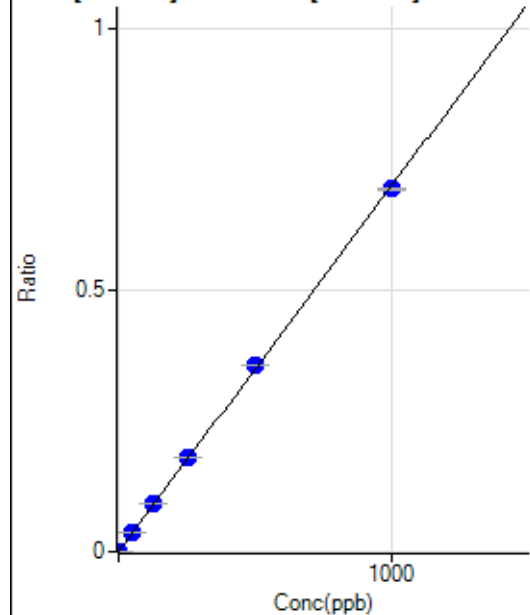


Calibration for 006CALS.d

Batch Folder: D:\ICP-MS Data\P7100619 MS.b\
 Analysis File: P7100619 MS.batch.bin
 DA Date-Time: 2019-10-06 18:12:13
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	S00	2019-10-06 16:32:30
2	003CALS.d	S02	2019-10-06 16:36:06
3	004CALS.d	S03	2019-10-06 16:40:50
4	005CALS.d	S04	2019-10-06 16:44:59
5	006CALS.d	S05	2019-10-06 16:48:50
6	007CALS.d	S06	2019-10-06 16:52:39
7	008CALS.d	S07	2019-10-06 16:56:26
8	009CALS.d	S08	2019-10-06 17:00:13

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	103.34	0.0000	P	13.4
2	☐	1.000	1.016	1896.82	0.0008	P	9.8
3	☐	50.000	52.489	92025.45	0.0367	P	0.3
4	☐	125.000	130.386	213251.93	0.0911	P	0.0
5	☐	250.000	258.740	392463.33	0.1807	P	0.3
6	☐	500.000	509.806	752508.70	0.3560	P	0.8
7	☐	1000.000	992.114	1417841.45	0.6927	P	0.6
8	☐			426.68	0.0002	P	12.8

$$y = 6.9813\text{E-}004 * x + 4.1409\text{E-}005$$

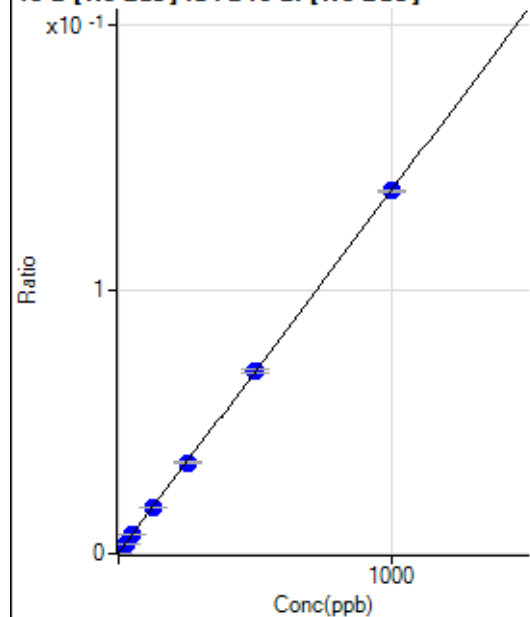
$$R = 0.9999$$

$$DL = 0.02389$$

$$BEC = 0.05931$$

Weight: <None>

Min Conc: 0

10 B [No Gas] ISTD:6 Li [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	761.16	0.0003	P	8.6
2	☐	25.000	24.269	9178.22	0.0036	P	1.7
3	☐	50.000	49.244	17708.18	0.0071	P	0.7
4	☐	125.000	126.786	41435.60	0.0177	P	1.1
5	☐	250.000	249.531	75008.99	0.0345	P	3.4
6	☐	500.000	503.124	146534.90	0.0693	P	2.1
7	☐	1000.000	998.388	280928.20	0.1372	P	0.8
8	☐			10003.69	0.0053	P	9.5

$$y = 1.3716\text{E-}004 * x + 3.0477\text{E-}004$$

$$R = 1.0000$$

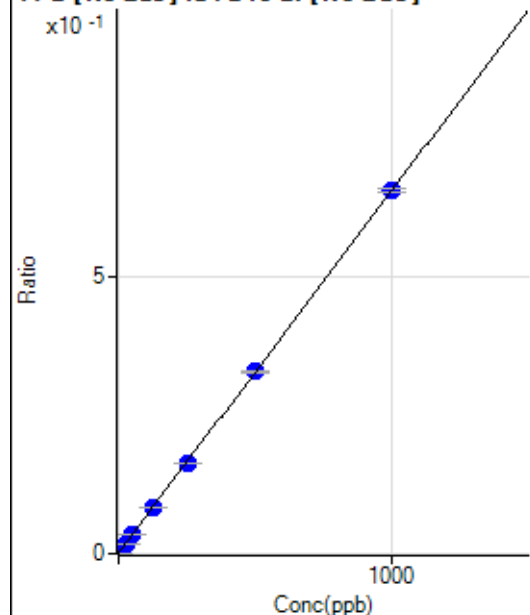
$$DL = 0.5756$$

$$BEC = 2.222$$

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	3625.57	0.0015	P	7.9
2	☐	25.000	23.962	43106.87	0.0171	P	2.8
3	☐	50.000	49.990	85351.87	0.0340	P	0.8
4	☐	125.000	126.408	196259.87	0.0838	P	1.3
5	☐	250.000	246.999	352740.75	0.1624	P	0.7
6	☐	500.000	501.094	693313.02	0.3280	P	1.1
7	☐	1000.000	1000.054	1336759.56	0.6531	P	0.9
8	☐			46935.39	0.0250	P	7.0

$$y = 6.5157E-004 * x + 0.0015$$

$$R = 1.0000$$

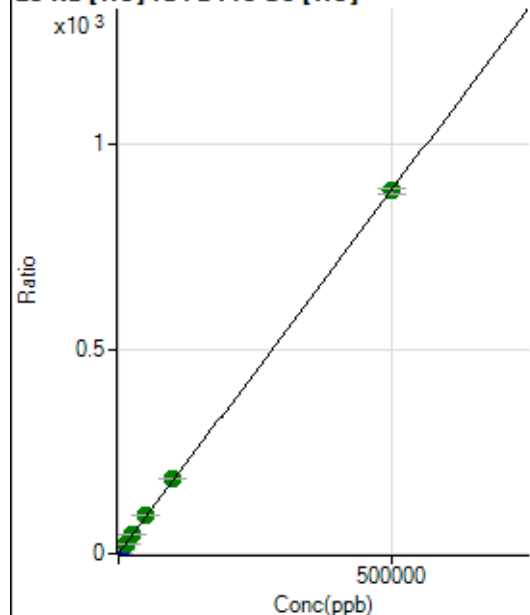
$$DL = 0.5263$$

$$BEC = 2.229$$

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	13083.93	0.0585	P	2.0
2	☐	500.000	506.863	222805.56	0.9595	P	0.4
3	☐	5000.000	5290.416	2135225.11	9.4635	P	1.2
4	☐	12500.000	13117.962	4931564.78	23.3790	A	0.6
5	☐	25000.000	26363.481	9282050.55	46.9263	A	0.5
6	☐	50000.000	52361.658	18184023.15	93.1447	A	1.3
7	☐	100000.00	103021.29	35088693.49	183.2053	A	0.7
8	☐	500000.00	499073.04	164993124.5	887.2889	A	1.6

$$y = 0.0018 * x + 0.0585$$

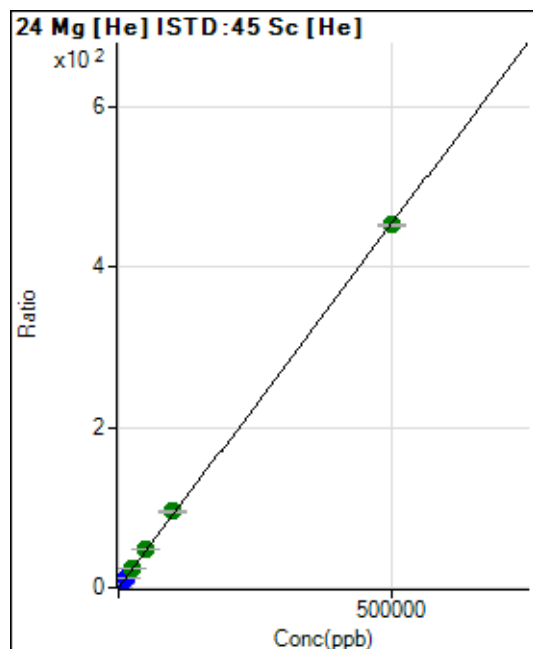
$$R = 1.0000$$

$$DL = 2.02$$

$$BEC = 32.88$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	305.57	0.0014	P	6.1
2	☐	500.000	542.947	114722.26	0.4941	P	2.0
3	☐	5000.000	5447.663	1115757.36	4.9451	P	1.1
4	☐	12500.000	13500.961	2584535.97	12.2534	P	1.7
5	☐	25000.000	27014.057	4849351.80	24.5164	A	0.3
6	☐	50000.000	53523.915	9482554.90	48.5738	A	1.5
7	☐	100000.00	104640.03	18187512.39	94.9613	A	0.9
8	☐	500000.00	498589.35	84143674.80	452.4668	A	0.6

$$y = 9.0749\text{E-}004 * x + 0.0014$$

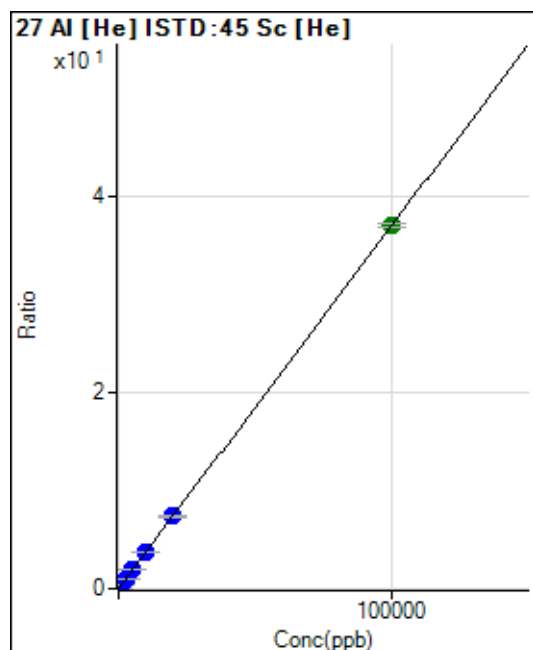
$$R = 0.9999$$

$$DL = 0.2737$$

$$BEC = 1.505$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.78	0.0001	P	17.3
2	☐	20.000	19.852	1736.29	0.0075	P	8.0
3	☐	1000.000	1029.294	86076.19	0.3814	P	0.6
4	☐	2500.000	2523.722	197245.94	0.9351	P	0.9
5	☐	5000.000	5091.107	373098.14	1.8862	P	0.3
6	☐	10000.000	10063.010	727797.31	3.7282	P	1.8
7	☐	20000.000	19916.714	1413208.40	7.3787	P	0.9
8	☐	100000.00	100004.91	6889608.05	37.0491	A	1.1

$$y = 3.7047\text{E-}004 * x + 1.2409\text{E-}004$$

$$R = 1.0000$$

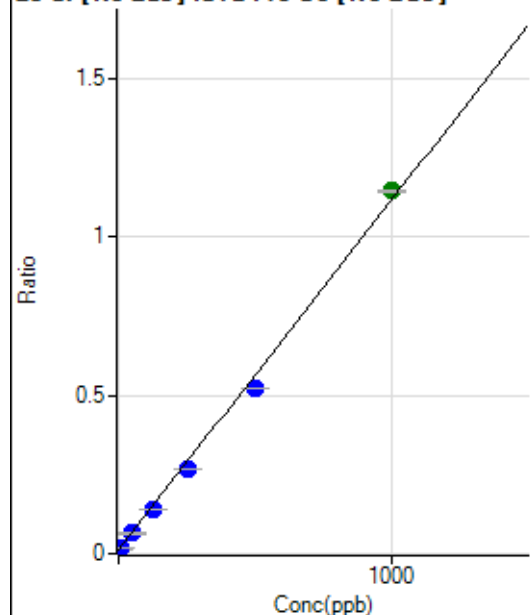
$$DL = 0.1735$$

$$BEC = 0.335$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	70868.69	0.0125	P	1.4
2	☐	10.000	7.728	120280.15	0.0211	P	1.7
3	☐	50.000	46.490	363676.05	0.0639	P	0.3
4	☐	125.000	114.702	745285.36	0.1393	P	1.3
5	☐	250.000	228.911	1318908.20	0.2656	P	0.7
6	☐	500.000	461.419	2551661.97	0.5226	P	0.3
7	☐	1000.000	1026.048	5490348.34	1.1468	A	0.5
8	☐			769715.57	0.1700	P	2.3

$$y = 0.0011 * x + 0.0125$$

$$R = 0.9987$$

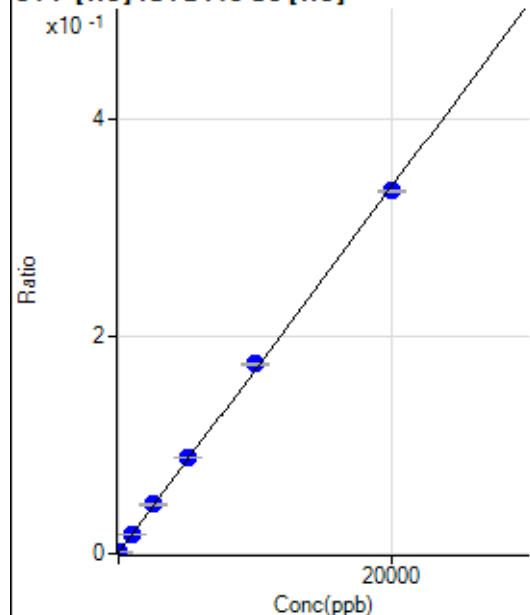
$$DL = 0.4892$$

$$BEC = 11.35$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-26.894	91.67	0.0004	P	18.0
2	☐	0.000	26.894	305.57	0.0013	P	17.0
3	☐	1000.000	1015.867	4059.03	0.0180	P	3.0
4	☐	2500.000	2630.599	9539.44	0.0452	P	0.4
5	☐	5000.000	5184.097	17460.79	0.0883	P	0.6
6	☐	10000.000	10312.773	34117.66	0.1748	P	0.8
7	☐	20000.000	19780.471	64049.26	0.3344	P	0.8
8	☐			130.56	0.0007	P	38.4

$$y = 1.6862E-005 * x + 8.6296E-004$$

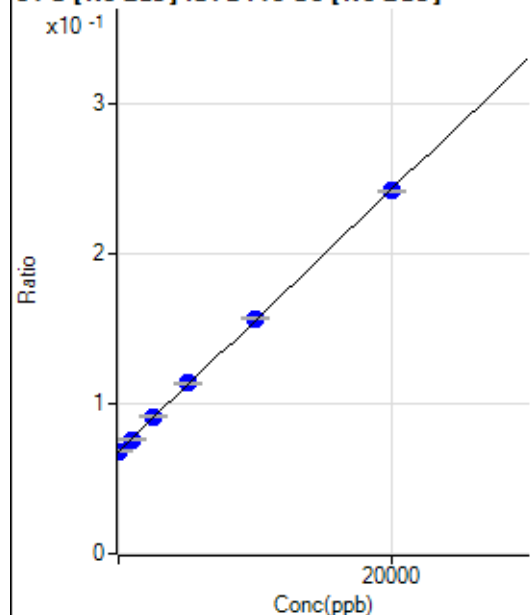
$$R = 0.9998$$

$$DL = 26.42$$

$$BEC = 51.18$$

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	10.065	387000.52	0.0685	P	0.9
2	☐	0.000	-10.065	389715.22	0.0683	P	1.3
3	☐	1000.000	892.001	433404.95	0.0762	P	0.9
4	☐	2500.000	2657.974	490024.31	0.0916	P	0.3
5	☐	5000.000	5171.672	563910.04	0.1136	P	0.2
6	☐	10000.000	10133.004	765871.86	0.1569	P	1.2
7	☐	20000.000	19876.233	1158254.43	0.2419	P	0.9
8	☐			331229.81	0.0731	P	1.3

