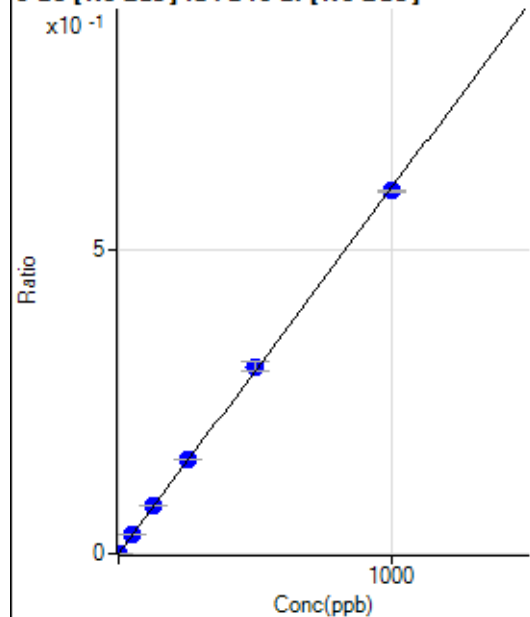


Calibration for 003CALS.d

Batch Folder: D:\ICP-MS Data\P7080819MS.b\
 Analysis File: P7080819MS.batch.bin
 DA Date-Time: 2019-08-09 01:59:06
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	S00	2019-08-08 13:20:30
2	003CALS.d	S02	2019-08-08 13:24:08
3	004CALS.d	S03	2019-08-08 13:28:33
4	005CALS.d	S04	2019-08-08 13:32:30
5	006CALS.d	S05	2019-08-08 13:36:24
6	007CALS.d	S06	2019-08-08 13:40:14
7	008CALS.d	S07	2019-08-08 13:44:03
8	009CALS.d	S08	2019-08-08 13:47:49

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	51.11	0.0000	P	7.0
2	☐	1.000	1.002	1582.33	0.0006	P	4.0
3	☐	50.000	53.295	81908.08	0.0320	P	0.2
4	☐	125.000	129.183	190126.09	0.0775	P	0.4
5	☐	250.000	256.058	357206.18	0.1537	P	0.6
6	☐	500.000	511.898	693835.87	0.3072	P	4.8
7	☐	1000.000	991.849	1294729.94	0.5952	P	0.5
8	☐			311.12	0.0001	P	4.8

$$y = 6.0011\text{E-}004 * x + 2.0152\text{E-}005$$

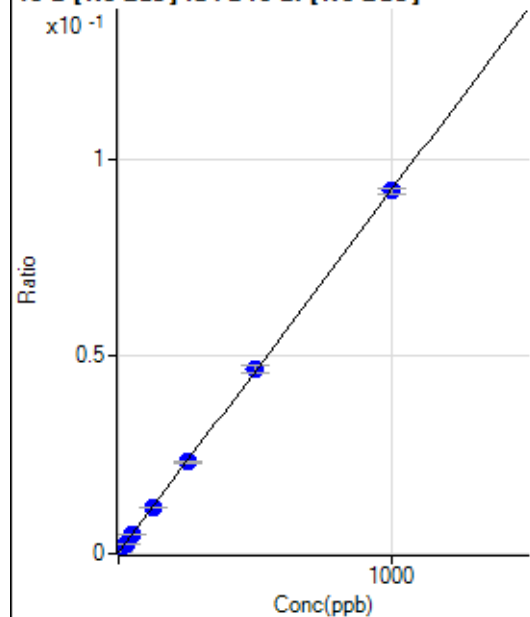
$$R = 0.9999$$

$$DL = 0.00708$$

$$BEC = 0.03358$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	797.28	0.0003	P	13.1
2	☐	25.000	22.882	6151.50	0.0024	P	4.9
3	☐	50.000	49.296	12391.64	0.0048	P	1.9
4	☐	125.000	125.013	28920.09	0.0118	P	1.2
5	☐	250.000	249.466	53975.49	0.0232	P	2.5
6	☐	500.000	504.848	105455.47	0.0467	P	3.7
7	☐	1000.000	997.796	199986.69	0.0919	P	1.8
8	☐			11354.71	0.0052	P	9.5

$$y = 9.1838\text{E-}005 * x + 3.1458\text{E-}004$$

$$R = 1.0000$$

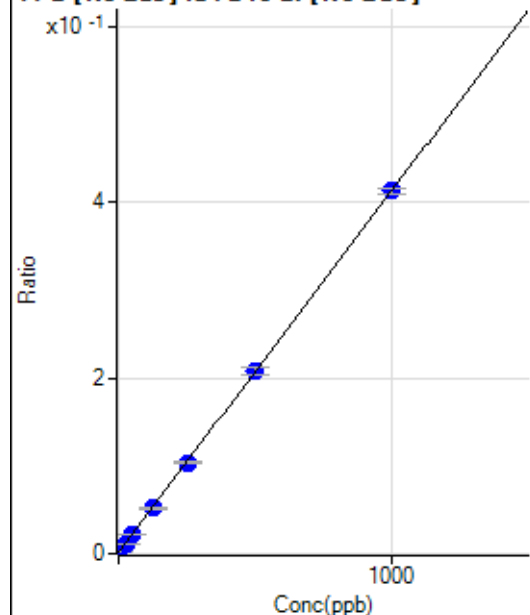
$$DL = 1.348$$

$$BEC = 3.425$$

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	3872.87	0.0015	P	2.6
2	☐	25.000	23.776	28822.87	0.0113	P	2.9
3	☐	50.000	49.870	56473.35	0.0221	P	3.2
4	☐	125.000	122.104	127046.85	0.0518	P	2.7
5	☐	250.000	246.645	239622.94	0.1031	P	2.1
6	☐	500.000	502.344	470782.86	0.2084	P	4.5
7	☐	1000.000	1000.066	899146.12	0.4134	P	1.5
8	☐			51436.50	0.0234	P	8.9

$$y = 4.1185\text{E-}004 * x + 0.0015$$

$$R = 1.0000$$

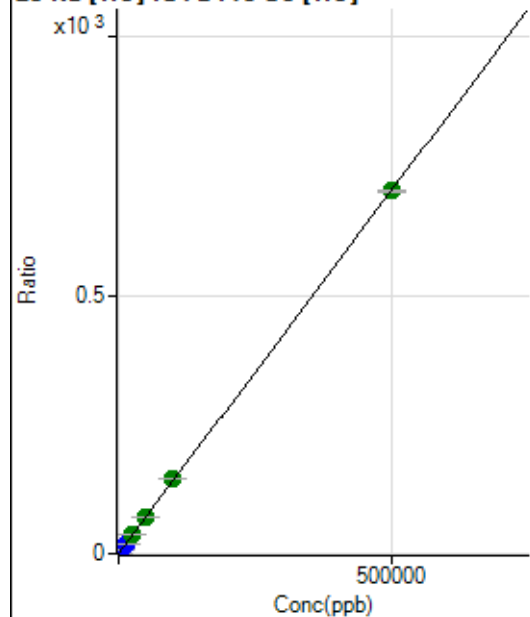
$$DL = 0.2928$$

$$BEC = 3.709$$

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	3817.31	0.0243	P	4.7
2	☐	500.000	494.277	116082.71	0.7195	P	0.4
3	☐	5000.000	5167.234	1125130.63	7.2922	P	0.8
4	☐	12500.000	12813.254	2579652.92	18.0465	P	0.7
5	☐	25000.000	25596.408	4915171.16	36.0264	A	0.5
6	☐	50000.000	50573.645	9763062.37	71.1577	A	0.9
7	☐	100000.00	102407.42	18986240.70	144.0635	A	0.4
8	☐	500000.00	499421.83	96437463.96	702.4764	A	0.7

$$y = 0.0014 * x + 0.0243$$

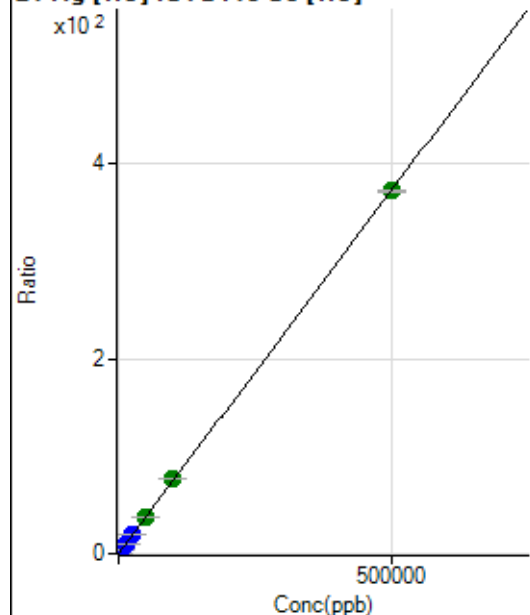
$$R = 1.0000$$

$$DL = 2.458$$

$$BEC = 17.27$$

Weight: <None>

Min Conc: 0

24 Mg [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	80.56	0.0005	P	20.8
2	☐	500.000	507.974	61195.35	0.3793	P	2.5
3	☐	5000.000	5204.905	598933.58	3.8817	P	0.6
4	☐	12500.000	12929.292	1378223.37	9.6417	P	0.4
5	☐	25000.000	25644.981	2609086.95	19.1237	P	0.4
6	☐	50000.000	51055.793	5223604.80	38.0722	A	0.8
7	☐	100000.00	102886.23	10111052.05	76.7215	A	0.4
8	☐	500000.00	499272.13	51109813.99	372.3018	A	0.7

$$y = 7.4569\text{E-}004 * x + 5.1199\text{E-}004$$

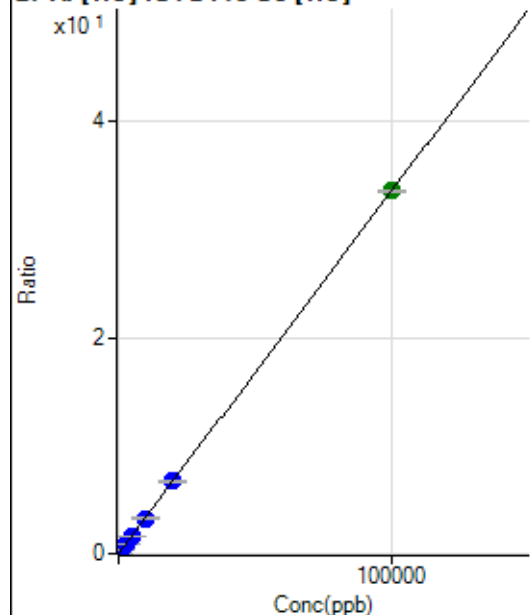
$$R = 1.0000$$

$$DL = 0.4281$$

$$BEC = 0.6866$$

Weight: <None>

Min Conc: 0

27 Al [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	13.89	0.0001	P	34.3
2	☐	20.000	21.295	1166.77	0.0072	P	12.3
3	☐	1000.000	1028.208	53229.04	0.3450	P	1.7
4	☐	2500.000	2526.578	121160.74	0.8476	P	2.2
5	☐	5000.000	5001.993	228921.66	1.6779	P	1.4
6	☐	10000.000	9797.994	450935.79	3.2866	P	0.8
7	☐	20000.000	19885.008	879031.98	6.6701	P	0.4
8	☐	100000.00	100042.15	4606691.29	33.5573	A	0.8

$$y = 3.3543\text{E-}004 * x + 8.8248\text{E-}005$$

$$R = 1.0000$$

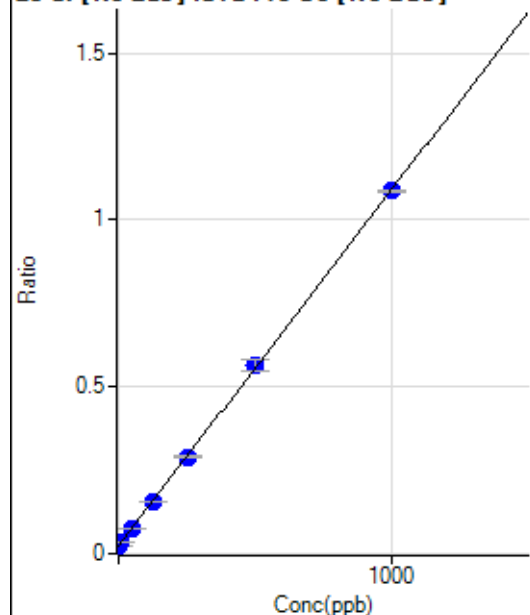
$$DL = 0.2705$$

$$BEC = 0.2631$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	97785.33	0.0238	P	1.0
2	☐	10.000	9.254	138836.89	0.0336	P	0.5
3	☐	50.000	49.436	317572.28	0.0765	P	0.8
4	☐	125.000	124.737	618947.27	0.1568	P	0.5
5	☐	250.000	249.383	1075586.80	0.2897	P	0.9
6	☐	500.000	506.156	2039872.81	0.5635	P	6.6
7	☐	1000.000	997.145	3852503.08	1.0871	P	0.6
8	☐			270695.00	0.0758	P	0.9

$$y = 0.0011 * x + 0.0238$$

$$R = 1.0000$$

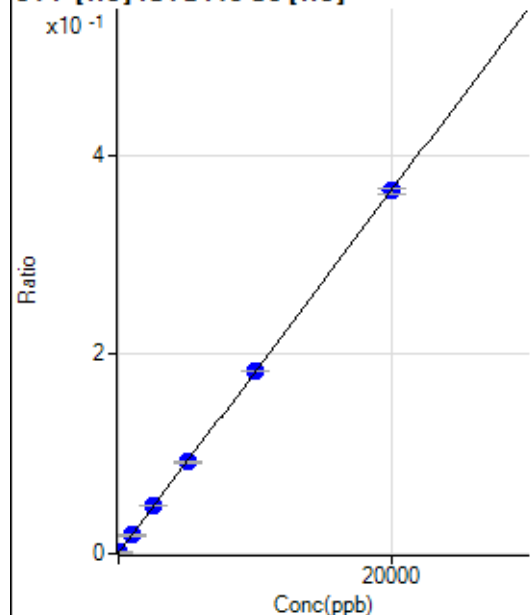
$$DL = 0.6953$$

$$BEC = 22.28$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-22.065	36.11	0.0002	P	35.6
2	☐	0.000	22.065	166.67	0.0010	P	31.4
3	☐	1000.000	1010.338	2936.51	0.0190	P	8.7
4	☐	2500.000	2621.414	6912.97	0.0484	P	1.6
5	☐	5000.000	5002.784	12514.06	0.0917	P	2.7
6	☐	10000.000	10030.875	25146.85	0.1833	P	0.1
7	☐	20000.000	19968.173	47997.74	0.3642	P	1.3
8	☐			52.78	0.0004	P	23.5

$$y = 1.8208E-005 * x + 6.3174E-004$$

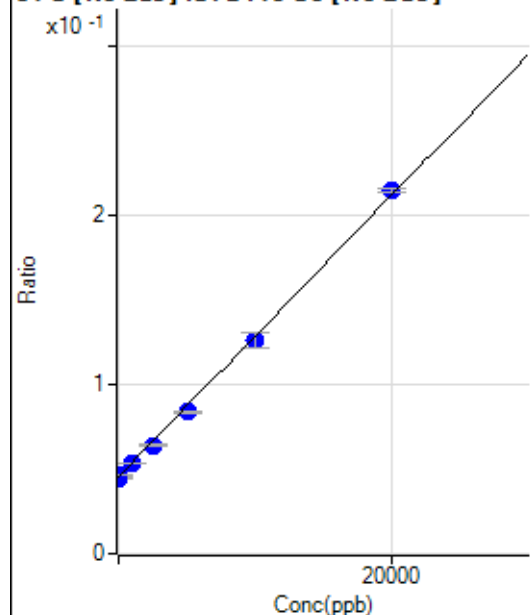
$$R = 1.0000$$

$$DL = 33.46$$

$$BEC = 34.7$$

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	-106.595	184418.98	0.0448	P	1.2
2	☐	0.000	106.595	192346.15	0.0466	P	0.6
3	☐	1000.000	948.217	222545.13	0.0536	P	1.6
4	☐	2500.000	2196.565	252614.97	0.0640	P	1.5
5	☐	5000.000	4570.344	310955.73	0.0838	P	0.7
6	☐	10000.000	9700.630	457772.14	0.1265	P	6.6
7	☐	20000.000	20297.617	760820.66	0.2147	P	0.9
8	☐			147151.12	0.0412	P	0.9

