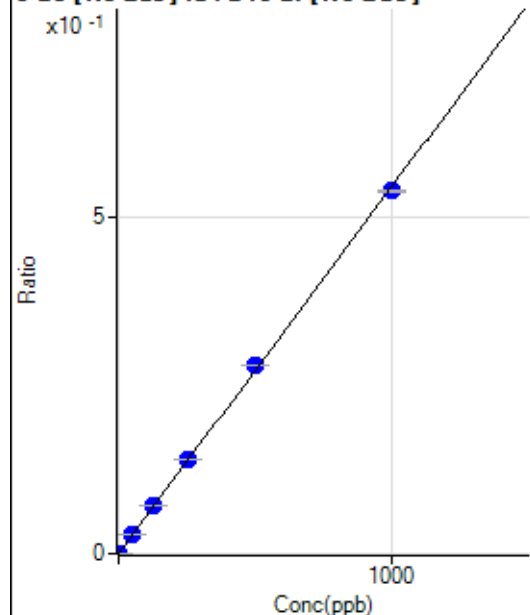


Calibration for 003CALB.d

Batch Folder: D:\ICP-MS Data\P7101219MS.b\
 Analysis File: P7101219MS.batch.bin
 DA Date-Time: 2019-10-13 20:50:09
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-10-12 14:11:43
2	004CALS.d	S01	2019-10-12 14:15:16
3	005CALS.d	S02	2019-10-12 14:19:44
4	006CALS.d	S03	2019-10-12 14:23:38
5	007CALS.d	S04	2019-10-12 14:27:33
6	008CALS.d	S05	2019-10-12 14:31:22
7	009CALS.d	S06	2019-10-12 14:35:10
8	010CALS.d	S07	2019-10-12 14:38:56
9	011CALS.d	S08	2019-10-12 14:42:40

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0000	P	30.3
2	☐	0.100	0.076	198.15	0.0001	P	23.5
3	☐	1.000	0.920	1809.42	0.0005	P	4.4
4	☐	50.000	53.708	97688.83	0.0293	P	1.8
5	☐	125.000	133.114	221982.47	0.0726	P	0.9
6	☐	250.000	257.688	382644.09	0.1405	P	0.7
7	☐	500.000	514.422	720080.17	0.2805	P	0.3
8	☐	1000.000	989.667	1339431.37	0.5396	P	0.4
9	☐			514.84	0.0002	P	16.1

$$y = 5.4522\text{E-}004 * x + 1.6342\text{E-}005$$

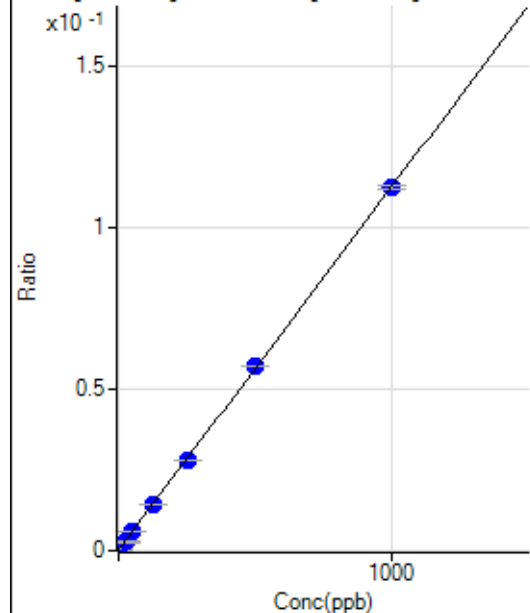
$$R = 0.9998$$

$$DL = 0.02722$$

$$BEC = 0.02997$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	880.62	0.0003	P	5.7
2	☐	2.500	1.947	1641.81	0.0005	P	0.4
3	☐	25.000	21.602	9372.70	0.0027	P	4.9
4	☐	50.000	50.490	19760.79	0.0059	P	2.9
5	☐	125.000	124.824	43644.56	0.0143	P	1.3
6	☐	250.000	246.689	76122.80	0.0280	P	1.3
7	☐	500.000	506.504	146650.44	0.0571	P	0.4
8	☐	1000.000	997.659	278670.67	0.1123	P	0.9
9	☐			13211.76	0.0051	P	4.8

$$y = 1.1227\text{E-}004 * x + 2.5891\text{E-}004$$

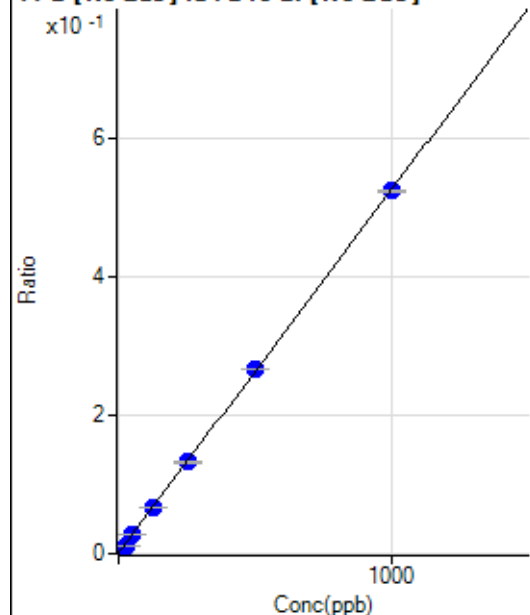
$$R = 1.0000$$

$$DL = 0.3924$$

$$BEC = 2.306$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3964.55	0.0012	P	1.1
2	☐	2.500	2.109	7810.67	0.0023	P	4.0
3	☐	25.000	21.120	42767.12	0.0122	P	2.2
4	☐	50.000	50.538	92295.41	0.0277	P	2.1
5	☐	125.000	126.130	205930.16	0.0673	P	1.3
6	☐	250.000	249.379	359500.58	0.1320	P	1.4
7	☐	500.000	506.447	685215.25	0.2669	P	0.9
8	☐	1000.000	996.862	1301282.30	0.5242	P	0.5
9	☐			62661.43	0.0243	P	7.7

$$y = 5.2471\text{E-}004 * x + 0.0012$$

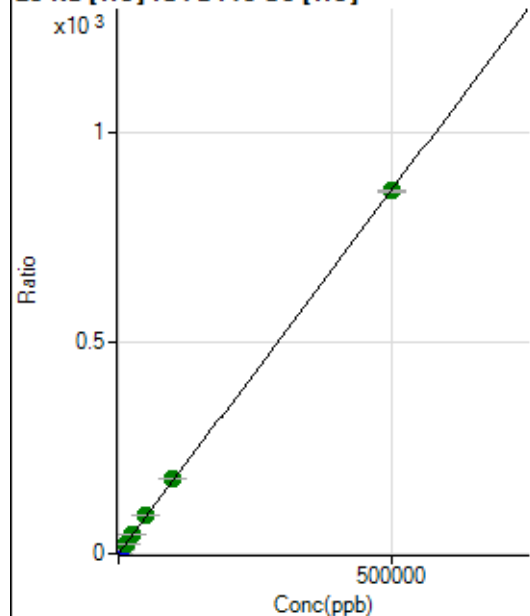
$$R = 1.0000$$

$$DL = 0.07279$$

$$BEC = 2.221$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10559.63	0.0494	P	2.5
2	☐	50.000	45.250	27334.13	0.1275	P	1.7
3	☐	500.000	466.202	185221.52	0.8533	P	0.4
4	☐	5000.000	5262.089	1855652.04	9.1222	P	1.0
5	☐	12500.000	13274.298	4161252.13	22.9367	A	0.2
6	☐	25000.000	26268.139	7413337.40	45.3405	A	0.4
7	☐	50000.000	53128.195	14479481.57	91.6521	A	1.2
8	☐	100000.00	102603.98	28295184.66	176.9573	A	0.8
9	☐	500000.00	499081.03	167782963.4	860.5555	A	0.6

$$y = 0.0017 * x + 0.0494$$

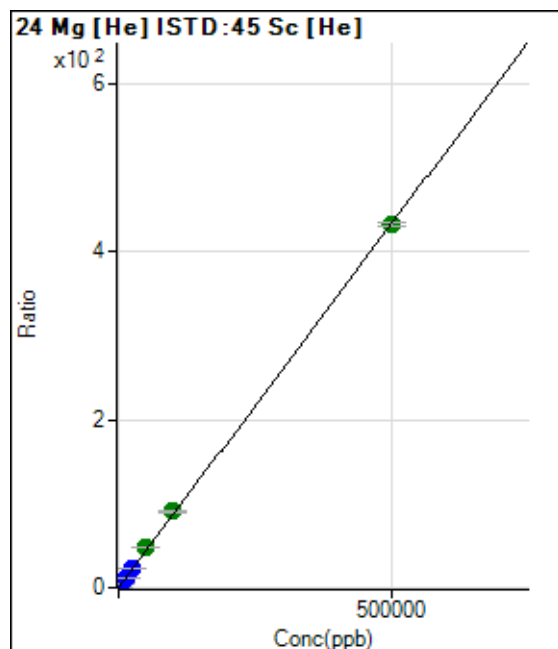
$$R = 1.0000$$

$$DL = 2.148$$

$$BEC = 28.68$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	941.73	0.0044	P	2.8
2	☐	50.000	47.565	9773.00	0.0456	P	0.7
3	☐	500.000	498.767	94653.07	0.4360	P	0.7
4	☐	5000.000	5457.142	961529.06	4.7269	P	1.0
5	☐	12500.000	13645.712	2143147.68	11.8131	P	0.5
6	☐	25000.000	26806.439	3793661.46	23.2020	P	0.1
7	☐	50000.000	54649.341	7472086.28	47.2966	A	1.0
8	☐	100000.00	104586.62	14472227.23	90.5111	A	1.1
9	☐	500000.00	498494.20	84104881.05	431.3891	A	0.9

$$y = 8.6538\text{E-}004 * x + 0.0044$$

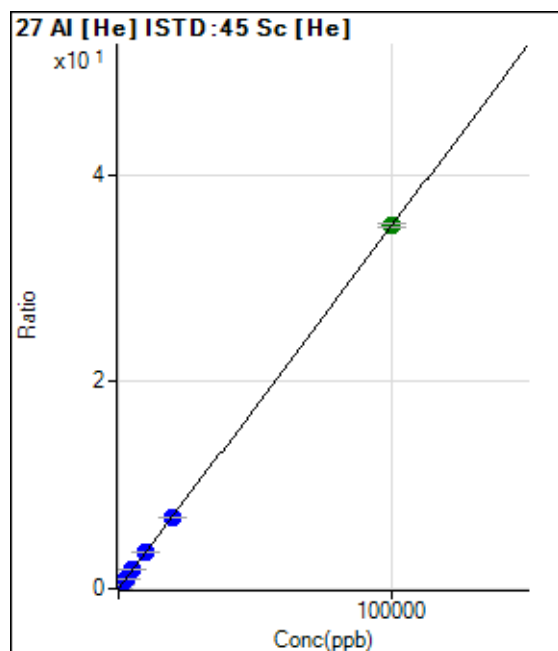
$$R = 0.9999$$

$$DL = 0.4234$$

$$BEC = 5.095$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.89	0.0003	P	27.2
2	☐	2.000	2.177	227.79	0.0011	P	17.2
3	☐	20.000	18.489	1472.35	0.0068	P	8.9
4	☐	1000.000	1050.145	74977.44	0.3686	P	1.6
5	☐	2500.000	2625.108	167080.99	0.9209	P	1.0
6	☐	5000.000	5146.342	295150.83	1.8052	P	0.2
7	☐	10000.000	10239.871	567392.69	3.5915	P	1.2
8	☐	20000.000	19667.551	1102932.58	6.8978	P	1.3
9	☐	100000.00	100031.55	6839925.67	35.0821	A	0.9

$$y = 3.5071\text{E-}004 * x + 2.9918\text{E-}004$$

$$R = 1.0000$$

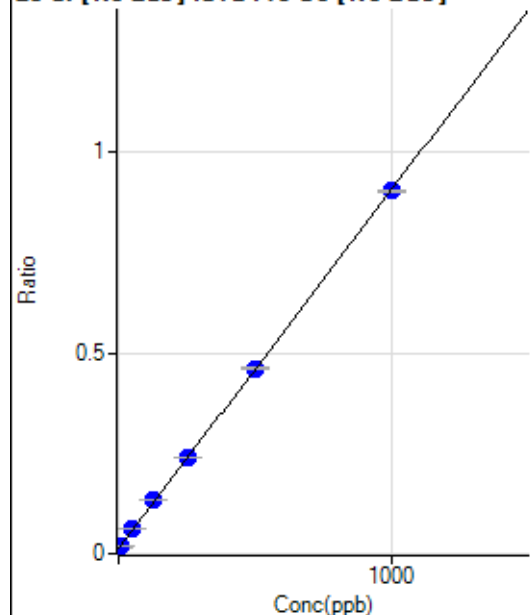
$$DL = 0.6973$$

$$BEC = 0.8531$$

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	64492.24	0.0124	P	0.4
2	☐	1.000	0.545	70111.59	0.0128	P	1.8
3	☐	10.000	8.070	107783.39	0.0196	P	1.3
4	☐	50.000	54.452	323039.16	0.0610	P	0.5
5	☐	125.000	134.096	637670.94	0.1322	P	0.5
6	☐	250.000	254.303	1032343.02	0.2396	P	1.3
7	☐	500.000	501.600	1880288.37	0.4605	P	0.7
8	☐	1000.000	996.784	3613277.12	0.9029	P	0.7
9	☐			141348.53	0.0322	P	1.9

$$y = 8.9342\text{E-}004 * x + 0.0124$$

$$R = 0.9999$$

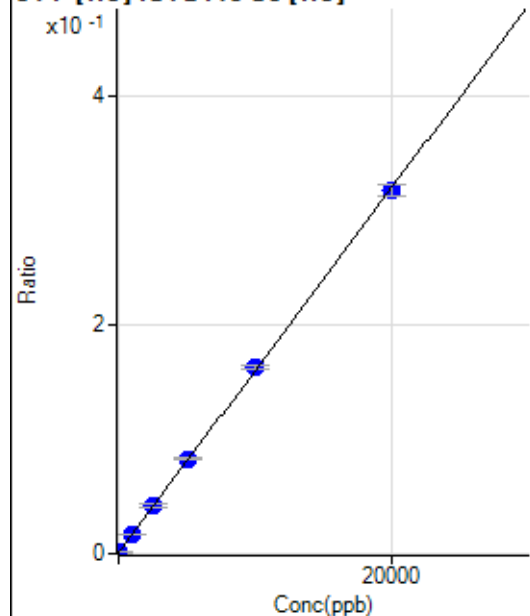
$$DL = 0.1463$$

$$BEC = 13.83$$

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	-14.988	111.12	0.0005	P	37.3
2	☐	0.000	-15.173	111.12	0.0005	P	25.8
3	☐	0.000	30.161	269.46	0.0012	P	10.1
4	☐	1000.000	1000.997	3406.07	0.0167	P	1.5
5	☐	2500.000	2591.683	7643.97	0.0421	P	5.3
6	☐	5000.000	5150.394	13570.49	0.0830	P	1.3
7	☐	10000.000	10212.872	25881.56	0.1638	P	2.4
8	☐	20000.000	19844.456	50779.14	0.3176	P	3.0
9	☐			158.34	0.0008	P	6.2