$$y = 8.7304\text{E-}006 * x + 0.0684$$

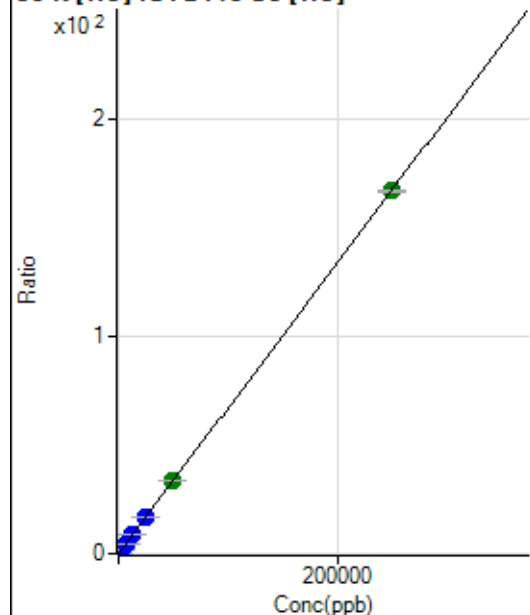
R = 0.9999

DL = 264.8

BEC = 7835

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	10442.97	0.0467	P	1.4
2	☐	500.000	509.177	89919.08	0.3872	P	0.9
3	☐	2500.000	2595.659	402300.02	1.7829	P	0.3
4	☐	6250.000	6435.540	917892.36	4.3514	P	0.4
5	☐	12500.000	12807.525	1703774.30	8.6136	P	0.2
6	☐	25000.000	25537.017	3343899.21	17.1284	P	1.1
7	☐	50000.000	50228.191	6443949.41	33.6444	A	0.3
8	☐	250000.00	249879.67	31092766.67	167.1917	A	0.4

$$y = 6.6890\text{E-}004 * x + 0.0467$$

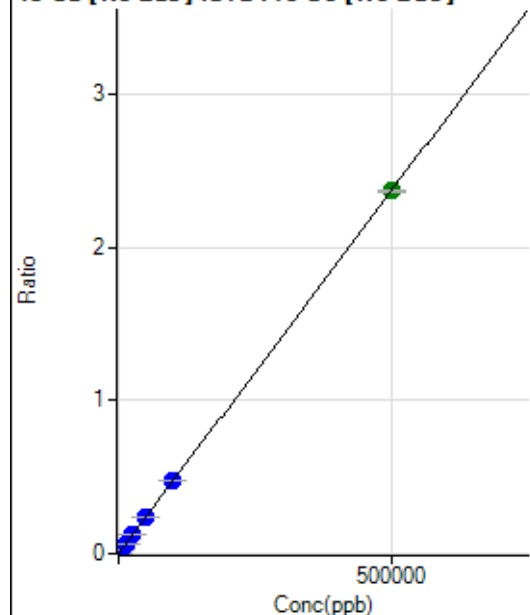
R = 1.0000

DL = 2.967

BEC = 69.75

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.34	0.0000	P	34.7
2	☐	500.000	495.282	13481.60	0.0024	P	1.4
3	☐	5000.000	5150.883	139011.78	0.0244	P	1.6
4	☐	12500.000	12737.919	323196.35	0.0604	P	0.6
5	☐	25000.000	25412.188	598490.52	0.1205	P	0.7
6	☐	50000.000	50629.952	1172220.05	0.2401	P	0.4
7	☐	100000.00	100778.46	2287896.80	0.4779	P	0.7
8	☐	500000.00	499753.25	10732697.03	2.3697	A	0.9

$$y = 4.7417\text{E-}006 * x + 1.4751\text{E-}005$$

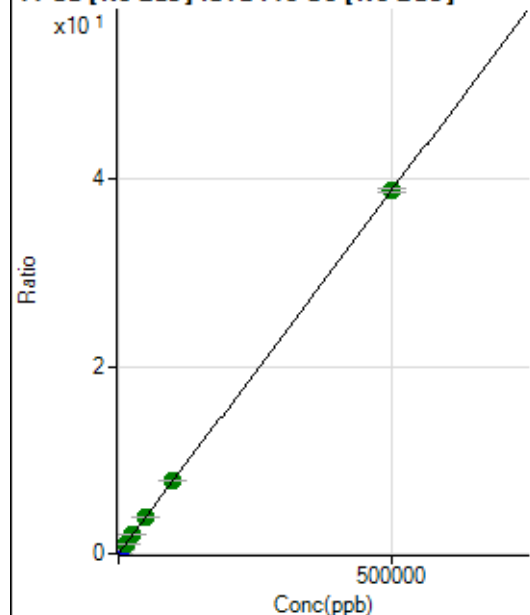
$$R = 1.0000$$

$$DL = 3.241$$

$$BEC = 3.111$$

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	5353.95	0.0009	P	2.0
2	☐	500.000	492.310	223255.19	0.0391	P	0.6
3	☐	5000.000	5081.310	2247295.28	0.3951	P	0.7
4	☐	12500.000	12633.289	5246502.94	0.9808	A	0.8
5	☐	25000.000	25247.428	9729721.05	1.9592	A	0.1
6	☐	50000.000	50514.561	19134599.74	3.9190	A	0.4
7	☐	100000.00	100575.33	37352178.27	7.8018	A	0.7
8	☐	500000.00	499816.96	175584649.7	38.7680	A	0.9

$$y = 7.7563\text{E-}005 * x + 9.4746\text{E-}004$$

$$R = 1.0000$$

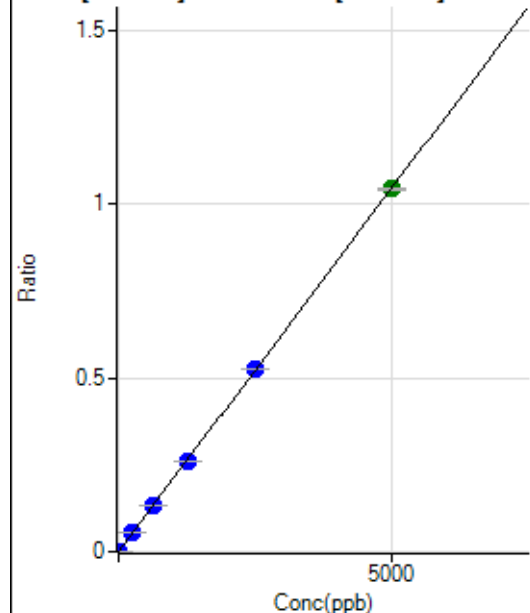
$$DL = 0.7304$$

$$BEC = 12.22$$

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	83.34	0.0000	P	26.5
2	☐	5.000	5.013	6070.96	0.0011	P	6.3
3	☐	250.000	253.277	301616.15	0.0530	P	0.7
4	☐	625.000	629.524	704919.12	0.1318	P	1.0
5	☐	1250.000	1252.975	1302392.50	0.2623	P	0.2
6	☐	2500.000	2509.216	2564124.12	0.5252	P	0.6
7	☐	5000.000	4993.919	5004000.68	1.0452	A	0.7
8	☐			2064.12	0.0005	P	3.4

$$y = 2.0929\text{E-}004 * x + 1.4747\text{E-}005$$

$$R = 1.0000$$

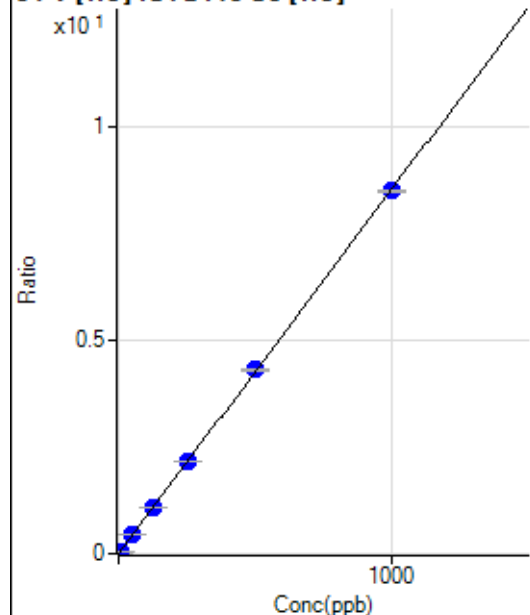
$$DL = 0.05594$$

$$BEC = 0.07046$$

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	3.33	0.0000	P	100.
2	☐	5.000	5.110	10138.06	0.0437	P	4.9
3	☐	50.000	51.196	98667.33	0.4373	P	1.2
4	☐	125.000	127.408	229557.50	1.0883	P	0.6
5	☐	250.000	253.399	428123.01	2.1644	P	0.6
6	☐	500.000	504.877	841883.01	4.3124	P	1.2
7	☐	1000.000	996.350	1629941.42	8.5103	P	0.8
8	☐			695.58	0.0037	P	7.8

$$y = 0.0085 * x + 1.4920\text{E-}005$$

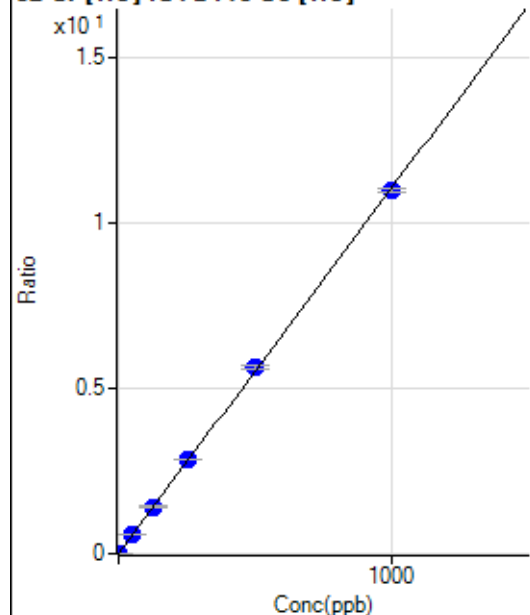
$$R = 1.0000$$

$$DL = 0.005259$$

$$BEC = 0.001747$$

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	514.46	0.0023	P	2.1
2	☐	2.000	1.991	5633.39	0.0243	P	5.2
3	☐	50.000	52.331	130796.60	0.5797	P	0.9
4	☐	125.000	128.668	299942.87	1.4220	P	1.0
5	☐	250.000	255.953	559054.85	2.8264	P	0.6
6	☐	500.000	509.902	1098775.66	5.6283	P	1.4
7	☐	1000.000	992.986	2098824.45	10.9585	P	0.9
8	☐			65768.18	0.3537	P	2.5

$$y = 0.0110 * x + 0.0023$$

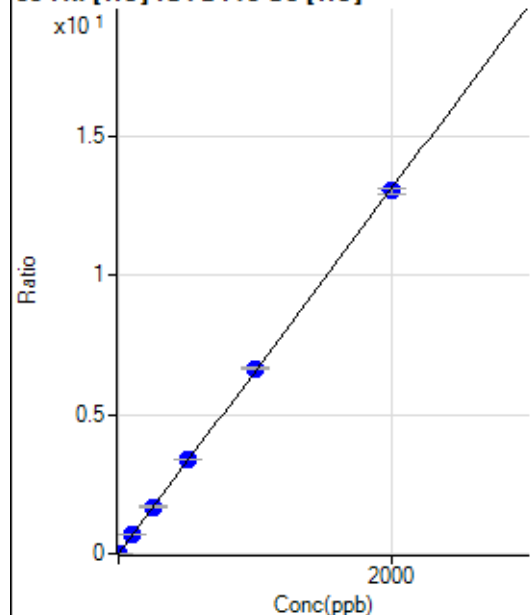
$$R = 0.9999$$

$$DL = 0.01306$$

$$BEC = 0.2083$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0002	P	8.1
2	☐	1.000	1.043	1630.12	0.0070	P	3.5
3	☐	100.000	103.761	153667.73	0.6810	P	0.8
4	☐	250.000	258.056	357216.79	1.6935	P	1.1
5	☐	500.000	513.445	666460.29	3.3693	P	0.5
6	☐	1000.000	1015.810	1301318.32	6.6657	P	1.2
7	☐	2000.000	1987.539	2497834.32	13.0420	P	1.3
8	☐			8656.00	0.0465	P	1.3

$$y = 0.0066 * x + 1.7870E-004$$

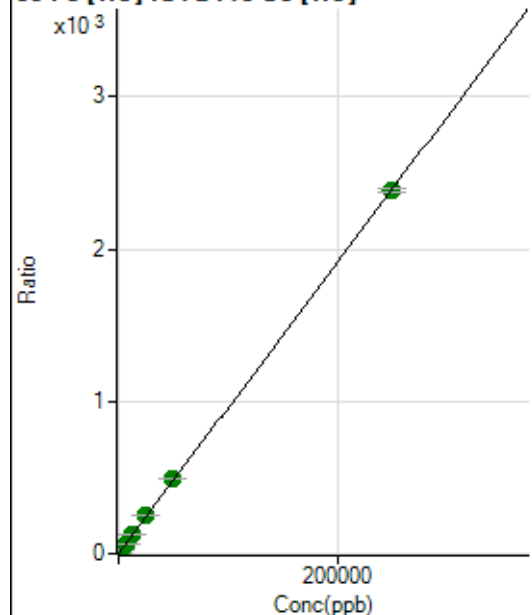
$$R = 0.9999$$

$$DL = 0.006648$$

$$BEC = 0.02723$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1763.12	0.0079	P	7.9
2	☐	50.000	54.355	122338.61	0.5269	P	2.7
3	☐	2500.000	2670.844	5755926.06	25.5102	A	0.9
4	☐	6250.000	6640.682	13376683.40	63.4158	A	0.8
5	☐	12500.000	13314.939	25149515.61	127.1444	A	0.4
6	☐	25000.000	26298.096	49025033.04	251.1129	A	0.8
7	☐	50000.000	51391.862	93983989.13	490.7185	A	1.1
8	☐	250000.00	249539.59	443093250.6	2,382.714	A	0.9

$$y = 0.0095 * x + 0.0079$$

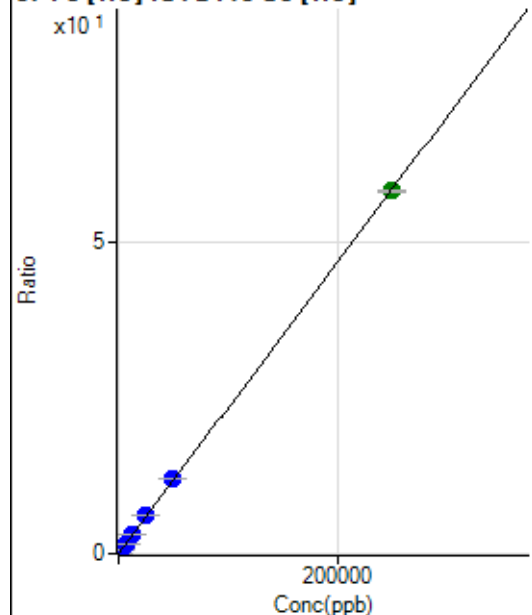
$$R = 1.0000$$

$$DL = 0.1954$$

$$BEC = 0.8252$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	37.04	0.0002	P	8.7
2	☐	50.000	55.878	3057.80	0.0132	P	5.3
3	☐	2500.000	2704.630	142056.71	0.6296	P	1.3
4	☐	6250.000	6702.129	329057.86	1.5599	P	0.5
5	☐	12500.000	13450.775	619220.74	3.1306	P	0.3
6	☐	25000.000	26424.735	1200618.20	6.1500	P	1.3
7	☐	50000.000	51683.272	2303730.38	12.0284	P	1.0
8	☐	250000.00	249459.98	10796514.36	58.0569	A	0.8

