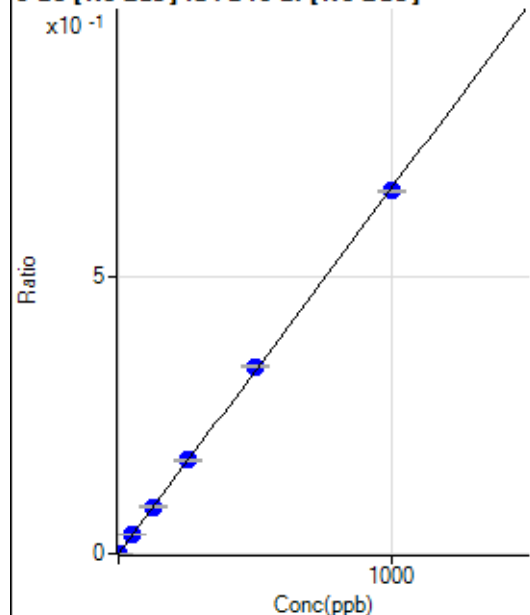


Calibration for 008CALS.d

Batch Folder: D:\ICP-MS Data\P7092919-MS.b\
 Analysis File: P7092919-MS.batch.bin
 DA Date-Time: 2019-09-30 01:02:08
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	S00	2019-09-29 14:53:02
2	003CALS.d	S02	2019-09-29 14:56:38
3	004CALS.d	S03	2019-09-29 15:01:13
4	005CALS.d	S04	2019-09-29 15:05:11
5	006CALS.d	S05	2019-09-29 15:09:02
6	007CALS.d	S06	2019-09-29 15:12:52
7	008CALS.d	S07	2019-09-29 15:16:39
8	009CALS.d	S08	2019-09-29 15:20:25

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	78.89	0.0000	P	2.7
2	☐	1.000	1.010	2051.28	0.0007	P	3.6
3	☐	50.000	51.900	99202.02	0.0344	P	0.5
4	☐	125.000	128.643	239281.29	0.0852	P	0.5
5	☐	250.000	255.218	454164.86	0.1690	P	1.0
6	☐	500.000	510.695	888018.66	0.3381	P	1.1
7	☐	1000.000	992.797	1655599.52	0.6573	P	0.6
8	☐			265.56	0.0001	P	14.5

$$y = 6.6207\text{E-}004 * x + 2.7070\text{E-}005$$

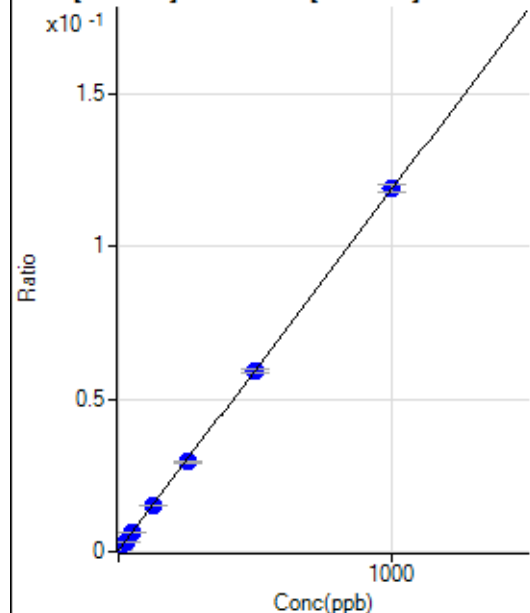
$$R = 0.9999$$

$$DL = 0.003315$$

$$BEC = 0.04089$$

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	1066.76	0.0004	P	18.0
2	☐	25.000	23.546	9275.42	0.0031	P	3.2
3	☐	50.000	50.038	18097.60	0.0063	P	3.4
4	☐	125.000	123.852	42090.01	0.0150	P	1.8
5	☐	250.000	245.445	78841.73	0.0293	P	0.9
6	☐	500.000	498.150	155385.73	0.0592	P	2.7
7	☐	1000.000	1002.242	298878.63	0.1187	P	2.1
8	☐			15814.41	0.0066	P	6.7

$$y = 1.1804\text{E-}004 * x + 3.6618\text{E-}004$$

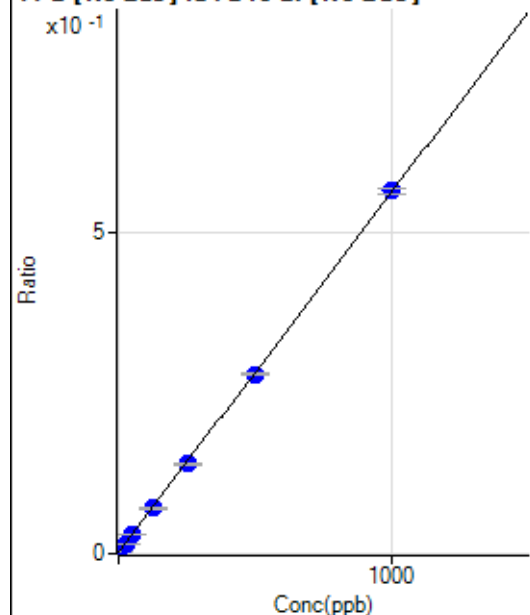
$$R = 1.0000$$

$$DL = 1.678$$

$$BEC = 3.102$$

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	4712.05	0.0016	P	4.4
2	☐	25.000	23.429	43429.96	0.0147	P	1.7
3	☐	50.000	49.395	84408.01	0.0293	P	0.5
4	☐	125.000	122.496	197070.38	0.0702	P	1.6
5	☐	250.000	246.186	374593.30	0.1394	P	1.3
6	☐	500.000	495.662	732729.47	0.2790	P	1.8
7	☐	1000.000	1003.505	1418518.67	0.5632	P	1.6
8	☐			74445.20	0.0310	P	6.7

$$y = 5.5963\text{E-}004 * x + 0.0016$$

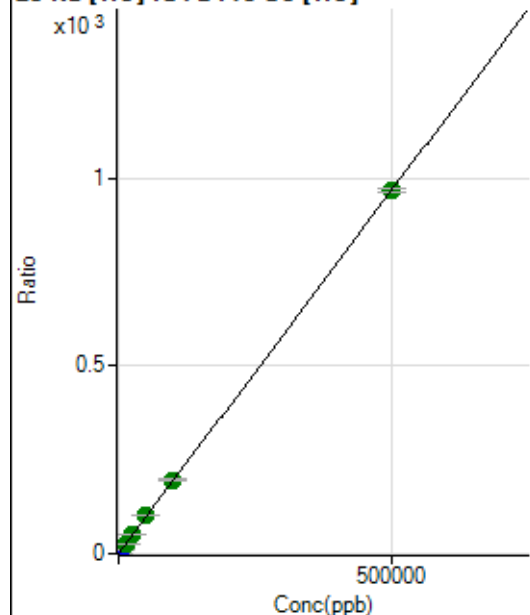
$$R = 1.0000$$

$$DL = 0.3793$$

$$BEC = 2.889$$

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	9948.13	0.0523	P	1.5
2	☐	500.000	507.298	199635.00	1.0332	P	0.7
3	☐	5000.000	5114.559	1833401.41	9.9413	P	0.6
4	☐	12500.000	12852.273	4455218.33	24.9021	A	0.7
5	☐	25000.000	25531.836	8666650.80	49.4180	A	0.7
6	☐	50000.000	51739.926	17143858.37	100.0912	A	0.2
7	☐	100000.00	101574.44	32493962.53	196.4461	A	0.9
8	☐	500000.00	499474.56	165133899.5	965.7843	A	0.9

$$y = 0.0019 * x + 0.0523$$

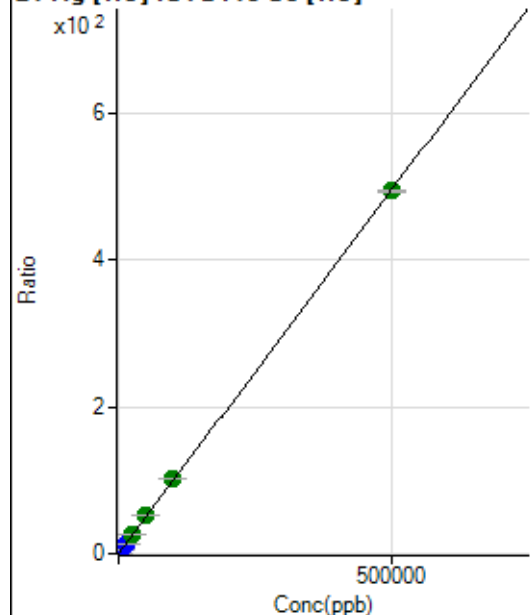
$$R = 1.0000$$

$$DL = 1.199$$

$$BEC = 27.05$$

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	216.68	0.0011	P	3.9
2	☐	500.000	538.761	103337.90	0.5348	P	0.6
3	☐	5000.000	5277.833	964350.58	5.2290	P	0.5
4	☐	12500.000	13186.175	2337014.98	13.0625	P	0.2
5	☐	25000.000	26244.347	4559286.60	25.9971	A	0.6
6	☐	50000.000	52671.353	8936454.89	52.1739	A	0.2
7	☐	100000.00	103763.34	17001224.69	102.7822	A	0.8
8	☐	500000.00	498898.00	84494942.86	494.1765	A	0.8

$$y = 9.9053\text{E-}004 * x + 0.0011$$

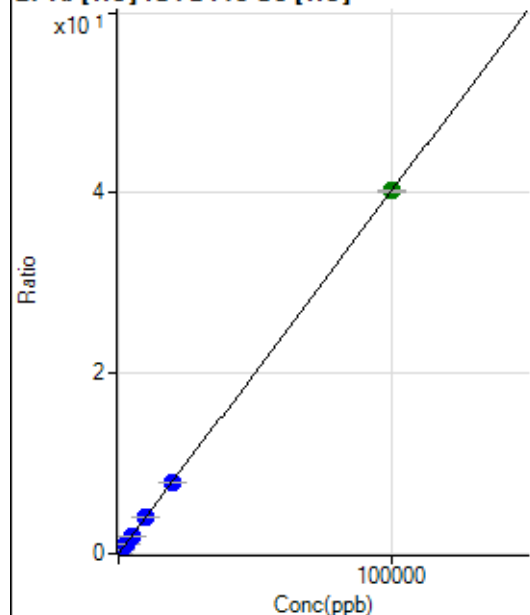
R = 1.0000

DL = 0.1352

BEC = 1.15

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	86.11	0.0005	P	45.5
2	☐	20.000	21.154	1730.73	0.0090	P	6.1
3	☐	1000.000	1015.409	75365.10	0.4087	P	1.6
4	☐	2500.000	2546.574	183236.16	1.0242	P	1.3
5	☐	5000.000	4959.023	349709.87	1.9940	P	0.8
6	☐	10000.000	10063.781	693046.79	4.0462	P	0.5
7	☐	20000.000	19750.328	1313369.97	7.9402	P	1.2
8	☐	100000.00	100044.28	6876846.51	40.2190	A	0.7

$$y = 4.0201\text{E-}004 * x + 4.5215\text{E-}004$$

R = 1.0000

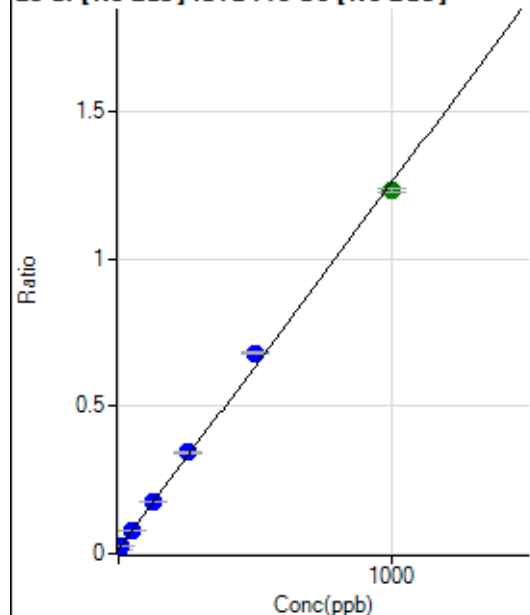
DL = 1.534

BEC = 1.125

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	82667.03	0.0157	P	1.0
2	☐	10.000	7.450	130478.85	0.0250	P	0.3
3	☐	50.000	49.336	390470.94	0.0769	P	1.2
4	☐	125.000	127.815	853463.27	0.1743	P	1.8
5	☐	250.000	263.158	1614418.66	0.3422	P	0.8
6	☐	500.000	535.867	3175409.40	0.6806	P	1.2
7	☐	1000.000	978.484	5566286.63	1.2298	A	0.9
8	☐			329800.75	0.0750	P	1.1

$$y = 0.0012 * x + 0.0157$$

$$R = 0.9989$$

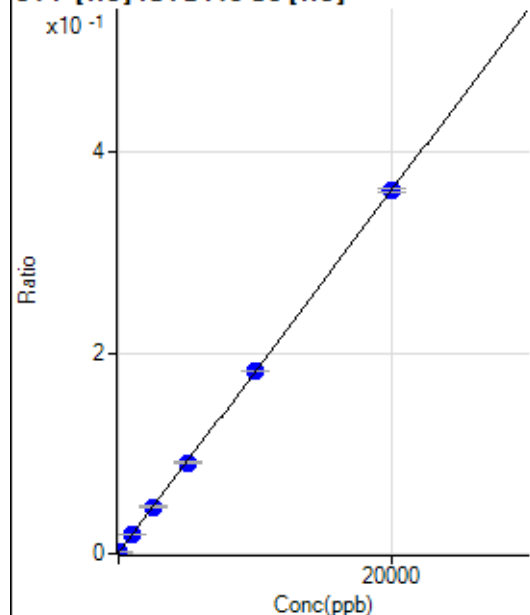
$$DL = 0.3747$$

$$BEC = 12.68$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-29.693	52.78	0.0003	P	23.9
2	☐	0.000	29.693	261.12	0.0014	P	22.4
3	☐	1000.000	1035.013	3600.60	0.0195	P	4.1
4	☐	2500.000	2537.516	8352.64	0.0467	P	4.1
5	☐	5000.000	4974.540	15914.63	0.0907	P	1.8
6	☐	10000.000	10053.597	31266.95	0.1826	P	0.7
7	☐	20000.000	19973.127	59859.60	0.3619	P	1.1
8	☐			61.11	0.0004	P	57.8

$$y = 1.8077E-005 * x + 8.1411E-004$$

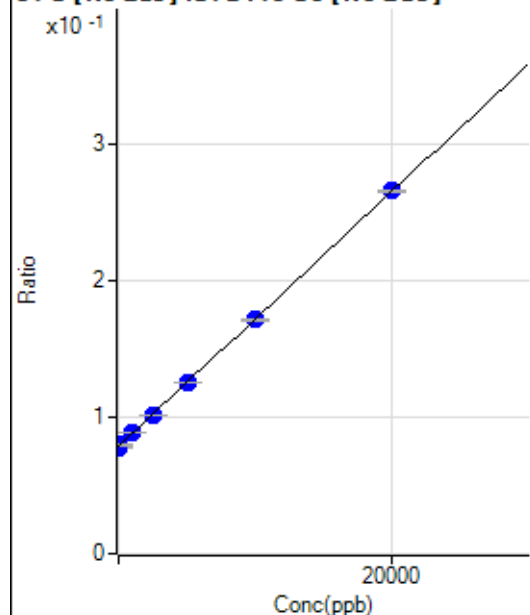
$$R = 1.0000$$

$$DL = 30.58$$

$$BEC = 45.04$$

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	-94.499	410245.80	0.0781	P	0.4
2	☐	0.000	94.499	417055.37	0.0798	P	1.0
3	☐	1000.000	1073.282	451523.21	0.0890	P	1.3
4	☐	2500.000	2467.612	499438.59	0.1020	P	0.3
5	☐	5000.000	4984.171	592180.44	0.1255	P	0.1
6	☐	10000.000	9933.647	801571.01	0.1718	P	0.5
7	☐	20000.000	20037.518	1205177.39	0.2663	P	0.7
8	☐			370240.95	0.0842	P	1.0

