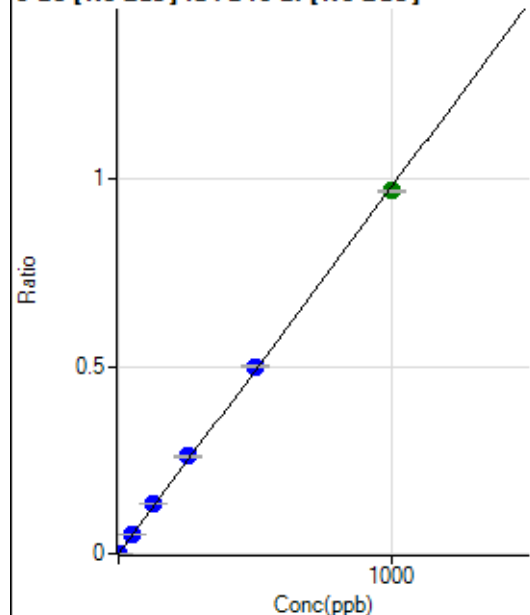


Calibration for 007CALS.d

Batch Folder: D:\ICP-MS Data\P7031119-MS.b\
 Analysis File: P7031119-MS.batch.bin
 DA Date-Time: 2019-03-12 00:46:27
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-03-11 13:09:49
2			
3	005CALS.d	S02	2019-03-11 13:18:16
4	006CALS.d	S03	2019-03-11 13:22:11
5	007CALS.d	S04	2019-03-11 13:26:19
6	008CALS.d	S05	2019-03-11 13:30:08
7	009CALS.d	S06	2019-03-11 13:33:53
8	010CALS.d	S07	2019-03-11 13:37:40
9	011CALS.d	S08	2019-03-11 13:41:30

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	155.56	0.0000	P	21.1
2	☐	0.100					
3	☐	1.000	0.999	6687.12	0.0010	P	0.5
4	☐	50.000	54.460	352216.61	0.0533	P	1.1
5	☐	125.000	135.628	839256.68	0.1328	P	0.6
6	☐	250.000	265.141	1577864.02	0.2596	P	0.4
7	☐	500.000	510.152	3039320.16	0.4995	P	0.6
8	☐	1000.000	989.587	5788783.25	0.9688	A	0.3
9	☐			640.02	0.0001	P	18.8

$$y = 9.7900\text{E-}004 * x + 2.2992\text{E-}005$$

$$R = 0.9998$$

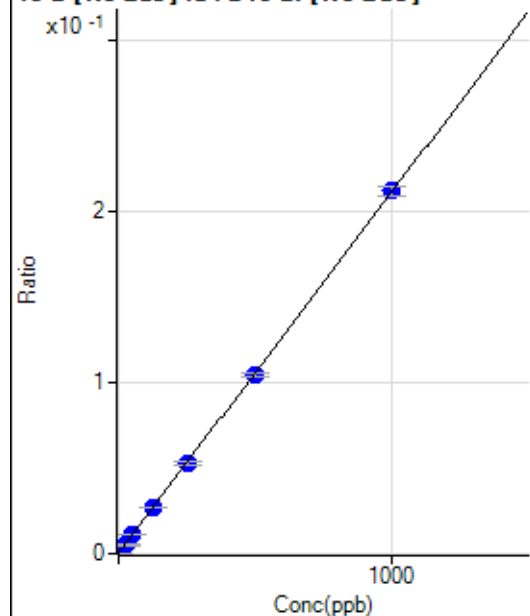
$$DL = 0.01486$$

$$BEC = 0.02348$$

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	2053.00	0.0003	P	6.4
2	☐	2.500					
3	☐	25.000	22.655	33961.25	0.0051	P	2.1
4	☐	50.000	50.613	72499.71	0.0110	P	2.2
5	☐	125.000	126.914	171094.61	0.0271	P	2.0
6	☐	250.000	250.341	322813.61	0.0531	P	3.6
7	☐	500.000	492.142	633556.31	0.1041	P	1.9
8	☐	1000.000	1003.633	1266769.07	0.2120	P	2.7
9	☐			62857.77	0.0110	P	12.3

$$y = 2.1094\text{E-}004 * x + 3.0363\text{E-}004$$

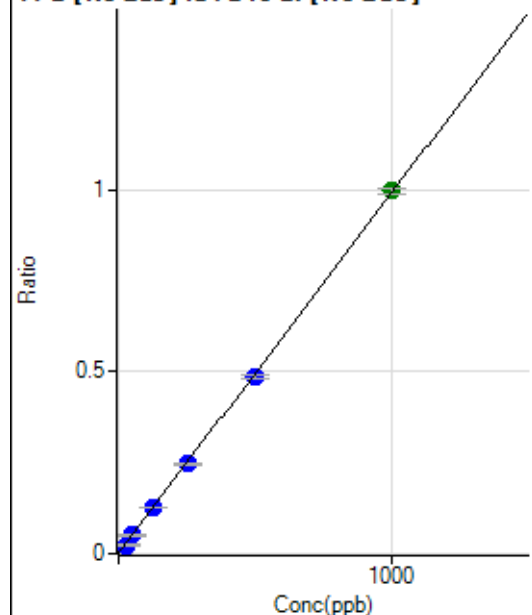
$$R = 0.9999$$

$$DL = 0.2772$$

$$BEC = 1.439$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9728.48	0.0014	P	2.9
2	☐	2.500					
3	☐	25.000	22.554	158811.33	0.0238	P	1.8
4	☐	50.000	49.753	334740.08	0.0507	P	2.8
5	☐	125.000	125.625	795105.64	0.1258	P	1.7
6	☐	250.000	248.032	1501384.23	0.2470	P	2.1
7	☐	500.000	489.263	2956480.41	0.4858	P	1.7
8	☐	1000.000	1005.856	5958942.45	0.9973	A	1.6
9	☐			287846.44	0.0504	P	12.1

$$y = 9.9006\text{E-}004 * x + 0.0014$$

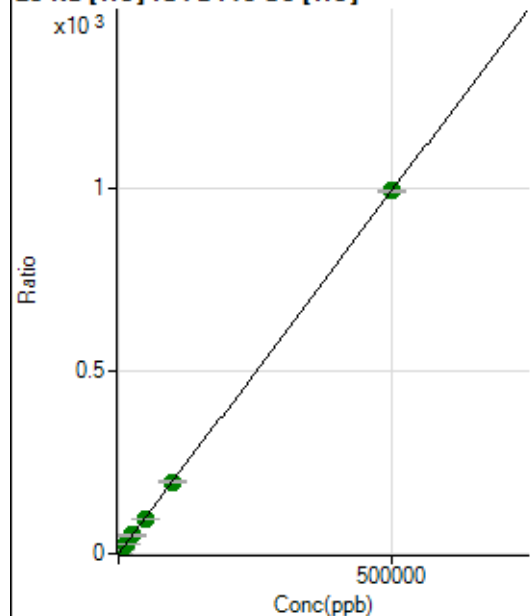
$$R = 0.9999$$

$$DL = 0.1275$$

$$BEC = 1.453$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	36189.02	0.0439	P	1.3
2	☐	50.000					
3	☐	500.000	467.547	798398.48	0.9705	P	0.4
4	☐	5000.000	5100.719	8047809.99	10.1524	A	1.1
5	☐	12500.000	12531.871	19165637.06	24.8793	A	0.5
6	☐	25000.000	25324.391	37577603.27	50.2313	A	1.3
7	☐	50000.000	48968.615	74025774.57	97.0890	A	0.1
8	☐	100000.00	99193.995	150090236.69	196.6248	A	0.5
9	☐	500000.00	500246.34	778686195.18	991.4233	A	0.4

$$y = 0.0020 * x + 0.0439$$

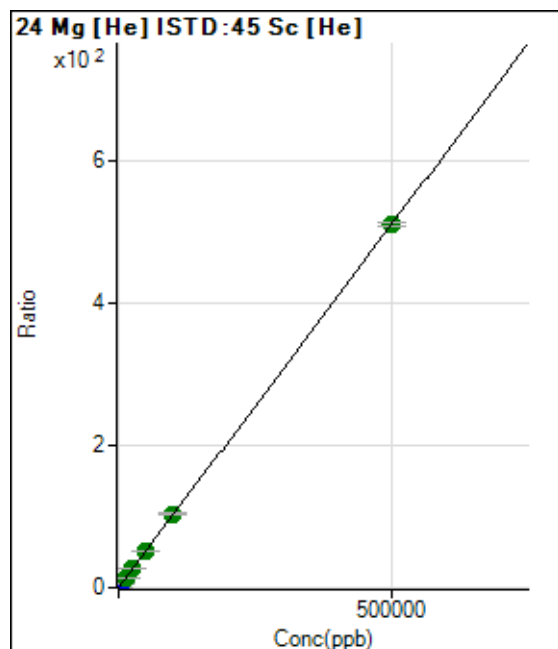
$$R = 1.0000$$

$$DL = 0.854$$

$$BEC = 22.15$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	247.23	0.0003	P	18.5
2	☐	50.000					
3	☐	500.000	496.350	417431.34	0.5074	P	0.9
4	☐	5000.000	5305.175	4296572.92	5.4202	P	1.1
5	☐	12500.000	12852.152	10114835.82	13.1303	A	0.4
6	☐	25000.000	26133.492	19972971.45	26.6988	A	1.2
7	☐	50000.000	49816.579	38804128.99	50.8939	A	0.5
8	☐	100000.00	101859.61	79432213.58	104.0620	A	0.8
9	☐	500000.00	499577.89	400848836.74	510.3787	A	1.0

$$y = 0.0010 * x + 2.9983E-004$$

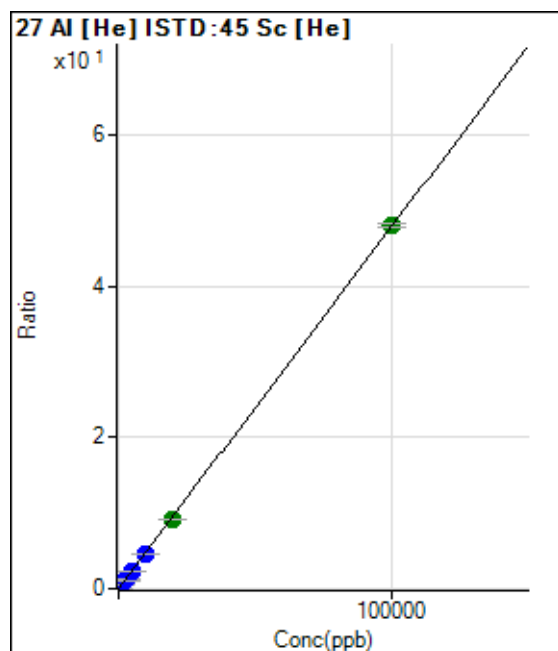
$$R = 1.0000$$

$$DL = 0.1629$$

$$BEC = 0.2935$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	102.78	0.0001	P	23.5
2	☐	2.000					
3	☐	20.000	17.695	7068.62	0.0086	P	2.5
4	☐	1000.000	989.026	375224.40	0.4733	P	0.8
5	☐	2500.000	2400.506	884886.17	1.1487	P	0.8
6	☐	5000.000	4869.978	1743312.39	2.3303	P	0.4
7	☐	10000.000	9382.122	3422770.26	4.4892	P	0.7
8	☐	20000.000	19056.470	6960092.26	9.1181	A	1.0
9	☐	100000.00	100259.59	37674281.74	47.9714	A	1.2