$$y = 2.3273E-004 * x + 1.6548E-004$$

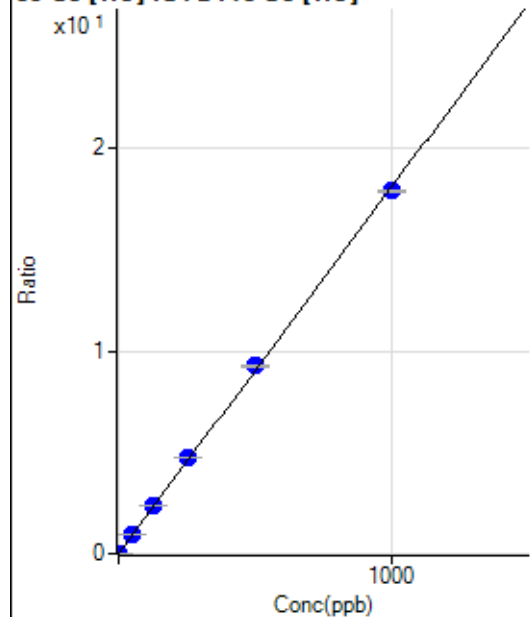
$$R = 1.0000$$

$$DL = 0.1862$$

$$BEC = 0.711$$

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	42.22	0.0002	P	29.8
2	☐	1.000	1.014	4305.15	0.0185	P	5.0
3	☐	50.000	53.727	219355.52	0.9722	P	0.8
4	☐	125.000	131.469	501729.89	2.3786	P	0.8
5	☐	250.000	261.432	935550.69	4.7298	P	0.1
6	☐	500.000	512.511	1810075.32	9.2721	P	1.6
7	☐	1000.000	989.891	3429986.06	17.9084	P	0.6
8	☐			40295.38	0.2167	P	1.1

$$y = 0.0181 * x + 1.8860E-004$$

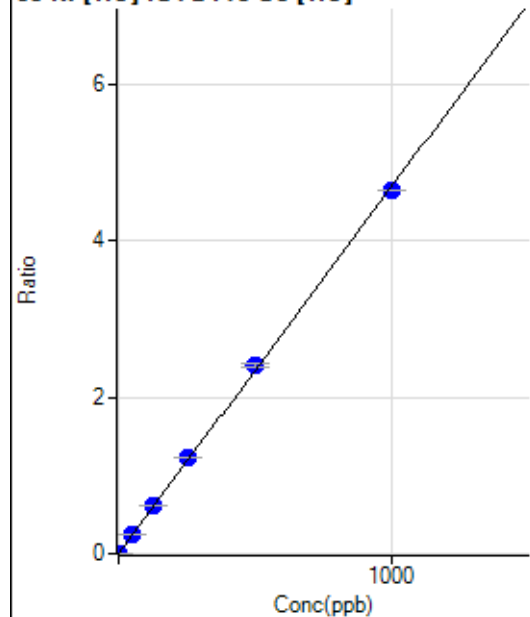
R = 0.9998

DL = 0.00932

BEC = 0.01043

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	188.89	0.0008	P	3.7
2	☐	1.000	1.029	1315.63	0.0057	P	2.5
3	☐	50.000	54.230	57515.83	0.2549	P	0.4
4	☐	125.000	132.433	131043.85	0.6213	P	0.8
5	☐	250.000	263.010	243882.68	1.2330	P	0.3
6	☐	500.000	513.653	469930.31	2.4072	P	1.5
7	☐	1000.000	988.780	887374.63	4.6330	P	0.0
8	☐			25507.93	0.1371	P	1.2

$$y = 0.0047 * x + 8.4385E-004$$

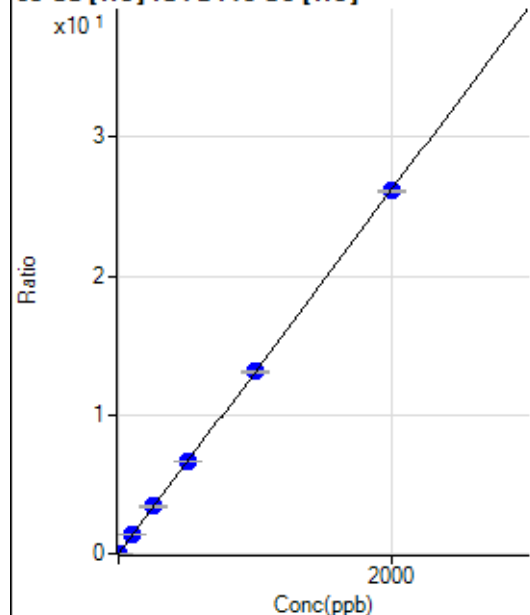
R = 0.9998

DL = 0.01984

BEC = 0.1801

Weight: <None>

Min Conc: 0

63 Cu [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	623.36	0.0028	P	5.0
2	☐	2.000	2.024	6798.35	0.0293	P	1.9
3	☐	100.000	106.848	316226.98	1.4015	P	0.7
4	☐	250.000	259.155	716156.97	3.3953	P	1.3
5	☐	500.000	510.901	1323464.04	6.6909	P	0.3
6	☐	1000.000	1002.347	2562185.60	13.1242	P	1.1
7	☐	2000.000	1994.615	5001543.47	26.1138	P	0.5
8	☐			8969.55	0.0482	P	4.2

$$y = 0.0131 * x + 0.0028$$

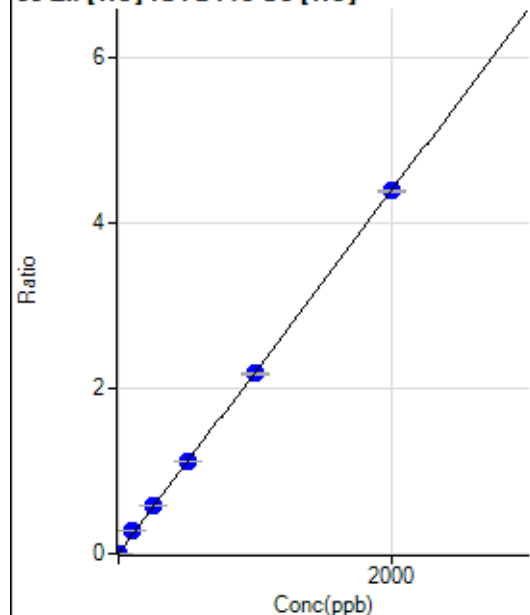
$$R = 1.0000$$

$$DL = 0.0319$$

$$BEC = 0.2128$$

Weight: <None>

Min Conc: 0

66 Zn [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	632.25	0.0028	P	3.6
2	☐	2.000	2.111	1730.13	0.0075	P	1.3
3	☐	100.000	127.474	63658.21	0.2821	P	1.2
4	☐	250.000	265.194	123154.95	0.5839	P	1.4
5	☐	500.000	508.581	220976.15	1.1172	P	0.4
6	☐	1000.000	992.488	425082.44	2.1774	P	1.4
7	☐	2000.000	1998.338	839160.22	4.3813	P	0.2
8	☐			9287.53	0.0499	P	2.2

$$y = 0.0022 * x + 0.0028$$

$$R = 0.9999$$

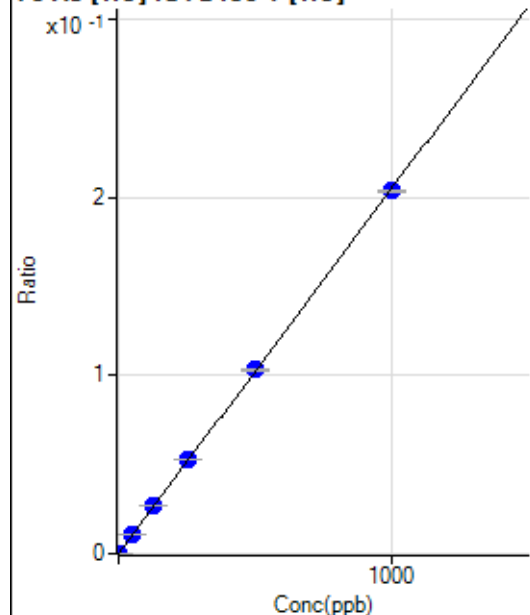
$$DL = 0.1378$$

$$BEC = 1.289$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	4.32	0.0000	P	99.3
2	☐	1.000	0.976	246.92	0.0002	P	7.5
3	☐	50.000	52.684	12808.19	0.0108	P	0.7
4	☐	125.000	130.794	29669.75	0.0268	P	0.3
5	☐	250.000	258.732	55234.53	0.0530	P	0.7
6	☐	500.000	504.971	107982.84	0.1033	P	0.8
7	☐	1000.000	994.473	206646.57	0.2035	P	0.4
8	☐			270.99	0.0003	P	10.8

$$y = 2.0466\text{E-}004 * x + 3.6659\text{E-}006$$

$$R = 0.9999$$

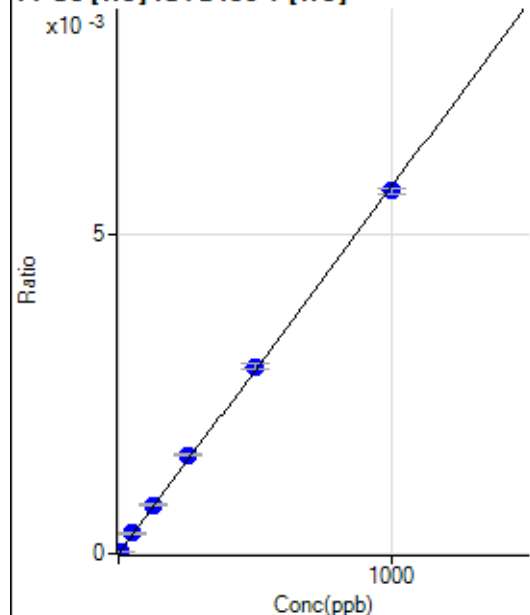
$$DL = 0.05337$$

$$BEC = 0.01791$$

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	6.678	46.67	0.0000	P	7.2
3	☐	50.000	56.244	384.45	0.0003	P	5.5
4	☐	125.000	132.426	844.48	0.0008	P	5.8
5	☐	250.000	269.691	1619.01	0.0016	P	2.6
6	☐	500.000	510.570	3070.38	0.0029	P	2.4
7	☐	1000.000	988.544	5776.80	0.0057	P	1.9
8	☐			3.33	0.0000	P	1.3

$$y = 5.7558\text{E-}006 * x + 0.0000\text{E+}000$$

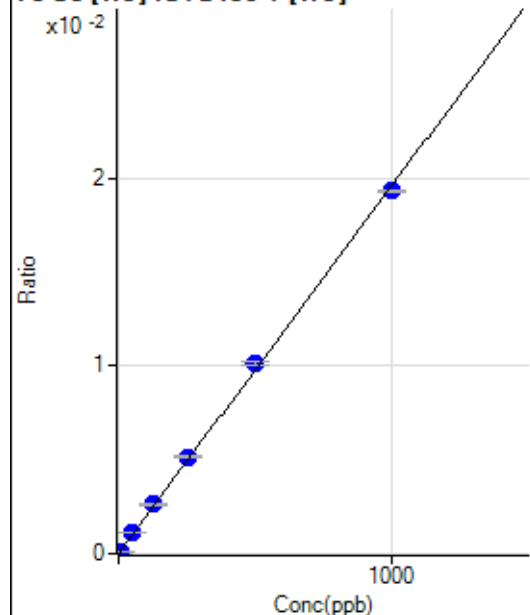
$$R = 0.9997$$

$$DL = 0$$

$$BEC = 0$$

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	14.82	0.0000	P	64.8
2	☐	5.000	6.214	162.97	0.0001	P	11.0
3	☐	50.000	56.242	1322.91	0.0011	P	4.8
4	☐	125.000	133.402	2909.58	0.0026	P	1.9
5	☐	250.000	262.354	5373.26	0.0052	P	1.6
6	☐	500.000	517.274	10597.77	0.0101	P	1.3
7	☐	1000.000	986.906	19636.77	0.0193	P	0.8
8	☐			24.69	0.0000	P	31.6

$$y = 1.9585\text{E-}005 * x + 1.2542\text{E-}005$$

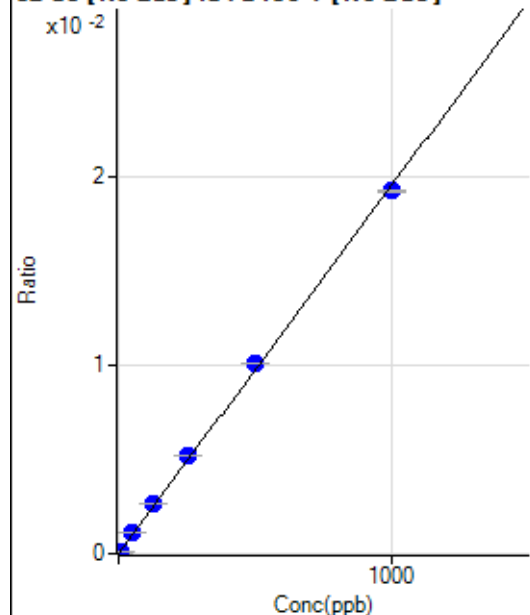
$$R = 0.9997$$

$$DL = 1.246$$

$$BEC = 0.6404$$

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	-83.53	0.0000	P	-76.
2	☐	5.000	5.698	1053.01	0.0001	P	10.0
3	☐	50.000	55.298	10964.46	0.0011	P	0.3
4	☐	125.000	134.324	25417.86	0.0026	P	0.7
5	☐	250.000	264.737	47188.02	0.0052	P	0.4
6	☐	500.000	517.835	91475.08	0.0101	P	0.6
7	☐	1000.000	985.964	171353.44	0.0192	P	0.4
8	☐			56.24	0.0000	P	96.9

$$y = 1.9521\text{E-}005 * x - 8.1415\text{E-}006$$

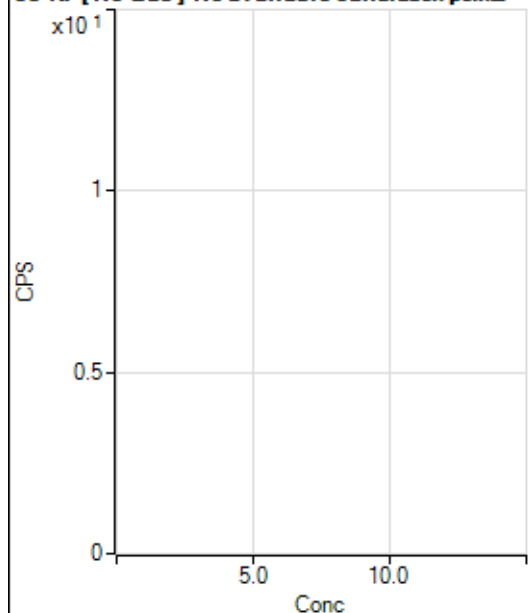
$$R = 0.9996$$

$$DL = 0.9624$$

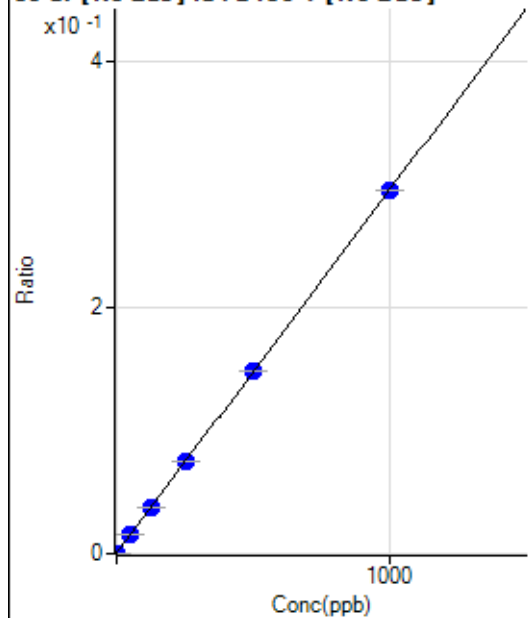
$$BEC = -0.4171$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2041.29		P	1.4
2	☐			2042.40		P	5.1
3	☐			1992.39		P	1.6
4	☐			1915.71		P	4.0
5	☐			1739.02		P	2.2
6	☐			1643.45		P	1.3
7	☐			1721.24		P	1.1
8	☐			1532.33		P	5.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	3225.51	0.0003	P	12.2
2	☐	1.000	0.904	5940.40	0.0006	P	2.6
3	☐	50.000	50.469	155396.63	0.0152	P	1.0
4	☐	125.000	126.772	366210.33	0.0377	P	0.8
5	☐	250.000	253.231	685150.95	0.0749	P	0.7
6	☐	500.000	502.191	1342757.41	0.1483	P	0.3
7	☐	1000.000	997.852	2621148.54	0.2943	P	0.0
8	☐			13028.59	0.0015	P	3.3

