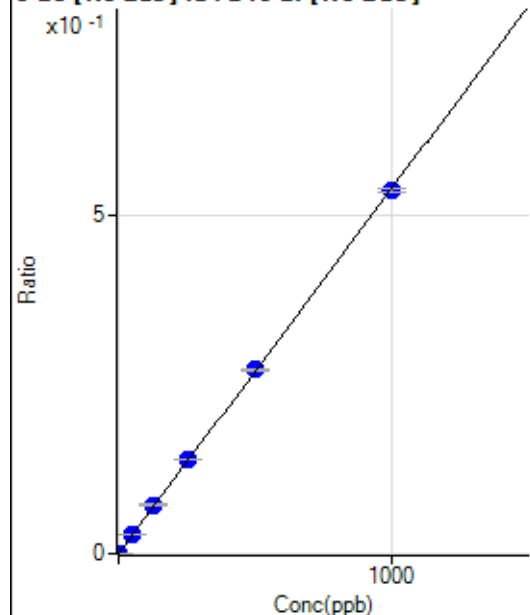


Calibration for 004CALS.d

Batch Folder: D:\ICP-MS Data\P7082919.b\
 Analysis File: P7082919.batch.bin
 DA Date-Time: 2019-08-29 19:28:15
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	S00	2019-08-29 11:54:22
2	003CALS.d	S02	2019-08-29 11:57:57
3	004CALS.d	S03	2019-08-29 12:02:34
4	005CALS.d	S04	2019-08-29 12:06:30
5	006CALS.d	S05	2019-08-29 12:10:22
6	007CALS.d	S06	2019-08-29 12:14:12
7	008CALS.d	S07	2019-08-29 12:18:00
8	009CALS.d	S08	2019-08-29 12:21:47

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	38.89	0.0000	P	21.6
2	☐	1.000	1.113	1744.57	0.0006	P	2.4
3	☐	50.000	53.976	82286.73	0.0291	P	0.7
4	☐	125.000	132.879	195451.65	0.0716	P	2.4
5	☐	250.000	259.054	349108.95	0.1396	P	0.0
6	☐	500.000	504.697	673402.77	0.2720	P	0.6
7	☐	1000.000	994.204	1337665.00	0.5358	P	1.1
8	☐			273.34	0.0001	P	16.0

$$y = 5.3891\text{E-}004 * x + 1.3975\text{E-}005$$

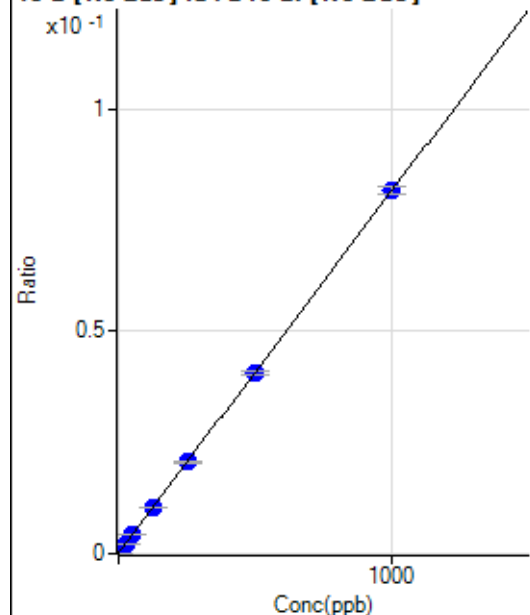
$$R = 0.9999$$

$$DL = 0.0168$$

$$BEC = 0.02593$$

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	369.46	0.0001	P	4.9
2	☐	25.000	25.186	6201.48	0.0022	P	4.6
3	☐	50.000	51.004	12102.47	0.0043	P	1.3
4	☐	125.000	126.351	28405.22	0.0104	P	0.6
5	☐	250.000	250.785	51321.32	0.0205	P	0.6
6	☐	500.000	497.649	100530.97	0.0406	P	3.0
7	☐	1000.000	1000.756	203496.27	0.0815	P	2.2
8	☐			9575.63	0.0039	P	7.5

$$y = 8.1315\text{E-}005 * x + 1.3276\text{E-}004$$

$$R = 1.0000$$

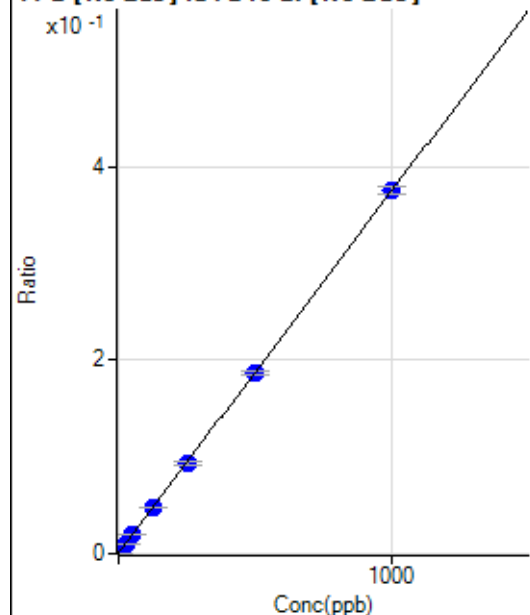
$$DL = 0.2396$$

$$BEC = 1.633$$

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	1677.95	0.0006	P	2.7
2	☐	25.000	24.519	27768.07	0.0098	P	2.5
3	☐	50.000	50.140	54685.99	0.0193	P	1.7
4	☐	125.000	124.483	128602.14	0.0471	P	1.5
5	☐	250.000	248.924	234056.00	0.0936	P	3.0
6	☐	500.000	498.294	462554.94	0.1868	P	1.7
7	☐	1000.000	1001.192	935591.03	0.3748	P	2.2
8	☐			45385.96	0.0183	P	6.1

$$y = 3.7370\text{E-}004 * x + 6.0283\text{E-}004$$

$$R = 1.0000$$

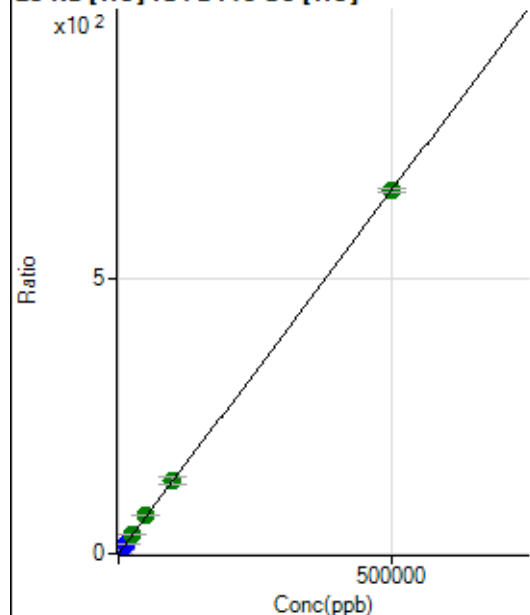
$$DL = 0.131$$

$$BEC = 1.613$$

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	2986.53	0.0162	P	6.8
2	☐	500.000	482.108	124581.05	0.6543	P	0.6
3	☐	5000.000	5111.402	1213187.97	6.7816	P	0.4
4	☐	12500.000	13110.344	2785599.19	17.3689	P	0.3
5	☐	25000.000	25768.561	5115777.07	34.1232	A	0.6
6	☐	50000.000	52153.461	10556922.98	69.0460	A	0.4
7	☐	100000.00	101104.52	21666976.70	133.8371	A	11.1
8	☐	500000.00	499508.96	112380837.2	661.1612	A	0.9

$$y = 0.0013 * x + 0.0162$$

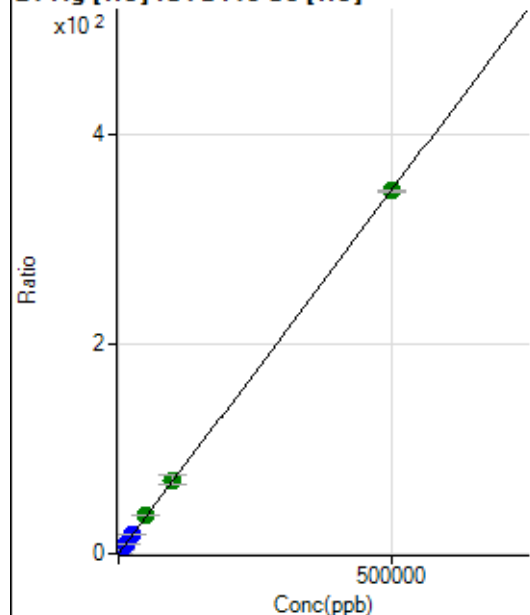
$$R = 1.0000$$

$$DL = 2.491$$

$$BEC = 12.21$$

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	83.34	0.0005	P	44.8
2	☐	500.000	499.405	66079.66	0.3470	P	2.4
3	☐	5000.000	5217.040	647697.80	3.6206	P	0.3
4	☐	12500.000	13262.797	1476052.00	9.2037	P	0.4
5	☐	25000.000	26176.036	2723212.63	18.1643	P	0.7
6	☐	50000.000	52683.415	5589633.54	36.5581	A	0.4
7	☐	100000.00	101657.11	11415160.93	70.5414	A	11.6
8	☐	500000.00	499320.19	58894429.79	346.4842	A	0.9

$$y = 6.9391\text{E-}004 * x + 4.5273\text{E-}004$$

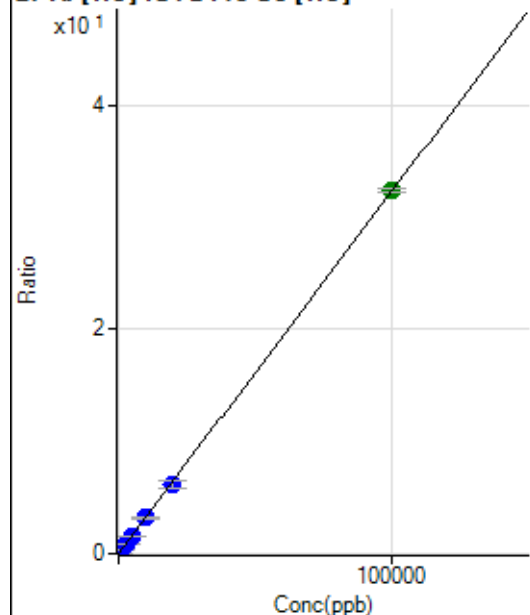
$$R = 1.0000$$

$$DL = 0.8777$$

$$BEC = 0.6524$$

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	19.44	0.0001	P	64.6
2	☐	20.000	17.393	1088.97	0.0057	P	9.3
3	☐	1000.000	1003.108	57915.93	0.3237	P	0.2
4	☐	2500.000	2483.669	128520.75	0.8014	P	1.2
5	☐	5000.000	4938.547	238891.20	1.5935	P	0.9
6	☐	10000.000	9844.561	485645.32	3.1763	P	0.8
7	☐	20000.000	19009.418	992974.49	6.1332	P	11.0
8	☐	100000.00	100217.11	5495957.50	32.3338	A	1.1

$$y = 3.2264\text{E-}004 * x + 1.0476\text{E-}004$$

$$R = 0.9999$$

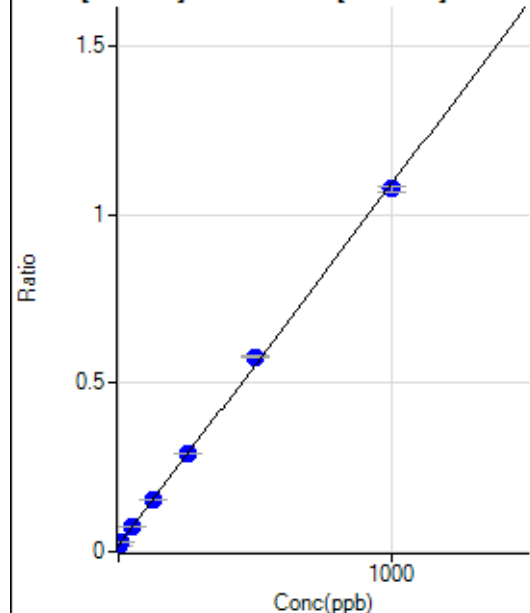
$$DL = 0.6289$$

$$BEC = 0.3247$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	85041.28	0.0180	P	0.8
2	☐	10.000	8.036	127433.55	0.0267	P	0.4
3	☐	50.000	50.799	339071.25	0.0726	P	0.6
4	☐	125.000	127.169	688130.38	0.1545	P	2.9
5	☐	250.000	256.777	1183022.63	0.2937	P	0.2
6	☐	500.000	522.656	2310443.84	0.5791	P	1.3
7	☐	1000.000	986.686	4405621.15	1.0772	P	1.6
8	☐			189626.31	0.0452	P	0.7

$$y = 0.0011 * x + 0.0180$$

$$R = 0.9996$$

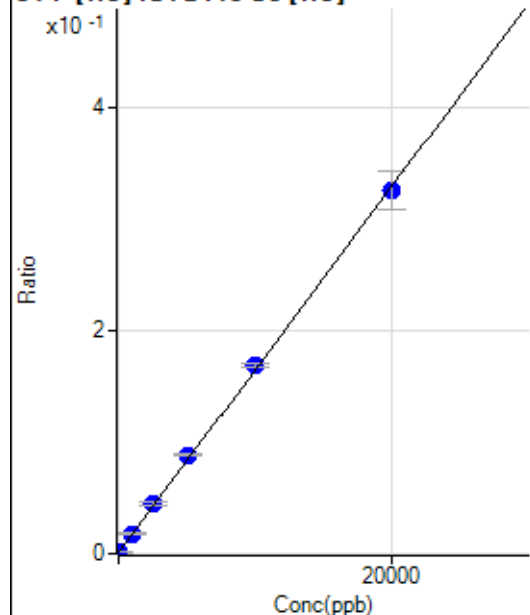
$$DL = 0.4153$$

$$BEC = 16.8$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-31.647	66.67	0.0004	P	54.3
2	☐	0.000	31.647	266.68	0.0014	P	7.1
3	☐	1000.000	1045.340	3231.04	0.0181	P	3.3
4	☐	2500.000	2651.139	7129.77	0.0445	P	6.8
5	☐	5000.000	5328.663	13261.98	0.0885	P	1.4
6	☐	10000.000	10232.527	25851.04	0.1691	P	2.7
7	☐	20000.000	19780.411	52797.38	0.3260	P	10.5
8	☐			66.67	0.0004	P	13.1

$$y = 1.6436E-005 * x + 8.8103E-004$$

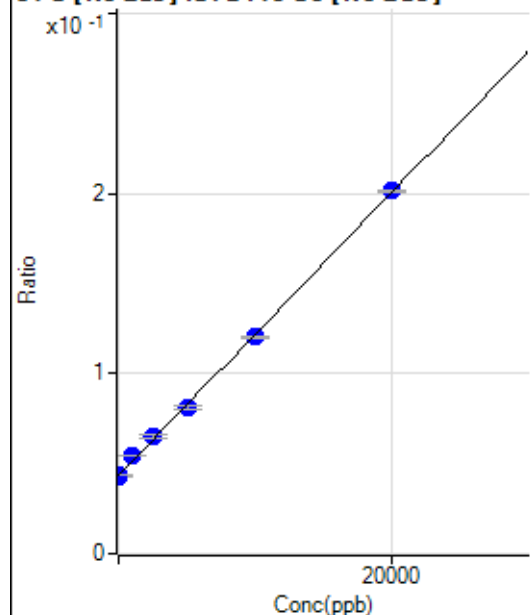
$$R = 0.9997$$

$$DL = 27.02$$

$$BEC = 53.6$$

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	-78.820	201307.23	0.0427	P	1.0
2	☐	0.000	78.820	209967.86	0.0439	P	0.6
3	☐	1000.000	1426.072	254738.85	0.0545	P	1.4
4	☐	2500.000	2774.611	289971.96	0.0651	P	2.6
5	☐	5000.000	4817.710	326991.06	0.0812	P	1.8
6	☐	10000.000	9768.933	479007.36	0.1201	P	0.6
7	☐	20000.000	20105.476	823253.52	0.2013	P	0.8
8	☐			167402.05	0.0399	P	1.3