$$y = 1.5967\text{E-}005 * x + 7.5989\text{E-}004$$

$$R = 0.9999$$

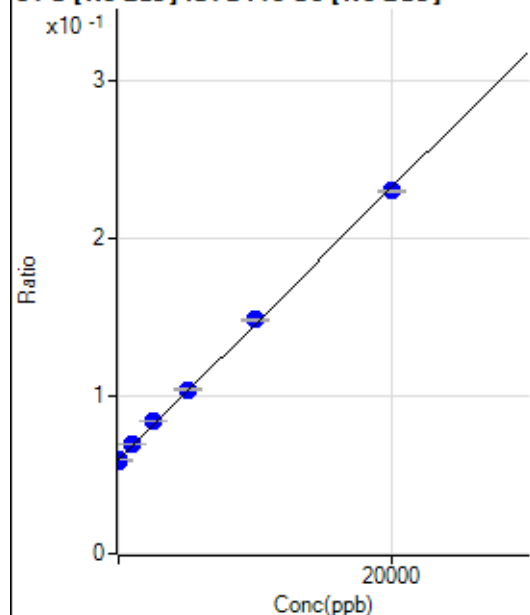
$$DL = 28.42$$

$$BEC = 47.59$$

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	111.964	314917.08	0.0603	P	0.2
2	☐	0.000	-120.894	318328.68	0.0583	P	0.9
3	☐	0.000	8.931	327426.26	0.0594	P	0.3
4	☐	1000.000	1219.288	370228.97	0.0699	P	0.5
5	☐	2500.000	2878.147	406686.69	0.0843	P	0.3
6	☐	5000.000	5174.845	448985.68	0.1042	P	0.8
7	☐	10000.000	10311.649	607131.59	0.1487	P	0.6
8	☐	20000.000	19742.231	922015.98	0.2304	P	0.5
9	☐			303814.74	0.0691	P	1.4

$$y = 8.6641\text{E-}006 * x + 0.0593$$

$$R = 0.9996$$

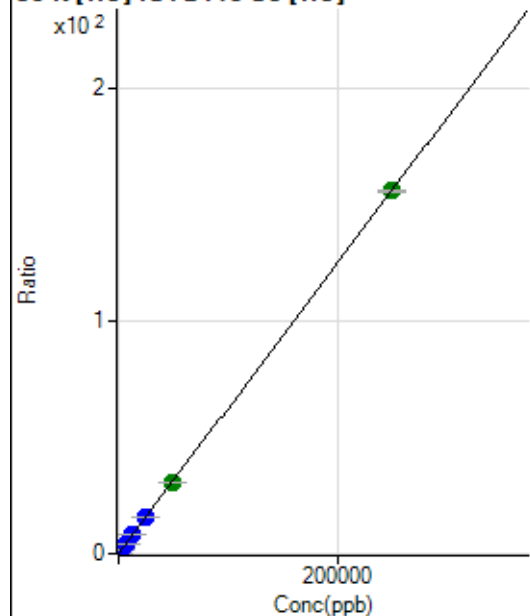
$$DL = 96.8$$

$$BEC = 6850$$

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	7001.92	0.0328	P	2.3
2	☐	50.000	44.833	13017.29	0.0607	P	2.5
3	☐	500.000	467.763	70342.02	0.3241	P	1.0
4	☐	2500.000	2591.412	334903.13	1.6464	P	0.8
5	☐	6250.000	6426.317	731911.50	4.0343	P	0.5
6	☐	12500.000	12580.181	1286162.28	7.8662	P	0.2
7	☐	25000.000	25329.174	2497008.67	15.8048	P	0.7
8	☐	50000.000	49273.994	4911264.00	30.7148	A	1.0
9	☐	250000.00	250103.01	30369720.47	155.7674	A	0.5

$$y = 6.2268\text{E-}004 * x + 0.0328$$

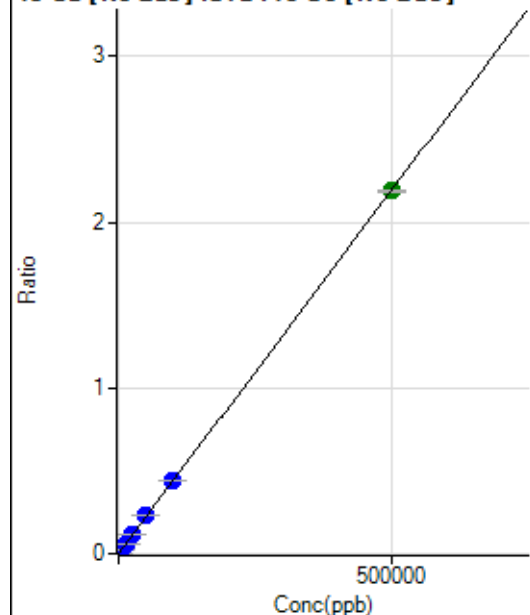
$$R = 1.0000$$

$$DL = 3.649$$

$$BEC = 52.65$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	247.23	0.0000	P	16.2
2	☐	50.000	43.725	1305.68	0.0002	P	10.0
3	☐	500.000	451.972	11179.67	0.0020	P	0.9
4	☐	5000.000	5241.126	121932.13	0.0230	P	1.9
5	☐	12500.000	13040.094	276109.43	0.0572	P	0.2
6	☐	25000.000	25827.374	488235.25	0.1133	P	0.9
7	☐	50000.000	52462.587	939440.07	0.2301	P	0.1
8	☐	100000.00	101718.84	1785001.06	0.4460	P	0.0
9	☐	500000.00	499352.74	9619140.23	2.1895	A	0.8

$$y = 4.3846E-006 * x + 4.7366E-005$$

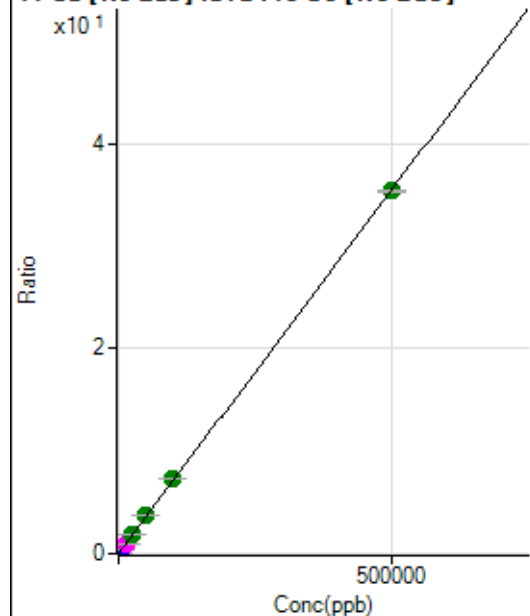
$$R = 1.0000$$

$$DL = 5.237$$

$$BEC = 10.8$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6390.56	0.0012	P	2.4
2	☐	50.000	44.190	23797.60	0.0044	P	1.8
3	☐	500.000	462.361	187451.47	0.0340	P	0.6
4	☐	5000.000	5241.873	1975434.96	0.3731	P	1.1
5	☐	12500.000	13032.358	4466700.93	0.9257	M	0.6
6	☐	25000.000	25799.303	7892071.96	1.8313	A	0.7
7	☐	50000.000	52692.000	15266676.04	3.7389	A	0.2
8	☐	100000.00	103249.04	29314067.67	7.3251	A	0.5
9	☐	500000.00	499025.33	155516929.8	35.3993	A	0.2

$$y = 7.0934E-005 * x + 0.0012$$

$$R = 1.0000$$

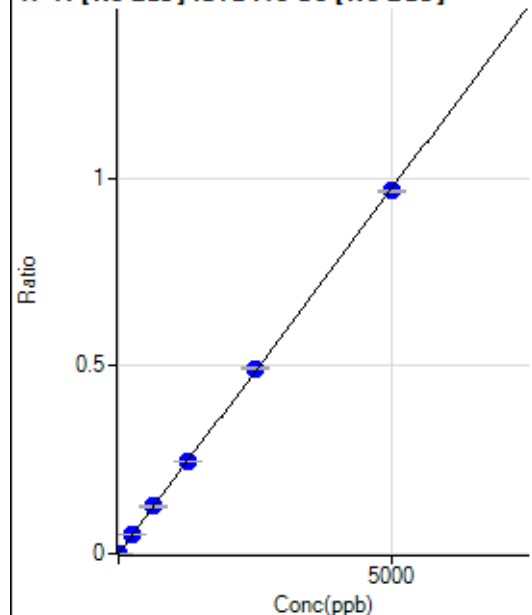
$$DL = 1.241$$

$$BEC = 17.26$$

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	72.23	0.0000	P	18.0
2	☐	0.500	0.531	638.93	0.0001	P	3.6
3	☐	5.000	4.839	5253.95	0.0010	P	5.5
4	☐	250.000	257.853	265218.10	0.0501	P	0.7
5	☐	625.000	646.267	605568.45	0.1255	P	0.9
6	☐	1250.000	1262.641	1056735.15	0.2452	P	0.3
7	☐	2500.000	2542.200	2015723.29	0.4937	P	0.4
8	☐	5000.000	4972.689	3864267.97	0.9656	P	0.4
9	☐			2514.21	0.0006	P	4.8

$$y = 1.9418\text{E-}004 * x + 1.3841\text{E-}005$$

$$R = 0.9999$$

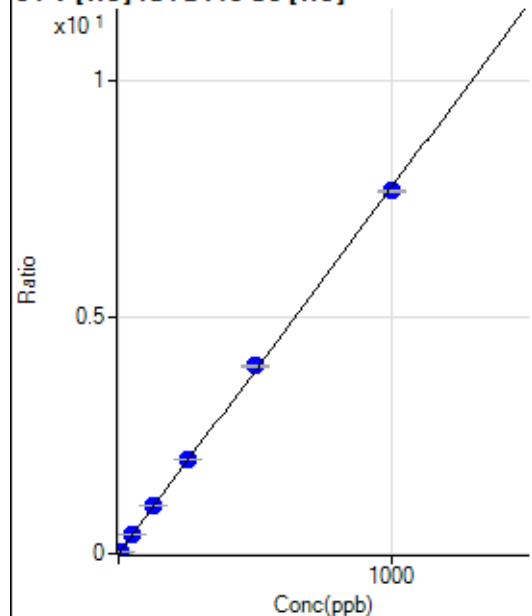
$$DL = 0.03852$$

$$BEC = 0.07128$$

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	6.67	0.0000	P	49.7
2	☐	0.500	0.508	850.04	0.0040	P	8.2
3	☐	5.000	5.077	8531.46	0.0393	P	2.0
4	☐	50.000	52.628	82806.26	0.4071	P	1.7
5	☐	125.000	131.333	184297.95	1.0159	P	0.3
6	☐	250.000	255.282	322847.67	1.9746	P	0.3
7	☐	500.000	514.341	628544.02	3.9783	P	1.0
8	☐	1000.000	990.585	1225163.99	7.6619	P	0.4
9	☐			625.58	0.0032	P	6.0

$$y = 0.0077 * x + 3.1173\text{E-}005$$

$$R = 0.9998$$

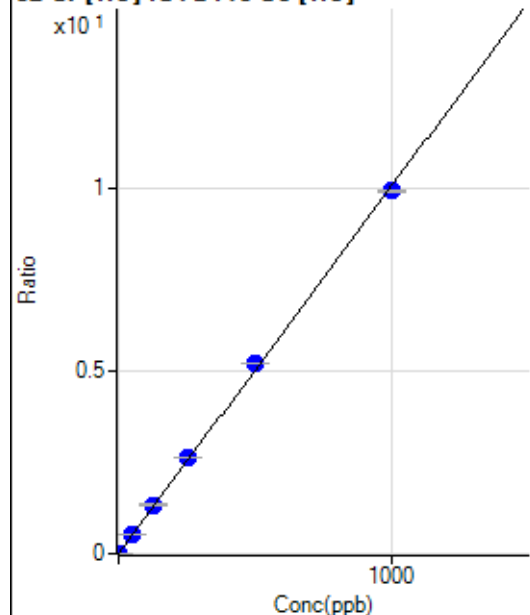
$$DL = 0.006003$$

$$BEC = 0.00403$$

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	337.79	0.0016	P	7.0
2	☐	0.200	0.206	784.48	0.0037	P	1.9
3	☐	2.000	1.910	4515.20	0.0208	P	2.1
4	☐	50.000	53.766	110370.42	0.5426	P	0.8
5	☐	125.000	133.214	243468.77	1.3420	P	0.6
6	☐	250.000	260.075	428132.80	2.6185	P	0.5
7	☐	500.000	517.937	823608.12	5.2131	P	0.8
8	☐	1000.000	987.298	1588767.95	9.9359	P	0.5
9	☐			68954.80	0.3537	P	0.9

$$y = 0.0101 * x + 0.0016$$

$$R = 0.9997$$

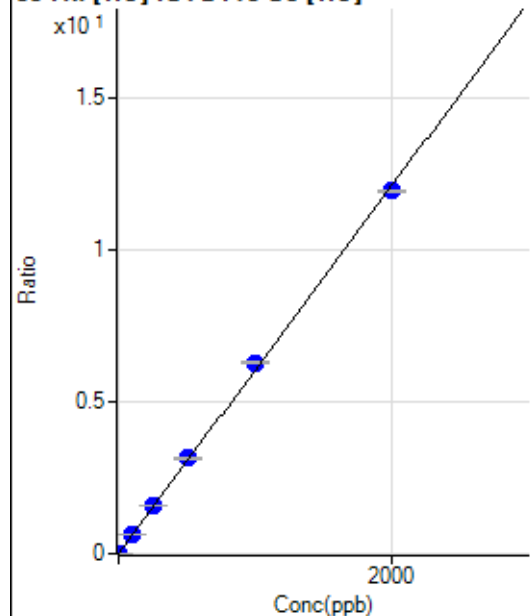
$$DL = 0.03294$$

$$BEC = 0.1572$$

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	62.22	0.0003	P	3.5
2	☐	0.100	0.118	215.56	0.0010	P	18.8
3	☐	1.000	1.032	1416.76	0.0065	P	3.2
4	☐	100.000	106.993	131505.93	0.6465	P	0.8
5	☐	250.000	265.743	291231.71	1.6053	P	0.4
6	☐	500.000	519.542	513091.47	3.1381	P	0.7
7	☐	1000.000	1037.600	990098.18	6.2670	P	1.2
8	☐	2000.000	1973.997	1906402.78	11.9224	P	0.7
9	☐			8849.45	0.0454	P	0.8

$$y = 0.0060 * x + 2.9135E-004$$

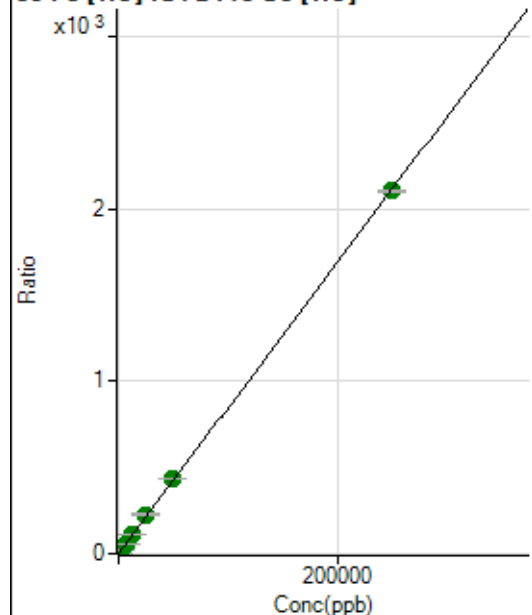
$$R = 0.9997$$

$$DL = 0.005066$$

$$BEC = 0.04824$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2463.24	0.0115	P	8.1
2	☐	5.000	4.817	11182.31	0.0521	P	1.1
3	☐	50.000	52.765	99061.51	0.4564	P	0.9
4	☐	2500.000	2757.416	4730851.90	23.2570	A	1.1
5	☐	6250.000	7062.730	10804236.70	59.5515	A	0.5
6	☐	12500.000	13442.563	18530640.69	113.3345	A	0.7
7	☐	25000.000	26998.408	35959773.49	227.6125	A	1.0
8	☐	50000.000	51415.241	69307979.79	433.4504	A	0.8
9	☐	250000.00	249447.09	409993009.1	2,102.891	A	0.5