$$y = 2.9461E-004 * x + 3.1491E-004$$

$$R = 1.0000$$

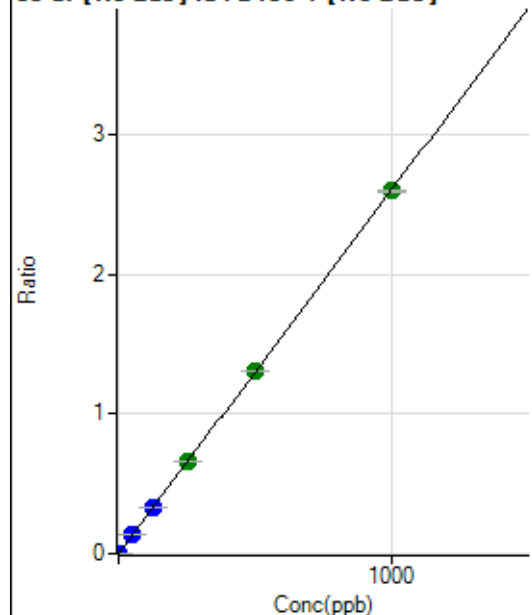
$$DL = 0.3926$$

$$BEC = 1.069$$

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	86.11	0.0000	P	10.8
2	☐	1.000	0.996	26561.57	0.0026	P	0.8
3	☐	50.000	50.502	1345235.98	0.1314	P	0.4
4	☐	125.000	125.989	3188293.41	0.3279	P	0.8
5	☐	250.000	252.436	6008310.77	0.6570	A	0.4
6	☐	500.000	502.919	11853928.22	1.3089	A	0.3
7	☐	1000.000	997.783	23128947.22	2.5968	A	0.2
8	☐			93199.95	0.0110	P	1.2

$$y = 0.0026 * x + 8.4034E-006$$

$$R = 1.0000$$

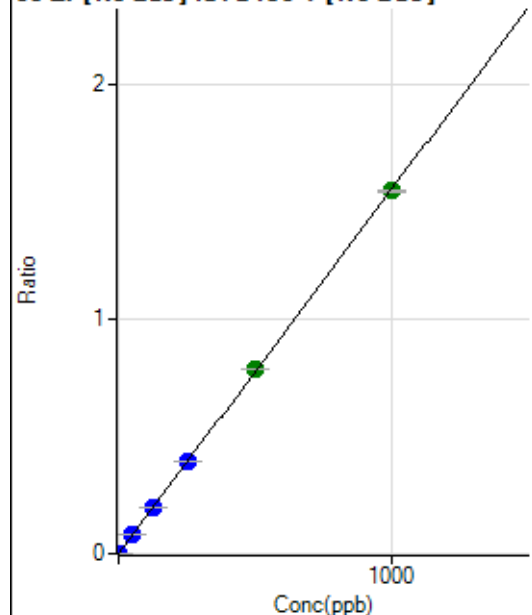
$$DL = 0.001043$$

$$BEC = 0.003229$$

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	902.84	0.0001	P	11.0
2	☐	1.000	0.871	14696.92	0.0014	P	2.5
3	☐	50.000	50.348	799974.84	0.0782	P	0.2
4	☐	125.000	126.863	1913835.96	0.1968	P	0.2
5	☐	250.000	252.241	3578112.41	0.3913	P	0.3
6	☐	500.000	506.318	7111729.76	0.7853	A	0.3
7	☐	1000.000	996.030	13758074.09	1.5447	A	0.5
8	☐			5123.34	0.0006	P	5.3

$$y = 0.0016 * x + 8.8154E-005$$

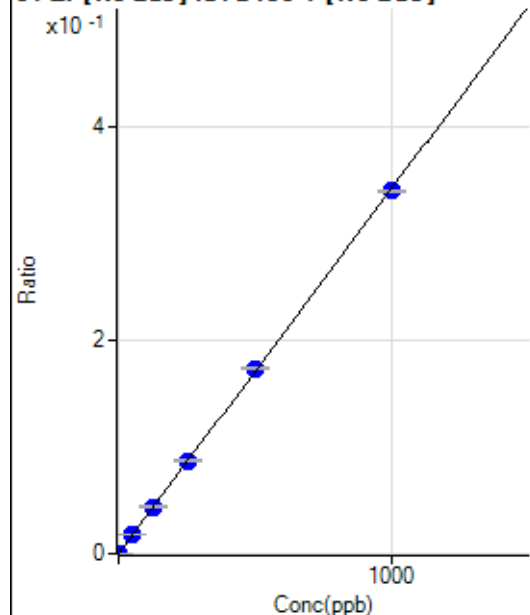
$$R = 1.0000$$

$$DL = 0.01878$$

$$BEC = 0.05684$$

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	186.12	0.0000	P	16.2
2	☐	1.000	0.951	3503.35	0.0003	P	2.7
3	☐	50.000	51.033	178426.64	0.0174	P	2.0
4	☐	125.000	128.700	427264.75	0.0439	P	0.9
5	☐	250.000	254.967	795960.16	0.0870	P	0.8
6	☐	500.000	507.920	1570083.13	0.1734	P	0.8
7	☐	1000.000	994.284	3022557.90	0.3394	P	0.6
8	☐			1211.22	0.0001	P	13.5

$$y = 3.4129\text{E-}004 * x + 1.8177\text{E-}005$$

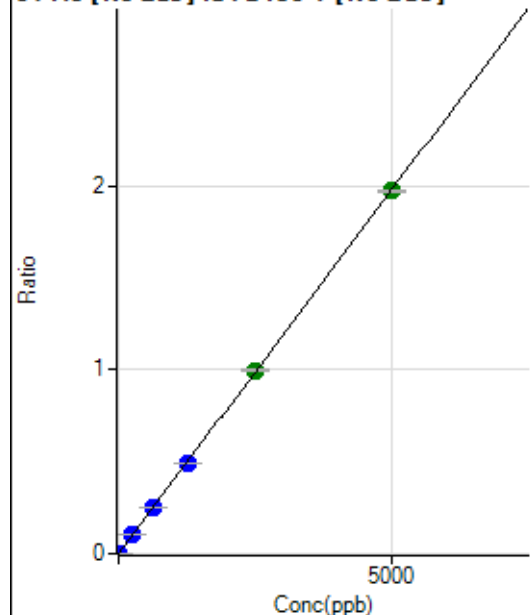
$$R = 0.9999$$

$$DL = 0.02585$$

$$BEC = 0.05326$$

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	380.58	0.0000	P	7.4
2	☐	5.000	4.665	19224.72	0.0019	P	0.9
3	☐	250.000	253.839	1027338.60	0.1004	P	1.4
4	☐	625.000	629.213	2419023.38	0.2488	P	0.1
5	☐	1250.000	1254.136	4534421.80	0.4958	P	0.3
6	☐	2500.000	2517.958	9015115.56	0.9954	A	0.8
7	☐	5000.000	4989.269	17567341.37	1.9724	A	0.5
8	☐			15089.01	0.0018	P	3.6

$$y = 3.9532\text{E-}004 * x + 3.7144\text{E-}005$$

$$R = 1.0000$$

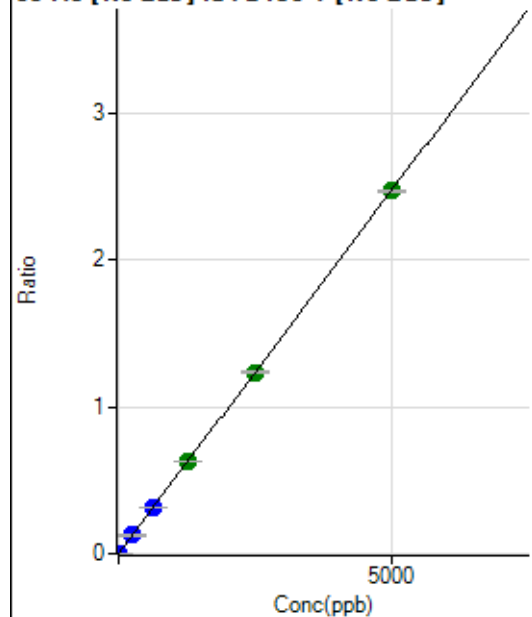
$$DL = 0.02072$$

$$BEC = 0.09396$$

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	180.57	0.0000	P	29.2
2	☐	5.000	4.841	24663.73	0.0024	P	1.7
3	☐	250.000	252.471	1279080.25	0.1250	P	1.2
4	☐	625.000	626.107	3013541.54	0.3099	P	0.5
5	☐	1250.000	1260.646	5706610.50	0.6240	A	0.2
6	☐	2500.000	2501.626	11214072.12	1.2383	A	1.1
7	☐	5000.000	4996.264	22026135.74	2.4730	A	0.2
8	☐			23612.08	0.0028	P	2.7

$$y = 4.9497\text{E-}004 * x + 1.7622\text{E-}005$$

$$R = 1.0000$$

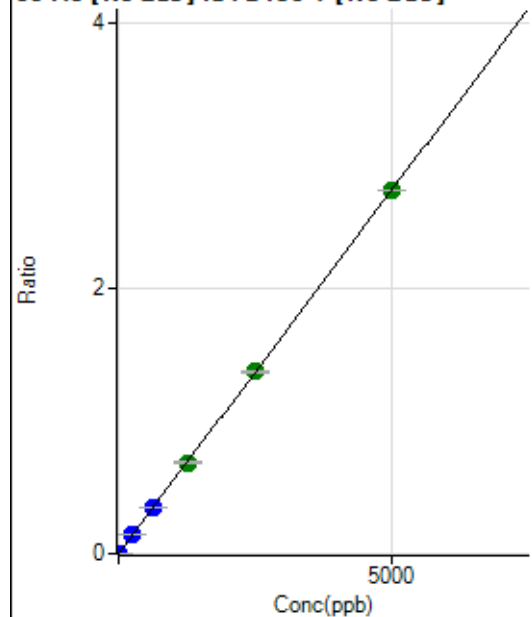
$$DL = 0.03114$$

$$BEC = 0.0356$$

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	222.23	0.0000	P	17.4
2	☐	5.000	4.786	26995.84	0.0026	P	2.8
3	☐	250.000	253.349	1419796.90	0.1387	P	0.9
4	☐	625.000	627.844	3342706.54	0.3438	P	0.1
5	☐	1250.000	1256.144	6289778.40	0.6878	A	0.2
6	☐	2500.000	2506.986	12430940.64	1.3726	A	1.2
7	☐	5000.000	4994.448	24355209.92	2.7345	A	0.1
8	☐			25690.51	0.0030	P	4.1

$$y = 5.4751\text{E-}004 * x + 2.1684\text{E-}005$$

$$R = 1.0000$$

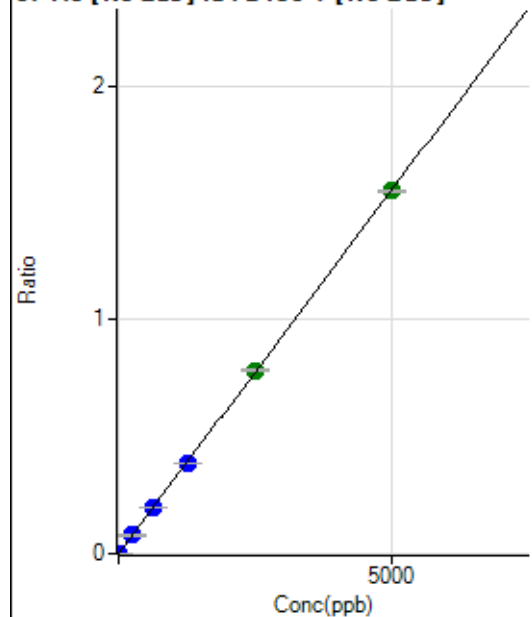
$$DL = 0.02062$$

$$BEC = 0.03961$$

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	102.78	0.0000	P	4.6
2	☐	5.000	4.785	15294.85	0.0015	P	1.5
3	☐	250.000	252.453	802890.86	0.0785	P	1.2
4	☐	625.000	630.087	1903823.76	0.1958	P	0.4
5	☐	1250.000	1248.886	3548977.38	0.3881	P	0.5
6	☐	2500.000	2515.677	7079341.22	0.7817	A	1.0
7	☐	5000.000	4991.682	13814468.54	1.5511	A	0.5
8	☐			14644.20	0.0017	P	3.0

$$y = 3.1073\text{E-}004 * x + 1.0033\text{E-}005$$

$$R = 1.0000$$

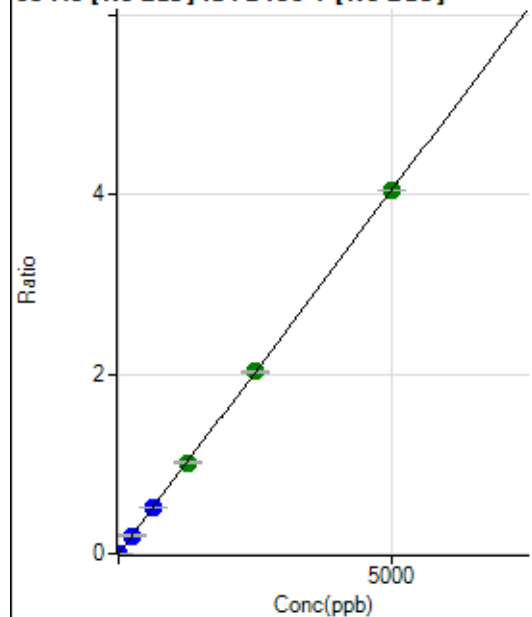
$$DL = 0.004414$$

$$BEC = 0.03229$$

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	213.90	0.0000	P	38.1
2	☐	5.000	4.806	39895.93	0.0039	P	3.1
3	☐	250.000	250.574	2072920.47	0.2026	P	1.1
4	☐	625.000	627.442	4931267.73	0.5072	P	0.5
5	☐	1250.000	1257.201	9292998.65	1.0162	A	0.4
6	☐	2500.000	2507.345	18353778.19	2.0266	A	0.7
7	☐	5000.000	4994.194	35952409.83	4.0366	A	0.2
8	☐			37803.90	0.0045	P	1.6