$$y = 7.8573\text{E-}006 * x + 0.0433$$

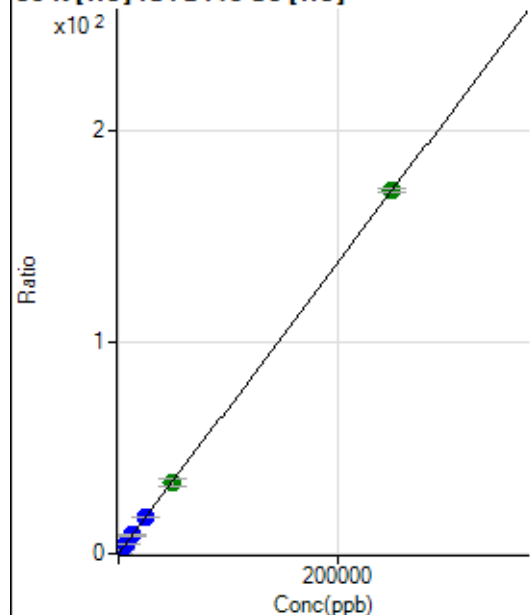
R = 0.9995

DL = 133.3

BEC = 5512

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	10189.98	0.0552	P	1.1
2	☐	500.000	493.572	74819.62	0.3929	P	1.4
3	☐	2500.000	2587.010	326580.17	1.8256	P	0.9
4	☐	6250.000	6415.264	712996.41	4.4455	P	0.3
5	☐	12500.000	12560.966	1296995.86	8.6514	P	1.3
6	☐	25000.000	25139.892	2638963.23	17.2599	P	0.6
7	☐	50000.000	48890.134	5424257.94	33.5136	A	11.4
8	☐	250000.00	250199.94	29113617.32	171.2818	A	1.0

$$y = 6.8436\text{E-}004 * x + 0.0552$$

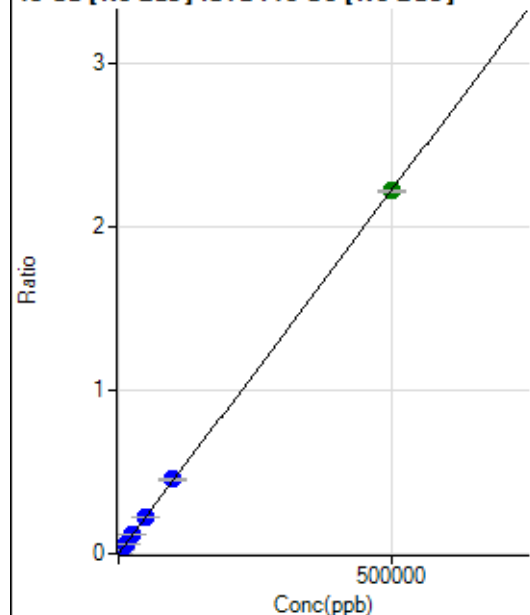
R = 1.0000

DL = 2.553

BEC = 80.61

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	83.34	0.0000	P	55.3
2	☐	500.000	479.732	10290.09	0.0022	P	3.1
3	☐	5000.000	5118.442	106529.34	0.0228	P	1.0
4	☐	12500.000	12734.873	252438.73	0.0567	P	3.1
5	☐	25000.000	25495.953	457200.42	0.1135	P	0.6
6	☐	50000.000	51084.965	907199.57	0.2274	P	0.9
7	☐	100000.00	102031.27	1857359.31	0.4541	P	1.3
8	☐	500000.00	499453.41	9336168.87	2.2230	A	0.4

$$y = 4.4508\text{E-}006 * x + 1.7641\text{E-}005$$

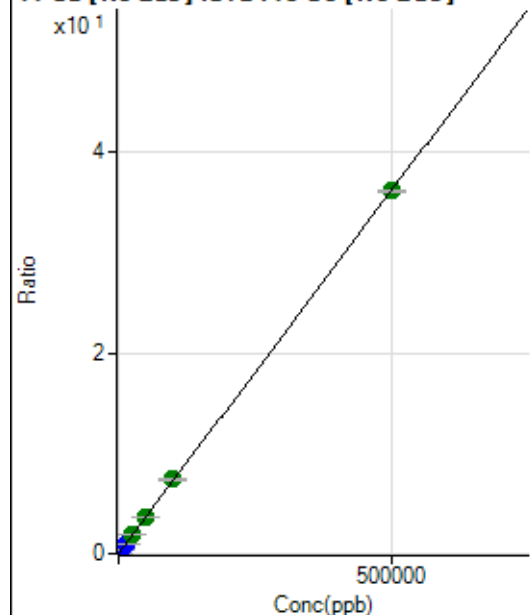
$$R = 1.0000$$

$$DL = 6.578$$

$$BEC = 3.964$$

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	3798.03	0.0008	P	7.7
2	☐	500.000	483.752	171051.46	0.0358	P	0.5
3	☐	5000.000	5088.721	1723285.02	0.3688	P	0.4
4	☐	12500.000	12713.616	4097330.65	0.9202	P	3.1
5	☐	25000.000	25552.573	7447415.53	1.8487	A	0.5
6	☐	50000.000	51084.732	14742259.01	3.6952	A	0.5
7	☐	100000.00	101978.19	30165494.42	7.3757	A	1.4
8	☐	500000.00	499462.04	151702907.5	36.1209	A	0.2

$$y = 7.2318\text{E-}005 * x + 8.0571\text{E-}004$$

$$R = 1.0000$$

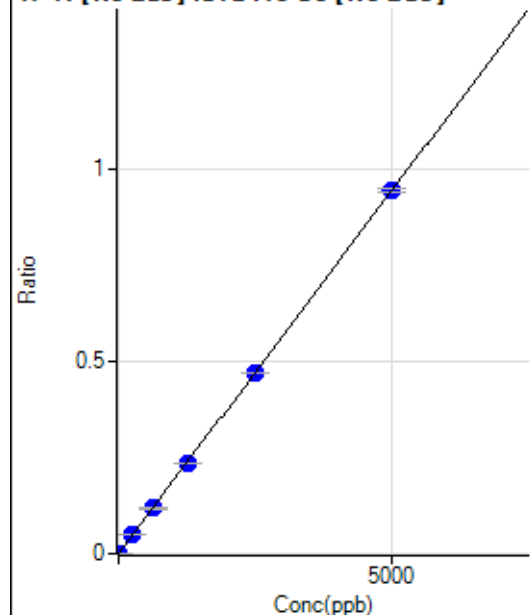
$$DL = 2.563$$

$$BEC = 11.14$$

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	33.33	0.0000	P	89.7
2	☐	5.000	5.325	4837.11	0.0010	P	0.8
3	☐	250.000	255.051	224960.11	0.0481	P	1.5
4	☐	625.000	626.495	526583.06	0.1183	P	2.6
5	☐	1250.000	1257.031	955772.93	0.2373	P	0.3
6	☐	2500.000	2491.654	1876181.25	0.4703	P	0.3
7	☐	5000.000	5001.976	3861195.53	0.9441	P	1.2
8	☐			1772.41	0.0004	P	1.8

$$y = 1.8874\text{E-}004 * x + 7.0533\text{E-}006$$

$$R = 1.0000$$

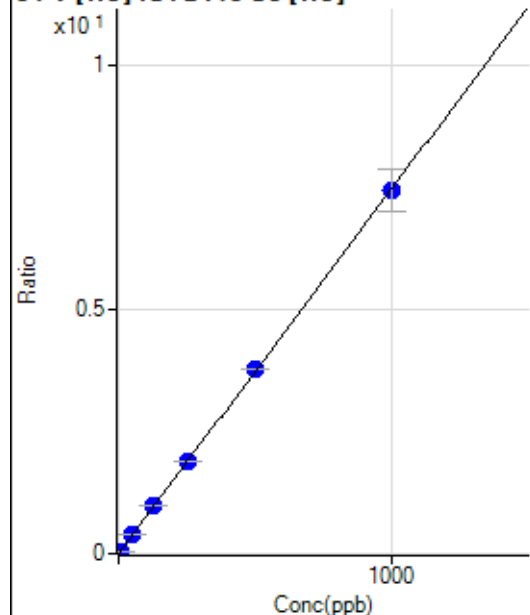
$$DL = 0.1006$$

$$BEC = 0.03737$$

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	0.00	0.0000	P	
2	☐	5.000	5.223	7414.19	0.0389	P	1.6
3	☐	50.000	52.554	70100.10	0.3918	P	0.3
4	☐	125.000	131.024	156672.46	0.9769	P	0.7
5	☐	250.000	252.570	282324.22	1.8832	P	1.2
6	☐	500.000	506.933	577908.43	3.7797	P	0.6
7	☐	1000.000	995.009	1200610.62	7.4189	P	11.6
8	☐			221.11	0.0013	P	25.2

$$y = 0.0075 * x + 0.0000\text{E}+000$$

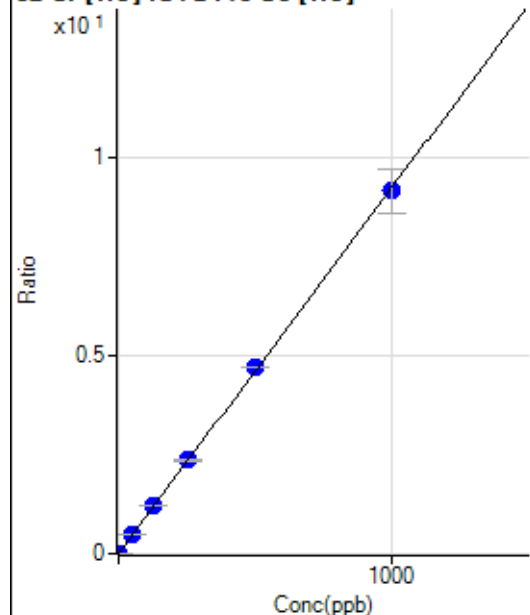
$$R = 0.9999$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	234.45	0.0013	P	11.5
2	☐	2.000	1.941	3659.39	0.0192	P	4.1
3	☐	50.000	52.780	87502.15	0.4891	P	0.3
4	☐	125.000	131.699	195447.62	1.2186	P	0.5
5	☐	250.000	256.111	355095.47	2.3686	P	1.3
6	☐	500.000	510.018	720990.40	4.7155	P	0.6
7	☐	1000.000	992.487	1484553.49	9.1752	P	11.8
8	☐			42628.35	0.2508	P	1.7

$$y = 0.0092 * x + 0.0013$$

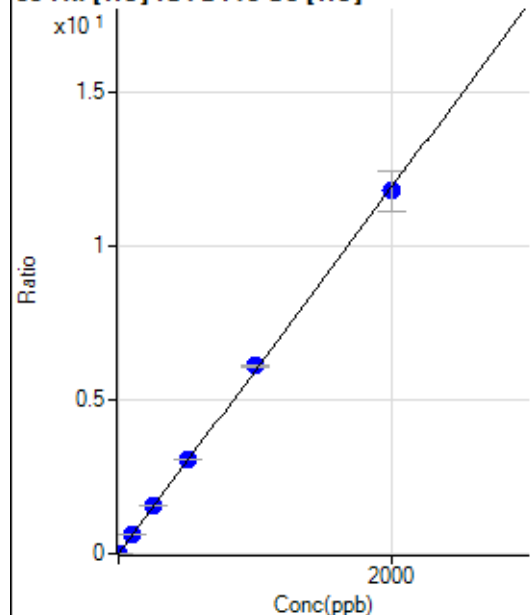
$$R = 0.9999$$

$$DL = 0.04724$$

$$BEC = 0.1372$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	27.78	0.0002	P	17.6
2	☐	1.000	1.016	1180.07	0.0062	P	0.5
3	☐	100.000	102.934	109587.39	0.6126	P	0.5
4	☐	250.000	262.535	250534.20	1.5622	P	0.5
5	☐	500.000	515.706	460031.82	3.0685	P	0.9
6	☐	1000.000	1026.923	934214.37	6.1102	P	0.8
7	☐	2000.000	1980.898	1907854.80	11.7862	P	11.2
8	☐			6549.33	0.0385	P	1.2

$$y = 0.0059 * x + 1.5027E-004$$

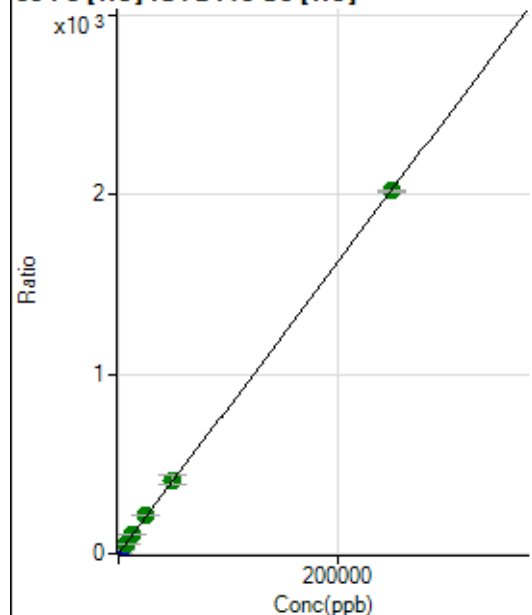
$$R = 0.9998$$

$$DL = 0.01335$$

$$BEC = 0.02526$$

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	2190.96	0.0119	P	4.5
2	☐	50.000	52.985	83959.41	0.4409	P	2.3
3	☐	2500.000	2680.019	3884185.10	21.7123	P	0.1
4	☐	6250.000	6724.806	8735135.79	54.4634	A	0.3
5	☐	12500.000	13174.413	15994551.86	106.6866	A	0.6
6	☐	25000.000	26326.877	32594884.76	213.1836	A	0.6
7	☐	50000.000	50782.795	66537920.93	411.2059	A	11.8
8	☐	250000.00	249663.36	343624307.6	2,021.564	A	0.8

$$y = 0.0081 * x + 0.0119$$

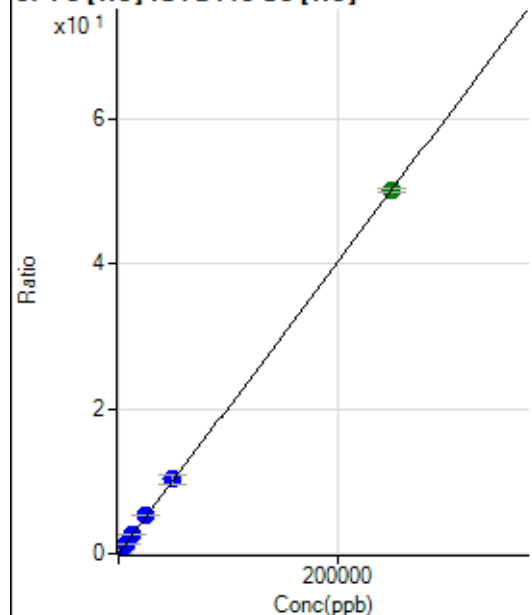
$$R = 1.0000$$

$$DL = 0.1972$$

$$BEC = 1.465$$

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	116.67	0.0006	P	12.3
2	☐	50.000	56.081	2265.06	0.0119	P	8.3
3	☐	2500.000	2674.137	96151.99	0.5375	P	0.8
4	☐	6250.000	6828.390	219952.48	1.3714	P	0.5
5	☐	12500.000	13261.571	399224.90	2.6629	P	0.9
6	☐	25000.000	26390.207	810126.11	5.2985	P	0.7
7	☐	50000.000	50991.597	1656759.73	10.2373	P	11.6
8	☐	250000.00	249608.37	8517471.95	50.1098	A	1.2

