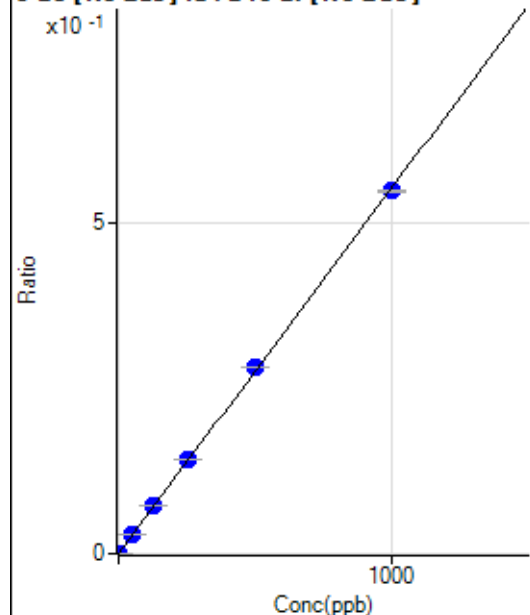


Calibration for 005CALS.d

Batch Folder: D:\ICP-MS Data\P7100919-MS.b\
 Analysis File: P7100919-MS.batch.bin
 DA Date-Time: 2019-10-10 00:24:50
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-10-09 12:36:11
2	004CALS.d	S01	2019-10-09 12:39:45
3	005CALS.d	S02	2019-10-09 12:44:20
4	006CALS.d	S03	2019-10-09 12:48:14
5	007CALS.d	S04	2019-10-09 12:52:09
6	008CALS.d	S05	2019-10-09 12:55:58
7	009CALS.d	S06	2019-10-09 12:59:46
8	010CALS.d	S07	2019-10-09 13:03:31
9	011CALS.d	S08	2019-10-09 13:07:16

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.71	0.0000	P	68.6
2	☐	0.100	0.095	218.53	0.0001	P	5.9
3	☐	1.000	1.054	1874.24	0.0006	P	2.3
4	☐	50.000	51.939	87458.48	0.0287	P	1.6
5	☐	125.000	129.828	211656.48	0.0717	P	0.6
6	☐	250.000	256.873	412310.83	0.1418	P	0.1
7	☐	500.000	508.917	801939.77	0.2809	P	0.4
8	☐	1000.000	993.122	1486970.05	0.5482	P	0.5
9	☐			392.61	0.0002	P	30.7

$$y = 5.5195\text{E-}004 * x + 1.7097\text{E-}005$$

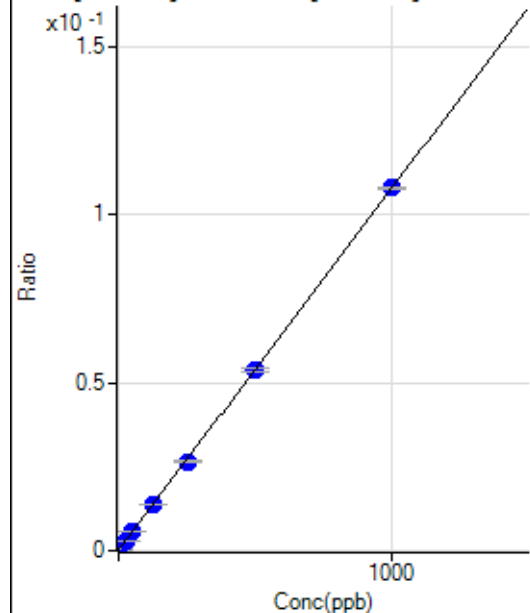
$$R = 0.9999$$

$$DL = 0.06376$$

$$BEC = 0.03098$$

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	561.14	0.0002	P	2.6
2	☐	2.500	1.985	1227.89	0.0004	P	15.0
3	☐	25.000	23.338	8408.20	0.0027	P	2.3
4	☐	50.000	49.637	16804.35	0.0055	P	1.7
5	☐	125.000	124.763	40112.41	0.0136	P	1.5
6	☐	250.000	245.241	77138.67	0.0265	P	2.0
7	☐	500.000	498.944	153550.75	0.0538	P	2.1
8	☐	1000.000	1001.808	292467.00	0.1078	P	0.3
9	☐			10951.56	0.0044	P	4.3

$$y = 1.0744\text{E-}004 * x + 1.7879\text{E-}004$$

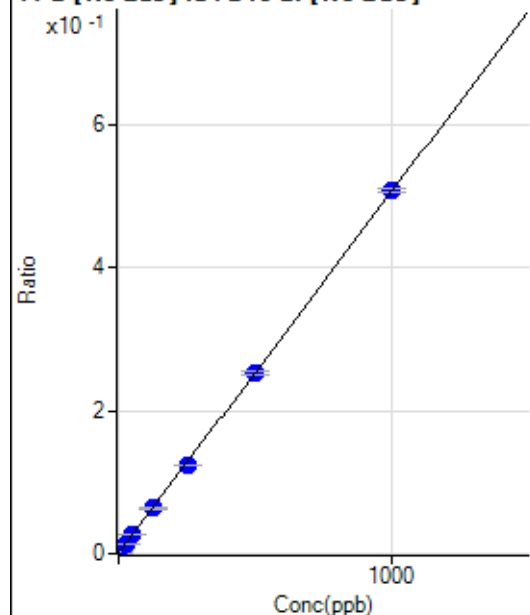
$$R = 1.0000$$

$$DL = 0.1288$$

$$BEC = 1.664$$

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	2686.45	0.0009	P	0.7
2	☐	2.500	2.090	5987.51	0.0019	P	4.1
3	☐	25.000	23.427	39756.02	0.0127	P	1.2
4	☐	50.000	49.235	78504.46	0.0257	P	1.0
5	☐	125.000	123.828	187401.23	0.0635	P	1.4
6	☐	250.000	243.008	359741.71	0.1237	P	1.8
7	☐	500.000	498.065	721322.33	0.2527	P	1.6
8	☐	1000.000	1002.941	1377789.81	0.5079	P	1.2
9	☐			51979.38	0.0210	P	4.9

$$y = 5.0559\text{E-}004 * x + 8.5593\text{E-}004$$

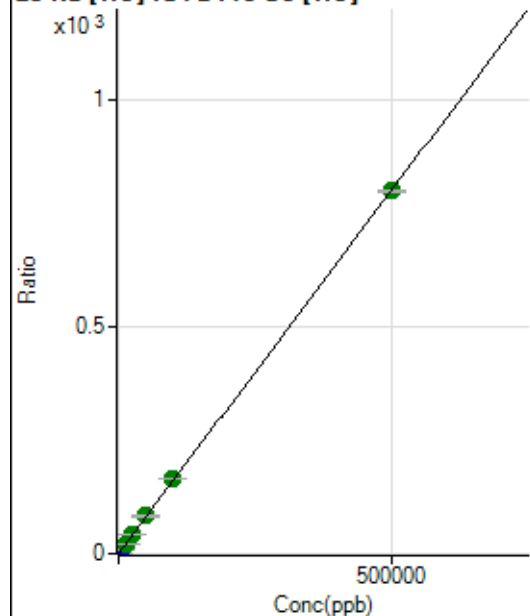
$$R = 1.0000$$

$$DL = 0.03759$$

$$BEC = 1.693$$

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	9436.67	0.0439	P	1.5
2	☐	50.000	46.668	25711.73	0.1188	P	2.8
3	☐	500.000	512.299	188296.91	0.8655	P	0.4
4	☐	5000.000	5203.247	1759746.20	8.3882	P	0.5
5	☐	12500.000	12998.308	4299164.72	20.8888	A	0.4
6	☐	25000.000	25904.605	8341273.54	41.5862	A	0.8
7	☐	50000.000	51623.892	16603645.68	82.8312	A	0.8
8	☐	100000.00	102395.52	31297207.99	164.2517	A	0.7
9	☐	500000.00	499298.77	154692124.2	800.7503	A	0.4

$$y = 0.0016 * x + 0.0439$$

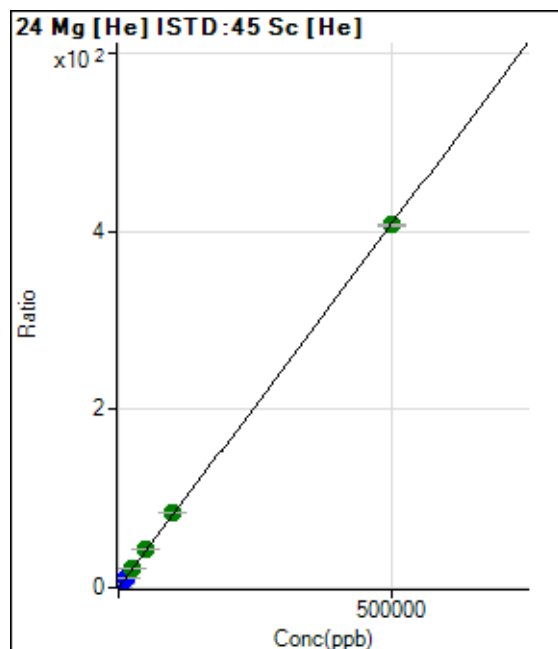
$$R = 1.0000$$

$$DL = 1.211$$

$$BEC = 27.39$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1175.10	0.0055	P	6.8
2	☐	50.000	48.264	9711.85	0.0449	P	3.7
3	☐	500.000	539.641	97015.61	0.4459	P	0.4
4	☐	5000.000	5344.668	916288.13	4.3677	P	0.7
5	☐	12500.000	13353.878	2244338.09	10.9047	P	0.3
6	☐	25000.000	26496.377	4338822.80	21.6315	A	0.7
7	☐	50000.000	52690.013	8621491.08	43.0104	A	0.9
8	☐	100000.00	103452.80	16090248.97	84.4424	A	0.6
9	☐	500000.00	498940.78	78669085.79	407.2351	A	0.8

$$y = 8.1619\text{E-}004 * x + 0.0055$$

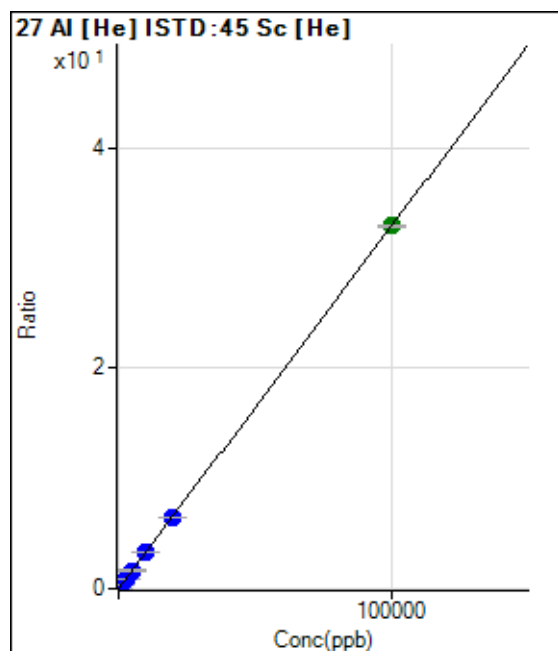
$$R = 1.0000$$

$$DL = 1.358$$

$$BEC = 6.702$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94.45	0.0004	P	41.6
2	☐	2.000					
3	☐	20.000	20.561	1566.81	0.0072	P	4.0
4	☐	1000.000	1013.690	70025.55	0.3338	P	0.8
5	☐	2500.000	2526.389	171081.67	0.8312	P	0.2
6	☐	5000.000	5019.486	331180.96	1.6511	P	0.7
7	☐	10000.000	10018.156	660474.34	3.2949	P	0.7
8	☐	20000.000	19729.560	1236340.38	6.4885	P	1.0
9	☐	100000.00	100050.50	6356176.66	32.9023	A	0.4

$$y = 3.2885\text{E-}004 * x + 4.3937\text{E-}004$$

$$R = 1.0000$$

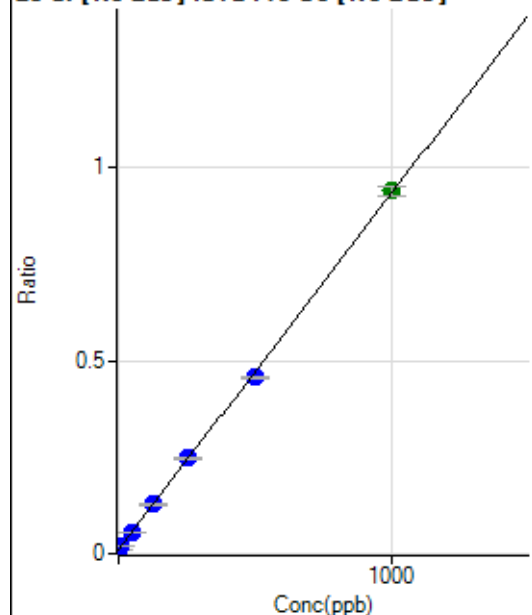
$$DL = 1.666$$

$$BEC = 1.336$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61942.76	0.0108	P	1.1
2	☐	1.000	1.143	67491.88	0.0119	P	0.3
3	☐	10.000	8.119	106225.23	0.0183	P	0.6
4	☐	50.000	49.950	322173.44	0.0569	P	1.1
5	☐	125.000	126.734	704986.28	0.1279	P	1.4
6	☐	250.000	256.132	1342627.87	0.2474	P	0.9
7	☐	500.000	482.417	2456054.83	0.4563	P	0.8
8	☐	1000.000	1007.063	4865501.54	0.9409	A	2.3
9	☐			247463.89	0.0513	P	1.6

$$y = 9.2356\text{E-}004 * x + 0.0108$$

$$R = 0.9998$$

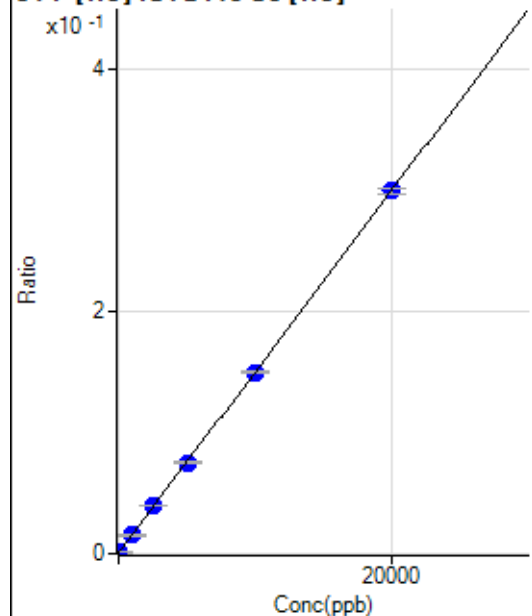
$$DL = 0.3746$$

$$BEC = 11.7$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-19.522	69.45	0.0003	P	18.6
2	☐	0.000	-19.666	69.45	0.0003	P	25.7
3	☐	0.000	39.188	261.13	0.0012	P	14.7
4	☐	1000.000	987.207	3222.71	0.0154	P	7.1
5	☐	2500.000	2635.321	8230.35	0.0400	P	2.2
6	☐	5000.000	4996.037	15097.03	0.0753	P	0.9
7	☐	10000.000	9985.586	30030.96	0.1498	P	1.2
8	☐	20000.000	19991.922	57034.76	0.2993	P	1.5
9	☐			75.00	0.0004	P	38.4

