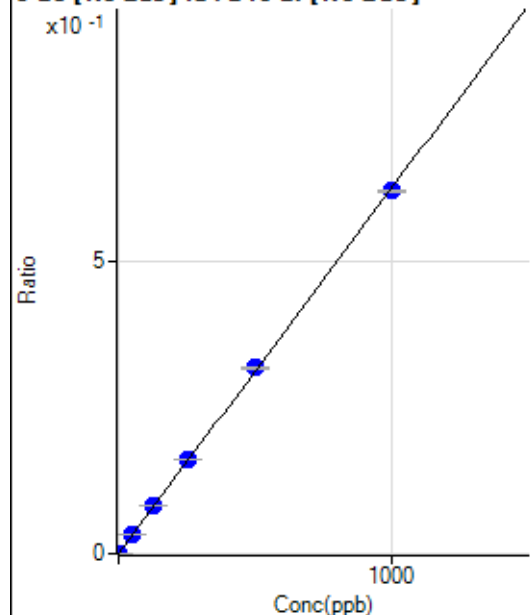


Calibration for 003CALB.d

Batch Folder: D:\ICP-MS Data\P7120618 MS.b\
 Analysis File: P7120618 MS.batch.bin
 DA Date-Time: 2018-12-06 23:16:45
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-12-06 14:48:11
2			
3	005CALS.d	S02	2018-12-06 14:56:37
4	006CALS.d	S03	2018-12-06 15:00:31
5	007CALS.d	S04	2018-12-06 15:04:38
6	008CALS.d	S05	2018-12-06 15:08:25
7	009CALS.d	S06	2018-12-06 15:12:09
8	010CALS.d	S07	2018-12-06 15:15:53
9	011CALS.d	S08	2018-12-06 15:19:39

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	62.97	0.0000	P	26.3
2	☐	0.100					
3	☐	1.000	0.957	4095.10	0.0006	P	3.2
4	☐	50.000	52.531	222140.09	0.0328	P	0.6
5	☐	125.000	130.310	536819.50	0.0814	P	0.2
6	☐	250.000	256.765	1004938.32	0.1604	P	0.9
7	☐	500.000	508.823	1909568.84	0.3179	P	0.5
8	☐	1000.000	993.107	3637646.78	0.6205	P	0.5
9	☐			655.59	0.0001	P	11.8

$$y = 6.2477\text{E-}004 * x + 9.4274\text{E-}006$$

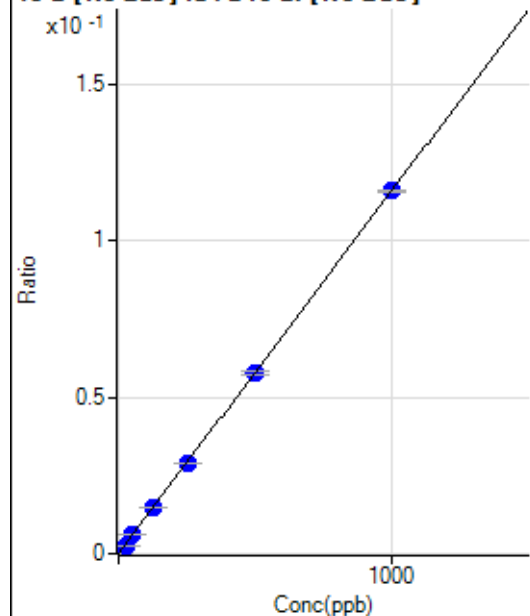
$$R = 0.9999$$

$$DL = 0.01193$$

$$BEC = 0.01509$$

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	516.70	0.0001	P	3.7
2	☐	2.500					
3	☐	25.000	22.088	17758.31	0.0026	P	2.4
4	☐	50.000	50.308	39939.80	0.0059	P	2.2
5	☐	125.000	124.907	95869.50	0.0145	P	0.6
6	☐	250.000	249.680	181594.11	0.0290	P	0.4
7	☐	500.000	499.412	347803.77	0.0579	P	2.3
8	☐	1000.000	1000.443	679645.94	0.1159	P	0.7
9	☐			17727.70	0.0031	P	7.7

$$y = 1.1579\text{E-}004 * x + 7.7461\text{E-}005$$

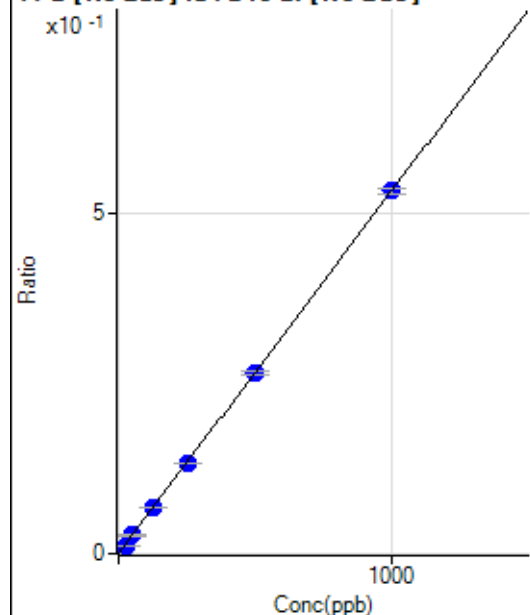
$$R = 1.0000$$

$$DL = 0.07426$$

$$BEC = 0.6689$$

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	2461.41	0.0004	P	3.8
2	☐	2.500					
3	☐	25.000	22.762	84357.92	0.0125	P	2.4
4	☐	50.000	49.762	182211.84	0.0269	P	1.4
5	☐	125.000	124.550	440721.26	0.0668	P	0.5
6	☐	250.000	248.491	833117.34	0.1330	P	0.8
7	☐	500.000	499.795	1604503.96	0.2671	P	2.0
8	☐	1000.000	1000.604	3133346.62	0.5344	P	1.5
9	☐			82588.29	0.0143	P	8.9

$$y = 5.3375\text{E-}004 * x + 3.6902\text{E-}004$$

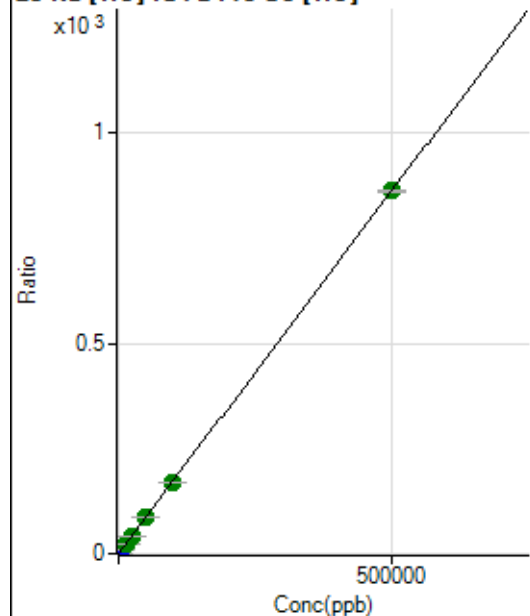
$$R = 1.0000$$

$$DL = 0.07791$$

$$BEC = 0.6914$$

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	7657.83	0.0202	P	3.2
2	☐	50.000					
3	☐	500.000	452.616	308717.86	0.7999	P	2.2
4	☐	5000.000	4944.229	3229330.06	8.5378	P	0.8
5	☐	12500.000	12355.740	7733038.63	21.3059	A	0.1
6	☐	25000.000	24637.006	14234474.63	42.4633	A	0.4
7	☐	50000.000	49743.407	28040054.10	85.7151	A	1.0
8	☐	100000.00	98918.104	55075179.70	170.4304	A	0.3
9	☐	500000.00	500264.40	299151051.1	861.8459	A	0.7

$$y = 0.0017 * x + 0.0202$$

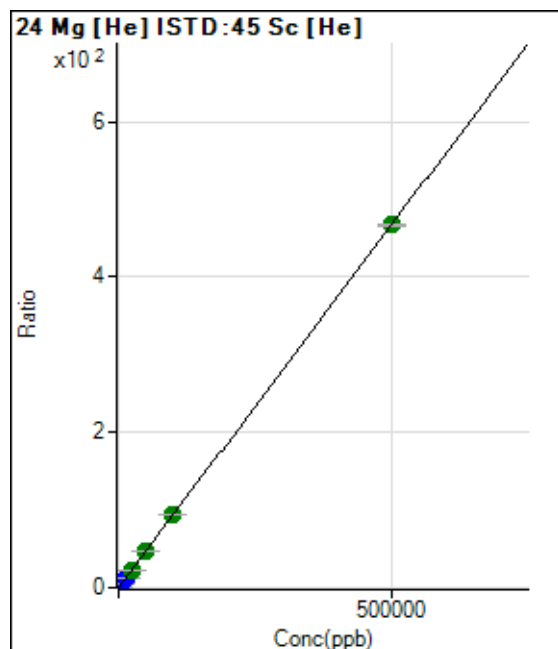
$$R = 1.0000$$

$$DL = 1.137$$

$$BEC = 11.7$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	175.01	0.0005	P	11.9
2	☐	50.000					
3	☐	500.000	460.564	166278.81	0.4308	P	2.3
4	☐	5000.000	5068.977	1791794.31	4.7372	P	0.8
5	☐	12500.000	12674.916	4299013.60	11.8447	P	0.4
6	☐	25000.000	25106.226	7864652.26	23.4612	A	0.5
7	☐	50000.000	50443.047	15420283.85	47.1374	A	0.7
8	☐	100000.00	99731.795	30117083.66	93.1957	A	0.2
9	☐	500000.00	499999.00	162174071.6	467.2291	A	0.9

$$y = 9.3446\text{E-}004 * x + 4.6047\text{E-}004$$

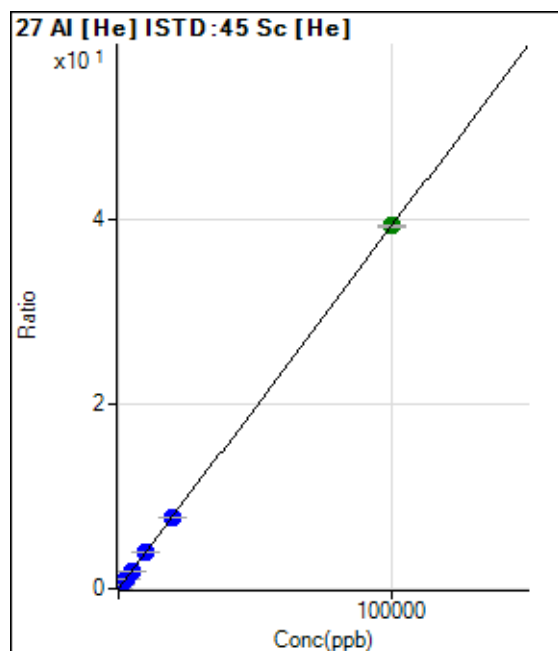
$$R = 1.0000$$

$$DL = 0.1754$$

$$BEC = 0.4928$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.56	0.0002	P	46.1
2	☐	2.000					
3	☐	20.000	17.062	2669.79	0.0069	P	5.4
4	☐	1000.000	1005.032	149529.35	0.3953	P	0.8
5	☐	2500.000	2505.398	357580.44	0.9851	P	1.2
6	☐	5000.000	4959.140	653596.83	1.9498	P	0.9
7	☐	10000.000	10014.685	1288013.25	3.9372	P	0.8
8	☐	20000.000	19483.082	2475242.87	7.6594	P	0.6
9	☐	100000.00	100103.77	13660170.79	39.3532	A	0.3

$$y = 3.9312\text{E-}004 * x + 2.1185\text{E-}004$$

$$R = 1.0000$$

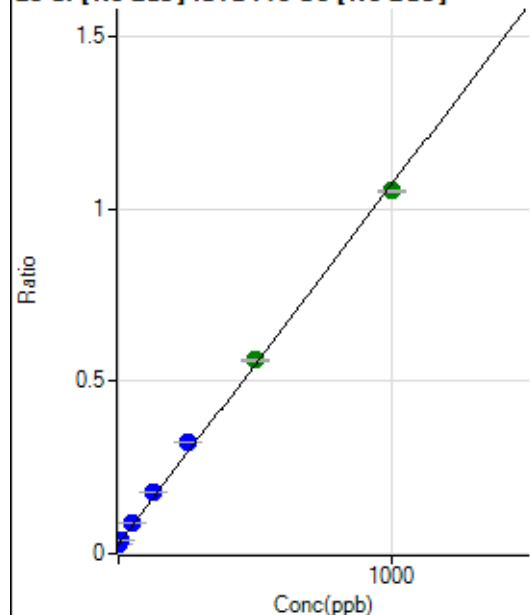
$$DL = 0.7459$$

$$BEC = 0.5389$$

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	263844.91	0.0285	P	0.6
2	☐	1.000					
3	☐	10.000	10.063	365714.34	0.0390	P	0.5
4	☐	50.000	56.738	820918.78	0.0876	P	1.5
5	☐	125.000	142.294	1604390.35	0.1768	P	1.0
6	☐	250.000	282.575	2735968.55	0.3229	P	0.4
7	☐	500.000	512.173	4582347.32	0.5622	A	0.5
8	☐	1000.000	983.270	8390908.61	1.0531	A	0.3
9	☐			677074.04	0.0833	P	1.4

$$y = 0.0010 * x + 0.0285$$

$$R = 0.9992$$

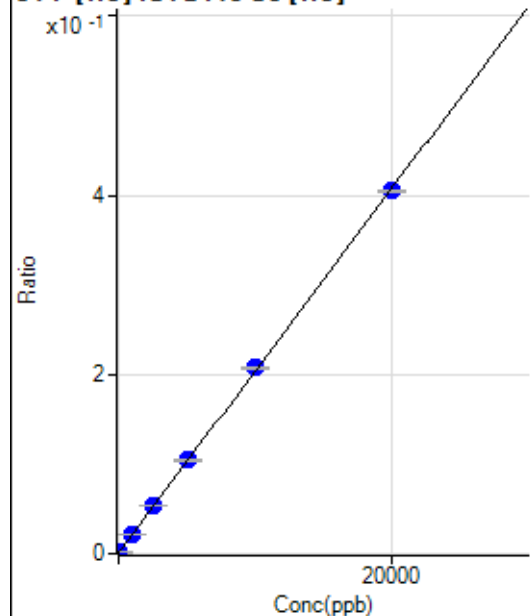
$$DL = 0.4639$$

$$BEC = 27.33$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-22.549	100.01	0.0003	P	22.2
2	☐	0.000					
3	☐	0.000	22.549	455.58	0.0012	P	7.2
4	☐	1000.000	1040.821	8269.32	0.0219	P	1.4
5	☐	2500.000	2573.946	19238.06	0.0530	P	1.0
6	☐	5000.000	5094.208	34928.00	0.1042	P	1.6
7	☐	10000.000	10155.184	67715.30	0.2070	P	0.4
8	☐	20000.000	19887.572	130766.10	0.4047	P	0.9
9	☐			152.78	0.0004	P	12.0

