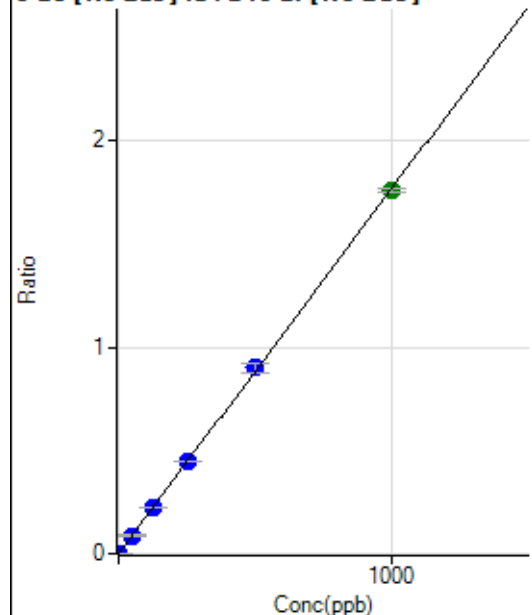


Batch Folder: D:\P8072617-MS.b\
Analysis File: P8072617-MS.batch.bin
DA Date-Time: 2017-07-27 11:34:59
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2017-07-26 11:21:50
2			
3	005CALS.d	S02	2017-07-26 11:29:02
4	006CALS.d	S03	2017-07-26 11:32:32
5	007CALS.d	S04	2017-07-26 11:36:00
6	008CALS.d	S05	2017-07-26 11:39:24
7	009CALS.d	S06	2017-07-26 11:42:43
8	010CALS.d	S07	2017-07-26 11:45:54
9	011CALS.d	S08	2017-07-26 11:49:03

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	105.56	0.0001	P	32.3
2	☐	0.100					
3	☐	1.000	0.878	1361.22	0.0017	P	9.7
4	☐	50.000	50.013	71493.84	0.0885	P	0.6
5	☐	125.000	125.568	179292.19	0.2219	P	0.9
6	☐	250.000	251.917	364749.41	0.4451	P	1.1
7	☐	500.000	509.550	718801.86	0.9002	P	5.4
8	☐	1000.000	994.674	1429928.30	1.7572	A	0.9
9	☐			659.30	0.0008	P	8.4

$$y = 0.0018 * x + 1.3146E-004$$

$$R = 0.9999$$

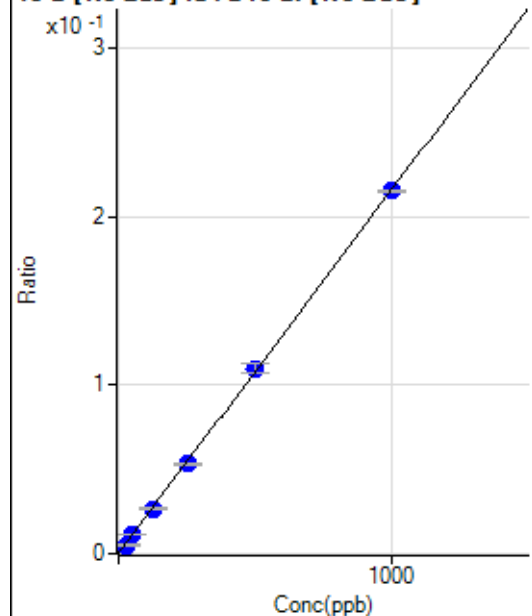
$$DL = 0.07217$$

$$BEC = 0.07442$$

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	283.35	0.0004	P	10.4
2	☐	2.500					
3	☐	25.000	21.936	4111.88	0.0051	P	4.4
4	☐	50.000	50.223	9028.22	0.0112	P	2.0
5	☐	125.000	121.492	21427.81	0.0265	P	3.1
6	☐	250.000	245.471	43625.83	0.0532	P	1.9
7	☐	500.000	508.340	87748.89	0.1099	P	5.0
8	☐	1000.000	997.466	175183.50	0.2153	P	0.6
9	☐			5745.83	0.0072	P	7.5

$$y = 2.1546E-004 * x + 3.5250E-004$$

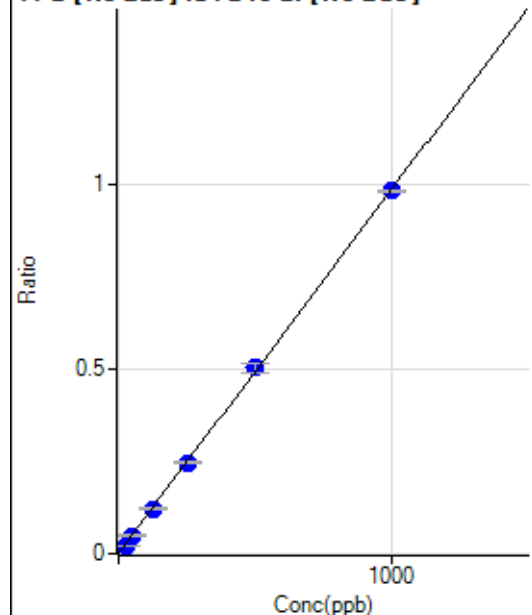
$$R = 0.9999$$

$$DL = 0.511$$

$$BEC = 1.636$$

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	1247.33	0.0016	P	4.3
2	☐	2.500					
3	☐	25.000	20.844	17828.43	0.0220	P	1.8
4	☐	50.000	48.460	39708.61	0.0491	P	1.5
5	☐	125.000	122.380	98341.23	0.1217	P	1.3
6	☐	250.000	247.807	200681.42	0.2449	P	2.2
7	☐	500.000	509.212	400652.95	0.5016	P	4.5
8	☐	1000.000	996.451	797643.84	0.9802	P	0.8
9	☐			25762.80	0.0324	P	6.9

$$y = 9.8210\text{E-}004 * x + 0.0016$$

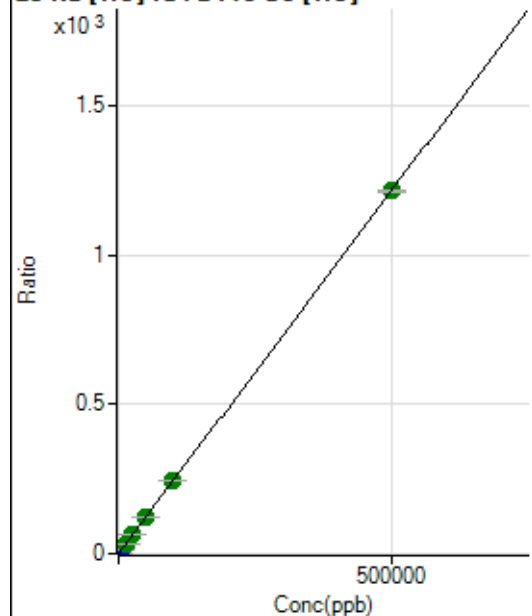
$$R = 0.9999$$

$$DL = 0.203$$

$$BEC = 1.58$$

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	4487.02	0.1116	P	3.8
2	☐	50.000					
3	☐	500.000	465.937	49395.02	1.2430	P	3.4
4	☐	5000.000	5289.361	516937.58	12.9549	P	0.5
5	☐	12500.000	12827.349	1286092.39	31.2582	A	0.5
6	☐	25000.000	25873.015	2539864.08	62.9350	A	0.4
7	☐	50000.000	51190.011	4874965.78	124.4082	A	0.9
8	☐	100000.00	100166.41	9512967.49	243.3299	A	0.8
9	☐	500000.00	499793.02	48894263.24	1,213.680	A	0.8

$$y = 0.0024 * x + 0.1116$$

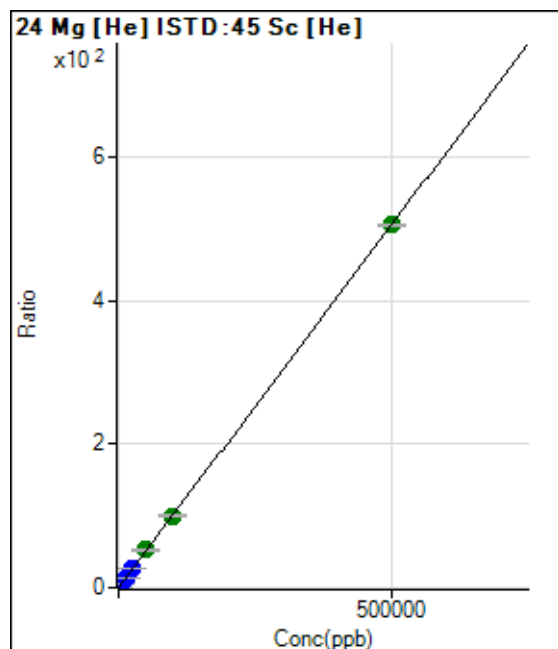
$$R = 1.0000$$

$$DL = 5.211$$

$$BEC = 45.96$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	191.68	0.0048	P	22.1
2	☐	50.000					
3	☐	500.000	448.966	18248.44	0.4592	P	4.2
4	☐	5000.000	5103.362	206312.31	5.1706	P	1.8
5	☐	12500.000	12504.085	520934.90	12.6619	P	0.9
6	☐	25000.000	25266.050	1032324.39	25.5802	P	0.7
7	☐	50000.000	51728.049	2051833.42	52.3662	A	1.6
8	☐	100000.00	98944.448	3915735.33	100.1607	A	1.1
9	☐	500000.00	500023.91	20390646.46	506.1510	A	0.9

$$y = 0.0010 * x + 0.0048$$

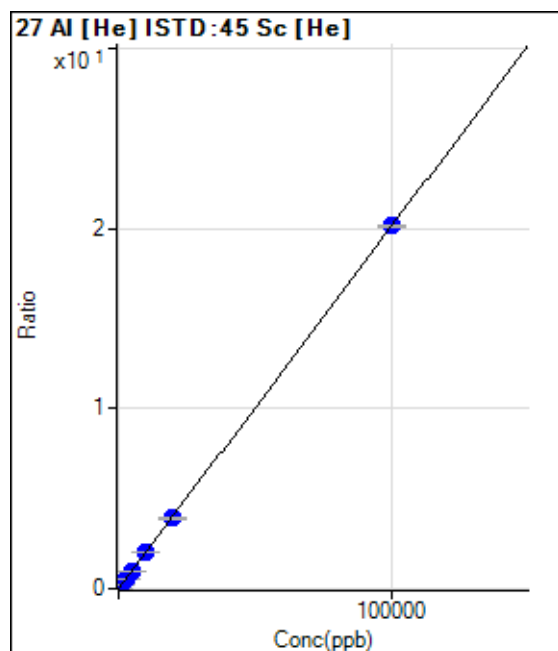
$$R = 1.0000$$

$$DL = 3.12$$

$$BEC = 4.704$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.22	0.0005	P	76.5
2	☐	2.000					
3	☐	20.000	21.563	194.45	0.0049	P	1.5
4	☐	1000.000	1009.114	8124.92	0.2036	P	2.7
5	☐	2500.000	2494.506	20674.28	0.5025	P	1.3
6	☐	5000.000	4926.197	40029.84	0.9919	P	0.2
7	☐	10000.000	9956.190	78525.59	2.0041	P	1.3
8	☐	20000.000	19373.675	152435.75	3.8992	P	1.4
9	☐	100000.00	100133.38	811788.13	20.1508	P	0.9

$$y = 2.0123E-004 * x + 5.4843E-004$$

$$R = 1.0000$$

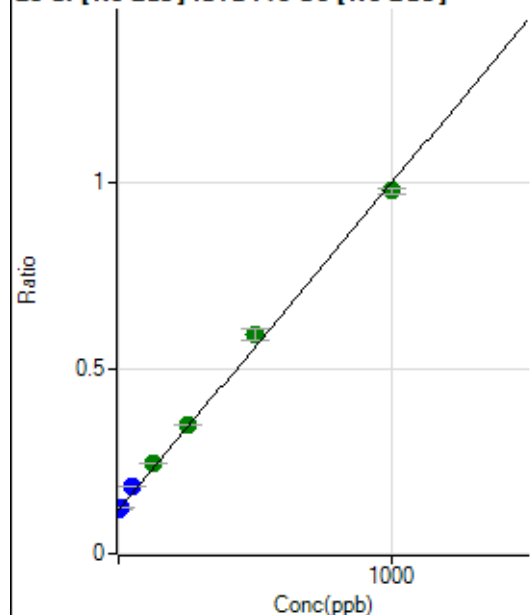
$$DL = 6.258$$

$$BEC = 2.725$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	471566.57	0.1177	P	0.4
2	☐	1.000					
3	☐	10.000	9.638	510670.43	0.1262	P	1.2
4	☐	50.000	70.237	735299.17	0.1797	P	0.3
5	☐	125.000	141.483	991720.96	0.2425	A	1.0
6	☐	250.000	260.719	1442329.80	0.3477	A	0.9
7	☐	500.000	536.790	2357102.35	0.5913	A	5.1
8	☐	1000.000	975.857	4020166.80	0.9787	A	1.7
9	☐			549063.17	0.1346	P	1.8

$$y = 8.8232\text{E-}004 * x + 0.1177$$

$$R = 0.9988$$

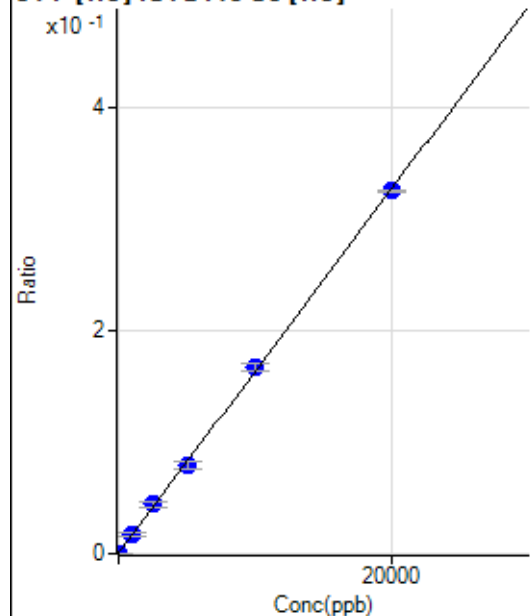
$$DL = 1.644$$

$$BEC = 133.4$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.160	11.11	0.0003	P	115.
2	☐	0.000					
3	☐	0.000	0.160	11.11	0.0003	P	47.3
4	☐	1000.000	1038.720	688.93	0.0173	P	12.2
5	☐	2500.000	2686.337	1819.64	0.0442	P	11.9
6	☐	5000.000	4862.739	3219.96	0.0798	P	7.9
7	☐	10000.000	10223.804	6562.92	0.1675	P	3.7
8	☐	20000.000	19897.185	12731.21	0.3256	P	0.5
9	☐			16.67	0.0004	P	49.1