$$y = 4.7847E-004 * x + 1.2468E-004$$

$$R = 0.9999$$

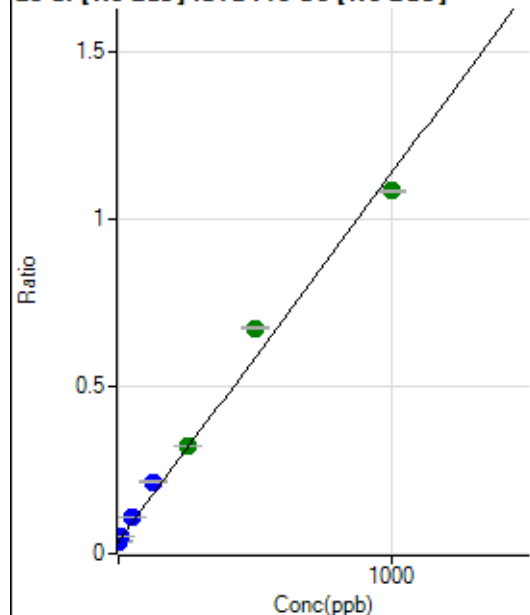
$$DL = 0.1838$$

$$BEC = 0.2606$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	514809.37	0.0373	P	0.7
2	☐	1.000					
3	☐	10.000	11.649	678425.96	0.0501	P	1.1
4	☐	50.000	64.570	1452053.63	0.1083	P	1.1
5	☐	125.000	162.071	2782097.39	0.2156	P	1.5
6	☐	250.000	259.127	3979331.77	0.3223	A	0.9
7	☐	500.000	580.218	8383796.80	0.6755	A	1.0
8	☐	1000.000	952.230	13390170.27	1.0847	A	0.7
9	☐			1000296.54	0.0804	P	0.3

$$y = 0.0011 * x + 0.0373$$

$$R = 0.9945$$

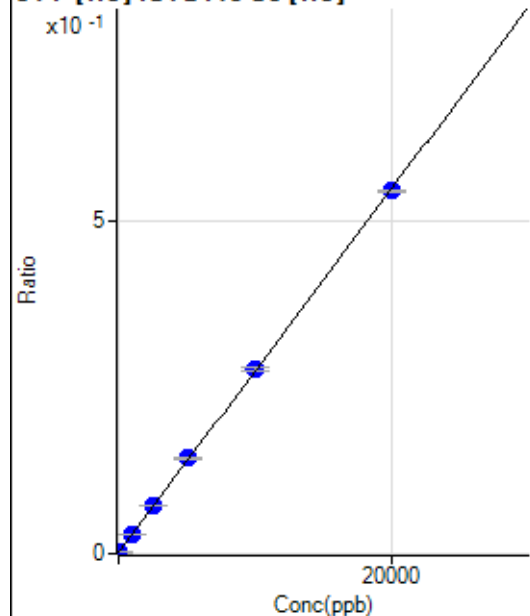
$$DL = 0.6991$$

$$BEC = 33.91$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-25.873	675.04	0.0008	P	6.9
2	☐	0.000					
3	☐	0.000	25.873	1836.31	0.0022	P	4.1
4	☐	1000.000	1038.535	23694.76	0.0299	P	0.7
5	☐	2500.000	2549.196	54810.14	0.0711	P	0.3
6	☐	5000.000	5180.796	106993.99	0.1430	P	1.0
7	☐	10000.000	10107.746	211642.35	0.2776	P	1.6
8	☐	20000.000	19892.852	415896.44	0.5448	P	0.5
9	☐			833.39	0.0011	P	11.8

$$y = 2.7312E-005 * x + 0.0015$$

$$R = 0.9999$$

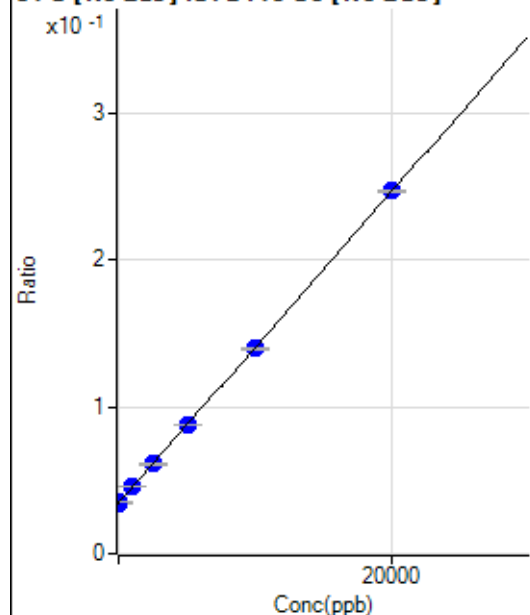
$$DL = 8.115$$

$$BEC = 55.85$$

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	-59.637	467346.01	0.0339	P	0.8
2	☐	0.000					
3	☐	0.000	59.637	475547.21	0.0351	P	1.0
4	☐	1000.000	1053.415	612106.83	0.0457	P	0.1
5	☐	2500.000	2513.582	789108.39	0.0611	P	1.0
6	☐	5000.000	5025.875	1083664.31	0.0878	P	0.2
7	☐	10000.000	9899.743	1730544.20	0.1394	P	1.5
8	☐	20000.000	20039.291	3048300.11	0.2469	P	0.3
9	☐			429424.17	0.0345	P	0.7

$$y = 1.0601\text{E-}005 * x + 0.0345$$

R = 1.0000

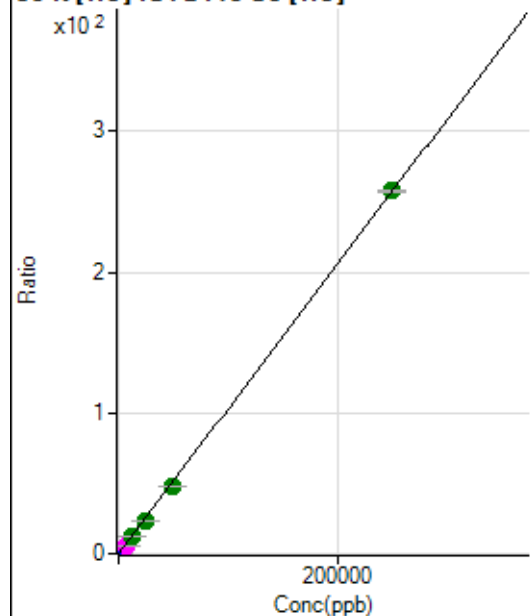
DL = 87.87

BEC = 3254

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	37069.56	0.0450	P	0.8
2	☐	50.000					
3	☐	500.000	433.514	402902.71	0.4897	P	0.4
4	☐	2500.000	2369.409	1962650.41	2.4759	P	0.8
5	☐	6250.000	5812.704	4628625.80	6.0086	M	0.7
6	☐	12500.000	11639.638	8967511.66	11.9868	A	0.2
7	☐	25000.000	22741.525	17823548.83	23.3769	A	0.9
8	☐	50000.000	46337.317	36323439.00	47.5853	A	1.2
9	☐	250000.00	251013.77	202302322.58	257.5755	A	0.3

$$y = 0.0010 * x + 0.0450$$

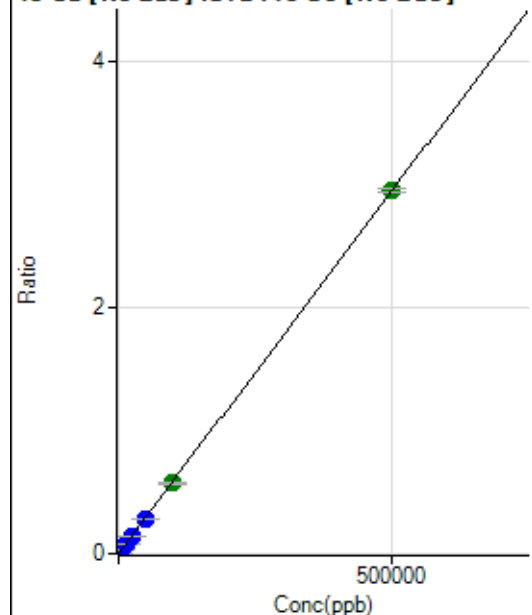
R = 0.9999

DL = 1.109

BEC = 43.82

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	441.69	0.0000	P	19.9
2	☐	50.000					
3	☐	500.000	451.490	36356.89	0.0027	P	0.3
4	☐	5000.000	4923.983	388319.18	0.0290	P	1.9
5	☐	12500.000	12192.372	925158.97	0.0717	P	1.1
6	☐	25000.000	24740.294	1795409.70	0.1454	P	0.4
7	☐	50000.000	48206.382	3516526.34	0.2833	P	1.5
8	☐	100000.00	96915.441	7031333.49	0.5696	A	0.7
9	☐	500000.00	500817.75	36600220.61	2.9433	A	0.9

$$y = 5.8769\text{E-}006 * x + 3.2003\text{E-}005$$

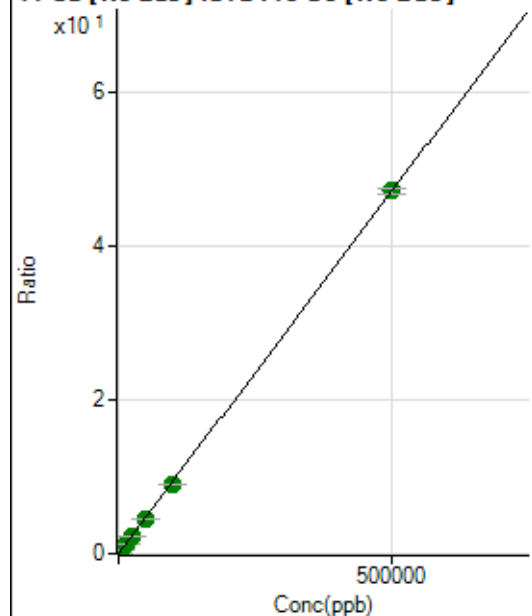
$$R = 1.0000$$

$$DL = 3.253$$

$$BEC = 5.446$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	54312.73	0.0039	P	1.7
2	☐	50.000					
3	☐	500.000	455.591	633697.95	0.0468	P	0.5
4	☐	5000.000	4831.924	6147936.12	0.4586	A	0.9
5	☐	12500.000	12068.859	14708276.54	1.1397	A	1.0
6	☐	25000.000	24352.180	28340277.02	2.2956	A	0.6
7	☐	50000.000	47490.794	55510651.94	4.4730	A	1.6
8	☐	100000.00	96662.065	112336409.45	9.1002	A	0.3
9	☐	500000.00	500963.40	586253501.99	47.1463	A	1.3

