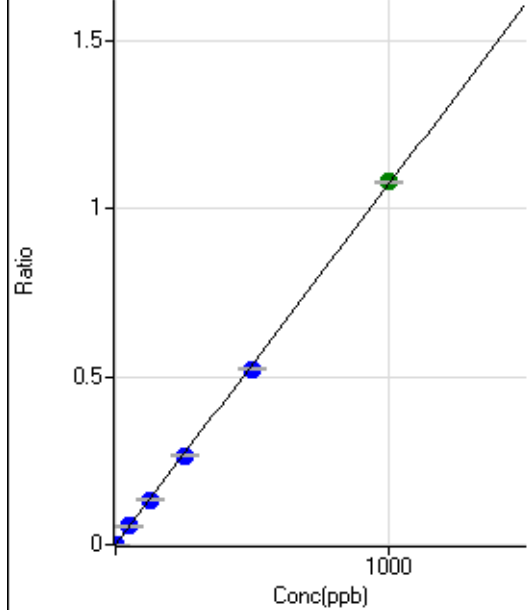


Batch Folder: D:\P8100217 MS .b\
Analysis File: P8100217 MS .batch.bin
DA Date-Time: 2017-10-04 00:33:07
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB P8100217 MS.D	S00	2017-10-02 15:36:42
2			
3	005CALS P8100217 MS.D	S02	2017-10-02 15:43:43
4	006CALS P8100217 MS.D	S03	2017-10-02 15:47:13
5	007CALS P8100217 MS.D	S04	2017-10-02 15:50:43
6	008CALS P8100217 MS.D	S05	2017-10-02 15:54:11
7	009CALS P8100217 MS.D	S06	2017-10-02 15:57:31
8	010CALS P8100217 MS.D	S07	2017-10-02 16:00:47
9	011CALS P8100217 MS.D	S08	2017-10-02 16:04:01

9 Be [NoGas] ISTD:6 Li [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	307.42	0.0002	P	10.3
2	☐	0.100					
3	☐	1.000	0.923	1555.68	0.0012	P	6.6
4	☐	50.000	50.523	69074.91	0.0545	P	0.4
5	☐	125.000	124.348	168076.28	0.1337	P	1.9
6	☐	250.000	247.634	332472.54	0.2660	P	1.5
7	☐	500.000	487.108	654729.80	0.5229	P	0.7
8	☐	1000.000	1007.093	1336557.89	1.0809	A	0.7
9	☐			963.03	0.0008	P	7.1

$$y = 0.0011 * x + 2.3958E-004$$

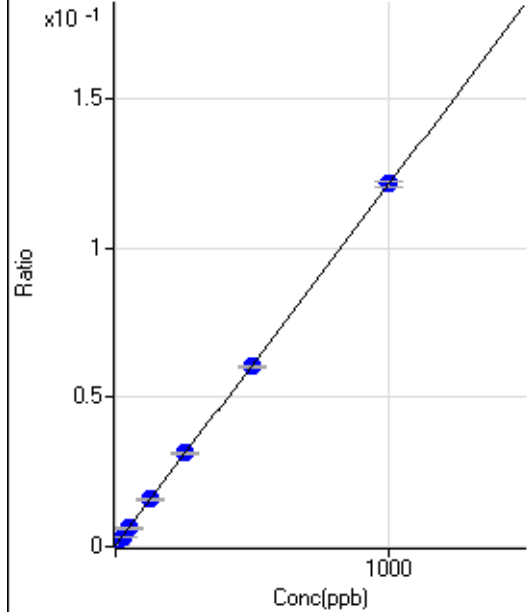
$$R = 0.9999$$

$$DL = 0.06901$$

$$BEC = 0.2233$$

Weight: <None>

Min Conc: 0

10 B [NoGas] ISTD:6 Li [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	680.60	0.0005	P	8.1
2	☐	2.500					
3	☐	25.000	20.629	3820.10	0.0030	P	2.3
4	☐	50.000	47.765	7980.35	0.0063	P	7.8
5	☐	125.000	126.732	19895.15	0.0158	P	3.1
6	☐	250.000	254.400	39037.34	0.0312	P	1.7
7	☐	500.000	494.828	75414.53	0.0602	P	0.6
8	☐	1000.000	1001.491	150068.53	0.1214	P	1.4
9	☐			6037.63	0.0052	P	9.1

$$y = 1.2065E-004 * x + 5.3035E-004$$

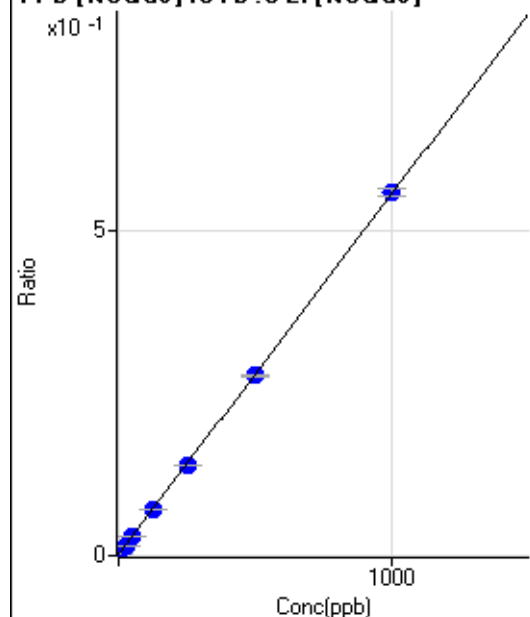
$$R = 1.0000$$

$$DL = 1.071$$

$$BEC = 4.396$$

Weight: <None>

Min Conc: 0

11 B [NoGas] ISTD:6 Li [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2953.22	0.0023	P	4.1
2	☐	2.500					
3	☐	25.000	21.236	17775.55	0.0140	P	3.3
4	☐	50.000	49.933	37956.81	0.0299	P	2.0
5	☐	125.000	124.394	89416.89	0.0711	P	2.3
6	☐	250.000	246.351	173252.66	0.1386	P	1.6
7	☐	500.000	495.335	345940.10	0.2763	P	1.6
8	☐	1000.000	1003.418	689128.04	0.5574	P	2.2
9	☐			27435.45	0.0237	P	8.0

$$y = 5.5318E-004 * x + 0.0023$$

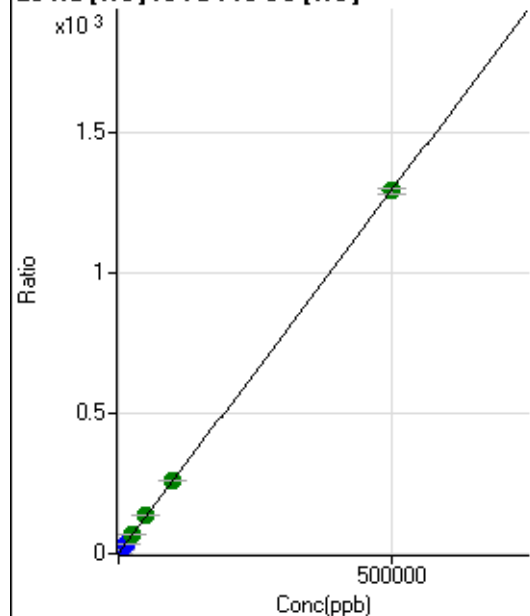
$$R = 1.0000$$

$$DL = 0.5105$$

$$BEC = 4.161$$

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	26297.35	1.0130	P	0.3
2	☐	50.000					
3	☐	500.000	450.036	57179.71	2.1740	P	1.7
4	☐	5000.000	5544.232	384803.67	15.3156	P	8.1
5	☐	12500.000	13291.858	908018.14	35.3024	P	0.3
6	☐	25000.000	26552.244	1745273.09	69.5105	A	0.8
7	☐	50000.000	52050.742	3403636.27	135.2897	A	0.2
8	☐	100000.00	100423.07	6755533.92	260.0772	A	0.6
9	☐	500000.00	499607.50	34840499.74	1,289.864	A	1.6

$$y = 0.0026 * x + 1.0130$$

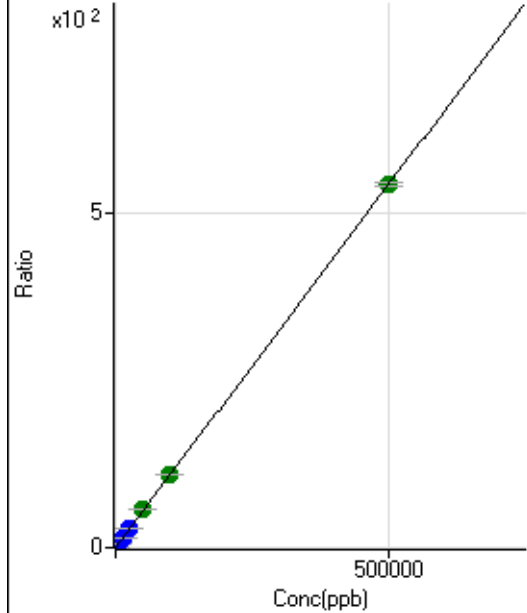
$$R = 1.0000$$

$$DL = 3.262$$

$$BEC = 392.7$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1252.89	0.0483	P	2.7
2	☐	50.000					
3	☐	500.000	460.974	14446.83	0.5493	P	1.4
4	☐	5000.000	5547.749	152698.44	6.0777	P	8.1
5	☐	12500.000	13203.394	370323.54	14.3980	P	0.9
6	☐	25000.000	25994.887	710535.32	28.3000	P	0.1
7	☐	50000.000	52318.516	1431678.18	56.9090	A	1.1
8	☐	100000.00	100406.54	2835669.14	109.1719	A	1.0
9	☐	500000.00	499614.07	14668616.82	543.0379	A	1.2

$$y = 0.0011 * x + 0.0483$$

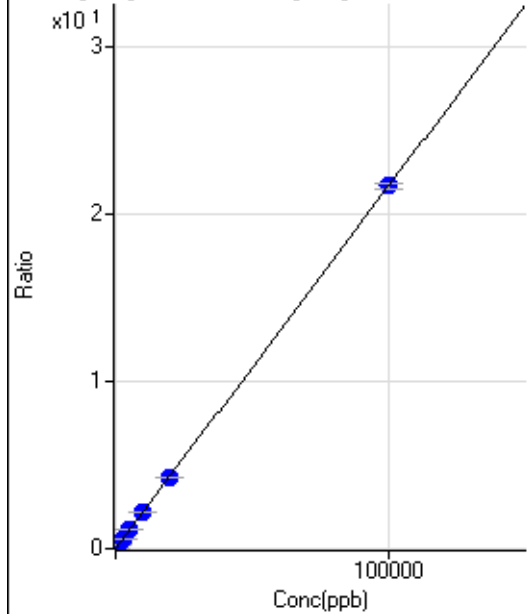
$$R = 1.0000$$

$$DL = 3.622$$

$$BEC = 44.41$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8.33	0.0003	P	173.2
2	☐	2.000					
3	☐	20.000	23.382	141.68	0.0054	P	25.8
4	☐	1000.000	1059.638	5787.53	0.2300	P	5.5
5	☐	2500.000	2558.961	14277.22	0.5551	P	2.1
6	☐	5000.000	5129.893	27931.11	1.1125	P	1.2
7	☐	10000.000	9992.799	54511.48	2.1668	P	0.8
8	☐	20000.000	19472.601	109674.00	4.2220	P	0.5
9	☐	100000.00	100097.63	586205.78	21.7016	P	1.3

$$y = 2.1680E-004 * x + 3.1870E-004$$

$$R = 1.0000$$

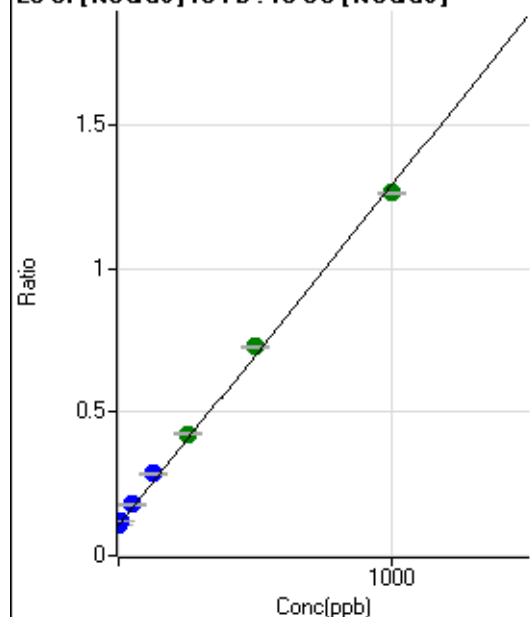
$$DL = 7.638$$

$$BEC = 1.47$$

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	370365.45	0.1058	P	0.9
2	☐	1.000					
3	☐	10.000	14.620	424003.23	0.1231	P	0.4
4	☐	50.000	61.244	615812.81	0.1784	P	1.0
5	☐	125.000	152.483	972252.11	0.2865	P	1.0
6	☐	250.000	268.344	1449634.19	0.4238	A	1.0
7	☐	500.000	526.000	2499298.80	0.7292	A	1.0
8	☐	1000.000	978.370	4316671.10	1.2653	A	0.7
9	☐			384704.60	0.1161	P	1.6

$$y = 0.0012 * x + 0.1058$$

$$R = 0.9991$$

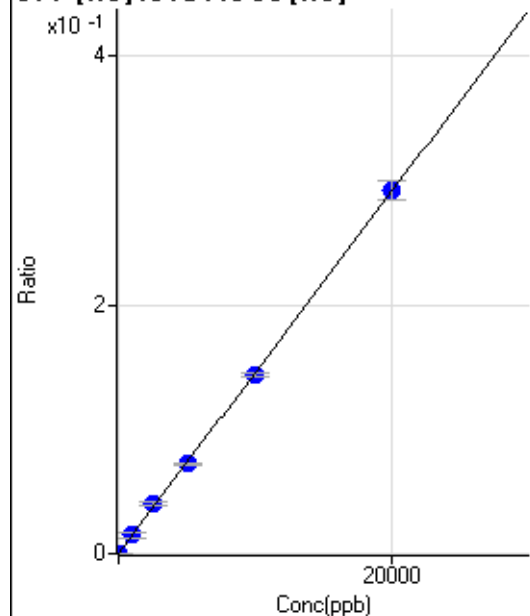
$$DL = 2.339$$

$$BEC = 89.25$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-7.223	2.78	0.0001	P	173.2
2	☐	0.000					
3	☐	0.000	7.223	8.33	0.0003	P	100.0
4	☐	1000.000	1005.532	369.46	0.0148	P	32.7
5	☐	2500.000	2722.886	1025.08	0.0398	P	8.9
6	☐	5000.000	4971.953	1822.42	0.0726	P	2.0
7	☐	10000.000	9877.591	3622.85	0.1440	P	3.0
8	☐	20000.000	20040.079	7580.14	0.2919	P	5.3
9	☐			8.33	0.0003	P	100.8

$$y = 1.4556E-005 * x + 2.1133E-004$$

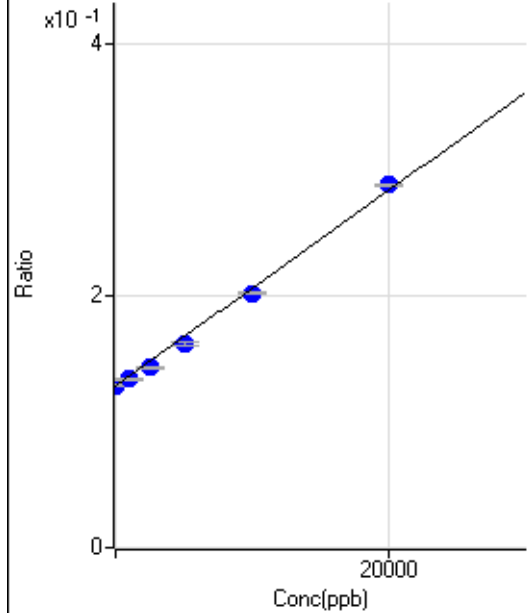
$$R = 0.9999$$

$$DL = 51.56$$

$$BEC = 14.52$$

Weight: <None>

Min Conc: 0

34 S [NoGas] ISTD:45 Sc [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-1.583	450416.22	0.1286	P	0.5
2	☐	0.000					
3	☐	0.000	1.583	443163.24	0.1287	P	0.7
4	☐	1000.000	671.472	462195.43	0.1339	P	1.1
5	☐	2500.000	1865.163	485750.20	0.1431	P	1.2
6	☐	5000.000	4282.280	553733.41	0.1619	P	1.3
7	☐	10000.000	9456.490	692587.83	0.2020	P	1.0
8	☐	20000.000	20546.966	982991.76	0.2881	P	0.3
9	☐			388267.58	0.1172	P	1.0