$$y = 9.3486\text{E-}006 * x + 0.0789$$

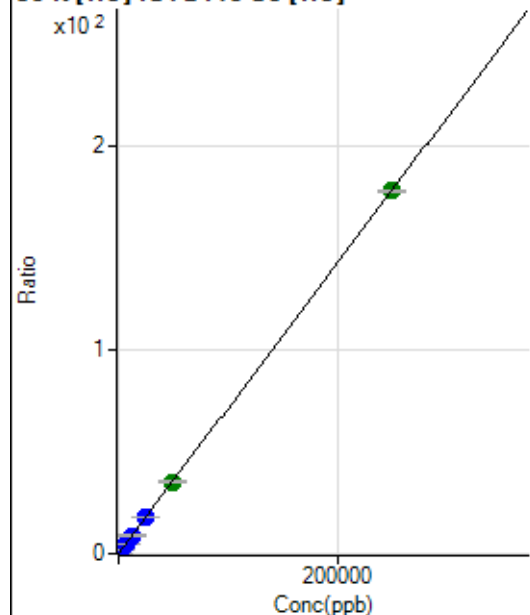
$$R = 1.0000$$

$$DL = 180$$

$$BEC = 8444$$

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	8691.76	0.0457	P	2.5
2	☐	500.000	503.865	78130.69	0.4043	P	1.2
3	☐	2500.000	2526.825	340126.76	1.8443	P	0.6
4	☐	6250.000	6322.248	813297.18	4.5458	P	0.3
5	☐	12500.000	12495.505	1567826.70	8.9399	P	0.8
6	☐	25000.000	25438.595	3109199.92	18.1528	P	0.6
7	☐	50000.000	49528.555	5838923.05	35.2999	A	0.9
8	☐	250000.00	250048.57	30441407.28	178.0289	A	0.8

$$y = 7.1179\text{E-}004 * x + 0.0457$$

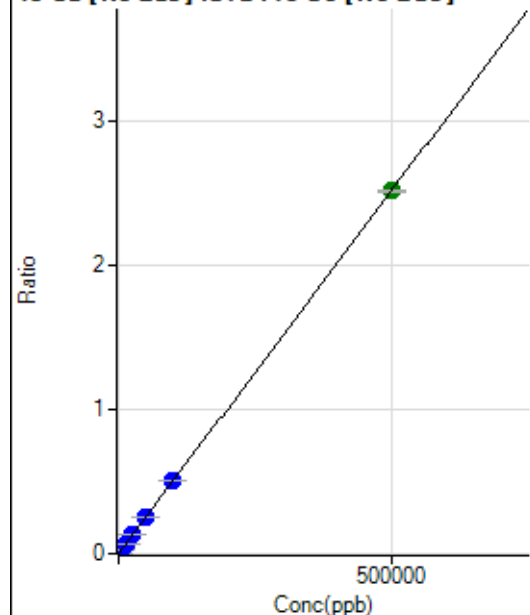
$$R = 1.0000$$

$$DL = 4.776$$

$$BEC = 64.2$$

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	102.78	0.0000	P	41.7
2	☐	500.000	483.101	12811.63	0.0025	P	2.7
3	☐	5000.000	5088.038	130112.65	0.0256	P	0.5
4	☐	12500.000	12772.484	314951.45	0.0643	P	0.2
5	☐	25000.000	25337.378	601871.95	0.1276	P	0.9
6	☐	50000.000	50953.473	1196996.89	0.2566	P	1.0
7	☐	100000.00	100164.67	2282749.66	0.5043	P	0.9
8	☐	500000.00	499847.17	11067014.65	2.5167	A	0.3

$$y = 5.0349\text{E-}006 * x + 1.9560\text{E-}005$$

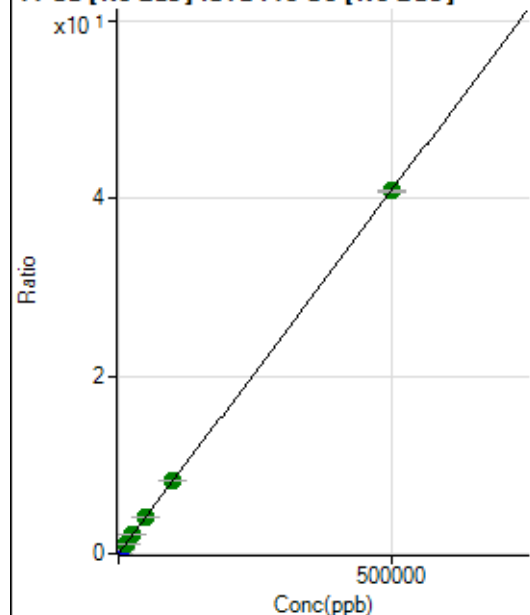
$$R = 1.0000$$

$$DL = 4.864$$

$$BEC = 3.885$$

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	5273.40	0.0010	P	0.7
2	☐	500.000	492.534	215353.66	0.0412	P	0.6
3	☐	5000.000	5076.233	2108495.38	0.4155	P	0.3
4	☐	12500.000	12780.185	5113734.40	1.0445	A	0.6
5	☐	25000.000	25531.418	9838035.12	2.0855	A	0.3
6	☐	50000.000	51151.140	19489477.35	4.1773	A	0.5
7	☐	100000.00	100915.07	37298071.67	8.2403	A	0.6
8	☐	500000.00	499667.54	179406416.5	40.7970	A	0.3

$$y = 8.1646\text{E-}005 * x + 0.0010$$

$$R = 1.0000$$

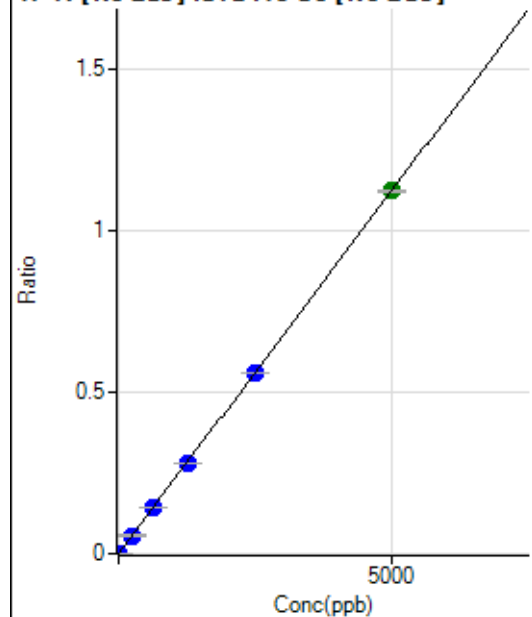
$$DL = 0.2718$$

$$BEC = 12.29$$

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	63.89	0.0000	P	46.0
2	☐	5.000	5.287	6268.26	0.0012	P	3.8
3	☐	250.000	250.800	285955.84	0.0563	P	1.1
4	☐	625.000	628.469	691234.63	0.1412	P	0.5
5	☐	1250.000	1250.256	1324838.52	0.2809	P	0.6
6	☐	2500.000	2497.230	2617191.12	0.5610	P	0.3
7	☐	5000.000	5000.847	5084524.37	1.1233	A	0.4
8	☐			1344.56	0.0003	P	10.3

$$y = 2.2463\text{E-}004 * x + 1.2167\text{E-}005$$

$$R = 1.0000$$

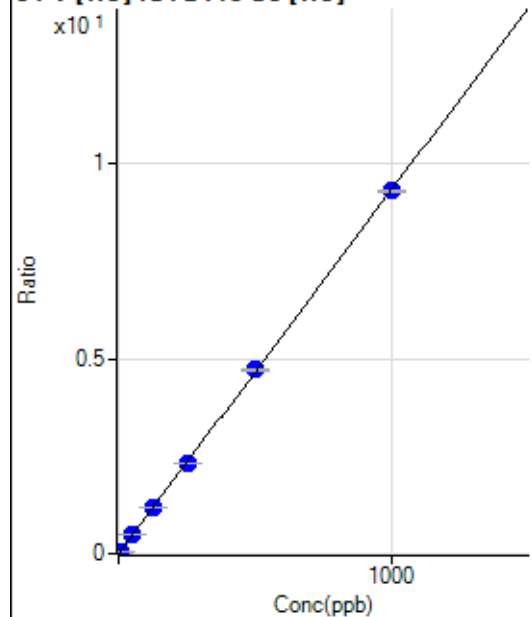
$$DL = 0.07472$$

$$BEC = 0.05417$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	7.78	0.0000	P	65.3
2	☐	5.000	5.287	9551.01	0.0494	P	1.1
3	☐	50.000	50.471	86958.61	0.4715	P	0.8
4	☐	125.000	126.695	211753.10	1.1836	P	0.7
5	☐	250.000	250.259	410005.63	2.3378	P	0.2
6	☐	500.000	504.871	807812.40	4.7163	P	0.4
7	☐	1000.000	997.263	1540955.41	9.3160	P	0.7
8	☐			458.90	0.0027	P	9.8

$$y = 0.0093 * x + 4.0882\text{E-}005$$

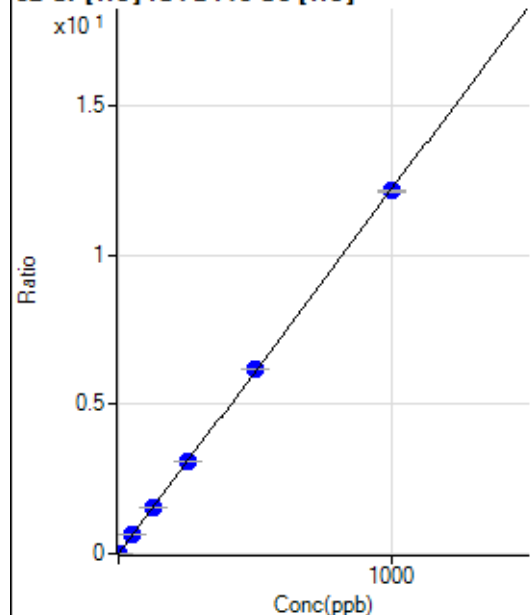
$$R = 1.0000$$

$$DL = 0.008574$$

$$BEC = 0.004376$$

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	407.79	0.0021	P	10.4
2	☐	2.000	2.040	5216.56	0.0270	P	1.8
3	☐	50.000	51.530	116178.80	0.6300	P	0.3
4	☐	125.000	128.436	280341.32	1.5669	P	0.6
5	☐	250.000	252.763	540465.71	3.0817	P	0.1
6	☐	500.000	505.833	1055955.65	6.1650	P	0.2
7	☐	1000.000	995.886	2007334.55	12.1356	P	0.8
8	☐			66826.21	0.3908	P	0.3

$$y = 0.0122 * x + 0.0021$$

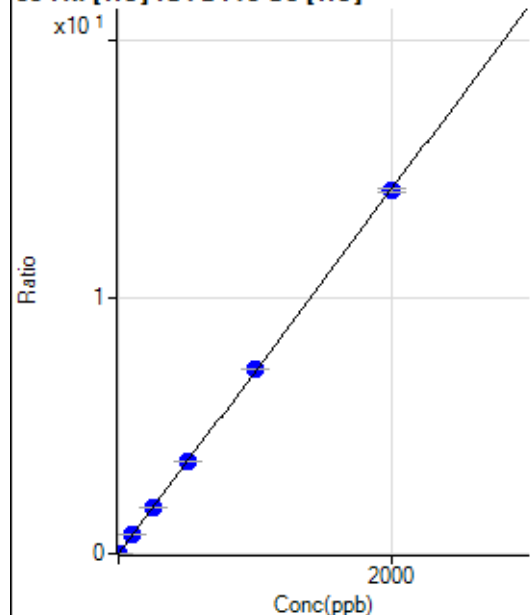
$$R = 1.0000$$

$$DL = 0.05478$$

$$BEC = 0.176$$

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	40.00	0.0002	P	42.1
2	☐	1.000	1.062	1497.88	0.0078	P	1.9
3	☐	100.000	102.720	134602.49	0.7299	P	0.8
4	☐	250.000	255.803	325122.55	1.8172	P	0.2
5	☐	500.000	506.003	630390.94	3.5945	P	0.3
6	☐	1000.000	1013.585	1233226.71	7.1999	P	0.1
7	☐	2000.000	1990.845	2339144.90	14.1416	P	1.0
8	☐			8341.37	0.0488	P	2.3

$$y = 0.0071 * x + 2.1054E-004$$

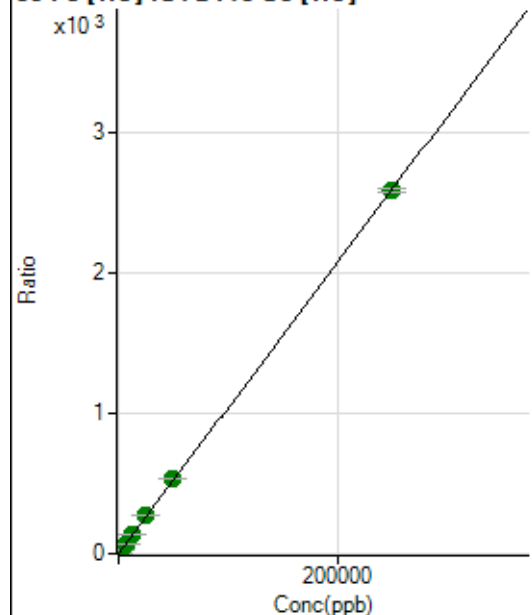
$$R = 1.0000$$

$$DL = 0.03741$$

$$BEC = 0.02964$$

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	1601.99	0.0084	P	5.2
2	☐	50.000	56.698	114848.88	0.5944	P	0.6
3	☐	2500.000	2647.587	5047717.30	27.3703	A	0.3
4	☐	6250.000	6634.745	12268977.47	68.5761	A	0.3
5	☐	12500.000	13134.371	23807224.84	135.7474	A	0.2
6	☐	25000.000	26114.391	46227109.83	269.8912	A	0.4
7	☐	50000.000	51429.104	87916109.37	531.5097	A	1.0
8	☐	250000.00	249559.92	440979165.4	2,579.120	A	1.0

$$y = 0.0103 * x + 0.0084$$

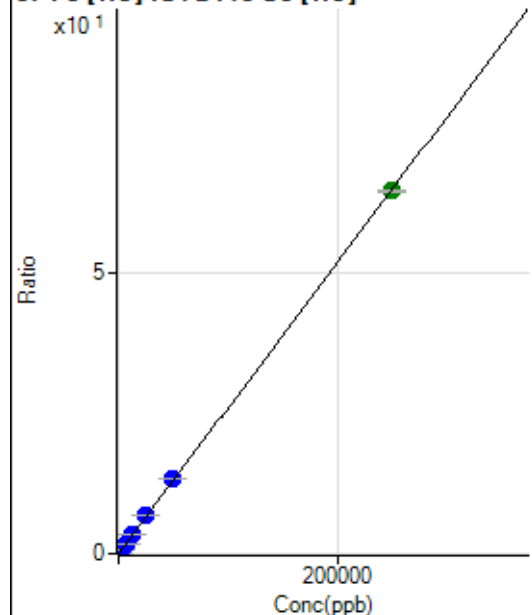
$$R = 1.0000$$

$$DL = 0.1282$$

$$BEC = 0.8149$$

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	55.56	0.0003	P	45.5
2	☐	50.000	55.467	2822.57	0.0146	P	3.9
3	☐	2500.000	2667.154	126996.56	0.6886	P	0.2
4	☐	6250.000	6632.813	306305.27	1.7120	P	0.8
5	☐	12500.000	13154.055	595393.90	3.3950	P	0.9
6	☐	25000.000	26206.478	1158454.45	6.7635	P	0.5
7	☐	50000.000	51432.166	2195515.17	13.2736	P	1.5
8	☐	250000.00	249548.97	11012374.55	64.4024	A	0.6

