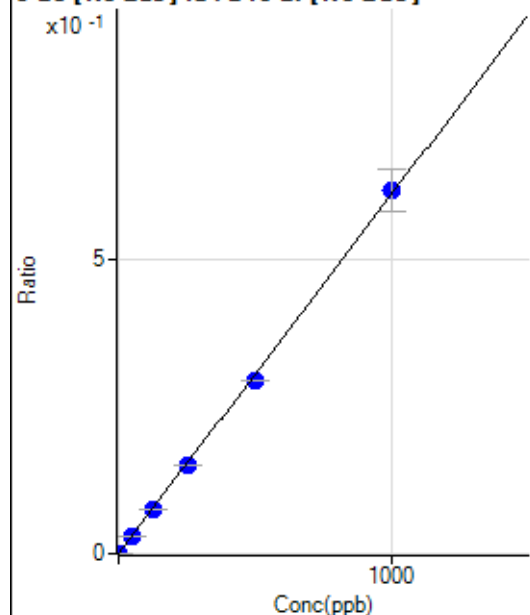


Calibration for 005CALS.d

Batch Folder: D:\ICP-MS Data\P7022220-MS.b\
 Analysis File: P7022220-MS.batch.bin
 DA Date-Time: 2020-02-23 23:01:26
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2020-02-22 13:03:03
2	005CALS.d	S02	2020-02-22 13:11:21
3	007CALS.d	S03	2020-02-22 13:19:43
4	008CALS.d	S04	2020-02-22 13:24:25
5	009CALS.d	S05	2020-02-22 13:28:22
6	010CALS.d	S06	2020-02-22 13:32:15
7	011CALS.d	S07	2020-02-22 13:36:08
8	012CALS.d	S08	2020-02-22 13:40:03
9	004CALS.d	S01	2020-02-22 13:06:46

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.74	0.0000	P	19.8
2	☐	1.000	1.068	3230.07	0.0007	P	4.5
3	☐	50.000	50.145	146892.73	0.0307	P	0.8
4	☐	125.000	123.843	346410.80	0.0758	P	0.7
5	☐	250.000	245.105	658056.97	0.1499	P	0.4
6	☐	500.000	482.799	1276277.72	0.2953	P	0.6
7	☐	1000.000	1009.962	2441564.49	0.6177	P	11.5
8	☐			718.56	0.0002	P	8.9
9	☐	0.100	0.111	400.02	0.0001	P	3.1

$$y = 6.1158\text{E-}004 * x + 1.8978\text{E-}005$$

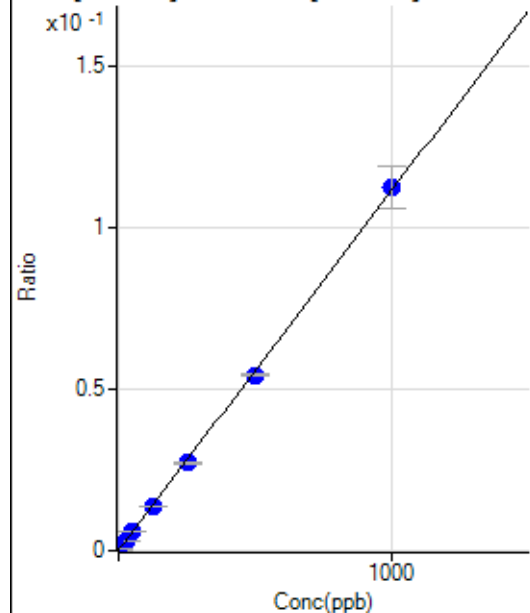
$$R = 0.9998$$

$$DL = 0.01845$$

$$BEC = 0.03103$$

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	522.25	0.0001	P	8.6
2	☐	25.000	25.180	14009.83	0.0029	P	2.5
3	☐	50.000	50.198	27311.56	0.0057	P	1.4
4	☐	125.000	122.742	63065.53	0.0138	P	1.9
5	☐	250.000	243.238	119506.01	0.0272	P	1.1
6	☐	500.000	487.583	235412.25	0.0545	P	1.2
7	☐	1000.000	1008.166	444666.06	0.1125	P	11.6
8	☐			10031.51	0.0027	P	8.9
9	☐	2.500	2.871	1972.43	0.0004	P	5.3

$$y = 1.1149\text{E-}004 * x + 1.0919\text{E-}004$$

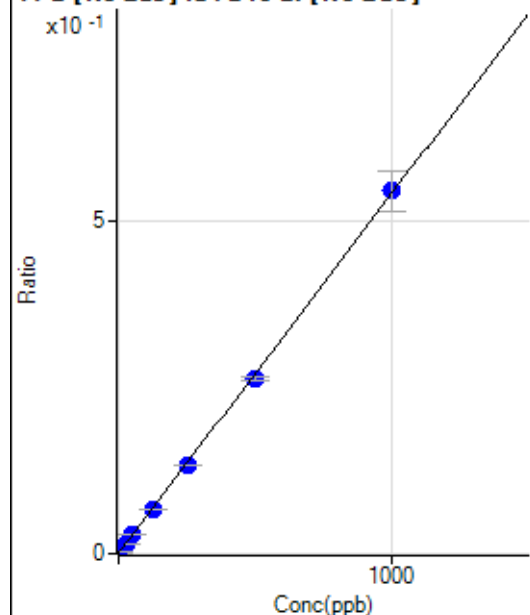
$$R = 0.9999$$

$$DL = 0.2519$$

$$BEC = 0.9794$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2603.12	0.0005	P	3.2
2	☐	25.000	24.861	67038.62	0.0140	P	1.6
3	☐	50.000	50.565	133192.41	0.0278	P	1.3
4	☐	125.000	122.585	304893.33	0.0667	P	0.8
5	☐	250.000	245.939	584784.85	0.1332	P	1.3
6	☐	500.000	485.823	1135210.68	0.2627	P	1.2
7	☐	1000.000	1008.380	2153381.54	0.5446	P	10.9
8	☐			49379.11	0.0131	P	6.3
9	☐	2.500	2.775	9364.35	0.0020	P	5.3

$$y = 5.3952\text{E-}004 * x + 5.4429\text{E-}004$$

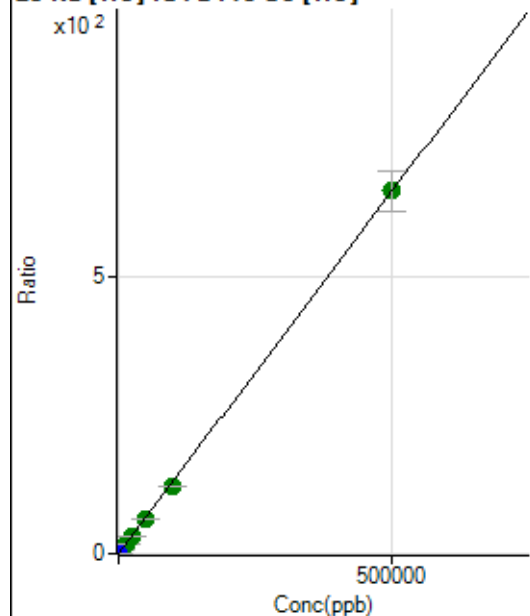
$$R = 0.9998$$

$$DL = 0.09596$$

$$BEC = 1.009$$

Weight: <None>

Min Conc: 0

23 Na [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14718.87	0.0276	P	1.8
2	☐	500.000	514.154	356666.17	0.6996	P	1.4
3	☐	5000.000	4913.258	3163936.79	6.4495	P	6.1
4	☐	12500.000	12043.381	7677552.25	15.7691	A	1.4
5	☐	25000.000	24236.675	15009043.21	31.7065	A	0.3
6	☐	50000.000	47690.165	29892673.94	62.3618	A	0.4
7	☐	100000.00	93899.173	59547545.78	122.7600	A	0.4
8	☐	500000.00	501501.58	279308017.3	655.5229	A	11.0
9	☐	50.000	49.771	48329.01	0.0926	P	3.9

$$y = 0.0013 * x + 0.0276$$

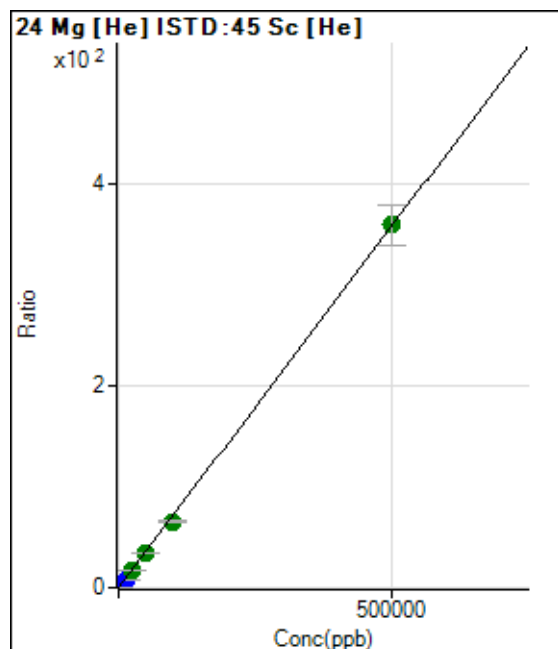
$$R = 0.9999$$

$$DL = 1.144$$

$$BEC = 21.11$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	155.56	0.0003	P	26.0
2	☐	500.000	514.473	187458.39	0.3677	P	0.6
3	☐	5000.000	4760.812	1667152.28	3.4004	P	8.4
4	☐	12500.000	11852.967	4121613.89	8.4655	P	1.4
5	☐	25000.000	23945.243	8095339.68	17.1016	A	0.3
6	☐	50000.000	46829.436	16031671.89	33.4451	A	0.4
7	☐	100000.00	91571.620	31723437.51	65.3991	A	0.8
8	☐	500000.00	502074.02	152774645.0	358.5728	A	11.1
9	☐	50.000	48.529	18234.09	0.0349	P	6.7

$$y = 7.1418\text{E-}004 * x + 2.9127\text{E-}004$$

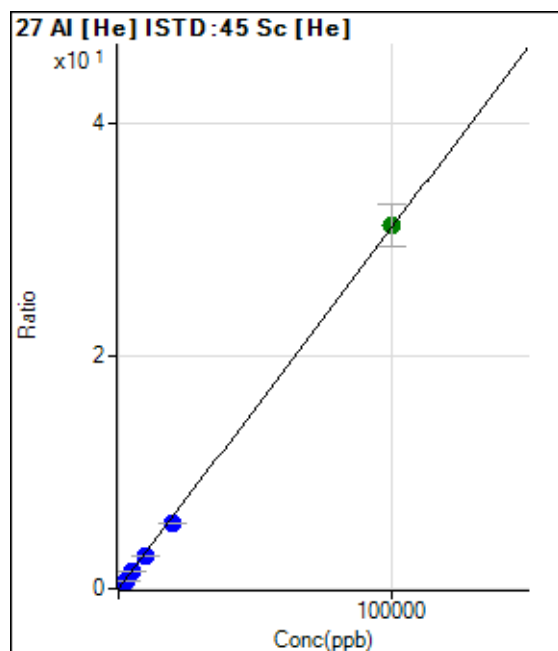
$$R = 0.9998$$

$$DL = 0.3185$$

$$BEC = 0.4078$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0001	P	23.3
2	☐	20.000	18.853	3039.31	0.0060	P	2.6
3	☐	1000.000	919.074	140043.01	0.2856	P	8.0
4	☐	2500.000	2337.678	353613.25	0.7263	P	1.0
5	☐	5000.000	4662.262	685607.12	1.4484	P	0.5
6	☐	10000.000	9185.738	1367818.37	2.8535	P	0.6
7	☐	20000.000	17966.742	2707313.34	5.5812	P	0.5
8	☐	100000.00	100509.83	13298316.44	31.2222	A	11.6
9	☒	2.000					

$$y = 3.1064\text{E-}004 * x + 1.0422\text{E-}004$$

$$R = 0.9998$$

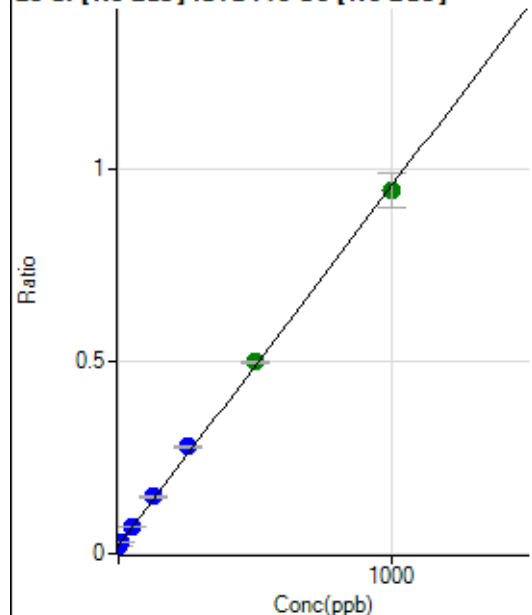
$$DL = 0.2343$$

$$BEC = 0.3355$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	255963.55	0.0211	P	1.4
2	☐	10.000	9.068	360745.35	0.0295	P	1.1
3	☐	50.000	53.872	865851.33	0.0714	P	1.2
4	☐	125.000	136.164	1721307.48	0.1482	P	1.5
5	☐	250.000	275.456	3129678.28	0.2783	P	1.4
6	☐	500.000	510.773	5648899.30	0.4981	A	0.6
7	☐	1000.000	986.670	10245941.11	0.9425	A	9.4
8	☐			553546.65	0.0528	P	1.2
9	☐			267110.62	0.0234	P	6.3

$$y = 9.3391\text{E-}004 * x + 0.0211$$

$$R = 0.9995$$

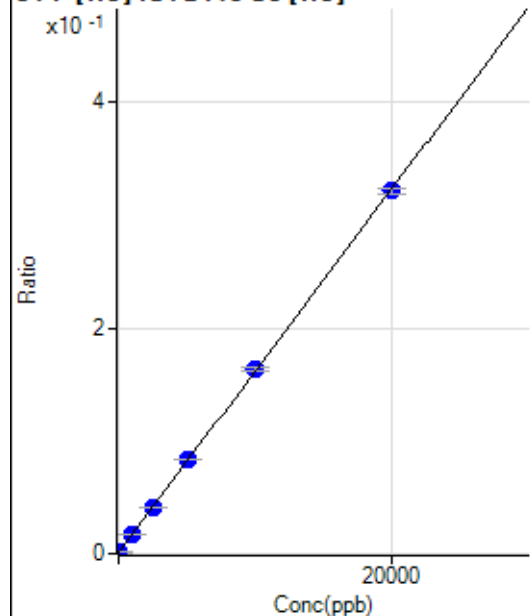
$$DL = 0.9277$$

$$BEC = 22.55$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-31.440	175.01	0.0003	P	8.8
2	☐	0.000	31.440	683.38	0.0013	P	7.0
3	☐	1000.000	1000.150	8308.22	0.0169	P	6.5
4	☐	2500.000	2516.169	20125.38	0.0413	P	0.6
5	☐	5000.000	5142.707	39578.41	0.0836	P	1.2
6	☐	10000.000	10103.180	78350.64	0.1635	P	1.7
7	☐	20000.000	19910.705	155862.21	0.3213	P	1.3
8	☐			263.91	0.0006	P	16.4
9	☐			247.23	0.0005	P	7.1

$$y = 1.6096\text{E-}005 * x + 8.3408\text{E-}004$$

$$R = 0.9999$$

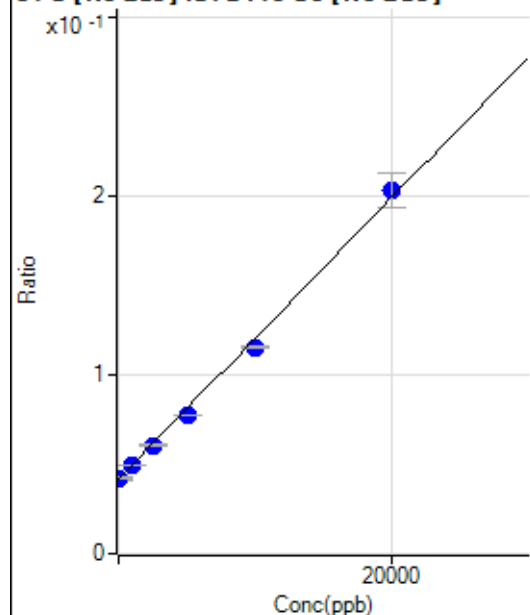
$$DL = 11.39$$

$$BEC = 51.82$$

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	-60.030	502766.80	0.0414	P	1.1
2	☐	0.000	60.030	516866.02	0.0423	P	1.1
3	☐	1000.000	940.757	597162.63	0.0492	P	0.4
4	☐	2500.000	2395.296	704248.54	0.0606	P	0.2
5	☐	5000.000	4505.228	868254.16	0.0772	P	0.9
6	☐	10000.000	9351.340	1307213.08	0.1153	P	0.6
7	☐	20000.000	20464.073	2201389.98	0.2025	P	9.5
8	☐			379443.23	0.0362	P	0.6
9	☐			510845.62	0.0447	P	4.8

