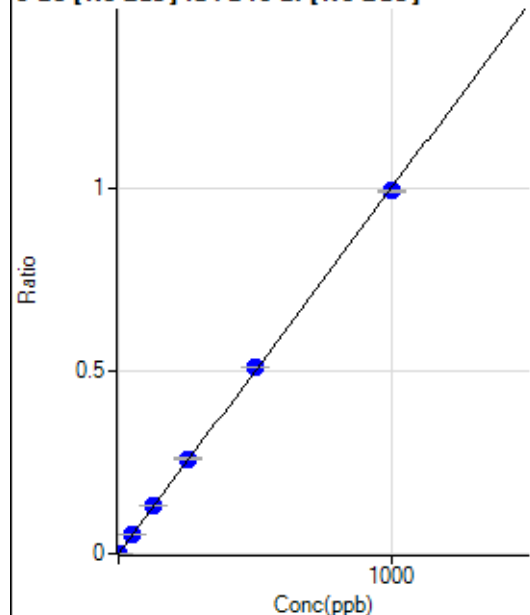


Calibration for 006CALS.d

Batch Folder: D:\ICP-MS Data\P7050619MS.b\
 Analysis File: P7050619MS.batch.bin
 DA Date-Time: 2019-05-10 00:01:52
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-05-06 15:13:12
2			
3	005CALS.d	S02	2019-05-06 15:21:31
4	006CALS.d	S03	2019-05-06 15:25:27
5	007CALS.d	S04	2019-05-06 15:29:36
6	008CALS.d	S05	2019-05-06 15:33:27
7	009CALS.d	S06	2019-05-06 15:37:15
8	010CALS.d	S07	2019-05-06 15:41:01
9	011CALS.d	S08	2019-05-06 15:44:49

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	68.89	0.0000	P	14.3
2	☐	0.100					
3	☐	1.000	1.008	3342.64	0.0010	P	5.7
4	☐	50.000	53.339	170038.71	0.0535	P	1.6
5	☐	125.000	131.131	405555.01	0.1315	P	2.3
6	☐	250.000	260.118	787734.21	0.2609	P	0.7
7	☐	500.000	509.384	1545442.58	0.5108	P	0.5
8	☐	1000.000	991.845	2870470.03	0.9947	P	0.5
9	☐			537.80	0.0002	P	11.4

$$y = 0.0010 * x + 2.1043E-005$$

$$R = 0.9999$$

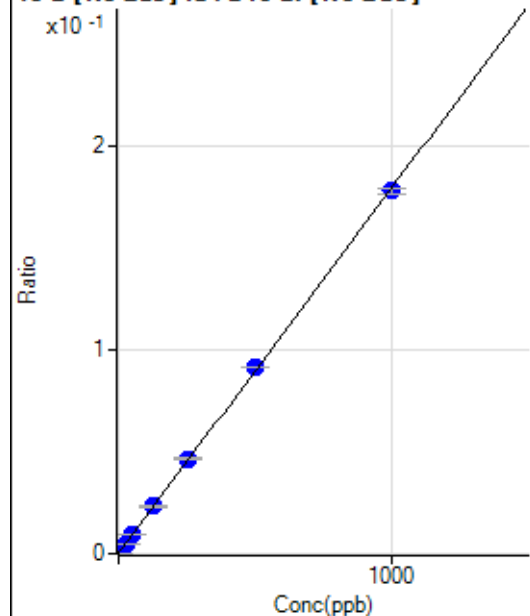
$$DL = 0.009027$$

$$BEC = 0.02098$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	644.49	0.0002	P	4.7
2	☐	2.500					
3	☐	25.000	23.831	14485.25	0.0045	P	2.1
4	☐	50.000	51.438	29933.26	0.0094	P	2.9
5	☐	125.000	128.230	71513.96	0.0232	P	2.3
6	☐	250.000	257.650	140110.82	0.0464	P	2.1
7	☐	500.000	509.634	277075.28	0.0916	P	0.8
8	☐	1000.000	992.824	514323.17	0.1782	P	1.8
9	☐			15692.14	0.0057	P	9.8

$$y = 1.7933E-004 * x + 1.9691E-004$$

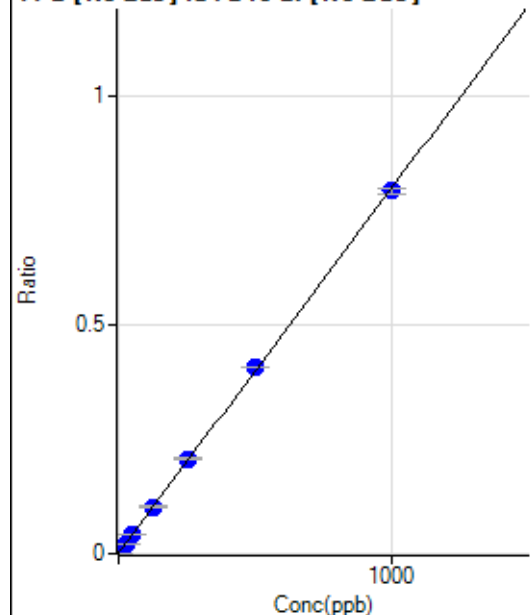
$$R = 0.9999$$

$$DL = 0.1556$$

$$BEC = 1.098$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2986.54	0.0009	P	5.0
2	☐	2.500					
3	☐	25.000	24.029	64987.91	0.0201	P	1.9
4	☐	50.000	51.105	132260.56	0.0416	P	2.7
5	☐	125.000	126.828	314367.19	0.1020	P	2.7
6	☐	250.000	258.748	625246.36	0.2071	P	1.4
7	☐	500.000	509.017	1229599.45	0.4064	P	0.5
8	☐	1000.000	993.045	2285640.09	0.7921	P	1.8
9	☐			69745.85	0.0253	P	9.7

$$y = 7.9670\text{E-}004 * x + 9.1249\text{E-}004$$

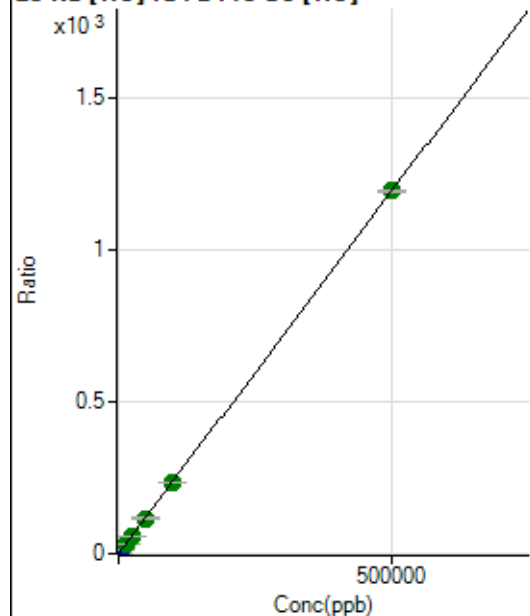
$$R = 0.9999$$

$$DL = 0.1727$$

$$BEC = 1.145$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4687.02	0.0188	P	6.5
2	☐	50.000					
3	☐	500.000	474.973	288675.47	1.1541	P	0.6
4	☐	5000.000	4987.810	2902223.74	11.9411	P	0.6
5	☐	12500.000	12413.265	6945194.17	29.6900	A	0.6
6	☐	25000.000	24332.380	13917098.05	58.1801	A	2.5
7	☐	50000.000	49057.927	27345603.39	117.2813	A	0.3
8	☐	100000.00	97662.285	52053414.01	233.4596	A	0.2
9	☐	500000.00	500597.44	261235633.6	1,196.590	A	0.2

$$y = 0.0024 * x + 0.0188$$

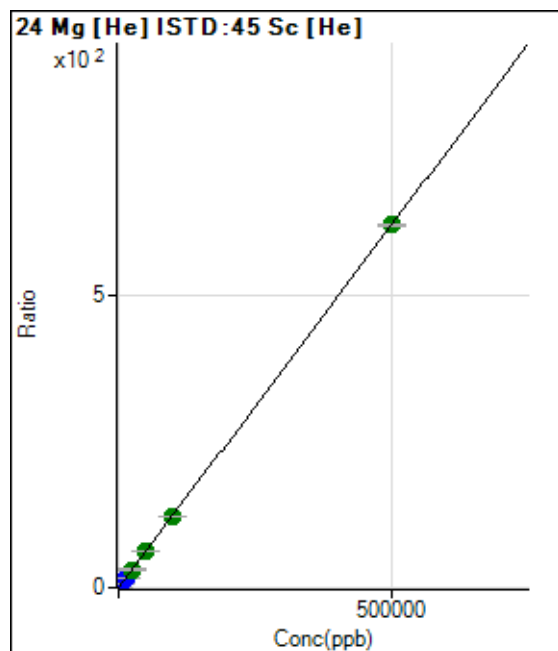
$$R = 1.0000$$

$$DL = 1.522$$

$$BEC = 7.848$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	172.23	0.0007	P	33.2
2	☐	50.000					
3	☐	500.000	503.845	156129.74	0.6242	P	1.0
4	☐	5000.000	5146.366	1548059.45	6.3693	P	0.2
5	☐	12500.000	12840.696	3717260.85	15.8910	P	0.8
6	☐	25000.000	25018.524	7406219.78	30.9610	A	2.4
7	☐	50000.000	50087.032	14452184.52	61.9832	A	0.3
8	☐	100000.00	99080.483	27338324.92	122.6124	A	0.2
9	☐	500000.00	500164.28	135127133.5	618.9519	A	0.3

$$y = 0.0012 * x + 6.8966E-004$$

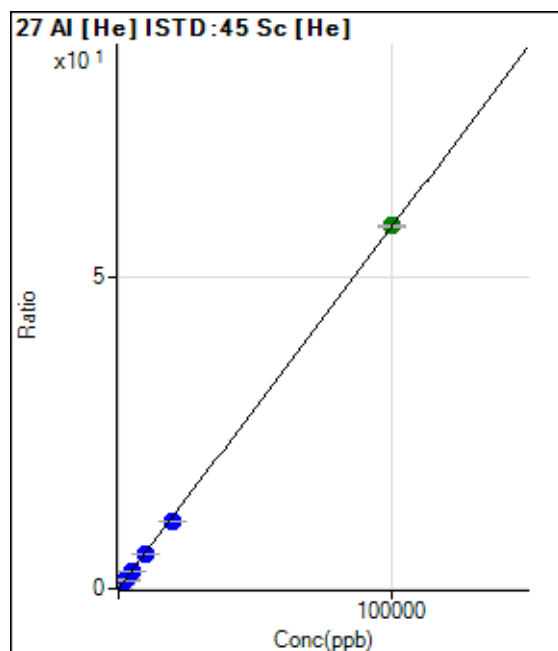
$$R = 1.0000$$

$$DL = 0.5556$$

$$BEC = 0.5573$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0001	P	32.4
2	☐	2.000					
3	☐	20.000	19.242	2822.61	0.0113	P	5.3
4	☐	1000.000	969.786	137039.85	0.5638	P	0.7
5	☐	2500.000	2394.551	325637.26	1.3921	P	0.8
6	☐	5000.000	4687.526	651841.30	2.7250	P	2.5
7	☐	10000.000	9389.187	1272611.90	5.4581	P	0.3
8	☐	20000.000	18565.761	2406352.94	10.7925	P	0.3
9	☐	100000.00	100366.49	12737396.90	58.3440	A	0.5

$$y = 5.8131E-004 * x + 9.9845E-005$$

$$R = 0.9999$$

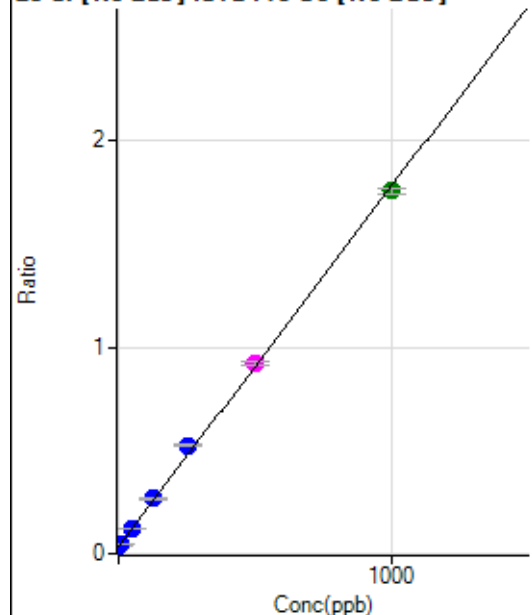
$$DL = 0.1671$$

$$BEC = 0.1718$$

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	180531.76	0.0339	P	0.3
2	☐	1.000					
3	☐	10.000	8.141	255836.63	0.0481	P	0.9
4	☐	50.000	51.770	641677.46	0.1242	P	2.0
5	☐	125.000	133.248	1338602.43	0.2665	P	2.4
6	☐	250.000	279.939	2566457.37	0.5227	P	1.7
7	☐	500.000	508.439	4538812.12	0.9217	M	1.4
8	☐	1000.000	987.195	8213669.89	1.7576	A	1.5
9	☐			619849.82	0.1396	P	1.1

$$y = 0.0017 * x + 0.0339$$

$$R = 0.9994$$

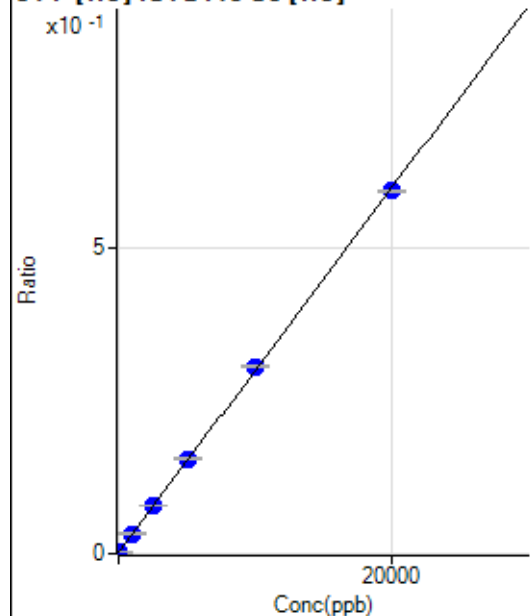
$$DL = 0.1592$$

$$BEC = 19.39$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-24.707	263.90	0.0011	P	16.6
2	☐	0.000					
3	☐	0.000	24.707	633.37	0.0025	P	7.3
4	☐	1000.000	1031.491	7924.64	0.0326	P	8.0
5	☐	2500.000	2579.919	18442.53	0.0788	P	3.1
6	☐	5000.000	5141.748	37169.40	0.1553	P	1.4
7	☐	10000.000	10200.806	71443.89	0.3064	P	1.4
8	☐	20000.000	19852.596	132581.72	0.5946	P	0.2
9	☐			241.68	0.0011	P	18.2