$$y = 2.5807E-004 * x + 2.9177E-004$$

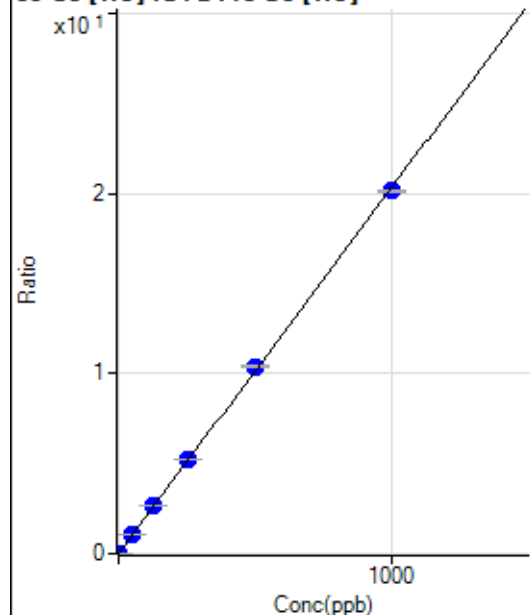
$$R = 1.0000$$

$$DL = 1.544$$

$$BEC = 1.131$$

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	57.78	0.0003	P	20.2
2	☐	1.000	1.045	4163.99	0.0215	P	1.6
3	☐	50.000	52.990	198766.24	1.0778	P	0.3
4	☐	125.000	131.088	476934.85	2.6658	P	0.5
5	☐	250.000	257.331	917697.40	5.2328	P	0.5
6	☐	500.000	511.115	1780123.64	10.3931	P	0.6
7	☐	1000.000	991.699	3335502.00	20.1651	P	0.7
8	☐			41681.46	0.2438	P	1.0

$$y = 0.0203 * x + 3.0379E-004$$

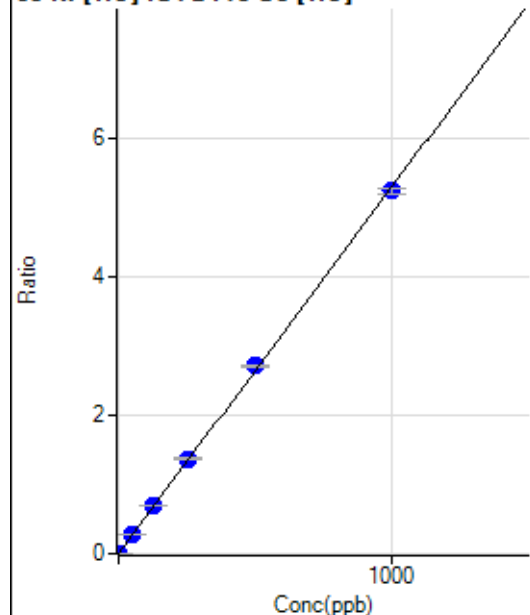
$$R = 0.9999$$

$$DL = 0.009069$$

$$BEC = 0.01494$$

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	131.11	0.0007	P	16.7
2	☐	1.000	1.104	1264.52	0.0065	P	4.1
3	☐	50.000	53.912	52840.50	0.2865	P	0.8
4	☐	125.000	132.998	126275.55	0.7058	P	0.7
5	☐	250.000	259.182	241098.39	1.3748	P	1.2
6	☐	500.000	511.925	464989.80	2.7148	P	0.1
7	☐	1000.000	990.547	868761.26	5.2523	P	1.4
8	☐			26228.09	0.1534	P	0.1

$$y = 0.0053 * x + 6.8916E-004$$

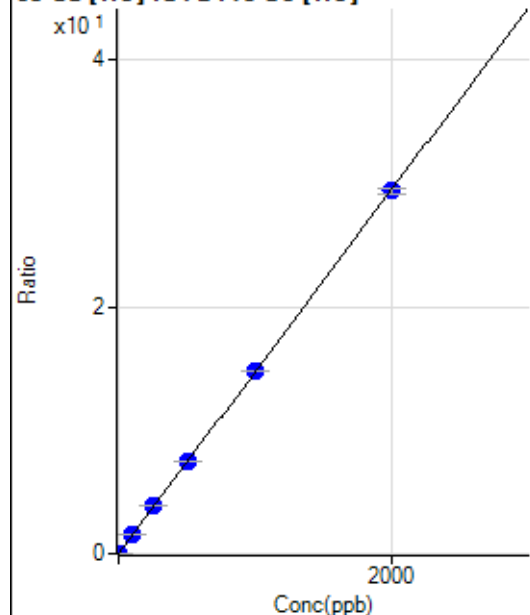
$$R = 0.9998$$

$$DL = 0.06499$$

$$BEC = 0.13$$

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	626.69	0.0033	P	2.6
2	☐	2.000	2.136	6721.64	0.0348	P	3.0
3	☐	100.000	105.212	286672.38	1.5544	P	0.9
4	☐	250.000	261.142	689389.68	3.8533	P	0.5
5	☐	500.000	509.187	1317062.07	7.5102	P	1.1
6	☐	1000.000	1003.979	2535815.48	14.8048	P	0.2
7	☐	2000.000	1994.060	4863148.16	29.4015	P	1.5
8	☐			8967.29	0.0525	P	2.0

$$y = 0.0147 * x + 0.0033$$

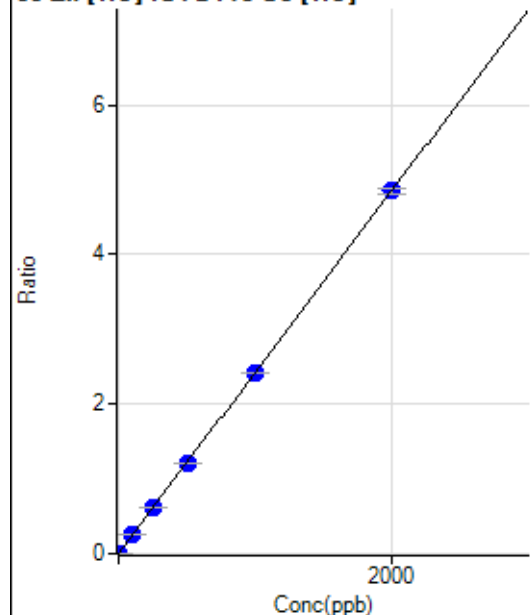
$$R = 1.0000$$

$$DL = 0.01742$$

$$BEC = 0.2235$$

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	312.23	0.0016	P	13.5
2	☐	2.000	1.998	1252.30	0.0065	P	2.4
3	☐	100.000	102.810	46226.35	0.2507	P	2.1
4	☐	250.000	256.043	111244.16	0.6218	P	0.9
5	☐	500.000	500.631	212940.99	1.2142	P	0.6
6	☐	1000.000	995.762	413380.38	2.4134	P	0.3
7	☐	2000.000	2001.065	801942.94	4.8483	P	1.4
8	☐			9011.80	0.0527	P	3.6

$$y = 0.0024 * x + 0.0016$$

$$R = 1.0000$$

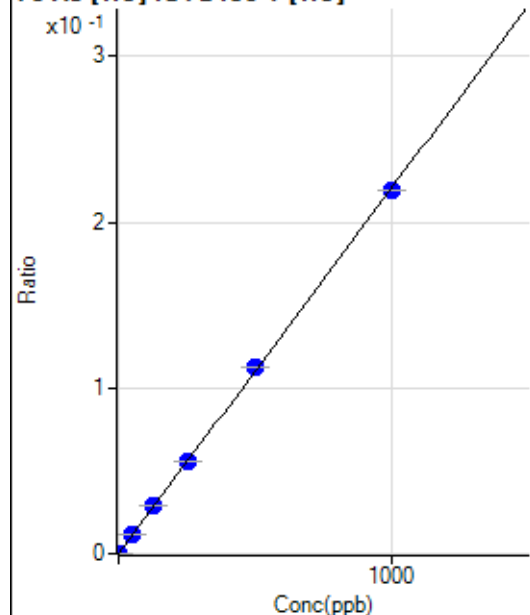
$$DL = 0.2752$$

$$BEC = 0.6775$$

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	6.17	0.0000	P	34.7
2	☐	1.000	1.050	241.98	0.0002	P	8.0
3	☐	50.000	52.098	11119.13	0.0115	P	0.5
4	☐	125.000	129.639	26947.20	0.0286	P	0.3
5	☐	250.000	254.852	51936.06	0.0562	P	0.1
6	☐	500.000	510.463	101735.80	0.1125	P	0.5
7	☐	1000.000	992.870	191996.25	0.2188	P	0.1
8	☐			271.61	0.0003	P	10.7

$$y = 2.2040\text{E-}004 * x + 6.1187\text{E-}006$$

$$R = 0.9999$$

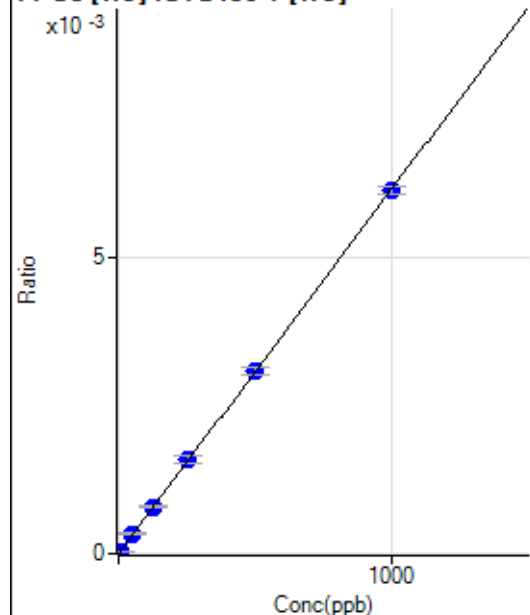
$$DL = 0.02893$$

$$BEC = 0.02776$$

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	4.093	25.55	0.0000	P	42.3
3	☐	50.000	55.407	328.90	0.0003	P	1.3
4	☐	125.000	128.559	743.37	0.0008	P	4.3
5	☐	250.000	258.685	1466.76	0.0016	P	6.3
6	☐	500.000	502.386	2785.87	0.0031	P	4.0
7	☐	1000.000	995.925	5358.85	0.0061	P	2.2
8	☐			2.22	0.0000	P	86.6

$$y = 6.1326\text{E-}006 * x + 0.0000\text{E+}000$$

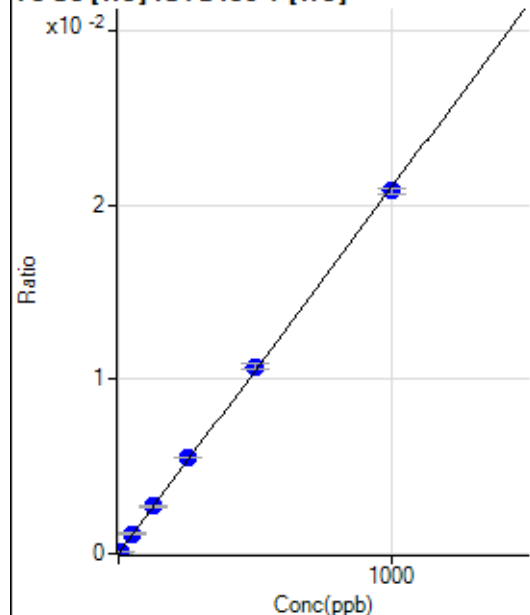
$$R = 0.9999$$

$$DL = 0$$

$$BEC = 0$$

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	12.34	0.0000	P	7.9
2	☐	5.000	6.029	141.36	0.0001	P	4.0
3	☐	50.000	54.365	1115.49	0.0012	P	2.2
4	☐	125.000	128.347	2550.25	0.0027	P	2.7
5	☐	250.000	261.957	5091.67	0.0055	P	0.9
6	☐	500.000	511.608	9715.06	0.0107	P	2.7
7	☐	1000.000	990.565	18240.56	0.0208	P	1.8
8	☐			27.16	0.0000	P	30.4

$$y = 2.0977\text{E-}005 * x + 1.2228\text{E-}005$$

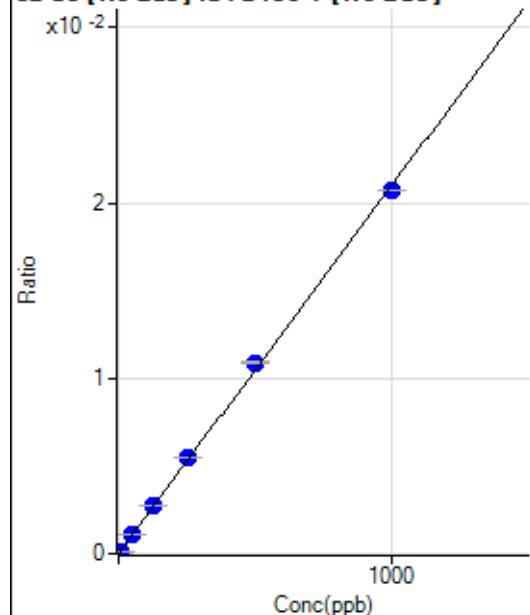
$$R = 0.9998$$

$$DL = 0.1386$$

$$BEC = 0.5829$$

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	40.93	0.0000	P	20.0
2	☐	5.000	5.023	1006.94	0.0001	P	5.8
3	☐	50.000	52.844	9955.78	0.0011	P	0.9
4	☐	125.000	131.140	23998.51	0.0028	P	1.1
5	☐	250.000	261.864	46649.78	0.0055	P	0.9
6	☐	500.000	519.745	90757.07	0.0109	P	0.4
7	☐	1000.000	986.251	169085.37	0.0207	P	0.1
8	☐			34.97	0.0000	P	310.

$$y = 2.0976\text{E-}005 * x + 4.3201\text{E-}006$$

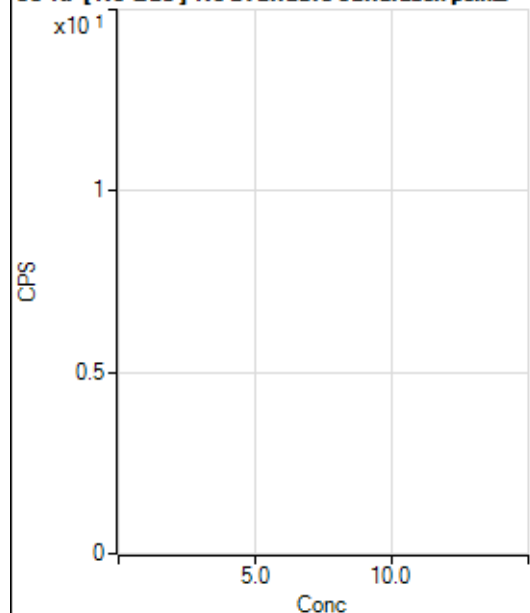
$$R = 0.9996$$

$$DL = 0.1233$$

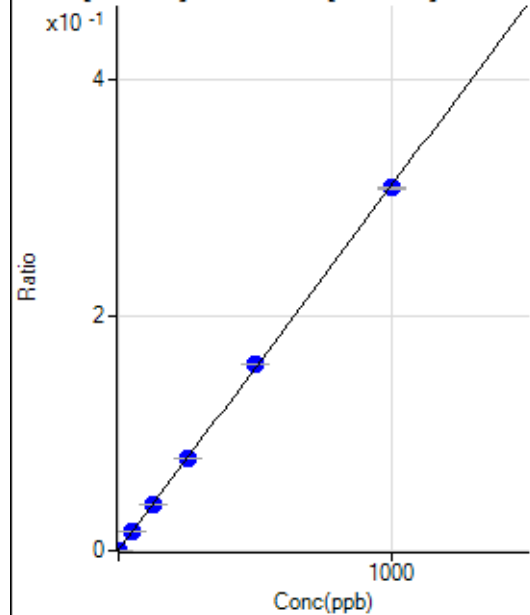
$$BEC = 0.2059$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1783.48		P	3.6
2	☐			1905.72		P	1.6
3	☐			1804.59		P	6.5
4	☐			1723.46		P	6.5
5	☐			1747.91		P	2.9
6	☐			1711.24		P	2.4
7	☐			1629.00		P	2.7
8	☐			1589.00		P	4.7