$$y = 2.0311E-005 * x + 7.2138E-004$$

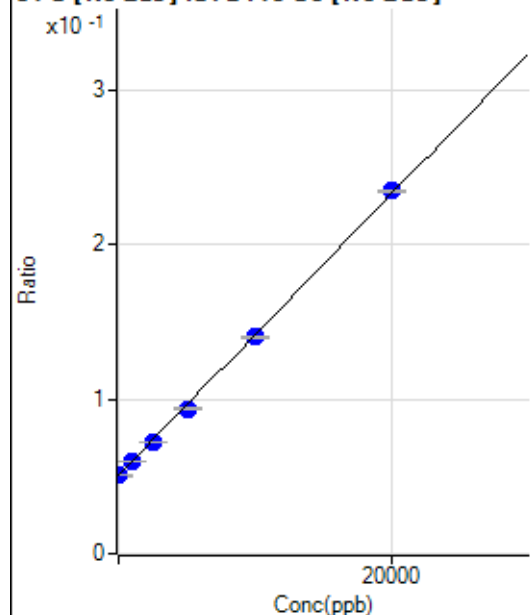
$$R = 0.9999$$

$$DL = 10.56$$

$$BEC = 35.52$$

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	-23.721	467856.16	0.0505	P	1.0
2	☐	0.000					
3	☐	0.000	23.721	478003.75	0.0509	P	0.5
4	☐	1000.000	942.317	555575.39	0.0593	P	0.9
5	☐	2500.000	2338.724	653428.06	0.0720	P	0.2
6	☐	5000.000	4700.807	791964.32	0.0935	P	1.0
7	☐	10000.000	9806.349	1140384.69	0.1399	P	0.6
8	☐	20000.000	20194.667	1867670.81	0.2344	P	0.4
9	☐			398044.24	0.0490	P	1.1

$$y = 9.0955E-006 * x + 0.0507$$

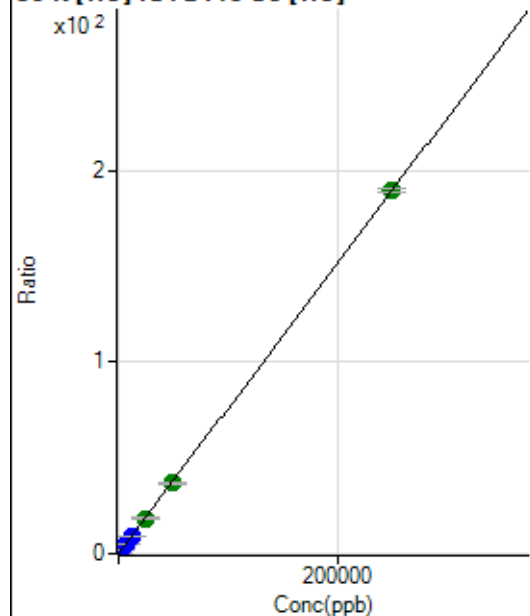
R = 0.9998

DL = 124.4

BEC = 5576

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	19149.16	0.0504	P	1.1
2	☐	50.000					
3	☐	500.000	470.327	156666.40	0.4059	P	1.7
4	☐	2500.000	2500.947	734060.79	1.9407	P	0.4
5	☐	6250.000	6231.490	1727781.79	4.7603	P	0.1
6	☐	12500.000	12339.038	3143205.84	9.3765	P	0.7
7	☐	25000.000	24461.436	6064793.06	18.5389	A	0.9
8	☐	50000.000	48519.871	11866901.65	36.7227	A	0.7
9	☐	250000.00	250358.44	65695229.94	189.2764	A	1.2

$$y = 7.5582E-004 * x + 0.0504$$

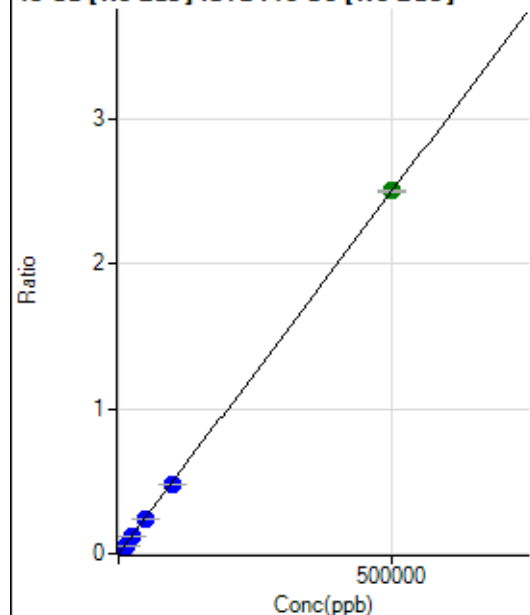
R = 1.0000

DL = 2.294

BEC = 66.71

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	88.89	0.0000	P	28.9
2	☐	50.000					
3	☐	500.000	441.897	20776.40	0.0022	P	0.7
4	☐	5000.000	4781.215	223568.03	0.0239	P	1.6
5	☐	12500.000	11895.948	538660.19	0.0593	P	0.8
6	☐	25000.000	23978.221	1013339.97	0.1196	P	0.0
7	☐	50000.000	47871.888	1946268.08	0.2388	P	0.5
8	☐	100000.00	95743.653	3805092.36	0.4775	P	0.3
9	☐	500000.00	501132.51	20304707.57	2.4994	A	0.4

$$y = 4.9875E-006 * x + 9.5990E-006$$

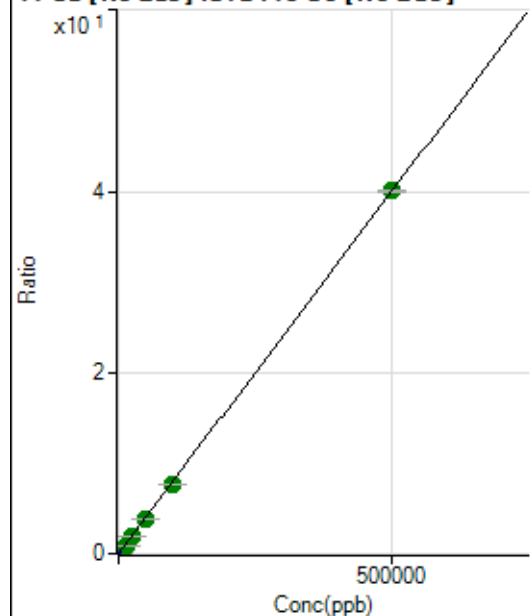
$$R = 1.0000$$

$$DL = 1.668$$

$$BEC = 1.925$$

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	7108.03	0.0008	P	1.0
2	☐	50.000					
3	☐	500.000	433.172	332220.80	0.0354	P	0.5
4	☐	5000.000	4781.968	3589680.94	0.3830	P	0.8
5	☐	12500.000	11806.010	8573950.97	0.9445	A	0.3
6	☐	25000.000	23710.618	16065655.74	1.8962	A	0.3
7	☐	50000.000	47692.117	31082389.59	3.8132	A	0.4
8	☐	100000.00	95335.595	60731979.14	7.6218	A	0.3
9	☐	500000.00	501247.73	325521435.0	40.0702	A	0.3

$$y = 7.9939E-005 * x + 7.6717E-004$$

$$R = 0.9999$$

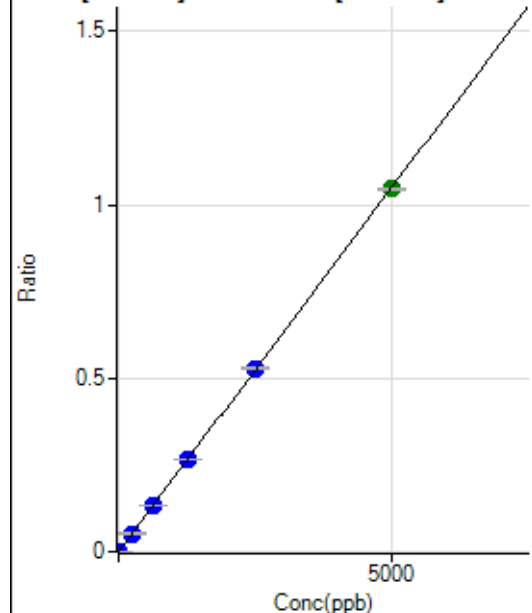
$$DL = 0.3011$$

$$BEC = 9.597$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0000	P	36.6
2	☐	0.500					
3	☐	5.000	4.712	9375.55	0.0010	P	0.9
4	☐	250.000	250.940	493278.64	0.0526	P	0.6
5	☐	625.000	630.073	1199454.88	0.1321	P	0.6
6	☐	1250.000	1262.002	2242302.20	0.2647	P	0.2
7	☐	2500.000	2519.144	4306044.54	0.5283	P	0.7
8	☐	5000.000	4986.747	8332582.30	1.0457	A	0.2
9	☐			5870.85	0.0007	P	1.3

$$y = 2.0970E-004 * x + 1.0800E-005$$

$$R = 1.0000$$

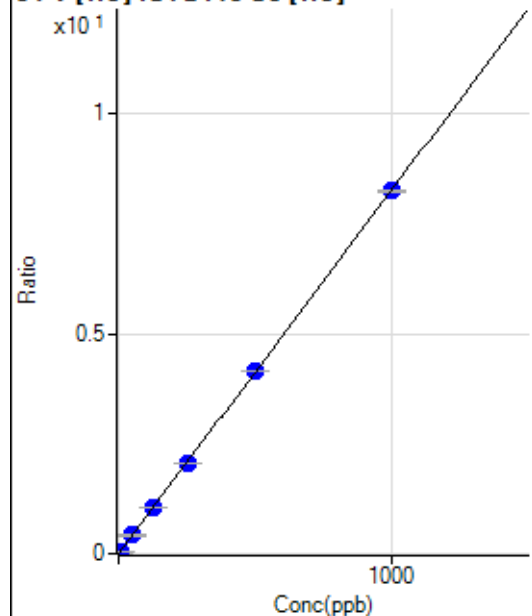
$$DL = 0.05653$$

$$BEC = 0.0515$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	132.
2	☐	0.500					
3	☐	5.000	4.893	15607.33	0.0404	P	1.4
4	☐	50.000	50.356	157284.16	0.4158	P	0.9
5	☐	125.000	126.315	378589.73	1.0431	P	0.1
6	☐	250.000	249.747	691333.50	2.0623	P	0.1
7	☐	500.000	503.014	1358843.52	4.1537	P	0.4
8	☐	1000.000	998.375	2664145.67	8.2442	P	0.4
9	☐			1086.72	0.0031	P	3.5

$$y = 0.0083 * x + 1.7429E-005$$

$$R = 1.0000$$

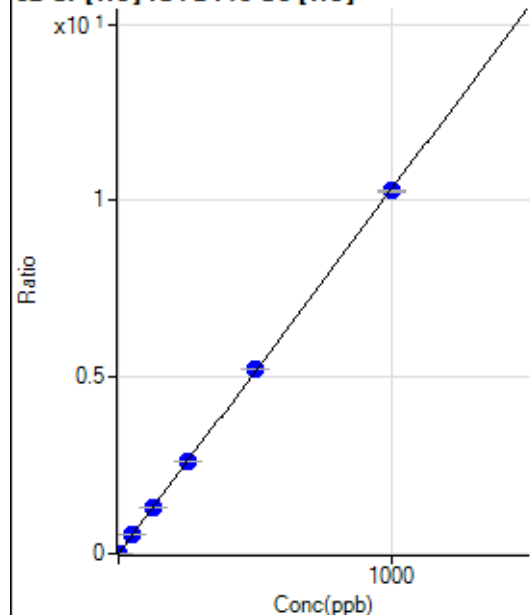
$$DL = 0.008361$$

$$BEC = 0.002111$$

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	1028.94	0.0027	P	6.2
2	☐	0.200					
3	☐	2.000	1.896	8598.18	0.0223	P	3.7
4	☐	50.000	51.027	200195.92	0.5293	P	1.2
5	☐	125.000	127.861	479900.05	1.3222	P	0.5
6	☐	250.000	252.521	874460.29	2.6086	P	0.5
7	☐	500.000	506.366	1710363.17	5.2282	P	0.3
8	☐	1000.000	995.778	3321629.26	10.2788	P	0.4
9	☐			119706.72	0.3449	P	0.2

$$y = 0.0103 * x + 0.0027$$

$$R = 1.0000$$

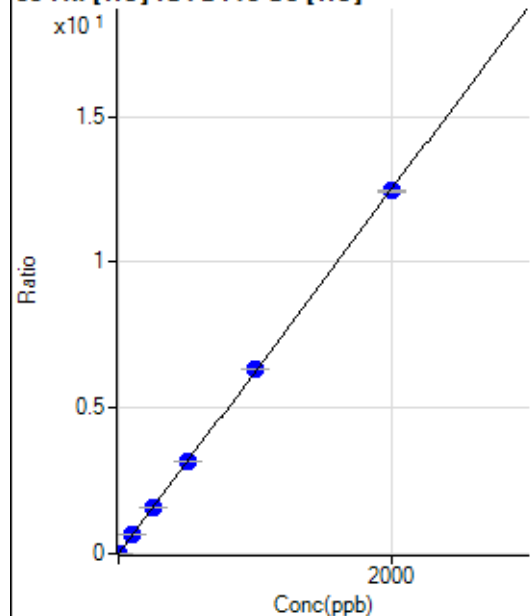
$$DL = 0.04864$$

$$BEC = 0.2624$$

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	48.89	0.0001	P	41.3
2	☐	0.100					
3	☐	1.000	0.952	2346.89	0.0061	P	2.3
4	☐	100.000	101.455	239950.25	0.6344	P	1.0
5	☐	250.000	253.816	575957.35	1.5869	P	0.7
6	☐	500.000	504.621	1057566.83	3.1548	P	0.2
7	☐	1000.000	1012.978	2071745.70	6.3329	P	0.3
8	☐	2000.000	1991.806	4023996.54	12.4522	P	0.5
9	☐			29385.03	0.0847	P	1.9

$$y = 0.0063 * x + 1.2861E-004$$

$$R = 1.0000$$

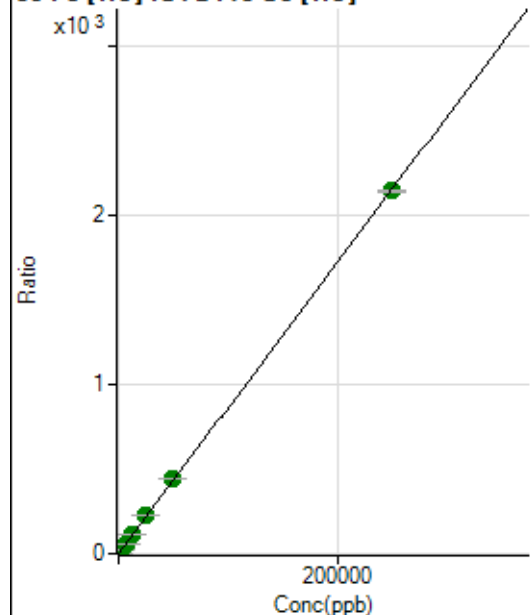
$$DL = 0.02548$$

$$BEC = 0.02057$$

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	4689.78	0.0123	P	1.2
2	☐	5.000					
3	☐	50.000	51.729	176114.97	0.4563	P	2.4
4	☐	2500.000	2652.614	8615994.70	22.7792	A	0.6
5	☐	6250.000	6641.763	20694701.62	57.0171	A	0.1
6	☐	12500.000	13181.179	37928277.23	113.1435	A	0.6
7	☐	25000.000	26462.334	74302036.85	227.1327	A	1.0
8	☐	50000.000	51924.124	144015592.1	445.6657	A	0.7
9	☐	250000.00	249423.56	743068172.1	2,140.759	A	0.7

