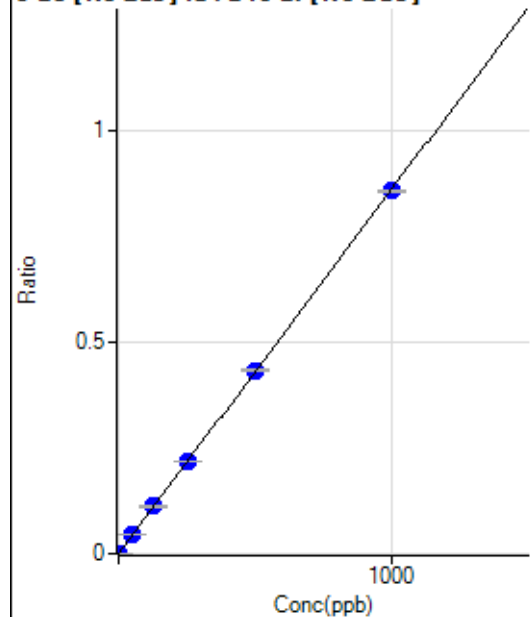


Calibration for 003CALB.d

Batch Folder: D:\ICP-MS Data\P7112019-MS1.b\
 Analysis File: P7112019-MS1.batch.bin
 DA Date-Time: 2019-11-21 20:34:50
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-11-21 14:11:20
2	004CALS.d	S02	2019-11-21 14:14:54
3	005CALS.d	S03	2019-11-21 14:19:16
4	006CALS.d	S04	2019-11-21 14:23:18
5	007CALS.d	S05	2019-11-21 14:27:08
6	008CALS.d	S06	2019-11-21 14:30:55
7	009CALS.d	S07	2019-11-21 14:34:40
8	010CALS.d	S08	2019-11-21 14:38:25

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57.41	0.0000	P	24.2
2	☐	1.000	0.986	2213.18	0.0009	P	7.8
3	☐	50.000	51.766	111471.12	0.0446	P	1.1
4	☐	125.000	129.399	272205.33	0.1116	P	0.7
5	☐	250.000	254.774	512908.34	0.2197	P	0.4
6	☐	500.000	503.720	1008216.68	0.4343	P	0.2
7	☐	1000.000	996.308	1917794.29	0.8589	P	0.3
8	☐			148.15	0.0001	P	33.8

$$y = 8.6208\text{E-}004 * x + 2.2874\text{E-}005$$

$$R = 1.0000$$

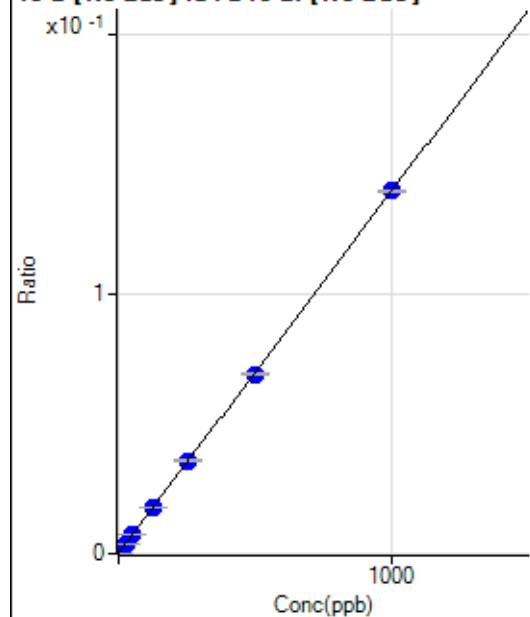
$$DL = 0.0193$$

$$BEC = 0.02653$$

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	388.91	0.0002	P	4.0
2	☐	25.000	24.834	9164.20	0.0036	P	1.8
3	☐	50.000	50.171	17830.65	0.0071	P	1.5
4	☐	125.000	128.293	43967.67	0.0180	P	0.9
5	☐	250.000	255.166	83343.87	0.0357	P	1.5
6	☐	500.000	494.504	160255.01	0.0690	P	0.8
7	☐	1000.000	1001.041	311634.10	0.1396	P	0.9
8	☐			3822.84	0.0019	P	2.7

$$y = 1.3927\text{E-}004 * x + 1.5485\text{E-}004$$

$$R = 1.0000$$

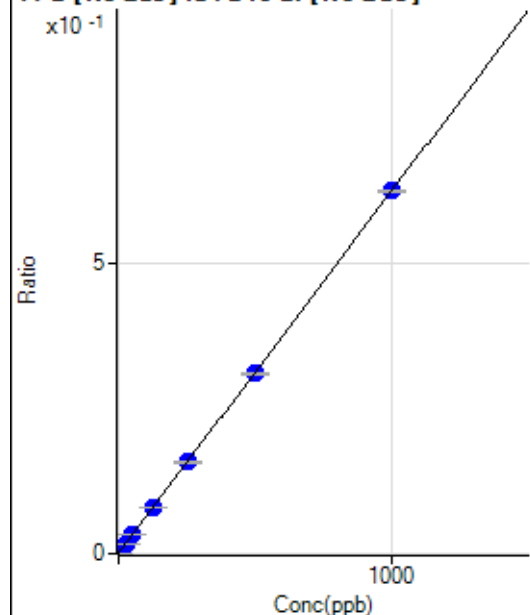
$$DL = 0.1328$$

$$BEC = 1.112$$

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	1991.88	0.0008	P	9.9
2	☐	25.000	24.401	40552.66	0.0160	P	1.5
3	☐	50.000	50.958	81207.21	0.0325	P	0.4
4	☐	125.000	126.202	193670.03	0.0794	P	1.3
5	☐	250.000	251.214	367168.73	0.1572	P	2.1
6	☐	500.000	497.116	720599.88	0.3104	P	0.8
7	☐	1000.000	1000.955	1393609.43	0.6242	P	0.4
8	☐			16868.40	0.0082	P	6.9

$$y = 6.2278\text{E-}004 * x + 7.9423\text{E-}004$$

$$R = 1.0000$$

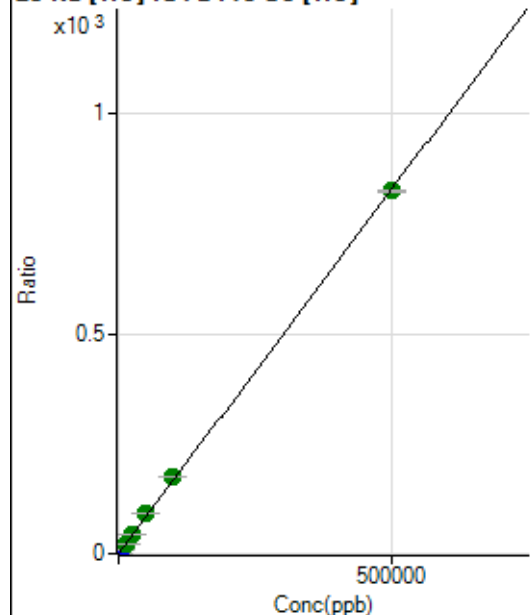
$$DL = 0.3804$$

$$BEC = 1.275$$

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	9661.81	0.0353	P	0.8
2	☐	500.000	537.615	258038.41	0.9258	P	0.8
3	☐	5000.000	5539.790	2487445.87	9.2111	P	0.2
4	☐	12500.000	13716.958	5844541.45	22.7552	A	0.8
5	☐	25000.000	27593.884	11190046.69	45.7401	A	0.4
6	☐	50000.000	54338.574	22328098.93	90.0384	A	0.6
7	☐	100000.00	106308.05	44145666.61	176.1176	A	0.8
8	☐	500000.00	498138.97	196504684.9	825.1228	A	0.2

$$y = 0.0017 * x + 0.0353$$

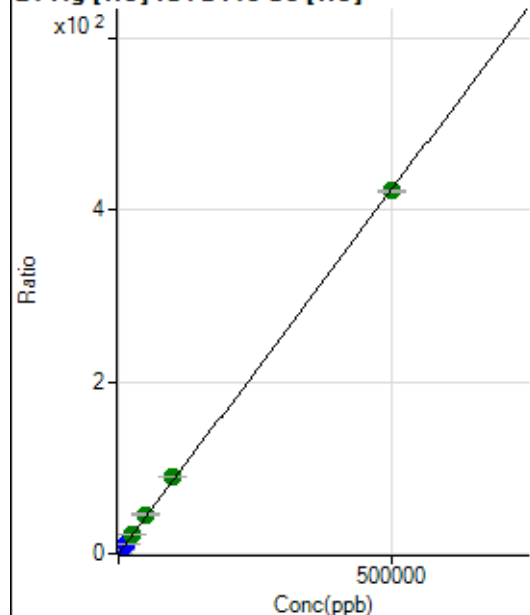
$$R = 0.9999$$

$$DL = 0.5151$$

$$BEC = 21.3$$

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	197.23	0.0007	P	12.3
2	☐	500.000	558.900	132063.04	0.4738	P	0.6
3	☐	5000.000	5490.304	1255150.57	4.6479	P	0.4
4	☐	12500.000	13637.691	2965053.21	11.5441	P	0.6
5	☐	25000.000	27442.476	5682840.23	23.2289	A	0.6
6	☐	50000.000	53938.916	11321876.03	45.6562	A	0.9
7	☐	100000.00	105191.00	22318085.05	89.0375	A	0.9
8	☐	500000.00	498412.38	100467637.6	421.8719	A	0.7

$$y = 8.4643\text{E-}004 * x + 7.2031\text{E-}004$$

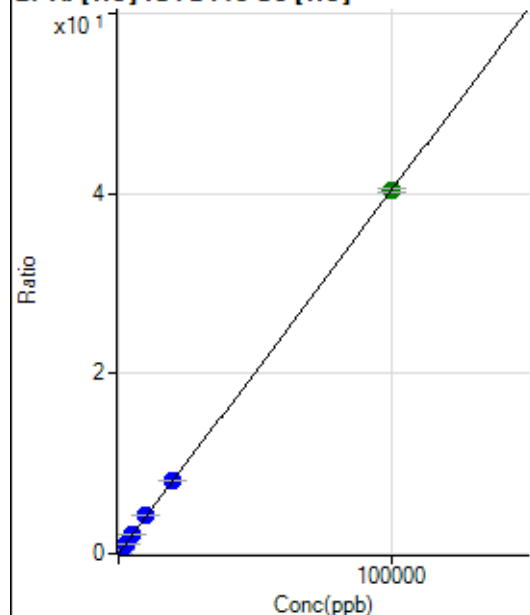
$$R = 0.9999$$

$$DL = 0.3141$$

$$BEC = 0.851$$

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	55.56	0.0002	P	22.9
2	☐	20.000	19.954	2300.27	0.0083	P	5.8
3	☐	1000.000	1052.891	114771.54	0.4250	P	0.4
4	☐	2500.000	2643.689	274007.95	1.0669	P	1.5
5	☐	5000.000	5279.204	521157.13	2.1302	P	1.0
6	☐	10000.000	10394.937	1040087.65	4.1943	P	1.1
7	☐	20000.000	20273.888	2050533.40	8.1801	P	0.4
8	☐	100000.00	99887.647	9597675.82	40.3020	A	1.0

$$y = 4.0347\text{E-}004 * x + 2.0289\text{E-}004$$

$$R = 1.0000$$

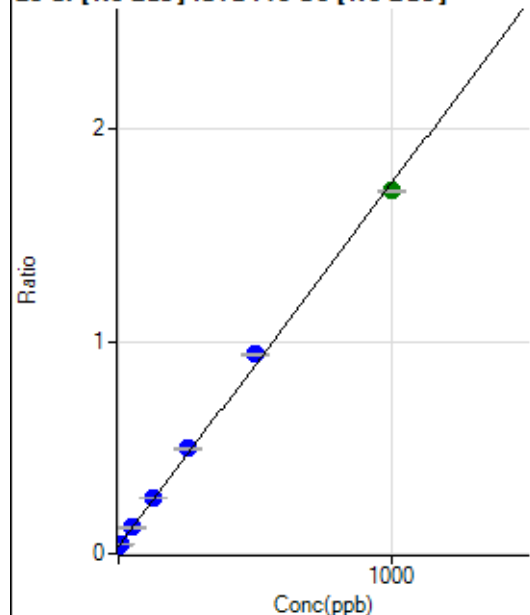
$$DL = 0.3453$$

$$BEC = 0.5029$$

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	193946.79	0.0346	P	1.6
2	☐	10.000	5.834	253561.29	0.0446	P	1.1
3	☐	50.000	51.622	674105.36	0.1229	P	0.8
4	☐	125.000	133.159	1386063.09	0.2624	P	1.4
5	☐	250.000	269.384	2459530.68	0.4955	P	1.6
6	☐	500.000	529.077	4708904.62	0.9399	P	0.5
7	☐	1000.000	979.556	8424729.35	1.7107	A	0.6
8	☐			1133915.80	0.2391	P	1.0

$$y = 0.0017 * x + 0.0346$$

$$R = 0.9991$$

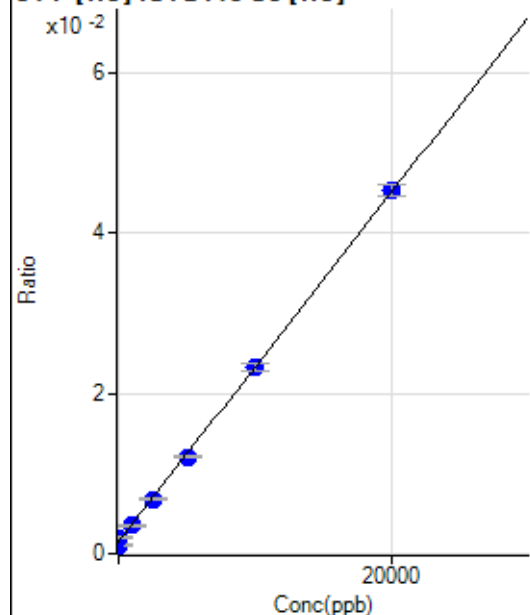
$$DL = 0.9558$$

$$BEC = 20.21$$

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	-231.855	275.02	0.0010	P	24.0
2	☐	0.000	231.855	561.15	0.0020	P	7.9
3	☐	1000.000	932.588	955.62	0.0035	P	8.4
4	☐	2500.000	2432.085	1747.41	0.0068	P	2.2
5	☐	5000.000	4851.745	2953.19	0.0121	P	1.8
6	☐	10000.000	9950.569	5745.77	0.0232	P	4.3
7	☐	20000.000	20073.639	11332.55	0.0452	P	3.1
8	☐			216.68	0.0009	P	23.3

$$y = 2.1770E-006 * x + 0.0015$$

$$R = 0.9998$$

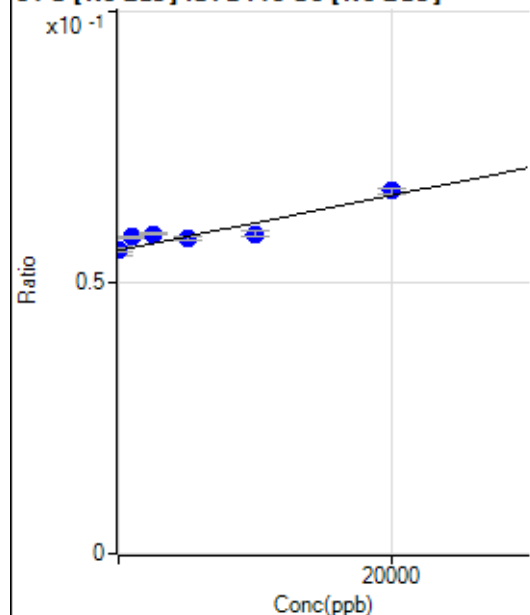
$$DL = 275.5$$

$$BEC = 693.1$$

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	-112.682	313459.36	0.0559	P	3.0
2	☐	0.000	112.682	318711.60	0.0560	P	1.0
3	☐	1000.000	4714.743	320026.59	0.0583	P	0.3
4	☐	2500.000	6042.475	311757.95	0.0590	P	0.6
5	☐	5000.000	4172.741	288250.48	0.0581	P	1.1
6	☐	10000.000	6015.482	295623.68	0.0590	P	1.5
7	☐	20000.000	21570.527	329509.08	0.0669	P	1.4
8	☐			240140.66	0.0506	P	0.7

