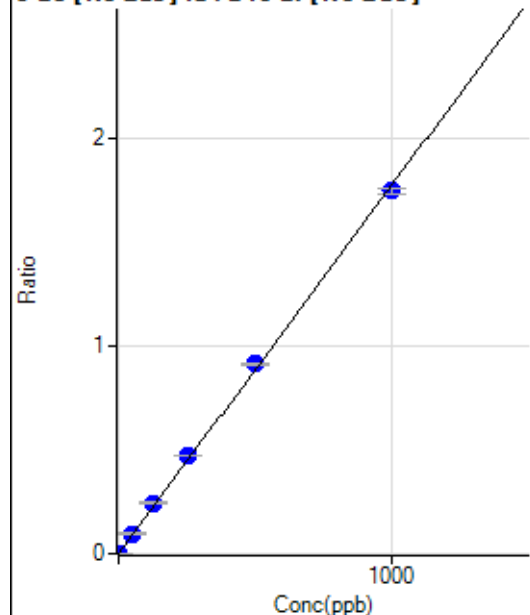


Batch Folder: D:\P8031219-MS.b\
Analysis File: P8031219-MS.batch.bin
DA Date-Time: 2019-03-13 02:12:50
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-03-12 13:51:02
2			
3	005CALS.d	S02	2019-03-12 13:58:32
4	006CALS.d	S03	2019-03-12 14:02:27
5	007CALS.d	S04	2019-03-12 14:06:21
6	008CALS.d	S05	2019-03-12 14:10:10
7	009CALS.d	S06	2019-03-12 14:13:54
8	010CALS.d	S07	2019-03-12 14:17:32
9	011CALS.d	S08	2019-03-12 14:21:04

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0001	P	49.8
2	☐	0.100					
3	☐	1.000	1.084	731.14	0.0020	P	3.9
4	☐	50.000	54.626	36465.31	0.0969	P	1.9
5	☐	125.000	137.268	91634.00	0.2434	P	2.4
6	☐	250.000	267.982	185029.01	0.4752	P	0.6
7	☐	500.000	516.036	395816.02	0.9150	P	1.3
8	☐	1000.000	985.721	797453.98	1.7478	P	1.6
9	☐			142.22	0.0003	P	12.6

$$y = 0.0018 * x + 5.1538E-005$$

$$R = 0.9996$$

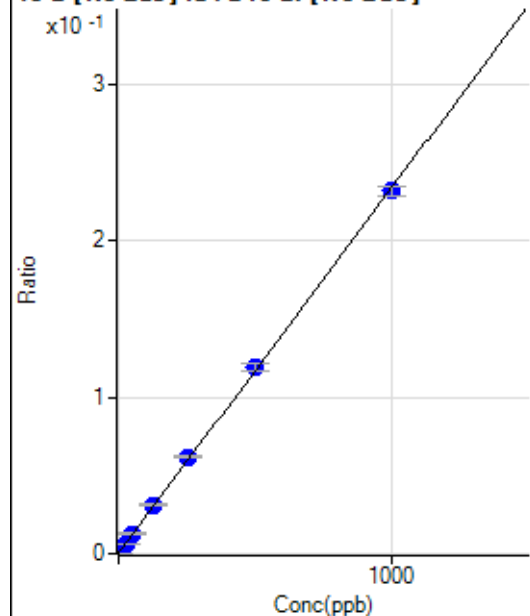
$$DL = 0.04338$$

$$BEC = 0.02907$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.12	0.0004	P	47.1
2	☐	2.500					
3	☐	25.000	25.078	2297.50	0.0062	P	1.8
4	☐	50.000	52.846	4767.69	0.0127	P	5.9
5	☐	125.000	132.422	11744.18	0.0312	P	6.2
6	☐	250.000	263.332	24032.20	0.0617	P	2.0
7	☐	500.000	506.975	51267.57	0.1185	P	4.2
8	☐	1000.000	992.108	105626.87	0.2315	P	2.4
9	☐			3436.68	0.0080	P	2.5

$$y = 2.3300E-004 * x + 3.5500E-004$$

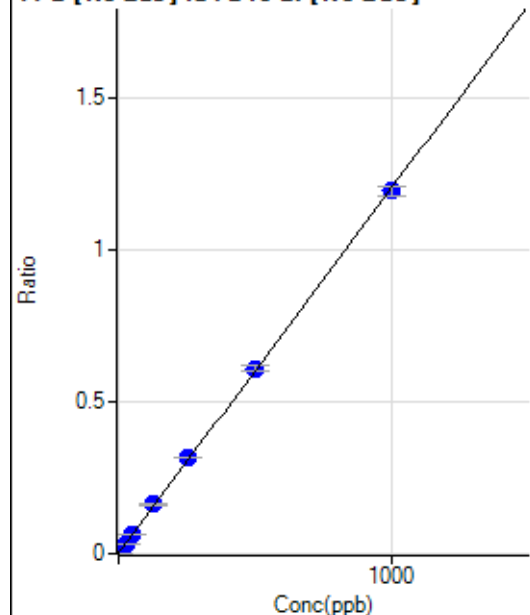
$$R = 0.9999$$

$$DL = 2.151$$

$$BEC = 1.524$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	597.26	0.0015	P	13.8
2	☐	2.500					
3	☐	25.000	25.878	12080.61	0.0326	P	2.6
4	☐	50.000	53.099	24552.55	0.0652	P	2.1
5	☐	125.000	134.227	61195.48	0.1626	P	2.2
6	☐	250.000	261.544	122781.60	0.3153	P	1.2
7	☐	500.000	506.550	263599.63	0.6092	P	3.7
8	☐	1000.000	992.509	543895.79	1.1921	P	2.6
9	☐			17931.30	0.0417	P	6.6

$$y = 0.0012 * x + 0.0015$$

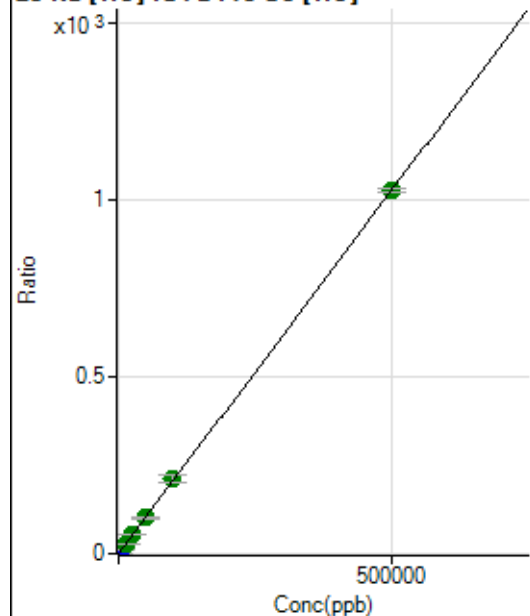
$$R = 0.9999$$

$$DL = 0.5335$$

$$BEC = 1.292$$

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	8416.74	0.1891	P	2.4
2	☐	50.000					
3	☐	500.000	461.104	51549.84	1.1338	P	3.9
4	☐	5000.000	5089.595	467072.52	10.6166	P	1.2
5	☐	12500.000	12670.106	1178053.75	26.1475	A	0.3
6	☐	25000.000	25776.795	2333100.05	53.0004	A	2.2
7	☐	50000.000	49102.124	4503386.99	100.7892	A	2.1
8	☐	100000.00	102327.03	8847276.76	209.8361	A	11.0
9	☐	500000.00	499580.43	44610493.36	1,023.726	A	1.2

$$y = 0.0020 * x + 0.1891$$

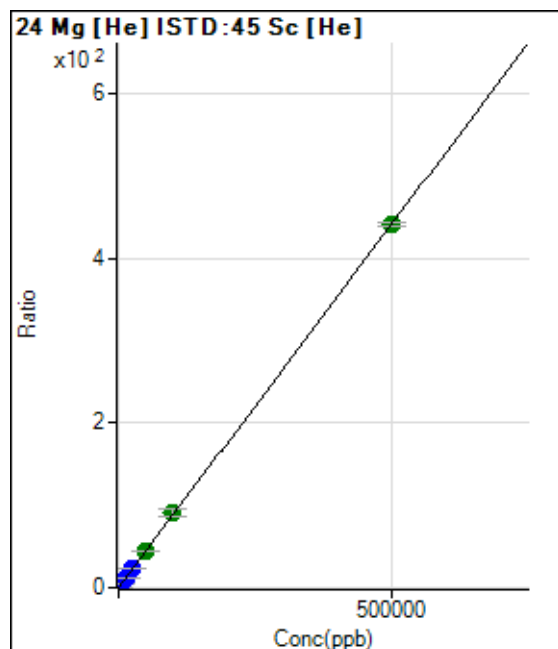
$$R = 1.0000$$

$$DL = 6.744$$

$$BEC = 92.29$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	452.80	0.0102	P	5.8
2	☐	50.000					
3	☐	500.000	479.203	19683.83	0.4332	P	6.3
4	☐	5000.000	5099.877	198502.30	4.5120	P	1.6
5	☐	12500.000	12458.720	495936.93	11.0078	P	1.2
6	☐	25000.000	25519.115	992027.56	22.5365	P	2.4
7	☐	50000.000	50075.327	1975452.58	44.2129	A	2.2
8	☐	100000.00	103308.28	3846404.64	91.2030	A	10.6
9	☐	500000.00	499304.90	19207251.99	440.7590	A	1.0

$$y = 8.8272E-004 * x + 0.0102$$

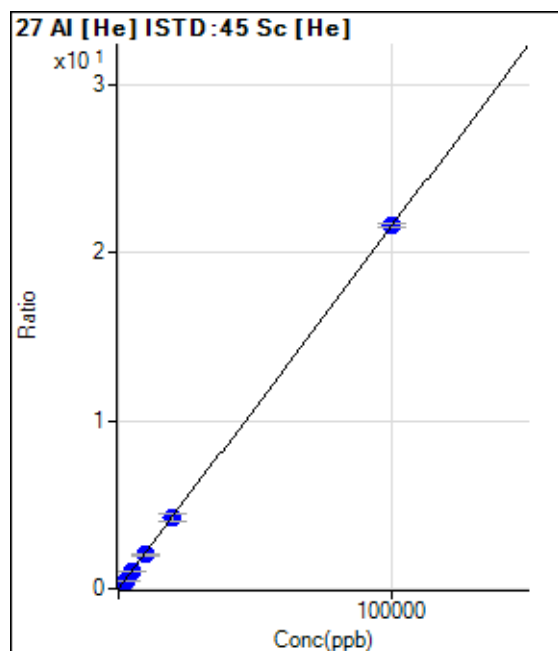
R = 1.0000

DL = 1.988

BEC = 11.52

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	54.18	0.0012	P	25.3
2	☐	2.000					
3	☐	20.000	15.897	210.89	0.0046	P	4.7
4	☐	1000.000	949.627	9048.56	0.2057	P	0.9
5	☐	2500.000	2348.261	22833.28	0.5068	P	0.5
6	☐	5000.000	4818.204	45720.30	1.0386	P	2.1
7	☐	10000.000	9361.720	90115.69	2.0168	P	1.7
8	☐	20000.000	19615.683	178099.57	4.2245	P	11.1
9	☐	100000.00	100154.07	939722.47	21.5645	P	0.9

$$y = 2.1530E-004 * x + 0.0012$$

R = 1.0000

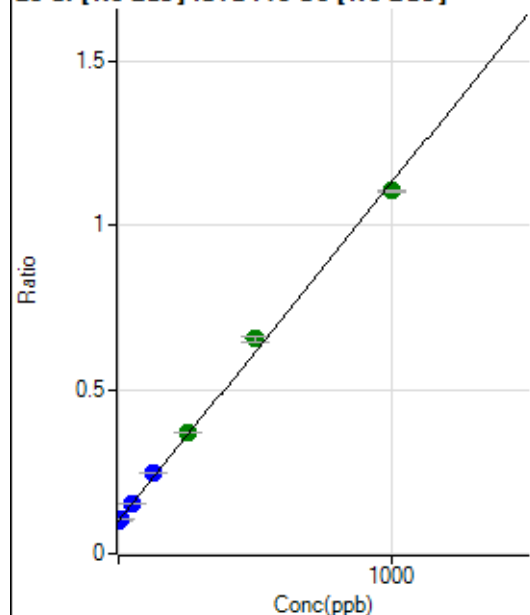
DL = 4.294

BEC = 5.652

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	316237.14	0.1001	P	4.8
2	☐	1.000					
3	☐	10.000	6.598	339650.03	0.1069	P	0.6
4	☐	50.000	52.322	498657.64	0.1539	P	1.3
5	☐	125.000	143.647	807984.49	0.2479	P	0.6
6	☐	250.000	262.687	1205049.20	0.3704	A	0.6
7	☐	500.000	537.189	2156506.41	0.6529	A	2.2
8	☐	1000.000	975.821	3658153.51	1.1043	A	0.6
9	☐			460529.43	0.1430	P	2.5

$$y = 0.0010 * x + 0.1001$$

$$R = 0.9987$$

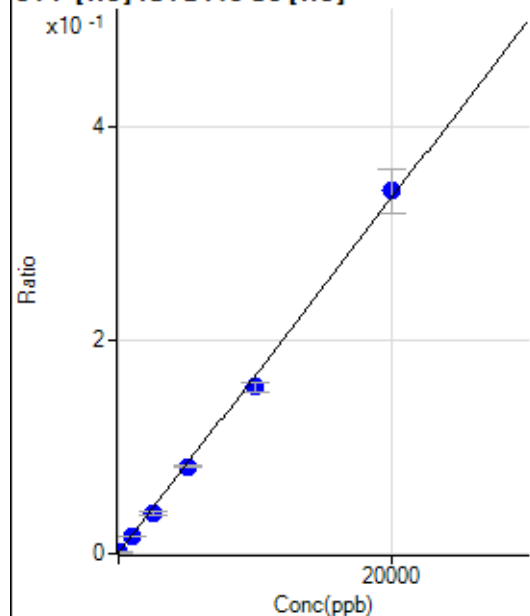
$$DL = 14.08$$

$$BEC = 97.24$$

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	-22.338	8.33	0.0002	P	0.2
2	☐	0.000					
3	☐	0.000	22.338	41.67	0.0009	P	89.4
4	☐	1000.000	969.699	736.17	0.0167	P	4.4
5	☐	2500.000	2273.021	1733.52	0.0385	P	10.1
6	☐	5000.000	4860.710	3595.05	0.0816	P	3.0
7	☐	10000.000	9341.000	6985.31	0.1563	P	5.3
8	☐	20000.000	20394.210	14355.08	0.3407	P	12.2
9	☐			5.55	0.0001	P	86.6

$$y = 1.6677E-005 * x + 5.5968E-004$$

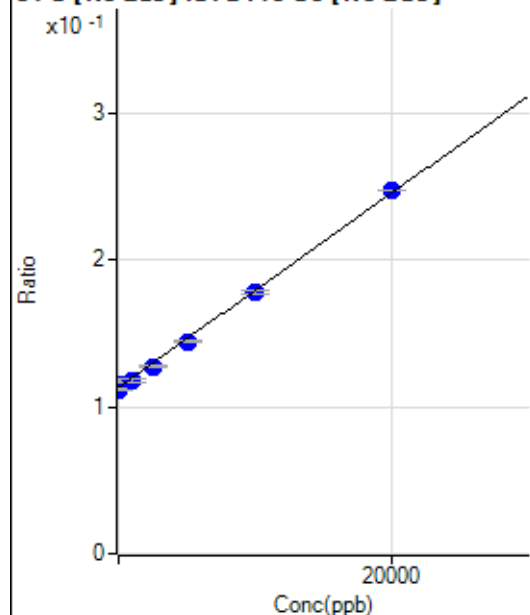
$$R = 0.9991$$

$$DL = 75.04$$

$$BEC = 33.56$$

Weight: <None>

Min Conc: 0

34 S [No Gas] ISTD:45 Sc [No Gas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	244.548	362837.13	0.1148	P	4.8
2	☐	0.000					
3	☐	0.000	-244.548	354607.33	0.1116	P	1.7
4	☐	1000.000	674.535	381169.92	0.1177	P	1.6
5	☐	2500.000	2098.794	414158.71	0.1271	P	0.9
6	☐	5000.000	4702.301	469406.72	0.1443	P	0.4
7	☐	10000.000	9861.820	589247.00	0.1784	P	1.4
8	☐	20000.000	20209.939	817624.83	0.2468	P	0.1
9	☐			331131.12	0.1028	P	2.1

