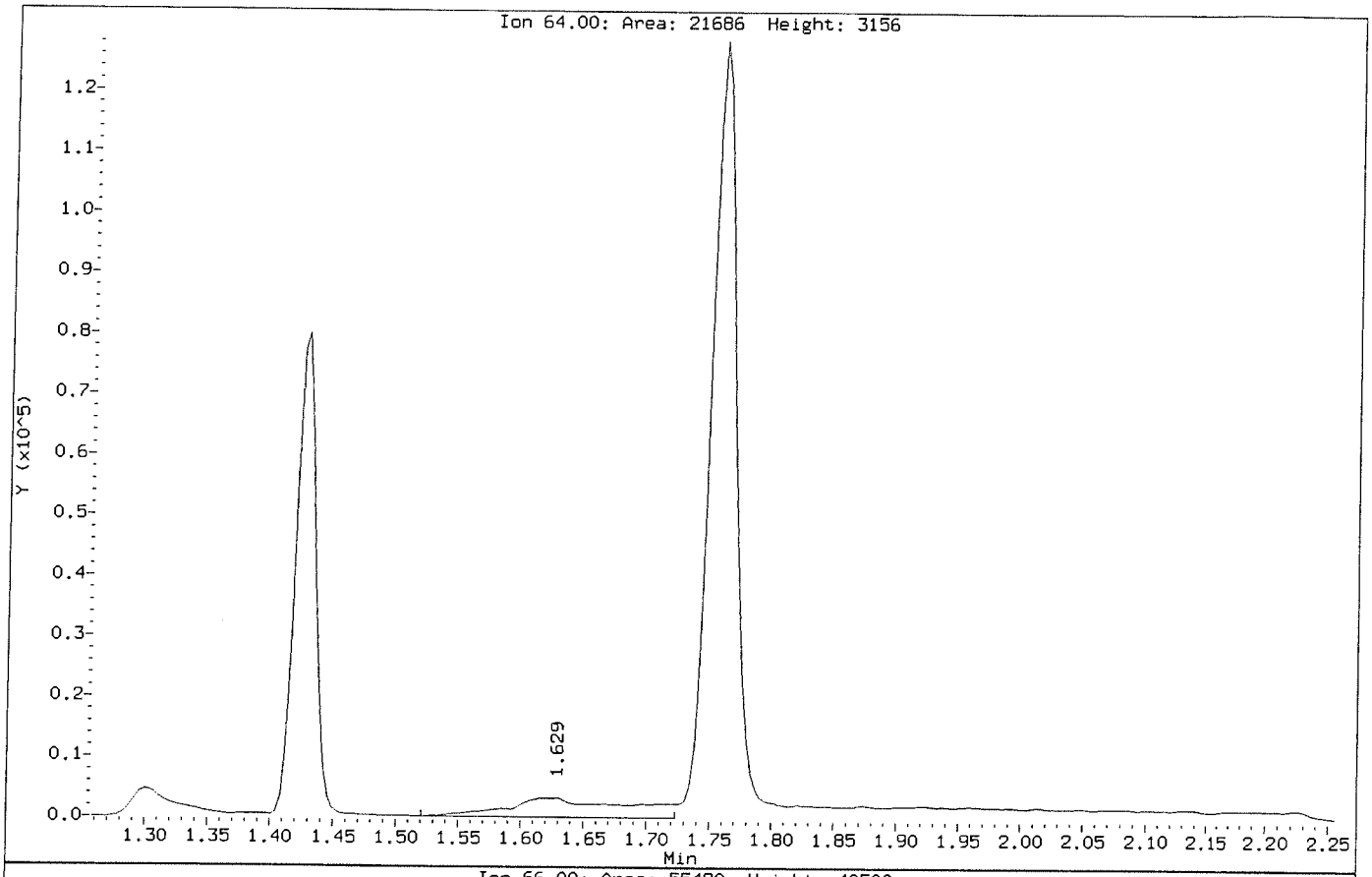
Date : 08-JAN-2019 13:45
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

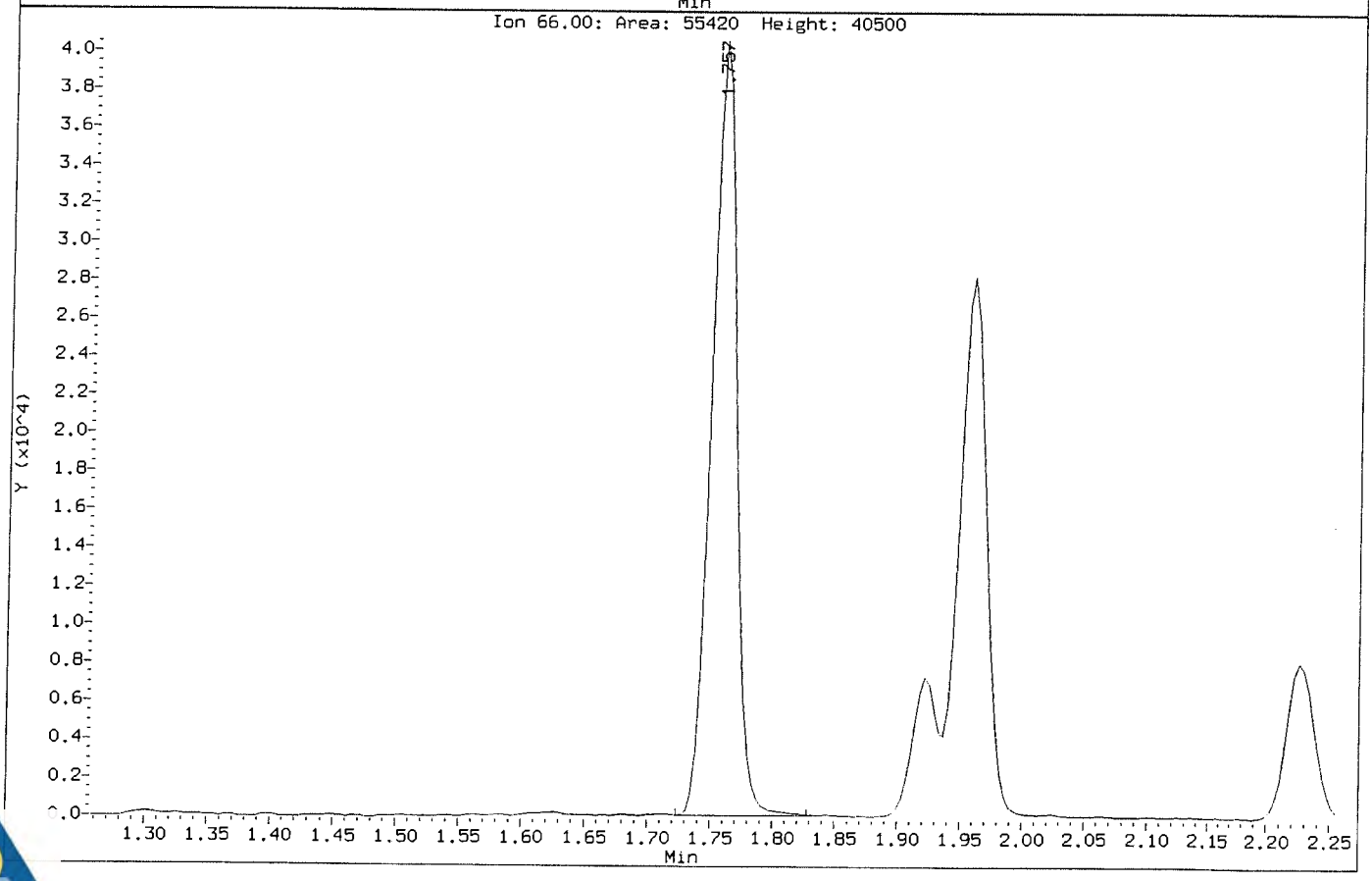
Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010808.D
Injection Date: 08-JAN-2019 13:45
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





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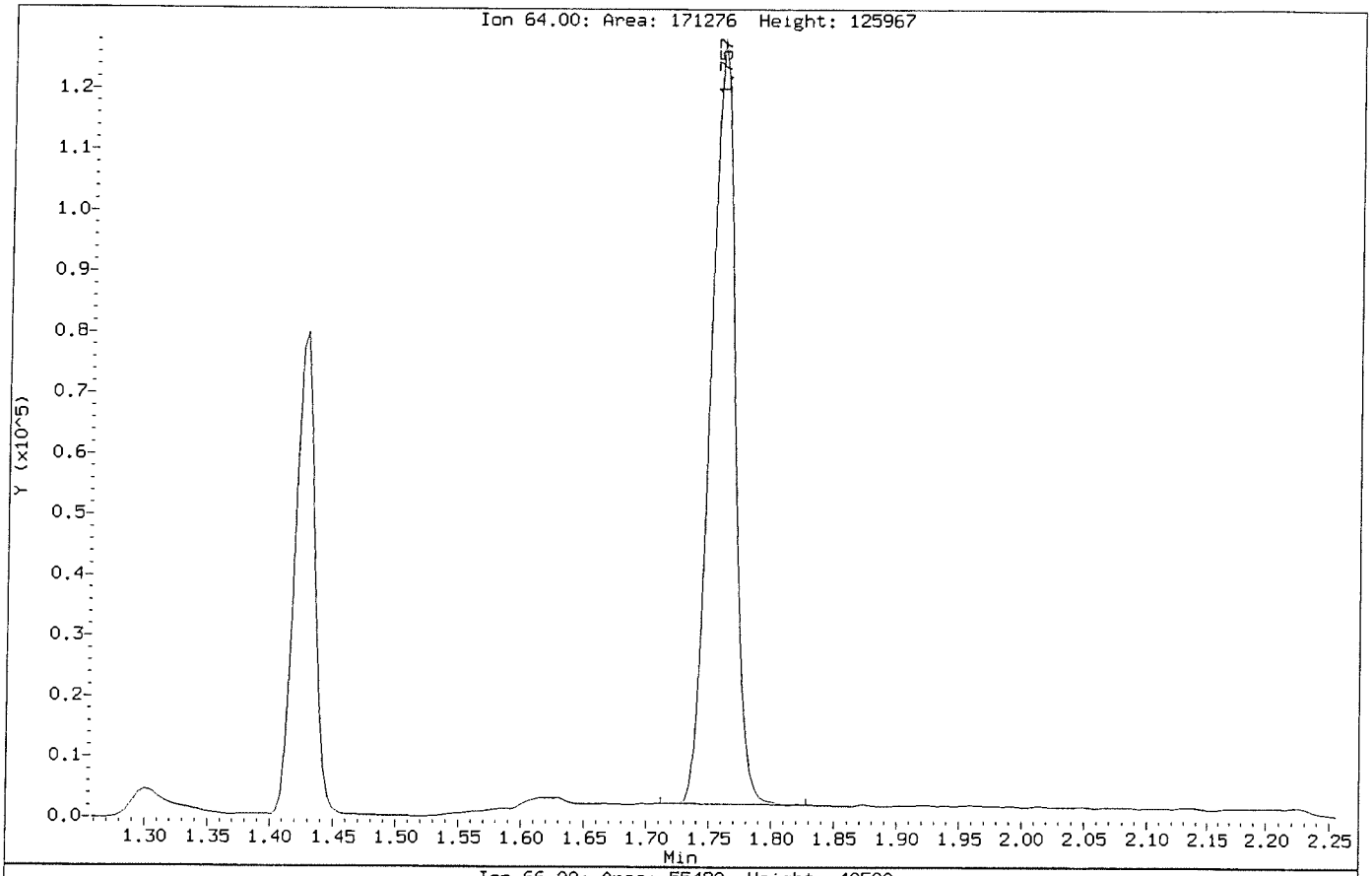
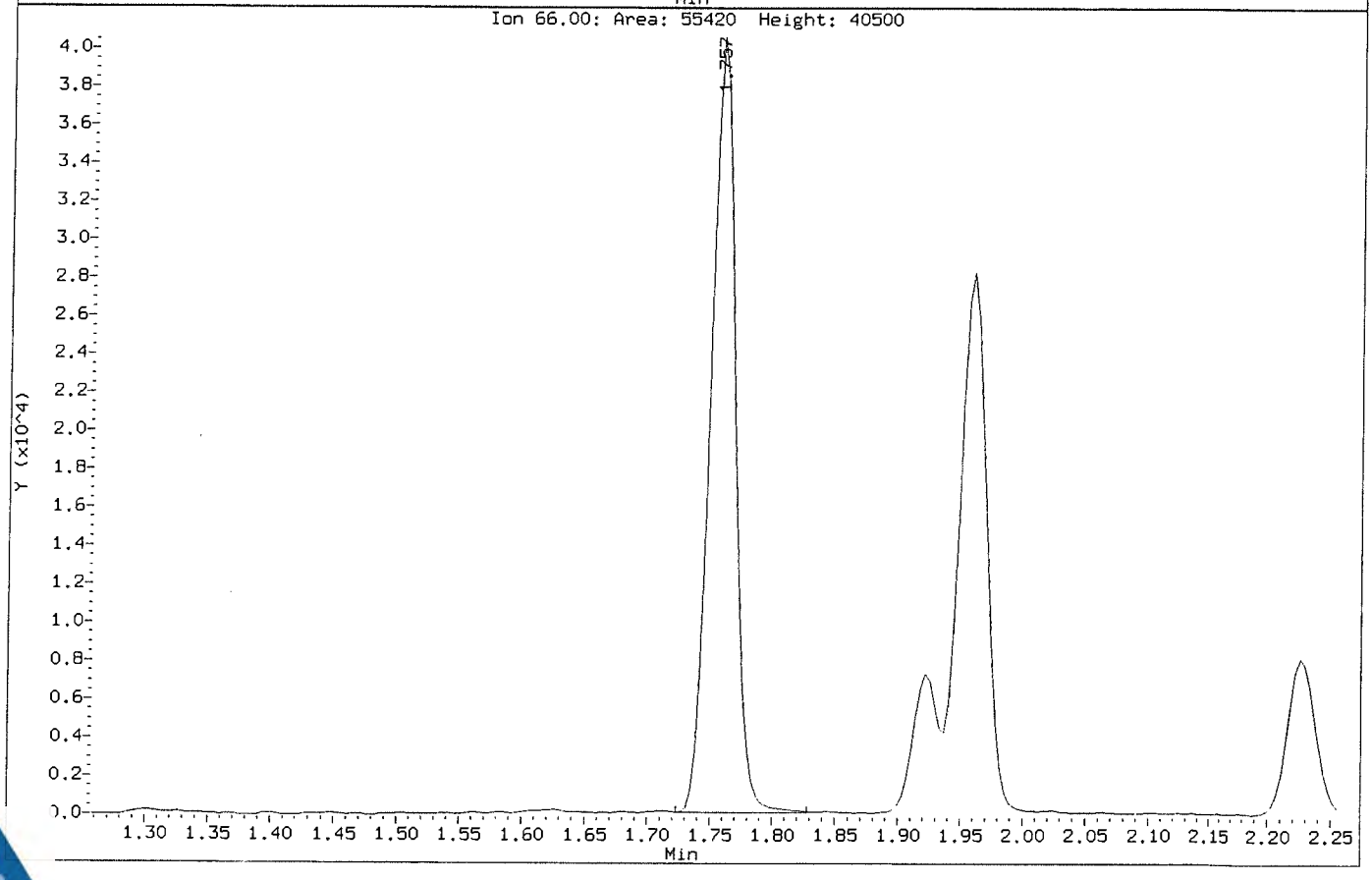
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010809.D Page 1
Report Date: 01-Feb-2019 15:44

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010809.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 08-JAN-2019 14:10
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 13:45 Cal File: U010808.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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)	421162	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	790870	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.253	(1.000)	736125	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	349513	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	464059	100.000	99.44
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	607717	100.000	100.00
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	1896057	100.000	101.52
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	714768	100.000	100.78
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	472198	100.000	106.17
31 1,1,1-Trichloroethane	97	4.834	4.834	(0.987)	725193	100.000	105.13
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	791393	100.000	100.67
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.899)	438628	100.000	97.36
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	942325	100.000	98.43
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	394650	100.000	97.14
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	725797	100.000	99.25
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	650560	100.000	104.45
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	883225	100.000	104.54
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	673602	100.000	106.97
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	1876622	100.000	102.23
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	123999	100.000	97.52
57 1,2-Dibromoethane	107	7.852	7.852	(0.951)	517332	100.000	100.81
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	1023463	100.000	96.44

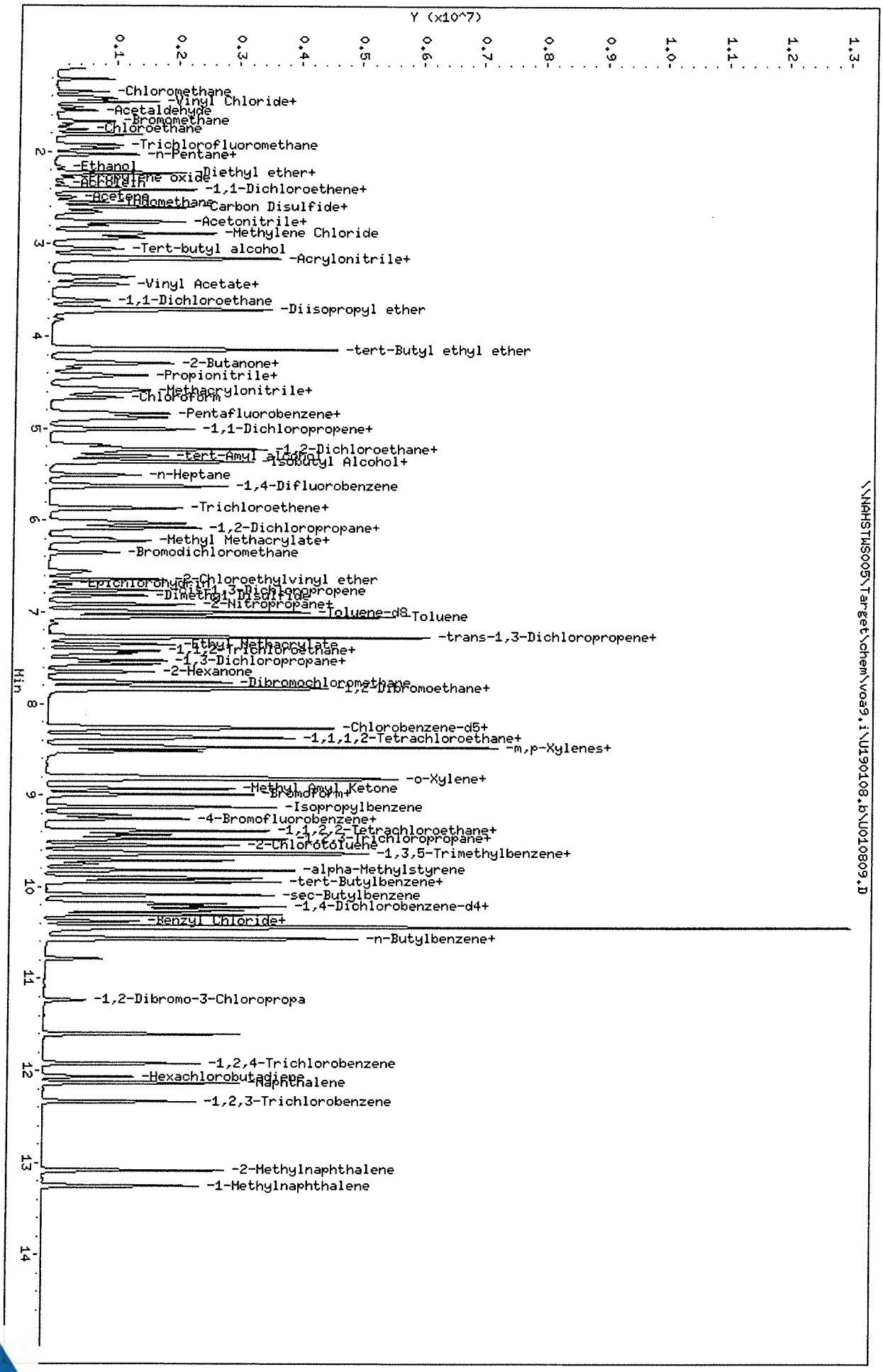
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010809.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	735470	100.000	96.10
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	570835	100.000	100.25
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	1870258	100.000	104.32
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1034507	100.000	98.12
54 1,3-Dichloropropane	76	7.567	7.567	(0.917)	952005	100.000	97.95
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	1056308	100.000	94.52
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	602840	100.000	105.14
24 2-Butanone	43	4.343	4.343	(0.887)	595792	200.000	204.43(A)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	1639232	100.000	98.65
52 2-Hexanone	43	7.653	7.653	(0.927)	931571	200.000	219.42(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	1912542	100.000	98.95
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	1976899	100.000	106.18
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1312369	200.000	214.36(A)
10 Acetone	43	2.491	2.491	(0.509)	376346	200.000	208.23(A)
37 Benzene	78	5.224	5.224	(0.928)	2132651	100.000	97.99
74 Bromobenzene	156	9.381	9.381	(0.917)	550328	100.000	100.97
29 Bromochloromethane	128	4.560	4.560	(0.931)	233959	100.000	101.06
39 Bromodichloromethane	83	6.348	6.348	(1.128)	650240	100.000	106.05
66 Bromoform	173	8.984	8.984	(1.089)	321354	100.000	98.27(T)
6 Bromomethane	94	1.670	1.670	(0.341)	307120	100.000	96.91
19 Carbon Disulfide	76	2.600	2.600	(0.531)	2926603	200.000	203.08(A)
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	580173	100.000	109.55
59 Chlorobenzene	112	8.275	8.275	(1.003)	1405423	100.000	95.76
7 Chloroethane	64	1.756	1.756	(0.359)	365339	100.000	96.23(M)
28 Chloroform	83	4.661	4.661	(0.952)	891596	100.000	98.03
3 Chloromethane	50	1.348	1.348	(0.275)	515965	100.000	89.77
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	567776	100.000	98.56
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	926076	100.000	99.29
55 Dibromochloromethane	129	7.758	7.758	(0.940)	491650	100.000	98.45
44 Dibromomethane	93	6.191	6.191	(1.100)	331611	100.000	99.81
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	546194	100.000	98.13
61 Ethylbenzene	106	8.373	8.373	(1.015)	748694	100.000	101.13
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	235659	100.000	101.50
67 Isopropylbenzene	105	9.126	9.126	(1.106)	2188066	100.000	103.47
62 m,p-Xylenes	106	8.474	8.474	(1.027)	1848649	200.000	204.56(A)
17 Methylene Chloride	84	2.877	2.877	(0.587)	540514	100.000	100.25
87 n-Butylbenzene	91	10.558	10.558	(1.031)	1831040	100.000	101.22
73 n-Propylbenzene	91	9.475	9.475	(0.926)	2755541	100.000	101.99
92 Naphthalene	128	12.133	12.133	(1.185)	2158340	100.000	100.73
63 o-Xylene	106	8.811	8.811	(1.068)	931273	100.000	101.01
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	2314669	100.000	104.74
64 Styrene	104	8.826	8.826	(1.069)	1608460	100.000	104.78
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	1536739	100.000	99.54
56 Tetrachloroethene	164	7.525	7.525	(0.912)	369314	100.000	95.50
50 Toluene	91	7.049	7.049	(0.854)	2230274	100.000	98.55
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	502759	100.000	97.85
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	801236	100.000	99.11
38 Trichloroethene	130	5.865	5.865	(1.042)	488802	100.000	97.07
8 Trichlorofluoromethane	101	1.962	1.962	(0.401)	691347	100.000	98.12
5 Vinyl Chloride	62	1.426	1.426	(0.291)	621317	100.000	99.40

QC Flag Legend

T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

00933152

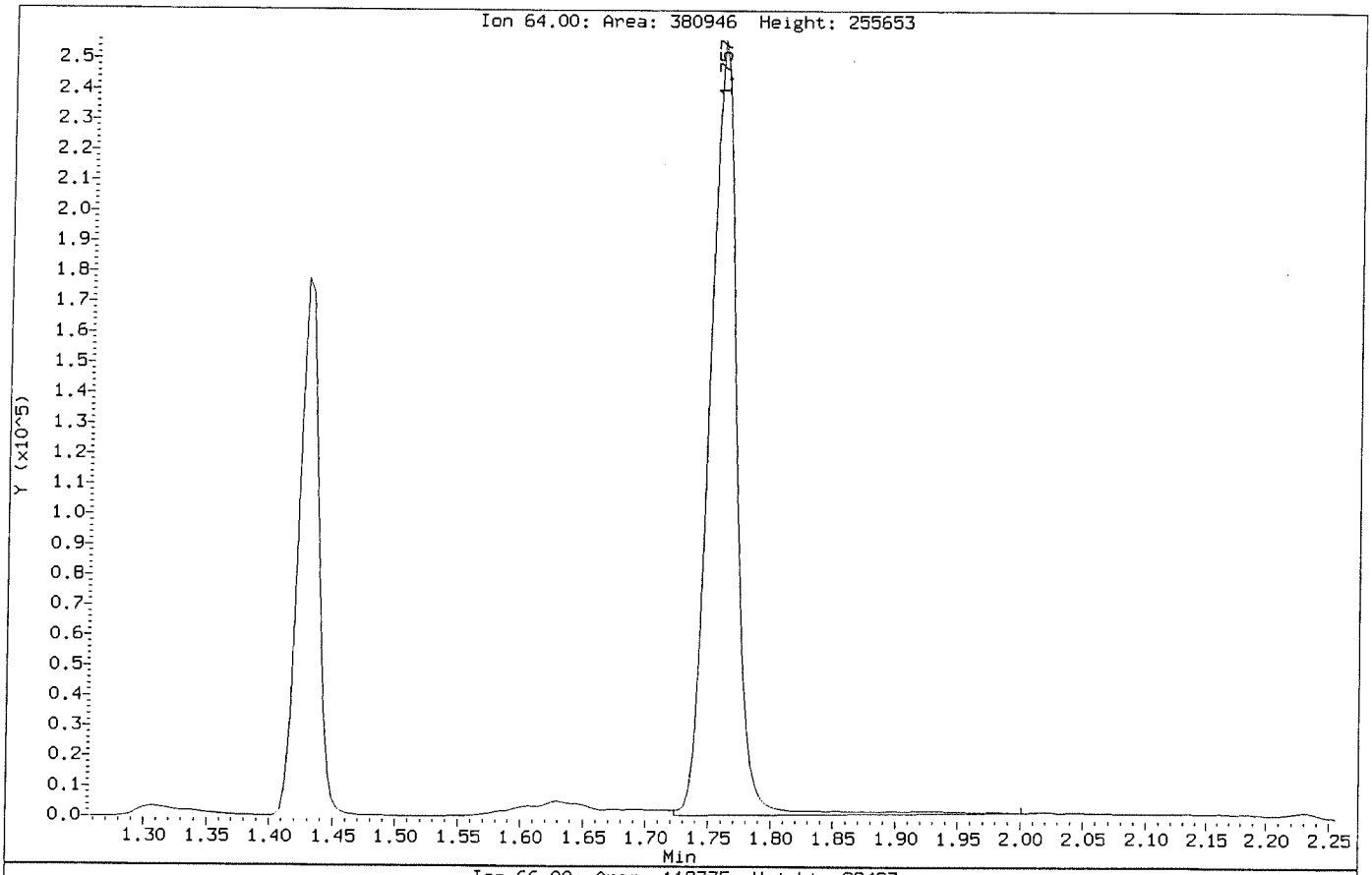


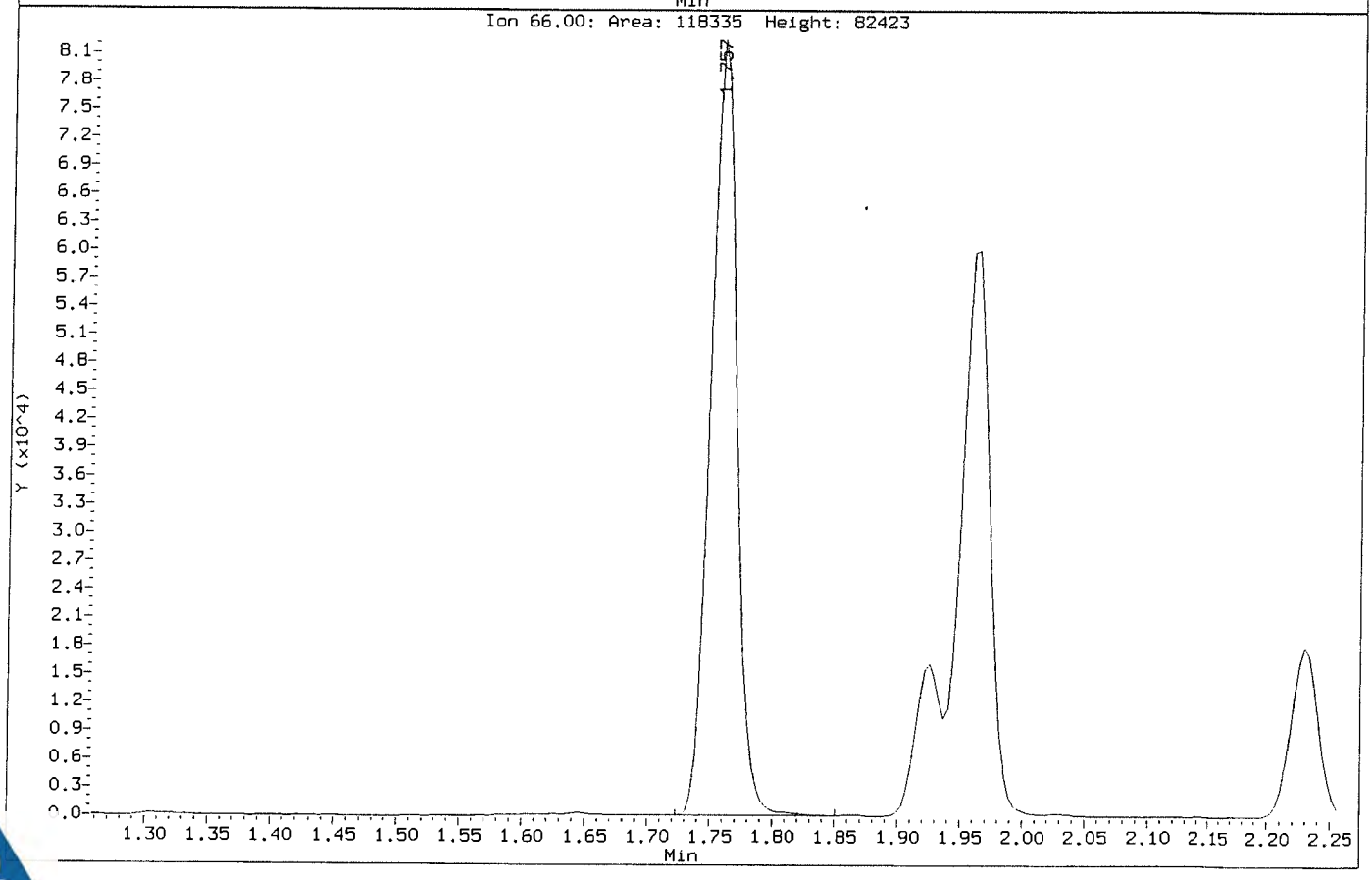
Data File: \\NAHSTWS005\Target\chem\voa9,i\U190108,b\U010809,D
Date : 08-JAN-2019 14:10
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010809.D
Injection Date: 08-JAN-2019 14:10
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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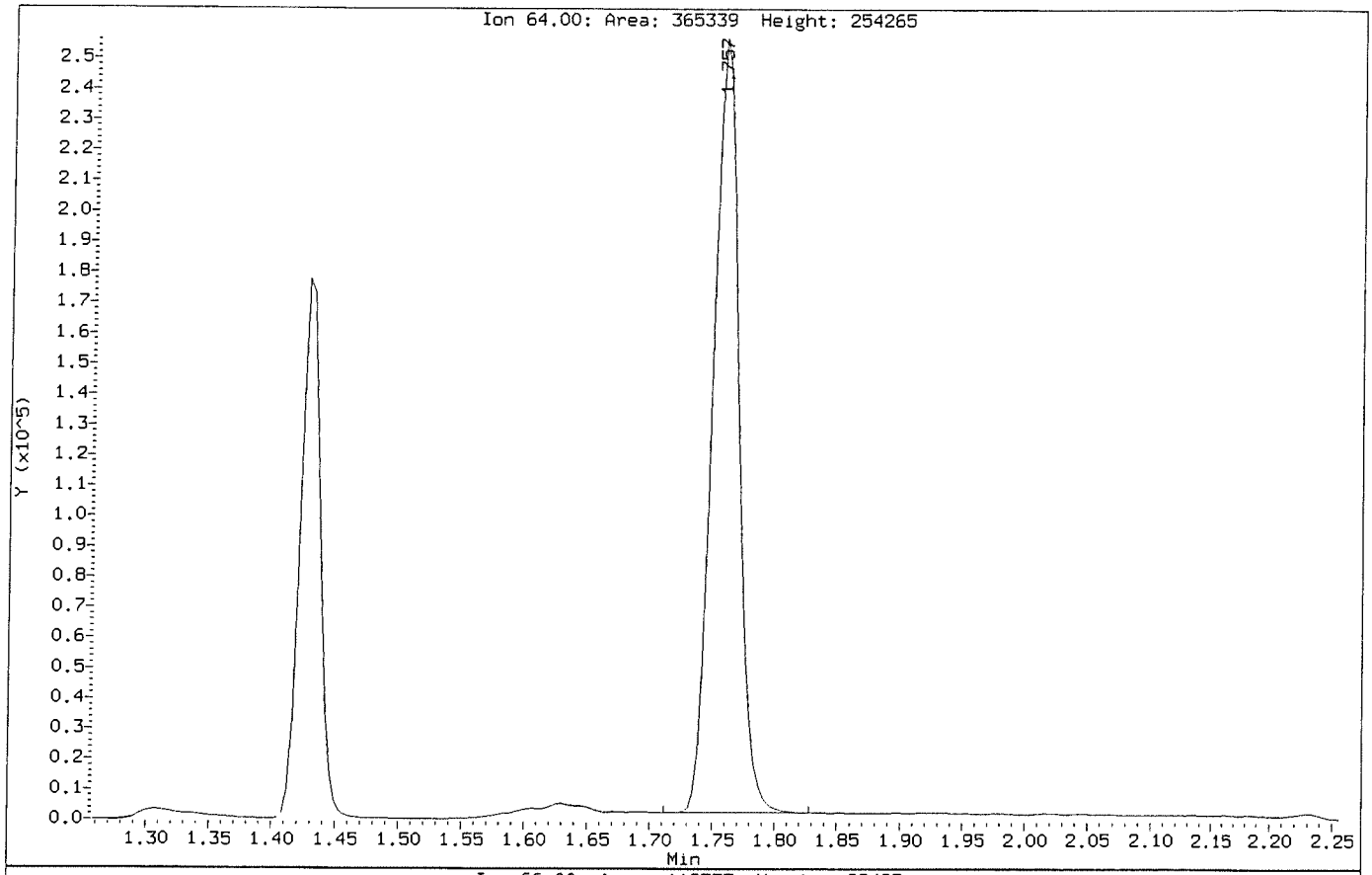
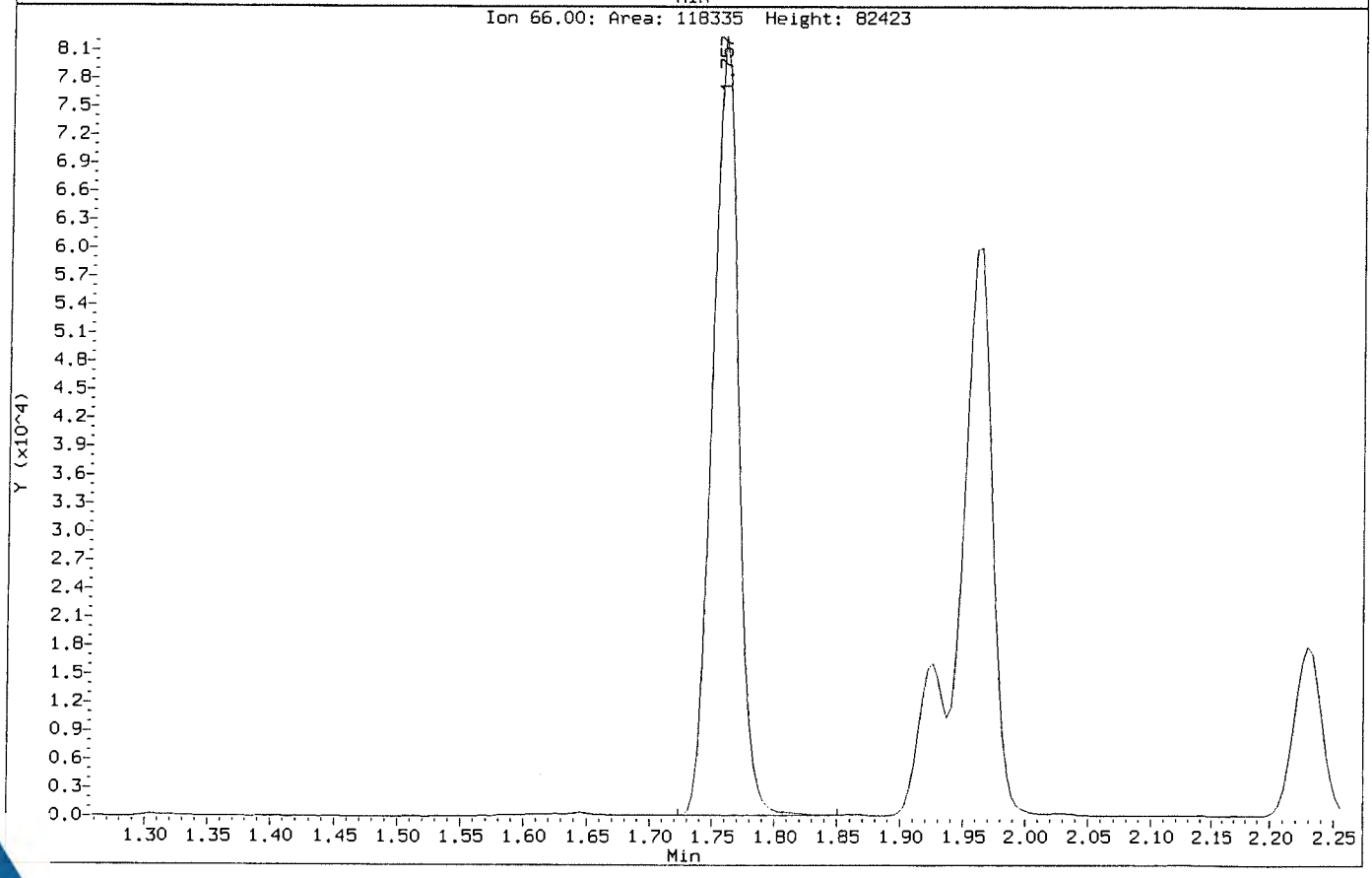
Injection Date: 08-JAN-2019 14:10
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010810.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 08-JAN-2019 14:34
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:10 Cal File: U010809.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

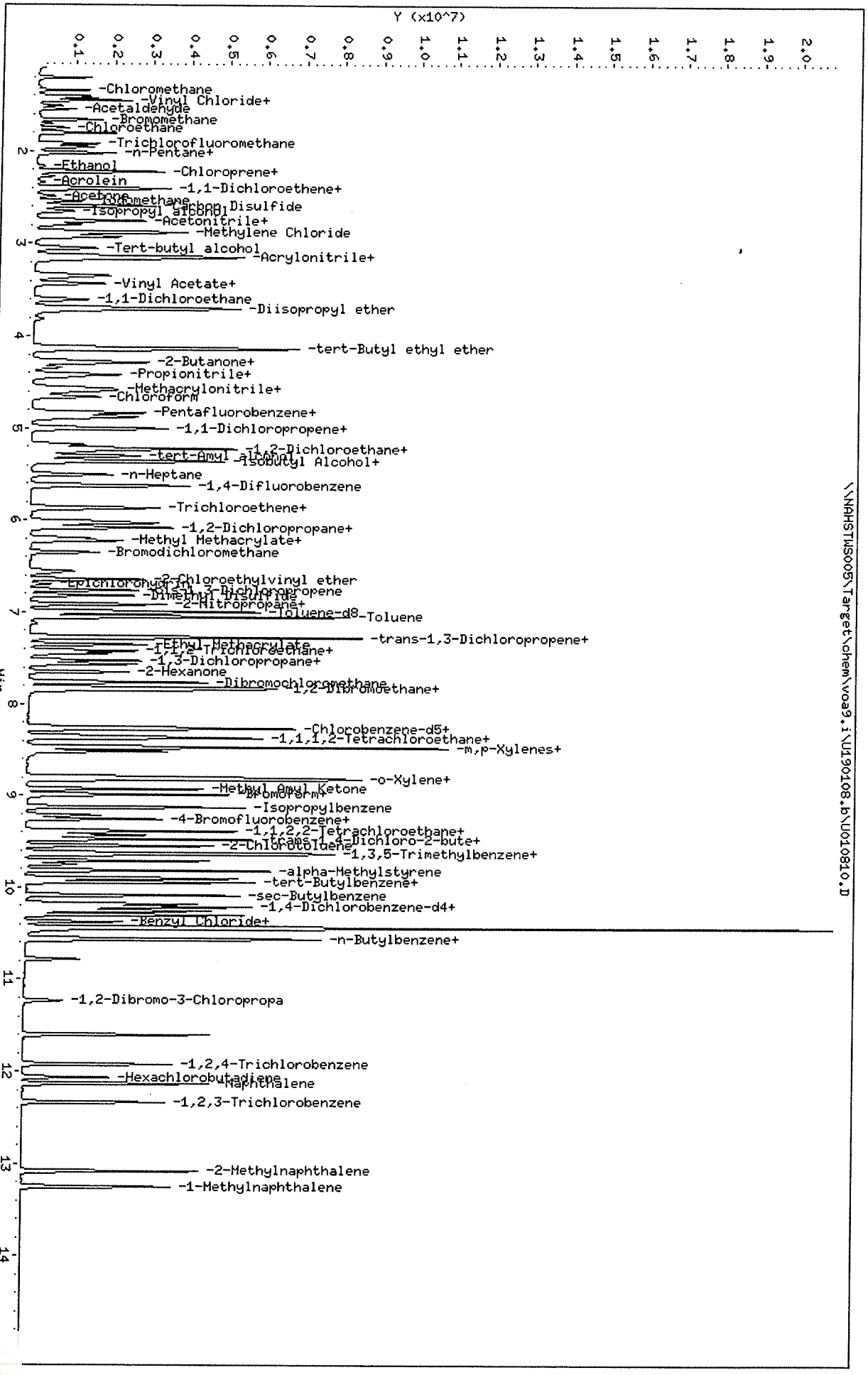
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	421886	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	800287	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	746796	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	352073	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	699083	150.000	150.76
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	910863	150.000	150.73
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	2828636	150.000	150.44
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	1067232	150.000	149.22
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	733799	150.000	162.63
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	1125782	150.000	162.93
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1181566	150.000	149.39
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	666579	150.000	145.84
22 1,1-Dichloroethane	63	3.604	3.604	(0.736)	1438222	150.000	149.97
11 1,1-Dichloroethene	96	2.401	2.401	(0.490)	606646	150.000	149.06
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	1107792	150.000	149.71
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	997739	150.000	159.03
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1361534	150.000	159.99
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	1038733	150.000	163.75
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	2881082	150.000	155.82
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	188865	150.000	146.39
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	788311	150.000	151.43
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	1550379	150.000	145.03

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010810.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	1110306	150.000	143.38
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	870571	150.000	151.10
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	2834428	150.000	156.95
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1575358	150.000	148.33
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1445134	150.000	146.57
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	1608865	150.000	142.91
26 2,2-Dichloropropane	77	4.275	4.275	(0.873)	928351	150.000	161.64
24 2-Butanone	43	4.339	4.339	(0.886)	875837	300.000	300.00(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	2482833	150.000	148.33
52 2-Hexanone	43	7.653	7.653	(0.928)	1403558	300.000	325.87(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	2889930	150.000	148.43
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	2965061	150.000	158.11
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1970058	300.000	317.19(A)
10 Acetone	43	2.484	2.484	(0.507)	504121	300.000	279.00(A)
37 Benzene	78	5.220	5.220	(0.928)	3240723	150.000	147.15
74 Bromobenzene	156	9.385	9.385	(0.917)	842882	150.000	153.53
29 Bromochloromethane	128	4.557	4.557	(0.930)	342313	150.000	147.61
39 Bromodichloromethane	83	6.348	6.348	(1.129)	1008643	150.000	162.58
66 Bromoform	173	8.984	8.984	(1.089)	502752	150.000	150.57
6 Bromomethane	94	1.663	1.663	(0.340)	488763	150.000	153.52
19 Carbon Disulfide	76	2.592	2.592	(0.529)	3988539	300.000	276.30(A)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	897860	150.000	167.55
59 Chlorobenzene	112	8.275	8.275	(1.003)	2143923	150.000	143.99
7 Chloroethane	64	1.749	1.749	(0.357)	563792	150.000	148.26(M)
28 Chloroform	83	4.658	4.658	(0.951)	1353118	150.000	148.53
3 Chloromethane	50	1.340	1.340	(0.274)	861673	150.000	148.03
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.875)	865247	150.000	149.94
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.202)	1431850	150.000	151.03
55 Dibromochloromethane	129	7.758	7.758	(0.940)	772060	150.000	151.72
44 Dibromomethane	93	6.191	6.191	(1.101)	505820	150.000	150.45
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	835318	150.000	149.83
61 Ethylbenzene	106	8.373	8.373	(1.015)	1138800	150.000	151.63
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	361569	150.000	151.28
67 Isopropylbenzene	105	9.126	9.126	(1.106)	3302960	150.000	153.97
62 m,p-Xylenes	106	8.474	8.474	(1.027)	2795974	300.000	304.96(A)
17 Methylene Chloride	84	2.873	2.873	(0.587)	814401	150.000	151.04
87 n-Butylbenzene	91	10.558	10.558	(1.031)	2752533	150.000	151.06
73 n-Propylbenzene	91	9.479	9.479	(0.926)	4111490	150.000	151.08
92 Naphthalene	128	12.133	12.133	(1.185)	3241704	150.000	150.02
63 o-Xylene	106	8.811	8.811	(1.068)	1419753	150.000	151.79
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	3466750	150.000	155.74
64 Styrene	104	8.826	8.826	(1.070)	2437657	150.000	156.52
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	2394976	150.000	154.00
56 Tetrachloroethene	164	7.525	7.525	(0.912)	569750	150.000	145.23
50 Toluene	91	7.049	7.049	(0.855)	3364863	150.000	146.56
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	764493	150.000	148.54
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	1237749	150.000	150.46
38 Trichloroethene	130	5.861	5.861	(1.042)	785531	150.000	154.17
8 Trichlorofluoromethane	101	1.955	1.955	(0.399)	1050633	150.000	148.85
5 Vinyl Chloride	62	1.423	1.423	(0.291)	956094	150.000	152.70

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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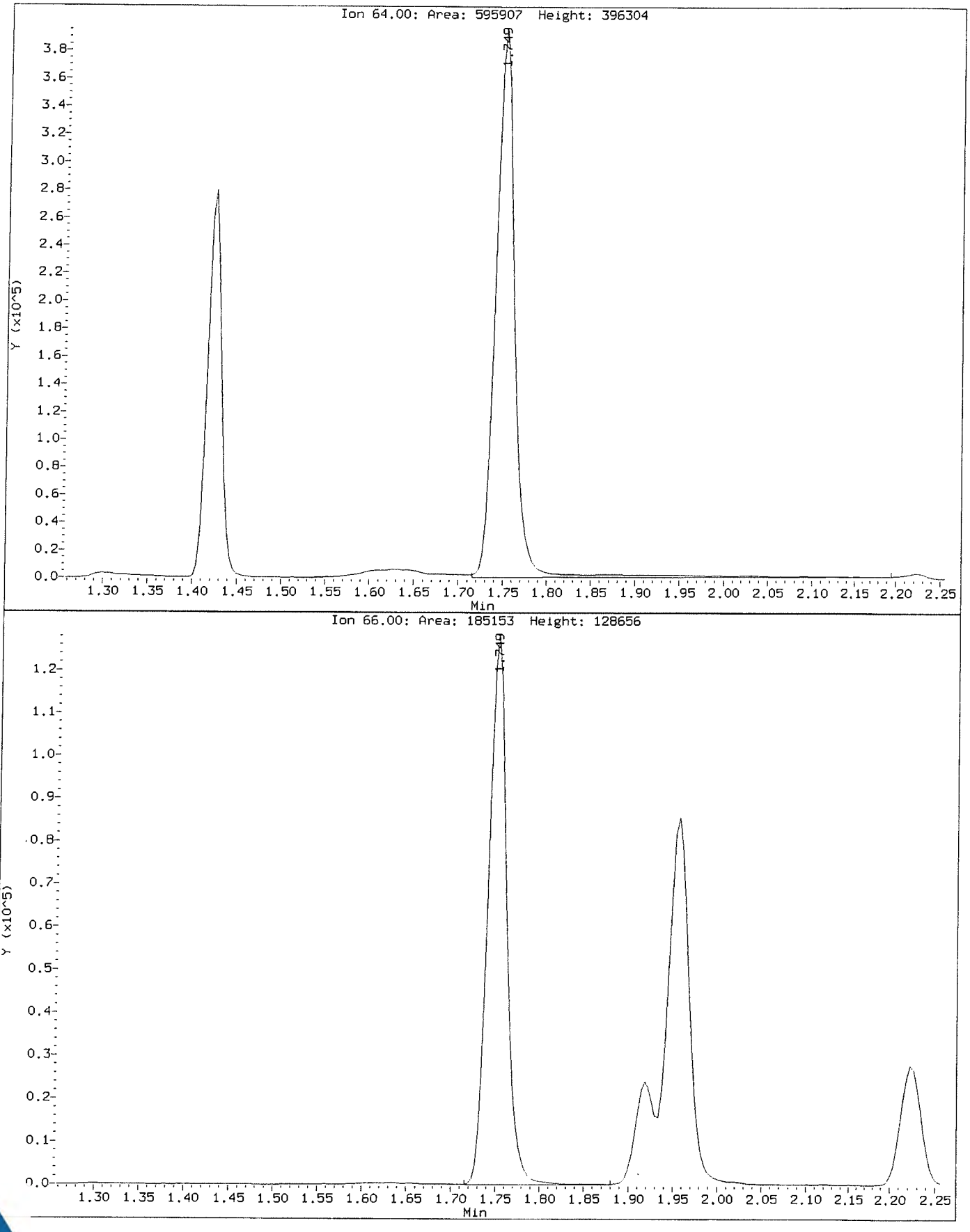
Date : 08-JAN-2019 14:34
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010810.D
Injection Date: 08-JAN-2019 14:34
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: Chloroethane
CAS Number: 75-00-3



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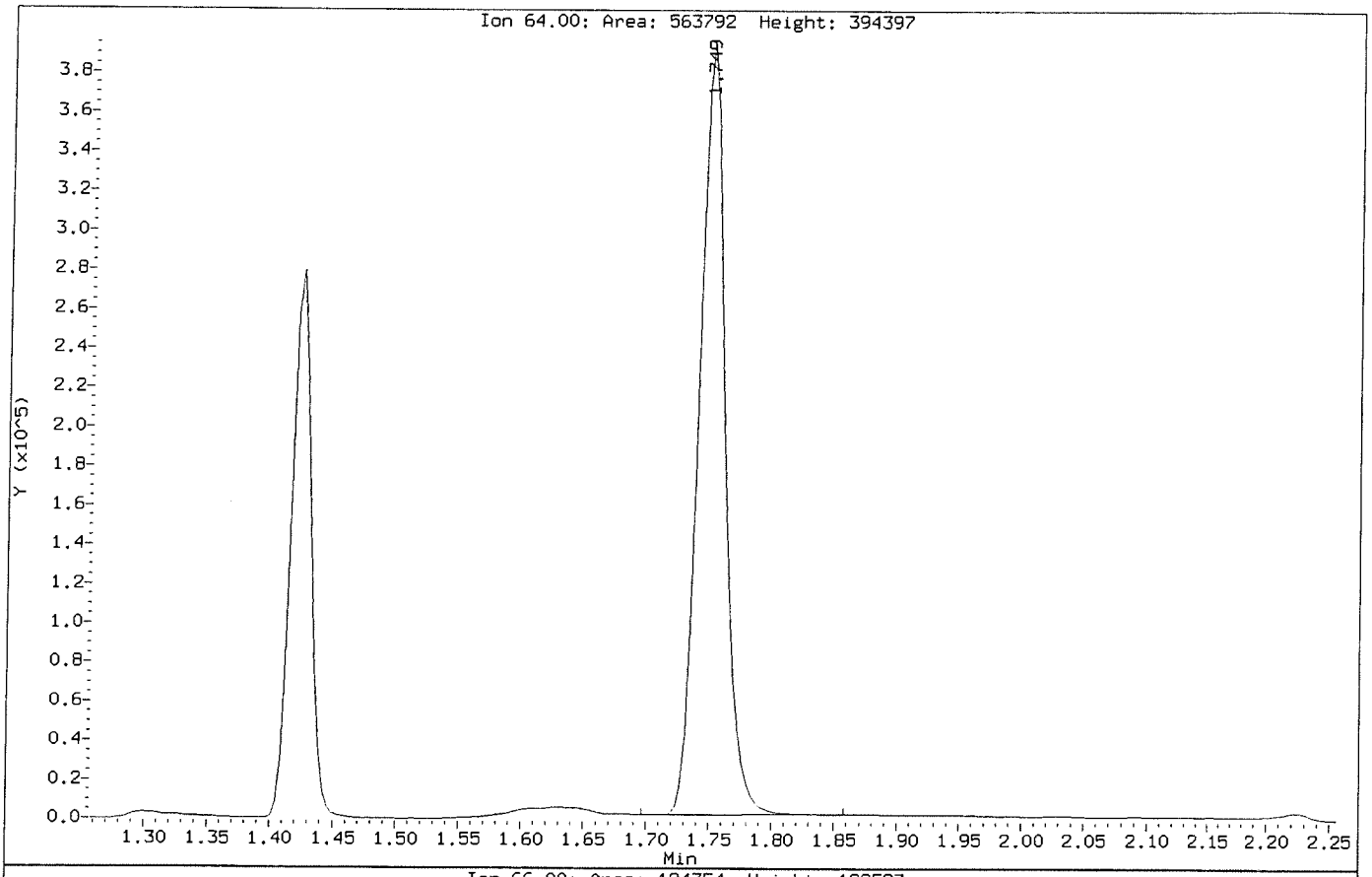
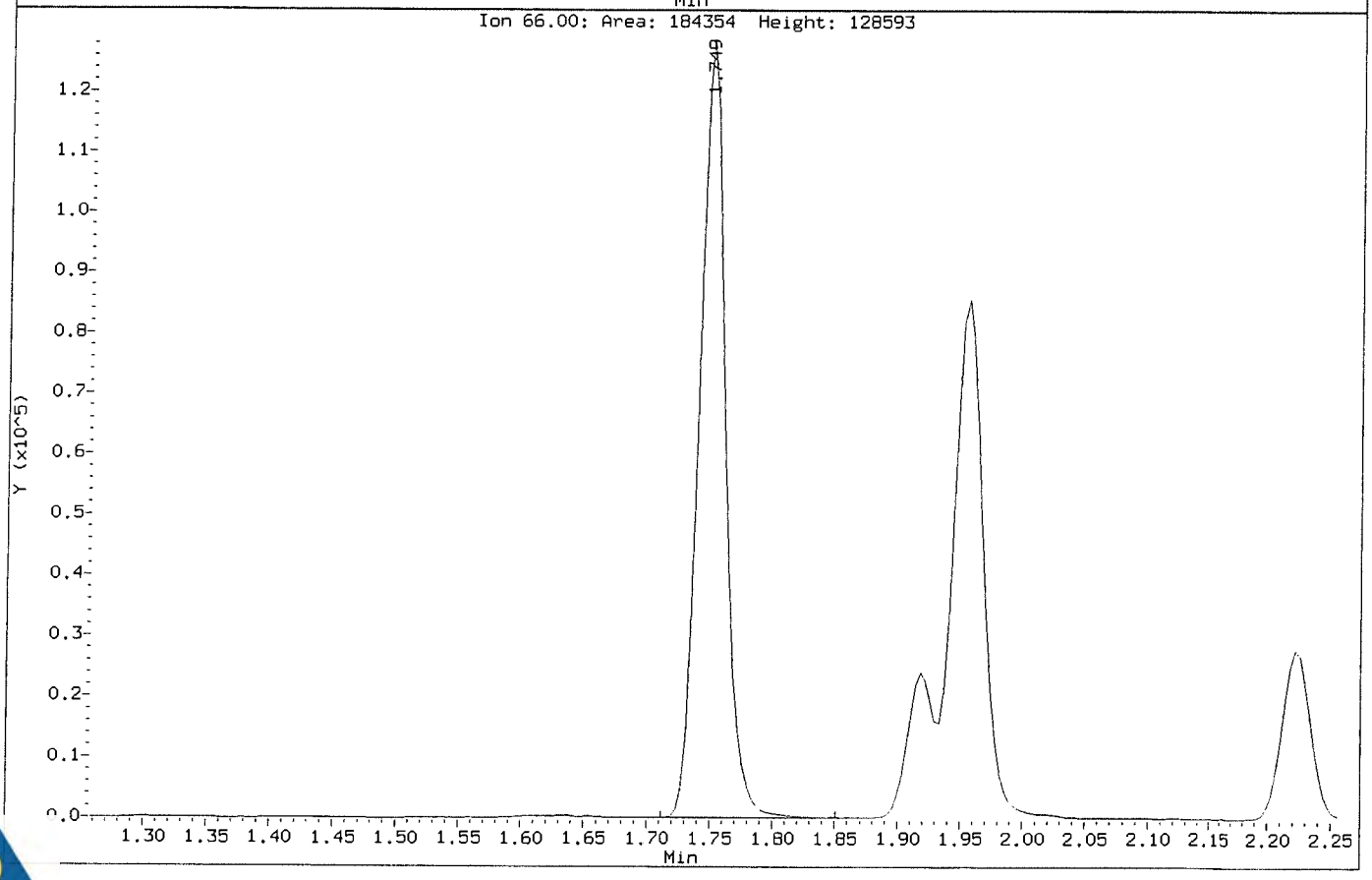
Injection Date: 08-JAN-2019 14:34
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D Page 1
Report Date: 01-Feb-2019 15:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 08-JAN-2019 14:59
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\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:34 Cal File: U010810.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

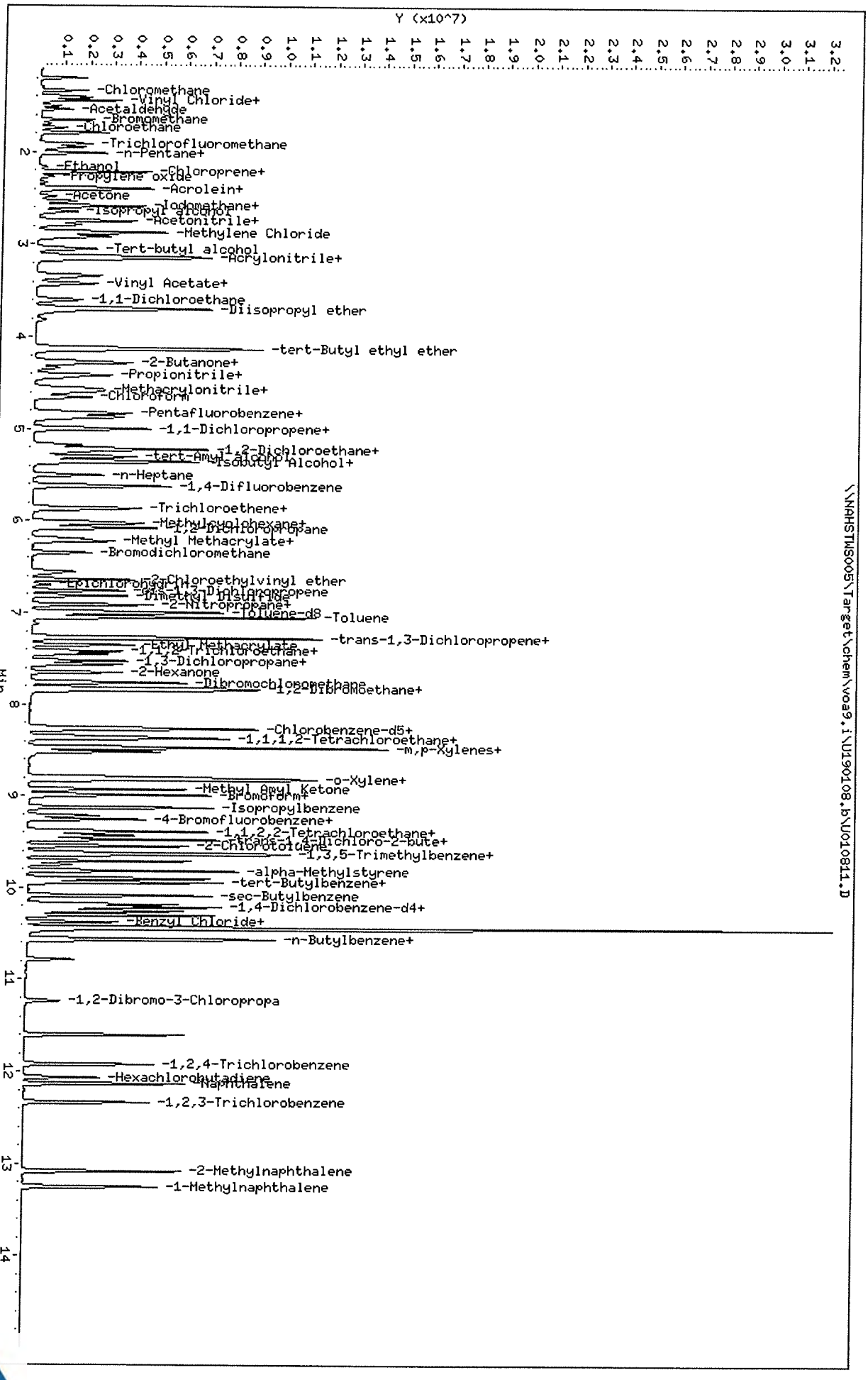
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	429927	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	808219	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	761406	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	355794	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	938870	200.000	199.70
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	1222427	200.000	199.21
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	3786858	200.000	198.31
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	1452643	200.000	199.83
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	984879	200.000	214.09(A)
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	1505349	200.000	213.79(A)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1597058	200.000	199.93
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	895818	200.000	192.24
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	1889553	200.000	193.35
11 1,1-Dichloroethene	96	2.393	2.393	(0.489)	823517	200.000	198.57
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	1465844	200.000	196.15
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	1348801	200.000	212.74(A)
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1870824	200.000	217.53(A)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	1398348	200.000	218.14(A)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	3800889	200.000	203.41(A)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	267735	200.000	204.51(A)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	1052363	200.000	198.27
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	2060137	200.000	190.70

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	1467861	200.000	187.69
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	1146745	200.000	197.08
75 1,3,5-Trimethylbenzene	105	9.628	9.628	(0.941)	3747524	200.000	205.34(A)
83 1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	2100365	200.000	195.69
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1923251	200.000	191.32
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	2142590	200.000	188.33
26 2,2-Dichloropropane	77	4.272	4.272	(0.873)	1232463	200.000	210.58(A)
24 2-Butanone	43	4.335	4.335	(0.886)	1216697	400.000	408.96(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	3297612	200.000	194.95
52 2-Hexanone	43	7.653	7.653	(0.928)	1936963	400.000	441.09(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	3826594	200.000	194.48
82 p-Isopropyltoluene	119	10.213	10.213	(0.998)	3919599	200.000	206.82(A)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	2707197	400.000	427.51(A)
10 Acetone	43	2.480	2.480	(0.507)	752770	400.000	409.58(A)
37 Benzene	78	5.216	5.216	(0.927)	4245482	200.000	190.88
74 Bromobenzene	156	9.385	9.385	(0.917)	1128976	200.000	203.49(A)
29 Bromochloromethane	128	4.553	4.553	(0.930)	439869	200.000	186.13
39 Bromodichloromethane	83	6.348	6.348	(1.129)	1348130	200.000	215.17(A)
66 Bromoform	173	8.984	8.984	(1.089)	687286	200.000	201.28(A)
6 Bromomethane	94	1.655	1.655	(0.338)	585977	200.000	180.48
19 Carbon Disulfide	76	2.585	2.585	(0.528)	5745653	400.000	390.57(A)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	1203648	200.000	222.41(A)
59 Chlorobenzene	112	8.275	8.275	(1.003)	2838218	200.000	186.97
7 Chloroethane	64	1.737	1.737	(0.355)	753381	200.000	194.41(M)
28 Chloroform	83	4.658	4.658	(0.952)	1774825	200.000	191.17
3 Chloromethane	50	1.336	1.336	(0.273)	1231855	200.000	206.67(A)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	1145016	200.000	194.71
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.202)	1921305	200.000	200.24(A)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1039615	200.000	199.99
44 Dibromomethane	93	6.191	6.191	(1.101)	674252	200.000	198.59
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	1134745	200.000	199.73
61 Ethylbenzene	106	8.373	8.373	(1.015)	1527436	200.000	199.48
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	491406	200.000	199.11
67 Isopropylbenzene	105	9.126	9.126	(1.106)	4368746	200.000	199.74
62 m,p-Xylenes	106	8.474	8.474	(1.027)	3708605	400.000	396.75(A)
17 Methylene Chloride	84	2.866	2.866	(0.586)	1093304	200.000	199.13
87 n-Butylbenzene	91	10.558	10.558	(1.031)	3656443	200.000	198.57
73 n-Propylbenzene	91	9.478	9.478	(0.926)	5413907	200.000	196.86
92 Naphthalene	128	12.133	12.133	(1.185)	4364184	200.000	199.85
63 o-Xylene	106	8.811	8.811	(1.068)	1887398	200.000	197.92
81 sec-Butylbenzene	105	10.090	10.090	(0.986)	4586325	200.000	203.88(A)
64 Styrene	104	8.826	8.826	(1.070)	3221123	200.000	202.86(A)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	3165126	200.000	201.39(A)
56 Tetrachloroethene	164	7.525	7.525	(0.912)	765741	200.000	191.45
50 Toluene	91	7.049	7.049	(0.855)	4399106	200.000	187.93
20 trans-1,2-Dichloroethene	96	3.136	3.136	(0.641)	1011119	200.000	192.78
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	1672981	200.000	200.84(A)
38 Trichloroethene	130	5.861	5.861	(1.042)	1053661	200.000	204.76(A)
8 Trichlorofluoromethane	101	1.947	1.947	(0.398)	1422198	200.000	197.73
5 Vinyl Chloride	62	1.415	1.415	(0.289)	1280236	200.000	200.65(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



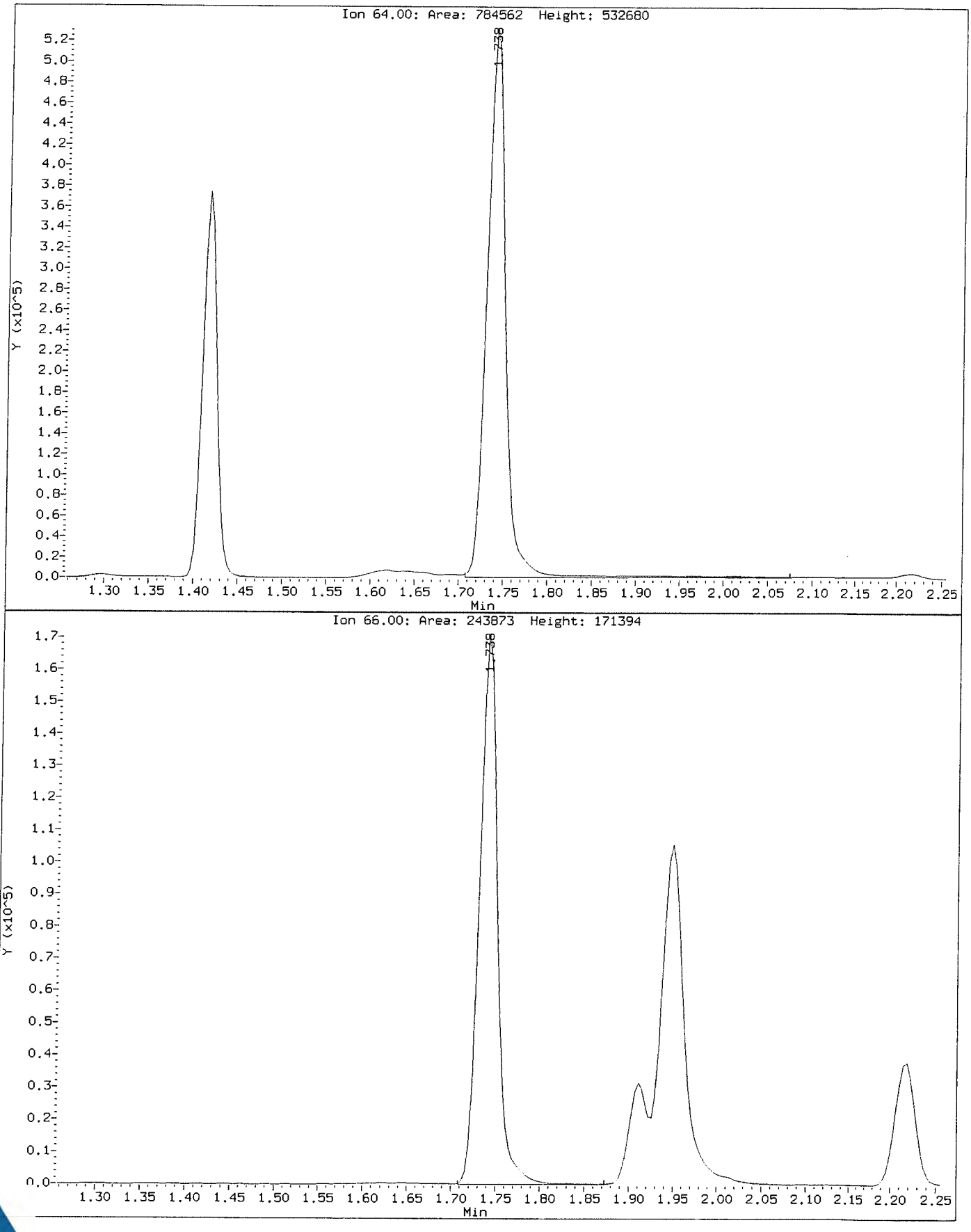
\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D
Date : 08-JAN-2019 14:59
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

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

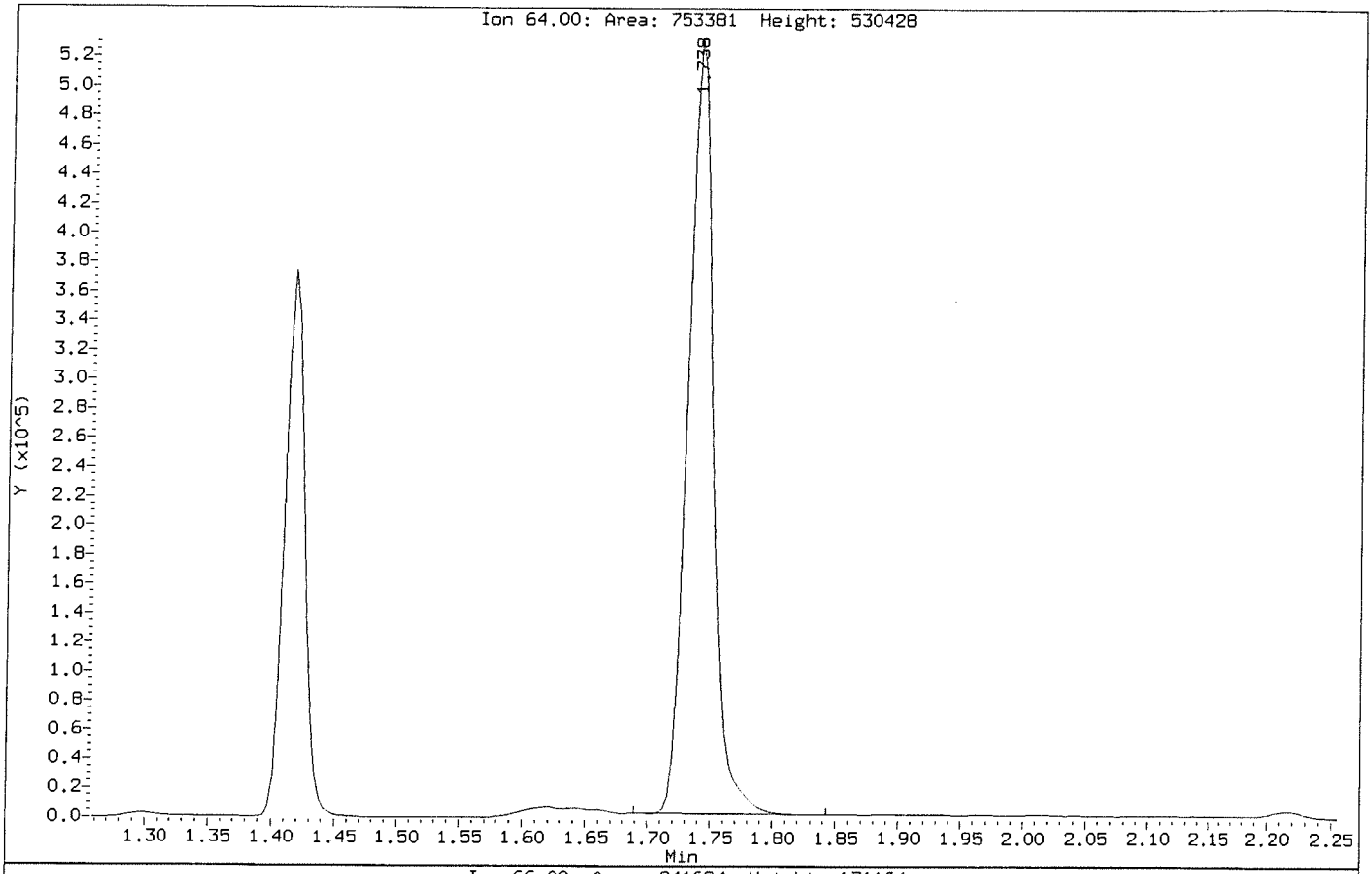
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010811.D
Injection Date: 08-JAN-2019 14:59
Instrument: VOA9.i
Client Sample ID: VSTD200

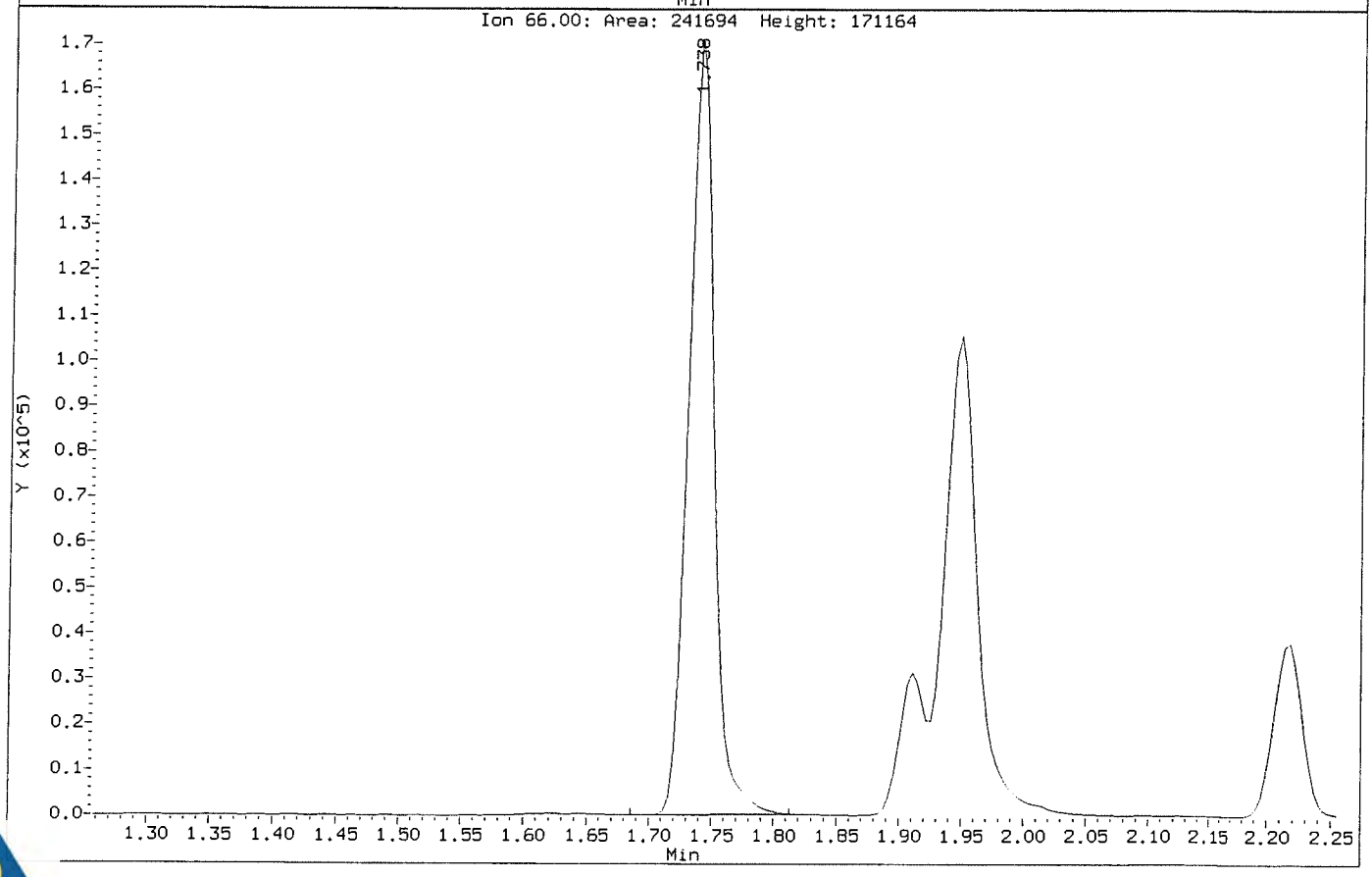
Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D
Injection Date: 08-JAN-2019 14:59
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D Page 1
Report Date: 01-Feb-2019 15:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 08-JAN-2019 15:48
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;2;;ICV
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

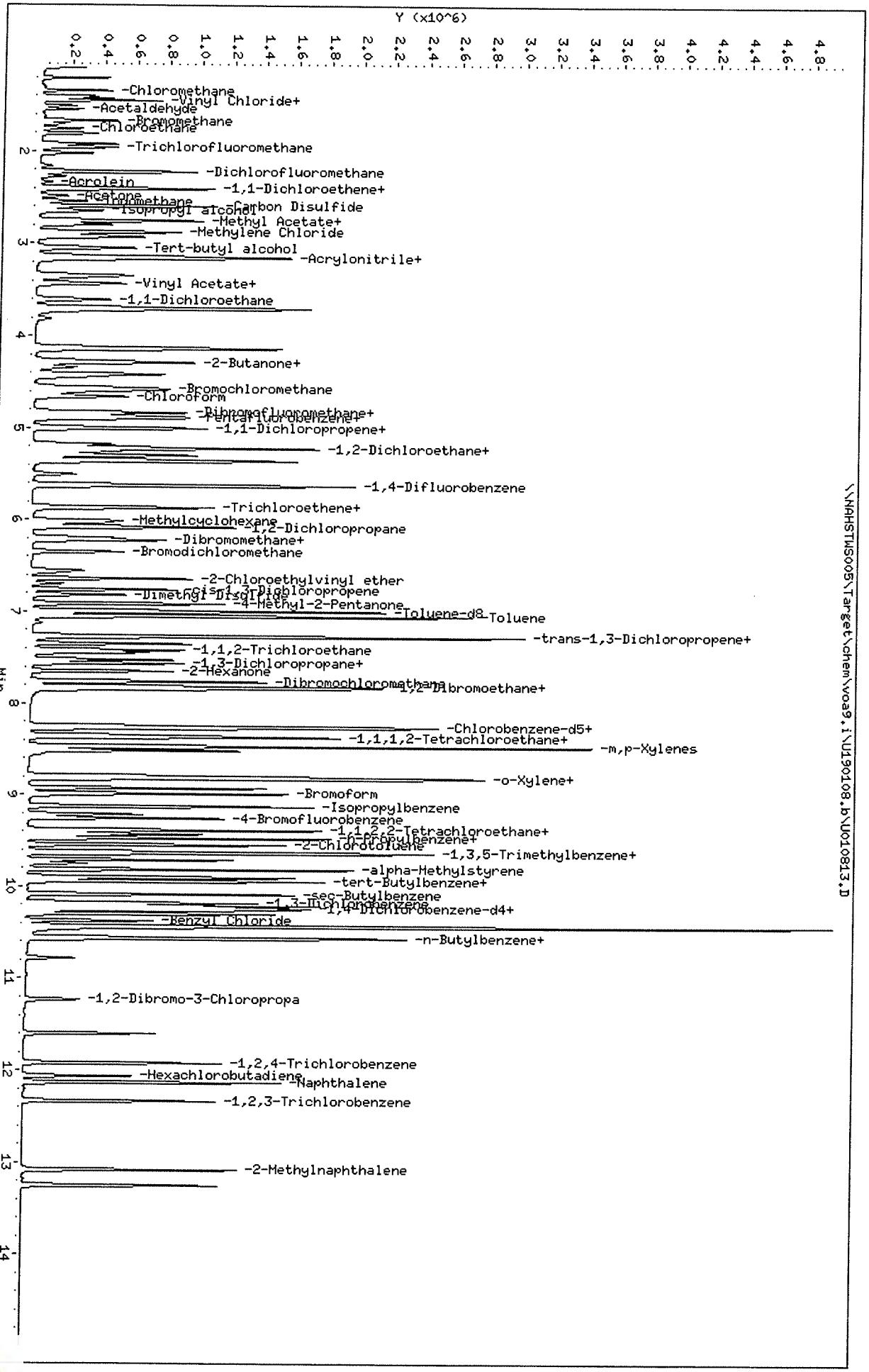
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	430548	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	797004	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	736491	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	345661	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	239269	50.0000	49.21
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	314304	50.0000	49.49
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	974246	50.0000	50.94
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	367815	50.0000	50.93
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	226050	50.0000	50.80
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	337056	50.0000	47.80
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	403909	50.0000	51.77
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	223064	50.0000	49.48
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	458068	50.0000	46.80
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	187340	50.0000	45.10
32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	336995	50.0000	45.73
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	308927	50.0000	50.15
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	450600	50.0000	53.93
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	320108	50.0000	51.40
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	918581	50.0000	50.60
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	61712	50.0000	50.11
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	262149	50.0000	51.06
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	502063	50.0000	47.83

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D Page 2
Report Date: 01-Feb-2019 15:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.933)	369789	50.0000	47.94
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	282197	50.0000	49.18
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	872265	50.0000	49.19
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	502149	50.0000	48.15
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	481086	50.0000	49.47
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	515943	50.0000	46.68
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	305623	50.0000	52.14
24 2-Butanone	43	4.339	4.339	(0.886)	313100	100.000	105.08
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	801797	50.0000	48.79
52 2-Hexanone	43	7.649	7.649	(0.927)	474501	100.000	111.71
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	931854	50.0000	48.74
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	890763	50.0000	48.38
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	670625	100.000	109.48
10 Acetone	43	2.483	2.483	(0.507)	186681	100.000	100.19
37 Benzene	78	5.220	5.220	(0.927)	1041442	50.0000	47.48
74 Bromobenzene	156	9.381	9.381	(0.917)	269447	50.0000	49.99
29 Bromochloromethane	128	4.557	4.557	(0.930)	125415	50.0000	52.99
39 Bromodichloromethane	83	6.348	6.348	(1.128)	313432	50.0000	50.72
66 Bromoform	173	8.984	8.984	(1.089)	153603	50.0000	47.88(T)
6 Bromomethane	94	1.670	1.670	(0.341)	164593	50.0000	51.16
19 Carbon Disulfide	76	2.596	2.596	(0.530)	1390922	100.000	94.41
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	260150	50.0000	48.74
59 Chlorobenzene	112	8.275	8.275	(1.003)	694010	50.0000	47.26
7 Chloroethane	64	1.756	1.756	(0.359)	171448	50.0000	44.17(M)
28 Chloroform	83	4.661	4.661	(0.952)	438854	50.0000	47.20
3 Chloromethane	50	1.344	1.344	(0.274)	267263	50.0000	46.70
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	277790	50.0000	47.17
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.200)	452822	50.0000	48.85
55 Dibromochloromethane	129	7.758	7.758	(0.940)	238591	50.0000	48.38
44 Dibromomethane	93	6.191	6.191	(1.100)	165264	50.0000	49.36
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	250516	50.0000	44.03
61 Ethylbenzene	106	8.369	8.369	(1.015)	350049	50.0000	47.26
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	105872	50.0000	47.27
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1025574	50.0000	48.47
62 m,p-Xylenes	106	8.474	8.474	(1.027)	888998	100.000	98.32
17 Methylene Chloride	84	2.877	2.877	(0.587)	268195	50.0000	48.39
87 n-Butylbenzene	91	10.554	10.554	(1.031)	822061	50.0000	45.95
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1282894	50.0000	48.01
92 Naphthalene	128	12.133	12.133	(1.185)	1070210	50.0000	50.80
63 o-Xylene	106	8.811	8.811	(1.068)	452391	50.0000	49.04
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1015099	50.0000	46.44
64 Styrene	104	8.826	8.826	(1.070)	785930	50.0000	51.17
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	718649	50.0000	47.06
56 Tetrachloroethene	164	7.525	7.525	(0.912)	170507	50.0000	44.07
50 Toluene	91	7.049	7.049	(0.855)	1095105	50.0000	48.36
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	241088	50.0000	45.90
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.290)	389510	50.0000	48.64
38 Trichloroethene	130	5.865	5.865	(1.042)	246948	50.0000	48.66
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	310344	50.0000	43.08
5 Vinyl Chloride	62	1.423	1.423	(0.291)	284020	50.0000	44.45

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



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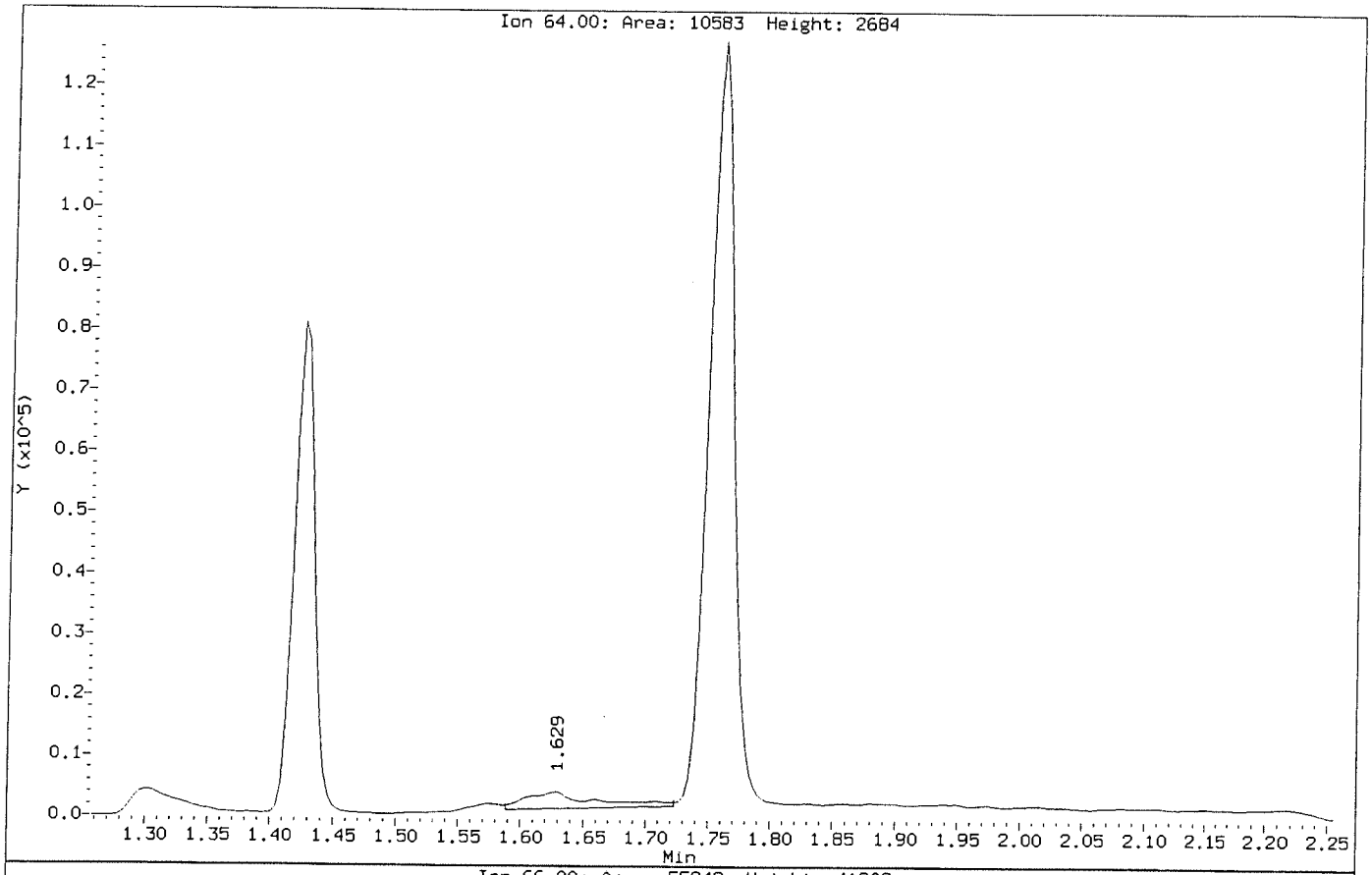
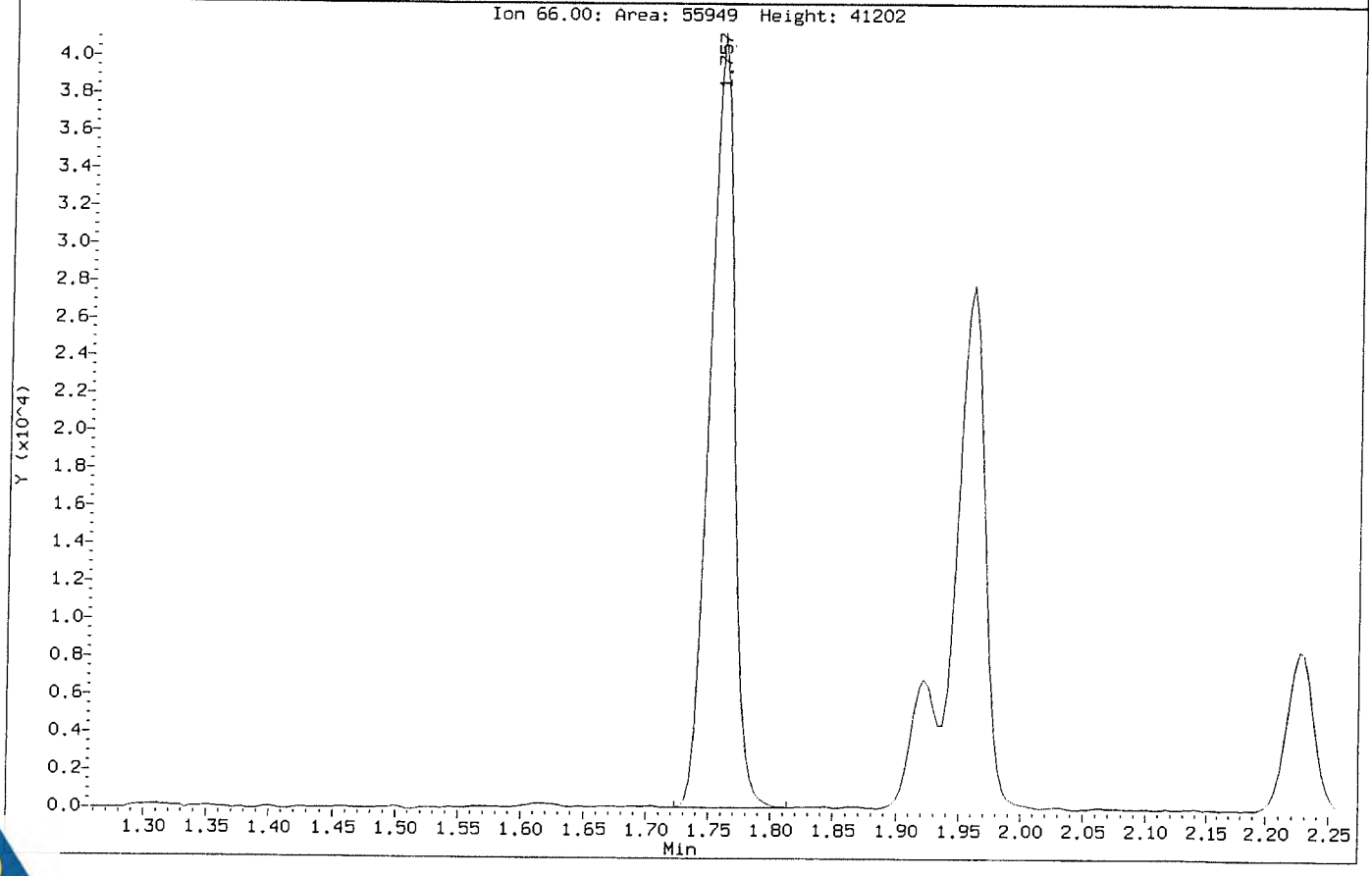
Date : 08-JAN-2019 15:48
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;2;;ICV
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010813.D
Injection Date: 08-JAN-2019 15:48
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





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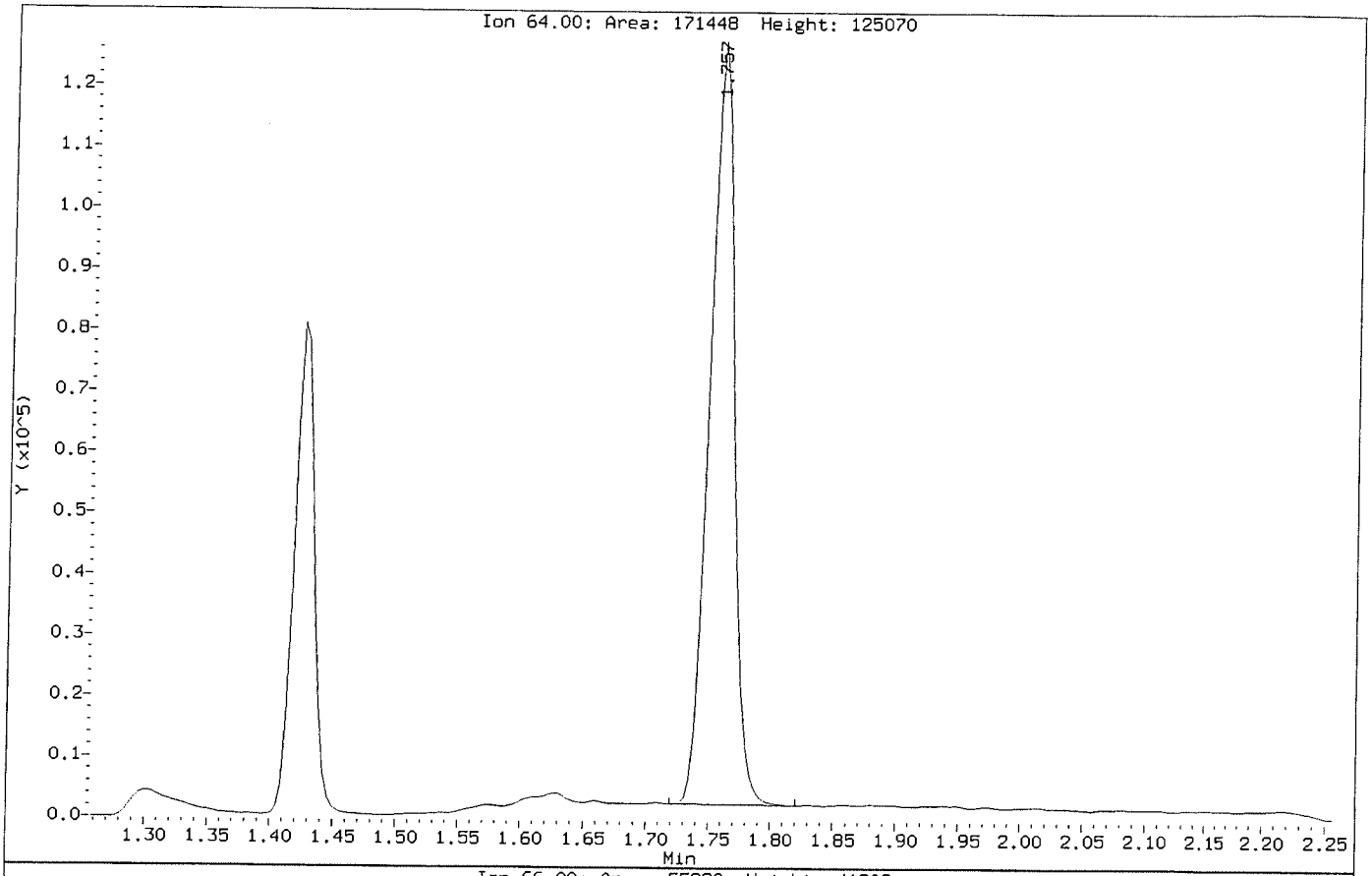
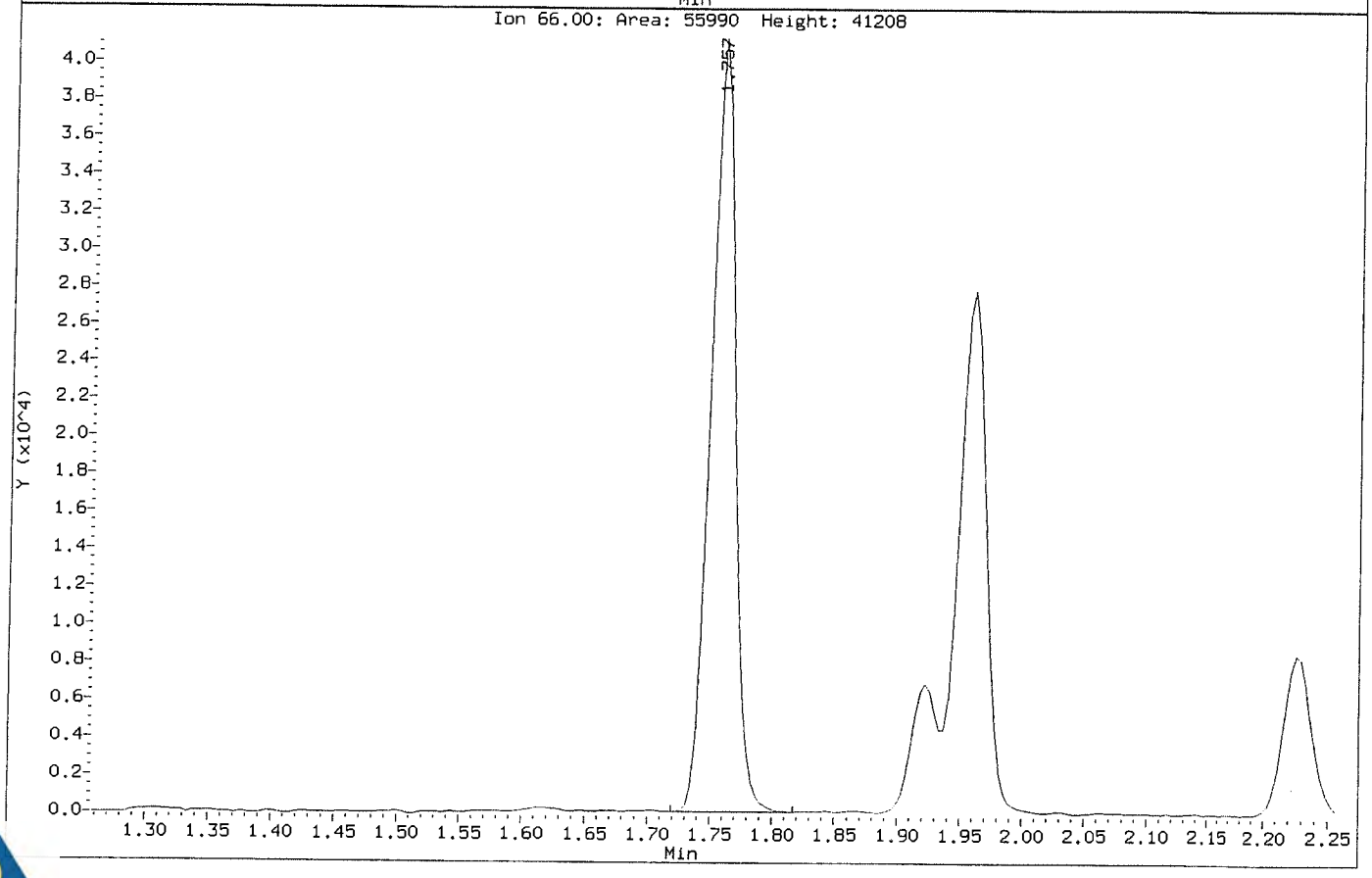
Injection Date: 08-JAN-2019 15:48
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





MSVOA09 -Logbook

Batch: 34079
Date: 01-10-2019
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	01-10-2019 10:09 am	1.00	50 mL	50 mL	V011001.D	Liquid	Y	r
	Auto find/ purged									
2	VSTD050	CCV	01-10-2019 10:33 am	1.00	50 mL	50 mL	V011002.D	Liquid	Y	r
	10 uL cal std/50 mL DI									
3	VSTD050	CCV	01-10-2019 10:58 am	1.00	50 mL	50 mL	V011003.D	Liquid	Y	r
	10 uL cal std/50 mL DI									
4	CCB	SAMP	01-10-2019 11:22 am	1.00	50 mL	50 mL	V011004.D	Liquid	Y	r
5	VLCSW-190108	LCS	01-10-2019 11:47 am	1.00	50 mL	50 mL	V011005.D	Liquid	Y	r
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	01-10-2019 12:11 pm	1.00	50 mL	50 mL	V011006.D	Liquid	Y	r
7	BLANK	SAMP	01-10-2019 12:36 pm	1.00	50 mL	50 mL	V011007.D	Liquid	Y	r
8	VBLKW-190108	MBLK	01-10-2019 01:00 pm	1.00	50 mL	50 mL	V011008.D	Liquid	Y	r
9	HS18121558-04	SAMP	01-10-2019 01:25 pm	1.00	50 mL	50 mL	V011009.D	Liquid	Y	>
10	HS19010248-05	SAMP	01-10-2019 01:50 pm	1.00	50 mL	50 mL	V011010.D	Liquid	Y	>
11	HS18121558-01	SAMP	01-10-2019 02:14 pm	1.00	50 mL	50 mL	V011011.D	Liquid	Y	>
12	HS18121558-03	SAMP	01-10-2019 02:39 pm	1.00	50 mL	50 mL	V011012.D	Liquid	Y	>
13	HS18121558-03DL	SAMP	01-10-2019 03:06 pm	5.00	10 mL	50 mL	V011013.D	Liquid	Y	>
14	HS18121558-02	SAMP	01-10-2019 03:33 pm	10.00	5 mL	50 mL	V011014.D	Liquid	Y	>
15	HS18121558-02DL	SAMP	01-10-2019 04:01 pm	100.0(	500 µL	50 mL	V011015.D	Liquid	Y	>
16	HS18121558-01MS	MS	01-10-2019 04:25 pm	1.00	50 mL	50 mL	V011016.D	Liquid	Y	>
	3.5 uL cal std/43 mL samp									
17	HS18121558-01MSD	MSD	01-10-2019 04:50 pm	1.00	50 mL	50 mL	V011017.D	Liquid	Y	>
	3.5 uL cal std/43 mL samp									
18	HS19010396-05	SAMP	01-10-2019 05:15 pm	1.00	50 mL	50 mL	V011018.D	Liquid	Y	>
19	HS19010396-15	SAMP	01-10-2019 05:39 pm	1.00	50 mL	50 mL	V011019.D	Liquid	Y	>
20	HS19010248-02	SAMP	01-10-2019 06:04 pm	1.00	50 mL	50 mL	V011020.D	Liquid	Y	>
21	HS19010248-02DL	SAMP	01-10-2019 06:31 pm	10.00	5 mL	50 mL	V011021.D	Liquid	Y	>
22	HS19010248-03	SAMP	01-10-2019 06:56 pm	1.00	50 mL	50 mL	V011022.D	Liquid	Y	>
23	HS19010248-03DL	SAMP	01-10-2019 07:23 pm	25.00	2 mL	50 mL	V011023.D	Liquid	Y	>
24	HS19010248-04	SAMP	01-10-2019 07:48 pm	1.00	50 mL	50 mL	V011024.D	Liquid	Y	>
25	HS19010248-04DL	SAMP	01-10-2019 08:15 pm	25.00	2 mL	50 mL	V011025.D	Liquid	Y	>
26	CCV_END	CCV	01-10-2019 08:40 pm	1.00	50 mL	50 mL	V011026.D	Liquid	Y	r
	10 uL cal std/50 mL DI									

Chemical	Value
SURR SPK ID	30502-57-03
IS ID	30502-57-04
ICV STD ID	30603-49-01
LCS/MS ID	30603-49-01
CAL STD ID	30502-59-01/02
BFB ID	30502-57-03
pH Paper	634-40-13

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-190108	104	99	105	106	0
02	VBLKW-190108	98	92	106	102	0
03	HS19010248-0	106	94	106	101	0
04	HS18121558-0	107	97	107	106	0
05	HS18121558-0	104	97	107	107	0
06	HS19010248-0	108	96	108	100	0
07	HS19010248-0	112	98	107	99	0
08	HS19010248-0	108	97	99	104	0
09	HS19010248-0	109	96	107	99	0
10	HS19010248-0	111	100	107	99	0
11	HS19010248-0	108	96	108	99	0
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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-190108

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Lab File ID: V011008 Lab Sample ID: VBLKW-190108

Date Analyzed: 01/10/19 Time Analyzed: 1300

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-190108	VLCSW-190108	V011005	1147
02	HS19010248-0	HS19010248-05	V011010	1350
03	HS18121558-0	HS18121558-01M	V011016	1625
04	HS18121558-0	HS18121558-01M	V011017	1650
05	HS19010248-0	HS19010248-02	V011020	1804
06	HS19010248-0	HS19010248-02D	V011021	1831
07	HS19010248-0	HS19010248-03	V011022	1856
08	HS19010248-0	HS19010248-03D	V011023	1923
09	HS19010248-0	HS19010248-04	V011024	1948
10	HS19010248-0	HS19010248-04D	V011025	2015
11				
12				
13				
14				
15				
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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.: HS19010248

Lab File ID: V011001 BFB Injection Date: 01/10/19

Instrument ID: VOA9 BFB Injection Time: 1009

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	20.5
75	30.0 - 60.0% of mass 95	51.2
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 (0.7)1
174	Greater than 50.0% of mass 95	64.6
175	5.0 - 9.0% of mass 174	5.3 (8.3)1
176	95.0 - 101.0% of mass 174	62.0 (96.0)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	V011003	01/10/19	1058
02	VLCSW-190108	VLCSW-190108	V011005	01/10/19	1147
03	VBLKW-190108	VBLKW-190108	V011008	01/10/19	1300
04	HS19010248-0	HS19010248-05	V011010	01/10/19	1350
05	HS18121558-0	HS18121558-01M	V011016	01/10/19	1625
06	HS18121558-0	HS18121558-01M	V011017	01/10/19	1650
07	HS19010248-0	HS19010248-02	V011020	01/10/19	1804
08	HS19010248-0	HS19010248-02D	V011021	01/10/19	1831
09	HS19010248-0	HS19010248-03	V011022	01/10/19	1856
10	HS19010248-0	HS19010248-03D	V011023	01/10/19	1923
11	HS19010248-0	HS19010248-04	V011024	01/10/19	1948
12	HS19010248-0	HS19010248-04D	V011025	01/10/19	2015
13	CCV_END	CCV_END	V011026	01/10/19	2040
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Instrument ID: VOA9 Calibration Date: 01/10/19 Time: 1058

Lab File ID: V011003 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
cis-1,3-Dichloropropene	51.05	50.00	LINR	2.1	20.0
trans-1,3-Dichloropropene	50.23	50.00	LINR	0.4	20.0
1,3-Dichlorobenzene	51.06	50.00	AVRG	2.1	20.0
2,2-Dichloropropane	57.78	50.00	AVRG	15.5	20.0
1,1-Dichloropropene	51.85	50.00	AVRG	3.7	20.0
Dibromomethane	50.02	50.00	AVRG	0.0	20.0
1,2-Dibromoethane	51.08	50.00	AVRG	2.1	20.0
trans-1,2-Dichloroethene	49.59	50.00	AVRG	0.8	20.0
1,1,1,2-Tetrachloroethane	53.64	50.00	AVRG	7.2	20.0
1,1,1-Trichloroethane	53.68	50.00	AVRG	7.3	20.0
1,1,2,2-Tetrachloroethane	49.45	50.00	LINR	1.1	20.0
1,1,2-Trichloroethane	50.72	50.00	AVRG	1.4	20.0
1,1-Dichloroethane	50.81	50.00	AVRG	1.6	20.0
1,1-Dichloroethene	49.50	50.00	AVRG	1.0	20.0
Trichloroethene	50.90	50.00	AVRG	1.8	20.0
1,2,3-Trichlorobenzene	51.65	50.00	AVRG	3.3	20.0
Trichlorofluoromethane	47.40	50.00	AVRG	5.2	20.0
1,2,4-Trichlorobenzene	54.70	50.00	AVRG	9.4	20.0
1,2,4-Trimethylbenzene	55.88	50.00	AVRG	11.7	20.0
Tetrachloroethene	49.36	50.00	AVRG	1.2	20.0
1,2-Dichlorobenzene	50.46	50.00	AVRG	0.9	20.0
1,2-Dichloroethane	50.43	50.00	AVRG	0.8	20.0
1,2-Dichloropropane	52.57	50.00	AVRG	5.1	20.0
1,3,5-Trimethylbenzene	55.52	50.00	AVRG	11.0	20.0
1,3-Dichloropropane	51.25	50.00	AVRG	2.5	20.0
1,4-Dichlorobenzene	49.62	50.00	AVRG	0.7	20.0
Toluene	52.10	50.00	AVRG	4.2	20.0
2-Butanone	90.72	100.00	AVRG	9.2	20.0
2-Chlorotoluene	53.18	50.00	AVRG	6.3	20.0
2-Hexanone	95.17	100.00	AVRG	4.8	20.0
4-Chlorotoluene	53.72	50.00	AVRG	7.4	20.0
tert-Butylbenzene	54.45	50.00	AVRG	8.9	20.0
4-Methyl-2-Pentanone	97.42	100.00	AVRG	2.5	20.0
Acetone	85.60	100.00	LINR	14.4	20.0
Benzene	50.99	50.00	AVRG	1.9	20.0
Bromobenzene	51.86	50.00	AVRG	3.7	20.0
Bromochloromethane	54.66	50.00	AVRG	9.3	20.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Instrument ID: VOA9 Calibration Date: 01/10/19 Time: 1058

Lab File ID: V011003 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Bromodichloromethane	54.03	50.00	AVRG	8.0	20.0
Bromoform	46.21	50.00	LINR	7.5	20.0
Bromomethane	45.67	50.00	LINR	8.6	20.0
Carbon Disulfide	107.24	100.00	AVRG	7.2	20.0
Carbon Tetrachloride	55.09	50.00	AVRG	10.1	20.0
Chlorobenzene	49.84	50.00	AVRG	0.3	20.0
Chloroethane	45.27	50.00	AVRG	9.4	20.0
Chloroform	50.63	50.00	AVRG	1.2	20.0
Chloromethane	47.42	50.00	LINR	5.1	20.0
cis-1,2-Dichloroethene	50.05	50.00	AVRG	0.0	20.0
Dibromochloromethane	49.76	50.00	LINR	0.4	20.0
Dichlorodifluoromethane	50.89	50.00	AVRG	1.7	20.0
Ethylbenzene	52.49	50.00	AVRG	4.9	20.0
Hexachlorobutadiene	54.89	50.00	2ORDR	9.7	20.0
Isopropylbenzene	54.67	50.00	AVRG	9.3	20.0
m,p-Xylenes	106.21	100.00	AVRG	6.2	20.0
Methylene Chloride	51.59	50.00	LINR	3.1	20.0
n-Butylbenzene	56.04	50.00	AVRG	12.0	20.0
n-Propylbenzene	55.48	50.00	AVRG	10.9	20.0
Naphthalene	47.30	50.00	2ORDR	5.4	20.0
o-Xylene	52.63	50.00	AVRG	5.2	20.0
sec-Butylbenzene	56.66	50.00	AVRG	13.3	20.0
Styrene	54.30	50.00	AVRG	8.6	20.0
Vinyl Chloride	49.14	50.00	AVRG	1.7	20.0
1,2,3-Trichloropropane	49.79	50.00	AVRG	0.4	20.0
p-Isopropyltoluene	57.19	50.00	AVRG	14.3	20.0
1,2-Dibromo-3-Chloropropane	42.09	50.00	LINR	15.8	20.0
1,2-Dichloroethane-d4	49.59	50.00	LINR	0.8	20.0
Dibromofluoromethane	49.83	50.00	2ORDR	0.3	20.0
Toluene-d8	52.45	50.00	LINR	4.9	20.0
4-Bromofluorobenzene	52.64	50.00	LINR	5.2	20.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Instrument ID: VOA9 Calibration Date: 01/10/19 Time: 2040

Lab File ID: V011026 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
cis-1,3-Dichloropropene	63.24	50.00	LINR	26.4	50.0
trans-1,3-Dichloropropene	62.41	50.00	LINR	24.8	50.0
1,3-Dichlorobenzene	64.18	50.00	AVRG	28.3	50.0
2,2-Dichloropropane	59.39	50.00	AVRG	18.7	50.0
1,1-Dichloropropene	70.90	50.00	AVRG	41.8	50.0
Dibromomethane	67.54	50.00	AVRG	35.0	50.0
1,2-Dibromoethane	66.93	50.00	AVRG	33.8	50.0
trans-1,2-Dichloroethene	65.62	50.00	AVRG	31.2	50.0
1,1,1,2-Tetrachloroethane	67.68	50.00	AVRG	35.3	50.0
1,1,1-Trichloroethane	71.97	50.00	AVRG	43.9	50.0
1,1,2,2-Tetrachloroethane	67.83	50.00	LINR	35.6	50.0
1,1,2-Trichloroethane	67.26	50.00	AVRG	34.5	50.0
1,1-Dichloroethane	68.92	50.00	AVRG	37.8	50.0
1,1-Dichloroethene	71.00	50.00	AVRG	42.0	50.0
Trichloroethene	70.51	50.00	AVRG	41.0	50.0
1,2,3-Trichlorobenzene	62.65	50.00	AVRG	25.3	50.0
Trichlorofluoromethane	72.65	50.00	AVRG	45.3	50.0
1,2,4-Trichlorobenzene	64.07	50.00	AVRG	28.1	50.0
1,2,4-Trimethylbenzene	72.19	50.00	AVRG	44.3	50.0
Tetrachloroethene	63.05	50.00	AVRG	26.1	50.0
1,2-Dichlorobenzene	63.03	50.00	AVRG	26.0	50.0
1,2-Dichloroethane	68.47	50.00	AVRG	36.9	50.0
1,2-Dichloropropane	70.62	50.00	AVRG	41.2	50.0
1,3,5-Trimethylbenzene	72.33	50.00	AVRG	44.6	50.0
1,3-Dichloropropane	68.70	50.00	AVRG	37.4	50.0
1,4-Dichlorobenzene	61.78	50.00	AVRG	23.5	50.0
Toluene	70.02	50.00	AVRG	40.0	50.0
2-Butanone	136.00	100.00	AVRG	36.0	50.0
2-Chlorotoluene	70.33	50.00	AVRG	40.6	50.0
2-Hexanone	144.12	100.00	AVRG	44.1	50.0
4-Chlorotoluene	70.09	50.00	AVRG	40.1	50.0
tert-Butylbenzene	71.46	50.00	AVRG	42.9	50.0
4-Methyl-2-Pentanone	143.91	100.00	AVRG	43.9	50.0
Acetone	139.26	100.00	LINR	39.2	50.0
Benzene	68.79	50.00	AVRG	37.5	50.0
Bromobenzene	64.44	50.00	AVRG	28.8	50.0
Bromochloromethane	70.23	50.00	AVRG	40.4	50.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Instrument ID: VOA9 Calibration Date: 01/10/19 Time: 2040

Lab File ID: V011026 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d	
Bromodichloromethane	71.12	50.00	AVRG	42.2	50.0	
Bromoform	56.97	50.00	LINR	13.9	50.0	
Bromomethane	67.23	50.00	LINR	34.4	50.0	
Carbon Disulfide	143.26	100.00	AVRG	43.2	50.0	
Carbon Tetrachloride	74.33	50.00	AVRG	48.6	50.0	
Chlorobenzene	65.27	50.00	AVRG	30.5	50.0	
Chloroethane	84.84	50.00	AVRG	69.6	50.0	<-
Chloroform	67.64	50.00	AVRG	35.2	50.0	
Chloromethane	68.00	50.00	LINR	36.0	50.0	
cis-1,2-Dichloroethene	65.31	50.00	AVRG	30.6	50.0	
Dibromochloromethane	62.19	50.00	LINR	24.3	50.0	
Dichlorodifluoromethane	69.02	50.00	AVRG	38.0	50.0	
Ethylbenzene	69.63	50.00	AVRG	39.2	50.0	
Hexachlorobutadiene	62.00	50.00	2ORDR	24.0	50.0	
Isopropylbenzene	73.25	50.00	AVRG	46.5	50.0	
m,p-Xylenes	141.15	100.00	AVRG	41.1	50.0	
Methylene Chloride	68.77	50.00	LINR	37.5	50.0	
n-Butylbenzene	73.43	50.00	AVRG	46.8	50.0	
n-Propylbenzene	73.52	50.00	AVRG	47.0	50.0	
Naphthalene	62.15	50.00	2ORDR	24.3	50.0	
o-Xylene	69.27	50.00	AVRG	38.5	50.0	
sec-Butylbenzene	74.16	50.00	AVRG	48.3	50.0	
Styrene	70.94	50.00	AVRG	41.8	50.0	
Vinyl Chloride	73.50	50.00	AVRG	47.0	50.0	
1,2,3-Trichloropropane	66.56	50.00	AVRG	33.1	50.0	
p-Isopropyltoluene	73.13	50.00	AVRG	46.2	50.0	
1,2-Dibromo-3-Chloropropane	56.50	50.00	LINR	13.0	50.0	
1,2-Dichloroethane-d4	51.46	50.00	LINR	2.9	50.0	
Dibromofluoromethane	49.04	50.00	2ORDR	1.9	50.0	
Toluene-d8	54.24	50.00	LINR	8.4	50.0	
4-Bromofluorobenzene	54.19	50.00	LINR	8.3	50.0	

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.: HS19010248

Lab File ID (Standard): V011003 Date Analyzed: 01/10/19

Instrument ID: VOA9 Time Analyzed: 1058

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

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	672751	8.25	737678	5.63	314733	10.24
	UPPER LIMIT	1345502	8.75	1475356	6.13	629466	10.74
	LOWER LIMIT	336376	7.75	368839	5.13	157367	9.74
	CLIENT SAMPLE NO.						
01	VLCSW-190108	603356	8.25	664579	5.63	310059	10.24
02	VBLKW-190108	531280	8.25	574805	5.63	250640	10.24
03	HS19010248-0	450234	8.25	488484	5.63	204360	10.24
04	HS18121558-0	440448	8.25	474689	5.63	209172	10.24
05	HS18121558-0	462915	8.25	498564	5.63	219863	10.24
06	HS19010248-0	438150	8.25	486547	5.63	178654	10.24
07	HS19010248-0	433634	8.25	476511	5.63	191085	10.24
08	HS19010248-0	414982	8.25	422802	5.63	191265	10.24
09	HS19010248-0	440009	8.25	485251	5.63	192326	10.24
10	HS19010248-0	428644	8.25	475871	5.63	188574	10.24
11	HS19010248-0	436201	8.25	487552	5.62	190759	10.24
12							
13							
14							
15							
16							
17							
18							
19							
20							

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

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 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS19010248

Lab File ID (Standard): V011003 Date Analyzed: 01/10/19

Instrument ID: VOA9 Time Analyzed: 1058

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	394425	4.89				
	UPPER LIMIT	788850	5.39				
	LOWER LIMIT	197213	4.39				
	CLIENT SAMPLE NO.						
01	VLCSW-190108	351736	4.89				
02	VBLKW-190108	314577	4.89				
03	HS19010248-0	260551	4.90				
04	HS18121558-0	249817	4.90				
05	HS18121558-0	271734	4.90				
06	HS19010248-0	259933	4.89				
07	HS19010248-0	251718	4.89				
08	HS19010248-0	224533	4.90				
09	HS19010248-0	260088	4.89				
10	HS19010248-0	249470	4.89				
11	HS19010248-0	231938	4.89				
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.

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011001.D

Date : 10-JAN-2019 10:09

Client ID: BFB

Instrument: VOA9.i

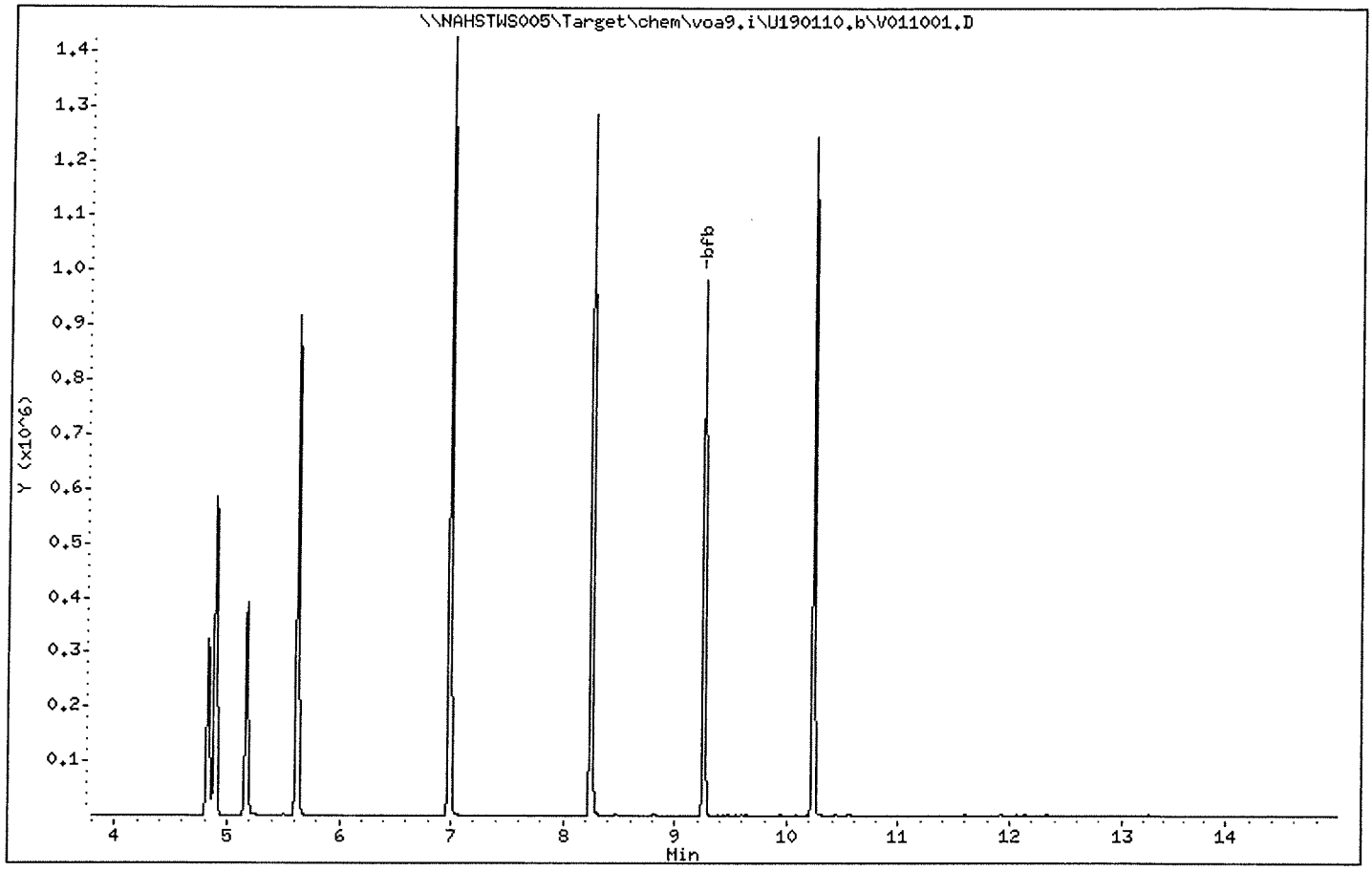
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011001.D

Date : 10-JAN-2019 10:09

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

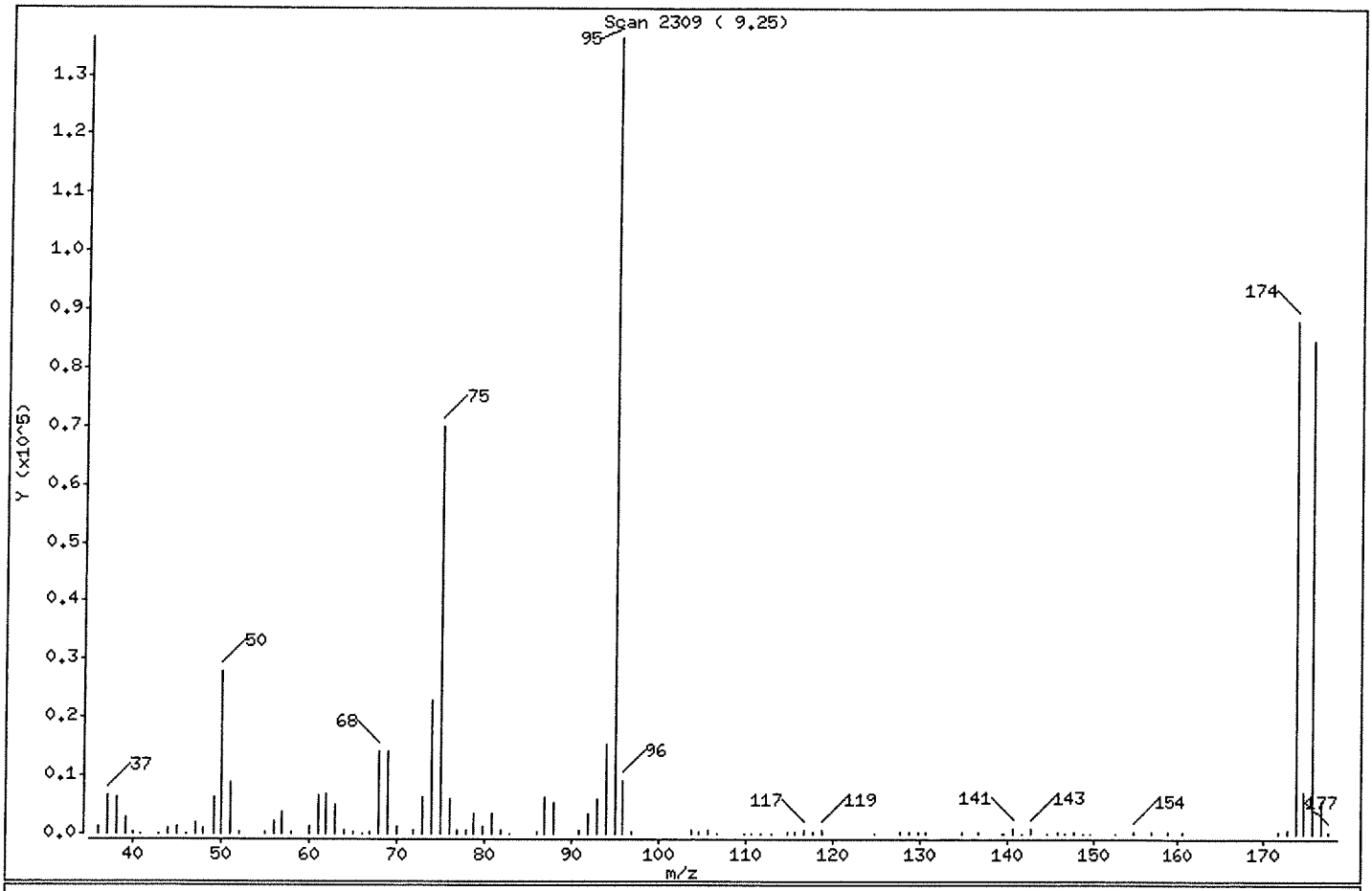
Volume Injected (uL): 2.0

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	20.46
75	30.00 - 60.00% of mass 95	51.23
96	5.00 - 9.00% of mass 95	6.76
173	Less than 2.00% of mass 174	0.45 (0.70)
174	Greater than 50.00% of mass 95	64.61
175	5.00 - 9.00% of mass 174	5.34 (8.26)
176	95.00 - 101.00% of mass 174	62.04 (96.03)
177	5.00 - 9.00% of mass 176	4.11 (6.62)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011001.D

Date : 10-JAN-2019 10:09

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: V011001.D
Spectrum: Scan 2309 (9.25)
Location of Maximum: 94.90
Number of points: 96

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	1163	65.00	361	94.90	136448	140.70	1001
37.00	6599	65.90	56	95.90	9227	141.60	121
38.00	6166	66.90	376	96.90	295	142.70	1095
39.00	2670	67.90	14174	103.80	558	144.50	127
39.90	249	68.90	14119	104.60	173	145.80	165
40.80	63	69.90	1102	105.70	476	146.70	66
42.80	92	71.90	752	106.70	124	147.70	281
43.90	978	72.90	6320	109.70	70	148.70	55
45.00	1273	73.90	22952	110.70	143	149.70	154
45.90	65	74.90	69896	111.60	69	152.60	72
47.00	1740	75.90	5996	112.80	101	154.60	257
47.90	927	76.90	771	114.70	171	156.70	188
49.00	6184	77.90	559	115.70	379	158.70	175
50.00	27920	78.80	3346	116.70	724	160.60	159
51.00	8758	79.80	1117	117.70	354	171.70	395
51.90	332	80.80	3412	118.80	537	172.80	616
54.90	372	81.80	706	124.70	52	173.70	88160
55.90	2084	82.80	66	127.70	401	174.70	7280
56.90	3658	85.90	256	128.70	253	175.70	84656
57.90	186	86.80	6323	129.70	389	176.70	5605
59.90	1313	87.80	5401	130.60	161	177.60	217
60.90	6558	90.80	521	134.80	178		
61.90	6932	91.90	3432	136.70	198		
62.90	4918	92.90	5844	139.40	53		
63.90	573	93.90	15313	139.70	61		

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011003.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 10-JAN-2019 10:58
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

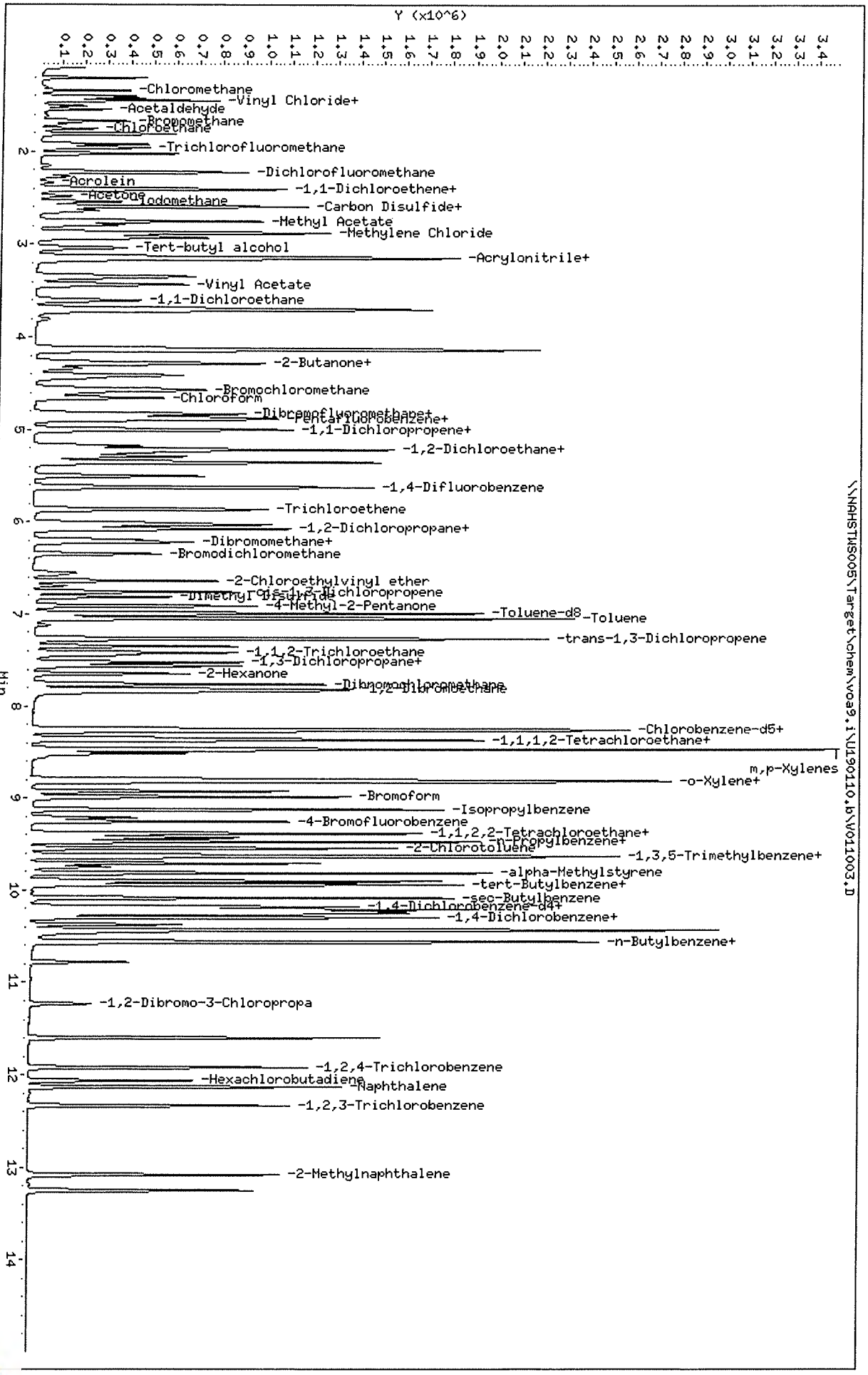
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	394425	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	737678	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	672751	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	314733	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	221864	50.0000	49.83
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	288523	50.0000	49.59
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	915098	50.0000	52.45
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	346888	50.0000	52.64
60 1,1,1,2-Tetrachloroethane	131	8.347	8.347	(1.012)	218049	50.0000	53.64
31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	346761	50.0000	53.68
68 1,1,2,2-Tetrachloroethane	83	9.389	9.389	(0.917)	351350	50.0000	49.45
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	208856	50.0000	50.72
22 1,1-Dichloroethane	63	3.605	3.605	(0.737)	455570	50.0000	50.81
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	188345	50.0000	49.50
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	353678	50.0000	51.85
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	289708	50.0000	51.65
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	378838	50.0000	49.79
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	310186	50.0000	54.70
79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	923718	50.0000	55.88
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	46814	50.0000	42.09
57 1,2-Dibromoethane	107	7.848	7.848	(0.951)	239556	50.0000	51.08
88 1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	482232	50.0000	50.46

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	359985	50.0000	50.43
42 1,2-Dichloropropane	63	6.079	6.079	(1.081)	279231	50.0000	52.57
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	896419	50.0000	55.52
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	484785	50.0000	51.06
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	455201	50.0000	51.25
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	499369	50.0000	49.62
26 2,2-Dichloropropane	77	4.276	4.276	(0.874)	310269	50.0000	57.78
24 2-Butanone	43	4.336	4.336	(0.886)	247610	100.000	90.72
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	795723	50.0000	53.18
52 2-Hexanone	43	7.649	7.649	(0.927)	369281	100.000	95.17
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	935082	50.0000	53.72
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	958830	50.0000	57.19
45 4-Methyl-2-Pentanone	43	6.911	6.911	(0.838)	545077	100.000	97.42
10 Acetone	43	2.480	2.480	(0.507)	146523	100.000	85.60
37 Benzene	78	5.216	5.216	(0.927)	1035200	50.0000	50.99
74 Bromobenzene	156	9.381	9.381	(0.917)	254556	50.0000	51.86
29 Bromochloromethane	128	4.557	4.557	(0.931)	118512	50.0000	54.66
39 Bromodichloromethane	83	6.349	6.349	(1.129)	308989	50.0000	54.03
66 Bromoform	173	8.984	8.984	(1.089)	135228	50.0000	46.21(T)
6 Bromomethane	94	1.674	1.674	(0.342)	134363	50.0000	45.67
19 Carbon Disulfide	76	2.592	2.592	(0.530)	1447342	100.000	107.24
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	272117	50.0000	55.09
59 Chlorobenzene	112	8.272	8.272	(1.003)	668485	50.0000	49.84
7 Chloroethane	64	1.756	1.756	(0.359)	160962	50.0000	45.27(M)
28 Chloroform	83	4.658	4.658	(0.952)	431261	50.0000	50.63
3 Chloromethane	50	1.340	1.340	(0.274)	248849	50.0000	47.42
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	270063	50.0000	50.05
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	438482	50.0000	51.05
55 Dibromochloromethane	129	7.758	7.758	(0.940)	224278	50.0000	49.76
44 Dibromomethane	93	6.191	6.191	(1.101)	155027	50.0000	50.02
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	265277	50.0000	50.89
61 Ethylbenzene	106	8.369	8.369	(1.015)	355130	50.0000	52.49
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	112387	50.0000	54.89
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1056601	50.0000	54.67
62 m,p-Xylenes	106	8.470	8.470	(1.027)	877260	100.000	106.21
17 Methylene Chloride	84	2.874	2.874	(0.587)	261742	50.0000	51.59
87 n-Butylbenzene	91	10.555	10.555	(1.031)	912883	50.0000	56.04
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1349809	50.0000	55.48
92 Naphthalene	128	12.133	12.133	(1.185)	906481	50.0000	47.30
63 o-Xylene	106	8.811	8.811	(1.068)	443468	50.0000	52.63
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1127474	50.0000	56.66
64 Styrene	104	8.823	8.823	(1.070)	761839	50.0000	54.30
78 tert-Butylbenzene	119	9.899	9.899	(0.967)	757067	50.0000	54.45
56 Tetrachloroethene	164	7.522	7.522	(0.912)	174444	50.0000	49.36
50 Toluene	91	7.046	7.046	(0.854)	1077649	50.0000	52.10
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	238618	50.0000	49.59
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	372709	50.0000	50.23
38 Trichloroethene	130	5.861	5.861	(1.042)	239093	50.0000	50.90
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	312790	50.0000	47.40
5 Vinyl Chloride	62	1.423	1.423	(0.291)	287643	50.0000	49.14

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

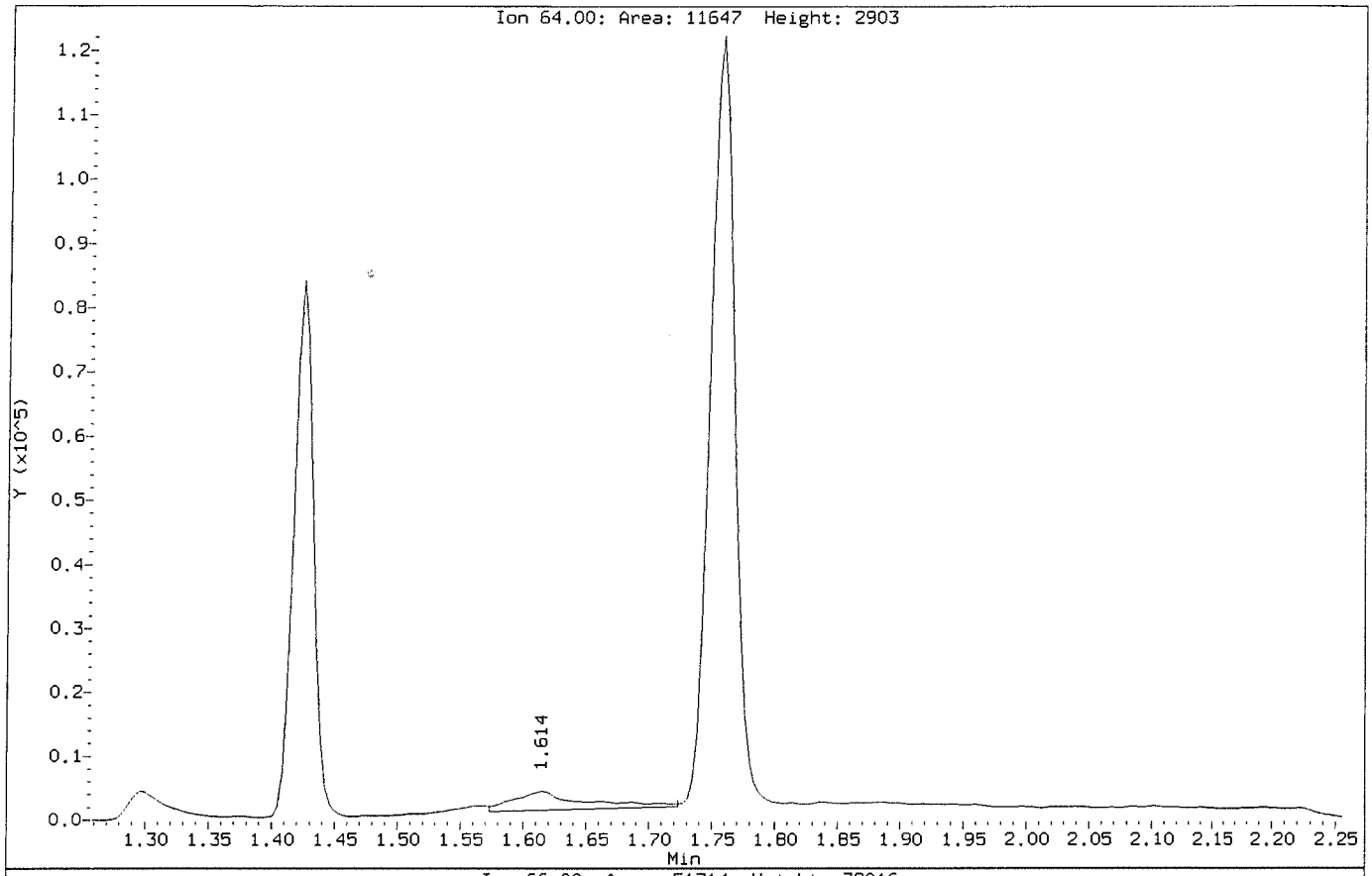


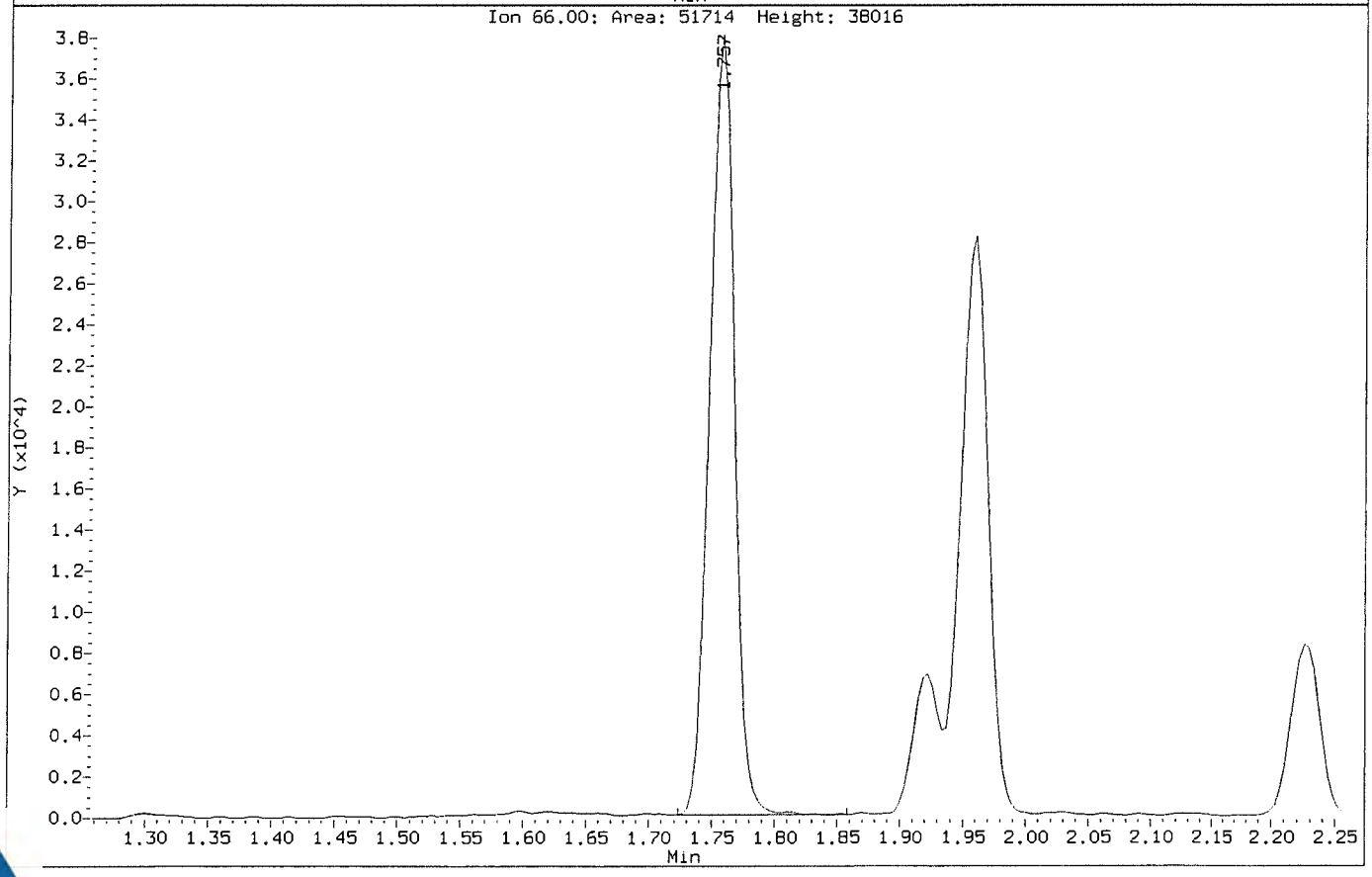
Data File: \\NAHSTWS005\Target\chem\voa9,i\U190110,b\V011003,D
Date : 10-JAN-2019 10:58
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\Before\V011003.D
Injection Date: 10-JAN-2019 10:58
Instrument: VOA9.i
Client Sample ID: VSTD050

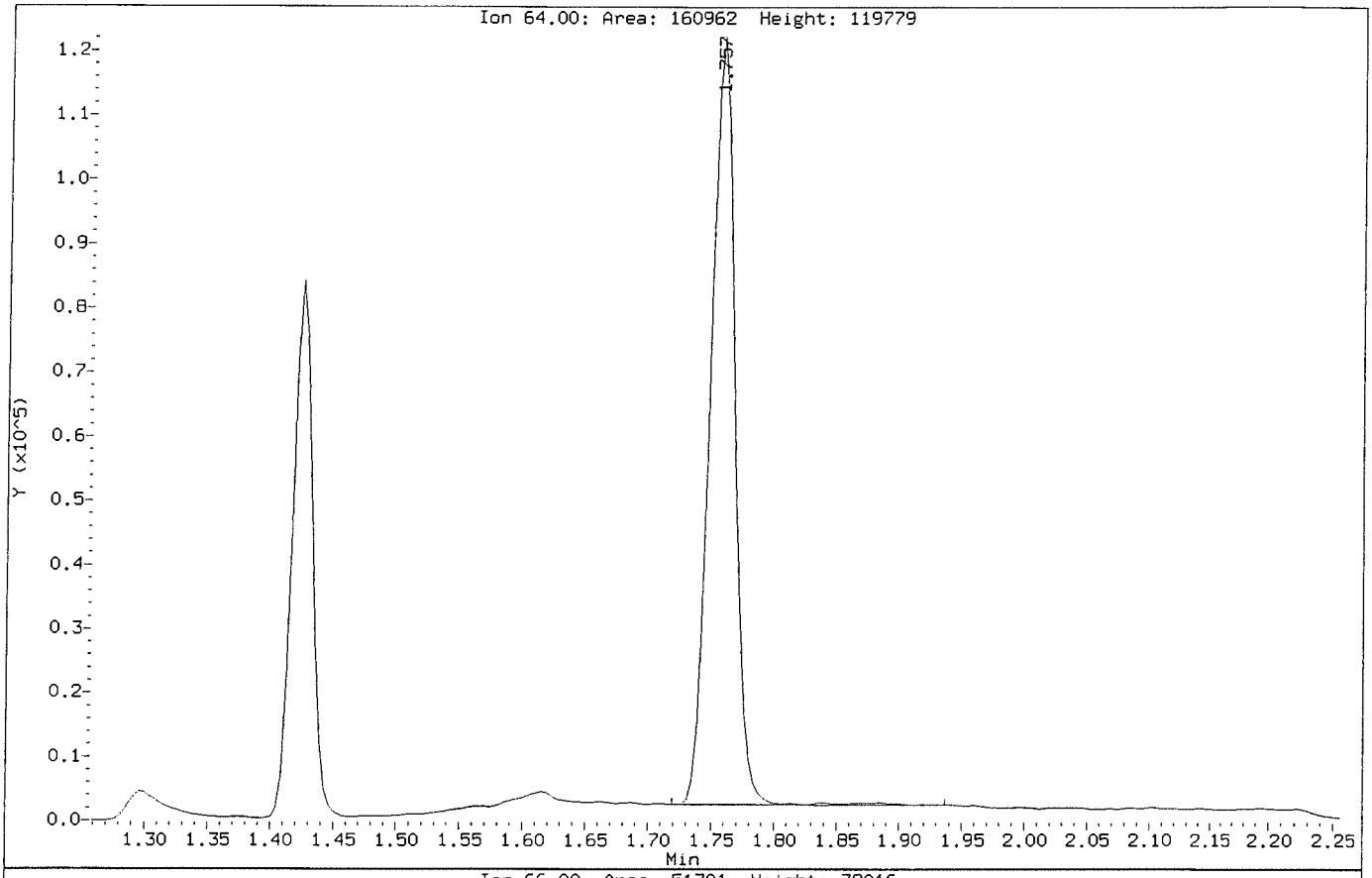
Compound: Chloroethane
CAS Number: 75-00-3

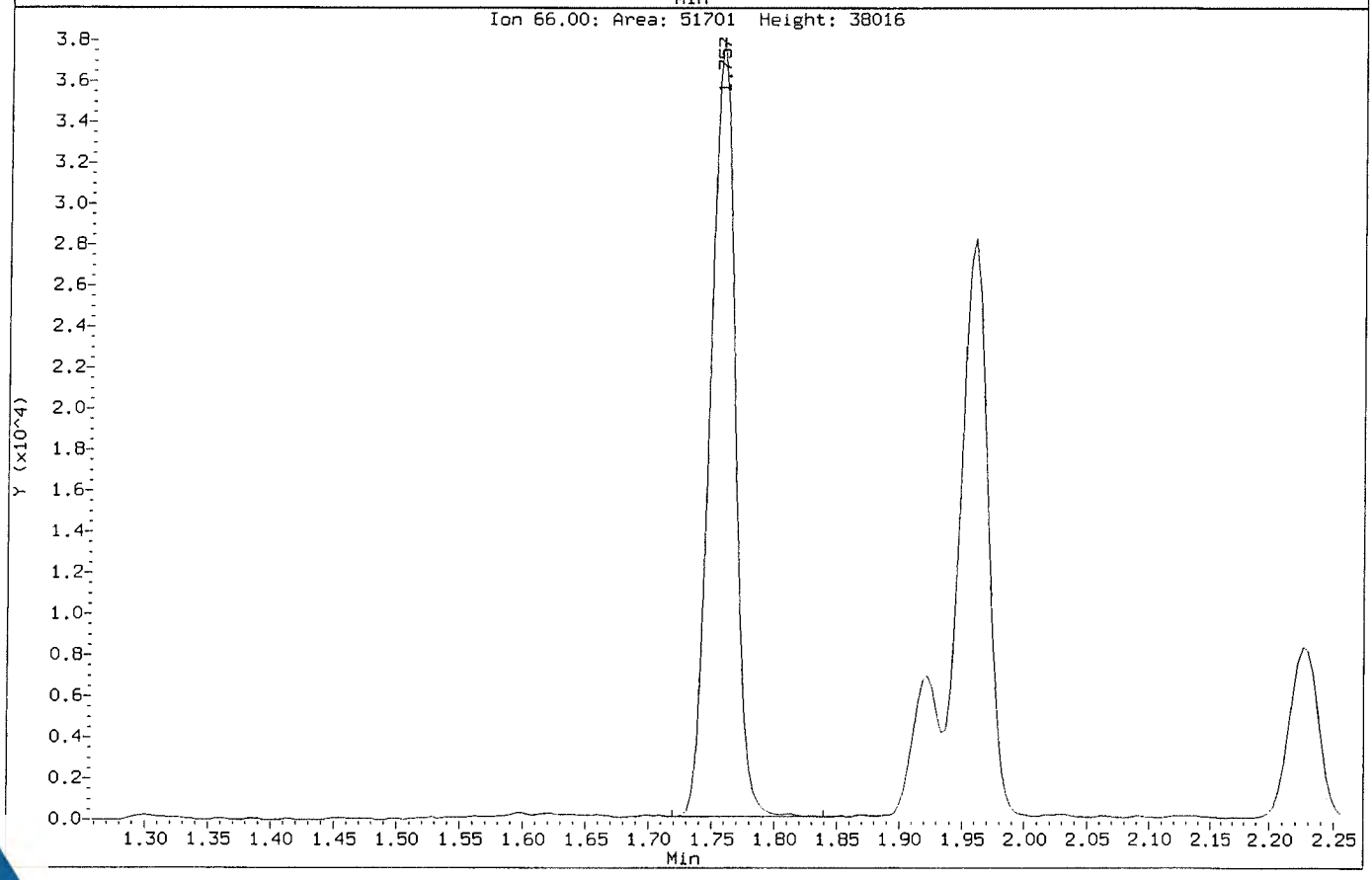




Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011003.D
Injection Date: 10-JAN-2019 10:58
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011005.D Page 1
Report Date: 01-Feb-2019 17:47

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011005.D
Lab Smp Id: VLCSW-190108 Client Smp ID: VLCSW-190108
Inj Date : 10-JAN-2019 11:47
Operator : PC Inst ID: VOA9.i
Smp Info : VLCSW-190108;VLCSW-190108;3;;LCS
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

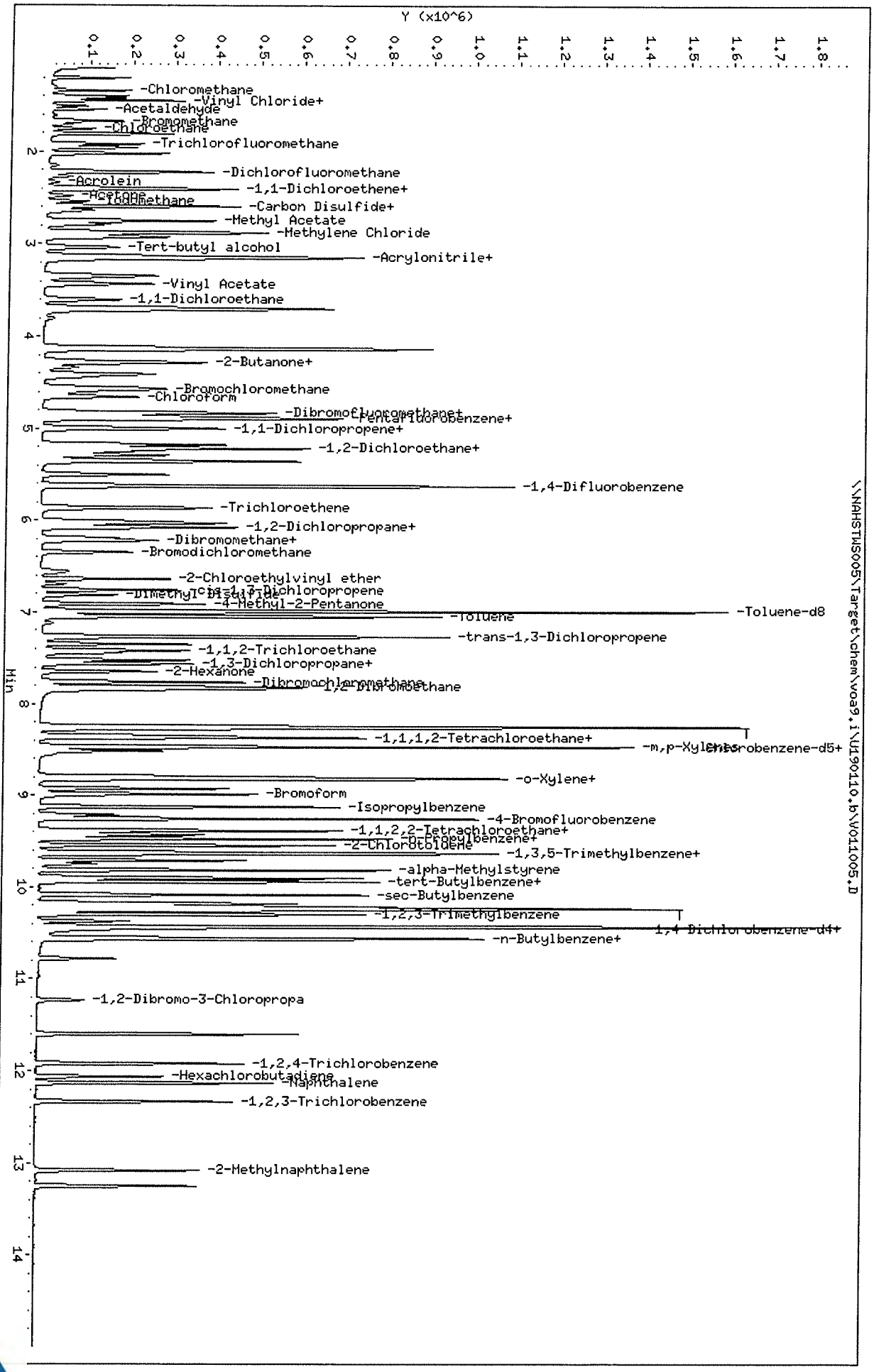
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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)	351736	50.0000	
*	36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	664579	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	603356	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	310059	50.0000	
$	30 Dibromofluoromethane	113	4.830	4.830	(0.987)	197449	49.7293	49.72
$	35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	270582	52.2724	52.27
$	48 Toluene-d8	98	6.990	6.990	(0.847)	818772	52.3248	52.32
$	69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	313141	53.0034	53.00
	60 1,1,1,2-Tetrachloroethane	131	8.347	8.347	(1.012)	82251	22.5635	22.56
	31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	129546	22.4883	22.48
	68 1,1,2,2-Tetrachloroethane	83	9.389	9.389	(0.917)	148777	21.0475	21.04
	53 1,1,2-Trichloroethane	83	7.417	7.421	(0.899)	80687	21.8514	21.85
	22 1,1-Dichloroethane	63	3.605	3.605	(0.737)	177072	22.1470	22.14
	11 1,1-Dichloroethene	96	2.401	2.405	(0.491)	75171	22.1552	22.15
	32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	135314	22.0209	22.02
	93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	119604	21.6474	21.64
	71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	156158	20.8363	20.83
	90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	123628	22.1313	22.13
	79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	390487	23.9808	23.98
	89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	18860	18.4461	18.44
	57 1,2-Dibromoethane	107	7.848	7.848	(0.951)	92530	22.0002	22.00
	88 1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	203201	21.5841	21.58

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	5.250	5.254	(0.933)	145671	22.6527	22.65
42 1,2-Dichloropropane	63	6.079	6.079	(1.081)	107323	22.4317	22.43
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	376521	23.6752	23.67
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	204472	21.8614	21.86
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	176997	22.2200	22.22
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	211244	21.3078	21.30
26 2,2-Dichloropropane	77	4.276	4.276	(0.874)	109782	22.9280	22.92
24 2-Butanone	43	4.335	4.336	(0.886)	100752	41.3939	41.39
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	341168	23.1451	23.14
52 2-Hexanone	43	7.649	7.649	(0.927)	152275	43.7605	43.76
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	396482	23.1233	23.12
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	396005	23.9782	23.97
45 4-Methyl-2-Pentanone	43	6.911	6.911	(0.838)	219876	43.8177	43.81
10 Acetone	43	2.480	2.480	(0.507)	62326	39.9786	39.97
37 Benzene	78	5.216	5.216	(0.927)	397587	21.7397	21.73
74 Bromobenzene	156	9.381	9.381	(0.917)	102972	21.2979	21.29
29 Bromochloromethane	128	4.553	4.557	(0.930)	45570	23.5697	23.56
39 Bromodichloromethane	83	6.345	6.349	(1.128)	116528	22.6184	22.61
66 Bromoform	173	8.984	8.984	(1.089)	47271	19.1078	19.10
6 Bromomethane	94	1.674	1.674	(0.342)	61178	23.6937	23.69
19 Carbon Disulfide	76	2.592	2.592	(0.530)	549474	45.6555	45.65
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	100207	22.5187	22.51
59 Chlorobenzene	112	8.272	8.272	(1.003)	259487	21.5720	21.57
7 Chloroethane	64	1.753	1.756	(0.358)	72938	23.0062	23.00(M)
28 Chloroform	83	4.658	4.658	(0.952)	167140	22.0061	22.00
3 Chloromethane	50	1.340	1.340	(0.274)	112699	25.2962	25.29
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	103745	21.5645	21.56
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	157507	21.1420	21.14
55 Dibromochloromethane	129	7.758	7.758	(0.940)	80762	20.7152	20.71
44 Dibromomethane	93	6.187	6.191	(1.100)	60604	21.7082	21.70
2 Dichlorodifluoromethane	85	1.205	1.209	(0.246)	108530	23.3494	23.34
61 Ethylbenzene	106	8.369	8.369	(1.015)	134274	22.1295	22.12
91 Hexachlorobutadiene	225	12.062	12.065	(1.178)	46164	23.3609	23.36
67 Isopropylbenzene	105	9.126	9.126	(1.106)	405840	23.4162	23.41
62 m,p-Xylenes	106	8.470	8.470	(1.027)	338570	45.7087	45.70
17 Methylene Chloride	84	2.874	2.874	(0.587)	103410	22.5774	22.57
87 n-Butylbenzene	91	10.555	10.555	(1.031)	380549	23.7151	23.71
73 n-Propylbenzene	91	9.475	9.475	(0.926)	569428	23.7600	23.76
92 Naphthalene	128	12.133	12.133	(1.185)	372665	20.1411	20.14
63 o-Xylene	106	8.808	8.811	(1.068)	168041	22.2382	22.23
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	471433	24.0487	24.04
64 Styrene	104	8.823	8.823	(1.070)	291823	23.1935	23.19
78 tert-Butylbenzene	119	9.899	9.899	(0.967)	317325	23.1700	23.17
56 Tetrachloroethene	164	7.522	7.522	(0.912)	64085	20.2201	20.22
50 Toluene	91	7.046	7.046	(0.854)	416201	22.4385	22.43
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	91760	21.3850	21.38
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	132909	20.8515	20.85
38 Trichloroethene	130	5.861	5.861	(1.042)	89327	21.1116	21.11
8 Trichlorofluoromethane	101	1.955	1.959	(0.400)	132541	22.5240	22.52
5 Vinyl Chloride	62	1.423	1.423	(0.291)	114392	21.9149	21.91

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011005.D
Date : 10-JAN-2019 11:47
Client ID: VLCSW-190108
Sample Info: VLCSW-190108;VLCSW-190108;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

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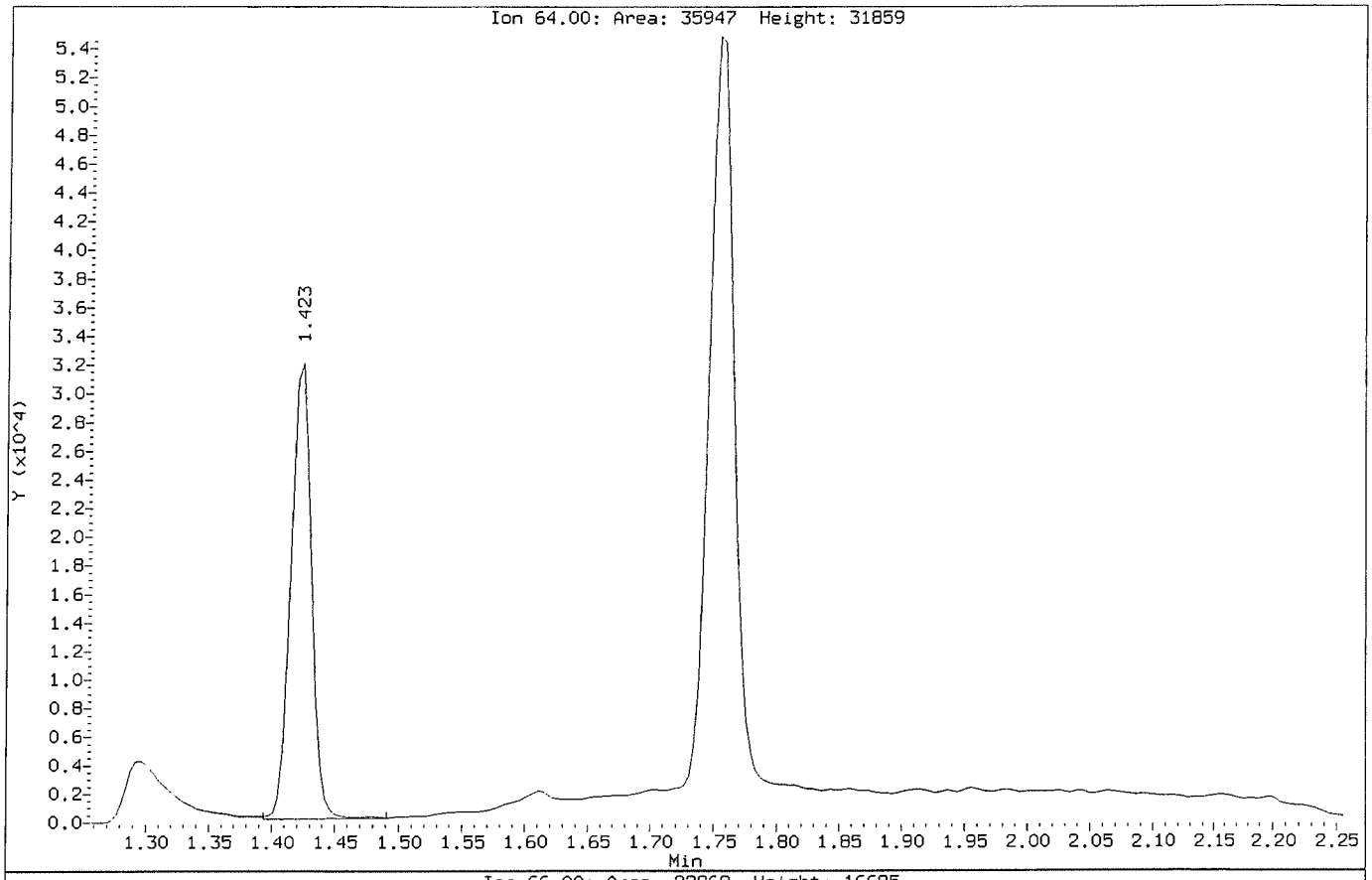
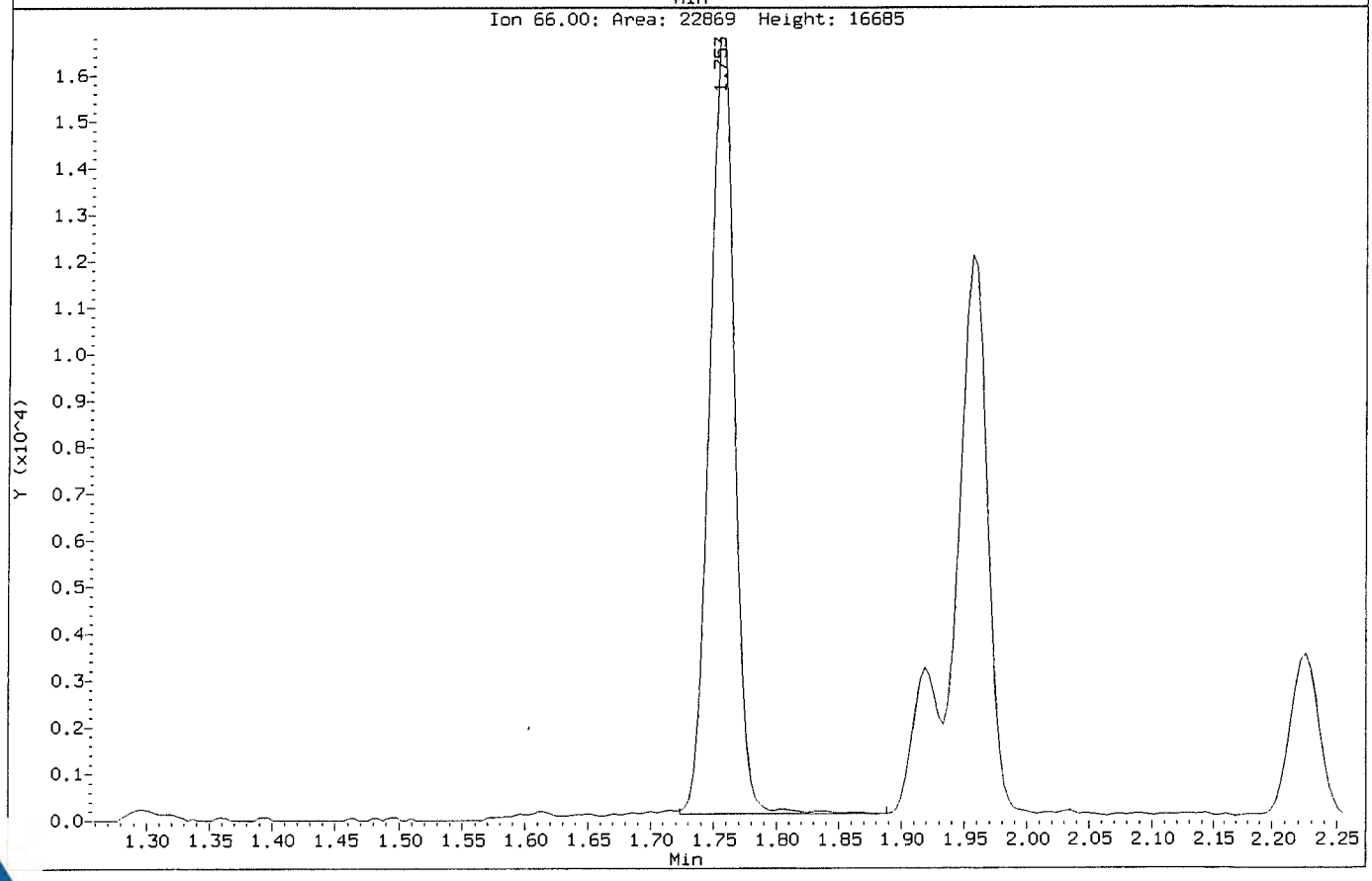
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\Before\V011005.D
Injection Date: 10-JAN-2019 11:47
Instrument: VOA9.i
Client Sample ID: VLCSW-190108

Compound: Chloroethane
CAS Number: 75-00-3





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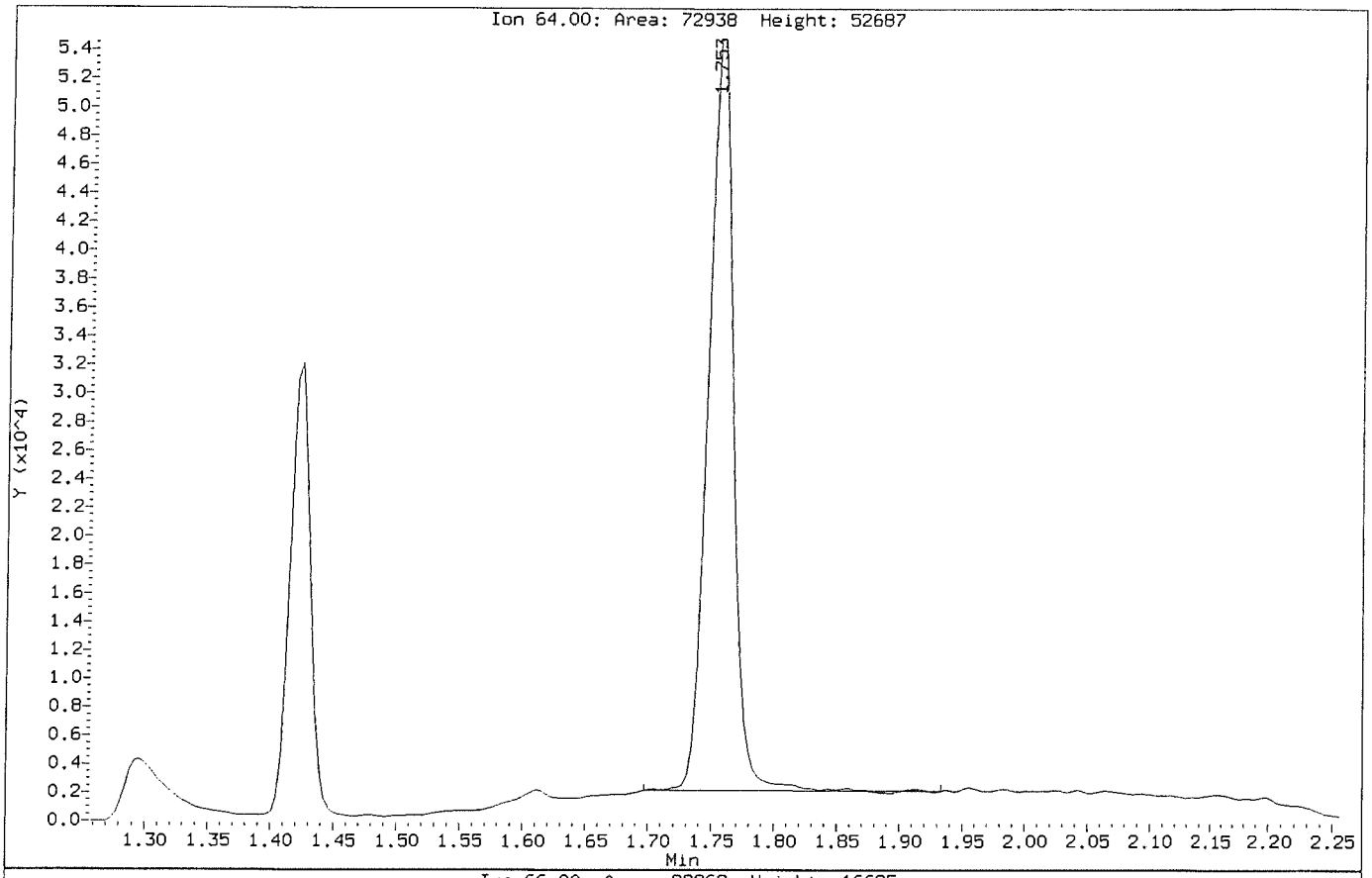
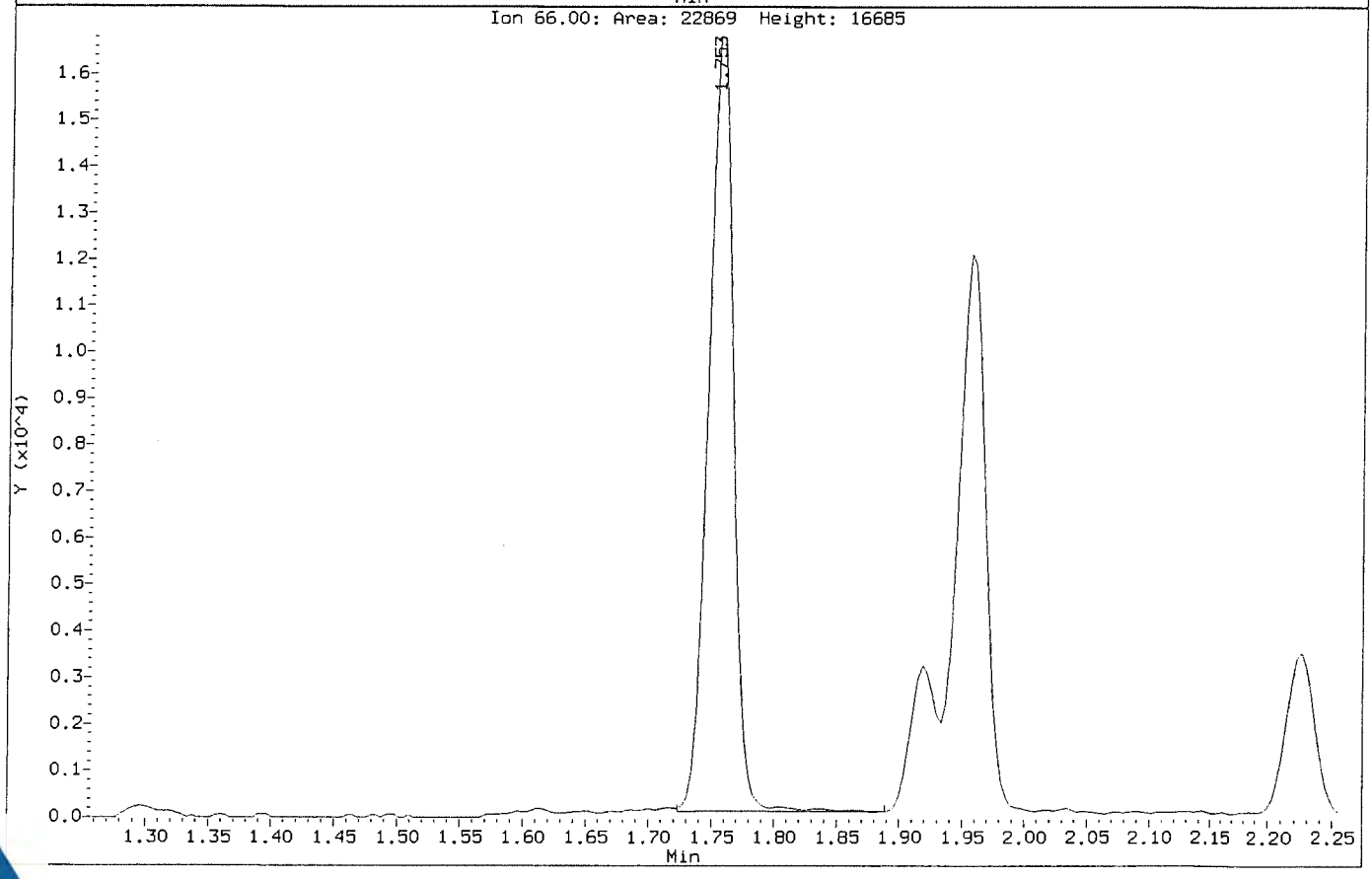
Injection Date: 10-JAN-2019 11:47
Instrument: VOA9.i
Client Sample ID: VLCSW-190108

Compound: Chloroethane
CAS Number: 75-00-3





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011008.D
Lab Smp Id: VBLKW-190108 Client Smp ID: VBLKW-190108
Inj Date : 10-JAN-2019 13:00
Operator : PC Inst ID: VOA9.i
Smp Info : VBLKW-190108;VBLKW-190108;3;;BLANK
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

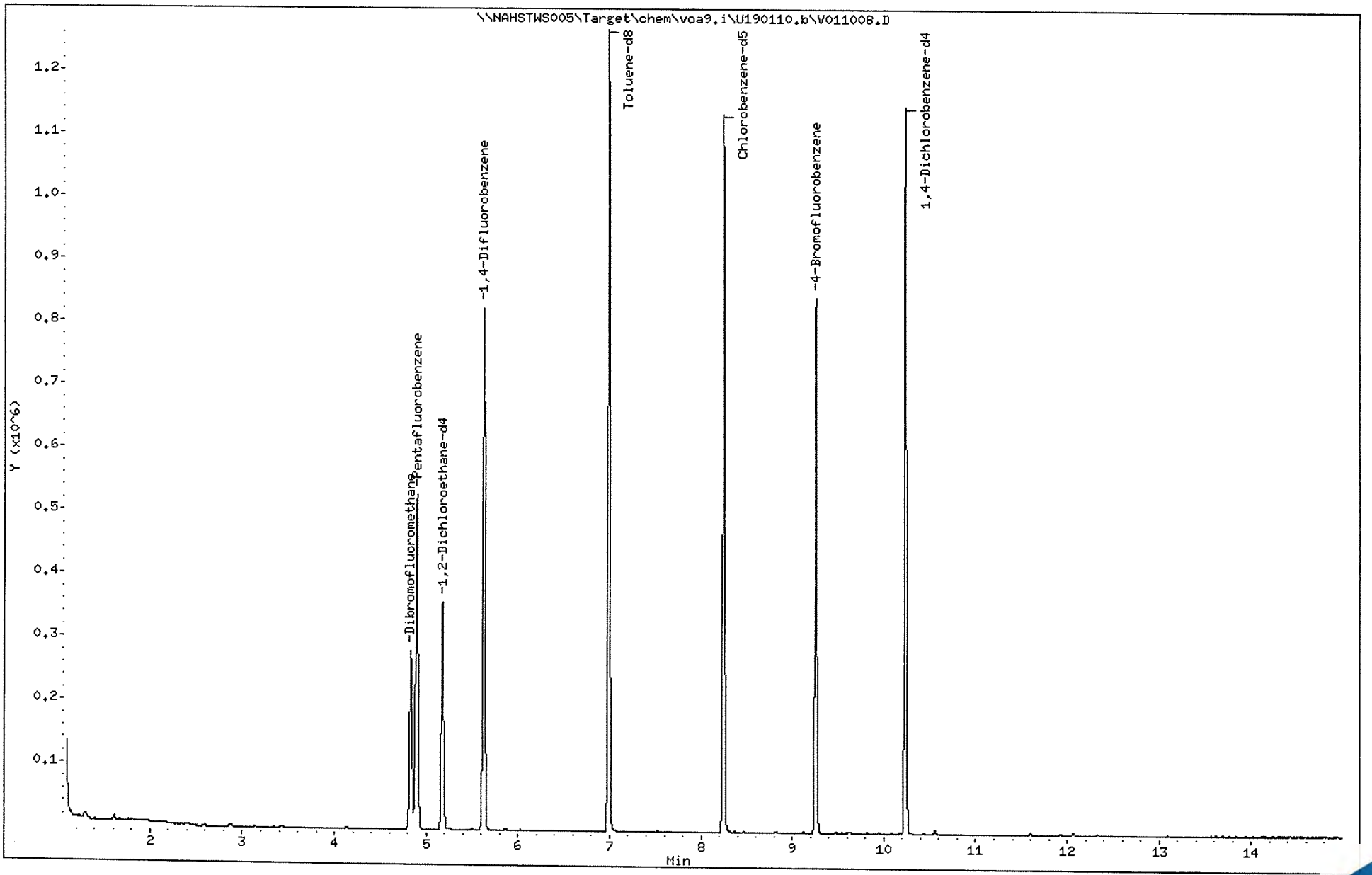
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	314577	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	574805	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	531280	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	250640	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	163818	46.0053	46.00
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	227459	48.9983	48.99
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	730206	53.0271	53.02
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	266989	51.2632	51.26

00933199

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011008.D
Date : 10-JAN-2019 13:00
Client ID: VBLKW-190108
Sample Info: VBLKW-190108;VBLKW-190108;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\U190110.b\V011010.D
Lab Smp Id: HS19010248-05 Client Smp ID: HS19010248-05
Inj Date : 10-JAN-2019 13:50
Operator : PC Inst ID: VOA9.i
Smp Info : HS19010248-05;HS19010248-05;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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)	260551	50.0000	
*	36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	488484	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	450234	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	204360	50.0000	
$	30 Dibromofluoromethane	113	4.834	4.830	(0.987)	137960	46.8066	46.80
$	35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	203805	53.1886	53.18
$	48 Toluene-d8	98	6.989	6.990	(0.847)	619052	53.0484	53.04
$	69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	222857	50.4641	50.46

00933201

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011010.D

Date : 10-JAN-2019 13:50

Client ID: HS19010248-05

Instrument: VOA9.i

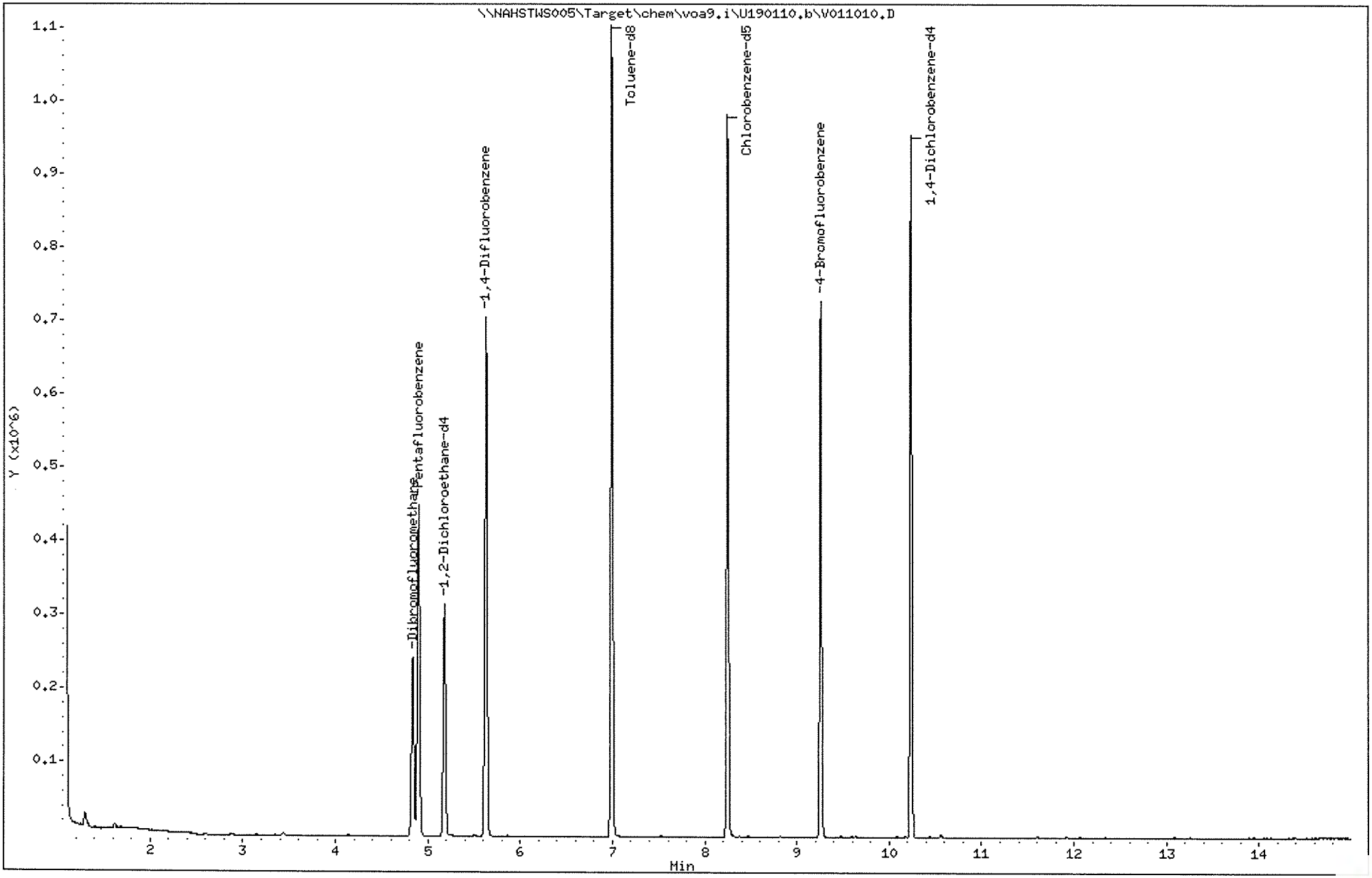
Sample Info: HS19010248-05;HS19010248-05;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011016.D Page 1
Report Date: 01-Feb-2019 17:47

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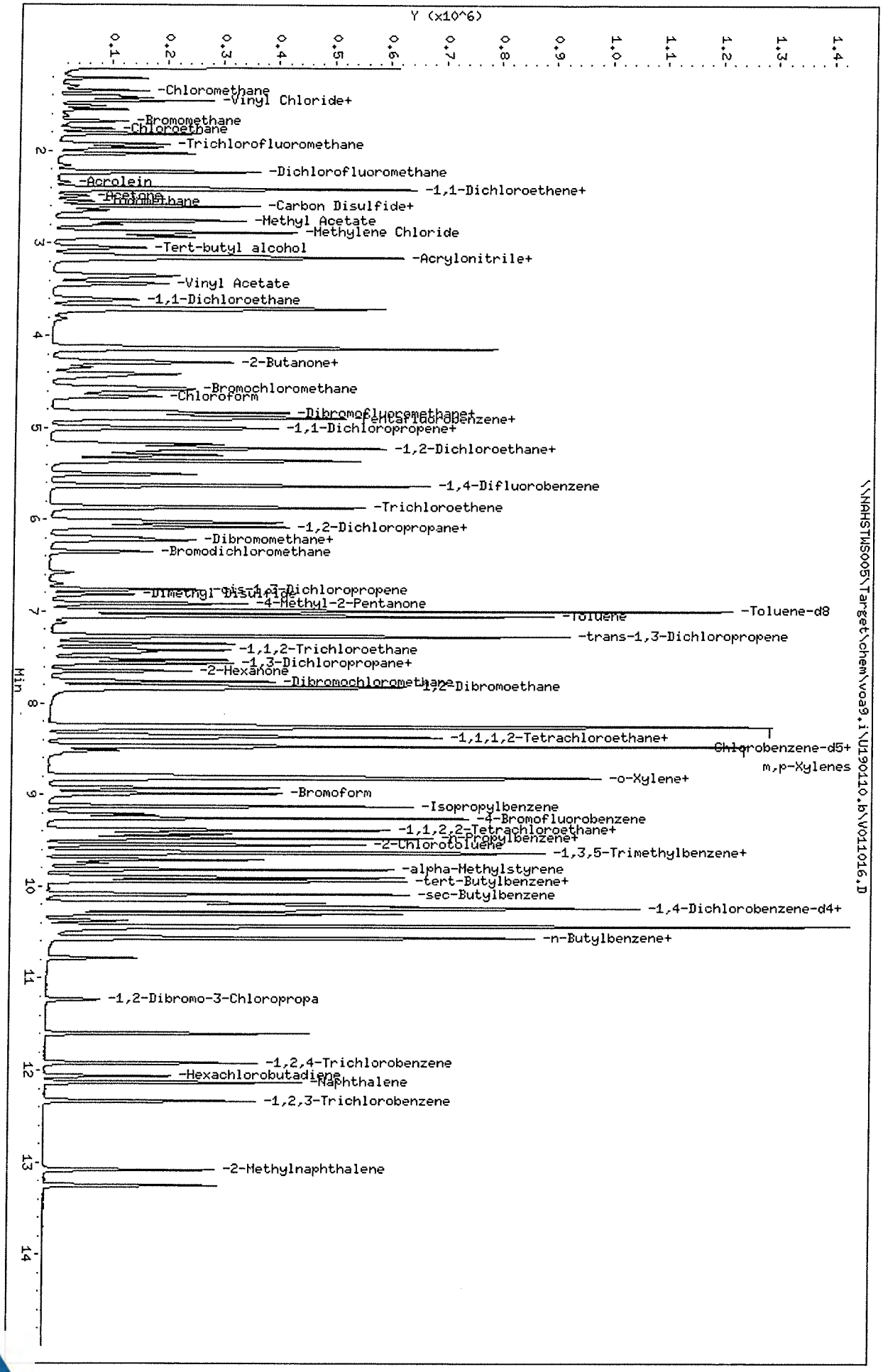
Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011016.D
Lab Smp Id: HS18121558-01MS Client Smp ID: HS18121558-01MS
Inj Date : 10-JAN-2019 16:25
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-01MS;HS18121558-01MS;3;;MS
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 14 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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)	249817	50.0000	
*	36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	474689	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	440448	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	209172	50.0000	
$	30 Dibromofluoromethane	113	4.834	4.830	(0.987)	137240	48.6290	48.62
$	35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	197161	53.6855	53.68
$	48 Toluene-d8	98	6.990	6.990	(0.847)	608870	53.3485	53.34
$	69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	229659	53.2595	53.25
	60 1,1,1,2-Tetrachloroethane	131	8.350	8.347	(1.012)	72461	27.2300	27.23
	31 1,1,1-Trichloroethane	97	4.830	4.827	(0.986)	117883	28.8124	28.81
	68 1,1,2,2-Tetrachloroethane	83	9.392	9.389	(0.918)	129632	27.2904	27.29
	53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	74275	27.5547	27.55
	22 1,1-Dichloroethane	63	3.608	3.605	(0.737)	151353	26.6533	26.65
	11 1,1-Dichloroethene	96	2.409	2.405	(0.492)	69082	28.6672	28.66
	32 1,1-Dichloropropene	75	5.007	5.003	(0.889)	129350	29.4711	29.47
	93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	93812	25.1686	25.16
	71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	132107	26.1290	26.12
	90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	95784	25.4170	25.41
	79 1,2,4-Trimethylbenzene	105	9.944	9.940	(0.971)	319437	29.0793	29.07
	89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	15389	21.8744	21.87
	57 1,2-Dibromoethane	107	7.852	7.848	(0.952)	84147	27.4070	27.40
	88 1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	163512	25.7454	25.74

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.933)	132884	28.9306	28.93
42 1,2-Dichloropropane	63	6.082	6.079	(1.081)	99349	29.0717	29.07
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	309377	28.8359	28.83
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	163875	25.9715	25.97
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	162233	27.8995	27.89
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	169297	25.3131	25.31
26 2,2-Dichloropropane	77	4.279	4.276	(0.874)	85913	25.2633	25.26
24 2-Butanone	43	4.343	4.336	(0.887)	87776	50.7754	50.77
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	282308	28.3892	28.38
52 2-Hexanone	43	7.649	7.649	(0.927)	140938	55.4831	55.48
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	331269	28.6383	28.63
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	322248	28.9233	28.92
45 4-Methyl-2-Pentanone	43	6.915	6.911	(0.838)	206116	56.2681	56.26
10 Acetone	43	2.487	2.480	(0.508)	60145	54.9066	54.90
37 Benzene	78	5.220	5.216	(0.927)	374607	28.6770	28.67
74 Bromobenzene	156	9.381	9.381	(0.917)	84686	25.9640	25.96
29 Bromochloromethane	128	4.557	4.557	(0.930)	38660	28.1534	28.15
39 Bromodichloromethane	83	6.349	6.349	(1.128)	103151	28.0313	28.03
66 Bromoform	173	8.984	8.984	(1.089)	42015	22.8747	22.87
6 Bromomethane	94	1.678	1.674	(0.343)	57791	31.2628	31.26
19 Carbon Disulfide	76	2.596	2.592	(0.530)	447845	52.3924	52.39
34 Carbon Tetrachloride	117	4.999	4.995	(0.888)	95303	29.9840	29.98
59 Chlorobenzene	112	8.275	8.272	(1.003)	235665	26.8379	26.83
7 Chloroethane	64	1.760	1.756	(0.359)	78587	34.9009	34.90
28 Chloroform	83	4.662	4.658	(0.952)	145740	27.0169	27.01
3 Chloromethane	50	1.348	1.340	(0.275)	96310	29.9372	29.93
27 cis-1,2-Dichloroethene	96	4.291	4.287	(0.876)	90181	26.3926	26.39
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.200)	134289	24.9827	24.98
55 Dibromochloromethane	129	7.758	7.758	(0.940)	71008	24.6986	24.69
44 Dibromomethane	93	6.191	6.191	(1.100)	55561	27.8632	27.86
2 Dichlorodifluoromethane	85	1.213	1.209	(0.248)	86741	26.2751	26.27
61 Ethylbenzene	106	8.369	8.369	(1.015)	124233	28.0476	28.04
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	33212	24.8760	24.87
67 Isopropylbenzene	105	9.126	9.126	(1.106)	372208	29.4189	29.41
62 m,p-Xylenes	106	8.470	8.470	(1.027)	308549	57.0629	57.06
17 Methylene Chloride	84	2.877	2.874	(0.588)	85382	26.3283	26.32
87 n-Butylbenzene	91	10.555	10.555	(1.031)	313037	28.9168	28.91
73 n-Propylbenzene	91	9.475	9.475	(0.926)	476235	29.4557	29.45
92 Naphthalene	128	12.133	12.133	(1.185)	305120	24.2950	24.29
63 o-Xylene	106	8.811	8.811	(1.068)	156673	28.4026	28.40
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	391760	29.6232	29.62
64 Styrene	104	8.823	8.823	(1.070)	261772	28.5003	28.50
78 tert-Butylbenzene	119	9.902	9.899	(0.967)	263962	28.5696	28.56
56 Tetrachloroethene	164	7.526	7.522	(0.912)	58368	25.2279	25.22
50 Toluene	91	7.050	7.046	(0.855)	386830	28.5687	28.56
20 trans-1,2-Dichloroethene	96	3.147	3.143	(0.643)	80418	26.3879	26.38
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.290)	114672	24.8540	24.85
38 Trichloroethene	130	5.865	5.861	(1.042)	136603	45.1998	45.19
8 Trichlorofluoromethane	101	1.963	1.959	(0.401)	120706	28.8814	28.88
5 Vinyl Chloride	62	1.427	1.423	(0.291)	105353	28.4175	28.41



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Date : 10-JAN-2019 16:25
Client ID: HS181215S8-01MS
Sample Info: HS181215S8-01MS;HS181215S8-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

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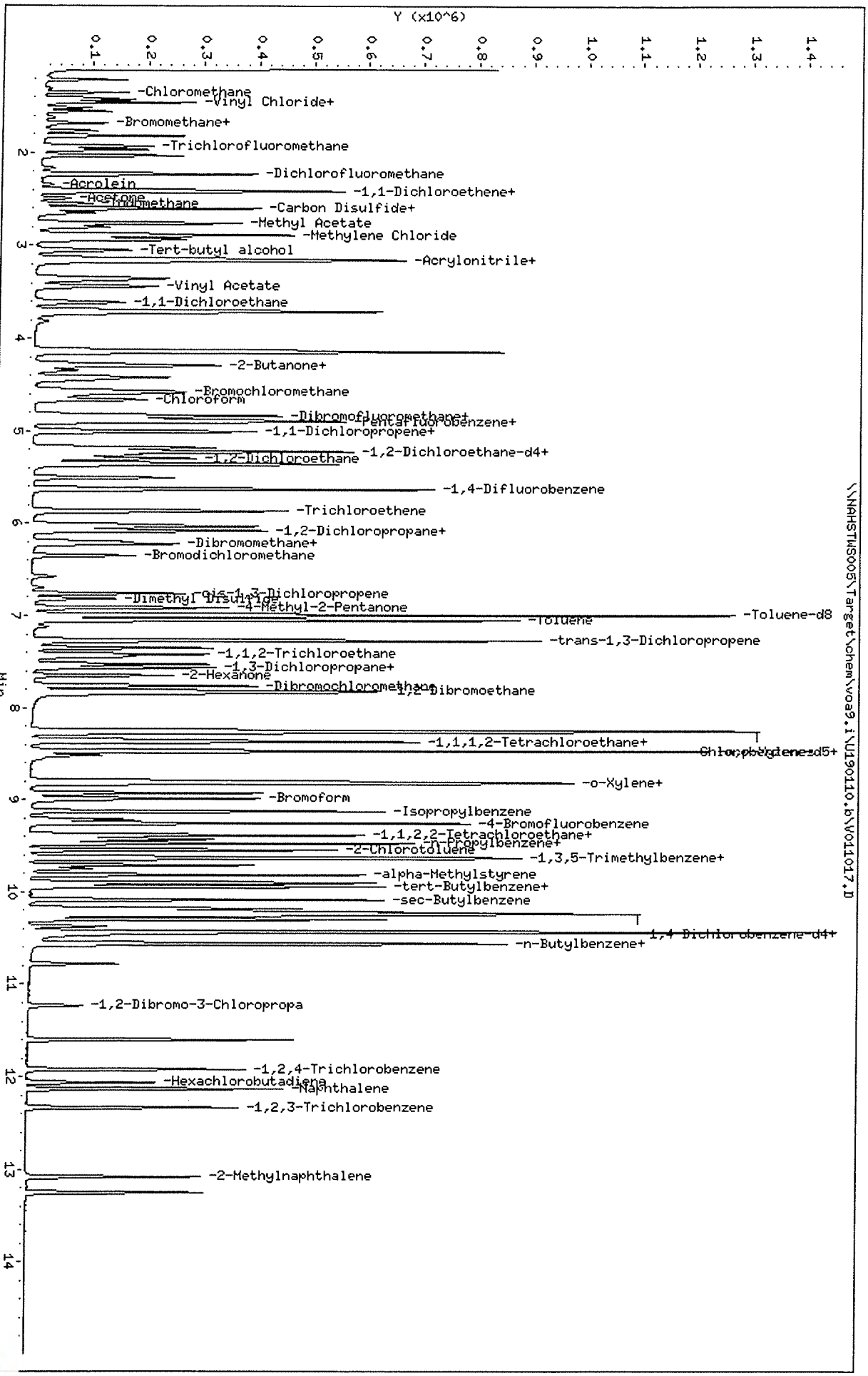
Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011017.D
Lab Smp Id: HS18121558-01MSD Client Smp ID: HS18121558-01MSD
Inj Date : 10-JAN-2019 16:50
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121558-01MSD;HS18121558-01MSD;3;;MSD
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:47 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 14 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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)	271734	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	498564	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	462915	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	219863	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.830	(0.987)	149088	48.5641	48.56
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	207537	51.8809	51.88
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	641176	53.4573	53.45
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	242506	53.5181	53.51
60 1,1,1,2-Tetrachloroethane	131	8.350	8.347	(1.012)	71934	25.7200	25.72
31 1,1,1-Trichloroethane	97	4.834	4.827	(0.987)	118516	26.6307	26.63
68 1,1,2,2-Tetrachloroethane	83	9.392	9.389	(0.918)	129550	25.9291	25.92
53 1,1,2-Trichloroethane	83	7.420	7.421	(0.900)	74739	26.3812	26.38
22 1,1-Dichloroethane	63	3.612	3.605	(0.737)	163244	26.4286	26.42
11 1,1-Dichloroethene	96	2.412	2.405	(0.493)	71559	27.3000	27.30
32 1,1-Dichloropropene	75	5.010	5.003	(0.890)	126902	27.5287	27.52
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	94273	24.0624	24.06
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	135354	25.4694	25.46
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	96647	24.3989	24.39
79 1,2,4-Trimethylbenzene	105	9.943	9.940	(0.971)	317548	27.5017	27.50
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	15382	20.9034	20.90
57 1,2-Dibromoethane	107	7.852	7.848	(0.952)	84003	26.0322	26.03
88 1,2-Dichlorobenzene	146	10.569	10.570	(1.033)	163069	24.4271	24.42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	5.257	5.254	(0.934)	133446	27.6617	27.66
42	1,2-Dichloropropane	63	6.082	6.079	(1.081)	98869	27.5458	27.54
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	309286	27.4256	27.42
83	1,3-Dichlorobenzene	146	10.179	10.180	(0.995)	161177	24.3018	24.30
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	163490	26.7511	26.75
84	1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	169153	24.0617	24.06
26	2,2-Dichloropropane	77	4.279	4.276	(0.874)	89849	24.2897	24.28
24	2-Butanone	43	4.343	4.336	(0.887)	95556	50.8176	50.81
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	278880	26.6808	26.68
52	2-Hexanone	43	7.649	7.649	(0.927)	143007	53.5652	53.56
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	329916	27.1345	27.13
82	p-Isopropyltoluene	119	10.209	10.210	(0.997)	319688	27.2983	27.29
45	4-Methyl-2-Pentanone	43	6.914	6.911	(0.838)	206386	53.6073	53.60
10	Acetone	43	2.487	2.480	(0.508)	62537	52.4133	52.41
37	Benzene	78	5.224	5.216	(0.928)	363385	26.4858	26.48
74	Bromobenzene	156	9.381	9.381	(0.917)	84585	24.6720	24.67
29	Bromochloromethane	128	4.560	4.557	(0.931)	40379	27.0335	27.03
39	Bromodichloromethane	83	6.348	6.349	(1.128)	104086	26.9309	26.93
66	Bromoform	173	8.984	8.984	(1.089)	41341	21.5298	21.52
6	Bromomethane	94	1.681	1.674	(0.343)	54086	27.0046	27.00
19	Carbon Disulfide	76	2.600	2.592	(0.531)	486518	52.3260	52.32
34	Carbon Tetrachloride	117	4.999	4.995	(0.888)	93323	27.9551	27.95
59	Chlorobenzene	112	8.275	8.272	(1.003)	231584	25.0932	25.09
7	Chloroethane	64	1.621	1.756	(0.331)	25018	10.2145	10.21
28	Chloroform	83	4.661	4.658	(0.952)	153026	26.0796	26.07
3	Chloromethane	50	1.351	1.340	(0.276)	94148	27.1538	27.15
27	cis-1,2-Dichloroethene	96	4.294	4.287	(0.877)	95197	25.6135	25.61
46	cis-1,3-Dichloropropene	75	6.761	6.757	(1.201)	134860	23.9449	23.94
55	Dibromochloromethane	129	7.758	7.758	(0.940)	71794	23.8067	23.80
44	Dibromomethane	93	6.191	6.191	(1.100)	55129	26.3226	26.32
2	Dichlorodifluoromethane	85	1.216	1.209	(0.248)	85471	23.8022	23.80
61	Ethylbenzene	106	8.373	8.369	(1.015)	124058	26.6488	26.64
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	34605	24.6640	24.66
67	Isopropylbenzene	105	9.126	9.126	(1.106)	369117	27.7586	27.75
62	m,p-Xylenes	106	8.474	8.470	(1.027)	305273	53.7170	53.71
17	Methylene Chloride	84	2.881	2.874	(0.588)	92691	26.2758	26.27
87	n-Butylbenzene	91	10.554	10.555	(1.031)	314733	27.6597	27.65
73	n-Propylbenzene	91	9.475	9.475	(0.926)	472073	27.7785	27.77
92	Naphthalene	128	12.133	12.133	(1.185)	307954	23.3561	23.35
63	o-Xylene	106	8.811	8.811	(1.068)	153246	26.4330	26.43
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	390229	28.0726	28.07
64	Styrene	104	8.822	8.823	(1.070)	260183	26.9525	26.95
78	tert-Butylbenzene	119	9.902	9.899	(0.967)	262356	27.0150	27.01
56	Tetrachloroethene	164	7.525	7.522	(0.912)	58284	23.9689	23.96
50	Toluene	91	7.049	7.046	(0.855)	382606	26.8853	26.88
20	trans-1,2-Dichloroethene	96	3.151	3.143	(0.643)	83638	25.2309	25.23
51	trans-1,3-Dichloropropene	75	7.263	7.259	(1.290)	116589	24.1106	24.11
38	Trichloroethene	130	5.865	5.861	(1.042)	108288	34.1150	34.11
8	Trichlorofluoromethane	101	1.966	1.959	(0.401)	125393	27.5830	27.58
5	Vinyl Chloride	62	1.430	1.423	(0.292)	104974	26.0315	26.03



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Date : 10-JAN-2019 16:50
Client ID: HS18121558-01MSD
Sample Info: HS18121558-01MSD;HS18121558-01MSD;3;;MSD
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\U190110.b\V011020.D
Lab Smp Id: HS19010248-02 Client Smp ID: HS19010248-02
Inj Date : 10-JAN-2019 18:04
Operator : PC Inst ID: VOA9.i
Smp Info : HS19010248-02;HS19010248-02;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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)	259933	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	486547	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	438150	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	178654	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.830	(0.986)	140619	47.8603	47.86
$ 35 1,2-Dichloroethane-d4	65	5.171	5.175	(1.057)	205433	53.7641	53.76
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	611969	53.9267	53.92
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	215137	50.0446	50.04
11 1,1-Dichloroethene	96	2.394	2.405	(0.489)	1260	0.50252	0.50(a)
33 1,2-Dichloroethane	62	5.250	5.254	(0.933)	33380	7.09015	7.09
28 Chloroform	83	4.654	4.662	(0.951)	4770	0.84984	0.84(a)
27 cis-1,2-Dichloroethene	96	4.283	4.290	(0.875)	62904	17.6932	17.69
38 Trichloroethene	130	5.861	5.861	(1.042)	1590371	513.404	513.40(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.