$$y = 5.0814\text{E-}007 * x + 0.0560$$

$$R = 0.9327$$

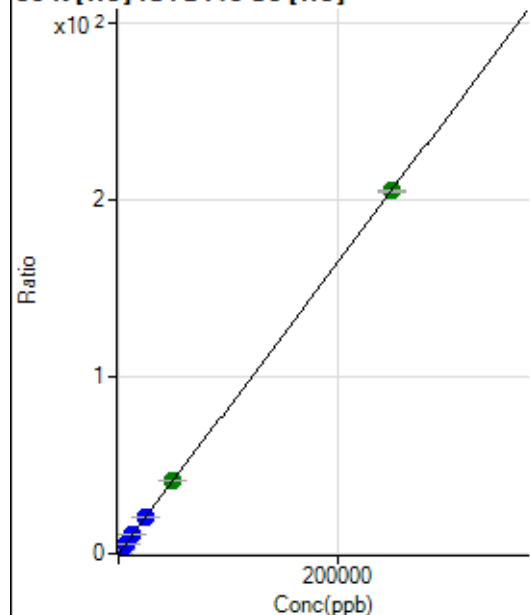
$$DL = 6551$$

$$BEC = 1.101\text{E}+05$$

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	19132.41	0.0699	P	2.3
2	☐	500.000	522.279	138863.97	0.4982	P	1.4
3	☐	2500.000	2599.601	594633.05	2.2018	P	1.0
4	☐	6250.000	6402.956	1366664.31	5.3209	P	0.4
5	☐	12500.000	12782.231	2581632.85	10.5526	P	0.6
6	☐	25000.000	25132.487	5128568.74	20.6810	P	0.7
7	☐	50000.000	50358.630	10369988.69	41.3689	A	0.5
8	☐	250000.00	249896.04	48822152.83	205.0094	A	0.7

$$y = 8.2010\text{E-}004 * x + 0.0699$$

$$R = 1.0000$$

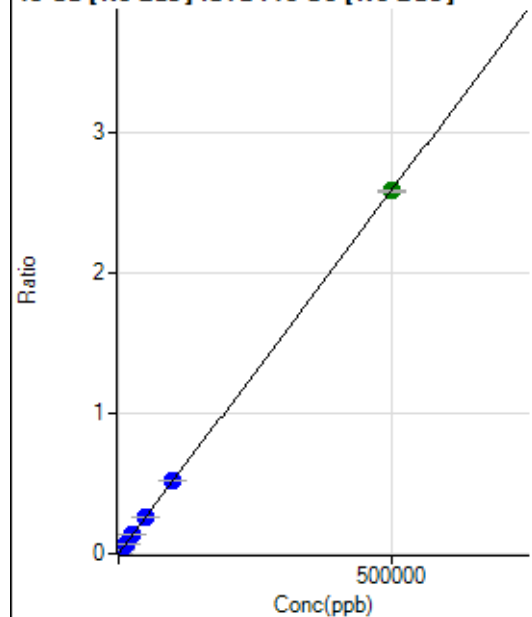
$$DL = 5.905$$

$$BEC = 85.2$$

Weight: <None>

Min Conc: 0

43 Ca [No Gas] ISTD:45 Sc [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	88.90	0.0000	P	53.9
2	☐	500.000	512.831	15219.50	0.0027	P	1.9
3	☐	5000.000	5167.378	147032.98	0.0268	P	0.9
4	☐	12500.000	12952.148	354795.14	0.0672	P	1.0
5	☐	25000.000	25591.444	658632.81	0.1327	P	0.6
6	☐	50000.000	50822.201	1320131.81	0.2635	P	0.2
7	☐	100000.00	101520.24	2592024.17	0.5263	P	0.7
8	☐	500000.00	499571.16	12281600.01	2.5900	A	0.3

$$y = 5.1843\text{E-}006 * x + 1.5756\text{E-}005$$

$$R = 1.0000$$

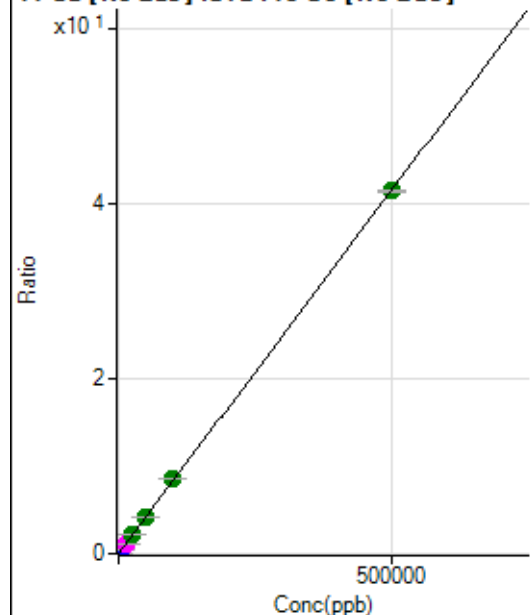
$$DL = 4.918$$

$$BEC = 3.039$$

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	11063.19	0.0020	P	1.3
2	☐	500.000	504.804	250040.71	0.0439	P	0.3
3	☐	5000.000	5178.044	2372037.90	0.4325	P	0.1
4	☐	12500.000	12893.417	5672969.70	1.0739	M	1.1
5	☐	25000.000	25729.233	10627422.46	2.1410	A	0.3
6	☐	50000.000	51390.610	21415410.89	4.2745	A	0.1
7	☐	100000.00	102605.20	42019019.00	8.5323	A	0.7
8	☐	500000.00	499291.81	196848547.4	41.5118	A	0.4

$$y = 8.3137\text{E-}005 * x + 0.0020$$

$$R = 1.0000$$

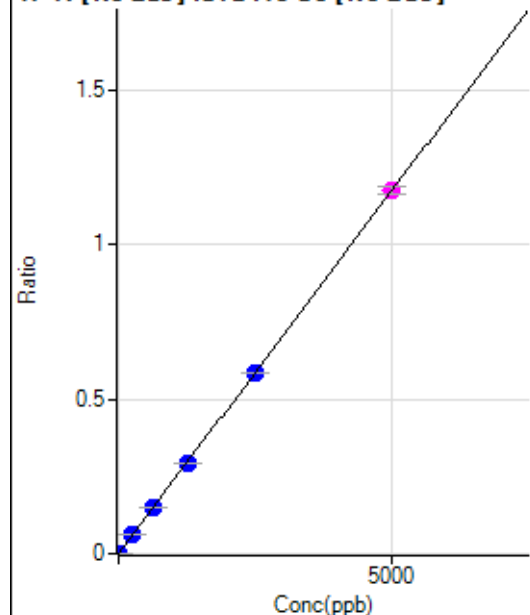
$$DL = 0.8905$$

$$BEC = 23.72$$

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	66.67	0.0000	P	45.4
2	☐	5.000	5.103	6885.23	0.0012	P	5.8
3	☐	250.000	254.602	327926.73	0.0598	P	0.5
4	☐	625.000	632.080	783958.07	0.1484	P	0.3
5	☐	1250.000	1257.942	1466018.76	0.2953	P	0.2
6	☐	2500.000	2487.619	2926113.35	0.5840	P	0.2
7	☐	5000.000	5003.090	5784359.07	1.1746	M	2.2
8	☐			1055.64	0.0002	P	13.5

$$y = 2.3478\text{E-}004 * x + 1.1885\text{E-}005$$

$$R = 1.0000$$

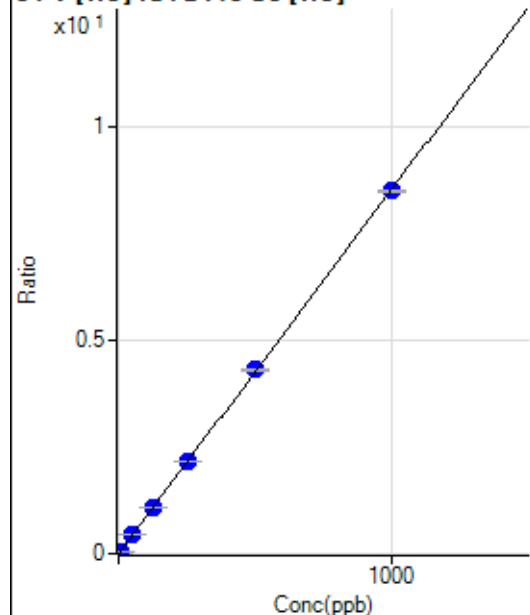
$$DL = 0.06897$$

$$BEC = 0.05062$$

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	1.11	0.0000	P	173.
2	☐	5.000	5.410	12839.11	0.0461	P	1.2
3	☐	50.000	51.242	117816.68	0.4363	P	0.3
4	☐	125.000	126.675	277020.39	1.0785	P	0.7
5	☐	250.000	253.481	527989.37	2.1582	P	0.5
6	☐	500.000	504.569	1065332.58	4.2960	P	0.8
7	☐	1000.000	996.572	2126965.79	8.4850	P	0.3
8	☐			893.37	0.0038	P	7.1

$$y = 0.0085 * x + 4.0525\text{E-}006$$

$$R = 1.0000$$

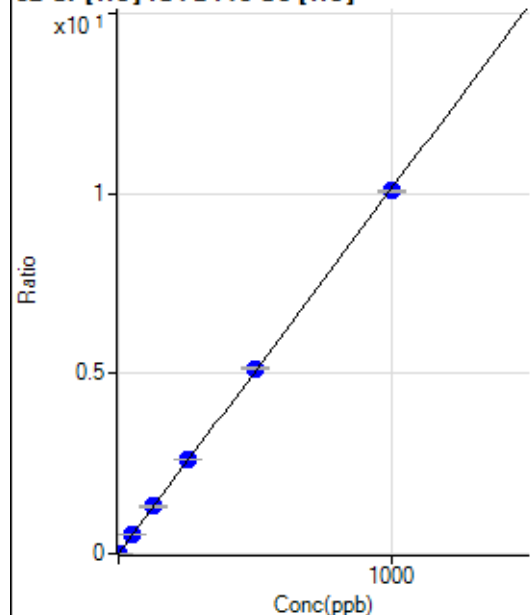
$$DL = 0.002473$$

$$BEC = 0.000476$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	865.59	0.0032	P	5.1
2	☐	2.000	2.074	6743.86	0.0242	P	3.3
3	☐	50.000	52.244	143951.53	0.5331	P	0.8
4	☐	125.000	129.294	337646.72	1.3146	P	1.2
5	☐	250.000	257.822	640552.66	2.6183	P	0.3
6	☐	500.000	506.785	1275525.48	5.1436	P	0.8
7	☐	1000.000	994.003	2528151.02	10.0856	P	0.7
8	☐			63778.36	0.2678	P	0.9

$$y = 0.0101 * x + 0.0032$$

$$R = 0.9999$$

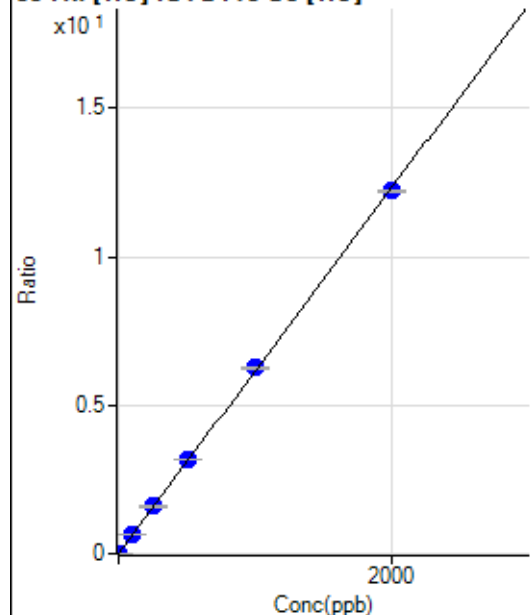
$$DL = 0.04802$$

$$BEC = 0.3116$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	27.78	0.0001	P	6.8
2	☐	1.000	1.046	1823.48	0.0065	P	3.4
3	☐	100.000	103.455	172010.07	0.6370	P	0.3
4	☐	250.000	258.518	408761.67	1.5915	P	0.8
5	☐	500.000	518.415	780743.05	3.1914	P	0.4
6	☐	1000.000	1019.106	1555694.61	6.2735	P	1.2
7	☐	2000.000	1984.606	3062457.04	12.2170	P	0.5
8	☐			9844.54	0.0413	P	0.8

$$y = 0.0062 * x + 1.0144E-004$$

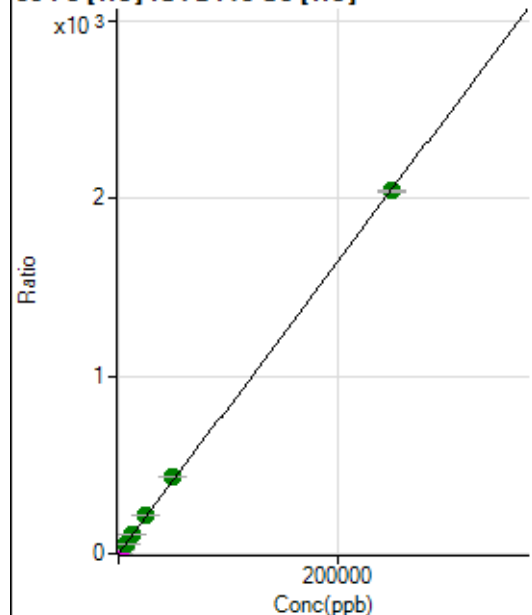
$$R = 0.9999$$

$$DL = 0.003381$$

$$BEC = 0.01648$$

Weight: <None>

Min Conc: 0

56 Fe [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	3858.01	0.0141	P	3.1
2	☐	50.000	56.558	133177.61	0.4778	P	0.7
3	☐	2500.000	2653.739	5879730.28	21.7712	M	2.2
4	☐	6250.000	6791.912	14305937.71	55.6987	A	0.5
5	☐	12500.000	13605.003	27291953.85	111.5569	A	0.6
6	☐	25000.000	26750.218	54390611.86	219.3300	A	0.5
7	☐	50000.000	52480.349	107857187.6	430.2826	A	0.5
8	☐	250000.00	249258.57	486678884.9	2,043.600	A	0.6

$$y = 0.0082 * x + 0.0141$$

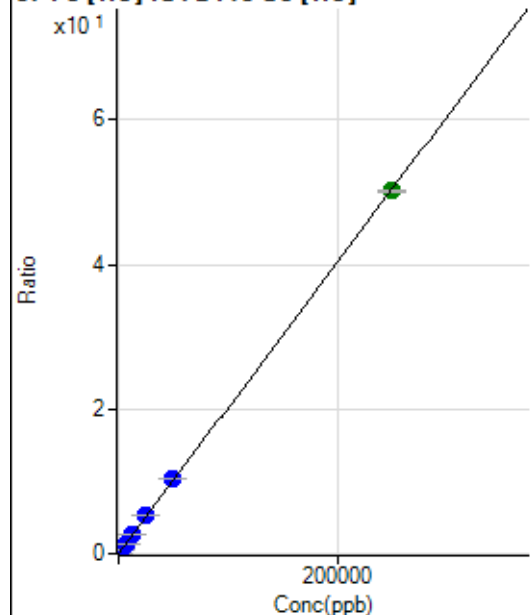
$$R = 0.9999$$

$$DL = 0.1606$$

$$BEC = 1.718$$

Weight: <None>

Min Conc: 0

57 Fe [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	270.38	0.0010	P	6.5
2	☐	50.000	59.599	3619.06	0.0130	P	6.4
3	☐	2500.000	2726.937	148457.47	0.5498	P	1.3
4	☐	6250.000	6818.853	352728.15	1.3733	P	0.6
5	☐	12500.000	13698.451	674701.82	2.7579	P	0.9
6	☐	25000.000	26742.045	1334880.31	5.3829	P	0.7
7	☐	50000.000	51972.214	2622208.33	10.4606	P	0.1
8	☐	250000.00	249354.93	11951438.69	50.1847	A	0.7