$$y = 0.0084 * x + 0.0115$$

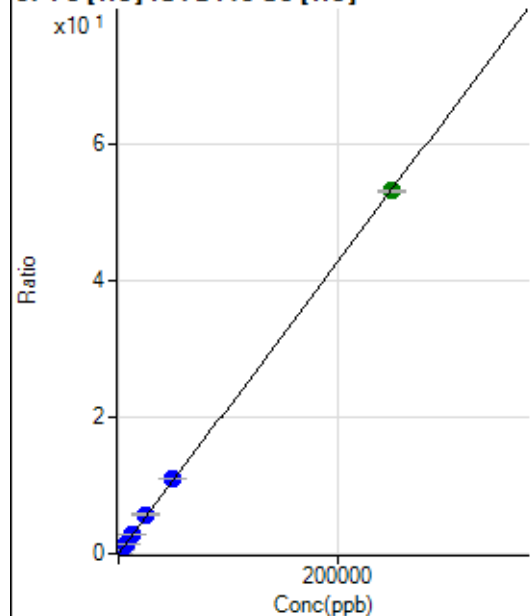
$$R = 1.0000$$

$$DL = 0.333$$

$$BEC = 1.368$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	77.78	0.0004	P	32.5
2	☐	5.000	4.324	275.93	0.0013	P	8.8
3	☐	50.000	51.285	2455.83	0.0113	P	2.4
4	☐	2500.000	2798.032	121584.74	0.5977	P	1.1
5	☐	6250.000	7128.807	276179.66	1.5223	P	0.6
6	☐	12500.000	13640.202	476192.41	2.9125	P	0.7
7	☐	25000.000	27020.741	911461.33	5.7691	P	1.3
8	☐	50000.000	51380.895	1754094.51	10.9699	P	0.6
9	☐	250000.00	249439.78	10382569.68	53.2542	A	0.3

$$y = 2.1349E-004 * x + 3.6397E-004$$

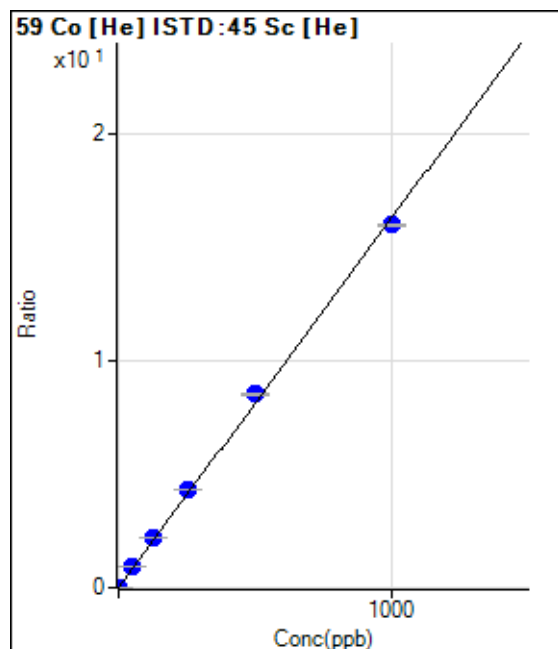
$$R = 1.0000$$

$$DL = 1.66$$

$$BEC = 1.705$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57.78	0.0003	P	8.4
2	☐	0.100	0.087	361.12	0.0017	P	17.4
3	☐	1.000	0.990	3554.93	0.0164	P	1.8
4	☐	50.000	55.396	183325.62	0.9012	P	1.0
5	☐	125.000	136.945	404131.97	2.2276	P	0.3
6	☐	250.000	264.981	704703.15	4.3100	P	0.3
7	☐	500.000	524.475	1347700.80	8.5305	P	0.9
8	☐	1000.000	982.254	2554564.58	15.9759	P	0.6
9	☐			38708.83	0.1985	P	1.3

$$y = 0.0163 * x + 2.7045E-004$$

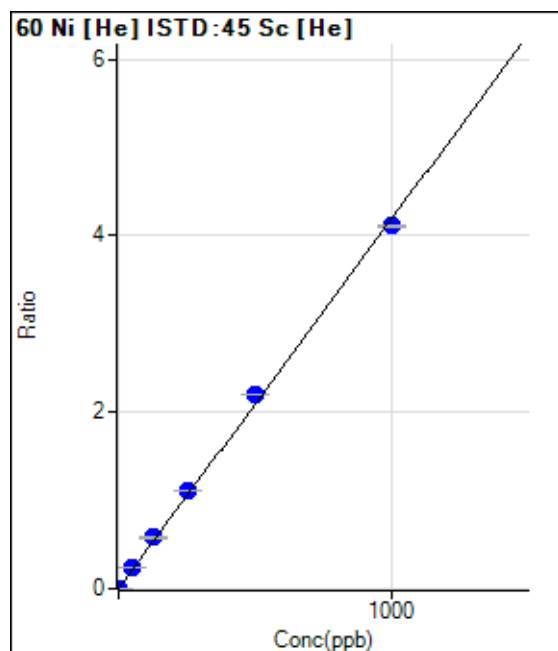
$$R = 0.9994$$

$$DL = 0.004181$$

$$BEC = 0.01663$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	124.45	0.0006	P	7.8
2	☐	0.100					
3	☐	1.000	1.039	1070.06	0.0049	P	16.0
4	☐	50.000	55.799	47639.44	0.2342	P	0.5
5	☐	125.000	137.879	104826.50	0.5778	P	1.1
6	☐	250.000	264.520	181165.90	1.1080	P	0.2
7	☐	500.000	525.574	347717.04	2.2009	P	0.9
8	☐	1000.000	981.683	657253.64	4.1105	P	0.9
9	☐			25493.41	0.1308	P	0.6

$$y = 0.0042 * x + 5.8258E-004$$

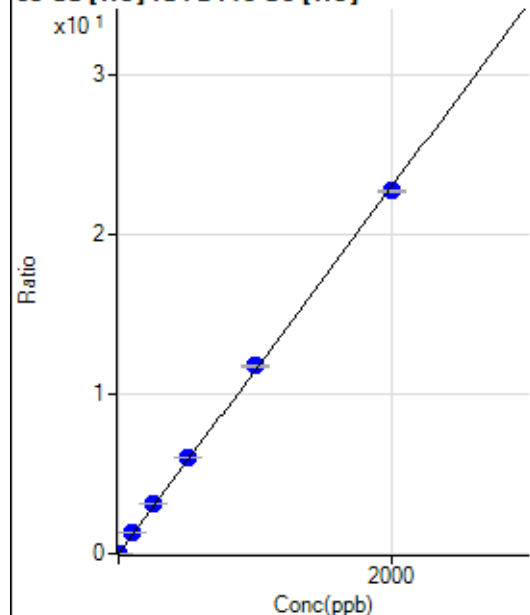
$$R = 0.9994$$

$$DL = 0.03266$$

$$BEC = 0.1392$$

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	1361.20	0.0064	P	6.4
2	☐	0.200	0.153	1743.46	0.0081	P	4.2
3	☐	2.000	1.927	6189.18	0.0285	P	3.8
4	☐	100.000	110.282	258994.62	1.2732	P	1.3
5	☐	250.000	272.626	569322.05	3.1382	P	1.0
6	☐	500.000	520.952	979528.71	5.9909	P	0.5
7	☐	1000.000	1026.439	1863914.56	11.7977	P	1.0
8	☐	2000.000	1978.200	3634658.66	22.7312	P	0.9
9	☐			10406.05	0.0534	P	3.1

$$y = 0.0115 * x + 0.0064$$

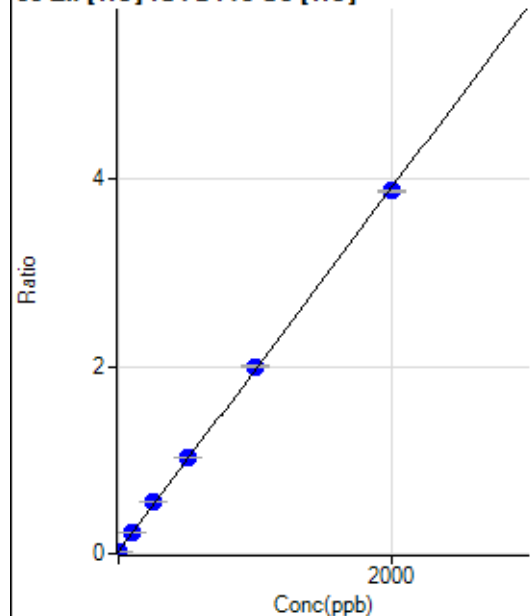
$$R = 0.9998$$

$$DL = 0.1067$$

$$BEC = 0.5549$$

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	5030.95	0.0236	P	1.4
2	☐	0.200	0.202	5135.43	0.0239	P	3.3
3	☐	2.000	1.869	5901.28	0.0272	P	1.0
4	☐	100.000	102.470	45271.24	0.2226	P	1.3
5	☐	250.000	272.584	100314.94	0.5529	P	0.4
6	☐	500.000	517.417	168150.45	1.0284	P	0.7
7	☐	1000.000	1017.380	315867.33	1.9994	P	1.5
8	☐	2000.000	1984.009	619886.03	3.8767	P	0.6
9	☐			10699.63	0.0549	P	1.0

$$y = 0.0019 * x + 0.0236$$

$$R = 0.9999$$

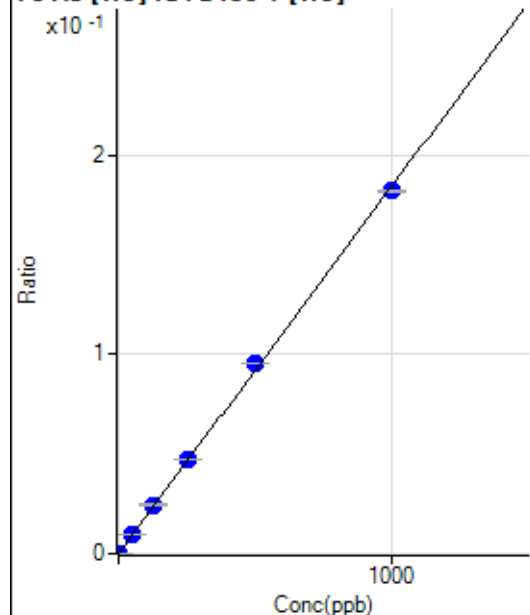
$$DL = 0.4996$$

$$BEC = 12.13$$

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	8.02	0.0000	P	57.8
2	☐	0.100	0.097	27.78	0.0000	P	30.5
3	☐	1.000	0.916	193.83	0.0002	P	4.5
4	☐	50.000	54.535	10421.70	0.0100	P	1.0
5	☐	125.000	133.519	23188.90	0.0246	P	0.6
6	☐	250.000	257.524	40282.16	0.0474	P	0.5
7	☐	500.000	516.796	78137.83	0.0951	P	0.2
8	☐	1000.000	988.429	150588.72	0.1819	P	0.5
9	☐			277.78	0.0003	P	3.3

$$y = 1.8406E-004 * x + 7.3770E-006$$

$$R = 0.9997$$

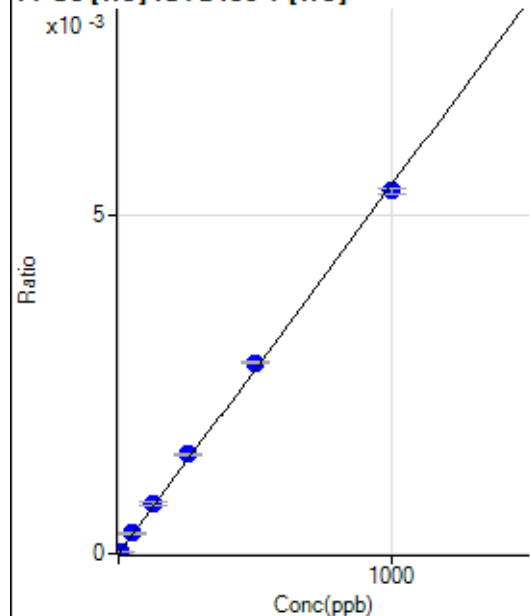
$$DL = 0.06952$$

$$BEC = 0.04008$$

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	☐	0.500	0.367	3.33	0.0000	P	100.
3	☐	5.000	3.694	23.33	0.0000	P	62.3
4	☐	50.000	55.964	317.79	0.0003	P	9.8
5	☐	125.000	134.509	693.36	0.0007	P	6.5
6	☐	250.000	269.437	1250.08	0.0015	P	0.8
7	☐	500.000	517.993	2322.44	0.0028	P	1.0
8	☐	1000.000	984.664	4448.53	0.0054	P	1.9
9	☐			4.45	0.0000	P	86.6

$$y = 5.4563E-006 * x + 1.0292E-006$$

$$R = 0.9995$$

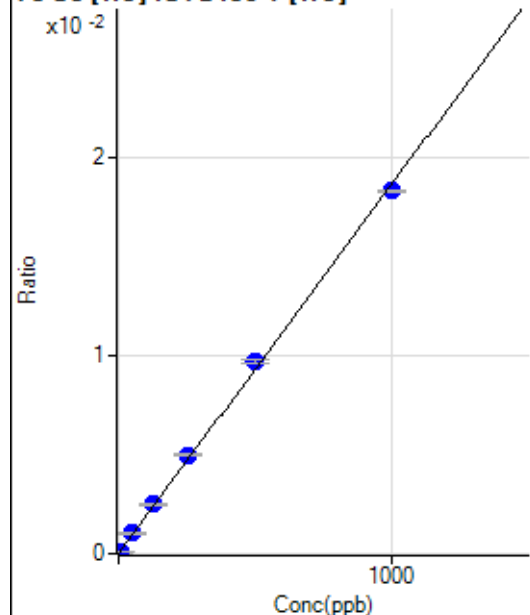
$$DL = 0.9801$$

$$BEC = 0.1886$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.56	0.0000	P	99.6
2	☐	0.500	0.808	22.22	0.0000	P	21.9
3	☐	5.000	5.794	124.69	0.0001	P	19.8
4	☐	50.000	54.768	1064.86	0.0010	P	4.2
5	☐	125.000	132.908	2342.80	0.0025	P	5.5
6	☐	250.000	267.566	4244.48	0.0050	P	1.2
7	☐	500.000	522.154	8002.88	0.0097	P	1.5
8	☐	1000.000	983.300	15183.31	0.0183	P	0.2
9	☐			25.31	0.0000	P	24.6