$$y = 2.0075E-004 * x + 6.3146E-004$$

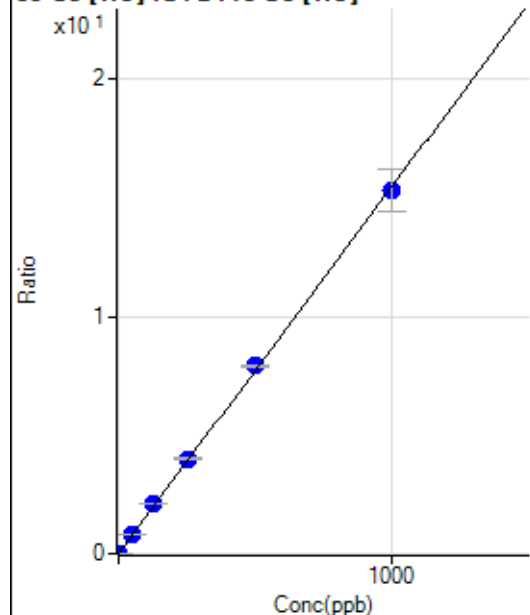
$$R = 1.0000$$

$$DL = 1.157$$

$$BEC = 3.145$$

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	60.00	0.0003	P	10.5
2	☐	1.000	1.008	3028.14	0.0159	P	2.4
3	☐	50.000	53.991	149328.20	0.8348	P	0.7
4	☐	125.000	134.898	334422.92	2.0851	P	0.1
5	☐	250.000	259.598	601539.22	4.0124	P	0.7
6	☐	500.000	512.235	1210442.28	7.9168	P	0.8
7	☐	1000.000	990.046	2476394.04	15.3013	P	11.5
8	☐			31874.77	0.1875	P	1.6

$$y = 0.0155 * x + 3.2467E-004$$

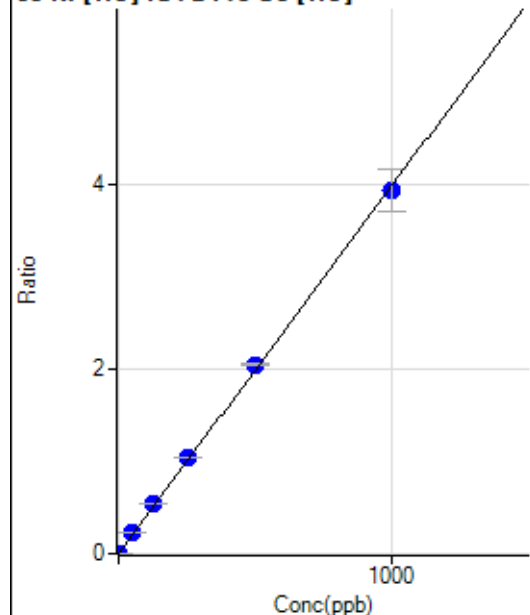
$$R = 0.9998$$

$$DL = 0.006595$$

$$BEC = 0.02101$$

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	23.34	0.0001	P	23.8
2	☐	1.000	1.100	856.71	0.0045	P	7.3
3	☐	50.000	55.623	39569.09	0.2212	P	1.8
4	☐	125.000	137.264	87509.20	0.5457	P	0.4
5	☐	250.000	263.475	157006.36	1.0473	P	0.4
6	☐	500.000	515.183	313065.29	2.0476	P	1.1
7	☐	1000.000	987.225	634918.24	3.9237	P	11.7
8	☐			17768.77	0.1045	P	0.5

$$y = 0.0040 * x + 1.2612E-004$$

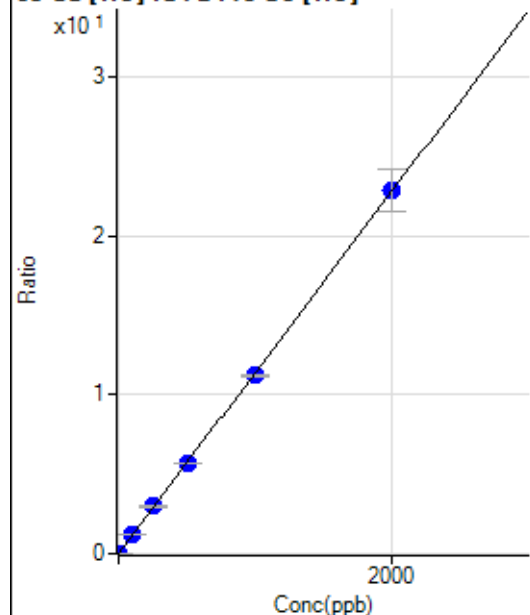
$$R = 0.9997$$

$$DL = 0.02269$$

$$BEC = 0.03173$$

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	396.68	0.0021	P	9.7
2	☐	2.000	2.040	4837.56	0.0254	P	3.3
3	☐	100.000	105.169	214803.85	1.2007	P	0.4
4	☐	250.000	260.781	476979.58	2.9742	P	0.5
5	☐	500.000	501.255	856767.69	5.7148	P	0.7
6	☐	1000.000	986.330	1718989.04	11.2431	P	1.0
7	☐	2000.000	2004.915	3697965.33	22.8516	P	11.7
8	☐			5538.92	0.0326	P	1.3

$$y = 0.0114 * x + 0.0021$$

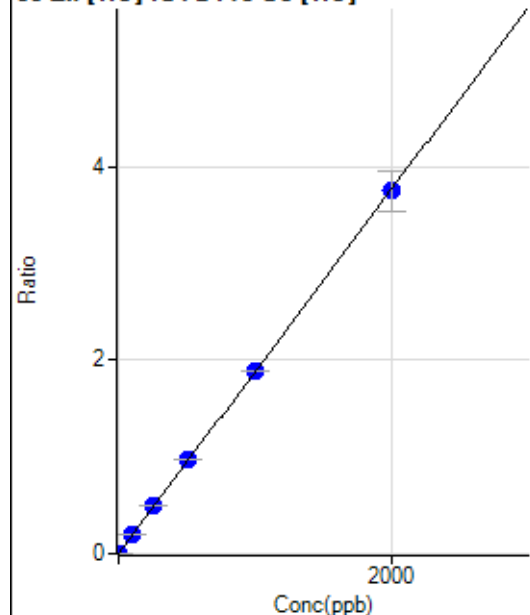
$$R = 0.9999$$

$$DL = 0.05464$$

$$BEC = 0.1884$$

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	228.90	0.0012	P	6.6
2	☐	2.000	2.279	1052.28	0.0055	P	7.8
3	☐	100.000	105.336	35694.87	0.1995	P	0.7
4	☐	250.000	264.277	79977.38	0.4987	P	1.4
5	☐	500.000	515.977	145803.60	0.9725	P	0.7
6	☐	1000.000	1004.310	289250.35	1.8918	P	0.5
7	☐	2000.000	1991.799	607098.65	3.7507	P	11.4
8	☐			4529.66	0.0266	P	4.2

$$y = 0.0019 * x + 0.0012$$

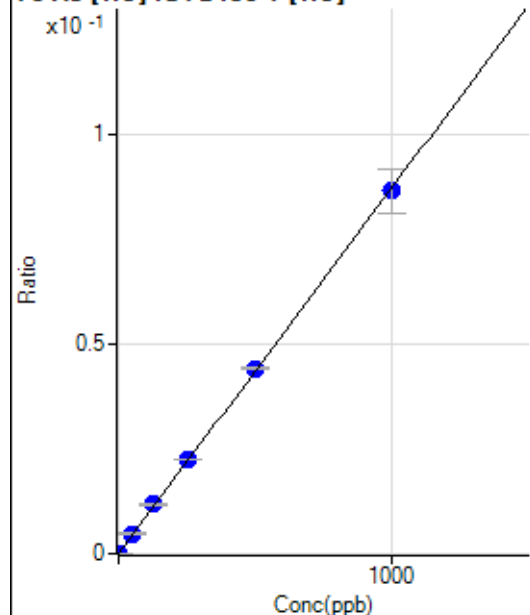
$$R = 0.9999$$

$$DL = 0.1307$$

$$BEC = 0.658$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.41	0.0000	P	25.4
2	☐	1.000	1.087	227.78	0.0001	P	4.0
3	☐	50.000	55.085	10755.28	0.0048	P	0.7
4	☐	125.000	134.462	23930.23	0.0117	P	0.9
5	☐	250.000	256.684	43269.06	0.0224	P	0.4
6	☐	500.000	507.503	87573.08	0.0443	P	0.6
7	☐	1000.000	993.141	177171.46	0.0867	P	12.2
8	☐			273.46	0.0001	P	8.6

$$y = 8.7253\text{E-}005 * x + 3.2432\text{E-}006$$

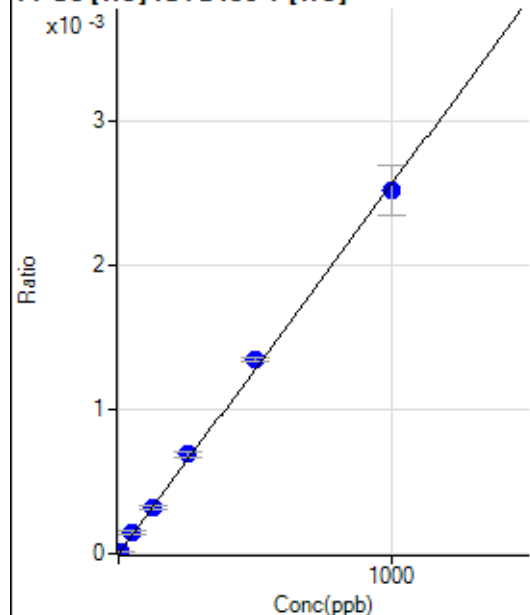
$$R = 0.9999$$

$$DL = 0.02832$$

$$BEC = 0.03717$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	5.000	5.046	30.00	0.0000	P	57.5
3	☐	50.000	56.927	325.56	0.0001	P	10.6
4	☐	125.000	125.697	655.58	0.0003	P	10.6
5	☐	250.000	268.622	1327.86	0.0007	P	5.9
6	☐	500.000	524.532	2653.62	0.0013	P	1.9
7	☐	1000.000	982.645	5133.19	0.0025	P	13.7
8	☐			3.33	0.0000	P	0.8

$$y = 2.5583\text{E-}006 * x + 0.0000\text{E+}000$$

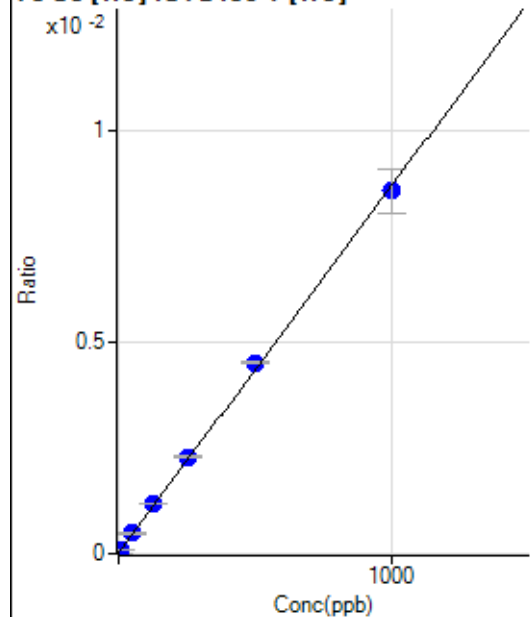
$$R = 0.9993$$

$$DL = 0$$

$$BEC = 0$$

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	40.12	0.0000	P	19.6
2	☐	5.000	6.135	164.20	0.0001	P	4.8
3	☐	50.000	53.213	1070.42	0.0005	P	2.1
4	☐	125.000	132.806	2382.32	0.0012	P	1.5
5	☐	250.000	262.466	4427.26	0.0023	P	2.7
6	☐	500.000	518.048	8912.67	0.0045	P	0.9
7	☐	1000.000	986.717	17516.22	0.0086	P	12.3
8	☐			43.21	0.0000	P	30.9

$$y = 8.6660\text{E-}006 * x + 1.7557\text{E-}005$$

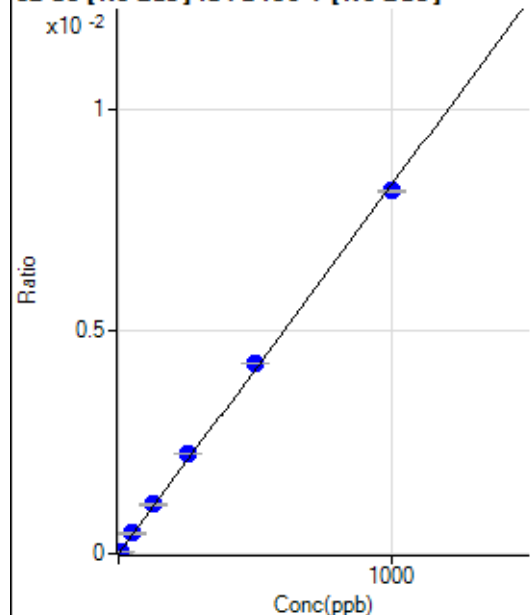
$$R = 0.9997$$

$$DL = 1.191$$

$$BEC = 2.026$$

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	4.53	0.0000	P	343.
2	☐	5.000	5.688	779.58	0.0000	P	8.1
3	☐	50.000	54.891	7345.23	0.0005	P	1.1
4	☐	125.000	135.546	17570.83	0.0011	P	3.8
5	☐	250.000	270.472	32284.86	0.0022	P	0.4
6	☐	500.000	517.743	62476.75	0.0043	P	0.3
7	☐	1000.000	984.444	121840.29	0.0082	P	0.8
8	☐			111.24	0.0000	P	19.1

$$y = 8.2918\text{E-}006 * x + 2.8329\text{E-}007$$

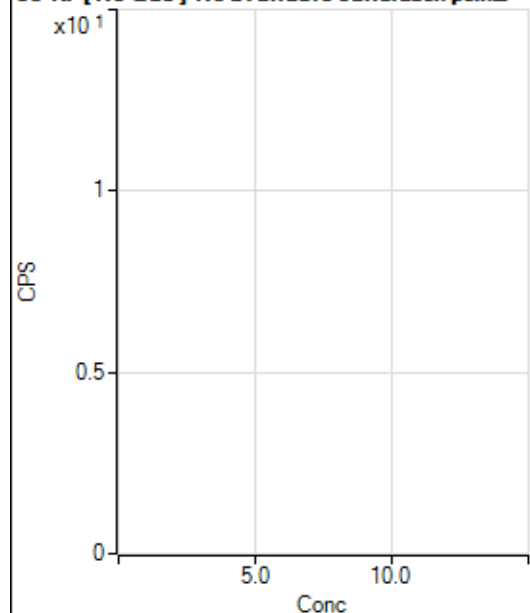
$$R = 0.9995$$

$$DL = 0.3521$$

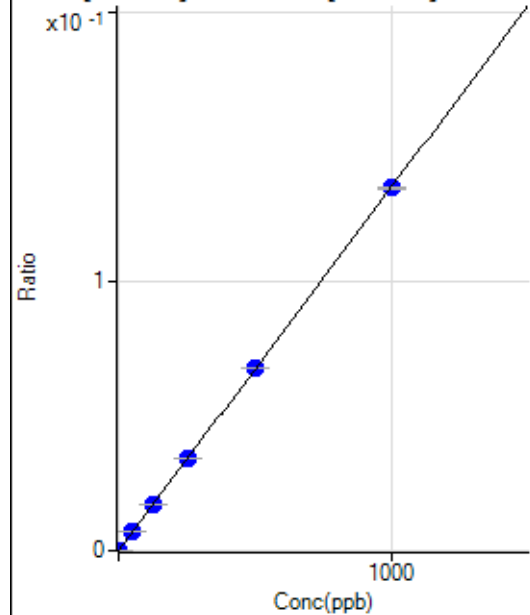
$$BEC = 0.03416$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			144.45		P	12.7
2	☐			167.78		P	26.5
3	☐			174.45		P	4.8
4	☐			154.45		P	13.9
5	☐			123.34		P	7.2
6	☐			136.67		P	12.2
7	☐			143.33		P	8.1
8	☐			178.89		P	3.9