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	3050.46	0.0003	P	8.3
2	☐	1.000	1.046	5934.78	0.0006	P	2.5
3	☐	50.000	51.111	144731.11	0.0162	P	1.3
4	☐	125.000	127.004	345973.64	0.0397	P	0.6
5	☐	250.000	252.852	668322.02	0.0788	P	0.9
6	☐	500.000	510.968	1321657.71	0.1588	P	0.4
7	☐	1000.000	993.497	2520945.96	0.3085	P	0.5
8	☐			12533.77	0.0016	P	3.5

$$y = 3.1021\text{E-}004 * x + 3.2201\text{E-}004$$

$$R = 0.9999$$

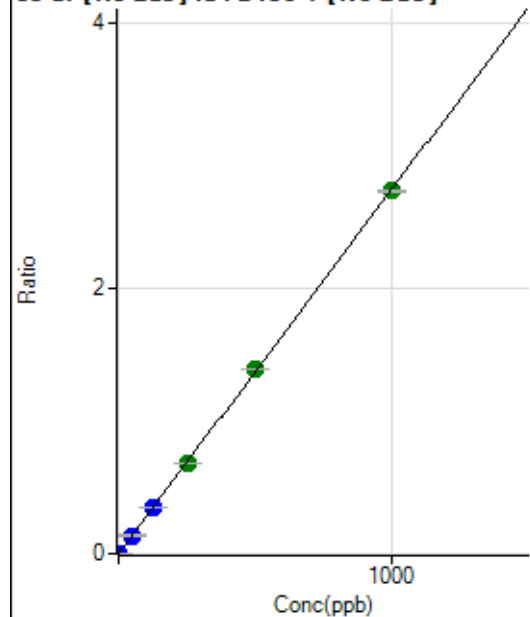
$$DL = 0.2585$$

$$BEC = 1.038$$

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	566.70	0.0001	P	7.8
2	☐	1.000	0.998	25643.25	0.0028	P	1.6
3	☐	50.000	50.142	1229742.07	0.1375	P	0.3
4	☐	125.000	125.783	3002777.54	0.3447	P	0.6
5	☐	250.000	249.156	5794149.65	0.6828	A	0.4
6	☐	500.000	506.650	11553399.82	1.3884	A	0.1
7	☐	1000.000	996.781	22319945.99	2.7315	A	0.4
8	☐			89299.27	0.0113	P	0.4

$$y = 0.0027 * x + 5.9819E-005$$

$$R = 1.0000$$

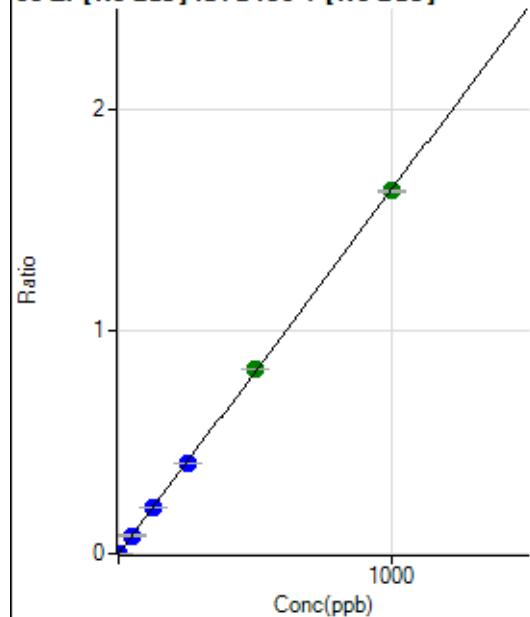
$$DL = 0.005124$$

$$BEC = 0.02183$$

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	825.06	0.0001	P	5.8
2	☐	1.000	0.874	13921.21	0.0015	P	1.5
3	☐	50.000	50.083	733459.65	0.0820	P	1.2
4	☐	125.000	125.977	1795212.26	0.2061	P	0.5
5	☐	250.000	249.696	3465783.41	0.4084	P	0.2
6	☐	500.000	506.376	6891530.19	0.8282	A	0.1
7	☐	1000.000	996.762	13320136.93	1.6301	A	0.5
8	☐			3850.68	0.0005	P	5.5

$$y = 0.0016 * x + 8.7078E-005$$

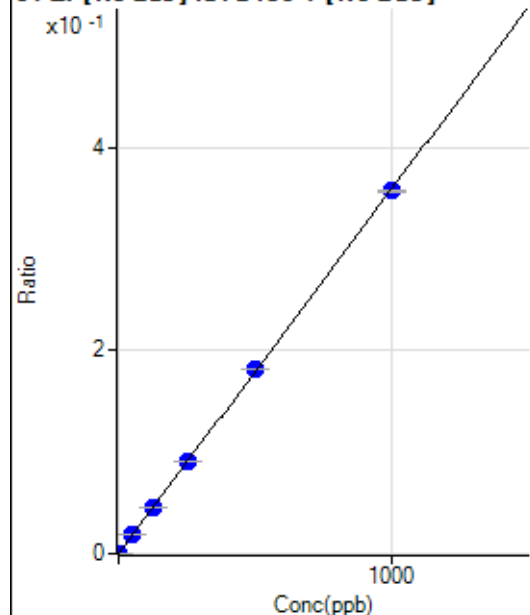
$$R = 1.0000$$

$$DL = 0.009199$$

$$BEC = 0.05325$$

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	155.56	0.0000	P	8.5
2	☐	1.000	0.923	3192.16	0.0003	P	3.4
3	☐	50.000	50.968	163843.58	0.0183	P	1.0
4	☐	125.000	127.927	400193.78	0.0459	P	0.4
5	☐	250.000	253.048	771064.18	0.0909	P	0.6
6	☐	500.000	506.474	1513219.42	0.1819	P	0.3
7	☐	1000.000	995.586	2920782.94	0.3575	P	0.8
8	☐			766.72	0.0001	P	15.1

$$y = 3.5902\text{E-}004 * x + 1.6423\text{E-}005$$

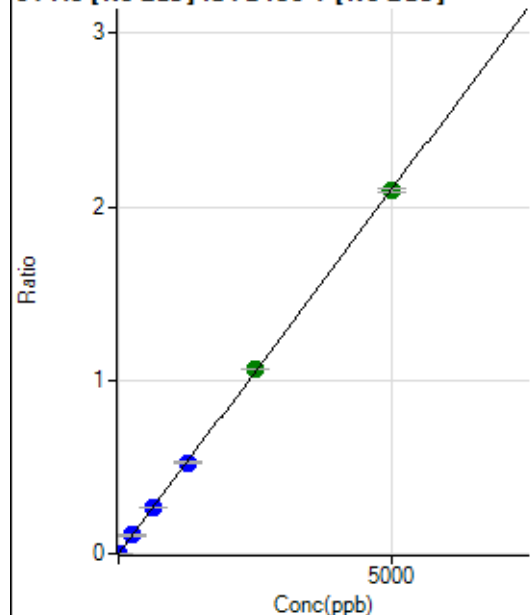
$$R = 1.0000$$

$$DL = 0.01164$$

$$BEC = 0.04574$$

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	283.35	0.0000	P	2.9
2	☐	5.000	4.849	18963.24	0.0021	P	1.5
3	☐	250.000	251.733	945650.52	0.1057	P	1.0
4	☐	625.000	628.444	2298238.96	0.2639	P	0.6
5	☐	1250.000	1251.600	4458867.11	0.5255	P	0.6
6	☐	2500.000	2532.758	8847881.62	1.0633	A	0.3
7	☐	5000.000	4982.704	17092060.63	2.0918	A	0.9
8	☐			12600.56	0.0016	P	2.8

$$y = 4.1980\text{E-}004 * x + 2.9908\text{E-}005$$

$$R = 1.0000$$

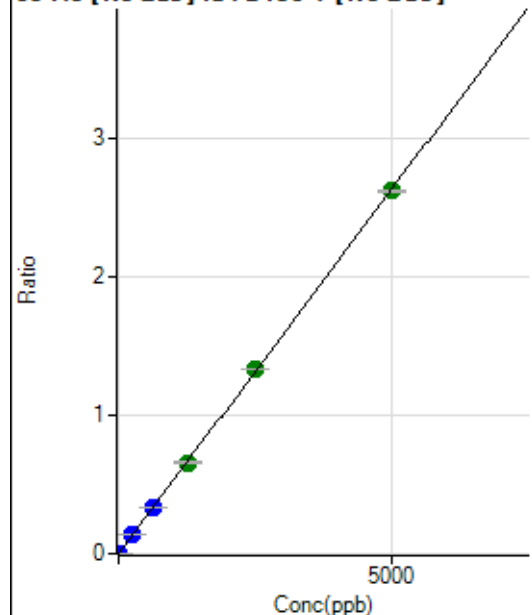
$$DL = 0.006172$$

$$BEC = 0.07124$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.12	0.0000	P	27.9
2	☐	5.000	4.894	23748.37	0.0026	P	0.4
3	☐	250.000	251.152	1183474.92	0.1323	P	0.1
4	☐	625.000	630.979	2894748.35	0.3323	P	0.2
5	☐	1250.000	1253.286	5601364.93	0.6601	A	1.0
6	☐	2500.000	2534.951	11109712.83	1.3351	A	0.6
7	☐	5000.000	4980.898	21436140.58	2.6234	A	0.5
8	☐			20918.84	0.0026	P	4.6

$$y = 5.2668\text{E-}004 * x + 9.0885\text{E-}006$$

$$R = 1.0000$$

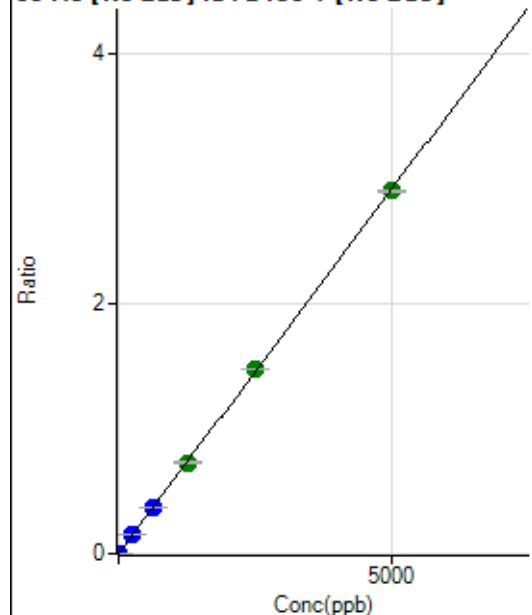
$$DL = 0.01443$$

$$BEC = 0.01726$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	169.45	0.0000	P	31.5
2	☐	5.000	4.905	26414.26	0.0029	P	0.3
3	☐	250.000	251.708	1312788.46	0.1467	P	0.3
4	☐	625.000	628.497	3191275.53	0.3664	P	0.8
5	☐	1250.000	1249.044	6178540.33	0.7281	A	1.1
6	☐	2500.000	2536.815	12305286.30	1.4788	A	0.2
7	☐	5000.000	4981.309	23727083.52	2.9037	A	0.4
8	☐			22665.91	0.0029	P	2.2

$$y = 5.8292\text{E-}004 * x + 1.7898\text{E-}005$$

$$R = 1.0000$$

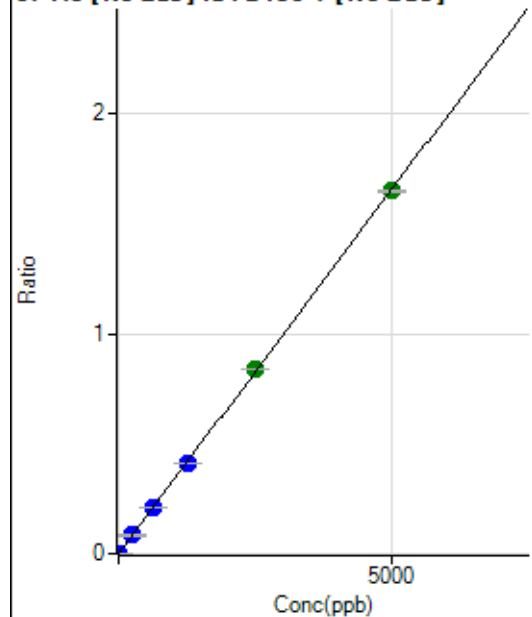
$$DL = 0.02898$$

$$BEC = 0.0307$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.89	0.0000	P	41.9
2	☐	5.000	4.905	14958.33	0.0016	P	1.0
3	☐	250.000	251.257	743659.11	0.0831	P	0.9
4	☐	625.000	631.026	1818410.98	0.2088	P	0.6
5	☐	1250.000	1242.966	3489407.98	0.4112	P	0.7
6	☐	2500.000	2533.619	6974716.30	0.8382	A	0.4
7	☐	5000.000	4984.133	13473435.37	1.6489	A	0.4
8	☐			13162.12	0.0017	P	2.5

$$y = 3.3082\text{E-}004 * x + 6.7431\text{E-}006$$

$$R = 1.0000$$

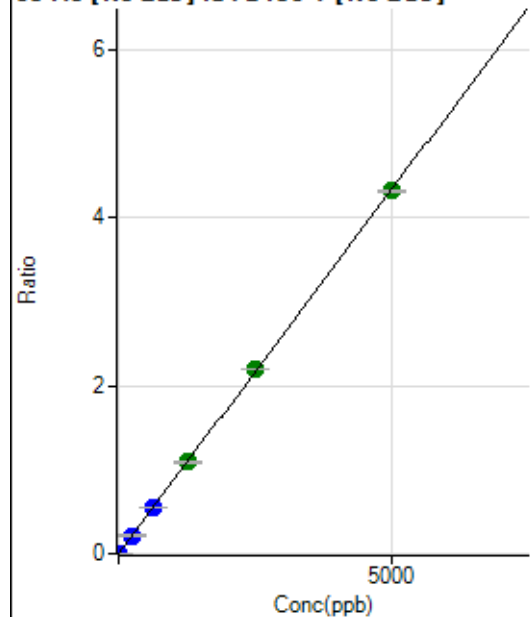
$$DL = 0.02565$$

$$BEC = 0.02038$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.90	0.0000	P	10.8
2	☐	5.000	4.786	38210.46	0.0042	P	2.2
3	☐	250.000	250.517	1941206.31	0.2170	P	0.4
4	☐	625.000	627.960	4737466.30	0.5439	P	0.3
5	☐	1250.000	1254.511	9220097.17	1.0865	A	0.7
6	☐	2500.000	2531.418	18243774.02	2.1925	A	0.6
7	☐	5000.000	4982.767	35263463.64	4.3156	A	0.5
8	☐			33673.98	0.0042	P	1.7

