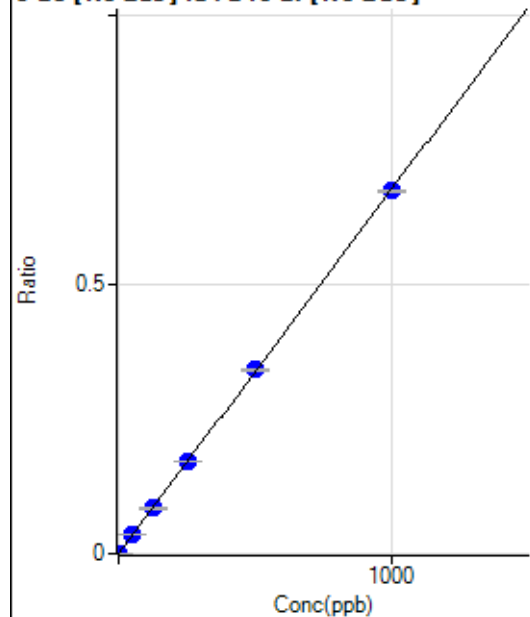


Calibration for 003CALB.d

Batch Folder: D:\ICP-MS Data\P7083019\ICPMS.b\
 Analysis File: P7083019ICPMS.batch.bin
 DA Date-Time: 2019-08-31 00:33:40
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-08-30 18:45:11
2	004CALS.d	S02	2019-08-30 18:48:47
3	005CALS.d	S03	2019-08-30 18:53:38
4	006CALS.d	S04	2019-08-30 18:57:42
5	007CALS.d	S05	2019-08-30 19:01:33
6	008CALS.d	S06	2019-08-30 19:05:20
7	009CALS.d	S07	2019-08-30 19:09:06
8	010CALS.d	S08	2019-08-30 19:12:54

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	83.33	0.0000	P	27.5
2	☐	1.000	1.084	2210.19	0.0008	P	6.4
3	☐	50.000	52.375	102578.04	0.0355	P	0.4
4	☐	125.000	124.276	245612.29	0.0842	P	1.8
5	☐	250.000	253.428	471992.32	0.1716	P	0.4
6	☐	500.000	506.184	909556.70	0.3428	P	1.1
7	☐	1000.000	996.023	1739611.07	0.6745	P	0.5
8	☐			397.79	0.0002	P	17.7

$$y = 6.7718\text{E-}004 * x + 2.8986\text{E-}005$$

$$R = 1.0000$$

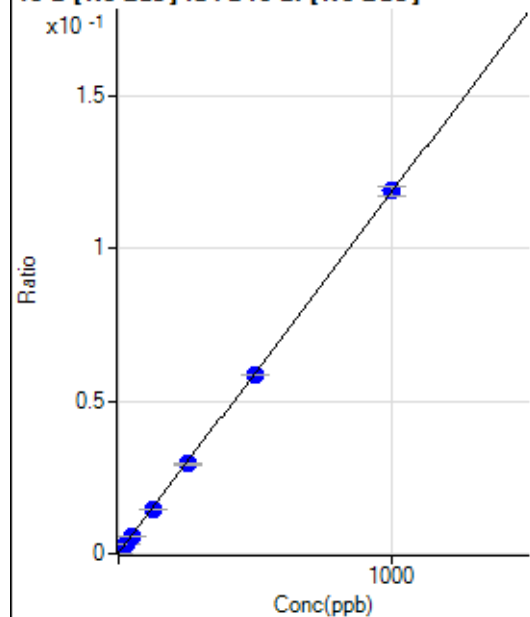
$$DL = 0.03534$$

$$BEC = 0.0428$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	497.25	0.0002	P	16.3
2	☐	25.000	23.814	8663.94	0.0030	P	2.7
3	☐	50.000	48.818	17193.77	0.0059	P	0.8
4	☐	125.000	120.777	42190.76	0.0145	P	3.6
5	☐	250.000	247.424	80984.30	0.0295	P	1.4
6	☐	500.000	493.689	155464.01	0.0586	P	0.1
7	☐	1000.000	1004.416	306947.58	0.1190	P	2.4
8	☐			13478.82	0.0057	P	6.9

$$y = 1.1833\text{E-}004 * x + 1.7316\text{E-}004$$

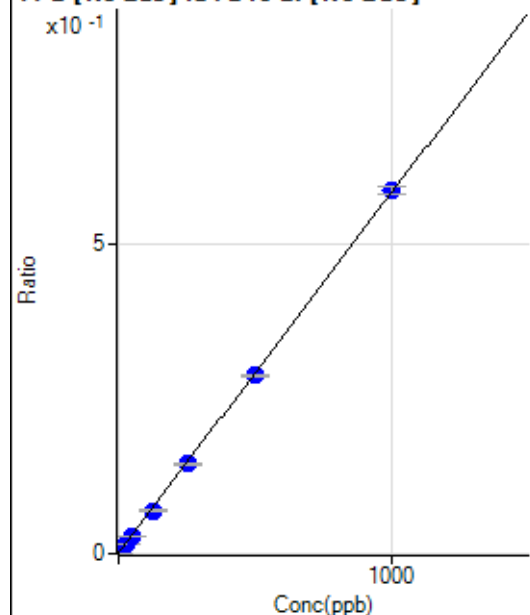
$$R = 1.0000$$

$$DL = 0.7159$$

$$BEC = 1.463$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2205.81	0.0008	P	10.9
2	☐	25.000	23.497	41836.94	0.0144	P	1.1
3	☐	50.000	48.912	84489.63	0.0292	P	1.5
4	☐	125.000	117.898	202399.98	0.0694	P	3.4
5	☐	250.000	246.738	397021.98	0.1444	P	2.0
6	☐	500.000	493.488	764187.88	0.2880	P	0.6
7	☐	1000.000	1005.051	1510611.32	0.5858	P	2.0
8	☐			65962.06	0.0277	P	5.2

$$y = 5.8205\text{E-}004 * x + 7.6815\text{E-}004$$

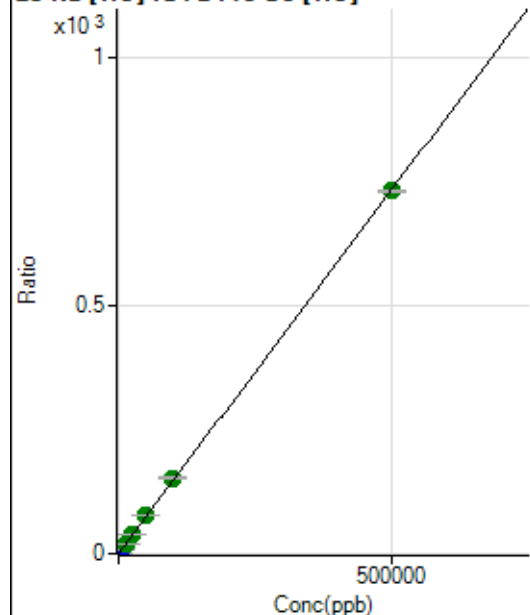
$$R = 0.9999$$

$$DL = 0.4301$$

$$BEC = 1.32$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13695.67	0.0366	P	2.2
2	☐	500.000	508.053	296473.17	0.7821	P	1.3
3	☐	5000.000	5315.139	3001841.99	7.8363	P	0.4
4	☐	12500.000	13347.049	7478805.81	19.6228	A	2.7
5	☐	25000.000	26608.566	14611229.49	39.0834	A	1.5
6	☐	50000.000	52633.605	28867052.73	77.2740	A	0.7
7	☐	100000.00	103939.46	58774303.40	152.5630	A	1.0
8	☐	500000.00	498843.98	297867026.1	732.0675	A	0.5

$$y = 0.0015 * x + 0.0366$$

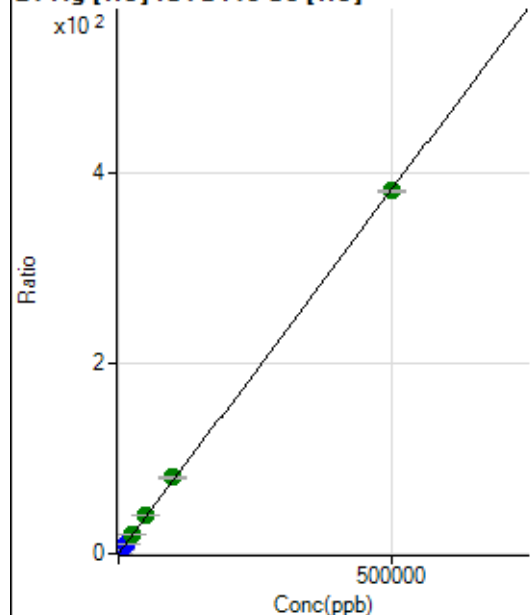
$$R = 1.0000$$

$$DL = 1.656$$

$$BEC = 24.92$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	366.69	0.0010	P	23.3
2	☐	500.000	529.477	154180.70	0.4067	P	1.7
3	☐	5000.000	5440.804	1597571.59	4.1704	P	0.0
4	☐	12500.000	13667.827	3992171.53	10.4751	P	2.9
5	☐	25000.000	27005.177	7737257.12	20.6959	A	1.3
6	☐	50000.000	53425.075	15294659.89	40.9423	A	0.8
7	☐	100000.00	104682.47	30904969.79	80.2224	A	1.3
8	☐	500000.00	498587.10	155465827.0	382.0837	A	0.3

$$y = 7.6633\text{E-}004 * x + 9.7810\text{E-}004$$

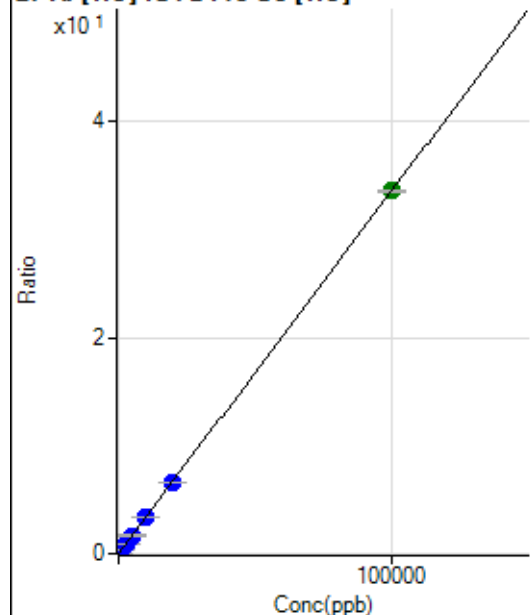
$$R = 0.9999$$

$$DL = 0.894$$

$$BEC = 1.276$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	36.11	0.0001	P	36.1
2	☐	20.000	18.854	2436.41	0.0064	P	4.4
3	☐	1000.000	1025.356	131901.82	0.3443	P	1.1
4	☐	2500.000	2563.446	328044.96	0.8607	P	2.6
5	☐	5000.000	5033.628	631848.26	1.6900	P	0.8
6	☐	10000.000	9995.290	1253639.14	3.3558	P	0.2
7	☐	20000.000	19757.154	2555387.62	6.6331	P	1.0
8	☐	100000.00	100045.51	13666976.17	33.5878	A	0.5

$$y = 3.3572\text{E-}004 * x + 9.6609\text{E-}005$$

$$R = 1.0000$$

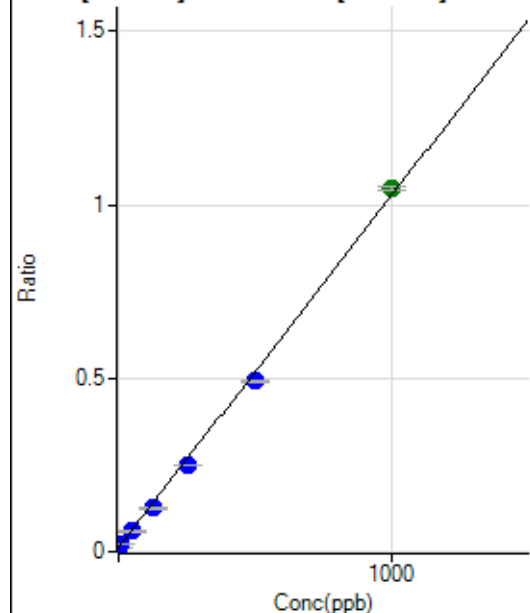
$$DL = 0.3119$$

$$BEC = 0.2878$$

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	89380.58	0.0123	P	0.6
2	☐	10.000	8.213	154162.20	0.0206	P	0.5
3	☐	50.000	45.438	440244.37	0.0584	P	0.8
4	☐	125.000	111.451	978713.88	0.1254	P	1.8
5	☐	250.000	235.243	1849491.47	0.2510	P	0.7
6	☐	500.000	473.374	3580061.93	0.4926	P	0.8
7	☐	1000.000	1018.942	7668712.93	1.0461	A	0.9
8	☐			294559.01	0.0395	P	0.7

$$y = 0.0010 * x + 0.0123$$

$$R = 0.9994$$

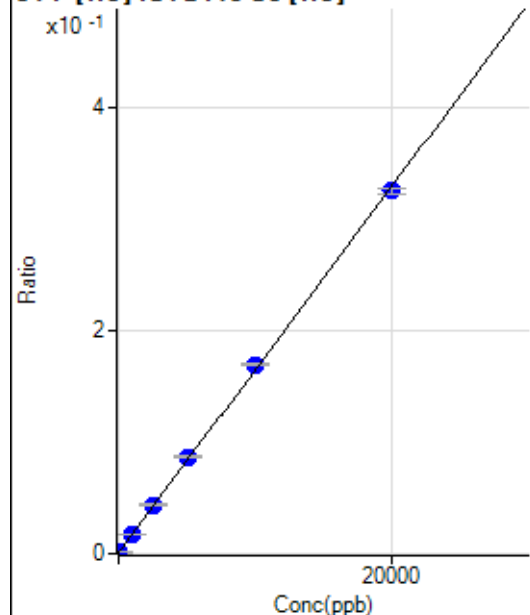
$$DL = 0.2233$$

$$BEC = 12.12$$

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	-34.692	66.67	0.0002	P	38.3
2	☐	0.000	34.692	500.03	0.0013	P	10.5
3	☐	1000.000	1035.024	6807.36	0.0178	P	1.1
4	☐	2500.000	2601.604	16587.63	0.0435	P	3.9
5	☐	5000.000	5245.370	32530.84	0.0870	P	1.6
6	☐	10000.000	10297.608	63547.33	0.1701	P	1.2
7	☐	20000.000	19775.402	125581.83	0.3260	P	1.4
8	☐			191.67	0.0005	P	23.0

$$y = 1.6445E-005 * x + 7.4889E-004$$

$$R = 0.9997$$

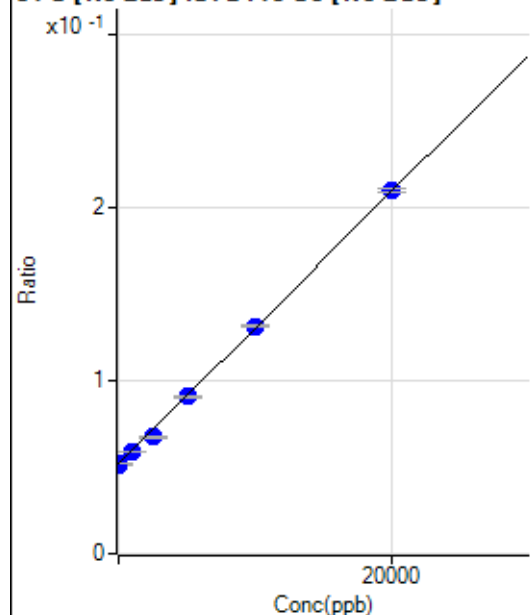
$$DL = 18.92$$

$$BEC = 45.54$$

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	-88.138	372356.93	0.0512	P	1.7
2	☐	0.000	88.138	393273.46	0.0526	P	0.6
3	☐	1000.000	876.829	443653.99	0.0589	P	0.9
4	☐	2500.000	1996.022	528329.26	0.0677	P	1.9
5	☐	5000.000	4945.392	670127.18	0.0909	P	1.5
6	☐	10000.000	10110.284	957039.95	0.1317	P	0.9
7	☐	20000.000	20027.666	1538652.41	0.2099	P	1.1
8	☐			397775.61	0.0533	P	0.9