$$y = 2.9862E-005 * x + 0.0018$$

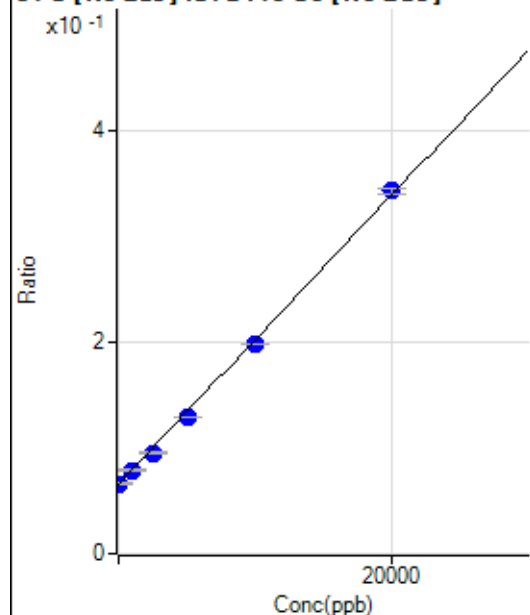
$$R = 0.9999$$

$$DL = 18.02$$

$$BEC = 60.1$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-27.778	349148.54	0.0655	P	0.5
2	☐	0.000					
3	☐	0.000	27.778	352499.41	0.0662	P	0.7
4	☐	1000.000	953.557	407308.72	0.0789	P	1.8
5	☐	2500.000	2156.719	478573.03	0.0953	P	2.5
6	☐	5000.000	4644.893	634658.18	0.1293	P	0.5
7	☐	10000.000	9714.756	977316.04	0.1985	P	0.4
8	☐	20000.000	20276.631	1601170.11	0.3426	P	1.2
9	☐			277466.55	0.0625	P	0.4

$$y = 1.3649\text{E-}005 * x + 0.0659$$

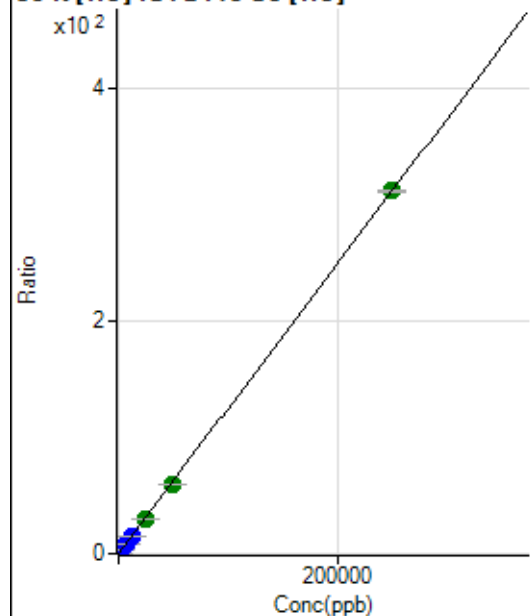
$$R = 0.9996$$

$$DL = 84.6$$

$$BEC = 4824$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	15567.06	0.0623	P	3.5
2	☐	50.000					
3	☐	500.000	475.139	163255.32	0.6527	P	1.2
4	☐	2500.000	2447.299	754220.35	3.1032	P	0.4
5	☐	6250.000	6127.503	1795586.93	7.6760	P	0.7
6	☐	12500.000	12092.264	3609026.30	15.0874	P	2.5
7	☐	25000.000	24011.384	6970986.70	29.8974	A	0.5
8	☐	50000.000	47281.555	13112933.80	58.8115	A	0.2
9	☐	250000.00	250666.57	68011082.07	311.5253	A	0.4

$$y = 0.0012 * x + 0.0623$$

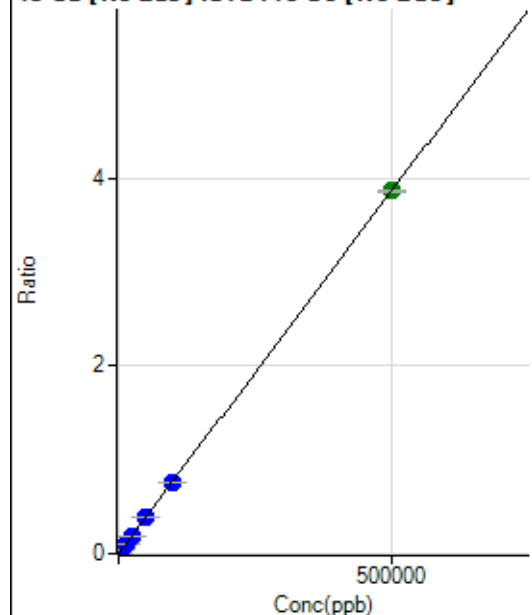
$$R = 0.9999$$

$$DL = 5.302$$

$$BEC = 50.14$$

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	213.90	0.0000	P	23.0
2	☐	50.000					
3	☐	500.000	461.074	19152.03	0.0036	P	1.3
4	☐	5000.000	4989.542	199066.75	0.0385	P	2.0
5	☐	12500.000	12311.929	477462.89	0.0951	P	1.7
6	☐	25000.000	24881.863	943049.36	0.1921	P	0.3
7	☐	50000.000	49452.721	1879579.79	0.3817	P	0.9
8	☐	100000.00	98664.422	3558701.64	0.7614	P	0.4
9	☐	500000.00	500332.59	17139771.22	3.8612	A	0.3

$$y = 7.7171\text{E-}006 * x + 4.0121\text{E-}005$$

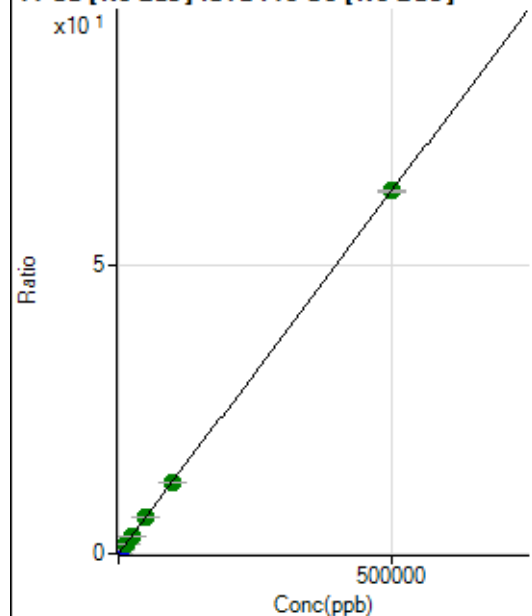
$$R = 1.0000$$

$$DL = 3.584$$

$$BEC = 5.199$$

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	9623.26	0.0018	P	2.6
2	☐	50.000					
3	☐	500.000	460.536	317935.43	0.0597	P	0.4
4	☐	5000.000	5025.084	3273547.10	0.6339	P	2.6
5	☐	12500.000	12364.663	7820666.15	1.5572	A	2.8
6	☐	25000.000	24903.598	15390956.25	3.1344	A	0.1
7	☐	50000.000	49494.954	30669522.22	6.2278	A	0.8
8	☐	100000.00	98942.795	58175774.22	12.4479	A	0.7
9	☐	500000.00	500269.93	279350692.3	62.9310	A	0.5

$$y = 1.2579\text{E-}004 * x + 0.0018$$

$$R = 1.0000$$

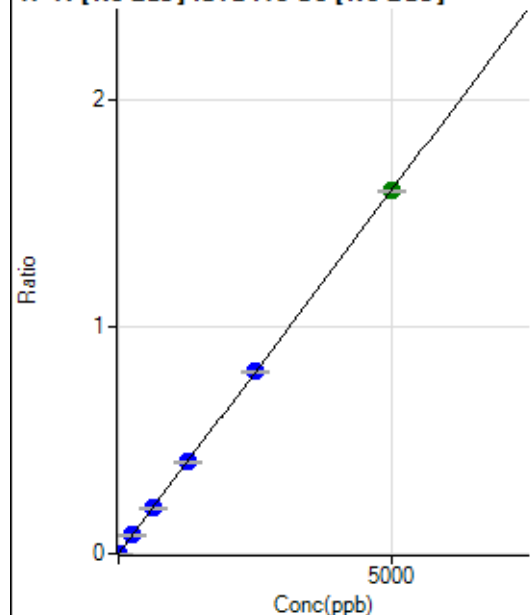
$$DL = 1.134$$

$$BEC = 14.34$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.01	0.0000	P	22.4
2	☐	0.500					
3	☐	5.000	5.163	8908.63	0.0017	P	3.8
4	☐	250.000	252.657	418339.94	0.0810	P	2.2
5	☐	625.000	622.052	1001485.84	0.1994	P	3.1
6	☐	1250.000	1259.145	1981929.60	0.4036	P	0.7
7	☐	2500.000	2508.808	3960392.84	0.8042	P	0.7
8	☐	5000.000	4993.545	7480761.71	1.6007	A	0.5
9	☐			3603.37	0.0008	P	6.2

$$y = 3.2054\text{E-}004 * x + 1.8761\text{E-}005$$

$$R = 1.0000$$

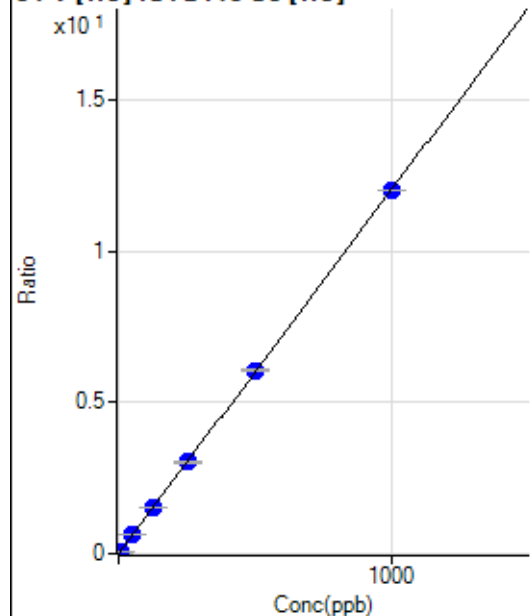
$$DL = 0.03926$$

$$BEC = 0.05853$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4.44	0.0000	P	44.3
2	☐	0.500					
3	☐	5.000	5.189	15608.46	0.0624	P	1.1
4	☐	50.000	51.099	149300.06	0.6143	P	1.0
5	☐	125.000	127.400	358252.23	1.5315	P	1.4
6	☐	250.000	251.413	722905.31	3.0223	P	2.9
7	☐	500.000	504.626	1414399.91	6.0662	P	0.2
8	☐	1000.000	996.978	2672205.43	11.9849	P	0.1
9	☐			408.90	0.0019	P	13.4

$$y = 0.0120 * x + 1.7827\text{E-}005$$

$$R = 1.0000$$

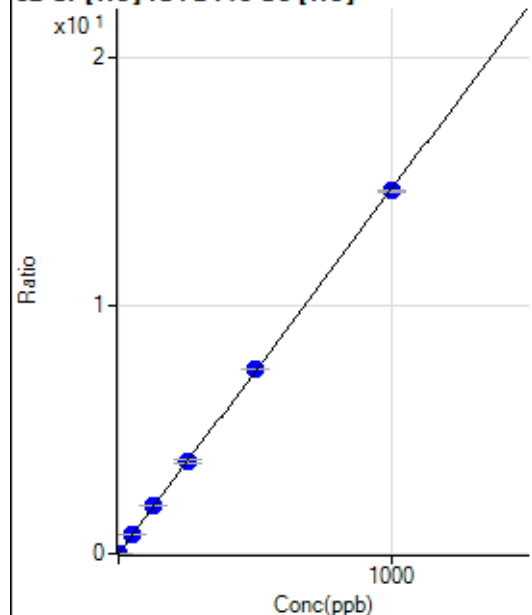
$$DL = 0.001972$$

$$BEC = 0.001483$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	777.81	0.0031	P	10.2
2	☐	0.200					
3	☐	2.000	1.989	8084.56	0.0323	P	1.2
4	☐	50.000	52.247	187238.72	0.7704	P	0.2
5	☐	125.000	129.939	447089.15	1.9113	P	1.0
6	☐	250.000	252.878	889050.91	3.7166	P	2.5
7	☐	500.000	506.667	1735537.70	7.4436	P	0.2
8	☐	1000.000	995.217	3259291.34	14.6179	P	0.4
9	☐			9915.70	0.0454	P	2.1

$$y = 0.0147 * x + 0.0031$$

$$R = 1.0000$$

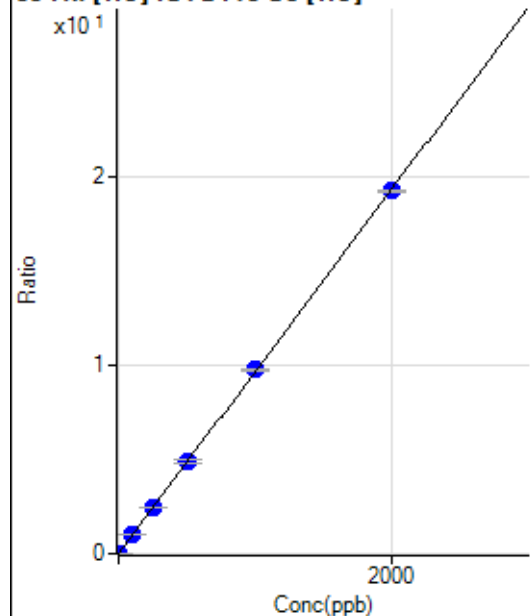
$$DL = 0.06487$$

$$BEC = 0.212$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	47.78	0.0002	P	39.9
2	☐	0.100					
3	☐	1.000	1.024	2522.48	0.0101	P	2.7
4	☐	100.000	103.642	243353.18	1.0013	P	0.4
5	☐	250.000	257.191	581151.04	2.4844	P	0.8
6	☐	500.000	505.655	1168323.98	4.8843	P	2.6
7	☐	1000.000	1009.976	2274551.65	9.7555	P	0.7
8	☐	2000.000	1992.517	4291120.98	19.2458	P	0.5
9	☐			9887.91	0.0453	P	3.3

$$y = 0.0097 * x + 1.9075E-004$$

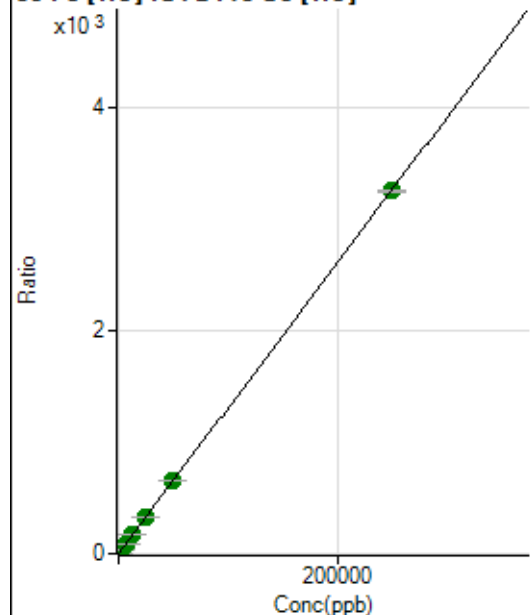
$$R = 1.0000$$

$$DL = 0.02366$$

$$BEC = 0.01975$$

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	4541.59	0.0182	P	1.0
2	☐	5.000					
3	☐	50.000	53.206	177473.17	0.7095	P	0.9
4	☐	2500.000	2627.766	8303157.25	34.1629	A	0.5
5	☐	6250.000	6569.900	19973927.53	85.3862	A	0.5
6	☐	12500.000	12868.851	40000470.80	167.2336	A	2.9
7	☐	25000.000	25663.816	77755670.26	333.4889	A	0.5
8	☐	50000.000	50360.222	145904166.2	654.3893	A	0.2
9	☐	250000.00	249833.85	708715445.4	3,246.311	A	0.6