$$y = 0.0086 * x + 0.0123$$

$$R = 1.0000$$

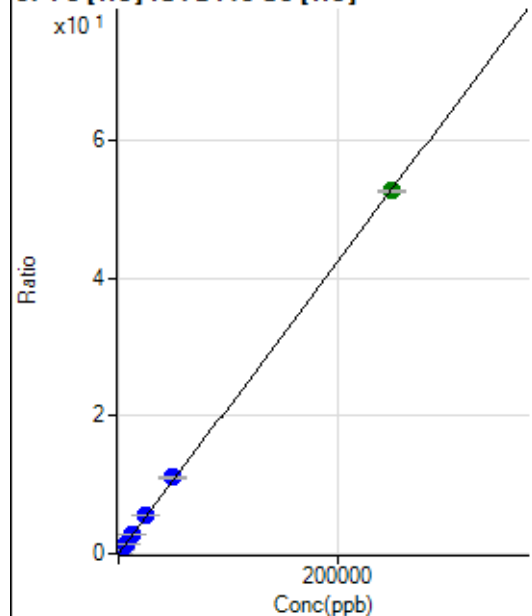
$$DL = 0.05248$$

$$BEC = 1.439$$

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	153.71	0.0004	P	2.8
2	☐	5.000					
3	☐	50.000	55.429	4678.65	0.0121	P	4.7
4	☐	2500.000	2642.893	211548.09	0.5593	P	1.2
5	☐	6250.000	6675.261	512494.24	1.4120	P	0.6
6	☐	12500.000	13171.189	933833.92	2.7857	P	0.3
7	☐	25000.000	26345.033	1822738.80	5.5717	P	0.2
8	☐	50000.000	52320.404	3575554.85	11.0647	P	0.6
9	☐	250000.00	249355.79	18303265.69	52.7323	A	0.9

$$y = 2.1147E-004 * x + 4.0473E-004$$

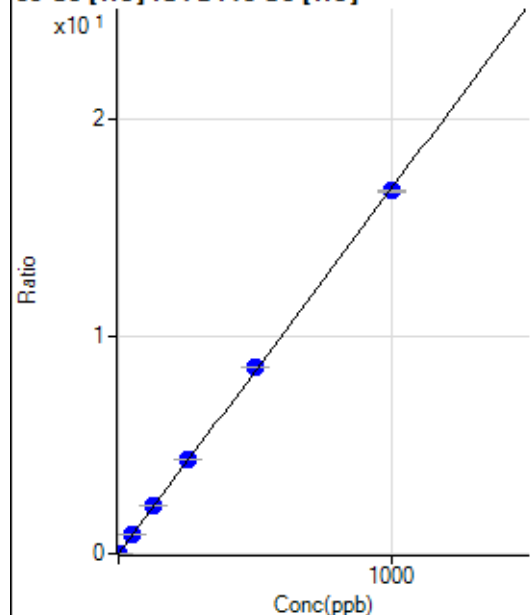
$$R = 0.9999$$

$$DL = 0.1633$$

$$BEC = 1.914$$

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	76.67	0.0002	P	15.1
2	☐	0.100					
3	☐	1.000	0.970	6357.05	0.0165	P	7.7
4	☐	50.000	52.428	332800.52	0.8799	P	1.1
5	☐	125.000	130.167	792768.43	2.1842	P	0.4
6	☐	250.000	256.186	1441009.87	4.2987	P	0.1
7	☐	500.000	508.786	2792832.36	8.5370	P	0.2
8	☐	1000.000	993.293	5385844.09	16.6665	P	0.4
9	☐			69970.47	0.2016	P	0.7

$$y = 0.0168 * x + 2.0186E-004$$

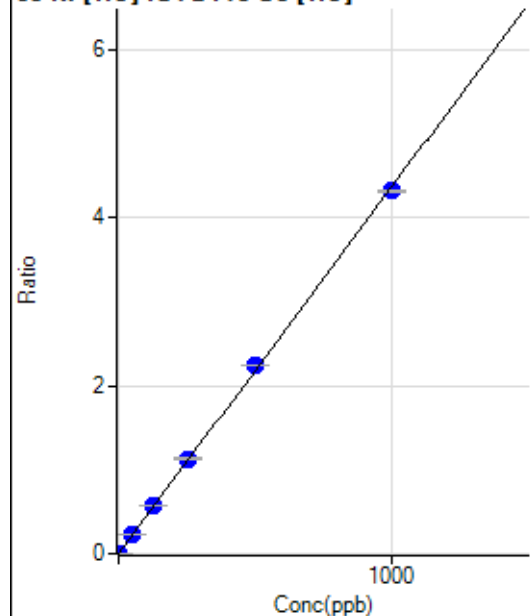
$$R = 0.9999$$

$$DL = 0.005452$$

$$BEC = 0.01203$$

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	84.45	0.0002	P	28.5
2	☐	0.100					
3	☐	1.000	0.997	1762.36	0.0046	P	3.4
4	☐	50.000	53.503	88236.69	0.2333	P	1.1
5	☐	125.000	132.641	209778.90	0.5780	P	1.0
6	☐	250.000	259.023	378305.28	1.1285	P	0.8
7	☐	500.000	513.253	731473.03	2.2359	P	0.1
8	☐	1000.000	989.987	1393613.97	4.3126	P	0.8
9	☐			44124.20	0.1271	P	0.8

$$y = 0.0044 * x + 2.2268E-004$$

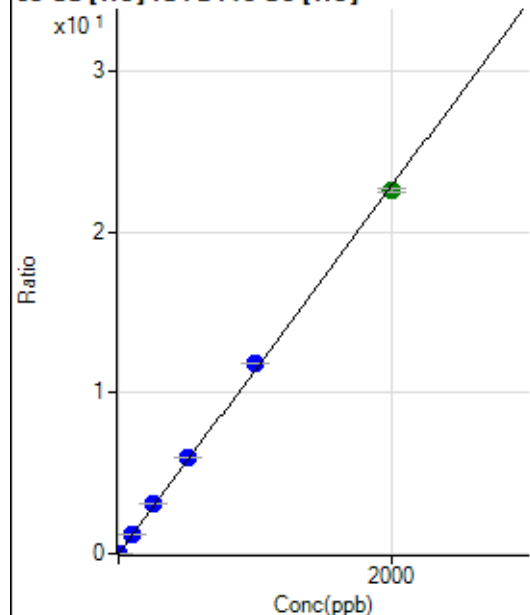
$$R = 0.9998$$

$$DL = 0.0437$$

$$BEC = 0.05112$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	393.35	0.0010	P	10.4
2	☐	0.200					
3	☐	2.000	2.027	9356.47	0.0242	P	1.2
4	☐	100.000	108.448	469815.46	1.2421	P	0.7
5	☐	250.000	268.993	1117661.46	3.0794	P	0.2
6	☐	500.000	524.177	2011179.19	5.9997	P	0.7
7	☐	1000.000	1034.385	3872826.58	11.8384	P	0.2
8	☐	2000.000	1973.967	7300057.81	22.5909	A	1.1
9	☐			18865.70	0.0544	P	2.2

$$y = 0.0114 * x + 0.0010$$

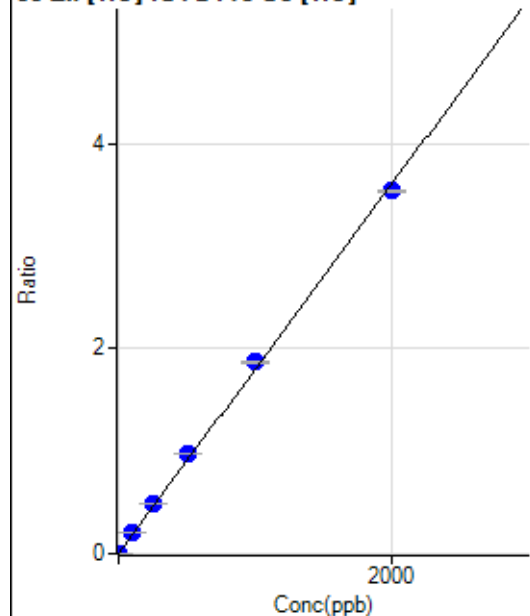
$$R = 0.9997$$

$$DL = 0.0281$$

$$BEC = 0.09049$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	271.12	0.0007	P	7.2
2	☐	0.200					
3	☐	2.000	2.003	1667.90	0.0043	P	2.8
4	☐	100.000	110.674	75662.44	0.2000	P	0.8
5	☐	250.000	273.800	179236.86	0.4938	P	0.2
6	☐	500.000	544.188	328784.89	0.9808	P	0.4
7	☐	1000.000	1040.617	613336.57	1.8749	P	0.9
8	☐	2000.000	1965.136	1143939.16	3.5399	P	0.7
9	☐			11737.10	0.0338	P	3.8

$$y = 0.0018 * x + 7.1353E-004$$

$$R = 0.9994$$

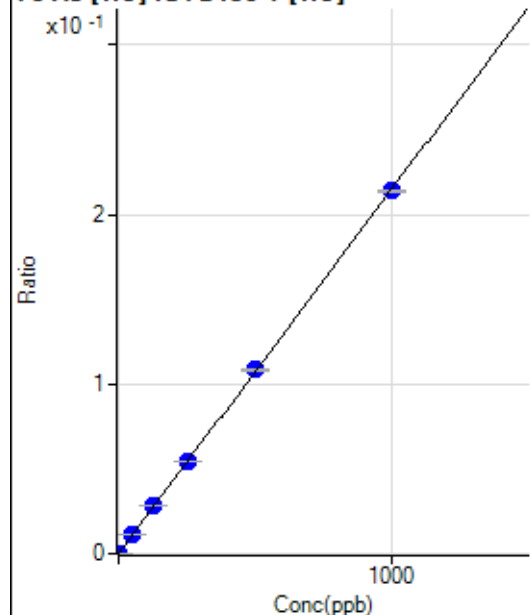
$$DL = 0.08523$$

$$BEC = 0.3962$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9.88	0.0000	P	66.2
2	☐	0.100					
3	☐	1.000	0.942	406.80	0.0002	P	6.3
4	☐	50.000	52.248	21742.85	0.0112	P	0.8
5	☐	125.000	129.843	51987.51	0.0279	P	0.4
6	☐	250.000	253.130	94330.87	0.0544	P	0.1
7	☐	500.000	504.858	183464.11	0.1085	P	0.4
8	☐	1000.000	996.071	353992.82	0.2140	P	0.4
9	☐			677.18	0.0004	P	5.0

$$y = 2.1482\text{E-}004 * x + 5.1561\text{E-}006$$

$$R = 1.0000$$

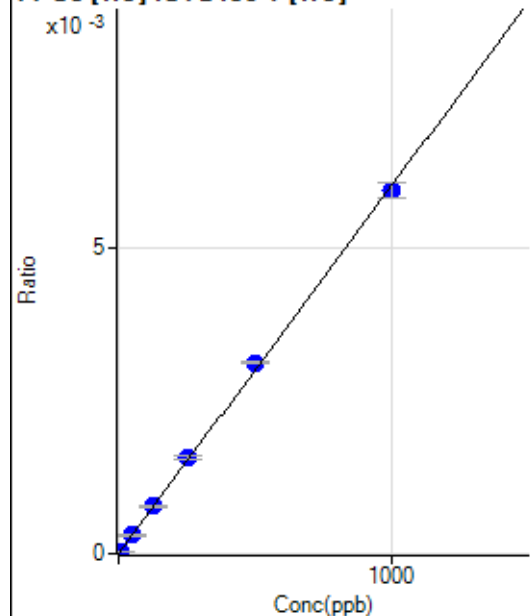
$$DL = 0.04768$$

$$BEC = 0.024$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500					
3	☐	5.000	6.045	71.11	0.0000	P	11.1
4	☐	50.000	50.636	588.91	0.0003	P	6.9
5	☐	125.000	128.667	1440.10	0.0008	P	4.6
6	☐	250.000	261.994	2729.19	0.0016	P	3.8
7	☐	500.000	519.852	5281.05	0.0031	P	1.4
8	☐	1000.000	986.580	9802.35	0.0059	P	4.2
9	☐			12.22	0.0000	P	16.2

$$y = 6.0053\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9996$$

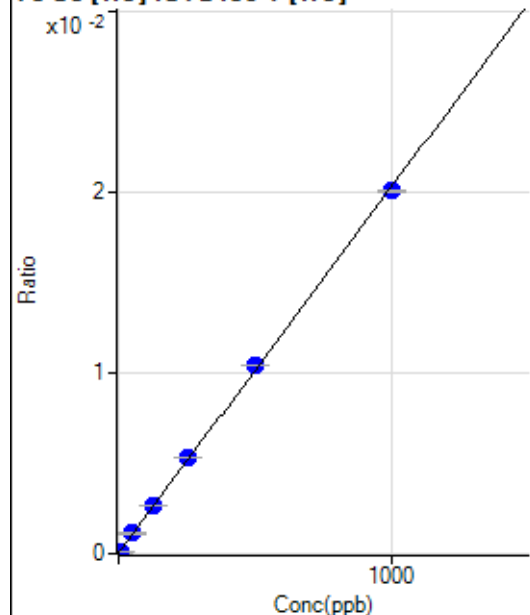
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61.11	0.0000	P	33.9
2	☐	0.500					
3	☐	5.000	5.171	267.91	0.0001	P	2.2
4	☐	50.000	53.686	2167.47	0.0011	P	2.3
5	☐	125.000	131.264	5014.49	0.0027	P	0.9
6	☐	250.000	259.663	9179.51	0.0053	P	0.9
7	☐	500.000	515.252	17710.28	0.0105	P	0.0
8	☐	1000.000	988.990	33196.58	0.0201	P	0.4
9	☐			78.40	0.0000	P	14.6