$$y = 1.6352\text{E-}005 * x + 2.7983\text{E-}004$$

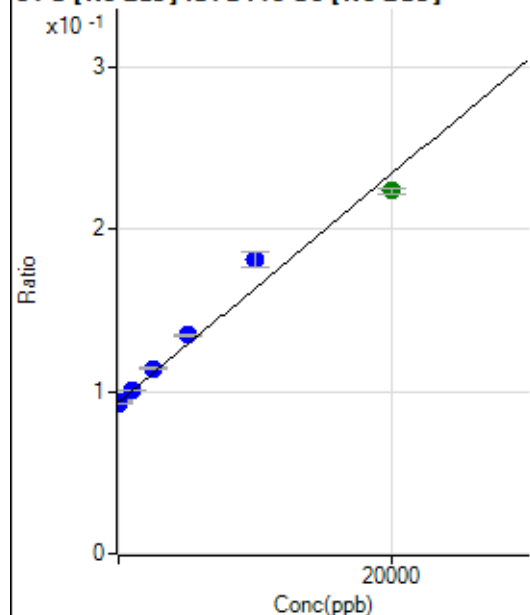
$$R = 0.9998$$

$$DL = 41.66$$

$$BEC = 17.11$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	100.955	377328.37	0.0942	P	0.9
2	☐	0.000					
3	☐	0.000	-100.955	375340.21	0.0927	P	0.5
4	☐	1000.000	1063.652	413177.43	0.1010	P	0.9
5	☐	2500.000	2961.173	467499.07	0.1143	P	1.2
6	☐	5000.000	5865.183	559118.10	0.1348	P	0.6
7	☐	10000.000	12461.749	722567.78	0.1813	P	5.4
8	☐	20000.000	18492.000	919267.32	0.2238	A	1.3
9	☐			387757.51	0.0950	P	0.9

$$y = 7.0482\text{E-}006 * x + 0.0935$$

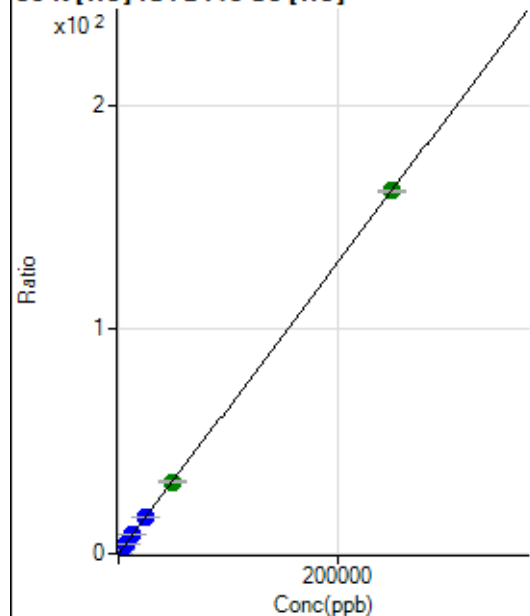
$$R = 0.9867$$

$$DL = 284.8$$

$$BEC = 1.326\text{E}+04$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3625.65	0.0902	P	3.5
2	☐	50.000					
3	☐	500.000	472.475	15723.29	0.3954	P	1.2
4	☐	2500.000	2635.095	71535.30	1.7928	P	1.0
5	☐	6250.000	6284.574	170770.81	4.1508	P	0.9
6	☐	12500.000	12625.529	332857.37	8.2479	P	0.7
7	☐	25000.000	25243.412	642643.97	16.4006	P	0.6
8	☐	50000.000	49487.228	1253595.73	32.0653	A	0.7
9	☐	250000.00	250069.77	6513050.15	161.6673	A	0.7

$$y = 6.4613\text{E-}004 * x + 0.0902$$

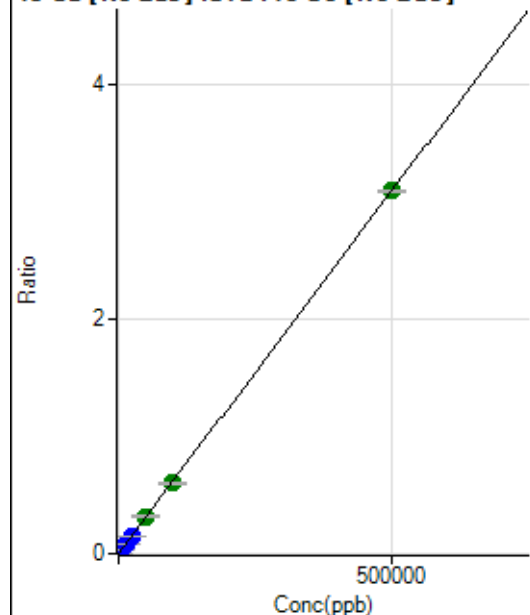
$$R = 1.0000$$

$$DL = 14.63$$

$$BEC = 139.5$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2858.75	0.0007	P	3.6
2	☐	50.000					
3	☐	500.000	426.600	13546.03	0.0033	P	2.3
4	☐	5000.000	4937.972	127668.40	0.0312	P	2.7
5	☐	12500.000	12174.728	310241.72	0.0759	P	1.5
6	☐	25000.000	24587.242	632577.19	0.1525	P	0.4
7	☐	50000.000	50925.448	1255676.39	0.3151	A	6.0
8	☐	100000.00	97323.950	2471059.99	0.6015	A	1.2
9	☐	500000.00	500472.12	12609122.42	3.0904	A	0.3

$$y = 6.1735E-006 * x + 7.1359E-004$$

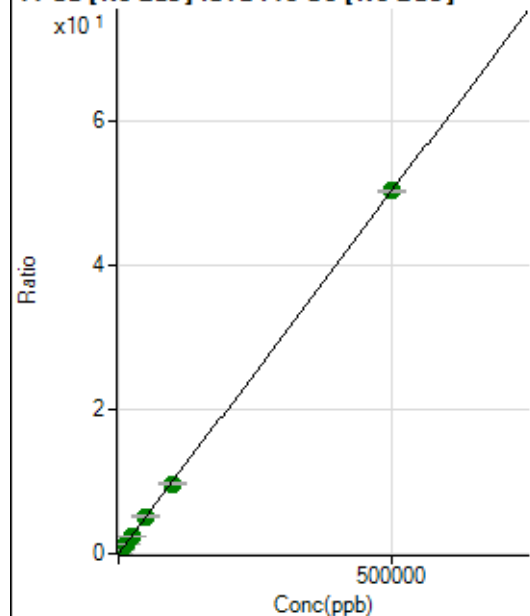
$$R = 1.0000$$

$$DL = 12.48$$

$$BEC = 115.6$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	68238.81	0.0170	P	1.1
2	☐	50.000					
3	☐	500.000	427.335	242519.54	0.0599	P	1.1
4	☐	5000.000	5013.262	2129268.62	0.5202	A	0.8
5	☐	12500.000	12258.805	5101162.74	1.2475	A	1.3
6	☐	25000.000	24478.555	10262467.42	2.4741	A	0.6
7	☐	50000.000	50389.498	20229007.22	5.0750	A	5.2
8	☐	100000.00	96676.282	39931531.45	9.7211	A	1.3
9	☐	500000.00	500657.83	205115933.7	50.2716	A	0.4

$$y = 1.0038E-004 * x + 0.0170$$

$$R = 1.0000$$

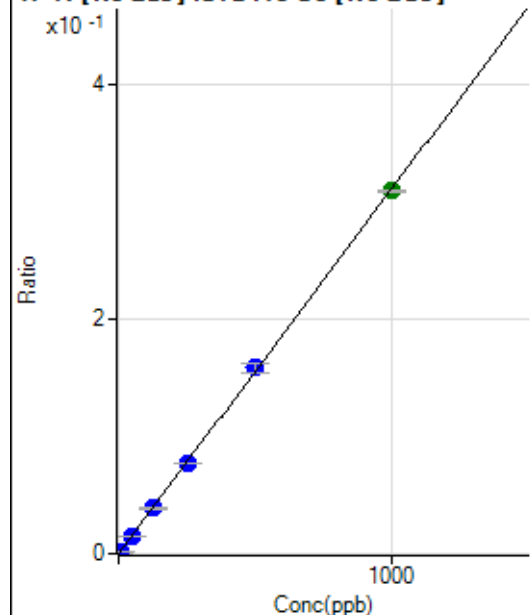
$$DL = 5.506$$

$$BEC = 169.7$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	144.45	0.0000	P	9.1
2	☐	0.500					
3	☐	5.000	4.384	5648.60	0.0014	P	2.9
4	☐	50.000	49.423	62875.20	0.0154	P	1.4
5	☐	125.000	124.264	157720.77	0.0386	P	1.1
6	☐	250.000	246.680	317454.49	0.0765	P	0.6
7	☐	500.000	511.312	632157.66	0.1586	P	5.2
8	☐	1000.000	995.298	1268025.57	0.3087	A	0.7
9	☐			2497.57	0.0006	P	4.7

$$y = 3.1010\text{E-}004 * x + 3.6058\text{E-}005$$

$$R = 0.9999$$

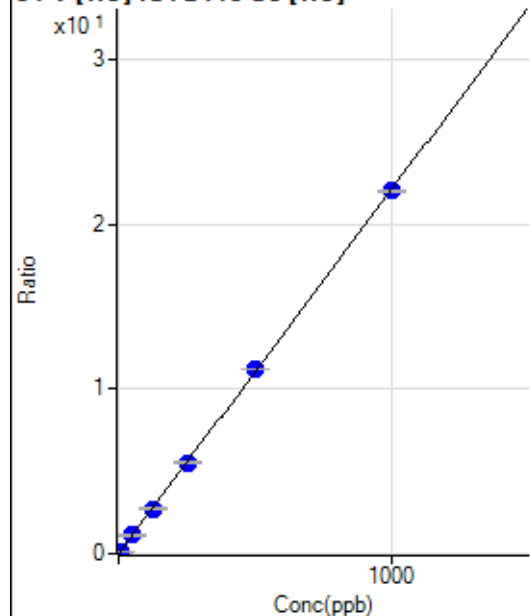
$$DL = 0.03186$$

$$BEC = 0.1163$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.78	0.0007	P	24.9
2	☐	0.500					
3	☐	5.000	4.483	3961.74	0.0997	P	5.2
4	☐	50.000	50.202	44275.52	1.1096	P	0.7
5	☐	125.000	123.618	112369.27	2.7312	P	0.8
6	☐	250.000	250.806	223597.93	5.5406	P	0.8
7	☐	500.000	507.338	439142.18	11.2070	P	0.3
8	☐	1000.000	996.295	860378.66	22.0073	P	0.4
9	☐			762.26	0.0189	P	11.1

$$y = 0.0221 * x + 6.9044\text{E-}004$$

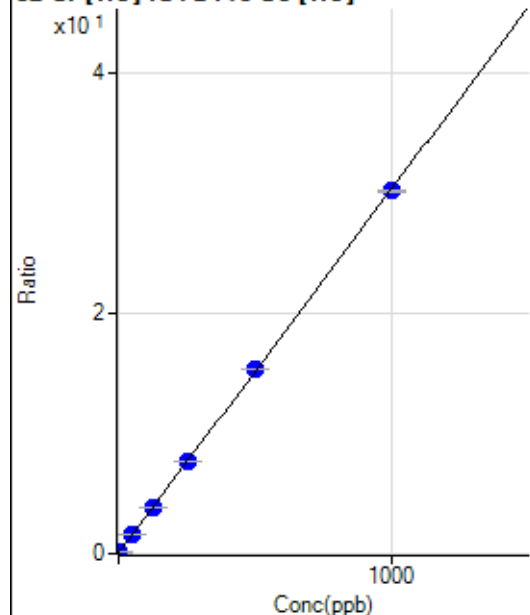
$$R = 1.0000$$

$$DL = 0.02338$$

$$BEC = 0.03126$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1098.95	0.0274	P	9.8
2	☐	0.200					
3	☐	2.000	1.943	3424.92	0.0862	P	5.2
4	☐	50.000	50.910	62645.00	1.5700	P	0.9
5	☐	125.000	125.009	156967.38	3.8152	P	0.6
6	☐	250.000	253.796	311451.29	7.7175	P	0.8
7	☐	500.000	507.374	603479.37	15.4011	P	0.3
8	☐	1000.000	995.318	1180128.57	30.1860	P	0.3
9	☐			37735.38	0.9367	P	1.3

$$y = 0.0303 * x + 0.0274$$

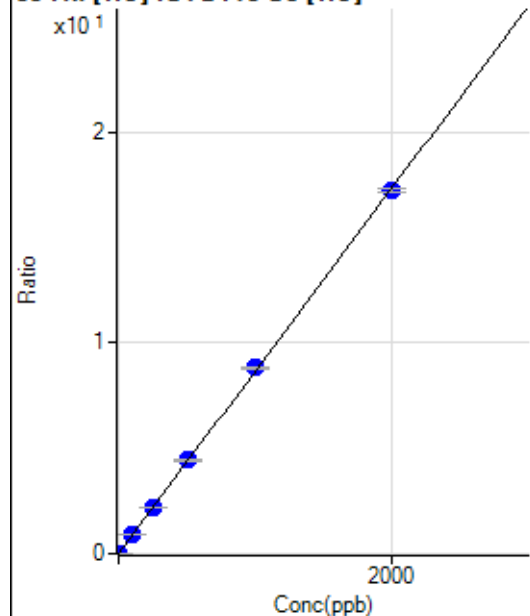
$$R = 1.0000$$

$$DL = 0.2653$$

$$BEC = 0.9027$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	78.89	0.0020	P	10.0
2	☐	0.100					
3	☐	1.000	0.992	418.90	0.0105	P	5.6
4	☐	100.000	102.870	35586.56	0.8918	P	0.4
5	☐	250.000	253.069	90148.45	2.1911	P	0.3
6	☐	500.000	511.035	178482.59	4.4226	P	0.6
7	☐	1000.000	1017.269	344888.71	8.8017	P	0.3
8	☐	2000.000	1988.080	672410.43	17.1996	P	1.0
9	☐			3935.06	0.0977	P	0.9

