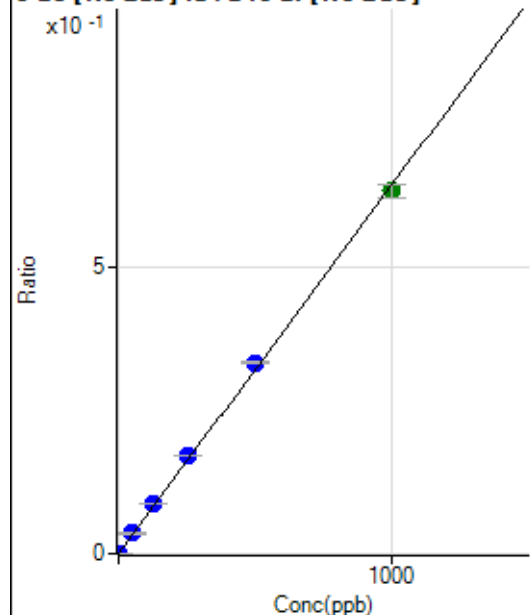


Batch Folder: D:\ICP-MS Data\P7042019-MS.b\
Analysis File: P7042019-MS.batch.bin
DA Date-Time: 2019-04-21 23:06:31
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-04-20 15:01:26
2	004CALS.d	S01	2019-04-20 15:05:02
3	005CALS.d	S02	2019-04-20 15:10:04
4	006CALS.d	S03	2019-04-20 15:13:59
5	007CALS.d	S04	2019-04-20 15:18:09
6	008CALS.d	S05	2019-04-20 15:21:57
7	009CALS.d	S06	2019-04-20 15:25:43
8	010CALS.d	S07	2019-04-20 15:29:27
9	011CALS.d	S08	2019-04-20 15:33:14

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	103.34	0.0000	P	18.9
2	☐	0.100	0.101	654.47	0.0001	P	2.2
3	☐	1.000	1.033	5728.94	0.0007	P	3.6
4	☐	50.000	54.921	300153.52	0.0352	P	0.7
5	☐	125.000	135.965	693983.01	0.0872	P	0.6
6	☐	250.000	267.192	1241865.55	0.1713	P	0.4
7	☐	500.000	518.151	2310279.39	0.3322	P	0.7
8	☐	1000.000	985.010	4440454.41	0.6316	A	3.6
9	☐			1342.30	0.0002	P	3.4

$$y = 6.4118\text{E-}004 * x + 1.2460\text{E-}005$$

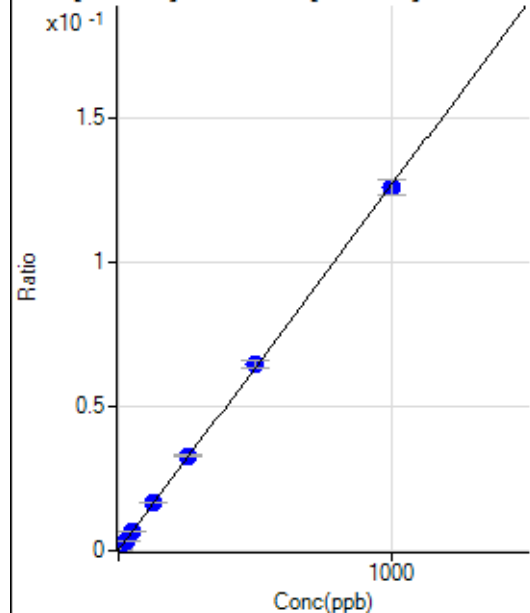
$$R = 0.9996$$

$$DL = 0.01102$$

$$BEC = 0.01943$$

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	1194.54	0.0001	P	6.5
2	☐	2.500	2.451	3833.98	0.0005	P	4.0
3	☐	25.000	24.171	27186.28	0.0032	P	1.2
4	☐	50.000	52.394	57683.06	0.0068	P	0.3
5	☐	125.000	129.856	131837.72	0.0166	P	1.6
6	☐	250.000	258.620	238093.56	0.0328	P	2.0
7	☐	500.000	509.793	449234.84	0.0646	P	3.3
8	☐	1000.000	992.243	883156.31	0.1256	P	4.1
9	☐			36862.77	0.0054	P	6.6

$$y = 1.2646\text{E-}004 * x + 1.4413\text{E-}004$$

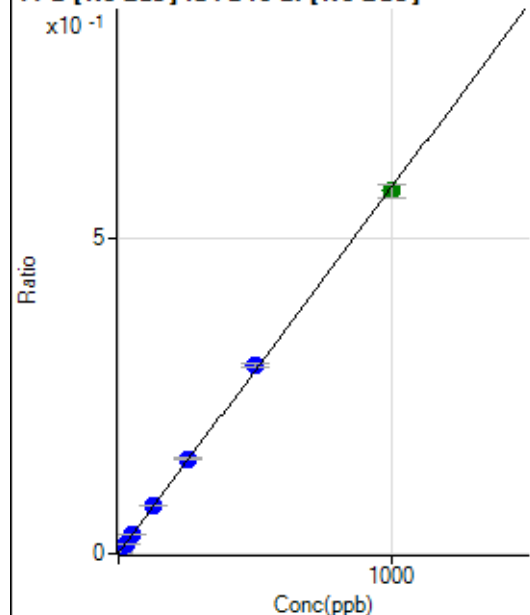
$$R = 0.9999$$

$$DL = 0.2211$$

$$BEC = 1.14$$

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	5456.79	0.0007	P	3.4
2	☐	2.500	2.505	17819.42	0.0021	P	1.0
3	☐	25.000	24.159	124521.09	0.0147	P	2.0
4	☐	50.000	52.990	267296.89	0.0314	P	1.7
5	☐	125.000	130.146	605552.35	0.0761	P	2.4
6	☐	250.000	259.044	1093041.17	0.1508	P	1.7
7	☐	500.000	512.435	2069741.47	0.2977	P	2.1
8	☐	1000.000	990.750	4042080.25	0.5749	A	3.6
9	☐			170958.08	0.0249	P	9.3

$$y = 5.7960\text{E-}004 * x + 6.5845\text{E-}004$$

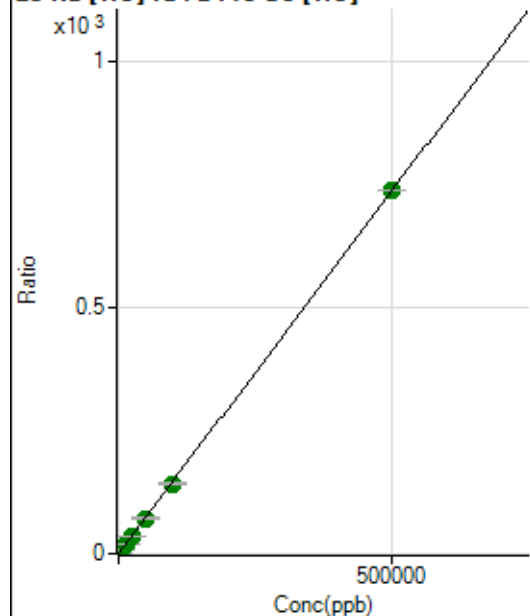
$$R = 0.9998$$

$$DL = 0.1167$$

$$BEC = 1.136$$

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	7557.80	0.0111	P	3.2
2	☐	50.000	43.719	51801.31	0.0755	P	1.7
3	☐	500.000	457.363	462093.07	0.6842	P	1.1
4	☐	5000.000	4861.859	4700679.36	7.1661	A	0.7
5	☐	12500.000	12251.086	10604260.31	18.0406	A	0.8
6	☐	25000.000	24473.735	19434438.11	36.0282	A	1.8
7	☐	50000.000	49027.923	37296815.76	72.1637	A	0.9
8	☐	100000.00	96846.330	75677787.11	142.5362	A	0.6
9	☐	500000.00	500761.90	421623753.87	736.9635	A	0.1

$$y = 0.0015 * x + 0.0111$$

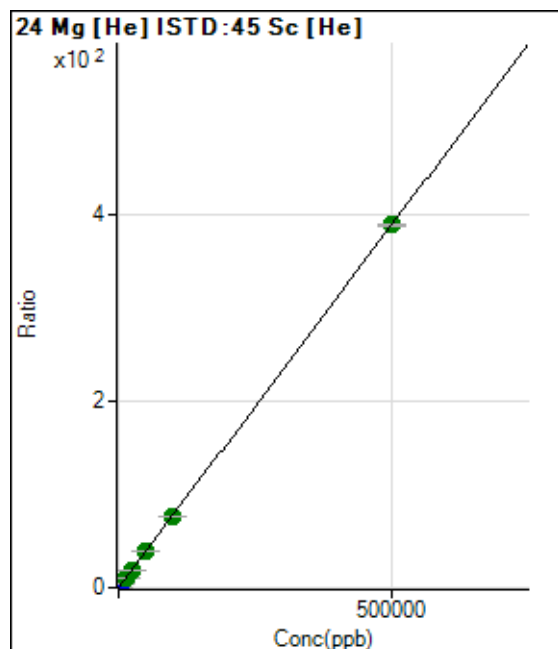
$$R = 1.0000$$

$$DL = 0.7338$$

$$BEC = 7.557$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	194.45	0.0003	P	26.0
2	☐	50.000	46.586	25038.57	0.0365	P	1.8
3	☐	500.000	484.161	254174.78	0.3763	P	0.8
4	☐	5000.000	5009.817	2552710.58	3.8915	P	0.3
5	☐	12500.000	12642.555	5771615.58	9.8200	A	1.3
6	☐	25000.000	25069.004	10504268.20	19.4718	A	0.8
7	☐	50000.000	50264.499	20178706.70	39.0417	A	0.7
8	☐	100000.00	98211.305	40501651.95	76.2828	A	0.2
9	☐	500000.00	500324.19	222330179.97	388.6113	A	0.3

$$y = 7.7672\text{E-}004 * x + 2.8624\text{E-}004$$

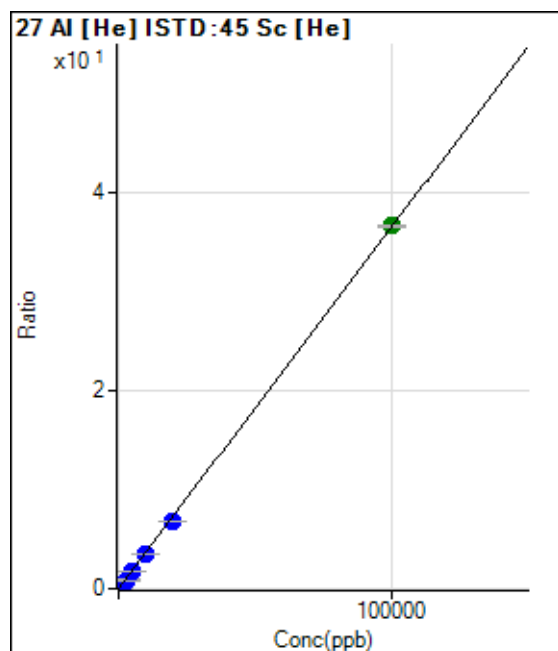
$$R = 1.0000$$

$$DL = 0.2879$$

$$BEC = 0.3685$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0001	P	44.9
2	☐	2.000	1.792	516.70	0.0008	P	20.2
3	☐	20.000	17.754	4450.85	0.0066	P	4.5
4	☐	1000.000	945.896	226990.74	0.3460	P	0.7
5	☐	2500.000	2388.469	513511.54	0.8736	P	0.9
6	☐	5000.000	4688.103	924955.56	1.7147	P	1.8
7	☐	10000.000	9423.796	1781350.43	3.4466	P	0.9
8	☐	20000.000	18590.665	3610036.19	6.7992	P	1.0
9	☐	100000.00	100358.41	20998257.59	36.7037	A	0.5

$$y = 3.6572\text{E-}004 * x + 9.8040\text{E-}005$$

$$R = 0.9999$$

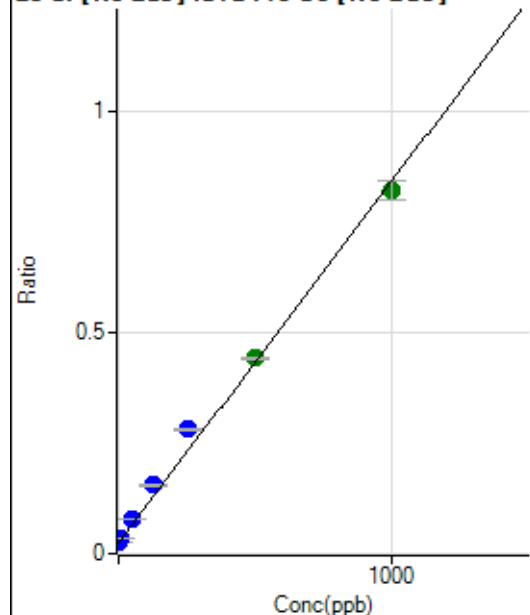
$$DL = 0.3608$$

$$BEC = 0.2681$$

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	345368.56	0.0245	P	1.5
2	☐	1.000	1.893	362056.59	0.0261	P	0.2
3	☐	10.000	11.939	476438.97	0.0343	P	1.0
4	☐	50.000	64.852	1077591.26	0.0775	P	0.8
5	☐	125.000	159.628	1985184.16	0.1549	P	1.0
6	☐	250.000	313.715	3236719.15	0.2807	P	1.5
7	☐	500.000	510.630	4884025.20	0.4416	A	1.2
8	☐	1000.000	973.665	9241797.78	0.8198	A	5.2
9	☐			644800.14	0.0578	P	0.3

$$y = 8.1677\text{E-}004 * x + 0.0245$$

$$R = 0.9973$$

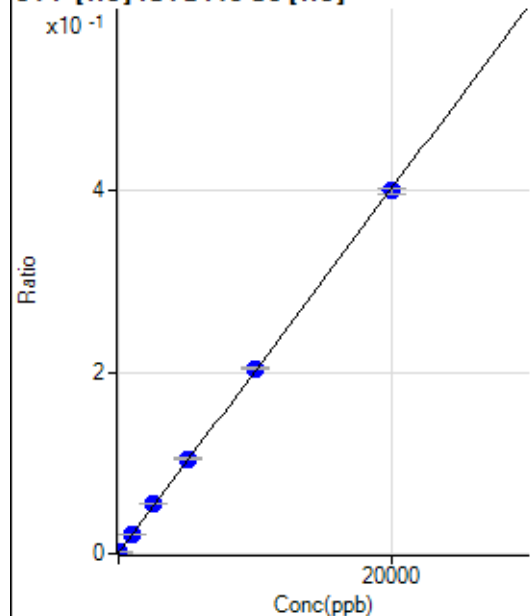
$$DL = 1.307$$

$$BEC = 30.01$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-20.283	211.12	0.0003	P	30.5
2	☐	0.000	-14.203	297.24	0.0004	P	12.5
3	☐	0.000	34.486	952.85	0.0014	P	0.9
4	☐	1000.000	1044.375	14232.28	0.0217	P	3.6
5	☐	2500.000	2699.490	32294.42	0.0549	P	1.6
6	☐	5000.000	5180.123	56530.19	0.1048	P	0.3
7	☐	10000.000	10110.532	105346.40	0.2038	P	1.1
8	☐	20000.000	19872.548	212343.03	0.3999	P	1.3
9	☐			488.92	0.0009	P	11.4

