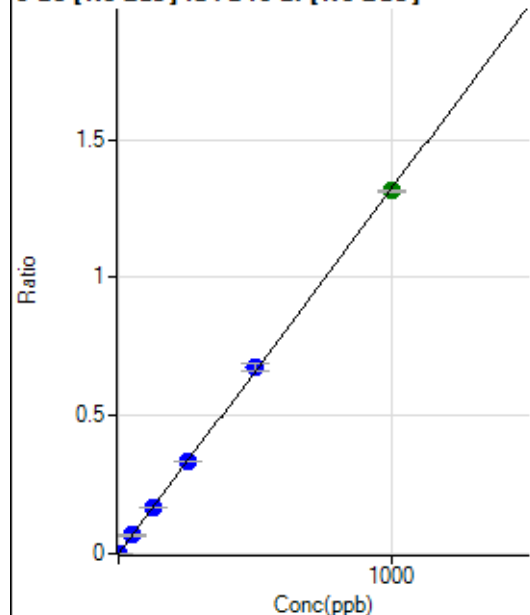


Batch Folder: D:\P8112118 MS.b\
Analysis File: P8112118 MS.batch.bin
DA Date-Time: 2018-11-21 17:15:18
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-11-21 15:35:10
2			
3	005CALS.d	S02	2018-11-21 15:42:21
4	006CALS.d	S03	2018-11-21 15:46:07
5	007CALS.d	S04	2018-11-21 15:49:52
6	008CALS.d	S05	2018-11-21 15:53:30
7	009CALS.d	S06	2018-11-21 15:57:02
8	010CALS.d	S07	2018-11-21 16:00:30
9	011CALS.d	S08	2018-11-21 16:03:52

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94.45	0.0001	P	15.5
2	☐	0.100					
3	☐	1.000	0.934	1359.37	0.0013	P	12.1
4	☐	50.000	50.544	71104.88	0.0669	P	2.5
5	☐	125.000	125.720	176258.32	0.1662	P	1.5
6	☐	250.000	251.975	357071.98	0.3331	P	1.3
7	☐	500.000	509.897	717676.75	0.6739	P	4.0
8	☐	1000.000	994.441	1408610.39	1.3142	A	0.7
9	☐			383.35	0.0004	P	16.7

$$y = 0.0013 * x + 8.8572E-005$$

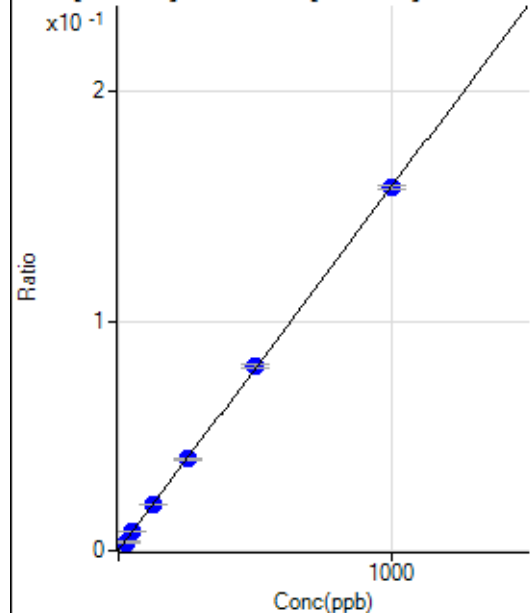
$$R = 0.9999$$

$$DL = 0.03117$$

$$BEC = 0.06702$$

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	188.90	0.0002	P	2.6
2	☐	2.500					
3	☐	25.000	22.457	3847.91	0.0037	P	9.0
4	☐	50.000	49.584	8544.57	0.0080	P	1.5
5	☐	125.000	125.906	21347.14	0.0201	P	3.1
6	☐	250.000	251.063	42842.80	0.0400	P	2.9
7	☐	500.000	505.801	85593.40	0.0803	P	2.3
8	☐	1000.000	996.805	169514.41	0.1582	P	1.0
9	☐			3989.60	0.0038	P	4.2

$$y = 1.5849E-004 * x + 1.7716E-004$$

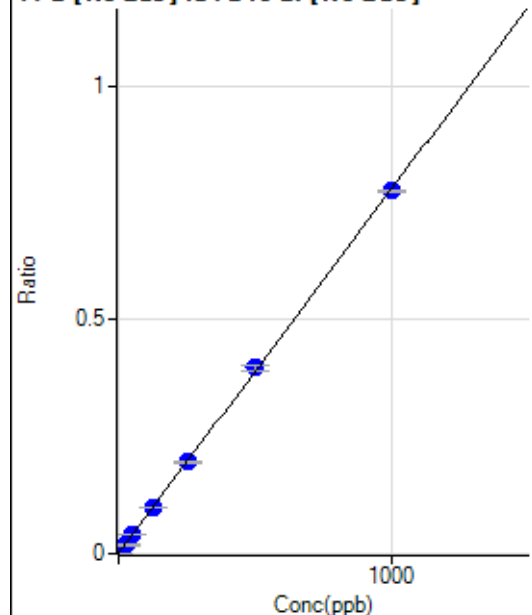
$$R = 1.0000$$

$$DL = 0.08681$$

$$BEC = 1.118$$

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	836.18	0.0008	P	3.2
2	☐	2.500					
3	☐	25.000	23.299	19522.25	0.0189	P	6.0
4	☐	50.000	50.133	42385.77	0.0399	P	1.9
5	☐	125.000	125.458	104526.54	0.0986	P	0.6
6	☐	250.000	251.122	210640.98	0.1965	P	2.5
7	☐	500.000	509.386	423715.93	0.3978	P	3.2
8	☐	1000.000	995.005	832047.12	0.7763	P	0.2
9	☐			19288.72	0.0183	P	6.5

$$y = 7.7937\text{E-}004 * x + 7.8423\text{E-}004$$

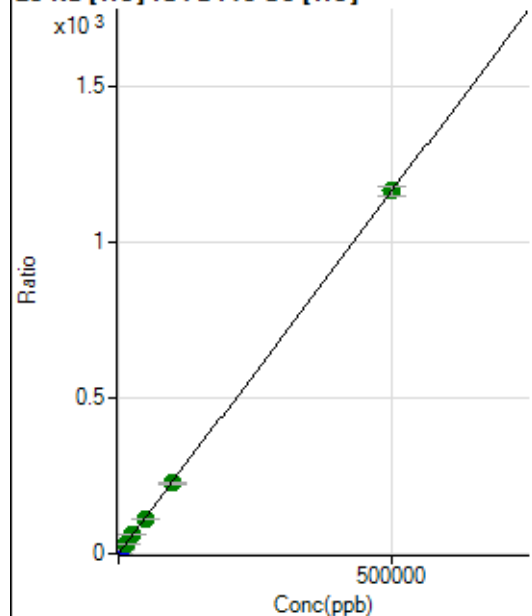
$$R = 0.9999$$

$$DL = 0.09513$$

$$BEC = 1.006$$

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	5484.61	0.1322	P	9.6
2	☐	50.000					
3	☐	500.000	450.123	48857.20	1.1803	P	10.2
4	☐	5000.000	4881.524	482951.09	11.4986	P	4.0
5	☐	12500.000	12562.655	1194842.10	29.3837	A	1.6
6	☐	25000.000	25577.937	2439024.73	59.6891	A	1.3
7	☐	50000.000	47778.416	4750897.20	111.3819	A	1.8
8	☐	100000.00	97324.046	9219809.93	226.7465	A	3.9
9	☐	500000.00	500728.12	45211594.76	1,166.053	A	2.8

$$y = 0.0023 * x + 0.1322$$

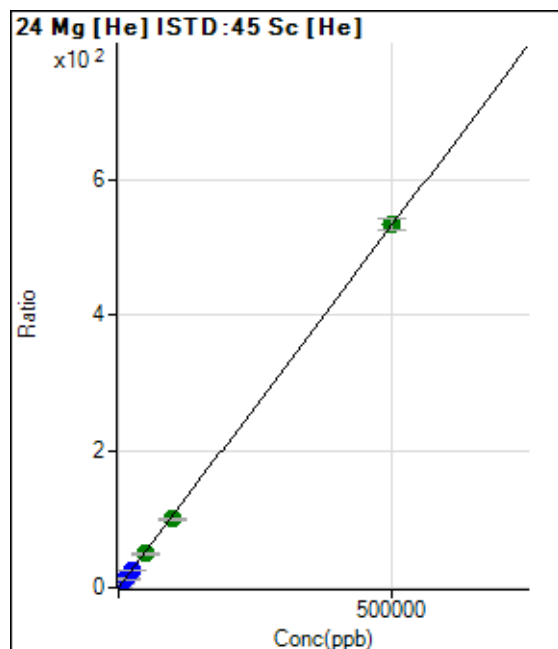
$$R = 1.0000$$

$$DL = 16.35$$

$$BEC = 56.76$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.34	0.0032	P	32.1
2	☐	50.000					
3	☐	500.000	432.841	19191.44	0.4634	P	9.3
4	☐	5000.000	4764.405	212855.52	5.0679	P	4.0
5	☐	12500.000	12041.113	520599.89	12.8032	P	2.0
6	☐	25000.000	24403.223	1060056.31	25.9443	P	2.1
7	☐	50000.000	46985.649	2130511.46	49.9499	A	2.0
8	☐	100000.00	94585.244	4088655.78	100.5492	A	3.6
9	☐	500000.00	501428.12	20667910.71	533.0312	A	3.1

$$y = 0.0011 * x + 0.0032$$

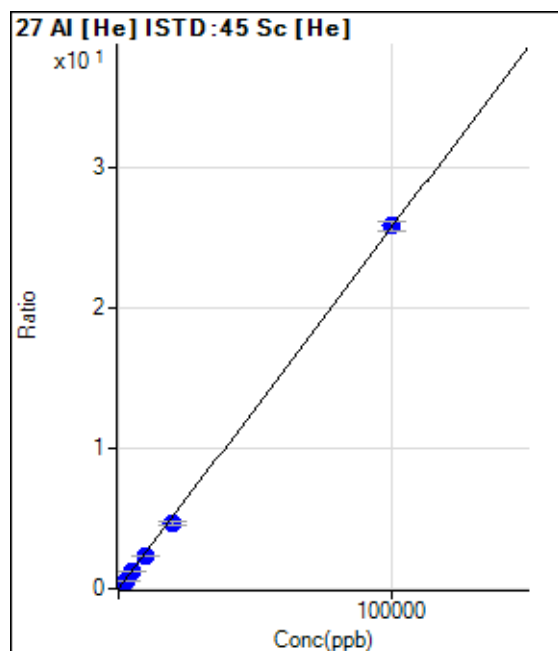
$$R = 0.9999$$

$$DL = 2.934$$

$$BEC = 3.045$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.68	0.0009	P	22.3
2	☐	2.000					
3	☐	20.000	16.747	215.06	0.0052	P	12.0
4	☐	1000.000	923.585	10024.45	0.2387	P	3.9
5	☐	2500.000	2345.120	24583.28	0.6046	P	3.0
6	☐	5000.000	4712.711	49618.39	1.2142	P	0.8
7	☐	10000.000	8966.701	98511.45	2.3094	P	1.0
8	☐	20000.000	18103.742	189567.00	4.6617	P	3.4
9	☐	100000.00	100501.58	1003238.05	25.8750	P	2.6

$$y = 2.5745E-004 * x + 8.8938E-004$$

$$R = 0.9998$$

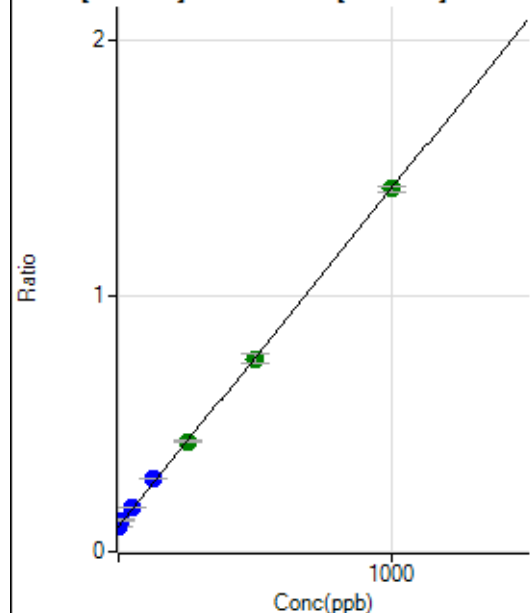
$$DL = 2.311$$

$$BEC = 3.455$$

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	318360.07	0.0987	P	1.0
2	☐	1.000					
3	☐	10.000	17.918	379365.38	0.1223	P	7.9
4	☐	50.000	56.906	552653.82	0.1737	P	0.8
5	☐	125.000	140.368	902691.62	0.2838	P	1.0
6	☐	250.000	251.728	1363266.59	0.4307	A	1.8
7	☐	500.000	496.966	2417630.26	0.7542	A	4.3
8	☐	1000.000	998.740	4602649.75	1.4161	A	1.3
9	☐			437875.22	0.1352	P	4.1

$$y = 0.0013 * x + 0.0987$$

$$R = 0.9999$$

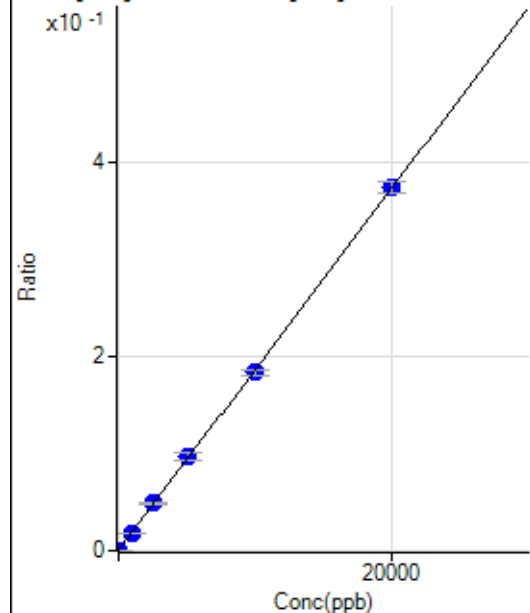
$$DL = 2.226$$

$$BEC = 74.79$$

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	8.105	22.22	0.0006	P	85.5
2	☐	0.000					
3	☐	0.000	-8.105	11.11	0.0003	P	108.
4	☐	1000.000	935.576	747.28	0.0178	P	6.1
5	☐	2500.000	2607.275	1986.34	0.0488	P	3.7
6	☐	5000.000	5173.443	3947.94	0.0965	P	8.7
7	☐	10000.000	9817.673	7799.72	0.1828	P	3.0
8	☐	20000.000	20037.615	15155.92	0.3727	P	3.3
9	☐			22.22	0.0006	P	22.4