$$y = 0.0087 * x + 0.0020$$

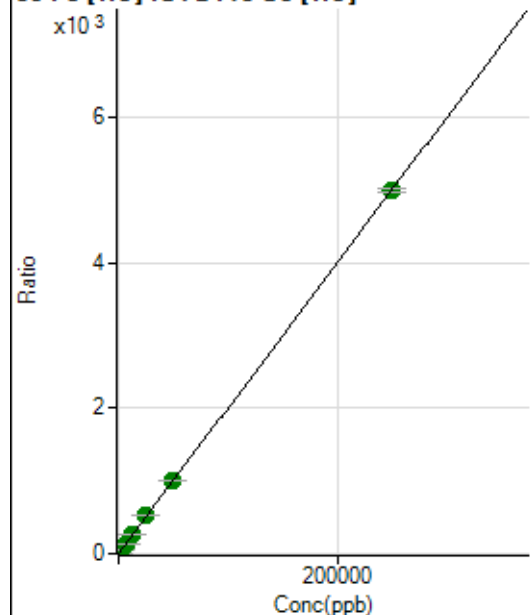
$$R = 0.9999$$

$$DL = 0.06828$$

$$BEC = 0.227$$

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	4145.19	0.1031	P	4.2
2	☐	5.000					
3	☐	50.000	46.678	41101.71	1.0345	P	4.2
4	☐	2500.000	2671.300	2130911.84	53.4034	A	1.1
5	☐	6250.000	6422.210	5276337.44	128.2451	A	0.5
6	☐	12500.000	12904.036	10395043.63	257.5765	A	0.7
7	☐	25000.000	26008.508	20338059.02	519.0492	A	1.0
8	☐	50000.000	50735.274	39580488.85	1,012.420	A	0.8
9	☐	250000.00	249725.87	200733311.8	4,982.867	A	1.2

$$y = 0.0200 * x + 0.1031$$

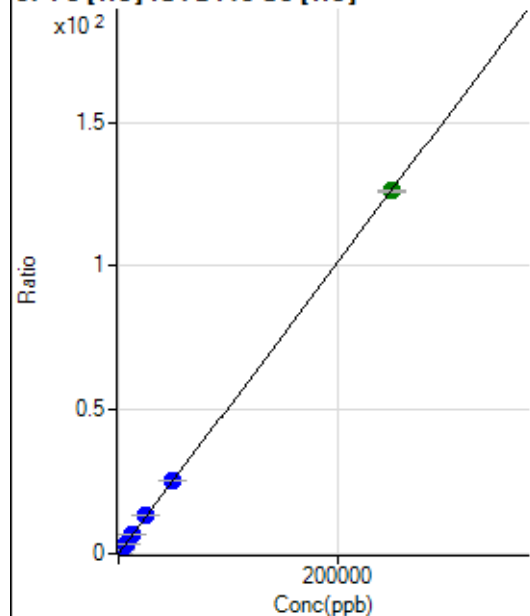
$$R = 1.0000$$

$$DL = 0.6459$$

$$BEC = 5.168$$

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	148.15	0.0037	P	8.3
2	☐	5.000					
3	☐	50.000	44.193	1033.40	0.0260	P	5.9
4	☐	2500.000	2622.323	53012.02	1.3285	P	1.3
5	☐	6250.000	6324.204	131601.87	3.1987	P	0.7
6	☐	12500.000	13012.547	265455.25	6.5777	P	0.7
7	☐	25000.000	25959.629	514046.91	13.1186	P	0.4
8	☐	50000.000	50826.395	1004027.50	25.6815	P	0.3
9	☐	250000.00	249710.05	5082493.34	126.1587	A	0.7

$$y = 5.0521E-004 * x + 0.0037$$

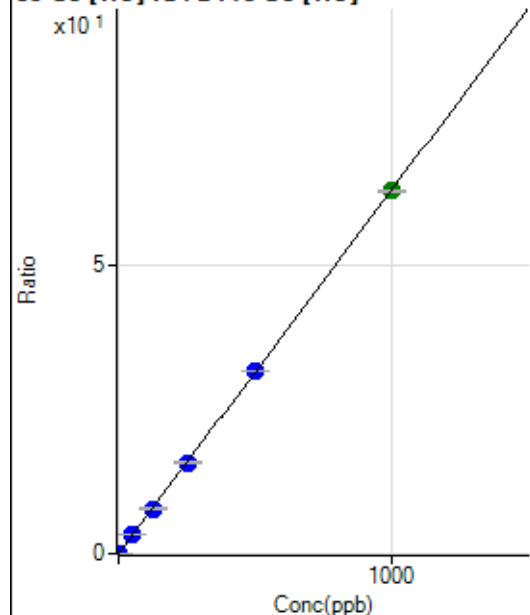
$$R = 1.0000$$

$$DL = 1.814$$

$$BEC = 7.294$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.34	0.0026	P	1.6
2	☐	0.100					
3	☐	1.000	0.898	2350.24	0.0592	P	6.8
4	☐	50.000	51.023	128494.60	3.2202	P	0.3
5	☐	125.000	123.847	321426.43	7.8126	P	0.8
6	☐	250.000	250.365	637267.20	15.7911	P	0.9
7	☐	500.000	503.649	1244635.17	31.7638	P	0.5
8	☐	1000.000	998.177	2461031.02	62.9498	A	0.5
9	☐			4679.76	0.1162	P	1.8

$$y = 0.0631 * x + 0.0026$$

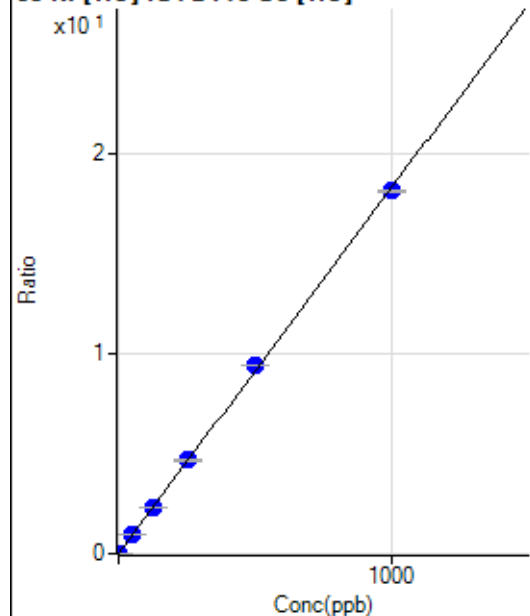
$$R = 1.0000$$

$$DL = 0.00191$$

$$BEC = 0.04075$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	102.23	0.0025	P	17.0
2	☐	0.100					
3	☐	1.000	0.905	758.93	0.0191	P	1.1
4	☐	50.000	52.754	38599.12	0.9673	P	1.4
5	☐	125.000	126.334	95154.43	2.3129	P	1.2
6	☐	250.000	254.993	188290.95	4.6657	P	0.9
7	☐	500.000	513.588	368129.99	9.3948	P	0.4
8	☐	1000.000	991.653	709092.08	18.1375	P	0.3
9	☐			12605.89	0.3128	P	2.4

$$y = 0.0183 * x + 0.0025$$

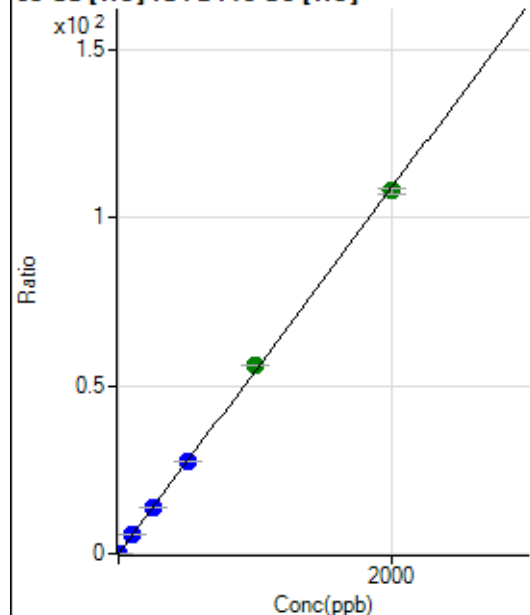
$$R = 0.9998$$

$$DL = 0.07065$$

$$BEC = 0.1388$$

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	590.03	0.0147	P	7.2
2	☐	0.200					
3	☐	2.000	2.031	4978.76	0.1252	P	1.1
4	☐	100.000	104.817	228239.95	5.7199	P	0.6
5	☐	250.000	249.619	559600.12	13.6015	P	0.6
6	☐	500.000	504.749	1109330.89	27.4884	P	1.0
7	☐	1000.000	1029.299	2195863.20	56.0398	A	0.7
8	☐	2000.000	1983.970	4222290.77	108.0030	A	1.4
9	☐			9875.87	0.2452	P	2.7

$$y = 0.0544 * x + 0.0147$$

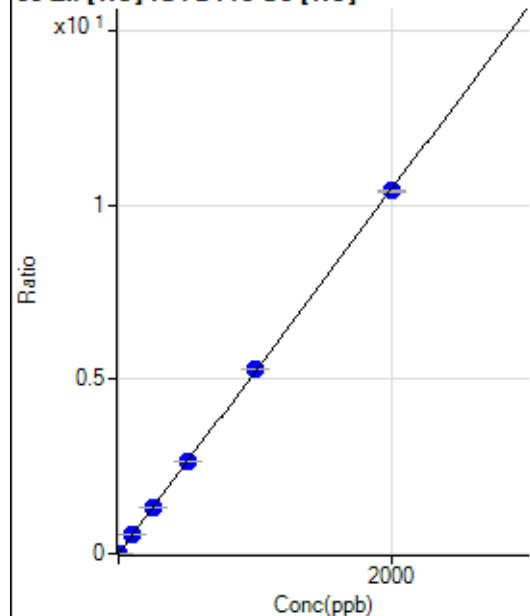
$$R = 0.9998$$

$$DL = 0.05852$$

$$BEC = 0.2694$$

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	55.56	0.0014	P	16.5
2	☐	0.200					
3	☐	2.000	1.891	448.90	0.0113	P	10.2
4	☐	100.000	109.292	22832.35	0.5722	P	1.7
5	☐	250.000	250.088	53796.17	1.3076	P	1.1
6	☐	500.000	505.162	106535.99	2.6399	P	0.8
7	☐	1000.000	1013.570	207491.61	5.2953	P	0.3
8	☐	2000.000	1991.449	406695.15	10.4028	P	0.7
9	☐			3806.16	0.0945	P	2.4

$$y = 0.0052 * x + 0.0014$$

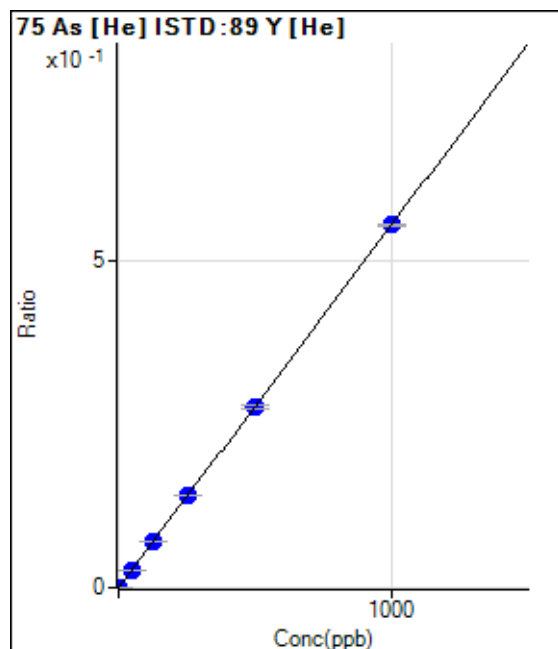
$$R = 1.0000$$

$$DL = 0.1309$$

$$BEC = 0.2649$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	8.02	0.0000	P	48.0
2	☐	0.100					
3	☐	1.000	0.887	140.74	0.0005	P	13.3
4	☐	50.000	49.695	7621.91	0.0276	P	1.2
5	☐	125.000	125.762	19466.25	0.0698	P	1.9
6	☐	250.000	253.672	38744.26	0.1408	P	0.4
7	☐	500.000	498.222	75542.44	0.2764	P	1.2
8	☐	1000.000	999.891	148417.45	0.5547	P	0.8
9	☐			112.96	0.0004	P	5.5

$$y = 5.5476\text{E-}004 * x + 2.9145\text{E-}005$$

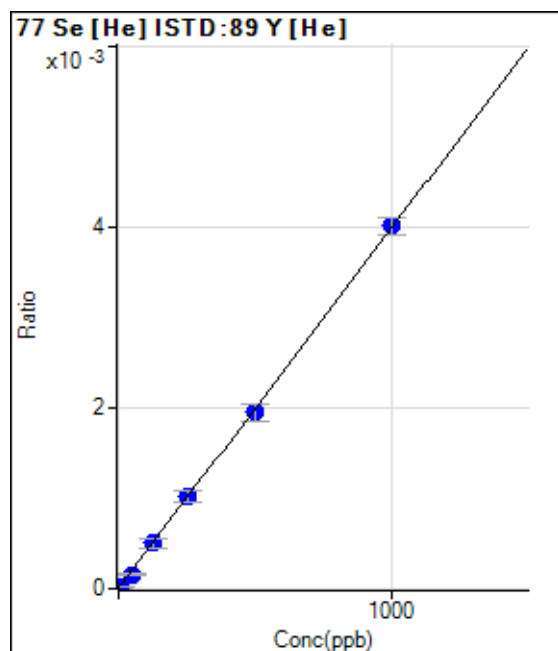
$$R = 1.0000$$

$$DL = 0.07558$$

$$BEC = 0.05254$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	0.500					
3	☐	5.000	5.098	6.67	0.0000	P	48.1
4	☐	50.000	38.270	43.33	0.0002	P	20.5
5	☐	125.000	125.690	141.12	0.0005	P	20.8
6	☐	250.000	255.514	282.23	0.0010	P	13.8
7	☐	500.000	487.624	533.35	0.0020	P	10.1
8	☐	1000.000	1005.309	1075.62	0.0040	P	4.9
9	☐			0.00	0.0000	P	

$$y = 3.9951\text{E-}006 * x + 4.0411\text{E-}006$$

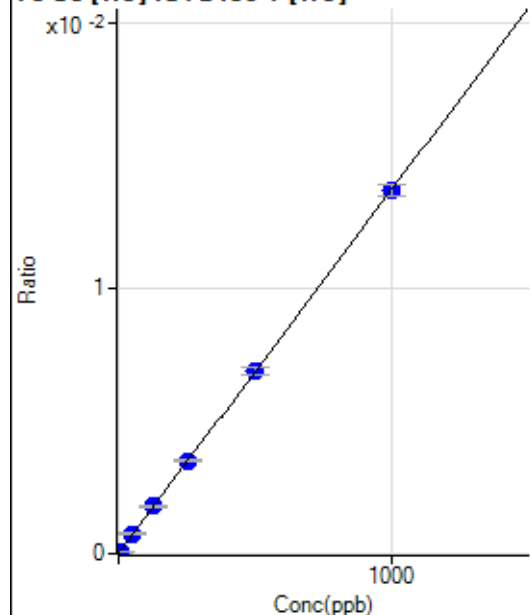
$$R = 0.9998$$

$$DL = 5.256$$

$$BEC = 1.012$$

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	4.94	0.0000	P	142.
2	☐	0.500					
3	☐	5.000	5.054	23.46	0.0001	P	40.4
4	☐	50.000	51.996	201.86	0.0007	P	9.2
5	☐	125.000	130.054	502.48	0.0018	P	4.1
6	☐	250.000	255.155	967.95	0.0035	P	3.9
7	☐	500.000	501.551	1884.71	0.0069	P	3.2
8	☐	1000.000	997.204	3663.49	0.0137	P	3.3
9	☐			4.94	0.0000	P	57.7