$$y = 7.7612\text{E-}006 * x + 0.1287$$

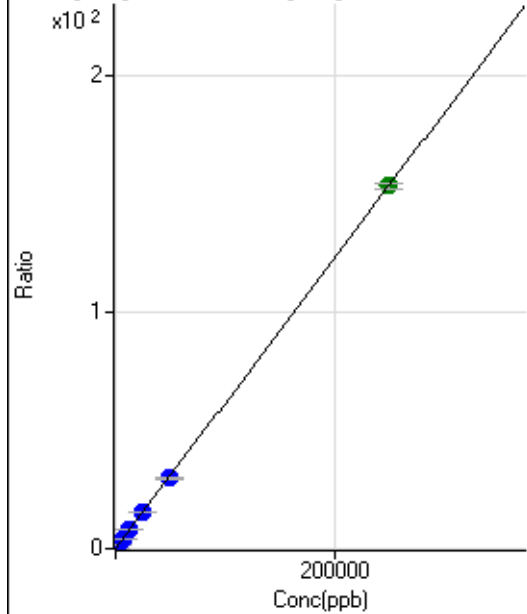
$$R = 0.9986$$

$$DL = 316.7$$

$$BEC = 1.658\text{E}+04$$

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	2461.45	0.0948	P	8.6
2	☐	50.000					
3	☐	500.000	467.076	10015.14	0.3808	P	2.8
4	☐	2500.000	2650.819	43200.58	1.7177	P	6.2
5	☐	6250.000	6410.919	103389.35	4.0196	P	1.1
6	☐	12500.000	12561.379	195459.94	7.7849	P	1.1
7	☐	25000.000	24882.897	385620.96	15.3280	P	0.6
8	☐	50000.000	48441.280	772773.90	29.7504	P	0.6
9	☐	250000.00	250314.92	4141987.29	153.3367	A	1.4

$$y = 6.1220\text{E-}004 * x + 0.0948$$

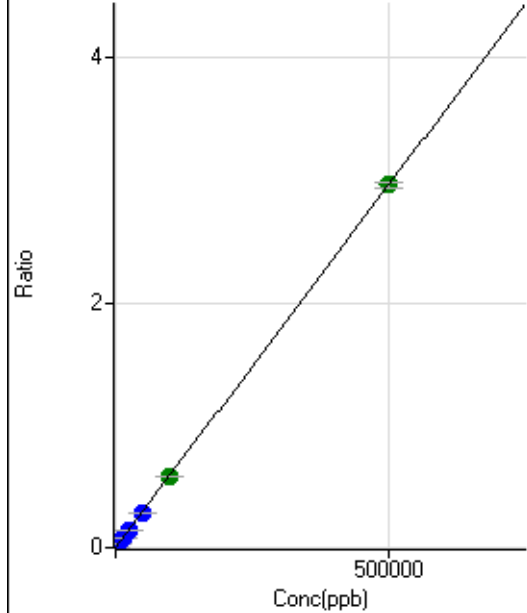
$$R = 1.0000$$

$$DL = 39.79$$

$$BEC = 154.9$$

Weight: <None>

Min Conc: 0

43 Ca [NoGas] ISTD:45 Sc [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1514.05	0.0004	P	3.6
2	☐	50.000					
3	☐	500.000	425.395	10170.81	0.0030	P	0.7
4	☐	5000.000	4938.882	102534.05	0.0297	P	1.2
5	☐	12500.000	12259.985	247995.90	0.0731	P	1.0
6	☐	25000.000	24465.038	497302.35	0.1454	P	1.2
7	☐	50000.000	48600.310	988520.84	0.2884	P	1.4
8	☐	100000.00	99091.044	2004599.46	0.5876	A	0.4
9	☐	500000.00	500355.19	9823326.96	2.9651	A	1.5

$$y = 5.9251E-006 * x + 4.3244E-004$$

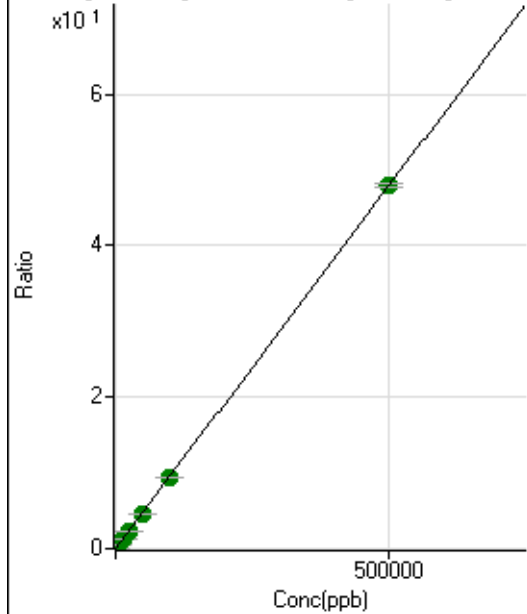
$$R = 1.0000$$

$$DL = 7.839$$

$$BEC = 72.99$$

Weight: <None>

Min Conc: 0

44 Ca [NoGas] ISTD:45 Sc [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26114.11	0.0075	P	0.9
2	☐	50.000					
3	☐	500.000	434.790	168891.19	0.0490	P	0.8
4	☐	5000.000	4996.405	1675376.43	0.4852	A	0.9
5	☐	12500.000	12403.948	4050711.07	1.1936	A	0.2
6	☐	25000.000	24348.030	7989673.27	2.3357	A	0.6
7	☐	50000.000	48672.964	15979226.40	4.6618	A	1.2
8	☐	100000.00	97798.455	31931583.70	9.3595	A	0.5
9	☐	500000.00	500608.11	158625286.8	47.8782	A	1.0

$$y = 9.5625E-005 * x + 0.0075$$

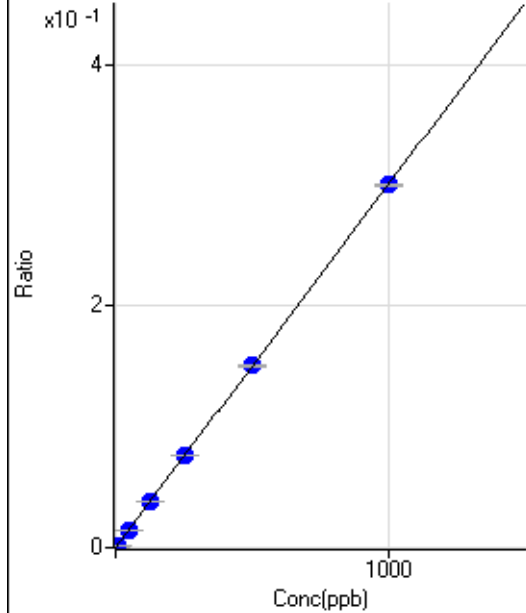
$$R = 1.0000$$

$$DL = 2.201$$

$$BEC = 77.99$$

Weight: <None>

Min Conc: 0

47 Ti [NoGas] ISTD : 45 Sc [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	108.34	0.0000	P	28.0
2	☐	0.500					
3	☐	5.000	4.360	4623.19	0.0013	P	5.1
4	☐	50.000	49.892	51913.92	0.0150	P	0.9
5	☐	125.000	126.296	129001.24	0.0380	P	0.5
6	☐	250.000	253.336	260703.20	0.0762	P	0.7
7	☐	500.000	500.684	516213.03	0.1506	P	1.4
8	☐	1000.000	998.671	1024733.66	0.3004	P	0.3
9	☐			647.27	0.0002	P	1.0

$$y = 3.0073\text{E-}004 * x + 3.0958\text{E-}005$$

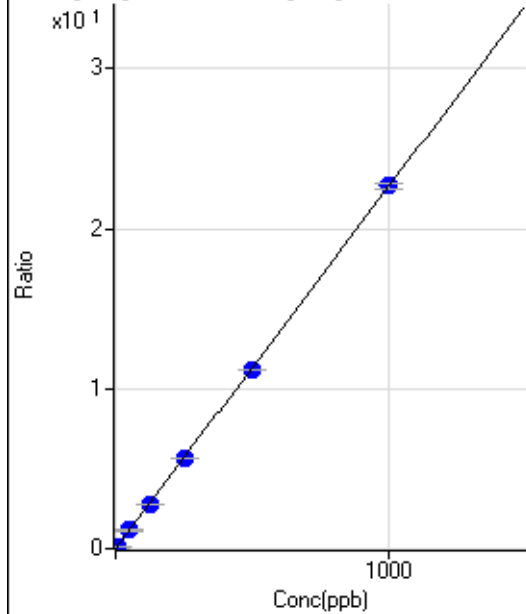
R = 1.0000

DL = 0.08658

BEC = 0.1029

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	0.0002	P	35.1
2	☐	0.500					
3	☐	5.000	4.562	2718.09	0.1033	P	1.1
4	☐	50.000	51.811	29437.79	1.1713	P	7.6
5	☐	125.000	123.506	71809.50	2.7919	P	1.2
6	☐	250.000	248.616	141103.10	5.6199	P	0.7
7	☐	500.000	495.577	281825.06	11.2022	P	0.4
8	☐	1000.000	1002.656	588671.72	22.6641	P	1.4
9	☐			94.45	0.0035	P	21.2

$$y = 0.0226 * x + 2.1434\text{E-}004$$

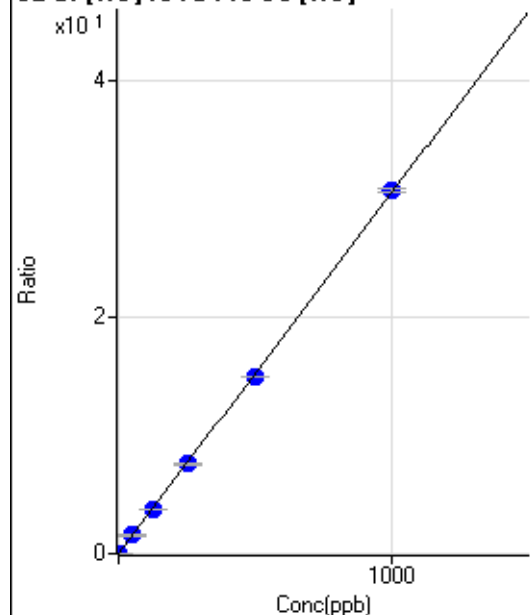
R = 1.0000

DL = 0.009992

BEC = 0.009483

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	421.12	0.0162	P	7.6
2	☐	0.200					
3	☐	2.000	1.913	1963.50	0.0746	P	3.6
4	☐	50.000	51.644	40041.79	1.5934	P	7.7
5	☐	125.000	123.687	97575.85	3.7935	P	0.6
6	☐	250.000	247.364	190078.63	7.5705	P	0.8
7	☐	500.000	491.318	377892.54	15.0207	P	0.4
8	☐	1000.000	1005.082	797692.51	30.7107	P	1.0
9	☐			8318.17	0.3079	P	1.9

$$y = 0.0305 * x + 0.0162$$

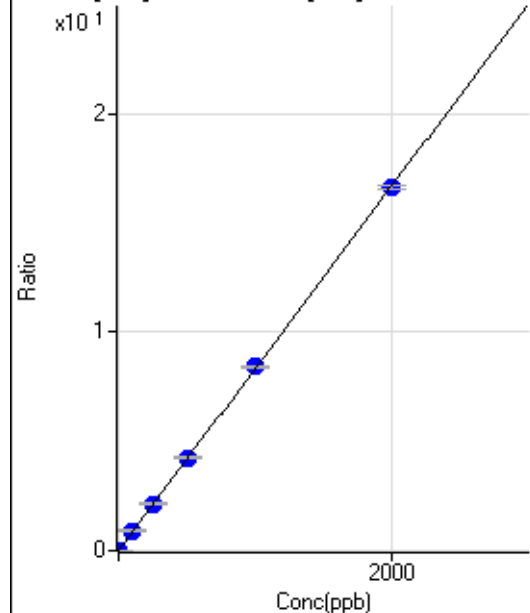
$$R = 0.9999$$

$$DL = 0.1218$$

$$BEC = 0.5314$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.56	0.0014	P	35.0
2	☐	0.100					
3	☐	1.000	1.022	260.01	0.0099	P	22.4
4	☐	100.000	107.441	22515.03	0.8968	P	9.6
5	☐	250.000	257.776	55291.35	2.1497	P	1.4
6	☐	500.000	509.534	106658.71	4.2479	P	1.5
7	☐	1000.000	1009.288	211650.53	8.4128	P	0.3
8	☐	2000.000	1991.628	431167.26	16.5997	P	1.0
9	☐			1422.32	0.0527	P	4.7

$$y = 0.0083 * x + 0.0014$$

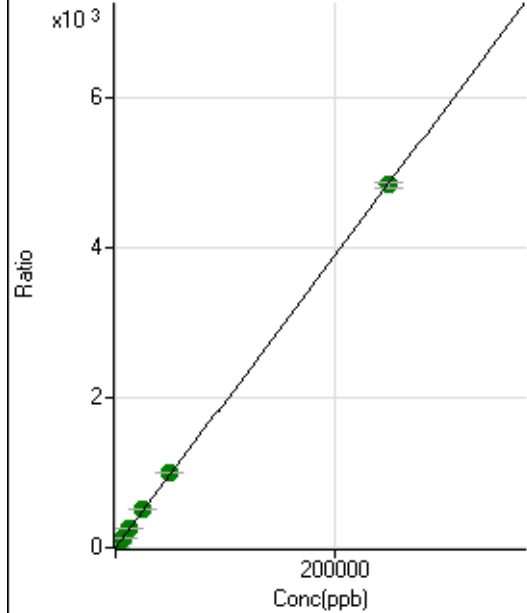
$$R = 1.0000$$

$$DL = 0.1722$$

$$BEC = 0.1642$$

Weight: <None>

Min Conc: 0

⁵⁶Fe [He] ISTD: ⁴⁵Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1992.80	0.0768	P	1.3
2	☐	5.000					
3	☐	50.000	48.652	26835.71	1.0203	P	0.9
4	☐	2500.000	2871.754	1400770.63	55.7691	A	8.7
5	☐	6250.000	6845.227	3416393.25	132.8273	A	0.9
6	☐	12500.000	13485.560	6568148.82	261.6042	A	0.6
7	☐	25000.000	26747.895	13051935.36	518.8027	A	0.7
8	☐	50000.000	51998.977	26195642.72	1,008.500	A	0.8
9	☐	250000.00	249357.53	130621516.8	4,835.904	A	1.8