$$y = 1.4942\text{E-}005 * x + 6.1505\text{E-}004$$

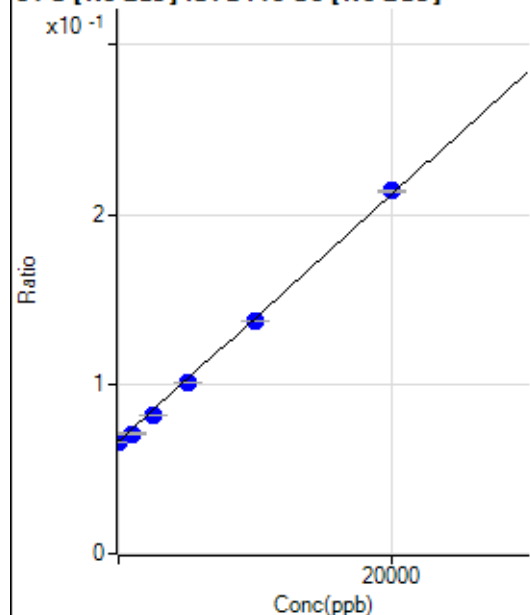
$$R = 1.0000$$

$$DL = 21.36$$

$$BEC = 41.16$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	131.787	385744.17	0.0673	P	0.4
2	☐	0.000	-13.195	376883.19	0.0662	P	0.2
3	☐	0.000	-118.592	379927.59	0.0655	P	0.9
4	☐	1000.000	606.194	400234.28	0.0707	P	0.7
5	☐	2500.000	2066.117	448532.46	0.0813	P	0.7
6	☐	5000.000	4706.419	545657.31	0.1005	P	0.3
7	☐	10000.000	9710.173	736732.69	0.1369	P	0.5
8	☐	20000.000	20292.234	1105619.98	0.2138	P	0.4
9	☐			321710.50	0.0667	P	0.6

$$y = 7.2669\text{E-}006 * x + 0.0663$$

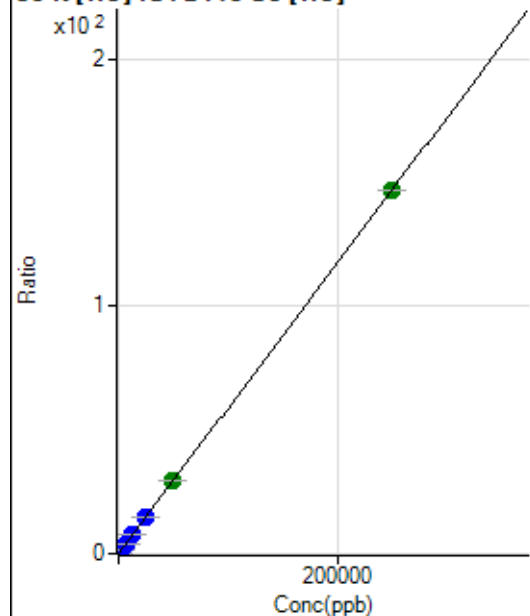
R = 0.9995

DL = 136.9

BEC = 9127

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8010.82	0.0373	P	2.8
2	☐	50.000	47.262	14082.22	0.0650	P	3.5
3	☐	500.000	513.705	73710.82	0.3388	P	0.9
4	☐	2500.000	2542.549	320889.32	1.5296	P	1.1
5	☐	6250.000	6381.090	778520.19	3.7826	P	0.2
6	☐	12500.000	12663.998	1498407.97	7.4704	P	0.6
7	☐	25000.000	25211.696	2973747.68	14.8352	P	0.6
8	☐	50000.000	50066.206	5606386.37	29.4235	A	1.2
9	☐	250000.00	249953.66	28350161.05	146.7467	A	0.2

$$y = 5.8695\text{E-}004 * x + 0.0373$$

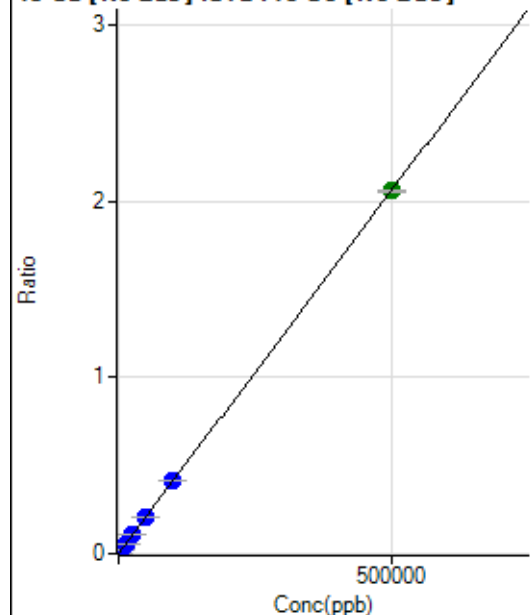
R = 1.0000

DL = 5.334

BEC = 63.53

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	305.57	0.0001	P	13.7
2	☐	50.000	47.491	1416.80	0.0002	P	4.4
3	☐	500.000	497.009	12194.38	0.0021	P	3.6
4	☐	5000.000	5080.024	118735.02	0.0210	P	0.9
5	☐	12500.000	12599.215	286528.75	0.0520	P	1.0
6	☐	25000.000	25312.717	566366.92	0.1043	P	0.1
7	☐	50000.000	51084.134	1132998.43	0.2105	P	0.9
8	☐	100000.00	101158.66	2155701.50	0.4168	P	0.4
9	☐	500000.00	499640.94	9929259.16	2.0586	A	0.4

$$y = 4.1200\text{E-}006 * x + 5.3285\text{E-}005$$

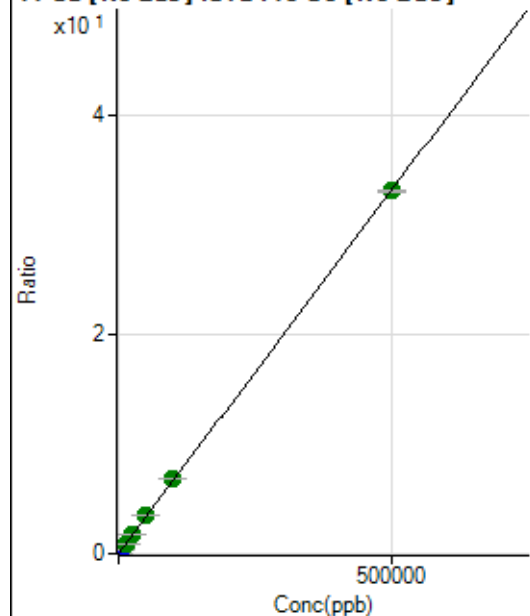
$$R = 1.0000$$

$$DL = 5.33$$

$$BEC = 12.93$$

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	8550.06	0.0015	P	1.4
2	☐	50.000	47.178	26265.91	0.0046	P	0.8
3	☐	500.000	507.996	203906.59	0.0351	P	1.2
4	☐	5000.000	5132.823	1931881.27	0.3414	P	0.4
5	☐	12500.000	12710.115	4649644.77	0.8432	A	0.2
6	☐	25000.000	25414.578	9143402.03	1.6845	A	0.8
7	☐	50000.000	51755.319	18454470.72	3.4289	A	0.5
8	☐	100000.00	103051.72	35300592.11	6.8260	A	0.7
9	☐	500000.00	499186.80	159457509.1	33.0595	A	0.7

$$y = 6.6224\text{E-}005 * x + 0.0015$$

$$R = 1.0000$$

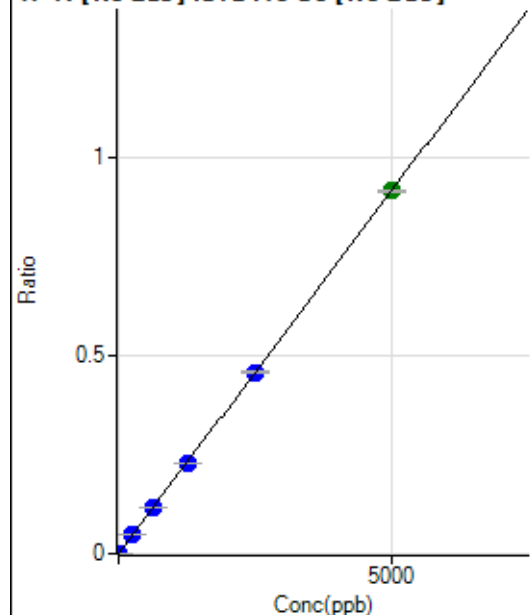
$$DL = 0.9754$$

$$BEC = 22.52$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	105.56	0.0000	P	16.2
2	☐	0.500	0.491	616.71	0.0001	P	3.5
3	☐	5.000	5.176	5606.89	0.0010	P	3.4
4	☐	250.000	254.708	263987.91	0.0467	P	0.9
5	☐	625.000	635.089	641290.80	0.1163	P	0.5
6	☐	1250.000	1249.509	1241846.64	0.2288	P	0.6
7	☐	2500.000	2498.206	2461702.42	0.4574	P	1.2
8	☐	5000.000	4999.523	4733997.33	0.9154	A	0.5
9	☐			1866.86	0.0004	P	11.9

$$y = 1.8309\text{E-}004 * x + 1.8407\text{E-}005$$

$$R = 1.0000$$

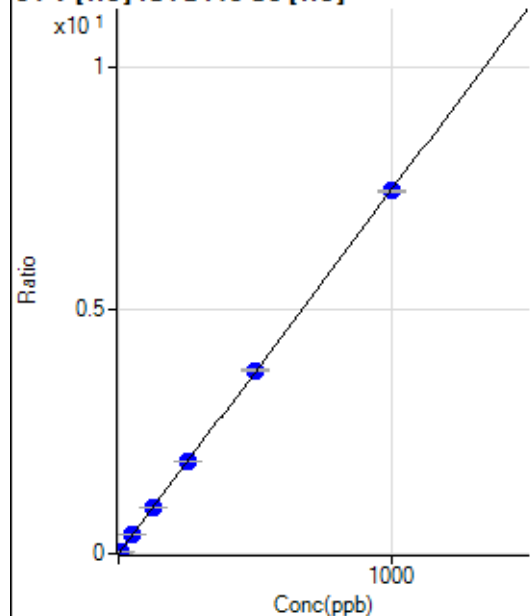
$$DL = 0.04881$$

$$BEC = 0.1005$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0001	P	25.3
2	☐	0.500	0.543	891.15	0.0041	P	1.5
3	☐	5.000	5.286	8598.16	0.0395	P	1.9
4	☐	50.000	51.007	79894.99	0.3808	P	1.1
5	☐	125.000	127.404	195760.07	0.9511	P	0.5
6	☐	250.000	252.448	378010.14	1.8846	P	0.6
7	☐	500.000	502.912	752556.02	3.7543	P	0.9
8	☐	1000.000	997.580	1418987.65	7.4470	P	0.8
9	☐			420.01	0.0022	P	7.4

$$y = 0.0075 * x + 6.2088\text{E-}005$$

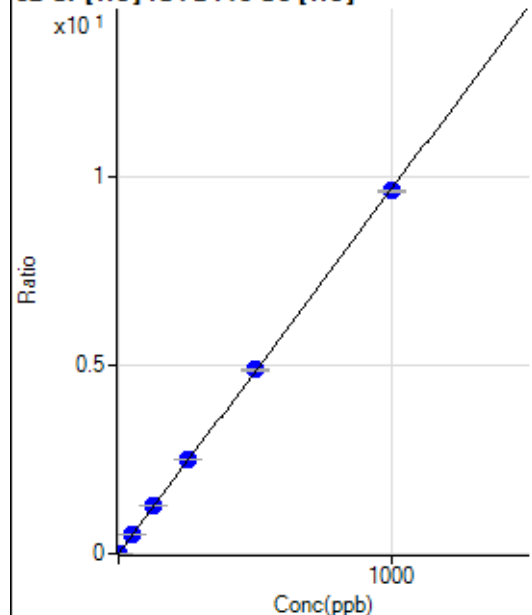
$$R = 1.0000$$

$$DL = 0.006301$$

$$BEC = 0.008317$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.02	0.0023	P	7.4
2	☐	0.200	0.195	912.27	0.0042	P	8.2
3	☐	2.000	2.109	4932.01	0.0227	P	1.2
4	☐	50.000	51.977	105680.72	0.5038	P	0.9
5	☐	125.000	130.531	259644.05	1.2616	P	0.4
6	☐	250.000	256.748	497268.21	2.4792	P	0.8
7	☐	500.000	504.671	976378.64	4.8709	P	0.5
8	☐	1000.000	995.187	1829791.55	9.6029	P	0.6
9	☐			66484.84	0.3441	P	0.8

$$y = 0.0096 * x + 0.0023$$

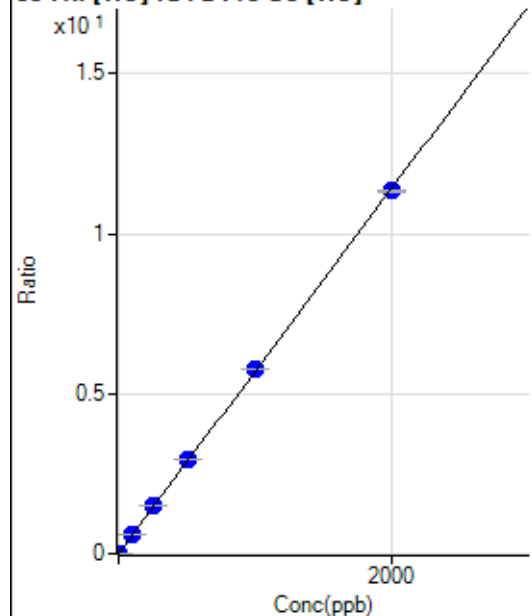
$$R = 0.9999$$

$$DL = 0.05344$$

$$BEC = 0.2413$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	68.89	0.0003	P	5.5
2	☐	0.100	0.118	215.56	0.0010	P	8.5
3	☐	1.000	1.078	1407.87	0.0065	P	2.7
4	☐	100.000	104.387	125008.05	0.5959	P	0.8
5	☐	250.000	261.050	306588.41	1.4897	P	0.8
6	☐	500.000	515.078	589493.17	2.9390	P	0.7
7	☐	1000.000	1013.348	1158959.86	5.7817	P	0.5
8	☐	2000.000	1987.956	2161182.62	11.3421	P	0.7
9	☐			7996.74	0.0414	P	0.8