$$y = 6.6119\text{E-}006 * x + 0.1132$$

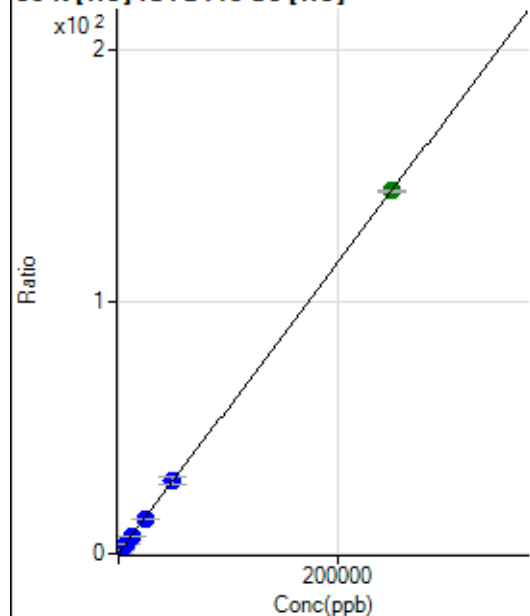
$$R = 0.9995$$

$$DL = 1676$$

$$BEC = 1.712\text{E}+04$$

Weight: <None>

Min Conc: 0

39 K [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4792.68	0.1077	P	3.0
2	☐	50.000					
3	☐	500.000	446.301	16588.26	0.3648	P	3.7
4	☐	2500.000	2488.425	67811.31	1.5413	P	1.4
5	☐	6250.000	6114.212	163556.26	3.6303	P	0.8
6	☐	12500.000	12286.180	316368.07	7.1862	P	1.6
7	☐	25000.000	23953.879	621450.88	13.9084	P	1.9
8	☐	50000.000	49924.348	1217289.72	28.8710	P	11.0
9	☐	250000.00	250134.05	6284891.33	144.2193	A	0.7

$$y = 5.7614\text{E-}004 * x + 0.1077$$

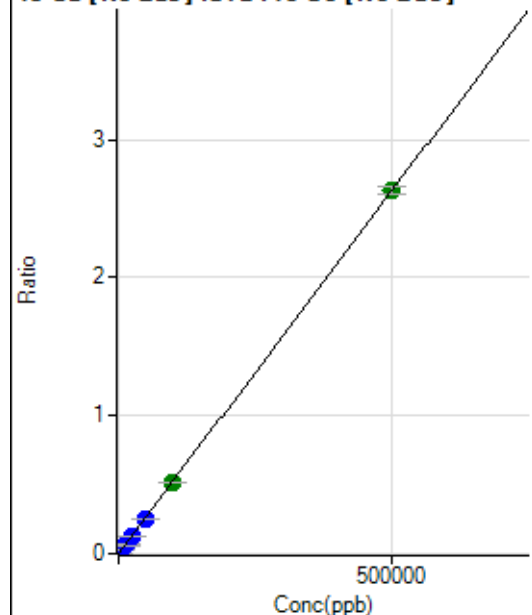
$$R = 1.0000$$

$$DL = 16.66$$

$$BEC = 186.9$$

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	366.68	0.0001	P	11.2
2	☐	50.000					
3	☐	500.000	460.344	8049.10	0.0025	P	1.0
4	☐	5000.000	4846.681	82800.81	0.0256	P	1.6
5	☐	12500.000	11980.724	205349.57	0.0630	P	1.3
6	☐	25000.000	24066.976	411379.00	0.1265	P	0.3
7	☐	50000.000	48553.020	842213.28	0.2550	P	1.5
8	☐	100000.00	97881.668	1702449.05	0.5140	A	1.3
9	☐	500000.00	500629.57	8466872.93	2.6282	A	2.1

$$y = 5.2496\text{E-}006 * x + 1.1609\text{E-}004$$

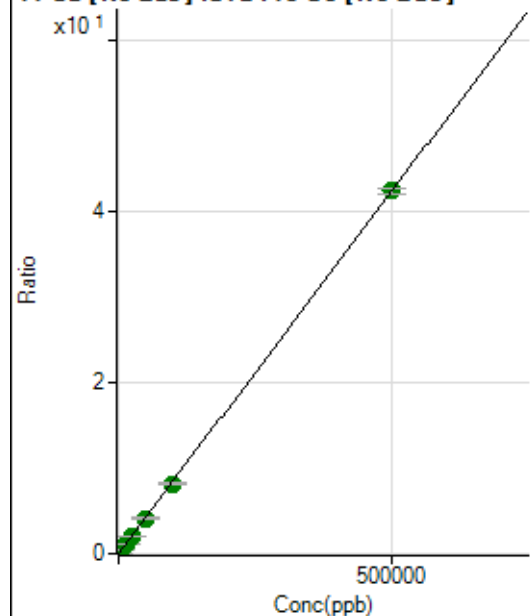
$$R = 1.0000$$

$$DL = 7.449$$

$$BEC = 22.11$$

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	24380.27	0.0077	P	4.9
2	☐	50.000					
3	☐	500.000	459.098	148035.76	0.0466	P	1.4
4	☐	5000.000	5020.983	1402111.94	0.4328	A	1.1
5	☐	12500.000	12161.642	3380464.71	1.0373	A	1.8
6	☐	25000.000	24042.558	6646473.72	2.0431	A	0.1
7	☐	50000.000	48808.722	13672728.96	4.1397	A	1.5
8	☐	100000.00	96447.372	27071885.71	8.1727	A	0.9
9	☐	500000.00	500885.81	136637387.9	42.4113	A	1.8

$$y = 8.4657\text{E-}005 * x + 0.0077$$

$$R = 1.0000$$

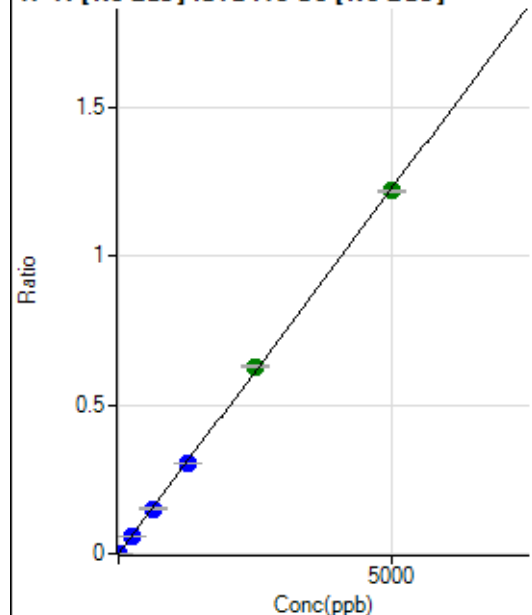
$$DL = 13.26$$

$$BEC = 91.14$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	113.90	0.0000	P	52.7
2	☐	0.500					
3	☐	5.000	4.841	3886.82	0.0012	P	1.0
4	☐	250.000	246.169	195592.45	0.0604	P	0.8
5	☐	625.000	616.037	492193.11	0.1510	P	1.5
6	☐	1250.000	1232.073	982474.59	0.3020	P	0.7
7	☐	2500.000	2566.182	2077502.30	0.6290	A	1.4
8	☐	5000.000	4972.703	4037402.18	1.2188	A	0.7
9	☐			811.17	0.0003	P	8.0

$$y = 2.4510E-004 * x + 3.6561E-005$$

$$R = 0.9999$$

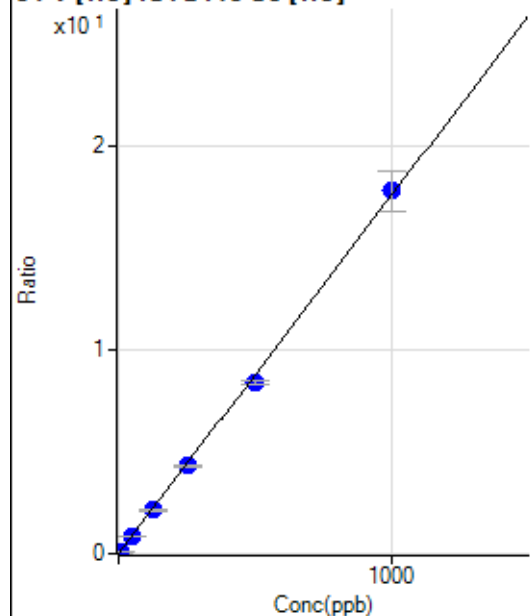
$$DL = 0.2357$$

$$BEC = 0.1492$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	20.00	0.0004	P	0.2
2	☐	0.500					
3	☐	5.000	4.652	3738.34	0.0823	P	6.2
4	☐	50.000	49.074	37989.41	0.8635	P	2.1
5	☐	125.000	120.843	95769.07	2.1257	P	1.4
6	☐	250.000	245.287	189920.21	4.3143	P	2.0
7	☐	500.000	478.987	376411.14	8.4243	P	2.0
8	☐	1000.000	1012.252	750384.91	17.8027	P	11.5
9	☐			112.23	0.0026	P	13.7

$$y = 0.0176 * x + 4.4930E-004$$

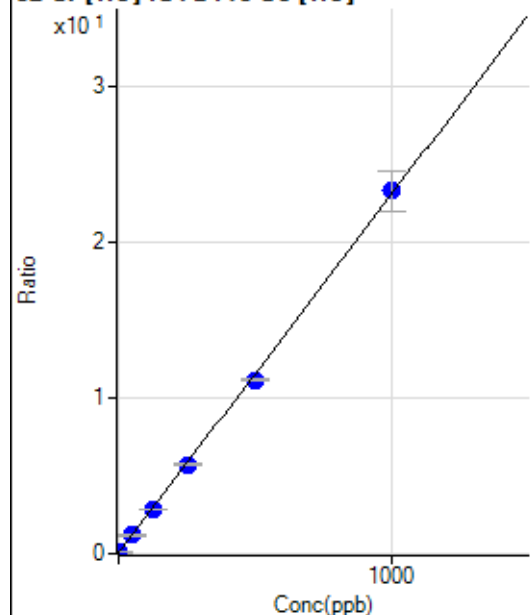
$$R = 0.9997$$

$$DL = 0.0001852$$

$$BEC = 0.02555$$

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	1712.36	0.0385	P	4.5
2	☐	0.200					
3	☐	2.000	1.859	3690.55	0.0813	P	10.2
4	☐	50.000	49.260	51633.98	1.1737	P	1.8
5	☐	125.000	121.203	127573.64	2.8316	P	0.9
6	☐	250.000	247.465	252730.96	5.7414	P	2.4
7	☐	500.000	483.156	499241.21	11.1730	P	1.7
8	☐	1000.000	1009.568	982341.82	23.3044	P	11.4
9	☐			8290.37	0.1903	P	3.3

$$y = 0.0230 * x + 0.0385$$

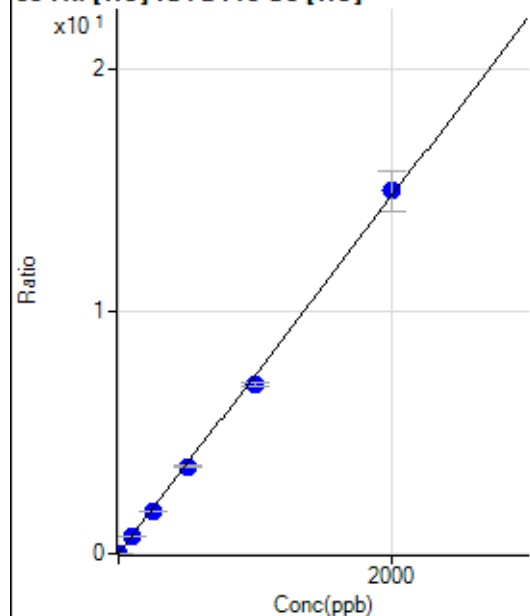
$$R = 0.9998$$

$$DL = 0.2258$$

$$BEC = 1.669$$

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	94.45	0.0021	P	10.8
2	☐	0.100					
3	☐	1.000	1.100	465.57	0.0102	P	7.7
4	☐	100.000	98.392	31990.12	0.7271	P	1.8
5	☐	250.000	238.949	79421.02	1.7628	P	1.3
6	☐	500.000	488.491	158531.35	3.6016	P	2.7
7	☐	1000.000	949.423	312674.32	6.9980	P	2.2
8	☐	2000.000	2029.628	630530.81	14.9575	P	11.3
9	☐			2394.69	0.0550	P	6.4

$$y = 0.0074 * x + 0.0021$$

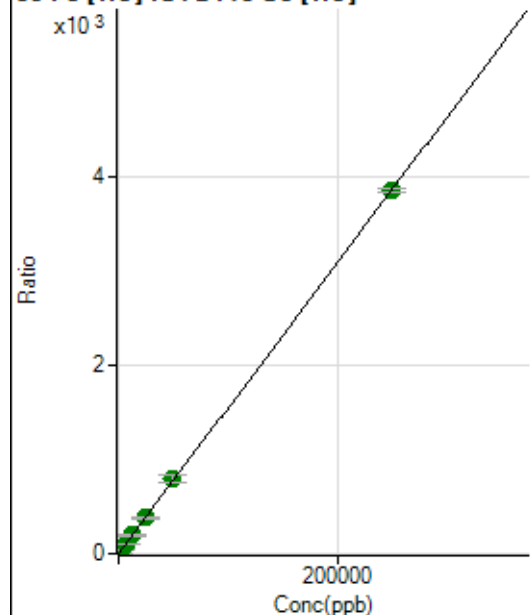
$$R = 0.9995$$

$$DL = 0.09359$$

$$BEC = 0.288$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3943.27	0.0886	P	5.6
2	☐	5.000					
3	☐	50.000	48.404	37996.64	0.8360	P	5.1
4	☐	2500.000	2569.899	1749656.68	39.7698	A	1.1
5	☐	6250.000	6211.932	4325323.39	96.0055	A	1.0
6	☐	12500.000	12606.259	8572380.75	194.7387	A	2.2
7	☐	25000.000	24534.595	16930365.89	378.9212	A	2.3
8	☐	50000.000	51499.133	33519616.49	795.2740	A	11.5
9	☐	250000.00	249741.65	168045614.8	3,856.287	A	1.0

$$y = 0.0154 * x + 0.0886$$

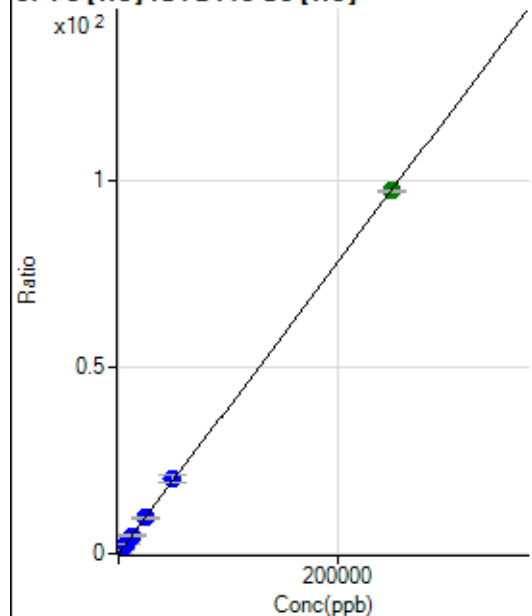
$$R = 1.0000$$

$$DL = 0.9607$$

$$BEC = 5.737$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.71	0.0035	P	5.5
2	☐	5.000					
3	☐	50.000	48.060	1009.33	0.0222	P	5.8
4	☐	2500.000	2519.200	43297.29	0.9842	P	2.6
5	☐	6250.000	6143.394	107908.95	2.3952	P	1.4
6	☐	12500.000	12550.596	215248.83	4.8896	P	2.0
7	☐	25000.000	24589.452	427893.15	9.5766	P	2.1
8	☐	50000.000	51727.303	849270.78	20.1419	P	10.9
9	☐	250000.00	249695.53	4236478.45	97.2146	A	0.5