$$y = 0.0194 * x + 0.0768$$

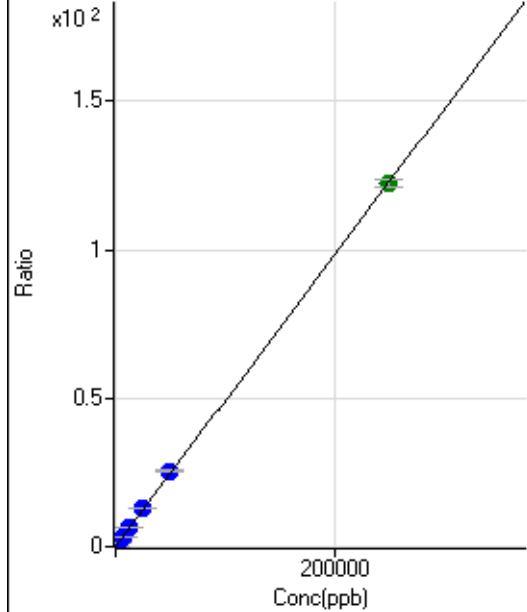
$$R = 1.0000$$

$$DL = 0.1592$$

$$BEC = 3.958$$

Weight: <None>

Min Conc: 0

⁵⁷Fe [He] ISTD: ⁴⁵Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	44.45	0.0017	P	21.0
2	☐	5.000					
3	☐	50.000	39.314	551.88	0.0210	P	7.0
4	☐	2500.000	2819.465	34745.68	1.3836	P	9.2
5	☐	6250.000	6800.434	85779.27	3.3349	P	0.9
6	☐	12500.000	13540.611	166678.81	6.6385	P	0.6
7	☐	25000.000	26925.543	332057.83	13.1990	P	0.6
8	☐	50000.000	52129.063	663709.04	25.5523	P	1.0
9	☐	250000.00	249312.64	3300563.93	122.2000	A	2.1

$$y = 4.9014E-004 * x + 0.0017$$

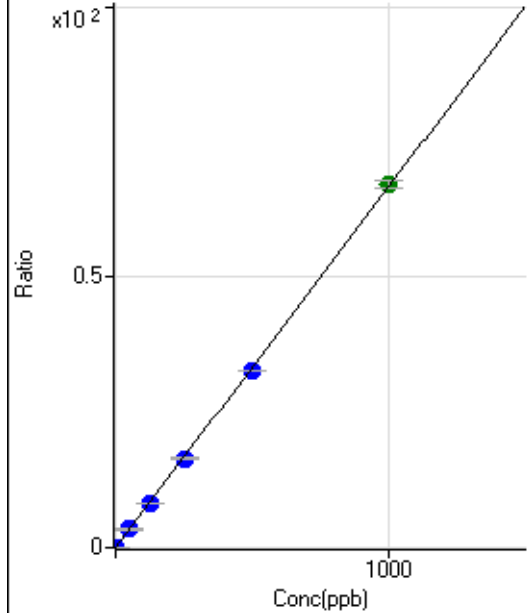
$$R = 0.9999$$

$$DL = 2.197$$

$$BEC = 3.49$$

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	85.56	0.0033	P	17.3
2	☐	0.100					
3	☐	1.000	0.907	1679.02	0.0638	P	5.7
4	☐	50.000	51.926	87107.98	3.4675	P	8.4
5	☐	125.000	124.827	214283.81	8.3311	P	0.5
6	☐	250.000	247.607	414834.04	16.5223	P	0.3
7	☐	500.000	490.495	823336.06	32.7264	P	0.3
8	☐	1000.000	1005.276	1741959.05	67.0698	A	2.1
9	☐			1736.81	0.0643	P	3.5

$$y = 0.0667 * x + 0.0033$$

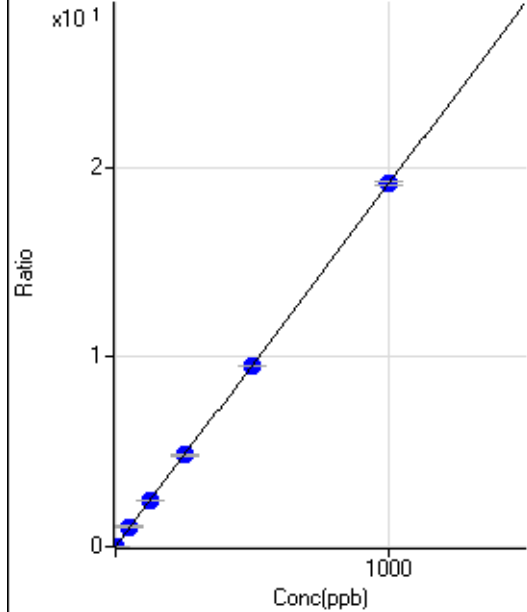
$$R = 0.9999$$

$$DL = 0.02568$$

$$BEC = 0.04937$$

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	241.12	0.0093	P	17.7
2	☐	0.100					
3	☐	1.000	0.928	711.14	0.0270	P	6.4
4	☐	50.000	53.042	25680.58	1.0227	P	9.3
5	☐	125.000	128.427	63348.96	2.4629	P	1.2
6	☐	250.000	251.952	121090.49	4.8229	P	0.5
7	☐	500.000	497.117	239171.38	9.5068	P	0.4
8	☐	1000.000	1000.373	496671.85	19.1215	P	0.9
9	☐			2362.46	0.0875	P	3.6

$$y = 0.0191 * x + 0.0093$$

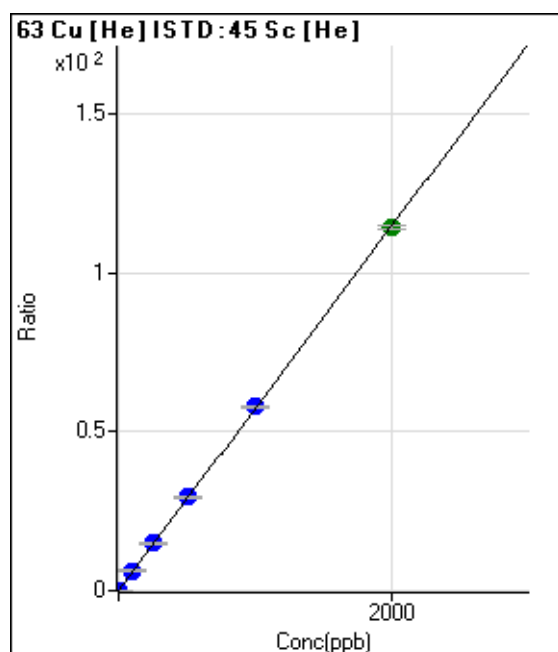
$$R = 1.0000$$

$$DL = 0.2578$$

$$BEC = 0.4868$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	158.89	0.0061	P	9.1
2	☐	0.200					
3	☐	2.000	1.910	3043.72	0.1157	P	6.7
4	☐	100.000	107.428	155052.73	6.1704	P	7.8
5	☐	250.000	258.561	381757.94	14.8424	P	0.8
6	☐	500.000	512.420	738391.14	29.4090	P	0.4
7	☐	1000.000	1008.194	1455548.45	57.8566	P	0.6
8	☐	2000.000	1991.357	2968166.31	114.2709	A	1.2
9	☐			3194.87	0.1183	P	3.8

$$y = 0.0574 * x + 0.0061$$

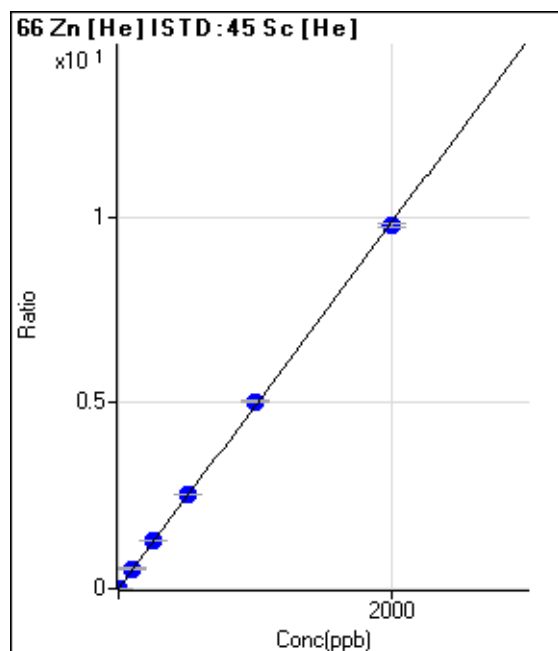
$$R = 1.0000$$

$$DL = 0.02915$$

$$BEC = 0.1066$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32.22	0.0012	P	22.9
2	☐	0.200					
3	☐	2.000	2.074	301.12	0.0114	P	8.8
4	☐	100.000	108.110	13386.65	0.5334	P	10.4
5	☐	250.000	262.223	33228.87	1.2919	P	0.4
6	☐	500.000	518.925	64158.76	2.5554	P	0.2
7	☐	1000.000	1021.870	126565.04	5.0309	P	0.6
8	☐	2000.000	1982.400	253471.24	9.7586	P	1.1
9	☐			547.80	0.0203	P	3.0

$$y = 0.0049 * x + 0.0012$$

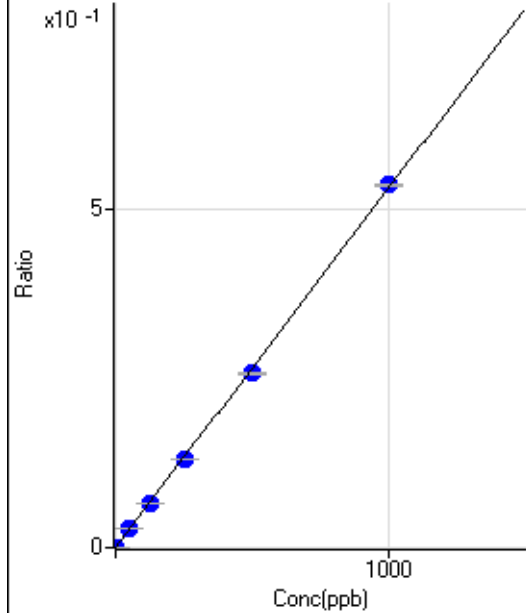
$$R = 0.9999$$

$$DL = 0.1731$$

$$BEC = 0.2517$$

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	2.47	0.0000	P	86.6
2	☐	0.100					
3	☐	1.000	0.998	96.91	0.0005	P	9.6
4	☐	50.000	52.101	4718.14	0.0276	P	5.0
5	☐	125.000	123.700	11543.17	0.0656	P	1.8
6	☐	250.000	245.781	22473.30	0.1303	P	0.5
7	☐	500.000	484.119	44403.75	0.2567	P	1.3
8	☐	1000.000	1009.053	92767.16	0.5350	P	0.5
9	☐			45.06	0.0003	P	25.4

$$y = 5.3022\text{E-}004 * x + 1.3876\text{E-}005$$

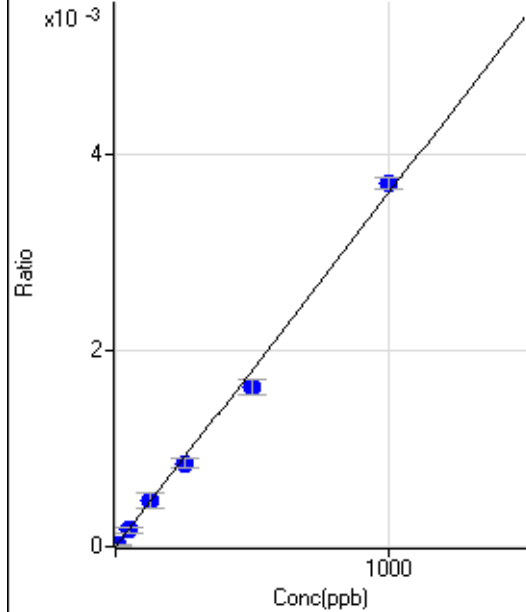
$$R = 0.9998$$

$$DL = 0.068$$

$$BEC = 0.02617$$

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	☐	0.500					
3	☐	5.000	5.186	3.33	0.0000	P	99.9
4	☐	50.000	47.570	28.89	0.0002	P	34.6
5	☐	125.000	130.023	82.22	0.0005	P	30.6
6	☐	250.000	236.482	146.67	0.0009	P	9.7
7	☐	500.000	452.209	281.12	0.0016	P	10.4
8	☐	1000.000	1026.768	640.03	0.0037	P	3.2
9	☐			1.11	0.0000	P	173.2

$$y = 3.5952\text{E-}006 * x + 0.0000\text{E+}000$$

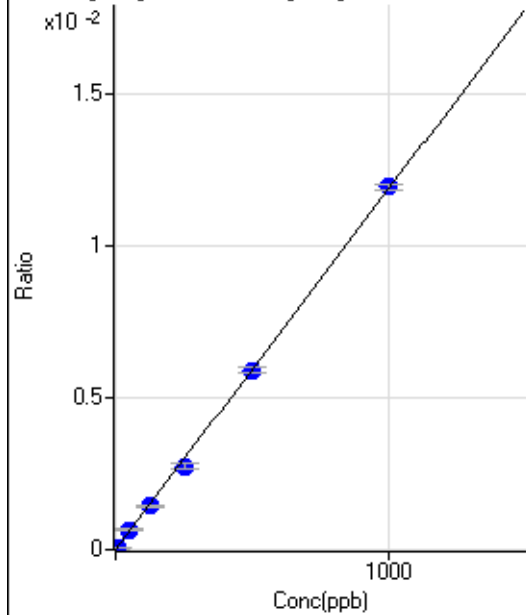
$$R = 0.9982$$

$$DL = 0$$

$$BEC = 0$$

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	1.23	0.0000	P	86.6
2	☐	0.500					
3	☐	5.000	3.499	8.64	0.0000	P	12.2
4	☐	50.000	54.224	111.12	0.0007	P	8.8
5	☐	125.000	121.289	254.33	0.0014	P	3.1
6	☐	250.000	229.409	470.38	0.0027	P	7.0
7	☐	500.000	497.612	1022.27	0.0059	P	3.1
8	☐	1000.000	1006.602	2071.16	0.0119	P	1.8
9	☐			2.47	0.0000	P	115.1

$$y = 1.1860\text{E-}005 * x + 6.9158\text{E-}006$$

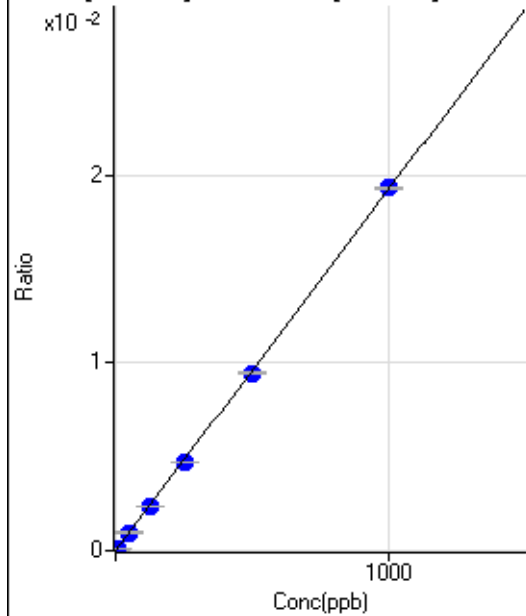
$$R = 0.9997$$

$$DL = 1.515$$

$$BEC = 0.5831$$

Weight: <None>

Min Conc: 0

82 Se [NoGas] ISTD:89 Y [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-32.76	0.0000	P	-107.
2	☐	0.500					
3	☐	5.000	4.724	504.59	0.0001	P	3.5
4	☐	50.000	50.451	5729.69	0.0010	P	1.1
5	☐	125.000	124.030	13995.33	0.0024	P	0.7
6	☐	250.000	246.153	28195.01	0.0047	P	0.7
7	☐	500.000	491.964	56471.32	0.0095	P	0.9
8	☐	1000.000	1005.080	115608.85	0.0193	P	0.6
9	☐			24.81	0.0000	P	96.9

