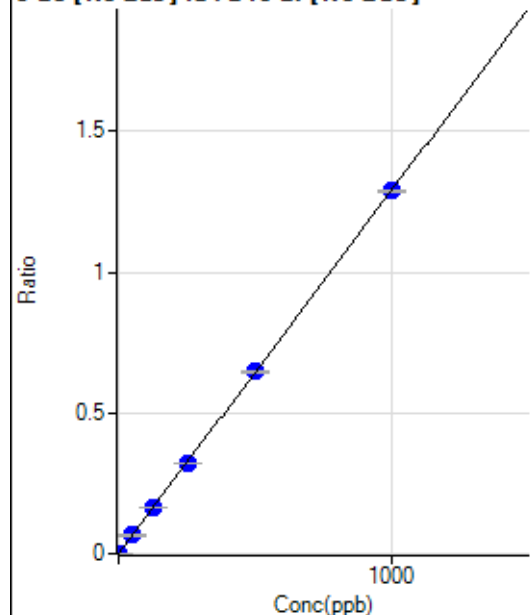


Calibration for 005CALB.d

Batch Folder: D:\ICP-MS Data\P7100717-MS.b\
 Analysis File: P7100717-MS.batch.bin
 DA Date-Time: 2017-10-09 08:36:13
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	005CALB.d	S00	2017-10-07 11:23:39
2			
3	007CALS.d	S02	2017-10-07 11:31:04
4	008CALS.d	S03	2017-10-07 11:34:55
5	009CALS.d	S04	2017-10-07 11:38:47
6	010CALS.d	S05	2017-10-07 11:42:38
7	011CALS.d	S06	2017-10-07 11:46:27
8	012CALS.d	S07	2017-10-07 11:50:15
9	013CALS.d	S08	2017-10-07 11:53:59

9 Be [No Gas] ISTD:6 Li [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.41	0.0000	P	43.4
2	☐	0.100					
3	☐	1.000	0.983	401.87	0.0013	P	4.0
4	☐	50.000	50.323	19681.77	0.0649	P	1.9
5	☐	125.000	125.468	49904.80	0.1619	P	1.0
6	☐	250.000	251.020	100588.07	0.3239	P	0.3
7	☐	500.000	501.277	200655.14	0.6467	P	0.8
8	☐	1000.000	999.032	400333.26	1.2889	P	0.3
9	☐			38.89	0.0001	P	13.5

$$y = 0.0013 * x + 2.3932E-005$$

$$R = 1.0000$$

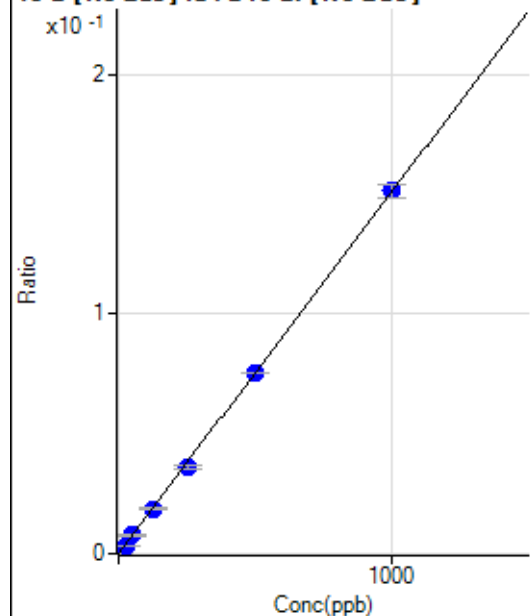
$$DL = 0.02416$$

$$BEC = 0.01855$$

Weight: <None>

Min Conc: 0

10 B [No Gas] ISTD:6 Li [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.66	0.0001	P	86.5
2	☐	2.500					
3	☐	25.000	21.076	1005.63	0.0032	P	10.4
4	☐	50.000	51.054	2350.27	0.0078	P	3.8
5	☐	125.000	124.521	5806.92	0.0188	P	3.2
6	☐	250.000	238.000	11165.65	0.0359	P	3.2
7	☐	500.000	499.134	23374.42	0.0753	P	0.8
8	☐	1000.000	1003.538	47021.52	0.1514	P	3.7
9	☐			722.27	0.0026	P	4.6

$$y = 1.5082E-004 * x + 5.3771E-005$$

$$R = 0.9999$$

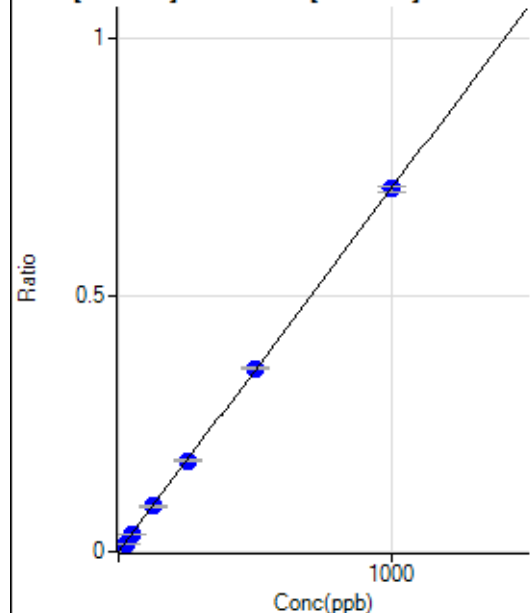
$$DL = 0.9256$$

$$BEC = 0.3565$$

Weight: <None>

Min Conc: 0

11 B [No Gas] ISTD:6 Li [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77.78	0.0003	P	32.6
2	☐	2.500					
3	☐	25.000	21.587	4837.09	0.0155	P	2.7
4	☐	50.000	49.610	10729.23	0.0354	P	0.7
5	☐	125.000	124.256	27219.90	0.0883	P	1.1
6	☐	250.000	250.101	55118.24	0.1775	P	2.0
7	☐	500.000	503.787	110825.76	0.3572	P	0.7
8	☐	1000.000	998.279	219751.06	0.7076	P	1.5
9	☐			3194.91	0.0113	P	10.7

$$y = 7.0852\text{E-}004 * x + 2.5103\text{E-}004$$

$$R = 1.0000$$

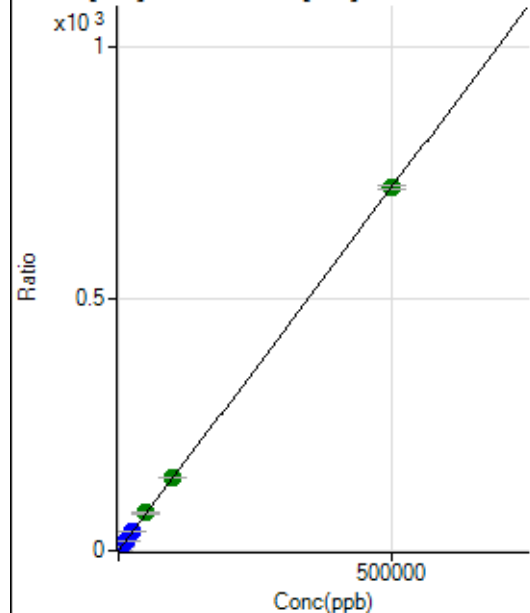
$$DL = 0.3468$$

$$BEC = 0.3543$$

Weight: <None>

Min Conc: 0

23 Na [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10959.99	0.1659	P	0.4
2	☐	50.000					
3	☐	500.000	460.029	54287.95	0.8291	P	0.4
4	☐	5000.000	5334.612	507809.36	7.8564	P	0.9
5	☐	12500.000	13282.339	1269819.83	19.3140	P	0.6
6	☐	25000.000	26478.121	2563899.04	38.3372	P	0.3
7	☐	50000.000	51538.924	5167870.73	74.4653	A	1.2
8	☐	100000.00	101173.50	10275393.81	146.0193	A	1.1
9	☐	500000.00	499514.63	50247666.75	720.2741	A	1.1

$$y = 0.0014 * x + 0.1659$$

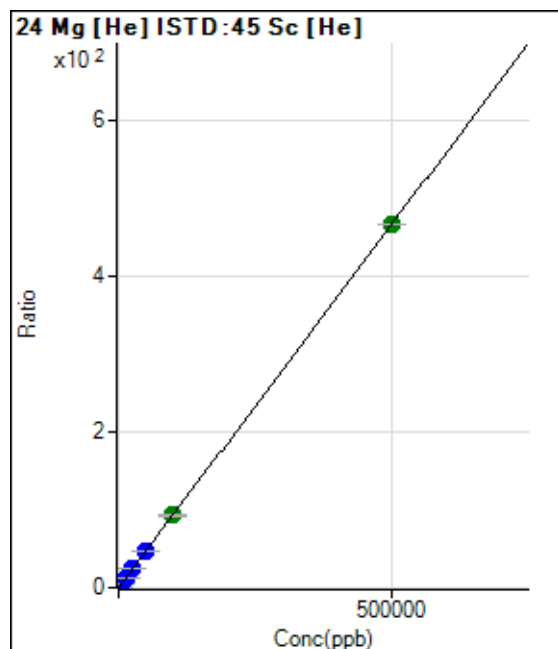
$$R = 1.0000$$

$$DL = 1.431$$

$$BEC = 115.1$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.89	0.0006	P	32.9
2	☐	50.000					
3	☐	500.000	464.511	28399.95	0.4338	P	1.8
4	☐	5000.000	5308.816	320053.02	4.9517	P	1.1
5	☐	12500.000	13293.531	815130.76	12.3983	P	0.9
6	☐	25000.000	26268.025	1638409.19	24.4985	P	0.2
7	☐	50000.000	51213.517	3314799.51	47.7631	P	1.0
8	☐	100000.00	99813.300	6550515.60	93.0879	A	1.3
9	☐	500000.00	499829.69	32519628.16	466.1492	A	0.1

$$y = 9.3261\text{E-}004 * x + 5.8887\text{E-}004$$

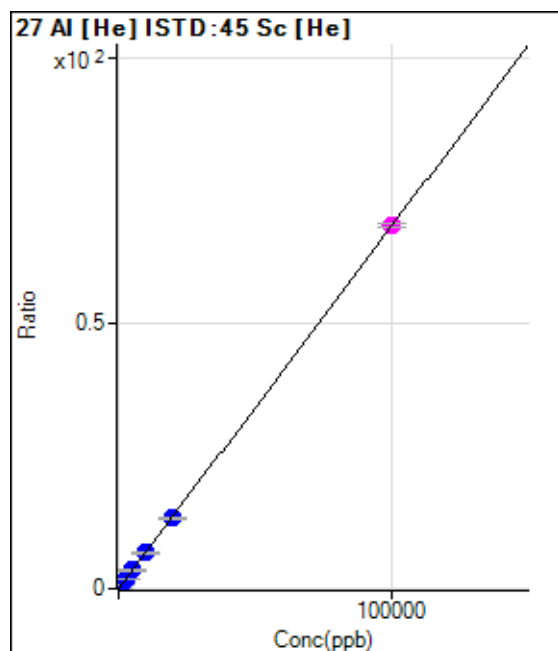
$$R = 1.0000$$

$$DL = 0.6238$$

$$BEC = 0.6314$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.11	0.0005	P	48.2
2	☐	2.000					
3	☐	20.000	19.238	897.29	0.0137	P	15.0
4	☐	1000.000	1010.011	44623.61	0.6904	P	2.1
5	☐	2500.000	2538.335	114015.19	1.7342	P	1.1
6	☐	5000.000	5043.879	230428.31	3.4455	P	0.5
7	☐	10000.000	9818.450	465437.10	6.7065	P	1.2
8	☐	20000.000	19409.851	932926.08	13.2574	P	0.9
9	☐	100000.00	100132.93	4770985.78	68.3908	M	1.0

$$y = 6.8299\text{E-}004 * x + 5.4663\text{E-}004$$

$$R = 1.0000$$

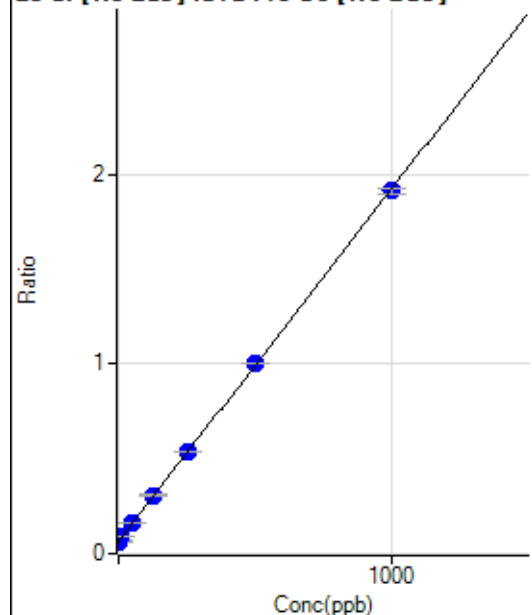
$$DL = 1.157$$

$$BEC = 0.8004$$

Weight: <None>

Min Conc: 0

28 Si [No Gas] ISTD:45 Sc [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39539.32	0.0657	P	1.1
2	☐	1.000					
3	☐	10.000	12.752	54567.05	0.0893	P	1.2
4	☐	50.000	52.302	95273.32	0.1627	P	0.4
5	☐	125.000	130.251	181125.99	0.3073	P	1.2
6	☐	250.000	253.774	324432.64	0.5365	P	1.3
7	☐	500.000	506.779	619183.54	1.0059	P	0.4
8	☐	1000.000	994.868	1203084.54	1.9114	P	1.5
9	☐			50979.57	0.0855	P	0.3

$$y = 0.0019 * x + 0.0657$$

$$R = 1.0000$$

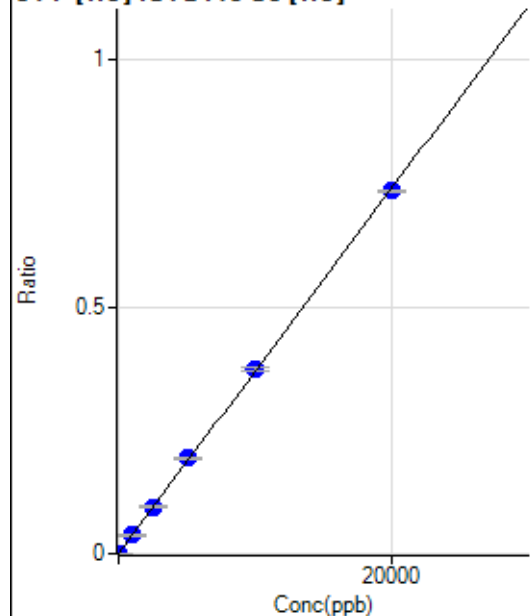
$$DL = 1.184$$

$$BEC = 35.41$$

Weight: <None>

Min Conc: 0

31 P [He] ISTD:45 Sc [He]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.215	19.44	0.0003	P	66.2
2	☐	0.000					
3	☐	0.000	1.215	25.00	0.0004	P	88.2
4	☐	1000.000	999.536	2405.85	0.0372	P	11.9
5	☐	2500.000	2570.553	6262.71	0.0953	P	3.0
6	☐	5000.000	5231.401	12942.26	0.1935	P	2.2
7	☐	10000.000	10121.345	25965.22	0.3741	P	1.6
8	☐	20000.000	19872.681	51665.26	0.7342	P	0.7
9	☐			47.22	0.0007	P	10.2