$$y = 0.0130 * x + 0.0182$$

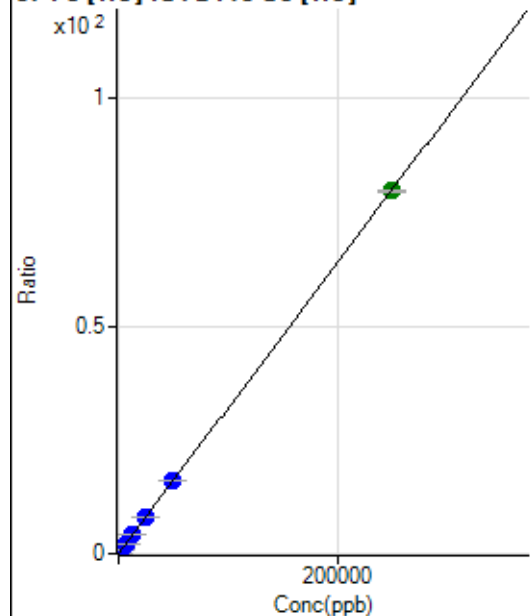
$$R = 1.0000$$

$$DL = 0.04363$$

$$BEC = 1.399$$

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	137.04	0.0005	P	15.5
2	☐	5.000					
3	☐	50.000	54.708	4504.53	0.0180	P	1.2
4	☐	2500.000	2632.137	204294.53	0.8406	P	0.5
5	☐	6250.000	6545.489	488764.63	2.0895	P	1.4
6	☐	12500.000	12793.976	976758.79	4.0836	P	2.8
7	☐	25000.000	25495.361	1897229.30	8.1370	P	0.4
8	☐	50000.000	50561.171	3597853.15	16.1365	P	0.3
9	☐	250000.00	249814.82	17405199.93	79.7256	A	0.5

$$y = 3.1914E-004 * x + 5.4856E-004$$

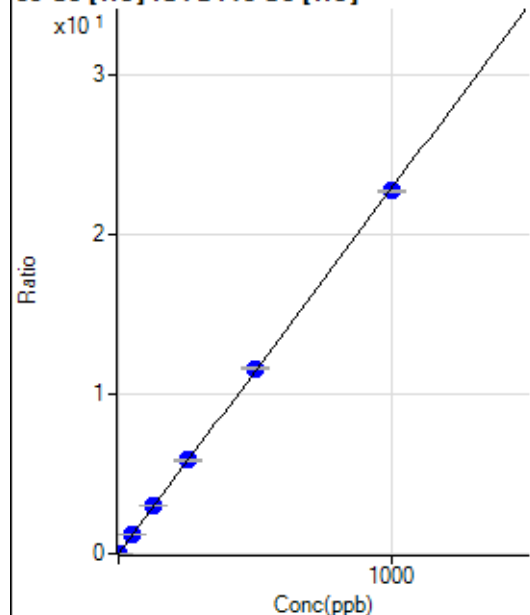
$$R = 1.0000$$

$$DL = 0.7978$$

$$BEC = 1.719$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	64.45	0.0003	P	16.5
2	☐	0.100					
3	☐	1.000	1.027	5936.85	0.0237	P	2.0
4	☐	50.000	53.086	294892.87	1.2133	P	0.7
5	☐	125.000	132.152	706449.40	3.0200	P	1.2
6	☐	250.000	256.407	1401618.30	5.8594	P	2.5
7	☐	500.000	507.713	2705092.95	11.6019	P	0.4
8	☐	1000.000	993.493	5061854.51	22.7024	P	0.4
9	☐			56418.13	0.2584	P	0.3

$$y = 0.0229 * x + 2.5789E-004$$

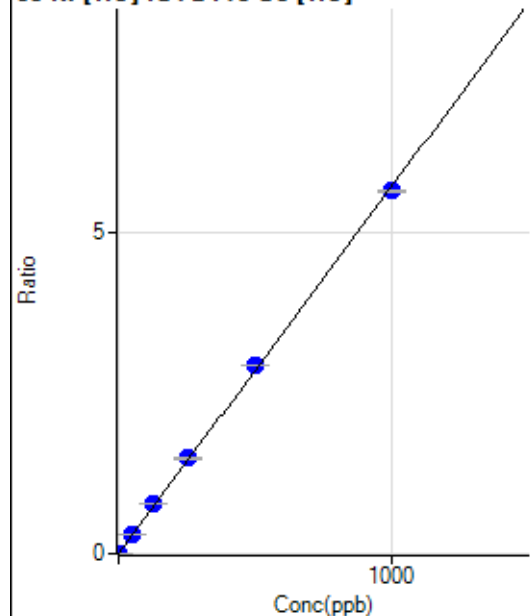
$$R = 0.9999$$

$$DL = 0.005596$$

$$BEC = 0.01129$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	92.22	0.0004	P	3.4
2	☐	0.100					
3	☐	1.000	1.120	1694.57	0.0068	P	4.4
4	☐	50.000	54.793	76249.30	0.3137	P	0.6
5	☐	125.000	134.914	180569.64	0.7719	P	0.9
6	☐	250.000	260.733	356753.06	1.4915	P	2.7
7	☐	500.000	514.328	685890.95	2.9417	P	0.5
8	☐	1000.000	988.674	1260735.41	5.6545	P	0.6
9	☐			11918.32	0.0546	P	2.0

$$y = 0.0057 * x + 3.6902E-004$$

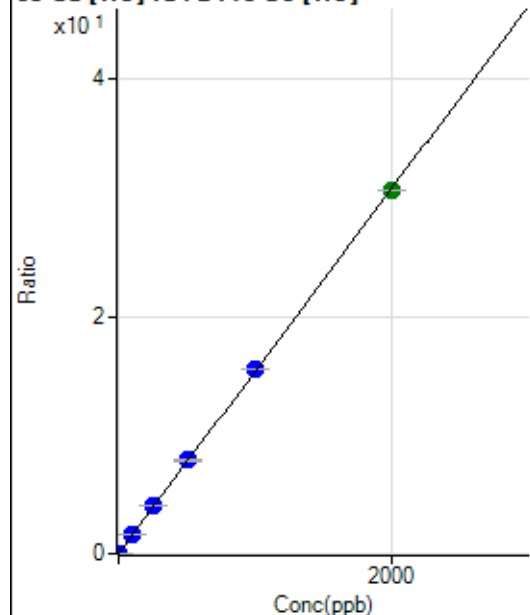
$$R = 0.9998$$

$$DL = 0.006508$$

$$BEC = 0.06453$$

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	600.02	0.0024	P	7.1
2	☐	0.200					
3	☐	2.000	2.082	8605.98	0.0344	P	2.7
4	☐	100.000	107.824	403332.93	1.6595	P	1.0
5	☐	250.000	265.780	956053.63	4.0871	P	0.9
6	☐	500.000	514.529	1892078.37	7.9100	P	2.6
7	☐	1000.000	1010.704	3622212.69	15.5355	P	0.6
8	☐	2000.000	1988.652	6814935.52	30.5652	A	0.1
9	☐			4626.36	0.0212	P	1.5

$$y = 0.0154 * x + 0.0024$$

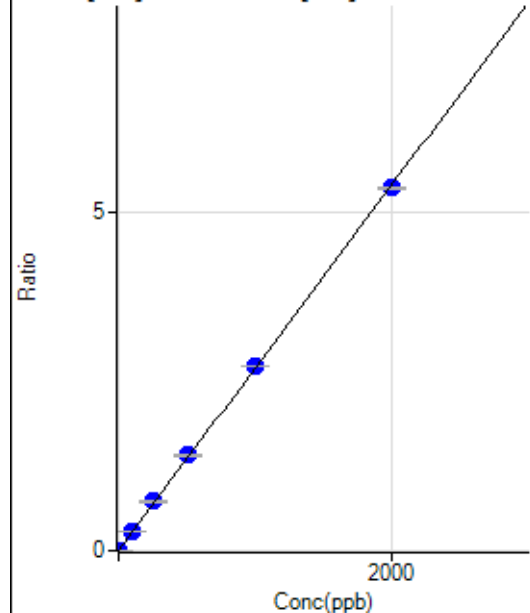
$$R = 0.9999$$

$$DL = 0.03331$$

$$BEC = 0.1563$$

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	627.80	0.0025	P	2.7
2	☐	0.200					
3	☐	2.000	1.733	1795.70	0.0072	P	3.9
4	☐	100.000	108.784	71827.73	0.2955	P	0.9
5	☐	250.000	269.108	170147.11	0.7274	P	1.6
6	☐	500.000	522.144	336992.67	1.4090	P	3.1
7	☐	1000.000	1011.417	635790.23	2.7269	P	0.4
8	☐	2000.000	1985.928	1193269.29	5.3518	P	0.6
9	☐			7556.51	0.0346	P	1.8

$$y = 0.0027 * x + 0.0025$$

$$R = 0.9999$$

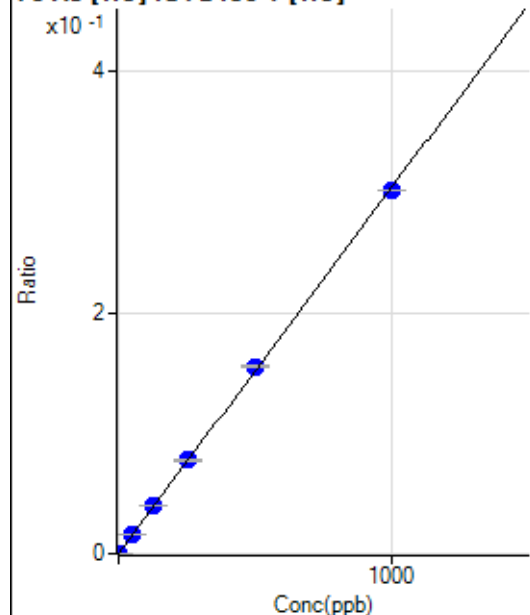
$$DL = 0.07527$$

$$BEC = 0.9326$$

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	10.49	0.0000	P	26.6
2	☐	0.100					
3	☐	1.000	0.964	407.42	0.0003	P	10.8
4	☐	50.000	52.243	20976.30	0.0159	P	0.8
5	☐	125.000	131.369	51306.64	0.0399	P	0.6
6	☐	250.000	255.788	102016.75	0.0777	P	2.8
7	☐	500.000	512.315	198589.36	0.1556	P	0.2
8	☐	1000.000	991.488	369046.73	0.3011	P	0.2
9	☐			455.57	0.0004	P	14.0

$$y = 3.0366\text{E-}004 * x + 7.7464\text{E-}006$$

$$R = 0.9999$$

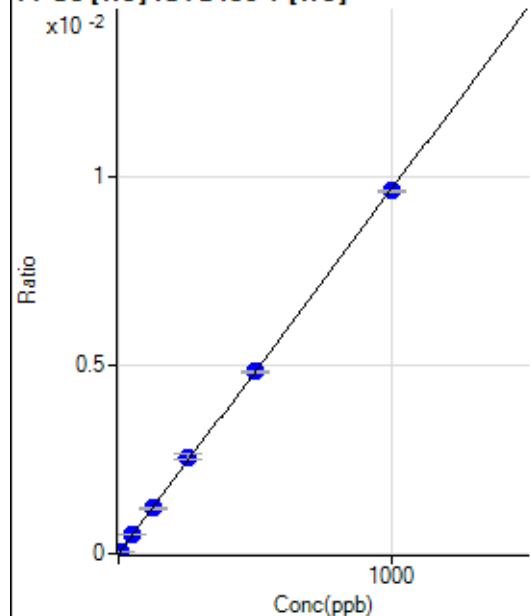
$$DL = 0.02036$$

$$BEC = 0.02551$$

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	0.00	0.0000	P	
2	☐	0.500					
3	☐	5.000	5.933	77.78	0.0001	P	17.7
4	☐	50.000	51.250	654.47	0.0005	P	3.6
5	☐	125.000	126.088	1566.78	0.0012	P	4.3
6	☐	250.000	265.958	3373.77	0.0026	P	5.0
7	☐	500.000	500.321	6171.42	0.0048	P	1.3
8	☐	1000.000	995.647	11792.76	0.0096	P	0.8
9	☐			6.67	0.0000	P	0.5

$$y = 9.6631\text{E-}006 * x + 0.0000\text{E+}000$$

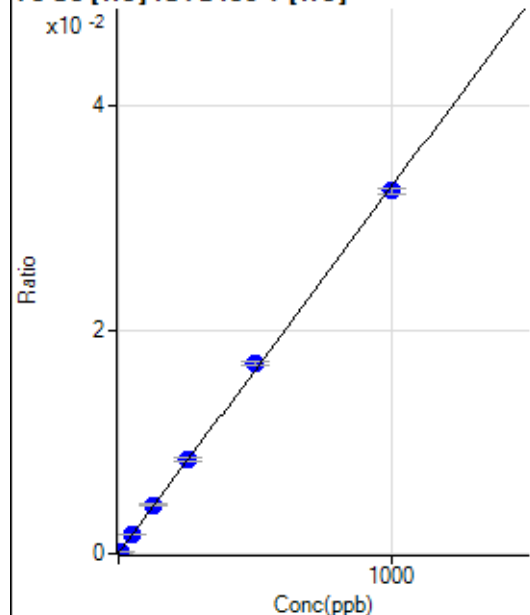
$$R = 0.9999$$

$$DL = 0$$

$$BEC = 0$$

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	48.77	0.0000	P	24.0
2	☐	0.500					
3	☐	5.000	6.155	322.23	0.0002	P	5.1
4	☐	50.000	53.354	2356.38	0.0018	P	1.9
5	☐	125.000	132.570	5628.30	0.0044	P	1.8
6	☐	250.000	256.177	11062.93	0.0084	P	4.5
7	☐	500.000	517.823	21689.09	0.0170	P	1.9
8	☐	1000.000	988.424	39716.49	0.0324	P	1.4
9	☐			63.58	0.0001	P	17.2

$$y = 3.2743\text{E-}005 * x + 3.6000\text{E-}005$$

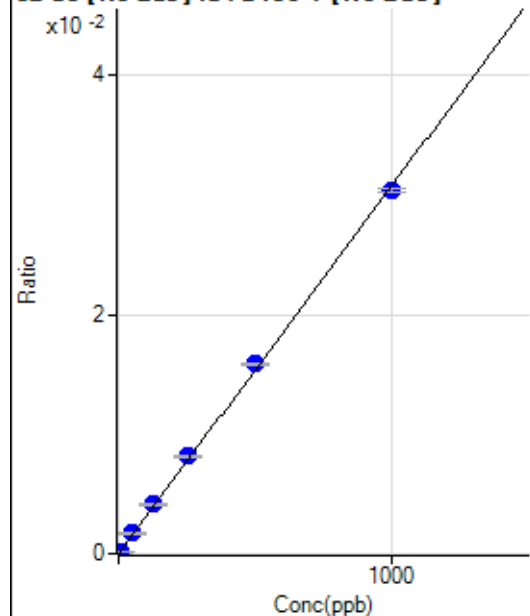
$$R = 0.9997$$

$$DL = 0.792$$

$$BEC = 1.099$$

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	-17.08	0.0000	P	-96.
2	☐	0.500					
3	☐	5.000	5.888	1466.49	0.0002	P	3.2
4	☐	50.000	55.594	13646.91	0.0017	P	3.5
5	☐	125.000	133.605	32261.87	0.0041	P	2.7
6	☐	250.000	264.724	62889.09	0.0081	P	0.4
7	☐	500.000	515.618	123516.17	0.0159	P	0.6
8	☐	1000.000	987.150	228573.39	0.0304	P	1.2
9	☐			104.77	0.0000	P	34.2

$$y = 3.0757\text{E-}005 * x - 2.0597\text{E-}006$$

$$R = 0.9997$$

$$DL = 0.1928$$

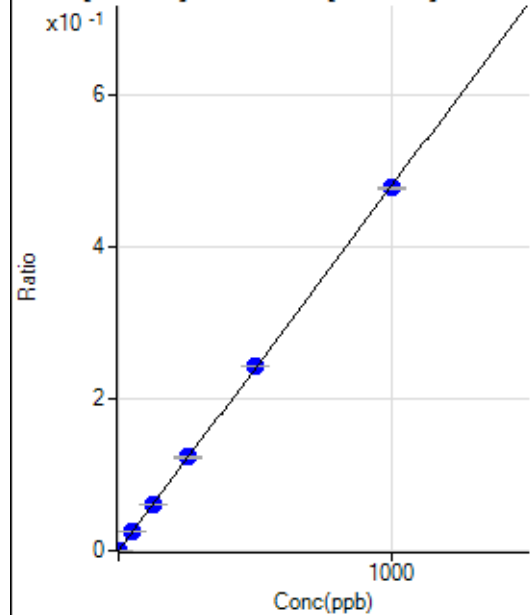
$$BEC = -0.06697$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			405.57		P	9.1
2	☐						
3	☐			345.57		P	9.3
4	☐			386.68		P	2.3
5	☐			378.90		P	2.2
6	☐			350.01		P	7.2
7	☐			355.57		P	15.2
8	☐			384.46		P	5.8
9	☐			413.35		P	8.2