00933209

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011020.D

Date : 10-JAN-2019 18:04

Client ID: HS19010248-02

Instrument: VOA9.i

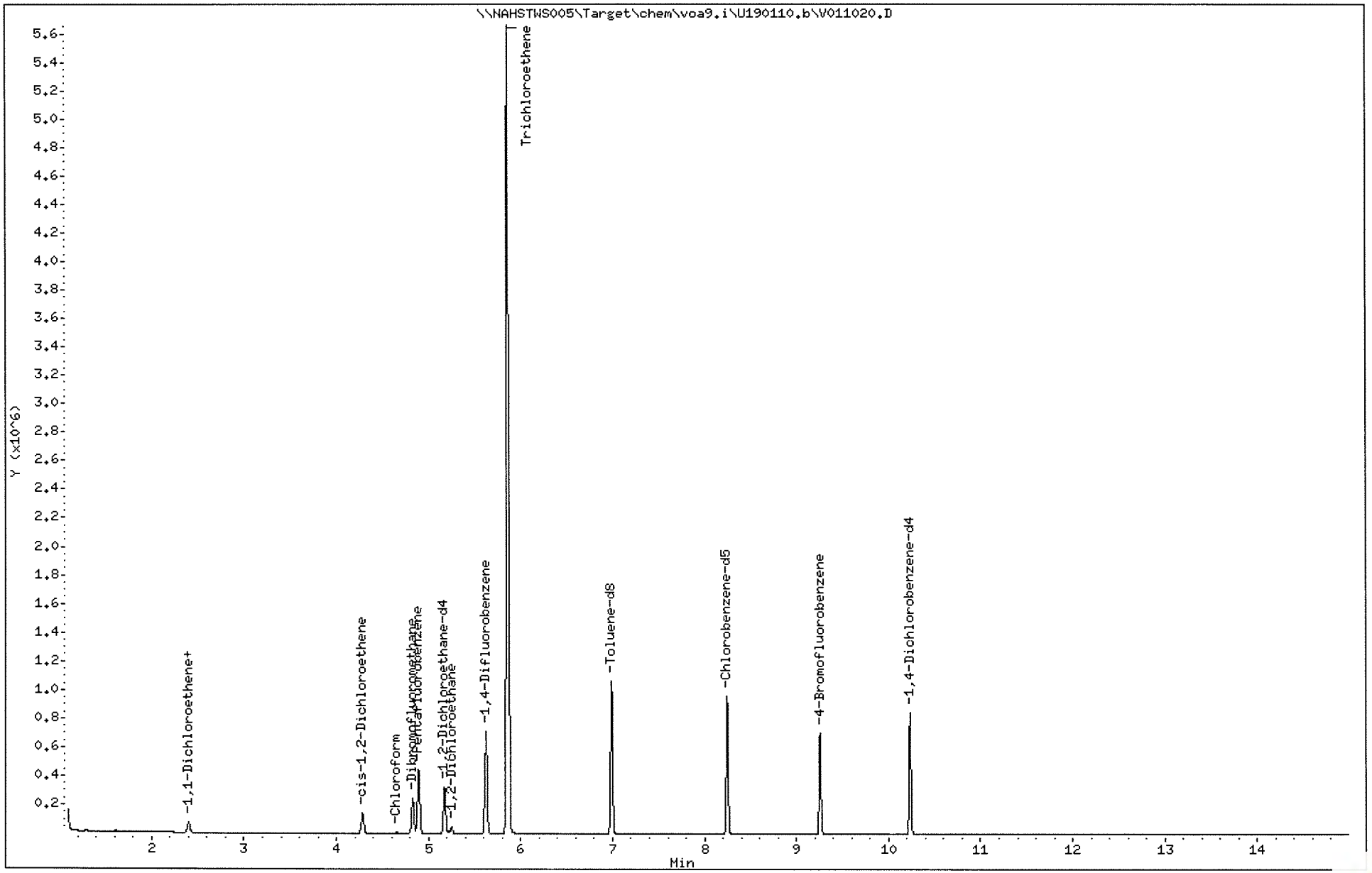
Sample Info: HS19010248-02;HS19010248-02;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



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Date : 10-JAN-2019 18:04

Client ID: HS19010248-02

Instrument: VOA9.i

Sample Info: HS19010248-02;HS19010248-02;;;

Purge Volume: 5.0

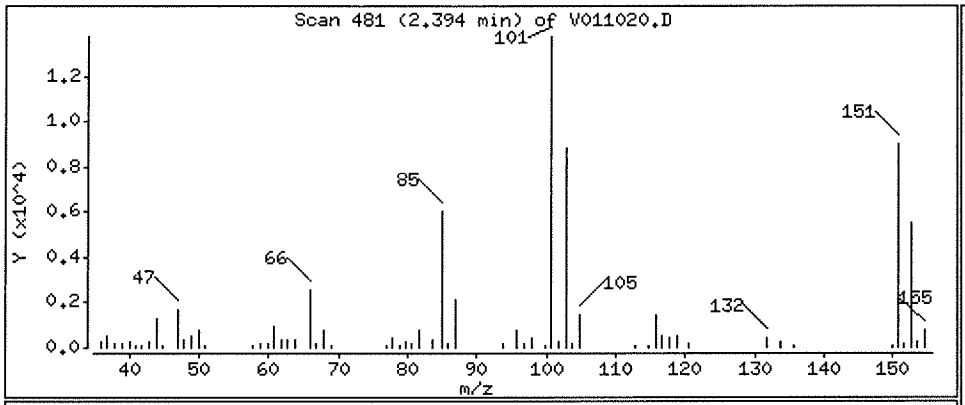
Operator: PC

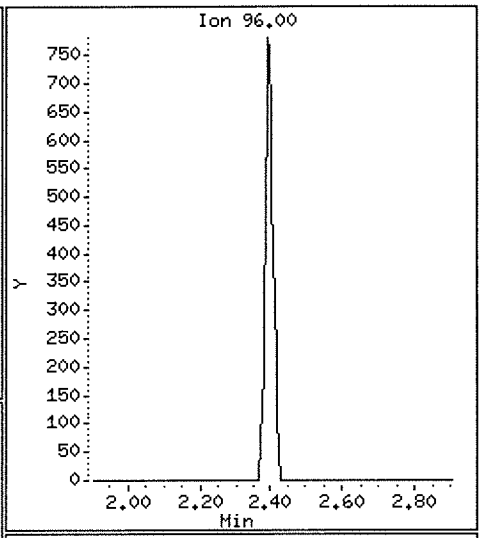
Column phase: DB624

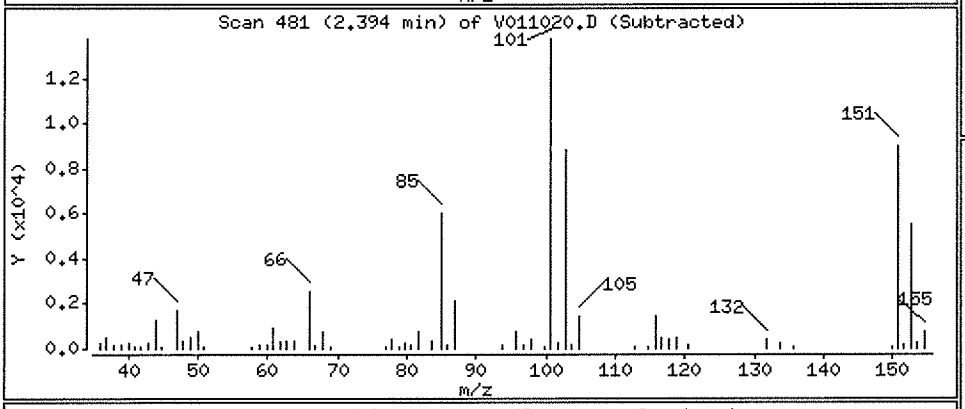
Column diameter: 0.18

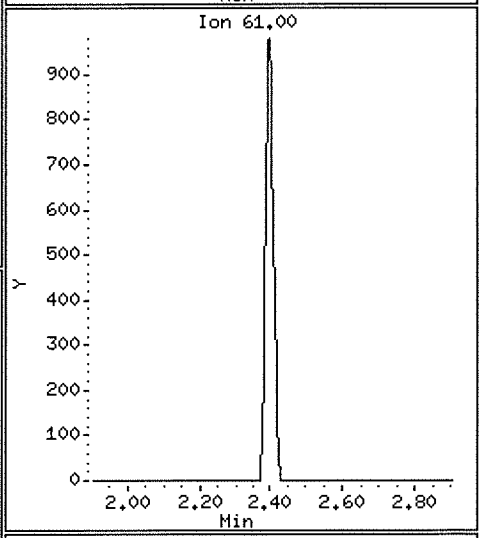
11 1,1-Dichloroethene

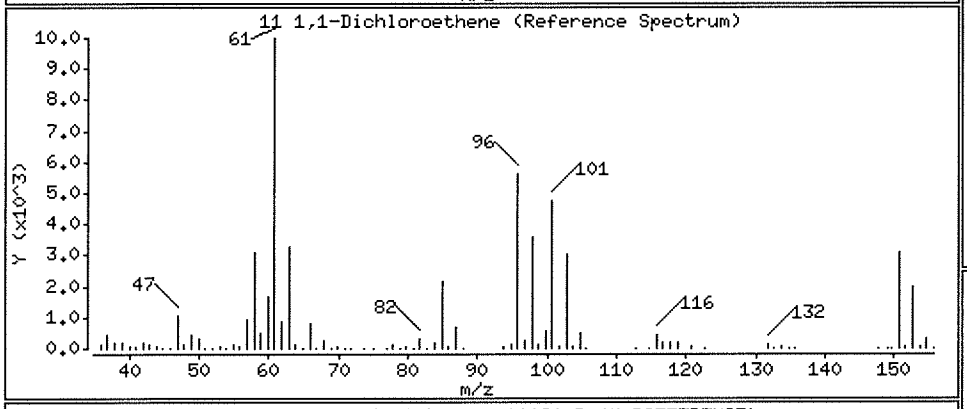
Concentration: 0.50 ug/l

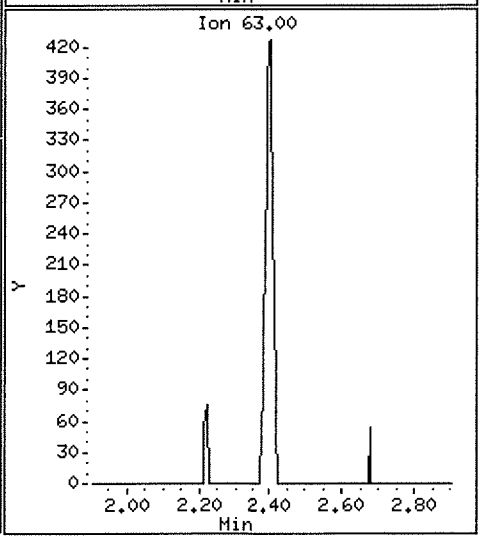


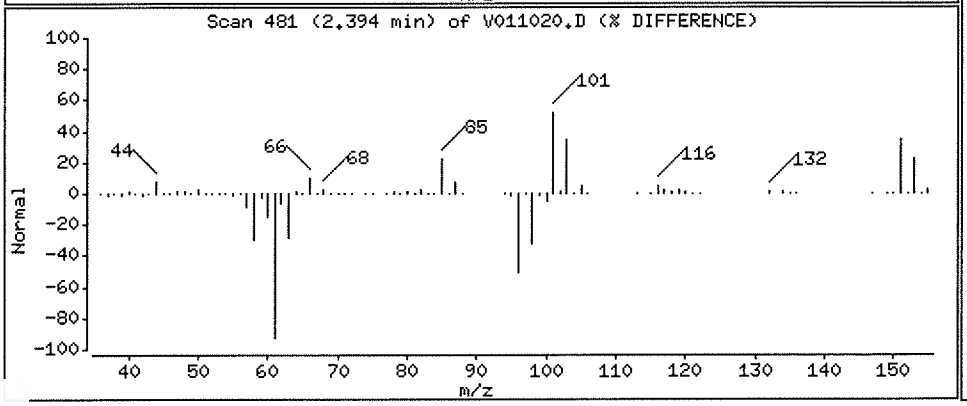












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011020.D

Date : 10-JAN-2019 18:04

Client ID: HS19010248-02

Instrument: VOA9.i

Sample Info: HS19010248-02;HS19010248-02;;;

Purge Volume: 5.0

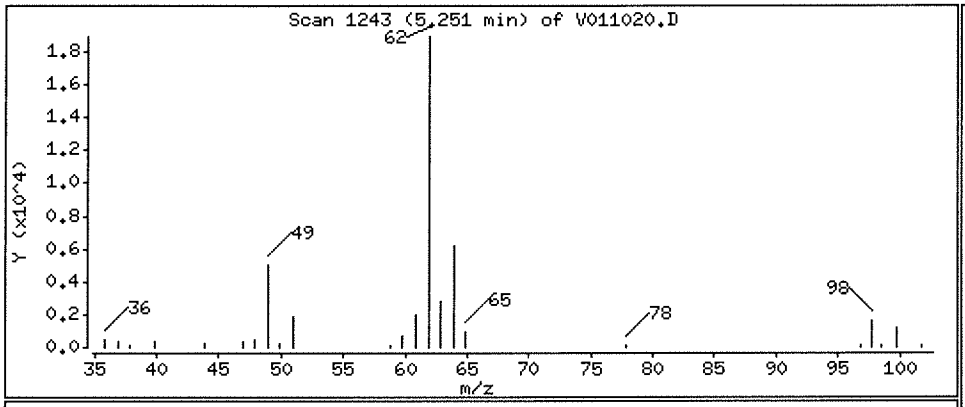
Operator: PC

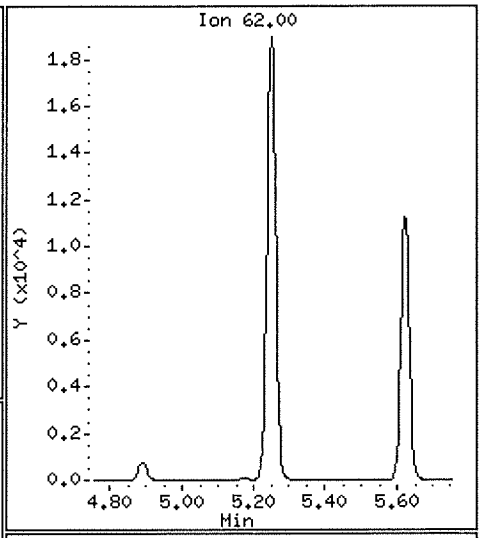
Column phase: DB624

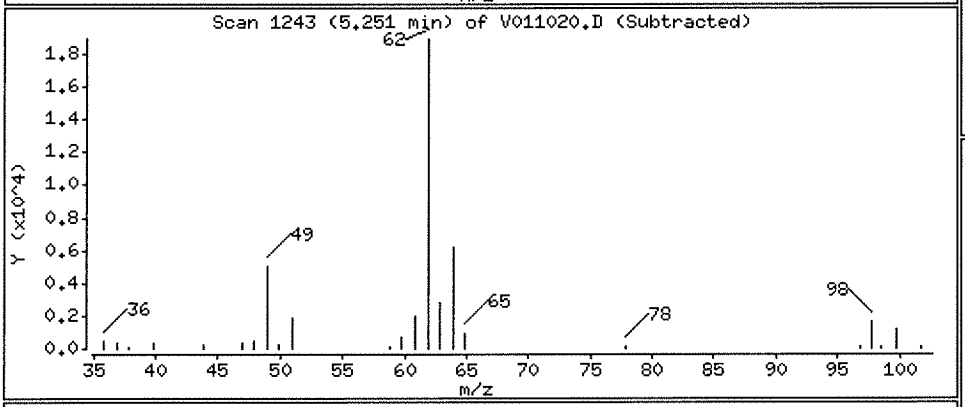
Column diameter: 0.18

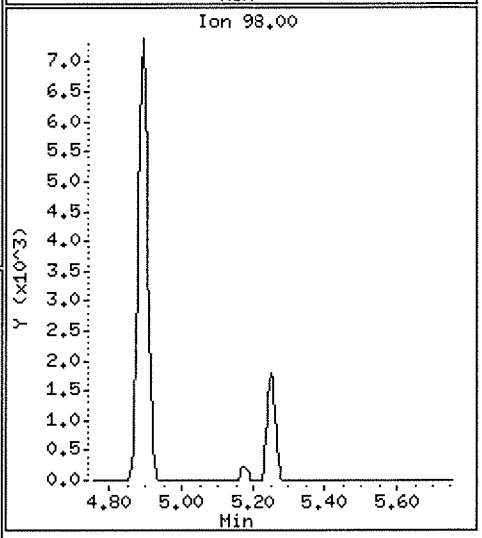
33 1,2-Dichloroethane

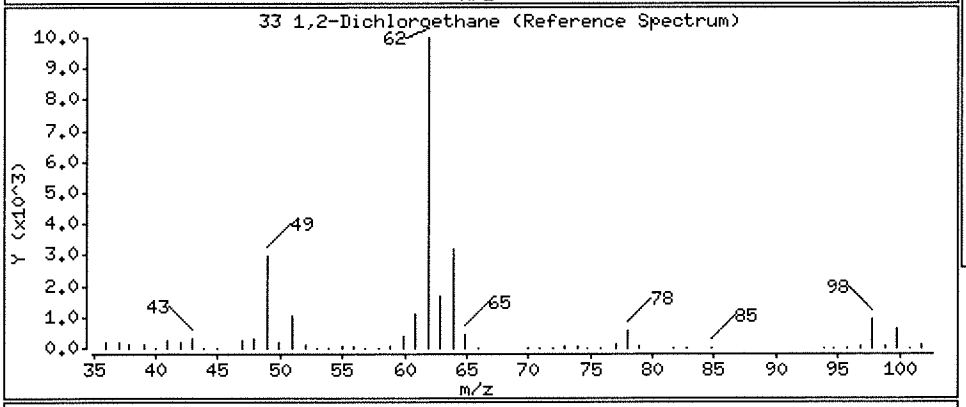
Concentration: 7.09 ug/l

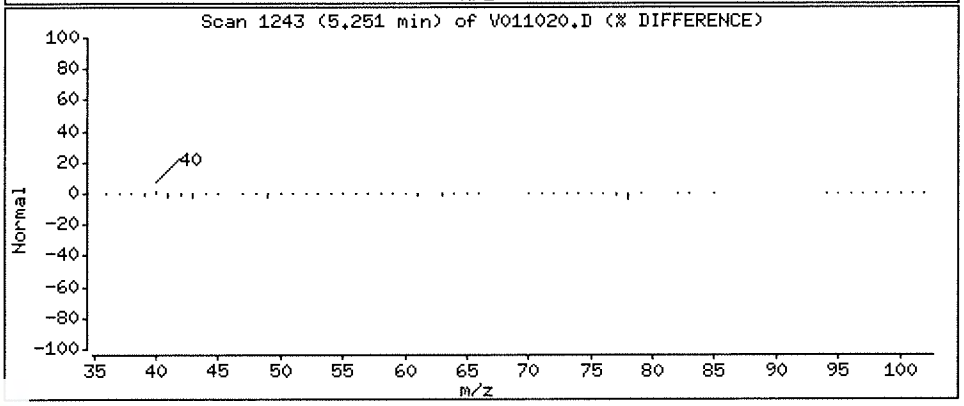












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011020.D

Date : 10-JAN-2019 18:04

Client ID: HS19010248-02

Instrument: VOA9.i

Sample Info: HS19010248-02;HS19010248-02;;;

Purge Volume: 5.0

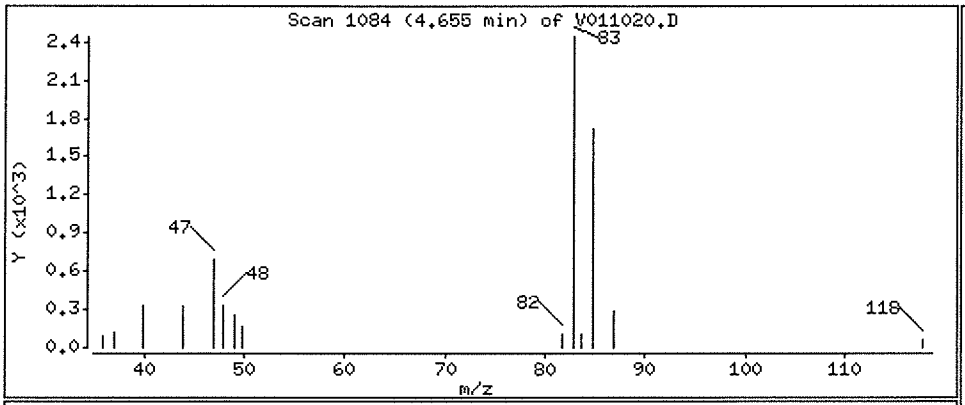
Operator: PC

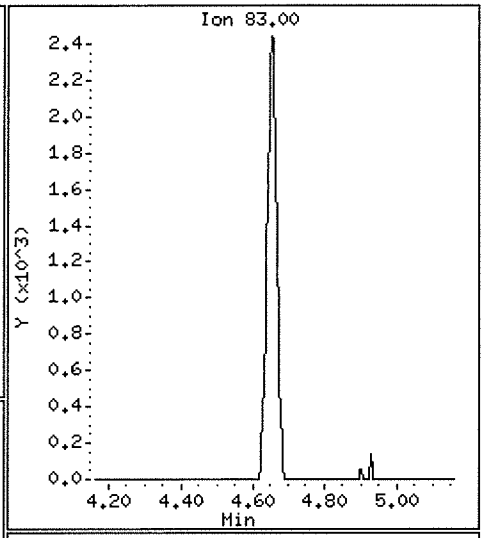
Column phase: DB624

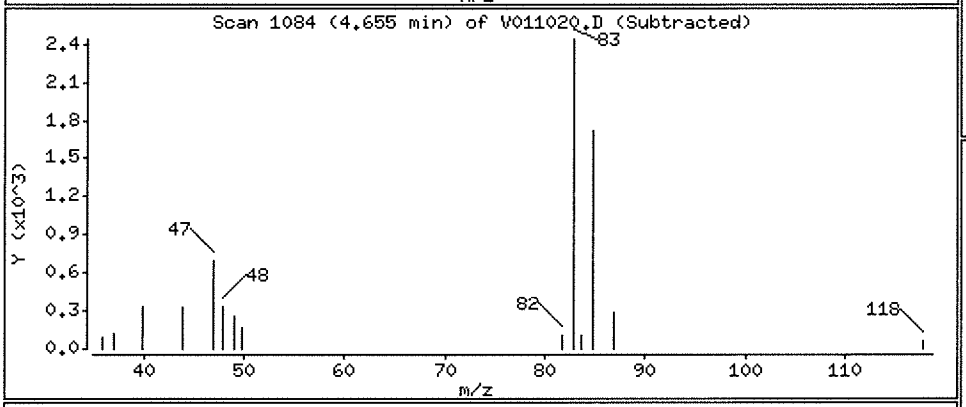
Column diameter: 0.18

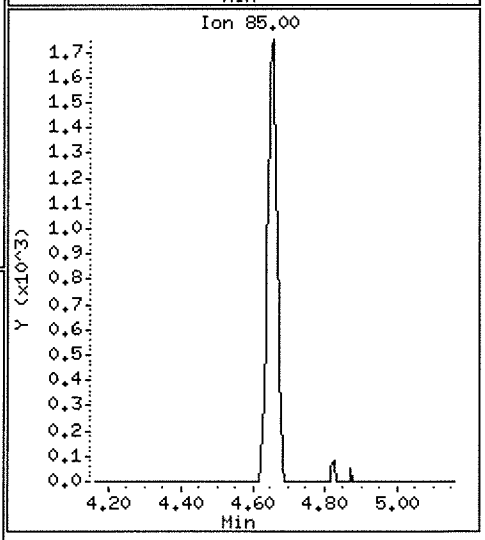
28 Chloroform

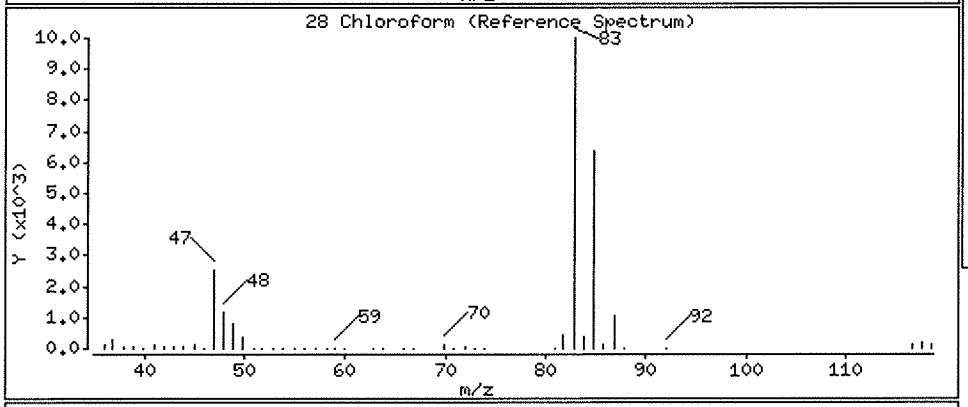
Concentration: 0.84 ug/l

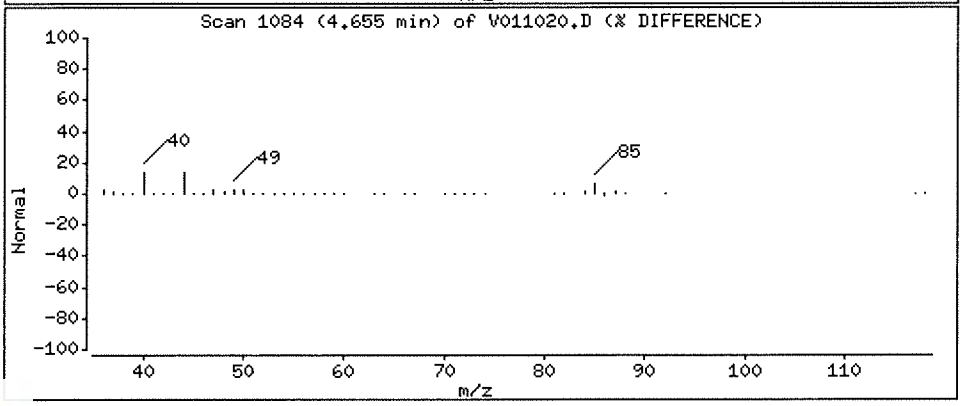












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011020.D

Date : 10-JAN-2019 18:04

Client ID: HS19010248-02

Instrument: VOA9.i

Sample Info: HS19010248-02;HS19010248-02;;;

Purge Volume: 5.0

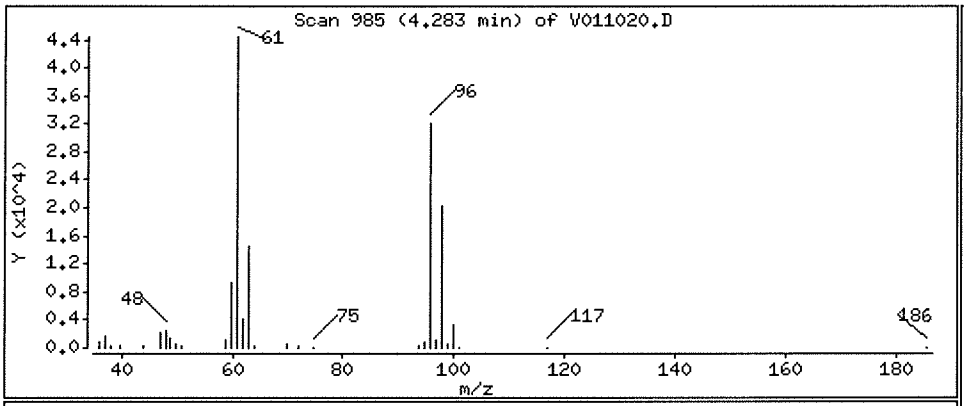
Operator: PC

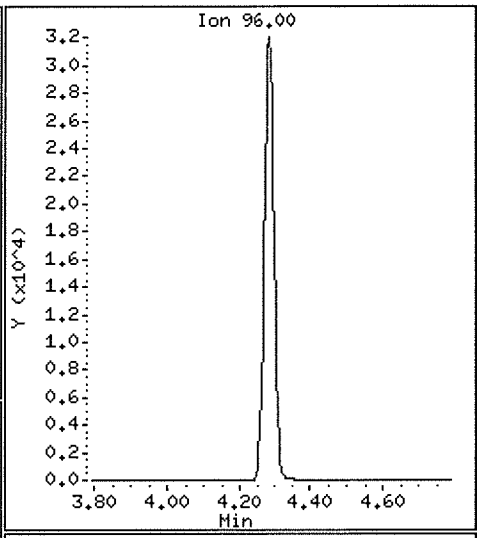
Column phase: DB624

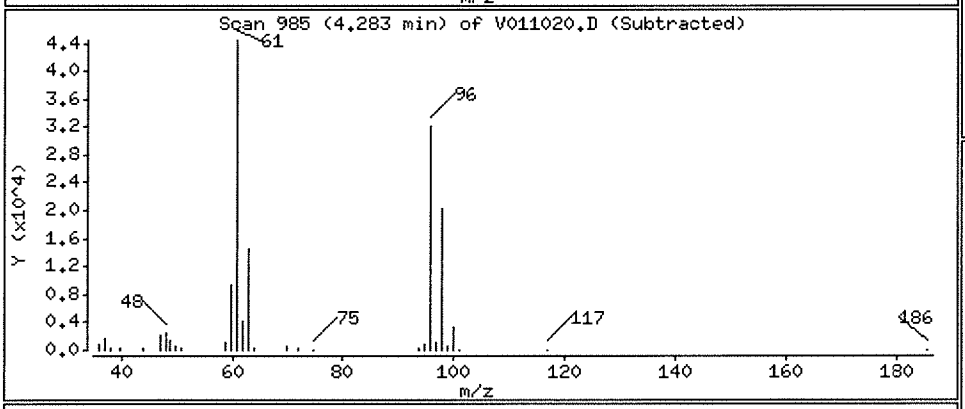
Column diameter: 0.18

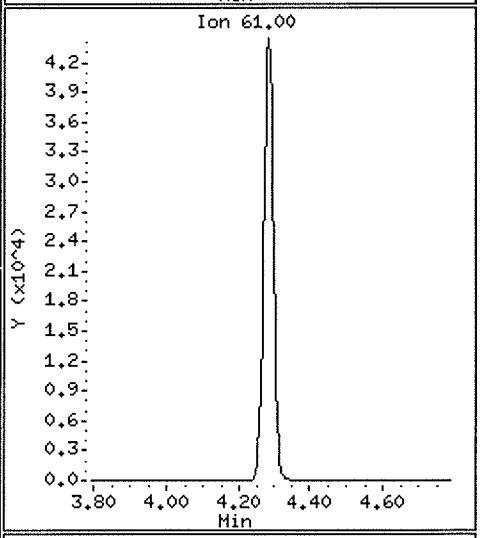
27 cis-1,2-Dichloroethene

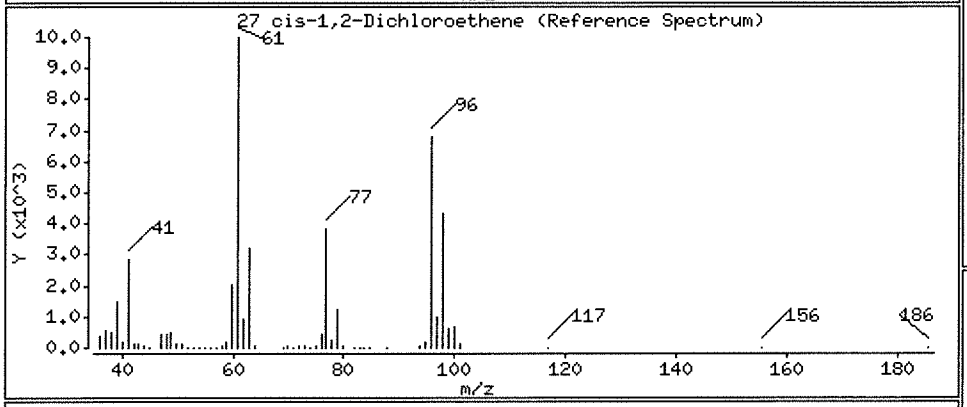
Concentration: 17.69 ug/l

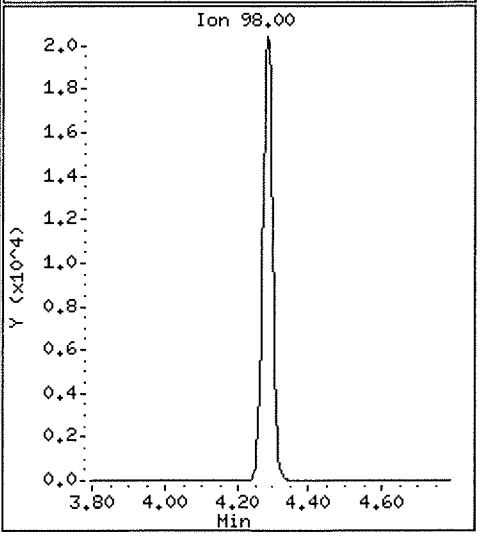


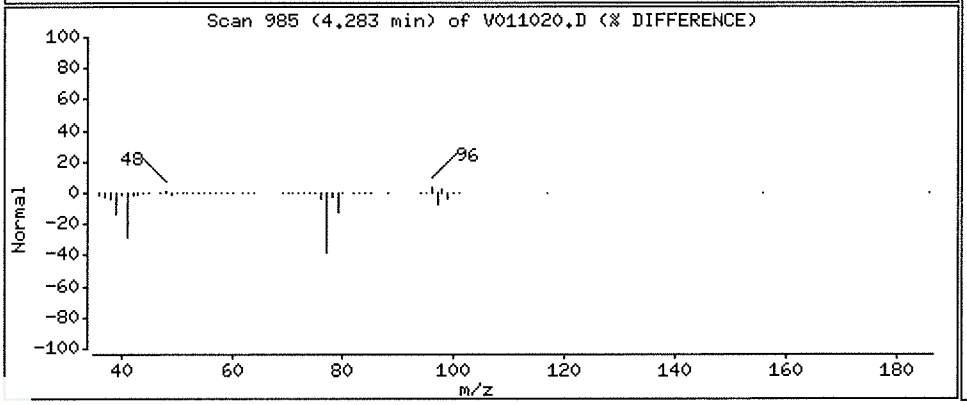












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011020.D

Date : 10-JAN-2019 18:04

Client ID: HS19010248-02

Instrument: VOA9.i

Sample Info: HS19010248-02;HS19010248-02;;;

Purge Volume: 5.0

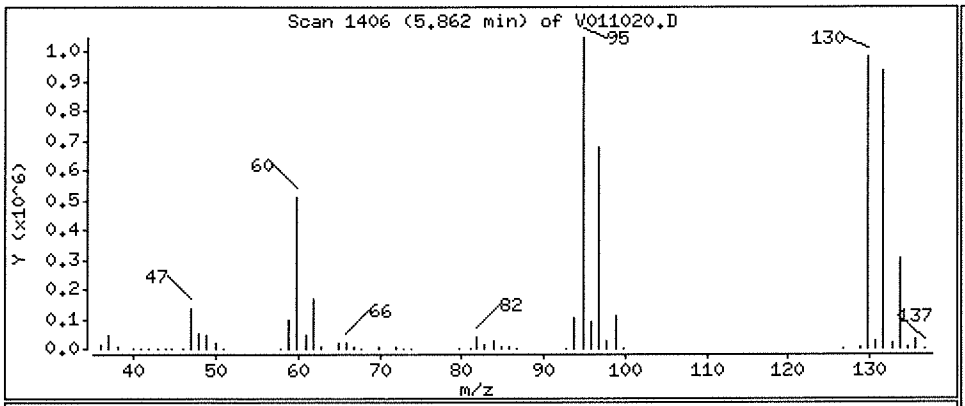
Operator: PC

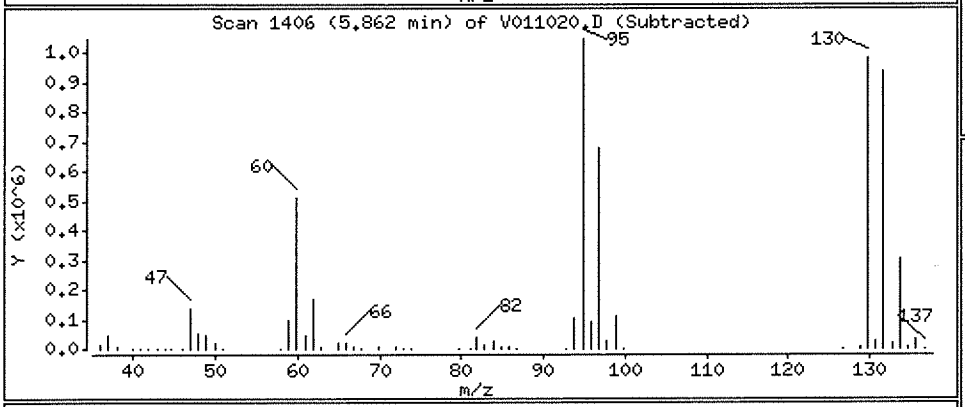
Column phase: DB624

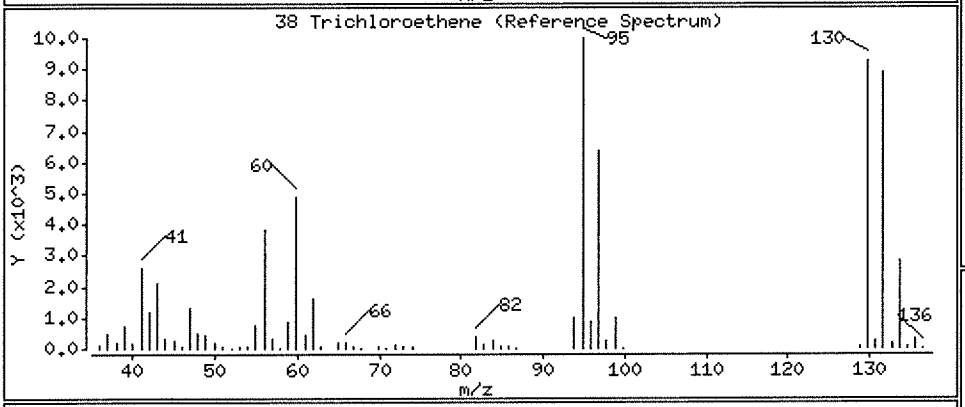
Column diameter: 0.18

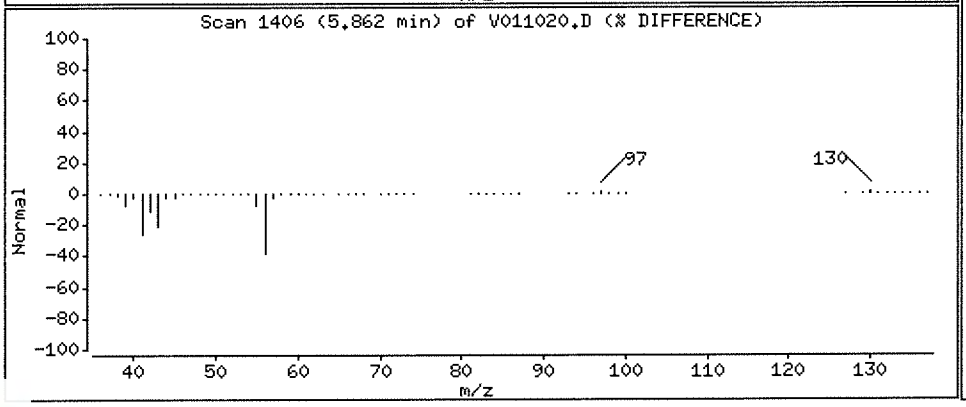
38 Trichloroethene

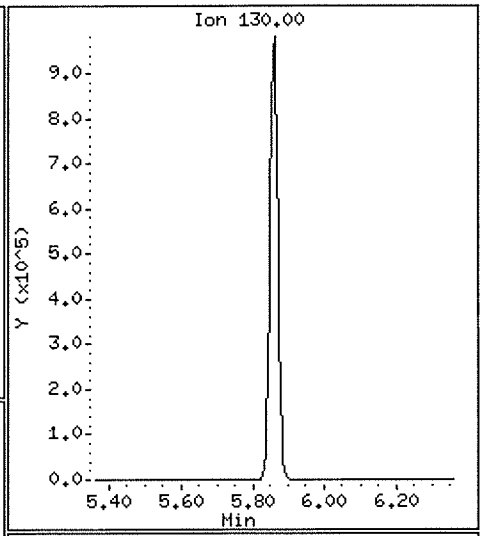
Concentration: 513.40 ug/l

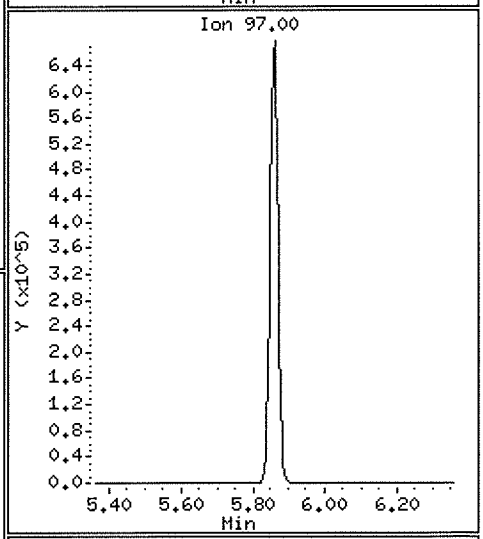


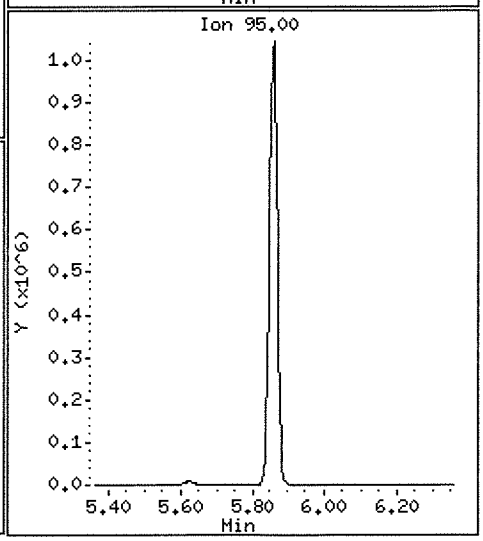












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011021.D Page 1
Report Date: 01-Feb-2019 18:05

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011021.D
Lab Smp Id: HS19010248-02DL Client Smp ID: HS19010248-02DL
Inj Date : 10-JAN-2019 18:31
Operator : PC Inst ID: VOA9.i
Smp Info : HS19010248-02;HS19010248-02;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 17
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14

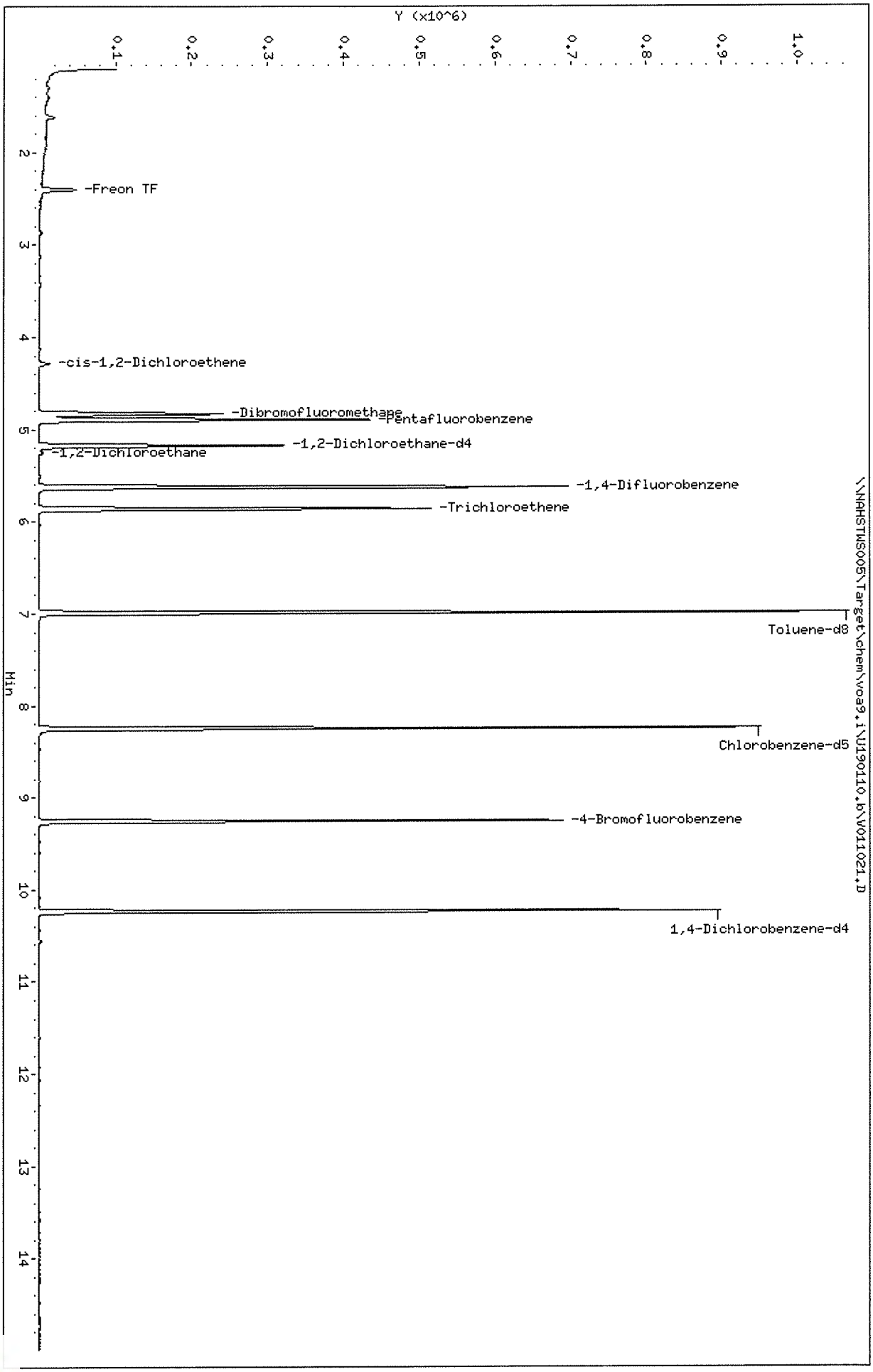
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	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)	251718	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	476511	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	433634	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	191085	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.830	(0.986)	139264	48.9860	48.98
$ 35 1,2-Dichloroethane-d4	65	5.171	5.175	(1.057)	207066	56.0511	56.05
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	600034	53.4028	53.40
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	211335	49.6582	49.65
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	4061	0.88075	8.80(aM)
27 cis-1,2-Dichloroethene	96	4.283	4.290	(0.875)	5936	1.72413	17.24(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	146402	48.2569	482.56

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa9.i\VJ190110.b\V011021.D
Date : 10-JAN-2019 18:31
Client ID: HS19010248-02DL
Sample Info: HS19010248-02;HS19010248-02;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011021.D

Date : 10-JAN-2019 18:31

Client ID: HS19010248-02DL

Instrument: VOA9.i

Sample Info: HS19010248-02;HS19010248-02;;;

Purge Volume: 5.0

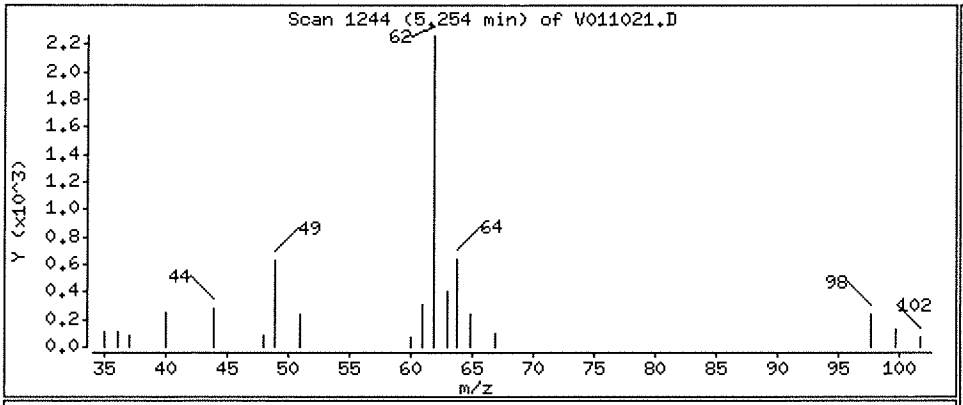
Operator: PC

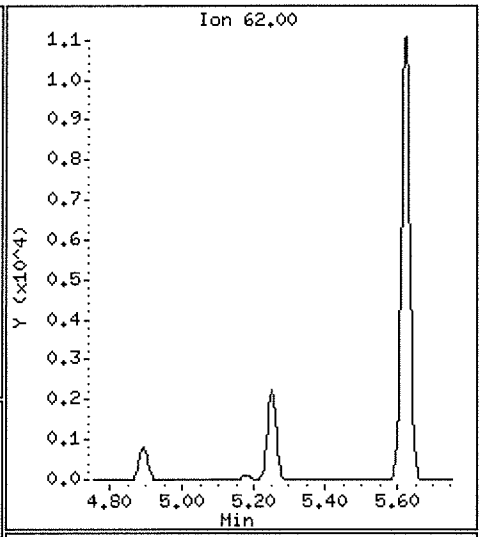
Column phase: DB624

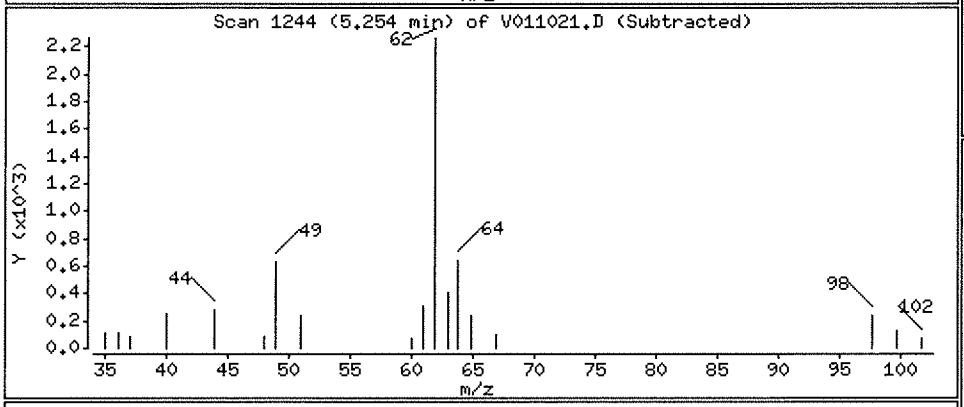
Column diameter: 0.18

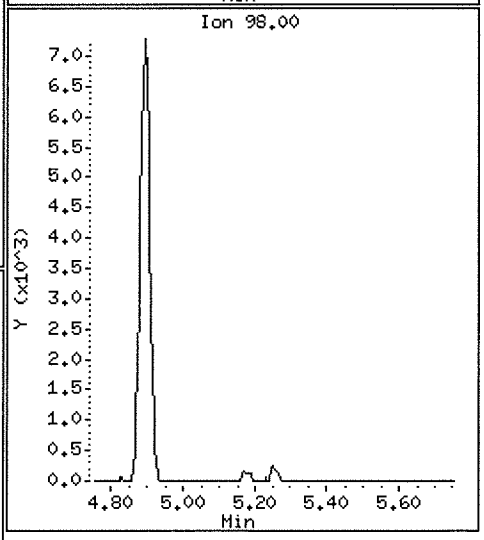
33 1,2-Dichloroethane

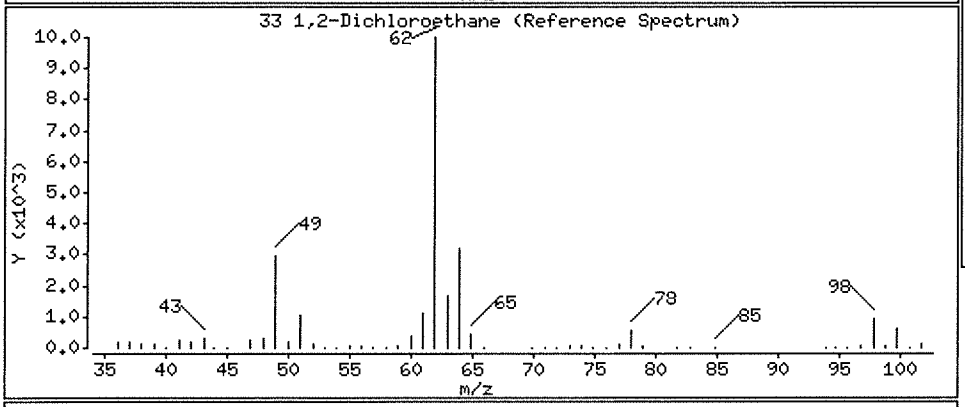
Concentration: 8.80 ug/l

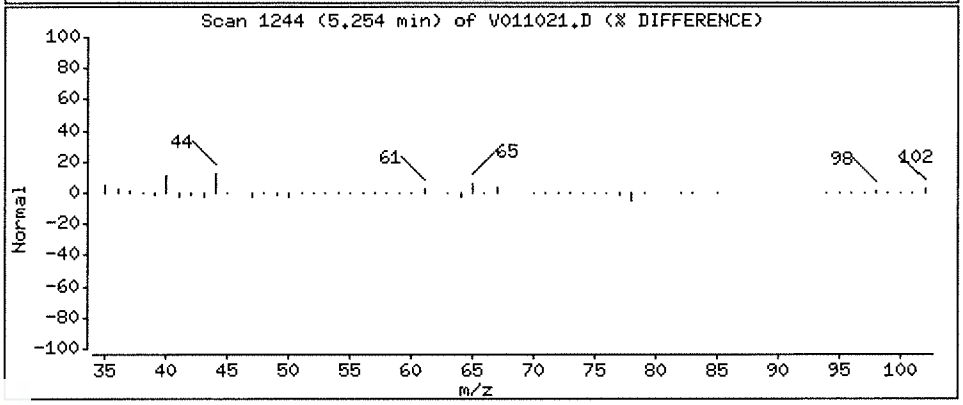












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011021.D

Date : 10-JAN-2019 18:31

Client ID: HS19010248-02DL

Instrument: VOA9.i

Sample Info: HS19010248-02;HS19010248-02;;;

Purge Volume: 5.0

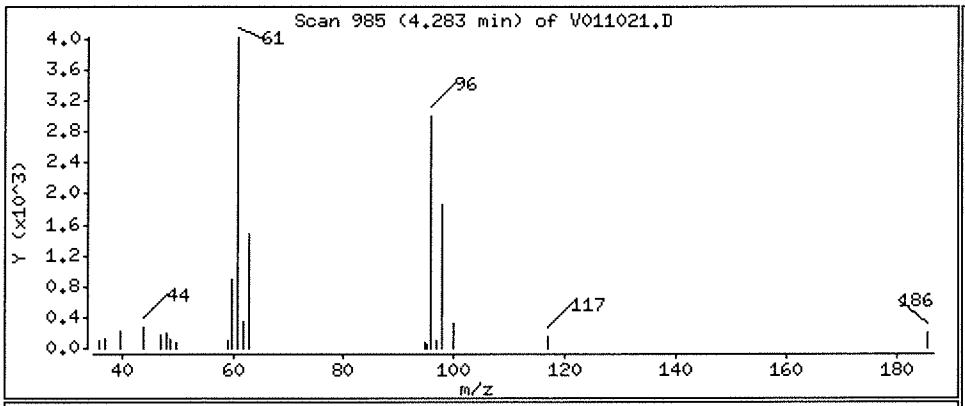
Operator: PC

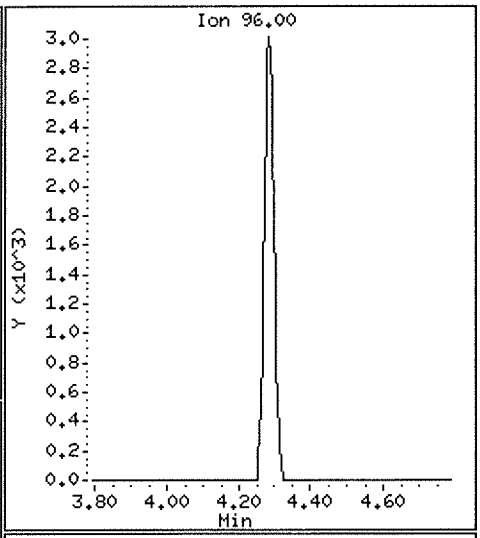
Column phase: DB624

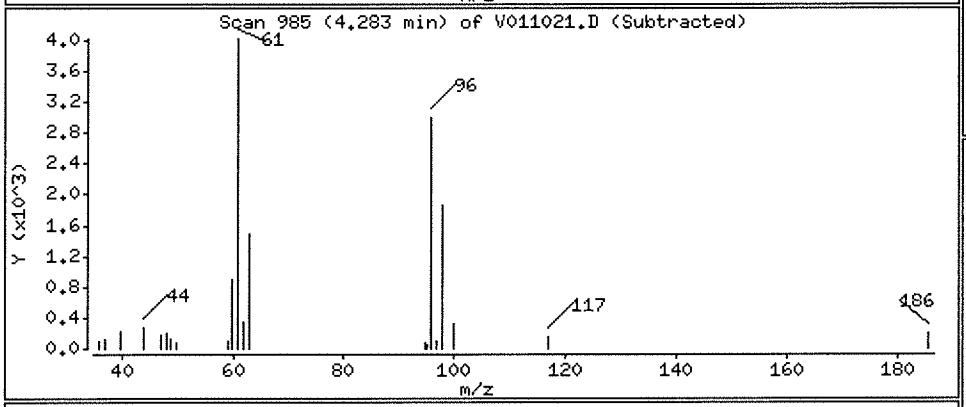
Column diameter: 0.18

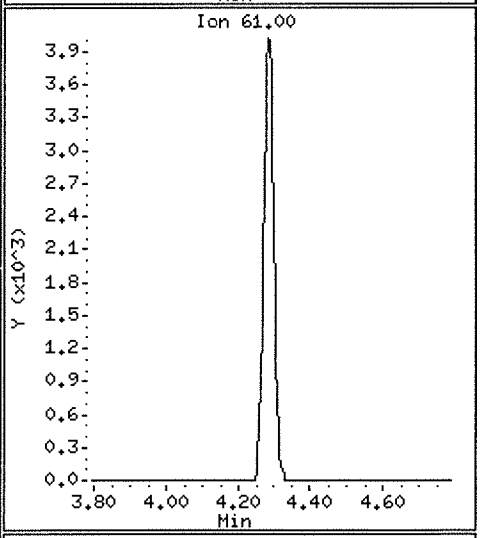
27 cis-1,2-Dichloroethene

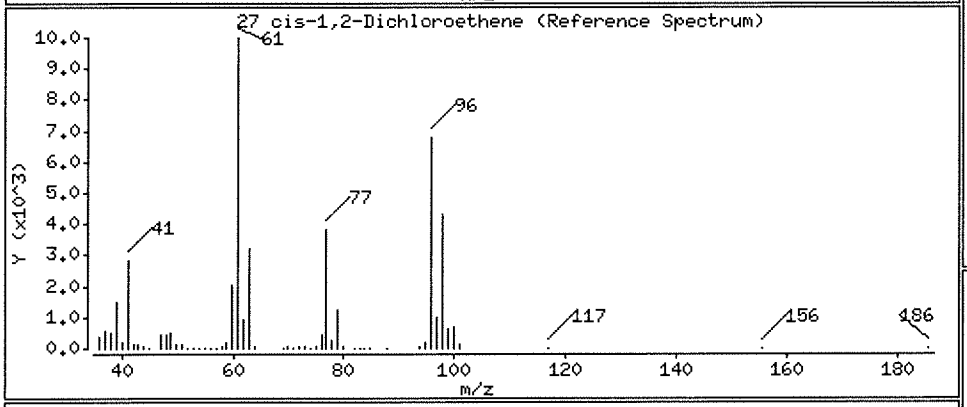
Concentration: 17.24 ug/l

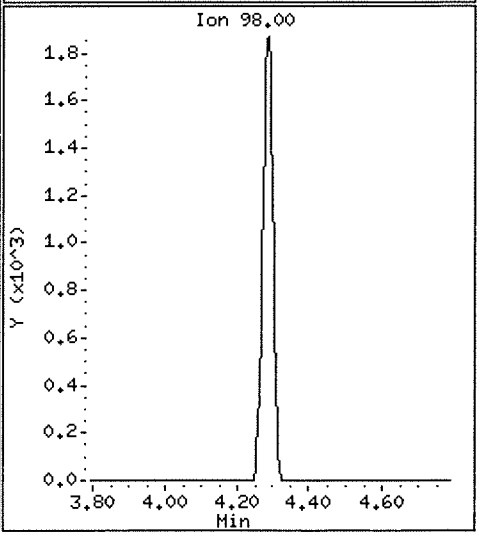


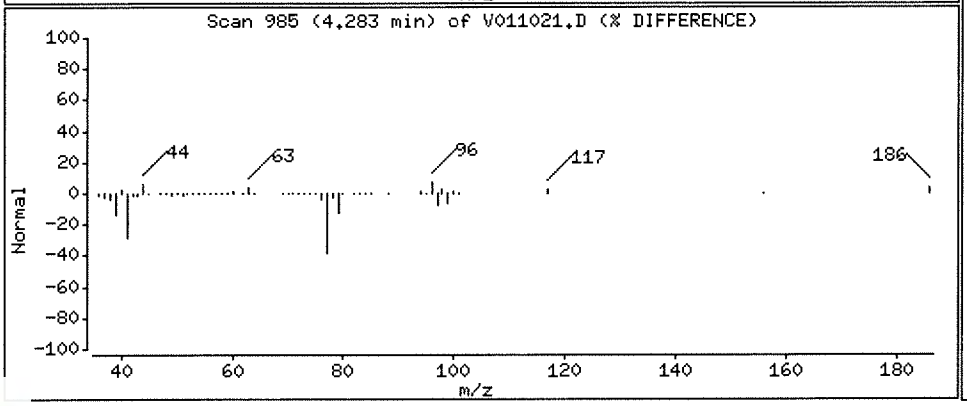












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011021.D Page 5

Date : 10-JAN-2019 18:31

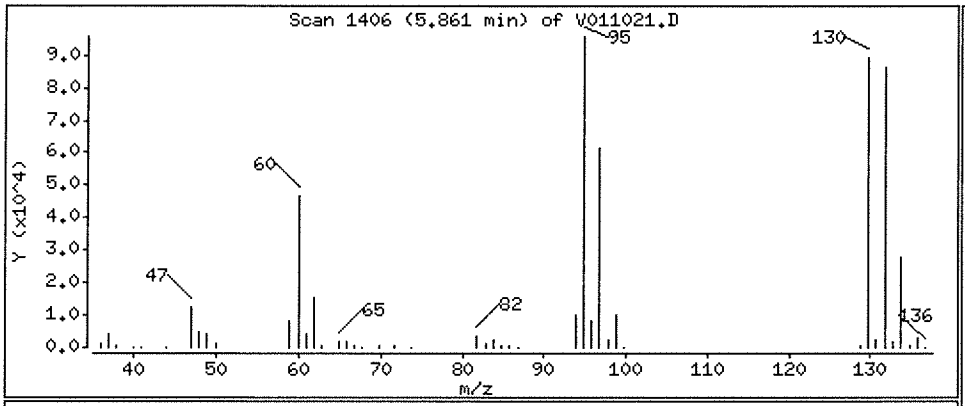
Client ID: HS19010248-02DL Instrument: VOA9.i

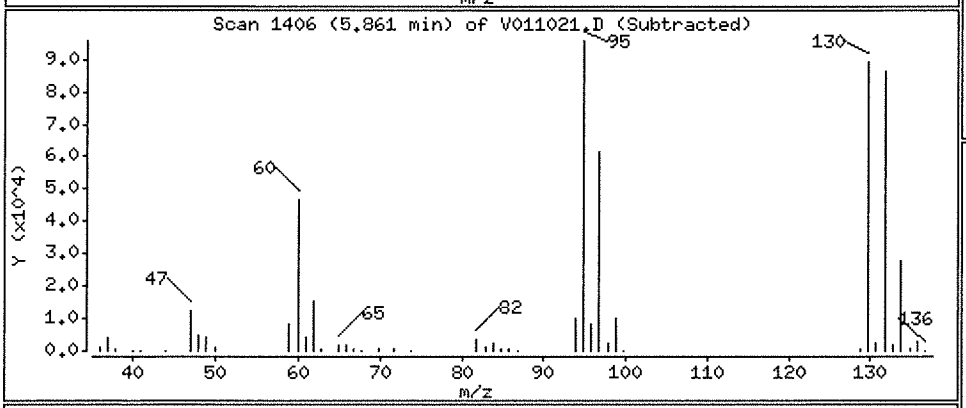
Sample Info: HS19010248-02;HS19010248-02;;;

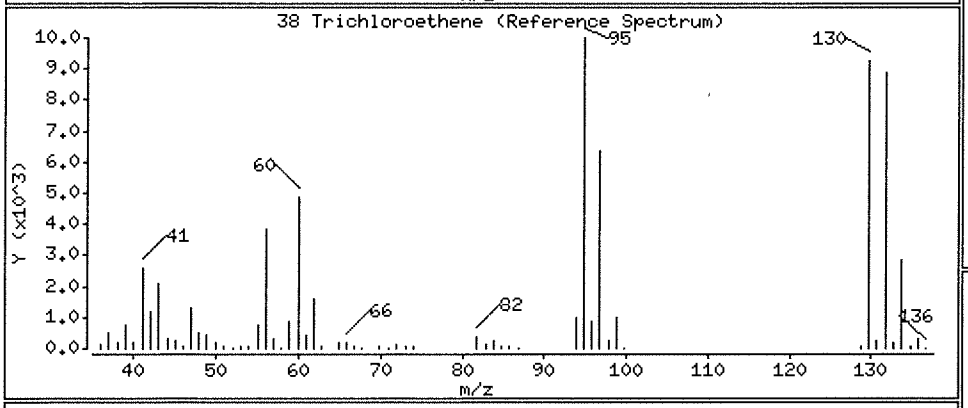
Purge Volume: 5.0 Operator: PC

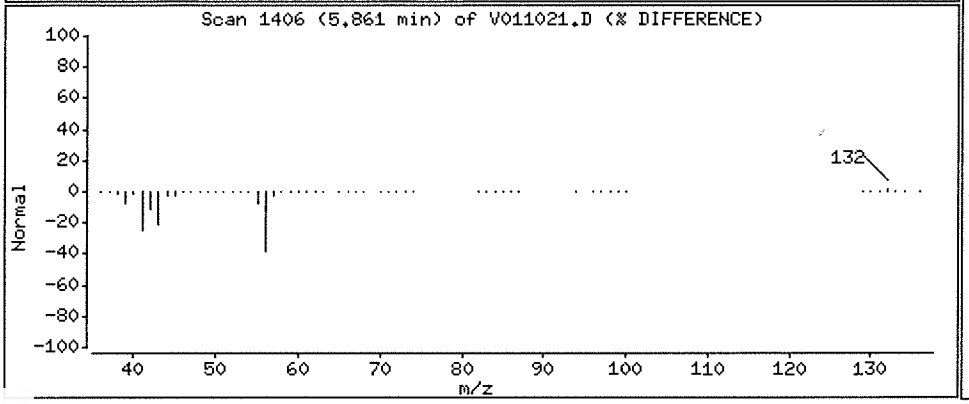
Column phase: DB624 Column diameter: 0.18

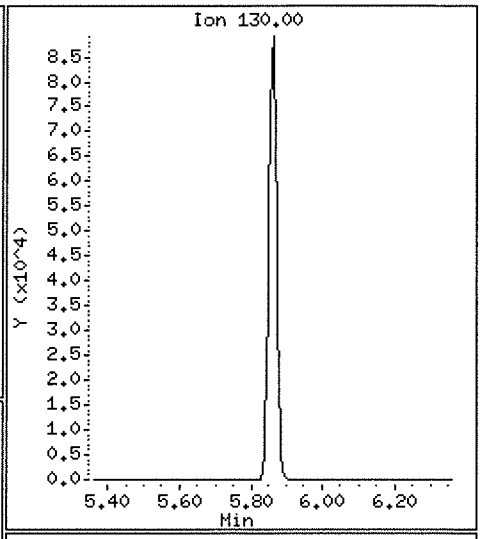
38 Trichloroethene Concentration: 482.56 ug/l

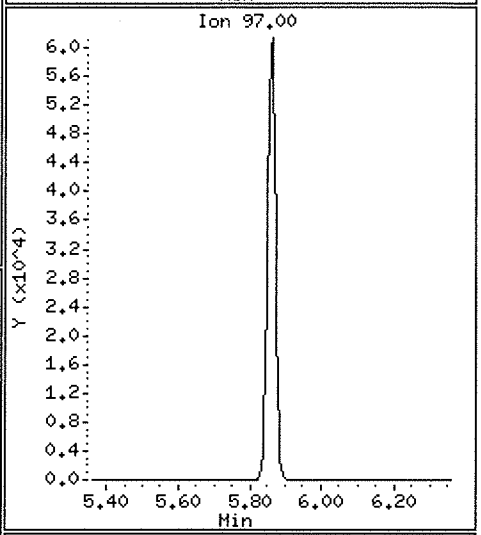


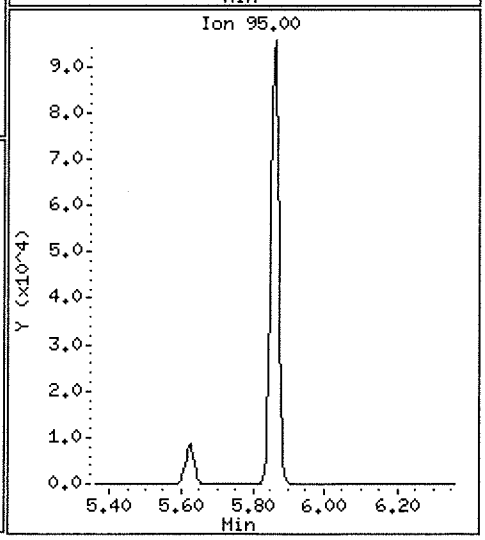












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011022.D Page 1
Report Date: 01-Feb-2019 18:03

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011022.D
Lab Smp Id: HS19010248-03 Client Smp ID: HS19010248-03
Inj Date : 10-JAN-2019 18:56
Operator : PC Inst ID: VOA9.i
Smp Info : HS19010248-03;HS19010248-03;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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)	224533	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	422802	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	414982	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	191265	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.830	(0.987)	122736	48.3782	48.37
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	179105	54.2846	54.28
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	533767	49.4671	49.46
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	211443	52.0016	52.00
33 1,2-Dichloroethane	62	5.258	5.254	(0.934)	33852	8.27449	8.27
10 Acetone	43	2.487	2.484	(0.508)	5505	4.12036	4.12(a)
37 Benzene	78	5.224	5.220	(0.928)	7713	0.66291	0.66(a)
28 Chloroform	83	4.662	4.662	(0.952)	70897	14.6227	14.62
27 cis-1,2-Dichloroethene	96	4.294	4.290	(0.877)	15133	4.92759	4.92(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	3434	1.57533	1.57(a)
38 Trichloroethene	130	5.865	5.861	(1.042)	3127875	1161.98	1161.97(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.

00933221

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011022.D

Date : 10-JAN-2019 18:56

Client ID: HS19010248-03

Instrument: VOA9.i

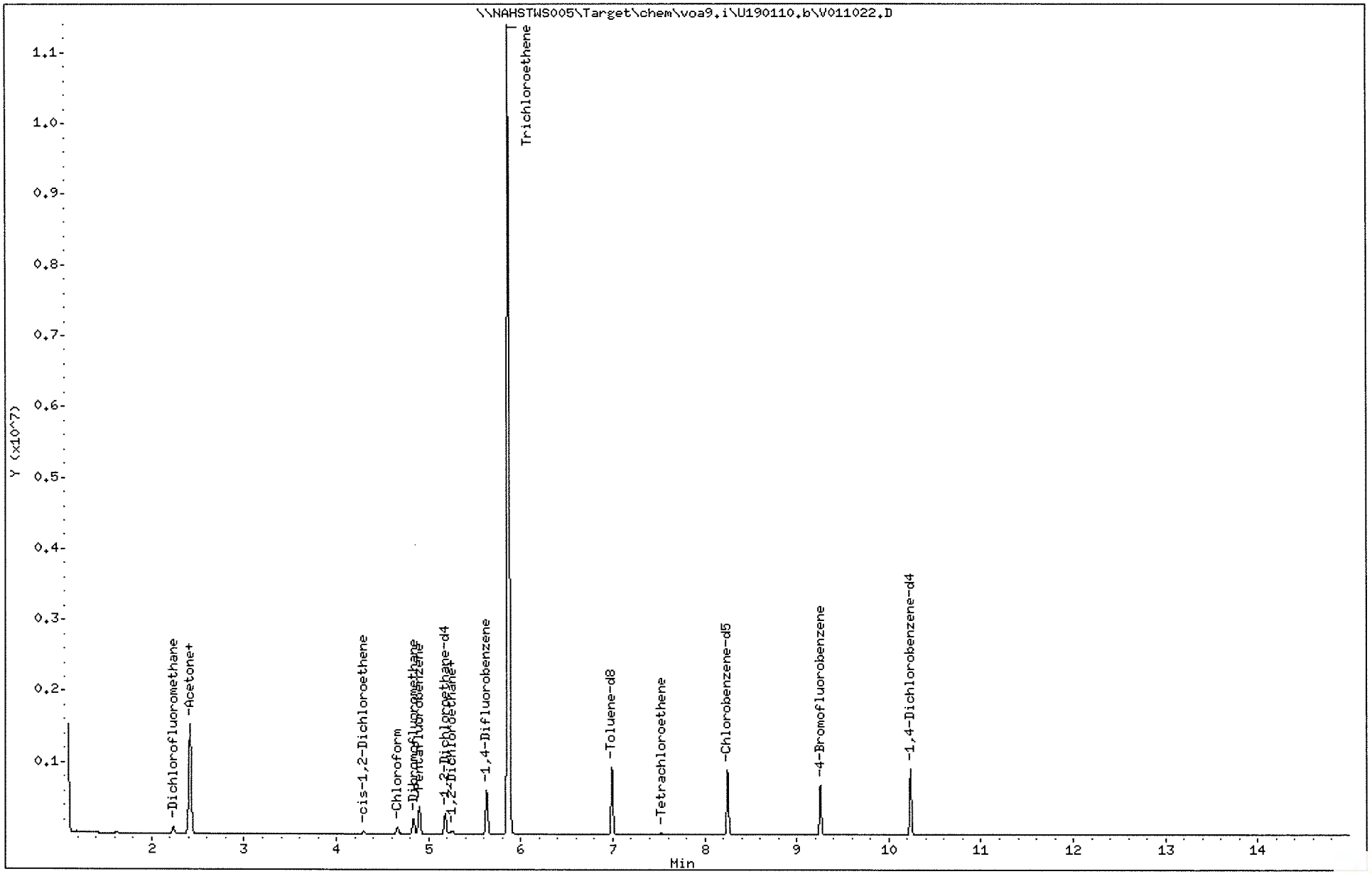
Sample Info: HS19010248-03;HS19010248-03;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



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Date : 10-JAN-2019 18:56

Client ID: HS19010248-03

Instrument: VOA9.i

Sample Info: HS19010248-03;HS19010248-03;;;

Purge Volume: 5.0

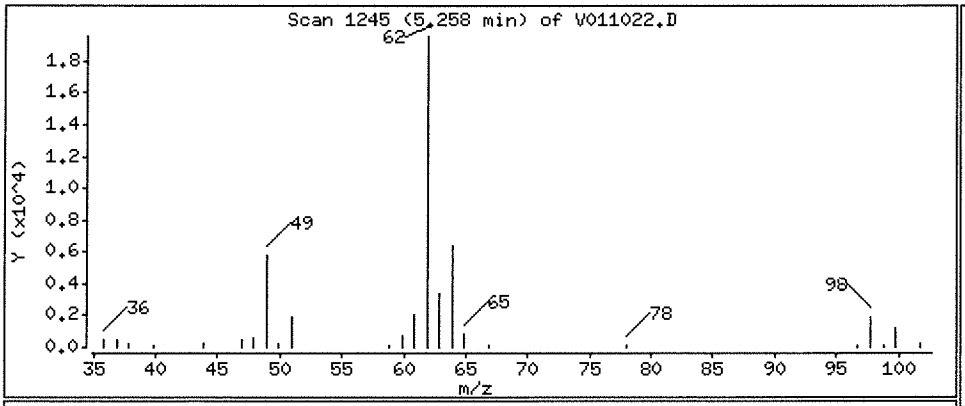
Operator: PC

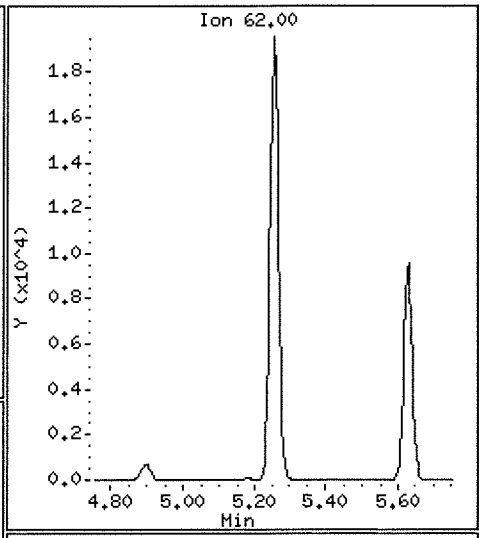
Column phase: DB624

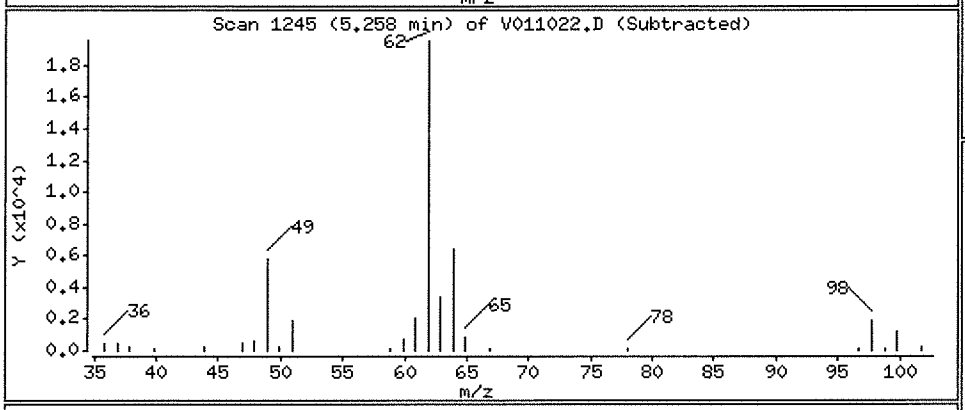
Column diameter: 0.18

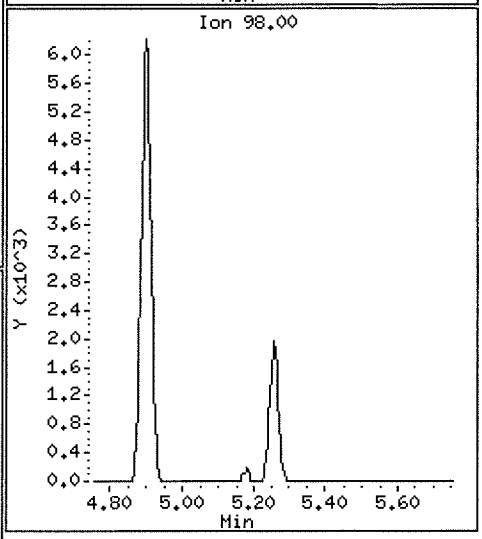
33 1,2-Dichloroethane

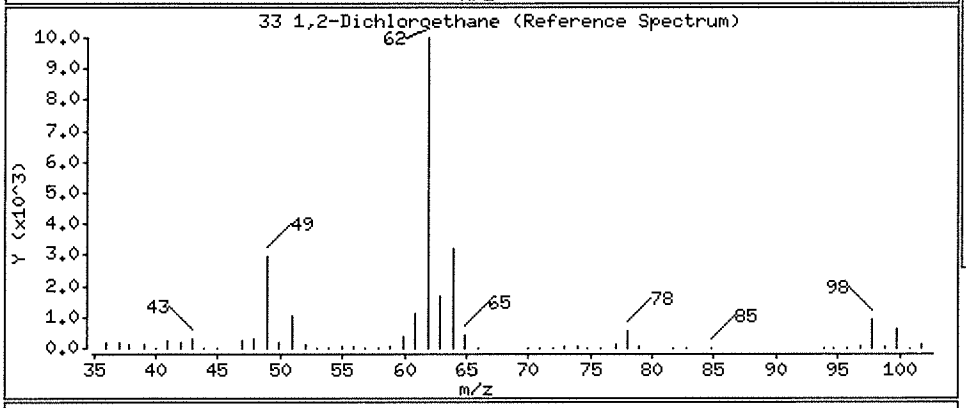
Concentration: 8.27 ug/l

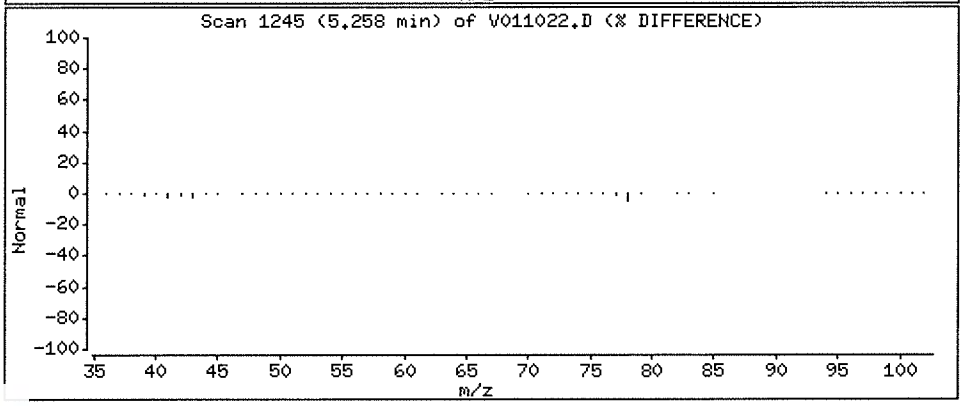












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011022.D

Date : 10-JAN-2019 18:56

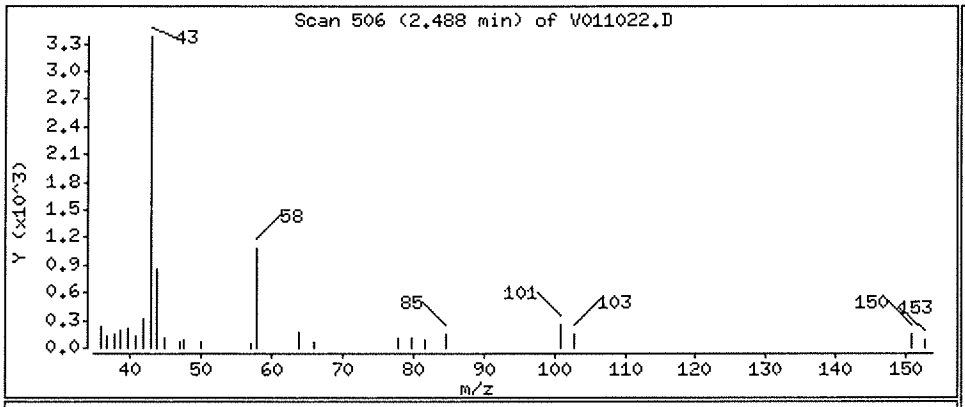
Client ID: HS19010248-03 Instrument: VOA9.i

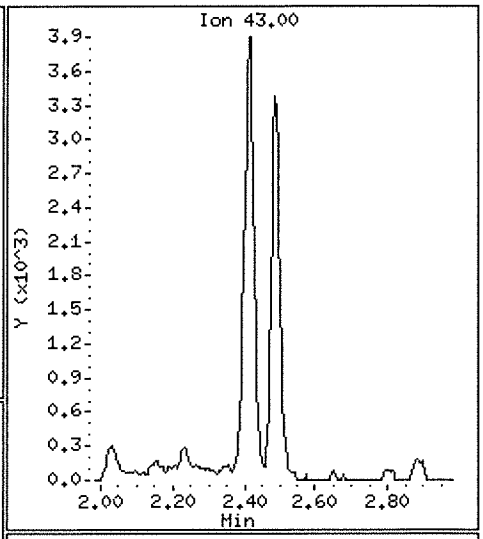
Sample Info: HS19010248-03;HS19010248-03;;;

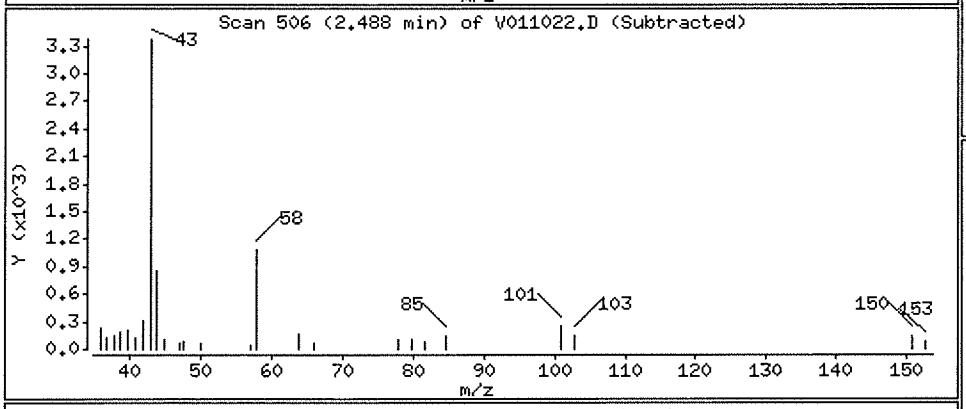
Purge Volume: 5.0 Operator: PC

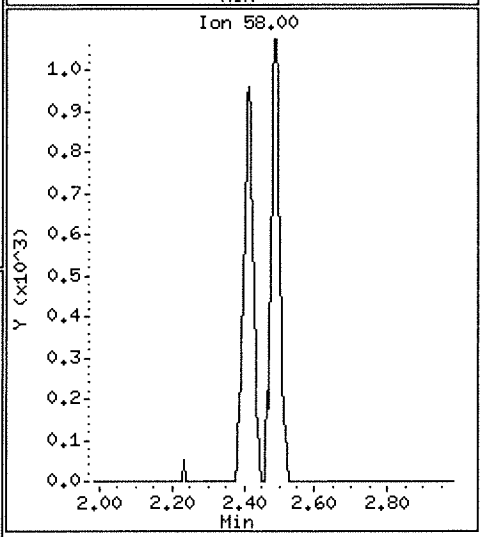
Column phase: DB624 Column diameter: 0.18

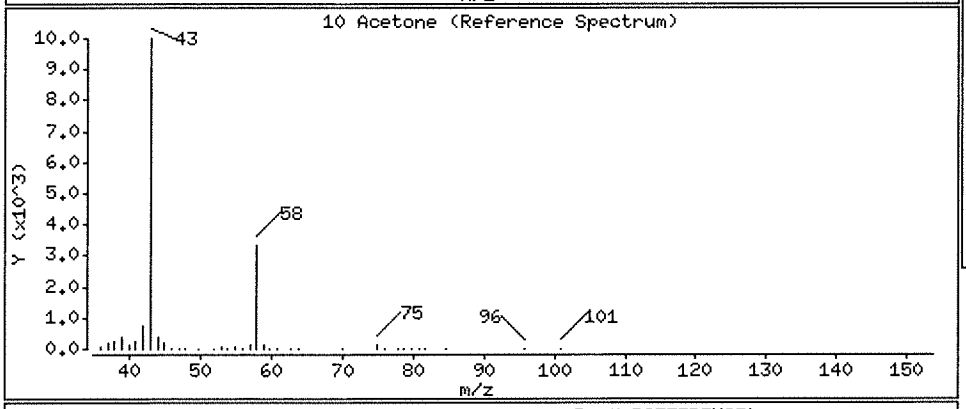
10 Acetone Concentration: 4.12 ug/l

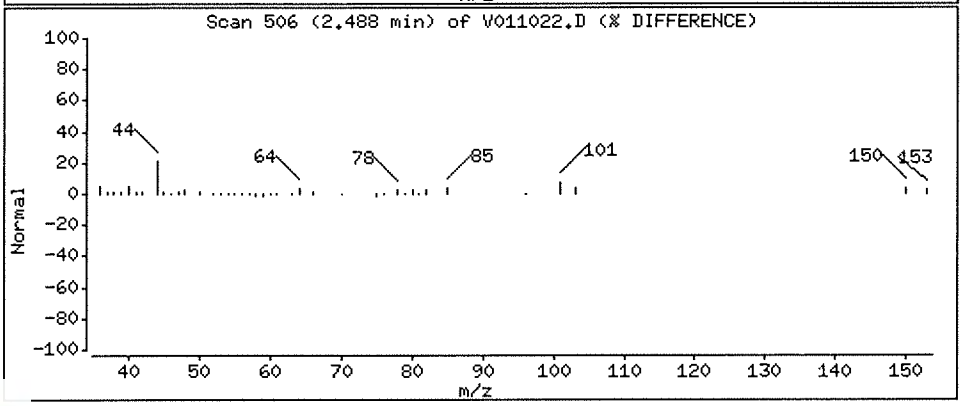












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011022.D

Date : 10-JAN-2019 18:56

Client ID: HS19010248-03

Instrument: VOA9.i

Sample Info: HS19010248-03;HS19010248-03;;;

Purge Volume: 5.0

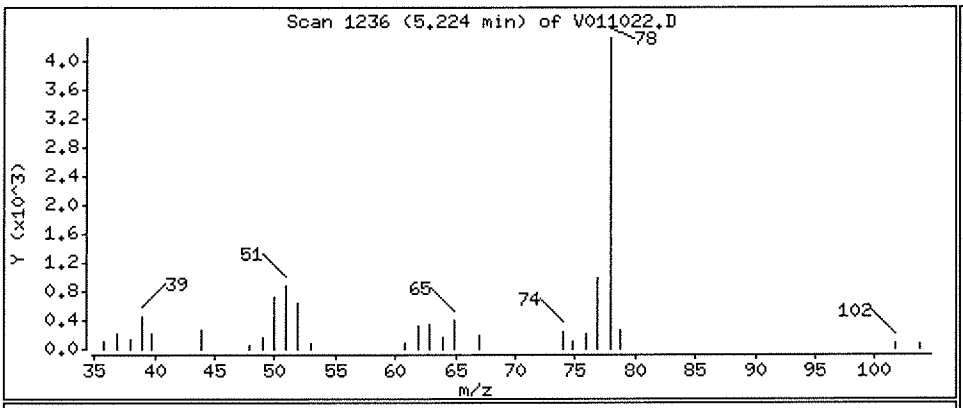
Operator: PC

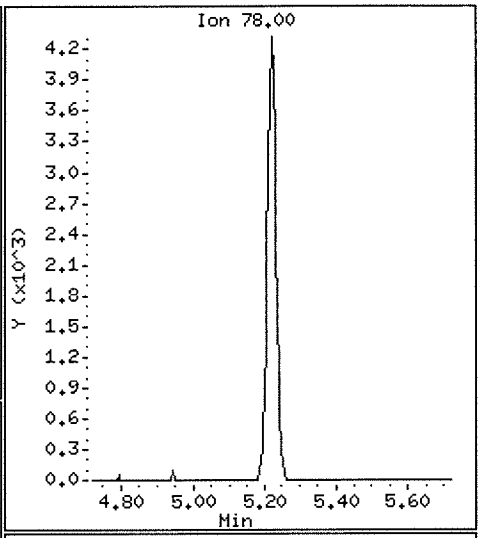
Column phase: DB624

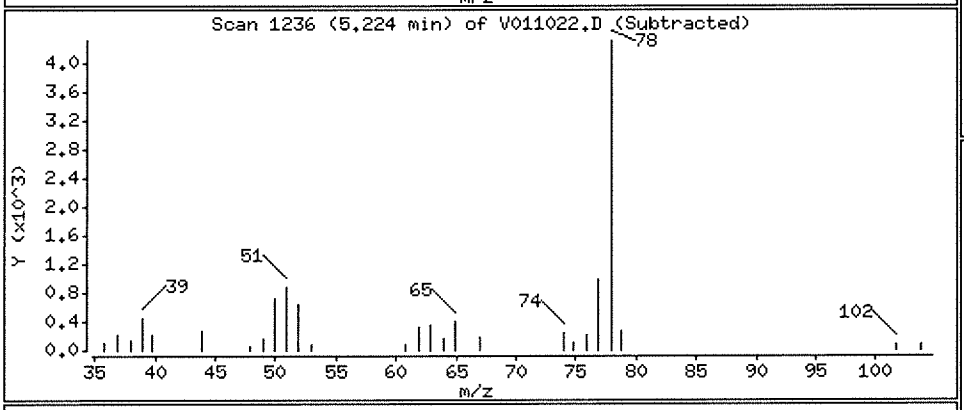
Column diameter: 0.18

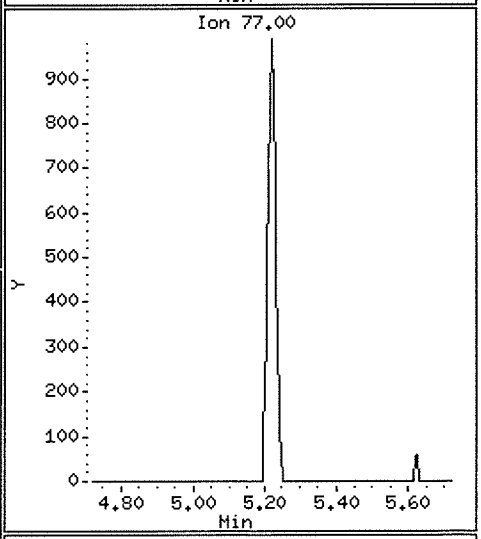
37 Benzene

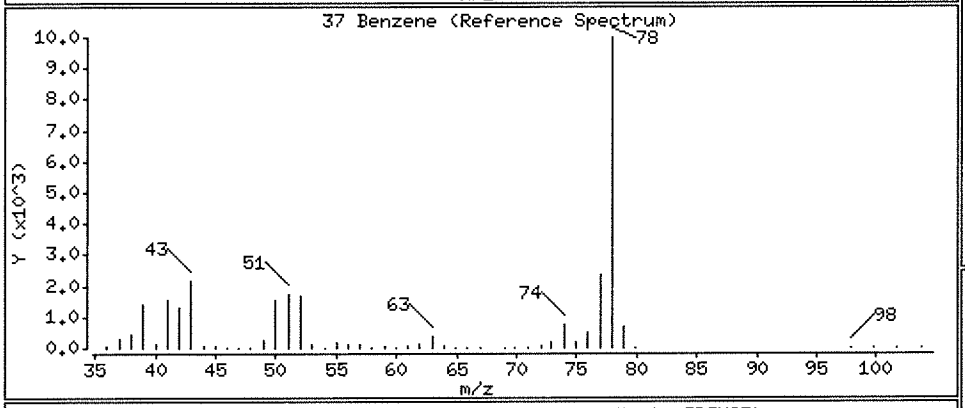
Concentration: 0.66 ug/l

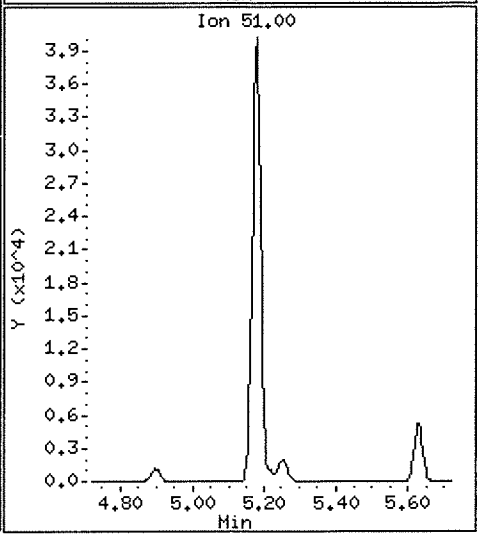


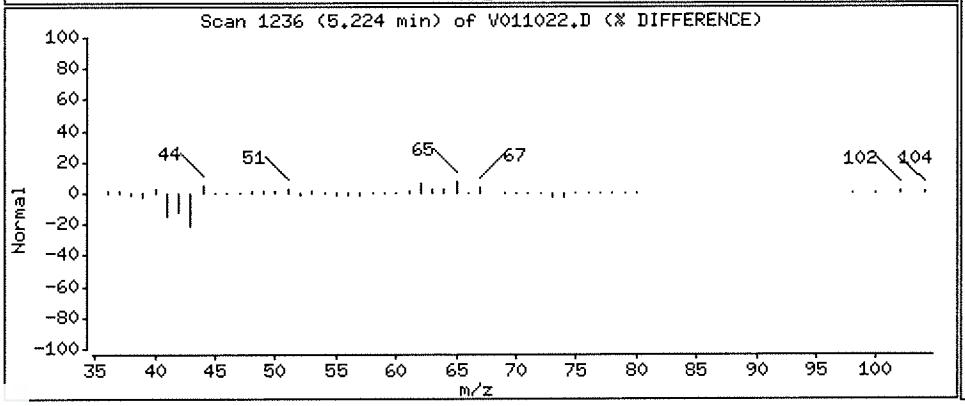












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Date : 10-JAN-2019 18:56

Client ID: HS19010248-03

Instrument: VOA9.i

Sample Info: HS19010248-03;HS19010248-03;;;

Purge Volume: 5.0

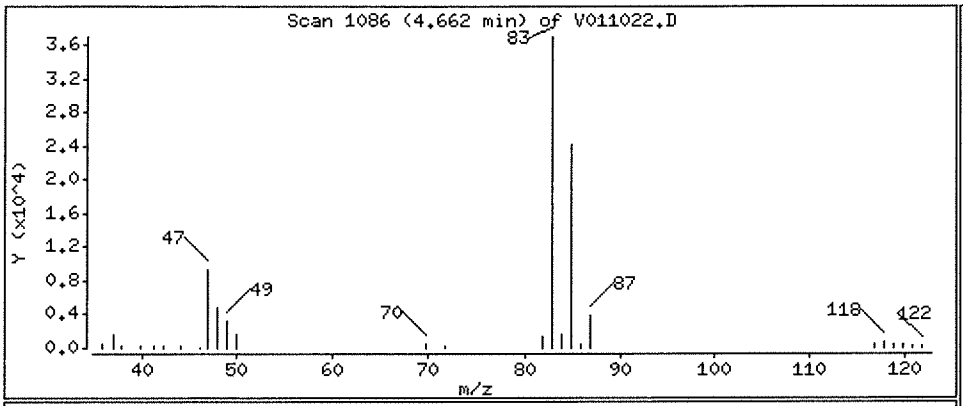
Operator: PC

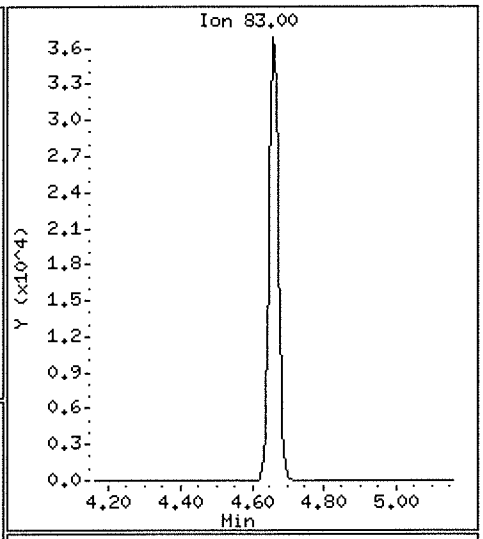
Column phase: DB624

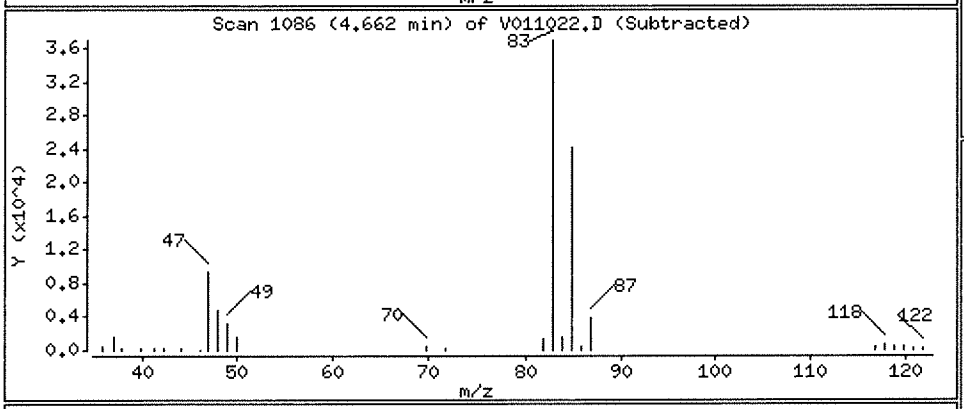
Column diameter: 0.18

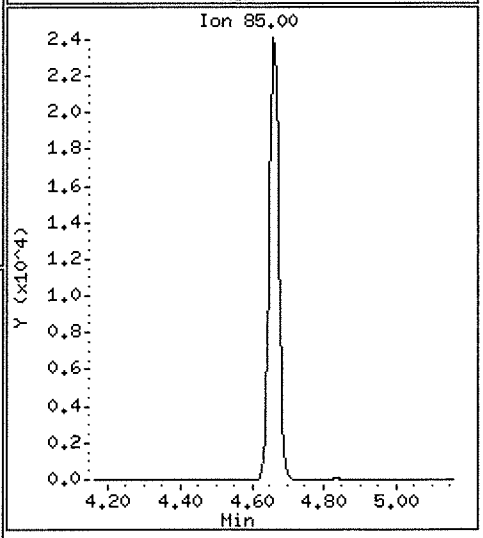
28 Chloroform

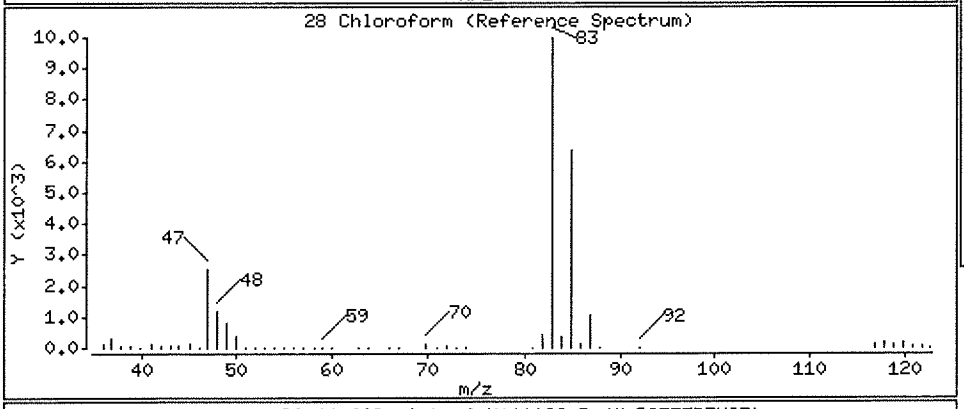
Concentration: 14.62 ug/l

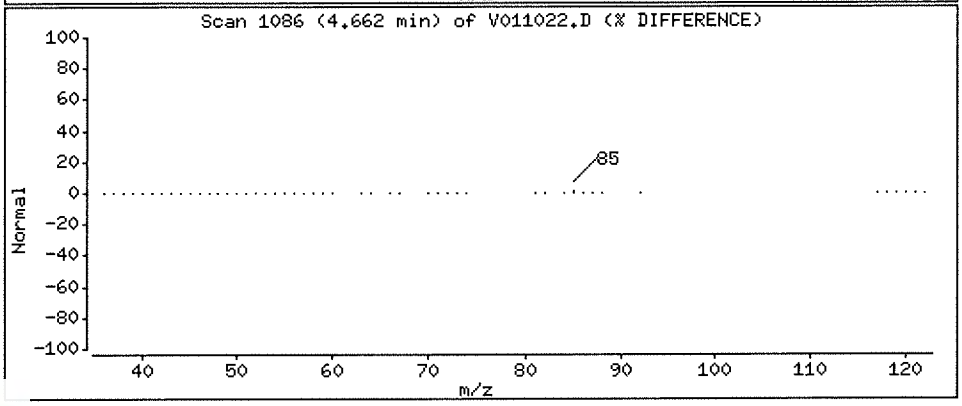












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011022.D Page 7

Date : 10-JAN-2019 18:56

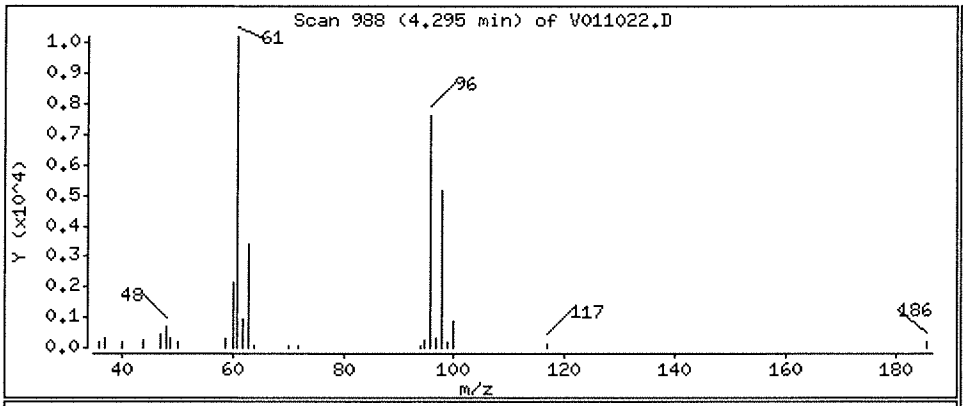
Client ID: HS19010248-03 Instrument: VOA9.i

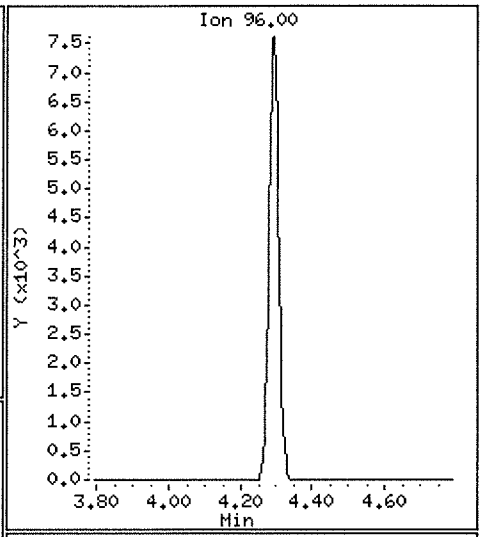
Sample Info: HS19010248-03;HS19010248-03;;;

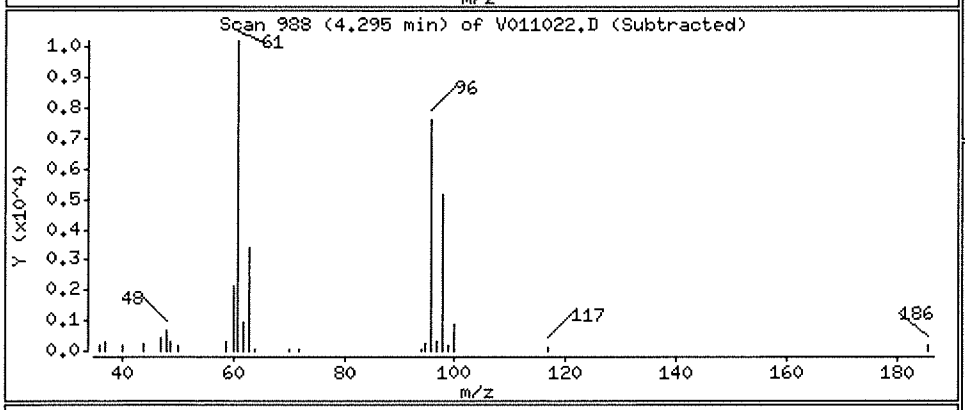
Purge Volume: 5.0 Operator: PC

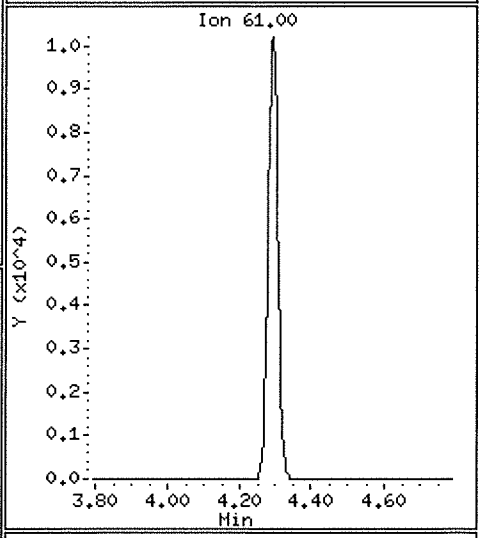
Column phase: DB624 Column diameter: 0.18

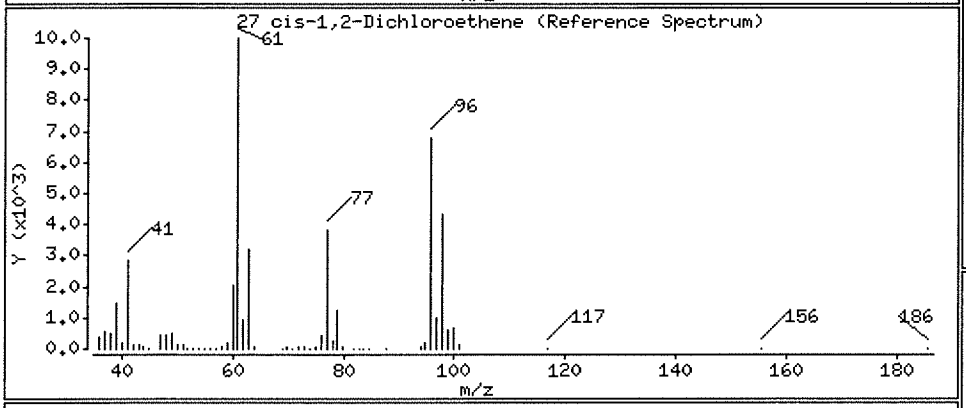
27 cis-1,2-Dichloroethene Concentration: 4.92 ug/l

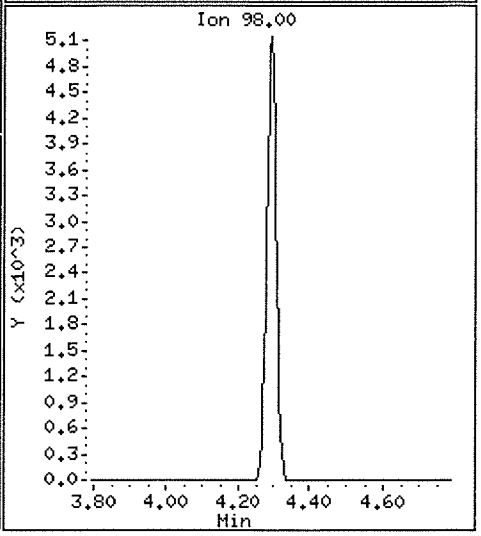


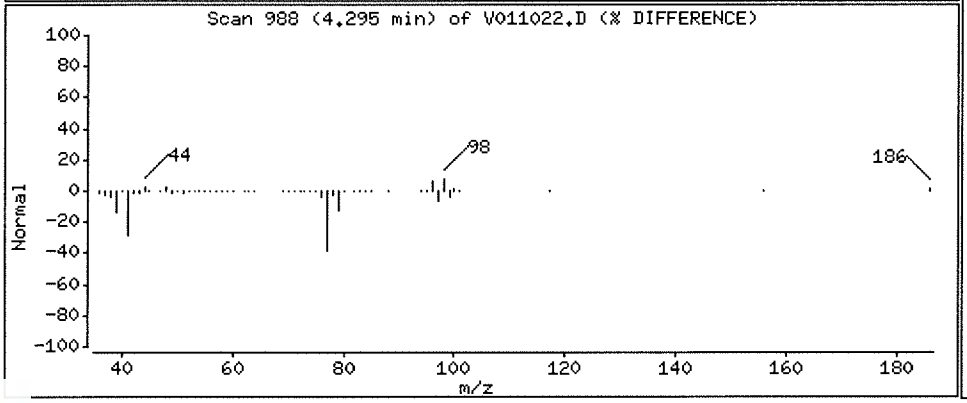












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Date : 10-JAN-2019 18:56

Client ID: HS19010248-03

Instrument: VOA9.i

Sample Info: HS19010248-03;HS19010248-03;;;

Purge Volume: 5.0

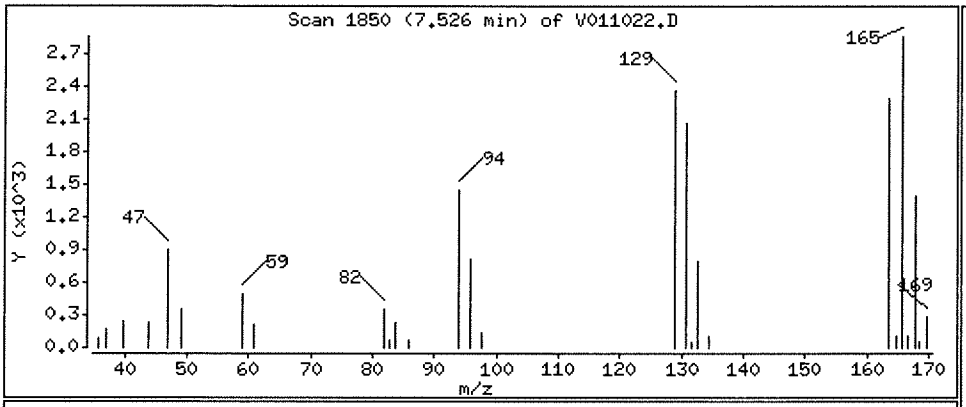
Operator: PC

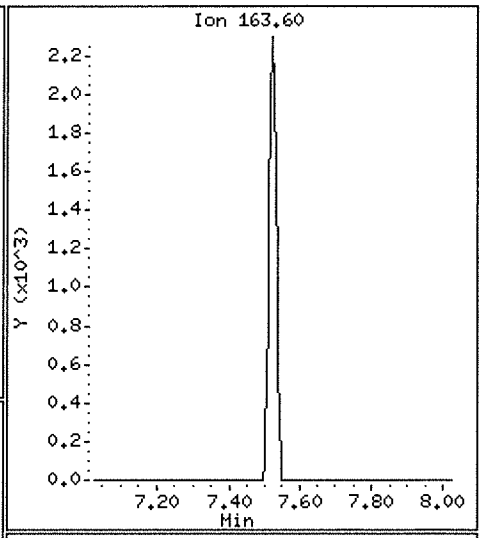
Column phase: DB624

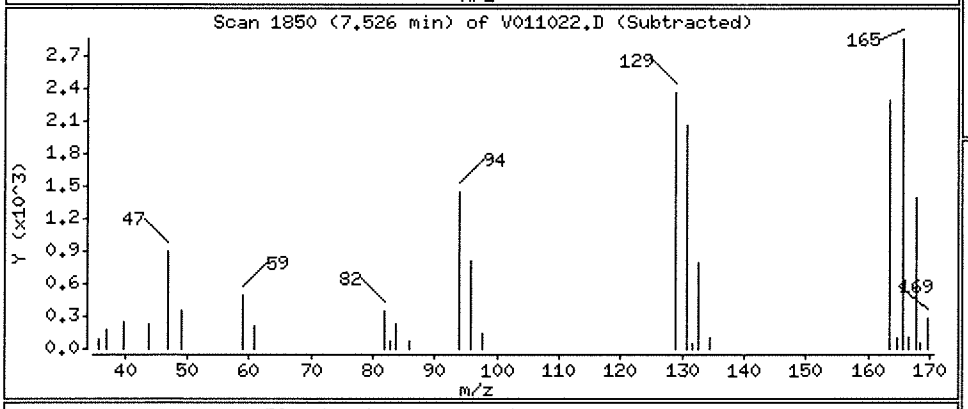
Column diameter: 0.18

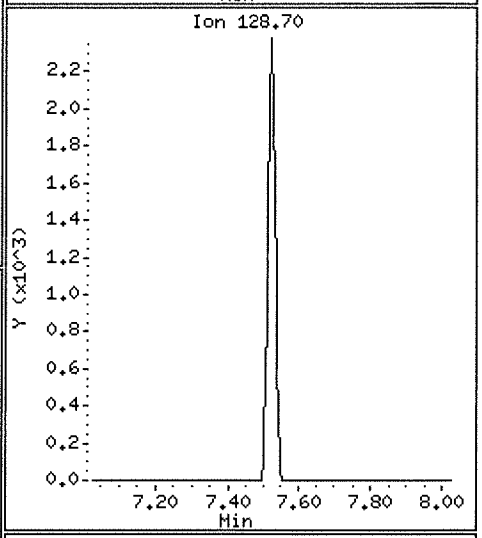
56 Tetrachloroethene

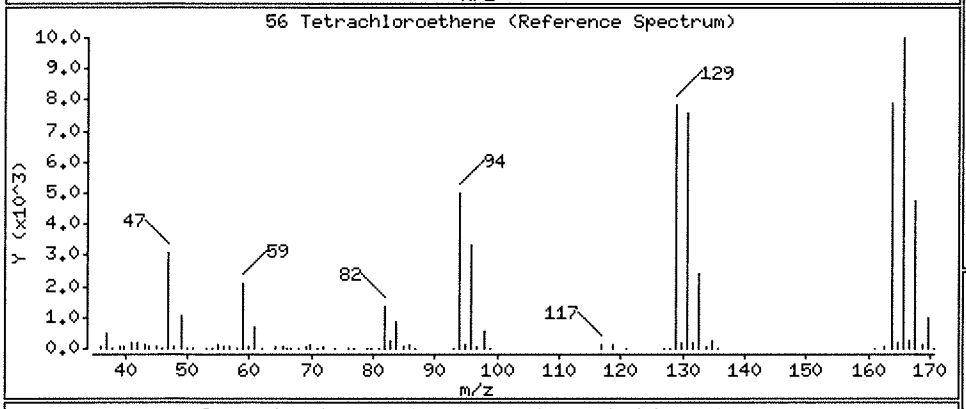
Concentration: 1.57 ug/l

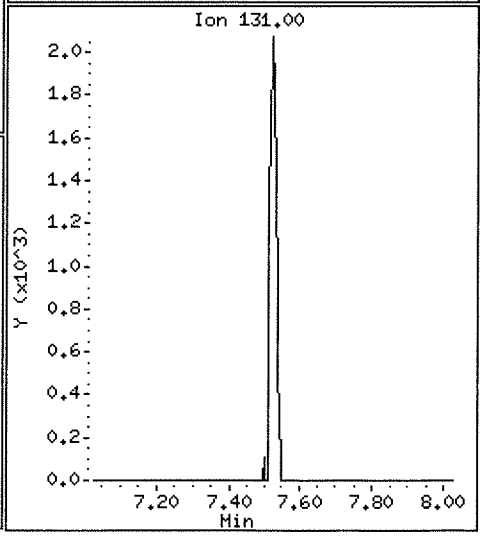


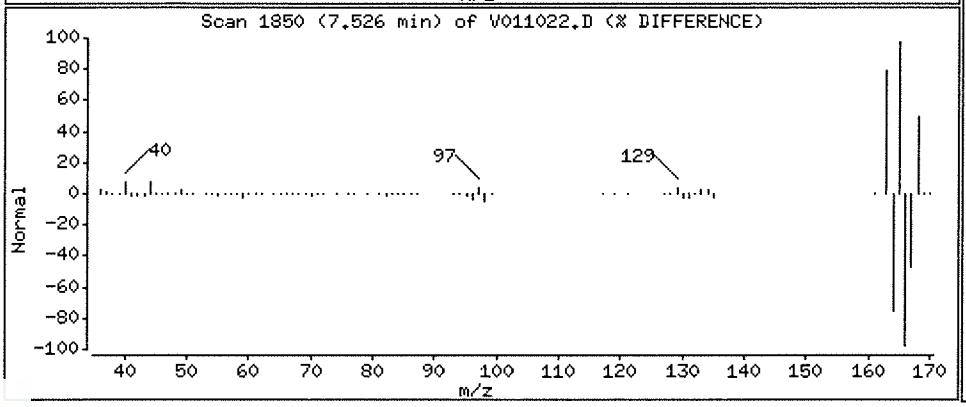












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011022.D

Date : 10-JAN-2019 18:56

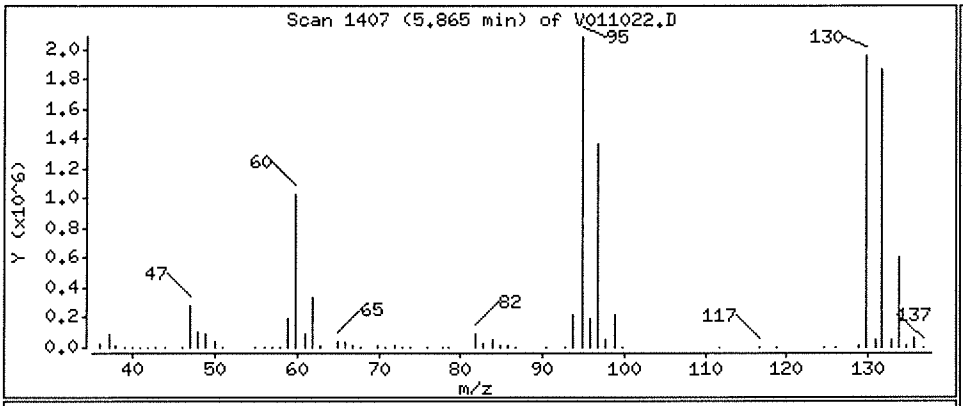
Client ID: HS19010248-03 Instrument: VOA9.i

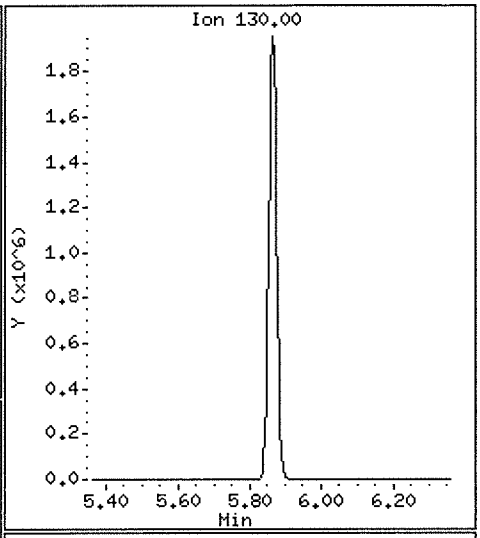
Sample Info: HS19010248-03;HS19010248-03;;;

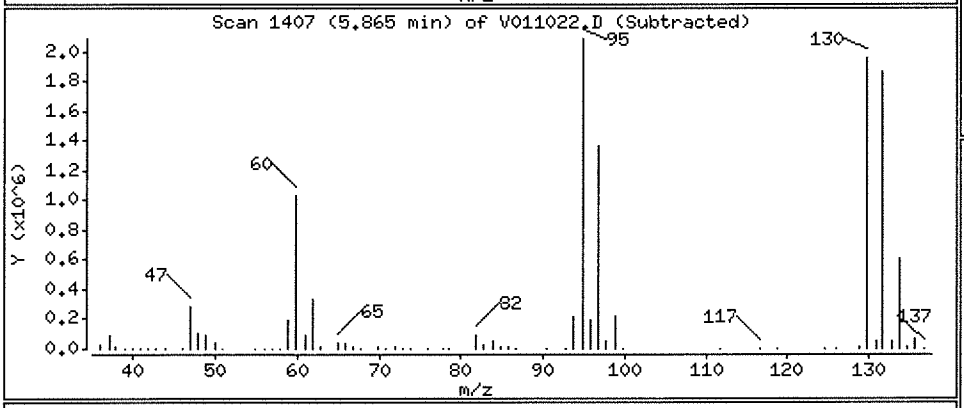
Purge Volume: 5.0 Operator: PC

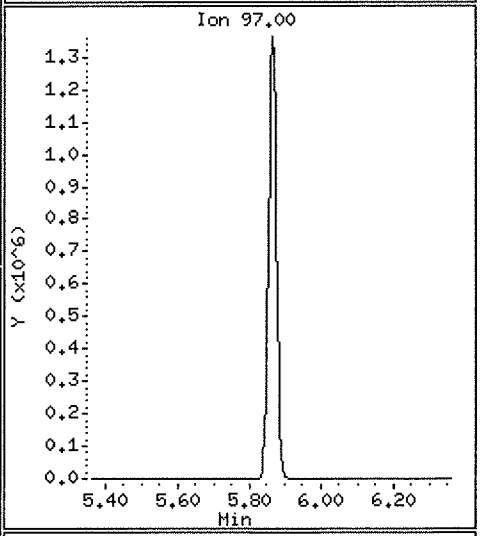
Column phase: DB624 Column diameter: 0.18

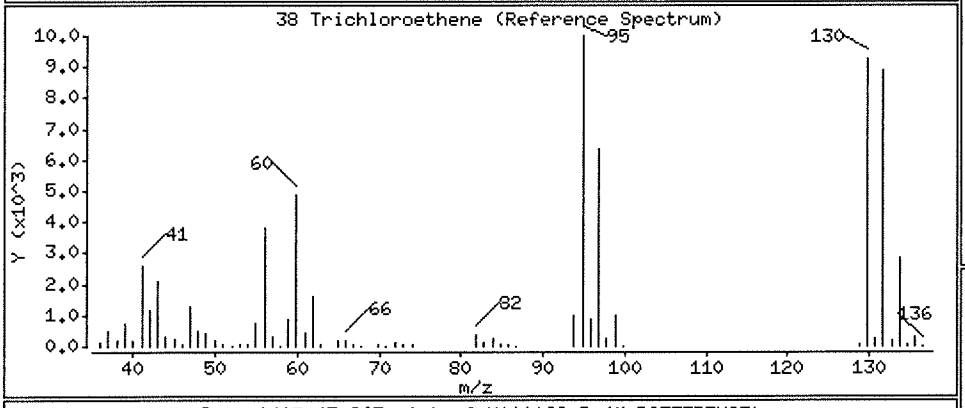
38 Trichloroethene Concentration: 1161.97 ug/l

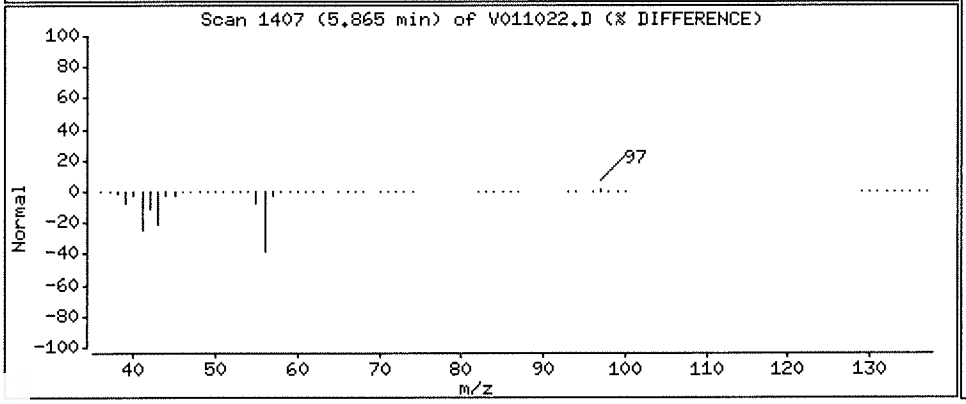


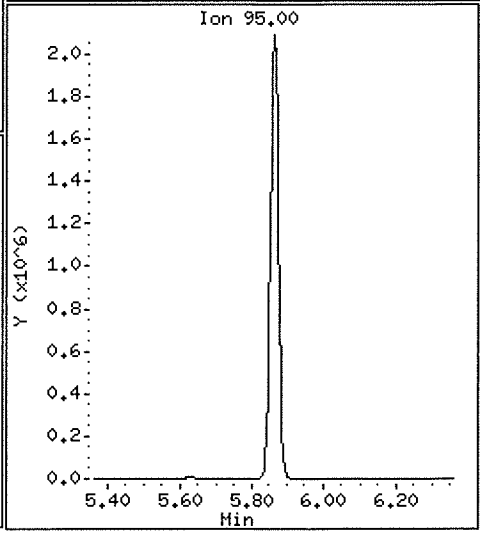












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011023.D
Lab Smp Id: HS19010248-03DL Client Smp ID: HS19010248-03DL
Inj Date : 10-JAN-2019 19:23
Operator : PC Inst ID: VOA9.i
Smp Info : HS19010248-03;HS19010248-03;;;
Misc Info : 180315V9;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 18
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14

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

Name	Value	Description
DF	25.000	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)	260088	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	485251	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	440009	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	192326	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	140810	47.8981	47.89
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	208877	54.6688	54.66
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	612107	53.7011	53.70
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	214692	49.7183	49.71
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	2353	0.50113	12.52(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	133719	43.2825	1082.06

QC Flag Legend

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

00933230

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011023.D

Date : 10-JAN-2019 19:23

Client ID: HS19010248-03DL

Instrument: VOA9.i

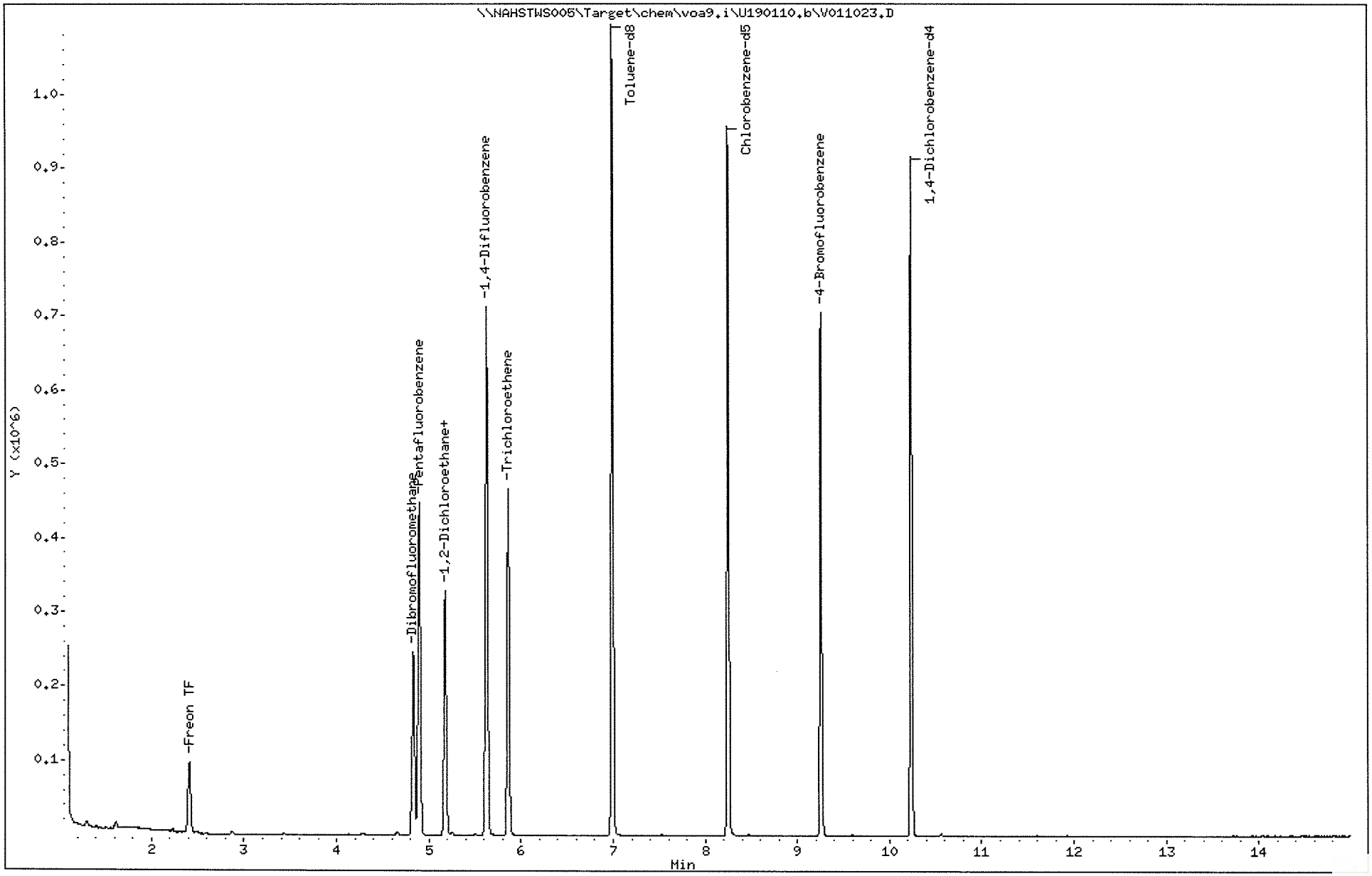
Sample Info: HS19010248-03;HS19010248-03;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



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Date : 10-JAN-2019 19:23

Client ID: HS19010248-03DL

Instrument: VOA9.i

Sample Info: HS19010248-03;HS19010248-03;;;

Purge Volume: 5.0

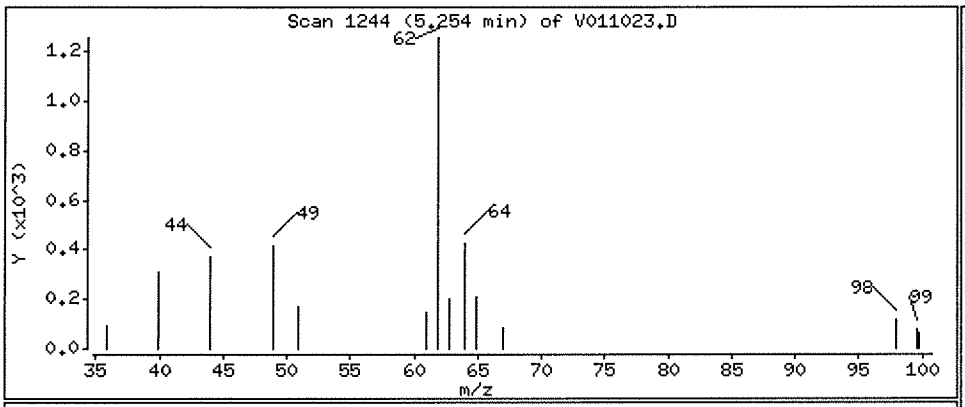
Operator: PC

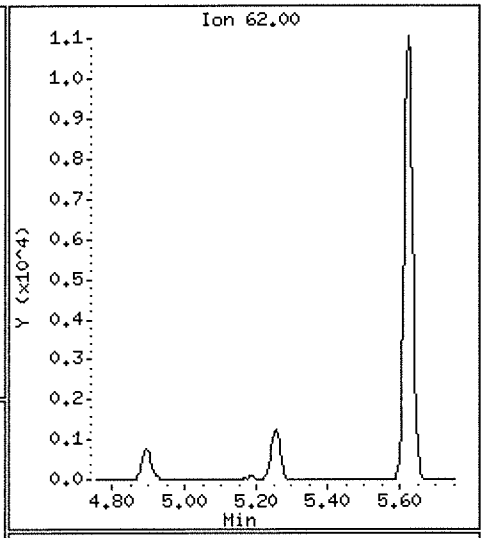
Column phase: DB624

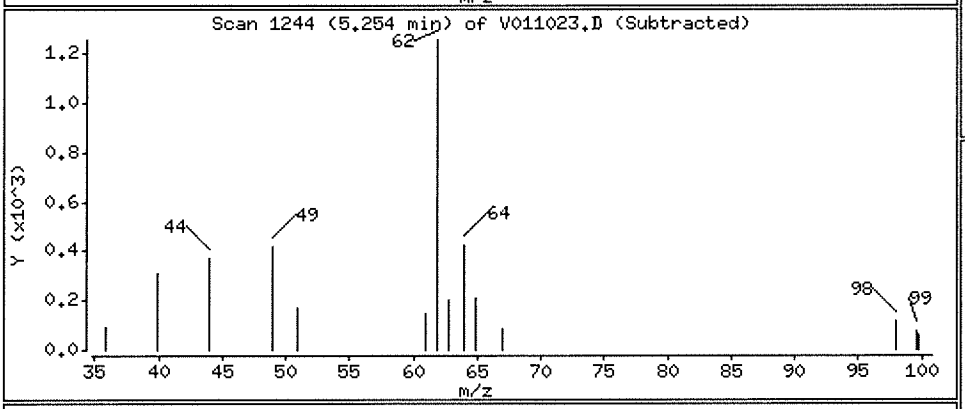
Column diameter: 0.18

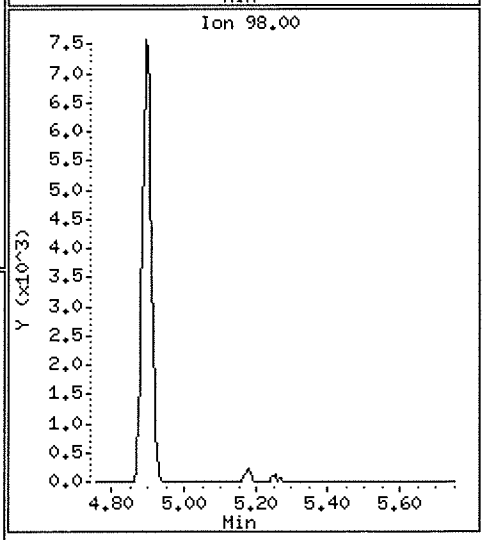
33 1,2-Dichloroethane

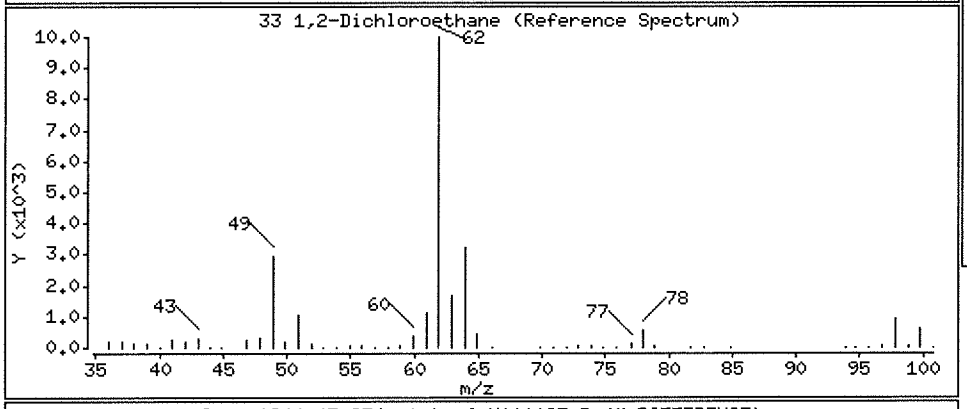
Concentration: 12.52 ug/l

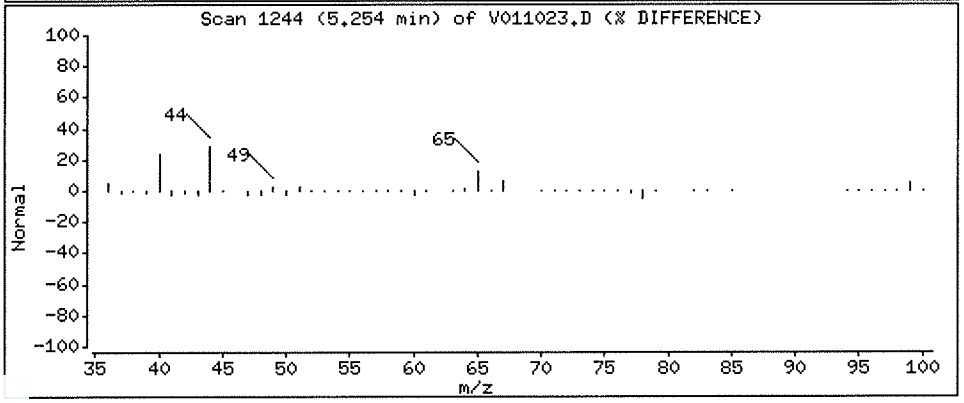












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011023.D

Date : 10-JAN-2019 19:23

Client ID: HS19010248-03DL

Instrument: VOA9.i

Sample Info: HS19010248-03;HS19010248-03;;;

Purge Volume: 5.0

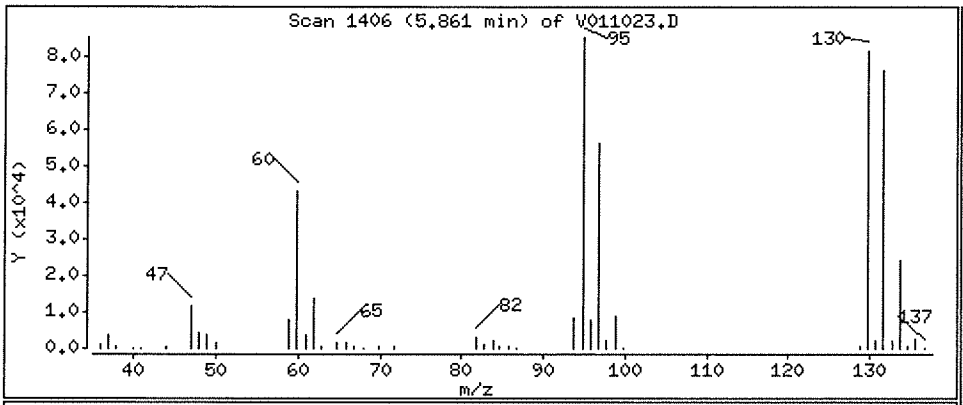
Operator: PC

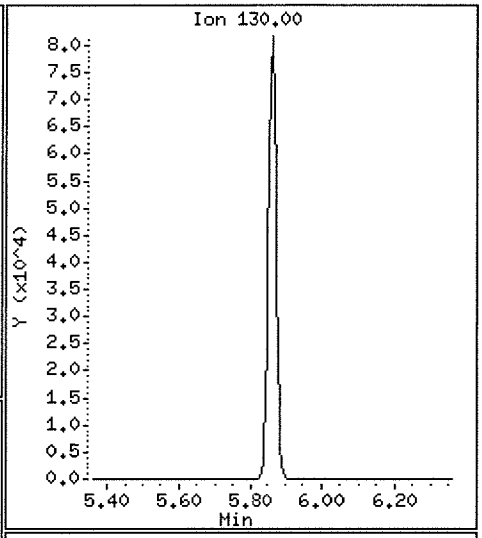
Column phase: DB624

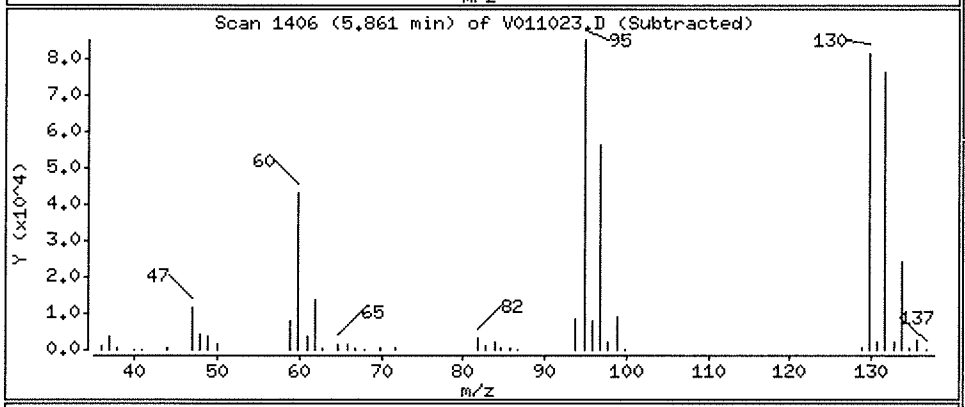
Column diameter: 0.18

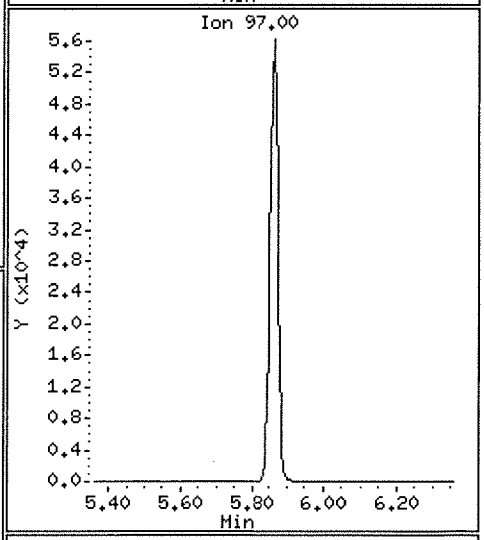
38 Trichloroethene

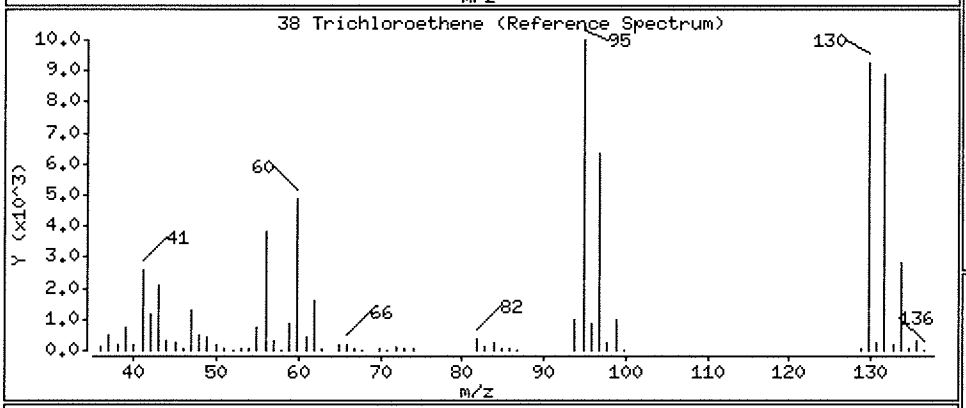
Concentration: 1082.06 ug/l

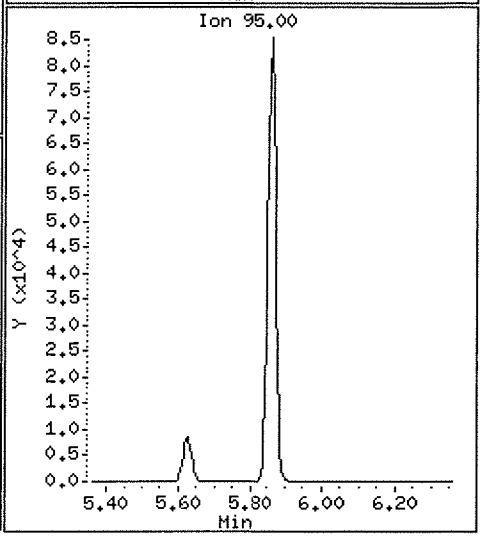


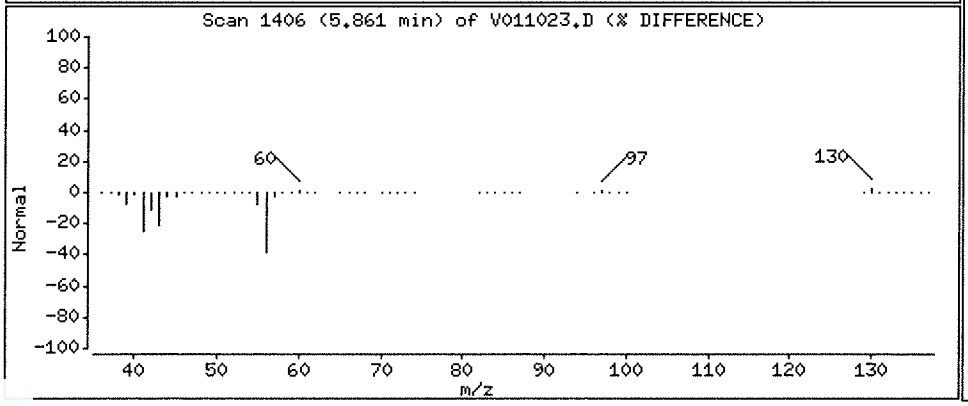












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011024.D
Lab Smp Id: HS19010248-04 Client Smp ID: HS19010248-04
Inj Date : 10-JAN-2019 19:48
Operator : PC Inst ID: VOA9.i
Smp Info : HS19010248-04;HS19010248-04;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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)	249470	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	475871	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	428644	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	188574	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	140389	49.8571	49.85
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	203530	55.5720	55.57
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	592909	53.3820	53.38
$ 69 4-Bromofluorobenzene	95	9.258	9.257	(1.122)	207776	49.3803	49.38
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	38016	8.25603	8.25
10 Acetone	43	2.476	2.484	(0.506)	10871	8.59655	8.59
37 Benzene	78	5.216	5.220	(0.927)	7979	0.60929	0.60(a)
28 Chloroform	83	4.658	4.662	(0.952)	78838	14.6351	14.63
27 cis-1,2-Dichloroethene	96	4.287	4.290	(0.876)	17003	4.98307	4.98(a)
56 Tetrachloroethene	164	7.522	7.526	(0.912)	3615	1.60551	1.60(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	3390612	1119.11	1119.11(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.

00933234

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011024.D

Date : 10-JAN-2019 19:48

Client ID: HS19010248-04

Instrument: VOA9.i

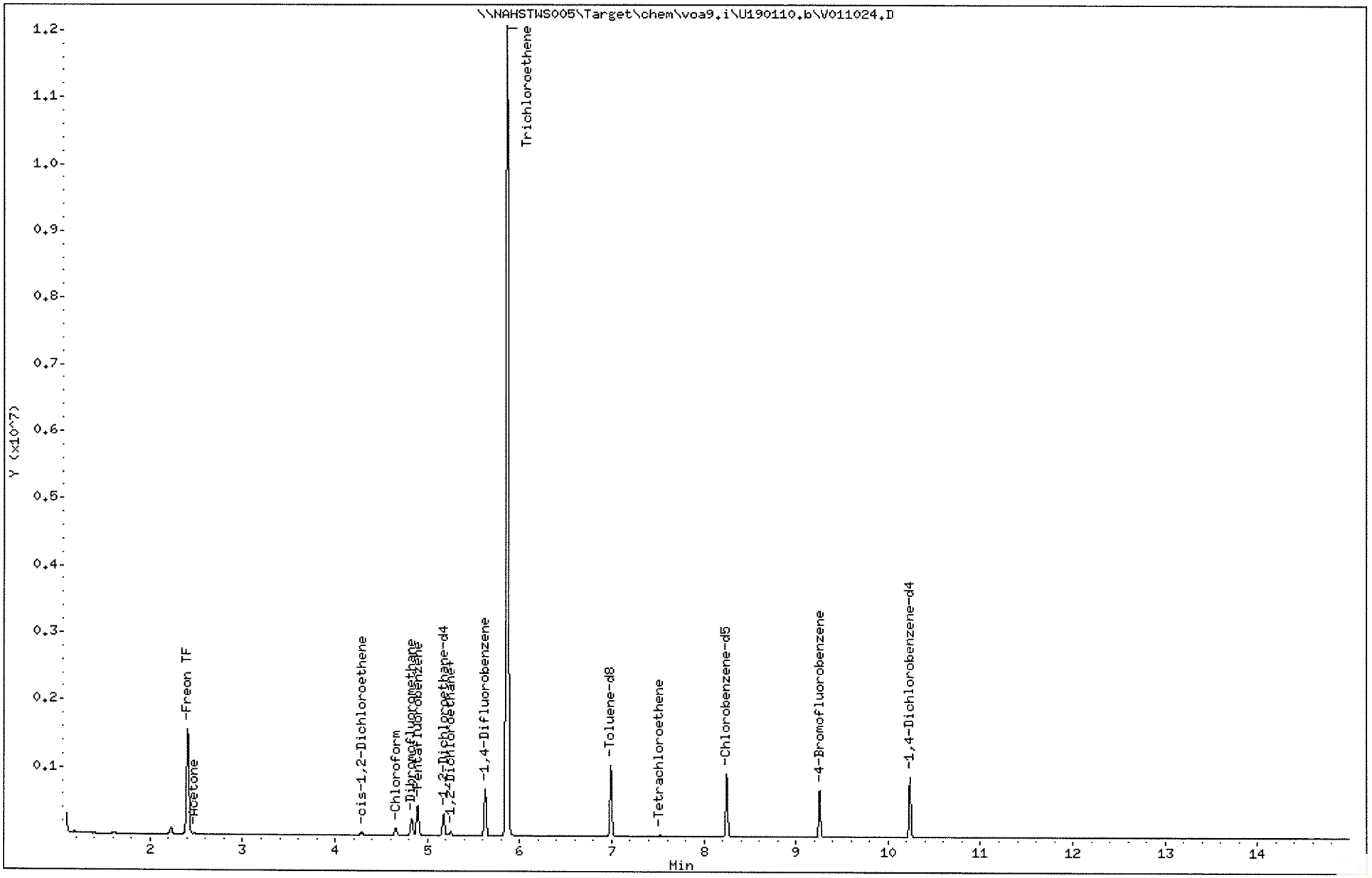
Sample Info: HS19010248-04;HS19010248-04;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



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Date : 10-JAN-2019 19:48

Client ID: HS19010248-04

Instrument: VOA9.i

Sample Info: HS19010248-04;HS19010248-04;;;

Purge Volume: 5.0

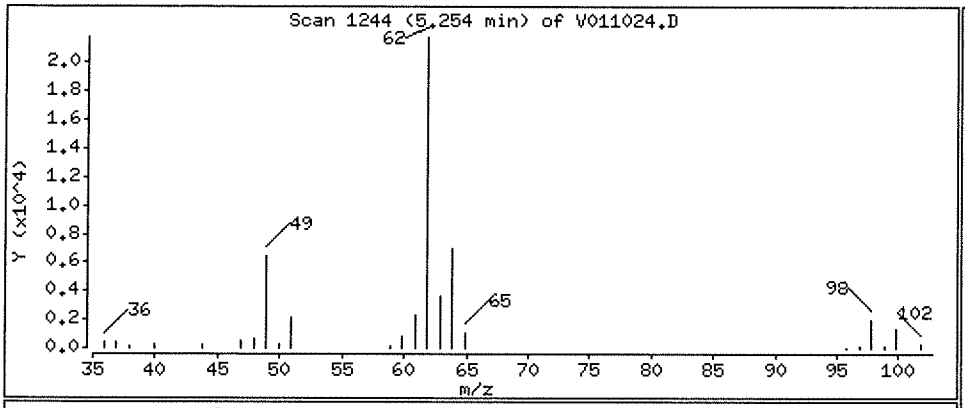
Operator: PC

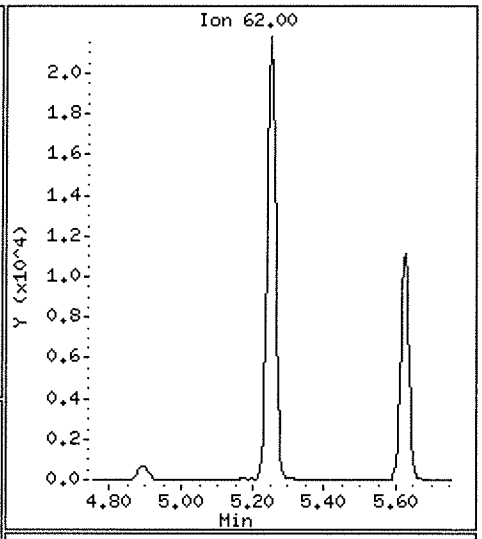
Column phase: DB624

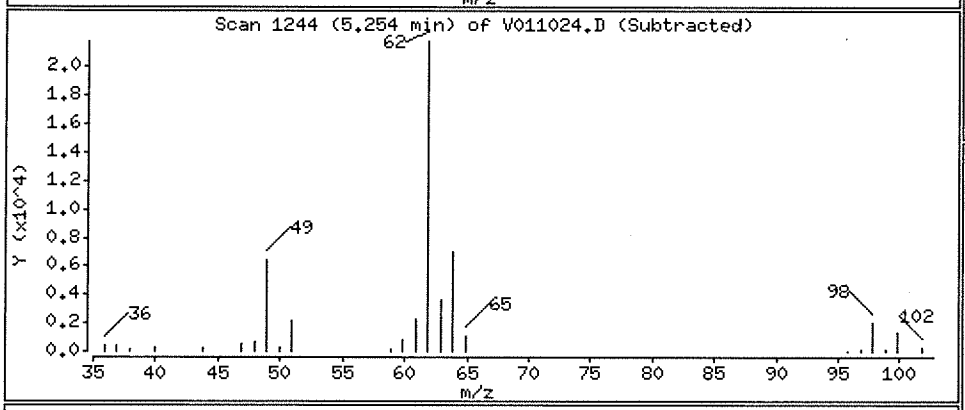
Column diameter: 0.18

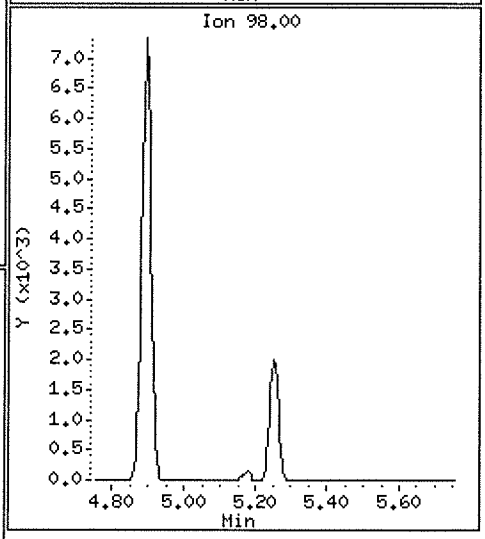
33 1,2-Dichloroethane

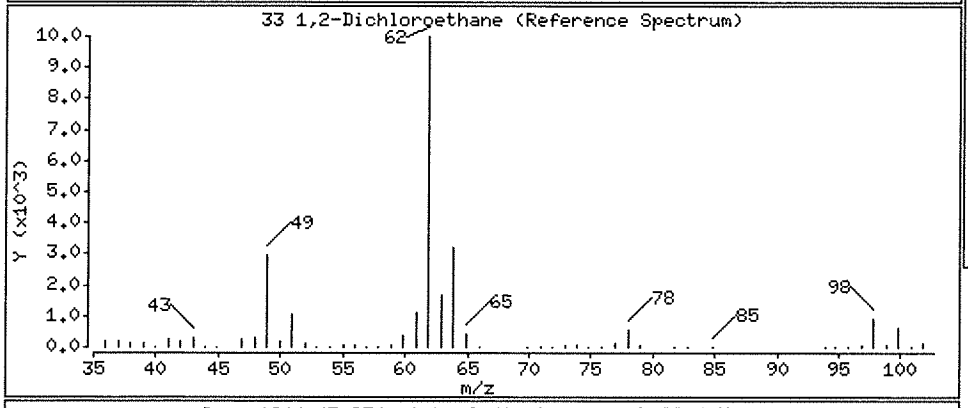
Concentration: 8.25 ug/l

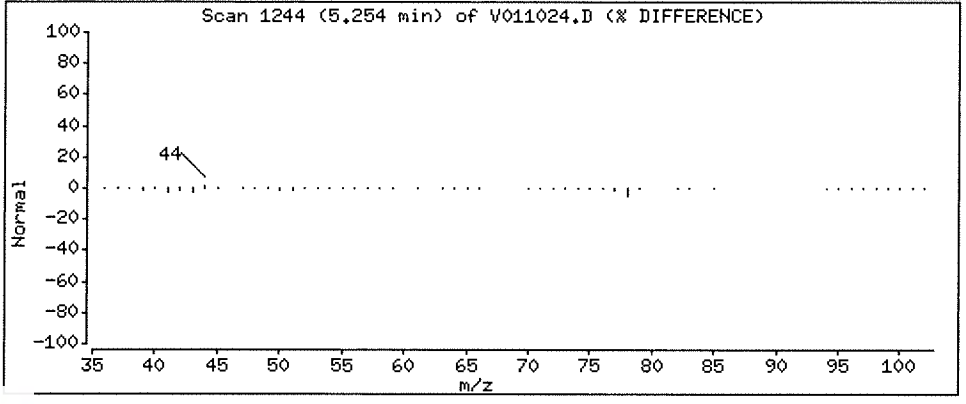












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011024.D

Date : 10-JAN-2019 19:48

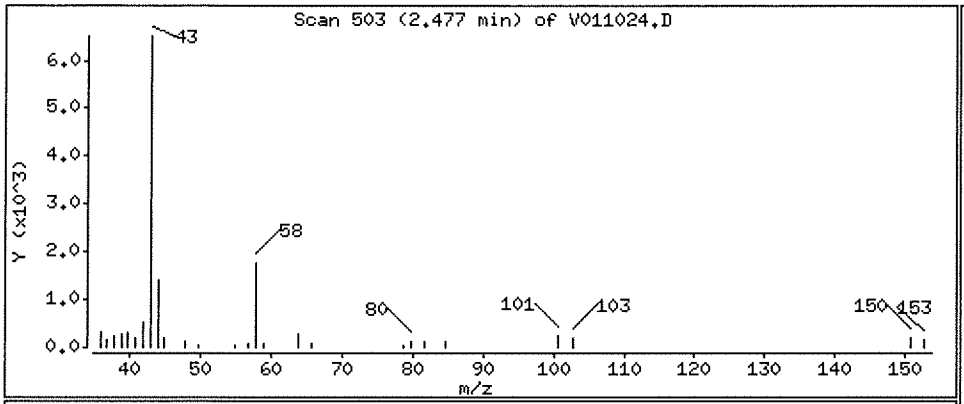
Client ID: HS19010248-04 Instrument: VOA9.i

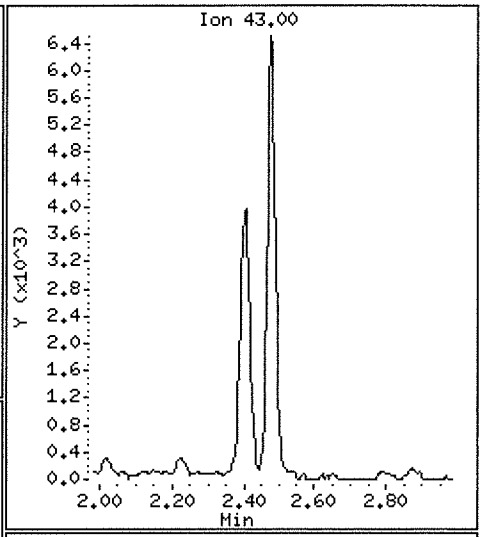
Sample Info: HS19010248-04;HS19010248-04;;;

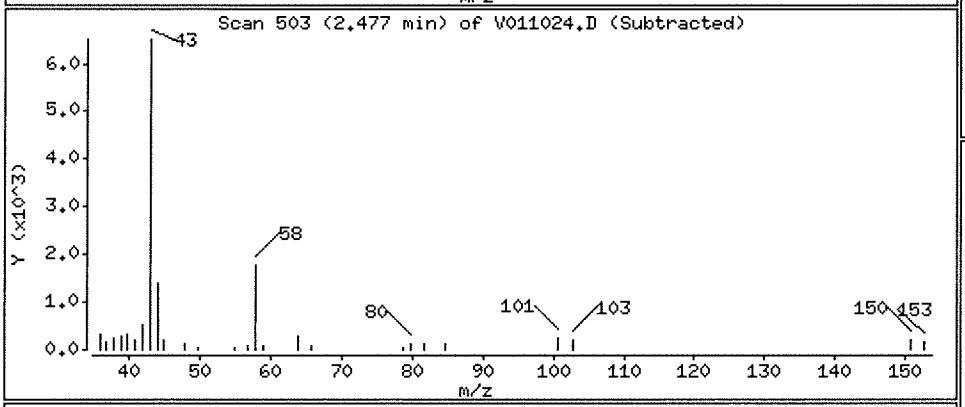
Purge Volume: 5.0 Operator: PC

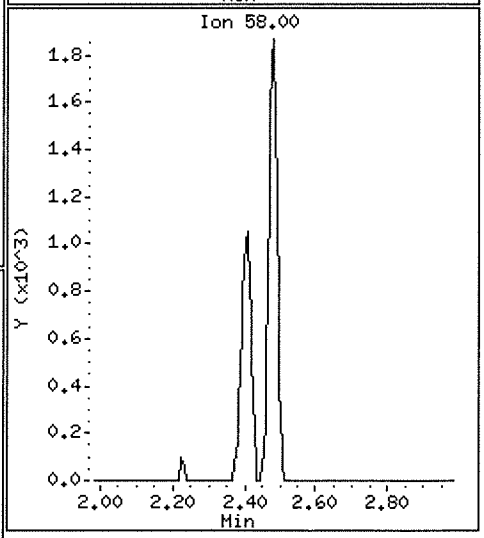
Column phase: DB624 Column diameter: 0.18

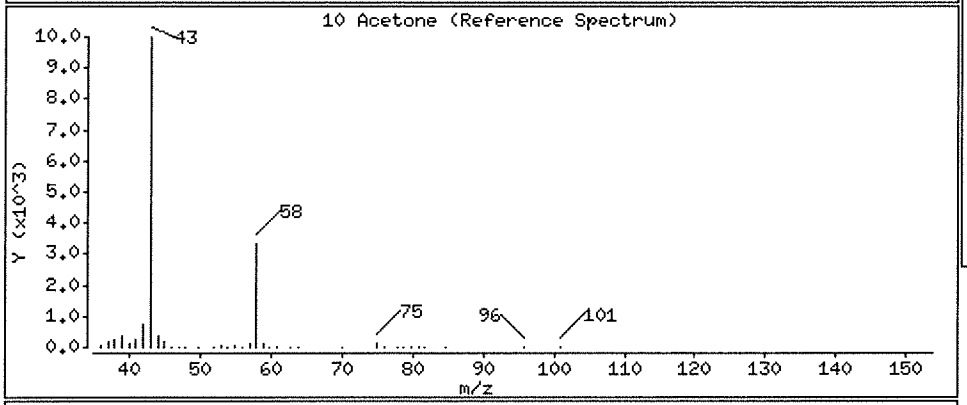
10 Acetone Concentration: 8.59 ug/l

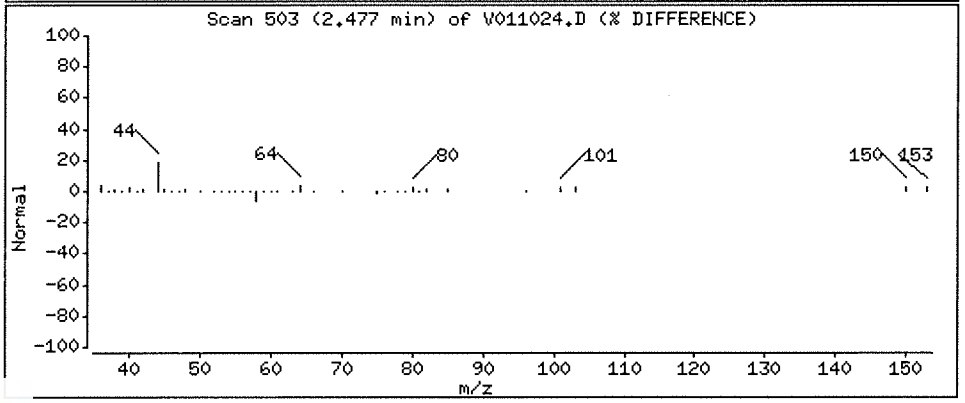












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011024.D

Date : 10-JAN-2019 19:48

Client ID: HS19010248-04

Instrument: VOA9.i

Sample Info: HS19010248-04;HS19010248-04;;;

Purge Volume: 5.0

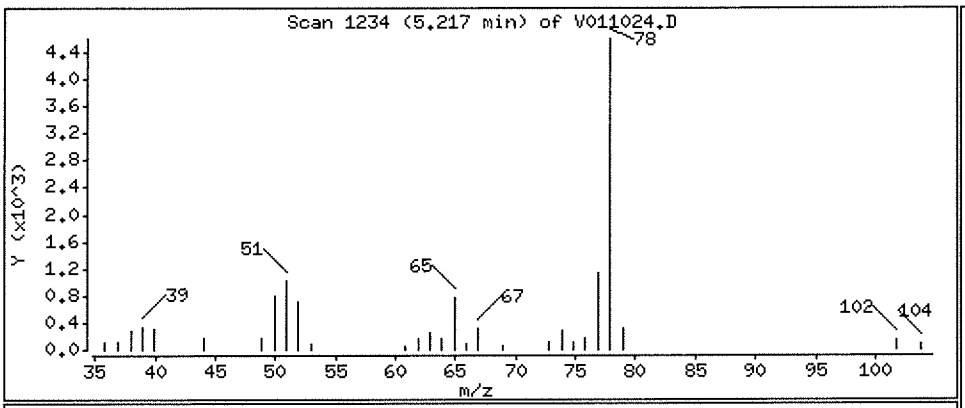
Operator: PC

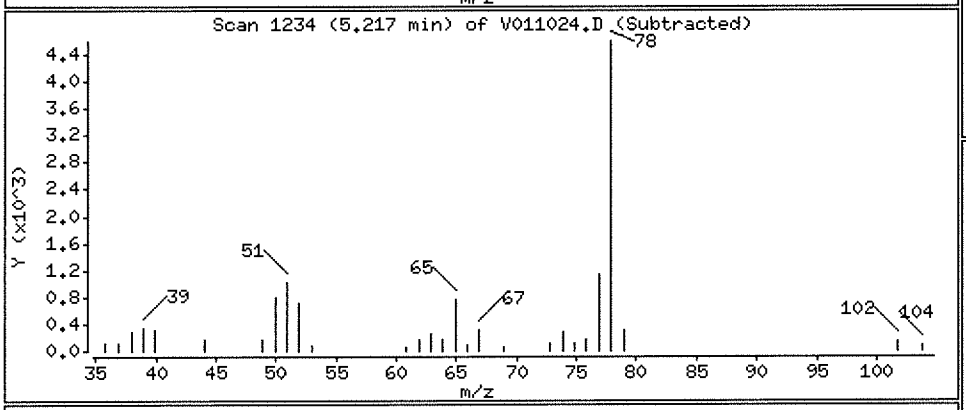
Column phase: DB624

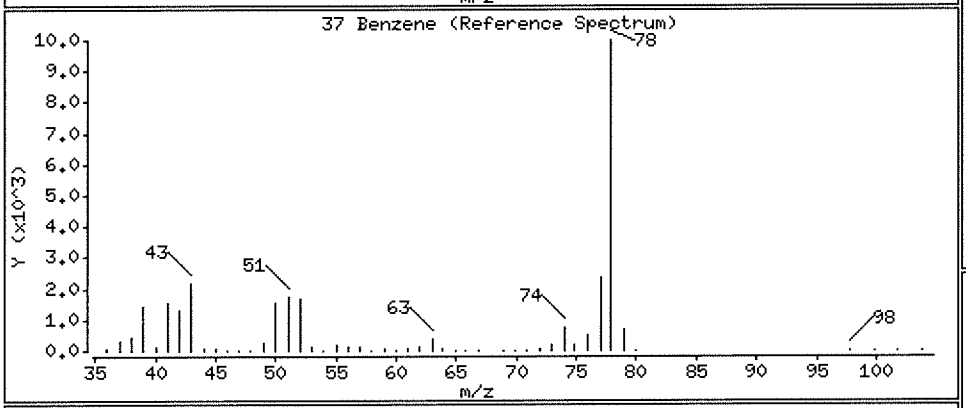
Column diameter: 0.18

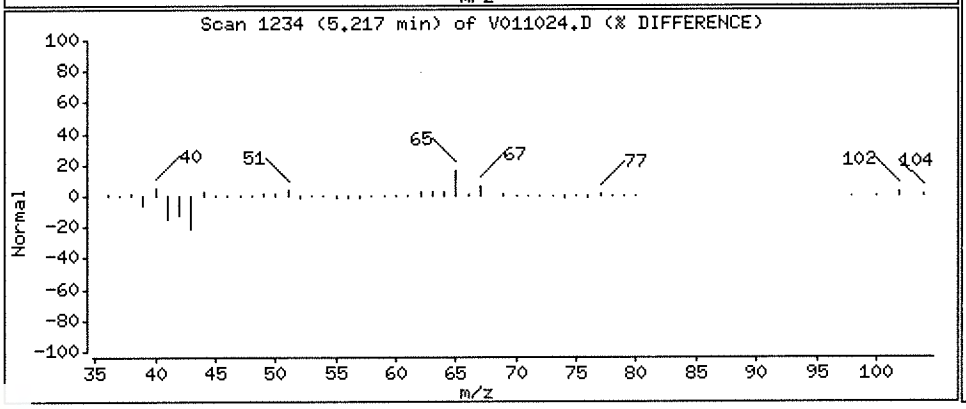
37 Benzene

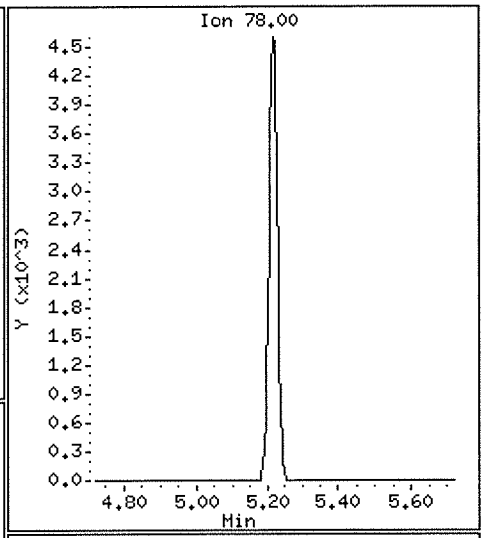
Concentration: 0.60 ug/l

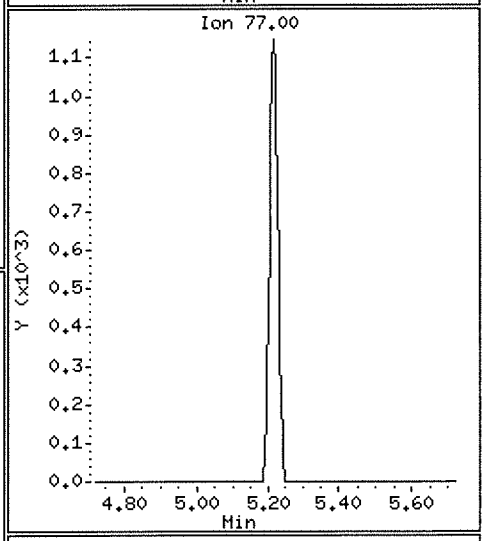


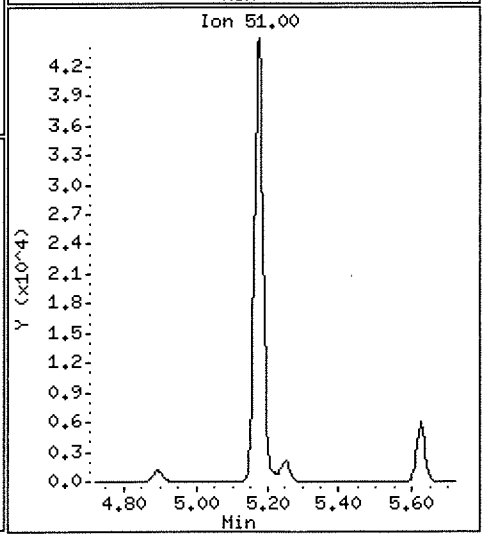












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Date : 10-JAN-2019 19:48

Client ID: HS19010248-04

Instrument: VOA9.i

Sample Info: HS19010248-04;HS19010248-04;;;

Purge Volume: 5.0

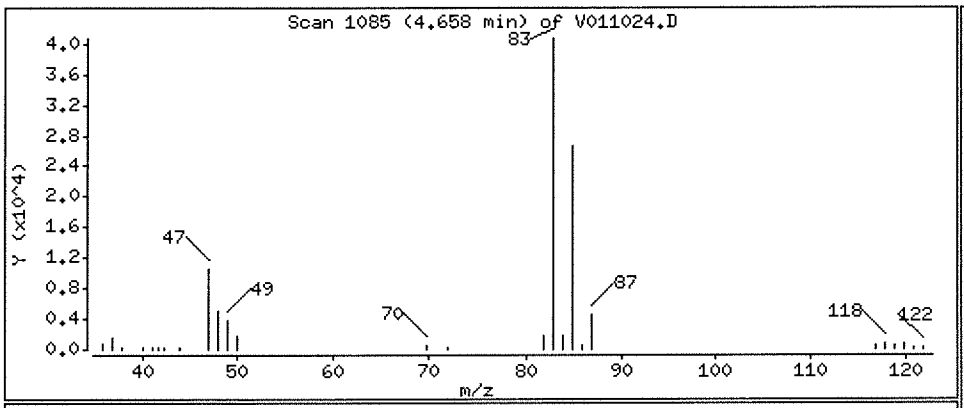
Operator: PC

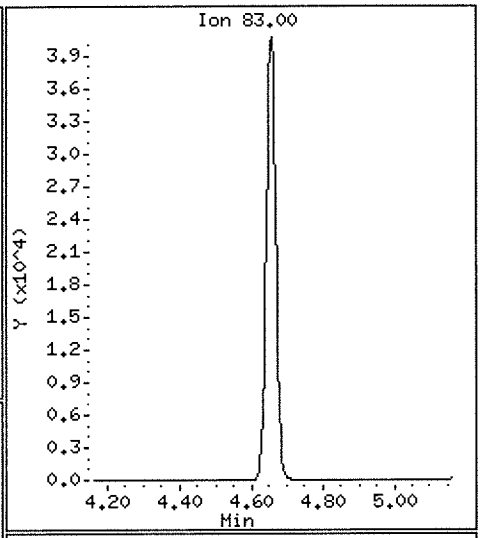
Column phase: DB624

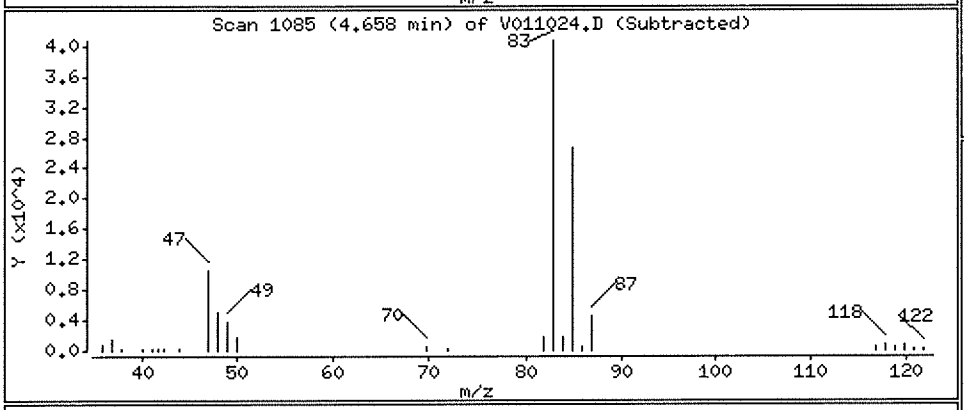
Column diameter: 0.18

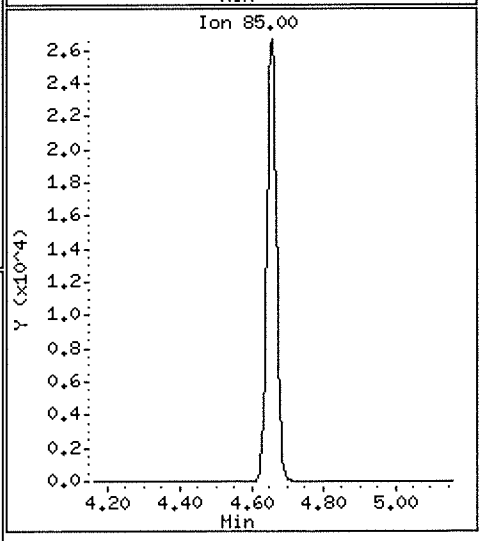
28 Chloroform

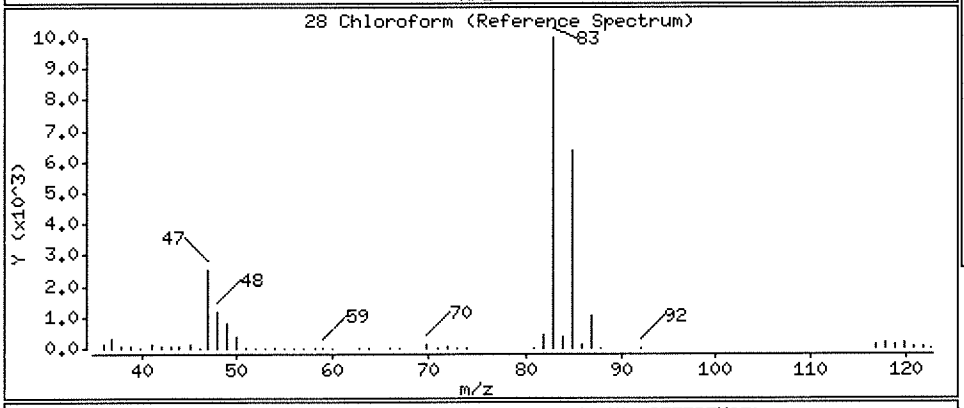
Concentration: 14.63 ug/l

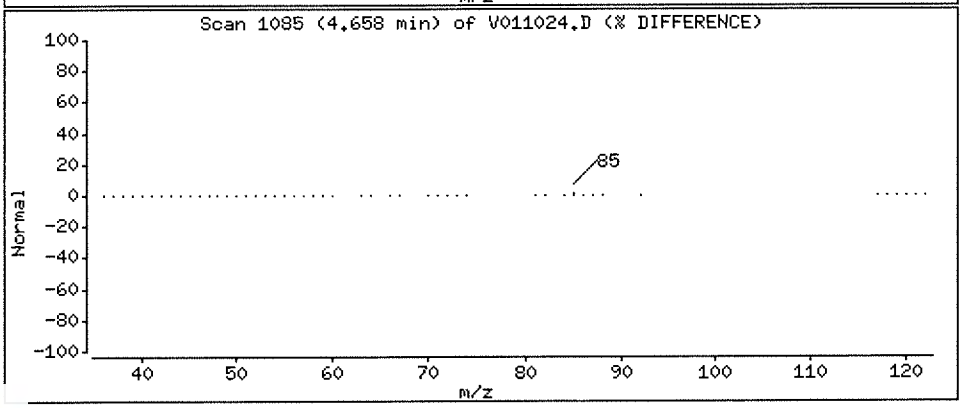












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011024.D

Date : 10-JAN-2019 19:48

Client ID: HS19010248-04

Instrument: VOA9.i

Sample Info: HS19010248-04;HS19010248-04;;;