$$y = 3.6926E-005 * x + 3.3981E-004$$

$$R = 0.9999$$

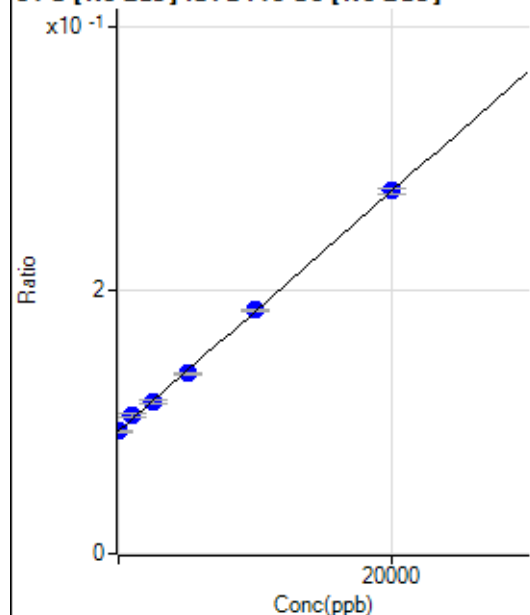
$$DL = 21.71$$

$$BEC = 9.202$$

Weight: <None>

Min Conc: 0

34 S [No Gas] ISTD:45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	32.998	56207.25	0.0934	P	1.1
2	☐	0.000					
3	☐	0.000	-32.998	56658.64	0.0928	P	1.0
4	☐	1000.000	1325.468	61550.50	0.1051	P	2.2
5	☐	2500.000	2457.934	68019.64	0.1154	P	2.4
6	☐	5000.000	4765.090	82490.21	0.1364	P	0.6
7	☐	10000.000	10070.542	113659.72	0.1847	P	0.9
8	☐	20000.000	20012.441	173125.04	0.2751	P	1.6
9	☐			60602.29	0.1016	P	1.9

$$y = 9.0939\text{E-}006 * x + 0.0931$$

$$R = 0.9997$$

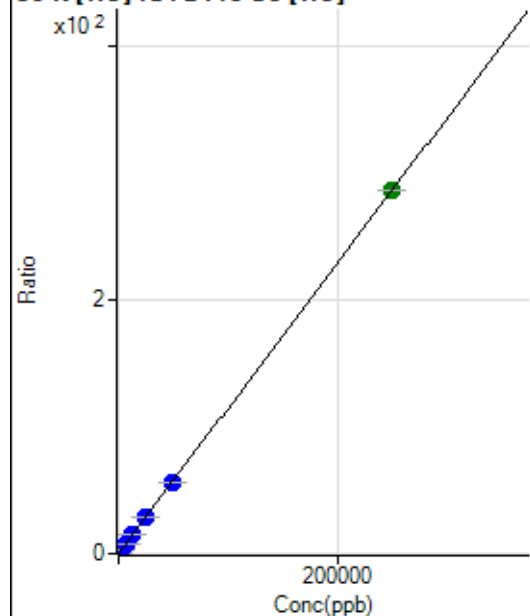
$$DL = 315.2$$

$$BEC = 1.023\text{E}+04$$

Weight: <None>

Min Conc: 0

39 K [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	12283.31	0.1860	P	2.7
2	☐	50.000					
3	☐	500.000	448.713	45724.20	0.6985	P	2.6
4	☐	2500.000	2558.491	200883.14	3.1080	P	1.3
5	☐	6250.000	6354.317	489343.72	7.4431	P	1.1
6	☐	12500.000	12580.039	973292.51	14.5534	P	0.5
7	☐	25000.000	24856.355	1983188.02	28.5739	P	0.2
8	☐	50000.000	48942.774	3946553.13	56.0825	P	0.6
9	☐	250000.00	250218.71	19948849.05	285.9553	A	0.2

$$y = 0.0011 * x + 0.1860$$

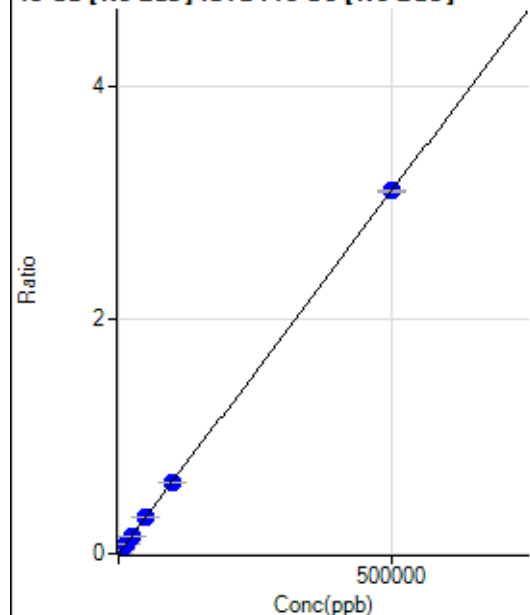
$$R = 1.0000$$

$$DL = 12.97$$

$$BEC = 162.9$$

Weight: <None>

Min Conc: 0

43 Ca [No Gas] ISTD:45 Sc [No Gas]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.01	0.0001	P	18.8
2	☐	50.000					
3	☐	500.000	461.891	1825.19	0.0030	P	5.8
4	☐	5000.000	5055.601	18431.71	0.0315	P	3.6
5	☐	12500.000	12510.328	45806.05	0.0777	P	1.0
6	☐	25000.000	24708.566	92752.89	0.1534	P	0.6
7	☐	50000.000	49361.224	188522.26	0.3063	P	0.9
8	☐	100000.00	98752.353	385593.49	0.6126	P	1.1
9	☐	500000.00	500327.20	1851074.45	3.1032	P	0.3

$$y = 6.2021\text{E-}006 * x + 1.2453\text{E-}004$$

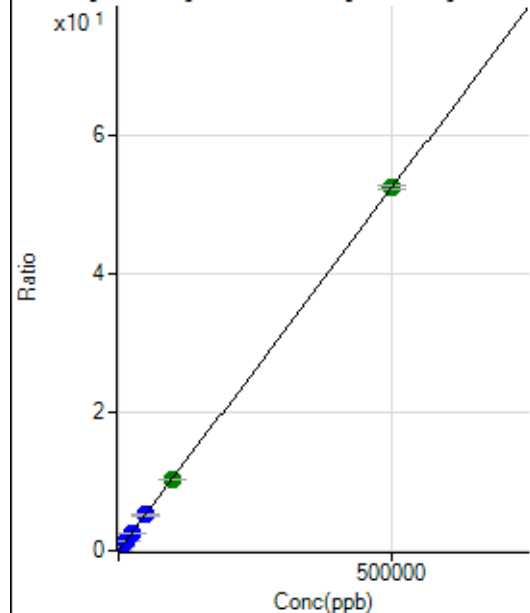
$$R = 1.0000$$

$$DL = 11.35$$

$$BEC = 20.08$$

Weight: <None>

Min Conc: 0

44 Ca [No Gas] ISTD:45 Sc [No Gas]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2675.38	0.0044	P	2.0
2	☐	50.000					
3	☐	500.000	439.460	30846.95	0.0505	P	0.4
4	☐	5000.000	4950.412	306403.90	0.5233	P	0.5
5	☐	12500.000	12445.620	771431.59	1.3089	P	0.5
6	☐	25000.000	24630.975	1563960.01	2.5861	P	0.2
7	☐	50000.000	49132.785	3172745.34	5.1543	P	0.5
8	☐	100000.00	97905.851	6462437.90	10.2665	A	0.7
9	☐	500000.00	500525.91	31296751.74	52.4672	A	1.0

$$y = 1.0482\text{E-}004 * x + 0.0044$$

$$R = 1.0000$$

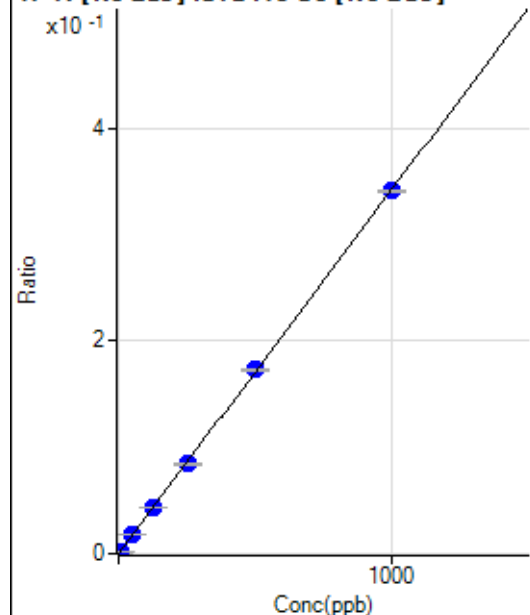
$$DL = 2.54$$

$$BEC = 42.4$$

Weight: <None>

Min Conc: 0

47 Ti [No Gas] ISTD :45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	16.67	0.0000	P	0.5
2	☐	0.500					
3	☐	5.000	4.226	900.07	0.0015	P	4.4
4	☐	50.000	51.036	10242.90	0.0175	P	3.2
5	☐	125.000	126.786	25589.63	0.0434	P	0.8
6	☐	250.000	247.902	51321.02	0.0849	P	1.9
7	☐	500.000	505.305	106464.43	0.1730	P	0.9
8	☐	1000.000	997.601	214939.26	0.3414	P	0.5
9	☐			197.23	0.0003	P	10.1

$$y = 3.4224\text{E-}004 * x + 2.7694\text{E-}005$$

$$R = 1.0000$$

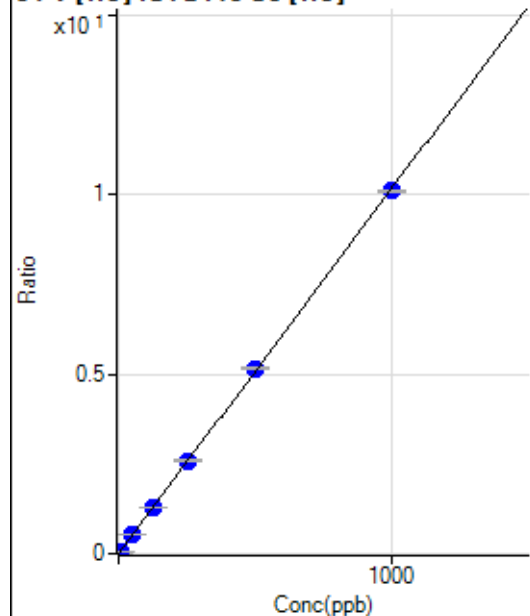
$$DL = 0.001174$$

$$BEC = 0.08092$$

Weight: <None>

Min Conc: 0

51 V [He] ISTD :45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	7.78	0.0001	P	23.5
2	☐	0.500					
3	☐	5.000	4.447	2963.68	0.0453	P	4.6
4	☐	50.000	51.760	33972.59	0.5256	P	0.6
5	☐	125.000	127.571	85151.77	1.2952	P	1.8
6	☐	250.000	255.094	173200.62	2.5898	P	0.8
7	☐	500.000	507.751	357750.23	5.1548	P	1.1
8	☐	1000.000	994.444	710443.79	10.0957	P	0.8
9	☐			100.00	0.0014	P	20.6

$$y = 0.0102 * x + 1.1759\text{E-}004$$

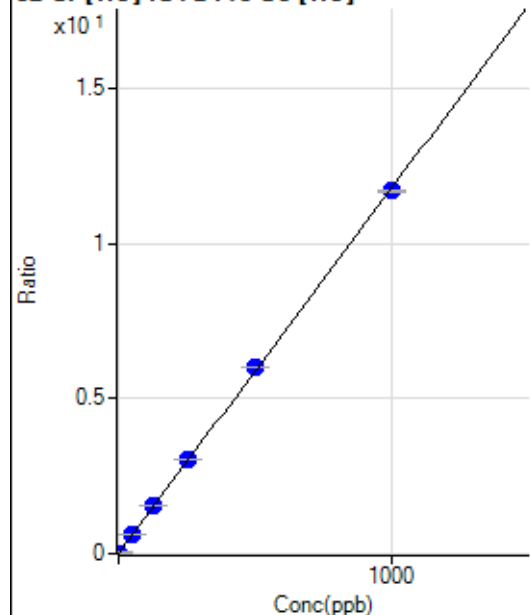
$$R = 0.9999$$

$$DL = 0.008154$$

$$BEC = 0.01158$$

Weight: <None>

Min Conc: 0

52 Cr [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	596.69	0.0090	P	1.6
2	☐	0.200					
3	☐	2.000	1.866	2030.17	0.0310	P	3.1
4	☐	50.000	52.001	40166.95	0.6214	P	0.5
5	☐	125.000	129.574	100910.08	1.5349	P	1.2
6	☐	250.000	257.397	203317.73	3.0401	P	0.9
7	☐	500.000	508.918	416567.56	6.0020	P	0.2
8	☐	1000.000	993.020	823534.74	11.7028	P	0.8
9	☐			8362.48	0.1199	P	1.8

$$y = 0.0118 * x + 0.0090$$

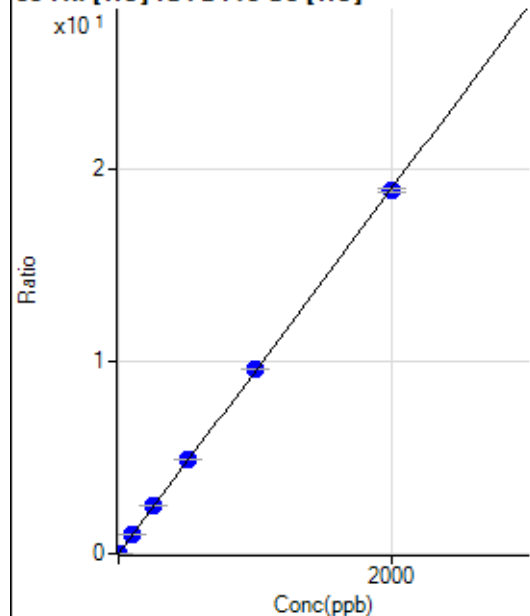
$$R = 0.9999$$

$$DL = 0.03709$$

$$BEC = 0.7673$$

Weight: <None>

Min Conc: 0

55 Mn [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	22.22	0.0003	P	35.5
2	☐	0.100					
3	☐	1.000	0.977	628.92	0.0096	P	2.3
4	☐	100.000	105.034	64407.08	0.9964	P	0.7
5	☐	250.000	262.510	163689.67	2.4897	P	0.8
6	☐	500.000	517.523	328234.17	4.9080	P	0.6
7	☐	1000.000	1010.962	665381.11	9.5873	P	0.6
8	☐	2000.000	1988.323	1326870.53	18.8556	P	0.9
9	☐			4800.87	0.0688	P	0.8