$$y = 2.0258\text{E-}005 * x + 3.1829\text{E-}005$$

$$R = 0.9998$$

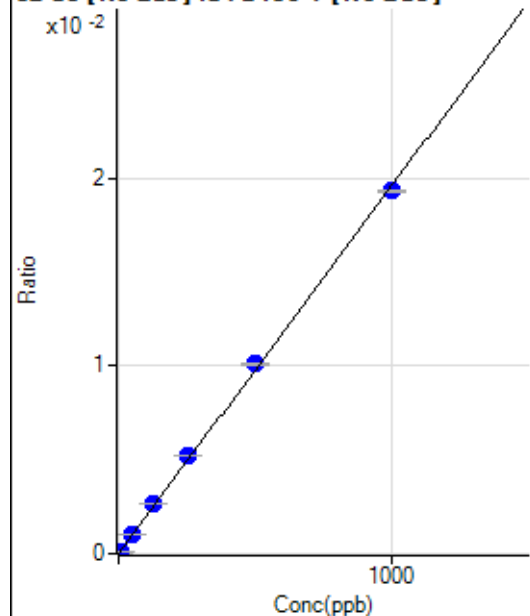
$$DL = 1.596$$

$$BEC = 1.571$$

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	64.89	0.0000	P	74.1
2	☐	0.500					
3	☐	5.000	5.188	1536.41	0.0001	P	5.6
4	☐	50.000	53.295	15107.66	0.0010	P	0.9
5	☐	125.000	133.873	36936.68	0.0026	P	0.7
6	☐	250.000	265.999	68918.24	0.0052	P	0.8
7	☐	500.000	515.344	129503.21	0.0101	P	0.7
8	☐	1000.000	987.053	244370.32	0.0193	P	0.9
9	☐			357.17	0.0000	P	18.7

$$y = 1.9577\text{E-}005 * x + 4.5489\text{E-}006$$

$$R = 0.9997$$

$$DL = 0.5167$$

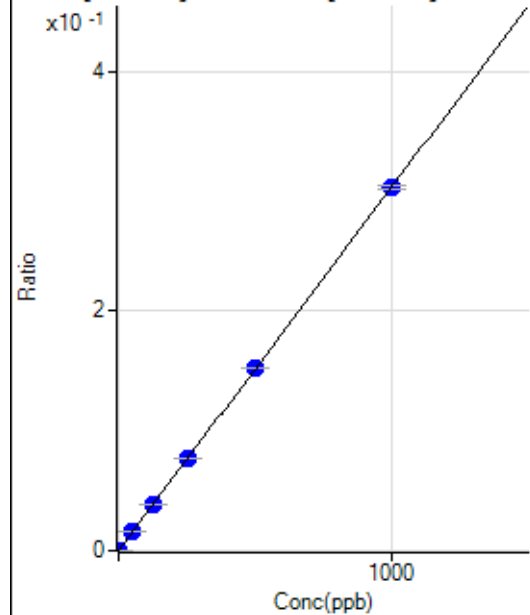
$$BEC = 0.2324$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			710.03		P	8.5
2	☐						
3	☐			674.47		P	9.1
4	☐			713.36		P	7.6
5	☐			666.69		P	10.1
6	☐			677.81		P	9.2
7	☐			618.92		P	6.7
8	☐			591.14		P	8.2
9	☐			681.14		P	10.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1277.89	0.0001	P	8.2
2	☐	0.100					
3	☐	1.000	0.809	4853.79	0.0003	P	6.3
4	☐	50.000	50.476	221997.47	0.0154	P	0.7
5	☐	125.000	125.291	535842.69	0.0381	P	1.2
6	☐	250.000	251.982	1011745.12	0.0765	P	0.6
7	☐	500.000	501.825	1953941.19	0.1523	P	0.4
8	☐	1000.000	998.532	3830086.33	0.3029	P	1.1
9	☐			19191.36	0.0015	P	0.6

$$y = 3.0330E-004 * x + 8.9798E-005$$

$$R = 1.0000$$

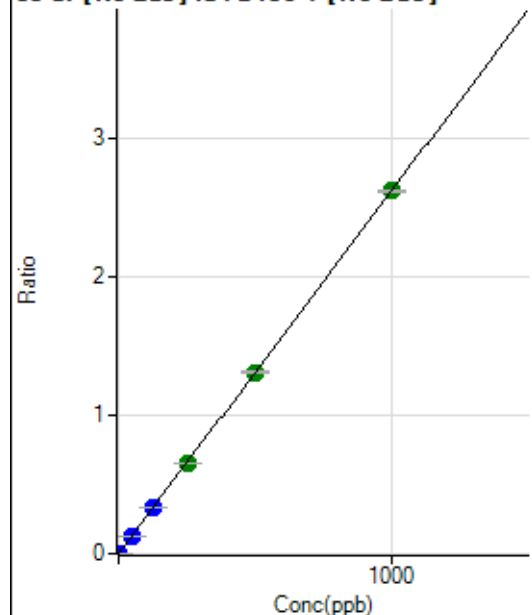
$$DL = 0.07319$$

$$BEC = 0.2961$$

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	169.45	0.0000	P	46.8
2	☐	0.100					
3	☐	1.000	0.881	33646.17	0.0023	P	2.0
4	☐	50.000	50.068	1893870.07	0.1314	P	0.1
5	☐	125.000	126.706	4676633.48	0.3324	P	0.7
6	☐	250.000	247.721	8593637.78	0.6499	A	0.5
7	☐	500.000	500.530	16848233.01	1.3132	A	0.2
8	☐	1000.000	1000.088	33172863.94	2.6238	A	0.5
9	☐			157732.25	0.0124	P	0.2

$$y = 0.0026 * x + 1.1917E-005$$

$$R = 1.0000$$

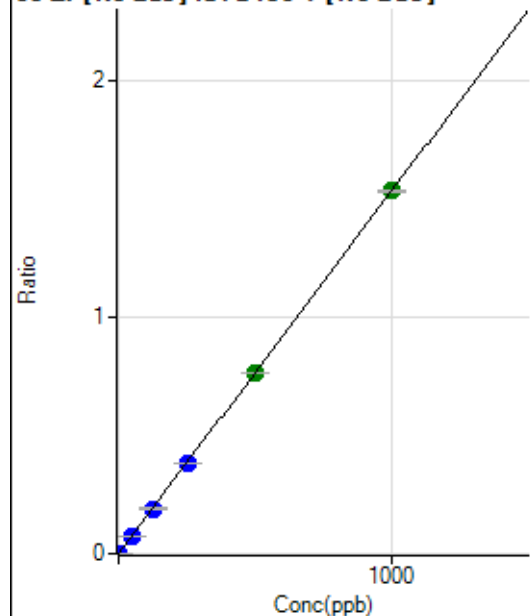
$$DL = 0.006374$$

$$BEC = 0.004543$$

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	1008.41	0.0001	P	17.0
2	☐	0.100					
3	☐	1.000	0.905	21155.27	0.0015	P	1.4
4	☐	50.000	49.401	1094361.83	0.0759	P	0.4
5	☐	125.000	124.575	2691455.88	0.1913	P	0.8
6	☐	250.000	251.025	5096620.64	0.3854	P	0.5
7	☐	500.000	498.297	9815793.28	0.7650	A	0.3
8	☐	1000.000	1000.679	19423860.68	1.5363	A	0.5
9	☐			9475.74	0.0007	P	0.6

$$y = 0.0015 * x + 7.0894E-005$$

$$R = 1.0000$$

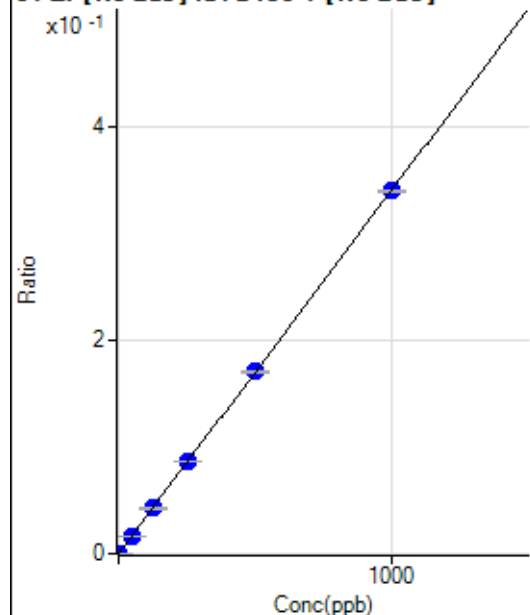
$$DL = 0.02352$$

$$BEC = 0.04618$$

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	216.68	0.0000	P	6.9
2	☐	0.100					
3	☐	1.000	0.888	4598.17	0.0003	P	3.1
4	☐	50.000	49.715	244087.18	0.0169	P	0.6
5	☐	125.000	124.797	597581.31	0.0425	P	0.9
6	☐	250.000	253.030	1138600.68	0.0861	P	0.6
7	☐	500.000	500.797	2186461.96	0.1704	P	0.8
8	☐	1000.000	998.884	4297285.69	0.3399	P	0.8
9	☐			2158.59	0.0002	P	4.5

$$y = 3.4025\text{E-}004 * x + 1.5231\text{E-}005$$

$$R = 1.0000$$

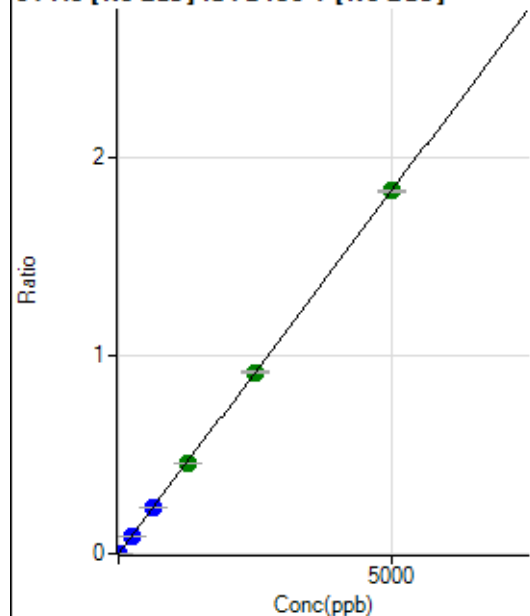
$$DL = 0.009285$$

$$BEC = 0.04476$$

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	433.35	0.0000	P	6.4
2	☐	0.500					
3	☐	5.000	4.659	25095.08	0.0017	P	4.5
4	☐	250.000	250.678	1321416.11	0.0917	P	0.5
5	☐	625.000	631.050	3245423.18	0.2307	P	1.3
6	☐	1250.000	1245.785	6021691.33	0.4554	A	0.4
7	☐	2500.000	2501.207	11730780.82	0.9143	A	0.5
8	☐	5000.000	4999.661	23106519.62	1.8276	A	0.3
9	☐			28893.95	0.0023	P	1.8

$$y = 3.6553\text{E-}004 * x + 3.0454\text{E-}005$$

$$R = 1.0000$$

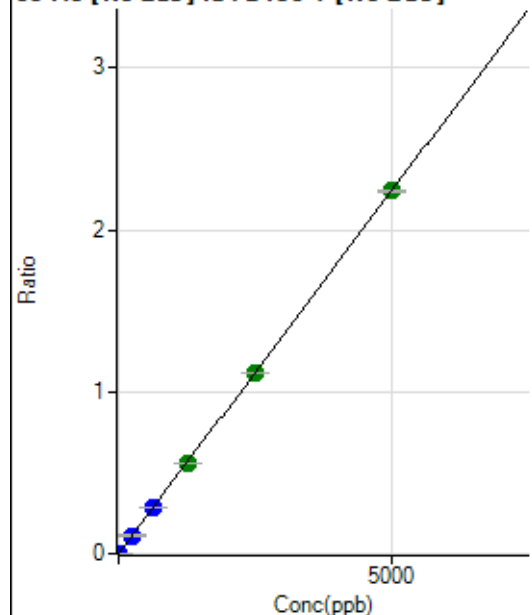
$$DL = 0.01598$$

$$BEC = 0.08332$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	108.34	0.0000	P	40.4
2	☐	0.500					
3	☐	5.000	4.851	31577.50	0.0022	P	0.8
4	☐	250.000	251.516	1624238.36	0.1127	P	0.3
5	☐	625.000	634.425	3997807.16	0.2842	P	0.8
6	☐	1250.000	1239.718	7342505.28	0.5553	A	0.7
7	☐	2500.000	2499.993	14367208.83	1.1198	A	0.2
8	☐	5000.000	5001.320	28322822.85	2.2402	A	0.8
9	☐			45306.08	0.0036	P	0.8

$$y = 4.4791\text{E-}004 * x + 7.6082\text{E-}006$$

$$R = 1.0000$$

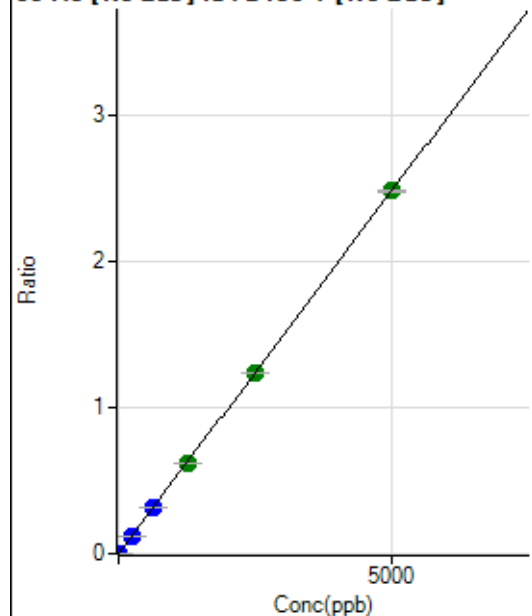
$$DL = 0.0206$$

$$BEC = 0.01699$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	286.13	0.0000	P	25.6
2	☐	0.500					
3	☐	5.000	4.754	34517.88	0.0024	P	2.1
4	☐	250.000	250.794	1797934.89	0.1247	P	0.5
5	☐	625.000	632.416	4423780.74	0.3145	P	1.0
6	☐	1250.000	1238.448	8142249.23	0.6158	A	0.7
7	☐	2500.000	2497.398	15931701.40	1.2417	A	0.4
8	☐	5000.000	5003.223	31451518.41	2.4876	A	0.7
9	☐			57229.47	0.0045	P	1.1

$$y = 4.9720\text{E-}004 * x + 2.0113\text{E-}005$$

$$R = 1.0000$$

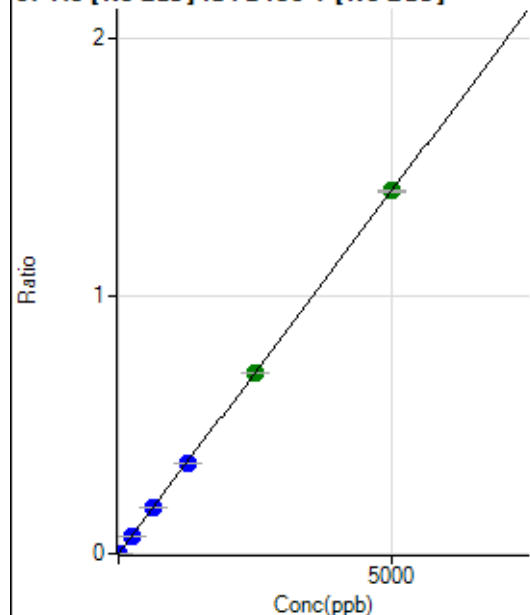
$$DL = 0.03107$$

$$BEC = 0.04045$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.89	0.0000	P	27.1
2	☐	0.500					
3	☐	5.000	4.790	19619.72	0.0014	P	0.8
4	☐	250.000	248.814	1008720.16	0.0700	P	0.7
5	☐	625.000	626.981	2480267.79	0.1763	P	0.8
6	☐	1250.000	1253.169	4659361.52	0.3524	P	0.4
7	☐	2500.000	2495.084	9001500.29	0.7016	A	0.7
8	☐	5000.000	5001.478	17780664.46	1.4063	A	0.7
9	☐			28251.16	0.0022	P	1.7