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	711.15	0.0001	P	9.0
2	☐	0.100					
3	☐	1.000	0.929	4353.63	0.0005	P	3.7
4	☐	50.000	51.436	198126.07	0.0248	P	2.6
5	☐	125.000	126.728	478833.87	0.0610	P	2.5
6	☐	250.000	256.002	950629.63	0.1230	P	0.9
7	☐	500.000	506.586	1895990.12	0.2434	P	0.6
8	☐	1000.000	994.919	3598578.77	0.4780	P	0.3
9	☐			14719.19	0.0021	P	2.6

$$y = 4.8032E-004 * x + 8.5415E-005$$

$$R = 0.9999$$

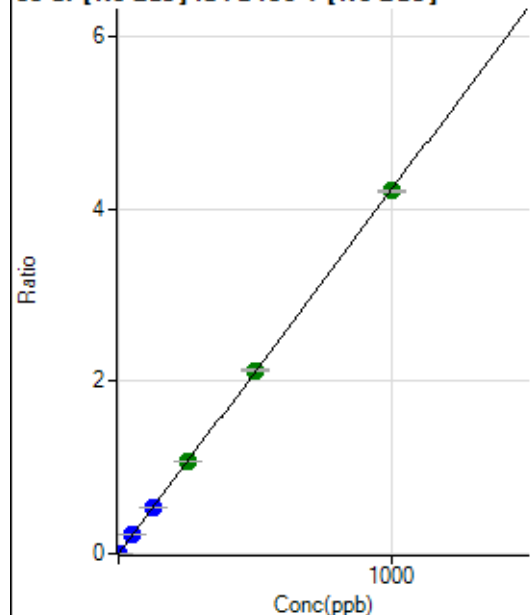
$$DL = 0.04801$$

$$BEC = 0.1778$$

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	311.13	0.0000	P	5.0
2	☐	0.100					
3	☐	1.000	0.958	33473.18	0.0041	P	0.3
4	☐	50.000	51.099	1725968.03	0.2160	P	2.6
5	☐	125.000	126.304	4192748.44	0.5338	P	2.9
6	☐	250.000	253.911	8289811.65	1.0730	A	0.7
7	☐	500.000	504.275	16599242.21	2.1310	A	0.3
8	☐	1000.000	996.667	31710173.63	4.2118	A	0.3
9	☐			123690.60	0.0180	P	0.6

$$y = 0.0042 * x + 3.7375E-005$$

$$R = 1.0000$$

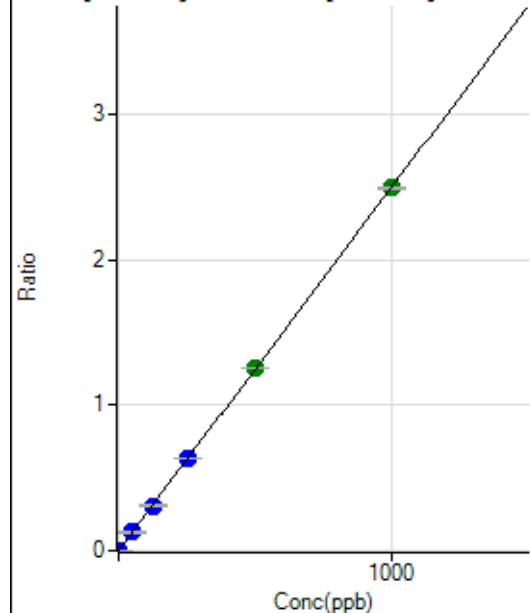
$$DL = 0.001329$$

$$BEC = 0.008844$$

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	480.58	0.0001	P	11.9
2	☐	0.100					
3	☐	1.000	0.916	19180.26	0.0023	P	0.3
4	☐	50.000	50.368	1004598.45	0.1257	P	2.1
5	☐	125.000	124.285	2435687.55	0.3101	P	2.8
6	☐	250.000	252.026	4857477.84	0.6287	P	0.3
7	☐	500.000	501.714	9748791.19	1.2515	A	0.4
8	☐	1000.000	998.707	18756724.55	2.4913	A	0.2
9	☐			5643.03	0.0008	P	3.9

$$y = 0.0025 * x + 5.7760E-005$$

$$R = 1.0000$$

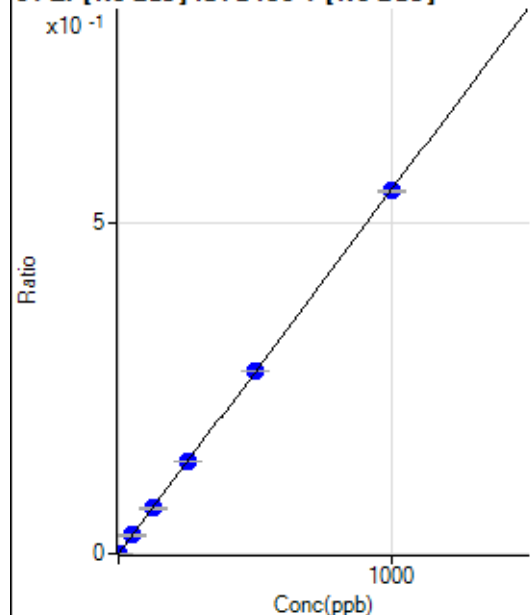
$$DL = 0.008258$$

$$BEC = 0.02316$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	88.89	0.0000	P	46.5
2	☐	0.100					
3	☐	1.000	0.919	4220.25	0.0005	P	1.6
4	☐	50.000	50.839	223241.32	0.0279	P	3.1
5	☐	125.000	125.778	542765.11	0.0691	P	2.7
6	☐	250.000	254.154	1078612.28	0.1396	P	0.3
7	☐	500.000	503.143	2152776.55	0.2764	P	0.6
8	☐	1000.000	997.251	4124251.70	0.5478	P	0.3
9	☐			1352.91	0.0002	P	13.5

$$y = 5.4928\text{E-}004 * x + 1.0695\text{E-}005$$

$$R = 1.0000$$

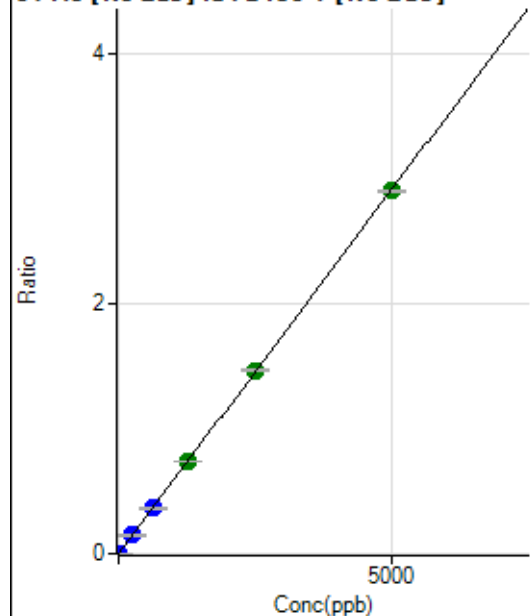
$$DL = 0.02719$$

$$BEC = 0.01947$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	238.90	0.0000	P	27.1
2	☐	0.500					
3	☐	5.000	4.909	23667.83	0.0029	P	4.3
4	☐	250.000	254.005	1183126.37	0.1480	P	2.4
5	☐	625.000	626.267	2867043.70	0.3650	P	2.1
6	☐	1250.000	1263.157	5686975.39	0.7361	A	0.2
7	☐	2500.000	2522.246	11448742.44	1.4698	A	0.3
8	☐	5000.000	4985.229	21872300.84	2.9050	A	0.4
9	☐			10162.45	0.0015	P	14.0

$$y = 5.8272\text{E-}004 * x + 2.8706\text{E-}005$$

$$R = 1.0000$$

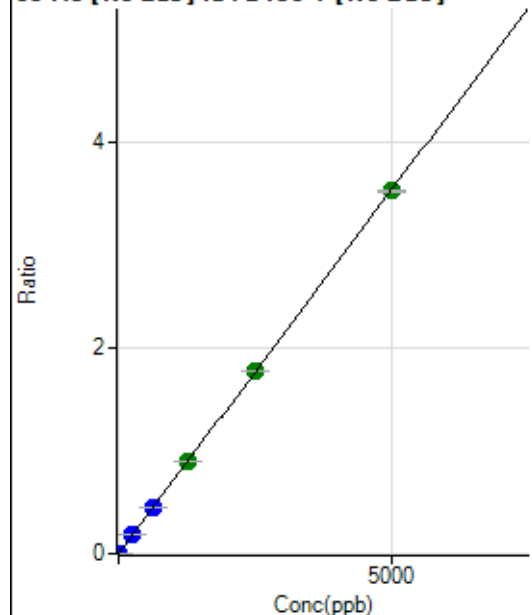
$$DL = 0.03998$$

$$BEC = 0.04926$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	105.56	0.0000	P	35.1
2	☐	0.500					
3	☐	5.000	5.012	29083.23	0.0036	P	1.5
4	☐	250.000	254.288	1434730.10	0.1795	P	2.2
5	☐	625.000	631.593	3502522.74	0.4459	P	2.2
6	☐	1250.000	1266.906	6909667.34	0.8943	A	0.4
7	☐	2500.000	2515.324	13830986.07	1.7756	A	0.4
8	☐	5000.000	4987.073	26505705.10	3.5205	A	0.6
9	☐			14582.99	0.0021	P	10.8

$$y = 7.0592E-004 * x + 1.2666E-005$$

$$R = 1.0000$$

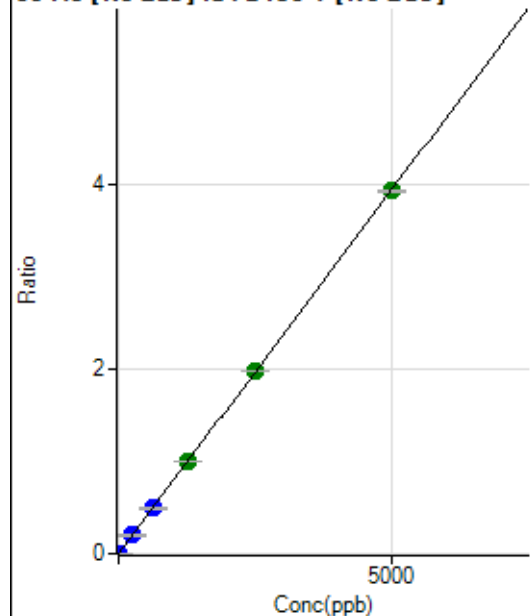
$$DL = 0.01891$$

$$BEC = 0.01794$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	202.79	0.0000	P	23.1
2	☐	0.500					
3	☐	5.000	4.951	32195.54	0.0039	P	2.8
4	☐	250.000	252.545	1592663.41	0.1993	P	1.9
5	☐	625.000	627.781	3891007.29	0.4953	P	2.2
6	☐	1250.000	1263.332	7700691.14	0.9967	A	0.1
7	☐	2500.000	2515.465	15458926.21	1.9846	A	0.1
8	☐	5000.000	4988.460	29631781.91	3.9357	A	0.7
9	☐			21887.13	0.0032	P	7.8

$$y = 7.8895E-004 * x + 2.4382E-005$$

$$R = 1.0000$$

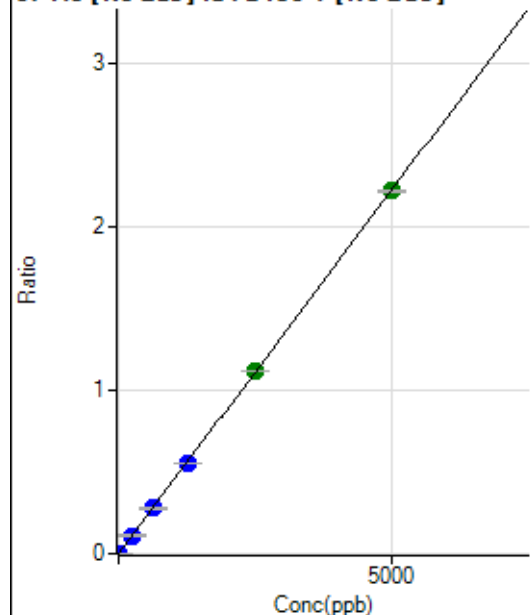
$$DL = 0.02144$$

$$BEC = 0.0309$$

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	72.23	0.0000	P	32.9
2	☐	0.500					
3	☐	5.000	4.971	18164.98	0.0022	P	4.5
4	☐	250.000	250.693	890349.65	0.1114	P	1.7
5	☐	625.000	623.823	2177430.71	0.2772	P	2.2
6	☐	1250.000	1250.133	4291369.32	0.5555	P	0.3
7	☐	2500.000	2516.987	8711110.70	1.1183	A	0.3
8	☐	5000.000	4991.586	16698025.37	2.2178	A	0.6
9	☐			8644.68	0.0013	P	11.0