$$y = 7.8874\text{E-}006 * x + 0.0519$$

$$R = 0.9996$$

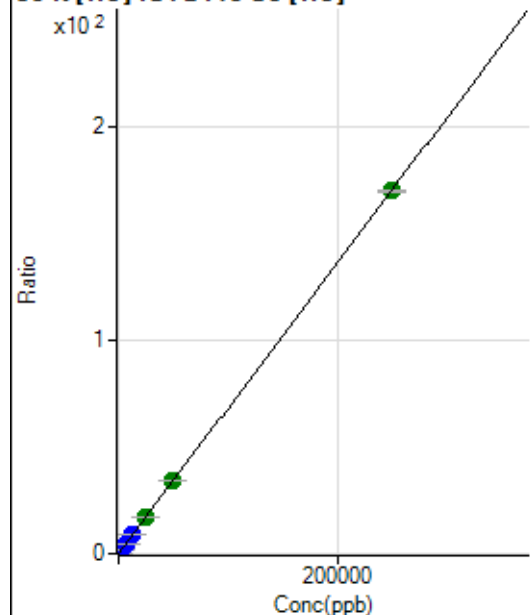
$$DL = 225.8$$

$$BEC = 6585$$

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	15803.44	0.0422	P	3.4
2	☐	500.000	492.122	142834.21	0.3768	P	1.6
3	☐	2500.000	2530.658	675316.15	1.7629	P	0.6
4	☐	6250.000	6352.554	1662293.55	4.3615	P	2.7
5	☐	12500.000	12635.863	3227928.50	8.6338	P	0.8
6	☐	25000.000	25219.289	6421660.69	17.1898	A	0.3
7	☐	50000.000	50023.016	13119780.50	34.0548	A	0.5
8	☐	250000.00	249963.82	69171542.52	170.0021	A	0.2

$$y = 6.7994\text{E-}004 * x + 0.0422$$

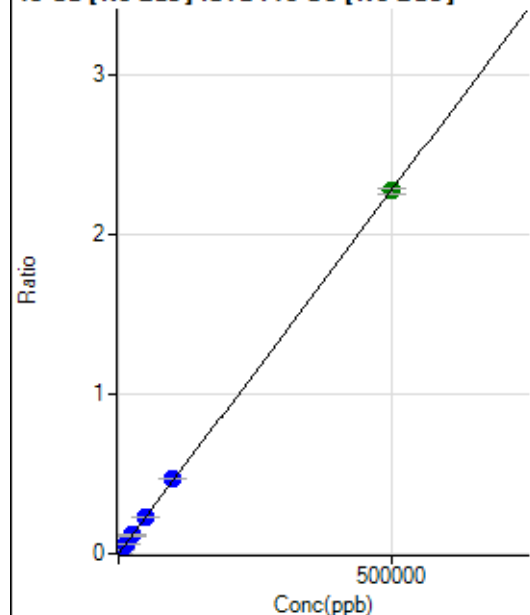
$$R = 1.0000$$

$$DL = 6.278$$

$$BEC = 62.07$$

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	119.45	0.0000	P	33.7
2	☐	500.000	522.341	17883.74	0.0024	P	0.6
3	☐	5000.000	5211.527	178899.10	0.0237	P	0.9
4	☐	12500.000	12315.579	437620.52	0.0561	P	1.7
5	☐	25000.000	25244.642	846646.85	0.1149	P	1.2
6	☐	50000.000	50791.100	1679995.42	0.2312	P	0.7
7	☐	100000.00	102757.16	3428020.00	0.4676	P	0.6
8	☐	500000.00	499359.69	16948867.05	2.2725	A	1.3

$$y = 4.5507\text{E-}006 * x + 1.6413\text{E-}005$$

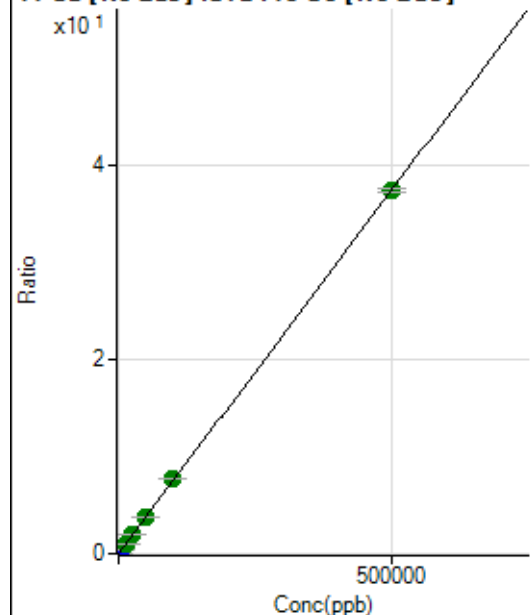
$$R = 1.0000$$

$$DL = 3.648$$

$$BEC = 3.607$$

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	20715.50	0.0028	P	4.4
2	☐	500.000	498.166	299609.82	0.0401	P	1.1
3	☐	5000.000	5213.896	2960356.27	0.3927	P	0.2
4	☐	12500.000	12312.662	7209310.32	0.9235	A	1.1
5	☐	25000.000	25395.004	14013266.29	1.9017	A	0.9
6	☐	50000.000	51078.787	27779227.70	3.8221	A	0.5
7	☐	100000.00	103079.96	56521905.43	7.7103	A	0.3
8	☐	500000.00	499258.92	278450236.7	37.3332	A	0.9

$$y = 7.4772\text{E-}005 * x + 0.0028$$

$$R = 1.0000$$

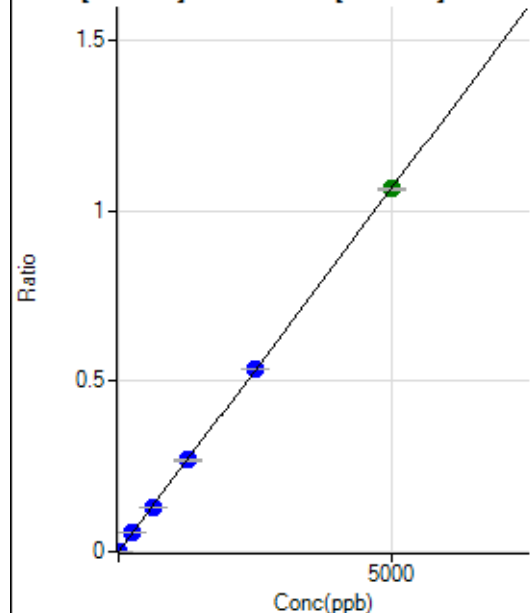
$$DL = 4.988$$

$$BEC = 38.12$$

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	116.67	0.0000	P	18.5
2	☐	5.000	5.190	8377.71	0.0011	P	1.3
3	☐	250.000	252.768	405889.42	0.0538	P	0.9
4	☐	625.000	603.979	1004227.94	0.1286	P	1.0
5	☐	1250.000	1257.436	1973316.64	0.2678	P	1.1
6	☐	2500.000	2513.446	3890395.71	0.5353	P	0.4
7	☐	5000.000	4993.907	7796161.54	1.0635	A	0.3
8	☐			2028.01	0.0003	P	10.2

$$y = 2.1296E-004 * x + 1.6048E-005$$

$$R = 1.0000$$

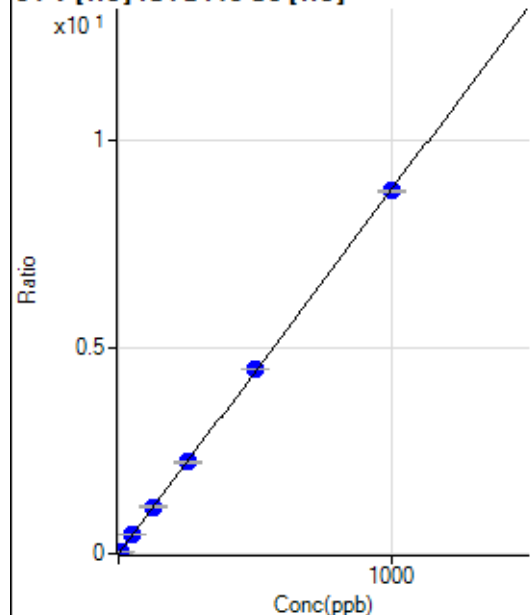
$$DL = 0.04191$$

$$BEC = 0.07536$$

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	8.89	0.0000	P	94.8
2	☐	5.000	5.036	16847.63	0.0444	P	4.8
3	☐	50.000	50.909	171995.94	0.4490	P	0.8
4	☐	125.000	127.582	428825.15	1.1252	P	2.9
5	☐	250.000	252.454	832368.04	2.2264	P	1.3
6	☐	500.000	505.014	1663830.32	4.4538	P	0.2
7	☐	1000.000	996.511	3385716.58	8.7884	P	0.8
8	☐			738.92	0.0018	P	7.4

$$y = 0.0088 * x + 2.3845E-005$$

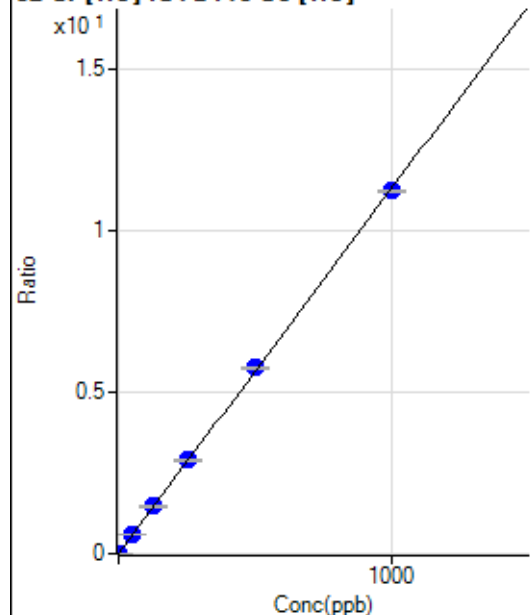
$$R = 1.0000$$

$$DL = 0.007688$$

$$BEC = 0.002704$$

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	732.25	0.0020	P	4.4
2	☐	2.000	1.948	9098.49	0.0240	P	6.4
3	☐	50.000	51.990	226071.81	0.5902	P	0.6
4	☐	125.000	129.909	560859.90	1.4717	P	3.2
5	☐	250.000	255.662	1082125.50	2.8945	P	1.1
6	☐	500.000	508.538	2150105.23	5.7555	P	0.2
7	☐	1000.000	993.602	4331507.81	11.2434	P	0.8
8	☐			118769.10	0.2919	P	0.8

$$y = 0.0113 * x + 0.0020$$

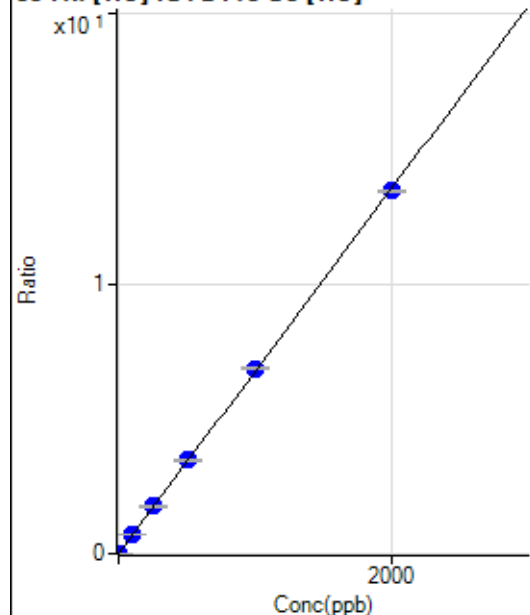
$$R = 0.9999$$

$$DL = 0.02285$$

$$BEC = 0.1729$$

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	50.00	0.0001	P	12.7
2	☐	1.000	0.989	2588.05	0.0068	P	5.6
3	☐	100.000	103.382	267925.63	0.6994	P	0.6
4	☐	250.000	258.542	666499.53	1.7489	P	3.2
5	☐	500.000	511.777	1294290.98	3.4618	P	0.7
6	☐	1000.000	1016.059	2567491.33	6.8728	P	0.5
7	☐	2000.000	1987.790	5180099.82	13.4457	P	0.5
8	☐			17398.21	0.0428	P	0.2

$$y = 0.0068 * x + 1.3343E-004$$

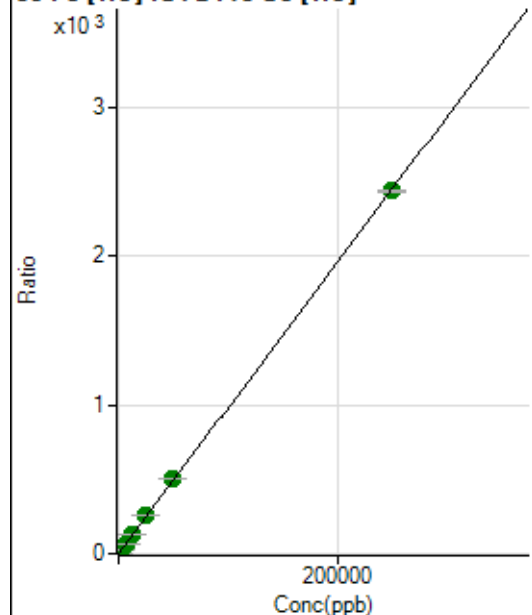
$$R = 0.9999$$

$$DL = 0.007502$$

$$BEC = 0.01973$$

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	2596.61	0.0069	P	5.3
2	☐	50.000	53.524	200745.54	0.5295	P	4.5
3	☐	2500.000	2707.294	10127921.18	26.4389	A	0.2
4	☐	6250.000	6770.248	25191848.95	66.1066	A	3.3
5	☐	12500.000	13353.793	48744612.67	130.3834	A	1.3
6	☐	25000.000	26459.155	96503616.04	258.3343	A	1.1
7	☐	50000.000	51823.166	194930128.4	505.9695	A	0.3
8	☐	250000.00	249431.68	990862466.5	2,435.271	A	0.6

$$y = 0.0098 * x + 0.0069$$

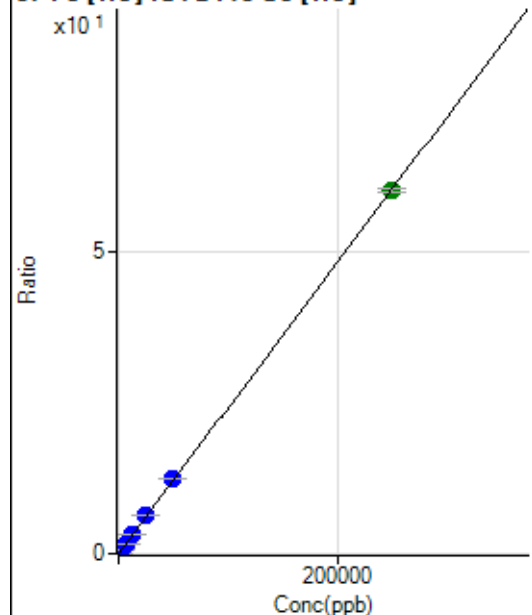
$$R = 1.0000$$

$$DL = 0.1119$$

$$BEC = 0.7101$$

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	83.33	0.0002	P	28.7
2	☐	50.000	57.068	5288.14	0.0139	P	6.4
3	☐	2500.000	2707.766	249551.27	0.6514	P	0.4
4	☐	6250.000	6737.140	617585.94	1.6205	P	3.0
5	☐	12500.000	13306.379	1196566.38	3.2004	P	0.7
6	☐	25000.000	26359.958	2368325.55	6.3399	P	1.2
7	☐	50000.000	51676.475	4788121.06	12.4286	P	0.7
8	☐	250000.00	249474.13	24412206.33	59.9995	A	1.0