Purge Volume: 5.0

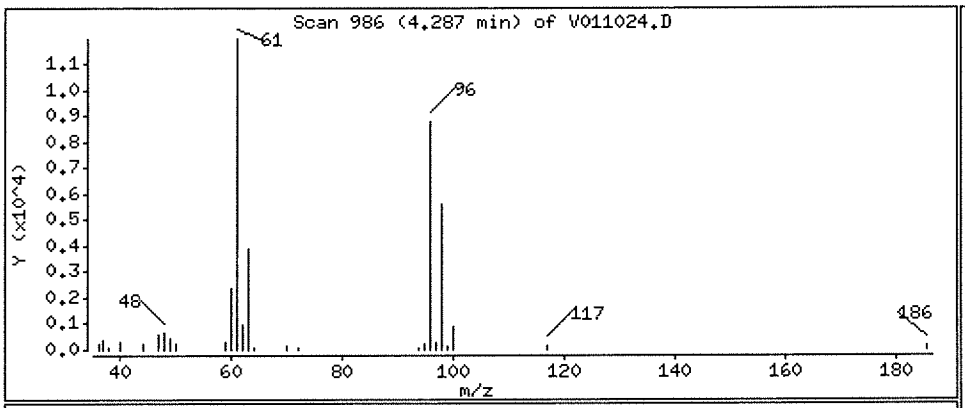
Operator: PC

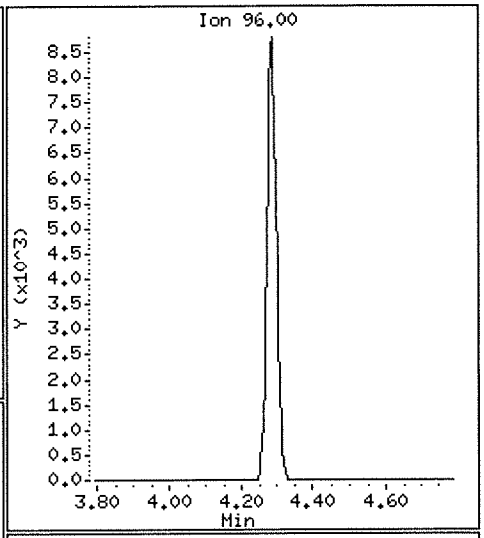
Column phase: DB624

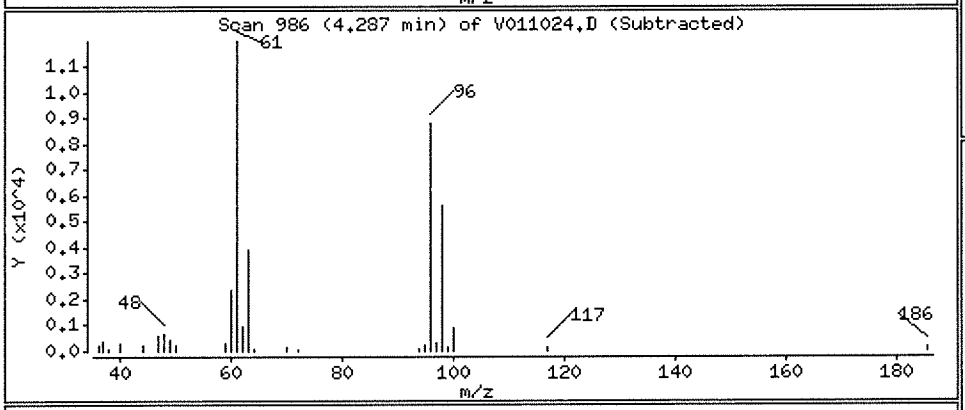
Column diameter: 0.18

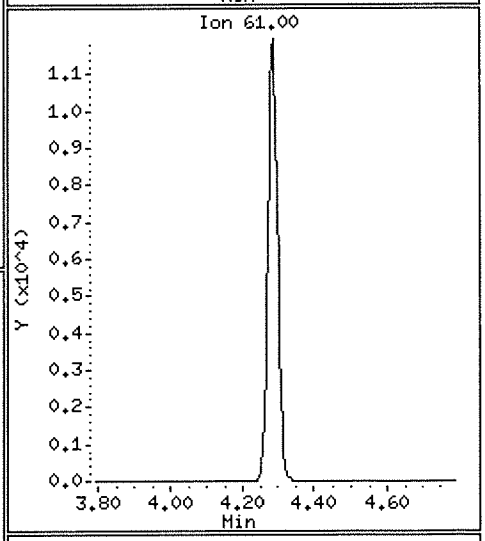
27 cis-1,2-Dichloroethene

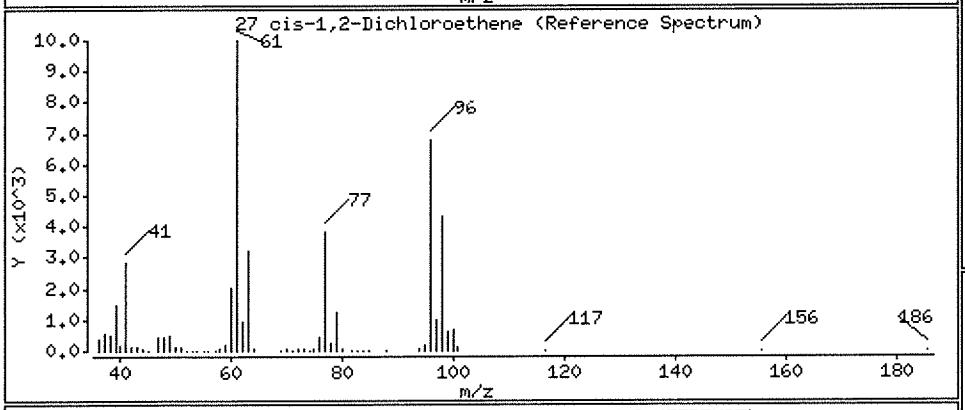
Concentration: 4.98 ug/l

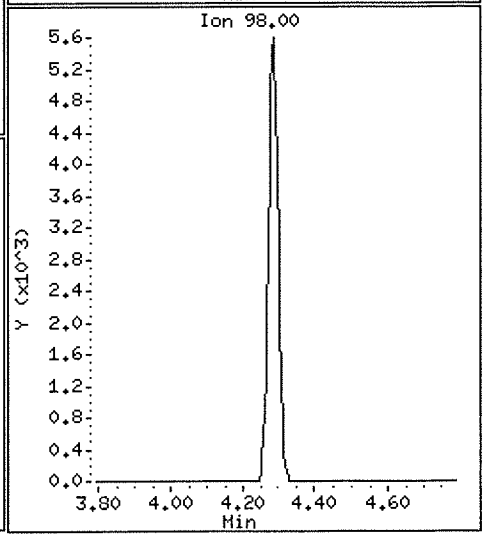


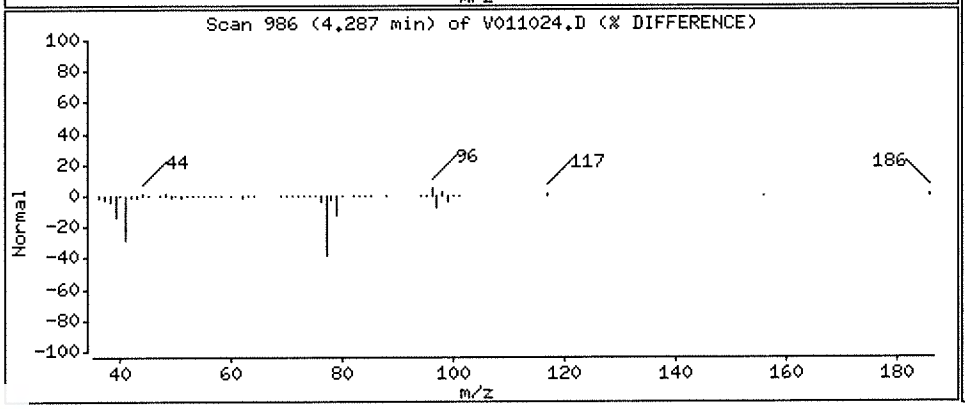












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011024.D

Date : 10-JAN-2019 19:48

Client ID: HS19010248-04

Instrument: VOA9.i

Sample Info: HS19010248-04;HS19010248-04;;;

Purge Volume: 5.0

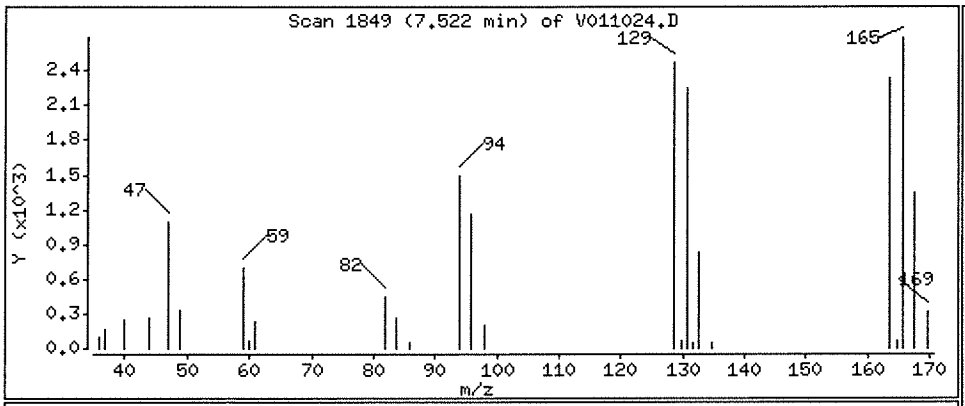
Operator: PC

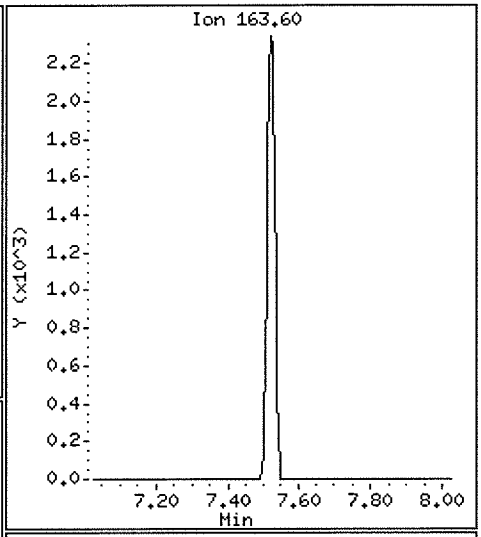
Column phase: DB624

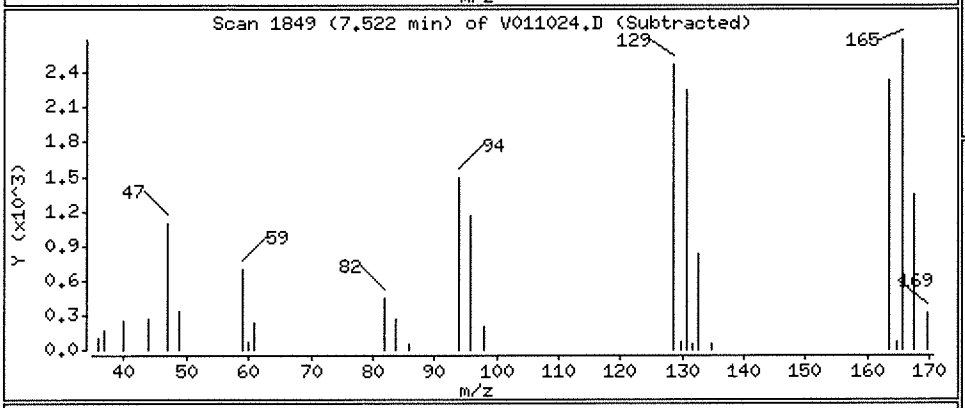
Column diameter: 0.18

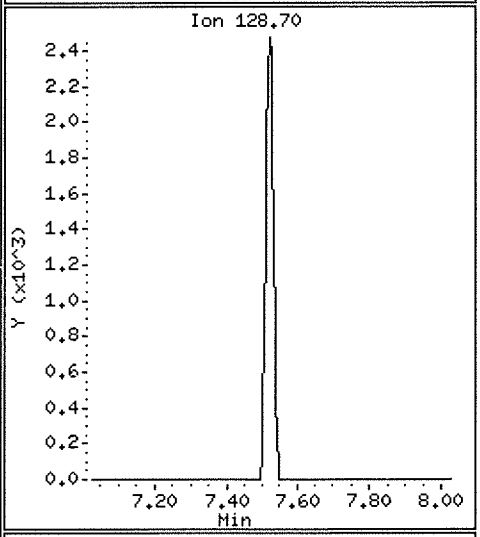
56 Tetrachloroethene

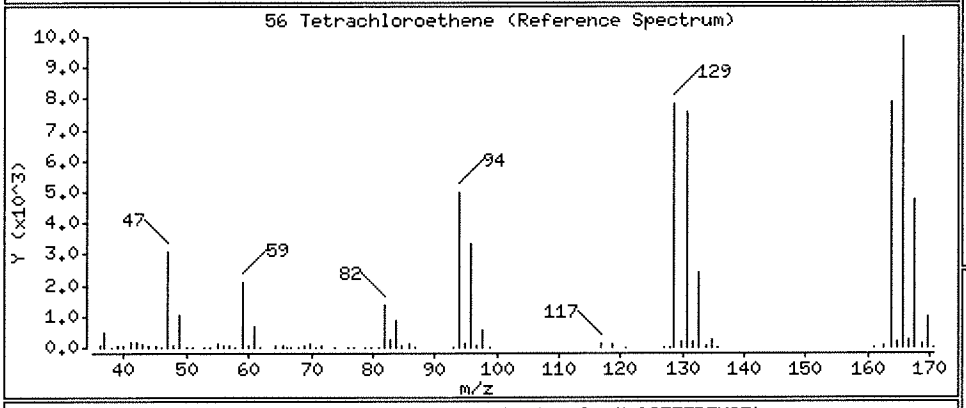
Concentration: 1.60 ug/l

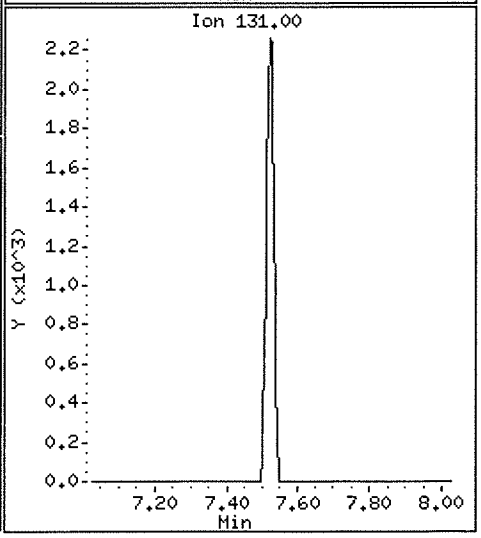


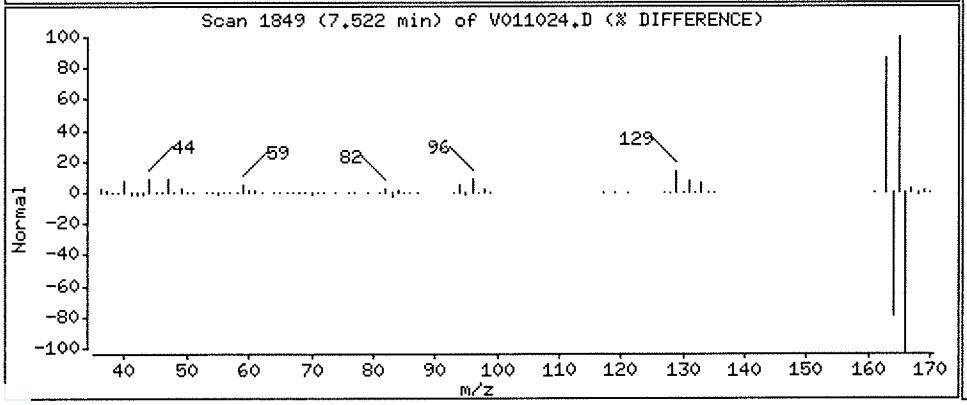












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011024.D

Date : 10-JAN-2019 19:48

Client ID: HS19010248-04

Instrument: VOA9.i

Sample Info: HS19010248-04;HS19010248-04;;;

Purge Volume: 5.0

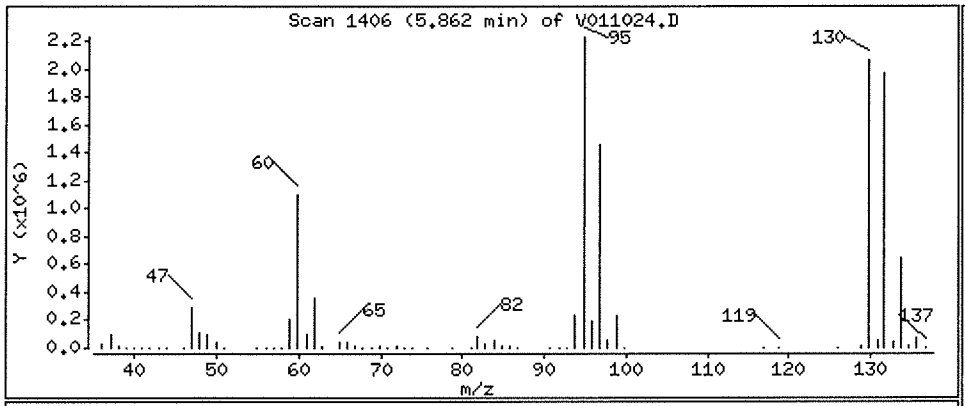
Operator: PC

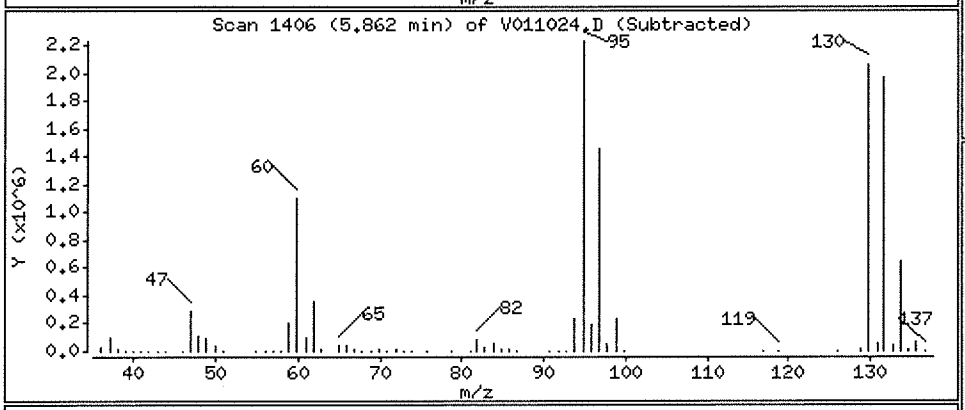
Column phase: DB624

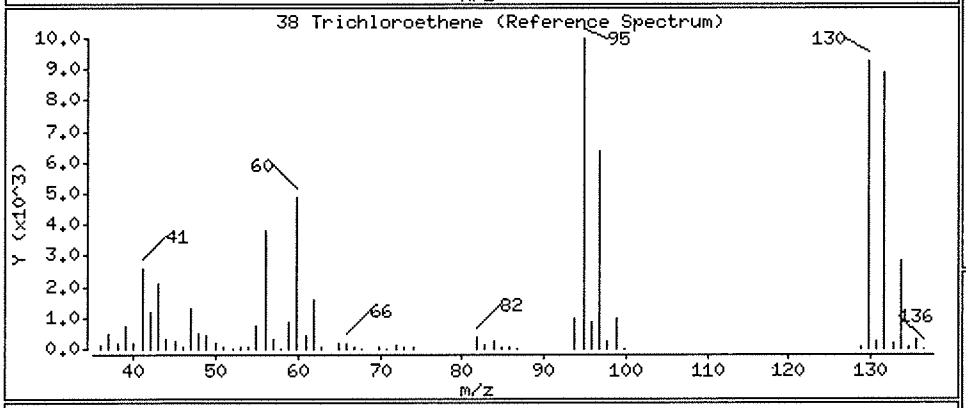
Column diameter: 0.18

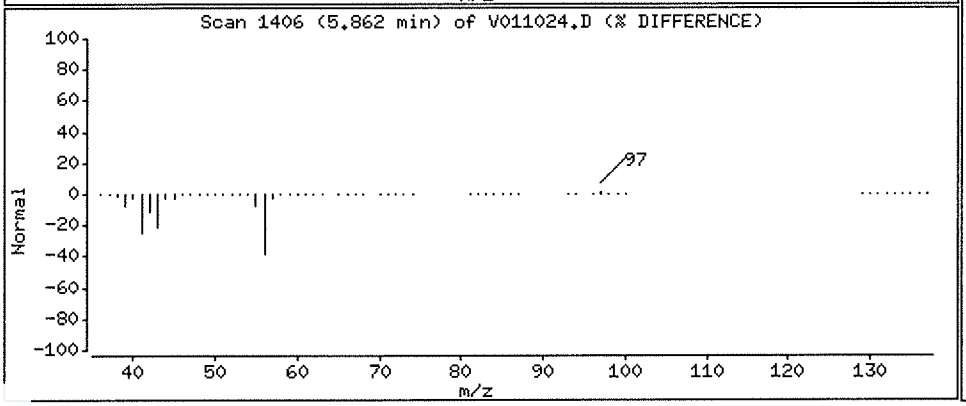
38 Trichloroethene

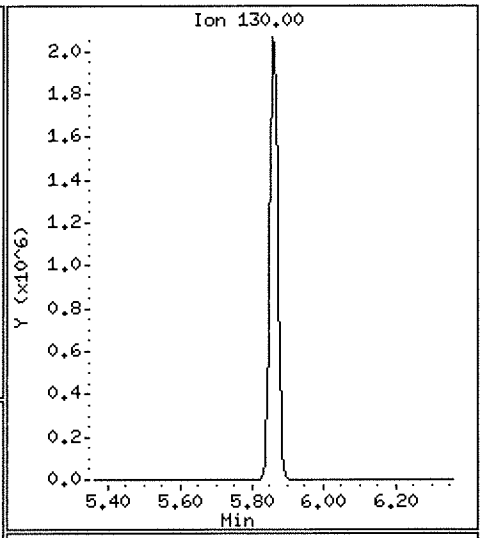
Concentration: 1119.11 ug/l

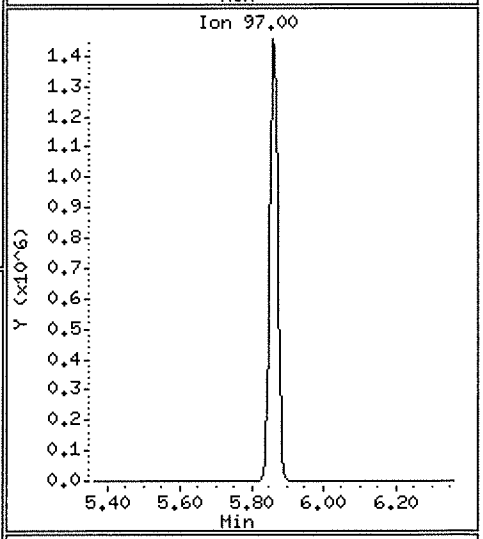


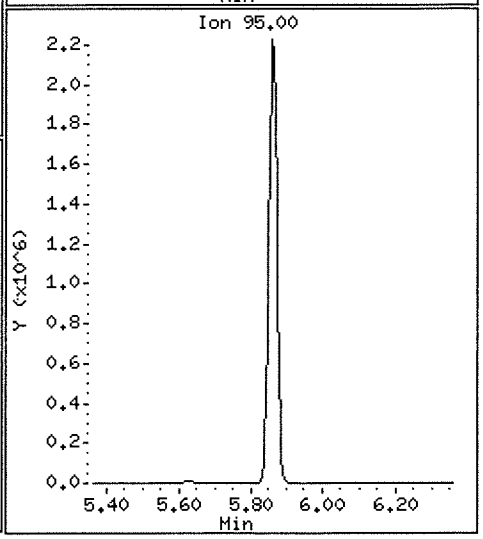












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011025.D
Lab Smp Id: HS19010248-04DL Client Smp ID: HS19010248-04DL
Inj Date : 10-JAN-2019 20:15
Operator : PC Inst ID: VOA9.i
Smp Info : HS19010248-04;HS19010248-04;;;
Misc Info : 180315V9;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:55 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 19
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14

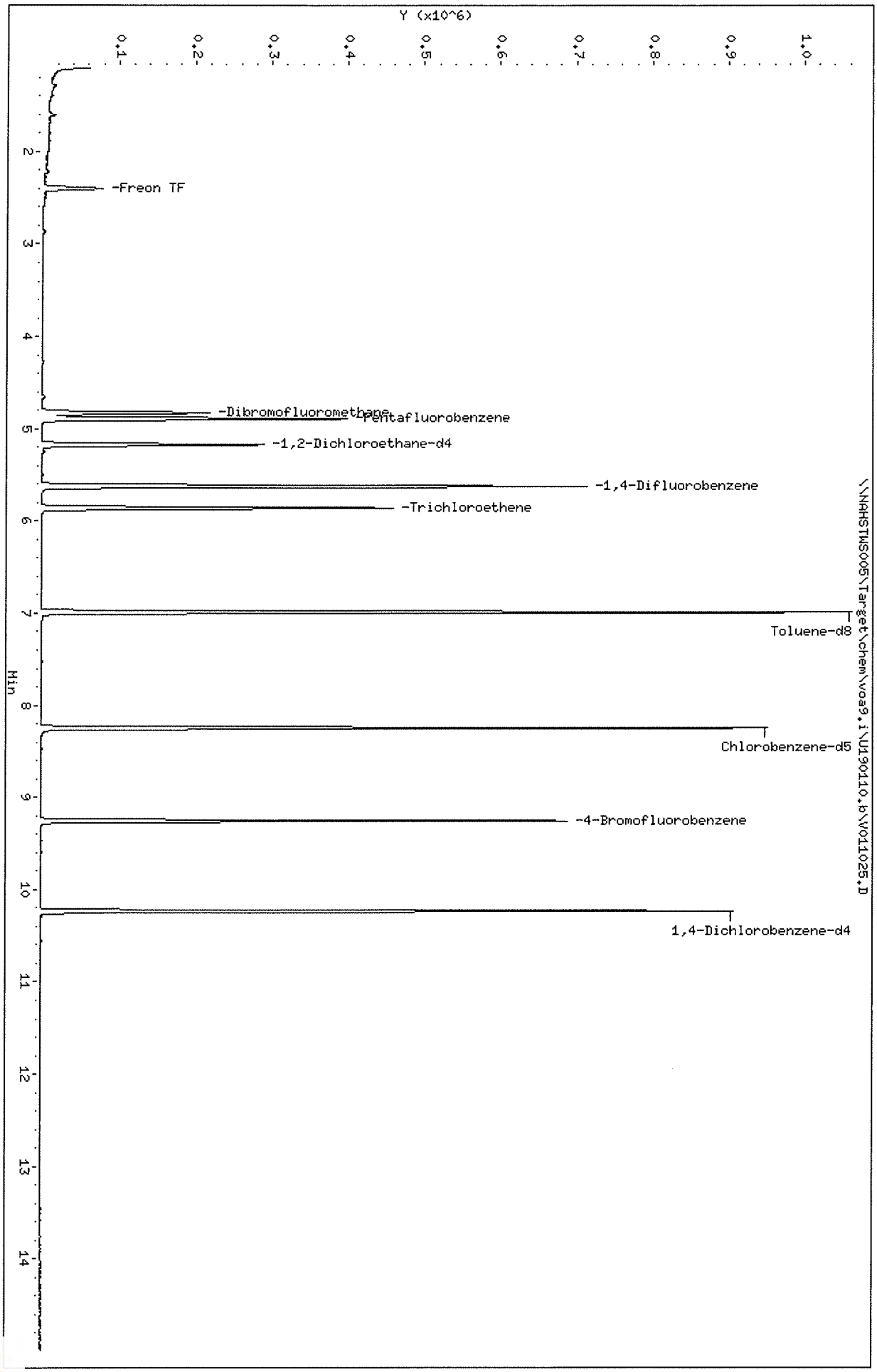
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	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)	231938	50.0000	
* 36 1,4-Difluorobenzene	114	5.621	5.625	(1.000)	487552	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	436201	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	190759	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.830	(0.987)	125374	47.8207	47.82
$ 35 1,2-Dichloroethane-d4	65	5.171	5.175	(1.057)	184745	54.2031	54.20
$ 48 Toluene-d8	98	6.986	6.990	(0.847)	608884	53.8931	53.89
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	212725	49.6919	49.69
38 Trichloroethene	130	5.861	5.861	(1.043)	131708	42.4303	1060.75

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011025.D
Date : 10-JAN-2019 20:15
Client ID: HS19010248-04DL
Sample Info: HS19010248-04;HS19010248-04;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011025.D

Date : 10-JAN-2019 20:15

Client ID: HS19010248-04DL

Instrument: VOA9.i

Sample Info: HS19010248-04;HS19010248-04;;;

Purge Volume: 5.0

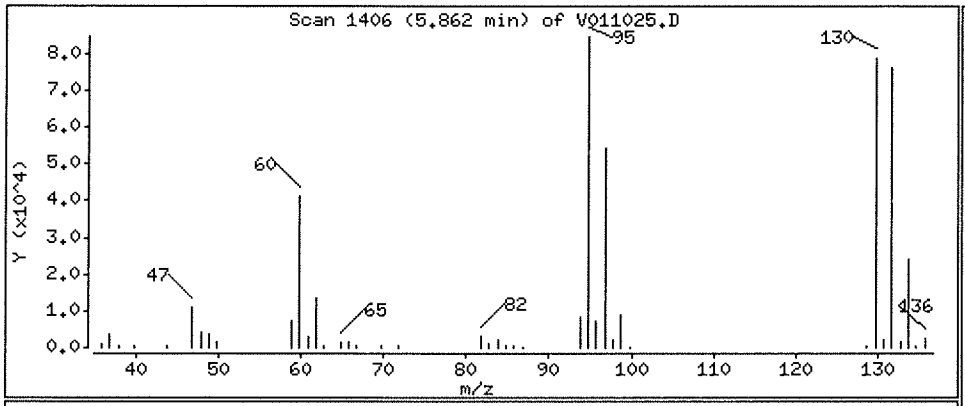
Operator: PC

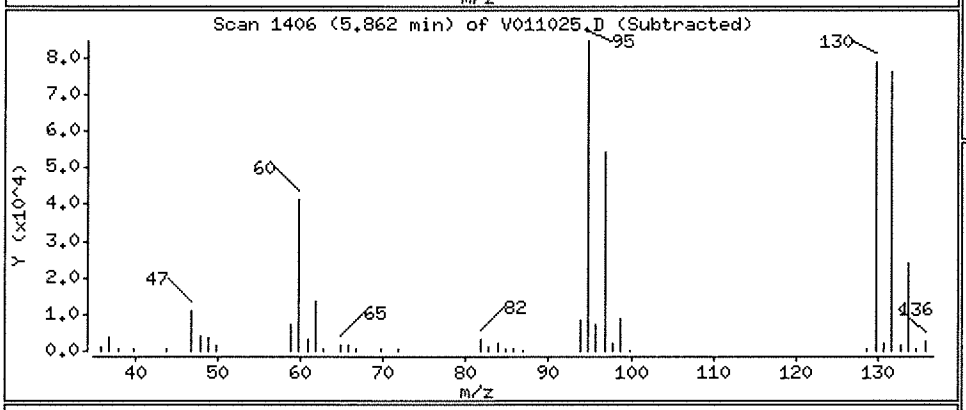
Column phase: DB624

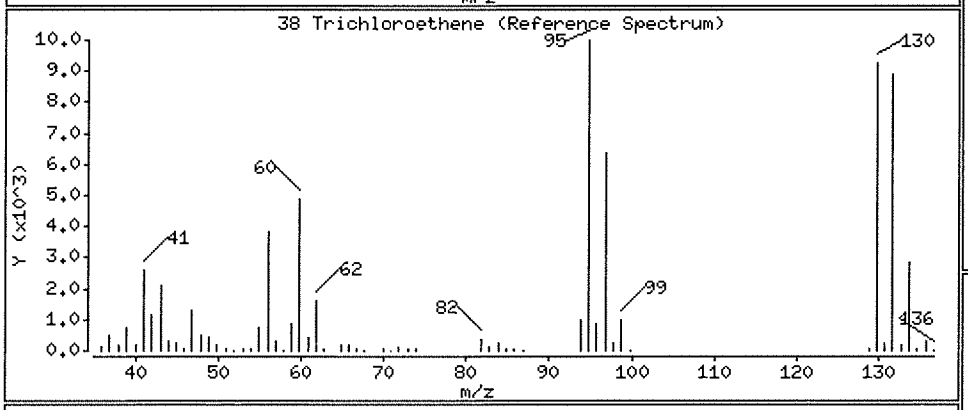
Column diameter: 0.18

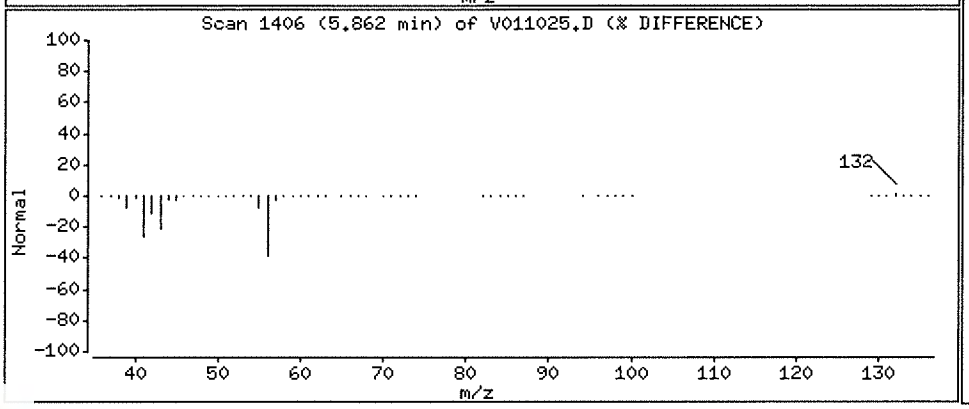
38 Trichloroethene

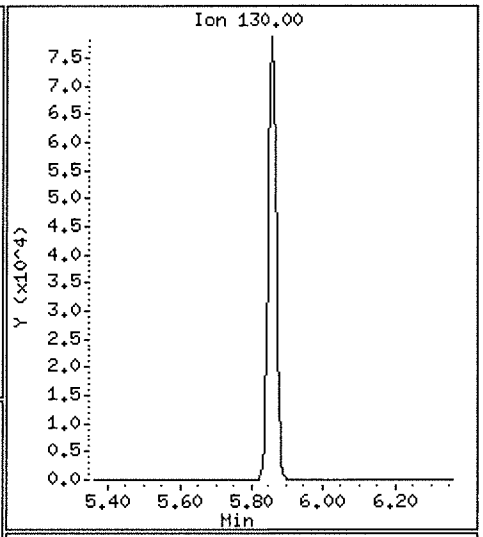
Concentration: 1060.75 ug/l

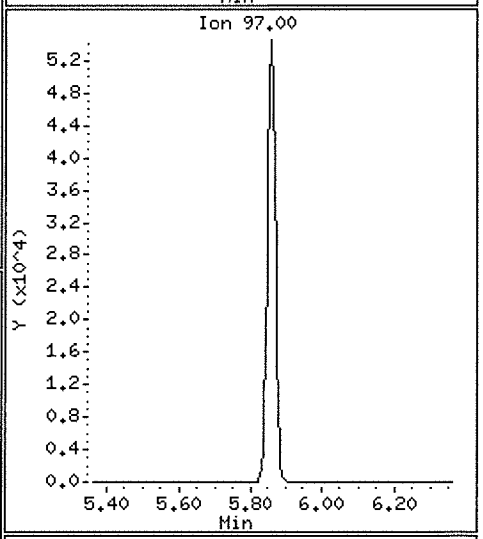


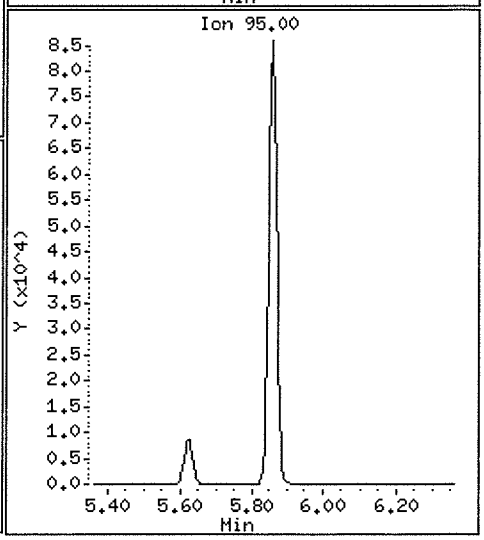












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011026.D
Lab Smp Id: CCV_END Client Smp ID: CCV_END
Inj Date : 10-JAN-2019 20:40
Operator : PC Inst ID: VOA9.i
Smp Info : CCV_END;CCV_END;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190110.b\8260C.m
Meth Date : 01-Feb-2019 17:48 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 20 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.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

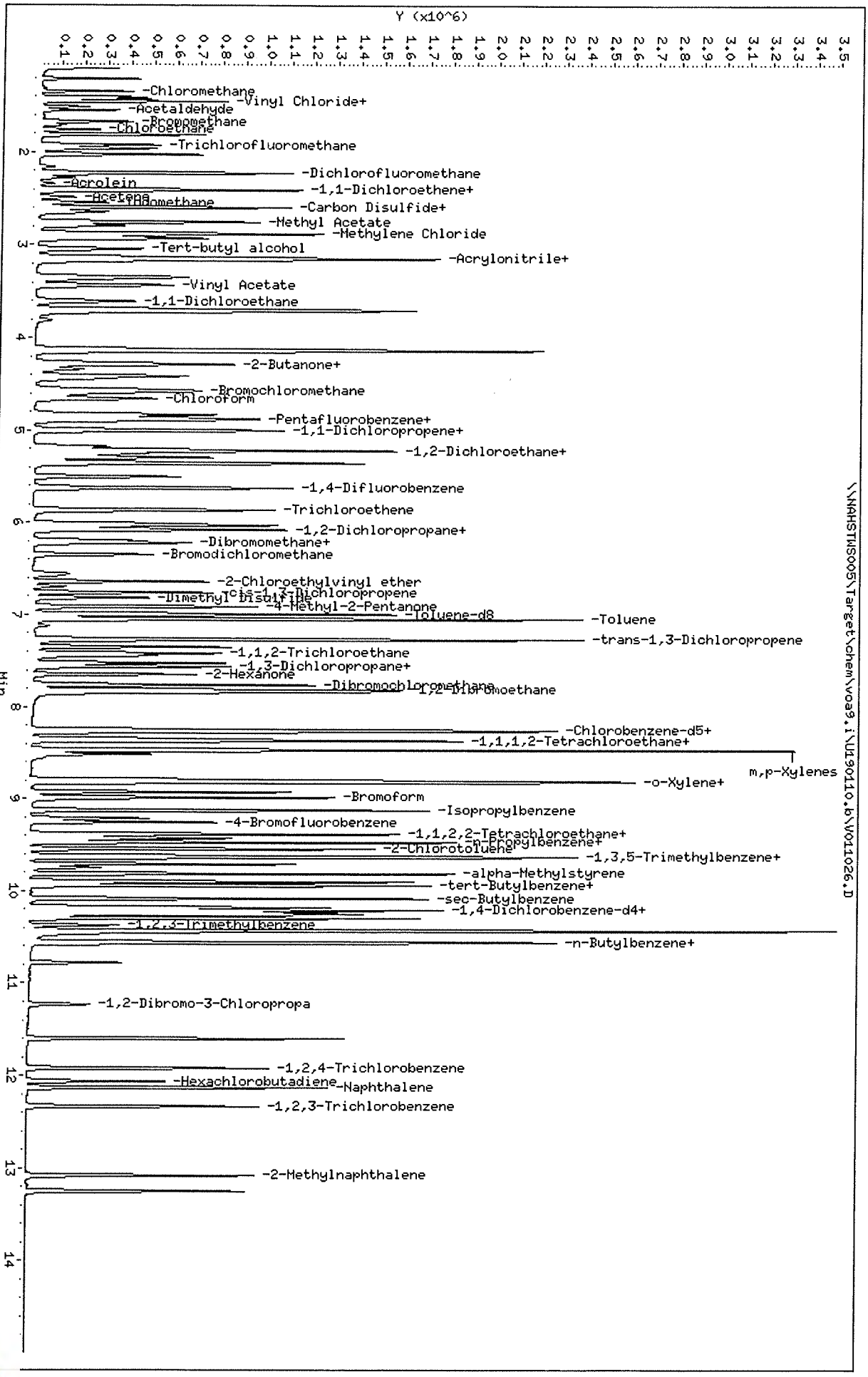
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	276147	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	515348	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	471054	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	223978	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	152951	50.0000	49.04
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	209298	50.0000	51.46
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	661651	50.0000	54.24
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	249775	50.0000	54.19
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	192641	50.0000	67.68
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	325528	50.0000	71.97
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	342327	50.0000	67.83
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	193926	50.0000	67.26
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	432662	50.0000	68.92
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	189140	50.0000	71.00
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	337852	50.0000	70.90
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	250067	50.0000	62.65
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	360385	50.0000	66.56
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	258575	50.0000	64.07
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	849205	50.0000	72.19
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	45309	50.0000	56.50
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	219773	50.0000	66.93
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	428657	50.0000	63.03

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011026.D Page 2
Report Date: 01-Feb-2019 17:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	341457	50.0000	68.47
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	262032	50.0000	70.62
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	830996	50.0000	72.33
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	433695	50.0000	64.18
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	427249	50.0000	68.70
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	442447	50.0000	61.78
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	223259	50.0000	59.39
24 2-Butanone	43	4.339	4.339	(0.886)	259892	100.000	136.00
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	748882	50.0000	70.33
52 2-Hexanone	43	7.649	7.649	(0.927)	391546	100.000	144.12
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	868235	50.0000	70.09
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	872513	50.0000	73.13
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	563824	100.000	143.91
10 Acetone	43	2.484	2.484	(0.507)	165671	100.000	139.26
37 Benzene	78	5.220	5.220	(0.928)	975640	50.0000	68.79
74 Bromobenzene	156	9.381	9.381	(0.917)	225088	50.0000	64.44
29 Bromochloromethane	128	4.557	4.557	(0.930)	106606	50.0000	70.23
39 Bromodichloromethane	83	6.348	6.348	(1.129)	284142	50.0000	71.12
66 Bromoform	173	8.984	8.984	(1.089)	117628	50.0000	56.97(T)
6 Bromomethane	94	1.674	1.674	(0.342)	139224	50.0000	67.23
19 Carbon Disulfide	76	2.596	2.596	(0.530)	1353715	100.000	143.26
34 Carbon Tetrachloride	117	4.999	4.999	(0.889)	256510	50.0000	74.33
59 Chlorobenzene	112	8.275	8.275	(1.003)	613000	50.0000	65.27
7 Chloroethane	64	1.756	1.756	(0.359)	211179	50.0000	84.84
28 Chloroform	83	4.662	4.662	(0.952)	403364	50.0000	67.64
3 Chloromethane	50	1.344	1.344	(0.274)	253968	50.0000	68.00
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	246712	50.0000	65.31
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	381419	50.0000	63.24
55 Dibromochloromethane	129	7.758	7.758	(0.940)	197261	50.0000	62.19
44 Dibromomethane	93	6.191	6.191	(1.101)	146233	50.0000	67.54
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	251884	50.0000	69.02
61 Ethylbenzene	106	8.369	8.369	(1.015)	329867	50.0000	69.63
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	90640	50.0000	62.00
67 Isopropylbenzene	105	9.126	9.126	(1.106)	991169	50.0000	73.25
62 m,p-Xylenes	106	8.474	8.474	(1.027)	816307	100.000	141.15
17 Methylene Chloride	84	2.877	2.877	(0.587)	243690	50.0000	68.77
87 n-Butylbenzene	91	10.555	10.555	(1.031)	851235	50.0000	73.43
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1272870	50.0000	73.52
92 Naphthalene	128	12.133	12.133	(1.185)	850341	50.0000	62.15
63 o-Xylene	106	8.811	8.811	(1.068)	408679	50.0000	69.27
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1050233	50.0000	74.16
64 Styrene	104	8.823	8.823	(1.070)	696852	50.0000	70.94
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	707059	50.0000	71.46
56 Tetrachloroethene	164	7.526	7.526	(0.912)	156026	50.0000	63.05
50 Toluene	91	7.049	7.049	(0.855)	1014003	50.0000	70.02
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	221057	50.0000	65.62
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	325606	50.0000	62.41
38 Trichloroethene	130	5.861	5.861	(1.042)	231363	50.0000	70.51
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	335655	50.0000	72.65
5 Vinyl Chloride	62	1.426	1.426	(0.291)	301220	50.0000	73.50

QC Flag Legend

T - Target compound detected outside RT window.



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190110.b\V011026.D
Date : 10-JAN-2019 20:40
Client ID: CCV_END
Sample Info: CCV_END;CCV_END;2;;
Purge Volume: 5.0
Column phase: DB624

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

Metals Raw Data

ALS WO# HS19010248

ALS Houston, US

Date: 25-Jan-19

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

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: 25-Jan-19

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248
Start Date: 10-Jan-2019 13:30 End Date: 10-Jan-2019 15:30

Batch ID: 136505
Prep Code: Hg_WPr
Method: SW7470
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS19010248-03	18CPTMW14_010719	Groundwater		10	10	1
HS19010248-03MS				10	10	1
HS19010248-03MSD				10	10	1
HS19010248-04	18CPTMW14_010719-a	Groundwater		10	10	1
LCS-136505				10	10	1
MBLK-136505				10	10	1

ALS Houston, US

Date: 25-Jan-19

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248
Start Date: 17-Jan-2019 08:30 End Date: 17-Jan-2019 13:00

Batch ID: 136717
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS19010248-03	18CPTMW14_010719	Groundwater		10	10	1
HS19010248-04	18CPTMW14_010719-a	Groundwater		10	10	1
HS19010627-01MS				10	10	1
HS19010627-01MSD				10	10	1
HS19010627-01PDS				10	10	1
HS19010627-01SD				10	10	1
LCS-136717				10	10	1
MBLK-136717				10	10	1

ALS Houston, US

Date: 25-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248
Start Date: 10-Jan-2019 End Date: 10-Jan-2019

Run ID:HG03_330807
Instrument:HG03
Method:E245.1

Sample No.	D/F	Time	FileID	Analytes
ICCV 1	1	10-Jan-2019 13:32	HG03_330807 Raw Data_4903435	HG
ICV	1	10-Jan-2019 13:34		HG
ICB	1	10-Jan-2019 13:36		HG
CRA	1	10-Jan-2019 13:37		HG
CCV 2	1	10-Jan-2019 13:58		HG
CCB 1	1	10-Jan-2019 14:00		HG
CCV 3	1	10-Jan-2019 14:19		HG
CCB 2	1	10-Jan-2019 14:20		HG
CCV 4	1	10-Jan-2019 14:38		HG
CCB 3	1	10-Jan-2019 14:40		HG
CCV 5	1	10-Jan-2019 15:06		HG
CCB 4	1	10-Jan-2019 15:08		HG
CCV 6	1	10-Jan-2019 15:27		HG
CCB 5	1	10-Jan-2019 15:29		HG
CCV 7	1	10-Jan-2019 15:54		HG
CCB 6	1	10-Jan-2019 15:56		HG
CCV 8	1	10-Jan-2019 16:13		HG
CCB 7	1	10-Jan-2019 16:15		HG
CCV 9	1	10-Jan-2019 16:30		HG
CCB 8	1	10-Jan-2019 16:32		HG
CCV 10	1	10-Jan-2019 18:05		HG
CCB 9	1	10-Jan-2019 18:06		HG
CCV 11	1	10-Jan-2019 18:25		HG
CCB 10	1	10-Jan-2019 18:27		HG
CCV 12	1	10-Jan-2019 18:49		HG
CCB 11	1	10-Jan-2019 18:50		HG
MBLK-136505	1	10-Jan-2019 18:52		HG
LCS-136505	1	10-Jan-2019 18:54		HG
18CPTMW14_010719	1	10-Jan-2019 18:55		HG
18CPTMW14_010719MS	1	10-Jan-2019 18:57		HG
18CPTMW14_010719MSD	1	10-Jan-2019 18:59		HG
CCV 13	1	10-Jan-2019 19:09		HG
CCB 12	1	10-Jan-2019 19:11		HG
18CPTMW14_010719-a	1	10-Jan-2019 19:25		HG
CCV 14	1	10-Jan-2019 19:30		HG
CCB 13	1	10-Jan-2019 19:32		HG
CCV 15	1	10-Jan-2019 19:39		HG
CCB 14	1	10-Jan-2019 19:41		HG

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248
Start Date: 22-Jan-2019 End Date: 23-Jan-2019

Run ID:ICPMS05_331472
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_331472_Tune	1	22-Jan-2019 00:00	ICPMS05_331472_Tune_1	
CAL BLK	1	22-Jan-2019 11:58	009CALB.d_4919064	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	22-Jan-2019 12:00	010CALS.d_4919065	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	22-Jan-2019 12:02	011CALS.d_4919066	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	22-Jan-2019 12:04	012CALS.d_4919067	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	22-Jan-2019 12:06	013CALS.d_4919068	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	22-Jan-2019 12:08	014CALS.d_4919069	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICV	1	22-Jan-2019 12:12	016_ICV.d_4919071	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV2	1	22-Jan-2019 12:14	017SMPL.d_4919072	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV5	1	22-Jan-2019 12:16	018LICV.d_4919073	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICB	1	22-Jan-2019 12:18	019_ICB.d_4919074	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	22-Jan-2019 12:29	021ICSA.d_4919120	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	22-Jan-2019 12:31	022ICSB.d_4919121	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 1	1	22-Jan-2019 12:49	029_CCV.d_4919349	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 1	1	22-Jan-2019 12:51	030_CCB.d_4919350	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 2	1	22-Jan-2019 13:09	039_CCV.d_4919359	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 2	1	22-Jan-2019 13:11	040_CCB.d_4919360	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 3	1	22-Jan-2019 13:46	051_CCB.d_4919495	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 3	1	22-Jan-2019 13:50	052_CCV.d_4919496	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 4	1	22-Jan-2019 14:12	063_CCV.d_4919577	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 4	1	22-Jan-2019 14:22	066_CCB.d_4919580	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 5	1	22-Jan-2019 14:44	077_CCV.d_4919748	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 5	1	22-Jan-2019 14:46	078_CCB.d_4919749	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 6	1	22-Jan-2019 15:23	089_CCV.d_4919912	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 6	1	22-Jan-2019 15:25	090_CCB.d_4919913	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 7	1	22-Jan-2019 15:46	099_CCV.d_4919922	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 7	1	22-Jan-2019 15:48	100_CCB.d_4919923	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	22-Jan-2019 16:05	108CALB.d_4920020	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	22-Jan-2019 16:07	109CALS.d_4920021	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	22-Jan-2019 16:09	110CALS.d_4920022	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	22-Jan-2019 16:11	111CALS.d_4920023	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	22-Jan-2019 16:13	112CALS.d_4920024	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248
Start Date: 22-Jan-2019 End Date: 23-Jan-2019

Run ID:ICPMS05_331472
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
200/1000/20K	1	22-Jan-2019 16:15	113CALS.d_4920025	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 8	1	22-Jan-2019 16:19	115_ICV.d_4920027	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	22-Jan-2019 16:21	116LICV.d_4920028	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	22-Jan-2019 16:23	117SMPL.d_4920029	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 8	1	22-Jan-2019 16:25	118_ICB.d_4920030	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MBLK-136717	1	22-Jan-2019 16:33	120SMPL.d_4920121	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LCS-136717	1	22-Jan-2019 16:35	121SMPL.d_4920122	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZSD	5	22-Jan-2019 16:39	123SMPL.d_4920124	AG AL AS BA BE CA CD CO CR CU FE K MG MN NI PB SB SE TL V ZN
ZZZZZZMS	1	22-Jan-2019 16:41	124SMPL.d_4920125	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZMSD	1	22-Jan-2019 16:42	125SMPL.d_4920126	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZPDS	1	22-Jan-2019 16:44	126SMPL.d_4920127	AG AL AS BA BE CA CD CO CR CU FE K MG MN NI PB SB SE TL V ZN
CCV 9	1	22-Jan-2019 16:48	128_CCV.d_4920129	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 9	1	22-Jan-2019 16:50	129_CCB.d_4920130	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
18CPTMW14_010719	1	22-Jan-2019 16:56	131SMPL.d_4920132	AG AL AS BE CD CO CR CU FE K MG MN NI PB SB SE TL V ZN
18CPTMW14_010719-a	1	22-Jan-2019 16:58	132SMPL.d_4920133	AG AL AS BE CD CO CR CU FE K MG MN NI PB SB SE TL V ZN
CCV 10	1	22-Jan-2019 17:06	135_CCV.d_4920136	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 10	1	22-Jan-2019 17:08	136_CCB.d_4920137	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
18CPTMW14_010719	20	22-Jan-2019 17:10	137SMPL.d_4920138	BA CA NA
18CPTMW14_010719-a	20	22-Jan-2019 17:12	138SMPL.d_4920139	BA CA NA
ZZZZZZSD	250	22-Jan-2019 17:18	141SMPL.d_4920162	NA
ZZZZZZPDS	50	22-Jan-2019 17:20	142SMPL.d_4920163	NA
CCV 11	1	22-Jan-2019 17:28	146_CCV.d_4920174	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 11	1	22-Jan-2019 17:30	147_CCB.d_4920175	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 12	1	22-Jan-2019 17:44	154_CCV.d_4920291	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 12	1	22-Jan-2019 17:46	155_CCB.d_4920292	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 13	1	22-Jan-2019 18:08	166_CCV.d_4920303	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 13	1	22-Jan-2019 18:10	167_CCB.d_4920304	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 14	1	22-Jan-2019 18:26	174_CCV.d_4920373	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 14	1	22-Jan-2019 18:28	175_CCB.d_4920374	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 15	1	22-Jan-2019 18:40	177_CCV.d_4920376	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 16	1	22-Jan-2019 19:03	187_CCV.d_4920386	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 15	1	22-Jan-2019 19:05	188_CCB.d_4920387	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 17	1	22-Jan-2019 19:27	199_CCV.d_4920398	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248
Start Date: 22-Jan-2019 End Date: 23-Jan-2019

Run ID:ICPMS05_331472
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 16	1	22-Jan-2019 19:29	200_CCB.d_4920399	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 18	1	22-Jan-2019 19:44	208_CCV.d_4920408	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 17	1	22-Jan-2019 19:46	209_CCB.d_4920409	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 19	1	22-Jan-2019 20:08	220_CCV.d_4920420	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 18	1	22-Jan-2019 20:10	221_CCB.d_4920421	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 19	1	22-Jan-2019 20:35	230_CCB.d_4920430	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 20	1	22-Jan-2019 20:39	232_CCV.d_4920432	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	22-Jan-2019 20:47	236CALB.d_4920435	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	22-Jan-2019 20:49	237CALS.d_4920436	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	22-Jan-2019 20:51	238CALS.d_4920437	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	22-Jan-2019 20:53	239CALS.d_4920438	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	22-Jan-2019 20:55	240CALS.d_4920439	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	22-Jan-2019 20:57	241CALS.d_4920440	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 21	1	22-Jan-2019 21:01	243_ICV.d_4920442	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	22-Jan-2019 21:03	244LICV.d_4920443	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	22-Jan-2019 21:05	245SMPL.d_4920444	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 20	1	22-Jan-2019 21:07	246_ICB.d_4920445	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 22	1	22-Jan-2019 21:26	256_CCV.d_4920455	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 21	1	22-Jan-2019 21:28	257_CCB.d_4920456	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 22	1	22-Jan-2019 21:46	266_CCB.d_4920465	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 23	1	22-Jan-2019 22:03	268_CCV.d_4920467	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 23	1	22-Jan-2019 22:25	279_CCB.d_4920478	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 24	1	22-Jan-2019 22:39	281_CCV.d_4920480	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	22-Jan-2019 22:49	286CALB.d_4920516	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	22-Jan-2019 22:51	287CALS.d_4920517	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	22-Jan-2019 22:53	288CALS.d_4920518	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	22-Jan-2019 22:55	289CALS.d_4920519	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	22-Jan-2019 22:57	290CALS.d_4920520	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	22-Jan-2019 22:59	291CALS.d_4920521	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 25	1	22-Jan-2019 23:03	293_ICV.d_4920523	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	22-Jan-2019 23:06	294LICV.d_4920524	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	22-Jan-2019 23:08	295SMPL.d_4920525	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

ALS Houston, US

Date: 25-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248
Start Date: 22-Jan-2019 End Date: 23-Jan-2019

Run ID:ICPMS05_331472
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICCB 24	1	22-Jan-2019 23:10	296_ICB.d_4920526	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 26	1	22-Jan-2019 23:23	303_CCV.d_4920533	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 25	1	22-Jan-2019 23:25	304_CCB.d_4920534	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 27	1	22-Jan-2019 23:47	315_CCV.d_4920545	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 26	1	22-Jan-2019 23:49	316_CCB.d_4920546	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 28	1	22-Jan-2019 23:51	317_CCV.d_4920547	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 27	1	22-Jan-2019 23:53	318_CCB.d_4920548	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	22-Jan-2019 23:55	319LICV.d_4920549	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	22-Jan-2019 23:57	320SMPL.d_4920550	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	22-Jan-2019 23:59	321ICSA.d_4920551	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	23-Jan-2019 00:01	322ICSB.d_4920552	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: HG03_330807
Instrument: HG03
Method: E245.1

ICCV1 Date: 10-Jan-2019 13:32 Seq: 4903435 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.19	104	90-110	

ICV Date: 10-Jan-2019 13:34 Seq: 4903436 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.14	103	90-110	

CCV2 Date: 10-Jan-2019 13:58 Seq: 4903445 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.24	105	90-110	

CCV3 Date: 10-Jan-2019 14:19 Seq: 4903457 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.24	105	90-110	

CCV4 Date: 10-Jan-2019 14:38 Seq: 4903468 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.19	104	90-110	

CCV5 Date: 10-Jan-2019 15:06 Seq: 4903480 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.04	101	90-110	

CCV6 Date: 10-Jan-2019 15:27 Seq: 4903492 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.08	102	90-110	

CCV7 Date: 10-Jan-2019 15:54 Seq: 4903527 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.06	101	90-110	

CCV8 Date: 10-Jan-2019 16:13 Seq: 4903538 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.09	102	90-110	

CCV9 Date: 10-Jan-2019 16:30 Seq: 4903579 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.11	102	90-110	

CCV10 Date: 10-Jan-2019 18:05 Seq: 4903819 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.07	101	90-110	

CCV11 Date: 10-Jan-2019 18:25 Seq: 4903831 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.19	104	90-110	

CCV12 Date: 10-Jan-2019 18:49 Seq: 4903865 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.08	102	90-110	

CCV13 Date: 10-Jan-2019 19:09 Seq: 4903877 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.03	101	90-110	

ALS Houston, US

Date: 25-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: HG03_330807
Instrument: HG03
Method: E245.1

CCV14	Date: 10-Jan-2019 19:30		Seq: 4903889	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	5.04	101	90-110	

CCV15	Date: 10-Jan-2019 19:39		Seq: 4903894	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Mercury	5	4.99	100	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

ICV Date: 22-Jan-2019 12:12 Seq: 4919071 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.549	103	90-110	
Antimony	100	101.641	102	90-110	
Arsenic	100	104.689	105	90-110	
Barium	100	104.481	104	90-110	
Beryllium	100	102.093	102	90-110	
Cadmium	100	104.518	105	90-110	
Calcium	10000	10118.328	101	90-110	
Chromium	100	102.129	102	90-110	
Cobalt	100	101.154	101	90-110	
Copper	100	104.416	104	90-110	
Iron	10000	10195.375	102	90-110	
Lead	100	102.984	103	90-110	
Magnesium	10000	10408.009	104	90-110	
Manganese	100	103.034	103	90-110	
Nickel	100	104.595	105	90-110	
Potassium	10000	10517.821	105	90-110	
Selenium	100	102.075	102	90-110	
Silver	100	104.418	104	90-110	
Sodium	10000	10399.726	104	90-110	
Thallium	100	109.173	109	90-110	
Vanadium	100	102.826	103	90-110	
Zinc	100	103.762	104	90-110	

CCV1 Date: 22-Jan-2019 12:49 Seq: 4919349 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.397	101	90-110	
Antimony	100	98.447	98	90-110	
Arsenic	100	100.648	101	90-110	
Barium	100	100.333	100	90-110	
Beryllium	100	92.821	93	90-110	
Cadmium	100	99.663	100	90-110	
Calcium	10000	10055.946	101	90-110	
Chromium	100	100.914	101	90-110	
Cobalt	100	101.336	101	90-110	
Copper	100	102.099	102	90-110	
Iron	10000	10178.084	102	90-110	
Lead	100	103.805	104	90-110	
Magnesium	10000	10074.929	101	90-110	
Manganese	100	101.529	102	90-110	
Nickel	100	102.289	102	90-110	
Potassium	10000	10175.769	102	90-110	
Selenium	100	98.456	99	90-110	
Silver	100	102.298	102	90-110	
Sodium	10000	10209.556	102	90-110	
Thallium	100	102.436	102	90-110	
Vanadium	100	100.792	101	90-110	
Zinc	100	101.204	101	90-110	

CCV2 Date: 22-Jan-2019 13:09 Seq: 4919359 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.721	100	90-110	
Antimony	100	98.631	99	90-110	
Arsenic	100	99.988	100	90-110	
Barium	100	101.469	101	90-110	
Beryllium	100	90.156	90	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV2 Date: 22-Jan-2019 13:09 Seq: 4919359 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	101.019	101	90-110	
Calcium	10000	10177.888	102	90-110	
Chromium	100	102.938	103	90-110	
Cobalt	100	102.431	102	90-110	
Copper	100	105.289	105	90-110	
Iron	10000	10223.075	102	90-110	
Lead	100	114.936	115	90-110	S
Magnesium	10000	10154.274	102	90-110	
Manganese	100	101.481	101	90-110	
Nickel	100	104.984	105	90-110	
Potassium	10000	10241.594	102	90-110	
Selenium	100	97.696	98	90-110	
Silver	100	103.727	104	90-110	
Sodium	10000	10381.371	104	90-110	
Thallium	100	101.908	102	90-110	
Vanadium	100	101.476	101	90-110	
Zinc	100	101.151	101	90-110	

CCV3 Date: 22-Jan-2019 13:50 Seq: 4919496 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	94.268	94	90-110	
Antimony	100	104.043	104	90-110	
Arsenic	100	98.99	99	90-110	
Barium	100	105.299	105	90-110	
Beryllium	100	98.709	99	90-110	
Cadmium	100	104.755	105	90-110	
Calcium	10000	9691.595	97	90-110	
Chromium	100	97.041	97	90-110	
Cobalt	100	98.374	98	90-110	
Copper	100	100.603	101	90-110	
Iron	10000	9844.471	98	90-110	
Lead	100	119.756	120	90-110	S
Magnesium	10000	9532.94	95	90-110	
Manganese	100	98.714	99	90-110	
Nickel	100	99.933	100	90-110	
Potassium	10000	10007.309	100	90-110	
Selenium	100	101.014	101	90-110	
Silver	100	109.398	109	90-110	
Sodium	10000	9713.779	97	90-110	
Thallium	100	107.486	107	90-110	
Vanadium	100	97.969	98	90-110	
Zinc	100	99.011	99	90-110	

CCV4 Date: 22-Jan-2019 14:12 Seq: 4919577 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	94.413	94	90-110	
Antimony	100	103.655	104	90-110	
Arsenic	100	103.876	104	90-110	
Barium	100	102.95	103	90-110	
Beryllium	100	102.066	102	90-110	
Cadmium	100	104.269	104	90-110	
Calcium	10000	9700.128	97	90-110	
Chromium	100	98.484	99	90-110	
Cobalt	100	98.991	99	90-110	
Copper	100	102.454	102	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV4 Date: 22-Jan-2019 14:12 Seq: 4919577 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Iron	10000	9927.498	99	90-110	
Lead	100	123.881	124	90-110	S
Magnesium	10000	9697.068	97	90-110	
Manganese	100	99.955	100	90-110	
Nickel	100	101.263	101	90-110	
Potassium	10000	10060.376	101	90-110	
Selenium	100	103.744	104	90-110	
Silver	100	104.519	105	90-110	
Sodium	10000	10146.16	101	90-110	
Thallium	100	105.8	106	90-110	
Vanadium	100	100.13	100	90-110	
Zinc	100	102.309	102	90-110	

CCV5 Date: 22-Jan-2019 14:44 Seq: 4919748 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	93.379	93	90-110	
Antimony	100	106.859	107	90-110	
Arsenic	100	100.846	101	90-110	
Barium	100	104.931	105	90-110	
Beryllium	100	97.013	97	90-110	
Cadmium	100	102.827	103	90-110	
Calcium	10000	9791.98	98	90-110	
Chromium	100	100.754	101	90-110	
Cobalt	100	101.17	101	90-110	
Copper	100	105.573	106	90-110	
Iron	10000	10050.734	101	90-110	
Lead	100	130.294	130	90-110	S
Magnesium	10000	9724.34	97	90-110	
Manganese	100	100.922	101	90-110	
Nickel	100	104.654	105	90-110	
Potassium	10000	9773.029	98	90-110	
Selenium	100	101.246	101	90-110	
Silver	100	109.608	110	90-110	
Sodium	10000	9899.903	99	90-110	
Thallium	100	107.302	107	90-110	
Vanadium	100	100.961	101	90-110	
Zinc	100	103.157	103	90-110	

CCV6 Date: 22-Jan-2019 15:23 Seq: 4919912 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	91.395	91	90-110	
Antimony	100	98.474	99	90-110	
Arsenic	100	95.447	95	90-110	
Barium	100	98.565	99	90-110	
Beryllium	100	87.441	87	90-110	S
Cadmium	100	96.138	96	90-110	
Calcium	10000	9353.825	94	90-110	
Chromium	100	96.31	96	90-110	
Cobalt	100	97.518	98	90-110	
Copper	100	101.478	101	90-110	
Iron	10000	9598.272	96	90-110	
Lead	100	124.868	125	90-110	S
Magnesium	10000	9544.021	95	90-110	
Manganese	100	95.407	95	90-110	
Nickel	100	100.902	101	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV6 Date: 22-Jan-2019 15:23 Seq: 4919912 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Potassium	10000	9487.784	95	90-110	
Selenium	100	91.692	92	90-110	
Silver	100	101.339	101	90-110	
Sodium	10000	9640.445	96	90-110	
Thallium	100	101.173	101	90-110	
Vanadium	100	96.944	97	90-110	
Zinc	100	97.877	98	90-110	

CCV7 Date: 22-Jan-2019 15:46 Seq: 4919922 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	94.326	94	90-110	
Antimony	100	102.25	102	90-110	
Arsenic	100	100.418	100	90-110	
Barium	100	103.875	104	90-110	
Beryllium	100	90.74	91	90-110	
Cadmium	100	103.18	103	90-110	
Calcium	10000	9557.77	96	90-110	
Chromium	100	101.156	101	90-110	
Cobalt	100	102.659	103	90-110	
Copper	100	106.103	106	90-110	
Iron	10000	10024.735	100	90-110	
Lead	100	132.322	132	90-110	S
Magnesium	10000	9767.148	98	90-110	
Manganese	100	99.812	100	90-110	
Nickel	100	105.663	106	90-110	
Potassium	10000	9966.114	100	90-110	
Selenium	100	97.988	98	90-110	
Silver	100	106.378	106	90-110	
Sodium	10000	10069.565	101	90-110	
Thallium	100	107.668	108	90-110	
Vanadium	100	101.282	101	90-110	
Zinc	100	101.981	102	90-110	

ICCV8 Date: 22-Jan-2019 16:19 Seq: 4920027 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	105.535	106	90-110	
Antimony	100	100.196	100	90-110	
Arsenic	100	104.169	104	90-110	
Barium	100	103.901	104	90-110	
Beryllium	100	105.058	105	90-110	
Cadmium	100	105.295	105	90-110	
Calcium	10000	10377.731	104	90-110	
Chromium	100	102.785	103	90-110	
Cobalt	100	103.331	103	90-110	
Copper	100	103.901	104	90-110	
Iron	10000	10320.603	103	90-110	
Lead	100	109.024	109	90-110	
Magnesium	10000	10416.625	104	90-110	
Manganese	100	105.139	105	90-110	
Nickel	100	105.851	106	90-110	
Potassium	10000	10424.475	104	90-110	
Selenium	100	104.195	104	90-110	
Silver	100	104.13	104	90-110	
Sodium	10000	10329.529	103	90-110	
Thallium	100	108.846	109	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

ICCV8 Date: 22-Jan-2019 16:19 Seq: 4920027 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Vanadium	100	102.655	103	90-110	
Zinc	100	103.886	104	90-110	

CCV9 Date: 22-Jan-2019 16:48 Seq: 4920129 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	107.206	107	90-110	
Antimony	100	93.113	93	90-110	
Arsenic	100	99.706	100	90-110	
Barium	100	95.333	95	90-110	
Beryllium	100	91.443	91	90-110	
Cadmium	100	98.503	99	90-110	
Calcium	10000	10145.069	101	90-110	
Chromium	100	100.236	100	90-110	
Cobalt	100	101.263	101	90-110	
Copper	100	100.409	100	90-110	
Iron	10000	10160.114	102	90-110	
Lead	100	99.342	99	90-110	
Magnesium	10000	10461.601	105	90-110	
Manganese	100	101.864	102	90-110	
Nickel	100	102.391	102	90-110	
Potassium	10000	10354.434	104	90-110	
Selenium	100	99.002	99	90-110	
Silver	100	96.375	96	90-110	
Sodium	10000	10776.155	108	90-110	
Thallium	100	97.646	98	90-110	
Vanadium	100	101.328	101	90-110	
Zinc	100	101.059	101	90-110	

CCV10 Date: 22-Jan-2019 17:06 Seq: 4920136 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	104.968	105	90-110	
Antimony	100	93.148	93	90-110	
Arsenic	100	101.637	102	90-110	
Barium	100	97.151	97	90-110	
Beryllium	100	98.326	98	90-110	
Cadmium	100	101.199	101	90-110	
Calcium	10000	9980.04	100	90-110	
Chromium	100	99.069	99	90-110	
Cobalt	100	98.396	98	90-110	
Copper	100	98.73	99	90-110	
Iron	10000	9838.218	98	90-110	
Lead	100	93.266	93	90-110	
Magnesium	10000	10216.017	102	90-110	
Manganese	100	100.379	100	90-110	
Nickel	100	99.806	100	90-110	
Potassium	10000	10283.309	103	90-110	
Selenium	100	101.016	101	90-110	
Silver	100	98.663	99	90-110	
Sodium	10000	10342.293	103	90-110	
Thallium	100	101.34	101	90-110	
Vanadium	100	99.705	100	90-110	
Zinc	100	100.114	100	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV11 Date: 22-Jan-2019 17:28 Seq: 4920174 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	105.728	106	90-110	
Antimony	100	95.164	95	90-110	
Arsenic	100	105.29	105	90-110	
Barium	100	98.591	99	90-110	
Beryllium	100	102.062	102	90-110	
Cadmium	100	100.918	101	90-110	
Calcium	10000	10138.194	101	90-110	
Chromium	100	100.604	101	90-110	
Cobalt	100	101.675	102	90-110	
Copper	100	100.43	100	90-110	
Iron	10000	10096.637	101	90-110	
Lead	100	105.329	105	90-110	
Magnesium	10000	10264.775	103	90-110	
Manganese	100	102.498	102	90-110	
Nickel	100	103.469	103	90-110	
Potassium	10000	10067.238	101	90-110	
Selenium	100	106.58	107	90-110	
Silver	100	96.583	97	90-110	
Sodium	10000	10265.327	103	90-110	
Thallium	100	101.273	101	90-110	
Vanadium	100	101.109	101	90-110	
Zinc	100	103.316	103	90-110	

CCV12 Date: 22-Jan-2019 17:44 Seq: 4920291 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	108.003	108	90-110	
Antimony	100	93.893	94	90-110	
Arsenic	100	105.184	105	90-110	
Barium	100	97.58	98	90-110	
Beryllium	100	96.866	97	90-110	
Cadmium	100	101.386	101	90-110	
Calcium	10000	10470.699	105	90-110	
Chromium	100	101.958	102	90-110	
Cobalt	100	102.028	102	90-110	
Copper	100	101.495	101	90-110	
Iron	10000	10233.506	102	90-110	
Lead	100	95.063	95	90-110	
Magnesium	10000	10465.52	105	90-110	
Manganese	100	103.665	104	90-110	
Nickel	100	102.69	103	90-110	
Potassium	10000	10449.196	104	90-110	
Selenium	100	102.569	103	90-110	
Silver	100	97.471	98	90-110	
Sodium	10000	10624.389	106	90-110	
Thallium	100	101.178	101	90-110	
Vanadium	100	102.735	103	90-110	
Zinc	100	103.486	103	90-110	

CCV13 Date: 22-Jan-2019 18:08 Seq: 4920303 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	110.997	111	90-110	S
Antimony	100	89.333	89	90-110	S
Arsenic	100	102.938	103	90-110	
Barium	100	96.226	96	90-110	
Beryllium	100	102.796	103	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV13 Date: 22-Jan-2019 18:08 Seq: 4920303 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	100.973	101	90-110	
Calcium	10000	10661.392	107	90-110	
Chromium	100	99.751	100	90-110	
Cobalt	100	99.448	99	90-110	
Copper	100	97.147	97	90-110	
Iron	10000	10105.986	101	90-110	
Lead	100	95.503	96	90-110	
Magnesium	10000	10645.098	106	90-110	
Manganese	100	103.215	103	90-110	
Nickel	100	99.29	99	90-110	
Potassium	10000	10632.402	106	90-110	
Selenium	100	104.543	105	90-110	
Silver	100	93.673	94	90-110	
Sodium	10000	11401.509	114	90-110	S
Thallium	100	100.921	101	90-110	
Vanadium	100	101.052	101	90-110	
Zinc	100	100.668	101	90-110	

CCV14 Date: 22-Jan-2019 18:26 Seq: 4920373 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	106.439	106	90-110	
Antimony	100	91.934	92	90-110	
Arsenic	100	104.403	104	90-110	
Barium	100	101.85	102	90-110	
Beryllium	100	102.694	103	90-110	
Cadmium	100	104.434	104	90-110	
Calcium	10000	10322.941	103	90-110	
Chromium	100	98.334	98	90-110	
Cobalt	100	98.759	99	90-110	
Copper	100	96.715	97	90-110	
Iron	10000	9977.842	100	90-110	
Lead	100	87.364	87	90-110	S
Magnesium	10000	10241.419	102	90-110	
Manganese	100	100.818	101	90-110	
Nickel	100	99.125	99	90-110	
Potassium	10000	10433.986	104	90-110	
Selenium	100	101.633	102	90-110	
Silver	100	95.047	95	90-110	
Sodium	10000	10294.747	103	90-110	
Thallium	100	102.849	103	90-110	
Vanadium	100	99.696	100	90-110	
Zinc	100	100.635	101	90-110	

CCV15 Date: 22-Jan-2019 18:40 Seq: 4920376 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	106.812	107	90-110	
Antimony	100	90.898	91	90-110	
Arsenic	100	103.838	104	90-110	
Barium	100	97.855	98	90-110	
Beryllium	100	99.55	100	90-110	
Cadmium	100	99.475	100	90-110	
Calcium	10000	10046.843	100	90-110	
Chromium	100	98.116	98	90-110	
Cobalt	100	97.967	98	90-110	
Copper	100	97.67	98	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV15 Date: 22-Jan-2019 18:40 Seq: 4920376 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Iron	10000	9933.926	99	90-110	
Lead	100	90.865	91	90-110	
Magnesium	10000	10255.137	103	90-110	
Manganese	100	100.715	101	90-110	
Nickel	100	98.553	99	90-110	
Potassium	10000	10275.315	103	90-110	
Selenium	100	101.668	102	90-110	
Silver	100	92.853	93	90-110	
Sodium	10000	10305.088	103	90-110	
Thallium	100	98.056	98	90-110	
Vanadium	100	99.099	99	90-110	
Zinc	100	99.976	100	90-110	

CCV16 Date: 22-Jan-2019 19:03 Seq: 4920386 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.548	102	90-110	
Antimony	100	87.811	88	90-110	S
Arsenic	100	100.188	100	90-110	
Barium	100	96.425	96	90-110	
Beryllium	100	98.967	99	90-110	
Cadmium	100	100.12	100	90-110	
Calcium	10000	9903.047	99	90-110	
Chromium	100	95.295	95	90-110	
Cobalt	100	96.213	96	90-110	
Copper	100	94.815	95	90-110	
Iron	10000	9640.269	96	90-110	
Lead	100	91.235	91	90-110	
Magnesium	10000	9810.61	98	90-110	
Manganese	100	97.114	97	90-110	
Nickel	100	97.303	97	90-110	
Potassium	10000	9775.603	98	90-110	
Selenium	100	99.95	100	90-110	
Silver	100	90.093	90	90-110	
Sodium	10000	9854.786	99	90-110	
Thallium	100	100.953	101	90-110	
Vanadium	100	96.019	96	90-110	
Zinc	100	97.095	97	90-110	

CCV17 Date: 22-Jan-2019 19:27 Seq: 4920398 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	106.414	106	90-110	
Antimony	100	89.72	90	90-110	S
Arsenic	100	102.724	103	90-110	
Barium	100	97.055	97	90-110	
Beryllium	100	94.977	95	90-110	
Cadmium	100	100.364	100	90-110	
Calcium	10000	9640.255	96	90-110	
Chromium	100	97.727	98	90-110	
Cobalt	100	98.001	98	90-110	
Copper	100	98.236	98	90-110	
Iron	10000	9887.719	99	90-110	
Lead	100	97.093	97	90-110	
Magnesium	10000	10081.676	101	90-110	
Manganese	100	98.676	99	90-110	
Nickel	100	99.555	100	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV17 Date: 22-Jan-2019 19:27 Seq: 4920398 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Potassium	10000	9969.038	100	90-110	
Selenium	100	102.368	102	90-110	
Silver	100	93.53	94	90-110	
Sodium	10000	10094.651	101	90-110	
Thallium	100	99.805	100	90-110	
Vanadium	100	97.995	98	90-110	
Zinc	100	101.714	102	90-110	

CCV18 Date: 22-Jan-2019 19:44 Seq: 4920408 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.152	102	90-110	
Antimony	100	88.843	89	90-110	S
Arsenic	100	101.997	102	90-110	
Barium	100	95.884	96	90-110	
Beryllium	100	99.554	100	90-110	
Cadmium	100	99.847	100	90-110	
Calcium	10000	9947.28	100	90-110	
Chromium	100	96.519	97	90-110	
Cobalt	100	95.251	95	90-110	
Copper	100	94.781	95	90-110	
Iron	10000	9560.23	96	90-110	
Lead	100	90.106	90	90-110	
Magnesium	10000	9889.621	99	90-110	
Manganese	100	96.829	97	90-110	
Nickel	100	96.373	96	90-110	
Potassium	10000	9926.712	99	90-110	
Selenium	100	98.718	99	90-110	
Silver	100	91.088	91	90-110	
Sodium	10000	9871.723	99	90-110	
Thallium	100	97.72	98	90-110	
Vanadium	100	96.265	96	90-110	
Zinc	100	98.73	99	90-110	

CCV19 Date: 22-Jan-2019 20:08 Seq: 4920420 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	107.868	108	90-110	
Antimony	100	92.503	93	90-110	
Arsenic	100	105.993	106	90-110	
Barium	100	99.126	99	90-110	
Beryllium	100	98.426	98	90-110	
Cadmium	100	103.156	103	90-110	
Calcium	10000	10121.465	101	90-110	
Chromium	100	100.209	100	90-110	
Cobalt	100	99.933	100	90-110	
Copper	100	99.908	100	90-110	
Iron	10000	10073.206	101	90-110	
Lead	100	92.551	93	90-110	
Magnesium	10000	10357.998	104	90-110	
Manganese	100	101.45	101	90-110	
Nickel	100	100.864	101	90-110	
Potassium	10000	10421.964	104	90-110	
Selenium	100	104.638	105	90-110	
Silver	100	96.429	96	90-110	
Sodium	10000	10448.413	104	90-110	
Thallium	100	98.402	98	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV19 Date: 22-Jan-2019 20:08 Seq: 4920420 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Vanadium	100	100.968	101	90-110	
Zinc	100	103.144	103	90-110	

CCV20 Date: 22-Jan-2019 20:39 Seq: 4920432 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	103.641	104	90-110	
Antimony	100	91.926	92	90-110	
Arsenic	100	104.062	104	90-110	
Barium	100	96.601	97	90-110	
Beryllium	100	96.68	97	90-110	
Cadmium	100	99.515	100	90-110	
Calcium	10000	10184.087	102	90-110	
Chromium	100	98.78	99	90-110	
Cobalt	100	97.899	98	90-110	
Copper	100	98.264	98	90-110	
Iron	10000	9772.548	98	90-110	
Lead	100	91.043	91	90-110	
Magnesium	10000	10125.558	101	90-110	
Manganese	100	99.652	100	90-110	
Nickel	100	99.939	100	90-110	
Potassium	10000	10154.513	102	90-110	
Selenium	100	102.151	102	90-110	
Silver	100	96.031	96	90-110	
Sodium	10000	10172.12	102	90-110	
Thallium	100	98.103	98	90-110	
Vanadium	100	98.957	99	90-110	
Zinc	100	101.972	102	90-110	

ICCV21 Date: 22-Jan-2019 21:01 Seq: 4920442 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	104.89	105	90-110	
Antimony	100	98.082	98	90-110	
Arsenic	100	103.34	103	90-110	
Barium	100	99.305	99	90-110	
Beryllium	100	108.703	109	90-110	
Cadmium	100	103.248	103	90-110	
Calcium	10000	10342.052	103	90-110	
Chromium	100	101.86	102	90-110	
Cobalt	100	101.046	101	90-110	
Copper	100	103.067	103	90-110	
Iron	10000	10368.049	104	90-110	
Lead	100	105.104	105	90-110	
Magnesium	10000	10499.708	105	90-110	
Manganese	100	104.329	104	90-110	
Nickel	100	103.734	104	90-110	
Potassium	10000	10354.583	104	90-110	
Selenium	100	103.225	103	90-110	
Silver	100	104.293	104	90-110	
Sodium	10000	10449.61	104	90-110	
Thallium	100	107.411	107	90-110	
Vanadium	100	99.765	100	90-110	
Zinc	100	103.842	104	90-110	

ALS Houston, US

Date: 25-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV22 Date: 22-Jan-2019 21:26 Seq: 4920455 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.431	99	90-110	
Antimony	100	96.757	97	90-110	
Arsenic	100	99.284	99	90-110	
Barium	100	96.413	96	90-110	
Beryllium	100	99.861	100	90-110	
Cadmium	100	99.735	100	90-110	
Calcium	10000	9634.332	96	90-110	
Chromium	100	98.345	98	90-110	
Cobalt	100	98.253	98	90-110	
Copper	100	100.009	100	90-110	
Iron	10000	9982.86	100	90-110	
Lead	100	101.643	102	90-110	
Magnesium	10000	9927.205	99	90-110	
Manganese	100	101.055	101	90-110	
Nickel	100	100.6	101	90-110	
Potassium	10000	9759.082	98	90-110	
Selenium	100	100.02	100	90-110	
Silver	100	102.106	102	90-110	
Sodium	10000	9983.285	100	90-110	
Thallium	100	98.388	98	90-110	
Vanadium	100	96.237	96	90-110	
Zinc	100	100.415	100	90-110	

CCV23 Date: 22-Jan-2019 22:03 Seq: 4920467 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	97.033	97	90-110	
Antimony	100	95.6	96	90-110	
Arsenic	100	97.958	98	90-110	
Barium	100	98.044	98	90-110	
Beryllium	100	98.598	99	90-110	
Cadmium	100	99.58	100	90-110	
Calcium	10000	9732.748	97	90-110	
Chromium	100	95.577	96	90-110	
Cobalt	100	95.163	95	90-110	
Copper	100	96.689	97	90-110	
Iron	10000	9632.496	96	90-110	
Lead	100	87.014	87	90-110	S
Magnesium	10000	9735.911	97	90-110	
Manganese	100	98.183	98	90-110	
Nickel	100	97.877	98	90-110	
Potassium	10000	9700.632	97	90-110	
Selenium	100	97.491	98	90-110	
Silver	100	100.893	101	90-110	
Sodium	10000	9827.98	98	90-110	
Thallium	100	98.951	99	90-110	
Vanadium	100	93.749	94	90-110	
Zinc	100	98.595	99	90-110	

CCV24 Date: 22-Jan-2019 22:39 Seq: 4920480 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	93.401	93	90-110	
Antimony	100	90.765	91	90-110	
Arsenic	100	93.554	94	90-110	
Barium	100	96.068	96	90-110	
Beryllium	100	97.256	97	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV24 Date: 22-Jan-2019 22:39 Seq: 4920480 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	100.656	101	90-110	
Calcium	10000	9288.576	93	90-110	
Chromium	100	91.615	92	90-110	
Cobalt	100	90.884	91	90-110	
Copper	100	92.438	92	90-110	
Iron	10000	9411.832	94	90-110	
Lead	100	94.586	95	90-110	
Magnesium	10000	9312.898	93	90-110	
Manganese	100	94.473	95	90-110	
Nickel	100	93.009	93	90-110	
Potassium	10000	9450.717	95	90-110	
Selenium	100	94.49	95	90-110	
Silver	100	98.31	98	90-110	
Sodium	10000	9657.707	97	90-110	
Thallium	100	98.343	98	90-110	
Vanadium	100	89.588	90	90-110	S
Zinc	100	94.573	95	90-110	

ICCV25 Date: 22-Jan-2019 23:03 Seq: 4920523 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	106.837	107	90-110	
Antimony	100	100.414	100	90-110	
Arsenic	100	105.481	105	90-110	
Barium	100	100.554	101	90-110	
Beryllium	100	109.255	109	90-110	
Cadmium	100	102.962	103	90-110	
Calcium	10000	10411.187	104	90-110	
Chromium	100	102.765	103	90-110	
Cobalt	100	103.17	103	90-110	
Copper	100	106.259	106	90-110	
Iron	10000	10477.667	105	90-110	
Lead	100	104.099	104	90-110	
Magnesium	10000	10625.317	106	90-110	
Manganese	100	107.213	107	90-110	
Nickel	100	106.883	107	90-110	
Potassium	10000	10586.029	106	90-110	
Selenium	100	105.159	105	90-110	
Silver	100	105.348	105	90-110	
Sodium	10000	10609.858	106	90-110	
Thallium	100	106	106	90-110	
Vanadium	100	105.037	105	90-110	
Zinc	100	105.307	105	90-110	

CCV26 Date: 22-Jan-2019 23:23 Seq: 4920533 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	105.703	106	90-110	
Antimony	100	99.579	100	90-110	
Arsenic	100	104.983	105	90-110	
Barium	100	93.19	93	90-110	
Beryllium	100	101.573	102	90-110	
Cadmium	100	97.543	98	90-110	
Calcium	10000	10406.422	104	90-110	
Chromium	100	102.866	103	90-110	
Cobalt	100	103.238	103	90-110	
Copper	100	104.714	105	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV26 Date: 22-Jan-2019 23:23 Seq: 4920533 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Iron	10000	10484.691	105	90-110	
Lead	100	102.633	103	90-110	
Magnesium	10000	10519.104	105	90-110	
Manganese	100	106.352	106	90-110	
Nickel	100	106.212	106	90-110	
Potassium	10000	10181.397	102	90-110	
Selenium	100	103.969	104	90-110	
Silver	100	105.854	106	90-110	
Sodium	10000	10443.046	104	90-110	
Thallium	100	100.901	101	90-110	
Vanadium	100	104.341	104	90-110	
Zinc	100	105.073	105	90-110	

CCV27 Date: 22-Jan-2019 23:47 Seq: 4920545 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.011	99	90-110	
Antimony	100	93.605	94	90-110	
Arsenic	100	97.396	97	90-110	
Barium	100	97.269	97	90-110	
Beryllium	100	100.082	100	90-110	
Cadmium	100	98.567	99	90-110	
Calcium	10000	9800.499	98	90-110	
Chromium	100	95.847	96	90-110	
Cobalt	100	94.418	94	90-110	
Copper	100	99.482	100	90-110	
Iron	10000	9631.794	96	90-110	
Lead	100	81.632	82	90-110	S
Magnesium	10000	9991.84	100	90-110	
Manganese	100	97.423	97	90-110	
Nickel	100	98.313	98	90-110	
Potassium	10000	9819.109	98	90-110	
Selenium	100	92.992	93	90-110	
Silver	100	98.182	98	90-110	
Sodium	10000	10061.559	101	90-110	
Thallium	100	99.875	100	90-110	
Vanadium	100	98.19	98	90-110	
Zinc	100	98.75	99	90-110	

CCV28 Date: 22-Jan-2019 23:51 Seq: 4920547 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	92.114	92	90-110	
Antimony	100	89.106	89	90-110	S
Arsenic	100	93.319	93	90-110	
Barium	100	96.88	97	90-110	
Beryllium	100	98.558	99	90-110	
Cadmium	100	97.983	98	90-110	
Calcium	10000	9288.758	93	90-110	
Chromium	100	90.9	91	90-110	
Cobalt	100	90.053	90	90-110	
Copper	100	93.372	93	90-110	
Iron	10000	9148.976	92	90-110	
Lead	100	81.281	81	90-110	S
Magnesium	10000	9415.505	94	90-110	
Manganese	100	93.098	93	90-110	
Nickel	100	94.014	94	90-110	

ALS Houston, US

Date: 25-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCV28 | Date: 22-Jan-2019 23:51 | Seq: 4920547 | CCV | Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Potassium	10000	9216.234	92	90-110	
Selenium	100	87.57	88	90-110	S
Silver	100	93.096	93	90-110	
Sodium	10000	9430.616	94	90-110	
Thallium	100	101.792	102	90-110	
Vanadium	100	92.489	93	90-110	
Zinc	100	93.578	94	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: HG03_330807
Instrument: HG03
Method: SW7470

ICB	Date: 10-Jan-2019 13:36		Seq: 4903437	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.031	0.03	0.2	J	

CCB1	Date: 10-Jan-2019 14:00		Seq: 4903446	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB2	Date: 10-Jan-2019 14:20		Seq: 4903458	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB3	Date: 10-Jan-2019 14:40		Seq: 4903469	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB4	Date: 10-Jan-2019 15:08		Seq: 4903481	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB5	Date: 10-Jan-2019 15:29		Seq: 4903493	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB6	Date: 10-Jan-2019 15:56		Seq: 4903528	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB7	Date: 10-Jan-2019 16:15		Seq: 4903539	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.033	0.03	0.2	J	

CCB8	Date: 10-Jan-2019 16:32		Seq: 4903580	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB9	Date: 10-Jan-2019 18:06		Seq: 4903820	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.033	0.03	0.2	J	

CCB10	Date: 10-Jan-2019 18:27		Seq: 4903832	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.034	0.03	0.2	J	

CCB11	Date: 10-Jan-2019 18:50		Seq: 4903866	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.034	0.03	0.2	J	

MBLK-136505	Date: 10-Jan-2019 18:52		Seq: 4903867	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.043	0.03	0.2	J	

CCB12	Date: 10-Jan-2019 19:11		Seq: 4903878	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.04	0.03	0.2	J	

CCB13	Date: 10-Jan-2019 19:32		Seq: 4903890	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.035	0.03	0.2	J	

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Date: 25-Jan-19

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: HG03_330807
Instrument: HG03
Method: SW7470

CCB14 | Date: 10-Jan-2019 19:41 | Seq: 4903895 | CCB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Mercury	0.036	0.03	0.2	J

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

ICB Date: 22-Jan-2019 12:18 Seq: 4919074 ICB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	3.041	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	200	14	200	U
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB1 Date: 22-Jan-2019 12:51 Seq: 4919350 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	3.153	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	24.35	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	22.43	14	200	J
Thallium	0.271	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB2 Date: 22-Jan-2019 13:11 Seq: 4919360 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	2.929	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB2	Date: 22-Jan-2019 13:11		Seq: 4919360	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	21.68	14	200	J	
Thallium	0.263	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB3	Date: 22-Jan-2019 13:46		Seq: 4919495	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	2.971	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	44.97	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	59.02	14	200	J	
Thallium	0.269	0.2	2	J	
Vanadium	0.787	0.6	5	J	
Zinc	4	2	4	U	

CCB4	Date: 22-Jan-2019 14:22		Seq: 4919580	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	2.661	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB4 Date: 22-Jan-2019 14:22 Seq: 4919580 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	120.6	14	200	J
Thallium	2	0.2	2	U
Vanadium	0.781	0.6	5	J
Zinc	4	2	4	U

CCB5 Date: 22-Jan-2019 14:46 Seq: 4919749 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	2.85	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	34.48	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	21.82	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	64.24	14	200	J
Thallium	0.256	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB6 Date: 22-Jan-2019 15:25 Seq: 4919913 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	2.596	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB6	Date: 22-Jan-2019 15:25		Seq: 4919913	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	40.21	14	200	J	
Thallium	0.264	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB7	Date: 22-Jan-2019 15:48		Seq: 4919923	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	2.632	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	33.92	14	200	J	
Thallium	0.31	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

ICCB8	Date: 22-Jan-2019 16:25		Seq: 4920030	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

ICCB8	Date: 22-Jan-2019 16:25		Seq: 4920030	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

MBLK-136717	Date: 22-Jan-2019 16:33		Seq: 4920121	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	4.917	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB9	Date: 22-Jan-2019 16:50		Seq: 4920130	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	3.456	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	39.64	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	19.9	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	226	14	200		
Thallium	0.344	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB10 Date: 22-Jan-2019 17:08 Seq: 4920137 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	3.41	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	37.3	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	40.05	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	169.9	14	200	J
Thallium	0.316	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB11 Date: 22-Jan-2019 17:30 Seq: 4920175 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	3.346	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	37.96	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	38.89	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	61.34	14	200	J
Thallium	0.392	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB12 Date: 22-Jan-2019 17:46 Seq: 4920292 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	3.258	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB12	Date: 22-Jan-2019 17:46		Seq: 4920292	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Cadmium	2	0.2	2	U	
Calcium	48.29	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	44.37	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	114.3	14	200	J	
Thallium	0.339	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB13	Date: 22-Jan-2019 18:10		Seq: 4920304	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	3.774	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	35.48	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	16.25	10	200	J	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	68.93	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	642.6	14	200		
Thallium	0.344	0.2	2	J	
Vanadium	0.735	0.6	5	J	
Zinc	4	2	4	U	

CCB14	Date: 22-Jan-2019 18:28		Seq: 4920374	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	3.435	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB14 Date: 22-Jan-2019 18:28 Seq: 4920374 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	47.46	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	159.8	14	200	J
Thallium	0.333	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB15 Date: 22-Jan-2019 19:05 Seq: 4920387 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	3.233	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	41.93	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	25.13	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	83.14	14	200	J
Thallium	0.342	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB16 Date: 22-Jan-2019 19:29 Seq: 4920399 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	3.358	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	42.76	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB16	Date: 22-Jan-2019 19:29		Seq: 4920399	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Potassium	58.68	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	146.7	14	200	J	
Thallium	0.313	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB17	Date: 22-Jan-2019 19:46		Seq: 4920409	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	3.335	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	41.23	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	97.53	14	200	J	
Thallium	0.346	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB18	Date: 22-Jan-2019 20:10		Seq: 4920421	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	3.819	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	37.88	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	59.66	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	131.5	14	200	J	
Thallium	0.379	0.2	2	J	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB18	Date: 22-Jan-2019 20:10		Seq: 4920421	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB19	Date: 22-Jan-2019 20:35		Seq: 4920430	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	3.427	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	44.31	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	57.09	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	91.38	14	200	J	
Thallium	0.334	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

ICCB20	Date: 22-Jan-2019 21:07		Seq: 4920445	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	0.968	0.6	5	J	
Zinc	4	2	4	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB21 Date: 22-Jan-2019 21:28 Seq: 4920456 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	-24.37	14	200	J
Thallium	0.306	0.2	2	J
Vanadium	0.706	0.6	5	J
Zinc	4	2	4	U

CCB22 Date: 22-Jan-2019 21:46 Seq: 4920465 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	25.26	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	200	14	200	U
Thallium	0.321	0.2	2	J
Vanadium	1.098	0.6	5	J
Zinc	4	2	4	U

CCB23 Date: 22-Jan-2019 22:25 Seq: 4920478 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB23	Date: 22-Jan-2019 22:25		Seq: 4920478	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	20.29	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	351.1	14	200		
Thallium	0.298	0.2	2	J	
Vanadium	1.127	0.6	5	J	
Zinc	4	2	4	U	

ICCB24	Date: 22-Jan-2019 23:10		Seq: 4920526	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-73.17	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB25	Date: 22-Jan-2019 23:25		Seq: 4920534	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB25 Date: 22-Jan-2019 23:25 Seq: 4920534 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	-88.14	14	200	J
Thallium	0.39	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB26 Date: 22-Jan-2019 23:49 Seq: 4920546 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	-48.36	14	200	J
Thallium	0.344	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB27 Date: 22-Jan-2019 23:53 Seq: 4920548 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U

ALS Houston, US

Date: 25-Jan-19

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID: ICPMS05_331472
Instrument: ICPMS05
Method: SW6020

CCB27 | Date: 22-Jan-2019 23:53 | Seq: 4920548 | CCB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Potassium	-18.45	18	200	J
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	-53.36	14	200	J
Thallium	0.348	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID:ICPMS05_331472
Instrument:ICPMS05
Method:SW6020

ICSA	Date: 22-Jan-2019 12:29	Seq: 4919120	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	96050	96.0	
Antimony		0.148	0	
Arsenic		0.167	0	
Barium		0.174	0	
Beryllium		-0.016	0	
Cadmium		2.505	0	
Calcium	100000	97920	97.9	
Chromium		0.27	0	
Cobalt		0.288	0	
Copper		0.388	0	
Iron	100000	100800	101	
Lead		0.07	0	
Magnesium	100000	100600	101	
Manganese		0.526	0	
Nickel		0.518	0	
Potassium	100000	101100	101	
Selenium		0.295	0	
Silver		0.025	0	
Sodium	100000	103100	103	
Thallium		0.002	0	
Vanadium		0.526	0	
Zinc		0.902	0	

ICSAB	Date: 22-Jan-2019 12:31	Seq: 4919121	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	93940	93.5	
Antimony	100	112.8	113	
Arsenic	100	116.9	117	
Barium	100	117.7	118	
Beryllium	100	105.6	106	
Cadmium	100	118.7	119	
Calcium	110000	108800	98.9	
Chromium	100	113.6	114	
Cobalt	100	112.7	113	
Copper	100	113.5	113	
Iron	110000	111600	101	
Lead	100	109.2	109	
Magnesium	110000	111200	101	
Manganese	100	114.9	115	
Nickel	100	112.1	112	
Potassium	110000	110600	101	
Selenium	100	117.9	118	
Silver	100	106.5	106	
Sodium	110000	114000	104	
Thallium	100	118.7	119	
Vanadium	100	115.7	116	
Zinc	100	116	116	

ICSA	Date: 22-Jan-2019 23:59	Seq: 4920551	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	101300	101	
Antimony		0.179	0	
Arsenic		0.195	0	
Barium		0.109	0	

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Run ID:ICPMS05_331472
Instrument:ICPMS05
Method:SW6020

ICSA	Date: 22-Jan-2019 23:59	Seq: 4920551	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Beryllium		0.005	0	
Cadmium		2.128	0	
Calcium	100000	102000	102	
Chromium		0.33	0	
Cobalt		0.28	0	
Copper		0.317	0	
Iron	100000	105900	106	
Lead		0.051	0	
Magnesium	100000	107500	107	
Manganese		0.608	0	
Nickel		0.644	0	
Potassium	100000	104300	104	
Selenium		0.715	0	
Silver		0.004	0	
Sodium	100000	109900	110	
Thallium		0.028	0	
Vanadium		0.541	0	
Zinc		3.537	0	

ICSAB	Date: 23-Jan-2019 00:01	Seq: 4920552	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	99970	99.5	
Antimony	100	115.3	115	
Arsenic	100	123.8	124	
Barium	100	115.3	115	
Beryllium	100	115.8	116	
Cadmium	100	117.8	118	
Calcium	110000	114100	104	
Chromium	100	118.6	119	
Cobalt	100	116.6	117	
Copper	100	119.8	120	
Iron	110000	116500	106	
Lead	100	89	89.0	
Magnesium	110000	119300	108	
Manganese	100	120.1	120	
Nickel	100	119.2	119	
Potassium	110000	115700	105	
Selenium	100	120	120	
Silver	100	114.7	115	
Sodium	110000	122900	112	
Thallium	100	116.4	116	
Vanadium	100	122.8	123	
Zinc	100	121.5	121	

ALS Houston, US

Date: 25-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Date Analyzed: 10-Jan-2019 18:59
Date Extracted: 10-Jan-2019 13:30
Units: ug/L

Matrix Spike: HS19010248-03MS
Client Sample ID: 18CPTMW14_010719

Analysis Method: SW7470

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Mercury	0.03200	5.130	5.000	102	5.060	5.000	101	75-125	1.37	20

ALS Houston, US

Date: 25-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Date Analyzed: 22-Jan-2019 16:42
Date Extracted: 17-Jan-2019 08:30
Units: ug/L

Matrix Spike: HS19010627-01MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aluminum	284.8	391.2	100.0	106	402.3	100.0	117	80-120	2.79	20
Antimony	2.000	48.32	50.00	96.6	48.28	50.00	96.6	80-120	0.0807	20
Arsenic	3.203	57.57	50.00	109	58.10	50.00	110	80-120	0.920	20
Barium	3.934	55.17	50.00	102	54.37	50.00	101	80-120	1.46	20
Beryllium	2.000	54.43	50.00	109	55.04	50.00	110	80-120	1.10	20
Cadmium	0.3740	53.18	50.00	106	53.51	50.00	106	80-120	0.628	20
Calcium	31760	37830	5000	121	38200	5000	129	80-120	0.965	20
Chromium	4.000	51.49	50.00	103	51.82	50.00	104	80-120	0.641	20
Cobalt	5.000	52.05	50.00	104	52.28	50.00	105	80-120	0.433	20
Copper	2.000	51.86	50.00	104	52.20	50.00	104	80-120	0.655	20
Iron	200.0	5312	5000	106	5346	5000	107	80-120	0.654	20
Lead	2.000	43.75	50.00	87.5	46.83	50.00	93.7	80-120	6.81	20
Magnesium	244.4	5804	5000	111	5784	5000	111	80-120	0.337	20
Manganese	2.753	54.68	50.00	104	57.13	50.00	109	80-120	4.38	20
Nickel	0.6080	52.09	50.00	103	52.35	50.00	103	80-120	0.500	20
Potassium	22270	27610	5000	107	28800	5000	131	80-120	4.22	20
Selenium	5.057	60.30	50.00	110	61.42	50.00	113	80-120	1.83	20
Silver	2.000	47.78	50.00	95.6	48.70	50.00	97.4	80-120	1.89	20
Sodium	572400	578600	5000	123	593200	5000	416	80-120	2.50	20
Thallium	0.3230	54.01	50.00	107	53.44	50.00	106	80-120	1.06	20
Vanadium	1.792	55.36	50.00	107	56.04	50.00	108	80-120	1.21	20
Zinc	2.262	53.75	50.00	103	54.19	50.00	104	80-120	0.817	20

ALS Houston, US

Date: 25-Jan-19

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Date Analyzed: 22-Jan-2019 16:44
Date Extracted: 17-Jan-2019 08:30
Units: ug/L

Lab Sample ID: HS19010627-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Aluminum	284.8	374.3	100	89	75-125
Antimony	0	87.12	100	87	75-125
Arsenic	3.203	107.3	100	104	75-125
Barium	3.934	102.2	100	98	75-125
Beryllium	0	102.3	100	102	75-125
Cadmium	0.374	102.3	100	102	75-125
Calcium	31760	40580	10000	88	75-125
Chromium	0	98.86	100	99	75-125
Cobalt	0	99.3	100	99	75-125
Copper	0	97.68	100	97	75-125
Iron	0	10150	10000	102	75-125
Lead	0	88.72	100	89	75-125
Magnesium	244.4	10960	10000	107	75-125
Manganese	2.753	102.4	100	100	75-125
Nickel	0.608	99.92	100	99	75-125
Potassium	22270	32690	10000	104	75-125
Selenium	5.057	111.2	100	106	75-125
Silver	0	93.36	100	93	75-125
Thallium	0.323	104.2	100	104	75-125
Vanadium	1.792	104.7	100	103	75-125
Zinc	2.262	103.1	100	101	75-125
Sodium	602600	1151000	500000	110	75-125

ALS Houston, US

Date: 25-Jan-19

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Date Analyzed: 10-Jan-2019 18:54
Date Extracted: 10-Jan-2019 13:30
Units: ug/L

Lab Sample ID: LCS-136505

Analysis Method: SW7470

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Mercury	5	5.09	102	80-120

ALS Houston, US

Date: 25-Jan-19

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.

Project: LHAAP 18/24

WorkOrder: HS19010248

Date Analyzed: 22-Jan-2019 16:35

Date Extracted: 17-Jan-2019 08:30

Units: ug/L

Lab Sample ID: LCS-136717

Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Aluminum	100	112.1	112	80-120
Antimony	50	49.74	100	80-120
Arsenic	50	52.11	104	80-120
Barium	50	51.98	104	80-120
Beryllium	50	53.63	107	80-120
Cadmium	50	54.29	109	80-120
Calcium	5000	5553	111	80-120
Chromium	50	51.55	103	80-120
Cobalt	50	52.67	105	80-120
Copper	50	53.42	107	80-120
Iron	5000	5355	107	80-120
Lead	50	53.67	107	80-120
Magnesium	5000	5461	109	80-120
Manganese	50	52.96	106	80-120
Nickel	50	52.96	106	80-120
Potassium	5000	5353	107	80-120
Selenium	50	53.46	107	80-120
Silver	50	53.39	107	80-120
Sodium	5000	5421	108	80-120
Thallium	50	51.95	104	80-120
Vanadium	50	51.3	103	80-120
Zinc	50	53.83	108	80-120

ALS Houston, US

Date: 25-Jan-19

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS19010248

Date Analyzed: 22-Jan-2019 16:39
Date Extracted: 17-Jan-2019 08:30
Units: ug/L

Lab Sample ID: HS19010627-01SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Aluminum	284.8		288.6		1	
Antimony	0	U	0	U	0	
Arsenic	3.203		3.007	J	6	
Barium	3.934	J	0	U	0	
Beryllium	0	U	0	U	0	
Cadmium	0.374	J	0	U	0	
Calcium	31760		33460		5	
Chromium	0	U	0	U	0	
Cobalt	0	U	0	U	0	
Copper	0	U	0	U	0	
Iron	0	U	0	U	0	
Lead	0	U	0	U	0	
Magnesium	244.4		248.2	J	2	
Manganese	2.753	J	0	U	0	
Nickel	0.608	J	0	U	0	
Potassium	22270		23800		7	
Selenium	5.057		6.942	J	37	
Silver	0	U	0	U	0	
Thallium	0.323	J	0	U	0	
Vanadium	1.792	J	4.634	J	159	
Zinc	2.262	J	0	U	0	
Sodium	602600		656500		9	

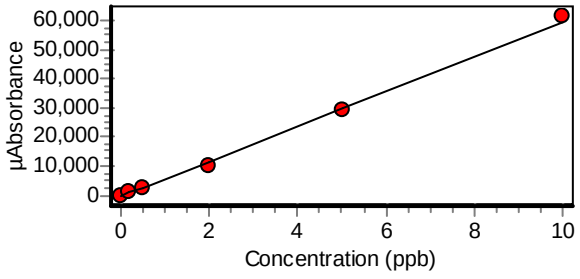
Report Generated By CETAC QuickTrace
Analyst: ALSHS.NoUser
Worksheet file: C:\Program Files (x86)\QuickTrace\Worksheets\011019AW.wsz
Date Started: 1/10/2019 1:01:32 PM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank					STD	01/10/19 01:18:25 pm	0.000	74	11.84	
Replicates	79.1	79.3	61.1	77.1						
Standard #1 (0.2 ppb)					STD	01/10/19 01:20:06 pm	0.200	1238	0.69	
Replicates	1231.9	1246.8	1229.8	1244.0						
Standard #2 (0.5 ppb)					STD	01/10/19 01:21:48 pm	0.500	2450	0.39	
Replicates	2441.4	2453.0	2443.3	2462.0						
Standard #3 (2.0 ppb)					STD	01/10/19 01:23:31 pm	2.000	10345	0.94	
Replicates	10226.3	10316.5	10383.7	10455.2						
Standard #4 (5.0 ppb)					STD	01/10/19 01:25:14 pm	5.000	29128	1.00	
Replicates	28751.2	29070.3	29265.5	29426.3						
Standard #5 (10.0 ppb)					STD	01/10/19 01:29:46 pm	10.000	61333	0.53	
Replicates	60927.2	61250.0	61462.0	61693.8						

Calibration

Equation: A = -160.449 + 5972.530C
R2: 0.99801
SEE: 1200.6000
Flags:



ICCV					UNK	01/10/19 01:32:51 pm	5.190	30866	0.30	
Replicates	30743.8	30846.8	30915.8	30958.8						
ICV					UNK	01/10/19 01:34:32 pm	5.140	30516	0.34	
Replicates	30386.5	30481.5	30575.5	30618.5						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
ICB					UNK	01/10/19 01:36:14 pm	0.031	26	21.20	
	Replicates	34.0	22.2	27.2	22.2					
CRA					UNK	01/10/19 01:37:55 pm	0.235	1245	1.07	
	Replicates	1234.6	1248.4	1233.6	1261.9					
MBLK-136484					UNK	01/10/19 01:48:14 pm	0.043	94	9.44	s
	Replicates	82.1	100.7	91.2	100.4					
LCS-136484					UNK	01/10/19 01:49:56 pm	5.250	31203	0.15	
	Replicates	31141.6	31201.8	31215.0	31251.8					
HS19010243-02					UNK	01/10/19 01:51:39 pm	0.030	20	90.83	
	Replicates	-6.7	27.8	25.0	33.8					
HS19010243-02MS					UNK	01/10/19 01:53:22 pm	5.180	30769	0.49	
	Replicates	30580.6	30712.7	30875.0	30905.7					
HS19010243-01MSD					UNK	01/10/19 01:55:05 pm	5.240	31153	0.30	
	Replicates	31043.2	31122.2	31180.9	31263.7					
MBLKT1-136484					UNK	01/10/19 01:56:48 pm	0.025	-13	176.07	
	Replicates	-2.5	-45.7	-13.5	8.5					
CCV					CCV	01/10/19 01:58:32 pm	5.240	31129	0.18	
	Replicates	31047.8	31131.0	31155.7	31180.0					
	% Recovery	104.78								
CCB					CCB	01/10/19 02:00:16 pm	0.023	-22	76.11	
	Replicates	-13.3	-46.8	-17.1	-10.8					
HS18121466-01					UNK	01/10/19 02:02:00 pm	0.035	48	25.79	
	Replicates	34.2	64.0	45.5	46.7					
HS18121471-01					UNK	01/10/19 02:03:44 pm	0.053	155	4.12	
	Replicates	156.5	162.4	156.1	146.9					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121486-01					UNK	01/10/19 02:05:25 pm	1.020	5928	1.67	
Replicates	5810.2	5889.8	5976.3	6037.0						
HS19010069-01					UNK	01/10/19 02:07:05 pm	0.020	-39	20.51	
Replicates	-44.6	-47.1	-32.4	-31.9						
HS19010108-01					UNK	01/10/19 02:08:47 pm	0.022	-29	46.91	
Replicates	-37.0	-11.3	-26.5	-42.5						
HS19010108-02					UNK	01/10/19 02:10:28 pm	0.025	-9	206.78	
Replicates	17.6	-23.9	-8.6	-22.4						
HS19010132-01					UNK	01/10/19 02:12:10 pm	0.034	42	17.26	
Replicates	46.9	44.0	31.5	46.8						
HS19010134-01					UNK	01/10/19 02:13:52 pm	0.029	15	84.33	
Replicates	18.1	-2.6	26.9	16.6						
HS19010243-01					UNK	01/10/19 02:15:34 pm	0.026	-5	271.73	
Replicates	-13.3	14.6	-8.2	-12.4						
HS19010255-01					UNK	01/10/19 02:17:16 pm	0.028	6	314.28	
Replicates	16.2	17.2	-19.8	8.4						
CCV					CCV	01/10/19 02:19:00 pm	5.240	31148	0.20	
Replicates	31076.7	31120.7	31172.4	31221.2						
% Recovery	104.84									
CCB					CCB	01/10/19 02:20:45 pm	0.022	-30	50.91	
Replicates	-42.5	-12.2	-23.0	-44.2						
HS19010255-02					UNK	01/10/19 02:22:27 pm	0.026	-4	42.32	
Replicates	-1.6	-4.3	-3.8	-5.3						
HS19010324-01					UNK	01/10/19 02:24:11 pm	0.029	10	59.24	
Replicates	8.9	14.9	1.9	12.7						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010330-01					UNK	01/10/19 02:25:54 pm	0.025	-13	88.91	
Replicates	-24.8	-2.4	-19.6	-3.9						
HS19010344-01					UNK	01/10/19 02:27:38 pm	0.026	-3	507.66	
Replicates	2.8	3.2	7.4	-25.3						
HS18121484-01					UNK	01/10/19 02:29:19 pm	5.970	35470	2.12	
Replicates	34620.1	35158.3	35736.0	36366.0						
HS19010133-01					UNK	01/10/19 02:30:59 pm	0.042	92	9.36	s
Replicates	103.5	89.0	94.0	83.0						
HS19010170-01					UNK	01/10/19 02:32:41 pm	0.024	-20	35.24	
Replicates	-18.6	-10.9	-26.7	-24.9						
HS19010170-02					UNK	01/10/19 02:34:22 pm	0.022	-26	33.32	
Replicates	-15.9	-32.1	-35.1	-22.6						
HS19010170-03					UNK	01/10/19 02:36:04 pm	0.045	111	19.10	s
Replicates	89.4	105.9	107.7	139.9						
CCV					CCV	01/10/19 02:38:50 pm	5.190	30813	0.56	
Replicates	30566.5	30827.7	30908.5	30950.2						
% Recovery	103.72									
CCB					CCB	01/10/19 02:40:35 pm	0.019	-46	24.85	
Replicates	-32.4	-59.1	-41.9	-49.9						
MBLK-136485					UNK	01/10/19 02:49:44 pm	0.027	-1	096.31	
Replicates	0.7	-6.8	27.9	-26.1						
LCS-136485					UNK	01/10/19 02:51:27 pm	5.250	31209	0.18	
Replicates	31147.6	31192.9	31214.4	31280.7						
HS19010249-03					UNK	01/10/19 02:53:09 pm	0.036	54	26.25	s
Replicates	46.0	38.4	64.9	67.4						

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010249-03MS				UNK	01/10/19 02:54:52 pm	5.230	31103	0.12	
Replicates	31054.6	31095.2	31129.9	31132.2					
HS19010249-03MSD				UNK	01/10/19 02:56:35 pm	5.170	30727	0.61	
Replicates	30512.6	30654.7	30792.5	30948.5					
MBLKT1-136485				UNK	01/10/19 02:58:19 pm	0.021	-37	30.32	
Replicates	-20.4	-41.6	-45.4	-39.6					
HS18120382-09				UNK	01/10/19 03:00:03 pm	0.060	201	1.09	
Replicates	203.0	198.6	199.1	202.1					
HS19010223-01				UNK	01/10/19 03:01:44 pm	0.035	49	22.93	
Replicates	54.3	53.4	32.4	56.6					
HS19010240-01				UNK	01/10/19 03:03:25 pm	0.067	242	2.73	
Replicates	242.6	242.7	233.0	249.0					
HS19010249-01				UNK	01/10/19 03:05:06 pm	0.161	803	1.94	
Replicates	797.2	783.9	815.6	816.1					
CCV				CCV	01/10/19 03:06:49 pm	5.040	29912	0.24	
Replicates	29826.3	29903.7	29918.5	29998.0					
% Recovery	100.70								
CCB				CCB	01/10/19 03:08:33 pm	0.028	4	128.18	
Replicates	3.0	-2.7	6.5	8.3					
HS19010249-02				UNK	01/10/19 03:10:15 pm	0.062	210	7.81	s
Replicates	218.6	196.0	195.8	228.3					
HS19010249-04				UNK	01/10/19 03:11:57 pm	0.028	8	104.78	
Replicates	-3.2	8.0	17.2	10.2					
HS19010249-05				UNK	01/10/19 03:13:39 pm	0.022	-28	46.56	
Replicates	-39.4	-26.0	-35.3	-10.3					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010249-06					UNK	01/10/19 03:15:21 pm	0.028	6	89.92	
Replicates	3.4	2.8	14.3	3.8						
HS19010250-01					UNK	01/10/19 03:17:04 pm	0.026	-6	381.52	
Replicates	-6.1	2.4	16.6	-36.4						
HS19010250-02					UNK	01/10/19 03:18:47 pm	0.024	-17	175.95	
Replicates	-26.9	20.2	-50.3	-10.3						
HS19010250-03					UNK	01/10/19 03:20:30 pm	0.025	-10	93.99	
Replicates	-21.4	0.9	-7.6	-11.1						
HS19010251-01					UNK	01/10/19 03:22:13 pm	0.033	37	47.61	
Replicates	21.9	57.2	22.7	47.2						
HS19010252-01					UNK	01/10/19 03:23:57 pm	0.034	40	63.20	
Replicates	46.3	66.0	5.5	41.8						
HS19010264-01					UNK	01/10/19 03:25:38 pm	0.461	2593	0.68	
Replicates	2586.0	2577.3	2591.5	2618.3						
CCV					CCV	01/10/19 03:27:22 pm	5.080	30158	0.10	
Replicates	30118.6	30182.2	30177.7	30153.2						
% Recovery	101.53									
CCB					CCB	01/10/19 03:29:06 pm	0.029	12	89.49	
Replicates	25.9	-0.8	13.7	10.2						
HS19010277-01					UNK	01/10/19 03:30:48 pm	0.027	0	769.67	
Replicates	-7.8	10.8	-0.2	-3.9						
HS19010293-01					UNK	01/10/19 03:32:29 pm	0.020	-40	60.36	
Replicates	-31.8	-68.7	-48.5	-11.7						
HS19010299-02					UNK	01/10/19 03:34:11 pm	0.021	-37	47.54	
Replicates	-13.1	-42.1	-36.9	-54.9						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010246-01					UNK	01/10/19 03:35:52 pm	0.026	-4	523.03	
Replicates	-15.3	2.8	21.0	-23.7						
HS19010262-01					UNK	01/10/19 03:37:34 pm	0.234	1235	1.37	
Replicates	1224.4	1227.5	1260.2	1227.7						
MBLK-136498					UNK	01/10/19 03:45:55 pm	0.035	52	18.58	s
Replicates	60.3	38.0	55.3	53.8						
LCS-136498					UNK	01/10/19 03:47:38 pm	5.070	30124	0.36	
Replicates	29980.3	30104.0	30176.5	30234.5						
HS18121504-01					UNK	01/10/19 03:49:21 pm	0.028	4	341.56	
Replicates	-2.3	-1.9	27.3	-5.2						
HS18121504-01MS					UNK	01/10/19 03:51:04 pm	5.080	30202	0.42	
Replicates	30057.2	30153.1	30250.1	30349.3						
HS18121504-01MSD					UNK	01/10/19 03:52:48 pm	4.970	29531	0.63	
Replicates	29303.9	29480.4	29603.1	29738.1						
CCV					CCV	01/10/19 03:54:32 pm	5.060	30081	0.36	
Replicates	29956.0	30025.6	30154.1	30187.8						
% Recovery	101.27									
CCB					CCB	01/10/19 03:56:16 pm	0.025	-8	133.48	
Replicates	-0.1	-5.3	-23.3	-2.8						
HS18121503-01					UNK	01/10/19 03:58:00 pm	0.031	26	46.14	
Replicates	27.6	38.2	9.5	29.2						
HS18121504-02					UNK	01/10/19 03:59:41 pm	0.024	-17	33.89	
Replicates	-22.5	-15.7	-9.7	-21.2						
HS18121504-03					UNK	01/10/19 04:01:24 pm	0.038	67	7.48	s
Replicates	66.0	70.2	60.2	71.2						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010338-01					UNK	01/10/19 04:03:05 pm	0.381	2115	0.84	
Replicates	2129.7	2115.8	2124.8	2089.8						
HS19010338-02					UNK	01/10/19 04:04:47 pm	0.030	16	135.44	
Replicates	3.8	14.4	-0.9	48.1						
HS19010338-03					UNK	01/10/19 04:06:29 pm	0.031	26	44.12	
Replicates	15.0	39.6	18.1	31.1						
HS19010338-04					UNK	01/10/19 04:08:11 pm	0.428	2396	0.89	
Replicates	2418.9	2389.0	2405.5	2369.8						
HS19010338-06					UNK	01/10/19 04:09:53 pm	0.020	-41	43.31	
Replicates	-35.0	-32.0	-68.0	-30.2						
HS19010338-08					UNK	01/10/19 04:11:35 pm	0.032	33	34.78	
Replicates	18.5	31.0	46.0	35.0						
CCV					CCV	01/10/19 04:13:19 pm	5.090	30231	0.43	
Replicates	30060.4	30211.8	30288.5	30362.3						
% Recovery	101.77									
CCB					CCB	01/10/19 04:15:03 pm	0.033	39	28.88	
Replicates	24.0	45.4	37.4	49.6						
MBLK-136499					UNK	01/10/19 04:19:28 pm	0.035	51	24.34	s
Replicates	34.8	63.9	57.2	49.4						
LCS-136499					UNK	01/10/19 04:21:12 pm	5.120	30405	0.44	
Replicates	30219.0	30393.9	30497.9	30508.6						
HS18120382-09					UNK	01/10/19 04:22:55 pm	0.026	-5	118.67	
Replicates	-9.2	0.3	0.0	-9.8						
HS18120382-09MS					UNK	01/10/19 04:24:39 pm	5.130	30455	0.48	
Replicates	30261.0	30431.9	30537.1	30588.9						

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18120382-09MSD				UNK	01/10/19 04:26:22 pm	5.110	30366	0.31	
Replicates	30235.7	30362.5	30430.3	30434.0					
MBLKP1-136499				UNK	01/10/19 04:28:04 pm	0.036	57	20.60	s
Replicates	53.4	54.6	73.6	46.1					
CCV				CCV	01/10/19 04:30:44 pm	5.110	30351	0.38	
Replicates	30208.2	30321.7	30398.0	30476.0					
% Recovery	102.17								
CCB				CCB	01/10/19 04:32:29 pm	0.027	1	233.42	
Replicates	-12.1	12.5	3.7	-0.8					
MBLK-136500				UNK	01/10/19 05:48:04 pm	0.039	71	6.29	s
Replicates	72.5	64.0	72.0	73.8					
LCS-136500				UNK	01/10/19 05:49:46 pm	5.060	30066	0.49	
Replicates	29865.6	30062.2	30124.7	30209.9					
HS19010287-01				UNK	01/10/19 05:51:29 pm	0.039	74	20.64	s
Replicates	89.9	57.9	64.4	83.6					
HS19010287-01MS				UNK	01/10/19 05:53:11 pm	5.090	30269	0.36	
Replicates	30128.9	30238.6	30329.9	30377.4					
HS19010287-01MSD				UNK	01/10/19 05:54:53 pm	5.060	30044	0.56	
Replicates	29850.6	29984.1	30098.1	30243.1					
HS18121567-01				UNK	01/10/19 05:56:35 pm	0.043	98	6.39	s
Replicates	97.3	105.4	90.2	98.7					
HS19010001-01				UNK	01/10/19 05:58:18 pm	0.031	27	32.33	
Replicates	19.8	24.9	40.2	24.7					
HS19010001-02				UNK	01/10/19 06:00:02 pm	0.036	58	28.59	s
Replicates	53.2	77.7	61.9	38.2					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS19010282-05				UNK	01/10/19 06:01:45 pm	0.035	47	34.68	
Replicates	54.1	65.8	31.8	34.8					
HS19010286-01				UNK	01/10/19 06:03:29 pm	0.042	93	16.53	s
Replicates	98.8	101.6	100.8	69.8					
CCV				CCV	01/10/19 06:05:13 pm	5.070	30132	0.18	
Replicates	30062.1	30115.2	30175.7	30173.7					
% Recovery	101.44								
CCB				CCB	01/10/19 06:06:57 pm	0.033	35	51.93	
Replicates	9.4	52.7	39.2	40.2					
HS19010287-02				UNK	01/10/19 06:08:39 pm	0.049	133	11.91	s
Replicates	110.8	132.2	142.4	145.9					
HS19010358-01				UNK	01/10/19 06:10:22 pm	0.097	417	3.37	
Replicates	401.1	434.4	411.7	419.7					
HS19010361-01				UNK	01/10/19 06:12:04 pm	0.068	245	3.24	
Replicates	233.8	251.1	250.1	243.6					
HS19010398-01				UNK	01/10/19 06:13:47 pm	0.053	154	7.55	s
Replicates	161.1	146.2	166.7	142.4					
MBLK-136504				UNK	01/10/19 06:15:29 pm	0.041	86	19.90	s
Replicates	76.8	66.1	99.1	100.8					
LCS-136504				UNK	01/10/19 06:17:12 pm	5.050	30013	0.42	
Replicates	29851.8	29982.2	30065.7	30150.9					
HS18121500-01				UNK	01/10/19 06:18:54 pm	0.034	44	48.67	
Replicates	57.8	63.9	17.9	34.9					
HS18121500-01MS				UNK	01/10/19 06:20:37 pm	5.060	30070	0.62	
Replicates	29826.3	30029.7	30163.0	30259.5					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121500-01MSD				UNK	01/10/19 06:22:19 pm	5.090	30236	0.49	
Replicates	30053.9	30195.5	30296.2	30399.7					
HS18121500-02				UNK	01/10/19 06:24:03 pm	0.035	51	22.93	s
Replicates	61.9	35.7	48.2	57.9					
CCV				CCV	01/10/19 06:25:46 pm	5.190	30809	0.40	
Replicates	30636.9	30812.6	30879.1	30909.1					
% Recovery	103.71								
CCB				CCB	01/10/19 06:27:31 pm	0.034	39	51.45	
Replicates	49.1	30.5	62.0	16.0					
HS18121500-03				UNK	01/10/19 06:29:14 pm	0.043	96	17.82	s
Replicates	95.5	78.6	119.1	89.9					
HS18121500-04				UNK	01/10/19 06:30:58 pm	0.048	123	11.91	s
Replicates	111.1	135.8	109.5	135.5					
HS18121500-05				UNK	01/10/19 06:32:41 pm	0.031	23	43.77	
Replicates	21.8	30.0	30.0	9.0					
HS18121500-06				UNK	01/10/19 06:34:23 pm	0.087	358	4.03	
Replicates	348.2	366.0	374.2	343.7					
HS18121500-07				UNK	01/10/19 06:36:06 pm	0.035	48	24.90	
Replicates	55.5	34.8	61.1	42.1					
HS18121524-01				UNK	01/10/19 06:37:48 pm	0.070	258	4.02	
Replicates	248.5	250.4	262.4	270.4					
HS18121536-01				UNK	01/10/19 06:39:31 pm	0.044	100	10.24	s
Replicates	112.1	87.2	102.7	99.7					
HS19010225-01				UNK	01/10/19 06:41:14 pm	0.030	19	127.90	
Replicates	15.0	54.5	3.5	3.0					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCV					CCV	01/10/19 06:49:04 pm	5.080	30200	0.36	
	Replicates	30048.2	30198.6	30252.6	30299.6					
	% Recovery	101.67								
CCB					CCB	01/10/19 06:50:48 pm	0.034	42	37.10	
	Replicates	53.3	20.1	42.6	53.6					
MBLK-136505					UNK	01/10/19 06:52:31 pm	0.043	95	20.62	s
	Replicates	114.6	95.3	102.5	68.3					
LCS-136505					UNK	01/10/19 06:54:13 pm	5.090	30226	0.45	
	Replicates	30049.2	30210.0	30276.8	30369.8					
HS19010248-03					UNK	01/10/19 06:55:56 pm	0.032	31	12.47	
	Replicates	33.7	25.8	33.8	29.5					
HS19010248-03MS					UNK	01/10/19 06:57:39 pm	5.130	30486	0.81	
	Replicates	30171.6	30423.2	30598.0	30749.2					
HS19010248-03MSD					UNK	01/10/19 06:59:23 pm	5.060	30058	0.55	
	Replicates	29863.2	29999.6	30117.3	30253.1					
HS18121544-07					UNK	01/10/19 07:01:06 pm	0.075	287	3.28	
	Replicates	278.7	300.0	281.7	286.2					
HS18121544-08					UNK	01/10/19 07:02:49 pm	0.199	1027	1.31	
	Replicates	1007.2	1035.6	1035.8	1028.3					
HS18121544-09					UNK	01/10/19 07:04:32 pm	0.052	152	6.89	s
	Replicates	157.2	150.0	161.8	137.8					
HS18121544-10					UNK	01/10/19 07:06:15 pm	0.041	83	15.11	s
	Replicates	90.4	64.1	85.8	89.8					
HS18121544-11					UNK	01/10/19 07:07:58 pm	0.065	228	8.50	s
	Replicates	210.6	213.4	235.7	251.4					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCV					CCV	01/10/19 07:09:42 pm	5.030	29889	1.56	
	Replicates	29270.5	29814.4	30125.9	30344.9					
	% Recovery	100.63								
CCB					CCB	01/10/19 07:11:26 pm	0.040	77	26.05	s
	Replicates	72.9	105.2	57.4	72.9					
HS18121544-13					UNK	01/10/19 07:13:09 pm	0.111	500	5.15	s
	Replicates	475.1	490.3	500.6	535.8					
HS18121544-14					UNK	01/10/19 07:14:52 pm	0.080	318	3.37	
	Replicates	302.3	325.4	324.4	318.4					
HS18121558-02					UNK	01/10/19 07:16:35 pm	0.042	90	21.87	s
	Replicates	62.2	93.7	108.2	97.0					
HS18121558-03					UNK	01/10/19 07:18:17 pm	0.030	22	64.47	
	Replicates	26.3	18.7	4.5	38.2					
HS18121566-01					UNK	01/10/19 07:20:00 pm	0.332	1820	1.37	
	Replicates	1786.3	1825.1	1822.1	1846.3					
HS18121566-02					UNK	01/10/19 07:21:43 pm	0.030	22	71.90	
	Replicates	9.0	28.3	9.0	41.0					
HS18121566-03					UNK	01/10/19 07:23:27 pm	0.035	49	24.28	
	Replicates	53.0	31.9	59.4	52.4					
HS19010248-04					UNK	01/10/19 07:25:10 pm	0.034	41	26.90	
	Replicates	47.9	52.4	27.7	37.2					
HS19010258-09					UNK	01/10/19 07:26:54 pm	0.034	40	40.81	
	Replicates	59.3	39.2	42.0	19.5					
HS19010258-10					UNK	01/10/19 07:28:37 pm	0.027	1	812.07	
	Replicates	-10.7	-3.0	36.8	-17.7					

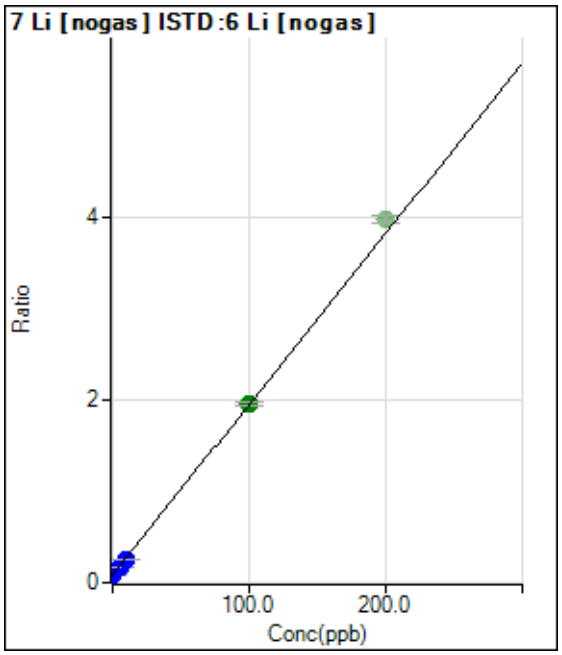
Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCV					CCV	01/10/19 07:30:21 pm	5.040	29929	0.34	
	Replicates	29782.6	29944.5	29969.5	30019.0					
	% Recovery	100.76								
CCB					CCB	01/10/19 07:32:05 pm	0.035	46	44.66	
	Replicates	69.4	20.9	40.2	52.7					
HS19010295-01					UNK	01/10/19 07:33:48 pm	0.036	57	45.16	s
	Replicates	63.4	42.3	89.5	31.5					
HS19010299-01					UNK	01/10/19 07:35:32 pm	0.027	3	406.28	
	Replicates	0.4	9.9	-12.1	12.7					
HS19010355-01					UNK	01/10/19 07:37:15 pm	0.053	156	5.07	s
	Replicates	155.9	149.7	152.5	167.7					
CCV					CCV	01/10/19 07:39:24 pm	4.990	29656	0.48	
	Replicates	29474.3	29630.1	29708.1	29812.6					
	% Recovery	99.85								
CCB					CCB	01/10/19 07:41:09 pm	0.036	53	22.76	s
	Replicates	51.0	66.9	56.7	37.9					

Calibration for 016_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\012219A.b\
Analysis File: 012219A.batch.bin
DA Date-Time: 2019-01-22 23:04:38
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	009CALB.d	CAL BLK	2019-01-22 11:58:31
2	010CALS.d	2/10/200	2019-01-22 12:00:31
3	011CALS.d	5/25/500	2019-01-22 12:02:31
4	012CALS.d	10/50/1000	2019-01-22 12:04:30
5	013CALS.d	100/500/10K	2019-01-22 12:06:30
6	014CALS.d	200/1000/20K	2019-01-22 12:08:27
7			

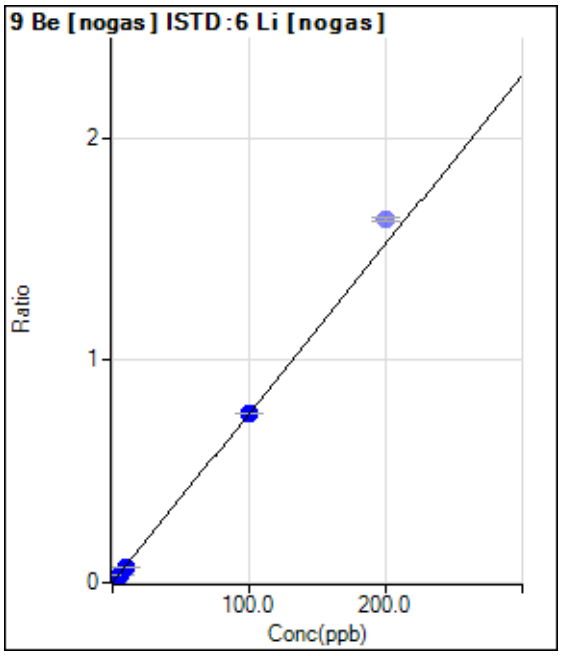
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	68427.66	0.0843	P	1.8
2	☐	2.000	1.861	97236.14	0.1190	P	1.2
3	☐	5.000	4.646	139803.77	0.1709	P	1.0
4	☐	10.000	9.334	209284.41	0.2583	P	1.0
5	☐	100.000	100.087	1470992.48	1.9503	A	1.6
6	☑	200.000		2748790.69	3.9655	A	2.0
7	☐	1.000					

y = 0.0186 * x + 0.0843
R = 1.0000
DL = 0.2455
BEC = 4.519

Weight: <None>
Min Conc: <None>

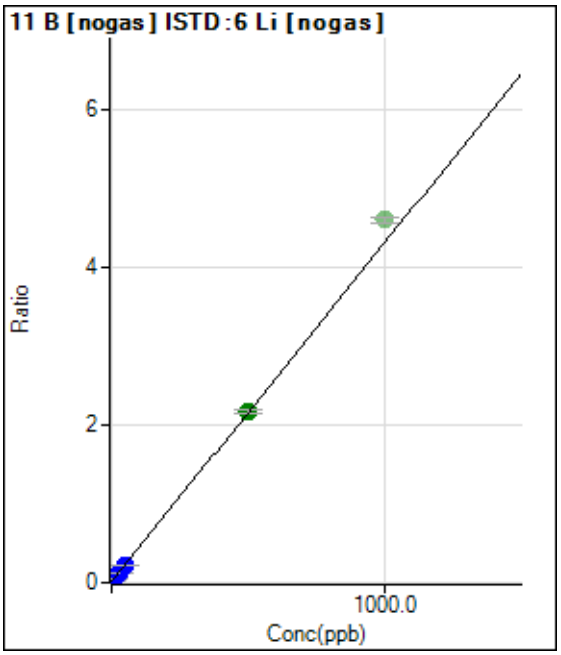


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	196.67	0.0002	P	29.1
2	☐	2.000	1.753	11096.67	0.0136	P	1.3
3	☐	5.000	4.571	28638.16	0.0350	P	3.1
4	☐	10.000	9.102	56278.66	0.0695	P	3.2
5	☐	100.000	100.116	574501.84	0.7617	P	0.4
6	☑	200.000		1131181.94	1.6318	P	1.1
7	☐	1.000					

y = 0.0076 * x + 2.4222E-004
R = 1.0000
DL = 0.02778
BEC = 0.03185

Weight: <None>
Min Conc: <None>

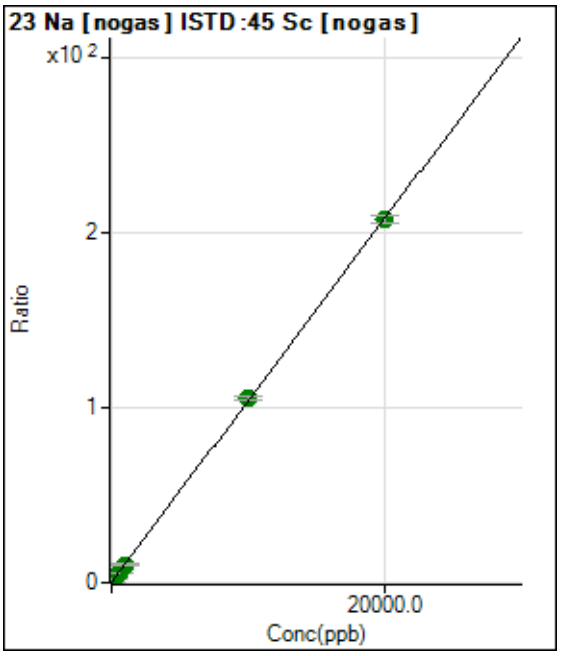
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13568.31	0.0167	P	1.6
2	☐	10.000	9.161	45767.85	0.0560	P	1.3
3	☐	25.000	22.450	92417.22	0.1130	P	2.2
4	☐	50.000	45.217	170629.93	0.2106	P	1.7
5	☐	500.000	500.623	1631582.47	2.1634	A	2.7
6	☑	1000.000		3187870.58	4.5989	A	1.6
7	☐	5.000					

y = 0.0043 * x + 0.0167
R = 1.0000
DL = 0.1889
BEC = 3.896

Weight: <None>
Min Conc: <None>

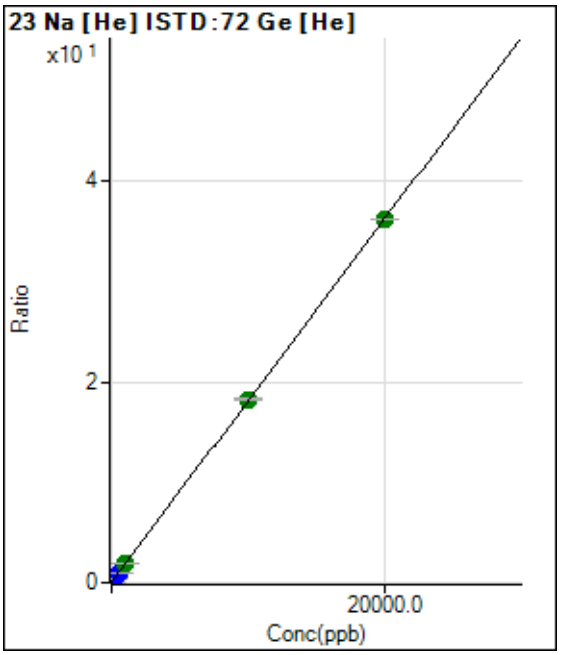


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	344882.83	0.1640	P	2.3
2	☐	200.000	198.871	4734166.38	2.2305	A	1.6
3	☐	500.000	501.496	11454288.54	5.3751	A	2.0
4	☐	1000.000	977.752	22180548.42	10.3239	A	2.4
5	☐	10000.00	10126.088	222094929.9	105.385	A	2.5
6	☐	20000.00	19938.042	428579776.2	207.341	A	2.0
7	☐	100.000					

y = 0.0104 * x + 0.1640
R = 1.0000
DL = 1.069
BEC = 15.78

Weight: <None>
Min Conc: <None>

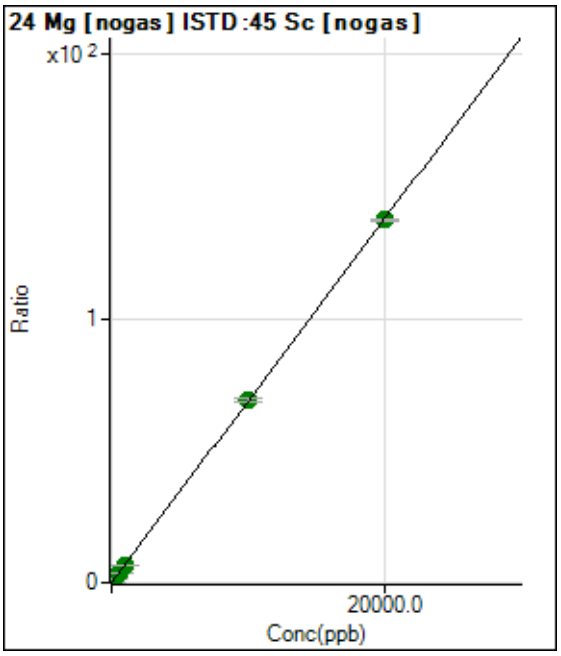
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31770.02	0.0408	P	0.8
2	☐	200.000	205.778	311909.47	0.4128	P	2.9
3	☐	500.000	493.756	736565.90	0.9334	P	1.0
4	☐	1000.000	991.136	1433822.17	1.8326	A	0.7
5	☐	10000.00	10085.080	14039847.71	18.2725	A	0.9
6	☐	20000.00	19958.002	27144108.76	36.1207	A	0.2
7	☐	100.000					

y = 0.0018 * x + 0.0408
R = 1.0000
DL = 0.558
BEC = 22.59

Weight: <None>
Min Conc: <None>

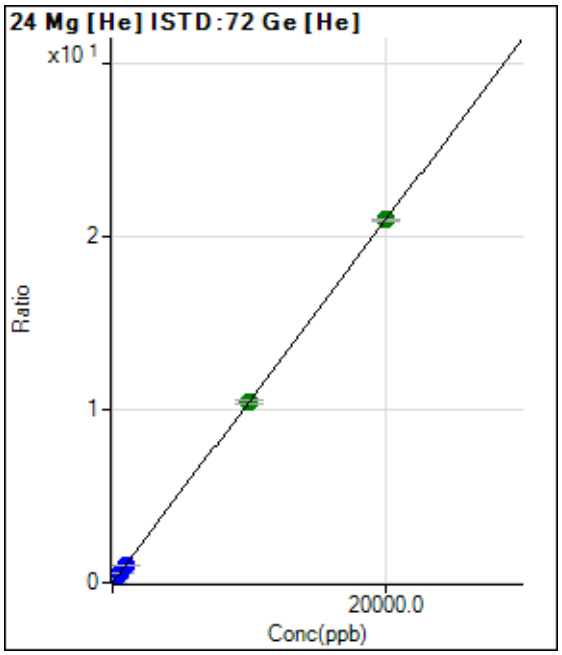


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28225.05	0.0134	P	2.7
2	☐	200.000	206.387	3043853.13	1.4340	A	1.8
3	☐	500.000	512.881	7553115.53	3.5437	A	1.8
4	☐	1000.000	985.457	14603626.37	6.7966	A	1.4
5	☐	10000.00	10083.641	146314794.9	69.4220	A	1.9
6	☐	20000.00	19958.521	284042989.6	137.393	A	0.9
7	☐	100.000					

y = 0.0069 * x + 0.0134
R = 1.0000
DL = 0.159
BEC = 1.949

Weight: <None>
Min Conc: <None>

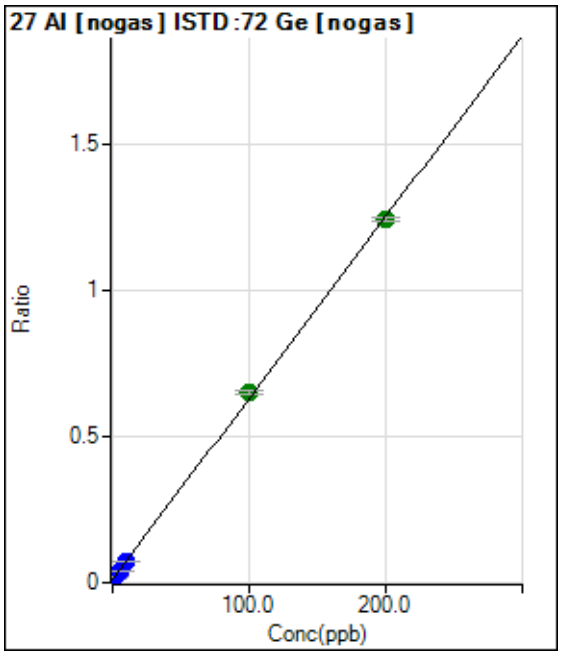
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1576.76	0.0020	P	16.7
2	☐	200.000	207.486	165840.41	0.2195	P	3.4
3	☐	500.000	494.960	411009.42	0.5209	P	0.6
4	☐	1000.000	978.569	804097.31	1.0278	P	1.3
5	☐	10000.00	9966.418	8028673.84	10.4493	A	1.4
6	☐	20000.00	20017.914	15770547.27	20.9857	A	0.8
7	☐	100.000					

y = 0.0010 * x + 0.0020
R = 1.0000
DL = 0.9656
BEC = 1.933

Weight: <None>
Min Conc: <None>

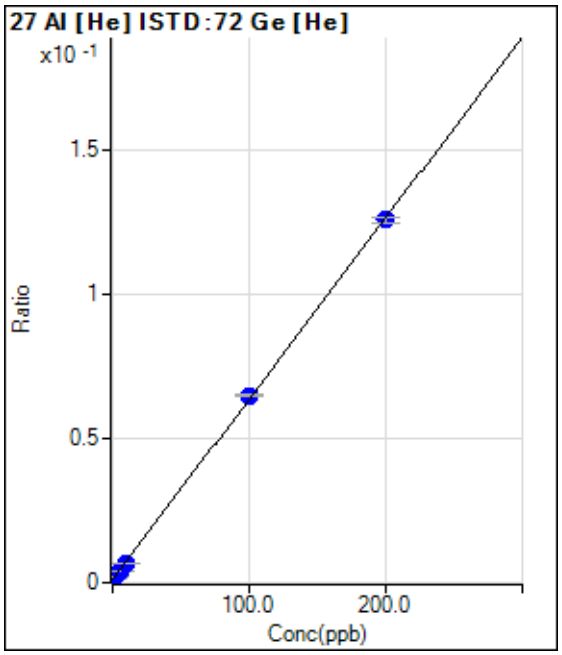


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33583.22	0.0116	P	1.0
2	☐	2.000	1.630	63181.61	0.0217	P	3.3
3	☐	5.000	4.598	117845.88	0.0401	P	0.8
4	☐	10.000	9.710	208866.33	0.0718	P	1.3
5	☐	100.000	103.103	1893159.45	0.6514	A	1.9
6	☐	200.000	198.477	3549198.28	1.2433	A	1.1
7	☐	1.000					

y = 0.0062 * x + 0.0116
R = 0.9998
DL = 0.05586
BEC = 1.861

Weight: <None>
Min Conc: <None>

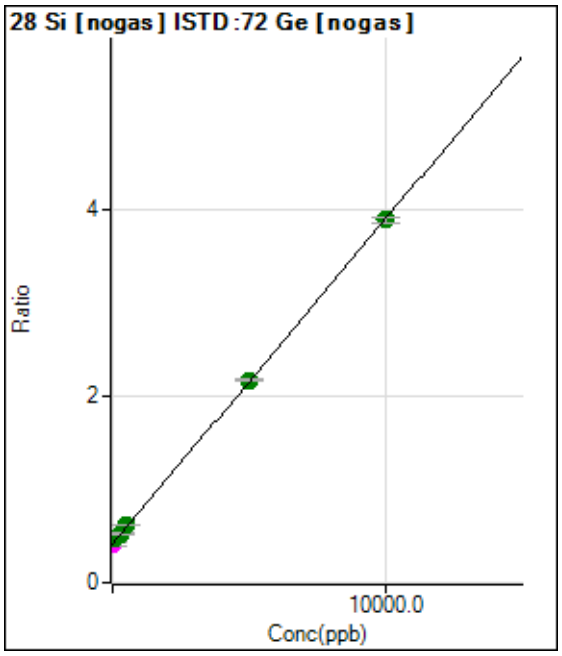
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.450	1030.05	0.0013	P	10.4
2	☐	2.000	1.484	1493.41	0.0020	P	8.3
3	☐	5.000	4.868	3233.65	0.0041	P	5.9
4	☐	10.000	9.134	5300.83	0.0068	P	3.8
5	☐	100.000	102.026	50019.37	0.0651	P	1.0
6	☐	200.000	199.039	94694.37	0.1260	P	1.3
7	☐	1.000					

y = 6.2785E-004 * x + 0.0010
R = 0.9999
DL = 0.6611
BEC = 1.659

Weight: <None>
Min Conc: <None>

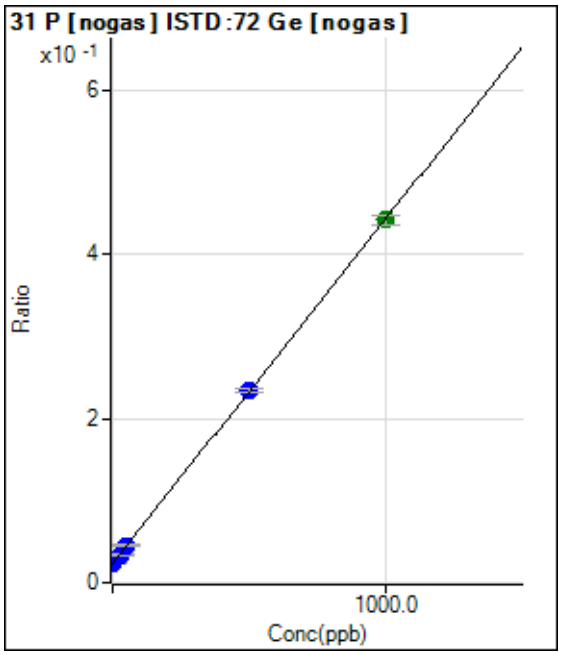


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1207924.59	0.4158	M	11.2
2	☐	100.000	164.436	1379824.62	0.4732	A	3.2
3	☐	250.000	300.218	1530456.39	0.5206	A	3.3
4	☐	500.000	570.124	1787877.37	0.6147	A	1.8
5	☐	5000.000	5047.125	6326796.99	2.1769	A	1.2
6	☐	10000.00	9971.031	11118889.00	3.8950	A	1.3
7	☐	5.000					

y = 3.4894E-004 * x + 0.4158
R = 1.0000
DL = 400.5
BEC = 1192

Weight: <None>
Min Conc: <None>

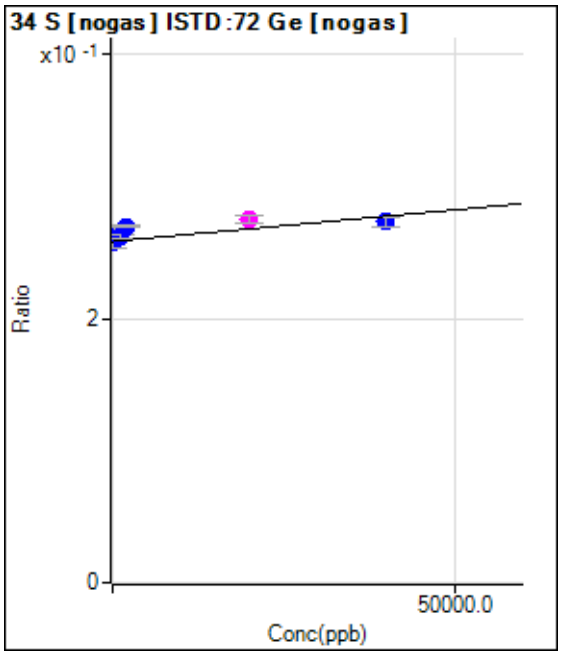
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	67848.21	0.0233	P	3.1
2	☐	10.000	11.050	81595.90	0.0280	P	1.7
3	☐	25.000	25.233	99725.07	0.0339	P	1.7
4	☐	50.000	52.306	131663.85	0.0453	P	2.3
5	☐	500.000	503.571	681420.87	0.2345	P	2.0
6	☐	1000.000	998.083	1261686.60	0.4418	A	2.9
7	☐	5.000					

y = 4.1929E-004 * x + 0.0233
R = 1.0000
DL = 5.14
BEC = 55.67

Weight: <None>
Min Conc: <None>

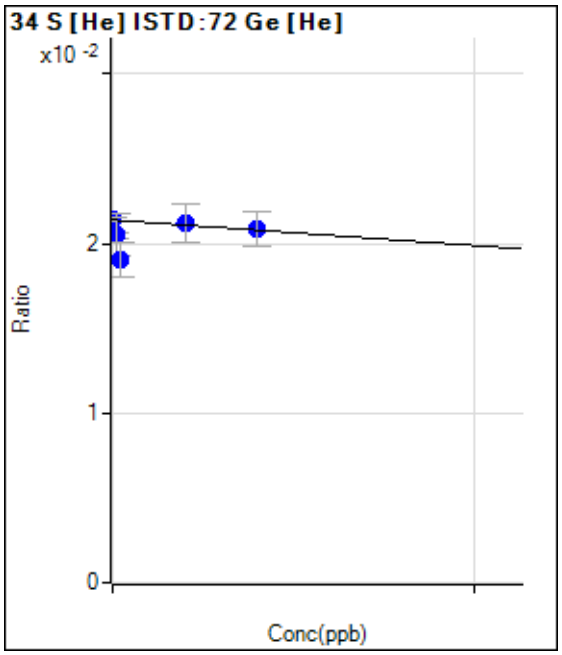


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	751447.09	0.2585	P	4.2
2	☐	400.000	11804.574	770336.07	0.2642	P	3.5
3	☐	1000.000	7097.256	770061.62	0.2619	P	1.2
4	☐	2000.000	24274.654	785736.10	0.2701	P	0.7
5	☐	20000.00	34039.241	798767.94	0.2748	M	2.0
6	☐	40000.00	31600.170	781082.11	0.2736	P	2.8
7	☐	100.000					

y = 4.7796E-007 * x + 0.2585
R = 0.7544
DL = 6.809E+04
BEC = 5.409E+05

Weight: <None>
Min Conc: <None>

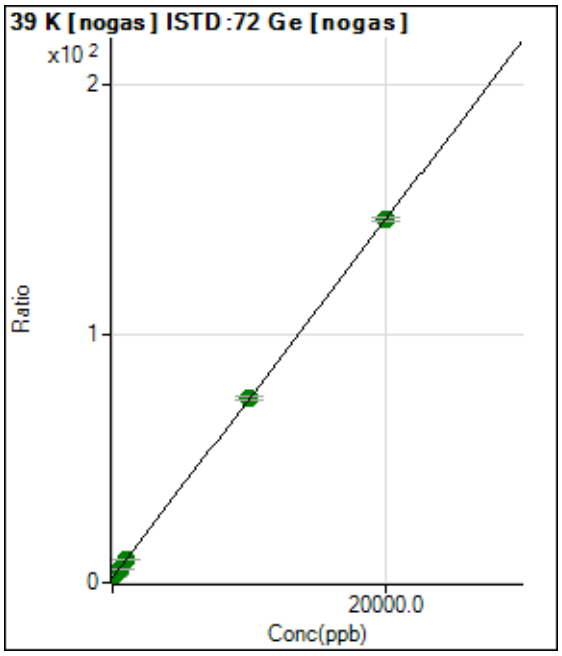
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16643.45	0.0214	P	0.9
2	☐	400.000	58302.354	15509.21	0.0205	P	1.6
3	☐	1000.000	59361.867	16177.00	0.0205	P	12.3
4	☐	2000.000	155700.79	14909.09	0.0190	P	10.8
5	☐	20000.00	10497.632	16310.20	0.0212	P	10.8
6	☐	40000.00	35028.074	15676.01	0.0209	P	9.5
7	☐	100.000					

y = -1.5043E-008 * x + 0.0214
R = 0.2994
DL = -3.792E+04
BEC = -1.422E+06

Weight: <None>
Min Conc: <None>

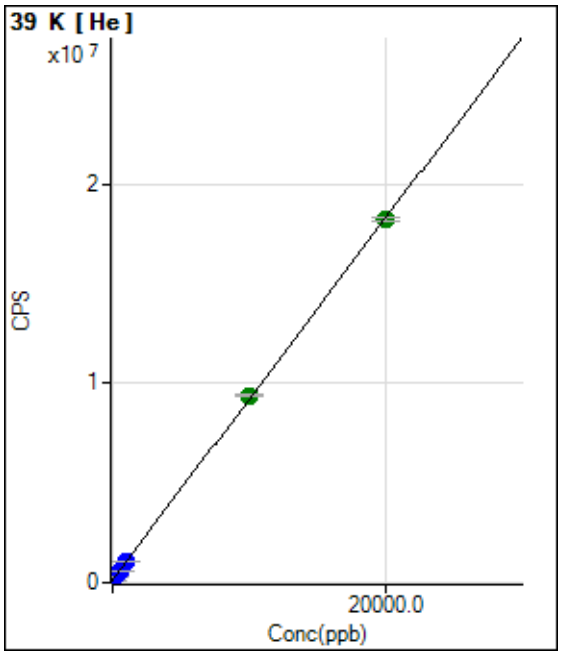


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5736459.38	1.9733	A	1.3
2	☐	200.000	200.688	9968929.91	3.4183	A	2.5
3	☐	500.000	496.925	16319538.91	5.5511	A	1.2
4	☐	1000.000	999.089	26660690.18	9.1667	A	1.5
5	☐	10000.00	10013.106	215245771.4	74.0667	A	1.8
6	☐	20000.00	19993.563	416570267.6	145.925	A	1.2
7	☐	100.000					

y = 0.0072 * x + 1.9733
R = 1.0000
DL = 10.56
BEC = 274.1

Weight: <None>
Min Conc: <None>

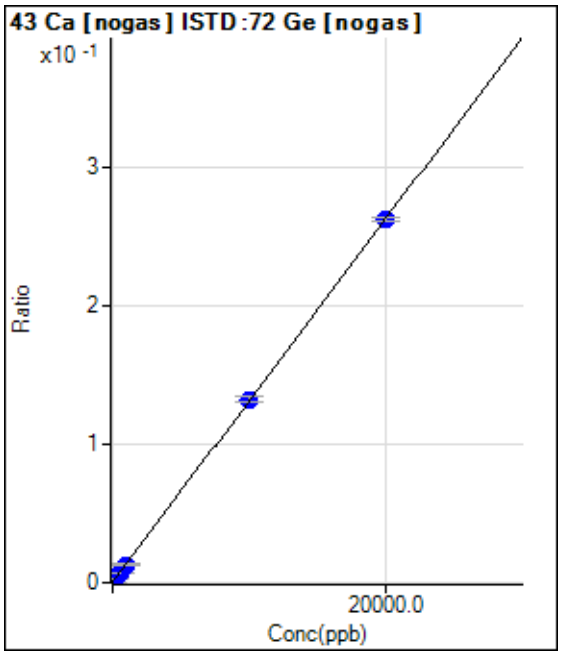
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	137396.75		P	1.7
2	☐	200.000	203.877	322211.66		P	1.0
3	☐	500.000	515.363	604573.27		P	0.8
4	☐	1000.000	1001.326	1045098.84		P	0.4
5	☐	10000.00	10178.450	9364166.53		A	1.2
6	☐	20000.00	19910.286	18186081.40		A	1.2
7	☐	100.000					

y = 906.5005 * x + 137396.7467
R = 0.9999
DL = 7.956
BEC = 151.6

Weight: <None>
Min Conc: <None>

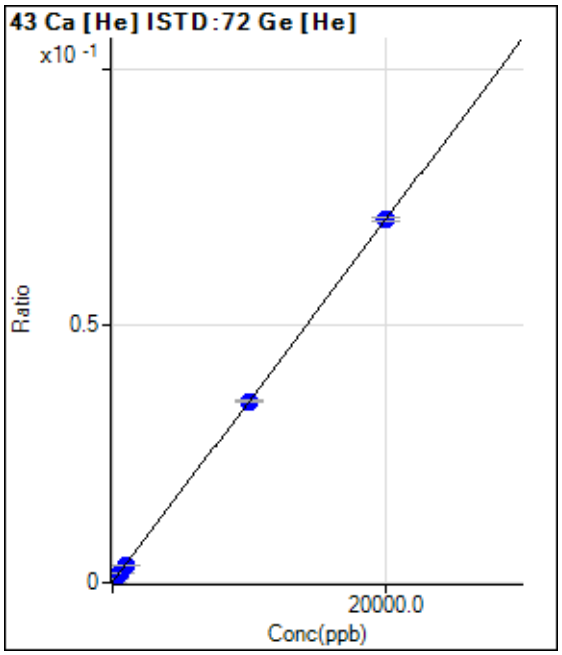


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	710.02	0.0002	P	10.6
2	☐	200.000	186.135	7838.40	0.0027	P	1.4
3	☐	500.000	498.397	19944.16	0.0068	P	1.6
4	☐	1000.000	980.941	38142.48	0.0131	P	3.8
5	☐	10000.00	10088.900	385387.04	0.1326	P	2.4
6	☐	20000.00	19956.682	748187.28	0.2621	P	1.2
7	☐	100.000					

y = 1.3121E-005 * x + 2.4435E-004
R = 1.0000
DL = 5.935
BEC = 18.62

Weight: <None>
Min Conc: <None>

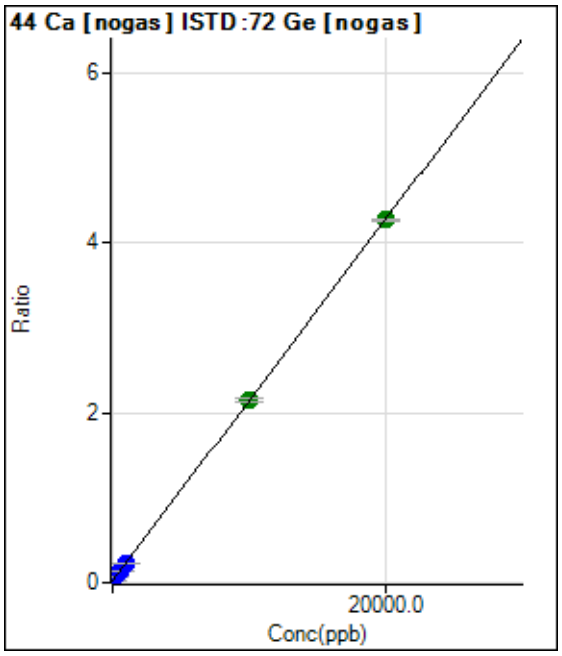
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0001	P	20.5
2	☐	200.000	173.719	513.35	0.0007	P	17.7
3	☐	500.000	508.741	1466.75	0.0019	P	13.3
4	☐	1000.000	933.470	2626.89	0.0034	P	4.4
5	☐	10000.00	9999.503	27153.36	0.0353	P	1.3
6	☐	20000.00	20003.620	53075.16	0.0706	P	1.1
7	☐	100.000					

y = 3.5275E-006 * x + 6.4304E-005
R = 1.0000
DL = 11.2
BEC = 18.23

Weight: <None>
Min Conc: <None>

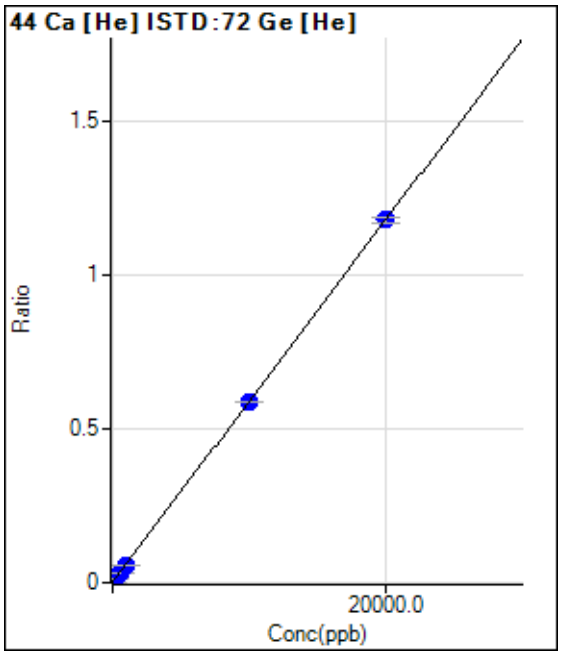


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60746.00	0.0209	P	0.1
2	☐	200.000	196.019	182555.95	0.0626	P	1.7
3	☐	500.000	493.585	370089.73	0.1259	P	0.8
4	☐	1000.000	991.223	674032.28	0.2317	P	0.8
5	☐	10000.00	10032.577	6262495.95	2.1549	A	2.6
6	☐	20000.00	19984.351	12195292.74	4.2718	A	0.5
7	☐	100.000					

y = 2.1271E-004 * x + 0.0209
R = 1.0000
DL = 0.355
BEC = 98.23

Weight: <None>
Min Conc: <None>

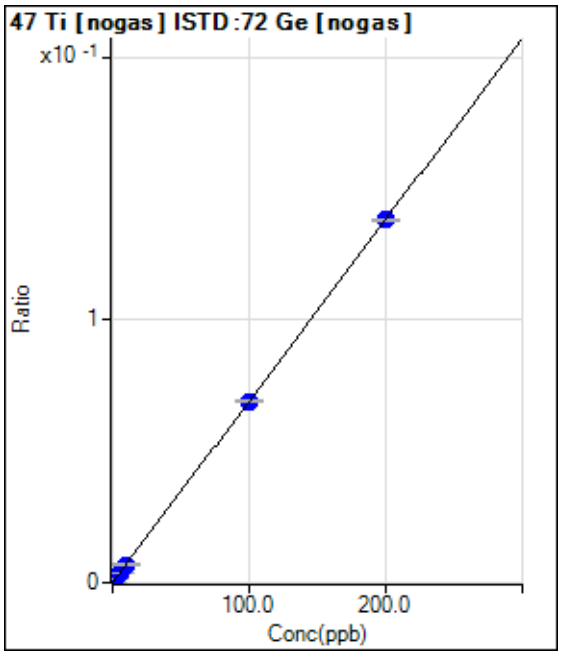
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1040.05	0.0013	P	4.4
2	☐	200.000	202.290	10009.51	0.0133	P	4.7
3	☐	500.000	497.286	24169.25	0.0306	P	1.4
4	☐	1000.000	965.030	45518.77	0.0582	P	1.2
5	☐	10000.00	9962.726	451971.36	0.5882	P	0.7
6	☐	20000.00	20020.431	887235.04	1.1807	P	1.4
7	☐	100.000					

y = 5.8906E-005 * x + 0.0013
R = 1.0000
DL = 3.004
BEC = 22.69

Weight: <None>
Min Conc: <None>

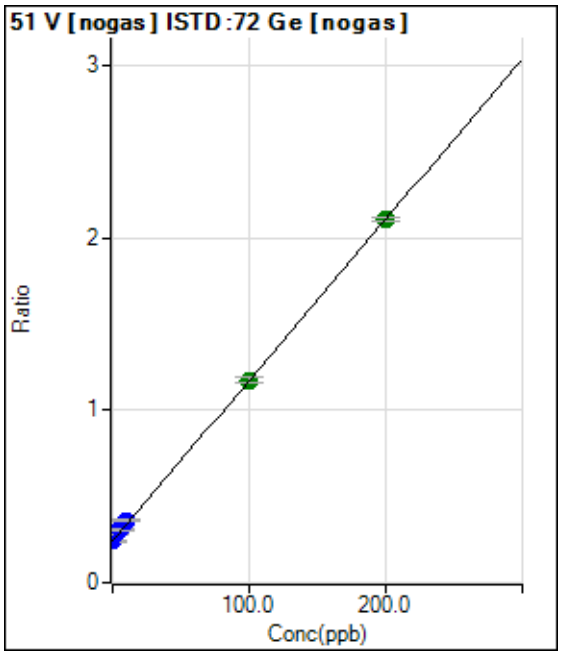


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	18.2
2	☐	2.000	1.939	4107.18	0.0014	P	3.7
3	☐	5.000	4.897	10146.20	0.0035	P	3.4
4	☐	10.000	9.909	20107.73	0.0069	P	2.6
5	☐	100.000	100.094	201116.85	0.0692	P	1.7
6	☐	200.000	199.961	394477.57	0.1382	P	0.7
7	☐	1.000					

y = 6.9070E-004 * x + 6.8878E-005
R = 1.0000
DL = 0.05443
BEC = 0.09972

Weight: <None>
Min Conc: <None>

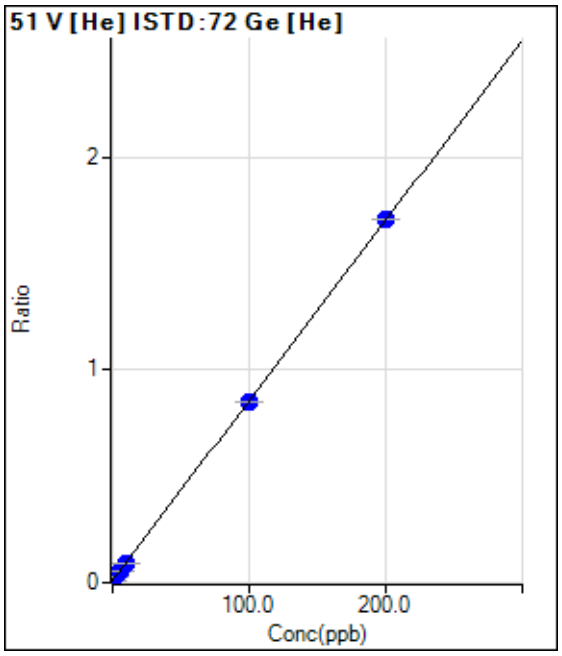
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	701785.50	0.2414	P	2.0
2	☐	2.000	4.312	821736.67	0.2817	P	0.9
3	☐	5.000	7.104	904746.63	0.3077	P	0.8
4	☐	10.000	12.911	1052655.13	0.3620	P	3.0
5	☐	100.000	100.048	3415787.45	1.1755	A	3.3
6	☐	200.000	199.755	6013120.06	2.1064	A	1.2
7	☐	1.000					

y = 0.0093 * x + 0.2414
R = 0.9999
DL = 1.558
BEC = 25.86

Weight: <None>
Min Conc: <None>

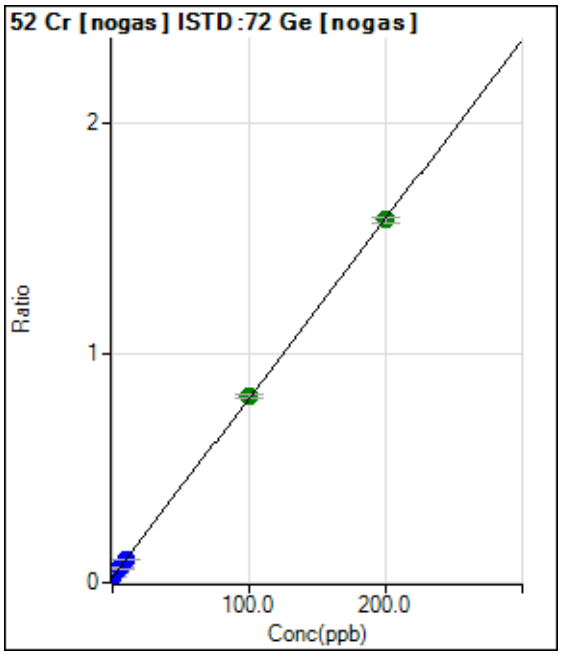


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.154	9274.33	0.0119	P	3.9
2	☐	2.000	2.296	22693.10	0.0300	P	2.8
3	☐	5.000	5.087	42321.70	0.0536	P	0.9
4	☐	10.000	9.800	73131.47	0.0935	P	1.0
5	☐	100.000	99.316	653370.91	0.8503	P	0.4
6	☐	200.000	200.347	1280929.21	1.7045	P	0.1
7	☐	1.000					

y = 0.0085 * x + 0.0106
R = 1.0000
DL = 0.1655
BEC = 1.256

Weight: <None>
Min Conc: <None>

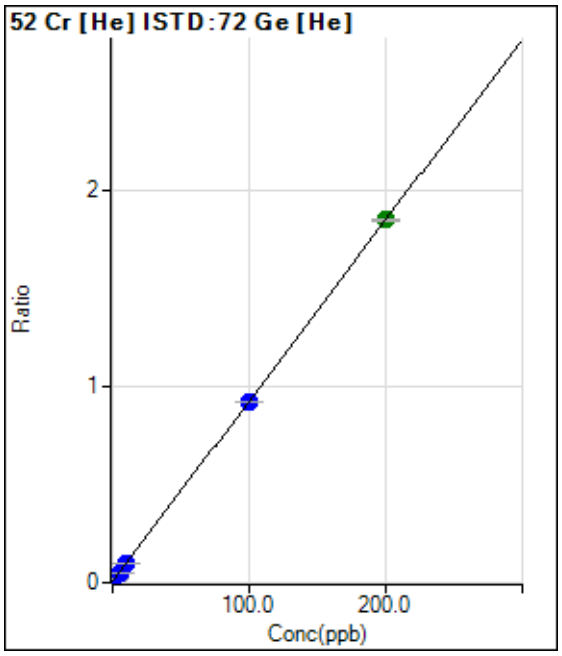
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	68475.75	0.0236	P	1.7
2	☐	2.000	2.255	120034.45	0.0412	P	2.4
3	☐	5.000	5.043	185002.82	0.0629	P	1.3
4	☐	10.000	10.086	297541.74	0.1023	P	0.7
5	☐	100.000	101.105	2362472.93	0.8129	A	1.7
6	☐	200.000	199.440	4512018.16	1.5807	A	1.8
7	☐	1.000					

y = 0.0078 * x + 0.0236
R = 1.0000
DL = 0.1502
BEC = 3.017

Weight: <None>
Min Conc: <None>

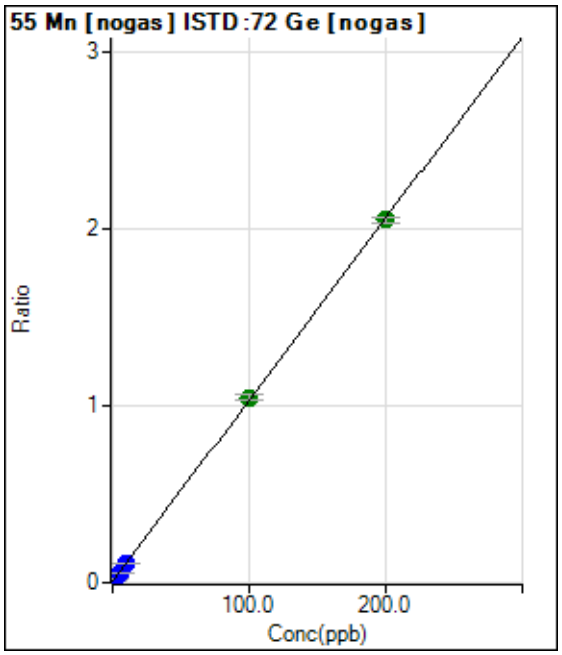


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4147.20	0.0053	P	10.7
2	☐	2.000	2.122	18773.04	0.0248	P	4.6
3	☐	5.000	4.906	39823.00	0.0505	P	3.4
4	☐	10.000	9.725	74177.37	0.0948	P	1.3
5	☐	100.000	99.513	707642.28	0.9209	P	0.7
6	☐	200.000	200.258	1388645.40	1.8479	A	0.6
7	☐	1.000					

y = 0.0092 * x + 0.0053
R = 1.0000
DL = 0.1856
BEC = 0.5793

Weight: <None>
Min Conc: <None>

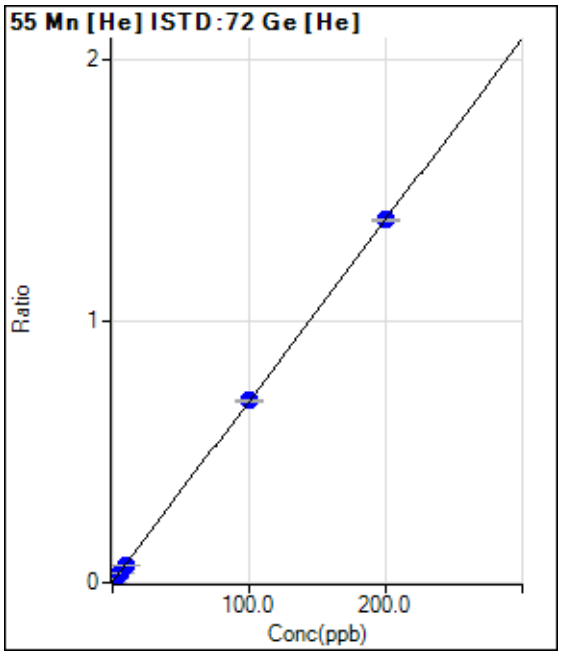
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18803.13	0.0065	P	2.9
2	☐	2.000	2.006	78806.95	0.0270	P	2.4
3	☐	5.000	4.872	165749.93	0.0564	P	0.7
4	☐	10.000	9.721	308499.69	0.1061	P	0.6
5	☐	100.000	101.548	3042012.77	1.0468	A	2.3
6	☐	200.000	199.243	5845175.33	2.0477	A	1.9
7	☐	1.000					

y = 0.0102 * x + 0.0065
R = 1.0000
DL = 0.05573
BEC = 0.6314

Weight: <None>
Min Conc: <None>

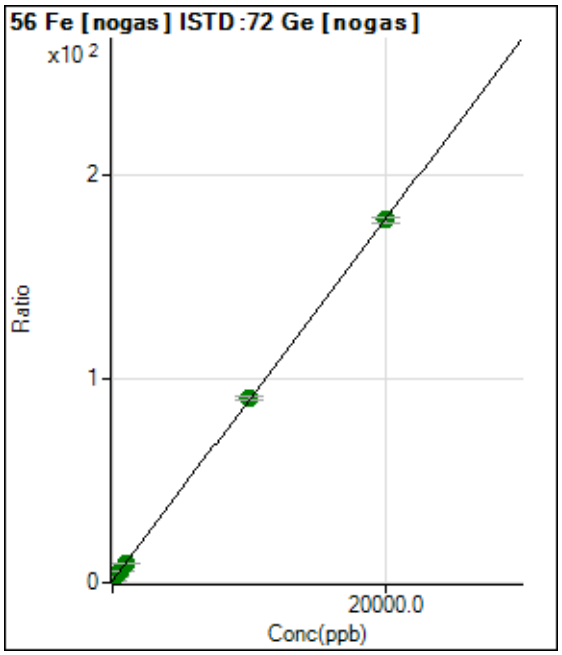


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1703.44	0.0022	P	13.0
2	☐	2.000	2.172	13018.10	0.0172	P	1.9
3	☐	5.000	4.800	27958.04	0.0354	P	3.3
4	☐	10.000	9.580	53607.53	0.0685	P	2.4
5	☐	100.000	100.176	534705.71	0.6959	P	0.5
6	☐	200.000	199.936	1042079.18	1.3867	P	0.6
7	☐	1.000					

y = 0.0069 * x + 0.0022
R = 1.0000
DL = 0.1237
BEC = 0.3161

Weight: <None>
Min Conc: <None>

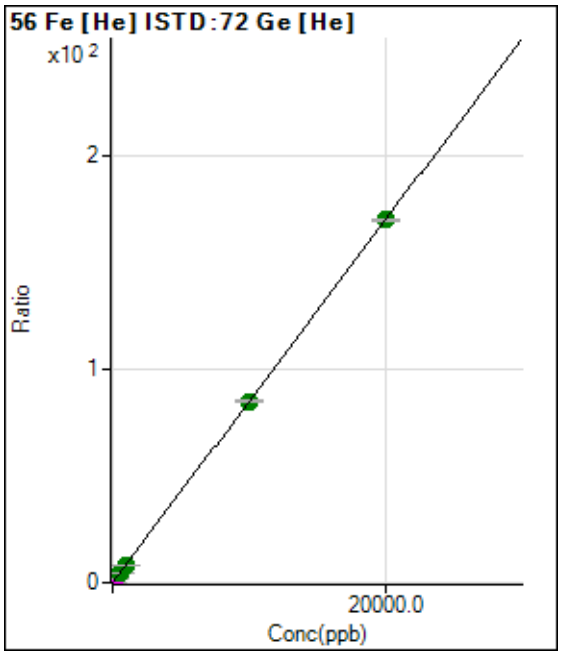
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2891194.53	0.9945	A	0.5
2	☐	200.000	200.850	8082332.73	2.7716	A	3.2
3	☐	500.000	497.008	15851706.60	5.3919	A	0.2
4	☐	1000.000	981.690	28154494.38	9.6803	A	1.4
5	☐	10000.00	10077.993	262022605.8	90.1621	A	1.8
6	☐	20000.00	19961.985	507006911.3	177.613	A	1.6
7	☐	100.000					

y = 0.0088 * x + 0.9945
R = 1.0000
DL = 1.677
BEC = 112.4

Weight: <None>
Min Conc: <None>

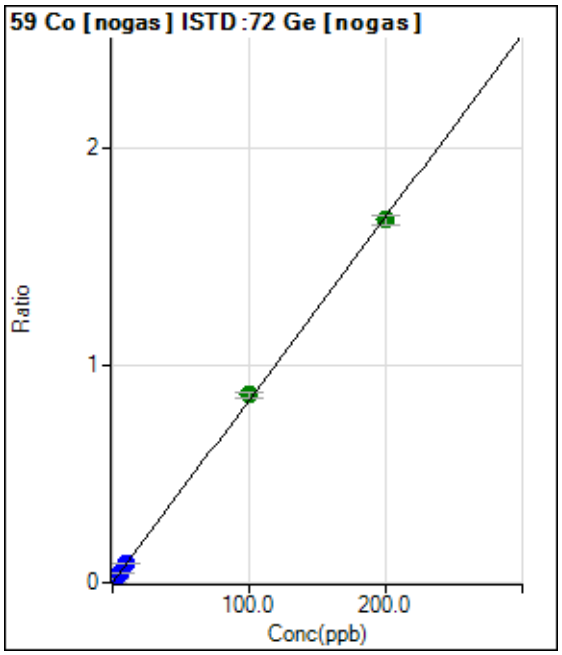


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18826.45	0.0242	P	1.6
2	☐	200.000	209.338	1359382.22	1.7996	M	5.4
3	☐	500.000	497.443	3348147.45	4.2431	A	0.6
4	☐	1000.000	969.051	6448712.61	8.2429	A	1.5
5	☐	10000.00	10005.912	65225360.70	84.8860	A	0.2
6	☐	20000.00	19998.562	127478861.4	169.635	A	0.7
7	☐	100.000					

y = 0.0085 * x + 0.0242
R = 1.0000
DL = 0.1364
BEC = 2.853

Weight: <None>
Min Conc: <None>

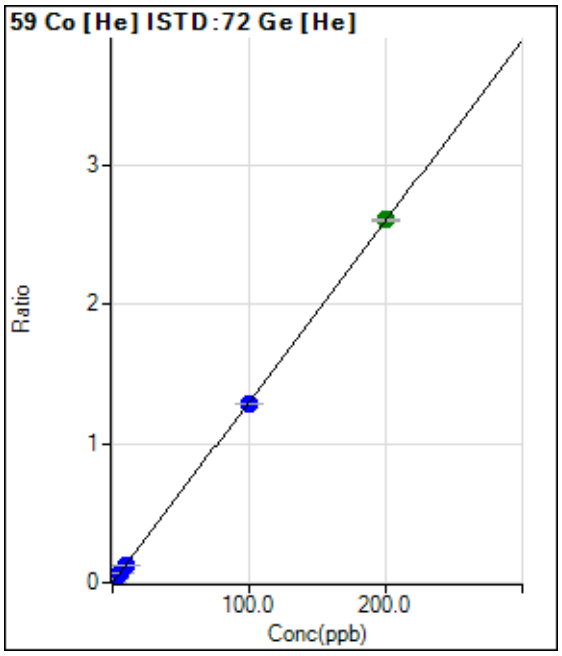
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	456.68	0.0002	P	13.0
2	☐	2.000	2.029	50141.52	0.0172	P	2.7
3	☐	5.000	5.120	126805.24	0.0431	P	1.1
4	☐	10.000	10.200	249471.91	0.0858	P	1.5
5	☐	100.000	102.843	2508965.01	0.8634	A	2.6
6	☐	200.000	198.565	4757886.70	1.6669	A	2.3
7	☐	1.000					

y = 0.0084 * x + 1.5720E-004
R = 0.9999
DL = 0.007282
BEC = 0.01873

Weight: <None>
Min Conc: <None>

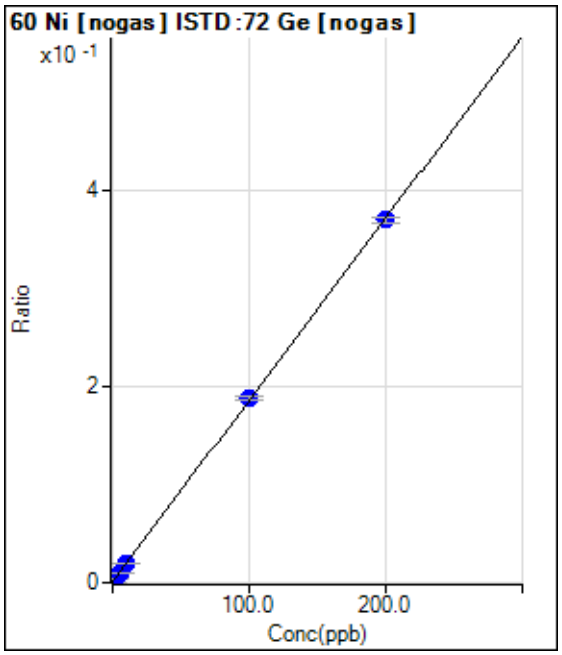


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0001	P	69.1
2	☐	2.000	2.079	20474.88	0.0271	P	3.8
3	☐	5.000	4.953	50806.60	0.0644	P	2.8
4	☐	10.000	9.742	98987.03	0.1265	P	1.1
5	☐	100.000	98.647	983522.22	1.2800	P	0.3
6	☐	200.000	200.690	1956826.01	2.6039	A	0.6
7	☐	1.000					

y = 0.0130 * x + 1.2447E-004
R = 1.0000
DL = 0.01988
BEC = 0.009594

Weight: <None>
Min Conc: <None>

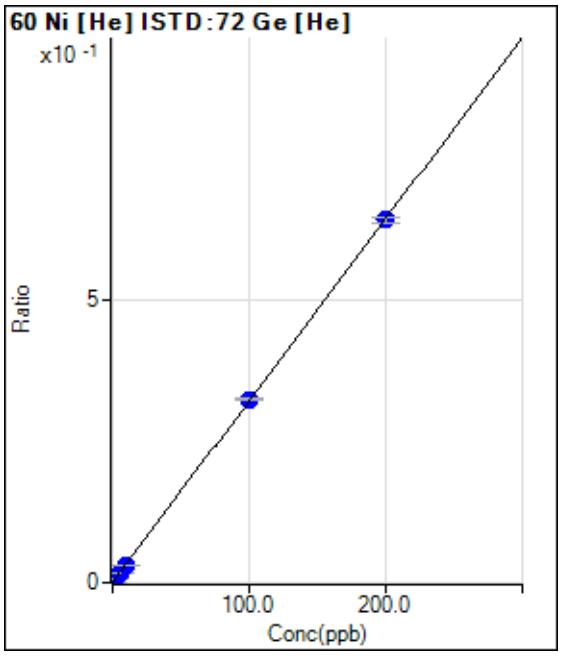
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.337	710.02	0.0002	P	11.2
2	☐	2.000	1.761	12030.74	0.0041	P	2.7
3	☐	5.000	4.863	29006.29	0.0099	P	1.5
4	☐	10.000	9.922	55921.40	0.0192	P	1.8
5	☐	100.000	101.561	548675.85	0.1888	P	2.0
6	☐	200.000	199.229	1054868.89	0.3695	P	1.4
7	☐	1.000					

y = 0.0019 * x + 8.6684E-004
R = 1.0000
DL = 0.04414
BEC = 0.4684

Weight: <None>
Min Conc: <None>

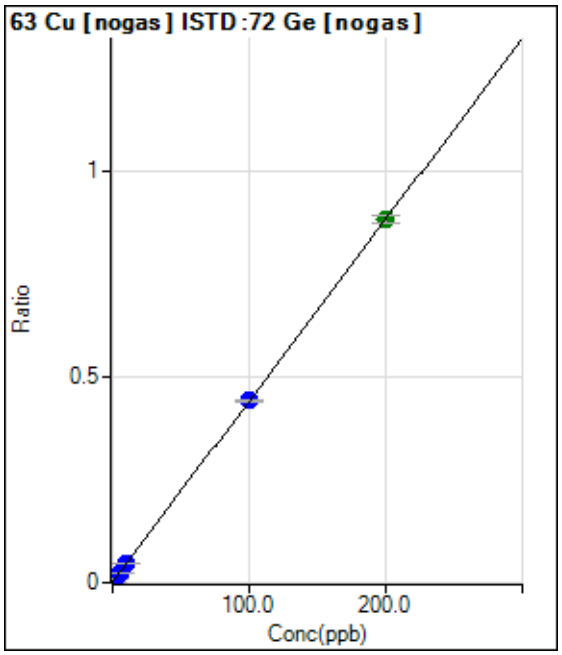


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.075	216.67	0.0003	P	6.6
2	☐	2.000	1.998	5237.48	0.0069	P	2.5
3	☐	5.000	4.930	12894.65	0.0163	P	3.9
4	☐	10.000	9.686	24726.76	0.0316	P	1.9
5	☐	100.000	100.884	249183.18	0.3243	P	0.8
6	☐	200.000	199.575	481732.05	0.6410	P	1.2
7	☐	1.000					

y = 0.0032 * x + 5.1784E-004
R = 1.0000
DL = 0.01726
BEC = 0.1613

Weight: <None>
Min Conc: <None>

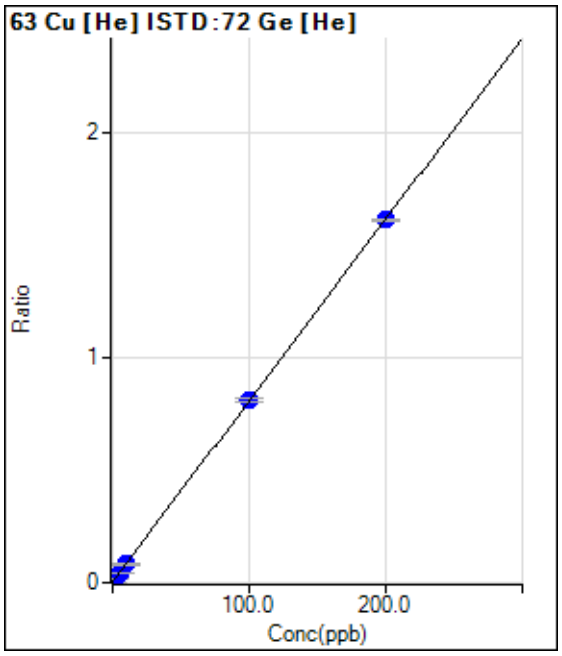
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4047.18	0.0014	P	6.4
2	☐	2.000	2.109	31193.34	0.0107	P	2.0
3	☐	5.000	5.343	73362.18	0.0250	P	1.0
4	☐	10.000	10.125	133896.21	0.0460	P	2.6
5	☐	100.000	100.170	1287805.21	0.4431	P	1.4
6	☐	200.000	199.899	2520326.58	0.8829	A	2.2
7	☐	1.000					

y = 0.0044 * x + 0.0014
R = 1.0000
DL = 0.06015
BEC = 0.3157

Weight: <None>
Min Conc: <None>

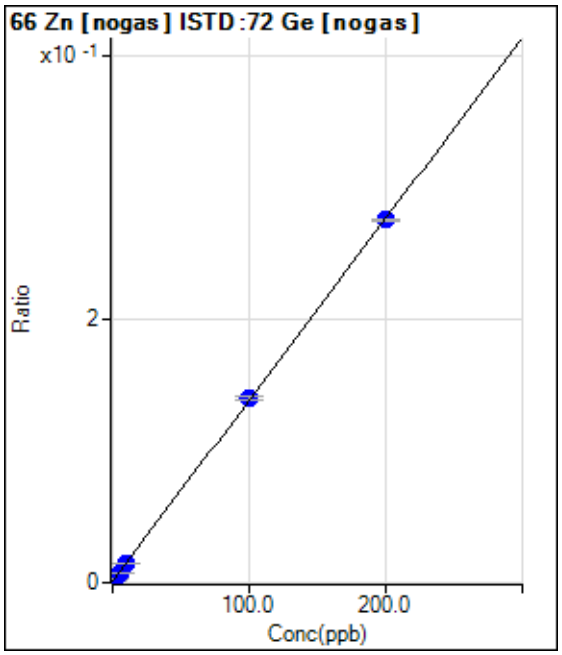


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.116	1756.78	0.0023	P	6.9
2	☐	2.000	2.000	14562.62	0.0193	P	4.4
3	☐	5.000	5.159	35257.40	0.0447	P	1.7
4	☐	10.000	9.701	63532.54	0.0812	P	0.5
5	☐	100.000	100.491	623384.62	0.8113	P	1.7
6	☐	200.000	199.765	1209661.52	1.6097	P	0.3
7	☐	1.000					

y = 0.0080 * x + 0.0032
R = 1.0000
DL = 0.05781
BEC = 0.397

Weight: <None>
Min Conc: <None>

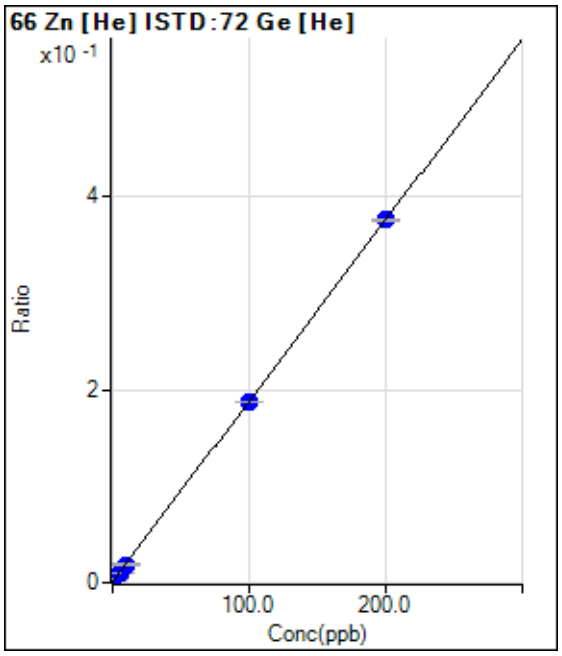
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.324	4420.59	0.0015	P	4.2
2	☐	2.000	1.850	10563.21	0.0036	P	3.4
3	☐	5.000	4.673	22076.83	0.0075	P	3.5
4	☐	10.000	9.528	41289.95	0.0142	P	0.5
5	☐	100.000	101.184	408027.89	0.1404	P	1.4
6	☐	200.000	199.441	787058.97	0.2757	P	0.2
7	☐	1.000					

y = 0.0014 * x + 0.0011
R = 1.0000
DL = 0.1379
BEC = 0.7807

Weight: <None>
Min Conc: <None>

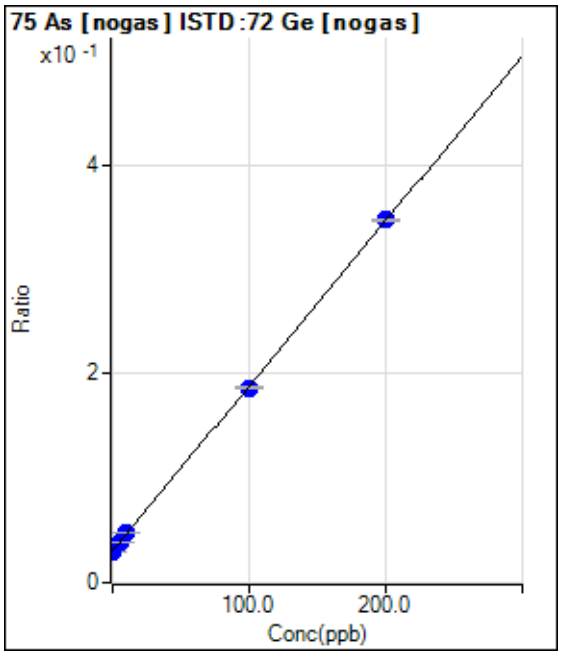


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.504	1463.41	0.0019	P	11.0
2	☐	2.000	2.202	3820.46	0.0051	P	10.5
3	☐	5.000	4.870	7935.17	0.0101	P	8.8
4	☐	10.000	9.549	14722.75	0.0188	P	4.3
5	☐	100.000	99.703	144169.75	0.1876	P	0.4
6	☐	200.000	200.172	282373.50	0.3758	P	0.7
7	☐	1.000					

y = 0.0019 * x + 9.3859E-004
R = 1.0000
DL = 0.3323
BEC = 0.5013

Weight: <None>
Min Conc: <None>

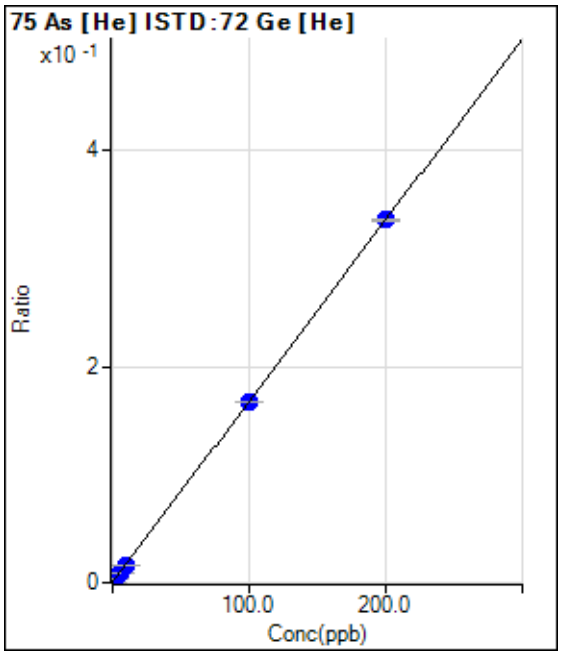
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.854	84775.55	0.0292	P	3.1
2	☐	2.000	2.554	100785.76	0.0346	P	1.6
3	☐	5.000	5.294	114312.36	0.0389	P	1.1
4	☐	10.000	10.737	138118.19	0.0475	P	1.5
5	☐	100.000	98.640	541821.65	0.1864	P	1.2
6	☐	200.000	200.630	992432.64	0.3476	P	0.8
7	☐	1.000					

y = 0.0016 * x + 0.0305
R = 0.9999
DL = 1.692
BEC = 19.3

Weight: <None>
Min Conc: <None>

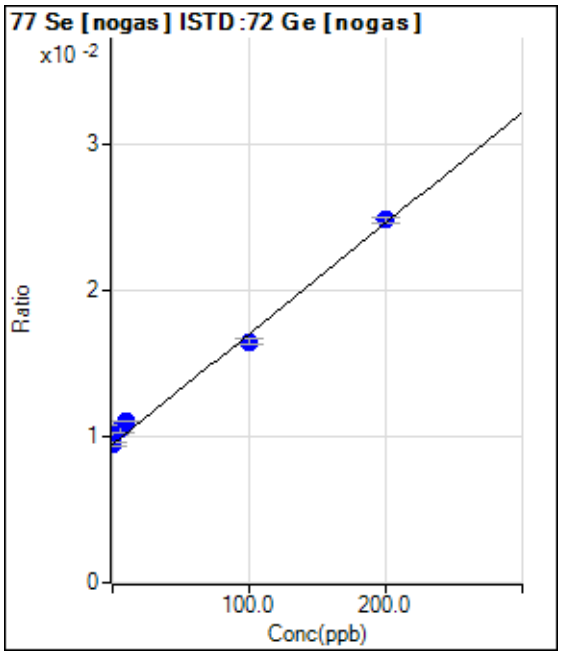


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.00	0.0003	P	14.5
2	☐	2.000	1.970	2739.11	0.0036	P	1.2
3	☐	5.000	4.960	6815.75	0.0086	P	1.7
4	☐	10.000	9.525	12744.46	0.0163	P	0.8
5	☐	100.000	99.701	128684.28	0.1675	P	0.7
6	☐	200.000	200.174	252439.94	0.3359	P	0.5
7	☐	1.000					

y = 0.0017 * x + 3.2140E-004
R = 1.0000
DL = 0.08359
BEC = 0.1917

Weight: <None>
Min Conc: <None>

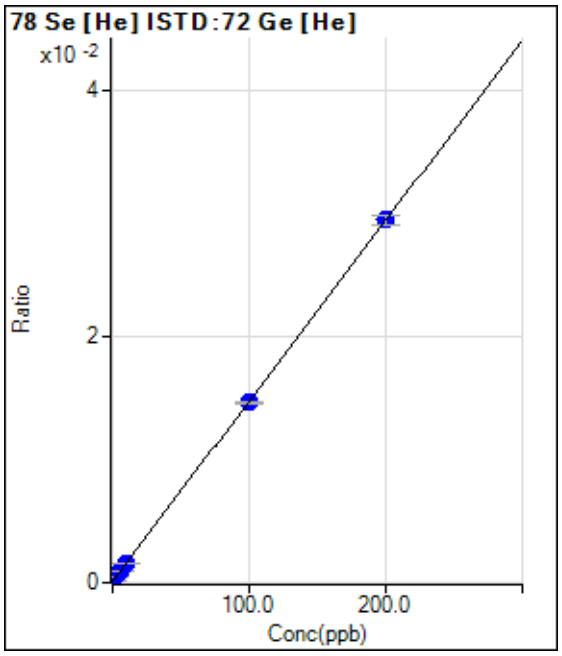
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27454.64	0.0094	P	2.1
2	☐	2.000	10.638	29898.41	0.0102	P	1.4
3	☐	5.000	14.248	30933.53	0.0105	P	4.1
4	☐	10.000	20.818	32048.70	0.0110	P	0.7
5	☐	100.000	92.747	47819.57	0.0165	P	2.3
6	☐	200.000	202.768	70716.67	0.0248	P	1.5
7	☐	1.000					

y = 7.5597E-005 * x + 0.0094
R = 0.9969
DL = 7.749
BEC = 124.9

Weight: <None>
Min Conc: <None>

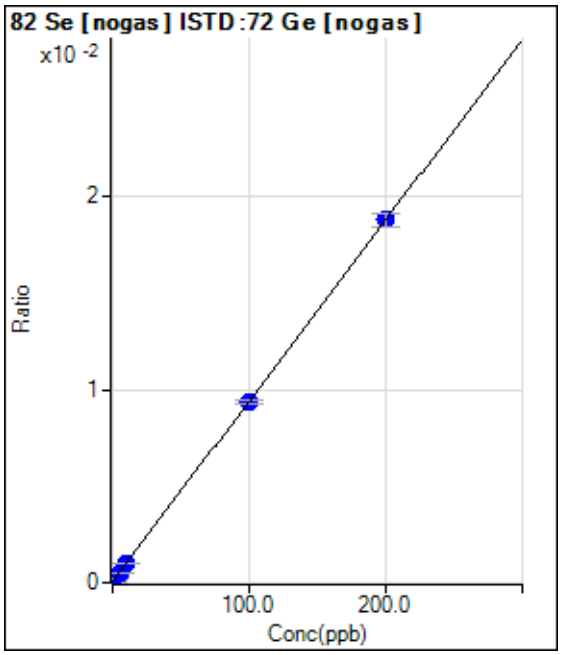


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.247	121.33	0.0002	P	10.8
2	☐	2.000	2.141	327.33	0.0004	P	9.0
3	☐	5.000	5.406	720.02	0.0009	P	8.8
4	☐	10.000	9.688	1205.38	0.0015	P	2.3
5	☐	100.000	99.029	11251.49	0.0146	P	0.5
6	☐	200.000	200.490	22186.13	0.0295	P	2.5
7	☐	1.000					

y = 1.4666E-004 * x + 1.1971E-004
R = 1.0000
DL = 0.3459
BEC = 0.8163

Weight: <None>
Min Conc: <None>

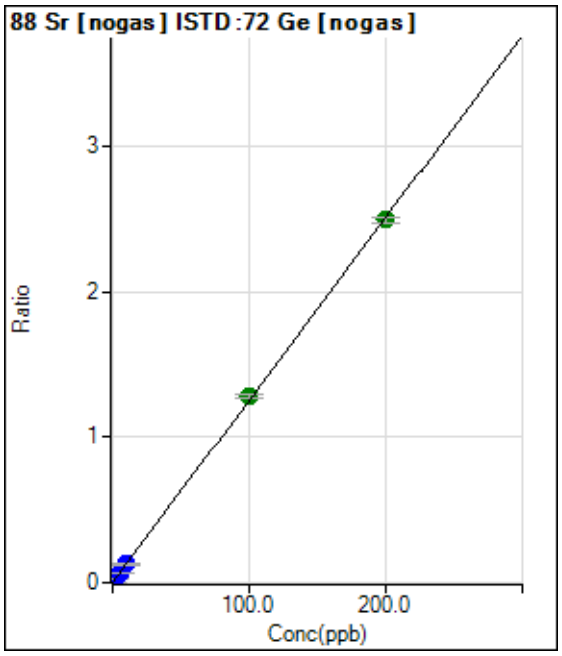
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.00	0.0001	P	46.2
2	☐	2.000	2.014	730.03	0.0003	P	14.6
3	☐	5.000	4.685	1470.08	0.0005	P	4.5
4	☐	10.000	10.068	2916.96	0.0010	P	6.0
5	☐	100.000	99.402	27190.61	0.0094	P	1.3
6	☐	200.000	200.303	53622.64	0.0188	P	3.7
7	☐	1.000					

y = 9.3490E-005 * x + 6.2022E-005
R = 1.0000
DL = 0.92
BEC = 0.6634

Weight: <None>
Min Conc: <None>

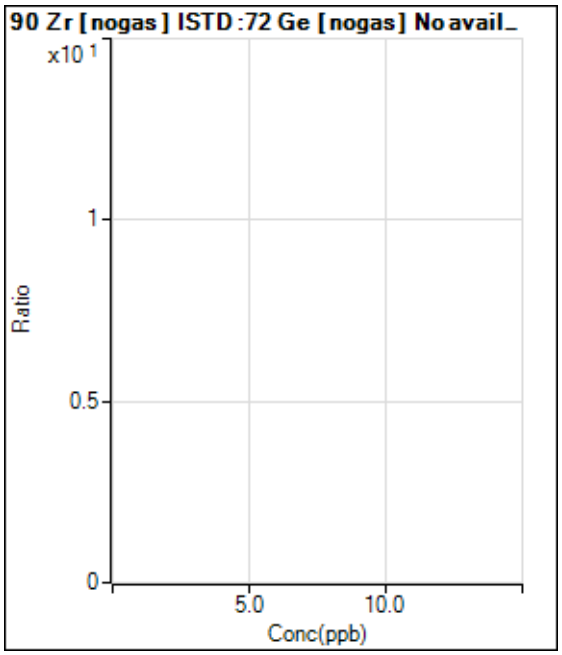


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2530.22	0.0009	P	7.0
2	☐	2.000	2.042	77285.28	0.0265	P	2.7
3	☐	5.000	4.979	186329.16	0.0634	P	1.2
4	☐	10.000	9.957	366091.96	0.1259	P	0.8
5	☐	100.000	102.159	3730018.48	1.2834	A	1.6
6	☐	200.000	198.923	7131121.98	2.4981	A	1.4
7	☐	1.000					