$$y = 9.4103\text{E-}005 * x + 0.0039$$

$$R = 1.0000$$

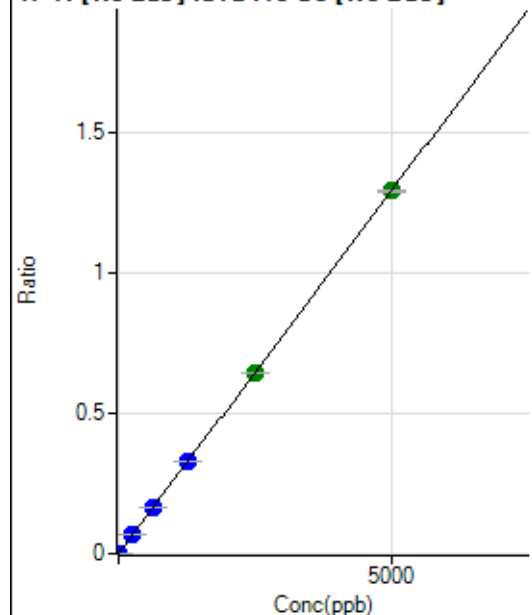
$$DL = 2.09$$

$$BEC = 41.82$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	547.26	0.0000	P	20.4
2	☐	0.500					
3	☐	5.000	4.798	17305.29	0.0013	P	1.8
4	☐	250.000	253.109	876337.85	0.0654	P	0.4
5	☐	625.000	630.896	2102250.83	0.1629	P	1.2
6	☐	1250.000	1271.590	4052727.04	0.3283	P	1.3
7	☐	2500.000	2489.422	7976071.36	0.6426	A	0.6
8	☐	5000.000	4998.999	15929708.17	1.2904	A	0.9
9	☐			5879.19	0.0005	P	1.2

$$y = 2.5813\text{E-}004 * x + 3.9630\text{E-}005$$

$$R = 1.0000$$

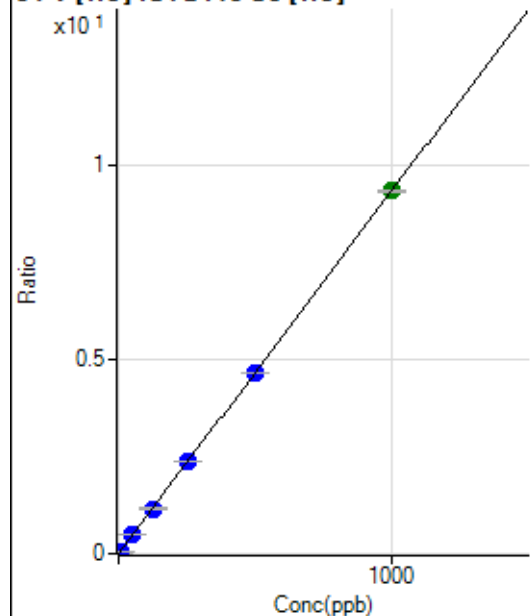
$$DL = 0.0939$$

$$BEC = 0.1535$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	16.67	0.0000	P	39.7
2	☐	0.500					
3	☐	5.000	4.941	38049.30	0.0462	P	0.8
4	☐	50.000	50.733	376282.16	0.4747	P	0.5
5	☐	125.000	124.279	895721.12	1.1627	P	0.6
6	☐	250.000	253.979	1777593.52	2.3762	P	0.7
7	☐	500.000	496.858	3544212.38	4.6485	P	0.2
8	☐	1000.000	1000.630	7145922.53	9.3616	A	0.4
9	☐			1184.51	0.0015	P	6.4

$$y = 0.0094 * x + 2.0196\text{E-}005$$

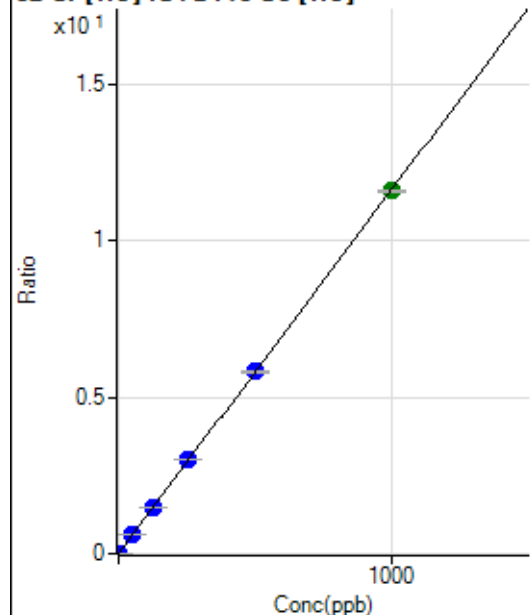
$$R = 1.0000$$

$$DL = 0.002573$$

$$BEC = 0.002159$$

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	4651.92	0.0056	P	2.8
2	☐	0.200					
3	☐	2.000	1.938	23139.55	0.0281	P	0.6
4	☐	50.000	51.688	479807.90	0.6053	P	0.4
5	☐	125.000	127.652	1145149.19	1.4865	P	0.6
6	☐	250.000	259.062	2252535.92	3.0110	P	0.9
7	☐	500.000	499.830	4425441.36	5.8042	P	0.6
8	☐	1000.000	997.404	8836432.51	11.5765	A	0.8
9	☐			63623.52	0.0810	P	0.4

$$y = 0.0116 * x + 0.0056$$

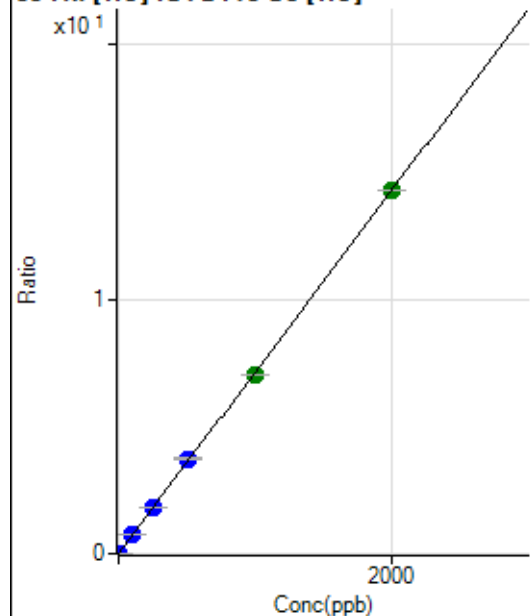
$$R = 1.0000$$

$$DL = 0.04077$$

$$BEC = 0.4863$$

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	68.89	0.0001	P	27.9
2	☐	0.100					
3	☐	1.000	1.041	6181.39	0.0075	P	3.1
4	☐	100.000	105.569	597201.56	0.7534	P	0.9
5	☐	250.000	258.824	1422739.11	1.8469	P	0.5
6	☐	500.000	523.001	2791832.18	3.7319	P	0.8
7	☐	1000.000	987.606	5373026.03	7.0470	A	0.1
8	☐	2000.000	1999.065	10888192.06	14.2642	A	0.1
9	☐			45051.29	0.0574	P	1.0

$$y = 0.0071 * x + 8.3593E-005$$

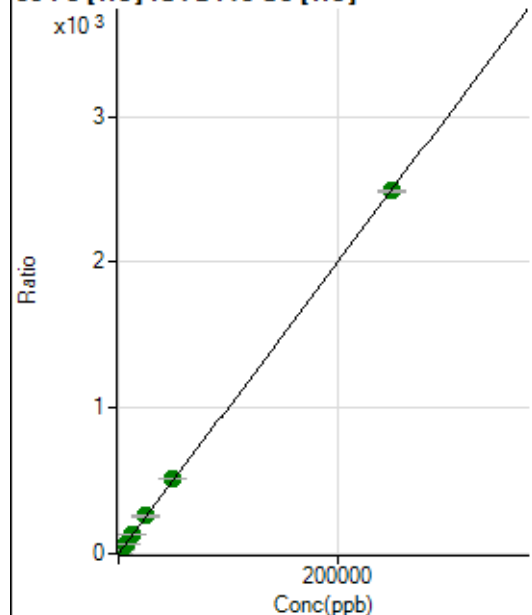
$$R = 0.9999$$

$$DL = 0.009795$$

$$BEC = 0.01172$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	11523.32	0.0140	P	2.9
2	☐	5.000					
3	☐	50.000	52.535	442489.42	0.5378	P	0.6
4	☐	2500.000	2710.082	21433834.04	27.0387	A	0.9
5	☐	6250.000	6654.395	51128949.29	66.3711	A	0.2
6	☐	12500.000	13464.637	100456730.02	134.2824	A	0.5
7	☐	25000.000	25836.110	196446150.68	257.6499	A	0.4
8	☐	50000.000	51595.541	392749238.41	514.5212	A	0.6
9	☐	250000.00	249536.83	1954414295.5	2,488.378	A	0.8

$$y = 0.0100 * x + 0.0140$$

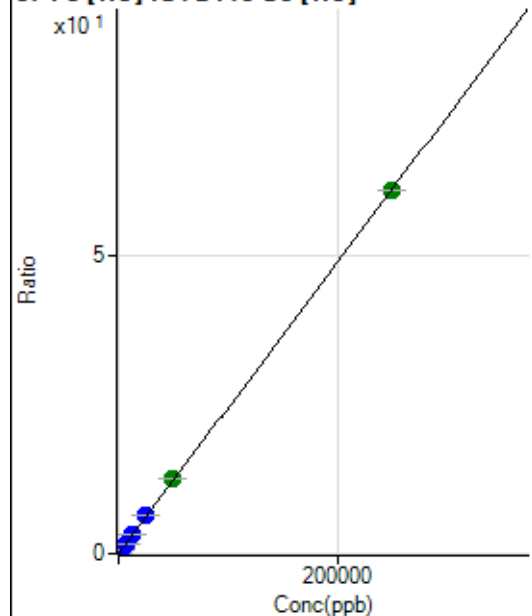
$$R = 1.0000$$

$$DL = 0.1212$$

$$BEC = 1.401$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	288.90	0.0004	P	16.4
2	☐	5.000					
3	☐	50.000	53.396	10993.30	0.0134	P	4.2
4	☐	2500.000	2748.360	531148.26	0.6700	P	0.4
5	☐	6250.000	6719.612	1261570.13	1.6377	P	0.9
6	☐	12500.000	13577.082	2475167.48	3.3086	P	0.7
7	☐	25000.000	26016.511	4833769.32	6.3397	P	1.0
8	☐	50000.000	51538.156	9586314.22	12.5585	A	0.4
9	☐	250000.00	249522.63	47754560.32	60.8006	A	0.2