$$y = 4.4431\text{E-}004 * x + 8.6709\text{E-}006$$

$$R = 1.0000$$

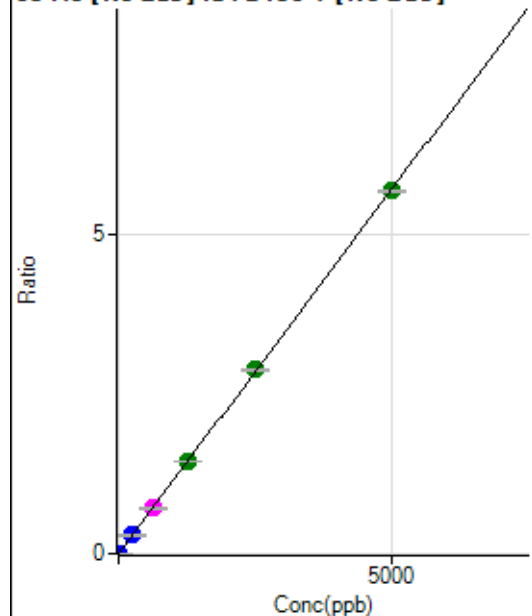
$$DL = 0.01924$$

$$BEC = 0.01952$$

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	188.90	0.0000	P	22.2
2	☐	0.500					
3	☐	5.000	4.985	46758.23	0.0057	P	1.2
4	☐	250.000	252.756	2304201.31	0.2883	P	2.4
5	☐	625.000	628.174	5628373.83	0.7165	M	2.5
6	☐	1250.000	1266.773	11163256.15	1.4449	A	0.3
7	☐	2500.000	2523.433	22419986.09	2.8783	A	0.2
8	☐	5000.000	4983.556	42797238.11	5.6843	A	0.5
9	☐			22109.75	0.0032	P	9.7

$$y = 0.0011 * x + 2.2679\text{E-}005$$

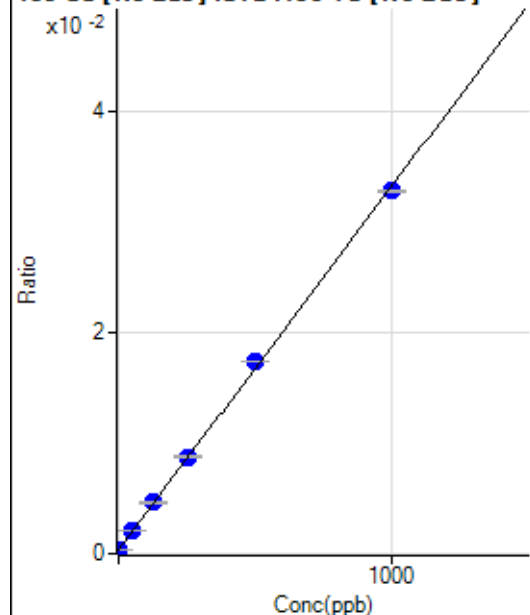
$$R = 1.0000$$

$$DL = 0.01326$$

$$BEC = 0.01988$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3681.20	0.0003	P	5.0
2	☐	0.100					
3	☐	1.000	1.039	3989.64	0.0004	P	4.9
4	☐	50.000	53.683	22643.83	0.0021	P	1.6
5	☐	125.000	131.078	50384.99	0.0046	P	3.2
6	☐	250.000	256.084	94346.84	0.0087	P	1.2
7	☐	500.000	518.999	190691.01	0.0174	P	0.5
8	☐	1000.000	988.036	352063.37	0.0328	P	0.4
9	☐			3069.91	0.0003	P	6.2

$$y = 3.2830\text{E-}005 * x + 3.3235\text{E-}004$$

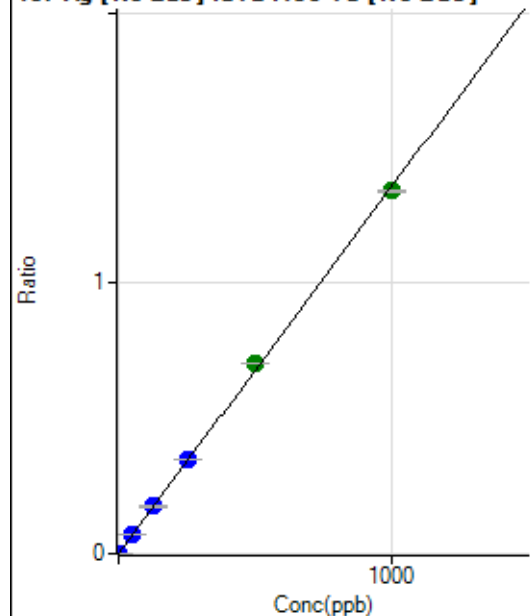
$$R = 0.9997$$

$$DL = 1.515$$

$$BEC = 10.12$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	166.68	0.0000	P	22.6
2	☐	0.100					
3	☐	1.000	1.031	15392.30	0.0014	P	2.1
4	☐	50.000	54.379	797622.55	0.0738	P	1.9
5	☐	125.000	129.899	1915461.72	0.1762	P	3.5
6	☐	250.000	256.509	3756954.69	0.3480	P	0.4
7	☐	500.000	517.221	7702688.72	0.7017	A	0.4
8	☐	1000.000	988.931	14413791.81	1.3416	A	0.8
9	☐			1608.49	0.0002	P	20.8

$$y = 0.0014 * x + 1.5041\text{E-}005$$

$$R = 0.9998$$

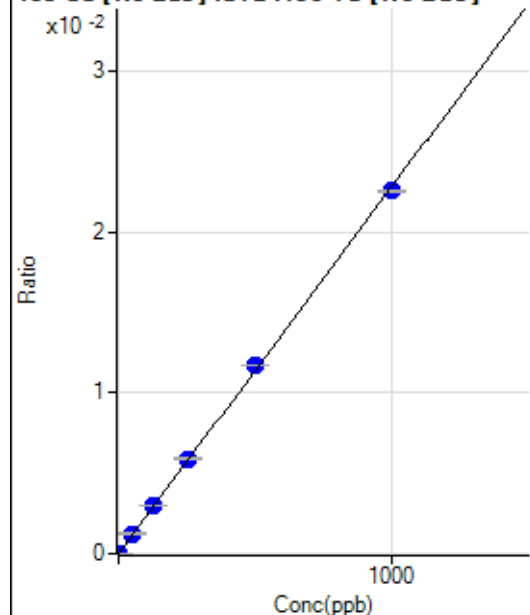
$$DL = 0.007504$$

$$BEC = 0.01109$$

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	6.95	0.0000	P	69.4
2	☐	0.100					
3	☐	1.000	0.935	238.89	0.0000	P	5.7
4	☐	50.000	54.339	13387.14	0.0012	P	5.1
5	☐	125.000	131.385	32554.24	0.0030	P	2.5
6	☐	250.000	258.610	63631.15	0.0059	P	0.9
7	☐	500.000	514.088	128612.48	0.0117	P	1.0
8	☐	1000.000	989.789	242346.31	0.0226	P	0.2
9	☐			79.17	0.0000	P	15.1

$$y = 2.2789\text{E-}005 * x + 6.2753\text{E-}007$$

$$R = 0.9998$$

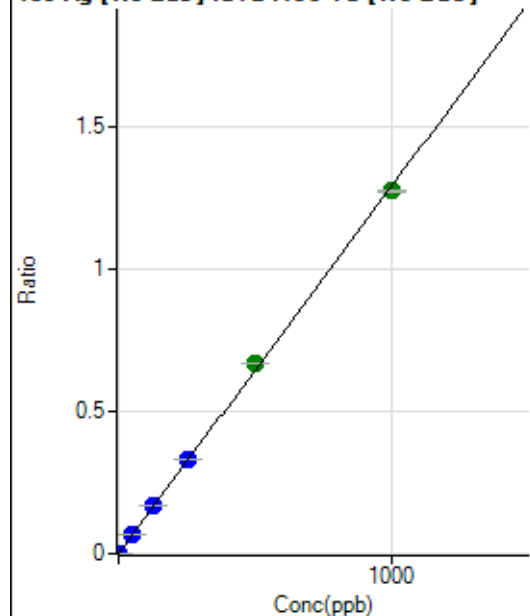
$$DL = 0.05729$$

$$BEC = 0.02754$$

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	88.89	0.0000	P	5.3
2	☐	0.100					
3	☐	1.000	1.029	14527.46	0.0013	P	2.3
4	☐	50.000	54.273	756219.88	0.0700	P	2.4
5	☐	125.000	130.405	1827200.04	0.1681	P	2.9
6	☐	250.000	257.001	3576437.15	0.3313	P	0.5
7	☐	500.000	518.823	7341260.93	0.6688	A	0.4
8	☐	1000.000	987.949	13681587.46	1.2735	A	0.5
9	☐			1489.04	0.0002	P	26.2

$$y = 0.0013 * x + 8.0258\text{E-}006$$

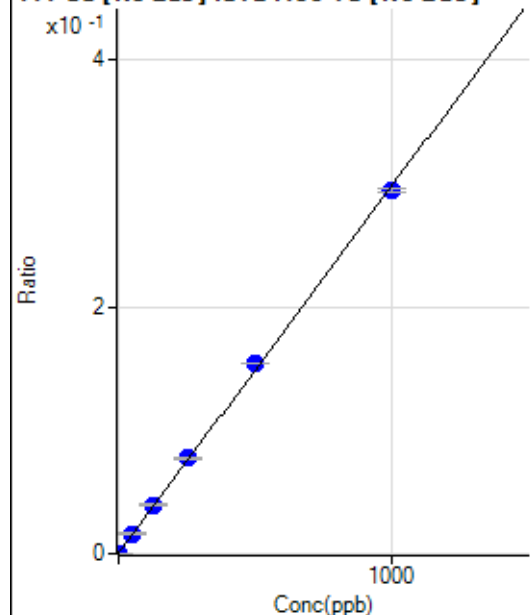
$$R = 0.9997$$

$$DL = 0.0009925$$

$$BEC = 0.006226$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2580.31	0.0002	P	5.0
2	☐	0.100					
3	☐	1.000	1.034	5884.30	0.0005	P	2.0
4	☐	50.000	54.209	176858.99	0.0164	P	2.1
5	☐	125.000	130.453	424341.04	0.0390	P	4.1
6	☐	250.000	258.607	833168.23	0.0772	P	1.1
7	☐	500.000	518.332	1695498.77	0.1545	P	0.5
8	☐	1000.000	987.790	3160061.62	0.2941	P	0.9
9	☐			2776.88	0.0003	P	6.2

$$y = 2.9754\text{E-}004 * x + 2.3296\text{E-}004$$

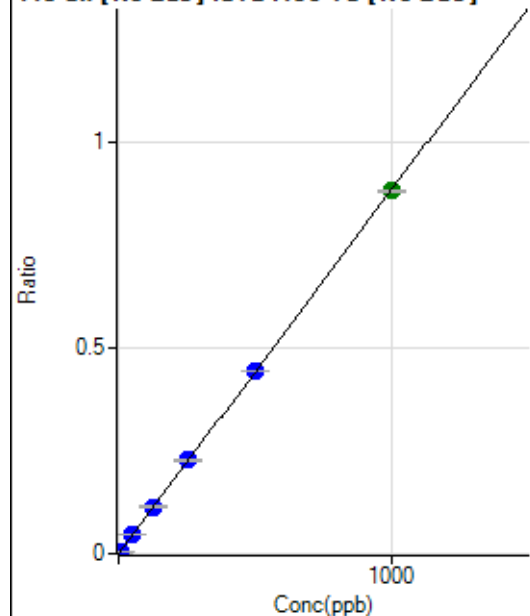
$$R = 0.9997$$

$$DL = 0.1169$$

$$BEC = 0.783$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	716.72	0.0001	P	11.0
2	☐	0.500					
3	☐	5.000	5.256	51182.92	0.0047	P	1.5
4	☐	50.000	53.040	506458.88	0.0469	P	2.1
5	☐	125.000	128.655	1234215.05	0.1136	P	3.5
6	☐	250.000	257.098	2449214.36	0.2269	P	1.1
7	☐	500.000	500.771	4850129.45	0.4418	P	0.2
8	☐	1000.000	997.230	9452106.20	0.8798	A	0.5
9	☐			4325.84	0.0004	P	0.6

$$y = 8.8217\text{E-}004 * x + 6.4706\text{E-}005$$

$$R = 1.0000$$

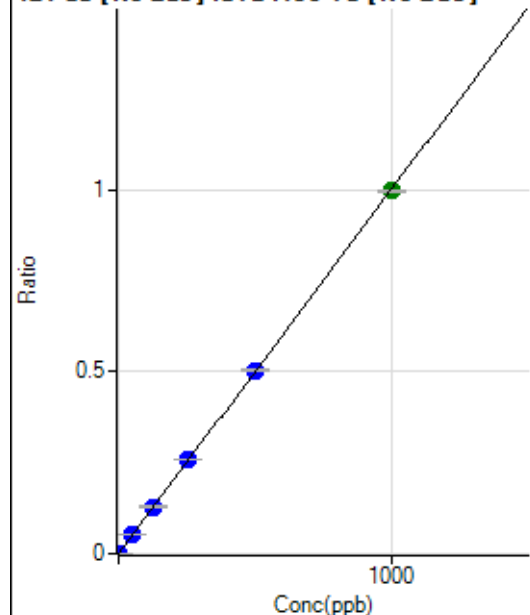
$$DL = 0.02415$$

$$BEC = 0.07335$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	161.12	0.0000	P	8.2
2	☐	0.200					
3	☐	2.000	1.869	20518.54	0.0019	P	1.9
4	☐	50.000	52.537	568555.49	0.0526	P	2.1
5	☐	125.000	127.617	1388517.82	0.1277	P	3.1
6	☐	250.000	257.270	2780133.96	0.2575	P	0.7
7	☐	500.000	503.987	5537644.35	0.5045	P	0.3
8	☐	1000.000	995.735	10707661.78	0.9967	A	0.9
9	☐			14697.11	0.0015	P	2.0

$$y = 0.0010 * x + 1.4550E-005$$

$$R = 1.0000$$

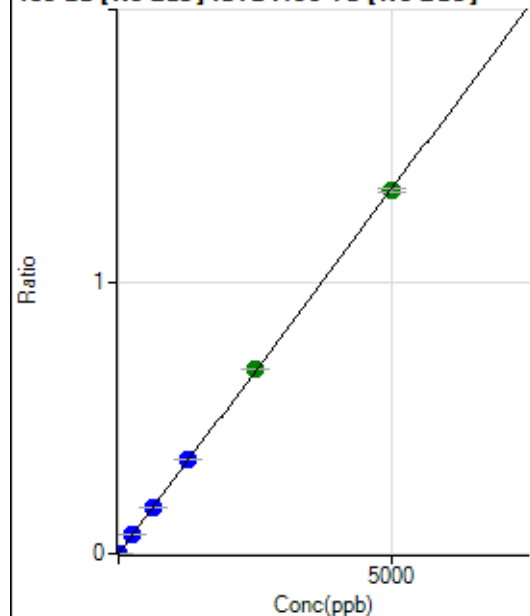
$$DL = 0.003574$$

$$BEC = 0.01454$$

Weight: <None>

Min Conc: 0

135 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	28.8
2	☐	1.000					
3	☐	10.000	10.372	30320.01	0.0028	P	1.3
4	☐	250.000	260.094	753861.87	0.0697	P	2.4
5	☐	625.000	634.146	1848280.79	0.1700	P	3.2
6	☐	1250.000	1285.318	3720776.91	0.3447	P	0.7
7	☐	2500.000	2526.913	7438083.67	0.6776	A	0.6
8	☐	5000.000	4976.066	14335250.15	1.3343	A	0.9
9	☐			2236.39	0.0002	P	7.3