$$y = 1.9238\text{E-}005 * x - 5.3980\text{E-}006$$

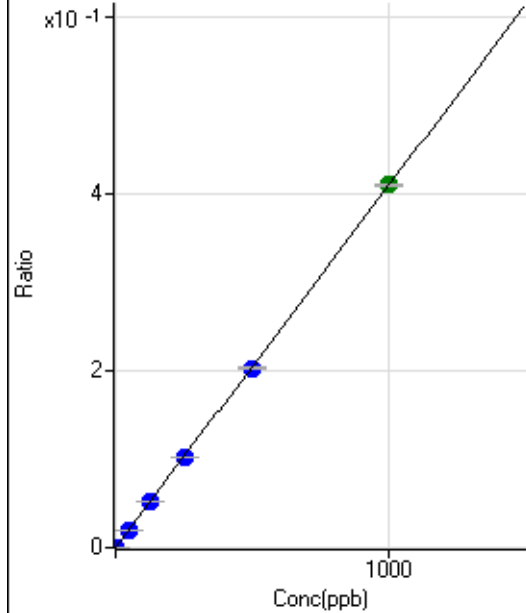
$$R = 0.9999$$

$$DL = 0.9061$$

$$BEC = -0.2806$$

Weight: <None>

Min Conc: 0

86 Sr [NoGas] ISTD:89 Y [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	733.39	0.0001	P	8.9
2	☐	0.100					
3	☐	1.000	0.887	2858.78	0.0005	P	3.0
4	☐	50.000	49.705	121458.18	0.0205	P	1.1
5	☐	125.000	126.644	305345.48	0.0519	P	0.7
6	☐	250.000	249.074	608172.24	0.1020	P	0.9
7	☐	500.000	494.993	1209912.04	0.2027	P	0.8
8	☐	1000.000	1002.544	2454107.46	0.4103	A	0.8
9	☐			80492.61	0.0140	P	1.0

$$y = 4.0917\text{E-}004 * x + 1.2099\text{E-}004$$

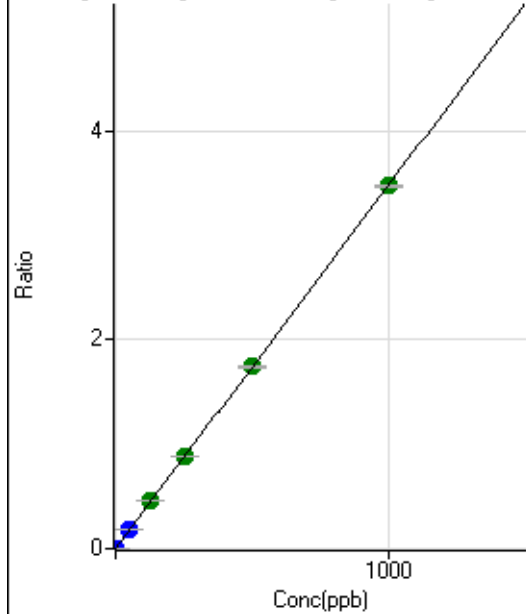
$$R = 1.0000$$

$$DL = 0.07919$$

$$BEC = 0.2957$$

Weight: <None>

Min Conc: 0

88 Sr [NoGas] ISTD:89 Y [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	286.13	0.0000	P	27.3
2	☐	0.100					
3	☐	1.000	0.911	18977.92	0.0032	P	2.5
4	☐	50.000	50.907	1051472.44	0.1771	P	0.6
5	☐	125.000	129.957	2657676.62	0.4521	A	0.2
6	☐	250.000	253.530	5256500.73	0.8819	A	0.9
7	☐	500.000	500.613	10396056.05	1.7413	A	0.8
8	☐	1000.000	998.146	20764399.77	3.4719	A	0.6
9	☐			687577.36	0.1196	P	1.6

$$y = 0.0035 * x + 4.7234\text{E-}005$$

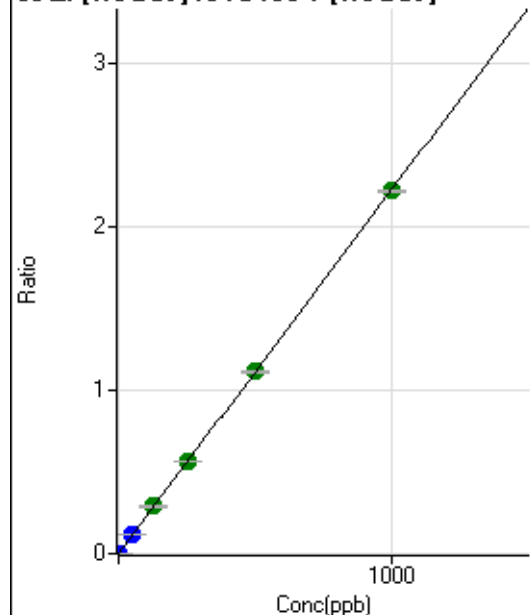
$$R = 1.0000$$

$$DL = 0.01114$$

$$BEC = 0.01358$$

Weight: <None>

Min Conc: 0

90 Zr [NoGas] ISTD:89 Y [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	350.02	0.0001	P	2.4
2	☐	0.100					
3	☐	1.000	0.879	11886.21	0.0020	P	2.9
4	☐	50.000	50.517	667320.76	0.1124	P	0.6
5	☐	125.000	129.776	1697072.33	0.2887	A	0.7
6	☐	250.000	254.624	3375729.11	0.5663	A	0.4
7	☐	500.000	501.584	6660129.71	1.1156	A	1.0
8	☐	1000.000	997.429	13267335.36	2.2183	A	0.7
9	☐			1464.04	0.0003	P	7.3

$$y = 0.0022 * x + 5.7747E-005$$

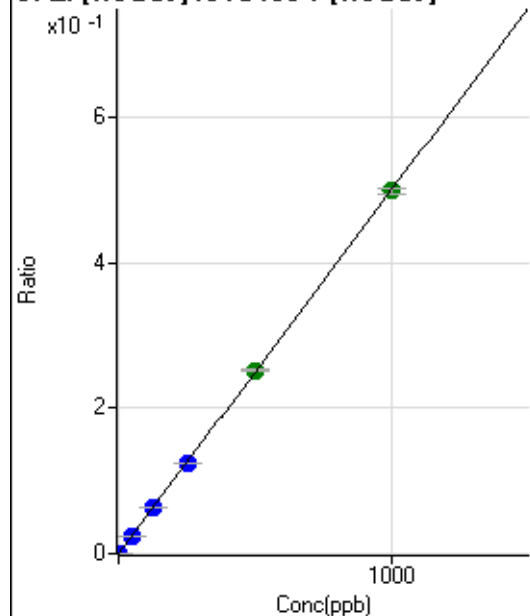
$$R = 1.0000$$

$$DL = 0.001878$$

$$BEC = 0.02597$$

Weight: <None>

Min Conc: 0

91 Zr [NoGas] ISTD:89 Y [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	77.78	0.0000	P	6.4
2	☐	0.100					
3	☐	1.000	0.855	2603.16	0.0004	P	7.6
4	☐	50.000	49.659	147710.29	0.0249	P	0.5
5	☐	125.000	126.170	371514.13	0.0632	P	1.0
6	☐	250.000	249.981	746268.05	0.1252	P	0.6
7	☐	500.000	504.327	1507952.81	0.2526	A	0.3
8	☐	1000.000	997.712	2988156.36	0.4997	A	1.6
9	☐			363.91	0.0001	P	4.5

$$y = 5.0078E-004 * x + 1.2834E-005$$

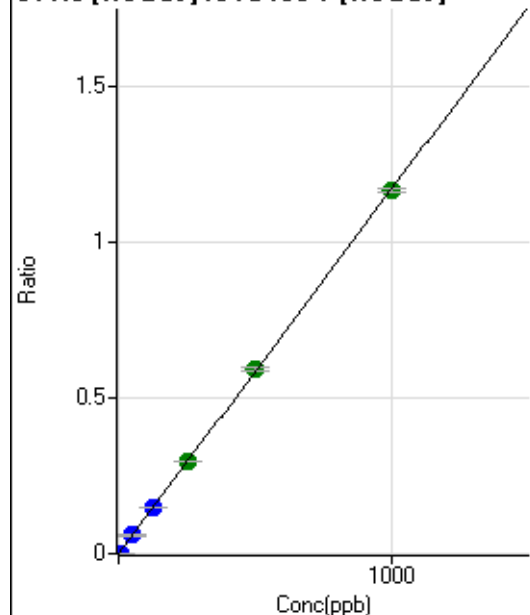
$$R = 1.0000$$

$$DL = 0.004901$$

$$BEC = 0.02563$$

Weight: <None>

Min Conc: 0

94 Mo [NoGas] ISTD : 89 Y [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.57	0.0000	P	5.5
2	☐	0.500					
3	☐	5.000	1.946	13640.69	0.0023	P	2.6
4	☐	50.000	50.118	348680.26	0.0587	P	0.4
5	☐	125.000	126.986	874606.50	0.1488	P	0.7
6	☐	250.000	253.502	1770154.95	0.2970	A	1.3
7	☐	500.000	506.875	3544709.63	0.5937	A	1.2
8	☐	1000.000	995.448	6973498.07	1.1660	A	1.1
9	☐			3678.43	0.0006	P	1.7

$$y = 0.0012 * x + 2.9792E-005$$

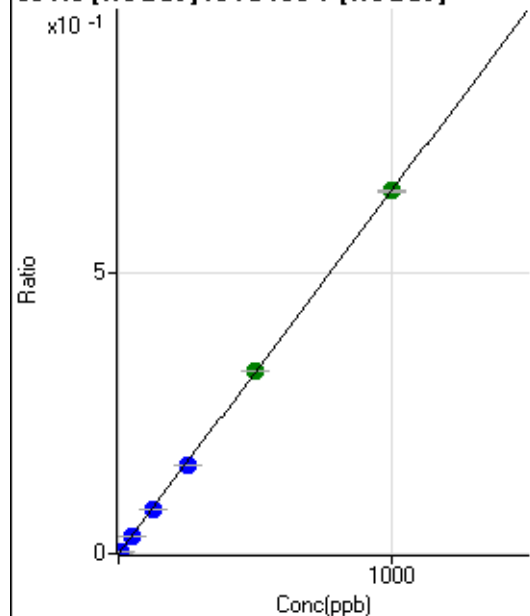
$$R = 0.9999$$

$$DL = 0.004211$$

$$BEC = 0.02543$$

Weight: <None>

Min Conc: 0

95 Mo [NoGas] ISTD : 89 Y [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77.78	0.0000	P	26.6
2	☐	0.500					
3	☐	5.000	4.335	16574.71	0.0028	P	1.2
4	☐	50.000	49.336	188870.06	0.0318	P	0.2
5	☐	125.000	123.709	468859.57	0.0798	P	0.7
6	☐	250.000	244.862	940881.84	0.1578	P	0.1
7	☐	500.000	503.004	1935866.30	0.3242	A	0.0
8	☐	1000.000	999.980	3855150.17	0.6446	A	0.7
9	☐			5993.28	0.0010	P	2.8

$$y = 6.4459E-004 * x + 1.2825E-005$$

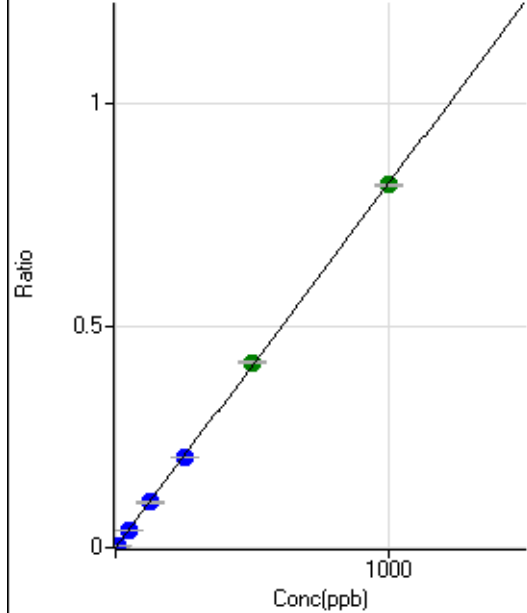
$$R = 1.0000$$

$$DL = 0.01589$$

$$BEC = 0.0199$$

Weight: <None>

Min Conc: 0

96 Mo [NoGas] ISTD : 89 Y [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	175.01	0.0000	P	12.7
2	☐	0.500					
3	☐	5.000	3.757	18365.88	0.0031	P	2.8
4	☐	50.000	49.300	240216.74	0.0405	P	0.4
5	☐	125.000	124.369	599835.97	0.1020	P	0.7
6	☐	250.000	247.678	1211012.35	0.2032	P	0.3
7	☐	500.000	508.233	2488770.71	0.4169	A	1.3
8	☐	1000.000	996.584	4888780.62	0.8174	A	0.4
9	☐			8133.39	0.0014	P	4.3

$$y = 8.2018\text{E-}004 * x + 2.8876\text{E-}005$$

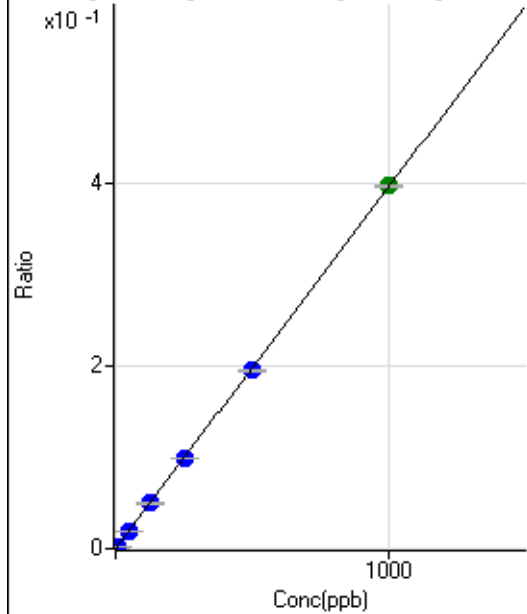
$$R = 0.9999$$

$$DL = 0.01345$$

$$BEC = 0.03521$$

Weight: <None>

Min Conc: 0

97 Mo [NoGas] ISTD : 89 Y [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	97.23	0.0000	P	54.7
2	☐	0.500					
3	☐	5.000	4.434	10465.58	0.0018	P	1.7
4	☐	50.000	49.681	116951.52	0.0197	P	1.2
5	☐	125.000	125.372	292106.05	0.0497	P	1.0
6	☐	250.000	248.895	587893.00	0.0986	P	0.5
7	☐	500.000	493.515	1167459.78	0.1955	P	1.1
8	☐	1000.000	1003.491	2378004.68	0.3976	A	0.6
9	☐			3756.30	0.0007	P	3.9

$$y = 3.9620\text{E-}004 * x + 1.6020\text{E-}005$$

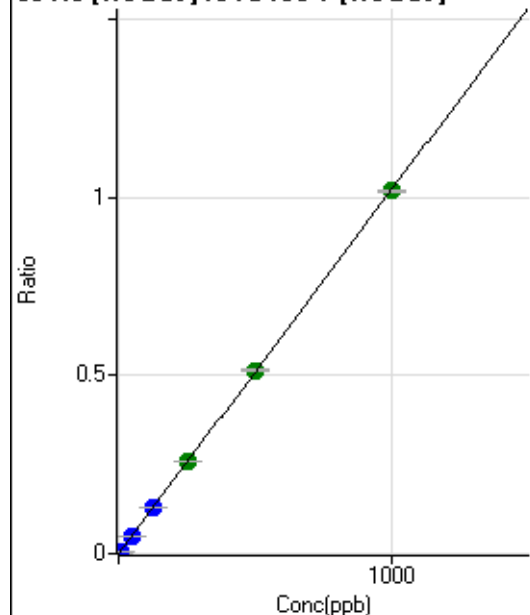
$$R = 1.0000$$

$$DL = 0.06638$$

$$BEC = 0.04043$$

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	144.45	0.0000	P	8.5
2	☐	0.500					
3	☐	5.000	4.379	26577.09	0.0045	P	2.5
4	☐	50.000	49.713	301905.68	0.0509	P	0.9
5	☐	125.000	125.572	754951.08	0.1284	P	0.6
6	☐	250.000	252.332	1537998.31	0.2580	A	0.5
7	☐	500.000	504.351	3079001.24	0.5157	A	0.7
8	☐	1000.000	997.187	6098239.68	1.0196	A	0.3
9	☐			8589.18	0.0015	P	1.6