$$y = 2.0125E-004 * x + 9.8734E-004$$

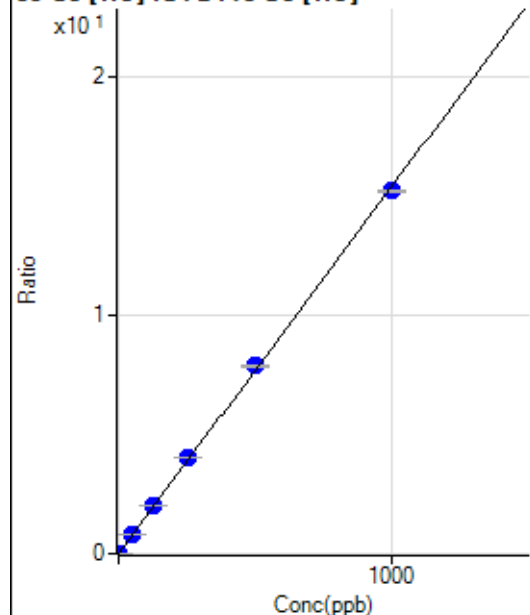
$$R = 1.0000$$

$$DL = 0.9589$$

$$BEC = 4.906$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	52.22	0.0002	P	35.1
2	☐	1.000	1.048	4547.43	0.0163	P	1.3
3	☐	50.000	53.033	220290.76	0.8158	P	0.5
4	☐	125.000	132.122	521916.67	2.0320	P	0.7
5	☐	250.000	263.251	990468.60	4.0486	P	0.7
6	☐	500.000	512.796	1955628.20	7.8862	P	0.8
7	☐	1000.000	989.248	3813503.00	15.2133	P	0.4
8	☐			6764.99	0.0284	P	1.7

$$y = 0.0154 * x + 1.9069E-004$$

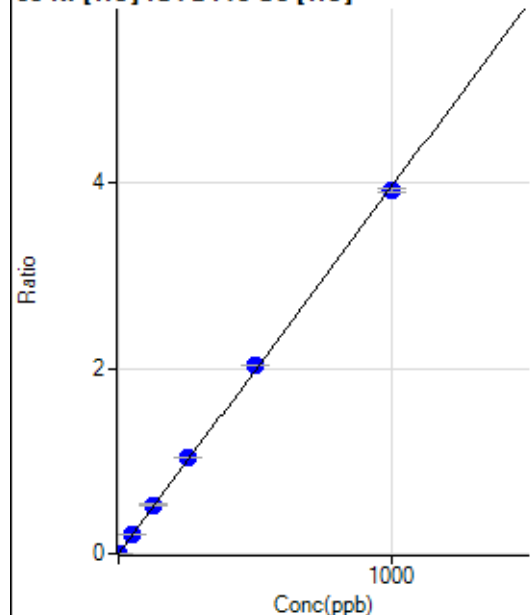
$$R = 0.9998$$

$$DL = 0.01307$$

$$BEC = 0.0124$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	20.0
2	☐	1.000	1.090	1218.96	0.0044	P	7.9
3	☐	50.000	53.645	57334.01	0.2123	P	0.6
4	☐	125.000	133.555	135732.97	0.5285	P	0.8
5	☐	250.000	263.364	254935.45	1.0421	P	0.7
6	☐	500.000	513.271	503600.99	2.0308	P	0.9
7	☐	1000.000	988.772	980608.39	3.9121	P	1.1
8	☐			17533.98	0.0736	P	1.1

$$y = 0.0040 * x + 6.0861E-005$$

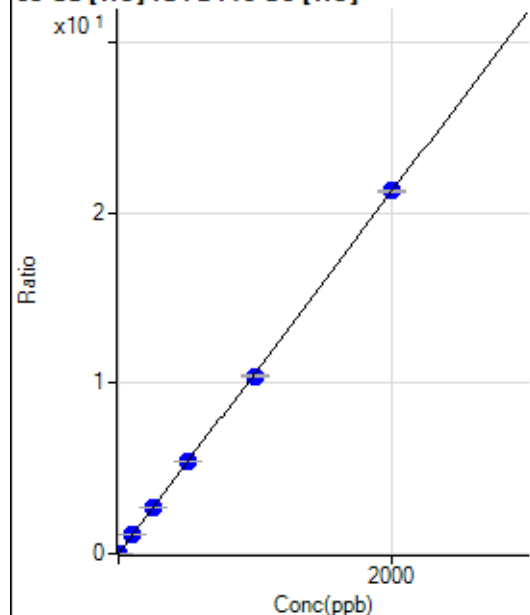
$$R = 0.9998$$

$$DL = 0.009214$$

$$BEC = 0.01538$$

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	468.90	0.0017	P	12.7
2	☐	2.000	2.005	6409.28	0.0230	P	2.2
3	☐	100.000	104.219	299235.57	1.1081	P	0.6
4	☐	250.000	257.213	701791.46	2.7324	P	0.8
5	☐	500.000	508.902	1322090.54	5.4044	P	0.4
6	☐	1000.000	981.578	2584541.07	10.4224	P	1.1
7	☐	2000.000	2005.873	5338379.71	21.2966	P	0.8
8	☐			7007.33	0.0294	P	0.9

$$y = 0.0106 * x + 0.0017$$

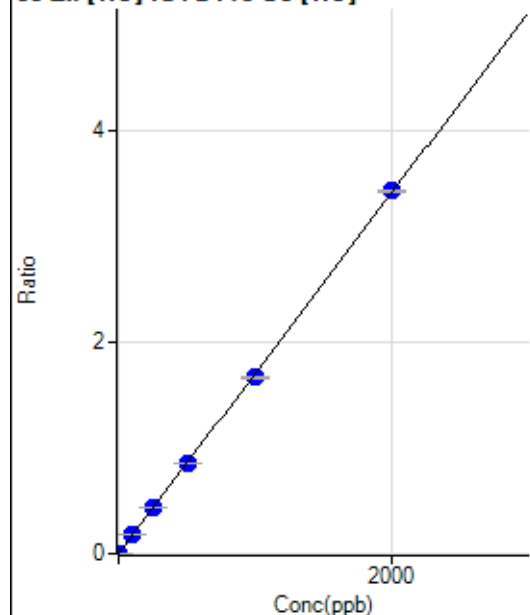
R = 0.9999

DL = 0.0613

BEC = 0.1613

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	663.36	0.0024	P	4.7
2	☐	2.000	2.324	1776.80	0.0064	P	2.5
3	☐	100.000	100.201	46666.68	0.1728	P	0.1
4	☐	250.000	251.778	110587.05	0.4306	P	0.8
5	☐	500.000	500.579	208833.45	0.8536	P	0.1
6	☐	1000.000	975.378	411904.74	1.6610	P	0.9
7	☐	2000.000	2011.934	858185.98	3.4237	P	0.7
8	☐			8900.64	0.0374	P	2.7

$$y = 0.0017 * x + 0.0024$$

R = 0.9999

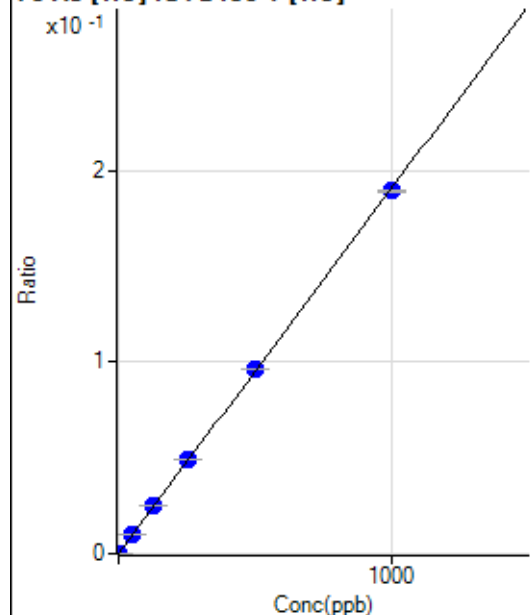
DL = 0.201

BEC = 1.425

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	16.66	0.0000	P	40.1
2	☐	1.000	0.990	301.86	0.0002	P	4.9
3	☐	50.000	53.021	14789.08	0.0101	P	0.3
4	☐	125.000	130.997	34850.95	0.0250	P	1.1
5	☐	250.000	257.417	66055.23	0.0491	P	0.2
6	☐	500.000	507.637	132085.94	0.0967	P	0.1
7	☐	1000.000	993.426	260480.66	0.1893	P	0.3
8	☐			90.74	0.0001	P	4.4

$$y = 1.9055\text{E-}004 * x + 1.1159\text{E-}005$$

$$R = 0.9999$$

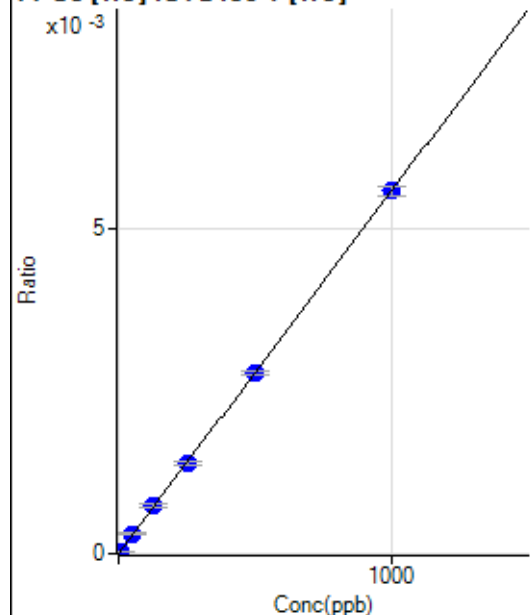
$$DL = 0.07038$$

$$BEC = 0.05857$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	5.000	4.601	38.89	0.0000	P	27.3
3	☐	50.000	54.760	447.79	0.0003	P	12.4
4	☐	125.000	132.698	1035.61	0.0007	P	6.5
5	☐	250.000	249.725	1880.15	0.0014	P	5.9
6	☐	500.000	497.713	3800.56	0.0028	P	2.1
7	☐	1000.000	1000.014	7694.38	0.0056	P	2.6
8	☐			5.56	0.0000	P	34.8

$$y = 5.5923\text{E-}006 * x + 0.0000\text{E+}000$$

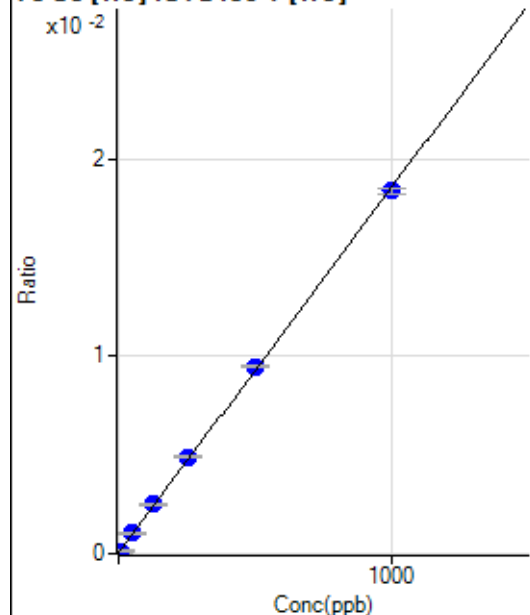
$$R = 1.0000$$

$$DL = 0$$

$$BEC = 0$$

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	60.50	0.0000	P	24.7
2	☐	5.000	5.697	220.37	0.0001	P	1.1
3	☐	50.000	53.375	1502.56	0.0010	P	4.8
4	☐	125.000	133.569	3504.16	0.0025	P	3.1
5	☐	250.000	261.343	6562.02	0.0049	P	1.8
6	☐	500.000	510.078	12936.69	0.0095	P	0.8
7	☐	1000.000	990.882	25273.28	0.0184	P	1.3
8	☐			69.14	0.0001	P	14.9

$$y = 1.8496E-005 * x + 4.0520E-005$$

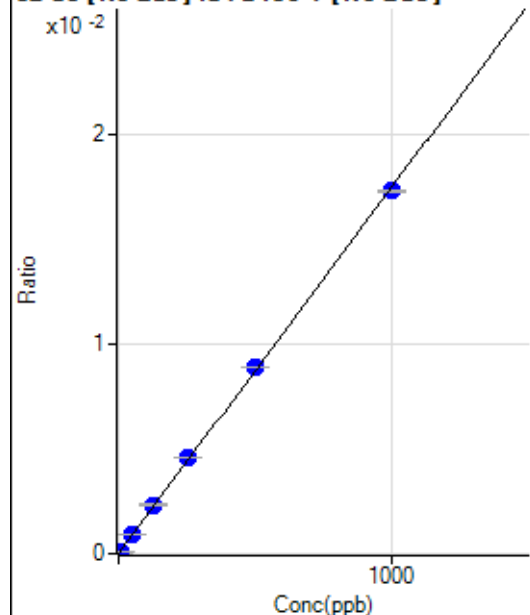
$$R = 0.9998$$

$$DL = 1.623$$

$$BEC = 2.191$$

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	85.31	0.0000	P	51.2
2	☐	5.000	5.344	1014.20	0.0001	P	7.6
3	☐	50.000	52.821	9022.50	0.0009	P	1.2
4	☐	125.000	132.951	22030.03	0.0023	P	1.3
5	☐	250.000	261.846	41279.82	0.0046	P	0.5
6	☐	500.000	509.832	81576.83	0.0089	P	0.3
7	☐	1000.000	990.986	156857.64	0.0173	P	0.6
8	☐			243.38	0.0000	P	49.4

$$y = 1.7443E-005 * x + 8.7086E-006$$

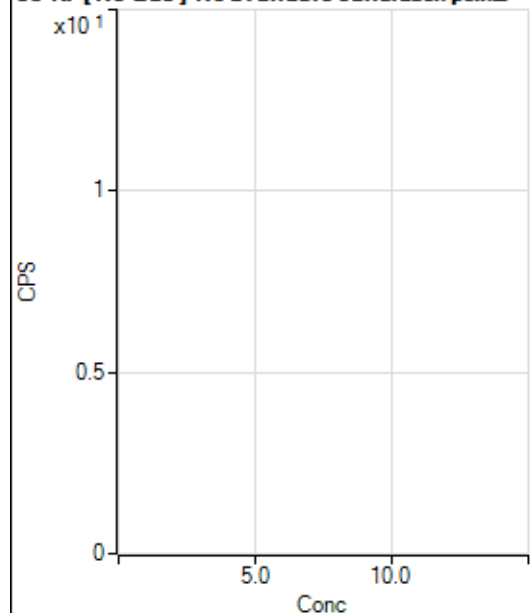
$$R = 0.9998$$

$$DL = 0.7668$$

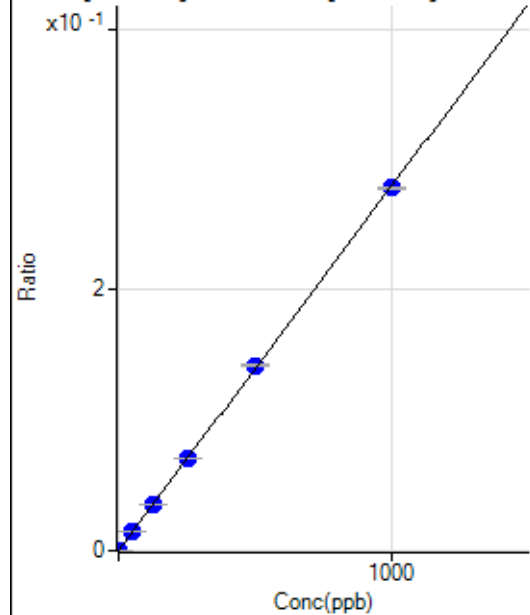
$$BEC = 0.4993$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			667.80		P	4.8
2	☐			701.14		P	3.6
3	☐			651.14		P	3.5
4	☐			647.81		P	15.0
5	☐			620.02		P	6.0
6	☐			611.13		P	6.1
7	☐			584.47		P	2.6
8	☐			586.69		P	12.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1000.07	0.0001	P	10.7
2	☐	1.000	1.046	3922.91	0.0004	P	5.1
3	☐	50.000	51.342	140040.86	0.0144	P	1.3
4	☐	125.000	127.596	338184.86	0.0357	P	0.7
5	☐	250.000	253.148	638580.56	0.0708	P	0.7
6	☐	500.000	506.863	1297938.54	0.1416	P	0.8
7	☐	1000.000	995.390	2521827.10	0.2780	P	0.7
8	☐			10876.70	0.0013	P	1.4