$$y = 2.4050E-004 * x + 2.2239E-004$$

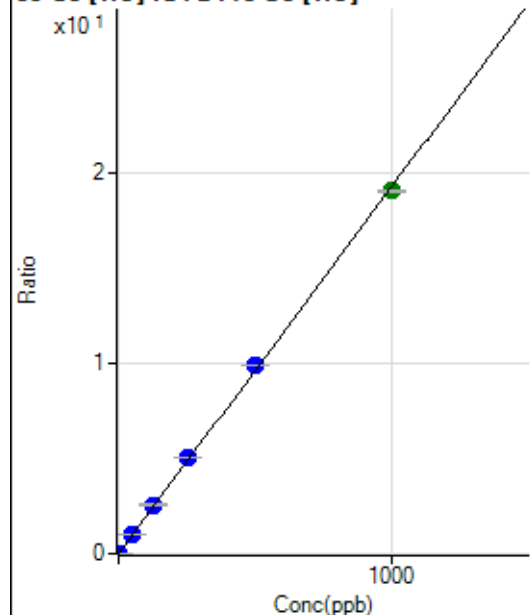
$$R = 1.0000$$

$$DL = 0.796$$

$$BEC = 0.9247$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	276.67	0.0007	P	6.9
2	☐	1.000	1.009	7630.98	0.0201	P	4.5
3	☐	50.000	53.088	391246.46	1.0213	P	0.1
4	☐	125.000	132.164	968543.31	2.5415	P	3.2
5	☐	250.000	261.108	1876958.75	5.0204	P	1.1
6	☐	500.000	513.107	3685343.80	9.8650	P	0.4
7	☐	1000.000	989.620	7329725.86	19.0258	A	0.6
8	☐			90371.69	0.2221	P	1.5

$$y = 0.0192 * x + 7.3885E-004$$

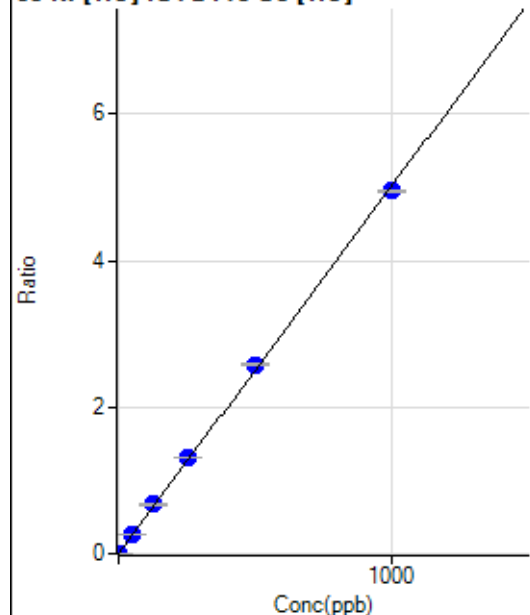
$$R = 0.9998$$

$$DL = 0.00796$$

$$BEC = 0.03843$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	331.12	0.0009	P	2.4
2	☐	1.000	1.085	2396.90	0.0063	P	4.9
3	☐	50.000	54.271	104579.38	0.2730	P	0.7
4	☐	125.000	134.435	257182.93	0.6750	P	4.0
5	☐	250.000	262.979	493315.71	1.3195	P	1.0
6	☐	500.000	515.134	965250.12	2.5838	P	0.4
7	☐	1000.000	987.795	1908474.64	4.9538	P	0.7
8	☐			51983.07	0.1278	P	2.0

$$y = 0.0050 * x + 8.8420E-004$$

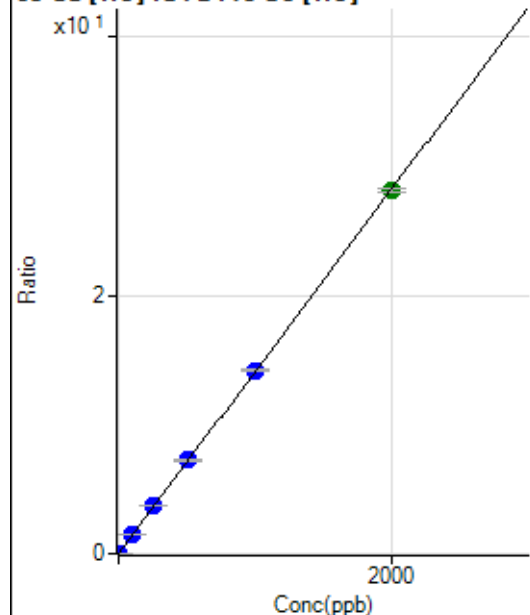
$$R = 0.9997$$

$$DL = 0.01284$$

$$BEC = 0.1763$$

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	1067.84	0.0029	P	4.4
2	☐	2.000	2.030	11941.69	0.0315	P	2.5
3	☐	100.000	106.728	577961.51	1.5088	P	0.7
4	☐	250.000	262.891	1414662.76	3.7122	P	3.2
5	☐	500.000	514.045	2712722.25	7.2560	P	1.2
6	☐	1000.000	1005.675	5302023.39	14.1928	P	0.5
7	☐	2000.000	1991.703	10827537.34	28.1056	A	1.1
8	☐			25473.44	0.0626	P	1.5

$$y = 0.0141 * x + 0.0029$$

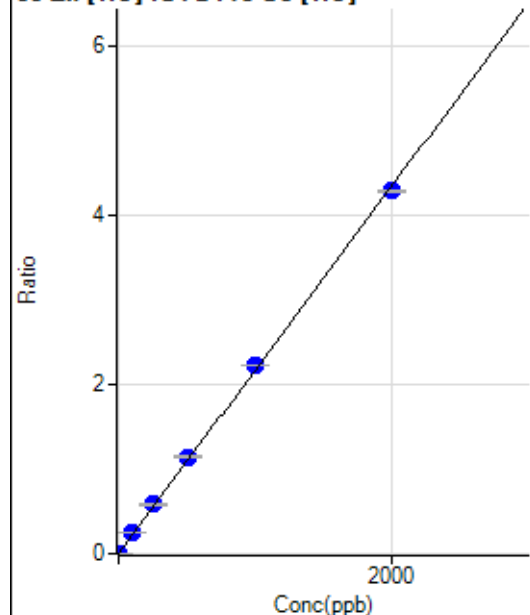
$$R = 1.0000$$

$$DL = 0.02678$$

$$BEC = 0.2021$$

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	538.91	0.0014	P	9.3
2	☐	2.000	2.417	2532.49	0.0067	P	4.8
3	☐	100.000	110.956	92694.96	0.2420	P	0.7
4	☐	250.000	269.854	223492.87	0.5865	P	3.1
5	☐	500.000	528.147	428592.43	1.1464	P	1.2
6	☐	1000.000	1026.929	832199.22	2.2277	P	0.6
7	☐	2000.000	1976.469	1651307.30	4.2862	P	0.5
8	☐			14109.24	0.0347	P	1.7

$$y = 0.0022 * x + 0.0014$$

$$R = 0.9997$$

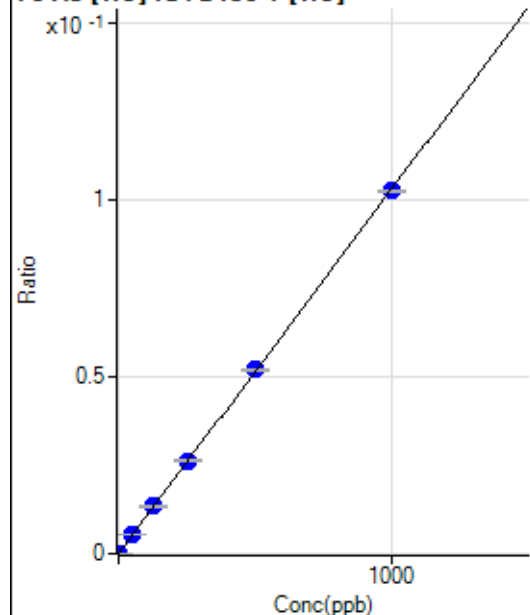
$$DL = 0.1852$$

$$BEC = 0.6639$$

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	16.67	0.0000	P	10.7
2	☐	1.000	1.038	483.96	0.0001	P	7.1
3	☐	50.000	53.004	24076.76	0.0055	P	0.3
4	☐	125.000	129.564	58275.27	0.0134	P	1.9
5	☐	250.000	255.833	113457.13	0.0264	P	1.4
6	☐	500.000	504.133	222726.48	0.0519	P	0.2
7	☐	1000.000	995.755	451062.06	0.1026	P	0.4
8	☐			705.58	0.0002	P	4.2

$$y = 1.0303\text{E-}004 * x + 3.8387\text{E-}006$$

$$R = 1.0000$$

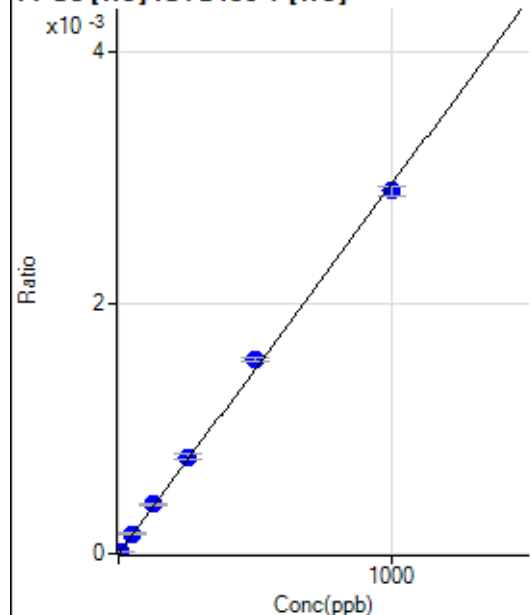
$$DL = 0.01195$$

$$BEC = 0.03726$$

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	5.269	67.78	0.0000	P	10.2
3	☐	50.000	54.402	705.59	0.0002	P	9.5
4	☐	125.000	133.301	1714.58	0.0004	P	3.7
5	☐	250.000	261.874	3318.22	0.0008	P	5.8
6	☐	500.000	526.269	6644.95	0.0015	P	2.1
7	☐	1000.000	982.638	12721.33	0.0029	P	2.4
8	☐			6.67	0.0000	P	50.2

$$y = 2.9449\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9994$$

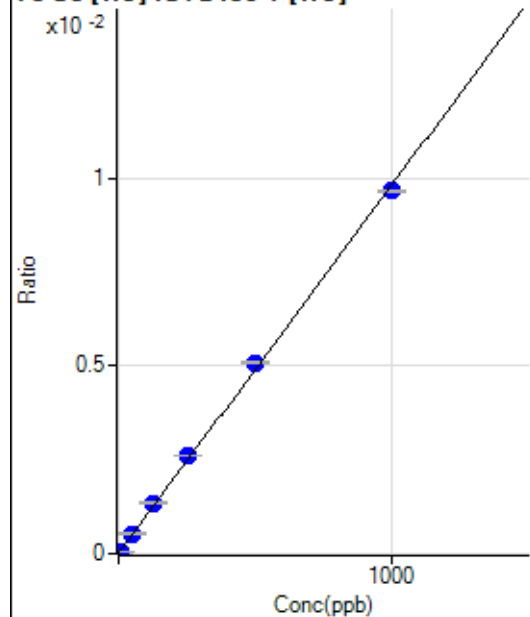
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.95	0.0000	P	11.0
2	☐	5.000	5.285	260.50	0.0001	P	8.3
3	☐	50.000	53.627	2350.83	0.0005	P	3.1
4	☐	125.000	136.610	5877.78	0.0013	P	3.2
5	☐	250.000	264.477	11192.66	0.0026	P	0.6
6	☐	500.000	518.656	21833.76	0.0051	P	0.3
7	☐	1000.000	985.419	42503.41	0.0097	P	0.6
8	☐			55.56	0.0000	P	5.5

$$y = 9.8031\text{E-}006 * x + 7.8207\text{E-}006$$

$$R = 0.9996$$

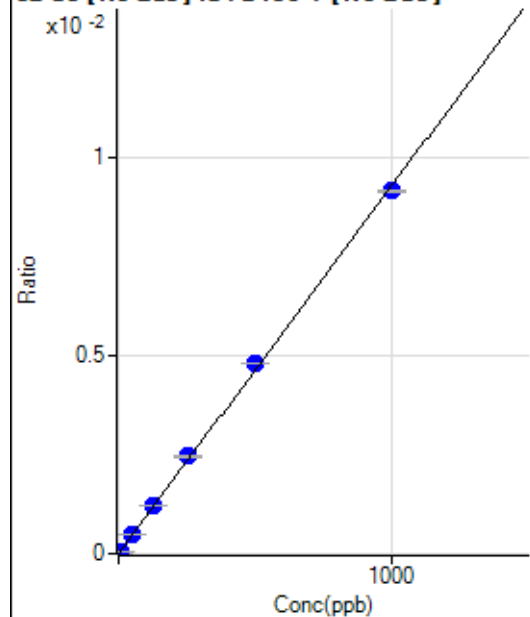
$$DL = 0.2641$$

$$BEC = 0.7978$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.61	0.0000	P	172.
2	☐	5.000	5.417	1462.00	0.0001	P	3.6
3	☐	50.000	54.343	14454.01	0.0005	P	0.6
4	☐	125.000	130.234	35341.20	0.0012	P	2.4
5	☐	250.000	264.346	68917.96	0.0025	P	0.5
6	☐	500.000	517.278	133976.12	0.0048	P	0.4
7	☐	1000.000	986.901	256415.92	0.0092	P	0.6
8	☐			116.42	0.0000	P	18.8

$$y = 9.2715\text{E-}006 * x + 1.4712\text{E-}006$$

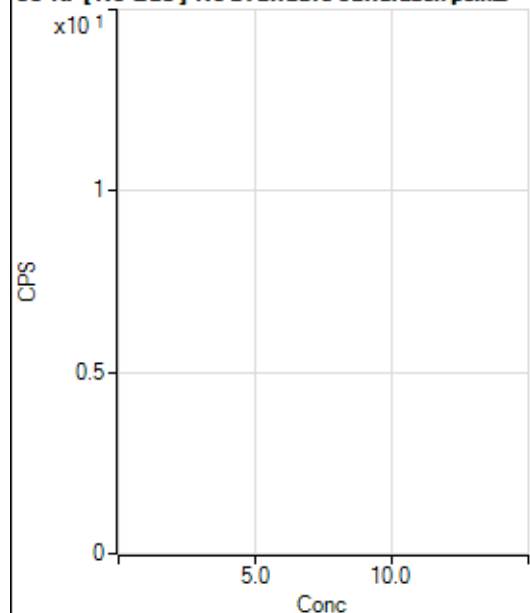
$$R = 0.9997$$

$$DL = 0.8207$$

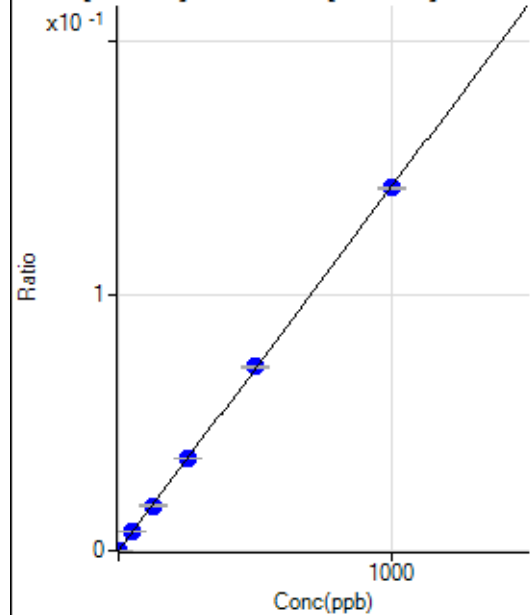
$$BEC = 0.1587$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			265.56		P	15.3
2	☐			320.01		P	7.5
3	☐			314.45		P	10.6
4	☐			292.23		P	16.0
5	☐			273.34		P	10.4
6	☐			284.45		P	8.8
7	☐			277.78		P	4.5
8	☐			314.45		P	11.2