$$y = 8.3261\text{E-}006 * x + 0.0457$$

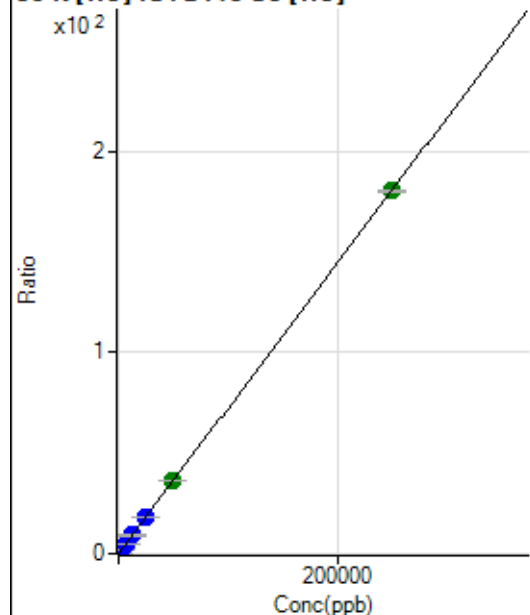
R = 0.9995

DL = 148.4

BEC = 5489

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	9069.80	0.0577	P	4.6
2	☐	500.000	509.505	68570.13	0.4250	P	2.9
3	☐	2500.000	2634.540	301947.56	1.9570	P	0.7
4	☐	6250.000	6371.921	664862.94	4.6513	P	0.7
5	☐	12500.000	12524.982	1239769.13	9.0871	P	0.2
6	☐	25000.000	24898.624	2470669.35	18.0073	P	0.5
7	☐	50000.000	49733.008	4732642.99	35.9106	A	0.2
8	☐	250000.00	250057.87	24755534.24	180.3262	A	0.7

$$y = 7.2091\text{E-}004 * x + 0.0577$$

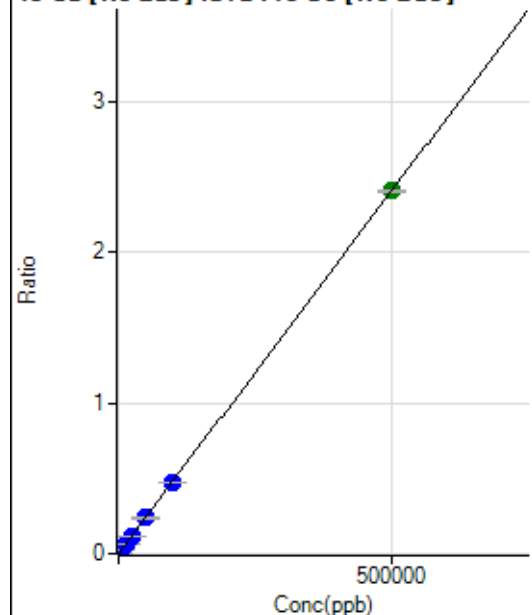
R = 1.0000

DL = 11.12

BEC = 80.05

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	105.56	0.0000	P	16.1
2	☐	500.000	501.521	10078.81	0.0024	P	4.3
3	☐	5000.000	5029.333	100702.83	0.0243	P	1.7
4	☐	12500.000	12435.525	236584.75	0.0599	P	0.5
5	☐	25000.000	24808.302	443769.15	0.1195	P	1.2
6	☐	50000.000	50084.675	873485.54	0.2413	P	6.2
7	☐	100000.00	98647.612	1683942.96	0.4752	P	1.5
8	☐	500000.00	500272.91	8603940.82	2.4098	A	0.8

$$y = 4.8170\text{E-}006 * x + 2.5644\text{E-}005$$

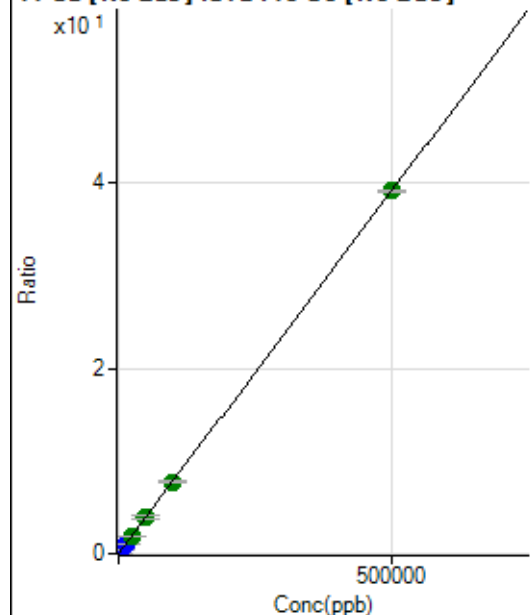
$$R = 1.0000$$

$$DL = 2.574$$

$$BEC = 5.324$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	6069.25	0.0015	P	2.7
2	☐	500.000	492.886	165511.41	0.0401	P	1.6
3	☐	5000.000	4971.211	1623312.73	0.3909	P	0.5
4	☐	12500.000	12272.127	3801430.86	0.9629	P	0.5
5	☐	25000.000	24733.134	7199634.01	1.9392	A	0.7
6	☐	50000.000	50190.328	14237780.18	3.9336	A	6.6
7	☐	100000.00	99099.216	27517231.87	7.7652	A	1.2
8	☐	500000.00	500180.45	139912190.6	39.1873	A	0.8

$$y = 7.8343\text{E-}005 * x + 0.0015$$

$$R = 1.0000$$

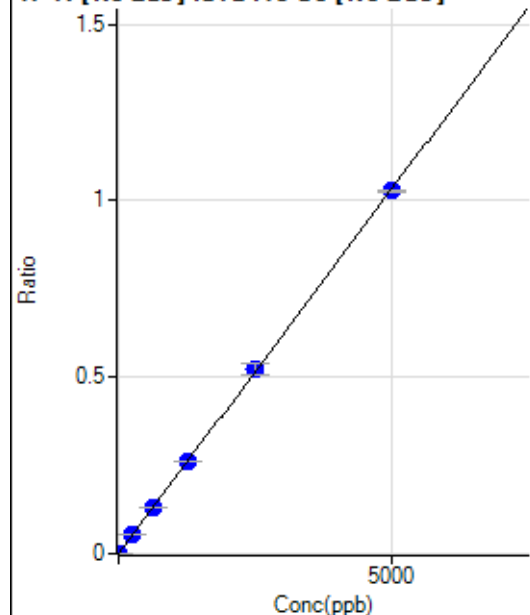
$$DL = 1.536$$

$$BEC = 18.83$$

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	41.67	0.0000	P	19.7
2	☐	5.000	5.144	4425.86	0.0011	P	6.6
3	☐	250.000	257.837	221074.89	0.0532	P	0.5
4	☐	625.000	627.941	511826.83	0.1296	P	0.9
5	☐	1250.000	1262.652	967847.21	0.2607	P	0.5
6	☐	2500.000	2533.032	1892872.85	0.5230	P	6.6
7	☐	5000.000	4979.561	3643077.82	1.0280	P	0.6
8	☐			1452.90	0.0004	P	4.9

$$y = 2.0645E-004 * x + 1.0123E-005$$

$$R = 1.0000$$

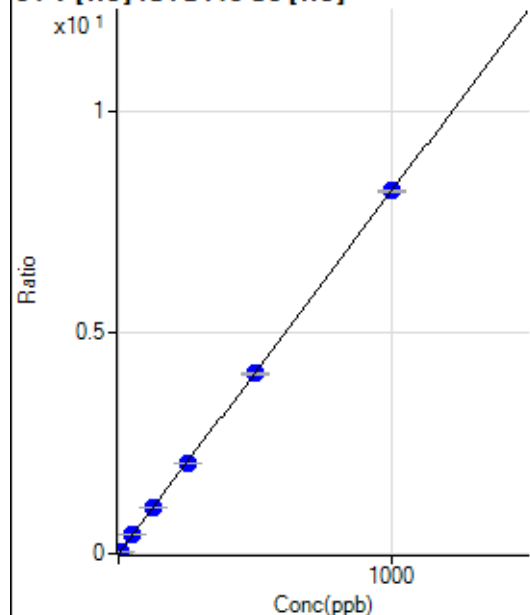
$$DL = 0.02901$$

$$BEC = 0.04903$$

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	3.33	0.0000	P	99.7
2	☐	5.000	5.174	6840.59	0.0424	P	5.8
3	☐	50.000	52.272	66058.17	0.4281	P	0.8
4	☐	125.000	127.480	149248.02	1.0441	P	0.5
5	☐	250.000	250.731	280174.41	2.0536	P	0.3
6	☐	500.000	497.429	558977.31	4.0741	P	0.7
7	☐	1000.000	1000.678	1080100.35	8.1958	P	0.5
8	☐			203.34	0.0015	P	3.4

$$y = 0.0082 * x + 2.1098E-005$$

$$R = 1.0000$$

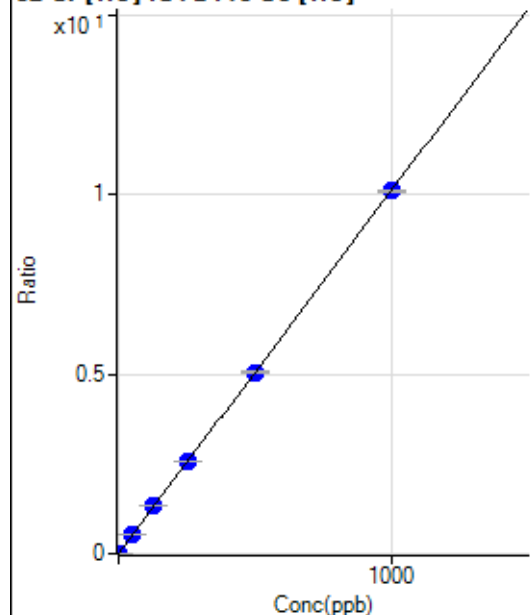
$$DL = 0.007704$$

$$BEC = 0.002576$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	271.12	0.0017	P	22.6
2	☐	2.000	2.021	3578.27	0.0222	P	2.4
3	☐	50.000	52.842	82799.99	0.5366	P	0.5
4	☐	125.000	129.668	187879.70	1.3144	P	0.1
5	☐	250.000	253.329	350109.87	2.5662	P	0.6
6	☐	500.000	499.314	693735.16	5.0563	P	0.8
7	☐	1000.000	998.785	1332686.25	10.1124	P	0.3
8	☐			23177.38	0.1689	P	2.4

$$y = 0.0101 * x + 0.0017$$

$$R = 1.0000$$

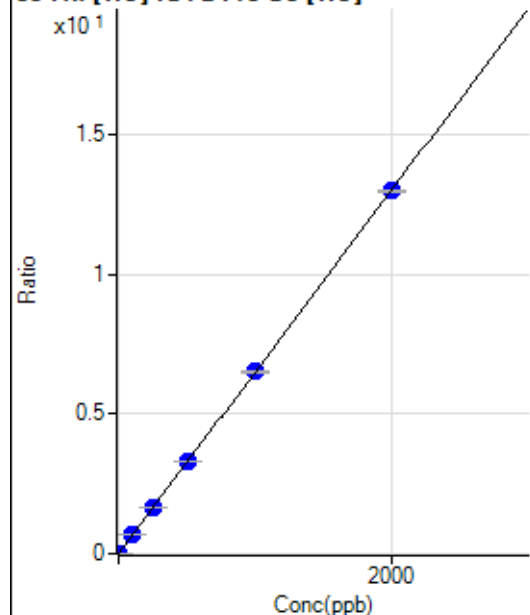
$$DL = 0.1155$$

$$BEC = 0.1703$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	20.00	0.0001	P	60.7
2	☐	1.000	1.101	1175.62	0.0073	P	2.0
3	☐	100.000	104.117	104466.35	0.6771	P	0.6
4	☐	250.000	257.631	239450.61	1.6752	P	0.5
5	☐	500.000	508.228	450833.14	3.3044	P	0.4
6	☐	1000.000	1000.428	892455.31	6.5045	P	0.6
7	☐	2000.000	1996.569	1710736.97	12.9811	P	0.4
8	☐			6385.94	0.0465	P	2.2

$$y = 0.0065 * x + 1.2758E-004$$

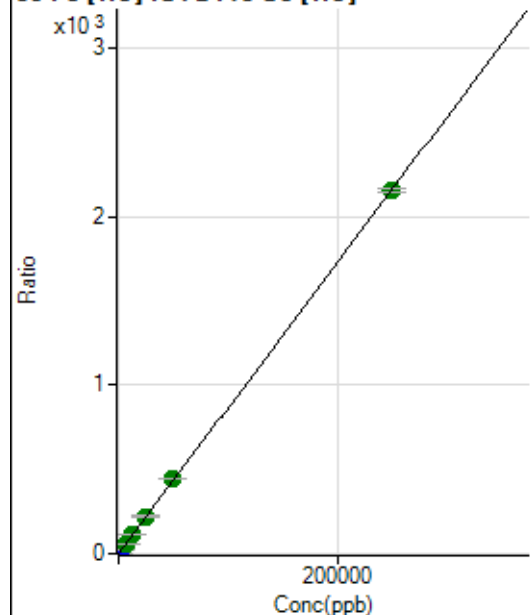
$$R = 1.0000$$

$$DL = 0.03571$$

$$BEC = 0.01962$$

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	1998.34	0.0127	P	5.6
2	☐	50.000	55.847	79700.55	0.4940	P	0.9
3	☐	2500.000	2685.633	3573048.69	23.1575	P	0.3
4	☐	6250.000	6584.077	8112584.38	56.7543	A	0.9
5	☐	12500.000	13029.328	15321292.01	112.2994	A	0.3
6	☐	25000.000	25780.242	30484128.00	222.1868	A	1.2
7	☐	50000.000	51469.570	58458651.77	443.5774	A	0.2
8	☐	250000.00	249591.38	295283099.1	2,150.990	A	1.0

$$y = 0.0086 * x + 0.0127$$

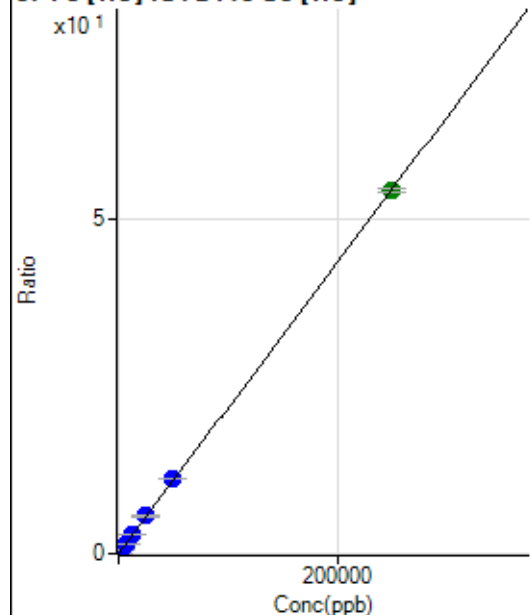
$$R = 1.0000$$

$$DL = 0.2495$$

$$BEC = 1.475$$

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	98.15	0.0006	P	25.0
2	☐	50.000	57.594	2122.43	0.0132	P	9.6
3	☐	2500.000	2716.442	91280.64	0.5916	P	1.3
4	☐	6250.000	6653.171	206985.24	1.4480	P	0.7
5	☐	12500.000	13154.804	390537.65	2.8625	P	0.7
6	☐	25000.000	25859.968	771975.02	5.6266	P	1.0
7	☐	50000.000	51825.164	1485934.71	11.2754	P	0.6
8	☐	250000.00	249503.98	7451460.58	54.2812	A	1.1