$$y = 2.7923\text{E-}004 * x + 1.0242\text{E-}004$$

$$R = 1.0000$$

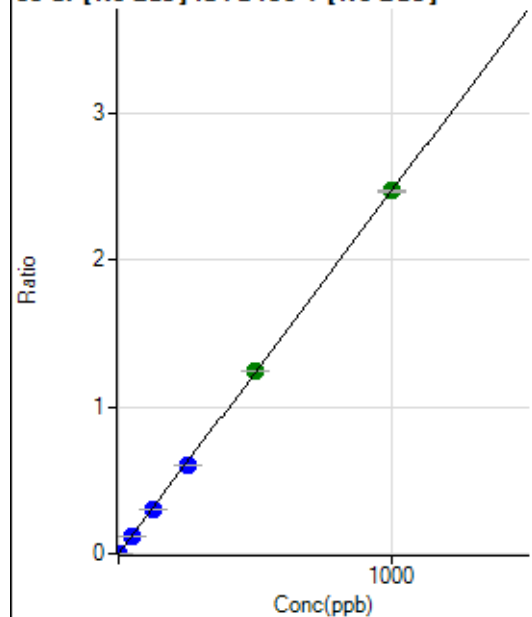
$$DL = 0.1174$$

$$BEC = 0.3668$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.00	0.0000	P	50.2
2	☐	1.000	1.015	25014.29	0.0025	P	0.7
3	☐	50.000	50.015	1197762.32	0.1235	P	0.6
4	☐	125.000	123.770	2891808.57	0.3055	P	0.5
5	☐	250.000	244.575	5446462.88	0.6038	P	0.3
6	☐	500.000	502.291	11363249.13	1.2400	A	0.2
7	☐	1000.000	1000.364	22398112.48	2.4695	A	0.7
8	☐			87843.28	0.0102	P	0.5

$$y = 0.0025 * x + 7.7207E-006$$

$$R = 1.0000$$

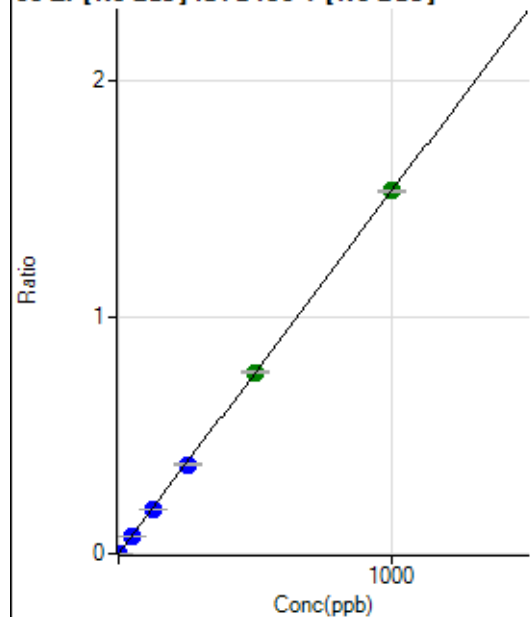
$$DL = 0.004712$$

$$BEC = 0.003128$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	541.70	0.0001	P	9.1
2	☐	1.000	0.908	14418.85	0.0014	P	3.9
3	☐	50.000	49.586	739063.51	0.0762	P	0.9
4	☐	125.000	124.077	1803728.40	0.1906	P	0.1
5	☐	250.000	246.441	3414133.02	0.3785	P	0.7
6	☐	500.000	500.298	7040563.18	0.7683	A	0.5
7	☐	1000.000	1000.877	13939905.52	1.5369	A	0.3
8	☐			3244.94	0.0004	P	6.9

$$y = 0.0015 * x + 5.5503E-005$$

$$R = 1.0000$$

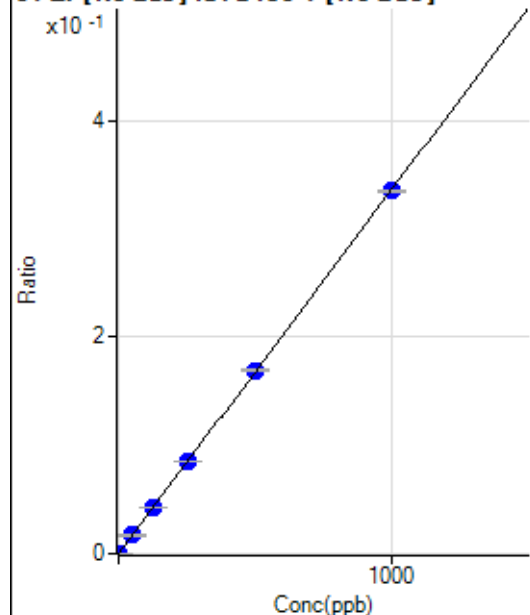
$$DL = 0.009857$$

$$BEC = 0.03615$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.56	0.0000	P	15.0
2	☐	1.000	0.922	3211.61	0.0003	P	4.8
3	☐	50.000	50.191	163570.82	0.0169	P	0.6
4	☐	125.000	127.118	404039.72	0.0427	P	0.5
5	☐	250.000	253.621	768208.97	0.0852	P	0.4
6	☐	500.000	503.034	1547737.66	0.1689	P	0.8
7	☐	1000.000	997.304	3036846.53	0.3348	P	0.5
8	☐			727.83	0.0001	P	3.5

$$y = 3.3572\text{E-}004 * x + 1.3391\text{E-}005$$

$$R = 1.0000$$

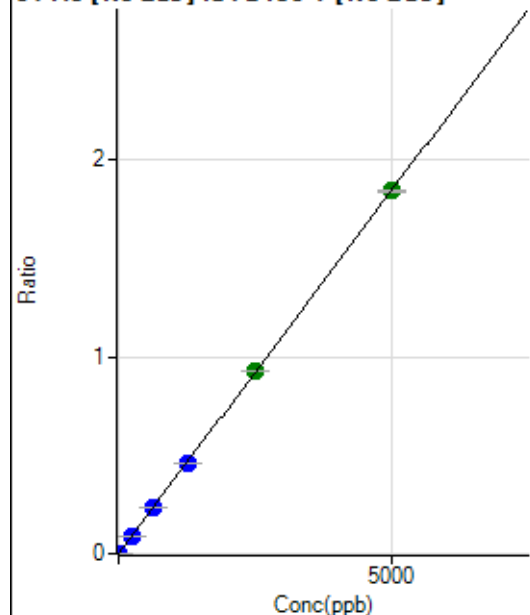
$$DL = 0.01798$$

$$BEC = 0.03989$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	247.23	0.0000	P	23.5
2	☐	5.000	4.884	18173.30	0.0018	P	2.1
3	☐	250.000	248.234	888352.20	0.0916	P	0.7
4	☐	625.000	624.550	2180466.93	0.2304	P	0.4
5	☐	1250.000	1235.549	4111140.41	0.4557	P	0.1
6	☐	2500.000	2513.104	8494647.15	0.9269	A	0.5
7	☐	5000.000	4997.205	16717352.11	1.8432	A	0.6
8	☐			11593.95	0.0013	P	3.4

$$y = 3.6883\text{E-}004 * x + 2.5381\text{E-}005$$

$$R = 1.0000$$

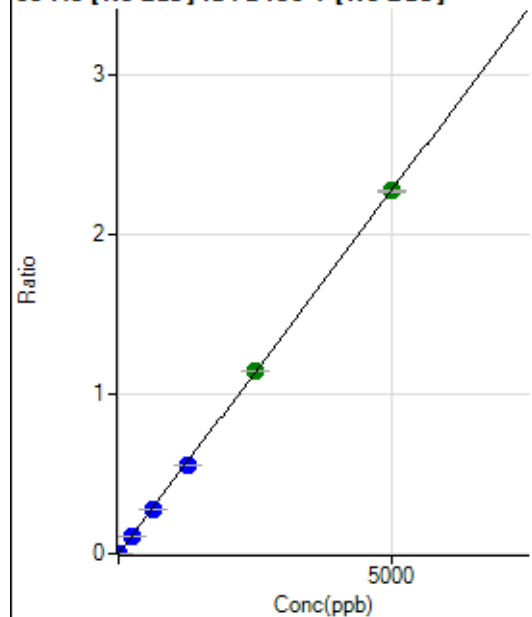
$$DL = 0.04843$$

$$BEC = 0.06881$$

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	102.78	0.0000	P	11.5
2	☐	5.000	5.104	23205.80	0.0023	P	1.4
3	☐	250.000	248.530	1096777.68	0.1131	P	0.7
4	☐	625.000	620.345	2671031.88	0.2822	P	0.6
5	☐	1250.000	1225.009	5027168.04	0.5573	P	0.1
6	☐	2500.000	2520.468	10507686.35	1.1466	A	0.5
7	☐	5000.000	4996.669	20616615.39	2.2731	A	0.3
8	☐			17881.26	0.0021	P	4.1

$$y = 4.5491\text{E-}004 * x + 1.0518\text{E-}005$$

$$R = 1.0000$$

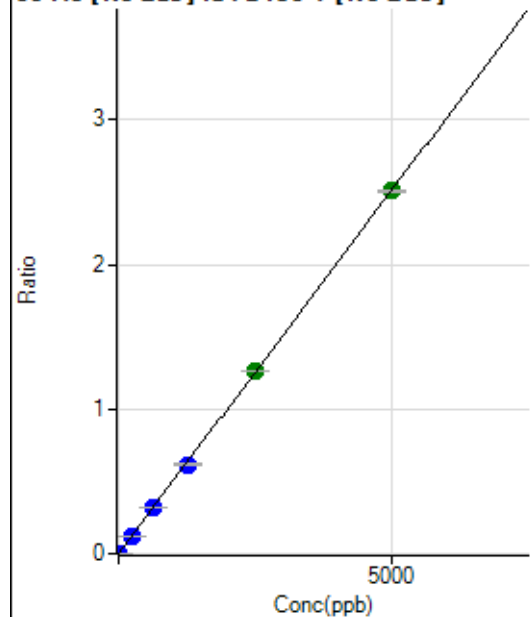
$$DL = 0.007961$$

$$BEC = 0.02312$$

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	144.45	0.0000	P	7.4
2	☐	5.000	5.035	25298.29	0.0025	P	1.6
3	☐	250.000	249.410	1214764.26	0.1252	P	0.4
4	☐	625.000	625.628	2973030.32	0.3141	P	0.3
5	☐	1250.000	1230.710	5574094.92	0.6179	P	0.1
6	☐	2500.000	2517.692	11584025.69	1.2641	A	0.6
7	☐	5000.000	4995.928	22750210.06	2.5083	A	0.2
8	☐			27964.53	0.0032	P	1.4

$$y = 5.0207\text{E-}004 * x + 1.4798\text{E-}005$$

$$R = 1.0000$$

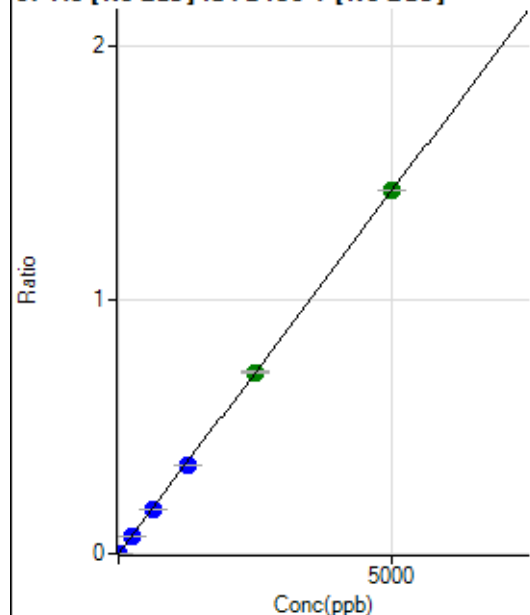
$$DL = 0.006504$$

$$BEC = 0.02947$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0000	P	52.0
2	☐	5.000	5.039	14352.21	0.0014	P	3.4
3	☐	250.000	246.027	680686.28	0.0702	P	0.6
4	☐	625.000	617.830	1667839.49	0.1762	P	0.3
5	☐	1250.000	1224.812	3151338.22	0.3493	P	0.4
6	☐	2500.000	2505.118	6547789.38	0.7145	A	0.6
7	☐	5000.000	5004.833	12947028.59	1.4275	A	0.1
8	☐			11240.92	0.0013	P	0.2

$$y = 2.8521E-004 * x + 5.6635E-006$$

$$R = 1.0000$$

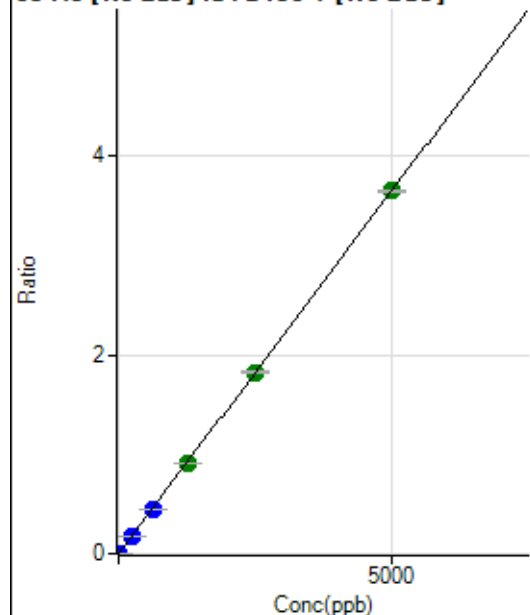
$$DL = 0.03097$$

$$BEC = 0.01986$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.01	0.0000	P	14.5
2	☐	5.000	5.006	36453.06	0.0037	P	0.5
3	☐	250.000	247.680	1751355.47	0.1806	P	0.6
4	☐	625.000	618.042	4263881.91	0.4505	P	0.4
5	☐	1250.000	1247.319	8201784.90	0.9092	A	0.4
6	☐	2500.000	2497.784	16684731.62	1.8207	A	1.0
7	☐	5000.000	5002.764	33074916.71	3.6466	A	0.4
8	☐			28571.11	0.0033	P	2.2