$$y = 2.0089\text{E-}005 * x + 7.1804\text{E-}004$$

$$R = 0.9999$$

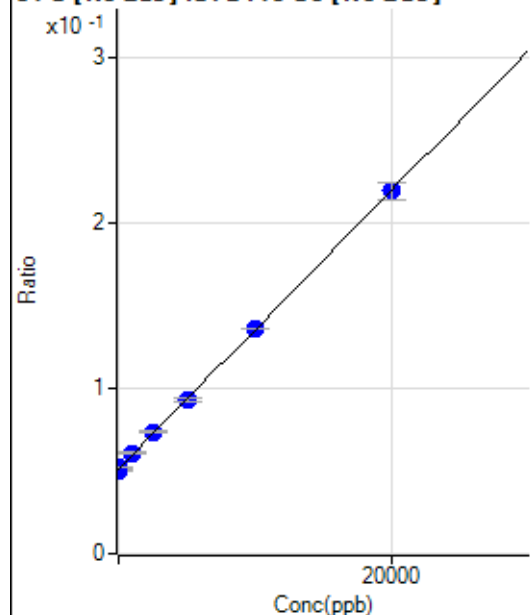
$$DL = 8.062$$

$$BEC = 35.74$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-142.828	706090.55	0.0501	P	0.3
2	☐	0.000	22.048	715546.35	0.0515	P	0.1
3	☐	0.000	120.780	727693.61	0.0523	P	1.1
4	☐	1000.000	1140.966	847476.09	0.0609	P	0.7
5	☐	2500.000	2631.424	942079.34	0.0735	P	1.0
6	☐	5000.000	4973.223	1075059.72	0.0933	P	2.1
7	☐	10000.000	10088.575	1508564.92	0.1364	P	0.2
8	☐	20000.000	19938.930	2474517.03	0.2195	P	4.6
9	☐			530173.43	0.0475	P	1.2

$$y = 8.4328\text{E-}006 * x + 0.0513$$

R = 0.9999

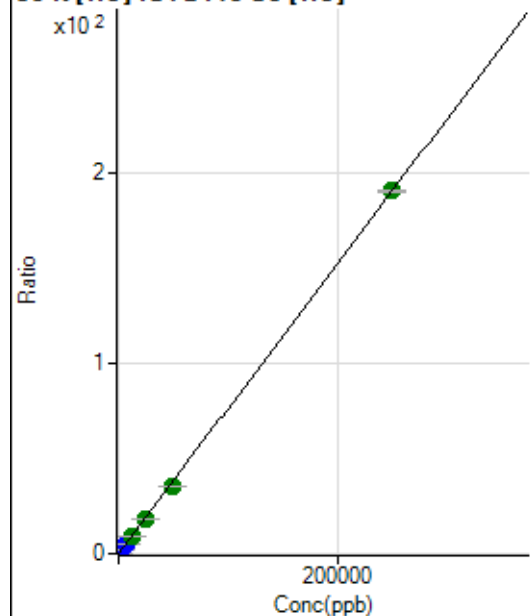
DL = 91.99

BEC = 6085

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	30479.59	0.0448	P	1.2
2	☐	50.000	44.923	54172.21	0.0789	P	1.7
3	☐	500.000	461.086	266366.38	0.3944	P	0.7
4	☐	2500.000	2453.842	1249692.76	1.9051	P	0.6
5	☐	6250.000	6135.178	2760213.69	4.6959	P	0.8
6	☐	12500.000	11825.245	4860425.85	9.0095	A	1.3
7	☐	25000.000	23792.253	9345494.57	18.0815	A	0.3
8	☐	50000.000	46842.160	18877744.70	35.5555	A	0.7
9	☐	250000.00	250789.49	108797498.26	190.1662	A	0.4

$$y = 7.5809\text{E-}004 * x + 0.0448$$

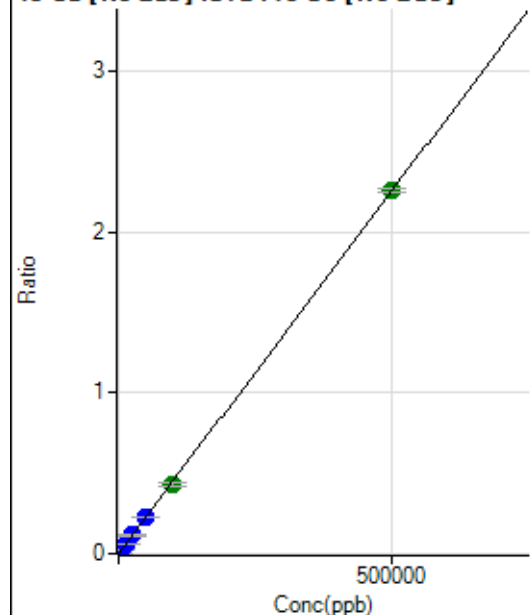
R = 0.9999

DL = 2.21

BEC = 59.16

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	347.24	0.0000	P	21.8
2	☐	50.000	45.095	3164.36	0.0002	P	5.8
3	☐	500.000	460.026	29157.56	0.0021	P	1.4
4	☐	5000.000	5059.217	317284.89	0.0228	P	1.0
5	☐	12500.000	12727.659	735166.69	0.0574	P	0.1
6	☐	25000.000	25379.845	1318280.51	0.1143	P	1.7
7	☐	50000.000	50597.065	2521076.30	0.2279	P	0.9
8	☐	100000.00	95913.076	4871176.80	0.4321	A	5.0
9	☐	500000.00	500732.44	25175209.42	2.2555	A	0.9

$$y = 4.5044\text{E-}006 * x + 2.4625\text{E-}005$$

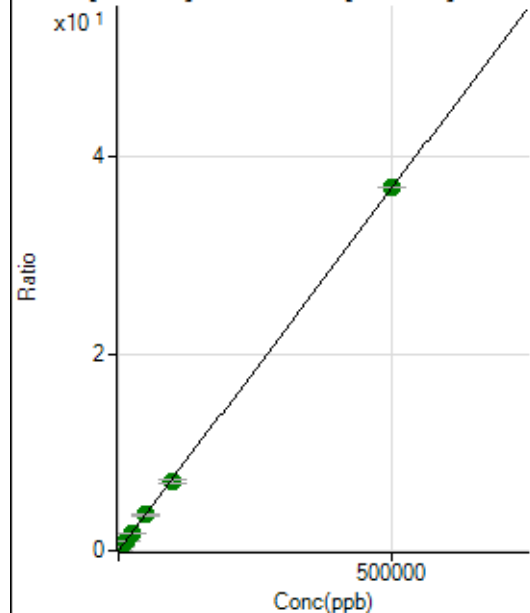
$$R = 1.0000$$

$$DL = 3.584$$

$$BEC = 5.467$$

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	15640.53	0.0011	P	1.9
2	☐	50.000	46.777	63222.94	0.0046	P	1.4
3	☐	500.000	459.362	485262.87	0.0349	P	0.2
4	☐	5000.000	4965.309	5094520.47	0.3663	A	0.6
5	☐	12500.000	12346.274	11653238.54	0.9092	A	0.3
6	☐	25000.000	24752.517	21000302.03	1.8216	A	2.2
7	☐	50000.000	49120.982	39972125.55	3.6139	A	0.5
8	☐	100000.00	95804.659	79453310.81	7.0475	A	5.1
9	☐	500000.00	500943.57	411246781.41	36.8453	A	0.1

$$y = 7.3550\text{E-}005 * x + 0.0011$$

$$R = 1.0000$$

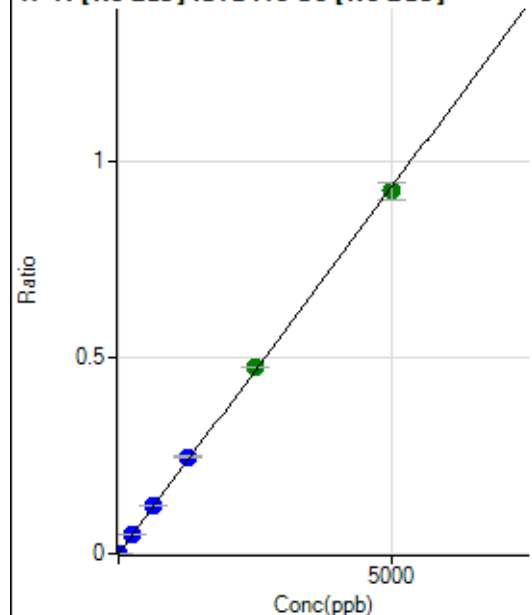
$$DL = 0.875$$

$$BEC = 15.09$$

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	286.13	0.0000	P	22.4
2	☐	0.500	0.506	1594.60	0.0001	P	6.0
3	☐	5.000	5.190	13762.54	0.0010	P	4.4
4	☐	250.000	263.922	685817.37	0.0493	P	0.2
5	☐	625.000	656.004	1570540.87	0.1225	P	1.1
6	☐	1250.000	1318.712	2839758.42	0.2463	P	1.6
7	☐	2500.000	2554.201	5276496.95	0.4771	A	0.3
8	☐	5000.000	4951.150	10425713.60	0.9247	A	4.9
9	☐			6796.32	0.0006	P	5.3

$$y = 1.8676E-004 * x + 2.0320E-005$$

$$R = 0.9998$$

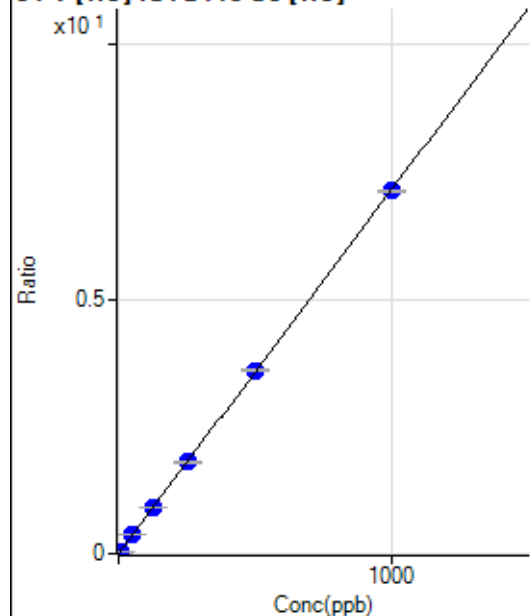
$$DL = 0.07302$$

$$BEC = 0.1088$$

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	0.0000	P	25.2
2	☐	0.500	0.482	2379.13	0.0035	P	6.0
3	☐	5.000	5.007	24177.85	0.0358	P	0.8
4	☐	50.000	50.892	238551.20	0.3637	P	1.2
5	☐	125.000	127.151	534067.58	0.9086	P	0.4
6	☐	250.000	251.403	969102.13	1.7964	P	1.2
7	☐	500.000	504.105	1861706.81	3.6020	P	0.4
8	☐	1000.000	997.283	3783527.48	7.1260	P	0.5
9	☐			1345.64	0.0024	P	9.5

$$y = 0.0071 * x + 1.9624E-005$$

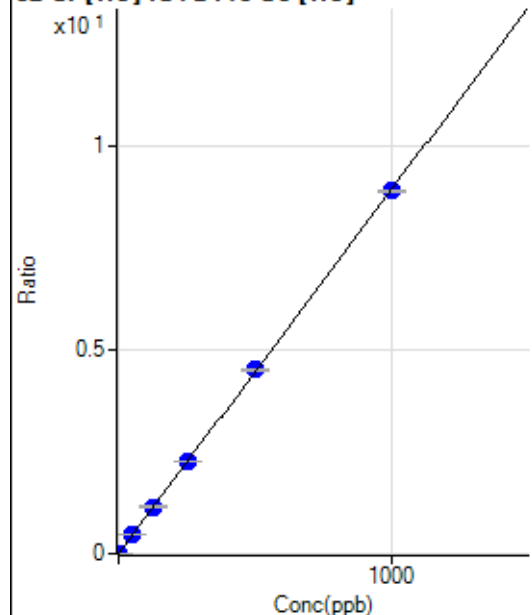
$$R = 1.0000$$

$$DL = 0.002074$$

$$BEC = 0.002746$$

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	1742.36	0.0026	P	2.9
2	☐	0.200	0.205	3018.14	0.0044	P	4.6
3	☐	2.000	1.934	13414.05	0.0199	P	1.7
4	☐	50.000	51.162	301747.68	0.4600	P	1.1
5	☐	125.000	129.059	679799.33	1.1565	P	0.5
6	☐	250.000	252.517	1219315.44	2.2603	P	1.3
7	☐	500.000	504.666	2333421.04	4.5148	P	1.1
8	☐	1000.000	996.473	4731765.31	8.9121	P	0.5
9	☐			17758.68	0.0310	P	0.5

$$y = 0.0089 * x + 0.0026$$

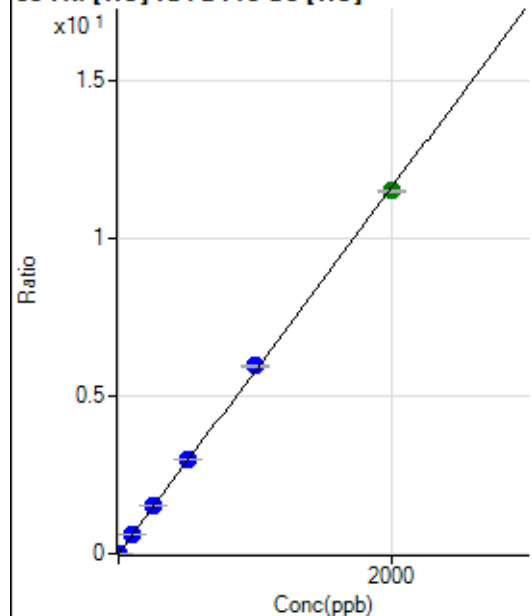
$$R = 1.0000$$

$$DL = 0.02465$$

$$BEC = 0.2867$$

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	155.56	0.0002	P	6.0
2	☐	0.100	0.096	540.02	0.0008	P	12.1
3	☐	1.000	1.008	4106.20	0.0061	P	2.9
4	☐	100.000	102.332	389749.51	0.5942	P	0.9
5	☐	250.000	259.852	886581.73	1.5084	P	1.2
6	☐	500.000	513.458	1607703.39	2.9803	P	1.3
7	☐	1000.000	1025.620	3076599.96	5.9528	P	1.4
8	☐	2000.000	1982.477	6109110.67	11.5064	A	0.6
9	☐			17871.08	0.0312	P	1.3

$$y = 0.0058 * x + 2.2888E-004$$

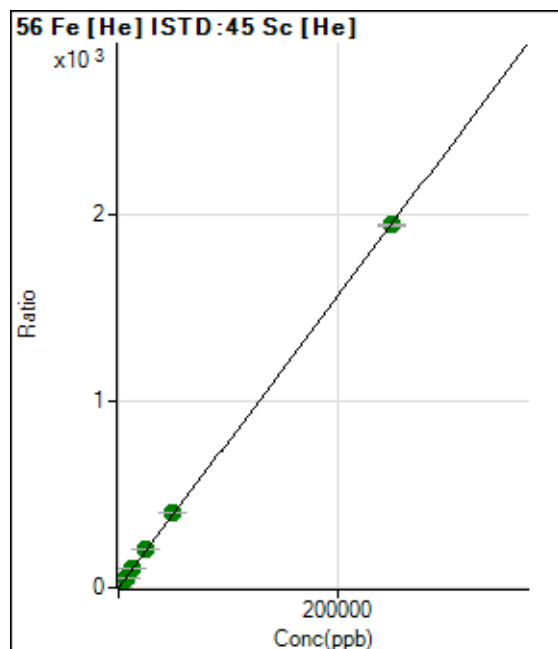
$$R = 0.9999$$

$$DL = 0.007103$$

$$BEC = 0.03943$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9412.53	0.0138	P	0.4
2	☐	5.000	4.991	36172.83	0.0527	P	0.3
3	☐	50.000	52.613	285891.95	0.4233	P	1.2
4	☐	2500.000	2651.815	13546632.71	20.6515	A	0.8
5	☐	6250.000	6676.611	30549434.94	51.9744	A	1.4
6	☐	12500.000	13210.985	55470781.33	102.8279	A	1.0
7	☐	25000.000	26222.153	105480434.77	204.0869	A	0.7
8	☐	50000.000	51336.798	212133714.00	399.5409	A	0.1
9	☐	250000.00	249562.69	1111184254.4	1,942.227	A	0.4