$$y = 1.3713\text{E-}005 * x + 1.7938\text{E-}005$$

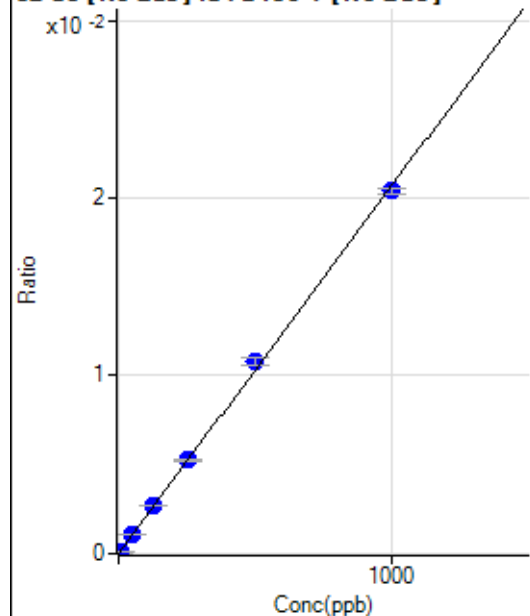
$$R = 1.0000$$

$$DL = 5.574$$

$$BEC = 1.308$$

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	-106.72	0.0000	P	-60.
2	☐	0.500					
3	☐	5.000	5.346	647.14	0.0001	P	15.6
4	☐	50.000	50.394	7118.34	0.0010	P	2.3
5	☐	125.000	129.393	18455.65	0.0027	P	0.6
6	☐	250.000	254.851	37064.90	0.0053	P	1.3
7	☐	500.000	522.245	74871.05	0.0108	P	4.6
8	☐	1000.000	987.094	147638.87	0.0204	P	1.3
9	☐			95.80	0.0000	P	85.7

$$y = 2.0695\text{E-}005 * x - 1.5946\text{E-}005$$

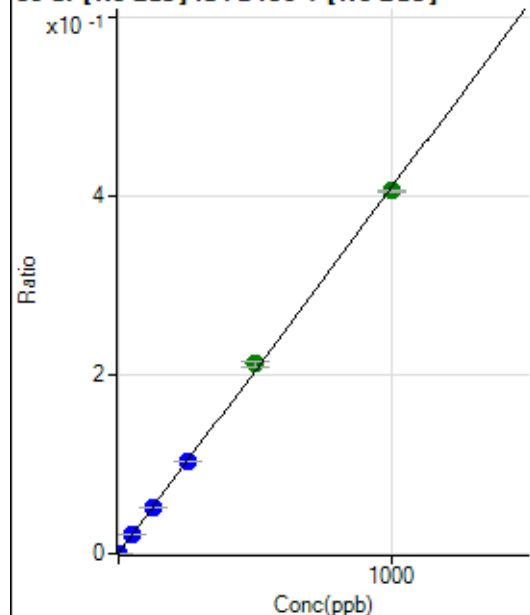
$$R = 0.9996$$

$$DL = 1.403$$

$$BEC = -0.7705$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1677.96	0.0003	P	3.3
2	☐	0.100					
3	☐	1.000	0.818	3998.00	0.0006	P	2.5
4	☐	50.000	49.644	142740.31	0.0206	P	0.9
5	☐	125.000	124.425	355229.38	0.0512	P	1.1
6	☐	250.000	251.220	727412.07	0.1032	P	0.3
7	☐	500.000	517.381	1472937.69	0.2123	A	3.7
8	☐	1000.000	991.094	2939428.21	0.4064	A	0.5
9	☐			102869.27	0.0144	P	1.5

$$y = 4.0977\text{E-}004 * x + 2.5036\text{E-}004$$

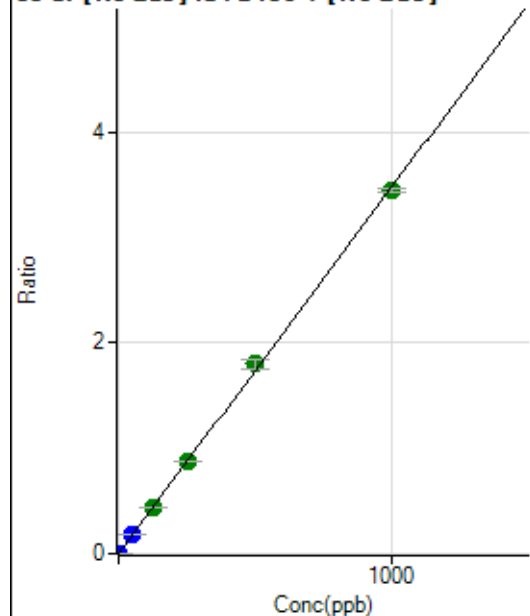
$$R = 0.9998$$

$$DL = 0.06125$$

$$BEC = 0.611$$

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	669.50	0.0001	P	6.4
2	☐	0.100					
3	☐	1.000	0.920	22522.28	0.0033	P	1.3
4	☐	50.000	50.439	1217153.14	0.1756	P	0.4
5	☐	125.000	127.451	3075118.58	0.4435	A	0.9
6	☐	250.000	253.014	6206061.51	0.8804	A	0.5
7	☐	500.000	517.142	12482739.78	1.7994	A	4.9
8	☐	1000.000	990.347	24923764.62	3.4458	A	1.1
9	☐			885128.60	0.1237	P	1.1

$$y = 0.0035 * x + 9.9912\text{E-}005$$

$$R = 0.9998$$

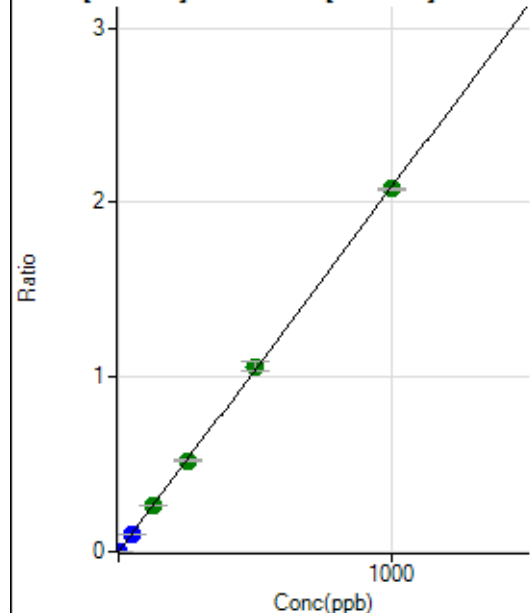
$$DL = 0.005511$$

$$BEC = 0.02872$$

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	502.81	0.0001	P	9.6
2	☐	0.100					
3	☐	1.000	0.930	13746.50	0.0020	P	4.3
4	☐	50.000	48.772	705783.51	0.1018	P	0.5
5	☐	125.000	124.605	1802755.97	0.2600	A	0.8
6	☐	250.000	250.620	3685952.21	0.5229	A	0.1
7	☐	500.000	508.530	7358899.38	1.0609	A	5.4
8	☐	1000.000	995.691	15024777.25	2.0772	A	0.6
9	☐			14335.87	0.0020	P	2.5

$$y = 0.0021 * x + 7.5043E-005$$

$$R = 0.9999$$

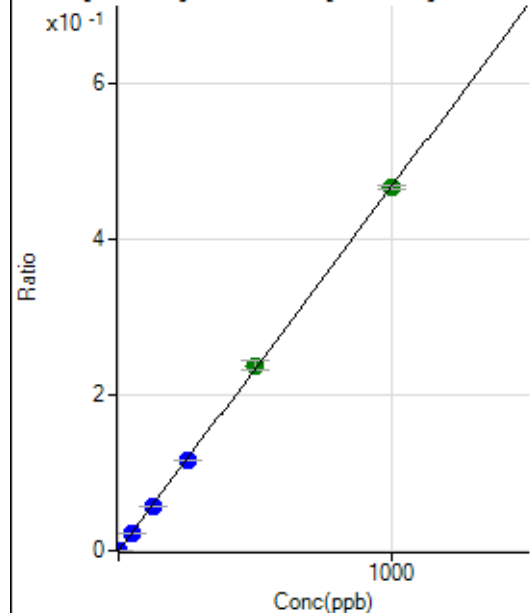
$$DL = 0.01035$$

$$BEC = 0.03597$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	105.56	0.0000	P	36.7
2	☐	0.100					
3	☐	1.000	1.003	3306.11	0.0005	P	7.3
4	☐	50.000	47.918	155350.24	0.0224	P	1.3
5	☐	125.000	121.569	394034.77	0.0568	P	1.2
6	☐	250.000	246.208	811253.88	0.1151	P	0.2
7	☐	500.000	509.517	1652158.85	0.2382	A	4.7
8	☐	1000.000	996.722	3369595.17	0.4659	A	1.0
9	☐			3153.45	0.0004	P	13.6

$$y = 4.6738E-004 * x + 1.5760E-005$$

$$R = 0.9999$$

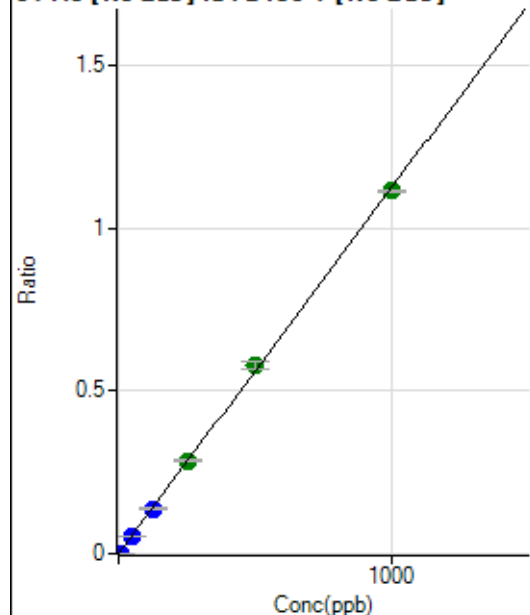
$$DL = 0.03717$$

$$BEC = 0.03372$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	272.24	0.0000	P	14.8
2	☐	0.500					
3	☐	5.000	2.005	15648.60	0.0023	P	2.3
4	☐	50.000	49.008	381822.10	0.0551	P	0.8
5	☐	125.000	123.040	958384.86	0.1382	P	1.0
6	☐	250.000	254.449	2014824.07	0.2858	A	0.5
7	☐	500.000	515.084	4014188.07	0.5786	A	4.4
8	☐	1000.000	991.655	8056460.25	1.1138	A	0.7
9	☐			19673.25	0.0027	P	2.9

$$y = 0.0011 * x + 4.0606E-005$$

$$R = 0.9998$$

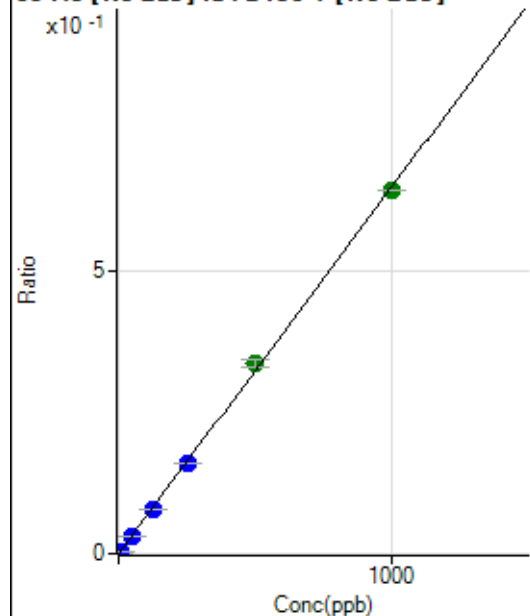
$$DL = 0.01608$$

$$BEC = 0.03615$$

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	205.57	0.0000	P	22.7
2	☐	0.500					
3	☐	5.000	4.315	19272.74	0.0028	P	4.0
4	☐	50.000	49.022	220234.25	0.0318	P	0.5
5	☐	125.000	122.362	549498.46	0.0793	P	1.5
6	☐	250.000	248.827	1135924.58	0.1611	P	0.2
7	☐	500.000	520.632	2339164.94	0.3371	A	4.3
8	☐	1000.000	990.359	4638555.10	0.6413	A	0.1
9	☐			23827.48	0.0033	P	0.8

$$y = 6.4750E-004 * x + 3.0693E-005$$

$$R = 0.9997$$

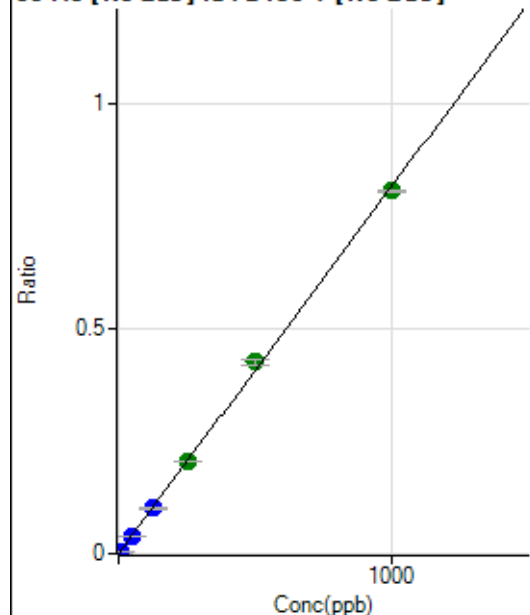
$$DL = 0.03234$$

$$BEC = 0.0474$$

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	369.47	0.0001	P	13.2
2	☐	0.500					
3	☐	5.000	3.880	21949.05	0.0032	P	3.9
4	☐	50.000	49.417	279517.41	0.0403	P	1.2
5	☐	125.000	123.206	696468.58	0.1005	P	1.4
6	☐	250.000	251.812	1446899.23	0.2053	A	0.5
7	☐	500.000	522.594	2956238.35	0.4259	A	2.9
8	☐	1000.000	988.509	5827167.10	0.8056	A	0.6
9	☐			29188.07	0.0041	P	2.6