$$y = 3.8932E-004 * x + 0.0035$$

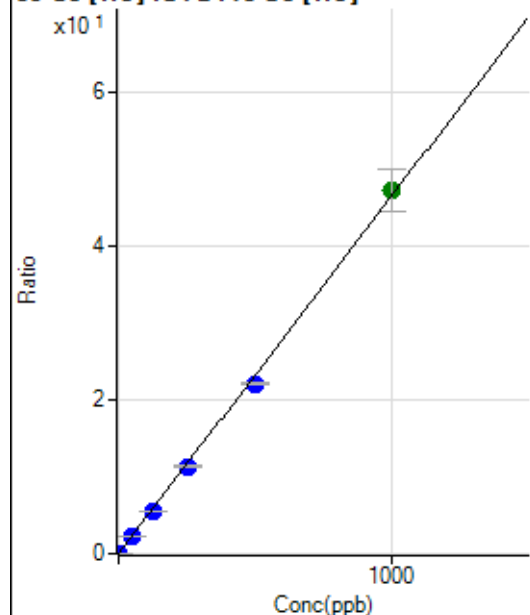
$$R = 1.0000$$

$$DL = 1.476$$

$$BEC = 8.87$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	138.89	0.0031	P	3.7
2	☐	0.100					
3	☐	1.000	0.918	2082.41	0.0458	P	4.9
4	☐	50.000	48.859	100048.07	2.2741	P	1.1
5	☐	125.000	119.122	249588.87	5.5399	P	1.1
6	☐	250.000	243.084	497472.82	11.3017	P	2.5
7	☐	500.000	475.271	987197.23	22.0937	P	1.8
8	☐	1000.000	1014.885	1988132.25	47.1749	A	11.7
9	☐			22221.24	0.5099	P	1.2

$$y = 0.0465 * x + 0.0031$$

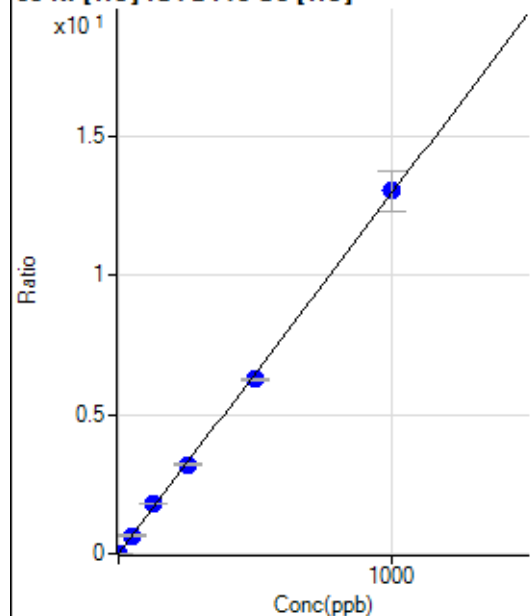
$$R = 0.9995$$

$$DL = 0.007443$$

$$BEC = 0.06713$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	118.89	0.0027	P	6.6
2	☐	0.100					
3	☐	1.000	0.909	654.47	0.0144	P	8.5
4	☐	50.000	50.450	28798.88	0.6546	P	0.7
5	☐	125.000	138.869	80966.14	1.7971	P	1.1
6	☐	250.000	247.814	141068.16	3.2049	P	2.7
7	☐	500.000	483.070	279052.33	6.2448	P	1.1
8	☐	1000.000	1007.256	548774.63	13.0183	P	11.3
9	☐			6760.63	0.1551	P	2.8

$$y = 0.0129 * x + 0.0027$$

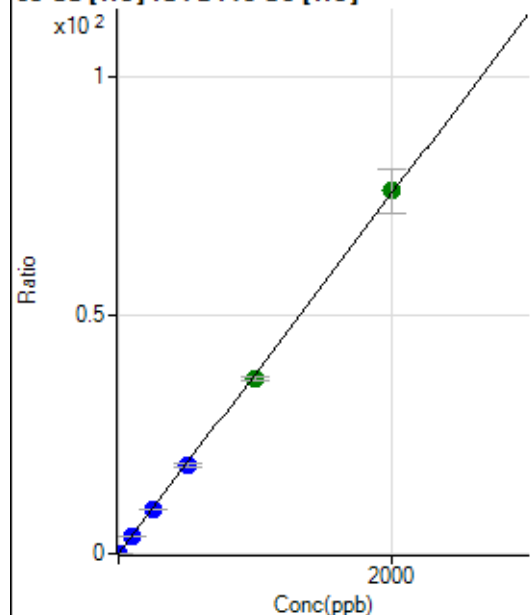
$$R = 0.9997$$

$$DL = 0.04082$$

$$BEC = 0.2067$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	367.79	0.0083	P	9.1
2	☐	0.200					
3	☐	2.000	1.768	3402.70	0.0749	P	4.4
4	☐	100.000	98.191	163047.38	3.7061	P	1.4
5	☐	250.000	245.743	417324.56	9.2629	P	0.7
6	☐	500.000	491.083	814373.49	18.5024	P	3.0
7	☐	1000.000	971.849	1635796.78	36.6079	A	1.3
8	☐	2000.000	2016.928	3200808.53	75.9655	A	12.0
9	☐			4279.62	0.0982	P	2.4

$$y = 0.0377 * x + 0.0083$$

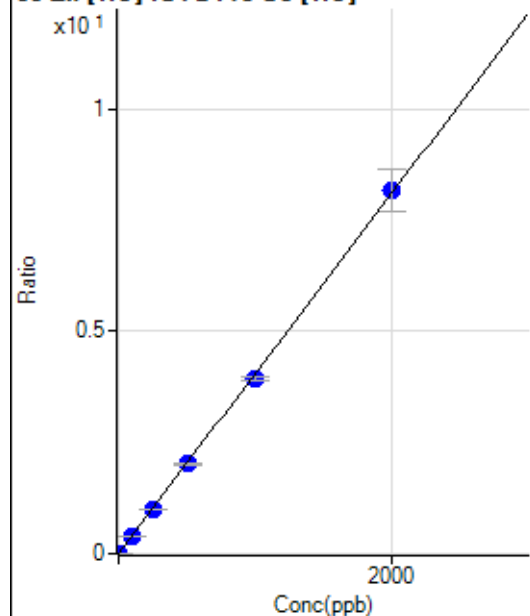
$$R = 0.9998$$

$$DL = 0.0601$$

$$BEC = 0.2194$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0008	P	9.3
2	☐	0.200					
3	☐	2.000	1.802	368.90	0.0081	P	7.9
4	☐	100.000	98.424	17576.87	0.3995	P	1.0
5	☐	250.000	243.972	44558.16	0.9890	P	1.1
6	☐	500.000	498.021	88827.76	2.0180	P	2.6
7	☐	1000.000	972.382	176016.35	3.9394	P	2.2
8	☐	2000.000	2015.136	344038.82	8.1630	P	11.6
9	☐			2269.11	0.0521	P	1.8

$$y = 0.0041 * x + 8.2382E-004$$

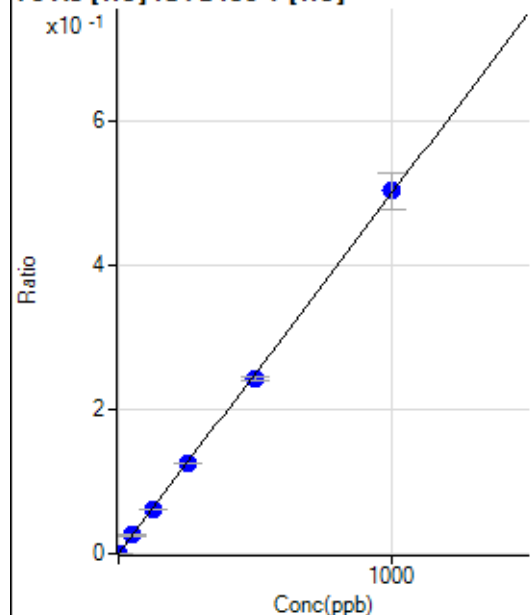
$$R = 0.9999$$

$$DL = 0.05676$$

$$BEC = 0.2034$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.17	0.0000	P	45.8
2	☐	0.100					
3	☐	1.000	0.834	120.99	0.0004	P	27.0
4	☐	50.000	50.742	6852.38	0.0254	P	3.1
5	☐	125.000	124.168	17002.50	0.0621	P	1.0
6	☐	250.000	249.719	33706.49	0.1249	P	0.6
7	☐	500.000	485.196	67031.75	0.2427	P	2.7
8	☐	1000.000	1007.539	132779.06	0.5039	P	9.8
9	☐			180.87	0.0007	P	5.8

$$y = 5.0008\text{E-}004 * x + 2.2926\text{E-}005$$

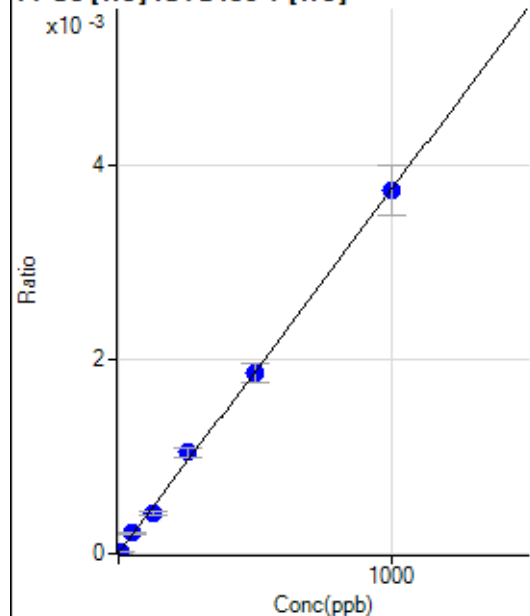
$$R = 0.9998$$

$$DL = 0.06297$$

$$BEC = 0.04585$$

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
2	☐	0.500					
3	☐	5.000	4.201	5.55	0.0000	P	65.1
4	☐	50.000	54.917	56.67	0.0002	P	5.3
5	☐	125.000	109.410	113.34	0.0004	P	12.4
6	☐	250.000	277.014	281.12	0.0010	P	9.7
7	☐	500.000	496.860	515.58	0.0019	P	10.9
8	☐	1000.000	996.524	983.39	0.0037	P	13.7
9	☐			0.00	0.0000	P	

$$y = 3.7488\text{E-}006 * x + 4.1229\text{E-}006$$

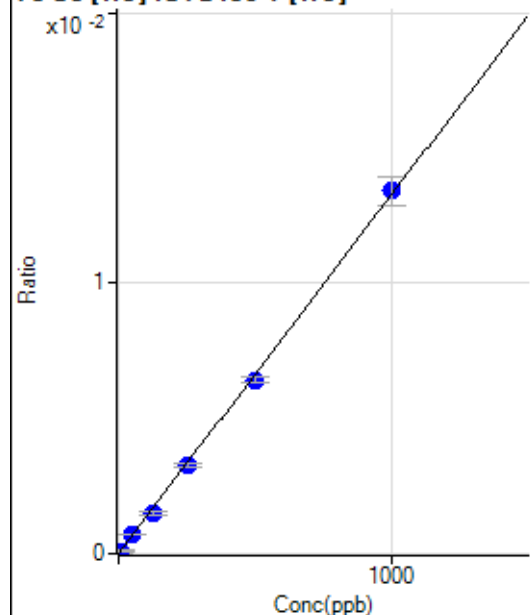
$$R = 0.9994$$

$$DL = 5.715$$

$$BEC = 1.1$$

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	2.47	0.0000	P	114.7
2	☐	0.500					
3	☐	5.000	6.753	27.16	0.0001	P	20.9
4	☐	50.000	54.189	196.30	0.0007	P	1.5
5	☐	125.000	111.962	408.65	0.0015	P	10.4
6	☐	250.000	246.931	885.84	0.0033	P	3.5
7	☐	500.000	483.038	1771.73	0.0064	P	2.9
8	☐	1000.000	1010.660	3538.14	0.0134	P	7.9
9	☐			5.55	0.0000	P	59.0

$$y = 1.3258\text{E-}005 * x + 9.1673\text{E-}006$$

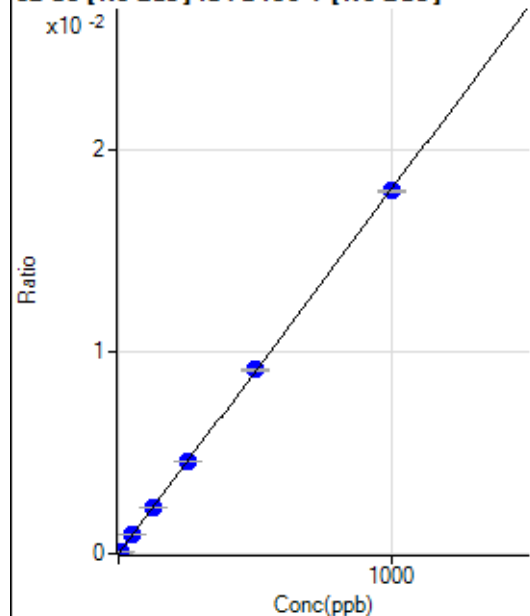
$$R = 0.9997$$

$$DL = 2.38$$

$$BEC = 0.6914$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-38.53	0.0000	P	-216.
2	☐	0.500					
3	☐	5.000	5.672	433.48	0.0001	P	3.4
4	☐	50.000	51.459	4303.05	0.0009	P	1.2
5	☐	125.000	127.685	10796.58	0.0023	P	1.9
6	☐	250.000	253.669	21789.44	0.0046	P	0.9
7	☐	500.000	505.449	44439.55	0.0091	P	1.4
8	☐	1000.000	995.946	88956.11	0.0180	P	0.8
9	☐			148.15	0.0000	P	43.9