$$y = 0.0078 * x + 0.0138$$

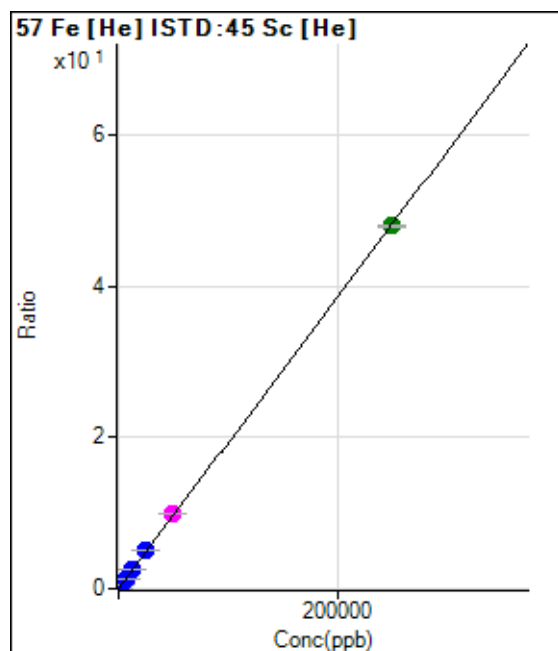
$$R = 1.0000$$

$$DL = 0.02311$$

$$BEC = 1.78$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	231.49	0.0003	P	19.3
2	☐	5.000	5.323	937.09	0.0014	P	6.1
3	☐	50.000	56.839	7617.03	0.0113	P	3.2
4	☐	2500.000	2657.598	335718.31	0.5118	P	0.6
5	☐	6250.000	6702.626	758350.65	1.2903	P	1.2
6	☐	12500.000	13227.864	1373498.09	2.5460	P	1.0
7	☐	25000.000	26532.513	2639166.15	5.1065	P	1.6
8	☐	50000.000	51712.677	5283998.96	9.9524	M	1.3
9	☐	250000.00	249454.92	27466244.59	48.0079	A	0.5

$$y = 1.9245E-004 * x + 3.4054E-004$$

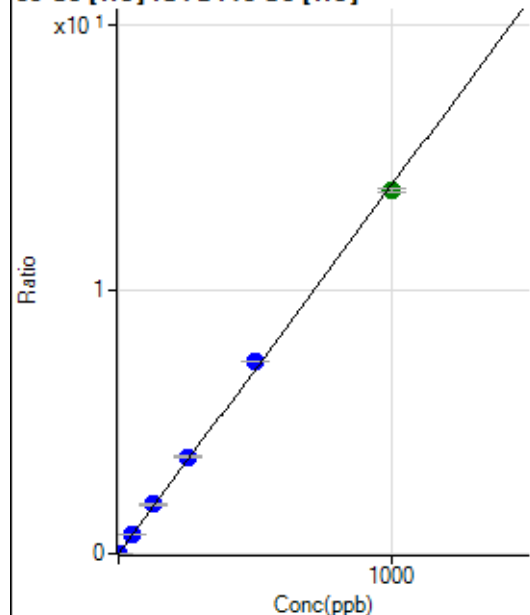
$$R = 1.0000$$

$$DL = 1.027$$

$$BEC = 1.769$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	252.23	0.0004	P	13.4
2	☐	0.100	0.092	1130.06	0.0016	P	2.0
3	☐	1.000	1.012	9771.20	0.0145	P	3.0
4	☐	50.000	53.377	488049.94	0.7440	P	0.7
5	☐	125.000	133.252	1091438.29	1.8568	P	0.8
6	☐	250.000	263.243	1978604.31	3.6678	P	1.1
7	☐	500.000	520.894	3750947.72	7.2574	P	0.5
8	☐	1000.000	985.042	7286310.10	13.7238	A	1.0
9	☐			90934.31	0.1589	P	0.3

$$y = 0.0139 * x + 3.7110E-004$$

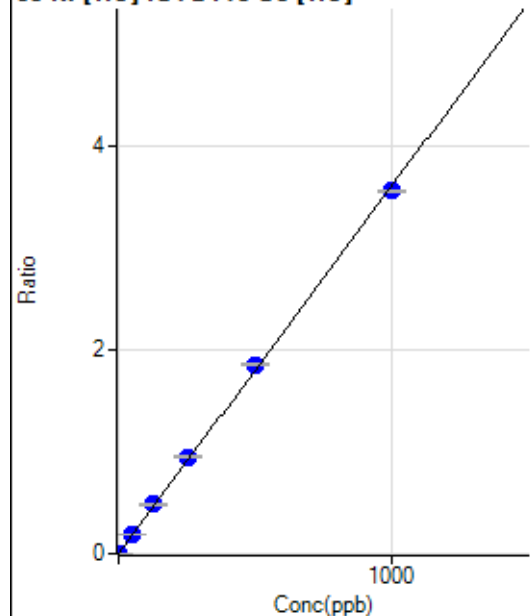
$$R = 0.9996$$

$$DL = 0.01072$$

$$BEC = 0.02664$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	181.12	0.0003	P	18.2
2	☐	0.100	0.103	438.90	0.0006	P	10.2
3	☐	1.000	1.035	2703.63	0.0040	P	1.1
4	☐	50.000	54.090	128243.34	0.1955	P	0.5
5	☐	125.000	134.137	284744.81	0.4844	P	1.1
6	☐	250.000	263.500	513202.86	0.9514	P	1.2
7	☐	500.000	515.013	960910.59	1.8592	P	0.6
8	☐	1000.000	987.772	1893122.09	3.5656	P	0.2
9	☐			19988.27	0.0349	P	1.6

$$y = 0.0036 * x + 2.6643E-004$$

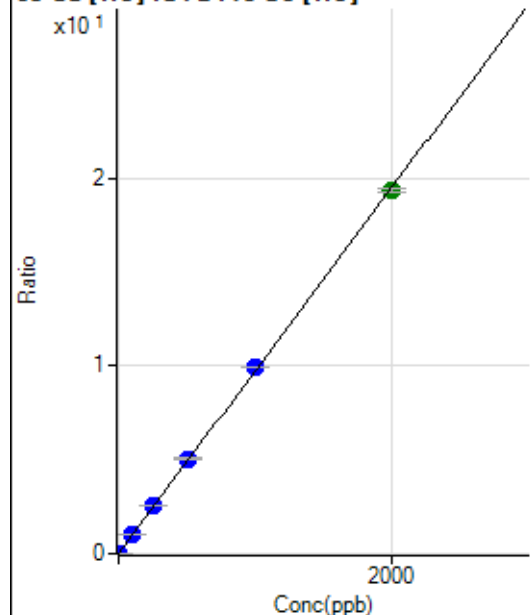
$$R = 0.9997$$

$$DL = 0.04035$$

$$BEC = 0.07381$$

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	3287.08	0.0048	P	4.5
2	☐	0.200	0.190	4589.69	0.0067	P	5.3
3	☐	2.000	2.043	16716.46	0.0248	P	1.6
4	☐	100.000	106.771	686070.81	1.0459	P	0.5
5	☐	250.000	264.663	1519558.83	2.5854	P	1.3
6	☐	500.000	519.891	2737221.73	5.0740	P	0.8
7	☐	1000.000	1018.031	5132802.95	9.9311	P	0.7
8	☐	2000.000	1983.840	10272487.49	19.3482	A	0.9
9	☐			11787.12	0.0206	P	1.4

$$y = 0.0098 * x + 0.0048$$

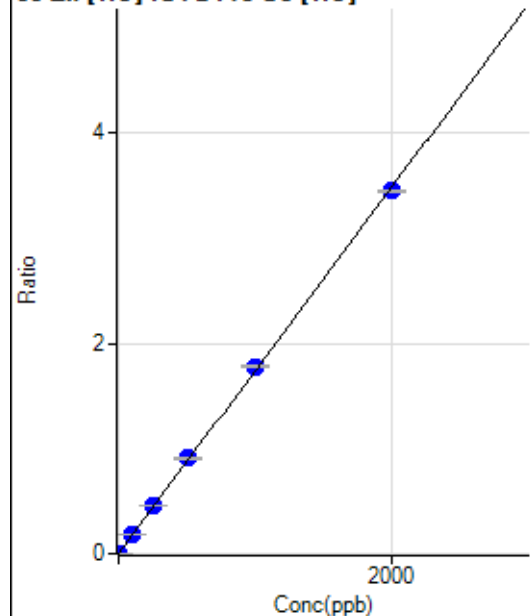
$$R = 0.9999$$

$$DL = 0.06688$$

$$BEC = 0.496$$

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	423.35	0.0006	P	6.5
2	☐	0.200	0.411	917.82	0.0013	P	14.0
3	☐	2.000	2.029	2804.77	0.0042	P	2.5
4	☐	100.000	107.019	122542.77	0.1868	P	1.3
5	☐	250.000	264.364	270716.63	0.4606	P	0.8
6	☐	500.000	522.462	490667.56	0.9096	P	1.6
7	☐	1000.000	1020.748	918178.76	1.7766	P	1.2
8	☐	2000.000	1981.864	1831074.35	3.4487	P	0.3
9	☐			14141.49	0.0247	P	0.3

$$y = 0.0017 * x + 6.2287E-004$$

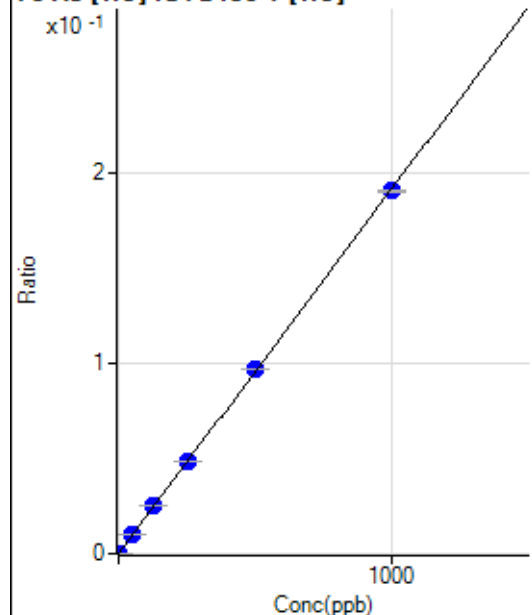
$$R = 0.9998$$

$$DL = 0.06991$$

$$BEC = 0.358$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14.81	0.0000	P	33.6
2	☐	0.100	0.080	69.14	0.0000	P	18.2
3	☐	1.000	0.935	633.97	0.0002	P	8.1
4	☐	50.000	53.844	35091.03	0.0103	P	1.5
5	☐	125.000	130.871	78816.98	0.0250	P	0.4
6	☐	250.000	253.678	141656.94	0.0485	P	0.2
7	☐	500.000	504.944	271215.93	0.0965	P	0.4
8	☐	1000.000	995.682	542498.66	0.1902	P	0.6
9	☐			780.27	0.0003	P	10.2

$$y = 1.9101\text{E-}004 * x + 4.2066\text{E-}006$$

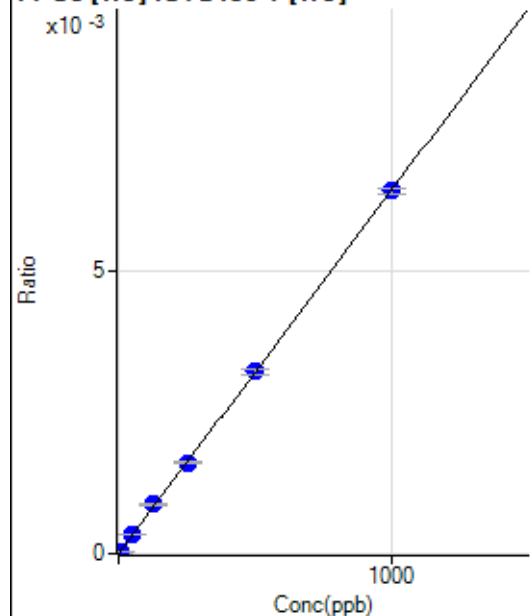
$$R = 1.0000$$

$$DL = 0.02218$$

$$BEC = 0.02202$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	0.500	0.391	10.00	0.0000	P	58.0
3	☐	5.000	5.433	122.22	0.0000	P	10.7
4	☐	50.000	52.504	1151.18	0.0003	P	8.7
5	☐	125.000	134.995	2735.87	0.0009	P	0.4
6	☐	250.000	250.408	4705.29	0.0016	P	1.1
7	☐	500.000	500.309	9042.96	0.0032	P	2.8
8	☐	1000.000	998.367	18304.01	0.0064	P	1.9
9	☐			13.33	0.0000	P	0.9

$$y = 6.4262\text{E-}006 * x + 3.1635\text{E-}007$$

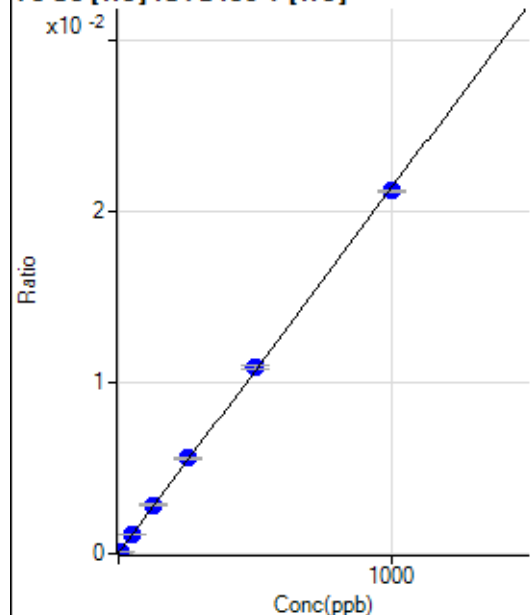
$$R = 1.0000$$

$$DL = 0.2558$$

$$BEC = 0.04923$$

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	101.24	0.0000	P	13.5
2	☐	0.500	0.673	152.47	0.0000	P	3.7
3	☐	5.000	4.884	461.12	0.0001	P	4.3
4	☐	50.000	51.825	3870.30	0.0011	P	0.1
5	☐	125.000	132.288	8988.66	0.0029	P	2.4
6	☐	250.000	260.271	16320.38	0.0056	P	0.9
7	☐	500.000	509.038	30625.53	0.0109	P	1.1
8	☐	1000.000	991.911	60459.91	0.0212	P	0.8
9	☐			95.07	0.0000	P	16.1