$$y = 0.0057 * x + 3.2067E-004$$

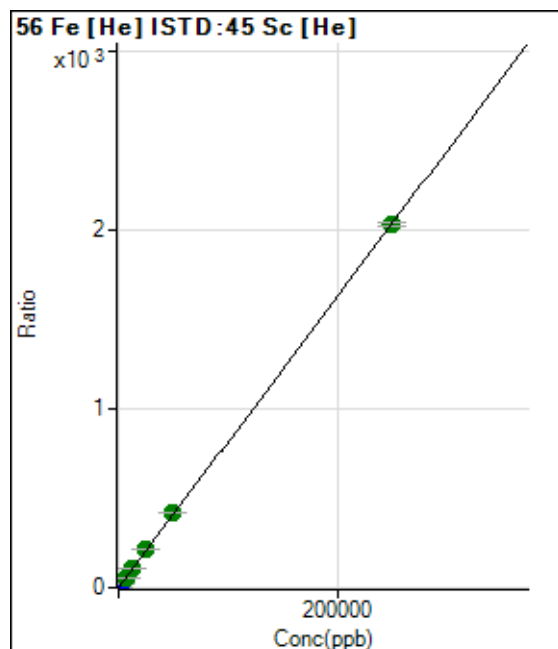
$$R = 0.9999$$

$$DL = 0.009307$$

$$BEC = 0.05621$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5938.40	0.0276	P	1.4
2	☐	5.000					
3	☐	50.000	55.169	103464.02	0.4756	P	0.3
4	☐	2500.000	2679.893	4570323.02	21.7853	P	0.6
5	☐	6250.000	6631.319	11086437.40	53.8663	A	0.3
6	☐	12500.000	13131.806	21390494.69	106.6427	A	0.2
7	☐	25000.000	26021.091	42353476.87	211.2888	A	0.4
8	☐	50000.000	51220.566	79242815.66	415.8794	A	1.0
9	☐	250000.00	249610.85	391485745.7	2,026.579	A	1.0

$$y = 0.0081 * x + 0.0276$$

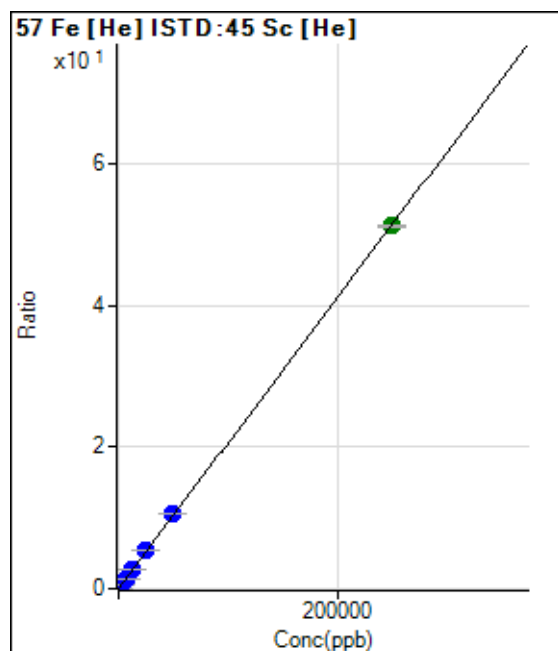
$$R = 1.0000$$

$$DL = 0.1443$$

$$BEC = 3.405$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	162.97	0.0008	P	10.4
2	☐	5.000					
3	☐	50.000	56.592	2689.21	0.0124	P	2.7
4	☐	2500.000	2682.597	115530.76	0.5507	P	1.2
5	☐	6250.000	6673.301	281722.65	1.3688	P	0.4
6	☐	12500.000	13215.215	543570.59	2.7100	P	0.4
7	☐	25000.000	25978.169	1067698.18	5.3265	P	0.5
8	☐	50000.000	51095.242	1996130.48	10.4756	P	0.4
9	☐	250000.00	249634.96	9886734.60	51.1776	A	0.6

$$y = 2.0501E-004 * x + 7.5857E-004$$

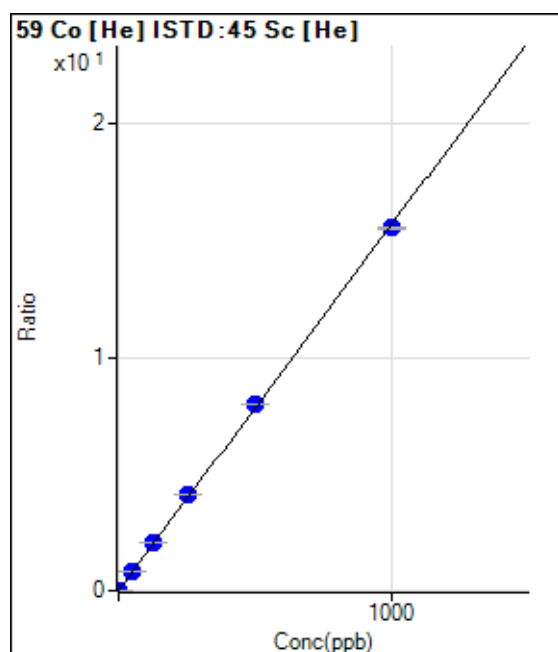
$$R = 1.0000$$

$$DL = 1.154$$

$$BEC = 3.7$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	47.78	0.0002	P	28.1
2	☐	0.100	0.105	403.34	0.0019	P	3.3
3	☐	1.000	1.056	3649.40	0.0168	P	2.6
4	☐	50.000	53.701	176600.40	0.8418	P	0.8
5	☐	125.000	132.503	427429.33	2.0768	P	0.2
6	☐	250.000	261.943	823461.26	4.1054	P	0.4
7	☐	500.000	509.151	1599512.16	7.9795	P	0.6
8	☐	1000.000	991.316	2960345.51	15.5359	P	0.4
9	☐			36873.13	0.1909	P	0.9

$$y = 0.0157 * x + 2.2236E-004$$

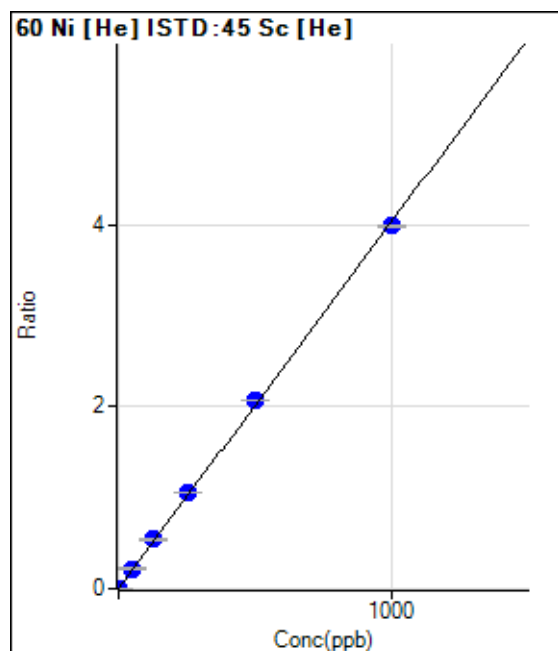
$$R = 0.9998$$

$$DL = 0.01197$$

$$BEC = 0.01419$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	111.12	0.0005	P	20.7
2	☐	0.100	0.096	195.56	0.0009	P	11.4
3	☐	1.000	1.174	1142.29	0.0053	P	6.7
4	☐	50.000	54.687	46352.05	0.2209	P	2.3
5	☐	125.000	133.769	111078.77	0.5397	P	0.6
6	☐	250.000	263.166	212875.10	1.0613	P	0.3
7	☐	500.000	512.941	414553.04	2.0681	P	0.2
8	☐	1000.000	988.907	759632.72	3.9866	P	0.6
9	☐			24748.82	0.1281	P	2.3

$$y = 0.0040 * x + 5.1740E-004$$

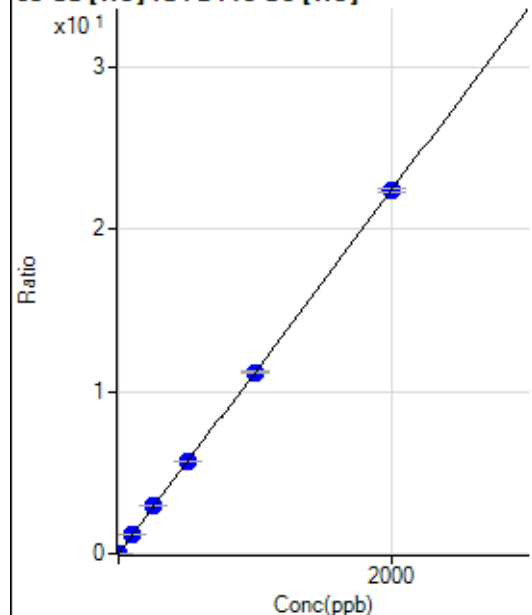
$$R = 0.9998$$

$$DL = 0.07965$$

$$BEC = 0.1284$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	462.24	0.0022	P	3.2
2	☐	0.200	0.234	1034.50	0.0048	P	1.1
3	☐	2.000	2.073	5520.01	0.0254	P	3.8
4	☐	100.000	106.859	251607.74	1.1993	P	1.5
5	☐	250.000	261.719	603911.41	2.9343	P	0.4
6	☐	500.000	512.276	1151609.03	5.7414	P	0.1
7	☐	1000.000	997.564	2240687.31	11.1782	P	0.7
8	☐	2000.000	1996.341	4262050.77	22.3679	P	1.1
9	☐			7917.81	0.0410	P	1.1

$$y = 0.0112 * x + 0.0022$$

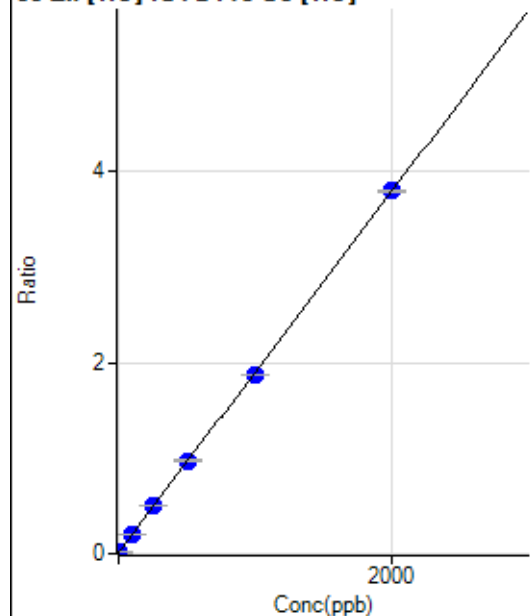
$$R = 1.0000$$

$$DL = 0.01822$$

$$BEC = 0.1921$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2071.29	0.0096	P	6.7
2	☐	0.200	0.162	2153.53	0.0099	P	1.2
3	☐	2.000	2.490	3120.38	0.0143	P	1.6
4	☐	100.000	104.328	43345.57	0.2066	P	1.1
5	☐	250.000	258.054	102261.41	0.4969	P	0.3
6	☐	500.000	509.397	194845.39	0.9714	P	0.8
7	☐	1000.000	985.204	374803.54	1.8698	P	0.3
8	☐	2000.000	2003.825	722751.86	3.7930	P	0.7
9	☐			9314.22	0.0482	P	1.7

$$y = 0.0019 * x + 0.0096$$

$$R = 0.9999$$

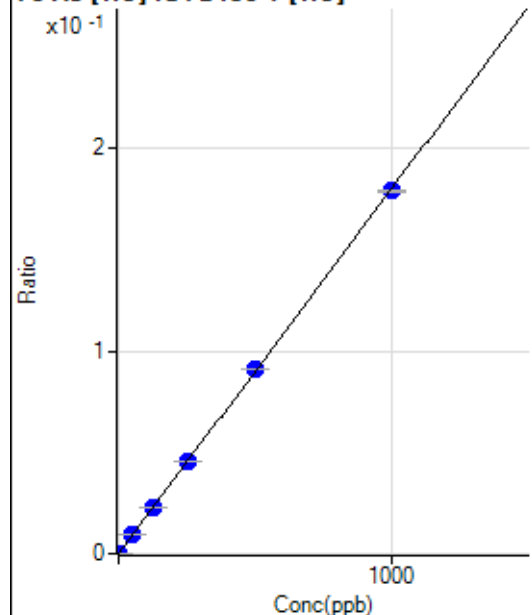
$$DL = 1.022$$

$$BEC = 5.106$$

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	4.94	0.0000	P	57.7
2	☐	0.100	0.108	26.55	0.0000	P	31.3
3	☐	1.000	0.949	196.30	0.0002	P	5.0
4	☐	50.000	51.119	9982.51	0.0092	P	2.5
5	☐	125.000	128.605	24703.11	0.0232	P	0.7
6	☐	250.000	253.418	47431.89	0.0456	P	0.9
7	☐	500.000	507.779	94747.82	0.0915	P	0.1
8	☐	1000.000	994.750	175920.00	0.1792	P	0.6
9	☐			251.86	0.0003	P	2.9

$$y = 1.8010E-004 * x + 4.4914E-006$$

$$R = 0.9999$$

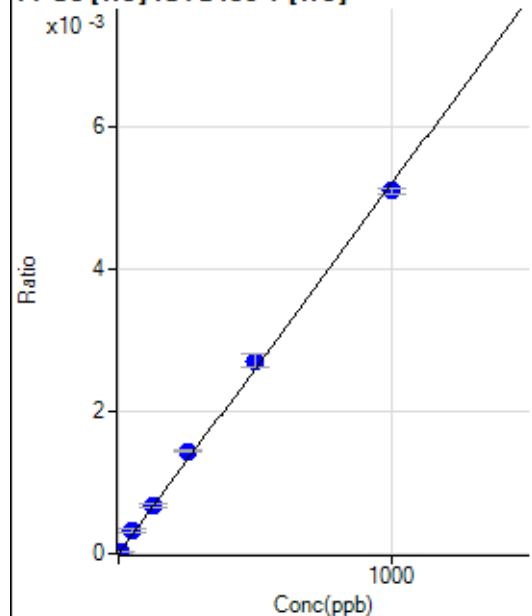
$$DL = 0.04316$$

$$BEC = 0.02494$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	0.384	2.22	0.0000	P	86.6
3	☐	5.000	5.540	32.22	0.0000	P	21.6
4	☐	50.000	61.133	344.46	0.0003	P	18.5
5	☐	125.000	129.709	718.92	0.0007	P	4.6
6	☐	250.000	278.102	1502.33	0.0014	P	1.2
7	☐	500.000	521.118	2806.98	0.0027	P	7.3
8	☐	1000.000	981.267	5008.72	0.0051	P	1.3
9	☐			2.22	0.0000	P	86.6

$$y = 5.1983E-006 * x + 0.0000E+000$$

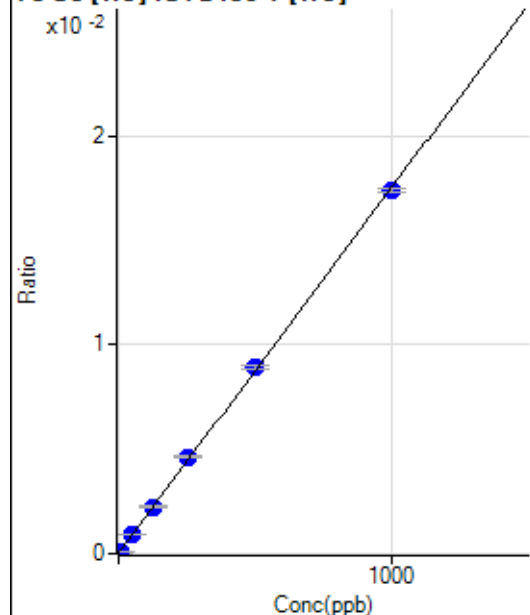
$$R = 0.9992$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	15.43	0.0000	P	54.1
2	☐	0.500	0.500	25.31	0.0000	P	20.8
3	☐	5.000	5.656	126.55	0.0001	P	8.8
4	☐	50.000	52.410	1009.92	0.0009	P	1.7
5	☐	125.000	128.011	2405.78	0.0023	P	3.2
6	☐	250.000	264.245	4823.68	0.0046	P	1.9
7	☐	500.000	508.944	9249.31	0.0089	P	1.2
8	☐	1000.000	991.466	17063.83	0.0174	P	1.1
9	☐			27.16	0.0000	P	30.7