$$y = 2.6815E-004 * x + 4.0140E-006$$

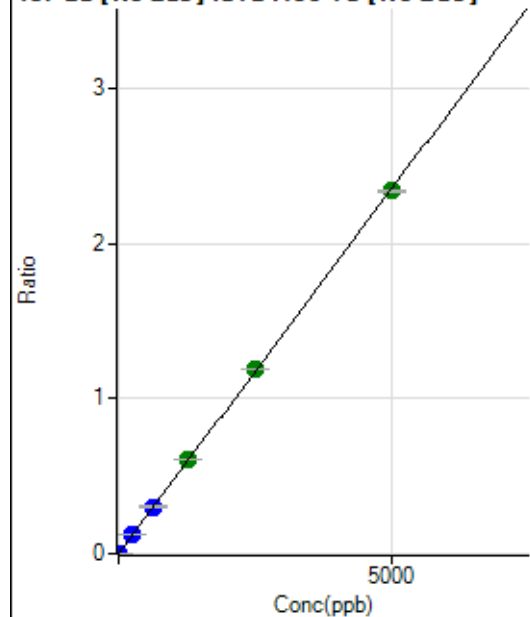
$$R = 1.0000$$

$$DL = 0.01295$$

$$BEC = 0.01497$$

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	66.67	0.0000	P	33.1
2	☐	1.000					
3	☐	10.000	10.217	52330.08	0.0048	P	0.5
4	☐	250.000	260.227	1321645.76	0.1223	P	2.5
5	☐	625.000	638.356	3260320.17	0.3000	P	3.1
6	☐	1250.000	1281.770	6502058.39	0.6023	A	0.4
7	☐	2500.000	2531.129	13055623.64	1.1893	A	0.2
8	☐	5000.000	4974.312	25110967.75	2.3373	A	0.5
9	☐			4011.87	0.0004	P	9.8

$$y = 4.6987\text{E-}004 * x + 6.0189\text{E-}006$$

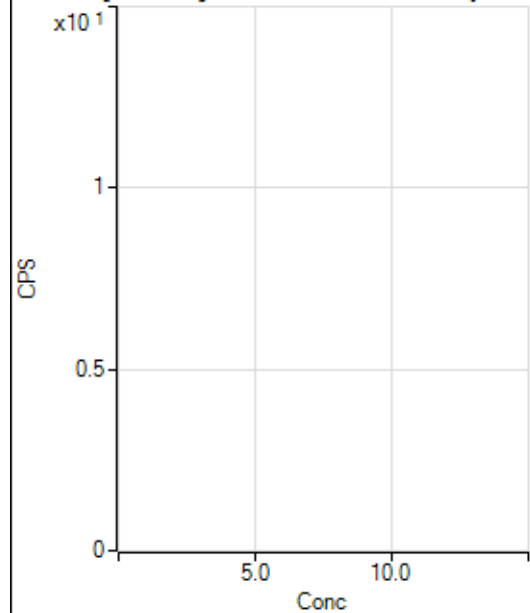
$$R = 0.9999$$

$$DL = 0.01271$$

$$BEC = 0.01281$$

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	☐			4.44		P	173.
4	☐			57.78		P	65.6
5	☐			197.79		P	11.8
6	☐			295.57		P	22.1
7	☐			648.93		P	4.2
8	☐			1186.76		P	9.7
9	☐			240.01		P	22.2

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	☐			8.89		P	57.3
5	☐			25.56		P	19.9
6	☐			43.34		P	13.3
7	☐			72.22		P	14.1
8	☐			138.89		P	28.4
9	☐			90.00		P	11.1

156 Dy [No Gas] No available calibration points

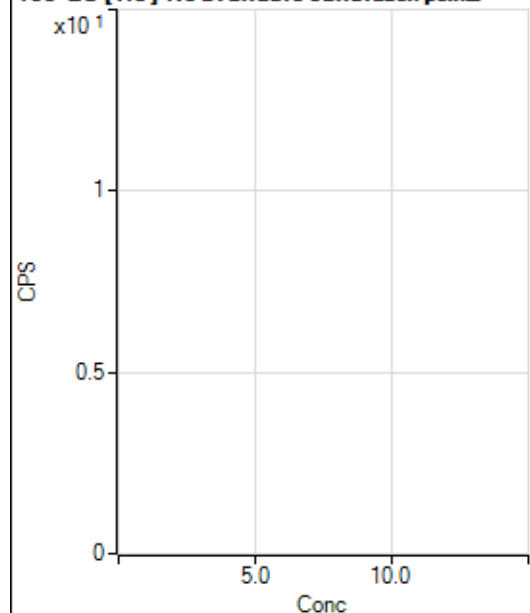
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.55		P	86.6
2	☐						
3	☐			16.66		P	86.6
4	☐			19.45		P	24.7
5	☐			50.00		P	44.1
6	☐			75.00		P	44.4
7	☐			130.56		P	16.1
8	☐			194.45		P	32.7
9	☐			127.78		P	27.2

156 Dy [He] No available calibration points

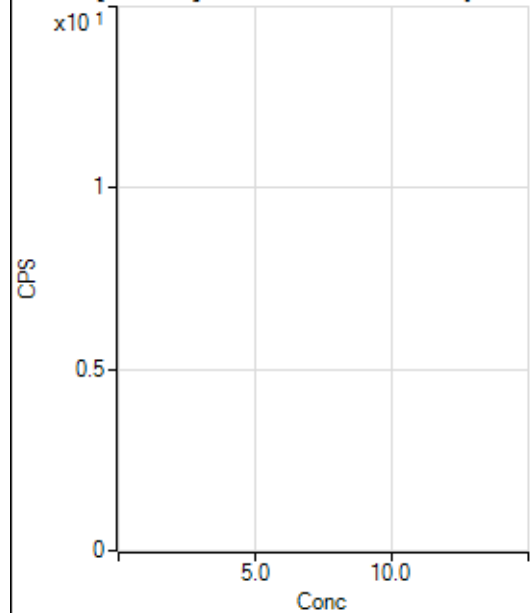
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	50.0
2	☐						
3	☐			4.44		P	114.
4	☐			23.33		P	14.3
5	☐			40.00		P	44.1
6	☐			75.56		P	24.3
7	☐			141.12		P	7.6
8	☐			253.34		P	4.6
9	☐			71.11		P	38.2

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			52.78		P	24.1
2	☐						
3	☐			66.67		P	33.1
4	☐			55.56		P	34.6
5	☐			44.45		P	28.7
6	☐			52.78		P	9.1
7	☐			86.12		P	20.1
8	☐			138.90		P	36.2
9	☐			122.23		P	15.7

160 Gd [He] No available calibration points

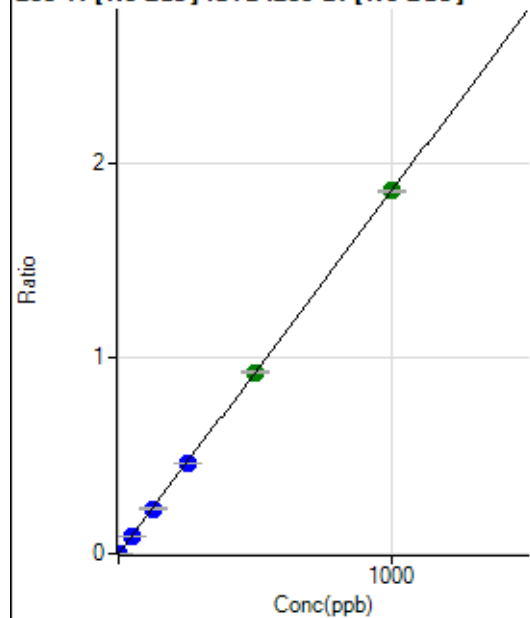
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			160.00		P	5.5
2	☐						
3	☐			170.00		P	13.7
4	☐			151.11		P	15.7
5	☐			193.34		P	13.7
6	☐			166.67		P	12.2
7	☐			165.56		P	12.3
8	☐			172.23		P	20.1
9	☐			206.67		P	10.1

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			25.00		P	66.7
2	☐						
3	☐			30.55		P	15.7
4	☐			19.45		P	24.7
5	☐			38.89		P	32.7
6	☐			50.00		P	44.1
7	☐			30.56		P	41.7
8	☐			75.00		P	22.2
9	☐			58.34		P	14.3

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			15.56		P	32.7
2	☐						
3	☐			27.78		P	13.9
4	☐			15.56		P	32.7
5	☐			16.67		P	20.0
6	☐			24.44		P	47.9
7	☐			21.11		P	9.1
8	☐			22.22		P	31.2
9	☐			31.11		P	37.6

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	86.12	0.0000	P	29.5
2	☐	0.100					
3	☐	1.000	0.932	12973.57	0.0017	P	1.9
4	☐	50.000	49.178	673585.67	0.0913	P	1.6
5	☐	125.000	123.272	1684588.01	0.2289	P	2.6
6	☐	250.000	248.501	3350886.40	0.4614	P	0.5
7	☐	500.000	500.863	6730214.73	0.9300	A	0.7
8	☐	1000.000	1000.200	12975903.33	1.8572	A	0.5
9	☐			2497.58	0.0004	P	26.0

$$y = 0.0019 * x + 1.1407E-005$$

$$R = 1.0000$$

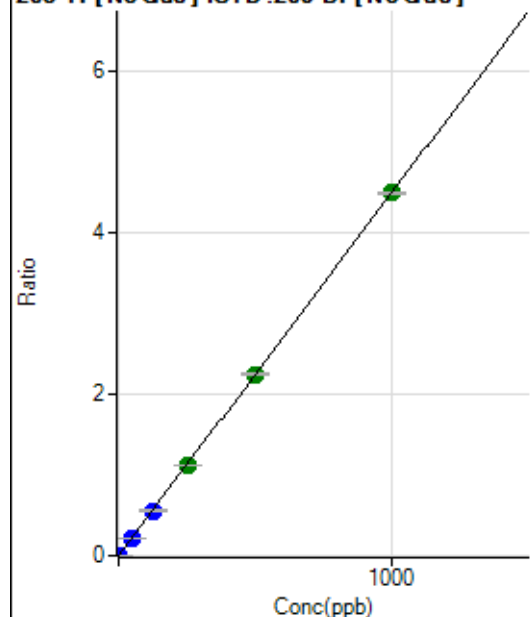
$$DL = 0.005443$$

$$BEC = 0.006143$$

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	258.35	0.0000	P	23.3
2	☐	0.100					
3	☐	1.000	0.908	30694.75	0.0041	P	1.6
4	☐	50.000	49.397	1639403.46	0.2223	P	1.9
5	☐	125.000	123.651	4094278.56	0.5564	P	3.1
6	☐	250.000	249.581	8154973.36	1.1230	A	0.8
7	☐	500.000	500.083	16282759.74	2.2501	A	0.9
8	☐	1000.000	1000.262	31444252.09	4.5006	A	0.3
9	☐			5682.04	0.0010	P	17.5

$$y = 0.0045 * x + 3.4225E-005$$

$$R = 1.0000$$

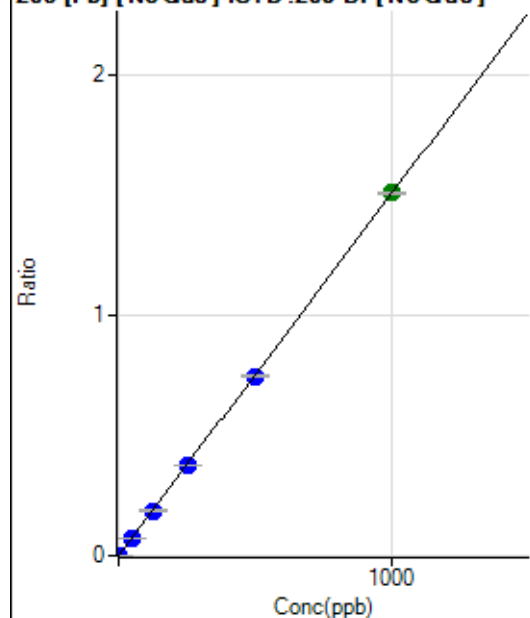
$$DL = 0.005319$$

$$BEC = 0.007607$$

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	579.66	0.0001	P	14.1
2	☐	0.100					
3	☐	1.000	0.939	11132.77	0.0015	P	1.6
4	☐	50.000	49.557	552032.04	0.0749	P	1.9
5	☐	125.000	123.389	1370467.65	0.1863	P	3.4
6	☐	250.000	248.916	2727911.14	0.3756	P	0.5
7	☐	500.000	496.601	5422759.09	0.7494	P	1.1
8	☐	1000.000	1002.194	10565483.92	1.5122	A	0.6
9	☐			8962.55	0.0015	P	3.7

$$y = 0.0015 * x + 7.6782E-005$$

$$R = 1.0000$$

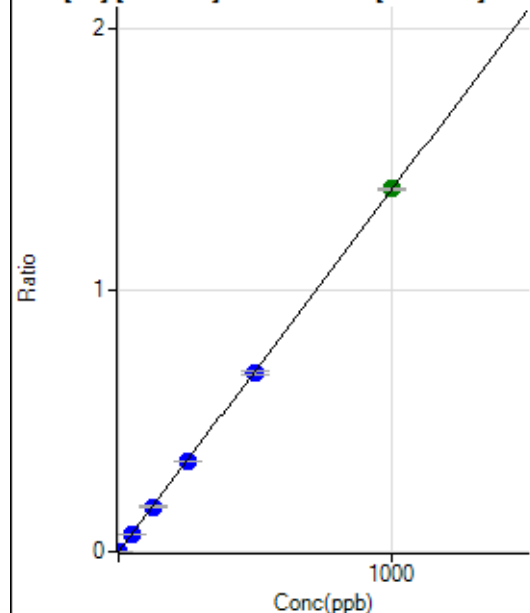
$$DL = 0.02152$$

$$BEC = 0.05089$$

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	518.54	0.0001	P	6.6
2	☐	0.100					
3	☐	1.000	0.896	9742.72	0.0013	P	1.7
4	☐	50.000	49.260	502852.21	0.0682	P	1.5
5	☐	125.000	123.230	1254245.50	0.1705	P	3.3
6	☐	250.000	248.960	2500219.67	0.3443	P	0.5
7	☐	500.000	494.360	4946789.00	0.6836	P	1.3
8	☐	1000.000	1003.338	9692991.65	1.3873	A	0.2
9	☐			7348.54	0.0013	P	1.7