$$y = 2.1340\text{E-}005 * x + 2.8724\text{E-}005$$

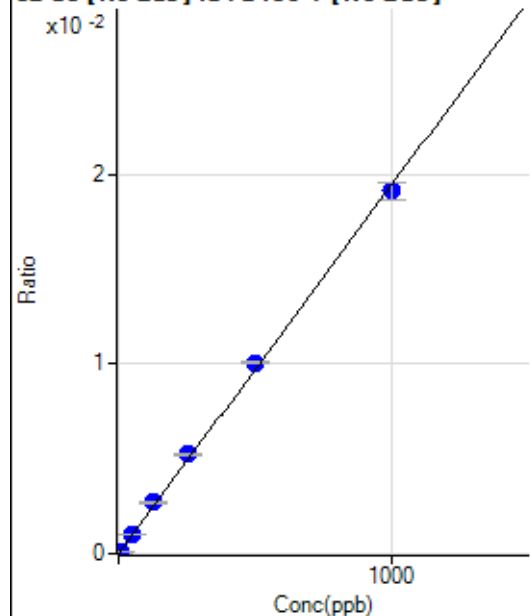
$$R = 0.9999$$

$$DL = 0.5446$$

$$BEC = 1.346$$

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	26.99	0.0000	P	287.
2	☐	0.500	0.665	303.01	0.0000	P	15.1
3	☐	5.000	5.414	2274.73	0.0001	P	2.1
4	☐	50.000	54.488	22741.35	0.0011	P	0.5
5	☐	125.000	138.448	54178.99	0.0027	P	1.9
6	☐	250.000	270.367	97940.78	0.0052	P	1.5
7	☐	500.000	517.356	182391.49	0.0100	P	1.2
8	☐	1000.000	984.323	352947.47	0.0191	P	4.6
9	☐			184.49	0.0000	P	6.7

$$y = 1.9411\text{E-}005 * x + 1.2537\text{E-}006$$

$$R = 0.9995$$

$$DL = 0.5564$$

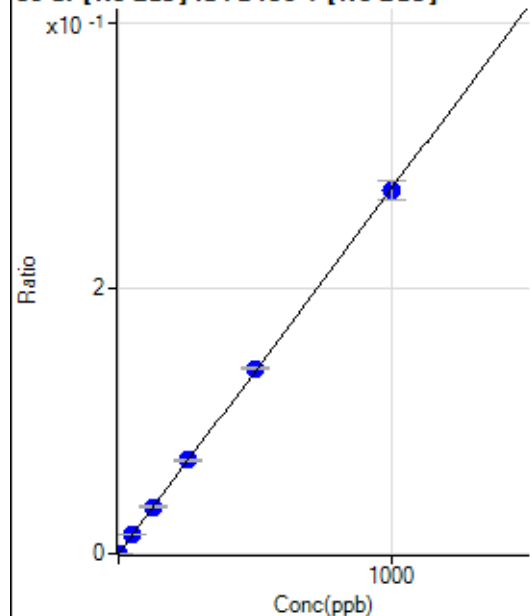
$$BEC = 0.06458$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			635.58		P	7.0
2	☐			623.36		P	8.8
3	☐			625.58		P	4.0
4	☐			657.80		P	6.9
5	☐			595.58		P	8.2
6	☐			581.14		P	12.5
7	☐			468.90		P	12.8
8	☐			518.91		P	12.0
9	☐			601.13		P	4.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	972.30	0.0000	P	3.6
2	☐	0.100	0.114	1641.83	0.0001	P	3.6
3	☐	1.000	0.954	6582.32	0.0003	P	1.2
4	☐	50.000	51.191	303428.88	0.0141	P	0.4
5	☐	125.000	127.834	709612.48	0.0352	P	1.9
6	☐	250.000	255.697	1313429.36	0.0704	P	1.1
7	☐	500.000	507.720	2537530.85	0.1397	P	0.6
8	☐	1000.000	994.302	5052840.87	0.2736	P	5.2
9	☐			22710.41	0.0013	P	3.3

$$y = 2.7512\text{E-}004 * x + 4.5327\text{E-}005$$

$$R = 0.9999$$

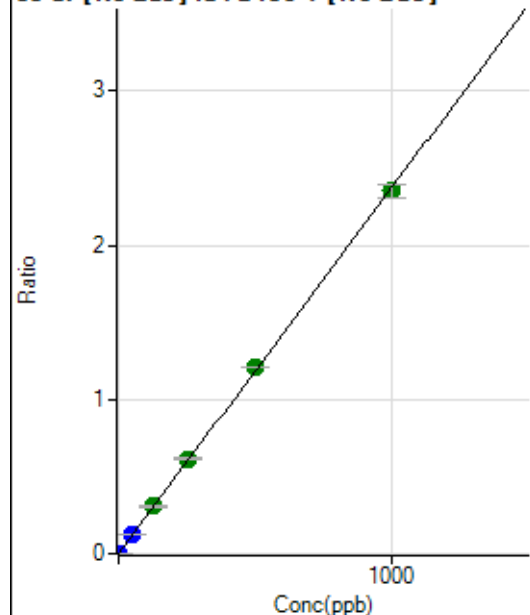
$$DL = 0.01776$$

$$BEC = 0.1648$$

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	277.79	0.0000	P	2.1
2	☐	0.100	0.100	5370.69	0.0003	P	4.4
3	☐	1.000	0.962	49054.75	0.0023	P	1.0
4	☐	50.000	52.366	2665386.15	0.1241	P	1.1
5	☐	125.000	129.282	6174106.13	0.3064	A	1.8
6	☐	250.000	260.075	11499966.05	0.6163	A	1.0
7	☐	500.000	509.300	21920211.08	1.2070	A	0.4
8	☐	1000.000	992.178	43441669.03	2.3513	A	3.8
9	☐			190387.15	0.0110	P	1.3

$$y = 0.0024 * x + 1.2953E-005$$

$$R = 0.9999$$

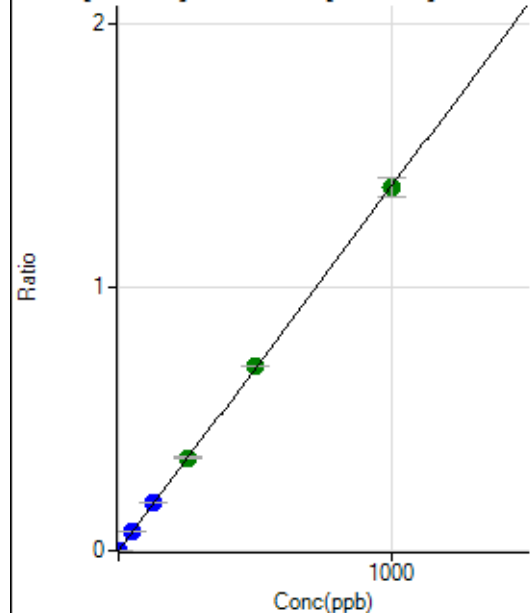
$$DL = 0.0003407$$

$$BEC = 0.005466$$

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	1755.74	0.0001	P	12.3
2	☐	0.100	0.091	4442.56	0.0002	P	6.0
3	☐	1.000	0.949	29876.68	0.0014	P	1.0
4	☐	50.000	51.642	1537930.82	0.0716	P	1.0
5	☐	125.000	130.283	3638234.46	0.1805	P	1.1
6	☐	250.000	255.021	6591903.62	0.3533	A	1.4
7	☐	500.000	504.872	12701311.05	0.6994	A	0.1
8	☐	1000.000	995.566	25468143.80	1.3790	A	5.2
9	☐			12483.74	0.0007	P	3.4

$$y = 0.0014 * x + 8.1832E-005$$

$$R = 1.0000$$

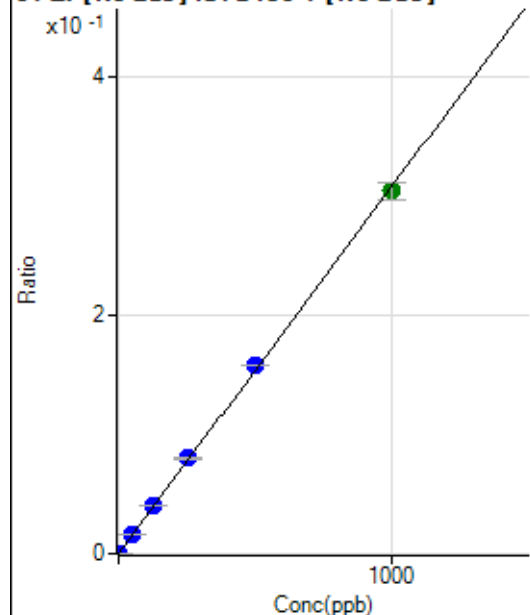
$$DL = 0.02175$$

$$BEC = 0.05908$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	261.12	0.0000	P	3.1
2	☐	0.100	0.089	847.29	0.0000	P	9.5
3	☐	1.000	0.942	6465.63	0.0003	P	4.5
4	☐	50.000	52.448	347284.24	0.0162	P	0.3
5	☐	125.000	131.873	818954.25	0.0406	P	1.7
6	☐	250.000	261.182	1501470.68	0.0805	P	2.0
7	☐	500.000	514.211	2877190.97	0.1584	P	0.7
8	☐	1000.000	989.117	5628774.95	0.3047	A	4.8
9	☐			2894.86	0.0002	P	3.9

$$y = 3.0809\text{E-}004 * x + 1.2174\text{E-}005$$

$$R = 0.9998$$

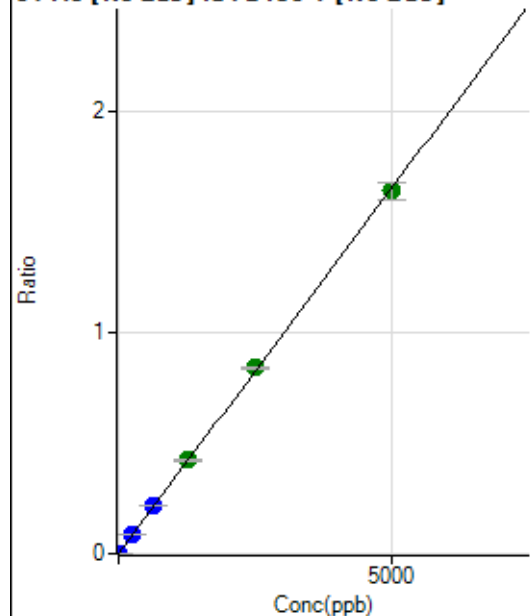
$$DL = 0.003631$$

$$BEC = 0.03952$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	580.59	0.0000	P	4.8
2	☐	0.500	0.518	4239.70	0.0002	P	4.7
3	☐	5.000	5.014	36015.69	0.0017	P	2.0
4	☐	250.000	259.957	1845215.97	0.0859	P	0.4
5	☐	625.000	663.997	4421851.83	0.2194	P	1.0
6	☐	1250.000	1282.579	7907226.91	0.4238	A	1.4
7	☐	2500.000	2540.262	15243292.87	0.8394	A	0.2
8	☐	5000.000	4966.352	30306207.62	1.6410	A	5.1
9	☐			18470.94	0.0011	P	3.7

$$y = 3.3041\text{E-}004 * x + 2.7069\text{E-}005$$

$$R = 0.9999$$

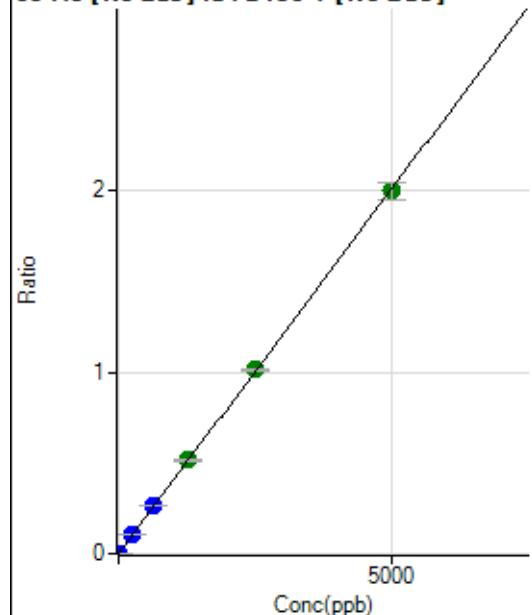
$$DL = 0.01168$$

$$BEC = 0.08193$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77.78	0.0000	P	25.5
2	☐	0.500	0.521	4556.45	0.0002	P	3.7
3	☐	5.000	5.168	44492.69	0.0021	P	1.4
4	☐	250.000	262.606	2266175.79	0.1055	P	0.9
5	☐	625.000	666.517	5397196.78	0.2678	P	1.2
6	☐	1250.000	1284.529	9629563.32	0.5161	A	2.3
7	☐	2500.000	2520.666	18393328.19	1.0128	A	0.9
8	☐	5000.000	4975.215	36926748.39	1.9991	A	4.5
9	☐			25587.85	0.0015	P	5.7

$$y = 4.0181\text{E-}004 * x + 3.6310\text{E-}006$$

$$R = 0.9999$$

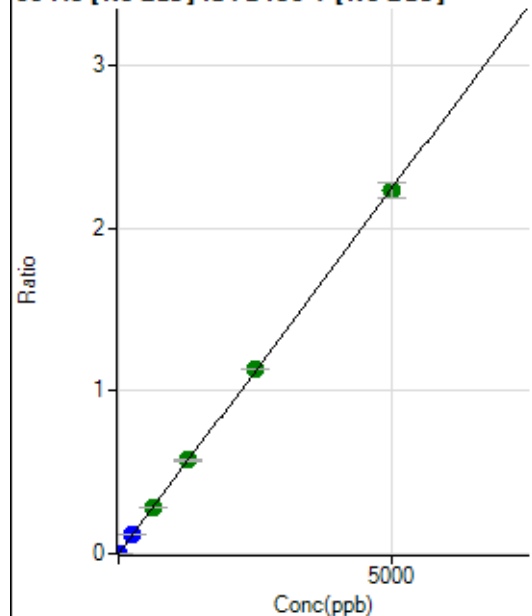
$$DL = 0.006916$$

$$BEC = 0.009037$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	191.68	0.0000	P	19.0
2	☐	0.500	0.499	4978.87	0.0002	P	1.1
3	☐	5.000	4.953	47664.11	0.0022	P	1.8
4	☐	250.000	260.031	2502713.01	0.1165	P	1.0
5	☐	625.000	640.498	5784633.59	0.2870	A	0.8
6	☐	1250.000	1283.271	10729769.51	0.5751	A	1.3
7	☐	2500.000	2533.965	20622585.01	1.1356	A	0.2
8	☐	5000.000	4972.261	41161323.14	2.2282	A	4.3
9	☐			37770.86	0.0022	P	3.6