$$y = 0.0095 * x + 3.3739E-004$$

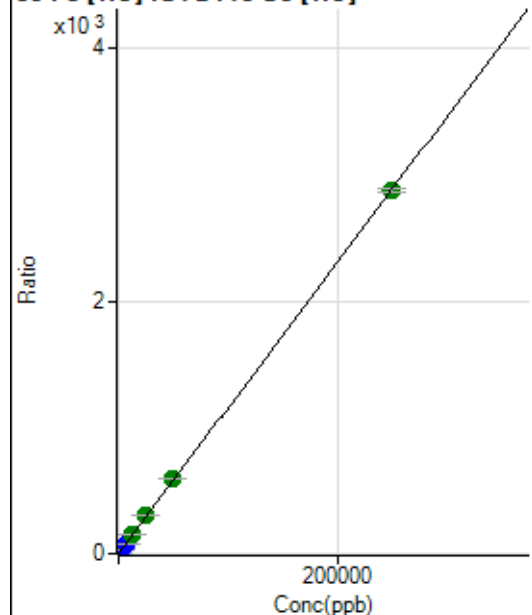
$$R = 0.9999$$

$$DL = 0.03786$$

$$BEC = 0.03558$$

Weight: <None>

Min Conc: 0

56 Fe [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1498.27	0.0227	P	4.7
2	☐	5.000					
3	☐	50.000	49.734	39002.29	0.5957	P	0.8
4	☐	2500.000	2769.731	2064073.82	31.9335	P	0.9
5	☐	6250.000	6902.095	5229559.72	79.5435	P	1.0
6	☐	12500.000	13549.559	10441666.32	156.1307	A	0.6
7	☐	25000.000	26474.539	21170083.81	305.0428	A	1.0
8	☐	50000.000	51600.300	41837290.29	594.5233	A	0.6
9	☐	250000.00	249461.00	200501165.5	2,874.128	A	1.0

$$y = 0.0115 * x + 0.0227$$

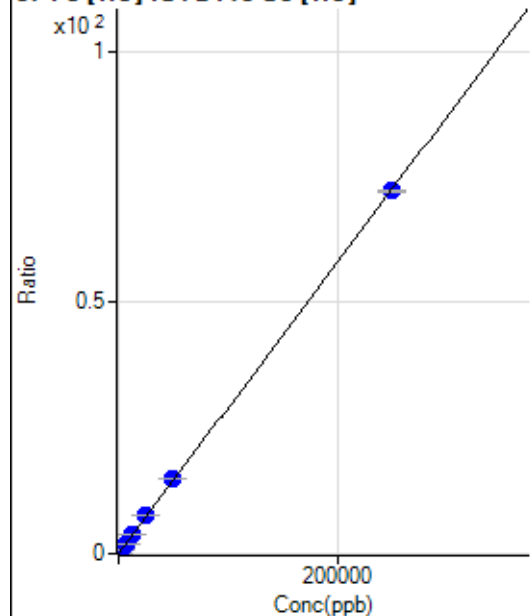
$$R = 1.0000$$

$$DL = 0.2772$$

$$BEC = 1.969$$

Weight: <None>

Min Conc: 0

57 Fe [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64.82	0.0010	P	18.8
2	☐	5.000					
3	☐	50.000	47.127	957.47	0.0146	P	1.6
4	☐	2500.000	2755.126	51605.92	0.7985	P	2.2
5	☐	6250.000	6856.068	130532.86	1.9855	P	1.3
6	☐	12500.000	13604.621	263418.92	3.9389	P	1.0
7	☐	25000.000	26606.803	534576.38	7.7024	P	0.6
8	☐	50000.000	51809.641	1055375.46	14.9974	P	0.6
9	☐	250000.00	249404.45	5036265.62	72.1915	P	0.7

$$y = 2.8945E-004 * x + 9.8255E-004$$

$$R = 1.0000$$

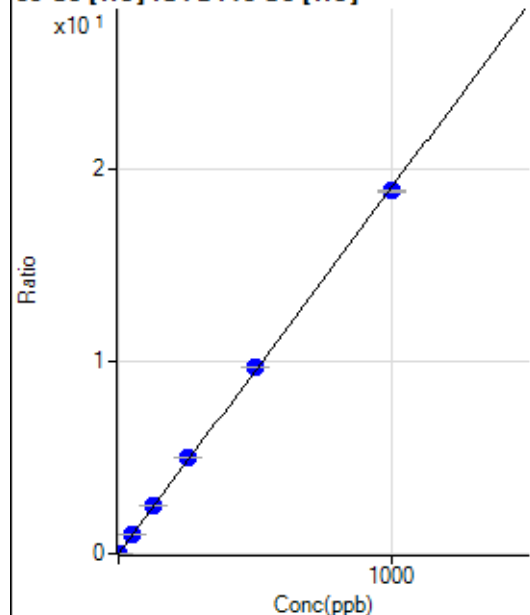
$$DL = 1.913$$

$$BEC = 3.395$$

Weight: <None>

Min Conc: 0

59 Co [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	23.34	0.0004	P	49.9
2	☐	0.100					
3	☐	1.000	0.945	1200.07	0.0183	P	3.0
4	☐	50.000	53.223	65464.08	1.0128	P	1.2
5	☐	125.000	132.428	165649.03	2.5195	P	1.0
6	☐	250.000	261.107	332209.76	4.9674	P	0.3
7	☐	500.000	509.679	672931.91	9.6960	P	0.6
8	☐	1000.000	991.294	1327030.87	18.8578	P	0.7
9	☐			1510.10	0.0216	P	3.7

$$y = 0.0190 * x + 3.5382E-004$$

$$R = 0.9999$$

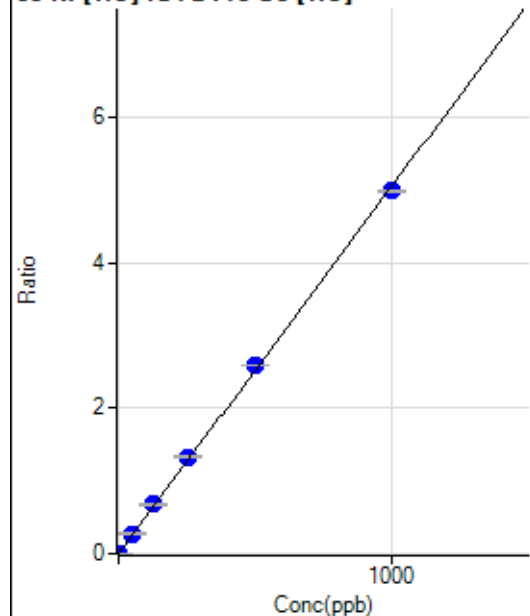
$$DL = 0.02785$$

$$BEC = 0.0186$$

Weight: <None>

Min Conc: 0

60 Ni [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	10.00	0.0002	P	56.5
2	☐	0.100					
3	☐	1.000	1.090	370.01	0.0057	P	3.1
4	☐	50.000	54.526	17801.01	0.2754	P	1.9
5	☐	125.000	134.083	44514.26	0.6771	P	0.8
6	☐	250.000	263.908	89110.88	1.3325	P	0.6
7	☐	500.000	513.178	179812.08	2.5909	P	0.6
8	☐	1000.000	988.572	351204.45	4.9908	P	0.8
9	☐			1589.00	0.0228	P	0.9

$$y = 0.0050 * x + 1.5081E-004$$

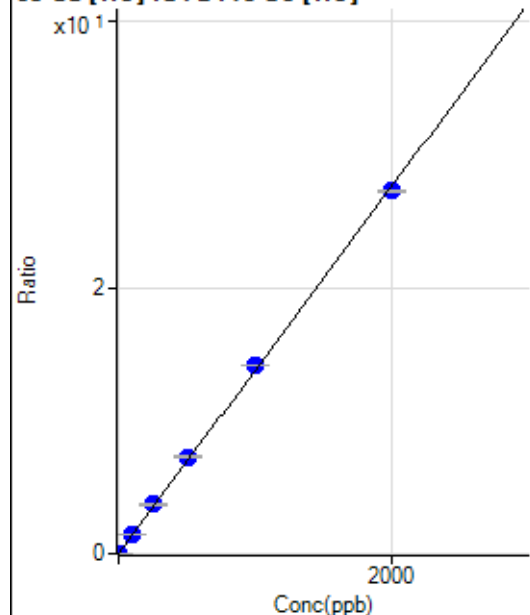
$$R = 0.9997$$

$$DL = 0.0506$$

$$BEC = 0.02987$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.00	0.0021	P	15.4
2	☐	0.200					
3	☐	2.000	1.992	1936.83	0.0296	P	5.0
4	☐	100.000	107.785	96165.37	1.4879	P	1.5
5	☐	250.000	267.506	242568.20	3.6895	P	0.7
6	☐	500.000	528.684	487513.88	7.2896	P	0.2
7	☐	1000.000	1025.994	981667.43	14.1447	P	0.7
8	☐	2000.000	1977.255	1918106.78	27.2571	P	0.5
9	☐			2200.20	0.0315	P	1.9

$$y = 0.0138 * x + 0.0021$$

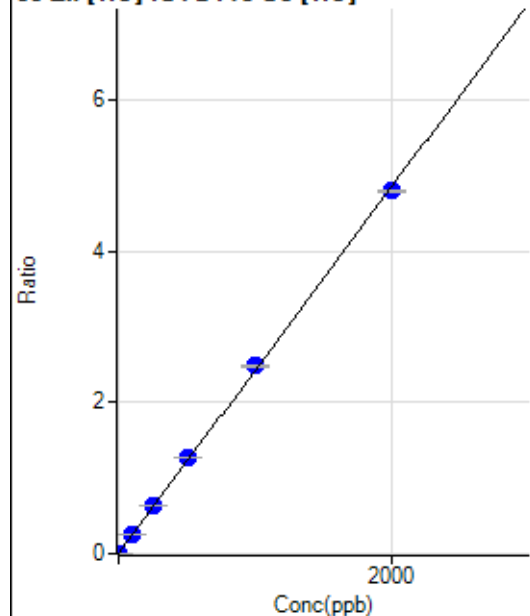
$$R = 0.9997$$

$$DL = 0.07105$$

$$BEC = 0.1537$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	197.78	0.0030	P	13.3
2	☐	0.200					
3	☐	2.000	1.987	511.13	0.0078	P	3.5
4	☐	100.000	106.380	16843.23	0.2606	P	2.6
5	☐	250.000	263.892	42203.16	0.6419	P	1.6
6	☐	500.000	525.734	85331.86	1.2759	P	0.6
7	☐	1000.000	1024.980	172440.97	2.4847	P	1.0
8	☐	2000.000	1979.021	337403.34	4.7947	P	0.9
9	☐			684.47	0.0098	P	8.2

$$y = 0.0024 * x + 0.0030$$

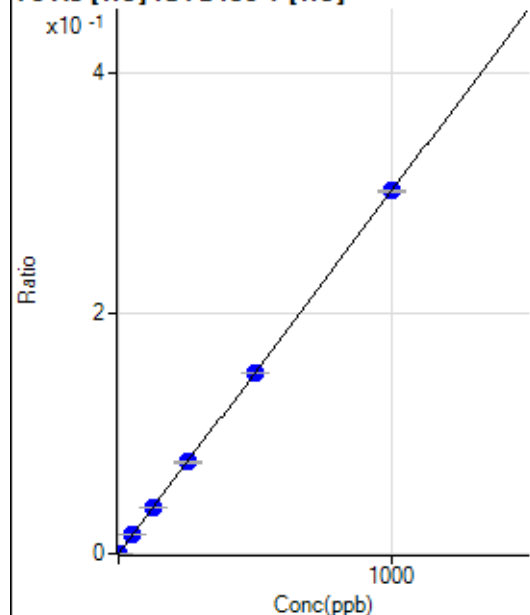
$$R = 0.9998$$

$$DL = 0.4923$$

$$BEC = 1.236$$

Weight: <None>

Min Conc: 0

75 As [He] ISTD:89 Y [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	5.55	0.0000	P	88.3
2	☐	0.100					
3	☐	1.000	0.852	112.96	0.0003	P	2.1
4	☐	50.000	51.081	6345.26	0.0155	P	0.4
5	☐	125.000	126.670	15879.11	0.0383	P	0.6
6	☐	250.000	252.309	32277.80	0.0763	P	1.0
7	☐	500.000	497.694	65611.16	0.1505	P	0.4
8	☐	1000.000	1000.313	131450.93	0.3024	P	0.4
9	☐			78.40	0.0002	P	6.2

$$y = 3.0228\text{E-}004 * x + 1.3318\text{E-}005$$

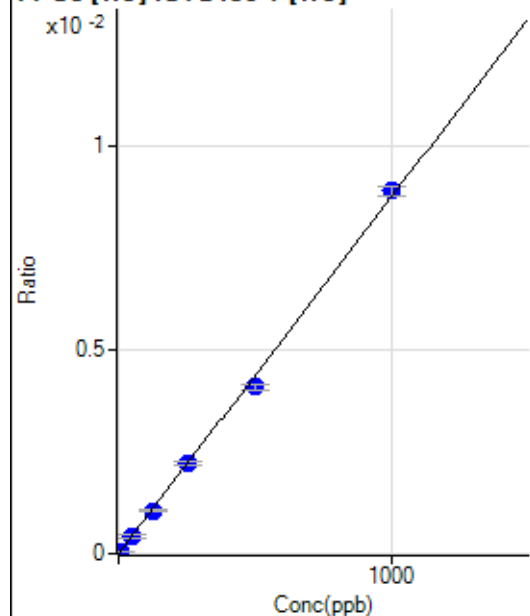
$$R = 1.0000$$

$$DL = 0.1167$$

$$BEC = 0.04406$$

Weight: <None>

Min Conc: 0

77 Se [He] ISTD:89 Y [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500					
3	☐	5.000	3.646	13.33	0.0000	P	24.6
4	☐	50.000	48.549	174.45	0.0004	P	21.7
5	☐	125.000	121.180	440.02	0.0011	P	5.9
6	☐	250.000	252.145	934.49	0.0022	P	3.7
7	☐	500.000	466.413	1781.25	0.0041	P	4.1
8	☐	1000.000	1016.814	3871.69	0.0089	P	2.6
9	☐			0.00	0.0000	P	

$$y = 8.7590\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9992$$

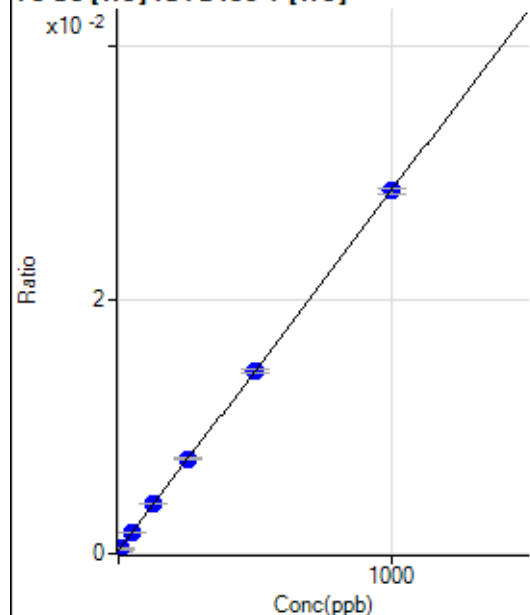
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