$$y = 1.8081\text{E-}005 * x - 8.2727\text{E-}006$$

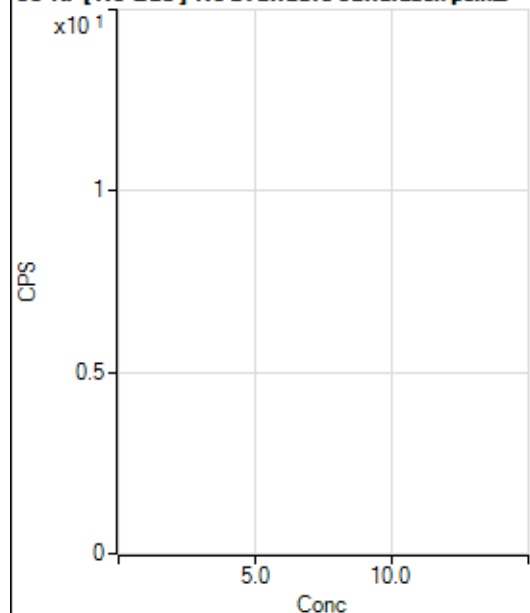
$$R = 1.0000$$

$$DL = 2.976$$

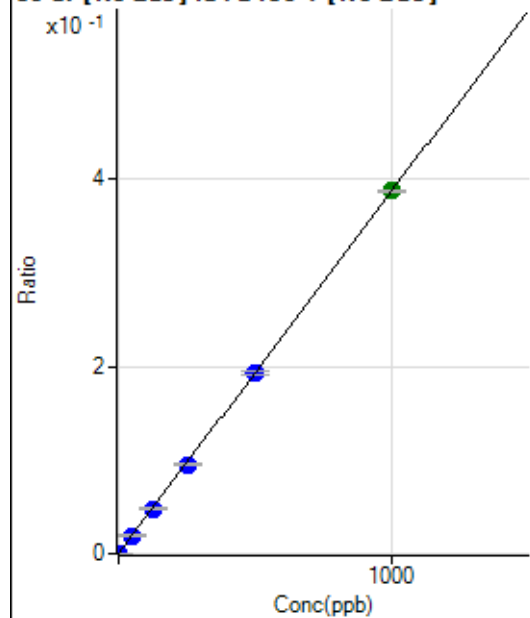
$$BEC = -0.4575$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			920.04		P	6.2
2	☐						
3	☐			901.16		P	4.5
4	☐			852.27		P	5.2
5	☐			876.72		P	3.1
6	☐			896.71		P	8.9
7	☐			877.82		P	8.1
8	☐			870.04		P	7.9
9	☐			855.60		P	9.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1366.81	0.0003	P	6.8
2	☐	0.100					
3	☐	1.000	0.719	2650.40	0.0006	P	5.8
4	☐	50.000	49.591	90792.55	0.0195	P	1.3
5	☐	125.000	123.604	225526.69	0.0481	P	1.2
6	☐	250.000	246.089	453905.60	0.0954	P	0.3
7	☐	500.000	499.285	940273.36	0.1932	P	1.7
8	☐	1000.000	1001.530	1913794.84	0.3872	A	0.8
9	☐			7941.54	0.0017	P	0.7

$$y = 3.8634E-004 * x + 2.9887E-004$$

$$R = 1.0000$$

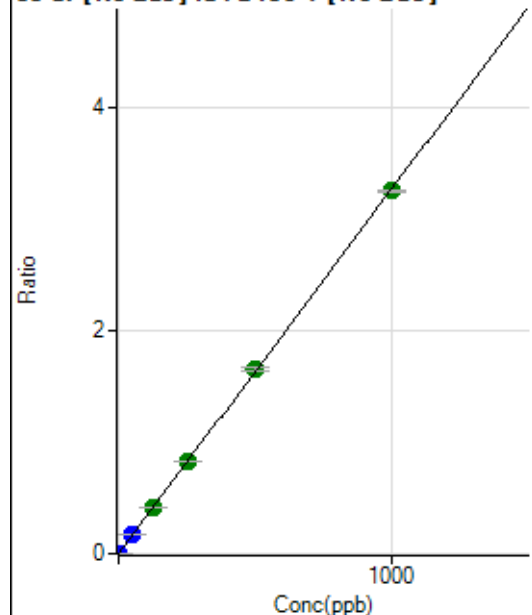
$$DL = 0.1579$$

$$BEC = 0.7736$$

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	130.56	0.0000	P	24.5
2	☐	0.100					
3	☐	1.000	0.831	12603.59	0.0027	P	1.1
4	☐	50.000	50.573	769982.25	0.1650	P	1.6
5	☐	125.000	128.212	1963357.14	0.4183	A	1.2
6	☐	250.000	254.348	3949352.57	0.8298	A	0.7
7	☐	500.000	505.585	8027858.43	1.6495	A	2.0
8	☐	1000.000	995.690	16054952.09	3.2484	A	0.3
9	☐			58799.68	0.0124	P	0.7

$$y = 0.0033 * x + 2.8838E-005$$

$$R = 1.0000$$

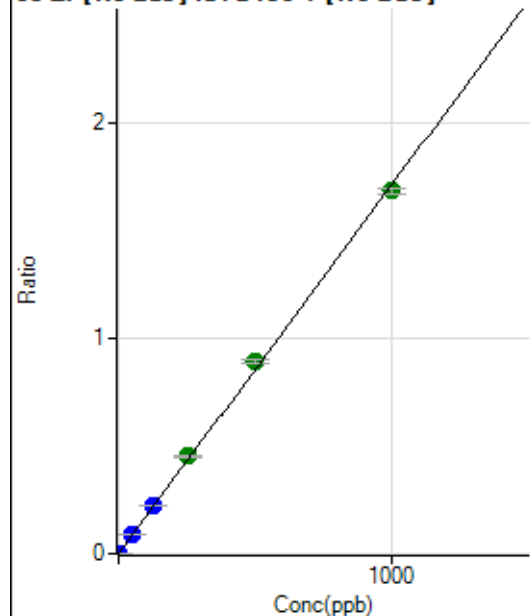
$$DL = 0.006491$$

$$BEC = 0.008839$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	238.90	0.0001	P	20.7
2	☐	0.100					
3	☐	1.000	0.873	7124.41	0.0015	P	2.8
4	☐	50.000	51.817	414867.76	0.0889	P	0.2
5	☐	125.000	129.587	1043117.46	0.2223	P	1.4
6	☐	250.000	263.915	2154049.72	0.4526	A	0.4
7	☐	500.000	522.707	4362611.68	0.8964	A	1.7
8	☐	1000.000	984.504	8343624.67	1.6882	A	1.3
9	☐			2041.92	0.0004	P	2.1

$$y = 0.0017 * x + 5.2028E-005$$

$$R = 0.9995$$

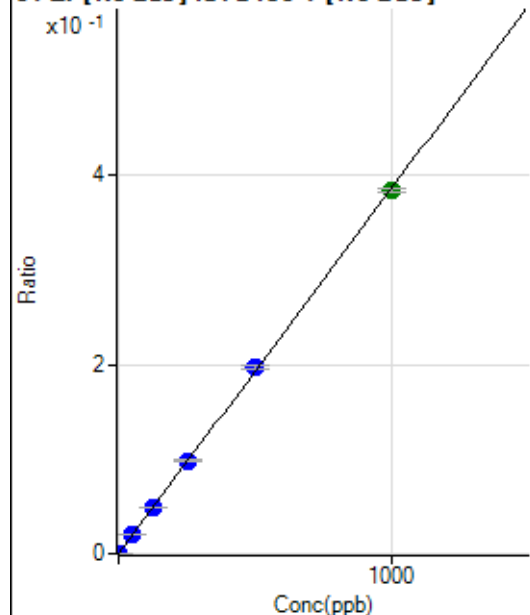
$$DL = 0.01886$$

$$BEC = 0.03034$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	52.3
2	☐	0.100					
3	☐	1.000	0.884	1616.84	0.0004	P	9.0
4	☐	50.000	50.600	91157.44	0.0195	P	0.5
5	☐	125.000	127.494	230939.52	0.0492	P	1.0
6	☐	250.000	254.954	468241.54	0.0984	P	1.0
7	☐	500.000	509.915	957669.05	0.1968	P	1.5
8	☐	1000.000	993.462	1894613.37	0.3833	A	1.0
9	☐			488.93	0.0001	P	5.6

$$y = 3.8586E-004 * x + 1.0769E-005$$

$$R = 0.9999$$

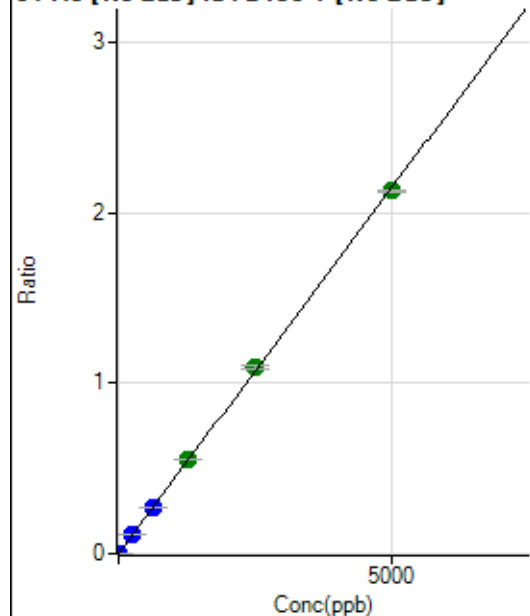
$$DL = 0.04375$$

$$BEC = 0.02791$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	158.34	0.0000	P	16.7
2	☐	0.500					
3	☐	5.000	4.523	9081.23	0.0020	P	1.8
4	☐	250.000	252.473	505523.51	0.1083	P	1.0
5	☐	625.000	634.876	1278352.01	0.2724	P	1.1
6	☐	1250.000	1286.031	2625697.26	0.5517	A	0.7
7	☐	2500.000	2555.837	5336190.66	1.0964	A	1.8
8	☐	5000.000	4961.716	10519547.55	2.1285	A	0.6
9	☐			4311.99	0.0009	P	1.6

$$y = 4.2897E-004 * x + 3.4831E-005$$

$$R = 0.9999$$

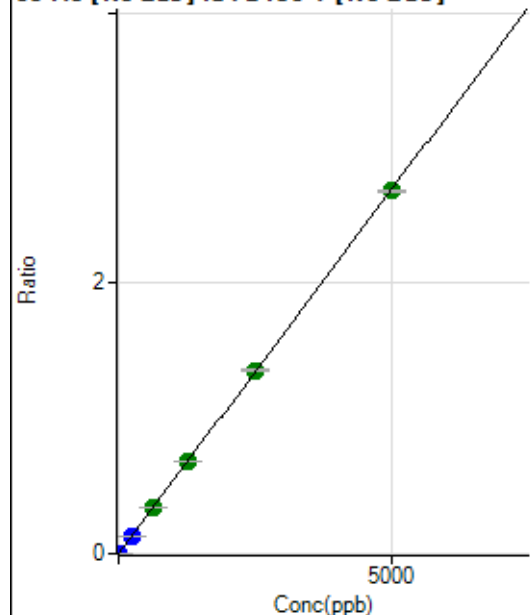
$$DL = 0.04077$$

$$BEC = 0.0812$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.56	0.0000	P	60.2
2	☐	0.500					
3	☐	5.000	4.676	11605.44	0.0025	P	2.4
4	☐	250.000	249.831	627680.98	0.1345	P	0.3
5	☐	625.000	639.653	1616373.26	0.3444	A	0.4
6	☐	1250.000	1271.095	3256834.82	0.6843	A	0.9
7	☐	2500.000	2521.068	6605891.77	1.3573	A	1.6
8	☐	5000.000	4982.369	13257172.95	2.6824	A	0.5
9	☐			5834.85	0.0012	P	6.5

$$y = 5.3837\text{E-}004 * x + 6.7661\text{E-}006$$

$$R = 1.0000$$

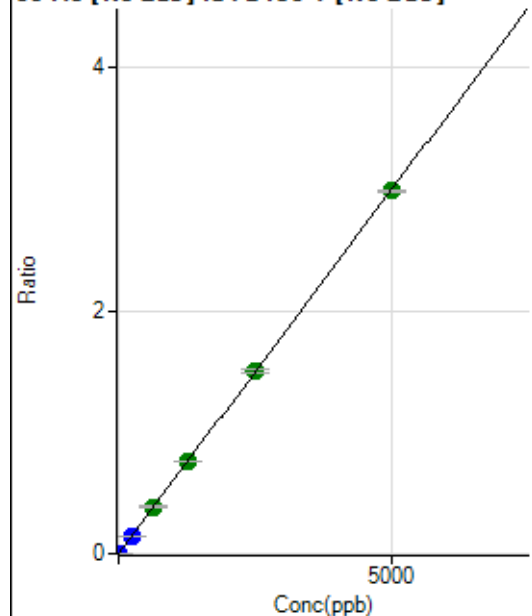
$$DL = 0.0227$$

$$BEC = 0.01257$$

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	75.01	0.0000	P	33.5
2	☐	0.500					
3	☐	5.000	4.725	13095.74	0.0028	P	3.3
4	☐	250.000	247.700	692547.73	0.1484	P	1.3
5	☐	625.000	641.708	1804438.60	0.3845	A	2.0
6	☐	1250.000	1268.274	3616427.12	0.7599	A	0.7
7	☐	2500.000	2518.954	7345035.15	1.5092	A	2.0
8	☐	5000.000	4983.981	14758266.30	2.9861	A	0.3
9	☐			7602.44	0.0016	P	1.0

$$y = 5.9913\text{E-}004 * x + 1.6591\text{E-}005$$

$$R = 1.0000$$

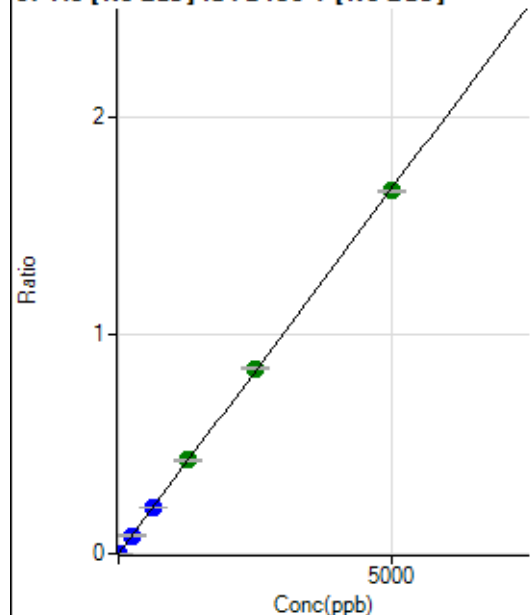
$$DL = 0.0278$$

$$BEC = 0.02769$$

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	138.90	0.0000	P	28.3
2	☐	0.500					
3	☐	5.000	4.798	7510.73	0.0016	P	6.9
4	☐	250.000	249.869	389929.62	0.0836	P	0.9
5	☐	625.000	628.580	986391.90	0.2102	P	1.2
6	☐	1250.000	1279.891	2036494.40	0.4279	A	1.1
7	☐	2500.000	2542.418	4137101.09	0.8500	A	1.1
8	☐	5000.000	4970.878	8213434.04	1.6618	A	0.6
9	☐			3786.81	0.0008	P	4.8

$$y = 3.3431\text{E-}004 * x + 3.0308\text{E-}005$$

$$R = 0.9999$$

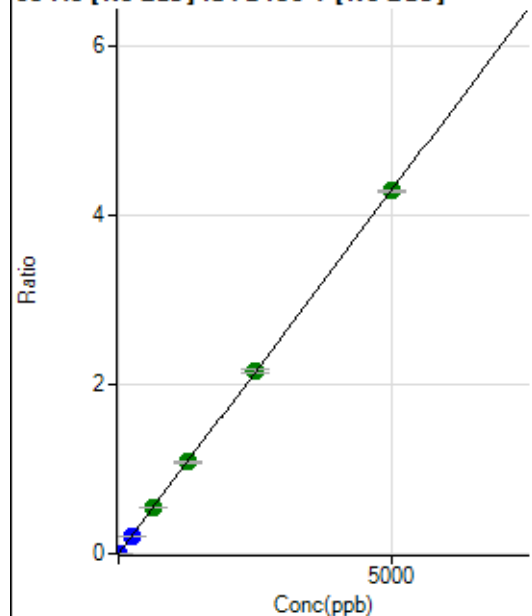
$$DL = 0.07695$$

$$BEC = 0.09066$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.89	0.0000	P	72.9
2	☐	0.500					
3	☐	5.000	4.706	18580.05	0.0040	P	0.1
4	☐	250.000	249.784	999984.94	0.2143	P	0.5
5	☐	625.000	636.555	2563213.84	0.5461	A	0.7
6	☐	1250.000	1259.925	5144178.63	1.0809	A	1.9
7	☐	2500.000	2506.088	10464285.22	2.1500	A	1.7
8	☐	5000.000	4993.041	21171206.38	4.2836	A	0.2
9	☐			9206.32	0.0019	P	3.2