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	277.79	0.0000	P	16.2
2	☐	1.000	0.930	2344.75	0.0001	P	7.7
3	☐	50.000	51.205	111641.83	0.0069	P	0.2
4	☐	125.000	126.001	265842.86	0.0170	P	2.7
5	☐	250.000	254.283	493799.55	0.0343	P	0.5
6	☐	500.000	502.208	985700.92	0.0677	P	0.6
7	☐	1000.000	997.640	2008217.10	0.1345	P	0.4
8	☐			9044.88	0.0006	P	4.0

$$y = 1.3485E-004 * x + 1.7314E-005$$

$$R = 1.0000$$

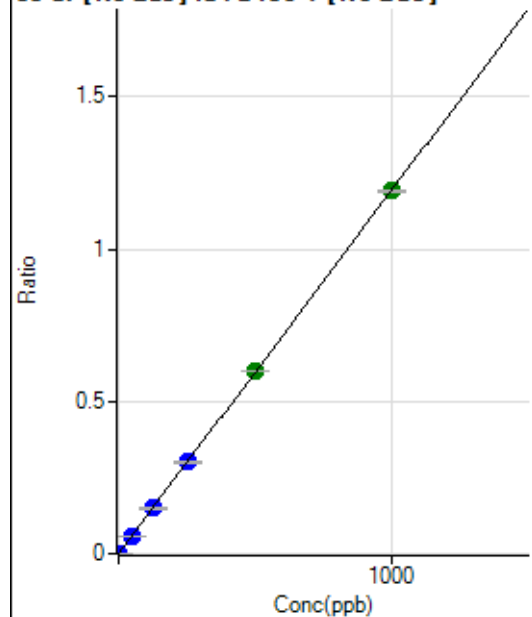
$$DL = 0.06221$$

$$BEC = 0.1284$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	66.67	0.0000	P	12.1
2	☐	1.000	0.985	19363.77	0.0012	P	3.2
3	☐	50.000	50.199	965309.77	0.0599	P	0.2
4	☐	125.000	124.684	2323768.74	0.1487	P	2.1
5	☐	250.000	251.593	4317511.16	0.3000	P	0.4
6	☐	500.000	501.349	8698189.69	0.5977	A	0.1
7	☐	1000.000	998.957	17776398.66	1.1910	A	0.5
8	☐			74549.85	0.0049	P	1.3

$$y = 0.0012 * x + 4.1559E-006$$

$$R = 1.0000$$

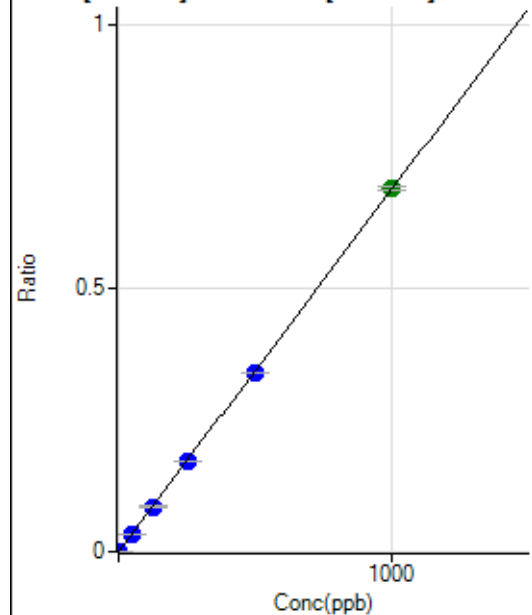
$$DL = 0.00127$$

$$BEC = 0.003486$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	686.15	0.0000	P	9.3
2	☐	1.000	0.808	9834.34	0.0006	P	3.0
3	☐	50.000	49.859	553455.04	0.0343	P	0.4
4	☐	125.000	124.415	1337463.53	0.0856	P	2.4
5	☐	250.000	249.294	2467204.76	0.1714	P	0.3
6	☐	500.000	496.150	4963675.24	0.3411	P	0.1
7	☐	1000.000	1002.182	10282934.78	0.6890	A	1.1
8	☐			3558.95	0.0002	P	8.9

$$y = 6.8741E-004 * x + 4.2784E-005$$

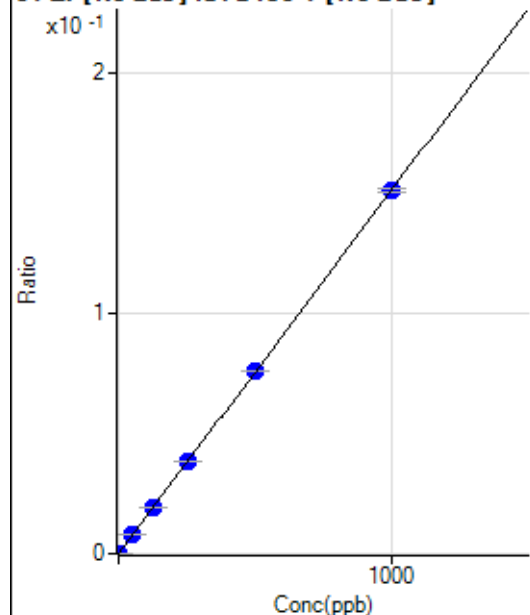
$$R = 1.0000$$

$$DL = 0.01741$$

$$BEC = 0.06224$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	108.34	0.0000	P	15.3
2	☐	1.000	0.952	2480.88	0.0002	P	4.6
3	☐	50.000	50.986	124663.71	0.0077	P	1.4
4	☐	125.000	126.453	299503.33	0.0192	P	2.3
5	☐	250.000	253.105	551944.39	0.0383	P	1.1
6	☐	500.000	501.479	1105427.48	0.0760	P	0.4
7	☐	1000.000	998.254	2256932.32	0.1512	P	1.0
8	☐			808.39	0.0001	P	22.8

$$y = 1.5147\text{E-}004 * x + 6.7546\text{E-}006$$

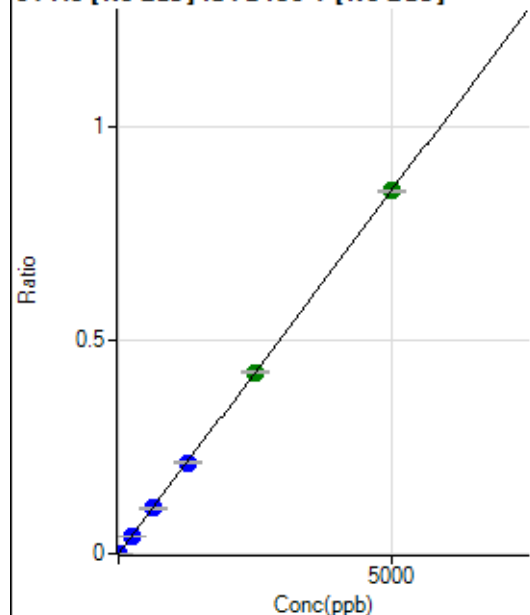
$$R = 1.0000$$

$$DL = 0.02051$$

$$BEC = 0.04459$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	205.57	0.0000	P	33.3
2	☐	5.000	4.541	12895.24	0.0008	P	2.2
3	☐	250.000	250.701	687481.37	0.0426	P	0.3
4	☐	625.000	622.766	1654755.28	0.1059	P	2.7
5	☐	1250.000	1254.241	3068867.01	0.2132	P	0.7
6	☐	2500.000	2501.354	6186956.74	0.4252	A	0.7
7	☐	5000.000	4998.507	12681493.16	0.8496	A	0.9
8	☐			9656.40	0.0006	P	4.3

$$y = 1.6998\text{E-}004 * x + 1.2825\text{E-}005$$

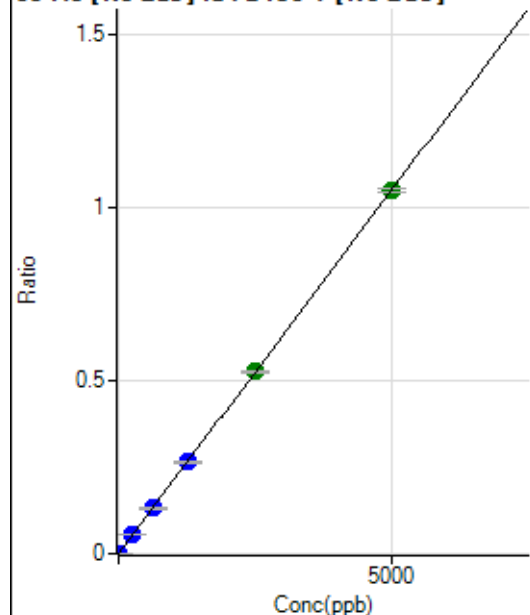
$$R = 1.0000$$

$$DL = 0.07548$$

$$BEC = 0.07545$$

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	27.78	0.0000	P	62.7
2	☐	5.000	4.806	16610.24	0.0010	P	1.5
3	☐	250.000	252.312	854460.36	0.0530	P	0.2
4	☐	625.000	627.209	2058418.80	0.1317	P	2.8
5	☐	1250.000	1258.912	3804871.27	0.2643	P	0.8
6	☐	2500.000	2509.316	7666648.00	0.5269	A	0.8
7	☐	5000.000	4992.722	15646745.66	1.0483	A	1.1
8	☐			14769.38	0.0010	P	3.9

$$y = 2.0997E-004 * x + 1.7353E-006$$

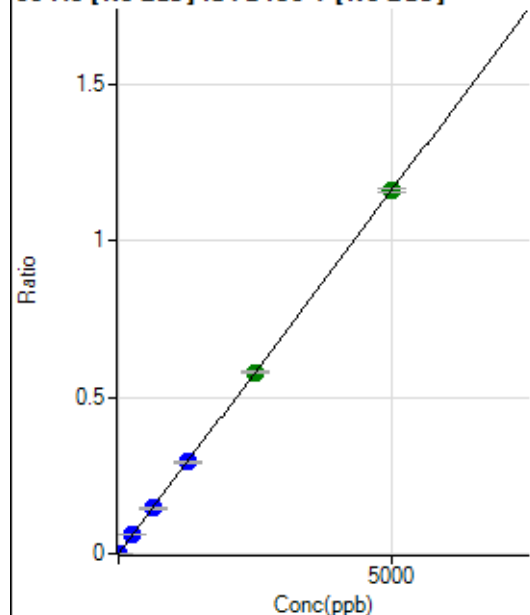
$$R = 1.0000$$

$$DL = 0.01554$$

$$BEC = 0.008264$$

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	119.45	0.0000	P	29.3
2	☐	5.000	4.750	18217.87	0.0011	P	1.2
3	☐	250.000	251.913	942053.45	0.0584	P	0.2
4	☐	625.000	626.871	2271755.04	0.1453	P	2.5
5	☐	1250.000	1261.181	4208758.99	0.2924	P	0.6
6	☐	2500.000	2500.524	8435712.25	0.5797	A	0.6
7	☐	5000.000	4996.614	17290039.10	1.1584	A	0.9
8	☐			21263.95	0.0014	P	6.9

$$y = 2.3184E-004 * x + 7.4513E-006$$

$$R = 1.0000$$

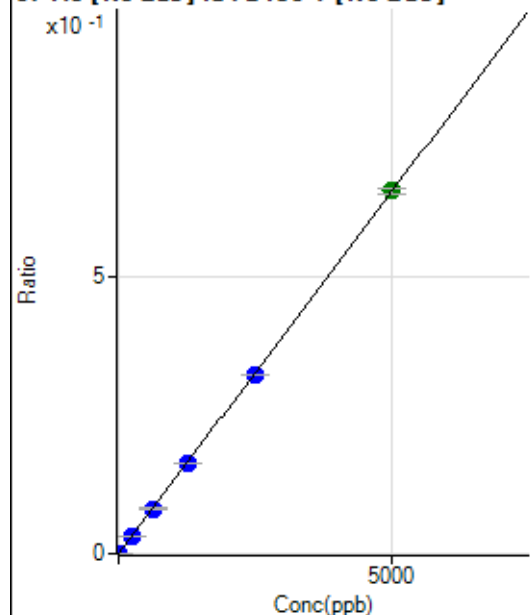
$$DL = 0.02828$$

$$BEC = 0.03214$$

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	22.22	0.0000	P	57.0
2	☐	5.000	4.889	10534.87	0.0006	P	3.8
3	☐	250.000	250.931	529599.96	0.0328	P	0.6
4	☐	625.000	621.050	1270318.31	0.0813	P	2.2
5	☐	1250.000	1251.134	2356541.74	0.1637	P	0.9
6	☐	2500.000	2467.944	4699284.09	0.3229	P	0.5
7	☐	5000.000	5016.191	9797020.88	0.6564	A	1.3
8	☐			8589.04	0.0006	P	2.2

$$y = 1.3085\text{E-}004 * x + 1.3841\text{E-}006$$

$$R = 1.0000$$

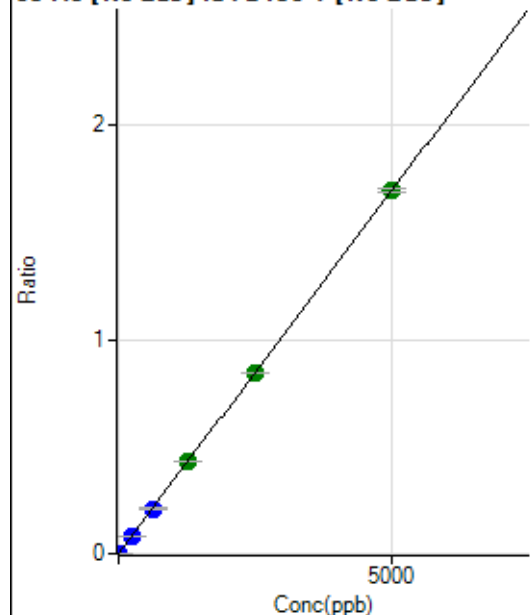
$$DL = 0.0181$$

$$BEC = 0.01058$$

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	41.67	0.0000	P	52.7
2	☐	5.000	4.834	26959.70	0.0016	P	1.9
3	☐	250.000	250.796	1370679.97	0.0850	P	0.5
4	☐	625.000	621.324	3291075.51	0.2105	P	2.1
5	☐	1250.000	1262.733	6158966.28	0.4279	A	0.5
6	☐	2500.000	2492.790	12291721.02	0.8447	A	0.4
7	☐	5000.000	5000.841	25292404.39	1.6946	A	1.2
8	☐			21750.64	0.0014	P	3.3