$$y = 1.8580E-005 * x + 4.0556E-004$$

$$R = 0.9999$$

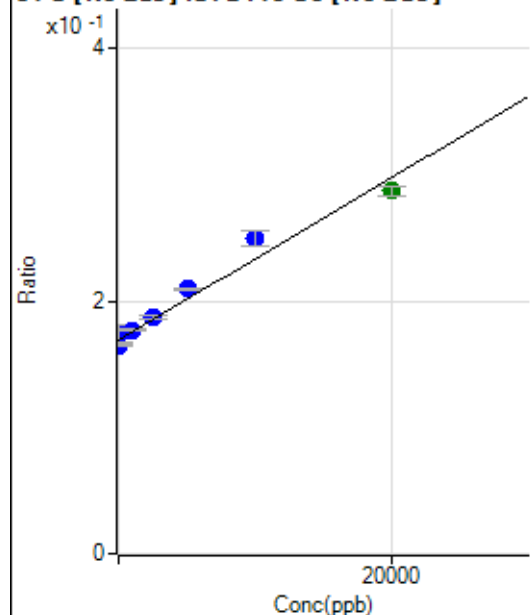
$$DL = 60.67$$

$$BEC = 21.83$$

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	-719.853	530988.14	0.1646	P	1.0
2	☐	0.000					
3	☐	0.000	719.853	539122.10	0.1738	P	8.1
4	☐	1000.000	1169.948	562090.78	0.1767	P	0.9
5	☐	2500.000	2800.951	595338.18	0.1872	P	1.4
6	☐	5000.000	6275.472	663217.46	0.2095	P	0.5
7	☐	10000.000	12532.085	800360.13	0.2498	P	5.1
8	☐	20000.000	18368.973	933547.79	0.2873	A	2.8
9	☐			512256.48	0.1582	P	3.5

$$y = 6.4295E-006 * x + 0.1692$$

$$R = 0.9830$$

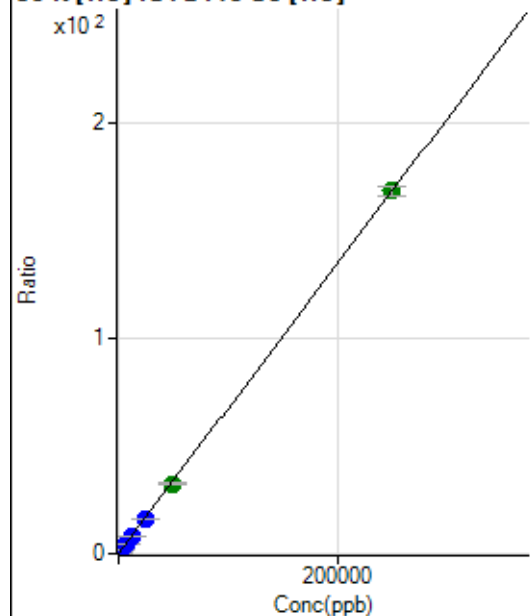
$$DL = 3649$$

$$BEC = 2.631E+04$$

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	5176.18	0.1246	P	7.6
2	☐	50.000					
3	☐	500.000	450.472	17650.64	0.4273	P	14.2
4	☐	2500.000	2403.263	73053.61	1.7397	P	4.9
5	☐	6250.000	6076.265	171103.12	4.2081	P	2.5
6	☐	12500.000	12232.841	341017.86	8.3456	P	1.5
7	☐	25000.000	23255.631	671982.70	15.7534	P	1.0
8	☐	50000.000	47999.565	1316953.03	32.3825	A	3.2
9	☐	250000.00	250593.29	6534701.40	168.5346	A	2.9

$$y = 6.7205E-004 * x + 0.1246$$

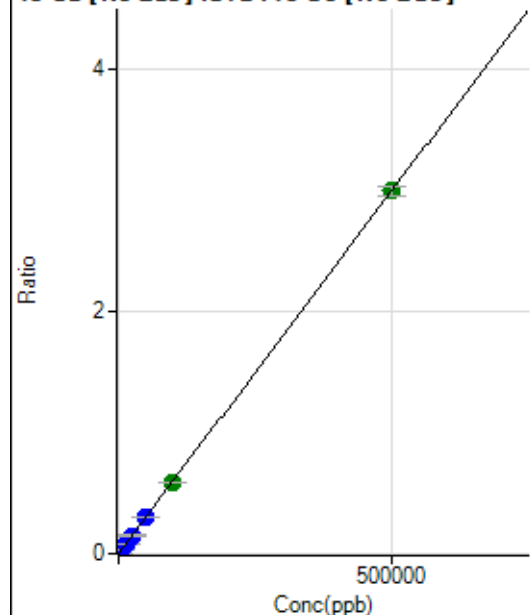
$$R = 0.9999$$

$$DL = 42.15$$

$$BEC = 185.4$$

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	1439.03	0.0004	P	5.8
2	☐	50.000					
3	☐	500.000	459.739	9917.79	0.0032	P	7.7
4	☐	5000.000	4911.361	94900.18	0.0298	P	0.9
5	☐	12500.000	12420.214	237777.64	0.0748	P	1.4
6	☐	25000.000	25083.718	476483.45	0.1505	P	0.6
7	☐	50000.000	50223.972	964770.84	0.3010	P	4.1
8	☐	100000.00	98424.112	1915514.13	0.5894	A	1.8
9	☐	500000.00	500291.51	9693584.85	2.9940	A	2.5

$$y = 5.9837\text{E-}006 * x + 4.4597\text{E-}004$$

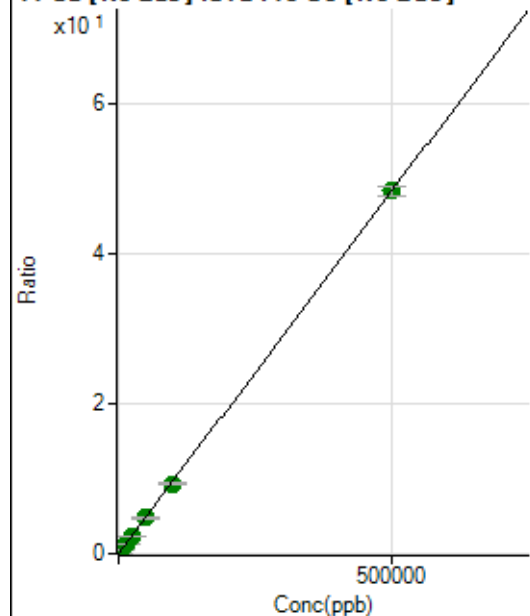
$$R = 1.0000$$

$$DL = 13.05$$

$$BEC = 74.53$$

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	34719.09	0.0108	P	1.6
2	☐	50.000					
3	☐	500.000	462.551	171909.35	0.0554	P	7.9
4	☐	5000.000	5023.361	1577139.91	0.4958	A	0.5
5	☐	12500.000	12495.999	3871477.34	1.2173	A	0.8
6	☐	25000.000	24930.188	7652748.87	2.4178	A	0.8
7	☐	50000.000	49891.680	15471096.00	4.8278	A	5.1
8	☐	100000.00	96537.387	30327249.98	9.3315	A	1.8
9	☐	500000.00	500706.74	156544668.7	48.3541	A	3.0

$$y = 9.6550\text{E-}005 * x + 0.0108$$

$$R = 1.0000$$

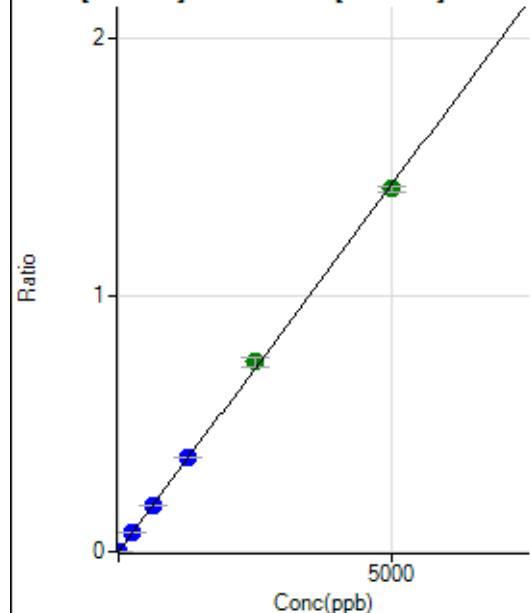
$$DL = 5.251$$

$$BEC = 111.4$$

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	222.23	0.0001	P	14.7
2	☐	0.500					
3	☐	5.000	4.660	4353.64	0.0014	P	6.2
4	☐	250.000	250.895	228408.10	0.0718	P	0.4
5	☐	625.000	633.075	575895.91	0.1811	P	0.9
6	☐	1250.000	1283.857	1162059.89	0.3671	P	0.4
7	☐	2500.000	2590.352	2373724.44	0.7407	A	4.9
8	☐	5000.000	4945.306	4595309.52	1.4140	A	1.9
9	☐			1514.04	0.0005	P	2.2

$$y = 2.8591E-004 * x + 6.8898E-005$$

$$R = 0.9997$$

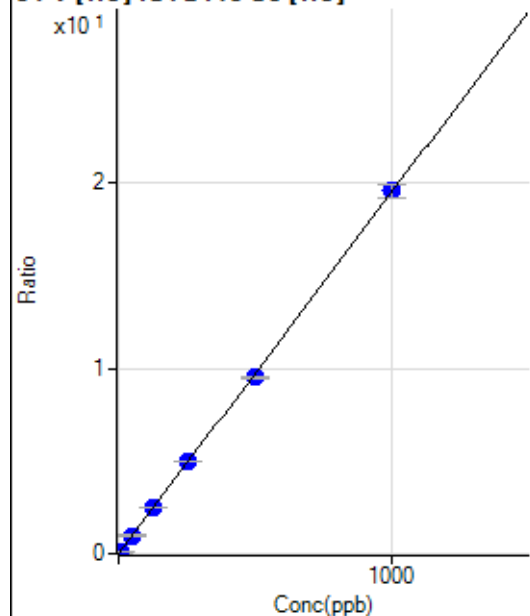
$$DL = 0.1062$$

$$BEC = 0.241$$

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	17.78	0.0004	P	23.4
2	☐	0.500					
3	☐	5.000	4.507	3656.10	0.0883	P	10.5
4	☐	50.000	49.927	40895.24	0.9735	P	3.4
5	☐	125.000	126.677	100407.77	2.4693	P	2.0
6	☐	250.000	255.392	203406.94	4.9779	P	1.3
7	☐	500.000	487.926	405646.66	9.5098	P	1.3
8	☐	1000.000	1004.485	796086.62	19.5773	P	3.5
9	☐			328.90	0.0085	P	10.7

$$y = 0.0195 * x + 4.2312E-004$$

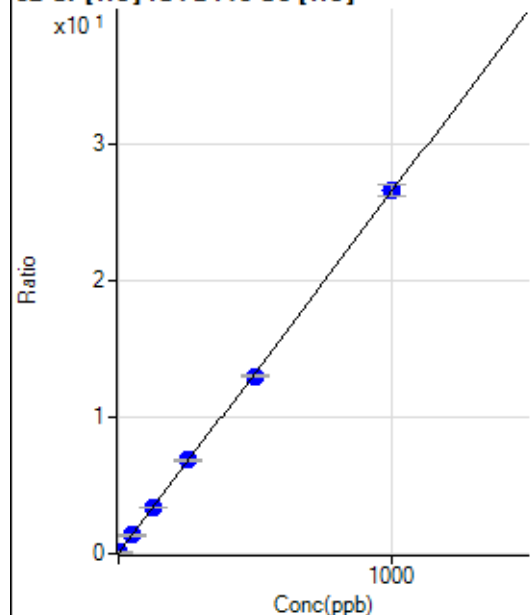
$$R = 0.9999$$

$$DL = 0.01527$$

$$BEC = 0.02171$$

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	925.60	0.0224	P	17.1
2	☐	0.200					
3	☐	2.000	1.928	3045.94	0.0735	P	9.1
4	☐	50.000	50.307	56961.06	1.3566	P	5.2
5	☐	125.000	127.898	138836.74	3.4145	P	2.1
6	☐	250.000	257.363	279814.28	6.8481	P	1.8
7	☐	500.000	490.403	555738.41	13.0288	P	1.4
8	☐	1000.000	1002.580	1082240.43	26.6127	P	3.3
9	☐			50147.57	1.2933	P	3.4

$$y = 0.0265 * x + 0.0224$$

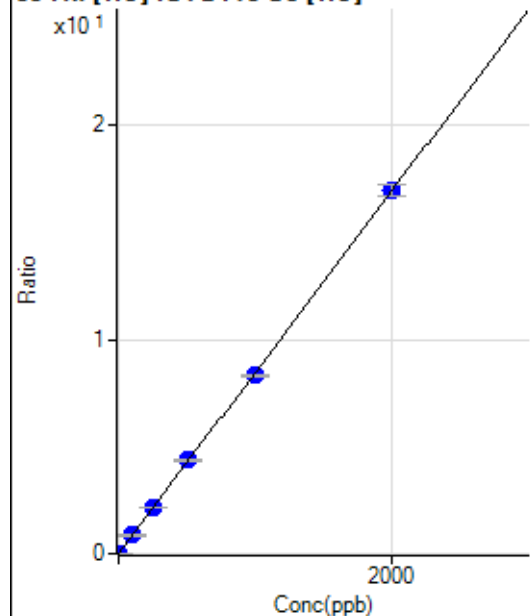
$$R = 0.9999$$

$$DL = 0.4327$$

$$BEC = 0.844$$

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	64.44	0.0016	P	19.8
2	☐	0.100					
3	☐	1.000	0.956	398.90	0.0096	P	11.8
4	☐	100.000	101.783	36212.57	0.8623	P	4.4
5	☐	250.000	256.685	88319.23	2.1722	P	2.5
6	☐	500.000	516.431	178517.62	4.3686	P	1.0
7	☐	1000.000	983.862	354961.09	8.3214	P	0.8
8	☐	2000.000	2003.036	688885.33	16.9398	P	3.2
9	☐			5026.55	0.1296	P	2.8