$$y = 8.1492\text{E-}004 * x + 5.5100\text{E-}005$$

$$R = 0.9996$$

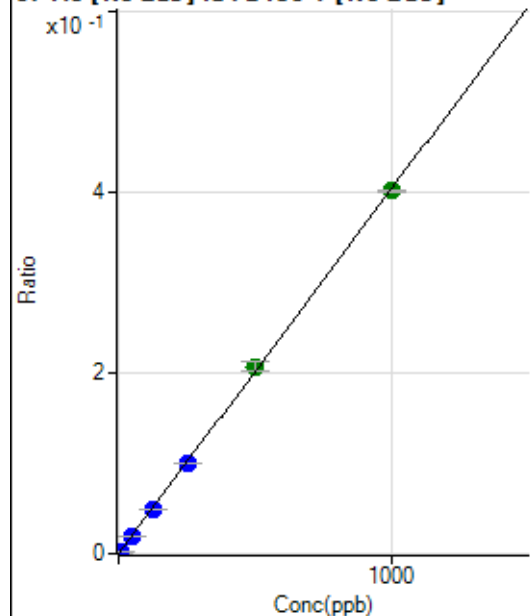
$$DL = 0.02687$$

$$BEC = 0.06761$$

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	255.57	0.0000	P	8.1
2	☐	0.500					
3	☐	5.000	4.287	12061.39	0.0018	P	1.8
4	☐	50.000	48.600	136173.17	0.0196	P	0.9
5	☐	125.000	122.715	343486.00	0.0495	P	1.0
6	☐	250.000	248.323	706428.11	0.1002	P	0.4
7	☐	500.000	512.453	1434444.39	0.2068	A	4.8
8	☐	1000.000	994.552	2902435.05	0.4013	A	0.5
9	☐			15253.69	0.0021	P	1.2

$$y = 4.0342\text{E-}004 * x + 3.8142\text{E-}005$$

$$R = 0.9999$$

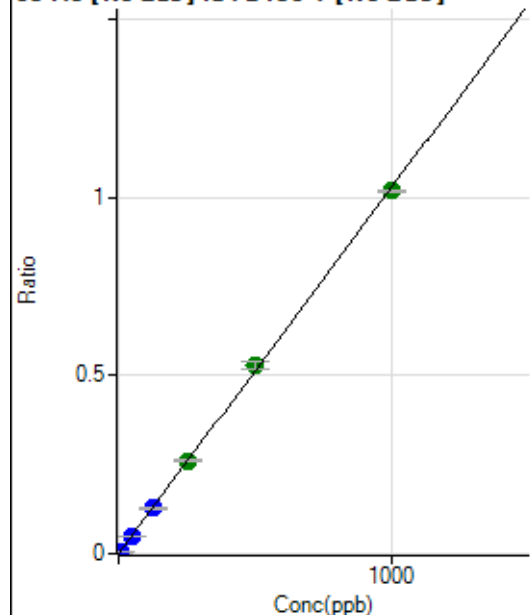
$$DL = 0.02284$$

$$BEC = 0.09455$$

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	308.35	0.0000	P	16.5
2	☐	0.500					
3	☐	5.000	4.386	31089.60	0.0046	P	3.0
4	☐	50.000	48.963	349385.12	0.0504	P	0.5
5	☐	125.000	123.904	883844.52	0.1275	P	1.0
6	☐	250.000	254.314	1844085.31	0.2616	A	0.3
7	☐	500.000	516.250	3684339.23	0.5310	A	4.3
8	☐	1000.000	990.988	7372667.70	1.0193	A	0.3
9	☐			38759.46	0.0054	P	1.5

$$y = 0.0010 * x + 4.5989E-005$$

$$R = 0.9998$$

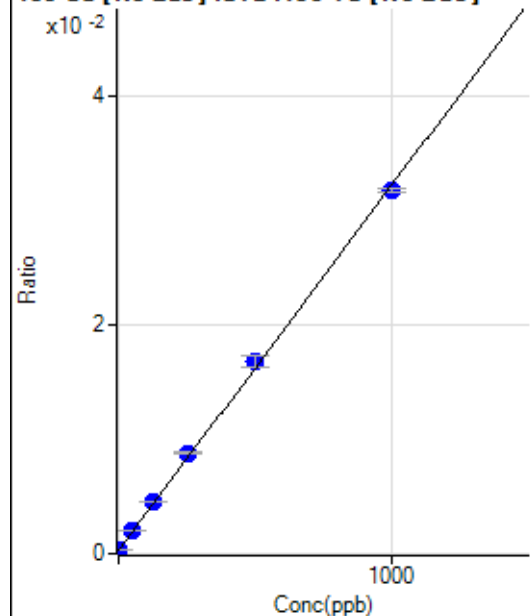
$$DL = 0.02218$$

$$BEC = 0.04471$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1811.33	0.0003	P	6.2
2	☐	0.100					
3	☐	1.000	0.054	1853.01	0.0003	P	2.7
4	☐	50.000	52.881	13173.72	0.0020	P	2.6
5	☐	125.000	132.234	30396.39	0.0045	P	1.2
6	☐	250.000	267.019	60913.65	0.0088	P	1.3
7	☐	500.000	518.788	118116.52	0.0169	P	6.3
8	☐	1000.000	985.304	233429.07	0.0318	P	1.2
9	☐			1797.44	0.0003	P	8.8

$$y = 3.1963E-005 * x + 2.8071E-004$$

$$R = 0.9996$$

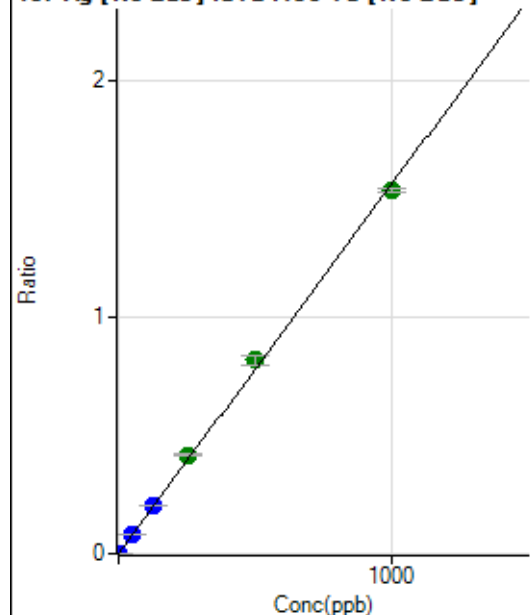
$$DL = 1.645$$

$$BEC = 8.782$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	42.9
2	☐	0.100					
3	☐	1.000	1.146	11847.30	0.0018	P	2.9
4	☐	50.000	52.844	551113.83	0.0825	P	0.6
5	☐	125.000	131.226	1380728.35	0.2048	P	1.3
6	☐	250.000	268.089	2890075.87	0.4183	A	1.8
7	☐	500.000	523.787	5725822.13	0.8172	A	5.6
8	☐	1000.000	982.664	11263404.77	1.5332	A	1.2
9	☐			3442.26	0.0005	P	4.3

$$y = 0.0016 * x + 1.8079E-005$$

$$R = 0.9994$$

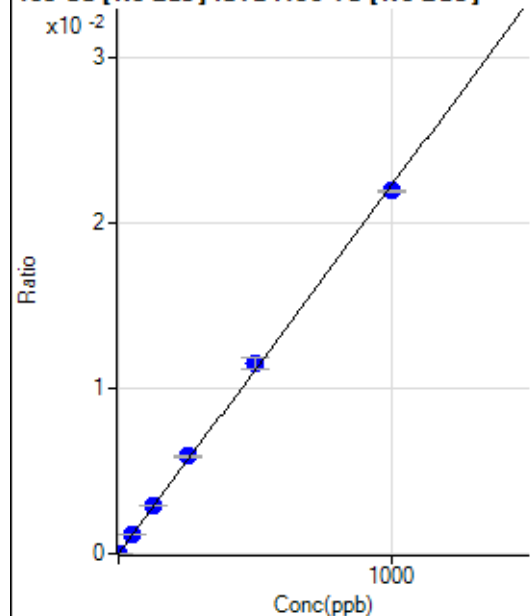
$$DL = 0.0149$$

$$BEC = 0.01159$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9.72	0.0000	P	24.9
2	☐	0.100					
3	☐	1.000	1.026	159.73	0.0000	P	16.3
4	☐	50.000	52.321	7794.07	0.0012	P	0.7
5	☐	125.000	130.444	19589.55	0.0029	P	2.5
6	☐	250.000	265.345	40824.42	0.0059	P	1.3
7	☐	500.000	518.690	80908.94	0.0115	P	5.6
8	☐	1000.000	986.022	161270.50	0.0220	P	0.7
9	☐			81.95	0.0000	P	29.9

$$y = 2.2261E-005 * x + 1.5065E-006$$

$$R = 0.9996$$

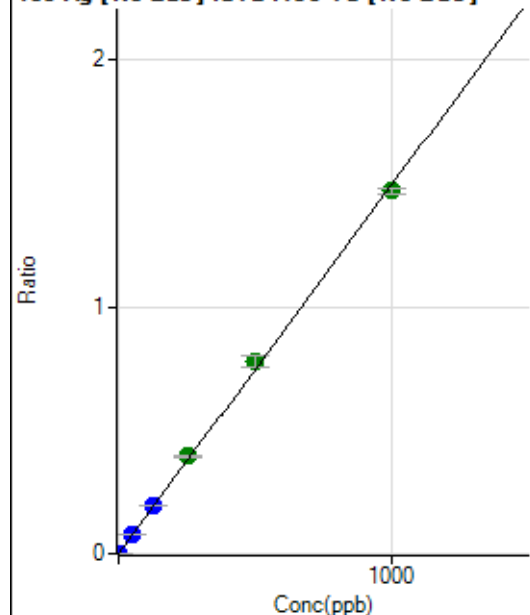
$$DL = 0.05049$$

$$BEC = 0.06767$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	35.8
2	☐	0.100					
3	☐	1.000	1.170	11588.86	0.0018	P	3.0
4	☐	50.000	52.116	520502.24	0.0779	P	0.2
5	☐	125.000	130.466	1314529.65	0.1949	P	1.2
6	☐	250.000	265.620	2742082.70	0.3969	A	1.8
7	☐	500.000	521.875	5463548.04	0.7797	A	5.3
8	☐	1000.000	984.368	10804478.45	1.4707	A	1.3
9	☐			3167.21	0.0004	P	1.4

$$y = 0.0015 * x + 1.8086E-005$$

$$R = 0.9995$$

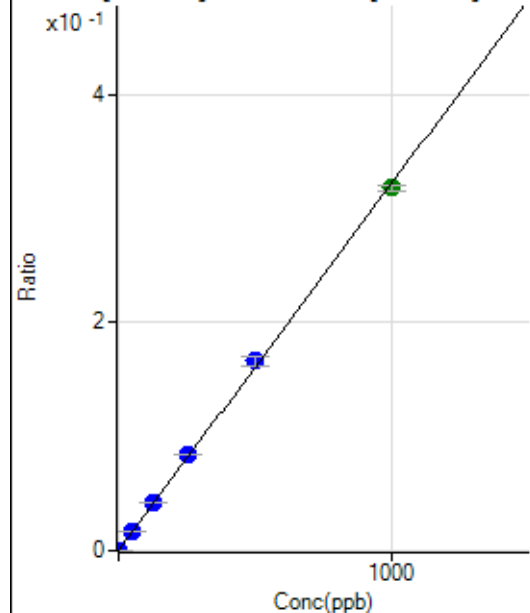
$$DL = 0.01301$$

$$BEC = 0.01211$$

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	1295.85	0.0002	P	4.6
2	☐	0.100					
3	☐	1.000	0.894	3203.55	0.0005	P	1.5
4	☐	50.000	52.668	114564.53	0.0171	P	0.1
5	☐	125.000	130.710	284866.81	0.0422	P	1.4
6	☐	250.000	260.080	579453.88	0.0839	P	0.8
7	☐	500.000	516.751	1165989.04	0.1664	P	5.5
8	☐	1000.000	988.258	2336750.86	0.3181	A	1.4
9	☐			1978.66	0.0003	P	7.7

$$y = 3.2166E-004 * x + 2.0082E-004$$

$$R = 0.9997$$

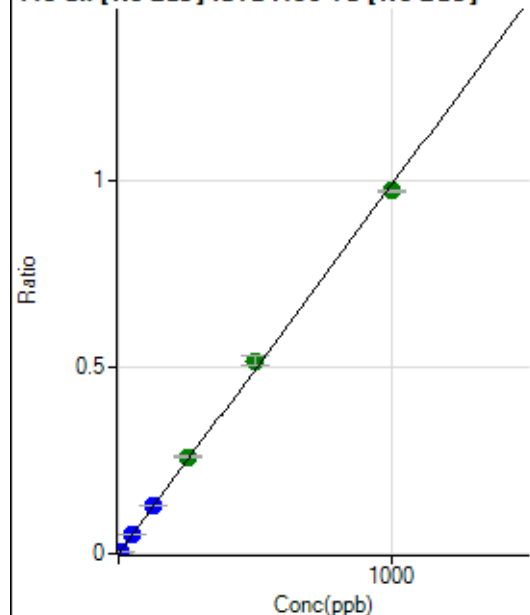
$$DL = 0.08622$$

$$BEC = 0.6243$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	794.51	0.0001	P	31.6
2	☐	0.500					
3	☐	5.000	4.525	30134.92	0.0046	P	1.5
4	☐	50.000	51.589	341438.16	0.0511	P	0.6
5	☐	125.000	129.134	861077.17	0.1277	P	1.4
6	☐	250.000	263.045	1796582.07	0.2600	A	0.5
7	☐	500.000	523.764	3626703.90	0.5176	A	5.2
8	☐	1000.000	984.263	7144690.87	0.9725	A	0.5
9	☐			13334.97	0.0019	P	3.0

$$y = 9.8791\text{E-}004 * x + 1.2313\text{E-}004$$

$$R = 0.9995$$

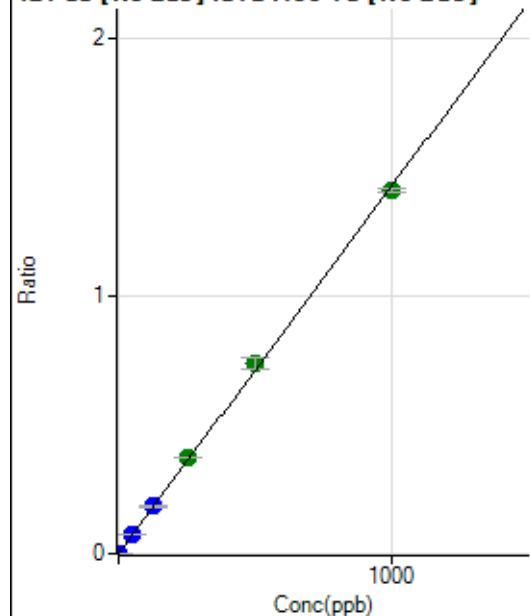
$$DL = 0.1182$$

$$BEC = 0.1246$$

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	130.56	0.0000	P	28.8
2	☐	0.200					
3	☐	2.000	1.848	17426.02	0.0027	P	1.9
4	☐	50.000	51.083	487242.53	0.0729	P	0.5
5	☐	125.000	128.309	1234687.34	0.1831	P	1.1
6	☐	250.000	261.351	2576906.57	0.3729	A	0.6
7	☐	500.000	517.653	5174301.59	0.7386	A	6.0
8	☐	1000.000	987.868	10354993.98	1.4095	A	1.2
9	☐			27985.88	0.0039	P	3.2