$$y = 7.8519\text{E-}006 * x + 0.0418$$

$$R = 0.9989$$

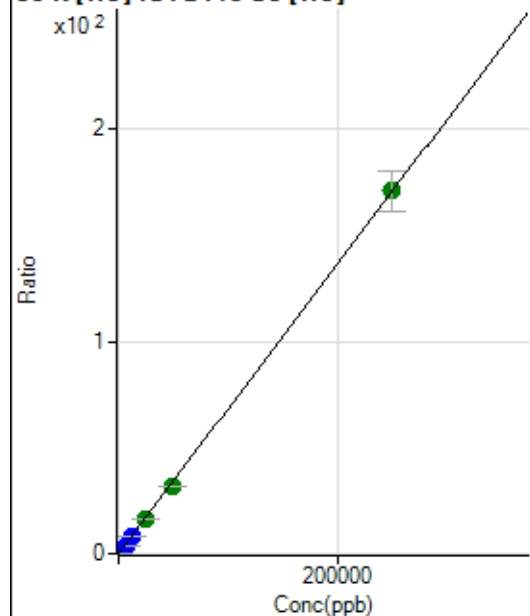
$$DL = 174.3$$

$$BEC = 5328$$

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	24854.95	0.0466	P	1.0
2	☐	500.000	493.920	195102.64	0.3827	P	0.9
3	☐	2500.000	2389.869	820959.17	1.6730	P	4.9
4	☐	6250.000	5763.261	1932285.92	3.9686	P	1.0
5	☐	12500.000	11684.323	3786061.59	7.9981	P	0.4
6	☐	25000.000	23301.594	7623410.76	15.9039	A	0.4
7	☐	50000.000	46036.407	15219375.51	31.3755	A	0.7
8	☐	250000.00	251016.62	72793286.35	170.8693	A	11.2
9	☐	50.000	50.999	42406.10	0.0813	P	1.6

$$y = 6.8052\text{E-}004 * x + 0.0466$$

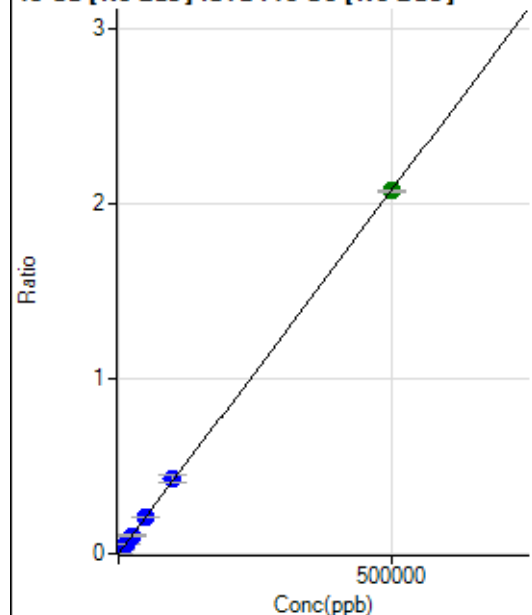
$$R = 0.9999$$

$$DL = 2.001$$

$$BEC = 68.48$$

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	1069.53	0.0001	P	6.9
2	☐	500.000	517.713	27298.42	0.0022	P	1.7
3	☐	5000.000	5004.195	252763.16	0.0208	P	1.4
4	☐	12500.000	12585.635	606977.32	0.0523	P	0.7
5	☐	25000.000	25067.099	1169678.83	0.1040	P	1.0
6	☐	50000.000	49709.248	2338353.83	0.2062	P	0.7
7	☐	100000.00	103183.71	4650889.86	0.4279	P	9.5
8	☐	500000.00	499386.77	21722179.30	2.0705	A	0.7
9	☐	50.000	63.174	3995.17	0.0003	P	9.9

$$y = 4.1459\text{E-}006 * x + 8.7975\text{E-}005$$

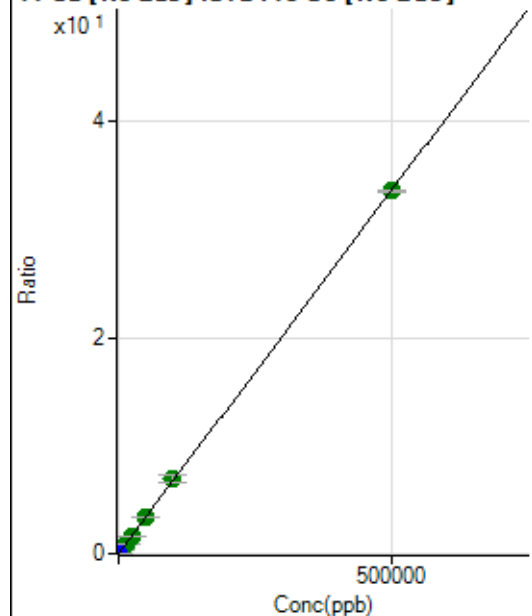
$$R = 1.0000$$

$$DL = 4.398$$

$$BEC = 21.22$$

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	11997.00	0.0010	P	3.1
2	☐	500.000	511.016	432010.58	0.0354	P	0.9
3	☐	5000.000	4954.552	4055136.16	0.3342	P	0.3
4	☐	12500.000	12438.352	9727844.66	0.8376	A	0.7
5	☐	25000.000	24755.685	18736578.20	1.6661	A	0.6
6	☐	50000.000	49258.737	37589606.74	3.3143	A	0.5
7	☐	100000.00	103204.25	75441001.69	6.9429	A	10.1
8	☐	500000.00	499447.47	352463018.9	33.5956	A	0.9
9	☐	50.000	58.402	56177.21	0.0049	P	7.1

$$y = 6.7263\text{E-}005 * x + 9.8704\text{E-}004$$

$$R = 1.0000$$

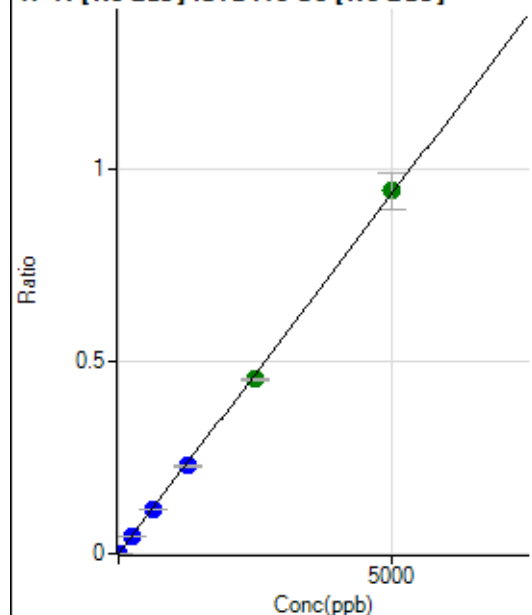
$$DL = 1.378$$

$$BEC = 14.67$$

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	208.35	0.0000	P	20.7
2	☐	5.000	5.123	11905.26	0.0010	P	2.7
3	☐	250.000	244.826	555401.58	0.0458	P	0.9
4	☐	625.000	609.417	1323080.24	0.1139	P	0.4
5	☐	1250.000	1218.114	2560591.77	0.2277	P	0.9
6	☐	2500.000	2422.721	5136264.09	0.4529	A	0.8
7	☐	5000.000	5048.818	10256483.91	0.9437	A	9.8
8	☐			3967.41	0.0004	P	3.0
9	☐	0.500	0.641	1564.05	0.0001	P	7.5

$$y = 1.8692E-004 * x + 1.7131E-005$$

$$R = 0.9998$$

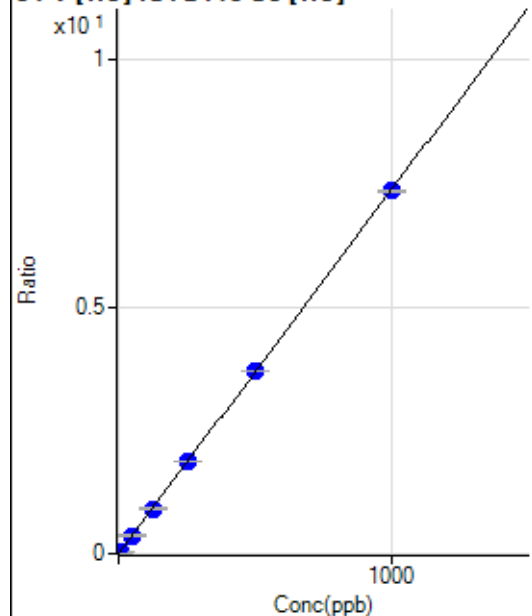
$$DL = 0.05703$$

$$BEC = 0.09165$$

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	5.56	0.0000	P	34.6
2	☐	5.000	5.498	20684.72	0.0406	P	1.1
3	☐	50.000	49.144	177780.87	0.3626	P	8.1
4	☐	125.000	124.096	445761.15	0.9155	P	0.7
5	☐	250.000	254.912	890230.99	1.8806	P	0.3
6	☐	500.000	504.067	1782578.34	3.7188	P	0.2
7	☐	1000.000	996.892	3567523.28	7.3546	P	0.4
8	☐			2304.67	0.0054	P	5.1
9	☐	0.500	0.509	1964.61	0.0038	P	8.8

$$y = 0.0074 * x + 1.0416E-005$$

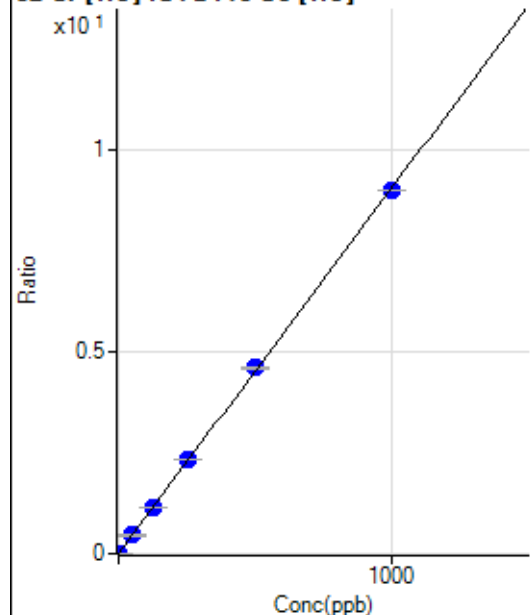
$$R = 1.0000$$

$$DL = 0.001466$$

$$BEC = 0.001412$$

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	1563.44	0.0029	P	4.2
2	☐	2.000	2.225	11731.49	0.0230	P	0.4
3	☐	50.000	49.992	222695.07	0.4542	P	8.4
4	☐	125.000	127.179	560407.29	1.1510	P	0.8
5	☐	250.000	258.499	1105996.85	2.3364	P	0.4
6	☐	500.000	508.903	2203489.71	4.5969	P	0.5
7	☐	1000.000	993.152	4350265.98	8.9683	P	0.1
8	☐			106016.96	0.2486	P	9.6
9	☐	0.200	0.202	2480.25	0.0048	P	2.6

$$y = 0.0090 * x + 0.0029$$

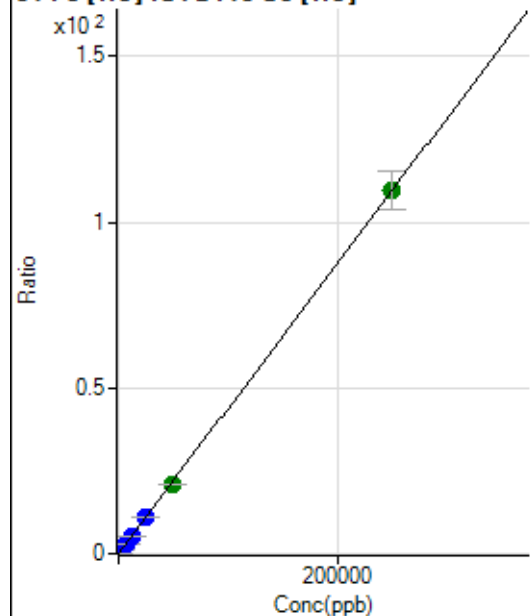
$$R = 0.9999$$

$$DL = 0.04056$$

$$BEC = 0.3246$$

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	503.87	0.0009	P	14.8
2	☐	50.000	54.079	12538.50	0.0246	P	6.2
3	☐	2500.000	2445.181	524460.89	1.0697	P	8.4
4	☐	6250.000	6215.052	1323097.88	2.7175	P	1.0
5	☐	12500.000	12573.842	2602040.54	5.4968	P	0.3
6	☐	25000.000	24907.360	5218905.86	10.8877	P	1.0
7	☐	50000.000	48078.935	10194119.39	21.0157	A	0.5
8	☐	250000.00	250391.20	46642884.99	109.4443	A	10.7
9	☐	5.000	7.950	2305.95	0.0044	P	13.9

$$y = 4.3709E-004 * x + 9.4367E-004$$

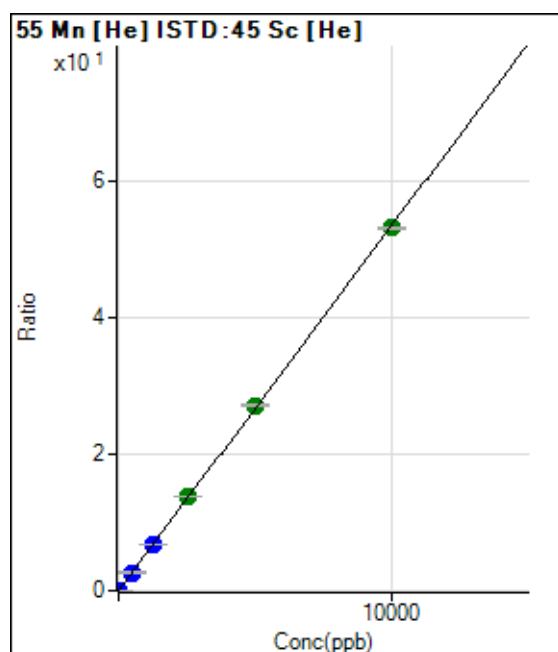
$$R = 1.0000$$

$$DL = 0.9591$$

$$BEC = 2.159$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	43.34	0.0001	P	35.8
2	☐	1.000	1.101	3044.82	0.0060	P	4.8
3	☐	500.000	497.456	1304942.79	2.6612	P	7.9
4	☐	1250.000	1256.916	3273813.63	6.7240	P	0.9
5	☐	2500.000	2560.719	6484541.36	13.6988	A	0.3
6	☐	5000.000	5082.108	13031933.28	27.1870	A	0.3
7	☐	10000.000	9943.029	25801382.39	53.1907	A	0.3
8	☐			25363.19	0.0596	P	12.5
9	☐	0.200	0.116	366.68	0.0007	P	11.0

$$y = 0.0053 * x + 8.1431E-005$$

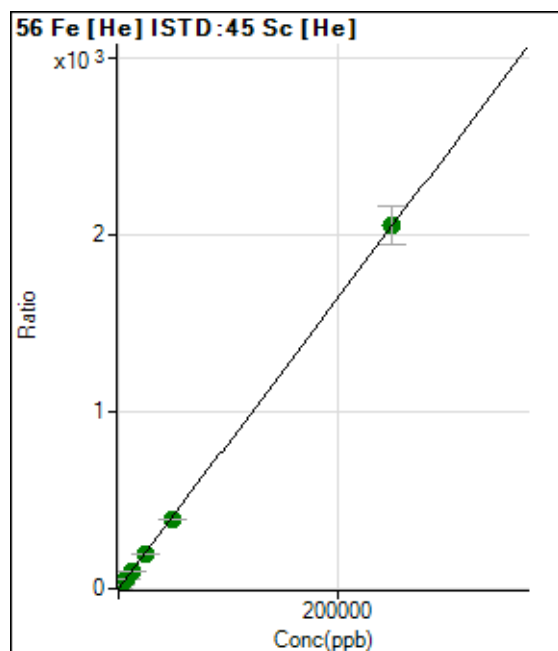
$$R = 0.9999$$

$$DL = 0.01636$$

$$BEC = 0.01522$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	4830.57	0.0091	P	5.2
2	☐	50.000	53.025	225480.43	0.4423	P	0.5
3	☐	2500.000	2358.947	9452476.48	19.2811	A	8.7
4	☐	6250.000	6021.895	23957559.10	49.2066	A	1.2
5	☐	12500.000	12218.683	47258148.74	99.8330	A	0.1
6	☐	25000.000	24222.158	94861973.42	197.8988	A	0.3
7	☐	50000.000	47546.645	188429057.9	388.4548	A	0.6
8	☐	250000.00	250589.63	872437967.6	2,047.271	A	10.8
9	☒	5.000					