$$y = 0.0014 * x + 6.8690E-005$$

$$R = 1.0000$$

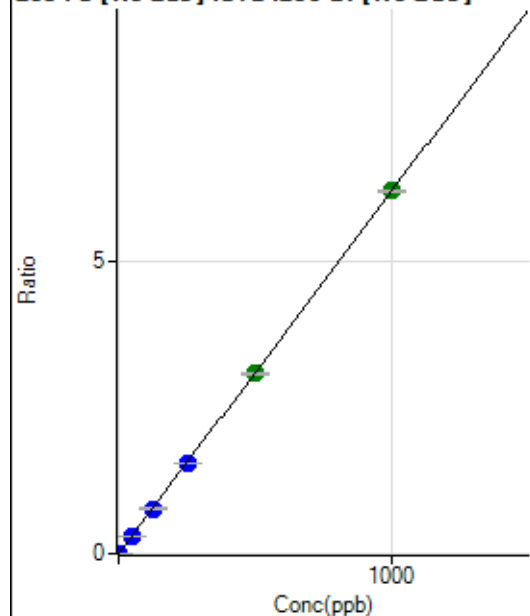
$$DL = 0.009776$$

$$BEC = 0.04968$$

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	2259.40	0.0003	P	7.4
2	☐	0.100					
3	☐	1.000	0.911	44303.98	0.0059	P	1.4
4	☐	50.000	49.528	2266699.56	0.3073	P	1.9
5	☐	125.000	123.657	5643342.21	0.7669	P	3.0
6	☐	250.000	250.342	11272328.41	1.5523	P	0.4
7	☐	500.000	497.226	22308740.02	3.0828	A	0.8
8	☐	1000.000	1001.493	43380303.17	6.2089	A	0.4
9	☐			34624.07	0.0060	P	2.1

$$y = 0.0062 * x + 2.9930E-004$$

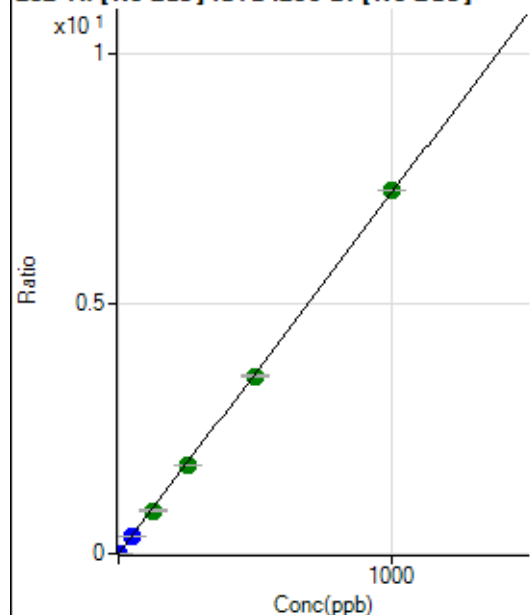
$$R = 1.0000$$

$$DL = 0.01067$$

$$BEC = 0.04828$$

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	370.39	0.0000	P	4.7
2	☐	0.100					
3	☐	1.000	0.826	44745.28	0.0060	P	0.1
4	☐	50.000	46.864	2493778.99	0.3381	P	1.7
5	☐	125.000	118.458	6289165.48	0.8546	A	2.9
6	☐	250.000	243.070	12734093.45	1.7536	A	0.3
7	☐	500.000	493.187	25746982.06	3.5579	A	0.8
8	☐	1000.000	1006.114	50710994.65	7.2582	A	0.2
9	☐			19522.53	0.0034	P	12.3

$$y = 0.0072 * x + 4.9065E-005$$

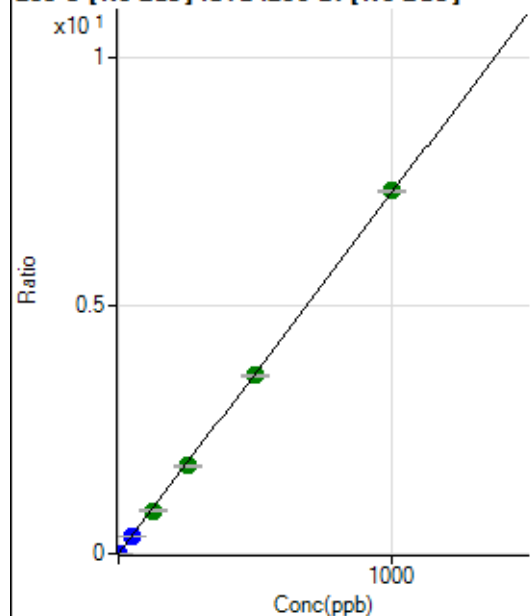
$$R = 0.9999$$

$$DL = 0.0009522$$

$$BEC = 0.006801$$

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	127.79	0.0000	P	16.5
2	☐	0.100					
3	☐	1.000	0.845	45957.06	0.0062	P	0.4
4	☐	50.000	46.984	2521178.70	0.3418	P	1.8
5	☐	125.000	118.505	6344929.96	0.8622	A	2.7
6	☐	250.000	242.941	12835329.63	1.7675	A	0.6
7	☐	500.000	493.930	26004702.49	3.5935	A	0.9
8	☐	1000.000	1005.762	51124079.62	7.3173	A	0.3
9	☐			5404.18	0.0009	P	23.0

$$y = 0.0073 * x + 1.6929E-005$$

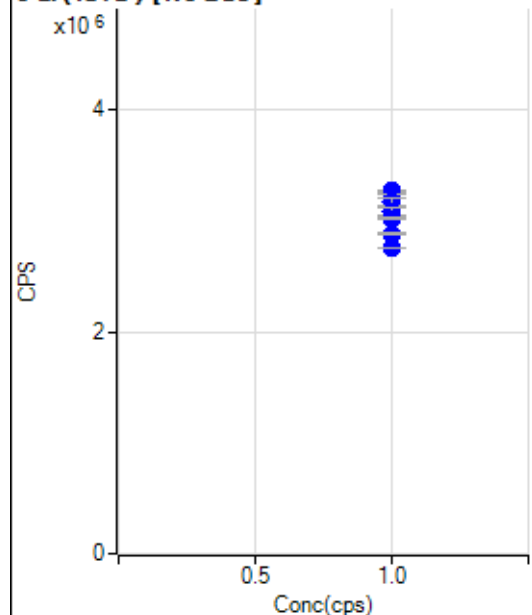
$$R = 0.9999$$

$$DL = 0.001151$$

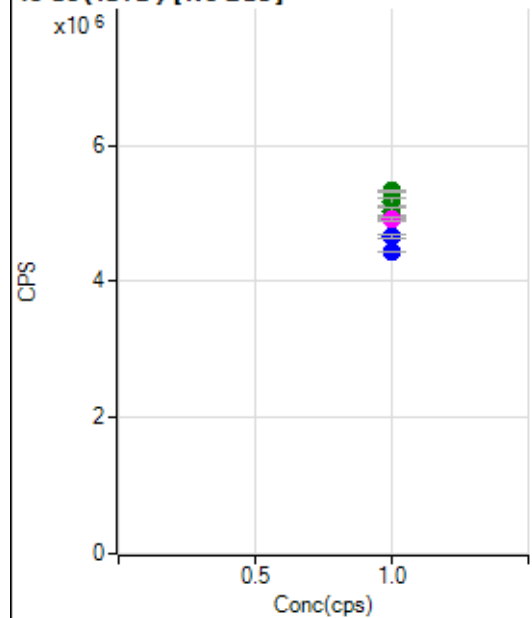
$$BEC = 0.002327$$

Weight: <None>

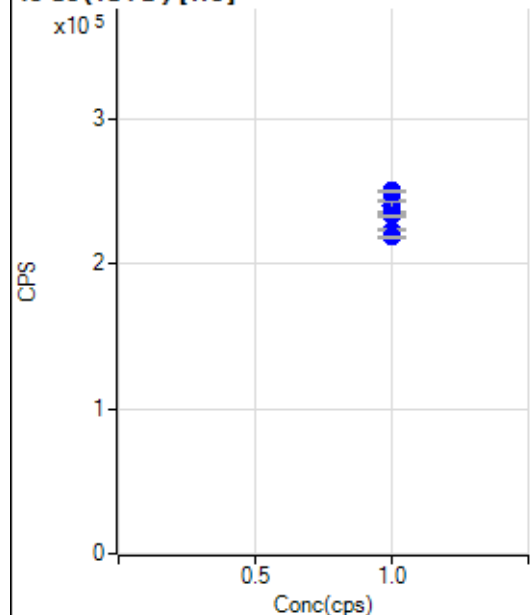
Min Conc: 0

6 Li (ISTD) [No Gas]

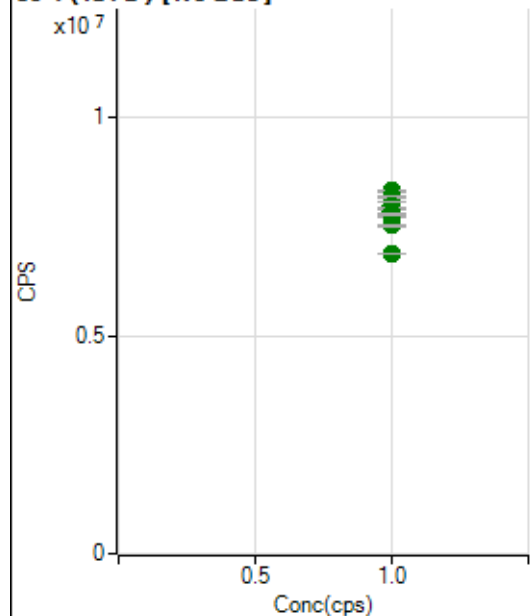
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3272495.14		P	0.5
2	☐	1.000					
3	☐	1.000		3240333.90		P	0.3
4	☐	1.000		3178286.60		P	1.9
5	☐	1.000		3084485.32		P	2.1
6	☐	1.000		3019602.30		P	0.5
7	☐	1.000		3025245.58		P	0.1
8	☐	1.000		2885924.78		P	0.9
9	☐	1.000		2758496.14		P	0.2

45 Sc (ISTD) [No Gas]

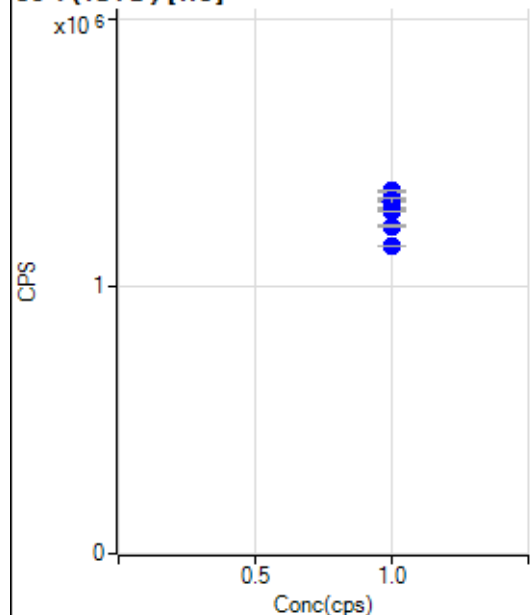
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5332899.42		A	0.3
2	☐	1.000					
3	☐	1.000		5322433.50		A	0.3
4	☐	1.000		5165780.41		A	2.0
5	☐	1.000		5024309.71		A	2.3
6	☐	1.000		4910269.03		M	0.2
7	☐	1.000		4924827.63		M	0.9
8	☐	1.000		4673691.21		P	1.1
9	☐	1.000		4439028.01		P	0.2

45 Sc (ISTD) [He]

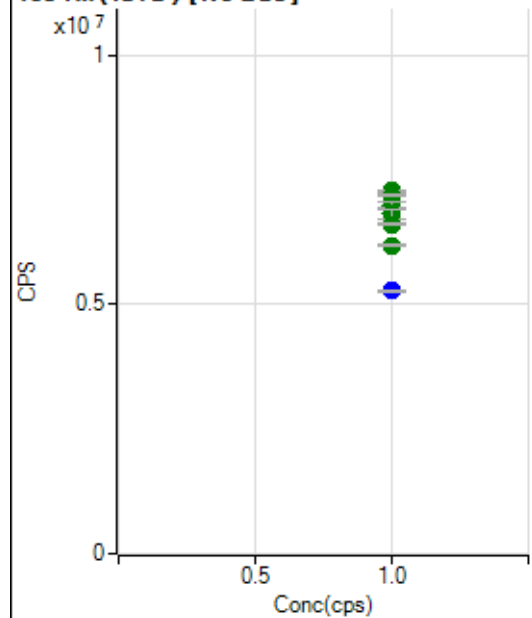
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		249869.24		P	1.0
2	☐	1.000					
3	☐	1.000		250136.63		P	0.4
4	☐	1.000		243049.97		P	0.5
5	☐	1.000		233926.99		P	0.4
6	☐	1.000		239319.54		P	2.8
7	☐	1.000		233161.39		P	0.4
8	☐	1.000		222963.96		P	0.5
9	☐	1.000		218317.13		P	0.4

89 Y (ISTD) [No Gas]

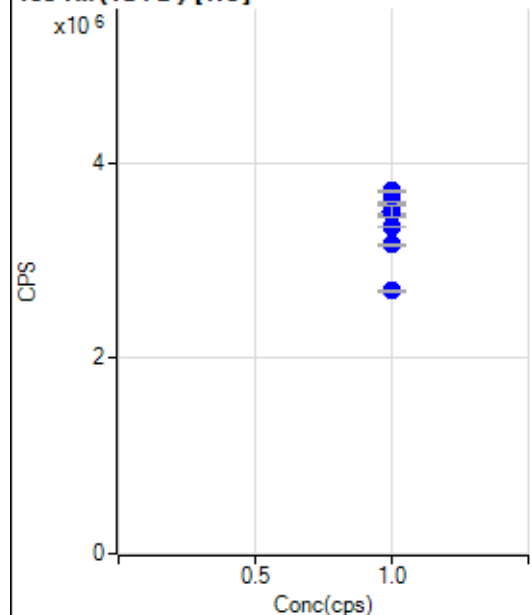
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8322942.38		A	0.6
2	☐	1.000					
3	☐	1.000		8191497.52		A	0.2
4	☐	1.000		7994554.12		A	2.1
5	☐	1.000		7857839.05		A	2.1
6	☐	1.000		7725925.30		A	0.7
7	☐	1.000		7789388.36		A	0.2
8	☐	1.000		7529073.71		A	0.7
9	☐	1.000		6884511.08		A	0.0

89 Y(ISTD) [He]

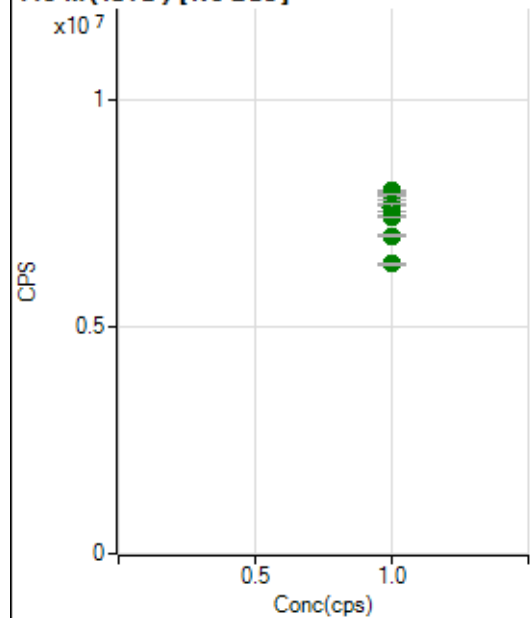
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1353607.97		P	0.5
2	☐	1.000					
3	☐	1.000		1356594.89		P	0.2
4	☐	1.000		1321626.61		P	0.3
5	☐	1.000		1285933.83		P	0.2
6	☐	1.000		1314035.41		P	2.9
7	☐	1.000		1276488.99		P	0.0
8	☐	1.000		1225746.90		P	0.6
9	☐	1.000		1150797.64		P	0.5