$$y = 0.0085 * x + 0.0016$$

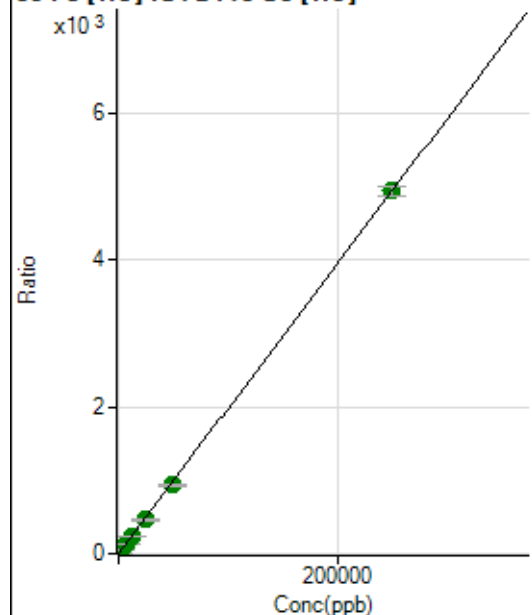
$$R = 0.9999$$

$$DL = 0.1094$$

$$BEC = 0.1842$$

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	2465.10	0.0595	P	14.4
2	☐	5.000					
3	☐	50.000	44.340	38685.55	0.9337	P	8.5
4	☐	2500.000	2438.751	2021605.86	48.1371	A	4.4
5	☐	6250.000	6160.221	4940142.41	121.5022	A	2.7
6	☐	12500.000	12237.657	9860999.52	241.3128	A	0.9
7	☐	25000.000	23358.424	19644755.76	460.5477	A	1.3
8	☐	50000.000	47682.031	38229599.46	940.0635	A	3.3
9	☐	250000.00	250643.72	191588304.2	4,941.252	A	2.8

$$y = 0.0197 * x + 0.0595$$

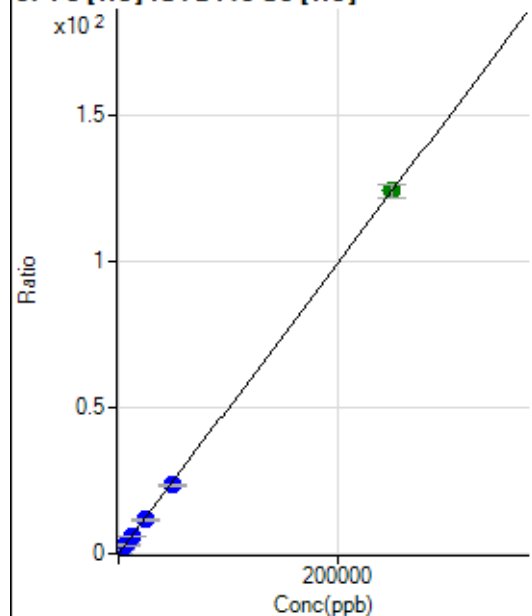
$$R = 0.9999$$

$$DL = 1.304$$

$$BEC = 3.02$$

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	64.81	0.0015	P	39.1
2	☐	5.000					
3	☐	50.000	48.727	1063.04	0.0257	P	12.1
4	☐	2500.000	2374.423	49493.86	1.1787	P	4.9
5	☐	6250.000	6040.942	121831.15	2.9963	P	2.6
6	☐	12500.000	12192.034	247045.00	6.0458	P	1.2
7	☐	25000.000	23257.899	491890.35	11.5317	P	1.2
8	☐	50000.000	47531.747	958216.03	23.5656	P	3.8
9	☐	250000.00	250689.74	4819287.38	124.2819	A	3.7

$$y = 4.9575E-004 * x + 0.0015$$

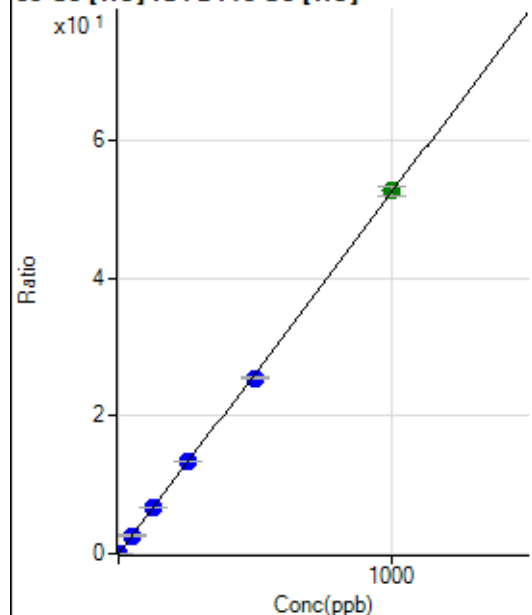
$$R = 0.9999$$

$$DL = 3.608$$

$$BEC = 3.079$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	86.67	0.0021	P	35.8
2	☐	0.100					
3	☐	1.000	0.895	2032.40	0.0491	P	9.2
4	☐	50.000	49.947	110098.00	2.6216	P	4.5
5	☐	125.000	127.443	271867.13	6.6860	P	1.8
6	☐	250.000	256.153	549030.56	13.4363	P	1.5
7	☐	500.000	486.305	1088007.56	25.5068	P	1.2
8	☐	1000.000	1005.007	2144026.43	52.7106	A	2.4
9	☐			26865.09	0.6929	P	2.2

$$y = 0.0524 * x + 0.0021$$

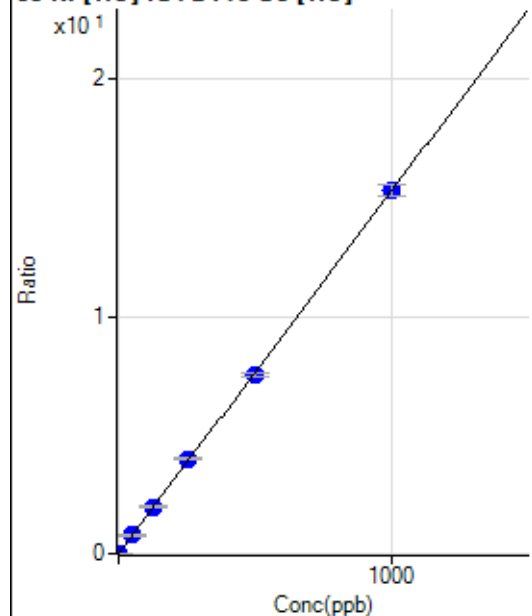
$$R = 0.9998$$

$$DL = 0.04316$$

$$BEC = 0.0402$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	107.78	0.0026	P	18.2
2	☐	0.100					
3	☐	1.000	0.993	734.48	0.0178	P	14.2
4	☐	50.000	51.088	32905.67	0.7836	P	4.8
5	☐	125.000	129.183	80404.74	1.9775	P	2.5
6	☐	250.000	261.544	163489.07	4.0010	P	1.4
7	☐	500.000	492.800	321464.95	7.5364	P	1.3
8	☐	1000.000	1000.137	621878.32	15.2923	P	3.3
9	☐			23690.42	0.6110	P	3.2

$$y = 0.0153 * x + 0.0026$$

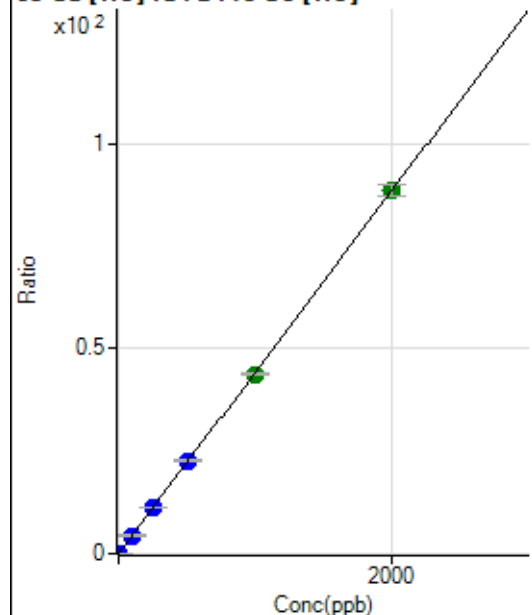
$$R = 0.9999$$

$$DL = 0.09307$$

$$BEC = 0.1701$$

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	803.37	0.0194	P	10.9
2	☐	0.200					
3	☐	2.000	1.873	4230.71	0.1022	P	9.7
4	☐	100.000	99.589	185712.64	4.4222	P	4.5
5	☐	250.000	254.537	458385.84	11.2726	P	1.6
6	☐	500.000	511.121	924141.23	22.6164	P	1.5
7	☐	1000.000	991.225	1870116.45	43.8421	A	1.1
8	☐	2000.000	2001.061	3598585.53	88.4876	A	3.1
9	☐			9920.37	0.2559	P	3.1

$$y = 0.0442 * x + 0.0194$$

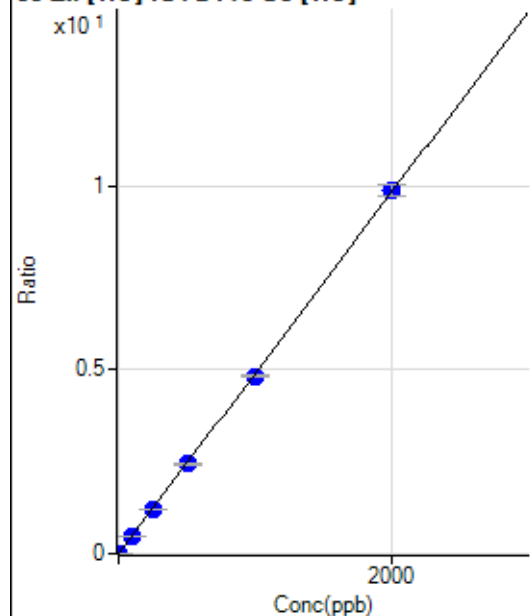
$$R = 1.0000$$

$$DL = 0.1429$$

$$BEC = 0.4378$$

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	101.11	0.0024	P	16.9
2	☐	0.200					
3	☐	2.000	1.927	496.69	0.0119	P	5.2
4	☐	100.000	96.866	20050.24	0.4775	P	5.0
5	☐	250.000	246.602	49272.98	1.2118	P	2.2
6	☐	500.000	497.312	99757.77	2.4413	P	1.3
7	☐	1000.000	982.737	205676.40	4.8219	P	1.4
8	☐	2000.000	2009.885	400933.80	9.8591	P	3.3
9	☐			4808.69	0.1240	P	3.5

$$y = 0.0049 * x + 0.0024$$

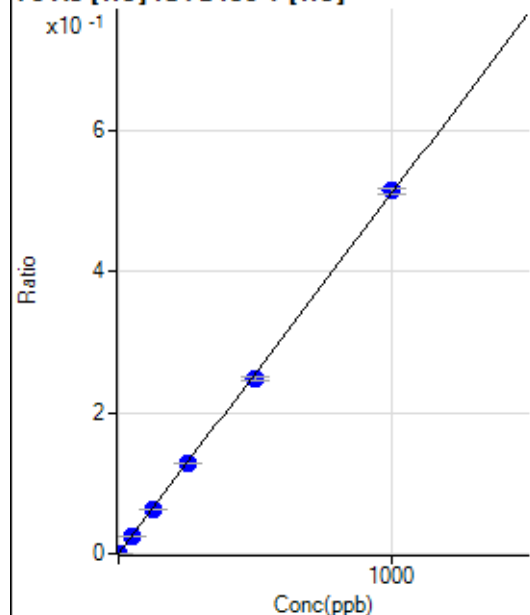
$$R = 0.9999$$

$$DL = 0.2532$$

$$BEC = 0.4984$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	19.14	0.0001	P	66.1
2	☐	0.100					
3	☐	1.000	0.850	137.04	0.0005	P	16.3
4	☐	50.000	48.228	6913.51	0.0247	P	6.5
5	☐	125.000	124.480	17145.29	0.0636	P	1.1
6	☐	250.000	251.006	34720.71	0.1282	P	0.5
7	☐	500.000	485.866	69762.46	0.2481	P	1.7
8	☐	1000.000	1006.969	136142.26	0.5140	P	1.9
9	☐			225.93	0.0009	P	5.7

$$y = 5.1041\text{E-}004 * x + 6.9390\text{E-}005$$

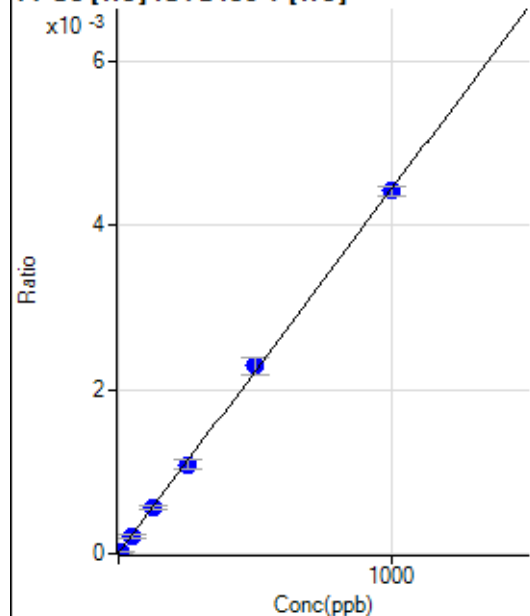
$$R = 0.9999$$

$$DL = 0.2694$$

$$BEC = 0.1359$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2.22	0.0000	P	87.0
2	☐	0.500					
3	☐	5.000	4.303	7.78	0.0000	P	56.7
4	☐	50.000	45.311	58.89	0.0002	P	20.1
5	☐	125.000	123.871	150.00	0.0006	P	8.1
6	☐	250.000	241.850	292.23	0.0011	P	10.6
7	☐	500.000	514.144	642.25	0.0023	P	9.6
8	☐	1000.000	995.345	1168.96	0.0044	P	2.6
9	☐			3.33	0.0000	P	101.