$$y = 7.2892E-004 * x + 1.5360E-005$$

$$R = 1.0000$$

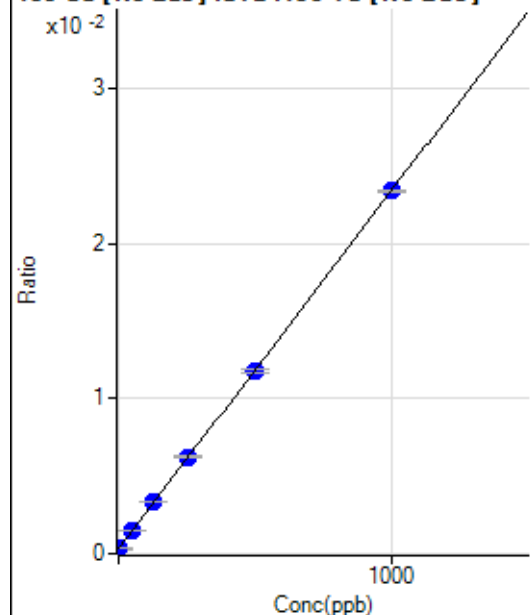
$$DL = 0.009146$$

$$BEC = 0.02107$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	3167.17	0.0003	P	4.2
2	☐	1.000	1.435	3595.06	0.0003	P	2.5
3	☐	50.000	52.435	15392.31	0.0015	P	2.2
4	☐	125.000	132.499	34245.19	0.0034	P	0.5
5	☐	250.000	256.159	61227.58	0.0062	P	1.0
6	☐	500.000	496.259	118545.55	0.0118	P	1.3
7	☐	1000.000	999.271	231881.52	0.0234	P	0.5
8	☐			2844.85	0.0003	P	3.6

$$y = 2.3112\text{E-}005 * x + 3.1433\text{E-}004$$

$$R = 0.9999$$

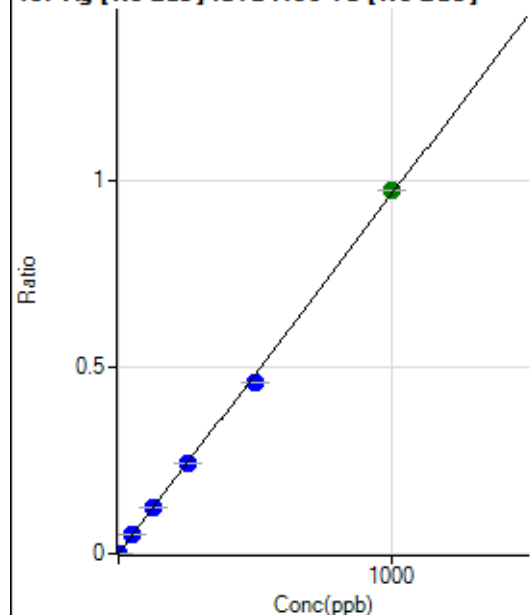
$$DL = 1.695$$

$$BEC = 13.6$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	69.45	0.0000	P	11.9
2	☐	1.000	1.132	11335.57	0.0011	P	3.0
3	☐	50.000	53.867	522860.06	0.0518	P	0.8
4	☐	125.000	130.015	1268654.82	0.1251	P	0.6
5	☐	250.000	251.624	2377462.25	0.2421	P	1.1
6	☐	500.000	477.043	4617272.24	0.4590	P	0.7
7	☐	1000.000	1010.252	9627623.39	0.9720	A	0.1
8	☐			1152.87	0.0001	P	4.5

$$y = 9.6211\text{E-}004 * x + 6.8846\text{E-}006$$

$$R = 0.9996$$

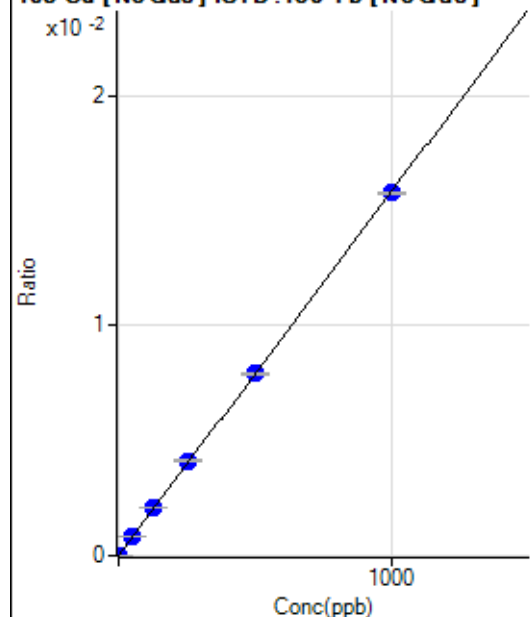
$$DL = 0.002559$$

$$BEC = 0.007156$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	113.
2	☐	1.000	0.874	154.17	0.0000	P	17.6
3	☐	50.000	52.127	8323.44	0.0008	P	3.7
4	☐	125.000	132.019	21178.62	0.0021	P	2.1
5	☐	250.000	260.261	40420.22	0.0041	P	2.2
6	☐	500.000	500.010	79543.72	0.0079	P	0.5
7	☐	1000.000	996.446	156065.07	0.0158	P	0.6
8	☐			36.11	0.0000	P	29.2

$$y = 1.5811\text{E-}005 * x + 1.0985\text{E-}006$$

$$R = 0.9999$$

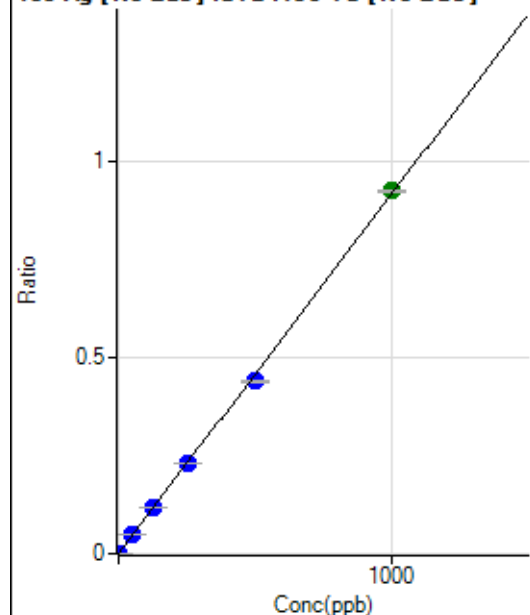
$$DL = 0.2358$$

$$BEC = 0.06948$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.55	0.0000	P	13.8
2	☐	1.000	1.090	10382.01	0.0010	P	1.9
3	☐	50.000	53.736	497294.87	0.0493	P	1.2
4	☐	125.000	129.276	1202878.51	0.1186	P	0.7
5	☐	250.000	252.142	2271715.22	0.2313	P	1.3
6	☐	500.000	479.582	4426386.69	0.4400	P	0.4
7	☐	1000.000	1008.952	9168891.61	0.9257	A	0.2
8	☐			869.51	0.0001	P	10.2

$$y = 9.1745\text{E-}004 * x + 3.0281\text{E-}006$$

$$R = 0.9997$$

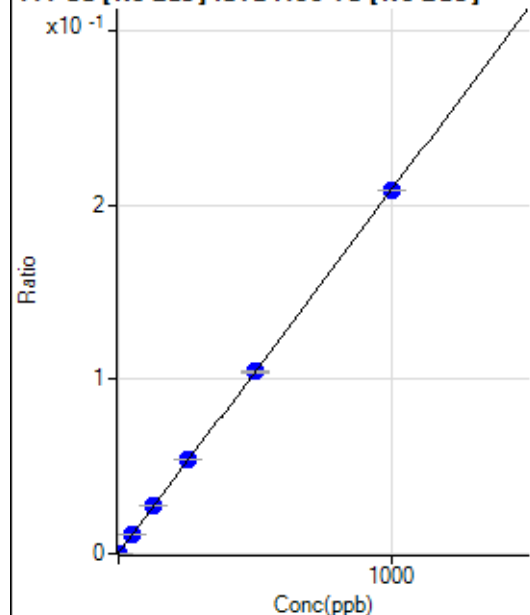
$$DL = 0.00137$$

$$BEC = 0.003301$$

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	2227.30	0.0002	P	4.2
2	☐	1.000	1.090	4635.22	0.0004	P	1.5
3	☐	50.000	53.452	114478.30	0.0114	P	1.6
4	☐	125.000	131.036	278938.90	0.0275	P	0.3
5	☐	250.000	257.488	528651.76	0.0538	P	1.1
6	☐	500.000	499.352	1048165.79	0.1042	P	0.6
7	☐	1000.000	997.525	2059447.93	0.2079	P	0.2
8	☐			2357.80	0.0003	P	3.2

$$y = 2.0821\text{E-}004 * x + 2.2105\text{E-}004$$

$$R = 1.0000$$

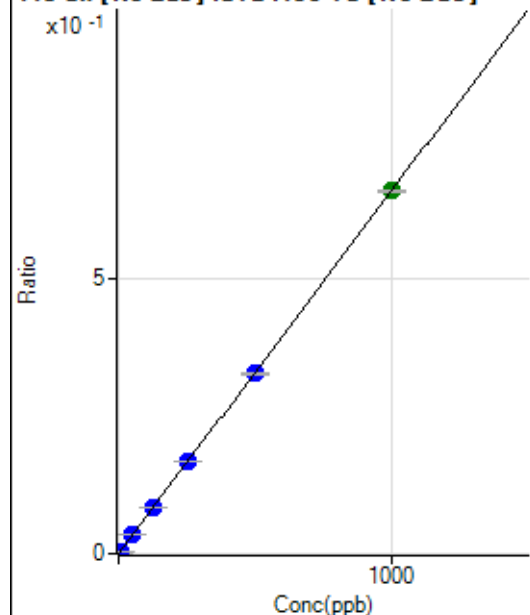
$$DL = 0.1325$$

$$BEC = 1.062$$

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	1077.87	0.0001	P	9.6
2	☐	5.000	5.224	36668.26	0.0035	P	1.6
3	☐	50.000	52.259	347889.53	0.0345	P	1.1
4	☐	125.000	128.889	861124.05	0.0849	P	0.5
5	☐	250.000	254.325	1644335.04	0.1674	P	1.2
6	☐	500.000	496.689	3288733.12	0.3269	P	0.6
7	☐	1000.000	999.974	6518071.76	0.6581	A	0.5
8	☐			4887.17	0.0005	P	0.9

$$y = 6.5796\text{E-}004 * x + 1.0692\text{E-}004$$

$$R = 1.0000$$

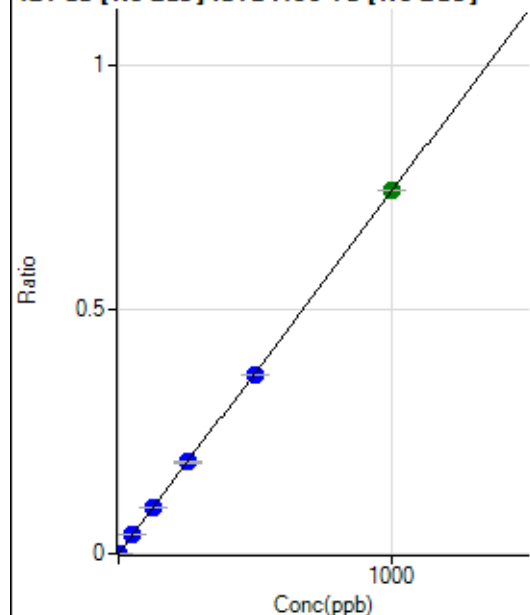
$$DL = 0.04683$$

$$BEC = 0.1625$$

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	44.45	0.0000	P	56.3
2	☐	2.000	2.015	15473.04	0.0015	P	1.1
3	☐	50.000	51.480	384386.56	0.0381	P	0.8
4	☐	125.000	127.757	959039.59	0.0946	P	0.3
5	☐	250.000	252.549	1835727.49	0.1869	P	1.0
6	☐	500.000	494.267	3680410.11	0.3658	P	0.3
7	☐	1000.000	1001.810	7344708.67	0.7415	A	0.1
8	☐			6646.31	0.0007	P	11.3

$$y = 7.4015\text{E-}004 * x + 4.3821\text{E-}006$$

$$R = 1.0000$$

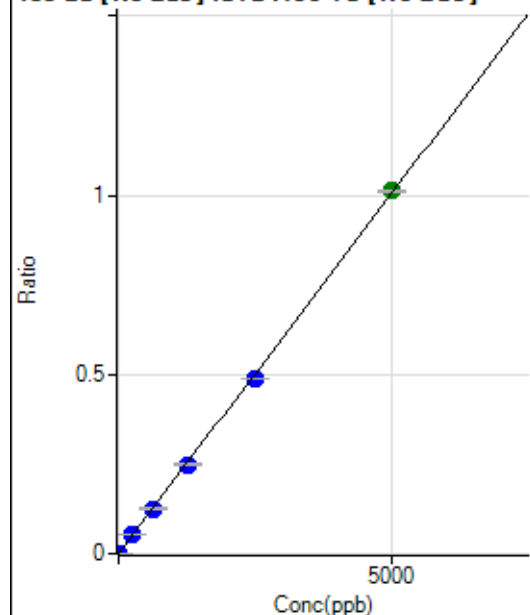
$$DL = 0.01001$$

$$BEC = 0.005921$$

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	16.67	0.0000	P	48.6
2	☐	10.000	10.342	21500.79	0.0021	P	2.7
3	☐	250.000	255.343	517193.82	0.0513	P	0.9
4	☐	625.000	627.078	1277094.96	0.1259	P	0.6
5	☐	1250.000	1239.985	2445277.77	0.2490	P	1.2
6	☐	2500.000	2426.622	4902136.83	0.4873	P	0.2
7	☐	5000.000	5038.665	10022087.46	1.0118	A	0.5
8	☐			1475.15	0.0002	P	5.0

$$y = 2.0081\text{E-}004 * x + 1.6448\text{E-}006$$

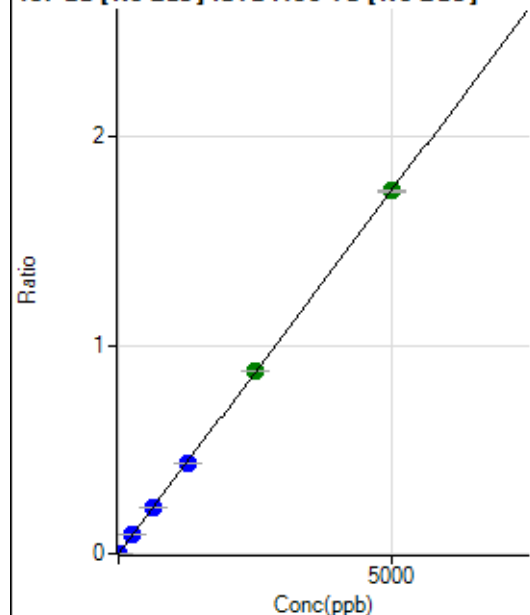
$$R = 0.9998$$

$$DL = 0.01195$$

$$BEC = 0.008191$$

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	30.56	0.0000	P	59.0
2	☐	10.000	10.489	37852.61	0.0037	P	1.0
3	☐	250.000	256.068	900317.23	0.0893	P	1.2
4	☐	625.000	628.234	2220887.44	0.2190	P	0.1
5	☐	1250.000	1235.397	4229046.49	0.4306	P	0.4
6	☐	2500.000	2509.772	8801019.38	0.8748	A	0.1
7	☐	5000.000	4998.056	17256587.19	1.7422	A	0.3
8	☐			2500.32	0.0003	P	5.6