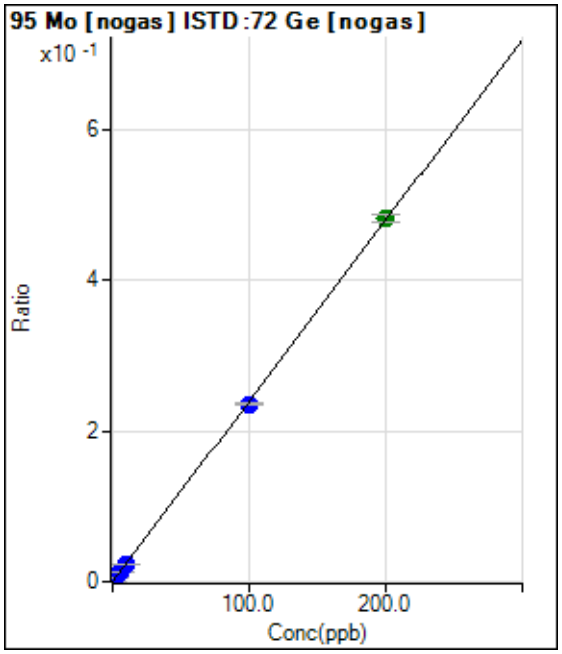
y = 0.0126 * x + 8.7066E-004
R = 0.9999
DL = 0.01459
BEC = 0.06935

Weight: <None>
Min Conc: <None>

Calibration for 016_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					

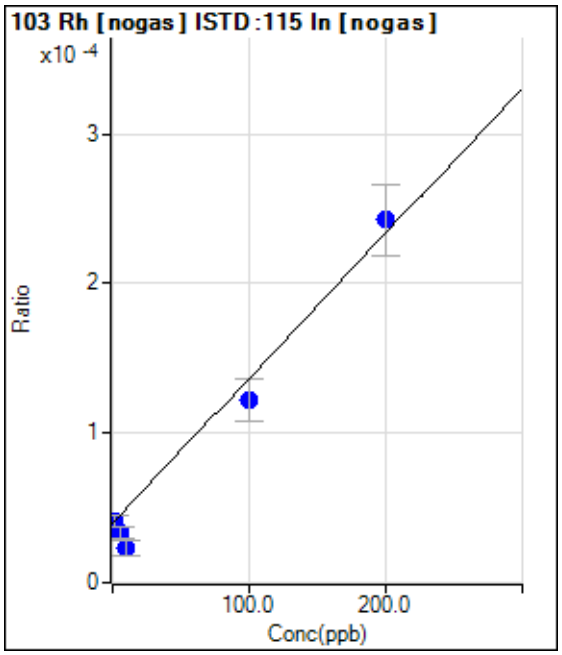


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0001	P	43.2
2	☐	2.000	1.963	14012.28	0.0048	P	2.2
3	☐	5.000	4.853	34480.20	0.0117	P	1.9
4	☐	10.000	9.553	66871.48	0.0230	P	1.5
5	☐	100.000	98.300	684801.19	0.2356	P	1.8
6	☐	200.000	200.876	1374234.98	0.4814	A	2.1
7	☐	1.000					

y = 0.0024 * x + 9.9743E-005
R = 1.0000
DL = 0.05393
BEC = 0.04163

Weight: <None>
Min Conc: <None>

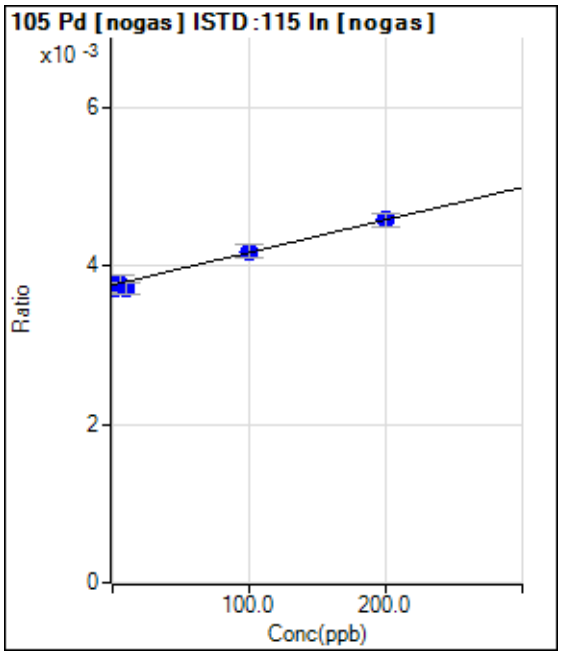
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.33	0.0000	P	23.7
2	☐	2.000	0.966	126.67	0.0000	P	21.3
3	☐	5.000	-6.874	103.33	0.0000	P	24.1
4	☐	10.000	-17.171	73.33	0.0000	P	46.7
5	☐	100.000	85.117	370.01	0.0001	P	23.1
6	☐	200.000	209.107	713.36	0.0002	P	19.5
7	☐	1.000					

y = 9.6886E-007 * x + 3.9824E-005
R = 0.9915
DL = 29.26
BEC = 41.1

Weight: <None>
Min Conc: <None>

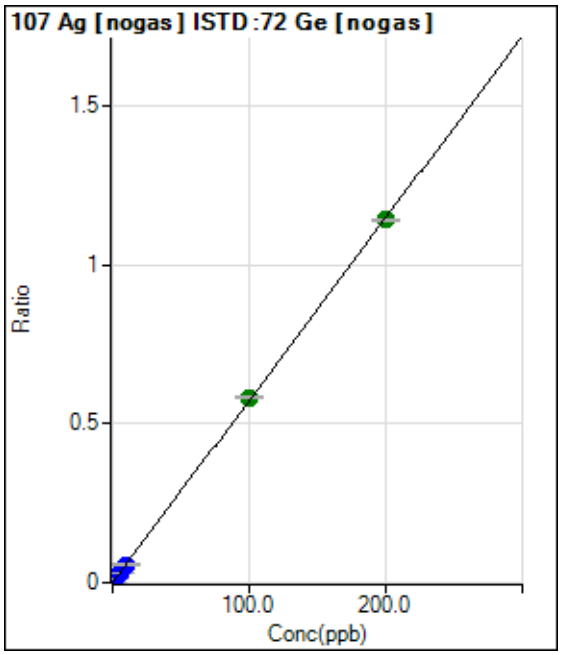


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11603.94	0.0038	P	2.9
2	☐	2.000	-13.279	11540.56	0.0037	P	3.1
3	☐	5.000	3.921	11774.11	0.0038	P	6.3
4	☐	10.000	-11.967	11690.67	0.0037	P	3.7
5	☐	100.000	103.306	12691.42	0.0042	P	3.8
6	☐	200.000	199.625	13465.30	0.0046	P	3.6
7	☐	1.000					

y = 4.1174E-006 * x + 0.0038
R = 0.9945
DL = 80.81
BEC = 913.3

Weight: <None>
Min Conc: <None>

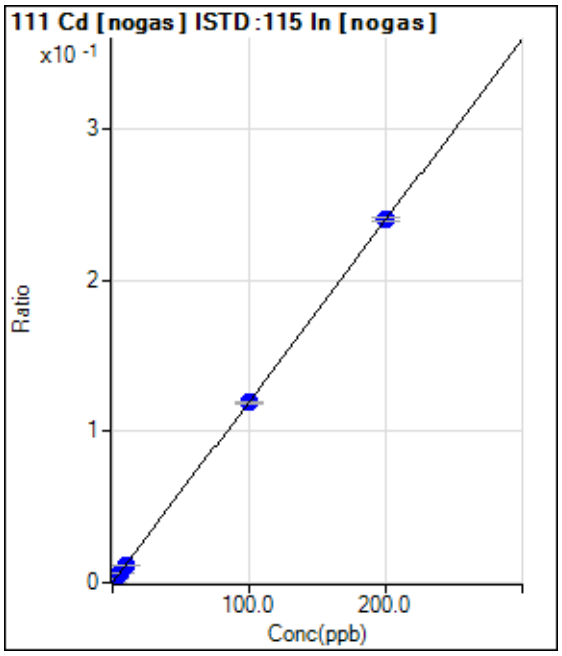
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	610.02	0.0002	P	12.2
2	☐	2.000	1.974	33645.47	0.0115	P	1.5
3	☐	5.000	4.956	84199.26	0.0286	P	2.7
4	☐	10.000	9.930	166291.37	0.0572	P	2.0
5	☐	100.000	101.793	1697601.80	0.5841	A	1.8
6	☐	200.000	199.108	3261600.47	1.1424	A	0.7
7	☐	1.000					

y = 0.0057 * x + 2.0997E-004
R = 0.9999
DL = 0.01341
BEC = 0.0366

Weight: <None>
Min Conc: <None>

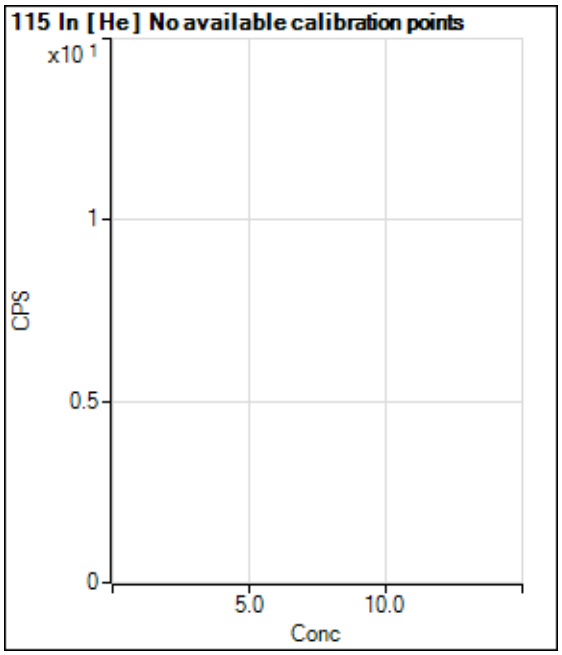


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	115.
2	☐	2.000	1.876	7008.17	0.0023	P	1.4
3	☐	5.000	4.940	18439.90	0.0059	P	4.4
4	☐	10.000	9.426	35565.96	0.0113	P	1.9
5	☐	100.000	99.688	361954.17	0.1193	P	1.1
6	☐	200.000	200.187	704324.44	0.2396	P	0.9
7	☐	1.000					

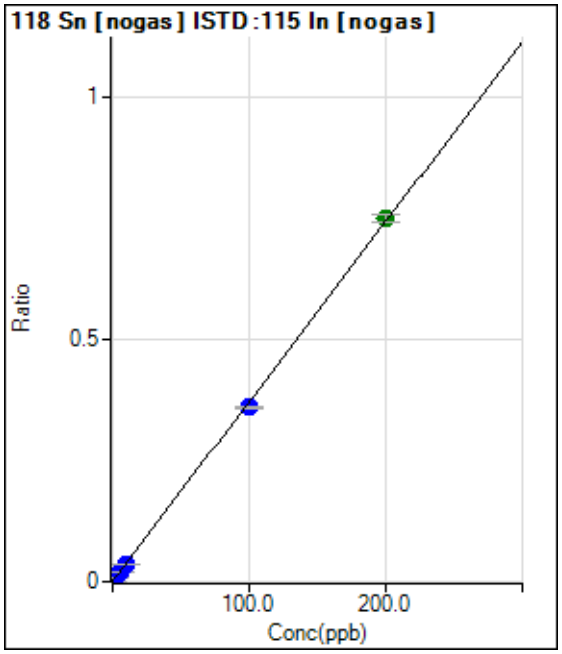
y = 0.0012 * x + 4.3328E-006
R = 1.0000
DL = 0.01259
BEC = 0.003619

Weight: <None>
Min Conc: <None>

Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1184410.59		P	0.1
2	☐			1145101.16		P	3.8
3	☐			1201662.31		P	1.0
4	☐			1185644.43		P	1.1
5	☐			1149733.18		P	0.9
6	☐			1118570.21		P	1.0
7	☐						

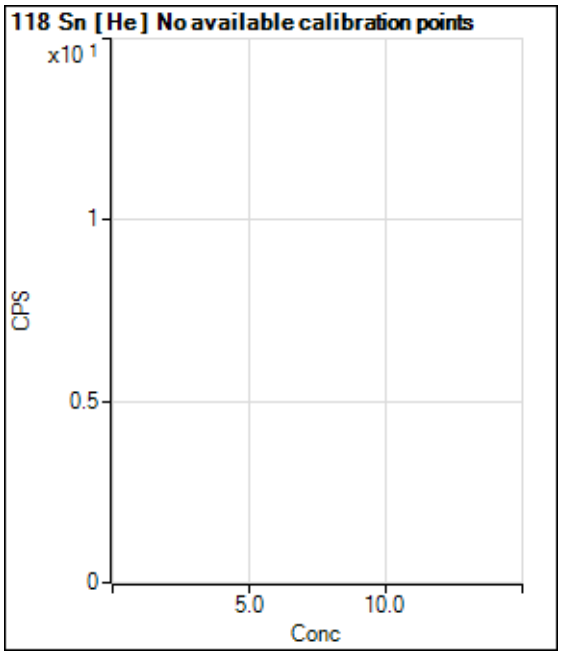


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2196.84	0.0007	P	10.3
2	☐	2.000	1.813	23178.86	0.0074	P	1.3
3	☐	5.000	4.682	56360.56	0.0181	P	0.3
4	☐	10.000	9.229	110176.94	0.0350	P	0.2
5	☐	100.000	96.662	1090032.17	0.3595	P	1.6
6	☐	200.000	201.717	2202314.45	0.7494	A	2.1
7	☐	1.000					

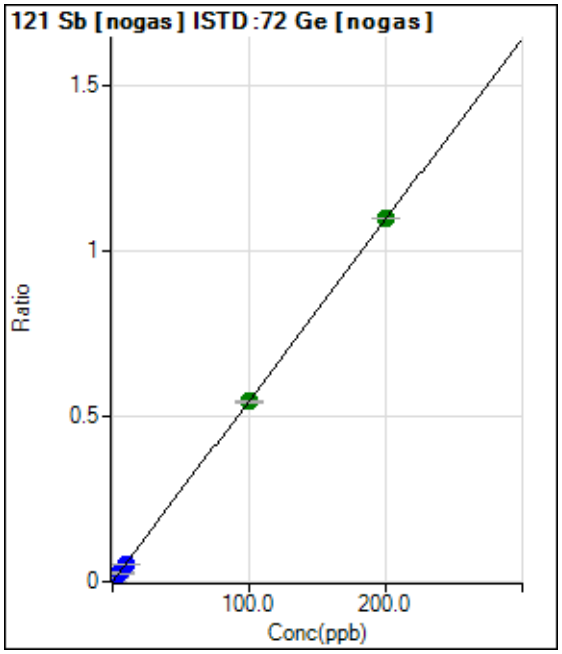
y = 0.0037 * x + 7.1274E-004
R = 0.9998
DL = 0.05932
BEC = 0.192

Weight: <None>
Min Conc: <None>

Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1016.72		P	16.8
2	☐			10499.98		P	4.3
3	☐			24550.72		P	4.0
4	☐			47223.71		P	1.5
5	☐			481553.82		P	0.6
6	☐			958609.36		P	0.6
7	☐						

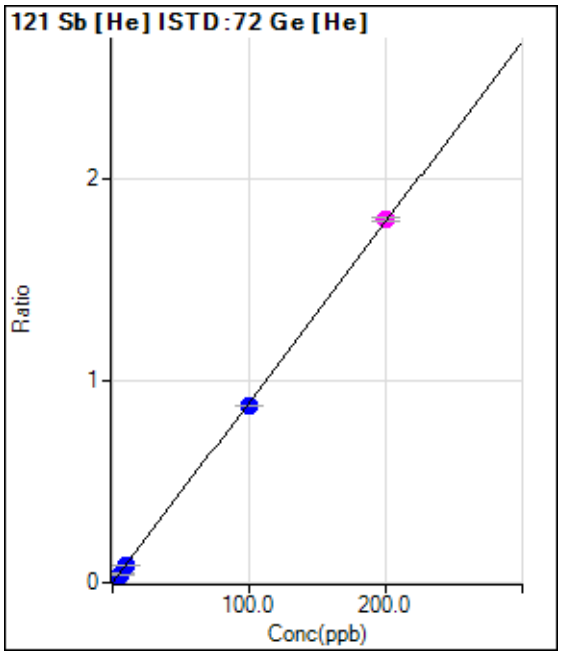


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	763.37	0.0003	P	15.0
2	☐	2.000	1.928	31481.78	0.0108	P	4.0
3	☐	5.000	4.762	77283.06	0.0263	P	1.3
4	☐	10.000	9.618	153643.46	0.0528	P	1.1
5	☐	100.000	99.308	1578132.32	0.5430	A	1.1
6	☐	200.000	200.372	3127121.20	1.0953	A	0.1
7	☐	1.000					

y = 0.0055 * x + 2.6269E-004
R = 1.0000
DL = 0.02161
BEC = 0.04807

Weight: <None>
Min Conc: <None>

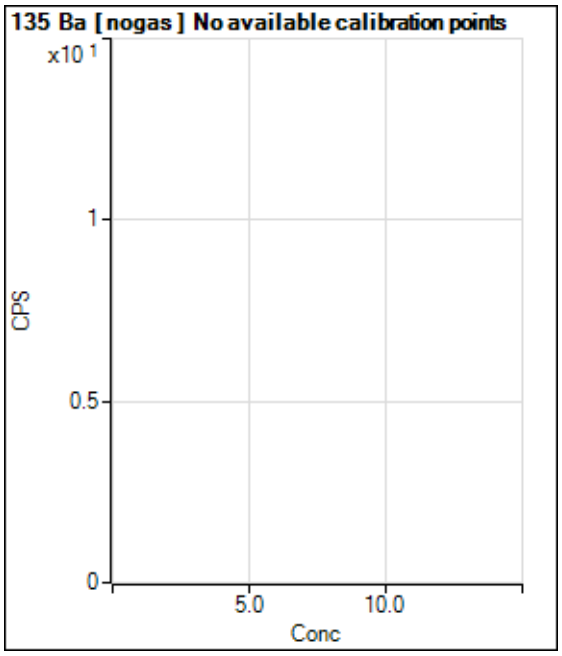
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	343.34	0.0004	P	17.2
2	☐	2.000	2.008	13865.61	0.0184	P	5.4
3	☐	5.000	4.724	33605.88	0.0426	P	2.5
4	☐	10.000	9.387	65860.32	0.0842	P	0.7
5	☐	100.000	97.711	670118.97	0.8721	P	0.1
6	☐	200.000	201.182	1349034.67	1.7952	M	1.0
7	☐	1.000					

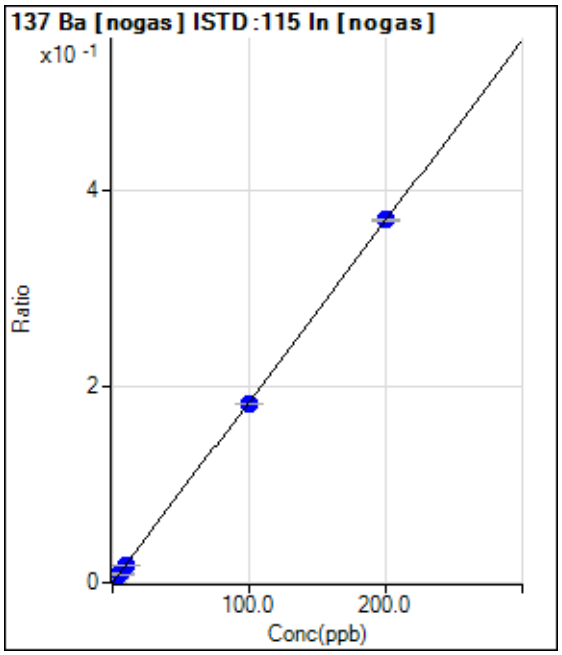
y = 0.0089 * x + 4.4130E-004
R = 0.9999
DL = 0.02557
BEC = 0.04947

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			370.01		P	12.4
2	☐			6761.40		P	4.5
3	☐			16594.85		P	3.6
4	☐			32120.15		P	1.1
5	☐			318145.05		P	0.5
6	☐			627784.17		P	0.8
7	☐						

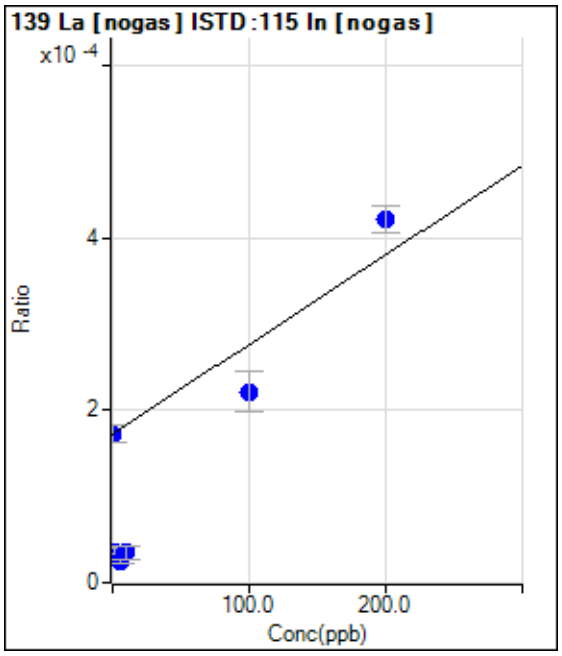
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	553.35	0.0002	P	6.9
2	☐	2.000	1.838	11120.39	0.0036	P	4.8
3	☐	5.000	4.726	27722.50	0.0089	P	2.0
4	☐	10.000	9.453	55512.49	0.0176	P	2.8
5	☐	100.000	98.965	554278.10	0.1828	P	0.6
6	☐	200.000	200.553	1088060.45	0.3702	P	0.5
7	☐	1.000					

y = 0.0018 * x + 1.7935E-004
R = 1.0000
DL = 0.02006
BEC = 0.0972

Weight: <None>
Min Conc: <None>

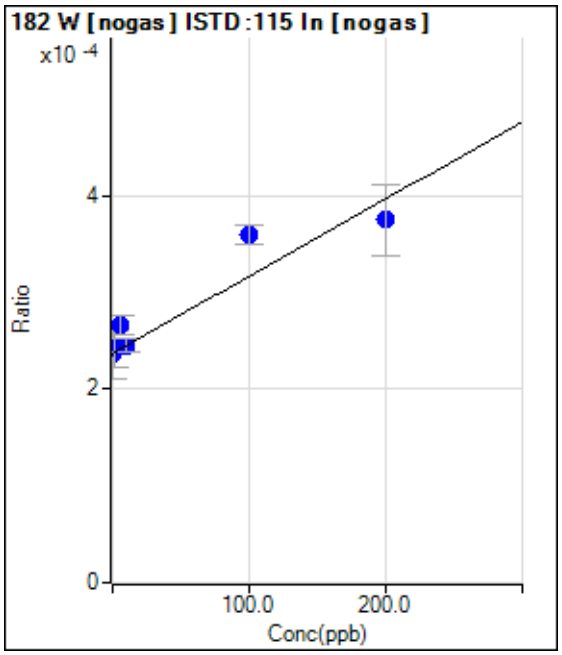


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	533.35	0.0002	P	12.1
2	☐	2.000	-131.474	113.33	0.0000	P	14.9
3	☐	5.000	-142.895	76.67	0.0000	P	26.5
4	☐	10.000	-132.907	110.00	0.0000	P	48.7
5	☐	100.000	46.440	670.02	0.0002	P	21.2
6	☐	200.000	238.958	1236.73	0.0004	P	7.6
7	☐	1.000					

y = 1.0379E-006 * x + 1.7290E-004
R = 0.9245
DL = 60.51
BEC = 166.6

Weight: <None>
Min Conc: <None>

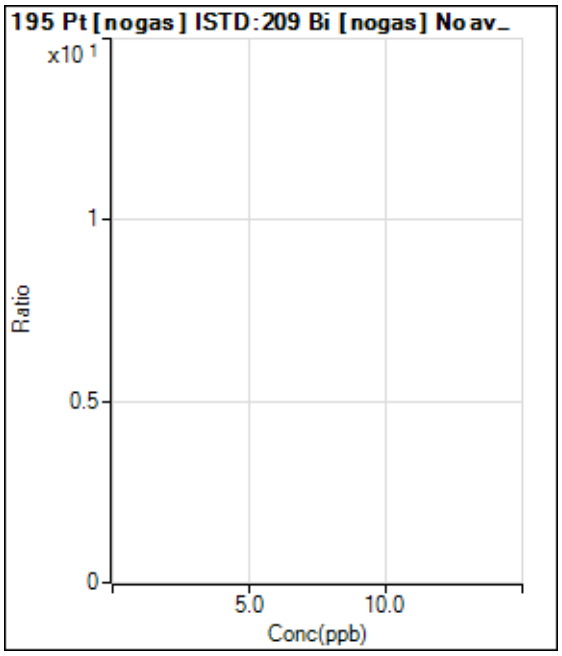
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	733.36	0.0002	P	22.0
2	☐	2.000	5.538	753.36	0.0002	P	15.6
3	☐	5.000	36.563	830.04	0.0003	P	7.4
4	☐	10.000	10.110	773.37	0.0002	P	5.5
5	☐	100.000	152.846	1090.05	0.0004	P	5.5
6	☐	200.000	172.747	1103.39	0.0004	P	19.9
7	☐	1.000					

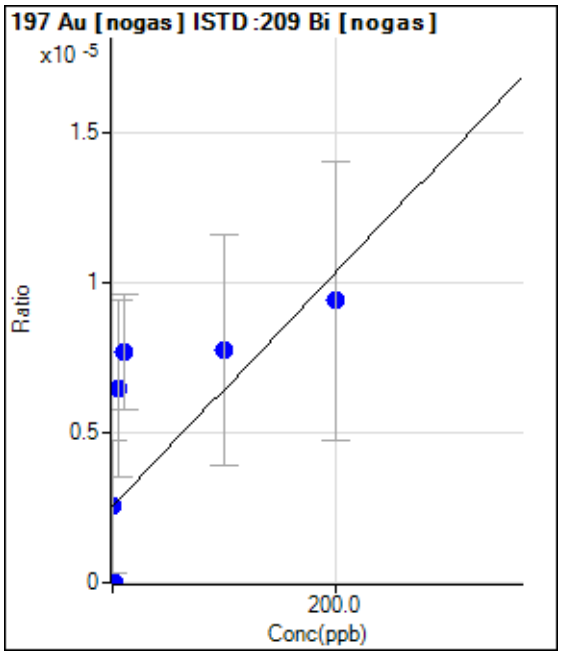
y = 7.9826E-007 * x + 2.3727E-004
R = 0.9396
DL = 196.1
BEC = 297.2

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					

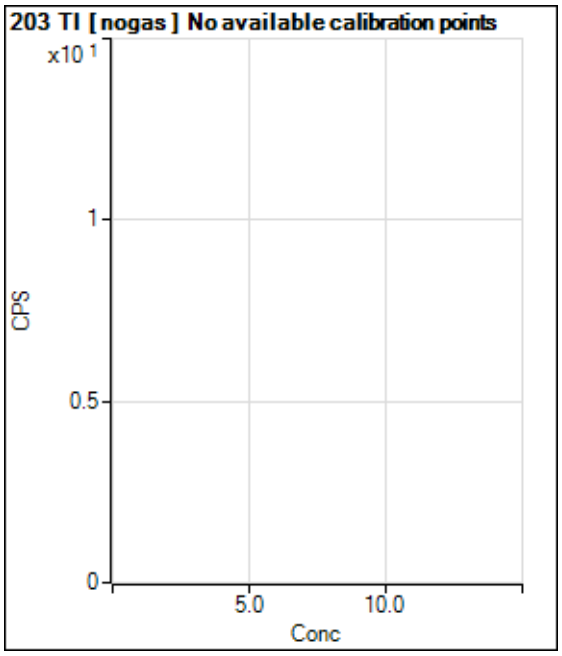
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.
2	☐	2.000	-65.072	0.00	0.0000	P	
3	☐	5.000	100.656	16.67	0.0000	P	91.6
4	☐	10.000	131.053	20.00	0.0000	P	50.1
5	☐	100.000	133.180	20.00	0.0000	P	99.3
6	☐	200.000	175.637	23.33	0.0000	P	98.5
7	☐	1.000					

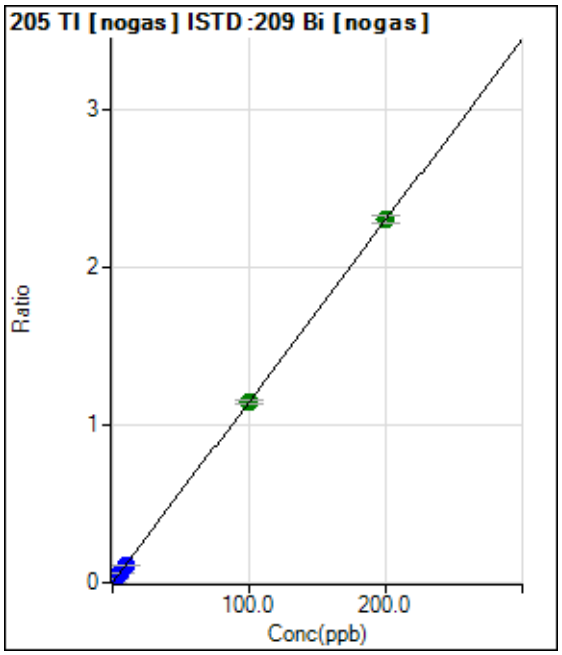
y = 3.9096E-008 * x + 2.5440E-006
R = 0.6644
DL = 338.1
BEC = 65.07

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			276.68		P	11.0
2	☐			23984.43		P	3.4
3	☐			60317.11		P	1.4
4	☐			119025.39		P	1.3
5	☐			1198540.79		P	0.6
6	☐			2404011.06		A	0.7
7	☐						

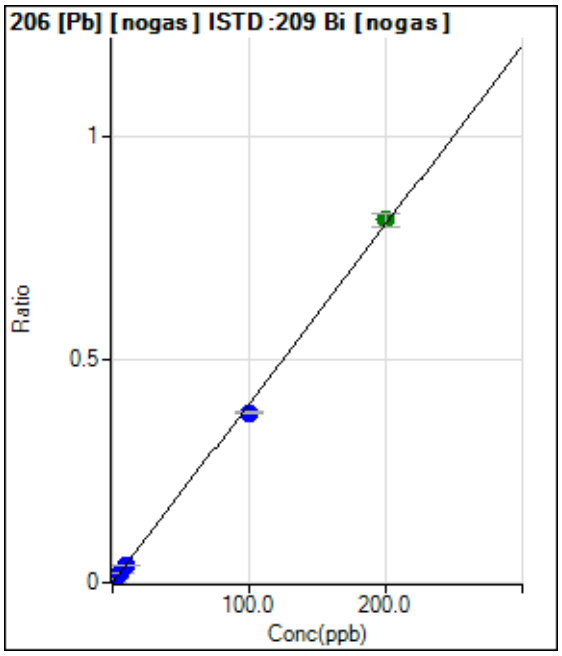
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	733.36	0.0003	P	12.2
2	☐	2.000	1.911	57818.86	0.0222	P	2.6
3	☐	5.000	4.909	146517.31	0.0567	P	1.2
4	☐	10.000	9.489	285312.16	0.1093	P	1.1
5	☐	100.000	99.585	2917139.02	1.1445	A	1.4
6	☐	200.000	200.236	5685537.00	2.3010	A	2.1
7	☐	1.000					

y = 0.0115 * x + 2.8182E-004
R = 1.0000
DL = 0.009001
BEC = 0.02453

Weight: <None>
Min Conc: <None>

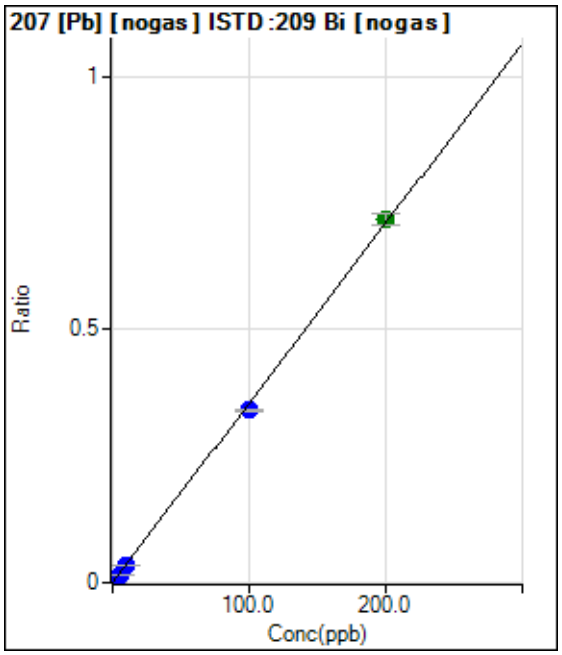


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	246.67	0.0001	P	15.3
2	☐	2.000	1.879	19812.20	0.0076	P	4.9
3	☐	5.000	4.876	50738.76	0.0196	P	0.6
4	☐	10.000	9.416	98723.69	0.0378	P	2.7
5	☐	100.000	94.759	968005.84	0.3798	P	1.3
6	☐	200.000	202.654	2006232.52	0.8122	A	4.0
7	☐	1.000					

y = 0.0040 * x + 9.4782E-005
R = 0.9995
DL = 0.01082
BEC = 0.02365

Weight: <None>
Min Conc: <None>

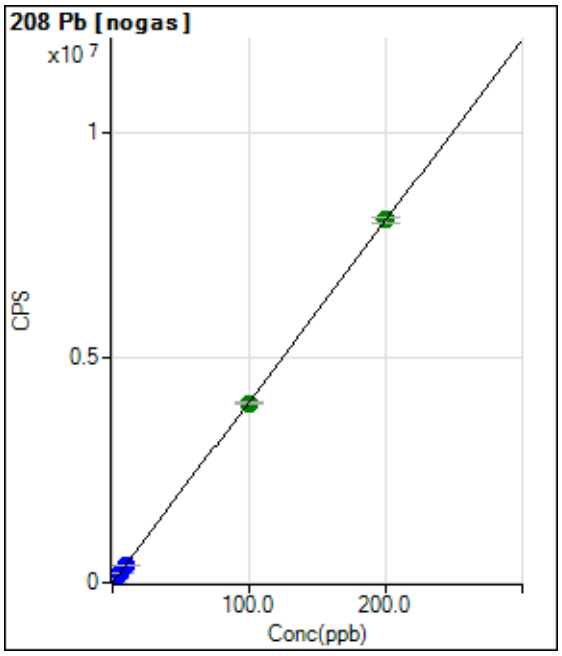
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	233.34	0.0001	P	33.1
2	☐	2.000	1.952	18203.70	0.0070	P	6.5
3	☐	5.000	4.728	43544.88	0.0168	P	0.2
4	☐	10.000	9.395	87151.44	0.0334	P	1.0
5	☐	100.000	96.032	867828.95	0.3405	P	1.0
6	☐	200.000	202.021	1769255.44	0.7162	A	3.2
7	☐	1.000					

y = 0.0035 * x + 8.9785E-005
R = 0.9997
DL = 0.02518
BEC = 0.02533

Weight: <None>
Min Conc: <None>

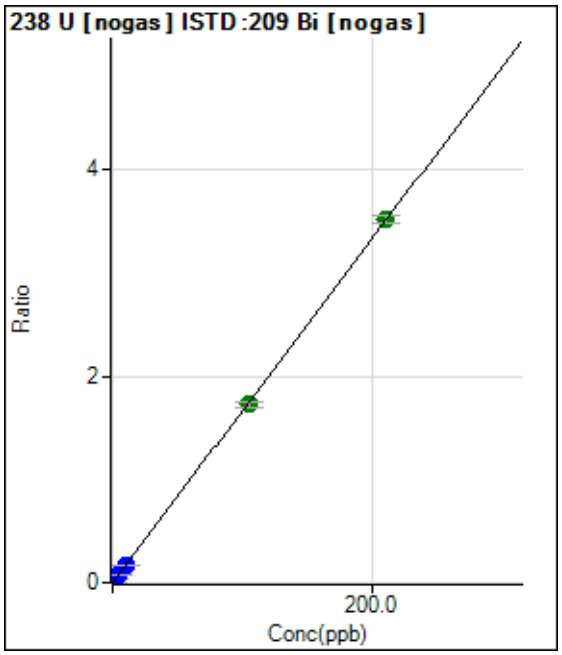


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	873.36		P	10.3
2	☐	2.000	2.007	81503.90		P	1.9
3	☐	5.000	4.985	201178.06		P	0.1
4	☐	10.000	9.884	397988.71		P	0.3
5	☐	100.000	99.232	3987775.23		A	0.2
6	☐	200.000	200.390	8052093.11		A	1.4
7	☐	1.000					

y = 40177.7030 * x + 873.3600
R = 1.0000
DL = 0.006692
BEC = 0.02174

Weight: <None>
Min Conc: <None>

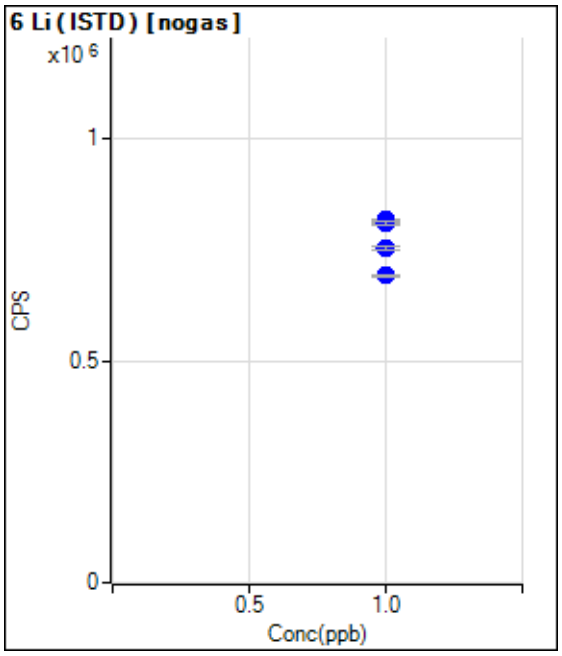
Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	17.8
2	☐	2.000	1.995	86633.58	0.0333	P	3.5
3	☐	5.000	4.954	213637.09	0.0827	P	1.1
4	☐	10.000	9.734	423730.76	0.1623	P	0.8
5	☐	105.000	103.720	4406210.14	1.7291	A	3.1
6	☐	210.000	210.654	8677228.20	3.5117	A	2.1
7	☐	1.000					

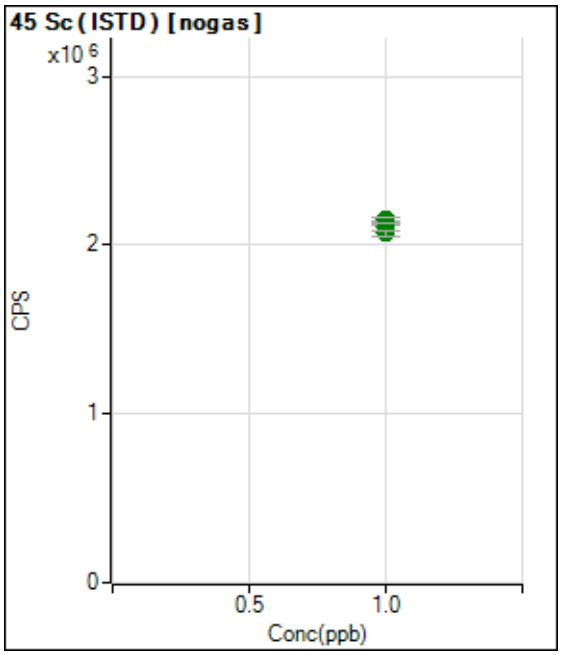
y = 0.0167 * x + 7.6844E-005
R = 1.0000
DL = 0.002467
BEC = 0.00461

Weight: <None>
Min Conc: <None>

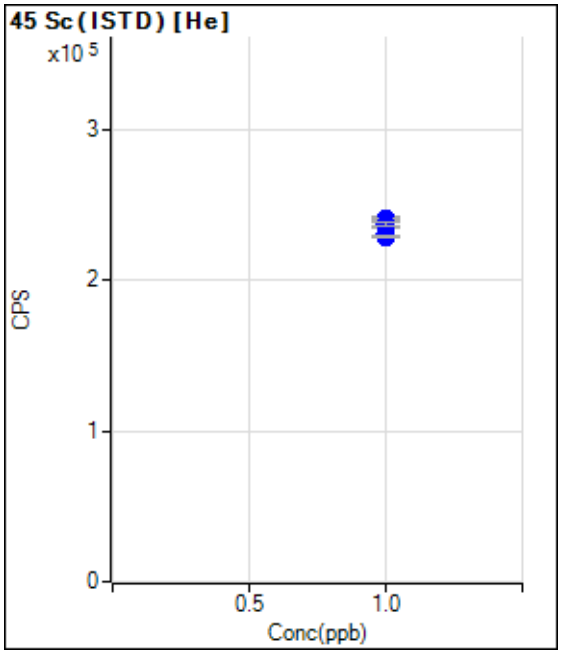


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		812123.79		P	0.4
2	☐	1.000		817428.08		P	0.6
3	☐	1.000		818144.69		P	0.9
4	☐	1.000		810304.87		P	1.1
5	☐	1.000		754284.36		P	0.8
6	☐	1.000		693227.46		P	0.5
7	☐	1.000					

Calibration for 016_ICV.d

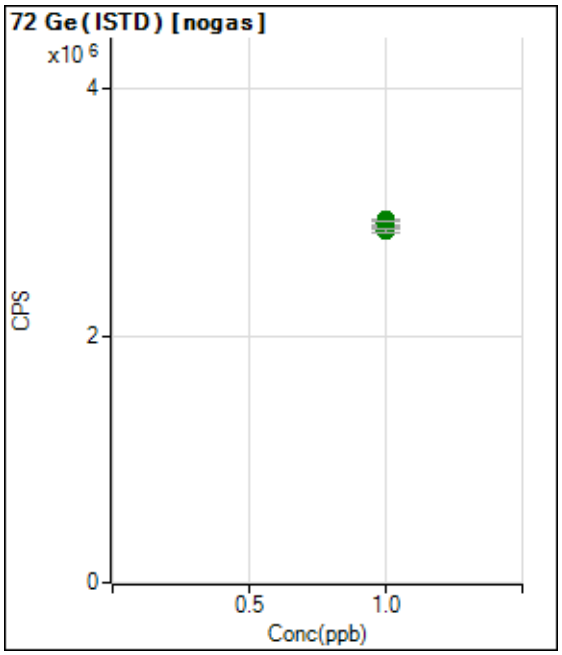


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2103344.60		A	1.3
2	☐	1.000		2122608.98		A	0.6
3	☐	1.000		2131232.00		A	1.0
4	☐	1.000		2148939.91		A	1.4
5	☐	1.000		2108125.96		A	1.9
6	☐	1.000		2067417.00		A	1.5
7	☐	1.000					

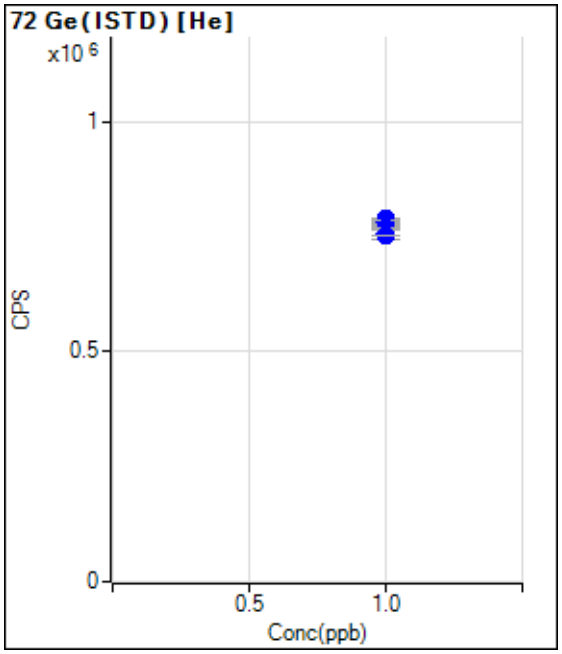


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		239259.50		P	0.6
2	☐	1.000		231315.88		P	2.9
3	☐	1.000		240147.10		P	1.4
4	☐	1.000		240642.95		P	0.6
5	☐	1.000		237206.95		P	1.0
6	☐	1.000		228712.40		P	0.8
7	☐	1.000					

Calibration for 016_ICV.d

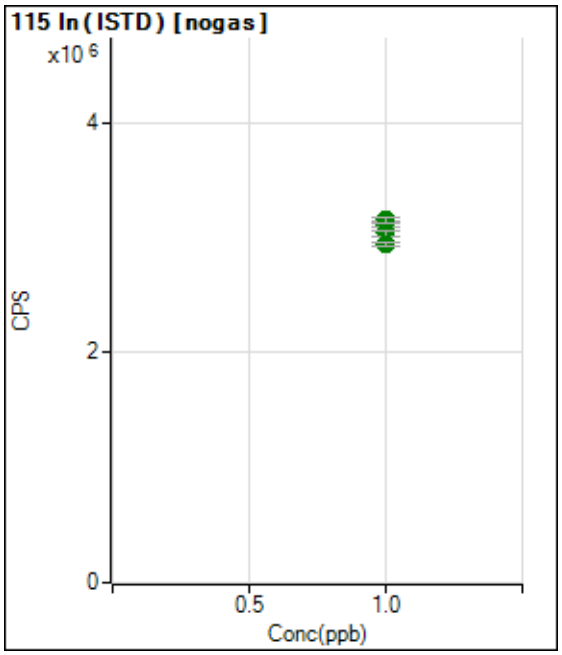


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2907263.39		A	1.0
2	☐	1.000		2917384.64		A	2.1
3	☐	1.000		2939913.81		A	0.3
4	☐	1.000		2908742.14		A	1.1
5	☐	1.000		2906620.48		A	1.4
6	☐	1.000		2854931.10		A	1.2
7	☐	1.000					

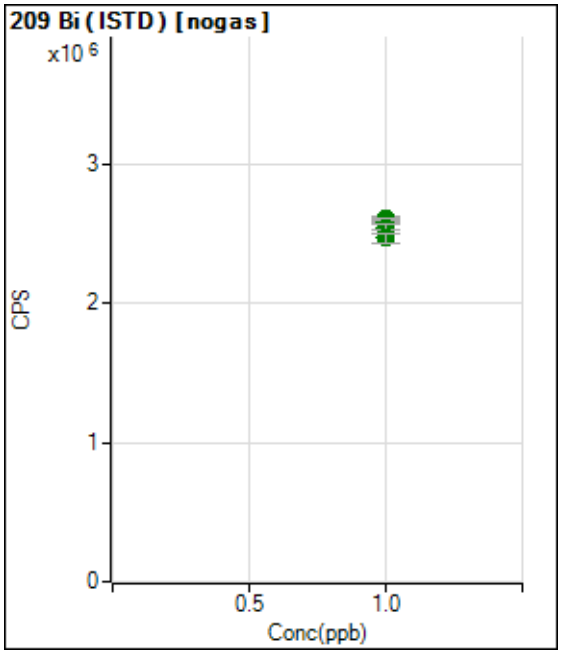


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		778142.67		P	0.7
2	☐	1.000		755901.34		P	2.6
3	☐	1.000		789081.97		P	0.3
4	☐	1.000		782378.69		P	0.7
5	☐	1.000		768382.96		P	0.5
6	☐	1.000		751483.06		P	0.2
7	☐	1.000					

Calibration for 016_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3086471.18		A	2.2
2	☐	1.000		3114245.45		A	1.5
3	☐	1.000		3115602.15		A	1.5
4	☐	1.000		3151052.47		A	1.3
5	☐	1.000		3032721.38		A	1.5
6	☐	1.000		2939073.08		A	1.0
7	☐	1.000					



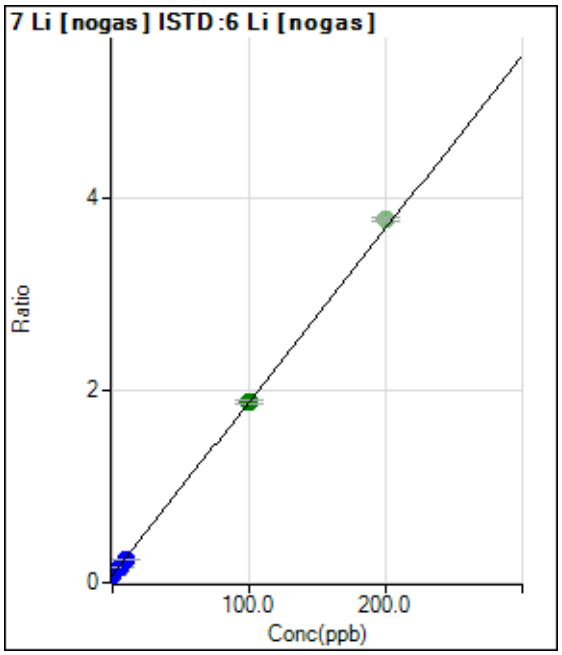
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2602271.89		A	0.7
2	☐	1.000		2600678.71		A	2.5
3	☐	1.000		2584506.94		A	0.9
4	☐	1.000		2609990.53		A	0.2
5	☐	1.000		2549110.49		A	1.9
6	☐	1.000		2471877.88		A	2.8
7	☐	1.000					

Calibration for 115_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\012219A.b\
Analysis File: 012219A.batch.bin
DA Date-Time: 2019-01-22 23:04:38
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	108CALB.d	CAL BLK	2019-01-22 16:05:44
2	109CALS.d	2/10/200	2019-01-22 16:07:44
3	110CALS.d	5/25/500	2019-01-22 16:09:44
4	111CALS.d	10/50/1000	2019-01-22 16:11:44
5	112CALS.d	100/500/10K	2019-01-22 16:13:42
6	113CALS.d	200/1000/20K	2019-01-22 16:15:42
7			

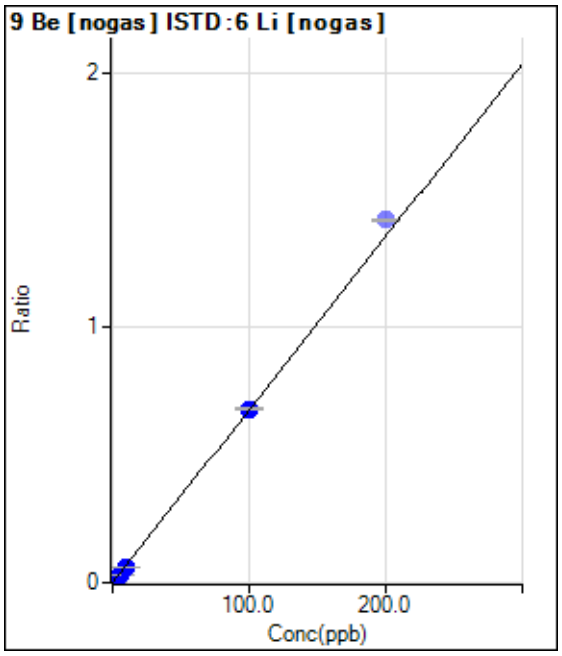
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	74566.55	0.0805	P	0.5
2	☐	2.000	1.966	106883.35	0.1159	P	1.3
3	☐	5.000	4.790	151453.80	0.1667	P	2.6
4	☐	10.000	9.293	223545.28	0.2478	P	0.5
5	☐	100.000	100.082	1536239.14	1.8819	A	2.6
6	☑	200.000		2907414.44	3.7721	A	1.2
7	☐	1.000					

y = 0.0180 * x + 0.0805
R = 1.0000
DL = 0.07059
BEC = 4.474

Weight: <None>
Min Conc: <None>

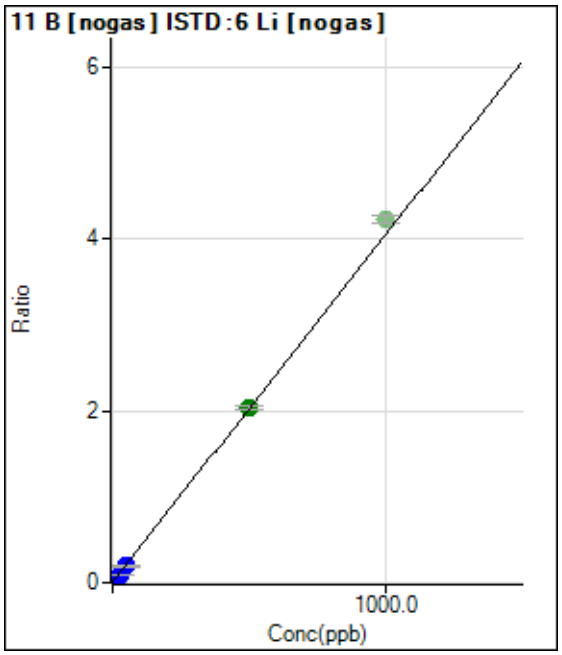


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0001	P	20.4
2	☐	2.000	1.791	11250.10	0.0122	P	2.0
3	☐	5.000	4.613	28444.49	0.0313	P	5.2
4	☐	10.000	9.066	55506.41	0.0615	P	2.4
5	☐	100.000	100.117	554263.83	0.6789	P	1.1
6	☑	200.000		1096531.00	1.4226	P	0.7
7	☐	1.000					

y = 0.0068 * x + 5.4021E-005
R = 1.0000
DL = 0.004874
BEC = 0.007967

Weight: <None>
Min Conc: <None>

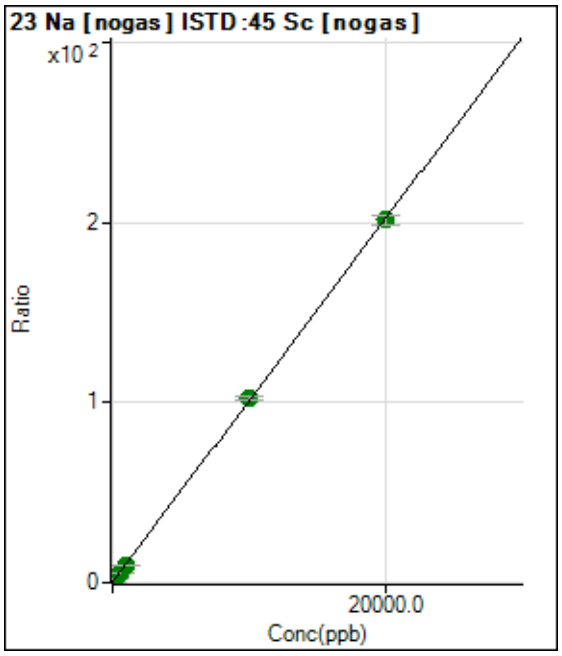
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7875.07	0.0085	P	1.7
2	☐	10.000	9.079	41648.51	0.0452	P	0.7
3	☐	25.000	22.336	89684.38	0.0987	P	1.2
4	☐	50.000	45.170	172247.98	0.1909	P	1.1
5	☐	500.000	500.635	1657440.86	2.0303	A	2.5
6	☑	1000.000		3255338.91	4.2237	A	2.3
7	☐	5.000					

y = 0.0040 * x + 0.0085
R = 1.0000
DL = 0.1045
BEC = 2.106

Weight: <None>
Min Conc: <None>

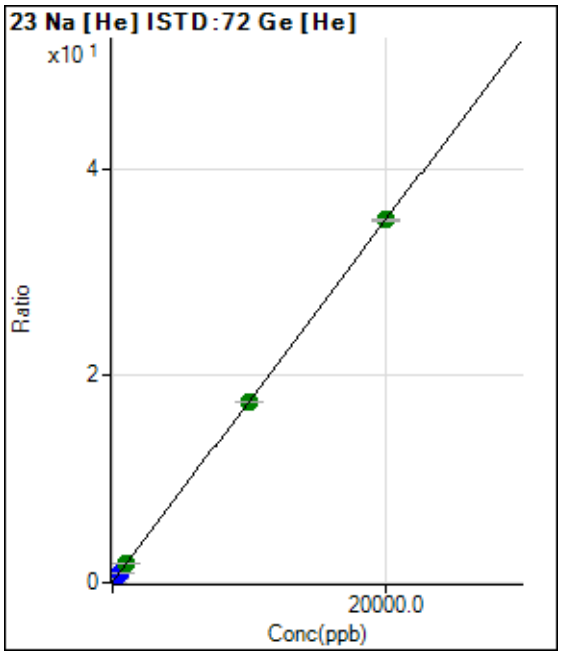


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	755013.72	0.2885	P	0.5
2	☐	200.000	199.650	5968819.92	2.3028	A	2.4
3	☐	500.000	519.606	13649442.49	5.5308	A	8.5
4	☐	1000.000	934.223	25773958.91	9.7139	A	1.2
5	☐	10000.00	10124.435	250715788.9	102.434	A	2.7
6	☐	20000.00	19940.585	494219344.3	201.469	A	2.6
7	☐	100.000					

y = 0.0101 * x + 0.2885
R = 1.0000
DL = 0.4576
BEC = 28.6

Weight: <None>
Min Conc: <None>

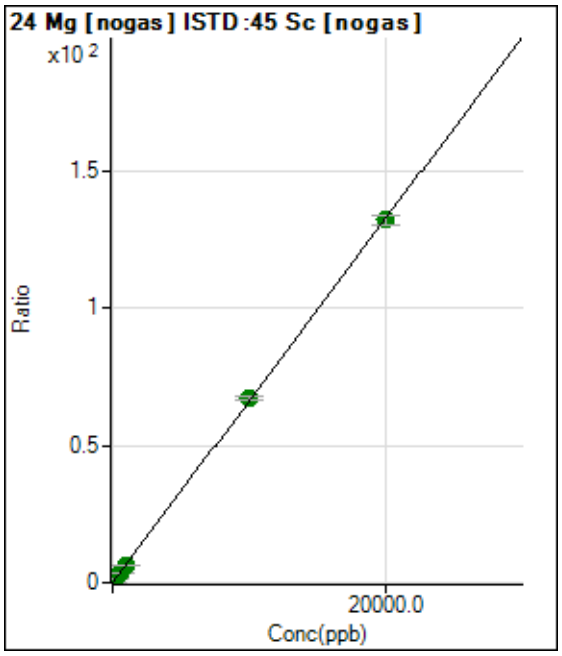
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56764.64	0.0627	P	0.7
2	☐	200.000	198.334	367630.45	0.4096	P	0.2
3	☐	500.000	496.624	833140.14	0.9315	P	0.9
4	☐	1000.000	988.885	1589692.16	1.7927	A	0.8
5	☐	10000.00	9952.455	14969339.78	17.4740	A	0.6
6	☐	20000.00	20024.429	30133881.22	35.0943	A	0.6
7	☐	100.000					

y = 0.0017 * x + 0.0627
R = 1.0000
DL = 0.7468
BEC = 35.82

Weight: <None>
Min Conc: <None>

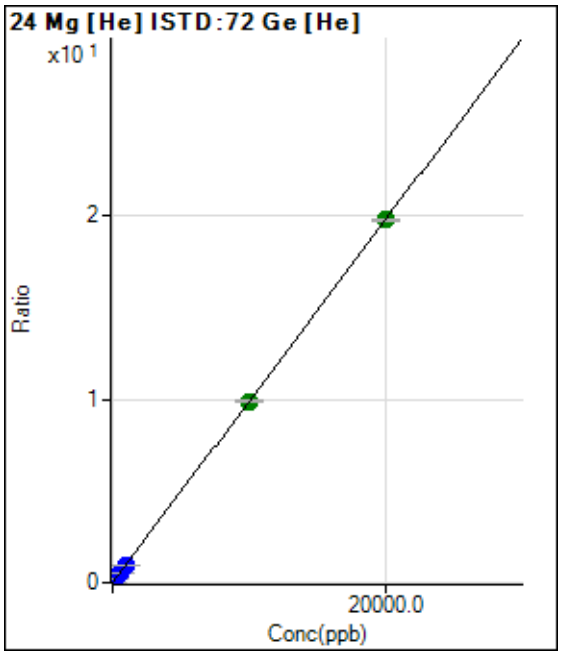


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41285.03	0.0158	P	5.5
2	☐	200.000	204.599	3553925.08	1.3712	A	3.2
3	☐	500.000	535.862	8802643.17	3.5657	A	7.9
4	☐	1000.000	963.848	16981484.75	6.4010	A	1.9
5	☐	10000.00	10112.872	164023607.8	67.0110	A	2.4
6	☐	20000.00	19944.429	324165098.9	132.142	A	2.5
7	☐	100.000					

y = 0.0066 * x + 0.0158
R = 1.0000
DL = 0.3959
BEC = 2.382

Weight: <None>
Min Conc: <None>

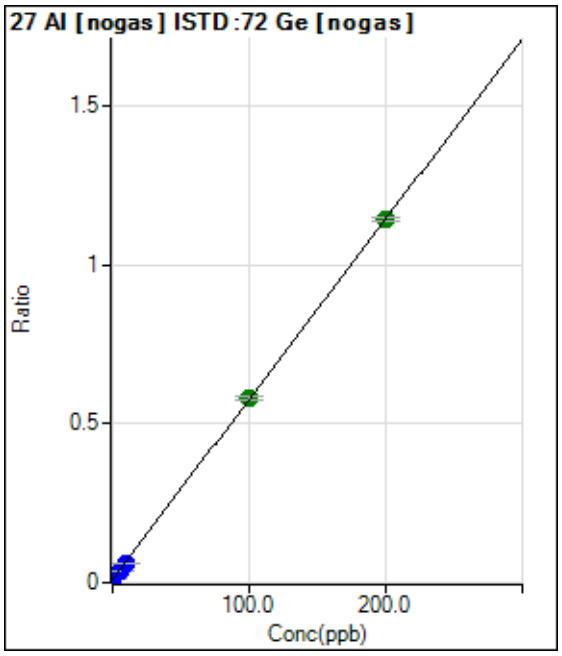
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2183.49	0.0024	P	6.9
2	☐	200.000	202.528	181743.31	0.2025	P	0.2
3	☐	500.000	502.530	446244.20	0.4989	P	1.2
4	☐	1000.000	982.754	863165.66	0.9734	P	0.6
5	☐	10000.00	10008.638	8473116.96	9.8912	A	1.2
6	☐	20000.00	19996.455	16966821.42	19.7594	A	0.8
7	☐	100.000					

y = 9.8802E-004 * x + 0.0024
R = 1.0000
DL = 0.5053
BEC = 2.439

Weight: <None>
Min Conc: <None>

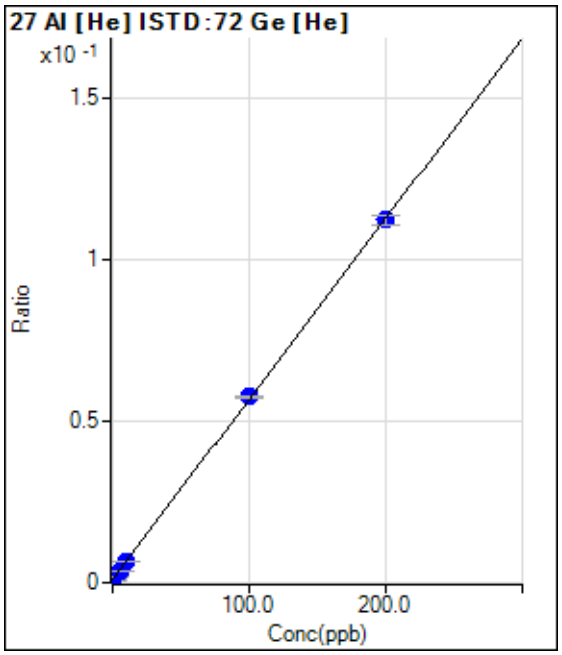


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40994.31	0.0108	P	1.8
2	☐	2.000	1.866	81544.11	0.0214	P	1.4
3	☐	5.000	4.792	138221.03	0.0379	P	4.5
4	☐	10.000	8.955	239624.94	0.0615	P	1.9
5	☐	100.000	100.787	2079245.96	0.5819	A	1.4
6	☐	200.000	199.665	4042732.86	1.1422	A	1.0
7	☐	1.000					

y = 0.0057 * x + 0.0108
R = 1.0000
DL = 0.1021
BEC = 1.905

Weight: <None>
Min Conc: <None>

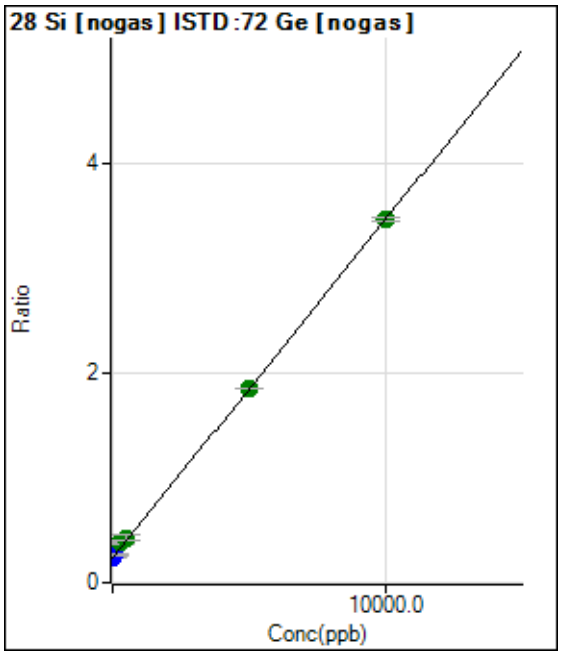
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.099	816.70	0.0009	P	16.6
2	☐	2.000	2.094	1906.80	0.0021	P	10.4
3	☐	5.000	4.467	3086.98	0.0035	P	5.5
4	☐	10.000	9.926	5764.29	0.0065	P	3.0
5	☐	100.000	101.192	49223.80	0.0575	P	1.8
6	☐	200.000	199.420	96419.58	0.1123	P	2.8
7	☐	1.000					

y = 5.5835E-004 * x + 9.5698E-004
R = 1.0000
DL = 0.8033
BEC = 1.714

Weight: <None>
Min Conc: <None>

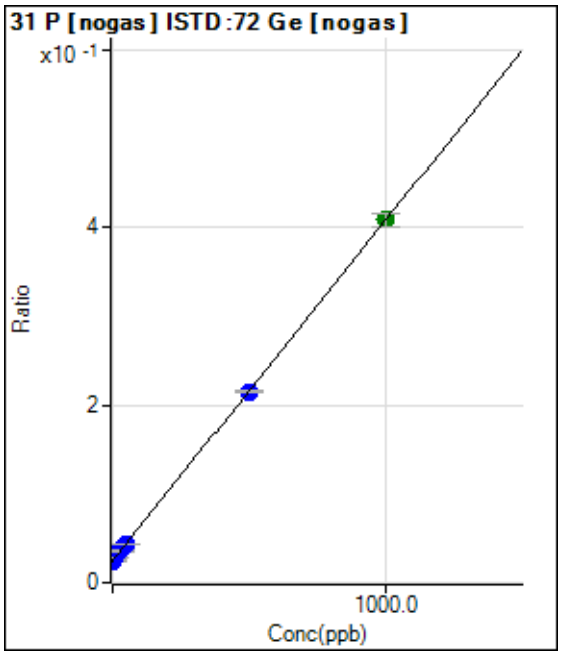


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	890570.14	0.2345	P	3.3
2	☐	100.000	104.805	1024132.38	0.2684	P	2.6
3	☐	250.000	444.412	1376823.94	0.3781	A	5.9
4	☐	500.000	593.573	1658170.08	0.4263	A	12.2
5	☐	5000.000	5006.629	6616641.36	1.8519	A	0.9
6	☐	10000.00	9987.098	12248476.49	3.4608	A	1.1
7	☐	5.000					

y = 3.2305E-004 * x + 0.2345
R = 0.9998
DL = 71.31
BEC = 725.9

Weight: <None>
Min Conc: <None>

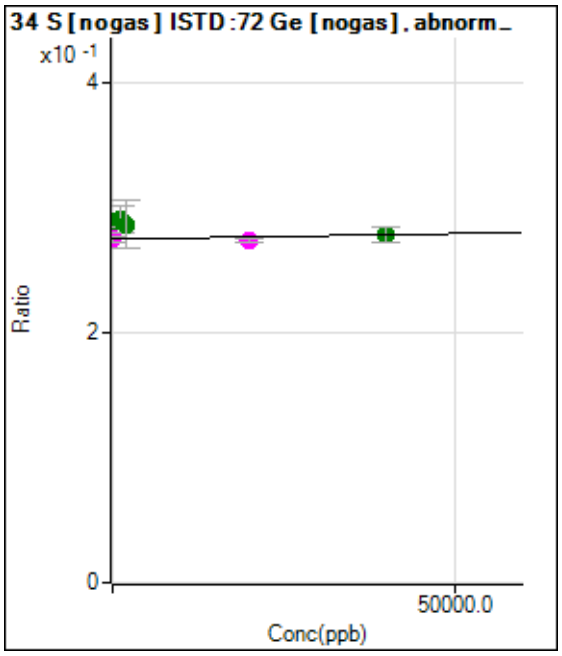
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93976.10	0.0247	P	2.2
2	☐	10.000	10.680	110058.22	0.0288	P	2.3
3	☐	25.000	29.049	130697.64	0.0359	P	5.1
4	☐	50.000	50.429	171703.92	0.0441	P	1.5
5	☐	500.000	497.131	769933.45	0.2155	P	0.7
6	☐	1000.000	1001.305	1447115.97	0.4089	A	4.1
7	☐	5.000					

y = 3.8369E-004 * x + 0.0247
R = 1.0000
DL = 4.185
BEC = 64.49

Weight: <None>
Min Conc: <None>

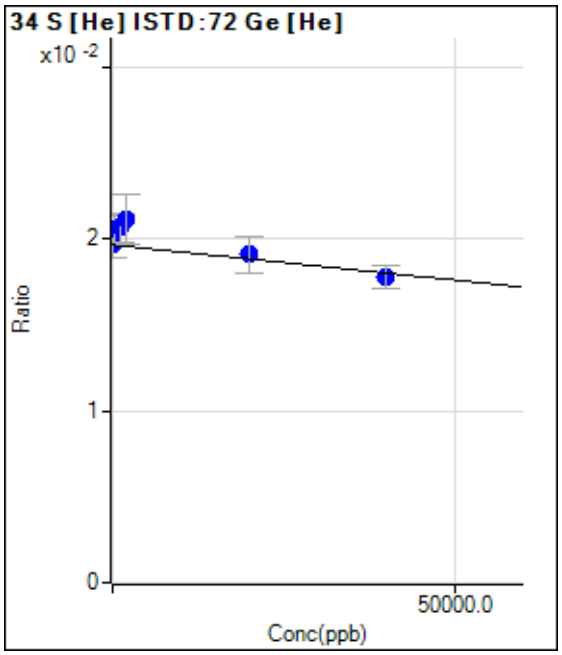


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1045992.96	0.2754	M	1.5
2	☐	400.000	156955.10	1103988.14	0.2893	A	3.2
3	☐	1000.000	173437.49	1058214.90	0.2908	A	7.4
4	☐	2000.000	133281.17	1117143.06	0.2872	A	13.2
5	☐	20000.00	-13626.99	979610.31	0.2742	M	1.0
6	☐	40000.00	44372.949	988352.95	0.2793	A	4.3
7	☐	100.000					

y = 8.8765E-008 * x + 0.2754
R = -0.4785
DL = 1.387E+05
BEC = 3.102E+06

Weight: <None>
Min Conc: <None>

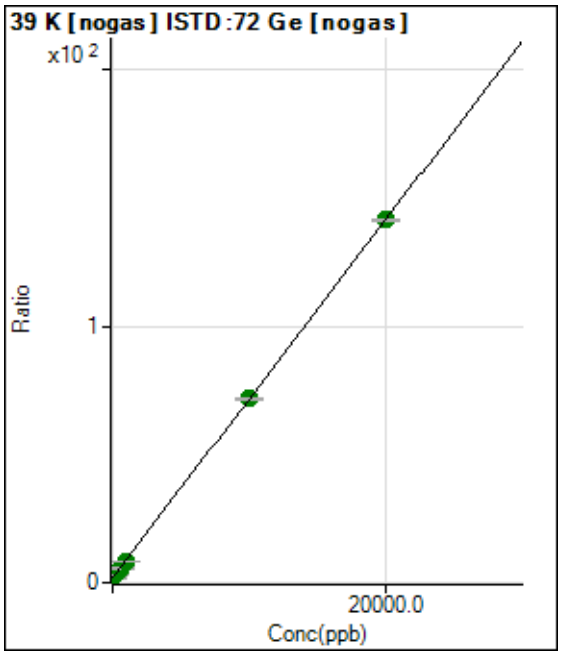
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17811.53	0.0197	P	7.6
2	☐	400.000	-23696.71	18513.52	0.0206	P	7.4
3	☐	1000.000	-24444.90	18479.56	0.0207	P	8.0
4	☐	2000.000	-35628.84	18712.72	0.0211	P	13.9
5	☐	20000.00	14096.593	16343.15	0.0191	P	11.5
6	☐	40000.00	45710.235	15276.24	0.0178	P	7.0
7	☐	100.000					

y = -4.0845E-008 * x + 0.0197
R = -0.9092
DL = -1.095E+05
BEC = -4.814E+05

Weight: <None>
Min Conc: <None>

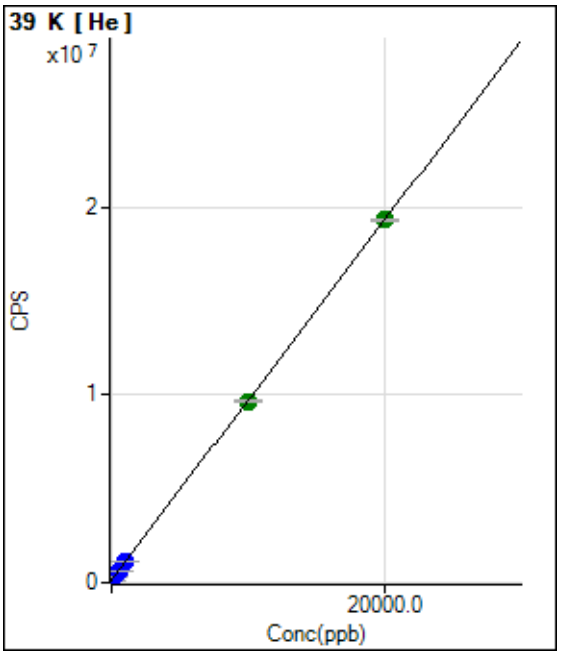


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7176010.84	1.8894	A	1.7
2	☐	200.000	201.701	12578885.18	3.2962	A	1.0
3	☐	500.000	522.357	20146163.99	5.5327	A	5.5
4	☐	1000.000	945.118	33028490.32	8.4814	A	1.3
5	☐	10000.00	9995.546	255851155.7	71.6070	A	0.2
6	☐	20000.00	20004.395	500524377.8	141.417	A	0.4
7	☐	100.000					

y = 0.0070 * x + 1.8894
R = 1.0000
DL = 14.15
BEC = 270.9

Weight: <None>
Min Conc: <None>

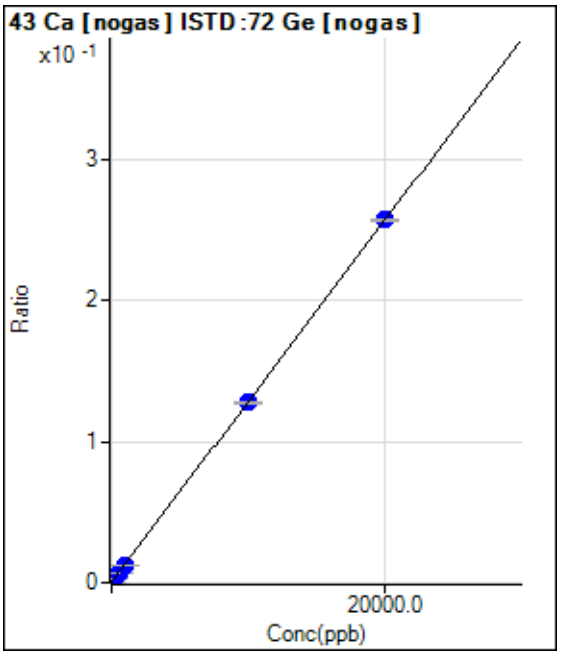
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	148981.73		P	0.4
2	☐	200.000	214.102	354275.85		P	1.5
3	☐	500.000	525.001	652384.43		P	1.0
4	☐	1000.000	1014.136	1121396.60		P	0.2
5	☐	10000.00	9949.644	9689301.73		A	0.9
6	☐	20000.00	20023.705	19348919.29		A	0.6
7	☐	100.000					

y = 958.8604 * x + 148981.7333
R = 1.0000
DL = 1.69
BEC = 155.4

Weight: <None>
Min Conc: <None>

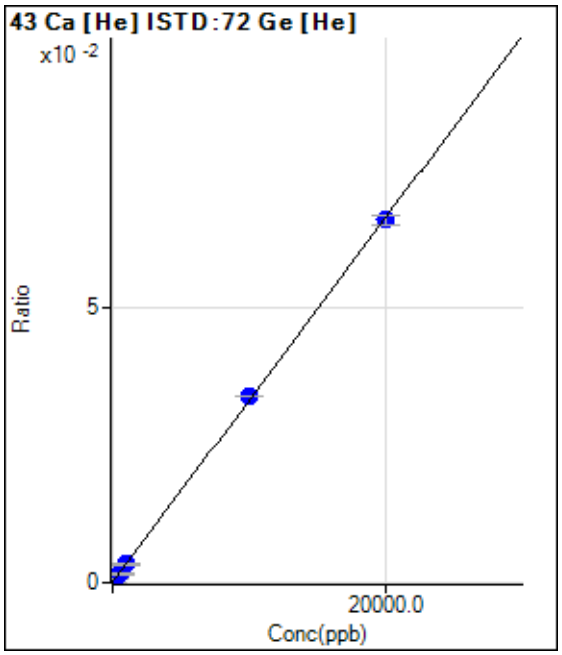


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	953.38	0.0003	P	19.4
2	☐	200.000	188.664	10182.88	0.0027	P	2.9
3	☐	500.000	504.619	24432.95	0.0067	P	8.5
4	☐	1000.000	929.718	47363.33	0.0122	P	0.7
5	☐	10000.00	9928.091	455323.29	0.1274	P	0.7
6	☐	20000.00	20039.466	909517.67	0.2570	P	0.4
7	☐	100.000					

y = 1.2810E-005 * x + 2.5146E-004
R = 1.0000
DL = 11.42
BEC = 19.63

Weight: <None>
Min Conc: <None>

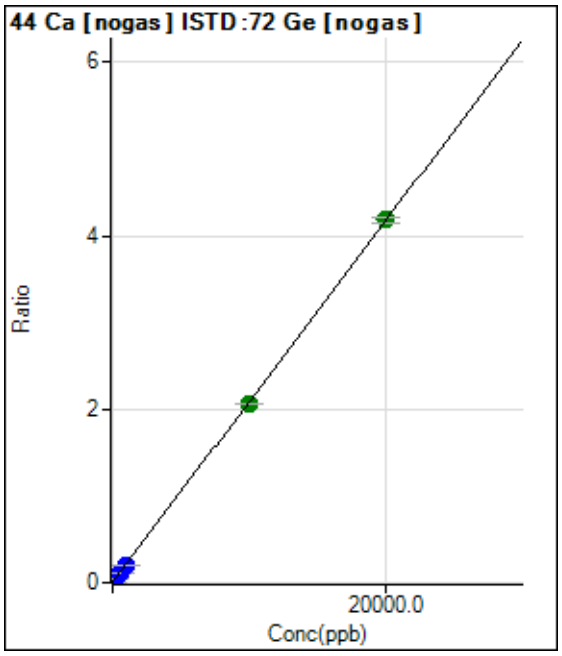
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0001	P	52.6
2	☐	200.000	233.585	743.36	0.0008	P	4.7
3	☐	500.000	471.003	1443.42	0.0016	P	8.8
4	☐	1000.000	1001.046	2986.95	0.0034	P	3.3
5	☐	10000.00	10213.752	29002.63	0.0339	P	0.7
6	☐	20000.00	19893.461	56578.90	0.0659	P	2.5
7	☐	100.000					

y = 3.3093E-006 * x + 5.5131E-005
R = 0.9999
DL = 26.3
BEC = 16.66

Weight: <None>
Min Conc: <None>

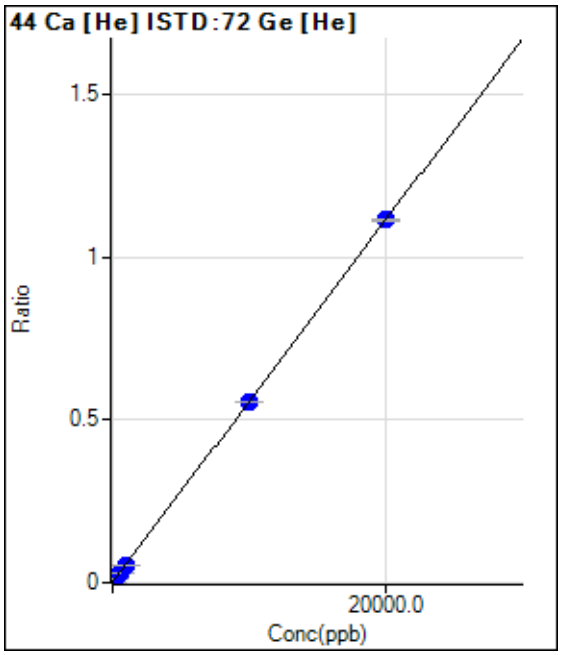


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32758.99	0.0086	P	0.2
2	☐	200.000	194.376	187220.68	0.0491	P	0.7
3	☐	500.000	507.402	415815.53	0.1142	P	5.0
4	☐	1000.000	928.950	786176.84	0.2019	P	0.9
5	☐	10000.00	9876.051	7371670.51	2.0632	A	0.7
6	☐	20000.00	20065.398	14803733.11	4.1829	A	1.6
7	☐	100.000					

y = 2.0803E-004 * x + 0.0086
R = 1.0000
DL = 0.3017
BEC = 41.45

Weight: <None>
Min Conc: <None>

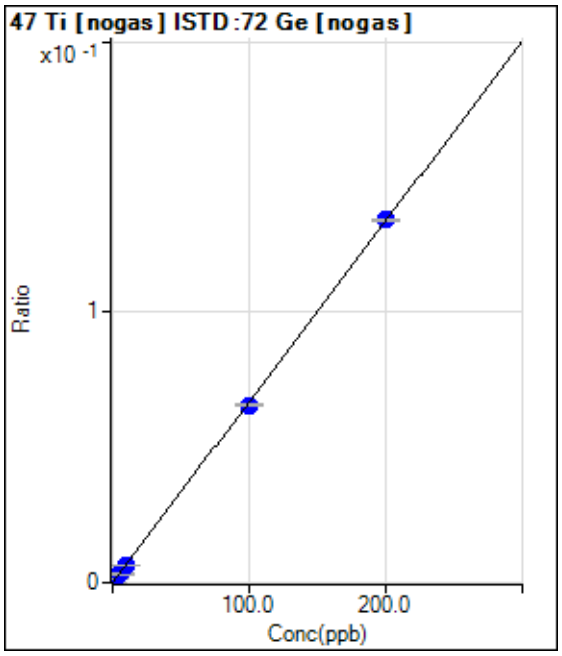
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1026.71	0.0011	P	3.9
2	☐	200.000	204.446	11230.18	0.0125	P	4.1
3	☐	500.000	489.014	25354.13	0.0283	P	1.7
4	☐	1000.000	955.416	48158.68	0.0543	P	1.7
5	☐	10000.00	9954.568	475531.26	0.5551	P	0.3
6	☐	20000.00	20025.176	957849.26	1.1155	P	0.2
7	☐	100.000					

y = 5.5650E-005 * x + 0.0011
R = 1.0000
DL = 2.391
BEC = 20.37

Weight: <None>
Min Conc: <None>

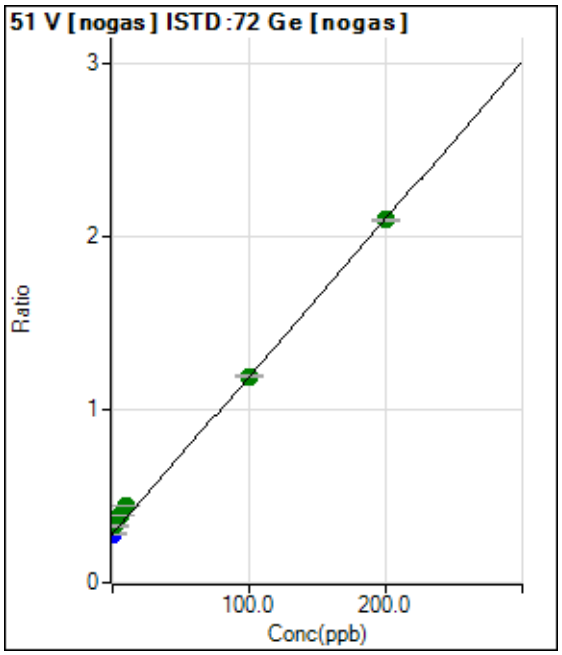


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	260.01	0.0001	P	17.0
2	☐	2.000	2.009	5384.19	0.0014	P	2.5
3	☐	5.000	4.890	12134.08	0.0033	P	8.6
4	☐	10.000	9.165	24109.13	0.0062	P	3.6
5	☐	100.000	98.397	235125.65	0.0658	P	0.3
6	☐	200.000	200.846	475149.87	0.1342	P	0.4
7	☐	1.000					

y = 6.6808E-004 * x + 6.8475E-005
R = 1.0000
DL = 0.05229
BEC = 0.1025

Weight: <None>
Min Conc: <None>

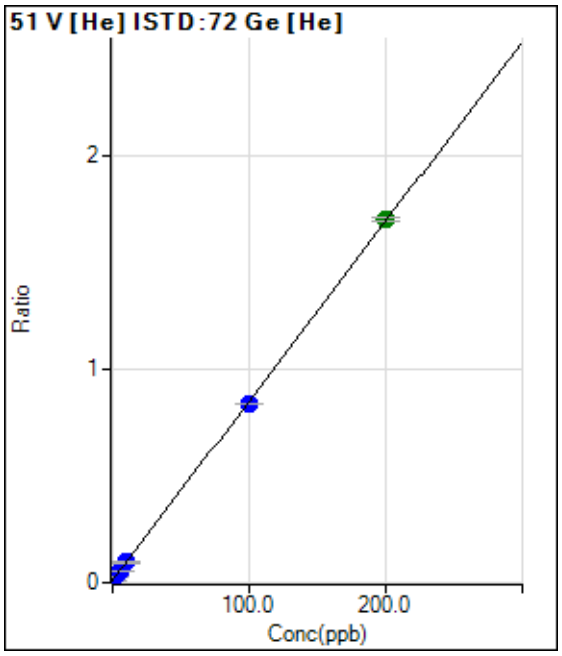
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1070783.62	0.2818	P	1.6
2	☐	2.000	5.220	1256881.96	0.3294	A	0.9
3	☐	5.000	12.038	1427326.43	0.3914	A	1.6
4	☐	10.000	17.778	1727949.19	0.4437	A	1.1
5	☐	100.000	99.966	4258221.71	1.1918	A	0.5
6	☐	200.000	199.420	7422060.06	2.0971	A	0.9
7	☐	1.000					

y = 0.0091 * x + 0.2818
R = 0.9993
DL = 1.511
BEC = 30.96

Weight: <None>
Min Conc: <None>

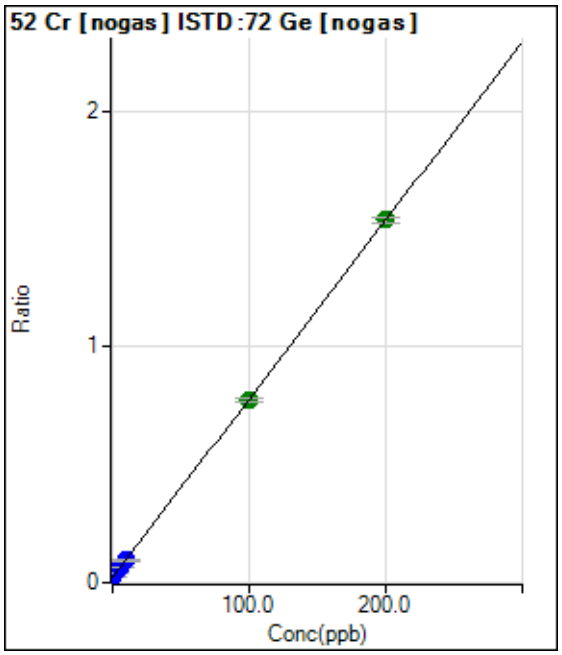


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.296	12025.91	0.0133	P	2.2
2	☐	2.000	2.365	27536.92	0.0307	P	0.9
3	☐	5.000	5.286	49427.71	0.0553	P	0.6
4	☐	10.000	9.988	84090.43	0.0948	P	0.8
5	☐	100.000	98.152	716766.04	0.8367	P	0.2
6	☐	200.000	200.914	1460975.45	1.7014	A	0.9
7	☐	1.000					

y = 0.0084 * x + 0.0108
R = 0.9999
DL = 0.1044
BEC = 1.282

Weight: <None>
Min Conc: <None>

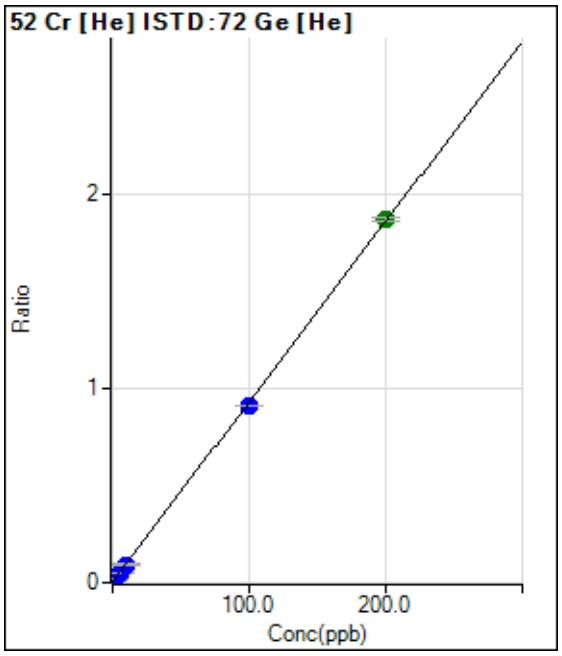
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	82934.45	0.0218	P	2.9
2	☐	2.000	2.104	144116.28	0.0378	P	1.1
3	☐	5.000	5.418	228960.00	0.0629	P	5.2
4	☐	10.000	9.554	366854.96	0.0942	P	1.3
5	☐	100.000	99.398	2768675.58	0.7749	A	1.7
6	☐	200.000	200.312	5448103.46	1.5394	A	1.8
7	☐	1.000					

y = 0.0076 * x + 0.0218
R = 1.0000
DL = 0.2535
BEC = 2.881

Weight: <None>
Min Conc: <None>

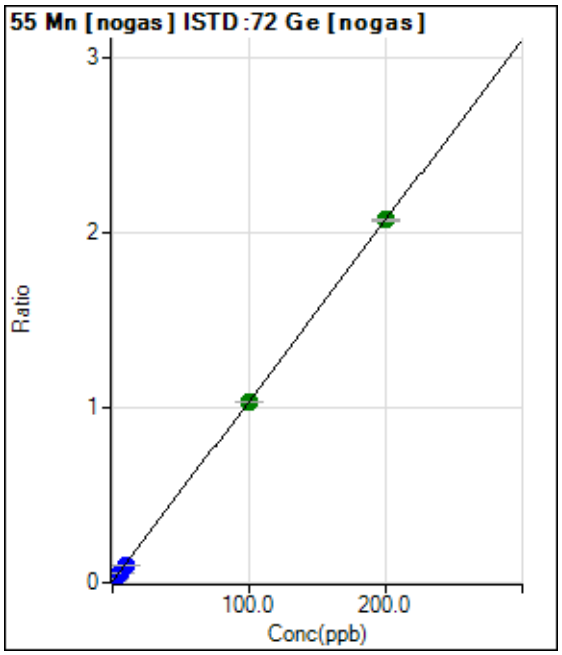


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4640.66	0.0051	P	5.0
2	☐	2.000	1.987	21115.52	0.0235	P	1.0
3	☐	5.000	4.896	45145.05	0.0505	P	1.7
4	☐	10.000	9.584	83265.66	0.0939	P	1.5
5	☐	100.000	98.022	782184.05	0.9131	P	0.4
6	☐	200.000	201.013	1603217.53	1.8671	A	1.0
7	☐	1.000					

y = 0.0093 * x + 0.0051
R = 0.9999
DL = 0.08374
BEC = 0.5531

Weight: <None>
Min Conc: <None>

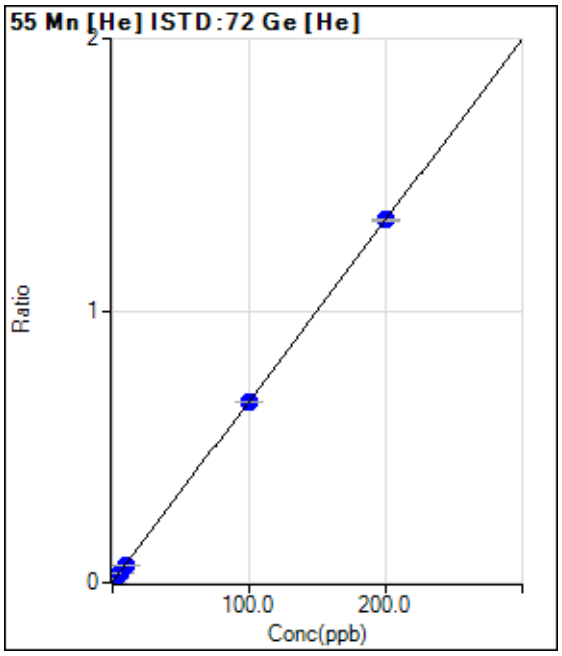
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23565.27	0.0062	P	1.1
2	☐	2.000	2.041	104147.03	0.0273	P	2.6
3	☐	5.000	4.902	206990.32	0.0569	P	6.0
4	☐	10.000	9.172	393225.97	0.1010	P	1.6
5	☐	100.000	99.731	3704117.65	1.0367	A	0.3
6	☐	200.000	200.178	7342849.47	2.0746	A	0.3
7	☐	1.000					

y = 0.0103 * x + 0.0062
R = 1.0000
DL = 0.02041
BEC = 0.6004

Weight: <None>
Min Conc: <None>

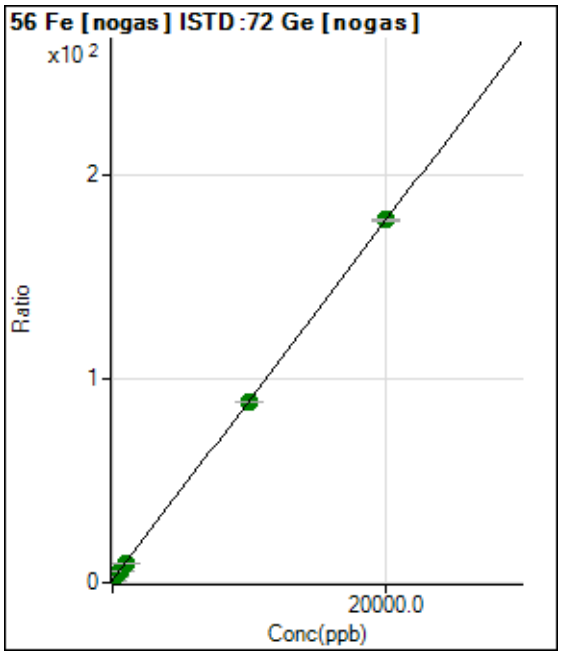


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1666.77	0.0018	P	3.6
2	☐	2.000	2.151	14519.18	0.0162	P	1.8
3	☐	5.000	4.967	31263.16	0.0350	P	2.1
4	☐	10.000	9.727	59130.92	0.0667	P	1.1
5	☐	100.000	99.916	572138.39	0.6679	P	0.3
6	☐	200.000	200.055	1146640.58	1.3354	P	0.4
7	☐	1.000					

y = 0.0067 * x + 0.0018
R = 1.0000
DL = 0.02997
BEC = 0.276

Weight: <None>
Min Conc: <None>

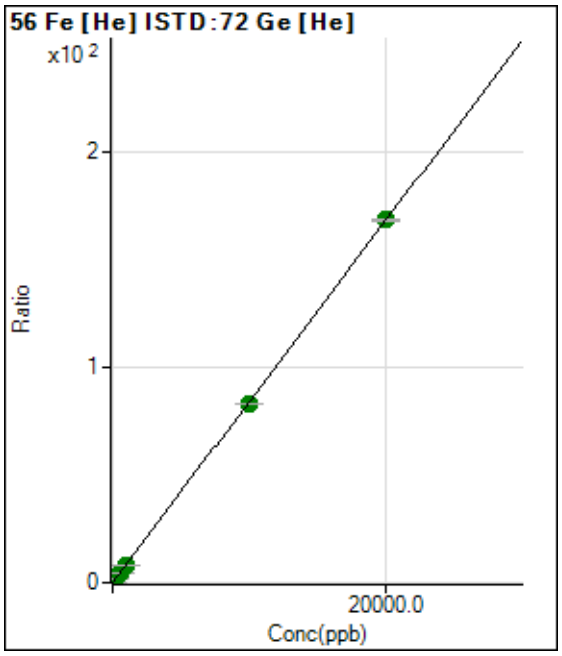
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4747399.97	1.2498	A	0.4
2	☐	200.000	197.068	11408526.82	2.9895	A	0.7
3	☐	500.000	517.439	21191762.97	5.8179	A	4.3
4	☐	1000.000	921.790	36557333.11	9.3876	A	1.3
5	☐	10000.00	9904.351	316885982.0	88.6883	A	0.4
6	☐	20000.00	20051.329	630941997.4	178.268	A	0.5
7	☐	100.000					

y = 0.0088 * x + 1.2498
R = 1.0000
DL = 1.517
BEC = 141.6

Weight: <None>
Min Conc: <None>

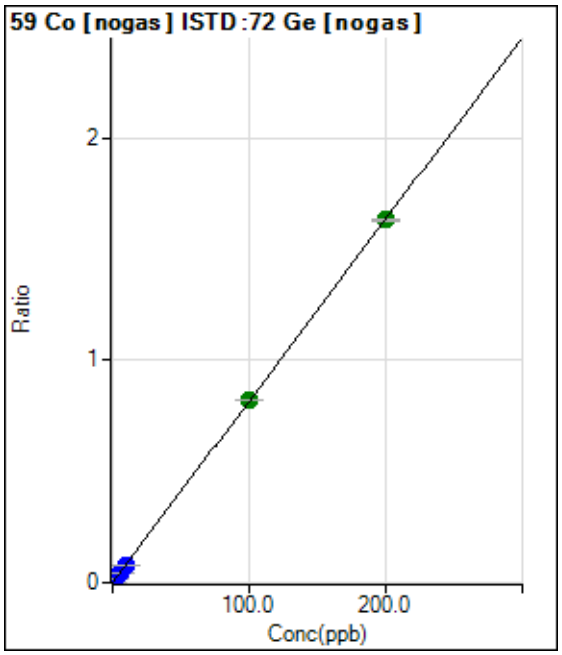


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22947.74	0.0253	P	2.1
2	☐	200.000	204.386	1563530.03	1.7423	A	1.5
3	☐	500.000	498.181	3765921.50	4.2105	A	0.4
4	☐	1000.000	980.813	7329302.81	8.2649	A	1.2
5	☐	10000.00	9886.780	71172778.94	83.0822	A	0.5
6	☐	20000.00	20057.571	144702721.1	168.525	A	0.4
7	☐	100.000					

y = 0.0084 * x + 0.0253
R = 1.0000
DL = 0.1932
BEC = 3.016

Weight: <None>
Min Conc: <None>

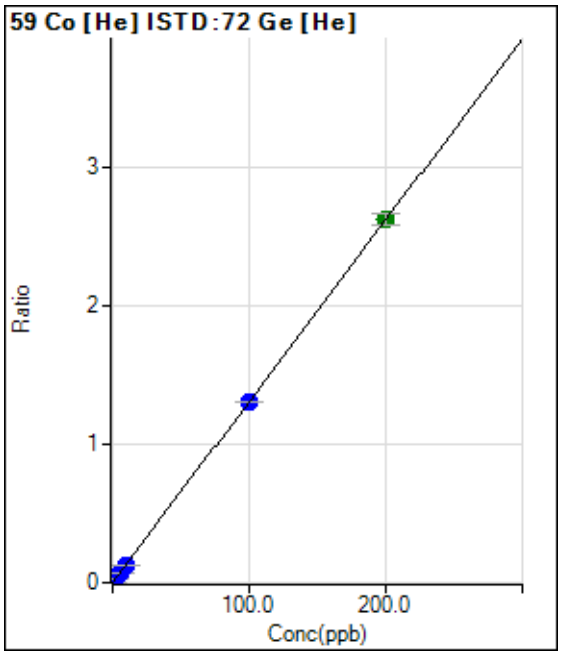
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	426.68	0.0001	P	11.1
2	☐	2.000	2.026	63635.89	0.0167	P	1.9
3	☐	5.000	5.237	156378.23	0.0429	P	4.2
4	☐	10.000	9.628	306970.94	0.0788	P	0.4
5	☐	100.000	100.582	2938309.96	0.8224	A	1.0
6	☐	200.000	199.722	5779151.58	1.6329	A	0.7
7	☐	1.000					

y = 0.0082 * x + 1.1243E-004
R = 1.0000
DL = 0.00456
BEC = 0.01375

Weight: <None>
Min Conc: <None>

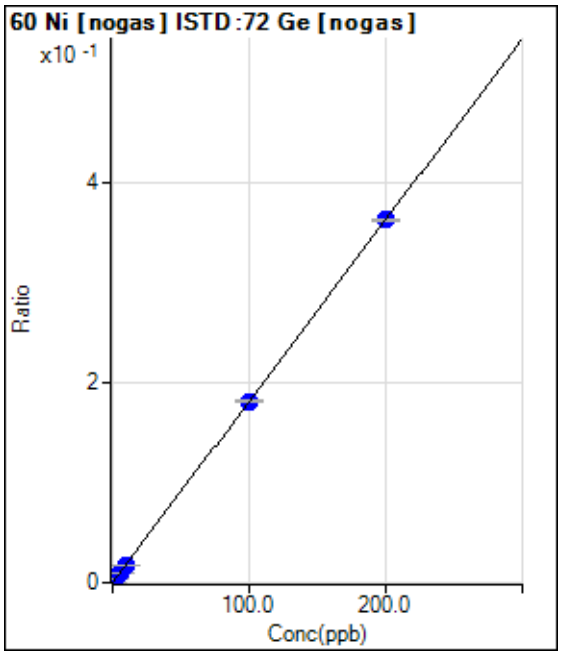


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	11.9
2	☐	2.000	2.032	23919.02	0.0267	P	2.7
3	☐	5.000	5.059	59227.96	0.0662	P	2.4
4	☐	10.000	9.877	114579.12	0.1292	P	1.4
5	☐	100.000	99.586	1115253.97	1.3019	P	0.6
6	☐	200.000	200.211	2247118.77	2.6173	A	3.1
7	☐	1.000					

y = 0.0131 * x + 8.8276E-005
R = 1.0000
DL = 0.00241
BEC = 0.006753

Weight: <None>
Min Conc: <None>

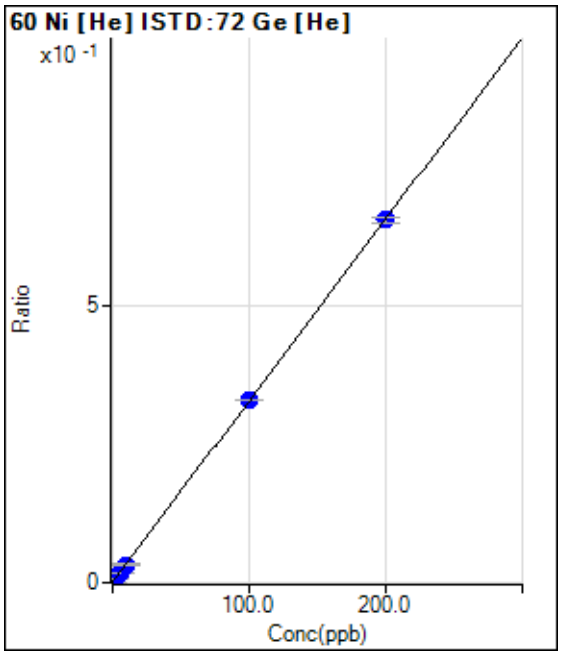
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.059	940.04	0.0002	P	21.9
2	☐	2.000	2.098	15049.64	0.0039	P	2.0
3	☐	5.000	5.258	35233.86	0.0097	P	4.8
4	☐	10.000	9.640	68623.46	0.0176	P	0.6
5	☐	100.000	99.869	647575.63	0.1812	P	1.2
6	☐	200.000	200.076	1284691.13	0.3630	P	0.6
7	☐	1.000					

y = 0.0018 * x + 1.3940E-004
R = 1.0000
DL = 0.08956
BEC = 0.07687

Weight: <None>
Min Conc: <None>

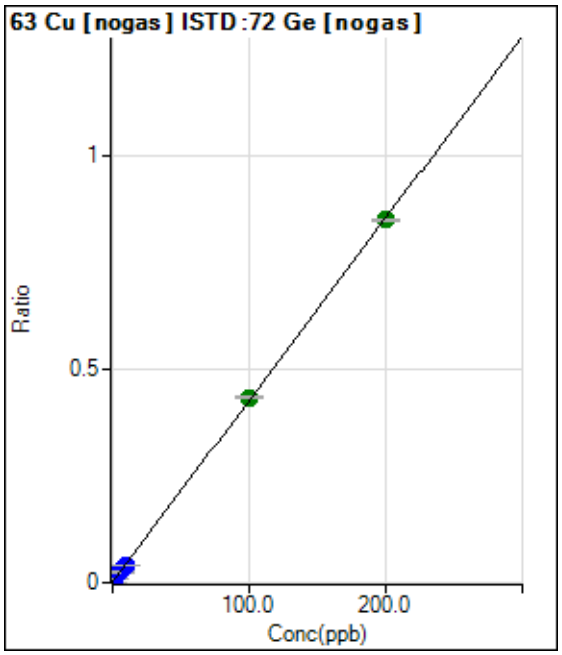


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.103	280.01	0.0003	P	23.0
2	☐	2.000	1.969	6364.52	0.0071	P	5.6
3	☐	5.000	4.957	15099.67	0.0169	P	4.5
4	☐	10.000	9.817	29086.56	0.0328	P	2.7
5	☐	100.000	100.700	283099.21	0.3305	P	0.5
6	☐	200.000	199.661	562060.58	0.6546	P	1.3
7	☐	1.000					

y = 0.0033 * x + 6.4565E-004
R = 1.0000
DL = 0.06494
BEC = 0.1971

Weight: <None>
Min Conc: <None>

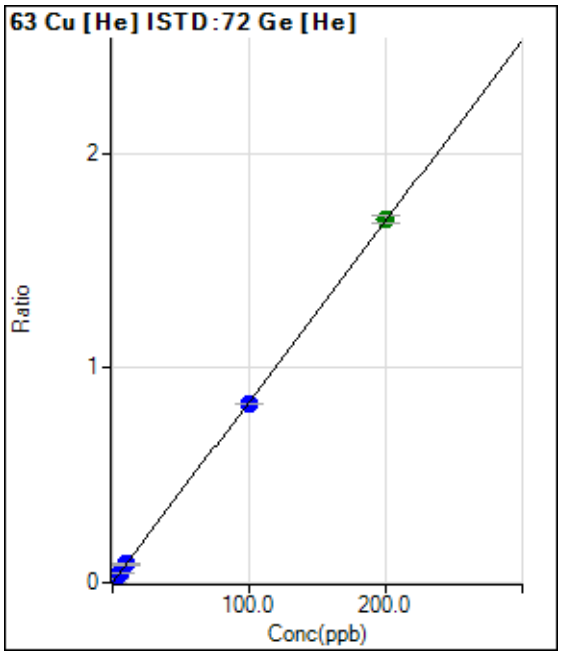
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5030.76	0.0013	P	4.9
2	☐	2.000	2.065	38653.96	0.0101	P	1.2
3	☐	5.000	5.578	91405.35	0.0251	P	5.9
4	☐	10.000	9.458	162169.69	0.0416	P	1.3
5	☐	100.000	101.640	1552792.68	0.4346	A	1.8
6	☐	200.000	199.192	3009973.29	0.8505	A	0.8
7	☐	1.000					

y = 0.0043 * x + 0.0013
R = 0.9999
DL = 0.04614
BEC = 0.3108

Weight: <None>
Min Conc: <None>

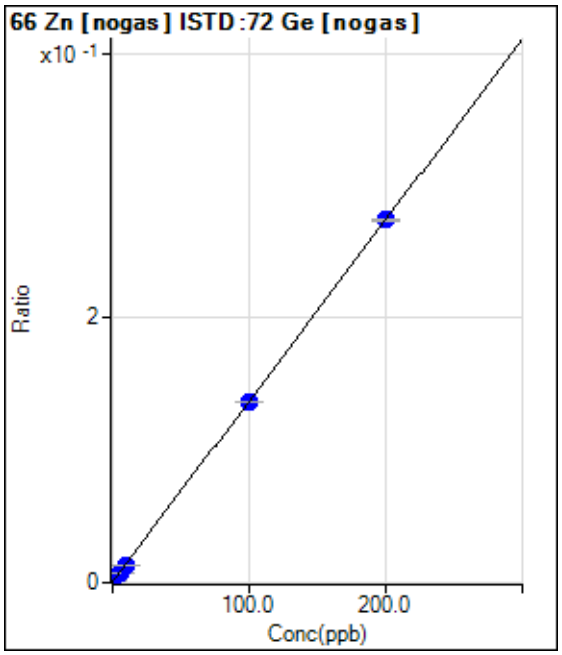


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.115	1910.13	0.0021	P	7.0
2	☐	2.000	2.215	17755.46	0.0198	P	1.5
3	☐	5.000	5.382	41540.21	0.0464	P	3.1
4	☐	10.000	9.992	75594.48	0.0852	P	0.4
5	☐	100.000	98.614	712101.40	0.8313	P	0.3
6	☐	200.000	200.682	1451420.92	1.6905	A	2.1
7	☐	1.000					

y = 0.0084 * x + 0.0011
R = 1.0000
DL = 0.05226
BEC = 0.1351

Weight: <None>
Min Conc: <None>

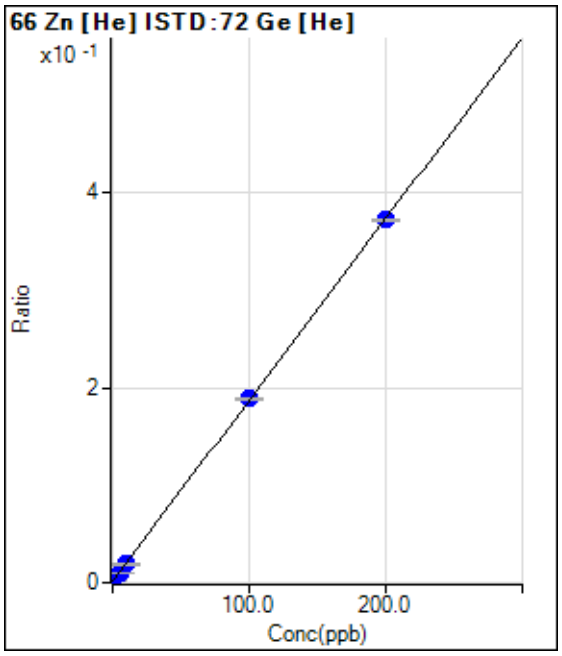
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.621	5507.56	0.0015	P	1.8
2	☐	2.000	2.368	14642.62	0.0038	P	1.8
3	☐	5.000	5.037	27257.04	0.0075	P	4.4
4	☐	10.000	8.986	50161.84	0.0129	P	0.7
5	☐	100.000	99.884	489707.81	0.1371	P	0.1
6	☐	200.000	200.104	969655.90	0.2740	P	0.8
7	☐	1.000					

y = 0.0014 * x + 6.0201E-004
R = 1.0000
DL = 0.05854
BEC = 0.4407

Weight: <None>
Min Conc: <None>

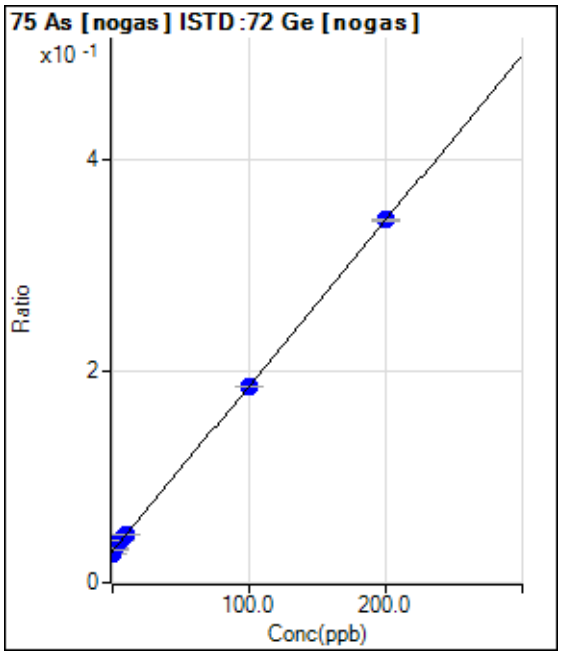


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.316	1786.78	0.0020	P	12.3
2	☐	2.000	2.122	4784.02	0.0053	P	2.2
3	☐	5.000	4.633	8945.67	0.0100	P	8.5
4	☐	10.000	9.370	16681.15	0.0188	P	0.9
5	☐	100.000	101.039	162178.38	0.1893	P	1.1
6	☐	200.000	199.520	319826.73	0.3725	P	0.3
7	☐	1.000					

y = 0.0019 * x + 0.0014
R = 1.0000
DL = 0.3928
BEC = 0.7444

Weight: <None>
Min Conc: <None>

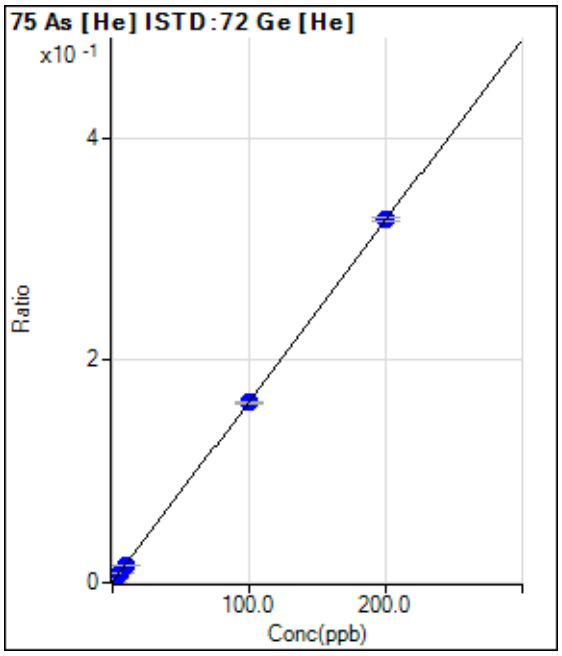
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.362	104597.70	0.0275	P	0.6
2	☐	2.000	1.879	124397.50	0.0326	P	5.2
3	☐	5.000	6.827	147074.49	0.0403	P	2.1
4	☐	10.000	10.023	176551.40	0.0453	P	2.7
5	☐	100.000	99.356	660747.20	0.1849	P	0.5
6	☐	200.000	200.277	1212777.66	0.3426	P	0.6
7	☐	1.000					

y = 0.0016 * x + 0.0297
R = 0.9999
DL = 0.3189
BEC = 18.98

Weight: <None>
Min Conc: <None>

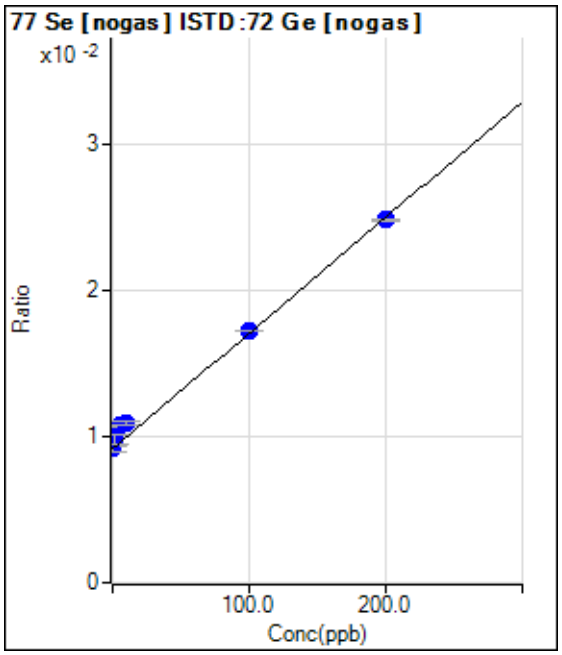


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	284.45	0.0003	P	5.0
2	☐	2.000	2.037	3258.08	0.0036	P	3.0
3	☐	5.000	4.864	7363.74	0.0082	P	2.3
4	☐	10.000	9.666	14231.12	0.0160	P	1.4
5	☐	100.000	99.425	138927.23	0.1622	P	0.6
6	☐	200.000	200.307	280260.22	0.3264	P	1.0
7	☐	1.000					

y = 0.0016 * x + 3.1409E-004
R = 1.0000
DL = 0.02921
BEC = 0.1929

Weight: <None>
Min Conc: <None>

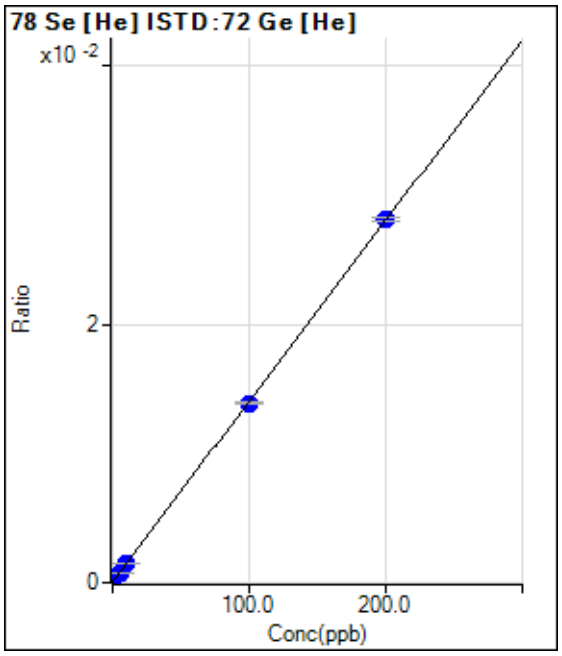
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34877.82	0.0092	P	4.4
2	☐	2.000	8.703	37649.70	0.0099	P	6.5
3	☐	5.000	20.858	39463.30	0.0108	P	3.8
4	☐	10.000	21.413	42349.86	0.0109	P	2.4
5	☐	100.000	102.251	61751.47	0.0173	P	0.2
6	☐	200.000	197.840	87991.78	0.0249	P	0.6
7	☐	1.000					

y = 7.9269E-005 * x + 0.0092
R = 0.9976
DL = 15.23
BEC = 115.8

Weight: <None>
Min Conc: <None>

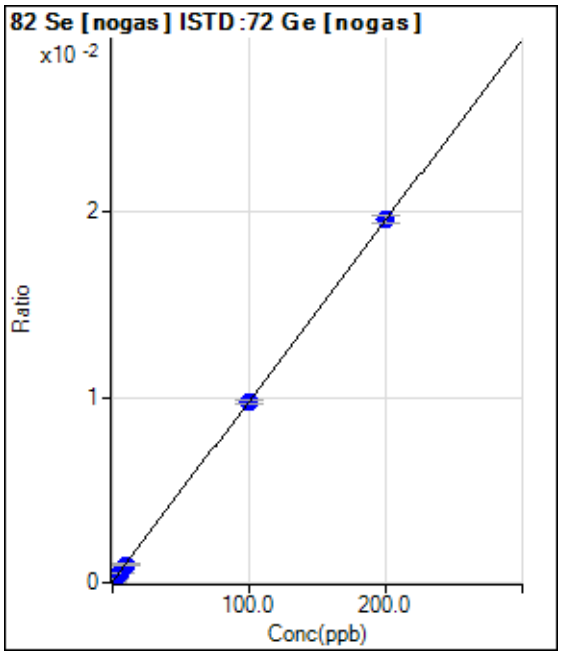


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.267	97.33	0.0001	P	15.1
2	☐	2.000	2.359	358.67	0.0004	P	1.9
3	☐	5.000	4.983	685.35	0.0008	P	6.7
4	☐	10.000	9.982	1298.72	0.0015	P	2.3
5	☐	100.000	98.823	11886.55	0.0139	P	1.3
6	☐	200.000	200.586	24119.90	0.0281	P	1.1
7	☐	1.000					

y = 1.3970E-004 * x + 7.0147E-005
R = 1.0000
DL = 0.3479
BEC = 0.5021

Weight: <None>
Min Conc: <None>

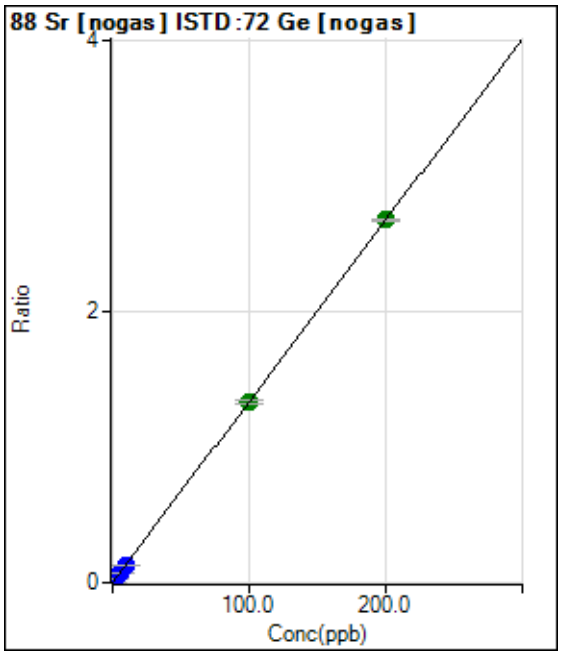
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193.34	0.0001	P	20.7
2	☐	2.000	1.915	906.70	0.0002	P	15.3
3	☐	5.000	4.826	1900.13	0.0005	P	10.2
4	☐	10.000	9.435	3780.46	0.0010	P	9.9
5	☐	100.000	99.449	34850.47	0.0098	P	2.3
6	☐	200.000	200.309	69365.93	0.0196	P	2.0
7	☐	1.000					

y = 9.7575E-005 * x + 5.0891E-005
R = 1.0000
DL = 0.3231
BEC = 0.5216

Weight: <None>
Min Conc: <None>

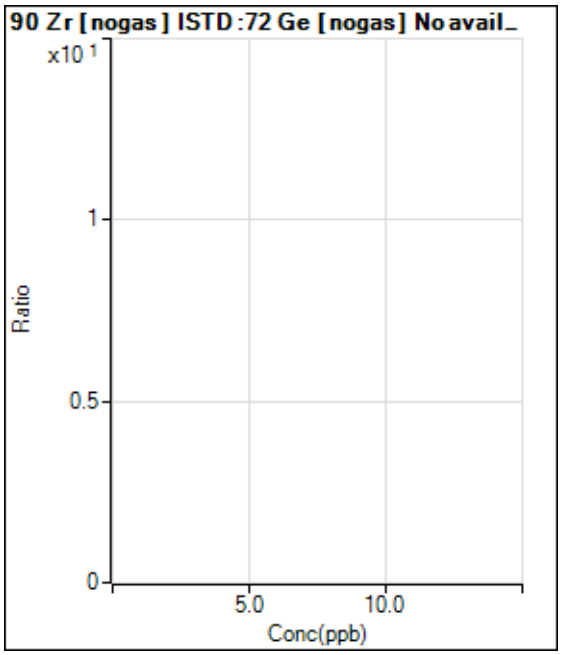


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3090.31	0.0008	P	1.2
2	☐	2.000	1.902	100076.06	0.0262	P	0.2
3	☐	5.000	4.991	245827.02	0.0675	P	5.1
4	☐	10.000	9.104	476907.60	0.1225	P	1.4
5	☐	100.000	99.509	4754053.68	1.3305	A	1.6
6	☐	200.000	200.292	9475277.77	2.6772	A	0.6
7	☐	1.000					

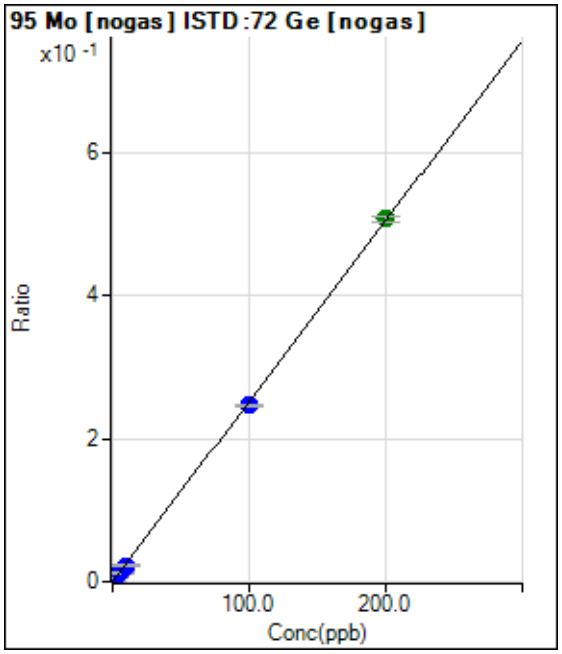
y = 0.0134 * x + 8.1361E-004
R = 1.0000
DL = 0.002212
BEC = 0.06089

Weight: <None>
Min Conc: <None>

Calibration for 115_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					

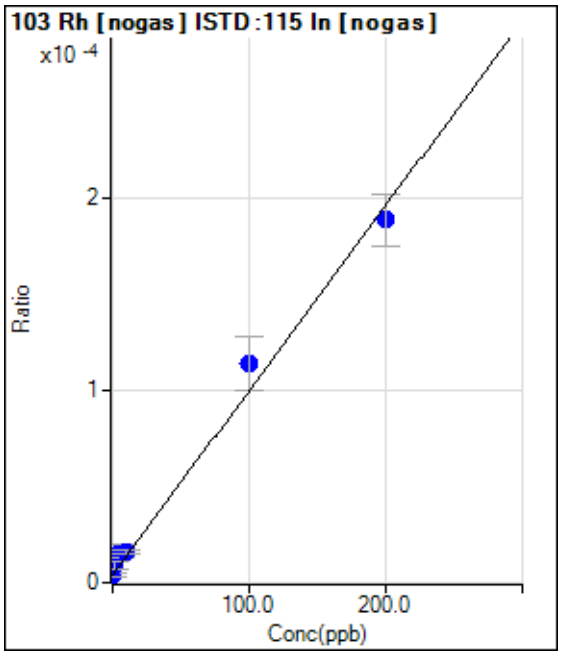


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	263.34	0.0001	P	18.0
2	☐	2.000	1.844	17992.62	0.0047	P	3.2
3	☐	5.000	4.860	44836.44	0.0123	P	5.7
4	☐	10.000	8.958	88139.64	0.0226	P	3.3
5	☐	100.000	97.680	879504.91	0.2462	P	0.8
6	☐	200.000	201.217	1794282.06	0.5070	A	1.8
7	☐	1.000					

y = 0.0025 * x + 6.9367E-005
R = 0.9999
DL = 0.01485
BEC = 0.02753

Weight: <None>
Min Conc: <None>

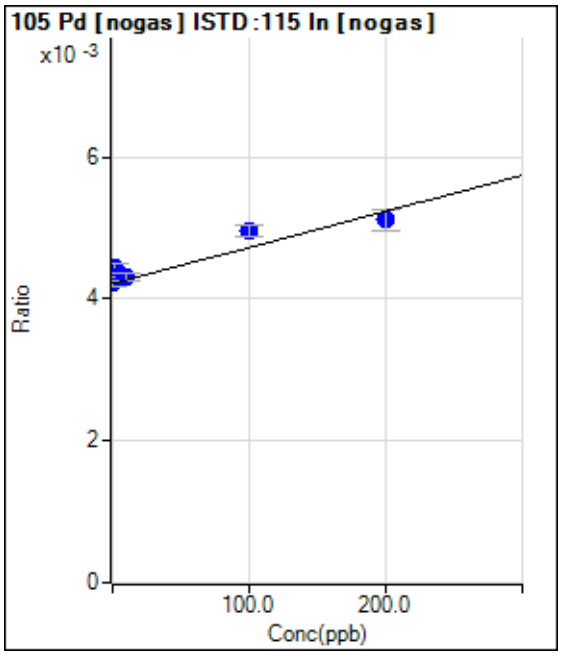
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	68.2
2	☐	2.000	5.093	36.67	0.0000	P	41.1
3	☐	5.000	13.086	66.67	0.0000	P	41.0
4	☐	10.000	12.986	70.00	0.0000	P	11.9
5	☐	100.000	114.438	440.01	0.0001	P	24.2
6	☐	200.000	192.399	736.70	0.0002	P	14.0
7	☐	1.000					

y = 9.6072E-007 * x + 3.9031E-006
R = 0.9962
DL = 8.311
BEC = 4.063

Weight: <None>
Min Conc: <None>

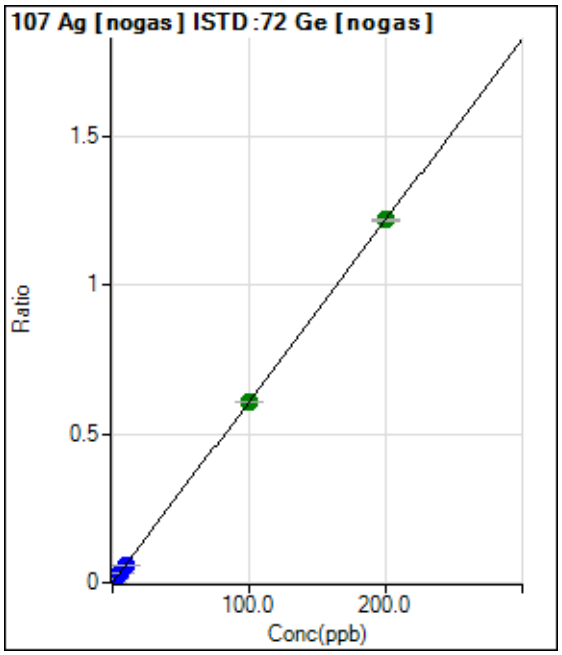


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17929.42	0.0042	P	2.2
2	☐	2.000	45.172	18519.90	0.0044	P	2.0
3	☐	5.000	23.266	17465.53	0.0043	P	1.7
4	☐	10.000	18.048	18383.03	0.0043	P	2.0
5	☐	100.000	145.218	19180.61	0.0050	P	3.4
6	☐	200.000	176.100	19968.22	0.0051	P	6.2
7	☐	1.000					

y = 5.0949E-006 * x + 0.0042
R = 0.9470
DL = 55.46
BEC = 828

Weight: <None>
Min Conc: <None>

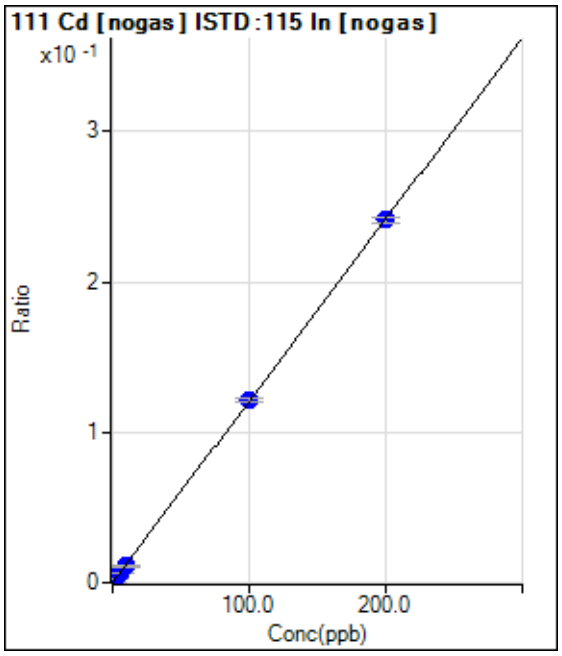
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	863.37	0.0002	P	8.2
2	☐	2.000	1.891	44776.65	0.0117	P	0.9
3	☐	5.000	4.973	111038.47	0.0305	P	5.5
4	☐	10.000	9.095	216427.24	0.0556	P	1.8
5	☐	100.000	99.797	2171047.57	0.6076	A	0.7
6	☐	200.000	200.148	4312413.27	1.2184	A	0.6
7	☐	1.000					

y = 0.0061 * x + 2.2709E-004
R = 1.0000
DL = 0.009173
BEC = 0.03731

Weight: <None>
Min Conc: <None>

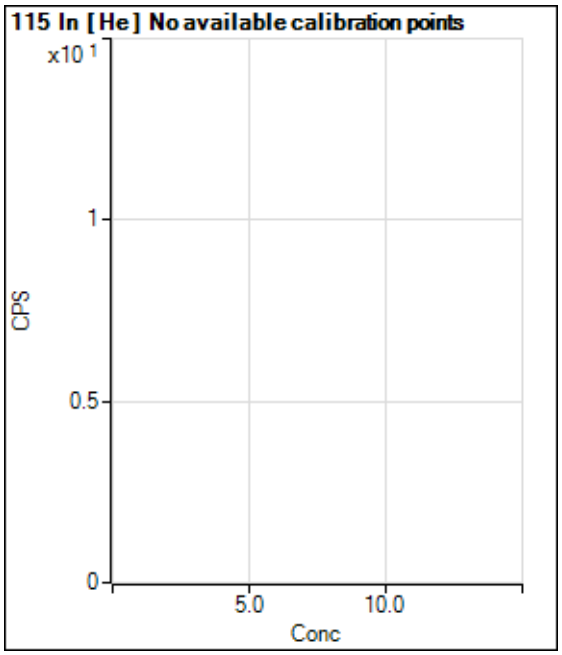


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	77.1
2	☐	2.000	1.883	9489.37	0.0023	P	2.3
3	☐	5.000	5.016	24387.08	0.0061	P	4.1
4	☐	10.000	9.147	47106.31	0.0110	P	4.1
5	☐	100.000	100.390	468873.42	0.1212	P	2.1
6	☐	200.000	199.848	942086.73	0.2412	P	1.4
7	☐	1.000					

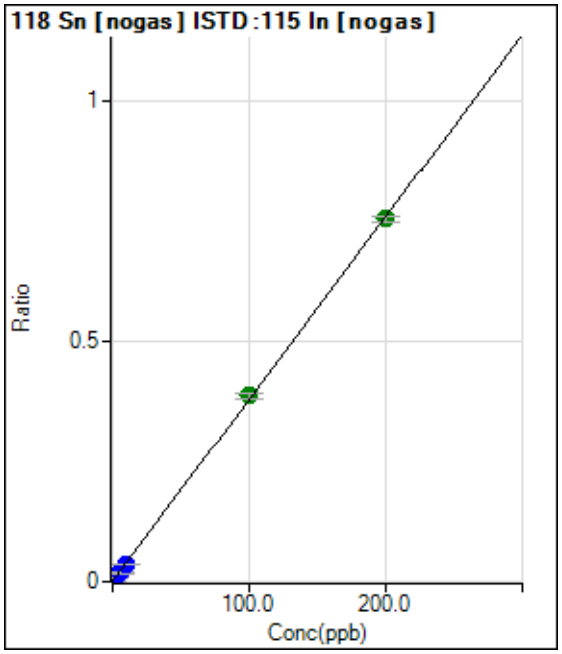
y = 0.0012 * x + 6.2252E-006
R = 1.0000
DL = 0.01193
BEC = 0.005157

Weight: <None>
Min Conc: <None>

Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1456869.06		A	2.3
2	☐			1389080.37		M	2.8
3	☐			1390161.18		M	3.3
4	☐			1372420.32		A	0.8
5	☐			1310350.01		P	0.8
6	☐			1302271.72		M	1.2
7	☐						

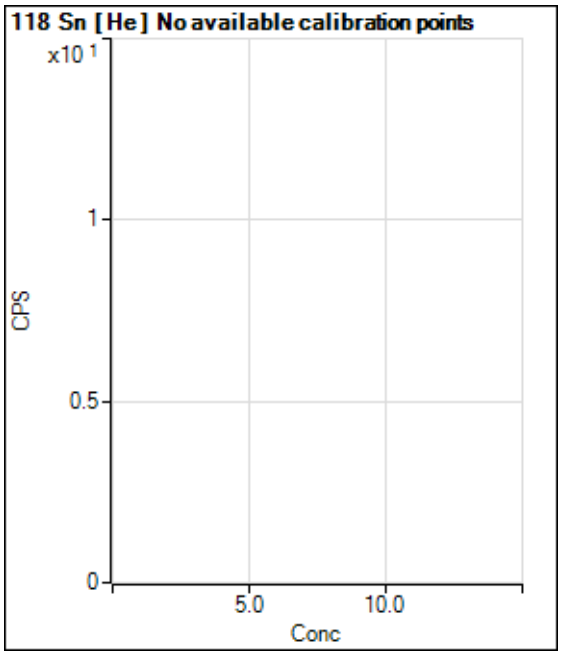


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2813.60	0.0007	P	4.6
2	☐	2.000	1.901	32710.78	0.0079	P	1.0
3	☐	5.000	4.765	75137.22	0.0187	P	7.7
4	☐	10.000	9.020	148428.07	0.0348	P	2.6
5	☐	100.000	102.030	1496762.37	0.3869	A	3.5
6	☐	200.000	199.041	2944957.25	0.7542	A	1.9
7	☐	1.000					

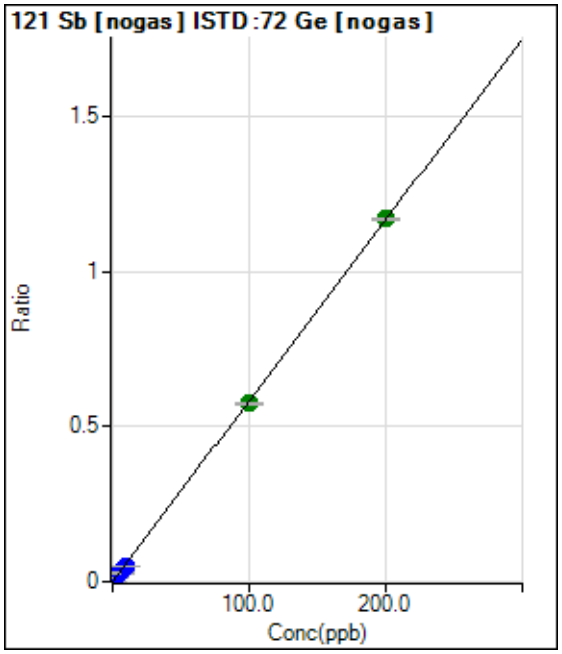
y = 0.0038 * x + 6.6147E-004
R = 0.9999
DL = 0.02435
BEC = 0.1747

Weight: <None>
Min Conc: <None>

Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1006.71		P	3.0
2	☐			12174.37		P	3.3
3	☐			28950.72		P	2.8
4	☐			55146.64		P	2.9
5	☐			561499.54		P	0.8
6	☐			1125621.62		P	0.6
7	☐						

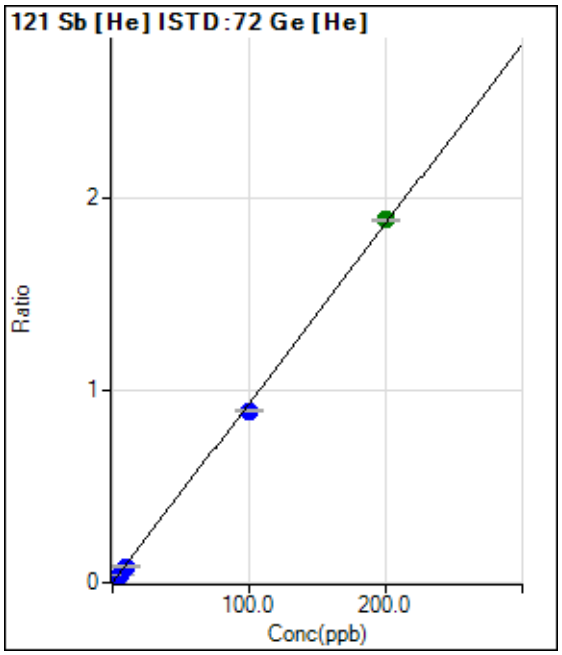


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	616.69	0.0002	P	11.3
2	☐	2.000	1.841	41606.13	0.0109	P	1.6
3	☐	5.000	4.836	103358.79	0.0284	P	4.8
4	☐	10.000	8.890	202596.01	0.0520	P	1.9
5	☐	100.000	98.763	2059262.00	0.5763	A	1.1
6	☐	200.000	200.680	4144397.65	1.1709	A	0.4
7	☐	1.000					

y = 0.0058 * x + 1.6251E-004
R = 1.0000
DL = 0.009423
BEC = 0.02786

Weight: <None>
Min Conc: <None>

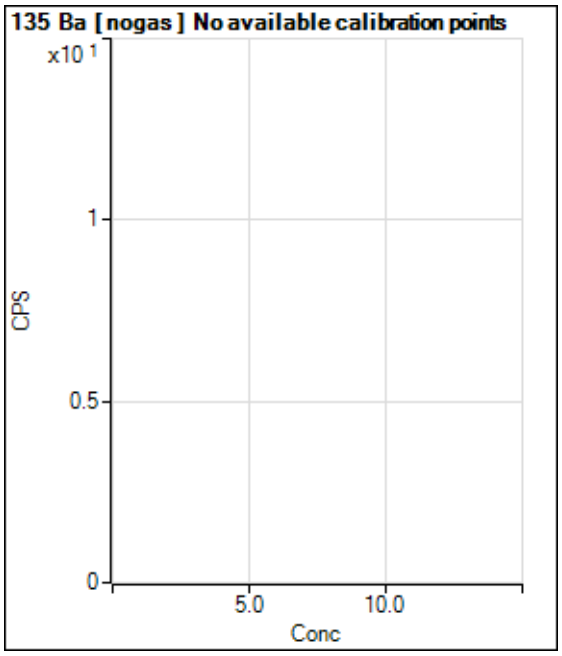
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.67	0.0003	P	9.6
2	☐	2.000	1.880	16060.89	0.0179	P	1.6
3	☐	5.000	4.715	39711.80	0.0444	P	2.5
4	☐	10.000	9.070	75472.01	0.0851	P	0.7
5	☐	100.000	95.727	766835.01	0.8952	P	0.8
6	☐	200.000	202.191	1623148.15	1.8904	A	0.3
7	☐	1.000					

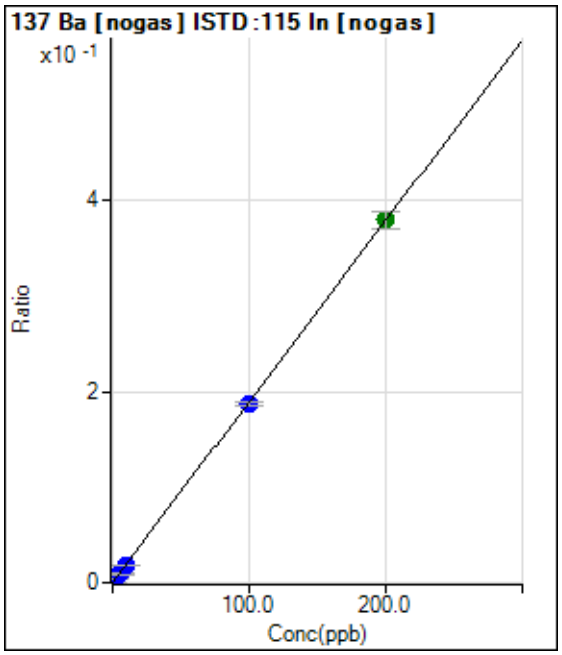
y = 0.0093 * x + 3.2739E-004
R = 0.9997
DL = 0.01014
BEC = 0.03502

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			573.35		P	11.2
2	☐			9075.81		P	2.3
3	☐			21907.34		P	0.9
4	☐			42542.37		P	1.3
5	☐			411888.63		P	1.0
6	☐			835682.07		P	0.9
7	☐						

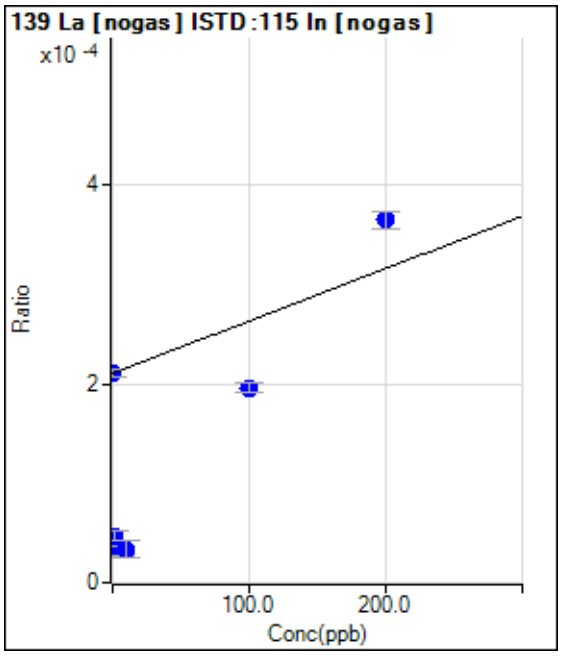
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	970.05	0.0002	P	7.4
2	☐	2.000	1.875	15724.06	0.0038	P	1.3
3	☐	5.000	4.810	37517.56	0.0093	P	5.9
4	☐	10.000	9.129	74644.03	0.0175	P	2.4
5	☐	100.000	98.943	725344.50	0.1875	P	1.4
6	☐	200.000	200.578	1482668.83	0.3798	A	4.6
7	☐	1.000					

y = 0.0019 * x + 2.2833E-004
R = 1.0000
DL = 0.02688
BEC = 0.1207

Weight: <None>
Min Conc: <None>

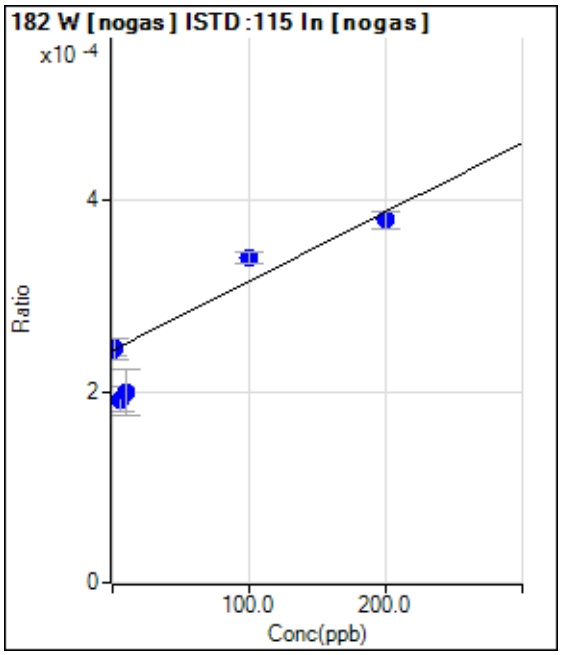


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	896.71	0.0002	P	3.1
2	☐	2.000	-310.039	196.67	0.0000	P	22.9
3	☐	5.000	-338.204	130.00	0.0000	P	26.9
4	☐	10.000	-335.367	143.34	0.0000	P	48.2
5	☐	100.000	-27.246	760.03	0.0002	P	4.2
6	☐	200.000	292.592	1426.75	0.0004	P	4.4
7	☐	1.000					

y = 5.2804E-007 * x + 2.1088E-004
R = 0.8478
DL = 36.89
BEC = 399.4

Weight: <None>
Min Conc: <None>

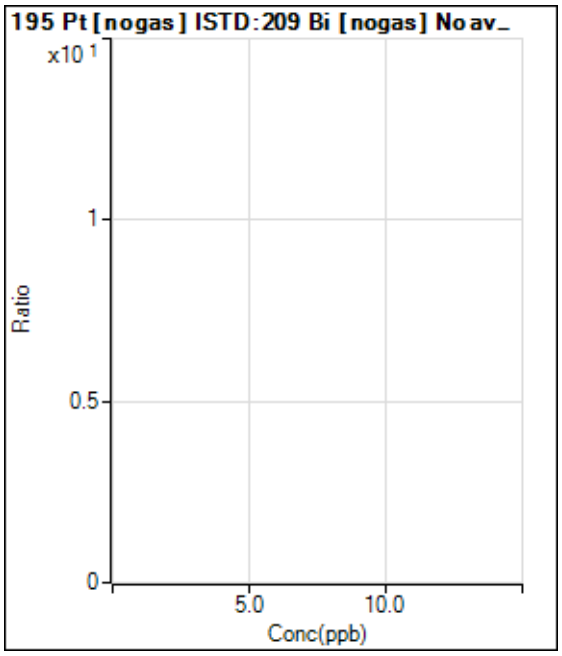
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1033.39	0.0002	P	5.2
2	☐	2.000	2.480	1020.05	0.0002	P	8.8
3	☐	5.000	-70.715	770.03	0.0002	P	13.8
4	☐	10.000	-60.771	846.71	0.0002	P	24.9
5	☐	100.000	134.118	1316.74	0.0003	P	3.4
6	☐	200.000	188.368	1483.42	0.0004	P	4.6
7	☐	1.000					

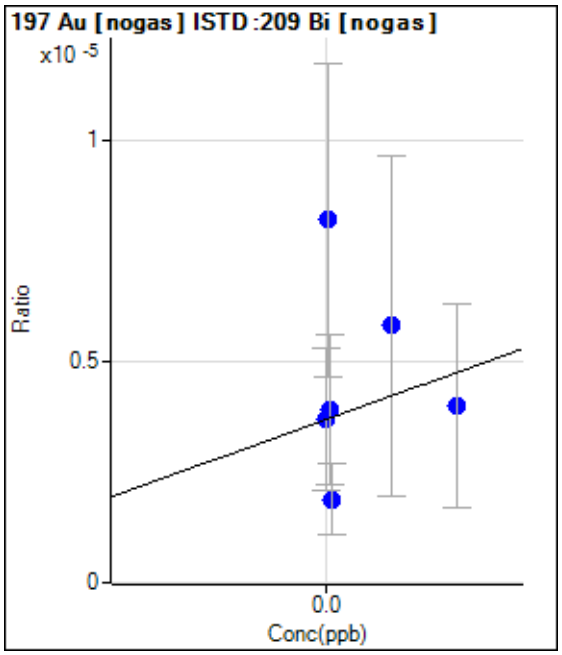
y = 7.2431E-007 * x + 2.4325E-004
R = 0.9236
DL = 52.89
BEC = 335.8

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					

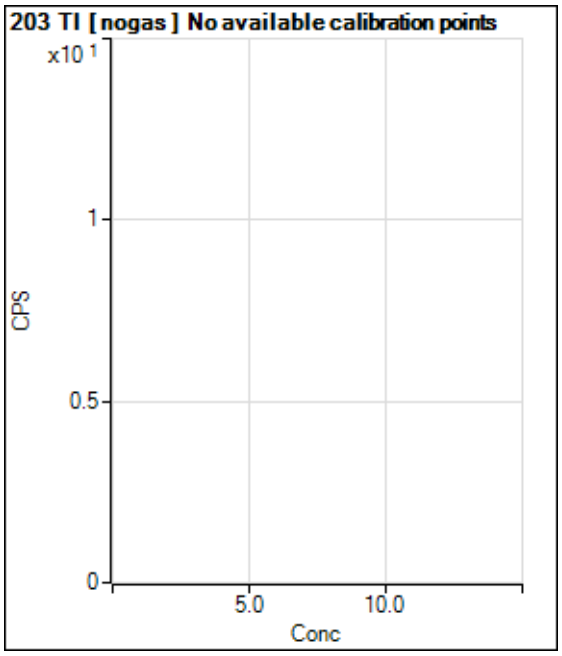
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	847.220	30.00	0.0000	P	86.5
3	☐	5.000	40.269	13.33	0.0000	P	86.6
4	☐	10.000	-339.547	6.67	0.0000	P	86.7
5	☐	100.000	397.780	20.00	0.0000	P	132.
6	☐	200.000	59.253	13.33	0.0000	P	115.
7	☐	1.000					

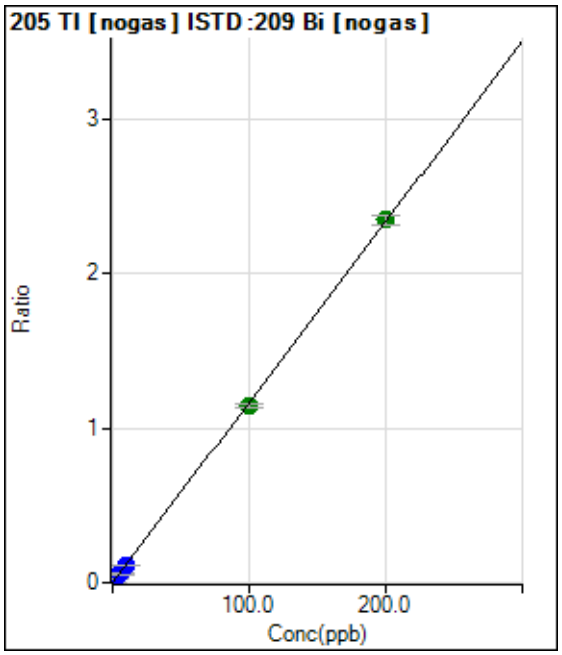
y = 5.3339E-009 * x + 3.6950E-006
R = -0.0178
DL = 1800
BEC = 692.7

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			226.67		P	13.5
2	☐			33233.98		P	4.0
3	☐			83740.12		P	1.0
4	☐			158293.78		P	0.9
5	☐			1668225.71		A	1.6
6	☐			3343506.20		A	1.0
7	☐						

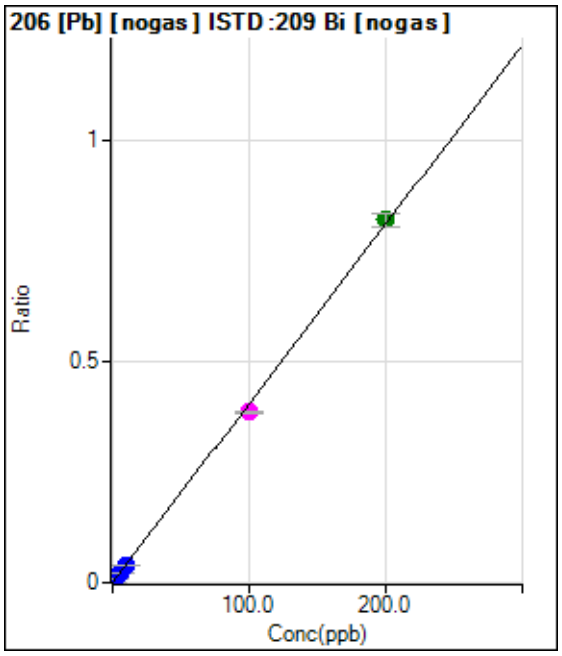
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	556.69	0.0002	P	10.2
2	☐	2.000	1.839	78102.75	0.0217	P	3.5
3	☐	5.000	4.821	195642.04	0.0565	P	3.7
4	☐	10.000	9.612	388510.20	0.1125	P	6.1
5	☐	100.000	97.968	3920911.71	1.1453	A	1.4
6	☐	200.000	201.041	7841416.14	2.3502	A	2.5
7	☐	1.000					

y = 0.0117 * x + 1.5424E-004
R = 0.9999
DL = 0.004035
BEC = 0.0132

Weight: <None>
Min Conc: <None>

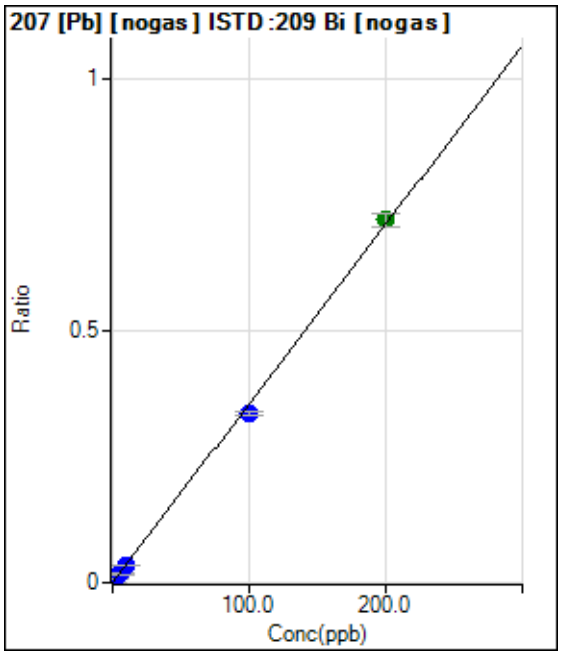


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.67	0.0001	P	27.7
2	☐	2.000	1.865	27416.57	0.0076	P	8.9
3	☐	5.000	4.911	69092.52	0.0200	P	2.3
4	☐	10.000	9.542	133755.51	0.0387	P	4.9
5	☐	100.000	95.046	1318620.32	0.3852	M	1.6
6	☐	200.000	202.503	2737857.67	0.8206	A	3.7
7	☐	1.000					

y = 0.0041 * x + 5.1738E-005
R = 0.9996
DL = 0.01063
BEC = 0.01277

Weight: <None>
Min Conc: <None>

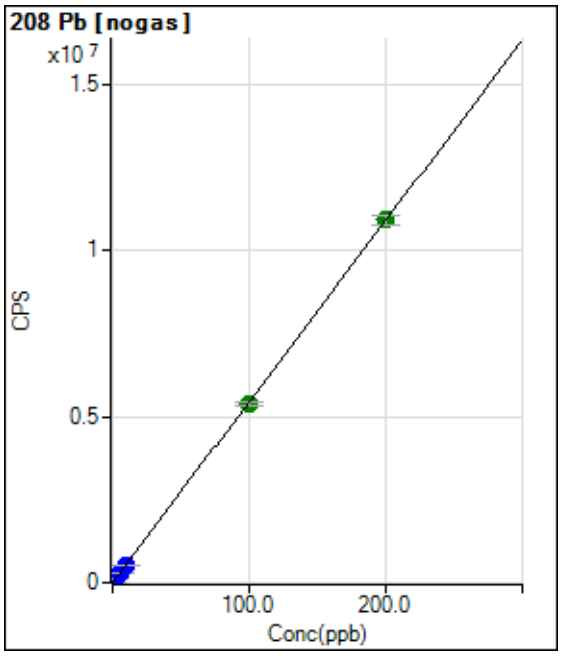
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.00	0.0000	P	39.5
2	☐	2.000	1.864	24031.24	0.0067	P	4.7
3	☐	5.000	4.837	59739.18	0.0172	P	1.5
4	☐	10.000	9.641	118603.69	0.0343	P	6.1
5	☐	100.000	94.683	1153758.34	0.3370	P	2.1
6	☐	200.000	202.682	2406807.88	0.7214	A	3.9
7	☐	1.000					

y = 0.0036 * x + 3.0464E-005
R = 0.9995
DL = 0.01015
BEC = 0.008559

Weight: <None>
Min Conc: <None>

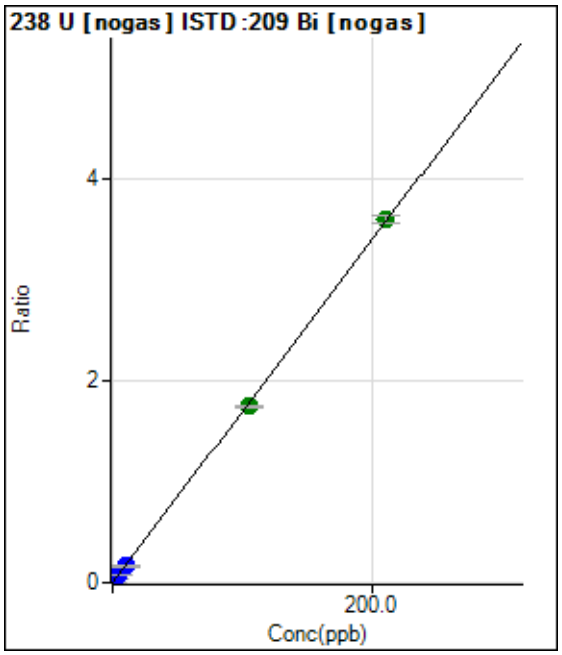


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	566.68		P	24.0
2	☐	2.000	2.039	111682.04		P	2.8
3	☐	5.000	5.045	275521.60		P	0.9
4	☐	10.000	9.872	538579.07		P	1.1
5	☐	100.000	98.952	5393270.60		A	1.5
6	☐	200.000	200.529	10929026.09		A	2.6
7	☐	1.000					

y = 54498.1827 * x + 566.6800
R = 1.0000
DL = 0.007474
BEC = 0.0104

Weight: <None>
Min Conc: <None>

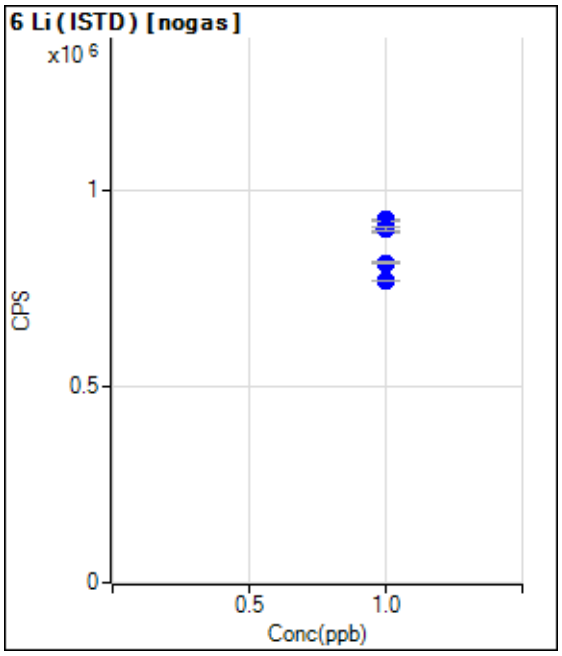
Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0000	P	32.3
2	☐	2.000	1.895	116378.04	0.0322	P	0.9
3	☐	5.000	4.885	287624.21	0.0831	P	4.0
4	☐	10.000	9.621	564820.39	0.1636	P	5.6
5	☐	105.000	102.683	5975187.41	1.7453	A	1.4
6	☐	210.000	211.180	11977677.74	3.5895	A	2.1
7	☐	1.000					

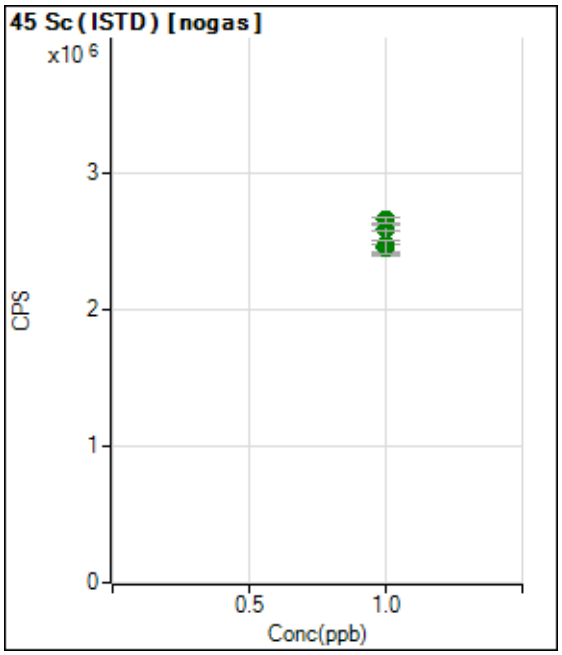
y = 0.0170 * x + 3.9712E-005
R = 0.9999
DL = 0.002262
BEC = 0.002336

Weight: <None>
Min Conc: <None>

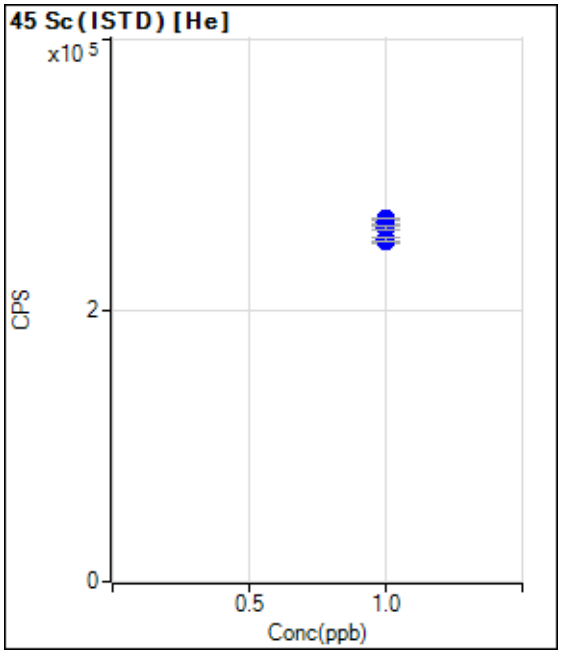


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		926025.73		P	0.5
2	☐	1.000		922087.61		P	0.4
3	☐	1.000		908817.18		P	3.3
4	☐	1.000		902190.03		P	0.8
5	☐	1.000		816386.40		P	0.4
6	☐	1.000		770778.20		P	0.5
7	☐	1.000					

Calibration for 115_ICV.d

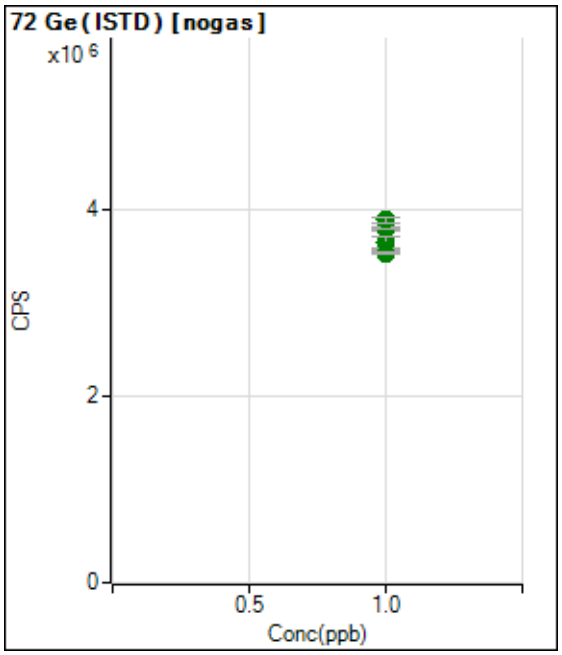


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2616799.91		A	0.4
2	☐	1.000		2592521.58		A	1.3
3	☐	1.000		2478058.71		A	7.2
4	☐	1.000		2653396.78		A	1.5
5	☐	1.000		2448618.40		A	2.4
6	☐	1.000		2454585.22		A	3.6
7	☐	1.000					

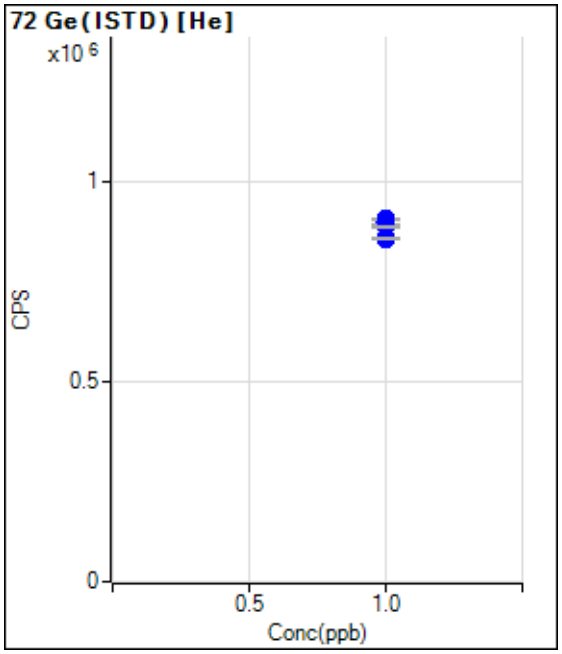


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		265753.10		P	0.8
2	☐	1.000		267864.63		P	0.5
3	☐	1.000		265851.78		P	1.6
4	☐	1.000		261148.83		P	1.0
5	☐	1.000		250766.26		P	0.6
6	☐	1.000		253292.91		P	1.2
7	☐	1.000					

Calibration for 115_ICV.d

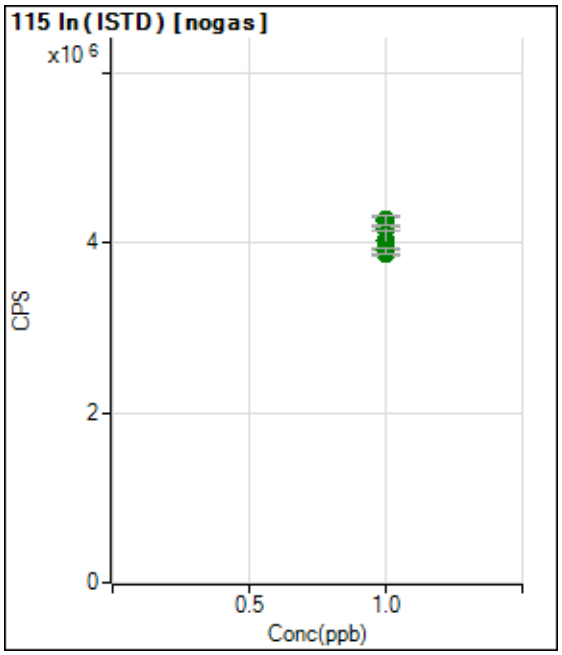


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3798749.84		A	1.5
2	☐	1.000		3816218.48		A	0.4
3	☐	1.000		3646942.13		A	4.3
4	☐	1.000		3894707.65		A	1.5
5	☐	1.000		3572989.74		A	0.5
6	☐	1.000		3539384.32		A	0.9
7	☐	1.000					

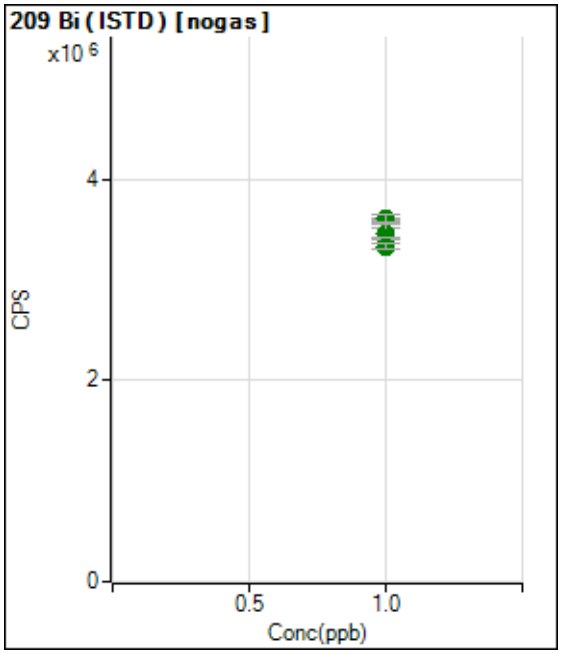


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		905821.16		P	0.6
2	☐	1.000		897449.47		P	0.9
3	☐	1.000		894419.78		P	0.1
4	☐	1.000		886776.94		P	0.8
5	☐	1.000		856648.53		P	0.6
6	☐	1.000		858650.12		P	0.5
7	☐	1.000					

Calibration for 115_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4251402.53		A	2.1
2	☐	1.000		4163678.66		A	1.3
3	☐	1.000		4029516.46		A	5.5
4	☐	1.000		4266139.23		A	2.7
5	☐	1.000		3869871.31		A	1.8
6	☐	1.000		3905648.56		A	1.5
7	☐	1.000					



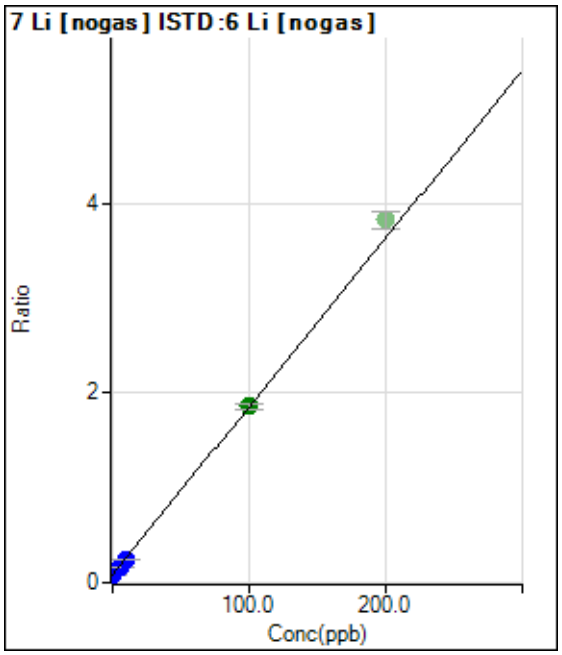
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3609904.11		A	0.3
2	☐	1.000		3608911.93		A	2.2
3	☐	1.000		3464903.28		A	3.1
4	☐	1.000		3459970.58		A	5.2
5	☐	1.000		3423572.45		A	0.5
6	☐	1.000		3337142.45		A	1.5
7	☐	1.000					

Calibration for 243_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\012219A.b\
Analysis File: 012219A.batch.bin
DA Date-Time: 2019-01-22 23:04:38
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	236CALB.d	CAL BLK	2019-01-22 20:47:19
2	237CALS.d	2/10/200	2019-01-22 20:49:18
3	238CALS.d	5/25/500	2019-01-22 20:51:17
4	239CALS.d	10/50/1000	2019-01-22 20:53:15
5	240CALS.d	100/500/10K	2019-01-22 20:55:13
6	241CALS.d	200/1000/20K	2019-01-22 20:57:11
7			