$$y = 2.4367E-004 * x + 3.5024E-004$$

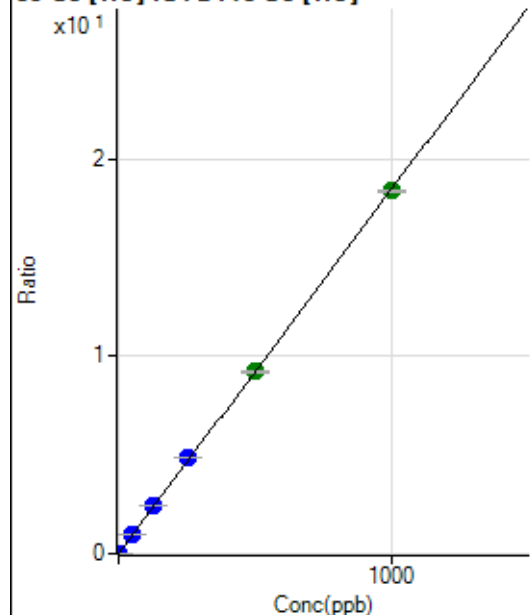
$$R = 1.0000$$

$$DL = 0.7052$$

$$BEC = 1.437$$

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	270.01	0.0003	P	5.2
2	☐	0.100					
3	☐	1.000	0.995	15387.13	0.0187	P	1.6
4	☐	50.000	53.493	783785.73	0.9887	P	0.7
5	☐	125.000	131.553	1872759.17	2.4311	P	0.6
6	☐	250.000	265.557	3671047.45	4.9071	P	0.5
7	☐	500.000	498.757	7026763.85	9.2161	A	0.4
8	☐	1000.000	995.739	14044230.90	18.3990	A	0.4
9	☐			159869.42	0.2036	P	0.5

$$y = 0.0185 * x + 3.2749E-004$$

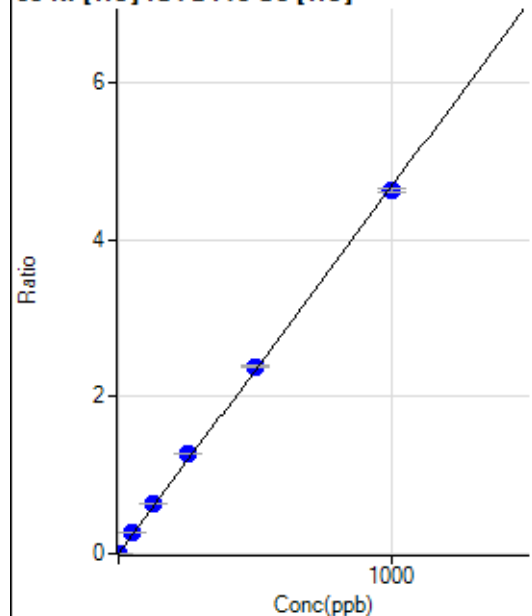
$$R = 0.9999$$

$$DL = 0.002776$$

$$BEC = 0.01772$$

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	166.67	0.0002	P	6.7
2	☐	0.100					
3	☐	1.000	1.069	4277.36	0.0052	P	1.5
4	☐	50.000	55.853	207126.64	0.2613	P	0.9
5	☐	125.000	135.572	488339.22	0.6339	P	1.5
6	☐	250.000	271.252	948737.69	1.2682	P	0.2
7	☐	500.000	509.409	1815760.70	2.3815	P	0.6
8	☐	1000.000	988.368	3526835.96	4.6204	P	1.0
9	☐			41186.98	0.0524	P	2.2

$$y = 0.0047 * x + 2.0211E-004$$

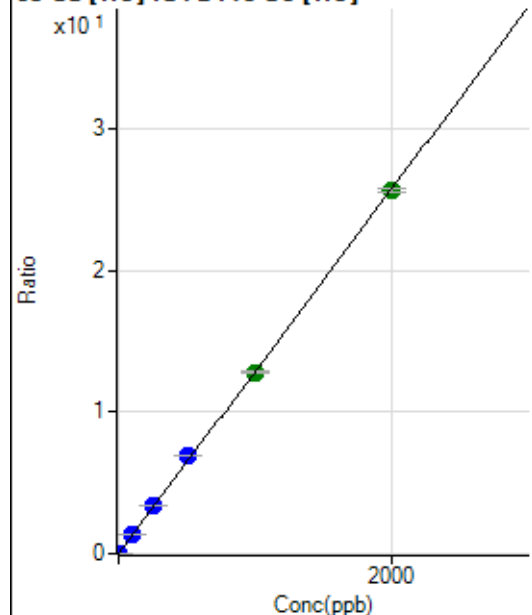
$$R = 0.9997$$

$$DL = 0.008708$$

$$BEC = 0.04324$$

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	1710.13	0.0021	P	5.2
2	☐	0.200					
3	☐	2.000	1.984	22729.03	0.0276	P	1.1
4	☐	100.000	109.635	1120990.32	1.4141	P	1.2
5	☐	250.000	266.794	2648594.11	3.4382	P	0.9
6	☐	500.000	533.861	5145415.48	6.8779	P	0.3
7	☐	1000.000	996.126	9783566.87	12.8317	A	0.3
8	☐	2000.000	1990.891	19574076.79	25.6437	A	1.0
9	☐			21230.12	0.0270	P	1.8

$$y = 0.0129 * x + 0.0021$$

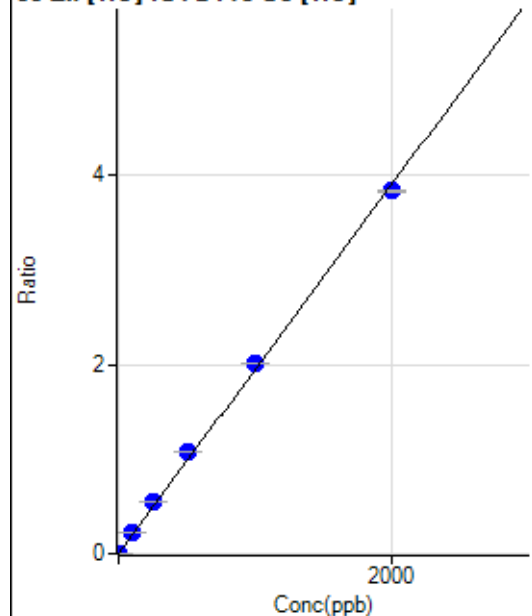
$$R = 0.9998$$

$$DL = 0.02534$$

$$BEC = 0.161$$

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	630.03	0.0008	P	13.1
2	☐	0.200					
3	☐	2.000	2.260	4249.58	0.0052	P	1.5
4	☐	100.000	114.988	178107.06	0.2247	P	1.5
5	☐	250.000	278.308	418082.89	0.5427	P	0.9
6	☐	500.000	553.950	807574.43	1.0795	P	0.6
7	☐	1000.000	1030.788	1531046.85	2.0081	P	0.3
8	☐	2000.000	1966.830	2924195.83	3.8308	P	0.7
9	☐			14775.48	0.0188	P	2.8

$$y = 0.0019 * x + 7.6395E-004$$

$$R = 0.9994$$

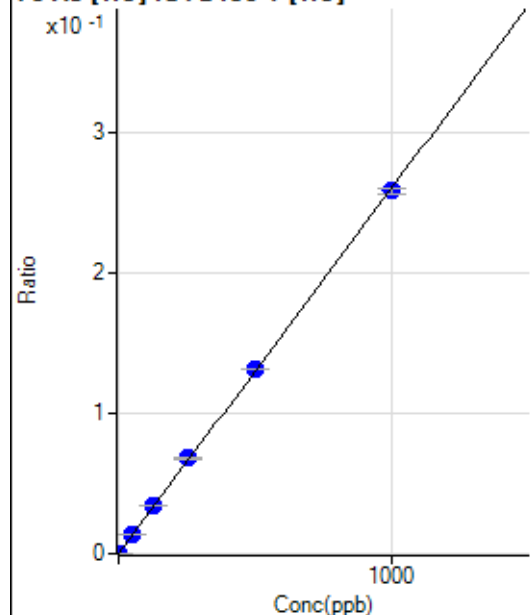
$$DL = 0.1542$$

$$BEC = 0.3923$$

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	17.90	0.0000	P	19.9
2	☐	0.100					
3	☐	1.000	0.936	962.39	0.0002	P	3.2
4	☐	50.000	53.128	52138.16	0.0138	P	0.4
5	☐	125.000	129.848	124368.23	0.0338	P	1.0
6	☐	250.000	260.625	243372.71	0.0678	P	0.5
7	☐	500.000	506.983	477266.26	0.1319	P	0.4
8	☐	1000.000	993.090	926853.40	0.2584	P	1.3
9	☐			1139.56	0.0003	P	2.4

$$y = 2.6023\text{E-}004 * x + 4.6087\text{E-}006$$

$$R = 0.9999$$

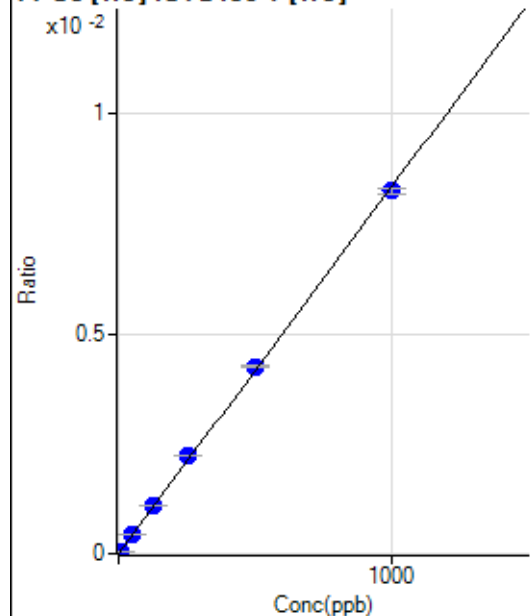
$$DL = 0.01057$$

$$BEC = 0.01771$$

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	5.506	177.78	0.0000	P	1.0
4	☐	50.000	53.616	1683.46	0.0004	P	3.9
5	☐	125.000	132.449	4059.52	0.0011	P	1.2
6	☐	250.000	268.132	8012.34	0.0022	P	0.7
7	☐	500.000	509.757	15357.24	0.0042	P	1.4
8	☐	1000.000	989.474	29552.59	0.0082	P	1.7
9	☐			13.33	0.0000	P	65.5