$$y = 3.3886\text{E-}004 * x + 2.5948\text{E-}006$$

$$R = 1.0000$$

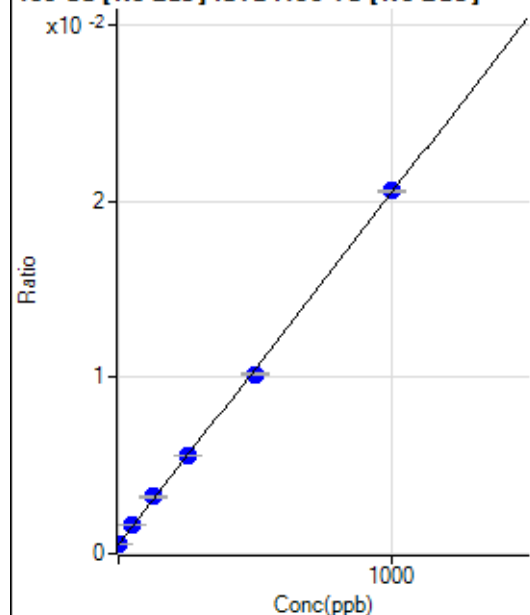
$$DL = 0.0121$$

$$BEC = 0.007658$$

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	4814.92	0.0005	P	4.3
2	☐	1.000	1.987	5292.87	0.0006	P	2.1
3	☐	50.000	57.747	15756.50	0.0017	P	1.0
4	☐	125.000	135.890	30700.66	0.0032	P	2.7
5	☐	250.000	253.034	51798.53	0.0056	P	1.4
6	☐	500.000	483.394	97411.63	0.0102	P	1.1
7	☐	1000.000	1005.795	201859.92	0.0206	P	0.7
8	☐			4709.34	0.0005	P	3.3

$$y = 1.9974\text{E-}005 * x + 5.2180\text{E-}004$$

$$R = 0.9997$$

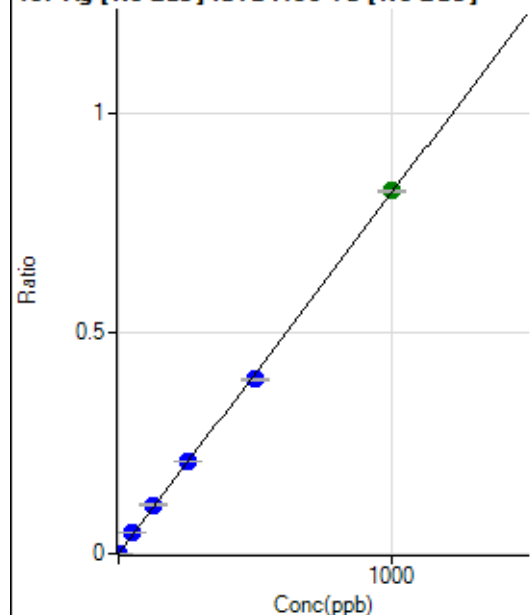
$$DL = 3.403$$

$$BEC = 26.12$$

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	141.67	0.0000	P	26.1
2	☐	1.000	1.198	9375.75	0.0010	P	1.2
3	☐	50.000	56.888	437499.95	0.0465	P	1.6
4	☐	125.000	134.627	1044051.12	0.1101	P	2.6
5	☐	250.000	254.689	1934172.89	0.2082	P	0.6
6	☐	500.000	483.212	3780961.59	0.3950	P	0.7
7	☐	1000.000	1005.674	8050880.56	0.8221	A	0.6
8	☐			994.52	0.0001	P	8.2

$$y = 8.1744\text{E-}004 * x + 1.5366\text{E-}005$$

$$R = 0.9997$$

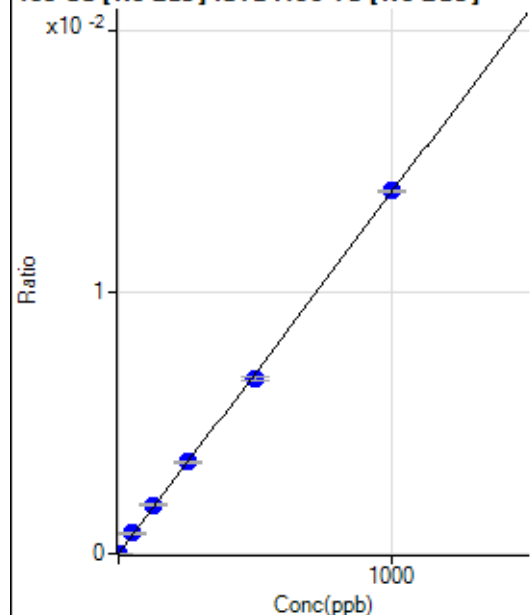
$$DL = 0.01473$$

$$BEC = 0.0188$$

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	12.50	0.0000	P	33.5
2	☐	1.000	0.893	129.17	0.0000	P	8.2
3	☐	50.000	55.863	7272.85	0.0008	P	3.5
4	☐	125.000	134.897	17693.26	0.0019	P	4.1
5	☐	250.000	254.807	32726.96	0.0035	P	1.7
6	☐	500.000	485.467	64228.11	0.0067	P	1.6
7	☐	1000.000	1004.534	135979.22	0.0139	P	0.4
8	☐			50.00	0.0000	P	43.7

$$y = 1.3821\text{E-}005 * x + 1.3546\text{E-}006$$

$$R = 0.9998$$

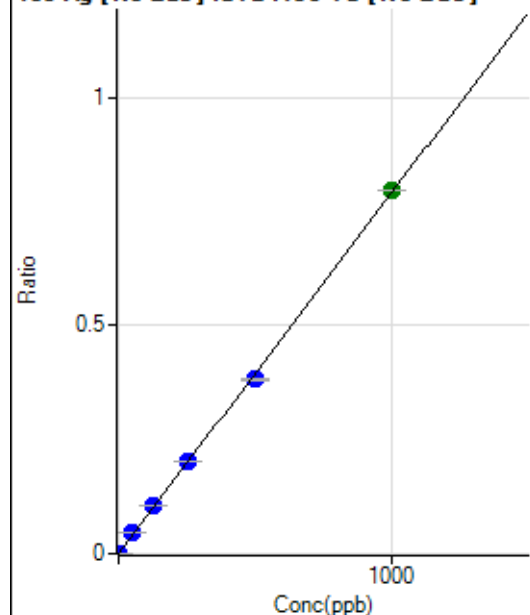
$$DL = 0.09857$$

$$BEC = 0.09801$$

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	27.78	0.0000	P	75.8
2	☐	1.000	1.141	8536.30	0.0009	P	3.9
3	☐	50.000	56.374	419626.80	0.0446	P	1.0
4	☐	125.000	133.852	1004821.94	0.1059	P	2.8
5	☐	250.000	254.624	1871954.08	0.2015	P	0.8
6	☐	500.000	483.283	3660921.92	0.3825	P	0.6
7	☐	1000.000	1005.777	7795175.00	0.7960	A	0.2
8	☐			800.06	0.0001	P	39.6

$$y = 7.9139\text{E-}004 * x + 3.0174\text{E-}006$$

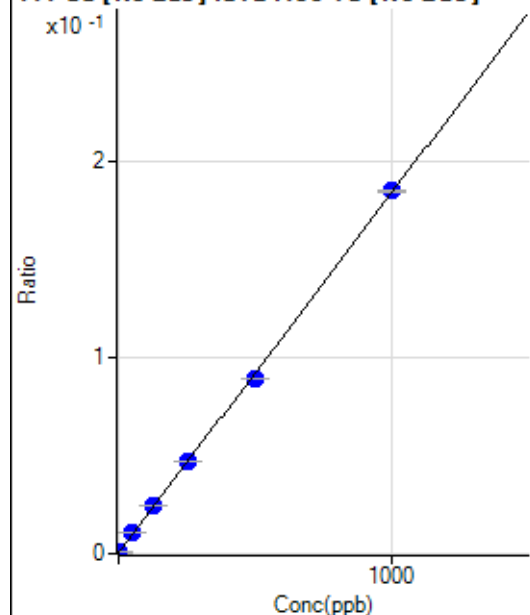
$$R = 0.9997$$

$$DL = 0.008666$$

$$BEC = 0.003813$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3393.64	0.0004	P	4.2
2	☐	1.000	1.175	5496.70	0.0006	P	1.2
3	☐	50.000	55.291	98769.88	0.0105	P	1.3
4	☐	125.000	131.524	232138.92	0.0245	P	2.7
5	☐	250.000	252.743	433722.07	0.0467	P	0.2
6	☐	500.000	484.762	853947.63	0.0892	P	0.3
7	☐	1000.000	1005.853	1808956.74	0.1847	P	0.4
8	☐			3639.33	0.0004	P	3.2

$$y = 1.8327\text{E-}004 * x + 3.6777\text{E-}004$$

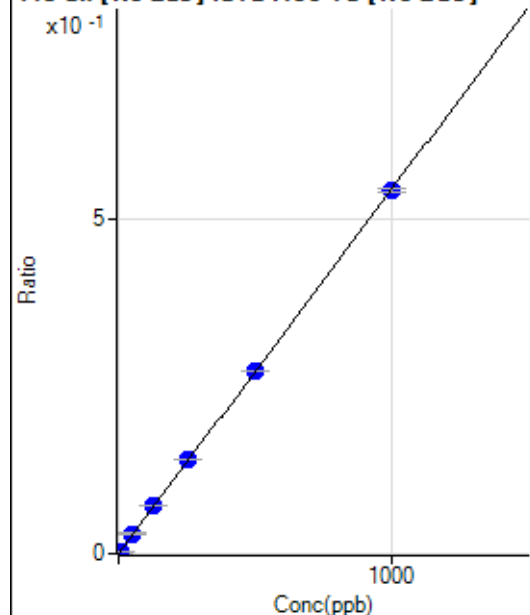
$$R = 0.9998$$

$$DL = 0.2532$$

$$BEC = 2.007$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	572.26	0.0001	P	12.0
2	☐	5.000	5.556	29134.05	0.0031	P	1.2
3	☐	50.000	55.155	283349.42	0.0301	P	1.4
4	☐	125.000	132.404	685212.48	0.0722	P	3.0
5	☐	250.000	256.659	1300300.65	0.1400	P	0.2
6	☐	500.000	501.828	2619014.03	0.2736	P	0.8
7	☐	1000.000	996.235	5319024.73	0.5431	P	0.9
8	☐			3325.54	0.0003	P	5.6

$$y = 5.4513\text{E-}004 * x + 6.1980\text{E-}005$$

$$R = 1.0000$$

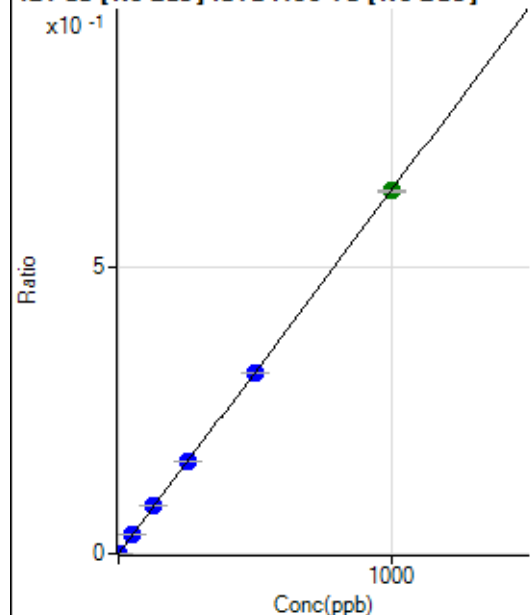
$$DL = 0.04091$$

$$BEC = 0.1137$$

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	27.78	0.0000	P	45.2
2	☐	2.000	2.067	12367.02	0.0013	P	3.2
3	☐	50.000	54.022	321717.71	0.0342	P	1.4
4	☐	125.000	131.589	790350.58	0.0833	P	2.9
5	☐	250.000	255.569	1503272.70	0.1618	P	0.3
6	☐	500.000	498.773	3022983.40	0.3158	P	0.4
7	☐	1000.000	998.196	6189711.94	0.6320	A	0.8
8	☐			9717.63	0.0010	P	1.6

$$y = 6.3318\text{E-}004 * x + 3.0049\text{E-}006$$

$$R = 1.0000$$

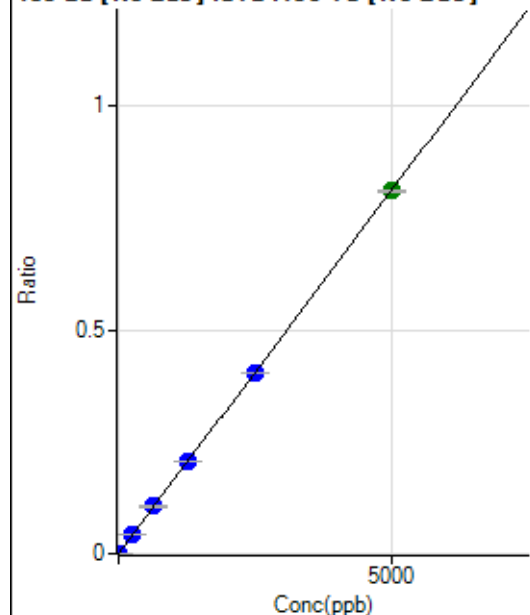
$$DL = 0.006437$$

$$BEC = 0.004746$$

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	27.78	0.0000	P	62.5
2	☐	10.000	10.558	16168.31	0.0017	P	1.6
3	☐	250.000	267.517	408014.22	0.0434	P	1.7
4	☐	625.000	650.742	1000977.24	0.1055	P	2.8
5	☐	1250.000	1276.985	1923688.52	0.2071	P	0.5
6	☐	2500.000	2490.200	3865541.54	0.4038	P	0.5
7	☐	5000.000	4994.059	7930945.84	0.8098	A	0.7
8	☐			1525.16	0.0002	P	17.2

$$y = 1.6216\text{E-}004 * x + 3.0072\text{E-}006$$

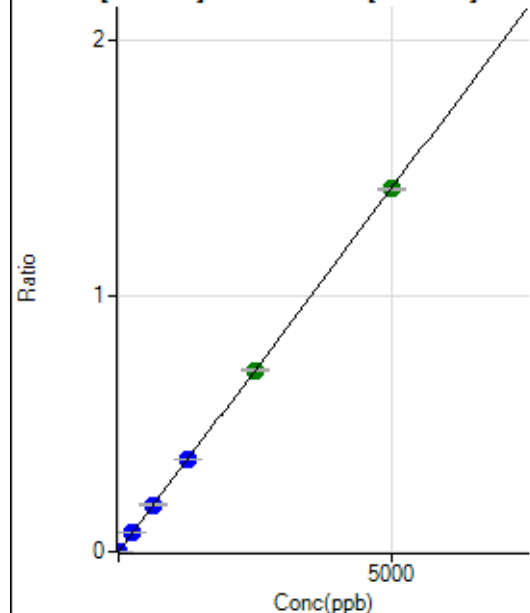
$$R = 1.0000$$

$$DL = 0.03477$$

$$BEC = 0.01854$$

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	25.00	0.0000	P	0.6
2	☐	10.000	10.529	28218.53	0.0030	P	2.2
3	☐	250.000	266.980	713226.56	0.0758	P	0.9
4	☐	625.000	648.134	1746337.35	0.1841	P	2.5
5	☐	1250.000	1273.486	3360205.09	0.3617	P	0.6
6	☐	2500.000	2496.729	6788496.64	0.7092	A	0.3
7	☐	5000.000	4992.022	13885999.96	1.4179	A	0.6
8	☐			2425.34	0.0003	P	19.7