$$y = 8.5792\text{E-}004 * x + 3.0947\text{E-}006$$

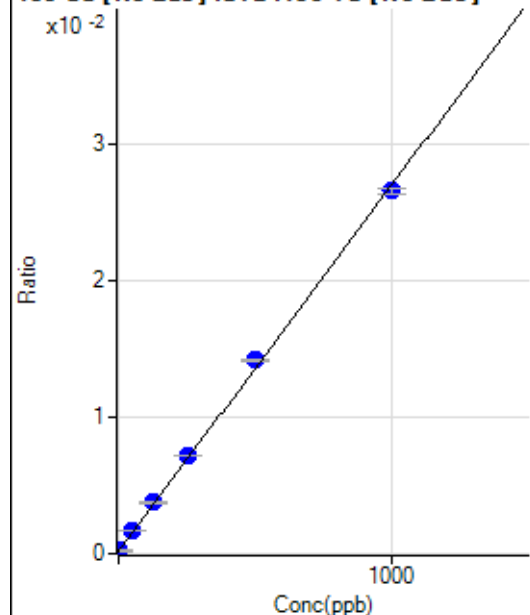
$$R = 1.0000$$

$$DL = 0.007886$$

$$BEC = 0.003607$$

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	716.72	0.0002	P	4.3
2	☐	0.100					
3	☐	1.000	1.985	950.08	0.0002	P	15.2
4	☐	50.000	54.736	7104.95	0.0016	P	1.7
5	☐	125.000	133.558	16591.51	0.0038	P	4.7
6	☐	250.000	261.552	32604.20	0.0072	P	0.4
7	☐	500.000	521.810	66456.59	0.0142	P	1.0
8	☐	1000.000	984.899	130515.11	0.0266	P	1.5
9	☐			908.41	0.0002	P	6.7

$$y = 2.6835E-005 * x + 1.6794E-004$$

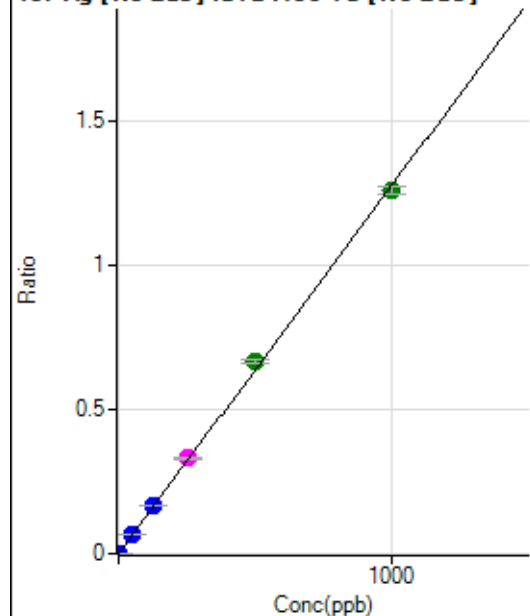
$$R = 0.9996$$

$$DL = 0.8052$$

$$BEC = 6.258$$

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	69.45	0.0000	P	32.9
2	☐	0.100					
3	☐	1.000	1.082	5982.15	0.0014	P	1.3
4	☐	50.000	53.431	295213.28	0.0680	P	1.4
5	☐	125.000	131.168	738001.39	0.1669	P	0.9
6	☐	250.000	259.244	1496698.95	0.3299	M	0.7
7	☐	500.000	520.760	3107202.46	0.6627	A	2.0
8	☐	1000.000	986.366	6158723.49	1.2551	A	2.0
9	☐			675.05	0.0001	P	12.8

$$y = 0.0013 * x + 1.6436E-005$$

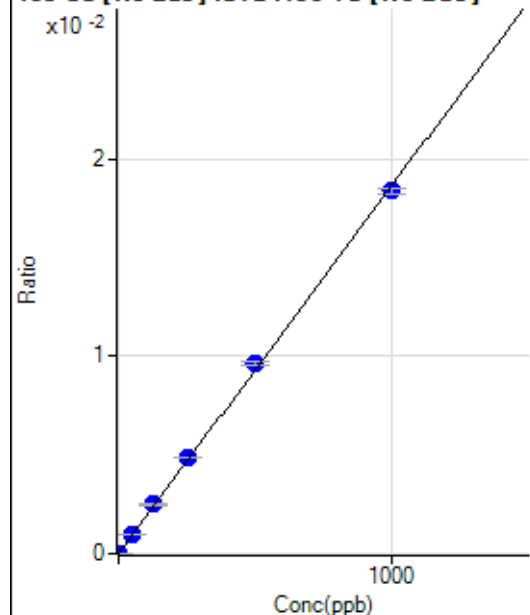
$$R = 0.9996$$

$$DL = 0.01276$$

$$BEC = 0.01292$$

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	11.11	0.0000	P	48.6
2	☐	0.100					
3	☐	1.000	0.934	86.12	0.0000	P	5.0
4	☐	50.000	53.881	4367.48	0.0010	P	2.9
5	☐	125.000	133.667	11017.21	0.0025	P	1.2
6	☐	250.000	261.038	22067.01	0.0049	P	1.5
7	☐	500.000	518.276	45274.61	0.0097	P	1.4
8	☐	1000.000	986.825	90194.92	0.0184	P	1.4
9	☐			23.61	0.0000	P	20.3

$$y = 1.8623\text{E-}005 * x + 2.6419\text{E-}006$$

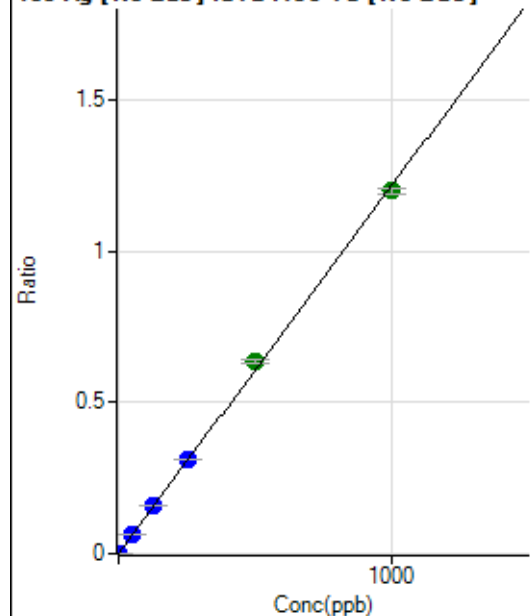
$$R = 0.9997$$

$$DL = 0.2067$$

$$BEC = 0.1419$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	83.34	0.0000	P	35.1
2	☐	0.100					
3	☐	1.000	1.041	5518.04	0.0013	P	5.7
4	☐	50.000	52.801	278441.47	0.0641	P	2.3
5	☐	125.000	130.091	698606.31	0.1580	P	1.4
6	☐	250.000	254.796	1403987.19	0.3095	P	0.9
7	☐	500.000	522.637	2976530.19	0.6348	A	1.5
8	☐	1000.000	986.706	5880668.06	1.1984	A	1.3
9	☐			636.16	0.0001	P	2.9

$$y = 0.0012 * x + 1.9770\text{E-}005$$

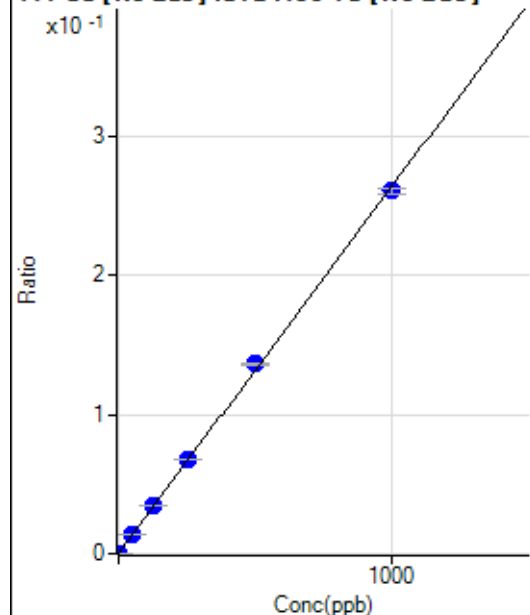
$$R = 0.9996$$

$$DL = 0.01715$$

$$BEC = 0.01628$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	503.65	0.0001	P	3.3
2	☐	0.100					
3	☐	1.000	1.187	1849.31	0.0004	P	6.9
4	☐	50.000	53.717	61942.65	0.0143	P	0.8
5	☐	125.000	131.954	154195.30	0.0349	P	1.6
6	☐	250.000	257.716	308528.04	0.0680	P	0.9
7	☐	500.000	516.143	638093.18	0.1361	P	1.8
8	☐	1000.000	988.944	1278918.19	0.2606	P	1.5
9	☐			677.70	0.0001	P	8.1

$$y = 2.6343\text{E-}004 * x + 1.1799\text{E-}004$$

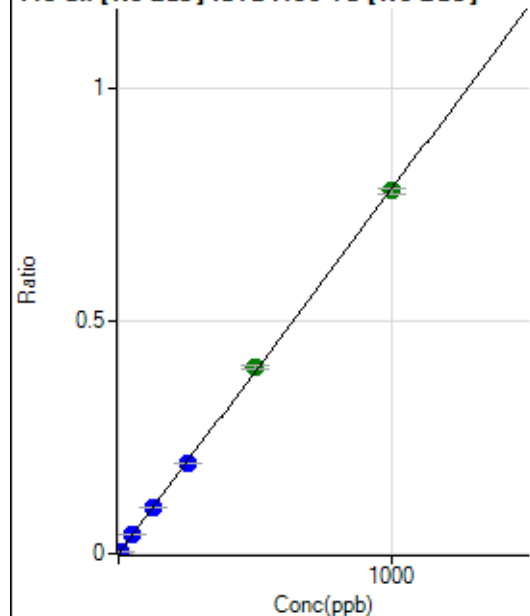
$$R = 0.9998$$

$$DL = 0.04378$$

$$BEC = 0.4479$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0000	P	29.2
2	☐	0.500					
3	☐	5.000	5.095	17350.70	0.0040	P	2.5
4	☐	50.000	51.592	175667.60	0.0405	P	2.1
5	☐	125.000	127.255	440992.40	0.0997	P	1.1
6	☐	250.000	248.737	884315.35	0.1949	P	0.5
7	☐	500.000	509.536	1872086.50	0.3993	A	2.1
8	☐	1000.000	995.186	3826153.91	0.7797	A	1.6
9	☐			2208.61	0.0005	P	2.1

$$y = 7.8347\text{E-}004 * x + 4.7299\text{E-}005$$

$$R = 0.9999$$

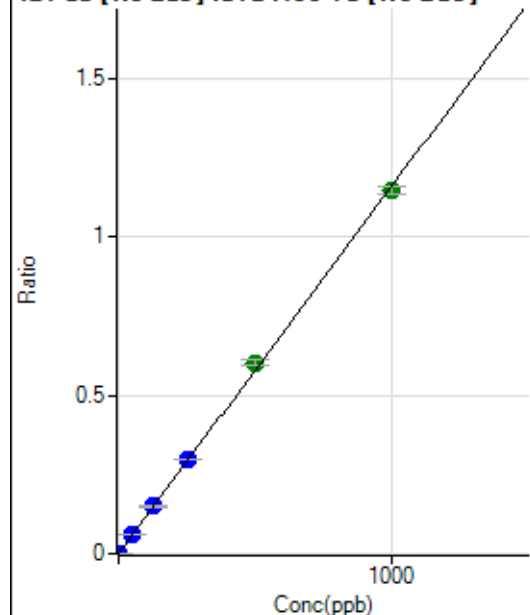
$$DL = 0.05289$$

$$BEC = 0.06037$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.67	0.0000	P	43.7
2	☐	0.200					
3	☐	2.000	1.935	9678.91	0.0023	P	3.2
4	☐	50.000	52.008	261854.40	0.0603	P	1.7
5	☐	125.000	128.428	658496.61	0.1489	P	1.5
6	☐	250.000	254.356	1338281.01	0.2950	P	0.1
7	☐	500.000	520.301	2829100.35	0.6034	A	2.6
8	☐	1000.000	988.232	5623408.59	1.1461	A	2.2
9	☐			6579.72	0.0014	P	0.9

$$y = 0.0012 * x + 9.8438E-006$$

$$R = 0.9997$$

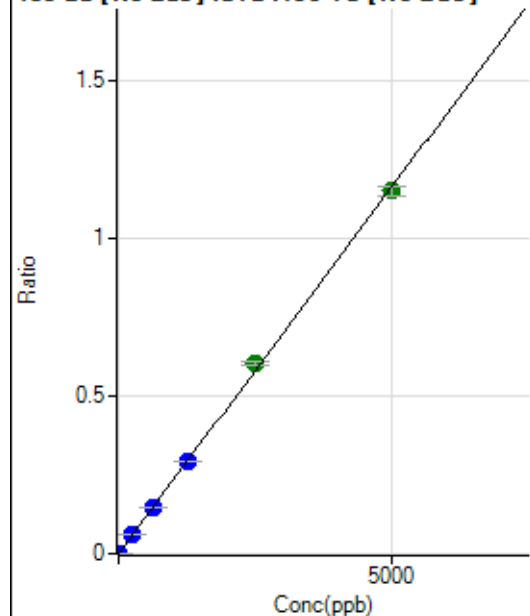
$$DL = 0.01114$$

$$BEC = 0.008488$$

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	22.22	0.0000	P	60.8
2	☐	1.000					
3	☐	10.000	9.899	9893.04	0.0023	P	2.3
4	☐	250.000	256.757	258720.92	0.0596	P	1.8
5	☐	625.000	635.882	652565.43	0.1476	P	1.1
6	☐	1250.000	1256.197	1322850.66	0.2916	P	0.4
7	☐	2500.000	2589.338	2818116.62	0.6010	A	2.2
8	☐	5000.000	4952.084	5639888.32	1.1495	A	2.5
9	☐			566.71	0.0001	P	22.2

$$y = 2.3211E-004 * x + 5.3225E-006$$

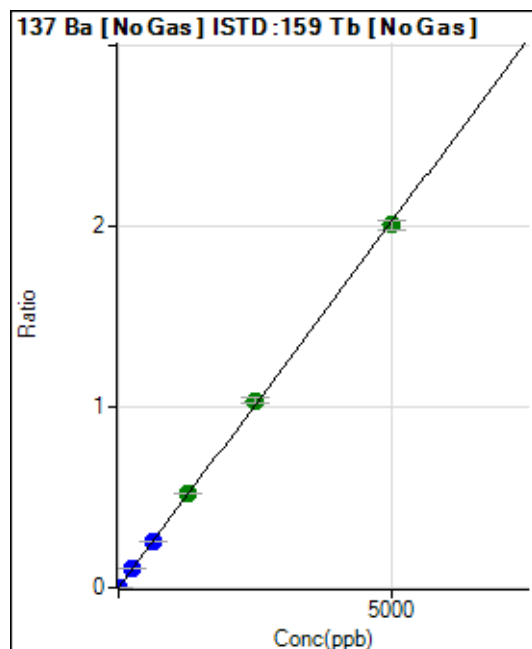
$$R = 0.9998$$

$$DL = 0.04182$$

$$BEC = 0.02293$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44.45	0.0000	P	23.0
2	☐	1.000					
3	☐	10.000	10.002	17456.63	0.0041	P	3.2
4	☐	250.000	256.471	451222.33	0.1040	P	2.0
5	☐	625.000	637.611	1142443.66	0.2584	P	1.6
6	☐	1250.000	1281.046	2355433.49	0.5192	A	0.2
7	☐	2500.000	2562.529	4869588.65	1.0385	A	2.5
8	☐	5000.000	4959.074	9861196.32	2.0098	A	2.4
9	☐			952.86	0.0002	P	8.6