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	450.03	0.0000	P	22.8
2	☐	1.000	0.996	4478.67	0.0002	P	4.2
3	☐	50.000	50.984	208455.65	0.0073	P	0.2
4	☐	125.000	123.044	513443.61	0.0176	P	2.8
5	☐	250.000	253.613	1016928.91	0.0362	P	0.4
6	☐	500.000	504.782	2010848.03	0.0720	P	0.7
7	☐	1000.000	996.901	3984039.41	0.1422	P	0.7
8	☐			16879.99	0.0006	P	0.2

$$y = 1.4262\text{E-}004 * x + 1.6353\text{E-}005$$

$$R = 1.0000$$

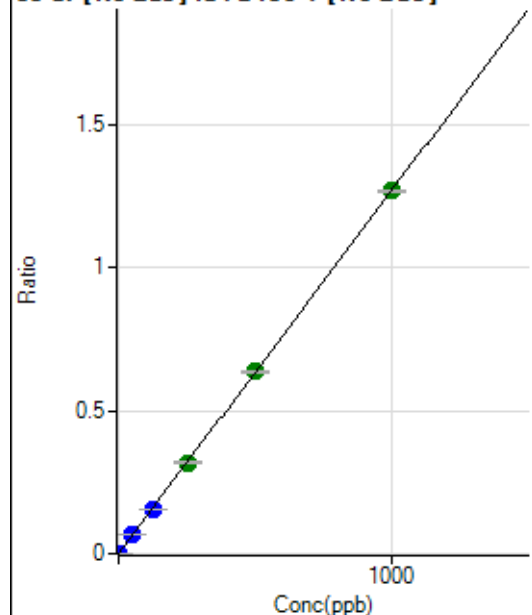
$$DL = 0.07849$$

$$BEC = 0.1147$$

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	125.01	0.0000	P	20.3
2	☐	1.000	0.993	35726.03	0.0013	P	0.9
3	☐	50.000	50.635	1835761.52	0.0642	P	0.5
4	☐	125.000	122.205	4528313.12	0.1549	P	1.6
5	☐	250.000	251.424	8955015.22	0.3187	A	0.8
6	☐	500.000	500.930	17729508.56	0.6349	A	0.7
7	☐	1000.000	999.497	35493394.20	1.2667	A	0.3
8	☐			144819.66	0.0052	P	0.5

$$y = 0.0013 * x + 4.5427E-006$$

$$R = 1.0000$$

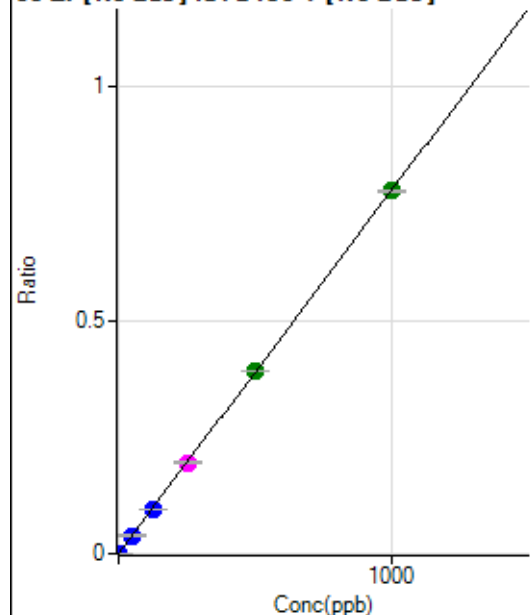
$$DL = 0.002183$$

$$BEC = 0.003584$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1219.55	0.0000	P	7.6
2	☐	1.000	0.830	19494.49	0.0007	P	3.1
3	☐	50.000	50.122	1116175.98	0.0390	P	0.6
4	☐	125.000	121.185	2756503.90	0.0943	P	1.7
5	☐	250.000	251.078	5488302.03	0.1953	M	0.6
6	☐	500.000	502.481	10913800.85	0.3908	A	0.2
7	☐	1000.000	998.961	21767826.01	0.7769	A	0.4
8	☐			6704.62	0.0002	P	8.1

$$y = 7.7765E-004 * x + 4.4300E-005$$

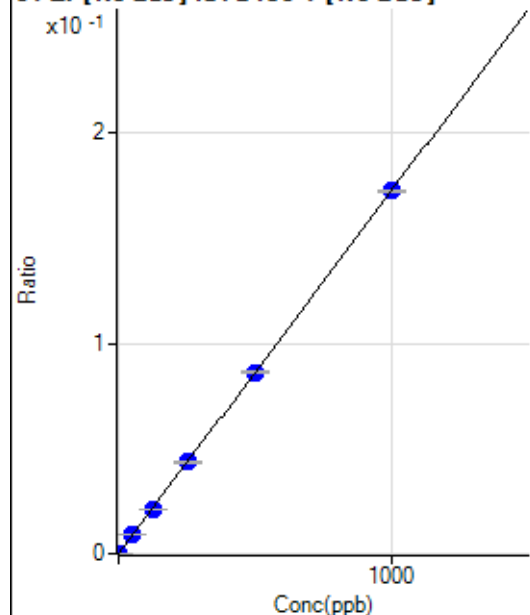
$$R = 1.0000$$

$$DL = 0.01298$$

$$BEC = 0.05697$$

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	252.79	0.0000	P	11.8
2	☐	1.000	0.859	4448.10	0.0002	P	5.4
3	☐	50.000	50.396	248838.90	0.0087	P	0.3
4	☐	125.000	122.741	619068.93	0.0212	P	1.6
5	☐	250.000	252.071	1221801.95	0.0435	P	0.7
6	☐	500.000	499.983	2407946.39	0.0862	P	0.4
7	☐	1000.000	999.754	4830659.92	0.1724	P	0.5
8	☐			1483.47	0.0001	P	14.7

$$y = 1.7244\text{E-}004 * x + 9.1832\text{E-}006$$

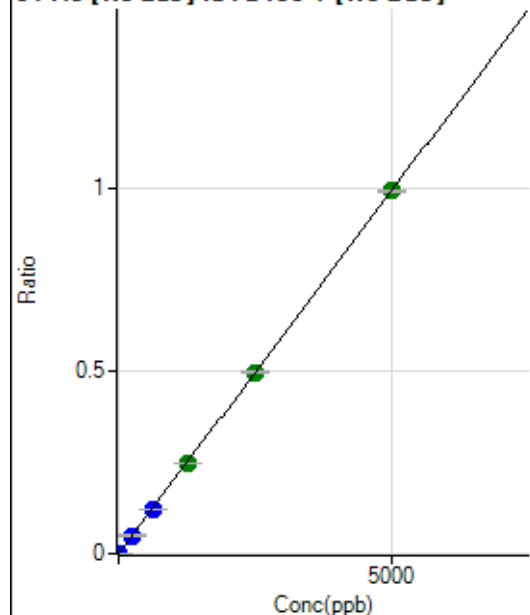
$$R = 1.0000$$

$$DL = 0.01877$$

$$BEC = 0.05326$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	386.14	0.0000	P	20.7
2	☐	5.000	4.708	26789.76	0.0009	P	2.0
3	☐	250.000	251.360	1425772.86	0.0498	P	0.7
4	☐	625.000	614.460	3561804.12	0.1218	P	1.6
5	☐	1250.000	1255.120	6993030.02	0.2488	A	0.3
6	☐	2500.000	2499.939	13840723.75	0.4956	A	0.6
7	☐	5000.000	5000.001	27773663.82	0.9912	A	0.5
8	☐			19221.96	0.0007	P	0.8

$$y = 1.9825\text{E-}004 * x + 1.4031\text{E-}005$$

$$R = 1.0000$$

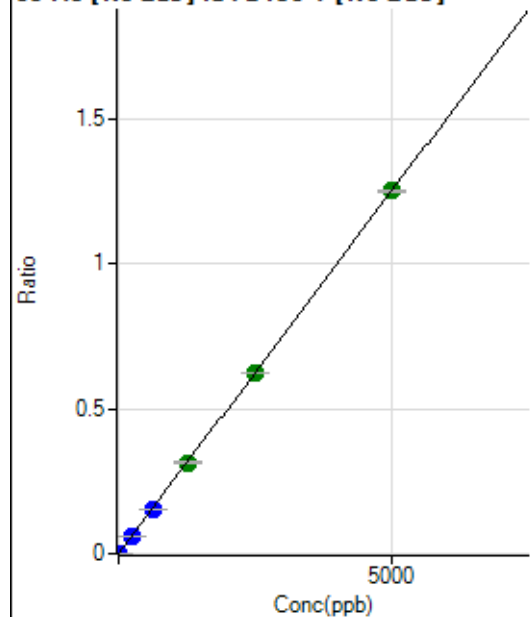
$$DL = 0.04395$$

$$BEC = 0.07078$$

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	94.45	0.0000	P	18.1
2	☐	5.000	4.924	34952.31	0.0012	P	3.1
3	☐	250.000	249.323	1785327.54	0.0624	P	1.0
4	☐	625.000	611.846	4477826.32	0.1532	P	1.9
5	☐	1250.000	1259.197	8858409.83	0.3152	A	0.4
6	☐	2500.000	2491.633	17417942.40	0.6237	A	0.7
7	☐	5000.000	5003.562	35095741.06	1.2525	A	0.2
8	☐			29111.14	0.0010	P	3.4

$$y = 2.5033\text{E-}004 * x + 3.4295\text{E-}006$$

$$R = 1.0000$$

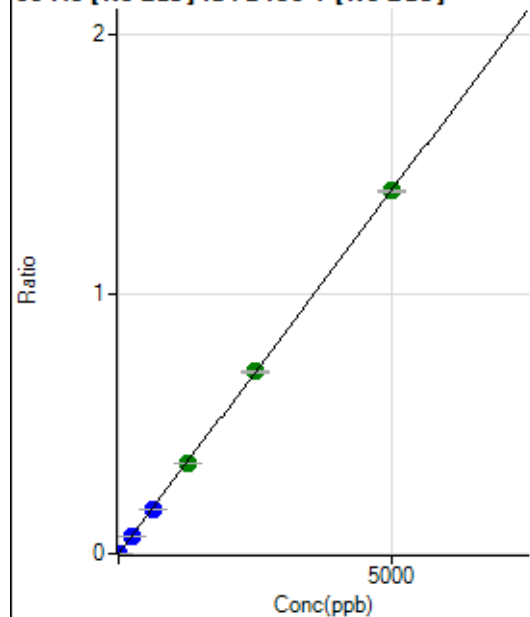
$$DL = 0.00744$$

$$BEC = 0.0137$$

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	147.23	0.0000	P	26.4
2	☐	5.000	4.889	38750.93	0.0014	P	1.1
3	☐	250.000	250.190	1998060.98	0.0699	P	1.0
4	☐	625.000	612.269	4997208.01	0.1709	P	2.2
5	☐	1250.000	1252.886	9829710.38	0.3498	A	0.8
6	☐	2500.000	2507.156	19546218.67	0.6999	A	0.9
7	☐	5000.000	4997.283	39090511.64	1.3951	A	0.4
8	☐			33097.56	0.0012	P	0.3

$$y = 2.7918\text{E-}004 * x + 5.3449\text{E-}006$$

$$R = 1.0000$$

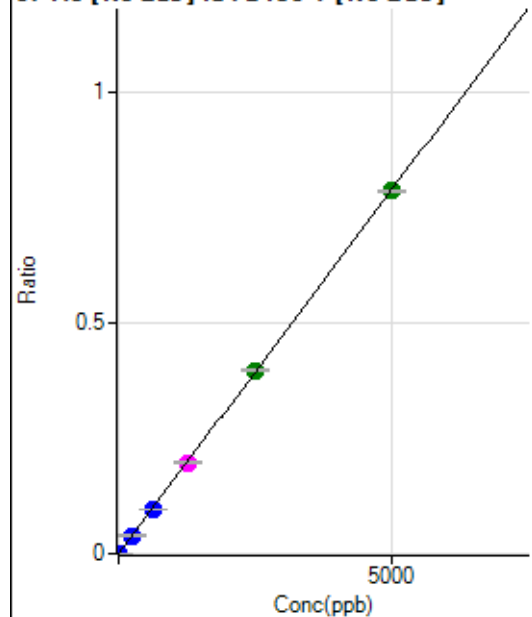
$$DL = 0.01518$$

$$BEC = 0.01915$$

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	63.89	0.0000	P	39.6
2	☐	5.000	4.876	21786.87	0.0008	P	1.8
3	☐	250.000	249.681	1124988.96	0.0393	P	1.3
4	☐	625.000	609.336	2806072.72	0.0960	P	1.7
5	☐	1250.000	1255.527	5557578.51	0.1978	M	1.3
6	☐	2500.000	2523.182	11098522.64	0.3974	A	0.8
7	☐	5000.000	4989.001	22018200.67	0.7858	A	0.8
8	☐			18345.79	0.0007	P	1.8

$$y = 1.5751\text{E-}004 * x + 2.3194\text{E-}006$$

$$R = 1.0000$$

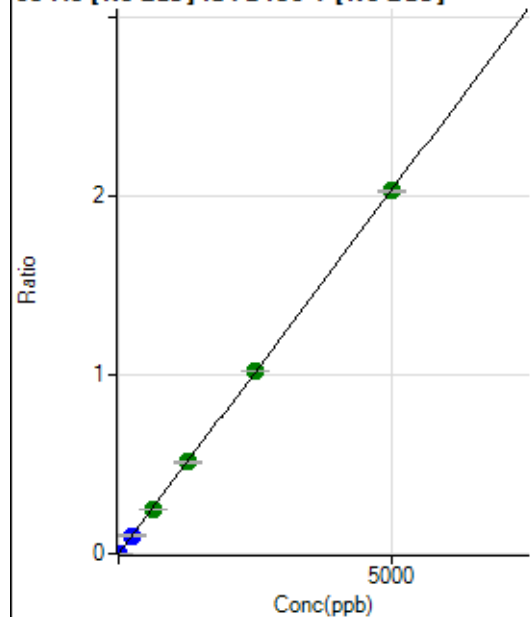
$$DL = 0.01748$$

$$BEC = 0.01473$$

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	111.12	0.0000	P	8.4
2	☐	5.000	4.848	55827.36	0.0020	P	3.0
3	☐	250.000	250.900	2916651.37	0.1020	P	1.1
4	☐	625.000	611.535	7265799.81	0.2485	A	1.8
5	☐	1250.000	1257.573	14362256.57	0.5111	A	0.8
6	☐	2500.000	2517.674	28572613.49	1.0232	A	0.6
7	☐	5000.000	4990.908	56829608.21	2.0283	A	0.5
8	☐			46721.98	0.0017	P	2.0

$$y = 4.0639\text{E-}004 * x + 4.0355\text{E-}006$$

$$R = 1.0000$$

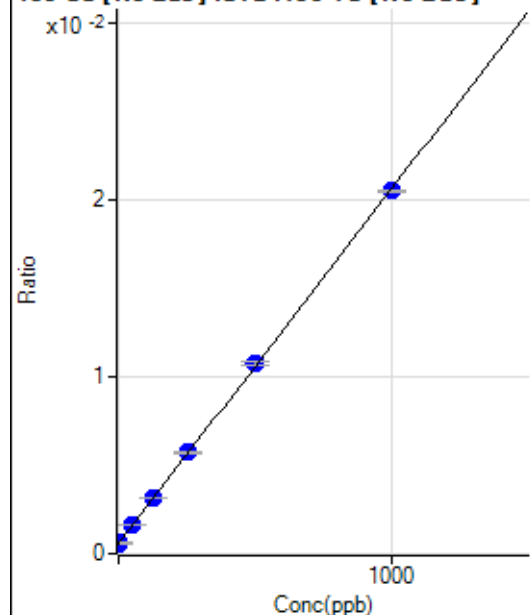
$$DL = 0.002508$$

$$BEC = 0.00993$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12436.50	0.0006	P	0.5
2	☐	1.000	1.027	13103.80	0.0006	P	3.7
3	☐	50.000	51.265	35882.60	0.0016	P	1.1
4	☐	125.000	126.748	71745.84	0.0031	P	1.2
5	☐	250.000	255.947	126306.85	0.0057	P	1.4
6	☐	500.000	507.169	237809.62	0.0107	P	1.7
7	☐	1000.000	994.647	455016.12	0.0205	P	0.8
8	☐			13498.62	0.0006	P	4.8