$$y = 0.0014 * x + 2.0232\text{E-}005$$

$$R = 0.9997$$

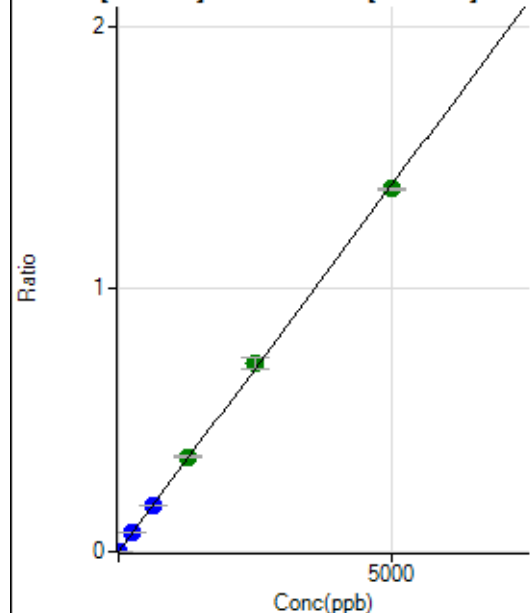
$$DL = 0.01224$$

$$BEC = 0.01418$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	127.78	0.0000	P	13.7
2	☐	1.000					
3	☐	10.000	9.147	16861.46	0.0026	P	1.1
4	☐	250.000	252.455	470539.10	0.0704	P	1.1
5	☐	625.000	635.484	1194918.06	0.1772	P	1.3
6	☐	1250.000	1295.696	2496318.24	0.3613	A	1.2
7	☐	2500.000	2575.511	5030437.74	0.7181	A	6.1
8	☐	5000.000	4949.389	10138522.62	1.3800	A	0.6
9	☐			5279.08	0.0007	P	5.9

$$y = 2.7882\text{E-}004 * x + 1.9805\text{E-}005$$

$$R = 0.9998$$

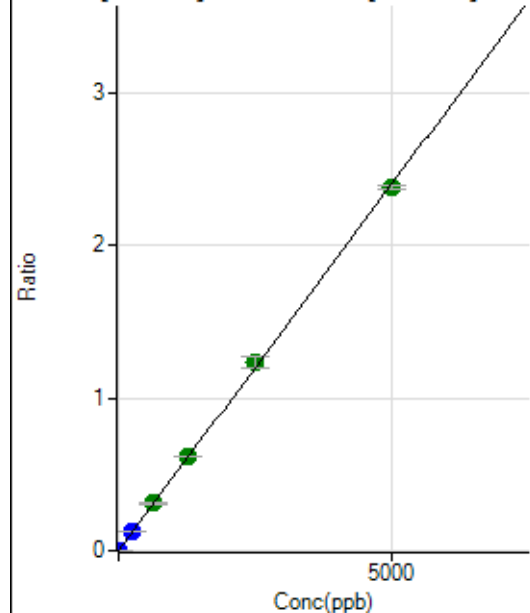
$$DL = 0.02919$$

$$BEC = 0.07103$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	283.35	0.0000	P	8.9
2	☐	1.000					
3	☐	10.000	9.064	28871.37	0.0044	P	2.4
4	☐	250.000	254.856	818815.20	0.1225	P	0.9
5	☐	625.000	647.320	2098018.80	0.3111	A	1.7
6	☐	1250.000	1287.113	4274863.55	0.6186	A	0.1
7	☐	2500.000	2570.286	8654144.98	1.2353	A	5.7
8	☐	5000.000	4952.548	17485712.20	2.3801	A	1.2
9	☐			9428.79	0.0013	P	4.2

$$y = 4.8058\text{E-}004 * x + 4.3911\text{E-}005$$

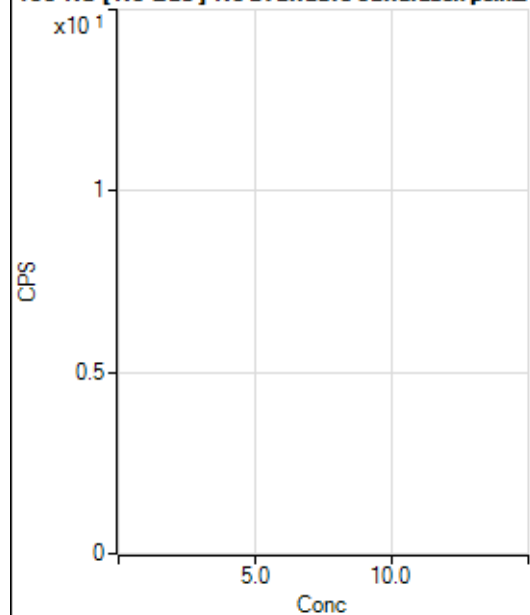
$$R = 0.9998$$

$$DL = 0.02428$$

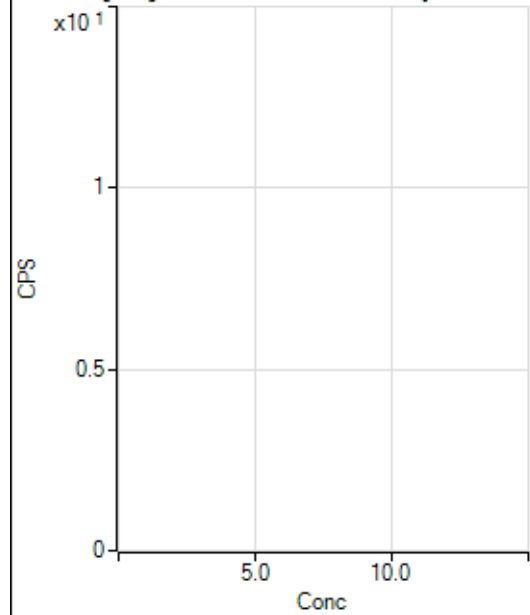
$$BEC = 0.09137$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			17.78		P	57.3
2	☐						
3	☐			28.89		P	93.3
4	☐			24.45		P	68.6
5	☐			77.78		P	32.5
6	☐			88.89		P	48.8
7	☐			202.23		P	31.7
8	☐			377.80		P	11.5
9	☐			122.23		P	24.6

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			0.00		P	
4	☐			0.00		P	
5	☐			1.11		P	173.
6	☐			4.44		P	114.
7	☐			4.45		P	86.6
8	☐			24.44		P	20.8
9	☐			15.56		P	32.7

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.33		P	0.0
2	☐						
3	☐			11.11		P	114.
4	☐			22.22		P	43.3
5	☐			30.56		P	56.8
6	☐			30.56		P	83.3
7	☐			94.45		P	27.0
8	☐			163.90		P	26.1
9	☐			152.79		P	36.3

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐						
3	☐			0.00		P	
4	☐			2.22		P	173.
5	☐			2.22		P	86.6
6	☐			6.67		P	50.0
7	☐			11.11		P	91.7
8	☐			22.22		P	52.7
9	☐			32.22		P	15.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			80.56		P	31.6
2	☐						
3	☐			58.34		P	14.3
4	☐			77.78		P	22.3
5	☐			86.12		P	47.7
6	☐			86.11		P	58.3
7	☐			119.45		P	52.4
8	☐			130.57		P	38.5
9	☐			144.45		P	28.5

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.33		P	90.2
2	☐						
3	☐			4.44		P	43.4
4	☐			17.78		P	39.0
5	☐			6.67		P	50.0
6	☐			12.22		P	41.7
7	☐			20.00		P	66.7
8	☐			44.44		P	34.6
9	☐			33.33		P	43.6

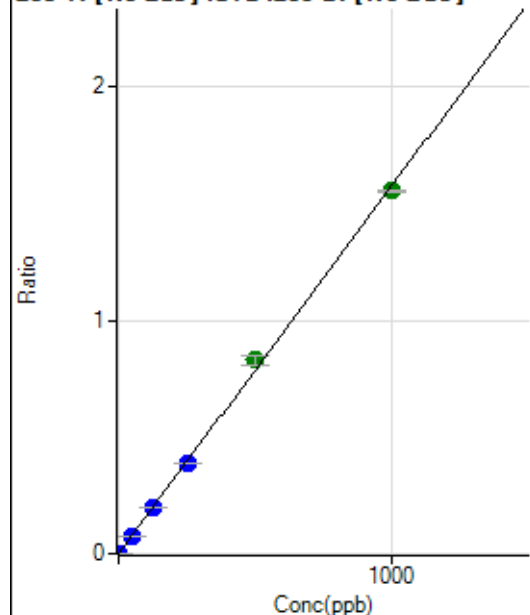
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			25.00		P	66.7
2	☐						
3	☐			30.56		P	56.8
4	☐			44.44		P	43.3
5	☐			33.33		P	25.0
6	☐			44.45		P	65.8
7	☐			52.78		P	24.1
8	☐			77.78		P	55.0
9	☐			75.01		P	19.2

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	114.
2	☐						
3	☐			8.89		P	21.6
4	☐			13.33		P	50.0
5	☐			2.22		P	86.6
6	☐			11.11		P	62.5
7	☐			15.55		P	24.8
8	☐			18.89		P	44.4
9	☐			20.00		P	33.4

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	147.23	0.0000	P	42.6
2	☐	0.100					
3	☐	1.000	0.903	5276.33	0.0015	P	2.1
4	☐	50.000	49.261	282927.53	0.0776	P	0.8
5	☐	125.000	124.215	718571.23	0.1957	P	1.5
6	☐	250.000	247.109	1495876.45	0.3893	P	0.9
7	☐	500.000	526.644	3145750.66	0.8296	A	5.3
8	☐	1000.000	987.536	6306209.51	1.5555	A	0.5
9	☐			5359.72	0.0014	P	2.9

$$y = 0.0016 * x + 4.1736E-005$$

$$R = 0.9995$$

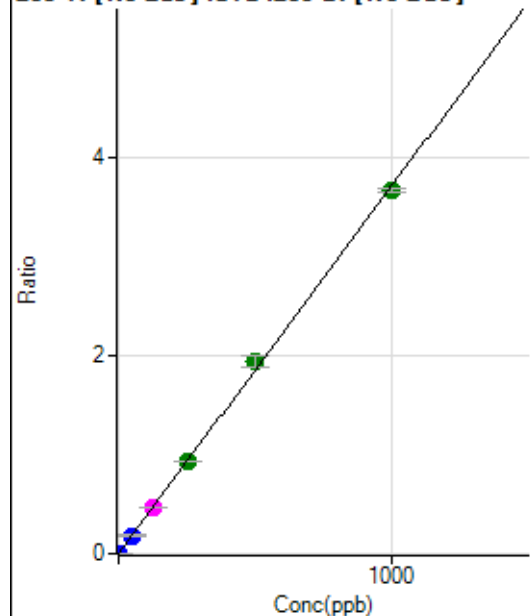
$$DL = 0.03384$$

$$BEC = 0.0265$$

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	308.35	0.0001	P	22.2
2	☐	0.100					
3	☐	1.000	0.899	12328.70	0.0034	P	2.9
4	☐	50.000	49.603	671146.48	0.1842	P	0.9
5	☐	125.000	126.097	1718398.06	0.4680	M	2.3
6	☐	250.000	252.748	3604607.07	0.9380	A	0.5
7	☐	500.000	523.554	7365536.71	1.9430	A	6.0
8	☐	1000.000	987.419	14854878.80	3.6643	A	1.0
9	☐			12642.99	0.0034	P	5.8

$$y = 0.0037 * x + 8.7412E-005$$

$$R = 0.9996$$

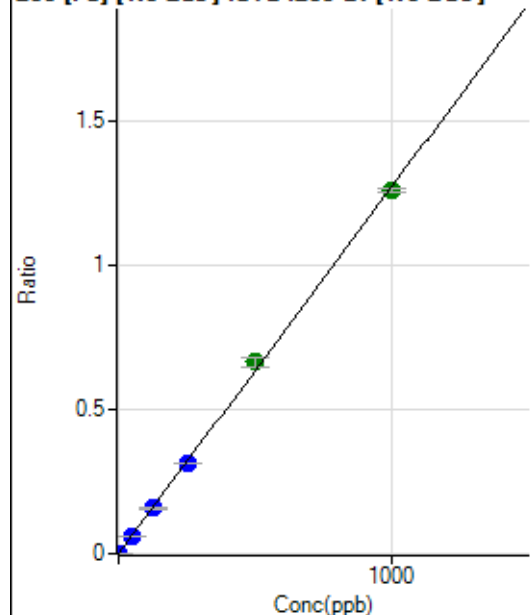
$$DL = 0.01572$$

$$BEC = 0.02356$$

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	566.70	0.0002	P	15.4
2	☐	0.100					
3	☐	1.000	0.978	5054.86	0.0014	P	0.5
4	☐	50.000	49.263	228591.12	0.0627	P	1.1
5	☐	125.000	123.696	577354.35	0.1573	P	2.2
6	☐	250.000	246.253	1202382.55	0.3129	P	1.3
7	☐	500.000	522.246	2515493.14	0.6634	A	5.4
8	☐	1000.000	990.014	5097894.73	1.2575	A	0.9
9	☐			12074.60	0.0032	P	1.1

$$y = 0.0013 * x + 1.6063E-004$$

$$R = 0.9996$$

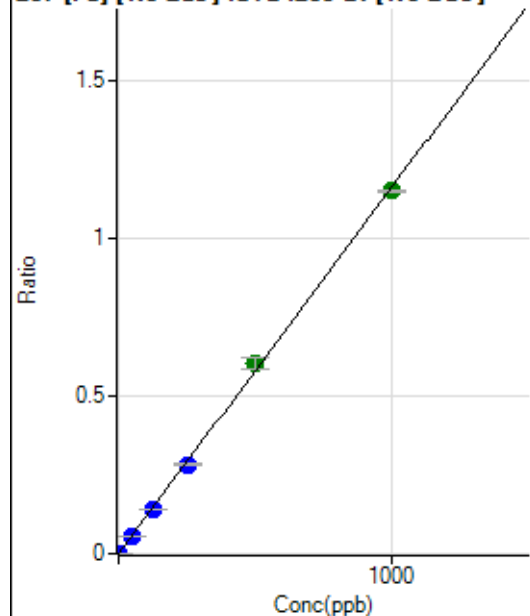
$$DL = 0.05854$$

$$BEC = 0.1265$$

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	479.65	0.0001	P	9.1
2	☐	0.100					
3	☐	1.000	0.981	4593.59	0.0013	P	4.4
4	☐	50.000	48.755	206737.61	0.0567	P	1.3
5	☐	125.000	122.188	521274.64	0.1420	P	1.4
6	☐	250.000	243.921	1088509.73	0.2833	P	0.9
7	☐	500.000	521.031	2292574.82	0.6049	A	6.7
8	☐	1000.000	991.418	4665837.20	1.1509	A	0.2
9	☐			10376.72	0.0028	P	2.1