$$y = 8.6610\text{E-}004 * x + 1.7302\text{E-}005$$

$$R = 1.0000$$

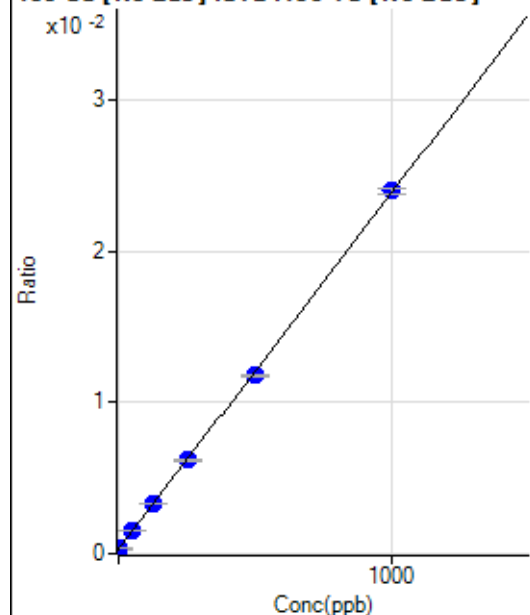
$$DL = 0.006449$$

$$BEC = 0.01998$$

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	4506.46	0.0003	P	2.1
2	☐	1.000	2.433	5120.57	0.0004	P	2.6
3	☐	50.000	53.008	21619.98	0.0015	P	2.2
4	☐	125.000	128.886	45618.64	0.0033	P	1.8
5	☐	250.000	250.101	83998.77	0.0062	P	1.6
6	☐	500.000	486.748	158443.56	0.0118	P	0.1
7	☐	1000.000	1005.963	318079.16	0.0240	P	1.2
8	☐			4275.83	0.0003	P	5.1

$$y = 2.3522\text{E-}005 * x + 3.0107\text{E-}004$$

$$R = 0.9999$$

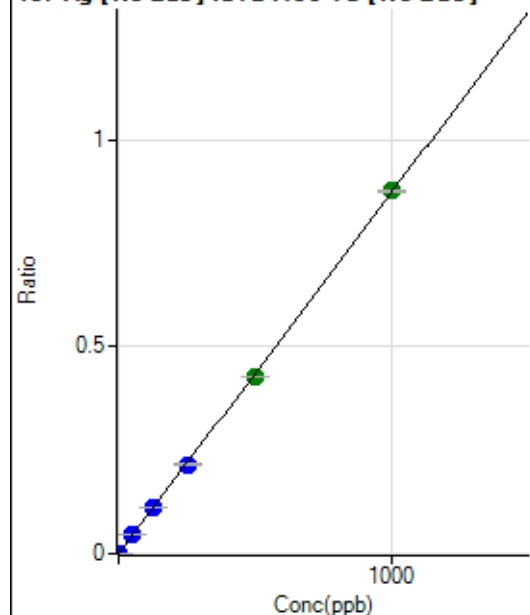
$$DL = 0.8017$$

$$BEC = 12.8$$

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	127.78	0.0000	P	20.6
2	☐	1.000	0.872	10979.65	0.0008	P	2.8
3	☐	50.000	52.208	635300.16	0.0455	P	1.3
4	☐	125.000	128.223	1529083.21	0.1117	P	0.4
5	☐	250.000	247.319	2926776.15	0.2155	P	0.5
6	☐	500.000	490.242	5758662.06	0.4271	A	0.3
7	☐	1000.000	1005.036	11621502.00	0.8755	A	0.6
8	☐			1764.07	0.0001	P	5.5

$$y = 8.7114\text{E-}004 * x + 8.5336\text{E-}006$$

$$R = 0.9999$$

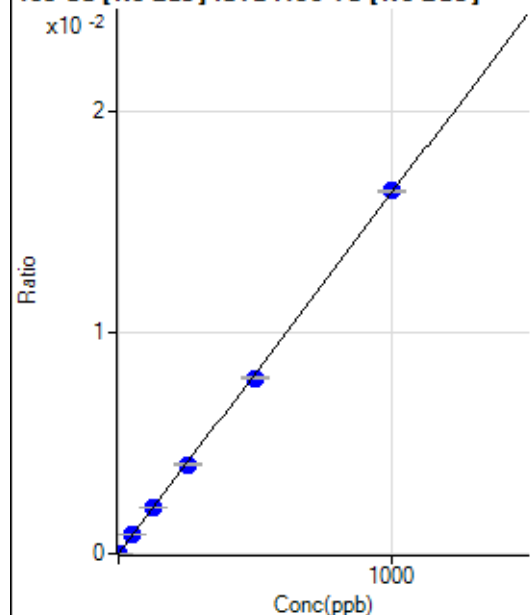
$$DL = 0.006053$$

$$BEC = 0.009796$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	8.34	0.0000	P	86.6
2	☐	1.000	1.002	241.67	0.0000	P	7.7
3	☐	50.000	51.204	11680.03	0.0008	P	1.2
4	☐	125.000	127.085	28399.59	0.0021	P	1.7
5	☐	250.000	247.836	54956.35	0.0040	P	0.9
6	☐	500.000	487.145	107215.78	0.0080	P	0.7
7	☐	1000.000	1006.648	218093.64	0.0164	P	0.7
8	☐			56.95	0.0000	P	36.2

$$y = 1.6322E-005 * x + 5.5702E-007$$

$$R = 0.9999$$

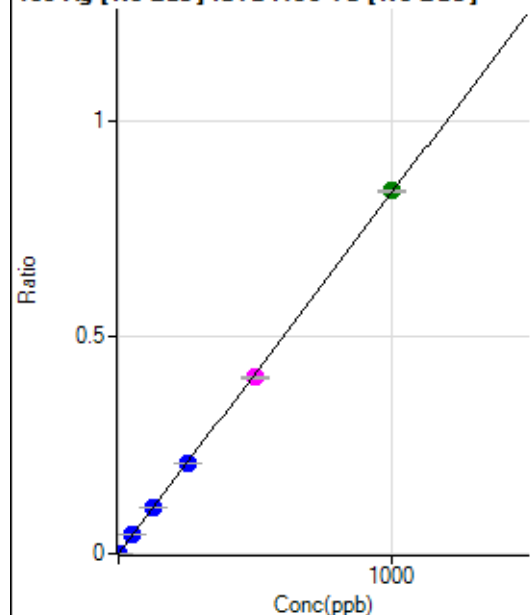
$$DL = 0.08864$$

$$BEC = 0.03413$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	97.23	0.0000	P	26.5
2	☐	1.000	0.880	10568.28	0.0007	P	2.6
3	☐	50.000	52.683	613161.20	0.0439	P	0.8
4	☐	125.000	128.769	1468669.80	0.1073	P	0.4
5	☐	250.000	249.349	2822115.56	0.2078	P	1.2
6	☐	500.000	487.908	5481491.31	0.4065	M	1.3
7	☐	1000.000	1005.604	11121631.67	0.8379	A	0.3
8	☐			1641.85	0.0001	P	7.3

$$y = 8.3319E-004 * x + 6.4989E-006$$

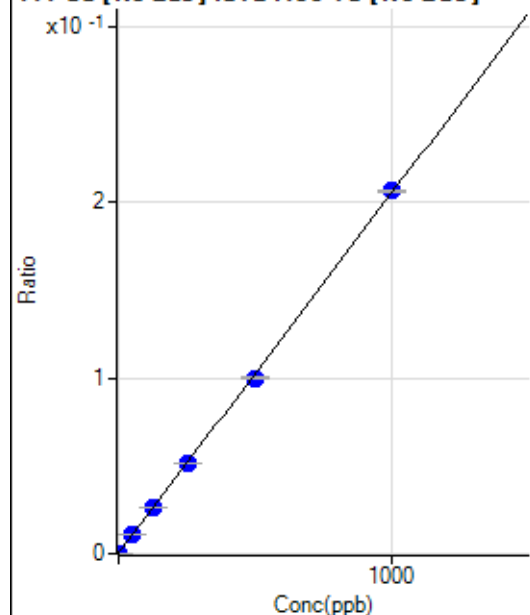
$$R = 0.9999$$

$$DL = 0.006203$$

$$BEC = 0.0078$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3187.58	0.0002	P	2.4
2	☐	1.000	1.118	6312.80	0.0004	P	2.6
3	☐	50.000	51.805	151040.06	0.0108	P	1.0
4	☐	125.000	126.785	358067.81	0.0262	P	0.1
5	☐	250.000	248.222	692916.52	0.0510	P	0.7
6	☐	500.000	486.789	1346112.98	0.0998	P	0.7
7	☐	1000.000	1006.737	2737521.50	0.2062	P	0.3
8	☐			3318.51	0.0003	P	4.8

$$y = 2.0465\text{E-}004 * x + 2.1295\text{E-}004$$

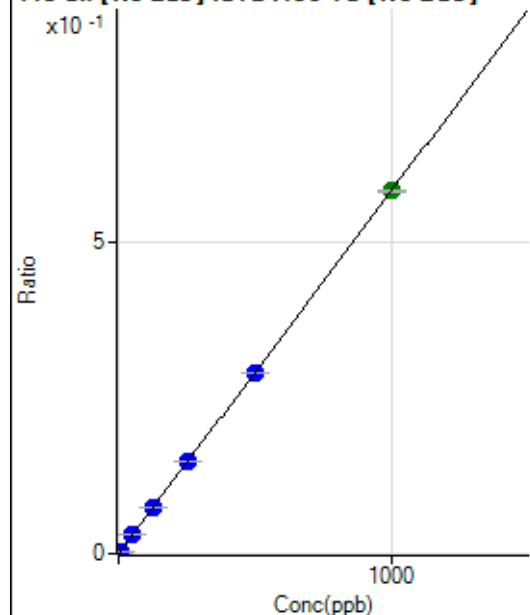
$$R = 0.9999$$

$$DL = 0.07635$$

$$BEC = 1.041$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1250.11	0.0001	P	8.1
2	☐	5.000	5.263	45134.61	0.0032	P	3.9
3	☐	50.000	51.822	424030.77	0.0304	P	0.9
4	☐	125.000	129.073	1033344.64	0.0755	P	0.7
5	☐	250.000	253.291	2011305.88	0.1481	P	0.7
6	☐	500.000	498.094	3924946.14	0.2911	P	0.7
7	☐	1000.000	999.529	7752410.85	0.5840	A	0.5
8	☐			3892.37	0.0003	P	4.2

$$y = 5.8424\text{E-}004 * x + 8.3522\text{E-}005$$

$$R = 1.0000$$

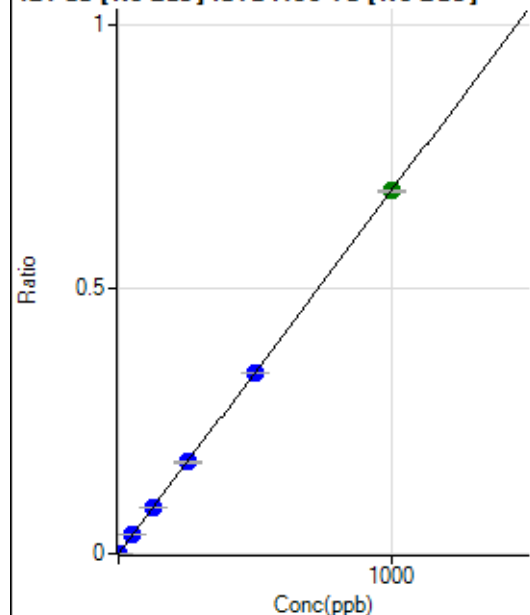
$$DL = 0.03468$$

$$BEC = 0.143$$

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	319.46	0.0000	P	8.2
2	☐	2.000	1.948	19380.69	0.0014	P	0.6
3	☐	50.000	51.205	490373.74	0.0351	P	0.5
4	☐	125.000	127.832	1199327.34	0.0876	P	0.3
5	☐	250.000	252.100	2346892.91	0.1728	P	0.8
6	☐	500.000	498.866	4609745.94	0.3419	P	0.3
7	☐	1000.000	999.628	9092610.45	0.6850	A	0.8
8	☐			12967.62	0.0010	P	5.1

$$y = 6.8525E-004 * x + 2.1347E-005$$

$$R = 1.0000$$

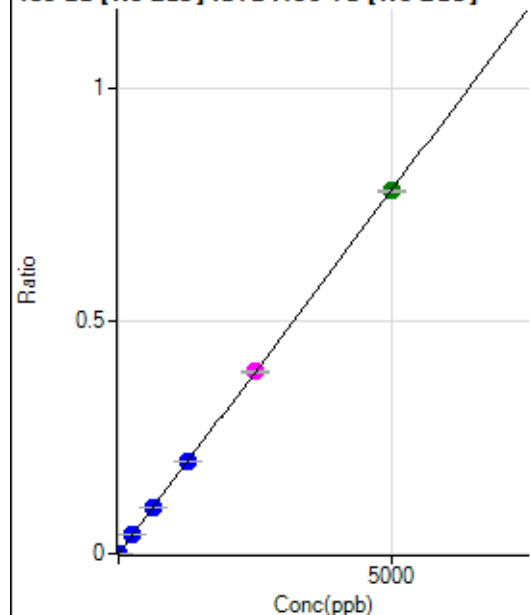
$$DL = 0.007696$$

$$BEC = 0.03115$$

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	52.78	0.0000	P	64.0
2	☐	10.000	10.423	23336.98	0.0016	P	2.4
3	☐	250.000	258.055	563506.74	0.0403	P	0.4
4	☐	625.000	642.069	1373993.35	0.1004	P	0.3
5	☐	1250.000	1264.401	2685060.45	0.1977	P	0.8
6	☐	2500.000	2504.372	5278897.73	0.3915	M	1.0
7	☐	5000.000	4991.677	10358181.22	0.7804	A	0.6
8	☐			1339.02	0.0001	P	1.6

$$y = 1.5633E-004 * x + 3.5288E-006$$

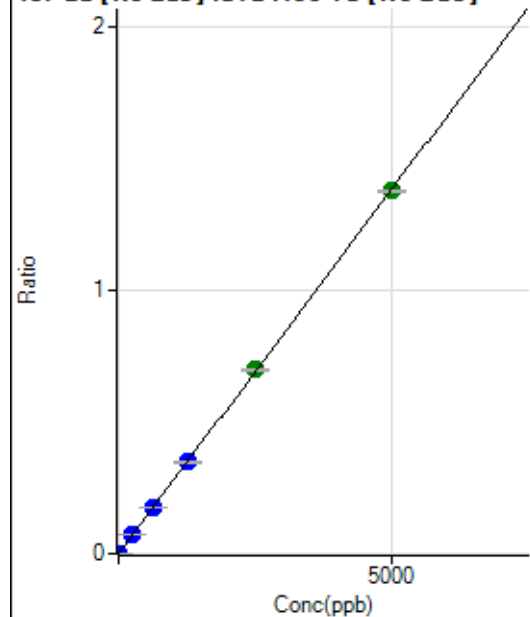
$$R = 1.0000$$

$$DL = 0.04336$$

$$BEC = 0.02257$$

Weight: <None>

Min Conc: 0

¹³⁷Ba [No Gas] ISTD : ¹⁵⁹Tb [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	52.78	0.0000	P	51.1
2	☐	10.000	10.404	41176.03	0.0029	P	2.9
3	☐	250.000	258.708	999544.89	0.0716	P	0.5
4	☐	625.000	640.161	2423808.91	0.1771	P	0.4
5	☐	1250.000	1257.058	4723227.19	0.3477	P	0.6
6	☐	2500.000	2527.982	9428470.87	0.6993	A	0.6
7	☐	5000.000	4981.913	18291305.27	1.3780	A	0.4
8	☐			2517.00	0.0002	P	7.3