$$y = 1.8650E-005 * x + 5.1160E-006$$

$$R = 0.9995$$

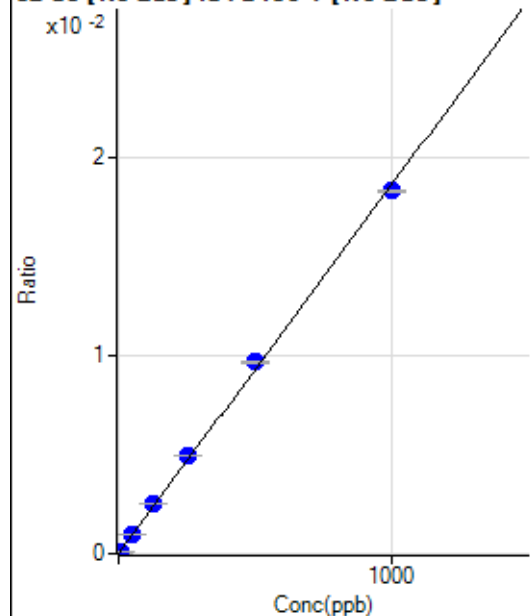
$$DL = 0.8198$$

$$BEC = 0.2743$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44.86	0.0000	P	176.
2	☐	0.500					
3	☐	5.000	5.122	962.61	0.0001	P	1.3
4	☐	50.000	53.764	9293.29	0.0010	P	1.4
5	☐	125.000	136.156	21768.57	0.0025	P	0.3
6	☐	250.000	266.848	38623.06	0.0050	P	0.6
7	☐	500.000	520.703	72305.18	0.0097	P	1.1
8	☐	1000.000	983.853	134787.32	0.0184	P	0.7
9	☐			81.44	0.0000	P	56.7

$$y = 1.8652E-005 * x + 4.9464E-006$$

$$R = 0.9995$$

$$DL = 1.404$$

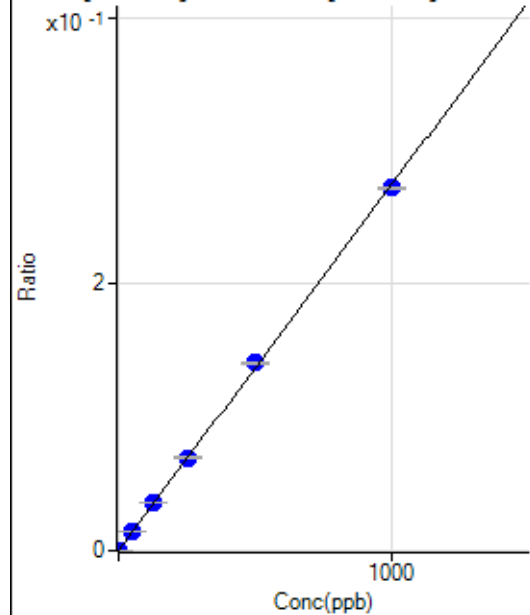
$$BEC = 0.2652$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			400.01		P	10.8
2	☐			470.01		P	4.4
3	☐			444.46		P	7.5
4	☐			443.35		P	8.7
5	☐			408.90		P	1.2
6	☐			334.45		P	9.3
7	☐			363.34		P	13.5
8	☐			370.01		P	5.0
9	☐			392.24		P	9.9

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	702.83	0.0001	P	5.6
2	☐	0.100	0.093	977.85	0.0001	P	15.9
3	☐	1.000	0.883	3067.12	0.0003	P	1.3
4	☐	50.000	52.016	132449.89	0.0144	P	1.0
5	☐	125.000	129.443	304776.75	0.0356	P	0.7
6	☐	250.000	254.327	542036.35	0.0699	P	1.1
7	☐	500.000	513.297	1049477.94	0.1410	P	0.9
8	☐	1000.000	991.614	2000216.36	0.2724	P	0.2
9	☐			9503.51	0.0012	P	3.6

$$y = 2.7462E-004 * x + 7.7691E-005$$

$$R = 0.9999$$

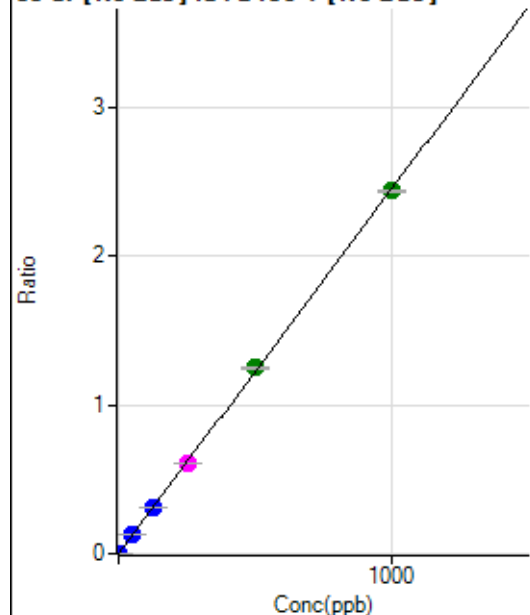
$$DL = 0.04793$$

$$BEC = 0.2829$$

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	283.35	0.0000	P	0.2
2	☐	0.100	0.090	2372.51	0.0003	P	5.0
3	☐	1.000	0.902	21447.36	0.0022	P	1.7
4	☐	50.000	50.981	1150396.69	0.1247	P	0.4
5	☐	125.000	126.227	2641815.18	0.3088	P	0.5
6	☐	250.000	248.175	4706370.03	0.6071	M	1.2
7	☐	500.000	509.473	9273746.82	1.2463	A	0.2
8	☐	1000.000	995.518	17881906.83	2.4352	A	0.3
9	☐			81610.12	0.0106	P	0.3

$$y = 0.0024 * x + 3.1320E-005$$

$$R = 0.9999$$

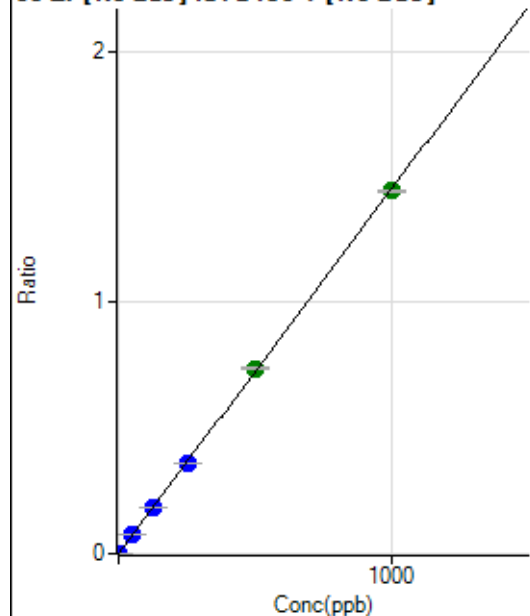
$$DL = 8.092E-05$$

$$BEC = 0.0128$$

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	691.71	0.0001	P	7.3
2	☐	0.100	0.085	1891.88	0.0002	P	3.0
3	☐	1.000	0.832	12314.10	0.0013	P	1.0
4	☐	50.000	51.532	691043.89	0.0749	P	0.4
5	☐	125.000	127.899	1590014.42	0.1859	P	0.8
6	☐	250.000	249.831	2813895.46	0.3630	P	0.2
7	☐	500.000	508.923	5501585.58	0.7394	A	0.5
8	☐	1000.000	995.142	10615445.73	1.4457	A	0.4
9	☐			5498.50	0.0007	P	8.0

$$y = 0.0015 * x + 7.6457E-005$$

$$R = 0.9999$$

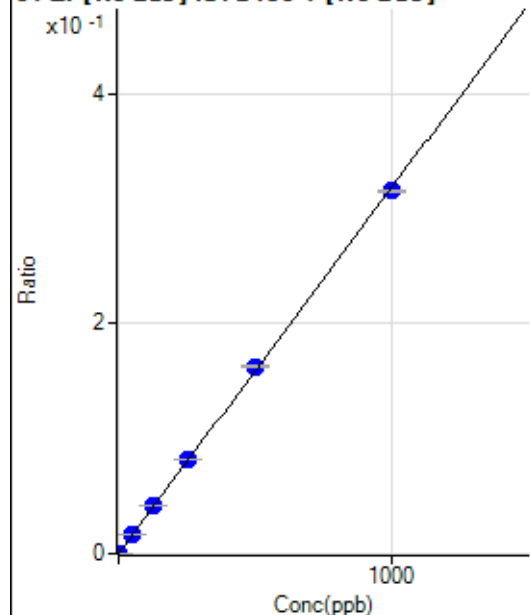
$$DL = 0.01158$$

$$BEC = 0.05263$$

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	144.45	0.0000	P	34.7
2	☐	0.100	0.056	319.46	0.0000	P	5.1
3	☐	1.000	0.862	2780.95	0.0003	P	4.7
4	☐	50.000	52.405	154000.36	0.0167	P	0.4
5	☐	125.000	131.027	356954.90	0.0417	P	0.9
6	☐	250.000	257.163	634743.13	0.0819	P	0.2
7	☐	500.000	511.639	1212092.36	0.1629	P	0.7
8	☐	1000.000	991.516	2317888.22	0.3157	P	0.3
9	☐			1297.33	0.0002	P	5.8

$$y = 3.1835E-004 * x + 1.5964E-005$$

$$R = 0.9999$$

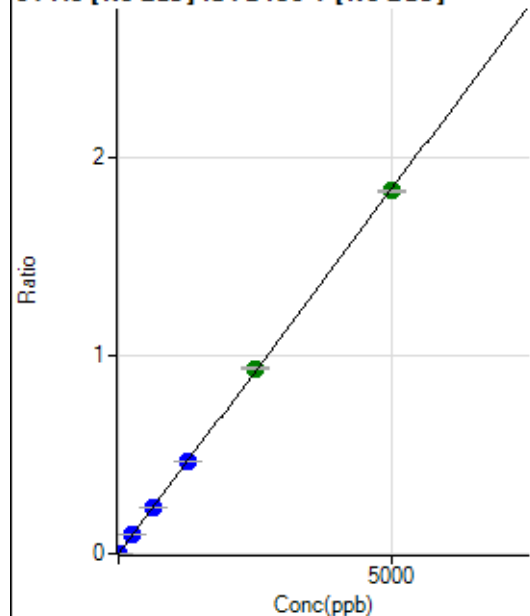
$$DL = 0.05216$$

$$BEC = 0.05015$$

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	269.46	0.0000	P	15.8
2	☐	0.500	0.445	1833.52	0.0002	P	4.7
3	☐	5.000	4.505	16154.13	0.0017	P	0.9
4	☐	250.000	258.644	877274.61	0.0951	P	1.1
5	☐	625.000	642.311	2020655.97	0.2362	P	0.4
6	☐	1250.000	1254.477	3575979.29	0.4613	P	0.2
7	☐	2500.000	2539.578	6948680.71	0.9338	A	0.7
8	☐	5000.000	4976.496	13436792.49	1.8299	A	0.2
9	☐			13590.36	0.0018	P	5.4

$$y = 3.6770E-004 * x + 2.9782E-005$$

$$R = 1.0000$$

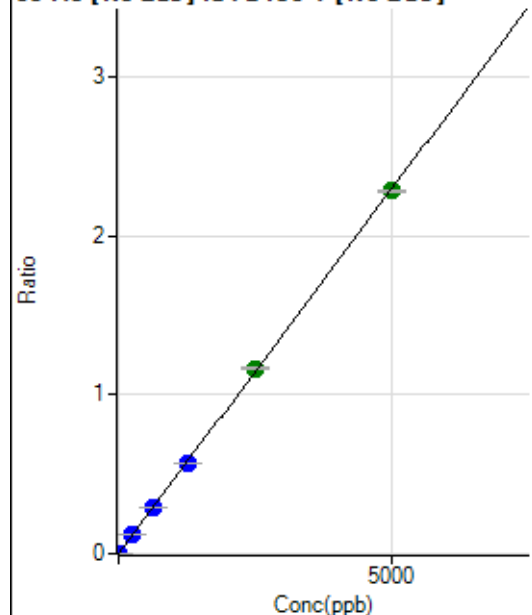
$$DL = 0.03841$$

$$BEC = 0.081$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	102.78	0.0000	P	24.7
2	☐	0.500	0.452	2075.24	0.0002	P	2.9
3	☐	5.000	4.565	20201.06	0.0021	P	1.5
4	☐	250.000	258.706	1096178.98	0.1189	P	0.5
5	☐	625.000	640.655	2518019.61	0.2943	P	0.3
6	☐	1250.000	1246.058	4437862.68	0.5725	P	0.3
7	☐	2500.000	2542.524	8691962.00	1.1681	A	0.3
8	☐	5000.000	4977.332	16791420.17	2.2867	A	0.3
9	☐			21547.56	0.0028	P	1.9

$$y = 4.5943\text{E-}004 * x + 1.1360\text{E-}005$$

$$R = 0.9999$$

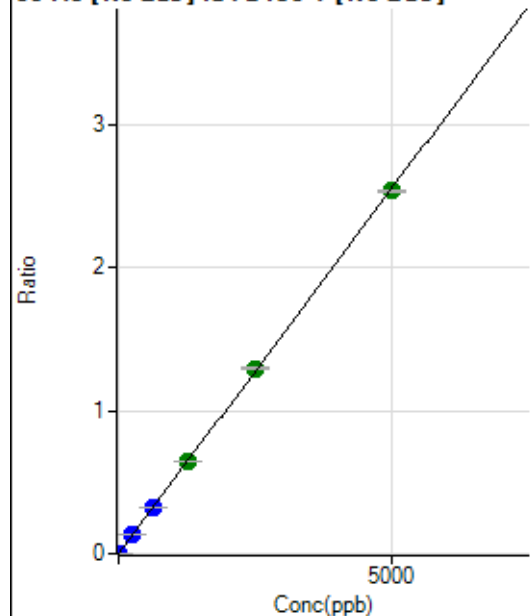
$$DL = 0.01832$$

$$BEC = 0.02473$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.11	0.0000	P	36.1
2	☐	0.500	0.427	2208.60	0.0002	P	6.0
3	☐	5.000	4.629	22768.95	0.0024	P	2.5
4	☐	250.000	257.656	1212452.48	0.1315	P	0.2
5	☐	625.000	643.600	2809192.73	0.3284	P	0.3
6	☐	1250.000	1264.273	5000413.00	0.6451	A	0.1
7	☐	2500.000	2543.033	9654650.22	1.2975	A	0.6
8	☐	5000.000	4972.208	18628035.49	2.5369	A	0.5
9	☐			22941.37	0.0030	P	1.1

$$y = 5.1021\text{E-}004 * x + 1.5052\text{E-}005$$

$$R = 0.9999$$

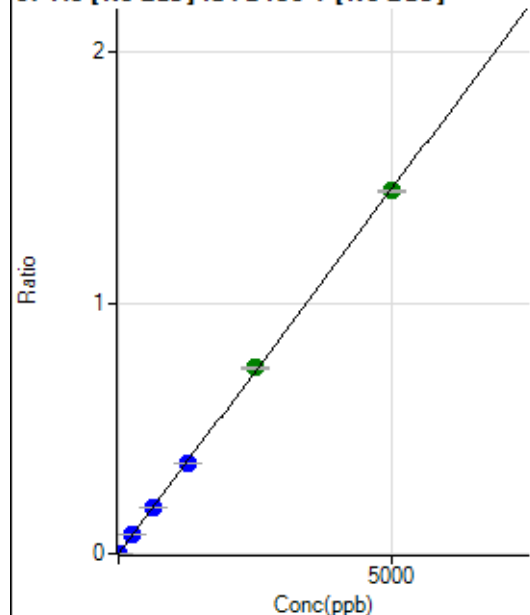
$$DL = 0.03194$$

$$BEC = 0.0295$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	25.1
2	☐	0.500	0.438	1275.11	0.0001	P	2.4
3	☐	5.000	4.538	12706.15	0.0013	P	3.5
4	☐	250.000	256.746	688159.11	0.0746	P	0.2
5	☐	625.000	638.127	1586508.22	0.1855	P	0.4
6	☐	1250.000	1240.769	2795264.43	0.3606	P	0.2
7	☐	2500.000	2547.141	5508195.57	0.7402	A	0.2
8	☐	5000.000	4976.760	10620385.31	1.4463	A	0.5
9	☐			13312.22	0.0017	P	2.8