$$y = 0.0010 * x + 2.3827E-005$$

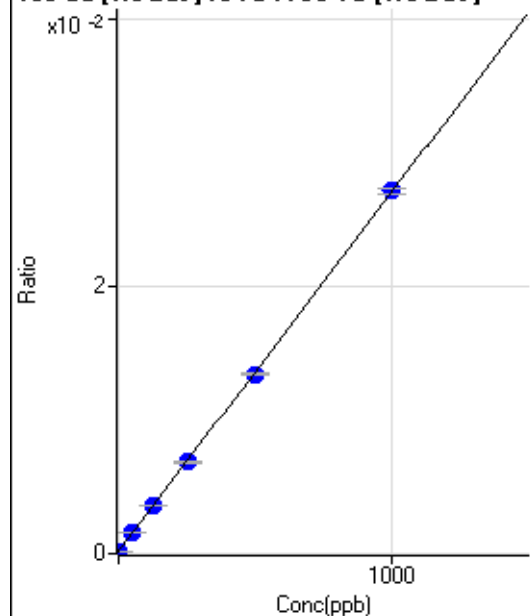
$$R = 1.0000$$

$$DL = 0.005921$$

$$BEC = 0.0233$$

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	1255.67	0.0002	P	8.7
2	☐	0.100					
3	☐	1.000	0.908	1402.92	0.0002	P	7.7
4	☐	50.000	50.709	10768.65	0.0015	P	3.5
5	☐	125.000	128.169	25444.25	0.0036	P	1.3
6	☐	250.000	248.358	49003.69	0.0068	P	0.6
7	☐	500.000	491.699	96136.05	0.0134	P	1.1
8	☐	1000.000	1004.130	193906.03	0.0272	P	1.3
9	☐			1150.10	0.0002	P	4.4

$$y = 2.6869E-005 * x + 1.7643E-004$$

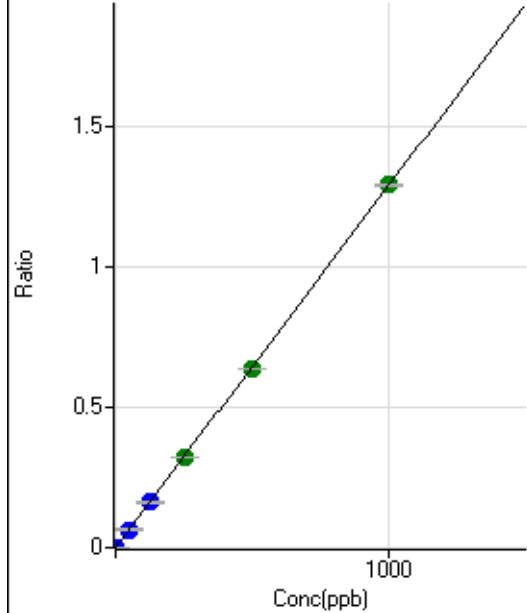
$$R = 0.9999$$

$$DL = 1.715$$

$$BEC = 6.566$$

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	130.56	0.0000	P	10.4
2	☐	0.100					
3	☐	1.000	0.929	8491.90	0.0012	P	5.2
4	☐	50.000	50.351	454337.94	0.0649	P	0.8
5	☐	125.000	125.183	1134314.33	0.1614	P	0.7
6	☐	250.000	251.750	2321808.34	0.3245	A	0.5
7	☐	500.000	494.317	4575531.66	0.6372	A	0.6
8	☐	1000.000	1002.364	9226275.99	1.2921	A	0.7
9	☐			819.51	0.0001	P	10.2

$$y = 0.0013 * x + 1.8352E-005$$

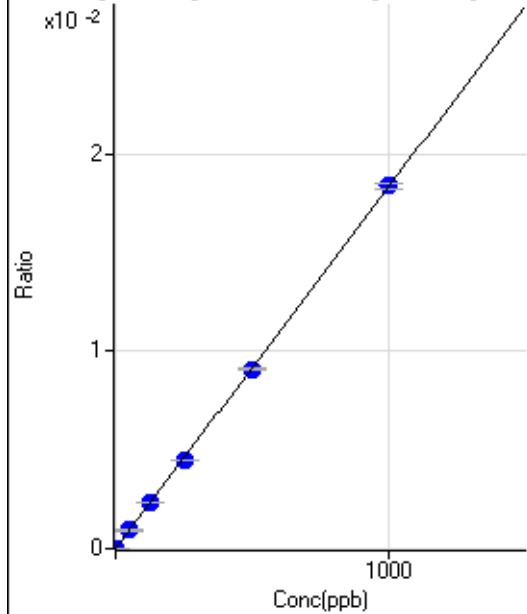
$$R = 1.0000$$

$$DL = 0.004449$$

$$BEC = 0.01424$$

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	6.95	0.0000	P	68.4
2	☐	0.100					
3	☐	1.000	0.826	112.50	0.0000	P	18.5
4	☐	50.000	50.727	6510.05	0.0009	P	1.9
5	☐	125.000	125.988	16228.04	0.0023	P	0.8
6	☐	250.000	245.564	32188.61	0.0045	P	0.9
7	☐	500.000	495.124	65131.38	0.0091	P	1.0
8	☐	1000.000	1003.387	131245.96	0.0184	P	1.3
9	☐			15.28	0.0000	P	31.0

$$y = 1.8318E-005 * x + 9.7246E-007$$

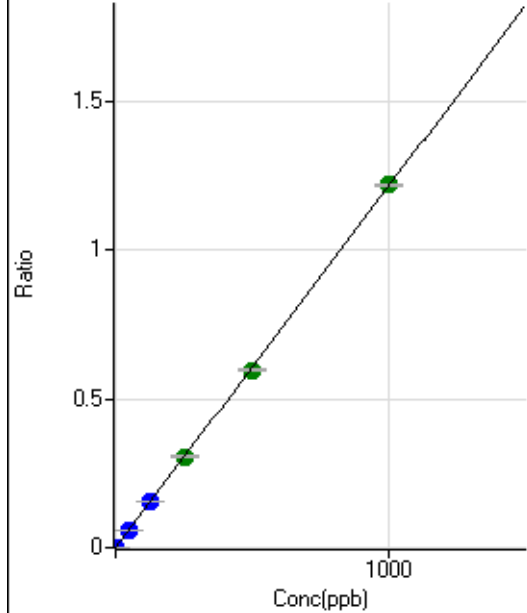
$$R = 1.0000$$

$$DL = 0.1089$$

$$BEC = 0.05309$$

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	158.34	0.0000	P	42.5
2	☐	0.100					
3	☐	1.000	0.906	7849.83	0.0011	P	7.9
4	☐	50.000	50.361	428791.18	0.0613	P	0.6
5	☐	125.000	125.889	1076249.50	0.1531	P	0.6
6	☐	250.000	252.189	2194447.79	0.3067	A	1.0
7	☐	500.000	490.823	4286186.77	0.5970	A	0.8
8	☐	1000.000	1003.912	8718131.45	1.2210	A	0.2
9	☐			755.61	0.0001	P	1.0

$$y = 0.0012 * x + 2.2205E-005$$

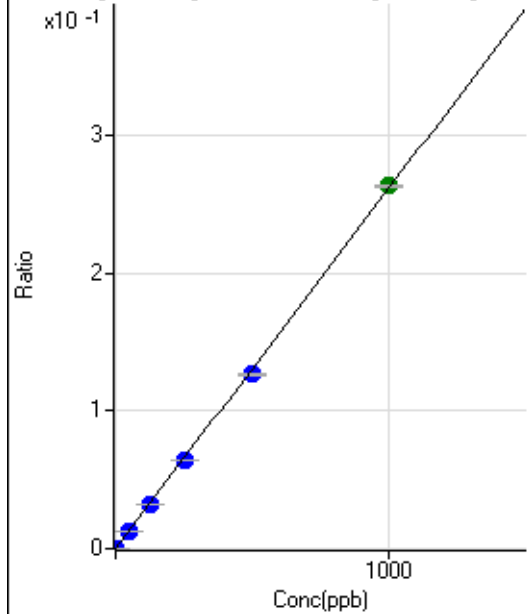
$$R = 0.9999$$

$$DL = 0.02329$$

$$BEC = 0.01826$$

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	133.90	0.0000	P	11.5
2	☐	0.100					
3	☐	1.000	0.880	1736.53	0.0002	P	3.5
4	☐	50.000	50.169	91766.58	0.0131	P	0.5
5	☐	125.000	124.480	228486.57	0.0325	P	0.5
6	☐	250.000	245.788	459084.91	0.0642	P	0.6
7	☐	500.000	485.759	910435.83	0.1268	P	1.0
8	☐	1000.000	1008.230	1879116.24	0.2632	A	0.5
9	☐			238.90	0.0000	P	9.3

$$y = 2.6100E-004 * x + 1.8814E-005$$

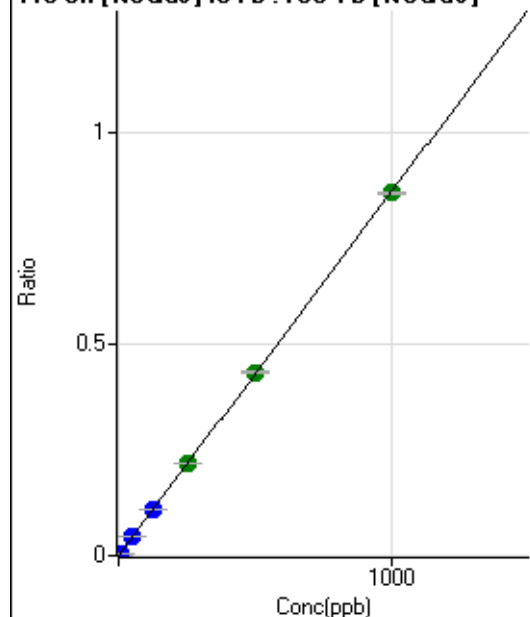
$$R = 0.9998$$

$$DL = 0.02481$$

$$BEC = 0.07208$$

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	875.07	0.0001	P	4.5
2	☐	0.500					
3	☐	5.000	4.404	27370.62	0.0039	P	1.3
4	☐	50.000	51.399	310773.07	0.0444	P	1.2
5	☐	125.000	127.479	772865.90	0.1100	P	0.9
6	☐	250.000	252.492	1557302.53	0.2177	A	0.4
7	☐	500.000	504.171	3119784.07	0.4345	A	1.5
8	☐	1000.000	996.915	6134212.25	0.8591	A	0.7
9	☐			2919.90	0.0004	P	5.1

$$y = 8.6163\text{E-}004 * x + 1.2295\text{E-}004$$

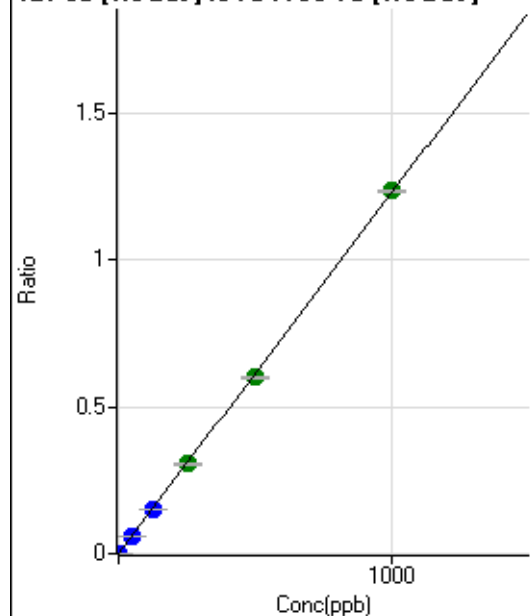
$$R = 1.0000$$

$$DL = 0.01919$$

$$BEC = 0.1427$$

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	88.89	0.0000	P	61.3
2	☐	0.200					
3	☐	2.000	1.789	15453.93	0.0022	P	1.5
4	☐	50.000	49.388	424915.59	0.0607	P	1.1
5	☐	125.000	123.874	1070303.40	0.1523	P	0.3
6	☐	250.000	248.009	2181091.30	0.3049	A	1.5
7	☐	500.000	489.411	4319497.45	0.6016	A	1.0
8	☐	1000.000	1005.964	8829454.19	1.2366	A	0.3
9	☐			10057.05	0.0015	P	2.5

$$y = 0.0012 * x + 1.2494\text{E-}005$$

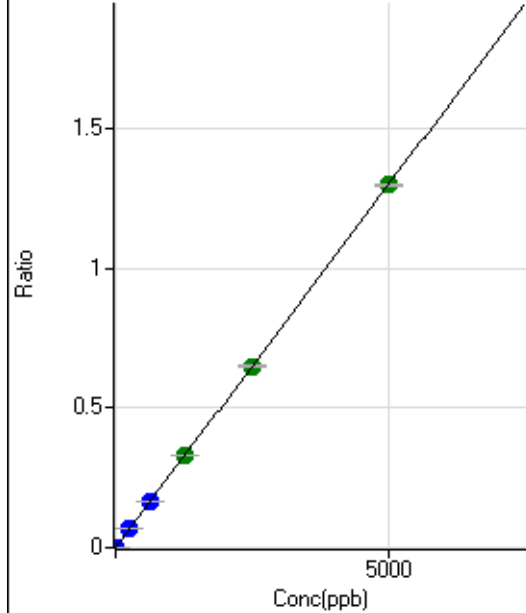
$$R = 0.9999$$

$$DL = 0.0187$$

$$BEC = 0.01016$$

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	25.00	0.0000	P	33.8
2	☐	1.000					
3	☐	10.000	8.908	16221.80	0.0023	P	1.1
4	☐	250.000	255.016	464470.96	0.0664	P	0.8
5	☐	625.000	636.643	1164565.52	0.1657	P	0.3
6	☐	1250.000	1267.088	2359205.82	0.3298	A	0.3
7	☐	2500.000	2494.450	4661137.30	0.6492	A	1.1
8	☐	5000.000	4996.799	9285514.88	1.3004	A	0.7
9	☐			2105.82	0.0003	P	10.9

$$y = 2.6025\text{E-}004 * x + 3.5174\text{E-}006$$

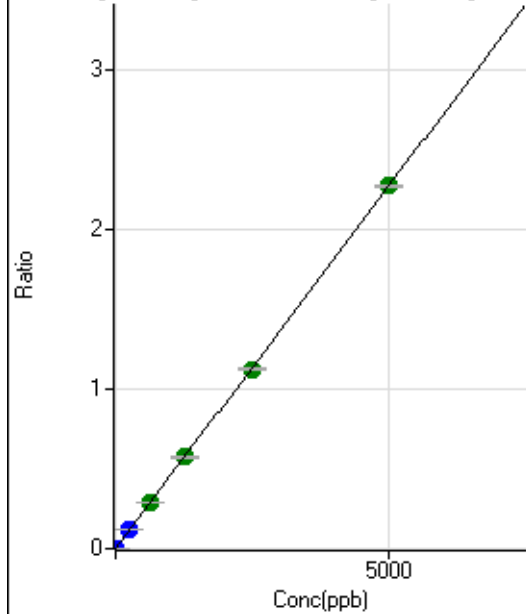
$$R = 1.0000$$

$$DL = 0.01371$$

$$BEC = 0.01352$$

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	44.45	0.0000	P	11.1
2	☐	1.000					
3	☐	10.000	8.894	28261.73	0.0040	P	1.7
4	☐	250.000	254.331	808275.73	0.1155	P	1.1
5	☐	625.000	643.650	2054401.85	0.2923	A	0.6
6	☐	1250.000	1261.483	4098389.89	0.5729	A	1.0
7	☐	2500.000	2475.501	8071410.25	1.1242	A	1.1
8	☐	5000.000	5006.833	16234937.52	2.2737	A	0.4
9	☐			3725.69	0.0006	P	3.2