$$y = 4.4813\text{E-}004 * x + 8.9383\text{E-}006$$

$$R = 0.9999$$

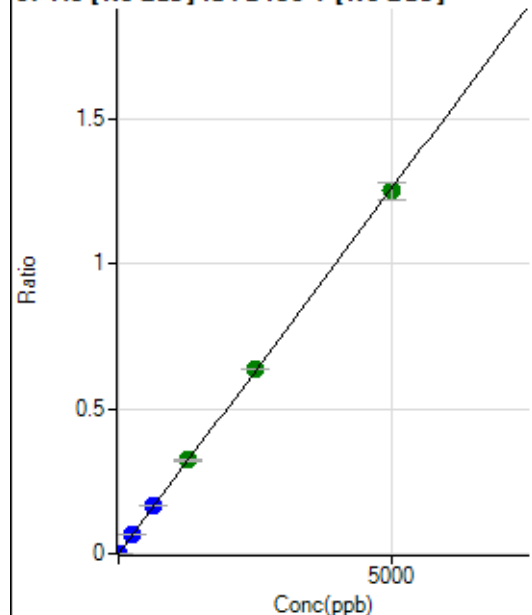
$$DL = 0.0114$$

$$BEC = 0.01995$$

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	69.45	0.0000	P	13.2
2	☐	0.500	0.485	2680.93	0.0001	P	4.0
3	☐	5.000	5.106	27555.22	0.0013	P	1.9
4	☐	250.000	260.145	1406327.80	0.0655	P	1.1
5	☐	625.000	653.783	3316326.77	0.1646	P	1.5
6	☐	1250.000	1283.208	6026331.69	0.3230	A	1.7
7	☐	2500.000	2536.716	11596280.47	0.6385	A	0.2
8	☐	5000.000	4969.234	23101059.55	1.2508	A	5.1
9	☐			15141.98	0.0009	P	4.6

$$y = 2.5171\text{E-}004 * x + 3.2362\text{E-}006$$

$$R = 0.9999$$

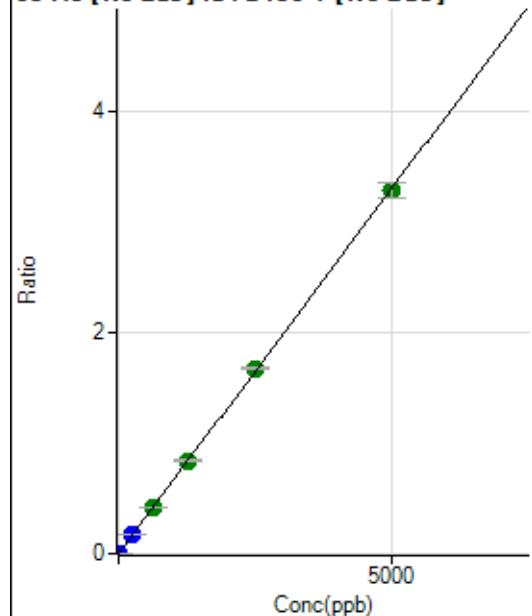
$$DL = 0.005104$$

$$BEC = 0.01286$$

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	136.12	0.0000	P	9.8
2	☐	0.500	0.498	7165.97	0.0003	P	1.5
3	☐	5.000	5.026	70971.92	0.0033	P	1.5
4	☐	250.000	258.947	3664611.02	0.1706	P	0.8
5	☐	625.000	636.614	8454683.78	0.4195	A	1.0
6	☐	1250.000	1274.579	15670632.99	0.8399	A	1.2
7	☐	2500.000	2540.687	30404454.15	1.6742	A	0.3
8	☐	5000.000	4971.613	60516480.52	3.2761	A	4.4
9	☐			39625.55	0.0023	P	6.1

$$y = 6.5895\text{E-}004 * x + 6.3489\text{E-}006$$

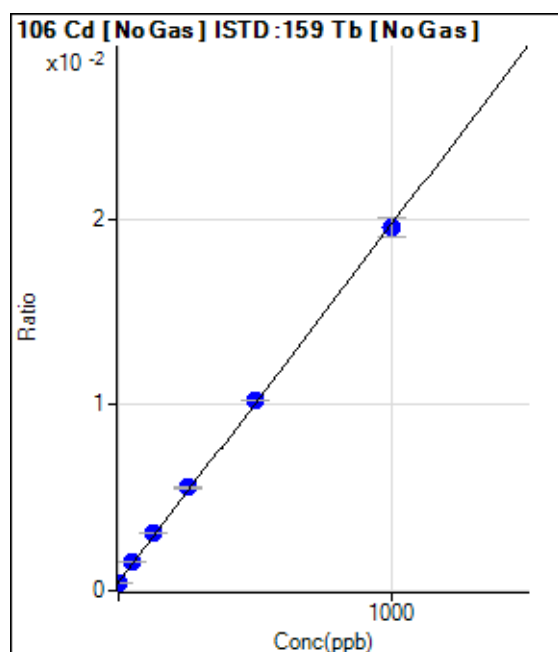
$$R = 0.9999$$

$$DL = 0.002828$$

$$BEC = 0.009635$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12714.61	0.0004	P	2.0
2	☐	0.100	-0.419	12494.88	0.0004	P	0.5
3	☐	1.000	0.298	12889.68	0.0005	P	1.5
4	☐	50.000	57.214	44719.04	0.0015	P	1.3
5	☐	125.000	138.965	87917.90	0.0031	P	2.0
6	☐	250.000	264.494	152690.71	0.0055	P	1.5
7	☐	500.000	508.114	277431.99	0.0102	P	0.7
8	☐	1000.000	990.214	544797.00	0.0195	P	5.2
9	☐			10357.00	0.0004	P	1.2

$$y = 1.9272\text{E-}005 * x + 4.4664\text{E-}004$$

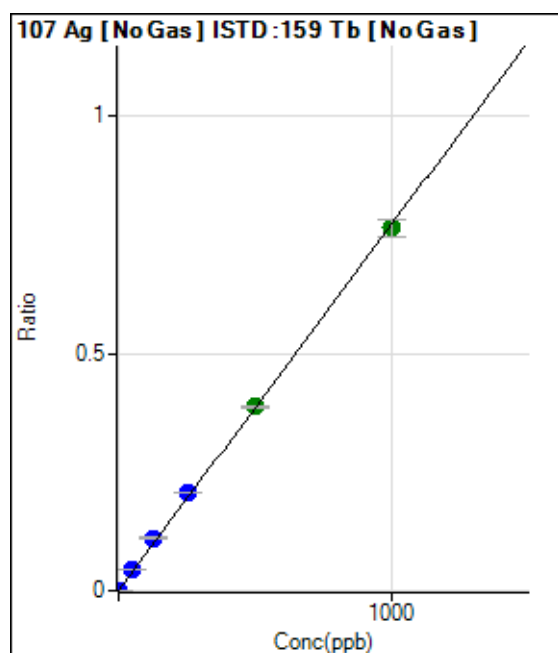
$$R = 0.9998$$

$$DL = 1.415$$

$$BEC = 23.18$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.36	0.0000	P	21.7
2	☐	0.100	0.104	2611.47	0.0001	P	4.9
3	☐	1.000	1.076	23973.92	0.0008	P	1.4
4	☐	50.000	59.373	1321915.36	0.0458	P	0.8
5	☐	125.000	143.420	3112185.12	0.1106	P	1.6
6	☐	250.000	268.736	5708144.22	0.2072	P	1.0
7	☐	500.000	503.309	10516489.99	0.3881	A	1.2
8	☐	1000.000	990.890	21318180.51	0.7641	A	4.9
9	☐			4742.69	0.0002	P	6.5

$$y = 7.7116\text{E-}004 * x + 1.1730\text{E-}005$$

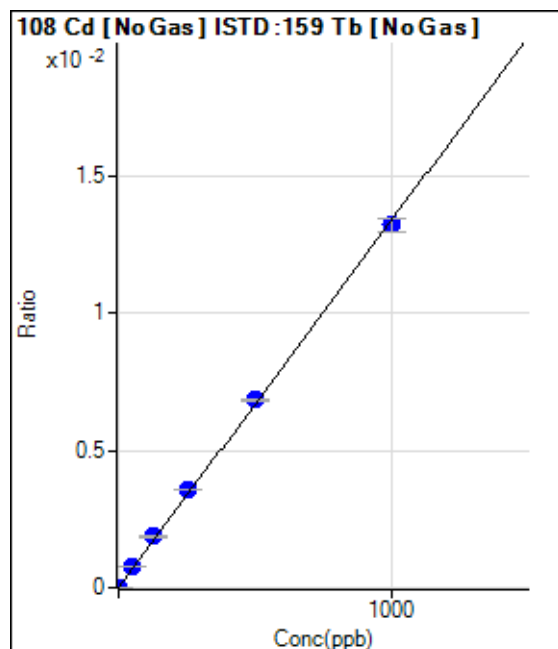
$$R = 0.9997$$

$$DL = 0.009912$$

$$BEC = 0.01521$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.22	0.0000	P	27.5
2	☐	0.100	0.095	58.33	0.0000	P	25.9
3	☐	1.000	1.127	451.40	0.0000	P	3.1
4	☐	50.000	57.749	22299.79	0.0008	P	0.1
5	☐	125.000	139.790	52585.14	0.0019	P	2.0
6	☐	250.000	268.176	98737.19	0.0036	P	0.8
7	☐	500.000	511.126	185106.69	0.0068	P	0.5
8	☐	1000.000	987.656	368390.09	0.0132	P	3.9
9	☐			158.34	0.0000	P	17.3

$$y = 1.3365\text{E-}005 * x + 7.7920\text{E-}007$$

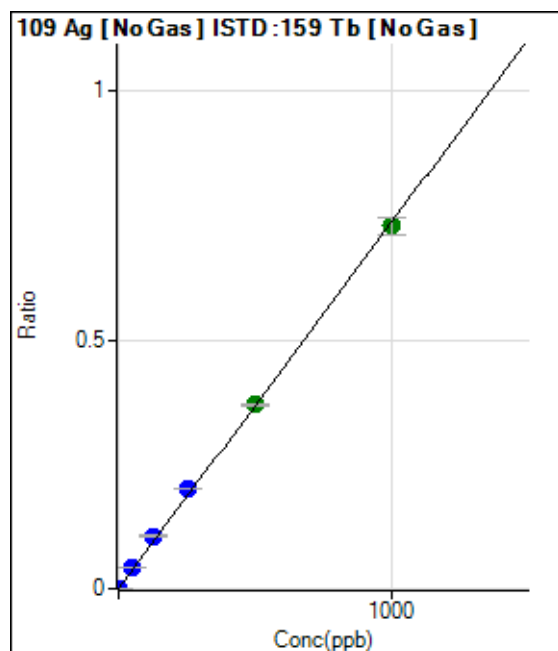
$$R = 0.9997$$

$$DL = 0.04815$$

$$BEC = 0.0583$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.12	0.0000	P	40.1
2	☐	0.100	0.106	2358.65	0.0001	P	2.5
3	☐	1.000	1.056	22287.81	0.0008	P	1.9
4	☐	50.000	59.805	1271818.77	0.0441	P	1.1
5	☐	125.000	144.002	2984772.29	0.1061	P	1.8
6	☐	250.000	271.115	5501011.19	0.1997	P	0.4
7	☐	500.000	503.137	10042387.99	0.3706	A	1.2
8	☐	1000.000	990.287	20354598.20	0.7295	A	4.5
9	☐			4331.41	0.0002	P	1.4

$$y = 7.3666\text{E-}004 * x + 4.7954\text{E-}006$$

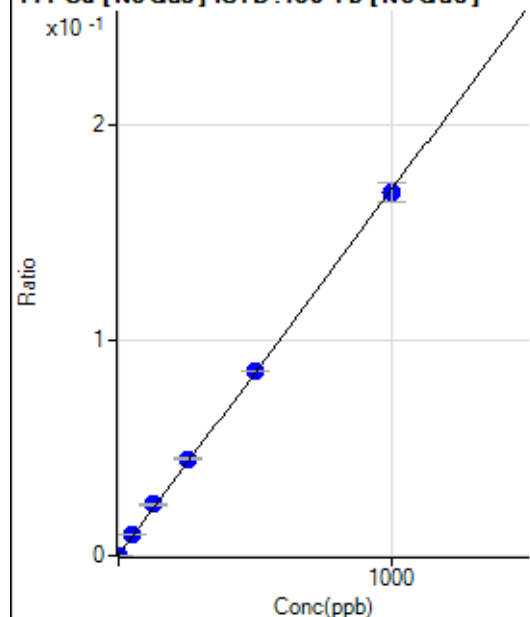
$$R = 0.9996$$

$$DL = 0.007825$$

$$BEC = 0.00651$$

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	6345.92	0.0002	P	2.0
2	☐	0.100	0.081	6739.96	0.0002	P	1.4
3	☐	1.000	0.979	11077.04	0.0004	P	0.6
4	☐	50.000	57.287	286503.89	0.0099	P	0.9
5	☐	125.000	138.823	667867.44	0.0237	P	1.1
6	☐	250.000	264.296	1239119.29	0.0450	P	0.6
7	☐	500.000	505.490	2325892.39	0.0858	P	0.2
8	☐	1000.000	991.589	4691368.16	0.1682	P	5.2
9	☐			6081.62	0.0002	P	1.7

$$y = 1.6938\text{E-}004 * x + 2.2292\text{E-}004$$

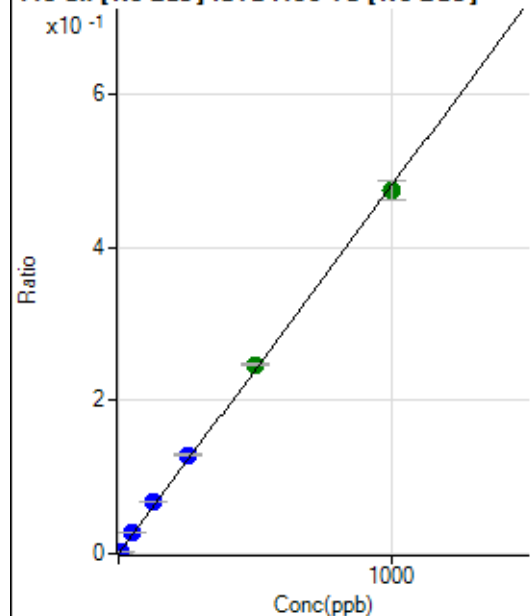
$$R = 0.9998$$

$$DL = 0.08087$$

$$BEC = 1.316$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1250.11	0.0000	P	12.3
2	☐	0.500	0.547	8728.05	0.0003	P	1.6
3	☐	5.000	5.505	76514.79	0.0027	P	0.9
4	☐	50.000	56.727	787017.34	0.0273	P	0.7
5	☐	125.000	139.172	1880479.75	0.0668	P	0.4
6	☐	250.000	268.717	3552714.05	0.1290	P	1.4
7	☐	500.000	513.631	6679467.95	0.2465	A	1.4
8	☐	1000.000	986.395	13205555.24	0.4734	A	5.2
9	☐			9459.12	0.0004	P	1.2

$$y = 4.7988\text{E-}004 * x + 4.3955\text{E-}005$$

$$R = 0.9996$$

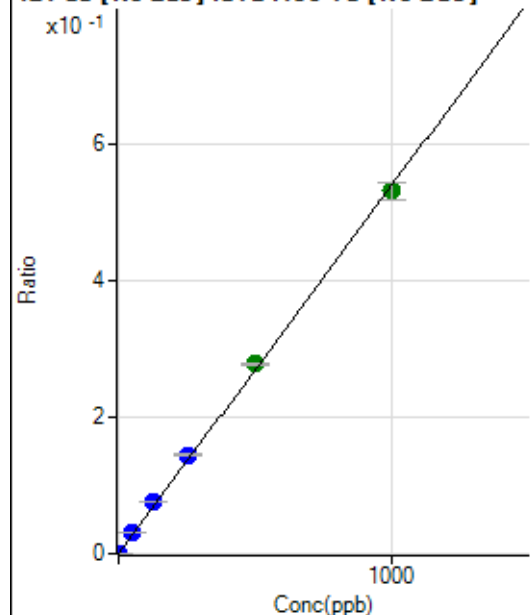
$$DL = 0.03381$$

$$BEC = 0.0916$$

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	50.00	0.0000	P	17.3
2	☐	0.200	0.210	3272.74	0.0001	P	2.0
3	☐	2.000	2.020	31077.29	0.0011	P	1.0
4	☐	50.000	56.424	878168.56	0.0304	P	0.4
5	☐	125.000	139.118	2110659.03	0.0750	P	0.8
6	☐	250.000	268.112	3981578.00	0.1446	P	1.1
7	☐	500.000	514.855	7521461.28	0.2776	A	0.8
8	☐	1000.000	985.958	14830444.60	0.5316	A	5.0
9	☐			18629.72	0.0007	P	1.9