$$y = 2.0025\text{E-}005 * x + 5.7831\text{E-}004$$

$$R = 0.9999$$

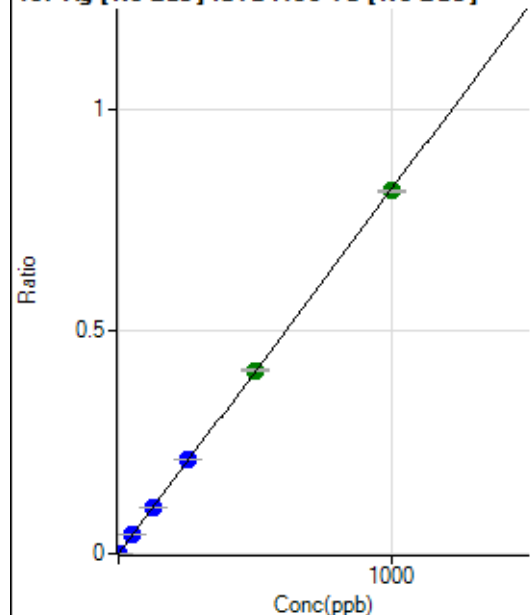
$$DL = 0.4623$$

$$BEC = 28.88$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.01	0.0000	P	5.7
2	☐	1.000	1.083	19675.58	0.0009	P	2.0
3	☐	50.000	52.940	969849.86	0.0434	P	0.2
4	☐	125.000	128.382	2421424.32	0.1052	P	0.9
5	☐	250.000	258.800	4694999.24	0.2120	P	0.7
6	☐	500.000	502.951	9128123.90	0.4120	A	1.0
7	☐	1000.000	995.755	18108818.81	0.8157	A	0.6
8	☐			2130.81	0.0001	P	17.7

$$y = 8.1916\text{E-}004 * x + 1.1626\text{E-}005$$

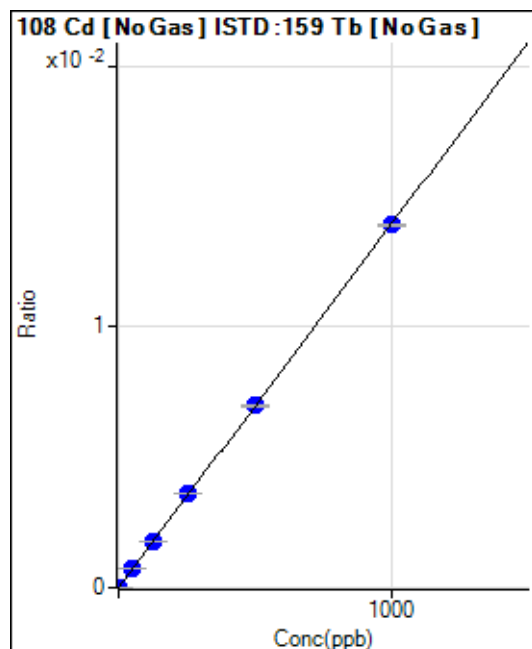
$$R = 1.0000$$

$$DL = 0.002443$$

$$BEC = 0.01419$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	25.00	0.0000	P	29.3
2	☐	1.000	1.058	348.62	0.0000	P	8.0
3	☐	50.000	52.722	16477.91	0.0007	P	0.9
4	☐	125.000	126.911	40799.20	0.0018	P	2.6
5	☐	250.000	258.049	79784.45	0.0036	P	0.3
6	☐	500.000	500.325	154742.81	0.0070	P	0.6
7	☐	1000.000	997.450	309083.88	0.0139	P	0.8
8	☐			108.34	0.0000	P	13.9

$$y = 1.3957\text{E-}005 * x + 1.1639\text{E-}006$$

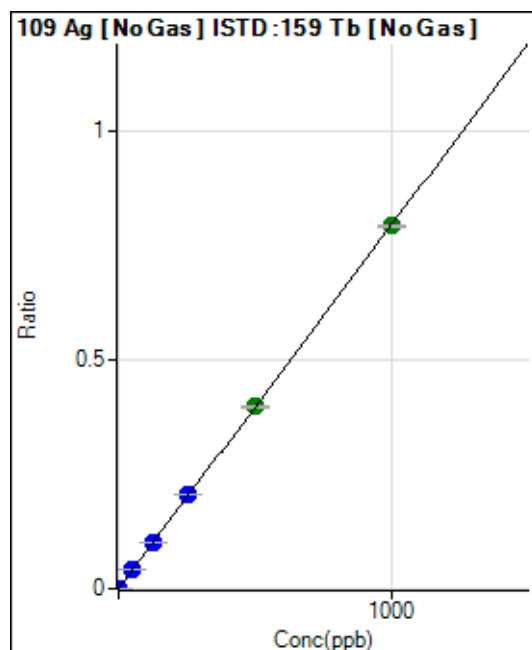
$$R = 1.0000$$

$$DL = 0.07324$$

$$BEC = 0.08339$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	75.00	0.0000	P	21.9
2	☐	1.000	1.094	19060.69	0.0009	P	0.2
3	☐	50.000	53.044	940702.72	0.0421	P	1.0
4	☐	125.000	126.967	2318331.39	0.1007	P	1.5
5	☐	250.000	257.694	4526338.12	0.2044	P	0.7
6	☐	500.000	500.223	8790125.89	0.3968	A	1.1
7	☐	1000.000	997.567	17565565.32	0.7912	A	0.2
8	☐			1939.11	0.0001	P	10.4

$$y = 7.9316\text{E-}004 * x + 3.4858\text{E-}006$$

$$R = 1.0000$$

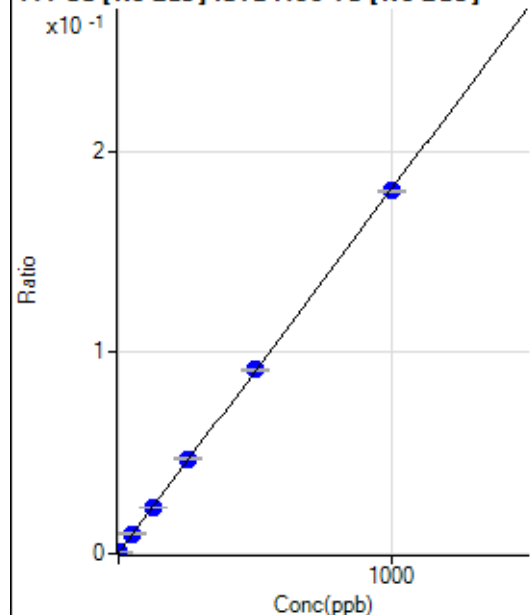
$$DL = 0.002891$$

$$BEC = 0.004395$$

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	8751.94	0.0004	P	0.2
2	☐	1.000	1.031	12984.85	0.0006	P	1.4
3	☐	50.000	53.089	223664.18	0.0100	P	0.7
4	☐	125.000	126.485	535744.24	0.0233	P	1.1
5	☐	250.000	258.799	1045022.05	0.0472	P	0.7
6	☐	500.000	504.097	2027899.31	0.0915	P	1.4
7	☐	1000.000	995.412	4003795.54	0.1803	P	0.4
8	☐			10074.62	0.0005	P	4.2

$$y = 1.8077\text{E-}004 * x + 4.0697\text{E-}004$$

$$R = 0.9999$$

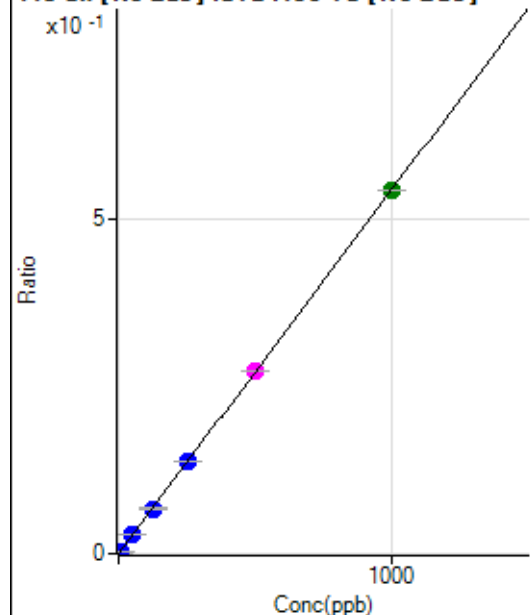
$$DL = 0.01553$$

$$BEC = 2.251$$

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	1450.14	0.0001	P	7.0
2	☐	5.000	5.193	63301.96	0.0029	P	1.3
3	☐	50.000	51.267	625079.06	0.0280	P	1.2
4	☐	125.000	123.752	1551362.80	0.0674	P	2.0
5	☐	250.000	254.175	3063805.04	0.1383	P	0.4
6	☐	500.000	502.662	6060227.39	0.2735	M	0.8
7	☐	1000.000	997.717	12051771.88	0.5429	A	0.1
8	☐			6893.68	0.0003	P	6.1

$$y = 5.4404\text{E-}004 * x + 6.7453\text{E-}005$$

$$R = 1.0000$$

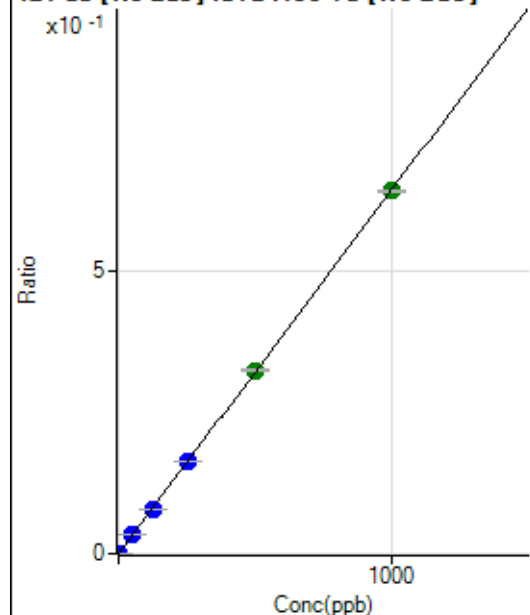
$$DL = 0.02592$$

$$BEC = 0.124$$

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	144.45	0.0000	P	34.2
2	☐	2.000	1.945	27480.56	0.0013	P	1.4
3	☐	50.000	50.661	727609.85	0.0325	P	0.4
4	☐	125.000	122.244	1807557.14	0.0785	P	1.3
5	☐	250.000	251.818	3581732.89	0.1617	P	0.1
6	☐	500.000	504.023	7172145.74	0.3237	A	0.6
7	☐	1000.000	997.846	14227772.71	0.6409	A	0.2
8	☐			20540.78	0.0009	P	3.7

$$y = 6.4225\text{E-}004 * x + 6.7073\text{E-}006$$

$$R = 1.0000$$

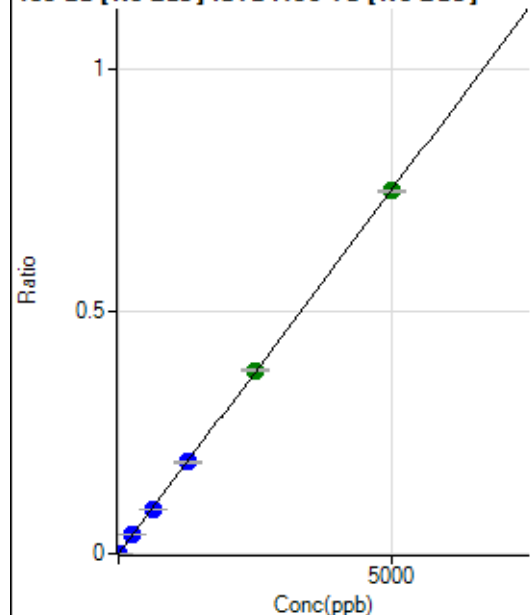
$$DL = 0.01072$$

$$BEC = 0.01044$$

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	102.79	0.0000	P	20.2
2	☐	10.000	10.169	33530.28	0.0015	P	2.7
3	☐	250.000	254.521	854924.55	0.0382	P	0.8
4	☐	625.000	614.341	2124690.22	0.0923	P	1.3
5	☐	1250.000	1261.168	4195512.16	0.1895	P	0.9
6	☐	2500.000	2515.373	8371708.35	0.3779	A	1.2
7	☐	5000.000	4990.628	16643589.43	0.7497	A	0.4
8	☐			2808.74	0.0001	P	11.3

$$y = 1.5022\text{E-}004 * x + 4.7777\text{E-}006$$

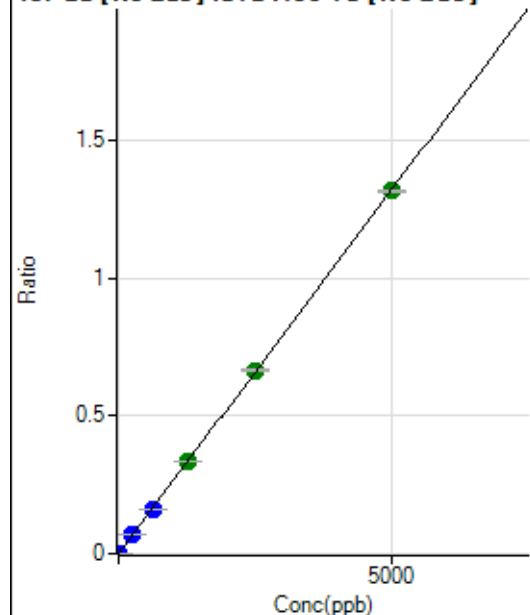
$$R = 1.0000$$

$$DL = 0.01923$$

$$BEC = 0.03181$$

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	61.12	0.0000	P	7.8
2	☐	10.000	10.260	59277.21	0.0027	P	0.6
3	☐	250.000	254.538	1501039.14	0.0671	P	0.4
4	☐	625.000	612.667	3720280.38	0.1616	P	0.6
5	☐	1250.000	1262.621	7374766.40	0.3330	A	0.5
6	☐	2500.000	2520.018	14725699.11	0.6647	A	0.9
7	☐	5000.000	4988.150	29208035.38	1.3156	A	0.6
8	☐			4859.40	0.0002	P	6.1