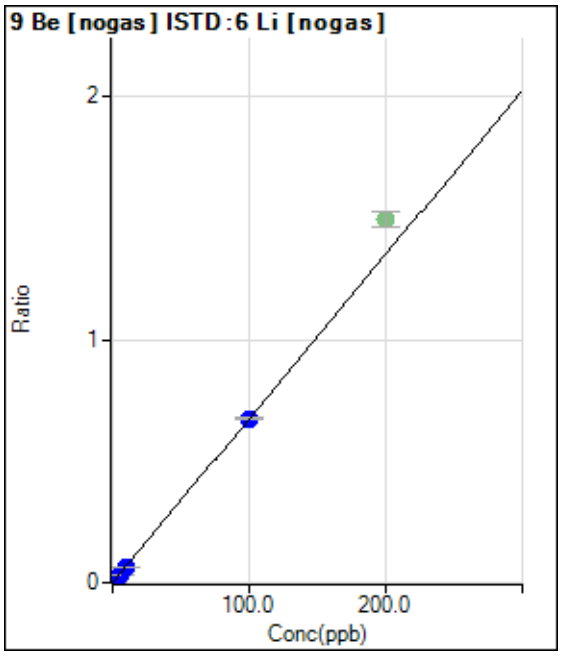
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83663.32	0.0843	P	1.2
2	☐	2.000	1.889	117758.82	0.1178	P	0.4
3	☐	5.000	4.856	169939.28	0.1704	P	1.2
4	☐	10.000	9.428	252957.84	0.2515	P	0.7
5	☐	100.000	100.067	1736465.86	1.8587	A	2.7
6	☑	200.000		3322594.01	3.8260	A	4.5
7	☐	1.000					

y = 0.0177 * x + 0.0843
R = 1.0000
DL = 0.1756
BEC = 4.757

Weight: <None>
Min Conc: <None>

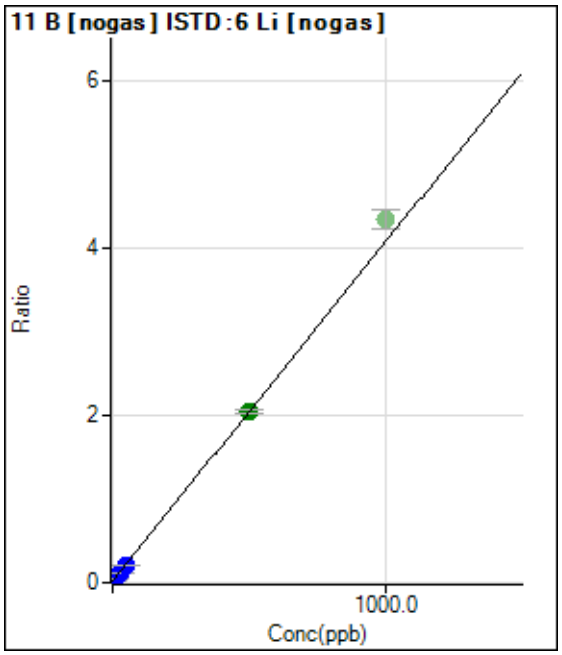


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.00	0.0001	P	21.8
2	☐	2.000	1.823	12434.18	0.0124	P	3.3
3	☐	5.000	4.712	31853.37	0.0319	P	1.8
4	☐	10.000	9.276	63113.03	0.0628	P	0.2
5	☐	100.000	100.090	631267.82	0.6758	P	0.8
6	☑	200.000		1296537.90	1.4929	A	4.3
7	☐	1.000					

y = 0.0068 * x + 1.4120E-004
R = 1.0000
DL = 0.01365
BEC = 0.02092

Weight: <None>
Min Conc: <None>

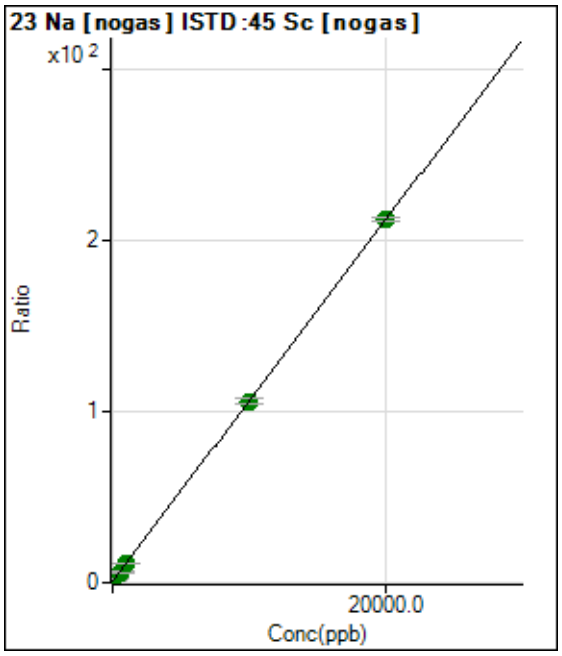
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18565.86	0.0187	P	2.8
2	☐	10.000	8.668	53801.98	0.0538	P	1.5
3	☐	25.000	23.082	111902.80	0.1122	P	2.1
4	☐	50.000	45.774	205357.89	0.2042	P	1.0
5	☐	500.000	500.545	1911878.05	2.0468	A	2.6
6	☑	1000.000		3762229.11	4.3331	A	5.2
7	☐	5.000					

y = 0.0041 * x + 0.0187
R = 1.0000
DL = 0.3932
BEC = 4.62

Weight: <None>
Min Conc: <None>

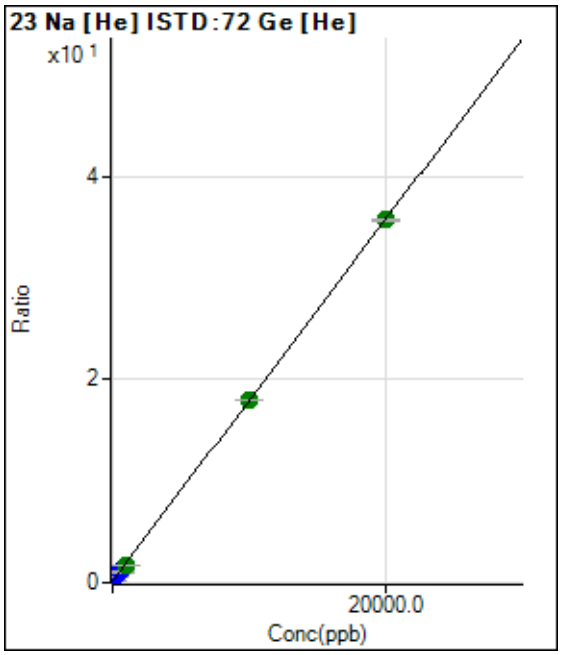


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2104636.31	0.8037	A	0.9
2	☐	200.000	191.987	7602918.92	2.8284	A	3.6
3	☐	500.000	503.272	15887607.13	6.1112	A	2.8
4	☐	1000.000	982.824	29386154.82	11.1685	A	1.4
5	☐	10000.00	9979.060	277846489.5	106.041	A	2.8
6	☐	20000.00	20011.327	550773845.6	211.840	A	1.1
7	☐	100.000					

y = 0.0105 * x + 0.8037
R = 1.0000
DL = 1.968
BEC = 76.21

Weight: <None>
Min Conc: <None>

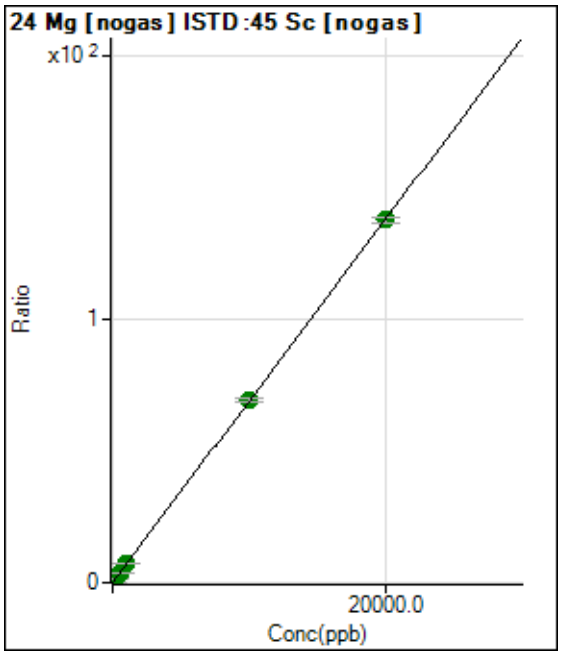
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138988.91	0.1537	P	0.8
2	☐	200.000	197.351	459085.95	0.5050	P	0.6
3	☐	500.000	500.569	954753.71	1.0449	P	1.8
4	☐	1000.000	841.290	1664921.69	1.6516	A	1.7
5	☐	10000.00	10037.597	16174903.51	18.0254	A	0.5
6	☐	20000.00	19989.149	31648925.36	35.7439	A	0.6
7	☐	100.000					

y = 0.0018 * x + 0.1537
R = 1.0000
DL = 2.005
BEC = 86.3

Weight: <None>
Min Conc: <None>

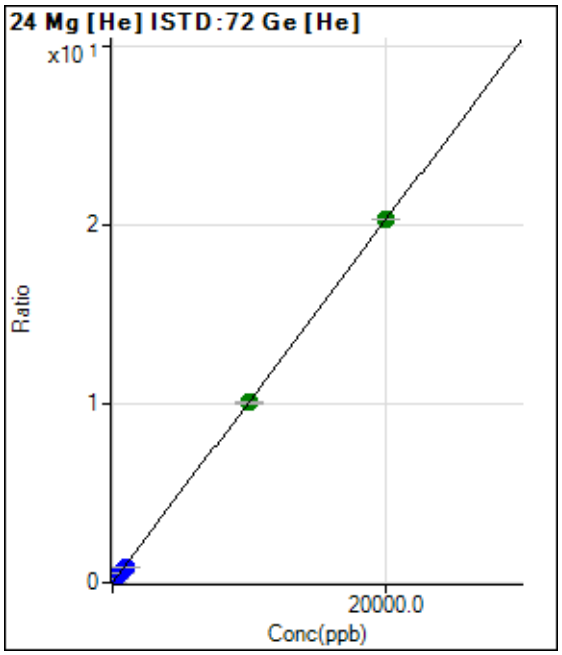


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60205.71	0.0230	P	3.7
2	☐	200.000	199.619	3759321.96	1.3984	A	3.1
3	☐	500.000	517.822	9334752.55	3.5908	A	3.5
4	☐	1000.000	1018.194	18516455.10	7.0385	A	2.8
5	☐	10000.00	10059.923	181680370.7	69.3370	A	2.6
6	☐	20000.00	19968.687	357744033.0	137.609	A	1.9
7	☐	100.000					

y = 0.0069 * x + 0.0230
R = 1.0000
DL = 0.3753
BEC = 3.337

Weight: <None>
Min Conc: <None>

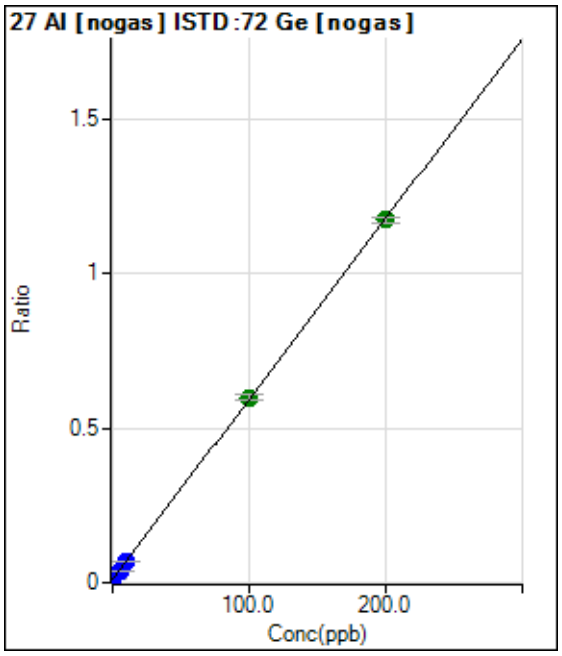
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3206.99	0.0035	P	8.5
2	☐	200.000	199.845	187204.68	0.2060	P	1.5
3	☐	500.000	503.190	468907.74	0.5132	P	1.9
4	☐	1000.000	840.618	861283.40	0.8550	P	3.1
5	☐	10000.00	9968.229	9062642.16	10.0997	A	1.0
6	☐	20000.00	20023.777	17960444.31	20.2844	A	0.2
7	☐	100.000					

y = 0.0010 * x + 0.0035
R = 1.0000
DL = 0.8948
BEC = 3.498

Weight: <None>
Min Conc: <None>

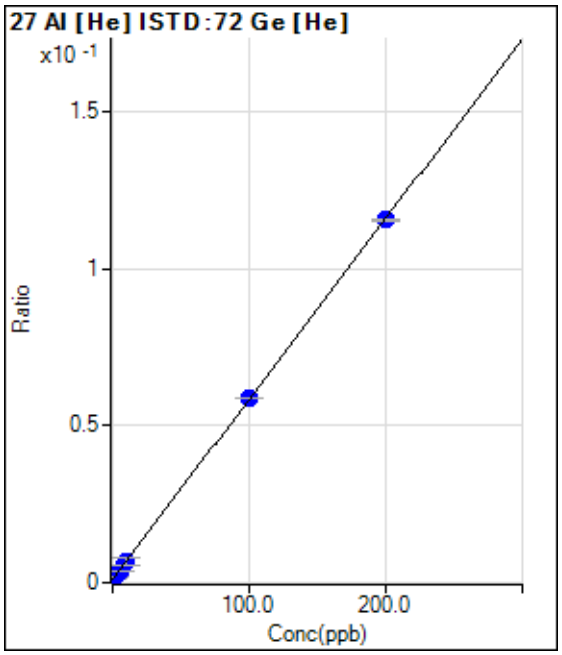


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43329.65	0.0114	P	2.2
2	☐	2.000	1.928	85832.69	0.0226	P	4.9
3	☐	5.000	4.712	149373.95	0.0388	P	2.4
4	☐	10.000	9.672	259876.00	0.0677	P	1.8
5	☐	100.000	101.071	2308991.79	0.5998	A	2.8
6	☐	200.000	199.489	4409076.60	1.1727	A	1.4
7	☐	1.000					

y = 0.0058 * x + 0.0114
R = 1.0000
DL = 0.1263
BEC = 1.956

Weight: <None>
Min Conc: <None>

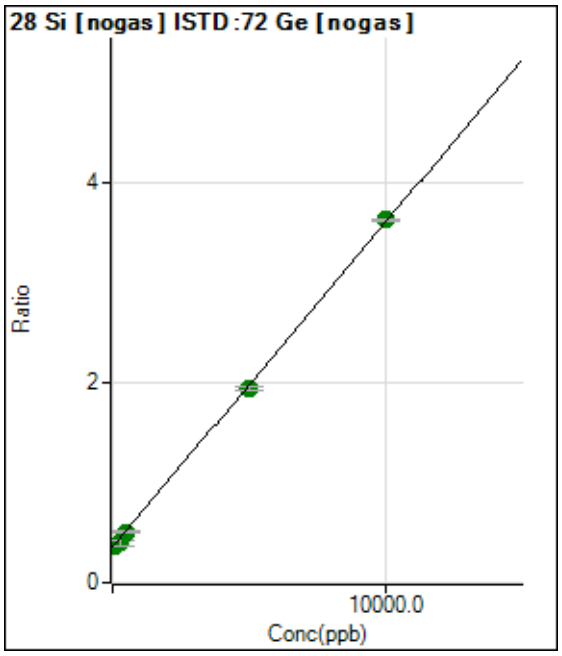
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.306	1146.72	0.0013	P	6.2
2	☐	2.000	1.760	1910.13	0.0021	P	3.4
3	☐	5.000	4.702	3460.38	0.0038	P	4.2
4	☐	10.000	9.738	6581.40	0.0067	P	31.7
5	☐	100.000	100.942	52907.05	0.0590	P	0.2
6	☐	200.000	199.552	102256.63	0.1155	P	0.5
7	☐	1.000					

y = 5.7327E-004 * x + 0.0011
R = 1.0000
DL = 0.409
BEC = 1.905

Weight: <None>
Min Conc: <None>

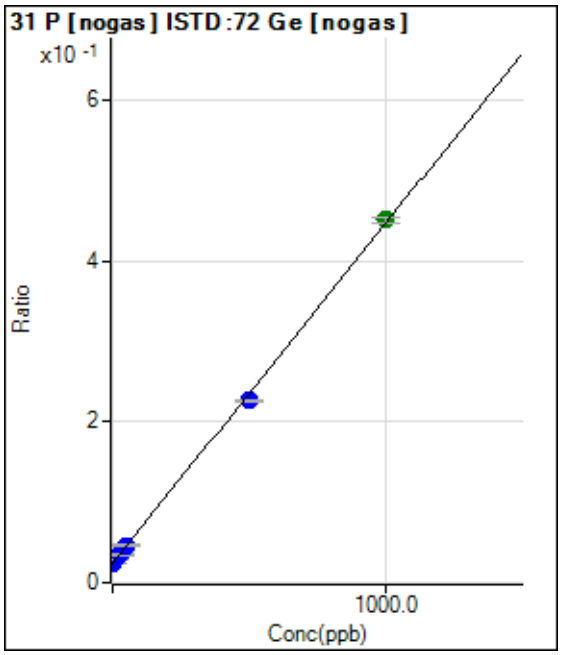


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1357658.89	0.3567	A	1.3
2	☐	100.000	45.425	1413822.79	0.3715	A	3.7
3	☐	250.000	128.175	1530932.06	0.3984	A	12.3
4	☐	500.000	466.910	1952679.50	0.5086	A	2.6
5	☐	5000.000	4868.308	7473285.72	1.9409	A	1.7
6	☐	10000.00	10071.092	13663470.63	3.6340	A	0.4
7	☐	5.000					

y = 3.2542E-004 * x + 0.3567
R = 0.9999
DL = 44.19
BEC = 1096

Weight: <None>
Min Conc: <None>

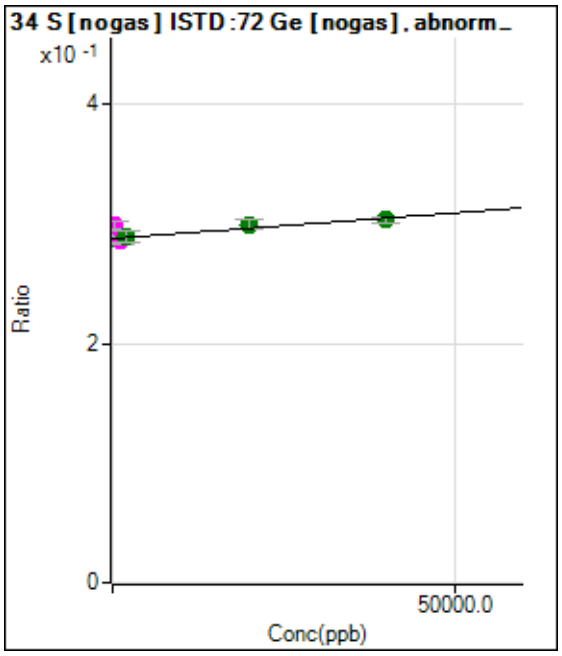
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	92136.55	0.0242	P	0.6
2	☐	10.000	10.997	109598.33	0.0289	P	3.3
3	☐	25.000	25.318	134282.14	0.0349	P	3.7
4	☐	50.000	52.623	178263.50	0.0464	P	2.0
5	☐	500.000	478.413	871079.28	0.2263	P	1.7
6	☐	1000.000	1010.645	1695790.76	0.4510	A	1.8
7	☐	5.000					

y = 4.2232E-004 * x + 0.0242
R = 0.9997
DL = 1.092
BEC = 57.32

Weight: <None>
Min Conc: <None>

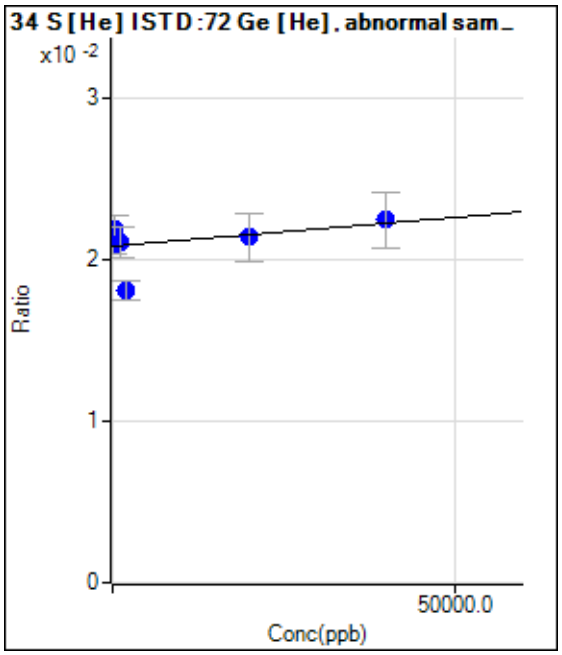


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1096106.14	0.2880	A	1.7
2	☐	400.000	25012.591	1135518.84	0.2987	M	2.2
3	☐	1000.000	-4030.600	1101747.39	0.2863	M	2.6
4	☐	2000.000	3005.593	1111218.74	0.2893	A	3.6
5	☐	20000.00	27072.940	1153384.01	0.2996	A	2.6
6	☐	40000.00	36292.889	1141140.23	0.3035	A	1.7
7	☐	100.000					

y = 4.2700E-007 * x + 0.2880
R = 0.7833
DL = 3.408E+04
BEC = 6.745E+05

Weight: <None>
Min Conc: <None>

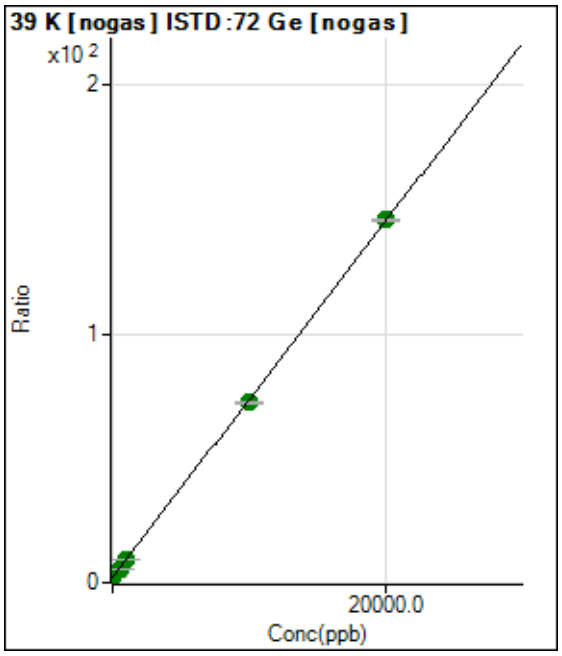
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18879.79	0.0209	P	4.1
2	☐	400.000	30174.169	19947.41	0.0219	P	7.9
3	☐	1000.000	7858.941	19313.15	0.0211	P	9.1
4	☐	2000.000	-78796.38	18312.39	0.0181	P	6.6
5	☐	20000.00	15781.152	19212.90	0.0214	P	14.1
6	☐	40000.00	45680.028	19914.38	0.0225	P	15.2
7	☐	100.000					

y = 3.5499E-008 * x + 0.0209
R = 0.5030
DL = 7.281E+04
BEC = 5.878E+05

Weight: <None>
Min Conc: <None>

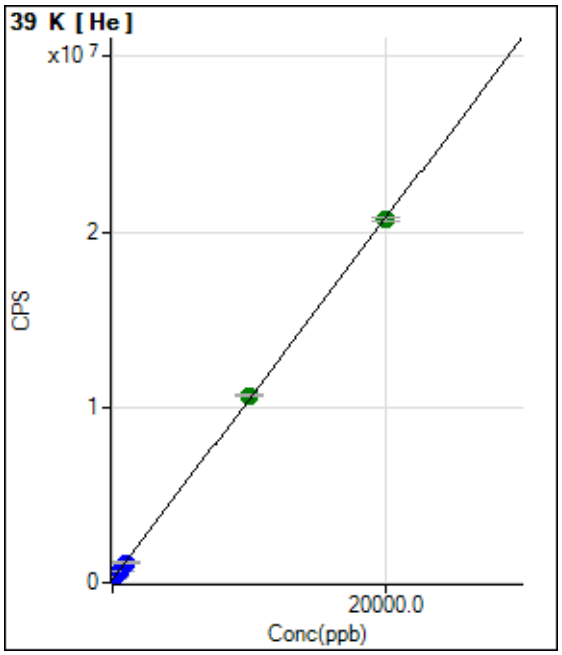


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8020590.80	2.1076	A	1.8
2	☐	200.000	203.308	13533974.26	3.5629	A	3.1
3	☐	500.000	496.637	21790107.78	5.6626	A	2.7
4	☐	1000.000	993.233	35388078.91	9.2173	A	1.8
5	☐	10000.00	9831.222	279065789.5	72.4815	A	1.0
6	☐	20000.00	20084.778	548486028.9	145.878	A	0.5
7	☐	100.000					

y = 0.0072 * x + 2.1076
R = 0.9999
DL = 15.79
BEC = 294.4

Weight: <None>
Min Conc: <None>

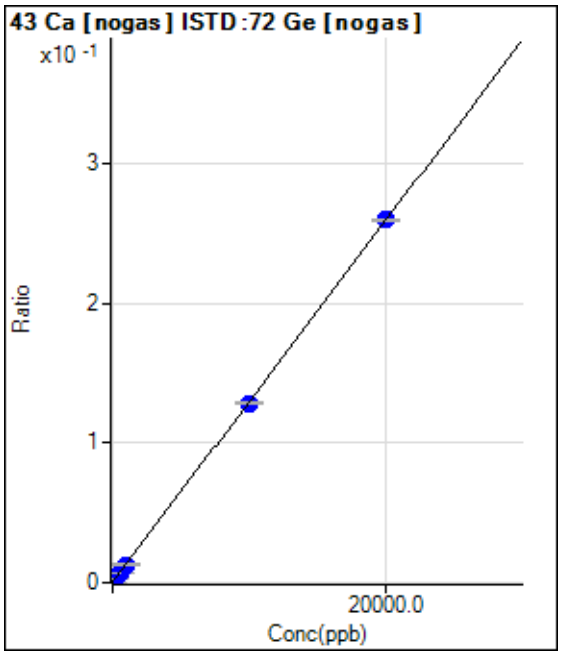
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170071.27		P	0.3
2	☐	200.000	203.303	379671.27		P	0.1
3	☐	500.000	508.637	694463.17		P	0.4
4	☐	1000.000	936.691	1135775.24		P	9.7
5	☐	10000.00	10197.358	10683284.42		A	0.2
6	☐	20000.00	19904.237	20690825.94		A	0.9
7	☐	100.000					

y = 1030.9742 * x + 170071.2667
R = 0.9999
DL = 1.527
BEC = 165

Weight: <None>
Min Conc: <None>

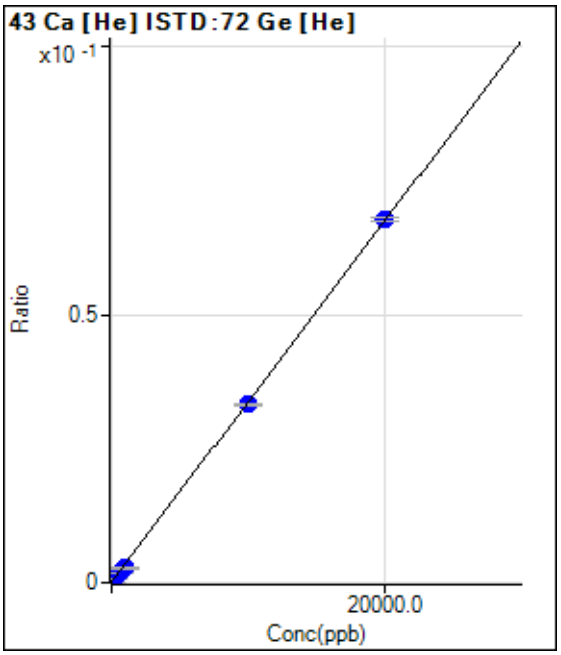


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1283.40	0.0003	P	11.7
2	☐	200.000	203.519	11276.87	0.0030	P	7.7
3	☐	500.000	478.279	25130.44	0.0065	P	3.8
4	☐	1000.000	979.615	50000.09	0.0130	P	2.7
5	☐	10000.00	9913.725	495634.38	0.1287	P	1.2
6	☐	20000.00	20044.665	977343.19	0.2599	P	0.6
7	☐	100.000					

y = 1.2951E-005 * x + 3.3697E-004
R = 1.0000
DL = 9.107
BEC = 26.02

Weight: <None>
Min Conc: <None>

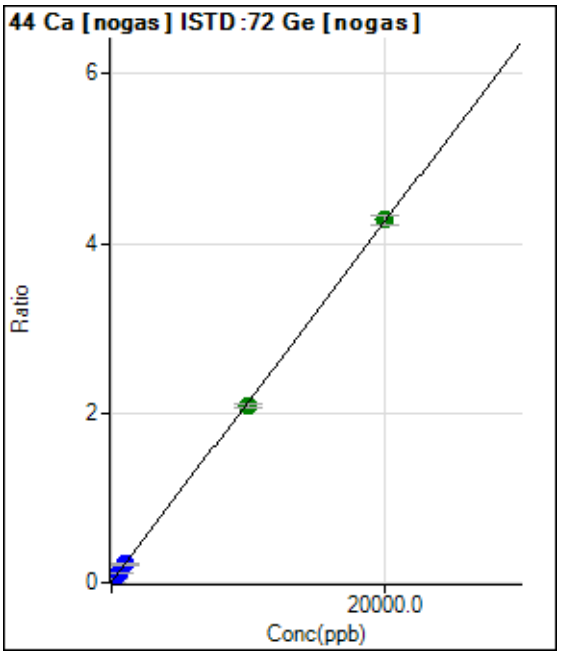
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0001	P	20.9
2	☐	200.000	184.435	666.69	0.0007	P	26.4
3	☐	500.000	480.382	1580.09	0.0017	P	8.3
4	☐	1000.000	782.360	2760.25	0.0027	P	8.9
5	☐	10000.00	9853.026	29833.96	0.0332	P	0.5
6	☐	20000.00	20085.015	59899.14	0.0677	P	1.0
7	☐	100.000					

y = 3.3625E-006 * x + 1.1437E-004
R = 0.9999
DL = 21.28
BEC = 34.01

Weight: <None>
Min Conc: <None>

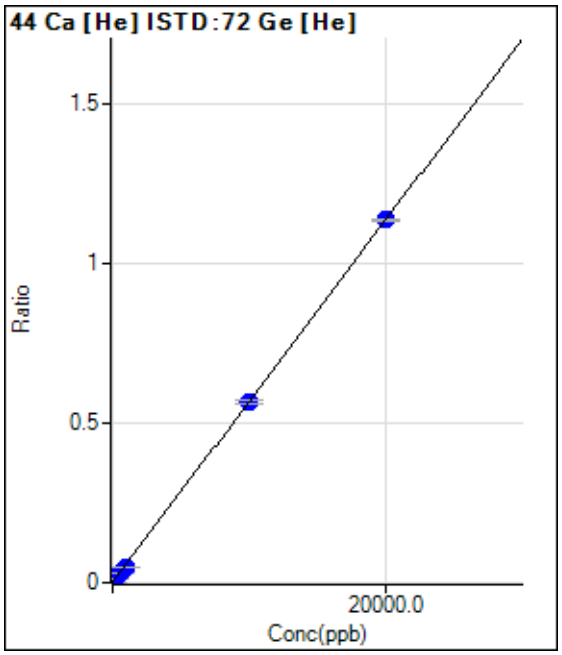


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37624.72	0.0099	P	1.5
2	☐	200.000	197.567	196699.48	0.0518	P	4.5
3	☐	500.000	491.890	439598.21	0.1142	P	3.2
4	☐	1000.000	977.518	834105.90	0.2173	P	2.6
5	☐	10000.00	9760.389	8010470.92	2.0807	A	2.1
6	☐	20000.00	20121.157	16086424.34	4.2788	A	2.5
7	☐	100.000					

y = 2.1216E-004 * x + 0.0099
R = 0.9999
DL = 2.076
BEC = 46.6

Weight: <None>
Min Conc: <None>

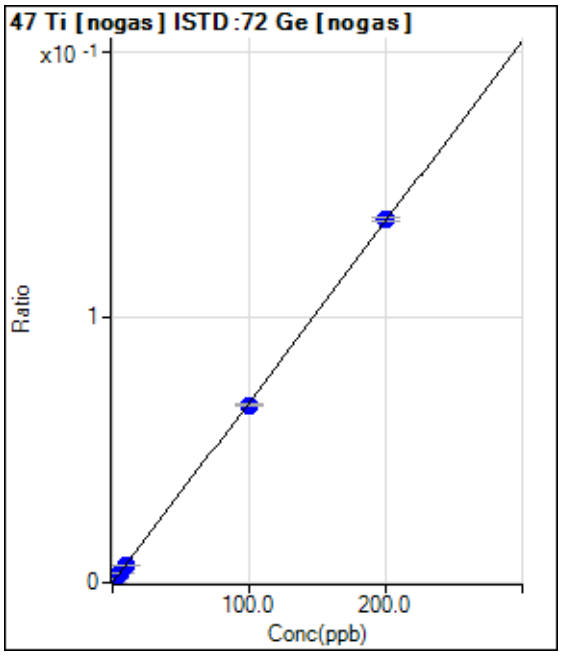
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1106.72	0.0012	P	13.9
2	☐	200.000	196.604	11246.86	0.0124	P	3.4
3	☐	500.000	495.498	26792.66	0.0293	P	3.0
4	☐	1000.000	825.733	48383.08	0.0481	P	3.5
5	☐	10000.00	9968.814	508404.19	0.5666	P	1.3
6	☐	20000.00	20024.453	1006636.44	1.1369	P	0.5
7	☐	100.000					

y = 5.6714E-005 * x + 0.0012
R = 1.0000
DL = 9.009
BEC = 21.59

Weight: <None>
Min Conc: <None>

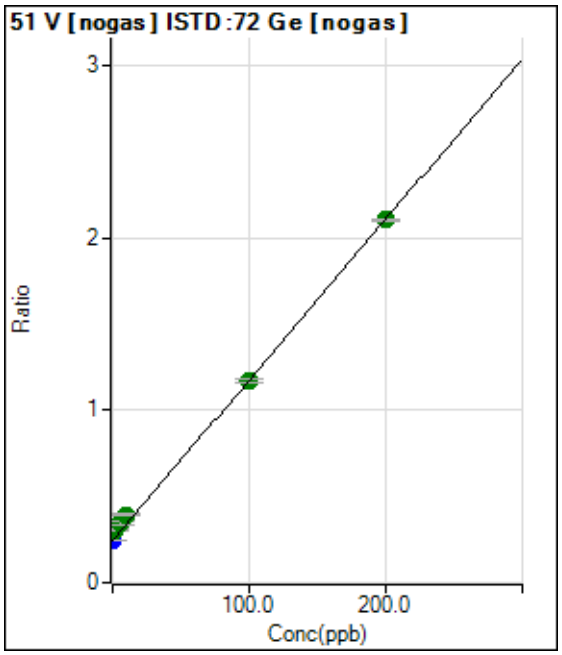


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	256.68	0.0001	P	14.4
2	☐	2.000	1.959	5314.18	0.0014	P	6.9
3	☐	5.000	4.965	13268.26	0.0034	P	1.3
4	☐	10.000	9.852	25998.31	0.0068	P	3.1
5	☐	100.000	98.098	257306.70	0.0668	P	0.9
6	☐	200.000	200.959	514461.14	0.1368	P	1.2
7	☐	1.000					

y = 6.8056E-004 * x + 6.7488E-005
R = 0.9999
DL = 0.0427
BEC = 0.09917

Weight: <None>
Min Conc: <None>

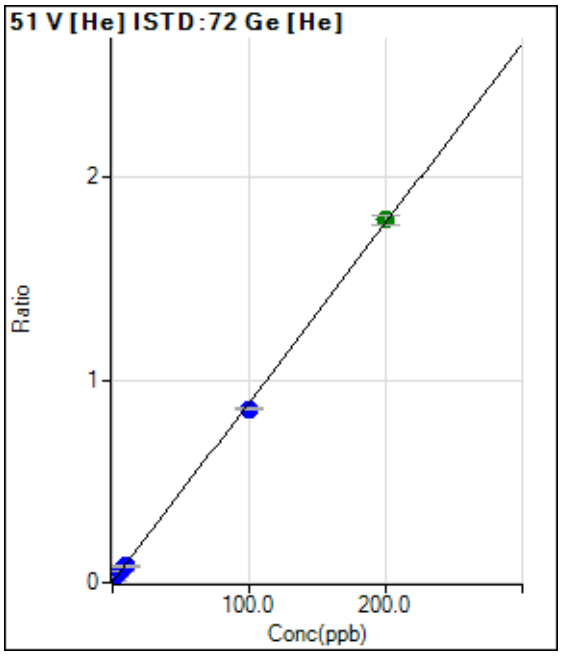
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	927960.47	0.2438	P	2.9
2	☐	2.000	6.512	1157483.75	0.3044	A	2.0
3	☐	5.000	10.582	1318837.14	0.3423	A	6.6
4	☐	10.000	16.198	1514939.07	0.3945	A	1.1
5	☐	100.000	99.611	4507711.56	1.1708	A	1.2
6	☐	200.000	199.700	7904180.64	2.1023	A	0.7
7	☐	1.000					

y = 0.0093 * x + 0.2438
R = 0.9995
DL = 2.267
BEC = 26.2

Weight: <None>
Min Conc: <None>

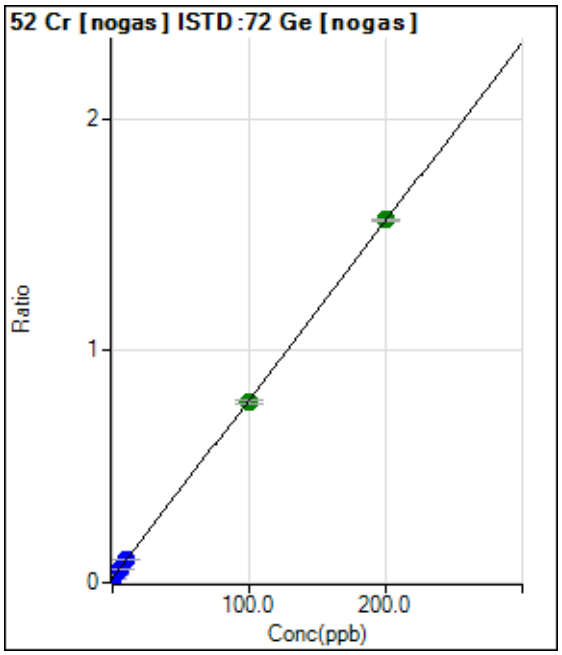


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	1.017	10647.05	0.0118	P	1.8
2	☐	2.000	2.985	26560.17	0.0292	P	0.6
3	☐	5.000	5.851	49916.97	0.0546	P	1.7
4	☐	10.000	8.838	81803.03	0.0811	P	3.0
5	☐	100.000	96.564	770868.17	0.8591	P	0.9
6	☐	200.000	201.745	1586541.75	1.7918	A	2.8
7	☐	1.000					

y = 0.0089 * x + 0.0027
R = 0.9997
DL = 0.07179
BEC = 0.3099

Weight: <None>
Min Conc: <None>

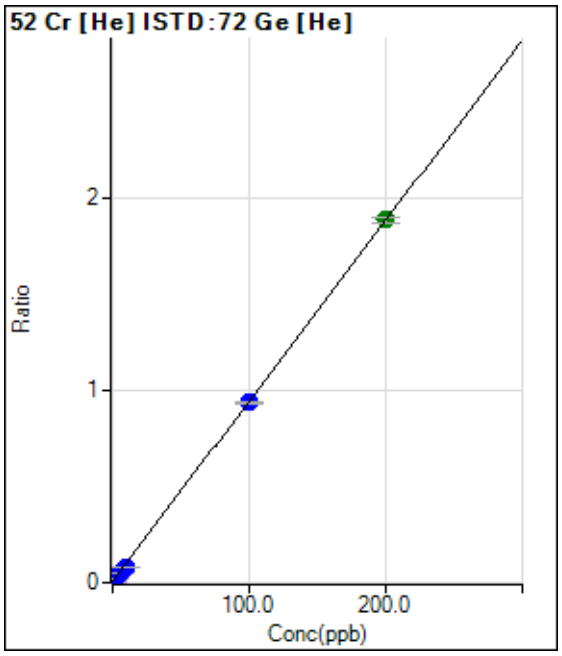
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71426.73	0.0188	P	1.0
2	☐	2.000	2.280	137899.49	0.0363	P	4.9
3	☐	5.000	5.217	226754.07	0.0589	P	3.8
4	☐	10.000	10.291	376212.86	0.0980	P	2.4
5	☐	100.000	98.637	2996223.18	0.7782	A	1.8
6	☐	200.000	200.659	5879339.29	1.5637	A	0.8
7	☐	1.000					

y = 0.0077 * x + 0.0188
R = 1.0000
DL = 0.07069
BEC = 2.438

Weight: <None>
Min Conc: <None>

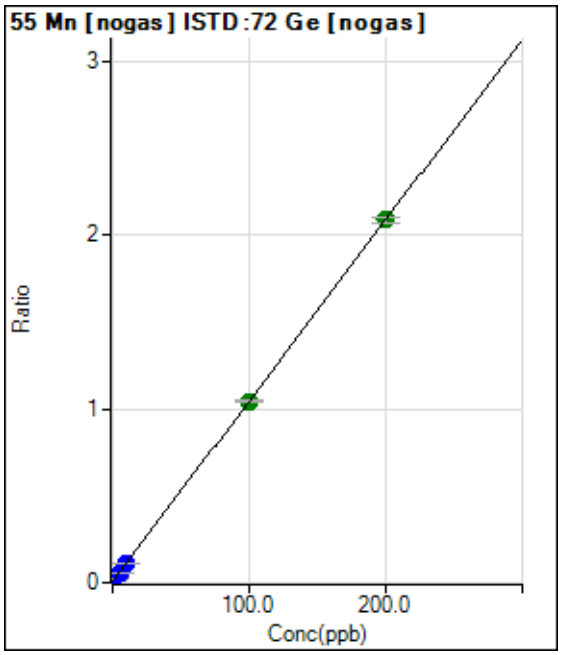


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4617.32	0.0051	P	7.0
2	☐	2.000	1.982	21532.72	0.0237	P	0.7
3	☐	5.000	5.016	47624.40	0.0521	P	2.7
4	☐	10.000	8.120	81965.32	0.0812	P	3.9
5	☐	100.000	99.374	840425.46	0.9366	P	0.8
6	☐	200.000	200.407	1667781.54	1.8836	A	1.3
7	☐	1.000					

y = 0.0094 * x + 0.0051
R = 1.0000
DL = 0.1141
BEC = 0.5448

Weight: <None>
Min Conc: <None>

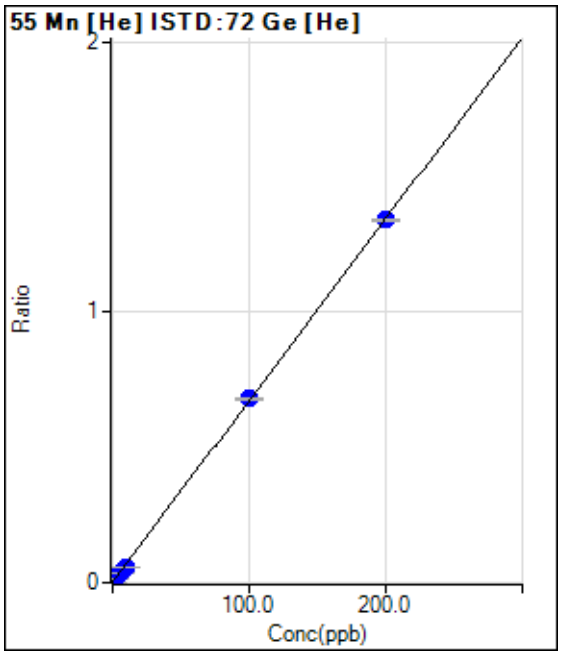
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25617.95	0.0067	P	3.1
2	☐	2.000	2.067	107254.49	0.0282	P	4.7
3	☐	5.000	4.767	216878.85	0.0564	P	2.6
4	☐	10.000	9.723	414465.32	0.1080	P	1.7
5	☐	100.000	99.741	4023965.04	1.0451	A	0.4
6	☐	200.000	200.148	7859937.59	2.0904	A	1.5
7	☐	1.000					

y = 0.0104 * x + 0.0067
R = 1.0000
DL = 0.06008
BEC = 0.6465

Weight: <None>
Min Conc: <None>

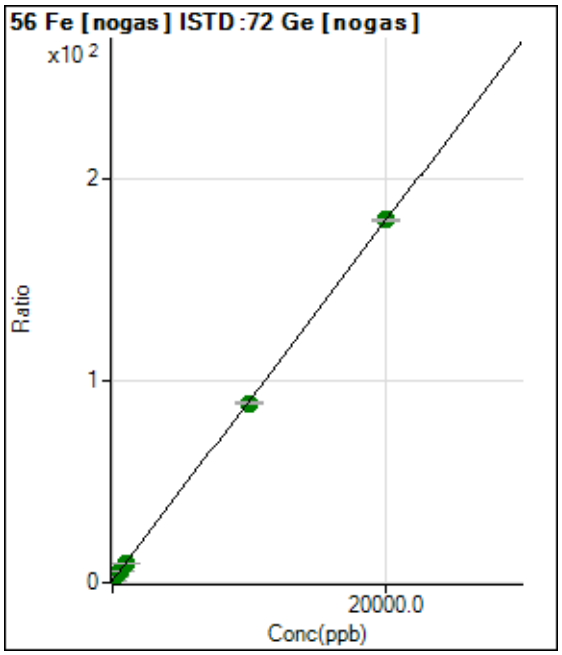


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1696.77	0.0019	P	13.4
2	☐	2.000	2.146	14806.09	0.0163	P	5.4
3	☐	5.000	4.886	31700.77	0.0347	P	3.0
4	☐	10.000	8.182	57259.20	0.0568	P	3.3
5	☐	100.000	101.034	610699.03	0.6806	P	1.1
6	☐	200.000	199.575	1188745.16	1.3425	P	0.6
7	☐	1.000					

y = 0.0067 * x + 0.0019
R = 0.9999
DL = 0.1126
BEC = 0.2795

Weight: <None>
Min Conc: <None>

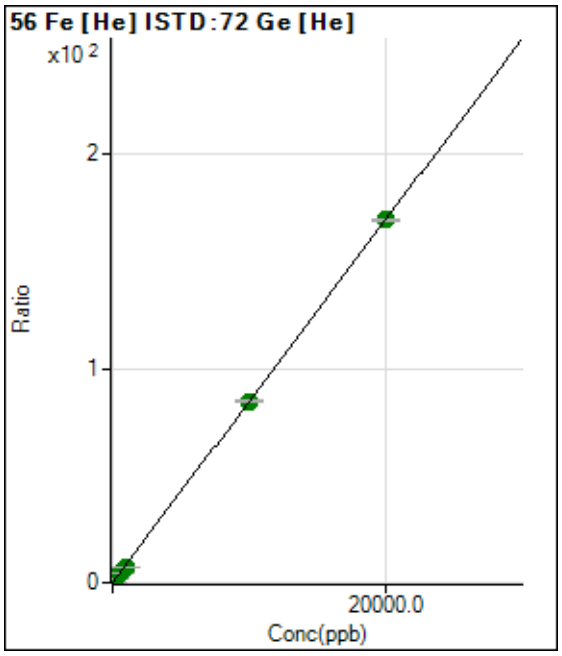
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4285170.28	1.1259	A	0.3
2	☐	200.000	204.285	11198095.30	2.9480	A	3.2
3	☐	500.000	503.029	21599077.04	5.6126	A	2.2
4	☐	1000.000	990.203	38233556.06	9.9579	A	1.2
5	☐	10000.00	9875.648	343481024.3	89.2104	A	1.6
6	☐	20000.00	20062.547	677039298.4	180.071	A	0.7
7	☐	100.000					

y = 0.0089 * x + 1.1259
R = 1.0000
DL = 1.186
BEC = 126.2

Weight: <None>
Min Conc: <None>

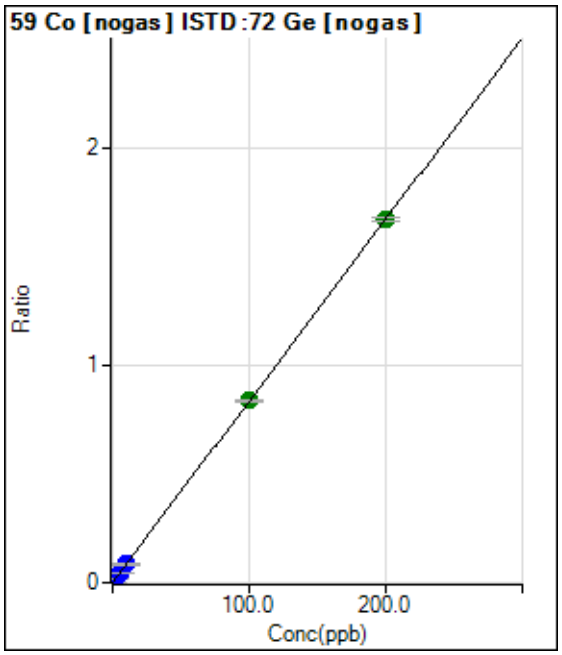


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23548.49	0.0260	P	3.6
2	☐	200.000	202.212	1580343.93	1.7387	A	2.4
3	☐	500.000	510.926	3977702.76	4.3535	A	2.2
4	☐	1000.000	841.811	7206060.73	7.1560	A	4.2
5	☐	10000.00	10003.848	76050867.20	84.7563	A	1.3
6	☐	20000.00	20005.690	150055454.4	169.469	A	0.6
7	☐	100.000					

y = 0.0085 * x + 0.0260
R = 1.0000
DL = 0.3299
BEC = 3.074

Weight: <None>
Min Conc: <None>

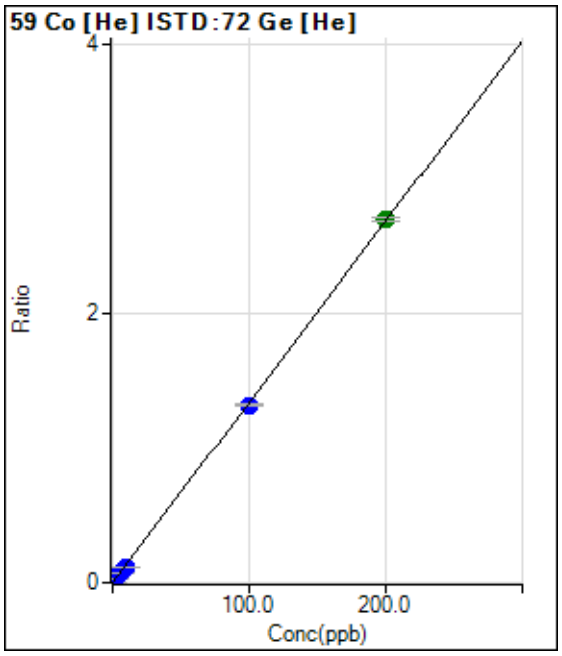
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	553.35	0.0001	P	10.8
2	☐	2.000	2.059	65934.02	0.0174	P	3.0
3	☐	5.000	5.077	163836.00	0.0426	P	2.6
4	☐	10.000	10.145	326087.98	0.0849	P	2.2
5	☐	100.000	100.336	3229605.27	0.8387	A	1.2
6	☐	200.000	199.822	6279754.28	1.6702	A	0.9
7	☐	1.000					

y = 0.0084 * x + 1.4548E-004
R = 1.0000
DL = 0.005633
BEC = 0.01741

Weight: <None>
Min Conc: <None>

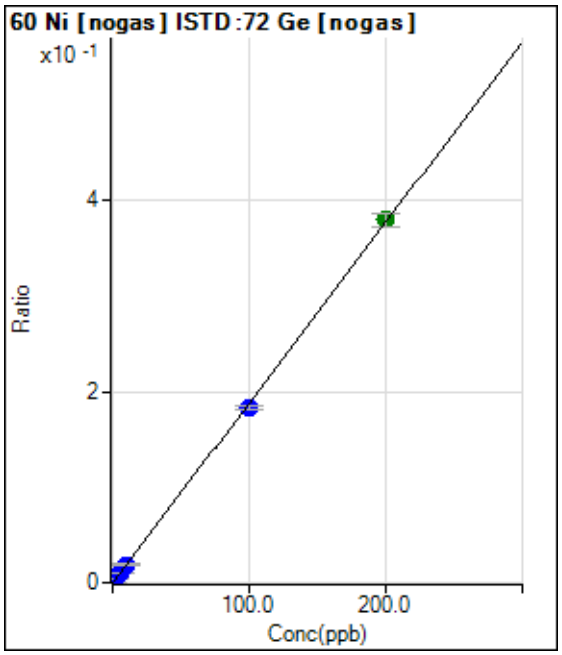


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0001	P	22.9
2	☐	2.000	1.921	23505.21	0.0259	P	2.3
3	☐	5.000	4.953	60746.42	0.0665	P	2.7
4	☐	10.000	8.262	111580.91	0.1108	P	4.5
5	☐	100.000	98.228	1180943.89	1.3161	P	1.3
6	☐	200.000	200.975	2384137.15	2.6927	A	0.9
7	☐	1.000					

y = 0.0134 * x + 1.2540E-004
R = 0.9999
DL = 0.006424
BEC = 0.00936

Weight: <None>
Min Conc: <None>

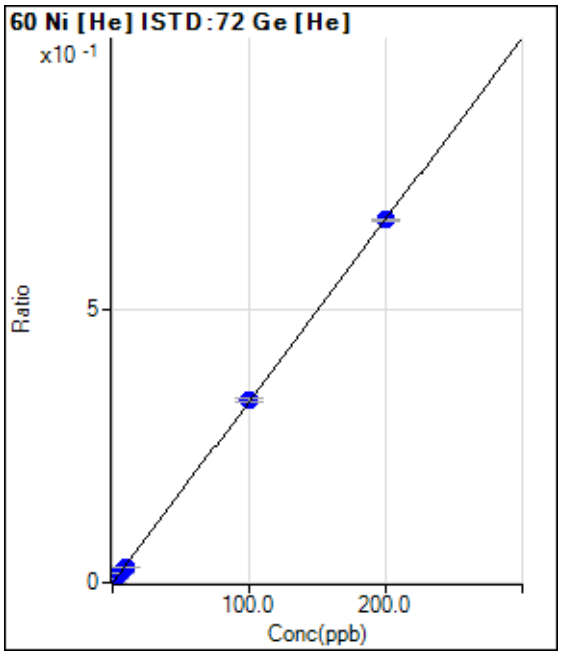
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.425	1476.75	0.0004	P	8.9
2	☐	2.000	2.405	15640.13	0.0041	P	6.8
3	☐	5.000	5.336	37140.99	0.0097	P	4.1
4	☐	10.000	10.319	73128.05	0.0191	P	3.1
5	☐	100.000	97.086	703483.27	0.1827	P	2.1
6	☐	200.000	201.429	1426861.70	0.3795	A	3.4
7	☐	1.000					

y = 0.0019 * x - 4.1426E-004
R = 0.9998
DL = 0.05489
BEC = -0.2196

Weight: <None>
Min Conc: <None>

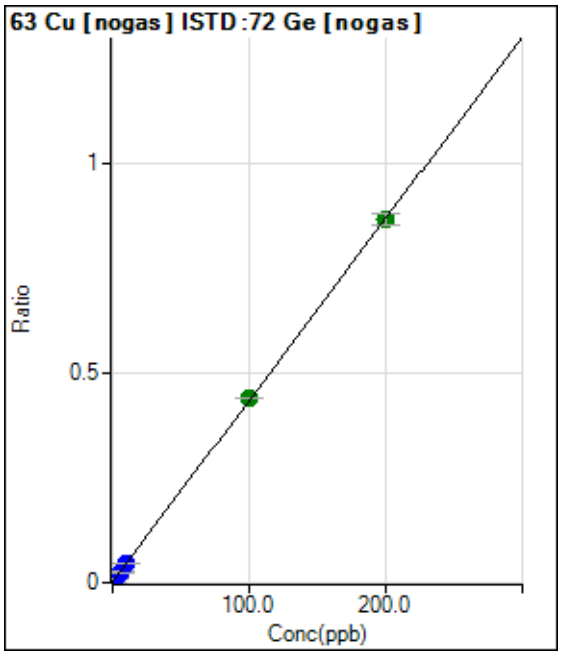


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.350	320.01	0.0004	P	10.0
2	☐	2.000	2.293	6201.16	0.0068	P	1.3
3	☐	5.000	5.158	14946.24	0.0164	P	2.6
4	☐	10.000	8.952	29236.92	0.0290	P	0.8
5	☐	100.000	100.402	299123.32	0.3334	P	1.9
6	☐	200.000	199.845	588252.18	0.6644	P	0.8
7	☐	1.000					

y = 0.0033 * x - 8.1130E-004
R = 1.0000
DL = 0.03188
BEC = -0.2437

Weight: <None>
Min Conc: <None>

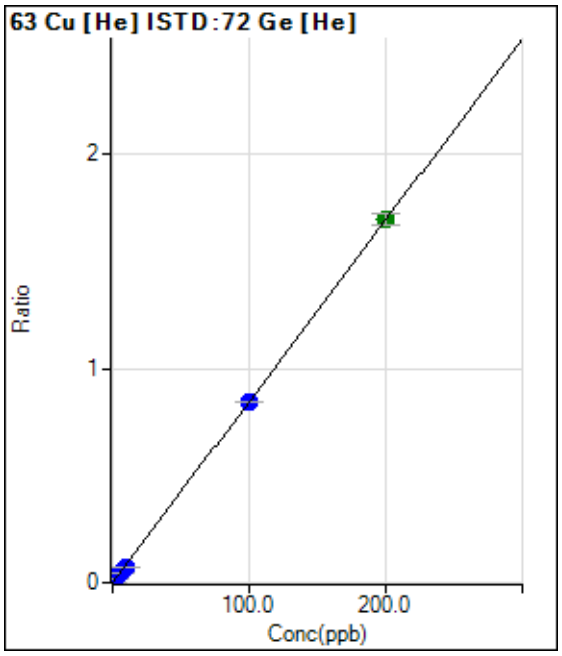
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5834.35	0.0015	P	3.0
2	☐	2.000	2.121	40761.97	0.0107	P	6.6
3	☐	5.000	5.451	97000.59	0.0252	P	2.1
4	☐	10.000	9.963	171954.52	0.0448	P	2.9
5	☐	100.000	101.201	1697885.13	0.4410	A	0.6
6	☐	200.000	199.389	3260575.37	0.8673	A	3.2
7	☐	1.000					

y = 0.0043 * x + 0.0015
R = 1.0000
DL = 0.03212
BEC = 0.353

Weight: <None>
Min Conc: <None>

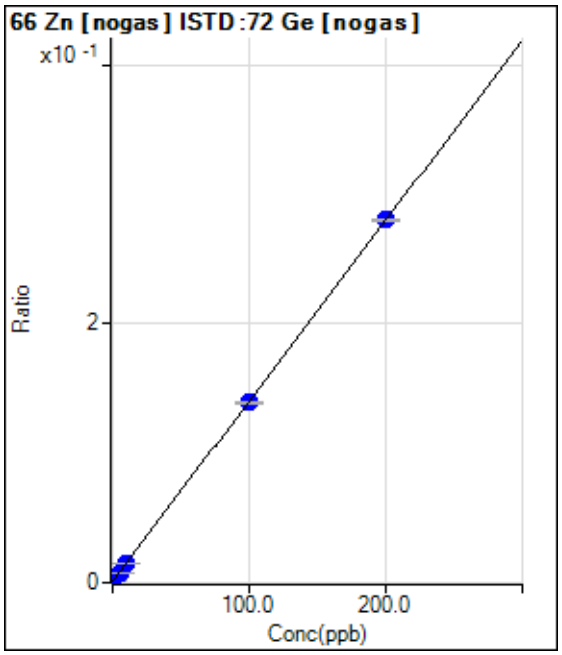


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.361	2186.83	0.0024	P	10.3
2	☐	2.000	2.497	18609.60	0.0205	P	2.8
3	☐	5.000	5.679	43297.76	0.0474	P	0.8
4	☐	10.000	8.618	72811.93	0.0722	P	2.2
5	☐	100.000	99.593	754923.35	0.8413	P	0.5
6	☐	200.000	200.251	1498321.64	1.6922	A	3.1
7	☐	1.000					

y = 0.0085 * x - 6.3603E-004
R = 1.0000
DL = 0.08849
BEC = -0.07524

Weight: <None>
Min Conc: <None>

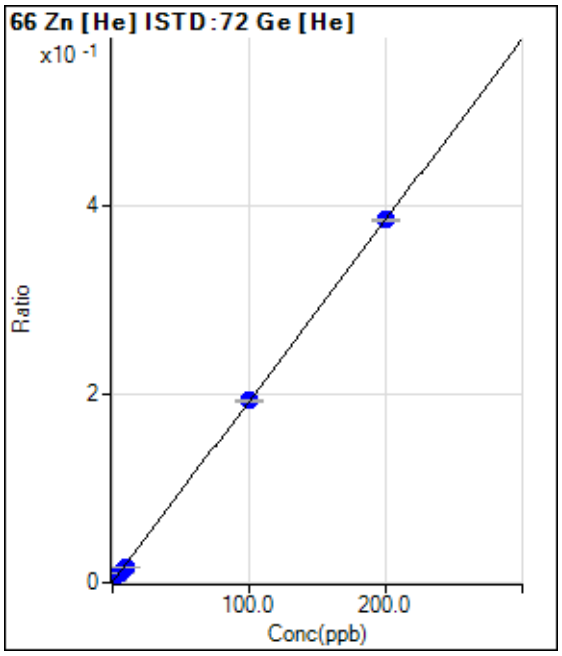
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.464	6357.87	0.0017	P	4.9
2	☐	2.000	2.291	16023.81	0.0042	P	3.9
3	☐	5.000	4.977	30645.70	0.0080	P	2.3
4	☐	10.000	9.718	55945.13	0.0146	P	2.3
5	☐	100.000	99.076	535765.34	0.1392	P	1.0
6	☐	200.000	200.474	1054715.32	0.2805	P	0.6
7	☐	1.000					

y = 0.0014 * x + 0.0010
R = 1.0000
DL = 0.1754
BEC = 0.7343

Weight: <None>
Min Conc: <None>

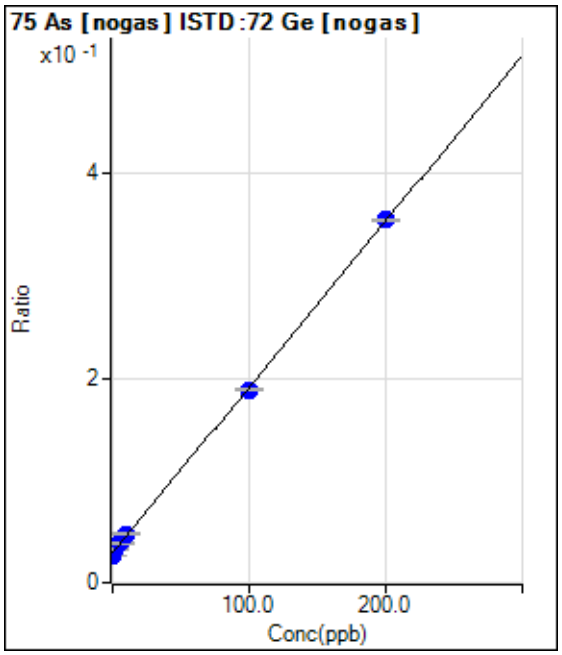


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.858	1970.14	0.0022	P	7.8
2	☐	2.000	2.554	4940.73	0.0054	P	3.7
3	☐	5.000	5.144	9509.25	0.0104	P	4.0
4	☐	10.000	8.304	16607.84	0.0165	P	2.7
5	☐	100.000	100.129	173006.00	0.1928	P	1.4
6	☐	200.000	200.011	340541.83	0.3846	P	0.4
7	☐	1.000					

y = 0.0019 * x + 5.3176E-004
R = 0.9999
DL = 0.2666
BEC = 0.2769

Weight: <None>
Min Conc: <None>

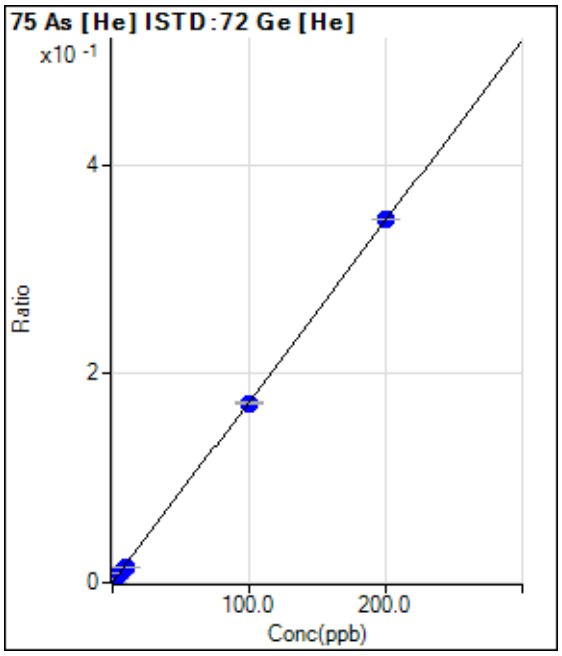
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.591	101205.95	0.0266	P	1.8
2	☐	2.000	2.086	123609.95	0.0326	P	4.4
3	☐	5.000	6.018	149772.76	0.0389	P	3.8
4	☐	10.000	11.485	183398.09	0.0478	P	4.7
5	☐	100.000	98.205	725118.92	0.1883	P	1.1
6	☐	200.000	200.797	1333278.84	0.3546	P	0.9
7	☐	1.000					

y = 0.0016 * x + 0.0292
R = 0.9999
DL = 0.8812
BEC = 18

Weight: <None>
Min Conc: <None>

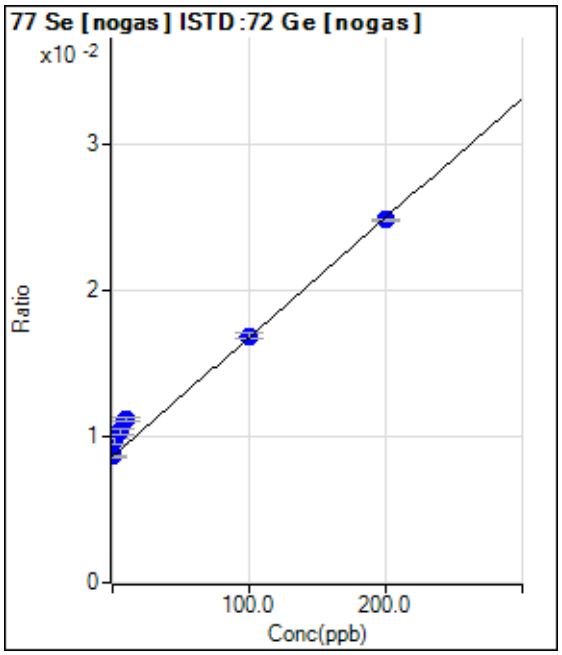


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	255.56	0.0003	P	5.2
2	☐	2.000	2.000	3403.67	0.0037	P	1.7
3	☐	5.000	4.893	7996.23	0.0088	P	2.2
4	☐	10.000	8.212	14615.95	0.0145	P	3.3
5	☐	100.000	99.044	154093.45	0.1717	P	0.7
6	☐	200.000	200.570	307654.35	0.3475	P	0.2
7	☐	1.000					

y = 0.0017 * x + 2.8250E-004
R = 1.0000
DL = 0.02523
BEC = 0.1632

Weight: <None>
Min Conc: <None>

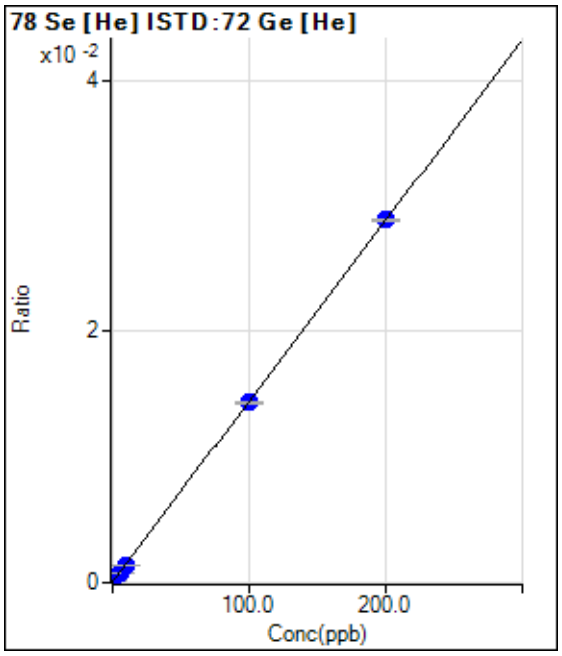
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32886.86	0.0086	P	1.6
2	☐	2.000	12.693	36774.47	0.0097	P	3.2
3	☐	5.000	21.107	39887.87	0.0104	P	3.8
4	☐	10.000	30.681	42800.87	0.0111	P	2.5
5	☐	100.000	100.770	64979.34	0.0169	P	2.4
6	☐	200.000	198.071	93364.83	0.0248	P	0.9
7	☐	1.000					

y = 8.1743E-005 * x + 0.0086
R = 0.9953
DL = 5.054
BEC = 105.7

Weight: <None>
Min Conc: <None>

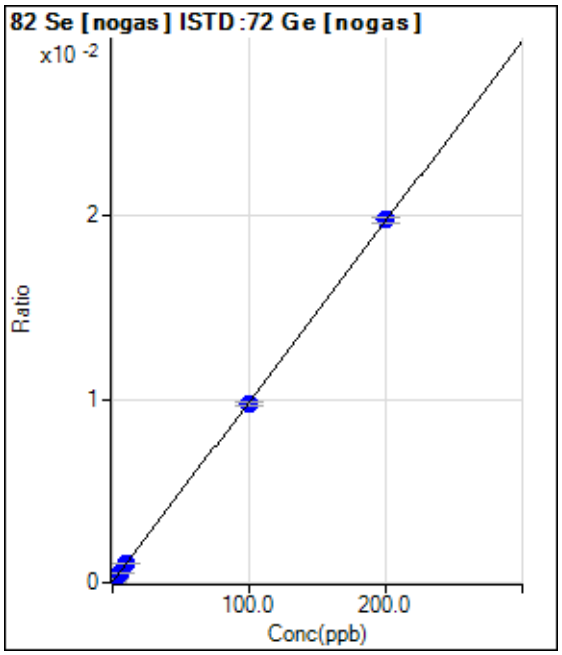


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.655	141.33	0.0002	P	4.4
2	☐	2.000	2.707	410.68	0.0005	P	7.8
3	☐	5.000	5.178	737.35	0.0008	P	5.7
4	☐	10.000	8.740	1330.72	0.0013	P	1.9
5	☐	100.000	99.337	12885.22	0.0144	P	1.0
6	☐	200.000	200.383	25591.21	0.0289	P	0.7
7	☐	1.000					

y = 1.4393E-004 * x + 6.1982E-005
R = 1.0000
DL = 0.143
BEC = 0.4306

Weight: <None>
Min Conc: <None>

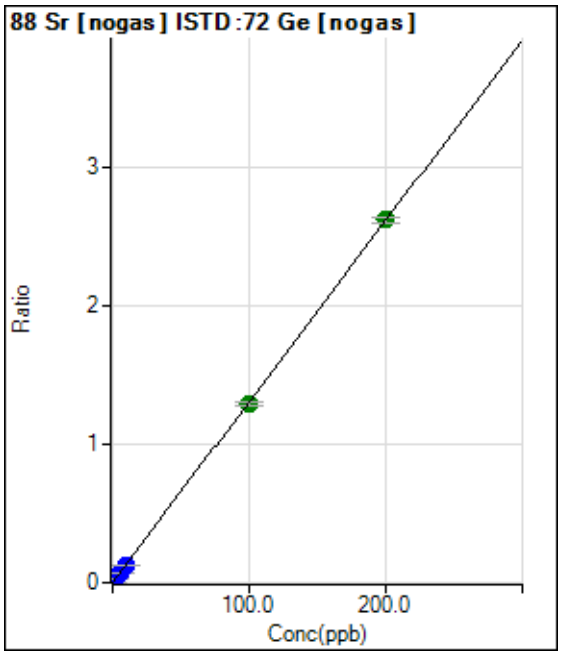
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	12.9
2	☐	2.000	1.844	890.03	0.0002	P	9.6
3	☐	5.000	4.874	2046.82	0.0005	P	6.3
4	☐	10.000	9.903	3942.16	0.0010	P	3.3
5	☐	100.000	98.394	37459.01	0.0097	P	2.6
6	☐	200.000	200.813	74455.95	0.0198	P	1.4
7	☐	1.000					

y = 9.8355E-005 * x + 5.2530E-005
R = 1.0000
DL = 0.206
BEC = 0.5341

Weight: <None>
Min Conc: <None>

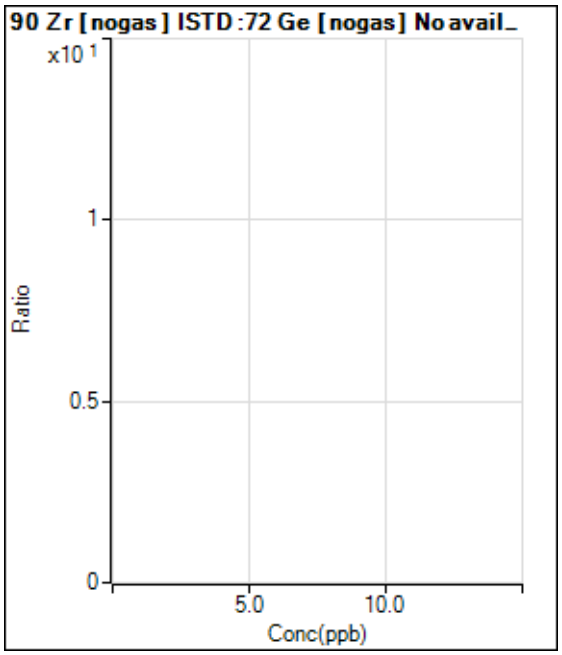


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3610.43	0.0009	P	5.9
2	☐	2.000	1.971	101481.06	0.0267	P	6.5
3	☐	5.000	4.868	248825.36	0.0647	P	2.6
4	☐	10.000	9.739	492941.04	0.1284	P	2.6
5	☐	100.000	98.877	4985846.59	1.2950	A	2.3
6	☐	200.000	200.578	9873342.77	2.6261	A	1.4
7	☐	1.000					

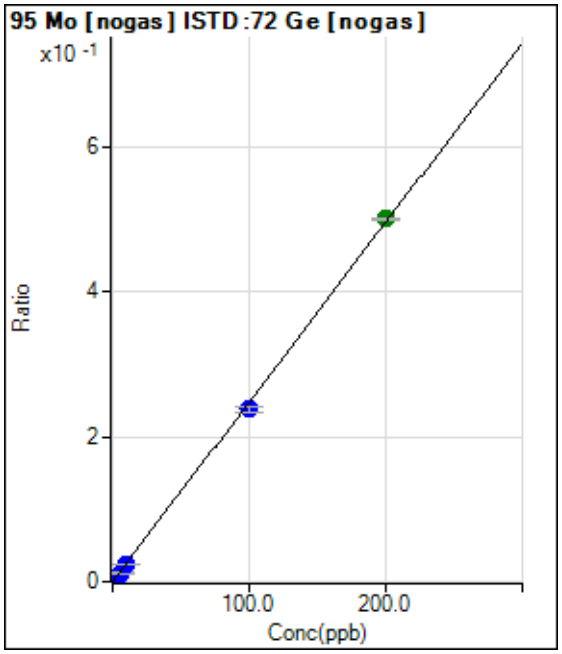
y = 0.0131 * x + 9.4879E-004
R = 1.0000
DL = 0.01292
BEC = 0.07249

Weight: <None>
Min Conc: <None>

Calibration for 243_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					

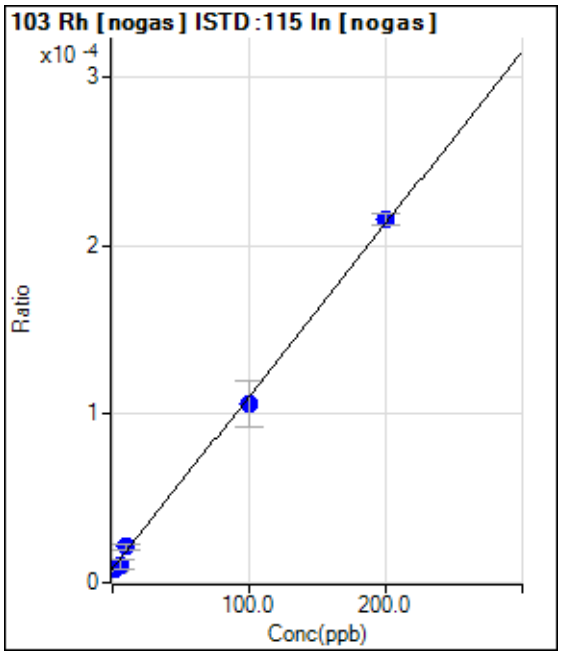


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	450.01	0.0001	P	13.6
2	☐	2.000	1.880	18136.13	0.0048	P	4.9
3	☐	5.000	4.741	45675.02	0.0119	P	2.5
4	☐	10.000	9.436	90219.99	0.0235	P	3.6
5	☐	100.000	95.868	915153.76	0.2377	P	3.3
6	☐	200.000	202.102	1883747.68	0.5010	A	0.8
7	☐	1.000					

y = 0.0025 * x + 1.1826E-004
R = 0.9997
DL = 0.01949
BEC = 0.04772

Weight: <None>
Min Conc: <None>

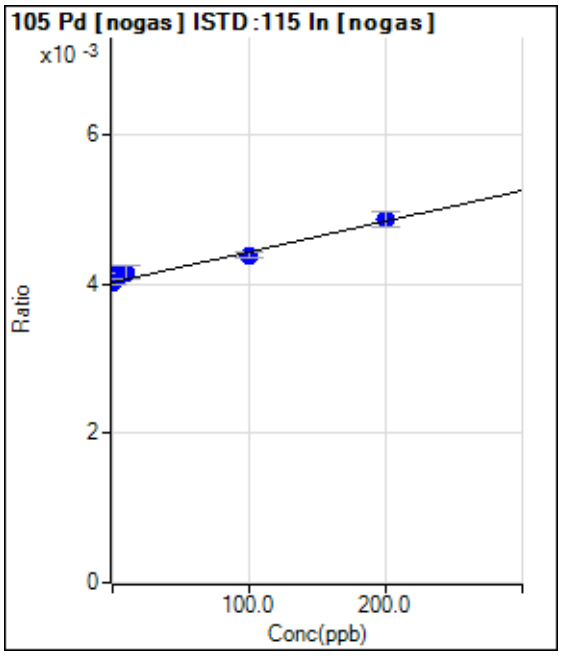
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	70.8
2	☐	2.000	-0.812	30.00	0.0000	P	3.3
3	☐	5.000	2.489	43.33	0.0000	P	52.3
4	☐	10.000	12.859	86.67	0.0000	P	16.7
5	☐	100.000	95.474	426.68	0.0001	P	25.0
6	☐	200.000	202.211	846.70	0.0002	P	3.0
7	☐	1.000					

y = 1.0242E-006 * x + 8.2893E-006
R = 0.9994
DL = 17.2
BEC = 8.094

Weight: <None>
Min Conc: <None>

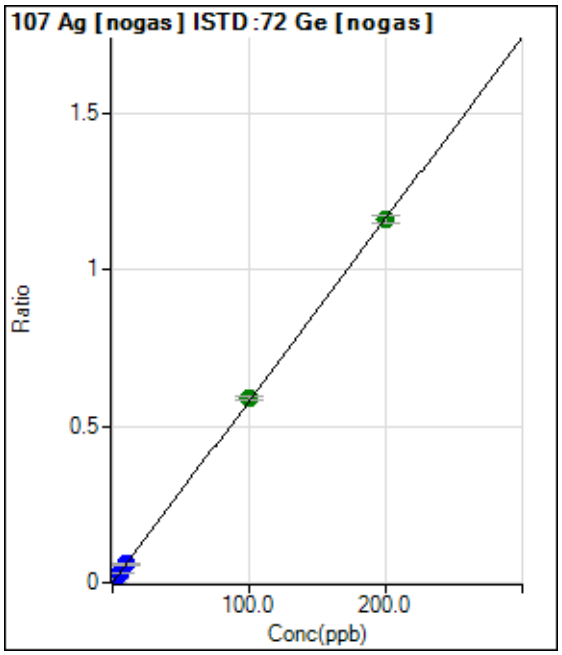


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16307.68	0.0040	P	0.9
2	☐	2.000	24.608	16618.03	0.0041	P	1.4
3	☐	5.000	22.617	16421.18	0.0041	P	2.0
4	☐	10.000	32.535	16851.56	0.0042	P	4.0
5	☐	100.000	88.405	17632.38	0.0044	P	1.7
6	☐	200.000	204.004	19127.19	0.0049	P	4.3
7	☐	1.000					

y = 4.1087E-006 * x + 0.0040
R = 0.9873
DL = 25.71
BEC = 980.3

Weight: <None>
Min Conc: <None>

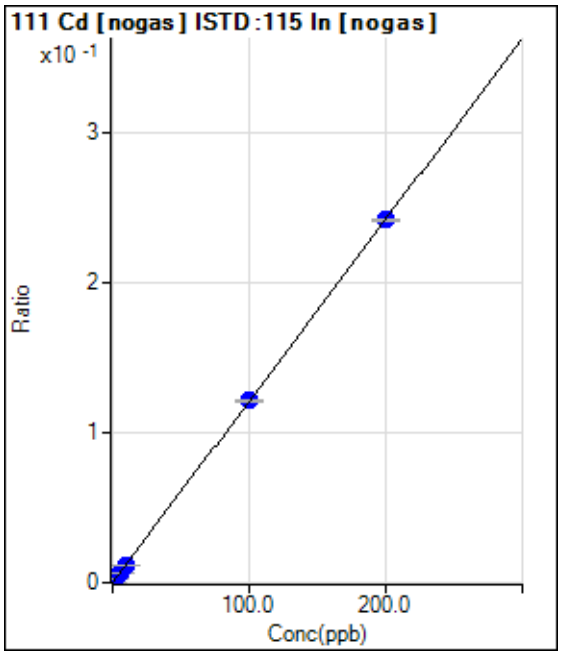
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	796.70	0.0002	P	7.3
2	☐	2.000	2.016	45261.32	0.0119	P	4.3
3	☐	5.000	4.970	111887.77	0.0291	P	3.5
4	☐	10.000	10.042	224737.81	0.0585	P	2.3
5	☐	100.000	101.149	2263068.19	0.5877	A	1.7
6	☐	200.000	199.424	4355633.68	1.1585	A	2.1
7	☐	1.000					

y = 0.0058 * x + 2.0932E-004
R = 1.0000
DL = 0.007898
BEC = 0.03604

Weight: <None>
Min Conc: <None>

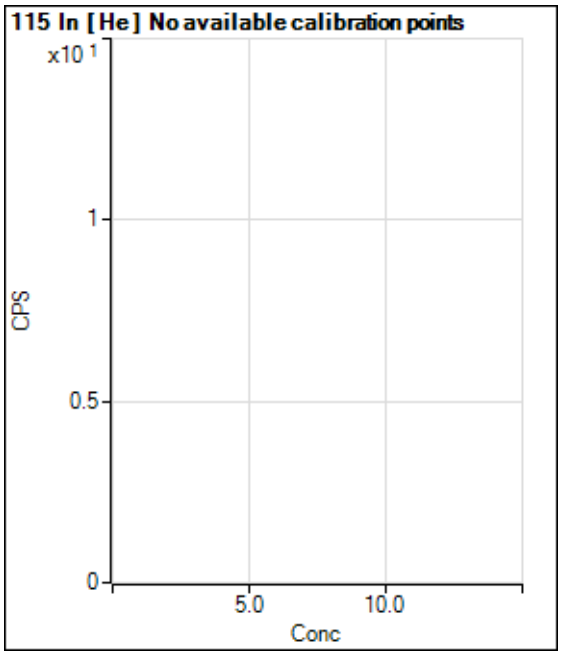


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	33.6
2	☐	2.000	2.001	9779.53	0.0024	P	5.0
3	☐	5.000	4.990	24116.64	0.0061	P	1.6
4	☐	10.000	9.737	47814.66	0.0118	P	1.5
5	☐	100.000	100.187	487340.75	0.1213	P	0.4
6	☐	200.000	199.920	951727.25	0.2421	P	0.3
7	☐	1.000					

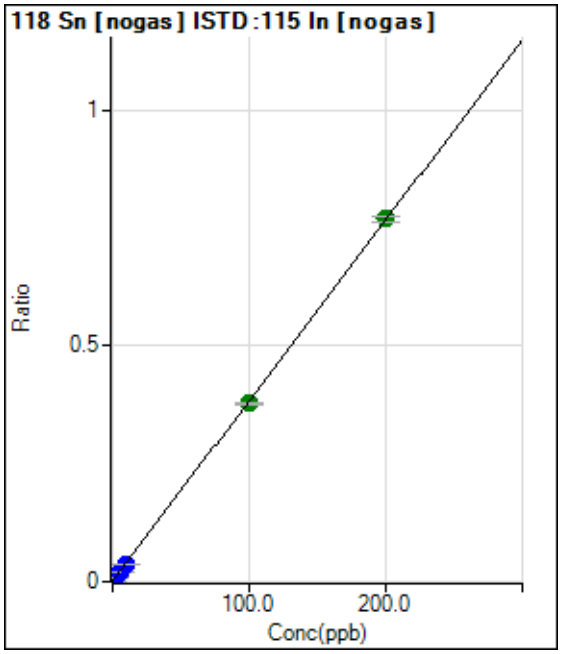
y = 0.0012 * x + 8.2063E-006
R = 1.0000
DL = 0.006828
BEC = 0.006776

Weight: <None>
Min Conc: <None>

Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1348297.84		M	4.0
2	☐			1337700.21		M	2.4
3	☐			1373873.91		M	2.8
4	☐			1592431.38		A	12.1
5	☐			1300243.00		P	1.2
6	☐			1259007.65		P	0.8
7	☐						

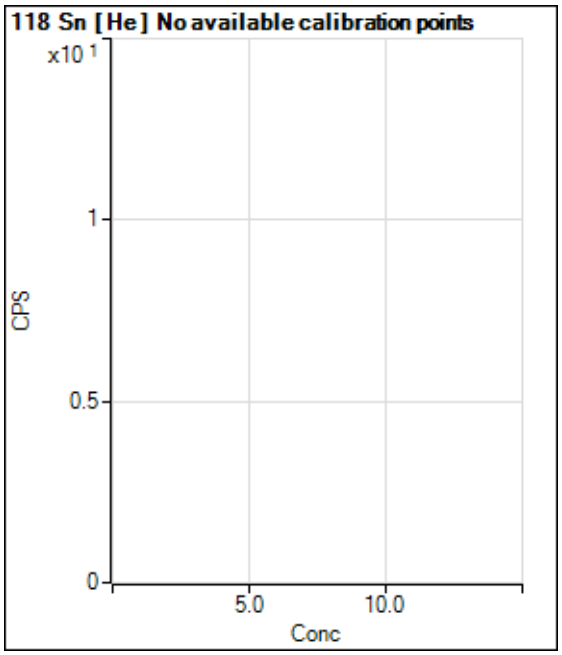


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3290.93	0.0008	P	26.1
2	☐	2.000	1.882	32236.44	0.0080	P	4.3
3	☐	5.000	4.740	75515.27	0.0190	P	3.7
4	☐	10.000	9.337	147992.01	0.0365	P	3.2
5	☐	100.000	98.444	1515881.07	0.3775	A	1.7
6	☐	200.000	200.819	3023155.06	0.7692	A	1.4
7	☐	1.000					

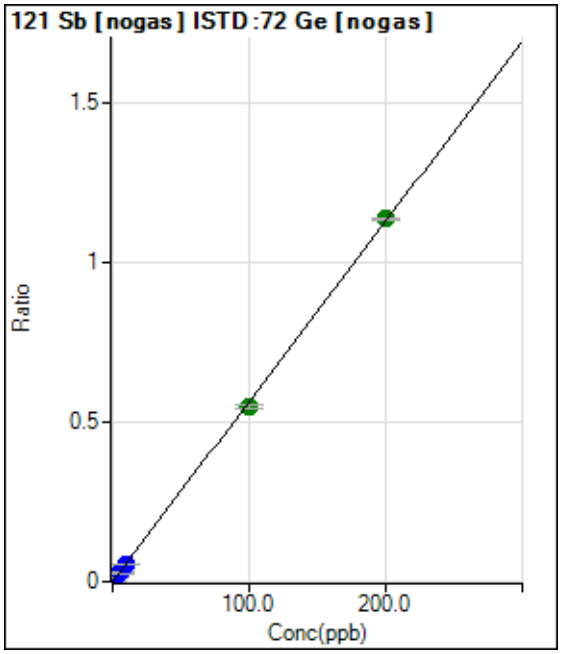
y = 0.0038 * x + 8.1485E-004
R = 1.0000
DL = 0.1669
BEC = 0.213

Weight: <None>
Min Conc: <None>

Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1246.73		P	11.6
2	☐			12401.21		P	3.9
3	☐			28510.08		P	1.8
4	☐			52258.59		P	11.7
5	☐			559209.25		P	0.5
6	☐			1114565.71		P	1.1
7	☐						

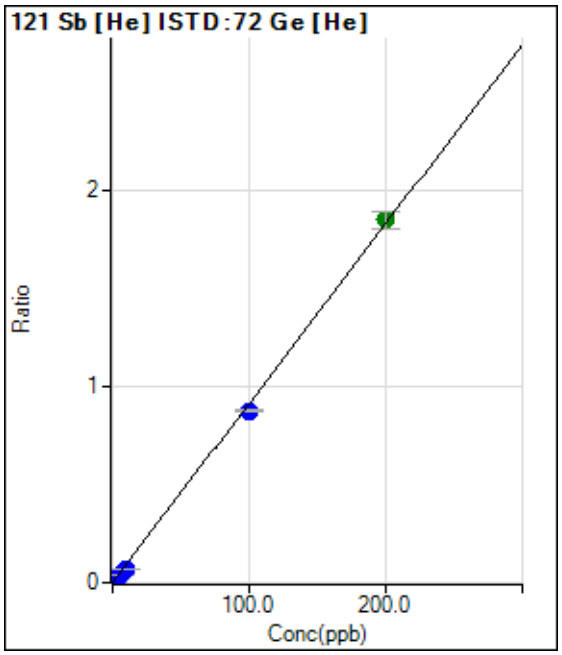


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1116.73	0.0003	P	7.9
2	☐	2.000	1.907	42027.31	0.0111	P	3.6
3	☐	5.000	4.800	105454.89	0.0274	P	2.1
4	☐	10.000	9.568	208576.36	0.0543	P	2.1
5	☐	100.000	97.223	2115004.24	0.5493	A	1.5
6	☐	200.000	201.416	4277767.44	1.1378	A	0.8
7	☐	1.000					

y = 0.0056 * x + 2.9332E-004
R = 0.9999
DL = 0.01224
BEC = 0.05194

Weight: <None>
Min Conc: <None>

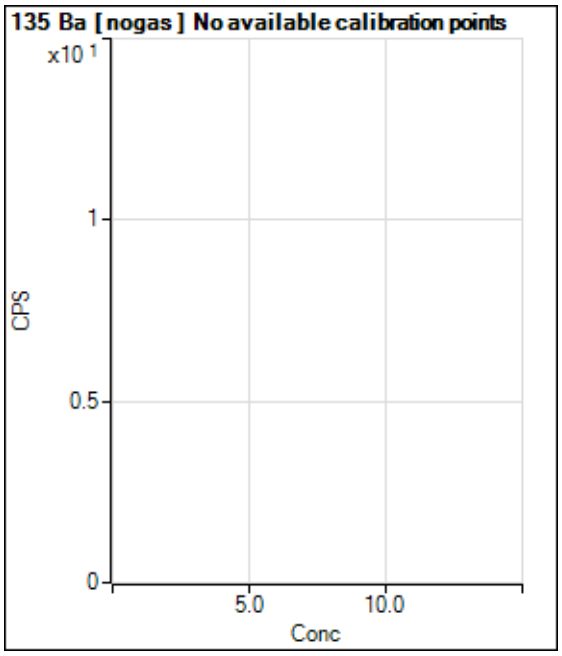
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0005	P	19.4
2	☐	2.000	1.878	16040.87	0.0176	P	1.6
3	☐	5.000	4.700	39695.12	0.0434	P	1.8
4	☐	10.000	7.748	71871.92	0.0713	P	3.2
5	☐	100.000	95.580	784284.73	0.8740	P	1.1
6	☐	200.000	202.331	1637844.14	1.8497	A	4.4
7	☐	1.000					

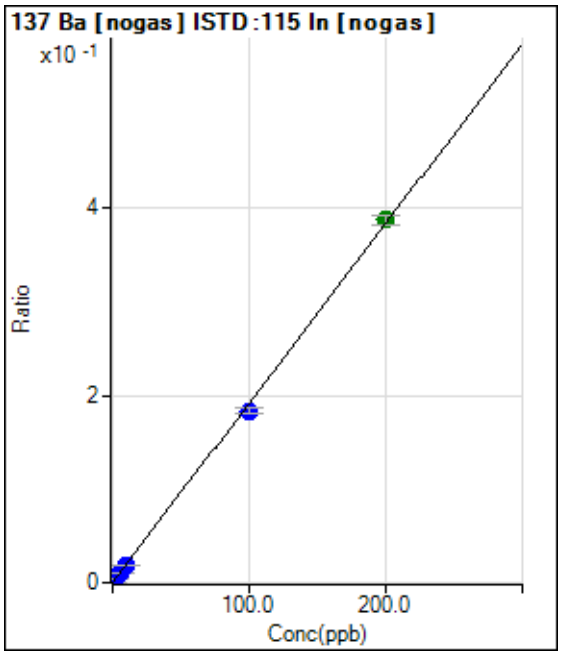
y = 0.0091 * x + 4.8213E-004
R = 0.9996
DL = 0.03077
BEC = 0.05275

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			610.02		P	5.9
2	☐			9002.49		P	4.9
3	☐			21560.35		P	2.7
4	☐			42946.94		P	1.8
5	☐			418011.97		P	2.6
6	☐			834031.66		P	0.6
7	☐						

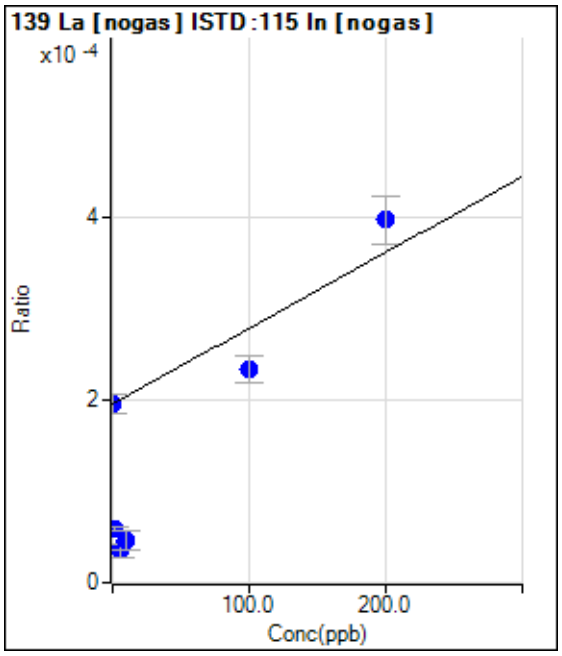
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1056.72	0.0003	P	11.7
2	☐	2.000	1.859	15347.00	0.0038	P	6.1
3	☐	5.000	4.770	37414.22	0.0094	P	1.1
4	☐	10.000	9.509	74741.16	0.0185	P	3.8
5	☐	100.000	95.665	736063.76	0.1833	P	2.6
6	☐	200.000	202.199	1521527.89	0.3872	A	2.6
7	☐	1.000					

y = 0.0019 * x + 2.6084E-004
R = 0.9997
DL = 0.04792
BEC = 0.1363

Weight: <None>
Min Conc: <None>

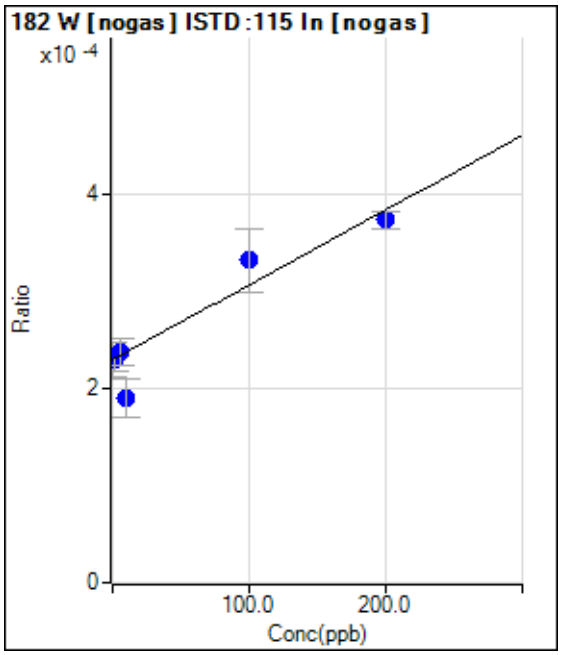


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	790.03	0.0002	P	10.7
2	☐	2.000	-164.970	236.67	0.0001	P	7.4
3	☐	5.000	-193.355	140.00	0.0000	P	40.4
4	☐	10.000	-180.351	186.67	0.0000	P	47.3
5	☐	100.000	46.758	940.04	0.0002	P	12.6
6	☐	200.000	242.767	1556.76	0.0004	P	13.0
7	☐	1.000					

y = 8.2796E-007 * x + 1.9529E-004
R = 0.9008
DL = 75.83
BEC = 235.9

Weight: <None>
Min Conc: <None>

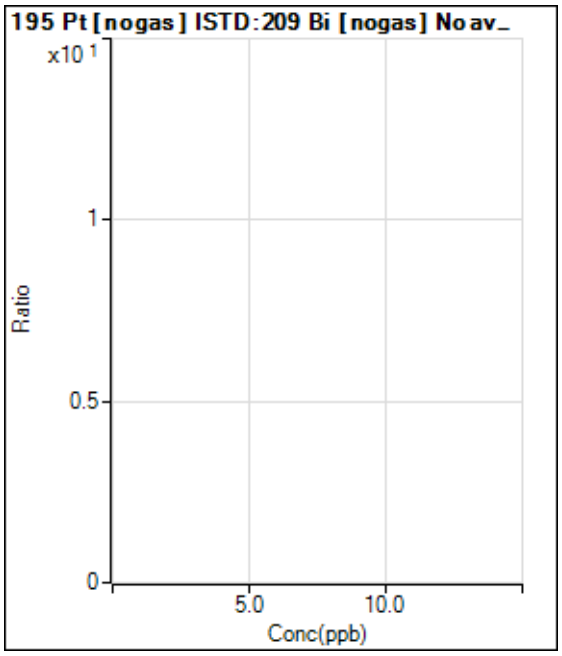
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	930.04	0.0002	P	15.2
2	☐	2.000	0.331	926.71	0.0002	P	10.4
3	☐	5.000	10.768	950.05	0.0002	P	11.6
4	☐	10.000	-51.915	770.03	0.0002	P	20.8
5	☐	100.000	132.649	1333.41	0.0003	P	20.0
6	☐	200.000	186.643	1470.09	0.0004	P	4.9
7	☐	1.000					

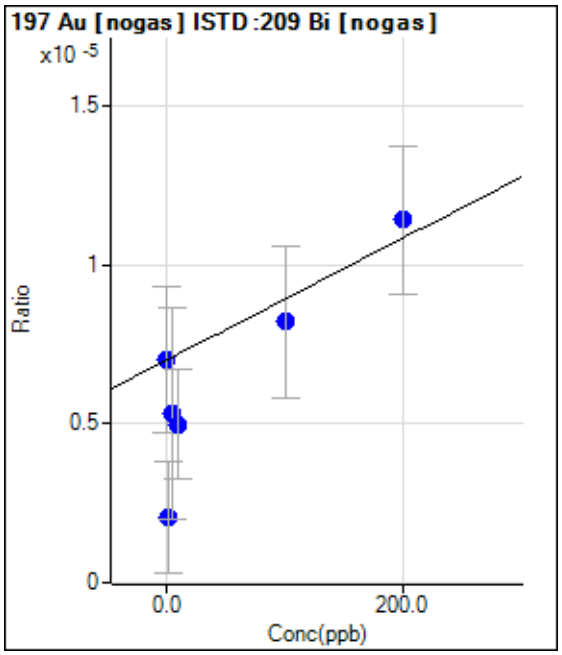
y = 7.7156E-007 * x + 2.2997E-004
R = 0.9423
DL = 136.2
BEC = 298.1

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					

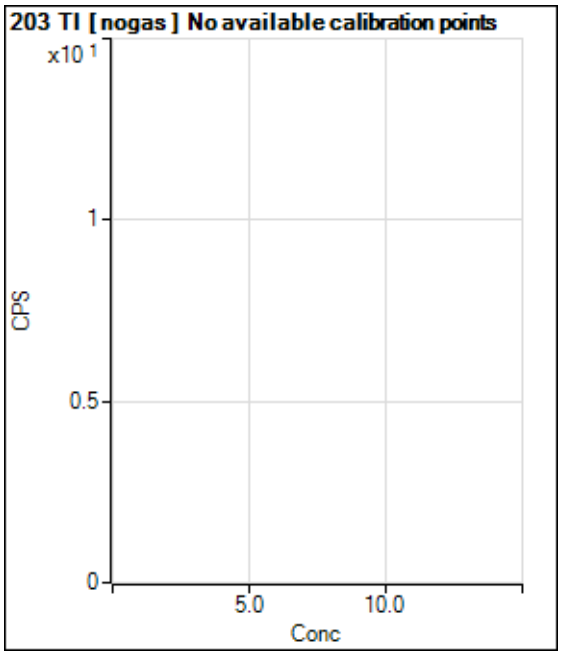
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	66.1
2	☐	2.000	-257.064	6.67	0.0000	P	173.
3	☐	5.000	-87.451	16.67	0.0000	P	125.
4	☐	10.000	-104.780	16.67	0.0000	P	69.9
5	☐	100.000	63.253	26.67	0.0000	P	58.0
6	☐	200.000	229.015	36.67	0.0000	P	40.6
7	☐	1.000					

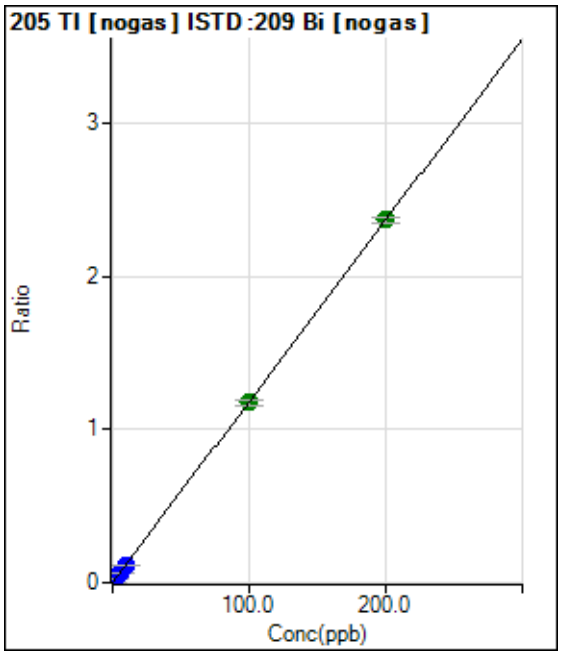
y = 1.9245E-008 * x + 6.9951E-006
R = 0.8638
DL = 720.5
BEC = 363.5

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			483.35		P	17.6
2	☐			31604.16		P	1.1
3	☐			77057.88		P	1.1
4	☐			155623.60		P	0.7
5	☐			1640231.75		A	1.9
6	☐			3240275.37		A	1.3
7	☐						

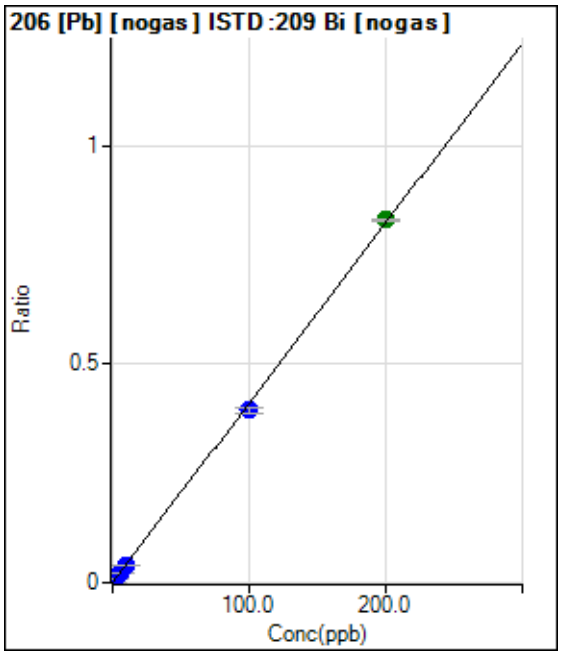
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	986.71	0.0003	P	12.5
2	☐	2.000	1.845	74171.33	0.0221	P	3.2
3	☐	5.000	4.921	189669.37	0.0585	P	5.7
4	☐	10.000	9.433	375152.10	0.1118	P	1.9
5	☐	100.000	99.518	3828106.71	1.1765	A	3.7
6	☐	200.000	200.273	7590652.60	2.3673	A	1.9
7	☐	1.000					

y = 0.0118 * x + 2.9534E-004
R = 1.0000
DL = 0.009342
BEC = 0.02499

Weight: <None>
Min Conc: <None>

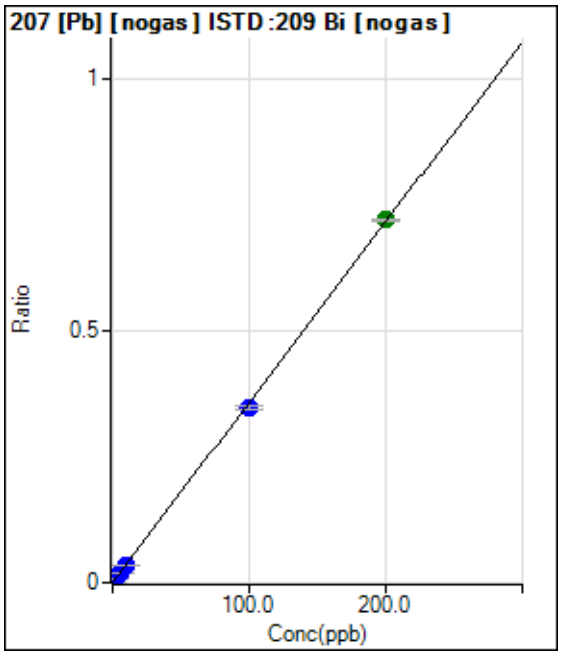


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.34	0.0000	P	8.5
2	☐	2.000	1.911	26531.71	0.0079	P	1.4
3	☐	5.000	4.970	66431.41	0.0205	P	5.5
4	☐	10.000	9.462	130656.31	0.0389	P	0.6
5	☐	100.000	96.252	1287106.26	0.3956	P	3.4
6	☐	200.000	201.903	2659974.65	0.8297	A	0.4
7	☐	1.000					

y = 0.0041 * x + 4.8857E-005
R = 0.9998
DL = 0.00302
BEC = 0.01189

Weight: <None>
Min Conc: <None>

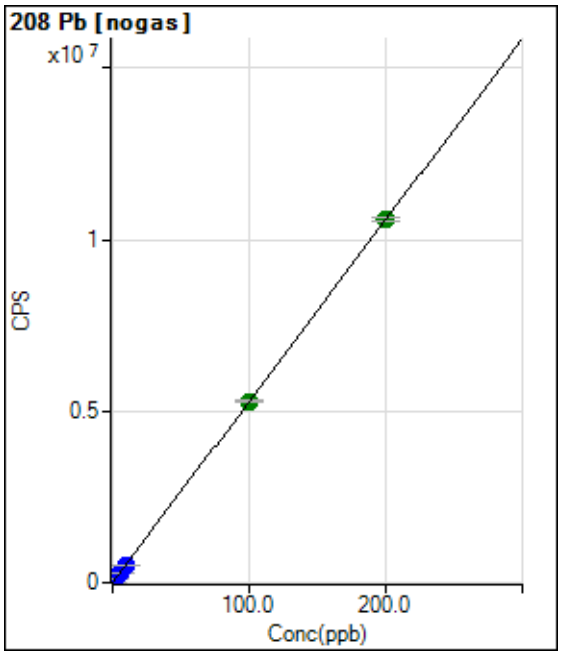
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0001	P	40.1
2	☐	2.000	1.863	22595.86	0.0067	P	3.6
3	☐	5.000	4.914	57283.81	0.0176	P	4.3
4	☐	10.000	9.288	111720.99	0.0333	P	1.3
5	☐	100.000	97.425	1134336.18	0.3486	P	2.4
6	☐	200.000	201.327	2309010.33	0.7202	A	0.5
7	☐	1.000					

y = 0.0036 * x + 6.7678E-005
R = 0.9999
DL = 0.02275
BEC = 0.01892

Weight: <None>
Min Conc: <None>

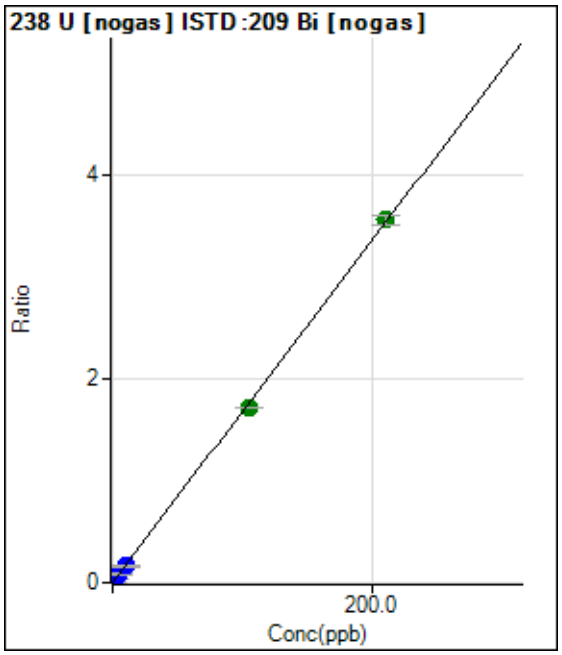


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	773.35		P	8.6
2	☐	2.000	1.999	106415.24		P	2.6
3	☐	5.000	4.988	264379.77		P	1.7
4	☐	10.000	9.845	521042.67		P	0.6
5	☐	100.000	99.858	5278149.06		A	1.1
6	☐	200.000	200.079	10574665.73		A	1.2
7	☐	1.000					

y = 52848.6117 * x + 773.3533
R = 1.0000
DL = 0.00378
BEC = 0.01463

Weight: <None>
Min Conc: <None>

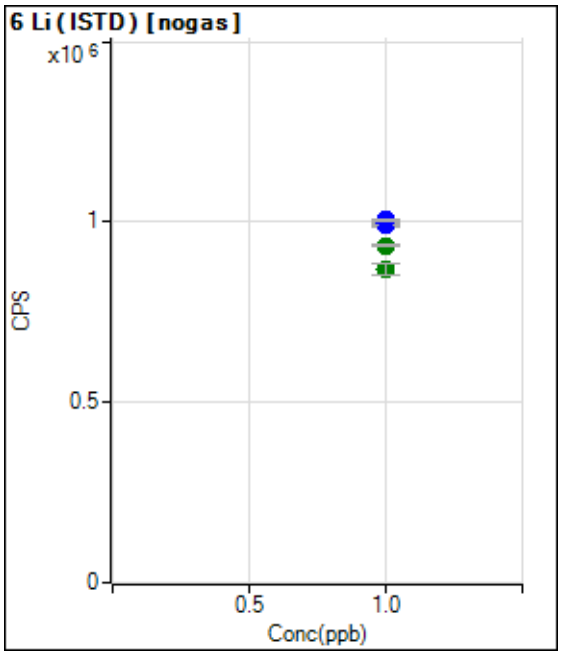
Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	256.68	0.0001	P	3.1
2	☐	2.000	1.918	108554.34	0.0323	P	2.9
3	☐	5.000	4.981	272187.36	0.0839	P	5.1
4	☐	10.000	9.594	541803.08	0.1615	P	2.9
5	☐	105.000	102.023	5586318.88	1.7164	A	1.0
6	☐	210.000	211.509	11404436.91	3.5583	A	2.9
7	☐	1.000					

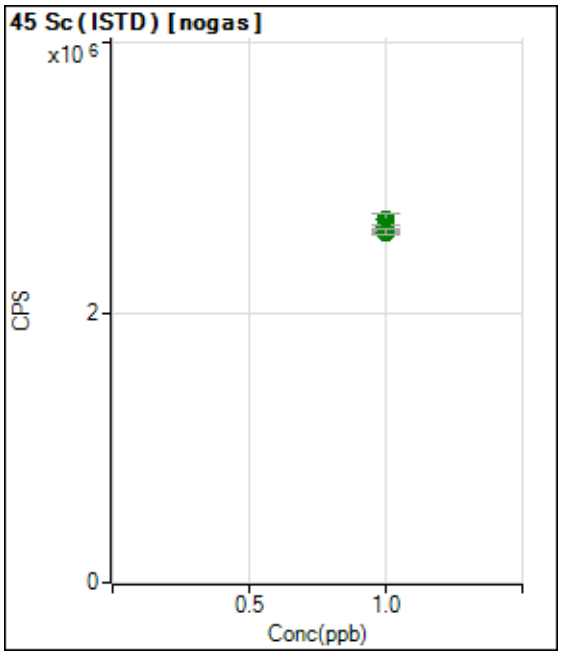
y = 0.0168 * x + 7.6827E-005
R = 0.9999
DL = 0.0004217
BEC = 0.004567

Weight: <None>
Min Conc: <None>

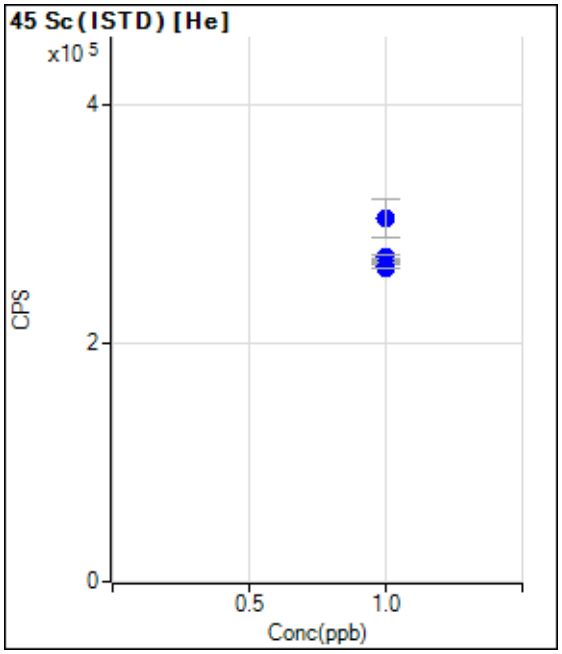


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		991885.95		P	0.7
2	☐	1.000		999235.51		P	0.4
3	☐	1.000		997078.19		P	0.8
4	☐	1.000		1005708.72		P	0.5
5	☐	1.000		934153.95		A	0.6
6	☐	1.000		869478.81		A	4.1
7	☐	1.000					

Calibration for 243_ICV.d

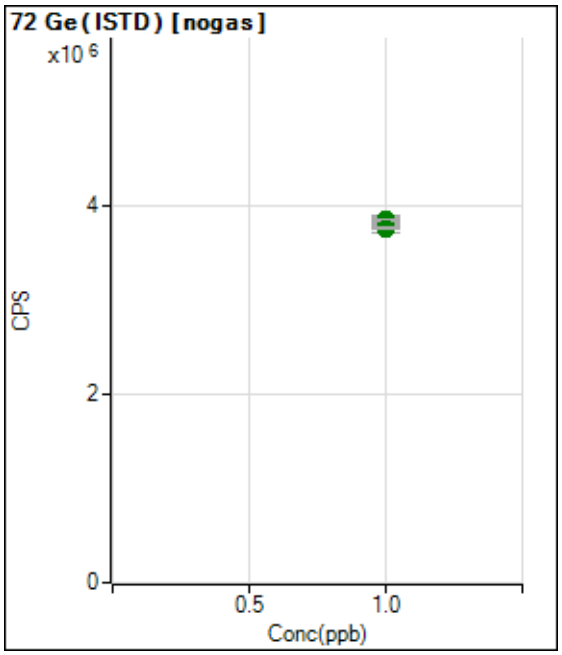


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2618715.80		A	0.7
2	☐	1.000		2690089.96		A	3.2
3	☐	1.000		2600719.13		A	2.1
4	☐	1.000		2631559.29		A	1.7
5	☐	1.000		2621366.84		A	2.5
6	☐	1.000		2600238.04		A	1.7
7	☐	1.000					

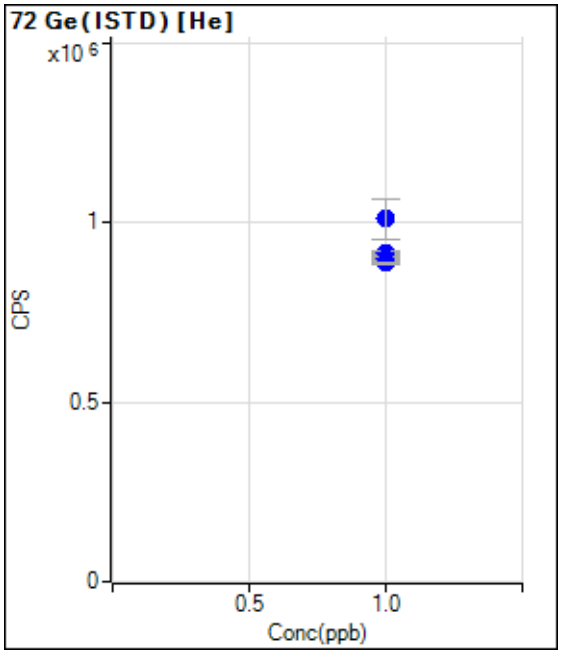


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		264823.21		P	0.7
2	☐	1.000		270369.07		P	0.8
3	☐	1.000		273414.74		P	1.0
4	☐	1.000		304670.98		P	10.7
5	☐	1.000		266909.38		P	0.4
6	☐	1.000		263342.82		P	0.5
7	☐	1.000					

Calibration for 243_ICV.d

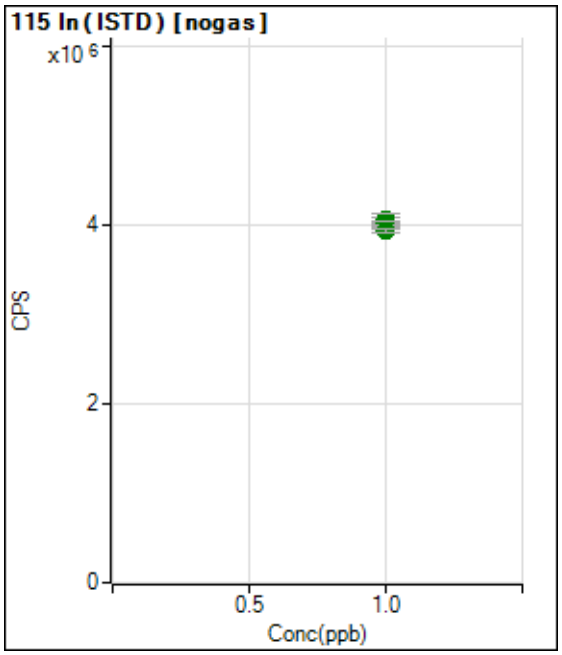


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3806005.46		A	0.9
2	☐	1.000		3802147.96		A	4.5
3	☐	1.000		3849594.42		A	2.2
4	☐	1.000		3840106.82		A	1.9
5	☐	1.000		3850365.78		A	0.8
6	☐	1.000		3759964.32		A	0.7
7	☐	1.000					

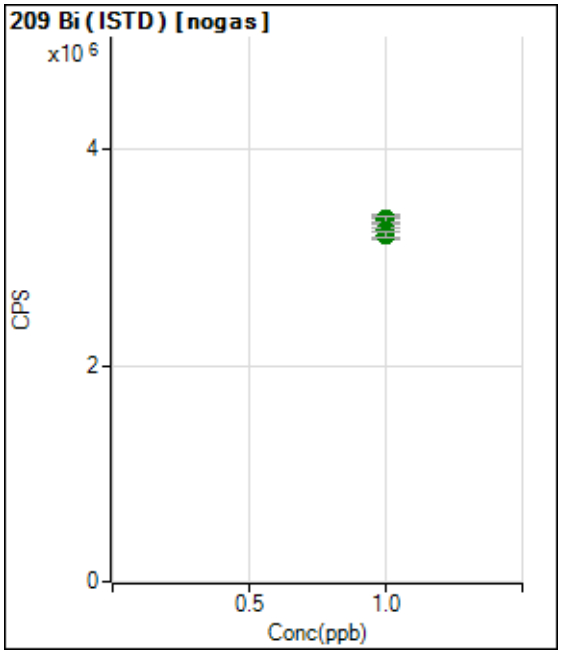


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		904570.38		P	1.1
2	☐	1.000		909036.44		P	0.9
3	☐	1.000		913862.36		P	1.4
4	☐	1.000		1009012.07		P	11.0
5	☐	1.000		897366.11		P	1.0
6	☐	1.000		885434.62		P	0.2
7	☐	1.000					

Calibration for 243_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4048857.73		A	1.5
2	☐	1.000		4025447.06		A	3.3
3	☐	1.000		3985433.66		A	0.9
4	☐	1.000		4052809.72		A	3.1
5	☐	1.000		4016248.64		A	1.5
6	☐	1.000		3930501.39		A	0.8
7	☐	1.000					



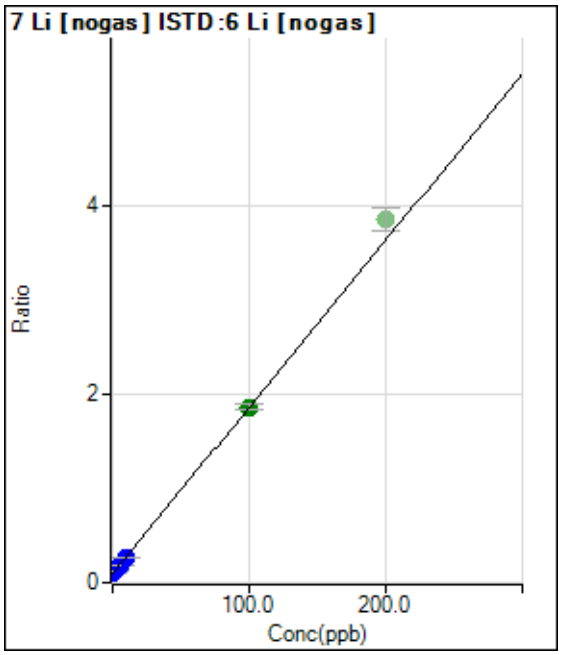
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3341531.20		A	0.9
2	☐	1.000		3358675.89		A	2.7
3	☐	1.000		3251084.33		A	5.3
4	☐	1.000		3356414.74		A	1.7
5	☐	1.000		3254900.78		A	1.4
6	☐	1.000		3206042.25		A	1.7
7	☐	1.000					

Calibration for 293_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\012219A.b\
Analysis File: 012219A.batch.bin
DA Date-Time: 2019-01-22 23:05:06
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	286CALB.d	CAL BLK	2019-01-22 22:49:40
2	287CALS.d	2/10/200	2019-01-22 22:51:37
3	288CALS.d	5/25/500	2019-01-22 22:53:35
4	289CALS.d	10/50/1000	2019-01-22 22:55:35
5	290CALS.d	100/500/10K	2019-01-22 22:57:34
6	291CALS.d	200/1000/20K	2019-01-22 22:59:35
7			

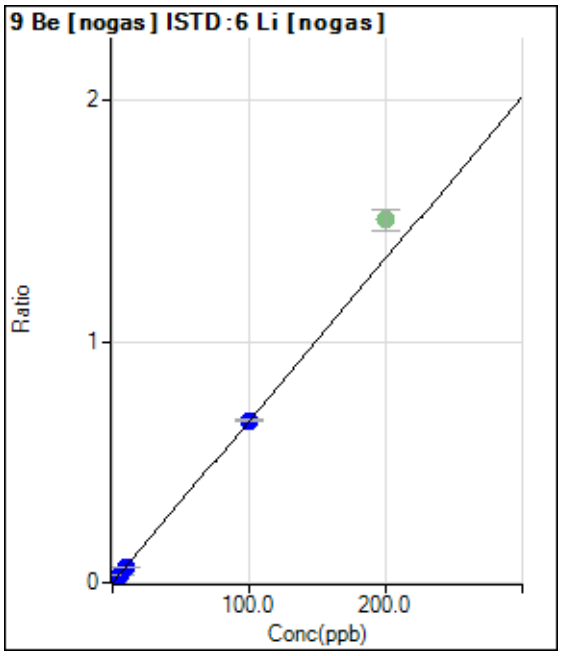
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	92834.88	0.0949	P	1.0
2	☐	2.000	1.780	124809.24	0.1264	P	0.6
3	☐	5.000	4.551	173576.82	0.1755	P	0.8
4	☐	10.000	9.147	248094.44	0.2569	P	0.7
5	☐	100.000	100.112	1635827.95	1.8677	A	2.9
6	☑	200.000		3039525.68	3.8558	A	6.5
7	☐	1.000					

y = 0.0177 * x + 0.0949
R = 1.0000
DL = 0.1607
BEC = 5.359

Weight: <None>
Min Conc: <None>

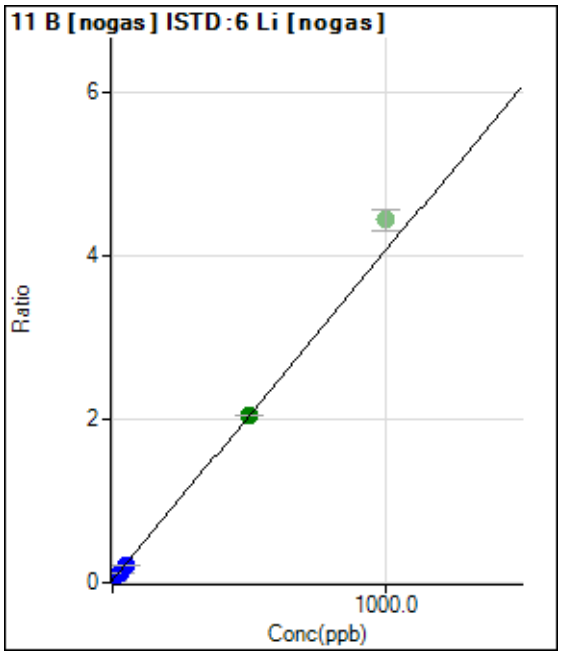


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	156.67	0.0002	P	56.6
2	☐	2.000	1.784	11987.22	0.0121	P	1.8
3	☐	5.000	4.636	30955.18	0.0313	P	3.9
4	☐	10.000	9.123	59331.09	0.0614	P	1.9
5	☐	100.000	100.110	589013.34	0.6725	P	0.6
6	☑	200.000		1185822.38	1.5042	A	6.1
7	☐	1.000					

y = 0.0067 * x + 1.5982E-004
R = 1.0000
DL = 0.04041
BEC = 0.0238

Weight: <None>
Min Conc: <None>

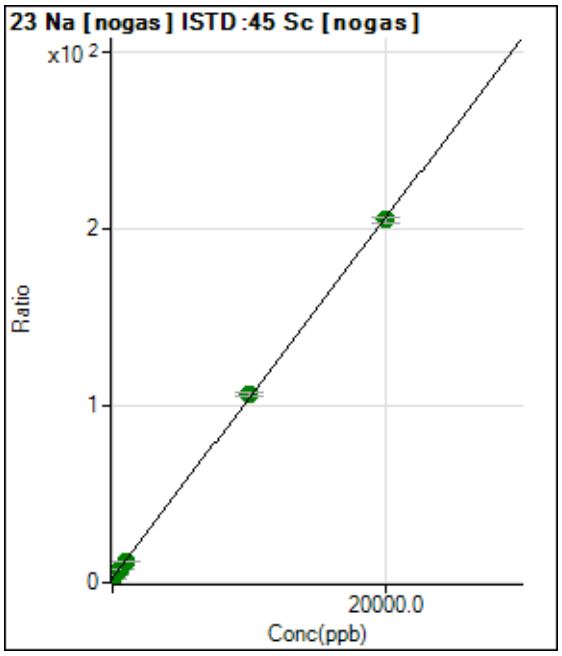
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30027.02	0.0307	P	2.3
2	☐	10.000	8.066	62377.76	0.0632	P	1.5
3	☐	25.000	21.786	117153.93	0.1184	P	1.6
4	☐	50.000	43.301	198072.97	0.2051	P	0.7
5	☐	500.000	500.869	1793593.77	2.0479	A	0.6
6	☑	1000.000		3497764.84	4.4360	A	5.6
7	☐	5.000					

y = 0.0040 * x + 0.0307
R = 0.9999
DL = 0.5176
BEC = 7.622

Weight: <None>
Min Conc: <None>

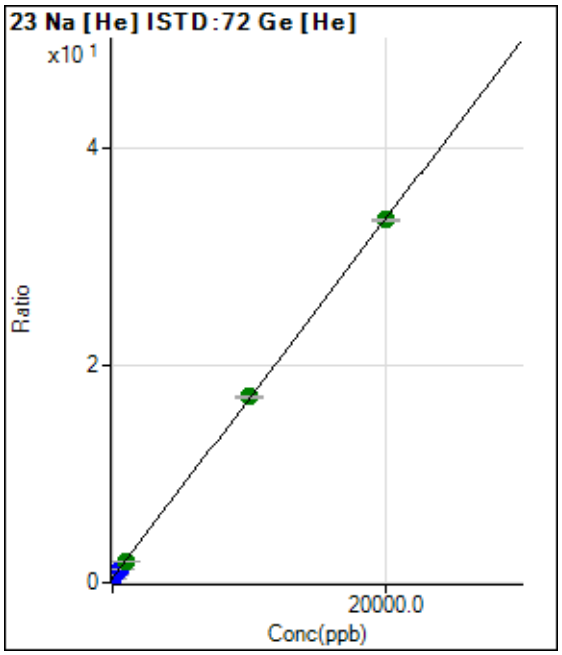


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6284786.34	2.4426	A	0.8
2	☐	200.000	179.687	11100266.13	4.2745	A	0.7
3	☐	500.000	477.220	18799625.42	7.3078	A	3.1
4	☐	1000.000	957.020	31078146.53	12.1993	A	1.0
5	☐	10000.00	10229.597	260008814.1	106.732	A	1.6
6	☐	20000.00	19888.123	512477594.7	205.199	A	1.8
7	☐	100.000					

y = 0.0102 * x + 2.4426
R = 0.9999
DL = 5.485
BEC = 239.6

Weight: <None>
Min Conc: <None>

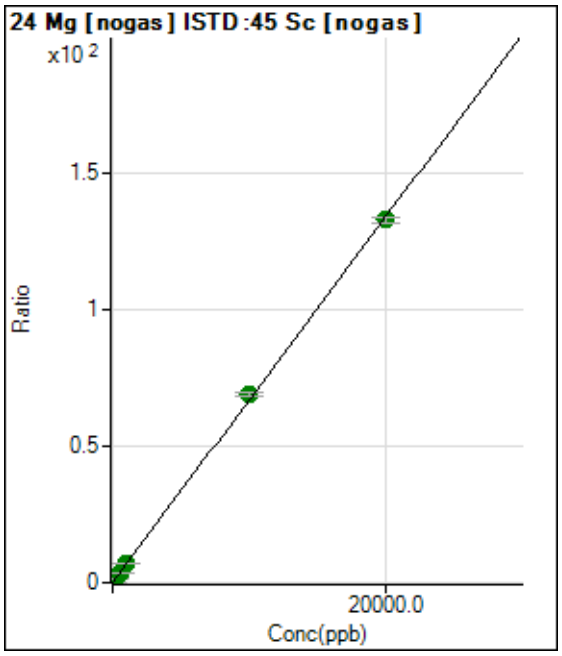
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	378975.36	0.4164	P	0.4
2	☐	200.000	179.029	668581.24	0.7125	P	0.5
3	☐	500.000	465.926	1124366.16	1.1871	P	0.3
4	☐	1000.000	932.703	1857741.27	1.9593	A	1.1
5	☐	10000.00	10089.168	15209258.52	17.1062	A	1.3
6	☐	20000.00	19959.842	29443799.56	33.4345	A	0.3
7	☐	100.000					

y = 0.0017 * x + 0.4164
R = 1.0000
DL = 2.774
BEC = 251.7

Weight: <None>
Min Conc: <None>

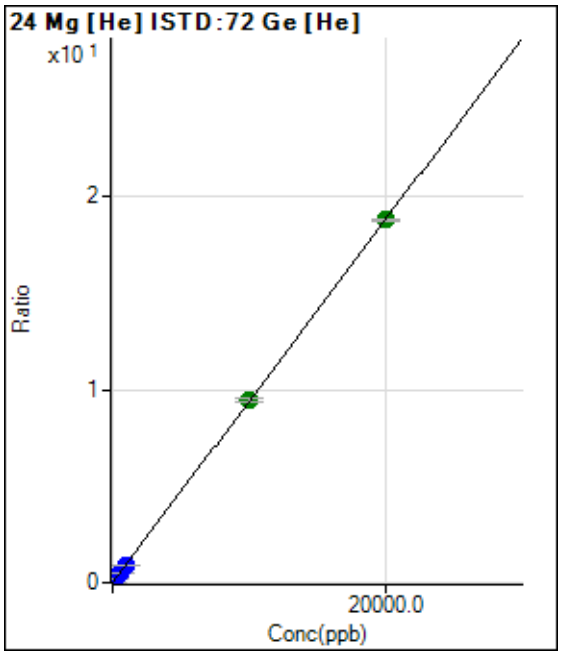


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	104878.43	0.0408	P	13.4
2	☐	200.000	197.673	3531989.53	1.3603	A	3.1
3	☐	500.000	514.702	8944360.36	3.4766	A	2.4
4	☐	1000.000	1006.353	17217886.32	6.7586	A	0.8
5	☐	10000.00	10295.037	167508524.5	68.7642	A	1.9
6	☐	20000.00	19851.820	331071224.0	132.559	A	1.4
7	☐	100.000					

y = 0.0067 * x + 0.0408
R = 0.9998
DL = 2.45
BEC = 6.105

Weight: <None>
Min Conc: <None>

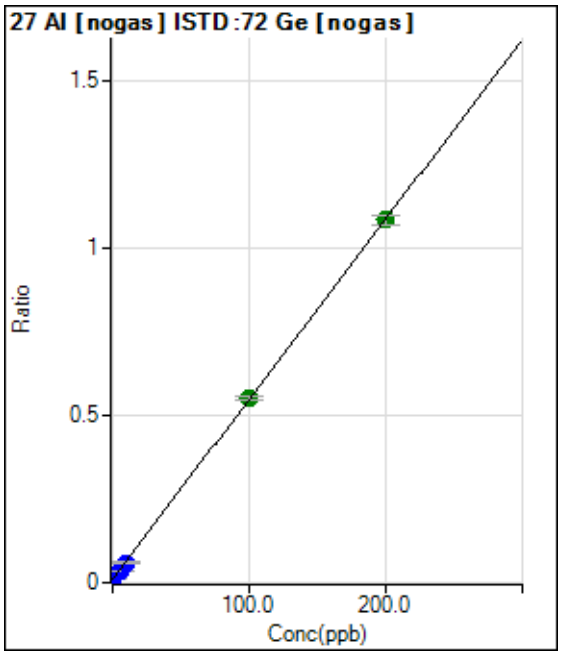
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5237.49	0.0058	P	8.0
2	☐	200.000	196.655	179041.78	0.1908	P	0.8
3	☐	500.000	494.873	446521.94	0.4714	P	1.0
4	☐	1000.000	958.520	860698.16	0.9078	P	0.3
5	☐	10000.00	10020.349	8388908.63	9.4353	A	2.3
6	☐	20000.00	19992.061	16572776.83	18.8190	A	0.2
7	☐	100.000					

y = 9.4104E-004 * x + 0.0058
R = 1.0000
DL = 1.472
BEC = 6.116

Weight: <None>
Min Conc: <None>

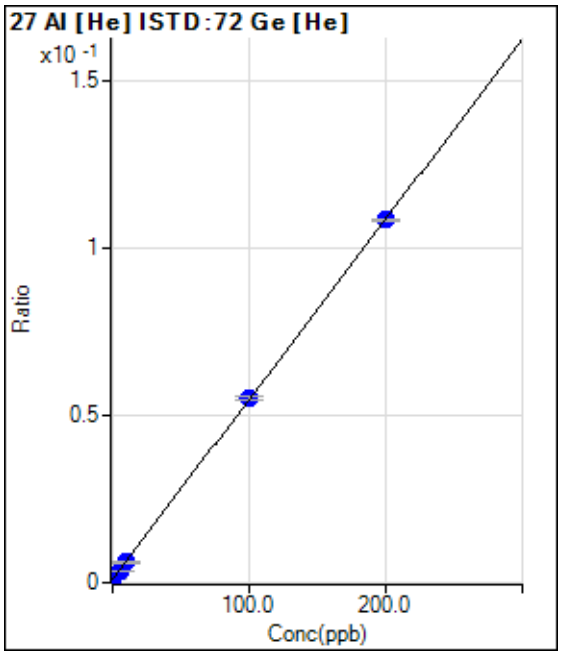


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40403.17	0.0105	P	0.9
2	☐	2.000	1.858	82364.27	0.0205	P	1.2
3	☐	5.000	4.595	142297.56	0.0352	P	1.3
4	☐	10.000	9.230	242907.37	0.0601	P	1.4
5	☐	100.000	100.636	2128054.19	0.5523	A	1.3
6	☐	200.000	199.732	4087702.65	1.0858	A	2.8
7	☐	1.000					

y = 0.0054 * x + 0.0105
R = 1.0000
DL = 0.05259
BEC = 1.941

Weight: <None>
Min Conc: <None>

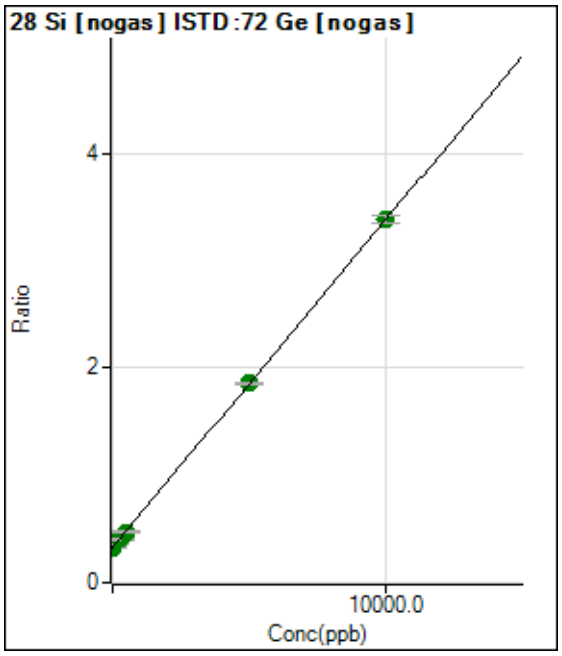
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.214	996.71	0.0011	P	12.3
2	☐	2.000	2.240	2050.15	0.0022	P	8.1
3	☐	5.000	4.815	3380.36	0.0036	P	5.0
4	☐	10.000	9.414	5727.64	0.0060	P	8.1
5	☐	100.000	100.570	48953.07	0.0551	P	1.5
6	☐	200.000	199.746	95451.33	0.1084	P	0.6
7	☐	1.000					

y = 5.3772E-004 * x + 9.7963E-004
R = 1.0000
DL = 0.7526
BEC = 1.822

Weight: <None>
Min Conc: <None>

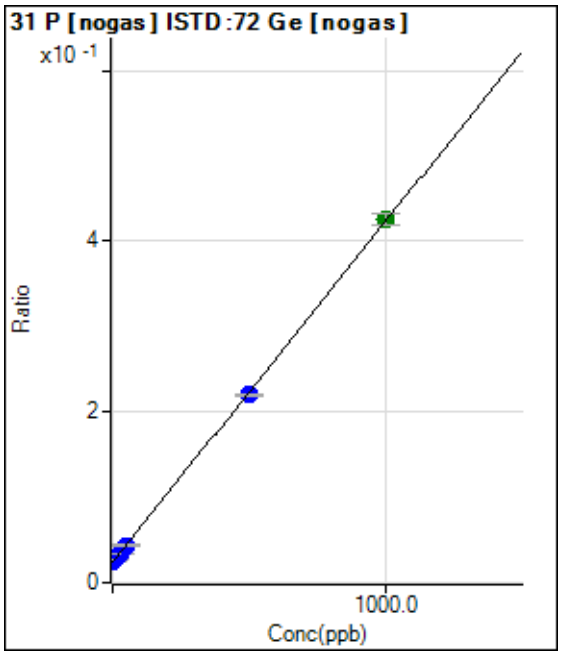


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1271778.91	0.3289	A	2.4
2	☐	100.000	125.804	1478357.89	0.3673	A	4.6
3	☐	250.000	249.361	1637214.92	0.4050	A	6.9
4	☐	500.000	471.955	1910023.30	0.4729	A	1.6
5	☐	5000.000	5004.018	7147692.19	1.8550	A	1.2
6	☐	10000.00	9999.151	12718877.73	3.3784	A	2.2
7	☐	5.000					

y = 3.0497E-004 * x + 0.3289
R = 1.0000
DL = 76.21
BEC = 1079

Weight: <None>
Min Conc: <None>

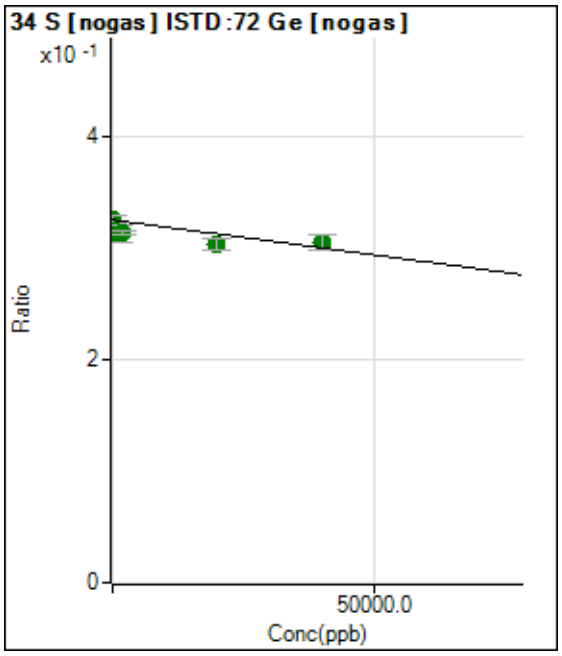
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	92595.02	0.0240	P	1.7
2	☐	10.000	8.275	109735.84	0.0273	P	2.3
3	☐	25.000	23.284	134436.24	0.0332	P	1.5
4	☐	50.000	49.250	176123.72	0.0436	P	1.6
5	☐	500.000	491.120	847615.48	0.2200	P	0.4
6	☐	1000.000	1004.538	1599460.08	0.4249	A	3.3
7	☐	5.000					

y = 3.9912E-004 * x + 0.0240
R = 0.9999
DL = 3.127
BEC = 60.02

Weight: <None>
Min Conc: <None>

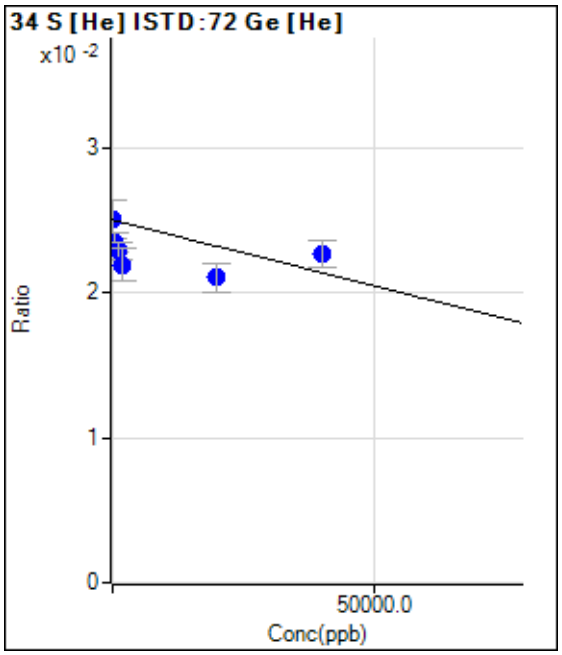


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1258766.01	0.3255	A	2.1
2	☐	400.000	16130.307	1269988.83	0.3154	A	1.5
3	☐	1000.000	19923.076	1265645.37	0.3131	A	4.7
4	☐	2000.000	17941.831	1269297.30	0.3143	A	1.5
5	☐	20000.00	35144.722	1169499.24	0.3035	A	3.2
6	☐	40000.00	31000.168	1152106.93	0.3061	A	4.6
7	☐	100.000					

y = -6.2715E-007 * x + 0.3255
R = -0.7257
DL = -3.274E+04
BEC = -5.191E+05

Weight: <None>
Min Conc: <None>

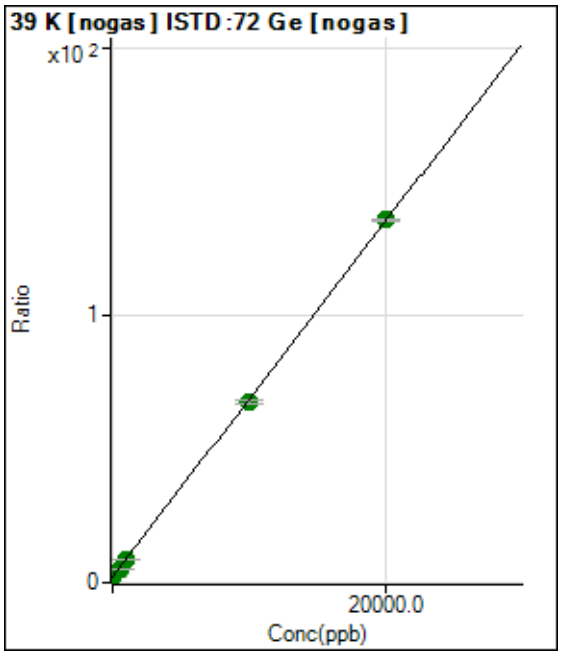
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22784.67	0.0250	P	10.6
2	☐	400.000	16886.838	22050.82	0.0235	P	5.3
3	☐	1000.000	23550.797	21682.05	0.0229	P	5.5
4	☐	2000.000	33808.532	20814.90	0.0220	P	10.1
5	☐	20000.00	43713.969	18711.82	0.0211	P	9.3
6	☐	40000.00	25823.950	19980.70	0.0227	P	8.1
7	☐	100.000					

y = -9.0916E-008 * x + 0.0250
R = -0.3982
DL = -8.779E+04
BEC = -2.753E+05

Weight: <None>
Min Conc: <None>

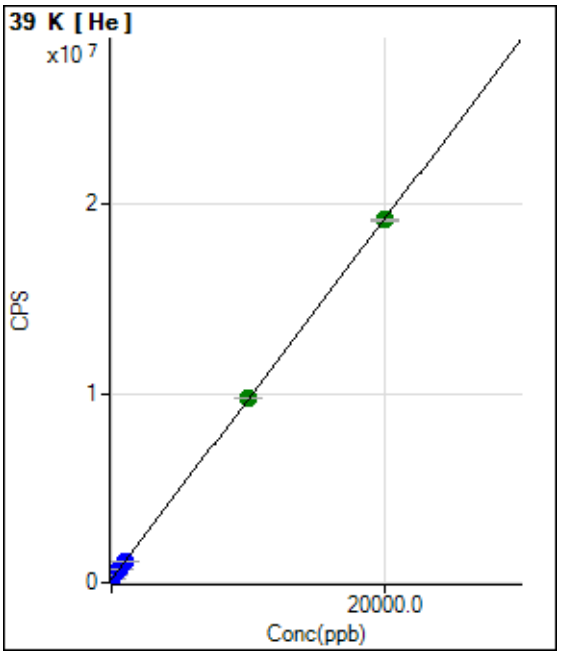


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8453948.63	2.1869	A	1.4
2	☐	200.000	183.226	13706237.28	3.4040	A	1.1
3	☐	500.000	475.564	21615797.36	5.3459	A	1.5
4	☐	1000.000	930.952	33806928.88	8.3709	A	0.9
5	☐	10000.00	9847.652	260477505.8	67.6012	A	1.3
6	☐	20000.00	20080.405	510571911.4	135.573	A	0.7
7	☐	100.000					

y = 0.0066 * x + 2.1869
R = 1.0000
DL = 14.14
BEC = 329.2

Weight: <None>
Min Conc: <None>

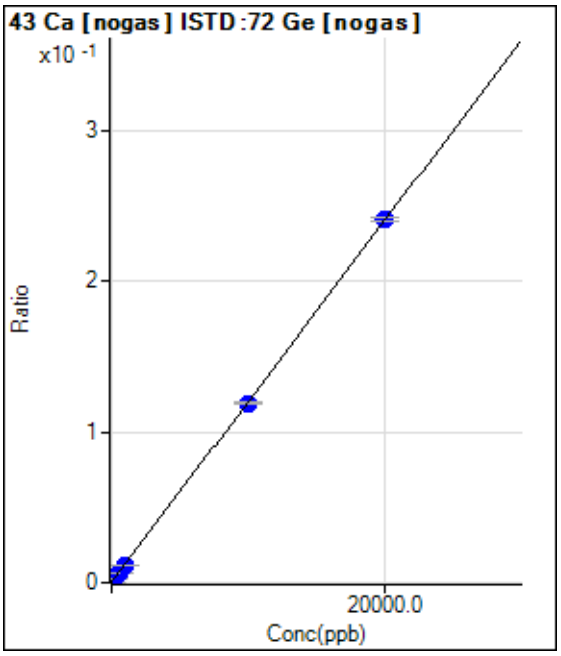
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	176431.79		P	1.1
2	☐	200.000	209.833	376415.23		P	0.8
3	☐	500.000	529.660	681229.99		P	0.6
4	☐	1000.000	1023.602	1151985.58		P	0.3
5	☐	10000.00	10074.614	9778143.60		A	0.8
6	☐	20000.00	19960.673	19200151.80		A	0.7
7	☐	100.000					

y = 953.0600 * x + 176431.7867
R = 1.0000
DL = 5.839
BEC = 185.1

Weight: <None>
Min Conc: <None>

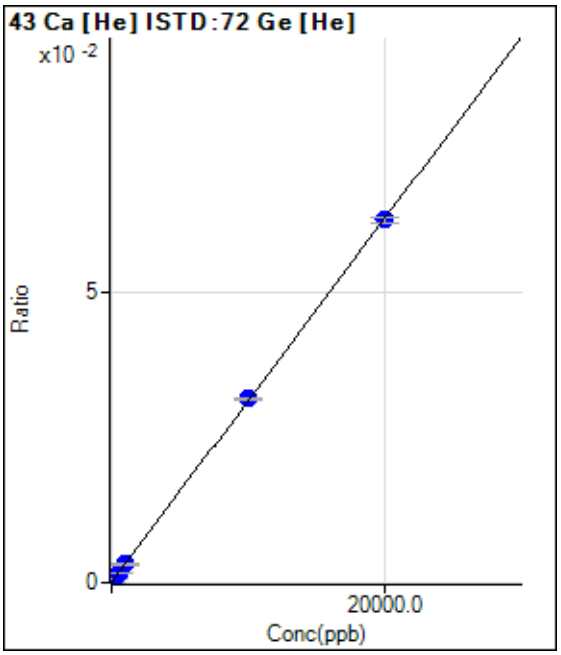


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1150.06	0.0003	P	22.1
2	☐	200.000	196.519	10699.86	0.0027	P	2.2
3	☐	500.000	471.431	24092.31	0.0060	P	2.5
4	☐	1000.000	932.118	46404.54	0.0115	P	1.6
5	☐	10000.00	9903.153	459302.18	0.1192	P	0.9
6	☐	20000.00	20052.567	907639.13	0.2411	P	1.2
7	☐	100.000					

y = 1.2006E-005 * x + 2.9818E-004
R = 1.0000
DL = 16.47
BEC = 24.83

Weight: <None>
Min Conc: <None>

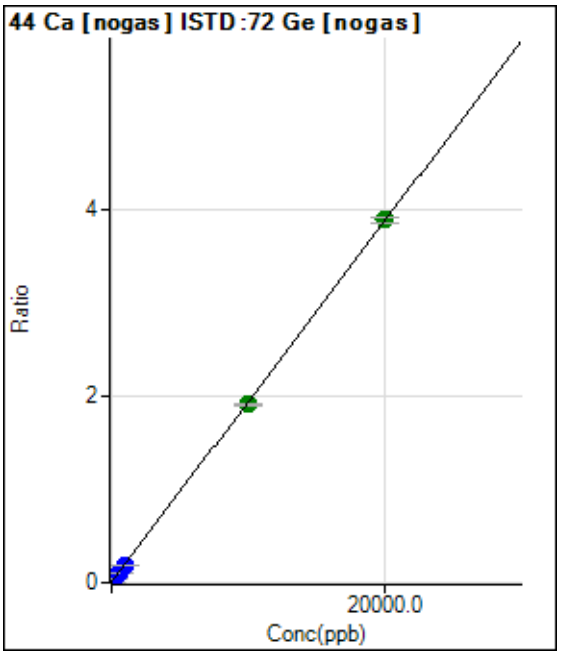
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	57.6
2	☐	200.000	186.752	593.35	0.0006	P	11.5
3	☐	500.000	508.517	1553.43	0.0016	P	5.2
4	☐	1000.000	997.334	3006.95	0.0032	P	5.4
5	☐	10000.00	10110.890	28204.88	0.0317	P	0.7
6	☐	20000.00	19944.608	55064.23	0.0625	P	1.5
7	☐	100.000					

y = 3.1326E-006 * x + 4.7506E-005
R = 1.0000
DL = 26.21
BEC = 15.16

Weight: <None>
Min Conc: <None>

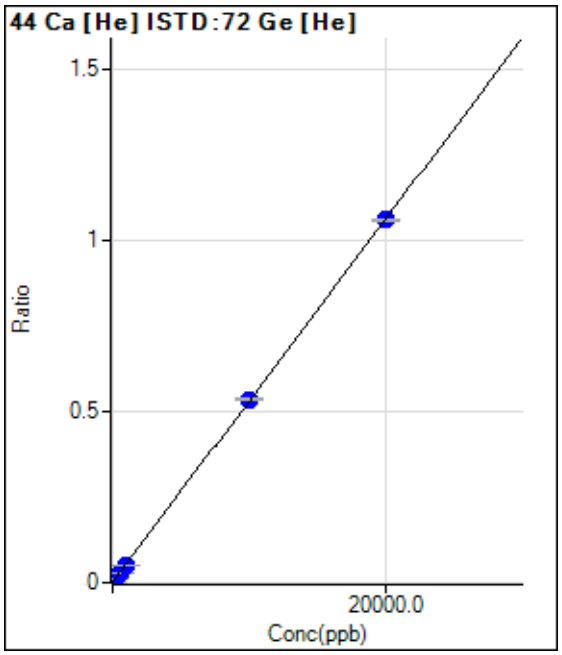


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35550.87	0.0092	P	6.2
2	☐	200.000	190.140	185283.30	0.0460	P	1.0
3	☐	500.000	481.493	414196.31	0.1024	P	0.8
4	☐	1000.000	945.984	776929.68	0.1924	P	0.8
5	☐	10000.00	9833.214	7371949.89	1.9132	A	1.3
6	☐	20000.00	20086.655	14678522.28	3.8986	A	1.7
7	☐	100.000					

y = 1.9363E-004 * x + 0.0092
R = 1.0000
DL = 8.838
BEC = 47.51

Weight: <None>
Min Conc: <None>

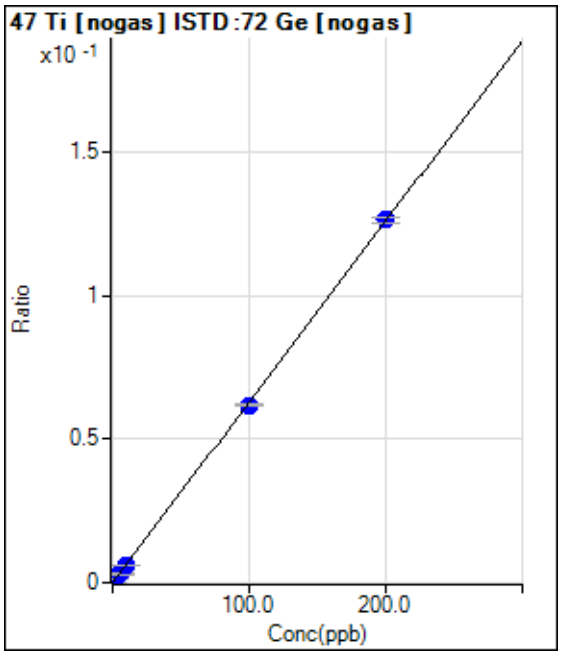
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1033.38	0.0011	P	6.3
2	☐	200.000	189.259	10489.79	0.0112	P	1.7
3	☐	500.000	472.853	24840.00	0.0262	P	3.4
4	☐	1000.000	957.054	49228.14	0.0519	P	1.5
5	☐	10000.00	10067.283	475993.25	0.5354	P	1.2
6	☐	20000.00	19969.292	934177.77	1.0608	P	0.2
7	☐	100.000					

y = 5.3065E-005 * x + 0.0011
R = 1.0000
DL = 4.022
BEC = 21.4

Weight: <None>
Min Conc: <None>

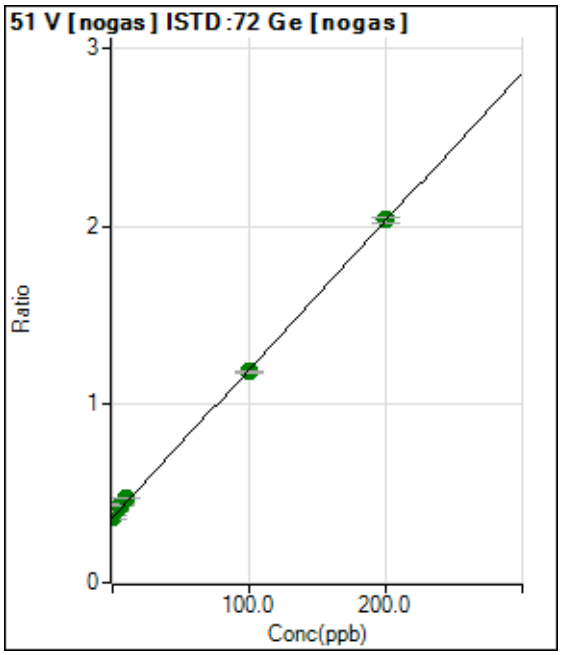


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0001	P	7.7
2	☐	2.000	1.800	4877.37	0.0012	P	2.0
3	☐	5.000	4.827	12591.10	0.0031	P	9.1
4	☐	10.000	9.403	24202.62	0.0060	P	2.9
5	☐	100.000	98.203	238324.54	0.0619	P	1.4
6	☐	200.000	200.935	476207.81	0.1265	P	1.3
7	☐	1.000					

y = 6.2904E-004 * x + 7.8500E-005
R = 0.9999
DL = 0.0289
BEC = 0.1248

Weight: <None>
Min Conc: <None>

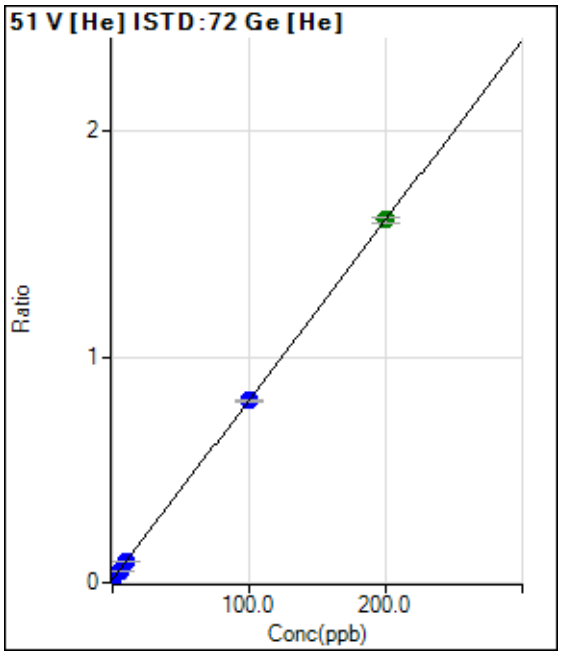
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1411643.42	0.3653	A	4.9
2	☐	2.000	3.522	1589101.50	0.3946	A	0.2
3	☐	5.000	8.427	1761148.47	0.4355	A	1.6
4	☐	10.000	13.348	1924552.65	0.4765	A	1.2
5	☐	100.000	98.190	4559088.52	1.1832	A	1.0
6	☐	200.000	200.637	7667652.51	2.0366	A	1.7
7	☐	1.000					

y = 0.0083 * x + 0.3653
R = 0.9998
DL = 6.51
BEC = 43.85

Weight: <None>
Min Conc: <None>

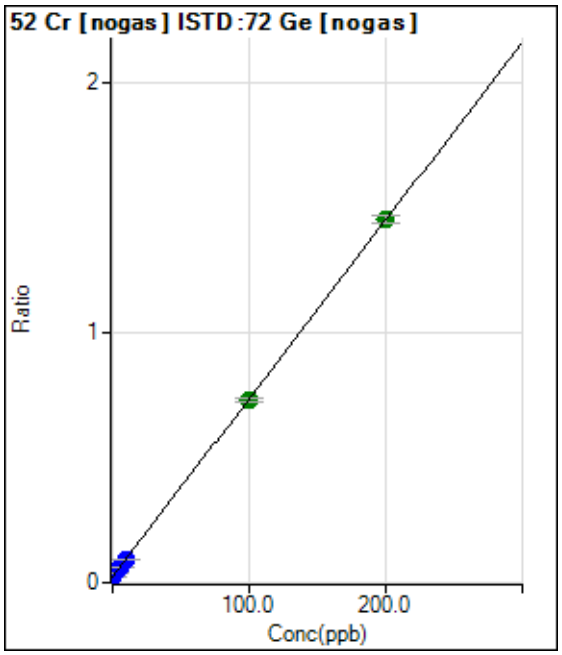


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.217	14116.04	0.0155	P	1.2
2	☐	2.000	2.193	29318.28	0.0312	P	2.8
3	☐	5.000	5.098	51501.22	0.0544	P	0.4
4	☐	10.000	9.638	85844.37	0.0905	P	0.6
5	☐	100.000	99.679	718055.63	0.8076	P	1.0
6	☐	200.000	200.174	1415980.83	1.6079	A	1.4
7	☐	1.000					

y = 0.0080 * x + 0.0138
R = 1.0000
DL = 0.06933
BEC = 1.73

Weight: <None>
Min Conc: <None>

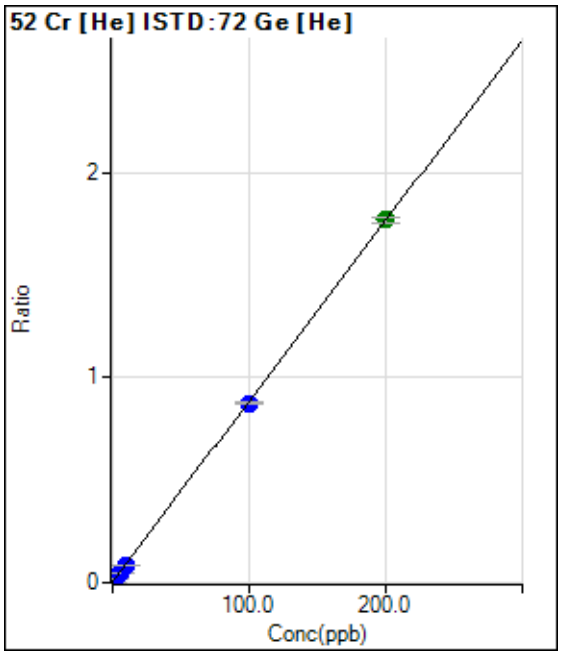
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	92425.36	0.0239	P	3.0
2	☐	2.000	2.036	154747.19	0.0384	P	3.1
3	☐	5.000	5.018	241481.38	0.0597	P	1.5
4	☐	10.000	9.626	373964.34	0.0926	P	0.9
5	☐	100.000	99.463	2826683.08	0.7336	A	2.1
6	☐	200.000	200.286	5470637.83	1.4530	A	2.2
7	☐	1.000					

y = 0.0071 * x + 0.0239
R = 1.0000
DL = 0.3063
BEC = 3.352

Weight: <None>
Min Conc: <None>

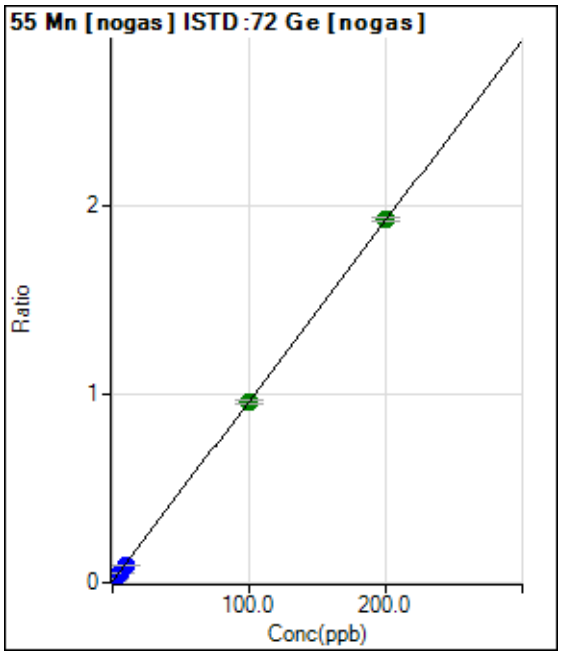


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4127.19	0.0045	P	7.0
2	☐	2.000	2.027	21002.10	0.0224	P	0.6
3	☐	5.000	4.858	44804.22	0.0473	P	0.7
4	☐	10.000	9.372	82538.85	0.0871	P	1.3
5	☐	100.000	98.890	778243.45	0.8753	P	1.4
6	☐	200.000	200.590	1559494.09	1.7708	A	1.3
7	☐	1.000					

y = 0.0088 * x + 0.0045
R = 1.0000
DL = 0.1075
BEC = 0.5148

Weight: <None>
Min Conc: <None>

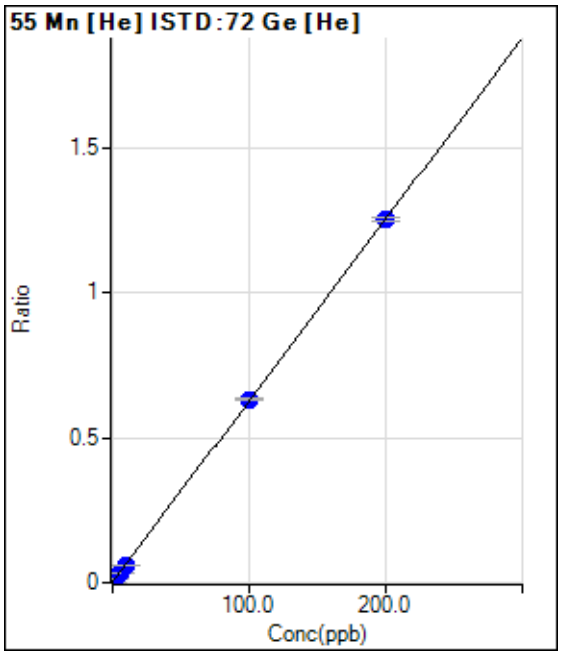
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25801.60	0.0067	P	4.3
2	☐	2.000	1.966	102625.69	0.0255	P	3.1
3	☐	5.000	4.649	206970.66	0.0512	P	0.6
4	☐	10.000	9.244	384331.02	0.0952	P	1.6
5	☐	100.000	99.067	3679782.24	0.9550	A	2.2
6	☐	200.000	200.513	7252415.10	1.9262	A	1.2
7	☐	1.000					

y = 0.0096 * x + 0.0067
R = 1.0000
DL = 0.08915
BEC = 0.6974

Weight: <None>
Min Conc: <None>

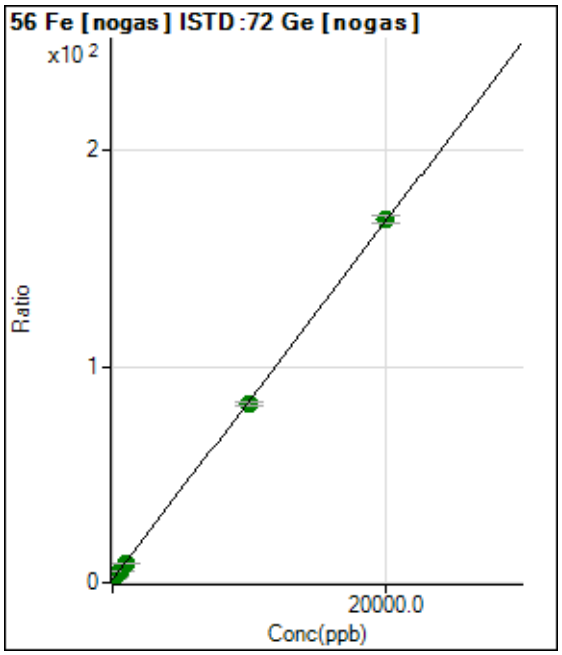


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1823.45	0.0020	P	4.7
2	☐	2.000	1.978	13508.43	0.0144	P	2.7
3	☐	5.000	4.863	30749.15	0.0325	P	0.2
4	☐	10.000	9.447	58010.86	0.0612	P	2.1
5	☐	100.000	100.662	562479.81	0.6326	P	1.0
6	☐	200.000	199.700	1103481.60	1.2530	P	1.0
7	☐	1.000					

y = 0.0063 * x + 0.0020
R = 1.0000
DL = 0.04549
BEC = 0.3199

Weight: <None>
Min Conc: <None>

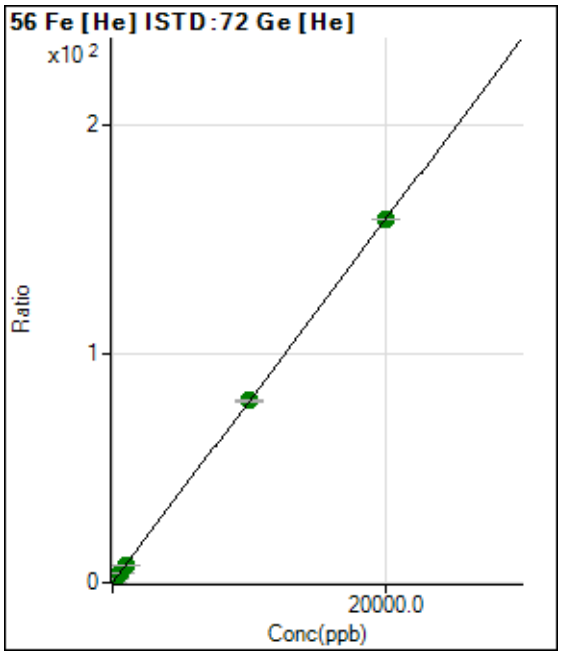
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5399978.51	1.3970	A	1.8
2	☐	200.000	189.947	11957918.50	2.9697	A	0.5
3	☐	500.000	474.708	21541257.25	5.3274	A	1.3
4	☐	1000.000	926.953	36637952.90	9.0718	A	1.2
5	☐	10000.00	9813.438	318436898.7	82.6477	A	2.0
6	☐	20000.00	20097.666	631730680.7	167.796	A	2.3
7	☐	100.000					

y = 0.0083 * x + 1.3970
R = 0.9999
DL = 8.939
BEC = 168.7

Weight: <None>
Min Conc: <None>

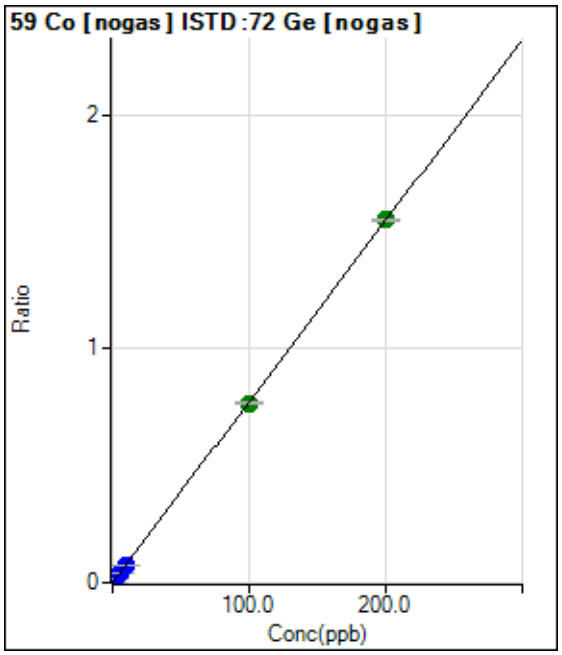


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25611.27	0.0281	P	1.6
2	☐	200.000	200.663	1518694.14	1.6186	A	1.1
3	☐	500.000	491.082	3713043.59	3.9204	A	1.0
4	☐	1000.000	945.461	7131509.06	7.5218	A	1.7
5	☐	10000.00	10039.958	70776840.61	79.6041	A	1.3
6	☐	20000.00	19982.964	139504317.9	158.411	A	0.1
7	☐	100.000					

y = 0.0079 * x + 0.0281
R = 1.0000
DL = 0.1748
BEC = 3.55

Weight: <None>
Min Conc: <None>

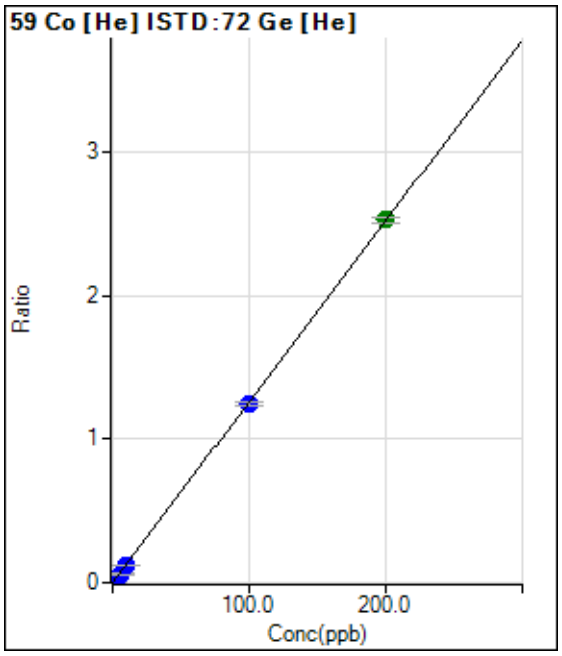
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	520.01	0.0001	P	9.0
2	☐	2.000	1.940	60896.88	0.0151	P	2.1
3	☐	5.000	4.895	153498.70	0.0380	P	1.7
4	☐	10.000	9.585	299732.26	0.0742	P	0.6
5	☐	100.000	99.003	2948796.10	0.7653	A	1.2
6	☐	200.000	200.522	5836846.58	1.5499	A	0.5
7	☐	1.000					

y = 0.0077 * x + 1.3456E-004
R = 1.0000
DL = 0.004704
BEC = 0.01741

Weight: <None>
Min Conc: <None>

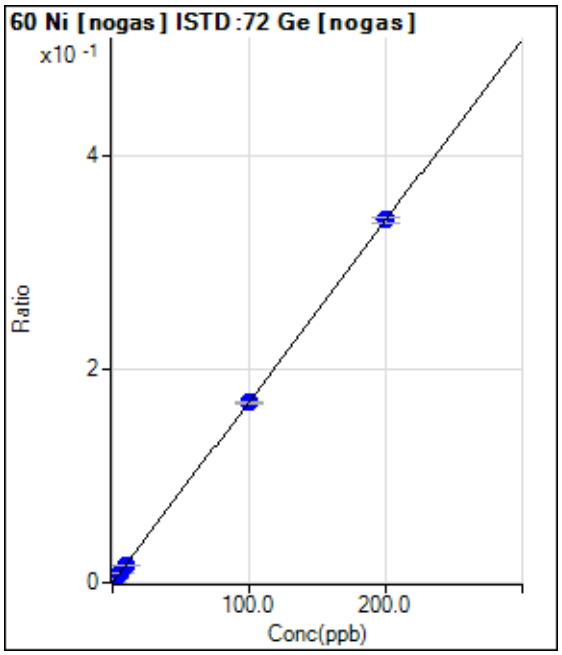


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0001	P	21.1
2	☐	2.000	1.909	22660.76	0.0241	P	0.9
3	☐	5.000	4.775	57068.11	0.0603	P	1.4
4	☐	10.000	9.276	110877.72	0.1169	P	1.0
5	☐	100.000	98.717	1105599.77	1.2435	P	1.8
6	☐	200.000	200.684	2226110.85	2.5279	A	1.6
7	☐	1.000					

y = 0.0126 * x + 1.0615E-004
R = 1.0000
DL = 0.00534
BEC = 0.008428

Weight: <None>
Min Conc: <None>

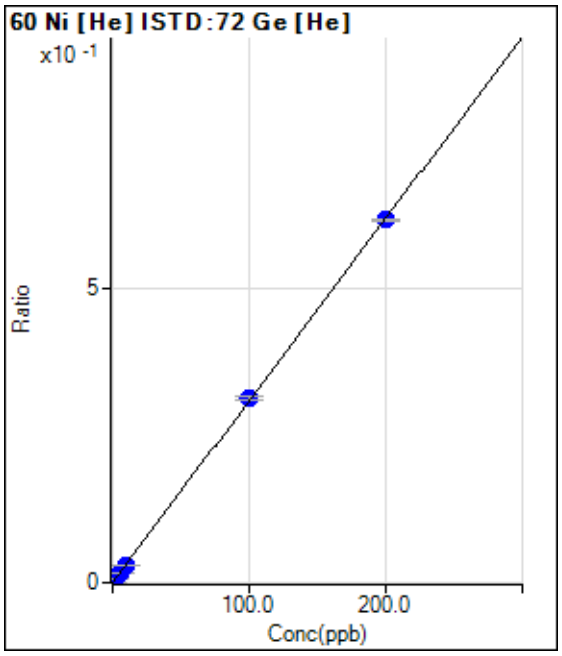
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.194	1876.79	0.0005	P	5.1
2	☐	2.000	2.213	15770.24	0.0039	P	0.8
3	☐	5.000	5.091	35621.19	0.0088	P	2.4
4	☐	10.000	9.828	68102.10	0.0169	P	1.0
5	☐	100.000	99.338	651195.61	0.1690	P	1.3
6	☐	200.000	200.335	1282676.81	0.3407	P	1.4
7	☐	1.000					

y = 0.0017 * x + 1.5503E-004
R = 1.0000
DL = 0.0433
BEC = 0.09121

Weight: <None>
Min Conc: <None>

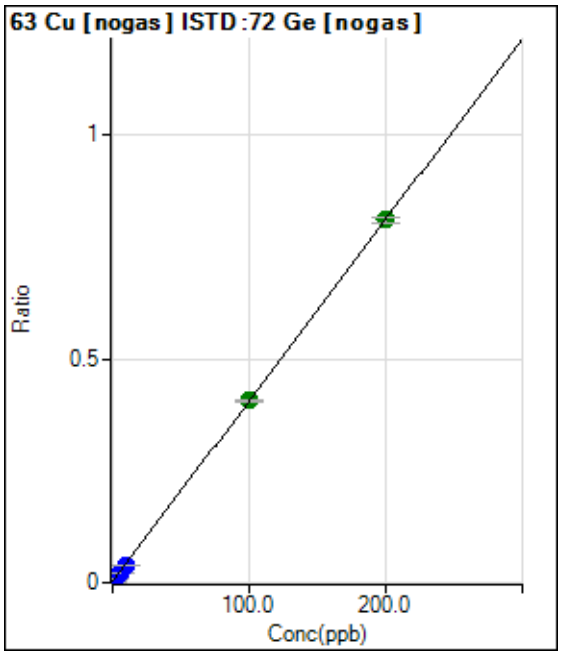


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.011	290.01	0.0003	P	23.0
2	☐	2.000	2.008	6094.43	0.0065	P	3.5
3	☐	5.000	4.959	14796.11	0.0156	P	5.1
4	☐	10.000	9.344	27677.68	0.0292	P	0.5
5	☐	100.000	101.288	278844.73	0.3136	P	1.7
6	☐	200.000	199.390	543458.20	0.6171	P	0.3
7	☐	1.000					

y = 0.0031 * x + 2.8433E-004
R = 1.0000
DL = 0.07098
BEC = 0.09191

Weight: <None>
Min Conc: <None>

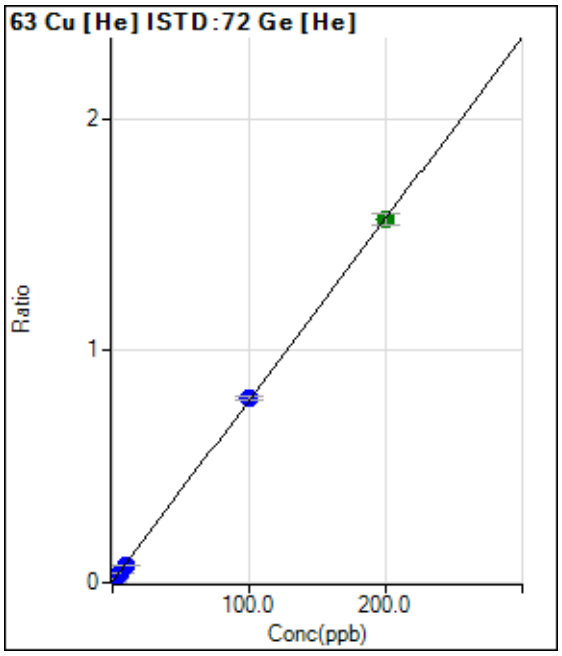
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8445.41	0.0022	P	4.2
2	☐	2.000	1.996	41272.87	0.0103	P	2.7
3	☐	5.000	5.198	93793.74	0.0232	P	1.6
4	☐	10.000	9.372	161816.32	0.0401	P	1.2
5	☐	100.000	100.183	1568823.21	0.4072	A	1.1
6	☐	200.000	199.935	3051068.18	0.8104	A	1.8
7	☐	1.000					

y = 0.0040 * x + 0.0022
R = 1.0000
DL = 0.06749
BEC = 0.5406

Weight: <None>
Min Conc: <None>

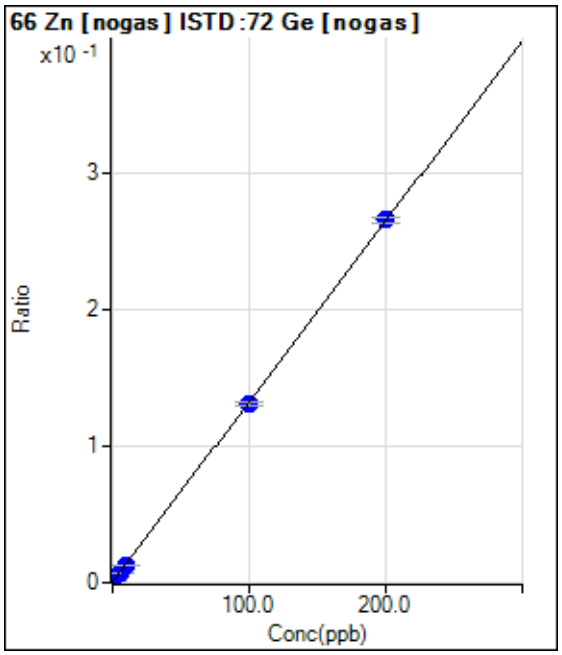


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.098	3560.40	0.0039	P	14.8
2	☐	2.000	1.915	18436.12	0.0196	P	3.5
3	☐	5.000	5.108	42262.17	0.0446	P	2.1
4	☐	10.000	9.345	73723.78	0.0778	P	1.7
5	☐	100.000	101.400	709210.53	0.7977	P	1.9
6	☐	200.000	199.331	1376813.11	1.5635	A	3.1
7	☐	1.000					

y = 0.0078 * x + 0.0047
R = 1.0000
DL = 0.2227
BEC = 0.5979

Weight: <None>
Min Conc: <None>

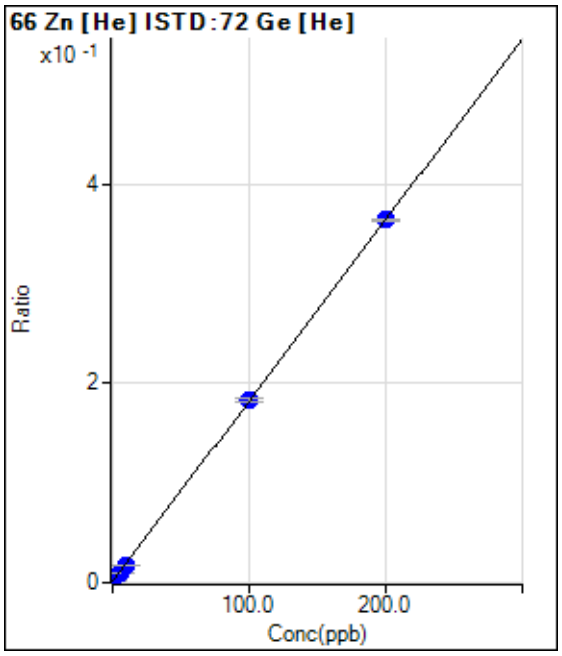
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.769	6291.17	0.0016	P	6.8
2	☐	2.000	2.402	15249.85	0.0038	P	0.8
3	☐	5.000	5.058	29524.03	0.0073	P	0.8
4	☐	10.000	9.401	52692.36	0.0130	P	0.8
5	☐	100.000	98.693	505389.94	0.1312	P	1.3
6	☐	200.000	200.678	1001771.18	0.2661	P	1.7
7	☐	1.000					

y = 0.0013 * x + 6.1036E-004
R = 1.0000
DL = 0.2491
BEC = 0.4614

Weight: <None>
Min Conc: <None>

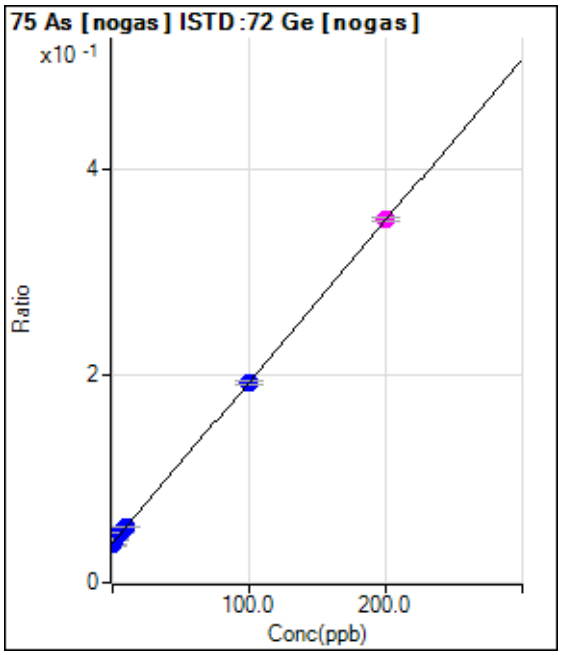


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.562	1890.13	0.0021	P	3.4
2	☐	2.000	2.210	4754.03	0.0051	P	4.1
3	☐	5.000	4.873	9375.85	0.0099	P	3.0
4	☐	10.000	9.302	17004.72	0.0179	P	3.1
5	☐	100.000	100.034	162329.65	0.1826	P	2.0
6	☐	200.000	200.019	320542.96	0.3640	P	0.6
7	☐	1.000					

y = 0.0018 * x + 0.0011
R = 1.0000
DL = 0.1168
BEC = 0.5823

Weight: <None>
Min Conc: <None>

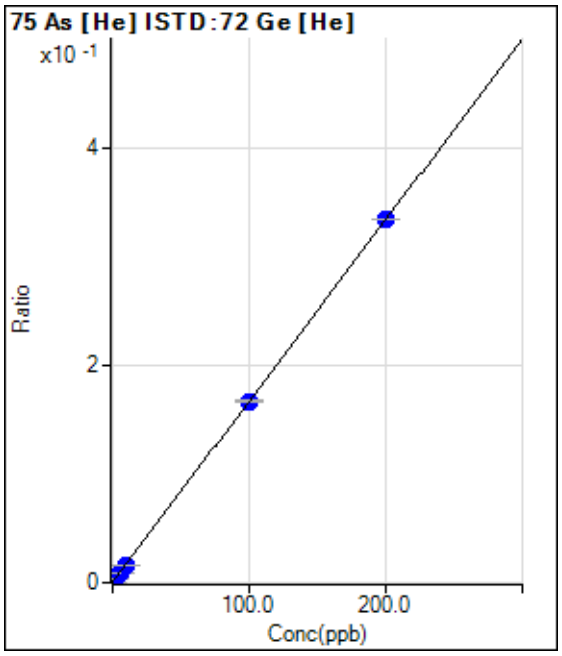
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.155	140420.89	0.0363	P	3.8
2	☐	2.000	2.324	168026.74	0.0418	P	7.0
3	☐	5.000	6.099	192691.11	0.0477	P	0.9
4	☐	10.000	10.168	218107.42	0.0540	P	1.5
5	☐	100.000	99.207	743391.81	0.1929	P	1.7
6	☐	200.000	200.357	1320869.85	0.3508	M	1.2
7	☐	1.000					

y = 0.0016 * x + 0.0381
R = 0.9999
DL = 2.657
BEC = 24.44

Weight: <None>
Min Conc: <None>

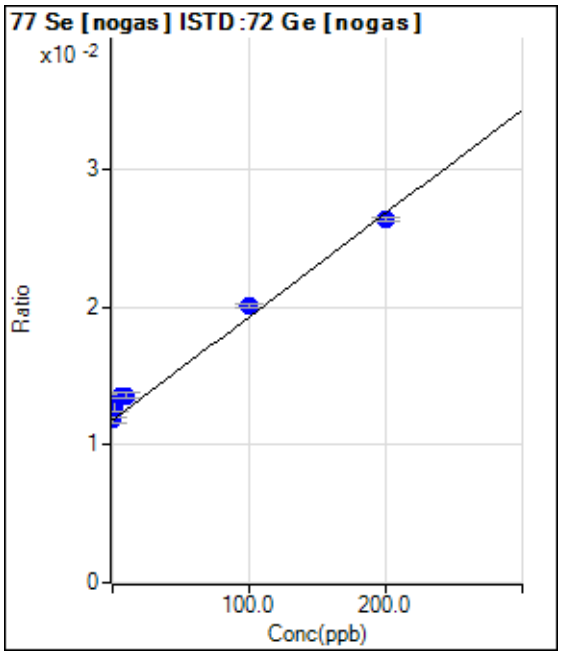


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0004	P	12.5
2	☐	2.000	1.903	3353.66	0.0036	P	5.1
3	☐	5.000	4.674	7767.24	0.0082	P	2.6
4	☐	10.000	9.255	15030.64	0.0159	P	0.3
5	☐	100.000	99.896	148688.37	0.1672	P	1.1
6	☐	200.000	200.099	294641.84	0.3346	P	0.1
7	☐	1.000					

y = 0.0017 * x + 3.9557E-004
R = 1.0000
DL = 0.08888
BEC = 0.2369

Weight: <None>
Min Conc: <None>

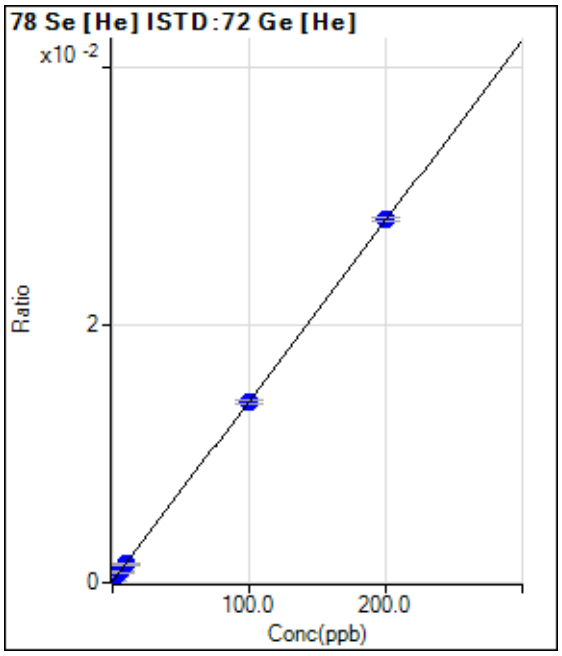
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45648.30	0.0118	P	3.6
2	☐	2.000	13.513	51604.19	0.0128	P	6.0
3	☐	5.000	23.071	54766.90	0.0135	P	2.9
4	☐	10.000	23.901	54963.86	0.0136	P	3.6
5	☐	100.000	110.583	77542.05	0.0201	P	1.6
6	☐	200.000	193.447	99235.79	0.0264	P	1.2
7	☐	1.000					

y = 7.5205E-005 * x + 0.0118
R = 0.9958
DL = 16.95
BEC = 157

Weight: <None>
Min Conc: <None>

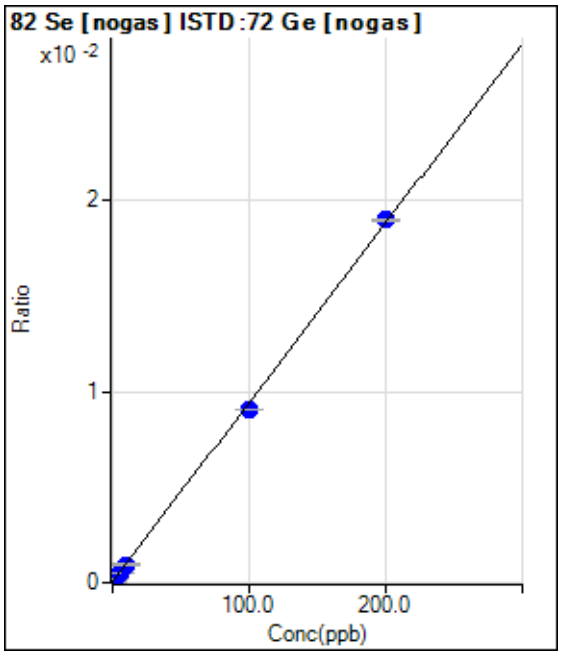


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.417	143.33	0.0002	P	7.1
2	☐	2.000	2.160	376.67	0.0004	P	6.9
3	☐	5.000	5.324	799.35	0.0008	P	6.7
4	☐	10.000	9.451	1348.06	0.0014	P	2.5
5	☐	100.000	99.259	12439.58	0.0140	P	2.7
6	☐	200.000	200.388	24785.45	0.0281	P	1.2
7	☐	1.000					

y = 1.3996E-004 * x + 9.9050E-005
R = 1.0000
DL = 0.2398
BEC = 0.7077

Weight: <None>
Min Conc: <None>

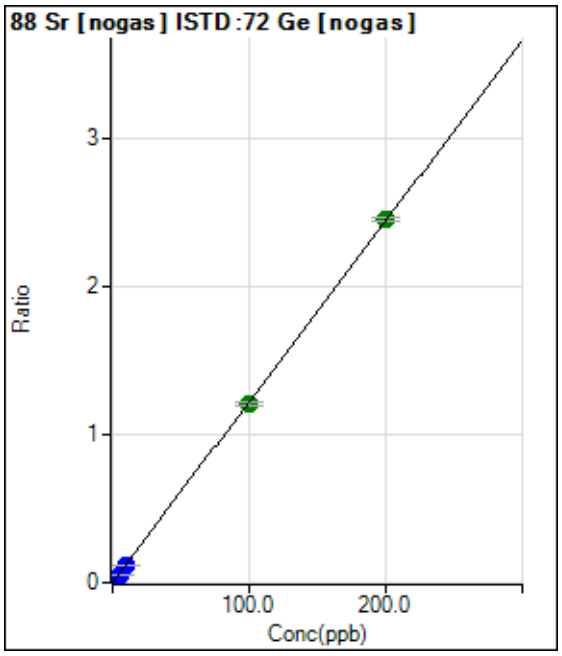
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.67	0.0000	P	17.8
2	☐	2.000	1.870	900.04	0.0002	P	1.8
3	☐	5.000	4.895	2050.15	0.0005	P	11.9
4	☐	10.000	9.601	3827.13	0.0009	P	9.1
5	☐	100.000	96.180	34920.47	0.0091	P	0.4
6	☐	200.000	201.934	71440.67	0.0190	P	0.8
7	☐	1.000					

y = 9.3715E-005 * x + 4.8320E-005
R = 0.9997
DL = 0.2761
BEC = 0.5156

Weight: <None>
Min Conc: <None>

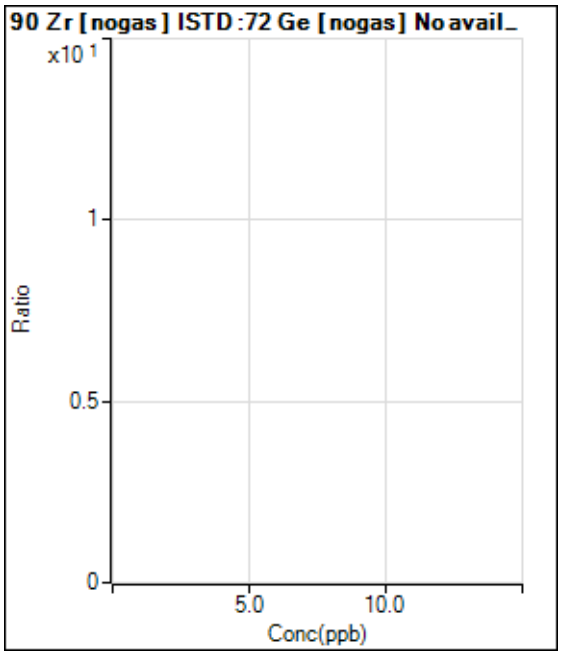


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5187.53	0.0013	P	27.3
2	☐	2.000	1.858	96879.70	0.0241	P	3.0
3	☐	5.000	4.663	235972.91	0.0584	P	0.5
4	☐	10.000	9.172	458254.11	0.1135	P	1.5
5	☐	100.000	98.680	4653247.02	1.2078	A	2.7
6	☐	200.000	200.711	9244704.03	2.4551	A	1.0
7	☐	1.000					

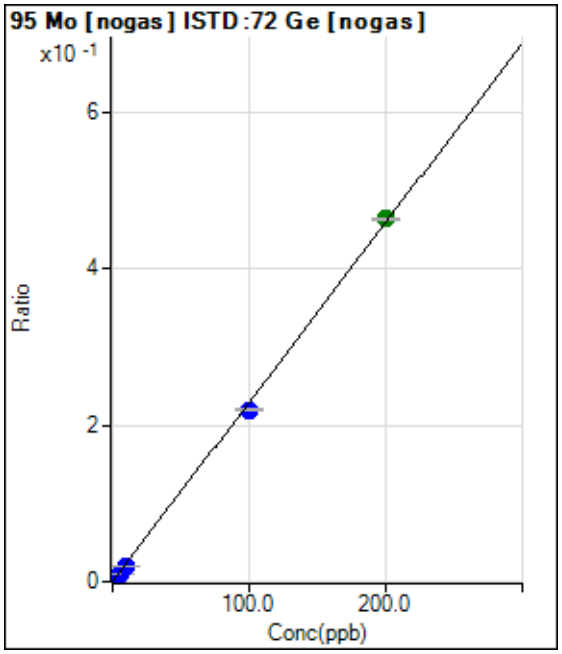
y = 0.0122 * x + 0.0013
R = 1.0000
DL = 0.09005
BEC = 0.11

Weight: <None>
Min Conc: <None>

Calibration for 293_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					

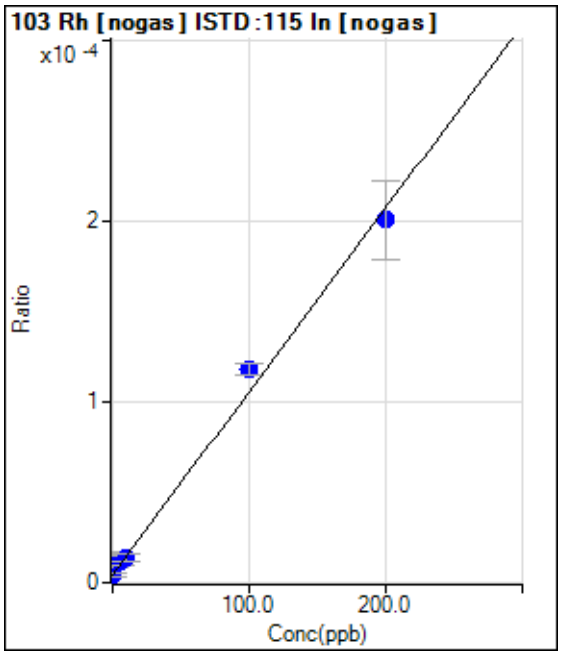


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	270.01	0.0001	P	23.3
2	☐	2.000	1.786	16781.46	0.0042	P	4.1
3	☐	5.000	4.591	42884.83	0.0106	P	1.4
4	☐	10.000	9.010	83785.26	0.0207	P	0.7
5	☐	100.000	95.801	847342.80	0.2199	P	1.7
6	☐	200.000	202.161	1747188.93	0.4640	A	0.7
7	☐	1.000					

y = 0.0023 * x + 6.9712E-005
R = 0.9997
DL = 0.02127
BEC = 0.03038

Weight: <None>
Min Conc: <None>

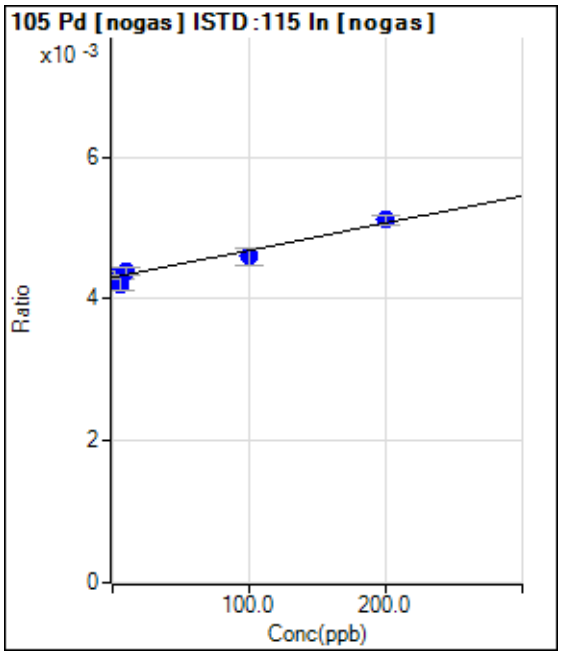
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	35.1
2	☐	2.000	8.207	50.00	0.0000	P	70.9
3	☐	5.000	7.494	46.67	0.0000	P	43.7
4	☐	10.000	9.308	53.33	0.0000	P	27.8
5	☐	100.000	112.549	446.68	0.0001	P	5.6
6	☐	200.000	193.635	750.03	0.0002	P	22.0
7	☐	1.000					

y = 1.0159E-006 * x + 4.2239E-006
R = 0.9970
DL = 4.378
BEC = 4.158

Weight: <None>
Min Conc: <None>

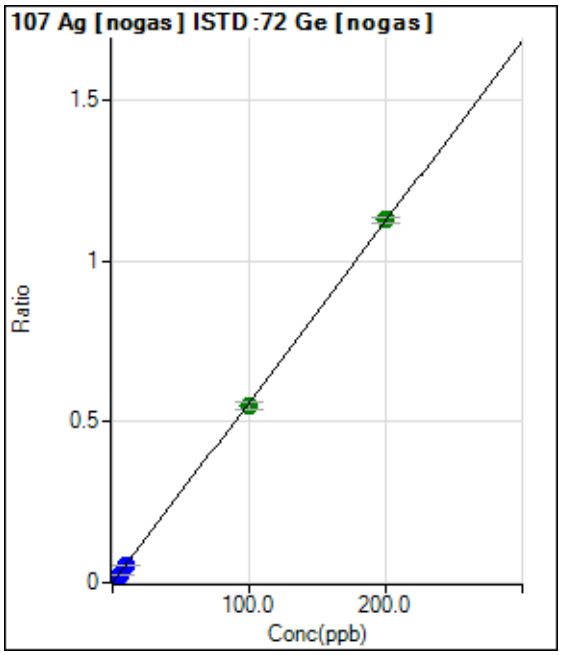


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16988.44	0.0043	P	3.2
2	☐	2.000	0.510	16981.77	0.0043	P	4.4
3	☐	5.000	-23.337	16547.94	0.0042	P	3.9
4	☐	10.000	24.257	17105.17	0.0044	P	2.0
5	☐	100.000	77.514	17318.73	0.0046	P	5.5
6	☐	200.000	211.254	19150.63	0.0051	P	2.6
7	☐	1.000					

y = 3.8444E-006 * x + 0.0043
R = 0.9805
DL = 107.6
BEC = 1119

Weight: <None>
Min Conc: <None>

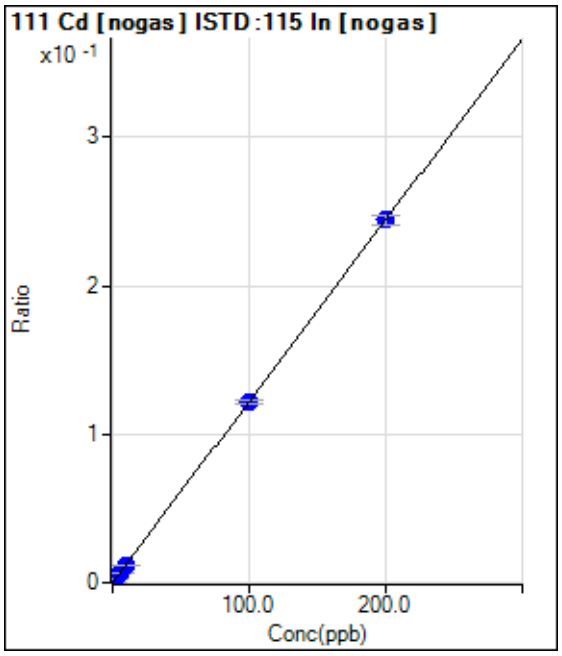
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	733.36	0.0002	P	4.8
2	☐	2.000	1.845	42404.23	0.0105	P	1.9
3	☐	5.000	4.697	107262.96	0.0265	P	1.6
4	☐	10.000	9.257	210380.50	0.0521	P	1.6
5	☐	100.000	98.112	2120959.13	0.5503	A	3.9
6	☐	200.000	200.990	4243585.87	1.1271	A	1.8
7	☐	1.000					

y = 0.0056 * x + 1.8979E-004
R = 0.9999
DL = 0.004898
BEC = 0.03385

Weight: <None>
Min Conc: <None>

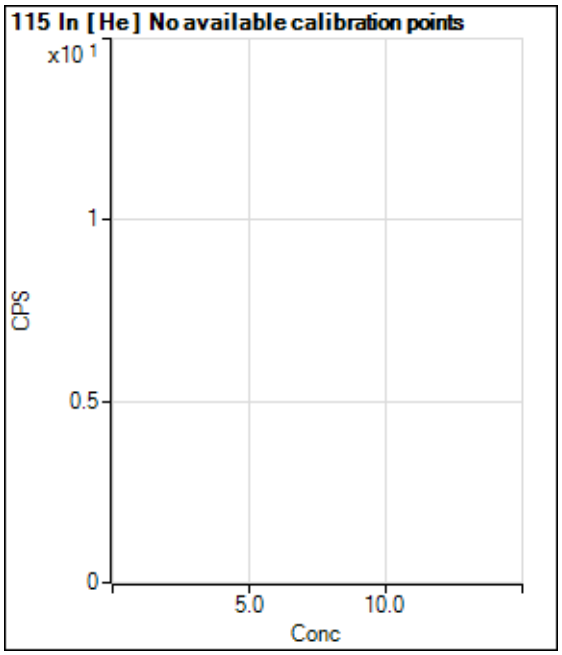


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	33.6
2	☐	2.000	1.902	9202.54	0.0023	P	7.6
3	☐	5.000	4.815	23155.50	0.0059	P	1.7
4	☐	10.000	9.421	44827.21	0.0115	P	0.8
5	☐	100.000	99.749	459202.32	0.1218	P	1.8
6	☐	200.000	200.160	915415.87	0.2444	P	2.5
7	☐	1.000					