$$y = 8.3281\text{E-}006 * x + 0.0000\text{E+}000$$

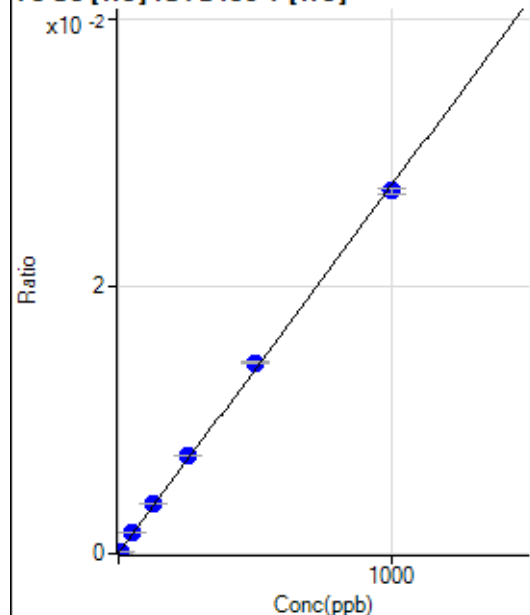
$$R = 0.9997$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	191.36	0.0000	P	4.4
2	☐	0.500					
3	☐	5.000	5.317	757.43	0.0002	P	5.3
4	☐	50.000	54.806	5858.64	0.0016	P	1.6
5	☐	125.000	135.649	13887.57	0.0038	P	0.3
6	☐	250.000	265.036	26285.57	0.0073	P	0.5
7	☐	500.000	518.693	51689.23	0.0143	P	1.3
8	☐	1000.000	985.322	97191.67	0.0271	P	1.2
9	☐			186.42	0.0001	P	9.4

$$y = 2.7455\text{E-}005 * x + 4.9393\text{E-}005$$

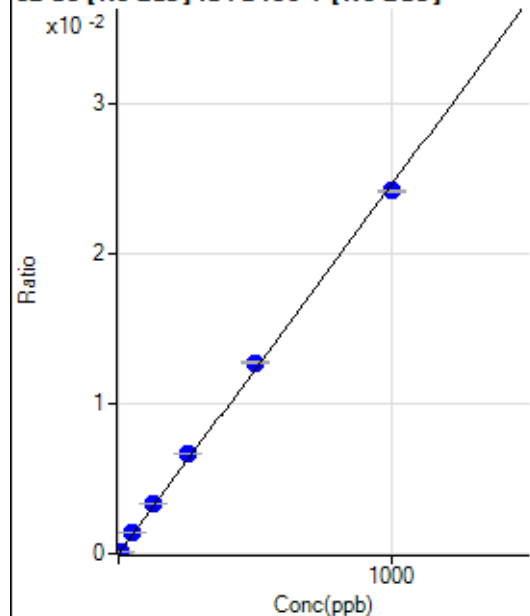
$$R = 0.9996$$

$$DL = 0.2399$$

$$BEC = 1.799$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118.30	0.0000	P	39.7
2	☐	0.500					
3	☐	5.000	5.207	2718.84	0.0001	P	3.4
4	☐	50.000	54.866	27370.48	0.0014	P	0.3
5	☐	125.000	135.528	65495.05	0.0033	P	0.8
6	☐	250.000	271.926	125913.47	0.0067	P	0.9
7	☐	500.000	518.273	243014.50	0.0128	P	0.7
8	☐	1000.000	983.822	457708.87	0.0242	P	0.3
9	☐			253.39	0.0000	P	32.7

$$y = 2.4600\text{E-}005 * x + 5.6317\text{E-}006$$

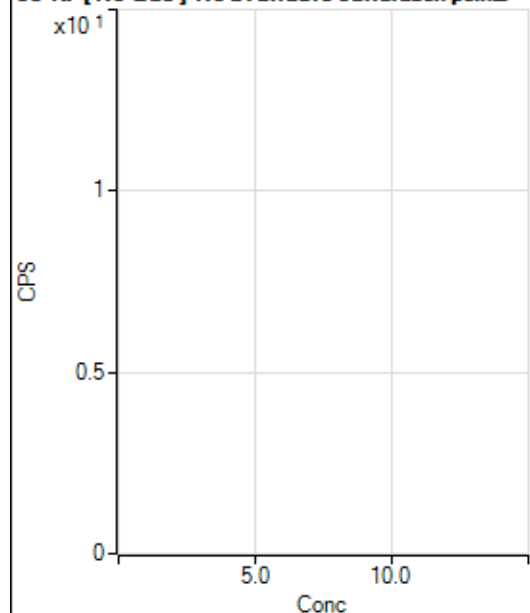
$$R = 0.9995$$

$$DL = 0.2729$$

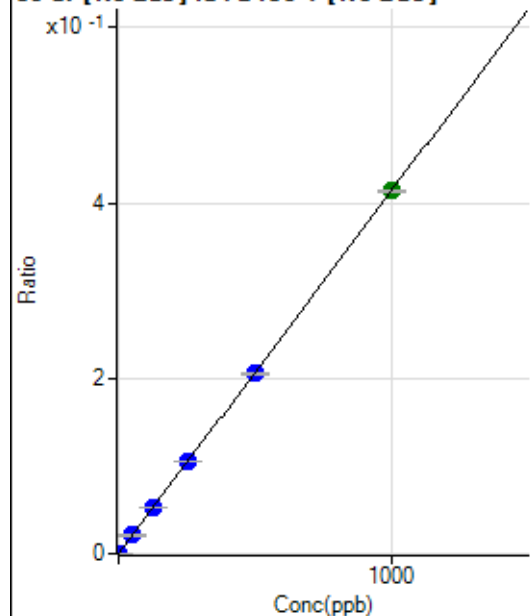
$$BEC = 0.2289$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			1416.76		P	0.8
2	☐						
3	☐			1450.10		P	4.1
4	☐			1367.87		P	2.6
5	☐			1446.77		P	6.1
6	☐			1248.96		P	3.7
7	☐			1295.64		P	7.7
8	☐			1308.97		P	5.8
9	☐			1354.53		P	3.1

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2316.96	0.0001	P	1.5
2	☐	0.100					
3	☐	1.000	0.822	9161.67	0.0005	P	3.7
4	☐	50.000	50.455	423837.25	0.0210	P	1.6
5	☐	125.000	126.360	1027634.71	0.0524	P	1.6
6	☐	250.000	255.303	1989115.76	0.1058	P	0.8
7	☐	500.000	497.462	3924345.14	0.2060	P	0.9
8	☐	1000.000	999.750	7824871.27	0.4139	A	0.3
9	☐			30720.06	0.0017	P	1.7

$$y = 4.1384\text{E-}004 * x + 1.1051\text{E-}004$$

$$R = 1.0000$$

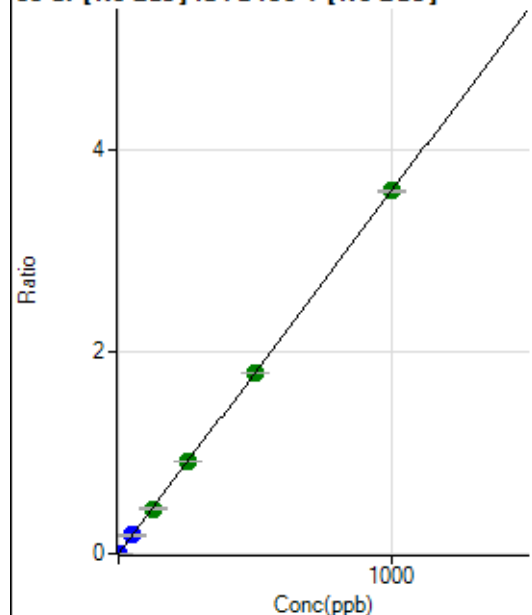
$$DL = 0.01168$$

$$BEC = 0.267$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	261.12	0.0000	P	5.3
2	☐	0.100					
3	☐	1.000	0.802	58782.95	0.0029	P	2.4
4	☐	50.000	50.502	3660166.66	0.1813	P	1.2
5	☐	125.000	124.548	8766572.07	0.4470	A	1.0
6	☐	250.000	253.361	17101118.78	0.9093	A	1.0
7	☐	500.000	497.883	34044770.56	1.7870	A	0.7
8	☐	1000.000	1000.250	67878795.96	3.5900	A	0.3
9	☐			249022.49	0.0137	P	0.3

$$y = 0.0036 * x + 1.2456E-005$$

$$R = 1.0000$$

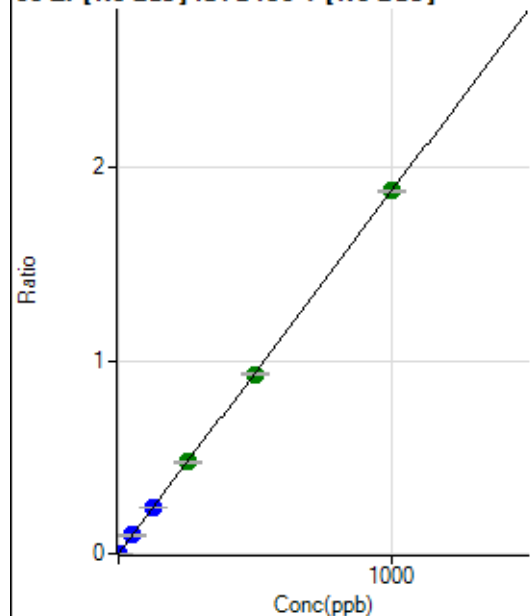
$$DL = 0.0005562$$

$$BEC = 0.00347$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1202.88	0.0001	P	6.8
2	☐	0.100					
3	☐	1.000	0.936	36853.93	0.0018	P	1.1
4	☐	50.000	50.785	1924500.69	0.0953	P	2.0
5	☐	125.000	126.804	4665625.32	0.2379	P	0.2
6	☐	250.000	253.528	8944068.78	0.4756	A	1.4
7	☐	500.000	495.939	17723865.50	0.9303	A	0.8
8	☐	1000.000	1000.884	35497774.40	1.8775	A	0.3
9	☐			9631.35	0.0005	P	3.2