$$y = 2.6375E-004 * x + 2.8420E-006$$

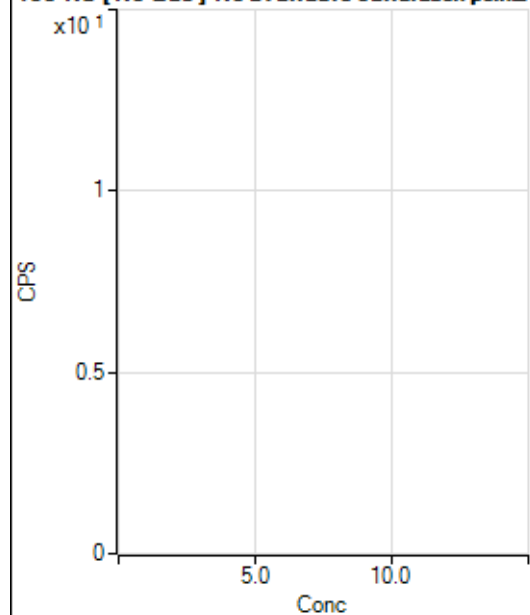
$$R = 1.0000$$

$$DL = 0.002529$$

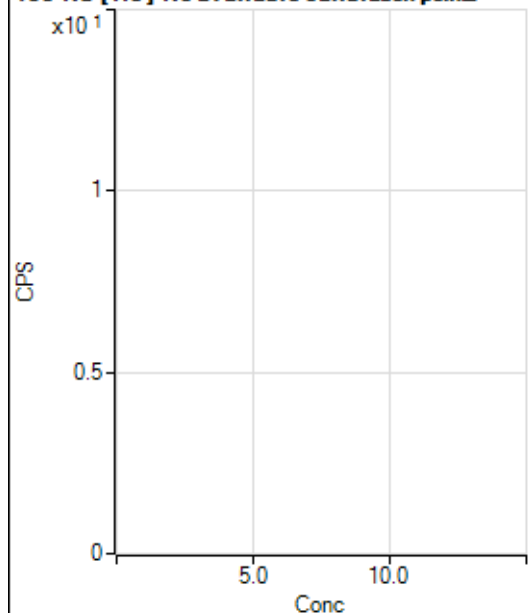
$$BEC = 0.01078$$

Weight: <None>

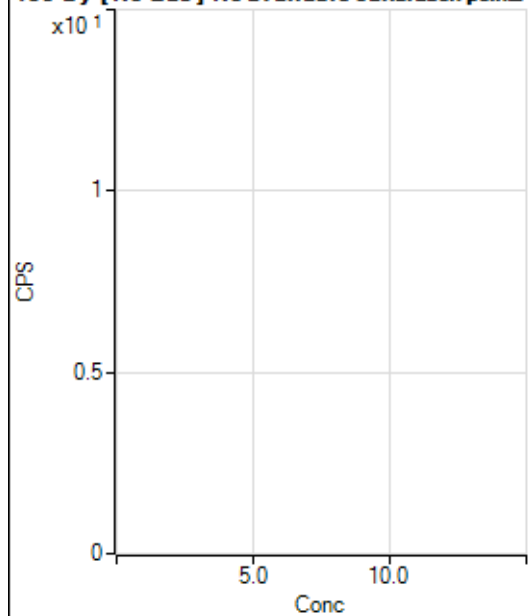
Min Conc: 0

150 Nd [No Gas] No available calibration points

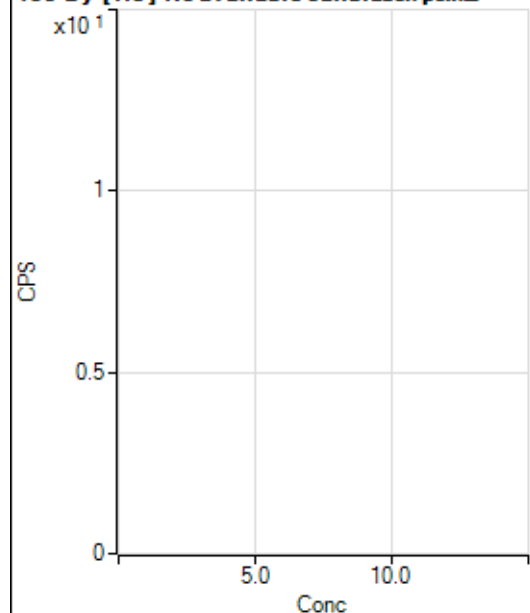
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	69.3
2	☐			4.45		P	86.6
3	☐			71.12		P	28.6
4	☐			211.12		P	11.1
5	☐			328.91		P	8.4
6	☐			720.05		P	6.7
7	☐			1182.32		P	4.9
8	☐			184.45		P	29.0

150 Nd [He] No available calibration points

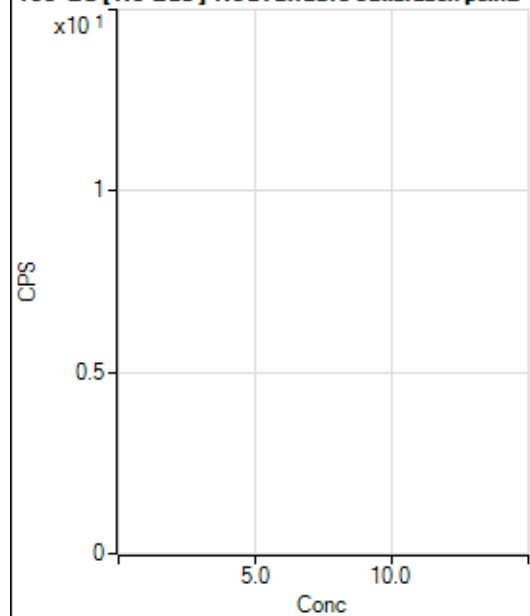
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	173.
2	☐			0.00		P	
3	☐			13.33		P	66.2
4	☐			21.11		P	48.2
5	☐			31.11		P	40.6
6	☐			77.78		P	8.9
7	☐			116.67		P	25.4
8	☐			78.89		P	24.8

156 Dy [No Gas] No available calibration points

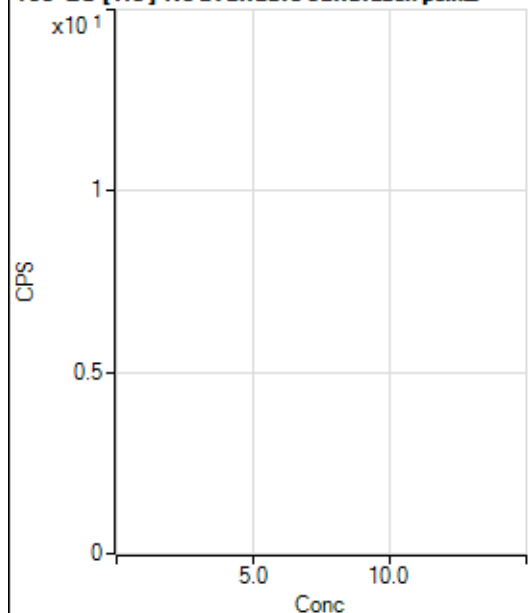
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			19.44		P	89.2
2	☐			16.67		P	50.0
3	☐			44.45		P	28.7
4	☐			61.12		P	34.3
5	☐			88.89		P	23.6
6	☐			158.34		P	24.1
7	☐			238.90		P	21.0
8	☐			113.90		P	8.5

156 Dy [He] No available calibration points

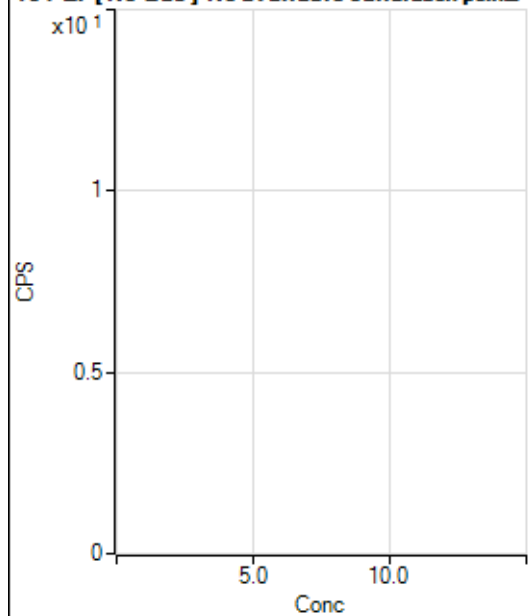
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			20.00		P	16.7
2	☐			8.89		P	94.4
3	☐			16.67		P	40.0
4	☐			48.89		P	14.2
5	☐			73.34		P	24.1
6	☐			167.78		P	10.9
7	☐			272.23		P	9.8
8	☐			57.78		P	6.7

160 Gd [No Gas] Noavailable calibration poin_

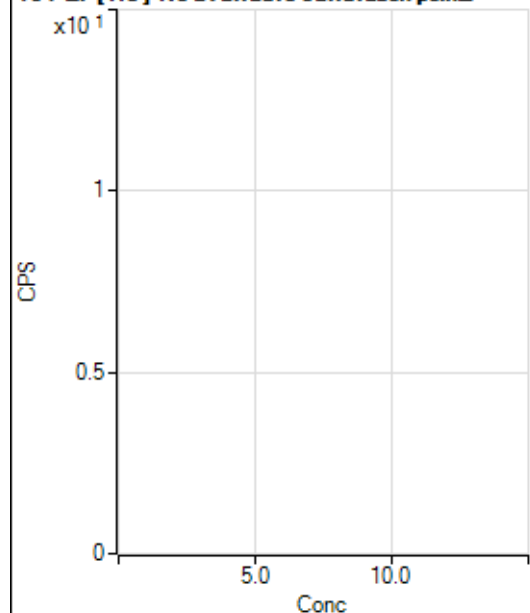
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			116.67		P	25.8
2	☐			113.90		P	15.2
3	☐			108.34		P	53.8
4	☐			152.79		P	16.7
5	☐			125.01		P	13.3
6	☐			155.56		P	20.3
7	☐			144.45		P	37.5
8	☐			152.78		P	11.4

160 Gd [He] No available calibration points

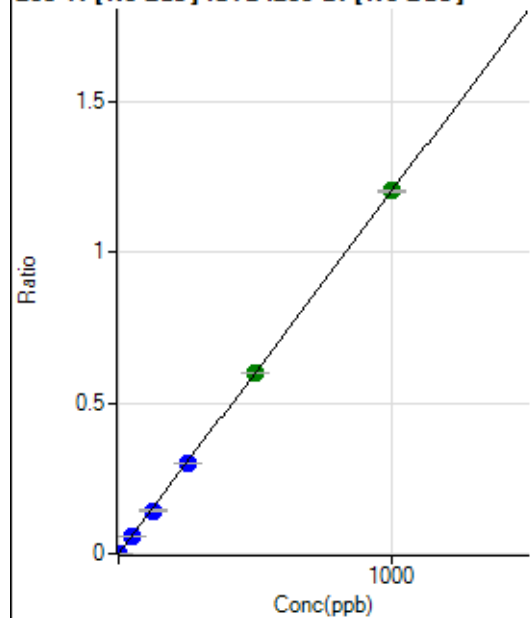
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			252.23		P	11.1
2	☐			306.67		P	5.0
3	☐			257.78		P	5.4
4	☐			278.90		P	7.0
5	☐			280.01		P	17.3
6	☐			274.45		P	4.9
7	☐			310.01		P	9.3
8	☐			303.34		P	15.6

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			38.89		P	44.6
2	☐			75.00		P	11.1
3	☐			88.89		P	27.1
4	☐			83.34		P	10.0
5	☐			88.89		P	21.7
6	☐			97.23		P	26.2
7	☐			66.67		P	54.5
8	☐			111.12		P	8.7

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			55.56		P	3.5
2	☐			41.11		P	46.1
3	☐			61.11		P	22.0
4	☐			47.78		P	28.2
5	☐			51.11		P	43.4
6	☐			64.44		P	15.8
7	☐			56.67		P	21.2
8	☐			63.33		P	15.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	750.06	0.0000	P	16.7
2	☐	1.000	0.927	18051.74	0.0012	P	4.0
3	☐	50.000	49.394	924610.42	0.0595	P	0.7
4	☐	125.000	118.817	2291185.21	0.1430	P	2.4
5	☐	250.000	248.483	4558597.85	0.2991	P	1.0
6	☐	500.000	499.307	9011403.59	0.6009	A	0.5
7	☐	1000.000	1001.529	17654124.70	1.2053	A	0.4
8	☐			5109.57	0.0004	P	10.9

$$y = 0.0012 * x + 4.8868E-005$$

$$R = 1.0000$$

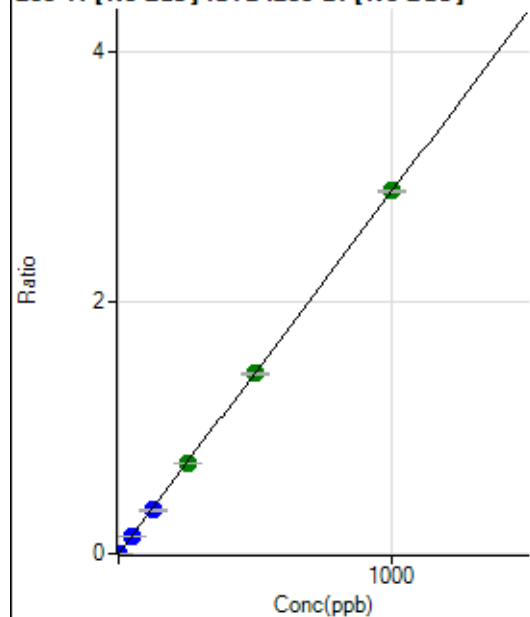
$$DL = 0.02033$$

$$BEC = 0.04061$$

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	1472.38	0.0001	P	3.5
2	☐	1.000	0.943	43695.30	0.0028	P	0.6
3	☐	50.000	49.240	2208820.73	0.1421	P	0.6
4	☐	125.000	119.681	5531271.91	0.3453	P	1.8
5	☐	250.000	248.562	10929107.54	0.7170	A	0.6
6	☐	500.000	497.413	21515859.86	1.4348	A	0.4
7	☐	1000.000	1002.356	42346807.20	2.8912	A	0.3
8	☐			11900.31	0.0009	P	9.4

$$y = 0.0029 * x + 9.5899E-005$$

$$R = 1.0000$$

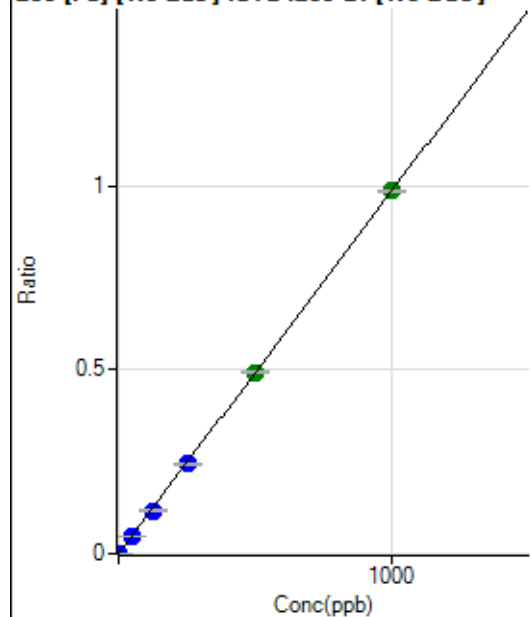
$$DL = 0.003445$$

$$BEC = 0.03325$$

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	1268.62	0.0001	P	10.4
2	☐	1.000	0.939	15624.33	0.0010	P	0.7
3	☐	50.000	49.376	757146.30	0.0487	P	0.4
4	☐	125.000	119.296	1883518.22	0.1176	P	2.2
5	☐	250.000	247.033	3709945.71	0.2434	P	0.7
6	☐	500.000	500.442	7392735.81	0.4930	A	0.7
7	☐	1000.000	1001.265	14445911.55	0.9863	A	0.4
8	☐			8063.80	0.0006	P	2.7