$$y = 1.7514\text{E-}005 * x + 1.4026\text{E-}005$$

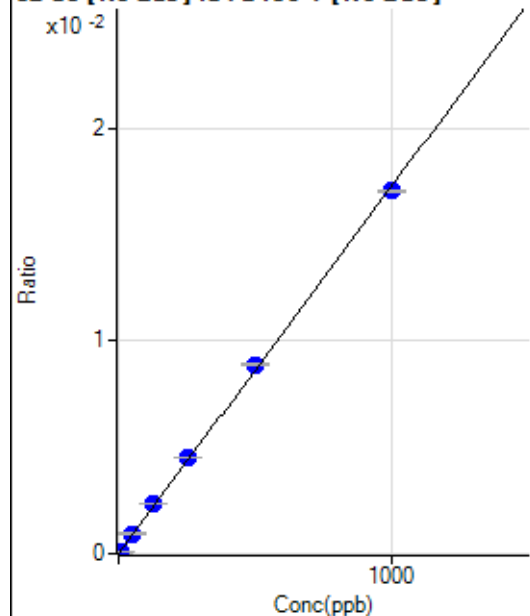
$$R = 0.9998$$

$$DL = 1.3$$

$$BEC = 0.8008$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	-59.08	0.0000	P	-125.
2	☐	0.500	0.591	42.74	0.0000	P	174.4
3	☐	5.000	6.031	993.81	0.0001	P	4.3
4	☐	50.000	54.683	9361.55	0.0009	P	2.3
5	☐	125.000	134.640	22466.12	0.0023	P	0.7
6	☐	250.000	263.334	43707.10	0.0045	P	0.8
7	☐	500.000	514.294	84551.25	0.0089	P	1.0
8	☐	1000.000	988.075	156743.69	0.0171	P	0.7
9	☐			127.82	0.0000	P	27.5

$$y = 1.7280\text{E-}005 * x - 5.8916\text{E-}006$$

$$R = 0.9997$$

$$DL = 1.286$$

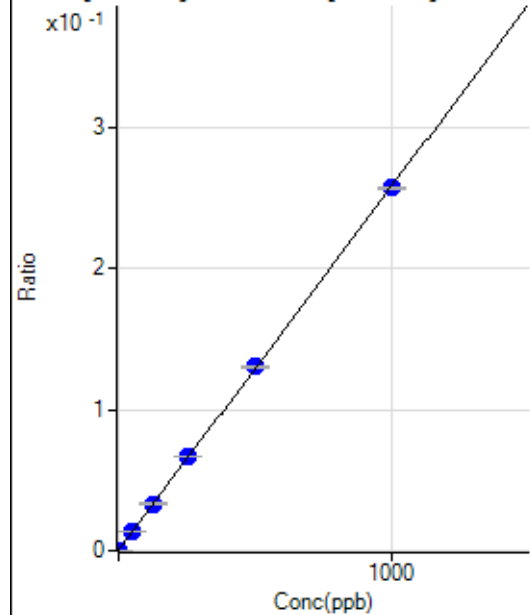
$$BEC = -0.341$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1816.81		P	2.9
2	☐			1892.38		P	2.3
3	☐			1869.04		P	5.8
4	☐			1775.69		P	4.5
5	☐			1787.92		P	0.8
6	☐			1680.12		P	6.9
7	☐			1605.67		P	6.4
8	☐			1640.12		P	3.7
9	☐			1546.77		P	2.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2842.07	0.0003	P	4.7
2	☐	0.100	0.109	3092.14	0.0003	P	11.5
3	☐	1.000	1.041	5573.51	0.0006	P	3.3
4	☐	50.000	51.156	134385.15	0.0135	P	0.7
5	☐	125.000	128.188	322835.00	0.0333	P	0.4
6	☐	250.000	256.070	637962.53	0.0663	P	0.3
7	☐	500.000	503.824	1239910.36	0.1302	P	1.0
8	☐	1000.000	996.114	2362126.36	0.2572	P	0.7
9	☐			12011.06	0.0014	P	3.0

$$y = 2.5793\text{E-}004 * x + 2.8300\text{E-}004$$

$$R = 1.0000$$

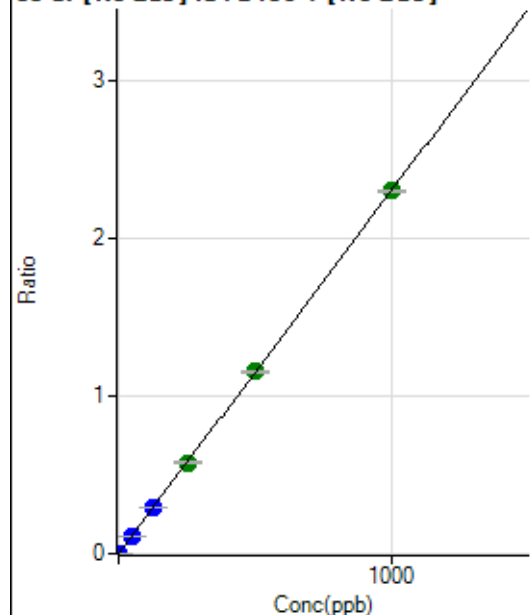
$$DL = 0.1561$$

$$BEC = 1.097$$

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	280.57	0.0000	P	3.9
2	☐	0.100	0.091	2353.07	0.0002	P	3.1
3	☐	1.000	0.976	22983.06	0.0023	P	1.3
4	☐	50.000	50.043	1148517.72	0.1152	P	0.4
5	☐	125.000	125.935	2805913.67	0.2898	P	0.3
6	☐	250.000	251.478	5566102.64	0.5787	A	0.4
7	☐	500.000	500.712	10970336.27	1.1523	A	0.4
8	☐	1000.000	999.155	21116034.50	2.2993	A	0.3
9	☐			82532.00	0.0096	P	2.5

$$y = 0.0023 * x + 2.7926E-005$$

$$R = 1.0000$$

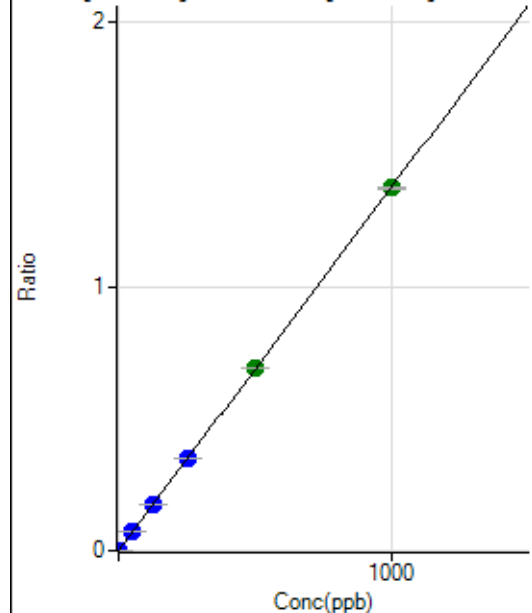
$$DL = 0.001408$$

$$BEC = 0.01214$$

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	750.06	0.0001	P	12.7
2	☐	0.100	0.068	1672.39	0.0002	P	7.5
3	☐	1.000	0.879	12970.30	0.0013	P	0.4
4	☐	50.000	50.594	694505.08	0.0697	P	0.4
5	☐	125.000	127.593	1699447.28	0.1755	P	0.8
6	☐	250.000	251.660	3329367.52	0.3462	P	0.2
7	☐	500.000	502.467	6579626.32	0.6911	A	0.2
8	☐	1000.000	997.998	12605183.62	1.3726	A	0.3
9	☐			4714.88	0.0006	P	12.9

$$y = 0.0014 * x + 7.4621E-005$$

$$R = 1.0000$$

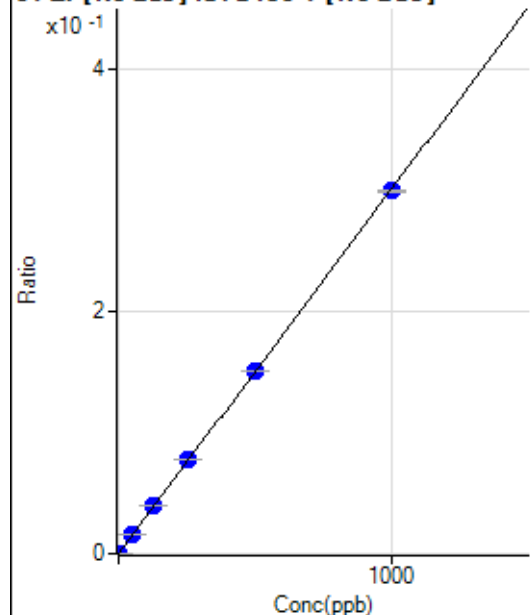
$$DL = 0.02073$$

$$BEC = 0.05426$$

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	144.45	0.0000	P	21.3
2	☐	0.100	0.085	397.25	0.0000	P	8.2
3	☐	1.000	0.890	2847.63	0.0003	P	2.1
4	☐	50.000	51.977	155864.36	0.0156	P	0.7
5	☐	125.000	130.790	380584.18	0.0393	P	0.7
6	☐	250.000	259.484	750002.71	0.0780	P	0.3
7	☐	500.000	502.547	1437751.65	0.1510	P	0.3
8	☐	1000.000	995.533	2747174.69	0.2991	P	0.6
9	☐			941.74	0.0001	P	14.4

$$y = 3.0047\text{E-}004 * x + 1.4369\text{E-}005$$

$$R = 0.9999$$

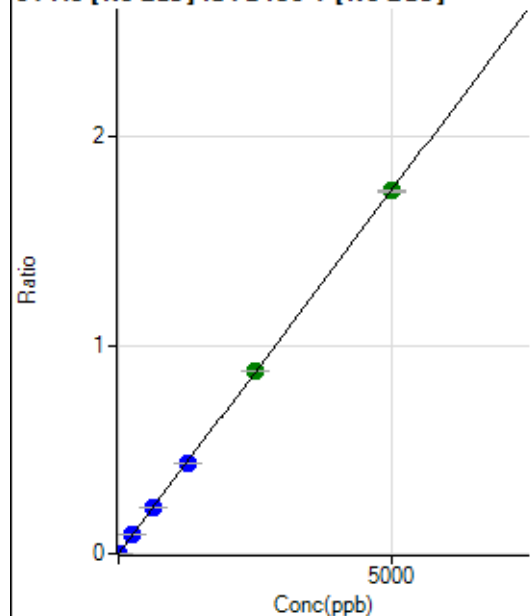
$$DL = 0.03059$$

$$BEC = 0.04782$$

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	311.13	0.0000	P	2.2
2	☐	0.500	0.465	1916.88	0.0002	P	1.6
3	☐	5.000	4.689	16816.04	0.0017	P	2.8
4	☐	250.000	252.831	878262.99	0.0881	P	0.5
5	☐	625.000	635.530	2143090.91	0.2214	P	0.6
6	☐	1250.000	1249.381	4185228.09	0.4352	P	0.2
7	☐	2500.000	2510.587	8324862.25	0.8744	A	0.1
8	☐	5000.000	4993.404	15971168.41	1.7391	A	0.7
9	☐			13228.79	0.0015	P	9.2

$$y = 3.4828\text{E-}004 * x + 3.0975\text{E-}005$$

$$R = 1.0000$$

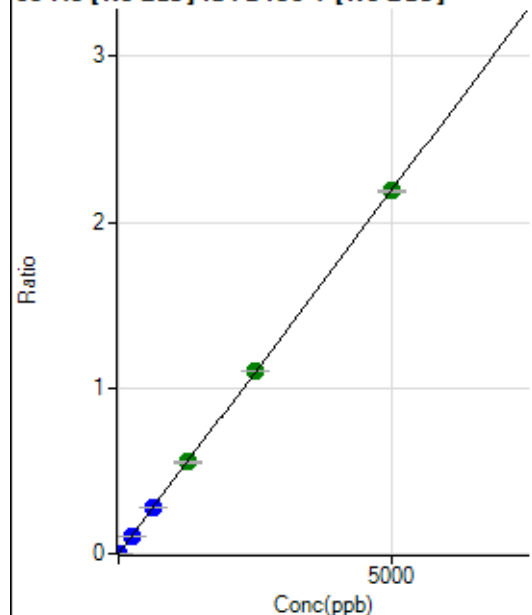
$$DL = 0.005762$$

$$BEC = 0.08894$$

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	18.2
2	☐	0.500	0.479	2180.82	0.0002	P	12.9
3	☐	5.000	4.810	21397.26	0.0021	P	2.0
4	☐	250.000	249.736	1091383.19	0.1095	P	0.3
5	☐	625.000	630.253	2674168.40	0.2762	P	0.4
6	☐	1250.000	1257.818	5301916.53	0.5513	A	0.1
7	☐	2500.000	2506.541	10458788.51	1.0985	A	0.3
8	☐	5000.000	4994.132	20100600.97	2.1888	A	0.4
9	☐			20721.24	0.0024	P	0.9

$$y = 4.3827\text{E-}004 * x + 9.4000\text{E-}006$$

$$R = 1.0000$$

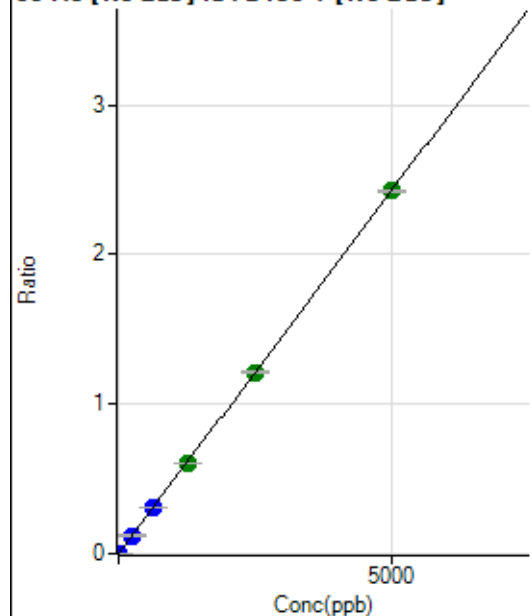
$$DL = 0.01174$$

$$BEC = 0.02145$$

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	152.78	0.0000	P	63.5
2	☐	0.500	0.508	2600.36	0.0003	P	1.8
3	☐	5.000	4.850	23934.70	0.0024	P	2.0
4	☐	250.000	251.129	1215044.41	0.1219	P	0.6
5	☐	625.000	626.937	2945138.61	0.3042	P	0.5
6	☐	1250.000	1251.632	5840951.60	0.6073	A	0.3
7	☐	2500.000	2501.540	11555959.98	1.2138	A	0.5
8	☐	5000.000	4998.524	22273019.42	2.4253	A	0.5
9	☐			23166.72	0.0027	P	3.5