$$y = 4.5412\text{E-}004 * x + 6.2461\text{E-}006$$

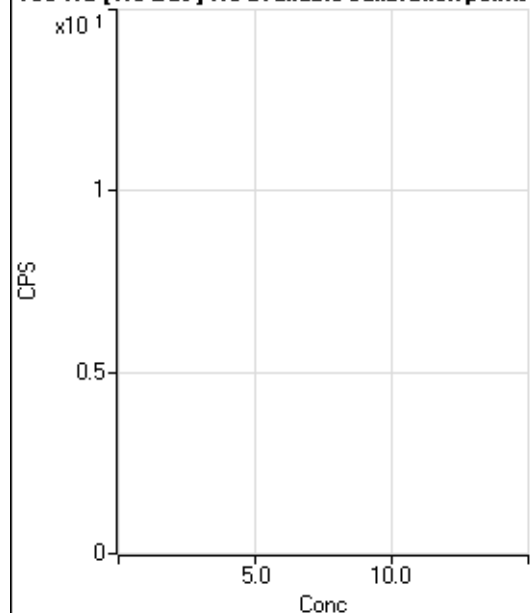
$$R = 1.0000$$

$$DL = 0.0046$$

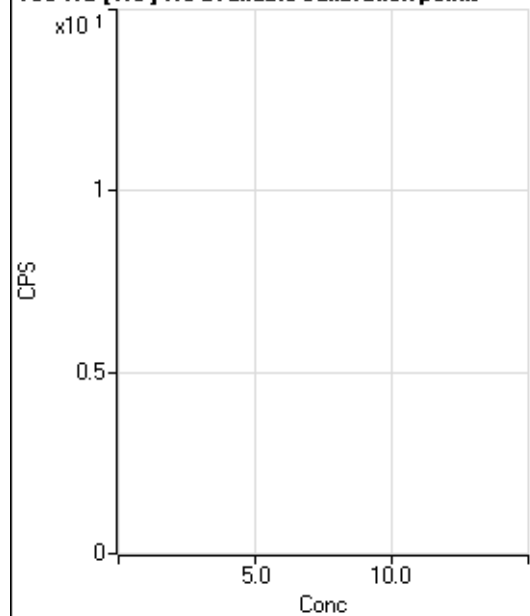
$$BEC = 0.01375$$

Weight: <None>

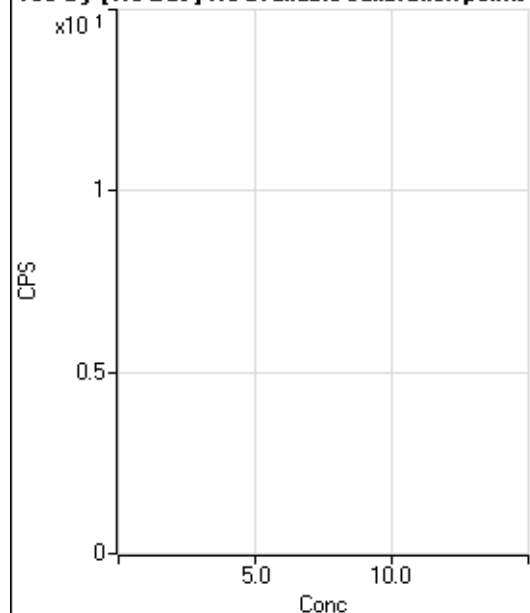
Min Conc: 0

150 Nd [No Gas] No available calibration points

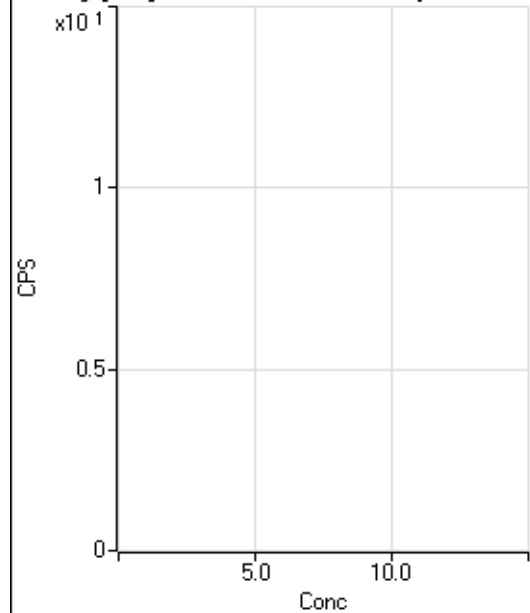
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.33		P	100.0
2	☐						
3	☐			15.56		P	65.5
4	☐			20.00		P	33.4
5	☐			86.67		P	15.4
6	☐			122.23		P	35.5
7	☐			180.01		P	18.5
8	☐			340.02		P	13.6
9	☐			111.12		P	9.2

150 Nd [He] No available calibration points

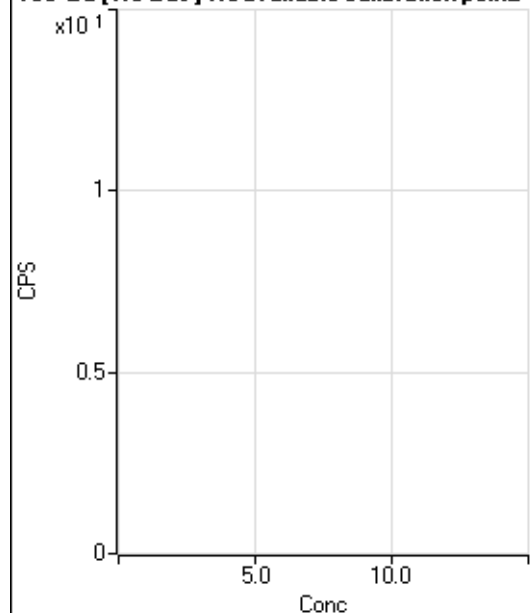
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			0.00		P	
4	☐			2.22		P	173.2
5	☐			2.22		P	86.6
6	☐			4.44		P	114.6
7	☐			6.67		P	50.0
8	☐			5.56		P	34.7
9	☐			8.89		P	114.5

156 Dy [No Gas] No available calibration points

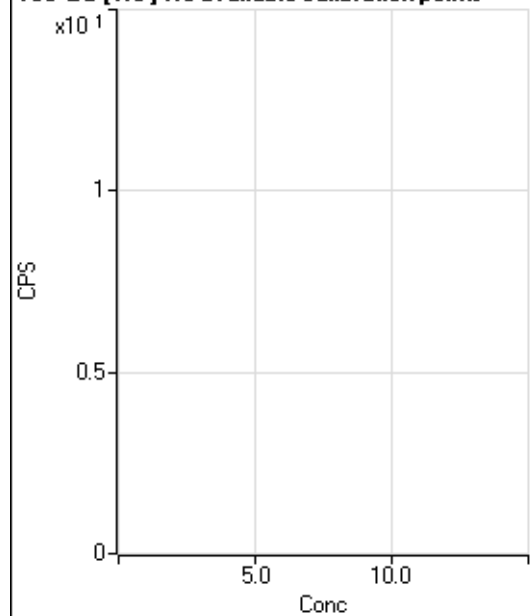
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.33		P	100.0
2	☐						
3	☐			13.89		P	34.7
4	☐			11.11		P	43.3
5	☐			41.67		P	52.9
6	☐			58.34		P	51.5
7	☐			72.23		P	13.3
8	☐			127.79		P	44.4
9	☐			66.67		P	69.6

156 Dy [He] No available calibration points

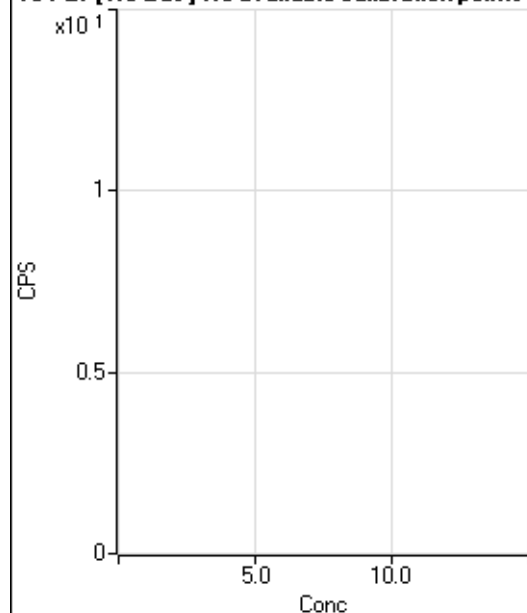
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			1.11		P	173.2
4	☐			1.11		P	173.2
5	☐			4.44		P	114.6
6	☐			7.78		P	89.2
7	☐			11.11		P	45.8
8	☐			21.11		P	48.2
9	☐			8.89		P	43.3

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

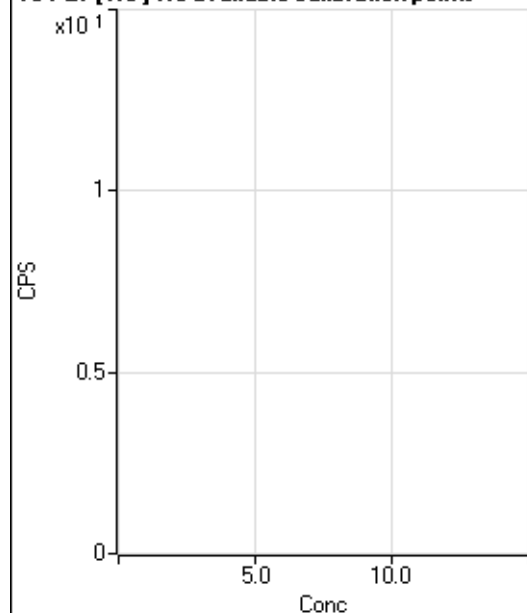
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			61.11		P	20.8
2	☐						
3	☐			47.22		P	27.0
4	☐			61.11		P	56.8
5	☐			55.56		P	31.2
6	☐			61.11		P	31.5
7	☐			97.23		P	34.6
8	☐			108.34		P	40.0
9	☐			97.23		P	34.6

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	114.6
2	☐						
3	☐			4.44		P	43.4
4	☐			8.89		P	57.3
5	☐			4.44		P	114.6
6	☐			11.11		P	17.3
7	☐			20.00		P	33.4
8	☐			17.78		P	10.8
9	☐			23.33		P	51.5

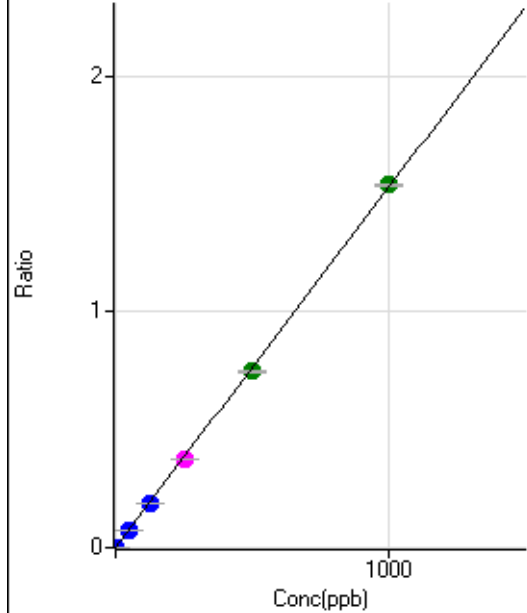
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.89		P	34.7
2	☐						
3	☐			36.11		P	113.8
4	☐			13.89		P	91.6
5	☐			41.67		P	52.9
6	☐			36.11		P	66.6
7	☐			44.45		P	28.7
8	☐			55.56		P	37.8
9	☐			55.56		P	22.9

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	86.6
2	☐						
3	☐			6.67		P	100.0
4	☐			3.33		P	100.1
5	☐			2.22		P	86.6
6	☐			1.11		P	173.2
7	☐			12.22		P	41.7
8	☐			3.33		P	100.1
9	☐			8.89		P	21.6

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	433.36	0.0001	P	4.7
2	☐	0.100					
3	☐	1.000	0.907	6321.30	0.0015	P	1.9
4	☐	50.000	48.796	319785.51	0.0747	P	0.8
5	☐	125.000	121.991	801971.53	0.1866	P	1.3
6	☐	250.000	244.498	1622075.67	0.3738	M	0.8
7	☐	500.000	489.591	3296164.92	0.7484	A	0.7
8	☐	1000.000	1007.017	6686978.10	1.5393	A	0.7
9	☐			1883.56	0.0005	P	2.5

$$y = 0.0015 * x + 9.8669E-005$$

$$R = 0.9999$$

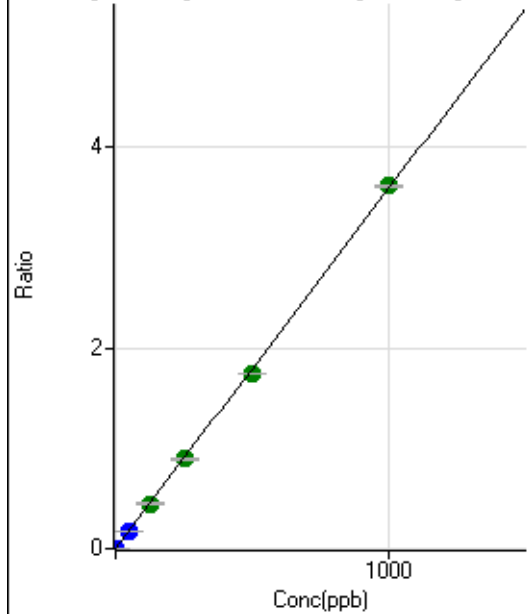
$$DL = 0.009022$$

$$BEC = 0.06455$$

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	922.30	0.0002	P	5.5
2	☐	0.100					
3	☐	1.000	0.934	15156.82	0.0036	P	0.8
4	☐	50.000	49.769	765882.01	0.1789	P	0.2
5	☐	125.000	125.103	1931315.30	0.4493	A	1.0
6	☐	250.000	248.961	3878599.65	0.8938	A	1.3
7	☐	500.000	484.703	7663546.44	1.7400	A	0.3
8	☐	1000.000	1007.907	15717489.76	3.6181	A	0.4
9	☐			4631.62	0.0012	P	2.6

$$y = 0.0036 * x + 2.1004E-004$$

$$R = 0.9998$$

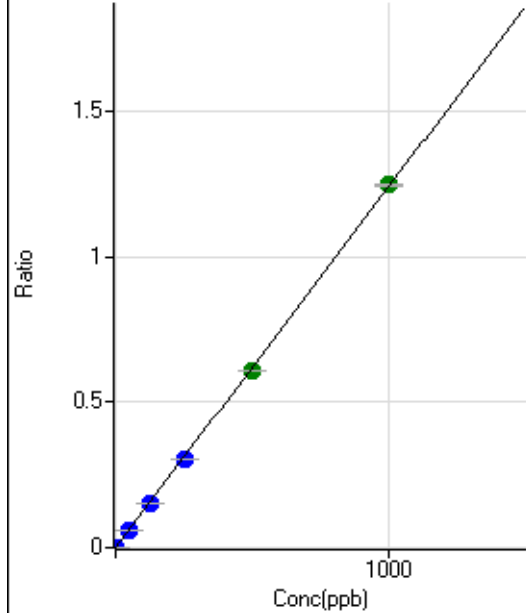
$$DL = 0.009682$$

$$BEC = 0.05852$$

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	735.23	0.0002	P	11.2
2	☐	0.100					
3	☐	1.000	0.889	5395.74	0.0013	P	2.6
4	☐	50.000	48.951	260264.23	0.0608	P	1.1
5	☐	125.000	122.543	653034.40	0.1519	P	0.9
6	☐	250.000	244.039	1311986.37	0.3024	P	1.1
7	☐	500.000	491.969	2683729.02	0.6094	A	0.4
8	☐	1000.000	1005.866	5411472.80	1.2457	A	0.6
9	☐			5408.72	0.0014	P	1.6