$$y = 0.0012 * x + 1.3597E-004$$

$$R = 0.9996$$

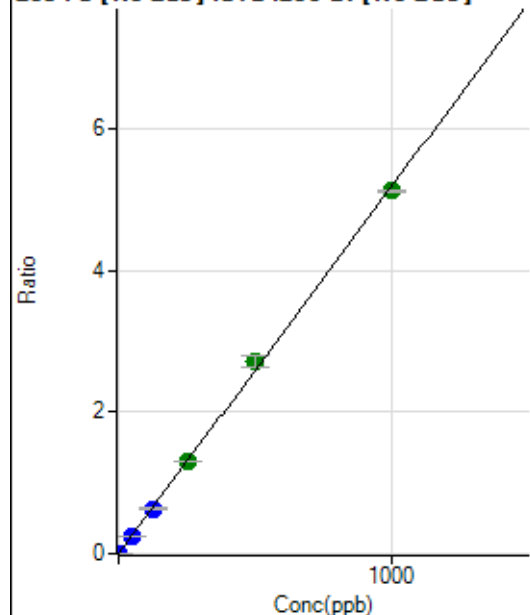
$$DL = 0.03196$$

$$BEC = 0.1171$$

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	2068.64	0.0006	P	7.6
2	☐	0.100					
3	☐	1.000	0.965	20164.22	0.0056	P	0.5
4	☐	50.000	48.905	927604.36	0.2545	P	0.7
5	☐	125.000	122.917	2345706.09	0.6388	P	1.5
6	☐	250.000	249.858	4987875.73	1.2980	A	0.4
7	☐	500.000	523.639	10310340.65	2.7196	A	5.8
8	☐	1000.000	988.531	20811445.14	5.1336	A	0.6
9	☐			47738.15	0.0127	P	1.2

$$y = 0.0052 * x + 5.8638E-004$$

$$R = 0.9996$$

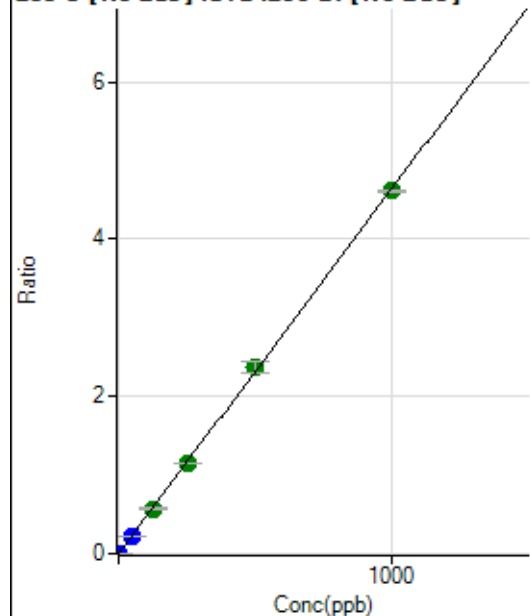
$$DL = 0.02577$$

$$BEC = 0.1129$$

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	483.37	0.0001	P	8.8
2	☐	0.100					
3	☐	1.000	0.842	14561.90	0.0040	P	0.9
4	☐	50.000	47.934	810428.21	0.2224	P	0.1
5	☐	125.000	123.516	2103042.30	0.5728	A	2.2
6	☐	250.000	247.654	4412894.67	1.1483	A	0.2
7	☐	500.000	511.113	8983362.79	2.3698	A	6.2
8	☐	1000.000	995.319	18708216.39	4.6148	A	0.9
9	☐			15474.22	0.0041	P	2.4

$$y = 0.0046 * x + 1.3702E-004$$

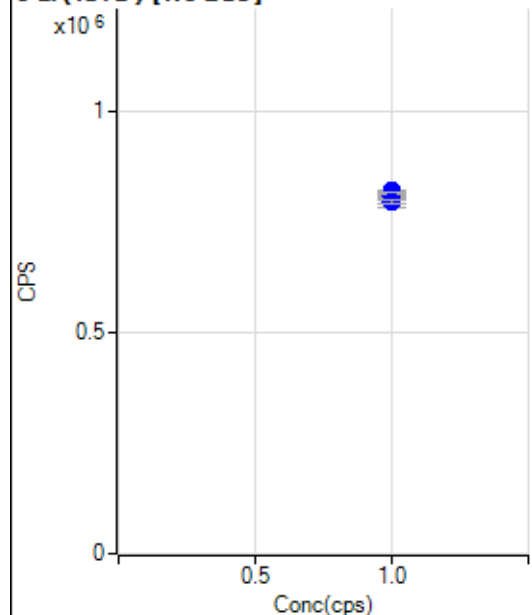
$$R = 0.9999$$

$$DL = 0.007817$$

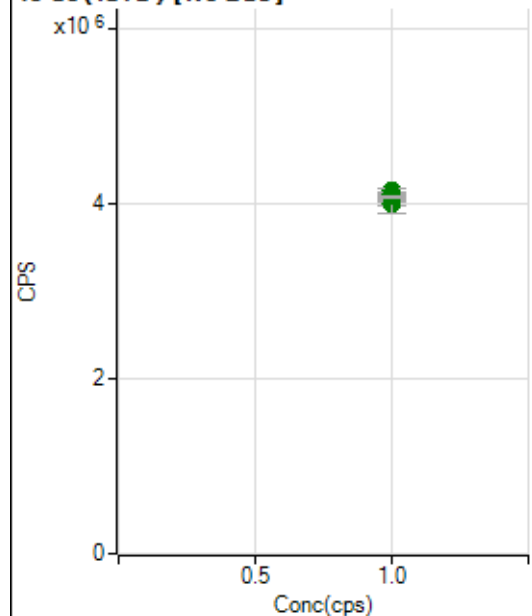
$$BEC = 0.02955$$

Weight: <None>

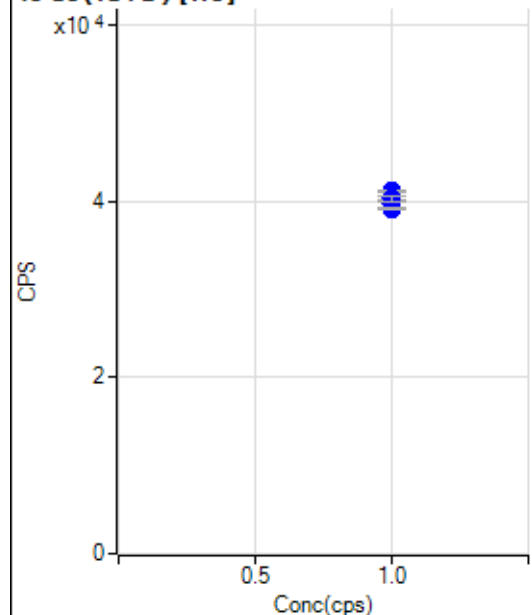
Min Conc: 0

6 Li (ISTD) [No Gas]

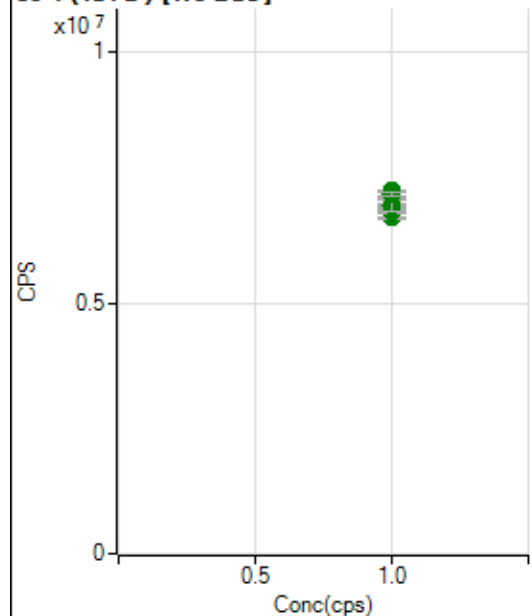
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		803694.07		P	0.4
2	☐	1.000					
3	☐	1.000		809505.34		P	0.4
4	☐	1.000		808029.68		P	0.4
5	☐	1.000		807871.33		P	1.1
6	☐	1.000		819435.33		P	0.6
7	☐	1.000		799801.82		P	4.7
8	☐	1.000		813769.66		P	0.4
9	☐	1.000		794266.09		P	1.0

45 Sc (ISTD) [No Gas]

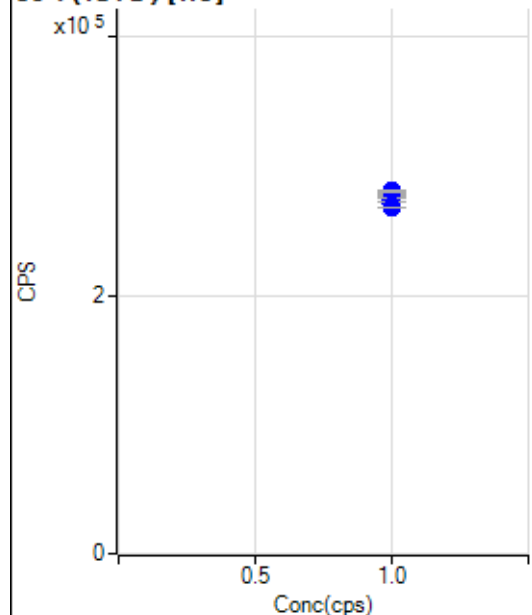
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4007170.19		A	1.1
2	☐	1.000					
3	☐	1.000		4047080.86		A	0.2
4	☐	1.000		4093033.17		A	1.1
5	☐	1.000		4089497.92		A	1.4
6	☐	1.000		4148104.95		A	1.0
7	☐	1.000		3992469.53		A	4.7
8	☐	1.000		4108057.95		A	1.0
9	☐	1.000		4080168.23		A	0.3

45 Sc (ISTD) [He]

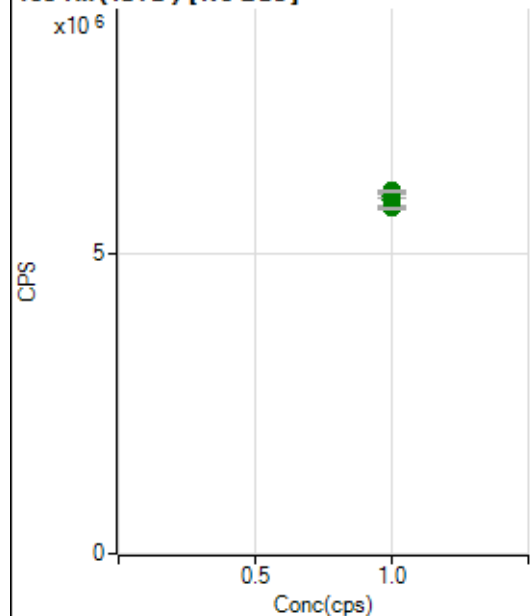
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		40217.53		P	1.6
2	☐	1.000					
3	☐	1.000		39770.86		P	3.5
4	☐	1.000		39903.42		P	0.5
5	☐	1.000		41143.65		P	0.8
6	☐	1.000		40357.89		P	0.8
7	☐	1.000		39184.78		P	0.6
8	☐	1.000		39095.53		P	0.4
9	☐	1.000		40288.90		P	1.4

89 Y (ISTD) [No Gas]

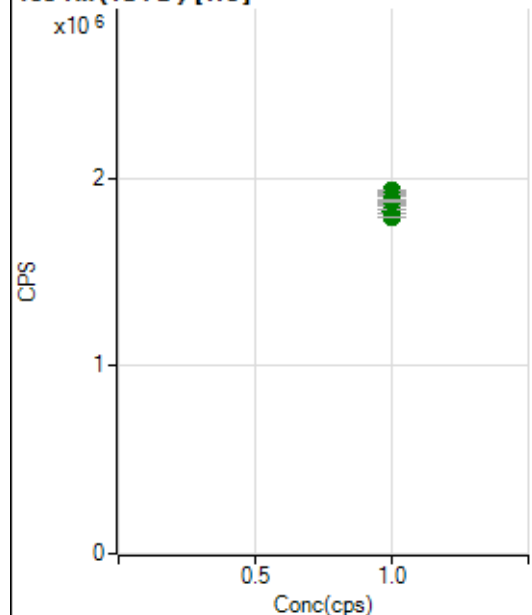
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6702410.18		A	0.6
2	☐	1.000					
3	☐	1.000		6824421.98		A	1.5
4	☐	1.000		6931797.19		A	0.7
5	☐	1.000		6933473.79		A	1.0
6	☐	1.000		7049041.84		A	0.2
7	☐	1.000		6946028.30		A	3.9
8	☐	1.000		7233250.66		A	0.5
9	☐	1.000		7155752.46		A	1.1

89 Y (ISTD) [He]

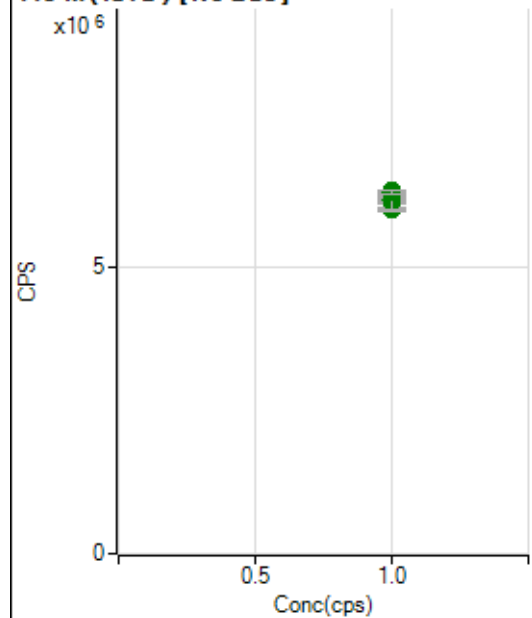
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		275146.85		P	0.2
2	☐	1.000					
3	☐	1.000		270830.70		P	2.9
4	☐	1.000		276173.39		P	0.2
5	☐	1.000		278880.63		P	0.9
6	☐	1.000		275259.38		P	0.5
7	☐	1.000		273304.13		P	1.0
8	☐	1.000		267548.87		P	0.1
9	☐	1.000		280573.67		P	0.7