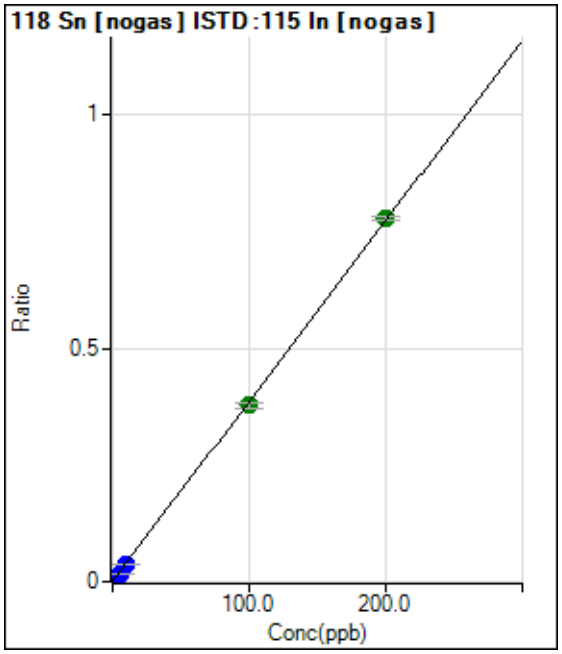
y = 0.0012 * x + 9.3186E-006
R = 1.0000
DL = 0.0077
BEC = 0.007631

Weight: <None>
Min Conc: <None>

Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1280605.42		P	0.3
2	☐			1287097.40		P	1.5
3	☐			1269797.22		P	0.2
4	☐			1252182.27		P	1.6
5	☐			1206140.26		P	1.1
6	☐			1200628.41		P	0.6
7	☐						

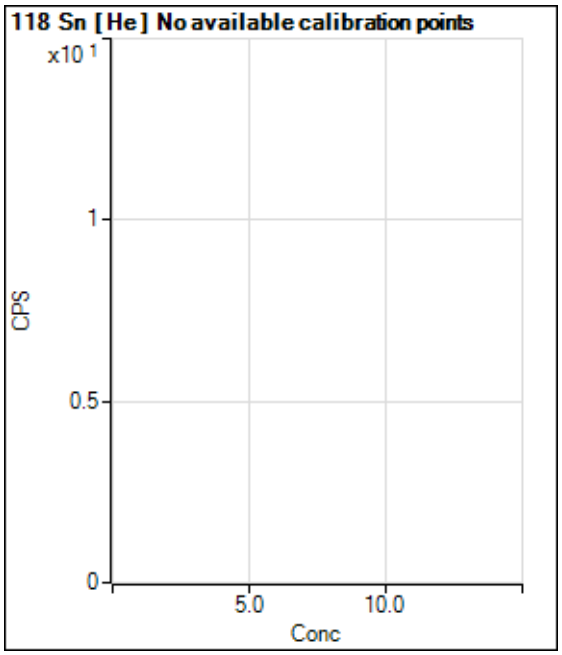


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3508.99	0.0009	P	33.1
2	☐	2.000	1.730	29845.47	0.0076	P	3.2
3	☐	5.000	4.525	72090.18	0.0183	P	0.7
4	☐	10.000	9.038	139180.07	0.0357	P	1.5
5	☐	100.000	97.749	1423824.82	0.3779	A	3.6
6	☐	200.000	201.188	2910067.56	0.7768	A	1.2
7	☐	1.000					

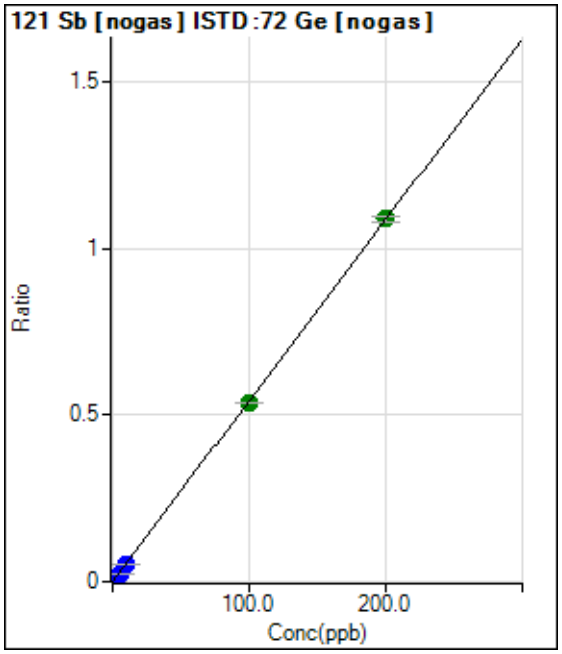
y = 0.0039 * x + 8.8642E-004
R = 0.9999
DL = 0.2284
BEC = 0.2298

Weight: <None>
Min Conc: <None>

Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1123.39		P	13.9
2	☐			11270.46		P	6.5
3	☐			26350.07		P	3.4
4	☐			51923.44		P	1.6
5	☐			523271.14		P	1.1
6	☐			1038746.84		P	0.1
7	☐						

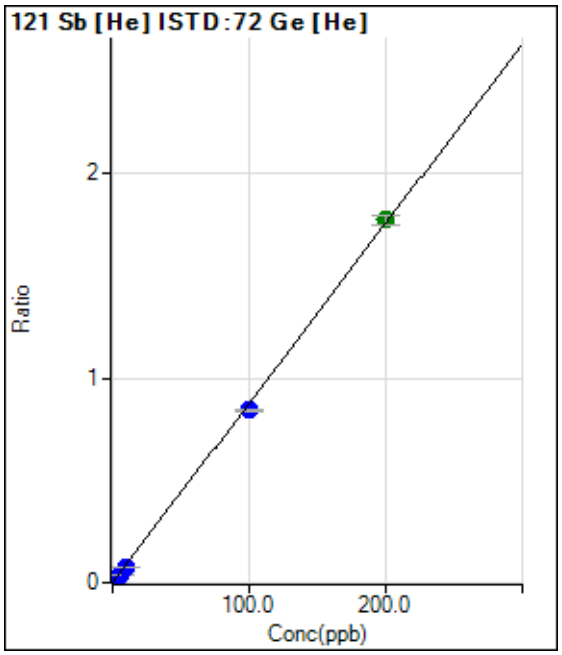


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	693.36	0.0002	P	5.0
2	☐	2.000	1.856	41312.22	0.0103	P	1.9
3	☐	5.000	4.496	99504.11	0.0246	P	1.5
4	☐	10.000	9.064	199617.73	0.0494	P	0.2
5	☐	100.000	98.853	2070103.77	0.5372	A	1.0
6	☐	200.000	200.634	4104813.37	1.0902	A	1.4
7	☐	1.000					

y = 0.0054 * x + 1.7943E-004
R = 1.0000
DL = 0.00499
BEC = 0.03303

Weight: <None>
Min Conc: <None>

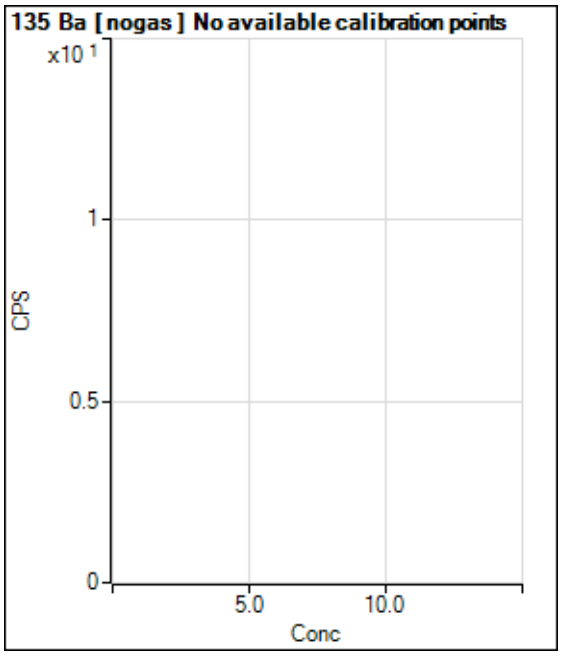
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	276.68	0.0003	P	14.3
2	☐	2.000	1.744	14656.36	0.0156	P	1.8
3	☐	5.000	4.364	36585.13	0.0386	P	2.2
4	☐	10.000	8.792	73507.01	0.0775	P	1.3
5	☐	100.000	95.973	749725.88	0.8432	P	1.7
6	☐	200.000	202.092	1563392.90	1.7753	A	2.8
7	☐	1.000					

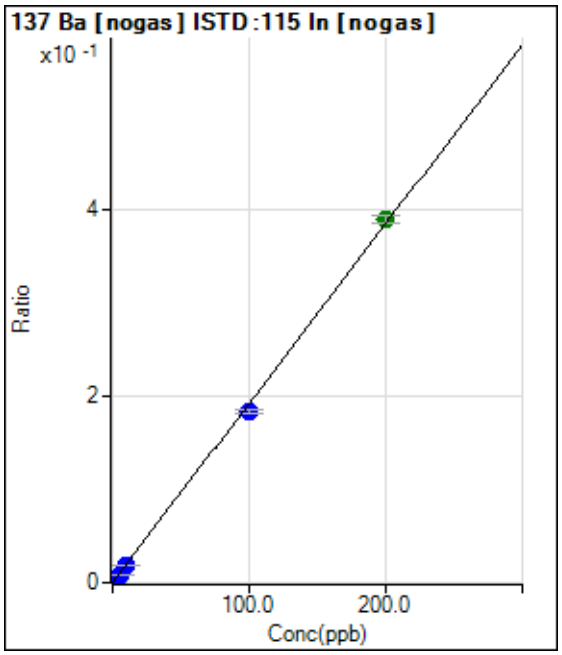
y = 0.0088 * x + 3.0390E-004
R = 0.9997
DL = 0.01482
BEC = 0.0346

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			610.02		P	8.7
2	☐			8455.54		P	2.0
3	☐			20128.60		P	0.7
4	☐			40046.46		P	1.2
5	☐			396043.30		P	0.9
6	☐			806512.62		P	0.7
7	☐						

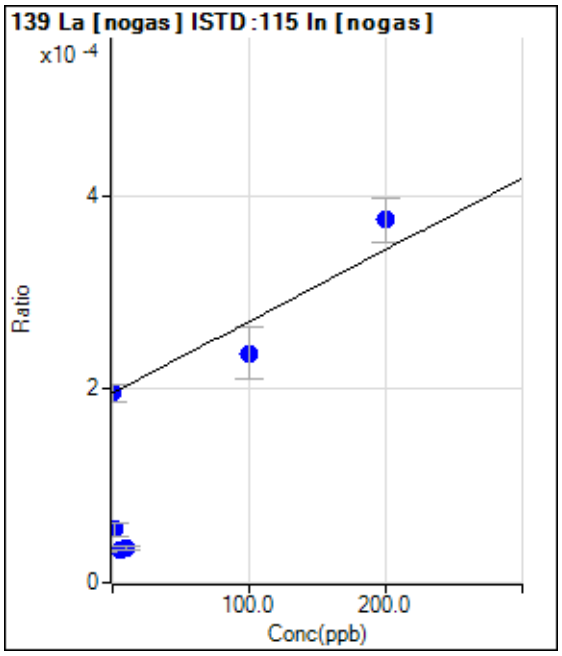
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1076.72	0.0003	P	6.9
2	☐	2.000	1.794	14713.13	0.0037	P	3.3
3	☐	5.000	4.476	34962.31	0.0089	P	0.6
4	☐	10.000	9.300	70798.05	0.0182	P	1.3
5	☐	100.000	95.373	693246.19	0.1840	P	3.0
6	☐	200.000	202.363	1460720.14	0.3900	A	2.0
7	☐	1.000					

y = 0.0019 * x + 2.7267E-004
R = 0.9996
DL = 0.02917
BEC = 0.1416

Weight: <None>
Min Conc: <None>

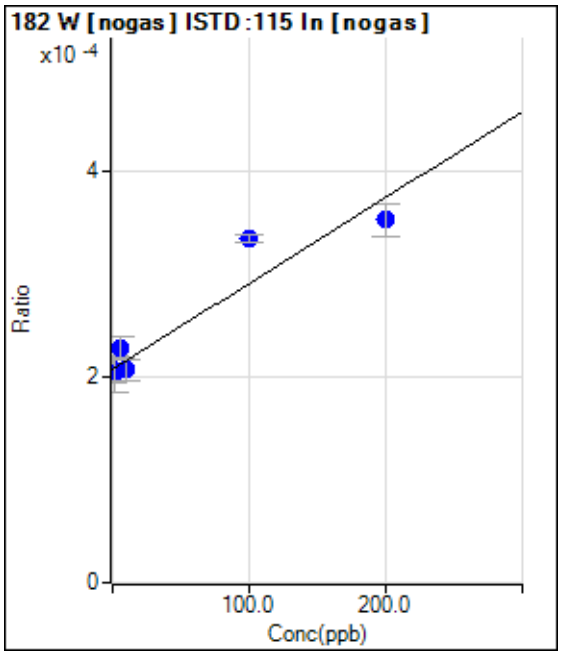


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	773.36	0.0002	P	8.8
2	☐	2.000	-190.248	216.67	0.0001	P	25.0
3	☐	5.000	-219.654	130.00	0.0000	P	7.8
4	☐	10.000	-216.937	136.67	0.0000	P	10.5
5	☐	100.000	54.890	890.04	0.0002	P	22.6
6	☐	200.000	241.440	1400.09	0.0004	P	12.2
7	☐	1.000					

y = 7.4057E-007 * x + 1.9574E-004
R = 0.8853
DL = 70.16
BEC = 264.3

Weight: <None>
Min Conc: <None>

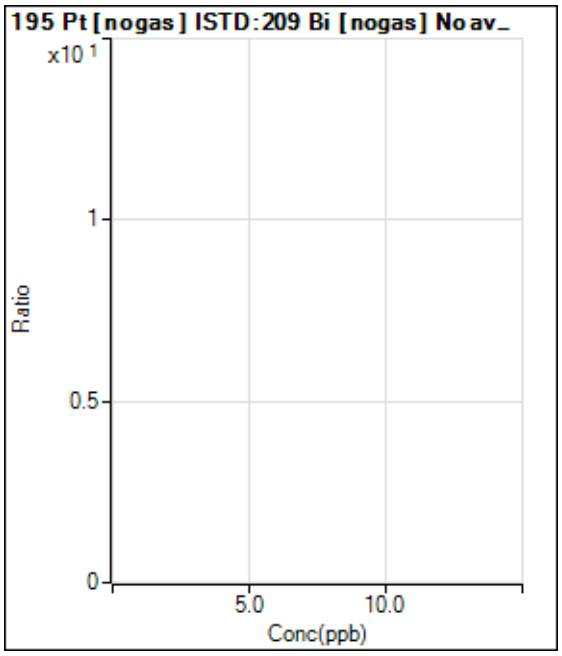
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	820.03	0.0002	P	13.3
2	☐	2.000	-4.780	806.70	0.0002	P	17.6
3	☐	5.000	25.297	900.04	0.0002	P	9.5
4	☐	10.000	-0.583	806.69	0.0002	P	10.1
5	☐	100.000	152.402	1263.40	0.0003	P	2.0
6	☐	200.000	173.889	1323.41	0.0004	P	9.2
7	☐	1.000					

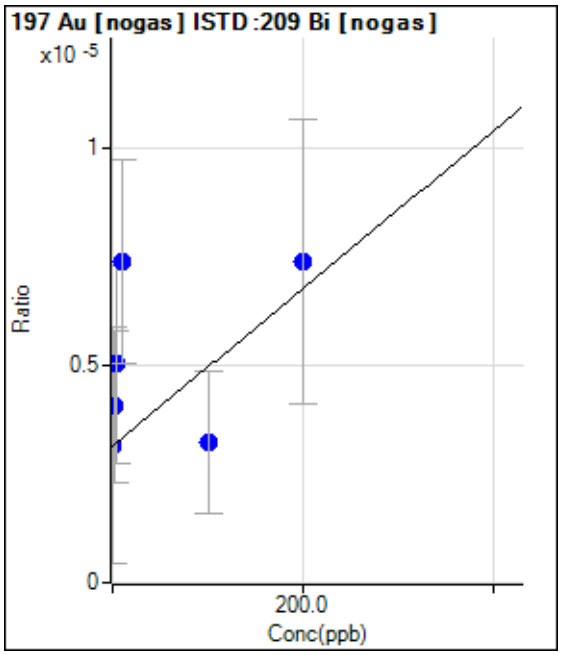
y = 8.3558E-007 * x + 2.0781E-004
R = 0.9430
DL = 99.49
BEC = 248.7

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					

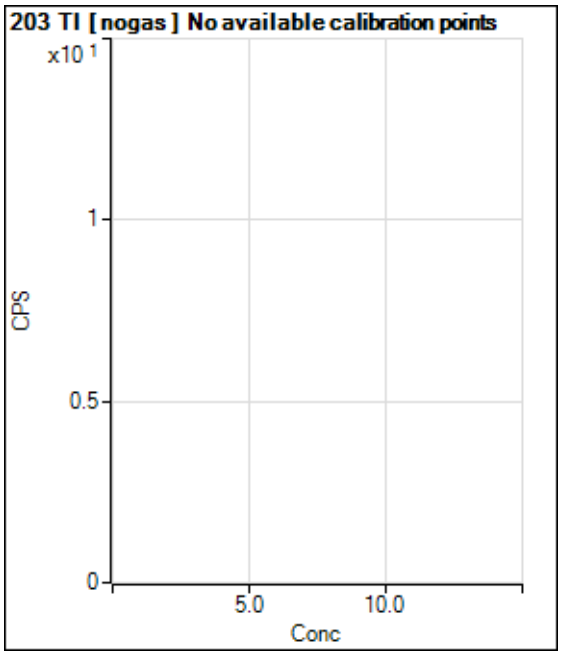
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	173.
2	☐	2.000	50.195	13.33	0.0000	P	86.6
3	☐	5.000	103.334	16.67	0.0000	P	91.2
4	☐	10.000	233.769	23.33	0.0000	P	63.9
5	☐	100.000	4.513	10.00	0.0000	P	100.
6	☐	200.000	233.615	23.33	0.0000	P	88.7
7	☐	1.000					

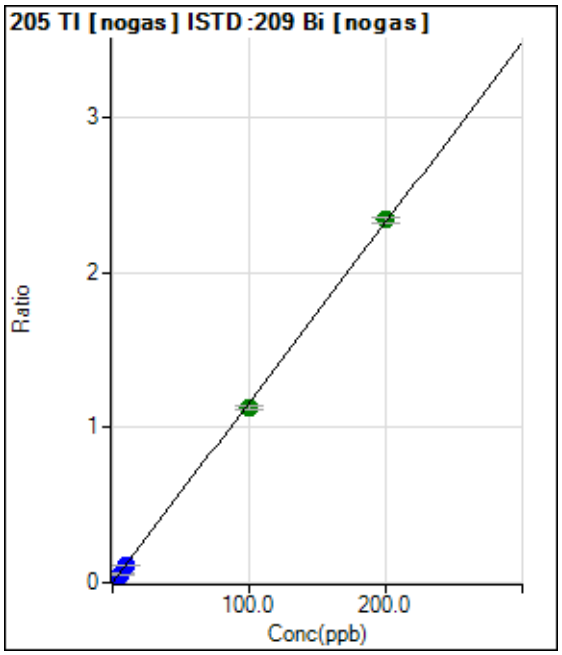
y = 1.8172E-008 * x + 3.1507E-006
R = 0.3908
DL = 900.9
BEC = 173.4

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			310.01		P	8.5
2	☐			28838.86		P	1.6
3	☐			73913.83		P	2.8
4	☐			145093.52		P	1.9
5	☐			1527911.64		A	1.6
6	☐			3080537.35		A	1.7
7	☐						

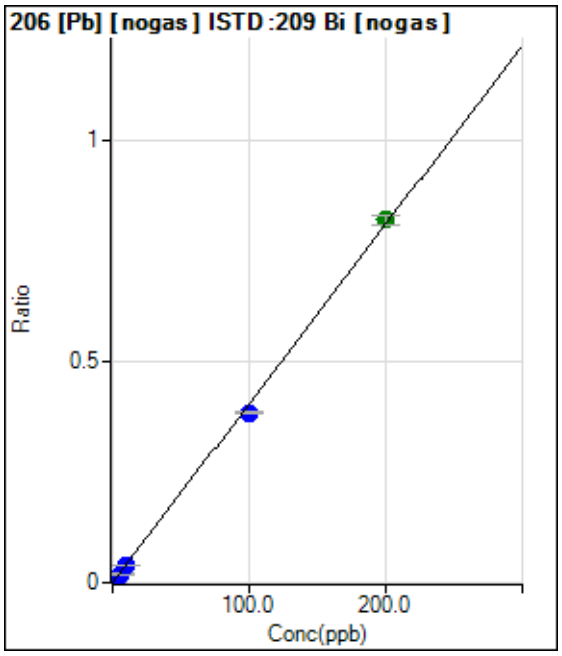
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	666.69	0.0002	P	9.5
2	☐	2.000	1.837	70314.43	0.0216	P	2.7
3	☐	5.000	4.737	177841.22	0.0553	P	3.4
4	☐	10.000	9.578	350573.76	0.1115	P	7.0
5	☐	100.000	97.306	3543725.05	1.1312	A	2.0
6	☐	200.000	201.376	7305247.81	2.3407	A	1.8
7	☐	1.000					

y = 0.0116 * x + 2.0533E-004
R = 0.9999
DL = 0.005044
BEC = 0.01767

Weight: <None>
Min Conc: <None>

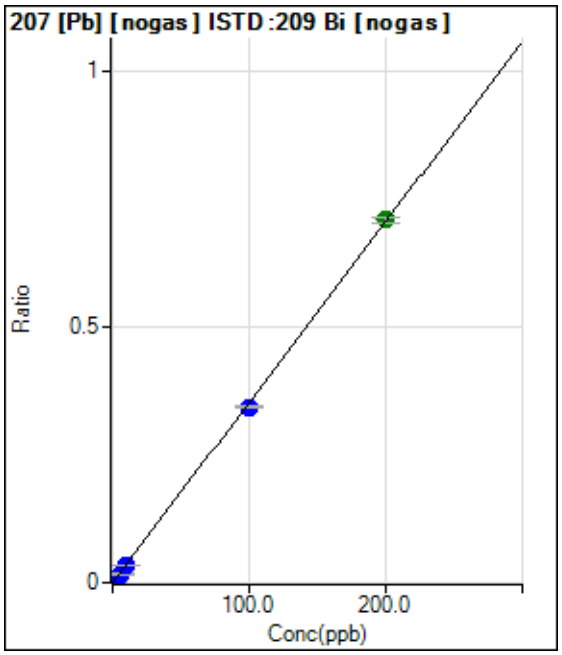


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	173.34	0.0001	P	43.8
2	☐	2.000	1.894	25182.92	0.0077	P	3.3
3	☐	5.000	4.727	61743.49	0.0192	P	5.7
4	☐	10.000	9.476	120860.98	0.0384	P	4.5
5	☐	100.000	94.765	1202437.41	0.3838	P	1.1
6	☐	200.000	202.652	2561397.25	0.8207	A	2.3
7	☐	1.000					

y = 0.0040 * x + 5.3367E-005
R = 0.9995
DL = 0.0173
BEC = 0.01318

Weight: <None>
Min Conc: <None>

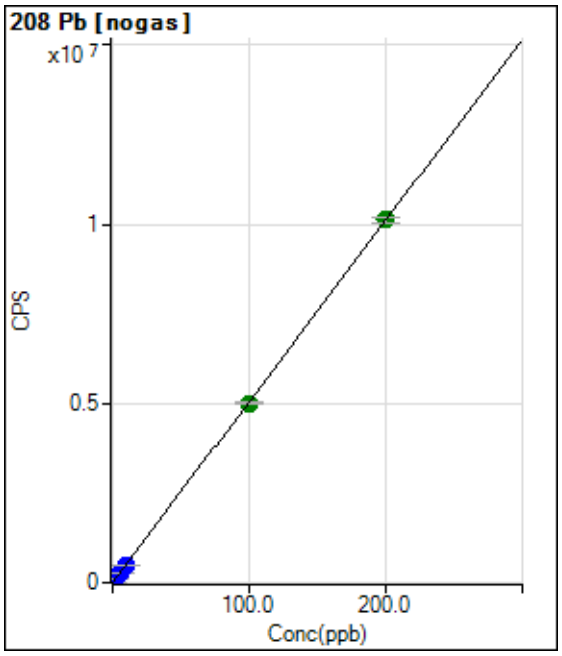
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0000	P	19.7
2	☐	2.000	1.853	21464.49	0.0066	P	2.3
3	☐	5.000	4.758	54113.29	0.0168	P	6.1
4	☐	10.000	9.482	105394.96	0.0335	P	2.7
5	☐	100.000	97.519	1077936.83	0.3441	P	0.8
6	☐	200.000	201.274	2216514.71	0.7101	A	1.3
7	☐	1.000					

y = 0.0035 * x + 4.5120E-005
R = 0.9999
DL = 0.007568
BEC = 0.01279

Weight: <None>
Min Conc: <None>

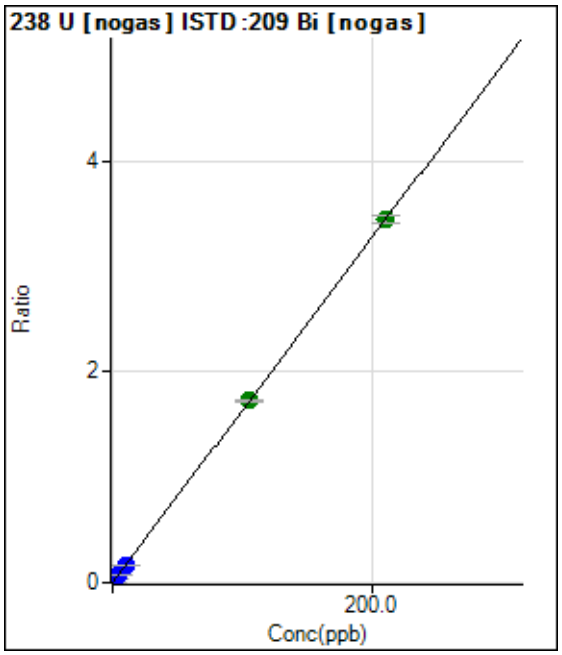


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713.35		P	21.6
2	☐	2.000	1.983	100891.13		P	0.8
3	☐	5.000	4.850	245716.76		P	1.0
4	☐	10.000	9.568	484034.64		P	0.6
5	☐	100.000	99.246	5014260.76		A	1.2
6	☐	200.000	200.402	10124266.88		A	1.3
7	☐	1.000					

y = 50516.1490 * x + 713.3500
R = 1.0000
DL = 0.00913
BEC = 0.01412

Weight: <None>
Min Conc: <None>

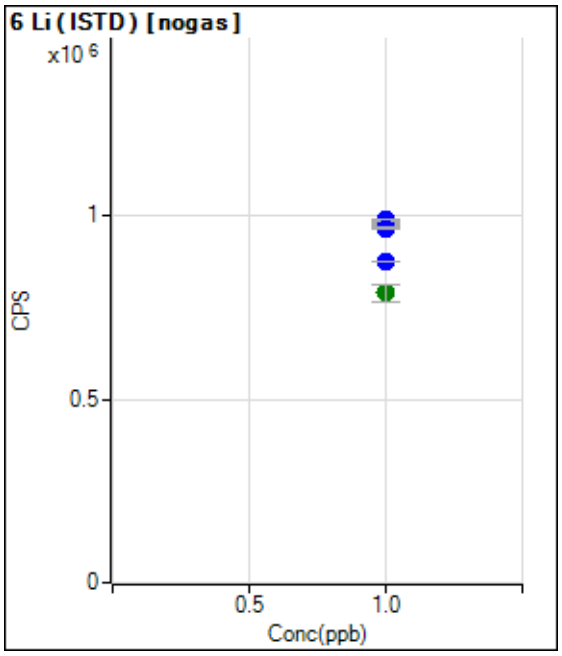
Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	25.0
2	☐	2.000	1.901	101925.11	0.0313	P	1.8
3	☐	5.000	4.757	251288.56	0.0781	P	5.1
4	☐	10.000	9.597	495722.08	0.1575	P	2.7
5	☐	105.000	105.357	5417201.38	1.7290	A	0.7
6	☐	210.000	209.848	10748160.26	3.4437	A	2.1
7	☐	1.000					

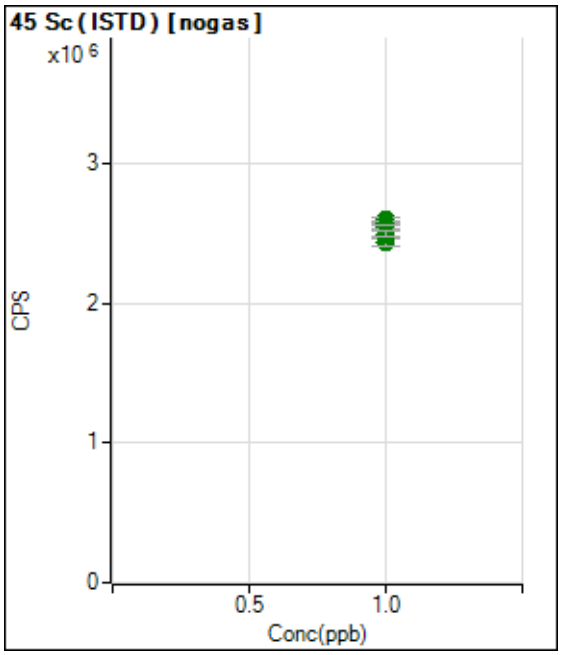
y = 0.0164 * x + 6.1751E-005
R = 1.0000
DL = 0.002828
BEC = 0.003763

Weight: <None>
Min Conc: <None>

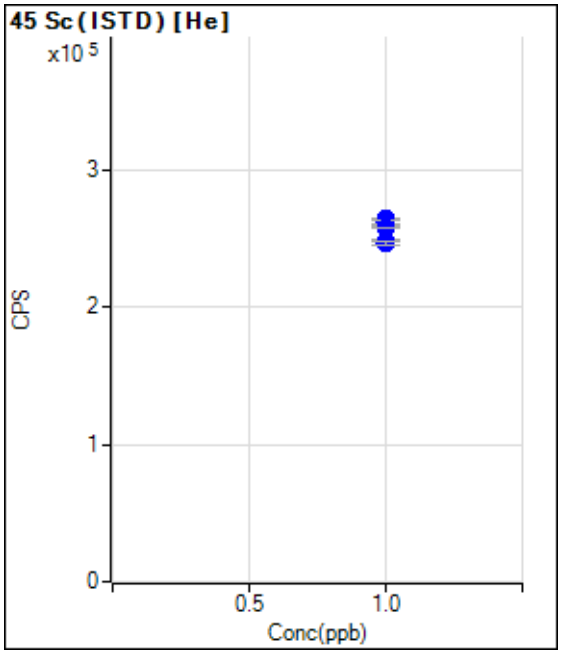


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		978239.51		P	0.6
2	☐	1.000		987241.26		P	0.3
3	☐	1.000		989131.71		P	0.5
4	☐	1.000		965809.03		P	0.5
5	☐	1.000		875825.66		P	0.1
6	☐	1.000		790170.00		A	5.8
7	☐	1.000					

Calibration for 293_ICV.d

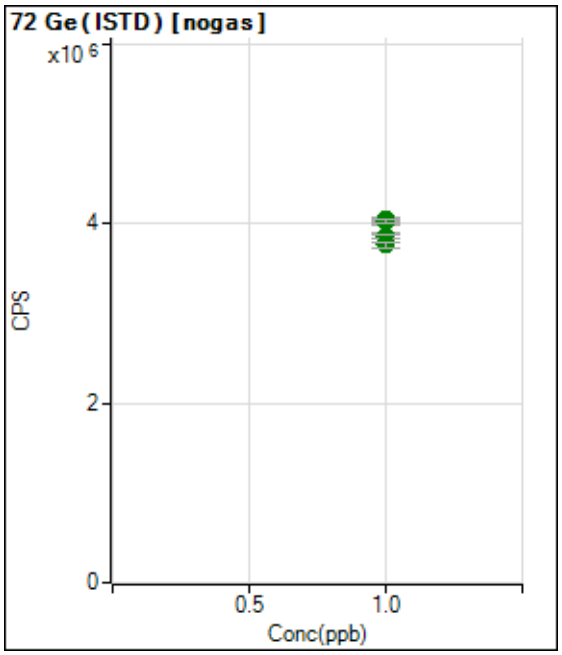


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2572976.27		A	0.4
2	☐	1.000		2596930.95		A	0.9
3	☐	1.000		2573107.46		A	1.4
4	☐	1.000		2547709.13		A	1.1
5	☐	1.000		2436614.86		A	2.1
6	☐	1.000		2497848.87		A	1.4
7	☐	1.000					

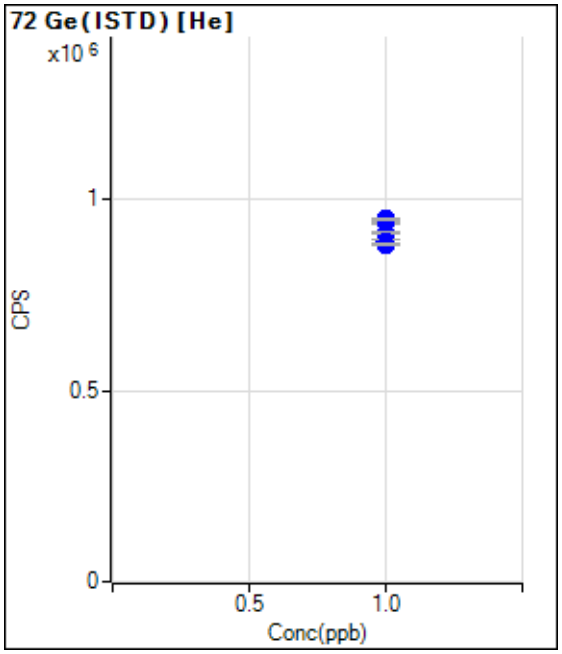


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		259321.59		P	1.2
2	☐	1.000		264505.30		P	0.4
3	☐	1.000		262018.48		P	1.6
4	☐	1.000		257861.55		P	0.3
5	☐	1.000		248488.65		P	0.6
6	☐	1.000		246417.20		P	1.3
7	☐	1.000					

Calibration for 293_ICV.d

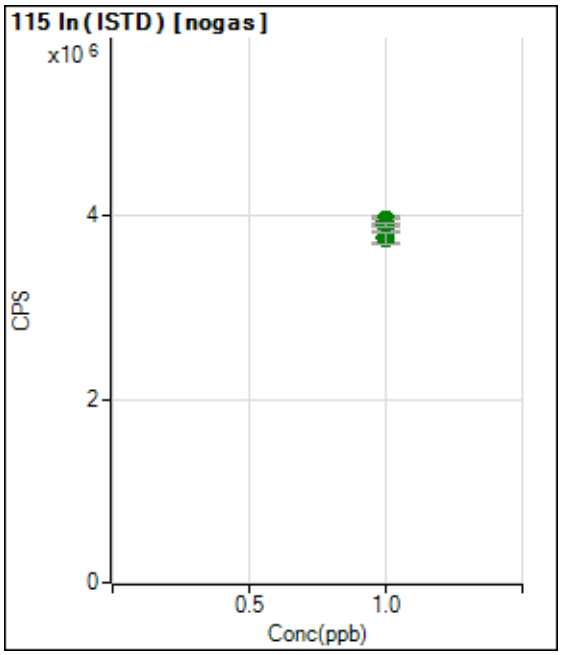


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3866153.69		A	1.7
2	☐	1.000		4026916.19		A	1.8
3	☐	1.000		4043760.25		A	0.8
4	☐	1.000		4038892.44		A	1.0
5	☐	1.000		3853442.44		A	1.0
6	☐	1.000		3765741.30		A	1.8
7	☐	1.000					

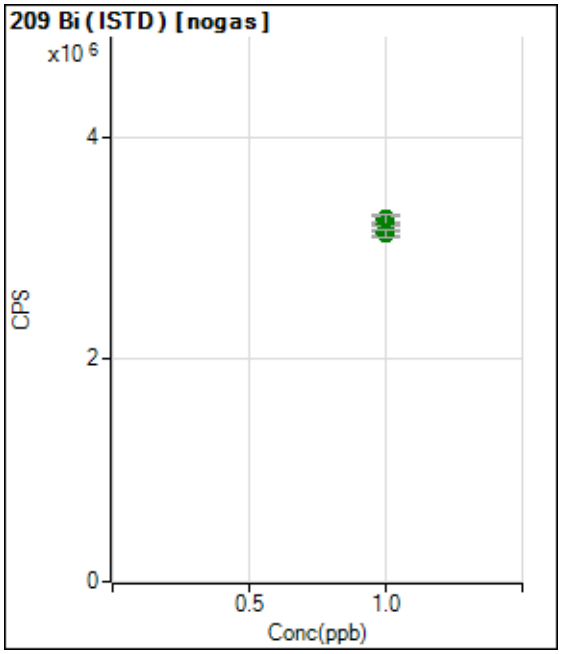


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		910172.12		P	0.6
2	☐	1.000		938325.07		P	0.6
3	☐	1.000		947136.63		P	0.7
4	☐	1.000		948156.65		P	0.4
5	☐	1.000		889193.74		P	1.1
6	☐	1.000		880641.16		P	0.4
7	☐	1.000					

Calibration for 293_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3951732.49		A	2.0
2	☐	1.000		3949486.37		A	2.0
3	☐	1.000		3931446.93		A	1.3
4	☐	1.000		3893435.80		A	1.2
5	☐	1.000		3770893.59		A	3.2
6	☐	1.000		3746798.47		A	3.1
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3251561.52		A	2.4
2	☐	1.000		3261274.01		A	1.4
3	☐	1.000		3221479.33		A	4.8
4	☐	1.000		3148415.79		A	3.3
5	☐	1.000		3133188.70		A	1.9
6	☐	1.000		3121634.74		A	2.1
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	009CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T11:58:31-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	197	14.70
Na	23	1	nogas	344883	0.00
Mg	24	1	nogas	28225	0.01
Al	27	1	nogas	33583	0.00
K	39	1	nogas	5736459	0.00
Ti	47	1	nogas	200	8.66
V	51	1	nogas	701785	0.00
Cr	52	1	nogas	68476	0.00
Mn	55	1	nogas	18803	0.01
Co	59	1	nogas	457	2.64
Ni	60	1	nogas	710	1.72
Cu	63	1	nogas	4047	0.15
Zn	66	1	nogas	4421	0.07
As	75	1	nogas	84776	0.00
Sr	88	1	nogas	2530	0.24
Ag	107	1	nogas	610	1.86
Cd	111	1	nogas	13	859.23
Sb	121	1	nogas	763	1.91
Tl	205	1	nogas	733	1.67
Pb	208	1	nogas	873	1.18
[Pb]	206	1	nogas	247	6.22
[Pb]	207	1	nogas	233	13.91
Na	23	2	He	31770	0.00
Mg	24	2	He	1577	1.06
Al	27	2	He	1030	0.98
K	39	2	He	137397	0.00
Ca	43	2	He	50	40.00
Ca	44	2	He	1040	0.49
V	51	2	He	9274	0.04
Cr	52	2	He	4147	0.26
Mn	55	2	He	1703	0.76
Fe	56	2	He	18826	0.01
Co	59	2	He	97	71.25
Ni	60	2	He	217	3.25
Cu	63	2	He	1757	0.39
Zn	66	2	He	1463	0.71
As	75	2	He	250	5.64
Se	78	2	He	121	9.05
B	11	1	nogas	13568	0.01
Si	28	1	nogas	1207925	0.00
Ca	43	1	nogas	710	1.39
Ca	44	1	nogas	60746	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2891195	0.00
Se	77	1	nogas	27455	0.01
Se	82	1	nogas	180	25.26
Mo	95	1	nogas	290	14.85
Sn	118	1	nogas	2197	0.38
Ba	137	1	nogas	553	1.15
Sb	121	2	He	343	4.97
Li	7	1	nogas	68428	0.00
P	31	1	nogas	67848	0.00
La	139	1	nogas	533	2.15

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	812124	0.37
Ge	72	1	nogas	2907263	1.05
In	115	1	nogas	3086471	2.17
Bi	209	1	nogas	2602272	0.72
Ge	72	2	He	778143	0.72

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	010CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:00:31-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	009CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	11097	0.01
Na	23	1	nogas	4734166	0.00
Mg	24	1	nogas	3043853	0.00
Al	27	1	nogas	63182	0.00
K	39	1	nogas	9968930	0.00
Ti	47	1	nogas	4107	0.06
V	51	1	nogas	821737	0.00
Cr	52	1	nogas	120034	0.00
Mn	55	1	nogas	78807	0.00
Co	59	1	nogas	50142	0.00
Ni	60	1	nogas	12031	0.01
Cu	63	1	nogas	31193	0.01
Zn	66	1	nogas	10563	0.03
As	75	1	nogas	100786	0.00
Sr	88	1	nogas	77285	0.00
Ag	107	1	nogas	33645	0.01
Cd	111	1	nogas	7008	0.03
Sb	121	1	nogas	31482	0.01
Tl	205	1	nogas	57819	0.01
Pb	208	1	nogas	81504	0.00
[Pb]	206	1	nogas	19812	0.01
[Pb]	207	1	nogas	18204	0.02
Na	23	2	He	311909	0.00
Mg	24	2	He	165840	0.00
Al	27	2	He	1493	0.72
K	39	2	He	322212	0.00
Ca	43	2	He	513	3.89
Ca	44	2	He	10010	0.02
V	51	2	He	22693	0.00
Cr	52	2	He	18773	0.02
Mn	55	2	He	13018	0.01
Fe	56	2	He	1359382	0.00
Co	59	2	He	20475	0.01
Ni	60	2	He	5237	0.01
Cu	63	2	He	14563	0.03
Zn	66	2	He	3820	0.22
As	75	2	He	2739	0.06
Se	78	2	He	327	2.00
B	11	1	nogas	45768	0.00
Si	28	1	nogas	1379825	0.00

Calibration Standard Report

Ca	43	1	nogas	7838	0.04
Ca	44	1	nogas	182556	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8082333	0.00
Se	77	1	nogas	29898	0.01
Se	82	1	nogas	730	1.99
Mo	95	1	nogas	14012	0.03
Sn	118	1	nogas	23179	0.01
Ba	137	1	nogas	11120	0.05
Sb	121	2	He	13866	0.02
P	31	1	nogas	81596	0.00
La	139	1	nogas	113	11.89

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	817428	0.59	812124	100.65	70	125	
Ge	72	1	nogas	2917385	2.08	2907263	100.35	70	125	
In	115	1	nogas	3114245	1.50	3086471	100.90	70	125	
Bi	209	1	nogas	2600679	2.54	2602272	99.94	70	125	
Ge	72	2	He	755901	2.56	778143	97.14	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	011CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:02:31-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	009CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	28638	0.01
Na	23	1	nogas	11454289	0.00
Mg	24	1	nogas	7553116	0.00
Al	27	1	nogas	117846	0.00
K	39	1	nogas	16319539	0.00
Ti	47	1	nogas	10146	0.03
V	51	1	nogas	904747	0.00
Cr	52	1	nogas	185003	0.00
Mn	55	1	nogas	165750	0.00
Co	59	1	nogas	126805	0.00
Ni	60	1	nogas	29006	0.01
Cu	63	1	nogas	73362	0.00
Zn	66	1	nogas	22077	0.02
As	75	1	nogas	114312	0.00
Sr	88	1	nogas	186329	0.00
Ag	107	1	nogas	84199	0.00
Cd	111	1	nogas	18440	0.03
Sb	121	1	nogas	77283	0.00
Tl	205	1	nogas	146517	0.00
Pb	208	1	nogas	201178	0.00
[Pb]	206	1	nogas	50739	0.00
[Pb]	207	1	nogas	43545	0.00
Na	23	2	He	736566	0.00
Mg	24	2	He	411009	0.00
Al	27	2	He	3234	0.18
K	39	2	He	604573	0.00
Ca	43	2	He	1467	0.90
Ca	44	2	He	24169	0.01
V	51	2	He	42322	0.00
Cr	52	2	He	39823	0.01
Mn	55	2	He	27958	0.01
Fe	56	2	He	3348147	0.00
Co	59	2	He	50807	0.01
Ni	60	2	He	12895	0.03
Cu	63	2	He	35257	0.00
Zn	66	2	He	7935	0.11
As	75	2	He	6816	0.02
Se	78	2	He	720	1.21
B	11	1	nogas	92417	0.00
Si	28	1	nogas	1530456	0.00

Calibration Standard Report

Ca	43	1	nogas	19944	0.01
Ca	44	1	nogas	370090	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	15851707	0.00
Se	77	1	nogas	30934	0.01
Se	82	1	nogas	1470	0.30
Mo	95	1	nogas	34480	0.01
Sn	118	1	nogas	56361	0.00
Ba	137	1	nogas	27723	0.01
Sb	121	2	He	33606	0.01
P	31	1	nogas	99725	0.00
La	139	1	nogas	77	35.42

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	818145	0.86	812124	100.74	70	125	
Ge	72	1	nogas	2939914	0.26	2907263	101.12	70	125	
In	115	1	nogas	3115602	1.51	3086471	100.94	70	125	
Bi	209	1	nogas	2584507	0.86	2602272	99.32	70	125	
Ge	72	2	He	789082	0.27	778143	101.41	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:04:30-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	009CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	56279	0.00
Na	23	1	nogas	22180548	0.00
Mg	24	1	nogas	14603626	0.00
Al	27	1	nogas	208866	0.00
K	39	1	nogas	26660690	0.00
Ti	47	1	nogas	20108	0.01
V	51	1	nogas	1052655	0.00
Cr	52	1	nogas	297542	0.00
Mn	55	1	nogas	308500	0.00
Co	59	1	nogas	249472	0.00
Ni	60	1	nogas	55921	0.00
Cu	63	1	nogas	133896	0.00
Zn	66	1	nogas	41290	0.00
As	75	1	nogas	138118	0.00
Sr	88	1	nogas	366092	0.00
Ag	107	1	nogas	166291	0.00
Cd	111	1	nogas	35566	0.00
Sb	121	1	nogas	153643	0.00
Tl	205	1	nogas	285312	0.00
Pb	208	1	nogas	397989	0.00
[Pb]	206	1	nogas	98724	0.00
[Pb]	207	1	nogas	87151	0.00
Na	23	2	He	1433822	0.00
Mg	24	2	He	804097	0.00
Al	27	2	He	5301	0.06
K	39	2	He	1045099	0.00
Ca	43	2	He	2627	0.18
Ca	44	2	He	45519	0.00
V	51	2	He	73131	0.00
Cr	52	2	He	74177	0.00
Mn	55	2	He	53608	0.00
Fe	56	2	He	6448713	0.00
Co	59	2	He	98987	0.00
Ni	60	2	He	24727	0.01
Cu	63	2	He	63533	0.00
Zn	66	2	He	14723	0.03
As	75	2	He	12744	0.00
Se	78	2	He	1205	0.22
B	11	1	nogas	170630	0.00
Si	28	1	nogas	1787877	0.00

Calibration Standard Report

Ca	43	1	nogas	38142	0.01
Ca	44	1	nogas	674032	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	28154494	0.00
Se	77	1	nogas	32049	0.00
Se	82	1	nogas	2917	0.17
Mo	95	1	nogas	66871	0.00
Sn	118	1	nogas	110177	0.00
Ba	137	1	nogas	55512	0.00
Sb	121	2	He	65860	0.00
P	31	1	nogas	131664	0.00
La	139	1	nogas	110	43.73

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	810305	1.08	812124	99.78	70	125	
Ge	72	1	nogas	2908742	1.14	2907263	100.05	70	125	
In	115	1	nogas	3151052	1.33	3086471	102.09	70	125	
Bi	209	1	nogas	2609991	0.25	2602272	100.30	70	125	
Ge	72	2	He	782379	0.72	778143	100.54	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	013CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:06:30-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	009CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	574502	0.00
Na	23	1	nogas	222094930	0.00
Mg	24	1	nogas	146314795	0.00
Al	27	1	nogas	1893159	0.00
K	39	1	nogas	215245771	0.00
Ti	47	1	nogas	201117	0.00
V	51	1	nogas	3415787	0.00
Cr	52	1	nogas	2362473	0.00
Mn	55	1	nogas	3042013	0.00
Co	59	1	nogas	2508965	0.00
Ni	60	1	nogas	548676	0.00
Cu	63	1	nogas	1287805	0.00
Zn	66	1	nogas	408028	0.00
As	75	1	nogas	541822	0.00
Sr	88	1	nogas	3730018	0.00
Ag	107	1	nogas	1697602	0.00
Cd	111	1	nogas	361954	0.00
Sb	121	1	nogas	1578132	0.00
Tl	205	1	nogas	2917139	0.00
Pb	208	1	nogas	3987775	0.00
[Pb]	206	1	nogas	968006	0.00
[Pb]	207	1	nogas	867829	0.00
Na	23	2	He	14039848	0.00
Mg	24	2	He	8028674	0.00
Al	27	2	He	50019	0.00
K	39	2	He	9364167	0.00
Ca	43	2	He	27153	0.01
Ca	44	2	He	451971	0.00
V	51	2	He	653371	0.00
Cr	52	2	He	707642	0.00
Mn	55	2	He	534706	0.00
Fe	56	2	He	65225361	0.00
Co	59	2	He	983522	0.00
Ni	60	2	He	249183	0.00
Cu	63	2	He	623385	0.00
Zn	66	2	He	144170	0.00
As	75	2	He	128684	0.00
Se	78	2	He	11251	0.01
B	11	1	nogas	1631582	0.00
Si	28	1	nogas	6326797	0.00

Calibration Standard Report

Ca	43	1	nogas	385387	0.00
Ca	44	1	nogas	6262496	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	262022606	0.00
Se	77	1	nogas	47820	0.00
Se	82	1	nogas	27191	0.01
Mo	95	1	nogas	684801	0.00
Sn	118	1	nogas	1090032	0.00
Ba	137	1	nogas	554278	0.00
Sb	121	2	He	670119	0.00
P	31	1	nogas	681421	0.00
La	139	1	nogas	670	3.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	754284	0.77	812124	92.88	70	125	
Ge	72	1	nogas	2906620	1.44	2907263	99.98	70	125	
In	115	1	nogas	3032721	1.52	3086471	98.26	70	125	
Bi	209	1	nogas	2549110	1.86	2602272	97.96	70	125	
Ge	72	2	He	768383	0.50	778143	98.75	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:08:27-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	009CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1131182	0.00
Na	23	1	nogas	428579776	0.00
Mg	24	1	nogas	284042990	0.00
Al	27	1	nogas	3549198	0.00
K	39	1	nogas	416570268	0.00
Ti	47	1	nogas	394478	0.00
V	51	1	nogas	6013120	0.00
Cr	52	1	nogas	4512018	0.00
Mn	55	1	nogas	5845175	0.00
Co	59	1	nogas	4757887	0.00
Ni	60	1	nogas	1054869	0.00
Cu	63	1	nogas	2520327	0.00
Zn	66	1	nogas	787059	0.00
As	75	1	nogas	992433	0.00
Sr	88	1	nogas	7131122	0.00
Ag	107	1	nogas	3261600	0.00
Cd	111	1	nogas	704324	0.00
Sb	121	1	nogas	3127121	0.00
Tl	205	1	nogas	5685537	0.00
Pb	208	1	nogas	8052093	0.00
[Pb]	206	1	nogas	2006233	0.00
[Pb]	207	1	nogas	1769255	0.00
Na	23	2	He	27144109	0.00
Mg	24	2	He	15770547	0.00
Al	27	2	He	94694	0.00
K	39	2	He	18186081	0.00
Ca	43	2	He	53075	0.00
Ca	44	2	He	887235	0.00
V	51	2	He	1280929	0.00
Cr	52	2	He	1388645	0.00
Mn	55	2	He	1042079	0.00
Fe	56	2	He	127478861	0.00
Co	59	2	He	1956826	0.00
Ni	60	2	He	481732	0.00
Cu	63	2	He	1209662	0.00
Zn	66	2	He	282373	0.00
As	75	2	He	252440	0.00
Se	78	2	He	22186	0.01
B	11	1	nogas	3187871	0.00
Si	28	1	nogas	11118889	0.00

Calibration Standard Report

Ca	43	1	nogas	748187	0.00
Ca	44	1	nogas	12195293	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	507006911	0.00
Se	77	1	nogas	70717	0.00
Se	82	1	nogas	53623	0.00
Mo	95	1	nogas	1374235	0.00
Sn	118	1	nogas	2202314	0.00
Ba	137	1	nogas	1088060	0.00
Sb	121	2	He	1349035	0.00
P	31	1	nogas	1261687	0.00
La	139	1	nogas	1237	0.56

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	693227	0.55	812124	85.36	70	125	
Ge	72	1	nogas	2854931	1.25	2907263	98.20	70	125	
In	115	1	nogas	2939073	0.97	3086471	95.22	70	125	
Bi	209	1	nogas	2471878	2.75	2602272	94.99	70	125	
Ge	72	2	He	751483	0.19	778143	96.57	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	016_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:12:27-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	102.093	0.410	599749	0.47	100	102.1	90	110	
Na	23	1	nogas	10643.441	1.525	230841938	0.33	10000	106.4	90	110	
Mg	24	1	nogas	10642.047	0.933	152706078	0.74	10000	106.4	90	110	
Al	27	1	nogas	106.280	1.981	1964831	1.46	100	106.3	90	110	
K	39	1	nogas	10517.821	1.487	227479805	0.42	10000	105.2	90	110	
Ti	47	1	nogas	99.140	2.036	200662	0.34	100	99.1	90	110	
V	51	1	nogas	97.823	2.636	3380435	0.46	100	97.8	90	110	
Cr	52	1	nogas	102.446	0.801	2410787	1.05	100	102.4	90	110	
Mn	55	1	nogas	103.328	2.146	3117830	0.44	100	103.3	90	110	
Co	59	1	nogas	105.429	0.132	2591678	1.63	100	105.4	90	110	
Ni	60	1	nogas	105.220	2.147	572520	0.59	100	105.2	90	110	
Cu	63	1	nogas	104.167	2.889	1348689	1.36	100	104.2	90	110	
Zn	66	1	nogas	103.905	1.810	421980	0.21	100	103.9	90	110	
As	75	1	nogas	100.405	2.448	553939	0.60	100	100.4	90	110	
Sr	88	1	nogas	100.195	1.200	3685110	0.60	100	100.2	90	110	
Ag	107	1	nogas	104.418	1.688	1754271	1.19	100	104.4	90	110	
Cd	111	1	nogas	104.518	1.239	378738	0.72	100	104.5	90	110	
Sb	121	1	nogas	103.302	1.444	1653624	0.37	100	103.3	90	110	
Tl	205	1	nogas	109.173	0.893	3117668	1.42	100	109.2	90	110	
Pb	208	1	nogas	102.984	1.443	4138517	1.44	100	103.0	90	110	
U	238	1	nogas	104.878	1.201	4344447	1.41	100	104.9	90	110	
[Pb]	206	1	nogas	103.792	1.389	1033624	1.05	100	103.8	90	110	
[Pb]	207	1	nogas	98.827	0.431	870723	1.93	100	98.8	90	110	
Na	23	2	He	10399.726	1.771	14437915	1.10	10000	104.0	90	110	
Mg	24	2	He	10408.009	1.036	8362252	0.70	10000	104.1	90	110	
Al	27	2	He	102.549	1.711	50146	2.66	100	102.5	90	110	
K	39	2	He	10509.556	0.396	9664314	0.39	10000	105.1	90	110	
Ca	43	2	He	10118.328	2.359	27407	3.33	10000	101.2	90	110	
Ca	44	2	He	10278.270	1.361	464996	1.17	10000	102.8	90	110	
V	51	2	He	102.826	0.630	674389	0.81	100	102.8	90	110	
Cr	52	2	He	102.129	0.547	724186	0.49	100	102.1	90	110	
Mn	55	2	He	103.034	1.175	548421	0.24	100	103.0	90	110	
Fe	56	2	He	10195.375	1.377	66280984	1.03	10000	102.0	90	110	
Co	59	2	He	101.154	1.862	1005756	1.02	100	101.2	90	110	
Ni	60	2	He	104.595	1.128	257643	0.47	100	104.6	90	110	
Cu	63	2	He	104.416	1.048	645921	0.06	100	104.4	90	110	
Zn	66	2	He	103.762	0.856	149607	0.21	100	103.8	90	110	
As	75	2	He	104.689	0.863	134748	0.45	100	104.7	90	110	
Se	78	2	He	102.075	1.210	11564	0.93	100	102.1	90	110	
B	11	1	nogas	500.201	0.792	1663338	0.33	500	100.0	90	110	
Si	28	1	nogas	5254.164	2.085	6584539	0.03	5000	105.1	90	110	
Ca	43	1	nogas	10407.887	2.000	400491	0.42	10000	104.1	90	110	
Ca	44	1	nogas	10309.914	1.703	6481493	0.73	10000	103.1	90	110	
Fe	56	1	nogas	10267.624	2.736	268835481	1.02	10000	102.7	90	110	
Se	77	1	nogas	78.887	4.931	45109	1.51	100	78.9	90	110	ICV Main CR1 Failed
Se	82	1	nogas	103.101	2.391	28403	2.34	100	103.1	90	110	
Mo	95	1	nogas	100.627	1.345	706224	1.28	100	100.6	90	110	
Sn	118	1	nogas	97.592	0.531	1098650	1.02	100	97.6	90	110	
Ba	137	1	nogas	104.481	2.099	584046	1.51	100	104.5	90	110	
Sb	121	2	He	101.641	1.164	695180	0.58	100	101.6	90	110	
Li	7	1	nogas	103.762	1.138	1519561	1.30	100	103.8	90	110	
P	31	1	nogas	509.708	1.846	693998	0.18	500	101.9	90	110	
La	139	1	nogas	78.471	10.400	770	3.90	100	78.5	90	110	ICV Main CR1 Failed
Au	197	1	nogas	244.436	43.757	30	33.33	100	244.4	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	729886	0.62	812124	89.87	70	125	
Ge	72	1	nogas	2928130	1.74	2907263	100.72	70	125	
In	115	1	nogas	3027128	0.62	3086471	98.08	70	125	
Bi	209	1	nogas	2485018	1.85	2602272	95.49	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	766364	0.99	778143	98.49	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	017SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:14:26-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	009CALB.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	1.789	1.789	1.81	12084	0.01	2000	
Na	23	1	nogas	203.308	203.308	0.48	4824758	0.00	200000	
Mg	24	1	nogas	207.670	207.670	1.98	3057542	0.01	200000	
Al	27	1	nogas	1.742	1.742	5.36	66486	0.00	2000	
K	39	1	nogas	202.226	202.226	4.39	10194743	0.00	200000	
Ti	47	1	nogas	2.068	2.068	6.36	4454	0.05	2000	
V	51	1	nogas	2.316	2.316	21.21	782022	0.00	2000	
Cr	52	1	nogas	1.626	1.626	6.09	107747	0.00	2000	
Mn	55	1	nogas	2.042	2.042	2.52	81434	0.00	2000	
Co	59	1	nogas	2.073	2.073	0.58	52211	0.00	2000	
Ni	60	1	nogas	1.761	1.761	6.17	12261	0.01	2000	
Cu	63	1	nogas	2.012	2.012	2.18	30509	0.01	2000	
Zn	66	1	nogas	1.785	1.785	8.36	10496	0.02	2000	
As	75	1	nogas	-1.778	-1.778	-22.10	82370	0.00	2000	
Sr	88	1	nogas	1.976	1.976	1.87	76369	0.00	2000	
Ag	107	1	nogas	1.985	1.985	2.17	34467	0.01	2000	
Cd	111	1	nogas	1.887	1.887	4.40	7055	0.03	2000	
Sb	121	1	nogas	1.989	1.989	1.53	33105	0.01	2000	
Tl	205	1	nogas	2.245	2.245	3.62	67091	0.00	2000	
Pb	208	1	nogas	2.079	2.079	1.08	84390	0.00	2000	
U	238	1	nogas	2.027	2.027	0.37	87120	0.00	2000	
[Pb]	206	1	nogas	1.989	1.989	3.49	20737	0.01	2000	
[Pb]	207	1	nogas	2.012	2.012	2.79	18577	0.01	2000	
Na	23	2	He	206.056	206.056	0.43	319567	0.06	200000	
Mg	24	2	He	202.631	202.631	0.06	165787	0.12	200000	
Al	27	2	He	1.844	1.844	12.26	1700	0.11	2000	
K	39	2	He	203.686	203.686	1.06	322038	0.06	200000	
Ca	43	2	He	155.292	155.292	9.10	473	32.81	200000	
Ca	44	2	He	197.772	197.772	2.33	10040	1.97	200000	
V	51	2	He	2.152	2.152	0.70	22277	0.01	2000	
Cr	52	2	He	2.002	2.002	0.79	18359	0.01	2000	
Mn	55	2	He	2.020	2.020	1.55	12508	0.02	2000	
Fe	56	2	He	196.662	196.662	1.27	1308193	0.02	200000	
Co	59	2	He	2.080	2.080	3.99	20962	0.01	2000	
Ni	60	2	He	1.962	1.962	5.00	5267	0.04	2000	
Cu	63	2	He	1.964	1.964	3.63	14679	0.01	2000	
Zn	66	2	He	2.336	2.336	8.55	4107	0.06	2000	
As	75	2	He	1.974	1.974	0.97	2807	0.07	2000	
Se	78	2	He	2.312	2.312	6.56	355	0.65	2000	
B	11	1	nogas	15.217	15.217	6.46	67652	0.02	2000	
Si	28	1	nogas	136.035	136.035	35.02	1377374	0.01	2000	
Ca	43	1	nogas	205.748	205.748	9.63	8746	2.35	200000	
Ca	44	1	nogas	188.458	188.458	2.28	181300	0.10	200000	
Fe	56	1	nogas	190.197	190.197	4.40	7958281	0.00	200000	

Sample Report

Se	77	1	nogas	-14.626	-14.626	-24.72	24801	-0.06	2000	
Se	82	1	nogas	1.796	1.796	7.78	683	0.26	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	2.063	2.063	3.04	15000	0.01	2000	
Sn	118	1	nogas	2.020	2.020	5.24	25576	0.01	2000	
Ba	137	1	nogas	1.871	1.871	1.63	11321	0.02	2000	
Sb	121	2	He	2.000	2.000	2.98	14133	0.01	2000	
La	139	1	nogas	-129.580	-129.580	-5.87	120	-107.98	2000	
Au	197	1	nogas	103.594	103.594	282.00	17	621.56	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	825396	0.84	812124	101.63	70	125	
Ge	72	1	nogas	2973308	1.51	2907263	102.27	70	125	
In	115	1	nogas	3117023	1.73	3086471	100.99	70	125	
Bi	209	1	nogas	2571837	1.94	2602272	98.83	70	125	
Ge	72	2	He	773138	0.49	778143	99.36	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	018LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:16:25-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	4.538	0.947	29055	0.32	5	90.8	70	130	
Na	23	1	nogas	492.732	1.302	11408439	0.20	500	98.5	70	130	
Mg	24	1	nogas	496.706	1.683	7410440	0.49	500	99.3	70	130	
Al	27	1	nogas	4.500	1.075	117454	1.49	5	90.0	70	130	
K	39	1	nogas	498.175	2.882	16540415	0.72	500	99.6	70	130	
Ti	47	1	nogas	4.758	5.208	9979	4.41	5	95.2	70	130	
V	51	1	nogas	8.586	25.793	957355	7.82	5	171.7	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.645	3.490	177939	0.20	5	92.9	70	130	
Mn	55	1	nogas	4.795	2.336	165363	0.21	5	95.9	70	130	
Co	59	1	nogas	5.055	0.803	126708	1.80	5	101.1	70	130	
Ni	60	1	nogas	4.771	1.876	28846	2.55	5	95.4	70	130	
Cu	63	1	nogas	5.307	2.488	73750	0.33	5	106.1	70	130	
Zn	66	1	nogas	4.601	1.780	22047	0.97	5	92.0	70	130	
As	75	1	nogas	3.175	6.896	105720	1.63	5	63.5	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.959	1.303	187786	1.22	5	99.2	70	130	
Ag	107	1	nogas	4.993	0.833	85850	1.44	5	99.9	70	130	
Cd	111	1	nogas	4.705	5.368	17903	5.29	5	94.1	70	130	
Sb	121	1	nogas	4.806	2.282	78917	0.44	5	96.1	70	130	
Tl	205	1	nogas	4.842	2.052	146568	1.36	5	96.8	70	130	
Pb	208	1	nogas	5.081	1.244	205018	1.24	5	101.6	70	130	
U	238	1	nogas	4.848	0.681	212091	1.37	5	97.0	70	130	
[Pb]	206	1	nogas	4.828	1.739	50973	2.24	5	96.6	70	130	
[Pb]	207	1	nogas	4.808	2.045	44919	2.20	5	96.2	70	130	
Na	23	2	He	509.178	0.479	742263	0.89	500	101.8	70	130	
Mg	24	2	He	503.604	0.548	409186	1.32	500	100.7	70	130	
Al	27	2	He	4.702	4.787	3084	3.15	5	94.0	70	130	
K	39	2	He	509.147	0.351	598938	0.27	500	101.8	70	130	
Ca	43	2	He	442.855	7.480	1257	8.58	500	88.6	70	130	
Ca	44	2	He	495.532	2.466	23568	1.96	500	99.1	70	130	
V	51	2	He	5.092	1.914	41438	0.44	5	101.8	70	130	
Cr	52	2	He	4.901	2.181	38934	2.78	5	98.0	70	130	
Mn	55	2	He	4.793	1.201	27314	0.22	5	95.9	70	130	
Fe	56	2	He	503.182	0.608	3313770	0.76	500	100.6	70	130	
Co	59	2	He	4.977	1.049	49958	0.97	5	99.5	70	130	
Ni	60	2	He	4.939	2.708	12638	2.14	5	98.8	70	130	
Cu	63	2	He	5.311	2.554	35438	1.04	5	106.2	70	130	
Zn	66	2	He	4.939	3.554	7865	2.97	5	98.8	70	130	
As	75	2	He	4.829	1.382	6500	2.58	5	96.6	70	130	
Se	78	2	He	5.077	7.041	667	6.17	5	101.5	70	130	
B	11	1	nogas	24.818	2.051	102920	1.29	25	99.3	70	130	
Si	28	1	nogas	306.229	19.049	1554311	1.64	25	1224.9	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	495.536	3.650	20064	1.57	500	99.1	70	130	
Ca	44	1	nogas	482.942	2.113	367755	0.72	500	96.6	70	130	
Fe	56	1	nogas	483.646	2.271	15688541	0.99	500	96.7	70	130	
Se	77	1	nogas	-1.784	-108.634	27695	1.03	5	-35.7	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.000	17.139	1573	13.84	5	100.0	70	130	
Mo	95	1	nogas	4.864	0.896	34974	1.36	5	97.3	70	130	
Sn	118	1	nogas	4.639	3.215	56939	0.56	5	92.8	70	130	
Ba	137	1	nogas	4.777	2.807	28561	1.37	5	95.5	70	130	
Sb	121	2	He	4.858	1.625	33799	1.22	5	97.2	70	130	
Li	7	1	nogas	4.598	0.912	142090	0.30	5	92.0	70	130	
P	31	1	nogas	24.250	6.025	99684	0.91	25	97.0	70	130	
La	139	1	nogas	-136.270	-5.796	100	26.46	5	-2725.4	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	128.898	198.690	20	132.29	5	2578.0	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	835943	0.74	812124	102.93	70	125	
Ge	72	1	nogas	2975604	2.22	2907263	102.35	70	125	
In	115	1	nogas	3177017	2.52	3086471	102.93	70	125	
Bi	209	1	nogas	2621668	0.70	2602272	100.75	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	772165	1.35	778143	99.23	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	019_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:18:23-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	0.013	19.9	283	5.4	1	
Na	23	1	nogas	8.971	4.0	538803	1.7	100	
Mg	24	1	nogas	2.345	5.9	61909	3.0	100	
Al	27	1	nogas	3.006	5.8	89663	2.5	5	
K	39	1	nogas	2.429	187.4	5909975	0.8	100	
Ti	47	1	nogas	-0.019	-118.4	167	28.4	2.5	
V	51	1	nogas	1.104	49.9	747511	3.3	2.5	
Cr	52	1	nogas	-0.345	-10.9	61923	0.2	2.5	
Mn	55	1	nogas	0.347	4.8	29747	0.4	2.5	
Co	59	1	nogas	0.002	170.1	510	15.3	2.5	
Ni	60	1	nogas	-0.286	-3.6	1003	6.1	2.5	
Cu	63	1	nogas	0.009	206.2	4247	6.7	1	
Zn	66	1	nogas	0.444	17.6	5004	5.1	2.5	
As	75	1	nogas	-2.799	-25.6	77446	3.7	2.5	
Sr	88	1	nogas	0.102	4.5	6405	3.2	2.5	
Ag	107	1	nogas	-0.023	-11.1	230	19.9	2.5	
Cd	111	1	nogas	0.003	116.5	23	49.5	1	
Sb	121	1	nogas	0.011	64.1	957	11.0	2.5	
Tl	205	1	nogas	0.038	30.3	1873	19.5	1	
Pb	208	1	nogas	0.011	30.5	1300	10.0	2.5	
U	238	1	nogas	0.006	27.6	477	17.1	2.5	
[Pb]	206	1	nogas	0.006	21.9	313	3.7	2.5	
[Pb]	207	1	nogas	0.002	146.5	257	13.7	2.5	
Na	23	2	He	8.329	3.7	43192	1.8	100	
Mg	24	2	He	2.236	8.1	3377	3.7	100	
Al	27	2	He	3.041	10.5	2280	6.4	5	
K	39	2	He	3.835	70.2	140873	1.7	100	
Ca	43	2	He	22.086	27.3	110	15.7	100	
Ca	44	2	He	28.795	10.3	2344	5.8	100	
V	51	2	He	0.210	5.3	9579	1.7	2.5	
Cr	52	2	He	0.004	1621.8	4144	9.9	2.5	
Mn	55	2	He	0.353	7.6	3584	4.9	2.5	
Fe	56	2	He	-0.068	-30.0	18253	1.7	100	
Co	59	2	He	0.003	131.9	130	33.5	2.5	
Ni	60	2	He	0.005	903.6	413	28.0	2.5	
Cu	63	2	He	-0.078	-19.1	1983	4.2	1	
Zn	66	2	He	0.727	4.5	1777	2.0	2.5	
As	75	2	He	-0.006	-497.0	241	15.2	2.5	
Se	78	2	He	0.420	50.9	140	16.5	1	
B	11	1	nogas	1.362	5.2	18876	1.9	10	
Si	28	1	nogas	99.231	21.0	1337484	2.9	5	ICB Main CR1 Failed
Ca	43	1	nogas	31.850	7.6	1967	5.8	100	
Ca	44	1	nogas	22.723	16.9	76366	2.0	100	
Fe	56	1	nogas	-6.930	-27.8	2770209	0.7	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-11.625	-31.4	25425	2.4	2.5	
Se	82	1	nogas	-0.205	-99.9	127	43.5	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.025	47.5	470	16.9	2.5	
Sn	118	1	nogas	0.220	5.6	4767	2.6	5	
Ba	137	1	nogas	0.038	17.1	777	5.4	2.5	
Sb	121	2	He	-0.005	-82.8	303	9.5	2.5	
P	31	1	nogas	0.448	135.5	69852	0.6	10	
La	139	1	nogas	123.424	32.1	937	12.5	2.5	ICB Main CR1 Failed
Au	197	1	nogas	32.166	523.6	10	173.2	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	837093	0.56	812124	103.07	70	125	
Ge	72	1	nogas	2968991	1.30	2907263	102.12	70	125	
In	115	1	nogas	3115064	1.72	3086471	100.93	70	125	
Bi	209	1	nogas	2601108	1.10	2602272	99.96	70	125	
Ge	72	2	He	772808	0.96	778143	99.31	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	021ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:29:49-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	-0.016	-34.8	83	38.6	0	ICSA Main CR1 Failed
Na	23	1	nogas	103573.716	1.4	2086119980	0.7	0	
Mg	24	1	nogas	101672.353	0.4	1356525830	1.7	0	
Al	27	1	nogas	96087.031	1.2	1626588936	1.2	0	
K	39	1	nogas	101146.779	1.1	1991801845	1.2	0	
Ti	47	1	nogas	2007.535	1.1	3782428	1.2	0	
V	51	1	nogas	3.834	24.9	756165	3.2	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.991	5.4	85341	1.1	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.634	4.3	35354	2.3	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.549	2.8	12988	2.9	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.476	0.4	9816	0.1	0	ICSA Main CR1 Failed
Cu	63	1	nogas	1.816	13.3	25645	11.4	0	ICSA Main CR1 Failed
Zn	66	1	nogas	2.035	3.5	10577	2.7	0	ICSA Main CR1 Failed
As	75	1	nogas	2.874	26.7	95625	3.5	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.832	2.2	30857	1.9	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.025	54.4	967	22.1	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.505	3.4	8195	3.0	0	
Sb	121	1	nogas	0.154	10.3	3014	8.0	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.002	236.1	697	19.1	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.070	8.8	3694	6.8	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.086	13.1	997	11.3	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.078	12.2	833	10.2	0	ICSA Main CR1 Failed
Na	23	2	He	103108.802	0.7	134203071	0.1	0	
Mg	24	2	He	100597.744	1.0	75906607	0.6	0	
Al	27	2	He	96049.488	0.7	43409251	0.3	0	
K	39	2	He	98192.643	0.5	89149079	0.5	0	
Ca	43	2	He	97921.202	0.6	248701	1.3	0	
Ca	44	2	He	100277.958	1.5	4252772	0.8	0	
V	51	2	He	0.526	4.8	10843	1.7	0	ICSA Main CR1 Failed
Cr	52	2	He	0.270	7.0	5621	1.7	0	ICSA Main CR1 Failed
Mn	55	2	He	0.526	8.9	4197	5.8	0	ICSA Main CR1 Failed
Fe	56	2	He	100794.287	1.2	615357631	1.0	0	
Co	59	2	He	0.288	3.9	2777	3.4	0	ICSA Main CR1 Failed
Ni	60	2	He	0.518	8.6	1570	7.2	0	ICSA Main CR1 Failed
Cu	63	2	He	0.388	9.6	4544	4.9	0	ICSA Main CR1 Failed
Zn	66	2	He	0.902	17.4	1890	10.6	0	ICSA Main CR1 Failed
As	75	2	He	0.167	18.5	433	8.0	0	ICSA Main CR1 Failed
Se	78	2	He	0.295	7.2	117	2.0	0	ICSA Main CR1 Failed
B	11	1	nogas	0.282	34.4	13168	2.6	0	ICSA Main CR1 Failed
Si	28	1	nogas	560.553	6.1	1667729	2.1	0	
Ca	43	1	nogas	100632.829	1.3	3602331	1.5	0	
Ca	44	1	nogas	100499.839	1.0	58368096	1.1	0	
Fe	56	1	nogas	100337.525	1.4	2424216988	1.3	0	
Se	77	1	nogas	27.850	14.6	31504	2.9	0	
Se	82	1	nogas	0.082	220.8	190	24.1	0	ICSA Main CR1 Failed
Mo	95	1	nogas	1959.076	1.2	12804466	1.3	0	
Sn	118	1	nogas	0.084	183.9	2796	56.2	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.174	26.9	1367	16.9	0	ICSA Main CR1 Failed
Sb	121	2	He	0.148	25.9	1267	19.7	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	101566.910	0.6	116224868	0.8	0	
La	139	1	nogas	-31.253	-53.1	383	12.3	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	732294	0.57	812124	90.17	70	125	
Ge	72	1	nogas	2727673	0.21	2907263	93.82	70	125	
In	115	1	nogas	2728929	0.39	3086471	88.42	70	125	
Bi	209	1	nogas	2267504	1.06	2602272	87.14	70	125	
Ge	72	2	He	719842	0.65	778143	92.51	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	022ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:31:53-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	105.628	1.054	644129	1.00	100	105.6	80	120	
Na	23	1	nogas	114350.400	1.529	2439328388	0.40	100	114350.4	80	120	
Mg	24	1	nogas	111679.794	2.107	1577892469	1.17	100	111679.8	80	120	
Al	27	1	nogas	94231.595	1.023	1714596721	0.68	100	94231.6	80	120	ICSB Main CR1 Failed
K	39	1	nogas	110559.793	1.178	2339610719	0.83	100	110559.8	80	120	
Ti	47	1	nogas	2089.853	0.874	4232425	1.16	100	2089.9	80	120	
V	51	1	nogas	124.368	1.477	4112205	0.96	100	124.4	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	113.895	1.569	2676120	1.19	100	113.9	80	120	
Mn	55	1	nogas	111.032	2.437	3353932	2.18	100	111.0	80	120	
Co	59	1	nogas	111.605	2.337	2746960	2.03	100	111.6	80	120	
Ni	60	1	nogas	111.206	1.634	605861	1.27	100	111.2	80	120	
Cu	63	1	nogas	114.090	1.158	1479212	1.47	100	114.1	80	120	
Zn	66	1	nogas	113.827	1.182	462665	0.83	100	113.8	80	120	
As	75	1	nogas	120.828	2.321	649406	1.68	100	120.8	80	120	
Sr	88	1	nogas	111.564	1.353	4108940	1.47	100	111.6	80	120	
Ag	107	1	nogas	106.491	1.741	1791622	1.44	100	106.5	80	120	
Cd	111	1	nogas	118.670	2.152	408010	1.44	100	118.7	80	120	
Sb	121	1	nogas	111.288	0.876	1783989	0.56	100	111.3	80	120	
Tl	205	1	nogas	118.657	1.838	3181458	0.30	100	118.7	80	120	
Pb	208	1	nogas	109.176	0.178	4387318	0.18	100	109.2	80	120	
U	238	1	nogas	125.986	1.625	4900337	0.92	100	126.0	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	114.474	1.839	1070410	0.32	100	114.5	80	120	
[Pb]	207	1	nogas	114.291	1.616	945378	0.21	100	114.3	80	120	
Na	23	2	He	114022.172	0.720	154885934	0.59	100	114022.2	80	120	
Mg	24	2	He	111246.033	0.822	87607832	0.67	100	111246.0	80	120	
Al	27	2	He	93936.172	0.192	44308758	0.40	100	93936.2	80	120	ICSB Main CR1 Failed
K	39	2	He	112168.826	0.346	101818495	0.35	100	112168.8	80	120	ICSB Main CR1 Failed
Ca	43	2	He	108781.483	1.673	288326	1.55	100	108781.5	80	120	
Ca	44	2	He	110219.415	0.468	4878655	0.67	100	110219.4	80	120	
V	51	2	He	115.658	0.491	742623	0.57	100	115.7	80	120	
Cr	52	2	He	113.648	0.564	789571	0.75	100	113.6	80	120	
Mn	55	2	He	114.861	1.454	599195	1.64	100	114.9	80	120	
Fe	56	2	He	111602.144	0.104	711101989	0.29	100	111602.1	80	120	
Co	59	2	He	112.742	0.762	1099004	0.90	100	112.7	80	120	
Ni	60	2	He	112.133	0.460	270759	0.57	100	112.1	80	120	
Cu	63	2	He	113.493	0.237	688081	0.04	100	113.5	80	120	
Zn	66	2	He	116.008	0.603	163893	0.45	100	116.0	80	120	
As	75	2	He	116.875	0.555	147447	0.48	100	116.9	80	120	
Se	78	2	He	117.932	2.231	13083	2.17	100	117.9	80	120	
B	11	1	nogas	532.636	1.720	1838065	2.57	100	532.6	80	120	
Si	28	1	nogas	6122.483	0.198	7482799	0.50	100	6122.5	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	108021.025	1.951	4156070	1.60	100	108021.0	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	109201.221	2.197	68162501	1.93	100	109201.2	80	120	
Fe	56	1	nogas	108222.457	0.848	2810279396	0.53	100	108222.5	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	173.057	4.568	66043	2.30	100	173.1	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	116.718	3.621	32172	3.25	100	116.7	80	120	
Mo	95	1	nogas	2041.264	0.918	14340620	1.00	100	2041.3	80	120	
Sn	118	1	nogas	113.757	1.330	1214848	1.82	100	113.8	80	120	
Ba	137	1	nogas	117.703	3.548	624035	0.61	100	117.7	80	120	
Sb	121	2	He	112.771	1.235	756127	1.39	100	112.8	80	120	
La	139	1	nogas	122.506	36.636	860	13.41	100	122.5	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	757709	1.31	812124	93.30	70	125	
Ge	72	1	nogas	2931951	0.36	2907263	100.85	70	125	
In	115	1	nogas	2873270	3.17	3086471	93.09	70	125	
Bi	209	1	nogas	2333565	1.83	2602272	89.67	70	125	
Ge	72	2	He	751264	0.22	778143	96.55	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	029_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:49:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	92.821	0.458	595919	0.03	100	92.8	90	110	
Na	23	1	nogas	10549.124	1.209	236856914	0.85	10000	105.5	90	110	
Mg	24	1	nogas	10467.938	2.854	155458445	1.28	10000	104.7	90	110	
Al	27	1	nogas	103.343	5.506	2000543	4.56	100	103.3	90	110	
K	39	1	nogas	10175.769	1.949	230575322	0.75	10000	101.8	90	110	
Ti	47	1	nogas	101.214	1.828	214456	0.73	100	101.2	90	110	
V	51	1	nogas	101.763	3.249	3651445	1.55	100	101.8	90	110	
Cr	52	1	nogas	100.722	0.568	2482543	1.47	100	100.7	90	110	
Mn	55	1	nogas	102.391	2.389	3234426	1.22	100	102.4	90	110	
Co	59	1	nogas	101.443	1.879	2609995	0.80	100	101.4	90	110	
Ni	60	1	nogas	101.280	2.080	577009	1.15	100	101.3	90	110	
Cu	63	1	nogas	102.710	4.340	1392056	3.18	100	102.7	90	110	
Zn	66	1	nogas	101.607	1.633	432057	0.48	100	101.6	90	110	
As	75	1	nogas	98.739	1.923	571849	1.03	100	98.7	90	110	
Sr	88	1	nogas	101.754	2.278	3917374	1.38	100	101.8	90	110	
Ag	107	1	nogas	102.298	1.976	1799043	0.86	100	102.3	90	110	
Cd	111	1	nogas	99.663	1.359	378494	0.98	100	99.7	90	110	
Sb	121	1	nogas	98.771	1.137	1655328	1.56	100	98.8	90	110	
Tl	205	1	nogas	102.436	1.870	3036733	1.22	100	102.4	90	110	
Pb	208	1	nogas	103.805	2.030	4171504	2.03	100	103.8	90	110	
U	238	1	nogas	108.060	1.222	4647063	0.97	100	108.1	90	110	
[Pb]	206	1	nogas	99.240	3.638	1025872	2.65	100	99.2	90	110	
[Pb]	207	1	nogas	99.218	2.536	907340	1.57	100	99.2	90	110	
Na	23	2	He	10209.556	0.288	14454322	0.24	10000	102.1	90	110	
Mg	24	2	He	10074.929	0.727	8254074	0.53	10000	100.7	90	110	
Al	27	2	He	101.397	1.681	50561	1.66	100	101.4	90	110	
K	39	2	He	10474.189	0.620	9632255	0.61	10000	104.7	90	110	
Ca	43	2	He	10055.946	2.107	27767	1.58	10000	100.6	90	110	
Ca	44	2	He	10126.119	0.408	467151	0.43	10000	101.3	90	110	
V	51	2	He	100.792	0.546	674207	0.02	100	100.8	90	110	
Cr	52	2	He	100.914	1.091	729695	0.86	100	100.9	90	110	
Mn	55	2	He	101.529	0.556	551100	0.80	100	101.5	90	110	
Fe	56	2	He	10178.084	1.896	67472252	1.86	10000	101.8	90	110	
Co	59	2	He	101.336	1.030	1027470	0.86	100	101.3	90	110	
Ni	60	2	He	102.289	0.219	256943	0.74	100	102.3	90	110	
Cu	63	2	He	102.099	0.197	644106	0.57	100	102.1	90	110	
Zn	66	2	He	101.204	0.814	148817	1.31	100	101.2	90	110	
As	75	2	He	100.648	0.341	132109	0.56	100	100.6	90	110	
Se	78	2	He	98.456	0.970	11377	1.24	100	98.5	90	110	
B	11	1	nogas	460.468	0.723	1674457	0.53	500	92.1	90	110	
Si	28	1	nogas	5055.418	1.812	6680718	1.00	5000	101.1	90	110	
Ca	43	1	nogas	10193.039	1.925	410619	0.93	10000	101.9	90	110	
Ca	44	1	nogas	10108.624	1.580	6653777	0.43	10000	101.1	90	110	
Fe	56	1	nogas	10180.605	1.417	279105556	0.29	10000	101.8	90	110	
Se	77	1	nogas	80.456	7.486	47579	1.88	100	80.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.487	2.779	28980	2.03	100	100.5	90	110	
Mo	95	1	nogas	99.851	2.595	733478	1.44	100	99.9	90	110	
Sn	118	1	nogas	98.473	0.832	1161756	0.53	100	98.5	90	110	
Ba	137	1	nogas	100.333	1.040	587848	0.28	100	100.3	90	110	
Sb	121	2	He	98.447	0.994	686625	1.18	100	98.4	90	110	
Li	7	1	nogas	96.293	2.858	1545856	2.47	100	96.3	90	110	
P	31	1	nogas	503.510	1.485	718554	0.18	500	100.7	90	110	
La	139	1	nogas	33.785	79.332	660	13.89	100	33.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	165.551	68.189	23	49.49	100	165.6	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	797650	0.47	812124	98.22	70	125	
Ge	72	1	nogas	3065069	1.16	2907263	105.43	70	125	
In	115	1	nogas	3172693	1.31	3086471	102.79	70	125	
Bi	209	1	nogas	2579737	0.98	2602272	99.13	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	781427	0.52	778143	100.42	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	030_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T12:51:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	0.017	82.2	333	29.6	1	
Na	23	1	nogas	22.093	3.5	885171	1.8	100	
Mg	24	1	nogas	3.700	12.5	87447	7.9	100	
Al	27	1	nogas	3.158	2.6	97840	1.5	5	
K	39	1	nogas	24.350	25.4	6749214	1.7	100	
Ti	47	1	nogas	0.048	39.0	320	12.5	2.5	
V	51	1	nogas	-0.565	-36.0	741806	0.5	2.5	
Cr	52	1	nogas	-0.623	-7.2	58706	1.7	2.5	
Mn	55	1	nogas	0.430	8.8	34165	3.6	2.5	
Co	59	1	nogas	0.014	31.5	870	13.8	2.5	
Ni	60	1	nogas	-0.269	-9.4	1160	12.2	2.5	
Cu	63	1	nogas	0.032	32.9	4814	2.6	2	
Zn	66	1	nogas	0.511	2.9	5588	1.4	2.5	
As	75	1	nogas	-4.866	-10.2	71692	3.5	2.5	
Sr	88	1	nogas	0.126	9.0	7718	6.1	2.5	
Ag	107	1	nogas	0.002	218.4	700	12.7	2.5	
Cd	111	1	nogas	0.015	60.8	73	47.9	1	
Sb	121	1	nogas	0.251	10.3	5138	8.7	2.5	
Tl	205	1	nogas	0.271	55.0	9120	50.6	1	
Pb	208	1	nogas	0.029	29.2	2040	16.7	2.5	
U	238	1	nogas	0.043	40.6	2127	36.8	2.5	
[Pb]	206	1	nogas	0.027	42.8	550	22.8	2.5	
[Pb]	207	1	nogas	0.024	39.6	473	18.9	2.5	
Na	23	2	He	22.428	2.7	64810	0.9	100	
Mg	24	2	He	3.897	6.4	4867	4.2	100	
Al	27	2	He	3.153	8.8	2407	6.4	5	
K	39	2	He	19.555	16.9	155124	1.9	100	
Ca	43	2	He	17.352	61.0	100	30.0	100	
Ca	44	2	He	31.155	12.5	2527	7.9	100	
V	51	2	He	0.188	10.6	9724	0.7	2.5	
Cr	52	2	He	0.021	97.3	4401	4.0	2.5	
Mn	55	2	He	0.342	3.8	3630	2.7	2.5	
Fe	56	2	He	1.893	3.7	32051	0.7	100	
Co	59	2	He	0.016	19.6	260	11.5	2.5	
Ni	60	2	He	0.004	1092.0	423	27.4	2.5	
Cu	63	2	He	-0.096	-24.5	1927	8.3	2	
Zn	66	2	He	0.791	4.9	1927	3.6	2.5	
As	75	2	He	0.027	43.3	292	5.1	2.5	
Se	78	2	He	0.324	51.2	133	15.2	2	
B	11	1	nogas	3.582	12.3	28835	5.8	10	
Si	28	1	nogas	90.470	41.2	1405419	3.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	31.767	5.0	2077	2.9	100	
Ca	44	1	nogas	8.805	21.4	71520	1.9	100	
Fe	56	1	nogas	4.326	30.6	3244272	1.1	100	
Se	77	1	nogas	-27.314	-7.5	23182	2.5	2.5	
Se	82	1	nogas	0.086	3.3	220	0.0	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.178	21.4	1650	17.3	2.5	
Sn	118	1	nogas	0.409	20.4	7362	12.7	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.041	43.6	840	11.9	2.5	
Sb	121	2	He	0.212	7.7	1857	5.8	2.5	
P	31	1	nogas	-0.669	-221.9	72438	2.6	10	
La	139	1	nogas	93.035	13.2	890	5.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	93.044	116.7	17	69.3	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	876253	0.49	812124	107.90	70	125	
Ge	72	1	nogas	3141308	0.38	2907263	108.05	70	125	
In	115	1	nogas	3301818	1.16	3086471	106.98	70	125	
Bi	209	1	nogas	2689255	0.77	2602272	103.34	70	125	
Ge	72	2	He	796480	0.72	778143	102.36	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	039_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T13:09:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	90.156	0.280	613293	0.76	100	90.2	90	110	
Na	23	1	nogas	10449.115	1.257	252283122	0.89	10000	104.5	90	110	
Mg	24	1	nogas	10327.667	0.437	164964033	0.76	10000	103.3	90	110	
Al	27	1	nogas	103.127	0.355	2117597	1.30	100	103.1	90	110	
K	39	1	nogas	10241.594	1.807	246061364	1.98	10000	102.4	90	110	
Ti	47	1	nogas	101.960	0.805	229093	0.78	100	102.0	90	110	
V	51	1	nogas	102.275	1.573	3888124	1.82	100	102.3	90	110	
Cr	52	1	nogas	102.137	0.405	2668134	0.83	100	102.1	90	110	
Mn	55	1	nogas	103.580	0.932	3469579	0.35	100	103.6	90	110	
Co	59	1	nogas	104.474	2.282	2850143	1.38	100	104.5	90	110	
Ni	60	1	nogas	103.641	0.727	626085	0.57	100	103.6	90	110	
Cu	63	1	nogas	103.961	1.394	1494351	0.85	100	104.0	90	110	
Zn	66	1	nogas	101.530	0.724	457816	0.34	100	101.5	90	110	
As	75	1	nogas	96.989	0.996	597393	0.53	100	97.0	90	110	
Sr	88	1	nogas	104.213	1.474	4254360	0.88	100	104.2	90	110	
Ag	107	1	nogas	103.727	0.622	1934428	0.42	100	103.7	90	110	
Cd	111	1	nogas	101.019	1.938	409440	0.21	100	101.0	90	110	
Sb	121	1	nogas	103.676	1.296	1842263	1.27	100	103.7	90	110	
Tl	205	1	nogas	101.908	1.142	3344475	0.68	100	101.9	90	110	
Pb	208	1	nogas	114.936	1.810	4618731	1.81	100	114.9	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	107.487	1.943	5117131	1.96	100	107.5	90	110	
[Pb]	206	1	nogas	97.772	0.453	1119080	0.44	100	97.8	90	110	
[Pb]	207	1	nogas	97.834	0.399	990576	1.07	100	97.8	90	110	
Na	23	2	He	10381.371	0.736	15251532	0.66	10000	103.8	90	110	
Mg	24	2	He	10154.274	1.357	8632922	1.22	10000	101.5	90	110	
Al	27	2	He	99.721	1.646	51613	1.25	100	99.7	90	110	
K	39	2	He	10855.925	1.249	9978298	1.23	10000	108.6	90	110	
Ca	43	2	He	10177.888	2.784	29166	2.86	10000	101.8	90	110	
Ca	44	2	He	10134.215	0.882	485173	1.19	10000	101.3	90	110	
V	51	2	He	101.476	0.424	704339	0.34	100	101.5	90	110	
Cr	52	2	He	102.938	1.194	772322	0.95	100	102.9	90	110	
Mn	55	2	He	101.481	0.216	571622	0.25	100	101.5	90	110	
Fe	56	2	He	10223.075	0.197	70328292	0.49	10000	102.2	90	110	
Co	59	2	He	102.431	0.323	1077765	0.11	100	102.4	90	110	
Ni	60	2	He	104.984	0.567	273653	0.95	100	105.0	90	110	
Cu	63	2	He	105.289	1.866	689230	2.12	100	105.3	90	110	
Zn	66	2	He	101.151	2.348	154348	2.43	100	101.2	90	110	
As	75	2	He	99.988	0.316	136194	0.20	100	100.0	90	110	
Se	78	2	He	97.696	1.479	11715	1.07	100	97.7	90	110	
B	11	1	nogas	462.204	1.709	1780761	1.45	500	92.4	90	110	
Si	28	1	nogas	4800.158	0.739	6795064	1.42	5000	96.0	90	110	
Ca	43	1	nogas	10213.721	1.200	436331	1.43	10000	102.1	90	110	
Ca	44	1	nogas	10178.427	1.670	7103851	1.30	10000	101.8	90	110	
Fe	56	1	nogas	10225.118	1.568	297247382	1.56	10000	102.3	90	110	
Se	77	1	nogas	84.246	3.305	51389	1.11	100	84.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.221	1.757	30650	0.88	100	100.2	90	110	
Mo	95	1	nogas	102.248	1.565	796499	1.14	100	102.2	90	110	
Sn	118	1	nogas	100.102	1.699	1260383	0.89	100	100.1	90	110	
Ba	137	1	nogas	101.469	1.905	634476	0.48	100	101.5	90	110	
Sb	121	2	He	98.631	1.190	713858	1.26	100	98.6	90	110	
Li	7	1	nogas	97.590	0.978	1659045	0.47	100	97.6	90	110	
P	31	1	nogas	489.480	1.203	742830	0.81	500	97.9	90	110	
La	139	1	nogas	32.894	72.985	700	9.90	100	32.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-5.099	-2037.207	7	173.21	100	-5.1	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	845145	0.48	812124	104.07	70	125	
Ge	72	1	nogas	3249995	0.98	2907263	111.79	70	125	
In	115	1	nogas	3386628	2.10	3086471	109.72	70	125	
Bi	209	1	nogas	2855742	0.81	2602272	109.74	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	810907	0.40	778143	104.21	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	040_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T13:11:42-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	93.4	253	9.9	1	
Na	23	1	nogas	22.630	5.6	946766	2.5	100	
Mg	24	1	nogas	4.028	16.8	97497	9.8	100	
Al	27	1	nogas	3.083	3.2	101908	1.3	5	
K	39	1	nogas	7.743	28.0	6738989	1.1	100	
Ti	47	1	nogas	0.079	35.6	410	16.0	2.5	
V	51	1	nogas	-3.972	-9.8	678571	1.1	2.5	
Cr	52	1	nogas	-0.769	-8.1	58268	2.1	2.5	
Mn	55	1	nogas	0.423	8.5	35868	3.3	2.5	
Co	59	1	nogas	0.016	30.7	973	14.0	2.5	
Ni	60	1	nogas	-0.267	-8.0	1240	11.2	2.5	
Cu	63	1	nogas	0.016	141.5	4864	6.4	2	
Zn	66	1	nogas	0.534	17.0	6011	7.0	2.5	
As	75	1	nogas	-6.456	-4.7	67456	2.6	2.5	
Sr	88	1	nogas	0.132	1.8	8385	1.9	2.5	
Ag	107	1	nogas	-0.002	-269.4	653	18.1	2.5	
Cd	111	1	nogas	0.012	74.6	67	56.8	1	
Sb	121	1	nogas	0.230	11.6	5037	9.3	2.5	
Tl	205	1	nogas	0.263	53.2	9937	49.5	1	
Pb	208	1	nogas	0.035	32.2	2277	19.8	2.5	
U	238	1	nogas	0.051	42.7	2794	40.1	2.5	
[Pb]	206	1	nogas	0.028	30.9	617	17.5	2.5	
[Pb]	207	1	nogas	0.022	69.0	507	33.6	2.5	
Na	23	2	He	21.679	0.7	65853	0.1	100	
Mg	24	2	He	3.453	6.6	4646	3.9	100	
Al	27	2	He	2.929	23.5	2370	14.8	5	
K	39	2	He	11.917	30.7	148200	2.2	100	
Ca	43	2	He	19.676	35.5	110	18.2	100	
Ca	44	2	He	26.894	3.2	2404	1.9	100	
V	51	2	He	0.009	106.4	8799	0.8	2.5	
Cr	52	2	He	0.047	20.1	4744	1.8	2.5	
Mn	55	2	He	0.366	12.9	3887	7.3	2.5	
Fe	56	2	He	1.901	6.2	33180	2.4	100	
Co	59	2	He	0.015	23.3	263	14.4	2.5	
Ni	60	2	He	0.009	204.5	450	11.1	2.5	
Cu	63	2	He	-0.058	-41.4	2244	6.9	2	
Zn	66	2	He	0.734	17.9	1903	10.5	2.5	
As	75	2	He	-0.021	-88.7	236	11.0	2.5	
Se	78	2	He	0.118	167.4	113	20.8	2	
B	11	1	nogas	3.588	18.3	30658	9.4	10	
Si	28	1	nogas	-108.162	-46.7	1255397	4.2	5	
Ca	43	1	nogas	33.863	5.3	2287	2.8	100	
Ca	44	1	nogas	0.349	433.7	69636	0.8	100	
Fe	56	1	nogas	-3.079	-99.7	3212333	2.7	100	
Se	77	1	nogas	-36.982	-1.1	22080	0.5	2.5	
Se	82	1	nogas	-0.020	-909.7	200	27.8	2	
Mo	95	1	nogas	0.162	17.6	1617	13.9	2.5	
Sn	118	1	nogas	0.419	16.4	7982	10.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.042	27.1	903	7.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.178	3.9	1670	3.0	2.5	
P	31	1	nogas	-1.413	-76.6	75557	2.5	10	
La	139	1	nogas	126.034	11.1	1070	4.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	107.877	161.9	20	100.0	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	930703	0.38	812124	114.60	70	125	
Ge	72	1	nogas	3321192	0.72	2907263	114.24	70	125	
In	115	1	nogas	3524083	1.63	3086471	114.18	70	125	
Bi	209	1	nogas	2993111	1.86	2602272	115.02	70	125	
Ge	72	2	He	822959	0.34	778143	105.76	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\012
Acq Date Time	2019-01-22T13:46:35-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	0.016	52.1	290	17.2	1	
Na	23	1	nogas	67.006	13.3	1925558	7.9	100	
Mg	24	1	nogas	5.176	6.2	109898	1.6	100	
Al	27	1	nogas	2.654	3.7	92008	1.3	5	
K	39	1	nogas	-8.003	-112.1	6289332	2.3	100	
Ti	47	1	nogas	0.050	16.8	340	2.9	2.5	
V	51	1	nogas	15.343	2.6	1263394	2.6	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.348	36.0	86239	2.0	2.5	
Mn	55	1	nogas	0.271	5.1	30372	3.0	2.5	
Co	59	1	nogas	0.018	23.0	1000	9.5	2.5	
Ni	60	1	nogas	-0.210	-11.5	1570	6.7	2.5	
Cu	63	1	nogas	0.224	15.4	7805	3.3	2	
Zn	66	1	nogas	0.511	22.6	5831	5.8	2.5	
As	75	1	nogas	1.391	28.3	107417	1.7	2.5	
Sr	88	1	nogas	0.228	5.2	12244	2.0	2.5	
Ag	107	1	nogas	-0.004	-148.0	613	14.8	2.5	
Cd	111	1	nogas	0.020	44.3	103	39.1	1	
Sb	121	1	nogas	0.391	18.1	7852	12.7	2.5	
Tl	205	1	nogas	0.269	52.4	10678	49.9	1	
Pb	208	1	nogas	0.030	16.3	2093	9.5	2.5	
U	238	1	nogas	0.055	37.9	3124	36.8	2.5	
[Pb]	206	1	nogas	0.018	14.4	523	8.0	2.5	
[Pb]	207	1	nogas	0.011	17.2	407	5.1	2.5	
Na	23	2	He	59.020	1.5	123500	1.0	100	
Mg	24	2	He	5.225	2.5	6281	1.4	100	
Al	27	2	He	2.971	3.4	2434	2.5	5	
K	39	2	He	10.390	46.1	146815	3.0	100	
Ca	43	2	He	44.967	10.9	187	8.2	100	
Ca	44	2	He	35.255	6.0	2857	3.2	100	
V	51	2	He	0.787	4.7	14462	1.7	2.5	
Cr	52	2	He	0.021	22.2	4621	0.6	2.5	
Mn	55	2	He	0.338	3.8	3794	2.3	2.5	
Fe	56	2	He	2.086	1.4	35063	0.5	100	
Co	59	2	He	0.019	5.0	313	3.7	2.5	
Ni	60	2	He	0.007	145.1	453	6.4	2.5	
Cu	63	2	He	0.086	46.3	3250	8.7	2	
Zn	66	2	He	0.767	17.0	1987	9.9	2.5	
As	75	2	He	0.088	63.1	392	19.6	2.5	
Se	78	2	He	0.253	57.5	131	13.8	2	
B	11	1	nogas	8.230	10.3	42357	6.4	10	
Si	28	1	nogas	-535.124	-2.3	752290	2.5	5	
Ca	43	1	nogas	36.099	9.3	2357	5.0	100	
Ca	44	1	nogas	-20.015	-18.4	54606	2.8	100	
Fe	56	1	nogas	13.411	11.8	3655876	2.4	100	
Se	77	1	nogas	15.059	31.7	34767	5.1	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.143	107.5	247	16.4	2	
Mo	95	1	nogas	0.170	32.7	1660	23.0	2.5	
Sn	118	1	nogas	0.423	9.8	8349	8.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.038	14.3	910	5.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.332	3.3	2847	2.5	2.5	
P	31	1	nogas	11.040	24.8	91798	0.8	10	CCB Main CR1 Failed
La	139	1	nogas	98.884	8.3	1007	2.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-37.953	-123.8	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	785711	0.87	812124	96.75	70	125	
Ge	72	1	nogas	3285033	3.43	2907263	112.99	70	125	
In	115	1	nogas	3654331	1.90	3086471	118.40	70	125	
Bi	209	1	nogas	3152662	1.79	2602272	121.15	70	125	
Ge	72	2	He	837157	0.45	778143	107.58	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	052_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T13:50:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	98.709	0.975	539773	1.19	100	98.7	90	110	
Na	23	1	nogas	10113.013	1.225	223759388	0.89	10000	101.1	90	110	
Mg	24	1	nogas	10139.174	1.042	148406849	1.02	10000	101.4	90	110	
Al	27	1	nogas	97.583	1.195	1904786	0.40	100	97.6	90	110	
K	39	1	nogas	10007.309	0.651	228480763	0.49	10000	100.1	90	110	
Ti	47	1	nogas	96.356	0.947	205627	0.49	100	96.4	90	110	
V	51	1	nogas	108.892	0.826	3883374	1.41	100	108.9	90	110	
Cr	52	1	nogas	99.742	0.612	2476353	1.07	100	99.7	90	110	
Mn	55	1	nogas	102.899	1.110	3273794	1.20	100	102.9	90	110	
Co	59	1	nogas	102.396	3.110	2653339	3.05	100	102.4	90	110	
Ni	60	1	nogas	101.794	0.696	584084	1.02	100	101.8	90	110	
Cu	63	1	nogas	102.136	2.171	1394600	2.77	100	102.1	90	110	
Zn	66	1	nogas	102.504	0.366	438952	0.51	100	102.5	90	110	
As	75	1	nogas	103.043	1.526	596896	0.84	100	103.0	90	110	
Sr	88	1	nogas	104.209	2.147	4040418	1.85	100	104.2	90	110	
Ag	107	1	nogas	109.398	2.472	1937662	2.57	100	109.4	90	110	
Cd	111	1	nogas	104.755	1.376	421586	0.42	100	104.8	90	110	
Sb	121	1	nogas	109.067	0.617	1840603	0.34	100	109.1	90	110	
Tl	205	1	nogas	107.486	1.852	3592178	2.27	100	107.5	90	110	
Pb	208	1	nogas	119.756	1.109	4812386	1.11	100	119.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	103.657	1.469	5024620	0.88	100	103.7	90	110	
[Pb]	206	1	nogas	103.026	0.417	1200769	1.20	100	103.0	90	110	
[Pb]	207	1	nogas	98.423	0.571	1014704	0.97	100	98.4	90	110	
Na	23	2	He	9713.779	1.188	14242886	0.82	10000	97.1	90	110	
Mg	24	2	He	9532.940	1.651	8087734	1.30	10000	95.3	90	110	
Al	27	2	He	94.268	1.707	48736	1.37	100	94.3	90	110	
K	39	2	He	10300.270	0.997	9474597	0.98	10000	103.0	90	110	
Ca	43	2	He	9691.595	0.309	27717	0.73	10000	96.9	90	110	
Ca	44	2	He	9684.352	1.538	462693	1.13	10000	96.8	90	110	
V	51	2	He	97.969	1.682	678857	1.27	100	98.0	90	110	
Cr	52	2	He	97.041	1.048	726826	1.02	100	97.0	90	110	
Mn	55	2	He	98.714	1.238	554909	0.82	100	98.7	90	110	
Fe	56	2	He	9844.471	0.969	67581934	0.64	10000	98.4	90	110	
Co	59	2	He	98.374	1.466	1032891	1.07	100	98.4	90	110	
Ni	60	2	He	99.933	1.742	259950	1.33	100	99.9	90	110	
Cu	63	2	He	100.603	1.744	657249	1.34	100	100.6	90	110	
Zn	66	2	He	99.011	2.079	150779	1.84	100	99.0	90	110	
As	75	2	He	98.990	1.382	134554	0.98	100	99.0	90	110	
Se	78	2	He	101.014	3.005	12084	2.57	100	101.0	90	110	
B	11	1	nogas	488.088	2.075	1510997	1.53	500	97.6	90	110	
Si	28	1	nogas	4530.008	0.352	6162308	0.65	5000	90.6	90	110	
Ca	43	1	nogas	10054.778	1.526	407981	2.04	10000	100.5	90	110	
Ca	44	1	nogas	9918.505	0.981	6576933	1.84	10000	99.2	90	110	
Fe	56	1	nogas	10253.787	1.268	283117415	2.10	10000	102.5	90	110	
Se	77	1	nogas	112.016	4.155	55294	2.81	100	112.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	109.022	2.148	31648	1.27	100	109.0	90	110	
Mo	95	1	nogas	103.884	0.818	768597	0.72	100	103.9	90	110	
Sn	118	1	nogas	97.929	1.411	1224358	1.17	100	97.9	90	110	
Ba	137	1	nogas	105.299	2.164	653696	0.70	100	105.3	90	110	
Sb	121	2	He	104.043	2.127	751403	1.78	100	104.0	90	110	
Li	7	1	nogas	99.632	1.774	1360415	1.69	100	99.6	90	110	
P	31	1	nogas	475.030	1.158	686796	0.74	500	95.0	90	110	
La	139	1	nogas	137.226	4.141	1060	0.94	100	137.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	313.411	84.247	43	70.50	100	313.4	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	679397	0.54	812124	83.66	70	125	
Ge	72	1	nogas	3086633	0.88	2907263	106.17	70	125	
In	115	1	nogas	3362352	1.71	3086471	108.94	70	125	
Bi	209	1	nogas	2908007	1.53	2602272	111.75	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	809221	0.42	778143	103.99	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	063_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T14:12:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	102.066	0.414	586386	0.43	100	102.1	90	110	
Na	23	1	nogas	10531.242	0.762	256045714	0.64	10000	105.3	90	110	
Mg	24	1	nogas	9981.882	1.449	160543941	0.37	10000	99.8	90	110	
Al	27	1	nogas	98.316	1.366	2094902	0.49	100	98.3	90	110	
K	39	1	nogas	10060.376	1.688	250714556	0.12	10000	100.6	90	110	
Ti	47	1	nogas	94.698	1.559	220626	0.25	100	94.7	90	110	
V	51	1	nogas	111.889	2.079	4333498	0.86	100	111.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.476	1.352	2696671	1.82	100	99.5	90	110	
Mn	55	1	nogas	101.440	3.245	3523221	2.32	100	101.4	90	110	
Co	59	1	nogas	100.570	1.923	2844869	0.35	100	100.6	90	110	
Ni	60	1	nogas	100.781	1.617	631306	0.33	100	100.8	90	110	
Cu	63	1	nogas	103.136	0.552	1537452	1.82	100	103.1	90	110	
Zn	66	1	nogas	101.710	1.714	475513	0.77	100	101.7	90	110	
As	75	1	nogas	104.790	1.315	660976	0.66	100	104.8	90	110	
Sr	88	1	nogas	101.866	1.920	4312474	2.28	100	101.9	90	110	
Ag	107	1	nogas	104.519	3.938	2020414	2.21	100	104.5	90	110	
Cd	111	1	nogas	104.269	1.099	446860	1.46	100	104.3	90	110	
Sb	121	1	nogas	106.315	1.640	1958681	0.23	100	106.3	90	110	
Tl	205	1	nogas	105.800	2.398	3699097	0.42	100	105.8	90	110	
Pb	208	1	nogas	123.881	1.190	4978123	1.19	100	123.9	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	102.520	2.234	5200503	2.24	100	102.5	90	110	
[Pb]	206	1	nogas	101.103	1.544	1232953	0.79	100	101.1	90	110	
[Pb]	207	1	nogas	96.605	2.186	1042060	0.92	100	96.6	90	110	
Na	23	2	He	10146.160	0.559	16091310	0.64	10000	101.5	90	110	
Mg	24	2	He	9697.068	0.483	8899837	1.20	10000	97.0	90	110	
Al	27	2	He	94.413	1.813	52797	1.29	100	94.4	90	110	
K	39	2	He	11579.860	1.938	10634545	1.91	10000	115.8	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9700.128	2.997	30004	2.28	10000	97.0	90	110	
Ca	44	2	He	9951.661	0.860	514301	0.87	10000	99.5	90	110	
V	51	2	He	100.130	0.022	750364	0.75	100	100.1	90	110	
Cr	52	2	He	98.484	0.391	797866	1.12	100	98.5	90	110	
Mn	55	2	He	99.955	0.987	607772	0.29	100	100.0	90	110	
Fe	56	2	He	9927.498	0.531	73724912	1.26	10000	99.3	90	110	
Co	59	2	He	98.991	0.545	1124335	0.43	100	99.0	90	110	
Ni	60	2	He	101.263	0.181	284946	0.92	100	101.3	90	110	
Cu	63	2	He	102.454	0.445	724038	1.13	100	102.5	90	110	
Zn	66	2	He	102.309	1.010	168511	1.18	100	102.3	90	110	
As	75	2	He	103.876	0.595	152729	1.24	100	103.9	90	110	
Se	78	2	He	103.744	0.903	13424	1.54	100	103.7	90	110	
B	11	1	nogas	507.350	2.105	1649785	1.94	500	101.5	90	110	
Si	28	1	nogas	4756.246	1.462	6993534	0.62	5000	95.1	90	110	
Ca	43	1	nogas	10032.274	1.767	444352	0.07	10000	100.3	90	110	
Ca	44	1	nogas	10027.864	1.615	7257716	0.38	10000	100.3	90	110	
Fe	56	1	nogas	10011.106	1.466	301813982	0.31	10000	100.1	90	110	
Se	77	1	nogas	118.905	6.379	62099	1.38	100	118.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	109.862	2.642	34830	3.96	100	109.9	90	110	
Mo	95	1	nogas	100.198	0.877	809372	0.89	100	100.2	90	110	
Sn	118	1	nogas	96.251	1.760	1281372	1.35	100	96.3	90	110	
Ba	137	1	nogas	102.950	1.666	680580	0.64	100	102.9	90	110	
Sb	121	2	He	103.655	0.370	809822	0.69	100	103.7	90	110	
Li	7	1	nogas	104.305	2.124	1493532	1.99	100	104.3	90	110	
P	31	1	nogas	503.379	1.340	789861	0.58	500	100.7	90	110	
La	139	1	nogas	108.566	23.728	1023	10.81	100	108.6	90	110	
Au	197	1	nogas	17.945	456.231	10	100.00	100	17.9	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	713806	0.20	812124	87.89	70	125	
Ge	72	1	nogas	3370154	1.77	2907263	115.92	70	125	
In	115	1	nogas	3580484	2.27	3086471	116.01	70	125	
Bi	209	1	nogas	3043352	2.34	2602272	116.95	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	875353	0.75	778143	112.49	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	066_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T14:22:20-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	-0.010	-28.0	127	12.1	1	
Na	23	1	nogas	131.719	3.0	3391571	2.4	100	CCB Main CR1 Failed
Mg	24	1	nogas	2.624	11.1	69637	5.6	100	
Al	27	1	nogas	2.726	6.0	94483	2.1	5	
K	39	1	nogas	12.421	51.9	6846364	0.6	100	
Ti	47	1	nogas	0.043	10.0	327	4.7	2.5	
V	51	1	nogas	15.244	14.9	1273958	5.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.353	14.4	87327	1.3	2.5	
Mn	55	1	nogas	0.357	8.3	33607	1.5	2.5	
Co	59	1	nogas	0.003	236.8	593	28.8	2.5	
Ni	60	1	nogas	-0.168	-28.4	1847	17.1	2.5	
Cu	63	1	nogas	0.341	1.1	9616	2.3	2	
Zn	66	1	nogas	0.473	10.1	5731	5.3	2.5	
As	75	1	nogas	1.653	6.0	109974	1.3	2.5	
Sr	88	1	nogas	0.164	1.0	9723	2.3	2.5	
Ag	107	1	nogas	-0.021	-18.2	300	23.3	2.5	
Cd	111	1	nogas	0.006	111.2	43	70.5	1	
Sb	121	1	nogas	-0.003	-260.9	810	21.5	2.5	
Tl	205	1	nogas	-0.002	-106.4	837	6.1	1	
Pb	208	1	nogas	0.002	193.5	947	15.0	2.5	
U	238	1	nogas	0.002	103.7	360	34.1	2.5	
[Pb]	206	1	nogas	-0.004	-156.8	257	27.4	2.5	
[Pb]	207	1	nogas	-0.007	-132.8	207	48.5	2.5	
Na	23	2	He	120.631	1.4	221881	0.5	100	CCB Main CR1 Failed
Mg	24	2	He	2.448	9.1	3937	5.8	100	
Al	27	2	He	2.661	13.2	2324	7.1	5	
K	39	2	He	24.618	21.9	159713	3.1	100	
Ca	43	2	He	28.073	20.1	140	12.4	100	
Ca	44	2	He	29.116	17.8	2614	9.0	100	
V	51	2	He	0.781	3.2	14761	1.5	2.5	
Cr	52	2	He	-0.029	-53.1	4337	2.1	2.5	
Mn	55	2	He	0.308	6.3	3704	2.1	2.5	
Fe	56	2	He	0.528	3.3	24573	1.1	100	
Co	59	2	He	0.003	62.2	143	16.1	2.5	
Ni	60	2	He	-0.015	-208.9	403	21.4	2.5	
Cu	63	2	He	0.150	16.8	3770	4.6	2	
Zn	66	2	He	0.684	13.4	1903	9.0	2.5	
As	75	2	He	0.067	34.8	371	7.5	2.5	
Se	78	2	He	-0.057	-174.6	95	11.6	2	
B	11	1	nogas	0.522	33.7	14749	3.1	10	
Si	28	1	nogas	-487.042	-2.4	816059	0.6	5	
Ca	43	1	nogas	30.593	16.6	2143	10.3	100	
Ca	44	1	nogas	-23.406	-9.2	52822	1.3	100	
Fe	56	1	nogas	39.586	3.7	4464008	1.0	100	
Se	77	1	nogas	15.341	53.4	35195	5.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.233	-24.0	133	11.5	2	
Mo	95	1	nogas	0.014	84.3	443	19.7	2.5	
Sn	118	1	nogas	0.208	9.2	5494	4.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.025	85.2	837	16.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	-0.004	-286.9	347	24.5	2.5	
P	31	1	nogas	12.524	10.8	94903	0.7	10	CCB Main CR1 Failed
La	139	1	nogas	82.269	27.9	957	10.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	173.068	121.7	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	773674	1.37	812124	95.27	70	125	
Ge	72	1	nogas	3319879	1.70	2907263	114.19	70	125	
In	115	1	nogas	3700793	1.43	3086471	119.90	70	125	
Bi	209	1	nogas	3194555	1.92	2602272	122.76	70	125	
Ge	72	2	He	857092	1.49	778143	110.15	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	077_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T14:44:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	97.013	1.061	534386	0.58	100	97.0	90	110	
Na	23	1	nogas	10113.023	1.903	233938630	1.52	10000	101.1	90	110	
Mg	24	1	nogas	9941.363	1.267	152128199	0.51	10000	99.4	90	110	
Al	27	1	nogas	95.622	1.058	1988156	0.65	100	95.6	90	110	
K	39	1	nogas	9773.029	0.778	237728530	0.52	10000	97.7	90	110	
Ti	47	1	nogas	93.954	0.180	213494	0.43	100	94.0	90	110	
V	51	1	nogas	106.673	3.006	4066474	2.39	100	106.7	90	110	
Cr	52	1	nogas	97.890	1.627	2588989	1.20	100	97.9	90	110	
Mn	55	1	nogas	101.994	0.964	3455287	1.15	100	102.0	90	110	
Co	59	1	nogas	99.389	2.122	2742035	1.65	100	99.4	90	110	
Ni	60	1	nogas	99.374	1.417	607148	0.95	100	99.4	90	110	
Cu	63	1	nogas	100.591	1.356	1462327	1.13	100	100.6	90	110	
Zn	66	1	nogas	100.407	0.739	457881	0.76	100	100.4	90	110	
As	75	1	nogas	100.951	1.331	624673	0.64	100	101.0	90	110	
Sr	88	1	nogas	104.418	1.182	4310701	0.84	100	104.4	90	110	
Ag	107	1	nogas	109.608	1.346	2066981	0.97	100	109.6	90	110	
Cd	111	1	nogas	102.827	0.850	447647	0.87	100	102.8	90	110	
Sb	121	1	nogas	110.150	0.896	1979207	0.41	100	110.2	90	110	CCV Main CR1-2 Failed
Tl	205	1	nogas	107.302	0.956	3924786	1.08	100	107.3	90	110	
Pb	208	1	nogas	130.294	1.081	5235798	1.08	100	130.3	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.822	2.727	5560500	1.19	100	104.8	90	110	
[Pb]	206	1	nogas	103.088	2.177	1314795	0.15	100	103.1	90	110	
[Pb]	207	1	nogas	98.294	1.397	1109083	0.63	100	98.3	90	110	
Na	23	2	He	9899.903	0.384	14683955	0.44	10000	99.0	90	110	
Mg	24	2	He	9724.340	0.864	8346063	0.80	10000	97.2	90	110	
Al	27	2	He	93.379	0.436	48846	0.46	100	93.4	90	110	
K	39	2	He	10537.491	0.826	9689637	0.81	10000	105.4	90	110	
Ca	43	2	He	9791.980	1.643	28328	1.60	10000	97.9	90	110	
Ca	44	2	He	9805.641	0.598	473929	0.71	10000	98.1	90	110	
V	51	2	He	100.961	0.102	707466	0.14	100	101.0	90	110	
Cr	52	2	He	100.754	0.274	763226	0.36	100	100.8	90	110	
Mn	55	2	He	100.922	0.706	573888	0.89	100	100.9	90	110	
Fe	56	2	He	10050.734	0.921	69799351	0.94	10000	100.5	90	110	
Co	59	2	He	101.170	0.571	1074606	0.38	100	101.2	90	110	
Ni	60	2	He	104.654	0.824	275382	1.01	100	104.7	90	110	
Cu	63	2	He	105.573	0.428	697618	0.39	100	105.6	90	110	
Zn	66	2	He	103.157	1.202	158886	1.07	100	103.2	90	110	
As	75	2	He	100.846	0.508	138668	0.68	100	100.8	90	110	
Se	78	2	He	101.246	2.175	12253	2.03	100	101.2	90	110	
B	11	1	nogas	481.960	1.636	1503271	1.73	500	96.4	90	110	
Si	28	1	nogas	4298.208	2.430	6295239	1.71	5000	86.0	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9888.142	0.899	427183	0.91	10000	98.9	90	110	
Ca	44	1	nogas	9728.946	1.349	6869539	1.11	10000	97.3	90	110	
Fe	56	1	nogas	10090.150	1.283	296650857	0.79	10000	100.9	90	110	
Se	77	1	nogas	113.879	6.379	59324	2.56	100	113.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.959	0.994	32760	1.35	100	106.0	90	110	
Mo	95	1	nogas	104.115	0.624	820181	0.66	100	104.1	90	110	
Sn	118	1	nogas	96.938	1.179	1310973	0.97	100	96.9	90	110	
Ba	137	1	nogas	104.931	1.126	704716	1.38	100	104.9	90	110	
Sb	121	2	He	106.859	1.102	780718	1.02	100	106.9	90	110	
Li	7	1	nogas	100.560	2.740	1382561	2.21	100	100.6	90	110	
P	31	1	nogas	455.685	1.370	704595	0.75	500	91.1	90	110	
La	139	1	nogas	146.079	17.506	1180	8.08	100	146.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	41.586	444.228	13	173.21	100	41.6	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	684399	0.48	812124	84.27	70	125	
Ge	72	1	nogas	3286411	0.49	2907263	113.04	70	125	
In	115	1	nogas	3636561	0.27	3086471	117.82	70	125	
Bi	209	1	nogas	3183068	2.02	2602272	122.32	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	818606	0.19	778143	105.20	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	078_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T14:46:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	0.016	44.5	287	16.1	1	
Na	23	1	nogas	75.144	7.0	2104850	6.0	100	
Mg	24	1	nogas	4.654	1.6	101280	3.2	100	
Al	27	1	nogas	2.941	5.4	90983	1.1	5	
K	39	1	nogas	21.824	66.8	6503058	3.1	100	
Ti	47	1	nogas	0.076	46.1	370	18.7	2.5	
V	51	1	nogas	8.495	11.7	979725	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.003	3184.3	71986	1.6	2.5	
Mn	55	1	nogas	0.322	15.8	29811	2.1	2.5	
Co	59	1	nogas	0.019	22.7	957	8.1	2.5	
Ni	60	1	nogas	-0.223	-7.5	1387	4.0	2.5	
Cu	63	1	nogas	0.342	12.6	8859	6.1	2	
Zn	66	1	nogas	0.611	13.1	5848	4.1	2.5	
As	75	1	nogas	-0.558	-286.5	90387	6.0	2.5	
Sr	88	1	nogas	0.161	7.1	8836	1.6	2.5	
Ag	107	1	nogas	-0.002	-232.0	597	14.3	2.5	
Cd	111	1	nogas	0.029	29.7	147	23.9	1	
Sb	121	1	nogas	0.039	28.6	1453	11.2	2.5	
Tl	205	1	nogas	0.256	53.5	11005	48.5	1	
Pb	208	1	nogas	0.032	25.8	2150	15.3	2.5	
U	238	1	nogas	0.053	44.6	3250	40.6	2.5	
[Pb]	206	1	nogas	0.015	69.6	530	26.4	2.5	
[Pb]	207	1	nogas	0.017	12.7	510	5.9	2.5	
Na	23	2	He	64.242	0.2	129368	0.3	100	
Mg	24	2	He	4.705	9.5	5734	6.5	100	
Al	27	2	He	2.850	9.0	2334	6.1	5	
K	39	2	He	5.102	58.1	142021	1.9	100	
Ca	43	2	He	34.480	41.0	153	27.2	100	
Ca	44	2	He	28.966	19.6	2507	10.6	100	
V	51	2	He	0.529	6.3	12437	1.5	2.5	
Cr	52	2	He	-0.012	-320.2	4304	6.5	2.5	
Mn	55	2	He	0.333	9.1	3707	4.8	2.5	
Fe	56	2	He	2.692	3.3	38754	1.4	100	
Co	59	2	He	0.018	36.1	300	23.3	2.5	
Ni	60	2	He	0.011	252.5	457	16.4	2.5	
Cu	63	2	He	0.102	4.2	3307	1.1	2	
Zn	66	2	He	0.689	16.3	1837	9.0	2.5	
As	75	2	He	0.078	43.1	372	12.8	2.5	
Se	78	2	He	0.155	105.4	117	16.4	2	
B	11	1	nogas	3.442	18.1	24706	8.4	10	
Si	28	1	nogas	-453.122	-5.9	786686	1.7	5	
Ca	43	1	nogas	35.289	8.2	2164	8.7	100	
Ca	44	1	nogas	-22.215	-15.4	49348	1.4	100	
Fe	56	1	nogas	6.615	32.3	3217982	4.8	100	
Se	77	1	nogas	2.002	364.1	29278	2.5	2.5	
Se	82	1	nogas	0.074	259.7	210	24.7	2	
Mo	95	1	nogas	0.196	32.9	1740	26.4	2.5	
Sn	118	1	nogas	0.343	0.3	7402	2.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.049	15.2	1007	2.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.037	7.9	633	3.6	2.5	
P	31	1	nogas	15.065	20.2	90519	1.0	10	CCB Main CR1 Failed
La	139	1	nogas	81.555	30.9	960	11.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	161.157	123.6	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	765604	0.37	812124	94.27	70	125	
Ge	72	1	nogas	3055095	3.42	2907263	105.08	70	125	
In	115	1	nogas	3726789	2.66	3086471	120.75	70	125	
Bi	209	1	nogas	3417457	1.50	2602272	131.33	70	125	ISTD Failed
Ge	72	2	He	824187	0.42	778143	105.92	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	089_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T15:23:34-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	87.441	0.804	544103	0.68	100	87.4	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9717.677	2.123	241109555	0.60	10000	97.2	90	110	
Mg	24	1	nogas	9588.842	1.452	157386316	0.31	10000	95.9	90	110	
Al	27	1	nogas	93.609	2.313	2054216	3.09	100	93.6	90	110	
K	39	1	nogas	9487.784	0.950	243643430	0.64	10000	94.9	90	110	
Ti	47	1	nogas	90.905	1.845	217881	0.91	100	90.9	90	110	
V	51	1	nogas	97.368	1.190	3988463	1.41	100	97.4	90	110	
Cr	52	1	nogas	94.345	1.830	2635196	2.01	100	94.3	90	110	
Mn	55	1	nogas	98.654	2.781	3525617	1.93	100	98.7	90	110	
Co	59	1	nogas	95.283	1.596	2772892	0.66	100	95.3	90	110	
Ni	60	1	nogas	95.157	0.717	613415	0.71	100	95.2	90	110	
Cu	63	1	nogas	97.284	0.749	1491989	0.68	100	97.3	90	110	
Zn	66	1	nogas	96.131	0.053	462590	0.98	100	96.1	90	110	
As	75	1	nogas	93.591	0.514	618615	0.54	100	93.6	90	110	
Sr	88	1	nogas	98.639	1.145	4296000	1.89	100	98.6	90	110	
Ag	107	1	nogas	101.339	1.466	2016190	2.41	100	101.3	90	110	
Cd	111	1	nogas	96.138	0.573	436202	0.38	100	96.1	90	110	
Sb	121	1	nogas	100.514	1.735	1905470	2.69	100	100.5	90	110	
Tl	205	1	nogas	101.173	2.703	3740285	1.21	100	101.2	90	110	
Pb	208	1	nogas	124.868	1.972	5017779	1.97	100	124.9	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	99.154	1.515	5318212	1.19	100	99.2	90	110	
[Pb]	206	1	nogas	97.329	2.176	1254961	1.11	100	97.3	90	110	
[Pb]	207	1	nogas	93.203	2.477	1063027	1.13	100	93.2	90	110	
Na	23	2	He	9640.445	0.904	14482214	0.50	10000	96.4	90	110	
Mg	24	2	He	9544.021	0.923	8295868	0.83	10000	95.4	90	110	
Al	27	2	He	91.395	2.835	48432	2.19	100	91.4	90	110	
K	39	2	He	10264.728	0.129	9442378	0.13	10000	102.6	90	110	
Ca	43	2	He	9353.825	1.404	27410	1.93	10000	93.5	90	110	
Ca	44	2	He	9305.848	0.547	455569	0.60	10000	93.1	90	110	
V	51	2	He	96.944	1.073	688324	0.50	100	96.9	90	110	
Cr	52	2	He	96.310	1.707	739024	1.09	100	96.3	90	110	
Mn	55	2	He	95.407	0.245	549548	0.45	100	95.4	90	110	
Fe	56	2	He	9598.272	0.504	67508397	0.33	10000	96.0	90	110	
Co	59	2	He	97.518	1.626	1049007	1.22	100	97.5	90	110	
Ni	60	2	He	100.902	1.207	268906	0.98	100	100.9	90	110	
Cu	63	2	He	101.478	1.714	679202	1.40	100	101.5	90	110	
Zn	66	2	He	97.877	0.427	152718	0.39	100	97.9	90	110	
As	75	2	He	95.447	1.498	132925	0.86	100	95.4	90	110	
Se	78	2	He	91.692	1.764	11248	2.00	100	91.7	90	110	
B	11	1	nogas	432.298	2.123	1524393	2.06	500	86.5	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4199.817	0.455	6521900	1.30	5000	84.0	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9493.071	0.739	432646	1.09	10000	94.9	90	110	
Ca	44	1	nogas	9457.193	1.442	7045557	0.55	10000	94.6	90	110	
Fe	56	1	nogas	9665.680	1.104	299898907	0.49	10000	96.7	90	110	
Se	77	1	nogas	90.488	6.731	56451	2.69	100	90.5	90	110	
Se	82	1	nogas	97.953	0.178	31962	1.13	100	98.0	90	110	
Mo	95	1	nogas	97.481	0.279	810059	0.71	100	97.5	90	110	
Sn	118	1	nogas	90.866	0.402	1281001	1.10	100	90.9	90	110	
Ba	137	1	nogas	98.565	1.079	689933	0.39	100	98.6	90	110	
Sb	121	2	He	98.474	1.821	728641	1.42	100	98.5	90	110	
Li	7	1	nogas	95.255	2.736	1482836	2.52	100	95.3	90	110	
P	31	1	nogas	431.190	0.662	707677	1.22	500	86.2	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	68.205	18.113	923	4.38	100	68.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	65.799	246.337	17	124.90	100	65.8	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	773077	0.13	812124	95.19	70	125	
Ge	72	1	nogas	3466690	0.95	2907263	119.24	70	125	
In	115	1	nogas	3790294	0.93	3086471	122.80	70	125	
Bi	209	1	nogas	3217672	1.62	2602272	123.65	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	829065	0.64	778143	106.54	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	090_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T15:25:33-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	0.025	31.8	380	14.7	1	
Na	23	1	nogas	48.754	13.9	1587204	9.8	100	
Mg	24	1	nogas	4.411	12.3	103529	5.6	100	
Al	27	1	nogas	2.677	5.4	93242	0.5	5	
K	39	1	nogas	1.834	648.4	6575397	1.4	100	
Ti	47	1	nogas	0.027	210.1	287	42.2	2.5	
V	51	1	nogas	2.086	19.0	864578	4.5	2.5	
Cr	52	1	nogas	-0.604	-7.7	62395	1.4	2.5	
Mn	55	1	nogas	0.297	7.7	31484	1.4	2.5	
Co	59	1	nogas	0.023	28.6	1143	12.5	2.5	
Ni	60	1	nogas	-0.230	-2.9	1460	0.7	2.5	
Cu	63	1	nogas	0.044	70.9	5247	5.8	2	
Zn	66	1	nogas	0.459	10.4	5654	3.2	2.5	
As	75	1	nogas	-2.532	-5.2	87820	2.5	2.5	
Sr	88	1	nogas	0.151	9.0	9139	4.3	2.5	
Ag	107	1	nogas	-0.006	-9.2	583	2.0	2.5	
Cd	111	1	nogas	0.019	24.4	107	21.7	1	
Sb	121	1	nogas	0.080	12.5	2324	4.8	2.5	
Tl	205	1	nogas	0.264	47.1	11485	44.3	1	
Pb	208	1	nogas	0.042	18.6	2567	12.3	2.5	
U	238	1	nogas	0.057	25.3	3550	24.7	2.5	
[Pb]	206	1	nogas	0.018	30.1	583	14.4	2.5	
[Pb]	207	1	nogas	0.016	31.9	510	13.7	2.5	
Na	23	2	He	40.206	2.8	94004	2.3	100	
Mg	24	2	He	4.931	4.9	5958	3.2	100	
Al	27	2	He	2.596	23.0	2214	14.6	5	
K	39	2	He	3.322	102.0	140408	2.2	100	
Ca	43	2	He	13.688	111.6	93	48.3	100	
Ca	44	2	He	24.462	9.9	2300	5.7	100	
V	51	2	He	0.223	5.0	10352	1.2	2.5	
Cr	52	2	He	-0.045	-47.7	4074	4.5	2.5	
Mn	55	2	He	0.285	18.0	3450	9.2	2.5	
Fe	56	2	He	2.587	6.2	38206	3.4	100	
Co	59	2	He	0.027	20.0	393	15.3	2.5	
Ni	60	2	He	-0.001	-2410.5	427	13.7	2.5	
Cu	63	2	He	-0.069	-39.1	2184	8.5	2	
Zn	66	2	He	0.617	7.9	1733	4.1	2.5	
As	75	2	He	0.031	66.2	309	9.7	2.5	
Se	78	2	He	0.270	78.3	132	20.0	2	
B	11	1	nogas	3.550	14.7	27844	6.8	10	
Si	28	1	nogas	-416.776	-5.3	895293	1.9	5	
Ca	43	1	nogas	37.035	21.4	2414	11.6	100	
Ca	44	1	nogas	-25.365	-15.6	51290	2.4	100	
Fe	56	1	nogas	-2.307	-26.6	3226869	2.8	100	
Se	77	1	nogas	-11.610	-37.3	28359	1.4	2.5	
Se	82	1	nogas	-0.014	-1175.0	200	22.9	2	
Mo	95	1	nogas	0.210	22.1	1993	15.5	2.5	
Sn	118	1	nogas	0.330	25.7	7582	14.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.042	21.8	1007	5.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.088	17.4	1017	10.9	2.5	
P	31	1	nogas	2.711	87.3	81026	1.1	10	
La	139	1	nogas	88.207	23.4	1037	6.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	9.171	802.8	10	100.0	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	850053	0.44	812124	104.67	70	125	
Ge	72	1	nogas	3312935	3.12	2907263	113.95	70	125	
In	115	1	nogas	3924345	2.45	3086471	127.15	70	125	ISTD Failed
Bi	209	1	nogas	3452500	1.65	2602272	132.67	70	125	ISTD Failed
Ge	72	2	He	828078	0.60	778143	106.42	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	099_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T15:46:12-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	90.740	0.405	579169	0.56	100	90.7	90	110	
Na	23	1	nogas	10234.423	2.069	256391447	1.45	10000	102.3	90	110	
Mg	24	1	nogas	10110.279	2.781	167533475	1.42	10000	101.1	90	110	
Al	27	1	nogas	96.834	0.697	2152496	0.88	100	96.8	90	110	
K	39	1	nogas	9966.114	1.139	259112489	1.65	10000	99.7	90	110	
Ti	47	1	nogas	94.807	0.136	230368	0.64	100	94.8	90	110	
V	51	1	nogas	103.195	1.103	4234251	0.40	100	103.2	90	110	
Cr	52	1	nogas	98.786	1.538	2793069	1.05	100	98.8	90	110	
Mn	55	1	nogas	102.697	1.530	3719955	0.96	100	102.7	90	110	
Co	59	1	nogas	100.587	1.200	2967732	1.51	100	100.6	90	110	
Ni	60	1	nogas	99.586	0.682	650642	0.31	100	99.6	90	110	
Cu	63	1	nogas	101.693	1.038	1580786	0.66	100	101.7	90	110	
Zn	66	1	nogas	101.752	0.683	496132	0.42	100	101.8	90	110	
As	75	1	nogas	99.980	1.419	662628	1.50	100	100.0	90	110	
Sr	88	1	nogas	104.299	1.302	4604275	0.83	100	104.3	90	110	
Ag	107	1	nogas	106.378	0.464	2145282	0.93	100	106.4	90	110	
Cd	111	1	nogas	103.180	0.987	469475	0.76	100	103.2	90	110	
Sb	121	1	nogas	107.748	1.121	2070429	1.62	100	107.7	90	110	
Tl	205	1	nogas	107.668	1.291	4023265	0.62	100	107.7	90	110	
Pb	208	1	nogas	132.322	0.542	5317251	0.54	100	132.3	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	102.728	1.211	5569246	2.28	100	102.7	90	110	
[Pb]	206	1	nogas	102.077	2.920	1330082	1.87	100	102.1	90	110	
[Pb]	207	1	nogas	97.639	1.182	1125570	0.13	100	97.6	90	110	
Na	23	2	He	10069.565	0.840	15121588	0.34	10000	100.7	90	110	
Mg	24	2	He	9767.148	2.133	8487339	1.80	10000	97.7	90	110	
Al	27	2	He	94.326	2.491	49946	1.86	100	94.3	90	110	
K	39	2	He	10708.527	0.941	9844682	0.93	10000	107.1	90	110	
Ca	43	2	He	9557.770	3.256	28001	3.70	10000	95.6	90	110	
Ca	44	2	He	9677.768	0.316	473618	0.59	10000	96.8	90	110	
V	51	2	He	101.282	1.170	718549	0.72	100	101.3	90	110	
Cr	52	2	He	101.156	0.931	775818	0.40	100	101.2	90	110	
Mn	55	2	He	99.812	0.982	574676	0.33	100	99.8	90	110	
Fe	56	2	He	10024.735	1.205	70487554	0.68	10000	100.2	90	110	
Co	59	2	He	102.659	1.008	1104039	0.45	100	102.7	90	110	
Ni	60	2	He	105.663	1.345	281506	1.17	100	105.7	90	110	
Cu	63	2	He	106.103	0.904	709874	0.64	100	106.1	90	110	
Zn	66	2	He	101.981	1.859	159040	1.28	100	102.0	90	110	
As	75	2	He	100.418	1.522	139800	0.96	100	100.4	90	110	
Se	78	2	He	97.988	1.845	12010	1.54	100	98.0	90	110	
B	11	1	nogas	444.915	2.437	1609126	3.12	500	89.0	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4345.612	1.078	6789929	0.64	5000	86.9	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9984.942	0.442	461268	0.66	10000	99.8	90	110	
Ca	44	1	nogas	9932.515	0.266	7498168	0.41	10000	99.3	90	110	
Fe	56	1	nogas	10060.277	1.389	316311299	1.70	10000	100.6	90	110	
Se	77	1	nogas	102.379	3.659	60387	1.56	100	102.4	90	110	
Se	82	1	nogas	105.243	1.888	34794	1.55	100	105.2	90	110	
Mo	95	1	nogas	102.274	1.219	861520	0.80	100	102.3	90	110	
Sn	118	1	nogas	100.071	2.831	1414322	2.38	100	100.1	90	110	
Ba	137	1	nogas	103.875	0.316	729147	0.34	100	103.9	90	110	
Sb	121	2	He	102.250	0.939	756397	0.38	100	102.3	90	110	
Li	7	1	nogas	96.963	3.665	1547151	3.57	100	97.0	90	110	
P	31	1	nogas	463.081	0.486	764387	0.94	500	92.6	90	110	
La	139	1	nogas	115.562	22.612	1113	9.69	100	115.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	13.516	584.711	10	100.00	100	13.5	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	793005	0.80	812124	97.65	70	125	
Ge	72	1	nogas	3514293	0.64	2907263	120.88	70	125	
In	115	1	nogas	3800935	0.47	3086471	123.15	70	125	
Bi	209	1	nogas	3251695	1.07	2602272	124.96	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	828859	0.65	778143	106.52	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	100_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T15:48:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	009CALB.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	0.012	37.4	297	10.8	1	
Na	23	1	nogas	38.765	12.4	1358514	5.8	100	
Mg	24	1	nogas	4.323	11.4	103529	5.4	100	
Al	27	1	nogas	2.610	3.0	96409	0.9	5	
K	39	1	nogas	3.006	456.8	6928116	2.7	100	
Ti	47	1	nogas	0.054	17.9	370	7.2	2.5	
V	51	1	nogas	1.174	26.9	877044	1.9	2.5	
Cr	52	1	nogas	-0.656	-7.9	64040	1.5	2.5	
Mn	55	1	nogas	0.306	9.9	33364	3.2	2.5	
Co	59	1	nogas	0.017	22.9	1053	8.6	2.5	
Ni	60	1	nogas	-0.229	-15.0	1540	12.8	2.5	
Cu	63	1	nogas	0.030	32.5	5294	4.9	2	
Zn	66	1	nogas	0.450	6.2	5888	2.2	2.5	
As	75	1	nogas	-3.586	-8.6	86332	1.7	2.5	
Sr	88	1	nogas	0.135	2.1	8916	2.4	2.5	
Ag	107	1	nogas	-0.006	-18.6	613	1.9	2.5	
Cd	111	1	nogas	0.027	36.9	143	32.2	1	
Sb	121	1	nogas	0.026	22.6	1410	5.5	2.5	
Tl	205	1	nogas	0.310	55.3	13180	52.7	1	
Pb	208	1	nogas	0.038	19.1	2390	12.1	2.5	
U	238	1	nogas	0.059	32.8	3634	32.0	2.5	
[Pb]	206	1	nogas	0.024	11.4	657	7.8	2.5	
[Pb]	207	1	nogas	0.013	18.1	463	8.2	2.5	
Na	23	2	He	33.916	0.7	85066	0.5	100	
Mg	24	2	He	4.634	7.2	5731	4.3	100	
Al	27	2	He	2.632	17.3	2243	10.4	5	
K	39	2	He	12.155	58.5	148415	4.3	100	
Ca	43	2	He	22.676	61.0	120	33.3	100	
Ca	44	2	He	23.854	22.8	2284	11.9	100	
V	51	2	He	0.195	17.1	10221	2.8	2.5	
Cr	52	2	He	-0.011	-145.0	4357	3.5	2.5	
Mn	55	2	He	0.275	4.7	3409	2.4	2.5	
Fe	56	2	He	2.364	3.8	36847	2.6	100	
Co	59	2	He	0.021	23.8	330	16.9	2.5	
Ni	60	2	He	0.011	279.4	460	17.0	2.5	
Cu	63	2	He	-0.035	-55.6	2427	6.2	2	
Zn	66	2	He	0.720	8.9	1903	4.5	2.5	
As	75	2	He	0.047	14.5	333	3.6	2.5	
Se	78	2	He	0.068	74.8	108	4.9	2	
B	11	1	nogas	2.244	28.0	23401	10.5	10	
Si	28	1	nogas	-415.742	-5.0	940583	1.6	5	
Ca	43	1	nogas	33.607	14.1	2380	8.4	100	
Ca	44	1	nogas	-24.764	-7.4	54292	1.5	100	
Fe	56	1	nogas	-2.562	-24.4	3377583	2.5	100	
Se	77	1	nogas	-13.374	-27.0	29308	3.9	2.5	
Se	82	1	nogas	-0.142	-91.2	170	27.0	2	
Mo	95	1	nogas	0.180	26.8	1840	19.3	2.5	
Sn	118	1	nogas	0.317	9.0	7315	5.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.049	34.3	1047	11.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.035	15.5	630	5.7	2.5	
P	31	1	nogas	3.689	47.6	86457	0.6	10	
La	139	1	nogas	55.671	26.4	893	7.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	135.081	33.3	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	871479	0.13	812124	107.31	70	125	
Ge	72	1	nogas	3475452	2.40	2907263	119.54	70	125	
In	115	1	nogas	3871267	0.94	3086471	125.43	70	125	ISTD Failed
Bi	209	1	nogas	3413030	2.14	2602272	131.16	70	125	ISTD Failed
Ge	72	2	He	832828	0.90	778143	107.03	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	108CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:05:44-06:00
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	755014	0.00
Mg	24	1	nogas	41285	0.01
Al	27	1	nogas	40994	0.00
K	39	1	nogas	7176011	0.00
Ti	47	1	nogas	260	6.45
V	51	1	nogas	1070784	0.00
Cr	52	1	nogas	82934	0.01
Mn	55	1	nogas	23565	0.01
Co	59	1	nogas	427	2.29
Ni	60	1	nogas	940	2.41
Cu	63	1	nogas	5031	0.07
Zn	66	1	nogas	5508	0.01
As	75	1	nogas	104598	0.00
Sr	88	1	nogas	3090	0.01
Ag	107	1	nogas	863	1.12
Cd	111	1	nogas	27	292.73
Sb	121	1	nogas	617	1.61
Tl	205	1	nogas	557	1.78
Pb	208	1	nogas	567	4.23
[Pb]	206	1	nogas	187	14.73
[Pb]	207	1	nogas	110	36.02
Na	23	2	He	56765	0.00
Mg	24	2	He	2183	0.33
Al	27	2	He	817	2.05
K	39	2	He	148982	0.00
Ca	43	2	He	50	105.83
Ca	44	2	He	1027	0.36
V	51	2	He	12026	0.02
Cr	52	2	He	4641	0.11
Mn	55	2	He	1667	0.25
Fe	56	2	He	22948	0.01
Co	59	2	He	80	15.63
Ni	60	2	He	280	8.36
Cu	63	2	He	1910	0.39
Zn	66	2	He	1787	0.71
As	75	2	He	284	1.56
Se	78	2	He	97	15.84
B	11	1	nogas	7875	0.02
Si	28	1	nogas	890570	0.00
Ca	43	1	nogas	953	1.87
Ca	44	1	nogas	32759	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	4747400	0.00
Se	77	1	nogas	34878	0.02
Se	82	1	nogas	193	10.81
Mo	95	1	nogas	263	6.66
Sn	118	1	nogas	2814	0.23
Ba	137	1	nogas	970	0.65
Sb	121	2	He	297	3.47
Li	7	1	nogas	74567	0.00
P	31	1	nogas	93976	0.00
La	139	1	nogas	897	0.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	926026	0.46
Ge	72	1	nogas	3798750	1.51
In	115	1	nogas	4251403	2.09
Bi	209	1	nogas	3609904	0.31
Ge	72	2	He	905821	0.65

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	109CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:07:44-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	108CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	11250	0.02
Na	23	1	nogas	5968820	0.00
Mg	24	1	nogas	3553925	0.00
Al	27	1	nogas	81544	0.00
K	39	1	nogas	12578885	0.00
Ti	47	1	nogas	5384	0.05
V	51	1	nogas	1256882	0.00
Cr	52	1	nogas	144116	0.00
Mn	55	1	nogas	104147	0.00
Co	59	1	nogas	63636	0.00
Ni	60	1	nogas	15050	0.01
Cu	63	1	nogas	38654	0.00
Zn	66	1	nogas	14643	0.02
As	75	1	nogas	124398	0.00
Sr	88	1	nogas	100076	0.00
Ag	107	1	nogas	44777	0.00
Cd	111	1	nogas	9489	0.02
Sb	121	1	nogas	41606	0.00
Tl	205	1	nogas	78103	0.00
Pb	208	1	nogas	111682	0.00
[Pb]	206	1	nogas	27417	0.02
[Pb]	207	1	nogas	24031	0.01
Na	23	2	He	367630	0.00
Mg	24	2	He	181743	0.00
Al	27	2	He	1907	0.50
K	39	2	He	354276	0.00
Ca	43	2	He	743	0.73
Ca	44	2	He	11230	0.04
V	51	2	He	27537	0.00
Cr	52	2	He	21116	0.00
Mn	55	2	He	14519	0.01
Fe	56	2	He	1563530	0.00
Co	59	2	He	23919	0.01
Ni	60	2	He	6365	0.07
Cu	63	2	He	17755	0.01
Zn	66	2	He	4784	0.03
As	75	2	He	3258	0.10
Se	78	2	He	359	0.47
B	11	1	nogas	41649	0.00
Si	28	1	nogas	1024132	0.00

Calibration Standard Report

Ca	43	1	nogas	10183	0.03
Ca	44	1	nogas	187221	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	11408527	0.00
Se	77	1	nogas	37650	0.02
Se	82	1	nogas	907	1.64
Mo	95	1	nogas	17993	0.02
Sn	118	1	nogas	32711	0.00
Ba	137	1	nogas	15724	0.00
Sb	121	2	He	16061	0.00
P	31	1	nogas	110058	0.00
La	139	1	nogas	197	12.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	922088	0.37	926026	99.57	70	125	
Ge	72	1	nogas	3816218	0.44	3798750	100.46	70	125	
In	115	1	nogas	4163679	1.34	4251403	97.94	70	125	
Bi	209	1	nogas	3608912	2.24	3609904	99.97	70	125	
Ge	72	2	He	897449	0.93	905821	99.08	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	110CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:09:44-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	108CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	28444	0.01
Na	23	1	nogas	13649442	0.00
Mg	24	1	nogas	8802643	0.00
Al	27	1	nogas	138221	0.00
K	39	1	nogas	20146164	0.00
Ti	47	1	nogas	12134	0.03
V	51	1	nogas	1427326	0.00
Cr	52	1	nogas	228960	0.00
Mn	55	1	nogas	206990	0.00
Co	59	1	nogas	156378	0.00
Ni	60	1	nogas	35234	0.00
Cu	63	1	nogas	91405	0.00
Zn	66	1	nogas	27257	0.00
As	75	1	nogas	147074	0.00
Sr	88	1	nogas	245827	0.00
Ag	107	1	nogas	111038	0.00
Cd	111	1	nogas	24387	0.01
Sb	121	1	nogas	103359	0.00
Tl	205	1	nogas	195642	0.00
Pb	208	1	nogas	275522	0.00
[Pb]	206	1	nogas	69093	0.00
[Pb]	207	1	nogas	59739	0.00
Na	23	2	He	833140	0.00
Mg	24	2	He	446244	0.00
Al	27	2	He	3087	0.18
K	39	2	He	652384	0.00
Ca	43	2	He	1443	0.61
Ca	44	2	He	25354	0.01
V	51	2	He	49428	0.00
Cr	52	2	He	45145	0.00
Mn	55	2	He	31263	0.01
Fe	56	2	He	3765922	0.00
Co	59	2	He	59228	0.00
Ni	60	2	He	15100	0.03
Cu	63	2	He	41540	0.01
Zn	66	2	He	8946	0.09
As	75	2	He	7364	0.03
Se	78	2	He	685	0.98
B	11	1	nogas	89684	0.00
Si	28	1	nogas	1376824	0.00

Calibration Standard Report

Ca	43	1	nogas	24433	0.02
Ca	44	1	nogas	415816	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	21191763	0.00
Se	77	1	nogas	39463	0.01
Se	82	1	nogas	1900	0.47
Mo	95	1	nogas	44836	0.01
Sn	118	1	nogas	75137	0.00
Ba	137	1	nogas	37518	0.00
Sb	121	2	He	39712	0.01
P	31	1	nogas	130698	0.00
La	139	1	nogas	130	21.33

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	908817	3.30	926026	98.14	70	125	
Ge	72	1	nogas	3646942	4.26	3798750	96.00	70	125	
In	115	1	nogas	4029516	5.49	4251403	94.78	70	125	
Bi	209	1	nogas	3464903	3.11	3609904	95.98	70	125	
Ge	72	2	He	894420	0.10	905821	98.74	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	111CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:11:44-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	108CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	55506	0.00
Na	23	1	nogas	25773959	0.00
Mg	24	1	nogas	16981485	0.00
Al	27	1	nogas	239625	0.00
K	39	1	nogas	33028490	0.00
Ti	47	1	nogas	24109	0.01
V	51	1	nogas	1727949	0.00
Cr	52	1	nogas	366855	0.00
Mn	55	1	nogas	393226	0.00
Co	59	1	nogas	306971	0.00
Ni	60	1	nogas	68623	0.00
Cu	63	1	nogas	162170	0.00
Zn	66	1	nogas	50162	0.00
As	75	1	nogas	176551	0.00
Sr	88	1	nogas	476908	0.00
Ag	107	1	nogas	216427	0.00
Cd	111	1	nogas	47106	0.01
Sb	121	1	nogas	202596	0.00
Tl	205	1	nogas	388510	0.00
Pb	208	1	nogas	538579	0.00
[Pb]	206	1	nogas	133756	0.00
[Pb]	207	1	nogas	118604	0.00
Na	23	2	He	1589692	0.00
Mg	24	2	He	863166	0.00
Al	27	2	He	5764	0.07
K	39	2	He	1121397	0.00
Ca	43	2	He	2987	0.13
Ca	44	2	He	48159	0.01
V	51	2	He	84090	0.00
Cr	52	2	He	83266	0.00
Mn	55	2	He	59131	0.00
Fe	56	2	He	7329303	0.00
Co	59	2	He	114579	0.00
Ni	60	2	He	29087	0.01
Cu	63	2	He	75594	0.00
Zn	66	2	He	16681	0.00
As	75	2	He	14231	0.00
Se	78	2	He	1299	0.17
B	11	1	nogas	172248	0.00
Si	28	1	nogas	1658170	0.00

Calibration Standard Report

Ca	43	1	nogas	47363	0.00
Ca	44	1	nogas	786177	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	36557333	0.00
Se	77	1	nogas	42350	0.01
Se	82	1	nogas	3780	0.23
Mo	95	1	nogas	88140	0.00
Sn	118	1	nogas	148428	0.00
Ba	137	1	nogas	74644	0.00
Sb	121	2	He	75472	0.00
P	31	1	nogas	171704	0.00
La	139	1	nogas	143	32.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	902190	0.75	926026	97.43	70	125	
Ge	72	1	nogas	3894708	1.48	3798750	102.53	70	125	
In	115	1	nogas	4266139	2.68	4251403	100.35	70	125	
Bi	209	1	nogas	3459971	5.20	3609904	95.85	70	125	
Ge	72	2	He	886777	0.81	905821	97.90	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	112CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:13:42-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	108CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	554264	0.00
Na	23	1	nogas	250715789	0.00
Mg	24	1	nogas	164023608	0.00
Al	27	1	nogas	2079246	0.00
K	39	1	nogas	255851156	0.00
Ti	47	1	nogas	235126	0.00
V	51	1	nogas	4258222	0.00
Cr	52	1	nogas	2768676	0.00
Mn	55	1	nogas	3704118	0.00
Co	59	1	nogas	2938310	0.00
Ni	60	1	nogas	647576	0.00
Cu	63	1	nogas	1552793	0.00
Zn	66	1	nogas	489708	0.00
As	75	1	nogas	660747	0.00
Sr	88	1	nogas	4754054	0.00
Ag	107	1	nogas	2171048	0.00
Cd	111	1	nogas	468873	0.00
Sb	121	1	nogas	2059262	0.00
Tl	205	1	nogas	3920912	0.00
Pb	208	1	nogas	5393271	0.00
[Pb]	206	1	nogas	1318620	0.00
[Pb]	207	1	nogas	1153758	0.00
Na	23	2	He	14969340	0.00
Mg	24	2	He	8473117	0.00
Al	27	2	He	49224	0.00
K	39	2	He	9689302	0.00
Ca	43	2	He	29003	0.00
Ca	44	2	He	475531	0.00
V	51	2	He	716766	0.00
Cr	52	2	He	782184	0.00
Mn	55	2	He	572138	0.00
Fe	56	2	He	71172779	0.00
Co	59	2	He	1115254	0.00
Ni	60	2	He	283099	0.00
Cu	63	2	He	712101	0.00
Zn	66	2	He	162178	0.00
As	75	2	He	138927	0.00
Se	78	2	He	11887	0.01
B	11	1	nogas	1657441	0.00
Si	28	1	nogas	6616641	0.00

Calibration Standard Report

Ca	43	1	nogas	455323	0.00
Ca	44	1	nogas	7371671	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	316885982	0.00
Se	77	1	nogas	61751	0.00
Se	82	1	nogas	34850	0.01
Mo	95	1	nogas	879505	0.00
Sn	118	1	nogas	1496762	0.00
Ba	137	1	nogas	725344	0.00
Sb	121	2	He	766835	0.00
P	31	1	nogas	769933	0.00
La	139	1	nogas	760	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	816386	0.42	926026	88.16	70	125	
Ge	72	1	nogas	3572990	0.49	3798750	94.06	70	125	
In	115	1	nogas	3869871	1.81	4251403	91.03	70	125	
Bi	209	1	nogas	3423572	0.53	3609904	94.84	70	125	
Ge	72	2	He	856649	0.56	905821	94.57	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	113CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:15:42-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	108CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1096531	0.00
Na	23	1	nogas	494219344	0.00
Mg	24	1	nogas	324165099	0.00
Al	27	1	nogas	4042733	0.00
K	39	1	nogas	500524378	0.00
Ti	47	1	nogas	475150	0.00
V	51	1	nogas	7422060	0.00
Cr	52	1	nogas	5448103	0.00
Mn	55	1	nogas	7342849	0.00
Co	59	1	nogas	5779152	0.00
Ni	60	1	nogas	1284691	0.00
Cu	63	1	nogas	3009973	0.00
Zn	66	1	nogas	969656	0.00
As	75	1	nogas	1212778	0.00
Sr	88	1	nogas	9475278	0.00
Ag	107	1	nogas	4312413	0.00
Cd	111	1	nogas	942087	0.00
Sb	121	1	nogas	4144398	0.00
Tl	205	1	nogas	7841416	0.00
Pb	208	1	nogas	10929026	0.00
[Pb]	206	1	nogas	2737858	0.00
[Pb]	207	1	nogas	2406808	0.00
Na	23	2	He	30133881	0.00
Mg	24	2	He	16966821	0.00
Al	27	2	He	96420	0.00
K	39	2	He	19348919	0.00
Ca	43	2	He	56579	0.01
Ca	44	2	He	957849	0.00
V	51	2	He	1460975	0.00
Cr	52	2	He	1603218	0.00
Mn	55	2	He	1146641	0.00
Fe	56	2	He	144702721	0.00
Co	59	2	He	2247119	0.00
Ni	60	2	He	562061	0.00
Cu	63	2	He	1451421	0.00
Zn	66	2	He	319827	0.00
As	75	2	He	280260	0.00
Se	78	2	He	24120	0.00
B	11	1	nogas	3255339	0.00
Si	28	1	nogas	12248476	0.00

Calibration Standard Report

Ca	43	1	nogas	909518	0.00
Ca	44	1	nogas	14803733	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	630941997	0.00
Se	77	1	nogas	87992	0.00
Se	82	1	nogas	69366	0.00
Mo	95	1	nogas	1794282	0.00
Sn	118	1	nogas	2944957	0.00
Ba	137	1	nogas	1482669	0.00
Sb	121	2	He	1623148	0.00
P	31	1	nogas	1447116	0.00
La	139	1	nogas	1427	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	770778	0.48	926026	83.24	70	125	
Ge	72	1	nogas	3539384	0.88	3798750	93.17	70	125	
In	115	1	nogas	3905649	1.52	4251403	91.87	70	125	
Bi	209	1	nogas	3337142	1.52	3609904	92.44	70	125	
Ge	72	2	He	858650	0.48	905821	94.79	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	115_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:19:40-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	105.058	0.695	588530	1.03	100	105.1	90	110	
Na	23	1	nogas	10542.714	0.261	263087573	1.25	10000	105.4	90	110	
Mg	24	1	nogas	10661.182	1.094	174243025	0.12	10000	106.6	90	110	
Al	27	1	nogas	105.273	2.838	2205294	0.83	100	105.3	90	110	
K	39	1	nogas	10424.475	2.248	270893356	0.61	10000	104.2	90	110	
Ti	47	1	nogas	99.350	2.500	241267	0.97	100	99.3	90	110	
V	51	1	nogas	97.568	2.777	4248571	0.53	100	97.6	90	110	
Cr	52	1	nogas	102.963	3.949	2911004	1.30	100	103.0	90	110	
Mn	55	1	nogas	103.073	2.232	3890058	0.76	100	103.1	90	110	
Co	59	1	nogas	105.366	3.042	3127938	0.76	100	105.4	90	110	
Ni	60	1	nogas	104.258	2.594	687022	0.08	100	104.3	90	110	
Cu	63	1	nogas	105.062	1.986	1631232	0.66	100	105.1	90	110	
Zn	66	1	nogas	103.642	2.535	516317	0.13	100	103.6	90	110	
As	75	1	nogas	97.744	2.827	662401	1.07	100	97.7	90	110	
Sr	88	1	nogas	100.775	2.695	4892455	0.17	100	100.8	90	110	
Ag	107	1	nogas	104.130	2.517	2302356	1.87	100	104.1	90	110	
Cd	111	1	nogas	105.295	2.320	508429	0.27	100	105.3	90	110	
Sb	121	1	nogas	103.199	2.569	2186782	0.63	100	103.2	90	110	
Tl	205	1	nogas	108.846	1.910	4358146	1.18	100	108.8	90	110	
Pb	208	1	nogas	109.024	0.426	5942157	0.43	100	109.0	90	110	
U	238	1	nogas	103.799	1.474	6042903	1.04	100	103.8	90	110	
[Pb]	206	1	nogas	110.446	2.761	1532704	0.97	100	110.4	90	110	ICV Main CR1 Failed
[Pb]	207	1	nogas	100.525	1.798	1225478	0.12	100	100.5	90	110	
Na	23	2	He	10329.529	0.425	15828444	0.22	10000	103.3	90	110	
Mg	24	2	He	10416.625	1.130	8985452	0.70	10000	104.2	90	110	
Al	27	2	He	105.535	1.879	52269	1.61	100	105.5	90	110	
K	39	2	He	10652.198	0.798	10362952	0.79	10000	106.5	90	110	
Ca	43	2	He	10377.731	3.436	30024	3.32	10000	103.8	90	110	
Ca	44	2	He	10387.086	1.846	505526	1.36	10000	103.9	90	110	
V	51	2	He	102.655	0.582	763420	0.36	100	102.7	90	110	
Cr	52	2	He	102.785	0.183	835537	0.51	100	102.8	90	110	
Mn	55	2	He	105.139	0.497	613368	0.09	100	105.1	90	110	
Fe	56	2	He	10320.603	1.260	75699532	0.75	10000	103.2	90	110	
Co	59	2	He	103.331	0.465	1179127	0.29	100	103.3	90	110	
Ni	60	2	He	105.851	0.617	303189	0.47	100	105.9	90	110	
Cu	63	2	He	103.901	0.328	764448	0.49	100	103.9	90	110	
Zn	66	2	He	103.886	0.691	169869	0.88	100	103.9	90	110	
As	75	2	He	104.169	0.801	148297	0.32	100	104.2	90	110	
Se	78	2	He	104.195	0.564	12766	0.07	100	104.2	90	110	
B	11	1	nogas	506.401	0.986	1689372	0.52	500	101.3	90	110	
Si	28	1	nogas	5221.120	2.136	6976955	1.03	5000	104.4	90	110	
Ca	43	1	nogas	10396.341	2.800	484487	0.29	10000	104.0	90	110	
Ca	44	1	nogas	10427.094	2.369	7908096	0.63	10000	104.3	90	110	
Fe	56	1	nogas	10302.236	2.155	334824166	1.06	10000	103.0	90	110	
Se	77	1	nogas	74.149	6.030	54669	0.45	100	74.1	90	110	ICV Main CR1 Failed
Se	82	1	nogas	103.297	0.421	36801	2.84	100	103.3	90	110	
Mo	95	1	nogas	100.565	2.314	920257	0.73	100	100.6	90	110	
Sn	118	1	nogas	100.601	1.487	1526259	1.42	100	100.6	90	110	
Ba	137	1	nogas	103.901	2.546	787377	1.13	100	103.9	90	110	
Sb	121	2	He	100.196	0.068	817842	0.53	100	100.2	90	110	
Li	7	1	nogas	106.031	1.181	1612126	1.07	100	106.0	90	110	
P	31	1	nogas	501.833	2.821	789013	0.15	500	100.4	90	110	
La	139	1	nogas	104.917	59.162	1063	9.97	100	104.9	90	110	
Au	197	1	nogas	-326.017	-97.460	7	86.60	100	-326.0	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	795022	0.48	926026	85.85	70	125	
Ge	72	1	nogas	3632706	2.61	3798750	95.63	70	125	
In	115	1	nogas	4001430	2.41	4251403	94.12	70	125	
Bi	209	1	nogas	3425605	1.87	3609904	94.89	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	872892	0.58	905821	96.36	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	116LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:21:37-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	4.488	0.994	28341	1.68	5	89.8	70	130	
Na	23	1	nogas	492.727	8.090	13505028	1.88	500	98.5	70	130	
Mg	24	1	nogas	507.498	6.264	8678005	0.79	500	101.5	70	130	
Al	27	1	nogas	4.557	0.719	138111	1.23	5	91.1	70	130	
K	39	1	nogas	479.649	1.662	19742500	0.21	500	95.9	70	130	
Ti	47	1	nogas	4.871	1.482	12531	1.77	5	97.4	70	130	
V	51	1	nogas	5.264	53.957	1243170	6.98	5	105.3	70	130	
Cr	52	1	nogas	4.474	2.193	210135	0.25	5	89.5	70	130	
Mn	55	1	nogas	4.656	2.279	204840	1.00	5	93.1	70	130	
Co	59	1	nogas	5.151	0.646	159259	0.87	5	103.0	70	130	
Ni	60	1	nogas	5.026	1.561	34900	0.58	5	100.5	70	130	
Cu	63	1	nogas	5.287	0.726	90002	1.51	5	105.7	70	130	
Zn	66	1	nogas	4.884	4.444	27441	4.78	5	97.7	70	130	
As	75	1	nogas	0.142	402.579	112685	1.91	5	2.8	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.918	2.944	250864	2.05	5	98.4	70	130	
Ag	107	1	nogas	4.972	2.141	114974	1.03	5	99.4	70	130	
Cd	111	1	nogas	4.938	5.136	24651	3.16	5	98.8	70	130	
Sb	121	1	nogas	4.841	1.083	107121	0.24	5	96.8	70	130	
Tl	205	1	nogas	4.973	3.075	218351	3.19	5	99.5	70	130	
Pb	208	1	nogas	5.312	0.761	290078	0.76	5	106.2	70	130	
U	238	1	nogas	4.850	0.717	308949	0.73	5	97.0	70	130	
[Pb]	206	1	nogas	4.706	1.587	71626	1.26	5	94.1	70	130	
[Pb]	207	1	nogas	4.779	3.359	63821	2.10	5	95.6	70	130	
Na	23	2	He	495.338	0.290	821997	0.29	500	99.1	70	130	
Mg	24	2	He	501.720	0.341	440640	0.65	500	100.3	70	130	
Al	27	2	He	4.583	26.576	3110	19.47	5	91.7	70	130	
K	39	2	He	503.905	0.209	632157	0.16	500	100.8	70	130	
Ca	43	2	He	523.062	3.963	1580	4.15	500	104.6	70	130	
Ca	44	2	He	491.537	0.806	25201	1.15	500	98.3	70	130	
V	51	2	He	5.053	1.629	47152	0.92	5	101.1	70	130	
Cr	52	2	He	5.119	2.401	46475	2.49	5	102.4	70	130	
Mn	55	2	He	4.876	1.747	30382	1.97	5	97.5	70	130	
Fe	56	2	He	506.378	0.813	3785548	1.17	500	101.3	70	130	
Co	59	2	He	5.068	1.491	58680	1.16	5	101.4	70	130	
Ni	60	2	He	4.937	1.035	14876	0.68	5	98.7	70	130	
Cu	63	2	He	5.560	2.104	42409	1.89	5	111.2	70	130	
Zn	66	2	He	4.729	3.739	9006	3.17	5	94.6	70	130	
As	75	2	He	4.865	4.301	7284	3.89	5	97.3	70	130	
Se	78	2	He	5.179	7.517	702	6.74	5	103.6	70	130	
B	11	1	nogas	28.502	3.897	114173	2.99	25	114.0	70	130	
Si	28	1	nogas	367.369	13.563	1331814	3.98	25	1469.5	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	486.677	2.238	24460	1.39	500	97.3	70	130	
Ca	44	1	nogas	481.104	1.100	409981	0.41	500	96.2	70	130	
Fe	56	1	nogas	464.501	1.299	20178802	0.41	500	92.9	70	130	
Se	77	1	nogas	-19.461	-15.488	28790	2.25	5	-389.2	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.708	7.573	1923	5.73	5	94.2	70	130	
Mo	95	1	nogas	5.022	1.302	47978	1.48	5	100.4	70	130	
Sn	118	1	nogas	4.935	0.892	79962	1.97	5	98.7	70	130	
Ba	137	1	nogas	4.829	1.617	38714	1.30	5	96.6	70	130	
Sb	121	2	He	4.803	0.370	40003	0.31	5	96.1	70	130	
Li	7	1	nogas	4.837	2.719	151532	1.92	5	96.7	70	130	
P	31	1	nogas	25.706	4.466	130519	1.46	25	102.8	70	130	
La	139	1	nogas	-340.709	-10.766	127	60.30	5	-6814.2	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	308.199	4.160	20	0.00	5	6164.0	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	894720	0.71	926026	96.62	70	125	
Ge	72	1	nogas	3771638	1.09	3798750	99.29	70	125	
In	115	1	nogas	4134258	2.63	4251403	97.24	70	125	
Bi	209	1	nogas	3746471	1.29	3609904	103.78	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	884599	0.38	905821	97.66	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	117SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:23:35-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	108CALB.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	1.773	1.773	2.45	11233	0.02	2000	
Na	23	1	nogas	199.283	199.283	1.49	5837736	0.00	200000	
Mg	24	1	nogas	205.357	205.357	0.91	3494645	0.01	200000	
Al	27	1	nogas	1.946	1.946	0.88	81929	0.00	2000	
K	39	1	nogas	190.076	190.076	4.28	12069497	0.00	200000	
Ti	47	1	nogas	1.937	1.937	3.68	5114	0.04	2000	
V	51	1	nogas	-0.818	-0.818	-32.52	1030309	0.00	2000	
Cr	52	1	nogas	1.588	1.588	1.78	127117	0.00	2000	
Mn	55	1	nogas	1.989	1.989	0.65	100450	0.00	2000	
Co	59	1	nogas	2.019	2.019	1.95	62385	0.00	2000	
Ni	60	1	nogas	2.178	2.178	2.81	15350	0.01	2000	
Cu	63	1	nogas	2.056	2.056	1.06	37872	0.01	2000	
Zn	66	1	nogas	2.362	2.362	1.63	14376	0.02	2000	
As	75	1	nogas	-2.523	-2.523	-5.16	96564	0.00	2000	
Sr	88	1	nogas	1.963	1.963	1.60	101524	0.00	2000	
Ag	107	1	nogas	1.968	1.968	1.56	45819	0.00	2000	
Cd	111	1	nogas	1.930	1.930	2.52	9876	0.02	2000	
Sb	121	1	nogas	1.970	1.970	1.60	43765	0.00	2000	
Tl	205	1	nogas	1.967	1.967	3.45	84759	0.00	2000	
Pb	208	1	nogas	2.081	2.081	1.25	114004	0.00	2000	
U	238	1	nogas	1.929	1.929	1.91	120219	0.00	2000	
[Pb]	206	1	nogas	1.868	1.868	3.00	27904	0.01	2000	
[Pb]	207	1	nogas	1.901	1.901	0.73	24892	0.01	2000	
Na	23	2	He	196.748	196.748	0.56	357402	0.06	200000	
Mg	24	2	He	204.536	204.536	0.55	179634	0.11	200000	
Al	27	2	He	2.501	2.501	15.79	2067	0.12	2000	
K	39	2	He	196.479	196.479	1.26	337377	0.06	200000	
Ca	43	2	He	182.928	182.928	13.59	580	31.54	200000	
Ca	44	2	He	195.384	195.384	8.30	10546	1.85	200000	
V	51	2	He	2.176	2.176	0.37	25557	0.01	2000	
Cr	52	2	He	1.975	1.975	1.69	20572	0.01	2000	
Mn	55	2	He	2.135	2.135	6.51	14116	0.02	2000	
Fe	56	2	He	209.625	209.625	1.01	1569145	0.01	200000	
Co	59	2	He	2.039	2.039	4.28	23488	0.01	2000	
Ni	60	2	He	2.025	2.025	1.56	6395	0.03	2000	
Cu	63	2	He	2.197	2.197	2.78	17248	0.01	2000	
Zn	66	2	He	2.111	2.111	7.75	4664	0.05	2000	
As	75	2	He	1.916	1.916	1.96	3016	0.06	2000	
Se	78	2	He	2.182	2.182	12.58	329	0.66	2000	
B	11	1	nogas	11.918	11.918	1.59	52214	0.02	2000	
Si	28	1	nogas	72.714	72.714	30.45	968444	0.01	2000	
Ca	43	1	nogas	192.485	192.485	4.85	10203	1.89	200000	
Ca	44	1	nogas	195.808	195.808	0.83	185309	0.11	200000	
Fe	56	1	nogas	166.551	166.551	2.61	10211592	0.00	200000	

Sample Report

Se	77	1	nogas	-23.069	-23.069	-15.43	27598	-0.08	2000	
Se	82	1	nogas	2.465	2.465	18.25	1093	0.23	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.888	1.888	2.31	18119	0.01	2000	
Sn	118	1	nogas	1.936	1.936	2.45	33793	0.01	2000	
Ba	137	1	nogas	1.835	1.835	0.52	15651	0.01	2000	
Sb	121	2	He	1.921	1.921	2.17	16064	0.01	2000	
La	139	1	nogas	-288.719	-288.719	-7.45	247	-117.05	2000	
Au	197	1	nogas	155.487	155.487	370.65	17	932.92	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	895393	0.70	926026	96.69	70	125	
Ge	72	1	nogas	3754592	1.42	3798750	98.84	70	125	
In	115	1	nogas	4228468	1.38	4251403	99.46	70	125	
Bi	209	1	nogas	3663170	1.35	3609904	101.48	70	125	
Ge	72	2	He	878434	0.45	905821	96.98	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	118_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:25:35-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	34.1	320	28.6	1	
Na	23	1	nogas	-1.762	-71.7	682620	2.9	100	
Mg	24	1	nogas	1.260	26.0	60838	8.7	100	
Al	27	1	nogas	-0.145	-13.3	37193	1.2	5	
K	39	1	nogas	-5.114	-53.9	6914695	0.4	100	
Ti	47	1	nogas	0.038	47.7	350	12.5	2.5	
V	51	1	nogas	-3.347	-10.9	937676	0.8	2.5	
Cr	52	1	nogas	-0.421	-12.5	69523	1.8	2.5	
Mn	55	1	nogas	-0.084	-22.3	19921	4.0	2.5	
Co	59	1	nogas	0.021	16.1	1070	9.8	2.5	
Ni	60	1	nogas	0.070	34.4	993	16.1	2.5	
Cu	63	1	nogas	-0.063	-10.8	3934	2.9	1	
Zn	66	1	nogas	0.232	25.9	3427	8.7	2.5	
As	75	1	nogas	-4.739	-7.8	83010	2.3	2.5	
Sr	88	1	nogas	0.022	11.5	4147	3.1	2.5	
Ag	107	1	nogas	-0.009	-3.8	647	1.8	2.5	
Cd	111	1	nogas	0.021	36.1	130	27.7	1	
Sb	121	1	nogas	0.046	6.6	1603	4.7	2.5	
Tl	205	1	nogas	0.060	19.2	3080	15.5	1	
Pb	208	1	nogas	0.026	0.4	1997	0.3	2.5	
U	238	1	nogas	0.025	9.9	1643	10.4	2.5	
[Pb]	206	1	nogas	0.022	3.1	510	3.4	2.5	
[Pb]	207	1	nogas	0.026	9.2	443	7.3	2.5	
Na	23	2	He	-2.731	-19.8	51212	1.5	100	
Mg	24	2	He	1.593	18.3	3524	6.7	100	
Al	27	2	He	0.189	40.7	940	3.8	5	
K	39	2	He	-3.703	-54.4	145431	1.3	100	
Ca	43	2	He	1.589	452.0	53	39.0	100	
Ca	44	2	He	2.923	49.5	1147	6.3	100	
V	51	2	He	0.205	10.1	11068	1.4	2.5	
Cr	52	2	He	-0.008	-543.3	4467	8.6	2.5	
Mn	55	2	He	0.018	163.8	1737	11.3	2.5	
Fe	56	2	He	1.976	11.5	37087	3.4	100	
Co	59	2	He	0.017	22.5	270	16.1	2.5	
Ni	60	2	He	-0.090	-25.4	310	22.4	2.5	
Cu	63	2	He	0.071	8.9	1533	2.5	1	
Zn	66	2	He	-0.111	-83.7	1043	15.6	2.5	
As	75	2	He	-0.009	-430.8	266	21.6	2.5	
Se	78	2	He	0.465	36.0	119	16.1	1	
B	11	1	nogas	1.881	4.2	14716	1.8	10	
Si	28	1	nogas	-17.433	-27.6	853790	0.8	5	
Ca	43	1	nogas	1.713	80.4	1020	6.9	100	
Ca	44	1	nogas	-0.101	-1633.0	32088	3.7	100	
Fe	56	1	nogas	-27.811	-4.3	3745960	0.5	100	
Se	77	1	nogas	-22.419	-17.0	27605	4.0	2.5	
Se	82	1	nogas	-0.119	-124.5	147	37.6	1	

Initial Calibration Blank (ICB) Report

Mo	95	1	nogas	0.037	19.6	603	11.8	2.5	
Sn	118	1	nogas	0.188	4.8	5651	3.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.006	159.3	987	8.6	2.5	
Sb	121	2	He	0.037	15.8	600	9.3	2.5	
P	31	1	nogas	-1.443	-68.6	90237	1.8	10	
La	139	1	nogas	-267.299	-8.6	287	16.5	2.5	
Au	197	1	nogas	514.275	229.5	23	99.0	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	899138	0.57	926026	97.10	70	125	
Ge	72	1	nogas	3730354	0.60	3798750	98.20	70	125	
In	115	1	nogas	4115385	1.38	4251403	96.80	70	125	
Bi	209	1	nogas	3593981	1.65	3609904	99.56	70	125	
Ge	72	2	He	884689	1.14	905821	97.67	70	125	

Sample Report

Sample Table

Sample Name	MBLK-136717
Data File Name	120SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:33:09-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	0.008	51.68	100	0.01	2000	
Na	23	1	nogas	-10.879	-10.879	-5.85	454175	0.00	200000	
Mg	24	1	nogas	8.604	8.604	8.49	184752	0.00	200000	
Al	27	1	nogas	3.812	3.812	2.66	121589	0.00	2000	
K	39	1	nogas	-3.932	-3.932	-114.72	6989789	0.00	200000	
Ti	47	1	nogas	0.022	0.022	79.30	313	0.01	2000	
V	51	1	nogas	-0.226	-0.226	-182.40	1050239	0.00	2000	
Cr	52	1	nogas	-0.412	-0.412	-13.59	70209	0.00	2000	
Mn	55	1	nogas	-0.186	-0.186	-8.74	16077	0.00	2000	
Co	59	1	nogas	-0.001	-0.001	-92.32	407	0.00	2000	
Ni	60	1	nogas	0.007	0.007	198.27	570	0.00	2000	
Cu	63	1	nogas	-0.113	-0.113	-2.94	3167	0.00	2000	
Zn	66	1	nogas	-0.200	-0.200	-10.26	1237	-0.02	2000	
As	75	1	nogas	-2.798	-2.798	-8.63	94925	0.00	2000	
Sr	88	1	nogas	-0.029	-0.029	-7.76	1583	0.00	2000	
Ag	107	1	nogas	-0.031	-0.031	-5.03	133	-0.02	2000	
Cd	111	1	nogas	-0.002	-0.002	-67.06	17	-0.01	2000	
Sb	121	1	nogas	0.001	0.001	737.62	630	0.00	2000	
Tl	205	1	nogas	0.001	0.001	211.71	600	0.00	2000	
Pb	208	1	nogas	-0.001	-0.001	-35.29	510	0.00	2000	
U	238	1	nogas	-0.001	-0.001	-47.78	73	0.00	2000	
[Pb]	206	1	nogas	-0.004	-0.004	-6.73	123	0.00	2000	
[Pb]	207	1	nogas	0.001	0.001	171.12	123	0.00	2000	
Na	23	2	He	-11.152	-11.152	-6.44	37928	-0.03	200000	
Mg	24	2	He	9.005	9.005	1.69	9936	0.09	200000	
Al	27	2	He	4.917	4.917	6.80	3254	0.15	2000	
K	39	2	He	-4.180	-4.180	-86.80	144974	0.00	200000	
Ca	43	2	He	-2.918	-2.918	-234.01	40	-7.29	200000	
Ca	44	2	He	-1.210	-1.210	-278.75	937	-0.13	200000	
V	51	2	He	0.335	0.335	3.26	11957	0.00	2000	
Cr	52	2	He	-0.239	-0.239	-9.24	2554	-0.01	2000	
Mn	55	2	He	-0.031	-0.031	-104.44	1433	0.00	2000	
Fe	56	2	He	-0.924	-0.924	-11.11	15440	-0.01	200000	
Co	59	2	He	-0.002	-0.002	-22.90	53	0.00	2000	
Ni	60	2	He	-0.147	-0.147	-7.64	143	-0.10	2000	
Cu	63	2	He	0.041	0.041	11.66	1300	0.00	2000	
Zn	66	2	He	-0.530	-0.530	-5.65	350	-0.15	2000	
As	75	2	He	-0.006	-0.006	-155.02	268	0.00	2000	
Se	78	2	He	0.285	0.285	48.89	97	0.29	2000	
B	11	1	nogas	0.232	0.232	61.74	8759	0.00	2000	
Si	28	1	nogas	855.434	855.434	5.25	1917482	0.04	2000	
Ca	43	1	nogas	-4.365	-4.365	-55.13	733	-0.60	200000	

Sample Report

Ca	44	1	nogas	-3.684	-3.684	-2.15	29497	-0.01	200000	
Fe	56	1	nogas	-31.687	-31.687	-6.66	3641181	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-13.157	-13.157	-35.83	30529	-0.04	2000	
Se	82	1	nogas	-0.004	-0.004	-4318.34	190	0.00	2000	
Mo	95	1	nogas	-0.014	-0.014	-3.43	123	-0.01	2000	
Sn	118	1	nogas	-0.098	-0.098	-3.18	1187	-0.01	2000	
Ba	137	1	nogas	-0.094	-0.094	-4.55	210	-0.04	2000	
Sb	121	2	He	-0.013	-0.013	-73.23	180	-0.01	2000	
La	139	1	nogas	-308.839	-308.839	-6.50	197	-157.03	2000	
Au	197	1	nogas	347.594	347.594	397.47	20	1737.97	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	924888	0.59	926026	99.88	70	125	
Ge	72	1	nogas	3754087	0.88	3798750	98.82	70	125	
In	115	1	nogas	4107386	1.38	4251403	96.61	70	125	
Bi	209	1	nogas	3601633	1.36	3609904	99.77	70	125	
Ge	72	2	He	878759	0.40	905821	97.01	70	125	

Sample Report

Sample Table

Sample Name	LCS-136717
Data File Name	121SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:35:08-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	53.634	53.634	1.71	311093	0.02	2000	
Na	23	1	nogas	5491.077	5491.077	0.39	138988536	0.00	200000	
Mg	24	1	nogas	5515.170	5515.170	0.56	91231258	0.01	200000	
Al	27	1	nogas	110.879	110.879	2.10	2340347	0.00	2000	
K	39	1	nogas	5352.578	5352.578	1.96	143638857	0.00	200000	
Ti	47	1	nogas	149.490	149.490	1.52	365991	0.04	2000	
V	51	1	nogas	47.734	47.734	4.46	2623159	0.00	2000	
Cr	52	1	nogas	53.065	53.065	1.55	1552178	0.00	2000	
Mn	55	1	nogas	51.597	51.597	1.70	1975150	0.00	2000	
Co	59	1	nogas	54.062	54.062	1.62	1618931	0.00	2000	
Ni	60	1	nogas	52.783	52.783	2.27	351010	0.02	2000	
Cu	63	1	nogas	53.623	53.623	3.03	841805	0.01	2000	
Zn	66	1	nogas	53.483	53.483	1.47	269780	0.02	2000	
As	75	1	nogas	47.144	47.144	3.31	378392	0.01	2000	
Sr	88	1	nogas	101.449	101.449	3.28	4966601	0.00	2000	
Ag	107	1	nogas	53.388	53.388	1.91	1190714	0.00	2000	
Cd	111	1	nogas	54.292	54.292	0.14	257734	0.02	2000	
Sb	121	1	nogas	50.205	50.205	2.67	1073051	0.00	2000	
Tl	205	1	nogas	51.946	51.946	1.79	2083504	0.00	2000	
Pb	208	1	nogas	53.670	53.670	0.75	2925485	0.00	2000	
U	238	1	nogas	103.474	103.474	1.17	6034482	0.00	2000	
[Pb]	206	1	nogas	50.826	50.826	1.61	706663	0.01	2000	
[Pb]	207	1	nogas	51.343	51.343	1.67	626997	0.01	2000	
Na	23	2	He	5421.028	5421.028	0.59	8356223	0.06	200000	
Mg	24	2	He	5461.369	5461.369	1.00	4725415	0.12	200000	
Al	27	2	He	112.104	112.104	0.80	55628	0.20	2000	
K	39	2	He	5455.810	5455.810	0.69	5380341	0.10	200000	
Ca	43	2	He	5552.570	5552.570	3.52	16134	34.42	200000	
Ca	44	2	He	5392.518	5392.518	0.66	263676	2.05	200000	
V	51	2	He	51.296	51.296	0.63	387252	0.01	2000	
Cr	52	2	He	51.550	51.550	0.96	422459	0.01	2000	
Mn	55	2	He	52.962	52.962	0.62	310637	0.02	2000	
Fe	56	2	He	5355.259	5355.259	0.63	39400453	0.01	200000	
Co	59	2	He	52.669	52.669	0.46	602723	0.01	2000	
Ni	60	2	He	52.957	52.957	1.72	152380	0.03	2000	
Cu	63	2	He	53.423	53.423	0.25	394626	0.01	2000	
Zn	66	2	He	53.831	53.831	0.46	88851	0.06	2000	
As	75	2	He	52.114	52.114	0.60	74538	0.07	2000	
Se	78	2	He	53.457	53.457	2.03	6598	0.81	2000	
B	11	1	nogas	532.280	532.280	0.42	1838206	0.03	2000	
Si	28	1	nogas	6023.815	6023.815	2.16	7984809	0.08	2000	>LDR
Ca	43	1	nogas	5368.102	5368.102	1.83	252756	2.12	200000	
Ca	44	1	nogas	5378.779	5378.779	1.98	4129223	0.13	200000	
Fe	56	1	nogas	5284.589	5284.589	1.97	175419225	0.00	200000	

Sample Report

Se	77	1	nogas	26.848	26.848	8.21	41408	0.06	2000	
Se	82	1	nogas	53.001	53.001	1.32	19130	0.28	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	49.851	49.851	1.41	460194	0.01	2000	
Sn	118	1	nogas	101.758	101.758	2.58	1517366	0.01	2000	
Ba	137	1	nogas	51.975	51.975	0.77	387658	0.01	2000	
Sb	121	2	He	49.743	49.743	1.26	407274	0.01	2000	
La	139	1	nogas	-182.780	-182.780	-28.00	450	-40.62	2000	
Au	197	1	nogas	33.966	33.966	3705.81	13	254.74	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	823164	1.09	926026	88.89	70	125	
Ge	72	1	nogas	3662877	2.05	3798750	96.42	70	125	
In	115	1	nogas	3932332	0.52	4251403	92.49	70	125	
Bi	209	1	nogas	3430795	0.94	3609904	95.04	70	125	
Ge	72	2	He	875314	0.66	905821	96.63	70	125	

Sample Report

Sample Table

Sample Name	HS19010627-01SD
Data File Name	123SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:39:03-06:00
Sample Type	Sample
Dilution	5
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	0.015	0.073	53.39	150	0.01	2000	
Na	23	1	nogas	119080.942	595404.708	0.65	3205367672	0.00	200000	
Mg	24	1	nogas	49.313	246.565	0.50	913508	0.01	200000	
Al	27	1	nogas	58.507	292.537	2.40	1316174	0.00	2000	
K	39	1	nogas	4760.541	23802.706	1.70	134907957	0.00	200000	
Ti	47	1	nogas	0.312	1.558	13.18	1063	0.03	2000	
V	51	1	nogas	9.359	46.795	7.93	1411164	0.00	2000	
Cr	52	1	nogas	0.236	1.180	23.82	90787	0.00	2000	
Mn	55	1	nogas	0.322	1.609	1.29	36633	0.00	2000	
Co	59	1	nogas	0.027	0.133	16.55	1270	0.00	2000	
Ni	60	1	nogas	0.488	2.441	2.18	3941	0.01	2000	
Cu	63	1	nogas	1.181	5.906	2.60	24450	0.00	2000	
Zn	66	1	nogas	0.672	3.362	7.72	5848	0.01	2000	
As	75	1	nogas	0.507	2.534	157.25	117079	0.00	2000	
Sr	88	1	nogas	106.794	533.968	2.61	5488735	0.00	2000	
Ag	107	1	nogas	-0.027	-0.135	-4.45	240	-0.01	2000	
Cd	111	1	nogas	0.105	0.526	5.59	527	0.02	2000	
Sb	121	1	nogas	0.058	0.289	10.47	1920	0.00	2000	
Tl	205	1	nogas	0.042	0.209	18.84	2150	0.00	2000	
Pb	208	1	nogas	0.008	0.042	26.30	1027	0.00	2000	
U	238	1	nogas	0.021	0.106	7.09	1340	0.00	2000	
[Pb]	206	1	nogas	0.005	0.026	8.92	243	0.00	2000	
[Pb]	207	1	nogas	0.013	0.066	10.13	260	0.01	2000	
Na	23	2	He	116223.742	581118.712	1.13	186895704	0.06	200000	
Mg	24	2	He	49.634	248.172	1.63	47279	0.10	200000	
Al	27	2	He	57.721	288.607	0.89	30495	0.19	2000	
K	39	2	He	5099.487	25497.434	2.19	5038678	0.10	200000	
Ca	43	2	He	6692.515	33462.574	3.34	20401	32.80	200000	
Ca	44	2	He	6471.524	32357.621	1.05	331977	1.95	200000	
V	51	2	He	0.927	4.634	4.73	17079	0.01	2000	
Cr	52	2	He	-0.002	-0.011	-1571.20	4687	0.00	2000	
Mn	55	2	He	0.280	1.398	3.42	3404	0.01	2000	
Fe	56	2	He	0.582	2.908	9.09	27771	0.00	200000	
Co	59	2	He	0.008	0.041	16.36	180	0.00	2000	
Ni	60	2	He	-0.014	-0.072	-214.63	550	0.00	2000	
Cu	63	2	He	0.285	1.423	13.50	3247	0.01	2000	
Zn	66	2	He	0.100	0.501	19.35	1443	0.01	2000	
As	75	2	He	0.601	3.007	10.75	1188	0.05	2000	
Se	78	2	He	1.388	6.942	5.84	243	0.57	2000	
B	11	1	nogas	1355.147	6775.736	1.80	5423221	0.02	2000	
Si	28	1	nogas	16035.093	80175.463	1.26	20815627	0.08	2000	>LDR
Ca	43	1	nogas	6517.977	32589.885	1.62	321952	2.02	200000	
Ca	44	1	nogas	6370.445	31852.225	2.05	5127608	0.12	200000	
Fe	56	1	nogas	40.560	202.801	4.36	6181039	0.00	200000	
Se	77	1	nogas	2.104	10.520	254.75	35923	0.01	2000	
Se	82	1	nogas	1.175	5.876	12.65	637	0.18	2000	

Sample Report

Mo	95	1	nogas	68.129	340.645	2.45	660051	0.01	2000	
Sn	118	1	nogas	0.020	0.102	114.96	2917	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	0.734	3.668	2.08	6395	0.01	2000	
Sb	121	2	He	0.049	0.244	15.03	720	0.01	2000	
La	139	1	nogas	-351.386	-1756.930	-4.98	100	-351.39	2000	
Au	197	1	nogas	-131.195	-655.975	-741.37	10	-1311.95	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	956098	0.35	926026	103.25	70	125	
Ge	72	1	nogas	3844525	0.76	3798750	101.20	70	125	
In	115	1	nogas	3956645	1.98	4251403	93.07	70	125	
Bi	209	1	nogas	3343172	0.70	3609904	92.61	70	125	
Ge	72	2	He	918945	0.62	905821	101.45	70	125	