$$y = 0.0082 * x + 0.0091$$

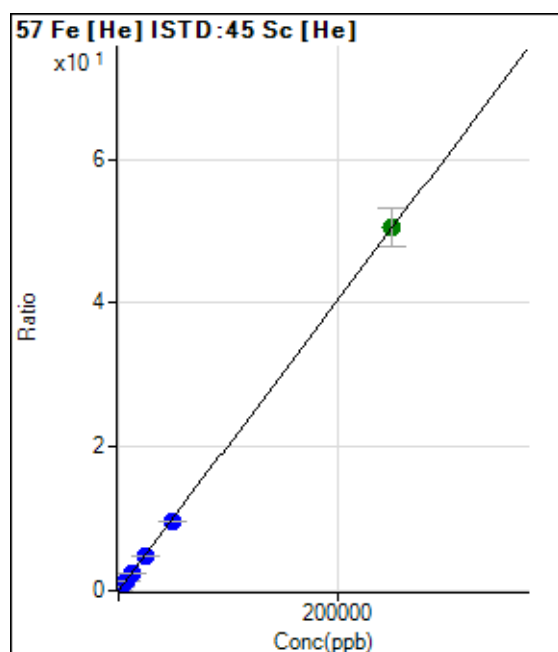
$$R = 0.9999$$

$$DL = 0.1721$$

$$BEC = 1.109$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	275.93	0.0005	P	11.9
2	☐	50.000	53.230	5723.50	0.0112	P	2.3
3	☐	2500.000	2373.494	234346.25	0.4781	P	9.6
4	☐	6250.000	6063.921	594356.52	1.2207	P	0.7
5	☐	12500.000	12269.536	1168940.62	2.4695	P	0.7
6	☐	25000.000	24171.931	2331771.15	4.8645	P	0.5
7	☐	50000.000	47465.413	4633296.63	9.5517	P	0.5
8	☐	250000.00	250607.16	21491358.58	50.4289	A	10.7
9	☒	5.000					

$$y = 2.0122\text{E-}004 * x + 5.1727\text{E-}004$$

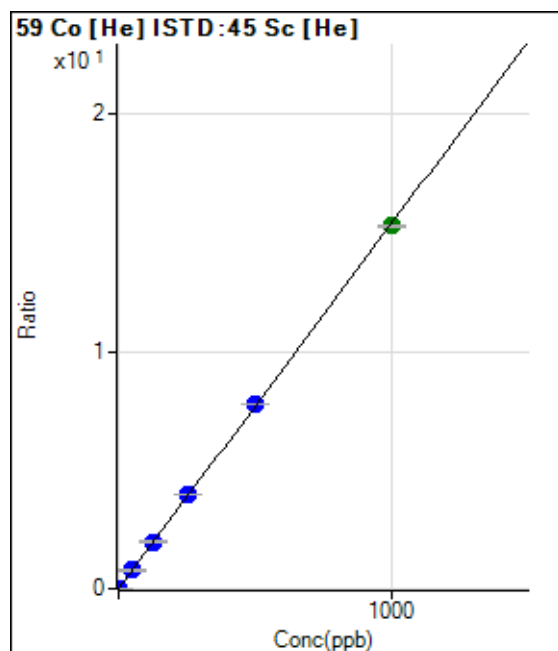
$$R = 0.9999$$

$$DL = 0.9192$$

$$BEC = 2.571$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	140.00	0.0003	P	16.2
2	☐	1.000	1.070	8523.70	0.0167	P	0.0
3	☐	50.000	51.012	384850.64	0.7849	P	8.3
4	☐	125.000	128.546	962851.74	1.9776	P	1.0
5	☐	250.000	258.476	1882168.72	3.9762	P	0.8
6	☐	500.000	507.432	3741622.76	7.8057	P	0.2
7	☐	1000.000	993.671	7414393.02	15.2851	A	0.2
8	☐			14950.02	0.0350	P	8.4
9	☐	0.100	0.101	951.16	0.0018	P	3.6

$$y = 0.0154 * x + 2.6225\text{E-}004$$

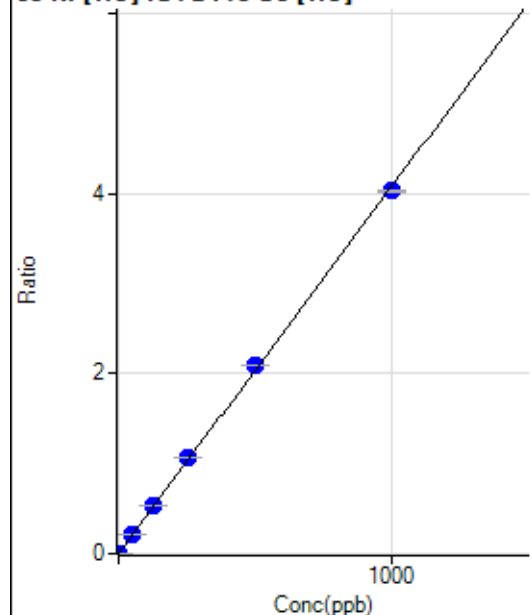
$$R = 0.9999$$

$$DL = 0.008268$$

$$BEC = 0.01705$$

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	44.45	0.0001	P	14.6
2	☐	1.000	1.219	2575.83	0.0051	P	3.5
3	☐	50.000	52.257	104438.23	0.2130	P	7.9
4	☐	125.000	131.705	261300.34	0.5367	P	0.2
5	☐	250.000	263.636	508480.99	1.0742	P	0.1
6	☐	500.000	513.955	1003752.43	2.0940	P	0.5
7	☐	1000.000	988.662	1953884.76	4.0280	P	0.4
8	☐			31207.85	0.0731	P	9.0
9	☐	0.100	0.120	298.90	0.0006	P	7.8

$$y = 0.0041 * x + 8.3250E-005$$

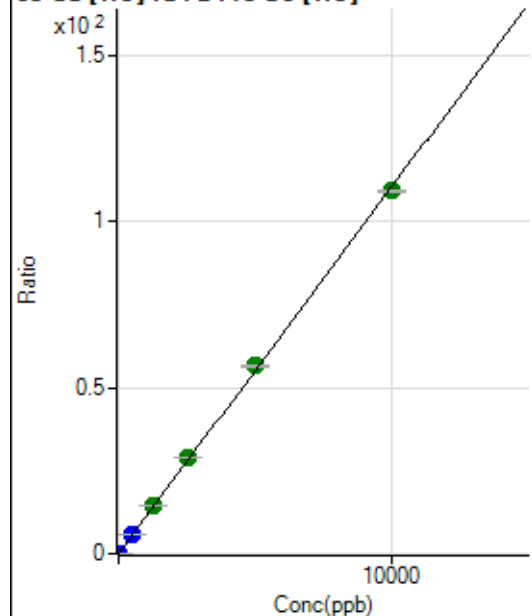
$$R = 0.9997$$

$$DL = 0.008952$$

$$BEC = 0.02043$$

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	940.05	0.0018	P	8.6
2	☐	2.000	2.233	13463.01	0.0264	P	0.9
3	☐	500.000	521.021	2820843.15	5.7524	P	7.7
4	☐	1250.000	1305.290	7015349.34	14.4086	A	0.7
5	☐	2500.000	2628.387	13733270.63	29.0119	A	0.4
6	☐	5000.000	5119.166	27084541.26	56.5033	A	0.2
7	☐	10000.000	9900.358	53006076.99	109.2745	A	0.3
8	☐			19622.26	0.0460	P	9.4
9	☐	0.200	0.229	2236.88	0.0043	P	5.3

$$y = 0.0110 * x + 0.0018$$

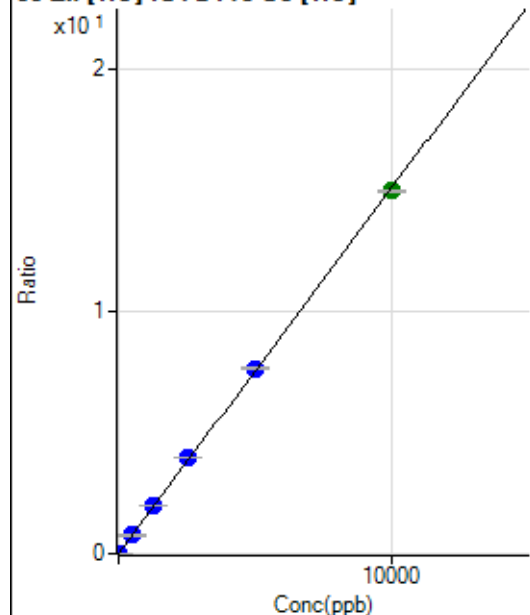
$$R = 0.9998$$

$$DL = 0.04101$$

$$BEC = 0.1598$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0006	P	9.3
2	☐	2.000	2.305	2074.63	0.0041	P	3.5
3	☐	500.000	514.942	381772.97	0.7785	P	7.6
4	☐	1250.000	1308.935	963087.52	1.9781	P	0.8
5	☐	2500.000	2623.496	1876474.28	3.9640	P	0.3
6	☐	5000.000	5074.500	3675043.04	7.6669	P	0.6
7	☐	10000.000	9923.762	7272606.00	14.9929	A	0.2
8	☐			20900.74	0.0491	P	11.3
9	☒	0.200					

$$y = 0.0015 * x + 5.8781E-004$$

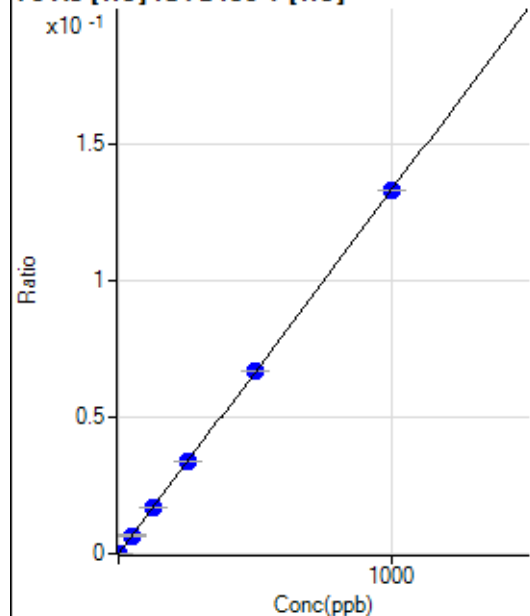
$$R = 0.9999$$

$$DL = 0.1087$$

$$BEC = 0.3891$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.79	0.0000	P	15.4
2	☐	1.000	1.140	531.50	0.0002	P	7.0
3	☐	50.000	50.036	22497.11	0.0067	P	6.8
4	☐	125.000	126.282	56740.45	0.0168	P	1.4
5	☐	250.000	252.748	111671.19	0.0336	P	0.4
6	☐	500.000	502.382	224655.07	0.0669	P	0.4
7	☐	1000.000	997.960	447905.82	0.1328	P	0.0
8	☐			285.19	0.0001	P	8.8
9	☐	0.100	0.118	62.96	0.0000	P	5.1

$$y = 1.3311E-004 * x + 1.8821E-006$$

$$R = 1.0000$$

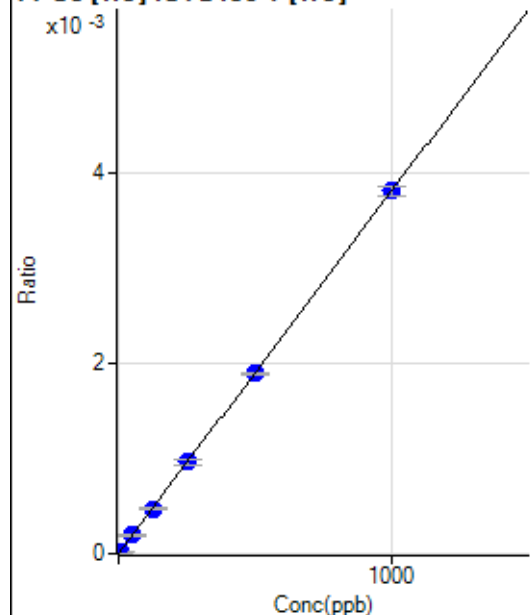
$$DL = 0.006515$$

$$BEC = 0.01414$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	5.000	7.075	94.45	0.0000	P	12.5
3	☐	50.000	51.524	664.47	0.0002	P	8.7
4	☐	125.000	123.877	1596.78	0.0005	P	5.1
5	☐	250.000	252.243	3194.85	0.0010	P	5.1
6	☐	500.000	497.358	6374.84	0.0019	P	1.2
7	☐	1000.000	1000.814	12873.68	0.0038	P	2.4
8	☐			6.67	0.0000	P	107.
9	☐	0.500	0.733	11.11	0.0000	P	17.1

$$y = 3.8149\text{E-}006 * x + 3.0633\text{E-}007$$

$$R = 1.0000$$

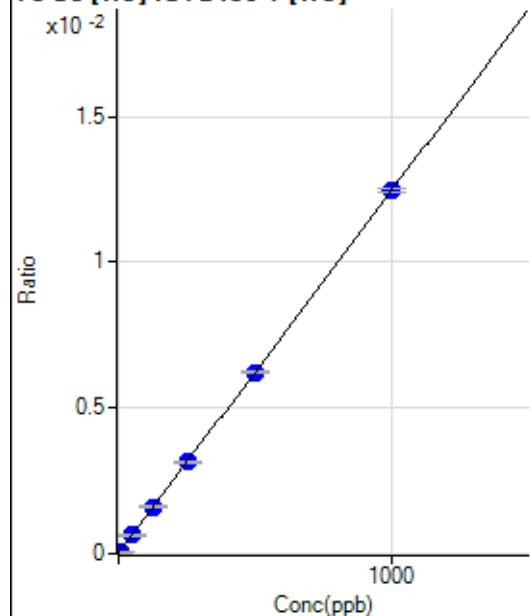
$$DL = 0.4172$$

$$BEC = 0.0803$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	69.14	0.0000	P	7.2
2	☐	5.000	6.007	324.70	0.0001	P	6.9
3	☐	50.000	49.821	2155.74	0.0006	P	8.1
4	☐	125.000	127.944	5431.93	0.0016	P	3.2
5	☐	250.000	251.118	10424.81	0.0031	P	1.2
6	☐	500.000	499.536	20925.69	0.0062	P	0.9
7	☐	1000.000	999.588	41960.54	0.0124	P	1.0
8	☐			90.74	0.0000	P	21.1
9	☐	0.500	1.104	117.90	0.0000	P	14.4

$$y = 1.2431\text{E-}005 * x + 1.9166\text{E-}005$$

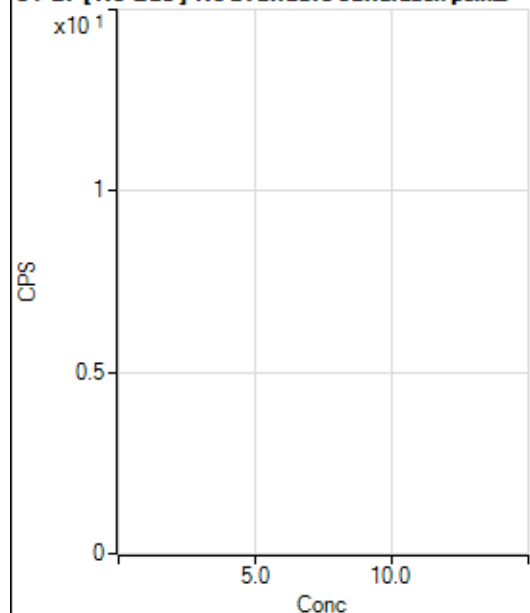
$$R = 1.0000$$

$$DL = 0.3326$$

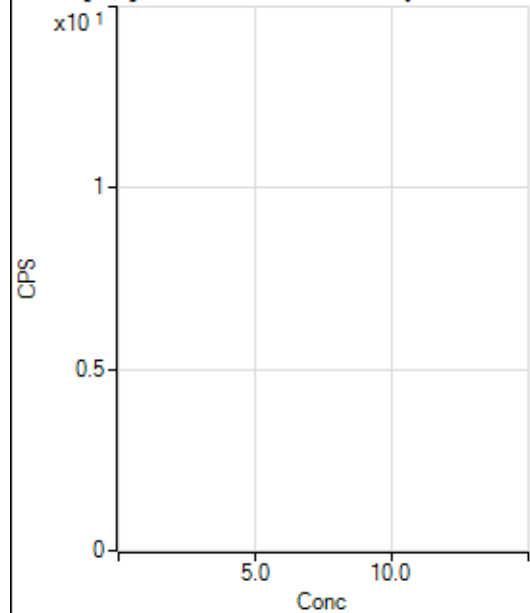
$$BEC = 1.542$$

Weight: <None>

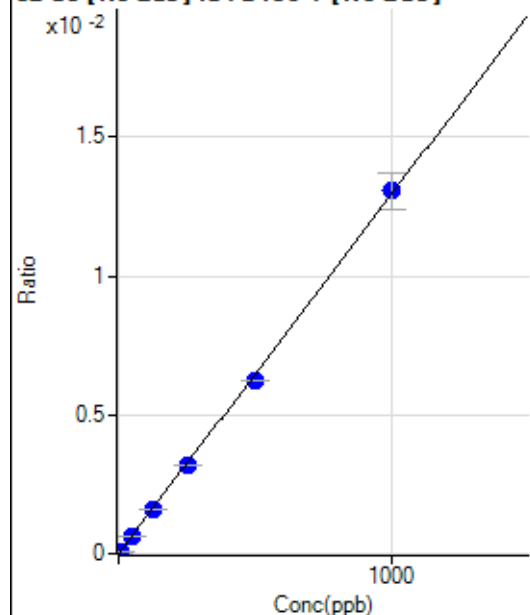
Min Conc: 0

81 Br [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			54997.78		P	0.1
2	☐			56294.42		P	1.5
3	☐			53413.58		P	3.0
4	☐			51367.58		P	2.8
5	☐			49395.04		P	2.3
6	☐			50982.39		P	1.6
7	☐			51160.09		P	2.5
8	☐			50590.61		P	1.3
9	☐			56445.14		P	1.8