$$y = 2.8403E-004 * x + 2.7089E-006$$

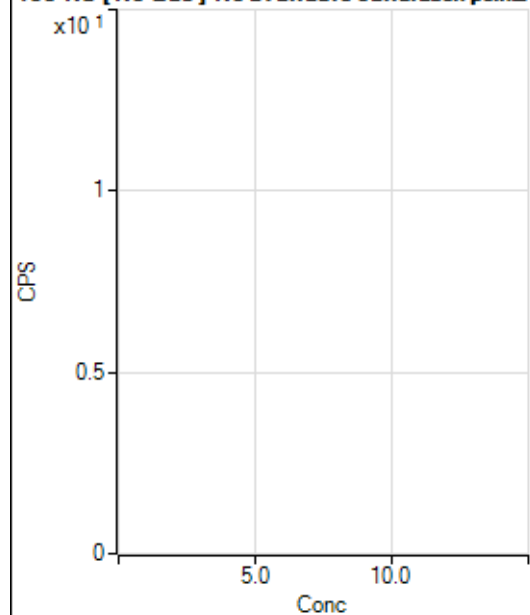
$$R = 1.0000$$

$$DL = 0.0001693$$

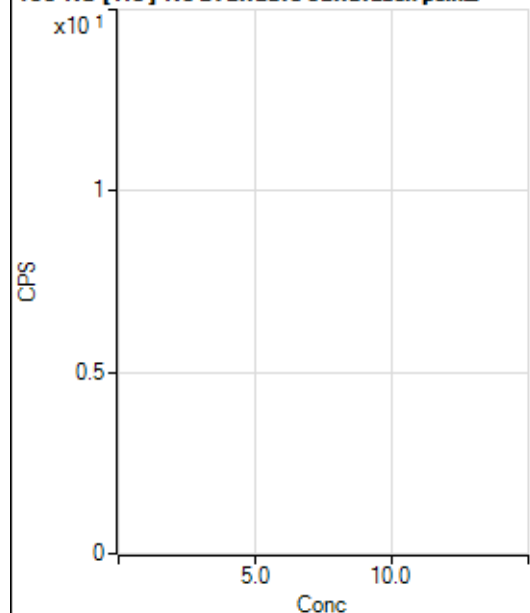
$$BEC = 0.009537$$

Weight: <None>

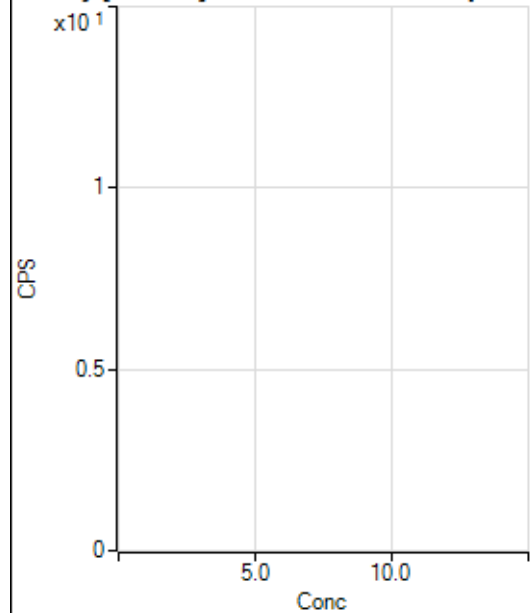
Min Conc: 0

150 Nd [No Gas] No available calibration points

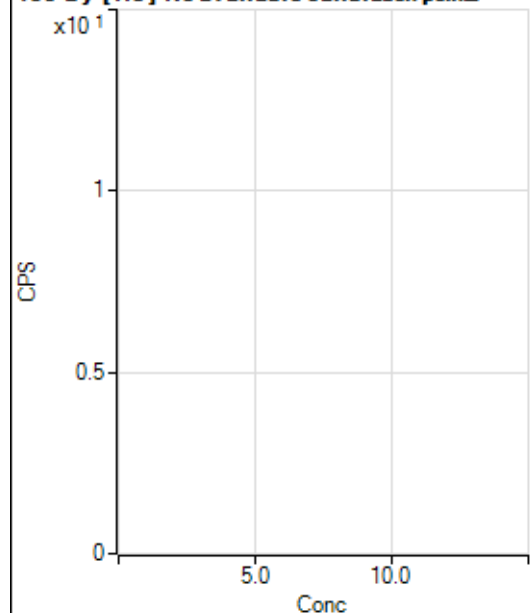
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	173.
2	☐			2.22		P	173.
3	☐			40.00		P	44.1
4	☐			73.34		P	18.2
5	☐			142.23		P	2.7
6	☐			317.79		P	10.3
7	☐			644.48		P	9.0
8	☐			86.67		P	7.7

150 Nd [He] No available calibration points

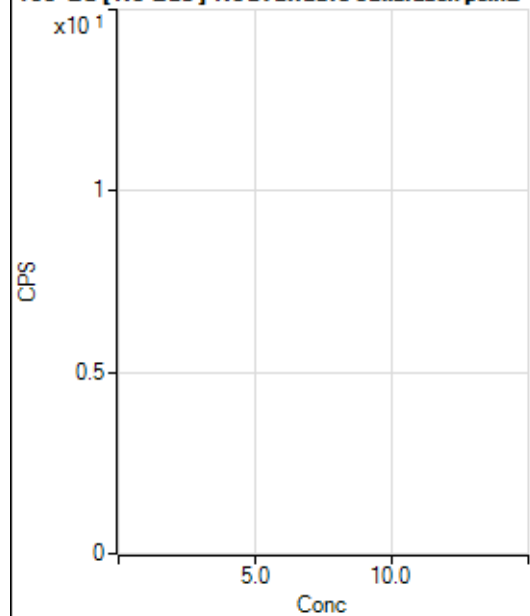
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	86.6
2	☐			2.22		P	173.
3	☐			7.78		P	65.5
4	☐			8.89		P	57.3
5	☐			23.33		P	14.3
6	☐			45.56		P	11.2
7	☐			66.67		P	13.2
8	☐			34.44		P	5.6

156 Dy [No Gas] No available calibration points

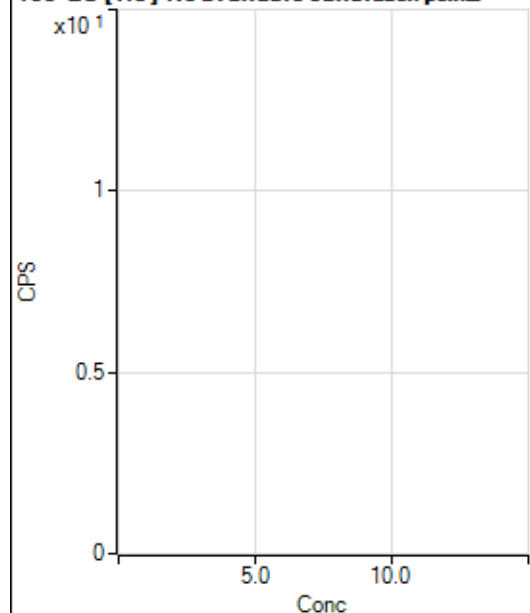
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.56		P	173.
2	☐			11.11		P	114.
3	☐			11.11		P	86.6
4	☐			27.78		P	34.6
5	☐			52.78		P	39.7
6	☐			52.78		P	39.7
7	☐			136.12		P	14.1
8	☐			30.56		P	110.

156 Dy [He] No available calibration points

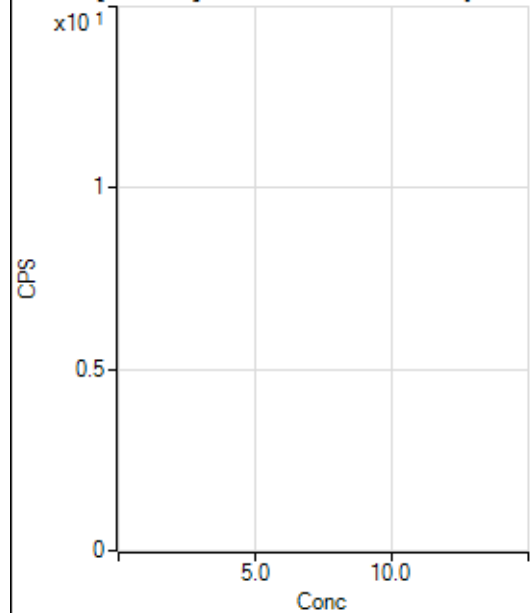
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			10.00		P	66.7
2	☐			7.78		P	24.7
3	☐			15.56		P	32.7
4	☐			40.00		P	28.9
5	☐			48.89		P	14.2
6	☐			77.78		P	2.5
7	☐			153.34		P	9.5
8	☐			28.89		P	46.6

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

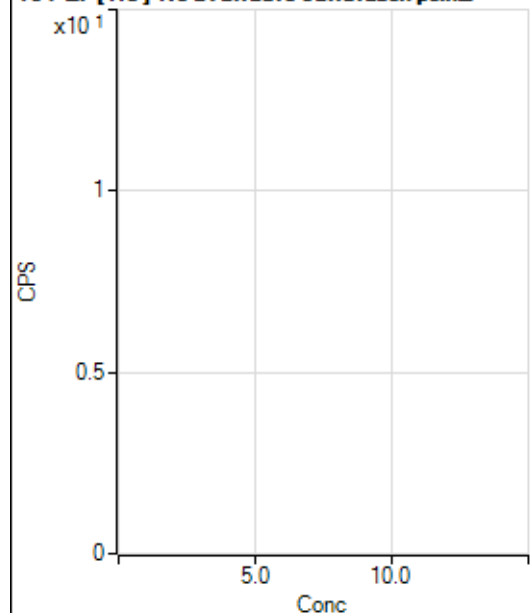
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			27.78		P	91.7
2	☐			38.89		P	24.7
3	☐			41.67		P	20.0
4	☐			63.89		P	41.9
5	☐			41.67		P	52.9
6	☐			75.00		P	11.1
7	☐			61.11		P	56.8
8	☐			55.56		P	43.3

160 Gd [He] No available calibration points

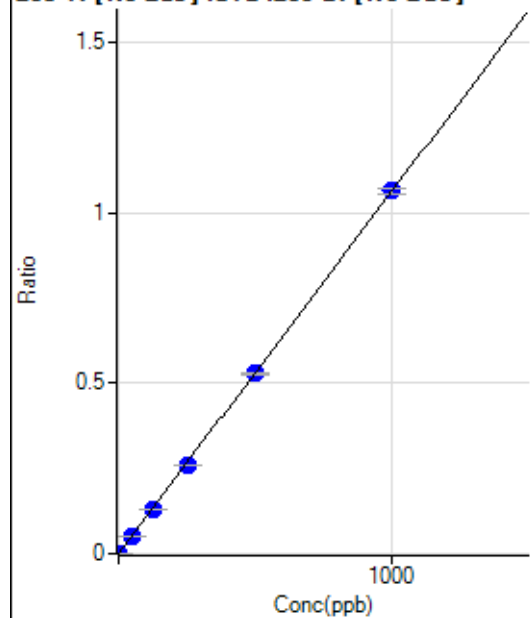
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			164.45		P	31.4
2	☐			196.67		P	6.1
3	☐			174.45		P	18.6
4	☐			164.45		P	17.5
5	☐			165.56		P	3.1
6	☐			162.23		P	9.7
7	☐			164.45		P	10.0
8	☐			173.34		P	13.5

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.89		P	69.3
2	☐			44.45		P	47.2
3	☐			55.56		P	22.9
4	☐			52.78		P	24.1
5	☐			52.78		P	71.2
6	☐			77.78		P	27.0
7	☐			50.00		P	16.7
8	☐			69.45		P	25.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			37.78		P	28.4
2	☐			38.89		P	21.6
3	☐			43.33		P	7.7
4	☐			32.22		P	23.9
5	☐			38.89		P	32.4
6	☐			31.11		P	22.3
7	☐			41.11		P	16.9
8	☐			35.55		P	19.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	283.35	0.0000	P	33.2
2	☐	1.000	0.968	6237.87	0.0011	P	7.8
3	☐	50.000	48.933	301191.24	0.0519	P	0.3
4	☐	125.000	122.311	767024.74	0.1297	P	3.3
5	☐	250.000	245.862	1546587.22	0.2607	P	0.8
6	☐	500.000	497.556	3170215.20	0.5276	P	0.4
7	☐	1000.000	1002.646	6387897.76	1.0631	P	1.3
8	☐			1911.33	0.0004	P	4.1

$$y = 0.0011 * x + 4.9168E-005$$

$$R = 1.0000$$

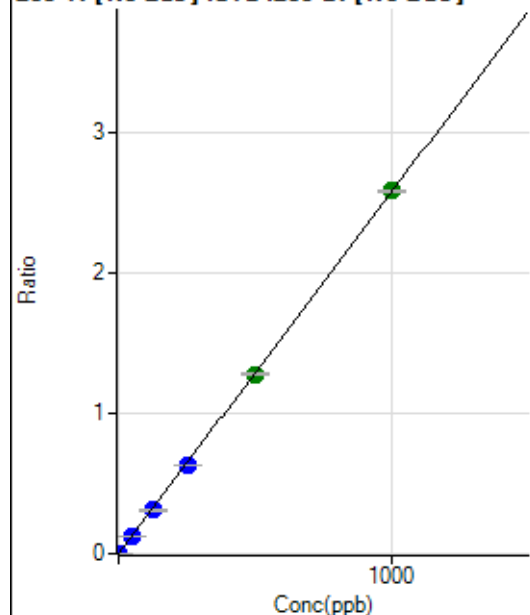
$$DL = 0.04617$$

$$BEC = 0.04637$$

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	497.25	0.0001	P	13.3
2	☐	1.000	0.927	14369.48	0.0025	P	2.6
3	☐	50.000	48.395	724275.27	0.1249	P	0.6
4	☐	125.000	120.609	1839530.40	0.3111	P	2.6
5	☐	250.000	244.965	3747402.38	0.6318	P	1.0
6	☐	500.000	496.983	7700940.45	1.2816	A	0.3
7	☐	1000.000	1003.396	15547323.79	2.5875	A	0.6
8	☐			4634.37	0.0009	P	7.1

$$y = 0.0026 * x + 8.6371E-005$$

$$R = 1.0000$$

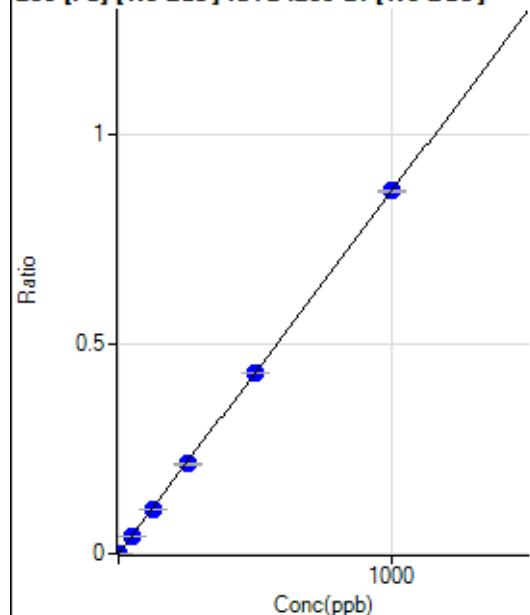
$$DL = 0.01338$$

$$BEC = 0.03349$$

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	462.99	0.0001	P	9.9
2	☐	1.000	0.925	5099.27	0.0009	P	4.1
3	☐	50.000	49.190	246842.08	0.0426	P	0.4
4	☐	125.000	121.793	622368.78	0.1053	P	3.1
5	☐	250.000	247.801	1269875.17	0.2141	P	1.2
6	☐	500.000	499.126	2590636.37	0.4311	P	0.4
7	☐	1000.000	1001.428	5197030.15	0.8649	P	0.7
8	☐			2959.68	0.0005	P	3.9