$$y = 2.9062E-004 * x + 7.3704E-006$$

$$R = 0.9999$$

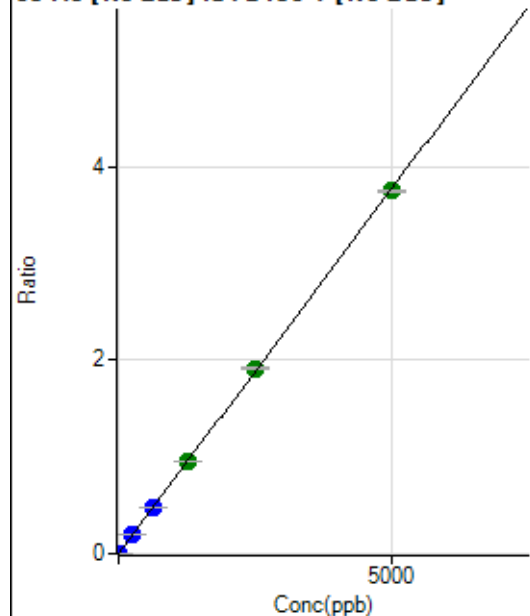
$$DL = 0.01907$$

$$BEC = 0.02536$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.01	0.0000	P	16.6
2	☐	0.500	0.455	3358.88	0.0004	P	8.6
3	☐	5.000	4.490	32540.81	0.0034	P	1.7
4	☐	250.000	255.225	1774864.69	0.1925	P	0.3
5	☐	625.000	635.369	4098484.68	0.4791	P	0.2
6	☐	1250.000	1262.539	7379827.86	0.9520	A	0.5
7	☐	2500.000	2542.552	14265598.24	1.9171	A	0.2
8	☐	5000.000	4974.032	27540070.41	3.7505	A	0.2
9	☐			34322.94	0.0044	P	2.0

$$y = 7.5402E-004 * x + 1.1053E-005$$

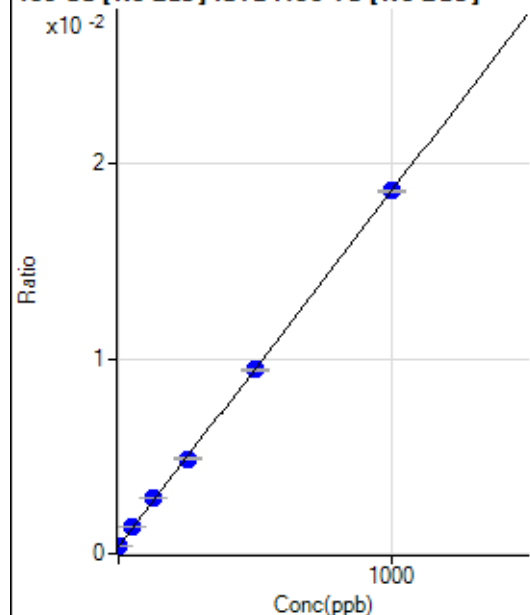
$$R = 0.9999$$

$$DL = 0.00728$$

$$BEC = 0.01466$$

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	5487.40	0.0004	P	1.2
2	☐	0.100	-0.152	5754.19	0.0004	P	4.2
3	☐	1.000	-0.214	5784.74	0.0004	P	2.5
4	☐	50.000	53.842	20749.37	0.0014	P	2.2
5	☐	125.000	136.021	41826.50	0.0029	P	0.1
6	☐	250.000	246.909	67949.10	0.0049	P	0.6
7	☐	500.000	497.318	127855.78	0.0094	P	0.8
8	☐	1000.000	1000.545	250233.61	0.0186	P	0.7
9	☐			4417.53	0.0003	P	2.1

$$y = 1.8235E-005 * x + 3.7173E-004$$

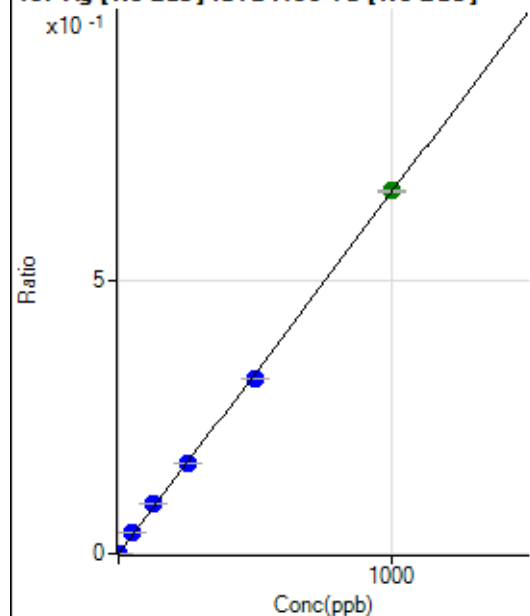
$$R = 0.9999$$

$$DL = 0.7358$$

$$BEC = 20.39$$

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	194.45	0.0000	P	12.5
2	☐	0.100	0.091	1141.77	0.0001	P	10.1
3	☐	1.000	1.060	11213.23	0.0007	P	2.9
4	☐	50.000	57.568	582973.33	0.0380	P	0.4
5	☐	125.000	137.080	1327855.45	0.0905	P	1.0
6	☐	250.000	251.901	2319484.58	0.1664	P	0.3
7	☐	500.000	486.010	4347360.34	0.3210	P	0.4
8	☐	1000.000	1004.631	8918659.75	0.6635	A	0.3
9	☐			2672.59	0.0002	P	1.9

$$y = 6.6045E-004 * x + 1.3173E-005$$

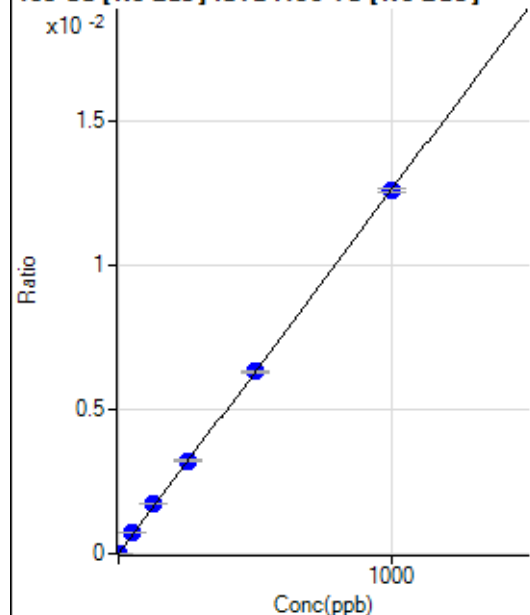
$$R = 0.9998$$

$$DL = 0.007472$$

$$BEC = 0.01995$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18.06	0.0000	P	12.6
2	☐	0.100	0.051	29.17	0.0000	P	38.4
3	☐	1.000	1.028	223.62	0.0000	P	20.1
4	☐	50.000	56.139	10894.65	0.0007	P	1.0
5	☐	125.000	136.346	25290.90	0.0017	P	2.2
6	☐	250.000	254.709	44896.05	0.0032	P	1.6
7	☐	500.000	500.119	85624.71	0.0063	P	0.8
8	☐	1000.000	997.038	169402.01	0.0126	P	1.0
9	☐			108.34	0.0000	P	22.1

$$y = 1.2639\text{E-}005 * x + 1.2225\text{E-}006$$

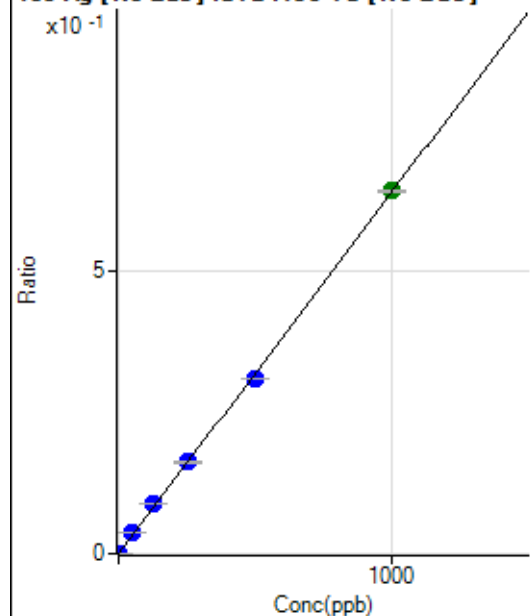
$$R = 0.9999$$

$$DL = 0.0367$$

$$BEC = 0.09672$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138.90	0.0000	P	19.9
2	☐	0.100	0.108	1225.11	0.0001	P	13.6
3	☐	1.000	1.044	10623.80	0.0007	P	3.6
4	☐	50.000	57.060	558151.11	0.0364	P	0.5
5	☐	125.000	138.225	1293430.40	0.0882	P	0.2
6	☐	250.000	253.122	2251498.29	0.1615	P	0.5
7	☐	500.000	484.408	4185756.30	0.3091	P	0.7
8	☐	1000.000	1005.009	8618748.72	0.6412	A	0.7
9	☐			2608.69	0.0002	P	15.5

$$y = 6.3800\text{E-}004 * x + 9.4174\text{E-}006$$

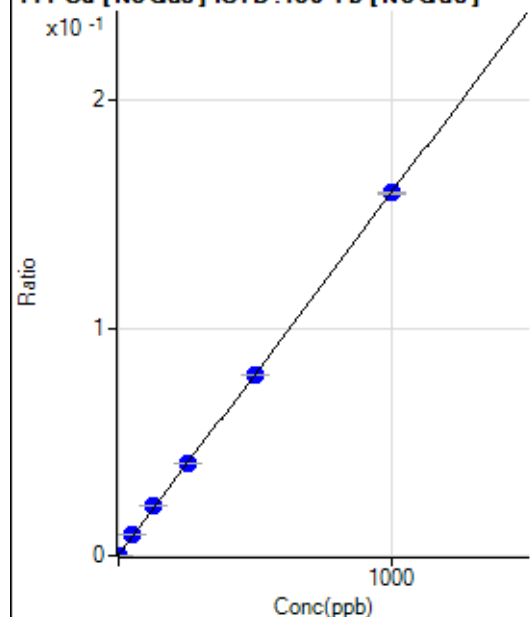
$$R = 0.9997$$

$$DL = 0.008817$$

$$BEC = 0.01476$$

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	3857.71	0.0003	P	1.4
2	☐	0.100	0.087	4290.86	0.0003	P	3.1
3	☐	1.000	0.920	6413.90	0.0004	P	1.5
4	☐	50.000	55.420	139260.71	0.0091	P	0.6
5	☐	125.000	134.294	317407.82	0.0216	P	0.2
6	☐	250.000	253.467	566249.51	0.0406	P	0.7
7	☐	500.000	496.909	1075048.79	0.0794	P	0.1
8	☐	1000.000	999.246	2142018.55	0.1594	P	0.3
9	☐			3797.03	0.0003	P	3.1

$$y = 1.5922\text{E-}004 * x + 2.6133\text{E-}004$$

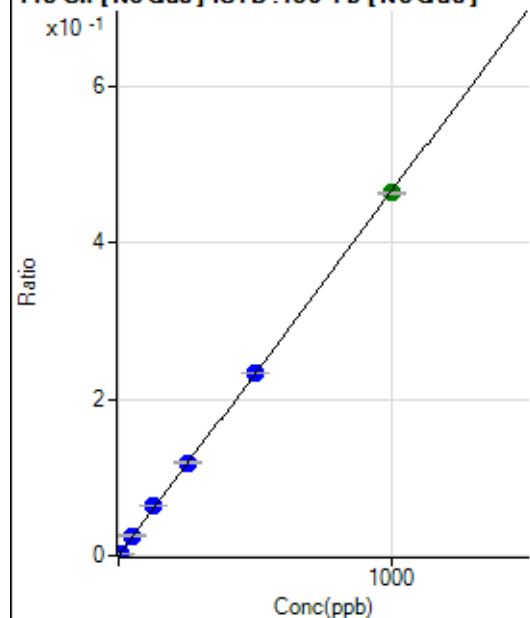
$$R = 0.9999$$

$$DL = 0.06972$$

$$BEC = 1.641$$

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	680.61	0.0000	P	12.4
2	☐	0.500	0.504	4384.20	0.0003	P	5.2
3	☐	5.000	5.025	37542.58	0.0024	P	1.0
4	☐	50.000	55.177	394789.83	0.0258	P	0.7
5	☐	125.000	135.143	924159.22	0.0630	P	0.3
6	☐	250.000	255.216	1658487.32	0.1190	P	0.6
7	☐	500.000	502.613	3172414.74	0.2342	P	0.3
8	☐	1000.000	995.862	6237776.05	0.4641	A	0.3
9	☐			4809.36	0.0004	P	1.6

$$y = 4.6595\text{E-}004 * x + 4.6133\text{E-}005$$

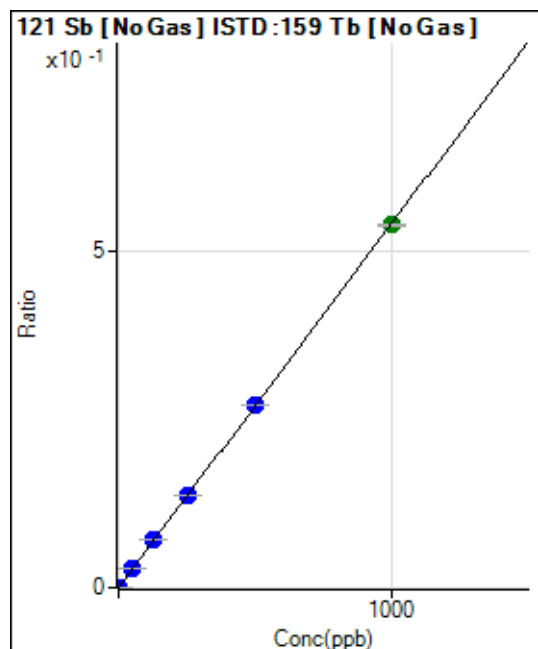
$$R = 0.9999$$

$$DL = 0.03685$$

$$BEC = 0.09901$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94.45	0.0000	P	12.7
2	☐	0.200	0.182	1636.28	0.0001	P	5.4
3	☐	2.000	1.940	16574.17	0.0011	P	1.6
4	☐	50.000	54.378	450142.02	0.0294	P	0.4
5	☐	125.000	134.384	1064209.59	0.0726	P	0.4
6	☐	250.000	254.697	1917276.02	0.1375	P	0.1
7	☐	500.000	501.161	3664933.59	0.2706	P	0.2
8	☐	1000.000	996.854	7234963.53	0.5383	A	0.3
9	☐			12564.47	0.0009	P	4.3