81 Br [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			56.72		P	10.2
2	☐			60.06		P	33.3
3	☐			33.37		P	34.6
4	☐			26.69		P	43.3
5	☐			50.06		P	60.0
6	☐			53.39		P	39.0
7	☐			33.37		P	69.3
8	☐			53.39		P	39.0
9	☐			36.70		P	41.7

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	-16.96	0.0000	P	-65.
2	☐	5.000	5.739	1935.57	0.0001	P	2.3
3	☐	50.000	49.803	16884.57	0.0006	P	0.5
4	☐	125.000	123.512	40258.76	0.0016	P	0.9
5	☐	250.000	245.803	78892.62	0.0032	P	1.2
6	☐	500.000	483.172	157576.78	0.0062	P	0.2
7	☐	1000.000	1009.656	317540.11	0.0131	P	9.9
8	☐			371.17	0.0000	P	7.4
9	☒	0.500					

$$y = 1.2936E-005 * x - 6.5447E-007$$

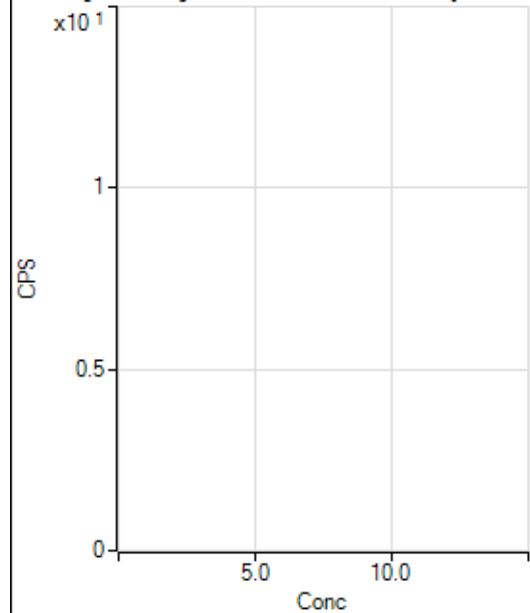
$$R = 0.9998$$

$$DL = 0.09983$$

$$BEC = -0.05059$$

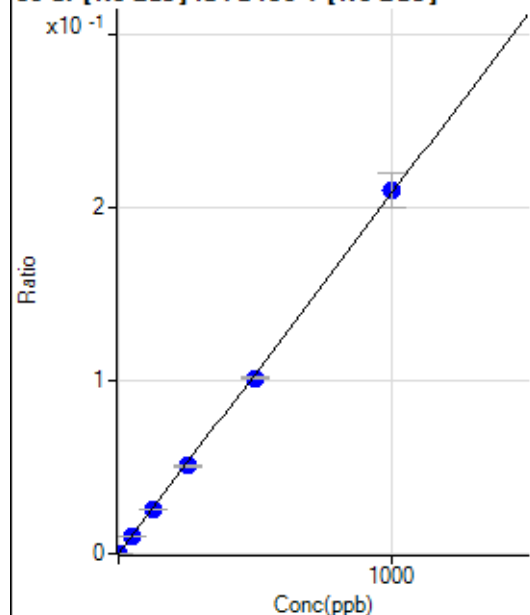
Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			362.23		P	7.7
2	☐			311.12		P	6.5
3	☐			324.45		P	12.3
4	☐			330.01		P	2.7
5	☐			306.68		P	22.2
6	☐			355.57		P	10.0
7	☐			376.68		P	8.7
8	☐			403.34		P	6.2
9	☐			322.23		P	12.1

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	511.14	0.0000	P	9.0
2	☐	1.000	1.009	6032.09	0.0002	P	4.6
3	☐	50.000	49.231	268814.38	0.0102	P	0.8
4	☐	125.000	122.158	640182.38	0.0254	P	0.7
5	☐	250.000	243.922	1257966.67	0.0507	P	1.1
6	☐	500.000	487.799	2555451.94	0.1014	P	0.6
7	☐	1000.000	1008.013	5092998.42	0.2094	P	9.4
8	☐			12005.53	0.0005	P	3.1
9	☐	0.100	0.119	1105.65	0.0000	P	1.5

$$y = 2.0774E-004 * x + 1.9743E-005$$

$$R = 0.9999$$

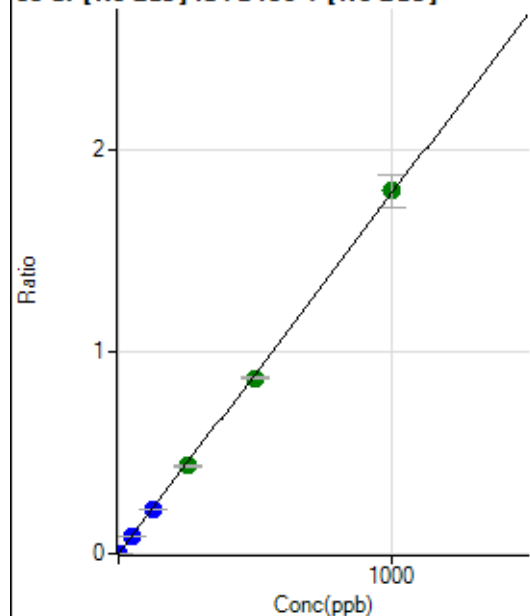
$$DL = 0.02574$$

$$BEC = 0.09504$$

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	105.56	0.0000	P	25.2
2	☐	1.000	1.005	47198.22	0.0018	P	1.6
3	☐	50.000	49.063	2294178.61	0.0875	P	0.5
4	☐	125.000	122.629	5509732.98	0.2186	P	0.4
5	☐	250.000	244.416	10810637.05	0.4356	A	1.2
6	☐	500.000	486.859	21878819.76	0.8678	A	0.9
7	☐	1000.000	1008.310	43715509.31	1.7972	A	9.0
8	☐			97497.38	0.0041	P	1.2
9	☐	0.100	0.107	4834.35	0.0002	P	4.6

$$y = 0.0018 * x + 4.0757E-006$$

$$R = 0.9999$$

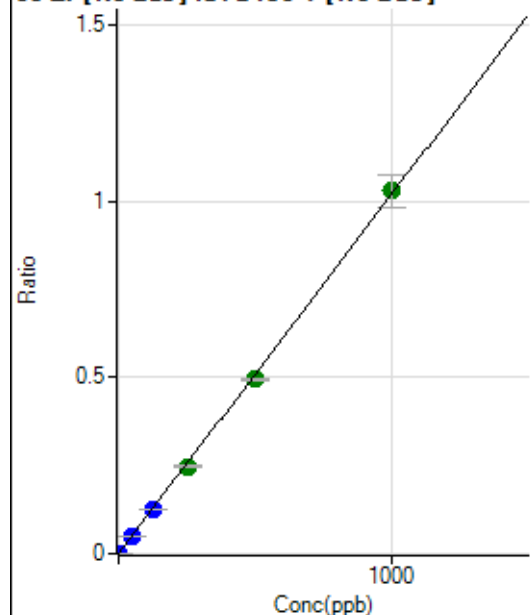
$$DL = 0.001729$$

$$BEC = 0.002287$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1330.68	0.0001	P	11.5
2	☐	1.000	0.830	23581.18	0.0009	P	2.7
3	☐	50.000	47.712	1275886.16	0.0486	P	0.3
4	☐	125.000	121.680	3124586.36	0.1240	P	0.4
5	☐	250.000	242.294	6123754.69	0.2468	A	1.2
6	☐	500.000	484.678	12444557.05	0.4936	A	0.2
7	☐	1000.000	1010.117	25017951.43	1.0286	A	9.2
8	☐			13131.64	0.0006	P	4.6
9	☐	0.100	0.078	3253.29	0.0001	P	4.7

$$y = 0.0010 * x + 5.1389E-005$$

$$R = 0.9998$$

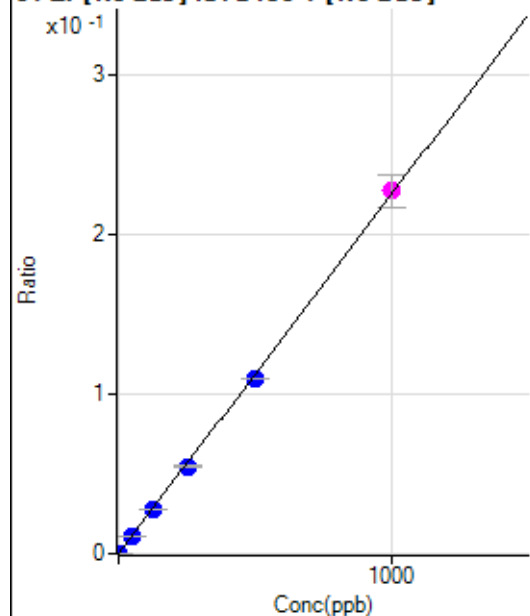
$$DL = 0.01735$$

$$BEC = 0.05047$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	272.24	0.0000	P	4.7
2	☐	1.000	0.854	5334.55	0.0002	P	9.7
3	☐	50.000	47.951	283436.21	0.0108	P	0.9
4	☐	125.000	122.137	693282.33	0.0275	P	0.4
5	☐	250.000	242.850	1356796.14	0.0547	P	1.2
6	☐	500.000	485.141	2753593.75	0.1092	P	0.3
7	☐	1000.000	1009.678	5527998.78	0.2273	M	9.2
8	☐			2911.53	0.0001	P	6.8
9	☐	0.100	0.078	697.27	0.0000	P	4.4

$$y = 2.2509E-004 * x + 1.0515E-005$$

$$R = 0.9998$$

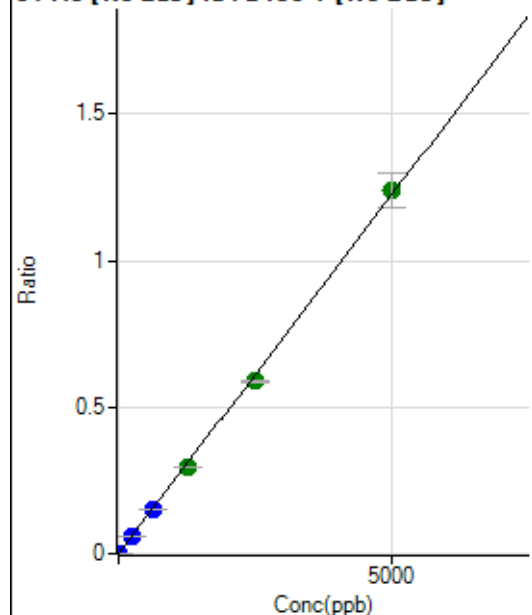
$$DL = 0.006554$$

$$BEC = 0.04671$$

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	425.03	0.0000	P	15.9
2	☐	5.000	4.913	32045.35	0.0012	P	2.6
3	☐	250.000	239.439	1536954.31	0.0586	P	0.2
4	☐	625.000	611.501	3770898.82	0.1496	P	0.9
5	☐	1250.000	1208.542	7336705.20	0.2956	A	0.8
6	☐	2500.000	2405.439	14835881.93	0.5884	A	0.8
7	☐	5000.000	5059.860	30097057.96	1.2377	A	9.6
8	☐			27335.53	0.0012	P	3.3
9	☐	0.500	0.554	3767.32	0.0002	P	6.4

$$y = 2.4461E-004 * x + 1.6413E-005$$

$$R = 0.9997$$

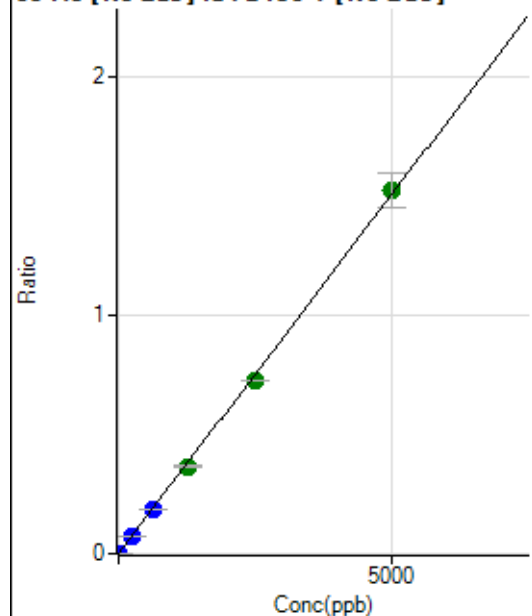
$$DL = 0.03193$$

$$BEC = 0.0671$$

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	41.67	0.0000	P	40.2
2	☐	5.000	5.222	41413.77	0.0016	P	0.4
3	☐	250.000	240.646	1901802.19	0.0725	P	0.6
4	☐	625.000	610.863	4638552.18	0.1840	P	1.3
5	☐	1250.000	1216.697	9095760.44	0.3665	A	0.5
6	☐	2500.000	2414.355	18337636.70	0.7273	A	0.7
7	☐	5000.000	5053.383	37021202.56	1.5223	A	9.4
8	☐			37517.09	0.0016	P	3.2
9	☐	0.500	0.625	4712.11	0.0002	P	6.0

$$y = 3.0124E-004 * x + 1.6102E-006$$

$$R = 0.9998$$

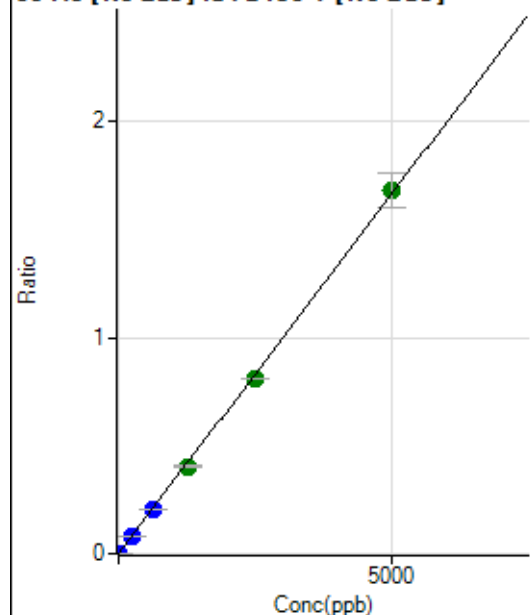
$$DL = 0.006444$$

$$BEC = 0.005345$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	169.45	0.0000	P	12.3
2	☐	5.000	5.206	45702.28	0.0017	P	0.3
3	☐	250.000	241.176	2104144.32	0.0802	P	0.8
4	☐	625.000	610.950	5121535.53	0.2032	P	1.3
5	☐	1250.000	1211.281	9996010.64	0.4028	A	1.1
6	☐	2500.000	2429.062	20366326.85	0.8078	A	0.3
7	☐	5000.000	5047.346	40819646.75	1.6785	A	9.4
8	☐			65353.64	0.0028	P	1.2
9	☐	0.500	0.608	5173.39	0.0002	P	9.6

$$y = 3.3254\text{E-}004 * x + 6.5446\text{E-}006$$

$$R = 0.9998$$

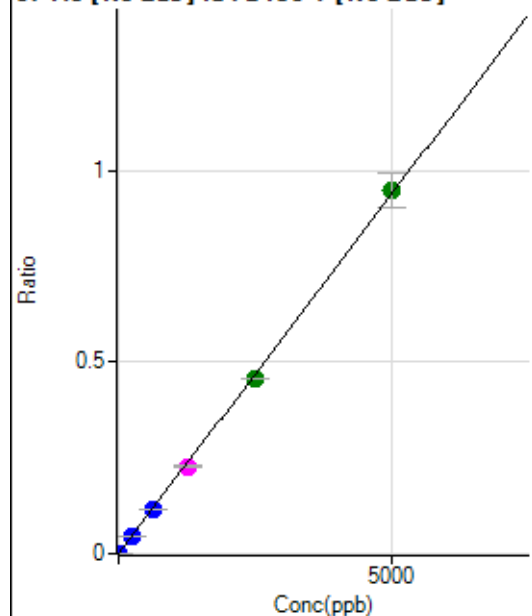
$$DL = 0.007262$$

$$BEC = 0.01968$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0000	P	33.2
2	☐	5.000	5.213	25763.12	0.0010	P	1.2
3	☐	250.000	241.991	1191932.29	0.0454	P	0.6
4	☐	625.000	611.877	2895895.40	0.1149	P	0.8
5	☐	1250.000	1210.960	5642012.41	0.2274	M	1.4
6	☐	2500.000	2427.494	11491213.10	0.4558	A	0.4
7	☐	5000.000	5048.054	23047616.83	0.9478	A	9.6
8	☐			23990.55	0.0010	P	0.4
9	☐	0.500	0.628	2956.02	0.0001	P	6.5