$$y = 8.6362E-004 * x + 8.0401E-005$$

$$R = 1.0000$$

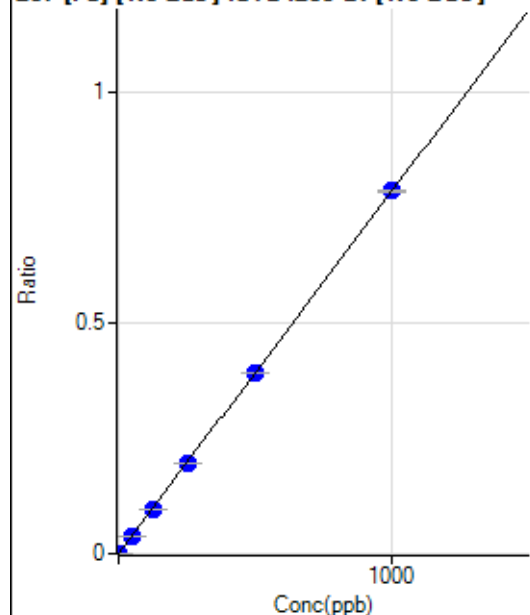
$$DL = 0.02767$$

$$BEC = 0.0931$$

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	448.17	0.0001	P	13.7
2	☐	1.000	0.919	4637.97	0.0008	P	1.9
3	☐	50.000	49.043	223822.96	0.0386	P	0.5
4	☐	125.000	121.708	565616.74	0.0957	P	2.8
5	☐	250.000	247.887	1155190.55	0.1947	P	0.4
6	☐	500.000	498.059	2350670.22	0.3912	P	0.3
7	☐	1000.000	1001.958	4728292.35	0.7869	P	0.8
8	☐			2700.36	0.0005	P	10.0

$$y = 7.8531\text{E-}004 * x + 7.7692\text{E-}005$$

$$R = 1.0000$$

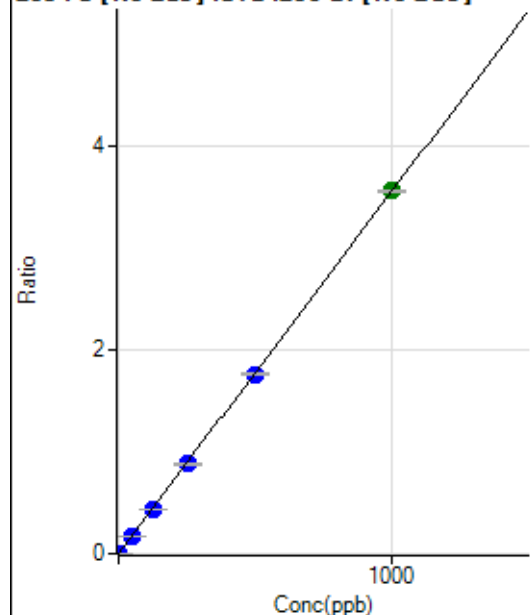
$$DL = 0.04072$$

$$BEC = 0.09893$$

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	1568.60	0.0003	P	7.1
2	☐	1.000	0.928	20690.16	0.0036	P	0.6
3	☐	50.000	48.877	1007578.72	0.1737	P	0.2
4	☐	125.000	121.441	2549937.87	0.4312	P	2.7
5	☐	250.000	247.305	5207654.59	0.8779	P	0.5
6	☐	500.000	496.689	10593031.55	1.7629	P	0.4
7	☐	1000.000	1002.831	21385574.03	3.5592	A	0.8
8	☐			11824.61	0.0022	P	5.7

$$y = 0.0035 * x + 2.7211\text{E-}004$$

$$R = 1.0000$$

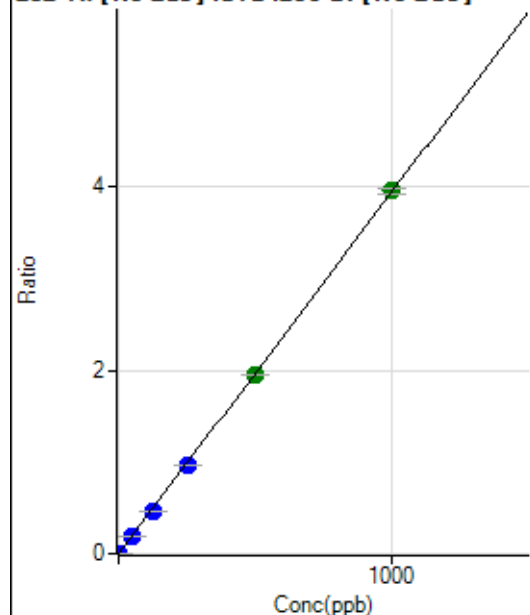
$$DL = 0.01628$$

$$BEC = 0.07668$$

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	1053.78	0.0002	P	6.2
2	☐	1.000	0.727	17669.76	0.0030	P	1.5
3	☐	50.000	45.950	1050803.96	0.1812	P	0.5
4	☐	125.000	117.810	2745098.61	0.4643	P	2.7
5	☐	250.000	244.354	5710672.70	0.9627	P	0.6
6	☐	500.000	495.302	11724727.92	1.9512	A	0.6
7	☐	1000.000	1004.862	23784297.99	3.9585	A	1.6
8	☐			8202.80	0.0015	P	13.4

$$y = 0.0039 * x + 1.8289E-004$$

$$R = 1.0000$$

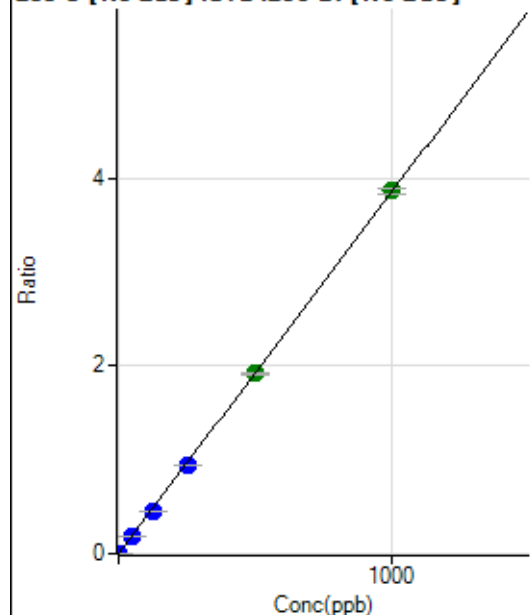
$$DL = 0.00865$$

$$BEC = 0.04643$$

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	1269.57	0.0002	P	6.9
2	☐	1.000	0.886	21084.46	0.0036	P	0.6
3	☐	50.000	46.223	1034159.90	0.1783	P	0.9
4	☐	125.000	117.743	2683985.19	0.4539	P	2.4
5	☐	250.000	244.607	5591932.16	0.9427	P	0.7
6	☐	500.000	497.531	11519973.78	1.9172	A	0.7
7	☐	1000.000	1003.679	23237789.06	3.8675	A	1.3
8	☐			4181.45	0.0008	P	13.8

$$y = 0.0039 * x + 2.2034E-004$$

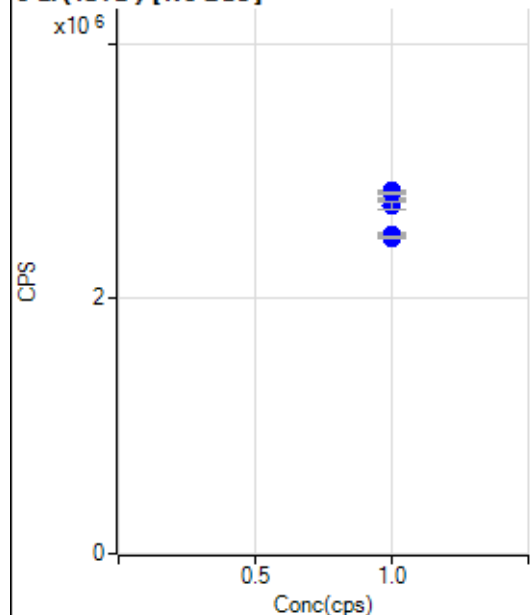
$$R = 1.0000$$

$$DL = 0.0119$$

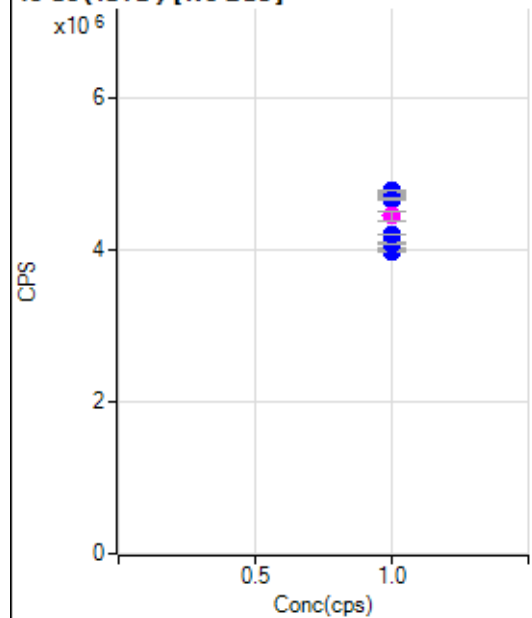
$$BEC = 0.05719$$

Weight: <None>

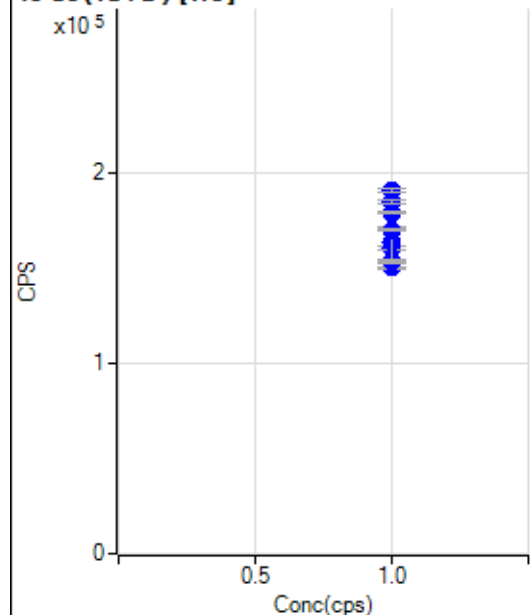
Min Conc: 0

6 Li (ISTD) [No Gas]

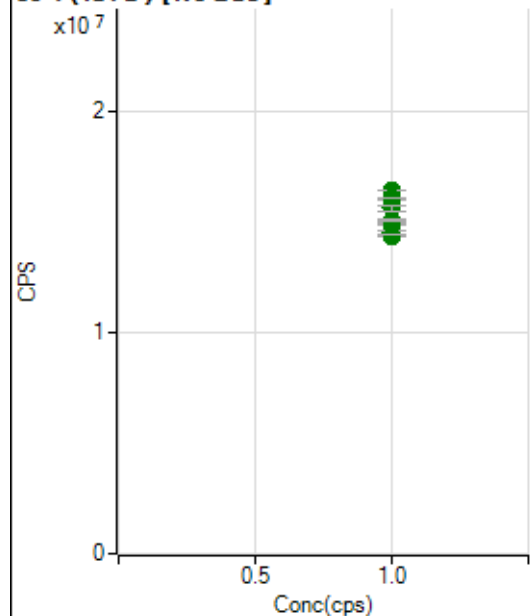
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2783211.41		P	0.7
2	☐	1.000		2843416.81		P	0.3
3	☐	1.000		2827486.74		P	0.3
4	☐	1.000		2729609.23		P	2.0
5	☐	1.000		2500411.83		P	1.1
6	☐	1.000		2475808.49		P	0.7
7	☐	1.000		2496654.02		P	0.7
8	☐	1.000		2482270.14		P	0.3

45 Sc (ISTD) [No Gas]

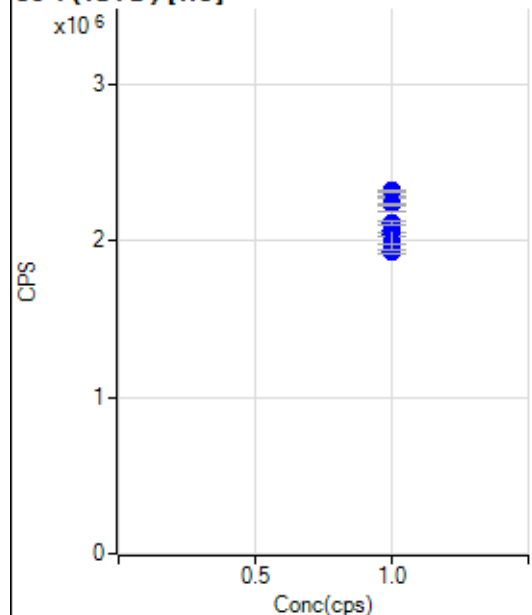
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4715165.21		P	0.5
2	☐	1.000		4779415.13		P	0.5
3	☐	1.000		4672555.40		P	0.3
4	☐	1.000		4455034.08		M	2.9
5	☐	1.000		4028342.15		P	0.6
6	☐	1.000		3989496.23		P	0.9
7	☐	1.000		4090116.85		P	0.8
8	☐	1.000		4199864.50		P	0.2

45 Sc (ISTD) [He]

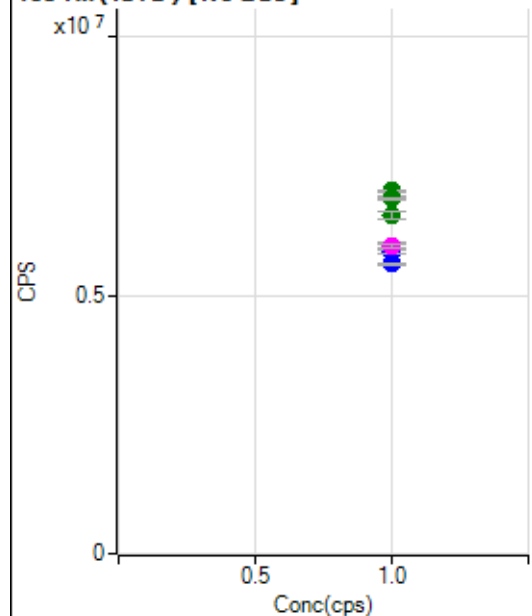
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		184717.29		P	1.2
2	☐	1.000		190407.14		P	0.9
3	☐	1.000		178894.06		P	0.6
4	☐	1.000		160381.35		P	1.6
5	☐	1.000		149923.55		P	0.4
6	☐	1.000		152900.11		P	0.8
7	☐	1.000		163172.83		P	10.7
8	☐	1.000		169981.27		P	0.9

89 Y (ISTD) [No Gas]

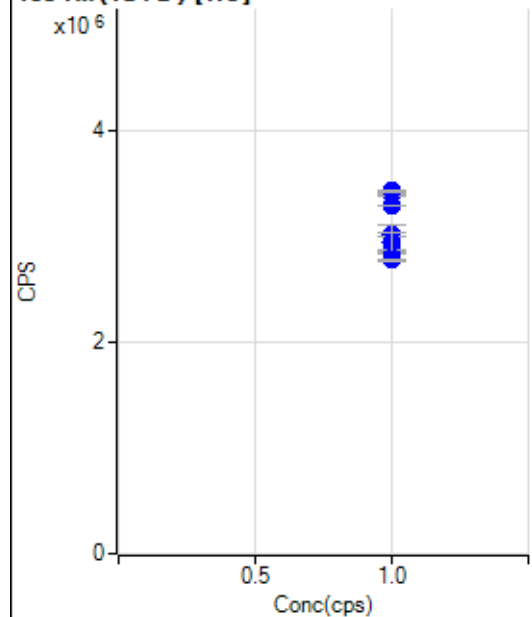
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16037987.54		A	0.5
2	☐	1.000		16432022.81		A	0.1
3	☐	1.000		16128089.90		A	0.2
4	☐	1.000		15635766.57		A	2.1
5	☐	1.000		14393645.76		A	0.7
6	☐	1.000		14551988.81		A	1.3
7	☐	1.000		14925853.11		A	0.3
8	☐	1.000		15099497.83		A	0.6