$$y = 9.8494E-004 * x + 8.2641E-005$$

$$R = 1.0000$$

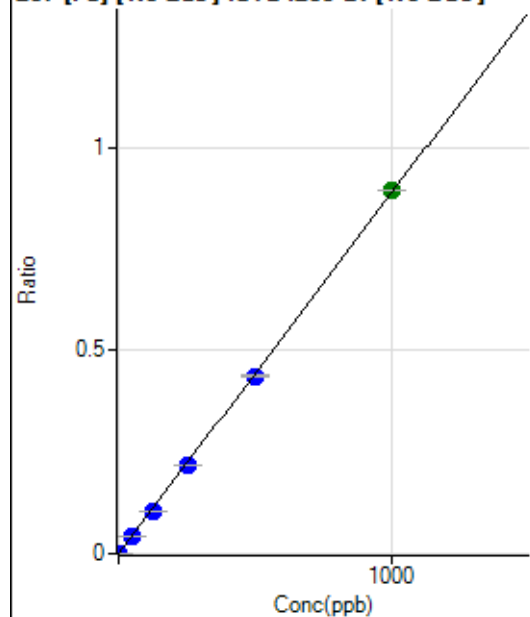
$$DL = 0.02622$$

$$BEC = 0.0839$$

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	1148.23	0.0001	P	9.4
2	☐	1.000	0.945	14183.85	0.0009	P	1.7
3	☐	50.000	48.876	675885.45	0.0435	P	0.4
4	☐	125.000	118.062	1681150.15	0.1049	P	1.3
5	☐	250.000	244.814	3315640.55	0.2175	P	0.6
6	☐	500.000	492.565	6561844.88	0.4376	P	0.8
7	☐	1000.000	1005.938	13088113.72	0.8936	A	0.1
8	☐			7116.94	0.0005	P	0.9

$$y = 8.8823\text{E-}004 * x + 7.4792\text{E-}005$$

$$R = 0.9999$$

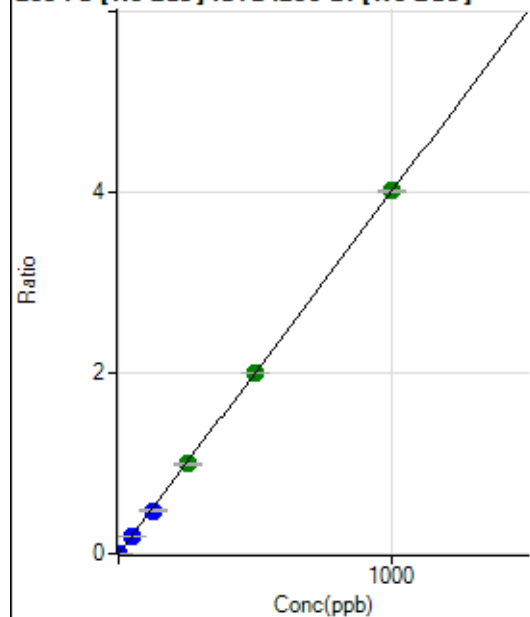
$$DL = 0.02372$$

$$BEC = 0.0842$$

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	4648.59	0.0003	P	4.7
2	☐	1.000	0.944	63310.37	0.0041	P	1.0
3	☐	50.000	49.082	3058545.33	0.1968	P	0.3
4	☐	125.000	119.016	7637450.24	0.4768	P	1.6
5	☐	250.000	247.285	15093974.29	0.9903	A	0.4
6	☐	500.000	498.298	29918540.66	1.9951	A	0.6
7	☐	1000.000	1002.324	58776352.59	4.0129	A	0.2
8	☐			31923.16	0.0024	P	1.8

$$y = 0.0040 * x + 3.0276\text{E-}004$$

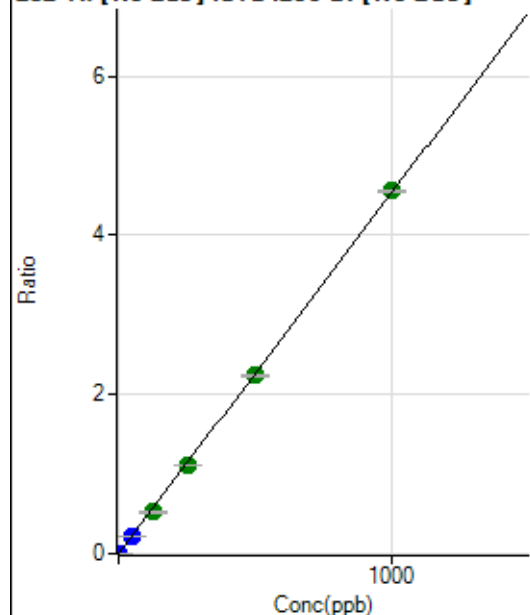
$$R = 1.0000$$

$$DL = 0.0106$$

$$BEC = 0.07563$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1633.49	0.0001	P	5.6
2	☐	1.000	0.781	56533.33	0.0036	P	1.2
3	☐	50.000	47.231	3326696.25	0.2140	P	0.3
4	☐	125.000	115.113	8354879.18	0.5215	A	1.4
5	☐	250.000	243.089	16785478.61	1.1012	A	0.2
6	☐	500.000	494.018	33558335.93	2.2378	A	0.6
7	☐	1000.000	1006.093	66750972.79	4.5574	A	0.3
8	☐			13985.64	0.0011	P	3.3

$$y = 0.0045 * x + 1.0637E-004$$

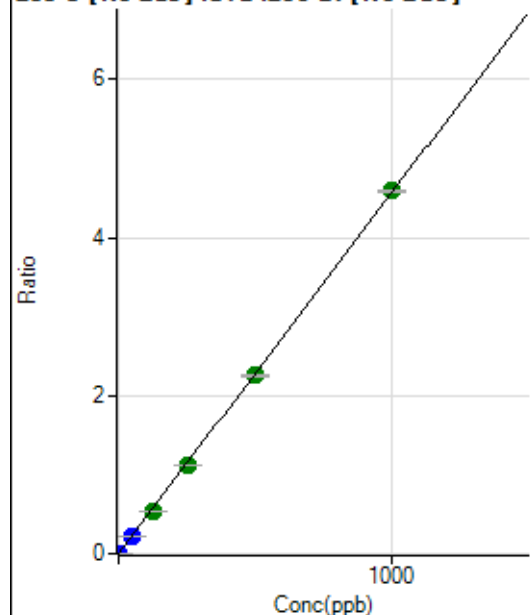
$$R = 0.9999$$

$$DL = 0.003959$$

$$BEC = 0.02348$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2094.71	0.0001	P	9.7
2	☐	1.000	0.910	66495.47	0.0043	P	1.6
3	☐	50.000	47.982	3404748.17	0.2191	P	0.9
4	☐	125.000	116.080	8487215.38	0.5298	A	1.4
5	☐	250.000	243.378	16928940.66	1.1106	A	0.1
6	☐	500.000	494.860	33860083.74	2.2581	A	1.3
7	☐	1000.000	1005.442	67196798.73	4.5877	A	0.5
8	☐			8550.42	0.0007	P	13.3

$$y = 0.0046 * x + 1.3643E-004$$

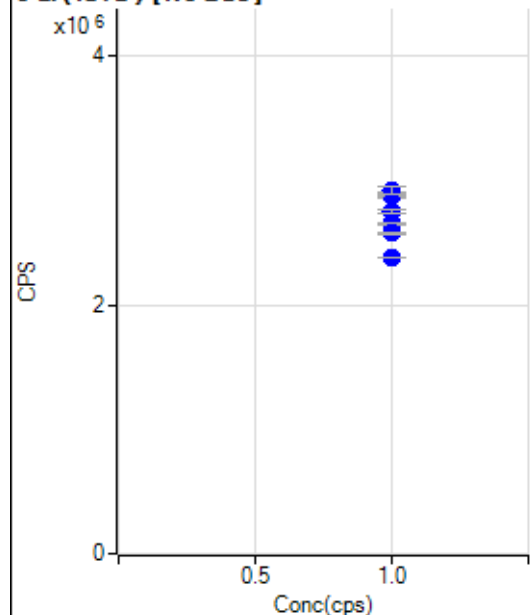
$$R = 0.9999$$

$$DL = 0.008679$$

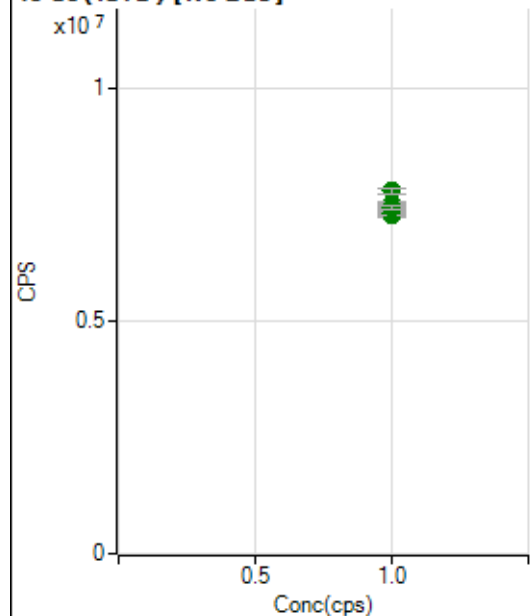
$$BEC = 0.0299$$

Weight: <None>

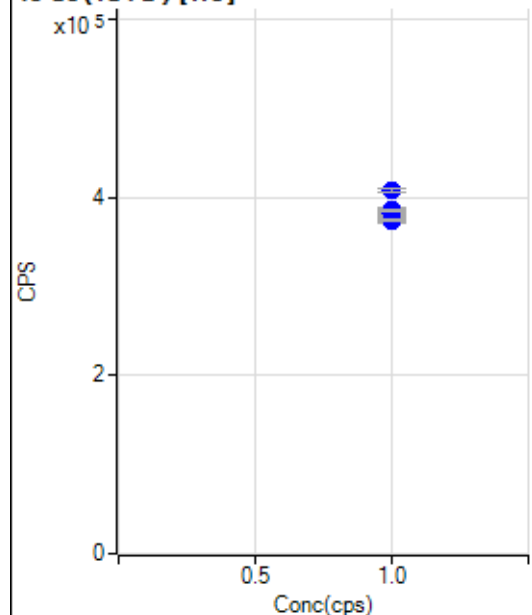
Min Conc: 0

6 Li (ISTD) [No Gas]

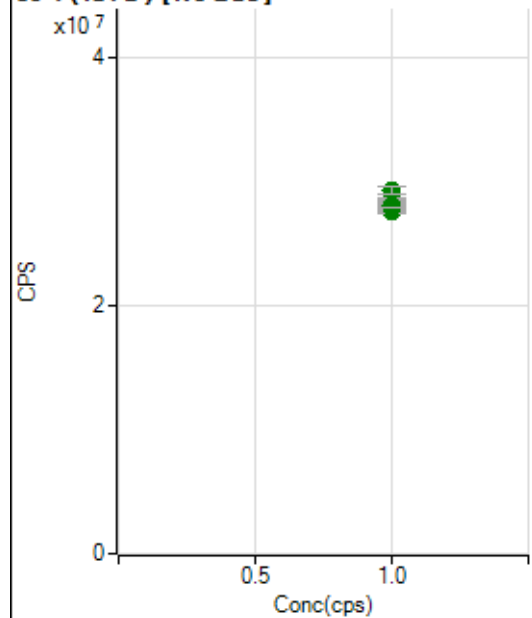
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2872741.22		P	0.6
2	☐	1.000		2896319.05		P	0.6
3	☐	1.000		2889851.14		P	0.6
4	☐	1.000		2918228.77		P	2.1
5	☐	1.000		2749882.22		P	1.0
6	☐	1.000		2653370.89		P	0.5
7	☐	1.000		2579103.57		P	0.6
8	☐	1.000		2380989.26		P	0.2

45 Sc (ISTD) [No Gas]

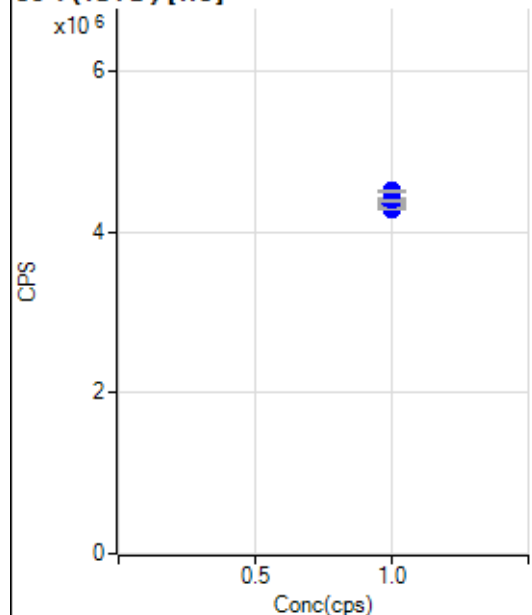
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7267112.75		A	0.9
2	☐	1.000		7471906.42		A	0.4
3	☐	1.000		7538438.19		A	0.7
4	☐	1.000		7807403.13		A	1.4
5	☐	1.000		7369439.05		A	1.3
6	☐	1.000		7268307.80		A	1.1
7	☐	1.000		7330869.70		A	1.2
8	☐	1.000		7458955.90		A	1.0

45 Sc (ISTD) [He]

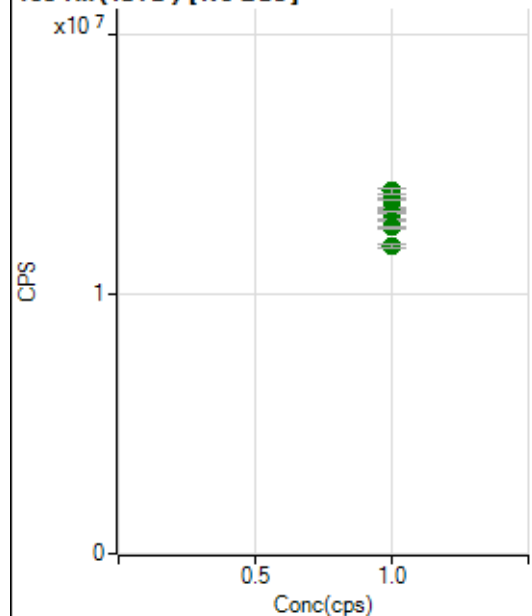
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		374511.88		P	0.8
2	☐	1.000		379037.48		P	0.8
3	☐	1.000		383070.62		P	0.4
4	☐	1.000		381339.48		P	3.1
5	☐	1.000		373896.74		P	1.3
6	☐	1.000		373578.77		P	0.6
7	☐	1.000		385262.10		P	0.6
8	☐	1.000		406891.95		P	0.9

89 Y (ISTD) [No Gas]

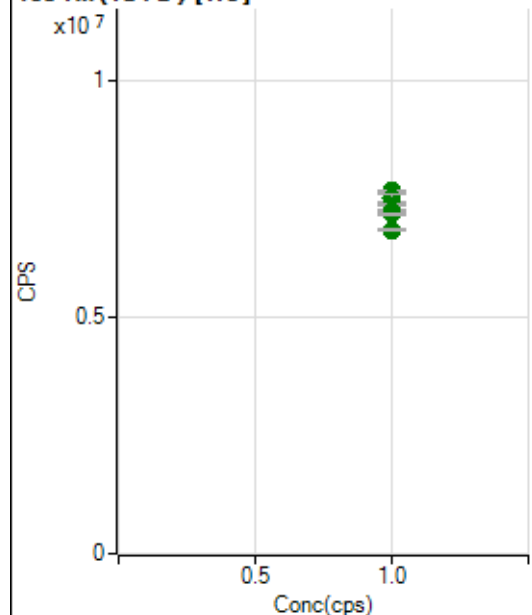
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		27530652.65		A	0.3
2	☐	1.000		28278889.85		A	0.4
3	☐	1.000		28604139.85		A	0.1
4	☐	1.000		29242958.45		A	2.1
5	☐	1.000		28103086.25		A	0.5
6	☐	1.000		27926846.25		A	0.9
7	☐	1.000		28019690.97		A	0.8
8	☐	1.000		27892084.86		A	0.1