$$y = 4.8521\text{E-}004 * x + 1.5204\text{E-}005$$

$$R = 1.0000$$

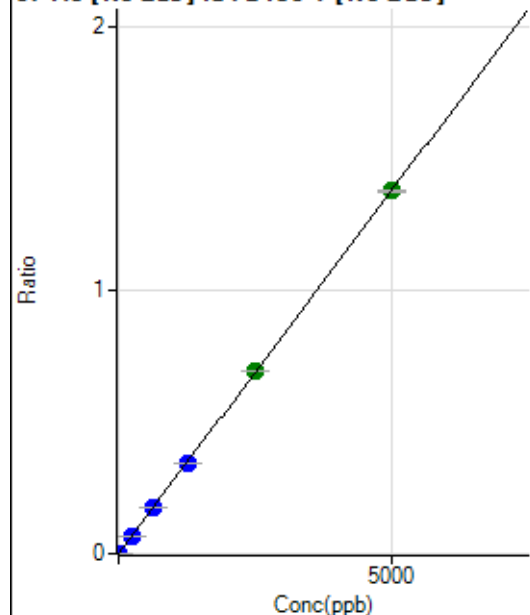
$$DL = 0.05968$$

$$BEC = 0.03133$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.01	0.0000	P	57.8
2	☐	0.500	0.444	1289.00	0.0001	P	16.9
3	☐	5.000	4.831	13515.26	0.0013	P	2.1
4	☐	250.000	250.611	687971.37	0.0690	P	0.4
5	☐	625.000	626.486	1669803.49	0.1725	P	0.3
6	☐	1250.000	1234.496	3268711.42	0.3399	P	0.3
7	☐	2500.000	2510.010	6578883.65	0.6910	A	0.2
8	☐	5000.000	4998.655	12637762.69	1.3761	A	0.6
9	☐			12619.90	0.0015	P	3.4

$$y = 2.7530E-004 * x + 7.4402E-006$$

$$R = 1.0000$$

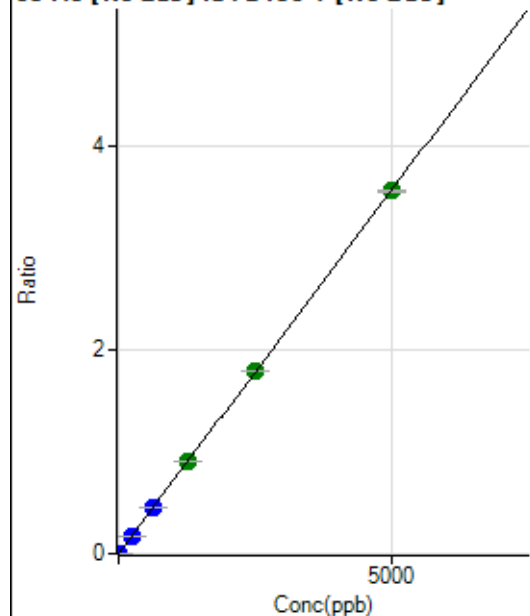
$$DL = 0.04686$$

$$BEC = 0.02703$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.56	0.0000	P	12.4
2	☐	0.500	0.472	3514.49	0.0004	P	3.9
3	☐	5.000	4.856	35110.84	0.0035	P	1.3
4	☐	250.000	250.584	1778702.43	0.1784	P	0.3
5	☐	625.000	626.208	4315629.30	0.4458	P	0.2
6	☐	1250.000	1258.294	8614680.75	0.8957	A	0.2
7	☐	2500.000	2511.999	17024253.50	1.7881	A	0.4
8	☐	5000.000	4991.747	32631860.45	3.5533	A	0.5
9	☐			33181.33	0.0039	P	3.3

$$y = 7.1183E-004 * x + 1.7987E-005$$

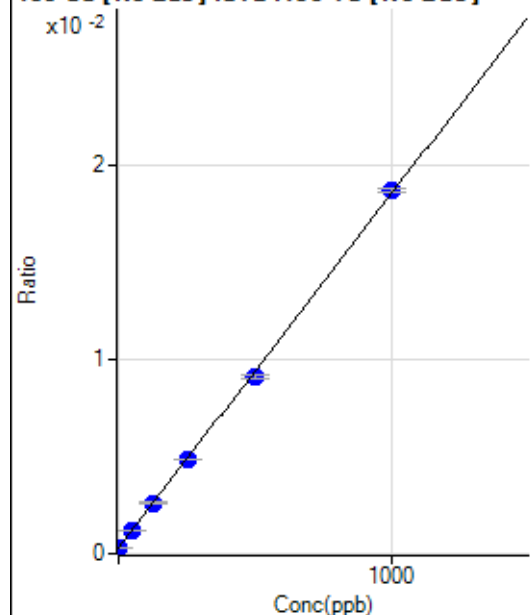
$$R = 1.0000$$

$$DL = 0.009413$$

$$BEC = 0.02527$$

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	4889.94	0.0003	P	1.0
2	☐	0.100	-0.746	4637.07	0.0003	P	2.3
3	☐	1.000	0.413	5045.56	0.0003	P	2.6
4	☐	50.000	48.953	19444.57	0.0012	P	1.3
5	☐	125.000	126.689	42010.48	0.0026	P	1.2
6	☐	250.000	250.654	77947.55	0.0049	P	0.4
7	☐	500.000	483.771	145879.88	0.0091	P	2.2
8	☐	1000.000	1007.793	290329.87	0.0187	P	1.1
9	☐			4092.42	0.0003	P	2.4

$$y = 1.8222\text{E-}005 * x + 3.0138\text{E-}004$$

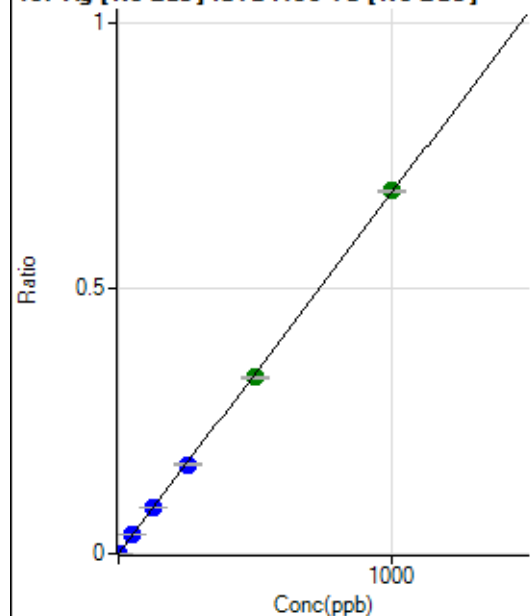
$$R = 0.9998$$

$$DL = 0.4828$$

$$BEC = 16.54$$

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	152.79	0.0000	P	3.8
2	☐	0.100	0.112	1372.35	0.0001	P	7.5
3	☐	1.000	1.048	11766.44	0.0007	P	2.7
4	☐	50.000	52.337	578852.82	0.0355	P	0.3
5	☐	125.000	127.517	1393090.15	0.0865	P	0.4
6	☐	250.000	247.307	2686900.02	0.1678	P	0.5
7	☐	500.000	488.951	5309639.96	0.3318	A	0.9
8	☐	1000.000	1005.766	10616334.44	0.6825	A	0.8
9	☐			2466.99	0.0002	P	11.2

$$y = 6.7861\text{E-}004 * x + 9.4178\text{E-}006$$

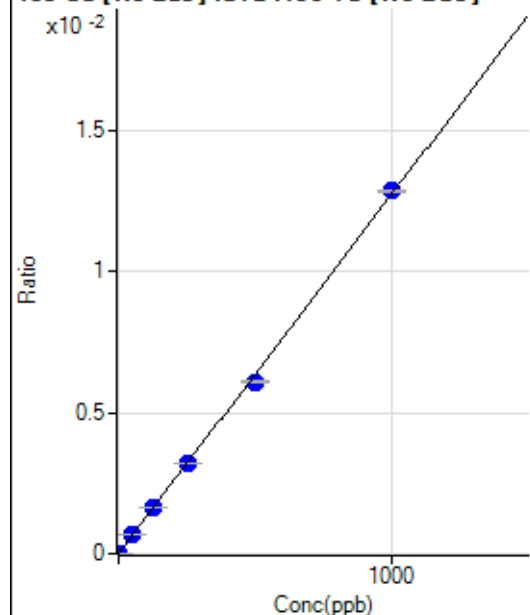
$$R = 0.9999$$

$$DL = 0.00158$$

$$BEC = 0.01388$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.56	0.0000	P	43.2
2	☐	0.100	0.115	29.17	0.0000	P	37.6
3	☐	1.000	1.184	251.40	0.0000	P	4.4
4	☐	50.000	51.638	10704.26	0.0007	P	2.7
5	☐	125.000	127.237	26047.84	0.0016	P	0.7
6	☐	250.000	251.564	51213.14	0.0032	P	0.2
7	☐	500.000	477.957	97252.89	0.0061	P	0.8
8	☐	1000.000	1010.269	199811.79	0.0128	P	0.7
9	☐			77.78	0.0000	P	32.1

$$y = 1.2715\text{E-}005 * x + 3.4241\text{E-}007$$

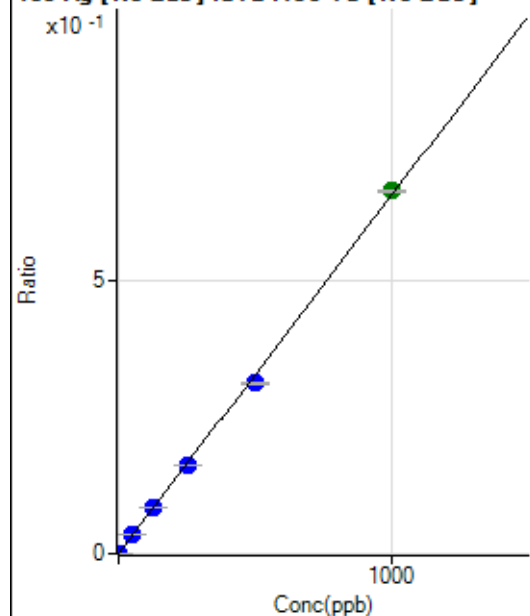
$$R = 0.9997$$

$$DL = 0.03487$$

$$BEC = 0.02693$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.00	0.0000	P	58.6
2	☐	0.100	0.106	1188.99	0.0001	P	7.3
3	☐	1.000	1.037	11163.20	0.0007	P	0.8
4	☐	50.000	52.197	556929.71	0.0342	P	1.1
5	☐	125.000	126.771	1336121.09	0.0830	P	0.7
6	☐	250.000	247.759	2597033.46	0.1622	P	0.7
7	☐	500.000	475.286	4979656.41	0.3112	P	0.4
8	☐	1000.000	1012.586	10312427.57	0.6630	A	0.3
9	☐			2364.18	0.0002	P	10.6

$$y = 6.5474\text{E-}004 * x + 4.6125\text{E-}006$$

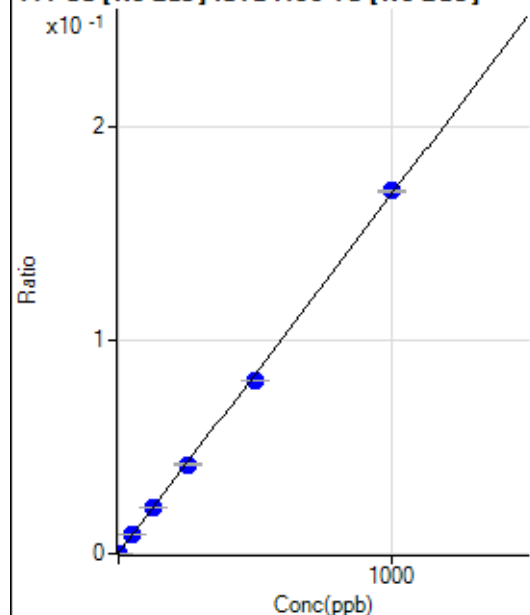
$$R = 0.9996$$

$$DL = 0.01239$$

$$BEC = 0.007045$$

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	3455.74	0.0002	P	1.3
2	☐	0.100					
3	☐	1.000	0.993	6209.85	0.0004	P	0.2
4	☐	50.000	50.514	142057.40	0.0087	P	0.4
5	☐	125.000	126.111	345227.52	0.0214	P	0.7
6	☐	250.000	247.949	671769.88	0.0420	P	1.1
7	☐	500.000	480.575	1298232.11	0.0811	P	0.6
8	☐	1000.000	1010.061	2648673.55	0.1703	P	0.4
9	☐			3454.16	0.0002	P	2.7

$$y = 1.6838\text{E-}004 * x + 2.1299\text{E-}004$$

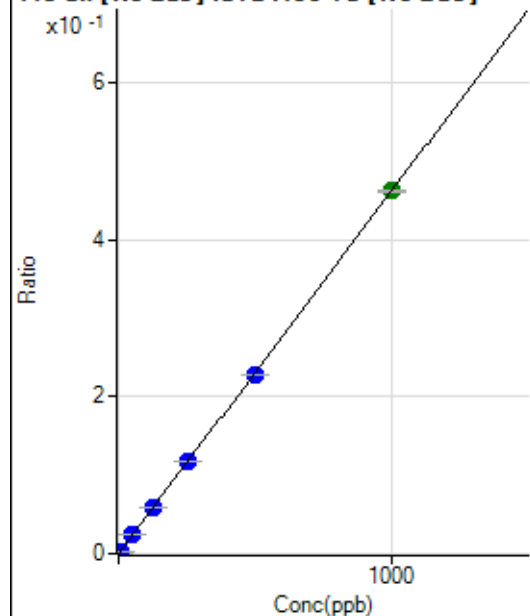
$$R = 0.9997$$

$$DL = 0.04883$$

$$BEC = 1.265$$

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	633.38	0.0000	P	8.6
2	☐	0.500	0.505	4389.75	0.0003	P	5.5
3	☐	5.000	5.346	41019.12	0.0025	P	0.9
4	☐	50.000	51.943	392060.43	0.0241	P	0.4
5	☐	125.000	128.408	956565.01	0.0594	P	0.4
6	☐	250.000	255.353	1891238.74	0.1181	P	0.6
7	☐	500.000	495.207	3665412.80	0.2291	P	0.1
8	☐	1000.000	1000.533	7198024.99	0.4628	A	0.6
9	☐			4217.49	0.0003	P	8.8

$$y = 4.6248\text{E-}004 * x + 3.9049\text{E-}005$$

$$R = 1.0000$$

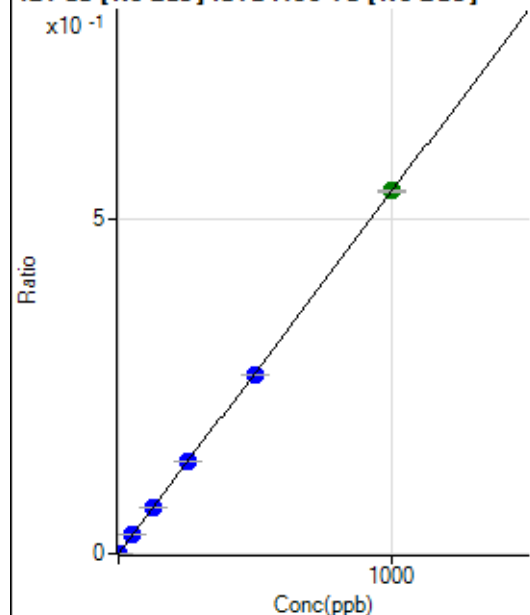
$$DL = 0.02175$$

$$BEC = 0.08443$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	144.45	0.0000	P	18.0
2	☐	0.200	0.191	1816.87	0.0001	P	2.7
3	☐	2.000	1.973	17620.00	0.0011	P	1.0
4	☐	50.000	51.351	454006.02	0.0279	P	0.4
5	☐	125.000	128.965	1126181.95	0.0700	P	0.6
6	☐	250.000	253.239	2199229.93	0.1374	P	0.4
7	☐	500.000	493.903	4287126.09	0.2679	P	0.3
8	☐	1000.000	1001.676	8451493.42	0.5433	A	0.2
9	☐			12898.06	0.0009	P	1.8