$$y = 8.0826\text{E-}004 * x + 2.0895\text{E-}005$$

$$R = 1.0000$$

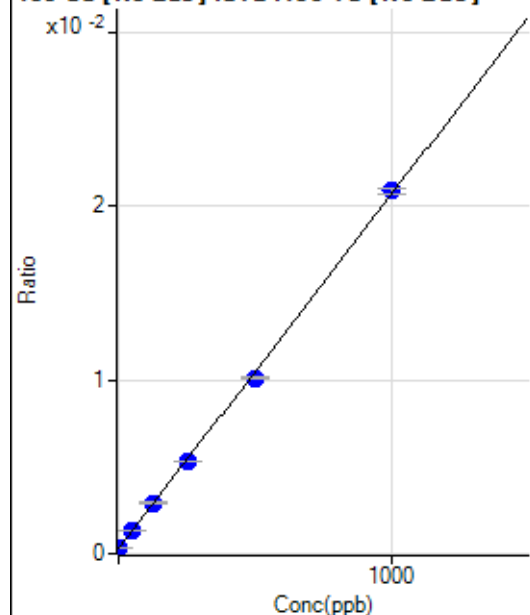
$$DL = 0.02956$$

$$BEC = 0.02585$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	4773.24	0.0003	P	4.9
2	☐	1.000	0.640	5023.35	0.0003	P	2.1
3	☐	50.000	52.080	22535.36	0.0013	P	1.4
4	☐	125.000	129.171	47533.33	0.0029	P	0.7
5	☐	250.000	246.629	83311.47	0.0053	P	0.8
6	☐	500.000	481.479	157434.76	0.0101	P	0.6
7	☐	1000.000	1009.478	322310.96	0.0208	P	1.3
8	☐			4109.09	0.0003	P	3.1

$$y = 2.0367\text{E-}005 * x + 2.8772\text{E-}004$$

$$R = 0.9997$$

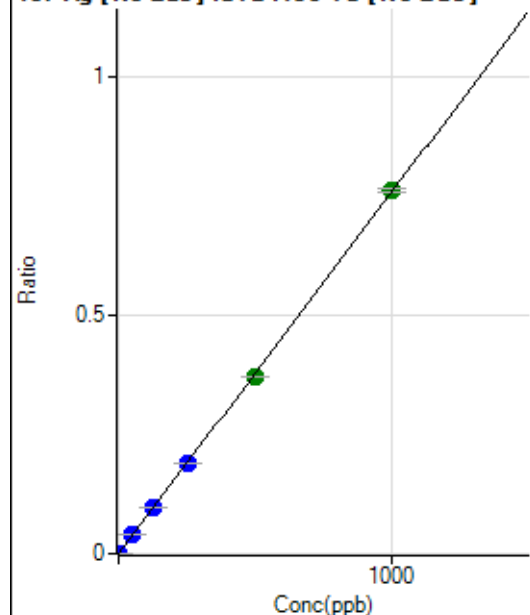
$$DL = 2.089$$

$$BEC = 14.13$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	133.34	0.0000	P	23.4
2	☐	1.000	1.065	13620.95	0.0008	P	1.3
3	☐	50.000	53.871	682726.55	0.0409	P	0.1
4	☐	125.000	130.028	1605827.65	0.0986	P	0.5
5	☐	250.000	250.008	2973741.15	0.1896	P	0.5
6	☐	500.000	490.179	5796967.32	0.3717	A	0.5
7	☐	1000.000	1004.087	11770510.59	0.7613	A	1.0
8	☐			3111.58	0.0002	P	11.5

$$y = 7.5824\text{E-}004 * x + 8.0466\text{E-}006$$

$$R = 0.9999$$

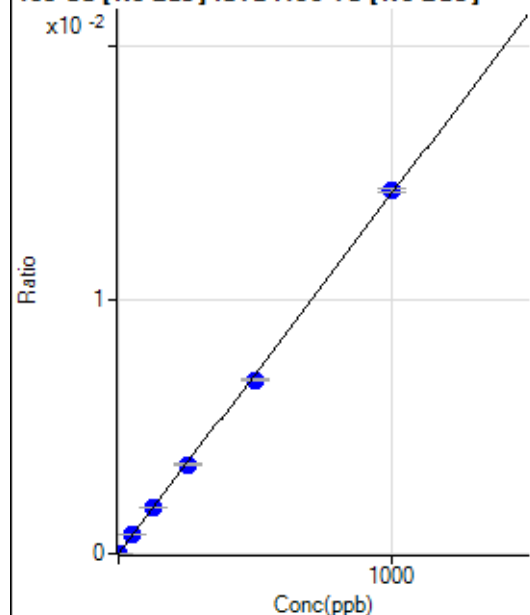
$$DL = 0.007451$$

$$BEC = 0.01061$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19.44	0.0000	P	66.2
2	☐	1.000	0.943	243.06	0.0000	P	6.6
3	☐	50.000	52.534	12470.97	0.0007	P	0.5
4	☐	125.000	126.781	29304.15	0.0018	P	0.6
5	☐	250.000	247.500	55083.22	0.0035	P	1.4
6	☐	500.000	483.537	106984.00	0.0069	P	0.3
7	☐	1000.000	1008.507	221158.87	0.0143	P	1.1
8	☐			104.17	0.0000	P	3.8

$$y = 1.4183\text{E-}005 * x + 1.1746\text{E-}006$$

$$R = 0.9998$$

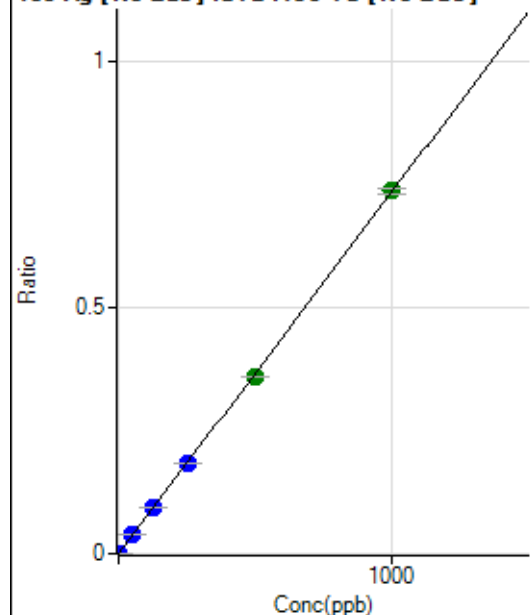
$$DL = 0.1645$$

$$BEC = 0.08282$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.34	0.0000	P	18.0
2	☐	1.000	1.082	13359.65	0.0008	P	2.5
3	☐	50.000	53.749	659848.14	0.0395	P	0.7
4	☐	125.000	129.208	1545847.19	0.0949	P	0.3
5	☐	250.000	248.666	2865373.18	0.1827	P	0.8
6	☐	500.000	490.162	5615839.36	0.3601	A	0.7
7	☐	1000.000	1004.539	11408071.52	0.7379	A	1.3
8	☐			2905.97	0.0002	P	6.4

$$y = 7.3456\text{E-}004 * x + 5.0273\text{E-}006$$

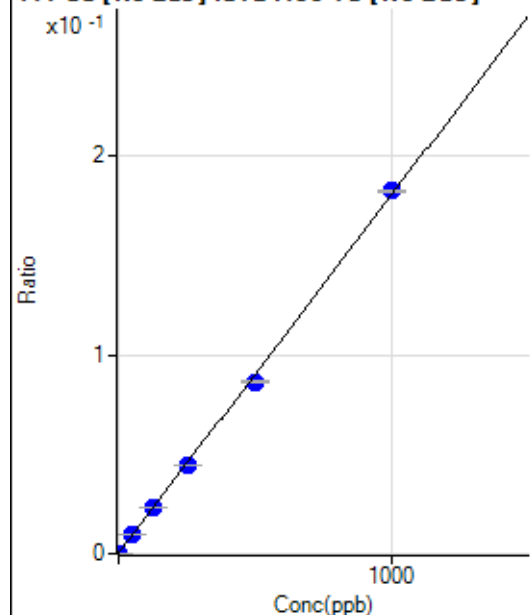
$$R = 0.9999$$

$$DL = 0.003702$$

$$BEC = 0.006844$$

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	3356.82	0.0002	P	5.0
2	☐	1.000	0.968	6295.18	0.0004	P	1.5
3	☐	50.000	52.671	162076.91	0.0097	P	0.8
4	☐	125.000	126.781	375565.66	0.0231	P	0.8
5	☐	250.000	246.771	701113.16	0.0447	P	0.3
6	☐	500.000	478.437	1348565.10	0.0865	P	0.8
7	☐	1000.000	1011.233	2821966.86	0.1825	P	0.6
8	☐			3418.75	0.0002	P	3.7

$$y = 1.8030\text{E-}004 * x + 2.0234\text{E-}004$$

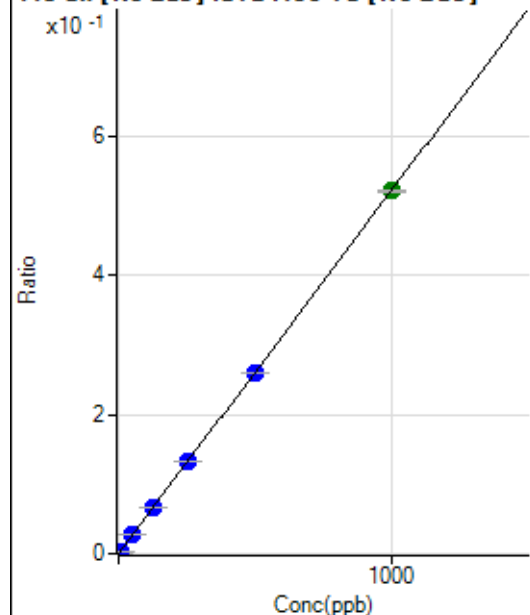
$$R = 0.9996$$

$$DL = 0.1684$$

$$BEC = 1.122$$

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	763.94	0.0000	P	5.3
2	☐	5.000	5.257	46541.85	0.0028	P	0.4
3	☐	50.000	52.703	459902.52	0.0275	P	1.4
4	☐	125.000	129.158	1097362.33	0.0674	P	0.5
5	☐	250.000	252.604	2066521.23	0.1317	P	0.3
6	☐	500.000	499.261	4060274.01	0.2603	P	0.2
7	☐	1000.000	999.063	8053499.57	0.5209	A	0.3
8	☐			4534.26	0.0003	P	5.4

$$y = 5.2134\text{E-}004 * x + 4.6039\text{E-}005$$

$$R = 1.0000$$

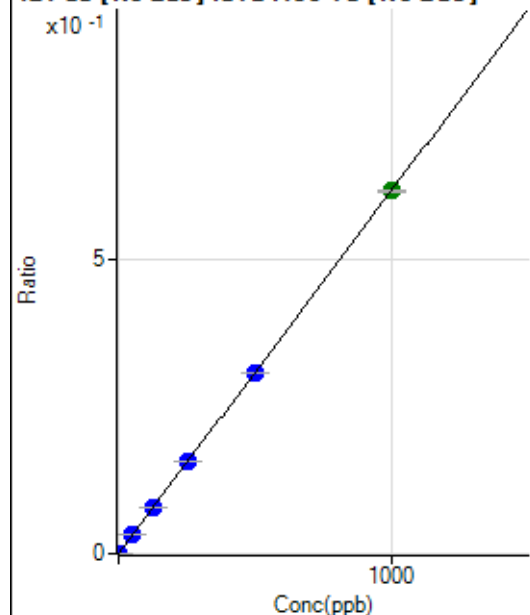
$$DL = 0.01407$$

$$BEC = 0.08831$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	191.68	0.0000	P	16.3
2	☐	2.000	1.971	20448.91	0.0012	P	2.7
3	☐	50.000	52.218	537247.12	0.0321	P	0.3
4	☐	125.000	128.339	1286590.68	0.0790	P	0.4
5	☐	250.000	253.976	2452143.63	0.1563	P	1.1
6	☐	500.000	498.542	4785702.06	0.3068	P	0.5
7	☐	1000.000	999.207	9508028.68	0.6150	A	0.4
8	☐			14104.86	0.0010	P	3.7

$$y = 6.1546\text{E-}004 * x + 1.1559\text{E-}005$$

$$R = 1.0000$$

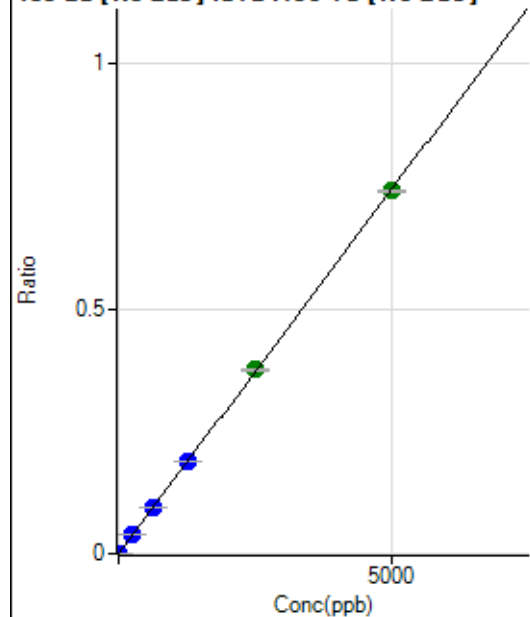
$$DL = 0.009207$$

$$BEC = 0.01878$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	47.23	0.0000	P	72.0
2	☐	10.000	10.501	26142.00	0.0016	P	1.0
3	☐	250.000	263.770	655820.19	0.0392	P	0.7
4	☐	625.000	639.086	1548545.99	0.0951	P	0.6
5	☐	1250.000	1259.396	2939240.54	0.1874	P	0.6
6	☐	2500.000	2526.485	5862626.26	0.3759	A	1.0
7	☐	5000.000	4981.958	11459494.35	0.7412	A	0.4
8	☐			3044.92	0.0002	P	10.0

$$y = 1.4878\text{E-}004 * x + 2.8582\text{E-}006$$

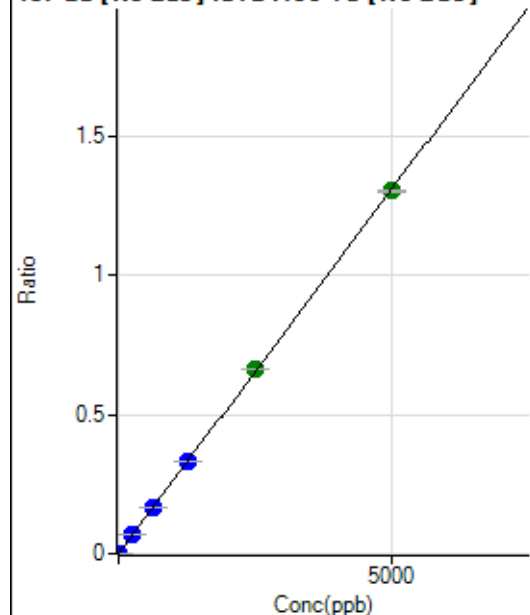
$$R = 1.0000$$

$$DL = 0.04148$$

$$BEC = 0.01921$$

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	27.78	0.0000	P	46.0
2	☐	10.000	10.277	44918.03	0.0027	P	0.4
3	☐	250.000	260.994	1140580.71	0.0683	P	0.4
4	☐	625.000	639.532	2723780.84	0.1672	P	0.2
5	☐	1250.000	1256.893	5156078.67	0.3287	P	0.3
6	☐	2500.000	2530.387	10320649.01	0.6617	A	0.7
7	☐	5000.000	4980.716	20138086.91	1.3025	A	0.3
8	☐			5017.80	0.0003	P	1.7