$$y = 0.0019 * x + 5.7348E-005$$

$$R = 1.0000$$

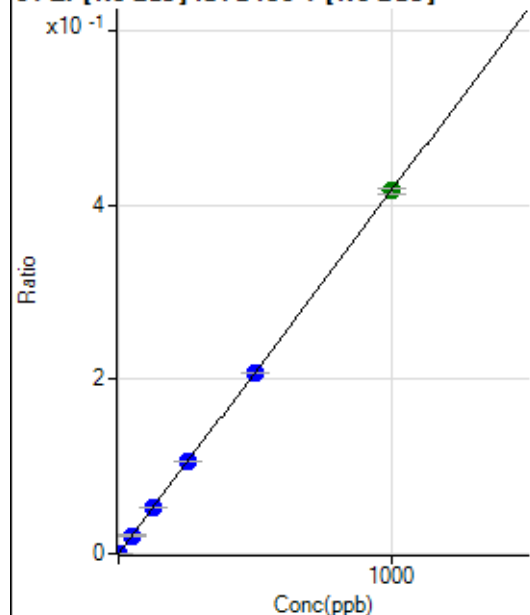
$$DL = 0.006249$$

$$BEC = 0.03057$$

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	280.57	0.0000	P	28.4
2	☐	0.100					
3	☐	1.000	0.923	8099.91	0.0004	P	3.2
4	☐	50.000	50.240	423211.32	0.0210	P	1.4
5	☐	125.000	126.816	1037076.62	0.0529	P	1.4
6	☐	250.000	255.404	2002811.03	0.1065	P	0.6
7	☐	500.000	498.728	3961723.83	0.2079	P	0.4
8	☐	1000.000	999.046	7875208.34	0.4165	A	1.5
9	☐			2183.61	0.0001	P	8.8

$$y = 4.1692\text{E-}004 * x + 1.3360\text{E-}005$$

$$R = 1.0000$$

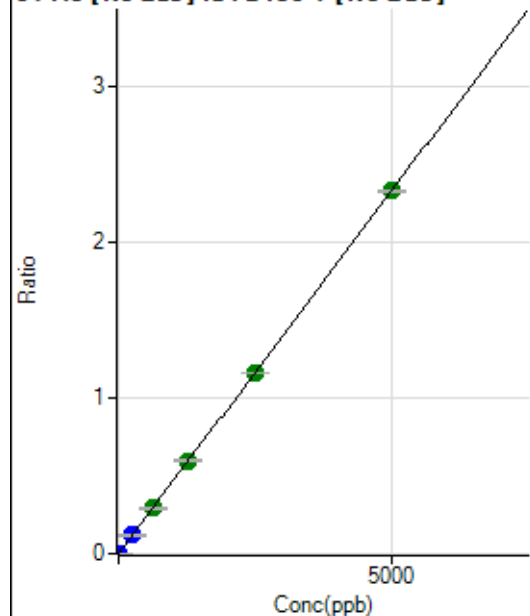
$$DL = 0.02729$$

$$BEC = 0.03204$$

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	563.93	0.0000	P	7.0
2	☐	0.500					
3	☐	5.000	4.625	44422.88	0.0022	P	1.7
4	☐	250.000	253.036	2384583.60	0.1181	P	2.1
5	☐	625.000	624.650	5716605.08	0.2915	A	1.3
6	☐	1250.000	1279.049	11224924.65	0.5969	A	1.2
7	☐	2500.000	2484.745	22090877.40	1.1595	A	0.3
8	☐	5000.000	5000.257	44117320.08	2.3334	A	0.7
9	☐			19144.10	0.0011	P	1.7

$$y = 4.6664\text{E-}004 * x + 2.6906\text{E-}005$$

$$R = 1.0000$$

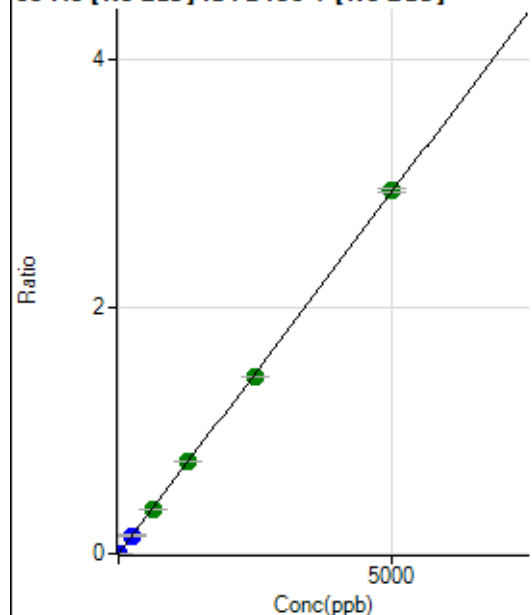
$$DL = 0.01207$$

$$BEC = 0.05766$$

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	138.90	0.0000	P	18.3
2	☐	0.500					
3	☐	5.000	4.657	55592.57	0.0027	P	1.7
4	☐	250.000	251.861	2978636.65	0.1475	P	1.3
5	☐	625.000	620.944	7131960.23	0.3637	A	0.9
6	☐	1250.000	1272.928	14020283.65	0.7455	A	1.2
7	☐	2500.000	2446.633	27301038.81	1.4330	A	0.7
8	☐	5000.000	5021.366	55604019.99	2.9409	A	0.9
9	☐			27936.49	0.0015	P	0.5

$$y = 5.8568\text{E-}004 * x + 6.6239\text{E-}006$$

$$R = 0.9999$$

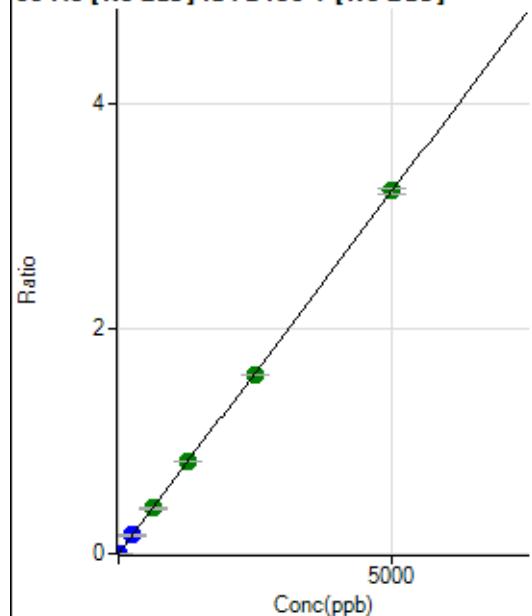
$$DL = 0.006223$$

$$BEC = 0.01131$$

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	297.24	0.0000	P	7.7
2	☐	0.500					
3	☐	5.000	4.655	61268.70	0.0030	P	1.7
4	☐	250.000	253.269	3295213.90	0.1632	P	1.3
5	☐	625.000	625.986	7909664.15	0.4033	A	0.8
6	☐	1250.000	1278.884	15495914.23	0.8240	A	0.9
7	☐	2500.000	2460.927	30208423.94	1.5856	A	0.1
8	☐	5000.000	5012.029	61054458.31	3.2292	A	1.3
9	☐			44821.50	0.0025	P	3.3

$$y = 6.4430\text{E-}004 * x + 1.4170\text{E-}005$$

$$R = 0.9999$$

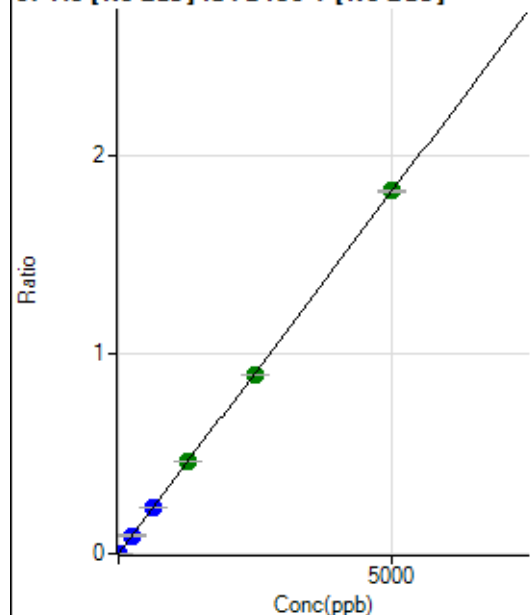
$$DL = 0.005076$$

$$BEC = 0.02199$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	125.01	0.0000	P	18.2
2	☐	0.500					
3	☐	5.000	4.606	34141.96	0.0017	P	2.9
4	☐	250.000	250.585	1838480.29	0.0911	P	1.6
5	☐	625.000	630.398	4491876.45	0.2291	P	1.6
6	☐	1250.000	1270.341	8680311.31	0.4616	A	0.5
7	☐	2500.000	2463.464	17052846.73	0.8951	A	0.3
8	☐	5000.000	5012.479	34434174.03	1.8212	A	0.7
9	☐			16318.32	0.0009	P	3.4

$$y = 3.6334\text{E-}004 * x + 5.9656\text{E-}006$$

$$R = 1.0000$$

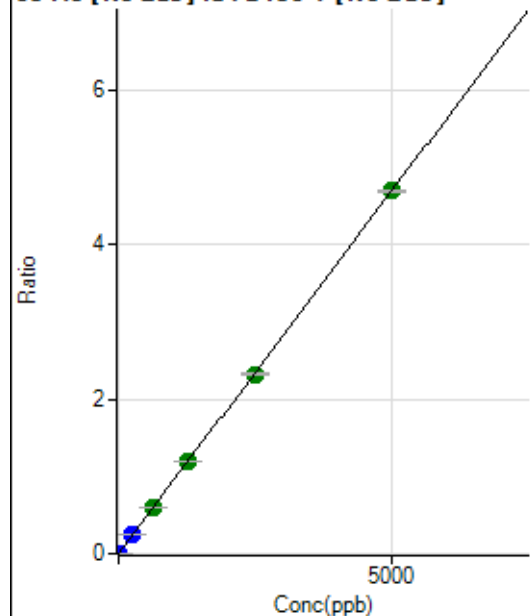
$$DL = 0.008973$$

$$BEC = 0.01642$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	263.90	0.0000	P	12.1
2	☐	0.500					
3	☐	5.000	4.626	88394.41	0.0043	P	1.3
4	☐	250.000	254.633	4818380.88	0.2386	P	1.0
5	☐	625.000	632.475	11623272.13	0.5927	A	0.7
6	☐	1250.000	1271.068	22400269.25	1.1911	A	0.8
7	☐	2500.000	2478.870	44255272.86	2.3229	A	0.9
8	☐	5000.000	5004.133	88660879.06	4.6893	A	0.8
9	☐			40503.27	0.0022	P	4.2