$$y = 4.0527\text{E-}004 * x + 1.0319\text{E-}005$$

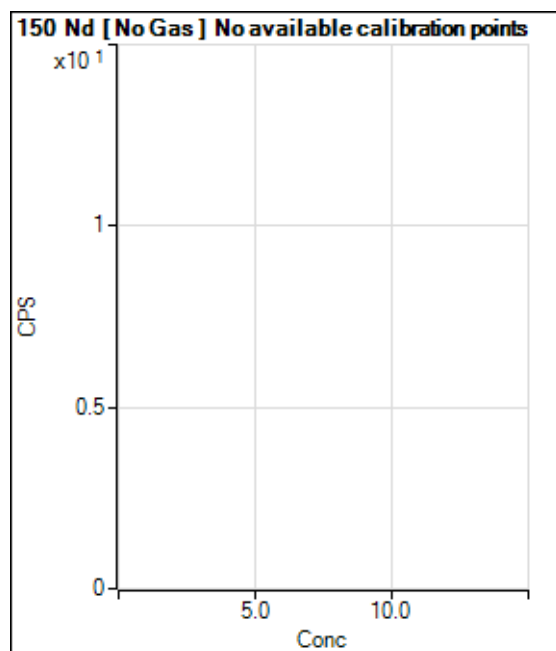
$$R = 0.9999$$

$$DL = 0.0176$$

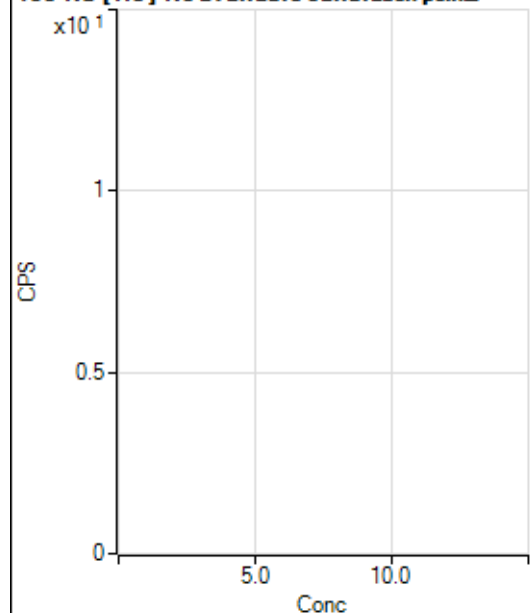
$$BEC = 0.02546$$

Weight: <None>

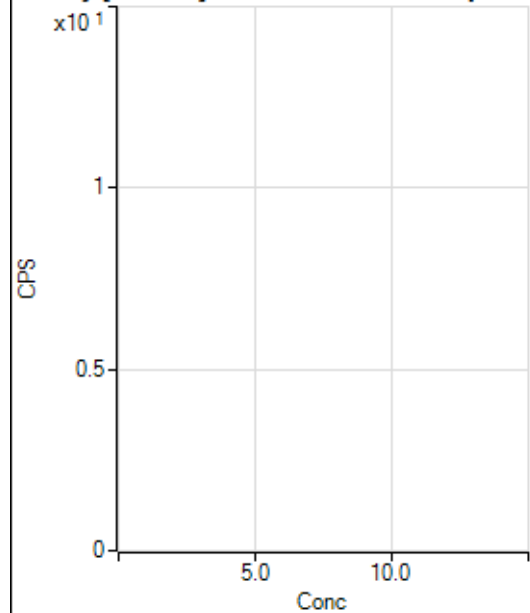
Min Conc: 0



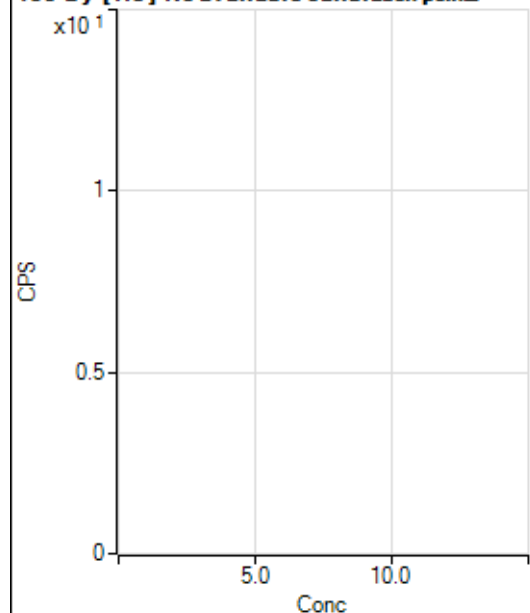
	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			4.45		P	86.6
2	☐						
3	☐			8.89		P	86.6
4	☐			20.00		P	33.4
5	☐			28.89		P	26.6
6	☐			64.45		P	6.0
7	☐			115.56		P	8.8
8	☐			142.23		P	23.6
9	☐			86.67		P	26.6

150 Nd [He] No available calibration points

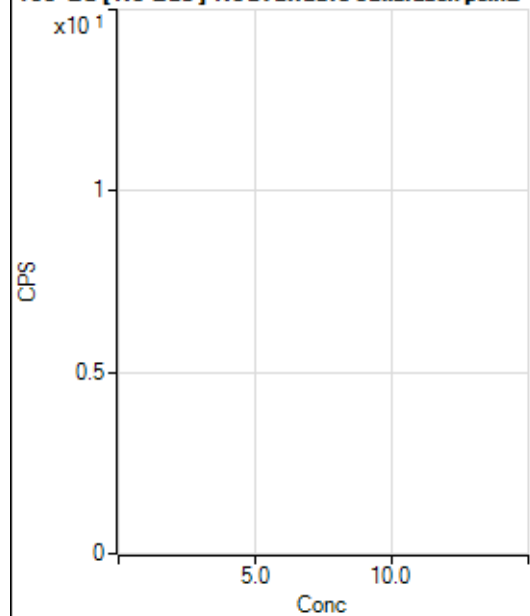
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			1.11		P	173.2
4	☐			2.22		P	173.2
5	☐			1.11		P	173.2
6	☐			1.11		P	173.2
7	☐			4.44		P	43.4
8	☐			10.00		P	33.3
9	☐			23.33		P	14.3

156 Dy [No Gas] No available calibration points

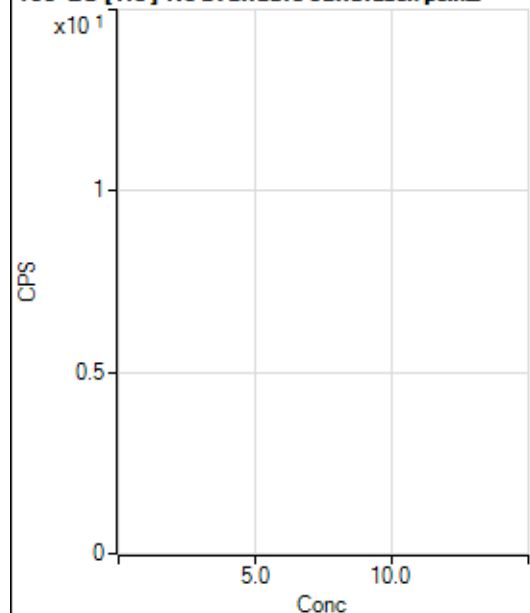
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.33		P	100.0
2	☐						
3	☐			22.22		P	78.1
4	☐			19.45		P	24.7
5	☐			22.22		P	21.6
6	☐			13.89		P	91.6
7	☐			63.89		P	61.6
8	☐			30.56		P	41.7
9	☐			41.67		P	52.9

156 Dy [He] No available calibration points

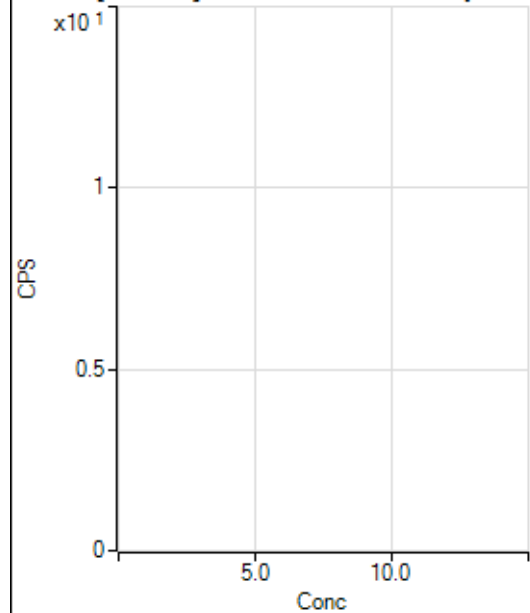
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	86.6
2	☐						
3	☐			1.11		P	173.2
4	☐			4.44		P	114.6
5	☐			2.22		P	86.6
6	☐			2.22		P	86.6
7	☐			2.22		P	173.2
8	☐			8.89		P	21.6
9	☐			8.89		P	108.3

160 Gd [No Gas] Noavailable calibration poin_

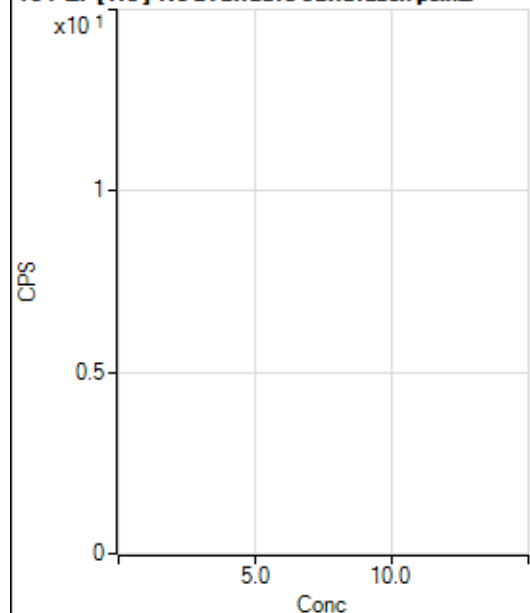
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			16.67		P	50.0
2	☐						
3	☐			27.78		P	34.6
4	☐			27.78		P	17.3
5	☐			25.00		P	33.3
6	☐			27.78		P	34.6
7	☐			44.45		P	28.7
8	☐			30.56		P	83.3
9	☐			58.34		P	37.8

160 Gd [He] No available calibration points

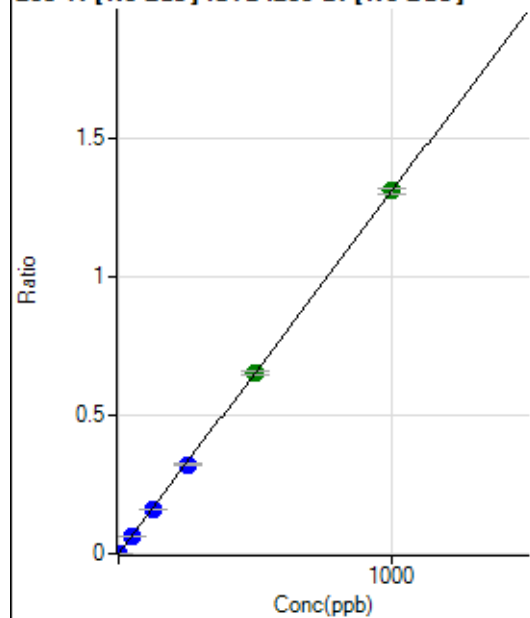
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.45		P	86.6
2	☐						
3	☐			3.33		P	0.0
4	☐			3.33		P	0.0
5	☐			4.45		P	86.6
6	☐			5.56		P	91.6
7	☐			15.56		P	12.4
8	☐			14.45		P	48.0
9	☐			15.56		P	121.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			19.44		P	89.2
2	☐						
3	☐			16.67		P	50.0
4	☐			27.78		P	17.3
5	☐			38.89		P	12.4
6	☐			25.00		P	88.2
7	☐			19.44		P	65.5
8	☐			22.22		P	57.3
9	☐			19.44		P	65.5

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			2.22		P	86.6
4	☐			7.78		P	49.5
5	☐			7.78		P	49.5
6	☐			3.33		P	0.0
7	☐			8.89		P	21.6
8	☐			2.22		P	86.6
9	☐			8.89		P	78.1

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	122.23	0.0001	P	18.6
2	☐	0.100					
3	☐	1.000	0.878	2825.46	0.0012	P	1.5
4	☐	50.000	48.730	153742.81	0.0639	P	1.0
5	☐	125.000	121.012	387390.98	0.1587	P	1.4
6	☐	250.000	246.294	792493.30	0.3229	P	0.8
7	☐	500.000	499.450	1710084.30	0.6547	A	2.0
8	☐	1000.000	1001.764	3547546.08	1.3132	A	1.3
9	☐			361.14	0.0001	P	5.5

$$y = 0.0013 * x + 5.1641E-005$$

$$R = 1.0000$$

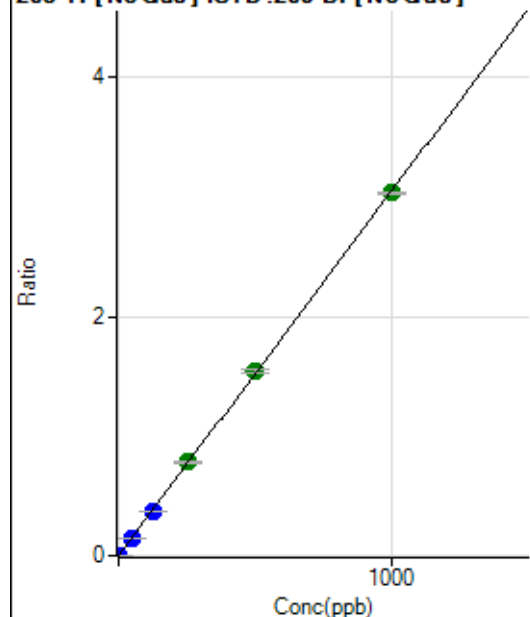
$$DL = 0.02198$$

$$BEC = 0.0394$$

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	208.34	0.0001	P	8.0
2	☐	0.100					
3	☐	1.000	0.926	6843.84	0.0029	P	2.4
4	☐	50.000	49.684	364664.76	0.1516	P	0.4
5	☐	125.000	123.307	918445.93	0.3762	P	1.0
6	☐	250.000	256.726	1921966.00	0.7831	A	0.9
7	☐	500.000	506.016	4031324.31	1.5434	A	1.8
8	☐	1000.000	995.538	8203080.48	3.0365	A	0.4
9	☐			713.95	0.0003	P	13.5

$$y = 0.0030 * x + 8.8617E-005$$

$$R = 0.9999$$

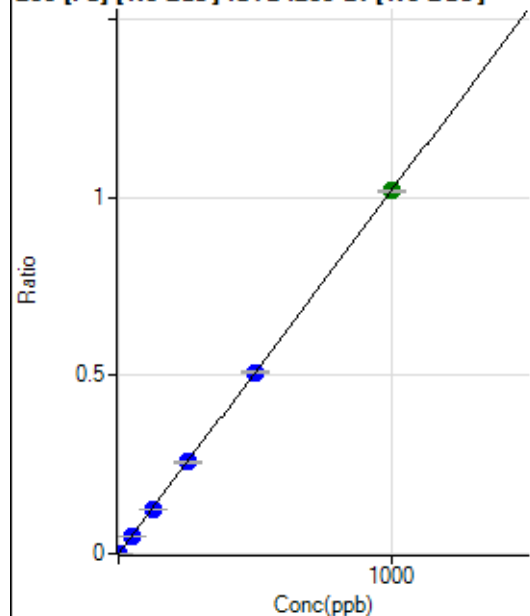
$$DL = 0.006993$$

$$BEC = 0.02905$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.34	0.0001	P	25.9
2	☐	0.100					
3	☐	1.000	1.005	2591.09	0.0011	P	3.2
4	☐	50.000	49.981	122713.02	0.0510	P	0.3
5	☐	125.000	123.581	307731.62	0.1260	P	1.2
6	☐	250.000	251.804	630103.68	0.2567	P	1.1
7	☐	500.000	499.956	1331288.49	0.5097	P	1.4
8	☐	1000.000	999.749	2753135.56	1.0191	A	0.2
9	☐			3978.53	0.0017	P	5.7