$$y = 1.8775\text{E-}004 * x + 9.6525\text{E-}007$$

$$R = 0.9998$$

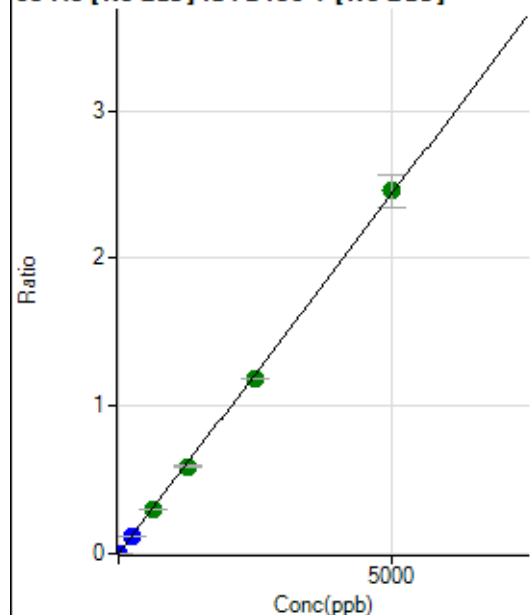
$$DL = 0.00512$$

$$BEC = 0.005141$$

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	83.34	0.0000	P	19.8
2	☐	5.000	5.181	66383.46	0.0025	P	0.4
3	☐	250.000	239.794	3060815.33	0.1167	P	0.1
4	☐	625.000	605.349	7424339.23	0.2945	A	0.7
5	☐	1250.000	1211.175	14623699.11	0.5893	A	1.2
6	☐	2500.000	2425.603	29755496.15	1.1802	A	0.3
7	☐	5000.000	5049.871	59757790.92	2.4570	A	9.3
8	☐			59999.53	0.0025	P	2.5
9	☐	0.500	0.622	7577.30	0.0003	P	10.2

$$y = 4.8654\text{E-}004 * x + 3.2180\text{E-}006$$

$$R = 0.9998$$

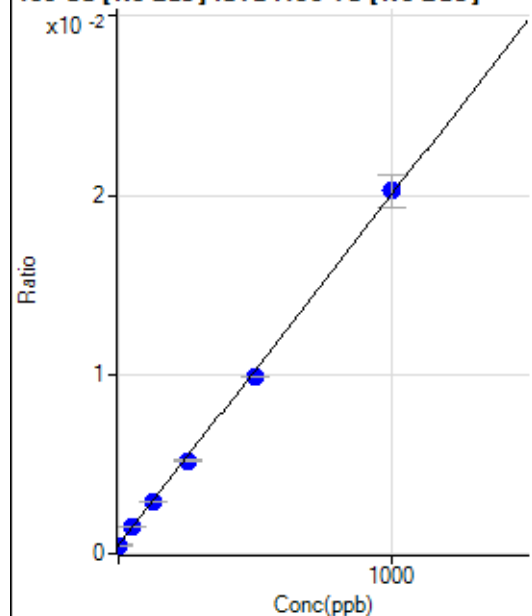
$$DL = 0.003931$$

$$BEC = 0.006614$$

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	11777.57	0.0005	P	2.2
2	☐	1.000	-0.013	11880.46	0.0005	P	1.8
3	☐	50.000	50.778	36425.61	0.0015	P	2.1
4	☐	125.000	125.544	71600.95	0.0029	P	0.5
5	☐	250.000	241.482	127099.49	0.0052	P	0.8
6	☐	500.000	481.588	247396.20	0.0099	P	0.2
7	☐	1000.000	1011.229	481803.55	0.0202	P	8.8
8	☐			11057.65	0.0005	P	1.7
9	☐	0.100	-0.570	10968.64	0.0005	P	2.8

$$y = 1.9541\text{E-}005 * x + 4.7825\text{E-}004$$

$$R = 0.9997$$

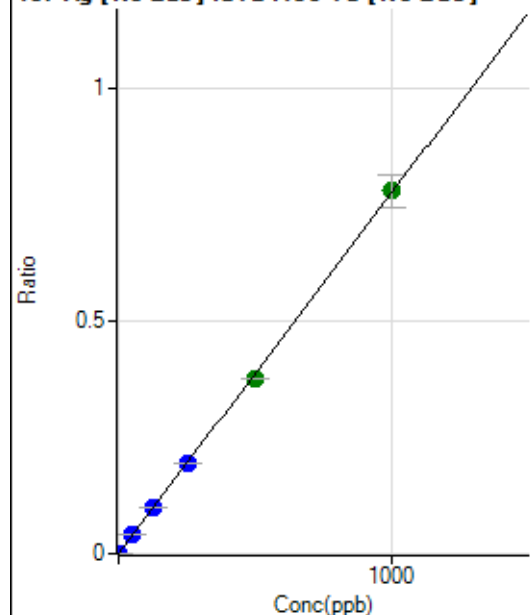
$$DL = 1.607$$

$$BEC = 24.47$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.90	0.0000	P	28.4
2	☐	1.000	1.023	19900.83	0.0008	P	1.8
3	☐	50.000	53.165	1019891.61	0.0412	P	0.9
4	☐	125.000	129.009	2440034.19	0.0999	P	0.5
5	☐	250.000	250.331	4740524.28	0.1938	P	0.9
6	☐	500.000	485.804	9410754.47	0.3762	A	0.6
7	☐	1000.000	1006.356	18550036.01	0.7792	A	8.9
8	☐			10598.90	0.0005	P	2.9
9	☐	0.100	0.109	2178.05	0.0001	P	10.1

$$y = 7.7430E-004 * x + 8.6888E-006$$

$$R = 0.9998$$

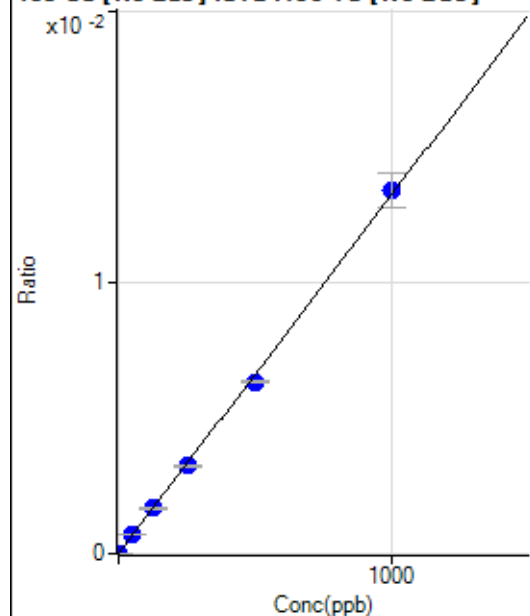
$$DL = 0.009548$$

$$BEC = 0.01122$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.61	0.0000	P	27.1
2	☐	1.000	1.158	404.18	0.0000	P	2.8
3	☐	50.000	51.240	16804.69	0.0007	P	0.9
4	☐	125.000	126.160	40763.01	0.0017	P	1.7
5	☐	250.000	245.316	79340.18	0.0032	P	1.6
6	☐	500.000	479.504	158623.79	0.0063	P	0.6
7	☐	1000.000	1011.212	318199.38	0.0134	P	9.4
8	☐			197.23	0.0000	P	10.3
9	☐	0.100	0.099	52.78	0.0000	P	17.0

$$y = 1.3221E-005 * x + 9.5930E-007$$

$$R = 0.9997$$

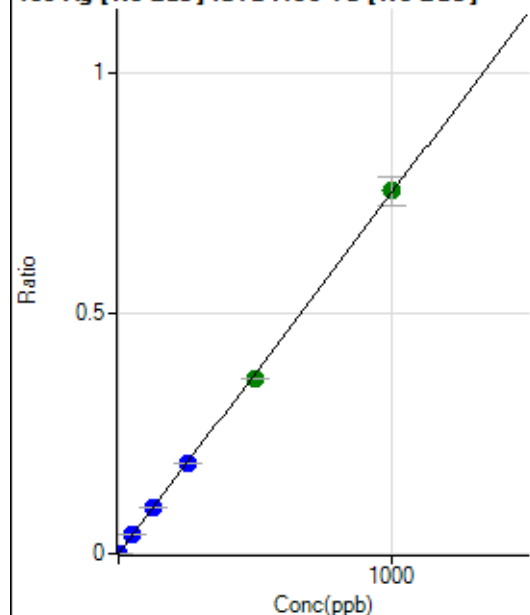
$$DL = 0.05909$$

$$BEC = 0.07256$$

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	58.34	0.0000	P	14.5
2	☐	1.000	1.057	19803.52	0.0008	P	1.4
3	☐	50.000	52.856	983693.78	0.0397	P	0.7
4	☐	125.000	129.012	2367389.11	0.0969	P	0.4
5	☐	250.000	250.175	4596706.92	0.1880	P	1.3
6	☐	500.000	485.863	9132298.64	0.3650	A	0.6
7	☐	1000.000	1006.380	18006392.42	0.7561	A	8.2
8	☐			10243.01	0.0005	P	2.4
9	☐	0.100	0.109	1978.00	0.0001	P	8.1

$$y = 7.5131\text{E-}004 * x + 2.3695\text{E-}006$$

$$R = 0.9998$$

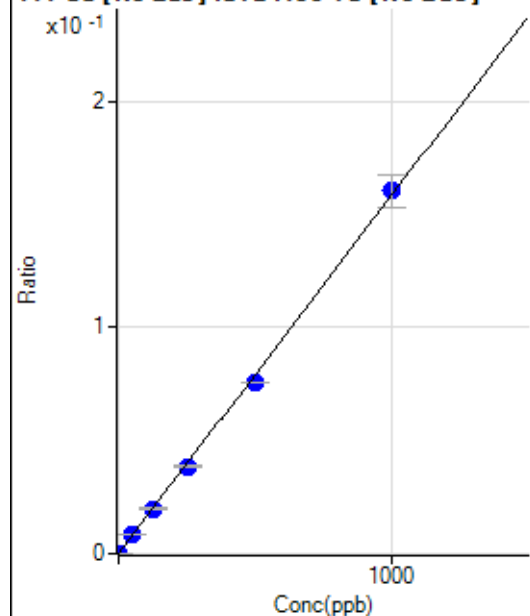
$$DL = 0.001372$$

$$BEC = 0.003154$$

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	2365.79	0.0001	P	2.4
2	☐	1.000	1.012	6367.38	0.0003	P	1.6
3	☐	50.000	50.901	201964.45	0.0082	P	0.8
4	☐	125.000	125.294	486763.62	0.0199	P	0.6
5	☐	250.000	243.569	945308.52	0.0387	P	0.5
6	☐	500.000	477.578	1893723.87	0.0757	P	0.4
7	☐	1000.000	1012.737	3818422.69	0.1604	P	9.0
8	☐			3508.02	0.0002	P	1.3
9	☐	0.100	0.083	2565.41	0.0001	P	3.4

$$y = 1.5830\text{E-}004 * x + 9.6067\text{E-}005$$

$$R = 0.9996$$

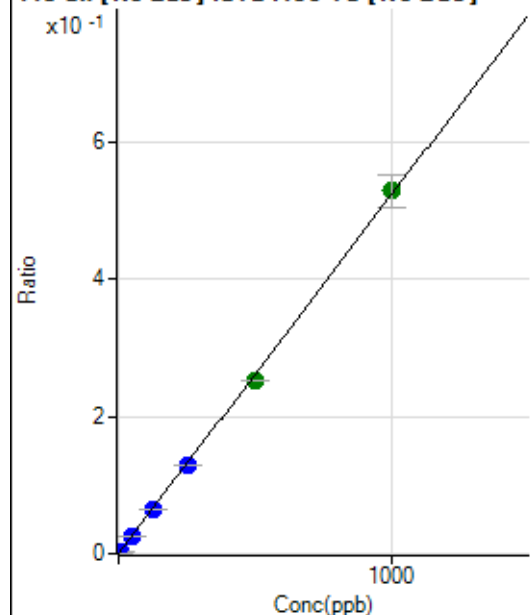
$$DL = 0.0442$$

$$BEC = 0.6069$$

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	977.86	0.0000	P	7.0
2	☐	5.000	5.233	69011.90	0.0028	P	0.3
3	☐	50.000	49.911	647636.45	0.0261	P	0.5
4	☐	125.000	124.255	1588345.28	0.0650	P	0.2
5	☐	250.000	244.657	3130613.33	0.1280	P	0.7
6	☐	500.000	481.938	6307425.62	0.2521	A	0.3
7	☐	1000.000	1010.463	12581625.20	0.5286	A	9.1
8	☐			13874.08	0.0006	P	4.6
9	☐	0.500	0.668	9117.25	0.0004	P	3.4

$$y = 5.2306\text{E-}004 * x + 3.9707\text{E-}005$$

$$R = 0.9998$$

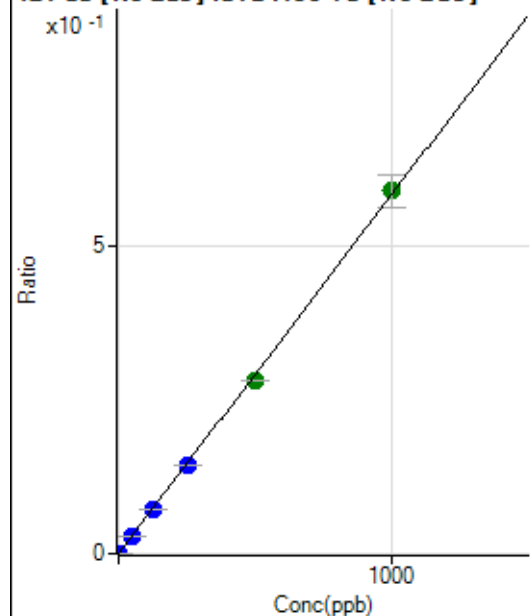
$$DL = 0.01595$$

$$BEC = 0.07591$$

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	63.89	0.0000	P	7.7
2	☐	2.000	1.990	28839.04	0.0012	P	1.4
3	☐	50.000	49.123	707803.92	0.0286	P	0.9
4	☐	125.000	123.422	1753467.70	0.0718	P	0.3
5	☐	250.000	244.983	3484981.15	0.1425	P	0.7
6	☐	500.000	481.326	7004145.64	0.2800	A	0.2
7	☐	1000.000	1010.832	13995624.71	0.5880	A	9.1
8	☐			21956.95	0.0010	P	8.9
9	☐	0.200	0.217	3014.35	0.0001	P	4.4

$$y = 5.8166\text{E-}004 * x + 2.5949\text{E-}006$$

$$R = 0.9997$$

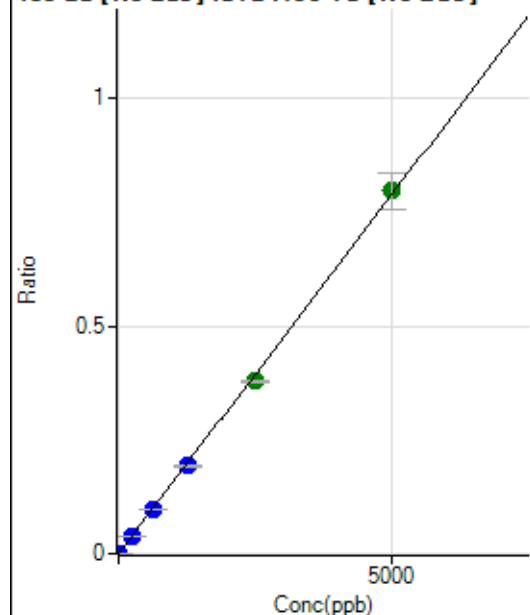
$$DL = 0.001036$$

$$BEC = 0.004461$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	75.1
2	☐	10.000	10.358	40585.23	0.0016	P	1.7
3	☐	250.000	246.208	960578.26	0.0388	P	2.1
4	☐	625.000	614.311	2363291.33	0.0968	P	0.8
5	☐	1250.000	1220.395	4701192.16	0.1922	P	1.0
6	☐	2500.000	2401.958	9465199.61	0.3783	A	0.5
7	☐	5000.000	5057.947	18953530.11	0.7967	A	10.1
8	☐			37131.16	0.0017	P	1.8
9	☐	1.000	1.153	4284.19	0.0002	P	4.6