$$y = 2.8118\text{E-}004 * x + 7.9974\text{E-}006$$

$$R = 1.0000$$

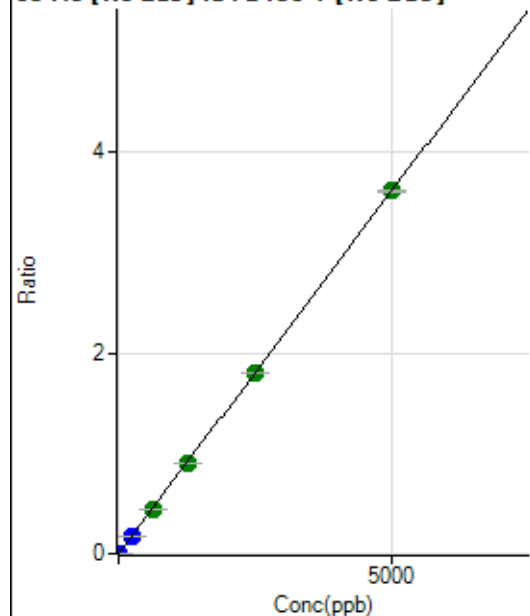
$$DL = 0.02315$$

$$BEC = 0.02844$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	194.45	0.0000	P	8.9
2	☐	0.500					
3	☐	5.000	4.750	49910.72	0.0034	P	1.7
4	☐	250.000	249.628	2601268.76	0.1804	P	0.6
5	☐	625.000	617.400	6278080.22	0.4463	A	0.6
6	☐	1250.000	1244.138	11890396.62	0.8992	A	0.7
7	☐	2500.000	2497.400	23159652.08	1.8051	A	0.5
8	☐	5000.000	5003.734	45725810.05	3.6166	A	0.4
9	☐			69966.70	0.0055	P	0.4

$$y = 7.2278\text{E-}004 * x + 1.3666\text{E-}005$$

$$R = 1.0000$$

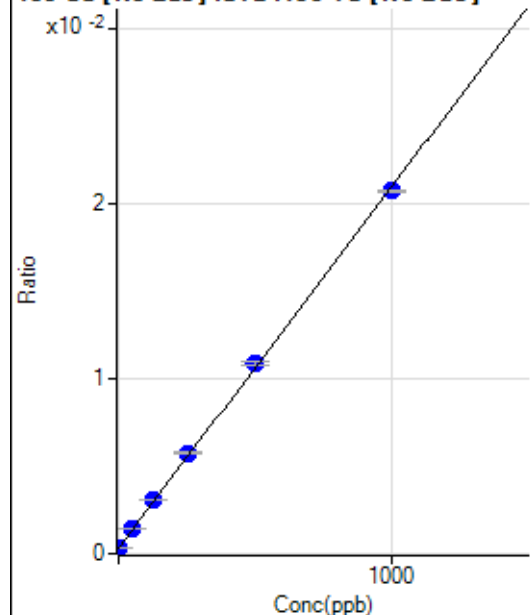
$$DL = 0.005021$$

$$BEC = 0.01891$$

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	5684.70	0.0003	P	5.4
2	☐	0.100					
3	☐	1.000	-0.293	5618.03	0.0003	P	4.4
4	☐	50.000	53.859	26620.31	0.0014	P	2.6
5	☐	125.000	135.195	57431.42	0.0031	P	1.0
6	☐	250.000	263.955	103702.02	0.0058	P	0.6
7	☐	500.000	511.615	191478.79	0.0109	P	1.6
8	☐	1000.000	989.238	363987.89	0.0207	P	0.5
9	☐			5445.72	0.0003	P	2.5

$$y = 2.0660\text{E-}005 * x + 3.0878\text{E-}004$$

$$R = 0.9998$$

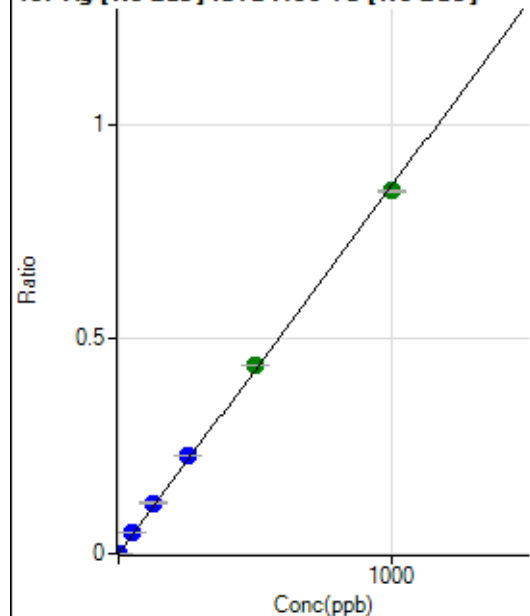
$$DL = 2.429$$

$$BEC = 14.95$$

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	141.67	0.0000	P	23.4
2	☐	0.100					
3	☐	1.000	1.079	17283.40	0.0009	P	1.9
4	☐	50.000	56.399	904581.51	0.0483	P	0.2
5	☐	125.000	138.490	2195999.72	0.1186	P	0.3
6	☐	250.000	267.399	4121465.11	0.2290	P	0.3
7	☐	500.000	513.201	7736174.65	0.4395	A	0.5
8	☐	1000.000	987.043	14830218.73	0.8453	A	0.7
9	☐			1308.45	0.0001	P	7.6

$$y = 8.5640\text{E-}004 * x + 7.6931\text{E-}006$$

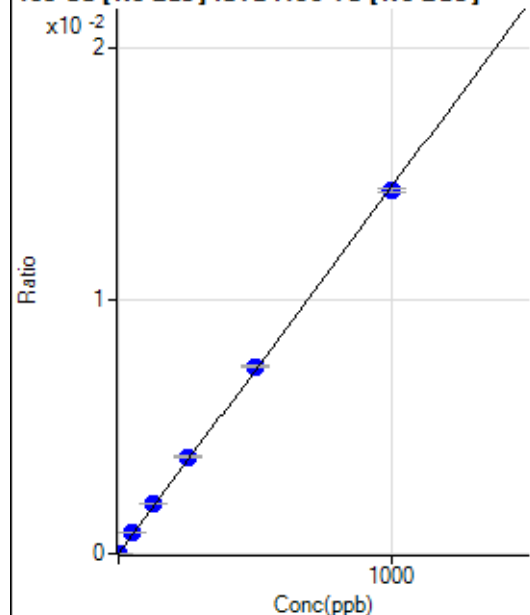
$$R = 0.9997$$

$$DL = 0.006307$$

$$BEC = 0.008983$$

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	15.28	0.0000	P	31.0
2	☐	0.100					
3	☐	1.000	0.956	272.23	0.0000	P	7.8
4	☐	50.000	56.323	15287.65	0.0008	P	1.0
5	☐	125.000	137.327	36831.40	0.0020	P	1.1
6	☐	250.000	264.012	68817.89	0.0038	P	1.1
7	☐	500.000	510.746	130189.59	0.0074	P	0.9
8	☐	1000.000	989.267	251333.63	0.0143	P	0.9
9	☐			131.95	0.0000	P	18.7

$$y = 1.4480\text{E-}005 * x + 8.2906\text{E-}007$$

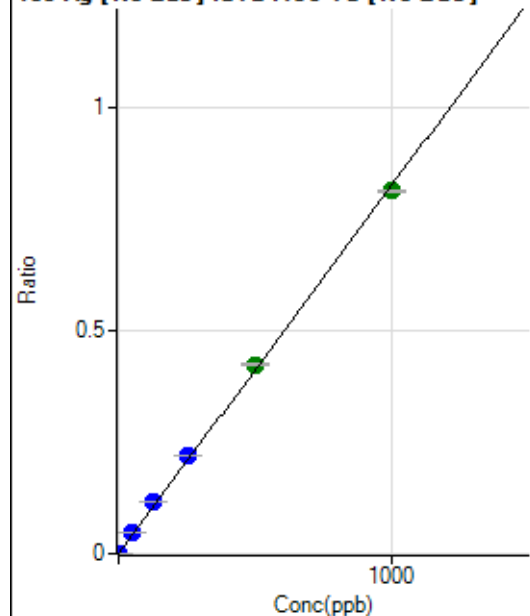
$$R = 0.9998$$

$$DL = 0.05325$$

$$BEC = 0.05725$$

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	63.89	0.0000	P	30.4
2	☐	0.100					
3	☐	1.000	1.073	16451.79	0.0009	P	1.1
4	☐	50.000	56.606	872642.63	0.0466	P	0.4
5	☐	125.000	139.379	2124387.33	0.1147	P	0.4
6	☐	250.000	268.596	3979359.94	0.2211	P	0.3
7	☐	500.000	514.430	7453959.20	0.4235	A	0.4
8	☐	1000.000	986.008	14240657.44	0.8117	A	0.4
9	☐			1339.01	0.0001	P	3.9

$$y = 8.2321\text{E-}004 * x + 3.4734\text{E-}006$$

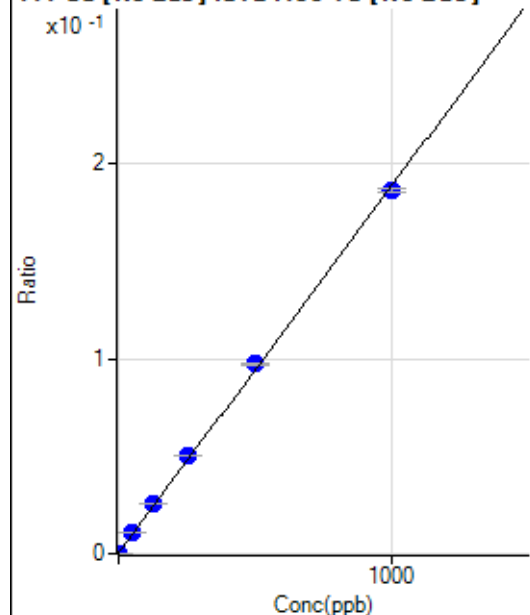
$$R = 0.9996$$

$$DL = 0.003854$$

$$BEC = 0.004219$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3992.21	0.0002	P	5.5
2	☐	0.100					
3	☐	1.000	0.906	7186.99	0.0004	P	1.1
4	☐	50.000	55.150	198464.60	0.0106	P	0.3
5	☐	125.000	137.127	481943.59	0.0260	P	0.5
6	☐	250.000	266.052	905247.86	0.0503	P	0.6
7	☐	500.000	514.693	1709189.74	0.0971	P	0.8
8	☐	1000.000	986.867	3263068.35	0.1860	P	1.0
9	☐			4796.09	0.0003	P	4.2

$$y = 1.8825E-004 * x + 2.1684E-004$$

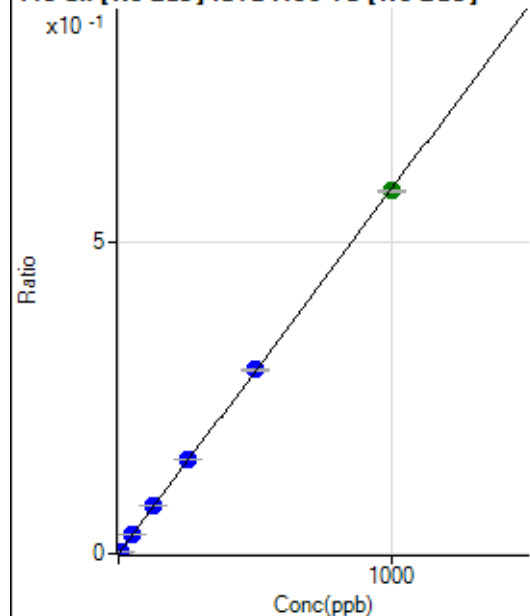
$$R = 0.9997$$

$$DL = 0.1903$$

$$BEC = 1.152$$

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	627.82	0.0000	P	19.8
2	☐	0.500					
3	☐	5.000	4.914	54107.66	0.0029	P	1.9
4	☐	50.000	52.381	575877.61	0.0308	P	0.4
5	☐	125.000	131.021	1423287.76	0.0769	P	0.1
6	☐	250.000	256.655	2709528.95	0.1506	P	0.6
7	☐	500.000	505.320	5216812.31	0.2964	P	0.9
8	☐	1000.000	994.805	10236258.47	0.5835	A	0.7
9	☐			24647.45	0.0014	P	1.9

$$y = 5.8647E-004 * x + 3.4082E-005$$

$$R = 0.9999$$

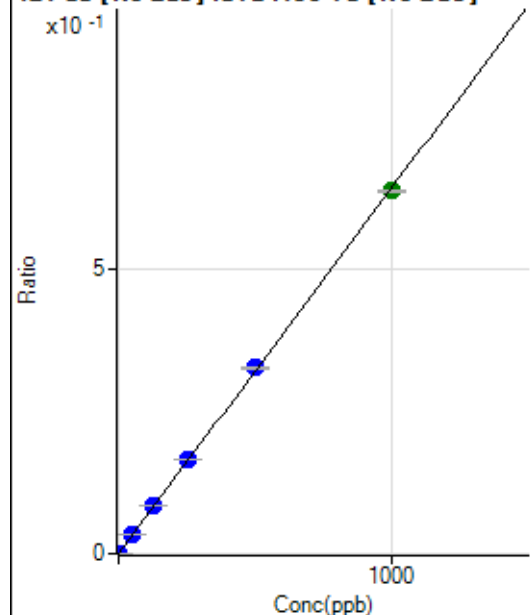
$$DL = 0.0346$$

$$BEC = 0.05811$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	102.78	0.0000	P	11.9
2	☐	0.200					
3	☐	2.000	1.844	22134.89	0.0012	P	0.9
4	☐	50.000	52.532	633360.19	0.0338	P	0.5
5	☐	125.000	131.308	1565112.58	0.0845	P	0.2
6	☐	250.000	257.247	2980451.00	0.1656	P	0.5
7	☐	500.000	508.674	5763739.28	0.3275	P	0.9
8	☐	1000.000	992.936	11214360.32	0.6392	A	0.6
9	☐			14752.69	0.0009	P	1.9

$$y = 6.4375\text{E-}004 * x + 5.5807\text{E-}006$$

$$R = 0.9999$$

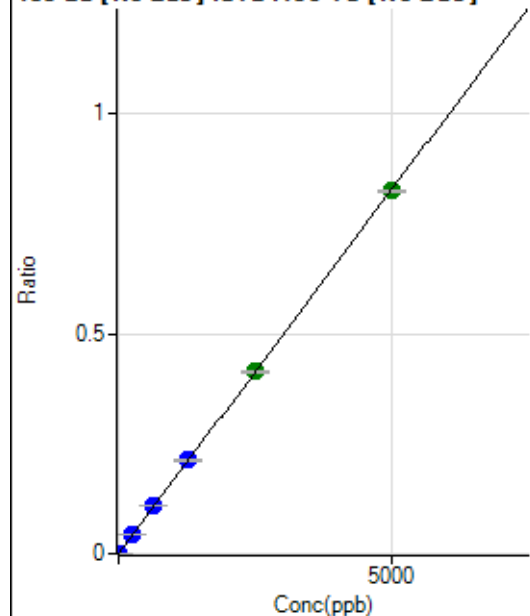
$$DL = 0.003096$$

$$BEC = 0.008669$$

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	50.00	0.0000	P	49.7
2	☐	1.000					
3	☐	10.000	9.804	30114.28	0.0016	P	0.7
4	☐	250.000	259.610	803429.59	0.0429	P	0.4
5	☐	625.000	654.115	2001448.31	0.1081	P	0.2
6	☐	1250.000	1283.218	3816592.01	0.2121	P	0.7
7	☐	2500.000	2503.793	7283067.96	0.4138	A	0.6
8	☐	5000.000	4985.680	14455349.11	0.8239	A	0.5
9	☐			2369.75	0.0001	P	5.2