$$y = 5.3995\text{E-}004 * x + 6.3940\text{E-}006$$

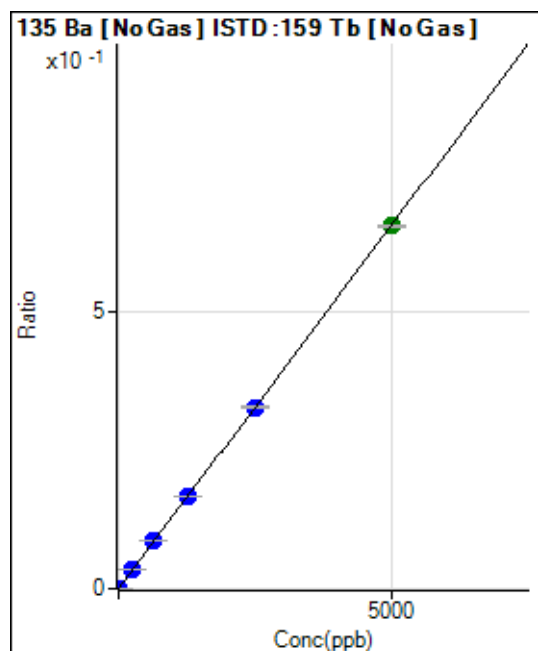
$$R = 0.9999$$

$$DL = 0.004523$$

$$BEC = 0.01184$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	191.68	0.0000	P	12.0
2	☐	1.000	0.914	2075.25	0.0001	P	10.7
3	☐	10.000	10.161	21183.51	0.0013	P	3.3
4	☐	250.000	273.079	549806.35	0.0359	P	0.5
5	☐	625.000	667.891	1286310.67	0.0877	P	0.3
6	☐	1250.000	1261.432	2309291.72	0.1656	P	0.3
7	☐	2500.000	2499.126	4444507.26	0.3282	P	0.4
8	☐	5000.000	4991.063	8809300.46	0.6554	A	0.4
9	☐			3142.16	0.0002	P	12.2

$$y = 1.3131\text{E-}004 * x + 1.2990\text{E-}005$$

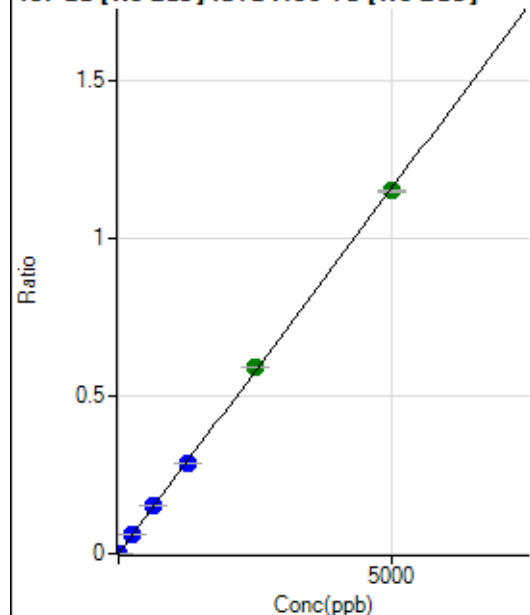
$$R = 1.0000$$

$$DL = 0.03556$$

$$BEC = 0.09893$$

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	255.57	0.0000	P	9.8
2	☐	1.000	0.930	3636.74	0.0002	P	8.3
3	☐	10.000	9.913	36426.50	0.0023	P	2.2
4	☐	250.000	271.137	964160.17	0.0629	P	0.4
5	☐	625.000	660.507	2246832.30	0.1532	P	0.3
6	☐	1250.000	1245.970	4028815.84	0.2890	P	0.2
7	☐	2500.000	2557.033	8032155.39	0.5931	A	0.1
8	☐	5000.000	4966.996	15484694.27	1.1520	A	0.2
9	☐			5395.72	0.0004	P	8.4

$$y = 2.3193\text{E-}004 * x + 1.7303\text{E-}005$$

$$R = 0.9999$$

$$DL = 0.02187$$

$$BEC = 0.07461$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	114.
2	☐			11.11		P	91.7
3	☐			17.78		P	43.3
4	☐			60.00		P	29.4
5	☐			180.01		P	13.4
6	☐			235.57		P	1.6
7	☐			482.25		P	18.9
8	☐			833.39		P	2.1
9	☐			137.78		P	14.8

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			12.22		P	15.7
2	☐			8.89		P	94.4
3	☐			11.11		P	75.5
4	☐			21.11		P	71.2
5	☐			27.78		P	6.9
6	☐			35.56		P	27.1
7	☐			62.22		P	6.2
8	☐			55.55		P	19.3
9	☐			46.67		P	0.0

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			41.67		P	20.0
2	☐			44.44		P	21.7
3	☐			41.67		P	52.9
4	☐			30.56		P	31.5
5	☐			80.56		P	36.3
6	☐			86.11		P	14.8
7	☐			111.12		P	15.6
8	☐			186.12		P	26.2
9	☐			100.01		P	36.3

156 Dy [He] No available calibration points

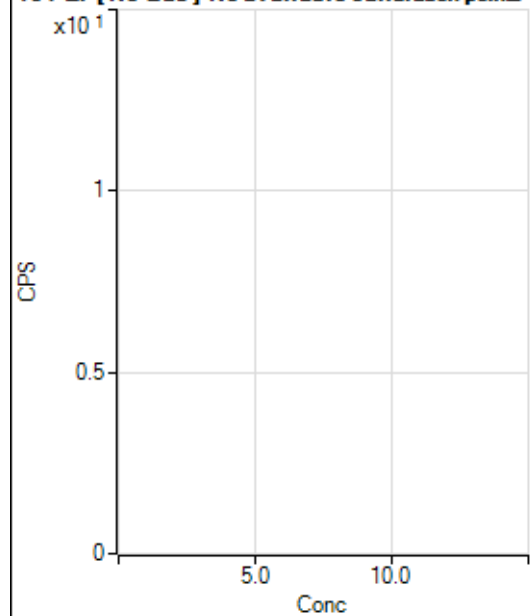
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			26.67		P	45.1
2	☐			32.22		P	33.3
3	☐			31.11		P	22.3
4	☐			44.44		P	22.9
5	☐			46.67		P	25.8
6	☐			64.44		P	15.8
7	☐			87.78		P	20.9
8	☐			131.12		P	5.3
9	☐			35.55		P	30.1

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			141.67		P	15.6
2	☐			125.00		P	35.3
3	☐			113.90		P	23.5
4	☐			111.12		P	37.8
5	☐			138.89		P	18.3
6	☐			119.45		P	8.1
7	☐			100.00		P	14.4
8	☐			113.89		P	22.4
9	☐			105.56		P	19.9

160 Gd [He] No available calibration points

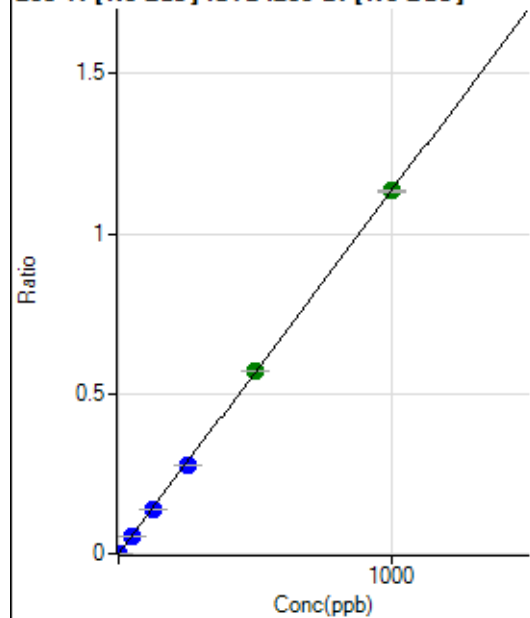
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			185.56		P	8.5
2	☐			194.45		P	4.3
3	☐			178.89		P	8.6
4	☐			168.89		P	6.3
5	☐			161.11		P	9.3
6	☐			146.67		P	6.8
7	☐			172.23		P	12.9
8	☐			157.78		P	19.6
9	☐			191.12		P	13.5

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			125.01		P	33.3
2	☐			111.12		P	30.3
3	☐			86.12		P	34.0
4	☐			97.23		P	13.1
5	☐			77.78		P	27.0
6	☐			83.34		P	26.5
7	☐			105.56		P	12.1
8	☐			77.78		P	6.2
9	☐			102.78		P	26.1

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			83.34		P	26.2
2	☐			74.45		P	28.4
3	☐			78.89		P	30.6
4	☐			74.45		P	9.3
5	☐			77.78		P	13.8
6	☐			75.56		P	15.5
7	☐			67.78		P	5.7
8	☐			90.00		P	35.3
9	☐			80.00		P	32.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	883.41	0.0001	P	11.4
2	☐	0.100	0.069	1783.55	0.0002	P	2.2
3	☐	1.000	0.844	11355.32	0.0010	P	3.6
4	☐	50.000	49.530	593267.62	0.0562	P	0.3
5	☐	125.000	123.627	1426716.57	0.1402	P	0.4
6	☐	250.000	241.287	2640483.63	0.2736	P	0.2
7	☐	500.000	505.316	5313288.71	0.5730	A	0.2
8	☐	1000.000	999.715	10146303.18	1.1335	A	0.8
9	☐			5034.51	0.0006	P	10.7

$$y = 0.0011 * x + 8.6195E-005$$

$$R = 0.9999$$

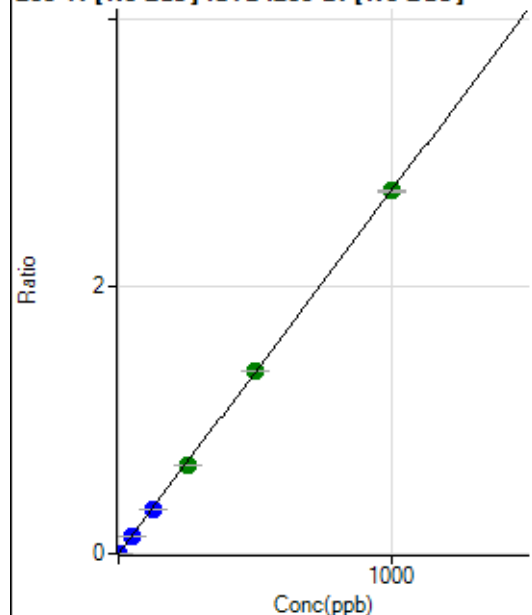
$$DL = 0.02599$$

$$BEC = 0.07603$$

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	1305.68	0.0001	P	10.2
2	☐	0.100	0.084	3864.63	0.0004	P	3.5
3	☐	1.000	0.883	27532.18	0.0025	P	1.8
4	☐	50.000	49.688	1426895.04	0.1353	P	0.5
5	☐	125.000	122.648	3394644.00	0.3337	P	0.6
6	☐	250.000	245.568	6445783.91	0.6680	A	0.5
7	☐	500.000	504.331	12720273.63	1.3718	A	0.2
8	☐	1000.000	999.252	24327738.91	2.7178	A	0.6
9	☐			11055.06	0.0014	P	11.3

$$y = 0.0027 * x + 1.2745E-004$$

$$R = 1.0000$$

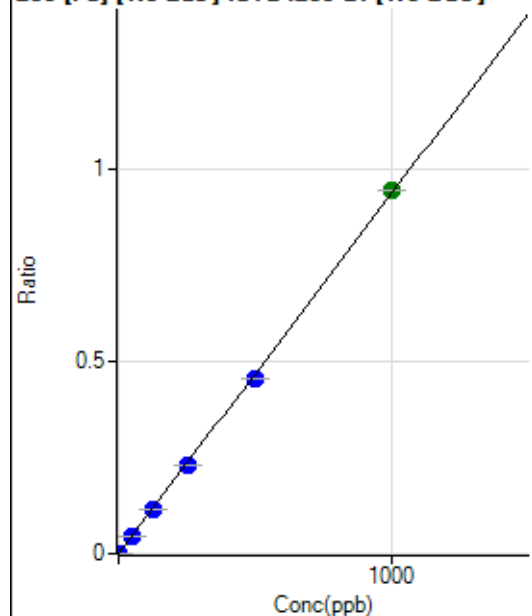
$$DL = 0.01439$$

$$BEC = 0.04686$$

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	1333.44	0.0001	P	3.3
2	☐	0.100	0.077	2192.83	0.0002	P	3.5
3	☐	1.000	0.826	9809.44	0.0009	P	1.2
4	☐	50.000	50.359	497212.53	0.0471	P	0.3
5	☐	125.000	124.039	1179127.85	0.1159	P	0.6
6	☐	250.000	243.653	2195760.86	0.2276	P	0.1
7	☐	500.000	487.132	4217503.05	0.4548	P	0.4
8	☐	1000.000	1008.123	8424135.72	0.9411	A	0.2
9	☐			13125.31	0.0016	P	1.9

$$y = 9.3340E-004 * x + 1.3012E-004$$

$$R = 0.9999$$

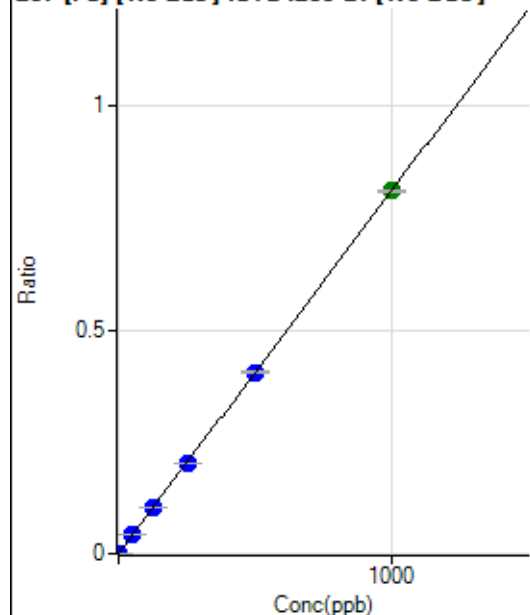
$$DL = 0.01385$$

$$BEC = 0.1394$$

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	1216.76	0.0001	P	6.5
2	☐	0.100	0.096	2135.42	0.0002	P	5.5
3	☐	1.000	0.869	8955.11	0.0008	P	4.0
4	☐	50.000	50.972	437082.20	0.0414	P	0.3
5	☐	125.000	126.289	1042544.65	0.1025	P	0.1
6	☐	250.000	248.979	1948485.50	0.2019	P	0.4
7	☐	500.000	500.122	3760144.29	0.4055	P	0.8
8	☐	1000.000	999.985	7256522.27	0.8107	A	0.7
9	☐			11647.97	0.0014	P	2.1