78 Se [He] ISTD:89 Y [He]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0002	P	13.9
2	☐	0.500					
3	☐	5.000	5.118	160.49	0.0004	P	7.4
4	☐	50.000	49.379	672.86	0.0016	P	5.1
5	☐	125.000	130.368	1630.97	0.0039	P	3.2
6	☐	250.000	255.754	3168.28	0.0075	P	1.5
7	☐	500.000	497.626	6254.49	0.0143	P	1.8
8	☐	1000.000	999.108	12412.17	0.0286	P	1.4
9	☐			153.70	0.0004	P	15.4

$$y = 2.8339E-005 * x + 2.3973E-004$$

$$R = 1.0000$$

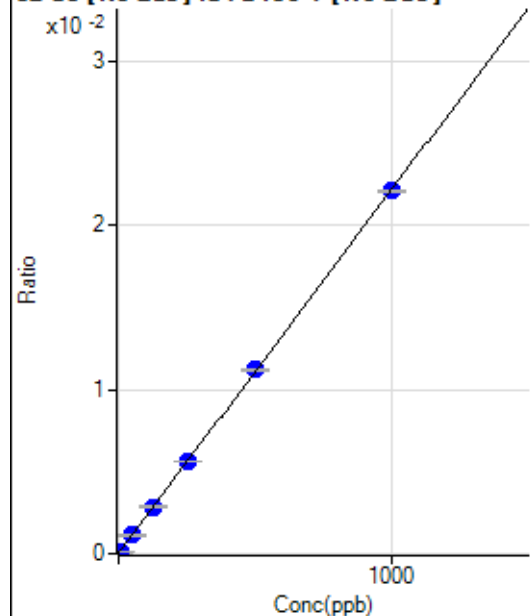
$$DL = 3.532$$

$$BEC = 8.459$$

Weight: <None>

Min Conc: 0

82 Se [No Gas] ISTD:89 Y [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.82	0.0000	P	60.5
2	☐	0.500					
3	☐	5.000	4.638	115.85	0.0001	P	20.9
4	☐	50.000	49.518	973.46	0.0011	P	4.1
5	☐	125.000	127.734	2510.40	0.0029	P	2.0
6	☐	250.000	252.791	5066.21	0.0056	P	1.2
7	☐	500.000	504.351	10295.70	0.0112	P	1.7
8	☐	1000.000	996.811	20769.08	0.0221	P	0.5
9	☐			37.12	0.0000	P	42.0

$$y = 2.2146E-005 * x + 2.3134E-005$$

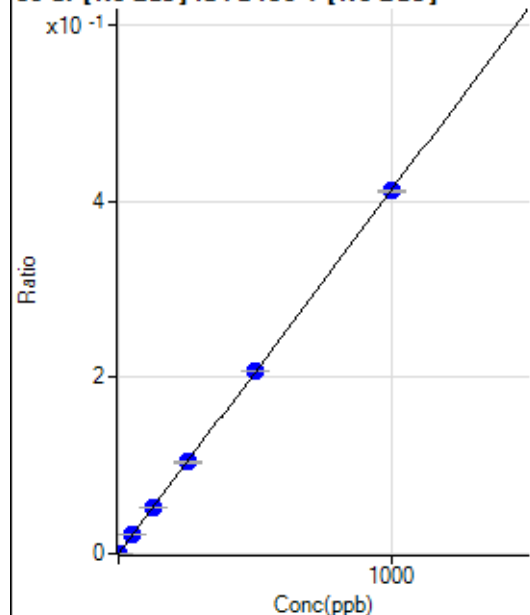
$$R = 1.0000$$

$$DL = 1.895$$

$$BEC = 1.045$$

Weight: <None>

Min Conc: 0

86 Sr [No Gas] ISTD:89 Y [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	86.12	0.0001	P	5.7
2	☐	0.100					
3	☐	1.000	0.997	466.70	0.0005	P	0.6
4	☐	50.000	51.969	18743.56	0.0216	P	0.4
5	☐	125.000	126.864	46201.15	0.0525	P	1.0
6	☐	250.000	251.160	93564.58	0.1038	P	0.7
7	☐	500.000	502.568	190993.33	0.2076	P	0.8
8	☐	1000.000	998.094	387480.06	0.4123	P	0.6
9	☐			12364.26	0.0144	P	2.9

$$y = 4.1297\text{E-}004 * x + 9.5596\text{E-}005$$

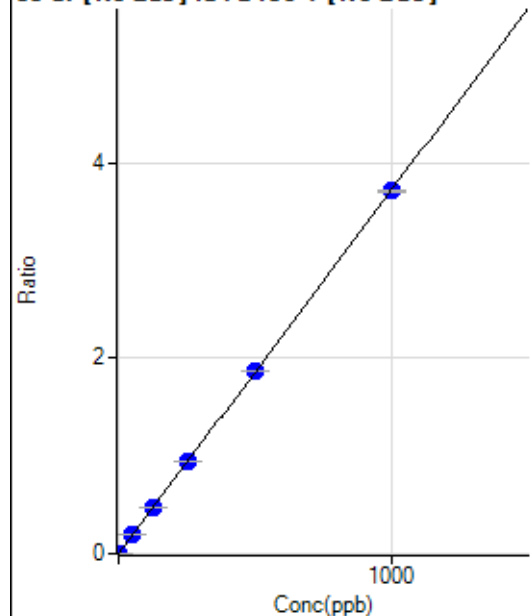
$$R = 1.0000$$

$$DL = 0.0394$$

$$BEC = 0.2315$$

Weight: <None>

Min Conc: 0

88 Sr [No Gas] ISTD:89 Y [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	61.12	0.0001	P	8.3
2	☐	0.100					
3	☐	1.000	0.883	3089.36	0.0034	P	0.8
4	☐	50.000	50.500	163616.70	0.1882	P	0.6
5	☐	125.000	127.312	417503.87	0.4743	P	0.6
6	☐	250.000	252.691	848398.67	0.9413	P	0.5
7	☐	500.000	502.361	1721339.85	1.8713	P	0.4
8	☐	1000.000	997.833	3493351.79	3.7170	P	0.8
9	☐			110361.31	0.1283	P	1.2

$$y = 0.0037 * x + 6.7856\text{E-}005$$

$$R = 1.0000$$

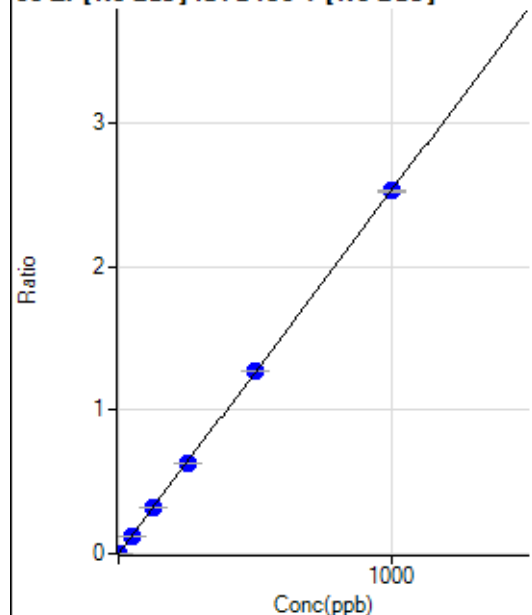
$$DL = 0.004516$$

$$BEC = 0.01822$$

Weight: <None>

Min Conc: 0

90 Zr [No Gas] ISTD: 89 Y [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	86.12	0.0001	P	5.1
2	☐	0.100					
3	☐	1.000	0.863	2094.70	0.0023	P	9.6
4	☐	50.000	49.958	109953.95	0.1265	P	0.1
5	☐	125.000	125.711	279983.87	0.3181	P	0.5
6	☐	250.000	250.585	571347.64	0.6339	P	0.6
7	☐	500.000	501.380	1166647.35	1.2683	P	0.2
8	☐	1000.000	999.077	2375203.96	2.5272	P	0.4
9	☐			461.14	0.0005	P	7.9

$$y = 0.0025 * x + 9.5578E-005$$

$$R = 1.0000$$

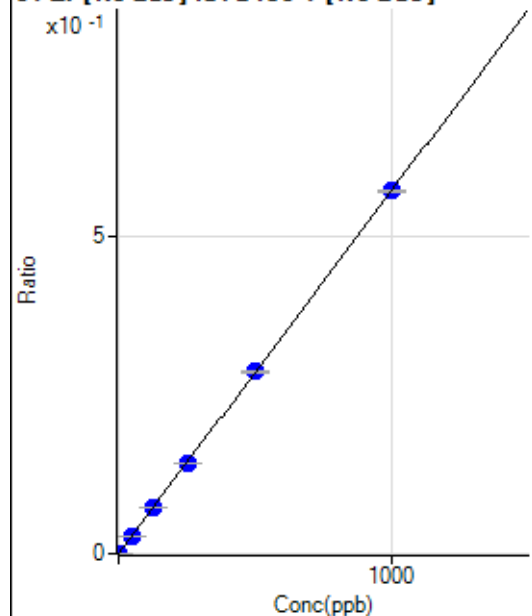
$$DL = 0.005817$$

$$BEC = 0.03779$$

Weight: <None>

Min Conc: 0

91 Zr [No Gas] ISTD: 89 Y [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	13.89	0.0000	P	69.7
2	☐	0.100					
3	☐	1.000	0.951	513.92	0.0006	P	5.7
4	☐	50.000	49.489	24597.17	0.0283	P	2.2
5	☐	125.000	125.118	62940.31	0.0715	P	0.3
6	☐	250.000	248.770	128114.07	0.1421	P	0.7
7	☐	500.000	500.860	263249.27	0.2862	P	0.7
8	☐	1000.000	999.888	536945.19	0.5713	P	0.4
9	☐			97.23	0.0001	P	17.9

$$y = 5.7134E-004 * x + 1.5442E-005$$

$$R = 1.0000$$

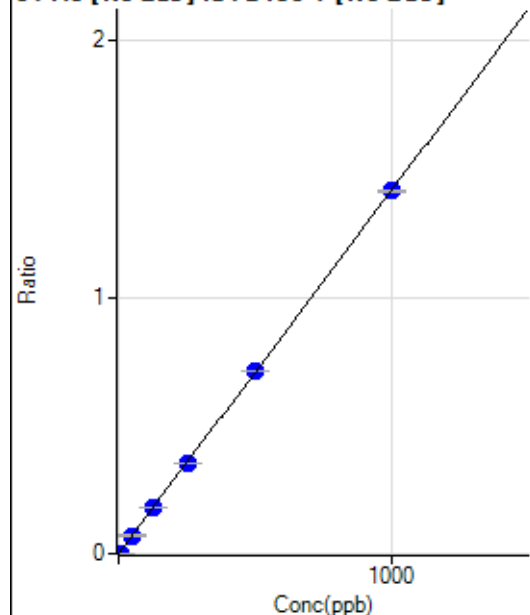
$$DL = 0.05652$$

$$BEC = 0.02703$$

Weight: <None>

Min Conc: 0

94 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.22	0.0000	P	86.6
2	☐	0.500					
3	☐	5.000	2.011	2639.26	0.0029	P	6.1
4	☐	50.000	50.019	61545.31	0.0708	P	1.8
5	☐	125.000	127.105	158297.39	0.1798	P	1.7
6	☐	250.000	250.745	319732.31	0.3548	P	0.3
7	☐	500.000	501.241	652297.86	0.7091	P	0.4
8	☐	1000.000	998.944	1328287.71	1.4132	P	0.3
9	☐			1000.07	0.0012	P	3.6

$$y = 0.0014 * x + 2.4612E-005$$

$$R = 1.0000$$

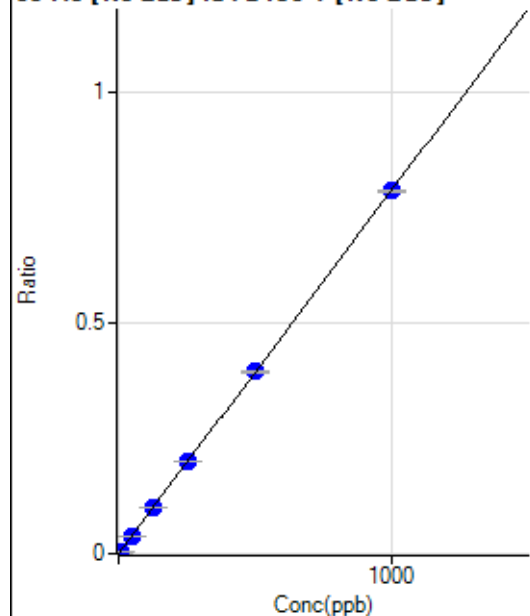
$$DL = 0.0452$$

$$BEC = 0.0174$$

Weight: <None>

Min Conc: 0

95 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8.33	0.0000	P	100.
2	☐	0.500					
3	☐	5.000	4.160	3017.13	0.0033	P	7.0
4	☐	50.000	48.630	33245.58	0.0382	P	2.5
5	☐	125.000	125.604	86926.28	0.0987	P	0.2
6	☐	250.000	253.073	179314.58	0.1990	P	1.0
7	☐	500.000	500.944	362239.35	0.3938	P	0.4
8	☐	1000.000	998.757	737913.05	0.7851	P	0.7
9	☐			1550.15	0.0018	P	12.1

$$y = 7.8611E-004 * x + 9.2394E-006$$

$$R = 1.0000$$

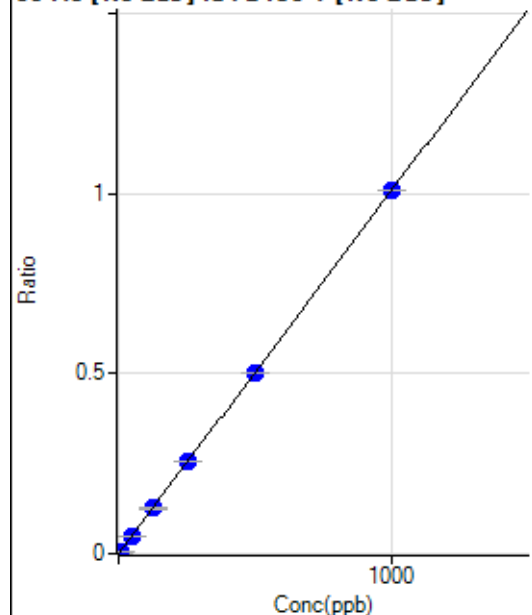
$$DL = 0.03534$$

$$BEC = 0.01175$$

Weight: <None>

Min Conc: 0

96 Mo [No Gas] ISTD:89 Y [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8.33	0.0000	P	173.
2	☐	0.500					
3	☐	5.000	3.800	3531.14	0.0038	P	1.1
4	☐	50.000	49.515	43398.04	0.0499	P	0.9
5	☐	125.000	125.157	111047.49	0.1261	P	1.1
6	☐	250.000	251.838	228763.25	0.2538	P	0.2
7	☐	500.000	500.174	463713.37	0.5041	P	0.2
8	☐	1000.000	999.464	946782.36	1.0073	P	0.1
9	☐			2105.81	0.0024	P	12.8