$$y = 2.6151E-004 * x + 1.6760E-006$$

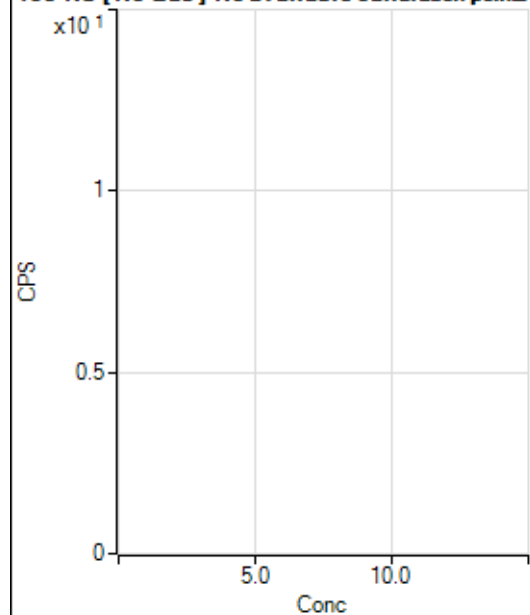
$$R = 1.0000$$

$$DL = 0.008842$$

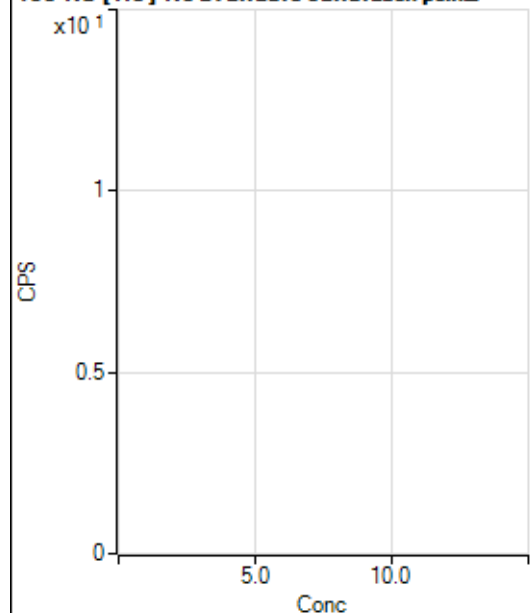
$$BEC = 0.006409$$

Weight: <None>

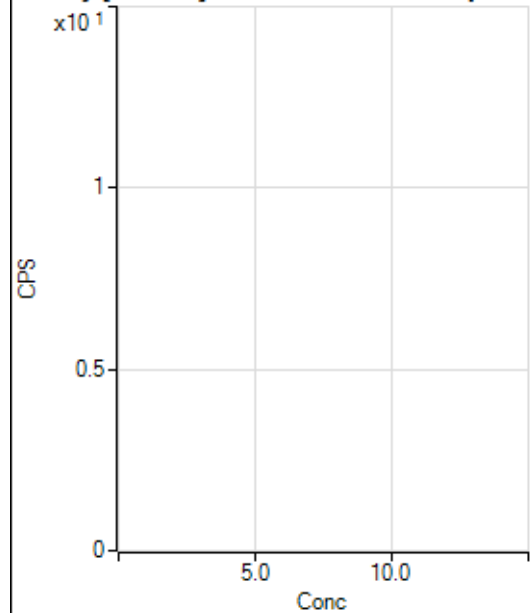
Min Conc: 0

150 Nd [No Gas] No available calibration points

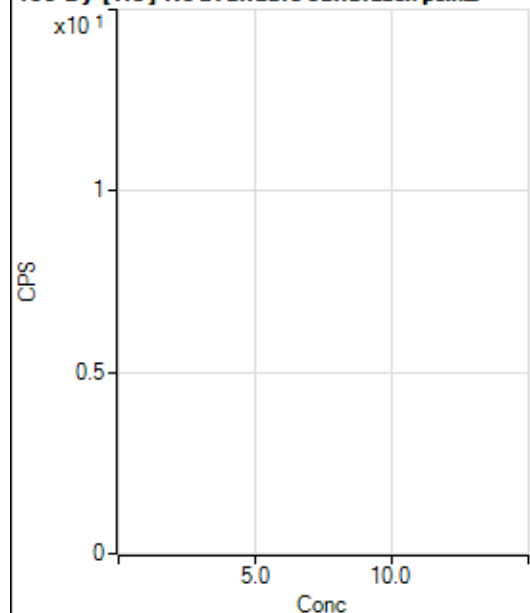
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			4.45		P	86.6
2	☐			11.11		P	91.7
3	☐			60.00		P	40.1
4	☐			140.00		P	16.5
5	☐			302.24		P	11.3
6	☐			597.81		P	9.0
7	☐			915.62		P	2.8
8	☐			106.67		P	25.0

150 Nd [He] No available calibration points

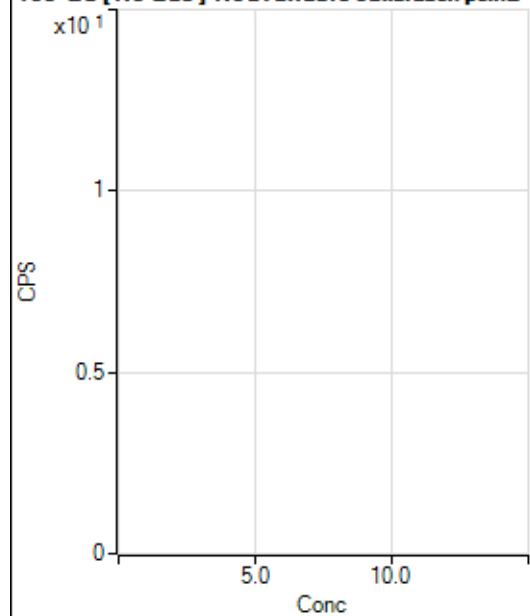
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			3.33		P	100.
2	☐			6.67		P	50.0
3	☐			11.11		P	45.8
4	☐			13.33		P	50.0
5	☐			32.22		P	6.0
6	☐			57.78		P	23.3
7	☐			62.22		P	11.1
8	☐			32.22		P	47.8

156 Dy [No Gas] No available calibration points

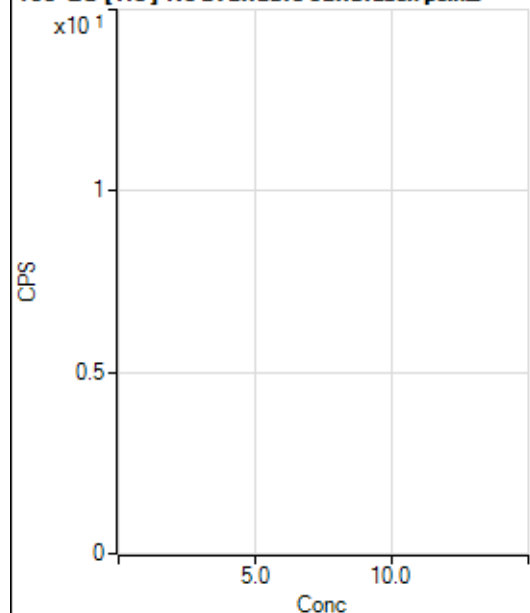
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.33		P	100.
2	☐			13.89		P	69.3
3	☐			33.33		P	43.3
4	☐			25.00		P	33.3
5	☐			86.12		P	24.4
6	☐			133.34		P	28.6
7	☐			213.90		P	32.4
8	☐			50.00		P	50.0

156 Dy [He] No available calibration points

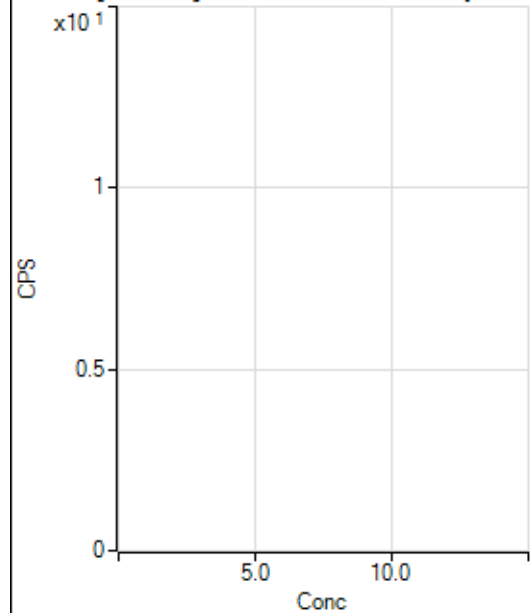
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			15.55		P	68.9
2	☐			20.00		P	60.1
3	☐			21.11		P	39.7
4	☐			28.89		P	74.2
5	☐			56.67		P	30.6
6	☐			82.22		P	16.4
7	☐			145.56		P	30.5
8	☐			20.00		P	44.1

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

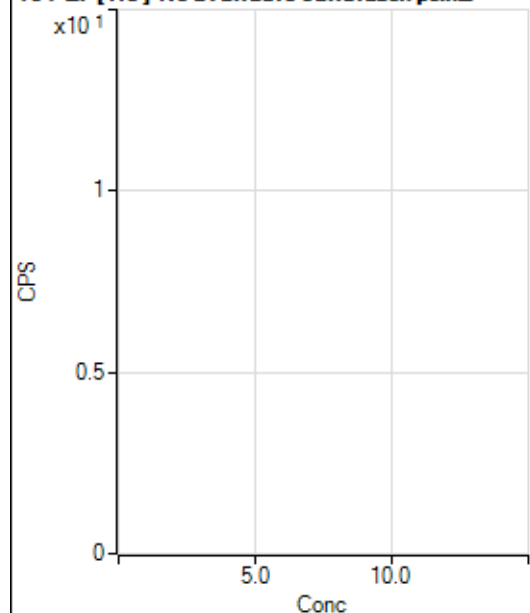
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			47.22		P	36.7
2	☐			69.45		P	85.1
3	☐			77.78		P	30.9
4	☐			75.00		P	55.6
5	☐			94.45		P	18.4
6	☐			94.45		P	28.4
7	☐			152.79		P	43.7
8	☐			75.01		P	40.1

160 Gd [He] No available calibration points

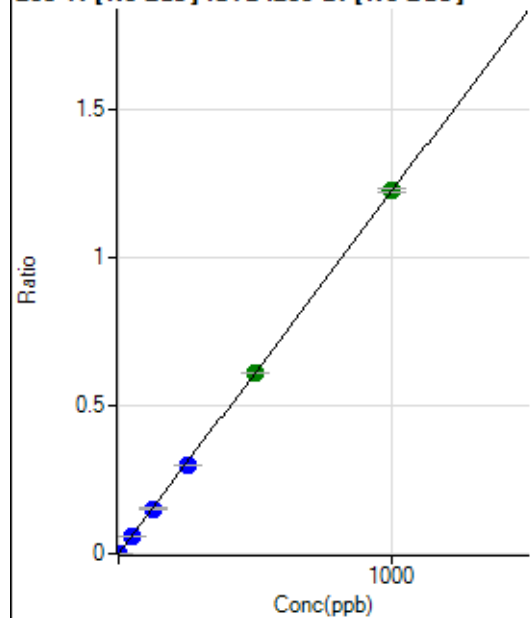
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			144.45		P	3.5
2	☐			154.45		P	18.4
3	☐			134.45		P	11.2
4	☐			112.23		P	8.6
5	☐			148.89		P	9.0
6	☐			153.34		P	11.5
7	☐			136.67		P	12.7
8	☐			145.56		P	5.3

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			83.34		P	17.3
2	☐			88.89		P	19.5
3	☐			83.33		P	17.3
4	☐			100.00		P	30.0
5	☐			63.89		P	19.9
6	☐			80.56		P	21.5
7	☐			144.45		P	47.0
8	☐			69.45		P	6.9

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			50.00		P	24.0
2	☐			40.00		P	28.9
3	☐			34.44		P	5.6
4	☐			44.44		P	11.5
5	☐			56.67		P	23.5
6	☐			52.22		P	20.5
7	☐			55.56		P	18.3
8	☐			57.78		P	46.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	688.94	0.0001	P	7.1
2	☐	1.000	0.938	14138.56	0.0012	P	2.7
3	☐	50.000	49.729	711382.86	0.0609	P	0.2
4	☐	125.000	124.703	1717397.04	0.1526	P	0.4
5	☐	250.000	244.881	3285298.43	0.2997	P	0.2
6	☐	500.000	499.244	6580502.88	0.6109	A	0.9
7	☐	1000.000	1001.708	12805885.01	1.2258	A	1.0
8	☐			5153.98	0.0006	P	4.4

$$y = 0.0012 * x + 5.8823E-005$$

$$R = 1.0000$$

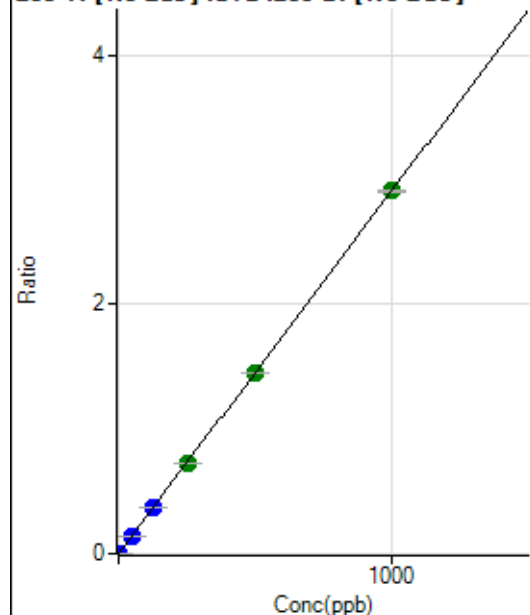
$$DL = 0.01029$$

$$BEC = 0.04807$$

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	1164.00	0.0001	P	1.5
2	☐	1.000	0.947	33462.59	0.0029	P	0.4
3	☐	50.000	50.028	1702155.14	0.1457	P	0.1
4	☐	125.000	125.206	4101891.80	0.3646	P	0.5
5	☐	250.000	248.555	7932776.65	0.7237	A	0.8
6	☐	500.000	498.967	15647531.95	1.4527	A	0.3
7	☐	1000.000	1000.850	30440128.11	2.9137	A	0.3
8	☐			11499.88	0.0013	P	6.9

$$y = 0.0029 * x + 9.9397E-005$$

$$R = 1.0000$$

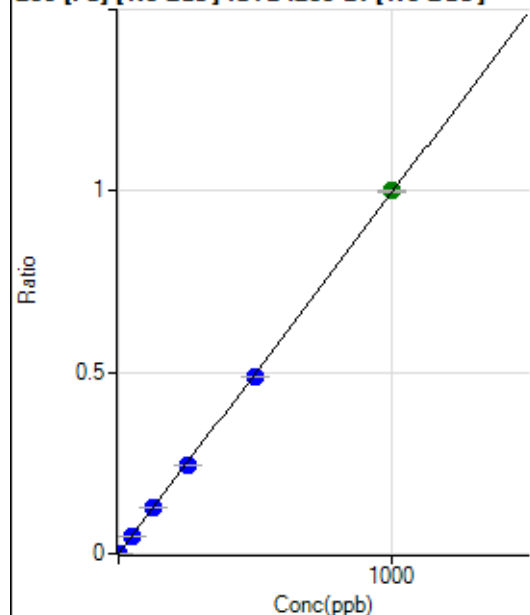
$$DL = 0.001581$$

$$BEC = 0.03414$$

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	1113.04	0.0001	P	5.6
2	☐	1.000	0.954	12235.55	0.0010	P	1.6
3	☐	50.000	50.152	583755.62	0.0500	P	1.1
4	☐	125.000	126.312	1414664.66	0.1257	P	0.5
5	☐	250.000	247.381	2698504.43	0.2462	P	0.2
6	☐	500.000	490.212	5253601.68	0.4877	P	0.2
7	☐	1000.000	1005.377	10448919.10	1.0002	A	0.6
8	☐			10207.92	0.0011	P	2.3