$$y = 1.5752\text{E-}004 * x + 1.3533\text{E-}006$$

$$R = 0.9997$$

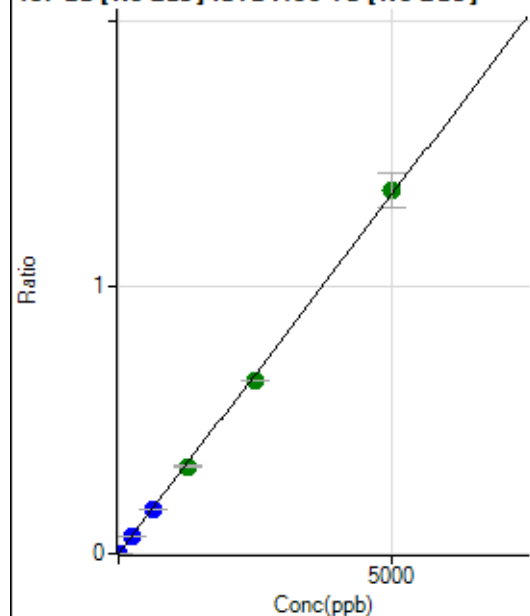
$$DL = 0.01935$$

$$BEC = 0.008592$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.11	0.0000	P	74.3
2	☐	10.000	10.402	69547.56	0.0028	P	1.8
3	☐	250.000	247.119	1646295.41	0.0665	P	0.8
4	☐	625.000	618.122	4060234.94	0.1662	P	0.8
5	☐	1250.000	1215.683	7996139.76	0.3270	A	0.8
6	☐	2500.000	2405.475	16185117.72	0.6470	A	0.2
7	☐	5000.000	5056.845	32363267.39	1.3600	A	9.7
8	☐			61833.06	0.0028	P	2.2
9	☐	1.000	1.113	7046.56	0.0003	P	4.7

$$y = 2.6895\text{E-}004 * x + 1.4674\text{E-}006$$

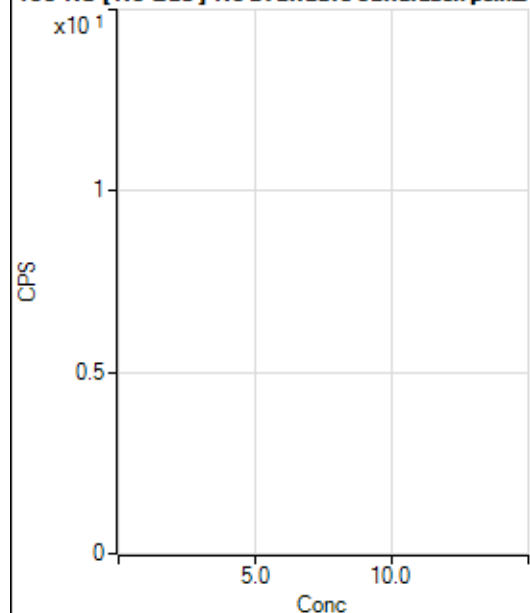
$$R = 0.9997$$

$$DL = 0.01217$$

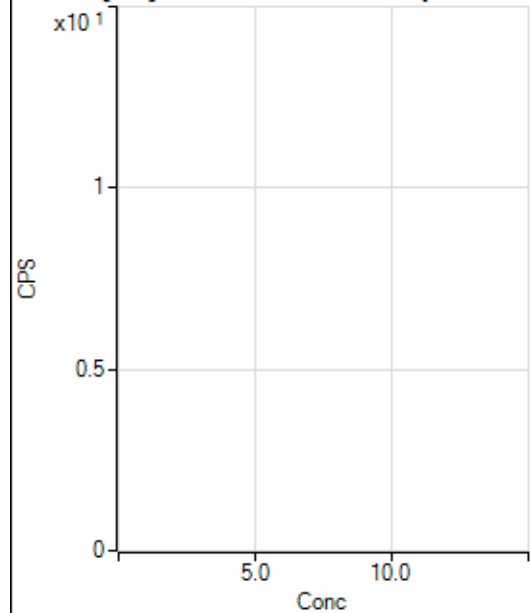
$$BEC = 0.005456$$

Weight: <None>

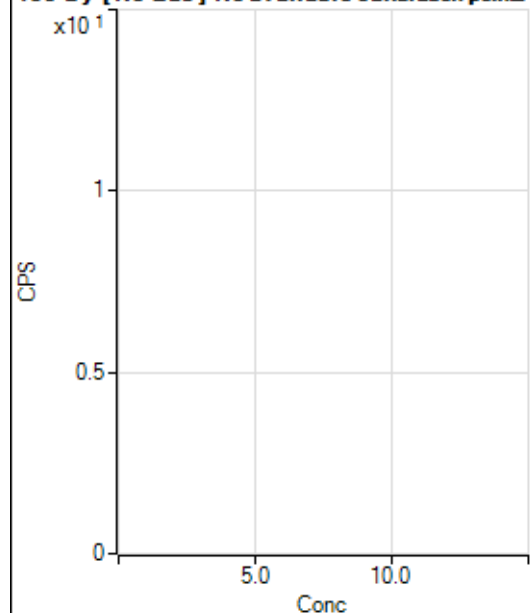
Min Conc: 0

150 Nd [No Gas] No available calibration points

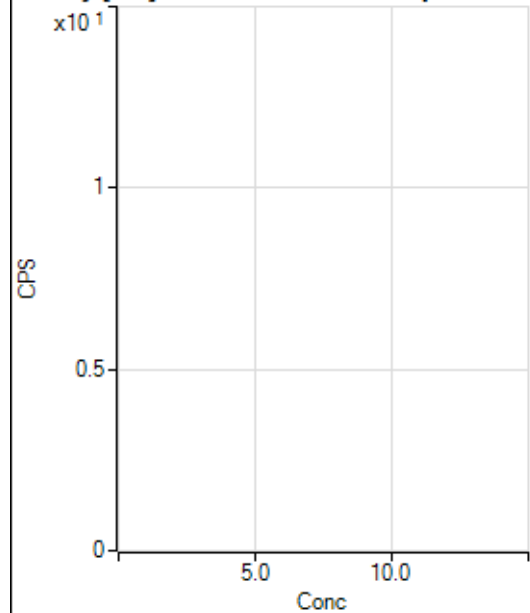
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐			8.89		P	86.6
3	☐			117.78		P	23.6
4	☐			295.57		P	10.7
5	☐			562.26		P	21.9
6	☐			1037.85		P	4.4
7	☐			2289.17		P	4.5
8	☐			242.24		P	18.7
9	☐			4.44		P	173.

150 Nd [He] No available calibration points

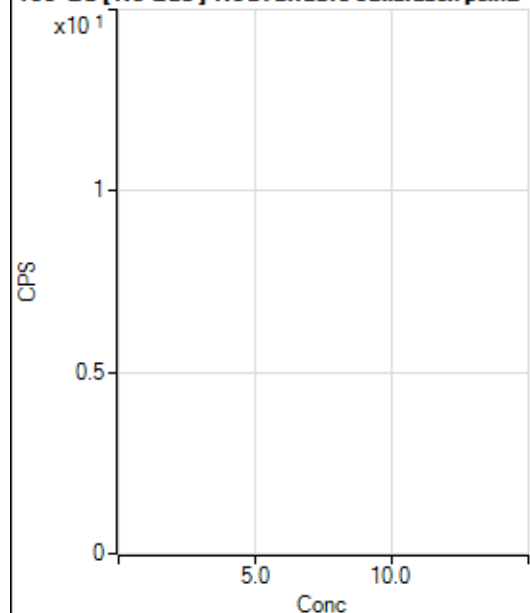
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐			1.11		P	173.
3	☐			6.67		P	0.0
4	☐			24.45		P	43.8
5	☐			43.33		P	13.3
6	☐			87.78		P	8.8
7	☐			168.89		P	4.1
8	☐			78.89		P	35.4
9	☐			1.11		P	173.

156 Dy [No Gas] No available calibration points

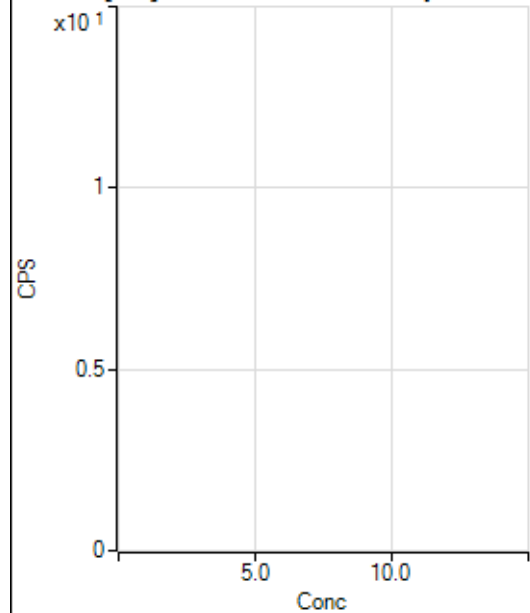
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			19.44		P	65.5
2	☐			27.78		P	17.3
3	☐			44.45		P	39.0
4	☐			91.67		P	27.3
5	☐			166.68		P	15.0
6	☐			300.02		P	10.0
7	☐			444.47		P	16.2
8	☐			988.97		P	6.8
9	☐			22.22		P	21.6

156 Dy [He] No available calibration points

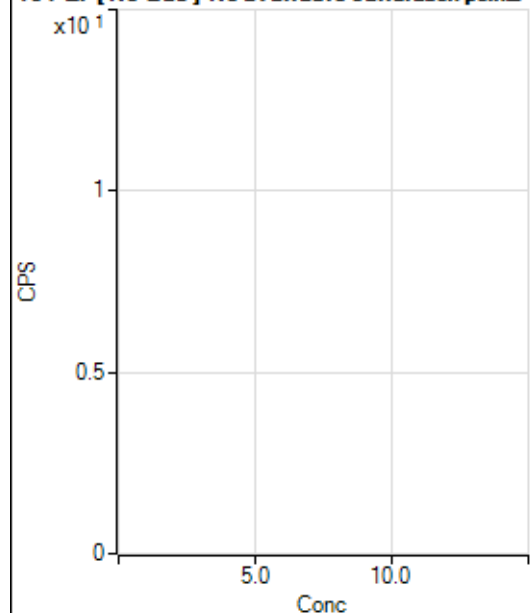
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			18.89		P	87.0
2	☐			15.56		P	96.6
3	☐			38.89		P	77.8
4	☐			55.56		P	9.2
5	☐			98.89		P	11.8
6	☐			224.45		P	7.5
7	☐			418.90		P	10.1
8	☐			557.80		P	7.8
9	☐			16.67		P	NaN

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

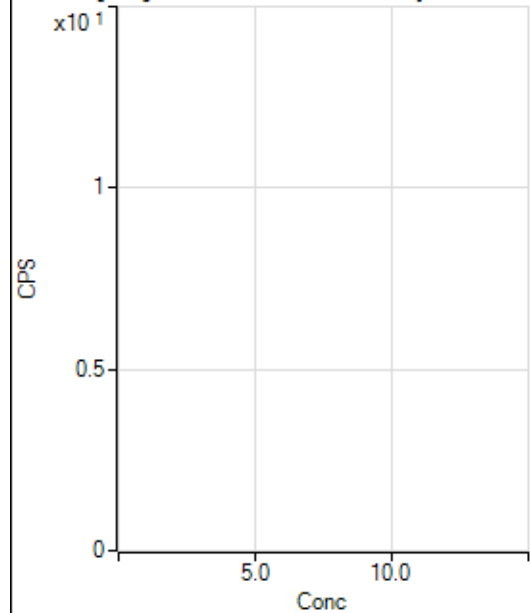
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			147.23		P	19.9
2	☐			211.12		P	13.9
3	☐			180.56		P	21.3
4	☐			180.56		P	26.2
5	☐			213.90		P	9.8
6	☐			238.90		P	12.2
7	☐			391.69		P	16.1
8	☐			1127.88		P	12.0
9	☐			158.34		P	9.1

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			405.57		P	4.8
2	☐			404.46		P	18.4
3	☐			382.24		P	5.7
4	☐			414.46		P	11.9
5	☐			418.91		P	18.2
6	☐			451.13		P	4.5
7	☐			507.80		P	8.7
8	☐			908.93		P	3.3
9	☐			383.35		P	7.1

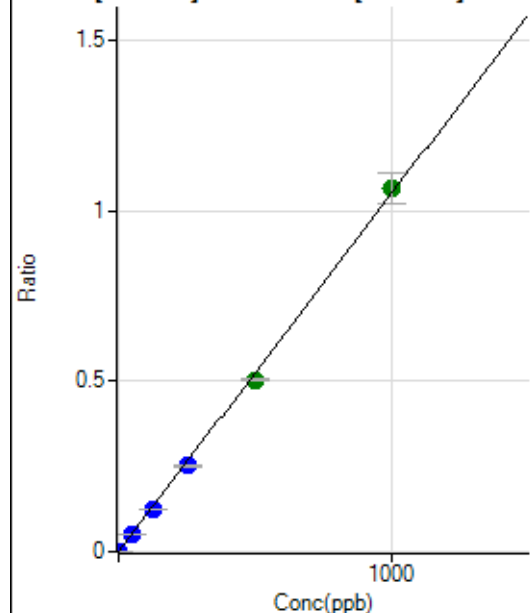
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			97.23		P	32.5
2	☐			133.34		P	12.5
3	☐			133.34		P	34.8
4	☐			122.23		P	15.7
5	☐			152.78		P	34.6
6	☐			133.34		P	38.0
7	☐			150.01		P	14.7
8	☐			286.13		P	12.1
9	☐			125.01		P	11.5

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			64.45		P	24.4
2	☐			55.56		P	21.1
3	☐			53.33		P	32.5
4	☐			66.67		P	22.9
5	☐			57.78		P	12.0
6	☐			67.78		P	24.3
7	☐			74.45		P	29.8
8	☐			108.89		P	23.0
9	☐			61.11		P	17.5

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.37	0.0000	P	4.7
2	☐	1.000	0.954	16230.04	0.0010	P	4.2
3	☐	50.000	47.311	775782.17	0.0498	P	1.2
4	☐	125.000	119.660	1926845.18	0.1258	P	0.7
5	☐	250.000	239.941	3835223.52	0.2523	P	1.1
6	☐	500.000	480.230	7641511.54	0.5049	A	0.7
7	☐	1000.000	1013.202	14982277.42	1.0652	A	8.6
8	☐			6699.20	0.0006	P	0.8
9	☐	0.100	0.106	2111.38	0.0001	P	8.5

$$y = 0.0011 * x + 3.0951E-005$$

$$R = 0.9997$$

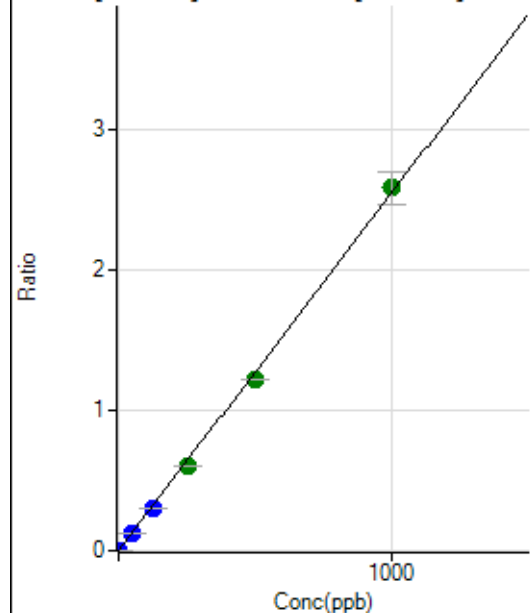
$$DL = 0.004112$$

$$BEC = 0.02944$$

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	1316.79	0.0001	P	5.1
2	☐	1.000	0.951	39297.99	0.0025	P	1.4
3	☐	50.000	47.355	1878736.76	0.1205	P	0.7
4	☐	125.000	120.000	4674841.12	0.3053	P	0.5
5	☐	250.000	236.898	9160821.91	0.6026	A	0.6
6	☐	500.000	478.697	18427603.88	1.2175	A	0.3
7	☐	1000.000	1014.684	36291972.69	2.5806	A	8.9
8	☐			16702.82	0.0014	P	2.7
9	☐	0.100	0.102	5106.77	0.0003	P	7.1

$$y = 0.0025 * x + 8.4318E-005$$

$$R = 0.9996$$

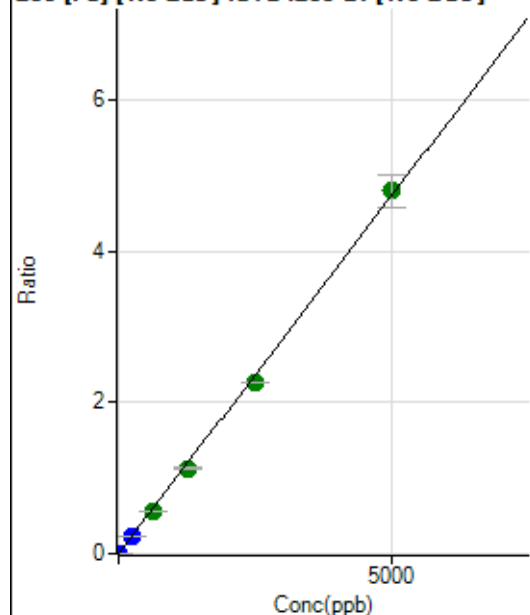
$$DL = 0.005059$$

$$BEC = 0.03315$$

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	777.82	0.0000	P	9.9
2	☐	1.000	0.892	14020.62	0.0009	P	4.0
3	☐	250.000	237.551	3502184.60	0.2247	P	0.8
4	☐	625.000	593.178	8589512.29	0.5609	A	0.5
5	☐	1250.000	1192.806	17147194.25	1.1279	A	0.8
6	☐	2500.000	2397.224	34306984.79	2.2667	A	0.6
7	☐	5000.000	5070.287	67412476.97	4.7941	A	9.2
8	☐			58966.22	0.0050	P	1.2
9	☐	0.100	0.104	2209.51	0.0001	P	4.7