89 Y(ISTD) [He]

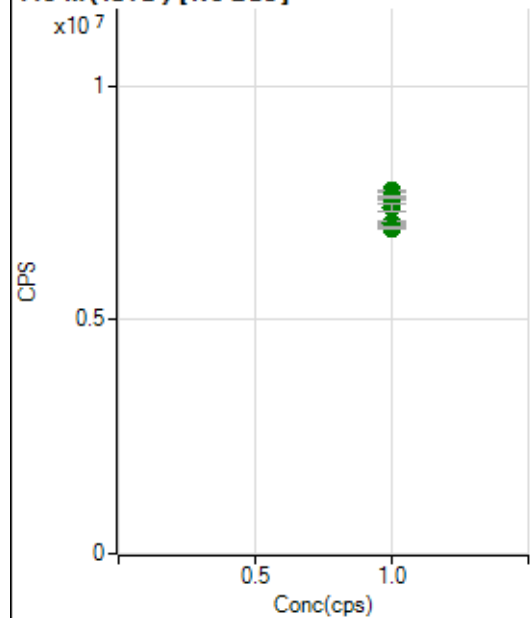
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2286494.97		P	0.4
2	☐	1.000		2321890.31		P	0.5
3	☐	1.000		2236183.58		P	0.5
4	☐	1.000		2039023.07		P	1.0
5	☐	1.000		1931711.22		P	0.8
6	☐	1.000		1977517.33		P	0.1
7	☐	1.000		2064130.52		P	11.7
8	☐	1.000		2116789.05		P	0.8

103 Rh(ISTD) [No Gas]

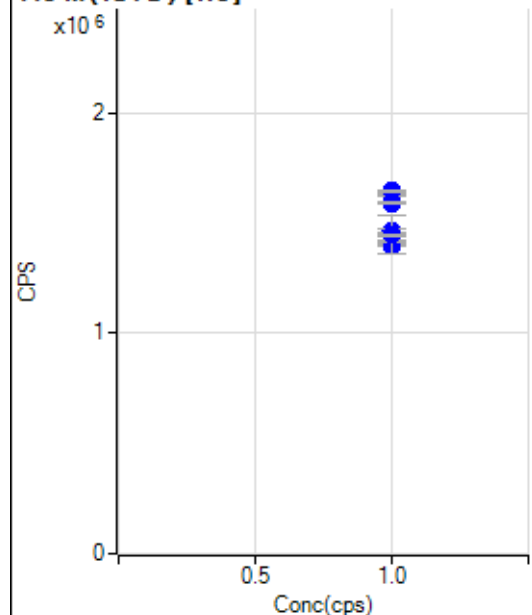
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6897037.22		A	0.6
2	☐	1.000		7025978.19		A	0.3
3	☐	1.000		6871536.26		A	0.6
4	☐	1.000		6554526.67		A	2.4
5	☐	1.000		5968292.50		M	1.9
6	☐	1.000		5844426.65		P	0.9
7	☐	1.000		5946220.88		M	1.2
8	☐	1.000		5614361.54		P	0.4

103 Rh (ISTD) [He]

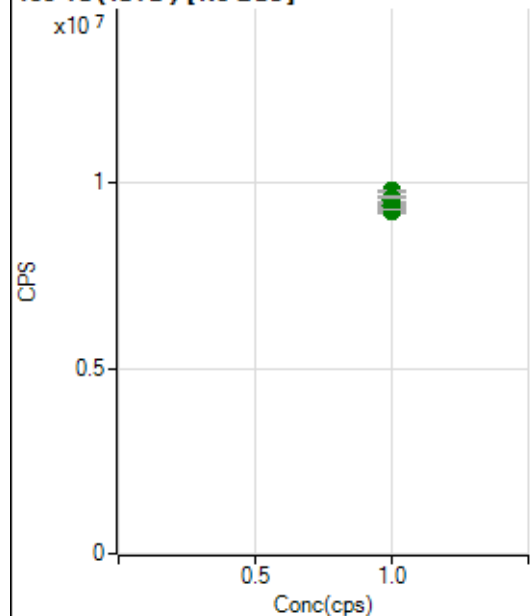
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3397110.51		P	0.3
2	☐	1.000		3433789.04		P	0.2
3	☐	1.000		3293776.79		P	0.4
4	☐	1.000		3024724.33		P	1.4
5	☐	1.000		2845511.13		P	0.9
6	☐	1.000		2874696.31		P	0.4
7	☐	1.000		2939865.27		P	11.7
8	☐	1.000		2776429.75		P	0.8

115 In (ISTD) [No Gas]

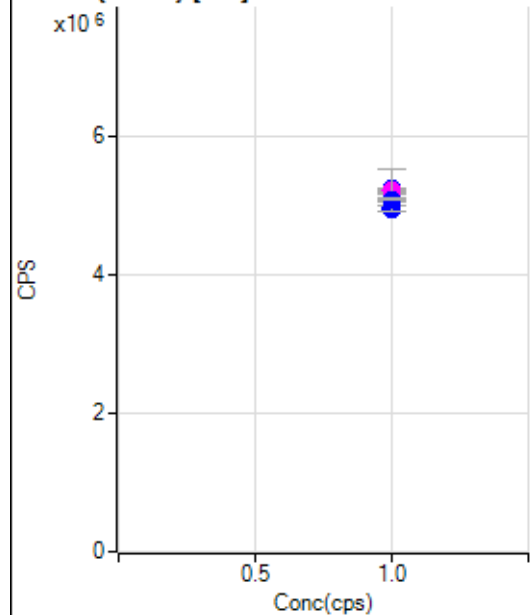
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7596740.16		A	0.5
2	☐	1.000		7758113.77		A	0.4
3	☐	1.000		7631074.27		A	0.5
4	☐	1.000		7392761.97		A	2.4
5	☐	1.000		6972378.08		A	0.4
6	☐	1.000		7026805.92		A	1.0
7	☐	1.000		7073396.66		A	0.6
8	☐	1.000		6969637.59		A	0.3

115 In (ISTD) [He]

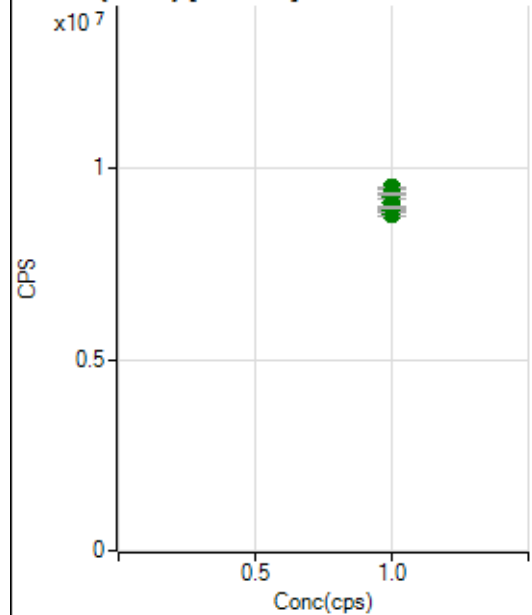
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1626230.51		P	0.4
2	☐	1.000		1647040.62		P	0.3
3	☐	1.000		1592606.17		P	0.2
4	☐	1.000		1462771.61		P	1.2
5	☐	1.000		1398773.25		P	0.5
6	☐	1.000		1415677.12		P	0.5
7	☐	1.000		1447417.35		P	12.0
8	☐	1.000		1444883.69		P	0.7

159 Tb (ISTD) [No Gas]

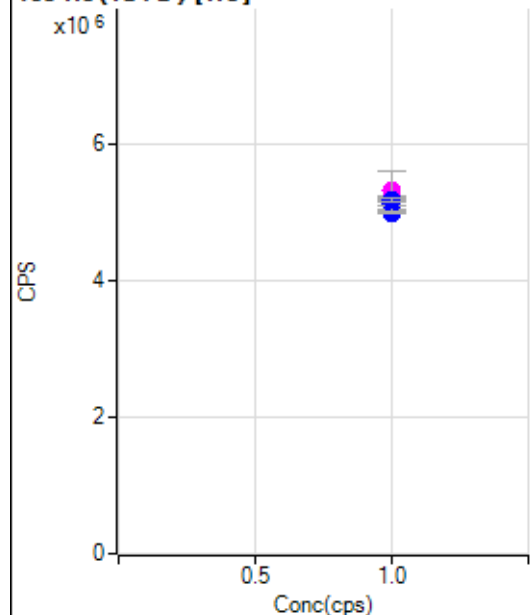
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9229037.64		A	0.6
2	☐	1.000		9426902.08		A	0.8
3	☐	1.000		9405490.69		A	0.9
4	☐	1.000		9490072.29		A	2.6
5	☐	1.000		9289576.67		A	0.2
6	☐	1.000		9572364.93		A	1.5
7	☐	1.000		9793388.05		A	0.6
8	☐	1.000		9620889.51		A	0.5

159 Tb (ISTD) [He]

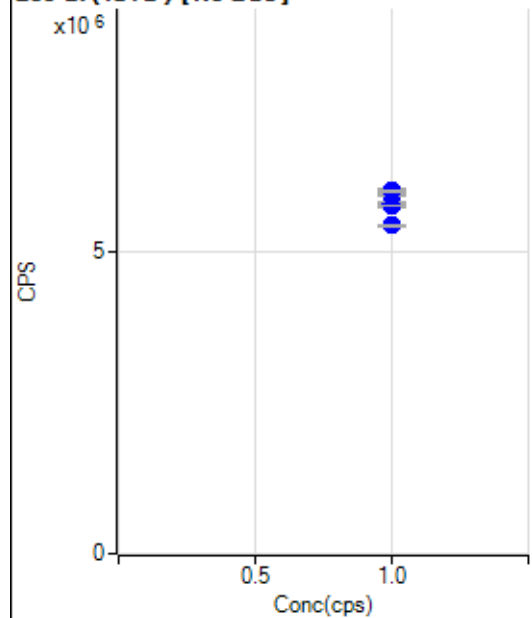
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5174372.18		P	0.8
2	☐	1.000		5229416.80		P	0.5
3	☐	1.000		5156043.19		P	0.6
4	☐	1.000		4951857.22		P	1.5
5	☐	1.000		4938502.71		P	1.7
6	☐	1.000		5056118.50		P	0.9
7	☐	1.000		5215202.22		M	11.8
8	☐	1.000		5079034.61		P	0.7

165 Ho (ISTD) [No Gas]

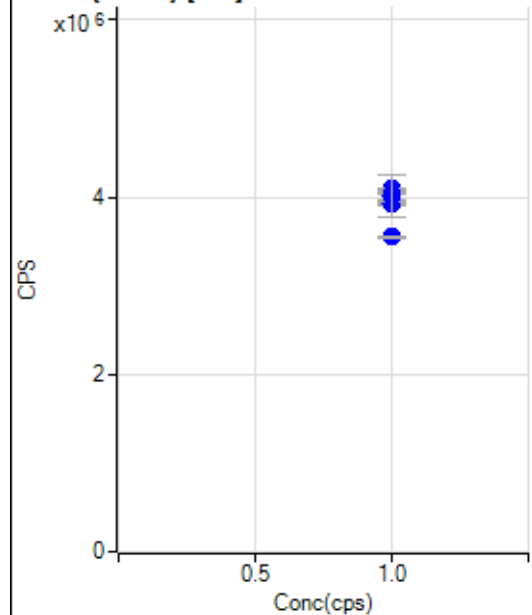
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8808235.53		A	0.7
2	☐	1.000		8957459.58		A	0.8
3	☐	1.000		8921052.37		A	1.3
4	☐	1.000		9103179.63		A	2.7
5	☐	1.000		8990168.95		A	0.4
6	☐	1.000		9275404.55		A	1.2
7	☐	1.000		9495223.56		A	0.6
8	☐	1.000		9347999.08		A	0.4

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5204671.07		P	0.8
2	☐	1.000		5242594.44		P	0.5
3	☐	1.000		5197205.58		P	0.5
4	☐	1.000		5008235.48		P	0.7
5	☐	1.000		5020127.63		P	0.9
6	☐	1.000		5146100.30		P	1.0
7	☐	1.000		5326539.47		M	11.0
8	☐	1.000		5202342.25		P	1.0

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5762974.78		P	1.4
2	☐	1.000		5802449.29		P	0.9
3	☐	1.000		5799692.07		P	0.7
4	☐	1.000		5915726.30		P	2.6
5	☐	1.000		5931941.23		P	0.7
6	☐	1.000		6008877.97		P	1.7
7	☐	1.000		6008722.76		P	0.5
8	☐	1.000		5433371.72		P	1.0

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4065593.03		P	1.3
2	☐	1.000		4093736.74		P	0.5
3	☐	1.000		4042088.06		P	0.5
4	☐	1.000		3917799.63		P	0.6
5	☐	1.000		3918076.88		P	1.1
6	☐	1.000		3957850.60		P	0.9
7	☐	1.000		4010328.66		P	11.8
8	☐	1.000		3551450.89		P	1.0

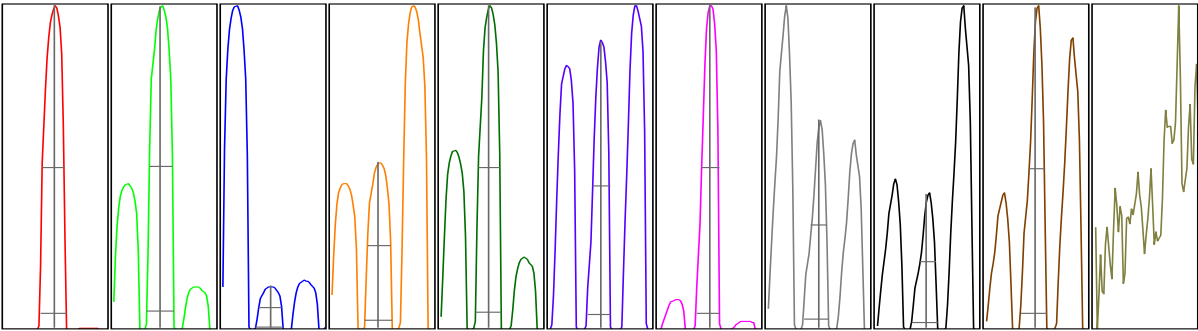
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7082919.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	7269	0.61	5.00	
24	74613	0.65	5.00	
25	9804	0.79	5.00	
26	11363	0.55	5.00	
59	54629	0.81	5.00	
113	7595	0.71	5.00	
115	92755	1.15	5.00	
206	18006	2.16	5.00	
207	16532	1.96	5.00	
208	39359	2.41	5.00	
220	53	4.71		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7200	7272	7320	7292	7262
24	73812	74493	74977	74940	74843
25	9692	9761	9887	9844	9837
26	11268	11348	11436	11387	11378
59	53921	54508	55049	54764	54900
113	7550	7638	7657	7598	7533
115	93735	93540	93264	91842	91392
206	17485	17707	18163	18323	18353
207	16010	16423	16705	16751	16775
208	37834	39133	39749	39768	40310
220	50	51	54	52	57

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	12287	9.00	8.9 - 9.1		0.780	0.900	
24	118596	23.90	23.9 - 24.1		0.786	0.900	
25	15618	24.95	24.9 - 25.1		0.787	0.900	
26	17943	25.90	25.9 - 26.1		0.787	0.900	
59	93270	58.95	58.9 - 59.1		0.741	0.900	
113	15301	113.05	112.9 - 113.1		0.682	0.900	
115	185845	115.05	114.9 - 115.1		0.681	0.900	
206	39465	206.05	205.9 - 206.1		0.733	0.900	
207	35236	207.00	206.9 - 207.1		0.748	0.900	
208	84129	208.00	207.9 - 208.1		0.759	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	6.7	V	Deflect	14.6	V
Extract 2	-75.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-42	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	13242	0.30	
89	20266	0.80	
205	20057	0.44	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	13313	13220	13218	13237	13221
89	20470	20360	20159	20281	20058
205	20148	20076	19977	20131	19953

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.6	V	Deflect	2.0	V
Extract 2	-90.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-50	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			