$$y = 9.9472E-004 * x + 9.5036E-005$$

$$R = 0.9999$$

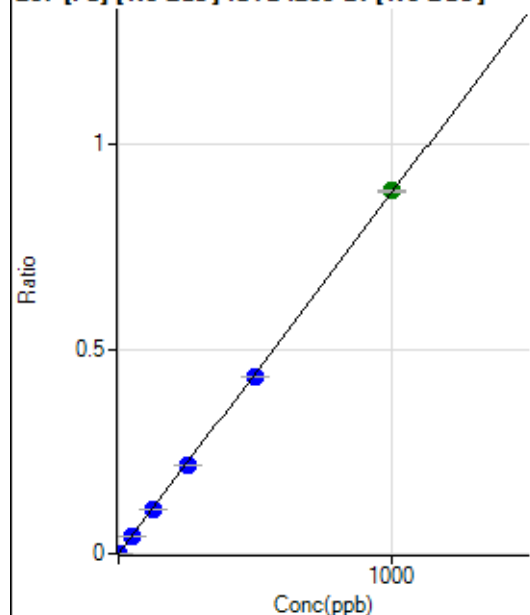
$$DL = 0.01606$$

$$BEC = 0.09554$$

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	933.40	0.0001	P	5.8
2	☐	1.000	0.971	10962.21	0.0009	P	0.8
3	☐	50.000	49.559	511309.42	0.0438	P	0.8
4	☐	125.000	124.620	1237157.74	0.1100	P	0.8
5	☐	250.000	245.603	2374818.42	0.2166	P	0.5
6	☐	500.000	489.489	4649865.38	0.4317	P	0.5
7	☐	1000.000	1006.424	9271924.51	0.8875	A	0.2
8	☐			9218.27	0.0010	P	1.8

$$y = 8.8176\text{E-}004 * x + 7.9697\text{E-}005$$

$$R = 0.9999$$

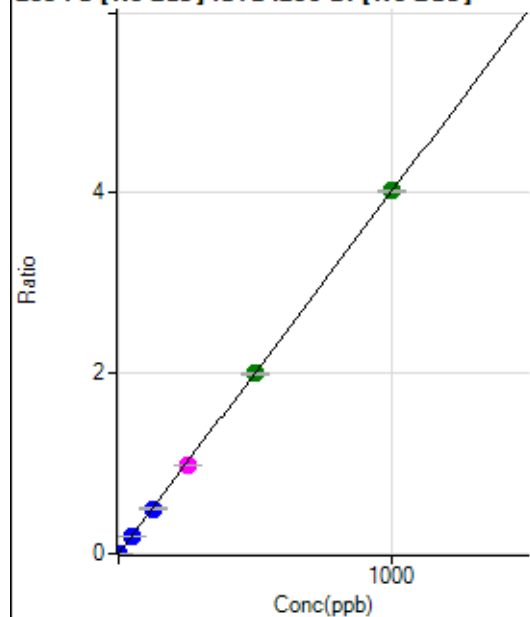
$$DL = 0.01568$$

$$BEC = 0.09038$$

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	3666.95	0.0003	P	6.3
2	☐	1.000	0.958	48726.50	0.0042	P	0.9
3	☐	50.000	49.751	2336120.60	0.2000	P	0.8
4	☐	125.000	124.743	5637194.17	0.5011	P	0.5
5	☐	250.000	246.311	10841832.70	0.9891	M	0.5
6	☐	500.000	497.092	21496932.02	1.9957	A	0.3
7	☐	1000.000	1002.421	42041794.81	4.0242	A	0.3
8	☐			40424.75	0.0044	P	1.9

$$y = 0.0040 * x + 3.1310\text{E-}004$$

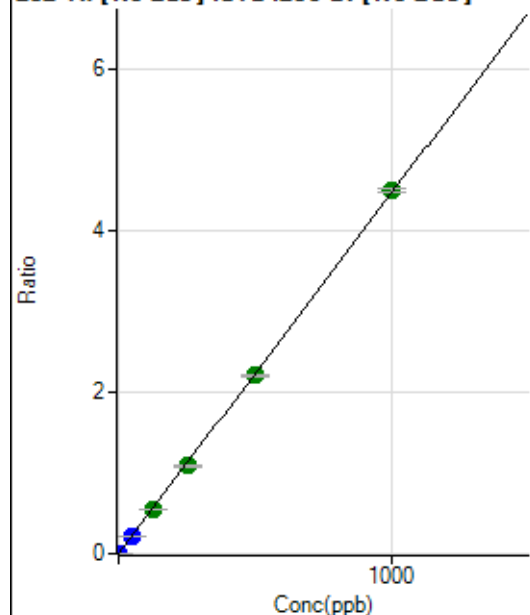
$$R = 1.0000$$

$$DL = 0.01483$$

$$BEC = 0.078$$

Weight: <None>

Min Conc: 0

232 Th [No Gas] ISTD :209 Bi [No Gas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2313.24	0.0002	P	9.8
2	☐	1.000	0.837	46202.41	0.0039	P	1.2
3	☐	50.000	46.972	2456492.94	0.2103	P	0.4
4	☐	125.000	120.519	6067848.63	0.5393	A	0.6
5	☐	250.000	242.641	11900675.96	1.0856	A	0.3
6	☐	500.000	493.888	23800600.76	2.2096	A	0.6
7	☐	1000.000	1005.607	46998844.10	4.4987	A	0.9
8	☐			14399.04	0.0016	P	5.5

$$y = 0.0045 * x + 1.9751E-004$$

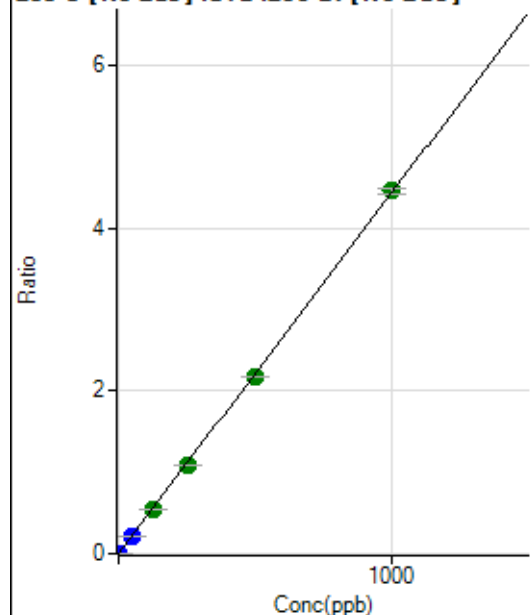
$$R = 0.9999$$

$$DL = 0.01301$$

$$BEC = 0.04415$$

Weight: <None>

Min Conc: 0

238 U [No Gas] ISTD :209 Bi [No Gas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2739.29	0.0002	P	1.8
2	☐	1.000	0.902	49562.59	0.0042	P	0.9
3	☐	50.000	47.440	2456508.17	0.2103	P	0.4
4	☐	125.000	121.709	6066685.07	0.5392	A	0.7
5	☐	250.000	245.328	11912325.09	1.0867	A	0.2
6	☐	500.000	491.284	23437500.70	2.1759	A	0.6
7	☐	1000.000	1006.065	46547955.55	4.4557	A	1.5
8	☐			11716.94	0.0013	P	6.4

$$y = 0.0044 * x + 2.3392E-004$$

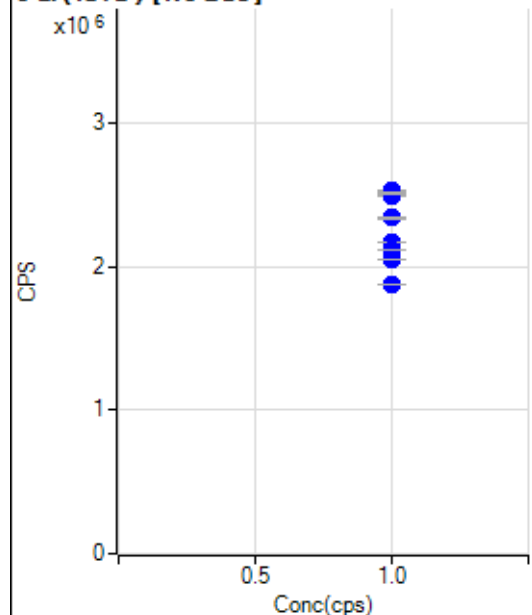
$$R = 0.9999$$

$$DL = 0.002869$$

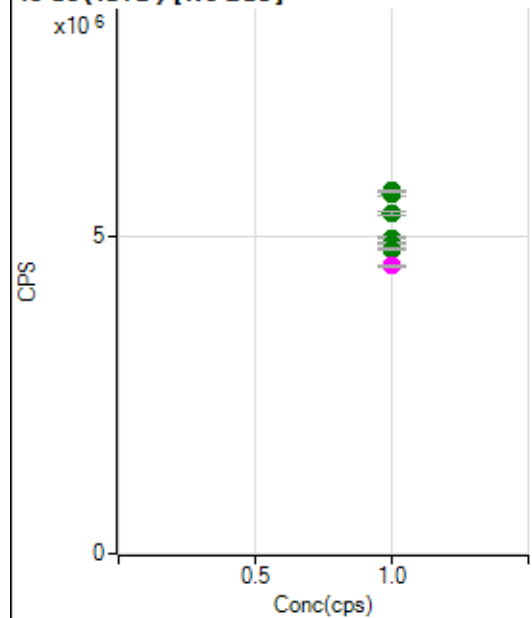
$$BEC = 0.05282$$

Weight: <None>

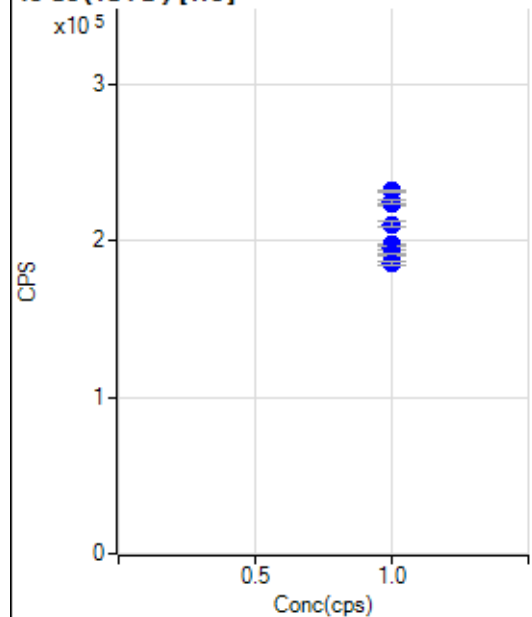
Min Conc: 0

6 Li (ISTD) [No Gas]

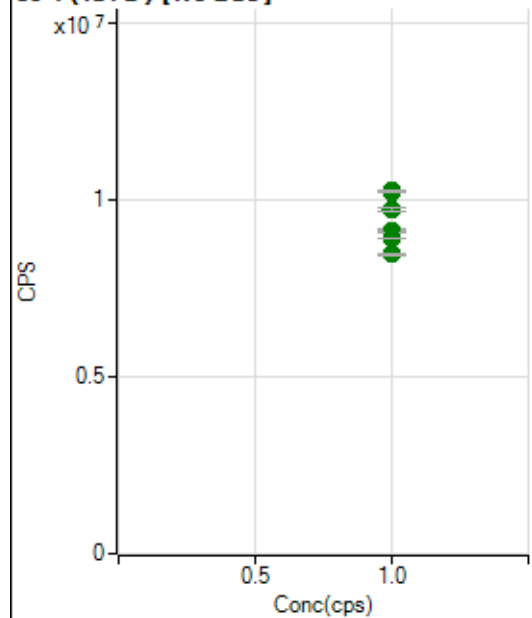
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2496698.00		P	0.5
2	☐	1.000		2526086.60		P	0.4
3	☐	1.000		2508570.50		P	0.8
4	☐	1.000		2341700.42		P	0.7
5	☐	1.000		2172201.95		P	0.2
6	☐	1.000		2114086.82		P	0.1
7	☐	1.000		2046929.57		P	0.2
8	☐	1.000		1875774.52		P	0.5

45 Sc (ISTD) [No Gas]

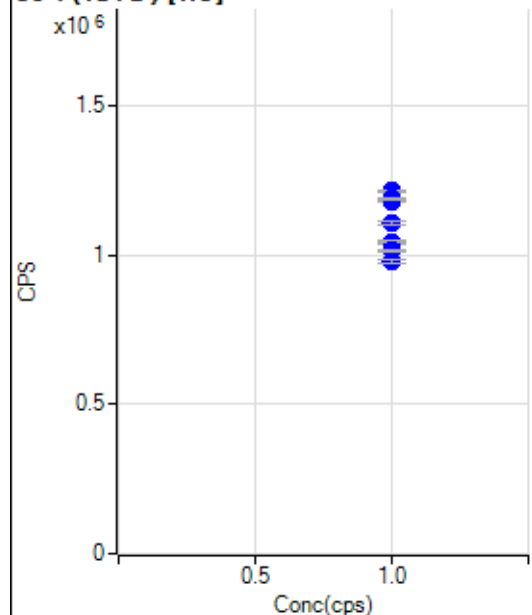
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5650772.61		A	0.7
2	☐	1.000		5705129.25		A	0.8
3	☐	1.000		5688511.07		A	0.6
4	☐	1.000		5349369.09		A	1.2
5	☐	1.000		4966157.79		A	0.7
6	☐	1.000		4882532.44		A	0.5
7	☐	1.000		4787668.60		A	0.3
8	☐	1.000		4529297.93		M	0.8

45 Sc (ISTD) [He]

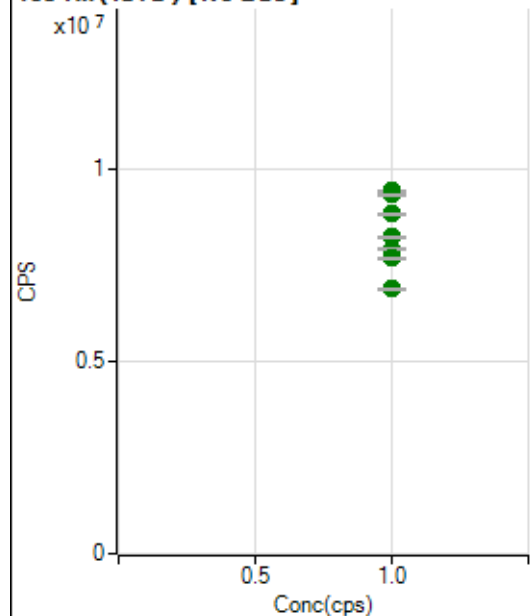
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		223824.26		P	0.5
2	☐	1.000		232201.22		P	0.4
3	☐	1.000		225646.70		P	1.1
4	☐	1.000		210949.79		P	1.4
5	☐	1.000		197800.38		P	0.5
6	☐	1.000		195243.86		P	1.3
7	☐	1.000		191533.07		P	0.7
8	☐	1.000		185977.12		P	1.4

89 Y (ISTD) [No Gas]

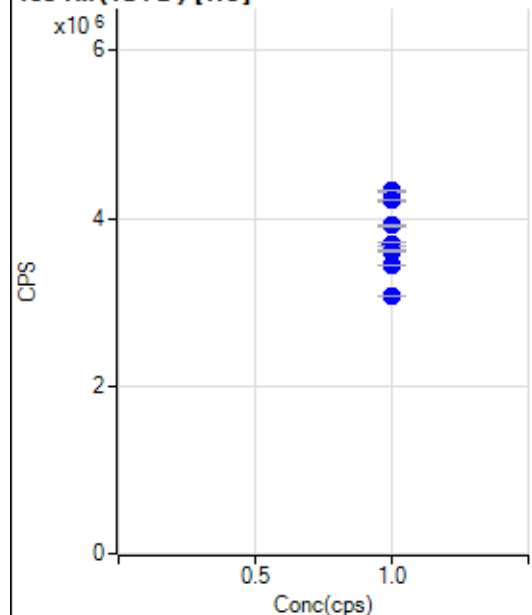
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10244244.71		A	0.5
2	☐	1.000		10217605.68		A	0.5
3	☐	1.000		10234249.22		A	0.5
4	☐	1.000		9723588.05		A	0.8
5	☐	1.000		9145164.24		A	0.3
6	☐	1.000		9056375.63		A	0.1
7	☐	1.000		8906554.66		A	0.2
8	☐	1.000		8449089.18		A	0.4