$$y = 4.4261\text{E-}006 * x + 8.2548\text{E-}006$$

$$R = 0.9998$$

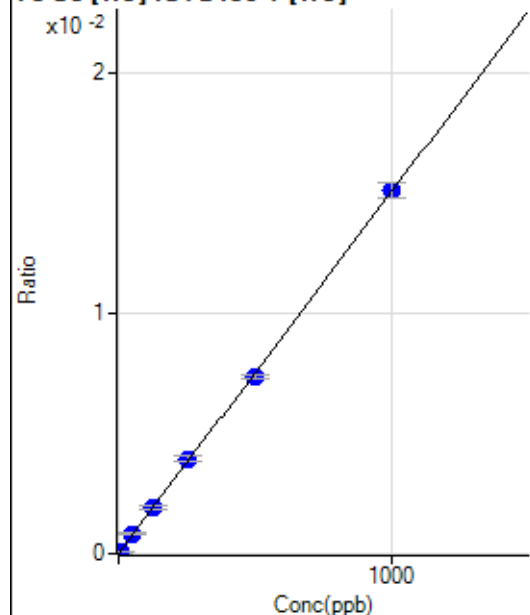
$$DL = 4.868$$

$$BEC = 1.865$$

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	3.09	0.0000	P	173.
2	☐	0.500					
3	☐	5.000	4.997	23.45	0.0001	P	13.5
4	☐	50.000	53.993	231.49	0.0008	P	5.8
5	☐	125.000	128.124	522.86	0.0019	P	6.0
6	☐	250.000	261.650	1069.80	0.0039	P	6.3
7	☐	500.000	487.680	2068.08	0.0074	P	1.5
8	☐	1000.000	1002.657	4001.24	0.0151	P	4.3
9	☐			7.41	0.0000	P	26.2

$$y = 1.5054\text{E-}005 * x + 1.0844\text{E-}005$$

$$R = 0.9998$$

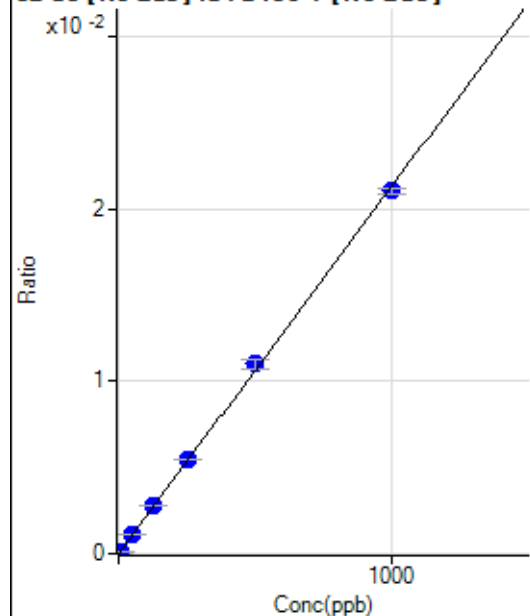
$$DL = 3.743$$

$$BEC = 0.7203$$

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	-152.99	0.0000	P	-13.
2	☐	0.500					
3	☐	5.000	6.001	477.94	0.0001	P	35.6
4	☐	50.000	53.051	5512.82	0.0011	P	1.8
5	☐	125.000	129.895	13868.44	0.0027	P	1.3
6	☐	250.000	257.213	27779.88	0.0055	P	0.8
7	☐	500.000	516.771	56611.17	0.0110	P	5.1
8	☐	1000.000	989.042	110049.03	0.0211	P	1.5
9	☐			122.80	0.0000	P	47.9

$$y = 2.1326\text{E-}005 * x - 3.0020\text{E-}005$$

$$R = 0.9998$$

$$DL = 0.551$$

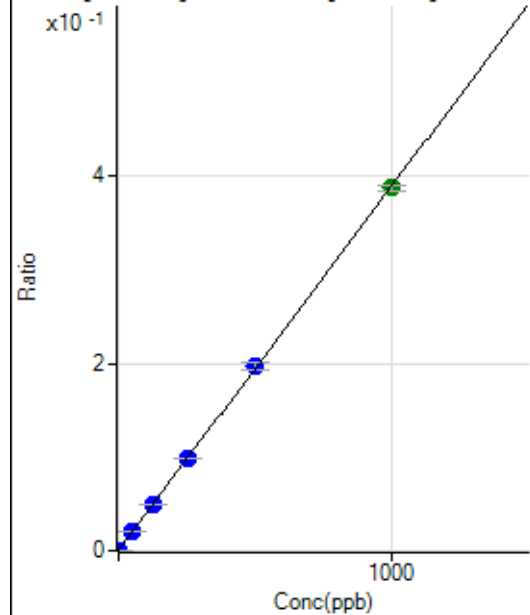
$$BEC = -1.408$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1212.30		P	2.7
2	☐						
3	☐			1145.63		P	8.5
4	☐			1075.62		P	2.8
5	☐			1065.61		P	3.9
6	☐			1106.73		P	12.6
7	☐			1108.95		P	1.2
8	☐			1043.39		P	3.6
9	☐			1108.95		P	2.6

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1791.87	0.0004	P	10.0
2	☐	0.100					
3	☐	1.000	1.046	3742.34	0.0008	P	4.2
4	☐	50.000	50.306	99603.91	0.0199	P	0.8
5	☐	125.000	126.095	249717.82	0.0493	P	1.0
6	☐	250.000	252.243	500890.36	0.0984	P	1.0
7	☐	500.000	507.032	1016848.14	0.1974	P	4.3
8	☐	1000.000	995.771	2023566.32	0.3873	A	1.3
9	☐			11241.25	0.0022	P	0.9

$$y = 3.8856E-004 * x + 3.5133E-004$$

$$R = 1.0000$$

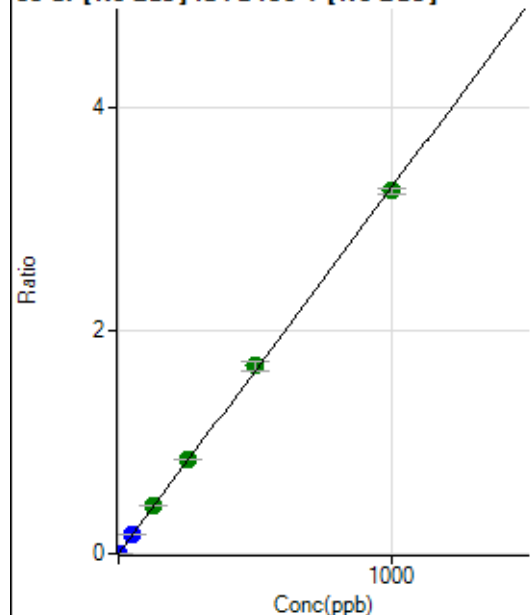
$$DL = 0.2699$$

$$BEC = 0.9042$$

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	91.67	0.0000	P	0.7
2	☐	0.100					
3	☐	1.000	0.973	15859.83	0.0032	P	5.5
4	☐	50.000	51.200	842063.41	0.1682	P	1.0
5	☐	125.000	130.350	2167111.01	0.4282	A	1.1
6	☐	250.000	256.333	4288479.87	0.8421	A	0.5
7	☐	500.000	513.324	8687621.98	1.6864	A	4.7
8	☐	1000.000	991.026	17010613.75	3.2558	A	1.7
9	☐			81608.24	0.0157	P	1.8

$$y = 0.0033 * x + 1.7978E-005$$

$$R = 0.9998$$

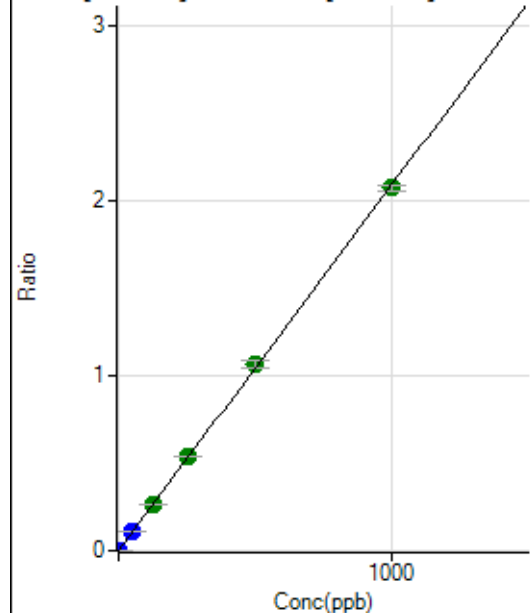
$$DL = 0.0001145$$

$$BEC = 0.005472$$

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	363.91	0.0001	P	22.7
2	☐	0.100					
3	☐	1.000	0.936	10004.11	0.0020	P	7.2
4	☐	50.000	50.672	530740.18	0.1060	P	1.7
5	☐	125.000	126.953	1343714.48	0.2655	A	1.3
6	☐	250.000	256.452	2731230.45	0.5363	A	0.5
7	☐	500.000	510.872	5504063.88	1.0683	A	4.4
8	☐	1000.000	992.673	10845433.92	2.0758	A	1.9
9	☐			5784.84	0.0011	P	6.6

$$y = 0.0021 * x + 7.1379E-005$$

$$R = 0.9999$$

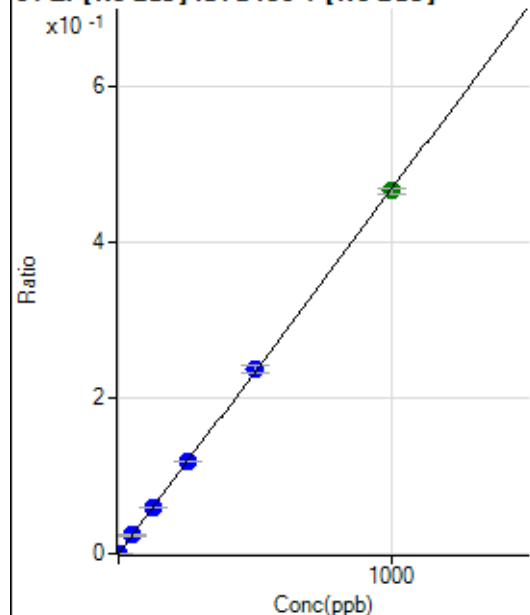
$$DL = 0.02329$$

$$BEC = 0.03414$$

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	69.45	0.0000	P	6.2
2	☐	0.100					
3	☐	1.000	0.967	2289.18	0.0005	P	12.5
4	☐	50.000	50.279	117619.62	0.0235	P	1.9
5	☐	125.000	125.749	297281.43	0.0587	P	1.2
6	☐	250.000	251.430	598108.08	0.1174	P	0.5
7	☐	500.000	507.971	1222570.95	0.2373	P	4.0
8	☐	1000.000	995.550	2429626.79	0.4650	A	1.4
9	☐			1222.34	0.0002	P	9.3

$$y = 4.6706\text{E-}004 * x + 1.3615\text{E-}005$$

$$R = 1.0000$$

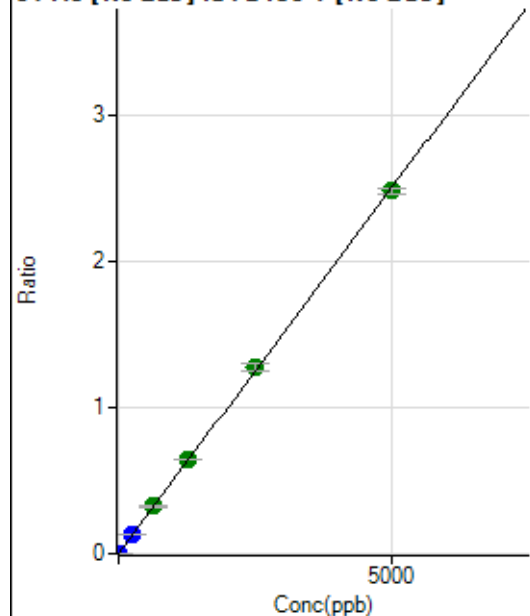
$$DL = 0.005448$$

$$BEC = 0.02915$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	200.01	0.0000	P	26.1
2	☐	0.500					
3	☐	5.000	4.702	11763.89	0.0024	P	9.8
4	☐	250.000	256.037	640189.85	0.1279	P	0.6
5	☐	625.000	648.233	1638226.36	0.3237	A	1.3
6	☐	1250.000	1287.883	3275228.63	0.6432	A	0.2
7	☐	2500.000	2551.364	6562981.00	1.2741	A	4.9
8	☐	5000.000	4961.642	12945898.98	2.4777	A	1.3
9	☐			16029.67	0.0031	P	7.9

$$y = 4.9936\text{E-}004 * x + 3.9224\text{E-}005$$

$$R = 0.9999$$

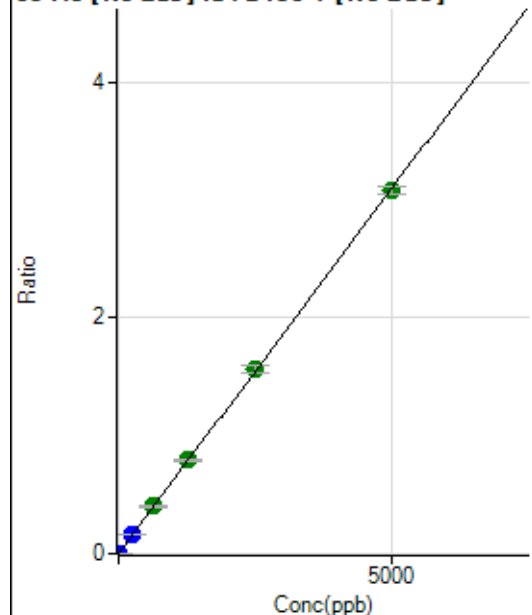
$$DL = 0.06149$$

$$BEC = 0.07855$$

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	147.23	0.0000	P	8.8
2	☐	0.500					
3	☐	5.000	4.643	14316.47	0.0029	P	8.2
4	☐	250.000	253.392	785547.18	0.1569	P	0.2
5	☐	625.000	646.933	2027227.61	0.4006	A	1.6
6	☐	1250.000	1280.816	4038769.14	0.7931	A	1.0
7	☐	2500.000	2532.989	8080670.93	1.5685	A	4.4
8	☐	5000.000	4972.891	16087727.44	3.0793	A	2.1
9	☐			24642.70	0.0047	P	1.1

$$y = 6.1921\text{E-}004 * x + 2.8874\text{E-}005$$

$$R = 0.9999$$

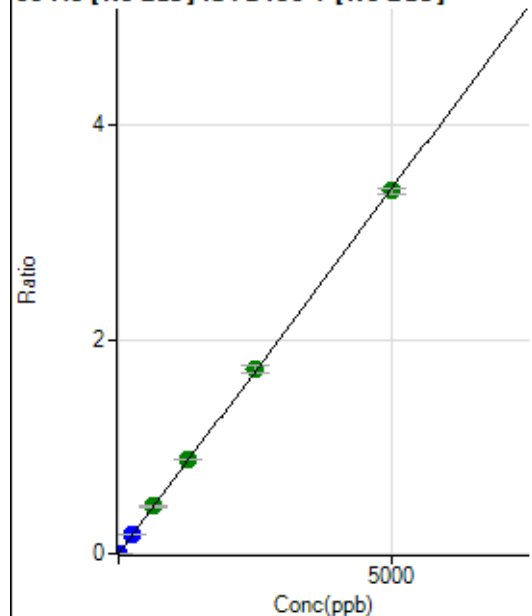
$$DL = 0.01225$$

$$BEC = 0.04663$$

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	188.90	0.0000	P	37.2
2	☐	0.500					
3	☐	5.000	4.766	16165.86	0.0033	P	9.0
4	☐	250.000	255.331	869866.20	0.1738	P	1.0
5	☐	625.000	646.810	2227393.67	0.4402	A	1.3
6	☐	1250.000	1280.329	4436758.09	0.8712	A	0.1
7	☐	2500.000	2531.118	8873580.49	1.7223	A	4.3
8	☐	5000.000	4973.866	17683168.97	3.3845	A	1.9
9	☐			28736.98	0.0055	P	3.0