$$y = 0.0010 * x + 7.8351E-005$$

$$R = 1.0000$$

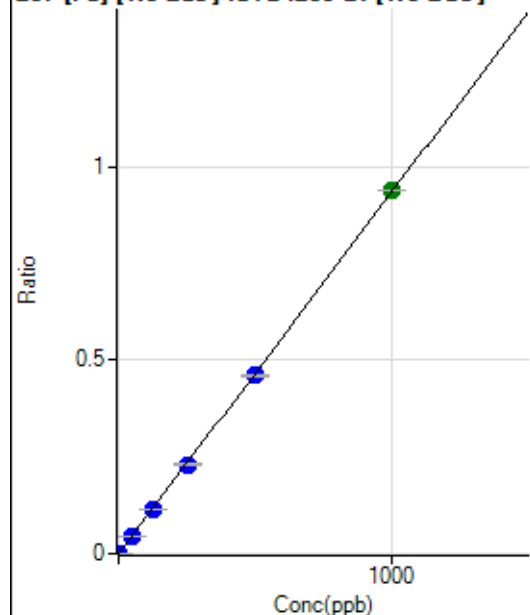
$$DL = 0.05984$$

$$BEC = 0.07687$$

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	172.23	0.0001	P	12.2
2	☐	0.100					
3	☐	1.000	0.884	2109.50	0.0009	P	4.5
4	☐	50.000	49.003	110135.63	0.0458	P	0.4
5	☐	125.000	121.342	276595.24	0.1133	P	0.8
6	☐	250.000	247.336	566549.05	0.2308	P	0.7
7	☐	500.000	493.217	1202145.40	0.4602	P	1.7
8	☐	1000.000	1004.565	2532188.46	0.9373	A	0.2
9	☐			3667.33	0.0015	P	4.6

$$y = 9.3298\text{E-}004 * x + 7.3330\text{E-}005$$

$$R = 1.0000$$

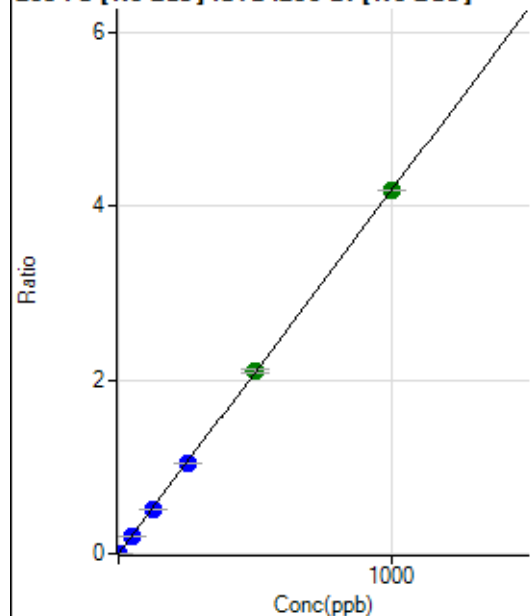
$$DL = 0.0288$$

$$BEC = 0.0786$$

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	740.77	0.0003	P	9.4
2	☐	0.100					
3	☐	1.000	0.938	9966.65	0.0042	P	1.2
4	☐	50.000	49.269	496693.74	0.2065	P	0.0
5	☐	125.000	122.876	1256338.62	0.5146	P	1.3
6	☐	250.000	248.415	2552531.33	1.0400	P	0.5
7	☐	500.000	503.910	5509528.66	2.1093	A	1.6
8	☐	1000.000	998.743	11293291.63	4.1803	A	0.1
9	☐			16669.69	0.0069	P	1.3

$$y = 0.0042 * x + 3.1512\text{E-}004$$

$$R = 1.0000$$

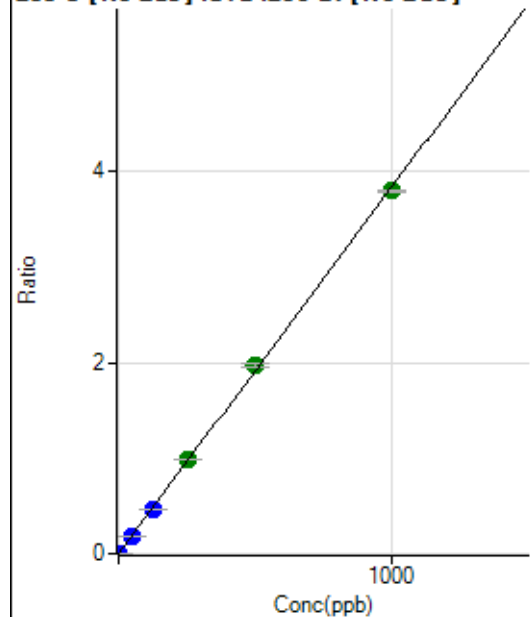
$$DL = 0.02121$$

$$BEC = 0.07529$$

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	25.00	0.0000	P	37.1
2	☐	0.100					
3	☐	1.000	0.930	8389.35	0.0036	P	2.5
4	☐	50.000	49.212	453275.04	0.1885	P	0.7
5	☐	125.000	121.873	1139512.17	0.4667	P	1.1
6	☐	250.000	258.607	2430697.60	0.9904	A	0.3
7	☐	500.000	515.604	5157521.30	1.9745	A	1.9
8	☐	1000.000	990.477	10246988.08	3.7931	A	0.7
9	☐			330.57	0.0001	P	19.6

$$y = 0.0038 * x + 1.0717E-005$$

$$R = 0.9998$$

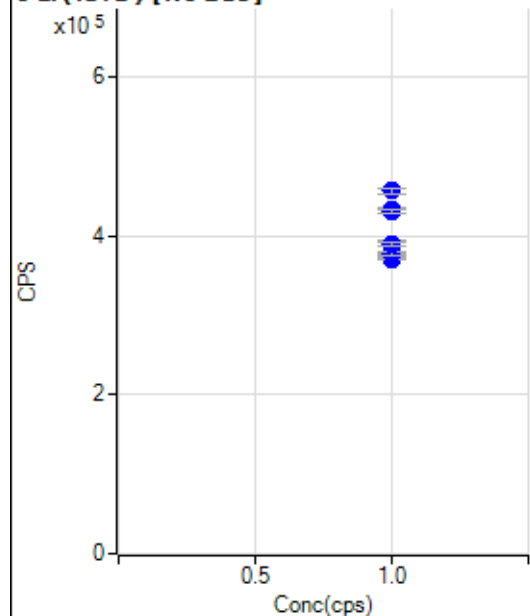
$$DL = 0.003113$$

$$BEC = 0.002798$$

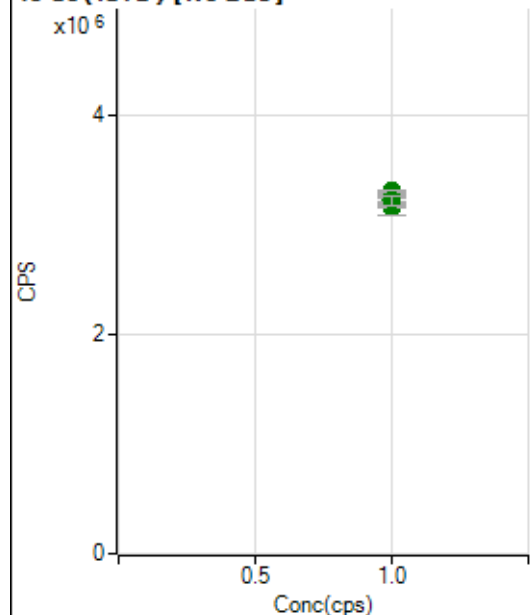
Weight: <None>

Min Conc: 0

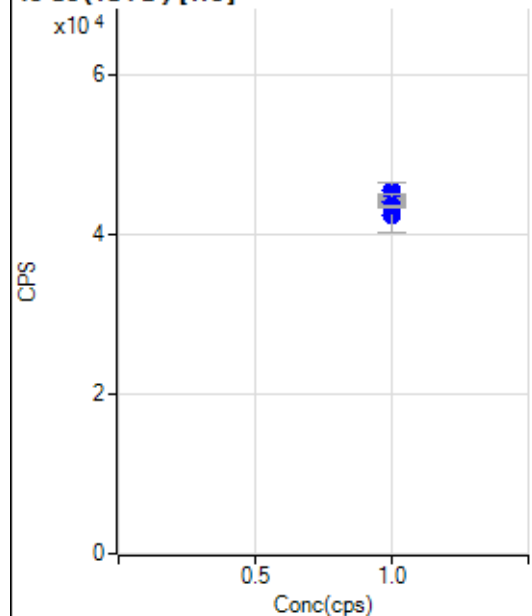
6 Li (ISTD) [No Gas]



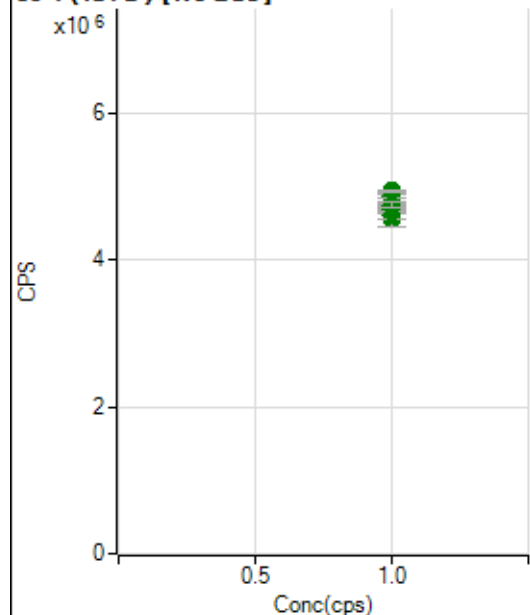
	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		386330.09		P	3.9
2	☐	1.000					
3	☐	1.000		370673.55		P	0.9
4	☐	1.000		376327.01		P	0.8
5	☐	1.000		376498.39		P	1.2
6	☐	1.000		389393.12		P	0.9
7	☐	1.000		432642.90		P	1.5
8	☐	1.000		456341.44		P	1.4
9	☐	1.000		429974.92		P	1.3

45 Sc (ISTD) [No Gas]

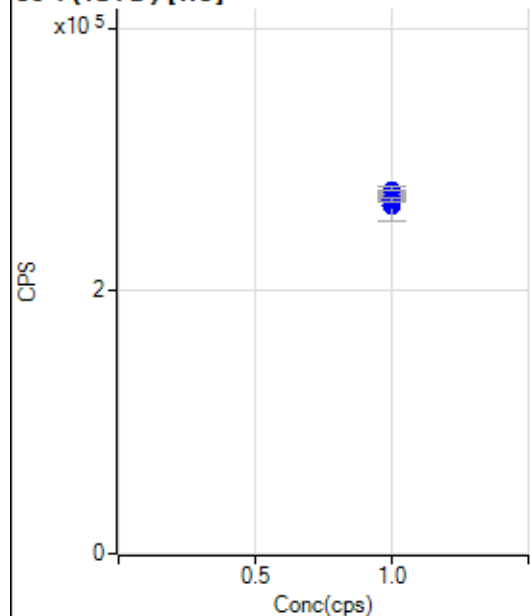
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3164937.55		A	5.0
2	☐	1.000					
3	☐	1.000		3178297.10		A	1.0
4	☐	1.000		3239904.54		A	1.1
5	☐	1.000		3259199.49		A	0.6
6	☐	1.000		3253149.16		A	0.5
7	☐	1.000		3303260.49		A	1.3
8	☐	1.000		3312547.82		A	0.4
9	☐	1.000		3222649.08		A	2.4

45 Sc (ISTD) [He]

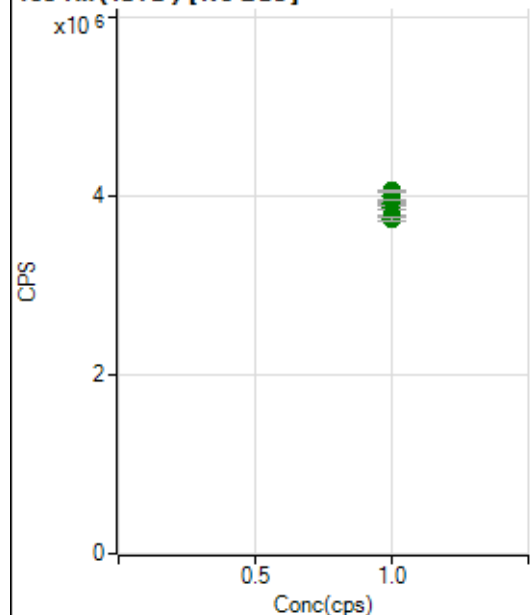
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		44513.84		P	0.2
2	☐	1.000					
3	☐	1.000		45518.21		P	4.4
4	☐	1.000		43996.98		P	0.7
5	☐	1.000		45054.41		P	0.5
6	☐	1.000		44035.72		P	2.4
7	☐	1.000		44689.96		P	1.4
8	☐	1.000		42479.37		P	10.2
9	☐	1.000		43579.77		P	0.9

89 Y (ISTD) [No Gas]

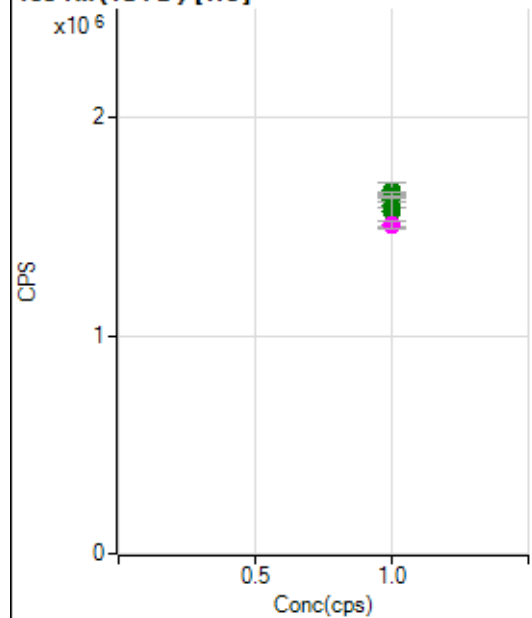
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4563728.61		A	5.1
2	☐	1.000					
3	☐	1.000		4598156.32		A	1.5
4	☐	1.000		4666461.70		A	1.1
5	☐	1.000		4693802.15		A	1.5
6	☐	1.000		4759274.62		A	0.3
7	☐	1.000		4867703.26		A	1.3
8	☐	1.000		4942375.45		A	0.5
9	☐	1.000		4753602.15		A	1.2