$$y = 9.4551\text{E-}004 * x + 4.9816\text{E-}005$$

$$R = 0.9996$$

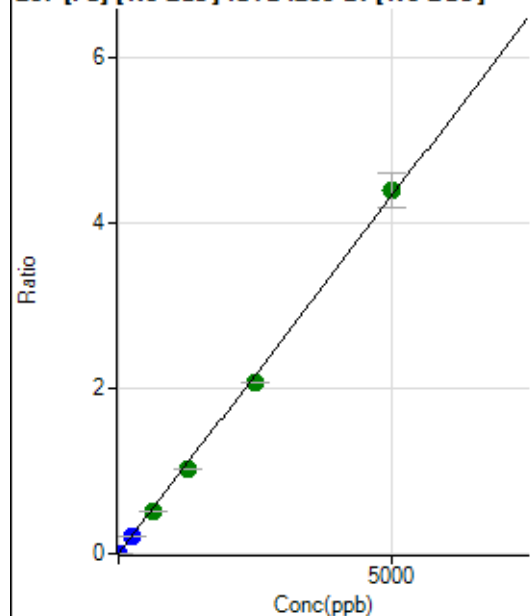
$$DL = 0.0156$$

$$BEC = 0.05269$$

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	801.90	0.0001	P	6.6
2	☐	1.000	0.879	12745.33	0.0008	P	1.5
3	☐	250.000	238.631	3219259.42	0.2065	P	1.0
4	☐	625.000	595.671	7892931.66	0.5154	A	0.6
5	☐	1250.000	1190.084	15654850.58	1.0297	A	0.7
6	☐	2500.000	2390.014	31297871.07	2.0679	A	0.5
7	☐	5000.000	5074.207	61722942.12	4.3902	A	9.5
8	☐			53149.09	0.0045	P	0.7
9	☐	0.100	0.100	2044.67	0.0001	P	11.2

$$y = 8.6519\text{E-}004 * x + 5.1346\text{E-}005$$

$$R = 0.9996$$

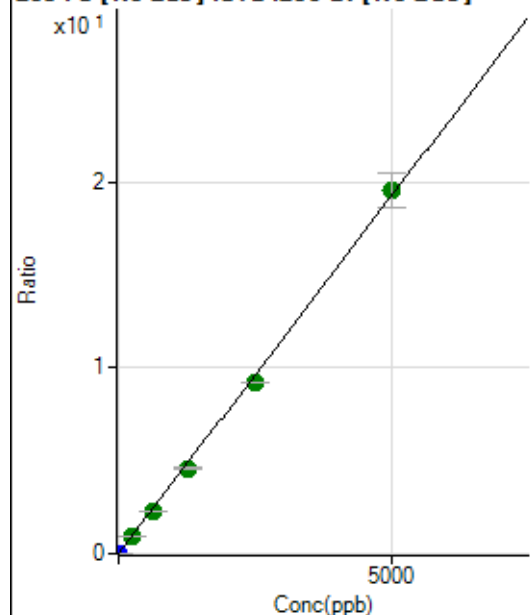
$$DL = 0.01174$$

$$BEC = 0.05935$$

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	3604.02	0.0002	P	1.5
2	☐	1.000	0.883	56993.50	0.0036	P	1.4
3	☐	250.000	237.326	14251769.24	0.9142	A	0.7
4	☐	625.000	594.774	35080849.69	2.2908	A	0.5
5	☐	1250.000	1195.351	69992637.33	4.6038	A	0.9
6	☐	2500.000	2395.543	139639937.1	9.2260	A	0.5
7	☐	5000.000	5070.303	274543675.1	19.5271	A	9.4
8	☐			237762.38	0.0200	P	0.3
9	☐	0.100	0.099	9099.64	0.0006	P	6.3

$$y = 0.0039 * x + 2.3080E-004$$

$$R = 0.9996$$

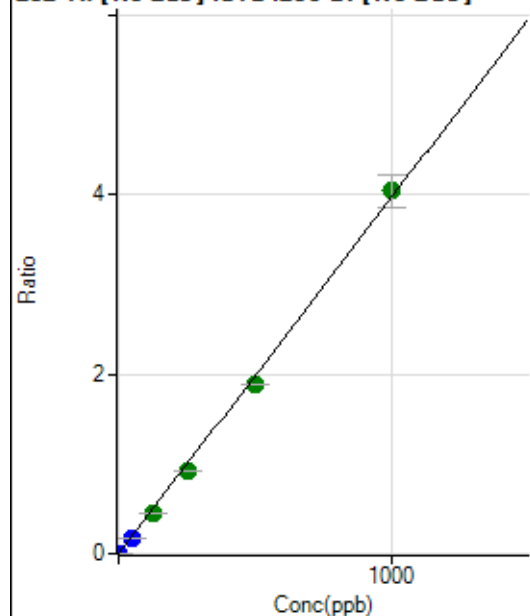
$$DL = 0.002765$$

$$BEC = 0.05993$$

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	820.42	0.0001	P	14.0
2	☐	1.000	0.681	43279.40	0.0028	P	3.7
3	☐	50.000	43.583	2700248.38	0.1732	P	0.4
4	☐	125.000	114.041	6939340.14	0.4532	A	0.7
5	☐	250.000	233.373	14097735.96	0.9273	A	0.5
6	☐	500.000	474.854	28556227.03	1.8867	A	0.5
7	☐	1000.000	1018.421	56901341.55	4.0464	A	9.1
8	☐			18202.06	0.0015	P	7.9
9	☐	0.100	0.069	4841.79	0.0003	P	4.8

$$y = 0.0040 * x + 5.2522E-005$$

$$R = 0.9994$$

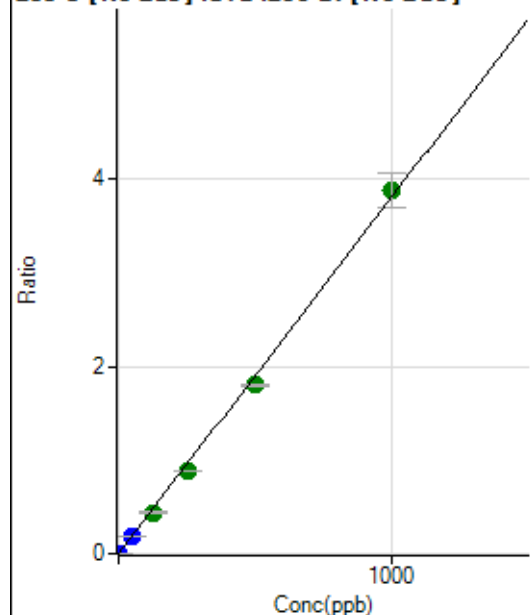
$$DL = 0.005547$$

$$BEC = 0.01322$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	258.35	0.0000	P	30.1
2	☐	1.000	0.897	53862.69	0.0034	P	1.4
3	☐	50.000	46.177	2740914.17	0.1758	P	0.4
4	☐	125.000	115.978	6761712.26	0.4416	A	1.4
5	☐	250.000	233.970	13542628.86	0.8908	A	0.5
6	☐	500.000	473.913	27308115.71	1.8043	A	0.9
7	☐	1000.000	1018.370	54506838.37	3.8771	A	9.6
8	☐			16413.80	0.0014	P	1.3
9	☐	0.100	0.095	5643.15	0.0004	P	3.9

$$y = 0.0038 * x + 1.6560E-005$$

$$R = 0.9994$$

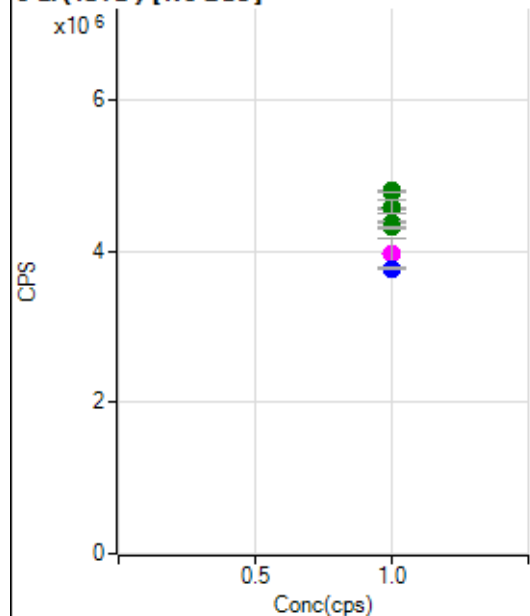
$$DL = 0.003922$$

$$BEC = 0.00435$$

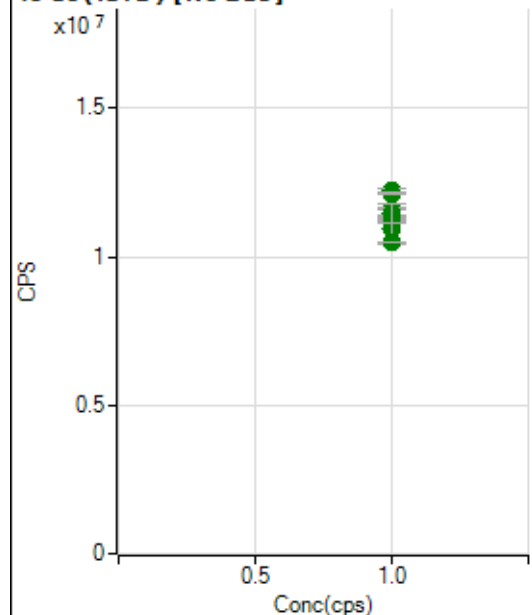
Weight: <None>

Min Conc: 0

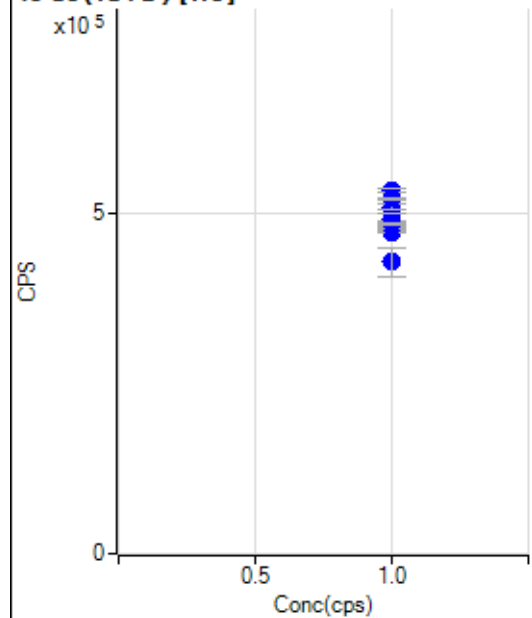
6 Li (ISTD) [No Gas]



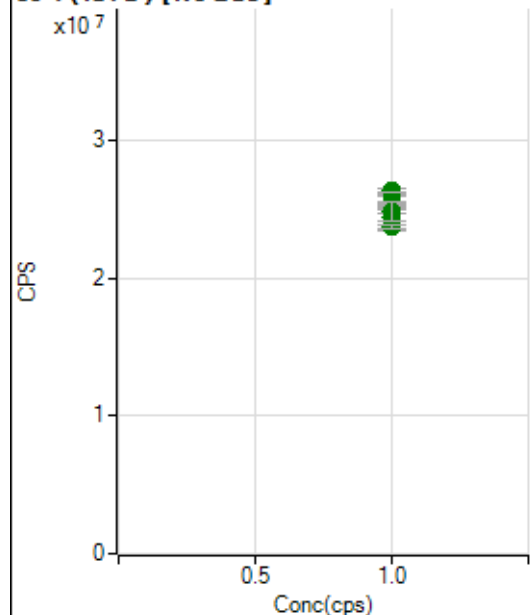
	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4782333.57		A	0.3
2	☐	1.000		4803458.99		A	0.6
3	☐	1.000		4786832.50		A	0.1
4	☐	1.000		4572489.03		A	0.4
5	☐	1.000		4389395.70		A	0.5
6	☐	1.000		4322243.23		A	0.5
7	☐	1.000		3983279.00		M	10.1
8	☐	1.000		3776574.56		P	0.9
9	☐	1.000		4593309.38		A	4.3

45 Sc (ISTD) [No Gas]

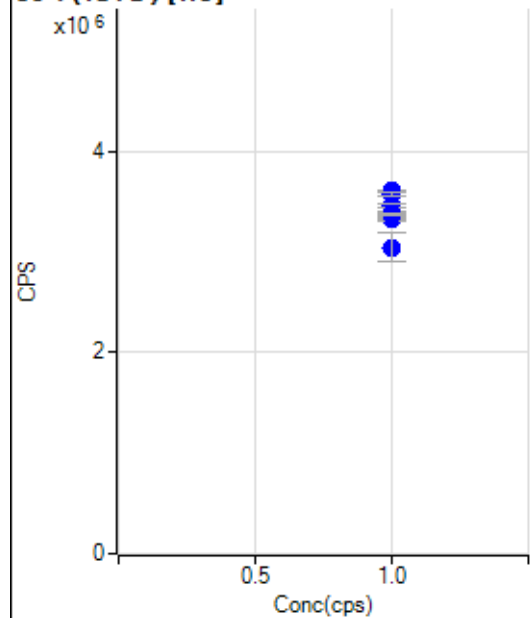
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12155377.60		A	0.4
2	☐	1.000		12218774.68		A	1.6
3	☐	1.000		12132215.79		A	0.3
4	☐	1.000		11613260.10		A	0.4
5	☐	1.000		11245616.50		A	0.5
6	☐	1.000		11341634.83		A	0.6
7	☐	1.000		10929322.76		A	8.6
8	☐	1.000		10491423.94		A	0.2
9	☐	1.000		11459953.02		A	5.7

45 Sc (ISTD) [He]

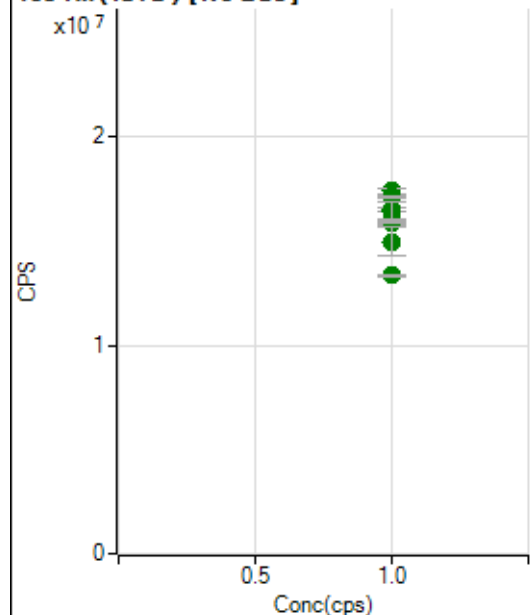
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		533345.21		P	1.2
2	☐	1.000		509807.98		P	1.5
3	☐	1.000		491350.78		P	3.9
4	☐	1.000		486898.34		P	0.5
5	☐	1.000		473372.59		P	0.6
6	☐	1.000		479345.38		P	0.2
7	☐	1.000		485071.36		P	0.1
8	☐	1.000		429142.28		P	9.7
9	☐	1.000		521578.79		P	0.7

89 Y (ISTD) [No Gas]

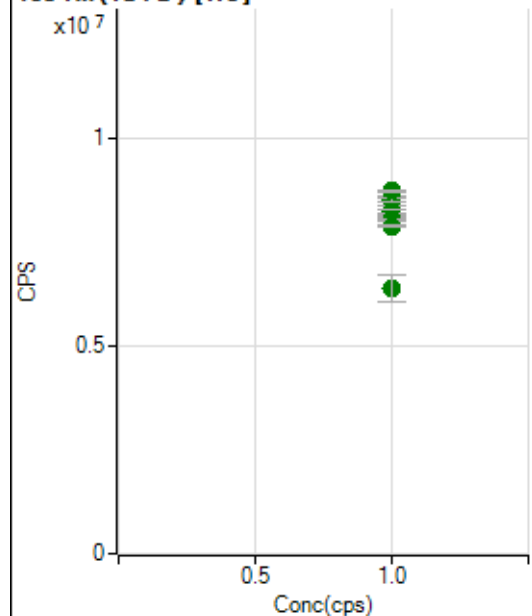
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		25890674.89		A	0.2
2	☐	1.000		26301031.55		A	1.3
3	☐	1.000		26234062.66		A	0.2
4	☐	1.000		25207829.35		A	0.7
5	☐	1.000		24817083.24		A	0.7
6	☐	1.000		25213067.68		A	0.1
7	☐	1.000		24442948.52		A	8.1
8	☐	1.000		23752279.65		A	1.1
9	☐	1.000		24851401.02		A	5.6