$$y = 3.4857E-004 * x + 3.0584E-006$$

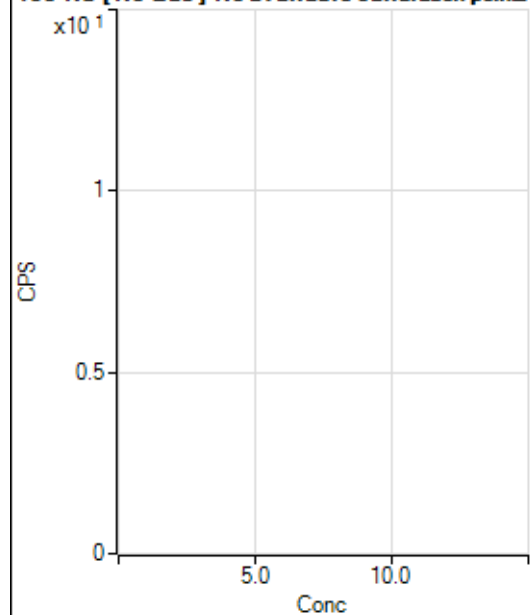
$$R = 1.0000$$

$$DL = 0.01553$$

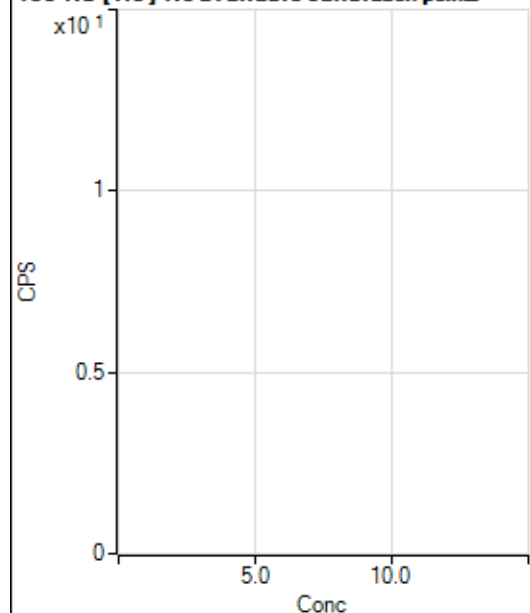
$$BEC = 0.008774$$

Weight: <None>

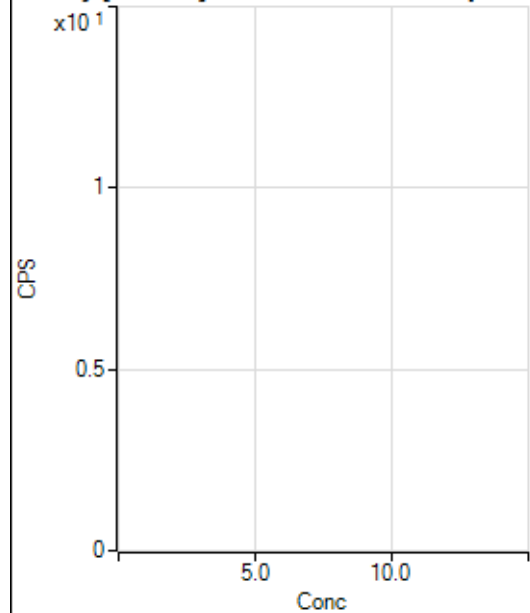
Min Conc: 0

150 Nd [No Gas] No available calibration points

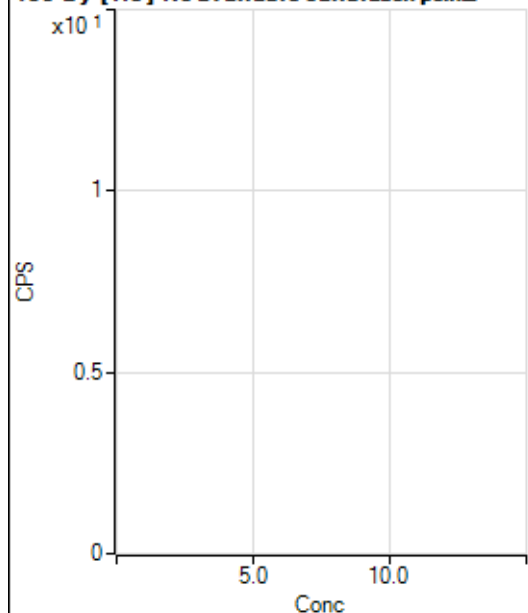
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			8.89		P	86.6
2	☐			6.67		P	100.
3	☐			42.22		P	48.2
4	☐			84.45		P	58.2
5	☐			177.79		P	11.5
6	☐			395.58		P	3.5
7	☐			593.37		P	8.8
8	☐			104.45		P	14.7

150 Nd [He] No available calibration points

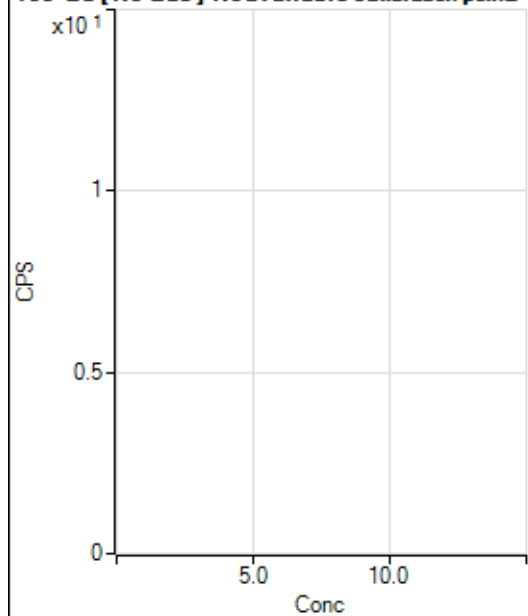
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	17.3
2	☐			8.89		P	78.1
3	☐			10.00		P	33.3
4	☐			30.00		P	29.4
5	☐			35.55		P	37.9
6	☐			87.78		P	5.8
7	☐			66.67		P	10.0
8	☐			40.00		P	0.0

156 Dy [No Gas] No available calibration points

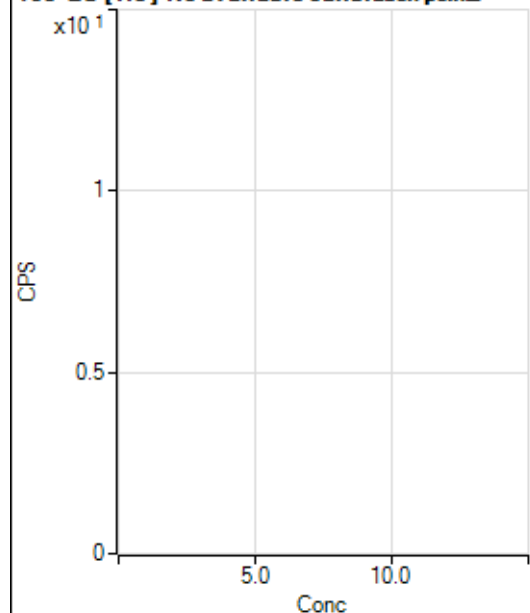
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			16.67		P	132.
2	☐			16.67		P	50.0
3	☐			16.67		P	50.0
4	☐			36.11		P	48.0
5	☐			55.56		P	31.2
6	☐			119.45		P	22.4
7	☐			147.23		P	31.2
8	☐			30.56		P	56.8

156 Dy [He] No available calibration points

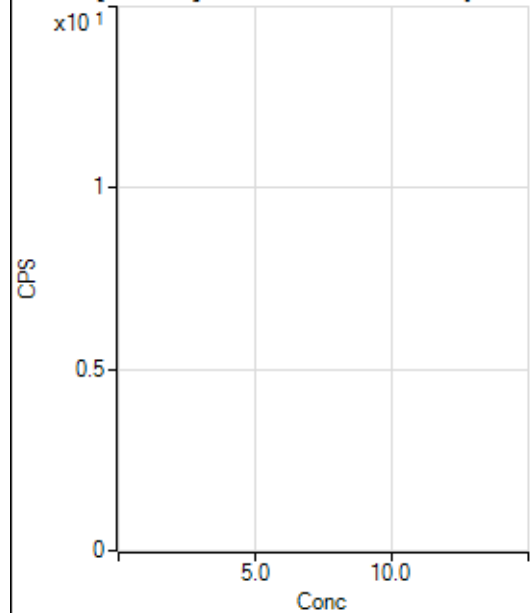
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			20.00		P	28.9
2	☐			23.33		P	28.6
3	☐			31.11		P	27.0
4	☐			57.78		P	34.8
5	☐			81.11		P	25.1
6	☐			153.34		P	2.2
7	☐			223.34		P	10.3
8	☐			30.00		P	0.0

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

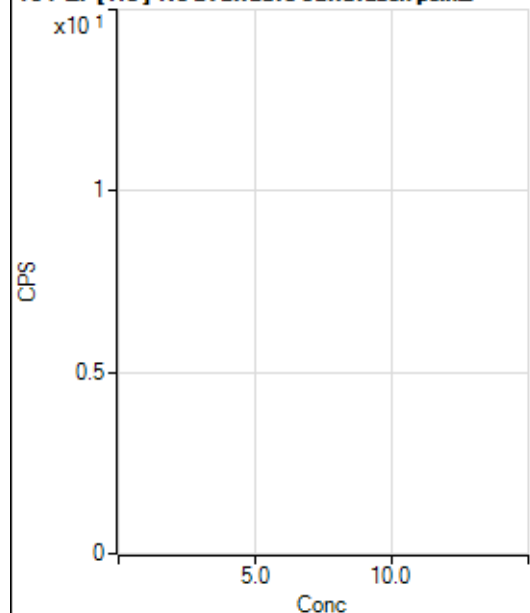
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			102.78		P	16.9
2	☐			72.22		P	29.0
3	☐			88.89		P	46.2
4	☐			105.56		P	24.1
5	☐			102.78		P	24.8
6	☐			141.67		P	17.6
7	☐			102.78		P	12.4
8	☐			91.67		P	15.8

160 Gd [He] No available calibration points

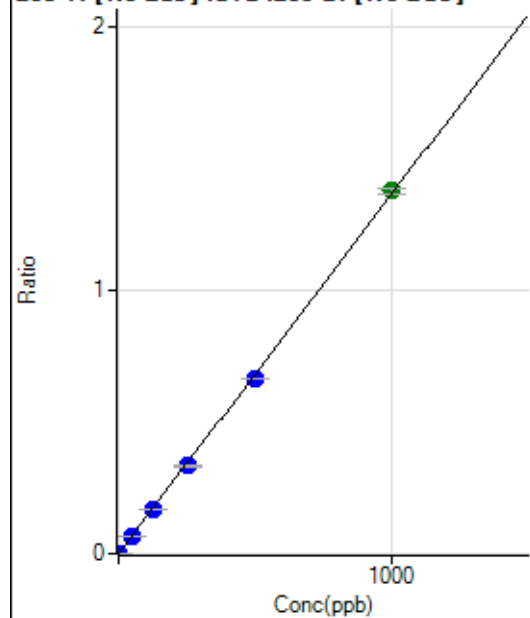
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			222.23		P	16.7
2	☐			212.23		P	7.9
3	☐			216.67		P	5.5
4	☐			242.23		P	5.2
5	☐			211.12		P	6.4
6	☐			220.01		P	15.4
7	☐			211.12		P	7.9
8	☐			205.56		P	15.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			61.11		P	55.1
2	☐			77.78		P	22.3
3	☐			91.67		P	36.4
4	☐			72.23		P	13.3
5	☐			77.78		P	16.4
6	☐			102.78		P	46.1
7	☐			88.89		P	23.6
8	☐			77.78		P	34.4

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			51.11		P	37.1
2	☐			55.56		P	33.0
3	☐			53.33		P	22.5
4	☐			73.33		P	12.0
5	☐			52.22		P	51.6
6	☐			80.00		P	22.1
7	☐			55.55		P	12.5
8	☐			61.11		P	36.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	463.92	0.0001	P	11.2
2	☐	1.000	0.969	8319.60	0.0014	P	5.0
3	☐	50.000	48.861	389017.89	0.0667	P	0.5
4	☐	125.000	122.026	978784.52	0.1665	P	0.7
5	☐	250.000	243.650	1909657.75	0.3325	P	0.2
6	☐	500.000	484.714	3808356.94	0.6613	P	0.0
7	☐	1000.000	1009.659	7591253.99	1.3774	A	1.5
8	☐			1836.32	0.0004	P	3.8

$$y = 0.0014 * x + 7.9147E-005$$

$$R = 0.9998$$

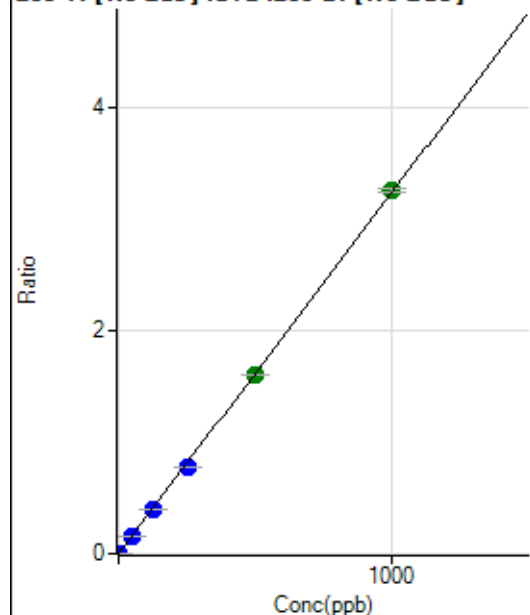
$$DL = 0.01953$$

$$BEC = 0.05802$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	736.16	0.0001	P	8.9
2	☐	1.000	0.992	19773.79	0.0033	P	0.9
3	☐	50.000	49.001	922601.98	0.1583	P	0.1
4	☐	125.000	121.167	2298902.61	0.3912	P	0.9
5	☐	250.000	238.548	4422784.56	0.7700	P	0.2
6	☐	500.000	495.049	9201376.68	1.5978	A	0.4
7	☐	1000.000	1005.868	17891533.39	3.2464	A	1.1
8	☐			3778.48	0.0008	P	11.3

$$y = 0.0032 * x + 1.2567E-004$$

$$R = 0.9999$$

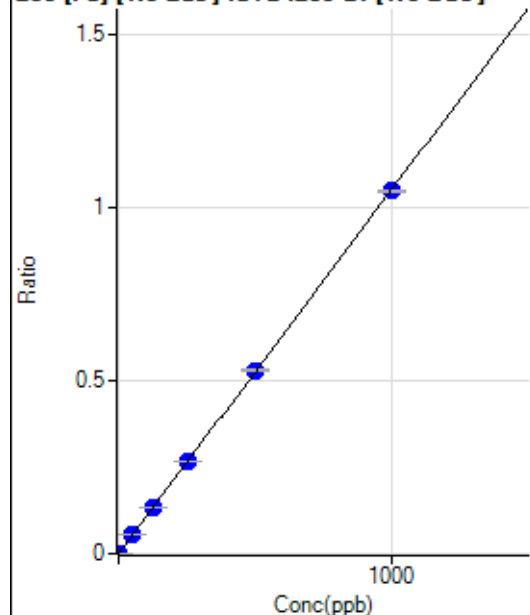
$$DL = 0.01045$$

$$BEC = 0.03894$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	640.77	0.0001	P	15.1
2	☐	1.000	0.999	6896.44	0.0012	P	1.8
3	☐	50.000	51.423	316127.92	0.0542	P	0.3
4	☐	125.000	127.736	790727.40	0.1345	P	0.8
5	☐	250.000	253.173	1531134.06	0.2666	P	0.1
6	☐	500.000	502.827	3048206.12	0.5293	P	0.9
7	☐	1000.000	997.380	5785805.45	1.0498	P	0.7
8	☐			18606.00	0.0039	P	0.1