89 Y (ISTD) [He]

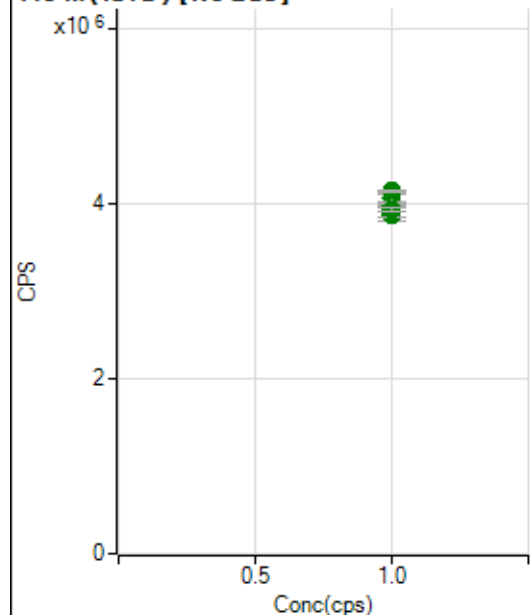
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		269155.81		P	0.3
2	☐	1.000					
3	☐	1.000		274727.44		P	4.0
4	☐	1.000		269794.33		P	0.6
5	☐	1.000		273730.32		P	0.7
6	☐	1.000		269874.78		P	1.8
7	☐	1.000		276335.29		P	2.0
8	☐	1.000		265046.76		P	8.9
9	☐	1.000		269042.50		P	1.1

103 Rh (ISTD) [No Gas]

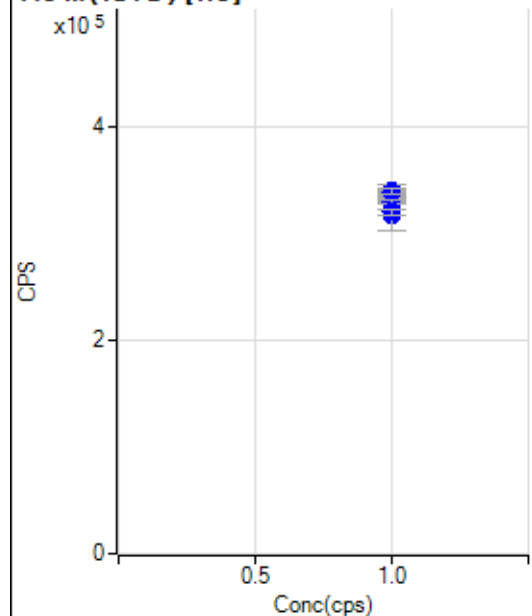
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3872719.44		A	4.5
2	☐	1.000					
3	☐	1.000		3841608.90		A	0.4
4	☐	1.000		3923380.34		A	0.6
5	☐	1.000		3911119.40		A	0.9
6	☐	1.000		3950720.14		A	0.2
7	☐	1.000		3989080.64		A	2.2
8	☐	1.000		4050109.51		A	0.4
9	☐	1.000		3728494.44		A	1.3

103 Rh (ISTD) [He]

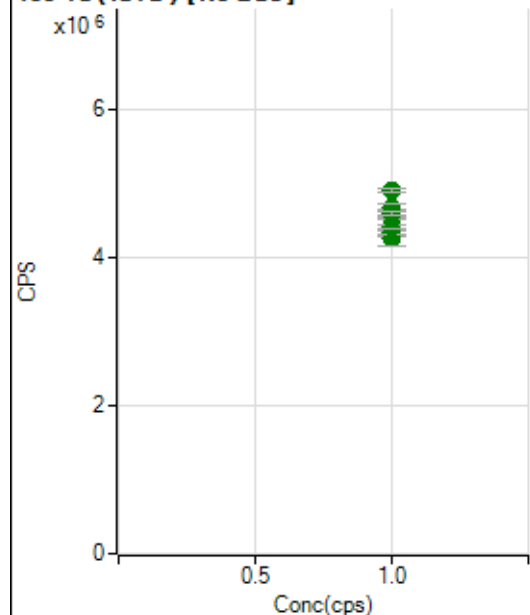
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1646030.15		A	0.5
2	☐	1.000					
3	☐	1.000		1663326.22		A	4.3
4	☐	1.000		1621395.48		A	0.9
5	☐	1.000		1635207.20		A	0.8
6	☐	1.000		1596910.60		A	1.8
7	☐	1.000		1640267.32		A	1.6
8	☐	1.000		1566733.60		A	8.9
9	☐	1.000		1511006.07		M	2.2

115 In (ISTD) [No Gas]

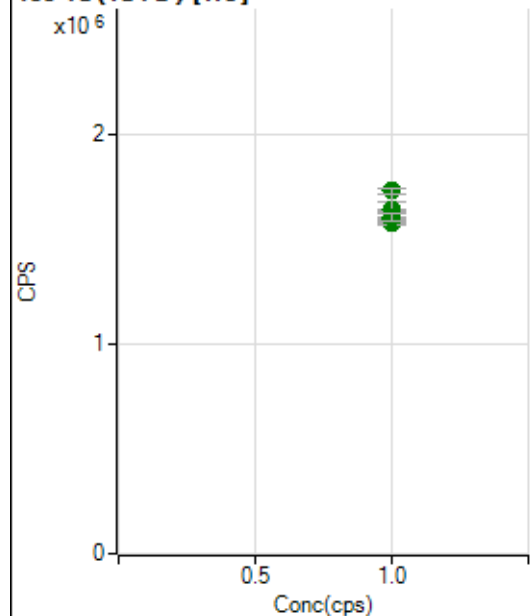
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3885707.34		A	5.0
2	☐	1.000					
3	☐	1.000		3876371.79		A	1.3
4	☐	1.000		3934756.89		A	0.8
5	☐	1.000		3979921.55		A	1.0
6	☐	1.000		3975325.09		A	1.2
7	☐	1.000		4071207.88		A	2.2
8	☐	1.000		4143594.21		A	0.5
9	☐	1.000		3926436.34		A	1.1

115 In (ISTD) [He]

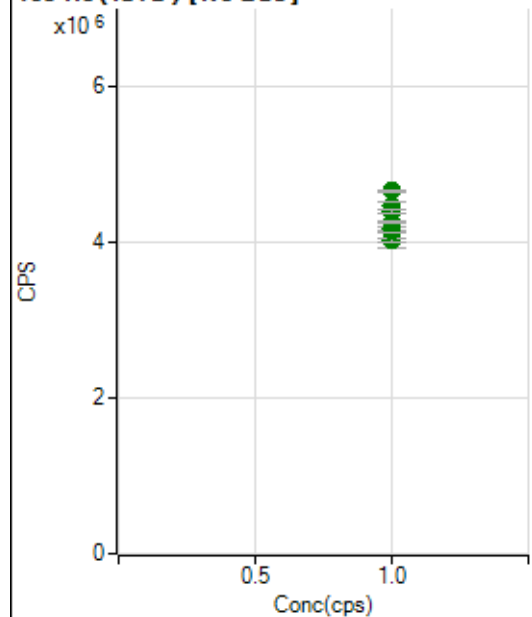
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		334163.93		P	0.7
2	☐	1.000					
3	☐	1.000		340239.71		P	4.1
4	☐	1.000		331711.76		P	1.2
5	☐	1.000		339308.10		P	0.5
6	☐	1.000		330400.05		P	1.7
7	☐	1.000		339577.43		P	1.9
8	☐	1.000		317405.81		P	9.4
9	☐	1.000		320122.01		P	1.7

159 Tb (ISTD) [No Gas]

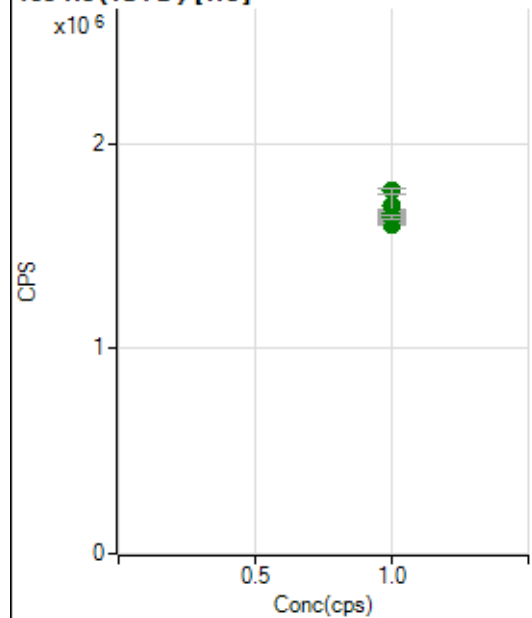
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4270831.67		A	5.6
2	☐	1.000					
3	☐	1.000		4295761.71		A	0.5
4	☐	1.000		4341448.82		A	1.3
5	☐	1.000		4421474.41		A	1.2
6	☐	1.000		4536781.67		A	0.5
7	☐	1.000		4689853.02		A	1.6
8	☐	1.000		4907561.52		A	1.2
9	☐	1.000		4612427.92		A	1.0

159 Tb (ISTD) [He]

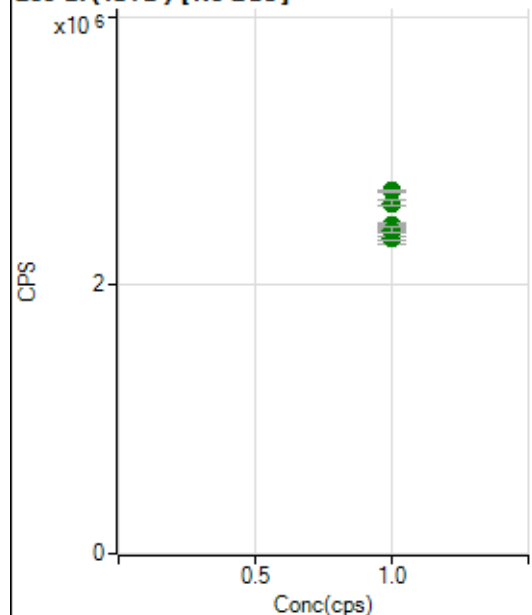
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1572964.57		A	1.1
2	☐	1.000					
3	☐	1.000		1637839.18		A	4.8
4	☐	1.000		1597702.42		A	1.3
5	☐	1.000		1632818.60		A	0.2
6	☐	1.000		1619693.45		A	2.3
7	☐	1.000		1729856.64		A	1.7
8	☐	1.000		1645069.47		A	8.9
9	☐	1.000		1600763.88		A	2.4

165 Ho (ISTD) [No Gas]

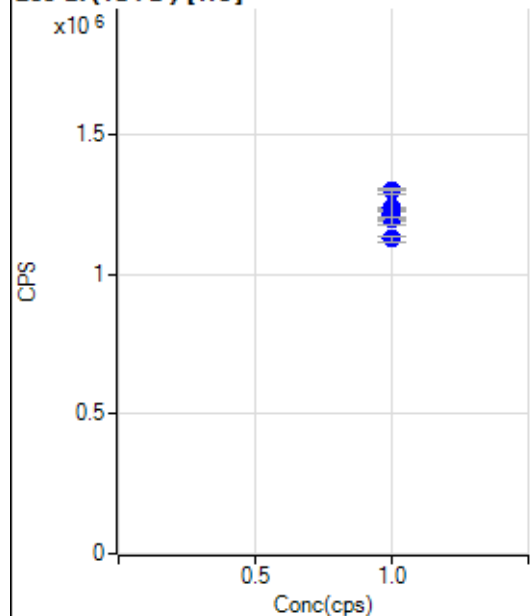
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4034266.15		A	5.7
2	☐	1.000					
3	☐	1.000		4027766.23		A	1.6
4	☐	1.000		4145096.14		A	0.6
5	☐	1.000		4169560.08		A	1.7
6	☐	1.000		4259817.42		A	0.3
7	☐	1.000		4475967.51		A	1.8
8	☐	1.000		4663000.11		A	0.4
9	☐	1.000		4395216.07		A	1.2

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1607670.46		A	0.6
2	☐	1.000					
3	☐	1.000		1641599.56		A	3.8
4	☐	1.000		1620374.04		A	0.8
5	☐	1.000		1668113.07		A	1.4
6	☐	1.000		1656871.68		A	2.0
7	☐	1.000		1769458.58		A	1.3
8	☐	1.000		1699115.29		A	9.4
9	☐	1.000		1643738.27		A	0.9

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2356104.55		A	4.0
2	☐	1.000					
3	☐	1.000		2349638.31		A	0.9
4	☐	1.000		2405067.93		A	0.6
5	☐	1.000		2441794.77		A	1.6
6	☐	1.000		2454379.11		A	0.6
7	☐	1.000		2612307.04		A	1.3
8	☐	1.000		2701524.44		A	0.3
9	☐	1.000		2409281.16		A	2.0

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1201057.13		P	0.7
2	☐	1.000					
3	☐	1.000		1215676.27		P	4.4
4	☐	1.000		1202213.07		P	0.6
5	☐	1.000		1227447.10		P	0.3
6	☐	1.000		1220372.03		P	2.0
7	☐	1.000		1300153.51		P	1.3
8	☐	1.000		1240195.49		P	9.6
9	☐	1.000		1126884.41		P	2.1

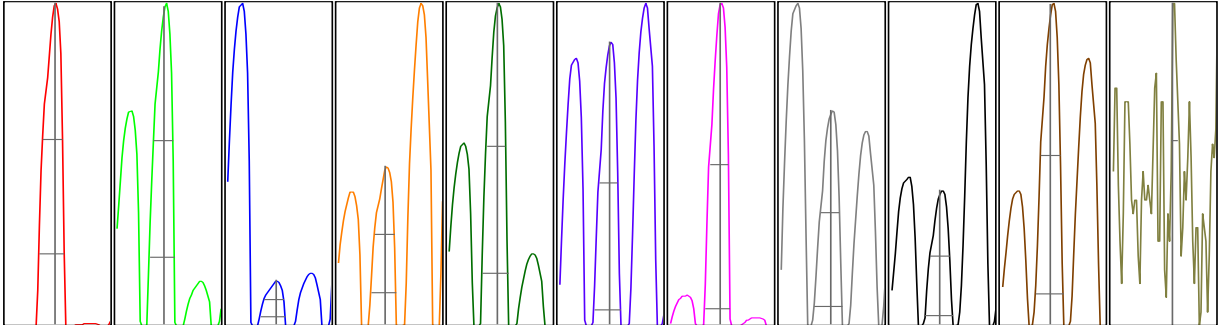
US EPA Tune Check Sample Report

Batch Folder D:\P8031219-MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	2904	3.34	5.00	
24	42414	2.58	5.00	
25	6151	2.69	5.00	
26	7634	2.54	5.00	
59	39919	2.18	5.00	
113	4719	1.93	5.00	
115	56124	2.48	5.00	
206	10088	1.95	5.00	
207	9271	2.17	5.00	
208	21744	2.29	5.00	
220	1	8.09		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	2778	2869	3047	2915	2912
24	40971	42068	43995	42324	42713
25	5951	6066	6394	6140	6207
26	7366	7587	7910	7654	7653
59	39016	39435	41320	39970	39856
113	4619	4708	4868	4685	4713
115	54662	55714	58428	56079	55738
206	9852	9982	10375	10161	10071
207	9019	9174	9566	9291	9309
208	21200	21459	22516	21676	21867
220	1	1	2	1	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	5346	8.95	8.9 - 9.1		0.723	0.900	
24	78761	23.90	23.9 - 24.1		0.713	0.900	
25	11005	24.95	24.9 - 25.1		0.714	0.900	
26	13118	25.90	25.9 - 26.1		0.708	0.900	
59	73395	58.95	58.9 - 59.1		0.734	0.900	
113	8986	113.00	112.9 - 113.1		0.768	0.900	
115	107731	115.00	114.9 - 115.1		0.728	0.900	
206	18364	206.00	205.9 - 206.1		0.795	0.900	
207	16571	206.95	206.9 - 207.1		0.776	0.900	
208	39528	207.95	207.9 - 208.1		0.791	0.900	
220	2	220.30	-				

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	11.6	V	Deflect	15.2	V
Extract 2	-250.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-120	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	200	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	7442	2.13	
89	3280	2.39	
205	8316	1.17	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	7580	7610	7460	7267	7292
89	3330	3394	3231	3219	3225
205	8342	8470	8273	8283	8214

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	11.6	V	Deflect	3.2	V
Extract 2	-250.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-120	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			