$$y = 0.0012 * x + 1.6747E-004$$

$$R = 0.9999$$

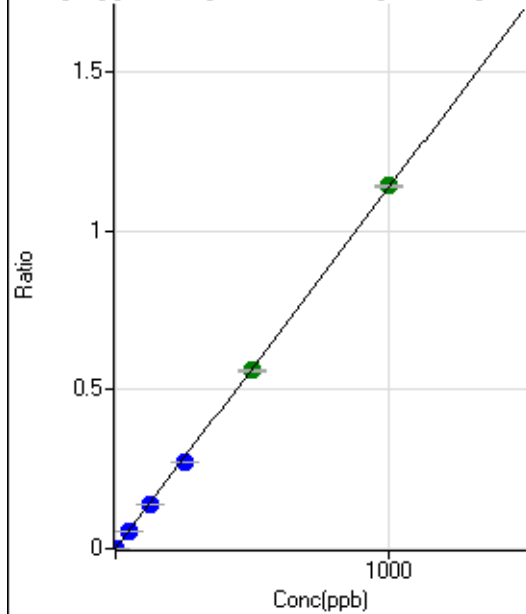
$$DL = 0.04525$$

$$BEC = 0.1352$$

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	675.97	0.0002	P	15.4
2	☐	0.100					
3	☐	1.000	0.876	4891.83	0.0011	P	5.2
4	☐	50.000	48.062	234587.89	0.0548	P	1.2
5	☐	125.000	120.760	590724.46	0.1374	P	0.6
6	☐	250.000	241.290	1190764.90	0.2744	P	0.5
7	☐	500.000	494.131	2474183.50	0.5618	A	0.7
8	☐	1000.000	1005.739	4966563.13	1.1433	A	0.3
9	☐			4793.64	0.0013	P	5.1

$$y = 0.0011 * x + 1.5394E-004$$

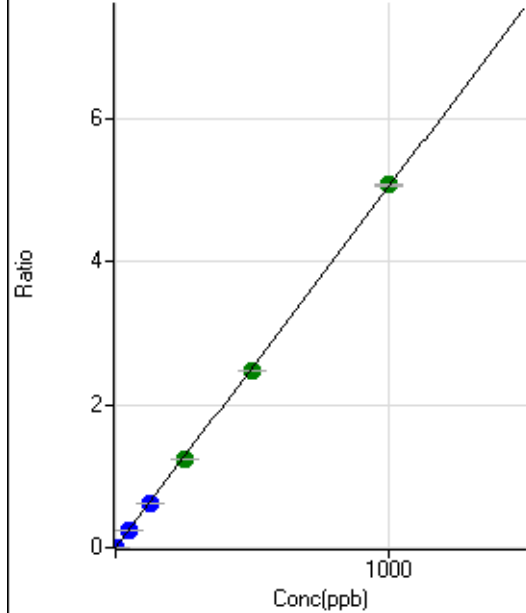
$$R = 0.9999$$

$$DL = 0.06237$$

$$BEC = 0.1354$$

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	3044.69	0.0007	P	6.9
2	☐	0.100					
3	☐	1.000	0.895	22180.49	0.0052	P	1.8
4	☐	50.000	48.606	1054043.24	0.2462	P	0.8
5	☐	125.000	122.062	2652921.38	0.6171	P	0.4
6	☐	250.000	246.379	5402058.57	1.2449	A	0.9
7	☐	500.000	491.005	10923490.78	2.4803	A	0.4
8	☐	1000.000	1005.840	22068898.35	5.0802	A	0.2
9	☐			21307.56	0.0057	P	1.7

$$y = 0.0050 * x + 6.9339E-004$$

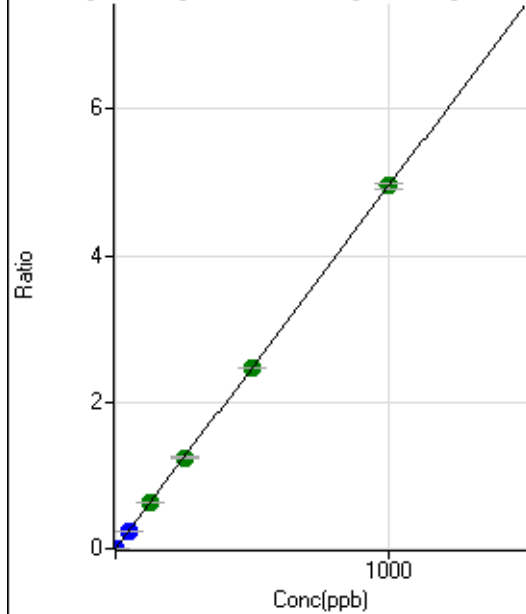
$$R = 0.9999$$

$$DL = 0.02846$$

$$BEC = 0.1373$$

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	61.11	0.0000	P	28.8
2	☐	0.100					
3	☐	1.000	0.831	17549.25	0.0041	P	0.8
4	☐	50.000	49.309	1044184.63	0.2439	P	1.2
5	☐	125.000	126.824	2696260.67	0.6272	A	0.8
6	☐	250.000	251.573	5398844.44	1.2441	A	0.4
7	☐	500.000	497.233	10829588.35	2.4590	A	0.4
8	☐	1000.000	1000.797	21499851.70	4.9493	A	1.4
9	☐			1202.90	0.0003	P	7.3

$$y = 0.0049 * x + 1.3929E-005$$

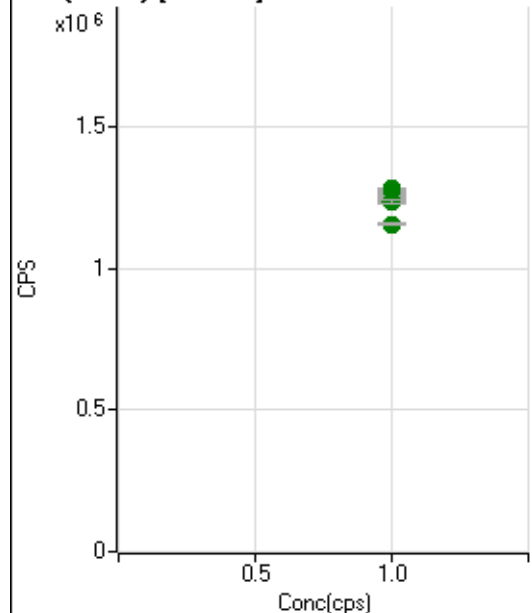
$$R = 1.0000$$

$$DL = 0.002436$$

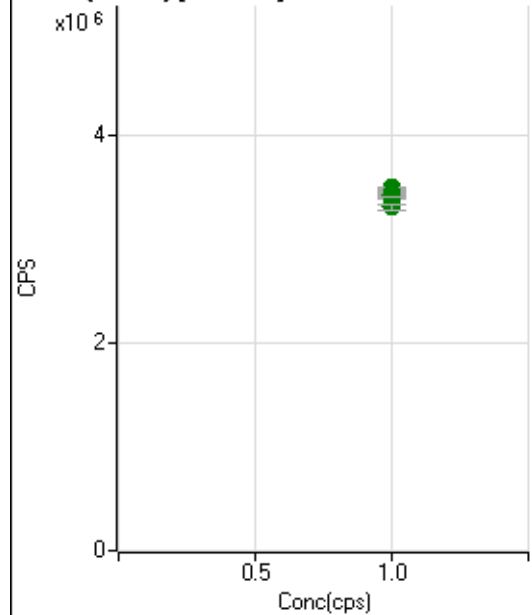
$$BEC = 0.002817$$

Weight: <None>

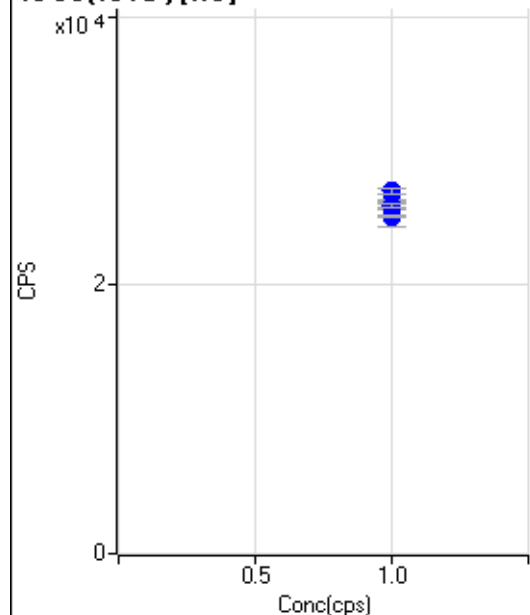
Min Conc: 0

6 Li(ISTD) [No Gas]

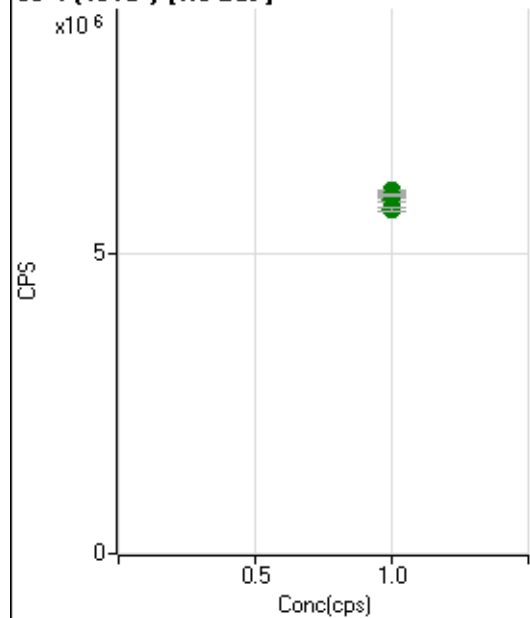
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1282904.00		A	0.6
2	☐	1.000					
3	☐	1.000		1265231.14		A	0.1
4	☐	1.000		1268516.49		A	0.7
5	☐	1.000		1257539.67		A	1.0
6	☐	1.000		1250308.41		A	2.0
7	☐	1.000		1252049.51		A	0.4
8	☐	1.000		1236540.47		A	1.1
9	☐	1.000		1157720.76		A	0.9

45 Sc(ISTD) [No Gas]

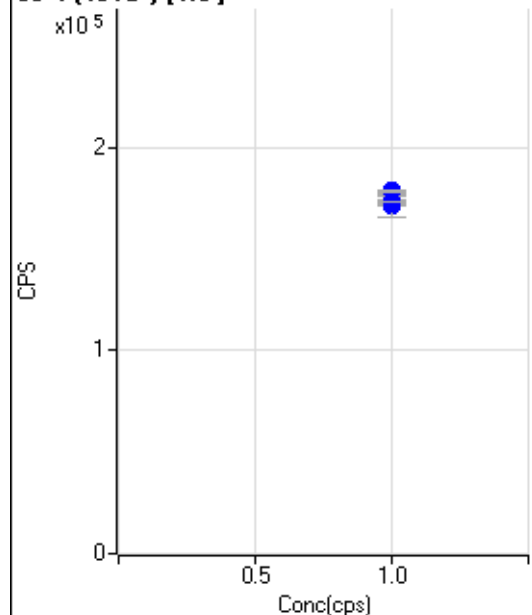
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3501341.14		A	0.3
2	☐	1.000					
3	☐	1.000		3444280.28		A	0.2
4	☐	1.000		3452880.54		A	1.0
5	☐	1.000		3393728.03		A	0.2
6	☐	1.000		3420753.77		A	1.1
7	☐	1.000		3427947.60		A	1.2
8	☐	1.000		3411729.33		A	0.3
9	☐	1.000		3313398.47		A	1.4

45 Sc(ISTD) [He]

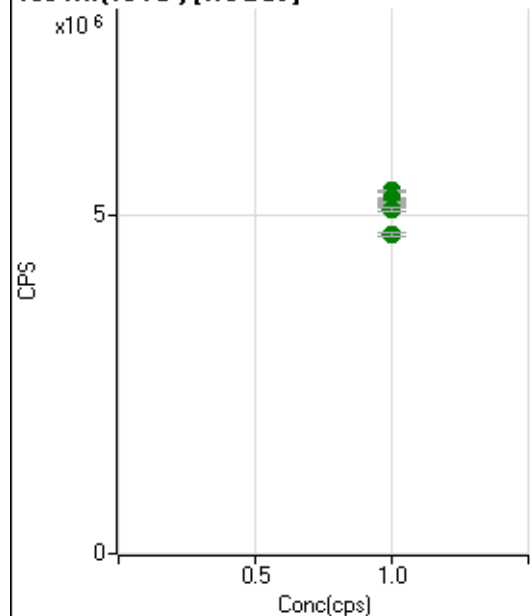
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		25959.76		P	1.2
2	☐	1.000					
3	☐	1.000		26302.65		P	0.2
4	☐	1.000		25225.28		P	7.4
5	☐	1.000		25721.42		P	0.6
6	☐	1.000		25107.12		P	0.8
7	☐	1.000		25158.28		P	0.5
8	☐	1.000		25976.36		P	1.1
9	☐	1.000		27016.20		P	1.8

89 Y(ISTD) [No Gas]

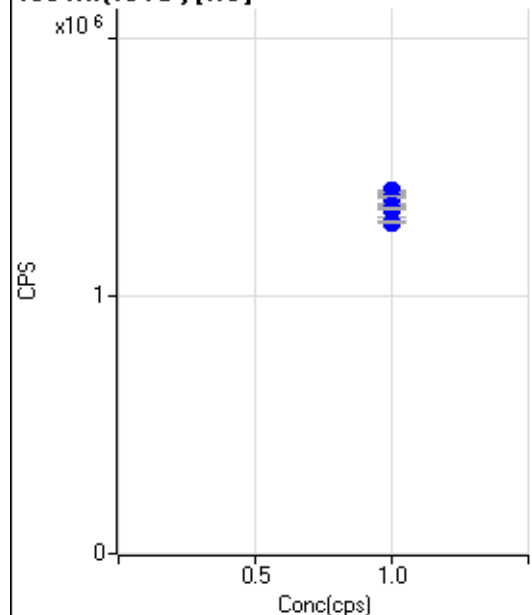
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6061365.47		A	0.4
2	☐	1.000					
3	☐	1.000		5904703.80		A	1.2
4	☐	1.000		5936594.98		A	0.3
5	☐	1.000		5878885.54		A	0.5
6	☐	1.000		5960665.40		A	0.7
7	☐	1.000		5970387.55		A	0.6
8	☐	1.000		5980907.06		A	0.7
9	☐	1.000		5750699.99		A	1.1

89 Y (ISTD) [He]

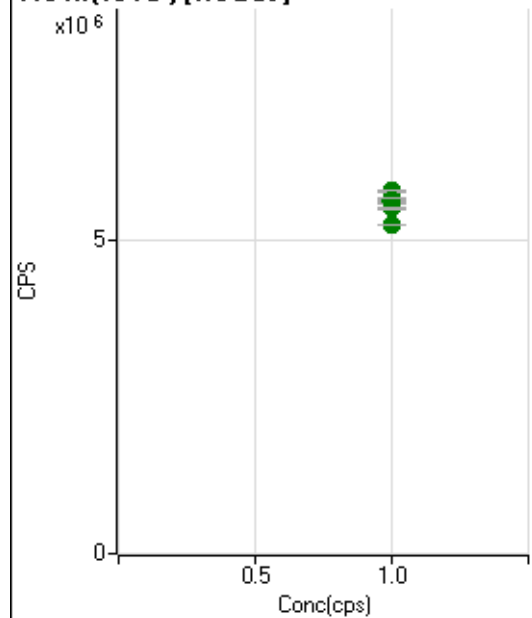
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		177694.05		P	0.8
2	☐	1.000					
3	☐	1.000		178530.11		P	0.2
4	☐	1.000		171076.74		P	6.6
5	☐	1.000		175961.39		P	0.2
6	☐	1.000		172435.95		P	0.7
7	☐	1.000		172992.10		P	0.9
8	☐	1.000		173386.40		P	0.2
9	☐	1.000		178663.15		P	0.8