89 Y (ISTD) [He]

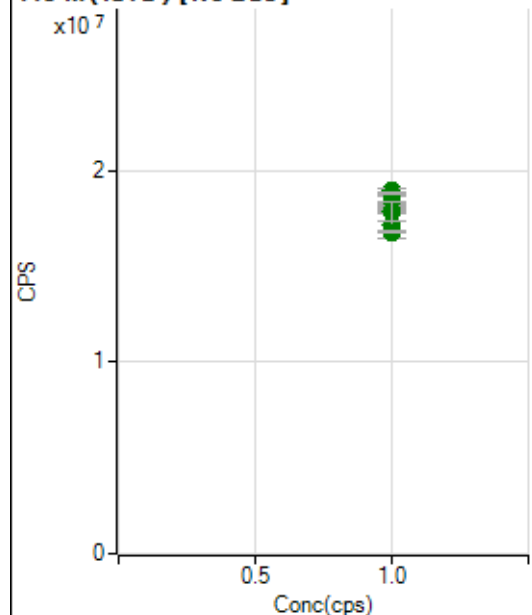
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3607995.43		P	0.5
2	☐	1.000		3460536.62		P	1.2
3	☐	1.000		3381788.28		P	3.4
4	☐	1.000		3375366.27		P	1.3
5	☐	1.000		3318958.04		P	0.4
6	☐	1.000		3359301.96		P	0.6
7	☐	1.000		3371640.58		P	0.7
8	☐	1.000		3049767.49		P	10.0
9	☐	1.000		3581514.15		P	0.9

103 Rh (ISTD) [No Gas]

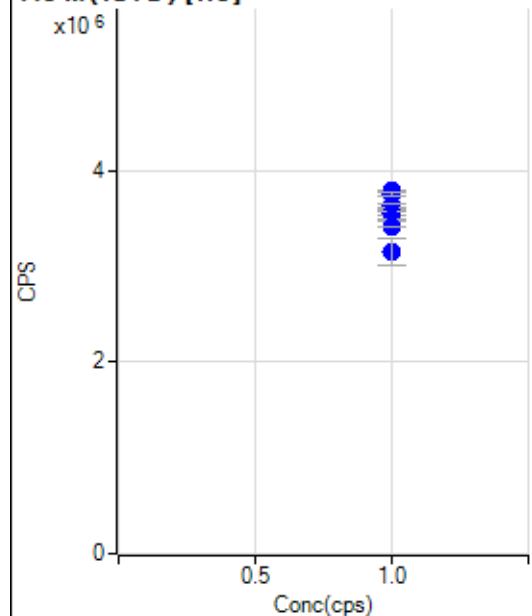
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		17256016.55		A	0.5
2	☐	1.000		17407558.07		A	1.7
3	☐	1.000		17118072.24		A	0.4
4	☐	1.000		16502357.53		A	0.8
5	☐	1.000		15829786.01		A	0.7
6	☐	1.000		15923125.32		A	0.5
7	☐	1.000		14982093.67		A	9.0
8	☐	1.000		13353106.05		A	0.9
9	☐	1.000		16464155.73		A	5.2

103 Rh (ISTD) [He]

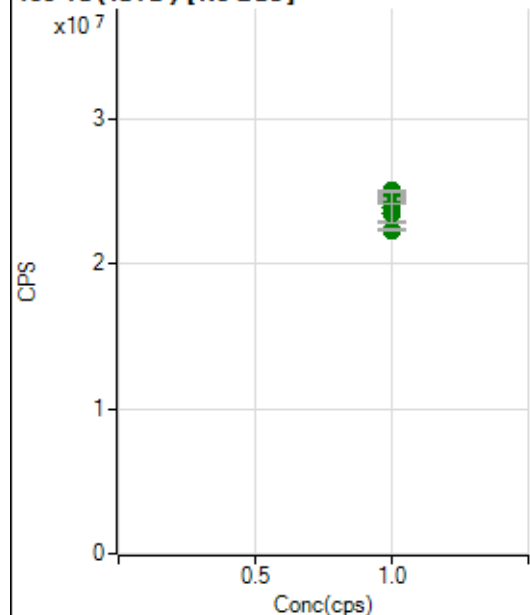
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8582974.60		A	0.6
2	☐	1.000		8510643.07		A	1.0
3	☐	1.000		8253613.28		A	3.2
4	☐	1.000		8243768.90		A	1.1
5	☐	1.000		8071316.06		A	0.5
6	☐	1.000		8017535.44		A	0.4
7	☐	1.000		7882365.79		A	0.4
8	☐	1.000		6383651.64		A	9.5
9	☐	1.000		8728905.50		A	0.8

115 In (ISTD) [No Gas]

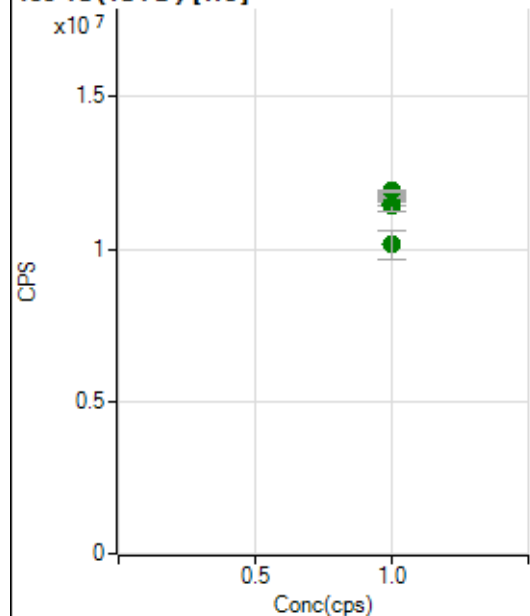
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		18648163.70		A	0.3
2	☐	1.000		18937445.40		A	1.9
3	☐	1.000		18814169.11		A	0.4
4	☐	1.000		18248656.26		A	0.2
5	☐	1.000		17853669.99		A	1.0
6	☐	1.000		18160406.84		A	0.5
7	☐	1.000		17185837.40		A	8.4
8	☐	1.000		16781173.03		A	0.5
9	☐	1.000		17882792.11		A	5.8

115 In (ISTD) [He]

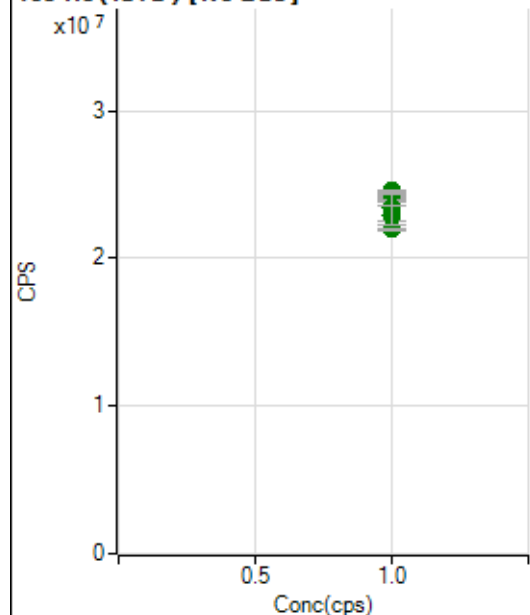
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3790193.44		P	0.5
2	☐	1.000		3627249.46		P	1.2
3	☐	1.000		3561929.25		P	3.6
4	☐	1.000		3556291.50		P	1.5
5	☐	1.000		3478098.15		P	0.7
6	☐	1.000		3491173.12		P	0.4
7	☐	1.000		3411281.28		P	0.1
8	☐	1.000		3146122.90		P	9.0
9	☐	1.000		3756098.99		P	0.8

159 Tb (ISTD) [No Gas]

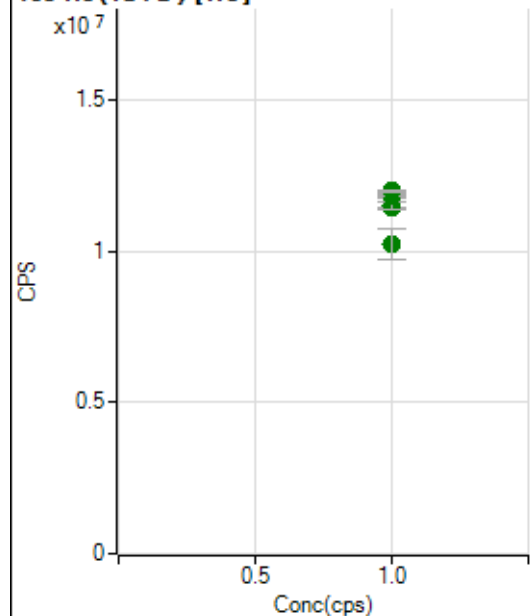
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		24625510.74		A	0.2
2	☐	1.000		24850244.91		A	1.8
3	☐	1.000		24770590.46		A	0.7
4	☐	1.000		24424207.69		A	0.8
5	☐	1.000		24456792.97		A	0.6
6	☐	1.000		25017424.35		A	0.2
7	☐	1.000		23919453.95		A	8.0
8	☐	1.000		22327389.39		A	0.3
9	☐	1.000		23459051.04		A	5.4

159 Tb (ISTD) [He]

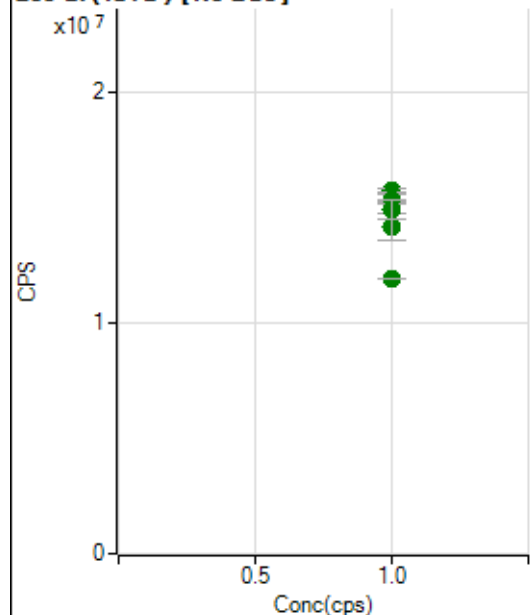
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11804420.52		A	0.6
2	☐	1.000		11500541.91		A	0.8
3	☐	1.000		11431401.15		A	3.0
4	☐	1.000		11745121.35		A	0.8
5	☐	1.000		11667974.69		A	0.4
6	☐	1.000		11797662.88		A	0.3
7	☐	1.000		11718237.32		A	0.4
8	☐	1.000		10151756.65		A	9.5
9	☐	1.000		11914066.90		A	0.8

165 Ho (ISTD) [No Gas]

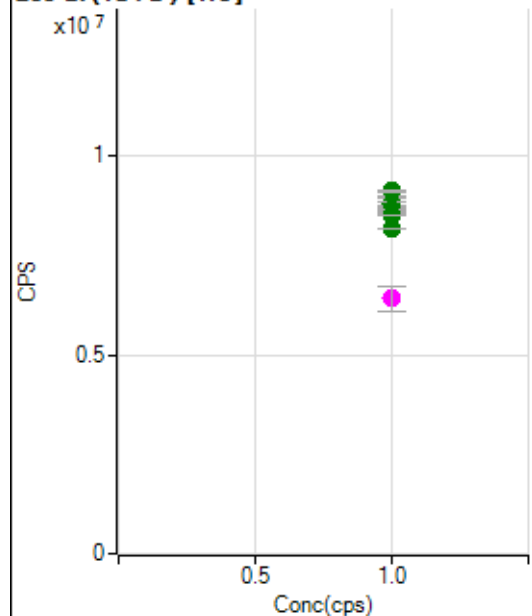
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		23863172.14		A	0.5
2	☐	1.000		24252986.03		A	1.8
3	☐	1.000		24125572.70		A	0.4
4	☐	1.000		23973372.42		A	1.3
5	☐	1.000		23954128.53		A	0.5
6	☐	1.000		24578957.69		A	0.6
7	☐	1.000		23451623.54		A	8.0
8	☐	1.000		21953445.50		A	0.5
9	☐	1.000		22907657.02		A	5.8

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11866842.67		A	0.8
2	☐	1.000		11479510.73		A	0.2
3	☐	1.000		11514086.70		A	2.4
4	☐	1.000		11816416.70		A	0.8
5	☐	1.000		11856108.29		A	0.7
6	☐	1.000		11997421.35		A	0.2
7	☐	1.000		11870581.91		A	0.1
8	☐	1.000		10229626.45		A	10.0
9	☐	1.000		12015761.90		A	0.8

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		15614758.38		A	0.5
2	☐	1.000		15693931.85		A	1.5
3	☐	1.000		15589294.21		A	0.6
4	☐	1.000		15313733.10		A	0.4
5	☐	1.000		15203484.91		A	0.4
6	☐	1.000		15135559.64		A	0.3
7	☐	1.000		14133080.07		A	8.3
8	☐	1.000		11893912.32		A	0.5
9	☐	1.000		14893041.44		A	5.6

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8958282.64		A	0.5
2	☐	1.000		8735696.96		A	0.5
3	☐	1.000		8652890.70		A	2.7
4	☐	1.000		8791309.45		A	0.8
5	☐	1.000		8632208.90		A	0.5
6	☐	1.000		8509863.90		A	0.3
7	☐	1.000		8180894.46		A	0.3
8	☐	1.000		6408210.32		M	9.5
9	☐	1.000		9120316.32		A	0.7

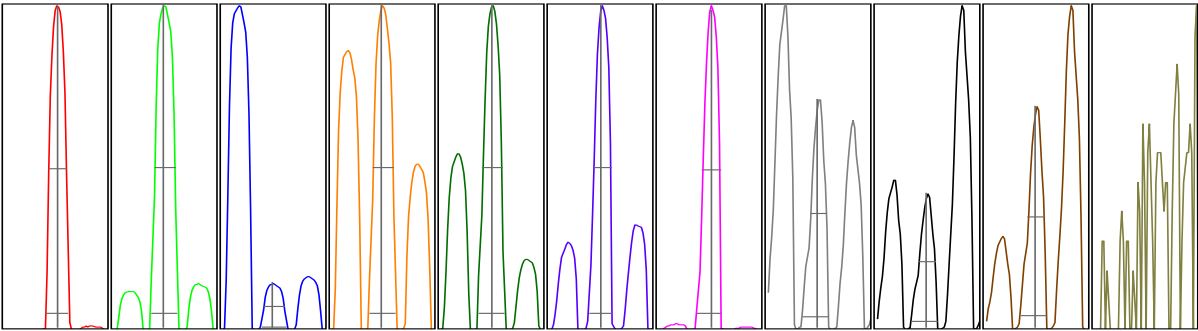
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7022220-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]					
Mass	Count	RSD%	RSD%	RSD%	
	(Mean)	(Actual)	(Required)	(Flag)	
9	11270	0.61	5.00		
24	401439	0.57	5.00		
25	56250	0.38	5.00		
26	63819	0.68	5.00		
59	132259	0.56	5.00		
113	10008	0.89	5.00		
115	198665	0.97	5.00		
206	46602	0.94	5.00		
207	42575	0.99	5.00		
208	101156	0.92	5.00		
220	0	54.29			

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	11365	11229	11257	11310	11191
24	403321	399588	400370	404408	399509
25	56125	56216	56213	56618	56076
26	63916	63959	64061	64107	63051
59	132441	132098	132519	133117	131120
113	10101	10078	10020	9958	9884
115	200370	199035	199402	199169	195350
206	46843	46839	46843	46656	45830
207	42922	42697	42855	42526	41876
208	101931	100726	102170	101080	99875
220	0	0	0	0	0

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	21748	9.10	8.9 - 9.1		0.684	0.900	
24	676289	24.00	23.9 - 24.1		0.778	0.900	
25	94802	25.00	24.9 - 25.1		0.742	0.900	
26	110157	26.00	25.9 - 26.1		0.777	0.900	
59	240219	59.05	58.9 - 59.1		0.776	0.900	
113	19907	113.05	112.9 - 113.1		0.690	0.900	
115	392452	115.10	114.9 - 115.1		0.708	0.900	
206	97539	206.00	205.9 - 206.1		0.765	0.900	
207	88733	207.00	206.9 - 207.1		0.769	0.900	
208	211605	208.00	207.9 - 208.1		0.769	0.900	
220	0	220.00	-		0.400		

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	9.4	V	Deflect	13.2	V
Extract 2	-140.0	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	33823	0.40	
89	59740	0.62	
205	37137	0.73	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	33657	33804	33908	33999	33746
89	59751	59977	59884	59983	59103
205	37217	37273	37175	37355	36666

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.9	V	Deflect	1.8	V
Extract 2	-140.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-65	V	Cell Exit	-60	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	Yes		OctP Bias	-18.0	V	Energy Discrimination		5.0 V
He Flow	4.1	mL/min	OctP RF	200	V			