$$y = 2.7660E-004 * x + 3.5311E-006$$

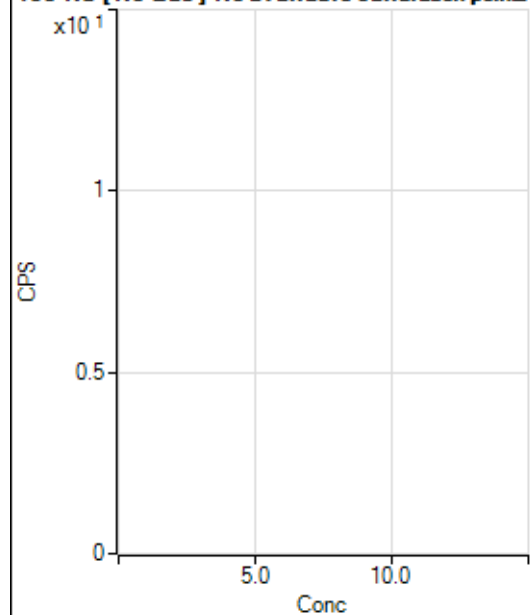
$$R = 1.0000$$

$$DL = 0.01959$$

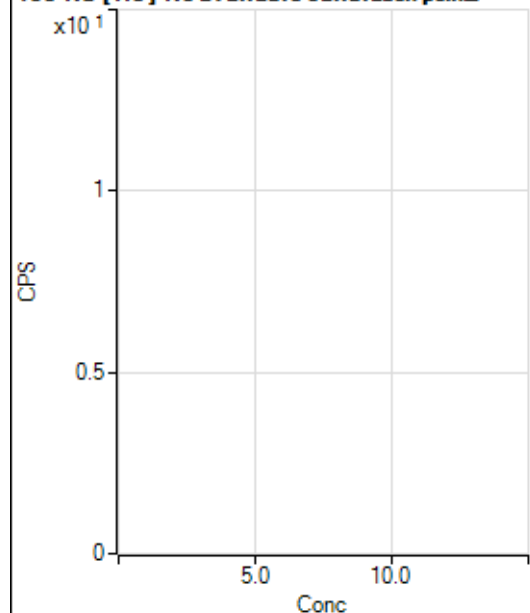
$$BEC = 0.01277$$

Weight: <None>

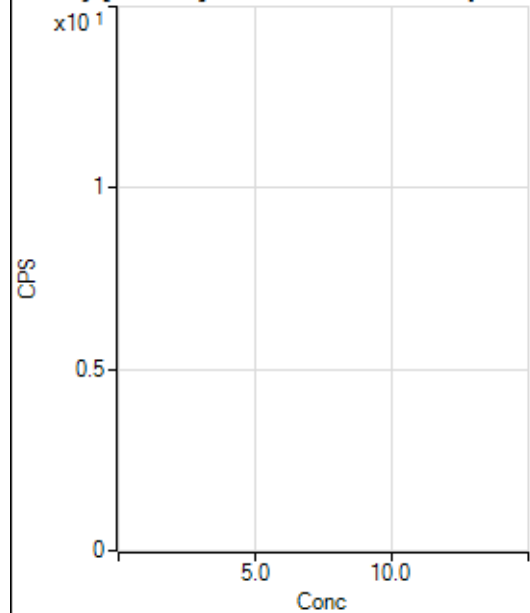
Min Conc: 0

¹⁵⁰Nd [No Gas] No available calibration points

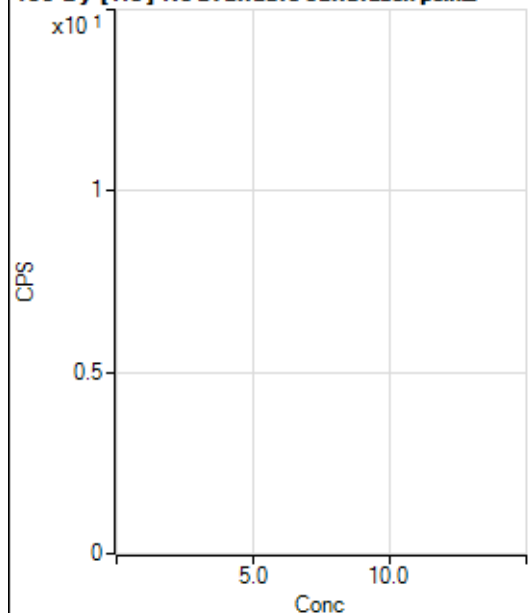
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	34.6
2	☐			20.00		P	33.4
3	☐			93.34		P	25.8
4	☐			157.78		P	20.0
5	☐			257.79		P	24.0
6	☐			682.27		P	16.7
7	☐			953.41		P	4.9
8	☐			111.11		P	25.0

150 Nd [He] No available calibration points

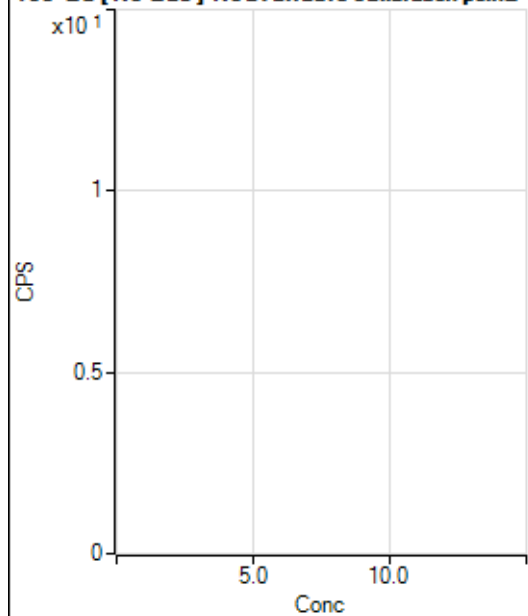
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			12.22		P	87.7
2	☐			8.89		P	108.
3	☐			12.22		P	15.7
4	☐			22.22		P	22.9
5	☐			37.78		P	41.7
6	☐			107.78		P	8.9
7	☐			55.55		P	19.3
8	☐			45.56		P	27.7

156 Dy [No Gas] No available calibration points

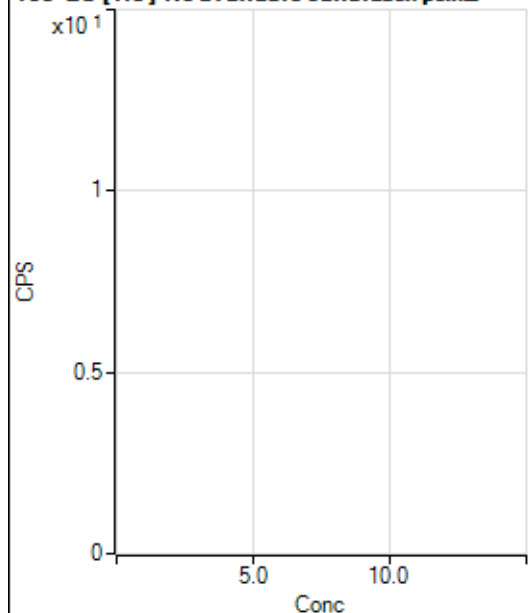
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			30.56		P	56.8
2	☐			2.78		P	173.
3	☐			38.89		P	24.7
4	☐			55.56		P	56.8
5	☐			66.67		P	37.5
6	☐			263.91		P	16.2
7	☐			219.46		P	28.0
8	☐			88.89		P	23.6

156 Dy [He] No available calibration points

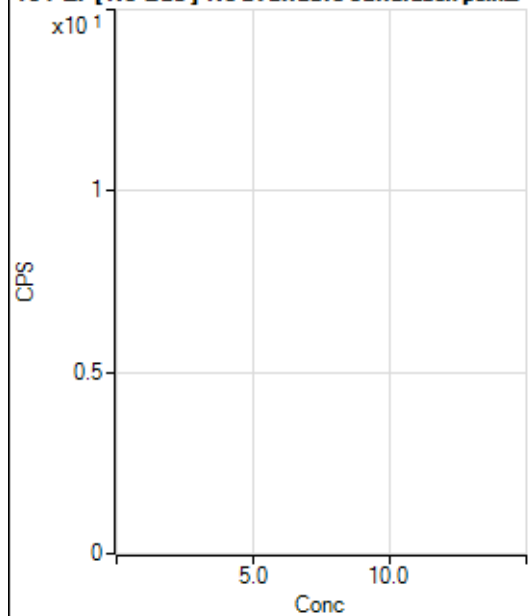
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			23.33		P	28.6
2	☐			21.11		P	65.7
3	☐			36.67		P	36.4
4	☐			33.33		P	20.0
5	☐			58.89		P	11.8
6	☐			135.56		P	5.1
7	☐			141.11		P	18.3
8	☐			42.22		P	12.1

160 Gd [No Gas] Noavailable calibration poin_

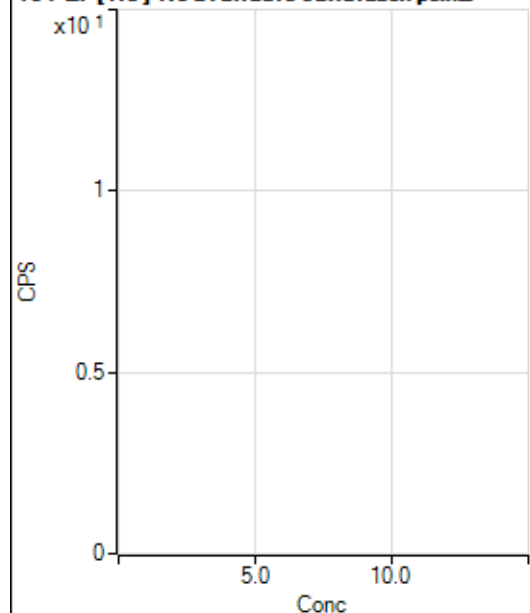
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			102.78		P	12.4
2	☐			86.11		P	59.1
3	☐			100.00		P	28.9
4	☐			80.56		P	23.9
5	☐			80.56		P	33.3
6	☐			177.79		P	9.8
7	☐			111.12		P	11.5
8	☐			100.01		P	43.3

160 Gd [He] No available calibration points

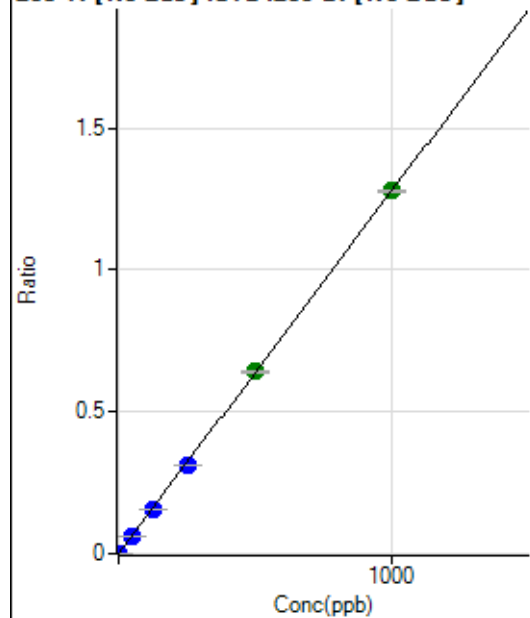
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			180.00		P	4.9
2	☐			173.34		P	6.9
3	☐			150.00		P	17.8
4	☐			150.00		P	2.2
5	☐			177.78		P	11.0
6	☐			193.34		P	7.9
7	☐			166.67		P	18.3
8	☐			177.78		P	13.3

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			50.00		P	44.1
2	☐			72.23		P	35.3
3	☐			55.56		P	31.2
4	☐			86.12		P	40.3
5	☐			77.78		P	37.6
6	☐			150.01		P	9.6
7	☐			91.67		P	9.1
8	☐			66.67		P	37.5

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			64.44		P	15.8
2	☐			65.56		P	7.8
3	☐			75.56		P	9.2
4	☐			66.67		P	8.7
5	☐			71.11		P	47.4
6	☐			92.22		P	9.1
7	☐			73.34		P	20.8
8	☐			80.00		P	15.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	950.08	0.0001	P	13.2
2	☐	1.000	0.960	13170.89	0.0013	P	1.2
3	☐	50.000	48.773	609532.96	0.0624	P	0.9
4	☐	125.000	121.781	1488020.37	0.1557	P	0.7
5	☐	250.000	244.823	2930004.15	0.3129	P	0.7
6	☐	500.000	501.997	5900540.06	0.6414	A	0.4
7	☐	1000.000	1000.759	11328725.51	1.2786	A	0.8
8	☐			3639.55	0.0005	P	4.6

$$y = 0.0013 * x + 8.8577E-005$$

$$R = 1.0000$$

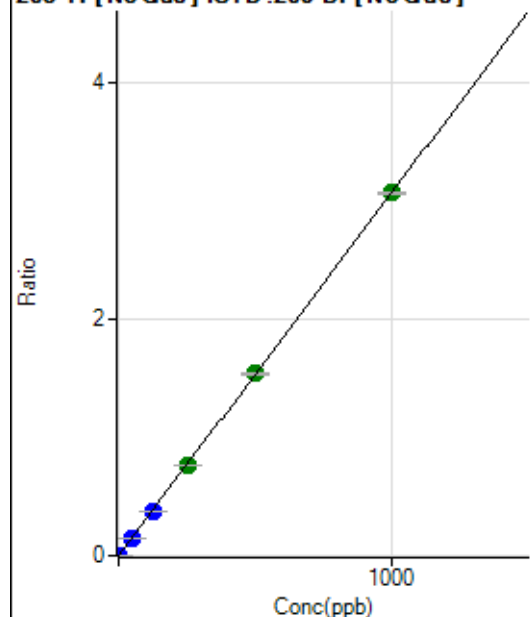
$$DL = 0.02755$$

$$BEC = 0.06933$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1325.13	0.0001	P	14.1
2	☐	1.000	0.961	30742.05	0.0031	P	2.0
3	☐	50.000	49.206	1474393.11	0.1509	P	0.6
4	☐	125.000	122.106	3578515.32	0.3744	P	0.5
5	☐	250.000	246.830	7086251.63	0.7567	A	0.1
6	☐	500.000	502.062	14156893.02	1.5389	A	0.5
7	☐	1000.000	1000.163	27161479.60	3.0656	A	0.4
8	☐			7797.05	0.0010	P	7.7

$$y = 0.0031 * x + 1.2370E-004$$

$$R = 1.0000$$

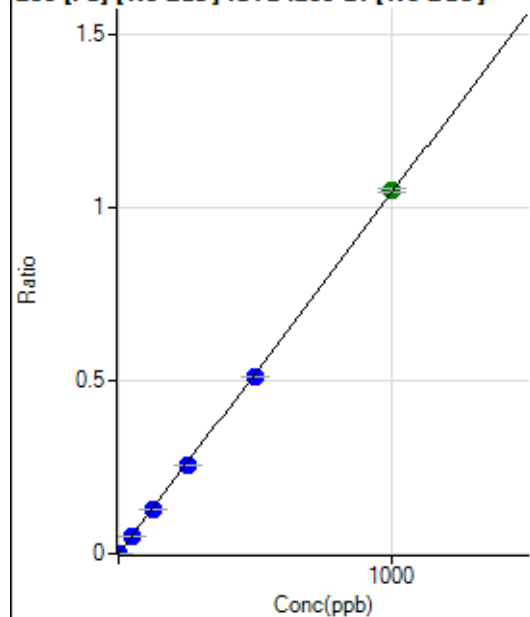
$$DL = 0.01711$$

$$BEC = 0.04036$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1266.76	0.0001	P	9.5
2	☐	1.000	0.915	10728.68	0.0011	P	0.5
3	☐	50.000	49.245	502214.84	0.0514	P	0.8
4	☐	125.000	122.049	1216300.46	0.1272	P	0.8
5	☐	250.000	244.901	2390106.42	0.2552	P	0.1
6	☐	500.000	491.057	4706350.34	0.5116	P	0.7
7	☐	1000.000	1006.153	9286363.52	1.0482	A	1.0
8	☐			8312.09	0.0011	P	1.6