Sample Report

Sample Table

Sample Name	HS19010627-01MS
Data File Name	124SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:41:02-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	54.434	54.434	1.50	308099	0.02	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	5563.485	5563.485	0.52	92060323	0.01	200000	
Al	27	1	nogas	386.072	386.072	0.21	7661251	0.01	2000	
K	39	1	nogas	27611.720	27611.720	0.78	677651965	0.00	200000	
Ti	47	1	nogas	153.968	153.968	1.08	358655	0.04	2000	
V	51	1	nogas	49.234	49.234	2.50	2543523	0.00	2000	
Cr	52	1	nogas	51.715	51.715	1.72	1441444	0.00	2000	
Mn	55	1	nogas	52.750	52.750	1.44	1920756	0.00	2000	
Co	59	1	nogas	53.047	53.047	1.20	1511597	0.00	2000	
Ni	60	1	nogas	53.096	53.096	1.12	336000	0.02	2000	
Cu	63	1	nogas	58.138	58.138	0.52	868226	0.01	2000	
Zn	66	1	nogas	54.748	54.748	1.28	262724	0.02	2000	
As	75	1	nogas	52.019	52.019	1.34	386627	0.01	2000	
Sr	88	1	nogas	599.824	599.824	1.59	27934700	0.00	2000	
Ag	107	1	nogas	47.784	47.784	1.66	1014091	0.00	2000	
Cd	111	1	nogas	53.177	53.177	1.30	228697	0.02	2000	
Sb	121	1	nogas	48.875	48.875	0.85	994119	0.00	2000	
Tl	205	1	nogas	54.010	54.010	1.71	1789891	0.00	2000	
Pb	208	1	nogas	43.750	43.750	0.93	2384873	0.00	2000	
U	238	1	nogas	106.628	106.628	1.10	5137352	0.00	2000	
[Pb]	206	1	nogas	51.770	51.770	1.07	594704	0.01	2000	
[Pb]	207	1	nogas	51.774	51.774	0.75	522353	0.01	2000	
Na	23	2	He	578559.476	578559.476	0.68	826041801	0.07	200000	>LDR
Mg	24	2	He	5803.724	5803.724	0.75	4681527	0.12	200000	
Al	27	2	He	391.189	391.189	0.68	179023	0.22	2000	
K	39	2	He	27215.061	27215.061	1.53	26244426	0.10	200000	
Ca	43	2	He	37828.268	37828.268	1.30	102207	37.01	200000	
Ca	44	2	He	37572.646	37572.646	2.10	1707802	2.20	200000	
V	51	2	He	55.363	55.363	0.34	388993	0.01	2000	
Cr	52	2	He	51.493	51.493	1.12	393406	0.01	2000	
Mn	55	2	He	54.684	54.684	0.90	298969	0.02	2000	
Fe	56	2	He	5311.515	5311.515	1.60	36430929	0.01	200000	
Co	59	2	He	52.050	52.050	1.16	555328	0.01	2000	
Ni	60	2	He	52.088	52.088	0.63	139762	0.04	2000	
Cu	63	2	He	51.863	51.863	0.41	357247	0.01	2000	
Zn	66	2	He	53.746	53.746	1.31	82725	0.06	2000	
As	75	2	He	57.568	57.568	1.02	76747	0.08	2000	
Se	78	2	He	60.305	60.305	0.93	6932	0.87	2000	
B	11	1	nogas	7440.903	7440.903	0.95	24989136	0.03	2000	>LDR
Si	28	1	nogas	81977.042	81977.042	0.27	93096335	0.09	2000	>LDR
Ca	43	1	nogas	36175.458	36175.458	1.80	1615919	2.24	200000	
Ca	44	1	nogas	36180.441	36180.441	0.51	26256066	0.14	200000	
Fe	56	1	nogas	5260.472	5260.472	1.87	166190158	0.00	200000	
Se	77	1	nogas	35.452	35.452	10.14	41772	0.08	2000	
Se	82	1	nogas	57.718	57.718	2.24	19798	0.29	2000	

Sample Report

Mo	95	1	nogas	375.409	375.409	2.21	3295714	0.01	2000	
Sn	118	1	nogas	96.697	96.697	0.83	1306078	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	55.170	55.170	1.21	372635	0.01	2000	
Sb	121	2	He	48.322	48.322	0.95	368890	0.01	2000	
La	139	1	nogas	-80.955	-80.955	-52.02	600	-13.49	2000	
Au	197	1	nogas	403.136	403.136	184.47	17	2418.81	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	803375	2.03	926026	86.76	70	125	
Ge	72	1	nogas	3484636	2.02	3798750	91.73	70	125	
In	115	1	nogas	3561934	2.50	4251403	83.78	70	125	
Bi	209	1	nogas	2834361	1.32	3609904	78.52	70	125	
Ge	72	2	He	816128	1.90	905821	90.10	70	125	

Sample Report

Sample Table

Sample Name	HS19010627-01MSD
Data File Name	125SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:42:59-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	55.037	55.037	2.03	333662	0.02	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	5547.896	5547.896	2.08	100824492	0.01	200000	
Al	27	1	nogas	400.573	400.573	0.92	8464954	0.00	2000	
K	39	1	nogas	28802.476	28802.476	0.83	752644350	0.00	200000	
Ti	47	1	nogas	159.245	159.245	0.62	395179	0.04	2000	
V	51	1	nogas	52.945	52.945	0.38	2835104	0.00	2000	
Cr	52	1	nogas	52.931	52.931	2.42	1569799	0.00	2000	
Mn	55	1	nogas	56.908	56.908	1.45	2206000	0.00	2000	
Co	59	1	nogas	54.700	54.700	0.36	1660210	0.00	2000	
Ni	60	1	nogas	54.502	54.502	0.21	367383	0.01	2000	
Cu	63	1	nogas	60.119	60.119	0.13	956195	0.01	2000	
Zn	66	1	nogas	55.897	55.897	0.85	285654	0.02	2000	
As	75	1	nogas	53.250	53.250	0.94	418967	0.01	2000	
Sr	88	1	nogas	616.773	616.773	1.81	30589901	0.00	2000	
Ag	107	1	nogas	48.698	48.698	1.21	1100917	0.00	2000	
Cd	111	1	nogas	53.512	53.512	2.41	248989	0.02	2000	
Sb	121	1	nogas	49.468	49.468	0.33	1071819	0.00	2000	
Tl	205	1	nogas	53.438	53.438	1.47	1875673	0.00	2000	
Pb	208	1	nogas	46.834	46.834	1.34	2552940	0.00	2000	
U	238	1	nogas	108.127	108.127	0.71	5516833	0.00	2000	
[Pb]	206	1	nogas	51.462	51.462	0.87	626160	0.01	2000	
[Pb]	207	1	nogas	51.942	51.942	1.66	555037	0.01	2000	
Na	23	2	He	593234.770	593234.770	0.24	913624573	0.06	200000	>LDR
Mg	24	2	He	5784.178	5784.178	1.11	5032540	0.11	200000	
Al	27	2	He	402.265	402.265	1.22	198548	0.20	2000	
K	39	2	He	29977.301	29977.301	0.24	28893029	0.10	200000	
Ca	43	2	He	38195.031	38195.031	1.14	111311	34.31	200000	
Ca	44	2	He	37646.901	37646.901	1.09	1845316	2.04	200000	
V	51	2	He	56.037	56.037	0.49	424566	0.01	2000	
Cr	52	2	He	51.824	51.824	0.90	427061	0.01	2000	
Mn	55	2	He	57.135	57.135	0.95	336867	0.02	2000	
Fe	56	2	He	5346.376	5346.376	1.17	39556564	0.01	200000	
Co	59	2	He	52.276	52.276	0.61	601606	0.01	2000	
Ni	60	2	He	52.349	52.349	1.69	151489	0.03	2000	
Cu	63	2	He	52.204	52.204	0.40	387832	0.01	2000	
Zn	66	2	He	54.187	54.187	1.82	89936	0.06	2000	
As	75	2	He	58.100	58.100	0.44	83535	0.07	2000	
Se	78	2	He	61.420	61.420	0.94	7615	0.81	2000	
B	11	1	nogas	7741.250	7741.250	1.90	27843592	0.03	2000	>LDR
Si	28	1	nogas	85791.630	85791.630	0.93	103733435	0.08	2000	>LDR
Ca	43	1	nogas	38246.876	38246.876	2.21	1819068	2.10	200000	
Ca	44	1	nogas	37418.430	37418.430	1.24	28922190	0.13	200000	
Fe	56	1	nogas	5397.554	5397.554	0.72	181499942	0.00	200000	
Se	77	1	nogas	35.802	35.802	4.50	44598	0.08	2000	
Se	82	1	nogas	61.712	61.712	1.23	22538	0.27	2000	

Sample Report

Mo	95	1	nogas	378.934	378.934	3.61	3542779	0.01	2000	
Sn	118	1	nogas	99.316	99.316	1.40	1451654	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	54.369	54.369	2.41	397375	0.01	2000	
Sb	121	2	He	48.283	48.283	0.09	397588	0.01	2000	
La	139	1	nogas	-47.492	-47.492	-122.13	717	-6.63	2000	
Au	197	1	nogas	565.789	565.789	224.54	20	2828.95	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	860482	1.32	926026	92.92	70	125	
Ge	72	1	nogas	3711884	1.98	3798750	97.71	70	125	
In	115	1	nogas	3854073	1.08	4251403	90.65	70	125	
Bi	209	1	nogas	3001831	1.47	3609904	83.16	70	125	
Ge	72	2	He	880275	0.73	905821	97.18	70	125	

Sample Report

Sample Table

Sample Name	HS19010627-01PDS
Data File Name	126SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:44:55-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	102.273	102.273	1.51	647486	0.02	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	10284.539	10284.539	2.58	190202358	0.01	200000	
Al	27	1	nogas	377.464	377.464	0.98	7936714	0.00	2000	
K	39	1	nogas	32691.999	32691.999	1.82	848740052	0.00	200000	
Ti	47	1	nogas	104.723	104.723	0.83	258544	0.04	2000	
V	51	1	nogas	101.317	101.317	2.41	4445361	0.00	2000	
Cr	52	1	nogas	102.865	102.865	2.89	2957237	0.00	2000	
Mn	55	1	nogas	103.344	103.344	1.78	3965305	0.00	2000	
Co	59	1	nogas	99.916	99.916	3.90	3015516	0.00	2000	
Ni	60	1	nogas	102.036	102.036	1.09	683631	0.01	2000	
Cu	63	1	nogas	115.355	115.355	0.98	1820348	0.01	2000	
Zn	66	1	nogas	104.805	104.805	1.13	530810	0.02	2000	
As	75	1	nogas	101.923	101.923	0.37	697572	0.01	2000	
Sr	88	1	nogas	474.043	474.043	0.25	23389027	0.00	2000	
Ag	107	1	nogas	93.360	93.360	1.51	2098746	0.00	2000	
Cd	111	1	nogas	102.348	102.348	2.25	460180	0.02	2000	
Sb	121	1	nogas	89.100	89.100	5.00	1919574	0.00	2000	
Tl	205	1	nogas	104.190	104.190	1.16	3535872	0.00	2000	
Pb	208	1	nogas	88.720	88.720	1.32	4835642	0.00	2000	
U	238	1	nogas	0.138	0.138	29.23	6898	0.00	2000	
[Pb]	206	1	nogas	99.320	99.320	2.78	1168174	0.01	2000	
[Pb]	207	1	nogas	99.505	99.505	2.81	1027933	0.01	2000	
Na	23	2	He	555146.861	555146.861	0.38	899459800	0.06	200000	>LDR
Mg	24	2	He	10961.834	10961.834	1.13	10031422	0.11	200000	
Al	27	2	He	374.260	374.260	0.52	194402	0.19	2000	
K	39	2	He	35567.336	35567.336	1.06	34253091	0.10	200000	
Ca	43	2	He	40575.800	40575.800	0.65	124410	32.61	200000	
Ca	44	2	He	41159.609	41159.609	2.37	2121991	1.94	200000	
V	51	2	He	104.723	104.723	0.55	826105	0.01	2000	
Cr	52	2	He	98.856	98.856	0.49	852801	0.01	2000	
Mn	55	2	He	102.409	102.409	0.28	633929	0.02	2000	
Fe	56	2	He	10154.269	10154.269	1.02	79030182	0.01	200000	
Co	59	2	He	99.297	99.297	0.63	1202224	0.01	2000	
Ni	60	2	He	99.924	99.924	1.52	303739	0.03	2000	
Cu	63	2	He	97.680	97.680	0.69	762588	0.01	2000	
Zn	66	2	He	103.123	103.123	0.69	178911	0.06	2000	
As	75	2	He	107.284	107.284	0.95	162049	0.07	2000	
Se	78	2	He	111.154	111.154	0.49	14446	0.77	2000	
B	11	1	nogas	7513.586	7513.586	1.49	28222872	0.03	2000	>LDR
Si	28	1	nogas	184036.472	184036.472	0.74	220356177	0.08	2000	>LDR
Ca	43	1	nogas	41039.843	41039.843	2.74	1941619	2.11	200000	
Ca	44	1	nogas	40208.664	40208.664	0.72	30913039	0.13	200000	
Fe	56	1	nogas	10370.986	10370.986	1.10	342625133	0.00	200000	
Se	77	1	nogas	84.071	84.071	4.68	58480	0.14	2000	
Se	82	1	nogas	108.949	108.949	2.37	39436	0.28	2000	

Sample Report

Mo	95	1	nogas	398.918	398.918	0.40	3710754	0.01	2000	
Sn	118	1	nogas	0.341	0.341	23.10	7262	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	102.150	102.150	2.47	720817	0.01	2000	
Sb	121	2	He	87.123	87.123	0.59	754557	0.01	2000	
La	139	1	nogas	-57.570	-57.570	-111.13	673	-8.55	2000	
Au	197	1	nogas	1870.563	1870.563	88.12	40	4676.41	2000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	898651	1.81	926026	97.04	70	125	
Ge	72	1	nogas	3692000	0.92	3798750	97.19	70	125	
In	115	1	nogas	3725744	2.02	4251403	87.64	70	125	
Bi	209	1	nogas	2903198	1.80	3609904	80.42	70	125	
Ge	72	2	He	926100	1.33	905821	102.24	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	128_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:48:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	91.443	1.951	630867	0.23	100	91.4	90	110	
Na	23	1	nogas	10825.909	1.439	294925865	1.66	10000	108.3	90	110	
Mg	24	1	nogas	10380.215	1.609	185226971	1.26	10000	103.8	90	110	
Al	27	1	nogas	107.111	0.725	2384636	0.81	100	107.1	90	110	
K	39	1	nogas	10354.434	1.855	286109431	2.70	10000	103.5	90	110	
Ti	47	1	nogas	101.303	1.411	261510	1.44	100	101.3	90	110	
V	51	1	nogas	104.589	2.951	4762342	1.39	100	104.6	90	110	
Cr	52	1	nogas	102.015	1.495	3067507	1.26	100	102.0	90	110	
Mn	55	1	nogas	100.176	1.630	4019816	2.13	100	100.2	90	110	
Co	59	1	nogas	103.542	0.891	3267854	0.66	100	103.5	90	110	
Ni	60	1	nogas	101.589	1.254	711651	0.78	100	101.6	90	110	
Cu	63	1	nogas	103.079	2.742	1700955	1.22	100	103.1	90	110	
Zn	66	1	nogas	99.414	1.618	526543	0.69	100	99.4	90	110	
As	75	1	nogas	99.176	1.772	712731	0.76	100	99.2	90	110	
Sr	88	1	nogas	97.789	1.162	5047285	1.56	100	97.8	90	110	
Ag	107	1	nogas	96.375	1.840	2265342	2.65	100	96.4	90	110	
Cd	111	1	nogas	98.503	1.456	488836	1.78	100	98.5	90	110	
Sb	121	1	nogas	95.748	2.559	2156527	1.30	100	95.7	90	110	
Tl	205	1	nogas	97.646	2.029	3913390	0.54	100	97.6	90	110	
Pb	208	1	nogas	99.342	0.844	5414525	0.84	100	99.3	90	110	
U	238	1	nogas	102.294	2.100	5960670	1.13	100	102.3	90	110	
[Pb]	206	1	nogas	94.586	1.373	1314148	0.79	100	94.6	90	110	
[Pb]	207	1	nogas	95.852	1.828	1169690	1.11	100	95.9	90	110	
Na	23	2	He	10776.155	0.553	17152163	1.06	10000	107.8	90	110	
Mg	24	2	He	10461.601	0.236	9375166	0.92	10000	104.6	90	110	
Al	27	2	He	107.206	1.484	55143	0.94	100	107.2	90	110	
K	39	2	He	10961.733	0.497	10659754	0.49	10000	109.6	90	110	
Ca	43	2	He	10145.069	2.791	30495	3.14	10000	101.5	90	110	
Ca	44	2	He	10277.844	0.337	519688	1.05	10000	102.8	90	110	
V	51	2	He	101.328	0.656	782958	0.93	100	101.3	90	110	
Cr	52	2	He	100.236	0.885	846568	0.92	100	100.2	90	110	
Mn	55	2	He	101.864	0.873	617399	0.86	100	101.9	90	110	
Fe	56	2	He	10160.114	0.847	77417464	0.08	10000	101.6	90	110	
Co	59	2	He	101.263	0.768	1200387	0.34	100	101.3	90	110	
Ni	60	2	He	102.391	0.775	304683	0.39	100	102.4	90	110	
Cu	63	2	He	100.409	0.529	767477	0.63	100	100.4	90	110	
Zn	66	2	He	101.059	0.624	171697	0.53	100	101.1	90	110	
As	75	2	He	99.706	1.376	147464	0.79	100	99.7	90	110	
Se	78	2	He	99.002	0.920	12604	0.77	100	99.0	90	110	
B	11	1	nogas	509.480	1.633	2093325	0.97	500	101.9	90	110	
Si	28	1	nogas	5371.014	1.258	7603190	1.55	5000	107.4	90	110	
Ca	43	1	nogas	10227.172	1.380	506672	0.69	10000	102.3	90	110	
Ca	44	1	nogas	10205.460	1.283	8228218	0.82	10000	102.1	90	110	
Fe	56	1	nogas	10054.380	2.174	347419724	1.14	10000	100.5	90	110	
Se	77	1	nogas	111.237	3.522	69466	2.08	100	111.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	94.276	0.606	35709	1.78	100	94.3	90	110	
Mo	95	1	nogas	95.219	0.574	926270	1.04	100	95.2	90	110	
Sn	118	1	nogas	98.961	2.821	1542520	1.72	100	99.0	90	110	
Ba	137	1	nogas	95.333	1.829	742475	0.55	100	95.3	90	110	
Sb	121	2	He	93.113	0.865	789538	0.30	100	93.1	90	110	
Li	7	1	nogas	96.400	0.601	1812637	1.79	100	96.4	90	110	
P	31	1	nogas	507.875	1.404	847697	1.01	500	101.6	90	110	
La	139	1	nogas	-16.976	-250.656	830	11.04	100	-17.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	1310.780	87.111	37	56.77	100	1310.8	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	979369	2.15	926026	105.76	70	125	
Ge	72	1	nogas	3860386	1.51	3798750	101.62	70	125	
In	115	1	nogas	4111195	1.63	4251403	96.70	70	125	
Bi	209	1	nogas	3429011	2.04	3609904	94.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	906797	0.79	905821	100.11	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	129_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:50:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	0.065	29.8	533	26.8	1	
Na	23	1	nogas	237.380	2.6	7399972	3.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	4.705	6.2	129455	4.6	100	
Al	27	1	nogas	3.215	3.8	114936	2.0	5	
K	39	1	nogas	19.898	15.2	8035901	0.7	100	
Ti	47	1	nogas	0.064	32.2	440	12.0	2.5	
V	51	1	nogas	3.730	6.7	1251307	1.4	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.219	-17.9	79901	1.5	2.5	
Mn	55	1	nogas	0.344	5.1	38671	1.2	2.5	
Co	59	1	nogas	0.029	26.4	1370	17.2	2.5	
Ni	60	1	nogas	0.368	4.0	3194	3.9	2.5	
Cu	63	1	nogas	0.389	14.4	11817	7.5	2	
Zn	66	1	nogas	0.906	2.5	7292	1.1	2.5	
As	75	1	nogas	-1.636	-11.6	107395	1.3	2.5	
Sr	88	1	nogas	0.152	9.7	11274	7.0	2.5	
Ag	107	1	nogas	-0.008	-22.4	717	5.6	2.5	
Cd	111	1	nogas	0.023	35.9	147	30.7	1	
Sb	121	1	nogas	0.282	10.6	7162	9.2	2.5	
Tl	205	1	nogas	0.344	47.3	14932	46.0	1	
Pb	208	1	nogas	0.038	17.9	2617	14.0	2.5	
U	238	1	nogas	0.062	37.5	3897	36.6	2.5	
[Pb]	206	1	nogas	0.033	33.9	667	24.7	2.5	
[Pb]	207	1	nogas	0.034	19.5	537	15.8	2.5	
Na	23	2	He	225.976	1.9	434772	1.0	100	CCB Main CR1 Failed
Mg	24	2	He	4.094	0.8	6128	1.1	100	
Al	27	2	He	3.456	5.7	2740	3.5	5	
K	39	2	He	25.494	8.5	173427	1.2	100	
Ca	43	2	He	39.642	44.9	177	31.2	100	
Ca	44	2	He	31.184	3.4	2724	2.1	100	
V	51	2	He	0.428	8.4	13657	2.7	2.5	
Cr	52	2	He	0.040	110.0	5214	7.2	2.5	
Mn	55	2	He	0.399	13.5	4271	8.0	2.5	
Fe	56	2	He	2.412	6.6	43287	2.8	100	
Co	59	2	He	0.024	17.6	383	14.4	2.5	
Ni	60	2	He	-0.014	-281.8	570	22.0	2.5	
Cu	63	2	He	0.332	13.2	3734	8.8	2	
Zn	66	2	He	0.594	4.6	2364	1.9	2.5	
As	75	2	He	0.031	136.2	347	19.6	2.5	
Se	78	2	He	0.469	35.2	129	16.5	2	
B	11	1	nogas	37.780	3.3	172205	3.0	10	CCB Main CR1 Failed
Si	28	1	nogas	243.860	6.5	1241384	2.0	5	CCB Main CR1 Failed
Ca	43	1	nogas	35.410	3.0	2794	1.7	100	
Ca	44	1	nogas	36.143	6.1	63956	2.5	100	
Fe	56	1	nogas	-18.540	-5.5	4303187	0.2	100	
Se	77	1	nogas	-6.293	-70.2	34393	4.7	2.5	
Se	82	1	nogas	0.099	103.1	240	16.7	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.293	16.3	3197	14.3	2.5	
Sn	118	1	nogas	0.461	11.2	10317	7.9	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.030	31.3	1223	5.6	2.5	
Sb	121	2	He	0.267	10.2	2677	9.4	2.5	
P	31	1	nogas	-0.548	-167.8	97201	0.9	10	
La	139	1	nogas	103.135	75.1	1137	14.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	9.889	6153.5	13	86.6	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	1034907	0.81	926026	111.76	70	125	
Ge	72	1	nogas	3962295	0.65	3798750	104.31	70	125	
In	115	1	nogas	4288669	1.53	4251403	100.88	70	125	
Bi	209	1	nogas	3566894	0.48	3609904	98.81	70	125	
Ge	72	2	He	949346	0.64	905821	104.80	70	125	

Sample Report

Sample Table

Sample Name	HS19010248-03
Data File Name	131SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:56:54-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	0.116	0.116	4.19	793	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	47245.741	47245.741	1.76	923951154	0.01	200000	
Al	27	1	nogas	1580.605	1580.605	2.69	32957010	0.00	2000	
K	39	1	nogas	19811.223	19811.223	3.91	514562112	0.00	200000	
Ti	47	1	nogas	27.341	27.341	10.20	67269	0.04	2000	
V	51	1	nogas	11.945	11.945	21.65	1434642	0.00	2000	
Cr	52	1	nogas	28.694	28.694	4.25	878716	0.00	2000	
Mn	55	1	nogas	90.036	90.036	2.78	3441519	0.00	2000	
Co	59	1	nogas	2.865	2.865	1.95	86492	0.00	2000	
Ni	60	1	nogas	7.846	7.846	5.10	52796	0.01	2000	
Cu	63	1	nogas	5.474	5.474	2.12	90625	0.01	2000	
Zn	66	1	nogas	5.198	5.198	6.19	28289	0.02	2000	
As	75	1	nogas	13.463	13.463	12.86	186203	0.01	2000	
Sr	88	1	nogas	9940.281	9940.281	3.20	487996313	0.00	2000	>LDR
Ag	107	1	nogas	0.000	0.000	1158.49	840	0.00	2000	
Cd	111	1	nogas	0.121	0.121	11.58	583	0.02	2000	
Sb	121	1	nogas	0.512	0.512	4.61	11577	0.00	2000	
Tl	205	1	nogas	0.052	0.052	2.27	2197	0.00	2000	
Pb	208	1	nogas	0.536	0.536	1.48	29778	0.00	2000	
U	238	1	nogas	3.434	3.434	5.19	168929	0.00	2000	
[Pb]	206	1	nogas	0.646	0.646	8.79	7719	0.01	2000	
[Pb]	207	1	nogas	0.605	0.605	8.15	6311	0.01	2000	
Na	23	2	He	488496.366	488496.366	1.76	717650896	0.07	200000	>LDR
Mg	24	2	He	55983.443	55983.443	1.05	46450523	0.12	200000	
Al	27	2	He	1680.480	1680.480	1.34	788783	0.21	2000	
K	39	2	He	20385.894	20385.894	0.63	19696208	0.10	200000	
Ca	43	2	He	395002.314	395002.314	0.88	1097757	35.98	200000	>LDR
Ca	44	2	He	384510.491	384510.491	1.41	17969206	2.14	200000	>LDR
V	51	2	He	4.822	4.822	0.83	43131	0.01	2000	
Cr	52	2	He	29.195	29.195	1.39	231394	0.01	2000	
Mn	55	2	He	92.091	92.091	1.70	517066	0.02	2000	
Fe	56	2	He	857.215	857.215	1.94	6068685	0.01	200000	
Co	59	2	He	1.961	1.961	2.46	21603	0.01	2000	
Ni	60	2	He	3.037	3.037	5.88	8892	0.03	2000	
Cu	63	2	He	1.928	1.928	3.72	14583	0.01	2000	
Zn	66	2	He	5.362	5.362	1.29	9539	0.06	2000	
As	75	2	He	2.659	2.659	4.78	3899	0.07	2000	
Se	78	2	He	1.055	1.055	13.29	183	0.58	2000	
B	11	1	nogas	38.261	38.261	2.92	152850	0.03	2000	
Si	28	1	nogas	209737.671	209737.671	2.74	249812416	0.08	2000	>LDR
Ca	43	1	nogas	358327.973	358327.973	4.28	16862060	2.13	200000	>LDR
Ca	44	1	nogas	358477.171	358477.171	3.87	273975363	0.13	200000	>LDR
Fe	56	1	nogas	855.830	855.830	4.00	32350316	0.00	200000	
Se	77	1	nogas	75.268	75.268	16.96	55605	0.14	2000	
Se	82	1	nogas	14.961	14.961	7.30	5548	0.27	2000	

Sample Report

Mo	95	1	nogas	1.854	1.854	2.35	17415	0.01	2000	
Sn	118	1	nogas	0.269	0.269	10.32	6411	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	2470.017	2470.017	3.60	17858701	0.01	2000	>LDR
Sb	121	2	He	0.493	0.493	5.69	4147	0.01	2000	
La	139	1	nogas	60467.136	60467.136	3.44	122808	49.24	2000	>LDR
Au	197	1	nogas	1053.321	1053.321	78.42	27	3949.96	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	907803	1.56	926026	98.03	70	125	
Ge	72	1	nogas	3676102	2.86	3798750	96.77	70	125	
In	115	1	nogas	3822943	2.64	4251403	89.92	70	125	
Bi	209	1	nogas	2896634	4.56	3609904	80.24	70	125	
Ge	72	2	He	839815	1.27	905821	92.71	70	125	

Sample Report

Sample Table

Sample Name	HS19010248-04
Data File Name	132SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T16:58:53-06:00
Sample Type	Sample
Dilution	1
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	0.109	0.109	8.14	687	0.02	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	51436.393	51436.393	4.97	847275786	0.01	200000	
Al	27	1	nogas	1376.905	1376.905	1.25	26410514	0.01	2000	
K	39	1	nogas	19534.684	19534.684	1.78	466900227	0.00	200000	
Ti	47	1	nogas	20.345	20.345	8.06	46139	0.04	2000	
V	51	1	nogas	11.162	11.162	40.30	1294609	0.00	2000	
Cr	52	1	nogas	28.677	28.677	2.16	808021	0.00	2000	
Mn	55	1	nogas	88.609	88.609	1.48	3115588	0.00	2000	
Co	59	1	nogas	2.737	2.737	2.73	75999	0.00	2000	
Ni	60	1	nogas	8.000	8.000	2.85	49503	0.02	2000	
Cu	63	1	nogas	5.044	5.044	1.83	77144	0.01	2000	
Zn	66	1	nogas	5.222	5.222	2.28	26146	0.02	2000	
As	75	1	nogas	13.559	13.559	8.38	171821	0.01	2000	
Sr	88	1	nogas	9675.169	9675.169	1.96	436939060	0.00	2000	>LDR
Ag	107	1	nogas	-0.010	-0.010	-39.90	557	0.00	2000	
Cd	111	1	nogas	0.094	0.094	11.67	410	0.02	2000	
Sb	121	1	nogas	0.516	0.516	3.78	10727	0.00	2000	
Tl	205	1	nogas	0.043	0.043	8.59	1833	0.00	2000	
Pb	208	1	nogas	0.517	0.517	2.99	28737	0.00	2000	
U	238	1	nogas	3.271	3.271	3.25	155367	0.00	2000	
[Pb]	206	1	nogas	0.638	0.638	7.63	7358	0.01	2000	
[Pb]	207	1	nogas	0.617	0.617	11.05	6215	0.01	2000	
Na	23	2	He	484223.297	484223.297	0.19	668816017	0.07	200000	>LDR
Mg	24	2	He	55655.487	55655.487	0.52	43413476	0.13	200000	
Al	27	2	He	1501.964	1501.964	2.07	662816	0.23	2000	
K	39	2	He	19026.588	19026.588	0.75	18392823	0.10	200000	
Ca	43	2	He	389524.445	389524.445	0.28	1017701	38.27	200000	>LDR
Ca	44	2	He	380572.191	380572.191	0.73	16721351	2.28	200000	>LDR
V	51	2	He	4.681	4.681	1.04	39612	0.01	2000	
Cr	52	2	He	28.979	28.979	0.42	215952	0.01	2000	
Mn	55	2	He	91.779	91.779	0.22	484446	0.02	2000	
Fe	56	2	He	857.451	857.451	1.55	5706273	0.02	200000	
Co	59	2	He	1.891	1.891	2.30	19591	0.01	2000	
Ni	60	2	He	2.920	2.920	4.10	8059	0.04	2000	
Cu	63	2	He	1.943	1.943	4.78	13815	0.01	2000	
Zn	66	2	He	5.130	5.130	4.48	8625	0.06	2000	
As	75	2	He	2.605	2.605	4.03	3596	0.07	2000	
Se	78	2	He	1.064	1.064	12.61	173	0.62	2000	
B	11	1	nogas	37.826	37.826	0.36	138584	0.03	2000	
Si	28	1	nogas	205555.732	205555.732	1.82	225225790	0.09	2000	>LDR
Ca	43	1	nogas	354382.916	354382.916	2.30	15343147	2.31	200000	>LDR
Ca	44	1	nogas	354067.477	354067.477	2.00	248969430	0.14	200000	>LDR
Fe	56	1	nogas	842.845	842.845	1.89	29373355	0.00	200000	
Se	77	1	nogas	85.841	85.841	9.46	54001	0.16	2000	
Se	82	1	nogas	12.249	12.249	3.90	4214	0.29	2000	

Sample Report

Mo	95	1	nogas	1.804	1.804	2.73	15597	0.01	2000	
Sn	118	1	nogas	0.334	0.334	1.63	6601	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	2549.877	2549.877	2.06	16516787	0.02	2000	>LDR
Sb	121	2	He	0.527	0.527	5.35	4151	0.01	2000	
La	139	1	nogas	61724.532	61724.532	2.76	112269	54.98	2000	>LDR
Au	197	1	nogas	1758.880	1758.880	16.64	37	4796.95	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	831865	0.97	926026	89.83	70	125	
Ge	72	1	nogas	3380615	2.11	3798750	88.99	70	125	
In	115	1	nogas	3424216	3.06	4251403	80.54	70	125	
Bi	209	1	nogas	2794748	4.15	3609904	77.42	70	125	
Ge	72	2	He	789461	0.74	905821	87.15	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	135_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:06:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	98.326	1.191	602009	1.08	100	98.3	90	110	
Na	23	1	nogas	10794.851	2.299	270094098	2.24	10000	107.9	90	110	
Mg	24	1	nogas	10411.934	1.546	170648450	1.50	10000	104.1	90	110	
Al	27	1	nogas	106.780	2.438	2198474	2.55	100	106.8	90	110	
K	39	1	nogas	10283.309	1.656	262763256	1.48	10000	102.8	90	110	
Ti	47	1	nogas	101.678	0.452	242719	0.52	100	101.7	90	110	
V	51	1	nogas	108.354	0.513	4526631	0.15	100	108.4	90	110	
Cr	52	1	nogas	103.035	1.533	2864166	1.32	100	103.0	90	110	
Mn	55	1	nogas	100.307	1.185	3721854	1.27	100	100.3	90	110	
Co	59	1	nogas	103.665	1.475	3025464	1.36	100	103.7	90	110	
Ni	60	1	nogas	102.459	1.706	663722	1.56	100	102.5	90	110	
Cu	63	1	nogas	103.504	1.598	1579660	1.34	100	103.5	90	110	
Zn	66	1	nogas	102.311	0.938	501065	0.85	100	102.3	90	110	
As	75	1	nogas	106.392	1.613	699353	1.12	100	106.4	90	110	
Sr	88	1	nogas	96.846	1.308	4622135	1.21	100	96.8	90	110	
Ag	107	1	nogas	98.663	2.432	2144200	2.20	100	98.7	90	110	
Cd	111	1	nogas	101.199	1.123	462337	0.35	100	101.2	90	110	
Sb	121	1	nogas	97.515	1.018	2031322	1.09	100	97.5	90	110	
Tl	205	1	nogas	101.340	0.312	3753935	0.80	100	101.3	90	110	
Pb	208	1	nogas	93.266	1.212	5083420	1.21	100	93.3	90	110	
U	238	1	nogas	100.502	1.140	5412837	1.51	100	100.5	90	110	
[Pb]	206	1	nogas	97.059	0.950	1246262	0.56	100	97.1	90	110	
[Pb]	207	1	nogas	97.372	1.873	1098149	1.41	100	97.4	90	110	
Na	23	2	He	10342.293	2.025	15474347	0.99	10000	103.4	90	110	
Mg	24	2	He	10216.017	1.098	8605722	1.00	10000	102.2	90	110	
Al	27	2	He	104.968	1.257	50775	1.58	100	105.0	90	110	
K	39	2	He	10269.613	0.755	9996107	0.74	10000	102.7	90	110	
Ca	43	2	He	9980.040	1.187	28198	1.05	10000	99.8	90	110	
Ca	44	2	He	10063.152	1.241	478304	0.85	10000	100.6	90	110	
V	51	2	He	99.705	1.390	724314	0.82	100	99.7	90	110	
Cr	52	2	He	99.069	1.752	786508	0.64	100	99.1	90	110	
Mn	55	2	He	100.379	1.106	571907	0.32	100	100.4	90	110	
Fe	56	2	He	9838.218	1.025	70469324	0.71	10000	98.4	90	110	
Co	59	2	He	98.396	1.559	1096378	0.46	100	98.4	90	110	
Ni	60	2	He	99.806	1.516	279176	0.41	100	99.8	90	110	
Cu	63	2	He	98.730	1.459	709362	0.94	100	98.7	90	110	
Zn	66	2	He	100.114	2.203	159885	1.40	100	100.1	90	110	
As	75	2	He	101.637	2.374	141287	1.41	100	101.6	90	110	
Se	78	2	He	101.016	2.095	12087	1.42	100	101.0	90	110	
B	11	1	nogas	495.991	1.388	1808565	0.63	500	99.2	90	110	
Si	28	1	nogas	5489.949	2.224	7167518	1.73	5000	109.8	90	110	
Ca	43	1	nogas	10188.369	1.510	466773	1.36	10000	101.9	90	110	
Ca	44	1	nogas	10185.597	1.693	7594289	1.64	10000	101.9	90	110	
Fe	56	1	nogas	10120.552	1.059	323382849	0.80	10000	101.2	90	110	
Se	77	1	nogas	129.596	1.198	69429	0.78	100	129.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.486	3.959	34830	3.72	100	99.5	90	110	
Mo	95	1	nogas	95.813	1.918	861851	1.74	100	95.8	90	110	
Sn	118	1	nogas	99.121	2.124	1422521	1.16	100	99.1	90	110	
Ba	137	1	nogas	97.151	1.552	696625	0.90	100	97.2	90	110	
Sb	121	2	He	93.148	1.204	742444	0.20	100	93.1	90	110	
Li	7	1	nogas	98.580	0.808	1643088	0.72	100	98.6	90	110	
P	31	1	nogas	540.043	1.774	827940	1.38	500	108.0	90	110	
La	139	1	nogas	-25.960	-284.695	747	20.15	100	-26.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	289.831	310.340	17	91.65	100	289.8	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	868940	0.76	926026	93.84	70	125	
Ge	72	1	nogas	3569527	0.26	3798750	93.97	70	125	
In	115	1	nogas	3784820	1.01	4251403	89.03	70	125	
Bi	209	1	nogas	3168556	0.60	3609904	87.77	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	852424	1.11	905821	94.11	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	136_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:08:53-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	16.5	587	14.5	1	
Na	23	1	nogas	177.504	4.8	5055227	0.3	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.600	8.9	160763	5.5	100	
Al	27	1	nogas	3.174	1.1	105269	0.9	5	
K	39	1	nogas	40.047	4.6	7932932	0.7	100	
Ti	47	1	nogas	0.099	32.9	493	16.9	2.5	
V	51	1	nogas	2.708	51.5	1121142	4.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.084	-55.6	77498	0.7	2.5	
Mn	55	1	nogas	0.413	6.9	38293	1.8	2.5	
Co	59	1	nogas	0.042	20.2	1673	16.2	2.5	
Ni	60	1	nogas	0.336	7.6	2740	5.4	2.5	
Cu	63	1	nogas	0.439	5.2	11701	4.1	2	
Zn	66	1	nogas	0.975	2.3	7071	0.6	2.5	
As	75	1	nogas	-0.343	-245.0	106507	3.5	2.5	
Sr	88	1	nogas	0.264	8.4	15877	5.8	2.5	
Ag	107	1	nogas	0.004	31.0	927	4.1	2.5	
Cd	111	1	nogas	0.050	28.4	257	25.4	1	
Sb	121	1	nogas	0.204	9.3	4944	9.1	2.5	
Tl	205	1	nogas	0.316	49.1	12743	47.6	1	
Pb	208	1	nogas	0.048	16.9	3167	13.9	2.5	
U	238	1	nogas	0.073	29.1	4261	28.5	2.5	
[Pb]	206	1	nogas	0.041	27.3	717	20.4	2.5	
[Pb]	207	1	nogas	0.056	16.2	757	14.1	2.5	
Na	23	2	He	169.864	2.6	315234	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	6.897	1.5	8082	0.8	100	
Al	27	2	He	3.410	1.4	2507	1.6	5	
K	39	2	He	23.243	13.5	171268	1.8	100	
Ca	43	2	He	37.298	33.7	157	24.2	100	
Ca	44	2	He	41.951	7.1	3040	6.3	100	
V	51	2	He	0.385	1.5	12287	1.4	2.5	
Cr	52	2	He	0.027	41.6	4711	3.5	2.5	
Mn	55	2	He	0.433	4.2	4141	1.0	2.5	
Fe	56	2	He	3.126	6.7	45199	2.2	100	
Co	59	2	He	0.036	21.3	487	19.4	2.5	
Ni	60	2	He	0.007	339.6	587	13.2	2.5	
Cu	63	2	He	0.409	2.7	4014	3.6	2	
Zn	66	2	He	0.580	8.8	2157	2.1	2.5	
As	75	2	He	0.081	24.7	390	5.6	2.5	
Se	78	2	He	0.462	5.6	118	2.9	2	
B	11	1	nogas	14.218	6.6	63143	4.7	10	CCB Main CR1 Failed
Si	28	1	nogas	184.752	37.8	1075643	6.7	5	CCB Main CR1 Failed
Ca	43	1	nogas	42.187	6.9	2897	5.0	100	
Ca	44	1	nogas	41.684	1.7	63263	0.5	100	
Fe	56	1	nogas	-17.330	-4.8	4012117	1.6	100	
Se	77	1	nogas	7.070	65.8	35612	2.8	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.036	-379.9	173	28.5	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.204	23.5	2137	21.7	2.5	
Sn	118	1	nogas	0.517	20.4	10146	14.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.074	8.0	1430	2.8	2.5	
Sb	121	2	He	0.151	14.9	1523	11.0	2.5	
P	31	1	nogas	6.344	16.2	99420	2.1	10	
La	139	1	nogas	121.821	51.8	1067	11.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	62.574	517.1	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	929932	1.08	926026	100.42	70	125	
Ge	72	1	nogas	3658046	1.03	3798750	96.30	70	125	
In	115	1	nogas	3877981	0.67	4251403	91.22	70	125	
Bi	209	1	nogas	3305667	0.57	3609904	91.57	70	125	
Ge	72	2	He	876257	1.69	905821	96.74	70	125	

Sample Report

Sample Table

Sample Name	HS19010248-03
Data File Name	137SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:10:52-06:00
Sample Type	Sample
Dilution	20
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	0.025	0.497	20.69	210	0.01	2000	
Na	23	1	nogas	23982.503	479650.062	1.45	618524564	0.00	200000	
Mg	24	1	nogas	2750.774	55015.482	0.51	46572526	0.01	200000	
Al	27	1	nogas	79.271	1585.425	6.23	1693361	0.00	2000	
K	39	1	nogas	1032.515	20650.292	1.05	33466616	0.00	200000	
Ti	47	1	nogas	1.133	22.667	12.44	3041	0.04	2000	
V	51	1	nogas	1.453	29.069	53.73	1086357	0.00	2000	
Cr	52	1	nogas	1.442	28.848	7.61	120592	0.00	2000	
Mn	55	1	nogas	4.343	86.866	1.07	188049	0.00	2000	
Co	59	1	nogas	0.163	3.251	5.94	5304	0.00	2000	
Ni	60	1	nogas	0.624	12.476	4.00	4677	0.01	2000	
Cu	63	1	nogas	0.498	9.952	14.76	12681	0.00	2000	
Zn	66	1	nogas	0.262	5.247	21.58	3537	0.01	2000	
As	75	1	nogas	0.657	13.130	105.03	112977	0.00	2000	
Sr	88	1	nogas	518.594	10371.885	2.29	25512639	0.00	2000	
Ag	107	1	nogas	-0.023	-0.458	-7.10	323	-0.01	2000	
Cd	111	1	nogas	0.014	0.281	48.01	90	0.02	2000	
Sb	121	1	nogas	0.072	1.446	14.56	2150	0.00	2000	
Tl	205	1	nogas	0.044	0.884	19.70	2234	0.00	2000	
Pb	208	1	nogas	0.040	0.794	11.67	2730	0.00	2000	
U	238	1	nogas	0.172	3.447	3.52	9903	0.00	2000	
[Pb]	206	1	nogas	0.040	0.798	23.92	710	0.01	2000	
[Pb]	207	1	nogas	0.040	0.807	17.52	580	0.01	2000	
Na	23	2	He	23935.091	478701.813	0.58	37089074	0.06	200000	
Mg	24	2	He	2776.520	55530.410	1.16	2428315	0.11	200000	
Al	27	2	He	85.908	1718.161	5.22	43259	0.20	2000	
K	39	2	He	1061.043	21220.868	0.47	1166374	0.09	200000	
Ca	43	2	He	19493.950	389878.996	1.60	57100	34.14	200000	
Ca	44	2	He	18950.445	379008.904	1.03	933689	2.03	200000	
V	51	2	He	0.672	13.441	2.89	14542	0.00	2000	
Cr	52	2	He	1.500	30.006	2.46	16821	0.01	2000	
Mn	55	2	He	4.447	88.934	3.05	27848	0.02	2000	
Fe	56	2	He	42.461	849.216	2.49	337860	0.01	200000	
Co	59	2	He	0.106	2.116	21.13	1300	0.01	2000	
Ni	60	2	He	0.019	0.385	46.34	627	0.00	2000	
Cu	63	2	He	0.359	7.176	7.07	3677	0.01	2000	
Zn	66	2	He	-0.065	-1.310	-66.46	1117	-0.01	2000	
As	75	2	He	0.193	3.869	28.08	557	0.03	2000	
Se	78	2	He	0.430	8.610	36.85	115	0.37	2000	
B	11	1	nogas	11.529	230.574	1.06	51887	0.02	2000	
Si	28	1	nogas	10607.506	212150.122	0.95	13478655	0.08	2000	>LDR
Ca	43	1	nogas	18309.809	366196.189	0.77	864428	2.12	200000	
Ca	44	1	nogas	18149.518	362990.362	0.69	13931486	0.13	200000	
Fe	56	1	nogas	38.563	771.254	10.52	5854745	0.00	200000	
Se	77	1	nogas	8.133	162.650	26.34	36160	0.02	2000	
Se	82	1	nogas	0.833	16.670	20.72	487	0.17	2000	

Sample Report

Mo	95	1	nogas	0.145	2.908	14.25	1603	0.01	2000	
Sn	118	1	nogas	-0.032	-0.635	-43.46	2107	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	130.628	2612.552	1.37	963890	0.01	2000	
Sb	121	2	He	0.066	1.324	17.43	837	0.01	2000	
La	139	1	nogas	2689.272	53785.443	11.47	6345	42.39	2000	>LDR
Au	197	1	nogas	-319.148	-6382.955	-101.48	7	-4787.22	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	915323	0.92	926026	98.84	70	125	
Ge	72	1	nogas	3681429	0.73	3798750	96.91	70	125	
In	115	1	nogas	3896588	2.48	4251403	91.65	70	125	
Bi	209	1	nogas	3336198	2.61	3609904	92.42	70	125	
Ge	72	2	He	884449	0.79	905821	97.64	70	125	

Sample Report

Sample Table

Sample Name	HS19010248-04
Data File Name	138SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:12:50-06:00
Sample Type	Sample
Dilution	20
Comment	TW B 136717
ISTD Ref FileName	108CALB.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	0.014	0.281	27.13	143	0.01	2000	
Na	23	1	nogas	23090.866	461817.328	0.48	615461280	0.00	200000	
Mg	24	1	nogas	2648.988	52979.768	1.71	46342465	0.01	200000	
Al	27	1	nogas	76.031	1520.622	5.01	1670247	0.00	2000	
K	39	1	nogas	1002.793	20055.861	2.28	33611101	0.00	200000	
Ti	47	1	nogas	0.988	19.752	9.53	2757	0.04	2000	
V	51	1	nogas	9.313	186.253	6.88	1387606	0.00	2000	
Cr	52	1	nogas	1.729	34.578	4.99	132139	0.00	2000	
Mn	55	1	nogas	4.241	84.817	2.85	189247	0.00	2000	
Co	59	1	nogas	0.155	3.092	3.63	5211	0.00	2000	
Ni	60	1	nogas	0.694	13.874	2.41	5288	0.01	2000	
Cu	63	1	nogas	0.527	10.544	2.06	13522	0.00	2000	
Zn	66	1	nogas	0.287	5.738	6.06	3760	0.01	2000	
As	75	1	nogas	2.333	46.653	35.20	126019	0.00	2000	
Sr	88	1	nogas	495.968	9919.357	2.20	25076730	0.00	2000	
Ag	107	1	nogas	-0.026	-0.512	-10.84	270	-0.01	2000	
Cd	111	1	nogas	0.008	0.152	51.66	63	0.01	2000	
Sb	121	1	nogas	0.048	0.958	6.58	1673	0.00	2000	
Tl	205	1	nogas	0.020	0.407	7.63	1317	0.00	2000	
Pb	208	1	nogas	0.032	0.636	4.72	2300	0.00	2000	
U	238	1	nogas	0.163	3.262	5.69	9436	0.00	2000	
[Pb]	206	1	nogas	0.035	0.690	10.60	643	0.01	2000	
[Pb]	207	1	nogas	0.030	0.605	18.04	463	0.01	2000	
Na	23	2	He	23213.312	464266.234	1.41	37020198	0.06	200000	
Mg	24	2	He	2706.640	54132.796	3.16	2436054	0.11	200000	
Al	27	2	He	78.277	1565.538	4.80	40663	0.19	2000	
K	39	2	He	1063.851	21277.019	0.53	1169066	0.09	200000	
Ca	43	2	He	19062.985	381259.694	0.80	57468	33.17	200000	
Ca	44	2	He	18373.591	367471.821	0.33	931713	1.97	200000	
V	51	2	He	0.910	18.206	1.84	16790	0.01	2000	
Cr	52	2	He	1.437	28.735	2.29	16778	0.01	2000	
Mn	55	2	He	4.380	87.609	2.12	28252	0.02	2000	
Fe	56	2	He	43.543	870.859	7.29	355885	0.01	200000	
Co	59	2	He	0.099	1.978	6.15	1257	0.01	2000	
Ni	60	2	He	0.162	3.241	27.20	1070	0.02	2000	
Cu	63	2	He	0.462	9.234	6.86	4574	0.01	2000	
Zn	66	2	He	-0.116	-2.317	-63.70	1063	-0.01	2000	
As	75	2	He	0.164	3.279	21.13	529	0.03	2000	
Se	78	2	He	0.352	7.049	21.89	109	0.32	2000	
B	11	1	nogas	9.935	198.710	1.76	46900	0.02	2000	
Si	28	1	nogas	10156.487	203129.735	2.13	13300768	0.08	2000	>LDR
Ca	43	1	nogas	17755.263	355105.270	1.29	861566	2.06	200000	
Ca	44	1	nogas	17561.519	351230.376	1.09	13856260	0.13	200000	
Fe	56	1	nogas	45.907	918.149	6.52	6262328	0.00	200000	
Se	77	1	nogas	23.456	469.124	20.73	41769	0.06	2000	
Se	82	1	nogas	0.472	9.439	7.47	367	0.13	2000	

Sample Report

Mo	95	1	nogas	0.111	2.216	20.18	1320	0.01	2000	
Sn	118	1	nogas	-0.050	-1.006	-7.13	1927	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	122.441	2448.816	2.36	948020	0.01	2000	
Sb	121	2	He	0.047	0.939	35.85	697	0.01	2000	
La	139	1	nogas	2779.153	55583.052	6.97	6858	40.52	2000	>LDR
Au	197	1	nogas	-130.101	-2602.029	-435.08	10	-1301.01	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	937464	0.06	926026	101.24	70	125	
Ge	72	1	nogas	3784404	2.12	3798750	99.62	70	125	
In	115	1	nogas	4089181	2.61	4251403	96.18	70	125	
Bi	209	1	nogas	3356529	1.16	3609904	92.98	70	125	
Ge	72	2	He	910229	1.01	905821	100.49	70	125	

Sample Report

Sample Table

Sample Name	HS19010627-01SD
Data File Name	141SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:18:49-06:00
Sample Type	Sample
Dilution	250
Comment	TW B 136717BNa
ISTD Ref FileName	108CALB.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	0.009	2.202	97.23	117	0.01	2000	
Na	23	1	nogas	2603.576	650894.097	0.88	72296418	0.00	200000	
Mg	24	1	nogas	2.235	558.808	6.48	83261	0.00	200000	
Al	27	1	nogas	1.786	446.596	2.00	83459	0.00	2000	
K	39	1	nogas	129.335	32333.743	6.64	11138257	0.00	200000	
Ti	47	1	nogas	-0.011	-2.812	-155.41	243	0.00	2000	
V	51	1	nogas	10.110	2527.621	4.99	1491843	0.00	2000	
Cr	52	1	nogas	0.423	105.664	6.32	99870	0.00	2000	
Mn	55	1	nogas	-0.088	-22.034	-24.92	21119	0.00	2000	
Co	59	1	nogas	0.005	1.264	74.08	613	0.00	2000	
Ni	60	1	nogas	0.153	38.374	27.62	1667	0.01	2000	
Cu	63	1	nogas	0.057	14.160	38.70	6251	0.00	2000	
Zn	66	1	nogas	-0.162	-40.587	-33.19	1517	-0.01	2000	
As	75	1	nogas	1.759	439.842	37.07	129318	0.00	2000	
Sr	88	1	nogas	2.266	566.534	1.36	124074	0.00	2000	
Ag	107	1	nogas	-0.027	-6.720	-4.72	253	-0.01	2000	
Cd	111	1	nogas	0.005	1.138	171.49	50	0.01	2000	
Sb	121	1	nogas	0.009	2.237	48.70	857	0.00	2000	
Tl	205	1	nogas	0.005	1.272	6.55	740	0.00	2000	
Pb	208	1	nogas	0.001	0.291	103.54	630	0.00	2000	
U	238	1	nogas	0.004	0.887	43.74	347	0.00	2000	
[Pb]	206	1	nogas	-0.003	-0.761	-79.65	137	0.00	2000	
[Pb]	207	1	nogas	0.004	0.905	47.58	150	0.00	2000	
Na	23	2	He	2626.066	656516.583	0.91	4387912	0.06	200000	
Mg	24	2	He	2.502	625.594	4.39	4601	0.05	200000	
Al	27	2	He	2.202	550.451	31.18	2060	0.11	2000	
K	39	2	He	138.083	34520.746	2.91	281384	0.05	200000	
Ca	43	2	He	121.252	30312.922	20.70	430	28.20	200000	
Ca	44	2	He	143.357	35839.356	5.73	8585	1.67	200000	
V	51	2	He	0.735	183.808	6.13	15992	0.00	2000	
Cr	52	2	He	0.052	13.104	102.95	5284	0.00	2000	
Mn	55	2	He	-0.122	-30.391	-12.54	970	-0.01	2000	
Fe	56	2	He	-0.033	-8.326	-303.94	23609	0.00	200000	
Co	59	2	He	0.004	0.950	93.04	130	0.00	2000	
Ni	60	2	He	-0.103	-25.791	-13.61	290	-0.04	2000	
Cu	63	2	He	0.163	40.718	13.93	2364	0.01	2000	
Zn	66	2	He	-0.457	-114.293	-3.20	503	-0.09	2000	
As	75	2	He	0.060	14.964	60.25	388	0.02	2000	
Se	78	2	He	0.405	101.127	35.04	119	0.34	2000	
B	11	1	nogas	34.003	8500.758	0.57	151530	0.02	2000	
Si	28	1	nogas	595.062	148765.595	3.54	1702796	0.03	2000	
Ca	43	1	nogas	133.456	33363.923	2.81	7825	1.71	200000	
Ca	44	1	nogas	135.879	33969.716	0.57	147203	0.09	200000	
Fe	56	1	nogas	18.337	4584.246	7.70	5632755	0.00	200000	

Sample Report

Se	77	1	nogas	15.454	3863.396	40.34	41505	0.04	2000	
Se	82	1	nogas	-0.051	-12.692	-248.57	183	-0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.379	344.677	2.86	14136	0.01	2000	
Sn	118	1	nogas	-0.091	-22.631	-6.28	1370	-0.01	2000	
Ba	137	1	nogas	-0.058	-14.501	-12.39	510	-0.01	2000	
Sb	121	2	He	0.010	2.411	112.42	393	0.00	2000	
La	139	1	nogas	-358.283	-89570.727	-3.75	93	-383.87	2000	
Au	197	1	nogas	30.450	7612.619	1045.59	13	228.38	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	1006052	0.37	926026	108.64	70	125	
Ge	72	1	nogas	3990271	0.30	3798750	105.04	70	125	
In	115	1	nogas	4300236	1.74	4251403	101.15	70	125	
Bi	209	1	nogas	3463081	0.85	3609904	95.93	70	125	
Ge	72	2	He	942258	0.11	905821	104.02	70	125	

Sample Report

Sample Table

Sample Name	HS19010627-01PDS
Data File Name	142SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:20:48-06:00
Sample Type	Sample
Dilution	50
Comment	TW B 136717BNa
ISTD Ref FileName	108CALB.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	102.460	5123.007	1.57	656493	0.02	2000	
Na	23	1	nogas	22415.828	1120791.381	2.59	598511513	0.00	200000	
Mg	24	1	nogas	10981.139	549056.969	1.91	192339788	0.01	200000	
Al	27	1	nogas	121.892	6094.624	1.52	2593644	0.00	2000	
K	39	1	nogas	11842.372	592118.612	1.85	312356499	0.00	200000	
Ti	47	1	nogas	108.693	5434.646	1.12	268739	0.04	2000	
V	51	1	nogas	117.658	5882.899	1.56	5002066	0.00	2000	
Cr	52	1	nogas	110.276	5513.779	1.03	3169729	0.00	2000	
Mn	55	1	nogas	109.518	5475.888	1.79	4206633	0.00	2000	
Co	59	1	nogas	108.953	5447.657	0.71	3293831	0.00	2000	
Ni	60	1	nogas	109.310	5465.476	0.71	733527	0.01	2000	
Cu	63	1	nogas	114.595	5729.740	2.56	1810795	0.01	2000	
Zn	66	1	nogas	112.083	5604.150	0.20	568427	0.02	2000	
As	75	1	nogas	113.005	5650.265	0.50	762682	0.01	2000	
Sr	88	1	nogas	10.873	543.660	0.84	540229	0.00	2000	
Ag	107	1	nogas	107.767	5388.365	2.24	2425616	0.00	2000	
Cd	111	1	nogas	112.589	5629.442	2.39	531744	0.02	2000	
Sb	121	1	nogas	104.788	5239.423	1.38	2260857	0.00	2000	
Tl	205	1	nogas	114.120	5706.020	0.66	4375339	0.00	2000	
Pb	208	1	nogas	108.419	5420.967	0.69	5909223	0.00	2000	
U	238	1	nogas	0.004	0.200	11.33	353	0.00	2000	
[Pb]	206	1	nogas	111.366	5568.319	1.70	1480287	0.01	2000	
[Pb]	207	1	nogas	107.766	5388.294	1.12	1258007	0.01	2000	
Na	23	2	He	23014.147	1150707.350	0.19	35844791	0.06	200000	
Mg	24	2	He	11430.990	571549.484	1.04	10040898	0.11	200000	
Al	27	2	He	119.964	5998.177	1.46	60389	0.20	2000	
K	39	2	He	12272.733	613636.633	2.62	11916819	0.10	200000	
Ca	43	2	He	11445.470	572273.481	2.24	33721	33.94	200000	
Ca	44	2	He	11797.313	589865.656	0.65	584572	2.02	200000	
V	51	2	He	110.118	5505.922	0.94	833228	0.01	2000	
Cr	52	2	He	108.691	5434.564	0.23	899490	0.01	2000	
Mn	55	2	He	110.756	5537.783	0.95	657929	0.02	2000	
Fe	56	2	He	11215.757	560787.832	0.55	83776865	0.01	200000	
Co	59	2	He	109.859	5492.970	0.98	1276656	0.01	2000	
Ni	60	2	He	109.410	5470.503	1.16	319126	0.03	2000	
Cu	63	2	He	110.498	5524.921	0.15	827836	0.01	2000	
Zn	66	2	He	113.492	5674.577	0.72	188876	0.06	2000	
As	75	2	He	113.275	5663.774	0.73	164194	0.07	2000	
Se	78	2	He	112.116	5605.789	1.15	13983	0.80	2000	
B	11	1	nogas	1181.145	59057.259	0.94	4496886	0.03	2000	
Si	28	1	nogas	113309.701	5665485.032	0.36	136217931	0.08	2000	>LDR
Ca	43	1	nogas	11900.089	595004.473	1.15	564569	2.11	200000	
Ca	44	1	nogas	11953.609	597680.445	1.37	9225834	0.13	200000	
Fe	56	1	nogas	11259.477	562973.852	1.37	372132692	0.00	200000	
Se	77	1	nogas	118.875	5943.728	1.43	68780	0.17	2000	
Se	82	1	nogas	109.837	5491.865	1.29	39814	0.28	2000	

Sample Report

Mo	95	1	nogas	111.774	5588.703	0.38	1041472	0.01	2000	
Sn	118	1	nogas	-0.064	-3.176	-27.98	1647	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	109.234	5461.705	2.30	809678	0.01	2000	
Sb	121	2	He	101.315	5065.770	0.70	842122	0.01	2000	
La	139	1	nogas	-42.792	-2139.581	-31.30	737	-5.81	2000	
Au	197	1	nogas	456.024	22801.204	128.58	20	2280.12	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	909413	1.03	926026	98.21	70	125	
Ge	72	1	nogas	3697741	1.59	3798750	97.34	70	125	
In	115	1	nogas	3914247	3.01	4251403	92.07	70	125	
Bi	209	1	nogas	3279745	1.47	3609904	90.85	70	125	
Ge	72	2	He	888902	1.02	905821	98.13	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	146_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:28:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	102.062	2.237	656421	0.31	100	102.1	90	110	
Na	23	1	nogas	10591.547	3.444	291214657	0.17	10000	105.9	90	110	
Mg	24	1	nogas	10364.776	3.207	186674896	0.31	10000	103.6	90	110	
Al	27	1	nogas	104.799	1.482	2422240	0.40	100	104.8	90	110	
K	39	1	nogas	10067.238	0.883	288889390	1.47	10000	100.7	90	110	
Ti	47	1	nogas	100.125	1.250	268243	0.48	100	100.1	90	110	
V	51	1	nogas	100.600	1.077	4797623	0.51	100	100.6	90	110	
Cr	52	1	nogas	102.564	1.046	3200240	0.53	100	102.6	90	110	
Mn	55	1	nogas	98.261	2.250	4092333	2.04	100	98.3	90	110	
Co	59	1	nogas	103.163	1.161	3379137	1.07	100	103.2	90	110	
Ni	60	1	nogas	101.498	1.618	737911	0.97	100	101.5	90	110	
Cu	63	1	nogas	103.359	3.854	1770576	4.03	100	103.4	90	110	
Zn	66	1	nogas	101.852	1.060	559865	1.25	100	101.9	90	110	
As	75	1	nogas	102.273	1.568	759185	1.90	100	102.3	90	110	
Sr	88	1	nogas	96.540	0.853	5171161	0.44	100	96.5	90	110	
Ag	107	1	nogas	96.583	0.647	2355933	1.03	100	96.6	90	110	
Cd	111	1	nogas	100.918	1.382	516181	2.16	100	100.9	90	110	
Sb	121	1	nogas	98.539	2.917	2303702	2.82	100	98.5	90	110	
Tl	205	1	nogas	101.273	0.651	4169808	0.89	100	101.3	90	110	
Pb	208	1	nogas	105.329	0.715	5740824	0.72	100	105.3	90	110	
U	238	1	nogas	103.552	0.274	6199283	1.34	100	103.6	90	110	
[Pb]	206	1	nogas	99.497	1.343	1419986	0.09	100	99.5	90	110	
[Pb]	207	1	nogas	97.159	1.300	1217995	1.06	100	97.2	90	110	
Na	23	2	He	10265.327	1.403	16974311	0.93	10000	102.7	90	110	
Mg	24	2	He	10264.775	1.607	9555779	2.07	10000	102.6	90	110	
Al	27	2	He	105.728	1.622	56504	1.11	100	105.7	90	110	
K	39	2	He	11365.893	0.769	11047287	0.76	10000	113.7	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10138.194	2.055	31654	2.01	10000	101.4	90	110	
Ca	44	2	He	10298.444	0.549	540895	0.18	10000	103.0	90	110	
V	51	2	He	101.109	0.454	811567	0.55	100	101.1	90	110	
Cr	52	2	He	100.604	0.700	882584	0.25	100	100.6	90	110	
Mn	55	2	He	102.498	0.664	645307	0.35	100	102.5	90	110	
Fe	56	2	He	10096.637	0.526	79920935	1.05	10000	101.0	90	110	
Co	59	2	He	101.675	0.587	1252024	0.50	100	101.7	90	110	
Ni	60	2	He	103.469	0.435	319829	0.48	100	103.5	90	110	
Cu	63	2	He	100.430	0.776	797381	0.30	100	100.4	90	110	
Zn	66	2	He	103.316	0.185	182311	0.71	100	103.3	90	110	
As	75	2	He	105.290	0.824	161748	0.47	100	105.3	90	110	
Se	78	2	He	106.580	2.422	14089	1.94	100	106.6	90	110	
B	11	1	nogas	513.859	0.211	1968818	2.51	500	102.8	90	110	
Si	28	1	nogas	5304.613	1.459	7804337	0.25	5000	106.1	90	110	
Ca	43	1	nogas	10021.627	1.122	515318	0.82	10000	100.2	90	110	
Ca	44	1	nogas	9944.448	1.301	8322057	0.59	10000	99.4	90	110	
Fe	56	1	nogas	10048.395	1.329	360379033	0.34	10000	100.5	90	110	
Se	77	1	nogas	106.025	4.827	70450	3.29	100	106.0	90	110	
Se	82	1	nogas	102.993	1.370	40462	0.31	100	103.0	90	110	
Mo	95	1	nogas	96.449	1.024	973690	0.34	100	96.4	90	110	
Sn	118	1	nogas	98.219	6.035	1577150	4.32	100	98.2	90	110	
Ba	137	1	nogas	98.591	1.647	791381	1.37	100	98.6	90	110	
Sb	121	2	He	95.164	0.459	838226	0.21	100	95.2	90	110	
Li	7	1	nogas	102.897	4.849	1797682	2.36	100	102.9	90	110	
P	31	1	nogas	530.767	0.127	915032	1.17	500	106.2	90	110	
La	139	1	nogas	-17.035	-241.726	857	12.86	100	-17.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	1076.761	74.140	33	45.83	100	1076.8	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	913102	2.47	926026	98.60	70	125	
Ge	72	1	nogas	4006408	1.22	3798750	105.47	70	125	
In	115	1	nogas	4237273	2.09	4251403	99.67	70	125	
Bi	209	1	nogas	3522110	1.33	3609904	97.57	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	941945	0.53	905821	103.99	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	147_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:30:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	0.109	13.5	847	12.6	1	
Na	23	1	nogas	64.825	5.0	2663476	3.2	100	
Mg	24	1	nogas	8.159	13.0	197315	9.9	100	
Al	27	1	nogas	3.189	3.9	118060	0.7	5	
K	39	1	nogas	38.890	22.9	8836493	1.0	100	
Ti	47	1	nogas	0.094	39.6	537	17.3	2.5	
V	51	1	nogas	-0.485	-403.3	1134082	4.5	2.5	
Cr	52	1	nogas	-0.340	-23.5	78736	1.4	2.5	
Mn	55	1	nogas	0.407	12.3	42552	3.2	2.5	
Co	59	1	nogas	0.055	28.3	2287	20.8	2.5	
Ni	60	1	nogas	0.273	3.7	2594	1.2	2.5	
Cu	63	1	nogas	0.224	35.7	9316	13.3	2	
Zn	66	1	nogas	0.887	7.3	7415	2.9	2.5	
As	75	1	nogas	-3.049	-12.1	101871	3.7	2.5	
Sr	88	1	nogas	0.196	6.4	14049	2.9	2.5	
Ag	107	1	nogas	0.016	53.4	1317	13.9	2.5	
Cd	111	1	nogas	0.055	32.4	320	29.8	1	
Sb	121	1	nogas	0.261	10.3	6875	7.4	2.5	
Tl	205	1	nogas	0.392	41.6	17518	42.9	1	
Pb	208	1	nogas	0.069	22.6	4310	19.6	2.5	
U	238	1	nogas	0.087	25.7	5601	27.8	2.5	
[Pb]	206	1	nogas	0.059	11.6	1070	12.3	2.5	
[Pb]	207	1	nogas	0.062	31.2	927	30.1	2.5	
Na	23	2	He	61.343	2.1	166083	1.6	100	
Mg	24	2	He	6.770	8.4	8889	5.9	100	
Al	27	2	He	3.346	7.6	2760	4.8	5	
K	39	2	He	40.470	10.0	187787	2.1	100	
Ca	43	2	He	37.963	32.6	177	22.9	100	
Ca	44	2	He	39.233	7.8	3240	4.9	100	
V	51	2	He	0.306	4.2	13051	0.6	2.5	
Cr	52	2	He	0.054	66.2	5491	5.9	2.5	
Mn	55	2	He	0.418	4.5	4521	2.6	2.5	
Fe	56	2	He	4.299	5.8	60041	3.7	100	
Co	59	2	He	0.041	33.8	607	29.3	2.5	
Ni	60	2	He	-0.023	-169.4	557	22.6	2.5	
Cu	63	2	He	0.260	13.4	3247	9.1	2	
Zn	66	2	He	0.601	24.0	2445	10.9	2.5	
As	75	2	He	0.038	19.7	367	3.1	2.5	
Se	78	2	He	0.514	15.2	139	7.4	2	
B	11	1	nogas	9.398	10.1	49150	7.5	10	
Si	28	1	nogas	338.640	10.4	1406412	1.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	39.111	9.4	3077	5.2	100	
Ca	44	1	nogas	40.496	5.6	69726	1.4	100	
Fe	56	1	nogas	-17.196	-21.5	4490232	1.0	100	
Se	77	1	nogas	-9.702	-14.8	34397	1.2	2.5	
Se	82	1	nogas	0.089	136.4	243	18.5	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.216	28.5	2500	23.7	2.5	
Sn	118	1	nogas	0.490	10.6	11074	8.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.059	15.0	1497	5.1	2.5	
Sb	121	2	He	0.214	5.3	2277	4.4	2.5	
P	31	1	nogas	4.710	43.3	108586	1.3	10	
La	139	1	nogas	93.004	21.2	1143	3.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	991.783	103.7	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	1029045	0.89	926026	111.12	70	125	
Ge	72	1	nogas	4091354	2.06	3798750	107.70	70	125	
In	115	1	nogas	4398324	0.35	4251403	103.46	70	125	
Bi	209	1	nogas	3672177	2.70	3609904	101.73	70	125	
Ge	72	2	He	977020	0.30	905821	107.86	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	154_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:44:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	96.866	2.399	649808	0.53	100	96.9	90	110	
Na	23	1	nogas	11147.417	2.359	288221248	1.08	10000	111.5	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10876.180	1.242	184235862	0.41	10000	108.8	90	110	
Al	27	1	nogas	110.666	1.783	2389491	1.55	100	110.7	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10449.196	1.071	280078773	0.64	10000	104.5	90	110	
Ti	47	1	nogas	102.708	0.968	257299	1.45	100	102.7	90	110	
V	51	1	nogas	103.896	1.215	4598374	1.08	100	103.9	90	110	
Cr	52	1	nogas	104.210	1.619	3038882	0.57	100	104.2	90	110	
Mn	55	1	nogas	102.803	3.017	4001474	1.65	100	102.8	90	110	
Co	59	1	nogas	104.390	0.986	3197142	0.69	100	104.4	90	110	
Ni	60	1	nogas	104.004	1.072	707009	0.73	100	104.0	90	110	
Cu	63	1	nogas	104.687	1.272	1676565	0.43	100	104.7	90	110	
Zn	66	1	nogas	103.237	1.451	530530	0.45	100	103.2	90	110	
As	75	1	nogas	104.346	1.206	721930	0.60	100	104.3	90	110	
Sr	88	1	nogas	98.892	1.636	4952528	0.11	100	98.9	90	110	
Ag	107	1	nogas	97.471	3.144	2222499	1.59	100	97.5	90	110	
Cd	111	1	nogas	101.386	0.863	478839	0.44	100	101.4	90	110	
Sb	121	1	nogas	99.447	1.411	2173805	0.76	100	99.4	90	110	
Tl	205	1	nogas	101.178	2.138	3756493	1.37	100	101.2	90	110	
Pb	208	1	nogas	95.063	0.298	5181337	0.30	100	95.1	90	110	
U	238	1	nogas	104.357	2.251	5633565	2.06	100	104.4	90	110	
[Pb]	206	1	nogas	98.130	1.304	1263009	0.86	100	98.1	90	110	
[Pb]	207	1	nogas	98.992	0.662	1119140	0.55	100	99.0	90	110	
Na	23	2	He	10624.389	0.995	16548934	0.70	10000	106.2	90	110	
Mg	24	2	He	10465.520	0.728	9177957	0.98	10000	104.7	90	110	
Al	27	2	He	108.003	1.623	54361	1.58	100	108.0	90	110	
K	39	2	He	10943.363	1.104	10642139	1.09	10000	109.4	90	110	
Ca	43	2	He	10470.699	2.402	30795	2.09	10000	104.7	90	110	
Ca	44	2	He	10462.967	1.142	517693	1.02	10000	104.6	90	110	
V	51	2	He	102.735	0.580	776702	0.49	100	102.7	90	110	
Cr	52	2	He	101.958	1.324	842626	1.50	100	102.0	90	110	
Mn	55	2	He	103.665	0.174	614849	0.44	100	103.7	90	110	
Fe	56	2	He	10233.506	0.356	76310294	0.30	10000	102.3	90	110	
Co	59	2	He	102.028	1.047	1183591	0.77	100	102.0	90	110	
Ni	60	2	He	102.690	0.769	299036	0.53	100	102.7	90	110	
Cu	63	2	He	101.495	0.328	759173	0.43	100	101.5	90	110	
Zn	66	2	He	103.486	0.603	172033	0.85	100	103.5	90	110	
As	75	2	He	105.184	0.319	152229	0.40	100	105.2	90	110	
Se	78	2	He	102.569	2.541	12776	2.24	100	102.6	90	110	
B	11	1	nogas	486.511	1.757	1944209	1.28	500	97.3	90	110	
Si	28	1	nogas	5582.613	1.493	7633609	0.27	5000	111.7	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	10362.726	0.938	498205	0.71	10000	103.6	90	110	
Ca	44	1	nogas	10332.386	2.433	8082785	1.21	10000	103.3	90	110	
Fe	56	1	nogas	10249.305	0.674	343634149	1.12	10000	102.5	90	110	
Se	77	1	nogas	108.521	4.559	66622	3.79	100	108.5	90	110	
Se	82	1	nogas	99.277	0.590	36480	1.80	100	99.3	90	110	
Mo	95	1	nogas	96.012	1.631	906252	0.06	100	96.0	90	110	
Sn	118	1	nogas	102.945	1.346	1527372	1.54	100	102.9	90	110	
Ba	137	1	nogas	97.580	0.623	723347	0.13	100	97.6	90	110	
Sb	121	2	He	93.893	0.922	779139	0.95	100	93.9	90	110	
Li	7	1	nogas	97.896	1.674	1788493	0.34	100	97.9	90	110	
P	31	1	nogas	540.514	1.632	869485	0.19	500	108.1	90	110	
La	139	1	nogas	-62.213	-49.440	697	9.56	100	-62.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	484.814	119.888	20	50.00	100	484.8	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	952324	1.85	926026	102.84	70	125	
Ge	72	1	nogas	3746216	1.60	3798750	98.62	70	125	
In	115	1	nogas	3912484	0.51	4251403	92.03	70	125	
Bi	209	1	nogas	3176160	0.77	3609904	87.98	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	887385	0.31	905821	97.96	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	155_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T17:46:37-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	0.104	7.6	790	6.6	1	
Na	23	1	nogas	111.970	2.4	3685790	1.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	8.757	13.7	191758	10.5	100	
Al	27	1	nogas	3.358	4.7	113436	2.4	5	
K	39	1	nogas	44.372	7.1	8364241	0.4	100	
Ti	47	1	nogas	0.068	25.5	433	10.4	2.5	
V	51	1	nogas	-5.263	-22.4	889636	3.5	2.5	
Cr	52	1	nogas	-0.446	-13.1	70162	2.1	2.5	
Mn	55	1	nogas	0.436	7.0	40735	1.9	2.5	
Co	59	1	nogas	0.058	3.5	2237	1.8	2.5	
Ni	60	1	nogas	0.312	15.4	2677	11.2	2.5	
Cu	63	1	nogas	0.259	17.8	9239	9.1	2	
Zn	66	1	nogas	0.925	11.1	7098	7.3	2.5	
As	75	1	nogas	-3.320	-28.8	93056	5.1	2.5	
Sr	88	1	nogas	0.195	15.6	13005	10.9	2.5	
Ag	107	1	nogas	0.007	79.9	1030	13.1	2.5	
Cd	111	1	nogas	0.054	34.3	280	31.7	1	
Sb	121	1	nogas	0.358	4.4	8572	4.8	2.5	
Tl	205	1	nogas	0.339	38.6	13336	38.0	1	
Pb	208	1	nogas	0.060	22.6	3810	19.3	2.5	
U	238	1	nogas	0.084	19.6	4754	19.9	2.5	
[Pb]	206	1	nogas	0.063	27.5	997	23.2	2.5	
[Pb]	207	1	nogas	0.056	25.5	743	23.0	2.5	
Na	23	2	He	114.321	2.1	232154	1.6	100	CCB Main CR1 Failed
Mg	24	2	He	8.462	9.5	9519	7.4	100	
Al	27	2	He	3.258	8.2	2454	5.2	5	
K	39	2	He	30.311	5.8	178046	1.0	100	
Ca	43	2	He	48.292	32.3	190	24.1	100	
Ca	44	2	He	39.072	6.9	2924	4.5	100	
V	51	2	He	0.162	9.6	10734	1.1	2.5	
Cr	52	2	He	0.074	37.4	5131	4.5	2.5	
Mn	55	2	He	0.419	16.7	4097	10.2	2.5	
Fe	56	2	He	4.677	11.9	57118	7.2	100	
Co	59	2	He	0.041	36.8	553	31.6	2.5	
Ni	60	2	He	0.039	70.6	683	11.7	2.5	
Cu	63	2	He	0.337	4.3	3510	3.1	2	
Zn	66	2	He	0.586	15.1	2187	6.7	2.5	
As	75	2	He	0.065	52.0	371	13.0	2.5	
Se	78	2	He	0.610	3.0	137	1.7	2	
B	11	1	nogas	11.052	5.5	55106	5.4	10	CCB Main CR1 Failed
Si	28	1	nogas	365.666	10.3	1341200	2.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	48.596	7.4	3324	4.4	100	
Ca	44	1	nogas	48.735	3.8	71369	1.9	100	
Fe	56	1	nogas	-17.917	-3.5	4152417	0.9	100	
Se	77	1	nogas	-18.396	-28.5	29354	4.4	2.5	
Se	82	1	nogas	0.106	158.4	233	27.6	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.214	17.5	2317	16.1	2.5	
Sn	118	1	nogas	0.508	19.4	10176	13.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.056	8.5	1320	4.0	2.5	
Sb	121	2	He	0.309	6.6	2844	5.9	2.5	
P	31	1	nogas	-0.597	-332.6	93235	2.1	10	
La	139	1	nogas	83.922	42.3	1007	8.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	468.322	124.6	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	1007287	0.74	926026	108.78	70	125	
Ge	72	1	nogas	3804150	1.09	3798750	100.14	70	125	
In	115	1	nogas	3942757	1.34	4251403	92.74	70	125	
Bi	209	1	nogas	3229818	0.79	3609904	89.47	70	125	
Ge	72	2	He	883835	0.10	905821	97.57	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	166_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T18:08:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	102.796	1.284	723750	1.57	100	102.8	90	110	
Na	23	1	nogas	11933.982	1.353	340988049	2.64	10000	119.3	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10744.679	0.231	201134454	1.60	10000	107.4	90	110	
Al	27	1	nogas	111.656	1.687	2603790	0.37	100	111.7	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10632.402	2.271	307697282	1.13	10000	106.3	90	110	
Ti	47	1	nogas	103.024	1.842	278764	0.57	100	103.0	90	110	
V	51	1	nogas	126.995	7.320	5815611	4.61	100	127.0	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	105.075	3.816	3308652	2.43	100	105.1	90	110	
Mn	55	1	nogas	101.366	1.546	4263132	0.26	100	101.4	90	110	
Co	59	1	nogas	104.269	3.236	3449086	2.13	100	104.3	90	110	
Ni	60	1	nogas	104.042	2.044	763977	1.18	100	104.0	90	110	
Cu	63	1	nogas	104.586	1.496	1809345	0.47	100	104.6	90	110	
Zn	66	1	nogas	101.369	1.482	562780	0.44	100	101.4	90	110	
As	75	1	nogas	116.856	4.548	858767	2.68	100	116.9	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	95.640	3.339	5173516	2.08	100	95.6	90	110	
Ag	107	1	nogas	93.673	1.997	2307673	0.81	100	93.7	90	110	
Cd	111	1	nogas	100.973	1.265	498297	2.07	100	101.0	90	110	
Sb	121	1	nogas	94.562	0.725	2233052	0.68	100	94.6	90	110	
Tl	205	1	nogas	100.921	1.810	3834293	0.28	100	100.9	90	110	
Pb	208	1	nogas	95.503	0.519	5205306	0.52	100	95.5	90	110	
U	238	1	nogas	100.632	1.188	5559992	2.20	100	100.6	90	110	
[Pb]	206	1	nogas	97.938	4.294	1289591	3.01	100	97.9	90	110	
[Pb]	207	1	nogas	96.975	0.350	1121963	1.22	100	97.0	90	110	
Na	23	2	He	11401.509	2.068	19438253	2.05	10000	114.0	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10645.098	1.516	10219367	0.77	10000	106.5	90	110	
Al	27	2	He	110.997	1.890	61132	1.06	100	111.0	90	110	CCV Main CR1-2 Failed
K	39	2	He	12162.767	0.798	11811377	0.79	10000	121.6	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10661.392	2.947	34332	3.41	10000	106.6	90	110	
Ca	44	2	He	10498.056	0.800	568661	0.97	10000	105.0	90	110	
V	51	2	He	101.052	0.715	836563	0.85	100	101.1	90	110	
Cr	52	2	He	99.751	1.017	902582	0.45	100	99.8	90	110	
Mn	55	2	He	103.215	1.506	670159	0.72	100	103.2	90	110	
Fe	56	2	He	10105.986	1.368	82497242	0.61	10000	101.1	90	110	
Co	59	2	He	99.448	1.757	1262928	1.05	100	99.4	90	110	
Ni	60	2	He	99.290	1.493	316543	0.82	100	99.3	90	110	
Cu	63	2	He	97.147	2.450	795474	1.68	100	97.1	90	110	
Zn	66	2	He	100.668	2.144	183223	1.33	100	100.7	90	110	
As	75	2	He	102.938	1.219	163098	0.58	100	102.9	90	110	
Se	78	2	He	104.543	1.903	14256	1.74	100	104.5	90	110	
B	11	1	nogas	512.796	0.527	2149953	0.42	500	102.6	90	110	
Si	28	1	nogas	5678.969	2.710	8371418	1.11	5000	113.6	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	10342.180	2.301	537056	1.02	10000	103.4	90	110	
Ca	44	1	nogas	10326.102	2.180	8726431	1.07	10000	103.3	90	110	
Fe	56	1	nogas	10162.768	1.579	368083267	0.33	10000	101.6	90	110	
Se	77	1	nogas	197.630	10.546	100478	5.33	100	197.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.295	3.192	39009	2.05	100	98.3	90	110	
Mo	95	1	nogas	92.500	1.777	943189	0.72	100	92.5	90	110	
Sn	118	1	nogas	100.441	2.305	1557013	2.37	100	100.4	90	110	
Ba	137	1	nogas	96.226	2.540	745154	1.19	100	96.2	90	110	
Sb	121	2	He	89.333	2.050	811508	1.46	100	89.3	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	101.651	1.196	1945797	1.38	100	101.7	90	110	
P	31	1	nogas	556.391	2.695	963842	1.20	500	111.3	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	7.970	420.960	880	9.91	100	8.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	67.337	1284.634	13	114.56	100	67.3	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	999181	0.30	926026	107.90	70	125	
Ge	72	1	nogas	4046755	1.28	3798750	106.53	70	125	
In	115	1	nogas	4088015	1.61	4251403	96.16	70	125	
Bi	209	1	nogas	3250445	1.55	3609904	90.04	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	971498	0.80	905821	107.25	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	167_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T18:10:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	0.129	23.2	1003	20.6	1	
Na	23	1	nogas	652.178	2.3	18935049	0.3	100	CCB Main CR1 Failed
Mg	24	1	nogas	14.101	1.0	301098	1.6	100	
Al	27	1	nogas	3.603	3.0	122063	1.3	5	
K	39	1	nogas	68.927	10.1	9269365	1.2	100	
Ti	47	1	nogas	0.134	31.6	617	17.0	2.5	
V	51	1	nogas	9.734	12.0	1448989	3.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.416	13.5	97705	2.1	2.5	
Mn	55	1	nogas	0.459	6.6	42810	2.0	2.5	
Co	59	1	nogas	0.073	12.0	2777	9.2	2.5	
Ni	60	1	nogas	1.047	1.0	7969	0.3	2.5	
Cu	63	1	nogas	1.130	4.1	24036	4.0	2	
Zn	66	1	nogas	1.149	2.7	8492	1.1	2.5	
As	75	1	nogas	5.116	10.5	147306	3.1	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.205	4.1	13872	2.3	2.5	
Ag	107	1	nogas	0.026	52.0	1500	20.3	2.5	
Cd	111	1	nogas	0.062	14.3	330	13.9	1	
Sb	121	1	nogas	0.226	18.0	5778	15.1	2.5	
Tl	205	1	nogas	0.344	52.3	13614	47.6	1	
Pb	208	1	nogas	0.072	15.4	4480	13.4	2.5	
U	238	1	nogas	0.096	27.3	5451	23.8	2.5	
[Pb]	206	1	nogas	0.072	15.1	1127	10.1	2.5	
[Pb]	207	1	nogas	0.076	8.7	993	6.9	2.5	
Na	23	2	He	642.610	0.7	1148244	0.7	100	CCB Main CR1 Failed
Mg	24	2	He	16.254	2.9	17865	1.2	100	
Al	27	2	He	3.774	10.7	2964	6.9	5	
K	39	2	He	61.023	3.5	207495	1.0	100	
Ca	43	2	He	35.476	27.4	167	17.3	100	
Ca	44	2	He	37.949	2.5	3140	2.8	100	
V	51	2	He	0.735	4.7	16419	1.7	2.5	
Cr	52	2	He	0.105	7.0	5898	0.6	2.5	
Mn	55	2	He	0.421	9.2	4491	4.3	2.5	
Fe	56	2	He	4.535	5.3	61385	4.1	100	
Co	59	2	He	0.041	8.2	603	6.7	2.5	
Ni	60	2	He	0.017	262.2	680	22.0	2.5	
Cu	63	2	He	0.992	4.2	9179	3.0	2	
Zn	66	2	He	0.737	15.8	2667	8.6	2.5	
As	75	2	He	0.123	37.6	497	14.0	2.5	
Se	78	2	He	0.703	24.6	163	13.1	2	
B	11	1	nogas	9.959	10.4	52087	6.6	10	
Si	28	1	nogas	374.094	9.3	1389889	3.1	5	CCB Main CR1 Failed
Ca	43	1	nogas	41.977	4.7	3087	3.6	100	
Ca	44	1	nogas	52.269	0.9	76258	0.4	100	
Fe	56	1	nogas	1.486	169.1	4939024	0.9	100	
Se	77	1	nogas	37.811	5.5	47623	2.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.169	83.0	263	19.5	2	
Mo	95	1	nogas	0.267	29.7	2894	26.0	2.5	
Sn	118	1	nogas	0.485	13.7	10090	7.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.086	26.5	1580	8.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.174	10.7	1893	9.5	2.5	
P	31	1	nogas	5.810	27.9	105495	2.3	10	
La	139	1	nogas	88.792	8.0	1043	2.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	256.758	255.9	17	69.3	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	1040501	2.80	926026	112.36	70	125	
Ge	72	1	nogas	3911341	0.87	3798750	102.96	70	125	
In	115	1	nogas	4048557	2.80	4251403	95.23	70	125	
Bi	209	1	nogas	3291232	2.89	3609904	91.17	70	125	
Ge	72	2	He	967497	1.24	905821	106.81	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	174_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T18:26:25-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	102.694	2.405	632603	1.02	100	102.7	90	110	
Na	23	1	nogas	11129.245	3.405	275768264	2.01	10000	111.3	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10837.279	3.357	175895633	0.89	10000	108.4	90	110	
Al	27	1	nogas	109.086	4.984	2254900	2.09	100	109.1	90	110	
K	39	1	nogas	10433.986	3.570	267753756	0.63	10000	104.3	90	110	
Ti	47	1	nogas	103.603	4.004	248428	0.88	100	103.6	90	110	
V	51	1	nogas	105.491	5.077	4454443	2.33	100	105.5	90	110	
Cr	52	1	nogas	104.337	4.667	2912320	1.70	100	104.3	90	110	
Mn	55	1	nogas	100.194	3.005	3735377	1.08	100	100.2	90	110	
Co	59	1	nogas	103.442	5.248	3031886	2.20	100	103.4	90	110	
Ni	60	1	nogas	103.232	3.893	671776	0.78	100	103.2	90	110	
Cu	63	1	nogas	103.856	5.171	1591847	2.06	100	103.9	90	110	
Zn	66	1	nogas	103.224	3.739	507837	0.68	100	103.2	90	110	
As	75	1	nogas	111.074	4.671	728783	1.23	100	111.1	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	96.266	1.945	4617231	1.15	100	96.3	90	110	
Ag	107	1	nogas	95.047	2.488	2075753	1.15	100	95.0	90	110	
Cd	111	1	nogas	104.434	2.850	448009	0.90	100	104.4	90	110	
Sb	121	1	nogas	95.536	3.667	1999401	1.69	100	95.5	90	110	
Tl	205	1	nogas	102.849	4.908	3457276	2.31	100	102.8	90	110	
Pb	208	1	nogas	87.364	0.944	4761759	0.94	100	87.4	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	103.131	2.810	5043300	2.43	100	103.1	90	110	
[Pb]	206	1	nogas	99.725	4.423	1162135	1.77	100	99.7	90	110	
[Pb]	207	1	nogas	100.076	3.284	1024608	1.24	100	100.1	90	110	
Na	23	2	He	10294.747	1.607	15832898	0.49	10000	102.9	90	110	
Mg	24	2	He	10241.419	1.779	8866730	0.81	10000	102.4	90	110	
Al	27	2	He	106.439	0.513	52907	0.70	100	106.4	90	110	
K	39	2	He	10659.417	1.341	10369874	1.32	10000	106.6	90	110	
Ca	43	2	He	10322.941	3.093	29974	2.39	10000	103.2	90	110	
Ca	44	2	He	10321.534	0.849	504228	0.34	10000	103.2	90	110	
V	51	2	He	99.696	1.454	744416	0.80	100	99.7	90	110	
Cr	52	2	He	98.334	1.224	802503	0.92	100	98.3	90	110	
Mn	55	2	He	100.818	0.976	590414	0.67	100	100.8	90	110	
Fe	56	2	He	9977.842	0.846	73460041	0.50	10000	99.8	90	110	
Co	59	2	He	98.759	0.934	1131138	0.32	100	98.8	90	110	
Ni	60	2	He	99.125	2.166	284990	1.29	100	99.1	90	110	
Cu	63	2	He	96.715	2.254	714231	1.58	100	96.7	90	110	
Zn	66	2	He	100.635	0.784	165205	0.89	100	100.6	90	110	
As	75	2	He	104.403	1.568	149174	0.51	100	104.4	90	110	
Se	78	2	He	101.633	1.655	12500	0.82	100	101.6	90	110	
B	11	1	nogas	502.205	1.022	1842652	0.45	500	100.4	90	110	
Si	28	1	nogas	5675.847	5.200	7414676	1.63	5000	113.5	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	10411.059	3.536	479182	1.08	10000	104.1	90	110	
Ca	44	1	nogas	10399.867	3.737	7789129	1.02	10000	104.0	90	110	
Fe	56	1	nogas	10162.715	3.713	326207349	0.58	10000	101.6	90	110	
Se	77	1	nogas	136.349	6.584	71668	0.45	100	136.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.157	1.869	35946	2.58	100	102.2	90	110	
Mo	95	1	nogas	95.203	4.270	860206	1.15	100	95.2	90	110	
Sn	118	1	nogas	103.573	3.562	1395780	2.61	100	103.6	90	110	
Ba	137	1	nogas	101.850	3.989	685540	0.30	100	101.8	90	110	
Sb	121	2	He	91.934	1.568	753158	0.47	100	91.9	90	110	
Li	7	1	nogas	101.405	0.807	1698763	0.78	100	101.4	90	110	
P	31	1	nogas	553.767	4.750	850549	1.25	500	110.8	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	51.209	127.990	843	11.64	100	51.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-267.763	-137.564	7	86.60	100	-267.8	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	874428	1.41	926026	94.43	70	125	
Ge	72	1	nogas	3588594	3.07	3798750	94.47	70	125	
In	115	1	nogas	3556129	3.68	4251403	83.65	70	125	
Bi	209	1	nogas	2879155	4.49	3609904	79.76	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	876169	1.14	905821	96.73	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	175_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T18:28:24-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	0.095	13.2	690	12.6	1	
Na	23	1	nogas	164.441	5.7	4926465	2.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.817	14.0	170751	8.3	100	
Al	27	1	nogas	3.165	3.9	107643	0.6	5	
K	39	1	nogas	47.458	16.5	8320191	0.7	100	
Ti	47	1	nogas	0.054	92.8	390	28.9	2.5	
V	51	1	nogas	-4.476	-13.6	904216	5.0	2.5	
Cr	52	1	nogas	-0.358	-7.6	71654	2.1	2.5	
Mn	55	1	nogas	0.383	9.1	38079	1.5	2.5	
Co	59	1	nogas	0.038	7.7	1577	5.7	2.5	
Ni	60	1	nogas	0.376	10.4	3074	6.3	2.5	
Cu	63	1	nogas	0.440	17.4	11977	8.6	2	
Zn	66	1	nogas	1.004	9.8	7392	4.6	2.5	
As	75	1	nogas	-1.244	-26.4	103881	2.2	2.5	
Sr	88	1	nogas	0.146	8.4	10366	3.0	2.5	
Ag	107	1	nogas	-0.003	-33.7	793	3.2	2.5	
Cd	111	1	nogas	0.036	2.1	193	3.0	1	
Sb	121	1	nogas	0.195	14.6	4871	9.9	2.5	
Tl	205	1	nogas	0.333	43.2	12516	43.3	1	
Pb	208	1	nogas	0.038	19.6	2657	15.4	2.5	
U	238	1	nogas	0.067	22.8	3621	23.8	2.5	
[Pb]	206	1	nogas	0.029	24.9	520	18.3	2.5	
[Pb]	207	1	nogas	0.050	21.4	637	19.9	2.5	
Na	23	2	He	159.798	1.3	309160	0.2	100	CCB Main CR1 Failed
Mg	24	2	He	6.642	8.2	8105	5.8	100	
Al	27	2	He	3.435	6.3	2597	4.1	5	
K	39	2	He	36.311	3.4	183799	0.6	100	
Ca	43	2	He	26.699	76.7	130	48.0	100	
Ca	44	2	He	31.686	9.3	2617	5.6	100	
V	51	2	He	0.158	10.7	10946	1.1	2.5	
Cr	52	2	He	0.025	124.6	4834	4.2	2.5	
Mn	55	2	He	0.387	11.5	3994	6.3	2.5	
Fe	56	2	He	2.801	2.3	44153	1.9	100	
Co	59	2	He	0.029	20.6	420	16.7	2.5	
Ni	60	2	He	-0.030	-168.3	493	29.0	2.5	
Cu	63	2	He	0.446	7.2	4421	4.7	2	
Zn	66	2	He	0.620	10.3	2294	5.2	2.5	
As	75	2	He	0.033	15.0	332	1.5	2.5	
Se	78	2	He	0.681	22.4	149	13.4	2	
B	11	1	nogas	7.006	6.3	36017	4.5	10	
Si	28	1	nogas	404.003	12.2	1367300	1.5	5	CCB Main CR1 Failed
Ca	43	1	nogas	35.462	12.1	2644	6.7	100	
Ca	44	1	nogas	42.581	3.8	65515	1.2	100	
Fe	56	1	nogas	-17.105	-15.2	4117472	0.9	100	
Se	77	1	nogas	-4.220	-22.8	33147	2.3	2.5	
Se	82	1	nogas	0.219	73.8	270	19.6	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.169	23.9	1853	17.8	2.5	
Sn	118	1	nogas	0.422	15.5	8746	9.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.041	44.7	1183	10.7	2.5	
Sb	121	2	He	0.147	7.3	1537	6.4	2.5	
P	31	1	nogas	-0.094	-2051.0	92572	0.4	10	
La	139	1	nogas	114.273	85.8	1053	20.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	314.150	292.0	17	91.7	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	953375	0.56	926026	102.95	70	125	
Ge	72	1	nogas	3748943	2.92	3798750	98.69	70	125	
In	115	1	nogas	3878552	1.57	4251403	91.23	70	125	
Bi	209	1	nogas	3074055	1.73	3609904	85.16	70	125	
Ge	72	2	He	903450	1.19	905821	99.74	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	177_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T18:40:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	99.550	0.406	624662	0.73	100	99.5	90	110	
Na	23	1	nogas	10709.910	1.580	274510898	1.01	10000	107.1	90	110	
Mg	24	1	nogas	10424.686	1.278	175024083	0.37	10000	104.2	90	110	
Al	27	1	nogas	107.132	2.649	2276058	1.55	100	107.1	90	110	
K	39	1	nogas	10275.315	1.504	270993548	1.04	10000	102.8	90	110	
Ti	47	1	nogas	101.188	0.986	249319	1.41	100	101.2	90	110	
V	51	1	nogas	98.448	1.405	4339766	0.59	100	98.4	90	110	
Cr	52	1	nogas	102.521	1.665	2941755	1.08	100	102.5	90	110	
Mn	55	1	nogas	98.814	1.196	3784437	0.84	100	98.8	90	110	
Co	59	1	nogas	103.288	1.404	3111155	0.67	100	103.3	90	110	
Ni	60	1	nogas	100.994	0.853	675263	0.67	100	101.0	90	110	
Cu	63	1	nogas	104.142	2.280	1640383	1.92	100	104.1	90	110	
Zn	66	1	nogas	100.941	0.583	510267	0.48	100	100.9	90	110	
As	75	1	nogas	101.899	0.835	695962	0.54	100	101.9	90	110	
Sr	88	1	nogas	95.075	2.259	4683426	2.15	100	95.1	90	110	
Ag	107	1	nogas	92.853	1.500	2082829	1.18	100	92.9	90	110	
Cd	111	1	nogas	99.475	2.505	452944	1.01	100	99.5	90	110	
Sb	121	1	nogas	94.464	0.803	2031073	1.41	100	94.5	90	110	
Tl	205	1	nogas	98.056	3.804	3536355	2.17	100	98.1	90	110	
Pb	208	1	nogas	90.865	0.624	4952544	0.62	100	90.9	90	110	
U	238	1	nogas	100.374	1.239	5265013	1.64	100	100.4	90	110	
[Pb]	206	1	nogas	95.118	3.274	1189193	1.64	100	95.1	90	110	
[Pb]	207	1	nogas	96.811	2.238	1063236	0.63	100	96.8	90	110	
Na	23	2	He	10305.088	0.557	16345585	0.09	10000	103.1	90	110	
Mg	24	2	He	10255.137	0.985	9157309	1.31	10000	102.6	90	110	
Al	27	2	He	106.812	1.905	54749	1.77	100	106.8	90	110	
K	39	2	He	10997.443	2.248	10693995	2.22	10000	110.0	90	110	
Ca	43	2	He	10046.843	1.165	30091	1.51	10000	100.5	90	110	
Ca	44	2	He	10199.408	0.779	513861	0.38	10000	102.0	90	110	
V	51	2	He	99.099	0.535	763189	0.04	100	99.1	90	110	
Cr	52	2	He	98.116	0.640	825797	0.66	100	98.1	90	110	
Mn	55	2	He	100.715	1.098	608270	1.04	100	100.7	90	110	
Fe	56	2	He	9933.926	0.456	75426227	0.68	10000	99.3	90	110	
Co	59	2	He	97.967	0.486	1157191	0.65	100	98.0	90	110	
Ni	60	2	He	98.553	1.618	292235	1.37	100	98.6	90	110	
Cu	63	2	He	97.670	0.299	743911	0.83	100	97.7	90	110	
Zn	66	2	He	99.976	0.892	169265	1.10	100	100.0	90	110	
As	75	2	He	103.838	0.976	153020	0.91	100	103.8	90	110	
Se	78	2	He	101.668	0.867	12896	0.75	100	101.7	90	110	
B	11	1	nogas	489.062	1.809	1827863	2.02	500	97.8	90	110	
Si	28	1	nogas	5388.545	0.344	7277732	1.35	5000	107.8	90	110	
Ca	43	1	nogas	10086.407	1.169	476963	1.15	10000	100.9	90	110	
Ca	44	1	nogas	9996.179	0.606	7693341	1.08	10000	100.0	90	110	
Fe	56	1	nogas	9929.080	0.737	327548991	0.71	10000	99.3	90	110	
Se	77	1	nogas	108.919	1.121	65621	0.82	100	108.9	90	110	
Se	82	1	nogas	97.683	1.195	35301	0.13	100	97.7	90	110	
Mo	95	1	nogas	92.475	0.525	858574	0.71	100	92.5	90	110	
Sn	118	1	nogas	100.625	0.959	1439636	1.25	100	100.6	90	110	
Ba	137	1	nogas	97.855	2.676	699318	1.00	100	97.9	90	110	
Sb	121	2	He	90.898	1.415	768020	1.34	100	90.9	90	110	
Li	7	1	nogas	98.767	0.668	1686971	0.29	100	98.8	90	110	
P	31	1	nogas	533.483	1.066	845271	0.68	500	106.7	90	110	
La	139	1	nogas	14.019	61.532	823	0.70	100	14.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	1324.805	67.525	33	45.83	100	1324.8	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	890518	0.35	926026	96.17	70	125	
Ge	72	1	nogas	3684331	1.05	3798750	96.99	70	125	
In	115	1	nogas	3772989	1.79	4251403	88.75	70	125	
Bi	209	1	nogas	3086162	1.65	3609904	85.49	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	903545	0.54	905821	99.75	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	187_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T19:03:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	98.967	1.213	636786	0.62	100	99.0	90	110	
Na	23	1	nogas	10588.797	2.337	273675281	0.21	10000	105.9	90	110	
Mg	24	1	nogas	10490.709	1.475	177620783	0.68	10000	104.9	90	110	
Al	27	1	nogas	103.450	0.904	2318433	0.53	100	103.4	90	110	
K	39	1	nogas	9775.603	0.504	272126756	0.70	10000	97.8	90	110	
Ti	47	1	nogas	96.989	0.770	251895	0.44	100	97.0	90	110	
V	51	1	nogas	91.535	2.755	4330196	1.99	100	91.5	90	110	
Cr	52	1	nogas	97.087	0.925	2941070	0.57	100	97.1	90	110	
Mn	55	1	nogas	95.443	0.489	3853926	0.12	100	95.4	90	110	
Co	59	1	nogas	98.009	1.735	3112016	1.79	100	98.0	90	110	
Ni	60	1	nogas	96.390	0.582	679370	0.72	100	96.4	90	110	
Cu	63	1	nogas	99.156	1.594	1646726	1.96	100	99.2	90	110	
Zn	66	1	nogas	96.737	0.766	515556	0.48	100	96.7	90	110	
As	75	1	nogas	95.096	0.799	692315	0.50	100	95.1	90	110	
Sr	88	1	nogas	90.934	1.100	4721861	0.91	100	90.9	90	110	
Ag	107	1	nogas	90.093	2.698	2130318	2.73	100	90.1	90	110	
Cd	111	1	nogas	100.120	2.175	460661	1.64	100	100.1	90	110	
Sb	121	1	nogas	91.162	1.012	2066030	1.05	100	91.2	90	110	
Tl	205	1	nogas	100.953	1.835	3603583	1.33	100	101.0	90	110	
Pb	208	1	nogas	91.235	0.618	4972715	0.62	100	91.2	90	110	
U	238	1	nogas	103.125	3.478	5351084	2.34	100	103.1	90	110	
[Pb]	206	1	nogas	97.442	1.623	1205677	0.46	100	97.4	90	110	
[Pb]	207	1	nogas	98.683	1.189	1072531	0.07	100	98.7	90	110	
Na	23	2	He	9854.786	1.076	16131441	0.64	10000	98.5	90	110	
Mg	24	2	He	9810.610	1.362	9038681	0.18	10000	98.1	90	110	
Al	27	2	He	101.548	1.261	53753	1.11	100	101.5	90	110	
K	39	2	He	10923.261	0.557	10622864	0.55	10000	109.2	90	110	
Ca	43	2	He	9903.047	1.946	30602	0.97	10000	99.0	90	110	
Ca	44	2	He	9843.796	1.302	511757	0.34	10000	98.4	90	110	
V	51	2	He	96.019	1.761	763263	0.22	100	96.0	90	110	
Cr	52	2	He	95.295	1.439	827677	0.30	100	95.3	90	110	
Mn	55	2	He	97.114	2.642	605149	1.16	100	97.1	90	110	
Fe	56	2	He	9640.269	3.032	75511071	1.60	10000	96.4	90	110	
Co	59	2	He	96.213	2.510	1172456	0.98	100	96.2	90	110	
Ni	60	2	He	97.303	2.232	297686	0.70	100	97.3	90	110	
Cu	63	2	He	94.815	1.762	745131	1.10	100	94.8	90	110	
Zn	66	2	He	97.095	0.561	169664	1.17	100	97.1	90	110	
As	75	2	He	100.188	1.326	152346	0.30	100	100.2	90	110	
Se	78	2	He	99.950	3.001	13080	1.53	100	99.9	90	110	
B	11	1	nogas	496.947	0.640	1904605	1.72	500	99.4	90	110	
Si	28	1	nogas	5215.482	0.354	7453783	0.36	5000	104.3	90	110	
Ca	43	1	nogas	9623.014	0.400	479705	0.22	10000	96.2	90	110	
Ca	44	1	nogas	9694.931	1.354	7865607	0.99	10000	96.9	90	110	
Fe	56	1	nogas	9487.486	1.286	330129382	1.44	10000	94.9	90	110	
Se	77	1	nogas	81.879	1.930	60845	0.59	100	81.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	93.670	3.923	35689	3.56	100	93.7	90	110	
Mo	95	1	nogas	89.687	0.546	877720	0.35	100	89.7	90	110	CCV Main CR1-2 Failed
Sn	118	1	nogas	101.967	3.328	1473382	0.62	100	102.0	90	110	
Ba	137	1	nogas	96.425	3.449	696137	0.80	100	96.4	90	110	
Sb	121	2	He	87.811	2.289	765466	0.88	100	87.8	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	100.060	4.414	1751216	3.32	100	100.1	90	110	
P	31	1	nogas	508.699	0.963	854059	0.57	500	101.7	90	110	
La	139	1	nogas	-16.531	-305.419	770	12.39	100	-16.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	1139.993	105.722	30	66.67	100	1140.0	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	913285	1.80	926026	98.62	70	125	
Ge	72	1	nogas	3883466	0.37	3798750	102.23	70	125	
In	115	1	nogas	3812830	2.97	4251403	89.68	70	125	
Bi	209	1	nogas	3053618	1.17	3609904	84.59	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	932383	1.53	905821	102.93	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	188_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T19:05:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	0.106	16.3	800	15.2	1	
Na	23	1	nogas	86.520	4.1	3084103	1.0	100	
Mg	24	1	nogas	7.714	10.4	177475	5.7	100	
Al	27	1	nogas	3.037	2.5	112973	0.8	5	
K	39	1	nogas	25.129	18.8	8329286	0.8	100	
Ti	47	1	nogas	0.064	4.1	450	2.2	2.5	
V	51	1	nogas	-3.597	-64.3	1005418	9.2	2.5	
Cr	52	1	nogas	-0.532	-6.7	71808	2.3	2.5	
Mn	55	1	nogas	0.373	7.9	40561	2.6	2.5	
Co	59	1	nogas	0.050	8.8	2093	6.0	2.5	
Ni	60	1	nogas	0.272	4.6	2550	2.6	2.5	
Cu	63	1	nogas	0.260	13.5	9813	5.0	2	
Zn	66	1	nogas	0.823	6.3	6965	4.8	2.5	
As	75	1	nogas	-4.098	-5.7	93829	1.3	2.5	
Sr	88	1	nogas	0.148	6.9	11277	3.9	2.5	
Ag	107	1	nogas	0.010	41.1	1167	7.8	2.5	
Cd	111	1	nogas	0.042	20.9	227	17.8	1	
Sb	121	1	nogas	0.364	9.7	9213	8.1	2.5	
Tl	205	1	nogas	0.342	45.7	13553	41.6	1	
Pb	208	1	nogas	0.057	20.2	3664	17.0	2.5	
U	238	1	nogas	0.070	23.2	4034	19.8	2.5	
[Pb]	206	1	nogas	0.055	28.2	893	22.7	2.5	
[Pb]	207	1	nogas	0.063	23.3	830	17.8	2.5	
Na	23	2	He	83.141	2.3	200296	0.9	100	
Mg	24	2	He	6.797	6.7	8782	4.4	100	
Al	27	2	He	3.233	2.4	2659	1.3	5	
K	39	2	He	34.980	1.9	182523	0.4	100	
Ca	43	2	He	41.931	7.5	187	6.2	100	
Ca	44	2	He	30.218	6.1	2710	4.6	100	
V	51	2	He	0.153	28.2	11618	2.0	2.5	
Cr	52	2	He	0.010	475.3	5014	7.2	2.5	
Mn	55	2	He	0.344	6.2	3980	3.1	2.5	
Fe	56	2	He	3.818	9.8	55246	5.0	100	
Co	59	2	He	0.034	2.4	517	1.1	2.5	
Ni	60	2	He	-0.007	-174.8	600	6.7	2.5	
Cu	63	2	He	0.334	6.3	3804	4.2	2	
Zn	66	2	He	0.695	12.3	2577	6.5	2.5	
As	75	2	He	0.042	24.8	369	5.0	2.5	
Se	78	2	He	0.554	21.2	142	10.6	2	
B	11	1	nogas	7.298	9.8	38850	7.1	10	
Si	28	1	nogas	339.752	9.7	1388902	3.0	5	CCB Main CR1 Failed
Ca	43	1	nogas	32.072	17.1	2670	9.6	100	
Ca	44	1	nogas	38.956	1.4	67492	1.5	100	
Fe	56	1	nogas	-24.600	-11.6	4165483	1.7	100	
Se	77	1	nogas	-20.862	-6.1	30356	1.7	2.5	
Se	82	1	nogas	0.121	201.0	253	38.3	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.195	20.0	2257	16.5	2.5	
Sn	118	1	nogas	0.484	9.8	9963	4.2	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.053	61.3	1310	15.6	2.5	
Sb	121	2	He	0.312	6.1	3117	4.7	2.5	
P	31	1	nogas	-2.711	-29.5	95630	1.4	10	
La	139	1	nogas	107.869	50.7	1070	9.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	272.492	255.0	17	69.3	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	996281	0.86	926026	107.59	70	125	
Ge	72	1	nogas	4034649	1.08	3798750	106.21	70	125	
In	115	1	nogas	4000353	3.05	4251403	94.09	70	125	
Bi	209	1	nogas	3277522	3.50	3609904	90.79	70	125	
Ge	72	2	He	962499	0.99	905821	106.26	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	199_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T19:27:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	94.977	1.706	658519	0.96	100	95.0	90	110	
Na	23	1	nogas	10592.433	1.715	293943182	0.65	10000	105.9	90	110	
Mg	24	1	nogas	10414.872	0.685	189323458	0.60	10000	104.1	90	110	
Al	27	1	nogas	102.840	1.233	2422357	1.29	100	102.8	90	110	
K	39	1	nogas	9969.038	0.064	291481107	0.73	10000	99.7	90	110	
Ti	47	1	nogas	97.061	0.876	264912	0.94	100	97.1	90	110	
V	51	1	nogas	102.675	2.161	4964094	1.04	100	102.7	90	110	
Cr	52	1	nogas	101.347	0.612	3222543	1.05	100	101.3	90	110	
Mn	55	1	nogas	96.564	1.913	4097152	1.54	100	96.6	90	110	
Co	59	1	nogas	98.347	1.129	3281722	1.53	100	98.3	90	110	
Ni	60	1	nogas	98.969	0.686	733052	1.33	100	99.0	90	110	
Cu	63	1	nogas	100.694	1.073	1757145	0.60	100	100.7	90	110	
Zn	66	1	nogas	100.269	0.912	561483	0.82	100	100.3	90	110	
As	75	1	nogas	102.608	0.720	775444	0.06	100	102.6	90	110	
Sr	88	1	nogas	92.294	0.213	5036453	0.87	100	92.3	90	110	
Ag	107	1	nogas	93.530	1.374	2324018	1.17	100	93.5	90	110	
Cd	111	1	nogas	100.364	1.637	497898	1.47	100	100.4	90	110	
Sb	121	1	nogas	92.710	1.908	2207912	1.63	100	92.7	90	110	
Tl	205	1	nogas	99.805	2.971	3920201	1.71	100	99.8	90	110	
Pb	208	1	nogas	97.093	1.829	5291947	1.83	100	97.1	90	110	
U	238	1	nogas	100.051	1.908	5714430	1.23	100	100.1	90	110	
[Pb]	206	1	nogas	94.533	1.141	1287364	0.70	100	94.5	90	110	
[Pb]	207	1	nogas	95.725	1.309	1145054	1.52	100	95.7	90	110	
Na	23	2	He	10094.651	0.223	16827969	0.81	10000	100.9	90	110	
Mg	24	2	He	10081.676	0.948	9460069	0.83	10000	100.8	90	110	
Al	27	2	He	106.414	1.646	57326	2.00	100	106.4	90	110	
K	39	2	He	11272.963	1.314	10958179	1.30	10000	112.7	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9640.255	2.474	30341	2.09	10000	96.4	90	110	
Ca	44	2	He	9970.868	0.576	527926	0.24	10000	99.7	90	110	
V	51	2	He	97.995	0.497	793197	0.46	100	98.0	90	110	
Cr	52	2	He	97.727	0.373	864384	0.65	100	97.7	90	110	
Mn	55	2	He	98.676	0.079	626319	0.86	100	98.7	90	110	
Fe	56	2	He	9887.719	1.021	78896359	1.45	10000	98.9	90	110	
Co	59	2	He	98.001	0.414	1216507	1.00	100	98.0	90	110	
Ni	60	2	He	99.555	1.229	310214	0.86	100	99.6	90	110	
Cu	63	2	He	98.236	0.535	786287	1.12	100	98.2	90	110	
Zn	66	2	He	101.714	0.912	180954	1.65	100	101.7	90	110	
As	75	2	He	102.724	0.345	159083	0.66	100	102.7	90	110	
Se	78	2	He	102.368	1.261	13646	1.95	100	102.4	90	110	
B	11	1	nogas	484.277	3.835	1999467	2.21	500	96.9	90	110	
Si	28	1	nogas	5226.075	2.008	7846548	1.20	5000	104.5	90	110	
Ca	43	1	nogas	9880.117	0.704	517552	0.58	10000	98.8	90	110	
Ca	44	1	nogas	9811.454	1.152	8364659	0.49	10000	98.1	90	110	
Fe	56	1	nogas	9730.847	1.053	355677941	0.40	10000	97.3	90	110	
Se	77	1	nogas	122.514	4.511	77080	1.67	100	122.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.987	1.012	38829	1.08	100	97.0	90	110	
Mo	95	1	nogas	90.916	0.671	935035	0.96	100	90.9	90	110	
Sn	118	1	nogas	99.674	0.952	1553441	1.08	100	99.7	90	110	
Ba	137	1	nogas	97.055	1.741	755684	1.18	100	97.1	90	110	
Sb	121	2	He	89.720	0.847	796657	1.26	100	89.7	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	96.552	2.689	1824093	2.34	100	96.6	90	110	
P	31	1	nogas	520.817	1.043	916477	0.40	500	104.2	90	110	
La	139	1	nogas	82.092	74.894	1043	11.11	100	82.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	967.631	149.072	30	88.19	100	967.6	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	984181	1.96	926026	106.28	70	125	
Ge	72	1	nogas	4081095	0.66	3798750	107.43	70	125	
In	115	1	nogas	4110071	1.79	4251403	96.68	70	125	
Bi	209	1	nogas	3360689	1.40	3609904	93.10	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	949514	0.78	905821	104.82	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	200_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T19:29:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	0.089	18.0	690	12.9	1	
Na	23	1	nogas	168.660	10.8	5208157	1.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.833	23.5	210727	11.5	100	
Al	27	1	nogas	3.658	13.7	124142	2.2	5	
K	39	1	nogas	58.682	38.3	9061255	0.9	100	
Ti	47	1	nogas	0.078	81.8	470	28.8	2.5	
V	51	1	nogas	-0.986	-47.3	1079299	7.6	2.5	
Cr	52	1	nogas	-0.122	-133.3	82429	1.2	2.5	
Mn	55	1	nogas	0.390	22.7	40297	2.3	2.5	
Co	59	1	nogas	0.057	31.2	2254	18.1	2.5	
Ni	60	1	nogas	0.375	11.0	3230	3.5	2.5	
Cu	63	1	nogas	0.585	22.6	15006	7.8	2	
Zn	66	1	nogas	1.825	3.7	12221	3.6	2.5	
As	75	1	nogas	-1.196	-36.6	109770	4.5	2.5	
Sr	88	1	nogas	0.205	11.2	13996	2.7	2.5	
Ag	107	1	nogas	0.017	83.4	1303	20.1	2.5	
Cd	111	1	nogas	0.054	26.8	287	21.3	1	
Sb	121	1	nogas	0.189	24.6	4954	14.3	2.5	
Tl	205	1	nogas	0.313	52.7	12452	42.7	1	
Pb	208	1	nogas	0.056	17.6	3624	14.8	2.5	
U	238	1	nogas	0.073	34.4	4234	25.3	2.5	
[Pb]	206	1	nogas	0.058	28.8	950	15.6	2.5	
[Pb]	207	1	nogas	0.063	19.3	850	13.6	2.5	
Na	23	2	He	146.680	0.6	319536	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	7.164	1.1	9496	0.5	100	
Al	27	2	He	3.358	12.3	2834	7.7	5	
K	39	2	He	45.843	6.5	192938	1.5	100	
Ca	43	2	He	42.765	33.3	197	23.5	100	
Ca	44	2	He	39.545	2.2	3337	1.7	100	
V	51	2	He	0.203	13.0	12508	1.6	2.5	
Cr	52	2	He	0.023	179.5	5341	7.5	2.5	
Mn	55	2	He	0.381	8.1	4381	5.1	2.5	
Fe	56	2	He	3.740	1.5	56801	1.2	100	
Co	59	2	He	0.027	4.7	447	3.4	2.5	
Ni	60	2	He	-0.022	-106.6	573	13.1	2.5	
Cu	63	2	He	0.485	7.7	5221	5.9	2	
Zn	66	2	He	1.508	7.2	4194	5.1	2.5	
As	75	2	He	0.027	69.9	358	8.7	2.5	
Se	78	2	He	0.566	15.7	149	8.5	2	
B	11	1	nogas	6.755	16.4	37103	7.5	10	
Si	28	1	nogas	340.291	34.4	1355834	5.8	5	CCB Main CR1 Failed
Ca	43	1	nogas	43.966	4.2	3217	4.0	100	
Ca	44	1	nogas	48.124	15.2	73417	1.9	100	
Fe	56	1	nogas	-5.191	-190.2	4744794	0.5	100	
Se	77	1	nogas	-1.408	-380.0	35796	5.2	2.5	
Se	82	1	nogas	0.144	140.4	253	23.1	2	
Mo	95	1	nogas	0.367	19.4	3900	12.5	2.5	
Sn	118	1	nogas	0.507	19.0	10430	5.7	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.101	30.3	1697	6.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.135	7.6	1587	6.2	2.5	
P	31	1	nogas	5.388	85.8	105693	0.6	10	
La	139	1	nogas	157.262	18.7	1193	3.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	1566.639	72.0	40	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	1014377	5.13	926026	109.54	70	125	
Ge	72	1	nogas	3953506	6.49	3798750	104.07	70	125	
In	115	1	nogas	4071754	8.05	4251403	95.77	70	125	
Bi	209	1	nogas	3352932	7.44	3609904	92.88	70	125	
Ge	72	2	He	1000812	0.45	905821	110.49	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\012
Acq Date Time	2019-01-22T19:44:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	99.554	0.638	637079	0.80	100	99.6	90	110	
Na	23	1	nogas	10495.337	0.907	276802815	0.86	10000	105.0	90	110	
Mg	24	1	nogas	10304.402	1.437	178007533	1.47	10000	103.0	90	110	
Al	27	1	nogas	102.116	1.476	2271523	1.39	100	102.1	90	110	
K	39	1	nogas	9926.712	1.610	274095023	1.52	10000	99.3	90	110	
Ti	47	1	nogas	97.506	1.406	251294	1.36	100	97.5	90	110	
V	51	1	nogas	93.857	1.679	4378244	0.72	100	93.9	90	110	
Cr	52	1	nogas	95.966	0.783	2885909	1.32	100	96.0	90	110	
Mn	55	1	nogas	95.258	1.950	3816763	1.41	100	95.3	90	110	
Co	59	1	nogas	97.704	0.405	3078513	0.54	100	97.7	90	110	
Ni	60	1	nogas	97.953	0.880	685077	0.95	100	98.0	90	110	
Cu	63	1	nogas	98.652	1.204	1625664	0.66	100	98.7	90	110	
Zn	66	1	nogas	99.420	1.192	525719	0.94	100	99.4	90	110	
As	75	1	nogas	99.974	0.652	716383	0.66	100	100.0	90	110	
Sr	88	1	nogas	90.816	1.063	4679594	1.17	100	90.8	90	110	
Ag	107	1	nogas	91.088	2.302	2137114	1.78	100	91.1	90	110	
Cd	111	1	nogas	99.847	1.040	469353	0.87	100	99.8	90	110	
Sb	121	1	nogas	92.546	0.060	2081305	0.67	100	92.5	90	110	
Tl	205	1	nogas	97.720	5.273	3569680	1.27	100	97.7	90	110	
Pb	208	1	nogas	90.106	1.633	4911190	1.63	100	90.1	90	110	
U	238	1	nogas	99.859	2.880	5308805	3.28	100	99.9	90	110	
[Pb]	206	1	nogas	93.923	3.780	1189825	0.50	100	93.9	90	110	
[Pb]	207	1	nogas	95.297	3.021	1060705	2.15	100	95.3	90	110	
Na	23	2	He	9871.723	0.989	16134403	0.63	10000	98.7	90	110	
Mg	24	2	He	9889.621	1.865	9097639	1.46	10000	98.9	90	110	
Al	27	2	He	102.152	2.578	53987	2.73	100	102.2	90	110	
K	39	2	He	10821.805	1.324	10525582	1.31	10000	108.2	90	110	
Ca	43	2	He	9947.280	2.476	30692	2.04	10000	99.5	90	110	
Ca	44	2	He	9758.661	1.128	506577	0.73	10000	97.6	90	110	
V	51	2	He	96.265	1.510	764074	1.11	100	96.3	90	110	
Cr	52	2	He	96.519	0.945	837013	0.90	100	96.5	90	110	
Mn	55	2	He	96.829	1.076	602568	1.09	100	96.8	90	110	
Fe	56	2	He	9560.230	1.174	74784182	0.80	10000	95.6	90	110	
Co	59	2	He	95.251	0.485	1159154	0.33	100	95.3	90	110	
Ni	60	2	He	96.373	0.372	294438	0.41	100	96.4	90	110	
Cu	63	2	He	94.781	0.880	743757	0.49	100	94.8	90	110	
Zn	66	2	He	98.730	0.934	172224	0.49	100	98.7	90	110	
As	75	2	He	101.997	0.757	154860	0.39	100	102.0	90	110	
Se	78	2	He	98.718	2.286	12902	1.85	100	98.7	90	110	
B	11	1	nogas	503.917	1.128	1920550	1.66	500	100.8	90	110	
Si	28	1	nogas	5301.414	0.887	7503373	0.26	5000	106.0	90	110	
Ca	43	1	nogas	9788.755	1.486	484190	1.15	10000	97.9	90	110	
Ca	44	1	nogas	9786.281	2.252	7878796	2.35	10000	97.9	90	110	
Fe	56	1	nogas	9655.373	0.668	333306807	0.99	10000	96.6	90	110	
Se	77	1	nogas	92.766	0.422	63705	0.63	100	92.8	90	110	
Se	82	1	nogas	96.089	1.068	36327	0.70	100	96.1	90	110	
Mo	95	1	nogas	89.649	1.684	870620	1.67	100	89.6	90	110	CCV Main CR1-2 Failed
Sn	118	1	nogas	99.016	1.490	1462155	0.73	100	99.0	90	110	
Ba	137	1	nogas	95.884	2.461	707321	0.67	100	95.9	90	110	
Sb	121	2	He	88.843	0.809	773400	1.16	100	88.8	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	101.062	2.304	1758740	2.27	100	101.1	90	110	
P	31	1	nogas	523.661	1.350	869607	0.72	500	104.7	90	110	
La	139	1	nogas	-37.620	-58.459	743	4.33	100	-37.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	1312.282	30.814	33	17.32	100	1312.3	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	908189	0.54	926026	98.07	70	125	
Ge	72	1	nogas	3853672	0.62	3798750	101.45	70	125	
In	115	1	nogas	3894454	1.77	4251403	91.60	70	125	
Bi	209	1	nogas	3129382	4.35	3609904	86.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	930888	0.44	905821	102.77	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	209_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T19:46:47-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	0.112	14.7	840	12.5	1	
Na	23	1	nogas	105.981	8.9	3497577	2.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.727	25.7	205889	16.5	100	
Al	27	1	nogas	6.103	84.1	178053	62.9	5	CCB Main CR1 Failed
K	39	1	nogas	41.232	6.0	8583503	0.8	100	
Ti	47	1	nogas	0.399	127.7	1311	100.6	2.5	
V	51	1	nogas	-5.908	-6.6	899331	2.5	2.5	
Cr	52	1	nogas	-0.493	-3.1	71343	1.3	2.5	
Mn	55	1	nogas	0.391	13.2	40361	3.8	2.5	
Co	59	1	nogas	0.052	30.1	2103	22.6	2.5	
Ni	60	1	nogas	0.286	9.3	2594	7.5	2.5	
Cu	63	1	nogas	0.229	13.7	9069	4.6	2	
Zn	66	1	nogas	1.238	3.0	9039	0.8	2.5	
As	75	1	nogas	-3.616	-13.4	94688	4.1	2.5	
Sr	88	1	nogas	0.153	11.8	11257	7.1	2.5	
Ag	107	1	nogas	0.009	81.2	1107	14.4	2.5	
Cd	111	1	nogas	0.040	30.3	213	23.1	1	
Sb	121	1	nogas	0.174	7.5	4647	5.4	2.5	
Tl	205	1	nogas	0.346	34.2	13256	31.6	1	
Pb	208	1	nogas	0.054	26.3	3507	22.1	2.5	
U	238	1	nogas	0.079	29.8	4347	27.7	2.5	
[Pb]	206	1	nogas	0.047	10.5	760	7.0	2.5	
[Pb]	207	1	nogas	0.070	28.2	887	23.9	2.5	
Na	23	2	He	97.529	2.1	219393	0.5	100	
Mg	24	2	He	7.207	4.2	8962	2.5	100	
Al	27	2	He	3.335	7.2	2650	3.3	5	
K	39	2	He	35.475	8.0	182997	1.5	100	
Ca	43	2	He	24.128	63.3	127	36.5	100	
Ca	44	2	He	32.476	6.8	2767	5.4	100	
V	51	2	He	0.125	23.3	11129	1.0	2.5	
Cr	52	2	He	0.032	77.7	5101	5.7	2.5	
Mn	55	2	He	0.349	23.5	3917	12.1	2.5	
Fe	56	2	He	3.161	9.5	48784	3.5	100	
Co	59	2	He	0.034	18.0	497	15.2	2.5	
Ni	60	2	He	0.001	1042.8	610	4.3	2.5	
Cu	63	2	He	0.308	8.6	3507	4.7	2	
Zn	66	2	He	0.843	3.8	2777	3.6	2.5	
As	75	2	He	0.034	52.9	348	8.7	2.5	
Se	78	2	He	0.787	17.8	169	10.7	2	
B	11	1	nogas	7.754	8.8	40804	5.8	10	
Si	28	1	nogas	439.400	45.1	1482414	15.8	5	CCB Main CR1 Failed
Ca	43	1	nogas	35.828	10.5	2800	6.1	100	
Ca	44	1	nogas	41.598	4.9	68114	1.4	100	
Fe	56	1	nogas	-17.703	-25.9	4310502	2.7	100	
Se	77	1	nogas	-15.665	-17.5	31294	3.4	2.5	
Se	82	1	nogas	0.049	600.1	220	52.4	2	
Mo	95	1	nogas	0.211	25.0	2370	20.9	2.5	
Sn	118	1	nogas	0.500	13.8	10023	6.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.087	51.8	1537	17.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.127	12.9	1423	10.6	2.5	
P	31	1	nogas	-1.453	-64.2	95356	0.8	10	
La	139	1	nogas	212.892	58.7	1267	16.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	2458.698	59.0	53	47.2	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	997987	1.51	926026	107.77	70	125	
Ge	72	1	nogas	3943146	1.42	3798750	103.80	70	125	
In	115	1	nogas	3936491	3.86	4251403	92.59	70	125	
Bi	209	1	nogas	3163758	1.39	3609904	87.64	70	125	
Ge	72	2	He	940565	1.54	905821	103.84	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\012
Acq Date Time	2019-01-22T20:08:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	98.426	4.669	649191	1.08	100	98.4	90	110	
Na	23	1	nogas	10754.343	0.581	281504631	1.16	10000	107.5	90	110	
Mg	24	1	nogas	10678.453	0.890	183095967	1.47	10000	106.8	90	110	
Al	27	1	nogas	106.907	1.476	2328713	1.70	100	106.9	90	110	
K	39	1	nogas	10421.964	1.439	281666715	1.62	10000	104.2	90	110	
Ti	47	1	nogas	100.427	0.882	253641	0.93	100	100.4	90	110	
V	51	1	nogas	99.715	3.555	4492397	2.92	100	99.7	90	110	
Cr	52	1	nogas	102.069	2.150	3002821	2.34	100	102.1	90	110	
Mn	55	1	nogas	101.062	1.450	3967204	1.54	100	101.1	90	110	
Co	59	1	nogas	102.926	1.364	3178081	1.12	100	102.9	90	110	
Ni	60	1	nogas	101.556	0.271	696046	0.09	100	101.6	90	110	
Cu	63	1	nogas	104.373	2.389	1685330	2.40	100	104.4	90	110	
Zn	66	1	nogas	102.474	0.626	530967	0.37	100	102.5	90	110	
As	75	1	nogas	104.863	1.317	730923	1.37	100	104.9	90	110	
Sr	88	1	nogas	95.398	0.590	4817257	0.84	100	95.4	90	110	
Ag	107	1	nogas	96.429	1.080	2217339	1.28	100	96.4	90	110	
Cd	111	1	nogas	103.156	1.409	475713	0.84	100	103.2	90	110	
Sb	121	1	nogas	95.712	2.330	2109439	2.41	100	95.7	90	110	
Tl	205	1	nogas	98.402	1.316	3623069	2.08	100	98.4	90	110	
Pb	208	1	nogas	92.551	1.777	5044426	1.78	100	92.6	90	110	
U	238	1	nogas	101.587	2.408	5437154	1.77	100	101.6	90	110	
[Pb]	206	1	nogas	95.200	2.068	1215030	2.53	100	95.2	90	110	
[Pb]	207	1	nogas	97.284	1.687	1090541	2.01	100	97.3	90	110	
Na	23	2	He	10448.413	1.150	16437580	0.56	10000	104.5	90	110	
Mg	24	2	He	10357.998	1.209	9173846	0.93	10000	103.6	90	110	
Al	27	2	He	107.868	0.095	54836	0.66	100	107.9	90	110	
K	39	2	He	11122.159	1.439	10813580	1.42	10000	111.2	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10121.465	2.390	30071	2.97	10000	101.2	90	110	
Ca	44	2	He	10258.114	0.268	512642	0.62	10000	102.6	90	110	
V	51	2	He	100.968	1.040	771094	0.54	100	101.0	90	110	
Cr	52	2	He	100.209	0.620	836481	0.38	100	100.2	90	110	
Mn	55	2	He	101.450	1.413	607713	0.88	100	101.5	90	110	
Fe	56	2	He	10073.206	1.602	75859906	1.07	10000	100.7	90	110	
Co	59	2	He	99.933	1.654	1170795	1.16	100	99.9	90	110	
Ni	60	2	He	100.864	0.644	296660	0.69	100	100.9	90	110	
Cu	63	2	He	99.908	0.570	754757	0.63	100	99.9	90	110	
Zn	66	2	He	103.144	0.680	173171	0.26	100	103.1	90	110	
As	75	2	He	105.993	1.013	154923	0.64	100	106.0	90	110	
Se	78	2	He	104.638	1.493	13163	0.95	100	104.6	90	110	
B	11	1	nogas	501.416	5.894	1968760	0.79	500	100.3	90	110	
Si	28	1	nogas	5573.489	1.051	7685392	0.93	5000	111.5	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	10155.595	0.669	492273	0.82	10000	101.6	90	110	
Ca	44	1	nogas	10202.937	1.206	8048605	1.43	10000	102.0	90	110	
Fe	56	1	nogas	10058.180	1.881	340071941	2.01	10000	100.6	90	110	
Se	77	1	nogas	115.489	4.952	69235	2.69	100	115.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.133	1.029	37091	1.25	100	100.1	90	110	
Mo	95	1	nogas	93.723	1.406	891998	1.66	100	93.7	90	110	
Sn	118	1	nogas	99.770	2.007	1445323	1.19	100	99.8	90	110	
Ba	137	1	nogas	99.126	3.137	717284	0.94	100	99.1	90	110	
Sb	121	2	He	92.503	1.315	775221	0.73	100	92.5	90	110	
Li	7	1	nogas	99.876	6.320	1791437	1.10	100	99.9	90	110	
P	31	1	nogas	541.447	2.616	878041	2.52	500	108.3	90	110	
La	139	1	nogas	-21.948	-352.681	760	19.38	100	-21.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	893.989	101.122	27	57.28	100	894.0	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	937489	5.02	926026	101.24	70	125	
Ge	72	1	nogas	3776570	0.26	3798750	99.42	70	125	
In	115	1	nogas	3820956	2.25	4251403	89.88	70	125	
Bi	209	1	nogas	3149208	0.84	3609904	87.24	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	896231	0.59	905821	98.94	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\012
Acq Date Time	2019-01-22T20:10:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	23.3	700	21.1	1	
Na	23	1	nogas	136.562	5.6	4385008	1.5	100	CCB Main CR1 Failed
Mg	24	1	nogas	8.807	7.5	195047	3.6	100	
Al	27	1	nogas	3.411	1.4	114898	1.6	5	
K	39	1	nogas	59.656	10.2	8793776	1.3	100	
Ti	47	1	nogas	0.083	24.0	473	10.0	2.5	
V	51	1	nogas	-5.323	-14.1	890433	3.8	2.5	
Cr	52	1	nogas	-0.442	-9.5	70483	2.1	2.5	
Mn	55	1	nogas	0.395	3.3	39238	1.4	2.5	
Co	59	1	nogas	0.048	30.5	1917	22.1	2.5	
Ni	60	1	nogas	0.280	3.2	2470	3.5	2.5	
Cu	63	1	nogas	0.448	14.7	12334	7.1	2	
Zn	66	1	nogas	1.248	6.0	8802	5.8	2.5	
As	75	1	nogas	-3.147	-7.7	94386	2.0	2.5	
Sr	88	1	nogas	0.218	11.7	14213	7.7	2.5	
Ag	107	1	nogas	0.006	14.2	1007	3.2	2.5	
Cd	111	1	nogas	0.044	16.2	237	13.6	1	
Sb	121	1	nogas	0.225	4.2	5631	2.3	2.5	
Tl	205	1	nogas	0.379	49.8	14431	46.3	1	
Pb	208	1	nogas	0.044	10.4	2990	8.4	2.5	
U	238	1	nogas	0.075	37.3	4151	34.6	2.5	
[Pb]	206	1	nogas	0.049	9.6	797	5.9	2.5	
[Pb]	207	1	nogas	0.049	10.6	647	7.0	2.5	
Na	23	2	He	131.529	1.7	265061	1.2	100	CCB Main CR1 Failed
Mg	24	2	He	8.235	6.4	9549	5.1	100	
Al	27	2	He	3.819	8.4	2797	5.9	5	
K	39	2	He	47.745	11.6	194762	2.7	100	
Ca	43	2	He	37.879	48.8	163	33.7	100	
Ca	44	2	He	45.337	8.5	3310	5.8	100	
V	51	2	He	0.139	12.1	10824	1.3	2.5	
Cr	52	2	He	0.104	19.1	5508	3.2	2.5	
Mn	55	2	He	0.415	4.9	4171	2.8	2.5	
Fe	56	2	He	3.859	4.3	52284	2.3	100	
Co	59	2	He	0.034	9.1	487	7.8	2.5	
Ni	60	2	He	0.021	224.4	647	21.4	2.5	
Cu	63	2	He	0.469	2.9	4601	2.4	2	
Zn	66	2	He	0.833	8.2	2657	4.4	2.5	
As	75	2	He	0.054	34.9	364	7.8	2.5	
Se	78	2	He	0.647	43.0	145	24.2	2	
B	11	1	nogas	6.836	7.3	37674	4.8	10	
Si	28	1	nogas	426.060	6.5	1419402	1.5	5	CCB Main CR1 Failed
Ca	43	1	nogas	47.562	14.2	3280	8.6	100	
Ca	44	1	nogas	50.924	1.4	73317	2.2	100	
Fe	56	1	nogas	-18.360	-12.5	4148509	0.6	100	
Se	77	1	nogas	-11.821	-45.9	31445	6.2	2.5	
Se	82	1	nogas	0.042	150.6	210	12.6	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.317	14.4	3310	11.7	2.5	
Sn	118	1	nogas	0.451	13.0	9539	8.2	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.072	19.4	1467	5.9	2.5	
Sb	121	2	He	0.206	6.3	2037	5.3	2.5	
P	31	1	nogas	0.786	225.6	95516	1.3	10	
La	139	1	nogas	48.874	43.3	953	4.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	80.868	1657.0	13	173.2	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	1016455	0.81	926026	109.77	70	125	
Ge	72	1	nogas	3814813	1.48	3798750	100.42	70	125	
In	115	1	nogas	4028782	1.35	4251403	94.76	70	125	
Bi	209	1	nogas	3164263	2.07	3609904	87.66	70	125	
Ge	72	2	He	905359	0.18	905821	99.95	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	230_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T20:35:29-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	0.094	23.5	703	20.8	1	
Na	23	1	nogas	93.119	4.6	3186680	1.4	100	
Mg	24	1	nogas	8.429	4.5	185862	2.1	100	
Al	27	1	nogas	3.379	2.9	112561	0.6	5	
K	39	1	nogas	57.093	20.3	8597029	1.2	100	
Ti	47	1	nogas	0.113	53.5	540	27.7	2.5	
V	51	1	nogas	-3.758	-6.1	931202	2.8	2.5	
Cr	52	1	nogas	-0.318	-16.3	72989	0.8	2.5	
Mn	55	1	nogas	0.414	6.3	39402	0.2	2.5	
Co	59	1	nogas	0.049	7.7	1927	3.8	2.5	
Ni	60	1	nogas	0.271	13.0	2377	11.4	2.5	
Cu	63	1	nogas	0.366	18.0	10837	7.5	2	
Zn	66	1	nogas	1.140	6.3	8115	2.5	2.5	
As	75	1	nogas	-1.322	-9.0	103767	2.6	2.5	
Sr	88	1	nogas	0.199	7.1	13045	3.1	2.5	
Ag	107	1	nogas	0.008	84.1	1030	12.7	2.5	
Cd	111	1	nogas	0.045	19.9	240	15.0	1	
Sb	121	1	nogas	0.180	13.7	4554	9.5	2.5	
Tl	205	1	nogas	0.334	51.9	13226	45.8	1	
Pb	208	1	nogas	0.050	8.9	3267	7.3	2.5	
U	238	1	nogas	0.078	25.7	4484	21.5	2.5	
[Pb]	206	1	nogas	0.048	3.8	807	3.8	2.5	
[Pb]	207	1	nogas	0.055	12.6	740	10.8	2.5	
Na	23	2	He	91.376	1.4	198497	1.3	100	
Mg	24	2	He	7.742	2.7	8972	1.7	100	
Al	27	2	He	3.427	4.5	2560	2.6	5	
K	39	2	He	44.160	5.6	191325	1.2	100	
Ca	43	2	He	44.311	26.3	180	19.2	100	
Ca	44	2	He	40.692	14.0	3030	8.9	100	
V	51	2	He	0.203	18.9	11142	2.6	2.5	
Cr	52	2	He	0.073	24.8	5174	2.5	2.5	
Mn	55	2	He	0.406	10.5	4054	6.6	2.5	
Fe	56	2	He	3.476	9.3	48654	5.2	100	
Co	59	2	He	0.041	24.1	553	20.8	2.5	
Ni	60	2	He	0.008	413.5	600	16.4	2.5	
Cu	63	2	He	0.388	3.9	3930	3.2	2	
Zn	66	2	He	0.756	26.3	2490	13.6	2.5	
As	75	2	He	0.068	53.6	379	14.1	2.5	
Se	78	2	He	0.471	43.4	121	21.3	2	
B	11	1	nogas	6.688	9.8	35884	6.7	10	
Si	28	1	nogas	313.338	12.4	1261723	1.8	5	CCB Main CR1 Failed
Ca	43	1	nogas	44.397	22.5	3080	14.4	100	
Ca	44	1	nogas	45.106	8.1	67665	1.9	100	
Fe	56	1	nogas	-20.249	-17.7	4025248	0.6	100	
Se	77	1	nogas	-4.945	-110.2	33014	3.2	2.5	
Se	82	1	nogas	-0.028	-616.5	180	33.8	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.168	19.5	1850	14.6	2.5	
Sn	118	1	nogas	0.432	14.3	9129	7.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.075	18.1	1477	6.8	2.5	
Sb	121	2	He	0.147	8.9	1520	6.9	2.5	
P	31	1	nogas	0.760	229.4	94099	0.9	10	
La	139	1	nogas	67.514	69.9	983	12.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	59.246	1420.3	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	984690	0.96	926026	106.34	70	125	
Ge	72	1	nogas	3760212	2.39	3798750	98.99	70	125	
In	115	1	nogas	3984560	2.72	4251403	93.72	70	125	
Bi	209	1	nogas	3298598	3.91	3609904	91.38	70	125	
Ge	72	2	He	892002	0.44	905821	98.47	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\012
Acq Date Time	2019-01-22T20:39:25-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	108CALB.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	96.680	1.509	612870	0.49	100	96.7	90	110	
Na	23	1	nogas	10536.172	1.303	265334006	0.85	10000	105.4	90	110	
Mg	24	1	nogas	10452.633	0.742	172419466	0.43	10000	104.5	90	110	
Al	27	1	nogas	105.276	5.146	2211577	3.79	100	105.3	90	110	
K	39	1	nogas	10154.513	1.389	264861864	0.45	10000	101.5	90	110	
Ti	47	1	nogas	99.220	1.759	241686	0.47	100	99.2	90	110	
V	51	1	nogas	96.763	2.819	4234482	0.84	100	96.8	90	110	
Cr	52	1	nogas	100.501	1.216	2852819	0.37	100	100.5	90	110	
Mn	55	1	nogas	98.907	2.553	3744788	1.38	100	98.9	90	110	
Co	59	1	nogas	100.686	0.467	2999029	1.81	100	100.7	90	110	
Ni	60	1	nogas	100.534	1.639	664553	0.32	100	100.5	90	110	
Cu	63	1	nogas	101.799	0.874	1585610	1.22	100	101.8	90	110	
Zn	66	1	nogas	100.812	1.561	503831	0.44	100	100.8	90	110	
As	75	1	nogas	104.095	1.889	700557	0.28	100	104.1	90	110	
Sr	88	1	nogas	96.495	1.615	4699365	0.33	100	96.5	90	110	
Ag	107	1	nogas	96.031	1.580	2129721	0.94	100	96.0	90	110	
Cd	111	1	nogas	99.515	1.279	458202	0.42	100	99.5	90	110	
Sb	121	1	nogas	95.994	3.337	2040727	3.62	100	96.0	90	110	
Tl	205	1	nogas	98.103	1.933	3562566	1.75	100	98.1	90	110	
Pb	208	1	nogas	91.043	1.438	4962243	1.44	100	91.0	90	110	
U	238	1	nogas	99.703	1.272	5264276	1.34	100	99.7	90	110	
[Pb]	206	1	nogas	95.381	0.273	1200714	0.58	100	95.4	90	110	
[Pb]	207	1	nogas	96.484	0.786	1066879	1.34	100	96.5	90	110	
Na	23	2	He	10172.120	0.738	15514381	0.51	10000	101.7	90	110	
Mg	24	2	He	10125.558	1.217	8693457	1.28	10000	101.3	90	110	
Al	27	2	He	103.641	3.003	51102	2.73	100	103.6	90	110	
K	39	2	He	10471.670	0.296	10189851	0.29	10000	104.7	90	110	
Ca	43	2	He	10184.087	1.418	29327	1.38	10000	101.8	90	110	
Ca	44	2	He	10049.199	0.689	486826	0.55	10000	100.5	90	110	
V	51	2	He	98.957	0.242	732789	0.39	100	99.0	90	110	
Cr	52	2	He	98.780	0.962	799351	0.85	100	98.8	90	110	
Mn	55	2	He	99.652	0.550	578697	0.40	100	99.7	90	110	
Fe	56	2	He	9772.548	0.397	71344797	0.42	10000	97.7	90	110	
Co	59	2	He	97.899	0.558	1111881	0.68	100	97.9	90	110	
Ni	60	2	He	99.939	0.724	284933	0.48	100	99.9	90	110	
Cu	63	2	He	98.264	1.384	719592	1.17	100	98.3	90	110	
Zn	66	2	He	101.972	0.854	165971	0.63	100	102.0	90	110	
As	75	2	He	104.062	0.544	147449	0.59	100	104.1	90	110	
Se	78	2	He	102.151	0.448	12458	0.60	100	102.2	90	110	
B	11	1	nogas	482.538	2.910	1821836	1.82	500	96.5	90	110	
Si	28	1	nogas	5400.143	2.134	7208079	0.59	5000	108.0	90	110	
Ca	43	1	nogas	10042.602	1.509	469503	0.25	10000	100.4	90	110	
Ca	44	1	nogas	9982.372	1.951	7595216	1.11	10000	99.8	90	110	
Fe	56	1	nogas	9835.771	2.139	320812516	0.84	10000	98.4	90	110	
Se	77	1	nogas	108.974	4.993	64886	1.09	100	109.0	90	110	
Se	82	1	nogas	98.431	3.731	35161	2.39	100	98.4	90	110	
Mo	95	1	nogas	93.437	1.784	857630	0.61	100	93.4	90	110	
Sn	118	1	nogas	97.786	2.794	1414760	3.47	100	97.8	90	110	
Ba	137	1	nogas	96.601	1.540	698115	0.83	100	96.6	90	110	
Sb	121	2	He	91.926	0.465	746810	0.34	100	91.9	90	110	
Li	7	1	nogas	98.108	2.094	1693322	0.93	100	98.1	90	110	
P	31	1	nogas	530.387	0.846	831420	0.77	500	106.1	90	110	
La	139	1	nogas	9.694	613.274	823	13.81	100	9.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	1115.712	53.178	30	33.33	100	1115.7	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	899738	1.07	926026	97.16	70	125	
Ge	72	1	nogas	3642846	1.34	3798750	95.90	70	125	
In	115	1	nogas	3814444	0.89	4251403	89.72	70	125	
Bi	209	1	nogas	3106369	0.56	3609904	86.05	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	868762	0.26	905821	95.91	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	236CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T20:47:19-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	140	15.31
Na	23	1	nogas	2104636	0.00
Mg	24	1	nogas	60206	0.01
Al	27	1	nogas	43330	0.00
K	39	1	nogas	8020591	0.00
Ti	47	1	nogas	257	5.33
V	51	1	nogas	927960	0.00
Cr	52	1	nogas	71427	0.00
Mn	55	1	nogas	25618	0.02
Co	59	1	nogas	553	1.80
Ni	60	1	nogas	1477	0.58
Cu	63	1	nogas	5834	0.06
Zn	66	1	nogas	6358	0.06
As	75	1	nogas	101206	0.00
Sr	88	1	nogas	3610	0.15
Ag	107	1	nogas	797	0.92
Cd	111	1	nogas	33	103.92
Sb	121	1	nogas	1117	0.76
Tl	205	1	nogas	987	1.24
Pb	208	1	nogas	773	1.11
[Pb]	206	1	nogas	163	5.73
[Pb]	207	1	nogas	227	18.08
Na	23	2	He	138989	0.00
Mg	24	2	He	3207	0.30
Al	27	2	He	1147	0.62
K	39	2	He	170071	0.00
Ca	43	2	He	103	19.50
Ca	44	2	He	1107	1.20
V	51	2	He	10647	0.02
Cr	52	2	He	4617	0.13
Mn	55	2	He	1697	0.73
Fe	56	2	He	23548	0.01
Co	59	2	He	113	19.59
Ni	60	2	He	320	2.93
Cu	63	2	He	2187	0.45
Zn	66	2	He	1970	0.38
As	75	2	He	256	2.13
Se	78	2	He	141	3.22
B	11	1	nogas	18566	0.01
Si	28	1	nogas	1357659	0.00
Ca	43	1	nogas	1283	0.98
Ca	44	1	nogas	37625	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	4285170	0.00
Se	77	1	nogas	32887	0.00
Se	82	1	nogas	200	6.61
Mo	95	1	nogas	450	2.96
Sn	118	1	nogas	3291	0.75
Ba	137	1	nogas	1057	1.19
Sb	121	2	He	437	4.70
Li	7	1	nogas	83663	0.00
P	31	1	nogas	92137	0.00
La	139	1	nogas	790	1.21

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	991886	0.71
Ge	72	1	nogas	3806005	0.91
In	115	1	nogas	4048858	1.45
Bi	209	1	nogas	3341531	0.87
Ge	72	2	He	904570	1.07

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	237CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T20:49:18-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	12434	0.02
Na	23	1	nogas	7602919	0.00
Mg	24	1	nogas	3759322	0.00
Al	27	1	nogas	85833	0.00
K	39	1	nogas	13533974	0.00
Ti	47	1	nogas	5314	0.04
V	51	1	nogas	1157484	0.00
Cr	52	1	nogas	137899	0.00
Mn	55	1	nogas	107254	0.00
Co	59	1	nogas	65934	0.00
Ni	60	1	nogas	15640	0.02
Cu	63	1	nogas	40762	0.00
Zn	66	1	nogas	16024	0.02
As	75	1	nogas	123610	0.00
Sr	88	1	nogas	101481	0.00
Ag	107	1	nogas	45261	0.00
Cd	111	1	nogas	9780	0.02
Sb	121	1	nogas	42027	0.00
Tl	205	1	nogas	74171	0.00
Pb	208	1	nogas	106415	0.00
[Pb]	206	1	nogas	26532	0.01
[Pb]	207	1	nogas	22596	0.01
Na	23	2	He	459086	0.00
Mg	24	2	He	187205	0.00
Al	27	2	He	1910	0.21
K	39	2	He	379671	0.00
Ca	43	2	He	667	3.83
Ca	44	2	He	11247	0.02
V	51	2	He	26560	0.00
Cr	52	2	He	21533	0.00
Mn	55	2	He	14806	0.03
Fe	56	2	He	1580344	0.00
Co	59	2	He	23505	0.01
Ni	60	2	He	6201	0.01
Cu	63	2	He	18610	0.01
Zn	66	2	He	4941	0.06
As	75	2	He	3404	0.07
Se	78	2	He	411	2.04
B	11	1	nogas	53802	0.00
Si	28	1	nogas	1413823	0.00

Calibration Standard Report

Ca	43	1	nogas	11277	0.03
Ca	44	1	nogas	196699	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	11198095	0.00
Se	77	1	nogas	36774	0.01
Se	82	1	nogas	890	1.31
Mo	95	1	nogas	18136	0.00
Sn	118	1	nogas	32236	0.00
Ba	137	1	nogas	15347	0.02
Sb	121	2	He	16041	0.01
P	31	1	nogas	109598	0.00
La	139	1	nogas	237	4.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	999236	0.45	991886	100.74	70	125	
Ge	72	1	nogas	3802148	4.51	3806005	99.90	70	125	
In	115	1	nogas	4025447	3.26	4048858	99.42	70	125	
Bi	209	1	nogas	3358676	2.68	3341531	100.51	70	125	
Ge	72	2	He	909036	0.88	904570	100.49	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	238CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T20:51:17-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	31853	0.00
Na	23	1	nogas	15887607	0.00
Mg	24	1	nogas	9334753	0.00
Al	27	1	nogas	149374	0.00
K	39	1	nogas	21790108	0.00
Ti	47	1	nogas	13268	0.02
V	51	1	nogas	1318837	0.00
Cr	52	1	nogas	226754	0.00
Mn	55	1	nogas	216879	0.00
Co	59	1	nogas	163836	0.00
Ni	60	1	nogas	37141	0.01
Cu	63	1	nogas	97001	0.00
Zn	66	1	nogas	30646	0.01
As	75	1	nogas	149773	0.00
Sr	88	1	nogas	248825	0.00
Ag	107	1	nogas	111888	0.00
Cd	111	1	nogas	24117	0.00
Sb	121	1	nogas	105455	0.00
Tl	205	1	nogas	189669	0.00
Pb	208	1	nogas	264380	0.00
[Pb]	206	1	nogas	66431	0.00
[Pb]	207	1	nogas	57284	0.00
Na	23	2	He	954754	0.00
Mg	24	2	He	468908	0.00
Al	27	2	He	3460	0.10
K	39	2	He	694463	0.00
Ca	43	2	He	1580	0.49
Ca	44	2	He	26793	0.01
V	51	2	He	49917	0.00
Cr	52	2	He	47624	0.00
Mn	55	2	He	31701	0.01
Fe	56	2	He	3977703	0.00
Co	59	2	He	60746	0.00
Ni	60	2	He	14946	0.02
Cu	63	2	He	43298	0.00
Zn	66	2	He	9509	0.03
As	75	2	He	7996	0.01
Se	78	2	He	737	0.63
B	11	1	nogas	111903	0.00
Si	28	1	nogas	1530932	0.00

Calibration Standard Report

Ca	43	1	nogas	25130	0.01
Ca	44	1	nogas	439598	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	21599077	0.00
Se	77	1	nogas	39888	0.01
Se	82	1	nogas	2047	0.29
Mo	95	1	nogas	45675	0.00
Sn	118	1	nogas	75515	0.00
Ba	137	1	nogas	37414	0.00
Sb	121	2	He	39695	0.01
P	31	1	nogas	134282	0.00
La	139	1	nogas	140	28.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	997078	0.85	991886	100.52	70	125	
Ge	72	1	nogas	3849594	2.24	3806005	101.15	70	125	
In	115	1	nogas	3985434	0.92	4048858	98.43	70	125	
Bi	209	1	nogas	3251084	5.27	3341531	97.29	70	125	
Ge	72	2	He	913862	1.35	904570	101.03	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	239CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T20:53:15-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	63113	0.00
Na	23	1	nogas	29386155	0.00
Mg	24	1	nogas	18516455	0.00
Al	27	1	nogas	259876	0.00
K	39	1	nogas	35388079	0.00
Ti	47	1	nogas	25998	0.01
V	51	1	nogas	1514939	0.00
Cr	52	1	nogas	376213	0.00
Mn	55	1	nogas	414465	0.00
Co	59	1	nogas	326088	0.00
Ni	60	1	nogas	73128	0.00
Cu	63	1	nogas	171955	0.00
Zn	66	1	nogas	55945	0.00
As	75	1	nogas	183398	0.00
Sr	88	1	nogas	492941	0.00
Ag	107	1	nogas	224738	0.00
Cd	111	1	nogas	47815	0.00
Sb	121	1	nogas	208576	0.00
Tl	205	1	nogas	375152	0.00
Pb	208	1	nogas	521043	0.00
[Pb]	206	1	nogas	130656	0.00
[Pb]	207	1	nogas	111721	0.00
Na	23	2	He	1664922	0.00
Mg	24	2	He	861283	0.00
Al	27	2	He	6581	0.30
K	39	2	He	1135775	0.00
Ca	43	2	He	2760	0.37
Ca	44	2	He	48383	0.02
V	51	2	He	81803	0.01
Cr	52	2	He	81965	0.01
Mn	55	2	He	57259	0.02
Fe	56	2	He	7206061	0.00
Co	59	2	He	111581	0.01
Ni	60	2	He	29237	0.04
Cu	63	2	He	72812	0.01
Zn	66	2	He	16608	0.06
As	75	2	He	14616	0.07
Se	78	2	He	1331	0.75
B	11	1	nogas	205358	0.00
Si	28	1	nogas	1952680	0.00

Calibration Standard Report

Ca	43	1	nogas	50000	0.00
Ca	44	1	nogas	834106	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	38233556	0.00
Se	77	1	nogas	42801	0.00
Se	82	1	nogas	3942	0.10
Mo	95	1	nogas	90220	0.00
Sn	118	1	nogas	147992	0.00
Ba	137	1	nogas	74741	0.00
Sb	121	2	He	71872	0.01
P	31	1	nogas	178264	0.00
La	139	1	nogas	187	26.04

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1005709	0.51	991886	101.39	70	125	
Ge	72	1	nogas	3840107	1.90	3806005	100.90	70	125	
In	115	1	nogas	4052810	3.14	4048858	100.10	70	125	
Bi	209	1	nogas	3356415	1.72	3341531	100.45	70	125	
Ge	72	2	He	1009012	11.00	904570	111.55	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	240CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T20:55:13-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	631268	0.00
Na	23	1	nogas	277846490	0.00
Mg	24	1	nogas	181680371	0.00
Al	27	1	nogas	2308992	0.00
K	39	1	nogas	279065790	0.00
Ti	47	1	nogas	257307	0.00
V	51	1	nogas	4507712	0.00
Cr	52	1	nogas	2996223	0.00
Mn	55	1	nogas	4023965	0.00
Co	59	1	nogas	3229605	0.00
Ni	60	1	nogas	703483	0.00
Cu	63	1	nogas	1697885	0.00
Zn	66	1	nogas	535765	0.00
As	75	1	nogas	725119	0.00
Sr	88	1	nogas	4985847	0.00
Ag	107	1	nogas	2263068	0.00
Cd	111	1	nogas	487341	0.00
Sb	121	1	nogas	2115004	0.00
Tl	205	1	nogas	3828107	0.00
Pb	208	1	nogas	5278149	0.00
[Pb]	206	1	nogas	1287106	0.00
[Pb]	207	1	nogas	1134336	0.00
Na	23	2	He	16174904	0.00
Mg	24	2	He	9062642	0.00
Al	27	2	He	52907	0.00
K	39	2	He	10683284	0.00
Ca	43	2	He	29834	0.00
Ca	44	2	He	508404	0.00
V	51	2	He	770868	0.00
Cr	52	2	He	840425	0.00
Mn	55	2	He	610699	0.00
Fe	56	2	He	76050867	0.00
Co	59	2	He	1180944	0.00
Ni	60	2	He	299123	0.00
Cu	63	2	He	754923	0.00
Zn	66	2	He	173006	0.00
As	75	2	He	154093	0.00
Se	78	2	He	12885	0.01
B	11	1	nogas	1911878	0.00
Si	28	1	nogas	7473286	0.00

Calibration Standard Report

Ca	43	1	nogas	495634	0.00
Ca	44	1	nogas	8010471	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	343481024	0.00
Se	77	1	nogas	64979	0.00
Se	82	1	nogas	37459	0.00
Mo	95	1	nogas	915154	0.00
Sn	118	1	nogas	1515881	0.00
Ba	137	1	nogas	736064	0.00
Sb	121	2	He	784285	0.00
P	31	1	nogas	871079	0.00
La	139	1	nogas	940	1.38

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	934154	0.57	991886	94.18	70	125	
Ge	72	1	nogas	3850366	0.85	3806005	101.17	70	125	
In	115	1	nogas	4016249	1.52	4048858	99.19	70	125	
Bi	209	1	nogas	3254901	1.36	3341531	97.41	70	125	
Ge	72	2	He	897366	0.99	904570	99.20	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	241CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T20:57:11-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1296538	0.00
Na	23	1	nogas	550773846	0.00
Mg	24	1	nogas	357744033	0.00
Al	27	1	nogas	4409077	0.00
K	39	1	nogas	548486029	0.00
Ti	47	1	nogas	514461	0.00
V	51	1	nogas	7904181	0.00
Cr	52	1	nogas	5879339	0.00
Mn	55	1	nogas	7859938	0.00
Co	59	1	nogas	6279754	0.00
Ni	60	1	nogas	1426862	0.00
Cu	63	1	nogas	3260575	0.00
Zn	66	1	nogas	1054715	0.00
As	75	1	nogas	1333279	0.00
Sr	88	1	nogas	9873343	0.00
Ag	107	1	nogas	4355634	0.00
Cd	111	1	nogas	951727	0.00
Sb	121	1	nogas	4277767	0.00
Tl	205	1	nogas	7590653	0.00
Pb	208	1	nogas	10574666	0.00
[Pb]	206	1	nogas	2659975	0.00
[Pb]	207	1	nogas	2309010	0.00
Na	23	2	He	31648925	0.00
Mg	24	2	He	17960444	0.00
Al	27	2	He	102257	0.00
K	39	2	He	20690826	0.00
Ca	43	2	He	59899	0.00
Ca	44	2	He	1006636	0.00
V	51	2	He	1586542	0.00
Cr	52	2	He	1667782	0.00
Mn	55	2	He	1188745	0.00
Fe	56	2	He	150055454	0.00
Co	59	2	He	2384137	0.00
Ni	60	2	He	588252	0.00
Cu	63	2	He	1498322	0.00
Zn	66	2	He	340542	0.00
As	75	2	He	307654	0.00
Se	78	2	He	25591	0.00
B	11	1	nogas	3762229	0.00
Si	28	1	nogas	13663471	0.00

Calibration Standard Report

Ca	43	1	nogas	977343	0.00
Ca	44	1	nogas	16086424	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	677039298	0.00
Se	77	1	nogas	93365	0.00
Se	82	1	nogas	74456	0.00
Mo	95	1	nogas	1883748	0.00
Sn	118	1	nogas	3023155	0.00
Ba	137	1	nogas	1521528	0.00
Sb	121	2	He	1637844	0.00
P	31	1	nogas	1695791	0.00
La	139	1	nogas	1557	0.79

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	869479	4.14	991886	87.66	70	125	
Ge	72	1	nogas	3759964	0.71	3806005	98.79	70	125	
In	115	1	nogas	3930501	0.82	4048858	97.08	70	125	
Bi	209	1	nogas	3206042	1.66	3341531	95.95	70	125	
Ge	72	2	He	885435	0.23	904570	97.88	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	243_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T21:01:07-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.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	108.703	1.747	670850	0.49	100	108.7	90	110	
Na	23	1	nogas	10450.795	0.434	296661573	0.71	10000	104.5	90	110	
Mg	24	1	nogas	10455.362	1.267	192563079	1.27	10000	104.6	90	110	
Al	27	1	nogas	104.739	2.273	2416402	2.53	100	104.7	90	110	
K	39	1	nogas	10354.583	0.661	296542040	0.73	10000	103.5	90	110	
Ti	47	1	nogas	99.124	2.028	262685	1.82	100	99.1	90	110	
V	51	1	nogas	98.332	2.111	4508173	1.40	100	98.3	90	110	
Cr	52	1	nogas	102.656	0.612	3147675	0.28	100	102.7	90	110	
Mn	55	1	nogas	103.761	1.213	4228356	0.91	100	103.8	90	110	
Co	59	1	nogas	103.271	0.359	3358299	0.52	100	103.3	90	110	
Ni	60	1	nogas	100.666	0.596	737109	0.93	100	100.7	90	110	
Cu	63	1	nogas	105.979	0.560	1796143	0.53	100	106.0	90	110	
Zn	66	1	nogas	103.560	1.137	565667	1.44	100	103.6	90	110	
As	75	1	nogas	99.271	0.569	739390	0.67	100	99.3	90	110	
Sr	88	1	nogas	99.199	1.727	5054424	1.89	100	99.2	90	110	
Ag	107	1	nogas	104.293	1.366	2357385	1.34	100	104.3	90	110	
Cd	111	1	nogas	103.248	0.368	512300	1.45	100	103.2	90	110	
Sb	121	1	nogas	101.410	2.111	2229000	1.96	100	101.4	90	110	
Tl	205	1	nogas	107.411	1.097	4157134	0.53	100	107.4	90	110	
Pb	208	1	nogas	105.104	0.738	5555389	0.74	100	105.1	90	110	
U	238	1	nogas	102.972	2.179	5671155	1.06	100	103.0	90	110	
[Pb]	206	1	nogas	106.449	0.643	1432306	1.29	100	106.4	90	110	
[Pb]	207	1	nogas	98.153	1.666	1149642	0.57	100	98.2	90	110	
Na	23	2	He	10449.610	0.508	17044419	0.27	10000	104.5	90	110	
Mg	24	2	He	10499.708	0.903	9665627	0.52	10000	105.0	90	110	
Al	27	2	He	104.890	1.200	55628	1.50	100	104.9	90	110	
K	39	2	He	10672.267	0.091	11172903	0.09	10000	106.7	90	110	
Ca	43	2	He	10342.052	0.851	31700	0.44	10000	103.4	90	110	
Ca	44	2	He	10350.749	1.053	534492	1.07	10000	103.5	90	110	
V	51	2	He	99.765	1.046	806345	0.89	100	99.8	90	110	
Cr	52	2	He	101.860	0.408	872169	0.62	100	101.9	90	110	
Mn	55	2	He	104.329	0.075	638497	0.50	100	104.3	90	110	
Fe	56	2	He	10368.049	1.005	79813402	1.08	10000	103.7	90	110	
Co	59	2	He	101.046	0.632	1230158	0.97	100	101.0	90	110	
Ni	60	2	He	103.734	0.672	312978	0.51	100	103.7	90	110	
Cu	63	2	He	103.067	0.765	791087	0.75	100	103.1	90	110	
Zn	66	2	He	103.842	1.756	181661	1.59	100	103.8	90	110	
As	75	2	He	103.340	0.436	162786	0.23	100	103.3	90	110	
Se	78	2	He	103.225	1.449	13555	1.02	100	103.2	90	110	
B	11	1	nogas	489.308	0.565	1923266	0.83	500	97.9	90	110	
Si	28	1	nogas	5144.921	0.781	7900864	0.87	5000	102.9	90	110	
Ca	43	1	nogas	10282.066	0.499	519357	0.78	10000	102.8	90	110	
Ca	44	1	nogas	10258.522	1.156	8505221	0.88	10000	102.6	90	110	
Fe	56	1	nogas	10309.873	1.033	362113658	1.07	10000	103.1	90	110	
Se	77	1	nogas	76.408	4.691	57912	1.83	100	76.4	90	110	ICV Main CR1 Failed
Se	82	1	nogas	101.337	1.651	38979	1.81	100	101.3	90	110	
Mo	95	1	nogas	98.413	0.909	949349	1.21	100	98.4	90	110	
Sn	118	1	nogas	96.203	1.051	1511496	2.60	100	96.2	90	110	
Ba	137	1	nogas	99.305	2.494	779354	1.80	100	99.3	90	110	
Sb	121	2	He	98.082	1.180	814930	1.05	100	98.1	90	110	
Li	7	1	nogas	106.502	0.770	1803629	1.68	100	106.5	90	110	
P	31	1	nogas	487.882	0.788	895730	0.80	500	97.6	90	110	
La	139	1	nogas	82.581	4.058	1080	0.93	100	82.6	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-45.398	-923.733	20	132.29	100	-45.4	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	914209	1.27	991886	92.17	70	125	
Ge	72	1	nogas	3890207	0.33	3806005	102.21	70	125	
In	115	1	nogas	4096722	1.56	4048858	101.18	70	125	
Bi	209	1	nogas	3274211	1.36	3341531	97.99	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	908613	0.42	904570	100.45	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	244LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T21:03:14-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.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	4.902	2.053	33807	2.33	5	98.0	70	130	
Na	23	1	nogas	485.932	1.573	15859158	1.98	500	97.2	70	130	
Mg	24	1	nogas	507.033	0.538	9406518	0.42	500	101.4	70	130	
Al	27	1	nogas	4.788	1.782	151555	0.36	5	95.8	70	130	
K	39	1	nogas	500.181	1.751	21957691	0.29	500	100.0	70	130	
Ti	47	1	nogas	5.109	6.005	13682	5.39	5	102.2	70	130	
V	51	1	nogas	5.403	3.986	1135248	0.31	5	108.1	70	130	
Cr	52	1	nogas	4.905	0.762	218234	0.48	5	98.1	70	130	
Mn	55	1	nogas	4.782	1.337	218167	0.29	5	95.6	70	130	
Co	59	1	nogas	5.103	1.064	165202	0.30	5	102.1	70	130	
Ni	60	1	nogas	5.475	4.174	38263	3.74	5	109.5	70	130	
Cu	63	1	nogas	5.472	1.514	97637	0.49	5	109.4	70	130	
Zn	66	1	nogas	4.862	1.970	30118	0.83	5	97.2	70	130	
As	75	1	nogas	1.545	29.032	122266	1.56	5	30.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.903	1.261	251388	0.60	5	98.1	70	130	
Ag	107	1	nogas	5.078	1.060	114675	1.96	5	101.6	70	130	
Cd	111	1	nogas	4.809	4.424	24284	3.82	5	96.2	70	130	
Sb	121	1	nogas	4.842	1.337	106696	1.11	5	96.8	70	130	
Tl	205	1	nogas	5.025	3.966	203767	1.98	5	100.5	70	130	
Pb	208	1	nogas	5.096	2.259	270075	2.25	5	101.9	70	130	
U	238	1	nogas	4.839	1.928	278264	0.22	5	96.8	70	130	
[Pb]	206	1	nogas	4.742	2.270	66709	0.22	5	94.8	70	130	
[Pb]	207	1	nogas	4.846	2.249	59462	3.89	5	96.9	70	130	
Na	23	2	He	491.786	1.227	947279	0.40	500	98.4	70	130	
Mg	24	2	He	502.855	0.160	472022	0.81	500	100.6	70	130	
Al	27	2	He	4.528	2.780	3394	1.33	5	90.6	70	130	
K	39	2	He	510.976	0.486	696875	0.37	500	102.2	70	130	
Ca	43	2	He	494.842	19.156	1637	17.94	500	99.0	70	130	
Ca	44	2	He	495.458	2.803	26986	2.21	500	99.1	70	130	
V	51	2	He	5.744	0.458	49413	0.97	5	114.9	70	130	
Cr	52	2	He	4.958	1.959	47467	1.32	5	99.2	70	130	
Mn	55	2	He	4.889	3.222	31951	2.43	5	97.8	70	130	
Fe	56	2	He	502.989	0.406	3944926	0.53	500	100.6	70	130	
Co	59	2	He	4.961	2.089	61295	2.60	5	99.2	70	130	
Ni	60	2	He	5.395	1.774	15780	1.83	5	107.9	70	130	
Cu	63	2	He	5.769	1.377	44300	0.97	5	115.4	70	130	
Zn	66	2	He	5.336	4.242	9919	3.80	5	106.7	70	130	
As	75	2	He	4.850	0.598	7986	1.23	5	97.0	70	130	
Se	78	2	He	5.701	9.057	812	8.03	5	114.0	70	130	
B	11	1	nogas	27.144	3.449	136704	2.68	25	108.6	70	130	
Si	28	1	nogas	201.464	9.035	1630302	2.10	25	805.9	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	484.095	0.924	25504	0.06	500	96.8	70	130	
Ca	44	1	nogas	493.415	1.076	442288	0.05	500	98.7	70	130	
Fe	56	1	nogas	489.924	1.048	21215987	0.46	500	98.0	70	130	
Se	77	1	nogas	-6.225	-41.973	31391	1.72	5	-124.5	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.803	1.693	2027	2.33	5	96.1	70	130	
Mo	95	1	nogas	4.993	1.289	48232	0.46	5	99.9	70	130	
Sn	118	1	nogas	4.758	3.020	79191	2.28	5	95.2	70	130	
Ba	137	1	nogas	4.580	1.062	37584	1.61	5	91.6	70	130	
Sb	121	2	He	4.724	1.776	40180	1.12	5	94.5	70	130	
Li	7	1	nogas	4.886	1.312	173941	0.36	5	97.7	70	130	
P	31	1	nogas	25.809	5.524	135527	0.81	25	103.2	70	130	
La	139	1	nogas	-198.150	-1.557	130	7.69	5	-3963.0	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	-162.658	-106.941	13	86.60	5	-3253.2	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	1017279	0.30	991886	102.56	70	125	
Ge	72	1	nogas	3860625	0.93	3806005	101.44	70	125	
In	115	1	nogas	4164317	0.63	4048858	102.85	70	125	
Bi	209	1	nogas	3416073	2.15	3341531	102.23	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	920379	0.65	904570	101.75	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	245SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T21:05:14-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	236CALB.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	1.916	1.916	4.86	13208	0.01	2000	
Na	23	1	nogas	188.275	188.275	1.94	7573370	0.00	200000	
Mg	24	1	nogas	205.450	205.450	0.57	3906133	0.01	200000	
Al	27	1	nogas	1.933	1.933	0.73	88920	0.00	2000	
K	39	1	nogas	190.100	190.100	3.84	13623346	0.00	200000	
Ti	47	1	nogas	1.959	1.959	8.03	5501	0.04	2000	
V	51	1	nogas	1.037	1.037	12.13	995576	0.00	2000	
Cr	52	1	nogas	1.878	1.878	3.47	130511	0.00	2000	
Mn	55	1	nogas	2.036	2.036	2.23	109699	0.00	2000	
Co	59	1	nogas	2.041	2.041	2.40	67563	0.00	2000	
Ni	60	1	nogas	2.396	2.396	2.79	16127	0.01	2000	
Cu	63	1	nogas	2.126	2.126	2.43	42272	0.01	2000	
Zn	66	1	nogas	2.383	2.383	4.78	17068	0.01	2000	
As	75	1	nogas	-1.465	-1.465	-20.45	105271	0.00	2000	
Sr	88	1	nogas	1.969	1.969	1.25	104937	0.00	2000	
Ag	107	1	nogas	2.003	2.003	4.94	46508	0.00	2000	
Cd	111	1	nogas	1.932	1.932	1.50	9800	0.02	2000	
Sb	121	1	nogas	1.906	1.906	0.14	43431	0.00	2000	
Tl	205	1	nogas	1.981	1.981	3.64	81459	0.00	2000	
Pb	208	1	nogas	2.055	2.055	1.06	109378	0.00	2000	
U	238	1	nogas	1.921	1.921	1.89	111299	0.00	2000	
[Pb]	206	1	nogas	1.919	1.919	0.22	27263	0.01	2000	
[Pb]	207	1	nogas	1.941	1.941	0.91	24091	0.01	2000	
Na	23	2	He	190.424	190.424	1.22	454420	0.04	200000	
Mg	24	2	He	201.474	201.474	1.15	191474	0.11	200000	
Al	27	2	He	2.010	2.010	3.63	2070	0.10	2000	
K	39	2	He	202.361	202.361	0.57	378700	0.05	200000	
Ca	43	2	He	206.808	206.808	9.74	747	27.70	200000	
Ca	44	2	He	201.177	201.177	4.71	11650	1.73	200000	
V	51	2	He	2.875	2.875	1.31	26052	0.01	2000	
Cr	52	2	He	2.057	2.057	0.65	22494	0.01	2000	
Mn	55	2	He	2.132	2.132	2.55	14943	0.01	2000	
Fe	56	2	He	208.979	208.979	1.05	1656479	0.01	200000	
Co	59	2	He	1.994	1.994	1.78	24750	0.01	2000	
Ni	60	2	He	2.435	2.435	5.87	6728	0.04	2000	
Cu	63	2	He	2.498	2.498	1.97	18887	0.01	2000	
Zn	66	2	He	2.695	2.695	1.44	5264	0.05	2000	
As	75	2	He	1.883	1.883	1.70	3266	0.06	2000	
Se	78	2	He	2.714	2.714	6.50	417	0.65	2000	
B	11	1	nogas	11.775	11.775	1.64	69602	0.02	2000	
Si	28	1	nogas	41.927	41.927	35.81	1454745	0.00	2000	
Ca	43	1	nogas	191.431	191.431	2.83	11063	1.73	200000	
Ca	44	1	nogas	195.421	195.421	1.09	201695	0.10	200000	
Fe	56	1	nogas	185.759	185.759	3.19	10930253	0.00	200000	
Se	77	1	nogas	-11.318	-11.318	-5.80	30309	-0.04	2000	
Se	82	1	nogas	1.847	1.847	14.74	920	0.20	2000	

Sample Report

Mo	95	1	nogas	1.868	1.868	2.12	18650	0.01	2000	
Sn	118	1	nogas	1.924	1.924	3.56	34117	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	1.886	1.886	3.19	16151	0.01	2000	
Sb	121	2	He	1.911	1.911	1.76	16551	0.01	2000	
La	139	1	nogas	-168.347	-168.347	-10.29	233	-72.15	2000	
Au	197	1	nogas	-313.230	-313.230	-27.78	3	-9396.90	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	1010194	0.65	991886	101.85	70	125	
Ge	72	1	nogas	3928212	0.80	3806005	103.21	70	125	
In	115	1	nogas	4173224	0.47	4048858	103.07	70	125	
Bi	209	1	nogas	3436252	0.51	3341531	102.83	70	125	
Ge	72	2	He	922274	0.43	904570	101.96	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	246_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T21:07:12-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.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	0.053	7.3	507	6.3	1	
Na	23	1	nogas	-7.918	-18.9	1903810	2.0	100	
Mg	24	1	nogas	1.426	15.5	86708	3.3	100	
Al	27	1	nogas	-0.051	-76.9	42732	2.0	5	
K	39	1	nogas	-4.294	-210.8	8000018	0.9	100	
Ti	47	1	nogas	0.022	49.1	317	6.6	2.5	
V	51	1	nogas	-1.021	-80.9	902452	1.1	2.5	
Cr	52	1	nogas	-0.109	-45.1	69078	0.5	2.5	
Mn	55	1	nogas	-0.054	-36.5	23765	0.9	2.5	
Co	59	1	nogas	0.018	23.0	1133	9.2	2.5	
Ni	60	1	nogas	0.389	2.7	1233	6.1	2.5	
Cu	63	1	nogas	-0.005	-676.9	5808	8.2	1	
Zn	66	1	nogas	-0.015	-339.7	3867	8.1	2.5	
As	75	1	nogas	-3.504	-0.4	90529	2.3	2.5	
Sr	88	1	nogas	0.014	24.6	4367	2.1	2.5	
Ag	107	1	nogas	-0.001	-278.1	787	5.3	2.5	
Cd	111	1	nogas	0.017	27.8	117	21.6	1	
Sb	121	1	nogas	0.016	17.1	1470	3.1	2.5	
Tl	205	1	nogas	0.050	21.6	2997	13.4	1	
Pb	208	1	nogas	0.019	2.6	1790	1.5	2.5	
U	238	1	nogas	0.020	9.4	1427	8.4	2.5	
[Pb]	206	1	nogas	0.020	21.0	447	12.3	2.5	
[Pb]	207	1	nogas	0.010	24.8	350	8.6	2.5	
Na	23	2	He	-9.653	-20.5	123869	1.3	100	
Mg	24	2	He	1.627	9.8	4714	4.3	100	
Al	27	2	He	-0.316	-19.0	827	3.0	5	
K	39	2	He	-1.174	-360.0	168860	2.6	100	
Ca	43	2	He	-8.940	-90.7	77	32.8	100	
Ca	44	2	He	0.482	527.6	1137	11.9	100	
V	51	2	He	0.968	1.8	10292	2.6	2.5	
Cr	52	2	He	-0.019	-110.9	4474	5.0	2.5	
Mn	55	2	He	-0.024	-8.0	1557	2.0	2.5	
Fe	56	2	He	2.050	2.5	39406	1.5	100	
Co	59	2	He	0.021	36.7	363	25.6	2.5	
Ni	60	2	He	0.354	16.1	333	51.6	2.5	
Cu	63	2	He	0.370	5.9	2267	8.6	1	
Zn	66	2	He	0.384	12.8	1153	8.7	2.5	
As	75	2	He	0.022	83.4	291	11.1	2.5	
Se	78	2	He	0.549	8.2	128	4.1	1	
B	11	1	nogas	1.392	31.2	24900	6.3	10	

Initial Calibration Blank (ICB) Report

Si	28	1	nogas	-63.577	-25.5	1294935	2.7	5	
Ca	43	1	nogas	-2.525	-133.0	1170	11.9	100	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ca	44	1	nogas	1.519	118.9	39322	1.9	100	
Fe	56	1	nogas	-12.164	-26.5	3919278	0.5	100	
Se	77	1	nogas	-12.715	-8.8	29301	3.4	2.5	
Se	82	1	nogas	-0.006	-928.1	200	10.0	1	
Mo	95	1	nogas	0.015	78.9	600	20.8	2.5	
Sn	118	1	nogas	0.145	10.0	5548	3.0	5	
Ba	137	1	nogas	-0.005	-286.6	1023	13.1	2.5	
Sb	121	2	He	0.006	159.9	490	17.8	2.5	
P	31	1	nogas	-3.309	-28.3	87890	0.7	10	
La	139	1	nogas	-161.142	-12.7	250	26.2	2.5	
Au	197	1	nogas	-6.003	-2963.3	23	49.5	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	1010630	1.18	991886	101.89	70	125	
Ge	72	1	nogas	3853865	2.35	3806005	101.26	70	125	
In	115	1	nogas	4054897	3.22	4048858	100.15	70	125	
Bi	209	1	nogas	3397249	1.06	3341531	101.67	70	125	
Ge	72	2	He	907842	1.27	904570	100.36	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\012
Acq Date Time	2019-01-22T21:26:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.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	99.861	0.522	600249	0.63	100	99.9	90	110	
Na	23	1	nogas	9856.094	0.742	267173514	1.16	10000	98.6	90	110	
Mg	24	1	nogas	9958.546	2.111	175056779	1.37	10000	99.6	90	110	
Al	27	1	nogas	100.627	0.900	2235036	1.15	100	100.6	90	110	
K	39	1	nogas	9759.082	0.389	269332239	0.13	10000	97.6	90	110	
Ti	47	1	nogas	98.137	0.318	250208	0.33	100	98.1	90	110	
V	51	1	nogas	107.974	1.636	4672931	1.00	100	108.0	90	110	
Cr	52	1	nogas	101.420	1.320	2992568	1.02	100	101.4	90	110	
Mn	55	1	nogas	101.628	1.760	3984714	1.46	100	101.6	90	110	
Co	59	1	nogas	99.405	1.844	3109827	1.62	100	99.4	90	110	
Ni	60	1	nogas	97.713	0.689	688268	0.53	100	97.7	90	110	
Cu	63	1	nogas	100.887	0.406	1645251	0.61	100	100.9	90	110	
Zn	66	1	nogas	99.821	0.521	524674	0.41	100	99.8	90	110	
As	75	1	nogas	104.896	1.687	745428	1.20	100	104.9	90	110	
Sr	88	1	nogas	100.066	0.829	4904932	0.55	100	100.1	90	110	
Ag	107	1	nogas	102.106	1.833	2220316	1.56	100	102.1	90	110	
Cd	111	1	nogas	99.735	1.425	480502	1.19	100	99.7	90	110	
Sb	121	1	nogas	103.048	2.308	2179058	2.30	100	103.0	90	110	
Tl	205	1	nogas	98.388	2.403	3858154	1.69	100	98.4	90	110	
Pb	208	1	nogas	101.643	1.161	5372477	1.16	100	101.6	90	110	
U	238	1	nogas	104.242	1.233	5818243	1.94	100	104.2	90	110	
[Pb]	206	1	nogas	95.436	1.073	1301086	1.12	100	95.4	90	110	
[Pb]	207	1	nogas	96.891	1.362	1149946	0.79	100	96.9	90	110	
Na	23	2	He	9983.285	0.803	15646539	0.69	10000	99.8	90	110	
Mg	24	2	He	9927.205	1.119	8777656	0.55	10000	99.3	90	110	
Al	27	2	He	99.431	0.849	50701	1.47	100	99.4	90	110	
K	39	2	He	9672.675	0.296	10142349	0.29	10000	96.7	90	110	
Ca	43	2	He	9634.332	3.023	28368	2.33	10000	96.3	90	110	
Ca	44	2	He	9824.059	0.700	487302	0.07	10000	98.2	90	110	
V	51	2	He	96.237	0.654	747194	0.47	100	96.2	90	110	
Cr	52	2	He	98.345	0.348	808967	0.89	100	98.3	90	110	
Mn	55	2	He	101.055	0.251	594084	0.43	100	101.1	90	110	
Fe	56	2	He	9982.860	0.809	73812437	0.65	10000	99.8	90	110	
Co	59	2	He	98.253	0.524	1148909	0.80	100	98.3	90	110	
Ni	60	2	He	100.600	0.952	291506	0.37	100	100.6	90	110	
Cu	63	2	He	100.009	0.942	737262	0.30	100	100.0	90	110	
Zn	66	2	He	100.415	0.748	168743	0.56	100	100.4	90	110	
As	75	2	He	99.284	0.147	150232	0.73	100	99.3	90	110	
Se	78	2	He	100.020	1.468	12618	2.12	100	100.0	90	110	
B	11	1	nogas	480.753	1.263	1840705	2.06	500	96.2	90	110	
Si	28	1	nogas	4925.568	0.626	7333834	0.69	5000	98.5	90	110	
Ca	43	1	nogas	9892.775	0.813	480778	1.04	10000	98.9	90	110	
Ca	44	1	nogas	9788.338	1.211	7809464	1.51	10000	97.9	90	110	
Fe	56	1	nogas	10007.458	1.083	338268283	0.75	10000	100.1	90	110	
Se	77	1	nogas	138.209	2.144	74623	1.41	100	138.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.599	2.171	36490	2.06	100	98.6	90	110	
Mo	95	1	nogas	97.356	0.596	903494	0.37	100	97.4	90	110	
Sn	118	1	nogas	99.683	1.876	1520453	2.01	100	99.7	90	110	
Ba	137	1	nogas	96.413	1.506	734834	1.23	100	96.4	90	110	
Sb	121	2	He	96.757	0.225	772191	0.83	100	96.8	90	110	
Li	7	1	nogas	101.821	2.673	1682378	2.18	100	101.8	90	110	
P	31	1	nogas	473.610	0.664	839177	0.67	500	94.7	90	110	
La	139	1	nogas	5.055	545.734	793	11.30	100	5.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	2.697	13471.848	23	98.97	100	2.7	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	890299	0.89	991886	89.76	70	125	
Ge	72	1	nogas	3742569	0.32	3806005	98.33	70	125	
In	115	1	nogas	3977814	0.42	4048858	98.25	70	125	
Bi	209	1	nogas	3317412	0.72	3341531	99.28	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	872729	0.68	904570	96.48	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\012
Acq Date Time	2019-01-22T21:28:54-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.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	0.077	31.7	657	24.7	1	
Na	23	1	nogas	-20.972	-10.2	1541994	3.7	100	
Mg	24	1	nogas	3.836	15.8	130769	7.7	100	
Al	27	1	nogas	-0.506	-12.2	32602	3.5	5	
K	39	1	nogas	-15.769	-14.5	7708885	0.1	100	
Ti	47	1	nogas	0.024	153.9	323	29.4	2.5	
V	51	1	nogas	-7.152	-1.4	684980	1.2	2.5	
Cr	52	1	nogas	-0.495	-7.3	57810	1.9	2.5	
Mn	55	1	nogas	0.021	88.2	26866	2.1	2.5	
Co	59	1	nogas	0.031	18.9	1573	11.6	2.5	
Ni	60	1	nogas	0.370	3.2	1093	8.2	2.5	
Cu	63	1	nogas	0.072	90.5	7135	15.3	2	
Zn	66	1	nogas	-0.334	-8.0	2157	6.2	2.5	
As	75	1	nogas	-6.368	-5.0	72838	2.0	2.5	
Sr	88	1	nogas	0.025	34.1	4911	7.9	2.5	
Ag	107	1	nogas	0.004	234.3	893	22.2	2.5	
Cd	111	1	nogas	0.035	48.5	207	40.3	1	
Sb	121	1	nogas	0.169	13.0	4811	9.4	2.5	
Tl	205	1	nogas	0.306	46.2	13697	44.9	1	
Pb	208	1	nogas	0.036	20.2	2660	14.3	2.5	
U	238	1	nogas	0.068	23.7	4257	24.4	2.5	
[Pb]	206	1	nogas	0.034	5.2	657	5.3	2.5	
[Pb]	207	1	nogas	0.027	23.1	573	15.0	2.5	
Na	23	2	He	-24.370	-6.6	99793	1.2	100	
Mg	24	2	He	2.982	18.4	5941	8.5	100	
Al	27	2	He	-0.533	-58.2	713	24.1	5	
K	39	2	He	-10.864	-13.9	158871	1.0	100	
Ca	43	2	He	-20.815	-42.7	40	66.1	100	
Ca	44	2	He	2.044	58.1	1213	5.5	100	
V	51	2	He	0.706	3.6	8153	3.1	2.5	
Cr	52	2	He	-0.090	-32.6	3857	7.4	2.5	
Mn	55	2	He	0.184	18.5	2820	7.4	2.5	
Fe	56	2	He	1.815	8.7	37478	1.8	100	
Co	59	2	He	0.018	27.6	337	19.8	2.5	
Ni	60	2	He	0.345	5.7	307	20.7	2.5	
Cu	63	2	He	0.385	1.3	2367	1.9	2	
Zn	66	2	He	0.078	83.0	617	17.3	2.5	
As	75	2	He	-0.017	-151.3	229	16.9	2.5	
Se	78	2	He	0.599	50.7	134	29.1	2	
B	11	1	nogas	3.660	9.6	34040	3.9	10	