$$y = 6.8046\text{E-}004 * x + 3.7018\text{E-}005$$

$$R = 0.9999$$

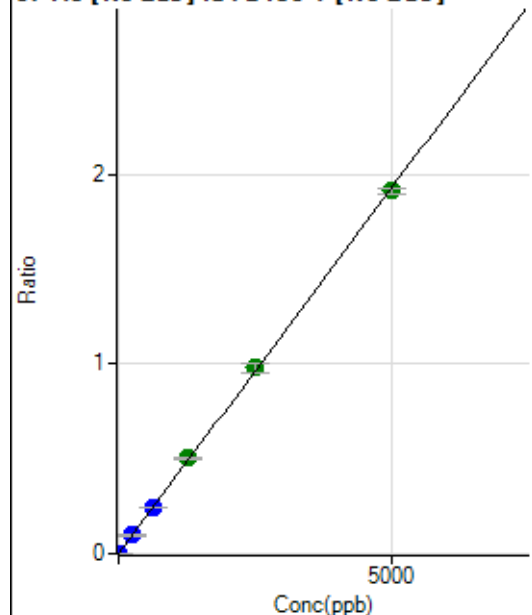
$$DL = 0.06079$$

$$BEC = 0.0544$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	88.89	0.0000	P	13.9
2	☐	0.500					
3	☐	5.000	4.775	9153.50	0.0019	P	6.4
4	☐	250.000	251.348	484329.81	0.0968	P	1.9
5	☐	625.000	628.294	1223802.01	0.2418	P	1.3
6	☐	1250.000	1303.925	2555778.51	0.5019	A	0.6
7	☐	2500.000	2543.905	5043792.95	0.9791	A	4.9
8	☐	5000.000	4964.087	9982456.73	1.9106	A	1.9
9	☐			15609.62	0.0030	P	1.3

$$y = 3.8489\text{E-}004 * x + 1.7426\text{E-}005$$

$$R = 0.9999$$

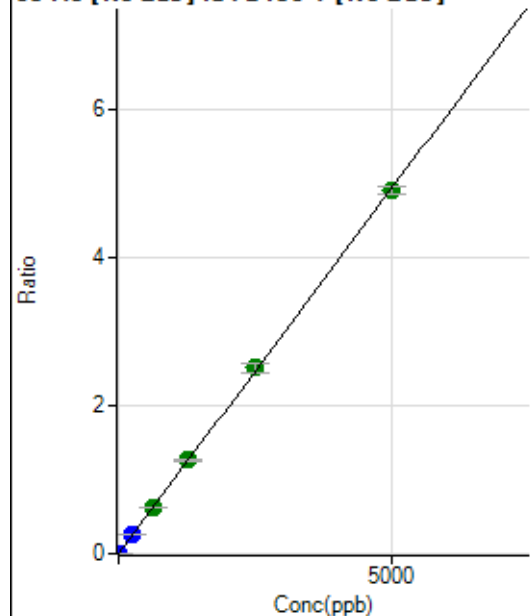
$$DL = 0.01892$$

$$BEC = 0.04528$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	233.35	0.0000	P	9.5
2	☐	0.500					
3	☐	5.000	4.698	23031.52	0.0047	P	9.0
4	☐	250.000	252.601	1245554.02	0.2488	P	1.2
5	☐	625.000	637.606	3178118.21	0.6280	A	0.9
6	☐	1250.000	1279.767	6418974.49	1.2605	A	0.6
7	☐	2500.000	2542.014	12896925.81	2.5037	A	4.9
8	☐	5000.000	4969.845	25572983.04	4.8948	A	2.2
9	☐			40102.16	0.0077	P	3.8

$$y = 9.8489\text{E-}004 * x + 4.5763\text{E-}005$$

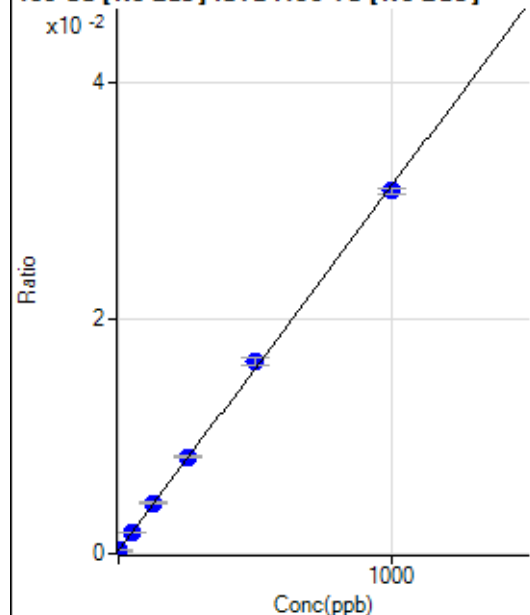
$$R = 0.9999$$

$$DL = 0.0133$$

$$BEC = 0.04647$$

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	1372.36	0.0003	P	7.2
2	☐	0.100					
3	☐	1.000	1.238	1536.26	0.0003	P	9.7
4	☐	50.000	51.296	9962.42	0.0018	P	2.0
5	☐	125.000	131.041	23649.38	0.0043	P	2.2
6	☐	250.000	258.130	46377.85	0.0082	P	0.7
7	☐	500.000	520.621	92527.97	0.0164	P	4.0
8	☐	1000.000	986.837	177455.35	0.0308	P	1.4
9	☐			1547.39	0.0003	P	3.1

$$y = 3.0960E-005 * x + 2.5279E-004$$

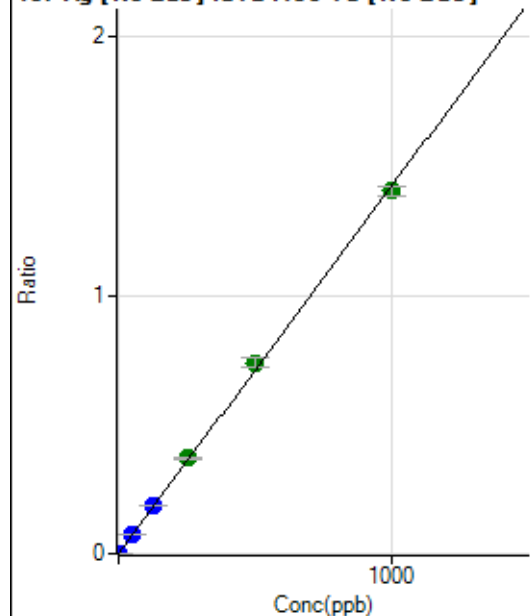
$$R = 0.9996$$

$$DL = 1.757$$

$$BEC = 8.165$$

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	213.90	0.0000	P	27.7
2	☐	0.100					
3	☐	1.000	0.961	7402.37	0.0014	P	7.2
4	☐	50.000	52.113	400959.06	0.0741	P	1.3
5	☐	125.000	130.244	1015657.08	0.1851	P	1.8
6	☐	250.000	259.163	2071636.35	0.3683	A	0.4
7	☐	500.000	518.732	4164686.20	0.7371	A	4.9
8	☐	1000.000	987.582	8082373.19	1.4033	A	2.4
9	☐			9541.87	0.0017	P	88.3

$$y = 0.0014 * x + 3.9417E-005$$

$$R = 0.9997$$

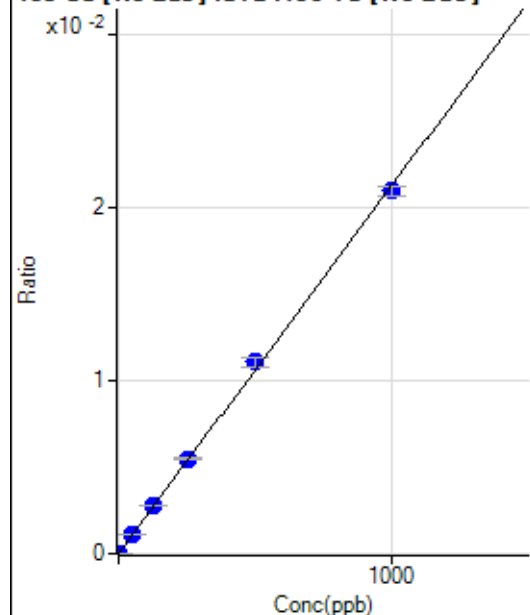
$$DL = 0.02305$$

$$BEC = 0.02774$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	13.89	0.0000	P	45.5
2	☐	0.100					
3	☐	1.000	1.030	129.17	0.0000	P	12.9
4	☐	50.000	52.305	6027.85	0.0011	P	3.1
5	☐	125.000	129.381	15096.24	0.0028	P	1.5
6	☐	250.000	257.989	30843.83	0.0055	P	1.7
7	☐	500.000	521.604	62619.78	0.0111	P	5.1
8	☐	1000.000	986.538	120726.00	0.0210	P	2.4
9	☐			52.78	0.0000	P	41.8

$$y = 2.1244\text{E-}005 * x + 2.5557\text{E-}006$$

$$R = 0.9996$$

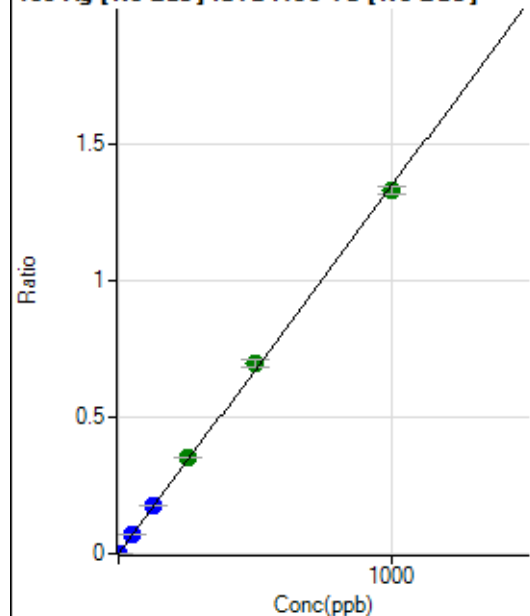
$$DL = 0.1642$$

$$BEC = 0.1203$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	186.12	0.0000	P	9.3
2	☐	0.100					
3	☐	1.000	0.956	6963.19	0.0013	P	9.5
4	☐	50.000	52.362	382149.74	0.0706	P	1.8
5	☐	125.000	130.738	967163.45	0.1762	P	0.9
6	☐	250.000	259.875	1970562.39	0.3503	A	0.2
7	☐	500.000	519.686	3958553.22	0.7005	A	4.3
8	☐	1000.000	986.853	7661446.52	1.3302	A	2.1
9	☐			9530.64	0.0017	P	87.2

$$y = 0.0013 * x + 3.4279\text{E-}005$$

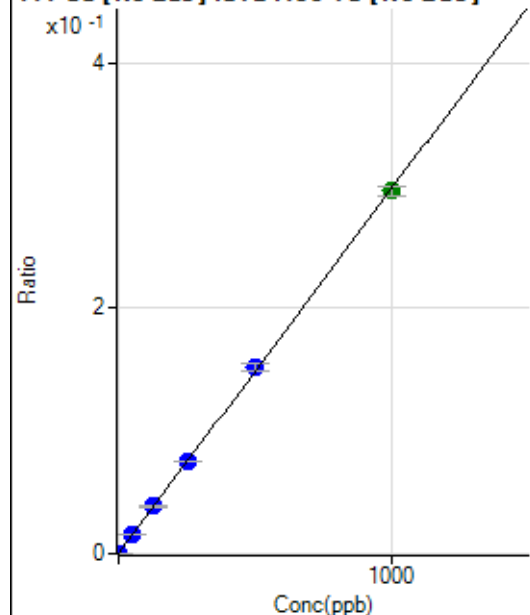
$$R = 0.9996$$

$$DL = 0.00706$$

$$BEC = 0.02543$$

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	963.43	0.0002	P	7.7
2	☐	0.100					
3	☐	1.000	0.919	2378.13	0.0005	P	6.4
4	☐	50.000	51.395	83700.20	0.0155	P	1.5
5	☐	125.000	128.604	210894.34	0.0384	P	1.0
6	☐	250.000	251.673	422118.86	0.0750	P	0.5
7	☐	500.000	509.612	857692.93	0.1518	P	4.1
8	☐	1000.000	994.256	1704388.95	0.2959	A	2.5
9	☐			1301.80	0.0002	P	6.2

$$y = 2.9746\text{E-}004 * x + 1.7747\text{E-}004$$

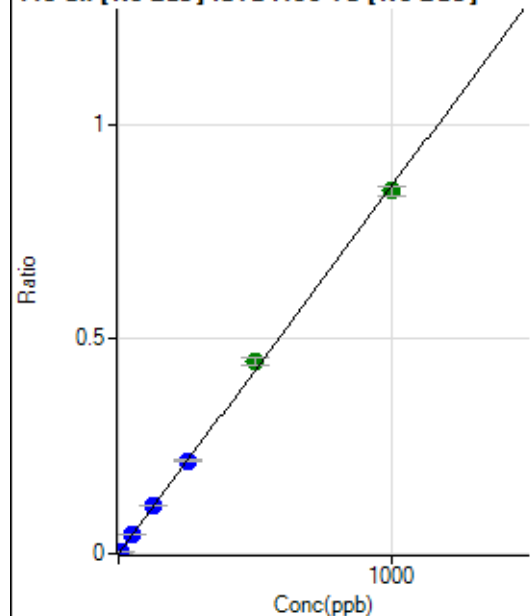
$$R = 0.9999$$

$$DL = 0.138$$

$$BEC = 0.5966$$

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	375.03	0.0001	P	19.3
2	☐	0.500					
3	☐	5.000	4.779	21924.28	0.0042	P	7.3
4	☐	50.000	51.124	237189.74	0.0438	P	2.2
5	☐	125.000	128.795	605343.88	0.1103	P	0.5
6	☐	250.000	253.484	1220851.03	0.2170	P	1.0
7	☐	500.000	521.637	2523763.68	0.4466	A	3.9
8	☐	1000.000	987.781	4869702.80	0.8455	A	2.7
9	☐			8000.01	0.0014	P	6.6