103 Rh (ISTD) [NoGas]

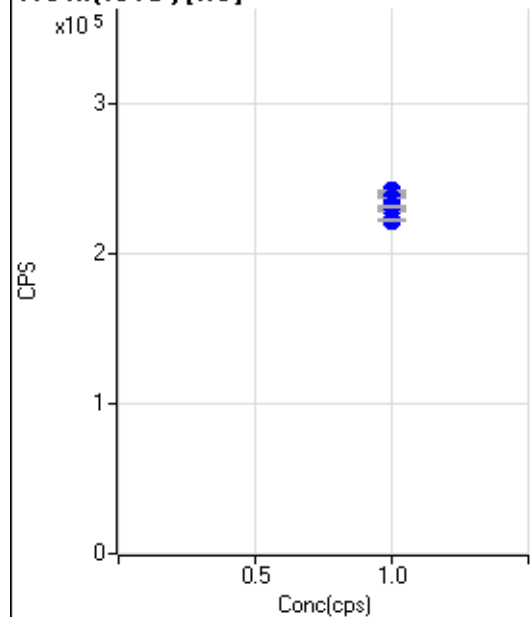
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5367415.05		A	0.5
2	☐	1.000					
3	☐	1.000		5250751.07		A	0.1
4	☐	1.000		5228871.82		A	0.7
5	☐	1.000		5175683.58		A	0.7
6	☐	1.000		5215051.07		A	1.0
7	☐	1.000		5192093.78		A	1.0
8	☐	1.000		5098913.65		A	1.2
9	☐	1.000		4732889.99		A	1.1

103Rh(ISTD)[He]

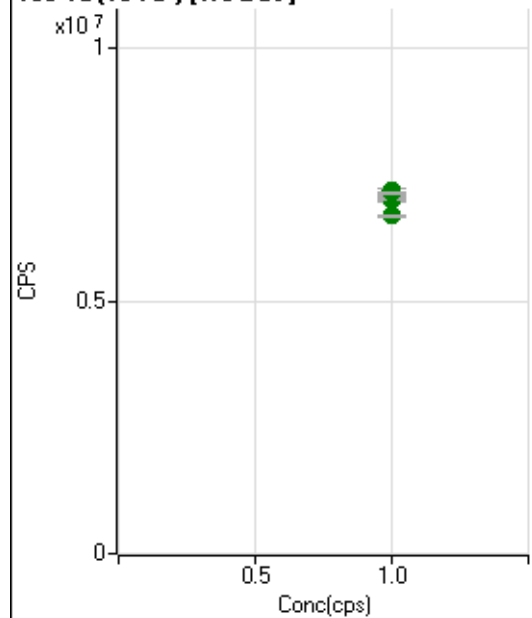
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1405683.30		P	0.5
2	☐	1.000					
3	☐	1.000		1398074.04		P	0.3
4	☐	1.000		1345625.40		P	6.2
5	☐	1.000		1381300.31		P	0.2
6	☐	1.000		1350418.99		P	1.3
7	☐	1.000		1351000.40		P	0.5
8	☐	1.000		1336520.89		P	0.2
9	☐	1.000		1282385.58		P	0.7

115In(ISTD)[NoGas]

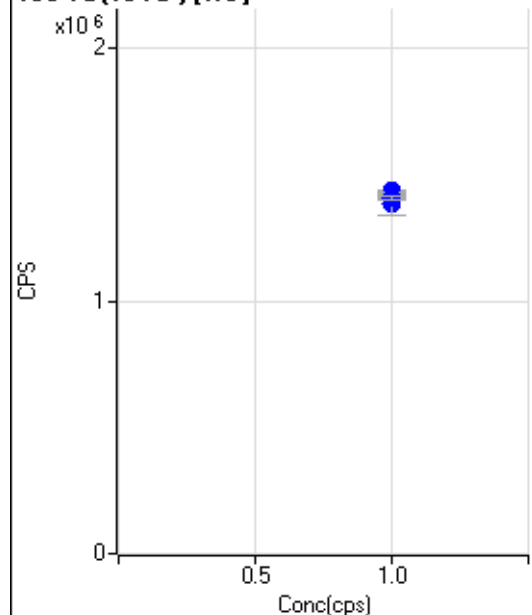
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5773467.87		A	0.6
2	☐	1.000					
3	☐	1.000		5619199.73		A	0.4
4	☐	1.000		5597139.19		A	0.8
5	☐	1.000		5572266.30		A	0.5
6	☐	1.000		5603370.24		A	0.8
7	☐	1.000		5619404.48		A	1.4
8	☐	1.000		5501056.56		A	0.4
9	☐	1.000		5231342.90		A	0.5

115 In(ISTD) [He]

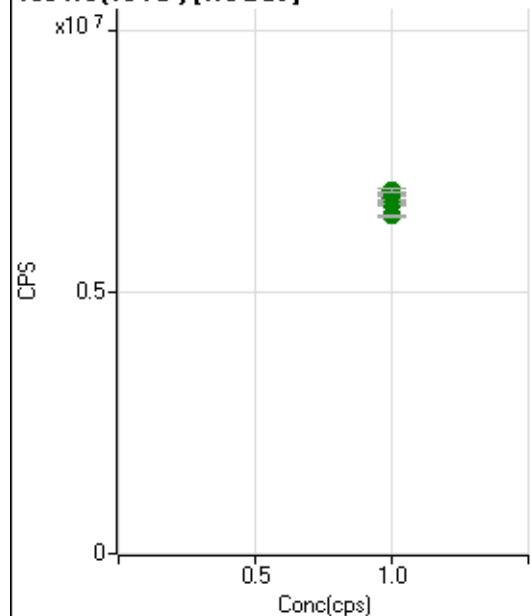
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		240723.28		P	0.7
2	☐	1.000					
3	☐	1.000		242350.36		P	0.5
4	☐	1.000		231038.77		P	6.4
5	☐	1.000		237833.04		P	0.2
6	☐	1.000		230373.97		P	1.1
7	☐	1.000		229562.31		P	0.6
8	☐	1.000		222704.79		P	0.8
9	☐	1.000		231863.99		P	0.6

159 Tb(ISTD) [NoGas]

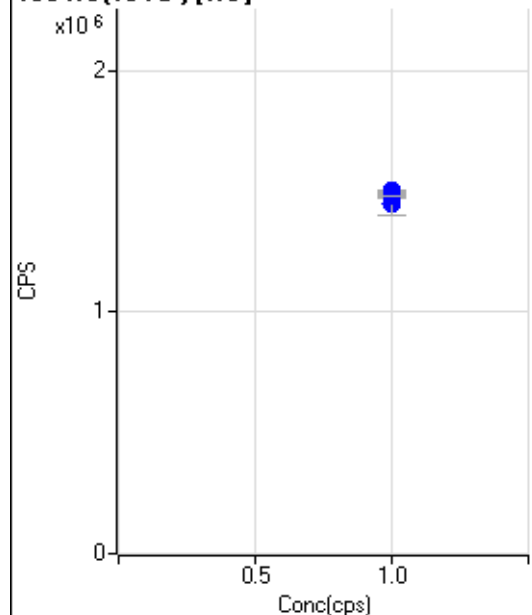
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7117699.89		A	0.8
2	☐	1.000					
3	☐	1.000		6987084.76		A	1.1
4	☐	1.000		6998099.27		A	0.5
5	☐	1.000		7028509.90		A	0.4
6	☐	1.000		7154123.09		A	0.2
7	☐	1.000		7180613.30		A	1.6
8	☐	1.000		7140255.45		A	0.2
9	☐	1.000		6691462.61		A	0.7

159 Tb(ISTD) [He]

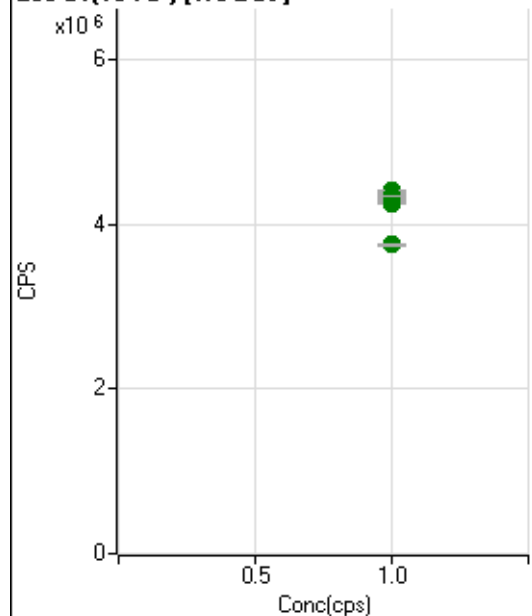
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1430493.54		P	0.3
2	☐	1.000					
3	☐	1.000		1433408.42		P	0.5
4	☐	1.000		1384690.82		P	6.1
5	☐	1.000		1435482.83		P	0.2
6	☐	1.000		1416582.25		P	1.0
7	☐	1.000		1427399.20		P	0.5
8	☐	1.000		1429403.62		P	0.5
9	☐	1.000		1407106.39		P	0.8

165 Ho(ISTD) [NoGas]

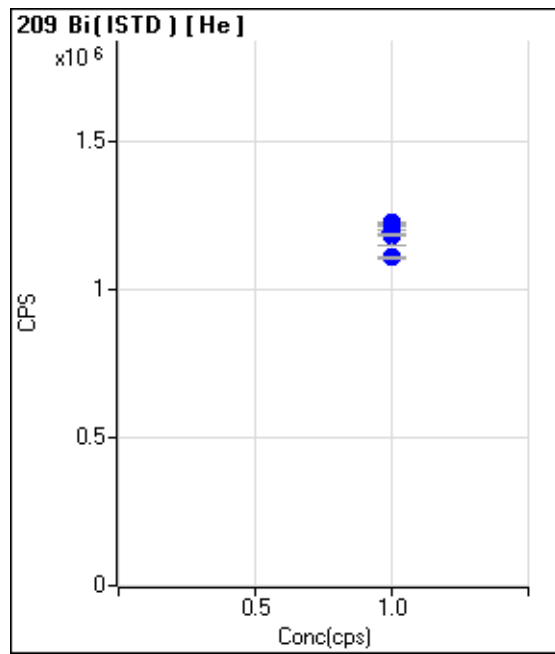
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6869439.56		A	0.7
2	☐	1.000					
3	☐	1.000		6702066.73		A	0.6
4	☐	1.000		6725799.54		A	0.4
5	☐	1.000		6815185.40		A	0.6
6	☐	1.000		6903367.26		A	0.8
7	☐	1.000		6942915.69		A	1.2
8	☐	1.000		6948053.02		A	0.9
9	☐	1.000		6481377.79		A	0.6

165 Ho(ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1492642.62		P	0.5
2	☐	1.000					
3	☐	1.000		1499182.06		P	0.4
4	☐	1.000		1446722.70		P	6.7
5	☐	1.000		1500361.75		P	0.4
6	☐	1.000		1477100.06		P	1.3
7	☐	1.000		1498450.57		P	0.4
8	☐	1.000		1495528.66		P	0.3
9	☐	1.000		1479177.88		P	0.4

209 Bi(ISTD) [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4391533.79		A	0.7
2	☐	1.000					
3	☐	1.000		4255764.66		A	0.4
4	☐	1.000		4282223.58		A	1.0
5	☐	1.000		4299052.44		A	0.7
6	☐	1.000		4339623.48		A	1.2
7	☐	1.000		4404171.77		A	0.8
8	☐	1.000		4344139.90		A	0.3
9	☐	1.000		3756603.87		A	0.7



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1223819.04		P	0.3
2	☐	1.000					
3	☐	1.000		1223253.83		P	0.5
4	☐	1.000		1180858.95		P	5.9
5	☐	1.000		1214351.32		P	0.2
6	☐	1.000		1192073.45		P	1.3
7	☐	1.000		1199227.17		P	0.0
8	☐	1.000		1184798.49		P	0.4
9	☐	1.000		1106905.35		P	0.4

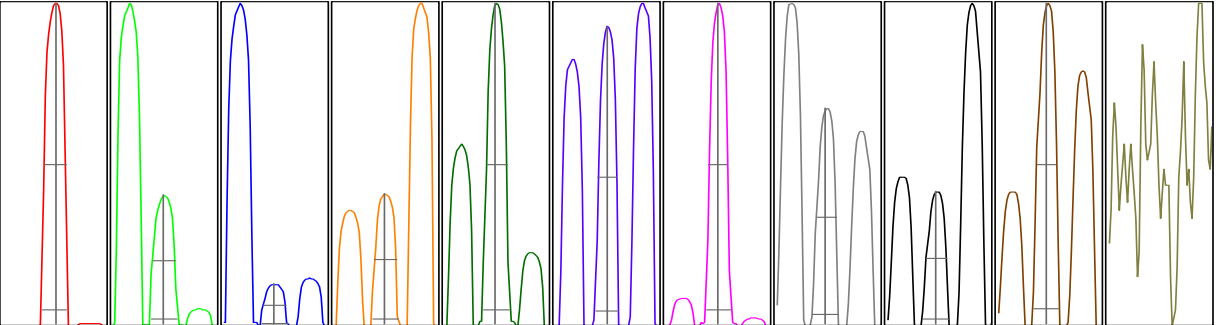
US EPA Tune Check Sample Report

Batch Folder D:\P8100217 MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	8678	1.15	5.00	
24	84006	2.19	5.00	
25	10695	2.03	5.00	
26	11987	2.16	5.00	
59	81985	1.09	5.00	
113	10399	0.89	5.00	
115	133921	0.60	5.00	
206	28730	0.89	5.00	
207	26101	0.97	5.00	
208	62500	0.99	5.00	
220	1	14.92		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	8686	8817	8597	8569	8719
24	86968	84569	83232	82709	82552
25	11022	10801	10601	10475	10577
26	12412	12040	11871	11748	11866
59	82275	82460	81842	80513	82834
113	10364	10492	10316	10318	10505
115	134159	134595	132919	133245	134687
206	28752	28876	28424	28540	29060
207	26105	26185	25720	26071	26425
208	62723	62840	61738	61977	63220
220	2	1	1	2	1

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	14111	9.10	8.9 - 9.1		0.740	0.900	
24	135270	24.00	23.9 - 24.1		0.786	0.900	
25	17469	25.00	24.9 - 25.1		0.765	0.900	
26	19942	26.00	25.9 - 26.1		0.755	0.900	
59	141231	59.00	58.9 - 59.1		0.780	0.900	
113	19422	113.05	112.9 - 113.1		0.689	0.900	
115	247837	115.05	114.9 - 115.1		0.730	0.900	
206	52499	205.95	205.9 - 206.1		0.739	0.900	
207	47095	206.95	206.9 - 207.1		0.770	0.900	
208	113519	207.95	207.9 - 208.1		0.766	0.900	
220			-				

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

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Plasma Mode		HMI	Aerosol Dilution		HMI-8			

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.8	V	Deflect	13.0	V
Extract 2	-230.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-100	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	10426	2.06	
89	2214	1.63	
205	15621	2.09	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	10623	10529	10410	10499	10067
89	2248	2227	2223	2218	2153
205	15946	15760	15666	15660	15074

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Plasma Mode		HMI	Aerosol Dilution		HMI-8			

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.8	V	Deflect	2.0	V
Extract 2	-230.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-100	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	5.0	mL/min	OctP RF	200	V			