$$y = 0.0010 * x + 9.2904E-006$$

$$R = 1.0000$$

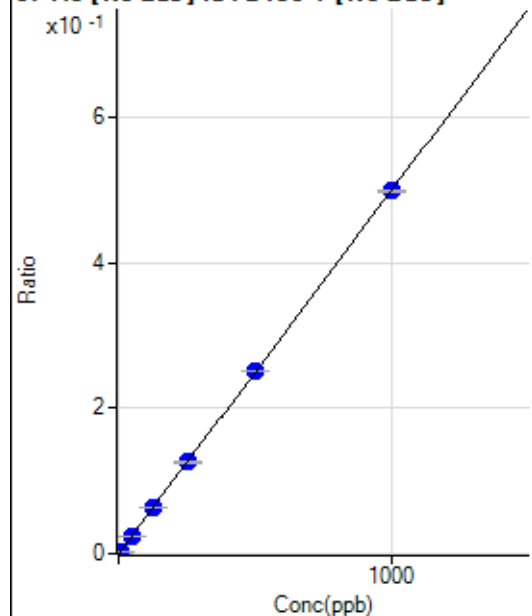
$$DL = 0.0479$$

$$BEC = 0.009218$$

Weight: <None>

Min Conc: 0

97 Mo [No Gas] ISTD:89 Y [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.78	0.0000	P	173.
2	☐	0.500					
3	☐	5.000	4.319	1986.34	0.0022	P	4.0
4	☐	50.000	49.609	21539.42	0.0248	P	2.0
5	☐	125.000	127.112	55875.11	0.0635	P	1.5
6	☐	250.000	251.669	113265.63	0.1257	P	1.7
7	☐	500.000	501.079	230148.48	0.2502	P	0.2
8	☐	1000.000	998.802	468736.58	0.4987	P	0.5
9	☐			986.19	0.0011	P	9.3

$$y = 4.9932E-004 * x + 3.0665E-006$$

$$R = 1.0000$$

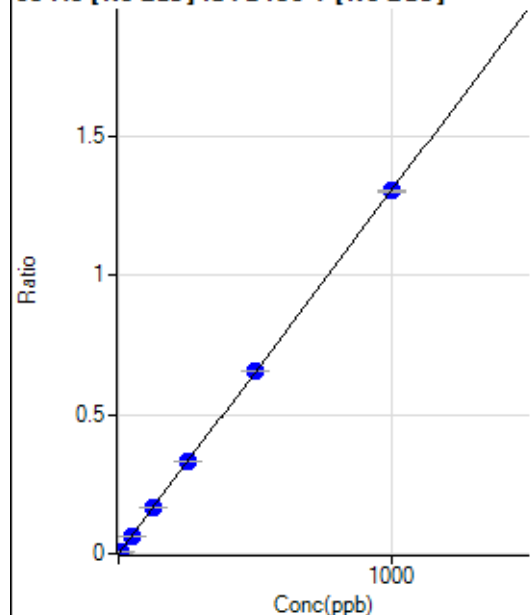
$$DL = 0.03191$$

$$BEC = 0.006141$$

Weight: <None>

Min Conc: 0

98 Mo [No Gas] ISTD:89 Y [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8.33	0.0000	P	99.7
2	☐	0.500					
3	☐	5.000	4.463	5359.62	0.0058	P	8.4
4	☐	50.000	50.097	56806.70	0.0653	P	0.5
5	☐	125.000	125.860	144473.33	0.1641	P	0.7
6	☐	250.000	252.592	296863.24	0.3294	P	0.3
7	☐	500.000	500.945	600869.79	0.6532	P	0.3
8	☐	1000.000	998.770	1224152.01	1.3024	P	0.6
9	☐			2369.76	0.0028	P	2.2

$$y = 0.0013 * x + 9.2322E-006$$

$$R = 1.0000$$

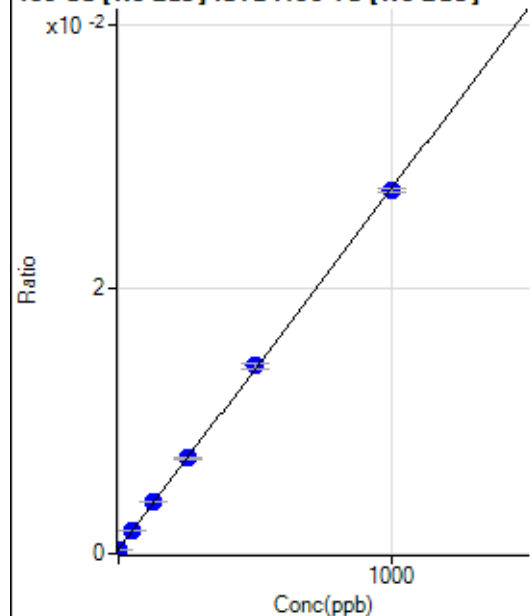
$$DL = 0.02118$$

$$BEC = 0.00708$$

Weight: <None>

Min Conc: 0

106 Cd [No Gas] ISTD:159 Tb [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	441.69	0.0003	P	16.9
2	☐	0.100					
3	☐	1.000	1.291	497.25	0.0004	P	4.8
4	☐	50.000	52.950	2366.97	0.0018	P	3.2
5	☐	125.000	131.628	5342.93	0.0039	P	1.2
6	☐	250.000	253.002	10206.89	0.0072	P	1.6
7	☐	500.000	508.857	20357.27	0.0142	P	2.5
8	☐	1000.000	993.845	40208.68	0.0274	P	1.1
9	☐			413.91	0.0003	P	9.2

$$y = 2.7267E-005 * x + 3.1636E-004$$

$$R = 0.9999$$

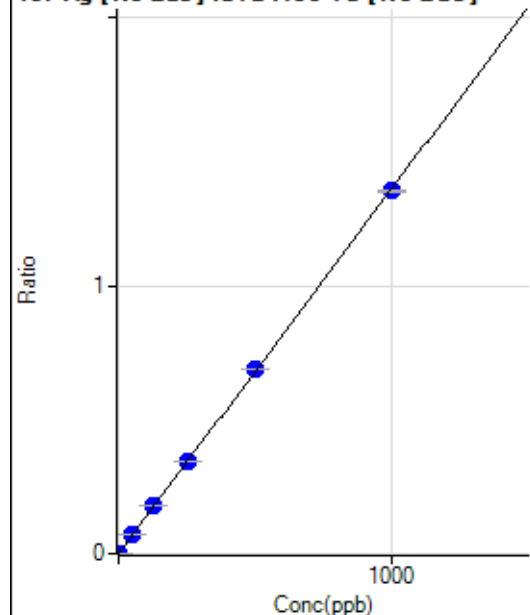
$$DL = 5.885$$

$$BEC = 11.6$$

Weight: <None>

Min Conc: 0

107 Ag [No Gas] ISTD:159 Tb [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.78	0.0000	P	173.
2	☐	0.100					
3	☐	1.000	1.000	1925.22	0.0014	P	5.6
4	☐	50.000	52.748	96449.42	0.0717	P	0.9
5	☐	125.000	131.349	244360.75	0.1786	P	0.2
6	☐	250.000	255.034	490647.47	0.3468	P	0.5
7	☐	500.000	505.521	986176.83	0.6874	P	0.6
8	☐	1000.000	995.050	1984518.62	1.3531	P	0.5
9	☐			144.45	0.0001	P	30.8

$$y = 0.0014 * x + 2.0060E-006$$

$$R = 1.0000$$

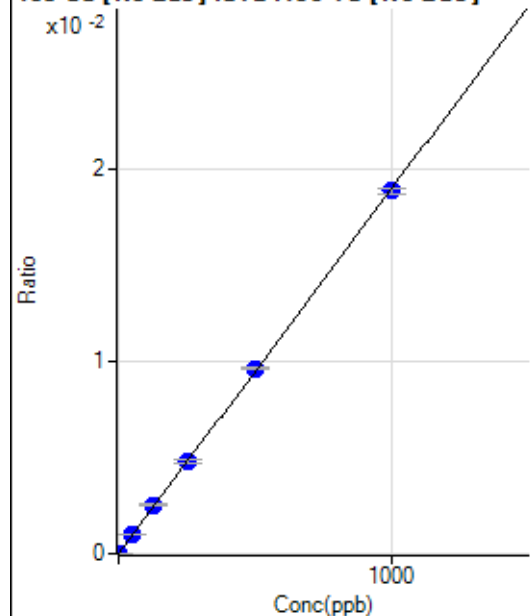
$$DL = 0.007665$$

$$BEC = 0.001475$$

Weight: <None>

Min Conc: 0

108 Cd [No Gas] ISTD:159 Tb [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.39	0.0000	P	173.
2	☐	0.100					
3	☐	1.000	0.828	23.61	0.0000	P	20.1
4	☐	50.000	53.502	1365.37	0.0010	P	2.2
5	☐	125.000	133.173	3456.05	0.0025	P	3.7
6	☐	250.000	250.863	6729.52	0.0048	P	3.8
7	☐	500.000	508.054	13820.91	0.0096	P	0.3
8	☐	1000.000	994.561	27656.56	0.0189	P	1.6
9	☐			6.94	0.0000	P	33.6

$$y = 1.8960E-005 * x + 9.9038E-007$$

$$R = 0.9999$$

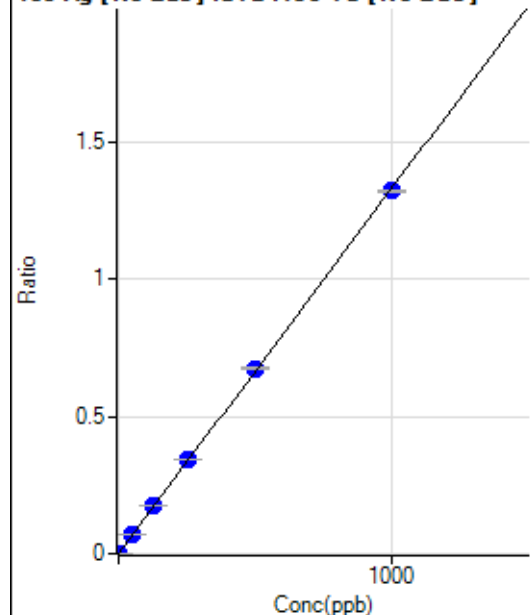
$$DL = 0.2714$$

$$BEC = 0.05223$$

Weight: <None>

Min Conc: 0

109 Ag [No Gas] ISTD:159 Tb [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.55	0.0000	P	86.6
2	☐	0.100					
3	☐	1.000	0.941	1772.41	0.0013	P	1.7
4	☐	50.000	52.923	94477.76	0.0703	P	0.4
5	☐	125.000	130.836	237645.38	0.1737	P	0.7
6	☐	250.000	256.707	482163.54	0.3408	P	0.6
7	☐	500.000	506.844	965310.95	0.6729	P	0.8
8	☐	1000.000	994.026	1935400.33	1.3197	P	0.5
9	☐			136.12	0.0001	P	38.8

$$y = 0.0013 * x + 3.9909E-006$$

$$R = 0.9999$$

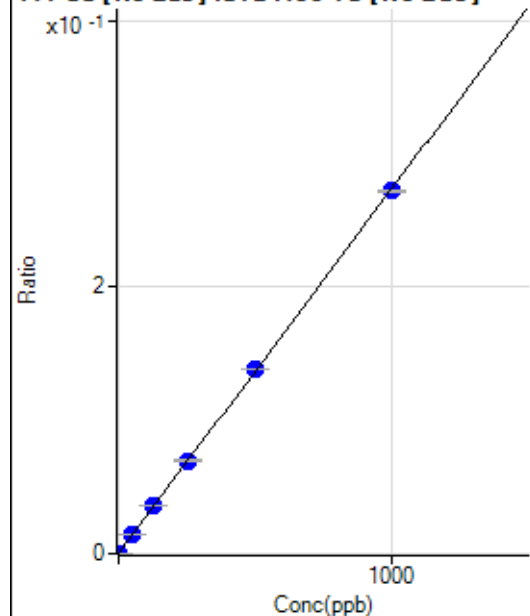
$$DL = 0.007811$$

$$BEC = 0.003006$$

Weight: <None>

Min Conc: 0

111 Cd [No Gas] ISTD:159 Tb [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	308.21	0.0002	P	17.1
2	☐	0.100					
3	☐	1.000	0.852	641.28	0.0005	P	8.6
4	☐	50.000	51.889	19347.16	0.0144	P	1.3
5	☐	125.000	130.612	49088.09	0.0359	P	1.4
6	☐	250.000	255.008	98818.29	0.0698	P	0.9
7	☐	500.000	505.315	198245.74	0.1382	P	0.5
8	☐	1000.000	995.295	398878.44	0.2720	P	0.2
9	☐			325.16	0.0002	P	6.4

$$y = 2.7303E-004 * x + 2.2076E-004$$

$$R = 1.0000$$

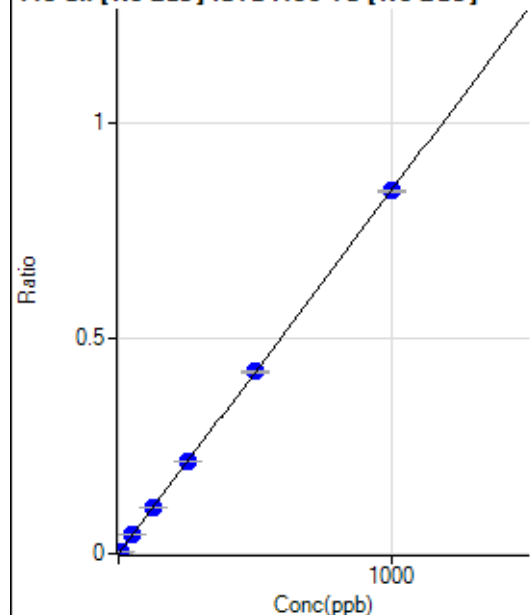
$$DL = 0.4145$$

$$BEC = 0.8086$$

Weight: <None>

Min Conc: 0

118 Sn [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	152.78	0.0001	P	17.4
2	☐	0.500					
3	☐	5.000	4.612	5659.71	0.0040	P	3.6
4	☐	50.000	50.914	57932.44	0.0431	P	1.5
5	☐	125.000	127.681	147598.30	0.1079	P	0.6
6	☐	250.000	252.540	301739.74	0.2133	P	0.5
7	☐	500.000	500.783	606581.19	0.4228	P	0.8
8	☐	1000.000	998.595	1236395.56	0.8430	P	0.5
9	☐			816.73	0.0006	P	2.7