$$y = 8.5593\text{E-}004 * x + 6.9077\text{E-}005$$

$$R = 0.9996$$

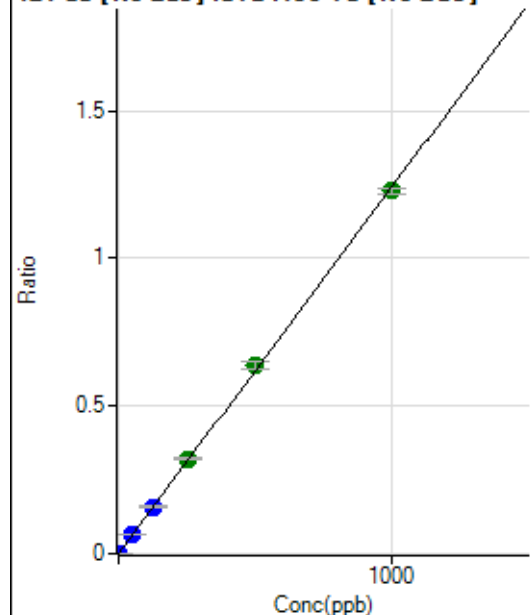
$$DL = 0.04669$$

$$BEC = 0.0807$$

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	319.46	0.0001	P	18.6
2	☐	0.200					
3	☐	2.000	1.850	12411.79	0.0024	P	5.3
4	☐	50.000	50.857	341502.13	0.0631	P	2.0
5	☐	125.000	128.176	872216.08	0.1589	P	0.9
6	☐	250.000	258.107	1800122.35	0.3200	A	1.6
7	☐	500.000	513.655	3598715.49	0.6368	A	4.0
8	☐	1000.000	990.706	7074047.03	1.2281	A	1.8
9	☐			12606.50	0.0022	P	3.4

$$y = 0.0012 * x + 5.8855E-005$$

$$R = 0.9998$$

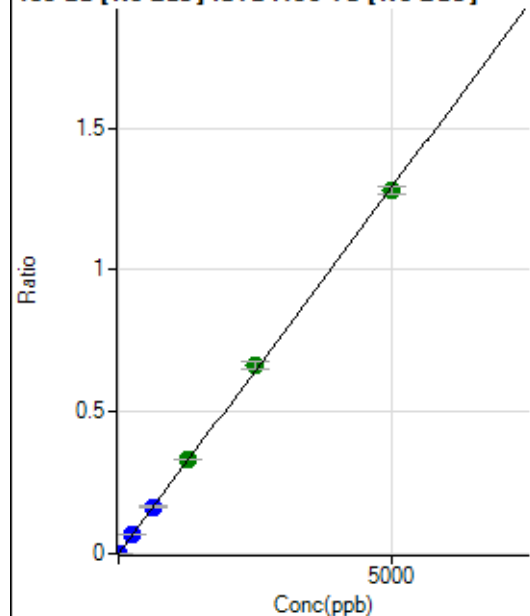
$$DL = 0.02646$$

$$BEC = 0.04748$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	49.9
2	☐	1.000					
3	☐	10.000	9.111	12406.38	0.0024	P	9.5
4	☐	250.000	254.765	355704.03	0.0657	P	0.7
5	☐	625.000	642.224	909128.76	0.1657	P	0.5
6	☐	1250.000	1281.566	1859577.67	0.3306	A	0.2
7	☐	2500.000	2567.630	3742818.23	0.6623	A	4.2
8	☐	5000.000	4955.904	7362903.46	1.2783	A	2.2
9	☐			1611.29	0.0003	P	10.3

$$y = 2.5794E-004 * x + 6.1343E-006$$

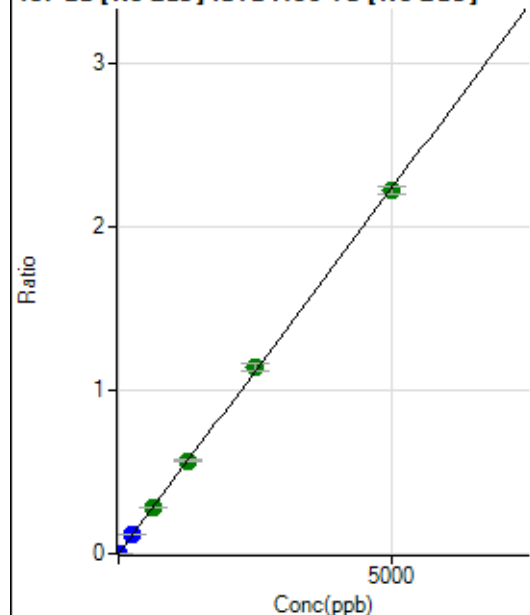
$$R = 0.9998$$

$$DL = 0.0356$$

$$BEC = 0.02378$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	44.45	0.0000	P	11.2
2	☐	1.000					
3	☐	10.000	9.520	22425.44	0.0043	P	8.6
4	☐	250.000	252.609	610156.47	0.1127	P	0.9
5	☐	625.000	642.725	1574071.55	0.2868	A	0.6
6	☐	1250.000	1272.065	3193270.42	0.5677	A	0.8
7	☐	2500.000	2549.777	6430374.93	1.1379	A	4.1
8	☐	5000.000	4967.250	12767732.49	2.2167	A	2.0
9	☐			2883.80	0.0005	P	5.4

$$y = 4.4625E-004 * x + 8.1886E-006$$

$$R = 0.9999$$

$$DL = 0.006186$$

$$BEC = 0.01835$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			4.45		P	86.6
4	☐			22.22		P	45.8
5	☐			57.78		P	58.1
6	☐			100.01		P	17.6
7	☐			177.79		P	15.2
8	☐			368.91		P	23.2
9	☐			117.78		P	14.2

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			1.11		P	173.
4	☐			3.33		P	100.
5	☐			4.44		P	114.
6	☐			11.11		P	62.5
7	☐			12.22		P	56.8
8	☐			16.67		P	NaN
9	☐			22.22		P	17.3

156 Dy [No Gas] No available calibration points

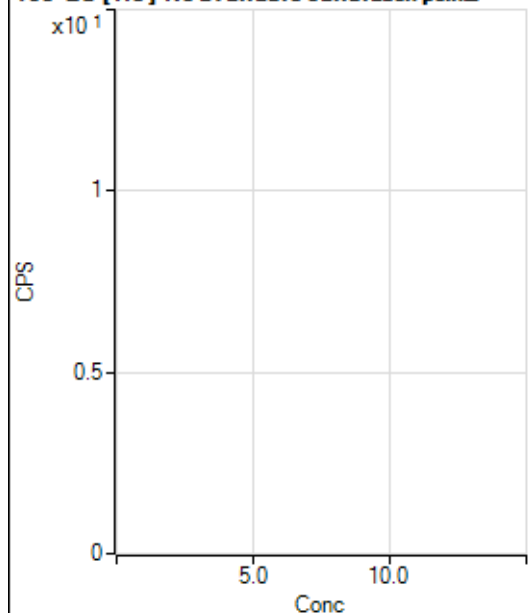
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	43.3
2	☐						
3	☐			13.89		P	34.7
4	☐			13.89		P	34.7
5	☐			36.11		P	13.3
6	☐			36.11		P	13.3
7	☐			52.78		P	39.7
8	☐			108.34		P	20.4
9	☐			75.00		P	22.2

156 Dy [He] No available calibration points

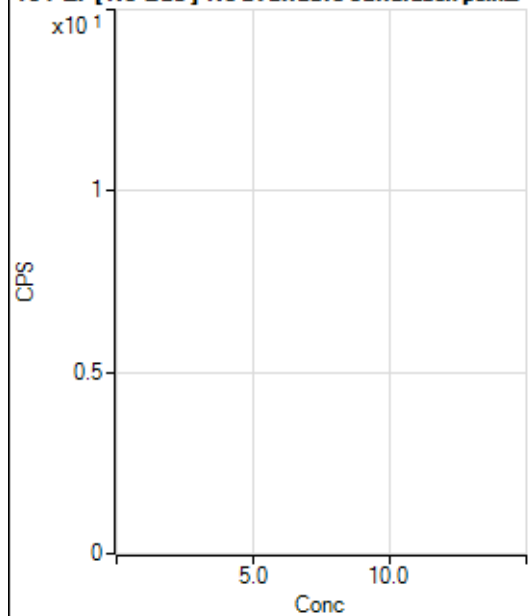
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐						
3	☐			0.00		P	
4	☐			2.22		P	86.6
5	☐			2.22		P	173.
6	☐			3.33		P	100.
7	☐			12.22		P	31.5
8	☐			7.78		P	49.5
9	☐			14.44		P	13.4

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			77.78		P	50.6
2	☐						
3	☐			69.44		P	48.5
4	☐			66.67		P	12.5
5	☐			55.56		P	70.9
6	☐			69.45		P	48.5
7	☐			88.89		P	21.7
8	☐			63.89		P	19.9
9	☐			102.79		P	40.8

160 Gd [He] No available calibration points

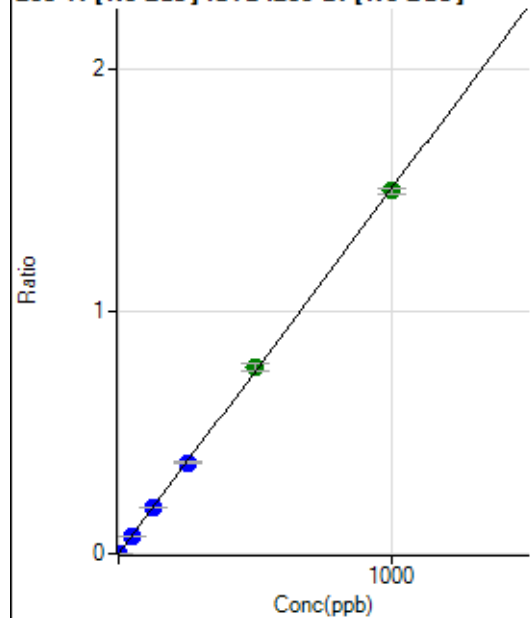
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	21.6
2	☐						
3	☐			15.56		P	65.5
4	☐			8.89		P	43.3
5	☐			6.67		P	86.6
6	☐			10.00		P	33.3
7	☐			18.89		P	20.4
8	☐			14.45		P	48.0
9	☐			20.00		P	28.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.89		P	91.6
2	☐						
3	☐			47.23		P	20.4
4	☐			19.44		P	65.5
5	☐			36.11		P	35.3
6	☐			38.89		P	12.4
7	☐			66.67		P	33.1
8	☐			50.00		P	44.1
9	☐			44.45		P	78.1

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	50.0
2	☐						
3	☐			12.22		P	41.7
4	☐			4.44		P	114.
5	☐			6.67		P	100.
6	☐			8.89		P	86.6
7	☐			8.89		P	57.3
8	☐			5.56		P	34.7
9	☐			10.00		P	88.2

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	141.67	0.0000	P	32.8
2	☐	0.100					
3	☐	1.000	0.902	4381.53	0.0014	P	7.7
4	☐	50.000	49.146	237899.96	0.0741	P	1.0
5	☐	125.000	124.515	607376.72	0.1876	P	0.4
6	☐	250.000	249.635	1230827.37	0.3760	P	0.9
7	☐	500.000	511.945	2563453.31	0.7711	A	4.3
8	☐	1000.000	994.222	5033638.52	1.4974	A	1.2
9	☐			2367.01	0.0007	P	1.8

$$y = 0.0015 * x + 4.3745E-005$$

$$R = 0.9999$$

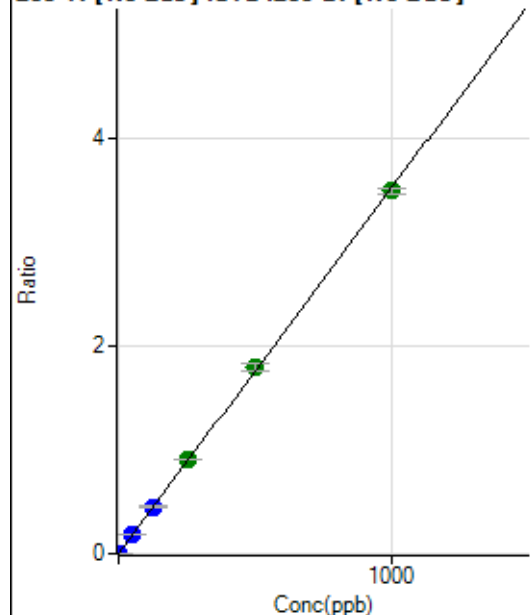
$$DL = 0.02857$$

$$BEC = 0.02905$$

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	219.46	0.0001	P	37.1
2	☐	0.100					
3	☐	1.000	0.945	10602.05	0.0034	P	5.3
4	☐	50.000	50.082	566356.86	0.1763	P	0.6
5	☐	125.000	128.543	1464970.94	0.4524	P	0.6
6	☐	250.000	258.783	2981330.77	0.9108	A	0.8
7	☐	500.000	510.351	5972357.08	1.7961	A	3.5
8	☐	1000.000	992.182	11737327.52	3.4917	A	1.4
9	☐			5520.93	0.0017	P	6.1

$$y = 0.0035 * x + 6.7838E-005$$

$$R = 0.9999$$

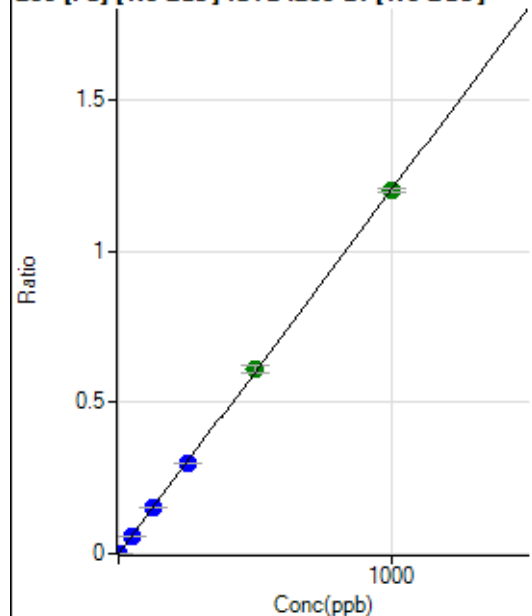
$$DL = 0.02144$$

$$BEC = 0.01928$$

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	390.76	0.0001	P	8.2
2	☐	0.100					
3	☐	1.000	0.964	3993.35	0.0013	P	10.4
4	☐	50.000	48.973	189852.11	0.0591	P	1.3
5	☐	125.000	124.710	486715.03	0.1503	P	0.9
6	☐	250.000	249.286	983188.69	0.3004	P	0.4
7	☐	500.000	505.873	2025905.64	0.6094	A	4.3
8	☐	1000.000	997.330	4038412.85	1.2013	A	1.2
9	☐			6381.41	0.0020	P	2.2

$$y = 0.0012 * x + 1.2062E-004$$

$$R = 1.0000$$

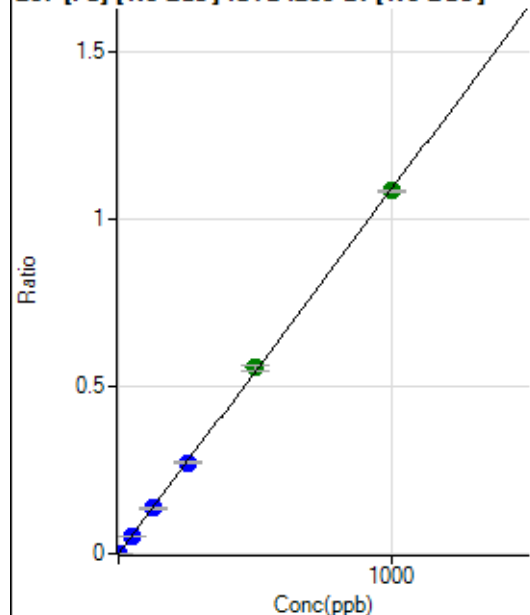
$$DL = 0.02471$$

$$BEC = 0.1002$$

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	362.98	0.0001	P	14.7
2	☐	0.100					
3	☐	1.000	0.964	3621.01	0.0012	P	8.3
4	☐	50.000	49.210	172298.65	0.0536	P	0.6
5	☐	125.000	124.042	437205.26	0.1350	P	1.4
6	☐	250.000	249.659	889280.19	0.2717	P	0.8
7	☐	500.000	509.401	1842866.13	0.5542	A	3.5
8	☐	1000.000	995.544	3640649.27	1.0830	A	0.7
9	☐			5495.80	0.0017	P	5.1

$$y = 0.0011 * x + 1.1203E-004$$

$$R = 0.9999$$

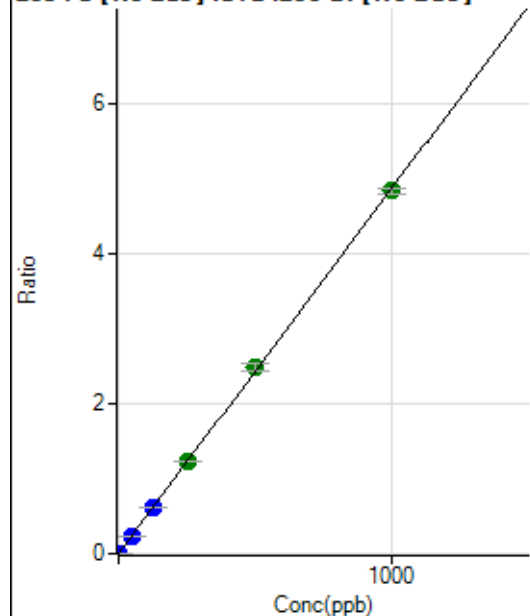
$$DL = 0.04551$$

$$BEC = 0.103$$

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	1585.28	0.0005	P	4.5
2	☐	0.100					
3	☐	1.000	0.960	16082.27	0.0052	P	7.0
4	☐	50.000	49.275	770138.27	0.2398	P	0.7
5	☐	125.000	124.952	1965999.30	0.6072	P	1.4
6	☐	250.000	253.742	4034701.06	1.2326	A	0.8
7	☐	500.000	509.757	8231341.14	2.4757	A	4.0
8	☐	1000.000	994.228	16229656.29	4.8282	A	1.5
9	☐			25423.66	0.0079	P	3.0

$$y = 0.0049 * x + 4.8934E-004$$

$$R = 0.9999$$

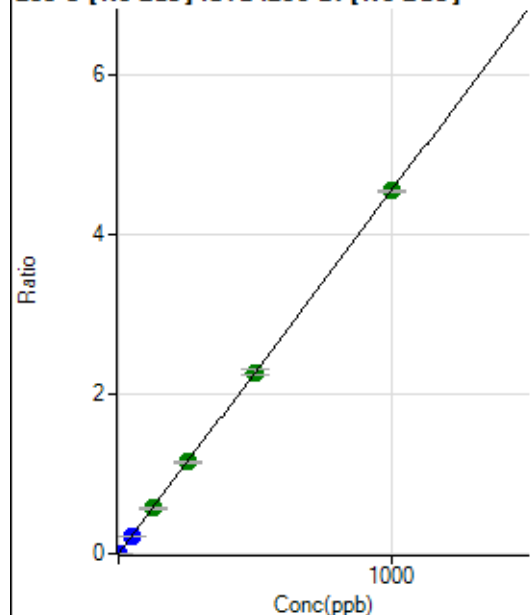
$$DL = 0.01352$$

$$BEC = 0.1008$$

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	33.33	0.0000	P	74.7
2	☐	0.100					
3	☐	1.000	0.897	12740.44	0.0041	P	9.7
4	☐	50.000	47.896	699043.60	0.2176	P	0.9
5	☐	125.000	124.578	1832751.58	0.5660	A	0.8
6	☐	250.000	253.169	3765100.04	1.1503	A	1.3
7	☐	500.000	500.071	7554219.44	2.2720	A	3.9
8	☐	1000.000	999.330	15263273.08	4.5404	A	0.8
9	☐			2833.81	0.0009	P	1.4

$$y = 0.0045 * x + 1.0291E-005$$

$$R = 1.0000$$

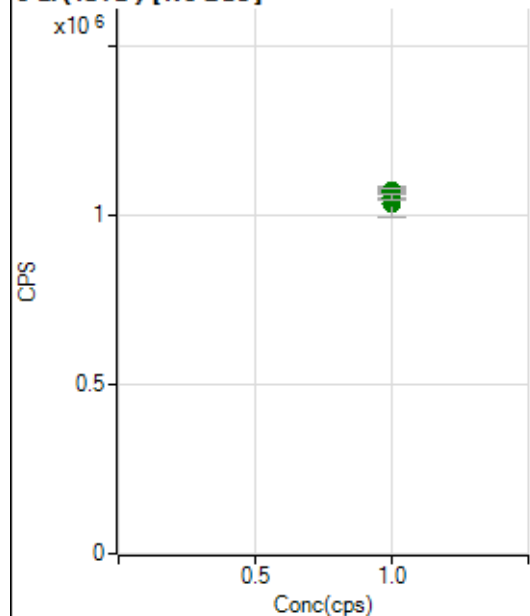
$$DL = 0.005078$$

$$BEC = 0.002265$$

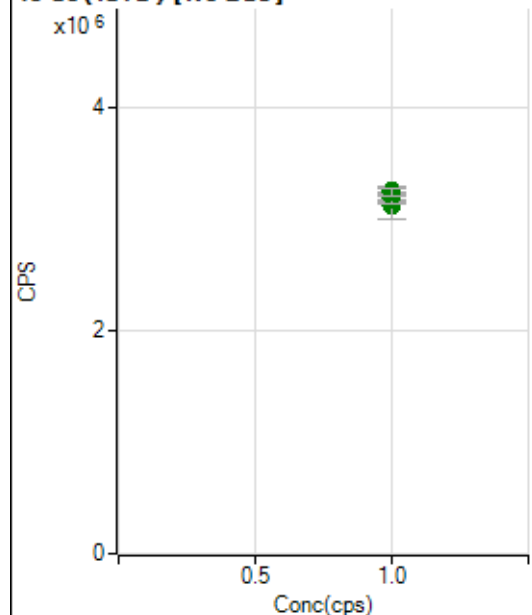
Weight: <None>

Min Conc: 0

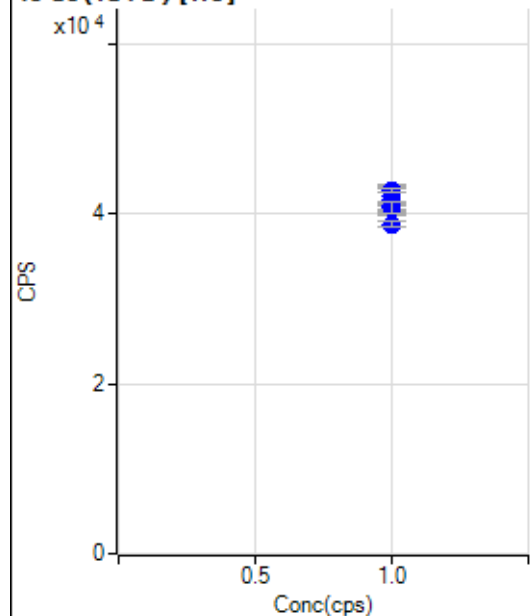
6 Li (ISTD) [No Gas]



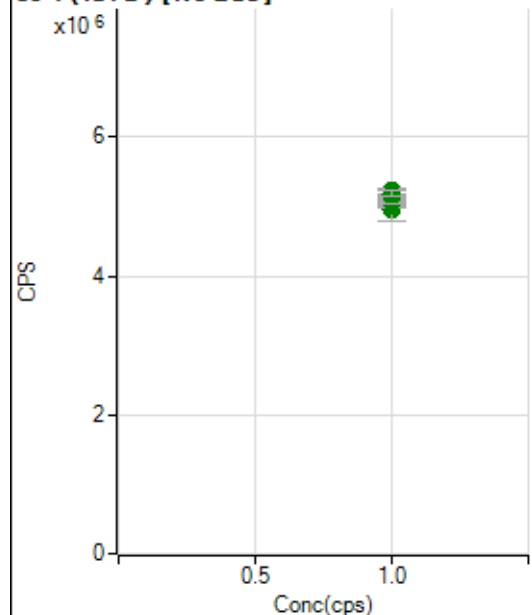
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1066259.45		A	0.1
2	☐	1.000					
3	☐	1.000		1033692.15		A	7.6
4	☐	1.000		1063547.41		A	2.3
5	☐	1.000		1060520.76		A	1.7
6	☐	1.000		1072137.31		A	1.1
7	☐	1.000		1065965.35		A	3.6
8	☐	1.000		1071874.26		A	1.4
9	☐	1.000		1051874.81		A	1.6

45 Sc (ISTD) [No Gas]

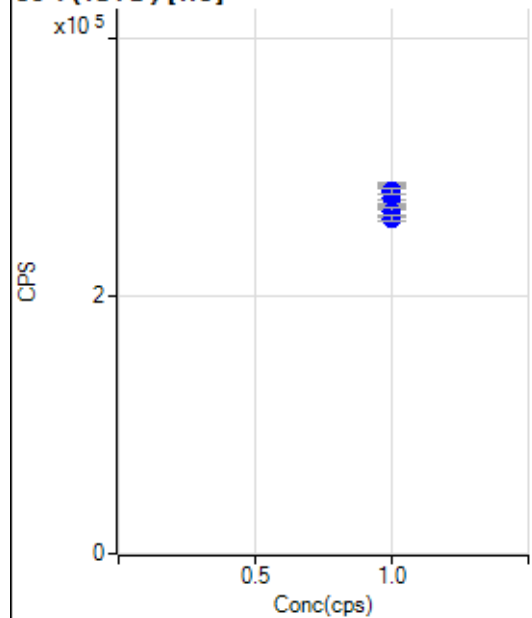
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3226970.69		A	0.7
2	☐	1.000					
3	☐	1.000		3114448.72		A	7.6
4	☐	1.000		3181139.72		A	1.0
5	☐	1.000		3180698.33		A	1.2
6	☐	1.000		3165261.68		A	0.6
7	☐	1.000		3209529.56		A	4.5
8	☐	1.000		3250738.62		A	2.0
9	☐	1.000		3238883.21		A	2.3

45 Sc (ISTD) [He]

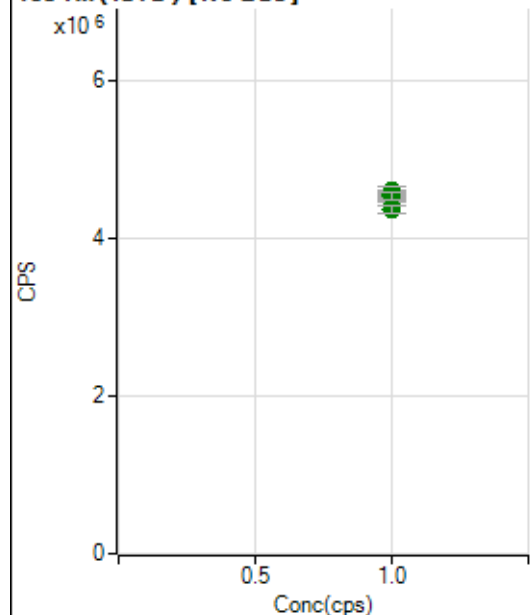
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		41697.75		P	7.5
2	☐	1.000					
3	☐	1.000		41640.00		P	8.8
4	☐	1.000		42044.08		P	3.8
5	☐	1.000		40669.95		P	1.5
6	☐	1.000		40867.12		P	1.4
7	☐	1.000		42659.08		P	1.1
8	☐	1.000		40696.83		P	3.4
9	☐	1.000		38761.32		P	1.7

89 Y (ISTD) [No Gas]

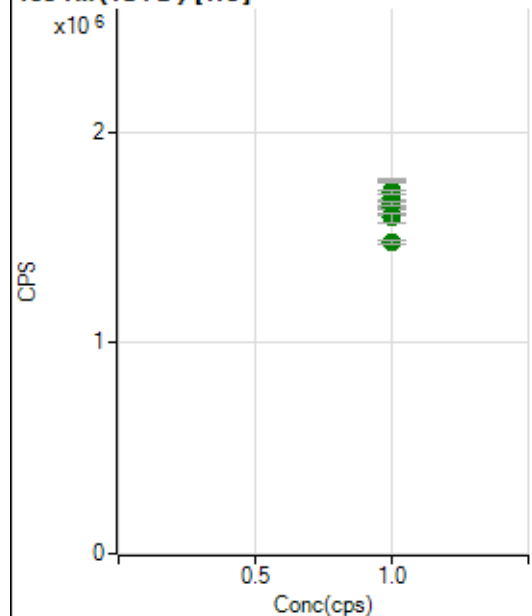
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5099291.73		A	0.7
2	☐	1.000					
3	☐	1.000		4947952.46		A	6.6
4	☐	1.000		5005686.38		A	0.2
5	☐	1.000		5060820.24		A	1.1
6	☐	1.000		5092449.09		A	0.6
7	☐	1.000		5158562.39		A	4.4
8	☐	1.000		5225901.56		A	1.9
9	☐	1.000		5191630.41		A	1.5

89 Y (ISTD) [He]

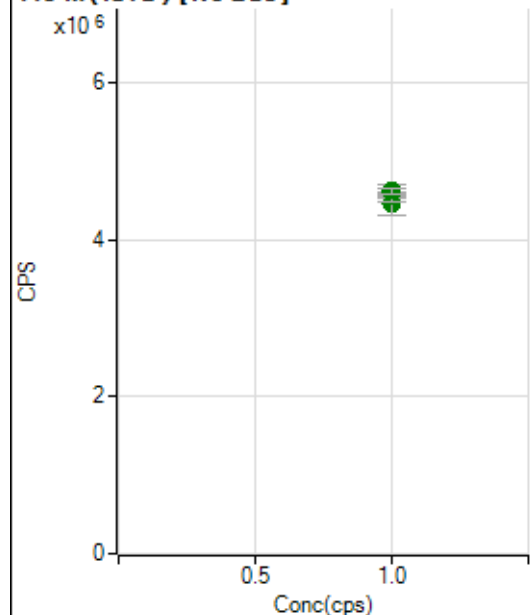
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		276064.87		P	6.7
2	☐	1.000					
3	☐	1.000		274843.98		P	9.6
4	☐	1.000		280601.63		P	4.5
5	☐	1.000		269555.92		P	0.2
6	☐	1.000		270862.99		P	0.3
7	☐	1.000		281283.56		P	1.7
8	☐	1.000		264933.39		P	2.5
9	☐	1.000		259689.61		P	1.9