$$y = 8.1056\text{E-}004 * x + 1.1871\text{E-}004$$

$$R = 1.0000$$

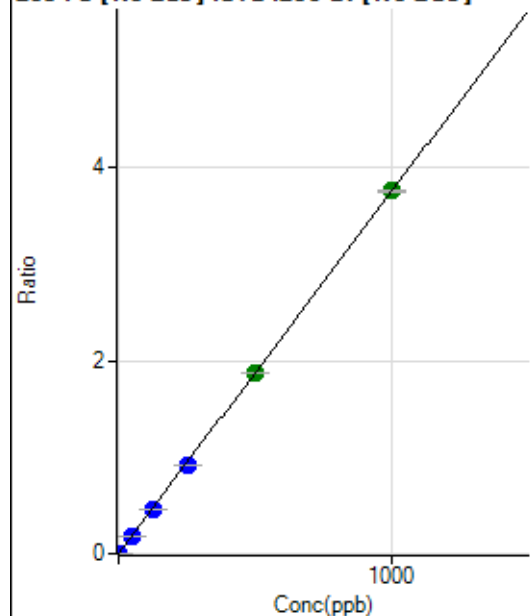
$$DL = 0.02851$$

$$BEC = 0.1465$$

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	4687.48	0.0005	P	2.9
2	☐	0.100	0.081	8267.83	0.0008	P	2.4
3	☐	1.000	0.845	39492.29	0.0036	P	0.8
4	☐	50.000	50.304	1995679.21	0.1892	P	0.1
5	☐	125.000	124.051	4739217.96	0.4659	P	0.4
6	☐	250.000	242.755	8792671.69	0.9112	P	0.4
7	☐	500.000	499.980	17398563.29	1.8763	A	0.4
8	☐	1000.000	1001.925	33652039.87	3.7595	A	0.2
9	☐			51704.79	0.0064	P	2.1

$$y = 0.0038 * x + 4.5741\text{E-}004$$

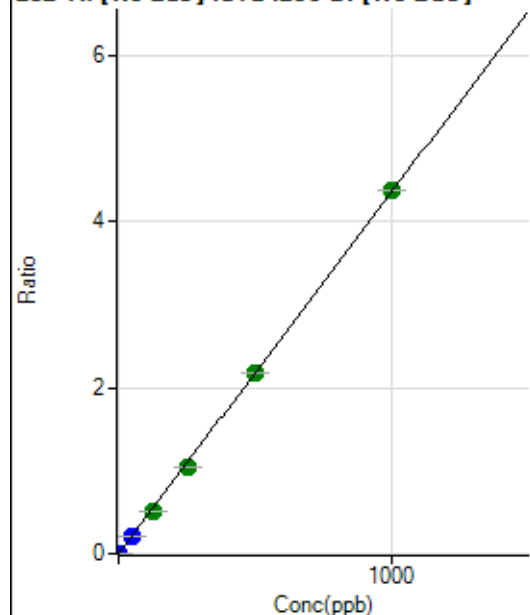
$$R = 1.0000$$

$$DL = 0.01067$$

$$BEC = 0.1219$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2852.25	0.0003	P	2.6
2	☐	0.100	0.061	5871.91	0.0005	P	2.6
3	☐	1.000	0.758	38900.89	0.0036	P	1.8
4	☐	50.000	46.832	2151229.95	0.2039	P	0.1
5	☐	125.000	118.911	5263278.59	0.5174	A	0.3
6	☐	250.000	241.392	10131897.10	1.0500	A	0.4
7	☐	500.000	499.238	20134337.25	2.1713	A	0.1
8	☐	1000.000	1003.453	39063044.86	4.3640	A	0.1
9	☐			17877.46	0.0022	P	7.3

$$y = 0.0043 * x + 2.7832E-004$$

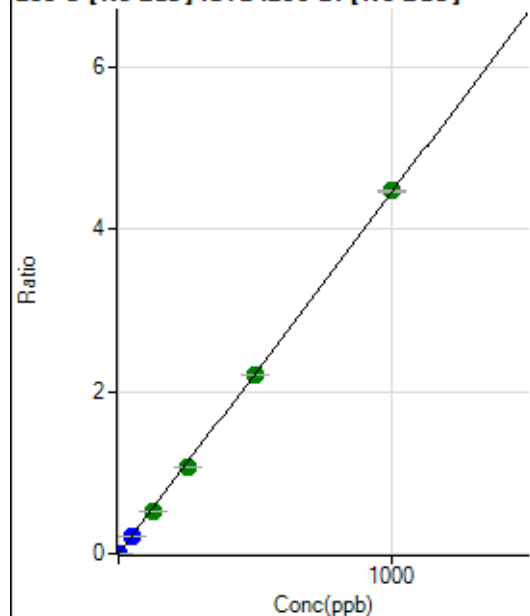
$$R = 0.9999$$

$$DL = 0.004917$$

$$BEC = 0.064$$

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	3331.14	0.0003	P	10.7
2	☐	0.100	0.071	6966.10	0.0006	P	4.8
3	☐	1.000	0.802	42291.68	0.0039	P	1.7
4	☐	50.000	47.144	2213014.81	0.2098	P	0.7
5	☐	125.000	118.510	5359970.48	0.5269	A	0.3
6	☐	250.000	240.695	10322659.87	1.0698	A	0.9
7	☐	500.000	496.474	20458437.26	2.2063	A	0.5
8	☐	1000.000	1005.044	39975956.80	4.4659	A	0.2
9	☐			14491.93	0.0018	P	8.5

$$y = 0.0044 * x + 3.2517E-004$$

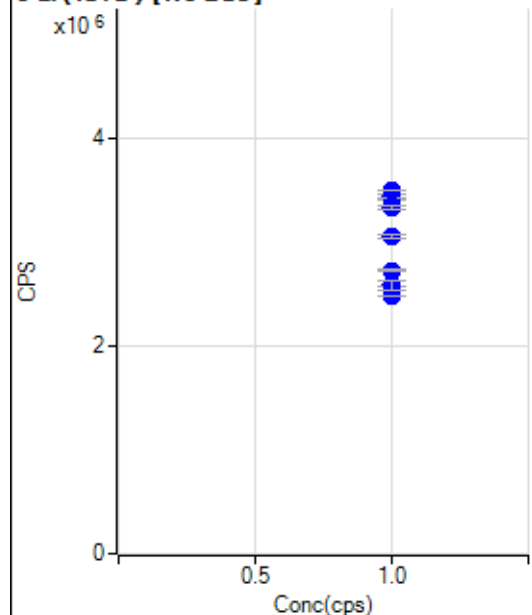
$$R = 0.9999$$

$$DL = 0.02356$$

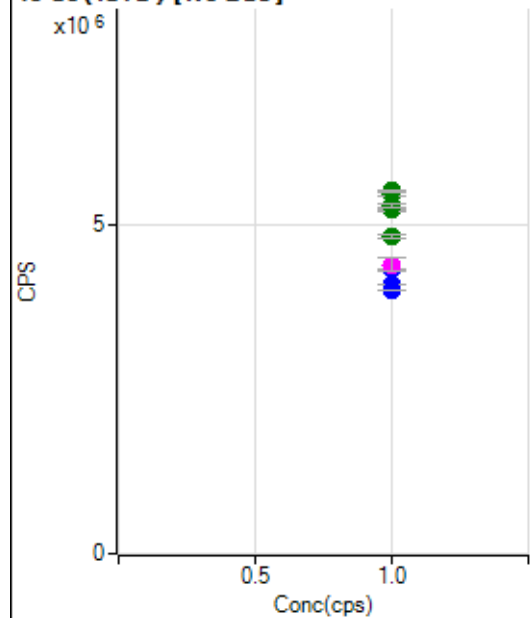
$$BEC = 0.07318$$

Weight: <None>

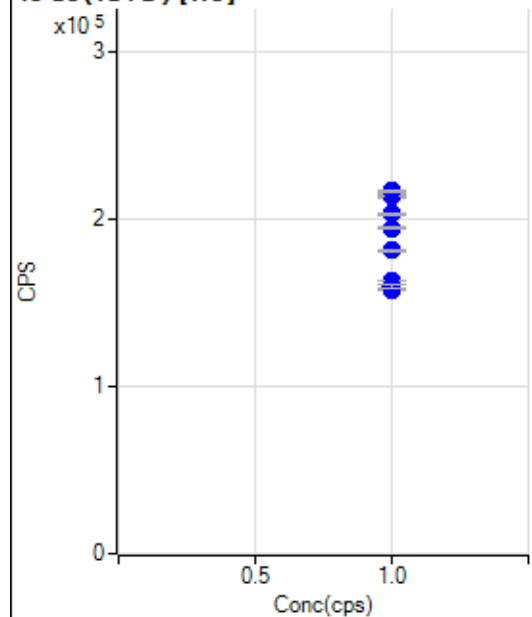
Min Conc: 0

6 Li (ISTD) [No Gas]

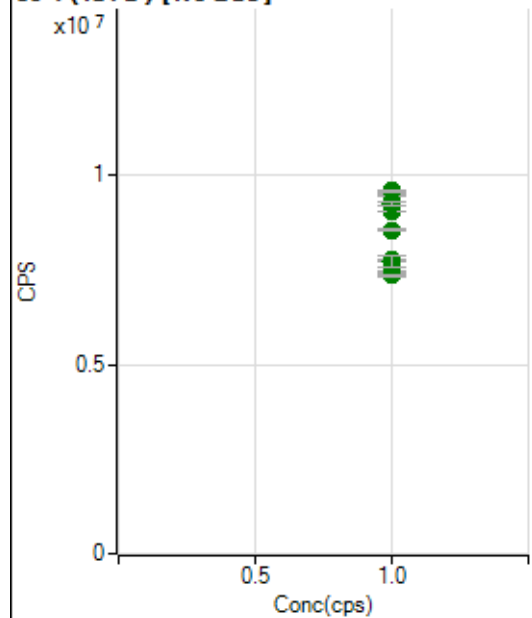
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3401578.14		P	0.3
2	☐	1.000		3437988.01		P	0.8
3	☐	1.000		3491836.96		P	0.2
4	☐	1.000		3334311.51		P	0.8
5	☐	1.000		3057943.08		P	1.2
6	☐	1.000		2723294.47		P	0.8
7	☐	1.000		2567258.23		P	0.2
8	☐	1.000		2482275.43		P	0.1
9	☐	1.000		2584573.66		P	3.5

45 Sc (ISTD) [No Gas]

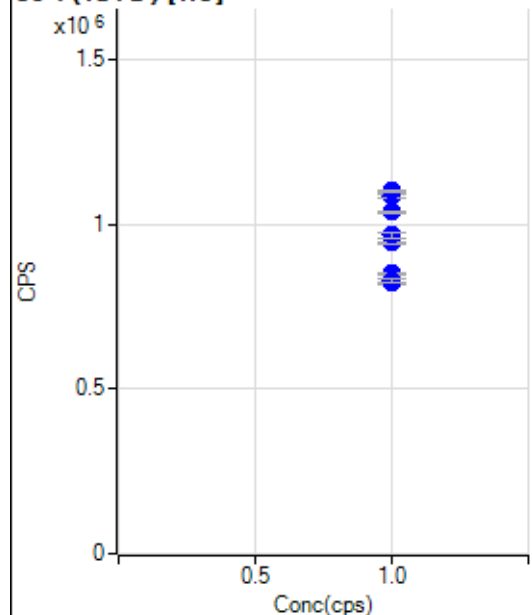
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5220958.67		A	0.4
2	☐	1.000		5460320.09		A	0.7
3	☐	1.000		5509811.32		A	0.4
4	☐	1.000		5295696.99		A	1.0
5	☐	1.000		4825220.77		A	0.9
6	☐	1.000		4309736.64		P	0.8
7	☐	1.000		4083196.88		P	0.1
8	☐	1.000		4001857.34		P	0.1
9	☐	1.000		4393519.28		M	4.5

45 Sc (ISTD) [He]

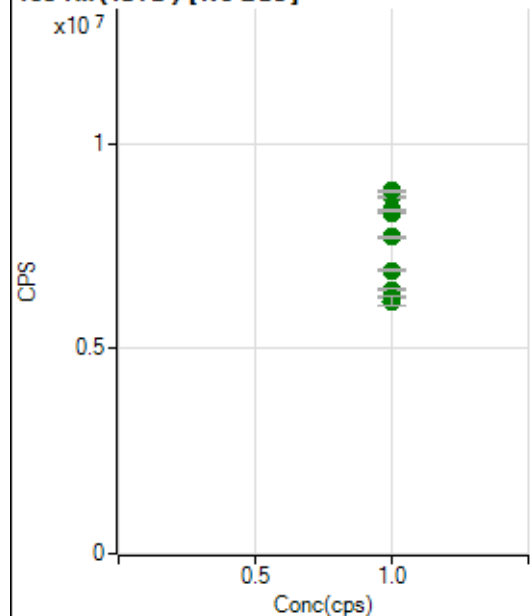
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		213579.09		P	0.4
2	☐	1.000		214464.62		P	0.7
3	☐	1.000		217077.40		P	0.5
4	☐	1.000		203419.12		P	0.5
5	☐	1.000		181424.70		P	0.7
6	☐	1.000		163505.15		P	0.5
7	☐	1.000		157996.32		P	1.2
8	☐	1.000		159907.44		P	1.1
9	☐	1.000		194965.07		P	1.1

89 Y (ISTD) [No Gas]

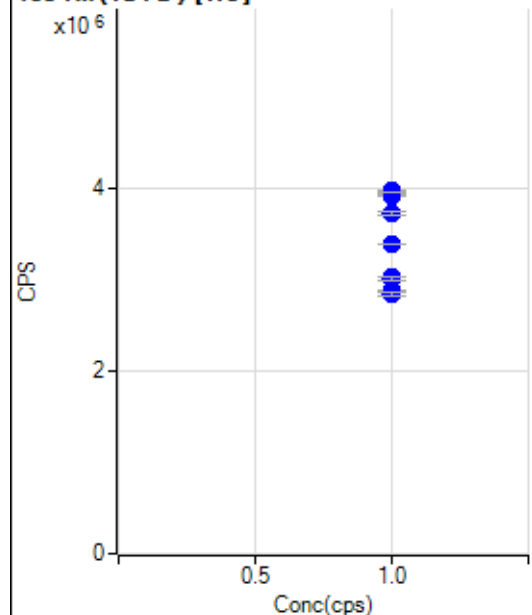
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9047091.46		A	0.2
2	☐	1.000		9479328.33		A	0.4
3	☐	1.000		9579633.05		A	0.4
4	☐	1.000		9222057.36		A	1.1
5	☐	1.000		8554740.36		A	0.8
6	☐	1.000		7751905.79		A	0.6
7	☐	1.000		7441079.26		A	0.4
8	☐	1.000		7342985.31		A	0.3
9	☐	1.000		7722238.77		A	3.7

89 Y(ISTD) [He]

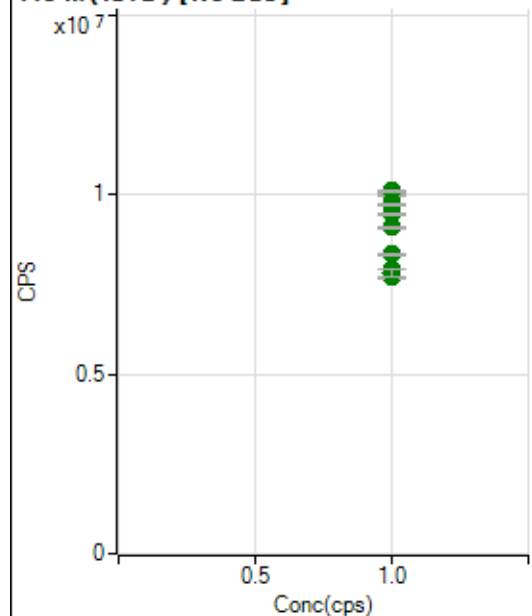
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1085790.73		P	0.6
2	☐	1.000		1100682.34		P	0.1
3	☐	1.000		1101537.80		P	0.3
4	☐	1.000		1037495.36		P	0.9
5	☐	1.000		943310.21		P	0.3
6	☐	1.000		849711.03		P	0.3
7	☐	1.000		821391.25		P	0.6
8	☐	1.000		827720.55		P	1.2
9	☐	1.000		967889.91		P	1.6