$$y = 2.1755E-004 * x + 6.2384E-004$$

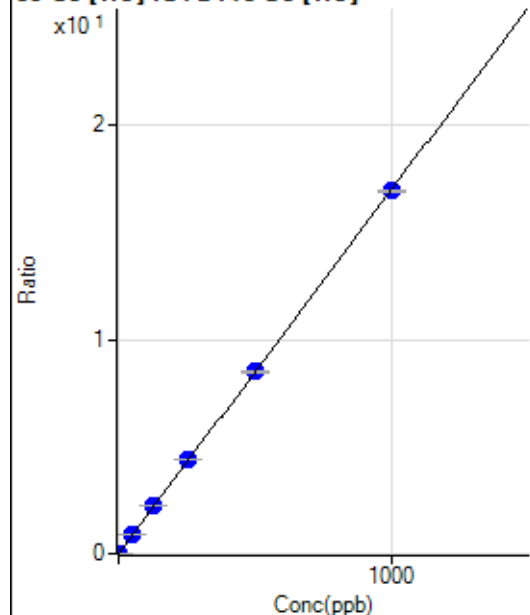
$$R = 1.0000$$

$$DL = 2.149$$

$$BEC = 2.868$$

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	32.22	0.0002	P	42.5
2	☐	1.000	1.048	2904.77	0.0180	P	1.4
3	☐	50.000	53.973	141454.73	0.9168	P	0.4
4	☐	125.000	131.322	318803.98	2.2303	P	1.0
5	☐	250.000	256.879	595197.66	4.3626	P	0.4
6	☐	500.000	501.362	1168204.34	8.5144	P	1.0
7	☐	1000.000	996.610	2230450.49	16.9248	P	0.5
8	☐			26962.78	0.1964	P	0.3

$$y = 0.0170 * x + 2.0540E-004$$

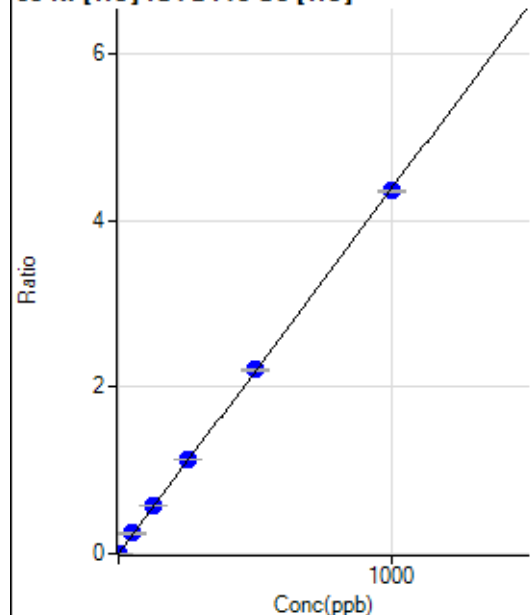
$$R = 1.0000$$

$$DL = 0.0154$$

$$BEC = 0.0121$$

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	34.45	0.0002	P	56.9
2	☐	1.000	1.121	827.82	0.0051	P	2.1
3	☐	50.000	55.486	37559.33	0.2434	P	1.0
4	☐	125.000	133.841	83888.22	0.5869	P	0.3
5	☐	250.000	258.999	154913.55	1.1355	P	1.0
6	☐	500.000	503.756	302977.63	2.2083	P	1.0
7	☐	1000.000	994.493	574494.97	4.3593	P	0.3
8	☐			11075.45	0.0807	P	1.3

$$y = 0.0044 * x + 2.1940E-004$$

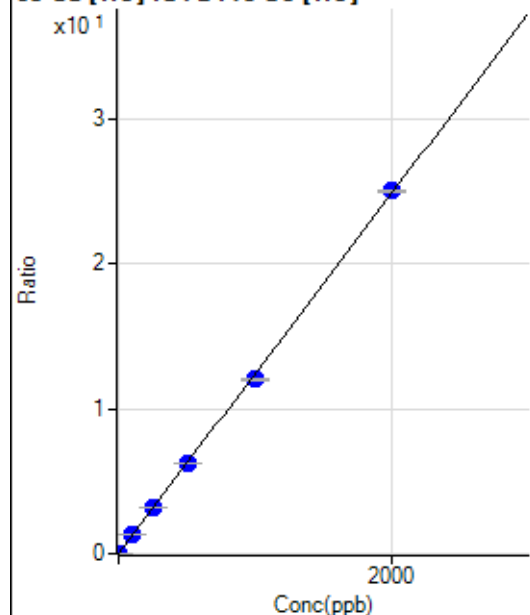
$$R = 0.9999$$

$$DL = 0.0855$$

$$BEC = 0.05006$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	357.79	0.0023	P	4.8
2	☐	2.000	2.022	4421.85	0.0274	P	1.3
3	☐	100.000	105.373	202393.40	1.3118	P	0.3
4	☐	250.000	257.191	457176.98	3.1984	P	1.2
5	☐	500.000	497.299	843458.96	6.1822	P	0.1
6	☐	1000.000	968.922	1652350.88	12.0431	P	0.9
7	☐	2000.000	2015.047	3300382.80	25.0434	P	0.5
8	☐			4767.52	0.0347	P	0.4

$$y = 0.0124 * x + 0.0023$$

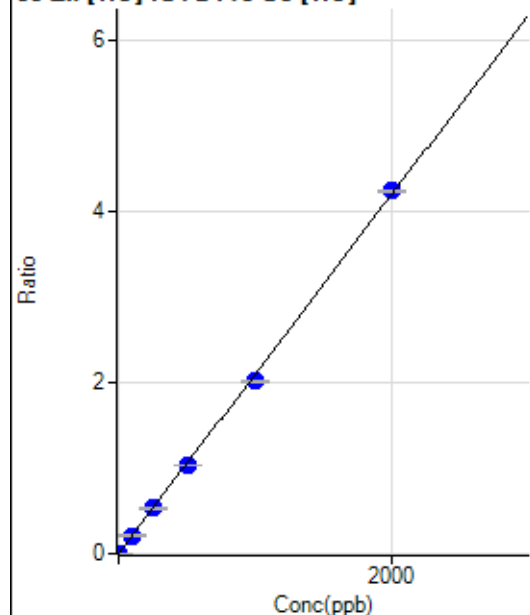
$$R = 0.9998$$

$$DL = 0.02652$$

$$BEC = 0.1832$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	203.34	0.0013	P	13.5
2	☐	2.000	2.060	906.71	0.0056	P	6.3
3	☐	100.000	100.784	32864.85	0.2130	P	1.7
4	☐	250.000	251.323	75648.03	0.5292	P	0.8
5	☐	500.000	493.125	141500.94	1.0372	P	0.9
6	☐	1000.000	960.708	277062.45	2.0194	P	1.2
7	☐	2000.000	2021.160	559699.75	4.2469	P	0.2
8	☐			5399.97	0.0393	P	3.5

$$y = 0.0021 * x + 0.0013$$

$$R = 0.9997$$

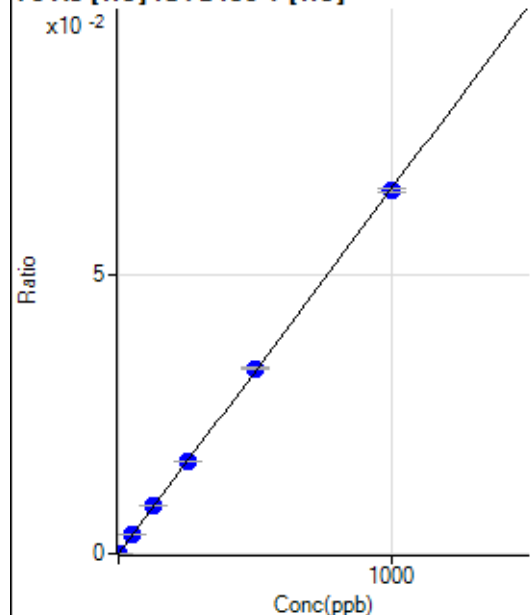
$$DL = 0.2494$$

$$BEC = 0.6155$$

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	5.56	0.0000	P	65.8
2	☐	1.000	1.054	205.56	0.0001	P	6.5
3	☐	50.000	54.356	9989.92	0.0036	P	1.3
4	☐	125.000	130.574	22539.77	0.0085	P	1.4
5	☐	250.000	253.793	42309.44	0.0166	P	0.4
6	☐	500.000	508.076	84757.81	0.0332	P	0.3
7	☐	1000.000	994.099	159779.17	0.0650	P	1.2
8	☐			216.05	0.0001	P	9.4

$$y = 6.5419\text{E-}005 * x + 1.9658\text{E-}006$$

$$R = 0.9999$$

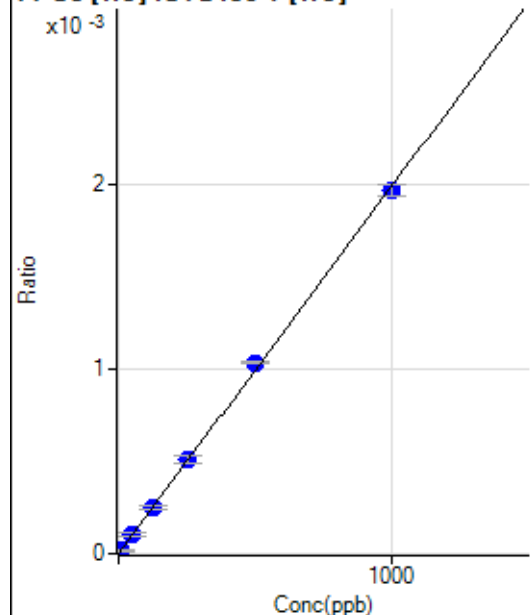
$$DL = 0.05934$$

$$BEC = 0.03005$$

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	☐	5.000	7.876	45.55	0.0000	P	29.1
3	☐	50.000	50.974	285.57	0.0001	P	21.6
4	☐	125.000	125.050	657.80	0.0002	P	10.1
5	☐	250.000	257.218	1306.75	0.0005	P	6.8
6	☐	500.000	520.175	2644.72	0.0010	P	1.1
7	☐	1000.000	988.039	4839.77	0.0020	P	3.3
8	☐			1.11	0.0000	P	173.

$$y = 1.9939\text{E-}006 * x + 0.0000\text{E+}000$$

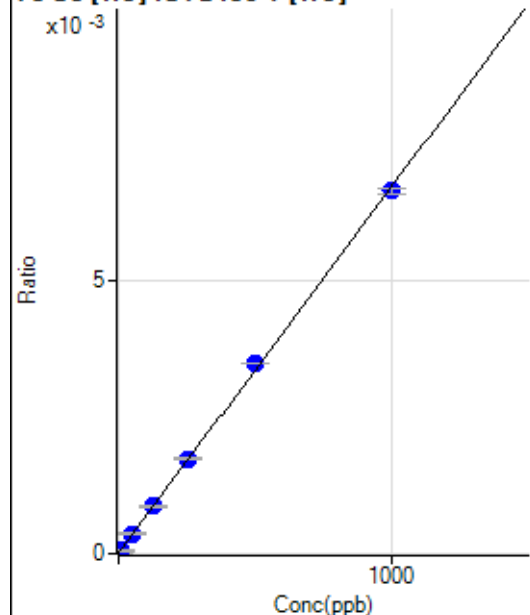
$$R = 0.9997$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.42	0.0000	P	20.9
2	☐	5.000	6.098	156.18	0.0001	P	15.6
3	☐	50.000	52.821	1032.76	0.0004	P	3.2
4	☐	125.000	127.333	2290.94	0.0009	P	2.9
5	☐	250.000	256.156	4418.00	0.0017	P	1.7
6	☐	500.000	517.550	8899.10	0.0035	P	0.6
7	☐	1000.000	989.248	16359.92	0.0067	P	1.9
8	☐			30.25	0.0000	P	22.7

$$y = 6.7184\text{E-}006 * x + 1.2945\text{E-}005$$

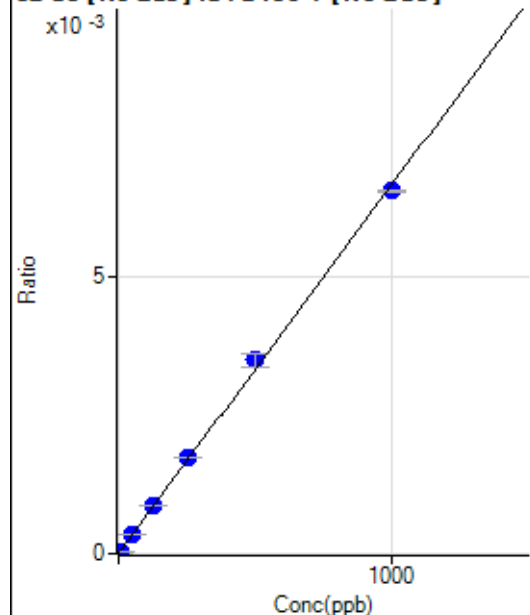
$$R = 0.9998$$

$$DL = 1.21$$

$$BEC = 1.927$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	97.82	0.0000	P	28.2
2	☐	5.000	4.967	757.81	0.0000	P	3.9
3	☐	50.000	52.431	7148.23	0.0004	P	0.9
4	☐	125.000	129.981	16806.71	0.0009	P	0.2
5	☐	250.000	261.140	32317.86	0.0017	P	0.3
6	☐	500.000	524.699	64195.32	0.0035	P	6.3
7	☐	1000.000	984.121	118090.57	0.0065	P	0.3
8	☐			131.15	0.0000	P	16.7

$$y = 6.6289\text{E-}006 * x + 4.8416\text{E-}006$$

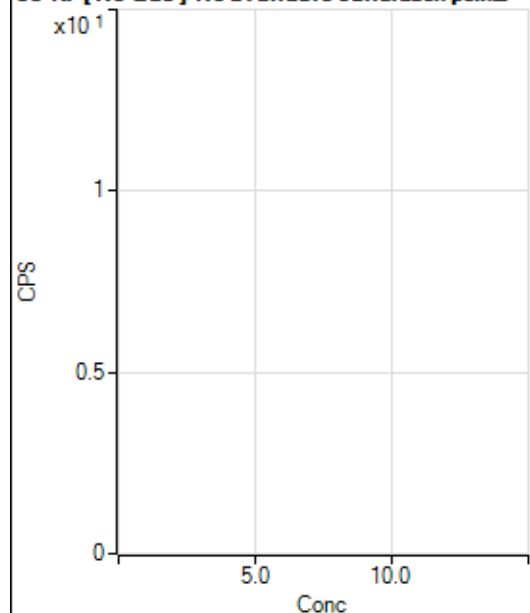
$$R = 0.9995$$

$$DL = 0.6189$$

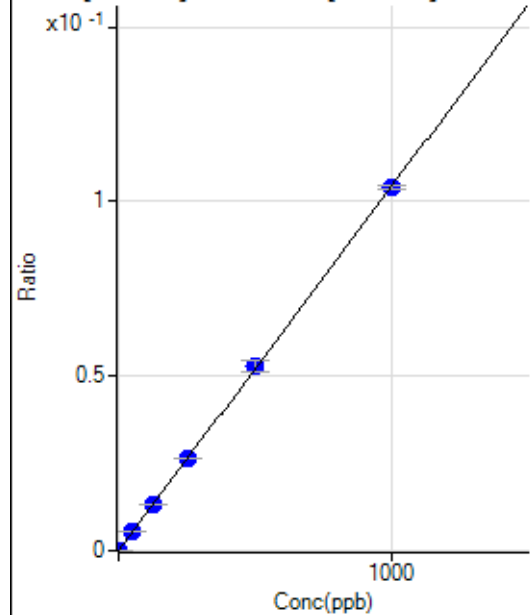
$$BEC = 0.7304$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			143.34		P	16.8
2	☐			186.67		P	3.6
3	☐			202.23		P	5.8
4	☐			177.78		P	15.3
5	☐			188.90		P	24.0
6	☐			151.12		P	28.8
7	☐			155.56		P	6.9
8	☐			165.56		P	7.1