$$y = 8.4411\text{E-}004 * x + 1.0947\text{E-}004$$

$$R = 1.0000$$

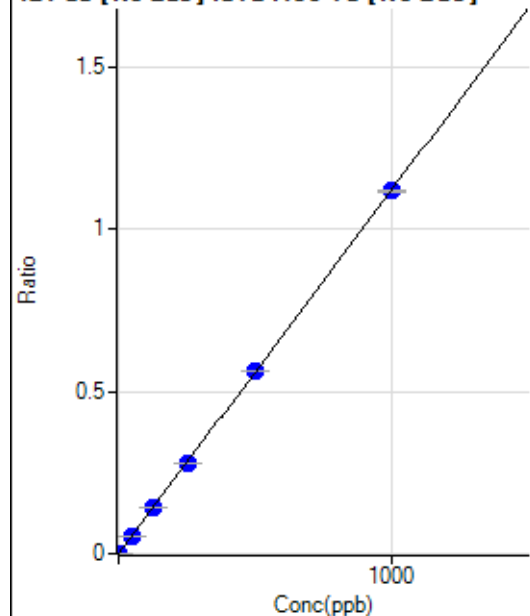
$$DL = 0.06772$$

$$BEC = 0.1297$$

Weight: <None>

Min Conc: 0

121 Sb [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.78	0.0000	P	173.
2	☐	0.200					
3	☐	2.000	1.782	2822.64	0.0020	P	6.8
4	☐	50.000	49.761	74864.77	0.0557	P	0.9
5	☐	125.000	126.673	193900.84	0.1417	P	0.9
6	☐	250.000	249.170	394419.97	0.2788	P	0.3
7	☐	500.000	503.999	808988.48	0.5639	P	0.3
8	☐	1000.000	998.011	1637675.88	1.1166	P	0.2
9	☐			4128.56	0.0031	P	5.4

$$y = 0.0011 * x + 2.0060\text{E-}006$$

$$R = 1.0000$$

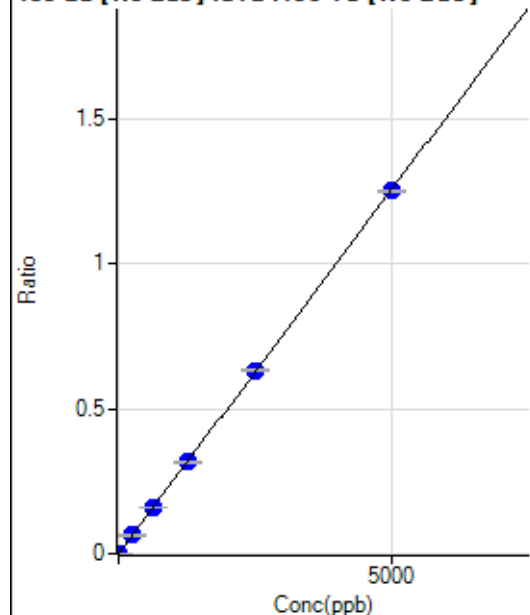
$$DL = 0.009316$$

$$BEC = 0.001793$$

Weight: <None>

Min Conc: 0

135 Ba [No Gas] ISTD :159 Tb [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	25.00	0.0000	P	88.1
2	☐	1.000					
3	☐	10.000	8.658	3103.27	0.0022	P	8.9
4	☐	250.000	252.041	85225.77	0.0634	P	1.8
5	☐	625.000	642.045	220861.16	0.1614	P	0.8
6	☐	1250.000	1257.793	447409.71	0.3163	P	1.0
7	☐	2500.000	2520.924	909301.42	0.6338	P	0.8
8	☐	5000.000	4985.360	1838398.24	1.2534	P	0.9
9	☐			408.36	0.0003	P	6.7

$$y = 2.5142\text{E-}004 * x + 1.7879\text{E-}005$$

$$R = 1.0000$$

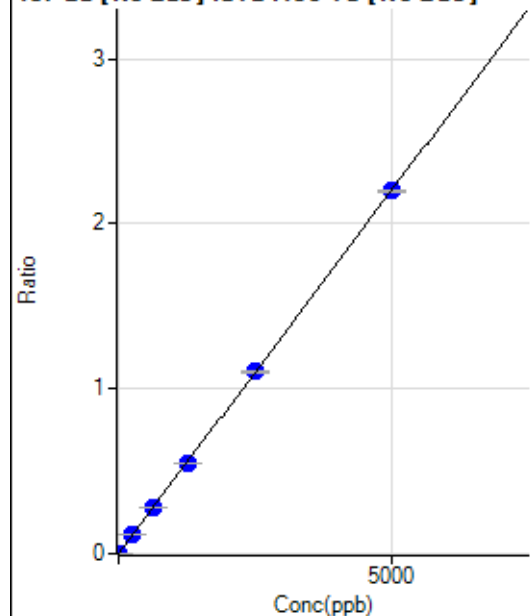
$$DL = 0.1879$$

$$BEC = 0.07111$$

Weight: <None>

Min Conc: 0

137 Ba [No Gas] ISTD :159 Tb [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	11.11	0.0000	P	44.1
2	☐	1.000					
3	☐	10.000	8.654	5398.54	0.0038	P	3.9
4	☐	250.000	256.483	151812.07	0.1129	P	0.2
5	☐	625.000	632.640	380986.77	0.2785	P	0.6
6	☐	1250.000	1252.822	780196.30	0.5515	P	0.1
7	☐	2500.000	2505.269	1582016.66	1.1028	P	0.4
8	☐	5000.000	4995.383	3224899.81	2.1988	P	0.2
9	☐			827.84	0.0006	P	7.8

$$y = 4.4017\text{E-}004 * x + 7.9777\text{E-}006$$

$$R = 1.0000$$

$$DL = 0.024$$

$$BEC = 0.01812$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐						
3	☐			2.22		P	173.
4	☐			13.34		P	132.
5	☐			20.00		P	33.4
6	☐			37.78		P	10.2
7	☐			86.67		P	46.8
8	☐			142.23		P	16.5
9	☐			22.22		P	45.8

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			0.00		P	
4	☐			5.56		P	34.7
5	☐			8.89		P	57.3
6	☐			3.33		P	173.
7	☐			18.89		P	36.7
8	☐			34.45		P	20.1
9	☐			22.22		P	22.9

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.56		P	173.
2	☐						
3	☐			0.00		P	
4	☐			8.33		P	0.0
5	☐			5.55		P	86.6
6	☐			5.56		P	173.
7	☐			13.89		P	34.7
8	☐			27.78		P	69.3
9	☐			13.89		P	69.3

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐						
3	☐			1.11		P	173.
4	☐			4.44		P	114.
5	☐			8.89		P	57.3
6	☐			7.78		P	24.7
7	☐			25.56		P	7.5
8	☐			70.00		P	8.3
9	☐			12.22		P	56.8

160 Gd [No Gas] Noavailable calibration poin...

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			36.11		P	93.3
2	☐						
3	☐			41.67		P	34.7
4	☐			36.11		P	35.3
5	☐			36.11		P	35.3
6	☐			52.78		P	50.8
7	☐			47.22		P	36.7
8	☐			47.22		P	66.8
9	☐			38.89		P	32.7

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			153.34		P	7.5
2	☐						
3	☐			173.34		P	8.8
4	☐			135.56		P	12.1
5	☐			163.34		P	12.4
6	☐			183.34		P	9.1
7	☐			176.67		P	19.9
8	☐			190.01		P	12.3
9	☐			182.23		P	2.8

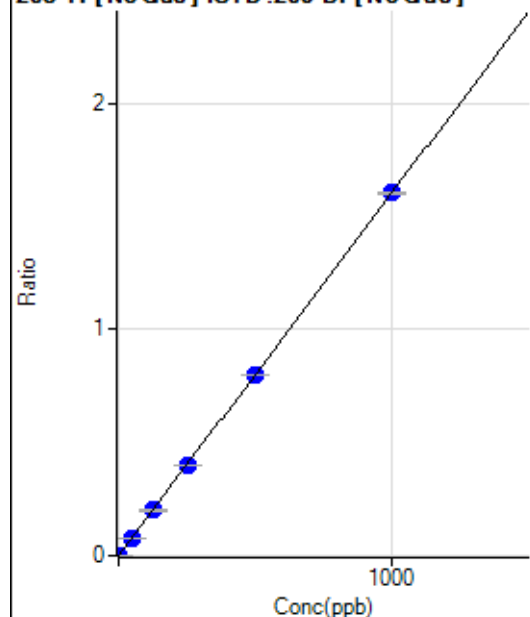
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			36.11		P	53.3
2	☐						
3	☐			33.33		P	25.0
4	☐			27.78		P	62.5
5	☐			22.22		P	78.1
6	☐			22.22		P	78.1
7	☐			27.78		P	17.3
8	☐			22.22		P	57.3
9	☐			36.11		P	48.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	50.0
2	☐						
3	☐			4.44		P	43.4
4	☐			6.67		P	50.0
5	☐			8.89		P	108.
6	☐			7.78		P	99.0
7	☐			7.78		P	24.7
8	☐			5.55		P	124.
9	☐			6.67		P	50.0

203 Tl [No Gas] ISTD :209 Bi [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.55	0.0000	P	86.6
2	☐	0.100					
3	☐	1.000	0.920	1702.97	0.0015	P	11.3
4	☐	50.000	49.801	87012.73	0.0798	P	1.0
5	☐	125.000	125.013	220369.51	0.2003	P	0.7
6	☐	250.000	248.573	447826.13	0.3984	P	0.7
7	☐	500.000	497.856	900211.83	0.7979	P	0.3
8	☐	1000.000	1001.437	1821790.47	1.6049	P	0.3
9	☐			783.39	0.0008	P	7.7

$$y = 0.0016 * x + 4.8813E-006$$

$$R = 1.0000$$

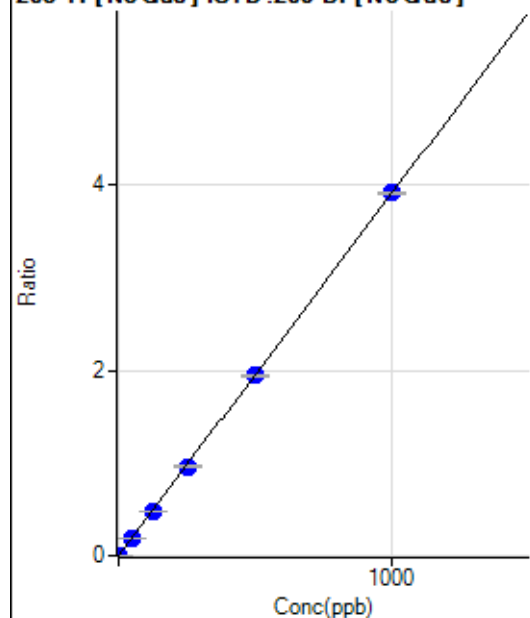
$$DL = 0.007914$$

$$BEC = 0.003046$$

Weight: <None>

Min Conc: 0

205 Tl [No Gas] ISTD :209 Bi [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.89	0.0001	P	33.5
2	☐	0.100					
3	☐	1.000	0.867	3961.90	0.0034	P	3.1
4	☐	50.000	49.207	209652.89	0.1923	P	0.6
5	☐	125.000	123.960	532805.55	0.4844	P	0.3
6	☐	250.000	246.943	1084722.41	0.9649	P	0.5
7	☐	500.000	497.042	2191182.04	1.9421	P	0.7
8	☐	1000.000	1002.413	4445935.08	3.9166	P	0.4
9	☐			1908.55	0.0019	P	6.4

$$y = 0.0039 * x + 5.6511E-005$$

$$R = 1.0000$$

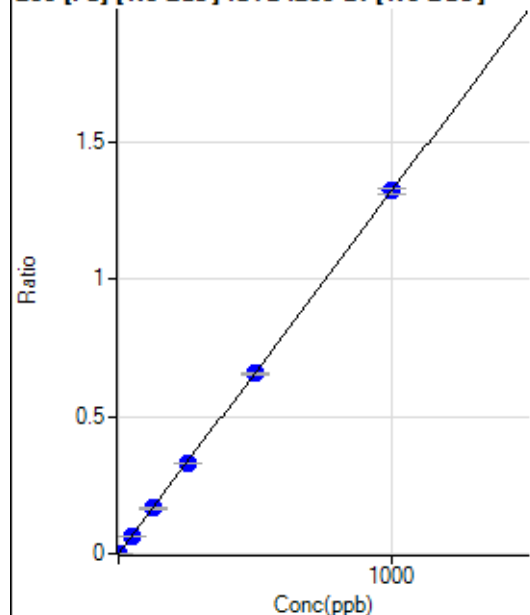
$$DL = 0.01455$$

$$BEC = 0.01446$$

Weight: <None>

Min Conc: 0

206 [Pb] [No Gas] ISTD :209 Bi [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	125.93	0.0001	P	8.7
2	☐	0.100					
3	☐	1.000	0.956	1581.62	0.0014	P	9.7
4	☐	50.000	49.699	71713.58	0.0658	P	0.8
5	☐	125.000	124.814	181532.53	0.1650	P	0.7
6	☐	250.000	249.364	370549.68	0.3296	P	0.7
7	☐	500.000	497.951	742518.52	0.6581	P	0.8
8	☐	1000.000	1001.222	1501839.79	1.3231	P	1.3
9	☐			1672.38	0.0017	P	8.8

$$y = 0.0013 * x + 1.1117E-004$$

$$R = 1.0000$$

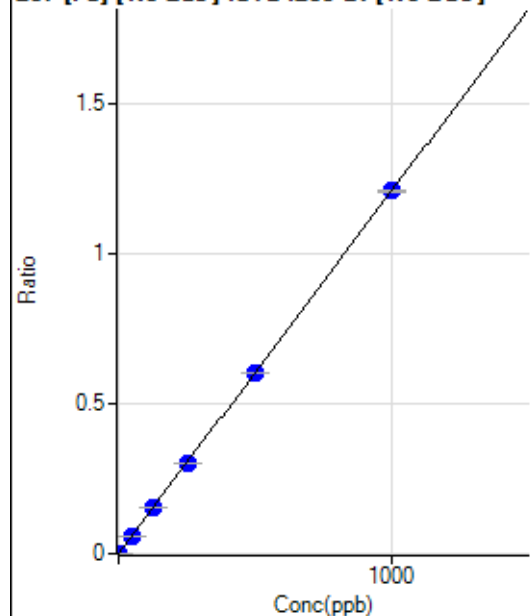
$$DL = 0.02208$$

$$BEC = 0.08413$$

Weight: <None>

Min Conc: 0

207 [Pb] [No Gas] ISTD :209 Bi [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	137.04	0.0001	P	21.1
2	☐	0.100					
3	☐	1.000	0.920	1416.78	0.0012	P	4.7
4	☐	50.000	49.786	65628.68	0.0602	P	0.5
5	☐	125.000	124.788	165776.43	0.1507	P	0.4
6	☐	250.000	249.683	338849.78	0.3014	P	0.5
7	☐	500.000	499.258	679899.83	0.6026	P	0.2
8	☐	1000.000	1000.487	1370592.18	1.2074	P	0.7
9	☐			1433.46	0.0015	P	5.9