103 Rh(ISTD) [No Gas]

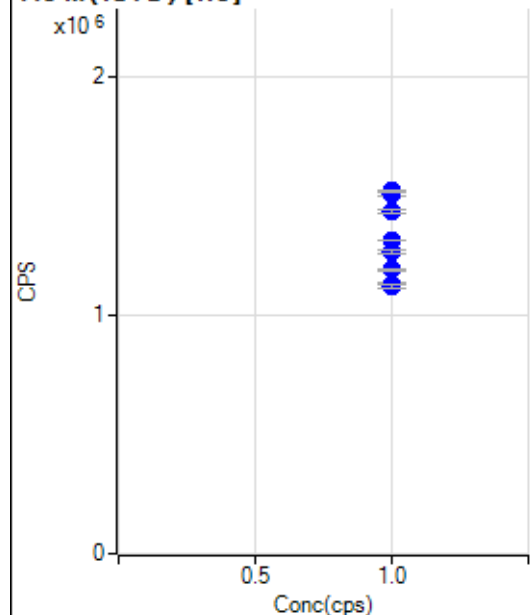
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8286760.51		A	0.0
2	☐	1.000		8700035.87		A	0.5
3	☐	1.000		8847330.14		A	0.4
4	☐	1.000		8382235.95		A	0.5
5	☐	1.000		7718827.78		A	0.5
6	☐	1.000		6897345.03		A	0.7
7	☐	1.000		6445238.60		A	0.2
8	☐	1.000		6251734.60		A	0.7
9	☐	1.000		6159356.26		A	4.0

103 Rh (ISTD) [He]

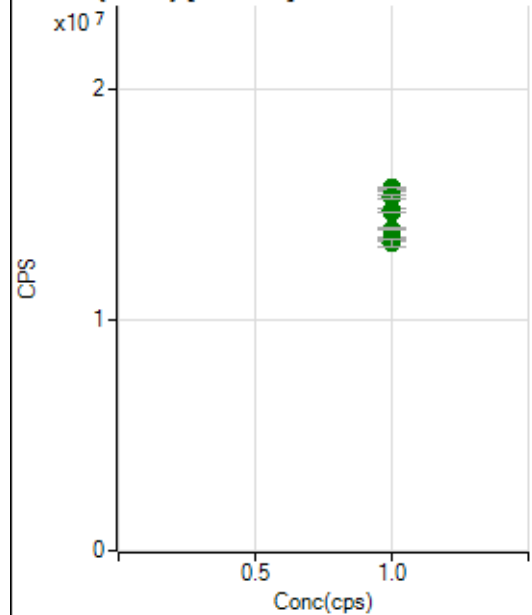
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3927611.75		P	0.4
2	☐	1.000		3975097.55		P	0.6
3	☐	1.000		3968481.99		P	0.1
4	☐	1.000		3724078.21		P	0.9
5	☐	1.000		3389227.90		P	0.3
6	☐	1.000		3035136.48		P	0.1
7	☐	1.000		2889177.53		P	0.4
8	☐	1.000		2841482.04		P	1.5
9	☐	1.000		3016890.61		P	1.2

115 In (ISTD) [No Gas]

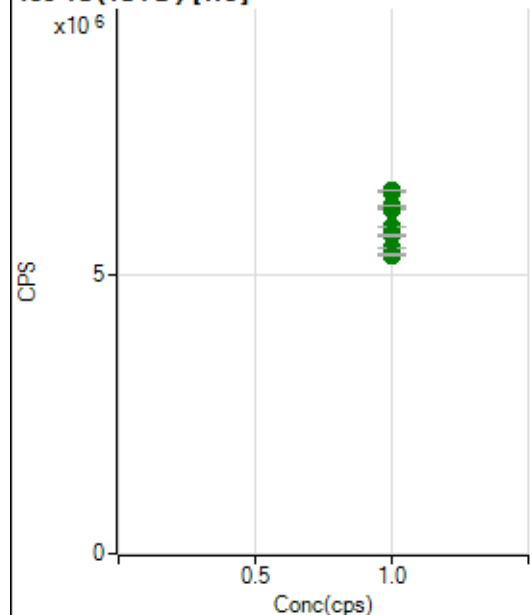
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9463844.15		A	0.5
2	☐	1.000		10005928.29		A	0.7
3	☐	1.000		10106566.88		A	0.6
4	☐	1.000		9733200.96		A	0.6
5	☐	1.000		9093506.72		A	0.5
6	☐	1.000		8335091.72		A	0.9
7	☐	1.000		7930642.50		A	0.3
8	☐	1.000		7687846.20		A	0.2
9	☐	1.000		7825900.60		A	2.9

115 In (ISTD) [He]

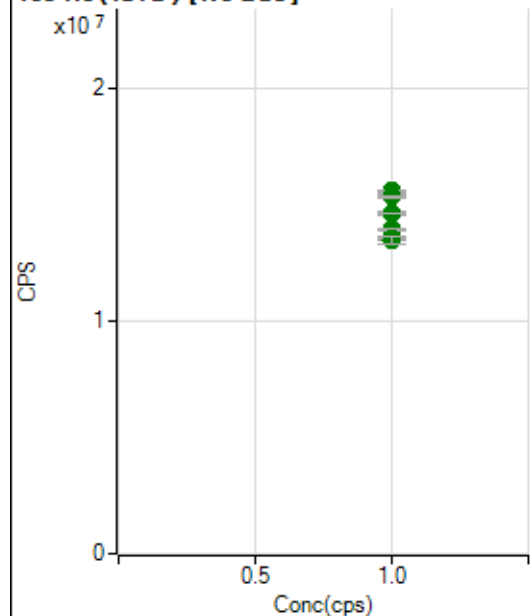
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1510647.58		P	0.9
2	☐	1.000		1522824.47		P	0.8
3	☐	1.000		1524334.92		P	0.2
4	☐	1.000		1436173.18		P	1.0
5	☐	1.000		1315275.97		P	0.3
6	☐	1.000		1192130.68		P	0.3
7	☐	1.000		1132514.39		P	0.6
8	☐	1.000		1119952.32		P	1.3
9	☐	1.000		1267923.44		P	1.2

159 Tb (ISTD) [No Gas]

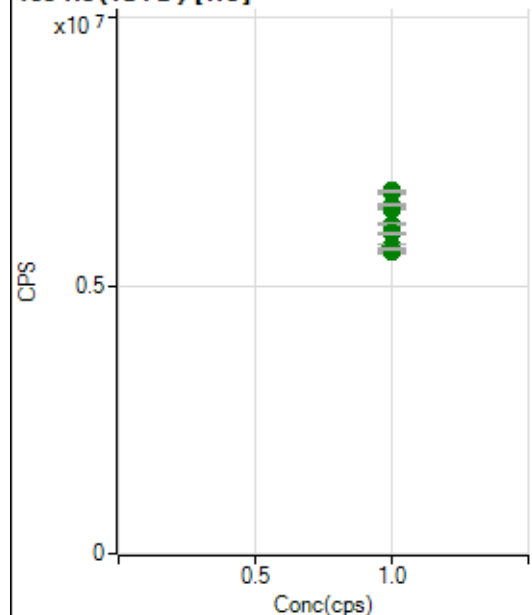
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14762496.17		A	0.8
2	☐	1.000		15597812.68		A	0.6
3	☐	1.000		15725575.32		A	0.4
4	☐	1.000		15327964.63		A	0.8
5	☐	1.000		14665267.84		A	0.5
6	☐	1.000		13940831.32		A	0.4
7	☐	1.000		13543393.27		A	0.2
8	☐	1.000		13441497.44		A	0.3
9	☐	1.000		13327472.44		A	2.7

159 Tb (ISTD) [He]

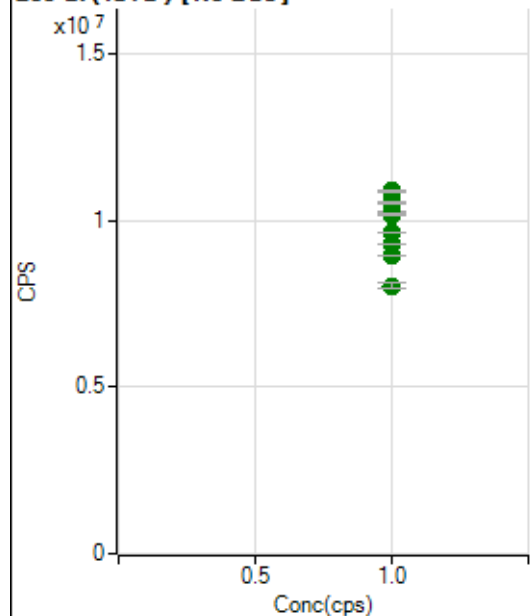
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6197596.85		A	0.4
2	☐	1.000		6499065.60		A	0.2
3	☐	1.000		6521796.71		A	0.1
4	☐	1.000		6258328.17		A	0.3
5	☐	1.000		5872187.97		A	0.3
6	☐	1.000		5491751.66		A	0.5
7	☐	1.000		5374059.50		A	0.6
8	☐	1.000		5362742.42		A	0.7
9	☐	1.000		5723410.75		A	0.7

165 Ho (ISTD) [No Gas]

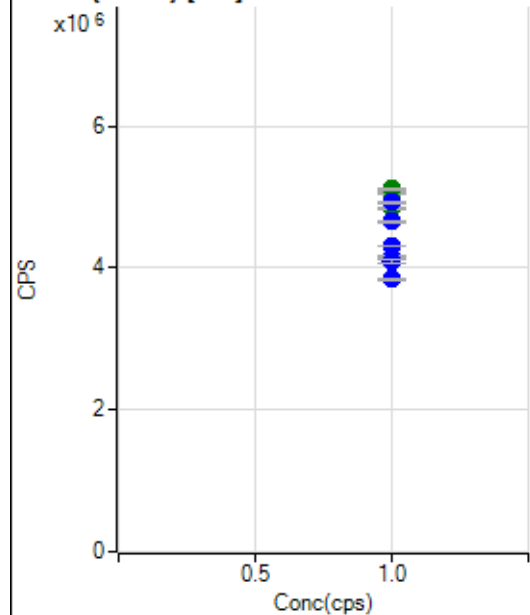
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14635128.28		A	0.9
2	☐	1.000		15504911.81		A	0.6
3	☐	1.000		15601053.30		A	0.5
4	☐	1.000		15356483.68		A	0.8
5	☐	1.000		14627396.16		A	0.3
6	☐	1.000		13941259.51		A	0.1
7	☐	1.000		13596981.90		A	0.4
8	☐	1.000		13518904.12		A	0.5
9	☐	1.000		13467671.05		A	2.4

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6429896.43		A	0.5
2	☐	1.000		6748785.94		A	0.8
3	☐	1.000		6773081.36		A	0.6
4	☐	1.000		6511461.36		A	0.4
5	☐	1.000		6149903.94		A	0.3
6	☐	1.000		5745405.33		A	0.8
7	☐	1.000		5629573.80		A	0.5
8	☐	1.000		5684976.79		A	0.8
9	☐	1.000		5990484.29		A	0.6

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10247614.15		A	0.4
2	☐	1.000		10842834.56		A	0.3
3	☐	1.000		10881699.97		A	0.2
4	☐	1.000		10548714.78		A	0.5
5	☐	1.000		10172847.14		A	0.2
6	☐	1.000		9649319.72		A	0.1
7	☐	1.000		9272951.53		A	0.2
8	☐	1.000		8951270.14		A	0.2
9	☐	1.000		8043443.49		A	1.6

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4840174.06		A	0.4
2	☐	1.000		5065975.48		A	0.5
3	☐	1.000		5114810.31		A	0.6
4	☐	1.000		4923674.55		P	0.8
5	☐	1.000		4656070.28		P	0.5
6	☐	1.000		4314751.15		P	0.4
7	☐	1.000		4159483.97		P	0.9
8	☐	1.000		4084538.10		P	1.3
9	☐	1.000		3844522.76		P	0.8

US EPA Tune Check Sample Report

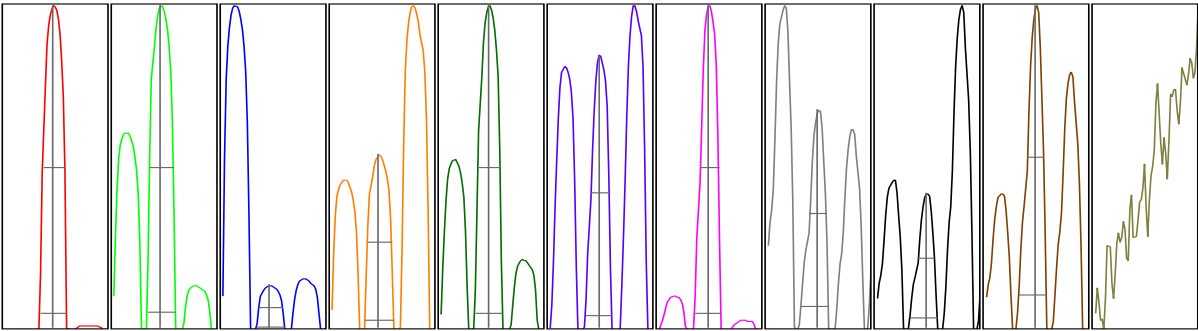
Batch Folder D:\ICP-MS Data\P7101219MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	9593	1.46	5.00	
24	104177	1.54	5.00	
25	14056	1.64	5.00	
26	16559	1.55	5.00	
59	72375	1.46	5.00	
113	11517	0.90	5.00	
115	133541	0.95	5.00	
206	41929	0.62	5.00	
207	38779	0.42	5.00	
208	91003	0.38	5.00	
220	139	4.42		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	9773	9626	9594	9592	9380
24	106738	104249	104005	103533	102357
25	14380	14170	13988	13971	13770
26	16950	16648	16482	16445	16269
59	73765	72938	72184	72064	70922
113	11606	11619	11496	11499	11364
115	135002	134740	132650	133166	132147
206	41915	42294	41966	41913	41560
207	38690	39037	38829	38709	38631
208	91142	91461	90611	91100	90702
220	146	141	131	143	136

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	15649	8.95	8.9 - 9.1		0.782	0.900	
24	161371	23.90	23.9 - 24.1		0.831	0.900	
25	21652	24.90	24.9 - 25.1		0.825	0.900	
26	25326	25.90	25.9 - 26.1		0.834	0.900	
59	120504	58.95	58.9 - 59.1		0.818	0.900	
113	21527	113.00	112.9 - 113.1		0.768	0.900	
115	248850	115.00	114.9 - 115.1		0.766	0.900	
206	80805	206.00	205.9 - 206.1		0.792	0.900	
207	73388	207.00	206.9 - 207.1		0.789	0.900	
208	174712	208.00	207.9 - 208.1		0.797	0.900	
220			-				

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

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.0	V	Deflect	12.4	V
Extract 2	-105.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-60	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	140	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	17544	0.89	
89	22633	1.00	
205	33362	0.55	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	17720	17681	17508	17470	17339
89	22857	22711	22658	22686	22252
205	33489	33572	33273	33371	33104

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.2	V	Deflect	1.2	V
Extract 2	-125.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-65	V	Cell Exit	-60	V			

Cell Parameters

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