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	333.35	0.0000	P	20.3
2	☐	1.000	1.058	2544.78	0.0001	P	8.9
3	☐	50.000	50.134	106339.14	0.0052	P	0.4
4	☐	125.000	126.190	255472.26	0.0132	P	0.5
5	☐	250.000	251.948	489272.85	0.0263	P	0.5
6	☐	500.000	506.225	973131.02	0.0528	P	5.7
7	☐	1000.000	996.245	1878658.05	0.1039	P	1.2
8	☐			7827.48	0.0004	P	2.4

$$y = 1.0424\text{E-}004 * x + 1.6524\text{E-}005$$

$$R = 1.0000$$

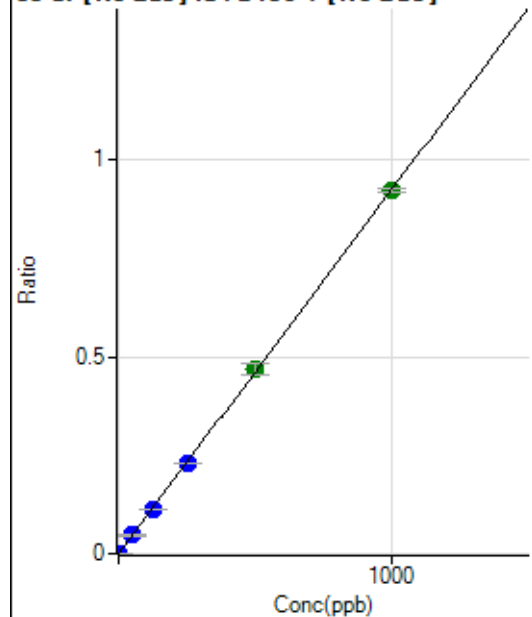
$$DL = 0.09643$$

$$BEC = 0.1585$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	91.67	0.0000	P	18.4
2	☐	1.000	0.978	18215.04	0.0009	P	2.0
3	☐	50.000	50.343	943084.84	0.0465	P	0.5
4	☐	125.000	123.806	2217707.71	0.1143	P	0.3
5	☐	250.000	246.578	4239209.51	0.2277	P	0.6
6	☐	500.000	507.002	8628705.83	0.4682	A	6.5
7	☐	1000.000	997.487	16661188.74	0.9211	A	1.0
8	☐			69546.96	0.0039	P	0.4

$$y = 9.2346\text{E-}004 * x + 4.5424\text{E-}006$$

$$R = 1.0000$$

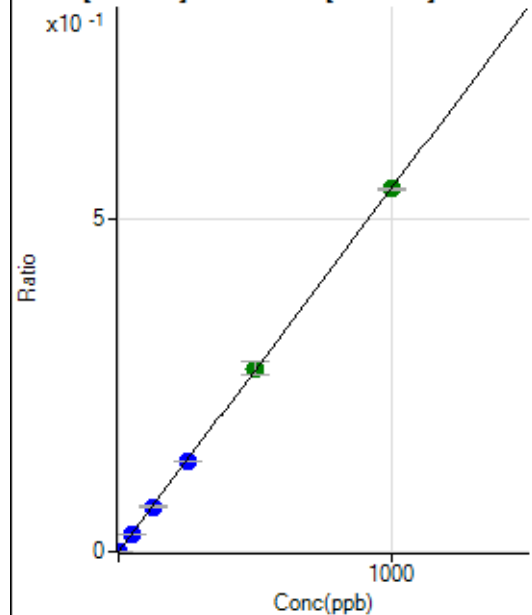
$$DL = 0.002711$$

$$BEC = 0.004919$$

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	605.60	0.0000	P	6.2
2	☐	1.000	0.841	9823.12	0.0005	P	2.9
3	☐	50.000	49.611	550480.45	0.0271	P	0.5
4	☐	125.000	124.038	1315219.35	0.0678	P	0.6
5	☐	250.000	247.223	2515489.88	0.1351	P	0.8
6	☐	500.000	504.439	5079593.69	0.2757	A	6.9
7	☐	1000.000	998.615	9870655.43	0.5457	A	0.3
8	☐			3795.13	0.0002	P	13.9

$$y = 5.4642\text{E-}004 * x + 3.0003\text{E-}005$$

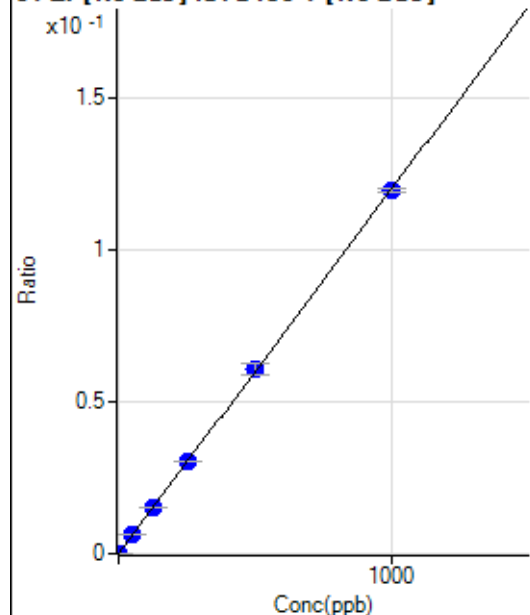
$$R = 1.0000$$

$$DL = 0.0102$$

$$BEC = 0.05491$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	97.23	0.0000	P	29.8
2	☐	1.000	0.854	2155.80	0.0001	P	11.4
3	☐	50.000	50.756	123782.10	0.0061	P	0.1
4	☐	125.000	125.776	293178.74	0.0151	P	0.2
5	☐	250.000	253.266	566561.63	0.0304	P	0.7
6	☐	500.000	507.337	1123451.75	0.0610	P	6.3
7	☐	1000.000	995.380	2162989.35	0.1196	P	1.1
8	☐			772.28	0.0000	P	15.1

$$y = 1.2014\text{E-}004 * x + 4.8143\text{E-}006$$

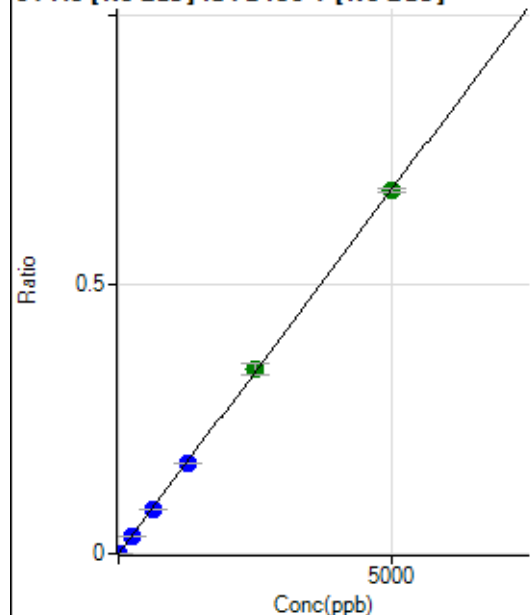
$$R = 1.0000$$

$$DL = 0.03582$$

$$BEC = 0.04007$$

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	275.02	0.0000	P	14.1
2	☐	5.000	4.528	12569.93	0.0006	P	4.5
3	☐	250.000	249.893	686239.20	0.0338	P	0.8
4	☐	625.000	617.614	1621497.95	0.0836	P	0.1
5	☐	1250.000	1241.811	3129003.19	0.1681	P	0.9
6	☐	2500.000	2537.073	6327958.56	0.3434	A	6.5
7	☐	5000.000	4984.440	12201443.33	0.6746	A	1.0
8	☐			7199.36	0.0004	P	2.5

$$y = 1.3533\text{E-}004 * x + 1.3634\text{E-}005$$

$$R = 1.0000$$

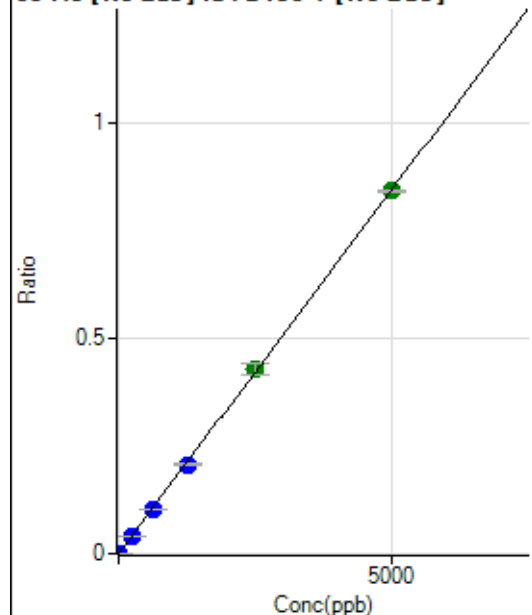
$$DL = 0.04271$$

$$BEC = 0.1007$$

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	100.01	0.0000	P	43.4
2	☐	5.000	4.800	16351.68	0.0008	P	1.3
3	☐	250.000	248.591	851051.70	0.0420	P	0.5
4	☐	625.000	616.305	2017463.02	0.1040	P	0.3
5	☐	1250.000	1227.992	3858187.93	0.2072	P	0.3
6	☐	2500.000	2532.563	7876476.65	0.4274	A	6.6
7	☐	5000.000	4990.378	15232891.49	0.8422	A	0.8
8	☐			10473.70	0.0006	P	3.3

$$y = 1.6876E-004 * x + 4.9461E-006$$

$$R = 1.0000$$

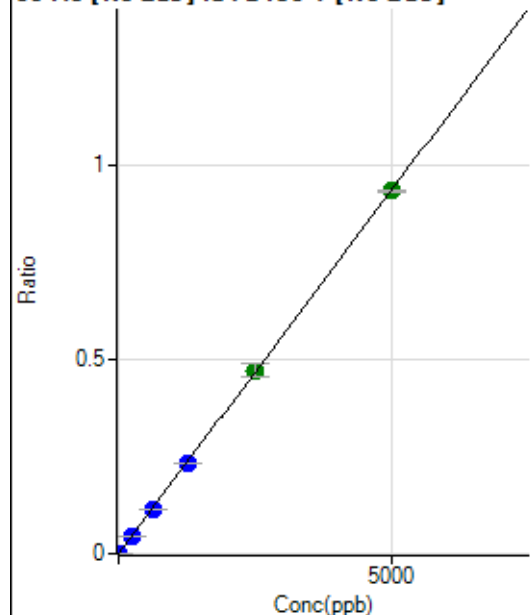
$$DL = 0.03818$$

$$BEC = 0.02931$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	158.34	0.0000	P	29.3
2	☐	5.000	4.737	17900.81	0.0009	P	2.7
3	☐	250.000	249.027	943159.32	0.0465	P	0.8
4	☐	625.000	617.846	2237466.37	0.1154	P	0.1
5	☐	1250.000	1236.528	4297849.96	0.2309	P	0.7
6	☐	2500.000	2524.919	8686596.29	0.4714	A	6.8
7	☐	5000.000	4991.851	16856860.27	0.9319	A	0.5
8	☐			16816.16	0.0009	P	6.7

$$y = 1.8669E-004 * x + 7.8454E-006$$

$$R = 1.0000$$

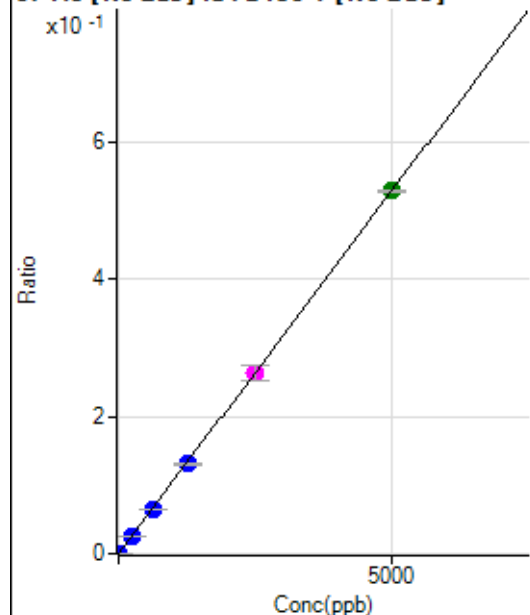
$$DL = 0.03696$$

$$BEC = 0.04202$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58.34	0.0000	P	43.7
2	☐	5.000	4.784	10198.57	0.0005	P	3.2
3	☐	250.000	249.802	535332.57	0.0264	P	0.8
4	☐	625.000	616.863	1264067.09	0.0652	P	0.3
5	☐	1250.000	1238.473	2435820.91	0.1308	P	0.8
6	☐	2500.000	2496.403	4857599.94	0.2637	M	8.0
7	☐	5000.000	5005.708	9565264.19	0.5288	A	0.6
8	☐			6521.22	0.0004	P	5.2

$$y = 1.0564\text{E-}004 * x + 2.8969\text{E-}006$$

$$R = 1.0000$$

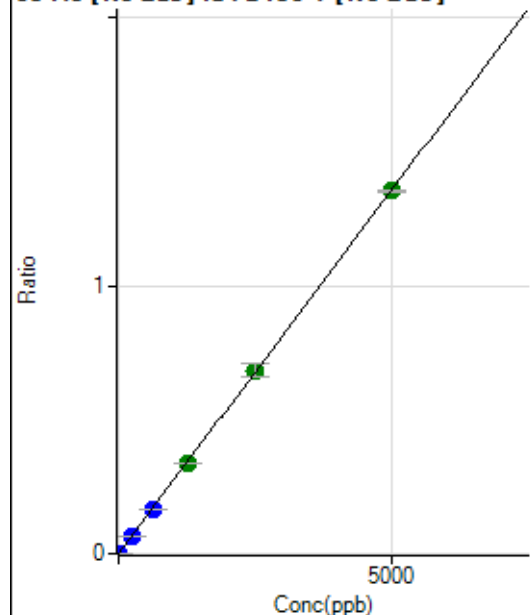
$$DL = 0.03593$$

$$BEC = 0.02742$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	158.34	0.0000	P	19.8
2	☐	5.000	4.898	26812.19	0.0013	P	0.6
3	☐	250.000	249.231	1371275.89	0.0676	P	0.8
4	☐	625.000	618.342	3253128.85	0.1677	P	0.5
5	☐	1250.000	1246.127	6292371.67	0.3380	A	0.5
6	☐	2500.000	2517.980	12583648.20	0.6829	A	7.0
7	☐	5000.000	4992.849	24494337.18	1.3542	A	0.7
8	☐			16321.07	0.0009	P	5.5