103 Rh (ISTD) [No Gas]

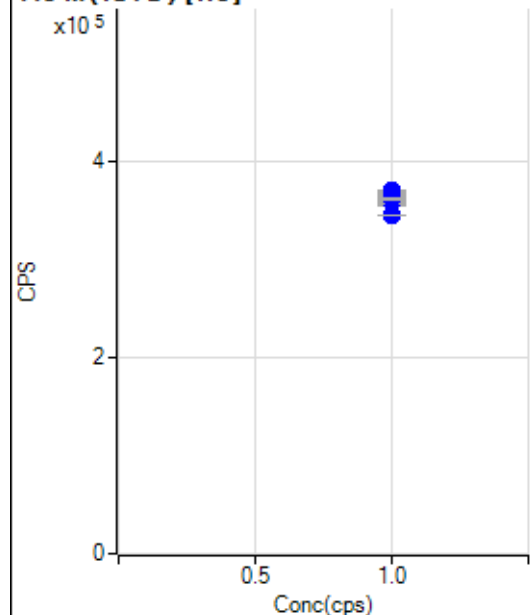
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5806148.74		A	0.3
2	☐	1.000					
3	☐	1.000		6028400.61		A	0.9
4	☐	1.000		5985901.39		A	0.9
5	☐	1.000		6011259.16		A	2.5
6	☐	1.000		6029144.79		A	0.7
7	☐	1.000		5912283.25		A	5.1
8	☐	1.000		6063799.83		A	0.8
9	☐	1.000		5772484.11		A	1.0

103 Rh (ISTD) [He]

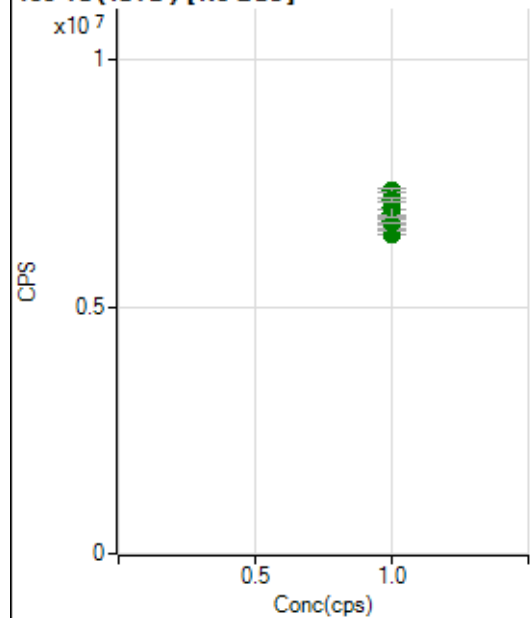
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1869257.44		A	0.4
2	☐	1.000					
3	☐	1.000		1887366.36		A	3.9
4	☐	1.000		1913230.96		A	0.2
5	☐	1.000		1931519.36		A	0.4
6	☐	1.000		1908813.06		A	0.6
7	☐	1.000		1879060.87		A	0.1
8	☐	1.000		1825726.50		A	0.9
9	☐	1.000		1793912.27		A	0.3

115 In (ISTD) [No Gas]

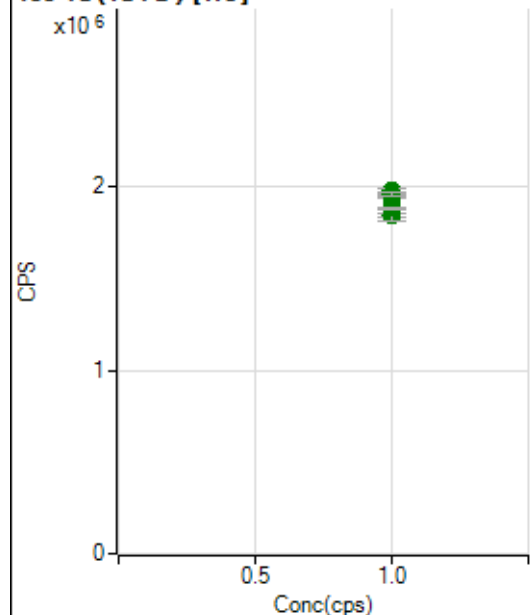
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6025644.21		A	1.2
2	☐	1.000					
3	☐	1.000		6149758.52		A	0.4
4	☐	1.000		6194577.33		A	0.6
5	☐	1.000		6213461.69		A	0.5
6	☐	1.000		6312844.66		A	1.4
7	☐	1.000		6181706.00		A	4.9
8	☐	1.000		6350146.59		A	0.5
9	☐	1.000		6327659.71		A	1.3

115 In (ISTD) [He]

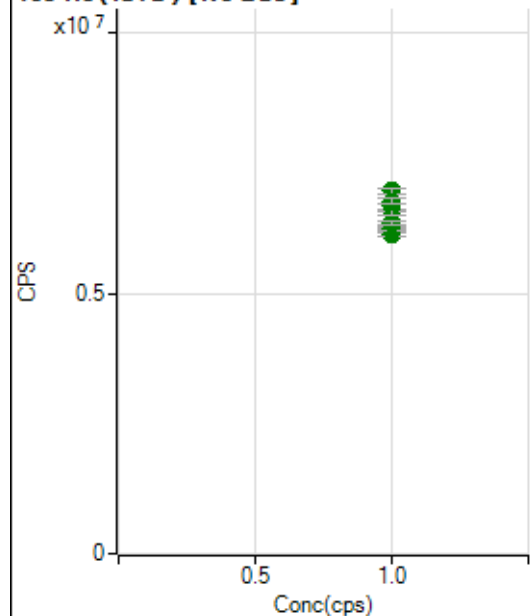
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		365769.01		P	0.1
2	☐	1.000					
3	☐	1.000		359921.28		P	3.2
4	☐	1.000		367501.77		P	0.5
5	☐	1.000		369819.76		P	0.4
6	☐	1.000		365886.01		P	0.8
7	☐	1.000		358356.76		P	0.5
8	☐	1.000		344582.40		P	0.1
9	☐	1.000		362387.97		P	0.4

159 Tb (ISTD) [No Gas]

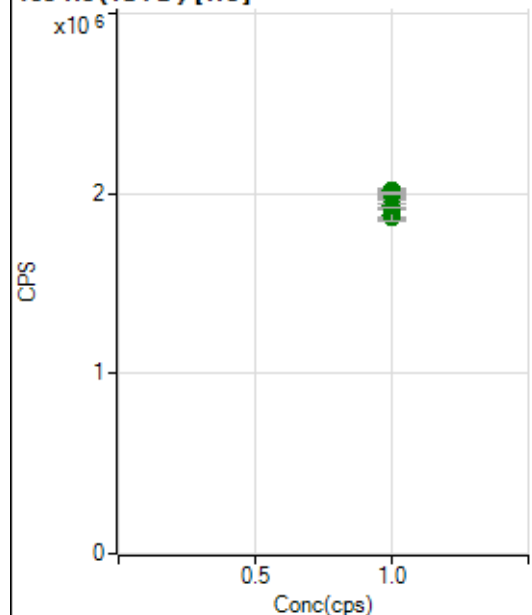
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6452954.14		A	0.1
2	☐	1.000					
3	☐	1.000		6560653.65		A	0.8
4	☐	1.000		6683243.86		A	0.7
5	☐	1.000		6743898.65		A	1.2
6	☐	1.000		6910446.42		A	1.5
7	☐	1.000		7020078.30		A	5.3
8	☐	1.000		7347061.83		A	1.0
9	☐	1.000		7157671.56		A	1.0

159 Tb (ISTD) [He]

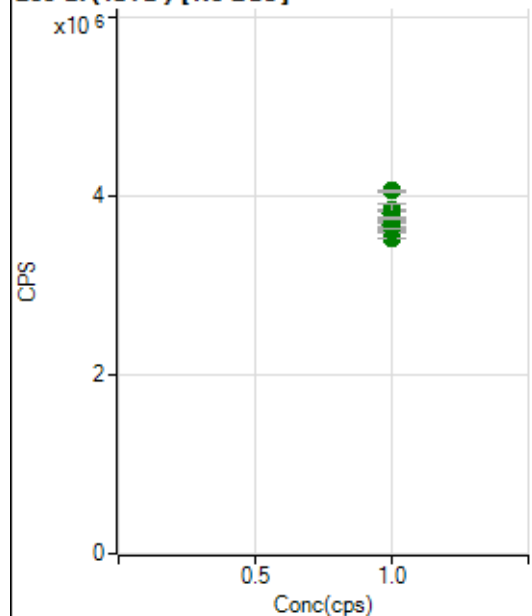
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1842279.52		A	1.5
2	☐	1.000					
3	☐	1.000		1843821.14		A	3.2
4	☐	1.000		1881078.86		A	0.4
5	☐	1.000		1938540.54		A	0.5
6	☐	1.000		1950216.03		A	0.4
7	☐	1.000		1976752.80		A	1.4
8	☐	1.000		1957281.13		A	0.5
9	☐	1.000		1954827.56		A	1.1

165 Ho (ISTD) [No Gas]

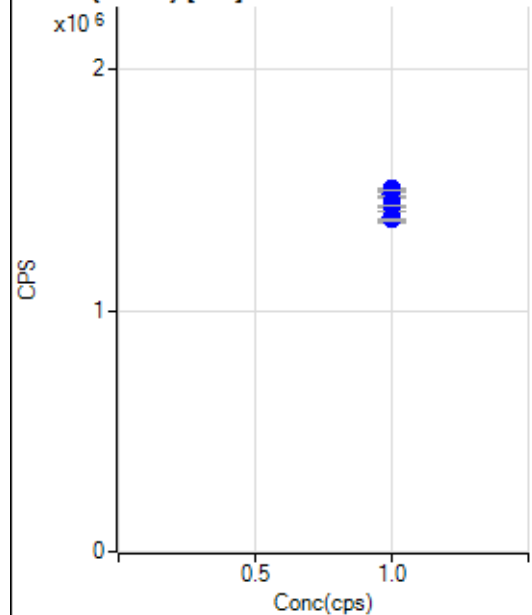
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6124977.83		A	1.0
2	☐	1.000					
3	☐	1.000		6215054.91		A	1.3
4	☐	1.000		6256283.30		A	1.3
5	☐	1.000		6361294.24		A	1.0
6	☐	1.000		6590903.49		A	0.9
7	☐	1.000		6670752.19		A	5.0
8	☐	1.000		6972558.75		A	1.4
9	☐	1.000		6781076.19		A	1.4

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1866011.75		A	0.5
2	☐	1.000					
3	☐	1.000		1876109.94		A	3.3
4	☐	1.000		1932838.43		A	0.6
5	☐	1.000		1974050.92		A	0.6
6	☐	1.000		1994039.64		A	1.2
7	☐	1.000		2007513.37		A	0.8
8	☐	1.000		2014809.92		A	1.4
9	☐	1.000		2004941.52		A	0.3

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3528073.28		A	0.3
2	☐	1.000					
3	☐	1.000		3602801.89		A	0.4
4	☐	1.000		3644397.76		A	0.2
5	☐	1.000		3672583.14		A	2.1
6	☐	1.000		3842840.29		A	0.4
7	☐	1.000		3799433.56		A	5.6
8	☐	1.000		4054108.76		A	0.7
9	☐	1.000		3745511.02		A	0.8

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1426899.13		P	0.6
2	☐	1.000					
3	☐	1.000		1388985.01		P	3.6
4	☐	1.000		1436454.63		P	0.2
5	☐	1.000		1470714.29		P	0.5
6	☐	1.000		1482823.15		P	0.8
7	☐	1.000		1503691.12		P	0.4
8	☐	1.000		1496879.26		P	0.2
9	☐	1.000		1376421.98		P	0.3

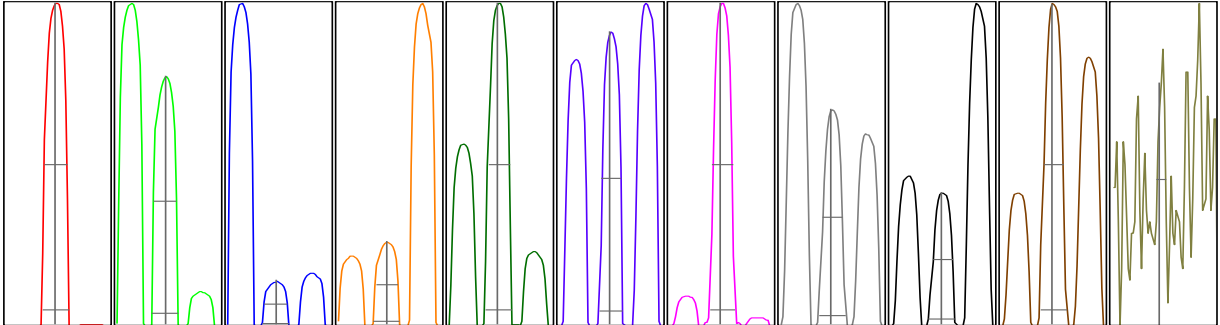
US EPA Tune Check Sample Report

Batch Folder D:\P8072617-MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	7374	1.20	5.00	
24	40374	0.77	5.00	
25	5542	0.75	5.00	
26	6544	0.95	5.00	
59	82111	0.69	5.00	
113	10157	0.77	5.00	
115	122268	0.63	5.00	
206	20935	1.00	5.00	
207	18701	1.06	5.00	
208	44590	0.98	5.00	
220	1	13.81		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7346	7502	7408	7261	7356
24	39991	40382	40598	40147	40751
25	5503	5526	5613	5535	5536
26	6466	6505	6543	6582	6625
59	81331	82425	81687	82615	82499
113	10153	10293	10121	10112	10105
115	123271	122927	121665	121839	121635
206	20662	20999	21092	20772	21150
207	18391	18861	18799	18615	18839
208	44262	45093	44472	44124	44997
220	2	1	1	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	11841	8.95	8.9 - 9.1		0.783	0.900	
24	64843	23.95	23.9 - 24.1		0.741	0.900	
25	8867	24.95	24.9 - 25.1		0.758	0.900	
26	10553	25.95	25.9 - 26.1		0.744	0.900	
59	137107	58.95	58.9 - 59.1		0.781	0.900	
113	18586	113.00	112.9 - 113.1		0.688	0.900	
115	221530	115.00	114.9 - 115.1		0.735	0.900	
206	37357	206.00	205.9 - 206.1		0.776	0.900	
207	33016	207.00	206.9 - 207.1		0.747	0.900	
208	79966	208.00	207.9 - 208.1		0.772	0.900	
220	2	219.90	-				

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	7.7	V	Deflect	13.6	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	11784	1.31	
89	3255	1.82	
205	15120	1.46	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	11958	11535	11795	11843	11788
89	3339	3173	3253	3269	3243
205	15384	14773	15114	15194	15136

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	7.7	V	Deflect	2.4	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			