103 Rh (ISTD) [No Gas]

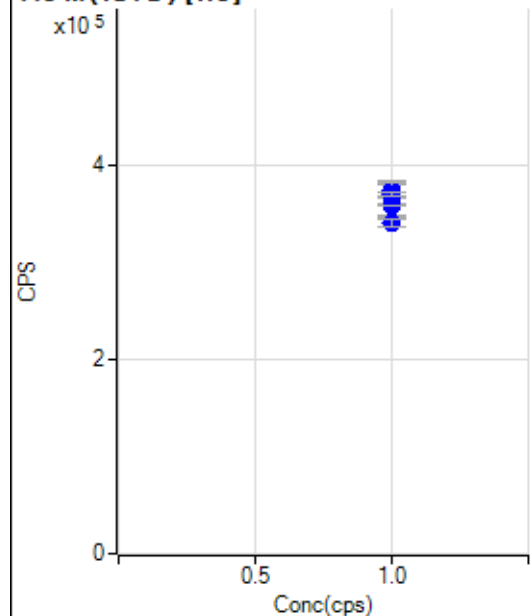
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4592980.27		A	0.7
2	☐	1.000					
3	☐	1.000		4443955.18		A	6.3
4	☐	1.000		4521024.06		A	0.1
5	☐	1.000		4483476.88		A	0.4
6	☐	1.000		4542883.52		A	0.8
7	☐	1.000		4553187.86		A	4.6
8	☐	1.000		4535240.16		A	2.2
9	☐	1.000		4363243.20		A	1.9

103 Rh (ISTD) [He]

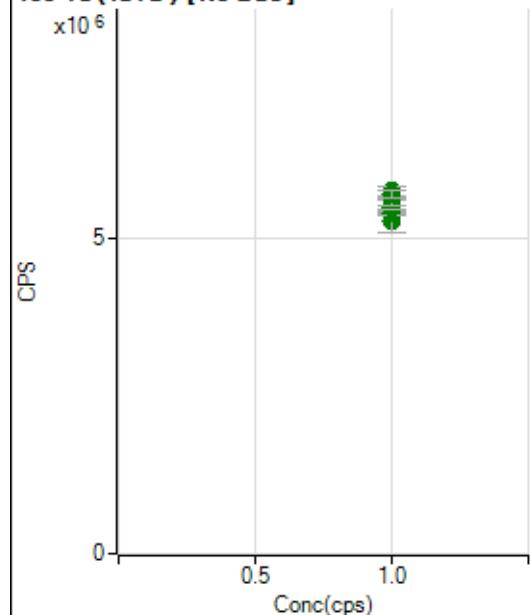
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1705491.28		A	7.5
2	☐	1.000					
3	☐	1.000		1690587.23		A	10.4
4	☐	1.000		1722479.92		A	4.5
5	☐	1.000		1645320.38		A	0.9
6	☐	1.000		1664499.73		A	1.1
7	☐	1.000		1717384.92		A	1.2
8	☐	1.000		1595280.57		A	2.8
9	☐	1.000		1478836.19		A	1.5

115 In (ISTD) [No Gas]

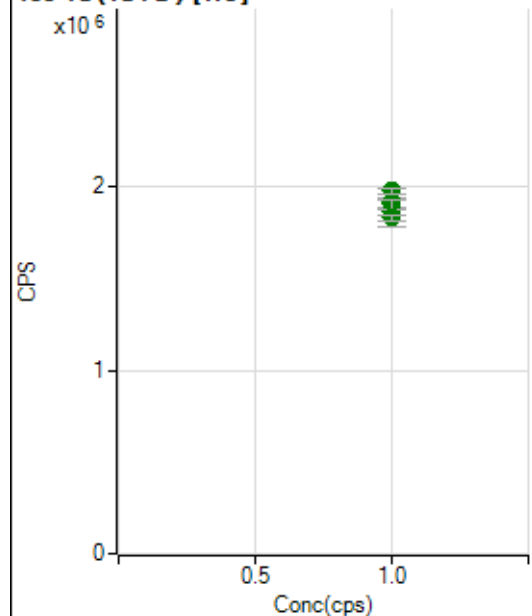
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4566139.92		A	1.4
2	☐	1.000					
3	☐	1.000		4451849.92		A	6.7
4	☐	1.000		4590395.07		A	0.8
5	☐	1.000		4576537.89		A	0.8
6	☐	1.000		4546248.85		A	0.5
7	☐	1.000		4599812.76		A	4.9
8	☐	1.000		4620041.39		A	1.9
9	☐	1.000		4616510.26		A	1.4

115 In (ISTD) [He]

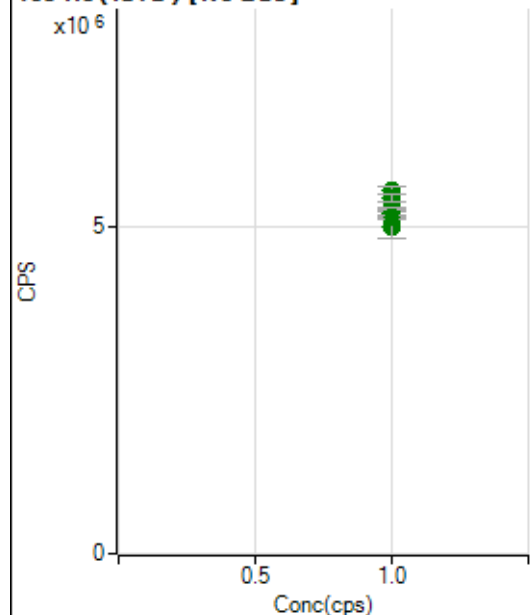
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		369074.22		P	6.1
2	☐	1.000					
3	☐	1.000		365328.58		P	9.9
4	☐	1.000		372701.56		P	4.2
5	☐	1.000		359407.92		P	0.2
6	☐	1.000		357667.21		P	0.4
7	☐	1.000		369400.52		P	0.7
8	☐	1.000		340311.47		P	2.9
9	☐	1.000		339791.39		P	2.6

159 Tb (ISTD) [No Gas]

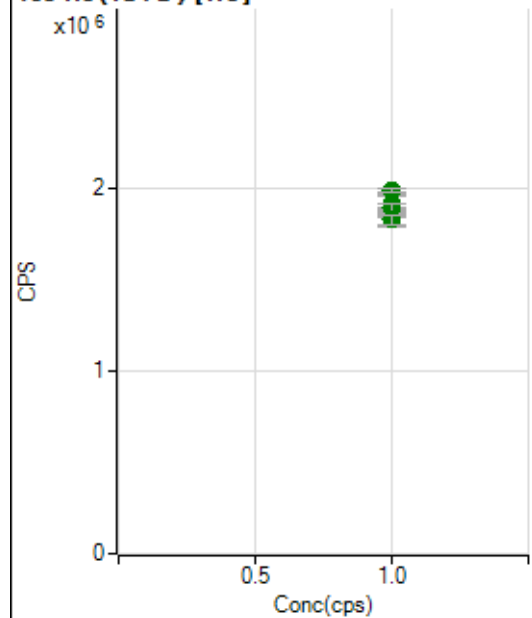
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5429458.04		A	0.4
2	☐	1.000					
3	☐	1.000		5287536.66		A	6.6
4	☐	1.000		5412646.48		A	1.3
5	☐	1.000		5487904.64		A	1.2
6	☐	1.000		5625298.32		A	0.3
7	☐	1.000		5657689.29		A	4.1
8	☐	1.000		5761687.83		A	2.3
9	☐	1.000		5709982.69		A	2.0

159 Tb (ISTD) [He]

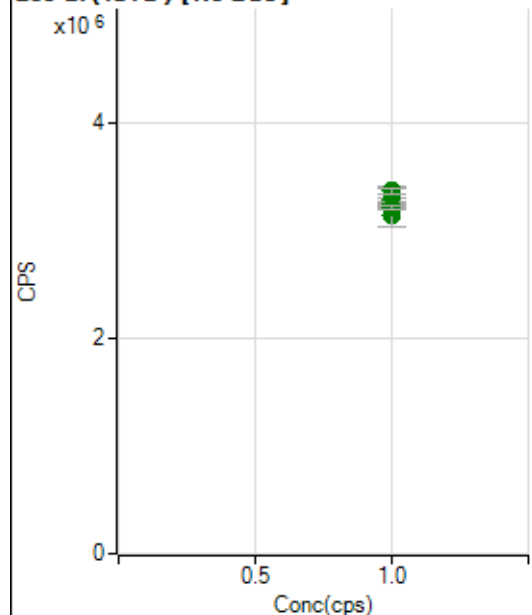
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1880268.11		A	6.5
2	☐	1.000					
3	☐	1.000		1869578.58		A	9.6
4	☐	1.000		1923958.11		A	3.8
5	☐	1.000		1880803.67		A	0.2
6	☐	1.000		1882784.47		A	0.8
7	☐	1.000		1978929.29		A	1.5
8	☐	1.000		1904062.11		A	3.3
9	☐	1.000		1832509.87		A	1.8

165 Ho (ISTD) [No Gas]

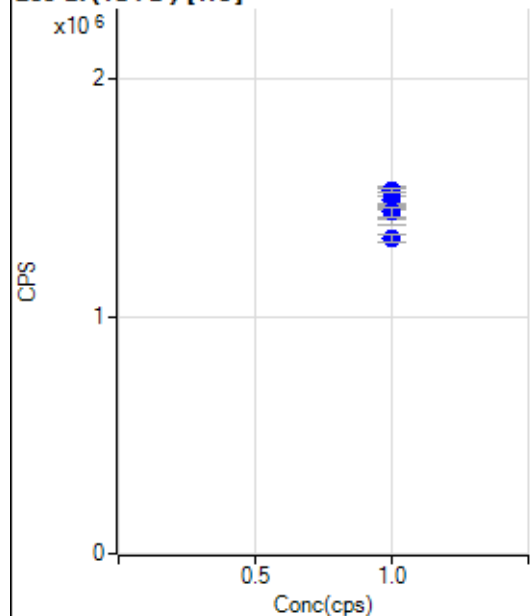
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5136076.03		A	0.5
2	☐	1.000					
3	☐	1.000		4979998.68		A	6.9
4	☐	1.000		5126518.56		A	0.3
5	☐	1.000		5193893.74		A	0.6
6	☐	1.000		5253322.73		A	0.5
7	☐	1.000		5381719.61		A	4.1
8	☐	1.000		5537892.57		A	1.9
9	☐	1.000		5429692.53		A	2.3

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1898684.16		A	6.5
2	☐	1.000					
3	☐	1.000		1874444.71		A	9.7
4	☐	1.000		1911750.20		A	4.2
5	☐	1.000		1862400.55		A	1.4
6	☐	1.000		1888943.63		A	0.3
7	☐	1.000		1984920.58		A	0.9
8	☐	1.000		1888537.02		A	3.2
9	☐	1.000		1828666.03		A	2.8

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3239961.17		A	0.7
2	☐	1.000					
3	☐	1.000		3130038.11		A	6.4
4	☐	1.000		3212175.27		A	0.2
5	☐	1.000		3238181.41		A	1.5
6	☐	1.000		3273500.20		A	0.9
7	☐	1.000		3328459.33		A	4.2
8	☐	1.000		3361977.07		A	1.7
9	☐	1.000		3207378.53		A	1.6

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1459564.30		P	6.5
2	☐	1.000					
3	☐	1.000		1468083.07		M	11.1
4	☐	1.000		1491074.26		P	4.2
5	☐	1.000		1452338.52		P	0.1
6	☐	1.000		1466555.50		P	0.5
7	☐	1.000		1528085.34		P	0.9
8	☐	1.000		1440016.18		P	2.9
9	☐	1.000		1327809.64		P	2.6

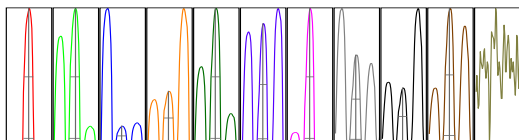
US EPA Tune Check Sample Report

Batch Folder D:\P8112118 MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]	Count	RSD%	RSD%	RSD%
Mass	(Mean)	(Actual)	(Required)	(Flag)
9	5305	2.88	5.00	
24	45506	2.42	5.00	
25	6302	2.58	5.00	
26	7500	2.75	5.00	
59	47124	2.57	5.00	
113	5815	2.30	5.00	
115	70826	2.01	5.00	
206	14546	2.02	5.00	
207	13235	2.54	5.00	
208	31407	2.72	5.00	
220	1	16.11		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	5341	5053	5304	5368	5461
24	45842	43608	45815	45766	46499
25	6397	6016	6332	6354	6409
26	7599	7140	7528	7581	7653
59	47693	45040	47353	47373	48163
113	5967	5604	5825	5802	5875
115	72810	68836	70754	70552	71180
206	14617	14055	14546	14683	14830
207	13313	12647	13357	13365	13493
208	31518	29999	31656	31536	32325
220	1	1	1	2	1

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	9269	9.00	8.9 - 9.1		0.737	0.900	
24	78090	24.00	23.9 - 24.1		0.741	0.900	
25	10722	24.95	24.9 - 25.1		0.740	0.900	
26	12712	25.95	25.9 - 26.1		0.740	0.900	
59	83204	58.95	58.9 - 59.1		0.736	0.900	
113	11257	113.00	112.9 - 113.1		0.689	0.900	
115	135763	115.00	114.9 - 115.1		0.689	0.900	
206	26826	205.95	205.9 - 206.1		0.772	0.900	
207	24357	206.95	206.9 - 207.1		0.741	0.900	
208	58205	207.95	207.9 - 208.1		0.768	0.900	
220			-				

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

Tune Parameters

Plasma Parameters

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	9.7	V	Deflect	15.0	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	8311	2.39	
89	6475	2.43	
205	11303	1.62	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	8325	8612	8058	8261	8301
89	6486	6725	6291	6426	6448
205	11269	11577	11064	11292	11313

Integration Time [sec] = 0.1

Tune Parameters

Plasma Parameters

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	9.7	V	Deflect	2.6	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			