$$y = 0.0012 * x + 1.2111E-004$$

$$R = 1.0000$$

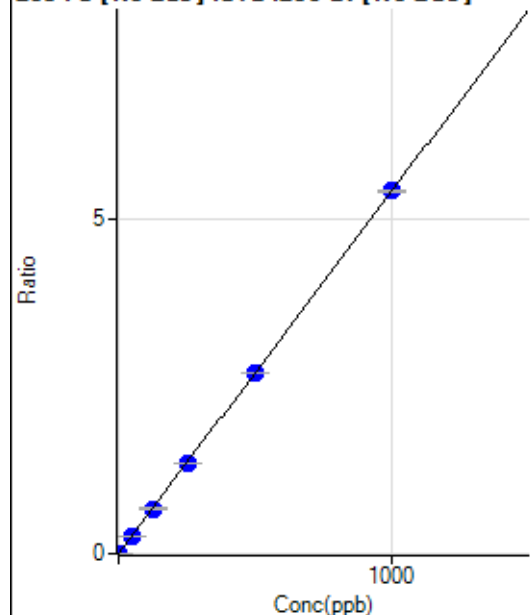
$$DL = 0.06357$$

$$BEC = 0.1004$$

Weight: <None>

Min Conc: 0

208 Pb [No Gas] ISTD :209 Bi [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	603.73	0.0005	P	9.0
2	☐	0.100					
3	☐	1.000	0.909	6280.38	0.0055	P	4.9
4	☐	50.000	49.541	293033.77	0.2688	P	0.2
5	☐	125.000	124.560	742496.16	0.6750	P	0.5
6	☐	250.000	248.636	1514138.24	1.3469	P	0.4
7	☐	500.000	497.564	3040589.91	2.6948	P	0.1
8	☐	1000.000	1001.637	6157279.55	5.4244	P	0.8
9	☐			6624.93	0.0067	P	1.0

$$y = 0.0054 * x + 5.3327E-004$$

$$R = 1.0000$$

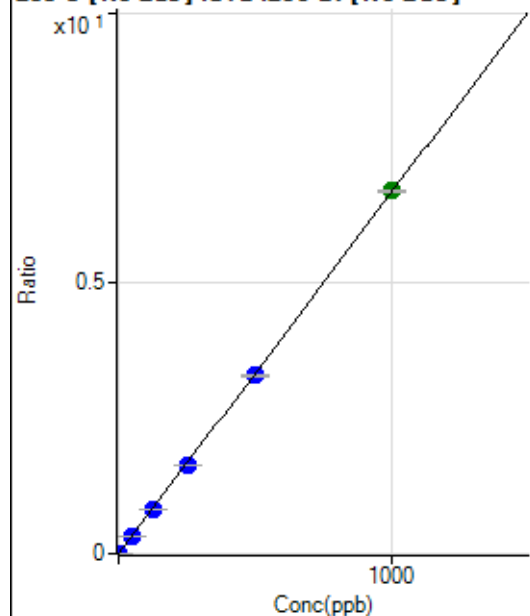
$$DL = 0.02646$$

$$BEC = 0.09848$$

Weight: <None>

Min Conc: 0

238 U [No Gas] ISTD :209 Bi [No Gas]



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	66.4
2	☐	0.100					
3	☐	1.000	0.795	6143.40	0.0053	P	2.1
4	☐	50.000	48.316	351941.35	0.3228	P	0.9
5	☐	125.000	122.520	900424.75	0.8186	P	0.7
6	☐	250.000	244.986	1840045.85	1.6368	P	0.5
7	☐	500.000	493.886	3723011.54	3.2998	P	0.6
8	☐	1000.000	1004.705	7620247.22	6.7126	A	0.7
9	☐			536.15	0.0005	P	10.5

$$y = 0.0067 * x + 2.9480E-005$$

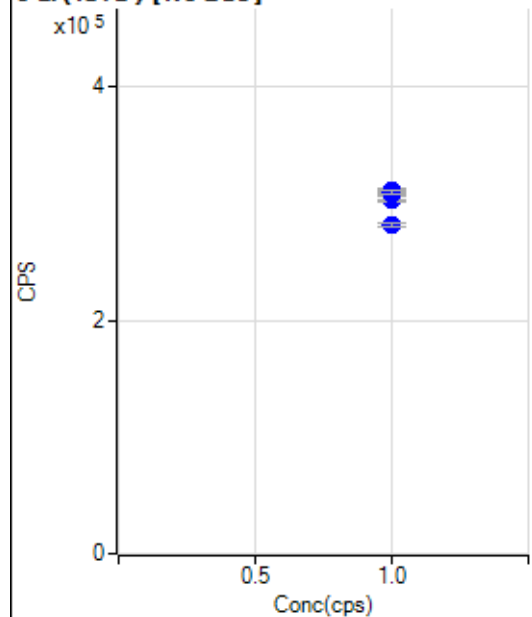
$$R = 1.0000$$

$$DL = 0.008796$$

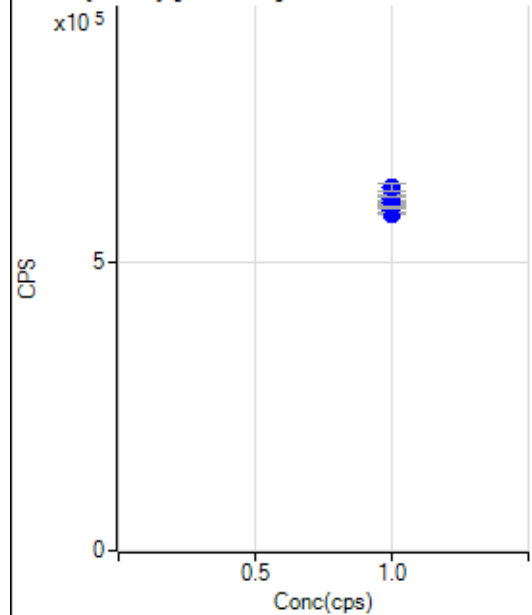
$$BEC = 0.004412$$

Weight: <None>

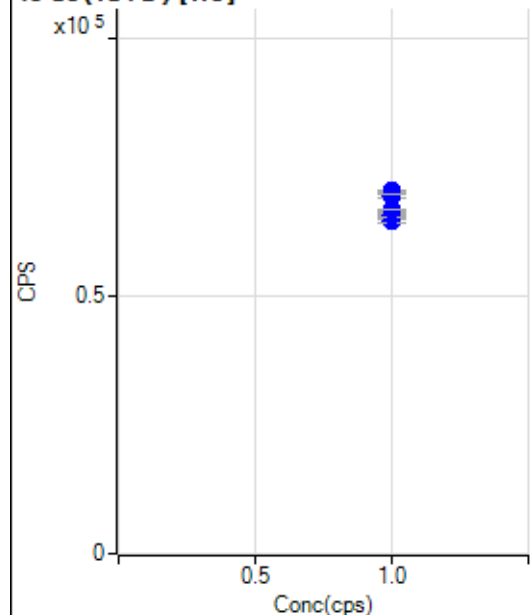
Min Conc: 0

6 Li (ISTD) [No Gas]

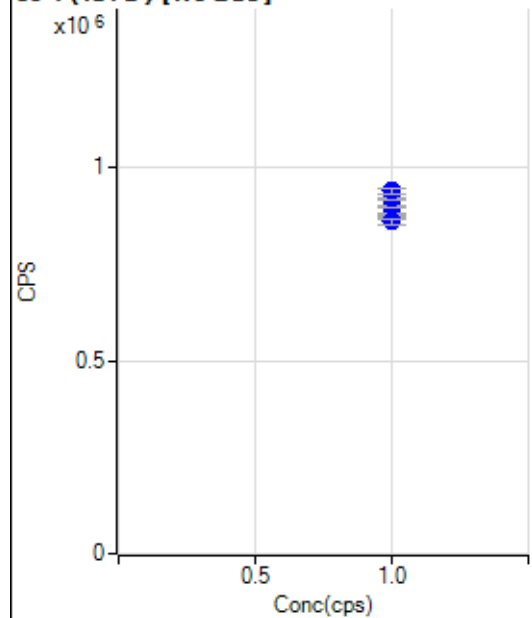
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		309755.49		P	0.1
2	☐	1.000					
3	☐	1.000		311195.15		P	1.0
4	☐	1.000		303072.59		P	0.6
5	☐	1.000		308286.21		P	1.1
6	☐	1.000		310581.93		P	0.7
7	☐	1.000		310273.00		P	0.4
8	☐	1.000		310613.66		P	1.1
9	☐	1.000		282304.16		P	1.1

45 Sc (ISTD) [No Gas]

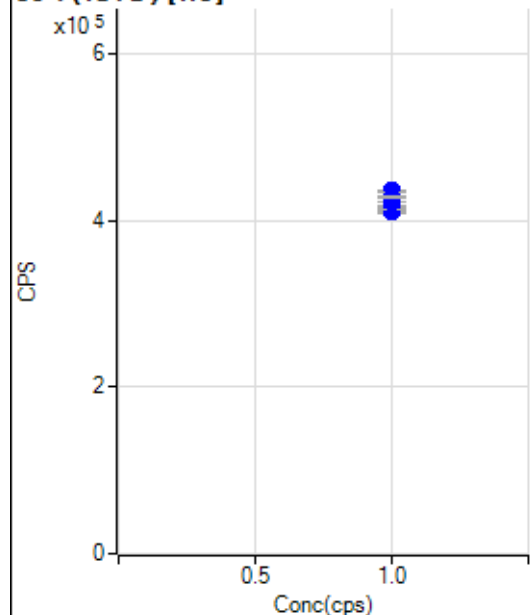
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		601953.16		P	0.5
2	☐	1.000					
3	☐	1.000		610762.14		P	0.7
4	☐	1.000		585496.70		P	0.1
5	☐	1.000		589375.40		P	1.0
6	☐	1.000		604749.98		P	1.0
7	☐	1.000		615558.99		P	0.7
8	☐	1.000		629529.79		P	2.0
9	☐	1.000		596497.40		P	0.5

45 Sc (ISTD) [He]

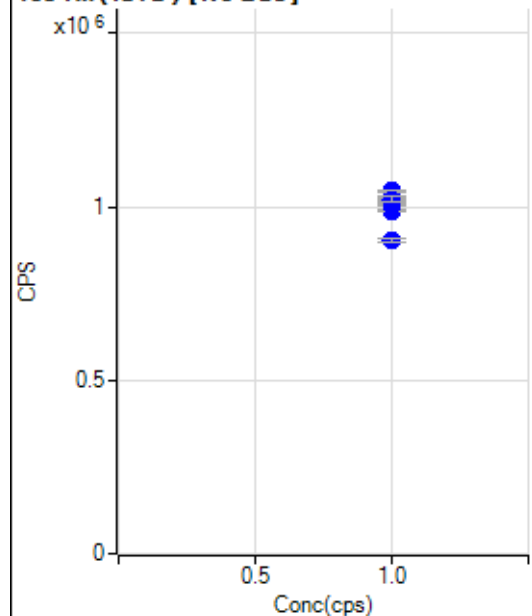
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		66046.61		P	1.2
2	☐	1.000					
3	☐	1.000		65477.33		P	1.3
4	☐	1.000		64640.39		P	1.0
5	☐	1.000		65748.58		P	0.9
6	☐	1.000		66877.83		P	0.2
7	☐	1.000		69405.31		P	1.0
8	☐	1.000		70371.82		P	0.4
9	☐	1.000		69762.12		P	0.3

89 Y (ISTD) [No Gas]

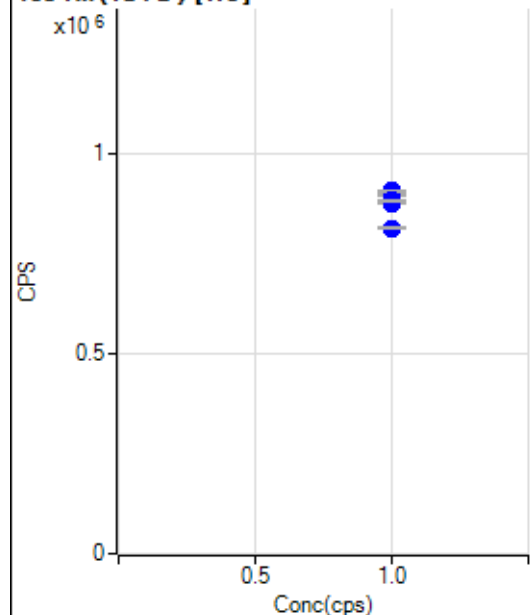
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		900878.47		P	0.5
2	☐	1.000					
3	☐	1.000		919788.94		P	0.6
4	☐	1.000		869475.84		P	0.5
5	☐	1.000		880276.56		P	0.8
6	☐	1.000		901262.17		P	0.6
7	☐	1.000		919853.79		P	0.6
8	☐	1.000		939901.01		P	1.3
9	☐	1.000		860269.17		P	1.7

89 Y(ISTD) [He]

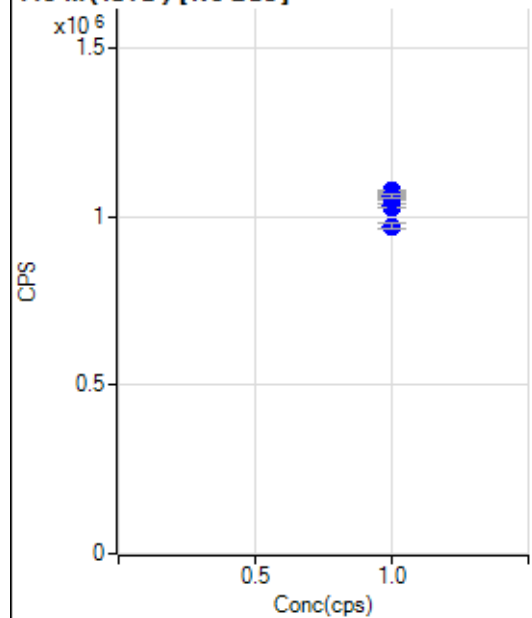
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		417131.80		P	0.1
2	☐	1.000					
3	☐	1.000		417207.14		P	0.5
4	☐	1.000		410586.68		P	0.7
5	☐	1.000		414561.32		P	0.0
6	☐	1.000		423139.90		P	0.1
7	☐	1.000		436075.97		P	0.5
8	☐	1.000		434710.62		P	0.2
9	☐	1.000		428438.33		P	0.5

103 Rh(ISTD) [No Gas]

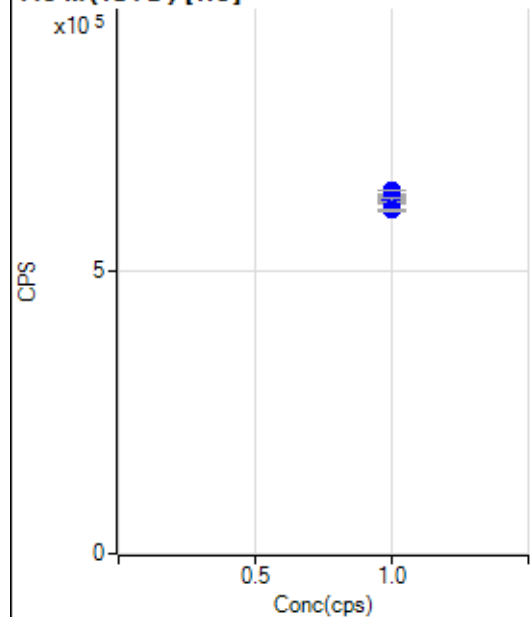
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1022148.71		P	0.6
2	☐	1.000					
3	☐	1.000		1045637.34		P	0.3
4	☐	1.000		987577.96		P	0.3
5	☐	1.000		988685.41		P	0.2
6	☐	1.000		1004990.80		P	0.7
7	☐	1.000		1011869.37		P	0.8
8	☐	1.000		1020851.07		P	1.5
9	☐	1.000		902329.85		P	1.1