$$y = 5.4243\text{E-}004 * x + 8.9071\text{E-}006$$

$$R = 1.0000$$

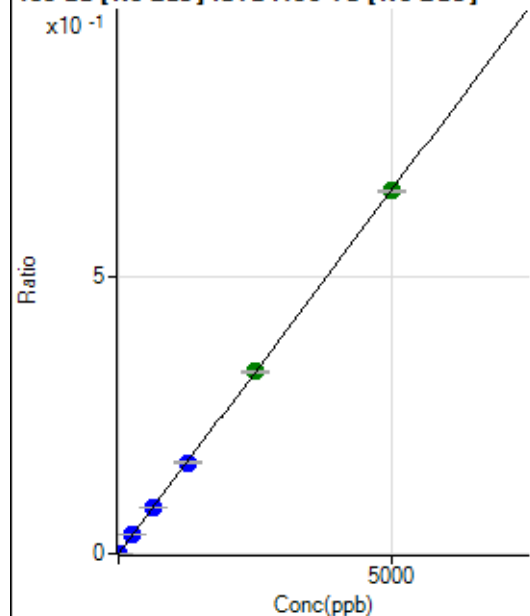
$$DL = 0.00885$$

$$BEC = 0.01642$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.56	0.0000	P	22.2
2	☐	1.000	1.030	2255.83	0.0001	P	5.5
3	☐	10.000	10.261	22057.11	0.0014	P	1.3
4	☐	250.000	257.206	549654.23	0.0337	P	0.3
5	☐	625.000	635.481	1341473.10	0.0833	P	0.8
6	☐	1250.000	1256.376	2637699.99	0.1648	P	0.6
7	☐	2500.000	2510.735	5268614.79	0.3293	A	0.9
8	☐	5000.000	4991.367	10181252.05	0.6545	A	0.4
9	☐			2344.74	0.0002	P	7.7

$$y = 1.3114\text{E-}004 * x + 4.9697\text{E-}006$$

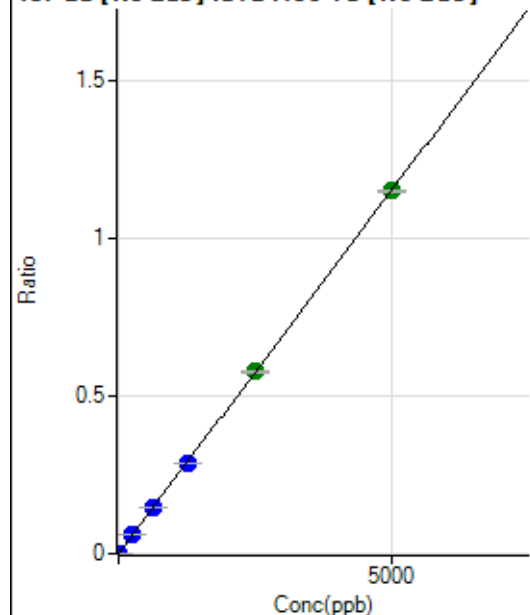
$$R = 1.0000$$

$$DL = 0.02529$$

$$BEC = 0.0379$$

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	83.34	0.0000	P	35.5
2	☐	1.000	1.044	3956.29	0.0002	P	7.9
3	☐	10.000	10.232	38543.34	0.0024	P	2.0
4	☐	250.000	257.854	966910.91	0.0593	P	0.1
5	☐	625.000	634.869	2351647.08	0.1461	P	1.2
6	☐	1250.000	1250.376	4606490.42	0.2877	P	0.2
7	☐	2500.000	2504.994	9224256.72	0.5764	A	0.8
8	☐	5000.000	4995.782	17881700.05	1.1496	A	0.5
9	☐			3950.74	0.0003	P	20.0

$$y = 2.3012\text{E-}004 * x + 5.1308\text{E-}006$$

$$R = 1.0000$$

$$DL = 0.02375$$

$$BEC = 0.0223$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	100.0
2	☐			6.67		P	0.0
3	☐			6.67		P	100.0
4	☐			62.22		P	6.2
5	☐			162.23		P	12.6
6	☐			266.68		P	24.6
7	☐			477.80		P	2.1
8	☐			951.18		P	1.8
9	☐			115.56		P	18.5

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			10.00		P	33.3
2	☐			11.11		P	34.6
3	☐			22.22		P	31.2
4	☐			15.56		P	65.5
5	☐			15.55		P	24.8
6	☐			32.22		P	21.5
7	☐			46.67		P	18.9
8	☐			62.22		P	3.1
9	☐			52.22		P	19.5

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			38.89		P	12.4
2	☐			33.33		P	25.0
3	☐			27.78		P	17.3
4	☐			41.67		P	91.7
5	☐			66.67		P	21.6
6	☐			66.67		P	12.5
7	☐			119.45		P	22.4
8	☐			166.68		P	26.5
9	☐			47.22		P	50.9

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			30.00		P	29.4
2	☐			31.11		P	16.4
3	☐			27.78		P	6.9
4	☐			36.67		P	24.1
5	☐			50.00		P	6.7
6	☐			60.00		P	30.9
7	☐			98.89		P	15.9
8	☐			137.78		P	16.1
9	☐			35.56		P	48.1

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			80.56		P	11.9
2	☐			88.89		P	21.7
3	☐			97.23		P	34.6
4	☐			127.78		P	32.2
5	☐			122.23		P	41.1
6	☐			105.56		P	29.9
7	☐			138.90		P	29.6
8	☐			122.23		P	14.2
9	☐			113.89		P	41.6

160 Gd [He] No available calibration points

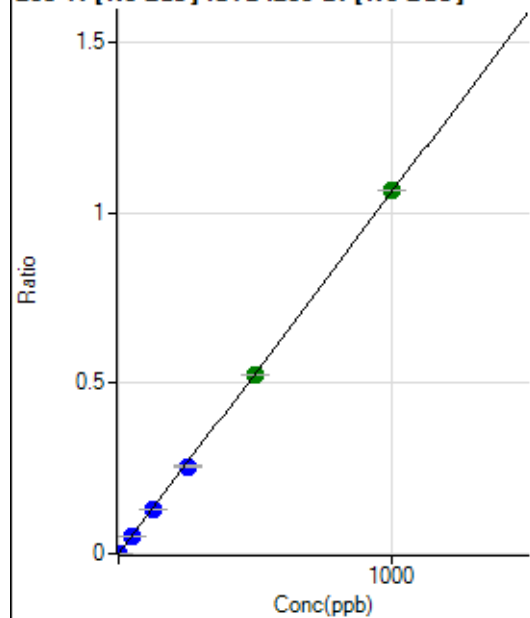
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			160.00		P	11.0
2	☐			165.56		P	20.2
3	☐			174.45		P	18.4
4	☐			153.34		P	17.0
5	☐			177.78		P	2.9
6	☐			160.00		P	12.7
7	☐			156.67		P	4.3
8	☐			142.23		P	9.8
9	☐			147.78		P	21.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			108.34		P	30.8
2	☐			100.00		P	8.3
3	☐			83.34		P	43.6
4	☐			108.34		P	20.4
5	☐			83.34		P	60.8
6	☐			105.56		P	12.1
7	☐			80.56		P	11.9
8	☐			111.12		P	26.3
9	☐			119.45		P	17.6

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			78.89		P	10.6
2	☐			70.00		P	34.3
3	☐			70.00		P	29.0
4	☐			80.00		P	33.1
5	☐			82.23		P	37.7
6	☐			72.23		P	30.7
7	☐			85.56		P	31.5
8	☐			72.22		P	16.2
9	☐			92.22		P	19.9

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	736.16	0.0001	P	3.0
2	☐	0.100	0.104	1989.12	0.0002	P	7.9
3	☐	1.000	0.939	12233.89	0.0011	P	1.7
4	☐	50.000	48.877	591712.14	0.0519	P	0.9
5	☐	125.000	121.980	1454602.42	0.1294	P	0.4
6	☐	250.000	241.539	2839998.89	0.2562	P	0.6
7	☐	500.000	495.319	5707113.15	0.5254	A	0.5
8	☐	1000.000	1004.890	11020804.50	1.0658	A	0.1
9	☐			4442.63	0.0005	P	11.0

$$y = 0.0011 * x + 6.4402E-005$$

$$R = 0.9999$$

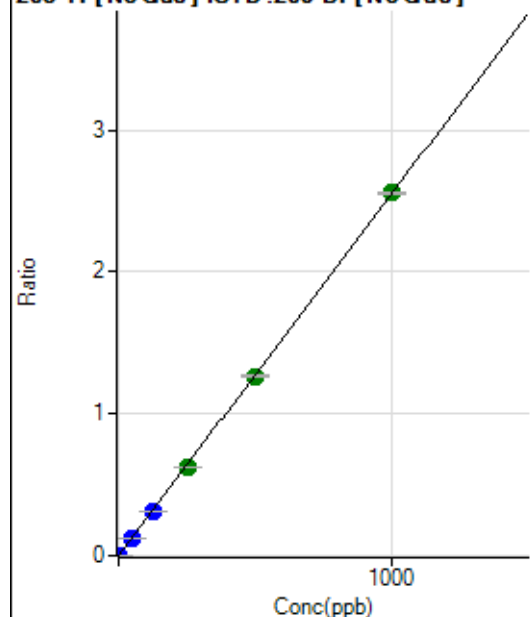
$$DL = 0.005428$$

$$BEC = 0.06073$$

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	1205.67	0.0001	P	2.4
2	☐	0.100	0.092	3864.60	0.0003	P	2.5
3	☐	1.000	0.950	29188.51	0.0025	P	1.7
4	☐	50.000	49.143	1429485.78	0.1254	P	0.4
5	☐	125.000	121.050	3469207.72	0.3087	P	0.4
6	☐	250.000	244.986	6923382.80	0.6246	A	0.9
7	☐	500.000	496.842	13759911.76	1.2667	A	0.8
8	☐	1000.000	1003.369	26450520.90	2.5579	A	0.2
9	☐			10571.30	0.0012	P	6.5

$$y = 0.0025 * x + 1.0548E-004$$

$$R = 1.0000$$

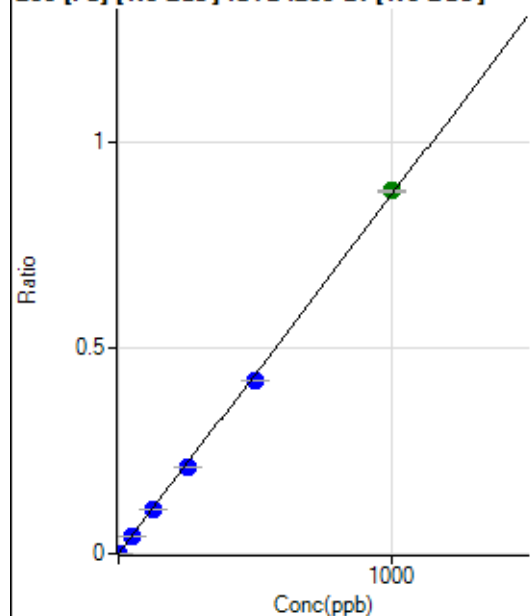
$$DL = 0.002996$$

$$BEC = 0.04138$$

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	1033.41	0.0001	P	11.2
2	☐	0.100	0.090	1927.98	0.0002	P	7.7
3	☐	1.000	0.930	10409.89	0.0009	P	3.8
4	☐	50.000	48.982	488390.91	0.0428	P	0.3
5	☐	125.000	122.000	1197546.13	0.1066	P	0.6
6	☐	250.000	243.075	2352302.86	0.2122	P	0.4
7	☐	500.000	482.027	4570730.77	0.4208	P	0.8
8	☐	1000.000	1011.144	9125833.88	0.8825	A	0.2
9	☐			11077.12	0.0012	P	1.6

$$y = 8.7271E-004 * x + 9.0406E-005$$

$$R = 0.9997$$

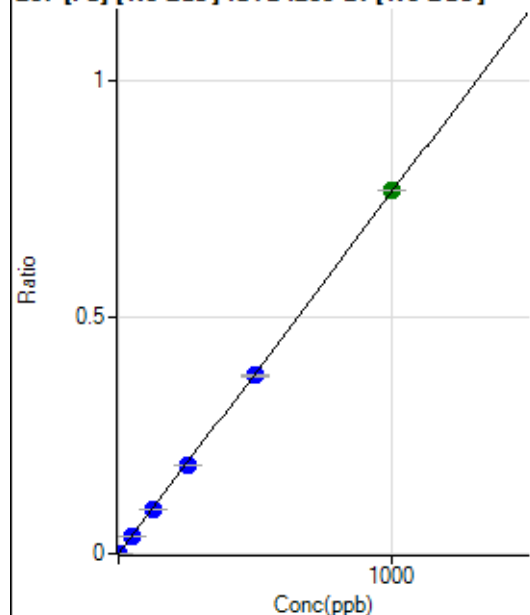
$$DL = 0.0348$$

$$BEC = 0.1036$$

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	988.95	0.0001	P	12.5
2	☐	0.100	0.094	1802.03	0.0002	P	5.9
3	☐	1.000	0.943	9312.74	0.0008	P	1.9
4	☐	50.000	49.507	431689.26	0.0379	P	0.7
5	☐	125.000	124.028	1064626.25	0.0947	P	0.6
6	☐	250.000	245.772	2079747.59	0.1876	P	0.9
7	☐	500.000	492.672	4085018.44	0.3760	P	0.6
8	☐	1000.000	1004.867	7930235.59	0.7669	A	0.1
9	☐			10133.81	0.0011	P	1.8

$$y = 7.6311\text{E-}004 * x + 8.6517\text{E-}005$$

$$R = 1.0000$$

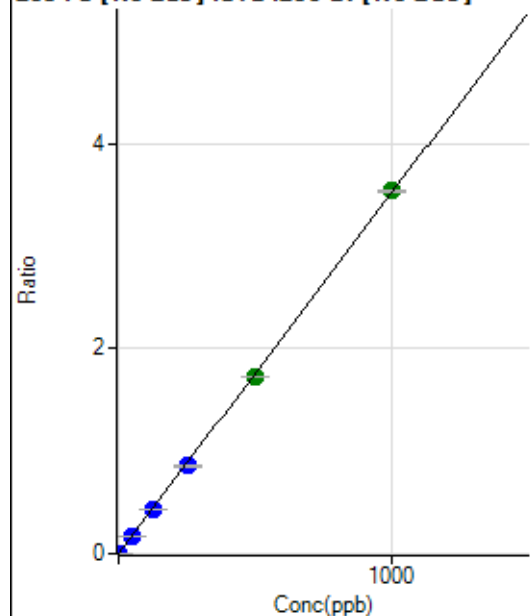
$$DL = 0.04238$$

$$BEC = 0.1134$$

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	3620.66	0.0003	P	3.7
2	☐	0.100	0.088	7124.98	0.0006	P	1.7
3	☐	1.000	0.944	42019.60	0.0036	P	0.8
4	☐	50.000	49.114	1973667.90	0.1731	P	0.6
5	☐	125.000	122.310	4839676.08	0.4306	P	0.4
6	☐	250.000	242.704	9468301.95	0.8542	P	0.2
7	☐	500.000	491.770	18798600.01	1.7305	A	0.5
8	☐	1000.000	1006.320	36614418.75	3.5408	A	0.5
9	☐			44409.45	0.0050	P	2.5