89 Y (ISTD) [He]

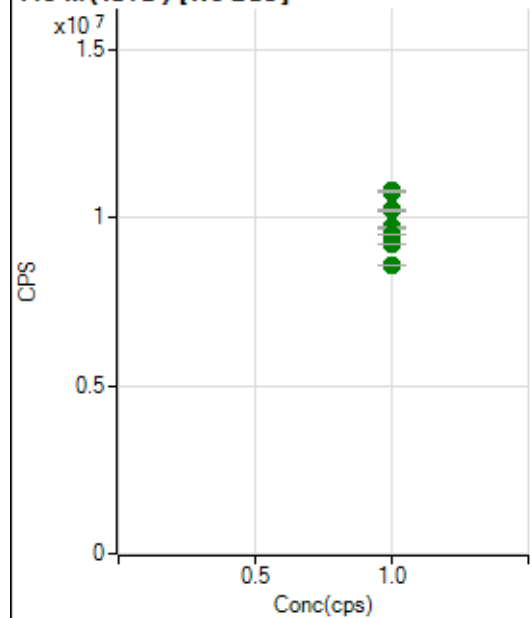
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1180861.20		P	0.3
2	☐	1.000		1214168.74		P	0.3
3	☐	1.000		1187508.38		P	0.1
4	☐	1.000		1108268.67		P	0.9
5	☐	1.000		1043098.64		P	1.2
6	☐	1.000		1044845.88		P	0.3
7	☐	1.000		1015319.53		P	0.5
8	☐	1.000		977781.15		P	1.3

103 Rh (ISTD) [No Gas]

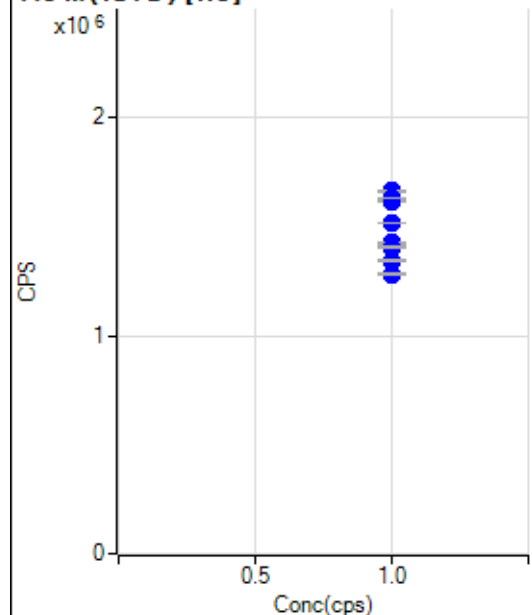
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9430563.41		A	0.7
2	☐	1.000		9442772.43		A	0.5
3	☐	1.000		9342814.88		A	0.4
4	☐	1.000		8835549.94		A	0.9
5	☐	1.000		8234060.51		A	0.1
6	☐	1.000		7925673.36		A	0.7
7	☐	1.000		7694282.29		A	0.7
8	☐	1.000		6882620.20		A	0.1

103 Rh (ISTD) [He]

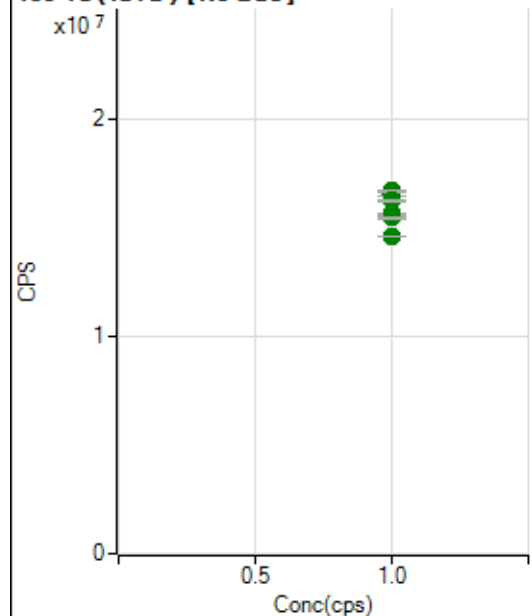
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4216010.25		P	0.5
2	☐	1.000		4325103.55		P	0.5
3	☐	1.000		4218870.63		P	0.2
4	☐	1.000		3917979.18		P	0.6
5	☐	1.000		3692740.64		P	0.9
6	☐	1.000		3608464.88		P	0.5
7	☐	1.000		3445041.30		P	0.2
8	☐	1.000		3070955.89		P	0.6

115 In (ISTD) [No Gas]

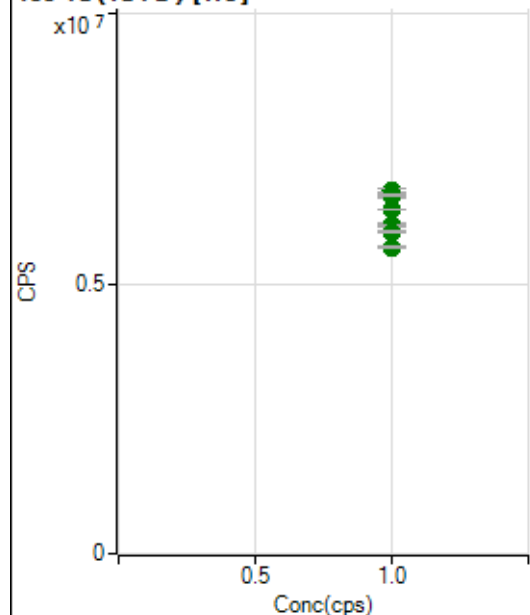
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10771146.09		A	0.2
2	☐	1.000		10785491.03		A	0.2
3	☐	1.000		10775137.18		A	0.6
4	☐	1.000		10228125.29		A	0.5
5	☐	1.000		9700754.24		A	0.5
6	☐	1.000		9489037.07		A	0.5
7	☐	1.000		9211505.60		A	0.1
8	☐	1.000		8594946.81		A	0.1

115 In (ISTD) [He]

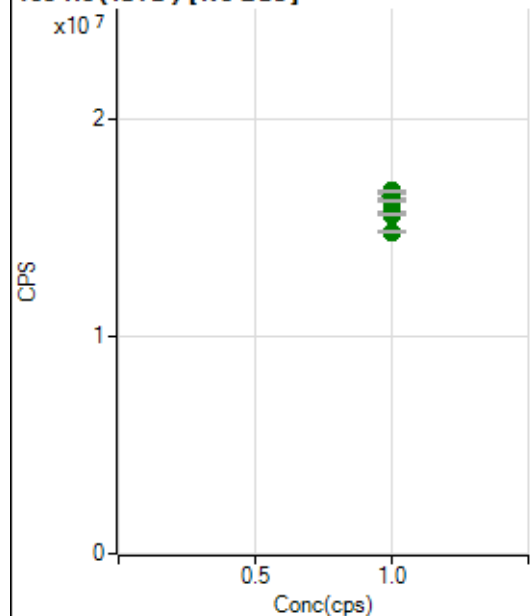
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1616676.85		P	0.7
2	☐	1.000		1665536.49		P	0.3
3	☐	1.000		1633184.99		P	0.4
4	☐	1.000		1516148.47		P	0.2
5	☐	1.000		1427185.58		P	0.6
6	☐	1.000		1404960.21		P	0.6
7	☐	1.000		1344060.73		P	0.8
8	☐	1.000		1282745.95		P	0.6

159 Tb (ISTD) [No Gas]

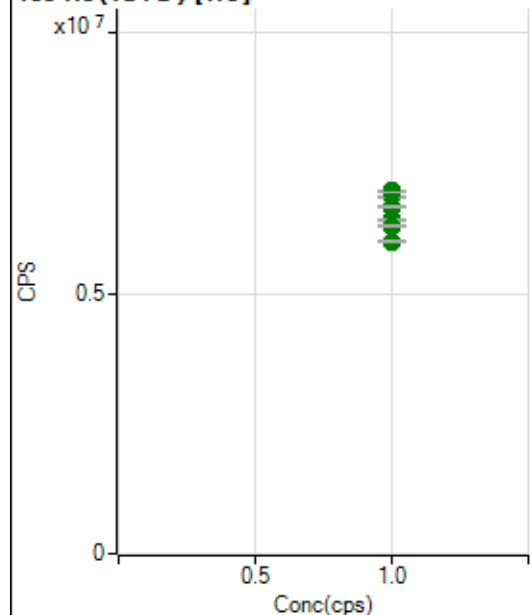
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16593127.95		A	0.9
2	☐	1.000		16702500.17		A	0.8
3	☐	1.000		16710897.67		A	0.7
4	☐	1.000		16286199.48		A	0.7
5	☐	1.000		15686604.21		A	0.3
6	☐	1.000		15596661.43		A	0.4
7	☐	1.000		15460714.77		A	0.6
8	☐	1.000		14634243.39		A	0.3

159 Tb (ISTD) [He]

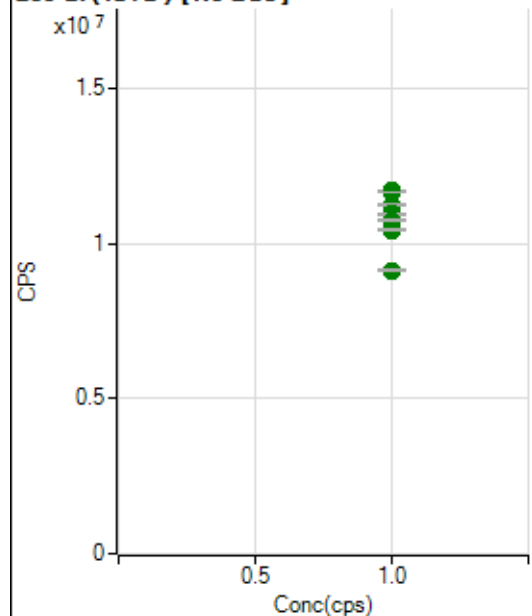
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6612992.75		A	0.5
2	☐	1.000		6719720.04		A	1.0
3	☐	1.000		6646845.18		A	0.7
4	☐	1.000		6365591.15		A	0.2
5	☐	1.000		6104845.47		A	0.7
6	☐	1.000		6086963.73		A	0.5
7	☐	1.000		5963617.27		A	0.3
8	☐	1.000		5672843.46		A	0.7

165 Ho (ISTD) [No Gas]

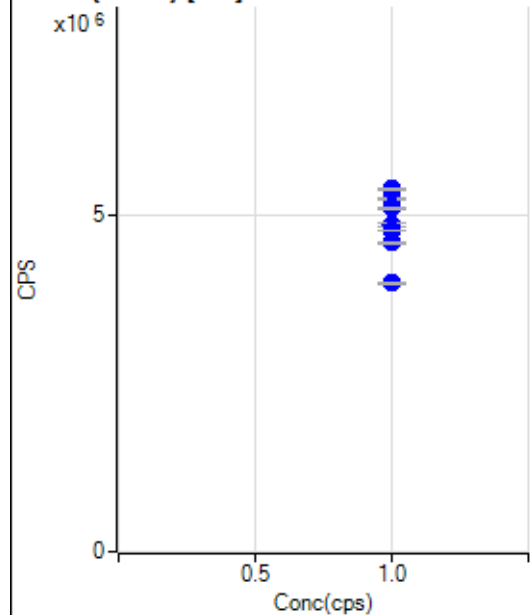
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16443709.40		A	0.8
2	☐	1.000		16614206.62		A	0.4
3	☐	1.000		16673793.25		A	0.4
4	☐	1.000		16201214.95		A	0.6
5	☐	1.000		15680517.19		A	0.5
6	☐	1.000		15697445.84		A	0.7
7	☐	1.000		15576124.83		A	0.3
8	☐	1.000		14776686.61		A	0.6

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6863742.26		A	0.6
2	☐	1.000		6968378.71		A	0.2
3	☐	1.000		6935451.22		A	0.1
4	☐	1.000		6659921.91		A	0.8
5	☐	1.000		6413664.35		A	0.8
6	☐	1.000		6406255.95		A	0.1
7	☐	1.000		6288635.32		A	0.4
8	☐	1.000		5991515.82		A	0.5

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11710703.99		A	0.3
2	☐	1.000		11716192.60		A	0.3
3	☐	1.000		11679540.52		A	0.3
4	☐	1.000		11250852.05		A	0.6
5	☐	1.000		10961950.95		A	0.3
6	☐	1.000		10771611.57		A	1.0
7	☐	1.000		10447265.74		A	0.6
8	☐	1.000		9147573.75		A	0.4

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5250126.87		P	0.9
2	☐	1.000		5396726.52		P	0.1
3	☐	1.000		5383572.63		P	0.5
4	☐	1.000		5110391.77		P	0.8
5	☐	1.000		4871311.28		P	1.0
6	☐	1.000		4776771.07		P	0.6
7	☐	1.000		4596200.62		P	0.5
8	☐	1.000		3991961.99		P	0.5

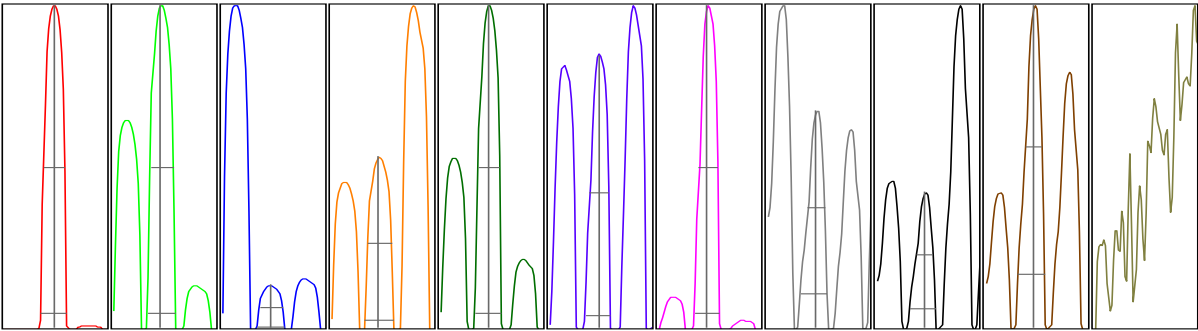
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7100619 MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count	RSD%	RSD%	RSD%
	(Mean)	(Actual)	(Required)	(Flag)
9	8591	0.77	5.00	
24	110064	0.38	5.00	
25	14825	0.55	5.00	
26	17504	0.41	5.00	
59	80831	0.50	5.00	
113	13629	0.51	5.00	
115	158223	0.64	5.00	
206	51504	0.63	5.00	
207	49791	0.72	5.00	
208	111670	0.82	5.00	
220	118	0.85		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	8632	8591	8493	8571	8667
24	110408	109730	109508	110276	110395
25	14829	14857	14749	14747	14944
26	17544	17428	17432	17523	17592
59	80863	81120	80352	80512	81308
113	13710	13619	13520	13639	13656
115	159171	158664	156603	157928	158748
206	51618	51361	51201	51324	52018
207	49943	49282	49801	49671	50260
208	111703	110850	110897	111793	113106
220	118	118	116	119	119

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	14238	9.00	8.9 - 9.1		0.743	0.900	
24	172293	23.90	23.9 - 24.1		0.827	0.900	
25	23152	24.95	24.9 - 25.1		0.806	0.900	
26	27105	25.90	25.9 - 26.1		0.833	0.900	
59	135164	58.95	58.9 - 59.1		0.777	0.900	
113	24856	113.00	112.9 - 113.1		0.738	0.900	
115	295422	114.95	114.9 - 115.1		0.731	0.900	
206	96998	205.95	205.9 - 206.1		0.779	0.900	
207	89017	206.95	206.9 - 207.1		0.748	0.900	
208	211363	207.95	207.9 - 208.1		0.764	0.900	
220			-				

X% = 5 Integration Time [sec] = 0.1 Acquisition Time [sec] = 268 Y Axis = Linear

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.2	V	Deflect	11.6	V
Extract 2	-115.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-60	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	190	V			

[He]

Mass	Count	RSD%	RSD%
	(Mean)	(Actual)	(Required)
59	20764	2.36	
89	26697	2.15	
205	38613	1.43	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	20918	21278	19962	20937	20723
89	27072	27132	25729	26923	26632
205	39155	38989	37729	38563	38629

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.1	V	Deflect	1.2	V
Extract 2	-115.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-55	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			