$$y = 5.3917\text{E-}004 * x + 1.7575\text{E-}006$$

$$R = 0.9996$$

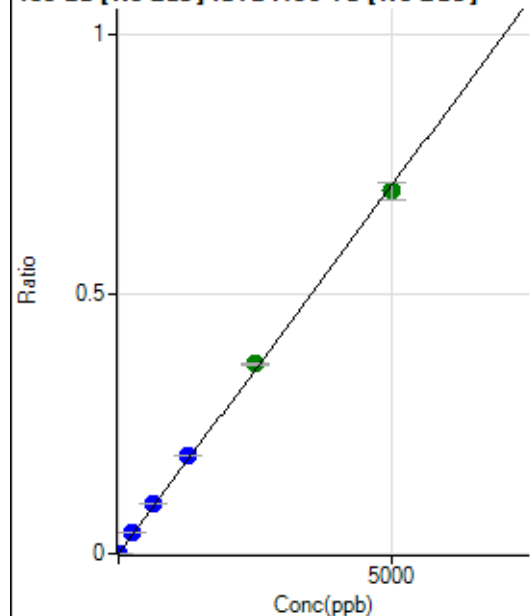
$$DL = 0.001696$$

$$BEC = 0.00326$$

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	83.34	0.0000	P	50.6
2	☐	1.000	1.074	4414.78	0.0002	P	2.0
3	☐	10.000	10.552	42644.52	0.0015	P	1.0
4	☐	250.000	278.041	1136199.78	0.0394	P	0.6
5	☐	625.000	680.947	2712300.14	0.0964	P	2.0
6	☐	1250.000	1334.722	5204328.55	0.1889	P	0.8
7	☐	2500.000	2579.843	9895353.17	0.3652	A	0.8
8	☐	5000.000	4930.501	19471745.23	0.6980	A	5.0
9	☐			5843.14	0.0002	P	2.8

$$y = 1.4156\text{E-}004 * x + 2.9153\text{E-}006$$

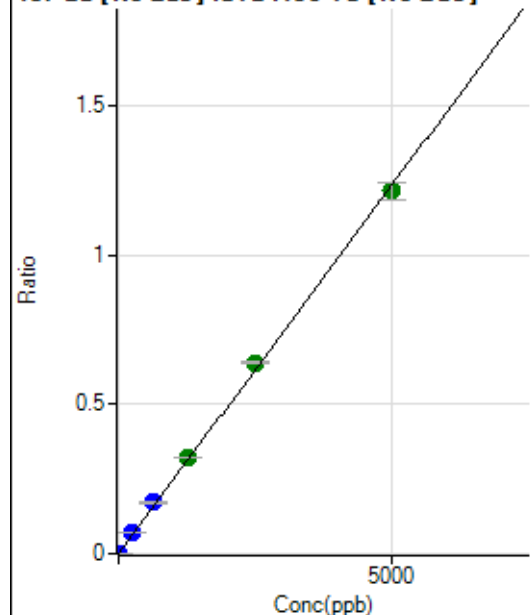
$$R = 0.9996$$

$$DL = 0.03126$$

$$BEC = 0.02059$$

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	75.00	0.0000	P	12.4
2	☐	1.000	1.102	7802.51	0.0003	P	0.9
3	☐	10.000	10.651	74758.20	0.0026	P	1.5
4	☐	250.000	279.316	1984431.92	0.0687	P	0.5
5	☐	625.000	695.135	4814137.61	0.1711	P	0.9
6	☐	1250.000	1300.931	8818895.60	0.3202	A	1.0
7	☐	2500.000	2593.202	17293133.72	0.6383	A	1.4
8	☐	5000.000	4930.432	33854297.28	1.2135	A	5.0
9	☐			10649.05	0.0004	P	4.4

$$y = 2.4613E-004 * x + 2.6372E-006$$

$$R = 0.9996$$

$$DL = 0.003986$$

$$BEC = 0.01071$$

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	☐			4.45		P	86.6
3	☐			8.89		P	86.6
4	☐			124.45		P	24.2
5	☐			302.24		P	8.4
6	☐			571.14		P	12.5
7	☐			1108.97		P	2.8
8	☐			2042.44		P	4.8
9	☐			337.80		P	5.0

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	86.6
2	☐			0.00		P	
3	☐			1.11		P	173.
4	☐			22.22		P	82.6
5	☐			38.89		P	43.1
6	☐			58.89		P	13.1
7	☐			110.00		P	21.2
8	☐			204.45		P	13.9
9	☐			171.12		P	14.1

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			52.78		P	39.7
2	☐			19.45		P	107.
3	☐			44.45		P	10.8
4	☐			55.56		P	22.9
5	☐			80.56		P	11.9
6	☐			119.45		P	33.0
7	☐			269.46		P	17.0
8	☐			405.58		P	15.4
9	☐			205.57		P	25.7

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			12.22		P	56.8
2	☐			12.22		P	31.5
3	☐			15.56		P	32.7
4	☐			32.22		P	21.5
5	☐			67.78		P	5.7
6	☐			125.56		P	23.8
7	☐			278.90		P	5.9
8	☐			440.01		P	8.7
9	☐			118.89		P	11.3

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			213.90		P	2.3
2	☐			269.46		P	21.1
3	☐			227.79		P	5.6
4	☐			219.46		P	5.8
5	☐			202.79		P	6.3
6	☐			202.79		P	12.6
7	☐			272.24		P	34.4
8	☐			186.12		P	33.6
9	☐			333.35		P	9.0

160 Gd [He] No available calibration points

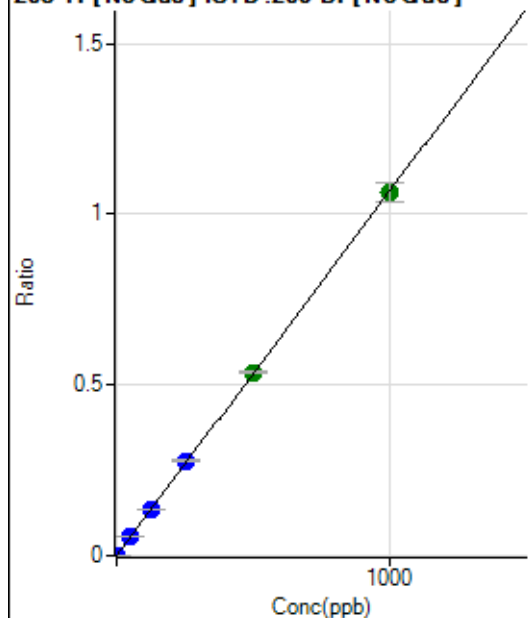
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			548.91		P	5.6
2	☐			530.02		P	8.7
3	☐			508.91		P	6.7
4	☐			596.69		P	5.9
5	☐			521.13		P	9.8
6	☐			446.69		P	11.7
7	☐			507.80		P	9.0
8	☐			516.69		P	6.4
9	☐			537.80		P	6.1

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			88.89		P	14.3
2	☐			77.78		P	22.3
3	☐			100.00		P	8.3
4	☐			127.78		P	49.8
5	☐			80.56		P	33.3
6	☐			88.89		P	23.6
7	☐			80.56		P	26.0
8	☐			77.78		P	16.4
9	☐			186.12		P	28.4

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			51.11		P	29.4
2	☐			53.33		P	27.2
3	☐			47.78		P	24.5
4	☐			50.00		P	29.1
5	☐			61.11		P	19.2
6	☐			50.00		P	6.7
7	☐			58.89		P	29.1
8	☐			61.11		P	22.0
9	☐			74.45		P	30.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.36	0.0000	P	7.3
2	☐	0.100	0.096	2405.89	0.0001	P	6.6
3	☐	1.000	0.917	18725.07	0.0010	P	2.4
4	☐	50.000	50.608	1025644.55	0.0540	P	0.9
5	☐	125.000	126.128	2487665.55	0.1346	P	0.6
6	☐	250.000	259.135	4978419.73	0.2765	P	1.6
7	☐	500.000	503.612	9476795.70	0.5373	A	1.4
8	☐	1000.000	995.739	18557946.25	1.0622	A	5.5
9	☐			4370.35	0.0003	P	2.3

$$y = 0.0011 * x + 2.6082E-005$$

$$R = 0.9999$$

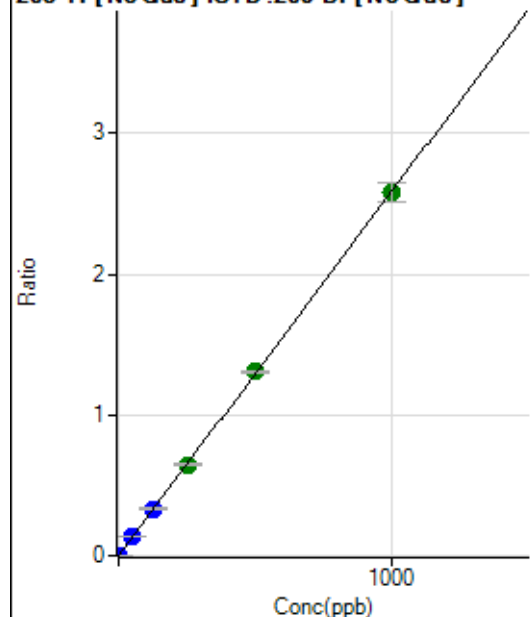
$$DL = 0.005326$$

$$BEC = 0.02445$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1222.34	0.0001	P	4.4
2	☐	0.100	0.095	5837.68	0.0003	P	4.0
3	☐	1.000	0.905	44885.29	0.0024	P	1.7
4	☐	50.000	50.670	2489480.83	0.1311	P	1.2
5	☐	125.000	129.235	6178894.80	0.3343	P	1.3
6	☐	250.000	250.538	11668416.67	0.6480	A	1.5
7	☐	500.000	505.048	23039394.44	1.3061	A	0.5
8	☐	1000.000	996.778	45034448.57	2.5778	A	5.4
9	☐			10451.77	0.0007	P	8.0

$$y = 0.0026 * x + 6.5983E-005$$

$$R = 1.0000$$

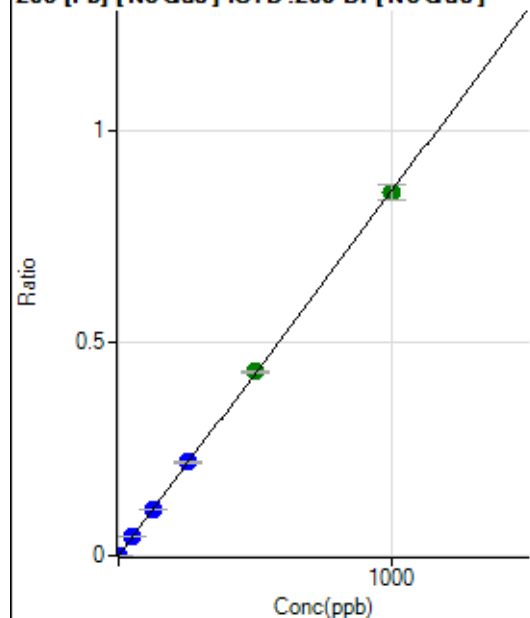
$$DL = 0.003374$$

$$BEC = 0.02552$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1157.49	0.0001	P	4.7
2	☐	0.100	0.095	2689.24	0.0001	P	5.9
3	☐	1.000	0.928	15997.11	0.0009	P	1.0
4	☐	50.000	50.823	828292.00	0.0436	P	0.6
5	☐	125.000	127.104	2014716.28	0.1090	P	1.1
6	☐	250.000	258.127	3984717.91	0.2213	P	1.9
7	☐	500.000	504.712	7630911.17	0.4326	A	0.9
8	☐	1000.000	995.308	14908541.19	0.8531	A	4.3
9	☐			17719.62	0.0013	P	2.4

$$y = 8.5703E-004 * x + 6.2487E-005$$

$$R = 0.9999$$

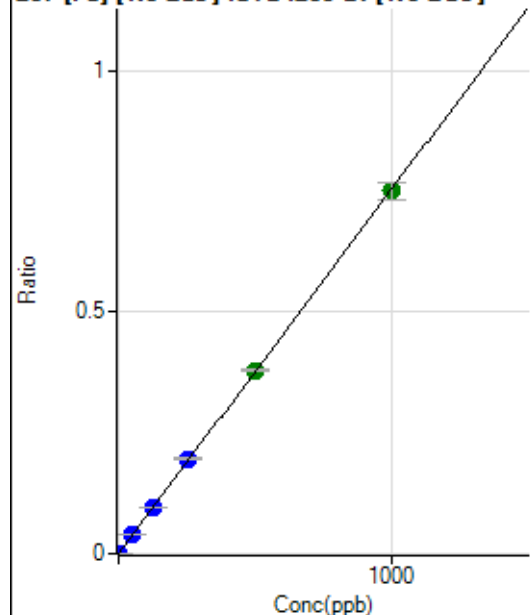
$$DL = 0.01019$$

$$BEC = 0.07291$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	925.98	0.0000	P	5.0
2	☐	0.100	0.088	2178.04	0.0001	P	4.8
3	☐	1.000	0.931	14022.63	0.0008	P	2.5
4	☐	50.000	50.956	730450.64	0.0385	P	0.7
5	☐	125.000	128.053	1785477.18	0.0966	P	1.3
6	☐	250.000	259.594	3525264.52	0.1958	P	1.3
7	☐	500.000	502.555	6684218.09	0.3789	A	0.7
8	☐	1000.000	995.895	13121603.42	0.7509	A	4.6
9	☐			15062.66	0.0011	P	2.9

$$y = 7.5393\text{E-}004 * x + 4.9983\text{E-}005$$

$$R = 0.9999$$

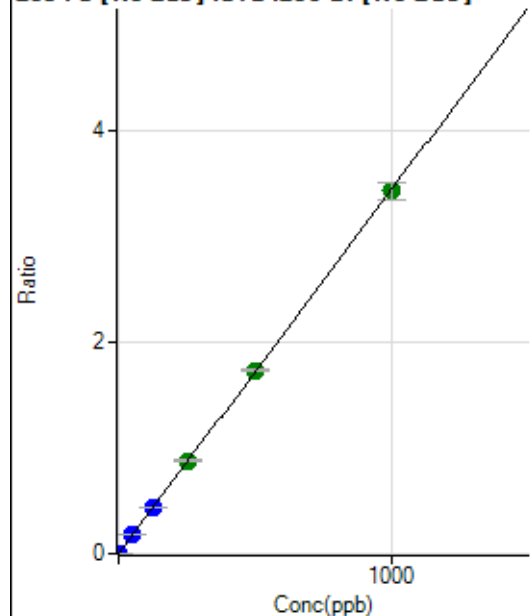
$$DL = 0.00989$$

$$BEC = 0.0663$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	4418.94	0.0002	P	2.3
2	☐	0.100	0.092	10403.79	0.0006	P	2.3
3	☐	1.000	0.926	63919.33	0.0034	P	0.7
4	☐	50.000	50.630	3314765.29	0.1746	P	0.5
5	☐	125.000	127.788	8137326.54	0.4402	P	1.1
6	☐	250.000	255.060	15818226.49	0.8784	A	1.3
7	☐	500.000	503.737	30597472.90	1.7346	A	0.7
8	☐	1000.000	996.486	59962212.22	3.4312	A	4.5
9	☐			68885.84	0.0049	P	2.7