$$y = 2.7122\text{E-}004 * x + 7.8510\text{E-}006$$

$$R = 1.0000$$

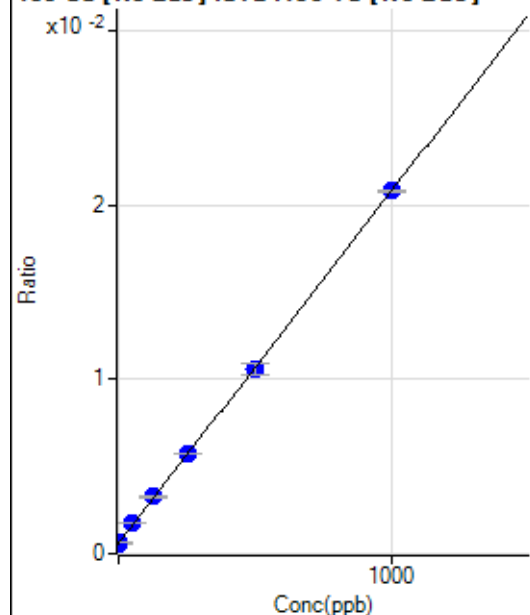
$$DL = 0.0172$$

$$BEC = 0.02895$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5406.87	0.0006	P	6.6
2	☐	1.000	3.297	5979.28	0.0007	P	3.5
3	☐	50.000	56.363	16079.14	0.0017	P	2.0
4	☐	125.000	132.839	30160.83	0.0033	P	2.0
5	☐	250.000	252.726	52138.40	0.0057	P	0.2
6	☐	500.000	495.413	97733.29	0.0106	P	6.1
7	☐	1000.000	1000.312	190397.06	0.0208	P	0.6
8	☐			5567.99	0.0006	P	3.2

$$y = 2.0206\text{E-}005 * x + 5.9004\text{E-}004$$

$$R = 0.9999$$

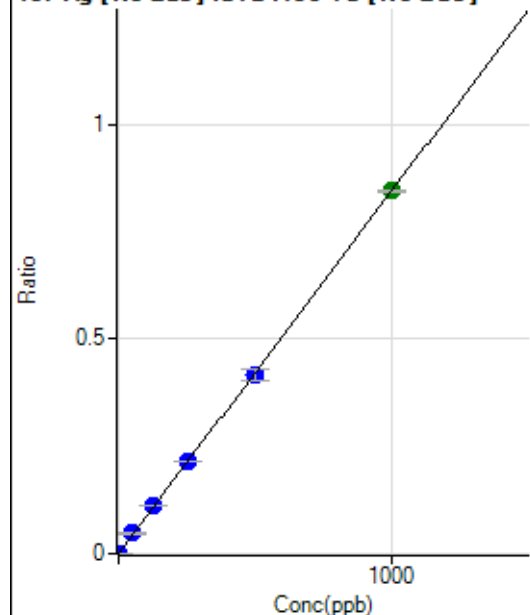
$$DL = 5.815$$

$$BEC = 29.2$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	119.45	0.0000	P	25.0
2	☐	1.000	1.135	8847.57	0.0010	P	2.4
3	☐	50.000	55.944	439579.83	0.0473	P	1.0
4	☐	125.000	133.763	1040921.58	0.1130	P	0.5
5	☐	250.000	255.657	1976628.65	0.2160	P	0.6
6	☐	500.000	492.547	3835790.32	0.4161	P	6.4
7	☐	1000.000	1000.920	7738545.23	0.8455	A	0.3
8	☐			1366.79	0.0002	P	14.6

$$y = 8.4473\text{E-}004 * x + 1.3043\text{E-}005$$

$$R = 0.9999$$

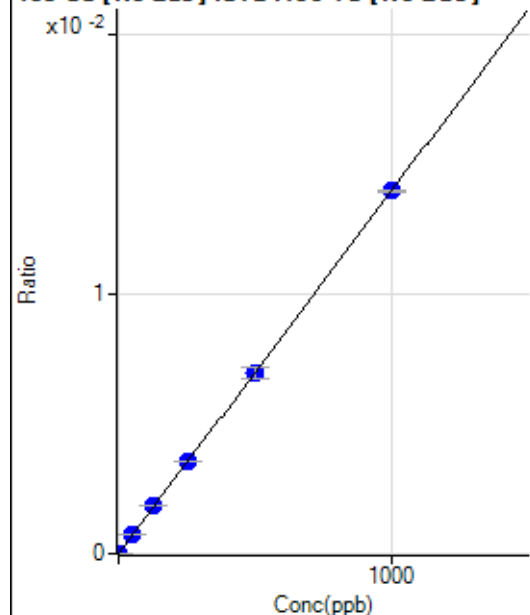
$$DL = 0.0116$$

$$BEC = 0.01544$$

Weight: <None>

Min Conc: 0

108 Cd [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	57.6
2	☐	1.000	1.093	150.00	0.0000	P	10.7
3	☐	50.000	54.785	7131.10	0.0008	P	2.1
4	☐	125.000	130.786	16847.72	0.0018	P	1.4
5	☐	250.000	252.287	32281.40	0.0035	P	0.4
6	☐	500.000	497.103	64059.27	0.0069	P	6.4
7	☐	1000.000	999.914	127912.13	0.0140	P	0.8
8	☐			37.50	0.0000	P	11.4

$$y = 1.3975\text{E-}005 * x + 1.2142\text{E-}006$$

$$R = 1.0000$$

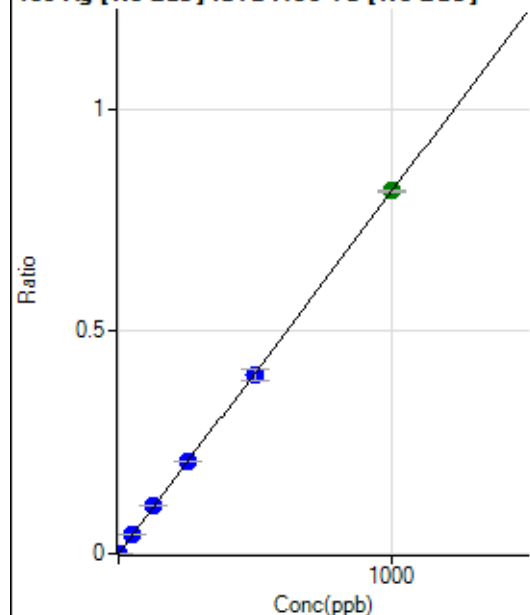
$$DL = 0.1502$$

$$BEC = 0.08688$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.89	0.0000	P	11.8
2	☐	1.000	1.139	8483.47	0.0009	P	2.2
3	☐	50.000	55.494	420058.46	0.0452	P	0.7
4	☐	125.000	132.707	994945.91	0.1080	P	0.1
5	☐	250.000	253.808	1890665.30	0.2066	P	0.6
6	☐	500.000	491.559	3688214.28	0.4001	P	6.5
7	☐	1000.000	1002.030	7464400.25	0.8156	A	0.3
8	☐			1088.98	0.0001	P	17.0

$$y = 8.1391\text{E-}004 * x + 4.2413\text{E-}006$$

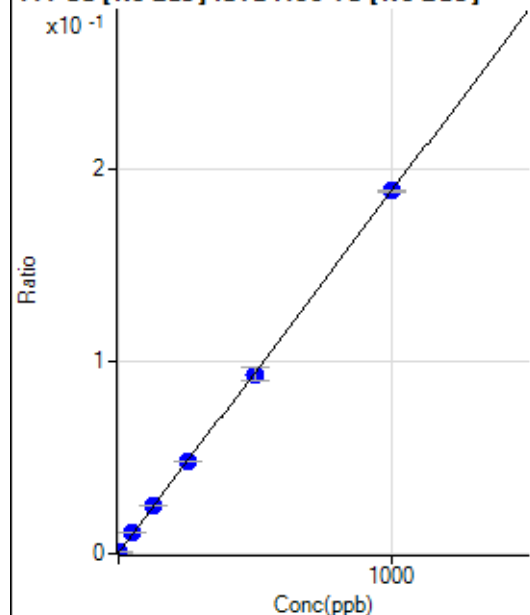
$$R = 0.9999$$

$$DL = 0.001846$$

$$BEC = 0.005211$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3795.09	0.0004	P	6.6
2	☐	1.000	1.191	5811.20	0.0006	P	4.0
3	☐	50.000	54.388	99012.55	0.0106	P	0.4
4	☐	125.000	131.073	230969.34	0.0251	P	0.3
5	☐	250.000	252.617	438776.10	0.0479	P	0.8
6	☐	500.000	494.893	862102.58	0.0935	P	6.7
7	☐	1000.000	1000.921	1727337.87	0.1887	P	0.6
8	☐			4182.46	0.0005	P	2.7

$$y = 1.8815E-004 * x + 4.1415E-004$$

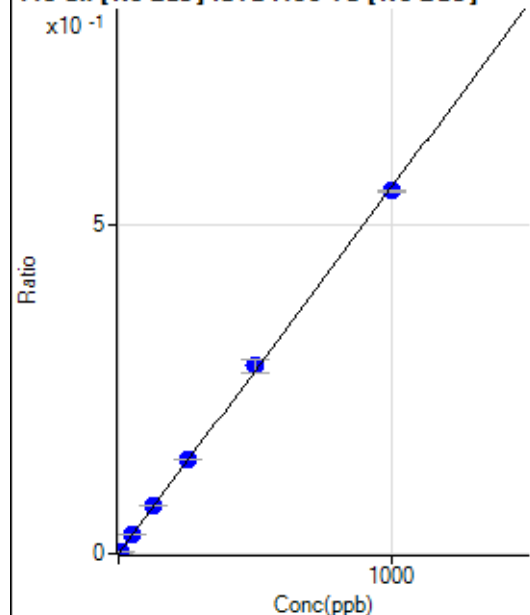
$$R = 1.0000$$

$$DL = 0.4331$$

$$BEC = 2.201$$

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	669.49	0.0001	P	18.3
2	☐	5.000	5.743	29877.08	0.0033	P	0.6
3	☐	50.000	54.763	285132.48	0.0307	P	0.7
4	☐	125.000	133.012	685022.89	0.0744	P	0.2
5	☐	250.000	258.825	1323864.02	0.1446	P	0.6
6	☐	500.000	512.320	2638332.70	0.2862	P	6.8
7	☐	1000.000	990.390	5063789.35	0.5533	P	0.2
8	☐			3720.08	0.0004	P	3.8

$$y = 5.5857E-004 * x + 7.3062E-005$$

$$R = 0.9998$$

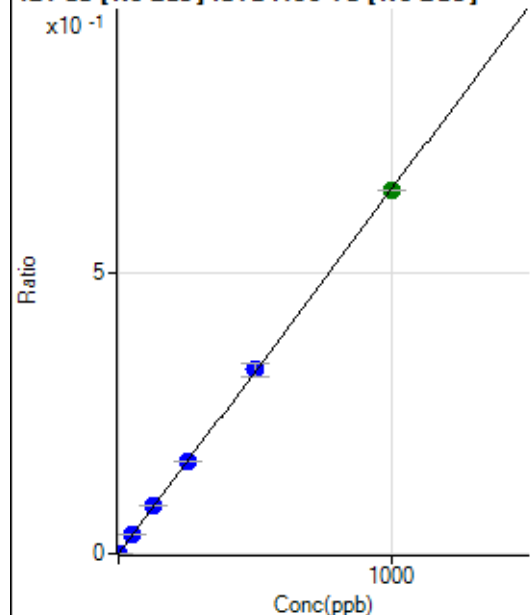
$$DL = 0.07171$$

$$BEC = 0.1308$$

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	233.35	0.0000	P	40.4
2	☐	2.000	2.019	12119.62	0.0013	P	3.1
3	☐	50.000	53.461	321811.43	0.0346	P	0.3
4	☐	125.000	130.419	777248.27	0.0844	P	0.9
5	☐	250.000	253.897	1503279.16	0.1643	P	0.2
6	☐	500.000	504.732	3009482.66	0.3265	P	6.7
7	☐	1000.000	995.809	5895416.41	0.6441	A	0.1
8	☐			9322.90	0.0011	P	2.1

$$y = 6.4682\text{E-}004 * x + 2.5452\text{E-}005$$

$$R = 1.0000$$

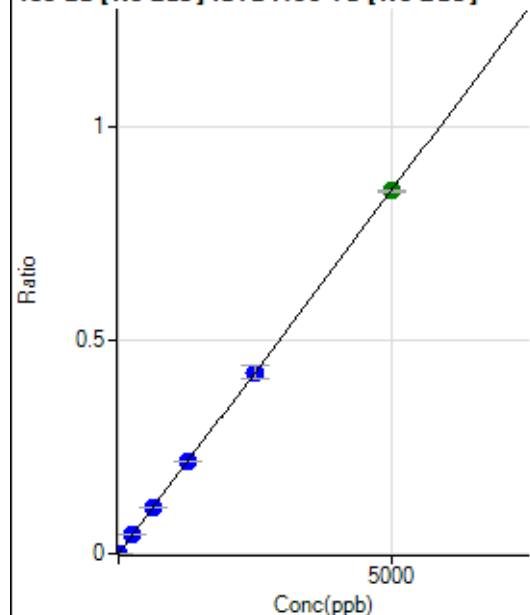
$$DL = 0.04768$$

$$BEC = 0.03935$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	11.11	0.0000	P	43.1
2	☐	10.000	10.616	16479.84	0.0018	P	2.0
3	☐	250.000	266.282	421952.64	0.0454	P	0.6
4	☐	625.000	643.088	1009328.00	0.1096	P	0.3
5	☐	1250.000	1261.846	1967762.54	0.2150	P	0.6
6	☐	2500.000	2499.952	3925900.91	0.4260	P	7.0
7	☐	5000.000	4993.986	7787918.57	0.8509	A	0.8
8	☐			1625.18	0.0002	P	6.1

$$y = 1.7039\text{E-}004 * x + 1.2115\text{E-}006$$

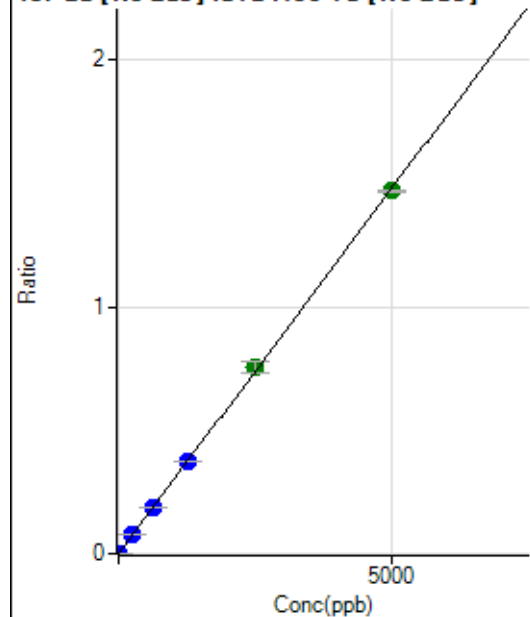
$$R = 1.0000$$

$$DL = 0.009201$$

$$BEC = 0.00711$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	19.44	0.0000	P	49.2
2	☐	10.000	10.610	28585.82	0.0031	P	1.1
3	☐	250.000	264.560	727584.42	0.0782	P	0.2
4	☐	625.000	639.675	1742428.81	0.1892	P	0.6
5	☐	1250.000	1259.590	3409118.87	0.3725	P	0.7
6	☐	2500.000	2547.873	6947056.49	0.7535	A	6.0
7	☐	5000.000	4971.103	13454743.01	1.4701	A	0.3
8	☐			2822.65	0.0003	P	3.1