$$y = 1.6526\text{E-}004 * x + 2.7134\text{E-}006$$

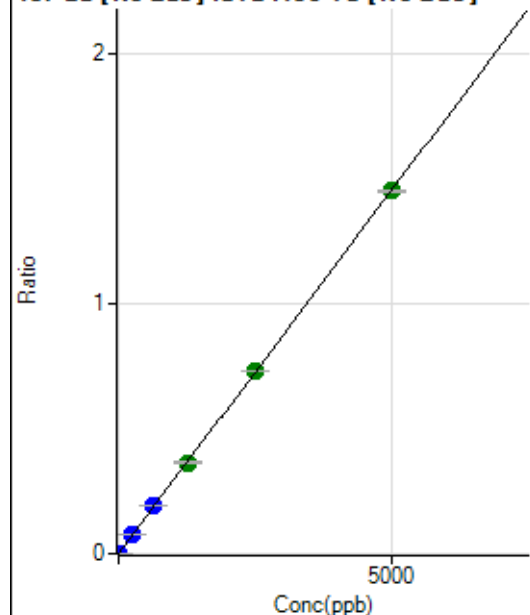
$$R = 1.0000$$

$$DL = 0.02446$$

$$BEC = 0.01642$$

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	63.89	0.0000	P	59.1
2	☐	1.000					
3	☐	10.000	9.736	52541.91	0.0028	P	1.0
4	☐	250.000	259.452	1411412.50	0.0754	P	0.8
5	☐	625.000	650.863	3500678.33	0.1891	P	0.1
6	☐	1250.000	1254.099	6556590.81	0.3643	A	0.7
7	☐	2500.000	2503.302	12799986.83	0.7272	A	0.1
8	☐	5000.000	4993.619	25450085.12	1.4506	A	0.8
9	☐			4220.27	0.0002	P	1.5

$$y = 2.9050E-004 * x + 3.4729E-006$$

$$R = 1.0000$$

$$DL = 0.02119$$

$$BEC = 0.01195$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			2.22		P	173.
2	☐						
3	☐			0.00		P	
4	☐			75.56		P	28.4
5	☐			206.68		P	9.7
6	☐			371.13		P	11.5
7	☐			584.48		P	19.1
8	☐			1200.09		P	6.7
9	☐			328.90		P	1.2

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			0.00		P	
4	☐			8.89		P	94.4
5	☐			34.45		P	31.1
6	☐			50.00		P	30.5
7	☐			63.33		P	31.6
8	☐			113.34		P	5.1
9	☐			102.23		P	12.3

156 Dy [No Gas] No available calibration points

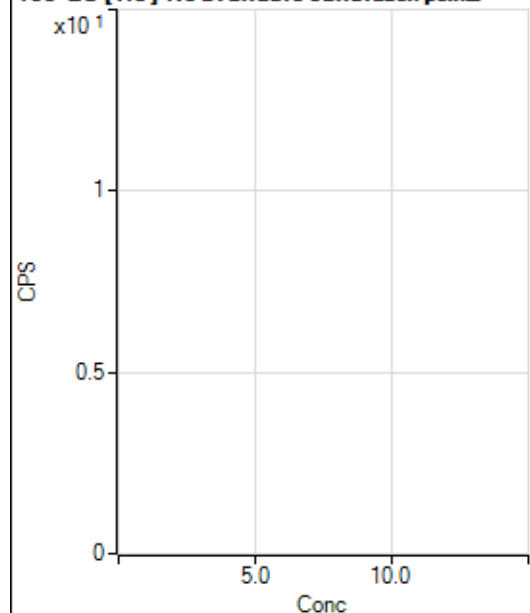
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.89		P	69.3
2	☐						
3	☐			8.33		P	100.
4	☐			52.78		P	50.8
5	☐			61.11		P	20.8
6	☐			138.90		P	9.2
7	☐			119.45		P	14.5
8	☐			294.46		P	6.5
9	☐			286.13		P	11.8

156 Dy [He] No available calibration points

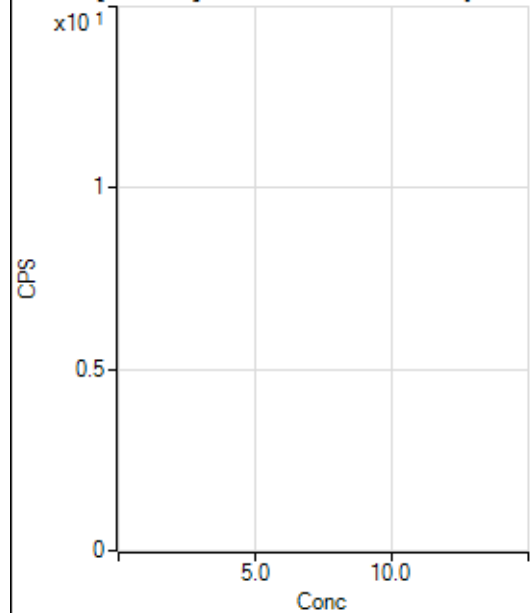
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.56		P	34.7
2	☐						
3	☐			1.11		P	173.
4	☐			18.89		P	44.4
5	☐			51.11		P	15.1
6	☐			57.78		P	12.0
7	☐			100.00		P	20.0
8	☐			228.89		P	10.2
9	☐			116.67		P	13.1

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			66.67		P	21.6
2	☐						
3	☐			116.67		P	18.9
4	☐			105.56		P	27.7
5	☐			116.67		P	51.5
6	☐			127.79		P	32.8
7	☐			105.56		P	16.4
8	☐			147.23		P	13.1
9	☐			133.34		P	28.6

160 Gd [He] No available calibration points

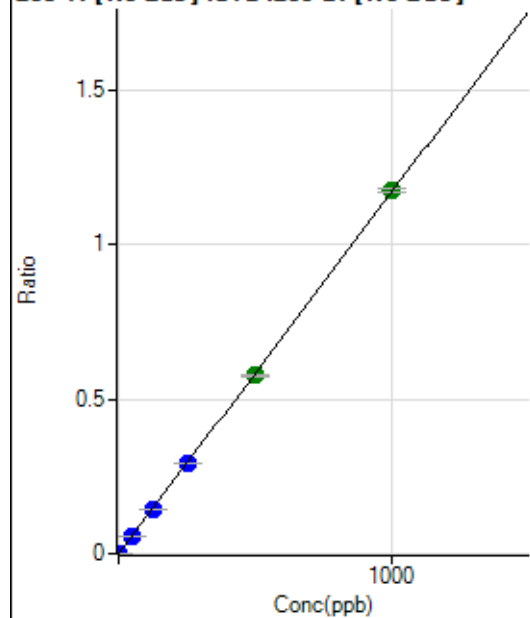
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			221.12		P	11.3
2	☐						
3	☐			228.89		P	14.0
4	☐			217.78		P	5.4
5	☐			244.45		P	5.2
6	☐			257.78		P	4.9
7	☐			191.12		P	20.2
8	☐			226.67		P	13.5
9	☐			260.01		P	8.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			36.11		P	53.3
2	☐						
3	☐			41.67		P	40.0
4	☐			69.45		P	30.2
5	☐			44.45		P	10.8
6	☐			80.56		P	21.5
7	☐			69.45		P	60.4
8	☐			75.00		P	19.2
9	☐			80.56		P	52.1

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			20.00		P	66.7
2	☐						
3	☐			24.44		P	34.3
4	☐			22.22		P	74.0
5	☐			31.11		P	49.5
6	☐			25.55		P	65.7
7	☐			26.67		P	45.1
8	☐			40.00		P	44.1
9	☐			48.89		P	43.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	325.02	0.0000	P	11.3
2	☐	0.100					
3	☐	1.000	0.871	12912.33	0.0010	P	2.9
4	☐	50.000	48.583	707311.09	0.0568	P	0.7
5	☐	125.000	122.972	1767169.75	0.1436	P	0.2
6	☐	250.000	247.919	3471292.09	0.2895	P	0.3
7	☐	500.000	493.238	6700611.61	0.5759	A	1.1
8	☐	1000.000	1004.226	13223465.83	1.1726	A	1.0
9	☐			13115.38	0.0013	P	4.2

$$y = 0.0012 * x + 2.6202E-005$$

$$R = 1.0000$$

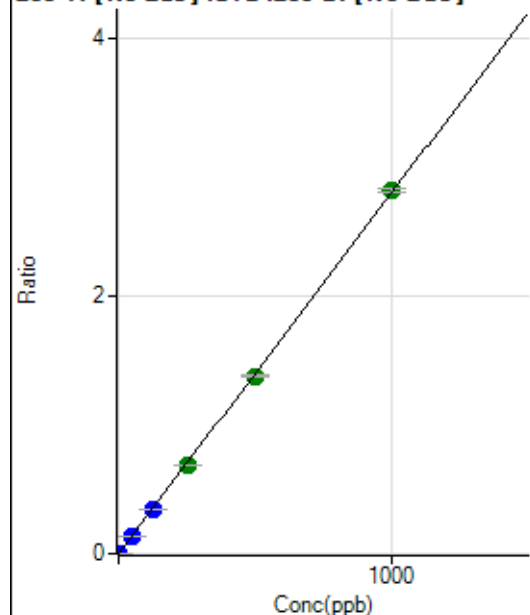
$$DL = 0.007631$$

$$BEC = 0.02244$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	747.28	0.0001	P	3.4
2	☐	0.100					
3	☐	1.000	0.878	31165.29	0.0025	P	2.5
4	☐	50.000	48.808	1704110.78	0.1367	P	0.6
5	☐	125.000	123.772	4265570.49	0.3466	P	0.5
6	☐	250.000	242.968	8158563.81	0.6804	A	0.2
7	☐	500.000	491.851	16023966.85	1.3773	A	1.1
8	☐	1000.000	1006.046	31769762.86	2.8171	A	1.2
9	☐			30992.77	0.0031	P	2.8

$$y = 0.0028 * x + 6.0238E-005$$

$$R = 0.9999$$

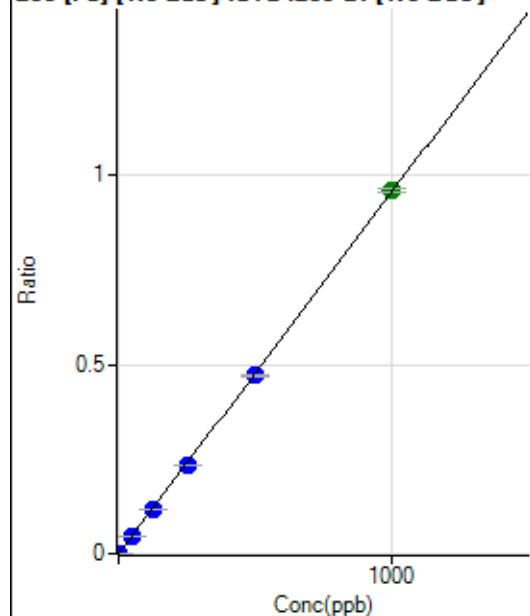
$$DL = 0.002199$$

$$BEC = 0.02151$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	574.11	0.0000	P	9.8
2	☐	0.100					
3	☐	1.000	0.892	11110.47	0.0009	P	2.0
4	☐	50.000	48.720	580190.76	0.0466	P	1.4
5	☐	125.000	123.082	1446320.99	0.1175	P	0.9
6	☐	250.000	246.583	2822909.03	0.2354	P	0.2
7	☐	500.000	493.969	5486446.59	0.4716	P	1.0
8	☐	1000.000	1004.173	10810446.08	0.9586	A	1.0
9	☐			54668.11	0.0055	P	0.5

$$y = 9.5456E-004 * x + 4.6278E-005$$

$$R = 1.0000$$

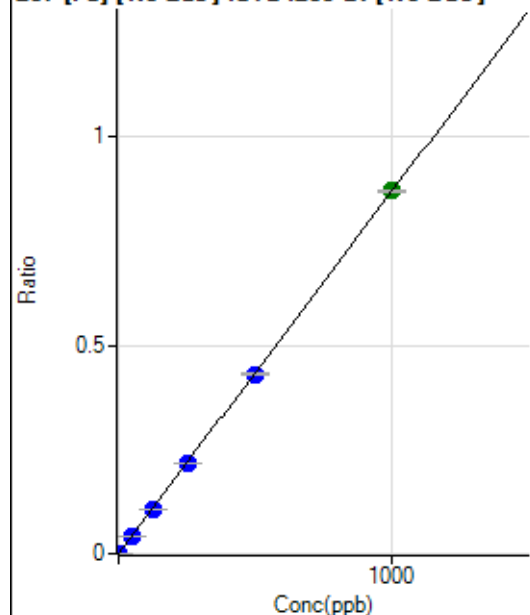
$$DL = 0.01428$$

$$BEC = 0.04848$$

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	448.17	0.0000	P	12.7
2	☐	0.100					
3	☐	1.000	0.842	9488.84	0.0008	P	5.5
4	☐	50.000	48.727	527788.95	0.0423	P	1.1
5	☐	125.000	123.175	1316597.53	0.1070	P	0.6
6	☐	250.000	247.964	2582251.39	0.2154	P	0.4
7	☐	500.000	495.865	5009992.36	0.4306	P	1.2
8	☐	1000.000	1002.869	9821302.30	0.8709	A	0.4
9	☐			46608.08	0.0047	P	0.7

$$y = 8.6834\text{E-}004 * x + 3.6118\text{E-}005$$

$$R = 1.0000$$

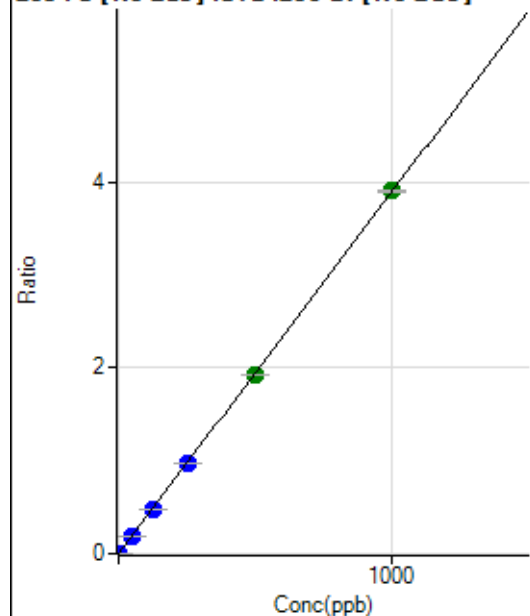
$$DL = 0.01582$$

$$BEC = 0.04159$$

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	2255.71	0.0002	P	1.5
2	☐	0.100					
3	☐	1.000	0.863	43764.41	0.0035	P	2.6
4	☐	50.000	48.698	2363431.98	0.1896	P	1.0
5	☐	125.000	123.663	5922267.72	0.4813	P	0.6
6	☐	250.000	248.341	11586827.45	0.9663	P	0.3
7	☐	500.000	493.747	22350228.80	1.9210	A	0.5
8	☐	1000.000	1003.774	44041102.14	3.9052	A	0.6
9	☐			217124.73	0.0219	P	0.3