Continuing Calibration Blank (CCB) Report

Si	28	1	nogas	-246.133	-29.9	1068781	8.2	5	
Ca	43	1	nogas	-5.770	-9.8	1013	2.1	100	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ca	44	1	nogas	-3.688	-34.6	35183	2.7	100	
Fe	56	1	nogas	-6.456	-38.3	4128519	1.3	100	
Se	77	1	nogas	-30.491	-9.9	23762	3.8	2.5	
Se	82	1	nogas	0.186	130.8	273	33.2	2	
Mo	95	1	nogas	0.149	30.1	1887	22.7	2.5	
Sn	118	1	nogas	0.100	36.6	4931	11.4	5	
Ba	137	1	nogas	-0.048	-25.7	700	13.6	2.5	
Sb	121	2	He	0.117	8.6	1403	6.6	2.5	
P	31	1	nogas	-12.001	-5.3	73978	1.8	10	
La	139	1	nogas	-162.575	-1.8	250	4.0	2.5	
Au	197	1	nogas	-214.443	-70.3	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	992078	0.46	991886	100.02	70	125	
Ge	72	1	nogas	3864850	0.79	3806005	101.55	70	125	
In	115	1	nogas	4120102	0.36	4048858	101.76	70	125	
Bi	209	1	nogas	3486704	2.00	3341531	104.34	70	125	
Ge	72	2	He	905216	1.47	904570	100.07	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	266_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T21:46:58-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.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	0.086	24.5	607	18.5	1	
Na	23	1	nogas	10.131	28.7	1947773	0.8	100	
Mg	24	1	nogas	6.079	16.8	138589	8.2	100	
Al	27	1	nogas	-0.568	-8.8	26242	2.4	5	
K	39	1	nogas	25.259	26.9	7432974	0.4	100	
Ti	47	1	nogas	0.020	176.9	263	29.5	2.5	
V	51	1	nogas	2.743	17.2	874843	1.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.196	-11.1	56081	2.1	2.5	
Mn	55	1	nogas	-0.023	-172.9	21086	4.4	2.5	
Co	59	1	nogas	0.022	18.4	1070	9.3	2.5	
Ni	60	1	nogas	0.383	5.4	1000	10.8	2.5	
Cu	63	1	nogas	0.109	31.9	6508	6.2	2	
Zn	66	1	nogas	-0.269	-24.1	2107	13.4	2.5	
As	75	1	nogas	-0.292	-102.8	93223	1.5	2.5	
Sr	88	1	nogas	0.129	15.9	8552	8.4	2.5	
Ag	107	1	nogas	-0.010	-43.1	493	14.7	2.5	
Cd	111	1	nogas	0.011	10.1	73	7.9	1	
Sb	121	1	nogas	0.124	8.6	3220	4.2	2.5	
Tl	205	1	nogas	0.321	50.0	11585	45.5	1	
Pb	208	1	nogas	0.016	38.5	1597	19.9	2.5	
U	238	1	nogas	0.060	37.0	3052	33.5	2.5	
[Pb]	206	1	nogas	0.024	19.1	423	13.4	2.5	
[Pb]	207	1	nogas	0.020	48.5	393	24.0	2.5	
Na	23	2	He	6.141	20.4	125426	0.9	100	
Mg	24	2	He	4.634	13.4	6278	7.8	100	
Al	27	2	He	-0.469	-51.3	627	16.1	5	
K	39	2	He	-13.990	-24.4	155648	2.3	100	
Ca	43	2	He	-17.069	-53.5	43	53.3	100	
Ca	44	2	He	3.639	91.3	1090	12.8	100	
V	51	2	He	1.098	1.8	9515	2.0	2.5	
Cr	52	2	He	-0.103	-7.6	3157	1.3	2.5	
Mn	55	2	He	0.034	40.0	1603	3.7	2.5	
Fe	56	2	He	1.286	14.0	28142	4.2	100	
Co	59	2	He	0.013	48.7	227	28.0	2.5	
Ni	60	2	He	0.350	7.5	270	24.3	2.5	
Cu	63	2	He	0.415	2.8	2190	3.7	2	
Zn	66	2	He	0.072	90.5	510	18.0	2.5	
As	75	2	He	0.016	219.9	237	19.7	2.5	
Se	78	2	He	0.748	27.2	129	17.6	2	
B	11	1	nogas	6.288	7.2	38372	3.0	10	
Si	28	1	nogas	104.797	60.9	1268908	3.5	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.495	174.6	1280	23.8	100	
Ca	44	1	nogas	5.993	38.7	36235	3.1	100	
Fe	56	1	nogas	1.544	146.0	3701997	0.3	100	
Se	77	1	nogas	9.389	34.1	30576	4.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.010	1603.7	173	29.0	2	
Mo	95	1	nogas	0.149	35.2	1580	24.8	2.5	
Sn	118	1	nogas	0.066	74.2	3587	16.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.067	-12.7	443	11.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.090	16.0	997	10.5	2.5	
P	31	1	nogas	-10.336	-3.9	64466	1.2	10	
La	139	1	nogas	-184.506	-5.5	143	21.3	2.5	
Au	197	1	nogas	183.101	296.1	30	100.0	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	843362	1.24	991886	85.03	70	125	
Ge	72	1	nogas	3248976	1.88	3806005	85.36	70	125	
In	115	1	nogas	3364124	1.65	4048858	83.09	70	125	
Bi	209	1	nogas	2835468	1.26	3341531	84.86	70	125	
Ge	72	2	He	762073	0.73	904570	84.25	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	268_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T22:03:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.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	98.598	1.827	524785	0.79	100	98.6	90	110	
Na	23	1	nogas	9905.444	1.319	230486622	0.38	10000	99.1	90	110	
Mg	24	1	nogas	9832.591	2.044	148384178	1.28	10000	98.3	90	110	
Al	27	1	nogas	98.653	1.539	1874136	1.62	100	98.7	90	110	
K	39	1	nogas	9700.632	0.258	228943372	1.01	10000	97.0	90	110	
Ti	47	1	nogas	97.287	0.573	212073	0.64	100	97.3	90	110	
V	51	1	nogas	108.409	1.932	4008102	0.88	100	108.4	90	110	
Cr	52	1	nogas	99.253	1.676	2505086	0.84	100	99.3	90	110	
Mn	55	1	nogas	97.404	2.095	3265975	1.25	100	97.4	90	110	
Co	59	1	nogas	97.755	1.462	2614830	1.56	100	97.8	90	110	
Ni	60	1	nogas	95.452	0.894	574798	0.08	100	95.5	90	110	
Cu	63	1	nogas	98.318	2.110	1370949	2.11	100	98.3	90	110	
Zn	66	1	nogas	99.480	0.301	447075	0.77	100	99.5	90	110	
As	75	1	nogas	107.198	1.533	649255	0.70	100	107.2	90	110	
Sr	88	1	nogas	98.037	1.079	4108654	0.86	100	98.0	90	110	
Ag	107	1	nogas	100.893	3.456	1875606	2.88	100	100.9	90	110	
Cd	111	1	nogas	99.580	0.603	405400	1.40	100	99.6	90	110	
Sb	121	1	nogas	102.935	2.004	1860944	1.64	100	102.9	90	110	
Tl	205	1	nogas	98.951	1.359	3340828	0.07	100	99.0	90	110	
Pb	208	1	nogas	87.014	1.601	4599356	1.60	100	87.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.260	1.226	5009997	1.80	100	104.3	90	110	
[Pb]	206	1	nogas	94.778	2.981	1112237	1.72	100	94.8	90	110	
[Pb]	207	1	nogas	96.804	2.728	989059	1.77	100	96.8	90	110	
Na	23	2	He	9827.980	0.658	13497726	1.03	10000	98.3	90	110	
Mg	24	2	He	9735.911	0.594	7542716	0.69	10000	97.4	90	110	
Al	27	2	He	97.033	1.229	43370	1.55	100	97.0	90	110	
K	39	2	He	8297.414	0.623	8724491	0.61	10000	83.0	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9732.748	3.576	25114	3.98	10000	97.3	90	110	
Ca	44	2	He	9620.587	0.726	418133	0.60	10000	96.2	90	110	
V	51	2	He	93.749	0.603	637787	0.25	100	93.7	90	110	
Cr	52	2	He	95.577	0.328	688929	0.28	100	95.6	90	110	
Mn	55	2	He	98.183	0.604	505767	1.03	100	98.2	90	110	
Fe	56	2	He	9632.496	0.672	62403816	1.01	10000	96.3	90	110	
Co	59	2	He	95.163	0.518	974966	0.87	100	95.2	90	110	
Ni	60	2	He	97.877	1.060	248482	1.13	100	97.9	90	110	
Cu	63	2	He	96.689	0.714	624516	0.87	100	96.7	90	110	
Zn	66	2	He	98.595	1.617	145179	1.93	100	98.6	90	110	
As	75	2	He	97.958	0.214	129869	0.40	100	98.0	90	110	
Se	78	2	He	97.491	0.610	10777	0.74	100	97.5	90	110	
B	11	1	nogas	462.239	1.829	1567587	1.13	500	92.4	90	110	
Si	28	1	nogas	4955.517	1.388	6301768	1.71	5000	99.1	90	110	
Ca	43	1	nogas	9781.027	1.298	406403	0.67	10000	97.8	90	110	
Ca	44	1	nogas	9733.311	1.992	6638961	1.39	10000	97.3	90	110	
Fe	56	1	nogas	9825.335	1.016	284011115	0.08	10000	98.3	90	110	
Se	77	1	nogas	153.592	1.962	67827	1.58	100	153.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.086	2.567	31034	1.61	100	98.1	90	110	
Mo	95	1	nogas	95.470	0.772	757527	1.07	100	95.5	90	110	
Sn	118	1	nogas	96.439	1.332	1242896	0.41	100	96.4	90	110	
Ba	137	1	nogas	98.044	0.371	631415	0.78	100	98.0	90	110	
Sb	121	2	He	95.600	0.554	668474	0.93	100	95.6	90	110	
Li	7	1	nogas	99.800	2.577	1461427	1.06	100	99.8	90	110	
P	31	1	nogas	473.092	0.611	716776	0.49	500	94.6	90	110	
La	139	1	nogas	-14.173	-213.253	617	13.21	100	-14.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	122.314	89.032	27	21.65	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	788441	1.46	991886	79.49	70	125	
Ge	72	1	nogas	3199913	0.97	3806005	84.08	70	125	
In	115	1	nogas	3361140	0.95	4048858	83.01	70	125	
Bi	209	1	nogas	2856257	1.31	3341531	85.48	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	764639	0.43	904570	84.53	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	279_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T22:25:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.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	29.8	470	21.0	1	
Na	23	1	nogas	375.416	3.7	10863504	1.2	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.297	10.6	166985	4.7	100	
Al	27	1	nogas	-0.593	-10.4	27567	4.1	5	
K	39	1	nogas	20.287	53.5	7828807	1.0	100	
Ti	47	1	nogas	0.027	131.5	297	25.3	2.5	
V	51	1	nogas	2.754	32.2	936779	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.119	-42.3	62060	2.5	2.5	
Mn	55	1	nogas	-0.069	-34.2	20889	2.3	2.5	
Co	59	1	nogas	0.021	40.6	1100	18.9	2.5	
Ni	60	1	nogas	0.758	1.4	3534	4.1	2.5	
Cu	63	1	nogas	0.365	10.9	10830	3.1	2	
Zn	66	1	nogas	-0.211	-13.3	2537	6.8	2.5	
As	75	1	nogas	0.041	2569.6	101557	3.1	2.5	
Sr	88	1	nogas	0.285	11.2	16254	6.8	2.5	
Ag	107	1	nogas	-0.006	-64.2	607	11.2	2.5	
Cd	111	1	nogas	0.030	43.4	157	32.8	1	
Sb	121	1	nogas	0.124	22.5	3437	12.8	2.5	
Tl	205	1	nogas	0.298	44.7	11481	40.4	1	
Pb	208	1	nogas	0.018	17.0	1750	9.5	2.5	
U	238	1	nogas	0.055	39.2	3030	35.2	2.5	
[Pb]	206	1	nogas	0.023	17.8	433	11.6	2.5	
[Pb]	207	1	nogas	0.018	12.1	397	5.2	2.5	
Na	23	2	He	351.112	1.1	646692	0.5	100	CCB Main CR1 Failed
Mg	24	2	He	5.961	5.3	7955	3.2	100	
Al	27	2	He	-0.224	-67.4	800	8.8	5	
K	39	2	He	-3.420	-45.0	166545	1.0	100	
Ca	43	2	He	-6.515	-118.0	77	27.2	100	
Ca	44	2	He	18.539	7.7	1890	4.3	100	
V	51	2	He	1.127	2.2	10578	1.1	2.5	
Cr	52	2	He	-0.130	-9.7	3227	4.1	2.5	
Mn	55	2	He	0.071	54.8	1953	10.2	2.5	
Fe	56	2	He	1.137	12.3	29617	3.2	100	
Co	59	2	He	0.012	24.9	240	14.4	2.5	
Ni	60	2	He	0.392	21.1	410	57.2	2.5	
Cu	63	2	He	0.588	2.3	3600	2.9	2	
Zn	66	2	He	0.147	19.7	677	6.7	2.5	
As	75	2	He	0.028	108.5	276	17.0	2.5	
Se	78	2	He	0.863	12.2	155	8.3	2	
B	11	1	nogas	17.869	7.2	84270	4.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-44.151	-269.5	1188715	9.6	5	
Ca	43	1	nogas	15.166	12.2	1853	2.7	100	
Ca	44	1	nogas	12.666	33.5	43664	4.3	100	
Fe	56	1	nogas	-2.258	-217.5	3842288	1.1	100	
Se	77	1	nogas	9.475	12.4	32737	2.1	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.128	86.6	227	17.8	2	
Mo	95	1	nogas	0.147	19.1	1670	11.7	2.5	
Sn	118	1	nogas	0.080	57.2	3951	12.3	5	
Ba	137	1	nogas	-0.073	-26.2	427	30.2	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.086	28.5	1050	16.9	2.5	
P	31	1	nogas	-9.862	-20.0	69648	1.6	10	
La	139	1	nogas	-174.749	-12.2	180	36.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-192.519	-88.1	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	888730	1.32	991886	89.60	70	125	
Ge	72	1	nogas	3477335	2.84	3806005	91.36	70	125	
In	115	1	nogas	3539682	3.23	4048858	87.42	70	125	
Bi	209	1	nogas	3018728	1.28	3341531	90.34	70	125	
Ge	72	2	He	830404	1.05	904570	91.80	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	281_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T22:39:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.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	97.256	1.656	573348	0.77	100	97.3	90	110	
Na	23	1	nogas	10350.058	3.233	262629273	0.90	10000	103.5	90	110	
Mg	24	1	nogas	10005.438	3.161	164720420	1.06	10000	100.1	90	110	
Al	27	1	nogas	97.194	1.188	2109954	0.77	100	97.2	90	110	
K	39	1	nogas	9450.717	0.904	255017764	1.51	10000	94.5	90	110	
Ti	47	1	nogas	93.493	0.823	232835	0.25	100	93.5	90	110	
V	51	1	nogas	105.845	0.042	4492077	0.62	100	105.8	90	110	
Cr	52	1	nogas	96.682	0.709	2789849	1.33	100	96.7	90	110	
Mn	55	1	nogas	93.551	0.547	3584964	1.14	100	93.6	90	110	
Co	59	1	nogas	95.873	1.308	2929618	0.74	100	95.9	90	110	
Ni	60	1	nogas	91.877	0.546	632026	0.11	100	91.9	90	110	
Cu	63	1	nogas	96.158	1.118	1531896	0.76	100	96.2	90	110	
Zn	66	1	nogas	95.469	0.984	490325	1.47	100	95.5	90	110	
As	75	1	nogas	102.463	0.880	713708	0.79	100	102.5	90	110	
Sr	88	1	nogas	94.660	0.223	4532447	0.84	100	94.7	90	110	
Ag	107	1	nogas	98.310	2.137	2088100	1.85	100	98.3	90	110	
Cd	111	1	nogas	100.656	1.258	455601	1.28	100	100.7	90	110	
Sb	121	1	nogas	97.110	0.283	2005863	0.57	100	97.1	90	110	
Tl	205	1	nogas	98.343	3.055	3670186	1.56	100	98.3	90	110	
Pb	208	1	nogas	94.586	0.501	4999506	0.50	100	94.6	90	110	
U	238	1	nogas	101.587	1.387	5396464	1.00	100	101.6	90	110	
[Pb]	206	1	nogas	93.922	4.145	1218226	1.93	100	93.9	90	110	
[Pb]	207	1	nogas	94.877	2.667	1071618	0.41	100	94.9	90	110	
Na	23	2	He	9657.707	1.190	15214206	0.70	10000	96.6	90	110	
Mg	24	2	He	9312.898	0.840	8275018	0.48	10000	93.1	90	110	
Al	27	2	He	93.401	0.922	47917	1.63	100	93.4	90	110	
K	39	2	He	9209.208	0.746	9664527	0.73	10000	92.1	90	110	
Ca	43	2	He	9288.576	0.741	27490	0.35	10000	92.9	90	110	
Ca	44	2	He	9281.168	1.522	462668	1.00	10000	92.8	90	110	
V	51	2	He	89.588	0.579	699143	0.66	100	89.6	90	110	CCV Main CR1-2 Failed
Cr	52	2	He	91.615	0.498	757581	0.62	100	91.6	90	110	
Mn	55	2	He	94.473	0.237	558212	0.61	100	94.5	90	110	
Fe	56	2	He	9411.832	0.486	69933211	0.87	10000	94.1	90	110	
Co	59	2	He	90.884	0.371	1067926	0.59	100	90.9	90	110	
Ni	60	2	He	93.009	1.419	270778	1.44	100	93.0	90	110	
Cu	63	2	He	92.438	1.457	684718	0.85	100	92.4	90	110	
Zn	66	2	He	94.573	2.281	159716	1.59	100	94.6	90	110	
As	75	2	He	93.554	0.593	142267	0.83	100	93.6	90	110	
Se	78	2	He	94.490	1.520	11981	1.16	100	94.5	90	110	
B	11	1	nogas	468.449	1.105	1759409	0.36	500	93.7	90	110	
Si	28	1	nogas	4672.732	0.427	6862634	0.61	5000	93.5	90	110	
Ca	43	1	nogas	9474.125	0.405	449791	1.04	10000	94.7	90	110	
Ca	44	1	nogas	9398.298	0.854	7325412	1.17	10000	94.0	90	110	
Fe	56	1	nogas	9497.104	0.539	313783899	1.15	10000	95.0	90	110	
Se	77	1	nogas	148.818	4.230	76056	2.29	100	148.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	94.439	1.737	34149	2.14	100	94.4	90	110	
Mo	95	1	nogas	91.770	1.140	831900	1.35	100	91.8	90	110	
Sn	118	1	nogas	96.803	0.400	1387219	0.44	100	96.8	90	110	
Ba	137	1	nogas	96.068	0.336	687914	0.53	100	96.1	90	110	
Sb	121	2	He	90.765	0.263	727930	0.58	100	90.8	90	110	
Li	7	1	nogas	97.742	2.886	1586839	1.85	100	97.7	90	110	
P	31	1	nogas	463.475	1.162	804023	1.00	500	92.7	90	110	
La	139	1	nogas	59.341	25.748	913	5.06	100	59.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-253.704	-37.500	7	86.60	100	-253.7	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	873235	0.92	991886	88.04	70	125	
Ge	72	1	nogas	3655630	0.65	3806005	96.05	70	125	
In	115	1	nogas	3737061	0.32	4048858	92.30	70	125	
Bi	209	1	nogas	3158176	2.32	3341531	94.51	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	876994	0.77	904570	96.95	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	286CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T22:49:40-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	157	36.52
Na	23	1	nogas	6284786	0.00
Mg	24	1	nogas	104878	0.01
Al	27	1	nogas	40403	0.00
K	39	1	nogas	8453949	0.00
Ti	47	1	nogas	303	2.26
V	51	1	nogas	1411643	0.00
Cr	52	1	nogas	92425	0.00
Mn	55	1	nogas	25802	0.01
Co	59	1	nogas	520	1.61
Ni	60	1	nogas	1877	0.36
Cu	63	1	nogas	8445	0.03
Zn	66	1	nogas	6291	0.11
As	75	1	nogas	140421	0.00
Sr	88	1	nogas	5188	0.50
Ag	107	1	nogas	733	0.43
Cd	111	1	nogas	37	85.89
Sb	121	1	nogas	693	0.52
Tl	205	1	nogas	667	1.11
Pb	208	1	nogas	713	3.02
[Pb]	206	1	nogas	173	25.20
[Pb]	207	1	nogas	147	13.42
Na	23	2	He	378975	0.00
Mg	24	2	He	5237	0.15
Al	27	2	He	997	1.27
K	39	2	He	176432	0.00
Ca	43	2	He	43	134.02
Ca	44	2	He	1033	0.55
V	51	2	He	14116	0.01
Cr	52	2	He	4127	0.18
Mn	55	2	He	1823	0.23
Fe	56	2	He	25611	0.00
Co	59	2	He	97	22.28
Ni	60	2	He	290	7.80
Cu	63	2	He	3560	0.43
Zn	66	2	He	1890	0.17
As	75	2	He	360	3.46
Se	78	2	He	143	5.36
B	11	1	nogas	30027	0.01
Si	28	1	nogas	1271779	0.00
Ca	43	1	nogas	1150	1.77
Ca	44	1	nogas	35551	0.02

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	5399979	0.00
Se	77	1	nogas	45648	0.01
Se	82	1	nogas	187	9.23
Mo	95	1	nogas	270	9.00
Sn	118	1	nogas	3509	0.97
Ba	137	1	nogas	1077	0.50
Sb	121	2	He	277	5.28
Li	7	1	nogas	92835	0.00
P	31	1	nogas	92595	0.00
La	139	1	nogas	773	1.14

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	978240	0.58
Ge	72	1	nogas	3866154	1.72
In	115	1	nogas	3951732	1.97
Bi	209	1	nogas	3251562	2.37
Ge	72	2	He	910172	0.59

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	287CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T22:51:37-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	286CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	11987	0.02
Na	23	1	nogas	11100266	0.00
Mg	24	1	nogas	3531990	0.00
Al	27	1	nogas	82364	0.00
K	39	1	nogas	13706237	0.00
Ti	47	1	nogas	4877	0.07
V	51	1	nogas	1589101	0.00
Cr	52	1	nogas	154747	0.00
Mn	55	1	nogas	102626	0.00
Co	59	1	nogas	60897	0.00
Ni	60	1	nogas	15770	0.02
Cu	63	1	nogas	41273	0.00
Zn	66	1	nogas	15250	0.01
As	75	1	nogas	168027	0.00
Sr	88	1	nogas	96880	0.00
Ag	107	1	nogas	42404	0.00
Cd	111	1	nogas	9203	0.07
Sb	121	1	nogas	41312	0.00
Tl	205	1	nogas	70314	0.01
Pb	208	1	nogas	100891	0.00
[Pb]	206	1	nogas	25183	0.01
[Pb]	207	1	nogas	21464	0.01
Na	23	2	He	668581	0.00
Mg	24	2	He	179042	0.00
Al	27	2	He	2050	0.42
K	39	2	He	376415	0.00
Ca	43	2	He	593	1.89
Ca	44	2	He	10490	0.02
V	51	2	He	29318	0.01
Cr	52	2	He	21002	0.00
Mn	55	2	He	13508	0.02
Fe	56	2	He	1518694	0.00
Co	59	2	He	22661	0.01
Ni	60	2	He	6094	0.05
Cu	63	2	He	18436	0.02
Zn	66	2	He	4754	0.10
As	75	2	He	3354	0.15
Se	78	2	He	377	1.86
B	11	1	nogas	62378	0.00
Si	28	1	nogas	1478358	0.00

Calibration Standard Report

Ca	43	1	nogas	10700	0.01
Ca	44	1	nogas	185283	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	11957918	0.00
Se	77	1	nogas	51604	0.01
Se	82	1	nogas	900	0.00
Mo	95	1	nogas	16781	0.01
Sn	118	1	nogas	29845	0.00
Ba	137	1	nogas	14713	0.01
Sb	121	2	He	14656	0.01
P	31	1	nogas	109736	0.00
La	139	1	nogas	217	11.73

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	987241	0.31	978240	100.92	70	125	
Ge	72	1	nogas	4026916	1.80	3866154	104.16	70	125	
In	115	1	nogas	3949486	1.97	3951732	99.94	70	125	
Bi	209	1	nogas	3261274	1.37	3251562	100.30	70	125	
Ge	72	2	He	938325	0.55	910172	103.09	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	288CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T22:53:35-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	286CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	30955	0.01
Na	23	1	nogas	18799625	0.00
Mg	24	1	nogas	8944360	0.00
Al	27	1	nogas	142298	0.00
K	39	1	nogas	21615797	0.00
Ti	47	1	nogas	12591	0.07
V	51	1	nogas	1761148	0.00
Cr	52	1	nogas	241481	0.00
Mn	55	1	nogas	206971	0.00
Co	59	1	nogas	153499	0.00
Ni	60	1	nogas	35621	0.01
Cu	63	1	nogas	93794	0.00
Zn	66	1	nogas	29524	0.01
As	75	1	nogas	192691	0.00
Sr	88	1	nogas	235973	0.00
Ag	107	1	nogas	107263	0.00
Cd	111	1	nogas	23155	0.01
Sb	121	1	nogas	99504	0.00
Tl	205	1	nogas	177841	0.00
Pb	208	1	nogas	245717	0.00
[Pb]	206	1	nogas	61743	0.01
[Pb]	207	1	nogas	54113	0.00
Na	23	2	He	1124366	0.00
Mg	24	2	He	446522	0.00
Al	27	2	He	3380	0.16
K	39	2	He	681230	0.00
Ca	43	2	He	1553	0.29
Ca	44	2	He	24840	0.01
V	51	2	He	51501	0.00
Cr	52	2	He	44804	0.00
Mn	55	2	He	30749	0.00
Fe	56	2	He	3713044	0.00
Co	59	2	He	57068	0.00
Ni	60	2	He	14796	0.03
Cu	63	2	He	42262	0.00
Zn	66	2	He	9376	0.03
As	75	2	He	7767	0.03
Se	78	2	He	799	0.77
B	11	1	nogas	117154	0.00
Si	28	1	nogas	1637215	0.00

Calibration Standard Report

Ca	43	1	nogas	24092	0.01
Ca	44	1	nogas	414196	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	21541257	0.00
Se	77	1	nogas	54767	0.01
Se	82	1	nogas	2050	0.58
Mo	95	1	nogas	42885	0.00
Sn	118	1	nogas	72090	0.00
Ba	137	1	nogas	34962	0.00
Sb	121	2	He	36585	0.00
P	31	1	nogas	134436	0.00
La	139	1	nogas	130	5.92

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	989132	0.54	978240	101.11	70	125	
Ge	72	1	nogas	4043760	0.78	3866154	104.59	70	125	
In	115	1	nogas	3931447	1.31	3951732	99.49	70	125	
Bi	209	1	nogas	3221479	4.77	3251562	99.07	70	125	
Ge	72	2	He	947137	0.68	910172	104.06	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	289CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T22:55:35-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	286CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	59331	0.00
Na	23	1	nogas	31078147	0.00
Mg	24	1	nogas	17217886	0.00
Al	27	1	nogas	242907	0.00
K	39	1	nogas	33806929	0.00
Ti	47	1	nogas	24203	0.01
V	51	1	nogas	1924553	0.00
Cr	52	1	nogas	373964	0.00
Mn	55	1	nogas	384331	0.00
Co	59	1	nogas	299732	0.00
Ni	60	1	nogas	68102	0.00
Cu	63	1	nogas	161816	0.00
Zn	66	1	nogas	52692	0.00
As	75	1	nogas	218107	0.00
Sr	88	1	nogas	458254	0.00
Ag	107	1	nogas	210380	0.00
Cd	111	1	nogas	44827	0.00
Sb	121	1	nogas	199618	0.00
Tl	205	1	nogas	350574	0.00
Pb	208	1	nogas	484035	0.00
[Pb]	206	1	nogas	120861	0.00
[Pb]	207	1	nogas	105395	0.00
Na	23	2	He	1857741	0.00
Mg	24	2	He	860698	0.00
Al	27	2	He	5728	0.14
K	39	2	He	1151986	0.00
Ca	43	2	He	3007	0.17
Ca	44	2	He	49228	0.00
V	51	2	He	85844	0.00
Cr	52	2	He	82539	0.00
Mn	55	2	He	58011	0.00
Fe	56	2	He	7131509	0.00
Co	59	2	He	110878	0.00
Ni	60	2	He	27678	0.00
Cu	63	2	He	73724	0.00
Zn	66	2	He	17005	0.02
As	75	2	He	15031	0.00
Se	78	2	He	1348	0.19
B	11	1	nogas	198073	0.00
Si	28	1	nogas	1910023	0.00

Calibration Standard Report

Ca	43	1	nogas	46405	0.00
Ca	44	1	nogas	776930	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	36637953	0.00
Se	77	1	nogas	54964	0.01
Se	82	1	nogas	3827	0.21
Mo	95	1	nogas	83785	0.00
Sn	118	1	nogas	139180	0.00
Ba	137	1	nogas	70798	0.00
Sb	121	2	He	73507	0.00
P	31	1	nogas	176124	0.00
La	139	1	nogas	137	8.18

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	965809	0.50	978240	98.73	70	125	
Ge	72	1	nogas	4038892	1.00	3866154	104.47	70	125	
In	115	1	nogas	3893436	1.17	3951732	98.52	70	125	
Bi	209	1	nogas	3148416	3.34	3251562	96.83	70	125	
Ge	72	2	He	948157	0.42	910172	104.17	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	290CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T22:57:34-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	286CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	589013	0.00
Na	23	1	nogas	260008814	0.00
Mg	24	1	nogas	167508525	0.00
Al	27	1	nogas	2128054	0.00
K	39	1	nogas	260477506	0.00
Ti	47	1	nogas	238325	0.00
V	51	1	nogas	4559089	0.00
Cr	52	1	nogas	2826683	0.00
Mn	55	1	nogas	3679782	0.00
Co	59	1	nogas	2948796	0.00
Ni	60	1	nogas	651196	0.00
Cu	63	1	nogas	1568823	0.00
Zn	66	1	nogas	505390	0.00
As	75	1	nogas	743392	0.00
Sr	88	1	nogas	4653247	0.00
Ag	107	1	nogas	2120959	0.00
Cd	111	1	nogas	459202	0.00
Sb	121	1	nogas	2070104	0.00
Tl	205	1	nogas	3543725	0.00
Pb	208	1	nogas	5014261	0.00
[Pb]	206	1	nogas	1202437	0.00
[Pb]	207	1	nogas	1077937	0.00
Na	23	2	He	15209259	0.00
Mg	24	2	He	8388909	0.00
Al	27	2	He	48953	0.00
K	39	2	He	9778144	0.00
Ca	43	2	He	28205	0.00
Ca	44	2	He	475993	0.00
V	51	2	He	718056	0.00
Cr	52	2	He	778243	0.00
Mn	55	2	He	562480	0.00
Fe	56	2	He	70776841	0.00
Co	59	2	He	1105600	0.00
Ni	60	2	He	278845	0.00
Cu	63	2	He	709211	0.00
Zn	66	2	He	162330	0.00
As	75	2	He	148688	0.00
Se	78	2	He	12440	0.02
B	11	1	nogas	1793594	0.00
Si	28	1	nogas	7147692	0.00

Calibration Standard Report

Ca	43	1	nogas	459302	0.00
Ca	44	1	nogas	7371950	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	318436899	0.00
Se	77	1	nogas	77542	0.00
Se	82	1	nogas	34920	0.00
Mo	95	1	nogas	847343	0.00
Sn	118	1	nogas	1423825	0.00
Ba	137	1	nogas	693246	0.00
Sb	121	2	He	749726	0.00
P	31	1	nogas	847615	0.00
La	139	1	nogas	890	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	875826	0.10	978240	89.53	70	125	
Ge	72	1	nogas	3853442	1.04	3866154	99.67	70	125	
In	115	1	nogas	3770894	3.18	3951732	95.42	70	125	
Bi	209	1	nogas	3133189	1.94	3251562	96.36	70	125	
Ge	72	2	He	889194	1.10	910172	97.70	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	291CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T22:59:35-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	286CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1185822	0.00
Na	23	1	nogas	512477595	0.00
Mg	24	1	nogas	331071224	0.00
Al	27	1	nogas	4087703	0.00
K	39	1	nogas	510571911	0.00
Ti	47	1	nogas	476208	0.00
V	51	1	nogas	7667653	0.00
Cr	52	1	nogas	5470638	0.00
Mn	55	1	nogas	7252415	0.00
Co	59	1	nogas	5836847	0.00
Ni	60	1	nogas	1282677	0.00
Cu	63	1	nogas	3051068	0.00
Zn	66	1	nogas	1001771	0.00
As	75	1	nogas	1320870	0.00
Sr	88	1	nogas	9244704	0.00
Ag	107	1	nogas	4243586	0.00
Cd	111	1	nogas	915416	0.00
Sb	121	1	nogas	4104813	0.00
Tl	205	1	nogas	7305248	0.00
Pb	208	1	nogas	10124267	0.00
[Pb]	206	1	nogas	2561397	0.00
[Pb]	207	1	nogas	2216515	0.00
Na	23	2	He	29443800	0.00
Mg	24	2	He	16572777	0.00
Al	27	2	He	95451	0.00
K	39	2	He	19200152	0.00
Ca	43	2	He	55064	0.00
Ca	44	2	He	934178	0.00
V	51	2	He	1415981	0.00
Cr	52	2	He	1559494	0.00
Mn	55	2	He	1103482	0.00
Fe	56	2	He	139504318	0.00
Co	59	2	He	2226111	0.00
Ni	60	2	He	543458	0.00
Cu	63	2	He	1376813	0.00
Zn	66	2	He	320543	0.00
As	75	2	He	294642	0.00
Se	78	2	He	24785	0.00
B	11	1	nogas	3497765	0.00
Si	28	1	nogas	12718878	0.00

Calibration Standard Report

Ca	43	1	nogas	907639	0.00
Ca	44	1	nogas	14678522	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	631730681	0.00
Se	77	1	nogas	99236	0.00
Se	82	1	nogas	71441	0.00
Mo	95	1	nogas	1747189	0.00
Sn	118	1	nogas	2910068	0.00
Ba	137	1	nogas	1460720	0.00
Sb	121	2	He	1563393	0.00
P	31	1	nogas	1599460	0.00
La	139	1	nogas	1400	0.69

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	790170	5.76	978240	80.77	70	125	
Ge	72	1	nogas	3765741	1.79	3866154	97.40	70	125	
In	115	1	nogas	3746798	3.10	3951732	94.81	70	125	
Bi	209	1	nogas	3121635	2.14	3251562	96.00	70	125	
Ge	72	2	He	880641	0.38	910172	96.76	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	293_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:03:47-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	109.255	0.945	623859	0.23	100	109.3	90	110	
Na	23	1	nogas	10638.013	1.534	275649931	0.22	10000	106.4	90	110	
Mg	24	1	nogas	10597.839	2.087	175940625	0.84	10000	106.0	90	110	
Al	27	1	nogas	109.967	0.417	2284533	1.20	100	110.0	90	110	
K	39	1	nogas	10586.029	0.791	274901989	0.97	10000	105.9	90	110	
Ti	47	1	nogas	101.329	0.979	241952	0.19	100	101.3	90	110	
V	51	1	nogas	92.054	1.390	4292180	0.87	100	92.1	90	110	
Cr	52	1	nogas	105.896	1.799	2955183	0.95	100	105.9	90	110	
Mn	55	1	nogas	106.768	1.063	3900291	0.28	100	106.8	90	110	
Co	59	1	nogas	107.799	1.081	3159154	0.28	100	107.8	90	110	
Ni	60	1	nogas	106.280	0.906	685485	0.12	100	106.3	90	110	
Cu	63	1	nogas	108.025	1.387	1663785	0.72	100	108.0	90	110	
Zn	66	1	nogas	105.114	1.304	529471	0.56	100	105.1	90	110	
As	75	1	nogas	96.384	0.157	714818	0.71	100	96.4	90	110	
Sr	88	1	nogas	101.542	0.428	4711722	0.43	100	101.5	90	110	
Ag	107	1	nogas	105.348	0.323	2240228	0.74	100	105.3	90	110	
Cd	111	1	nogas	102.962	0.914	484159	0.94	100	103.0	90	110	
Sb	121	1	nogas	104.614	1.807	2155416	1.05	100	104.6	90	110	
Tl	205	1	nogas	106.000	1.825	3933037	0.93	100	106.0	90	110	
Pb	208	1	nogas	104.099	1.556	5259393	1.56	100	104.1	90	110	
U	238	1	nogas	104.750	2.321	5486716	1.43	100	104.7	90	110	
[Pb]	206	1	nogas	100.673	0.350	1301596	0.92	100	100.7	90	110	
[Pb]	207	1	nogas	97.905	0.191	1102703	1.23	100	97.9	90	110	
Na	23	2	He	10609.858	0.330	15953261	0.69	10000	106.1	90	110	
Mg	24	2	He	10625.317	0.347	8883173	1.03	10000	106.3	90	110	
Al	27	2	He	106.837	2.536	51878	2.55	100	106.8	90	110	
K	39	2	He	10918.249	1.190	10582179	1.17	10000	109.2	90	110	
Ca	43	2	He	10411.187	1.824	29003	2.44	10000	104.1	90	110	
Ca	44	2	He	10494.239	0.616	495455	0.97	10000	104.9	90	110	
V	51	2	He	105.037	0.304	754958	0.97	100	105.0	90	110	
Cr	52	2	He	102.765	0.441	807478	0.92	100	102.8	90	110	
Mn	55	2	He	107.213	0.944	598146	1.37	100	107.2	90	110	
Fe	56	2	He	10477.667	0.615	73762286	1.22	10000	104.8	90	110	
Co	59	2	He	103.170	1.523	1153924	1.64	100	103.2	90	110	
Ni	60	2	He	106.883	1.706	293833	1.69	100	106.9	90	110	
Cu	63	2	He	106.259	0.240	741984	0.72	100	106.3	90	110	
Zn	66	2	He	105.307	1.125	170607	1.79	100	105.3	90	110	
As	75	2	He	105.481	0.303	156764	0.70	100	105.5	90	110	
Se	78	2	He	105.159	0.684	13155	0.08	100	105.2	90	110	
B	11	1	nogas	524.731	2.111	1822319	1.34	500	104.9	90	110	
Si	28	1	nogas	5304.928	1.313	7380789	0.31	5000	106.1	90	110	
Ca	43	1	nogas	10593.619	0.637	483361	0.28	10000	105.9	90	110	
Ca	44	1	nogas	10607.213	1.283	7821823	0.90	10000	106.1	90	110	
Fe	56	1	nogas	10488.547	1.268	334529499	0.63	10000	104.9	90	110	
Se	77	1	nogas	48.542	12.215	58608	2.79	100	48.5	90	110	ICV Main CR1 Failed
Se	82	1	nogas	106.247	1.276	37937	1.91	100	106.2	90	110	
Mo	95	1	nogas	101.117	1.488	879959	0.70	100	101.1	90	110	
Sn	118	1	nogas	97.359	1.217	1449270	2.11	100	97.4	90	110	
Ba	137	1	nogas	100.554	1.422	746653	0.73	100	100.6	90	110	
Sb	121	2	He	100.414	1.511	783383	2.09	100	100.4	90	110	
Li	7	1	nogas	107.072	2.123	1692450	2.20	100	107.1	90	110	
P	31	1	nogas	502.982	1.061	851947	1.06	500	100.6	90	110	
La	139	1	nogas	106.362	20.264	1057	5.21	100	106.4	90	110	
Au	197	1	nogas	286.453	35.013	27	21.65	100	286.5	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	850060	0.90	978240	86.90	70	125	
Ge	72	1	nogas	3791476	0.81	3866154	98.07	70	125	
In	115	1	nogas	3850623	1.63	3951732	97.44	70	125	
Bi	209	1	nogas	3192227	1.06	3251562	98.18	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	887898	0.70	910172	97.55	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	294LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:06:02-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	4.695	0.174	30508	0.33	5	93.9	70	130	
Na	23	1	nogas	437.320	2.067	17776533	0.43	500	87.5	70	130	
Mg	24	1	nogas	517.813	1.671	9008565	0.18	500	103.6	70	130	
Al	27	1	nogas	4.875	5.923	143446	3.22	5	97.5	70	130	
K	39	1	nogas	499.405	1.940	21519706	0.99	500	99.9	70	130	
Ti	47	1	nogas	5.114	1.360	12885	2.17	5	102.3	70	130	
V	51	1	nogas	-4.100	-32.955	1294298	1.87	5	-82.0	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.402	4.110	216271	1.57	5	88.0	70	130	
Mn	55	1	nogas	4.876	1.740	208565	0.57	5	97.5	70	130	
Co	59	1	nogas	5.194	2.332	157441	1.15	5	103.9	70	130	
Ni	60	1	nogas	5.446	2.237	36794	0.68	5	108.9	70	130	
Cu	63	1	nogas	5.564	0.913	96474	0.82	5	111.3	70	130	
Zn	66	1	nogas	5.274	3.042	29657	1.25	5	105.5	70	130	
As	75	1	nogas	-2.698	-31.763	132605	3.01	5	-54.0	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.973	2.511	242925	0.96	5	99.5	70	130	
Ag	107	1	nogas	5.074	2.536	111941	1.04	5	101.5	70	130	
Cd	111	1	nogas	4.891	3.867	24234	2.67	5	97.8	70	130	
Sb	121	1	nogas	5.002	1.669	106934	0.46	5	100.0	70	130	
Tl	205	1	nogas	5.090	3.471	200759	2.73	5	101.8	70	130	
Pb	208	1	nogas	5.216	1.462	264219	1.46	5	104.3	70	130	
U	238	1	nogas	4.949	0.700	274938	0.64	5	99.0	70	130	
[Pb]	206	1	nogas	4.774	2.671	65572	2.25	5	95.5	70	130	
[Pb]	207	1	nogas	4.853	1.700	58056	1.17	5	97.1	70	130	
Na	23	2	He	451.103	2.585	1059365	0.82	500	90.2	70	130	
Mg	24	2	He	515.503	1.075	447289	0.42	500	103.1	70	130	
Al	27	2	He	5.348	3.993	3514	3.79	5	107.0	70	130	
K	39	2	He	520.027	0.388	672049	0.29	500	104.0	70	130	
Ca	43	2	He	526.751	4.427	1547	3.79	500	105.4	70	130	
Ca	44	2	He	507.188	0.988	25561	1.37	500	101.4	70	130	
V	51	2	He	4.895	1.903	48075	0.66	5	97.9	70	130	
Cr	52	2	He	5.118	1.075	45195	0.30	5	102.4	70	130	
Mn	55	2	He	4.946	0.759	30061	1.49	5	98.9	70	130	
Fe	56	2	He	522.487	0.527	3799321	0.34	500	104.5	70	130	
Co	59	2	He	5.059	0.628	58165	0.86	5	101.2	70	130	
Ni	60	2	He	5.224	1.055	14986	1.76	5	104.5	70	130	
Cu	63	2	He	5.382	1.204	42613	1.08	5	107.6	70	130	
Zn	66	2	He	4.940	3.057	9132	3.34	5	98.8	70	130	
As	75	2	He	4.951	0.620	7895	0.26	5	99.0	70	130	
Se	78	2	He	5.471	1.302	788	1.02	5	109.4	70	130	
B	11	1	nogas	27.558	1.661	136395	1.06	25	110.2	70	130	
Si	28	1	nogas	248.250	19.185	1581608	2.08	25	993.0	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	509.940	3.276	25100	2.50	500	102.0	70	130	
Ca	44	1	nogas	507.967	2.707	420448	1.02	500	101.6	70	130	
Fe	56	1	nogas	467.117	1.525	20582626	1.07	500	93.4	70	130	
Se	77	1	nogas	-36.248	-7.584	35502	0.85	5	-725.0	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.472	5.307	2194	4.21	5	109.4	70	130	
Mo	95	1	nogas	5.200	2.146	46922	1.05	5	104.0	70	130	
Sn	118	1	nogas	4.693	1.035	76921	0.91	5	93.9	70	130	
Ba	137	1	nogas	4.740	2.133	38099	2.94	5	94.8	70	130	
Sb	121	2	He	4.806	0.684	38743	1.05	5	96.1	70	130	
Li	7	1	nogas	4.692	2.604	171341	1.02	5	93.8	70	130	
P	31	1	nogas	26.291	8.929	134655	1.16	25	105.2	70	130	
La	139	1	nogas	-206.437	-6.855	173	23.32	5	-4128.7	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	531.874	35.578	43	26.65	5	10637.5	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	962681	0.30	978240	98.41	70	125	
Ge	72	1	nogas	3910018	1.57	3866154	101.13	70	125	
In	115	1	nogas	4051993	1.29	3951732	102.54	70	125	
Bi	209	1	nogas	3382652	0.75	3251562	104.03	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	911280	0.84	910172	100.12	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	295SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:08:01-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	286CALB.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	1.835	1.835	3.11	12067	0.02	2000	
Na	23	1	nogas	130.400	130.400	4.35	9688507	0.00	200000	
Mg	24	1	nogas	207.579	207.579	0.80	3664299	0.01	200000	
Al	27	1	nogas	2.027	2.027	2.29	83442	0.00	2000	
K	39	1	nogas	194.519	194.519	3.41	13588249	0.00	200000	
Ti	47	1	nogas	1.962	1.962	1.90	5127	0.04	2000	
V	51	1	nogas	-9.906	-9.906	-2.80	1104478	0.00	2000	
Cr	52	1	nogas	1.364	1.364	3.52	131417	0.00	2000	
Mn	55	1	nogas	2.061	2.061	2.22	103125	0.00	2000	
Co	59	1	nogas	2.073	2.073	1.62	63088	0.00	2000	
Ni	60	1	nogas	2.284	2.284	1.13	15767	0.01	2000	
Cu	63	1	nogas	2.089	2.089	3.13	41520	0.01	2000	
Zn	66	1	nogas	2.615	2.615	5.63	15894	0.02	2000	
As	75	1	nogas	-5.704	-5.704	-5.72	114185	0.00	2000	
Sr	88	1	nogas	1.983	1.983	0.95	99942	0.00	2000	
Ag	107	1	nogas	1.989	1.989	0.74	44309	0.00	2000	
Cd	111	1	nogas	1.917	1.917	2.09	9516	0.02	2000	
Sb	121	1	nogas	1.963	1.963	1.34	42365	0.00	2000	
Tl	205	1	nogas	2.001	2.001	1.81	79534	0.00	2000	
Pb	208	1	nogas	2.119	2.119	1.28	107746	0.00	2000	
U	238	1	nogas	1.941	1.941	1.88	108196	0.00	2000	
[Pb]	206	1	nogas	1.971	1.971	2.70	27243	0.01	2000	
[Pb]	207	1	nogas	1.960	1.960	1.37	23597	0.01	2000	
Na	23	2	He	132.977	132.977	5.01	580604	0.02	200000	
Mg	24	2	He	201.893	201.893	1.16	178618	0.11	200000	
Al	27	2	He	2.132	2.132	18.02	1940	0.11	2000	
K	39	2	He	201.225	201.225	1.27	368212	0.05	200000	
Ca	43	2	He	230.910	230.910	9.83	703	32.83	200000	
Ca	44	2	He	206.592	206.592	5.79	11043	1.87	200000	
V	51	2	He	1.825	1.825	2.74	25833	0.01	2000	
Cr	52	2	He	2.086	2.086	1.41	20899	0.01	2000	
Mn	55	2	He	2.187	2.187	3.47	14336	0.02	2000	
Fe	56	2	He	208.780	208.780	0.99	1535572	0.01	200000	
Co	59	2	He	2.012	2.012	1.52	23218	0.01	2000	
Ni	60	2	He	2.054	2.054	5.11	6054	0.03	2000	
Cu	63	2	He	2.057	2.057	2.91	18943	0.01	2000	
Zn	66	2	He	2.376	2.376	6.87	4897	0.05	2000	
As	75	2	He	1.801	1.801	2.94	3106	0.06	2000	
Se	78	2	He	2.284	2.284	12.38	382	0.60	2000	
B	11	1	nogas	11.850	11.850	0.50	75799	0.02	2000	
Si	28	1	nogas	83.428	83.428	11.68	1384162	0.01	2000	
Ca	43	1	nogas	205.238	205.238	1.99	10790	1.90	200000	
Ca	44	1	nogas	204.268	204.268	0.39	190419	0.11	200000	
Fe	56	1	nogas	156.333	156.333	1.02	10512247	0.00	200000	

Sample Report

Se	77	1	nogas	-39.617	-39.617	-4.38	34483	-0.11	2000	
Se	82	1	nogas	2.062	2.062	5.42	943	0.22	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.999	1.999	2.19	18186	0.01	2000	
Sn	118	1	nogas	1.877	1.877	3.68	32878	0.01	2000	
Ba	137	1	nogas	1.832	1.832	1.80	15384	0.01	2000	
Sb	121	2	He	1.939	1.939	3.96	15817	0.01	2000	
La	139	1	nogas	-193.488	-193.488	-12.14	213	-90.69	2000	
Au	197	1	nogas	151.225	151.225	1.19	20	756.13	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	966560	0.54	978240	98.81	70	125	
Ge	72	1	nogas	3905876	0.34	3866154	101.03	70	125	
In	115	1	nogas	4047453	2.30	3951732	102.42	70	125	
Bi	209	1	nogas	3390618	0.55	3251562	104.28	70	125	
Ge	72	2	He	912538	1.58	910172	100.26	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	296_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:10:02-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	0.035	31.5	387	18.7	1	
Na	23	1	nogas	-77.024	-3.1	4360299	1.5	100	
Mg	24	1	nogas	0.569	35.3	117214	3.4	100	
Al	27	1	nogas	0.014	390.5	41579	1.4	5	
K	39	1	nogas	-11.162	-70.7	8345073	1.3	100	
Ti	47	1	nogas	0.031	92.9	387	17.2	2.5	
V	51	1	nogas	-12.923	-6.9	1017638	1.7	2.5	
Cr	52	1	nogas	-0.710	-6.1	74442	0.8	2.5	
Mn	55	1	nogas	-0.087	-25.7	23075	2.9	2.5	
Co	59	1	nogas	0.020	16.3	1133	7.1	2.5	
Ni	60	1	nogas	0.146	8.9	1590	6.0	2.5	
Cu	63	1	nogas	-0.017	-291.0	8359	8.4	1	
Zn	66	1	nogas	0.374	9.3	4364	2.6	2.5	
As	75	1	nogas	-7.905	-8.1	101909	3.5	2.5	
Sr	88	1	nogas	-0.010	-80.3	4811	9.8	2.5	
Ag	107	1	nogas	0.000	-3734.1	747	12.1	2.5	
Cd	111	1	nogas	0.018	33.8	130	23.1	1	
Sb	121	1	nogas	0.030	25.8	1353	11.1	2.5	
Tl	205	1	nogas	0.060	14.3	3080	11.2	1	
Pb	208	1	nogas	0.021	24.6	1777	14.7	2.5	
U	238	1	nogas	0.024	4.1	1567	4.1	2.5	
[Pb]	206	1	nogas	0.021	24.2	480	15.7	2.5	
[Pb]	207	1	nogas	0.018	38.3	373	23.4	2.5	
Na	23	2	He	-73.171	-3.3	272244	1.7	100	
Mg	24	2	He	0.825	40.2	6021	5.0	100	
Al	27	2	He	0.189	104.9	997	9.7	5	
K	39	2	He	-4.424	-69.4	172215	1.7	100	
Ca	43	2	He	2.138	581.1	50	72.1	100	
Ca	44	2	He	4.560	24.9	1270	4.9	100	
V	51	2	He	-0.143	-9.7	11653	0.7	2.5	
Cr	52	2	He	0.040	106.8	4504	7.5	2.5	
Mn	55	2	He	-0.012	-320.3	1780	12.7	2.5	
Fe	56	2	He	1.758	6.1	38781	2.0	100	
Co	59	2	He	0.017	16.7	297	10.8	2.5	
Ni	60	2	He	0.017	92.6	310	14.8	2.5	
Cu	63	2	He	-0.146	-16.5	3260	5.1	1	
Zn	66	2	He	0.191	28.1	1293	7.2	2.5	
As	75	2	He	-0.037	-57.2	308	11.1	2.5	
Se	78	2	He	0.331	20.3	134	6.0	1	
B	11	1	nogas	2.053	17.3	38201	2.9	10	

Initial Calibration Blank (ICB) Report

Si	28	1	nogas	-124.462	-74.1	1149335	9.4	5	
Ca	43	1	nogas	1.527	73.1	1250	3.2	100	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ca	44	1	nogas	0.010	13291.5	36349	2.9	100	
Fe	56	1	nogas	-43.613	-5.4	4091890	0.5	100	
Se	77	1	nogas	-45.164	-4.4	33227	1.4	2.5	
Se	82	1	nogas	0.124	51.8	237	8.8	1	
Mo	95	1	nogas	0.031	8.0	553	5.5	2.5	
Sn	118	1	nogas	0.134	14.4	5768	6.4	5	
Ba	137	1	nogas	-0.015	-117.0	1003	15.5	2.5	
Sb	121	2	He	0.028	45.9	507	20.2	2.5	
P	31	1	nogas	-0.353	-406.1	94059	0.8	10	
La	139	1	nogas	-171.239	-1.7	283	4.1	2.5	
Au	197	1	nogas	-120.284	-76.5	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	980621	1.06	978240	100.24	70	125	
Ge	72	1	nogas	3950778	1.59	3866154	102.19	70	125	
In	115	1	nogas	4110190	1.68	3951732	104.01	70	125	
Bi	209	1	nogas	3422590	1.12	3251562	105.26	70	125	
Ge	72	2	He	921769	0.58	910172	101.27	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	303_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:23:50-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	101.573	5.142	651656	0.91	100	101.6	90	110	
Na	23	1	nogas	10352.647	5.602	290877607	1.02	10000	103.5	90	110	
Mg	24	1	nogas	10295.989	5.069	185267096	0.82	10000	103.0	90	110	
Al	27	1	nogas	106.715	1.770	2420845	3.70	100	106.7	90	110	
K	39	1	nogas	10181.397	5.023	288578565	0.13	10000	101.8	90	110	
Ti	47	1	nogas	101.618	5.947	264435	1.08	100	101.6	90	110	
V	51	1	nogas	90.108	13.219	4606604	4.60	100	90.1	90	110	
Cr	52	1	nogas	100.285	6.018	3055547	1.43	100	100.3	90	110	
Mn	55	1	nogas	102.535	6.418	4082986	2.35	100	102.5	90	110	
Co	59	1	nogas	105.135	1.686	3364309	5.11	100	105.1	90	110	
Ni	60	1	nogas	102.796	4.508	722933	0.71	100	102.8	90	110	
Cu	63	1	nogas	106.967	3.151	1801014	8.19	100	107.0	90	110	
Zn	66	1	nogas	101.376	4.476	556898	1.08	100	101.4	90	110	
As	75	1	nogas	96.218	5.527	778316	0.64	100	96.2	90	110	
Sr	88	1	nogas	103.352	1.535	5234631	4.02	100	103.4	90	110	
Ag	107	1	nogas	105.854	2.840	2460164	7.84	100	105.9	90	110	
Cd	111	1	nogas	97.543	3.061	506638	1.43	100	97.5	90	110	
Sb	121	1	nogas	99.030	8.038	2222299	3.50	100	99.0	90	110	
Tl	205	1	nogas	100.901	4.159	3957135	5.29	100	100.9	90	110	
Pb	208	1	nogas	102.633	5.961	5185344	5.96	100	102.6	90	110	
U	238	1	nogas	102.785	0.748	5688620	0.94	100	102.8	90	110	
[Pb]	206	1	nogas	89.342	13.991	1221845	15.14	100	89.3	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	97.899	1.303	1164816	0.88	100	97.9	90	110	
Na	23	2	He	10443.046	1.032	16606326	0.80	10000	104.4	90	110	
Mg	24	2	He	10519.104	0.905	9297010	0.56	10000	105.2	90	110	
Al	27	2	He	105.703	0.601	54274	1.16	100	105.7	90	110	
K	39	2	He	11328.074	0.991	10972766	0.98	10000	113.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10406.422	2.563	30642	1.96	10000	104.1	90	110	
Ca	44	2	He	10481.135	0.510	523131	0.42	10000	104.8	90	110	
V	51	2	He	104.341	0.299	792912	0.43	100	104.3	90	110	
Cr	52	2	He	102.866	0.660	854473	0.58	100	102.9	90	110	
Mn	55	2	He	106.352	0.765	627269	0.65	100	106.4	90	110	
Fe	56	2	He	10484.691	1.201	78027774	0.55	10000	104.8	90	110	
Co	59	2	He	103.238	0.375	1220748	0.89	100	103.2	90	110	
Ni	60	2	He	106.212	0.843	308685	0.27	100	106.2	90	110	
Cu	63	2	He	104.714	0.833	773056	0.17	100	104.7	90	110	
Zn	66	2	He	105.073	1.202	179947	0.55	100	105.1	90	110	
As	75	2	He	104.983	1.051	164944	0.41	100	105.0	90	110	
Se	78	2	He	103.969	1.256	13751	0.65	100	104.0	90	110	
B	11	1	nogas	545.762	3.938	2133940	8.29	500	109.2	90	110	
Si	28	1	nogas	5174.989	7.643	7879016	1.48	5000	103.5	90	110	
Ca	43	1	nogas	10272.181	4.480	511070	0.43	10000	102.7	90	110	
Ca	44	1	nogas	10149.534	7.649	8153735	2.82	10000	101.5	90	110	
Fe	56	1	nogas	10237.930	4.878	356166683	1.50	10000	102.4	90	110	
Se	77	1	nogas	71.382	21.765	70952	2.40	100	71.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.595	4.860	39553	0.29	100	101.6	90	110	
Mo	95	1	nogas	99.229	4.700	941537	0.78	100	99.2	90	110	
Sn	118	1	nogas	99.210	3.623	1632409	5.64	100	99.2	90	110	
Ba	137	1	nogas	93.190	2.825	764456	0.89	100	93.2	90	110	
Sb	121	2	He	99.579	1.209	821225	0.67	100	99.6	90	110	
Li	7	1	nogas	102.552	1.816	1828184	5.52	100	102.6	90	110	
P	31	1	nogas	512.110	6.111	943650	1.04	500	102.4	90	110	
La	139	1	nogas	0.596	6071.976	833	12.08	100	0.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	98.179	190.660	17	69.28	100	98.2	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	956970	5.96	978240	97.83	70	125	
Ge	72	1	nogas	4139985	4.99	3866154	107.08	70	125	
In	115	1	nogas	4254489	1.98	3951732	107.66	70	125	
Bi	209	1	nogas	3372615	1.32	3251562	103.72	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	938684	0.66	910172	103.13	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	304_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:25:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	0.080	30.1	710	22.7	1	
Na	23	1	nogas	-93.528	-2.8	4194244	1.1	100	
Mg	24	1	nogas	0.338	173.7	121108	8.5	100	
Al	27	1	nogas	-0.373	-10.6	34807	3.1	5	
K	39	1	nogas	-6.024	-49.7	8847777	0.4	100	
Ti	47	1	nogas	0.013	315.1	357	29.2	2.5	
V	51	1	nogas	-23.070	-2.4	713592	3.3	2.5	
Cr	52	1	nogas	-1.342	-0.9	59104	0.5	2.5	
Mn	55	1	nogas	-0.124	-12.0	22607	1.9	2.5	
Co	59	1	nogas	0.034	21.0	1630	13.2	2.5	
Ni	60	1	nogas	0.163	19.7	1777	12.1	2.5	
Cu	63	1	nogas	-0.095	-37.4	7422	7.4	2	
Zn	66	1	nogas	-0.050	-24.7	2240	2.7	2.5	
As	75	1	nogas	-12.668	-2.1	75691	2.4	2.5	
Sr	88	1	nogas	-0.013	-88.0	4861	11.7	2.5	
Ag	107	1	nogas	-0.006	-55.5	650	10.7	2.5	
Cd	111	1	nogas	0.025	78.5	173	58.9	1	
Sb	121	1	nogas	0.208	10.3	5388	8.2	2.5	
Tl	205	1	nogas	0.390	47.6	16844	45.2	1	
Pb	208	1	nogas	0.034	14.5	2407	10.2	2.5	
U	238	1	nogas	0.058	44.9	3597	41.8	2.5	
[Pb]	206	1	nogas	0.040	42.4	767	30.7	2.5	
[Pb]	207	1	nogas	0.027	4.5	497	2.3	2.5	
Na	23	2	He	-88.142	-2.5	259761	0.6	100	
Mg	24	2	He	0.365	64.4	5854	2.9	100	
Al	27	2	He	-0.233	-114.7	820	16.5	5	
K	39	2	He	13.812	32.3	189596	2.2	100	
Ca	43	2	He	-1.879	-350.2	40	50.0	100	
Ca	44	2	He	-0.327	-321.8	1073	4.2	100	
V	51	2	He	-0.575	-0.2	8830	0.8	2.5	
Cr	52	2	He	-0.036	-70.6	4047	4.6	2.5	
Mn	55	2	He	0.004	459.0	1947	5.3	2.5	
Fe	56	2	He	1.656	7.6	39616	2.2	100	
Co	59	2	He	0.019	22.0	327	14.5	2.5	
Ni	60	2	He	0.025	64.2	347	14.2	2.5	
Cu	63	2	He	-0.225	-14.8	2800	8.2	2	
Zn	66	2	He	-0.246	-23.1	587	17.1	2.5	
As	75	2	He	-0.073	-10.5	263	5.1	2.5	
Se	78	2	He	0.353	44.0	143	15.4	2	
B	11	1	nogas	9.908	4.2	72245	2.1	10	
Si	28	1	nogas	-21.566	-72.7	1328510	0.9	5	
Ca	43	1	nogas	-2.733	-85.0	1093	10.1	100	
Ca	44	1	nogas	-3.098	-60.5	35434	3.5	100	
Fe	56	1	nogas	-39.440	-5.2	4411493	0.9	100	
Se	77	1	nogas	-76.944	-1.5	24817	2.1	2.5	
Se	82	1	nogas	0.097	77.5	237	12.2	2	
Mo	95	1	nogas	0.297	18.0	3097	15.6	2.5	
Sn	118	1	nogas	0.052	73.5	4701	12.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.074	-7.1	563	8.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.199	5.9	1967	4.6	2.5	
P	31	1	nogas	-7.576	-13.1	86259	1.3	10	
La	139	1	nogas	-187.435	-1.8	247	4.7	2.5	
Au	197	1	nogas	293.386	93.6	30	57.7	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	1023434	1.84	978240	104.62	70	125	
Ge	72	1	nogas	4121377	0.70	3866154	106.60	70	125	
In	115	1	nogas	4332769	1.30	3951732	109.64	70	125	
Bi	209	1	nogas	3550923	1.47	3251562	109.21	70	125	
Ge	72	2	He	960093	0.79	910172	105.48	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	315_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:47:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	100.082	2.198	493848	2.08	100	100.1	90	110	
Na	23	1	nogas	10311.711	0.702	217886705	0.08	10000	103.1	90	110	
Mg	24	1	nogas	10452.428	1.792	141410607	1.47	10000	104.5	90	110	
Al	27	1	nogas	101.369	3.578	1774955	3.01	100	101.4	90	110	
K	39	1	nogas	9819.109	1.592	215120930	0.49	10000	98.2	90	110	
Ti	47	1	nogas	96.608	2.005	194168	0.79	100	96.6	90	110	
V	51	1	nogas	123.026	3.970	4435436	1.64	100	123.0	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.183	4.321	2379609	2.81	100	101.2	90	110	
Mn	55	1	nogas	99.863	2.326	3071790	1.13	100	99.9	90	110	
Co	59	1	nogas	96.828	1.738	2389017	2.70	100	96.8	90	110	
Ni	60	1	nogas	97.724	2.398	530507	0.40	100	97.7	90	110	
Cu	63	1	nogas	95.810	2.577	1242712	0.63	100	95.8	90	110	
Zn	66	1	nogas	98.138	2.051	416194	0.12	100	98.1	90	110	
As	75	1	nogas	112.314	2.585	680932	1.01	100	112.3	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	98.305	1.057	3839857	1.30	100	98.3	90	110	
Ag	107	1	nogas	98.182	0.521	1757660	1.98	100	98.2	90	110	
Cd	111	1	nogas	98.567	2.174	370692	0.28	100	98.6	90	110	
Sb	121	1	nogas	98.332	2.439	1705201	0.43	100	98.3	90	110	
Tl	205	1	nogas	99.875	0.483	3019066	0.68	100	99.9	90	110	
Pb	208	1	nogas	81.632	0.999	4124459	1.00	100	81.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.975	1.436	4479678	1.41	100	105.0	90	110	
[Pb]	206	1	nogas	94.407	1.279	994331	1.68	100	94.4	90	110	
[Pb]	207	1	nogas	96.760	0.842	887751	1.26	100	96.8	90	110	
Na	23	2	He	10061.559	2.237	12377151	2.02	10000	100.6	90	110	
Mg	24	2	He	9991.840	1.968	6825568	1.62	10000	99.9	90	110	
Al	27	2	He	99.011	2.692	39334	2.29	100	99.0	90	110	
K	39	2	He	8133.381	1.681	7928032	1.64	10000	81.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9800.499	3.477	22310	3.80	10000	98.0	90	110	
Ca	44	2	He	9663.570	0.655	372853	0.36	10000	96.6	90	110	
V	51	2	He	98.190	1.289	577295	0.94	100	98.2	90	110	
Cr	52	2	He	95.847	1.011	615582	0.79	100	95.8	90	110	
Mn	55	2	He	97.423	0.355	444238	0.25	100	97.4	90	110	
Fe	56	2	He	9631.794	2.348	55403291	2.01	10000	96.3	90	110	
Co	59	2	He	94.418	2.481	862851	2.11	100	94.4	90	110	
Ni	60	2	He	98.313	2.570	220848	2.21	100	98.3	90	110	
Cu	63	2	He	99.482	1.140	567811	0.77	100	99.5	90	110	
Zn	66	2	He	98.750	1.024	130761	0.69	100	98.7	90	110	
As	75	2	He	97.396	0.662	118295	0.29	100	97.4	90	110	
Se	78	2	He	92.992	1.573	9514	1.83	100	93.0	90	110	
B	11	1	nogas	528.901	3.516	1587155	3.39	500	105.8	90	110	
Si	28	1	nogas	5111.874	2.342	6024404	0.68	5000	102.2	90	110	
Ca	43	1	nogas	9848.926	1.533	378318	0.96	10000	98.5	90	110	
Ca	44	1	nogas	10004.693	3.382	6209870	1.34	10000	100.0	90	110	
Fe	56	1	nogas	9828.320	1.762	264130564	0.59	10000	98.3	90	110	
Se	77	1	nogas	202.230	8.124	86201	3.85	100	202.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	94.060	2.867	28279	0.82	100	94.1	90	110	
Mo	95	1	nogas	94.006	1.916	688591	0.49	100	94.0	90	110	
Sn	118	1	nogas	95.301	2.174	1134548	0.42	100	95.3	90	110	
Ba	137	1	nogas	97.269	1.970	577733	0.68	100	97.3	90	110	
Sb	121	2	He	93.605	1.663	596666	1.41	100	93.6	90	110	
Li	7	1	nogas	100.960	0.824	1382937	0.61	100	101.0	90	110	
P	31	1	nogas	484.838	2.831	693865	0.51	500	97.0	90	110	
La	139	1	nogas	-0.270	-16091.240	603	18.18	100	-0.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	252.929	169.153	20	100.00	100	252.9	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	734542	0.46	978240	75.09	70	125	
Ge	72	1	nogas	3191813	2.01	3866154	82.56	70	125	
In	115	1	nogas	3080230	1.90	3951732	77.95	70	125	
Bi	209	1	nogas	2600440	1.08	3251562	79.98	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	725506	0.37	910172	79.71	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	316_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:49:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	35.7	517	26.4	1	
Na	23	1	nogas	-39.123	-4.8	4301234	0.8	100	
Mg	24	1	nogas	4.482	18.5	148766	8.2	100	
Al	27	1	nogas	-0.572	-8.0	25554	2.2	5	
K	39	1	nogas	-12.497	-11.1	7293566	1.0	100	
Ti	47	1	nogas	-0.024	-237.9	220	55.1	2.5	
V	51	1	nogas	-11.930	-5.9	922096	3.6	2.5	
Cr	52	1	nogas	-1.146	-1.1	54560	1.9	2.5	
Mn	55	1	nogas	-0.167	-10.6	17599	2.2	2.5	
Co	59	1	nogas	0.020	29.9	993	14.4	2.5	
Ni	60	1	nogas	0.151	3.3	1427	2.7	2.5	
Cu	63	1	nogas	-0.168	-13.8	5224	4.8	2	
Zn	66	1	nogas	-0.001	-2015.9	2110	6.2	2.5	
As	75	1	nogas	-6.289	-7.1	98188	3.3	2.5	
Sr	88	1	nogas	0.066	29.0	7435	9.7	2.5	
Ag	107	1	nogas	-0.003	-208.3	593	21.3	2.5	
Cd	111	1	nogas	0.018	67.9	103	47.7	1	
Sb	121	1	nogas	0.134	19.8	3134	14.4	2.5	
Tl	205	1	nogas	0.344	47.5	11522	45.8	1	
Pb	208	1	nogas	0.016	31.5	1533	16.8	2.5	
U	238	1	nogas	0.063	48.5	2984	46.3	2.5	
[Pb]	206	1	nogas	0.024	32.5	410	21.7	2.5	
[Pb]	207	1	nogas	0.021	31.3	327	19.7	2.5	
Na	23	2	He	-48.356	-3.1	269255	0.1	100	
Mg	24	2	He	2.697	12.6	6638	3.6	100	
Al	27	2	He	-0.451	-20.2	590	7.4	5	
K	39	2	He	-27.458	-5.3	150263	0.9	100	
Ca	43	2	He	-0.615	-2430.0	37	103.3	100	
Ca	44	2	He	4.745	98.3	1110	17.4	100	
V	51	2	He	-0.191	-17.7	9811	2.6	2.5	
Cr	52	2	He	-0.100	-17.8	2920	3.5	2.5	
Mn	55	2	He	-0.074	-18.4	1233	5.2	2.5	
Fe	56	2	He	0.695	5.5	26937	1.3	100	
Co	59	2	He	0.015	38.1	240	25.0	2.5	
Ni	60	2	He	0.028	54.8	297	12.8	2.5	
Cu	63	2	He	-0.293	-7.8	1907	8.4	2	
Zn	66	2	He	-0.300	-6.4	410	6.5	2.5	
As	75	2	He	-0.066	-51.0	229	19.6	2.5	
Se	78	2	He	0.517	48.8	137	21.2	2	
B	11	1	nogas	20.309	6.0	90793	4.0	10	CCB Main CR1 Failed
Si	28	1	nogas	107.792	27.2	1254085	1.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	0.486	653.2	1053	12.0	100	
Ca	44	1	nogas	2.901	98.7	33821	4.2	100	
Fe	56	1	nogas	-44.152	-3.8	3575470	0.5	100	
Se	77	1	nogas	-34.080	-7.2	32055	3.2	2.5	
Se	82	1	nogas	0.141	32.2	213	7.2	2	
Mo	95	1	nogas	0.143	31.5	1373	24.4	2.5	
Sn	118	1	nogas	0.058	87.0	3594	17.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.071	-13.8	440	14.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.107	12.5	993	9.7	2.5	
P	31	1	nogas	-18.688	-5.7	57176	1.2	10	
La	139	1	nogas	-196.265	-7.6	163	21.5	2.5	
Au	197	1	nogas	-40.470	-284.4	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	807207	0.40	978240	82.52	70	125	
Ge	72	1	nogas	3466855	1.44	3866154	89.67	70	125	
In	115	1	nogas	3243007	0.51	3951732	82.07	70	125	
Bi	209	1	nogas	2732590	1.82	3251562	84.04	70	125	
Ge	72	2	He	800457	0.84	910172	87.95	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	317_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:51:50-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	98.558	0.925	487603	0.37	100	98.6	90	110	
Na	23	1	nogas	10531.683	0.510	215938213	0.34	10000	105.3	90	110	
Mg	24	1	nogas	10627.550	0.342	139587845	0.72	10000	106.3	90	110	
Al	27	1	nogas	96.433	2.847	1770542	1.33	100	96.4	90	110	
K	39	1	nogas	9216.234	2.126	211969321	0.28	10000	92.2	90	110	
Ti	47	1	nogas	92.376	2.578	194505	0.81	100	92.4	90	110	
V	51	1	nogas	98.739	4.544	3970219	1.32	100	98.7	90	110	
Cr	52	1	nogas	93.550	4.425	2310682	2.20	100	93.6	90	110	
Mn	55	1	nogas	96.305	2.575	3104288	1.57	100	96.3	90	110	
Co	59	1	nogas	93.886	2.210	2426126	0.46	100	93.9	90	110	
Ni	60	1	nogas	93.036	1.857	529186	0.34	100	93.0	90	110	
Cu	63	1	nogas	91.065	1.700	1237953	0.40	100	91.1	90	110	
Zn	66	1	nogas	93.780	3.013	416708	1.19	100	93.8	90	110	
As	75	1	nogas	96.630	2.167	631578	0.36	100	96.6	90	110	
Sr	88	1	nogas	94.278	2.226	3857504	0.28	100	94.3	90	110	
Ag	107	1	nogas	93.096	2.421	1745550	0.69	100	93.1	90	110	
Cd	111	1	nogas	97.983	0.954	371164	0.53	100	98.0	90	110	
Sb	121	1	nogas	94.680	2.393	1720164	0.83	100	94.7	90	110	
Tl	205	1	nogas	101.792	0.948	3032518	1.13	100	101.8	90	110	
Pb	208	1	nogas	81.281	0.529	4106697	0.53	100	81.3	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	106.264	1.192	4469189	1.40	100	106.3	90	110	
[Pb]	206	1	nogas	97.072	1.001	1007548	0.71	100	97.1	90	110	
[Pb]	207	1	nogas	98.024	0.823	886319	0.96	100	98.0	90	110	
Na	23	2	He	9430.616	0.235	12510508	0.33	10000	94.3	90	110	
Mg	24	2	He	9415.505	1.922	6925406	2.16	10000	94.2	90	110	
Al	27	2	He	92.114	3.403	39458	3.80	100	92.1	90	110	
K	39	2	He	8173.439	2.148	7966210	2.10	10000	81.7	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9288.758	2.003	22764	1.50	10000	92.9	90	110	
Ca	44	2	He	9168.135	2.027	380874	1.74	10000	91.7	90	110	
V	51	2	He	92.489	0.727	586065	0.26	100	92.5	90	110	
Cr	52	2	He	90.900	2.123	628703	1.76	100	90.9	90	110	
Mn	55	2	He	93.098	0.714	457107	0.23	100	93.1	90	110	
Fe	56	2	He	9148.976	1.305	56662009	1.35	10000	91.5	90	110	
Co	59	2	He	90.053	0.498	886053	0.15	100	90.1	90	110	
Ni	60	2	He	94.014	0.514	227396	0.80	100	94.0	90	110	
Cu	63	2	He	93.372	0.986	573990	0.50	100	93.4	90	110	
Zn	66	2	He	93.578	1.867	133447	1.57	100	93.6	90	110	
As	75	2	He	93.319	0.431	122043	0.62	100	93.3	90	110	
Se	78	2	He	87.570	1.221	9651	1.38	100	87.6	90	110	CCV Main CR1-2 Failed
B	11	1	nogas	523.087	2.934	1574159	3.06	500	104.6	90	110	
Si	28	1	nogas	4755.913	2.094	5948664	0.39	5000	95.1	90	110	
Ca	43	1	nogas	9325.166	1.521	375315	0.60	10000	93.3	90	110	
Ca	44	1	nogas	9390.953	3.478	6108457	1.42	10000	93.9	90	110	
Fe	56	1	nogas	9367.912	3.706	263901481	1.59	10000	93.7	90	110	
Se	77	1	nogas	116.653	5.124	68800	0.34	100	116.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	92.234	1.612	29060	1.06	100	92.2	90	110	
Mo	95	1	nogas	89.854	2.090	689529	0.22	100	89.9	90	110	CCV Main CR1-2 Failed
Sn	118	1	nogas	94.732	0.757	1135986	0.83	100	94.7	90	110	
Ba	137	1	nogas	96.880	1.444	579554	0.85	100	96.9	90	110	
Sb	121	2	He	89.106	1.037	611518	0.73	100	89.1	90	110	CCV Main CR1-2 Failed
Li	7	1	nogas	97.810	2.054	1345431	1.47	100	97.8	90	110	
P	31	1	nogas	447.738	2.855	677433	0.57	500	89.5	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	-53.796	-48.288	483	11.77	100	-53.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	255.682	84.204	20	50.00	100	255.7	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	736477	0.58	978240	75.29	70	125	
Ge	72	1	nogas	3343942	2.08	3866154	86.49	70	125	
In	115	1	nogas	3101851	0.89	3951732	78.49	70	125	
Bi	209	1	nogas	2562907	1.46	3251562	78.82	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	781093	0.51	910172	85.82	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	318_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:53:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	0.096	19.0	637	14.9	1	
Na	23	1	nogas	-47.557	-4.8	4041716	0.5	100	
Mg	24	1	nogas	4.034	18.1	139665	6.3	100	
Al	27	1	nogas	-0.553	-6.5	25878	2.6	5	
K	39	1	nogas	-18.449	-1.1	7147792	0.3	100	
Ti	47	1	nogas	-0.016	-241.0	237	35.9	2.5	
V	51	1	nogas	-16.730	-5.2	782241	3.0	2.5	
Cr	52	1	nogas	-1.340	-1.8	49696	1.4	2.5	
Mn	55	1	nogas	-0.151	-4.0	18099	0.9	2.5	
Co	59	1	nogas	0.021	17.8	1040	10.0	2.5	
Ni	60	1	nogas	0.166	9.7	1513	6.0	2.5	
Cu	63	1	nogas	-0.172	-4.9	5164	2.4	2	
Zn	66	1	nogas	-0.007	-162.0	2080	2.5	2.5	
As	75	1	nogas	-8.902	-2.3	83937	1.1	2.5	
Sr	88	1	nogas	0.034	10.1	6111	2.6	2.5	
Ag	107	1	nogas	-0.003	-92.5	603	8.3	2.5	
Cd	111	1	nogas	0.025	47.2	127	35.6	1	
Sb	121	1	nogas	0.138	18.1	3217	14.8	2.5	
Tl	205	1	nogas	0.348	49.3	11428	46.9	1	
Pb	208	1	nogas	0.020	28.5	1717	16.6	2.5	
U	238	1	nogas	0.067	40.8	3127	38.7	2.5	
[Pb]	206	1	nogas	0.025	52.8	417	35.0	2.5	
[Pb]	207	1	nogas	0.032	23.8	427	17.0	2.5	
Na	23	2	He	-53.362	-4.1	254087	0.2	100	
Mg	24	2	He	2.490	9.3	6271	2.4	100	
Al	27	2	He	-0.487	-49.6	557	19.2	5	
K	39	2	He	-27.277	-16.9	150435	2.9	100	
Ca	43	2	He	12.254	67.3	67	31.2	100	
Ca	44	2	He	0.742	134.3	910	4.8	100	
V	51	2	He	-0.396	-6.4	8231	2.1	2.5	
Cr	52	2	He	-0.083	-23.8	2947	5.2	2.5	
Mn	55	2	He	-0.056	-64.1	1283	14.5	2.5	
Fe	56	2	He	1.029	10.2	28115	3.4	100	
Co	59	2	He	0.019	21.8	267	14.2	2.5	
Ni	60	2	He	0.026	130.3	283	28.5	2.5	
Cu	63	2	He	-0.297	-8.3	1823	8.7	2	
Zn	66	2	He	-0.243	-8.7	477	6.7	2.5	
As	75	2	He	-0.070	-58.2	217	25.4	2.5	
Se	78	2	He	0.505	33.9	131	13.1	2	
B	11	1	nogas	16.651	6.8	77663	4.4	10	CCB Main CR1 Failed
Si	28	1	nogas	57.043	164.6	1199140	8.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	1.543	140.7	1097	8.4	100	
Ca	44	1	nogas	-0.587	-378.8	31460	5.0	100	
Fe	56	1	nogas	-52.025	-2.7	3345746	1.4	100	
Se	77	1	nogas	-50.213	-6.0	27808	2.6	2.5	
Se	82	1	nogas	0.019	416.2	173	14.5	2	
Mo	95	1	nogas	0.158	32.8	1493	27.7	2.5	
Sn	118	1	nogas	0.039	123.7	3337	17.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	-0.067	-22.7	460	21.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.126	14.4	1090	10.3	2.5	
P	31	1	nogas	-18.176	-0.3	57825	0.1	10	
La	139	1	nogas	-206.913	-14.8	137	52.9	2.5	
Au	197	1	nogas	234.960	149.6	20	86.6	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	794523	0.49	978240	81.22	70	125	
Ge	72	1	nogas	3462484	0.23	3866154	89.56	70	125	
In	115	1	nogas	3217632	0.68	3951732	81.42	70	125	
Bi	209	1	nogas	2687128	0.57	3251562	82.64	70	125	
Ge	72	2	He	774457	1.09	910172	85.09	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	319LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:55:48-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	4.656	2.200	25093	1.75	5	93.1	70	130	
Na	23	1	nogas	478.514	2.020	15094976	0.59	500	95.7	70	130	
Mg	24	1	nogas	524.605	0.584	7304907	0.49	500	104.9	70	130	
Al	27	1	nogas	4.844	3.163	115568	0.62	5	96.9	70	130	
K	39	1	nogas	522.881	3.152	17906860	0.32	500	104.6	70	130	
Ti	47	1	nogas	4.894	3.329	9993	4.96	5	97.9	70	130	
V	51	1	nogas	8.090	3.509	1369073	1.20	5	161.8	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.727	2.326	182371	1.22	5	94.5	70	130	
Mn	55	1	nogas	4.858	1.357	168258	1.36	5	97.2	70	130	
Co	59	1	nogas	5.126	0.946	125785	1.31	5	102.5	70	130	
Ni	60	1	nogas	5.323	2.784	29110	1.10	5	106.5	70	130	
Cu	63	1	nogas	5.278	2.591	74413	0.69	5	105.6	70	130	
Zn	66	1	nogas	5.226	1.909	23802	0.88	5	104.5	70	130	
As	75	1	nogas	6.975	17.030	155083	3.44	5	139.5	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.993	2.195	197363	0.87	5	99.9	70	130	
Ag	107	1	nogas	4.989	1.872	89113	2.86	5	99.8	70	130	
Cd	111	1	nogas	4.939	1.347	19111	0.76	5	98.8	70	130	
Sb	121	1	nogas	4.865	2.312	84188	2.21	5	97.3	70	130	
Tl	205	1	nogas	4.815	2.540	148149	1.87	5	96.3	70	130	
Pb	208	1	nogas	4.104	0.223	208027	0.22	5	82.1	70	130	
U	238	1	nogas	4.940	1.567	214021	1.94	5	98.8	70	130	
[Pb]	206	1	nogas	4.853	2.085	51973	1.34	5	97.1	70	130	
[Pb]	207	1	nogas	4.857	1.789	45313	1.03	5	97.1	70	130	
Na	23	2	He	499.122	2.643	895370	0.24	500	99.8	70	130	
Mg	24	2	He	520.488	2.432	357211	0.79	500	104.1	70	130	
Al	27	2	He	5.014	6.824	2650	4.95	5	100.3	70	130	
K	39	2	He	380.769	0.615	539328	0.41	500	76.2	70	130	
Ca	43	2	He	479.189	1.264	1117	2.74	500	95.8	70	130	
Ca	44	2	He	507.408	3.003	20228	1.96	500	101.5	70	130	
V	51	2	He	5.289	3.115	40295	1.42	5	105.8	70	130	
Cr	52	2	He	5.065	3.523	35417	2.41	5	101.3	70	130	
Mn	55	2	He	4.919	2.942	23655	1.66	5	98.4	70	130	
Fe	56	2	He	514.757	0.466	2961866	1.23	500	103.0	70	130	
Co	59	2	He	5.005	2.789	45523	2.34	5	100.1	70	130	
Ni	60	2	He	5.143	1.775	11677	2.42	5	102.9	70	130	
Cu	63	2	He	5.418	1.493	33918	0.84	5	108.4	70	130	
Zn	66	2	He	4.966	4.929	7258	4.61	5	99.3	70	130	
As	75	2	He	4.875	6.758	6151	4.93	5	97.5	70	130	
Se	78	2	He	5.142	9.453	590	7.36	5	102.8	70	130	
B	11	1	nogas	36.060	1.671	140450	0.75	25	144.2	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	519.272	0.282	1542009	1.77	25	2077.1	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	507.240	1.493	20214	2.03	500	101.4	70	130	
Ca	44	1	nogas	503.021	0.870	337290	0.93	500	100.6	70	130	
Fe	56	1	nogas	476.088	3.142	16890168	1.37	500	95.2	70	130	
Se	77	1	nogas	24.766	20.755	43252	2.63	5	495.3	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.204	10.857	1697	10.62	5	104.1	70	130	
Mo	95	1	nogas	4.804	0.686	35101	1.05	5	96.1	70	130	
Sn	118	1	nogas	4.640	3.536	59411	2.84	5	92.8	70	130	
Ba	137	1	nogas	4.575	3.409	28727	2.27	5	91.5	70	130	
Sb	121	2	He	4.806	1.421	30647	0.42	5	96.1	70	130	
Li	7	1	nogas	4.766	0.166	143159	0.72	5	95.3	70	130	
P	31	1	nogas	21.766	4.669	103277	0.50	25	87.1	70	130	
La	139	1	nogas	-201.699	-3.269	147	10.41	5	-4034.0	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	523.122	61.533	33	45.83	5	10462.4	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	798412	0.76	978240	81.62	70	125	
Ge	72	1	nogas	3164342	1.73	3866154	81.85	70	125	
In	115	1	nogas	3163551	1.13	3951732	80.05	70	125	
Bi	209	1	nogas	2637878	0.77	3251562	81.13	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	721025	1.69	910172	79.22	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	320SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:57:46-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	286CALB.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	1.735	1.735	5.06	9646	0.02	2000	
Na	23	1	nogas	169.753	169.753	18.52	8694356	0.00	200000	
Mg	24	1	nogas	222.580	222.580	2.99	3186071	0.01	200000	
Al	27	1	nogas	2.163	2.163	10.27	68112	0.00	2000	
K	39	1	nogas	237.480	237.480	9.20	11611399	0.00	200000	
Ti	47	1	nogas	1.888	1.888	5.46	3904	0.05	2000	
V	51	1	nogas	4.675	4.675	60.50	1250516	0.00	2000	
Cr	52	1	nogas	1.923	1.923	12.94	116039	0.00	2000	
Mn	55	1	nogas	2.166	2.166	7.39	84512	0.00	2000	
Co	59	1	nogas	2.072	2.072	4.69	49797	0.00	2000	
Ni	60	1	nogas	2.380	2.380	6.55	12948	0.02	2000	
Cu	63	1	nogas	2.032	2.032	4.85	32081	0.01	2000	
Zn	66	1	nogas	2.680	2.680	8.18	12805	0.02	2000	
As	75	1	nogas	4.972	4.972	39.08	141438	0.00	2000	
Sr	88	1	nogas	2.087	2.087	3.09	82863	0.00	2000	
Ag	107	1	nogas	1.941	1.941	4.65	34143	0.01	2000	
Cd	111	1	nogas	1.852	1.852	6.68	7565	0.02	2000	
Sb	121	1	nogas	2.008	2.008	6.61	34180	0.01	2000	
Tl	205	1	nogas	1.823	1.823	3.43	60602	0.00	2000	
Pb	208	1	nogas	1.647	1.647	0.78	83919	0.00	2000	
U	238	1	nogas	1.839	1.839	2.34	85676	0.00	2000	
[Pb]	206	1	nogas	1.811	1.811	3.26	20927	0.01	2000	
[Pb]	207	1	nogas	1.837	1.837	0.79	18491	0.01	2000	
Na	23	2	He	187.500	187.500	3.56	519460	0.04	200000	
Mg	24	2	He	214.258	214.258	1.62	148270	0.14	200000	
Al	27	2	He	2.355	2.355	18.39	1607	0.15	2000	
K	39	2	He	143.935	143.935	1.92	313610	0.05	200000	
Ca	43	2	He	172.139	172.139	15.01	420	40.98	200000	
Ca	44	2	He	211.276	211.276	7.32	8832	2.39	200000	
V	51	2	He	2.354	2.354	2.86	23253	0.01	2000	
Cr	52	2	He	2.164	2.164	5.25	16871	0.01	2000	
Mn	55	2	He	2.095	2.095	3.70	10813	0.02	2000	
Fe	56	2	He	203.004	203.004	1.29	1170529	0.02	200000	
Co	59	2	He	2.059	2.059	3.15	18620	0.01	2000	
Ni	60	2	He	2.213	2.213	4.98	5097	0.04	2000	
Cu	63	2	He	2.005	2.005	3.20	14553	0.01	2000	
Zn	66	2	He	2.586	2.586	6.74	4111	0.06	2000	
As	75	2	He	2.090	2.090	4.92	2779	0.08	2000	
Se	78	2	He	2.512	2.512	8.54	322	0.78	2000	
B	11	1	nogas	19.939	19.939	2.73	90609	0.02	2000	
Si	28	1	nogas	638.792	638.792	23.01	1616646	0.04	2000	
Ca	43	1	nogas	211.542	211.542	7.83	8746	2.42	200000	
Ca	44	1	nogas	214.808	214.808	5.87	156615	0.14	200000	
Fe	56	1	nogas	188.028	188.028	6.73	9111775	0.00	200000	

Sample Report

Se	77	1	nogas	26.186	26.186	50.39	42447	0.06	2000	
Se	82	1	nogas	2.217	2.217	10.47	790	0.28	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.958	1.958	5.32	14076	0.01	2000	
Sn	118	1	nogas	1.777	1.777	8.43	25779	0.01	2000	
Ba	137	1	nogas	1.810	1.810	9.16	12528	0.01	2000	
Sb	121	2	He	1.885	1.885	4.73	12054	0.02	2000	
La	139	1	nogas	-187.394	-187.394	-11.39	190	-98.63	2000	
Au	197	1	nogas	344.987	344.987	33.17	27	1293.70	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	816408	0.99	978240	83.46	70	125	
Ge	72	1	nogas	3088241	4.91	3866154	79.88	70	125	
In	115	1	nogas	3340790	6.39	3951732	84.54	70	125	
Bi	209	1	nogas	2833092	1.32	3251562	87.13	70	125	
Ge	72	2	He	715055	1.24	910172	78.56	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	321ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-22T23:59:44-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	219.9	150	40.6	0	ICSA Main CR1 Failed
Na	23	1	nogas	104157.977	1.3	2123383314	0.6	0	
Mg	24	1	nogas	102699.284	1.0	1367829564	0.4	0	
Al	27	1	nogas	101124.100	0.5	1624396189	0.8	0	
K	39	1	nogas	104306.379	0.4	2073607313	0.5	0	
Ti	47	1	nogas	2101.671	1.5	3944092	0.8	0	
V	51	1	nogas	10.937	2.1	1361603	0.5	0	
Cr	52	1	nogas	0.987	5.7	92365	1.5	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.679	4.3	39308	1.6	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.531	3.3	12648	4.0	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.854	6.0	9859	5.1	0	ICSA Main CR1 Failed
Cu	63	1	nogas	2.280	4.3	34018	4.3	0	
Zn	66	1	nogas	5.171	1.5	22227	0.7	0	
As	75	1	nogas	9.555	6.2	158258	2.2	0	
Sr	88	1	nogas	0.901	4.3	36868	3.4	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.004	88.3	640	9.4	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.128	1.8	7785	1.6	0	
Sb	121	1	nogas	0.179	9.2	3440	8.7	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.028	43.9	1267	25.7	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.051	7.8	3287	6.1	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.065	5.8	757	5.5	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.070	4.5	703	3.6	0	ICSA Main CR1 Failed
Na	23	2	He	109888.827	0.2	123155035	0.5	0	
Mg	24	2	He	107499.240	1.0	68381471	0.8	0	
Al	27	2	He	101317.720	0.9	36825130	0.3	0	
K	39	2	He	83460.910	0.7	79719690	0.7	0	
Ca	43	2	He	102030.488	1.4	216073	1.1	0	
Ca	44	2	He	104903.270	1.1	3763349	0.4	0	
V	51	2	He	0.541	4.8	12227	0.7	0	ICSA Main CR1 Failed
Cr	52	2	He	0.330	15.1	5031	5.9	0	ICSA Main CR1 Failed
Mn	55	2	He	0.608	1.3	3930	1.2	0	ICSA Main CR1 Failed
Fe	56	2	He	105888.354	1.0	567295418	0.5	0	
Co	59	2	He	0.280	5.0	2457	4.7	0	ICSA Main CR1 Failed
Ni	60	2	He	0.644	11.8	1540	10.8	0	ICSA Main CR1 Failed
Cu	63	2	He	0.317	14.1	4837	4.6	0	ICSA Main CR1 Failed
Zn	66	2	He	3.537	7.8	5054	7.3	0	ICSA Main CR1 Failed
As	75	2	He	0.195	29.0	488	13.4	0	ICSA Main CR1 Failed
Se	78	2	He	0.715	34.9	135	18.1	0	ICSA Main CR1 Failed
B	11	1	nogas	10.478	6.5	55767	3.1	0	ICSA Main CR1 Failed
Si	28	1	nogas	858.777	4.2	1762921	2.7	0	
Ca	43	1	nogas	105376.167	1.2	3775283	0.5	0	
Ca	44	1	nogas	106186.091	1.6	61364582	0.9	0	
Fe	56	1	nogas	103951.723	0.5	2571893057	0.8	0	
Se	77	1	nogas	75.182	5.9	52092	1.3	0	
Se	82	1	nogas	0.308	89.0	230	32.8	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2070.782	0.7	14176880	0.7	0	
Sn	118	1	nogas	-0.020	-51.1	2414	5.3	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.109	5.7	1443	1.6	0	ICSA Main CR1 Failed
Sb	121	2	He	0.179	11.4	1267	9.0	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	104177.574	0.6	124116231	0.5	0	
La	139	1	nogas	-33.827	-173.7	510	25.9	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	765161	0.72	978240	78.22	70	125	
Ge	72	1	nogas	2983429	0.86	3866154	77.17	70	125	
In	115	1	nogas	2985694	0.86	3951732	75.55	70	125	
Bi	209	1	nogas	2404400	1.61	3251562	73.95	70	125	
Ge	72	2	He	675947	0.66	910172	74.27	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	322ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\012
Acq Date Time	2019-01-23T00:01:49-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	286CALB.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	115.810	1.798	571793	0.53	100	115.8	80	120	
Na	23	1	nogas	117817.826	1.441	2395333787	0.56	100	117817.8	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	115332.874	1.660	1532271968	0.67	100	115332.9	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	100737.487	0.422	1639486109	0.58	100	100737.5	80	120	ICSB Main CR1 Failed
K	39	1	nogas	115685.213	1.216	2329300185	0.62	100	115685.2	80	120	
Ti	47	1	nogas	2184.457	1.417	4153459	0.61	100	2184.5	80	120	
V	51	1	nogas	132.256	1.488	4434033	0.61	100	132.3	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	120.752	0.750	2676716	1.43	100	120.8	80	120	
Mn	55	1	nogas	119.013	0.930	3464019	1.44	100	119.0	80	120	
Co	59	1	nogas	119.754	2.842	2798134	3.14	100	119.8	80	120	
Ni	60	1	nogas	116.588	0.863	599512	1.68	100	116.6	80	120	
Cu	63	1	nogas	119.368	1.460	1465154	1.83	100	119.4	80	120	
Zn	66	1	nogas	119.981	0.782	481576	0.46	100	120.0	80	120	
As	75	1	nogas	131.124	0.607	733743	0.92	100	131.1	80	120	ICSB Main CR1 Failed
Sr	88	1	nogas	119.136	0.978	4406429	0.20	100	119.1	80	120	
Ag	107	1	nogas	114.704	2.175	1944458	1.81	100	114.7	80	120	
Cd	111	1	nogas	117.771	0.709	422292	0.90	100	117.8	80	120	
Sb	121	1	nogas	119.208	0.996	1958228	1.34	100	119.2	80	120	
Tl	205	1	nogas	116.427	3.193	3264524	2.73	100	116.4	80	120	
Pb	208	1	nogas	89.001	1.726	4496726	1.73	100	89.0	80	120	
U	238	1	nogas	127.033	0.652	5028907	0.35	100	127.0	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	110.476	2.565	1079325	2.30	100	110.5	80	120	
[Pb]	207	1	nogas	112.913	2.007	960999	2.03	100	112.9	80	120	
Na	23	2	He	122925.298	0.504	137494001	0.36	100	122925.3	80	120	ICSB Main CR1 Failed
Mg	24	2	He	119325.146	0.556	75774424	0.63	100	119325.1	80	120	
Al	27	2	He	99970.695	0.545	36274078	0.54	100	99970.7	80	120	ICSB Main CR1 Failed
K	39	2	He	91177.407	1.287	87073975	1.28	100	91177.4	80	120	ICSB Main CR1 Failed
Ca	43	2	He	114057.061	1.695	241135	1.86	100	114057.1	80	120	ICSB Main CR1 Failed
Ca	44	2	He	116242.198	0.600	4163044	0.72	100	116242.2	80	120	
V	51	2	He	122.766	0.402	669016	0.76	100	122.8	80	120	ICSB Main CR1 Failed
Cr	52	2	He	118.558	0.688	707494	0.78	100	118.6	80	120	
Mn	55	2	He	120.089	1.427	508970	0.77	100	120.1	80	120	
Fe	56	2	He	116520.705	1.444	623168924	0.78	100	116520.7	80	120	
Co	59	2	He	116.649	0.426	991516	0.50	100	116.6	80	120	
Ni	60	2	He	119.182	1.699	248981	1.68	100	119.2	80	120	
Cu	63	2	He	119.760	1.412	635127	1.36	100	119.8	80	120	
Zn	66	2	He	121.456	1.625	149422	1.57	100	121.5	80	120	
As	75	2	He	123.848	1.322	139830	0.75	100	123.8	80	120	ICSB Main CR1 Failed
Se	78	2	He	120.013	3.327	11402	3.58	100	120.0	80	120	
B	11	1	nogas	587.284	1.788	1760961	0.49	100	587.3	80	120	
Si	28	1	nogas	6752.986	0.866	7219217	0.17	100	6753.0	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	115135.418	1.910	4178987	1.04	100	115135.4	80	120	
Ca	44	1	nogas	116904.487	1.340	68446727	0.45	100	116904.5	80	120	
Fe	56	1	nogas	114450.637	1.168	2868473064	1.09	100	114450.6	80	120	
Se	77	1	nogas	197.892	1.866	80681	1.83	100	197.9	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	120.066	1.805	34156	1.46	100	120.1	80	120	
Mo	95	1	nogas	2143.764	0.677	14869688	0.29	100	2143.8	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	112.540	0.974	1276986	1.61	100	112.5	80	120	
Ba	137	1	nogas	115.252	1.445	652465	0.80	100	115.3	80	120	
Sb	121	2	He	115.255	1.880	683251	1.57	100	115.3	80	120	
La	139	1	nogas	85.236	70.073	760	17.11	100	85.2	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	735096	1.29	978240	75.14	70	125	
Ge	72	1	nogas	3022738	0.89	3866154	78.18	70	125	
In	115	1	nogas	2936083	0.86	3951732	74.30	70	125	
Bi	209	1	nogas	2412329	0.55	3251562	74.19	70	125	
Ge	72	2	He	674787	0.66	910172	74.14	70	125	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\012219A.b
Report Comment
Instrument Name G3281A JP11080910

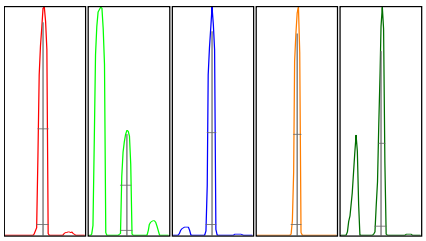
[nogas]

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		10711				NaN	-	
24		28573				NaN	-	
59		33479				NaN	-	
115		38060				NaN	-	
208		20069				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	0.96	5.00				
24	2.16	5.00				
59	0.86	5.00				
115	1.12	5.00				
208	1.60	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	10793	10788	10665	10757	10553
24	29336	29084	28434	27912	28096
59	33501	33698	33819	33185	33192
115	38243	38429	38273	37345	38014
208	20097	20514	19925	20169	19639

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	3041.88	8.95	8.9 - 9.1		0.35	0.445	0.750	
24	8003.81	23.95	23.9 - 24.1		0.37	0.444	0.750	
59	11018.17	59.00	58.9 - 59.1		0.30	0.392	0.750	
115	14087.54	115.05	114.9 - 115.1		0.26	0.364	0.750	
208	6832.12	208.05	207.9 - 208.1		0.26	0.433	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	0.50 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		216				NaN	-	
24		1788				NaN	-	
59		15185				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	9.45	5.00	[F]			
24	1.48	5.00				
59	0.56	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	231	189	235	200	225
24	1793	1752	1803	1772	1820
59	15287	15143	15149	15261	15085

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	63.64	8.95	8.9 - 9.1		0.34	0.459	0.750	
24	507.92	23.95	23.9 - 24.1		0.37	0.442	0.750	
59	5115.33	59.00	58.9 - 59.1		0.29	0.384	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	0.50 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 %		

APPENDIX F
PROTOCOL FOR DISCHARGING GWTP EFFLUENT

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MEMORANDUM

DATE: August 28, 2017

PROJECT NAME: Remediation of Multiple Sites, Longhorn Army Ammunition Plant, Karnack, TX

TO:	Richard Mayer	Senior Project Engineer US Environmental Protection Agency Federal Facilities Section (6PD-F)
	April Palmie	Project and Grant Manager Superfund Section, Remediation Division Texas Commission on Environmental Quality
FROM:	Rose M. Zeiler, Ph.D.	Longhorn AAP Site Manager

SUBJECT: **Protocol for Discharging GWTP Effluent**
Longhorn Army Ammunition Plant, Karnack, TX
(Contract: W912DY-09-D-0059, Task Order DS01)

INTRODUCTION

The purpose of this memo is to document the protocol for discharging Longhorn Army Ammunition Plant groundwater treatment plant (GWTP) effluent to Harrison Bayou, the INF-Pond, or LHAAP-18/24.

The GWTP is designed to:

- Extract groundwater from LHAAP-18/24 and LHAAP-16 for hydraulic control;
- Remove metals by pH adjustment, polymer addition, and gravity separation;
- Remove volatile organic compounds (VOCs) by air stripping;
- Remove perchlorate in a fluidized bed reactor (FBR) and an ion exchange scavenger system; and
- Discharge the effluent continuously.

DISCHARGE CRITERIA

The discharge criteria established for discharge to Harrison Bayou are:

Parameter	Discharge Criteria (µg/L)	
	Daily Average	Daily Maximum
Volatiles		
1,1,1-Trichloroethane	3,417	7,230
1,1,2-Trichloroethane	102.5	216.9
1,1-Dichloroethane	6,633	14,032
1,1-Dichloroethene	119	253
1,2-Dichloroethane	85	181
Acetone	1,132	2,395
Benzene	85	181
Carbon Tetrachloride	85	181
Chlorobenzene	22,300	47,180
Chloroform	1,708	3,615
Ethylbenzene	26,954	57,025
Xylenes	39.5	83.6
Methylene Chloride	803	1,699
Styrene	2,829	5,987
Tetrachloroethene	85.4	180.7
Toluene	1,980	4,189
Trichloroethene	85	181
Vinyl Chloride	34	72
Anions		
Chloride	*	*
Sulfate	*	*
Perchlorate**	278	589
Metals		
Aluminum	777	1,644
Arsenic	365	772
Barium	1,000	2,000
Cadmium	1.6	3.4
Chromium, Total	355	752
Chromium, Hexavalent	58	124
Cobalt	5,433	11,495
Iron	1,132	2,395
Lead	2.2	4.6
Nickel	87	184
Manganese	7,323	15,494
Silver	1.4	3
Selenium	5.7	12
Vanadium	1,698	3,592
Zinc	146	310
Other		
Hexachlorobenzene	0.22	0.47
1,4-Dioxane		134.2
Oil and Grease		15
Chemical Oxygen Demand		200

* - Based upon flow in Harrison Bayou

** - Discharge criteria, when diverted to the INF Pond, is 17 µg/L

PROTOCOL FOR DISCHARGING GWTP EFFLUENT

In accordance with the *Sampling and Analysis Plan, Groundwater Treatment Plant and Well Fields* (SAP) Table 2-2, indicator parameters for the FBR, such as temperature, pH and oxidation reduction potential (ORP), are monitored in real time to predict FBR performance and perchlorate removal. Based upon these indicator parameters, the operator of the GWTP can make adjustments such as:

- Bring the ion exchange system online;
- Increase or decrease the addition rate of electron donor (acetic acid);
- Increase or decrease the nutrient addition rate (urea or phosphoric acid); or
- Increase or decrease the FBR recirculation rate

Samples of the GWTP effluent are collected weekly, analyzed for perchlorate, nutrients (ammonia-nitrogen and ortho-phosphate), total organic carbon (TOC), chloride, and sulfate, with the results received from the laboratory 14 days later. Other parameters (e.g. Record of Decision metals and volatiles) are collected and analyzed in GWTP effluent samples according to the frequencies listed in Table 2-1 of the SAP.

As shown in Figure 1, groundwater is continuously extracted, treated, and discharged. If Harrison Bayou is flowing and indicator parameters are within their historical optimal ranges, then the ion exchange vessels can be bypassed and the GWTP effluent sample will be collected after the FBR. If Harrison Bayou is not flowing or the indicator parameters are not within historical optimal ranges, then the ion exchange vessels will be put on line, and the GWTP effluent sample will be collected between the lead and lag ion exchange vessel. Professional judgement may also be used as to when to bring the ion exchange vessels online, such as after a power outage or during anticipated cold temperatures when the FBR has historically not performed optimally.

If a parameter is measured in the effluent at a concentration above the discharge criteria, then a confirmation sample and an effluent sample after the lag ion exchange vessel will be collected and analyzed for the parameter with a 24-hour turnaround time. Corrective measures (e.g. increased nutrient or electron donor addition rates, bring ion exchange vessels on line) will be implemented as appropriate to bring the parameter back within the discharge criteria. ***If an upset condition in the FBR leads to high concentrations of perchlorate going into the lead ion exchange vessel and breaking through at the sample location between the vessels, the lag vessel will still remove perchlorate before it is discharged to Harrison Bayou, the INF Pond, or LHAAP-18/24.*** It is estimated that the lag ion exchange vessel can remove all of the perchlorate from two weeks of typical groundwater extraction at a concentration of 920 µg/L. If the residual perchlorate concentration after the FBR and lead ion exchange vessel is only 600 µg/L, the lag ion exchange vessel could last almost 2.5 years before perchlorate would be detected in the discharged effluent.

If a parameter exceeds the discharge criteria by more than 40% (see Appendix A-2, SAP, Section 7c of Monitoring and Reporting Requirements) or reaches 920 µg/L of perchlorate, then the GWTP will be put into full recycle mode (no discharge) until the parameter is below the discharge criteria again. Appendix A-2 of the SAP requires GWTP data to be provided to TCEQ monthly including a list of noncompliance(s), if applicable.

Discharge to Harrison Bayou

As shown in Figure 1, the GWTP effluent will be discharged to Harrison Bayou as long as it has a measurable flow. The flowrate in Harrison Bayou is estimated by measuring the height of water with a staff gauge and velocity in feet/sec at intervals along the width as described in the Installation-Wide Work Plan, Standard Operating Procedures, Attachment 18 – Water Depth and Velocity Measurements (AECOM, July 2014).

The allowable flow rate of GWTP effluent that can be discharged to Harrison Bayou is given by:

$$QE \leq \frac{QS\,(CC - CA)}{(CE - CC)}$$

where Q_E = GWTP effluent flow Q_S = Harrison Bayou flow

C_C = Criteria concentration (100 mg/L for chloride, 50 mg/L for sulfate)

C_A = Ambient concentration = 10 mg/L

C_E = Chloride or sulfate concentration in GWTP effluent

The allowable GWTP effluent flow will be the lower of the calculated values given the measured concentrations of chloride and sulfate in the discharge stream. For each day that GWTP effluent is discharged to Harrison Bayou, the measured Harrison Bayou flow, the allowable effluent flow, and the actual effluent flow are recorded.

Discharge to INF Pond

If Harrison Bayou is not flowing, then GWTP effluent will be discharged to the Intermediate-Range Nuclear Forces (INF) Pond for temporary storage until Harrison Bayou flow resumes. Perchlorate concentration detected in the effluent must be 17 µg/L or less, when this occurs.

The INF Pond has a flexible membrane liner protected by a soil cover with a gravity discharge pipe (and valve) to Harrison Bayou. The INF Pond has a nominal capacity of 3 million gallons with a staff gage to measure the height of water stored in the pond. The GWTP operator maintains the INF Pond by visually inspecting for erosion, vegetative growth including tree growth along the anchor trench, and liner integrity and making necessary repairs. Periodically, accumulated debris must be removed from the influent and effluent piping to the INF Pond.

Prior to discharging to the INF Pond, a lead and lag ion exchange vessel will be brought online. The GWTP Operator will also confirm that the discharge valve is closed, will record the reading on the effluent totalizer, and will record the height of water using the staff gage. The GWTP Operator will then configure valves and pumps to direct GWTP effluent to the INF Pond. The height of water in the INF Pond and totalizer reading will be recorded at the beginning and end of each shift for the duration of active discharge. When the height of water in the pond reaches 3 feet below the height of the berm (freeboard), the GWTP Operator will stop discharging to the INF Pond and TCEQ will be notified. After the TCEQ acknowledges the INF Pond level, GWTP effluent may be discharged to the INF Pond again until 2 feet of freeboard is reached. The GWTP Operator will stop discharging to the INF Pond and TCEQ will be notified again. After the TCEQ acknowledges 2 feet of freeboard in the INF Pond,GWTP effluent may be discharged again until 1 foot of freeboard remains. No additional GWTP effluent can be accepted at the INF Pond until greater than 1 foot of freeboard is measured.

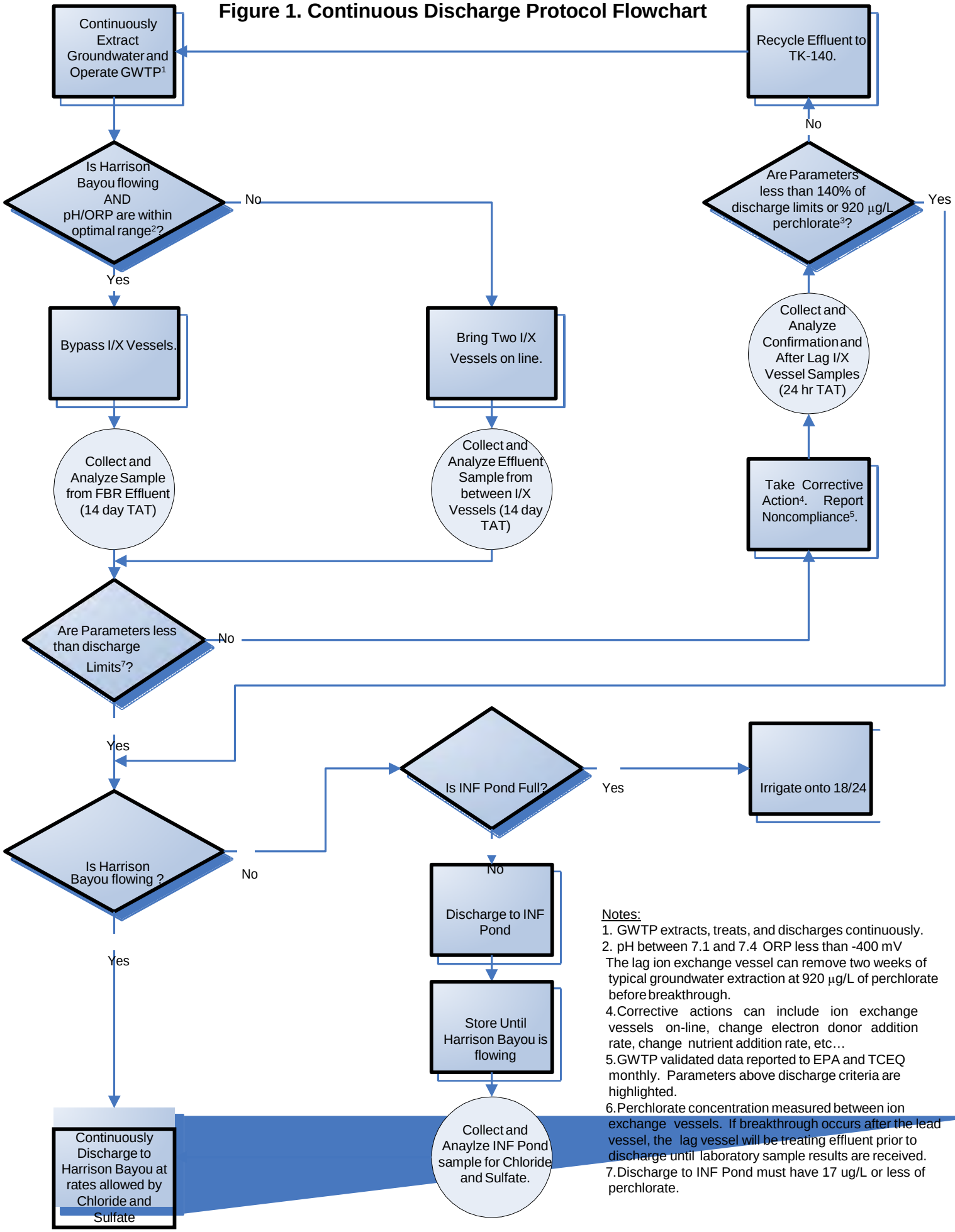
As soon as flow in Harrison Bayou returns, stored GWTP effluent from the INF Pond will be discharged. As with direct discharges from the GWTP to Harrison Bayou, the allowable flowrate of effluent from the INF Pond is calculated based upon the chloride and sulfate concentrations in the pond and the flow in Harrison Bayou. If effluent from the INF Pond and the GWTP are discharged simultaneously, total flow of both streams together should not exceed the calculated discharge level for either discharge location. For each day that INF Pond contents are discharged to Harrison Bayou, the measured Harrison Bayou flow, the allowable effluent flow, and the actual effluent flow are recorded.

Irrigation onto LHAAP-18/24

If Harrison Bayou is not flowing and the INF Pond has less than 1 foot of freeboard, then GWTP effluent will be irrigated onto LHAAP-18/24 using one of the three main sprinkler lines. To avoid pooling and runoff of irrigation water, only one line will be used for half a day at a time, with a separate line being used the second half of the day. If needed, the irrigation will occur 5 days a week for 8 hours each day (using 3 sprinklers in each line). If conditions are wet due to rain events, irrigation will not be conducted to avoid ponding and potential runoff, the GWTP will be put into recycle mode, and groundwater extraction will be interrupted if storage space is not available.

While irrigating, site inspections will be performed to ensure pooling and runoff are not occurring. During the irrigation activities, inspections will be performed twice a day, once approximately three hours and again approximately six hours into the 8-hour irrigation shift. The system will be inspected to ensure that the sprinkler heads are operating properly and not leaking large amounts of water. If ponding or runoff is observed, irrigation at that sprinkler line will cease, and irrigation at another sprinkler line will be started if possible. Volumes of GWTP effluent and twice daily inspections will be recorded daily and reported monthly until flow resumes in Harrison Bayou or greater than 1 foot of freeboard is available in the INF Pond.

Figure 1. Continuous Discharge Protocol Flowchart



Notes:

1. GWTP extracts, treats, and discharges continuously.
2. pH between 7.1 and 7.4 ORP less than -400 mV
The lag ion exchange vessel can remove two weeks of typical groundwater extraction at 920 µg/L of perchlorate before breakthrough.
4. Corrective actions can include ion exchange vessels on-line, change electron donor addition rate, change nutrient addition rate, etc…
5. GWTP validated data reported to EPA and TCEQ monthly. Parameters above discharge criteria are highlighted.
6. Perchlorate concentration measured between ion exchange vessels. If breakthrough occurs after the lead vessel, the lag vessel will be treating effluent prior to discharge until laboratory sample results are received.
7. Discharge to INF Pond must have 17 ug/L or less of perchlorate.

APPENDIX G
QUALITY CONTROL SUMMARY REPORT

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QUARTERLY CONTROL SUMMARY REPORT
4th QUARTER (OCT-DEC) 2018
GROUNDWATER TREATMENT PLANT
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

April 2019

Prepared For:

Longhorn Army Ammunition Plant
Karnack, Texas

Under Contract To:

U.S. Army Corps of Engineers
Tulsa District
Tulsa, Oklahoma

Contract Number: W9128F-13-D-0012
Task Order Number: W912BV17F0150

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Tables

Table 1: Field Sample Identification and Laboratory Packages
Table 2: Qualified Analytical Data
Table 3: Completeness by Method

1 INTRODUCTION

Bhate reviewed 30 data packages from ALS Environmental, Houston, Texas. Groundwater samples were collected October 4, 2018, through January 7, 2019, at the Groundwater Treatment Plant (GWTP) and Site LHAAP 18/24 at Longhorn Army Ammunition Plant (LHAAP) Karnack, Texas. Data were reviewed for conformance to the requirements of the following guidance documents: [U.S. Environmental Protection Agency] *USEPA Contract Laboratory Program* [CLP] *National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, January 2017); *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, January 2017); and the *Final Basewide Uniform Federal Policy* [UFP] – *Quality Assurance Project Plan* [QAPP] *Longhorn Army Ammunition Plant* which is in Appendix C of the *Final Installation-Wide Work Plan for Longhorn Army Ammunition Plant Karnack, Texas* (Bhate, May 2018).

1.1 Intended Use of Data

The objective of sampling at the GWTP is to monitor effluent streams to confirm compliance with discharge limits.

Analyses performed include:

- SW6850 – Perchlorate
- E350.3/SM4500 NH3 – Nitrogen, Ammonia
- E365.3/SM4500 P – Orthophosphate
- E415.1/SM5310 – Total Organic Carbon
- SW8260C – Volatile Organic Compounds (VOCs)
- SW8270D SIM - 1,4-Dioxane
- SW6020A/7470A – Metals
- SW9056A – Chloride (Cl) and Sulfate (SO_4)
- SW7196A – Hexavalent Chromium
- E410.4 – Chemical Oxygen Demand
- E1664A – Oil and Grease
- TO-15 – Volatiles in Air

Table 1 lists the sample identification numbers (IDs) and their associated laboratory package.

Table 2 lists qualified results with the qualification flag and reason code.

The following narrative is a brief synopsis of data that required qualification due to quality control discrepancies.

1.2 Preservation and Holding Times

Sample identification data were evaluated for agreement with the chain-of-custody (COC). All samples were received in appropriate containers, within the proper temperature range, in good condition, and within the required hold time with the following exceptions.

- The weekly sample LH18/24-SP650_113018 was analyzed outside hold time for ortho-phosphate and was qualified as estimated, "J".
- Additionally, LH18/24-SP650_113018 was analyzed outside temperature range (17.2°) and both ammonia and ortho-phosphate were considered estimated and flagged as such "J".

1.3 Calibrations

All analytes reported must be present in the initial and continuing calibration. The calibrations must meet the acceptance criteria specified in Worksheet 24 (Analytical Instrument Calibration) of the QAPP. All results reported must be within the calibration range. Samples were diluted, if necessary, to bring analyte responses within the calibration range.

1.3.1 Continuing Calibration Verifications

The calibrations must meet the following criteria otherwise the compound is qualified J or UJ: The continuing calibration verification (CCV) criteria are 20 percent difference (%D) for VOCs and Semi-volatile Organic Compounds (SVOCs) and 50% for closing CCVs. Metals and general chemistry - 10%D; perchlorate - 15%D; and volatiles in air - 30%D.

Several LHAAP 18/24 CCVs reported the recoveries of 2,2-dichloropropane and/or bromochloromethane outside control limits. Those associated samples were qualified estimated non-detects and flagged "UJ".

1.4 Blanks

If the analyte result for an associated sample was less than 5x (10x for common laboratory contaminants) the analyte concentration in the blank, that result was qualified "UB" and considered an artifact of blank contamination. Where the sample result for the affected analyte was non-detect or greater than 5x the amount in the blank, no qualifier was applied.

1.4.1 SW6020

The results for aluminum in samples 18CPTMW12DW_121718, MW5_121818, MW14_122018, 18WW17_122618, MW22_122018, and MW3_122818 were <5x the method blank concentration. Manganese was also reported less than 5x the blank concentration in samples 18WW22_122118 and 18WW22_122118-a. Furthermore, mercury was reported <5x the blank contamination in samples 18CPTMW14_010719 and 18CPTMW14_010719-a. These metals were qualified "UB" and considered artifacts of blank contamination.

1.5 Surrogates

Surrogates were evaluated using limits defined by each method in the project-specific QAPP Worksheet 28.

1.5.1 SW8270SIM

The surrogate recovery of 4-terphenyl-d14 was above control limits in samples LH18/24-SP650_101018, 18CPTMW22R_122018, 18CPTMW22SW_122018 and 18CPTMW03SW_122018. The compound 1,4-dioxane was flagged as estimated, "J".

1.6 Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

LCS/LCSD recoveries were evaluated using limits defined in the project-specific QAPP Worksheet 15.

All sample recoveries were within control limits.

1.7 Matrix Spike (MS)/Matrix Spike Duplicate Sample (MSD)

MS/MSD recoveries were evaluated using limits defined in Worksheet 15 of the project-specific QAPP. When sample results were greater than 4x the spike amount, control limits were not applicable and require no qualification. Furthermore, if a MS/MSD analyses was performed on a batched (unrelated) sample no qualification was made to the sample data. Otherwise, only the sample used for spiking requires qualification.

1.7.1 SW6850

The MS recoveries of perchlorate were above control limits in weekly sample LH18/24-SP650_120618_BIX and LHAAP 18/24 sample MW23_122618 (124% and 143%, respectively). The MS/MSD (128%/162%) recoveries in sample C03_122118 were also reported above control limits. Perchlorate was qualified as estimated, "J".

1.7.2 E365.3

The MS and MSD recoveries (61.6%/51.6%) were below QC limits for ortho-phosphate in weekly sample LH18/24-SP650_121218. This compound was qualified as estimated, "J".

1.7.3 SW8260

The MS and MSD recoveries for trichloroethene (TCE) were above control limits in the spike samples 18CPTMW12SW_121718, 18CPTMW04SW_121818, and 18CPTMW07_122818 (142%/132%, 143%/136% and 223%/168%, respectively). This compound was qualified as estimated, "J". Sample MW23_122618 reported multiple compounds above control limits in the MS analysis yet only 1,2-dichloroethane; carbon tetrachloride; chloroform; cis-1,2-dichlroethene; and trans-1,2-dichloroethene were detected. These compounds were qualified as estimated, "J".

1.7.4 SW6020

The MS/MSD recoveries for aluminum (138%/141%) were above control limits in the spike sample 18CPTMW12SW_121718. This compound was qualified as estimated, "J".

1.8 Internal Standards

If the percent recovery (%R) for an internal standard in a sample is not within the limit, the associated sample is qualified for those analytes associated with the internal standard(s) outside of the limit.

Internal standards were within acceptance criteria for the associated compounds.

1.9 Precision

Precision is the measure of variability of individual sample measurements. Evaluation of laboratory and/or field duplicates for precision was done using the relative percent difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. Field duplicate RPD limits were set at <30% for groundwater and <25% for air matrices.

1.9.1 Laboratory/Field Duplicate

The laboratory duplicate RPD for Total Organic Carbon (TOC) in sample LH18/24-SP650_101018 was above laboratory defined control limits. TOC was qualified as estimated, "J".

The field duplicate RPD for iron in sample 18WW22_122118 and its duplicate was outside control limits. Additionally, the RPD for acetone between 18CPTMW14_010719 and its duplicate was outside control limits. These compounds were qualified as estimated, "J", in both sample sets.

2 DATA USABILITY SUMMARY

The data are usable for the intended purposes of the project (Table 3). The data quality objectives have been met for the project.

Table 1: Field Sample Identification and Laboratory Packages

Client Sample ID	Lab Package	SW6850	E350.3/ SM4500 NH3	E365.3/ SM4500 P	E415.1	SW8270D SIM	SW8260C	SW6020A	SW9056A	SW7196A	E410.4	1664A	TO-15
GWTP Samples													
LH18/24-SP650_100418/BIX	HS18100278	X	X	X	X								
LH18/24-SP650_100418	HS18100281						X		X				
LH18/24-SP650_101018/AIX	HS18100544	X				X	X	X		X			
LH18/24-SP650_101018/AIX	HS18100546	X	X	X	X								
LH18/24-SP140_101018	HS18100549	X						X		X			
LH18/24-SP650_101718/BIX	HS18100975	X	X	X	X								
LH18/24-SP650_101718	HS18100977						X		X				
LH18/24-SP650_102318/BIX	HS18101286	X	X	X	X								
LH18/24-SP650_103018/BIX	HS18101687	X	X	X	X								
LH18/24-SP650_103018	HS18101733						X		X				
LH18/24-SP650_113018	HS18120299	X	X	X	X								
LH18/24-SP650_120618/BIX	HS18120375	X				X	X	X		X			
LH18/24-SP140_120618	HS18120379	X						X		X			
LH18/24-SP650_120618/BIX	HS18120380	X	X	X	X								
LH18/24-SP650_121218	HS18120731	X	X	X	X								
LH18/24_SP650_121218	HS18120734						X		X				
LH18/24-SP650_121818/BIX	HS18121078	X	X	X	X								
LH18/24-SP140_121818	HS18120193	X				X	X	X	X		X	X	
LH18/24-SP650_121818/BIX	HS18120194	X				X	X	X	X		X	X	
Air Samples													
LH18/24-Air_121918_Stripper	P1807079												X
LH18/24-Air_121918_Stripper_Dup	P1807079												X
LH18/24-Air_121918_GWTP	P1807079												X
LH18/24-Air_121918_Downwind_North	P1807079												X
LHAAP 18/24 Samples													
AWD1_121818	HS18121123	X						X					
AWD3_121718	HS18121123	X					X	X					
AWD4_121918	HS18121264	X					X	X					
AWD4_121918-a	HS18121264	X					X	X					
18CPTMW01SW	HS18121324	X					X	X					
18CPTMW03SW_122018	HS18121267	X				X	X	X					
18CPTMW04_121818	HS18121123	X					X						
18CPTMW04SW_121818	HS18121123	X					X	X					
18CPTMW06_122018	HS18121267	X					X						
18CPTMW06_122018_a	HS18121267	X					X						
18CPTMW07_122818	HS18121558	X					X						
18CPTMW08SW_121818	HS18121117	X					X						
18CPTMW08DW_121818	HS18121117	X											
18CPTMW10SW_121818	HS18121117	X					X						
18CPTMW10DW_121818	HS18121117	X					X	X					
18CPTMW12SW_121718	HS18121117	X					X	X					
18CPTMW12DW_121718	HS18121117	X					X	X					
18CPTMW14_010719	HS19010248	X					X	X					
18CPTMW14_010719-a	HS19010248	X					X	X					
18CPTMW15_121918	HS18121264	X					X						
18CPTMW16_010719	HS19010248	X											
18CPTMW18_122118	HS18121325	X					X	X					
18CPTMW19_121918	HS18121264	X					X						
18CPTMW19_121918_a	HS18121264	X					X						
18CPTMW22R_122018	HS18121264	X				X	X	X					
18CPTMW22SW_122018	HS18121264	X				X	X	X					

Client Sample ID	Lab Package	SW6850	E350.3/ SM4500 NH3	E365.3/ SM4500 P	E415.1	SW8270D SIM	SW8260C	SW6020A	SW9056A	SW7196A	E410.4	1664A	TO-15
18CPTMW23_121918	HS18121264	X					X						
18CPTMW24_122718	HS18121523	X					X	X					
18WW02_122718	HS18121523	X					X	X					
18WW06_122718	HS18121523	X					X						
18WW06_122718_a	HS18121523	X					X						
18WW08_121918	HS18121264	X					X						
18WW10_122618	HS18121520	X					X						
18WW17_122618	HS18121520	X					X	X					
18WW22_122118	HS18121325	X					X	X					
18WW22_122118_a	HS18121325	X					X	X					
18WW24_122618	HS18121520	X					X	X					
CO3_122118	HS18121325	X					X						
CO4_122118	HS18121325	X					X						
CO8_122118	HS18121324	X					X	X					
CO9_122118	HS18121324	X					X	X					
MW2_122018	HS18121267	X					X	X					
MW3_122818	HS18121558	X					X	X					
MW5_121818	HS18121117	X					X	X					
MW7_121718	HS18121117	X					X						
MW8_010719	HS19010248	X					X						
MW9_121818	HS18121117	X					X	X					
MW10_121918	HS18121264	X					X						
MW14_122018	HS18121267	X					X	X					
MW16_122618	HS18121520	X					X						
MW17_122618	HS18121520	X											
MW18_122618	HS18121520	X					X						
MW19_122618	HS18121520	X					X	X					
MW20_122018	HS18121264	X					X						
MW21_122818	HS18121558	X					X	X					
MW22_122018	HS18121267	X					X	X					
MW23_122618	HS18121520	X					X						
109_122718	HS18121523	X					X						
120_122018	HS18121267	X					X						
125_122718	HS18121523	X					X	X					
126_122618	HS18121520	X					X	X					

Notes:
MW – Monitoring Well
SM – Standard Method
SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.
E – U.S. Environmental Protection Agency Method
HS – Houston
AIX – after ion exchange
BIX – before ion exchange

Table 2: Qualified Analytical Data

Client Sample ID Laboratory	Laboratory Package	Analyte Name	Data Validation Qualifier	Reason for Qualification
GWTP				
LH18/24-SP650_101018	HS18100544	1,4-Dioxane	3.5 J	Surr >
LH18/24-SP650_101018	HS18100546	TOC	242 J	Lab Dup RPD
LH18/24-SP650_113018	HS18120299	Ammonia Ortho-Phosphate	81 J 2.55 J	Temperature Temperature/HT
LH18/24-SP650_120618_BIX	HS18120380	Perchlorate	2.2 J	MS >
LH18/24-SP650_121218	HS18120731	Ortho-Phosphate	2.23 J	MS/MSD <
LHAAP 18/24				
AWD3_121718	HS18121123	Bromochloromethane	< 0.5 UJ	CCV
18CPTMW01SW	HS18121324	Bromochloromethane 2,2-Dichloropropane	< 5.0 UJ < 5.0 UJ	CCV CCV
18CPTMW03SW_122018	HS18121267	1,4-Dioxane	0.17 J	Surr >
18CPTMW04_121818	HS18121123	Bromochloromethane	< 2.5 UJ	CCV
18CPTMW04SW_121818	HS18121123	Trichloroethene Bromochloromethane	1.0 J < 0.5 UJ	MS/MSD > CCV
18CPTMW07_122818	HS18121558	Trichloroethene	0.55 J	MS/MSD >
18CPTMW08SW_121818	HS18121117	Bromochloromethane	< 0.5 UJ	CCV
18CPTMW10SW_121818	HS18121117	Bromochloromethane	< 0.5 UJ	CCV
18CPTMW10DW_121818	HS18121117	Bromochloromethane	< 0.5 UJ	CCV
18CPTMW12SW_121718	HS18121117	Trichloroethene Aluminum Bromochloromethane	1.7 J 0.0248 J < 0.5 UJ	MS/MSD > MS/MSD > CCV
18CPTMW12DW_121718	HS18121117	Aluminum Bromochloromethane	0.0142 UB < 0.5 UJ	MB CCV
18CPTMW14_010719	HS19010248	Acetone Mercury	4.1 J 0.0000320 UB	Dup RPD MB
18CPTMW14_010719-a	HS19010248	Acetone Mercury	8.6 J 0.0000340 UB	Dup RPD MB
18CPTMW18_122118	HS18121325	2,2-Dichloropropane Bromochloromethane	< 0.5 UJ < 0.5 UJ	CCV CCV
18CPTMW22R_122018	HS18121264	1,4-Dioxane	0.012 J	Surr >
18CPTMW22SW_122018	HS18121264	1,4-Dioxane	0.30 J	Surr >
MW2_122018	HS18121267	2,2-Dichloropropane Bromochloromethane	< 25 UJ < 25 UJ	CCV CCV
MW3_122818	HS18121558	Aluminum	0.00670 UB	MB
MW5_121818	HS18121117	Aluminum Bromochloromethane	0.0126 UB < 0.5 UJ	MB CCV
MW7_121718	HS18121117	Bromochloromethane	< 2.5 UJ	CCV
MW9_121818	HS18121117	Bromochloromethane	< 0.5 UJ	CCV
MW14_122018	HS18121267	Aluminum 2,2-Dichloropropane Bromochloromethane	0.0212 UB < 5.0 UJ < 5.0 UJ	MB CCV CCV
MW16_122618	HS18121520	2,2-Dichloropropane Bromochloromethane	< 0.5 UJ < 0.5 UJ	CCV CCV
MW18_122618	HS18121520	2,2-Dichloropropane Bromochloromethane	< 0.5 UJ < 0.5 UJ	CCV CCV
MW19_122618	HS18121520	2,2-Dichloropropane Bromochloromethane	< 0.5 UJ < 0.5 UJ	CCV CCV
MW22_122018	HS18121267	Aluminum	0.0126 UB	MB
MW23_122618	HS18121520	Perchlorate 1,2-Dichloroethane Carbon tetrachloride Chloroform cis-1,2-Dichloroethene trans-1,2-Dichloroethene	52,000 J 110 J 5.3 J 12 J 24 J 5.0 J	MS > MS/MSD > MS/MSD > MS/MSD > MS/MSD > MS/MSD >
18WW17_122618	HS18121520	Aluminum	0.00895 UB	MB

Client Sample ID Laboratory	Laboratory Package	Analyte Name	Data Validation Qualifier	Reason for Qualification
18WW22_122118	HS18121325	Manganese Iron 2,2-Dichloropropane Bromochloromethane	0.00371 UB 0.112 J < 0.5 UJ < 0.5 UJ	MB Dup RPD CCV CCV
18WW22_122118_a	HS18121325	Manganese Iron 2,2-Dichloropropane Bromochloromethane	0.00399 UB 0.0644 J < 0.5 UJ < 0.5 UJ	MB Dup RPD CCV CCV
C03_122118	HS18121325	Perchlorate 2,2-Dichloropropane Bromochloromethane	15 J < 0.5 UJ < 0.5 UJ	MS/MSD > CCV CCV
C04_122118	HS18121325	2,2-Dichloropropane Bromochloromethane	< 0.5 UJ < 0.5 UJ	CCV CCV
C08_122118	HS18121324	2,2-Dichloropropane Bromochloromethane	< 0.5 UJ < 0.5 UJ	CCV CCV
C09_122118	HS18121324	2,2-Dichloropropane Bromochloromethane	< 0.5 UJ < 0.5 UJ	CCV CCV
126_122618	HS18121520	2,2-Dichloropropane Bromochloromethane	< 0.5 UJ < 0.5 UJ	CCV CCV

Notes:
J – Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Dup RPD – Laboratory Duplicate/Field Duplicate Relative Percent Difference outside control limits
HT – hold time exceedance
MS/MSD >< - matrix spike/duplicate recovery above/below control limits
Surr > - surrogate recovery above control limits
MB – method blank contamination
HS – Houston

Table 3: Completeness by Method

Method	No. of Rejected Results	% Completeness
SW6850	0	100
E350.3/ SM4500 NH3	0	100
E365.3/ SM4500 P	0	100
E415.1/ SM5310	0	100
SW8270D	0	100
SW8260B	0	100
SW6020A	0	100
SW9056	0	100
SW7196A	0	100
E410.4	0	100
E1664	0	100
TO-15	0	100

APPENDIX H
AIR ANALYTICAL LABORATORY REPORT

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LABORATORY REPORT

January 15, 2019

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Suite 129
Lakewood, CO 80228

RE: LHAAP-GWTP / NW01312.0150

Dear Marcia:

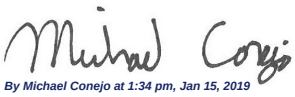
Enclosed are the results of the samples submitted to our laboratory on December 21, 2018. For your reference, these analyses have been assigned our service request number P1807079.

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



Michael Conejo
Project Manager

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www.alsglobal.com

Client: Bhate Environmental Associates, Inc. Service Request No: P1807079
Project: LHAAP-GWTP / NW01312.0150

CASE NARRATIVE

The samples were received intact under chain of custody on December 21, 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.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. 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 NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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.

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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: Bhate Environmental Associates, Inc. Service Request: P1807079
Project ID: LHAAP-GWTP / NW01312.0150

Date Received: 12/21/2018
Time Received: 11:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pfl (psig)	2nd Pi (psig)	2nd Pf (psig)	TO-15 - VOC Cans
LH18/24-Air_121918_Stripper	P1807079-001	Air	12/19/2018	14:00	SC00932	0.26	3.56			X
LH18/24-Air _121918_Stripper_Dup	P1807079-002	Air	12/19/2018	14:00	SC02097	0.28	3.78			X
LH18/24-Air_121918_GWTP	P1807079-003	Air	12/19/2018	14:15	AC01205	-1.25	3.34			X
LH18/24-Air_121918_Downwind_North	P1807079-004	Air	12/19/2018	06:30	AC00747	0.90	3.59	0.00	0.90	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. A P1807079

Company Name & Address (Reporting Information)
BHATE ENVIRONMENTAL
445 Union Blvd. Suite 129
Lakewood, Co. 80228

Project Name: LHAAP - GWTP
Project Number: NW01312.0150
P.O. # / Billing Information

Project Manager: Kim Nemmers
Phone: 303-725-7631
Fax:
Email Address for Result Reporting: kmolive@bhate.com
Sampler (Print & Sign): Scott Beesinger

ALS Contact:

Analysis Method

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO-15		Comments e.g. Actual Preservative or specific instructions
LH18/24-AIR_121918_Stripper		12/19/18	1400	SC00932		-30	0	6L	✓		
LH18/24-AIR_121918_Stripper_Dup		12/19/18	1400	SC02097		-30	0	6L	✓		
LH18/24-AIR_121918_GWTP		12/19/18	1415	AC01205	FCR00243	-30	-5	6L	✓		
LH18/24-AIR_121918_Downwind_North		12/20/18	0630	AC00747	SFC00351	-30	-1	6L	✓		

Report Tier Levels - please select

Tier I - Results (Default if not specified) ____
Tier II (Results + QC Summaries) X
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Data Validation Package) 10% Surcharge ____

EDD required Yes / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Scott Beesinger	12/20/18	0700			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				12-20-18	1115

Cooler / Blank Temperature ____ °C

5 of 31

00933700

ALS Environmental
Sample Acceptance Check Form

Client: Bhate Environmental Associates, Inc. Work order: P1807079

Project: LHAAP-GWTP / NW01312.0150

Sample(s) received on: 12/21/18 Date opened: 12/21/18 by: AARON GONZALEZ

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?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ 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
P1807079-001.01	6.0 L Source Can					
P1807079-002.01	6.0 L Source Can					
P1807079-003.01	6.0 L Ambient Can					
P1807079-004.01	6.0 L Ambient Can					

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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air_121918_Stripper** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-001

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.0080 Liter(s)
Test Notes:
Container ID: SC00932

Initial Pressure (psig): 0.26 Final Pressure (psig): 3.56

Container Dilution Factor: 1.22

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	79	ND	46	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	79	ND	16	
74-87-3	Chloromethane	ND	76	ND	37	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	78	ND	11	
75-01-4	Vinyl Chloride	**97**	81	**38**	32	
106-99-0	1,3-Butadiene	ND	79	ND	36	
74-83-9	Bromomethane	ND	76	ND	20	
75-00-3	Chloroethane	ND	78	ND	29	
64-17-5	Ethanol	ND	780	ND	410	
75-05-8	Acetonitrile	ND	79	ND	47	
107-02-8	Acrolein	ND	150	ND	67	
67-64-1	Acetone	ND	820	ND	350	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	81	ND	14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	320	ND	130	
107-13-1	Acrylonitrile	ND	79	ND	37	
75-35-4	1,1-Dichloroethene	**100**	82	**26**	21	
75-09-2	Methylene Chloride	**230**	82	**66**	24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	81	ND	26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	**5,900**	81	**760**	11	
75-15-0	Carbon Disulfide	ND	170	ND	54	
156-60-5	trans-1,2-Dichloroethene	ND	81	ND	20	
75-34-3	1,1-Dichloroethane	ND	79	ND	20	
1634-04-4	Methyl tert-Butyl Ether	ND	82	ND	23	
108-05-4	Vinyl Acetate	ND	810	ND	230	
78-93-3	2-Butanone (MEK)	ND	150	ND	52	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air_121918_Stripper** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-001

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.0080 Liter(s)
Test Notes:
Container ID: SC00932

Initial Pressure (psig): 0.26 Final Pressure (psig): 3.56

Container Dilution Factor: 1.22

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**3,800**	81	**960**	20	
141-78-6	Ethyl Acetate	ND	170	ND	47	
110-54-3	n-Hexane	ND	82	ND	23	
67-66-3	Chloroform	ND	82	ND	17	
109-99-9	Tetrahydrofuran (THF)	ND	81	ND	27	
107-06-2	1,2-Dichloroethane	**110**	81	**27**	20	
71-55-6	1,1,1-Trichloroethane	ND	82	ND	15	
71-43-2	Benzene	ND	79	ND	25	
56-23-5	Carbon Tetrachloride	ND	79	ND	13	
110-82-7	Cyclohexane	ND	150	ND	44	
78-87-5	1,2-Dichloropropane	ND	82	ND	18	
75-27-4	Bromodichloromethane	ND	81	ND	12	
79-01-6	Trichloroethene	**14,000**	81	**2,600**	15	
123-91-1	1,4-Dioxane	ND	81	ND	22	
80-62-6	Methyl Methacrylate	ND	170	ND	41	
142-82-5	n-Heptane	ND	82	ND	20	
10061-01-5	cis-1,3-Dichloropropene	ND	85	ND	19	
108-10-1	4-Methyl-2-pentanone	ND	81	ND	20	
10061-02-6	trans-1,3-Dichloropropene	ND	81	ND	18	
79-00-5	1,1,2-Trichloroethane	ND	82	ND	15	
108-88-3	Toluene	ND	81	ND	21	
591-78-6	2-Hexanone	ND	82	ND	20	
124-48-1	Dibromochloromethane	ND	82	ND	9.7	
106-93-4	1,2-Dibromoethane	ND	82	ND	11	
123-86-4	n-Butyl Acetate	ND	82	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air_121918_Stripper** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-001

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.0080 Liter(s)
Test Notes:
Container ID: SC00932

Initial Pressure (psig): 0.26 Final Pressure (psig): 3.56

Container Dilution Factor: 1.22

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	82	ND	18	
127-18-4	Tetrachloroethene	ND	81	ND	12	
108-90-7	Chlorobenzene	ND	81	ND	18	
100-41-4	Ethylbenzene	ND	79	ND	18	
179601-23-1	m,p-Xylenes	ND	170	ND	39	
75-25-2	Bromoform	ND	81	ND	7.8	
100-42-5	Styrene	ND	81	ND	19	
95-47-6	o-Xylene	ND	81	ND	19	
111-84-2	n-Nonane	ND	82	ND	16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	81	ND	12	
98-82-8	Cumene	ND	81	ND	16	
80-56-8	alpha-Pinene	ND	79	ND	14	
103-65-1	n-Propylbenzene	ND	82	ND	17	
622-96-8	4-Ethyltoluene	ND	81	ND	16	
108-67-8	1,3,5-Trimethylbenzene	ND	81	ND	16	
95-63-6	1,2,4-Trimethylbenzene	ND	81	ND	16	
100-44-7	Benzyl Chloride	ND	170	ND	32	
541-73-1	1,3-Dichlorobenzene	ND	82	ND	14	
106-46-7	1,4-Dichlorobenzene	ND	82	ND	14	
95-50-1	1,2-Dichlorobenzene	ND	82	ND	14	
5989-27-5	d-Limonene	ND	78	ND	14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	79	ND	8.2	
120-82-1	1,2,4-Trichlorobenzene	ND	81	ND	11	
91-20-3	Naphthalene	ND	78	ND	15	
87-68-3	Hexachlorobutadiene	ND	81	ND	7.6	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air _121918_Stripper_Dup** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-002

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.0080 Liter(s)
Test Notes:
Container ID: SC02097

Initial Pressure (psig): 0.28 Final Pressure (psig): 3.78

Container Dilution Factor: 1.23

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	80	ND	46	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	80	ND	16	
74-87-3	Chloromethane	ND	77	ND	37	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	78	ND	11	
75-01-4	Vinyl Chloride	**96**	81	**38**	32	
106-99-0	1,3-Butadiene	ND	80	ND	36	
74-83-9	Bromomethane	ND	77	ND	20	
75-00-3	Chloroethane	ND	78	ND	30	
64-17-5	Ethanol	ND	780	ND	420	
75-05-8	Acetonitrile	ND	80	ND	48	
107-02-8	Acrolein	ND	150	ND	67	
67-64-1	Acetone	ND	830	ND	350	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	81	ND	15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	320	ND	130	
107-13-1	Acrylonitrile	ND	80	ND	37	
75-35-4	1,1-Dichloroethene	**97**	83	**25**	21	
75-09-2	Methylene Chloride	**240**	83	**68**	24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	81	ND	26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	**6,000**	81	**780**	11	
75-15-0	Carbon Disulfide	ND	170	ND	54	
156-60-5	trans-1,2-Dichloroethene	ND	81	ND	21	
75-34-3	1,1-Dichloroethane	ND	80	ND	20	
1634-04-4	Methyl tert-Butyl Ether	ND	83	ND	23	
108-05-4	Vinyl Acetate	ND	810	ND	230	
78-93-3	2-Butanone (MEK)	ND	150	ND	52	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air _121918_Stripper_Dup** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-002

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.0080 Liter(s)
Test Notes:
Container ID: SC02097

Initial Pressure (psig): 0.28 Final Pressure (psig): 3.78

Container Dilution Factor: 1.23

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**3,800**	81	**960**	21	
141-78-6	Ethyl Acetate	ND	170	ND	47	
110-54-3	n-Hexane	ND	83	ND	24	
67-66-3	Chloroform	ND	83	ND	17	
109-99-9	Tetrahydrofuran (THF)	ND	81	ND	28	
107-06-2	1,2-Dichloroethane	**110**	81	**27**	20	
71-55-6	1,1,1-Trichloroethane	ND	83	ND	15	
71-43-2	Benzene	ND	80	ND	25	
56-23-5	Carbon Tetrachloride	ND	80	ND	13	
110-82-7	Cyclohexane	ND	150	ND	45	
78-87-5	1,2-Dichloropropane	ND	83	ND	18	
75-27-4	Bromodichloromethane	ND	81	ND	12	
79-01-6	Trichloroethene	**14,000**	81	**2,600**	15	
123-91-1	1,4-Dioxane	ND	81	ND	23	
80-62-6	Methyl Methacrylate	ND	170	ND	41	
142-82-5	n-Heptane	ND	83	ND	20	
10061-01-5	cis-1,3-Dichloropropene	ND	86	ND	19	
108-10-1	4-Methyl-2-pentanone	ND	81	ND	20	
10061-02-6	trans-1,3-Dichloropropene	ND	81	ND	18	
79-00-5	1,1,2-Trichloroethane	ND	83	ND	15	
108-88-3	Toluene	ND	81	ND	22	
591-78-6	2-Hexanone	ND	83	ND	20	
124-48-1	Dibromochloromethane	ND	83	ND	9.7	
106-93-4	1,2-Dibromoethane	ND	83	ND	11	
123-86-4	n-Butyl Acetate	ND	83	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air _121918_Stripper_Dup** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-002

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.0080 Liter(s)
Test Notes:
Container ID: SC02097

Initial Pressure (psig): 0.28 Final Pressure (psig): 3.78

Container Dilution Factor: 1.23

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	83	ND	18	
127-18-4	Tetrachloroethene	ND	81	ND	12	
108-90-7	Chlorobenzene	ND	81	ND	18	
100-41-4	Ethylbenzene	ND	80	ND	18	
179601-23-1	m,p-Xylenes	ND	170	ND	39	
75-25-2	Bromoform	ND	81	ND	7.9	
100-42-5	Styrene	ND	81	ND	19	
95-47-6	o-Xylene	ND	81	ND	19	
111-84-2	n-Nonane	ND	83	ND	16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	81	ND	12	
98-82-8	Cumene	ND	81	ND	17	
80-56-8	alpha-Pinene	ND	80	ND	14	
103-65-1	n-Propylbenzene	ND	83	ND	17	
622-96-8	4-Ethyltoluene	ND	81	ND	17	
108-67-8	1,3,5-Trimethylbenzene	ND	81	ND	17	
95-63-6	1,2,4-Trimethylbenzene	ND	81	ND	17	
100-44-7	Benzyl Chloride	ND	170	ND	33	
541-73-1	1,3-Dichlorobenzene	ND	83	ND	14	
106-46-7	1,4-Dichlorobenzene	ND	83	ND	14	
95-50-1	1,2-Dichlorobenzene	ND	83	ND	14	
5989-27-5	d-Limonene	ND	78	ND	14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	80	ND	8.3	
120-82-1	1,2,4-Trichlorobenzene	ND	81	ND	11	
91-20-3	Naphthalene	ND	78	ND	15	
87-68-3	Hexachlorobutadiene	ND	81	ND	7.6	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air_121918_GWTP** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-003

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01205

Initial Pressure (psig): -1.25 Final Pressure (psig): 3.34

Container Dilution Factor: 1.34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**0.77**	0.70	**0.45**	0.41	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.70	**0.40**	0.14	
74-87-3	Chloromethane	ND	0.67	ND	0.32	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.68	ND	0.098	
75-01-4	Vinyl Chloride	ND	0.71	ND	0.28	
106-99-0	1,3-Butadiene	ND	0.70	ND	0.32	
74-83-9	Bromomethane	ND	0.67	ND	0.17	
75-00-3	Chloroethane	ND	0.68	ND	0.26	
64-17-5	Ethanol	**12**	6.8	**6.6**	3.6	
75-05-8	Acetonitrile	**1.4**	0.70	**0.84**	0.42	
107-02-8	Acrolein	ND	1.3	ND	0.58	
67-64-1	Acetone	**32**	7.2	**14**	3.0	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.2**	0.71	**0.21**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.8	ND	1.1	
107-13-1	Acrylonitrile	ND	0.70	ND	0.32	
75-35-4	1,1-Dichloroethene	ND	0.72	ND	0.18	
75-09-2	Methylene Chloride	**0.77**	0.72	**0.22**	0.21	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.71	ND	0.23	
76-13-1	Trichlorotrifluoroethane (CFC 113)	**7.2**	0.71	**0.94**	0.093	
75-15-0	Carbon Disulfide	ND	1.5	ND	0.47	
156-60-5	trans-1,2-Dichloroethene	ND	0.71	ND	0.18	
75-34-3	1,1-Dichloroethane	ND	0.70	ND	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	0.72	ND	0.20	
108-05-4	Vinyl Acetate	ND	7.1	ND	2.0	
78-93-3	2-Butanone (MEK)	**3.1**	1.3	**1.1**	0.45	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air_121918_GWTP** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-003

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01205

Initial Pressure (psig): -1.25 Final Pressure (psig): 3.34

Container Dilution Factor: 1.34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**1.9**	0.71	**0.47**	0.18	
141-78-6	Ethyl Acetate	ND	1.5	ND	0.41	
110-54-3	n-Hexane	**1.6**	0.72	**0.46**	0.21	
67-66-3	Chloroform	ND	0.72	ND	0.15	
109-99-9	Tetrahydrofuran (THF)	**5.2**	0.71	**1.8**	0.24	
107-06-2	1,2-Dichloroethane	ND	0.71	ND	0.18	
71-55-6	1,1,1-Trichloroethane	ND	0.72	ND	0.13	
71-43-2	Benzene	**1.2**	0.70	**0.38**	0.22	
56-23-5	Carbon Tetrachloride	ND	0.70	ND	0.11	
110-82-7	Cyclohexane	ND	1.3	ND	0.39	
78-87-5	1,2-Dichloropropane	ND	0.72	ND	0.16	
75-27-4	Bromodichloromethane	ND	0.71	ND	0.11	
79-01-6	Trichloroethene	**7.5**	0.71	**1.4**	0.13	
123-91-1	1,4-Dioxane	ND	0.71	ND	0.20	
80-62-6	Methyl Methacrylate	ND	1.5	ND	0.36	
142-82-5	n-Heptane	**1.1**	0.72	**0.28**	0.18	
10061-01-5	cis-1,3-Dichloropropene	ND	0.75	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.71	ND	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	0.71	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.72	ND	0.13	
108-88-3	Toluene	**4.6**	0.71	**1.2**	0.19	
591-78-6	2-Hexanone	ND	0.72	ND	0.18	
124-48-1	Dibromochloromethane	ND	0.72	ND	0.085	
106-93-4	1,2-Dibromoethane	ND	0.72	ND	0.094	
123-86-4	n-Butyl Acetate	ND	0.72	ND	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air_121918_GWTP** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-003

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01205

Initial Pressure (psig): -1.25 Final Pressure (psig): 3.34

Container Dilution Factor: 1.34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.72	ND	0.15	
127-18-4	Tetrachloroethene	ND	0.71	ND	0.10	
108-90-7	Chlorobenzene	ND	0.71	ND	0.15	
100-41-4	Ethylbenzene	ND	0.70	ND	0.16	
179601-23-1	m,p-Xylenes	ND	1.5	ND	0.34	
75-25-2	Bromoform	ND	0.71	ND	0.069	
100-42-5	Styrene	ND	0.71	ND	0.17	
95-47-6	o-Xylene	ND	0.71	ND	0.16	
111-84-2	n-Nonane	ND	0.72	ND	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.71	ND	0.10	
98-82-8	Cumene	ND	0.71	ND	0.14	
80-56-8	alpha-Pinene	ND	0.70	ND	0.13	
103-65-1	n-Propylbenzene	ND	0.72	ND	0.15	
622-96-8	4-Ethyltoluene	ND	0.71	ND	0.14	
108-67-8	1,3,5-Trimethylbenzene	ND	0.71	ND	0.14	
95-63-6	1,2,4-Trimethylbenzene	ND	0.71	ND	0.14	
100-44-7	Benzyl Chloride	ND	1.5	ND	0.28	
541-73-1	1,3-Dichlorobenzene	ND	0.72	ND	0.12	
106-46-7	1,4-Dichlorobenzene	ND	0.72	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.72	ND	0.12	
5989-27-5	d-Limonene	ND	0.68	ND	0.12	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.70	ND	0.072	
120-82-1	1,2,4-Trichlorobenzene	ND	0.71	ND	0.096	
91-20-3	Naphthalene	ND	0.68	ND	0.13	
87-68-3	Hexachlorobutadiene	ND	0.71	ND	0.067	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air_121918_Downwind_North** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-004

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00747

Initial Pressure (psig): 0.90 Final Pressure (psig): 3.59

Container Dilution Factor: 1.17

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.61	ND	0.35	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.61	**0.39**	0.12	
74-87-3	Chloromethane	ND	0.59	ND	0.28	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.60	ND	0.085	
75-01-4	Vinyl Chloride	ND	0.62	ND	0.24	
106-99-0	1,3-Butadiene	ND	0.61	ND	0.28	
74-83-9	Bromomethane	ND	0.59	ND	0.15	
75-00-3	Chloroethane	ND	0.60	ND	0.23	
64-17-5	Ethanol	ND	6.0	ND	3.2	
75-05-8	Acetonitrile	ND	0.61	ND	0.36	
107-02-8	Acrolein	ND	1.2	ND	0.51	
67-64-1	Acetone	**17**	6.3	**7.2**	2.7	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.62	**0.19**	0.11	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.5	ND	1.0	
107-13-1	Acrylonitrile	ND	0.61	ND	0.28	
75-35-4	1,1-Dichloroethene	ND	0.63	ND	0.16	
75-09-2	Methylene Chloride	**1.4**	0.63	**0.39**	0.18	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.62	ND	0.20	
76-13-1	Trichlorotrifluoroethane (CFC 113)	**8.6**	0.62	**1.1**	0.081	
75-15-0	Carbon Disulfide	ND	1.3	ND	0.41	
156-60-5	trans-1,2-Dichloroethene	ND	0.62	ND	0.16	
75-34-3	1,1-Dichloroethane	ND	0.61	ND	0.15	
1634-04-4	Methyl tert-Butyl Ether	ND	0.63	ND	0.18	
108-05-4	Vinyl Acetate	ND	6.2	ND	1.8	
78-93-3	2-Butanone (MEK)	ND	1.2	ND	0.40	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air_121918_Downwind_North** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-004

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00747

Initial Pressure (psig): 0.90 Final Pressure (psig): 3.59

Container Dilution Factor: 1.17

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.62	ND	0.16	
141-78-6	Ethyl Acetate	ND	1.3	ND	0.36	
110-54-3	n-Hexane	**1.3**	0.63	**0.37**	0.18	
67-66-3	Chloroform	ND	0.63	ND	0.13	
109-99-9	Tetrahydrofuran (THF)	ND	0.62	ND	0.21	
107-06-2	1,2-Dichloroethane	ND	0.62	ND	0.15	
71-55-6	1,1,1-Trichloroethane	ND	0.63	ND	0.12	
71-43-2	Benzene	**1.1**	0.61	**0.36**	0.19	
56-23-5	Carbon Tetrachloride	ND	0.61	ND	0.097	
110-82-7	Cyclohexane	ND	1.2	ND	0.34	
78-87-5	1,2-Dichloropropane	ND	0.63	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.62	ND	0.093	
79-01-6	Trichloroethene	**1.0**	0.62	**0.19**	0.12	
123-91-1	1,4-Dioxane	ND	0.62	ND	0.17	
80-62-6	Methyl Methacrylate	ND	1.3	ND	0.31	
142-82-5	n-Heptane	**0.65**	0.63	**0.16**	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	0.66	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.62	ND	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	0.62	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.63	ND	0.12	
108-88-3	Toluene	**1.2**	0.62	**0.33**	0.16	
591-78-6	2-Hexanone	ND	0.63	ND	0.15	
124-48-1	Dibromochloromethane	ND	0.63	ND	0.074	
106-93-4	1,2-Dibromoethane	ND	0.63	ND	0.082	
123-86-4	n-Butyl Acetate	ND	0.63	ND	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **LH18/24-Air_121918_Downwind_North** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P1807079-004

Test Code: EPA TO-15 Date Collected: 12/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/21/18
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00747

Initial Pressure (psig): 0.90 Final Pressure (psig): 3.59

Container Dilution Factor: 1.17

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.63	ND	0.14	
127-18-4	Tetrachloroethene	ND	0.62	ND	0.091	
108-90-7	Chlorobenzene	ND	0.62	ND	0.13	
100-41-4	Ethylbenzene	ND	0.61	ND	0.14	
179601-23-1	m,p-Xylenes	ND	1.3	ND	0.30	
75-25-2	Bromoform	ND	0.62	ND	0.060	
100-42-5	Styrene	ND	0.62	ND	0.15	
95-47-6	o-Xylene	ND	0.62	ND	0.14	
111-84-2	n-Nonane	ND	0.63	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.62	ND	0.090	
98-82-8	Cumene	ND	0.62	ND	0.13	
80-56-8	alpha-Pinene	**0.69**	0.61	**0.12**	0.11	
103-65-1	n-Propylbenzene	ND	0.63	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.62	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.62	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	ND	0.62	ND	0.13	
100-44-7	Benzyl Chloride	ND	1.3	ND	0.25	
541-73-1	1,3-Dichlorobenzene	ND	0.63	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.63	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.63	ND	0.11	
5989-27-5	d-Limonene	ND	0.60	ND	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.61	ND	0.063	
120-82-1	1,2,4-Trichlorobenzene	ND	0.62	ND	0.084	
91-20-3	Naphthalene	ND	0.60	ND	0.11	
87-68-3	Hexachlorobutadiene	ND	0.62	ND	0.058	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190110-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
106-99-0	1,3-Butadiene	ND	0.52	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.1	ND	2.7	
75-05-8	Acetonitrile	ND	0.52	ND	0.31	
107-02-8	Acrolein	ND	1.0	ND	0.44	
67-64-1	Acetone	ND	5.4	ND	2.3	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.52	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.54	ND	0.14	
75-09-2	Methylene Chloride	ND	0.54	ND	0.16	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.52	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190110-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.54	ND	0.15	
67-66-3	Chloroform	ND	0.54	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.52	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.52	ND	0.083	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.54	ND	0.12	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.54	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.54	ND	0.099	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.54	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.54	ND	0.063	
106-93-4	1,2-Dibromoethane	ND	0.54	ND	0.070	
123-86-4	n-Butyl Acetate	ND	0.54	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190110-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.54	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.54	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.54	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.53	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.54	ND	0.090	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.51	ND	0.092	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.52	ND	0.054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.53	ND	0.071	
91-20-3	Naphthalene	ND	0.51	ND	0.097	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190114-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
106-99-0	1,3-Butadiene	ND	0.52	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.1	ND	2.7	
75-05-8	Acetonitrile	ND	0.52	ND	0.31	
107-02-8	Acrolein	ND	1.0	ND	0.44	
67-64-1	Acetone	ND	5.4	ND	2.3	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.52	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.54	ND	0.14	
75-09-2	Methylene Chloride	ND	0.54	ND	0.16	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.52	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190114-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.54	ND	0.15	
67-66-3	Chloroform	ND	0.54	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.52	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.52	ND	0.083	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.54	ND	0.12	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.54	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.54	ND	0.099	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.54	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.54	ND	0.063	
106-93-4	1,2-Dibromoethane	ND	0.54	ND	0.070	
123-86-4	n-Butyl Acetate	ND	0.54	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = 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: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190114-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.54	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.54	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.54	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.53	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.54	ND	0.090	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.51	ND	0.092	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.52	ND	0.054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.53	ND	0.071	
91-20-3	Naphthalene	ND	0.51	ND	0.097	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **Bhate Environmental Associates, Inc.**
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Project ID: P1807079

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 12/19/18
Analyst: Simon Cao Date(s) Received: 12/21/18
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 1/10 - 1/14/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190110-MB	**88**	**100**	**104**	70-130	
Method Blank	P190114-MB	**91**	**101**	**99**	70-130	
Lab Control Sample	P190110-LCS	**87**	**99**	**103**	70-130	
Lab Control Sample	P190114-LCS	**91**	**100**	**98**	70-130	
LH18/24-Air_121918_Stripper	P1807079-001	**89**	**101**	**100**	70-130	
LH18/24-Air _121918_Stripper_Dup	P1807079-002	**90**	**100**	**99**	70-130	
LH18/24-Air_121918_GWTP	P1807079-003	**87**	**100**	**105**	70-130	
LH18/24-Air_121918_Downwind_North	P1807079-004	**88**	**100**	**105**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190110-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	211	**158**	**75**	53-112	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**170**	**81**	62-103	
74-87-3	Chloromethane	211	**171**	**81**	51-121	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**194**	**92**	56-111	
75-01-4	Vinyl Chloride	214	**195**	**91**	57-117	
106-99-0	1,3-Butadiene	210	**198**	**94**	53-134	
74-83-9	Bromomethane	212	**200**	**94**	65-110	
75-00-3	Chloroethane	214	**189**	**88**	64-111	
64-17-5	Ethanol	1,020	**797**	**78**	57-124	
75-05-8	Acetonitrile	206	**163**	**79**	57-126	
107-02-8	Acrolein	205	**181**	**88**	62-121	
67-64-1	Acetone	1,060	**875**	**83**	60-113	
75-69-4	Trichlorofluoromethane (CFC 11)	211	**178**	**84**	63-104	
67-63-0	2-Propanol (Isopropyl Alcohol)	413	**341**	**83**	60-124	
107-13-1	Acrylonitrile	207	**191**	**92**	66-125	
75-35-4	1,1-Dichloroethene	218	**205**	**94**	68-107	
75-09-2	Methylene Chloride	217	**202**	**93**	66-105	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	**186**	**86**	63-127	
76-13-1	Trichlorotrifluoroethane (CFC 113)	216	**196**	**91**	59-109	
75-15-0	Carbon Disulfide	218	**197**	**90**	67-109	
156-60-5	trans-1,2-Dichloroethene	214	**184**	**86**	70-115	
75-34-3	1,1-Dichloroethane	216	**187**	**87**	66-106	
1634-04-4	Methyl tert-Butyl Ether	214	**194**	**91**	67-109	
108-05-4	Vinyl Acetate	1,060	**1180**	**111**	68-136	
78-93-3	2-Butanone (MEK)	208	**203**	**98**	71-116	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190110-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	211	**182**	**86**	67-110	
141-78-6	Ethyl Acetate	436	**431**	**99**	64-127	
110-54-3	n-Hexane	216	**195**	**90**	60-115	
67-66-3	Chloroform	217	**188**	**87**	66-105	
109-99-9	Tetrahydrofuran (THF)	216	**198**	**92**	65-110	
107-06-2	1,2-Dichloroethane	215	**173**	**80**	60-110	
71-55-6	1,1,1-Trichloroethane	215	**182**	**85**	64-108	
71-43-2	Benzene	211	**184**	**87**	67-106	
56-23-5	Carbon Tetrachloride	212	**182**	**86**	64-112	
110-82-7	Cyclohexane	416	**398**	**96**	67-110	
78-87-5	1,2-Dichloropropane	216	**194**	**90**	66-112	
75-27-4	Bromodichloromethane	215	**194**	**90**	67-113	
79-01-6	Trichloroethene	213	**199**	**93**	66-108	
123-91-1	1,4-Dioxane	214	**205**	**96**	70-116	
80-62-6	Methyl Methacrylate	431	**454**	**105**	73-118	
142-82-5	n-Heptane	215	**205**	**95**	66-110	
10061-01-5	cis-1,3-Dichloropropene	214	**207**	**97**	75-120	
108-10-1	4-Methyl-2-pentanone	209	**198**	**95**	65-124	
10061-02-6	trans-1,3-Dichloropropene	213	**211**	**99**	77-123	
79-00-5	1,1,2-Trichloroethane	215	**202**	**94**	68-112	
108-88-3	Toluene	212	**188**	**89**	62-111	
591-78-6	2-Hexanone	214	**183**	**86**	59-128	
124-48-1	Dibromochloromethane	213	**203**	**95**	67-123	
106-93-4	1,2-Dibromoethane	216	**206**	**95**	66-122	
123-86-4	n-Butyl Acetate	219	**190**	**87**	64-128	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190110-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	217	**193**	**89**	65-114	
127-18-4	Tetrachloroethene	213	**190**	**89**	55-120	
108-90-7	Chlorobenzene	215	**197**	**92**	61-114	
100-41-4	Ethylbenzene	212	**190**	**90**	64-113	
179601-23-1	m,p-Xylenes	426	**389**	**91**	64-114	
75-25-2	Bromoform	213	**204**	**96**	65-132	
100-42-5	Styrene	212	**216**	**102**	67-124	
95-47-6	o-Xylene	214	**191**	**89**	65-114	
111-84-2	n-Nonane	215	**176**	**82**	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	214	**198**	**93**	66-119	
98-82-8	Cumene	214	**194**	**91**	61-116	
80-56-8	alpha-Pinene	211	**198**	**94**	65-120	
103-65-1	n-Propylbenzene	218	**199**	**91**	63-117	
622-96-8	4-Ethyltoluene	214	**199**	**93**	63-124	
108-67-8	1,3,5-Trimethylbenzene	214	**192**	**90**	60-117	
95-63-6	1,2,4-Trimethylbenzene	215	**202**	**94**	61-122	
100-44-7	Benzyl Chloride	217	**229**	**106**	77-142	
541-73-1	1,3-Dichlorobenzene	216	**203**	**94**	61-125	
106-46-7	1,4-Dichlorobenzene	216	**199**	**92**	59-123	
95-50-1	1,2-Dichlorobenzene	216	**202**	**94**	61-126	
5989-27-5	d-Limonene	211	**203**	**96**	66-124	
96-12-8	1,2-Dibromo-3-chloropropane	209	**205**	**98**	67-138	
120-82-1	1,2,4-Trichlorobenzene	214	**211**	**99**	62-141	
91-20-3	Naphthalene	203	**205**	**101**	62-145	
87-68-3	Hexachlorobutadiene	209	**183**	**88**	49-131	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190114-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	211	**163**	**77**	53-112	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**179**	**85**	62-103	
74-87-3	Chloromethane	211	**180**	**85**	51-121	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**198**	**94**	56-111	
75-01-4	Vinyl Chloride	214	**205**	**96**	57-117	
106-99-0	1,3-Butadiene	210	**201**	**96**	53-134	
74-83-9	Bromomethane	212	**207**	**98**	65-110	
75-00-3	Chloroethane	214	**201**	**94**	64-111	
64-17-5	Ethanol	1,020	**853**	**84**	57-124	
75-05-8	Acetonitrile	206	**173**	**84**	57-126	
107-02-8	Acrolein	205	**188**	**92**	62-121	
67-64-1	Acetone	1,060	**924**	**87**	60-113	
75-69-4	Trichlorofluoromethane (CFC 11)	211	**188**	**89**	63-104	
67-63-0	2-Propanol (Isopropyl Alcohol)	413	**362**	**88**	60-124	
107-13-1	Acrylonitrile	207	**204**	**99**	66-125	
75-35-4	1,1-Dichloroethene	218	**213**	**98**	68-107	
75-09-2	Methylene Chloride	217	**211**	**97**	66-105	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	**196**	**91**	63-127	
76-13-1	Trichlorotrifluoroethane (CFC 113)	216	**199**	**92**	59-109	
75-15-0	Carbon Disulfide	218	**208**	**95**	67-109	
156-60-5	trans-1,2-Dichloroethene	214	**194**	**91**	70-115	
75-34-3	1,1-Dichloroethane	216	**198**	**92**	66-106	
1634-04-4	Methyl tert-Butyl Ether	214	**205**	**96**	67-109	
108-05-4	Vinyl Acetate	1,060	**1240**	**117**	68-136	
78-93-3	2-Butanone (MEK)	208	**212**	**102**	71-116	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190114-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	211	**193**	**91**	67-110	
141-78-6	Ethyl Acetate	436	**461**	**106**	64-127	
110-54-3	n-Hexane	216	**210**	**97**	60-115	
67-66-3	Chloroform	217	**198**	**91**	66-105	
109-99-9	Tetrahydrofuran (THF)	216	**210**	**97**	65-110	
107-06-2	1,2-Dichloroethane	215	**184**	**86**	60-110	
71-55-6	1,1,1-Trichloroethane	215	**186**	**87**	64-108	
71-43-2	Benzene	211	**190**	**90**	67-106	
56-23-5	Carbon Tetrachloride	212	**186**	**88**	64-112	
110-82-7	Cyclohexane	416	**409**	**98**	67-110	
78-87-5	1,2-Dichloropropane	216	**202**	**94**	66-112	
75-27-4	Bromodichloromethane	215	**200**	**93**	67-113	
79-01-6	Trichloroethene	213	**199**	**93**	66-108	
123-91-1	1,4-Dioxane	214	**210**	**98**	70-116	
80-62-6	Methyl Methacrylate	431	**459**	**106**	73-118	
142-82-5	n-Heptane	215	**213**	**99**	66-110	
10061-01-5	cis-1,3-Dichloropropene	214	**213**	**100**	75-120	
108-10-1	4-Methyl-2-pentanone	209	**205**	**98**	65-124	
10061-02-6	trans-1,3-Dichloropropene	213	**217**	**102**	77-123	
79-00-5	1,1,2-Trichloroethane	215	**205**	**95**	68-112	
108-88-3	Toluene	212	**195**	**92**	62-111	
591-78-6	2-Hexanone	214	**194**	**91**	59-128	
124-48-1	Dibromochloromethane	213	**208**	**98**	67-123	
106-93-4	1,2-Dibromoethane	216	**211**	**98**	66-122	
123-86-4	n-Butyl Acetate	219	**201**	**92**	64-128	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Bhate Environmental Associates, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1807079
Client Project ID: **LHAAP-GWTP / NW01312.0150** ALS Sample ID: P190114-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 1/14/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	217	**202**	**93**	65-114	
127-18-4	Tetrachloroethene	213	**192**	**90**	55-120	
108-90-7	Chlorobenzene	215	**202**	**94**	61-114	
100-41-4	Ethylbenzene	212	**197**	**93**	64-113	
179601-23-1	m,p-Xylenes	426	**405**	**95**	64-114	
75-25-2	Bromoform	213	**206**	**97**	65-132	
100-42-5	Styrene	212	**221**	**104**	67-124	
95-47-6	o-Xylene	214	**199**	**93**	65-114	
111-84-2	n-Nonane	215	**188**	**87**	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	214	**207**	**97**	66-119	
98-82-8	Cumene	214	**199**	**93**	61-116	
80-56-8	alpha-Pinene	211	**203**	**96**	65-120	
103-65-1	n-Propylbenzene	218	**207**	**95**	63-117	
622-96-8	4-Ethyltoluene	214	**204**	**95**	63-124	
108-67-8	1,3,5-Trimethylbenzene	214	**197**	**92**	60-117	
95-63-6	1,2,4-Trimethylbenzene	215	**210**	**98**	61-122	
100-44-7	Benzyl Chloride	217	**234**	**108**	77-142	
541-73-1	1,3-Dichlorobenzene	216	**206**	**95**	61-125	
106-46-7	1,4-Dichlorobenzene	216	**203**	**94**	59-123	
95-50-1	1,2-Dichlorobenzene	216	**204**	**94**	61-126	
5989-27-5	d-Limonene	211	**213**	**101**	66-124	
96-12-8	1,2-Dibromo-3-chloropropane	209	**208**	**100**	67-138	
120-82-1	1,2,4-Trichlorobenzene	214	**212**	**99**	62-141	
91-20-3	Naphthalene	203	**208**	**102**	62-145	
87-68-3	Hexachlorobutadiene	209	**184**	**88**	49-131	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

APPENDIX I
AIR MONITORING CALCULATIONS, PID READINGS, AND CALIBRATION LOGS

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Appendix I, Table 1. Ambient Air Data - December 2018
Longhorn Army Ammunition Plant
Groundwater Treatment Plant

Pollutant	CAS #	Short Term ESL March 2012	AMCVs (ST Health)	GWTP Ambient Air Concentrations (1)		Status (3)	Downwind Ambient Air Concentrations (2)		Status (3)
		µg/m^3	µg/m^3	µg/m^3			µg/m^3		
1,1-Dichloroethane	75-34-3	4,000	4,047	0.70	U	PASS	0.61	U	PASS
1,1-Dichloroethene	75-35-4	210	714	0.72	U	PASS	0.63	U	PASS
1,2-Dichloroethane	107-06-2	160	162	0.71	U	PASS	0.62	U	PASS
Acetone	67-64-1	5,900	NA	**32**		PASS	**17.0**		PASS
Benzene	71-43-2	170	575	**1.2**		PASS	**1.1**		PASS
Carbon disulfide	75-15-0	30	NA	1.5	U	PASS	1.3	U	PASS
Chloroform	67-66-3	100	98	0.72	U	PASS	0.63	U	PASS
cis-1,2-Dichloroethene	156-59-2	7,900	NA	**1.9**		PASS	0.62	U	PASS
Methylene chloride	75-09-2	3,600	12,158	**0.77**		PASS	**1.4**		PASS
Tetrachloroethene	127-18-4	2,000	6,782	0.71	U	PASS	0.62	U	PASS
trans-1,2-Dichloroethene	156-60-5	7,900	NA	0.71	U	PASS	0.62	U	PASS
Trichloroethene	79-01-6	540	537	**7.5**		PASS	**1.0**		PASS
Vinyl chloride	75-01-4	20,000	66,460	0.71	U	PASS	0.62	U	PASS
n-Hexane	110-54-3	5,300	6,336	**1.60**		PASS	**1.30**		PASS
Styrene	100-42-5	110	21,725	0.71	U	PASS	0.62	U	PASS
Toluene	108-88-3	640	15,074	**4.6**		PASS	**1.2**		PASS
Ethylbenzene	100-41-4	740	86,844	0.70	U	PASS	0.61	U	PASS
m,p-Xylenes	179601-23-1	180	7,382	1.5	U	PASS	1.3	U	PASS
o-Xylene	95-47-6	1,600	7,382	0.71	U	PASS	0.62	U	PASS
1,3-Dichlorobenzene	541-73-1	720	NA	0.72	U	PASS	0.63	U	PASS
Propene (C3 H6)	115-07-1	Asphyxiant	Asphyxiant	**0.77**		NA	0.61	U	NA
Dichlorodifluoromethane (CCl2F2)	75-71-8	50,000	49,452	**2.0**		PASS	**2.0**		PASS
Ethanol	64-17-5	18,800	NA	**12.0**		PASS	6.0	U	PASS
Trichlorofluoromethane (CCl3F)	75-69-4	28,000	56,184	**1.2**		PASS	**1.1**		PASS
Trichlorotrifluoroethane (C2Cl3F3)	76-13-1	38,000	NA	**7.2**		PASS	**8.6**		PASS
alpha-Pinene	80-56-8	60	3,499	0.70	U	PASS	**0.69**		PASS
d-Limonene	5989-27-5	1,100	NA	0.68	U	PASS	0.60	U	PASS

Notes:

(1) Sample collected over an 8-hour period on Dec 19, 2018, between 8 AM and 4 PM

(2) Sample collected over a 24-hour period beginning on Dec 19, 2018, at 6:30 AM and ending on Dec 20, 2018 at 6:30 AM

(3) Status based on comparison of air sample result to Air Monitoring Comparison Values (AMCVs). When there is no AMCV value for a chemical, the air sample concentration is compared to the short-term Effects Screening Level (ESL).

CAS # = Chemcial Abstracts Service Number

GWTP = Groundwater Treatment Plant

J = estimated value

U = non-detect

µg/m^3 = micrograms per cubic meter

Appendix I, Table 2. Emission Stack Air Data - December 2018
Longhorn Army Ammunition Plant
Groundwater Treatment Plant

Pollutant	CAS #	Measured Air Stripper Stack Concentrations (1)		Air Stripper Emission Rates (2)		Air Stripper Emission Rates (2a)		Allowable Annual Emission (3)	Status (4)	TLV (L)	TLV Reference	Compliance section	Distance Downwind to nearest off-site Receptor (D)	(K) conversion value	Allowable Maximum Hourly Emission Limit at Nearest off-site Receptor [6][7] (E) = L/K	Status (8)
		µg/m^3		lb/hr		tpy		tpy		mg/m^3			feet		lb/hr	
1,1-Dichloroethane	75-34-3	80	U	6.56E-04	U	4.26E-04	U	5	PASS	405	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
1,1-Dichloroethene	75-35-4	**100**		1.64E-03		1.07E-03		5	PASS	20	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.4	PASS
1,2-Dichloroethane	107-06-2	**110**		1.80E-03		1.17E-03		5	PASS	40	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	2.9	PASS
Acetone	67-64-1	830	U	6.80E-03	U	4.42E-03	U	5	PASS	590	106.262 List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
Benzene	71-43-2	80	U	6.56E-04	U	4.26E-04	U	5	PASS	3	106.262 List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	0.21	PASS
Carbon disulfide	75-15-0	170	U	1.39E-03	U	9.06E-04	U	5	PASS	31	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	2.2	PASS
Chloroform	67-66-3	83	U	6.80E-04	U	4.42E-04	U	5	PASS	10	106.262 List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	0.71	PASS
cis-1,2-Dichloroethene	156-59-2	**3,800**		6.23E-02		4.05E-02		5	PASS	793	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
Methylene chloride	75-09-2	**240**		3.93E-03		2.56E-03		5	PASS	26	106.262 List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.9	PASS
Tetrachloroethene	127-18-4	81	U	6.64E-04	U	4.32E-04	U	5	PASS	33.5	106.262 List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	2.4	PASS
trans-1,2-Dichloroethene	156-60-5	81	U	6.64E-04	U	4.32E-04	U	5	PASS	793	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
Trichloroethene	79-01-6	**14,000**		2.30E-01		1.49E-01		5	PASS	135	106.262 List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	6.0	PASS
Vinyl chloride	75-01-4	**97**		1.59E-03		1.03E-03		5	PASS	2	106.262 List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	0.14	PASS
n-Hexane	110-54-3	83	U	6.80E-04	U	4.42E-04	U	5	PASS	1,800	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
Styrene	100-42-5	81	U	6.64E-04	U	4.32E-04	U	5	PASS	21	106.262 List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.5	PASS
Toluene	108-88-3	81	U	6.64E-04	U	4.32E-04	U	5	PASS	188	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	6.0	PASS
Ethylbenzene	100-41-4	80	U	6.56E-04	U	4.26E-04	U	5	PASS	434	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
m,p-Xylenes	179601-23-1	170	U	1.39E-03	U	9.06E-04	U	5	PASS	434	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
o-Xylene	95-47-6	81	U	6.64E-04	U	4.32E-04	U	5	PASS	434	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
1,3-Dichlorobenzene	541-73-1	82	U	6.72E-04	U	4.37E-04	U	5	PASS	(5)	--	30 TAC 106.533(f)(1)(A)(i)	2,000	14	1.0	PASS
Propene (C3 H6)	115-07-1	80	U	6.56E-04	U	4.26E-04	U	5	PASS	(5)	--	30 TAC 106.533(f)(1)(A)(i)	2,000	14	6.0	PASS
Dichlorodifluoromethane (CCl2F2)	75-71-8	80	U	6.56E-04	U	4.26E-04	U	5	PASS	4,950	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
Ethanol	64-17-5	780	U	6.39E-03	U	4.16E-03	U	5	PASS	1,880	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
Trichlorofluoromethane (CCl3F)	75-69-4	81	U	6.64E-04	U	4.32E-04	U	5	PASS	5,620	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
Trichlorotrifluoroethane (C2Cl3F3)	76-13-1	**6,000**		9.84E-02		6.39E-02		5	PASS	7,670	ACGIH List	30 TAC 106.533(f)(1)(A)(ii)	2,000	14	1.0	PASS
alpha-Pinene	80-56-8	80	U	6.56E-04	U	4.26E-04	U	5	PASS	(5)	--	30 TAC 106.533(f)(1)(A)(i)	2,000	14	1.0	PASS
d-Limonene	5989-27-5	78	U	6.39E-04	U	4.16E-04	U	5	PASS	(5)	--	30 TAC 106.533(f)(1)(A)(i)	2,000	14	1.0	PASS
		TOTAL		0.426												

Notes:

(1) Sample collected on Dec 19, 2018. The higher value of the sample or duplicate is reported.

(2) Based on a blower flow rate of 4,390 cubic feet per minute (cfm). Note that plant operations is less than or equal to 25 hours per week. 1/2 of detection limit was used for estimating mass rate

(2a) Based on operation of 25 hours per week, 52 weeks per year.

(3) Per 30 Texas Administrative Code (TAC) 106.533(f)(1)(B)

(4) Based on comparing the calculated air stripper stack sample emission rate in tons per year (tpy) to the allowable annual emission limit per chemical of 5 tpy.

(5) No Threshold Limit Values (TLVs) for these chemicals

(6) The maximum hourly limit allowed by 30 TAC 106.262, per pollutant, is 6 pounds per hour (lb/hr) per "Figure 1: 30 TAC 106.262(a)". The E value was overridden with 6 lb/hr when the calculated E was higher.

(7) The maximum hourly emission rate allowed by 30 TAC 106.261(a)(3) for chemicals with a limit value (L) greater than 200 mg/m^3 is 1 lb/hr.

(8) Based on comparing the calculated air stripper stack sample emission rate in lb/hr to the allowable maximum emission limit per chemical based on distance downwind to nearest off-site receptor.

Blower flowrate = 4,390 cubic feet per minute

CAS # = Chemical Abstracts Service Number

mg/m^3 = milligrams per cubic meter

µg/m^3 = micrograms per cubic meter

U = non-detect

Appendix I, Table 3: PID Measurements for 4th Quarter 2018
Longhorn Army Ammunition Plant
Groundwater Treatment Plant

Date	Time	Location	Air Flow Rate at Blower	Instrument ID	Person Collecting	PID Reading	Weather Conditions
10/1/2018	8:00	Outside GWTP Office	3720 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Cloudy 71 degrees
10/1/2018	8:00	Downwind	3720 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Cloudy 71 degrees
10/1/2018	8:00	Stripper	3720 ACFM	MiniRAE 3000	Scott Beesinger	Max. 21.2 ppm Steady State 5.3 ppm	Cloudy 71 degrees
10/1/2018	14:00	Outside GWTP Office	3701 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 81 degrees
10/1/2018	14:00	Downwind	3701 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 81 degrees
10/1/2018	14:00	Stripper	3701 ACFM	MiniRAE 3000	Kennie Moore	Max. 22.9 ppm Steady State 6.5 ppm	Clear 81 degrees
10/8/2018	8:00	Outside GWTP Office	3710 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Clear 71 degrees
10/8/2018	8:00	Downwind	3710 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Clear 71 degrees
10/8/2018	8:00	Stripper	3710 ACFM	MiniRAE 3000	Scott Beesinger	Max. 21.8 ppm Steady State 5.1 ppm	Clear 81 degrees
10/8/2018	14:00	Outside GWTP Office	3622 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 86 degrees
10/8/2018	14:00	Downwind	3622 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 86 degrees
10/8/2018	14:00	Stripper	3622 ACFM	MiniRAE 3000	Kennie Moore	Max. 23.5 ppm Steady State 6.4 ppm	Clear 86 degrees
10/15/2018	8:00	Outside GWTP Office	3750 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Cloudy 53 degrees
10/15/2018	8:00	Downwind	3750 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Cloudy 53 degrees
10/15/2018	8:00	Stripper	3750 ACFM	MiniRAE 3000	Scott Beesinger	Max. 22.3 ppm Steady State 5.2 ppm	Cloudy 53 degrees
10/15/2018	14:00	Outside GWTP Office	3764 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 56 degrees
10/15/2018	14:00	Downwind	3764 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 56 degrees
10/15/2018	14:00	Stripper	3764 ACFM	MiniRAE 3000	Kennie Moore	Max. 23.9 ppm Steady State 7.4 ppm	Cloudy 56 degrees
10/18/2018	9:00	Outside GWTP Office	3711 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Cloudy 58 degrees
10/18/2018	9:00	Downwind	3711 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Cloudy 58 degrees
10/18/2018	9:00	Stripper	3711 ACFM	MiniRAE 3000	Scott Beesinger	Max. 20.3 ppm Steady State 3.9 ppm	Cloudy 58 degrees
10/18/2018	13:00	Outside GWTP Office	3764 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 64 degrees
10/18/2018	13:00	Downwind	36764 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 64 degrees
10/18/2018	13:00	Stripper	3764 ACFM	MiniRAE 3000	Kennie Moore	Max. 22.0 ppm Steady State 4.5 ppm	Cloudy 64 degrees
10/22/2018	8:00	Outside GWTP Office	3815 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Clear 41 degrees
10/22/2018	8:00	Downwind	3815 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Clear 41 degrees
10/22/2018	8:00	Stripper	3815 ACFM	MiniRAE 3000	Scott Beesinger	Max. 23.7 ppm Steady State 6.3 ppm	Clear 41 degrees
10/22/2018	14:00	Outside GWTP Office	3730 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 64 degrees
10/22/2018	14:00	Downwind	3730 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 64 degrees
10/22/2018	14:00	Stripper	3730 ACFM	MiniRAE 3000	Kennie Moore	Max. 21.3 ppm Steady State 5.6 ppm	Clear 64 degrees
10/25/2018	8:00	Outside GWTP Office	3715 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Overcast 54 degrees
10/25/2018	8:00	Downwind	3715 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Overcast 54 degrees
10/25/2018	8:00	Stripper	3715 ACFM	MiniRAE 3000	Kennie Moore	Max. 21.6 ppm Steady State 7.1 ppm	Overcast 54 degrees
10/25/2018	13:00	Outside GWTP Office	3770 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Overcast 57 degrees

Appendix I, Table 3: PID Measurements for 4th Quarter 2018
Longhorn Army Ammunition Plant
Groundwater Treatment Plant

Date	Time	Location	Air Flow Rate at Blower	Instrument ID	Person Collecting	PID Reading	Weather Conditions
10/25/2018	13:00	Downwind	3770 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Overcast 57 degrees
10/25/2018	13:00	Stripper	3770 ACFM	MiniRAE 3000	Kennie Moore	Max. 20.9 ppm Steady State 5.6 ppm	Overcast 57 degrees
10/29/2018	8:00	Outside GWTP Office	3768 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Clear 55 degrees
10/29/2018	8:00	Downwind	3768 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Clear 55 degrees
10/29/2018	8:00	Stripper	3768 ACFM	MiniRAE 3000	Scott Beesinger	Max. 22.1 ppm Steady State 6.3 ppm	Clear 55 degrees
10/29/2018	14:00	Outside GWTP Office	3615 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 82 degrees
10/29/2018	14:00	Downwind	3615 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 82 degrees
10/29/2018	14:00	Stripper	3615 ACFM	MiniRAE 3000	Kennie Moore	Max. 21.6 ppm Steady State 7.4 ppm	Clear 82 degrees
11/1/2018	8:00	Outside GWTP Office	3768 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Cloudy 53 degrees
11/1/2018	8:00	Downwind	3768 ACFM	MiniRAE 3000	Scott Beesinger	0.0 ppm	Cloudy 53 degrees
11/1/2018	8:00	Stripper	3768 ACFM	MiniRAE 3000	Scott Beesinger	Max. 23.8 ppm Steady State 7.9 ppm	Cloudy 53 degrees
11/1/2018	12:00	Outside GWTP Office	3615 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 53 degrees
11/1/2018	12:00	Downwind	3615 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 53 degrees
11/1/2018	12:00	Stripper	3615 ACFM	MiniRAE 3000	Kennie Moore	Max. 20.5 ppm Steady State 5.4 ppm	Cloudy 53 degrees
11/30/2018	8:00	Outside GWTP Office	3855 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Rain 67 degrees
11/30/2018	8:00	Downwind	3855 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Rain 67 degrees
11/30/2018	8:00	Stripper	3855 ACFM	MiniRAE 3000	Kennie Moore	Max. 19.6 ppm Steady State 7.8 ppm	Rain 67 degrees
11/30/2018	14:00	Outside GWTP Office	3632 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Overcast 73 degrees
11/30/2018	14:00	Downwind	3632 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Overcast 73 degrees
11/30/2018	14:00	Stripper	3632 ACFM	MiniRAE 3000	Kennie Moore	Max. 21.2 ppm Steady State 6.9 ppm	Overcast 73 degrees
12/5/2018	8:00	Outside GWTP Office	3864 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 30 degrees
12/5/2018	8:00	Downwind	3864 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 30 degrees
12/5/2018	8:00	Stripper	3864 ACFM	MiniRAE 3000	Kennie Moore	Max. 20.9 ppm Steady State 5.4 ppm	Clear 30 degrees
12/5/2018	14:00	Outside GWTP Office	3788 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 51 degrees
12/5/2018	14:00	Downwind	3788 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 51 degrees
12/5/2018	14:00	Stripper	3788 ACFM	MiniRAE 3000	Kennie Moore	Max. 22.1 ppm Steady State 6.7 ppm	Clear 51 degrees
12/10/2018	8:00	Outside GWTP Office	3895 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 32 degrees
12/10/2018	8:00	Downwind	3895 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 32 degrees
12/10/2018	8:00	Stripper	3895 ACFM	MiniRAE 3000	Kennie Moore	Max. 18.9 ppm Steady State 7.2 ppm	Clear 32 degrees
12/10/2018	14:00	Outside GWTP Office	3750 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 51 degrees
12/10/2018	14:00	Downwind	3750 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Clear 51 degrees
12/10/2018	14:00	Stripper	3750 ACFM	MiniRAE 3000	Kennie Moore	Max. 17.1 ppm Steady State 6.6 ppm	Clear 51 degrees
12/13/2018	8:00	Outside GWTP Office	3661 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Rain 57 degrees

Appendix I, Table 3: PID Measurements for 4th Quarter 2018
Longhorn Army Ammunition Plant
Groundwater Treatment Plant

Date	Time	Location	Air Flow Rate at Blower	Instrument ID	Person Collecting	PID Reading	Weather Conditions
12/13/2018	8:00	Downwind	3661 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Rain 57 degrees
12/13/2018	8:00	Stripper	3661 ACFM	MiniRAE 3000	Kennie Moore	Max. 20.6 ppm Steady State 4.9 ppm	Rain 57 degrees
12/13/2018	13:00	Outside GWTP Office	3670 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Rain 59 degrees
12/13/2018	13:00	Downwind	3670 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Rain 59 degrees
12/13/2018	13:00	Stripper	3670 ACFM	MiniRAE 3000	Kennie Moore	Max. 19.17 ppm Steady State 6.4 ppm	Rain 59 degrees
12/19/2018	8:00	Outside GWTP Office	3845 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Rain 46 degrees
12/19/2018	8:00	Downwind	3845 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Rain 46 degrees
12/19/2018	8:00	Stripper	3845 ACFM	MiniRAE 3000	Kennie Moore	Max. 18.7 ppm Steady State 7.6 ppm	Rain 46 degrees
12/19/2018	14:00	Outside GWTP Office	3693 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 51 degrees
12/19/2018	14:00	Downwind	3693 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 51 degrees
12/19/2018	14:00	Stripper	3693 ACFM	MiniRAE 3000	Kennie Moore	Max. 21.8 ppm Steady State 8.3 ppm	Cloudy 51 degrees
12/26/2018	8:00	Outside GWTP Office	3880 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 59 degrees
12/26/2018	8:00	Downwind	3880 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 59 degrees
12/26/2018	8:00	Stripper	3880 ACFM	MiniRAE 3000	Kennie Moore	Max. 19.8 ppm Steady State 6.6 ppm	Cloudy 59 degrees
12/26/2018	14:00	Outside GWTP Office	3655 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 66 degrees
12/26/2018	14:00	Downwind	3655 ACFM	MiniRAE 3000	Kennie Moore	0.0 ppm	Cloudy 66 degrees
12/26/2018	14:00	Stripper	3655 ACFM	MiniRAE 3000	Kennie Moore	Max. 18.3 ppm Steady State 7.1 ppm	Cloudy 66 degrees

00933734

EQUIPMENT CALIBRATION DAILY LOG

Date: 10/1/18	Project Name: LHAAP - GWTP
Project Number: NW01312.0150	Recorded By: Scott Beesinger

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
PID	Model: Mini Rae 3000		Bulb: 10.6 11.7 meV				
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 07:00	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
COMB. GAS/O_2 METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

					Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
WATER QUALITY METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933735

EQUIPMENT CALIBRATION DAILY LOG

Date: 10/8/18 | Project Name: LHAAP-GWTP

Project Number: NW01312.0150 | Recorded By: Scott Beesinger

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
PID	Model: Mini Rae 3000		Bulb: ~~10.6~~ 11.7 meV				
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 0715	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	~~2019~~ CAP-248-100-4	Value: SB	Value:	Value:

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
COMB. GAS/O_2 METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

					Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
WATER QUALITY METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933736

EQUIPMENT CALIBRATION DAILY LOG

Date:	10/15/18	**Project Name:**	LHAAP-GWTP
Project Number:	NWO 1312.0150	**Recorded By:**	Scott Beesinger

PID	Model: M.N. RAE 3000		Bulb: ~~10.6~~ 11.7 meV		**Morning Calibration**	**Evening Check**	**Additional Calib./Check (if necessary)**
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 0710	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

COMB. GAS/O_2 METER	Model:				**Morning Calibration**	**Evening Check**	**Additional Calib./Check (if necessary)**
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

WATER QUALITY METER	Model:				**Morning Calibration/Check**	**Evening Check (one point only)**	**Additional Calib./Check (if necessary)**
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

EQUIPMENT CALIBRATION DAILY LOG

Date: 10/18/18	Project Name: LHAAP- GWTP
Project Number: NW01312.0150	Recorded By: Scott BEESINGER

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
PID	Model: Mini RAE 3000		Bulb: 10.6 eV				
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 0820	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
COMB. GAS/O_2 METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

					Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
WATER QUALITY METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933738

EQUIPMENT CALIBRATION DAILY LOG

Date: 10/22/18 | Project Name: LHAAP - GWTP

Project Number: NW01312.0150 | Recorded By: Scott BEESINGER

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
PID	Model: Mini RAE 3000		Bulb: 10.6 eV				
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 0645	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
COMB. GAS/O_2 METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

					Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
WATER QUALITY METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933739

EQUIPMENT CALIBRATION DAILY LOG

Date: 10/25/18 | Project Name: LHAAP - GWTP

Project Number: NW01312.0150 | Recorded By: Scott BEESINGER

PID	Model: Mini RAE 3000	Bulb: 10.6 meV			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 0740	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

COMB. GAS/O_2 METER	Model:				Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

WATER QUALITY METER	Model:				Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933740

EQUIPMENT CALIBRATION DAILY LOG

Date: 10/29/18

Project Number: NW01312.0150

Project Name: LHAAP-GWTP

Recorded By: Scott BEESINGER

PID	Model: Mini RAE 3000	Bulb: 10.6 eV			Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 0700	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

COMB. GAS/O_2 METER	Model:				Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

WATER QUALITY METER	Model:				Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933741

EQUIPMENT CALIBRATION DAILY LOG

Date:	11/1/18	Project Name:	LHAAP - GWTP
Project Number:	NW01312.0150	Recorded By:	Scott BEESINGER

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
PID	Model: MiniRAE 3000		Bulb: 10.6 meV				
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 0730	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
COMB. GAS/O_2 METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

					Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
WATER QUALITY METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933742

EQUIPMENT CALIBRATION DAILY LOG

Date: 11/30/18	Project Name: LHAAP - GWTP
Project Number: NW01312.0150	Recorded By: Scott BEESINGER

						Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
PID	Model: Mini RAE 3000		Bulb: 10.6 meV					
	Equipment ID #: PGM 7320							
	Parameter	Standard	Exp. Date	Lot #		Time: 0735	Time:	Time:
						Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA		Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4		Value: SB	Value:	Value:

						Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
COMB. GAS/O_2 METER	Model:							
	Equipment ID #:							
	Parameter	Standard	Exp. Date	Lot #		Time:	Time:	Time:
						Initials:	Initials:	Initials:
First Point Calibration	O2 (%)					Value:	Value:	Value:
	% LEL Pentane					Value:	Value:	Value:

						Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
WATER QUALITY METER	Model:							
	Equipment ID #:							
	Parameter	Standard	Exp. Date	Lot #		Time:	Time:	Time:
						Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00				Value:	Value:	Value:
	Conductivity (mS/cm)	4.49				Value:	Value:	Value:
	Turbidity (NTU)	0				Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA		Value:	Value:	Value:
Second Point Calibration	pH	6.86				Value:	Value:	Value:
	Conductivity (mS/cm)	53.7				Value:	Value:	Value:
	Turbidity (NTU)	100				Value:	Value:	Value:
Third Point Calibration	pH	9.18				Value:	Value:	Value:
	Conductivity (mS/cm)	53.7				Value:	Value:	Value:
	Turbidity (NTU)	100				Value:	Value:	Value:

Additional Remarks:

00933743

EQUIPMENT CALIBRATION DAILY LOG

Date:	12/5/18	**Project Name:**	LHAAP - GWTP
Project Number:	NW01312.0150	**Recorded By:**	Scott BEESINGER

PID	Model: Mini RAE 3000		Bulb: 10.6 meV		**Morning Calibration**	**Evening Check**	**Additional Calib./Check (if necessary)**
	Equipment ID #: PGM 7320				Time: 0710	Time:	Time:
	Parameter	Standard	Exp. Date	Lot #	Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

COMB. GAS/O_2 METER	Model:				**Morning Calibration**	**Evening Check**	**Additional Calib./Check (if necessary)**
	Equipment ID #:				Time:	Time:	Time:
	Parameter	Standard	Exp. Date	Lot #	Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

WATER QUALITY METER	Model:				**Morning Calibration/Check**	**Evening Check (one point only)**	**Additional Calib./Check (if necessary)**
	Equipment ID #:				Time:	Time:	Time:
	Parameter	Standard	Exp. Date	Lot #	Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933744

EQUIPMENT CALIBRATION DAILY LOG

Date: 12/10/18
Project Number: NW01312.0150
Project Name: LHAAP-GWTP
Recorded By: Scott BEESINGER

PID

Model: MiniRAE 3000
Bulb: 10.6 eV
Equipment ID #: PGM 7320

	Parameter	Standard	Exp. Date	Lot #	Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
					Time: 0700	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

COMB. GAS/O_2 METER

Model:
Equipment ID #:

	Parameter	Standard	Exp. Date	Lot #	Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
					Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

WATER QUALITY METER

Model:
Equipment ID #:

	Parameter	Standard	Exp. Date	Lot #	Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
					Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933745

EQUIPMENT CALIBRATION DAILY LOG

Date: 12/13/18 | Project Name: LHAAP-GWTP

Project Number: NW01312.0150 | Recorded By: Scott BEESINGER

						Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
PID	Model: Mini RAE 3000		Bulb: 10.6 meV					
	Equipment ID #: PGM 7320							
	Parameter	Standard	Exp. Date	Lot #		Time: 0745	Time:	Time:
						Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA		Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4		Value: SB	Value:	Value:

						Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
COMB. GAS/O_2 METER	Model:							
	Equipment ID #:							
	Parameter	Standard	Exp. Date	Lot #		Time:	Time:	Time:
						Initials:	Initials:	Initials:
First Point Calibration	O2 (%)					Value:	Value:	Value:
	% LEL Pentane					Value:	Value:	Value:

						Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
WATER QUALITY METER	Model:							
	Equipment ID #:							
	Parameter	Standard	Exp. Date	Lot #		Time:	Time:	Time:
						Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00				Value:	Value:	Value:
	Conductivity (mS/cm)	4.49				Value:	Value:	Value:
	Turbidity (NTU)	0				Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA		Value:	Value:	Value:
Second Point Calibration	pH	6.86				Value:	Value:	Value:
	Conductivity (mS/cm)	53.7				Value:	Value:	Value:
	Turbidity (NTU)	100				Value:	Value:	Value:
Third Point Calibration	pH	9.18				Value:	Value:	Value:
	Conductivity (mS/cm)	53.7				Value:	Value:	Value:
	Turbidity (NTU)	100				Value:	Value:	Value:

Additional Remarks:

00933746

EQUIPMENT CALIBRATION DAILY LOG

Date: 12/19/18 | Project Name: LHAAP-GWTP

Project Number: NW01312.0150 | Recorded By: Scott BEESINGER

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
PID	Model: MiniRAE 3000		Bulb: 10.6 meV				
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 0645	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
COMB. GAS/O_2 METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

					Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
WATER QUALITY METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Point Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Point Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks:

00933747

EQUIPMENT CALIBRATION DAILY LOG

Date: 12/26/18 | Project Name: LHAAP-GWTP

Project Number: NW01312.0150 | Recorded By: Scott BEESINGER

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
PID	Model: MiniRAE 3000		Bulb: 10.6 meV				
	Equipment ID #: PGM 7320						
	Parameter	Standard	Exp. Date	Lot #	Time: 0640	Time:	Time:
					Initials: SB	Initials:	Initials:
First Point Calibration	Vapor conc. (ppm)	0.0 (ambient air)	NA	NA	Value: TO ZERO SB	Value:	Value:
Second Point Calibration	Vapor conc. (ppm)	100 ppm (isobutylene)	2/6/19	CAP-248-100-4	Value: SB	Value:	Value:

					Morning Calibration	Evening Check	Additional Calib./Check (if necessary)
COMB. GAS/O_2 METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration	O2 (%)				Value:	Value:	Value:
	% LEL Pentane				Value:	Value:	Value:

					Morning Calibration/Check	Evening Check (one point only)	Additional Calib./Check (if necessary)
WATER QUALITY METER	Model:						
	Equipment ID #:						
	Parameter	Standard	Exp. Date	Lot #	Time:	Time:	Time:
					Initials:	Initials:	Initials:
First Point Calibration (Auto)	pH	4.00			Value:	Value:	Value:
	Conductivity (mS/cm)	4.49			Value:	Value:	Value:
	Turbidity (NTU)	0			Value:	Value:	Value:
	DO (mg/L)	8.9-9.1 (ambient air)	NA	NA	Value:	Value:	Value:
Second Pio mt Calibration	pH	6.86			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:
Third Piont Calibration	pH	9.18			Value:	Value:	Value:
	Conductivity (mS/cm)	53.7			Value:	Value:	Value:
	Turbidity (NTU)	100			Value:	Value:	Value:

Additional Remarks: