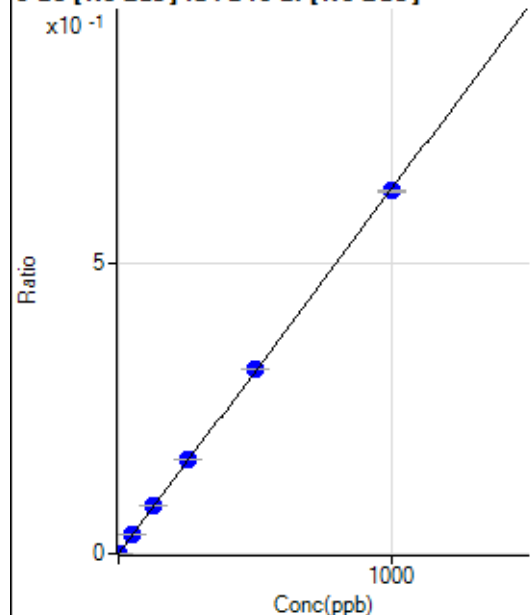


Calibration for 003CALB.d

Batch Folder: D:\ICP-MS Data\P7020420IMS.b\
 Analysis File: P7020420IMS.batch.bin
 DA Date-Time: 2020-02-04 19:07:22
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2020-02-04 17:20:56
2	004CALS.d	S02	2020-02-04 17:24:37
3	005CALS.d	S03	2020-02-04 17:29:51
4	006CALS.d	S04	2020-02-04 17:34:07
5	007CALS.d	S05	2020-02-04 17:38:02
6	008CALS.d	S06	2020-02-04 17:41:54
7	009CALS.d	S07	2020-02-04 17:45:44
8	010CALS.d	S08	2020-02-04 17:49:39

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	105.56	0.0000	P	38.0
2	☐	1.000	1.027	4634.17	0.0007	P	3.5
3	☐	50.000	52.951	228483.15	0.0333	P	0.9
4	☐	125.000	130.411	539738.18	0.0821	P	0.8
5	☐	250.000	256.782	1021915.46	0.1616	P	0.4
6	☐	500.000	504.632	1965601.34	0.3175	P	0.2
7	☐	1000.000	995.165	3825023.26	0.6261	P	0.3
8	☐			574.10	0.0001	P	10.8

$$y = 6.2917\text{E-}004 * x + 1.5206\text{E-}005$$

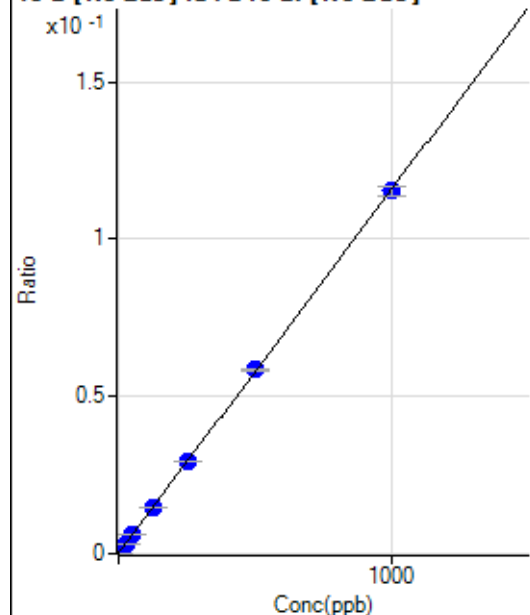
$$R = 1.0000$$

$$DL = 0.02757$$

$$BEC = 0.02417$$

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	897.28	0.0001	P	6.9
2	☐	25.000	25.221	21349.16	0.0030	P	1.2
3	☐	50.000	51.046	41360.24	0.0060	P	1.2
4	☐	125.000	126.689	97223.29	0.0148	P	0.3
5	☐	250.000	253.380	186168.40	0.0294	P	0.8
6	☐	500.000	504.879	362285.74	0.0585	P	1.6
7	☐	1000.000	996.447	704787.91	0.1154	P	2.3
8	☐			21833.08	0.0040	P	6.1

$$y = 1.1566\text{E-}004 * x + 1.2922\text{E-}004$$

$$R = 1.0000$$

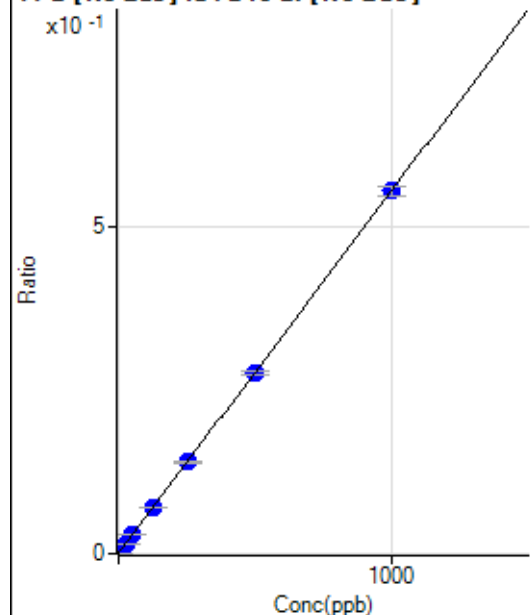
$$DL = 0.2327$$

$$BEC = 1.117$$

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	4178.56	0.0006	P	4.4
2	☐	25.000	25.172	101985.64	0.0146	P	1.8
3	☐	50.000	50.300	195184.54	0.0285	P	1.4
4	☐	125.000	125.397	460956.30	0.0701	P	0.3
5	☐	250.000	252.105	887288.88	0.1403	P	1.5
6	☐	500.000	498.946	1715181.18	0.2771	P	1.7
7	☐	1000.000	999.932	3388129.33	0.5547	P	2.3
8	☐			104453.74	0.0190	P	8.5

$$y = 5.5412\text{E-}004 * x + 6.0182\text{E-}004$$

$$R = 1.0000$$

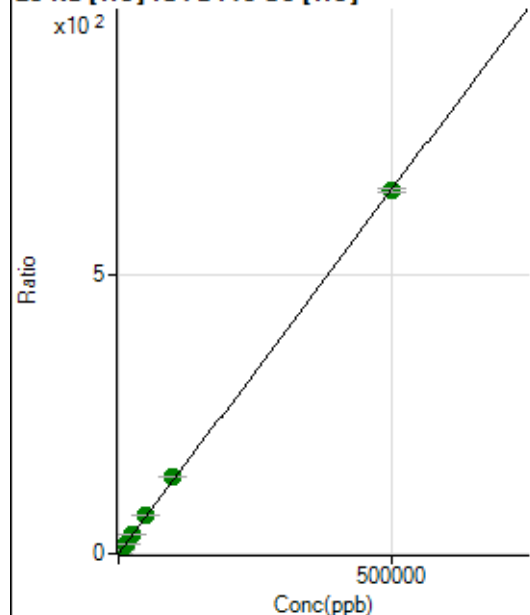
$$DL = 0.1422$$

$$BEC = 1.086$$

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	31567.45	0.0462	P	2.4
2	☐	500.000	544.801	525331.19	0.7587	P	2.0
3	☐	5000.000	5449.223	4813215.04	7.1726	A	0.7
4	☐	12500.000	13384.481	11627359.29	17.5502	A	0.1
5	☐	25000.000	26566.977	23042303.29	34.7900	A	0.5
6	☐	50000.000	52474.486	43811261.05	68.6713	A	0.5
7	☐	100000.00	105736.05	87797729.04	138.3257	A	0.7
8	☐	500000.00	498500.34	400086728.39	651.9749	A	1.1

$$y = 0.0013 * x + 0.0462$$

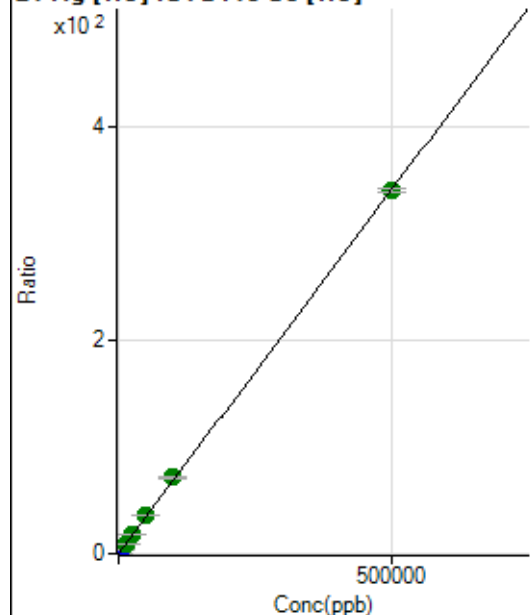
$$R = 0.9999$$

$$DL = 2.541$$

$$BEC = 35.35$$

Weight: <None>

Min Conc: 0

24 Mg [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	241.68	0.0004	P	17.6
2	☐	500.000	533.770	251887.00	0.3638	P	4.5
3	☐	5000.000	5490.044	2508568.87	3.7382	P	0.6
4	☐	12500.000	13433.194	6059630.13	9.1463	A	0.1
5	☐	25000.000	26535.507	11966333.86	18.0670	A	0.3
6	☐	50000.000	52391.912	22757847.90	35.6713	A	0.4
7	☐	100000.00	104652.41	45225598.58	71.2528	A	0.7
8	☐	500000.00	498725.28	208369976.88	339.5566	A	1.0

$$y = 6.8085E-004 * x + 3.5362E-004$$

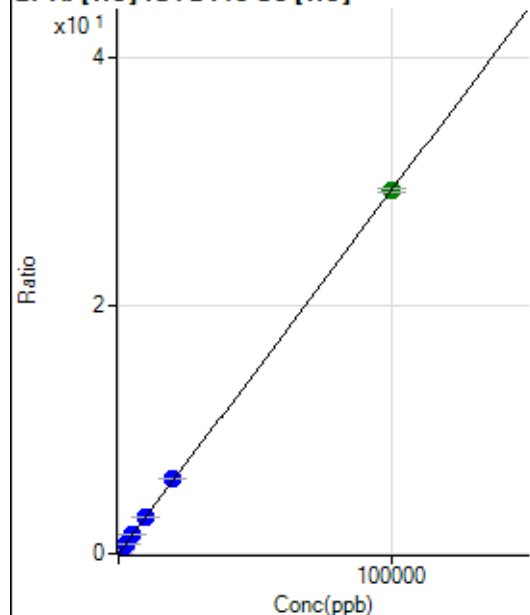
$$R = 1.0000$$

$$DL = 0.2743$$

$$BEC = 0.5194$$

Weight: <None>

Min Conc: 0

27 Al [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	102.78	0.0002	P	9.1
2	☐	20.000	19.866	4139.65	0.0060	P	7.1
3	☐	1000.000	1063.096	209384.53	0.3120	P	1.0
4	☐	2500.000	2611.283	507629.12	0.7662	P	1.4
5	☐	5000.000	5158.295	1002314.73	1.5134	P	1.0
6	☐	10000.000	10222.897	1913443.47	2.9991	P	0.5
7	☐	20000.000	20470.516	3811646.74	6.0053	P	0.7
8	☐	100000.00	99872.279	17979069.85	29.2982	A	1.1

$$y = 2.9336E-004 * x + 1.5047E-004$$

$$R = 1.0000$$

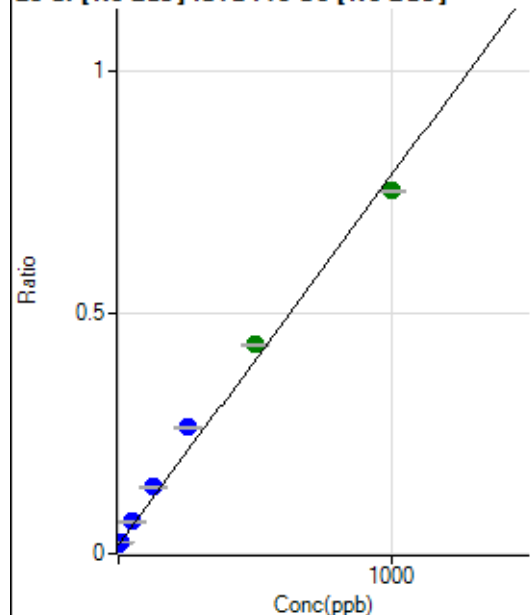
$$DL = 0.1402$$

$$BEC = 0.5129$$

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	331414.50	0.0184	P	0.9
2	☐	10.000	9.287	467265.19	0.0256	P	0.7
3	☐	50.000	62.162	1182470.46	0.0661	P	1.2
4	☐	125.000	156.387	2430904.81	0.1382	P	1.9
5	☐	250.000	317.994	4497708.17	0.2620	P	1.8
6	☐	500.000	541.546	7374046.00	0.4333	A	0.5
7	☐	1000.000	957.704	12820068.43	0.7520	A	0.4
8	☐			769930.54	0.0499	P	1.0

$$y = 7.6599\text{E-}004 * x + 0.0184$$

$$R = 0.9957$$

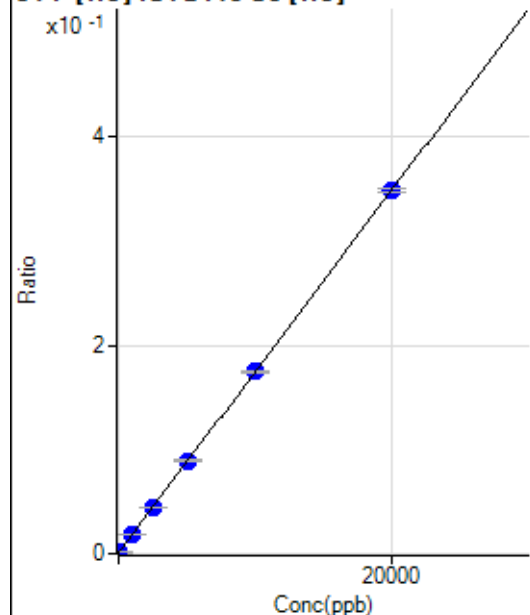
$$DL = 0.6443$$

$$BEC = 24.07$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-24.164	252.79	0.0004	P	19.3
2	☐	0.000	24.164	838.95	0.0012	P	7.3
3	☐	1000.000	1025.807	12511.27	0.0186	P	2.6
4	☐	2500.000	2498.709	29335.16	0.0443	P	1.7
5	☐	5000.000	5101.217	59318.90	0.0896	P	2.1
6	☐	10000.000	9990.932	111439.62	0.1747	P	0.4
7	☐	20000.000	19978.101	221188.43	0.3485	P	0.9
8	☐			297.24	0.0005	P	25.2

$$y = 1.7404\text{E-}005 * x + 7.9098\text{E-}004$$

$$R = 1.0000$$

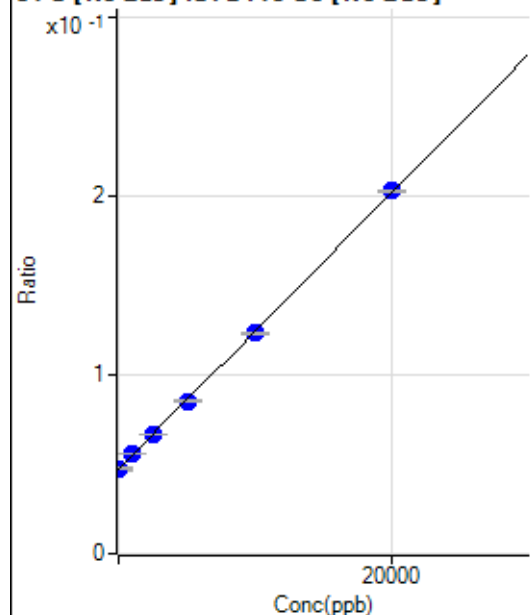
$$DL = 13.76$$

$$BEC = 45.45$$

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	-55.654	844004.83	0.0470	P	1.1
2	☐	0.000	55.654	874450.39	0.0478	P	0.7
3	☐	1000.000	1070.218	996374.28	0.0557	P	0.5
4	☐	2500.000	2454.931	1166995.00	0.0664	P	0.2
5	☐	5000.000	4876.142	1460241.58	0.0851	P	1.0
6	☐	10000.000	9820.771	2097950.09	0.1233	P	0.7
7	☐	20000.000	20122.702	3458097.99	0.2029	P	0.4
8	☐			660887.99	0.0429	P	1.2

$$y = 7.7258\text{E-}006 * x + 0.0474$$

R = 0.9999

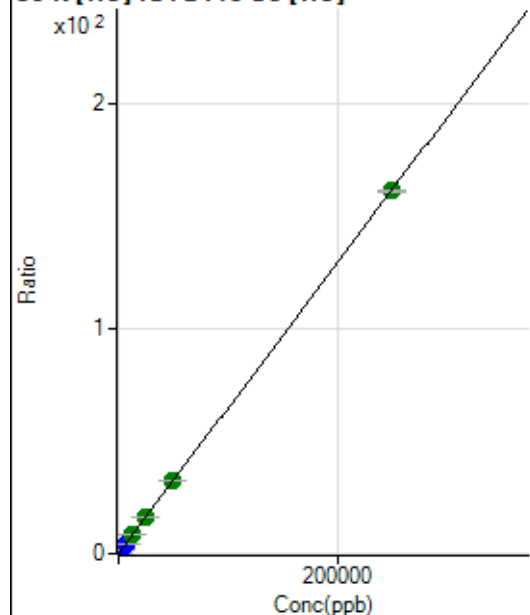
DL = 160.9

BEC = 6134

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	35003.53	0.0513	P	1.4
2	☐	500.000	525.171	269856.98	0.3897	P	1.3
3	☐	2500.000	2638.983	1175808.18	1.7522	P	0.6
4	☐	6250.000	6543.292	2828059.59	4.2686	P	0.5
5	☐	12500.000	12779.118	5488895.00	8.2877	A	1.1
6	☐	25000.000	25399.866	10477342.07	16.4221	A	0.5
7	☐	50000.000	50542.354	20709633.97	32.6272	A	0.2
8	☐	250000.00	249828.81	98845200.13	161.0726	A	0.8

$$y = 6.4453\text{E-}004 * x + 0.0513$$

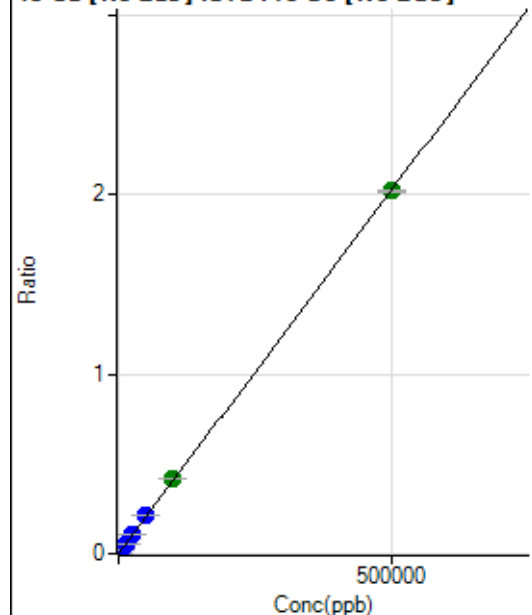
R = 1.0000

DL = 3.446

BEC = 79.52

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	338.91	0.0000	P	14.1
2	☐	500.000	542.275	40450.93	0.0022	P	0.9
3	☐	5000.000	5318.129	385395.34	0.0215	P	0.4
4	☐	12500.000	13263.868	943803.79	0.0537	P	0.5
5	☐	25000.000	26384.837	1832200.80	0.1067	P	1.3
6	☐	50000.000	52726.471	3629821.56	0.2133	P	0.8
7	☐	100000.00	103097.51	7108437.23	0.4170	A	0.7
8	☐	500000.00	499016.28	31118209.38	2.0183	A	0.4

$$y = 4.0445\text{E-}006 * x + 1.8859\text{E-}005$$

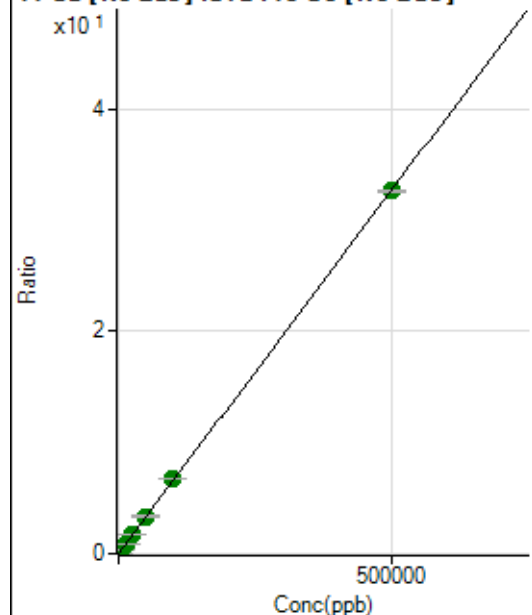
$$R = 1.0000$$

$$DL = 1.977$$

$$BEC = 4.663$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	14443.99	0.0008	P	4.8
2	☐	500.000	538.003	658230.37	0.0360	P	0.4
3	☐	5000.000	5229.197	6137591.63	0.3428	A	0.3
4	☐	12500.000	12985.242	14951431.58	0.8501	A	0.2
5	☐	25000.000	25903.656	29100868.36	1.6951	A	0.5
6	☐	50000.000	51569.875	57423819.34	3.3739	A	0.3
7	☐	100000.00	103007.86	114874767.85	6.7383	A	0.1
8	☐	500000.00	499181.79	503425355.70	32.6512	A	0.4

$$y = 6.5408\text{E-}005 * x + 8.0347\text{E-}004$$

$$R = 1.0000$$

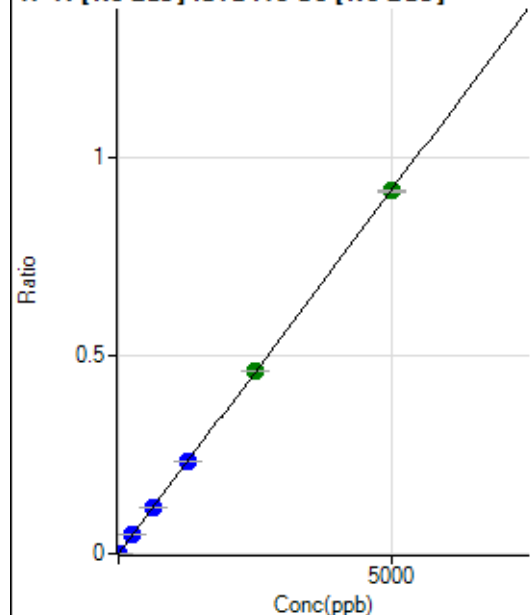
$$DL = 1.782$$

$$BEC = 12.28$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	236.12	0.0000	P	27.1
2	☐	5.000	5.382	18325.93	0.0010	P	1.9
3	☐	250.000	255.150	839463.43	0.0469	P	0.2
4	☐	625.000	636.725	2057653.91	0.1170	P	0.2
5	☐	1250.000	1274.801	4021030.95	0.2342	P	1.0
6	☐	2500.000	2504.040	7830674.57	0.4601	A	0.2
7	☐	5000.000	4990.056	15629964.58	0.9168	A	0.4
8	☐			4200.75	0.0003	P	2.9

$$y = 1.8373E-004 * x + 1.3149E-005$$

$$R = 1.0000$$

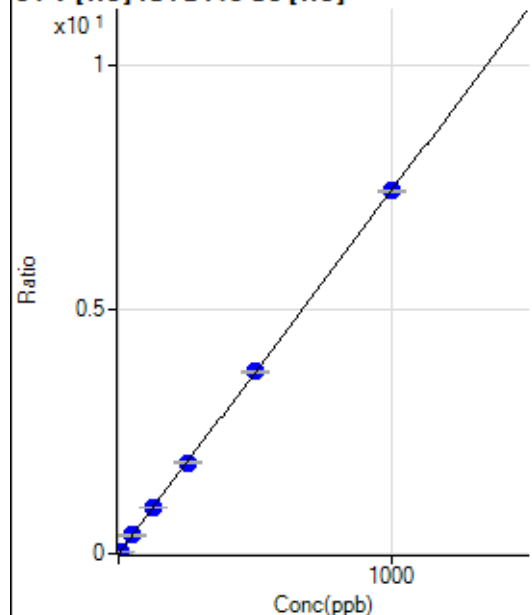
$$DL = 0.05808$$

$$BEC = 0.07157$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	17.78	0.0000	P	47.5
2	☐	5.000	5.011	25763.84	0.0372	P	3.8
3	☐	50.000	50.422	251082.59	0.3742	P	1.0
4	☐	125.000	125.616	617540.28	0.9321	P	0.2
5	☐	250.000	250.379	1230476.82	1.8579	P	1.0
6	☐	500.000	500.939	2371541.47	3.7171	P	0.6
7	☐	1000.000	999.338	4706743.82	7.4153	P	0.3
8	☐			1690.13	0.0028	P	1.7

$$y = 0.0074 * x + 2.6074E-005$$

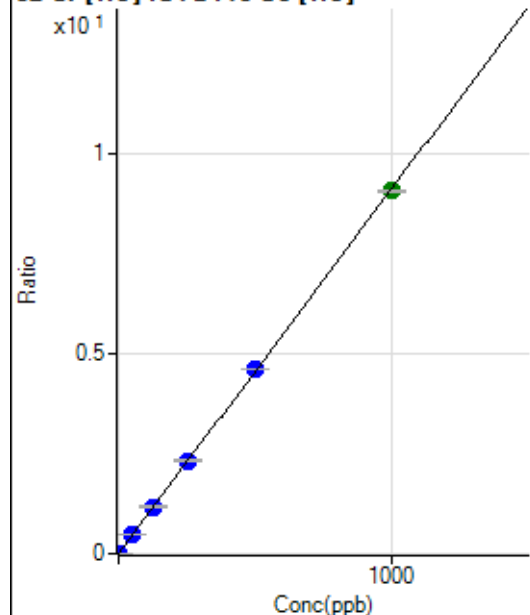
$$R = 1.0000$$

$$DL = 0.005012$$

$$BEC = 0.003514$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1919.04	0.0028	P	5.7
2	☐	2.000	1.926	14080.24	0.0203	P	5.1
3	☐	50.000	52.087	319888.70	0.4767	P	1.0
4	☐	125.000	128.788	778125.55	1.1745	P	0.6
5	☐	250.000	255.000	1538411.56	2.3228	P	0.6
6	☐	500.000	506.397	2941147.04	4.6100	P	0.5
7	☐	1000.000	994.974	5747502.35	9.0550	A	0.3
8	☐			95188.07	0.1551	P	0.2

$$y = 0.0091 * x + 0.0028$$

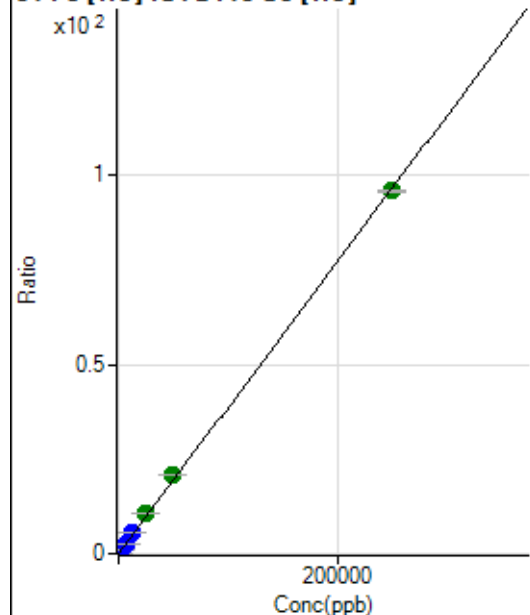
$$R = 1.0000$$

$$DL = 0.05312$$

$$BEC = 0.3089$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	827.56	0.0012	P	3.5
2	☐	50.000	58.063	16332.80	0.0236	P	6.5
3	☐	2500.000	2903.094	751553.96	1.1200	P	0.6
4	☐	6250.000	7201.354	1839357.38	2.7764	P	0.5
5	☐	12500.000	14246.027	3636929.67	5.4911	P	0.4
6	☐	25000.000	27450.875	6749945.64	10.5798	A	0.5
7	☐	50000.000	53903.959	13186012.22	20.7738	A	0.3
8	☐	250000.00	248859.00	58851463.97	95.9025	A	0.9

$$y = 3.8536E-004 * x + 0.0012$$

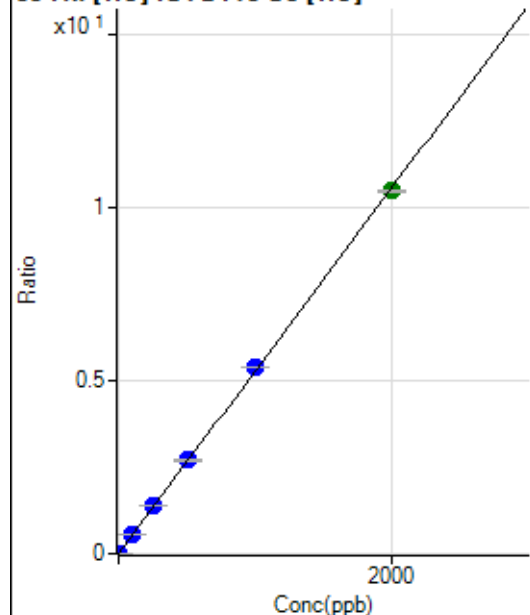
$$R = 0.9998$$

$$DL = 0.3323$$

$$BEC = 3.144$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	95.56	0.0001	P	15.5
2	☐	1.000	1.032	3872.80	0.0056	P	3.7
3	☐	100.000	103.865	368221.59	0.5487	P	0.7
4	☐	250.000	259.363	907636.44	1.3700	P	0.5
5	☐	500.000	511.065	1787835.18	2.6994	P	0.9
6	☐	1000.000	1020.243	3438007.45	5.3887	P	0.3
7	☐	2000.000	1985.748	6657024.48	10.4882	A	0.7
8	☐			31798.94	0.0518	P	1.2

$$y = 0.0053 * x + 1.3983E-004$$

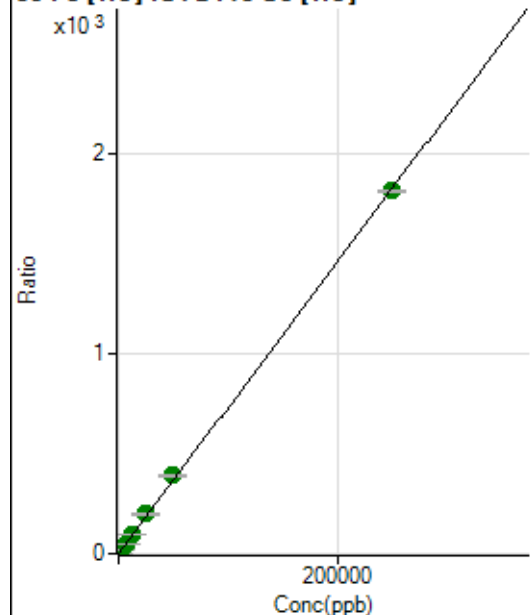
$$R = 0.9999$$

$$DL = 0.01227$$

$$BEC = 0.02648$$

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	7503.99	0.0110	P	1.7
2	☐	50.000	54.204	280574.46	0.4052	P	4.2
3	☐	2500.000	2764.832	13500830.97	20.1191	A	1.2
4	☐	6250.000	6882.265	33168656.76	50.0644	A	0.2
5	☐	12500.000	13570.348	65375259.33	98.7056	A	0.6
6	☐	25000.000	27090.659	125709275.03	197.0363	A	0.3
7	☐	50000.000	53555.375	247223331.45	389.5092	A	1.0
8	☐	250000.00	249007.88	1111354402.6	1,810.998	A	0.5

$$y = 0.0073 * x + 0.0110$$

$$R = 0.9999$$

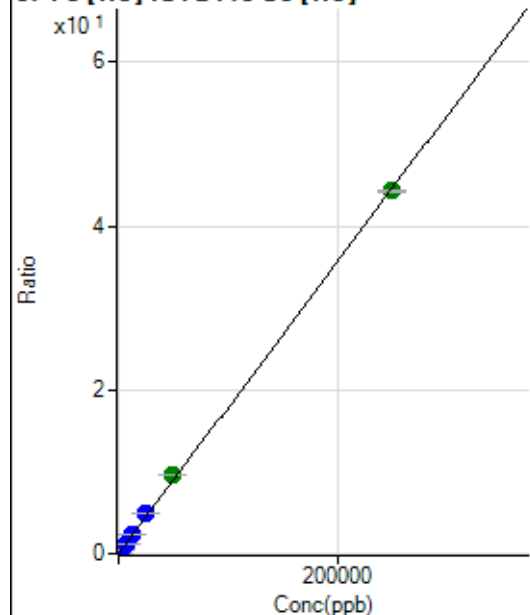
$$DL = 0.07622$$

$$BEC = 1.511$$

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	324.09	0.0005	P	14.2
2	☐	50.000	56.150	7242.74	0.0105	P	3.7
3	☐	2500.000	2797.503	334168.37	0.4980	P	1.1
4	☐	6250.000	6976.435	822281.35	1.2411	P	0.1
5	☐	12500.000	13768.500	1622078.71	2.4490	P	0.3
6	☐	25000.000	27415.206	3110845.18	4.8759	P	0.4
7	☐	50000.000	53696.040	6061488.91	9.5496	A	0.5
8	☐	250000.00	248934.70	27166786.72	44.2703	A	0.7

$$y = 1.7784\text{E-}004 * x + 4.7448\text{E-}004$$

$$R = 0.9999$$

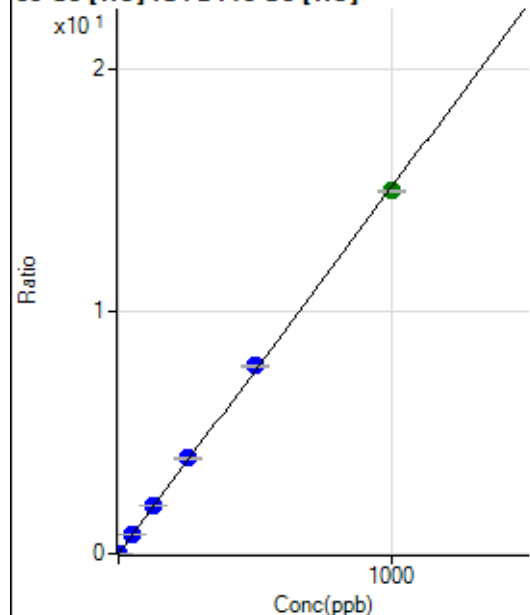
$$DL = 1.135$$

$$BEC = 2.668$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.00	0.0002	P	3.4
2	☐	1.000	1.018	10846.37	0.0157	P	4.9
3	☐	50.000	53.086	539370.73	0.8038	P	1.4
4	☐	125.000	132.057	1324398.61	1.9991	P	0.6
5	☐	250.000	260.106	2607622.97	3.9372	P	0.9
6	☐	500.000	512.477	4949040.13	7.7571	P	0.3
7	☐	1000.000	990.198	9513276.46	14.9878	A	0.4
8	☐			17015.64	0.0277	P	0.9

$$y = 0.0151 * x + 2.4889\text{E-}004$$

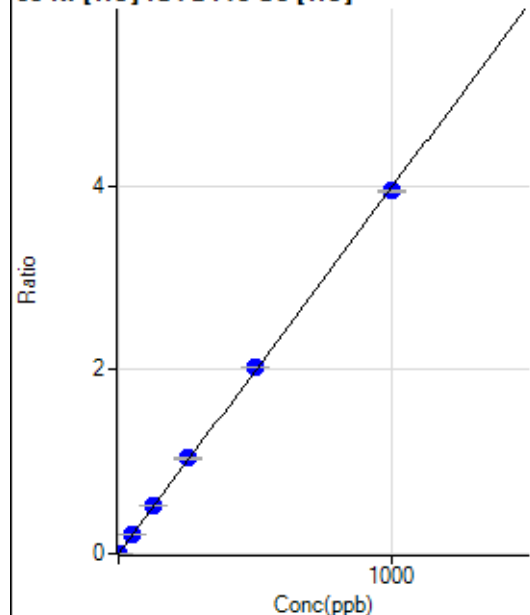
$$R = 0.9998$$

$$DL = 0.001682$$

$$BEC = 0.01644$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	98.89	0.0001	P	5.1
2	☐	1.000	1.188	3372.67	0.0049	P	6.4
3	☐	50.000	53.837	143837.08	0.2143	P	0.9
4	☐	125.000	132.969	350591.81	0.5292	P	0.5
5	☐	250.000	260.758	687222.61	1.0376	P	0.7
6	☐	500.000	509.363	1293027.32	2.0267	P	0.4
7	☐	1000.000	991.441	2503872.01	3.9447	P	0.3
8	☐			27298.94	0.0445	P	1.2

$$y = 0.0040 * x + 1.4480E-004$$

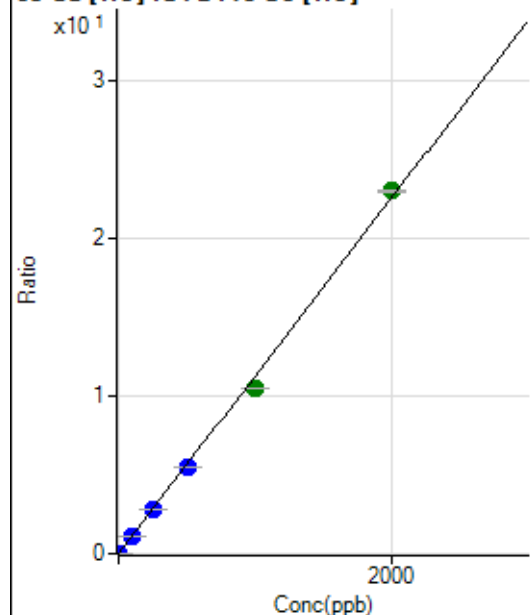
$$R = 0.9999$$

$$DL = 0.005531$$

$$BEC = 0.03639$$

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	1594.56	0.0023	P	8.3
2	☐	2.000	1.959	16934.46	0.0245	P	2.9
3	☐	100.000	100.651	764475.89	1.1392	P	0.7
4	☐	250.000	248.347	1859988.67	2.8074	P	0.6
5	☐	500.000	483.800	3620896.72	5.4669	P	0.5
6	☐	1000.000	928.271	6690772.82	10.4873	A	0.4
7	☐	2000.000	2040.089	14627470.06	23.0454	A	0.5
8	☐			29919.62	0.0488	P	1.5

$$y = 0.0113 * x + 0.0023$$

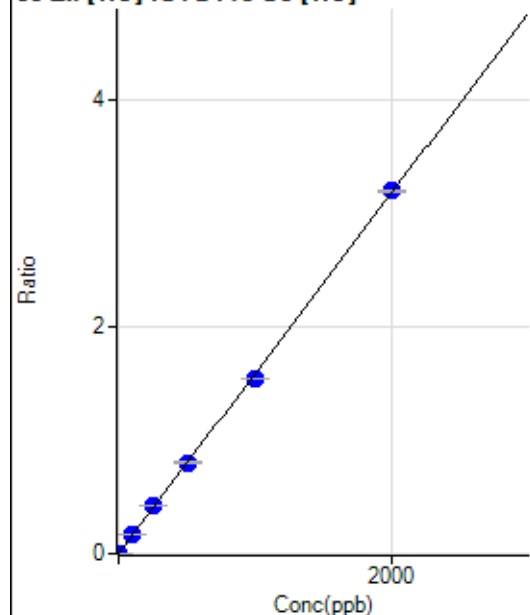
$$R = 0.9990$$

$$DL = 0.0517$$

$$BEC = 0.2068$$

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	1322.30	0.0019	P	3.4
2	☐	2.000	1.560	3057.04	0.0044	P	1.6
3	☐	100.000	106.406	114744.02	0.1710	P	1.3
4	☐	250.000	262.430	277517.01	0.4189	P	1.1
5	☐	500.000	505.129	532815.14	0.8045	P	0.9
6	☐	1000.000	968.051	982478.77	1.5399	P	0.1
7	☐	2000.000	2012.819	2031049.38	3.1998	P	0.5
8	☐			22016.79	0.0359	P	0.7

$$y = 0.0016 * x + 0.0019$$

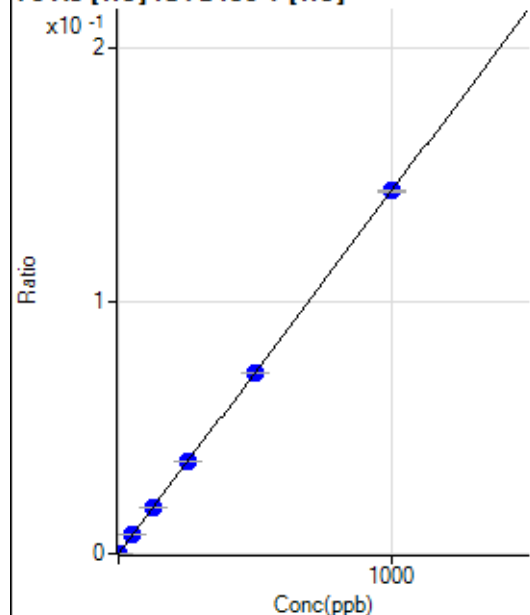
$$R = 0.9998$$

$$DL = 0.1241$$

$$BEC = 1.219$$

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	11.73	0.0000	P	55.6
2	☐	1.000	1.023	662.37	0.0001	P	2.6
3	☐	50.000	51.959	32408.91	0.0075	P	0.8
4	☐	125.000	129.092	80598.69	0.0185	P	0.5
5	☐	250.000	253.316	158280.33	0.0364	P	0.7
6	☐	500.000	497.088	299870.90	0.0714	P	0.5
7	☐	1000.000	1000.018	597652.66	0.1436	P	0.6
8	☐			304.33	0.0001	P	6.0

$$y = 1.4355E-004 * x + 2.6795E-006$$

$$R = 1.0000$$

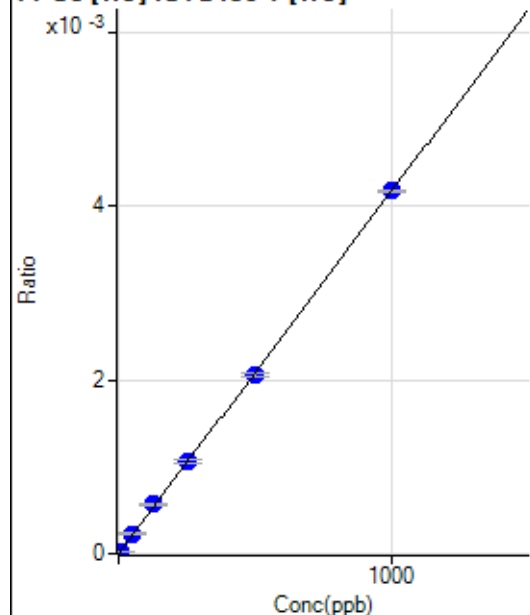
$$DL = 0.03113$$

$$BEC = 0.01867$$

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	5.948	110.00	0.0000	P	13.0
3	☐	50.000	53.687	973.38	0.0002	P	8.5
4	☐	125.000	136.990	2486.92	0.0006	P	4.9
5	☐	250.000	254.247	4619.70	0.0011	P	2.5
6	☐	500.000	493.404	8657.16	0.0021	P	3.1
7	☐	1000.000	1000.548	17388.40	0.0042	P	0.8
8	☐			12.22	0.0000	P	31.1

$$y = 4.1743\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9999$$

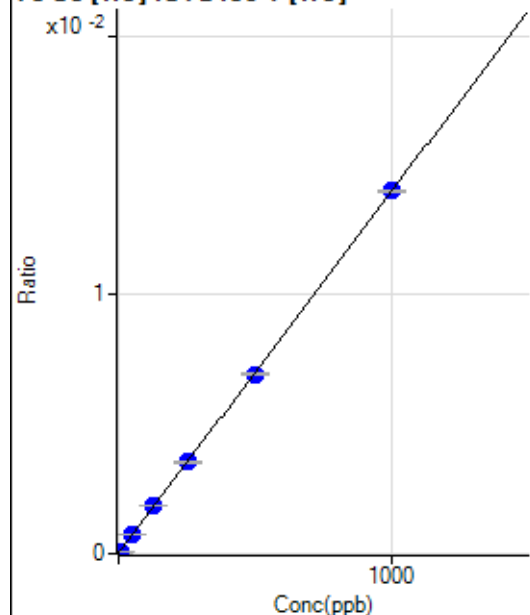
$$DL = 0$$

$$BEC = 0$$

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	91.36	0.0000	P	8.4
2	☐	5.000	5.667	443.22	0.0001	P	1.7
3	☐	50.000	52.611	3283.74	0.0008	P	1.2
4	☐	125.000	132.539	8144.31	0.0019	P	1.4
5	☐	250.000	251.183	15365.63	0.0035	P	1.2
6	☐	500.000	494.030	29095.90	0.0069	P	0.7
7	☐	1000.000	1001.613	58350.68	0.0140	P	0.8
8	☐			115.43	0.0000	P	12.7

$$y = 1.3972\text{E-}005 * x + 2.0879\text{E-}005$$

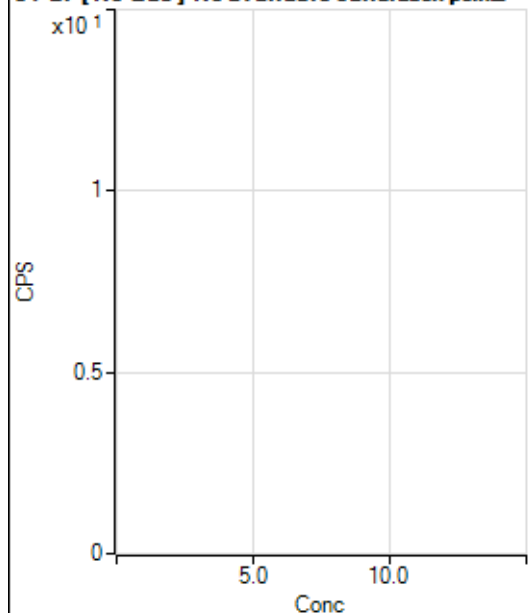
$$R = 0.9999$$

$$DL = 0.3744$$

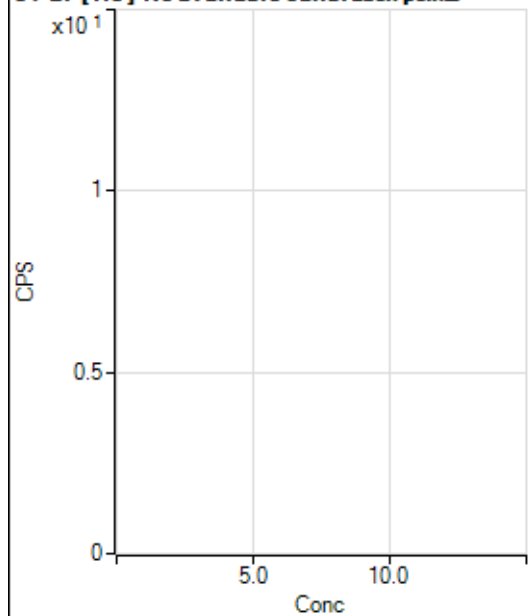
$$BEC = 1.494$$

Weight: <None>

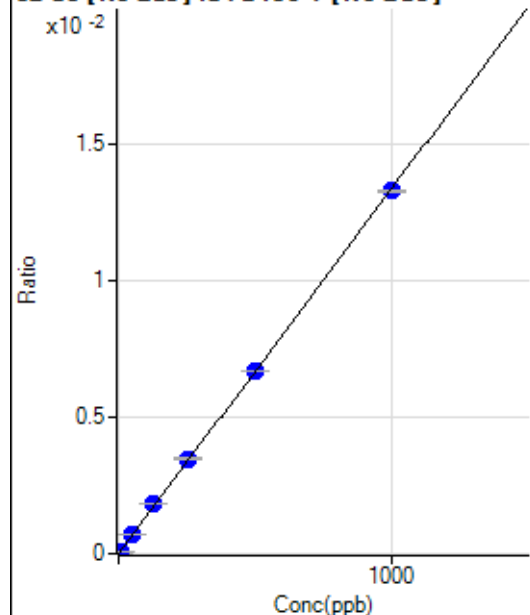
Min Conc: 0

81 Br [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			86129.90		P	1.4
2	☐			88755.59		P	1.0
3	☐			85751.21		P	1.0
4	☐			85465.83		P	1.4
5	☐			86177.29		P	0.2
6	☐			84696.85		P	0.9
7	☐			80183.46		P	0.7
8	☐			75707.40		P	1.4

81 Br [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			143.49		P	8.1
2	☐			70.07		P	37.8
3	☐			80.08		P	43.3
4	☐			56.73		P	36.7
5	☐			63.40		P	39.7
6	☐			40.04		P	43.3
7	☐			50.05		P	20.0
8	☐			86.76		P	35.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	-16.22	0.0000	P	-772.
2	☐	5.000	5.978	3120.54	0.0001	P	0.4
3	☐	50.000	54.781	28380.47	0.0007	P	0.9
4	☐	125.000	135.139	69370.48	0.0018	P	0.3
5	☐	250.000	260.293	131537.85	0.0035	P	0.9
6	☐	500.000	502.379	253593.58	0.0067	P	0.2
7	☐	1000.000	994.726	500211.12	0.0133	P	0.8
8	☐			383.39	0.0000	P	6.2

$$y = 1.3341\text{E-}005 * x - 4.1256\text{E-}007$$

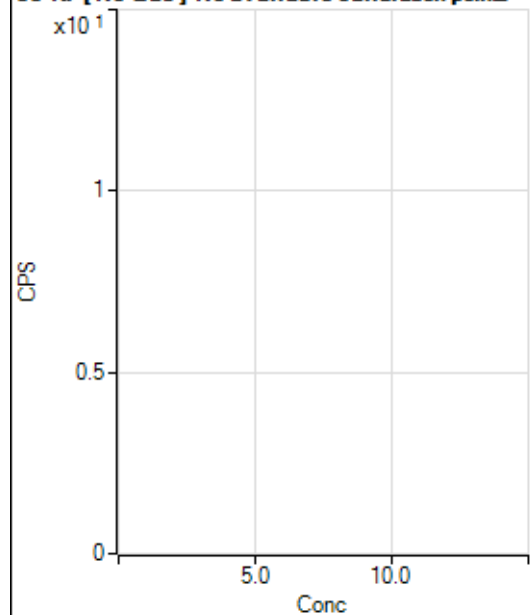
$$R = 0.9999$$

$$DL = 0.7163$$

$$BEC = -0.03092$$

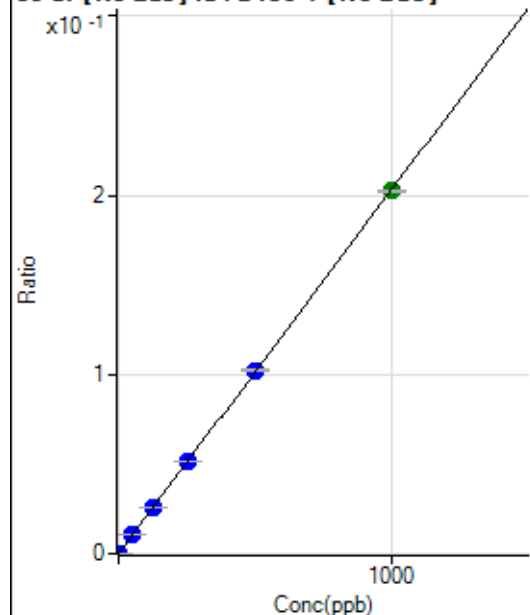
Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			724.48		P	12.8
2	☐			687.80		P	9.0
3	☐			681.14		P	3.6
4	☐			707.81		P	13.5
5	☐			637.80		P	11.3
6	☐			730.03		P	9.2
7	☐			753.37		P	3.6
8	☐			746.70		P	3.9

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1152.88	0.0000	P	4.3
2	☐	1.000	1.051	9548.00	0.0002	P	2.5
3	☐	50.000	51.196	404913.48	0.0104	P	0.7
4	☐	125.000	127.593	997860.22	0.0259	P	0.6
5	☐	250.000	253.556	1950809.31	0.0515	P	1.1
6	☐	500.000	502.977	3864223.22	0.1021	P	0.9
7	☐	1000.000	997.239	7631096.09	0.2024	A	0.8
8	☐			15389.30	0.0005	P	2.7

$$y = 2.0298\text{E-}004 * x + 2.9485\text{E-}005$$

$$R = 1.0000$$

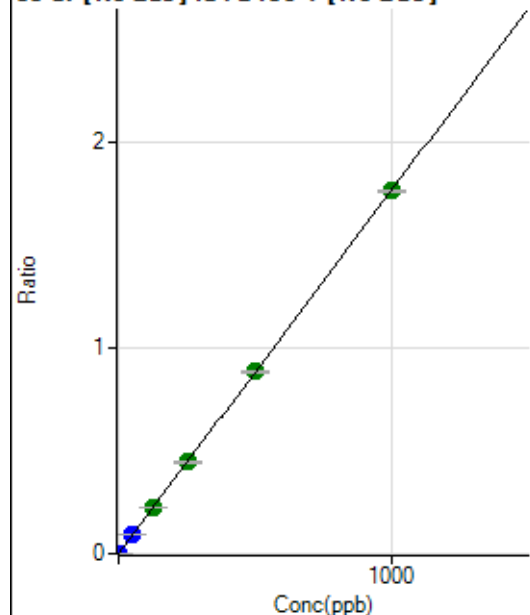
$$DL = 0.01853$$

$$BEC = 0.1453$$

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	291.69	0.0000	P	7.7
2	☐	1.000	1.021	71076.96	0.0018	P	1.9
3	☐	50.000	51.217	3509697.17	0.0903	P	0.6
4	☐	125.000	126.211	8566137.87	0.2226	A	0.5
5	☐	250.000	251.674	16814334.92	0.4438	A	0.4
6	☐	500.000	501.795	33484412.21	0.8849	A	0.7
7	☐	1000.000	998.472	66374382.04	1.7608	A	0.3
8	☐			123803.80	0.0037	P	0.6

$$y = 0.0018 * x + 7.4594\text{E-}006$$

$$R = 1.0000$$

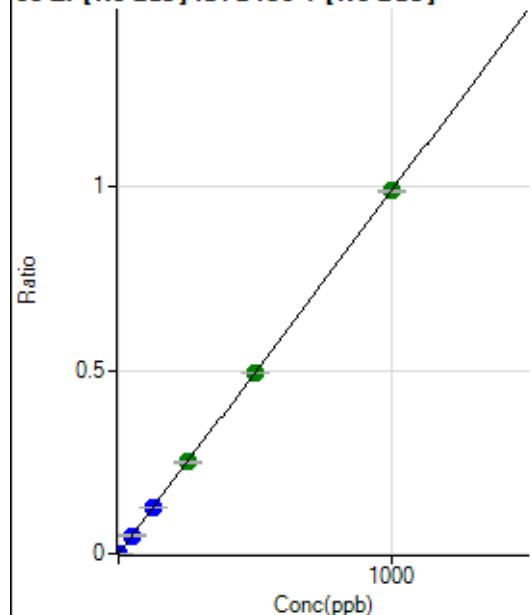
$$DL = 0.00098$$

$$BEC = 0.00423$$

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	1933.56	0.0000	P	7.4
2	☐	1.000	0.770	31892.00	0.0008	P	2.7
3	☐	50.000	50.238	1932688.65	0.0497	P	0.3
4	☐	125.000	126.661	4823613.82	0.1253	P	0.4
5	☐	250.000	251.701	9434067.83	0.2490	A	0.6
6	☐	500.000	498.954	18676438.96	0.4936	A	0.7
7	☐	1000.000	999.879	37282430.69	0.9891	A	0.4
8	☐			12733.12	0.0004	P	2.3

$$y = 9.8915\text{E-}004 * x + 4.9431\text{E-}005$$

$$R = 1.0000$$

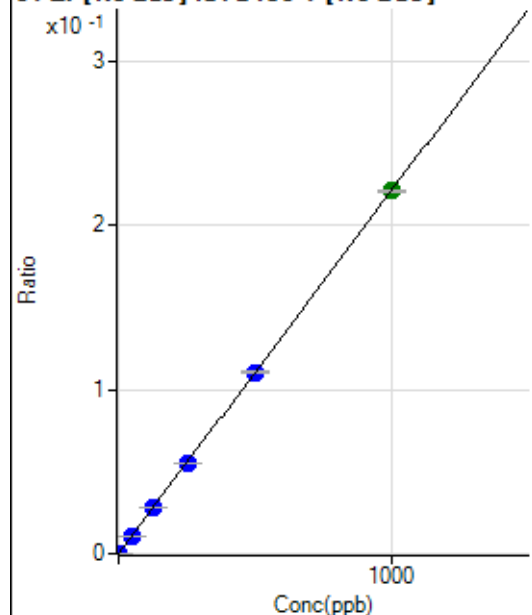
$$DL = 0.01104$$

$$BEC = 0.04997$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.91	0.0000	P	2.1
2	☐	1.000	0.811	7371.63	0.0002	P	2.4
3	☐	50.000	50.044	430229.42	0.0111	P	0.1
4	☐	125.000	126.205	1074212.02	0.0279	P	0.5
5	☐	250.000	251.458	2106598.98	0.0556	P	0.0
6	☐	500.000	500.023	4183586.29	0.1106	P	0.3
7	☐	1000.000	999.471	8330062.42	0.2210	A	0.5
8	☐			2672.59	0.0001	P	7.2

$$y = 2.2110\text{E-}004 * x + 8.0275\text{E-}006$$

$$R = 1.0000$$

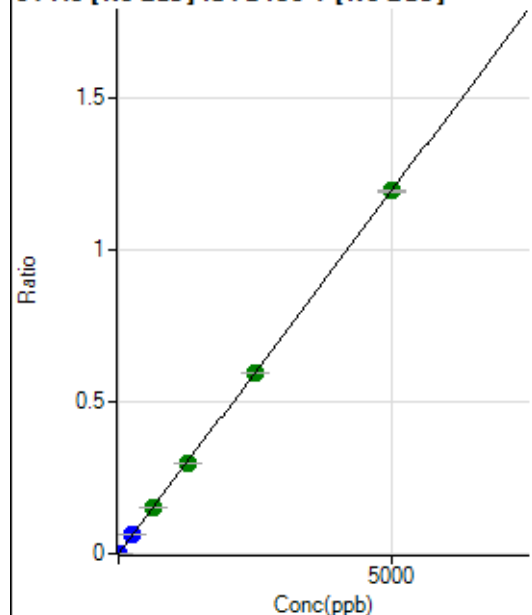
$$DL = 0.002235$$

$$BEC = 0.03631$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	727.82	0.0000	P	12.6
2	☐	5.000	4.859	46406.89	0.0012	P	0.9
3	☐	250.000	254.248	2361995.45	0.0608	P	0.4
4	☐	625.000	626.857	5767264.37	0.1499	A	0.1
5	☐	1250.000	1256.235	11376543.66	0.3003	A	0.2
6	☐	2500.000	2495.940	22575239.57	0.5966	A	0.1
7	☐	5000.000	5000.027	45049755.52	1.1952	A	0.8
8	☐			26444.89	0.0008	P	2.8

$$y = 2.3903\text{E-}004 * x + 1.8608\text{E-}005$$

$$R = 1.0000$$

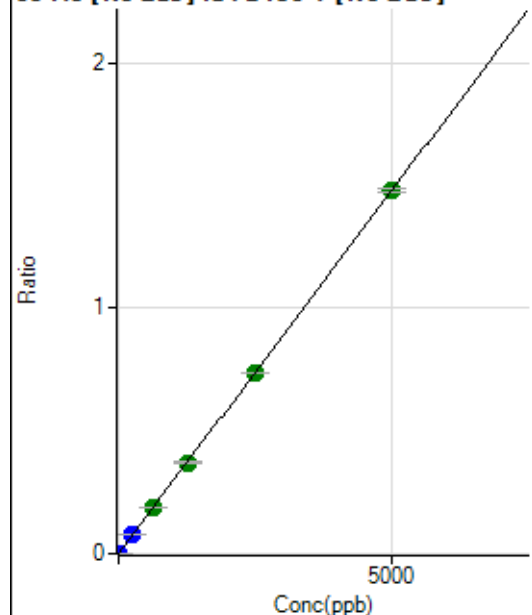
$$DL = 0.02952$$

$$BEC = 0.07785$$

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	147.23	0.0000	P	16.4
2	☐	5.000	5.233	60952.68	0.0015	P	1.3
3	☐	250.000	254.208	2918248.61	0.0751	P	0.4
4	☐	625.000	625.107	7107765.96	0.1847	A	0.2
5	☐	1250.000	1257.058	14069915.07	0.3714	A	0.5
6	☐	2500.000	2495.079	27892803.05	0.7372	A	0.4
7	☐	5000.000	5000.472	55685603.33	1.4774	A	1.0
8	☐			36717.77	0.0011	P	2.4

$$y = 2.9544\text{E-}004 * x + 3.7651\text{E-}006$$

$$R = 1.0000$$

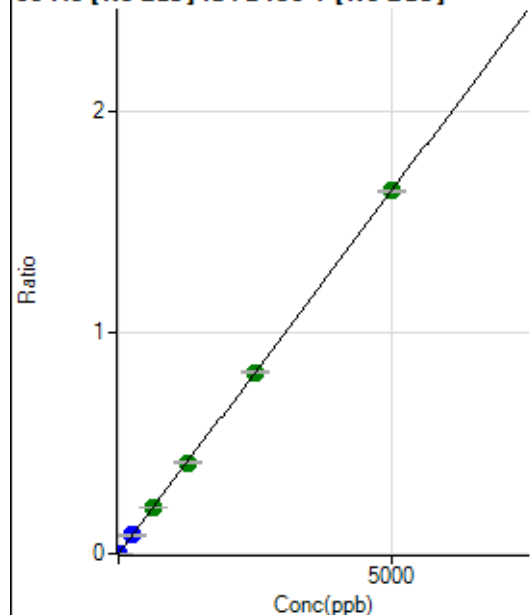
$$DL = 0.00627$$

$$BEC = 0.01274$$

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	380.58	0.0000	P	4.0
2	☐	5.000	5.141	66709.57	0.0017	P	0.5
3	☐	250.000	251.926	3211767.46	0.0827	P	0.5
4	☐	625.000	627.155	7918941.06	0.2058	A	0.4
5	☐	1250.000	1255.017	15598527.60	0.4118	A	0.7
6	☐	2500.000	2496.835	30995975.34	0.8192	A	0.6
7	☐	5000.000	4999.963	61833361.11	1.6404	A	0.4
8	☐			69241.48	0.0021	P	1.0

$$y = 3.2808\text{E-}004 * x + 9.7302\text{E-}006$$

R = 1.0000

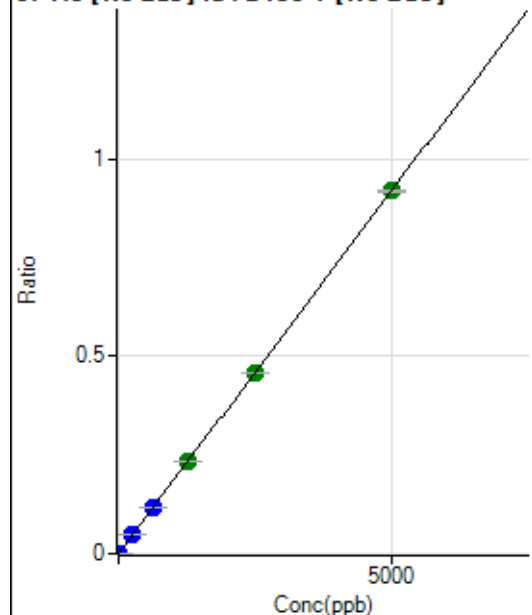
DL = 0.003558

BEC = 0.02966

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	138.90	0.0000	P	19.2
2	☐	5.000	5.308	38488.92	0.0010	P	2.3
3	☐	250.000	254.443	1816276.13	0.0467	P	0.9
4	☐	625.000	633.950	4482155.09	0.1165	P	0.4
5	☐	1250.000	1260.802	8774783.70	0.2316	A	0.2
6	☐	2500.000	2492.426	17325171.05	0.4579	A	0.9
7	☐	5000.000	4999.746	34621054.59	0.9185	A	0.7
8	☐			22897.09	0.0007	P	2.8

$$y = 1.8371\text{E-}004 * x + 3.5512\text{E-}006$$

R = 1.0000

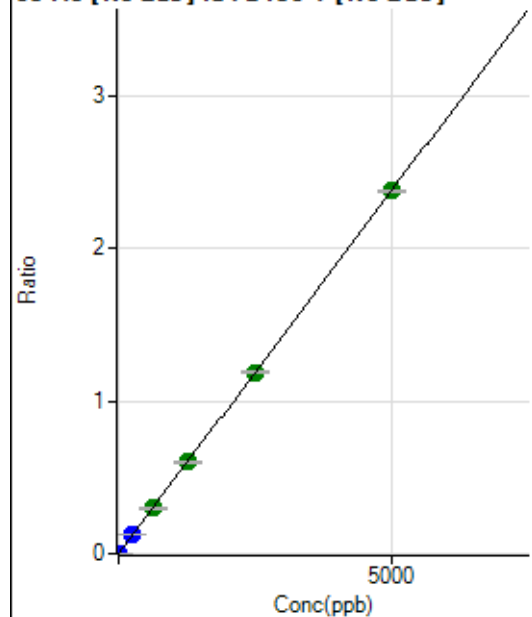
DL = 0.01111

BEC = 0.01933

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	191.67	0.0000	P	7.0
2	☐	5.000	5.215	97675.62	0.0025	P	0.7
3	☐	250.000	253.269	4677624.93	0.1204	P	0.2
4	☐	625.000	623.009	11396690.45	0.2961	A	0.4
5	☐	1250.000	1258.956	22670500.68	0.5984	A	0.5
6	☐	2500.000	2497.958	44925914.54	1.1873	A	1.1
7	☐	5000.000	4998.867	89562842.28	2.3761	A	0.5
8	☐			56245.46	0.0017	P	0.7

$$y = 4.7532\text{E-}004 * x + 4.9001\text{E-}006$$

$$R = 1.0000$$

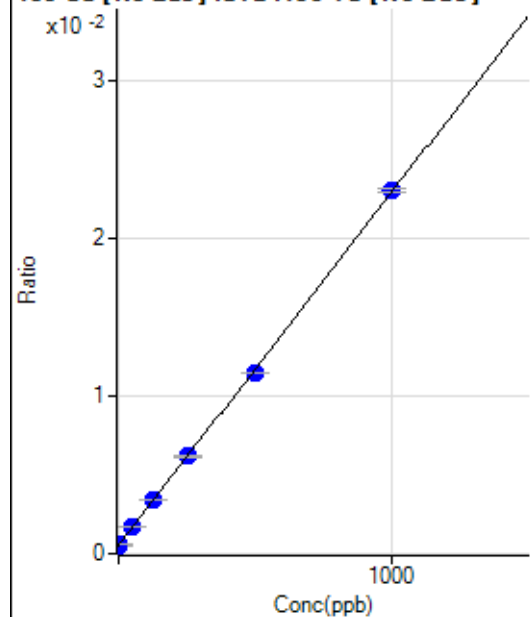
$$DL = 0.002166$$

$$BEC = 0.01031$$

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	18020.42	0.0005	P	5.4
2	☐	1.000	1.918	19636.56	0.0006	P	3.0
3	☐	50.000	53.497	58954.06	0.0017	P	1.3
4	☐	125.000	129.187	116815.55	0.0034	P	0.5
5	☐	250.000	251.860	210368.88	0.0062	P	1.6
6	☐	500.000	489.239	390947.65	0.0115	P	0.7
7	☐	1000.000	1004.216	781761.57	0.0231	P	1.1
8	☐			16818.96	0.0006	P	2.7

$$y = 2.2427\text{E-}005 * x + 5.2918\text{E-}004$$

$$R = 0.9999$$

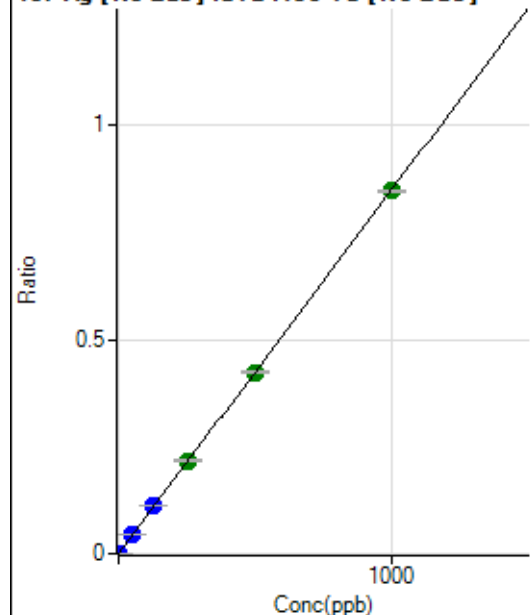
$$DL = 3.835$$

$$BEC = 23.6$$

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	305.58	0.0000	P	11.8
2	☐	1.000	1.115	32772.55	0.0010	P	0.2
3	☐	50.000	54.742	1584758.94	0.0465	P	0.9
4	☐	125.000	133.577	3865887.28	0.1134	P	1.3
5	☐	250.000	255.846	7396790.88	0.2172	A	0.7
6	☐	500.000	499.015	14399002.75	0.4236	A	0.6
7	☐	1000.000	997.722	28725311.06	0.8469	A	0.7
8	☐			6671.30	0.0002	P	1.4

$$y = 8.4887E-004 * x + 8.9746E-006$$

$$R = 1.0000$$

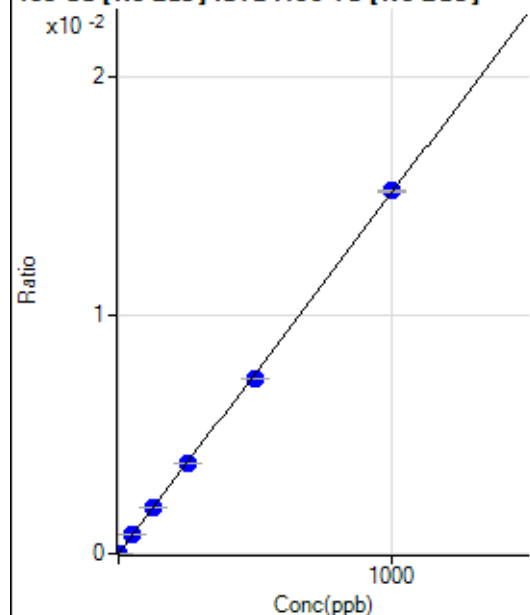
$$DL = 0.00374$$

$$BEC = 0.01057$$

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	61.11	0.0000	P	25.6
2	☐	1.000	0.982	572.25	0.0000	P	3.0
3	☐	50.000	52.672	27269.56	0.0008	P	1.5
4	☐	125.000	129.937	67172.64	0.0020	P	0.1
5	☐	250.000	250.074	129078.07	0.0038	P	0.6
6	☐	500.000	486.307	250488.35	0.0074	P	0.5
7	☐	1000.000	1006.077	516983.14	0.0152	P	0.2
8	☐			162.50	0.0000	P	9.5

$$y = 1.5149E-005 * x + 1.7939E-006$$

$$R = 0.9998$$

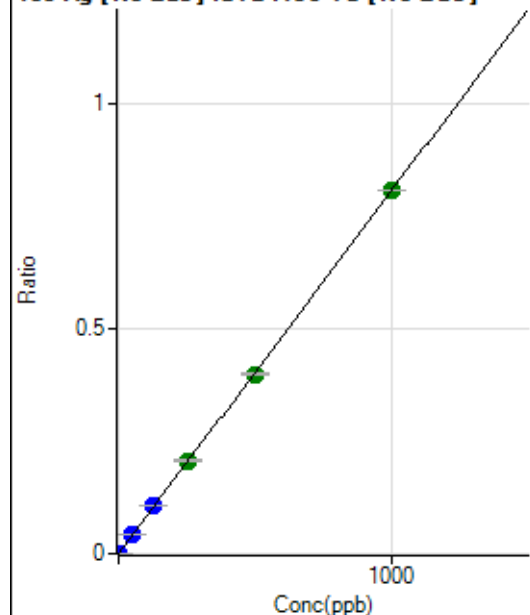
$$DL = 0.09112$$

$$BEC = 0.1184$$

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	72.23	0.0000	P	17.5
2	☐	1.000	1.125	31207.65	0.0009	P	1.9
3	☐	50.000	54.644	1502522.46	0.0441	P	0.7
4	☐	125.000	133.937	3682188.62	0.1080	P	0.4
5	☐	250.000	256.636	7047418.65	0.2069	A	0.6
6	☐	500.000	494.591	13556663.15	0.3988	A	0.6
7	☐	1000.000	999.696	27340487.77	0.8061	A	0.0
8	☐			6354.49	0.0002	P	6.3

$$y = 8.0637E-004 * x + 2.1205E-006$$

$$R = 0.9999$$

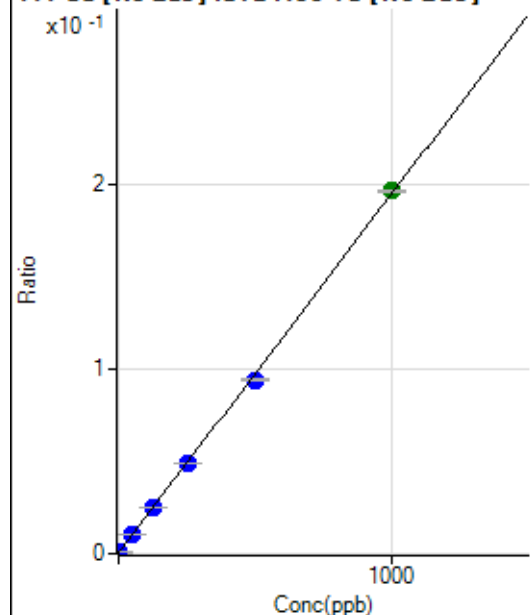
$$DL = 0.001383$$

$$BEC = 0.00263$$

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	12597.90	0.0004	P	5.5
2	☐	1.000	1.130	20223.20	0.0006	P	2.1
3	☐	50.000	52.342	359129.57	0.0105	P	0.2
4	☐	125.000	129.085	867051.11	0.0254	P	0.4
5	☐	250.000	249.388	1661385.21	0.0488	P	1.6
6	☐	500.000	481.436	3189912.34	0.0938	P	0.8
7	☐	1000.000	1008.807	6655355.16	0.1962	A	0.5
8	☐			12874.87	0.0004	P	2.2

$$y = 1.9415E-004 * x + 3.6995E-004$$

$$R = 0.9997$$

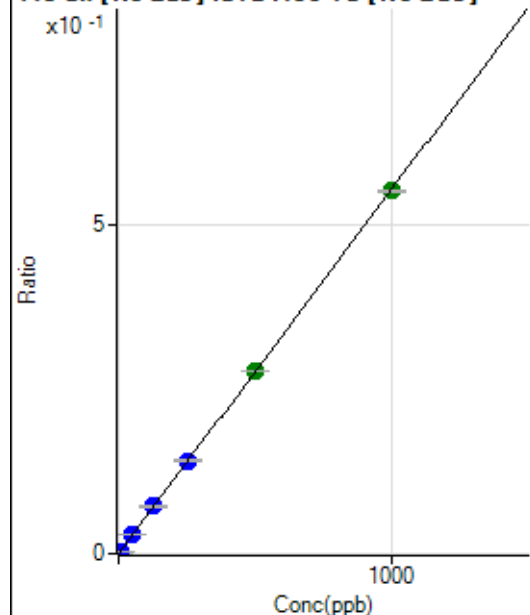
$$DL = 0.3163$$

$$BEC = 1.905$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1861.32	0.0001	P	4.7
2	☐	5.000	5.272	101982.45	0.0030	P	1.5
3	☐	50.000	51.959	982491.95	0.0288	P	0.3
4	☐	125.000	129.536	2446227.55	0.0718	P	0.6
5	☐	250.000	255.588	4819374.02	0.1415	P	0.9
6	☐	500.000	503.421	9473368.27	0.2787	A	0.2
7	☐	1000.000	996.226	18702997.99	0.5515	A	0.6
8	☐			15122.55	0.0005	P	4.8

$$y = 5.5350\text{E-}004 * x + 5.4633\text{E-}005$$

$$R = 1.0000$$

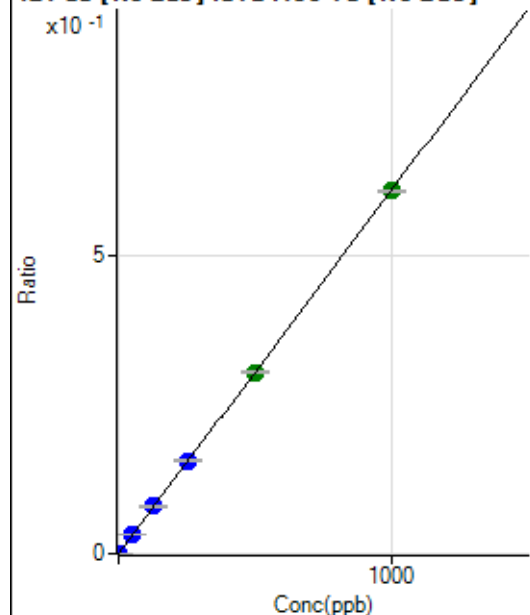
$$DL = 0.01386$$

$$BEC = 0.0987$$

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	269.46	0.0000	P	37.5
2	☐	2.000	2.051	43120.14	0.0013	P	1.2
3	☐	50.000	51.461	1068427.28	0.0313	P	0.2
4	☐	125.000	130.010	2698405.79	0.0791	P	0.6
5	☐	250.000	255.918	5305367.91	0.1558	P	0.9
6	☐	500.000	499.124	10327973.58	0.3038	A	0.5
7	☐	1000.000	998.259	20609399.94	0.6077	A	0.6
8	☐			30796.04	0.0011	P	7.3

$$y = 6.0874\text{E-}004 * x + 7.8972\text{E-}006$$

$$R = 1.0000$$

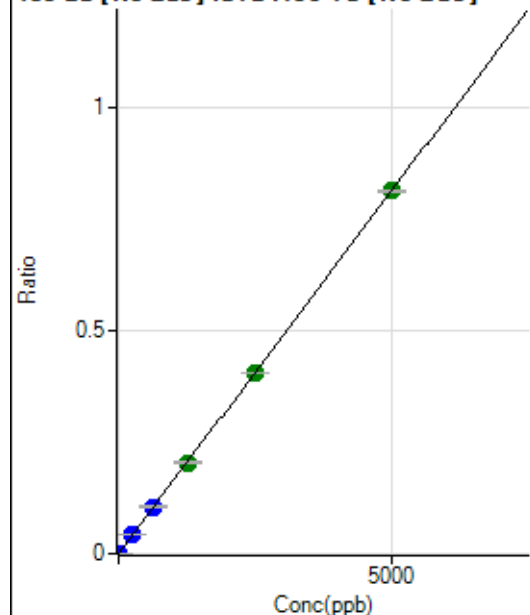
$$DL = 0.0146$$

$$BEC = 0.01297$$

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	91.67	0.0000	P	0.8
2	☐	10.000	10.540	58875.42	0.0017	P	2.7
3	☐	250.000	258.969	1435642.10	0.0421	P	0.8
4	☐	625.000	647.014	3586092.83	0.1052	P	1.1
5	☐	1250.000	1258.502	6967619.17	0.2046	A	0.7
6	☐	2500.000	2488.075	13749507.77	0.4045	A	0.3
7	☐	5000.000	5000.636	27572531.87	0.8130	A	0.4
8	☐			44909.58	0.0015	P	1.3

$$y = 1.6257E-004 * x + 2.6915E-006$$

$$R = 1.0000$$

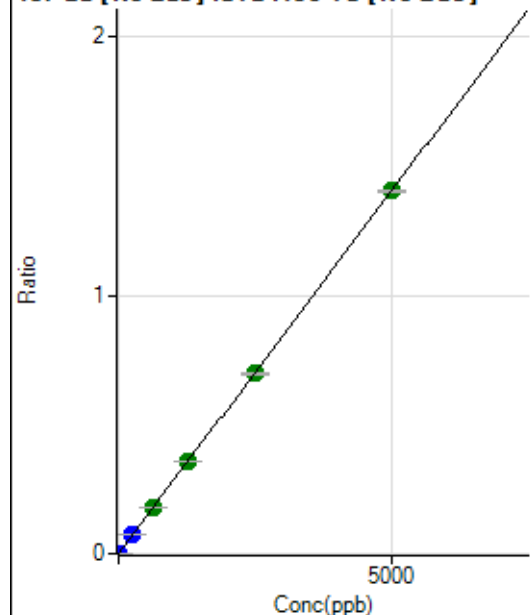
$$DL = 0.0004028$$

$$BEC = 0.01656$$

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	94.45	0.0000	P	21.2
2	☐	10.000	10.640	102482.99	0.0030	P	2.8
3	☐	250.000	258.163	2469235.17	0.0724	P	1.4
4	☐	625.000	638.126	6102387.90	0.1790	A	1.0
5	☐	1250.000	1265.398	12088100.01	0.3550	A	0.3
6	☐	2500.000	2486.270	23705665.46	0.6974	A	0.7
7	☐	5000.000	5000.965	47578161.48	1.4028	A	0.7
8	☐			77307.38	0.0026	P	0.9

$$y = 2.8050E-004 * x + 2.7760E-006$$

$$R = 1.0000$$

$$DL = 0.006304$$

$$BEC = 0.009897$$

Weight: <None>

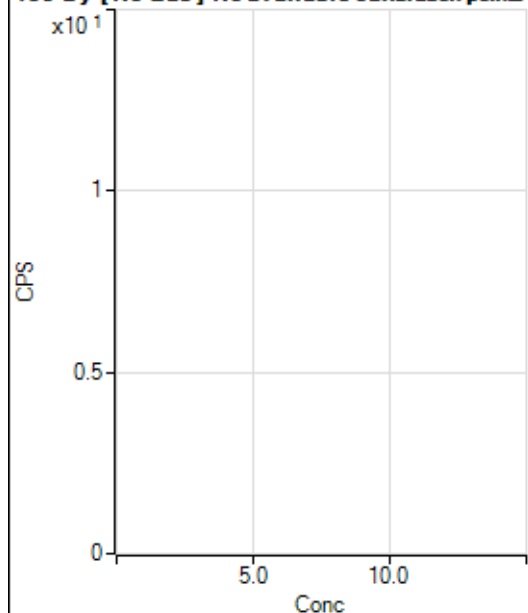
Min Conc: 0

150 Nd [No Gas] No available calibration points

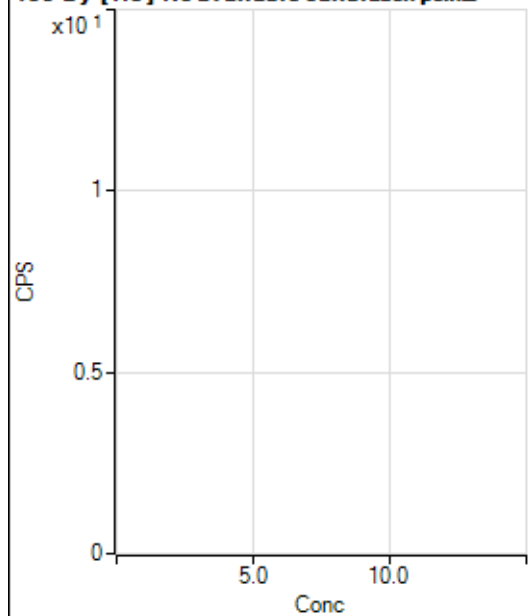
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.33		P	86.6
2	☐			13.33		P	50.0
3	☐			224.45		P	12.0
4	☐			435.58		P	16.9
5	☐			937.85		P	8.6
6	☐			1680.16		P	6.0
7	☐			3333.86		P	3.2
8	☐			248.90		P	8.6

150 Nd [He] No available calibration points

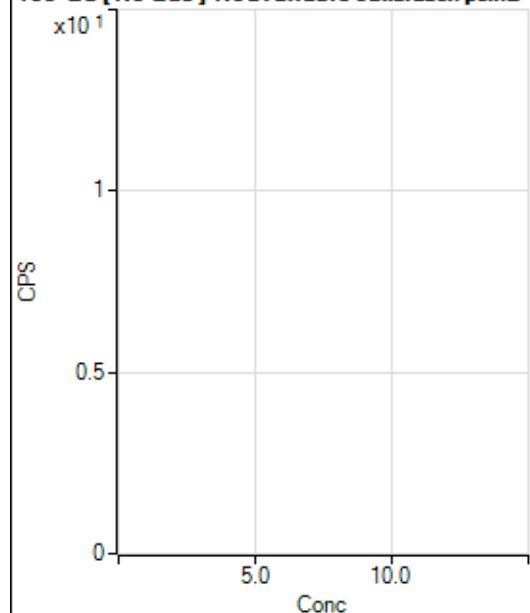
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	65.5
2	☐			11.11		P	34.6
3	☐			23.33		P	37.8
4	☐			40.00		P	25.0
5	☐			74.45		P	36.2
6	☐			144.45		P	36.2
7	☐			280.01		P	9.3
8	☐			86.67		P	16.8

156 Dy [No Gas] No available calibration points

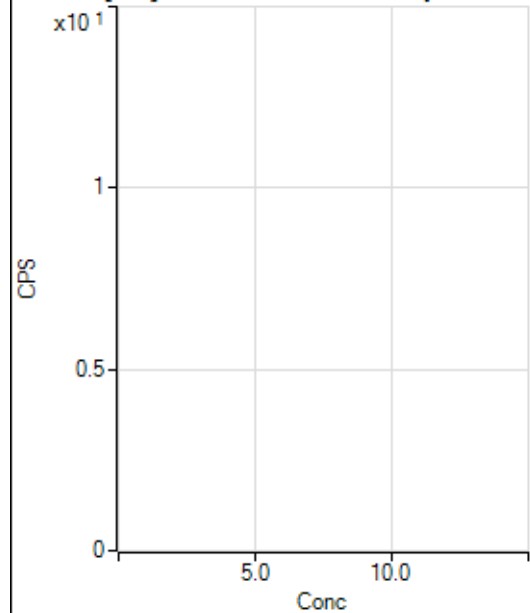
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			50.00		P	60.1
2	☐			41.67		P	34.6
3	☐			108.34		P	20.4
4	☐			166.67		P	0.0
5	☐			202.79		P	12.6
6	☐			533.37		P	10.8
7	☐			958.42		P	2.3
8	☐			1375.13		P	8.2

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			26.67		P	50.0
2	☐			23.33		P	14.3
3	☐			65.56		P	21.2
4	☐			110.00		P	22.9
5	☐			193.34		P	6.9
6	☐			303.34		P	13.7
7	☐			626.69		P	5.8
8	☐			605.58		P	9.9

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

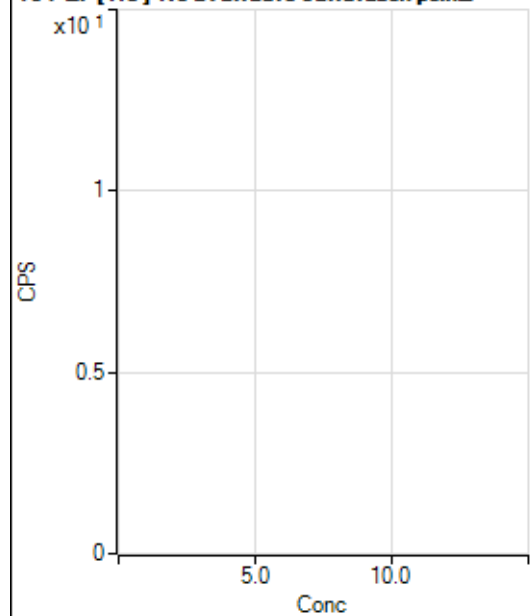
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			172.23		P	19.6
2	☐			247.24		P	3.9
3	☐			241.68		P	24.1
4	☐			252.79		P	37.5
5	☐			311.13		P	8.2
6	☐			386.14		P	10.9
7	☐			505.59		P	11.0
8	☐			1425.14		P	10.3

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			526.69		P	10.4
2	☐			501.13		P	3.0
3	☐			503.35		P	0.7
4	☐			527.80		P	12.2
5	☐			527.80		P	3.0
6	☐			545.58		P	9.2
7	☐			611.14		P	5.6
8	☐			1102.28		P	3.7

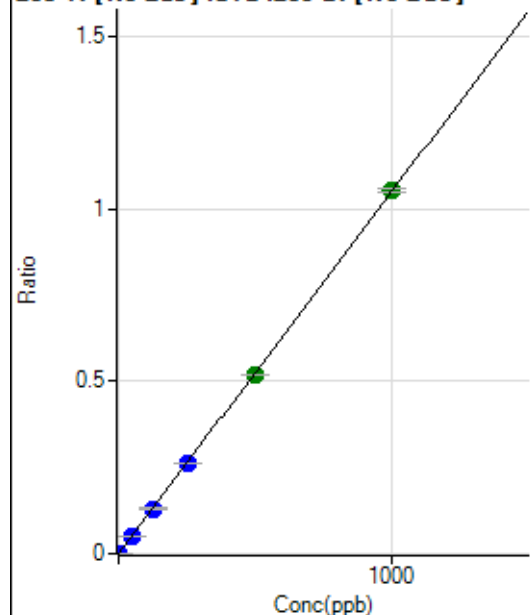
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			161.12		P	41.8
2	☐			177.79		P	27.1
3	☐			158.34		P	15.8
4	☐			180.56		P	42.6
5	☐			183.34		P	15.7
6	☐			166.68		P	5.0
7	☐			319.46		P	14.8
8	☐			288.91		P	4.4

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			91.11		P	23.5
2	☐			76.67		P	11.5
3	☐			94.45		P	25.0
4	☐			83.33		P	34.2
5	☐			73.34		P	19.8
6	☐			90.00		P	19.6
7	☐			121.11		P	4.2
8	☐			167.78		P	21.9

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	602.82	0.0000	P	6.0
2	☐	1.000	0.978	22361.29	0.0011	P	2.2
3	☐	50.000	49.506	1088309.77	0.0519	P	0.4
4	☐	125.000	124.858	2708864.45	0.1308	P	1.1
5	☐	250.000	249.341	5305487.53	0.2613	P	1.2
6	☐	500.000	493.968	10291842.24	0.5176	A	0.6
7	☐	1000.000	1003.223	20348916.95	1.0511	A	1.1
8	☐			5126.22	0.0003	P	3.2

$$y = 0.0010 * x + 2.8229E-005$$

$$R = 1.0000$$

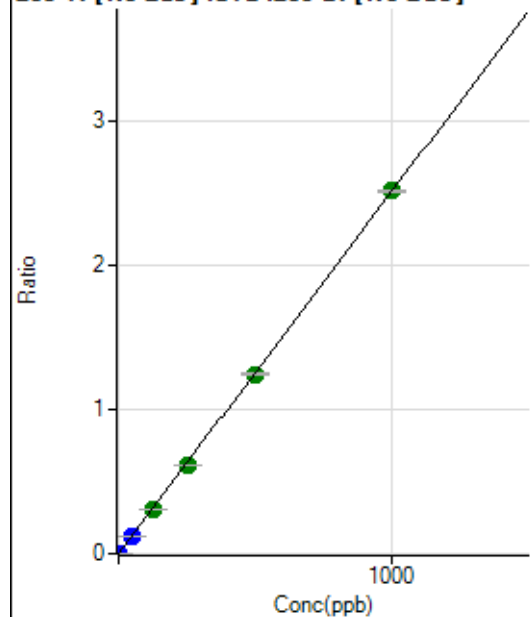
$$DL = 0.004828$$

$$BEC = 0.02694$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1005.64	0.0000	P	7.6
2	☐	1.000	0.993	53871.70	0.0025	P	1.5
3	☐	50.000	49.037	2579512.52	0.1230	P	0.5
4	☐	125.000	122.546	6362456.39	0.3073	A	0.7
5	☐	250.000	245.572	12505546.72	0.6158	A	0.3
6	☐	500.000	496.996	24780729.72	1.2463	A	0.3
7	☐	1000.000	1002.964	48686042.41	2.5150	A	0.6
8	☐			12011.45	0.0008	P	2.8

$$y = 0.0025 * x + 4.7091E-005$$

$$R = 1.0000$$

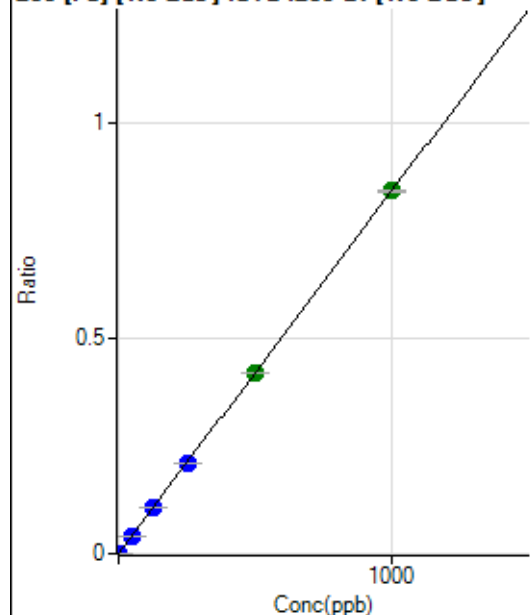
$$DL = 0.004306$$

$$BEC = 0.01878$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1535.32	0.0001	P	1.7
2	☐	1.000	0.995	19269.98	0.0009	P	2.4
3	☐	50.000	49.580	874508.93	0.0417	P	1.3
4	☐	125.000	125.726	2186991.53	0.1056	P	0.4
5	☐	250.000	249.868	4261791.33	0.2099	P	1.0
6	☐	500.000	497.774	8312159.10	0.4180	A	0.2
7	☐	1000.000	1001.076	16272655.23	0.8406	A	0.9
8	☐			63135.28	0.0042	P	0.9

$$y = 8.3965E-004 * x + 7.1909E-005$$

$$R = 1.0000$$

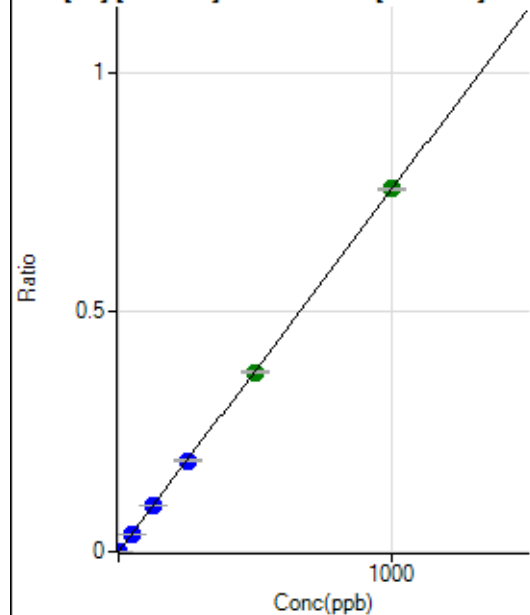
$$DL = 0.004281$$

$$BEC = 0.08564$$

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	1459.38	0.0001	P	7.1
2	☐	1.000	0.993	17384.01	0.0008	P	0.5
3	☐	50.000	49.737	789809.86	0.0377	P	1.6
4	☐	125.000	125.509	1965440.89	0.0949	P	0.1
5	☐	250.000	250.919	3852687.82	0.1897	P	1.2
6	☐	500.000	495.842	7453740.50	0.3749	A	0.4
7	☐	1000.000	1001.799	14659531.35	0.7573	A	0.8
8	☐			57528.46	0.0038	P	0.4

$$y = 7.5587E-004 * x + 6.8331E-005$$

$$R = 1.0000$$

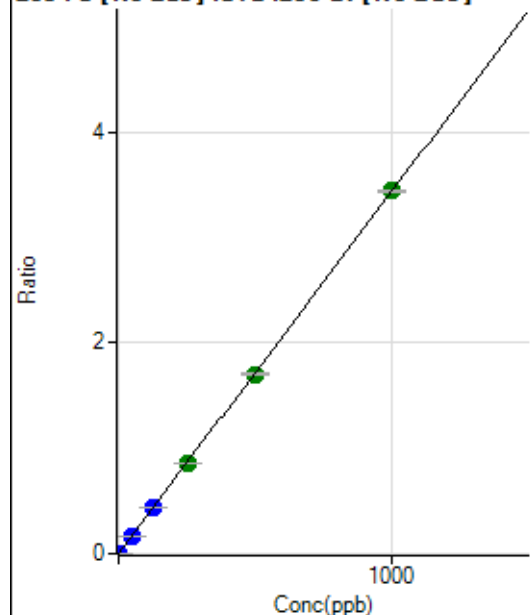
$$DL = 0.0193$$

$$BEC = 0.0904$$

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	5887.71	0.0003	P	1.4
2	☐	1.000	0.994	78405.20	0.0037	P	0.7
3	☐	50.000	49.685	3587111.04	0.1711	P	1.1
4	☐	125.000	125.589	8942717.01	0.4320	P	0.3
5	☐	250.000	248.438	17346599.95	0.8542	A	0.6
6	☐	500.000	496.464	33937095.84	1.7068	A	0.5
7	☐	1000.000	1002.100	66683438.30	3.4448	A	0.7
8	☐			259702.71	0.0172	P	0.4

$$y = 0.0034 * x + 2.7573E-004$$

$$R = 1.0000$$

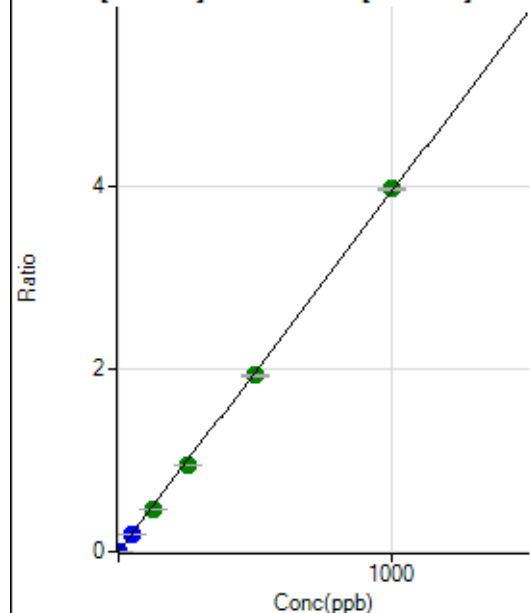
$$DL = 0.00347$$

$$BEC = 0.08022$$

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	1863.15	0.0001	P	5.5
2	☐	1.000	0.623	54002.57	0.0025	P	3.4
3	☐	50.000	45.554	3768539.90	0.1797	P	0.4
4	☐	125.000	117.687	9608369.31	0.4641	A	0.6
5	☐	250.000	239.636	19189011.31	0.9450	A	0.5
6	☐	500.000	490.235	38435155.03	1.9330	A	1.0
7	☐	1000.000	1008.610	76985398.02	3.9770	A	0.8
8	☐			18743.50	0.0012	P	4.3

$$y = 0.0039 * x + 8.7246E-005$$

$$R = 0.9999$$

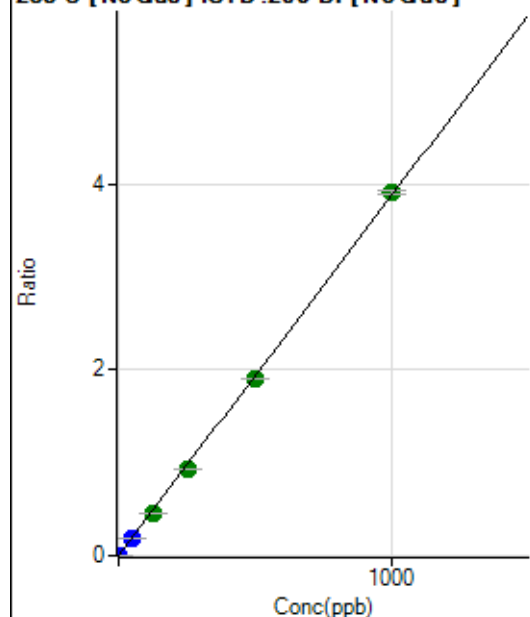
$$DL = 0.003659$$

$$BEC = 0.02213$$

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	1533.50	0.0001	P	1.4
2	☐	1.000	0.912	76639.75	0.0036	P	0.7
3	☐	50.000	47.268	3848097.44	0.1835	P	0.5
4	☐	125.000	118.242	9500823.04	0.4589	A	0.7
5	☐	250.000	241.076	18998133.93	0.9356	A	1.2
6	☐	500.000	491.314	37912164.74	1.9067	A	0.8
7	☐	1000.000	1007.556	75689480.16	3.9100	A	0.9
8	☐			11477.80	0.0008	P	1.2

$$y = 0.0039 * x + 7.1816E-005$$

$$R = 0.9999$$

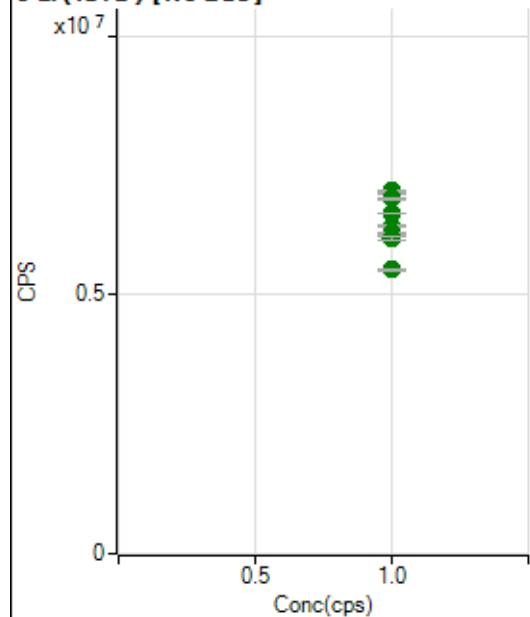
$$DL = 0.0007964$$

$$BEC = 0.01851$$

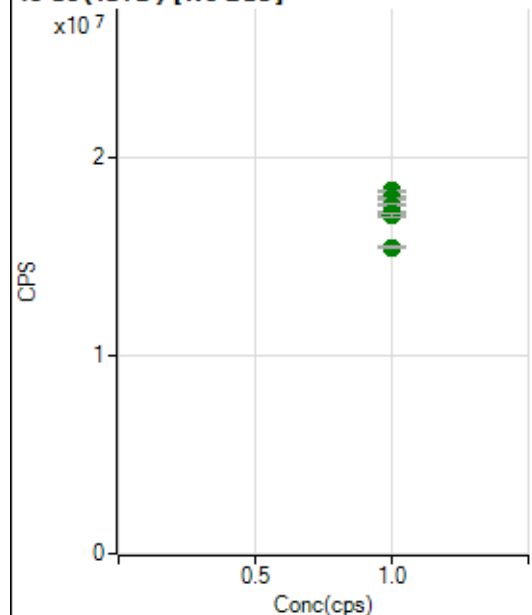
Weight: <None>

Min Conc: 0

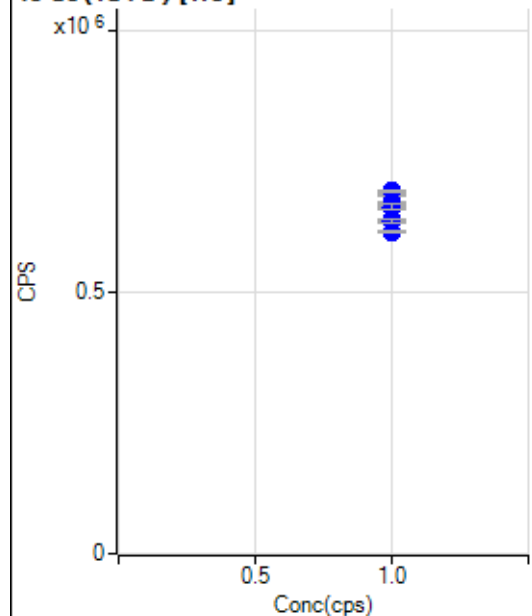
6 Li (ISTD) [No Gas]



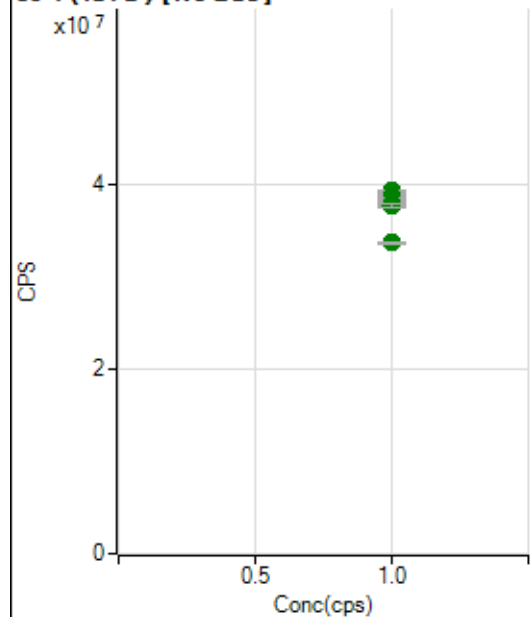
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6943504.20		A	0.2
2	☐	1.000		7008634.76		A	0.8
3	☐	1.000		6855106.70		A	0.6
4	☐	1.000		6576981.85		A	0.2
5	☐	1.000		6324845.88		A	0.8
6	☐	1.000		6190604.49		A	0.4
7	☐	1.000		6109009.91		A	1.2
8	☐	1.000		5486048.32		A	0.5

45 Sc (ISTD) [No Gas]

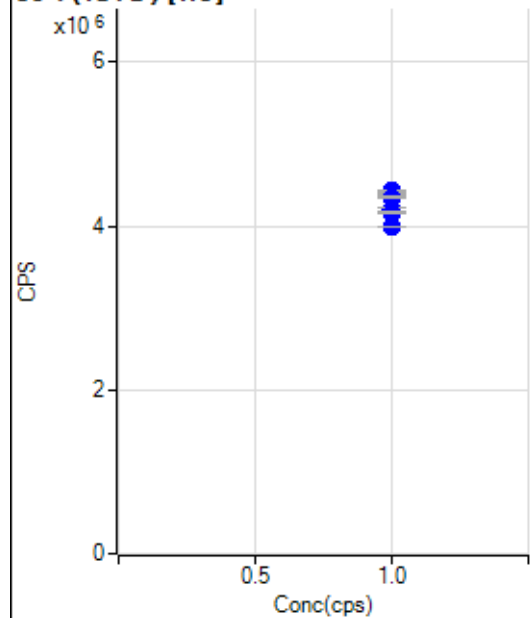
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		17974043.28		A	0.6
2	☐	1.000		18287244.33		A	0.8
3	☐	1.000		17902322.45		A	0.5
4	☐	1.000		17587067.93		A	0.4
5	☐	1.000		17168209.24		A	1.3
6	☐	1.000		17020286.49		A	0.5
7	☐	1.000		17047948.64		A	1.5
8	☐	1.000		15418418.05		A	0.6

45 Sc (ISTD) [He]

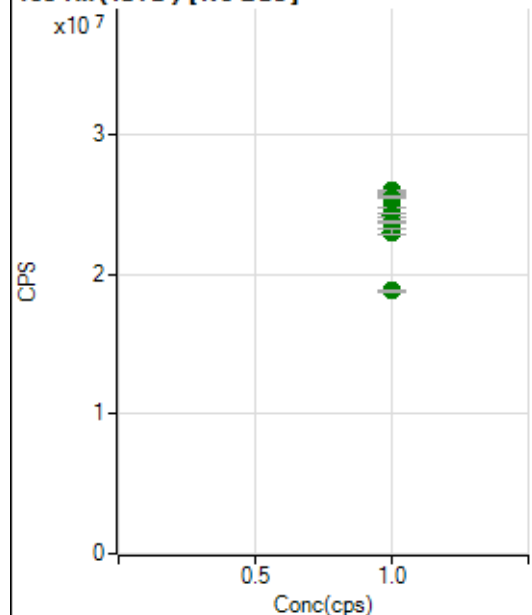
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		682957.70		P	0.6
2	☐	1.000		692381.99		P	0.3
3	☐	1.000		671064.85		P	0.4
4	☐	1.000		662517.75		P	0.5
5	☐	1.000		662347.00		P	1.1
6	☐	1.000		637993.99		P	0.7
7	☐	1.000		634744.30		P	0.9
8	☐	1.000		613662.25		P	0.7

89 Y (ISTD) [No Gas]

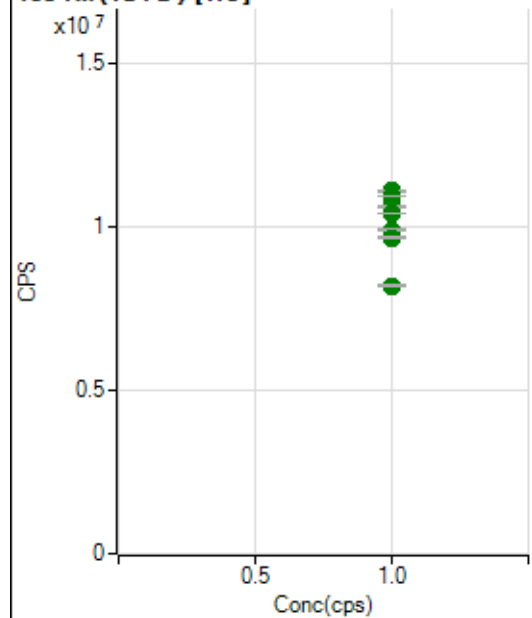
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		39107012.47		A	0.6
2	☐	1.000		39327051.91		A	0.5
3	☐	1.000		38854415.53		A	0.4
4	☐	1.000		38485267.48		A	0.2
5	☐	1.000		37884537.49		A	0.9
6	☐	1.000		37838363.05		A	0.3
7	☐	1.000		37695239.44		A	1.1
8	☐	1.000		33709902.27		A	0.6