$$y = 0.0039 * x + 1.8182\text{E-}004$$

$$R = 1.0000$$

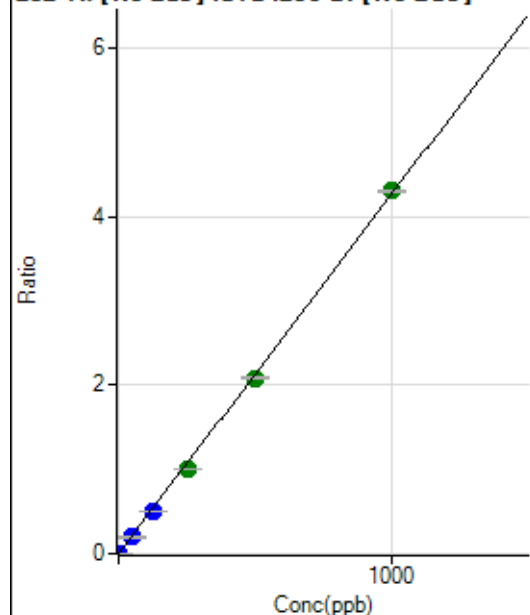
$$DL = 0.00206$$

$$BEC = 0.04674$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	275.94	0.0000	P	16.5
2	☐	0.100					
3	☐	1.000	0.798	42337.55	0.0034	P	0.4
4	☐	50.000	45.672	2427027.34	0.1947	P	1.1
5	☐	125.000	118.849	6235258.36	0.5067	P	0.8
6	☐	250.000	237.311	12131658.95	1.0118	A	0.4
7	☐	500.000	488.805	24245751.00	2.0840	A	0.8
8	☐	1000.000	1009.755	48549754.79	4.3049	A	0.3
9	☐			7658.05	0.0008	P	9.8

$$y = 0.0043 * x + 2.2250E-005$$

$$R = 0.9998$$

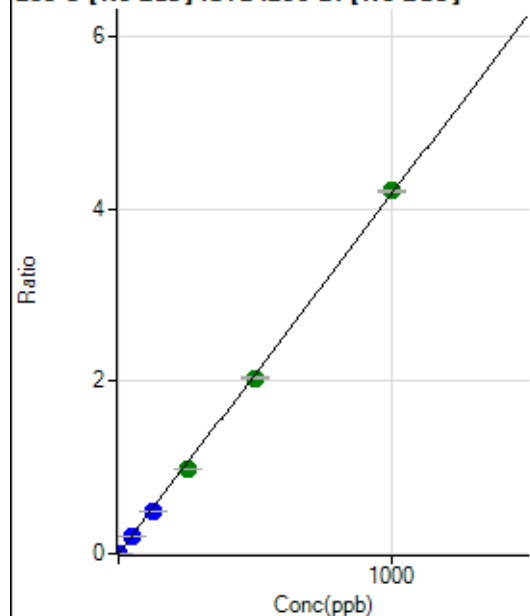
$$DL = 0.002589$$

$$BEC = 0.005219$$

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	97.22	0.0000	P	5.3
2	☐	0.100					
3	☐	1.000	0.807	41681.44	0.0034	P	2.8
4	☐	50.000	45.690	2372386.90	0.1903	P	0.4
5	☐	125.000	118.839	6092103.48	0.4951	P	0.8
6	☐	250.000	237.106	11844002.61	0.9878	A	0.1
7	☐	500.000	489.254	23713269.98	2.0382	A	0.2
8	☐	1000.000	1009.582	47431295.85	4.2058	A	0.7
9	☐			3447.86	0.0003	P	2.7

$$y = 0.0042 * x + 7.8377E-006$$

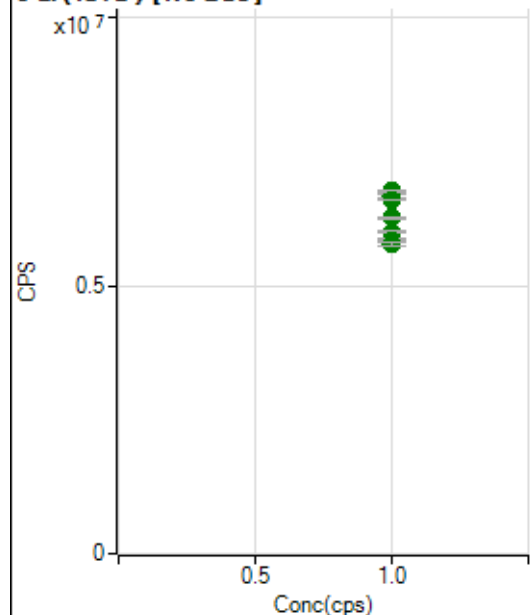
$$R = 0.9998$$

$$DL = 0.0002968$$

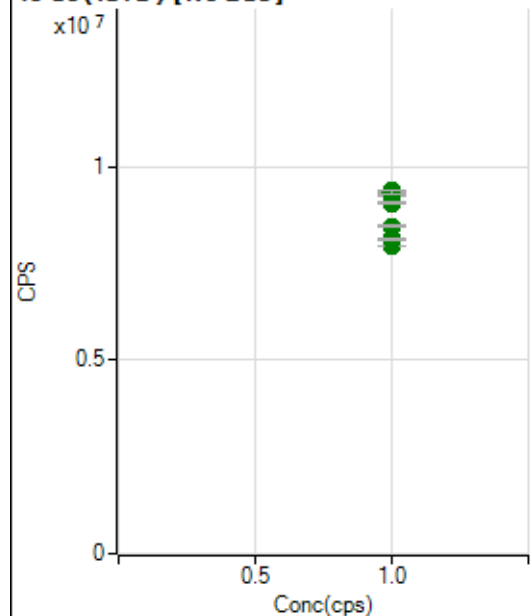
$$BEC = 0.001881$$

Weight: <None>

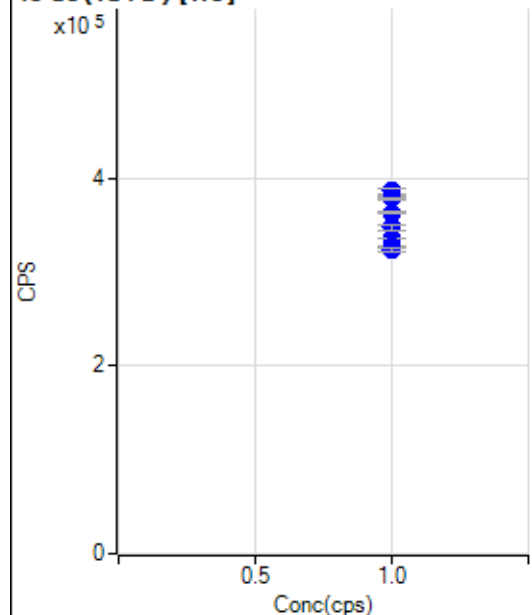
Min Conc: 0

6 Li (ISTD) [No Gas]

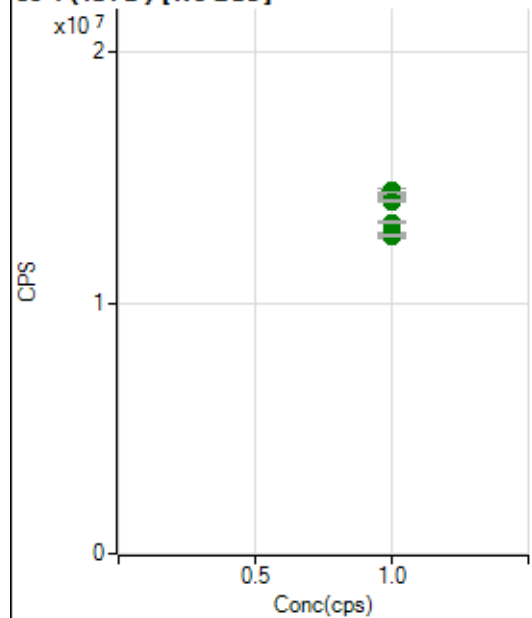
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6671304.00		A	0.7
2	☐	1.000					
3	☐	1.000		6739361.29		A	0.6
4	☐	1.000		6766592.05		A	0.5
5	☐	1.000		6592971.50		A	0.1
6	☐	1.000		6264163.52		A	0.5
7	☐	1.000		6006816.51		A	0.7
8	☐	1.000		5862831.23		A	0.5
9	☐	1.000		5769405.33		A	1.2

45 Sc (ISTD) [No Gas]

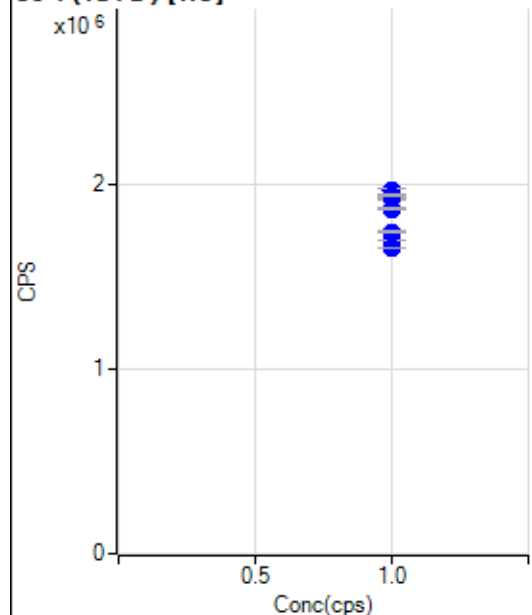
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9265061.49		A	0.2
2	☐	1.000					
3	☐	1.000		9386032.42		A	0.7
4	☐	1.000		9372229.72		A	1.1
5	☐	1.000		9077448.47		A	0.5
6	☐	1.000		8472574.50		A	0.9
7	☐	1.000		8151286.55		A	0.6
8	☐	1.000		7968150.18		A	0.3
9	☐	1.000		8123629.69		A	0.9

45 Sc (ISTD) [He]

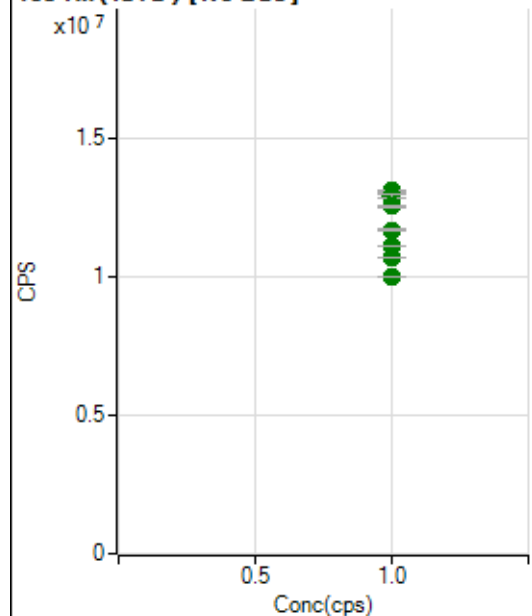
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		379831.05		P	0.8
2	☐	1.000					
3	☐	1.000		386052.28		P	1.9
4	☐	1.000		378247.97		P	0.5
5	☐	1.000		362955.36		P	0.7
6	☐	1.000		335219.69		P	0.3
7	☐	1.000		327143.94		P	0.6
8	☐	1.000		323158.76		P	0.8
9	☐	1.000		347128.30		P	1.5

89 Y (ISTD) [No Gas]

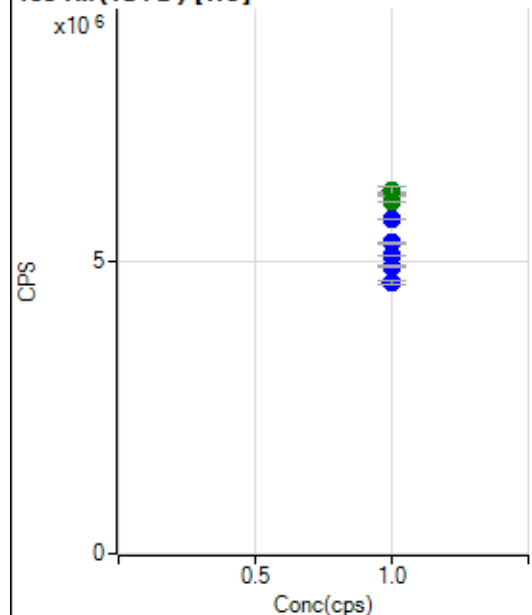
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14227970.21		A	0.5
2	☐	1.000					
3	☐	1.000		14481437.42		A	0.9
4	☐	1.000		14416602.28		A	0.5
5	☐	1.000		14068639.51		A	0.7
6	☐	1.000		13222678.83		A	0.4
7	☐	1.000		12830314.53		A	0.1
8	☐	1.000		12643476.06		A	0.5
9	☐	1.000		12684255.09		A	0.5

89 Y (ISTD) [He]

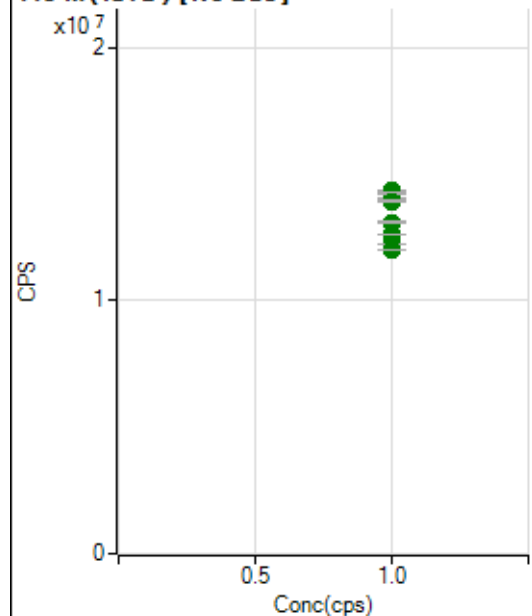
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1920017.30		P	0.6
2	☐	1.000					
3	☐	1.000		1961222.40		P	1.9
4	☐	1.000		1936329.68		P	0.5
5	☐	1.000		1863499.38		P	0.6
6	☐	1.000		1734616.54		P	0.1
7	☐	1.000		1691589.23		P	0.2
8	☐	1.000		1654353.38		P	0.4
9	☐	1.000		1740027.02		P	0.7