$$y = 0.0034 * x + 2.3853\text{E-}004$$

$$R = 1.0000$$

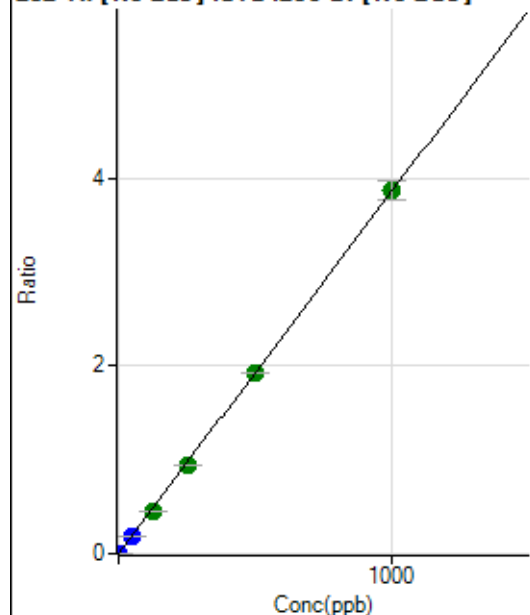
$$DL = 0.004773$$

$$BEC = 0.06928$$

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	457.43	0.0000	P	11.6
2	☐	0.100	0.080	6209.08	0.0003	P	0.8
3	☐	1.000	0.828	59929.80	0.0032	P	1.7
4	☐	50.000	46.730	3418563.07	0.1800	P	0.6
5	☐	125.000	118.864	8463873.39	0.4579	A	0.8
6	☐	250.000	244.099	16932929.08	0.9403	A	0.6
7	☐	500.000	499.928	33967917.43	1.9257	A	0.4
8	☐	1000.000	1002.442	67464107.07	3.8613	A	5.2
9	☐			29887.09	0.0021	P	6.4

$$y = 0.0039 * x + 2.4679E-005$$

$$R = 1.0000$$

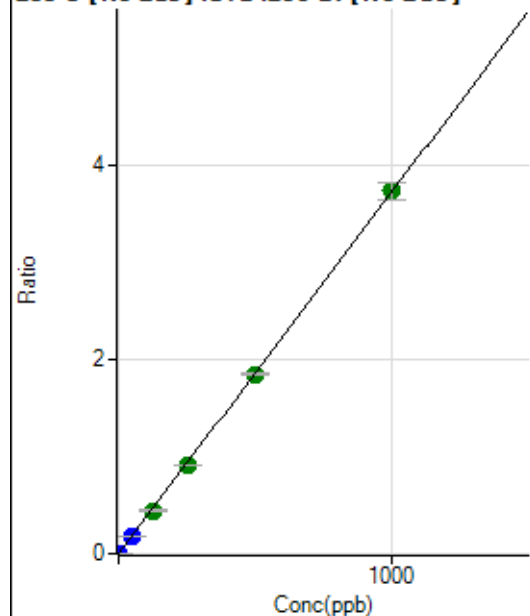
$$DL = 0.002229$$

$$BEC = 0.006407$$

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	133.34	0.0000	P	54.0
2	☐	0.100	0.082	5834.92	0.0003	P	2.8
3	☐	1.000	0.837	58157.51	0.0031	P	0.9
4	☐	50.000	47.005	3317224.16	0.1747	P	0.5
5	☐	125.000	119.671	8221177.87	0.4447	A	0.6
6	☐	250.000	244.663	16374316.68	0.9093	A	1.5
7	☐	500.000	496.393	32540099.34	1.8448	A	1.1
8	☐	1000.000	1003.954	65188946.60	3.7310	A	5.1
9	☐			14230.67	0.0010	P	3.4

$$y = 0.0037 * x + 7.1913E-006$$

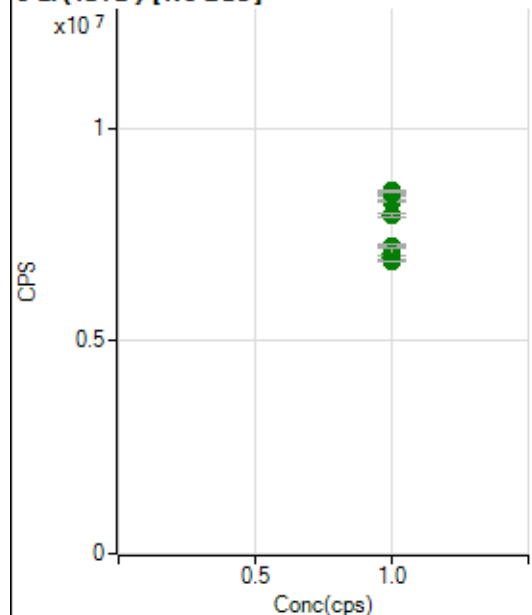
$$R = 1.0000$$

$$DL = 0.003136$$

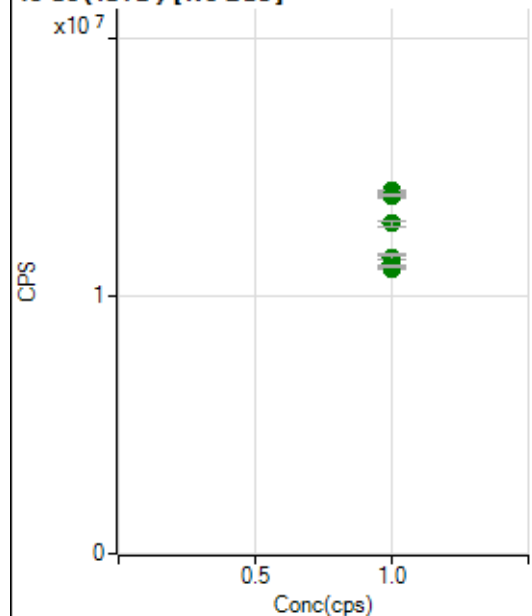
$$BEC = 0.001935$$

Weight: <None>

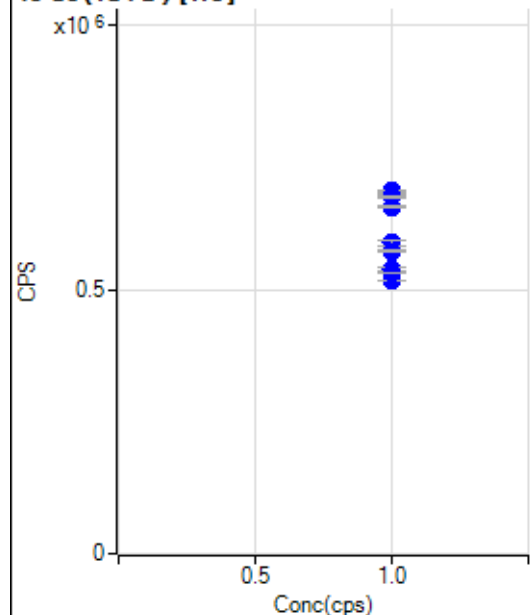
Min Conc: 0

6 Li (ISTD) [No Gas]

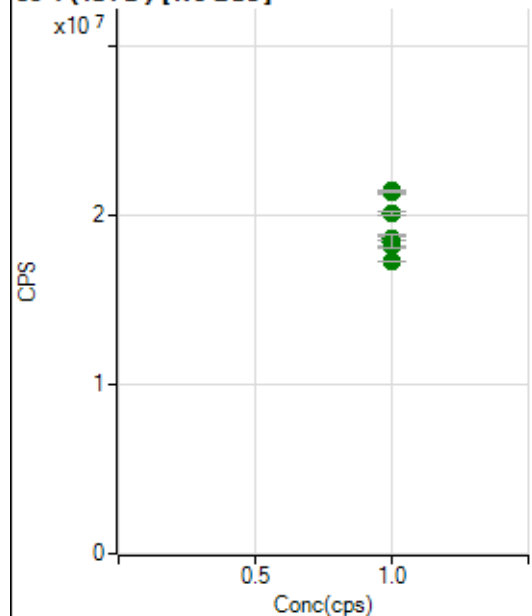
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8286748.33		A	0.7
2	☐	1.000		8442901.31		A	0.5
3	☐	1.000		8494037.52		A	0.9
4	☐	1.000		8520887.52		A	0.5
5	☐	1.000		7959823.55		A	1.3
6	☐	1.000		7248444.46		A	0.4
7	☐	1.000		6953859.55		A	0.7
8	☐	1.000		7036587.43		A	3.5
9	☐	1.000		6862768.30		A	0.5

45 Sc (ISTD) [No Gas]

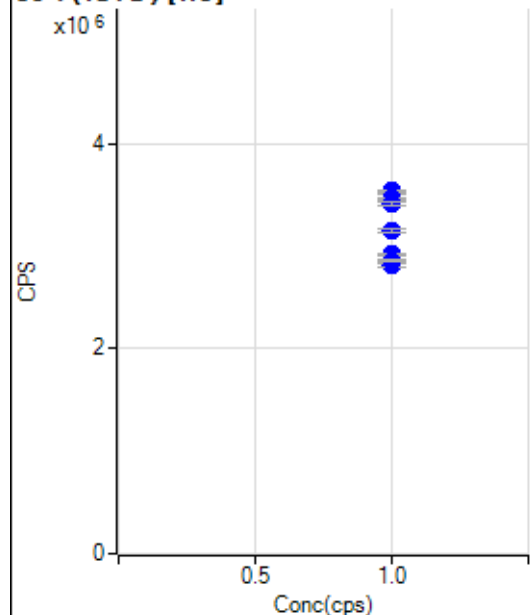
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		14090848.23		A	0.7
2	☐	1.000		13894097.19		A	0.0
3	☐	1.000		13905950.14		A	0.8
4	☐	1.000		13907928.96		A	0.3
5	☐	1.000		12817751.59		A	1.4
6	☐	1.000		11530759.72		A	1.5
7	☐	1.000		11060666.74		A	0.4
8	☐	1.000		11292003.72		A	4.7
9	☐	1.000		11161430.37		A	0.1

45 Sc (ISTD) [He]

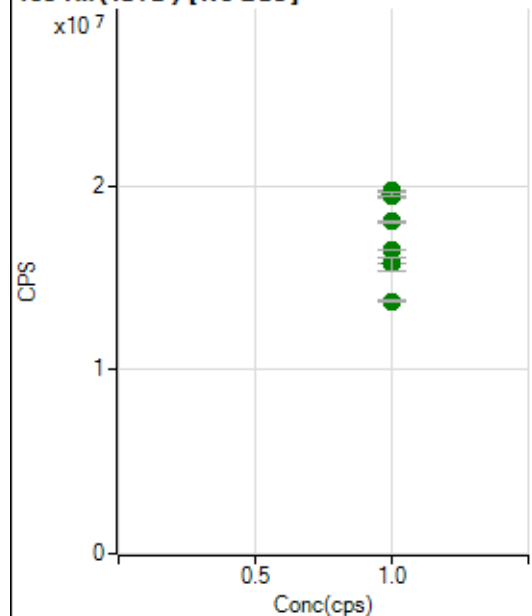
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		679605.36		P	0.2
2	☐	1.000		686520.01		P	0.8
3	☐	1.000		675403.04		P	0.6
4	☐	1.000		655969.38		P	0.4
5	☐	1.000		587844.81		P	2.0
6	☐	1.000		539498.31		P	1.4
7	☐	1.000		516855.19		P	0.6
8	☐	1.000		530943.31		P	0.5
9	☐	1.000		572111.18		P	0.5

89 Y (ISTD) [No Gas]

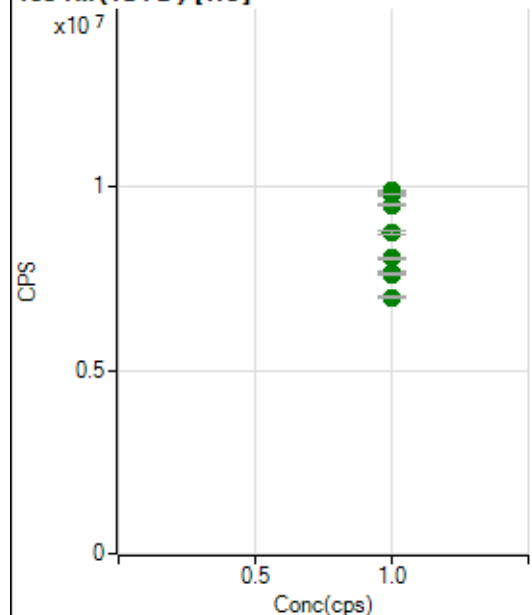
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		21446736.35		A	0.9
2	☐	1.000		21401337.18		A	0.3
3	☐	1.000		21391271.35		A	1.3
4	☐	1.000		21476229.40		A	0.5
5	☐	1.000		20154606.23		A	1.5
6	☐	1.000		18659272.92		A	1.0
7	☐	1.000		18160940.84		A	0.8
8	☐	1.000		18496039.72		A	4.4
9	☐	1.000		17315712.94		A	0.3

89 Y (ISTD) [He]

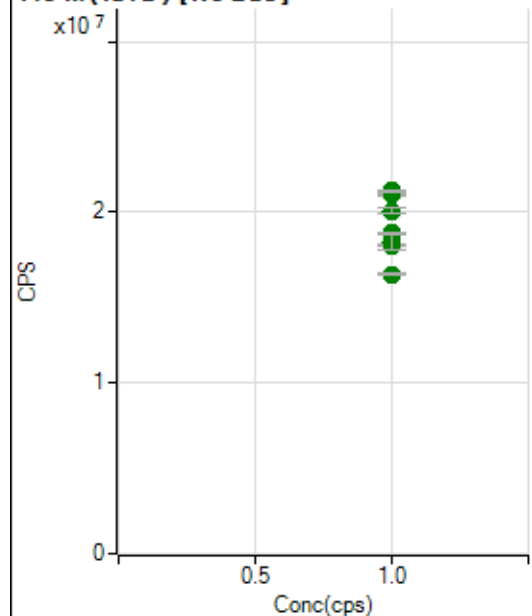
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3525315.99		P	0.6
2	☐	1.000		3539550.85		P	0.8
3	☐	1.000		3468933.11		P	0.6
4	☐	1.000		3410956.16		P	1.1
5	☐	1.000		3152582.83		P	1.2
6	☐	1.000		2923317.91		P	0.8
7	☐	1.000		2812008.39		P	0.9
8	☐	1.000		2852613.95		P	1.2
9	☐	1.000		2857967.56		P	0.9