103 Rh(ISTD) [No Gas]

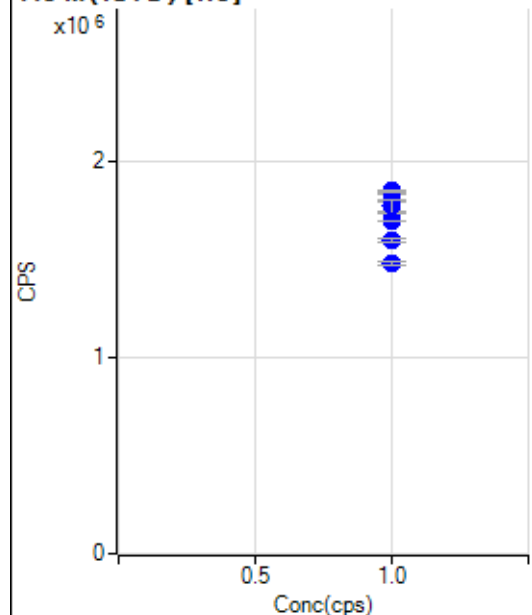
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7279726.81		A	0.3
2	☐	1.000					
3	☐	1.000		7182963.61		A	0.4
4	☐	1.000		6989343.12		A	1.6
5	☐	1.000		6811523.85		A	2.4
6	☐	1.000		6611853.79		A	0.5
7	☐	1.000		6604250.93		A	0.6
8	☐	1.000		6178934.51		A	0.6
9	☐	1.000		5270163.40		P	0.6

103 Rh (ISTD) [He]

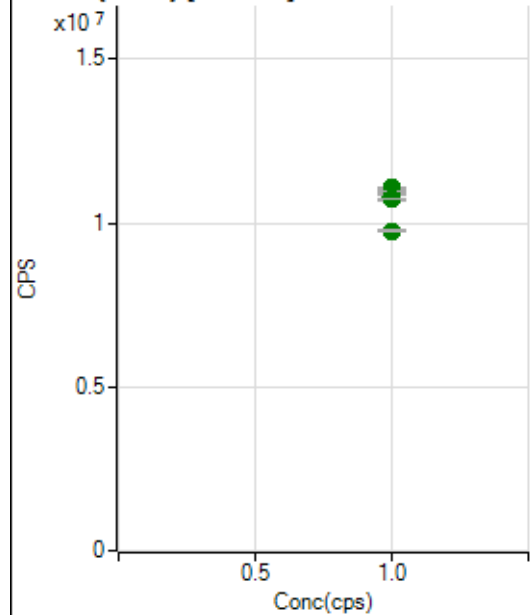
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3717276.68		P	0.4
2	☐	1.000					
3	☐	1.000		3711510.57		P	0.4
4	☐	1.000		3595818.38		P	0.2
5	☐	1.000		3478372.97		P	0.0
6	☐	1.000		3502477.55		P	3.4
7	☐	1.000		3351556.44		P	0.4
8	☐	1.000		3165801.13		P	1.0
9	☐	1.000		2689701.31		P	0.7

115 In (ISTD) [No Gas]

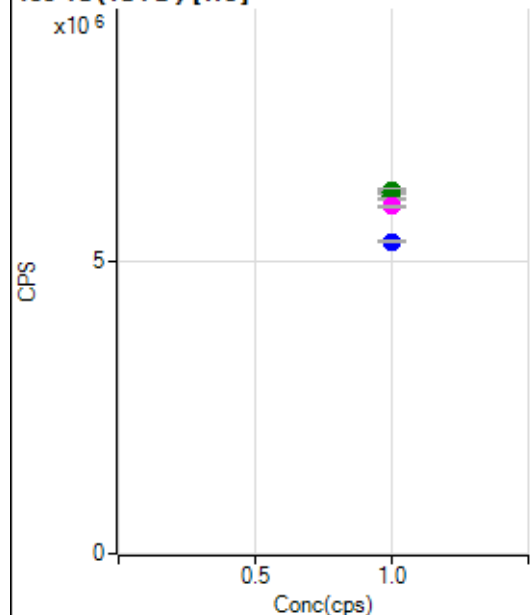
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8002435.09		A	0.4
2	☐	1.000					
3	☐	1.000		7923955.08		A	0.4
4	☐	1.000		7739862.64		A	2.0
5	☐	1.000		7626443.59		A	2.0
6	☐	1.000		7446809.31		A	0.4
7	☐	1.000		7426473.20		A	0.2
8	☐	1.000		7018163.28		A	0.5
9	☐	1.000		6397887.62		A	0.7

115 In (ISTD) [He]

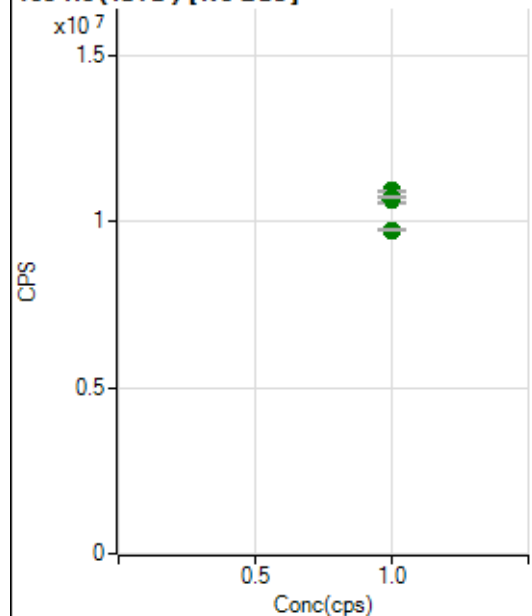
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1843595.32		P	0.8
2	☐	1.000					
3	☐	1.000		1848990.08		P	0.3
4	☐	1.000		1796998.88		P	0.8
5	☐	1.000		1745957.94		P	0.2
6	☐	1.000		1770226.52		P	3.6
7	☐	1.000		1697605.91		P	0.2
8	☐	1.000		1597376.01		P	1.2
9	☐	1.000		1480061.53		P	0.9

159 Tb (ISTD) [No Gas]

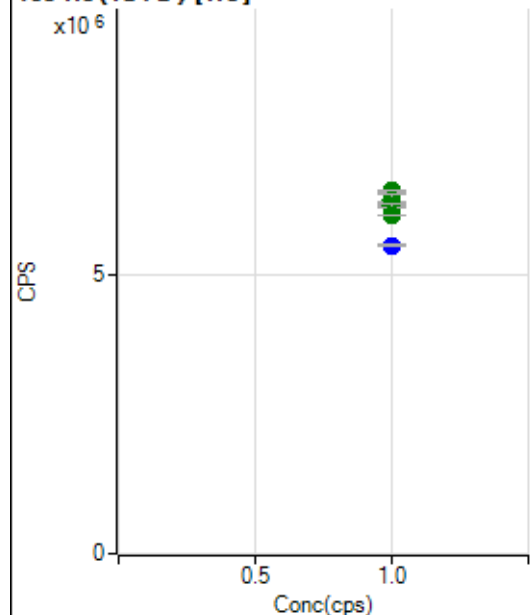
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11075606.64		A	0.3
2	☐	1.000					
3	☐	1.000		10886389.56		A	0.1
4	☐	1.000		10811989.35		A	2.0
5	☐	1.000		10875025.67		A	2.7
6	☐	1.000		10795987.68		A	0.7
7	☐	1.000		10977395.53		A	0.4
8	☐	1.000		10743634.22		A	0.2
9	☐	1.000		9771890.62		A	0.8

159 Tb (ISTD) [He]

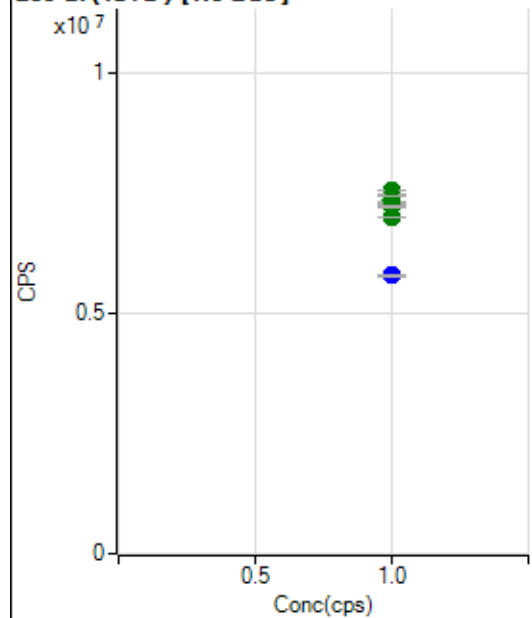
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6213893.87		A	0.9
2	☐	1.000					
3	☐	1.000		6185440.47		A	0.5
4	☐	1.000		6123446.37		A	0.9
5	☐	1.000		6074646.99		A	0.7
6	☐	1.000		6188363.24		A	2.8
7	☐	1.000		6078115.40		A	0.6
8	☐	1.000		5946217.00		M	0.9
9	☐	1.000		5347975.06		P	0.9

165 Ho (ISTD) [No Gas]

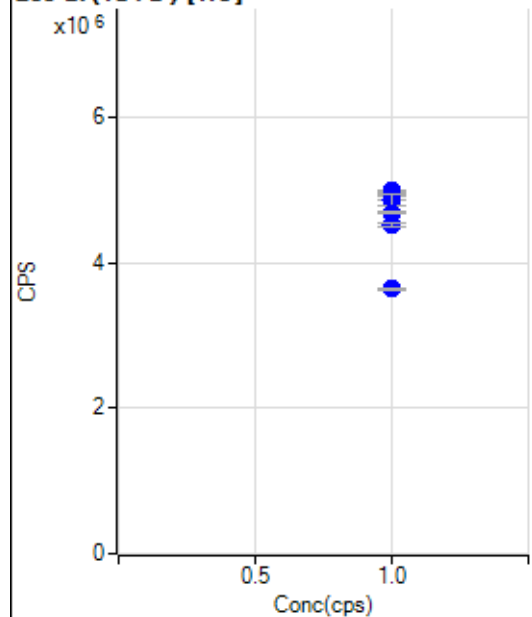
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10879808.14		A	0.1
2	☐	1.000					
3	☐	1.000		10765038.35		A	0.5
4	☐	1.000		10662917.68		A	2.0
5	☐	1.000		10763813.79		A	2.8
6	☐	1.000		10717370.64		A	0.3
7	☐	1.000		10930061.96		A	0.4
8	☐	1.000		10725321.94		A	0.6
9	☐	1.000		9752668.79		A	1.0

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6512633.10		A	0.3
2	☐	1.000					
3	☐	1.000		6304447.41		A	0.3
4	☐	1.000		6250392.27		A	0.6
5	☐	1.000		6221402.90		A	0.6
6	☐	1.000		6350628.31		A	3.0
7	☐	1.000		6246689.77		A	0.7
8	☐	1.000		6067727.83		A	0.3
9	☐	1.000		5537201.86		P	0.6

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7549142.94		A	0.1
2	☐	1.000					
3	☐	1.000		7450813.36		A	0.4
4	☐	1.000		7376786.28		A	1.8
5	☐	1.000		7362530.51		A	2.6
6	☐	1.000		7261868.99		A	0.1
7	☐	1.000		7236729.68		A	0.5
8	☐	1.000		6986747.25		A	0.1
9	☐	1.000		5789552.20		P	0.7

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4981475.06		P	0.4
2	☐	1.000					
3	☐	1.000		4938021.76		P	0.4
4	☐	1.000		4913865.90		P	0.3
5	☐	1.000		4856867.98		P	0.3
6	☐	1.000		4850433.30		P	3.1
7	☐	1.000		4681433.30		P	0.4
8	☐	1.000		4511924.17		P	0.8
9	☐	1.000		3634789.91		P	0.7

US EPA Tune Check Sample Report

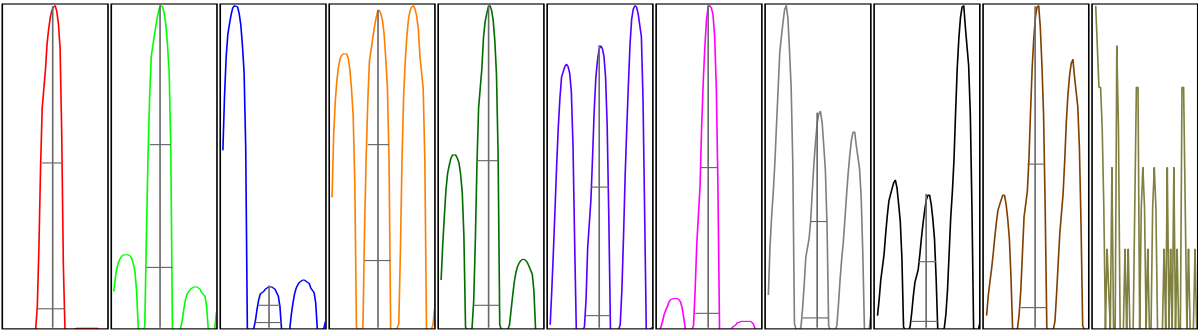
Batch Folder D:\ICP-MS Data\P7050619MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	13896	0.32	5.00	
24	252637	0.41	5.00	
25	33956	0.20	5.00	
26	38554	0.24	5.00	
59	89798	0.59	5.00	
113	12254	0.50	5.00	
115	148319	0.79	5.00	
206	39308	0.55	5.00	
207	35974	0.27	5.00	
208	85302	0.45	5.00	
220	0	37.27		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	13959	13921	13886	13864	13850
24	254036	252330	252516	253084	251218
25	34007	33952	33993	33989	33840
26	38643	38636	38538	38537	38415
59	90127	90240	89782	89930	88912
113	12281	12316	12234	12282	12157
115	149205	149622	148191	147925	146651
206	39145	39635	39329	39342	39087
207	35965	35991	36032	36068	35815
208	84797	85154	85185	85650	85725
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	23733	8.95	8.9 - 9.1		0.788	0.900	
24	409829	23.90	23.9 - 24.1		0.750	0.900	
25	53933	24.90	24.9 - 25.1		0.752	0.900	
26	62330	25.90	25.9 - 26.1		0.746	0.900	
59	156213	58.95	58.9 - 59.1		0.752	0.900	
113	24222	113.00	112.9 - 113.1		0.722	0.900	
115	289016	115.00	114.9 - 115.1		0.726	0.900	
206	78289	206.00	205.9 - 206.1		0.769	0.900	
207	71472	207.00	206.9 - 207.1		0.773	0.900	
208	171615	208.00	207.9 - 208.1		0.777	0.900	
220	0	219.80	-		0.350		

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	8.0	V	Deflect	13.6	V
Extract 2	-100.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-50	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	150	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	23214	0.21	
89	93096	0.17	
205	38939	0.36	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	23217	23160	23227	23287	23176
89	93077	92900	93314	93011	93177
205	39161	38877	38925	38950	38784

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	8.4	V	Deflect	1.8	V
Extract 2	-105.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-55	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			