103 Rh (ISTD) [He]

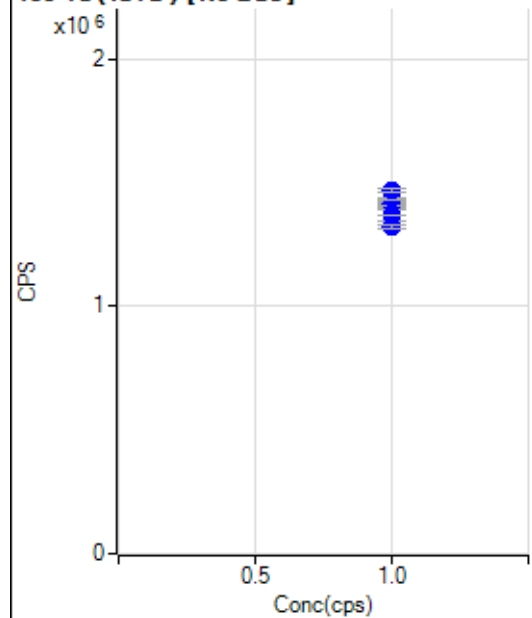
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		903021.30		P	0.6
2	☐	1.000					
3	☐	1.000		899246.77		P	0.7
4	☐	1.000		874484.90		P	0.2
5	☐	1.000		881944.65		P	0.6
6	☐	1.000		896683.53		P	0.4
7	☐	1.000		907855.53		P	0.8
8	☐	1.000		884604.22		P	0.6
9	☐	1.000		815051.51		P	0.6

115 In (ISTD) [No Gas]

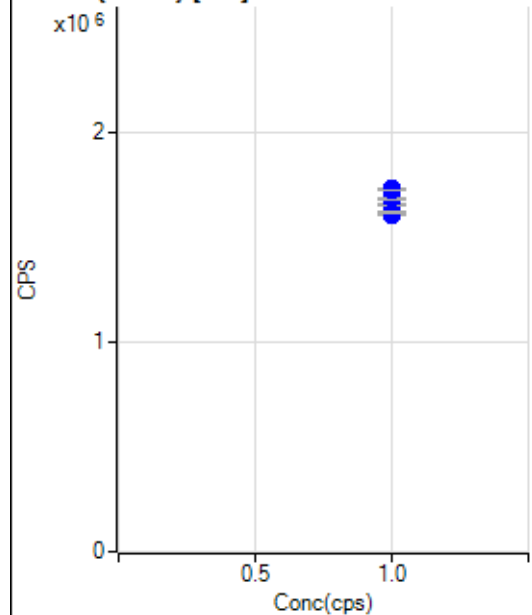
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1062373.63		P	0.6
2	☐	1.000					
3	☐	1.000		1077406.43		P	0.4
4	☐	1.000		1027007.16		P	0.1
5	☐	1.000		1033076.25		P	1.1
6	☐	1.000		1053369.44		P	0.7
7	☐	1.000		1057813.31		P	0.5
8	☐	1.000		1063361.78		P	1.0
9	☐	1.000		971797.07		P	1.7

115 In (ISTD) [He]

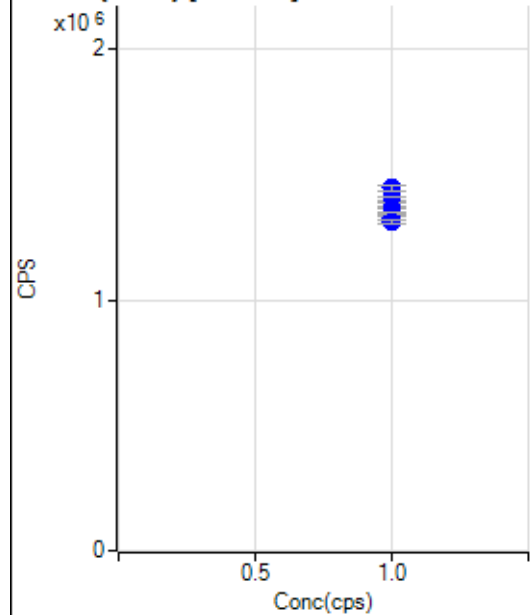
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		632222.01		P	0.7
2	☐	1.000					
3	☐	1.000		631809.24		P	0.4
4	☐	1.000		617795.40		P	0.3
5	☐	1.000		623222.42		P	0.3
6	☐	1.000		631934.64		P	0.6
7	☐	1.000		640210.35		P	0.2
8	☐	1.000		625187.24		P	0.9
9	☐	1.000		606116.32		P	0.8

159 Tb (ISTD) [No Gas]

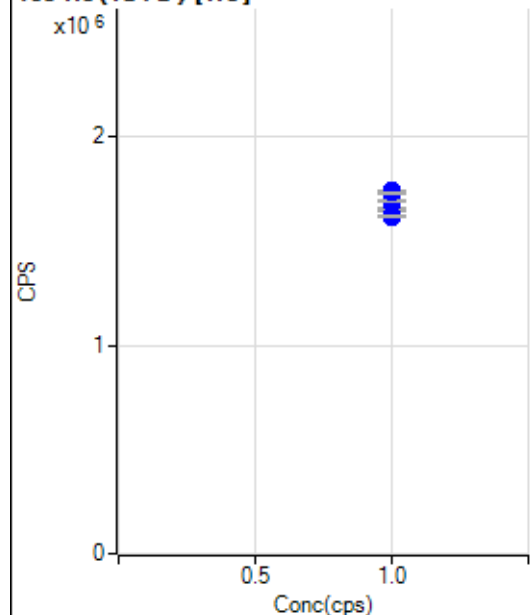
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1395517.88		P	0.7
2	☐	1.000					
3	☐	1.000		1414218.83		P	0.3
4	☐	1.000		1344623.12		P	0.5
5	☐	1.000		1368101.39		P	0.5
6	☐	1.000		1414784.47		P	0.7
7	☐	1.000		1434623.55		P	0.5
8	☐	1.000		1466638.48		P	1.1
9	☐	1.000		1323067.84		P	1.3

159 Tb (ISTD) [He]

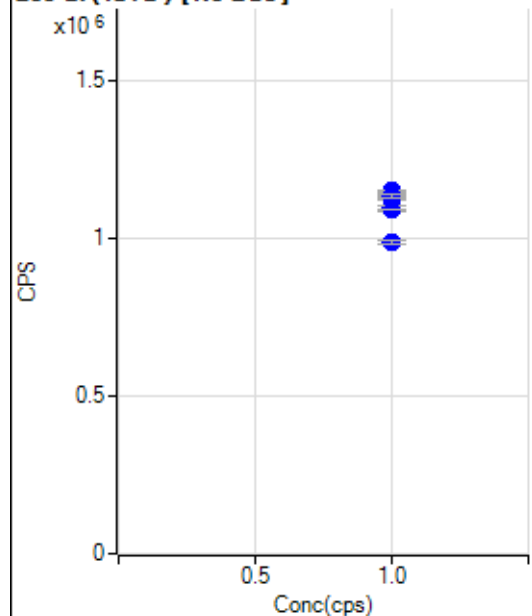
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1651676.35		P	0.2
2	☐	1.000					
3	☐	1.000		1647417.30		P	0.5
4	☐	1.000		1606056.75		P	0.1
5	☐	1.000		1648838.98		P	0.2
6	☐	1.000		1681375.90		P	0.3
7	☐	1.000		1726941.56		P	0.3
8	☐	1.000		1722369.82		P	0.0
9	☐	1.000		1614164.91		P	0.4

165 Ho (ISTD) [No Gas]

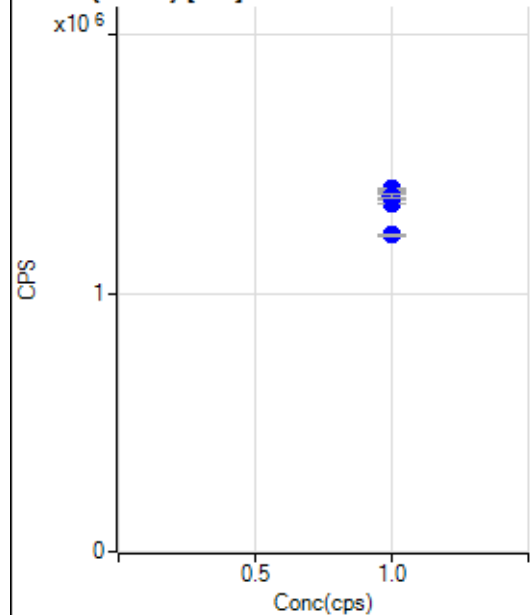
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1372487.11		P	0.6
2	☐	1.000					
3	☐	1.000		1393392.60		P	0.1
4	☐	1.000		1329278.22		P	1.1
5	☐	1.000		1348015.26		P	0.2
6	☐	1.000		1390757.78		P	0.2
7	☐	1.000		1413414.82		P	0.2
8	☐	1.000		1448164.93		P	1.5
9	☐	1.000		1311396.83		P	1.4

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1659297.25		P	0.3
2	☐	1.000					
3	☐	1.000		1656171.78		P	0.4
4	☐	1.000		1613509.37		P	0.1
5	☐	1.000		1649208.22		P	0.5
6	☐	1.000		1692435.37		P	0.1
7	☐	1.000		1740447.75		P	0.6
8	☐	1.000		1732184.49		P	0.5
9	☐	1.000		1621767.75		P	0.5

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1132551.32		P	0.8
2	☐	1.000					
3	☐	1.000		1150783.77		P	0.3
4	☐	1.000		1090170.67		P	0.5
5	☐	1.000		1099980.07		P	1.2
6	☐	1.000		1124180.53		P	0.8
7	☐	1.000		1128302.93		P	0.9
8	☐	1.000		1135166.71		P	0.9
9	☐	1.000		988281.26		P	1.1

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1391805.17		P	0.2
2	☐	1.000					
3	☐	1.000		1385607.99		P	0.6
4	☐	1.000		1349549.18		P	0.2
5	☐	1.000		1366469.80		P	0.2
6	☐	1.000		1388521.91		P	0.2
7	☐	1.000		1404327.03		P	0.5
8	☐	1.000		1378135.00		P	0.7
9	☐	1.000		1225674.35		P	0.7

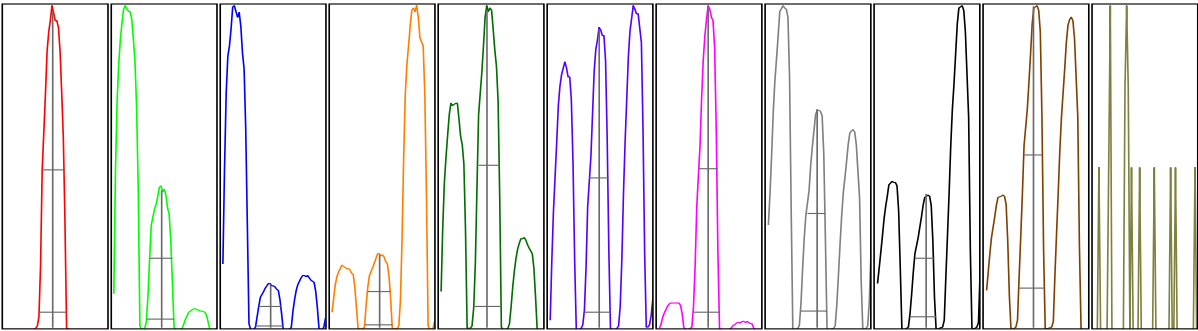
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7100717-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count	RSD%	RSD%	RSD%
	(Mean)	(Actual)	(Required)	(Flag)
9	1288	0.88	5.00	
24	4871	1.02	5.00	
25	704	1.21	5.00	
26	873	1.43	5.00	
59	8617	1.38	5.00	
113	1237	0.40	5.00	
115	15652	2.46	5.00	
206	4406	1.88	5.00	
207	4044	1.95	5.00	
208	9518	1.53	5.00	
220	0	149.07		

Mass	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
	Count	Count	Count	Count	Count
9	1272	1280	1298	1295	1294
24	4832	4811	4873	4926	4913
25	697	698	697	712	714
26	861	858	883	884	880
59	8523	8503	8570	8758	8732
113	1239	1235	1245	1237	1231
115	16081	15832	15788	15483	15078
206	4284	4386	4395	4494	4471
207	3933	3996	4062	4112	4118
208	9344	9374	9602	9639	9630
220	0	0	0	0	0

Integration Time [sec] = 0.1



Mass	Peak	Axis	Axis	Axis	Width-X%	Width-X%	Width-
	Height	(Actual)	(Required)	(Flag)	(Actual)	(Required)	X% (Flag)
9	2173	8.95	8.9 - 9.1		0.788	0.900	
24	8005	23.95	23.9 - 24.1		0.785	0.900	
25	1127	24.95	24.9 - 25.1		0.786	0.900	
26	1357	25.95	25.9 - 26.1		0.788	0.900	
59	14406	58.90	58.9 - 59.1		0.790	0.900	
113	2337	113.00	112.9 - 113.1		0.747	0.900	
115	30063	115.00	114.9 - 115.1		0.754	0.900	
206	8190	206.00	205.9 - 206.1		0.758	0.900	
207	7461	207.00	206.9 - 207.1		0.746	0.900	
208	17966	207.95	207.9 - 208.1		0.737	0.900	
220			-				

X% = 5 Integration Time [sec] = 0.1 Acquisition Time [sec] = 268 Y Axis = Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min	S/C Temp		2 °C
RF Matching	1.80	V	Option Gas	0.0	%	Gas Switch		Dilution Gas
Smpl Depth	9.0	mm	Nebulizer Pump	0.10	rpm	Makeup/Dilution Gas		0.37 L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	18.0	V	Deflect	20.0	V
Extract 2	-230.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-120	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	130	V			

[He]

Mass	Count	RSD%	RSD%
	(Mean)	(Actual)	(Required)
59	4221	0.65	
89	3077	0.92	
205	7453	1.02	

Mass	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
	Count	Count	Count	Count	Count
59	4245	4235	4242	4191	4192
89	3091	3104	3097	3043	3050
205	7526	7535	7436	7407	7361

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min	S/C Temp		2 °C
RF Matching	1.80	V	Option Gas	0.0	%	Gas Switch		Dilution Gas
Smpl Depth	9.0	mm	Nebulizer Pump	0.10	rpm	Makeup/Dilution Gas		0.37 L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	18.0	V	Deflect	4.8	V
Extract 2	-230.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-120	V	Cell Exit	-60	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	Yes		OctP Bias	-18.0	V	Energy Discrimination		5.0 V
He Flow	4.1	mL/min	OctP RF	200	V			