$$y = 9.3709\text{E-}004 * x + 1.2587\text{E-}005$$

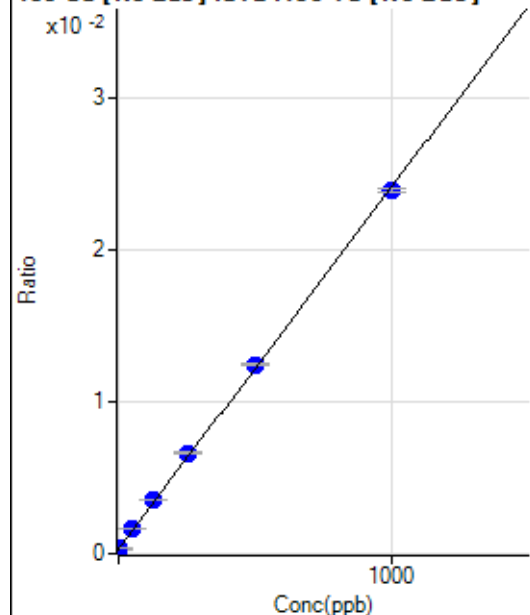
$$R = 1.0000$$

$$DL = 0.004875$$

$$BEC = 0.01343$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8416.74	0.0003	P	2.8
2	☐	0.100					
3	☐	1.000	1.137	8961.60	0.0003	P	3.7
4	☐	50.000	55.844	44797.27	0.0016	P	0.8
5	☐	125.000	135.923	96246.24	0.0035	P	0.2
6	☐	250.000	265.915	175476.32	0.0066	P	3.2
7	☐	500.000	509.498	332452.47	0.0124	P	1.2
8	☐	1000.000	989.614	636077.00	0.0239	P	1.2
9	☐			7733.00	0.0003	P	3.1

$$y = 2.3823\text{E-}005 * x + 3.0146\text{E-}004$$

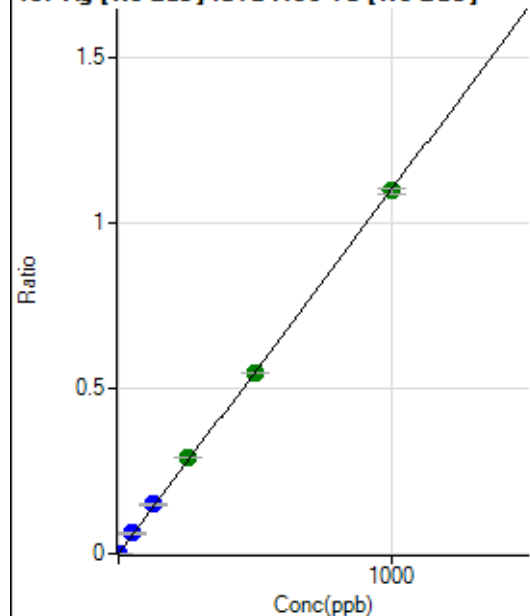
$$R = 0.9998$$

$$DL = 1.077$$

$$BEC = 12.65$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	269.46	0.0000	P	21.2
2	☐	0.100					
3	☐	1.000	1.077	32591.48	0.0012	P	2.6
4	☐	50.000	55.722	1684077.32	0.0613	P	1.2
5	☐	125.000	135.654	4060198.83	0.1493	P	1.6
6	☐	250.000	263.057	7656620.66	0.2896	A	0.5
7	☐	500.000	496.835	14615862.65	0.5469	A	0.5
8	☐	1000.000	996.700	29224612.80	1.0971	A	1.8
9	☐			2333.63	0.0001	P	9.1

$$y = 0.0011 * x + 9.6545\text{E-}006$$

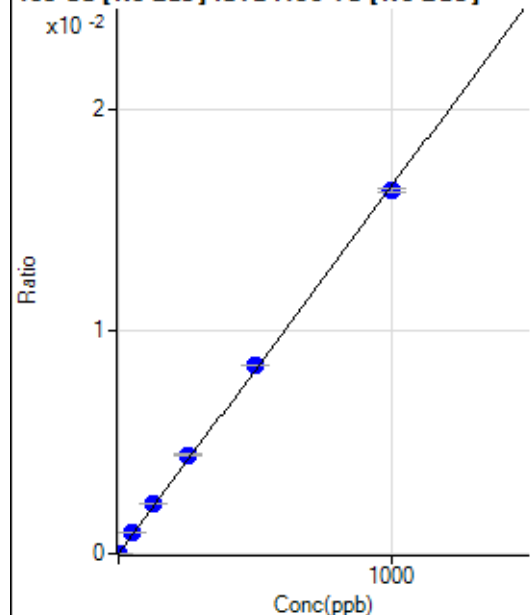
$$R = 0.9999$$

$$DL = 0.005581$$

$$BEC = 0.008771$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	16.66	0.0000	P	43.3
2	☐	0.100					
3	☐	1.000	1.010	470.85	0.0000	P	12.1
4	☐	50.000	55.579	25196.30	0.0009	P	1.4
5	☐	125.000	136.320	61187.61	0.0023	P	0.9
6	☐	250.000	268.946	117378.29	0.0044	P	0.5
7	☐	500.000	511.732	225723.32	0.0084	P	0.3
8	☐	1000.000	987.704	434246.01	0.0163	P	1.2
9	☐			75.00	0.0000	P	33.4

$$y = 1.6503\text{E-}005 * x + 5.9681\text{E-}007$$

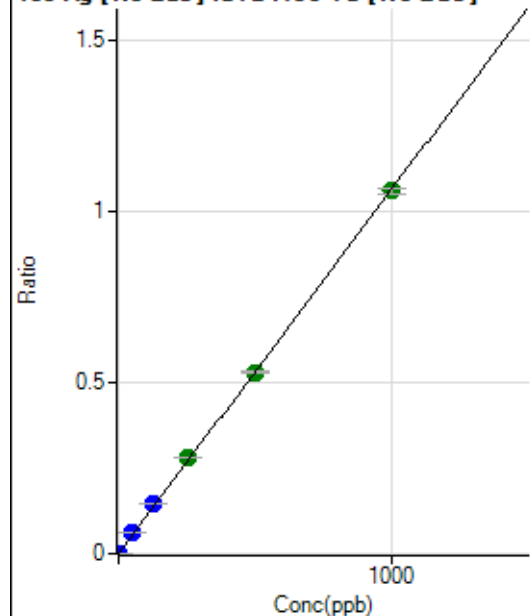
$$R = 0.9997$$

$$DL = 0.04697$$

$$BEC = 0.03616$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	236.12	0.0000	P	14.0
2	☐	0.100					
3	☐	1.000	1.101	32182.27	0.0012	P	2.2
4	☐	50.000	55.756	1628603.08	0.0593	P	1.0
5	☐	125.000	136.411	3946170.53	0.1451	P	0.6
6	☐	250.000	262.589	7386859.98	0.2794	A	0.3
7	☐	500.000	498.240	14165840.42	0.5300	A	0.9
8	☐	1000.000	996.019	28227565.21	1.0596	A	1.3
9	☐			2236.39	0.0001	P	5.2

$$y = 0.0011 * x + 8.4626\text{E-}006$$

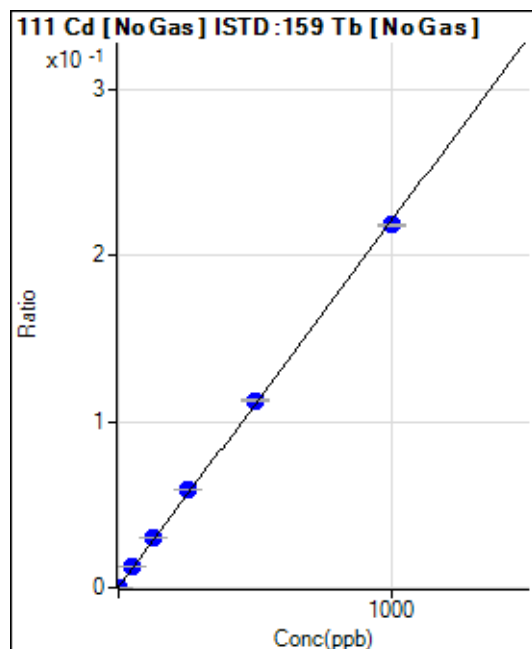
$$R = 0.9999$$

$$DL = 0.00333$$

$$BEC = 0.007955$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5949.50	0.0002	P	2.8
2	☐	0.100					
3	☐	1.000	1.018	11944.91	0.0004	P	3.0
4	☐	50.000	55.832	344438.39	0.0125	P	0.7
5	☐	125.000	136.807	827541.28	0.0304	P	1.0
6	☐	250.000	267.056	1565592.39	0.0592	P	0.3
7	☐	500.000	510.069	3017017.90	0.1129	P	1.2
8	☐	1000.000	988.934	5825850.65	0.2187	P	0.6
9	☐			5955.07	0.0002	P	4.2

$$y = 2.2091\text{E-}004 * x + 2.1309\text{E-}004$$

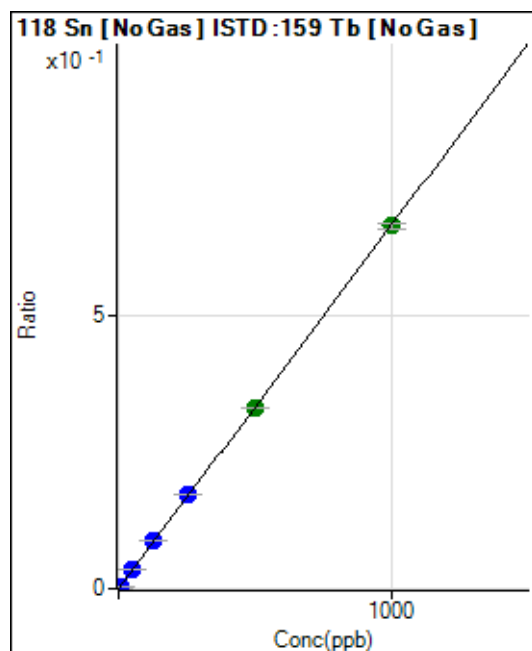
$$R = 0.9997$$

$$DL = 0.08074$$

$$BEC = 0.9646$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1216.77	0.0000	P	2.9
2	☐	0.500					
3	☐	5.000	5.138	94299.31	0.0035	P	0.5
4	☐	50.000	53.075	969029.63	0.0353	P	1.4
5	☐	125.000	131.124	2369518.22	0.0871	P	1.1
6	☐	250.000	259.694	4562624.32	0.1725	P	0.3
7	☐	500.000	497.735	8837583.96	0.3307	A	0.1
8	☐	1000.000	997.789	17656632.86	0.6628	A	1.9
9	☐			10487.69	0.0004	P	2.3