89 Y (ISTD) [He]

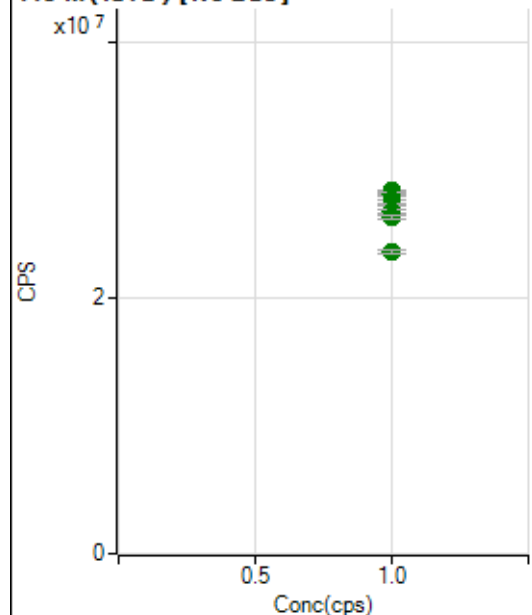
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4375835.01		P	0.8
2	☐	1.000		4429532.12		P	0.2
3	☐	1.000		4343709.21		P	0.1
4	☐	1.000		4348981.26		P	0.8
5	☐	1.000		4352511.64		P	0.8
6	☐	1.000		4202516.85		P	1.2
7	☐	1.000		4163302.75		P	0.5
8	☐	1.000		3990823.24		P	0.4

103 Rh (ISTD) [No Gas]

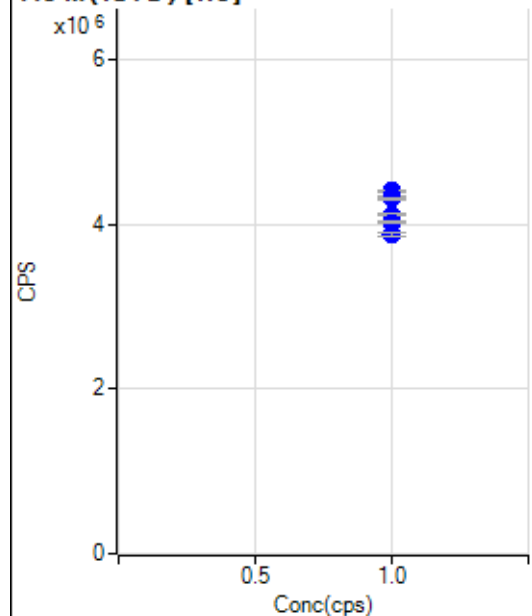
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		25867147.97		A	1.2
2	☐	1.000		25995500.75		A	0.8
3	☐	1.000		25546704.57		A	0.7
4	☐	1.000		24829067.57		A	0.2
5	☐	1.000		24241628.67		A	1.3
6	☐	1.000		23740671.36		A	0.3
7	☐	1.000		23070228.47		A	1.5
8	☐	1.000		18851281.15		A	0.8

103 Rh (ISTD) [He]

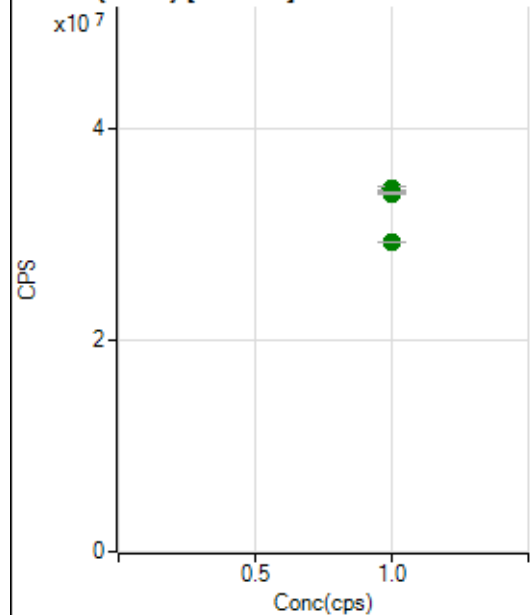
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11093279.83		A	0.8
2	☐	1.000		10941531.78		A	0.3
3	☐	1.000		10643851.65		A	0.2
4	☐	1.000		10616113.66		A	0.6
5	☐	1.000		10407649.71		A	0.5
6	☐	1.000		9881763.74		A	0.6
7	☐	1.000		9650716.52		A	0.7
8	☐	1.000		8186324.11		A	0.7

115 In (ISTD) [No Gas]

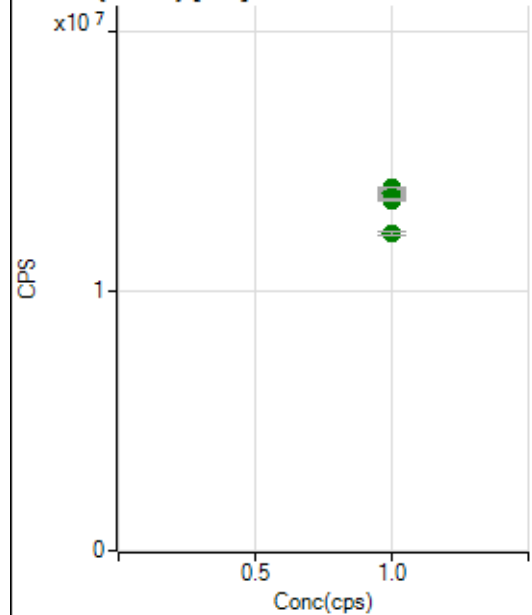
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		28154370.46		A	0.5
2	☐	1.000		28330073.00		A	0.7
3	☐	1.000		28082809.85		A	0.8
4	☐	1.000		27624993.12		A	0.3
5	☐	1.000		27290747.54		A	0.7
6	☐	1.000		26741629.24		A	0.9
7	☐	1.000		26279499.33		A	0.8
8	☐	1.000		23576353.81		A	0.7

115 In (ISTD) [He]

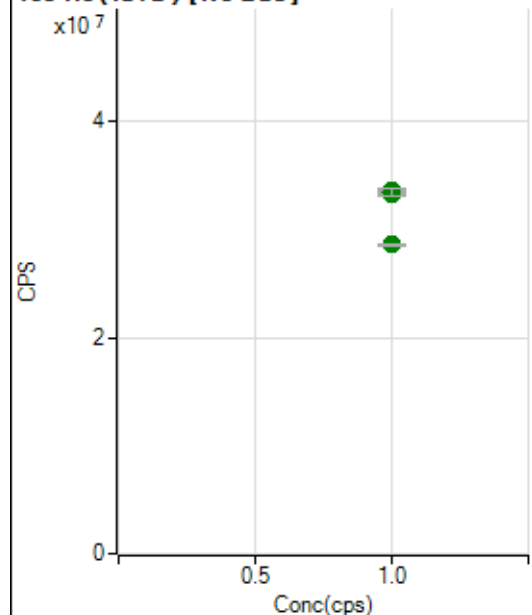
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4338500.90		P	0.9
2	☐	1.000		4412520.67		P	0.7
3	☐	1.000		4344633.05		P	0.7
4	☐	1.000		4326013.88		P	0.2
5	☐	1.000		4324195.86		P	0.6
6	☐	1.000		4120796.00		P	0.8
7	☐	1.000		4034314.02		P	0.7
8	☐	1.000		3882315.58		P	0.7

159 Tb (ISTD) [No Gas]

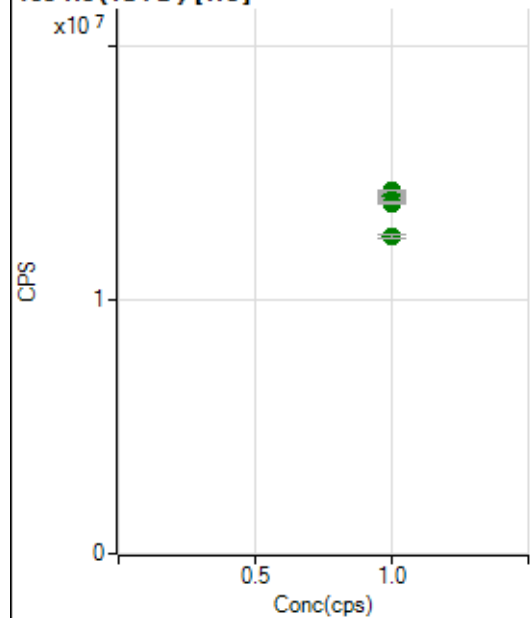
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		34061119.49		A	0.8
2	☐	1.000		34312341.71		A	1.1
3	☐	1.000		34098318.38		A	0.6
4	☐	1.000		34093192.27		A	0.7
5	☐	1.000		34055679.21		A	1.0
6	☐	1.000		33991593.38		A	0.4
7	☐	1.000		33915681.99		A	0.9
8	☐	1.000		29272469.01		A	0.5

159 Tb (ISTD) [He]

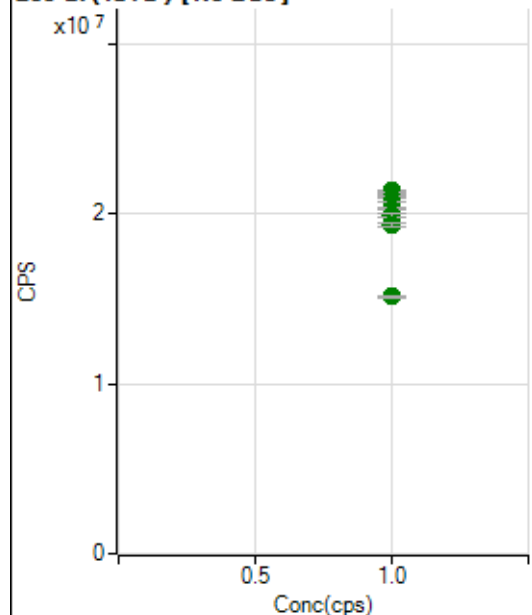
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		13966255.77		A	0.7
2	☐	1.000		13719399.52		A	0.5
3	☐	1.000		13760279.24		A	0.8
4	☐	1.000		13871892.29		A	0.6
5	☐	1.000		13962658.68		A	0.6
6	☐	1.000		13613294.24		A	0.4
7	☐	1.000		13509368.55		A	0.7
8	☐	1.000		12195835.10		A	1.4

165 Ho (ISTD) [No Gas]

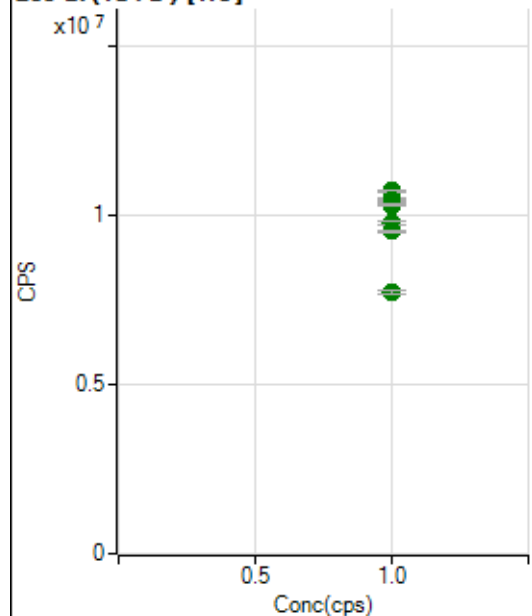
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		33498175.40		A	0.6
2	☐	1.000		33534895.89		A	0.8
3	☐	1.000		33573649.01		A	0.2
4	☐	1.000		33468783.73		A	0.3
5	☐	1.000		33275568.45		A	0.8
6	☐	1.000		33413117.41		A	0.7
7	☐	1.000		33433941.03		A	2.0
8	☐	1.000		28627139.18		A	0.6

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14295367.70		A	0.4
2	☐	1.000		14047265.76		A	1.2
3	☐	1.000		14083048.12		A	0.9
4	☐	1.000		14226888.26		A	0.5
5	☐	1.000		14288261.31		A	0.2
6	☐	1.000		13957035.90		A	0.4
7	☐	1.000		13820086.88		A	0.7
8	☐	1.000		12505382.45		A	1.6

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		21352116.90		A	0.6
2	☐	1.000		21231425.10		A	0.7
3	☐	1.000		20970589.55		A	0.3
4	☐	1.000		20702584.55		A	0.1
5	☐	1.000		20307446.64		A	0.9
6	☐	1.000		19884480.40		A	1.0
7	☐	1.000		19358690.96		A	1.0
8	☐	1.000		15114955.19		A	0.6

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10730893.94		A	0.7
2	☐	1.000		10468900.12		A	0.6
3	☐	1.000		10435870.68		A	0.7
4	☐	1.000		10375176.65		A	0.9
5	☐	1.000		10320350.75		A	0.3
6	☐	1.000		9777272.84		A	0.7
7	☐	1.000		9537094.58		A	0.6
8	☐	1.000		7757882.18		A	1.4

US EPA Tune Check Sample Report

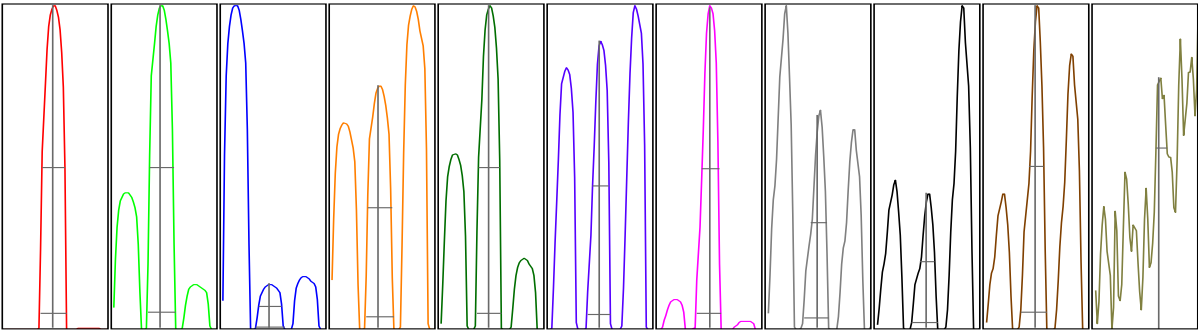
Batch Folder D:\ICP-MS Data\P7020420IMS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	22992	0.79	5.00	
24	382142	0.77	5.00	
25	52614	1.10	5.00	
26	61604	0.60	5.00	
59	225071	1.03	5.00	
113	27596	1.50	5.00	
115	334159	2.39	5.00	
206	65515	0.32	5.00	
207	60453	0.79	5.00	
208	143112	0.70	5.00	
220	68	2.10		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	23227	22991	22716	23006	23022
24	387110	381424	379664	380318	382195
25	53332	53123	51988	52299	52327
26	62035	61773	61078	61409	61726
59	228711	225906	222961	223606	224170
113	28054	28041	27317	27214	27356
115	346387	338237	329444	328874	327853
206	65617	65596	65258	65341	65765
207	61222	60554	59976	60258	60257
208	143669	144525	142212	142203	142948
220	70	68	67	67	66

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	36801	8.95	8.9 - 9.1		0.786	0.900	
24	595598	23.90	23.9 - 24.1		0.828	0.900	
25	82307	24.90	24.9 - 25.1		0.807	0.900	
26	97077	25.90	25.9 - 26.1		0.826	0.900	
59	388295	58.95	58.9 - 59.1		0.738	0.900	
113	56357	113.00	112.9 - 113.1		0.680	0.900	
115	680279	115.05	114.9 - 115.1		0.722	0.900	
206	143579	206.00	205.9 - 206.1		0.733	0.900	
207	134345	207.00	206.9 - 207.1		0.743	0.900	
208	320118	208.00	207.9 - 208.1		0.746	0.900	
220	76	220.40	-				

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	7.5	V	Deflect	13.8	V
Extract 2	-145.0	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	170	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	52497	0.77	
89	82582	0.76	
205	49387	0.84	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	52423	52711	52602	52903	51848
89	82786	82236	82476	83536	81877
205	49351	48869	49363	50035	49317

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	6.8	V	Deflect	2.2	V
Extract 2	-160.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-75	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			