$$y = 0.0035 * x + 3.1675\text{E-}004$$

$$R = 0.9999$$

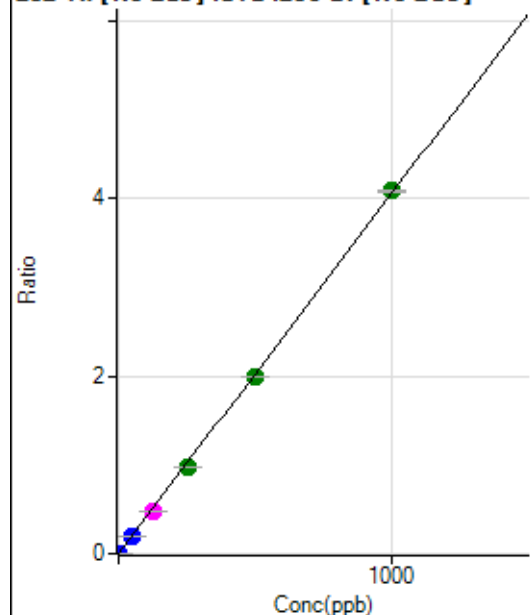
$$DL = 0.01002$$

$$BEC = 0.09003$$

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	3144.92	0.0003	P	4.0
2	☐	0.100	0.073	6481.42	0.0006	P	1.1
3	☐	1.000	0.826	41811.56	0.0036	P	1.1
4	☐	50.000	46.385	2144464.31	0.1881	P	0.2
5	☐	125.000	117.930	5369640.05	0.4778	M	1.4
6	☐	250.000	240.796	10810287.40	0.9753	A	0.4
7	☐	500.000	490.497	21578149.09	1.9864	A	0.6
8	☐	1000.000	1008.117	42213101.41	4.0823	A	0.3
9	☐			13296.07	0.0015	P	9.0

$$y = 0.0040 * x + 2.7514E-004$$

$$R = 0.9999$$

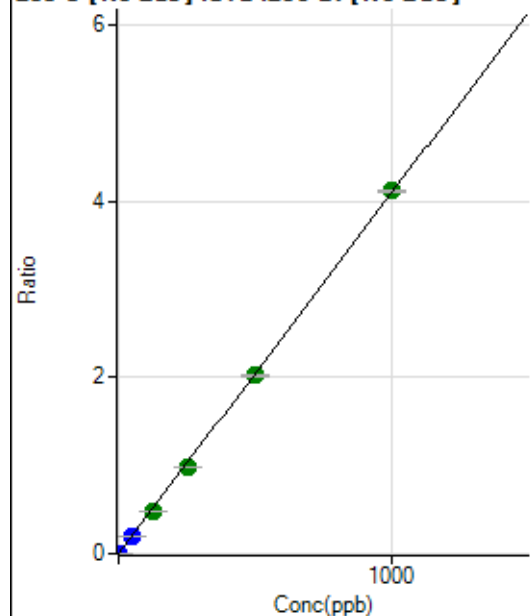
$$DL = 0.008128$$

$$BEC = 0.06795$$

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	3461.73	0.0003	P	5.5
2	☐	0.100	0.080	7177.24	0.0006	P	4.1
3	☐	1.000	0.912	46612.34	0.0040	P	1.0
4	☐	50.000	46.956	2194752.83	0.1925	P	0.3
5	☐	125.000	118.502	5454609.76	0.4854	A	0.4
6	☐	250.000	241.447	10957686.79	0.9886	A	0.2
7	☐	500.000	493.571	21949736.08	2.0206	A	0.8
8	☐	1000.000	1006.317	42596512.76	4.1194	A	0.2
9	☐			10780.02	0.0012	P	14.5

$$y = 0.0041 * x + 3.0281E-004$$

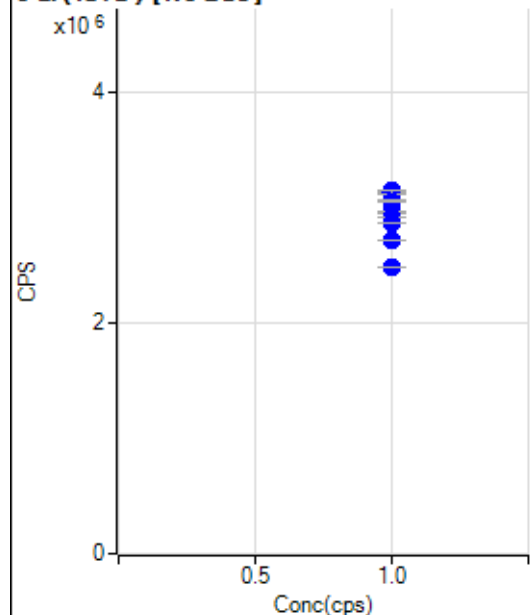
$$R = 0.9999$$

$$DL = 0.01232$$

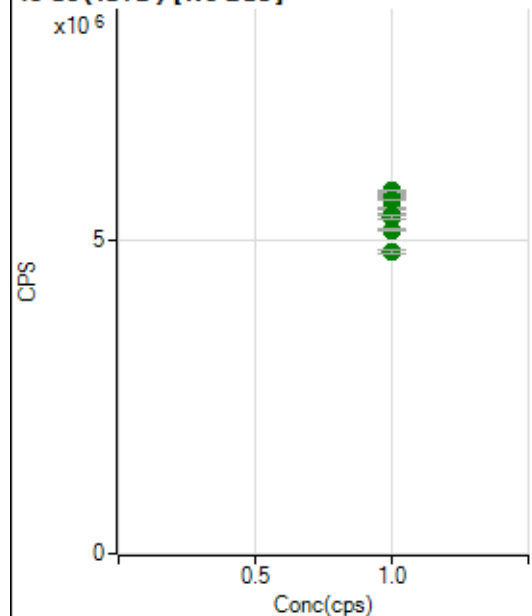
$$BEC = 0.07398$$

Weight: <None>

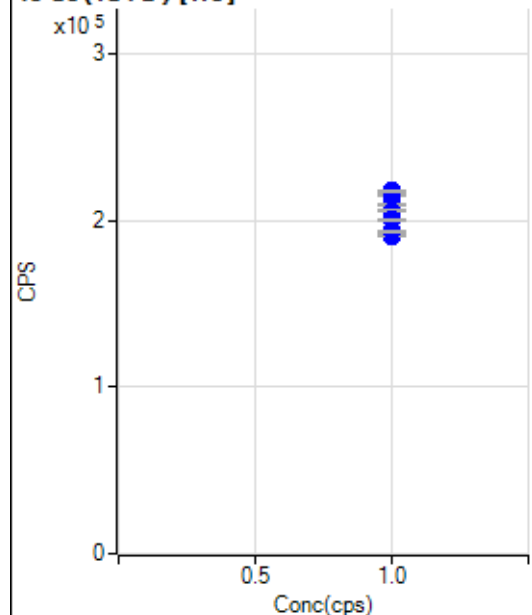
Min Conc: 0

6 Li (ISTD) [No Gas]

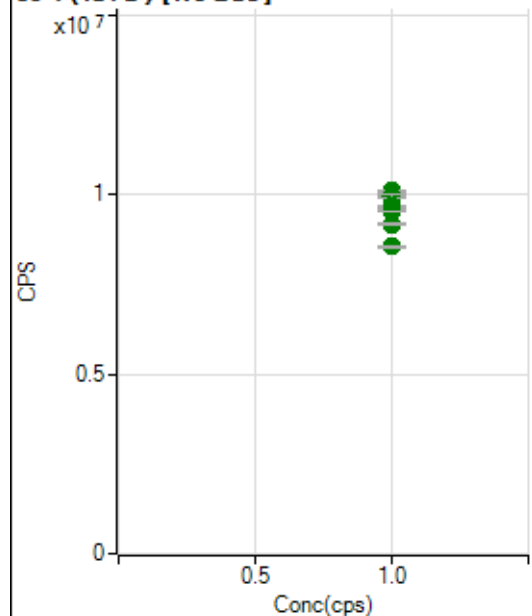
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3138680.37		P	0.4
2	☐	1.000		3130670.92		P	0.6
3	☐	1.000		3130451.96		P	0.9
4	☐	1.000		3048884.92		P	0.5
5	☐	1.000		2952976.00		P	0.0
6	☐	1.000		2907738.43		P	0.3
7	☐	1.000		2854755.34		P	0.1
8	☐	1.000		2712634.16		P	0.4
9	☐	1.000		2477641.75		P	0.3

45 Sc (ISTD) [No Gas]

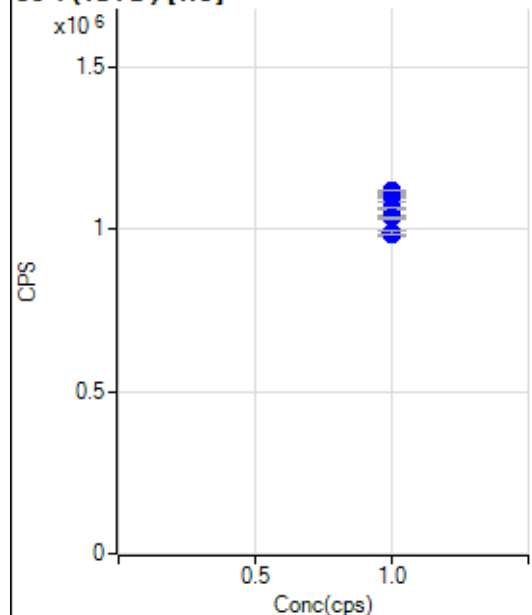
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5733222.09		A	0.3
2	☐	1.000		5690641.36		A	0.3
3	☐	1.000		5803794.88		A	0.3
4	☐	1.000		5658636.59		A	0.4
5	☐	1.000		5514296.65		A	0.5
6	☐	1.000		5427982.02		A	0.6
7	☐	1.000		5382182.54		A	1.0
8	☐	1.000		5171681.06		A	0.7
9	☐	1.000		4823482.06		A	1.2

45 Sc (ISTD) [He]

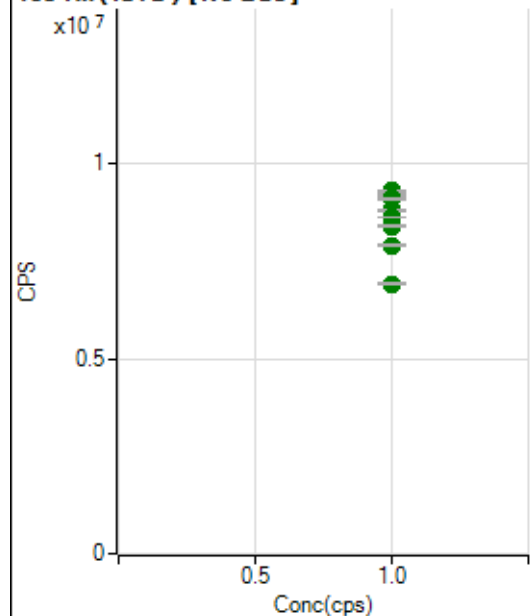
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		214834.69		P	0.2
2	☐	1.000		216520.45		P	0.9
3	☐	1.000		217565.23		P	0.3
4	☐	1.000		209791.59		P	0.6
5	☐	1.000		205814.65		P	0.5
6	☐	1.000		200581.45		P	0.3
7	☐	1.000		200454.61		P	0.4
8	☐	1.000		190551.44		P	0.8
9	☐	1.000		193188.75		P	1.1

89 Y (ISTD) [No Gas]

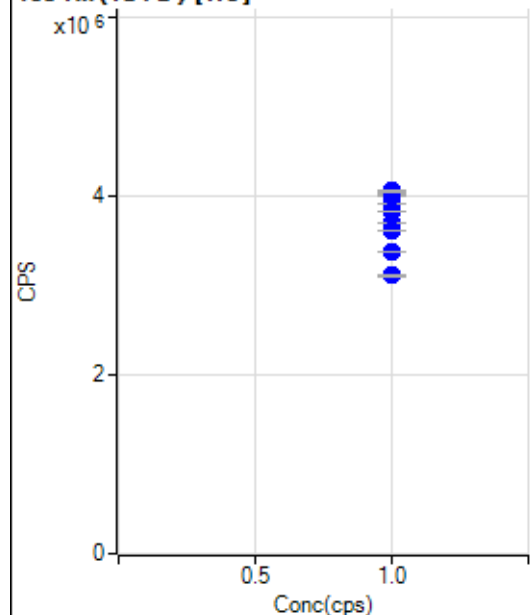
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10045464.64		A	0.9
2	☐	1.000		9937412.70		A	0.4
3	☐	1.000		10105672.91		A	0.4
4	☐	1.000		9970638.19		A	0.8
5	☐	1.000		9681148.05		A	0.6
6	☐	1.000		9617683.19		A	0.2
7	☐	1.000		9520589.23		A	0.3
8	☐	1.000		9183710.98		A	0.7
9	☐	1.000		8568443.34		A	0.6

89 Y (ISTD) [He]

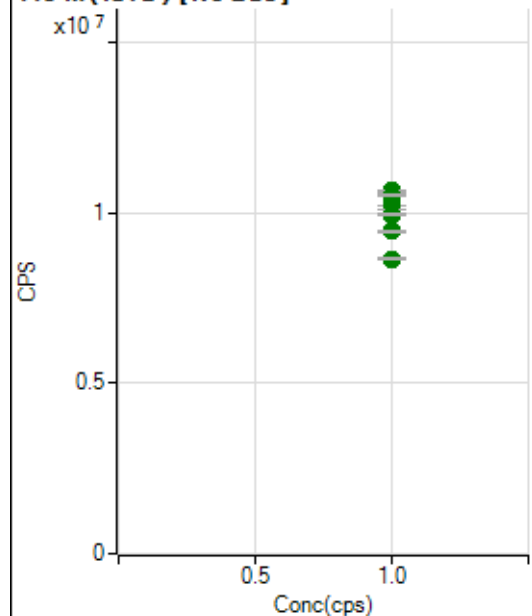
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1101194.99		P	0.7
2	☐	1.000		1109941.41		P	0.6
3	☐	1.000		1119006.71		P	0.1
4	☐	1.000		1083720.07		P	0.2
5	☐	1.000		1066345.37		P	0.4
6	☐	1.000		1039159.81		P	0.5
7	☐	1.000		1035991.83		P	0.7
8	☐	1.000		981928.53		P	0.3
9	☐	1.000		991224.55		P	0.8