$$y = 2.9572\text{E-}004 * x + 2.1171\text{E-}006$$

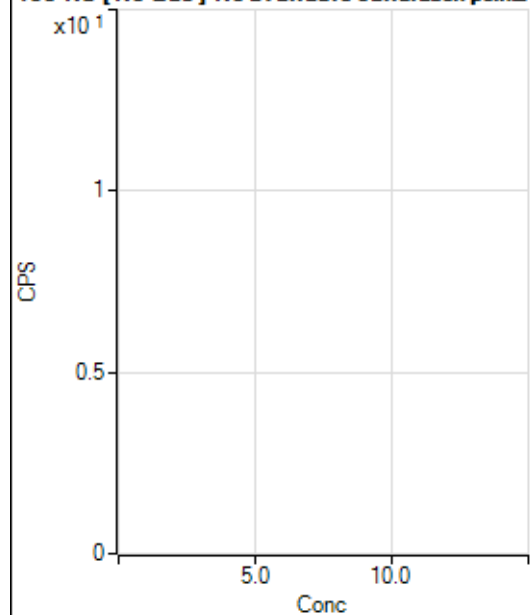
$$R = 0.9999$$

$$DL = 0.01056$$

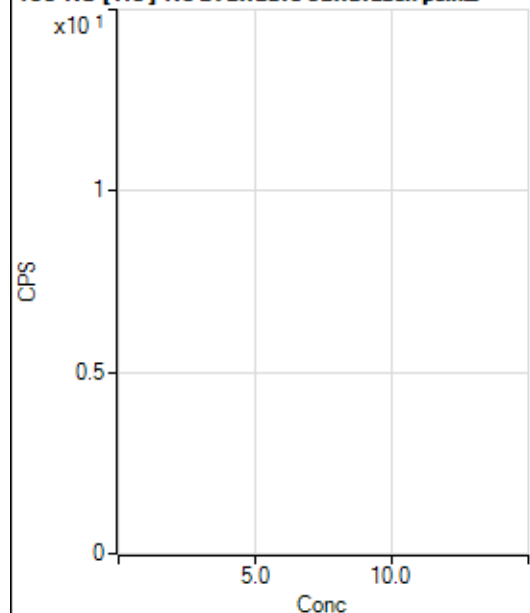
$$BEC = 0.007159$$

Weight: <None>

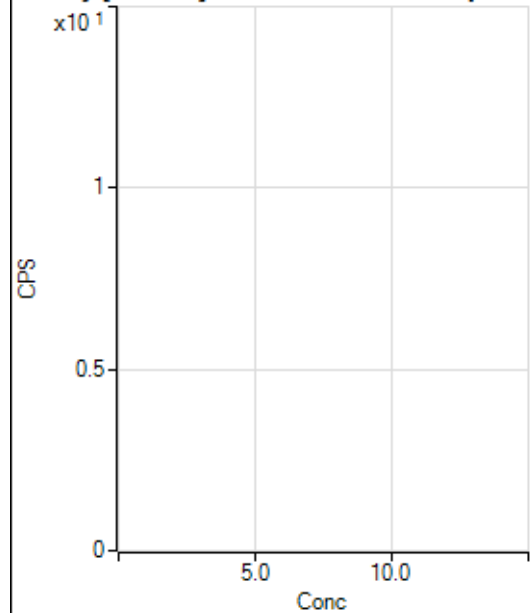
Min Conc: 0

150 Nd [No Gas] No available calibration points

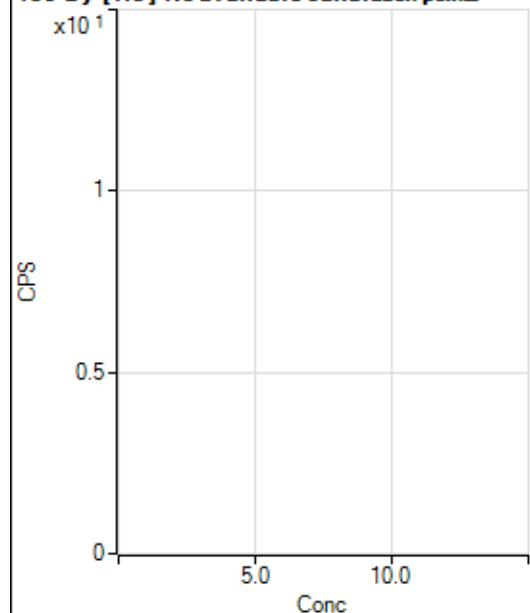
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐			11.11		P	69.3
3	☐			33.33		P	69.3
4	☐			82.22		P	24.8
5	☐			153.34		P	11.5
6	☐			324.46		P	1.2
7	☐			586.70		P	18.6
8	☐			135.56		P	19.9

150 Nd [He] No available calibration points

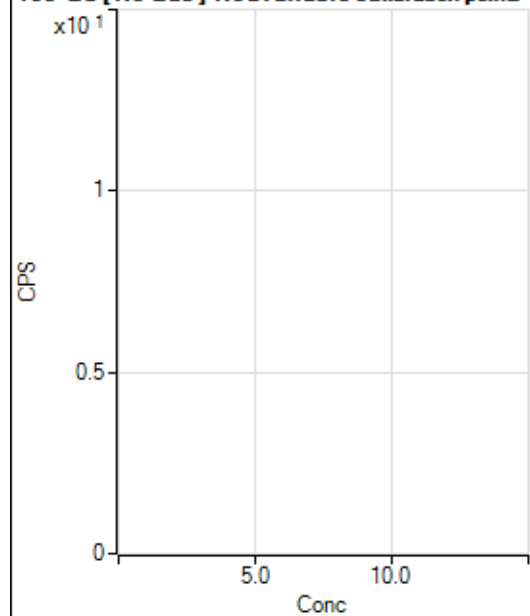
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	43.4
2	☐			3.33		P	100.
3	☐			8.89		P	57.3
4	☐			11.11		P	17.3
5	☐			20.00		P	50.0
6	☐			30.00		P	19.2
7	☐			57.78		P	23.3
8	☐			51.11		P	7.5

156 Dy [No Gas] No available calibration points

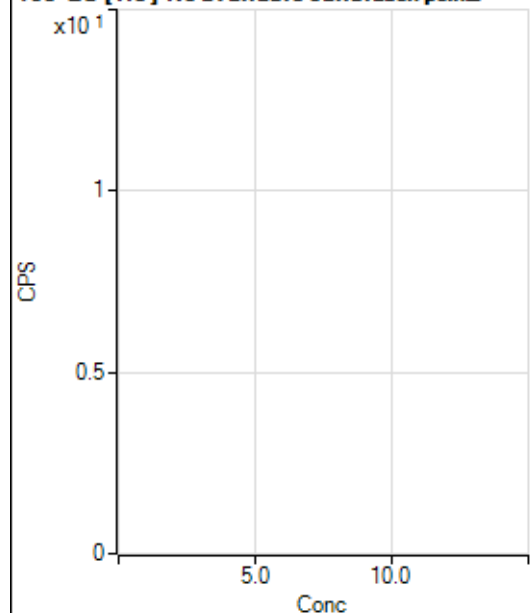
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	43.3
2	☐			13.89		P	91.6
3	☐			13.89		P	34.7
4	☐			33.33		P	43.3
5	☐			33.33		P	75.0
6	☐			77.78		P	32.7
7	☐			144.45		P	32.8
8	☐			63.89		P	7.5

156 Dy [He] No available calibration points

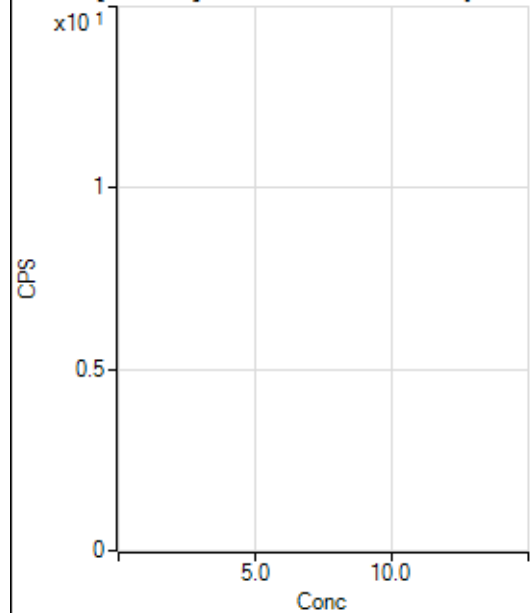
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.55		P	69.3
2	☐			13.33		P	25.0
3	☐			24.44		P	41.7
4	☐			28.89		P	6.7
5	☐			54.44		P	28.3
6	☐			76.67		P	11.5
7	☐			168.89		P	4.1
8	☐			47.78		P	22.4

160 Gd [No Gas] Noavailable calibration poin_

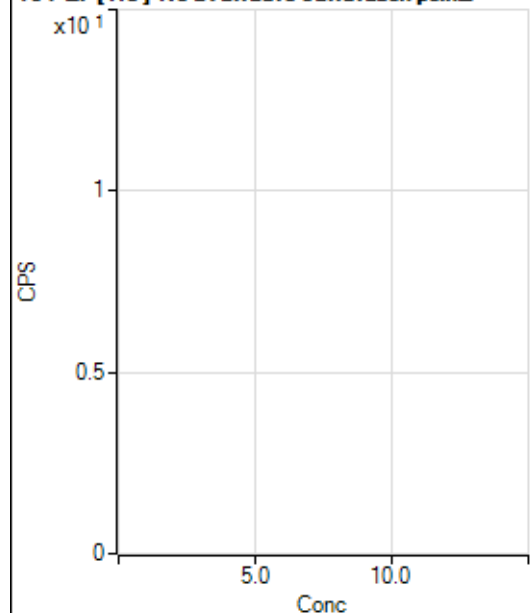
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			44.44		P	60.3
2	☐			44.45		P	39.0
3	☐			52.78		P	50.8
4	☐			38.89		P	12.4
5	☐			63.89		P	19.9
6	☐			55.56		P	52.7
7	☐			50.00		P	33.3
8	☐			72.23		P	17.6

160 Gd [He] No available calibration points

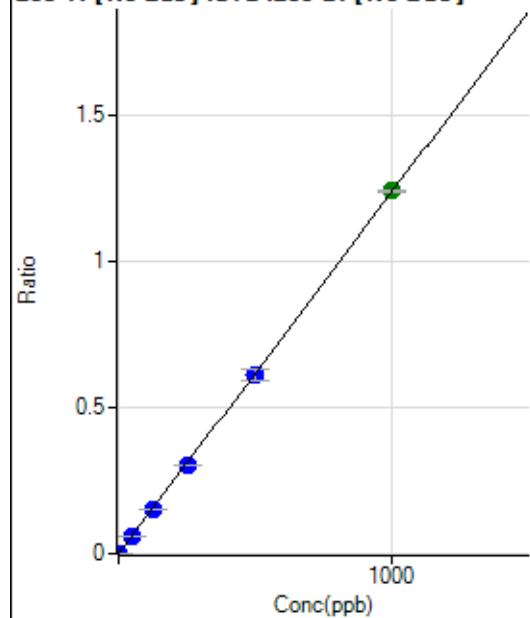
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			195.56		P	13.0
2	☐			176.67		P	3.8
3	☐			172.23		P	7.3
4	☐			155.56		P	4.5
5	☐			214.45		P	10.3
6	☐			155.56		P	12.2
7	☐			142.23		P	9.8
8	☐			180.00		P	4.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			41.67		P	20.0
2	☐			25.00		P	33.3
3	☐			30.56		P	103.
4	☐			30.56		P	31.5
5	☐			69.45		P	36.7
6	☐			52.78		P	24.1
7	☐			44.44		P	21.7
8	☐			58.34		P	14.3

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			33.33		P	40.0
2	☐			45.56		P	33.0
3	☐			28.89		P	26.6
4	☐			45.56		P	63.1
5	☐			26.67		P	0.0
6	☐			37.78		P	10.2
7	☐			35.56		P	43.3
8	☐			44.45		P	37.7

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	419.47	0.0001	P	2.7
2	☐	1.000	0.959	6879.86	0.0013	P	1.5
3	☐	50.000	48.835	337921.71	0.0603	P	1.4
4	☐	125.000	121.913	841046.72	0.1504	P	0.5
5	☐	250.000	244.822	1694843.85	0.3019	P	0.7
6	☐	500.000	493.609	3416299.95	0.6087	P	6.5
7	☐	1000.000	1004.934	6688411.09	1.2391	A	0.9
8	☐			1975.24	0.0004	P	16.0

$$y = 0.0012 * x + 7.6095E-005$$

$$R = 1.0000$$

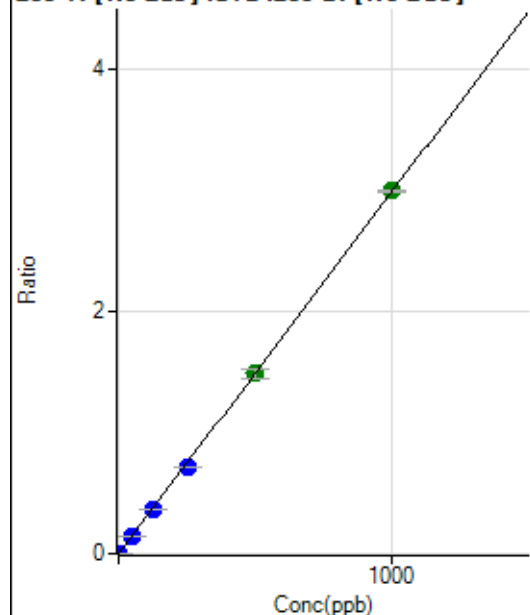
$$DL = 0.00508$$

$$BEC = 0.06172$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	608.37	0.0001	P	6.0
2	☐	1.000	0.940	15937.90	0.0029	P	0.6
3	☐	50.000	48.236	807479.25	0.1440	P	1.0
4	☐	125.000	121.210	2023480.88	0.3618	P	0.3
5	☐	250.000	240.384	4027294.88	0.7174	P	0.2
6	☐	500.000	497.689	8337196.54	1.4852	A	6.2
7	☐	1000.000	1004.122	16174514.95	2.9964	A	0.7
8	☐			4506.52	0.0009	P	10.4

$$y = 0.0030 * x + 1.1037E-004$$

$$R = 0.9999$$

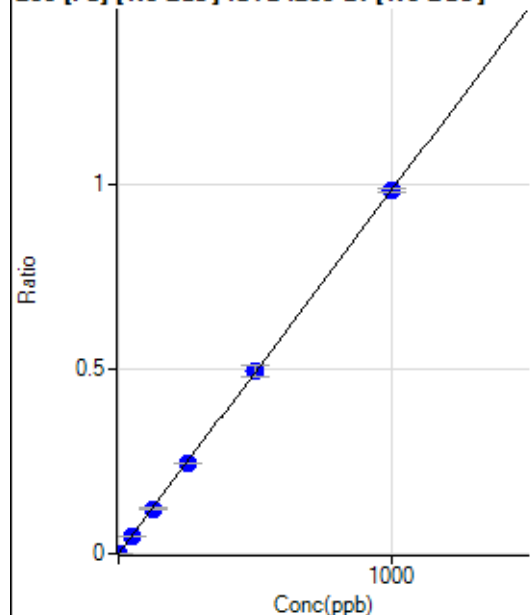
$$DL = 0.006651$$

$$BEC = 0.03699$$

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	751.90	0.0001	P	12.1
2	☐	1.000	0.942	5816.24	0.0011	P	4.6
3	☐	50.000	49.822	275717.92	0.0492	P	0.8
4	☐	125.000	124.226	684781.73	0.1224	P	0.7
5	☐	250.000	249.662	1380561.05	0.2459	P	0.7
6	☐	500.000	502.738	2779494.22	0.4951	P	5.9
7	☐	1000.000	998.821	5308941.04	0.9835	P	0.9
8	☐			5156.70	0.0011	P	4.5