$$y = 0.0011 * x + 1.0947E-004$$

$$R = 1.0000$$

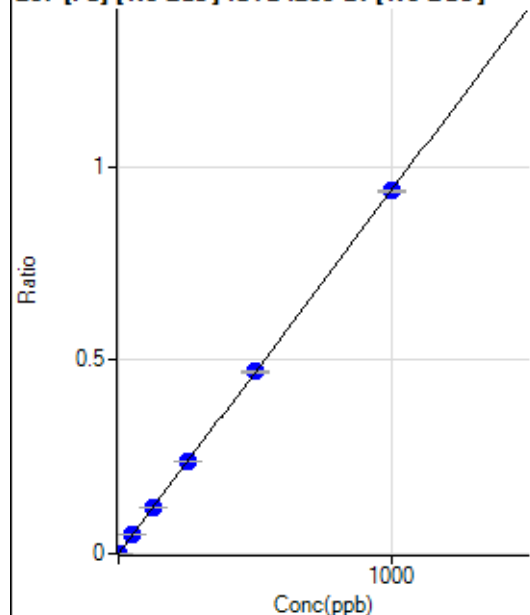
$$DL = 0.04711$$

$$BEC = 0.104$$

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	683.37	0.0001	P	1.5
2	☐	1.000	1.013	6349.85	0.0011	P	2.6
3	☐	50.000	50.626	278012.35	0.0477	P	0.7
4	☐	125.000	126.575	699746.70	0.1191	P	1.0
5	☐	250.000	252.582	1364107.58	0.2375	P	0.5
6	☐	500.000	501.122	2712691.56	0.4710	P	0.4
7	☐	1000.000	998.565	5172504.86	0.9385	P	0.4
8	☐			16805.50	0.0036	P	1.6

$$y = 9.3975\text{E-}004 * x + 1.1653\text{E-}004$$

$$R = 1.0000$$

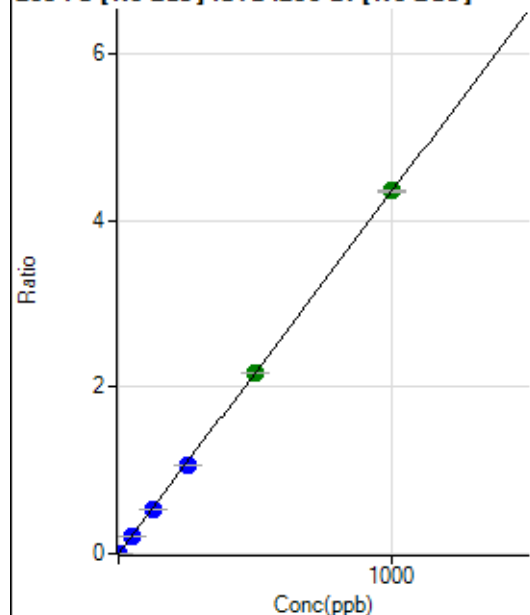
$$DL = 0.005701$$

$$BEC = 0.124$$

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	2416.82	0.0004	P	9.3
2	☐	1.000	0.978	27724.91	0.0047	P	1.7
3	☐	50.000	49.688	1262514.99	0.2166	P	0.2
4	☐	125.000	123.623	3163183.15	0.5382	P	0.7
5	☐	250.000	245.042	6125656.82	1.0665	P	0.6
6	☐	500.000	498.751	12497882.78	2.1702	A	0.3
7	☐	1000.000	1002.051	24028178.09	4.3598	A	0.8
8	☐			75126.92	0.0159	P	0.8

$$y = 0.0044 * x + 4.1257\text{E-}004$$

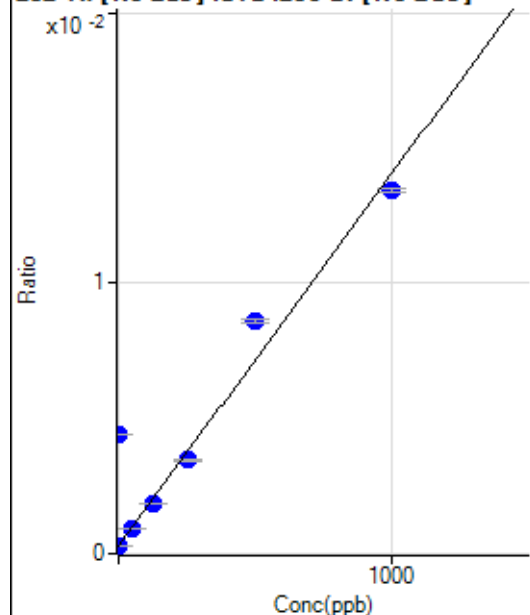
$$R = 1.0000$$

$$DL = 0.02649$$

$$BEC = 0.09483$$

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	1720.53	0.0003	P	3.1
2	☐	1.000	299.169	26197.16	0.0044	P	0.4
3	☐	50.000	46.762	5460.56	0.0009	P	4.5
4	☐	125.000	113.296	10886.25	0.0019	P	0.7
5	☐	250.000	229.616	19832.16	0.0035	P	1.4
6	☐	500.000	604.340	49577.72	0.0086	P	1.1
7	☐	1000.000	954.253	73983.02	0.0134	P	0.9
8	☐			1822.40	0.0004	P	5.1

$$y = 1.3760\text{E-}005 * x + 2.9340\text{E-}004$$

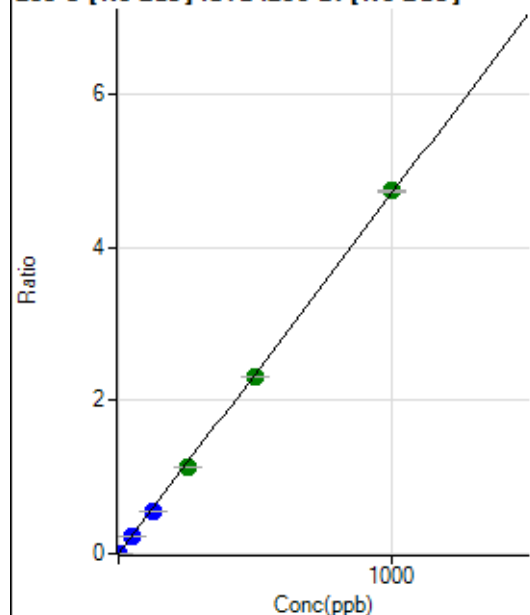
$$R = 0.9437$$

$$DL = 2.014$$

$$BEC = 21.32$$

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	2119.72	0.0004	P	4.0
2	☐	1.000	0.918	27797.51	0.0047	P	2.5
3	☐	50.000	46.536	1278122.21	0.2193	P	0.2
4	☐	125.000	116.968	3235611.40	0.5506	P	0.1
5	☐	250.000	240.744	6506379.18	1.1328	A	0.5
6	☐	500.000	490.414	13286428.16	2.3071	A	0.2
7	☐	1000.000	1008.285	26140749.37	4.7431	A	0.3
8	☐			3759.05	0.0008	P	1.3

$$y = 0.0047 * x + 3.6154\text{E-}004$$

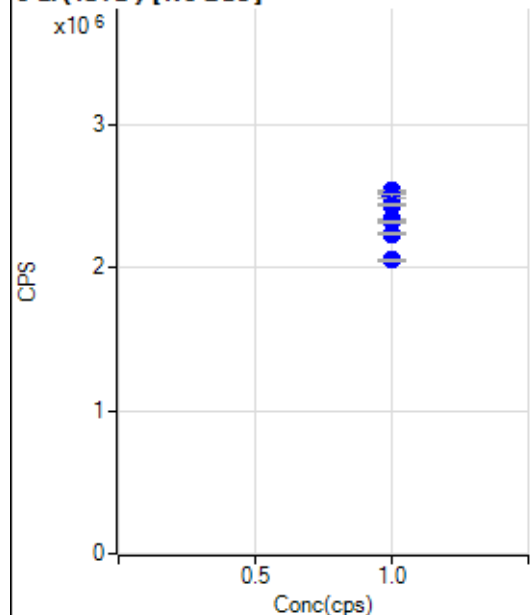
$$R = 0.9999$$

$$DL = 0.009202$$

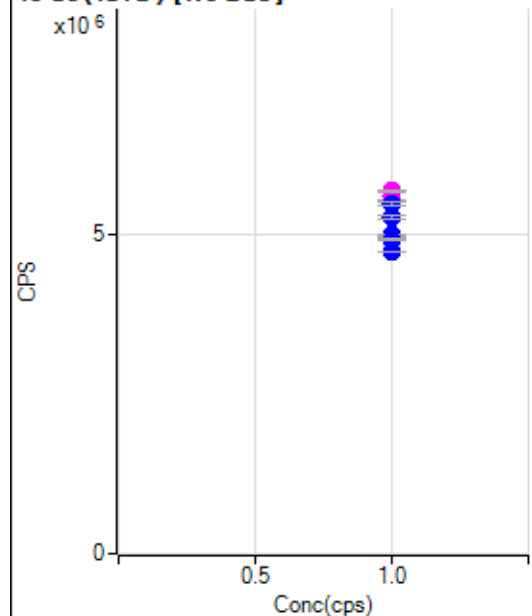
$$BEC = 0.07686$$

Weight: <None>

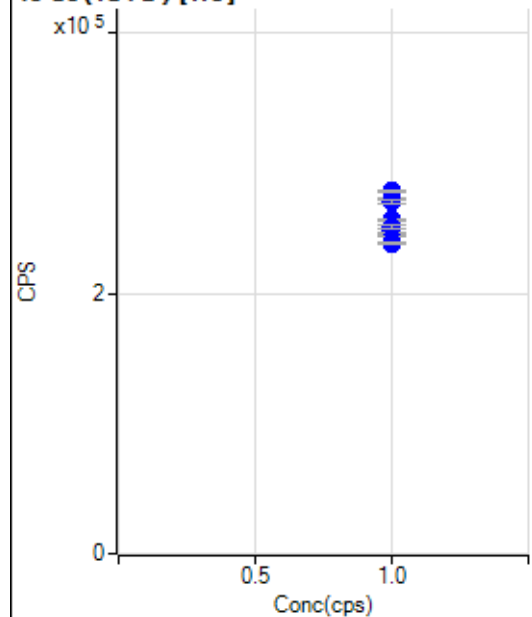
Min Conc: 0

6 Li (ISTD) [No Gas]

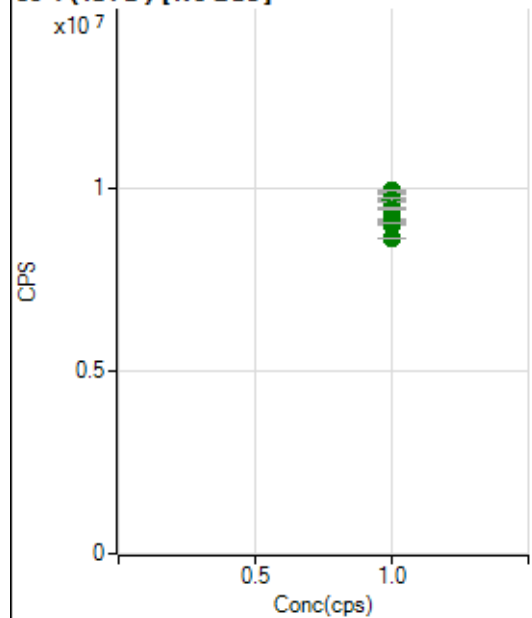
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2510724.56		P	1.9
2	☐	1.000		2536122.30		P	0.5
3	☐	1.000		2496447.24		P	1.0
4	☐	1.000		2439616.75		P	0.6
5	☐	1.000		2335023.51		P	0.2
6	☐	1.000		2321666.46		P	0.5
7	☐	1.000		2232786.29		P	0.5
8	☐	1.000		2054346.55		P	0.4

45 Sc (ISTD) [No Gas]

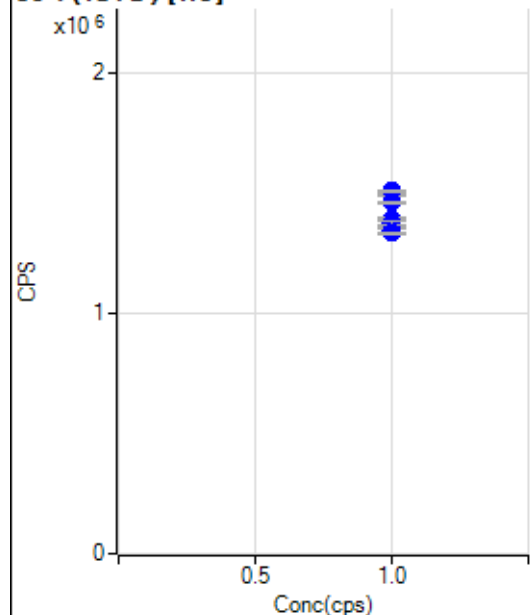
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5610335.41		M	2.0
2	☐	1.000		5690568.09		M	0.4
3	☐	1.000		5484991.74		P	1.1
4	☐	1.000		5282285.71		P	1.1
5	☐	1.000		4963702.67		P	0.3
6	☐	1.000		5010078.76		P	0.3
7	☐	1.000		4924837.18		P	0.7
8	☐	1.000		4742006.53		P	0.2

45 Sc (ISTD) [He]

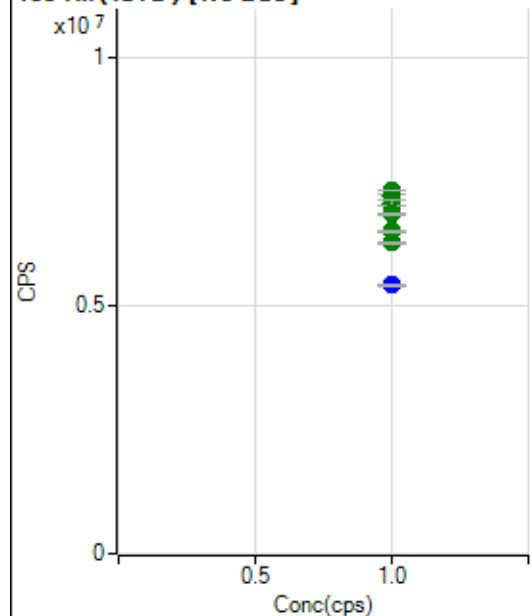
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		273834.99		P	0.1
2	☐	1.000		278732.81		P	0.5
3	☐	1.000		270047.33		P	1.1
4	☐	1.000		256851.30		P	0.7
5	☐	1.000		244638.83		P	0.8
6	☐	1.000		247992.00		P	0.8
7	☐	1.000		250674.84		P	1.2
8	☐	1.000		238154.24		P	0.7

89 Y (ISTD) [No Gas]

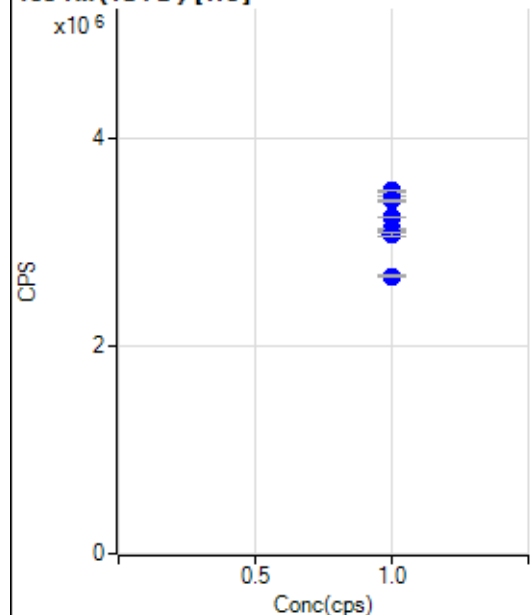
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9765995.69		A	1.6
2	☐	1.000		9948658.25		A	0.6
3	☐	1.000		9700208.75		A	1.4
4	☐	1.000		9464439.86		A	0.7
5	☐	1.000		9020825.63		A	0.2
6	☐	1.000		9164293.19		A	0.6
7	☐	1.000		9069958.06		A	0.4
8	☐	1.000		8640916.47		A	0.0