$$y = 0.0010 * x + 1.1812E-004$$

$$R = 0.9999$$

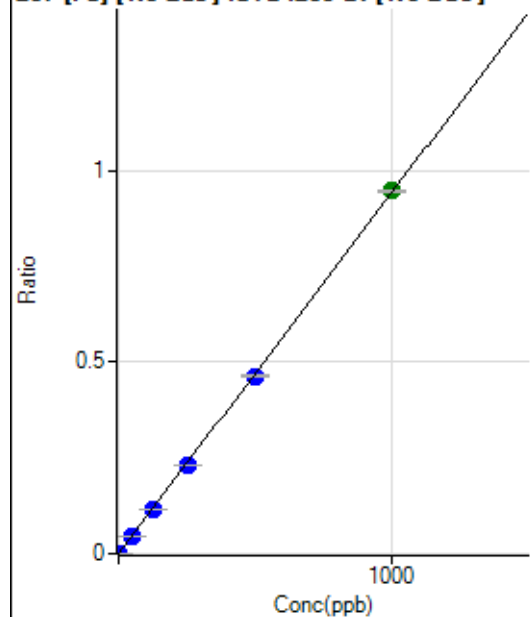
$$DL = 0.03244$$

$$BEC = 0.1134$$

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	1135.27	0.0001	P	5.5
2	☐	1.000	0.985	10346.90	0.0010	P	2.2
3	☐	50.000	49.082	452395.56	0.0463	P	0.4
4	☐	125.000	122.231	1100935.00	0.1152	P	0.5
5	☐	250.000	244.518	2156812.81	0.2303	P	0.4
6	☐	500.000	491.392	4256397.49	0.4627	P	0.9
7	☐	1000.000	1006.067	8392468.65	0.9473	A	0.8
8	☐			7565.37	0.0010	P	1.8

$$y = 9.4143\text{E-}004 * x + 1.0588\text{E-}004$$

$$R = 0.9999$$

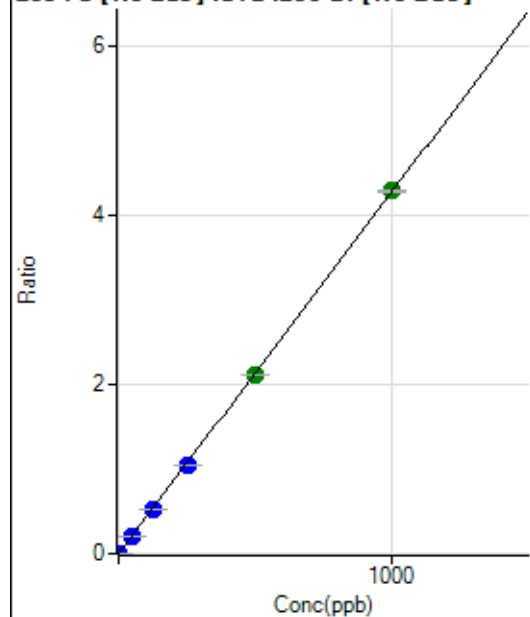
$$DL = 0.01855$$

$$BEC = 0.1125$$

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	4483.74	0.0004	P	2.2
2	☐	1.000	0.952	44910.39	0.0045	P	1.0
3	☐	50.000	49.200	2056745.02	0.2106	P	0.9
4	☐	125.000	122.565	5007798.95	0.5239	P	0.6
5	☐	250.000	245.300	9815805.00	1.0481	P	0.2
6	☐	500.000	495.054	19454486.37	2.1149	A	0.4
7	☐	1000.000	1003.992	37996231.23	4.2886	A	0.8
8	☐			33025.96	0.0043	P	1.8

$$y = 0.0043 * x + 4.1812\text{E-}004$$

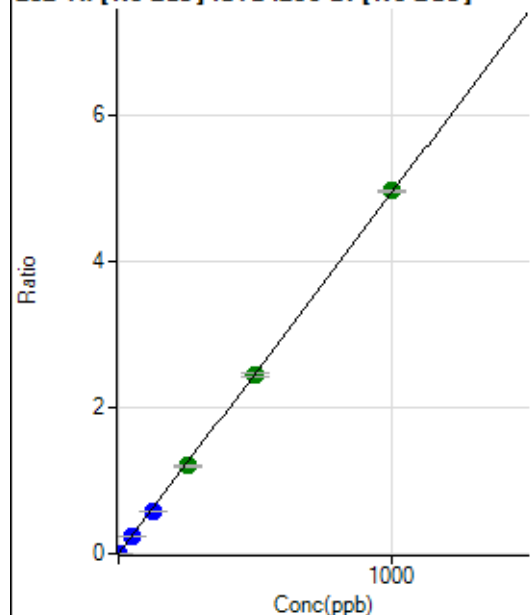
$$R = 1.0000$$

$$DL = 0.006353$$

$$BEC = 0.0979$$

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	3476.49	0.0003	P	6.6
2	☐	1.000	0.811	43428.25	0.0043	P	1.9
3	☐	50.000	46.662	2257864.59	0.2311	P	0.3
4	☐	125.000	118.500	5606025.59	0.5865	P	0.5
5	☐	250.000	242.444	11234440.99	1.1996	A	0.6
6	☐	500.000	495.427	22547519.49	2.4510	A	1.1
7	☐	1000.000	1005.155	44056949.60	4.9725	A	0.5
8	☐			9409.20	0.0012	P	5.2

$$y = 0.0049 * x + 3.2411E-004$$

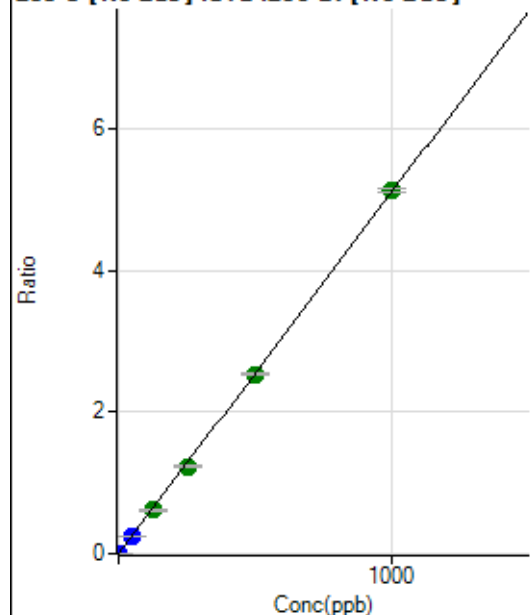
$$R = 0.9999$$

$$DL = 0.01291$$

$$BEC = 0.06552$$

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	3581.20	0.0003	P	6.8
2	☐	1.000	0.900	49394.42	0.0049	P	2.8
3	☐	50.000	47.205	2360034.21	0.2416	P	0.9
4	☐	125.000	119.770	5854354.95	0.6125	A	1.0
5	☐	250.000	242.064	11589225.09	1.2375	A	1.1
6	☐	500.000	496.976	23369505.04	2.5404	A	0.7
7	☐	1000.000	1004.290	45481043.73	5.1334	A	0.9
8	☐			6482.46	0.0008	P	10.2

$$y = 0.0051 * x + 3.3406E-004$$

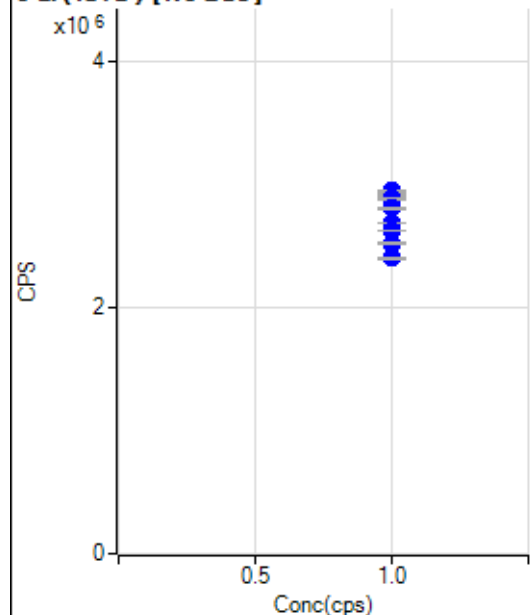
$$R = 1.0000$$

$$DL = 0.01327$$

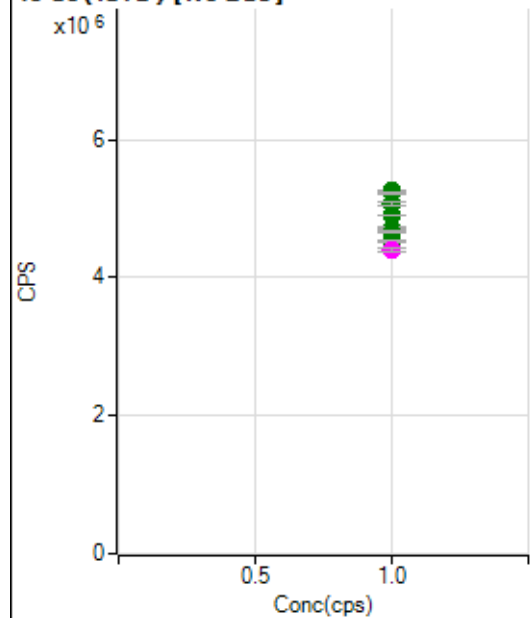
$$BEC = 0.06536$$

Weight: <None>

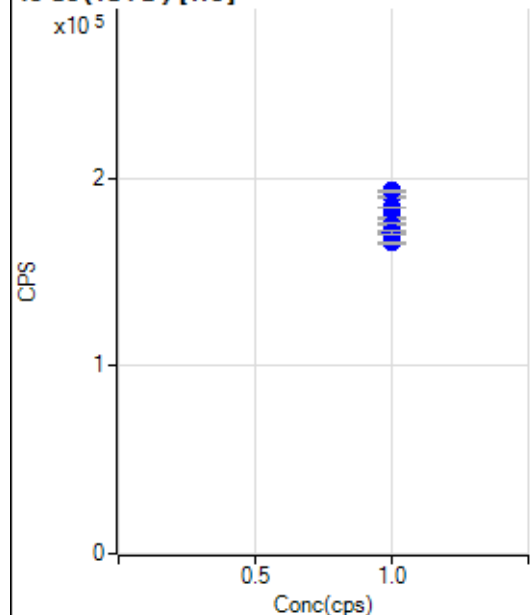
Min Conc: 0

6 Li (ISTD) [No Gas]

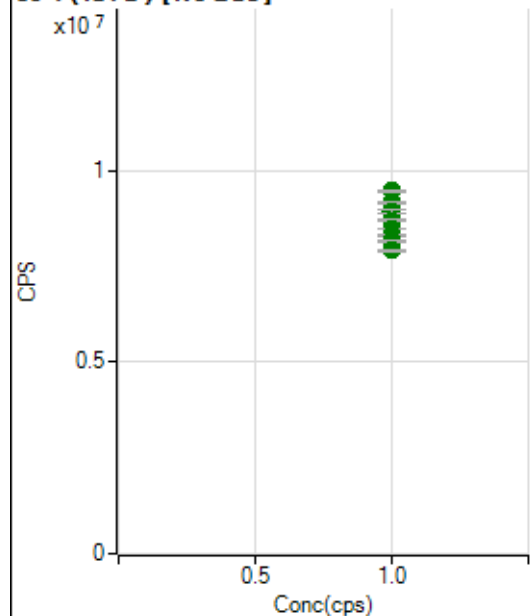
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2914503.64		P	0.6
2	☐	1.000		2948505.33		P	0.7
3	☐	1.000		2884810.89		P	0.7
4	☐	1.000		2808585.36		P	0.5
5	☐	1.000		2687372.04		P	0.0
6	☐	1.000		2626123.33		P	0.4
7	☐	1.000		2518753.04		P	0.7
8	☐	1.000		2404467.27		P	0.6

45 Sc (ISTD) [No Gas]

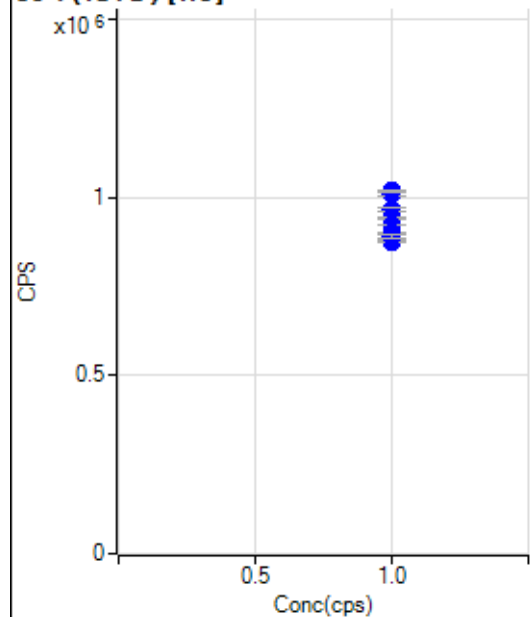
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5255740.05		A	0.3
2	☐	1.000		5224868.65		A	0.3
3	☐	1.000		5075191.95		A	1.1
4	☐	1.000		4896072.64		A	0.2
5	☐	1.000		4717277.14		A	0.4
6	☐	1.000		4665641.03		A	0.5
7	☐	1.000		4526316.68		A	0.3
8	☐	1.000		4397539.51		M	0.9

45 Sc (ISTD) [He]

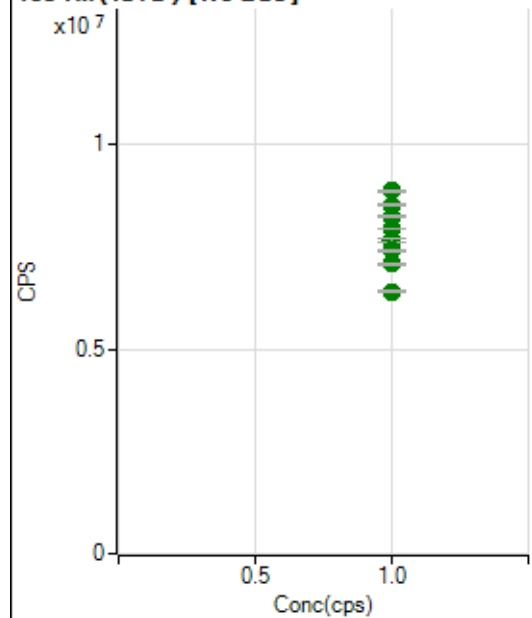
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		190202.59		P	0.4
2	☐	1.000		193229.03		P	0.3
3	☐	1.000		184423.18		P	0.0
4	☐	1.000		178910.94		P	0.2
5	☐	1.000		175379.99		P	0.7
6	☐	1.000		171282.31		P	0.5
7	☐	1.000		165415.22		P	0.7
8	☐	1.000		170996.19		P	1.6

89 Y (ISTD) [No Gas]

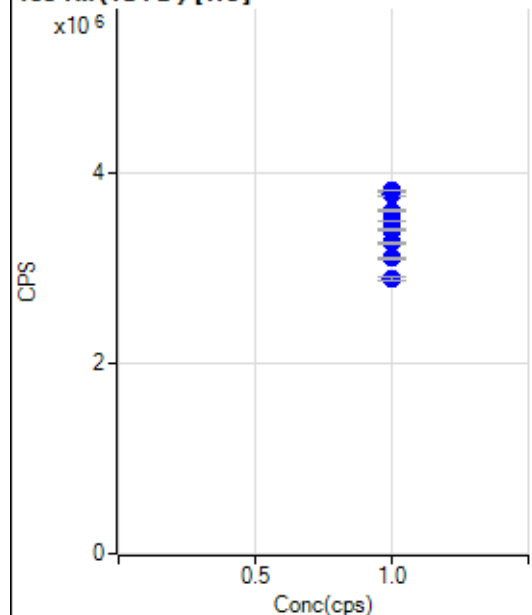
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9473822.08		A	0.3
2	☐	1.000		9180373.75		A	0.4
3	☐	1.000		8946302.92		A	0.8
4	☐	1.000		8710332.09		A	0.1
5	☐	1.000		8485824.60		A	0.4
6	☐	1.000		8321327.65		A	0.7
7	☐	1.000		8171422.52		A	0.7
8	☐	1.000		7930360.58		A	0.7