$$y = 9.8452E-004 * x + 1.3641E-004$$

$$R = 1.0000$$

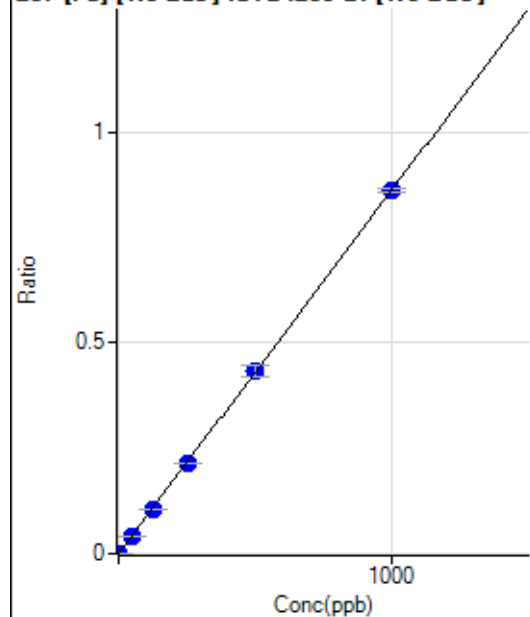
$$DL = 0.05011$$

$$BEC = 0.1386$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	638.92	0.0001	P	7.7
2	☐	1.000	0.992	5301.22	0.0010	P	2.6
3	☐	50.000	49.782	240689.56	0.0429	P	0.4
4	☐	125.000	123.221	593392.91	0.1061	P	0.6
5	☐	250.000	248.020	1198202.82	0.2134	P	0.6
6	☐	500.000	502.893	2428541.17	0.4327	P	6.5
7	☐	1000.000	999.282	4640243.62	0.8596	P	0.9
8	☐			4302.68	0.0009	P	2.6

$$y = 8.6014\text{E-}004 * x + 1.1591\text{E-}004$$

$$R = 1.0000$$

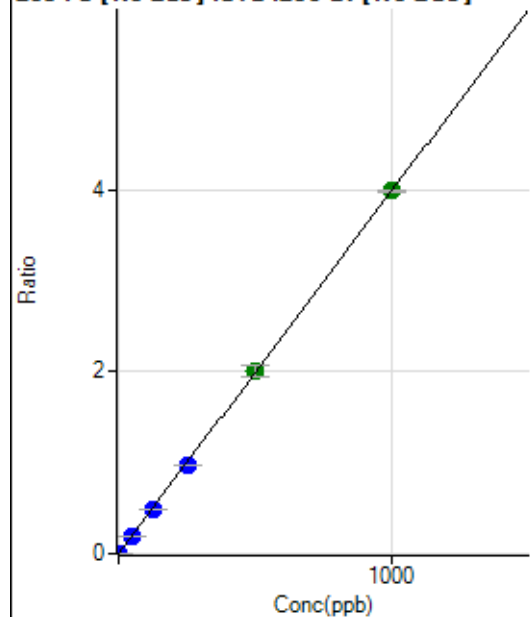
$$DL = 0.03117$$

$$BEC = 0.1348$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2590.91	0.0005	P	6.2
2	☐	1.000	0.957	23423.52	0.0043	P	2.0
3	☐	50.000	49.186	1101821.21	0.1966	P	0.4
4	☐	125.000	122.149	2726093.97	0.4874	P	0.5
5	☐	250.000	245.044	5486493.48	0.9774	P	0.5
6	☐	500.000	502.084	11237977.19	2.0021	A	6.3
7	☐	1000.000	1000.594	21534832.95	3.9894	A	0.8
8	☐			19317.00	0.0040	P	4.5

$$y = 0.0040 * x + 4.7003\text{E-}004$$

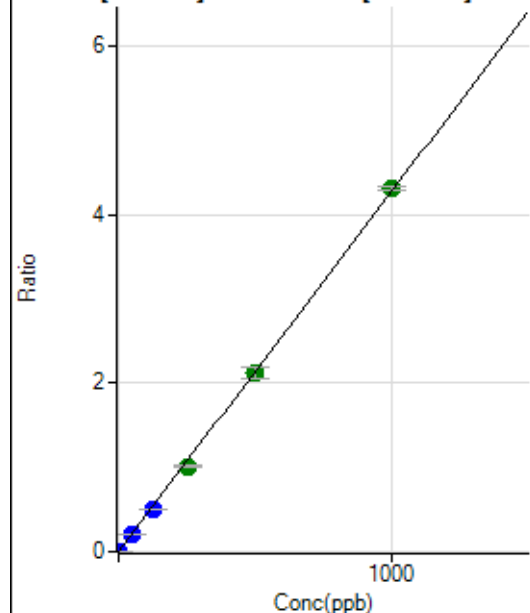
$$R = 1.0000$$

$$DL = 0.02179$$

$$BEC = 0.1179$$

Weight: <None>

Min Conc: 0

232 Th [No Gas] ISTD :209 Bi [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1722.39	0.0003	P	5.0
2	☐	1.000	0.782	19973.13	0.0037	P	1.1
3	☐	50.000	45.815	1098925.14	0.1960	P	0.8
4	☐	125.000	115.806	2768767.34	0.4951	P	0.4
5	☐	250.000	237.207	5690518.76	1.0137	A	0.4
6	☐	500.000	494.333	11855280.13	2.1122	A	6.5
7	☐	1000.000	1007.391	23232660.94	4.3041	A	1.2
8	☐			8931.12	0.0019	P	11.3

$$y = 0.0043 * x + 3.1247E-004$$

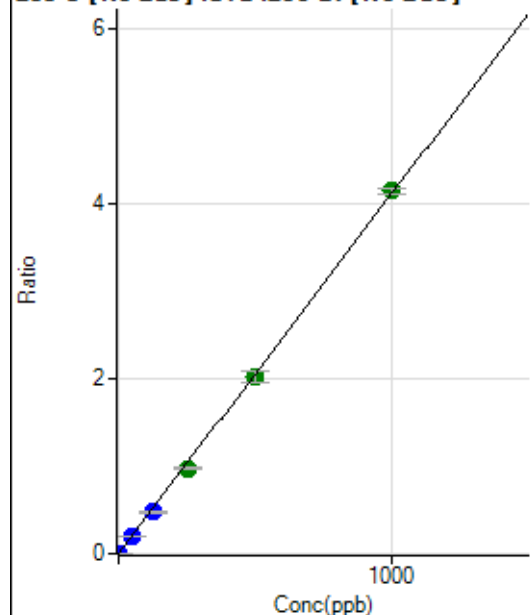
$$R = 0.9999$$

$$DL = 0.01104$$

$$BEC = 0.07314$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1883.56	0.0003	P	3.4
2	☐	1.000	0.876	21574.37	0.0039	P	3.3
3	☐	50.000	45.816	1058299.88	0.1888	P	1.2
4	☐	125.000	114.992	2647205.18	0.4733	P	0.7
5	☐	250.000	237.395	5483515.22	0.9768	A	0.4
6	☐	500.000	492.208	11367560.67	2.0250	A	6.2
7	☐	1000.000	1008.507	22393563.52	4.1487	A	1.3
8	☐			5259.65	0.0011	P	7.7

$$y = 0.0041 * x + 3.4167E-004$$

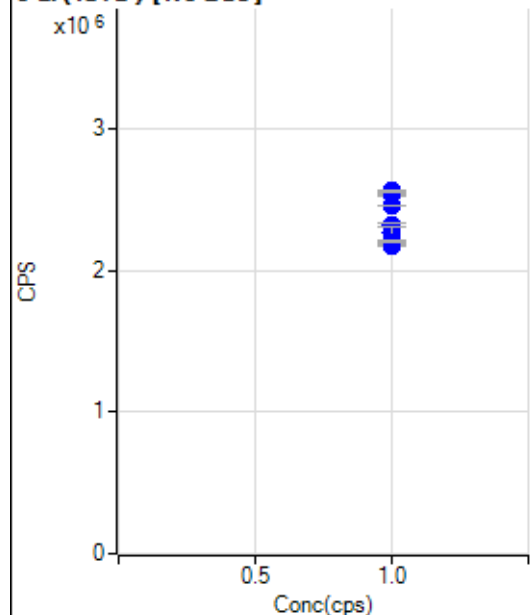
$$R = 0.9998$$

$$DL = 0.008424$$

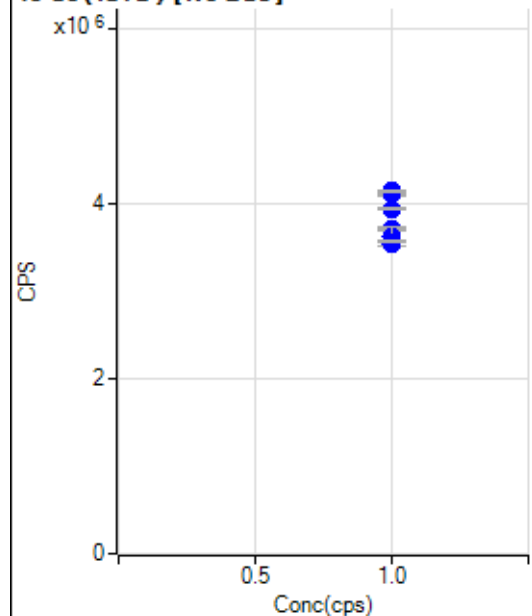
$$BEC = 0.08306$$

Weight: <None>

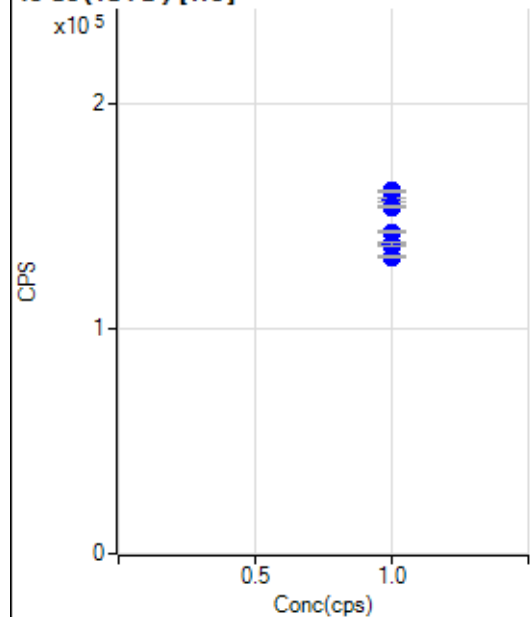
Min Conc: 0

6 Li (ISTD) [No Gas]

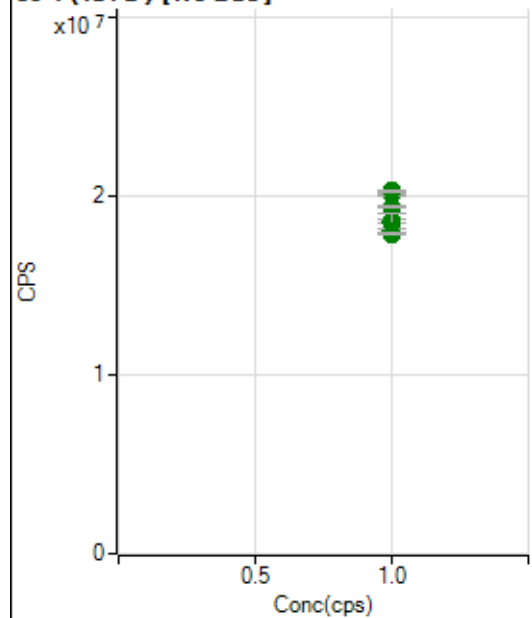
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2535586.68		P	0.5
2	☐	1.000		2546401.95		P	0.4
3	☐	1.000		2559363.40		P	0.3
4	☐	1.000		2451828.53		P	0.2
5	☐	1.000		2324358.50		P	1.0
6	☐	1.000		2261623.55		P	4.4
7	☐	1.000		2175153.87		P	0.9
8	☐	1.000		2202044.80		P	0.3

45 Sc (ISTD) [No Gas]

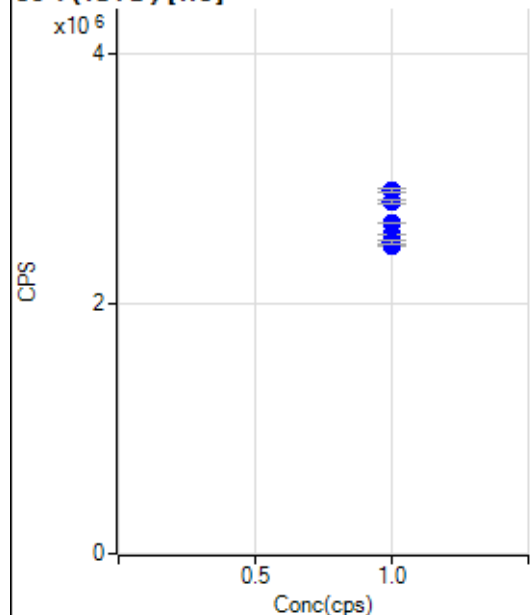
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4115857.34		P	1.6
2	☐	1.000		4128772.88		P	0.5
3	☐	1.000		4152398.79		P	0.2
4	☐	1.000		3947870.92		P	0.3
5	☐	1.000		3712713.06		P	0.5
6	☐	1.000		3629129.68		P	6.0
7	☐	1.000		3543796.26		P	0.9
8	☐	1.000		3570428.81		P	0.5

45 Sc (ISTD) [He]

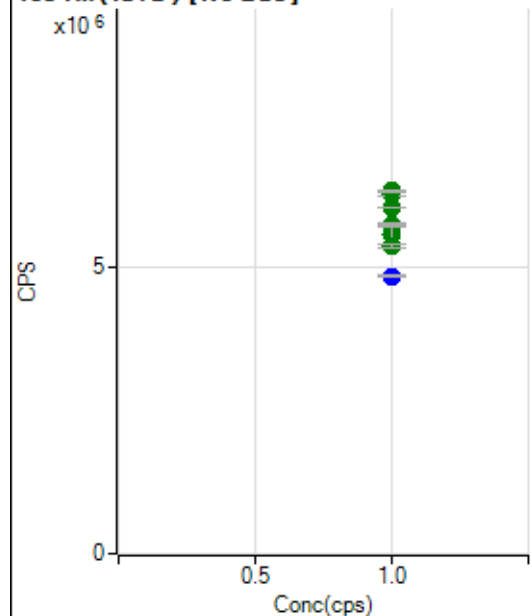
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		157200.34		P	0.8
2	☐	1.000		161338.18		P	0.2
3	☐	1.000		154293.00		P	0.4
4	☐	1.000		142943.80		P	0.5
5	☐	1.000		136432.45		P	0.0
6	☐	1.000		137206.70		P	0.6
7	☐	1.000		131788.60		P	0.6
8	☐	1.000		137287.80		P	1.3

89 Y (ISTD) [No Gas]

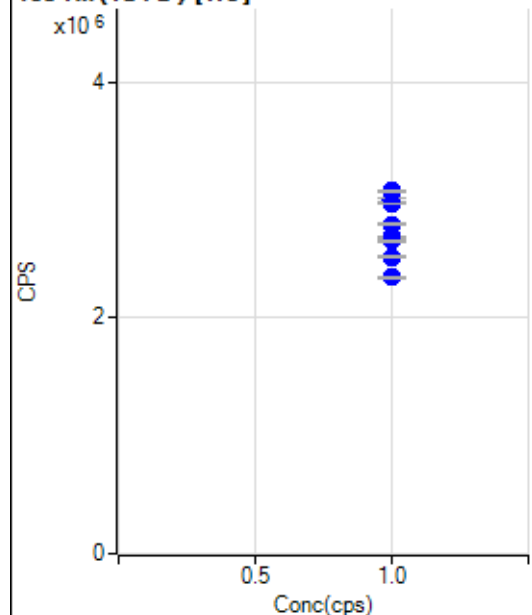
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		20188709.29		A	0.9
2	☐	1.000		20063852.89		A	0.3
3	☐	1.000		20284195.81		A	0.5
4	☐	1.000		19396713.46		A	0.2
5	☐	1.000		18617268.89		A	0.8
6	☐	1.000		18474446.53		A	5.6
7	☐	1.000		18088637.65		A	1.1
8	☐	1.000		17890014.87		A	0.2