103 Rh (ISTD) [No Gas]

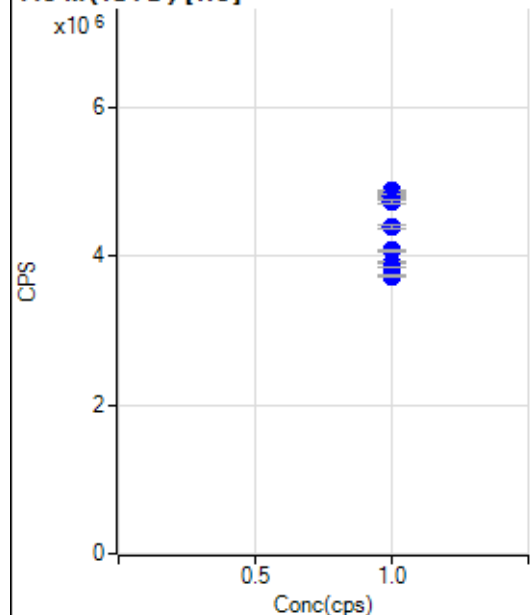
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		19635156.52		A	0.2
2	☐	1.000		19715761.90		A	0.3
3	☐	1.000		19480519.53		A	1.2
4	☐	1.000		19543088.81		A	0.9
5	☐	1.000		18046721.41		A	0.8
6	☐	1.000		16524909.22		A	0.5
7	☐	1.000		15802398.27		A	0.4
8	☐	1.000		15765350.18		A	4.6
9	☐	1.000		13718787.98		A	0.6

103 Rh (ISTD) [He]

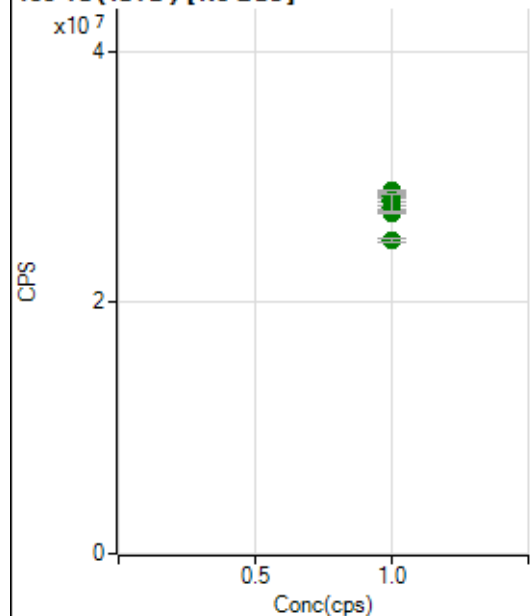
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9797943.81		A	1.3
2	☐	1.000		9897236.10		A	0.0
3	☐	1.000		9796928.60		A	0.2
4	☐	1.000		9513313.81		A	0.7
5	☐	1.000		8764544.52		A	1.1
6	☐	1.000		8067529.39		A	0.6
7	☐	1.000		7669487.80		A	0.4
8	☐	1.000		7608776.00		A	0.7
9	☐	1.000		6997681.49		A	0.5

115 In (ISTD) [No Gas]

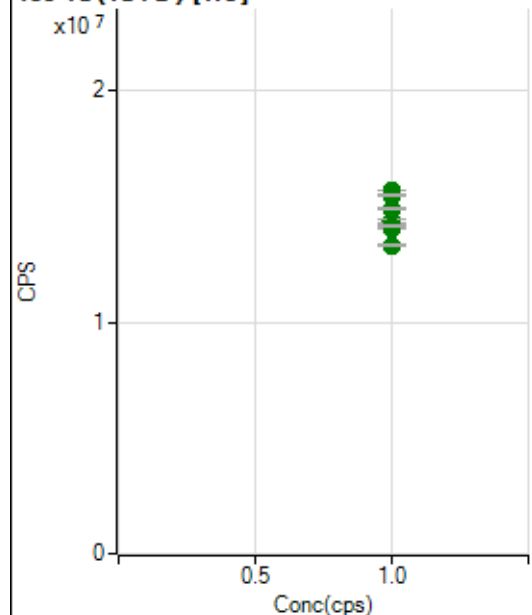
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		21067358.16		A	0.8
2	☐	1.000		21124108.07		A	0.3
3	☐	1.000		21165804.71		A	0.8
4	☐	1.000		21250075.82		A	0.4
5	☐	1.000		20068972.28		A	1.6
6	☐	1.000		18796164.25		A	0.4
7	☐	1.000		18056421.15		A	0.4
8	☐	1.000		18267379.46		A	4.9
9	☐	1.000		16343886.76		A	0.6

115 In (ISTD) [He]

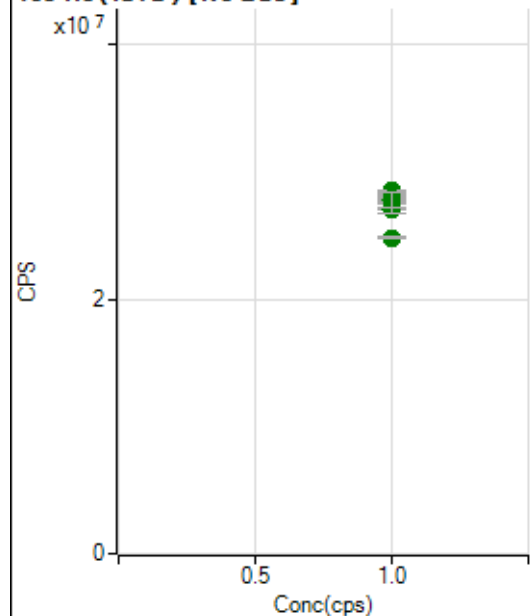
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4823617.57		P	0.4
2	☐	1.000		4876482.08		P	0.6
3	☐	1.000		4809300.99		P	0.7
4	☐	1.000		4723560.50		P	0.9
5	☐	1.000		4389058.59		P	1.0
6	☐	1.000		4074347.72		P	0.9
7	☐	1.000		3906023.90		P	0.8
8	☐	1.000		3851160.13		P	0.6
9	☐	1.000		3731739.74		P	0.9

159 Tb (ISTD) [No Gas]

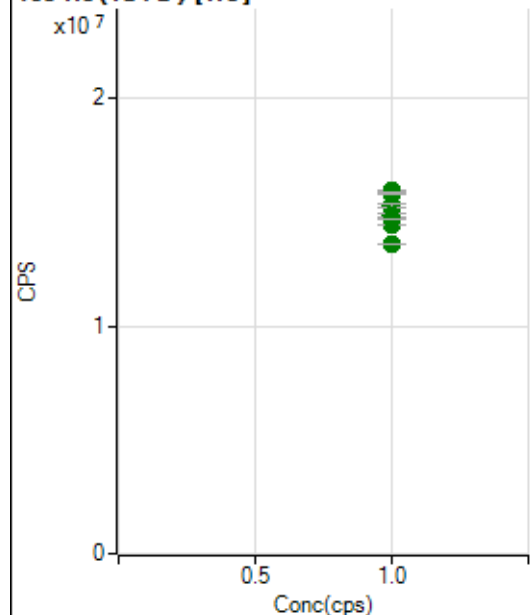
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		28470932.35		A	1.3
2	☐	1.000		28490188.74		A	0.2
3	☐	1.000		28489953.74		A	1.0
4	☐	1.000		28864678.46		A	0.2
5	☐	1.000		28139220.42		A	1.1
6	☐	1.000		27543820.70		A	0.9
7	☐	1.000		27095623.21		A	0.5
8	☐	1.000		27941639.58		A	4.8
9	☐	1.000		24986500.74		A	1.3

159 Tb (ISTD) [He]

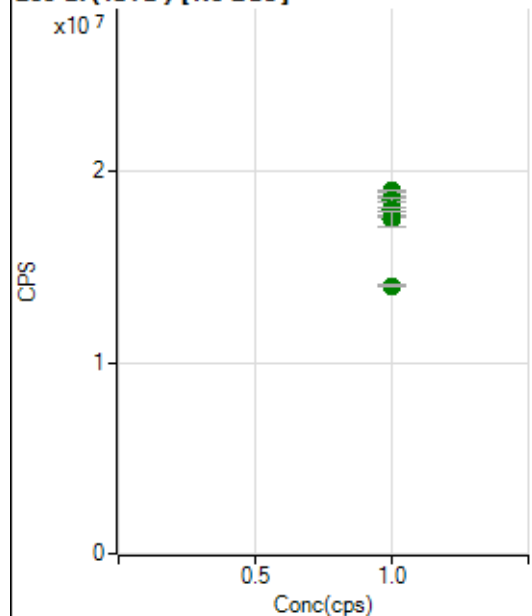
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		15481425.32		A	0.7
2	☐	1.000		15681517.82		A	0.1
3	☐	1.000		15556262.54		A	0.1
4	☐	1.000		15519976.44		A	0.8
5	☐	1.000		14895801.31		A	0.7
6	☐	1.000		14375704.78		A	1.3
7	☐	1.000		14029862.84		A	0.3
8	☐	1.000		14144161.04		A	0.6
9	☐	1.000		13319097.72		A	0.4

165 Ho (ISTD) [No Gas]

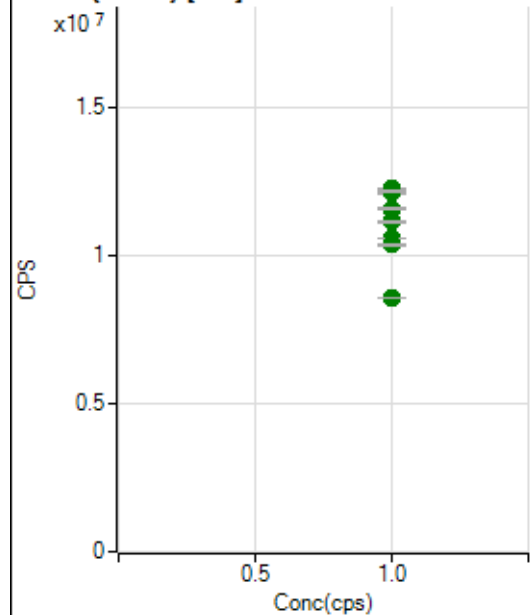
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		27579830.48		A	0.4
2	☐	1.000		27965920.07		A	0.7
3	☐	1.000		28030555.84		A	1.4
4	☐	1.000		28480190.22		A	0.5
5	☐	1.000		27973908.61		A	0.7
6	☐	1.000		27064906.16		A	0.5
7	☐	1.000		26984391.92		A	1.5
8	☐	1.000		27808555.13		A	4.2
9	☐	1.000		24805816.53		A	0.8

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		15767848.38		A	0.2
2	☐	1.000		15880425.18		A	0.7
3	☐	1.000		15925243.10		A	0.1
4	☐	1.000		15829387.82		A	0.6
5	☐	1.000		15272454.63		A	0.7
6	☐	1.000		14847642.97		A	1.0
7	☐	1.000		14434428.67		A	0.3
8	☐	1.000		14681670.61		A	0.4
9	☐	1.000		13593154.94		A	0.3

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		18526799.86		A	0.8
2	☐	1.000		18721795.00		A	0.5
3	☐	1.000		18645726.11		A	0.1
4	☐	1.000		18989464.30		A	0.6
5	☐	1.000		18485977.50		A	0.9
6	☐	1.000		18008665.29		A	0.9
7	☐	1.000		17639537.79		A	0.5
8	☐	1.000		17500704.04		A	4.8
9	☐	1.000		14038492.29		A	0.4

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12097022.46		A	0.2
2	☐	1.000		12225094.26		A	0.4
3	☐	1.000		12214434.68		A	0.4
4	☐	1.000		12148851.63		A	0.2
5	☐	1.000		11559648.44		A	0.8
6	☐	1.000		11115857.96		A	0.7
7	☐	1.000		10550701.86		A	0.4
8	☐	1.000		10354741.58		A	0.6
9	☐	1.000		8557093.21		A	0.3

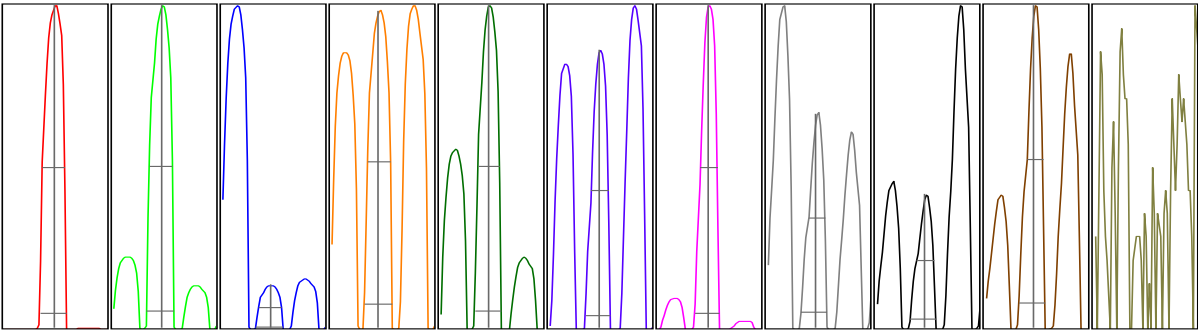
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7042019-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count	RSD%	RSD%	RSD%
	(Mean)	(Actual)	(Required)	(Flag)
9	26547	1.08	5.00	
24	428632	1.12	5.00	
25	57800	0.77	5.00	
26	66917	0.98	5.00	
59	166930	1.00	5.00	
113	20872	0.75	5.00	
115	243845	1.05	5.00	
206	60654	0.90	5.00	
207	55794	1.02	5.00	
208	132783	0.83	5.00	
220	0	50.46		

Mass	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
	Count	Count	Count	Count	Count
9	26790	26797	26671	26226	26253
24	433180	431476	431691	423776	423038
25	58297	57956	58054	57495	57200
26	67650	67321	67155	66118	66339
59	168334	167813	168279	165160	165062
113	21040	20891	21006	20731	20691
115	245642	245427	245550	239763	242844
206	60008	60506	61283	60327	61146
207	55137	55325	56155	55842	56511
208	131205	132684	133100	132656	134270
220	0	0	0	0	0

Integration Time [sec] = 0.1



Mass	Peak	Axis	Axis	Axis	Width-X%	Width-X%	Width-
	Height	(Actual)	(Required)	(Flag)	(Actual)	(Required)	X%
9	43385	9.00	8.9 - 9.1		0.785	0.900	
24	680883	23.95	23.9 - 24.1		0.789	0.900	
25	91962	24.95	24.9 - 25.1		0.788	0.900	
26	105533	25.90	25.9 - 26.1		0.809	0.900	
59	284018	58.95	58.9 - 59.1		0.780	0.900	
113	41247	113.00	112.9 - 113.1		0.725	0.900	
115	494019	115.00	114.9 - 115.1		0.711	0.900	
206	123316	205.95	205.9 - 206.1		0.741	0.900	
207	113392	206.95	206.9 - 207.1		0.732	0.900	
208	272797	207.95	207.9 - 208.1		0.748	0.900	
220	0	220.30	-		0.300		

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	8.4	V	Deflect	13.6	V
Extract 2	-120.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-60	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination	5.0	V
He Flow	0.0	mL/min	OctP RF	160	V			

[He]

Mass	Count	RSD%	RSD%
	(Mean)	(Actual)	(Required)
59	42443	0.34	
89	158410	0.46	
205	59512	0.58	

Mass	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
	Count	Count	Count	Count	Count
59	42453	42622	42546	42298	42297
89	159030	158424	158982	158382	157232
205	59565	59490	59955	59561	58988

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.9	V	Deflect	1.6	V
Extract 2	-130.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-65	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			