103 Rh (ISTD) [No Gas]

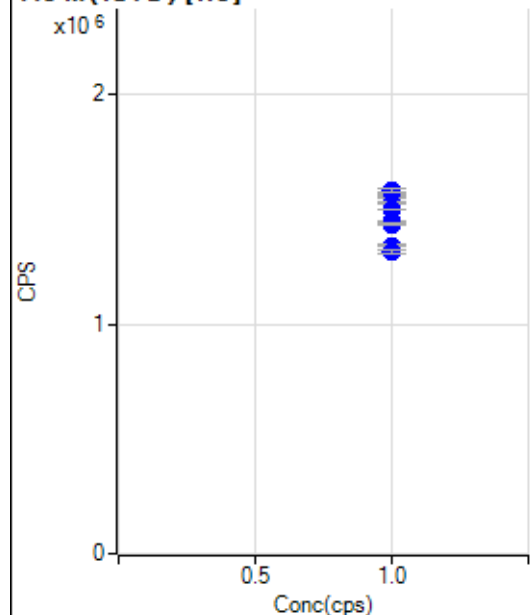
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9209805.85		A	0.4
2	☐	1.000		9161377.99		A	0.2
3	☐	1.000		9294608.45		A	0.6
4	☐	1.000		9089629.20		A	0.2
5	☐	1.000		8806911.48		A	0.4
6	☐	1.000		8628278.32		A	0.3
7	☐	1.000		8394732.13		A	0.9
8	☐	1.000		7901181.86		A	0.4
9	☐	1.000		6907171.25		A	0.7

103 Rh (ISTD) [He]

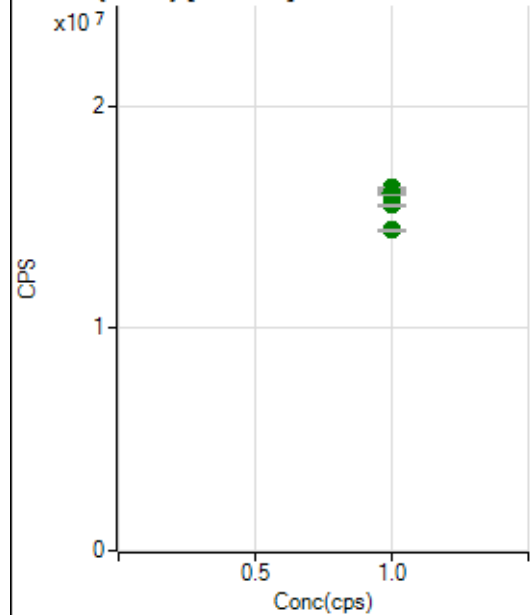
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4000363.72		P	0.3
2	☐	1.000		4036387.13		P	1.0
3	☐	1.000		4061079.76		P	0.5
4	☐	1.000		3913777.37		P	0.2
5	☐	1.000		3826914.11		P	0.2
6	☐	1.000		3698505.64		P	0.2
7	☐	1.000		3619762.38		P	0.3
8	☐	1.000		3379243.60		P	0.5
9	☐	1.000		3119612.52		P	0.7

115 In (ISTD) [No Gas]

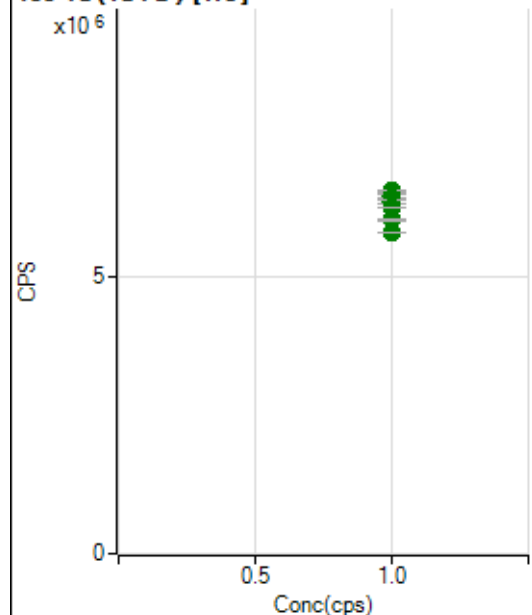
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10578612.75		A	0.3
2	☐	1.000		10534393.16		A	0.4
3	☐	1.000		10643090.60		A	0.3
4	☐	1.000		10507427.50		A	0.7
5	☐	1.000		10212936.29		A	0.3
6	☐	1.000		10085584.12		A	0.2
7	☐	1.000		9935325.26		A	0.5
8	☐	1.000		9451172.56		A	0.5
9	☐	1.000		8639907.80		A	0.5

115 In (ISTD) [He]

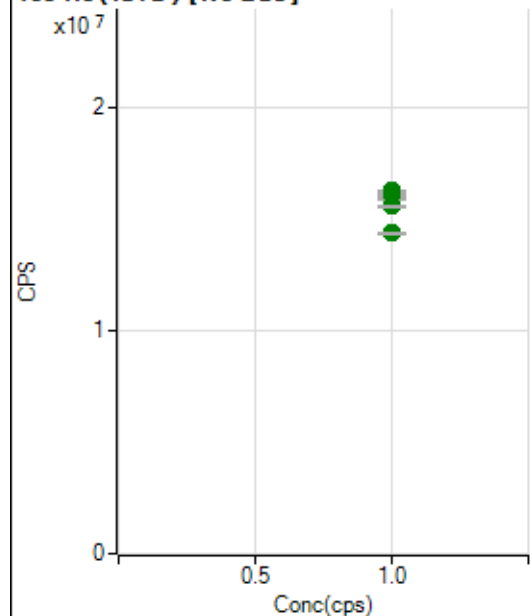
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1554684.89		P	0.5
2	☐	1.000		1571134.20		P	0.7
3	☐	1.000		1579272.27		P	0.9
4	☐	1.000		1526904.88		P	0.2
5	☐	1.000		1494969.29		P	0.0
6	☐	1.000		1449937.25		P	0.2
7	☐	1.000		1435431.10		P	0.9
8	☐	1.000		1342775.70		P	0.7
9	☐	1.000		1314119.23		P	1.2

159 Tb (ISTD) [No Gas]

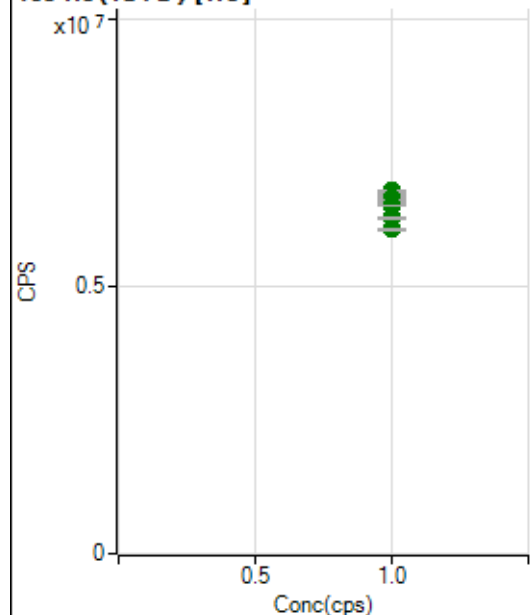
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16225799.90		A	0.7
2	☐	1.000		16113561.57		A	0.3
3	☐	1.000		16332448.09		A	0.5
4	☐	1.000		16293935.31		A	0.6
5	☐	1.000		16097143.93		A	0.8
6	☐	1.000		16009241.01		A	0.2
7	☐	1.000		16001866.15		A	0.3
8	☐	1.000		15554558.80		A	0.4
9	☐	1.000		14421917.56		A	0.2

159 Tb (ISTD) [He]

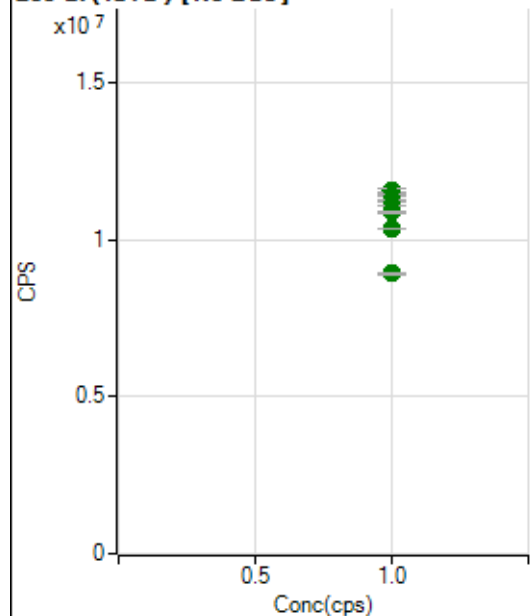
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6509650.81		A	0.4
2	☐	1.000		6471999.97		A	0.7
3	☐	1.000		6562467.34		A	0.1
4	☐	1.000		6420450.32		A	0.7
5	☐	1.000		6357098.10		A	0.8
6	☐	1.000		6260871.57		A	0.2
7	☐	1.000		6253754.35		A	0.3
8	☐	1.000		6040170.26		A	0.4
9	☐	1.000		5806496.37		A	0.1

165 Ho (ISTD) [No Gas]

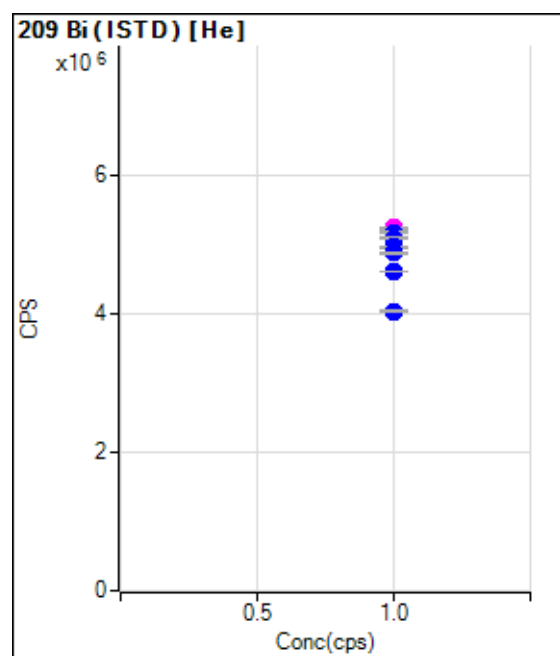
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16122535.43		A	0.4
2	☐	1.000		16036176.57		A	0.4
3	☐	1.000		16268600.54		A	0.5
4	☐	1.000		16197680.92		A	0.1
5	☐	1.000		16031368.76		A	0.6
6	☐	1.000		15904776.22		A	0.9
7	☐	1.000		15842306.95		A	0.2
8	☐	1.000		15579565.80		A	0.4
9	☐	1.000		14384817.51		A	0.7

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6727505.45		A	0.5
2	☐	1.000		6723070.32		A	0.4
3	☐	1.000		6793169.76		A	0.4
4	☐	1.000		6643456.71		A	0.6
5	☐	1.000		6614622.12		A	0.3
6	☐	1.000		6525059.55		A	0.6
7	☐	1.000		6513350.32		A	0.2
8	☐	1.000		6296642.96		A	0.5
9	☐	1.000		6068532.69		A	0.7

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11431013.44		A	0.2
2	☐	1.000		11394762.19		A	0.2
3	☐	1.000		11545855.52		A	1.2
4	☐	1.000		11400947.33		A	0.6
5	☐	1.000		11238482.61		A	0.7
6	☐	1.000		11084158.17		A	0.4
7	☐	1.000		10863094.56		A	0.1
8	☐	1.000		10340560.40		A	0.2
9	☐	1.000		8908863.34		A	0.3



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5182297.15		M	0.9
2	☐	1.000		5235052.25		M	0.5
3	☐	1.000		5230785.37		M	0.1
4	☐	1.000		5170247.84		P	0.5
5	☐	1.000		5090716.94		P	0.4
6	☐	1.000		4962904.58		P	0.6
7	☐	1.000		4875611.90		P	0.5
8	☐	1.000		4607418.68		P	0.5
9	☐	1.000		4030650.95		P	0.9

US EPA Tune Check Sample Report

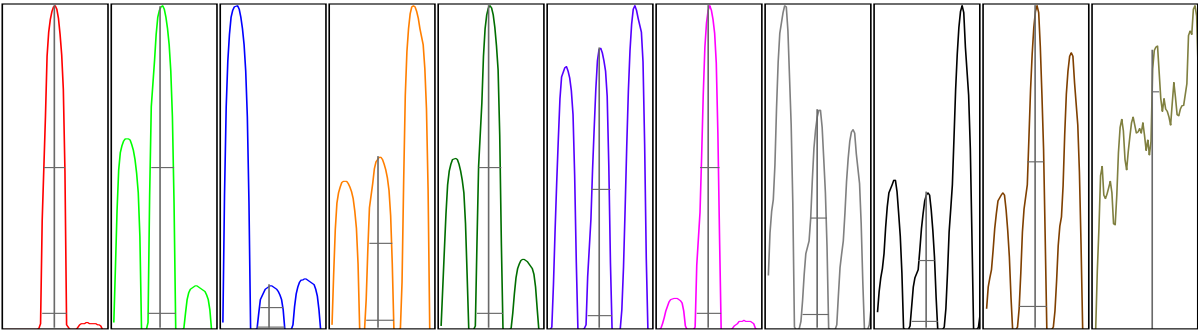
Batch Folder D:\ICP-MS Data\P7100919-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	8071	0.54	5.00	
24	93963	0.24	5.00	
25	12624	0.26	5.00	
26	14812	0.25	5.00	
59	65792	0.45	5.00	
113	10657	0.85	5.00	
115	127090	2.11	5.00	
206	38068	0.90	5.00	
207	34996	0.77	5.00	
208	83068	0.63	5.00	
220	127	2.29		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	8048	8022	8086	8137	8062
24	93636	94119	94205	94016	93837
25	12609	12618	12615	12679	12597
26	14759	14826	14823	14858	14794
59	65413	65785	65728	66237	65796
113	10762	10701	10685	10608	10528
115	130866	128243	127131	125294	123916
206	37593	37947	38286	38489	38026
207	34651	34883	35359	35154	34934
208	82479	83177	83622	83491	82569
220	128	128	125	123	131

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	13586	9.00	8.9 - 9.1		0.741	0.900	
24	148333	23.90	23.9 - 24.1		0.790	0.900	
25	19935	24.90	24.9 - 25.1		0.791	0.900	
26	23202	25.90	25.9 - 26.1		0.829	0.900	
59	111843	58.95	58.9 - 59.1		0.783	0.900	
113	20786	113.00	112.9 - 113.1		0.729	0.900	
115	246402	115.00	114.9 - 115.1		0.730	0.900	
206	77086	206.00	205.9 - 206.1		0.776	0.900	
207	70226	207.00	206.9 - 207.1		0.774	0.900	
208	166918	208.00	207.9 - 208.1		0.785	0.900	
220	134	220.25	-				

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	6.0	V	Deflect	11.8	V
Extract 2	-115.0	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	160	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	15732	0.33	
89	20370	0.28	
205	29336	0.70	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	15684	15740	15704	15818	15713
89	20451	20398	20321	20370	20310
205	29099	29558	29155	29506	29361

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	6.4	V	Deflect	1.2	V
Extract 2	-120.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-60	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			