89 Y(ISTD) [He]

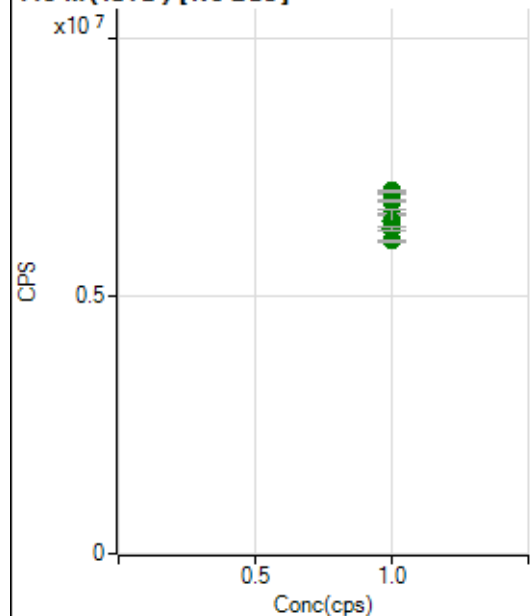
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2814666.10		P	1.1
2	☐	1.000		2897350.24		P	0.9
3	☐	1.000		2808009.44		P	0.8
4	☐	1.000		2638059.21		P	0.1
5	☐	1.000		2548019.79		P	0.1
6	☐	1.000		2549871.99		P	0.3
7	☐	1.000		2456881.65		P	0.4
8	☐	1.000		2484639.96		P	1.3

103 Rh(ISTD) [No Gas]

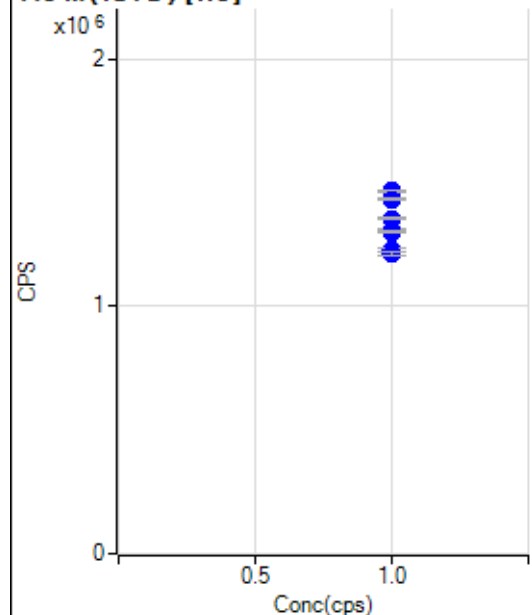
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6285910.51		A	0.8
2	☐	1.000		6336617.59		A	0.5
3	☐	1.000		6331628.13		A	0.1
4	☐	1.000		6035614.07		A	0.2
5	☐	1.000		5749317.36		A	0.8
6	☐	1.000		5569719.40		A	5.4
7	☐	1.000		5383113.01		A	1.1
8	☐	1.000		4850293.16		P	0.6

103 Rh (ISTD) [He]

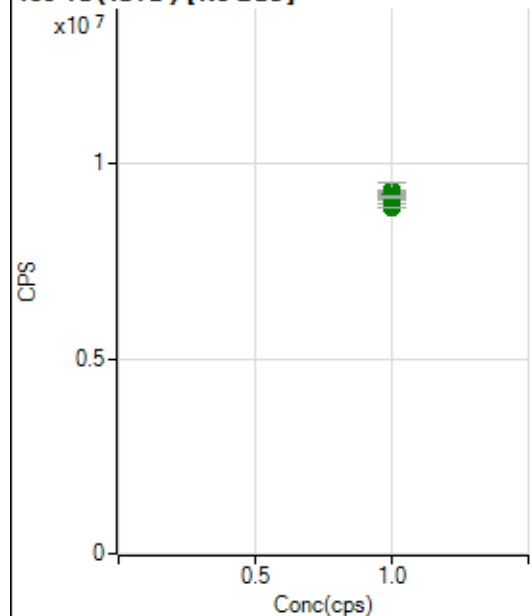
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2999444.43		P	1.1
2	☐	1.000		3076859.74		P	0.7
3	☐	1.000		2968307.91		P	0.4
4	☐	1.000		2794878.19		P	0.4
5	☐	1.000		2683203.05		P	0.3
6	☐	1.000		2650436.75		P	0.4
7	☐	1.000		2513349.53		P	0.7
8	☐	1.000		2343316.25		P	0.9

115 In (ISTD) [No Gas]

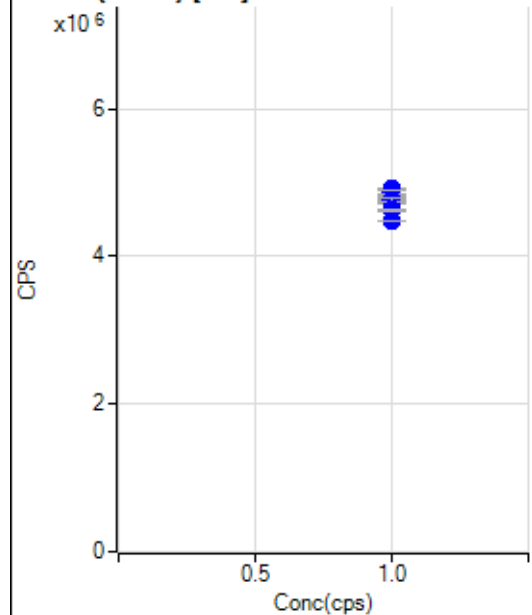
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6985973.03		A	0.9
2	☐	1.000		6986530.88		A	0.4
3	☐	1.000		7029018.24		A	0.4
4	☐	1.000		6826833.77		A	0.5
5	☐	1.000		6581349.85		A	0.4
6	☐	1.000		6459136.39		A	6.1
7	☐	1.000		6296297.25		A	1.0
8	☐	1.000		6058822.66		A	0.5

115 In (ISTD) [He]

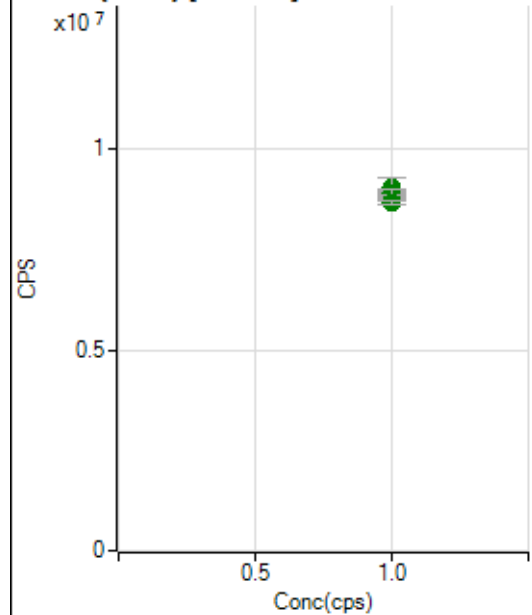
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1435047.62		P	0.9
2	☐	1.000		1468025.65		P	0.5
3	☐	1.000		1435153.37		P	0.3
4	☐	1.000		1354790.37		P	0.5
5	☐	1.000		1308968.64		P	0.4
6	☐	1.000		1300360.57		P	0.6
7	☐	1.000		1228746.46		P	0.8
8	☐	1.000		1214338.40		P	0.9

159 Tb (ISTD) [No Gas]

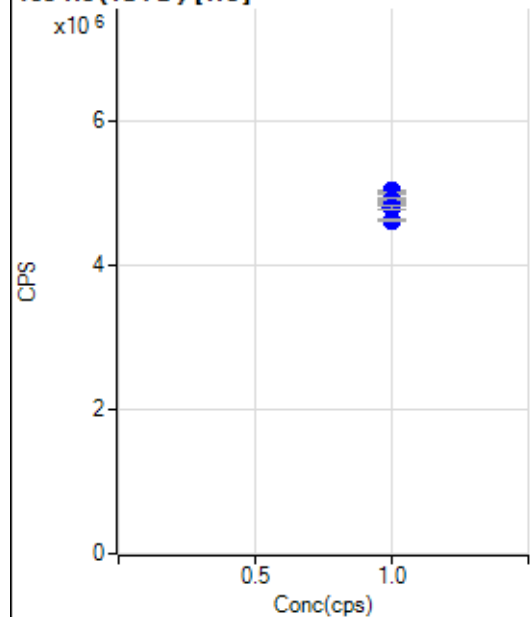
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9165762.01		A	0.6
2	☐	1.000		9105324.31		A	0.8
3	☐	1.000		9299467.85		A	0.5
4	☐	1.000		9211100.90		A	0.5
5	☐	1.000		9152424.86		A	0.8
6	☐	1.000		9241717.36		A	5.9
7	☐	1.000		9152462.44		A	0.6
8	☐	1.000		8863827.99		A	0.4

159 Tb (ISTD) [He]

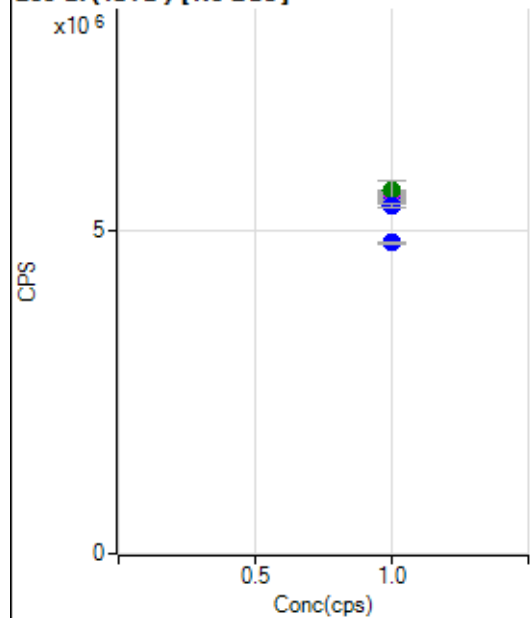
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4802250.69		P	0.7
2	☐	1.000		4915390.17		P	0.8
3	☐	1.000		4872185.24		P	0.6
4	☐	1.000		4762064.44		P	0.4
5	☐	1.000		4716430.38		P	0.5
6	☐	1.000		4770634.72		P	0.9
7	☐	1.000		4627488.33		P	0.4
8	☐	1.000		4481627.61		P	0.5

165 Ho (ISTD) [No Gas]

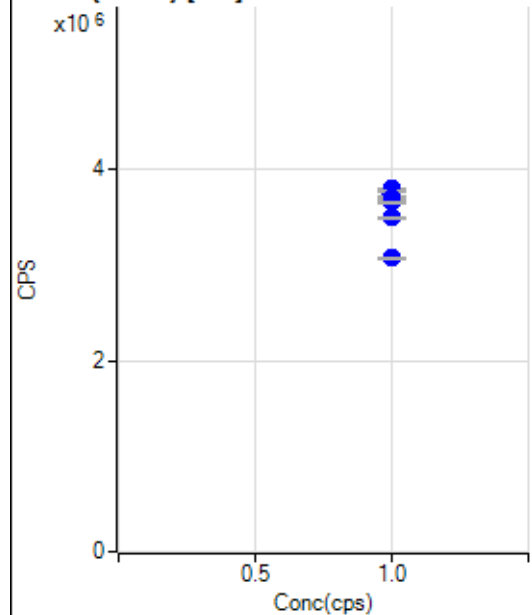
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8850853.58		A	0.7
2	☐	1.000		8806430.92		A	0.5
3	☐	1.000		8949692.73		A	0.6
4	☐	1.000		8980675.46		A	0.7
5	☐	1.000		8975564.09		A	0.1
6	☐	1.000		9037834.75		A	6.2
7	☐	1.000		8928051.15		A	1.7
8	☐	1.000		8676533.96		A	0.7

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4916797.11		P	0.9
2	☐	1.000		5026885.34		P	0.3
3	☐	1.000		4992580.69		P	0.4
4	☐	1.000		4900957.46		P	0.9
5	☐	1.000		4869184.03		P	0.4
6	☐	1.000		4914821.04		P	0.2
7	☐	1.000		4792748.40		P	0.8
8	☐	1.000		4620059.06		P	0.8

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5512240.41		P	0.4
2	☐	1.000		5467682.49		P	0.6
3	☐	1.000		5605799.57		M	0.9
4	☐	1.000		5592839.15		P	1.2
5	☐	1.000		5613615.19		M	0.3
6	☐	1.000		5626699.36		A	5.7
7	☐	1.000		5398302.49		P	1.2
8	☐	1.000		4819557.01		P	0.5

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3735593.87		P	1.0
2	☐	1.000		3796299.49		P	0.6
3	☐	1.000		3773729.67		P	0.5
4	☐	1.000		3694085.19		P	0.6
5	☐	1.000		3679288.28		P	0.4
6	☐	1.000		3652258.42		P	0.6
7	☐	1.000		3498506.86		P	0.5
8	☐	1.000		3075543.18		P	0.8

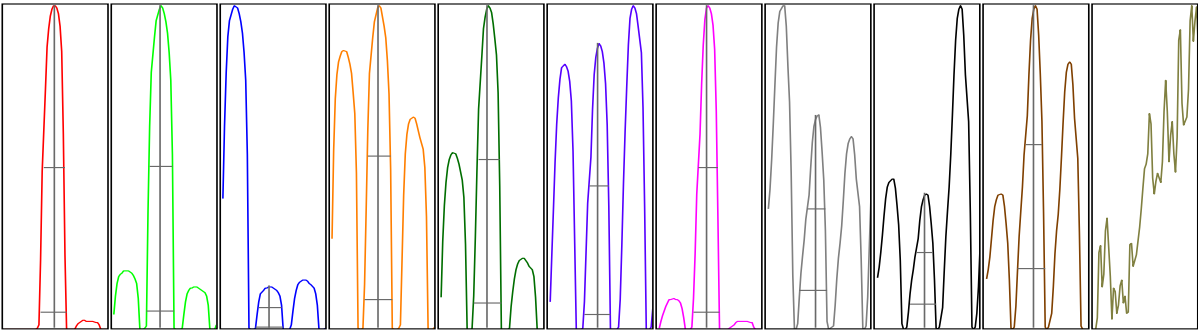
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7080819MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	7192	0.37	5.00	
24	214036	0.44	5.00	
25	28544	0.36	5.00	
26	32171	0.28	5.00	
59	54901	0.35	5.00	
113	8378	0.26	5.00	
115	98474	0.54	5.00	
206	24722	0.34	5.00	
207	23926	0.79	5.00	
208	52870	0.39	5.00	
220	93	6.87		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7186	7159	7179	7226	7209
24	213008	213059	214939	214781	214393
25	28452	28419	28657	28582	28613
26	32046	32122	32274	32177	32236
59	55046	54863	55143	54703	54748
113	8366	8404	8398	8358	8363
115	97956	98936	99149	98177	98153
206	24602	24785	24790	24664	24770
207	23744	23917	24158	23740	24070
208	52695	52744	53198	52955	52758
220	86	88	96	102	93

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	12098	9.00	8.9 - 9.1		0.780	0.900	
24	332239	23.90	23.9 - 24.1		0.789	0.900	
25	43810	24.90	24.9 - 25.1		0.789	0.900	
26	50740	25.90	25.9 - 26.1		0.808	0.900	
59	90022	58.90	58.9 - 59.1		0.801	0.900	
113	15145	112.95	112.9 - 113.1		0.769	0.900	
115	181932	114.95	114.9 - 115.1		0.766	0.900	
206	45129	205.95	205.9 - 206.1		0.770	0.900	
207	40685	206.95	206.9 - 207.1		0.752	0.900	
208	97383	207.95	207.9 - 208.1		0.771	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	7.1	V	Deflect	14.4	V
Extract 2	-85.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-45	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	160	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	12501	0.34	
89	27447	0.30	
205	24521	0.28	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	12518	12436	12481	12526	12544
89	27442	27561	27430	27472	27331
205	24553	24454	24475	24496	24627

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	8.0	V	Deflect	2.0	V
Extract 2	-105.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-55	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			