89 Y (ISTD) [He]

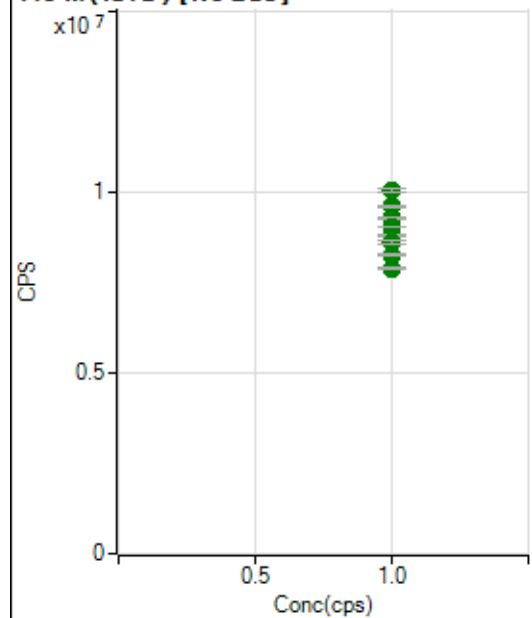
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1009055.79		P	0.9
2	☐	1.000		1019439.84		P	0.8
3	☐	1.000		967881.99		P	0.9
4	☐	1.000		942933.08		P	0.2
5	☐	1.000		924541.65		P	0.2
6	☐	1.000		904233.57		P	0.1
7	☐	1.000		877365.01		P	0.5
8	☐	1.000		891205.02		P	1.0

103 Rh (ISTD) [No Gas]

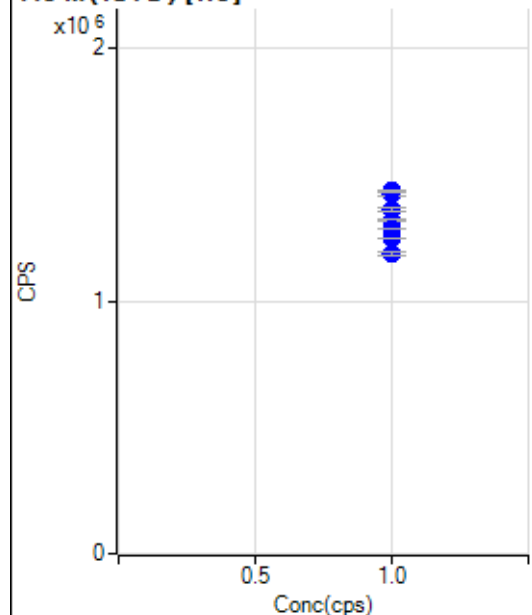
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8859373.55		A	0.6
2	☐	1.000		8514485.09		A	0.7
3	☐	1.000		8230710.43		A	0.4
4	☐	1.000		7943808.86		A	0.2
5	☐	1.000		7648715.19		A	1.0
6	☐	1.000		7412309.54		A	0.5
7	☐	1.000		7083107.02		A	0.6
8	☐	1.000		6407598.75		A	0.6

103 Rh (ISTD) [He]

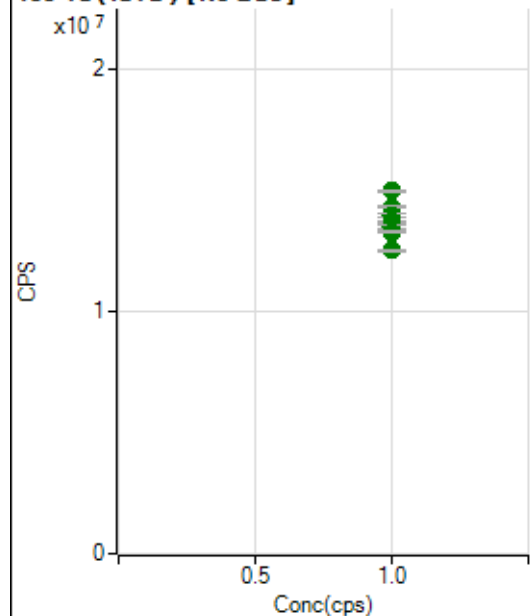
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3781462.41		P	0.7
2	☐	1.000		3815700.95		P	0.1
3	☐	1.000		3604868.80		P	0.4
4	☐	1.000		3496767.90		P	0.3
5	☐	1.000		3405936.83		P	0.3
6	☐	1.000		3269326.38		P	0.2
7	☐	1.000		3110504.54		P	0.4
8	☐	1.000		2899672.77		P	1.3

115 In (ISTD) [No Gas]

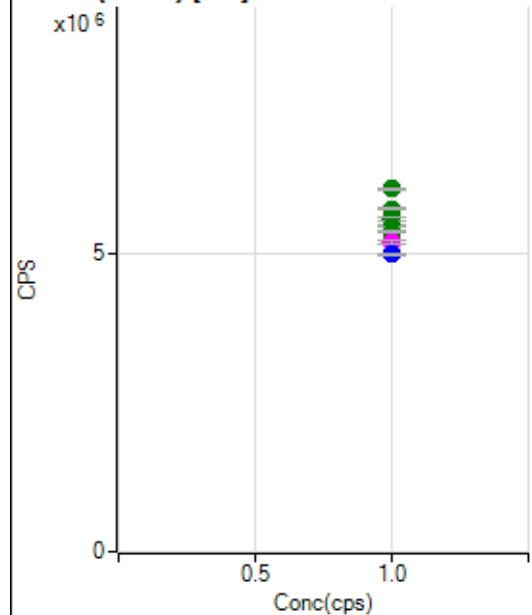
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10046351.72		A	1.0
2	☐	1.000		9619809.79		A	0.6
3	☐	1.000		9309671.29		A	0.8
4	☐	1.000		9043066.22		A	0.3
5	☐	1.000		8811733.38		A	0.8
6	☐	1.000		8633264.13		A	0.9
7	☐	1.000		8264701.03		A	0.5
8	☐	1.000		7890090.80		A	0.9

115 In (ISTD) [He]

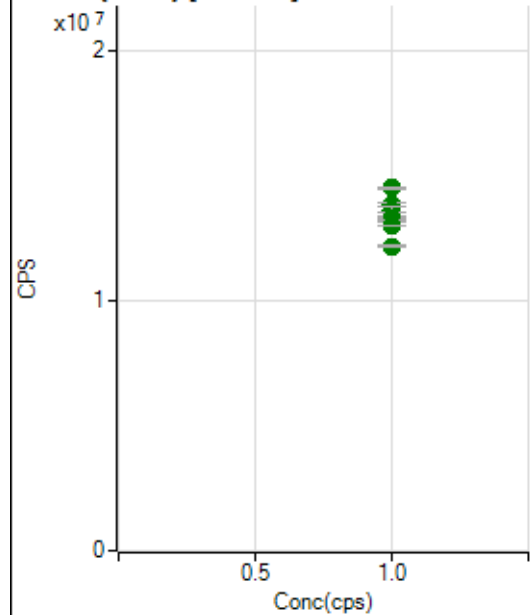
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1424814.33		P	0.9
2	☐	1.000		1435792.09		P	0.7
3	☐	1.000		1361892.16		P	0.7
4	☐	1.000		1319659.19		P	0.4
5	☐	1.000		1285546.90		P	0.3
6	☐	1.000		1246246.94		P	0.3
7	☐	1.000		1187302.17		P	0.8
8	☐	1.000		1185996.73		P	1.4

159 Tb (ISTD) [No Gas]

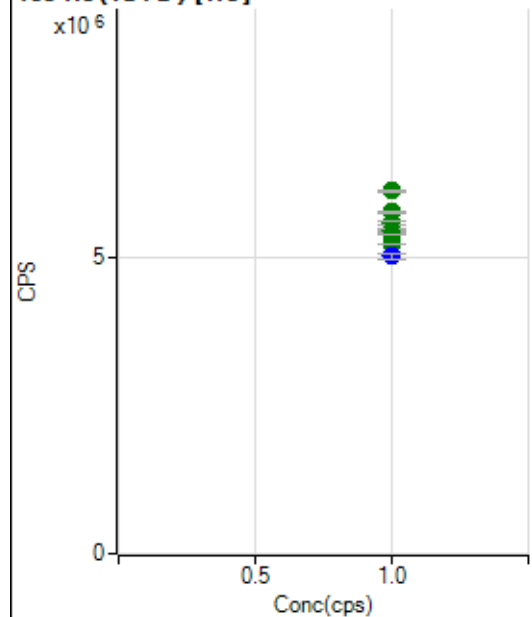
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14967517.69		A	0.4
2	☐	1.000		14291212.01		A	0.5
3	☐	1.000		13967583.82		A	1.3
4	☐	1.000		13688174.10		A	0.2
5	☐	1.000		13584245.77		A	0.8
6	☐	1.000		13484006.60		A	0.7
7	☐	1.000		13273776.89		A	0.5
8	☐	1.000		12498795.37		A	0.3

159 Tb (ISTD) [He]

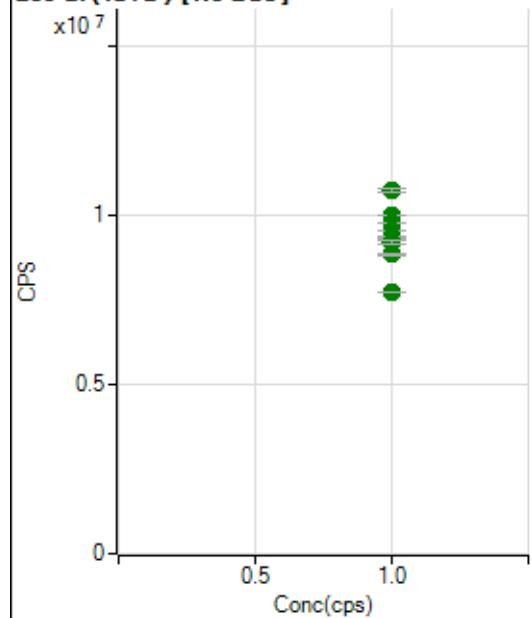
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6101874.29		A	0.2
2	☐	1.000		5768720.68		A	0.4
3	☐	1.000		5594943.35		A	0.7
4	☐	1.000		5478623.77		A	0.4
5	☐	1.000		5464657.35		A	0.3
6	☐	1.000		5377415.30		A	0.6
7	☐	1.000		5213477.53		M	1.1
8	☐	1.000		4997347.53		P	0.9

165 Ho (ISTD) [No Gas]

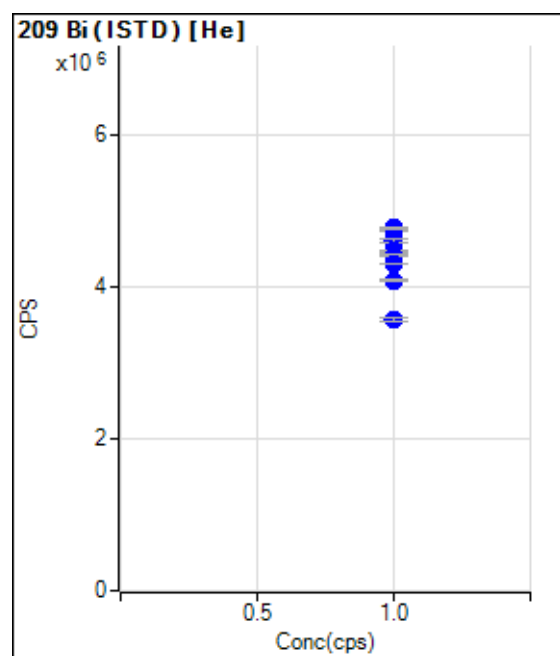
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14531704.40		A	0.6
2	☐	1.000		13876040.68		A	0.8
3	☐	1.000		13659326.87		A	1.4
4	☐	1.000		13308374.86		A	1.1
5	☐	1.000		13245168.61		A	1.1
6	☐	1.000		13203750.21		A	0.7
7	☐	1.000		13014046.47		A	0.3
8	☐	1.000		12201098.10		A	0.5

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6131346.99		A	0.6
2	☐	1.000		5770603.80		A	0.8
3	☐	1.000		5593024.60		A	0.9
4	☐	1.000		5461008.88		A	0.3
5	☐	1.000		5455949.92		A	1.2
6	☐	1.000		5404545.02		A	0.1
7	☐	1.000		5240288.74		A	0.3
8	☐	1.000		5022031.25		P	1.6

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10722135.32		A	1.0
2	☐	1.000		10012361.80		A	0.2
3	☐	1.000		9768196.73		A	0.1
4	☐	1.000		9558463.68		A	0.3
5	☐	1.000		9365240.69		A	0.8
6	☐	1.000		9199300.77		A	1.2
7	☐	1.000		8860167.37		A	0.7
8	☐	1.000		7725057.87		A	0.4



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4740021.21		P	0.3
2	☐	1.000		4774876.60		P	0.6
3	☐	1.000		4599394.21		P	0.9
4	☐	1.000		4471812.29		P	0.4
5	☐	1.000		4405968.02		P	0.6
6	☐	1.000		4297163.55		P	0.2
7	☐	1.000		4082509.73		P	0.5
8	☐	1.000		3565405.68		P	0.9

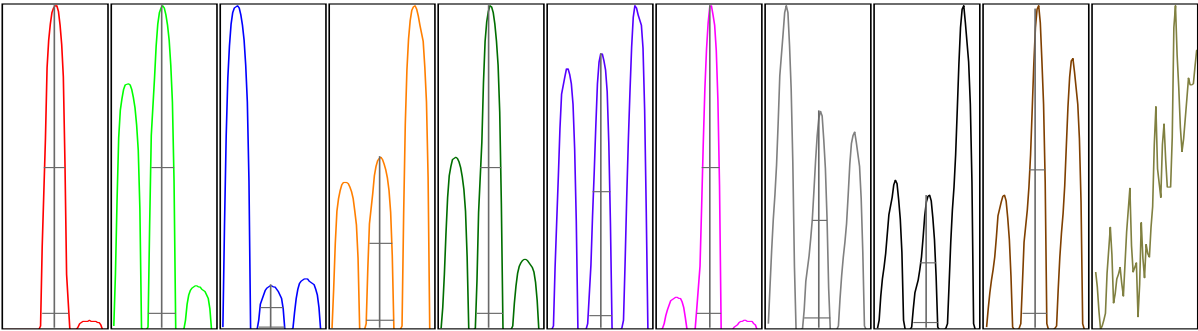
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7092919-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count	RSD%	RSD%	RSD%
	(Mean)	(Actual)	(Required)	(Flag)
9	9558	0.70	5.00	
24	105840	0.94	5.00	
25	14142	0.72	5.00	
26	16537	0.88	5.00	
59	77470	0.46	5.00	
113	11953	0.42	5.00	
115	140342	0.97	5.00	
206	40382	0.59	5.00	
207	36808	0.60	5.00	
208	88878	0.74	5.00	
220	142	2.47		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	9443	9562	9590	9580	9615
24	104102	106208	106637	106274	105979
25	13970	14207	14151	14226	14156
26	16291	16520	16628	16624	16626
59	76929	77669	77881	77467	77402
113	11929	11988	12023	11927	11900
115	141542	141550	140801	139231	138588
206	40019	40529	40636	40285	40438
207	36438	36867	37015	36905	36815
208	87771	89244	89495	88988	88889
220	140	141	144	146	137

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	16220	9.00	8.9 - 9.1		0.777	0.900	
24	169412	23.95	23.9 - 24.1		0.788	0.900	
25	22652	24.95	24.9 - 25.1		0.785	0.900	
26	26458	25.95	25.9 - 26.1		0.791	0.900	
59	134923	58.95	58.9 - 59.1		0.777	0.900	
113	24293	113.05	112.9 - 113.1		0.687	0.900	
115	285386	115.05	114.9 - 115.1		0.705	0.900	
206	88334	206.05	205.9 - 206.1		0.760	0.900	
207	78480	207.00	206.9 - 207.1		0.733	0.900	
208	188918	208.00	207.9 - 208.1		0.733	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	6.4	V	Deflect	11.8	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	18795	0.62	
89	22972	0.54	
205	32084	0.42	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	18874	18907	18754	18825	18613
89	22961	23186	22945	22901	22869
205	32260	32135	32087	31890	32047

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	6.5	V	Deflect	1.6	V
Extract 2	-130.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-70	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	190	V			