103 Rh (ISTD) [No Gas]

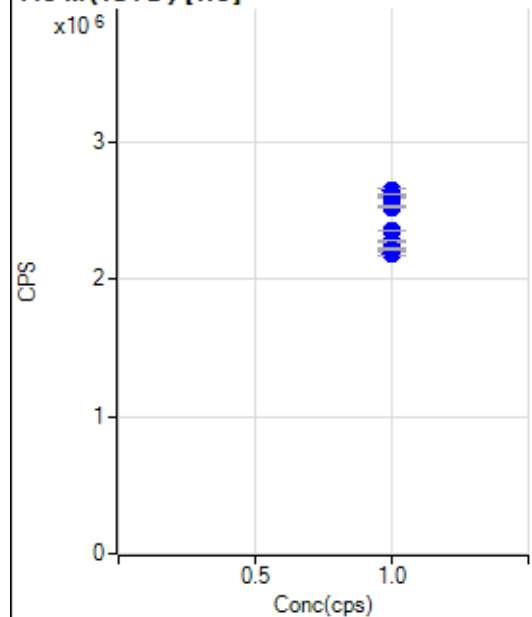
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		13002214.88		A	0.3
2	☐	1.000					
3	☐	1.000		13078487.10		A	0.4
4	☐	1.000		12908726.94		A	0.8
5	☐	1.000		12523281.10		A	0.5
6	☐	1.000		11659757.90		A	0.5
7	☐	1.000		11087463.79		A	0.3
8	☐	1.000		10682394.51		A	0.2
9	☐	1.000		9986057.77		A	0.6

103 Rh (ISTD) [He]

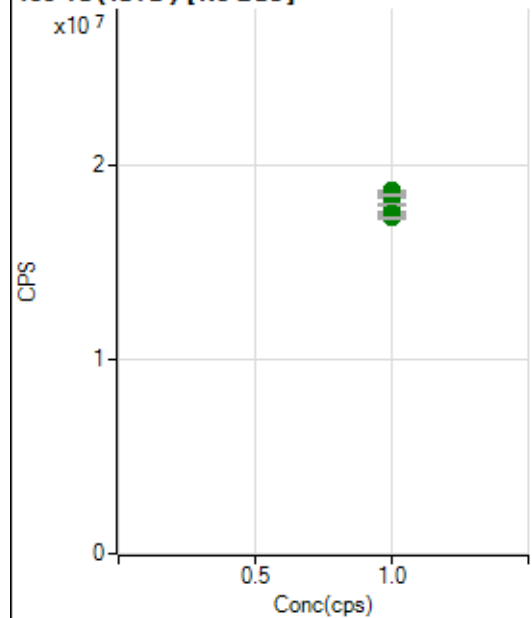
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6164189.07		A	0.3
2	☐	1.000					
3	☐	1.000		6198168.10		A	2.4
4	☐	1.000		6016371.23		A	0.3
5	☐	1.000		5711883.18		P	0.2
6	☐	1.000		5307736.87		P	0.4
7	☐	1.000		5101980.20		P	0.1
8	☐	1.000		4905780.34		P	0.9
9	☐	1.000		4642058.16		P	1.3

115 In (ISTD) [No Gas]

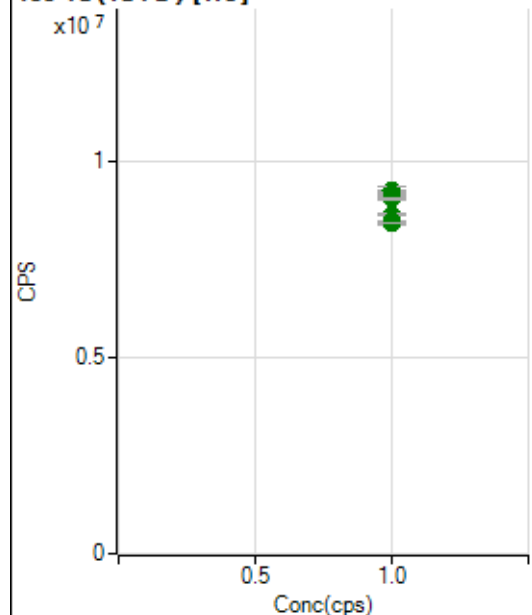
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14028173.03		A	0.1
2	☐	1.000					
3	☐	1.000		14328407.35		A	0.6
4	☐	1.000		14249484.67		A	0.7
5	☐	1.000		13919905.23		A	0.5
6	☐	1.000		13095180.13		A	0.7
7	☐	1.000		12598407.77		A	0.3
8	☐	1.000		12237892.44		A	0.3
9	☐	1.000		11977641.95		A	0.1

115 In (ISTD) [He]

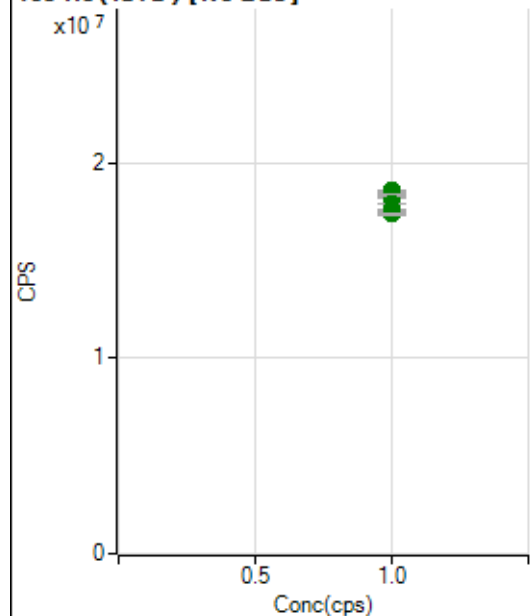
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2597448.39		P	0.6
2	☐	1.000					
3	☐	1.000		2645176.68		P	1.6
4	☐	1.000		2627269.20		P	0.1
5	☐	1.000		2527275.82		P	0.5
6	☐	1.000		2355789.20		P	0.1
7	☐	1.000		2275642.03		P	0.3
8	☐	1.000		2189590.71		P	1.2
9	☐	1.000		2220092.50		P	1.1

159 Tb (ISTD) [No Gas]

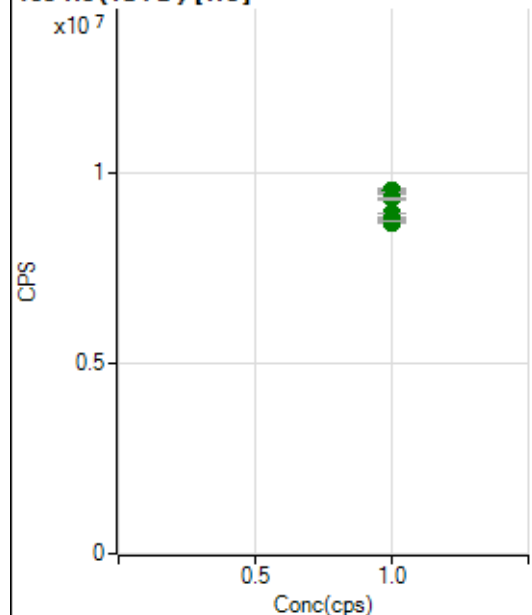
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		18410137.09		A	0.5
2	☐	1.000					
3	☐	1.000		18555719.45		A	0.8
4	☐	1.000		18725557.77		A	0.4
5	☐	1.000		18514442.08		A	0.3
6	☐	1.000		17996922.23		A	0.3
7	☐	1.000		17601495.29		A	0.3
8	☐	1.000		17544699.32		A	0.8
9	☐	1.000		17324093.35		A	0.5

159 Tb (ISTD) [He]

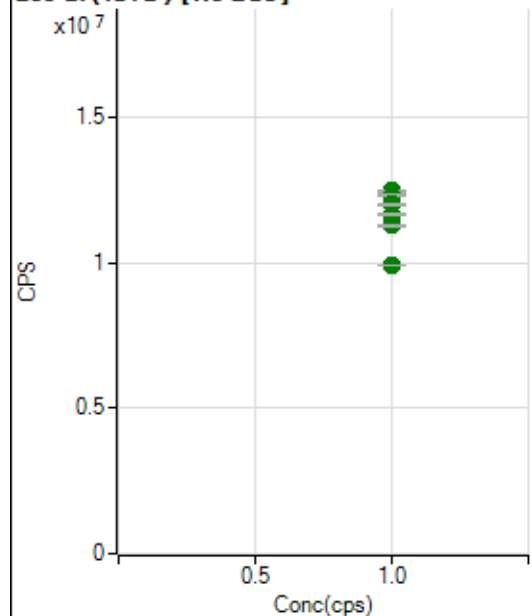
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9244433.68		A	0.2
2	☐	1.000					
3	☐	1.000		9249124.51		A	2.3
4	☐	1.000		9164124.65		A	0.6
5	☐	1.000		9047527.02		A	0.7
6	☐	1.000		8635773.14		A	0.7
7	☐	1.000		8489899.04		A	0.3
8	☐	1.000		8411676.20		A	0.2
9	☐	1.000		8421023.00		A	0.3

165 Ho (ISTD) [No Gas]

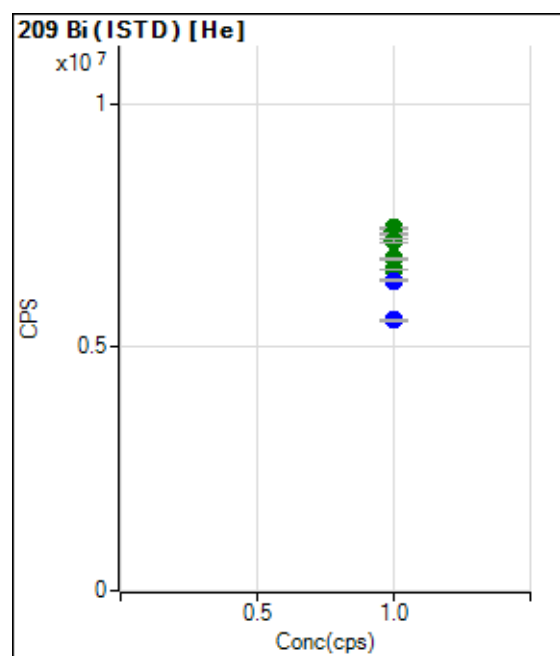
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		18233251.62		A	0.5
2	☐	1.000					
3	☐	1.000		18383045.20		A	0.8
4	☐	1.000		18551780.10		A	0.5
5	☐	1.000		18353702.84		A	0.7
6	☐	1.000		17872255.78		A	0.2
7	☐	1.000		17555914.63		A	0.4
8	☐	1.000		17503342.75		A	0.3
9	☐	1.000		17363141.70		A	0.3

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9530992.71		A	0.4
2	☐	1.000					
3	☐	1.000		9545337.29		A	1.9
4	☐	1.000		9488659.86		A	0.2
5	☐	1.000		9338388.05		A	1.0
6	☐	1.000		8947207.02		A	0.1
7	☐	1.000		8827306.39		A	0.5
8	☐	1.000		8705826.26		A	0.4
9	☐	1.000		8738532.58		A	0.0

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12406001.34		A	0.3
2	☐	1.000					
3	☐	1.000		12371136.20		A	0.8
4	☐	1.000		12463489.40		A	0.4
5	☐	1.000		12305418.43		A	0.4
6	☐	1.000		11990729.82		A	0.1
7	☐	1.000		11634633.30		A	0.6
8	☐	1.000		11277661.64		A	0.4
9	☐	1.000		9928693.53		A	0.1



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7442513.50		A	0.3
2	☐	1.000					
3	☐	1.000		7393980.38		A	2.2
4	☐	1.000		7320268.22		A	0.3
5	☐	1.000		7181019.83		A	0.8
6	☐	1.000		6808465.59		A	0.4
7	☐	1.000		6591632.33		A	0.2
8	☐	1.000		6365838.38		P	0.9
9	☐	1.000		5559267.83		P	0.6

US EPA Tune Check Sample Report

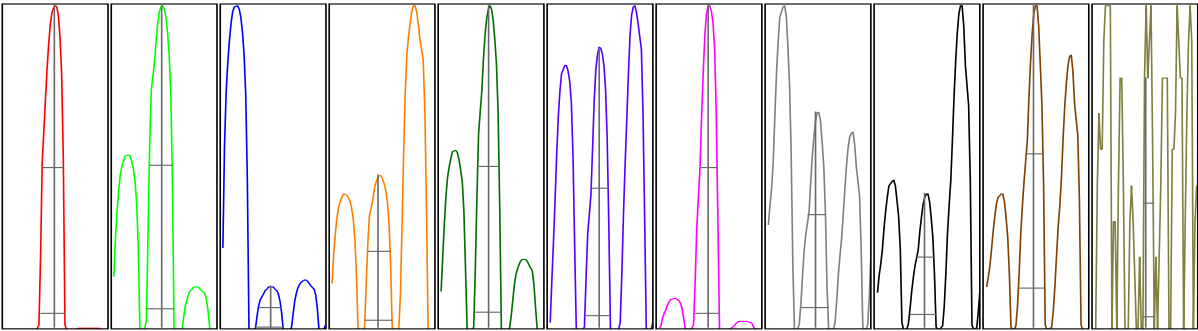
Batch Folder D:\ICP-MS Data\P7120618 MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	15722	0.67	5.00	
24	129384	0.68	5.00	
25	16930	0.83	5.00	
26	19513	0.75	5.00	
59	99041	0.66	5.00	
113	13004	1.18	5.00	
115	154782	1.52	5.00	
206	40901	0.88	5.00	
207	38183	0.85	5.00	
208	88801	0.69	5.00	
220	0	57.05		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	15891	15688	15600	15708	15723
24	130428	129467	127975	129559	129490
25	17164	16919	16787	16876	16903
26	19729	19515	19335	19440	19546
59	99806	99307	98019	99023	99048
113	13256	13047	12905	12909	12905
115	158517	155727	153042	153356	153265
206	41408	40857	40428	40773	41042
207	38626	38377	37802	37980	38130
208	89490	89238	88006	88375	88898
220	0	0	0	0	0

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	27510	9.00	8.9 - 9.1		0.738	0.900	
24	209478	23.95	23.9 - 24.1		0.787	0.900	
25	27681	24.95	24.9 - 25.1		0.786	0.900	
26	31737	25.90	25.9 - 26.1		0.786	0.900	
59	172547	58.95	58.9 - 59.1		0.780	0.900	
113	25235	113.00	112.9 - 113.1		0.731	0.900	
115	302552	115.00	114.9 - 115.1		0.728	0.900	
206	78329	205.95	205.9 - 206.1		0.785	0.900	
207	71092	206.95	206.9 - 207.1		0.758	0.900	
208	170554	207.95	207.9 - 208.1		0.759	0.900	
220	0	220.05	-		0.344		

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

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	5.7	V	Deflect	13.8	V
Extract 2	-100.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-55	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	160	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	23400	0.78	
89	29179	0.78	
205	35962	0.85	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	23313	23703	23243	23423	23316
89	29138	29527	28914	29233	29082
205	36189	36238	36072	35501	35811

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.5	V	Deflect	1.6	V
Extract 2	-105.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-60	V	Cell Exit	-60	V			

Cell Parameters

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