89 Y(ISTD) [He]

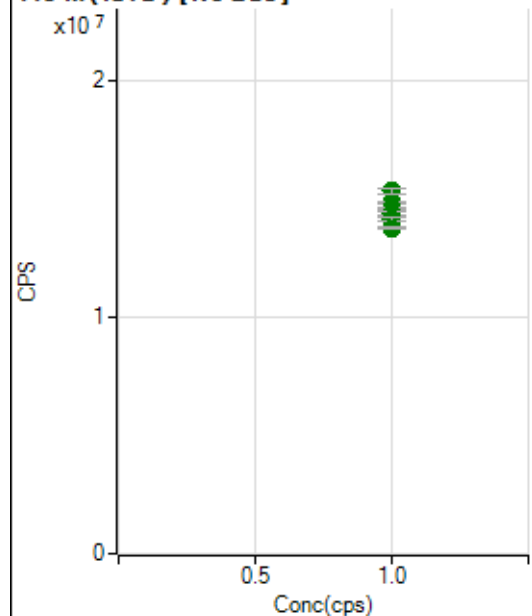
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4340461.12		P	0.5
2	☐	1.000		4368266.81		P	0.4
3	☐	1.000		4405710.87		P	0.7
4	☐	1.000		4365426.05		P	2.3
5	☐	1.000		4303908.65		P	0.8
6	☐	1.000		4287669.35		P	0.4
7	☐	1.000		4396431.57		P	0.6
8	☐	1.000		4514029.27		P	0.5

103 Rh(ISTD) [No Gas]

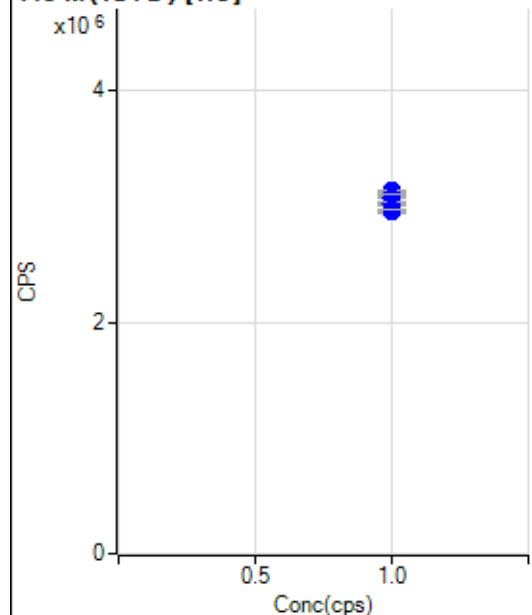
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		13293520.78		A	1.0
2	☐	1.000		13674759.86		A	0.6
3	☐	1.000		13633979.13		A	0.3
4	☐	1.000		13973039.90		A	1.8
5	☐	1.000		13142733.11		A	0.3
6	☐	1.000		12832240.65		A	0.9
7	☐	1.000		12574414.34		A	0.5
8	☐	1.000		11834985.60		A	0.9

103 Rh (ISTD) [He]

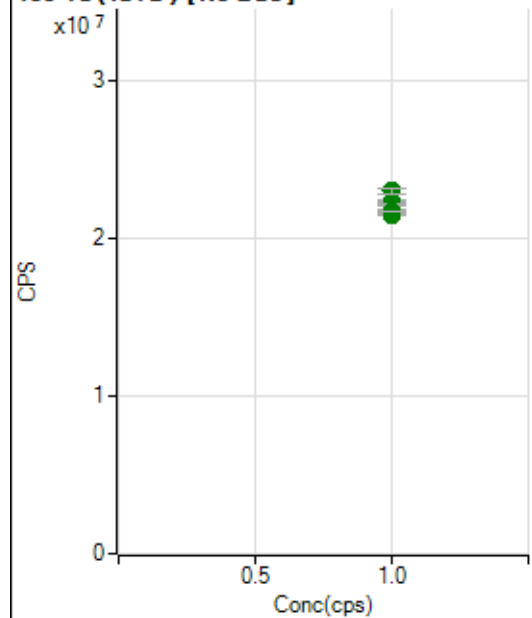
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7449304.33		A	0.3
2	☐	1.000		7670414.95		A	0.4
3	☐	1.000		7661071.90		A	0.3
4	☐	1.000		7523253.70		A	2.3
5	☐	1.000		7377017.32		A	0.7
6	☐	1.000		7249905.59		A	0.2
7	☐	1.000		7180575.38		A	0.6
8	☐	1.000		6842790.73		A	0.4

115 In (ISTD) [No Gas]

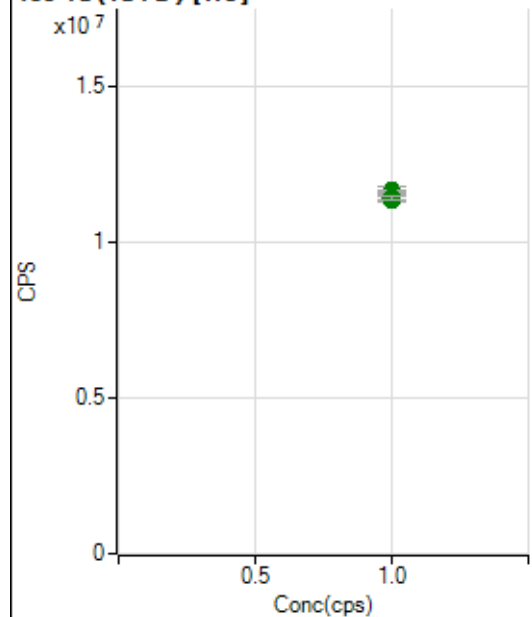
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14492323.68		A	0.3
2	☐	1.000		14863119.87		A	0.5
3	☐	1.000		14929682.92		A	0.2
4	☐	1.000		15367218.15		A	1.5
5	☐	1.000		14631996.80		A	0.3
6	☐	1.000		14392088.44		A	1.3
7	☐	1.000		14147765.79		A	0.9
8	☐	1.000		13801491.79		A	0.1

115 In (ISTD) [He]

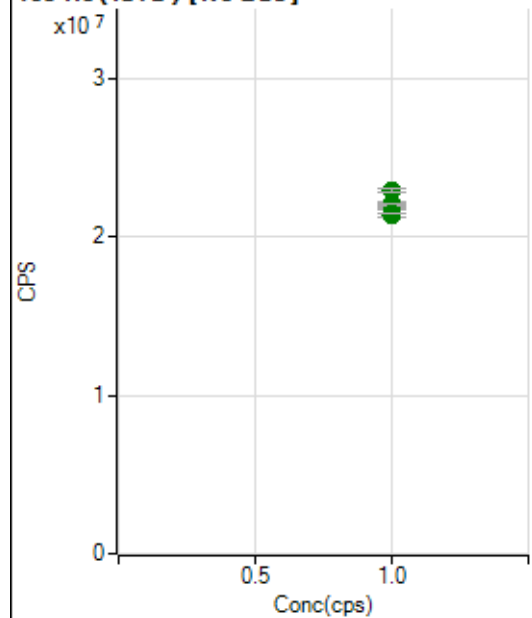
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3077417.90		P	0.6
2	☐	1.000		3117078.31		P	0.5
3	☐	1.000		3135704.56		P	0.2
4	☐	1.000		3067585.72		P	2.4
5	☐	1.000		3020388.04		P	0.9
6	☐	1.000		2973882.78		P	0.2
7	☐	1.000		2952629.71		P	0.6
8	☐	1.000		2975111.22		P	0.5

159 Tb (ISTD) [No Gas]

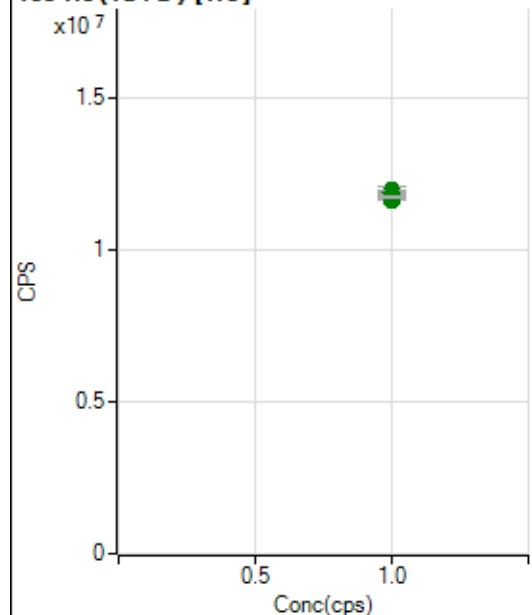
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		21504989.96		A	0.6
2	☐	1.000		21881685.23		A	0.2
3	☐	1.000		22358029.67		A	0.4
4	☐	1.000		23023975.49		A	1.5
5	☐	1.000		22145399.39		A	0.3
6	☐	1.000		22156531.61		A	1.1
7	☐	1.000		22200514.39		A	0.5
8	☐	1.000		21695971.34		A	0.2

159 Tb (ISTD) [He]

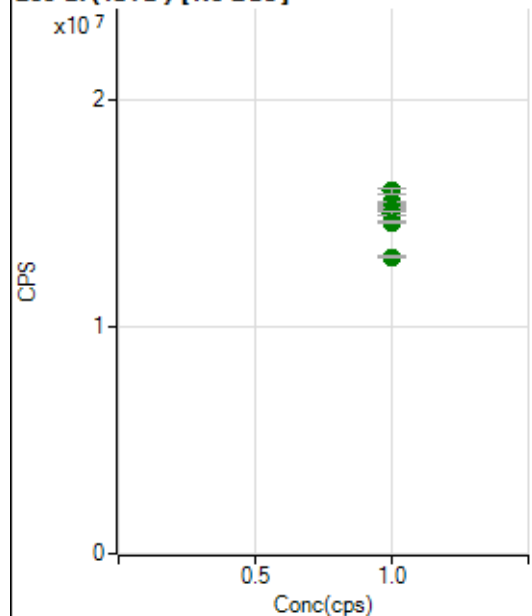
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11341937.75		A	0.5
2	☐	1.000		11589568.30		A	0.6
3	☐	1.000		11635360.94		A	0.1
4	☐	1.000		11620700.38		A	2.3
5	☐	1.000		11579488.99		A	0.7
6	☐	1.000		11519412.74		A	0.1
7	☐	1.000		11620248.85		A	0.5
8	☐	1.000		11413342.33		A	0.7

165 Ho (ISTD) [No Gas]

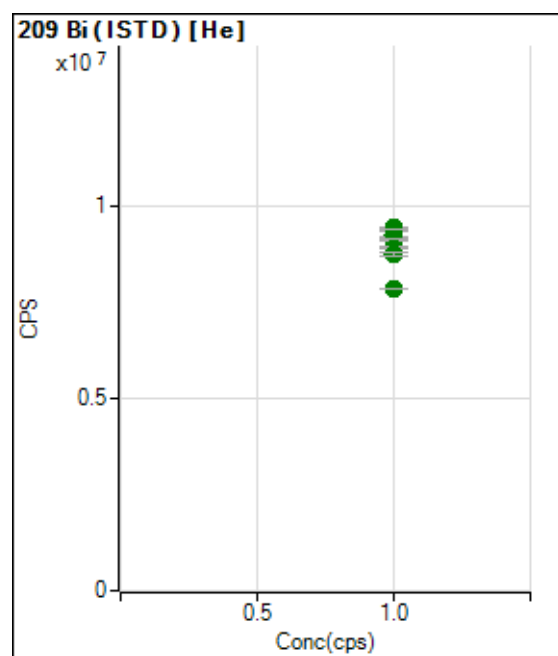
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		21390057.77		A	0.8
2	☐	1.000		21809074.80		A	0.2
3	☐	1.000		22172002.41		A	0.4
4	☐	1.000		22925535.76		A	1.1
5	☐	1.000		22014408.65		A	0.5
6	☐	1.000		22025871.85		A	1.1
7	☐	1.000		22062220.46		A	0.4
8	☐	1.000		21526878.60		A	0.2

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11644321.63		A	0.3
2	☐	1.000		11883527.46		A	1.0
3	☐	1.000		11876464.13		A	0.4
4	☐	1.000		11944759.96		A	2.4
5	☐	1.000		11861823.85		A	0.6
6	☐	1.000		11845733.30		A	0.2
7	☐	1.000		11914824.96		A	1.0
8	☐	1.000		11747657.88		A	0.2

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		15354691.02		A	0.4
2	☐	1.000		15510799.63		A	0.9
3	☐	1.000		15542194.35		A	0.3
4	☐	1.000		16022398.79		A	1.6
5	☐	1.000		15242776.02		A	0.6
6	☐	1.000		14996441.72		A	1.0
7	☐	1.000		14646863.25		A	0.4
8	☐	1.000		13116228.41		A	0.2



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9179541.39		A	0.4
2	☐	1.000		9428935.07		A	0.8
3	☐	1.000		9342926.95		A	0.2
4	☐	1.000		9259296.18		A	2.7
5	☐	1.000		9121743.75		A	0.3
6	☐	1.000		8905367.92		A	0.5
7	☐	1.000		8744220.22		A	0.7
8	☐	1.000		7852668.35		A	0.2

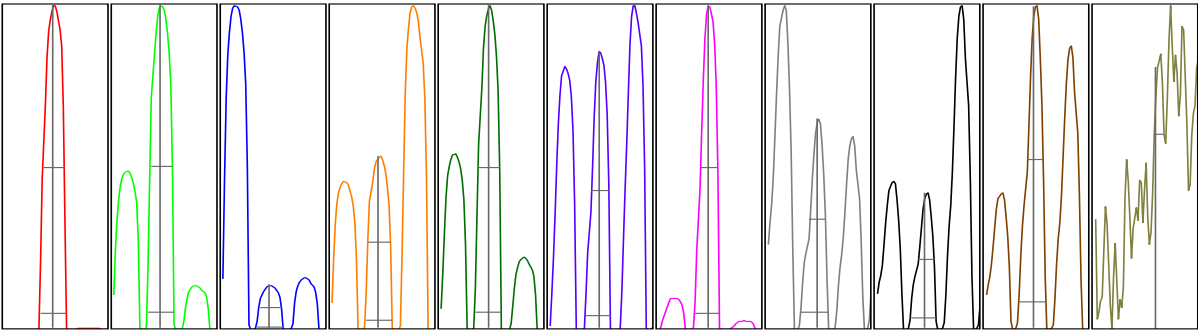
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7083019ICPMS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count	RSD%	RSD%	RSD%
	(Mean)	(Actual)	(Required)	(Flag)
9	8483	0.27	5.00	
24	113596	0.70	5.00	
25	15321	0.60	5.00	
26	18009	0.61	5.00	
59	103977	0.56	5.00	
113	16121	0.85	5.00	
115	191246	1.32	5.00	
206	53372	0.33	5.00	
207	49539	0.43	5.00	
208	116975	0.33	5.00	
220	74	7.06		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	8467	8465	8521	8485	8478
24	113378	112723	113170	113893	114815
25	15207	15322	15255	15390	15430
26	17905	17886	18115	18028	18109
59	103545	103356	104483	103816	104685
113	16314	16103	16195	15970	16024
115	194746	192462	191236	189419	188367
206	53585	53111	53363	53323	53480
207	49499	49189	49621	49731	49654
208	117183	116677	116929	116573	117511
220	67	73	82	77	74

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	14193	8.95	8.9 - 9.1		0.781	0.900	
24	185124	23.90	23.9 - 24.1		0.784	0.900	
25	25092	24.90	24.9 - 25.1		0.782	0.900	
26	29297	25.90	25.9 - 26.1		0.784	0.900	
59	178643	58.95	58.9 - 59.1		0.775	0.900	
113	31131	113.00	112.9 - 113.1		0.727	0.900	
115	372889	115.00	114.9 - 115.1		0.719	0.900	
206	108000	206.00	205.9 - 206.1		0.793	0.900	
207	98144	206.95	206.9 - 207.1		0.742	0.900	
208	234151	207.95	207.9 - 208.1		0.785	0.900	
220	79	220.35	-				

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	7.0	V	Deflect	12.4	V
Extract 2	-120.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-60	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	140	V			

[He]

Mass	Count	RSD%	RSD%
	(Mean)	(Actual)	(Required)
59	32395	0.41	
89	42254	0.67	
205	54081	0.86	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	32232	32556	32479	32289	32421
89	42279	42721	42190	42012	42067
205	54236	54662	54135	53999	53372

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	7.2	V	Deflect	1.0	V
Extract 2	-130.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-75	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			