89 Y(ISTD) [He]

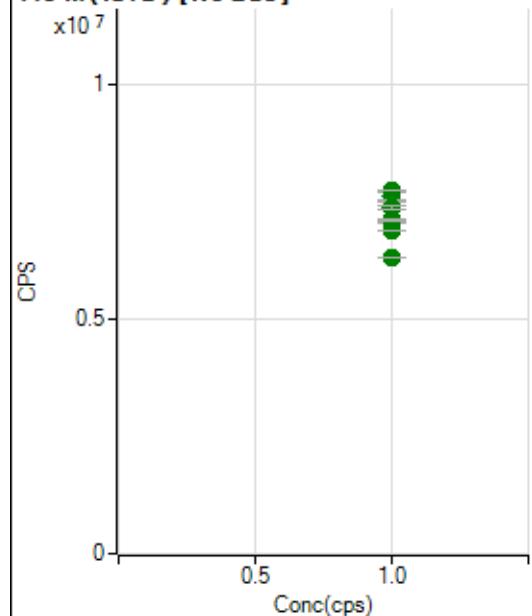
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1493288.49		P	0.2
2	☐	1.000		1510572.60		P	0.4
3	☐	1.000		1462214.04		P	0.8
4	☐	1.000		1395631.11		P	0.5
5	☐	1.000		1346369.79		P	1.2
6	☐	1.000		1365364.74		P	0.4
7	☐	1.000		1375996.35		P	1.1
8	☐	1.000		1334714.56		P	0.4

103 Rh(ISTD) [No Gas]

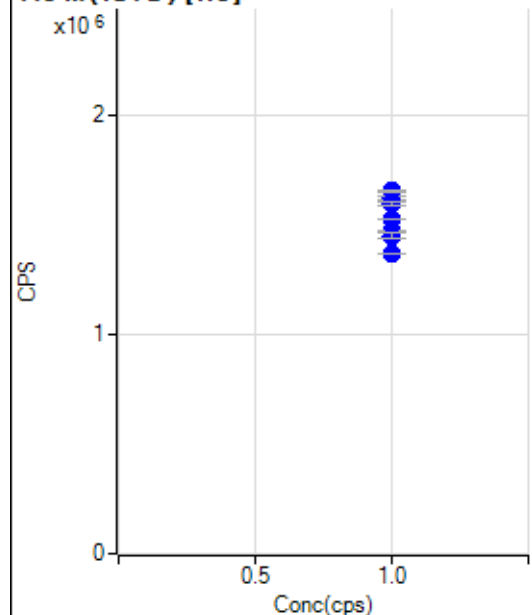
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7202396.43		A	1.9
2	☐	1.000		7323267.44		A	0.1
3	☐	1.000		7076974.03		A	1.7
4	☐	1.000		6857221.25		A	0.7
5	☐	1.000		6504854.01		A	0.2
6	☐	1.000		6508721.37		A	0.7
7	☐	1.000		6280587.73		A	0.8
8	☐	1.000		5419339.66		P	0.3

103 Rh (ISTD) [He]

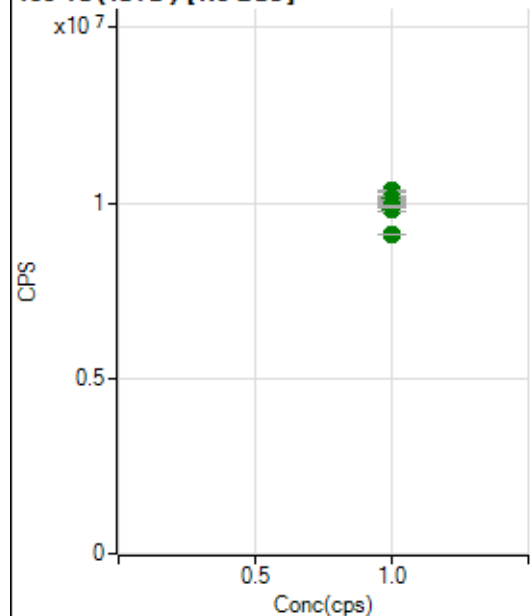
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3437981.96		P	0.2
2	☐	1.000		3488662.41		P	0.4
3	☐	1.000		3393767.28		P	1.0
4	☐	1.000		3235835.27		P	0.4
5	☐	1.000		3118883.74		P	0.7
6	☐	1.000		3112608.15		P	0.2
7	☐	1.000		3067681.76		P	1.1
8	☐	1.000		2669116.31		P	0.4

115 In (ISTD) [No Gas]

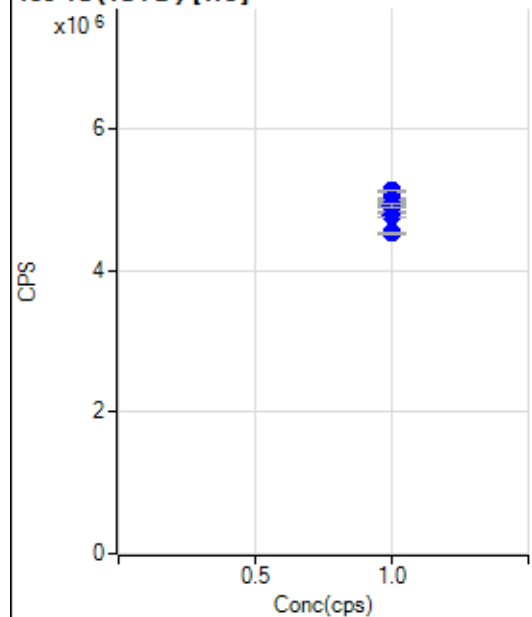
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7627794.14		A	1.9
2	☐	1.000		7743206.85		A	0.1
3	☐	1.000		7527484.56		A	0.8
4	☐	1.000		7390413.75		A	0.7
5	☐	1.000		7083834.10		A	0.4
6	☐	1.000		7126000.67		A	0.4
7	☐	1.000		6885521.56		A	0.3
8	☐	1.000		6324249.99		A	0.0

115 In (ISTD) [He]

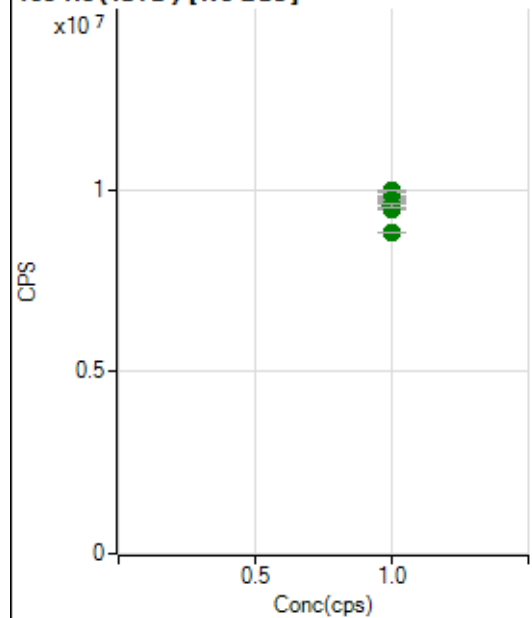
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1622834.92		P	0.6
2	☐	1.000		1654554.06		P	0.6
3	☐	1.000		1596436.46		P	1.0
4	☐	1.000		1527603.65		P	0.3
5	☐	1.000		1469109.38		P	0.9
6	☐	1.000		1473360.28		P	0.1
7	☐	1.000		1450962.30		P	1.4
8	☐	1.000		1368195.54		P	0.3

159 Tb (ISTD) [No Gas]

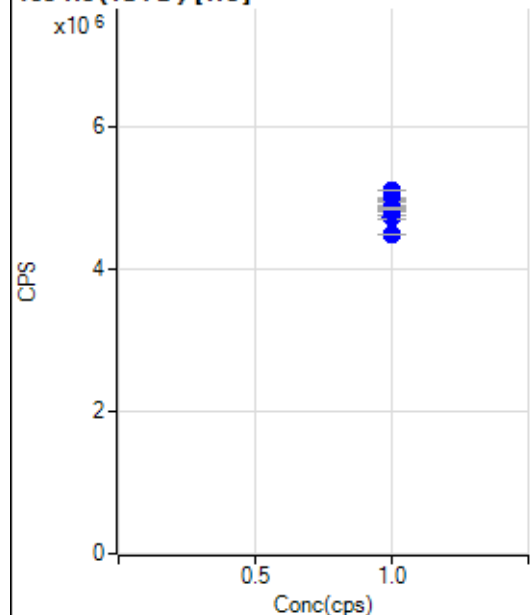
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10070450.82		A	2.1
2	☐	1.000		10345218.95		A	0.7
3	☐	1.000		10087342.42		A	1.4
4	☐	1.000		10141662.00		A	0.7
5	☐	1.000		9820810.76		A	0.7
6	☐	1.000		10060184.36		A	0.4
7	☐	1.000		9905238.53		A	0.4
8	☐	1.000		9094245.49		A	0.3

159 Tb (ISTD) [He]

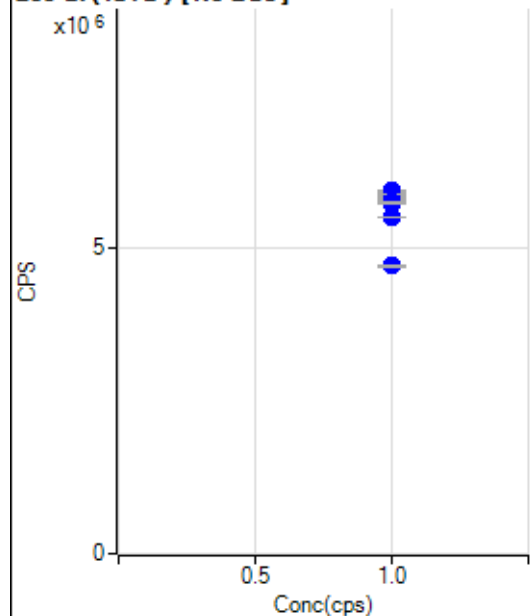
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5021234.54		P	0.5
2	☐	1.000		5120976.10		P	0.6
3	☐	1.000		4986501.42		P	0.5
4	☐	1.000		4901068.47		P	0.4
5	☐	1.000		4777340.69		P	0.9
6	☐	1.000		4829969.55		P	0.3
7	☐	1.000		4904954.93		P	1.2
8	☐	1.000		4520054.90		P	0.7

165 Ho (ISTD) [No Gas]

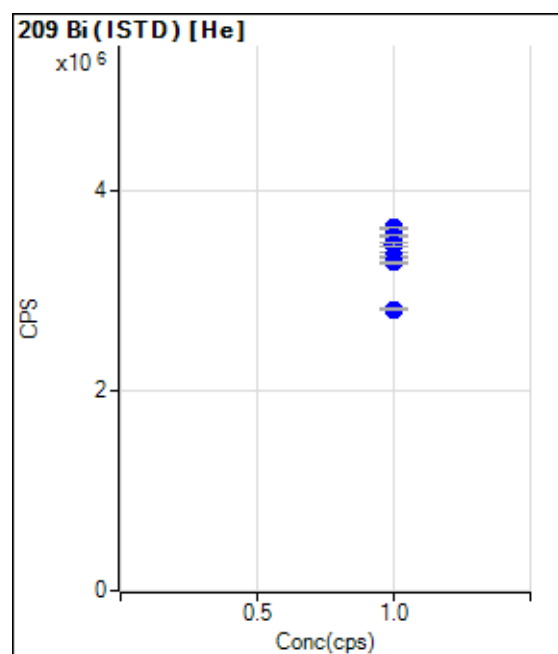
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9715043.28		A	1.7
2	☐	1.000		9956829.48		A	0.5
3	☐	1.000		9656186.15		A	1.0
4	☐	1.000		9724953.25		A	0.5
5	☐	1.000		9464226.60		A	0.4
6	☐	1.000		9677744.40		A	0.7
7	☐	1.000		9543534.59		A	0.9
8	☐	1.000		8814907.84		A	0.3

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4975974.20		P	0.3
2	☐	1.000		5089858.01		P	0.2
3	☐	1.000		4931719.37		P	0.3
4	☐	1.000		4864141.52		P	0.4
5	☐	1.000		4719194.93		P	0.9
6	☐	1.000		4803162.84		P	0.2
7	☐	1.000		4848707.43		P	0.5
8	☐	1.000		4470833.82		P	0.3

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5865797.00		P	2.2
2	☐	1.000		5940549.36		P	0.3
3	☐	1.000		5829393.25		P	0.6
4	☐	1.000		5877043.80		P	0.2
5	☐	1.000		5743976.23		P	0.8
6	☐	1.000		5758787.35		P	0.5
7	☐	1.000		5511401.79		P	0.4
8	☐	1.000		4714482.19		P	0.3



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3558892.83		P	0.1
2	☐	1.000		3632582.24		P	0.4
3	☐	1.000		3547722.24		P	0.4
4	☐	1.000		3467286.76		P	0.9
5	☐	1.000		3358942.73		P	1.3
6	☐	1.000		3350310.40		P	0.4
7	☐	1.000		3285073.74		P	0.9
8	☐	1.000		2815873.81		P	0.8

US EPA Tune Check Sample Report

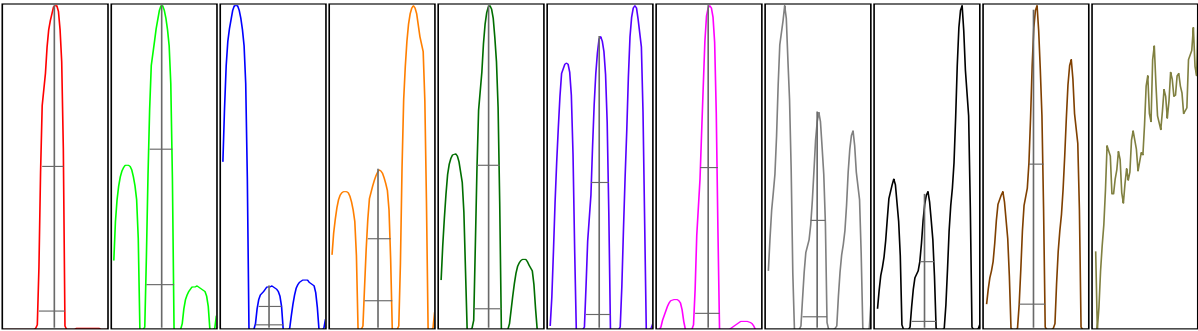
Batch Folder D:\ICP-MS Data\P7112019-MS1.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	12108	0.96	5.00	
24	117138	0.97	5.00	
25	16233	0.90	5.00	
26	18309	0.95	5.00	
59	85787	0.99	5.00	
113	10170	1.07	5.00	
115	120468	0.94	5.00	
206	25129	1.80	5.00	
207	23195	1.58	5.00	
208	54450	1.53	5.00	
220	72	1.91		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	12026	12042	12004	12233	12235
24	116410	116011	116598	118024	118648
25	16168	16091	16128	16365	16414
26	18255	18112	18200	18473	18508
59	85328	85073	85112	86775	86648
113	10138	10087	10061	10250	10317
115	120276	119663	119178	121348	121875
206	24806	24701	24938	25443	25758
207	22969	22889	22971	23402	23744
208	53776	53710	54069	55431	55267
220	72	71	72	74	71

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	19566	9.00	8.9 - 9.1		0.784	0.900	
24	181031	23.95	23.9 - 24.1		0.805	0.900	
25	24080	24.90	24.9 - 25.1		0.798	0.900	
26	27931	25.90	25.9 - 26.1		0.797	0.900	
59	143740	58.95	58.9 - 59.1		0.784	0.900	
113	20004	113.00	112.9 - 113.1		0.728	0.900	
115	240669	115.00	114.9 - 115.1		0.725	0.900	
206	55541	206.00	205.9 - 206.1		0.731	0.900	
207	49602	206.95	206.9 - 207.1		0.730	0.900	
208	118037	207.95	207.9 - 208.1		0.739	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	8.4	V	Deflect	14.8	V
Extract 2	-145.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-75	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	180	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	23299	0.56	
89	20550	0.77	
205	21584	0.93	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	23299	23276	23386	23437	23097
89	20706	20595	20592	20574	20281
205	21818	21689	21464	21643	21308

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	8.1	V	Deflect	2.2	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			