$$y = 6.6426\text{E-}004 * x + 4.3582\text{E-}005$$

$$R = 0.9999$$

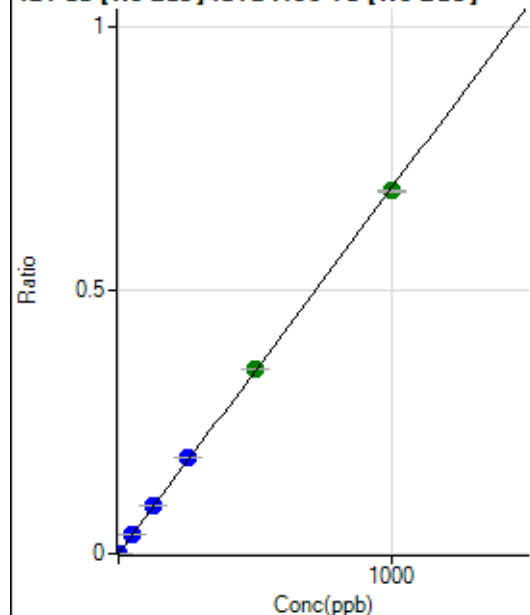
$$DL = 0.005795$$

$$BEC = 0.06561$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	216.68	0.0000	P	18.0
2	☐	0.200					
3	☐	2.000	1.960	37323.17	0.0014	P	3.0
4	☐	50.000	53.750	1024364.42	0.0373	P	1.1
5	☐	125.000	132.101	2493259.47	0.0917	P	1.5
6	☐	250.000	263.418	4834743.25	0.1828	P	0.3
7	☐	500.000	505.911	9384646.91	0.3511	A	0.7
8	☐	1000.000	992.615	18354292.25	0.6890	A	0.8
9	☐			19161.09	0.0008	P	1.2

$$y = 6.9408\text{E-}004 * x + 7.7656\text{E-}006$$

$$R = 0.9999$$

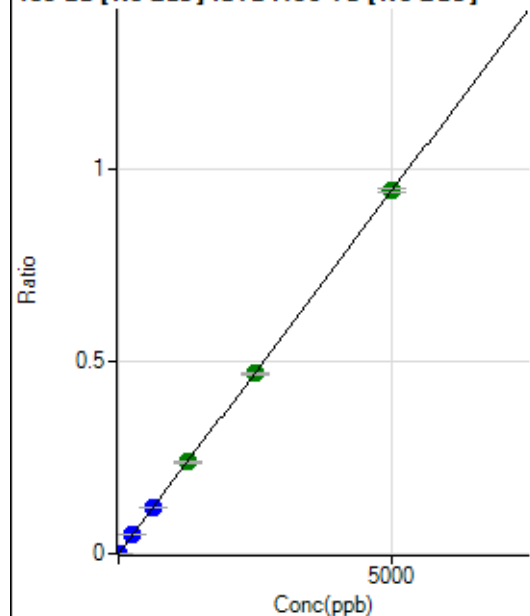
$$DL = 0.006049$$

$$BEC = 0.01119$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	30.56	0.0000	P	41.5
2	☐	1.000					
3	☐	10.000	9.869	50671.25	0.0019	P	1.7
4	☐	250.000	260.890	1347202.94	0.0491	P	1.8
5	☐	625.000	642.836	3288104.98	0.1209	P	0.6
6	☐	1250.000	1260.276	6268649.66	0.2371	A	0.6
7	☐	2500.000	2481.408	12474900.10	0.4668	A	0.6
8	☐	5000.000	5003.953	25076765.49	0.9413	A	0.9
9	☐			3267.23	0.0001	P	5.9

$$y = 1.8811\text{E-}004 * x + 1.0933\text{E-}006$$

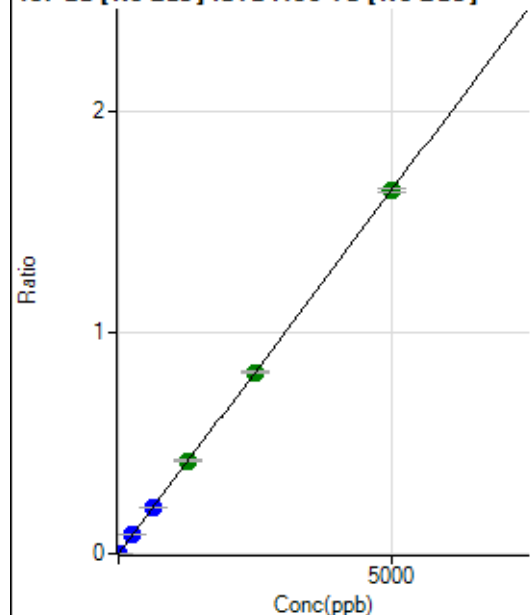
$$R = 1.0000$$

$$DL = 0.007229$$

$$BEC = 0.005812$$

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	61.11	0.0000	P	39.8
2	☐	1.000					
3	☐	10.000	9.827	88043.77	0.0032	P	1.0
4	☐	250.000	259.378	2336944.10	0.0851	P	1.9
5	☐	625.000	641.722	5727103.56	0.2106	P	0.2
6	☐	1250.000	1281.794	11124146.78	0.4207	A	0.5
7	☐	2500.000	2494.803	21882921.32	0.8188	A	1.2
8	☐	5000.000	4992.091	43648121.12	1.6384	A	1.2
9	☐			5784.77	0.0002	P	8.7

$$y = 3.2821\text{E-}004 * x + 2.1924\text{E-}006$$

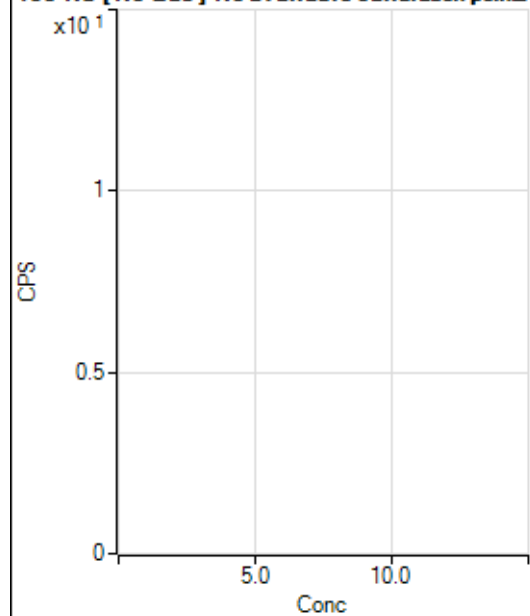
$$R = 1.0000$$

$$DL = 0.00797$$

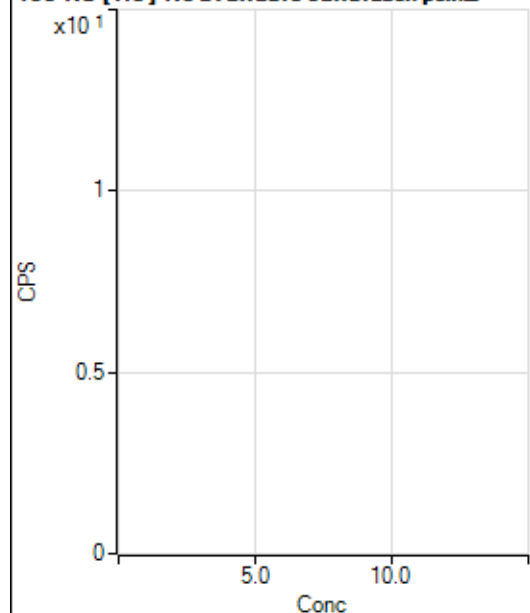
$$BEC = 0.00668$$

Weight: <None>

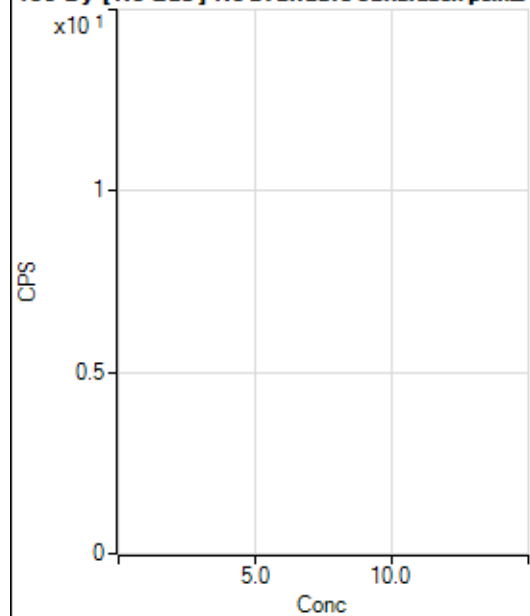
Min Conc: 0

150 Nd [No Gas] No available calibration points

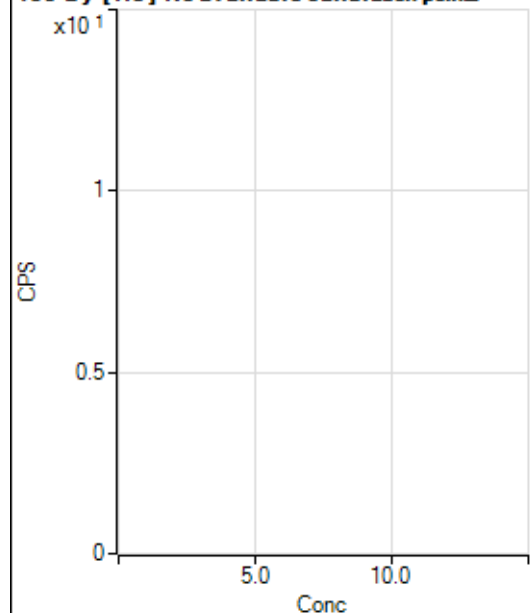
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			4.45		P	86.6
2	☐						
3	☐			8.89		P	114.
4	☐			77.78		P	19.8
5	☐			182.23		P	7.6
6	☐			393.36		P	2.9
7	☐			846.72		P	7.9
8	☐			1500.14		P	2.7
9	☐			408.91		P	10.0

150 Nd [He] No available calibration points

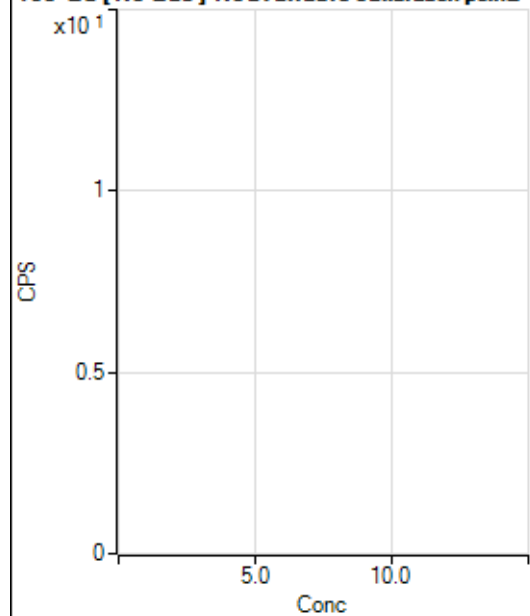
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			3.33		P	173.
2	☐						
3	☐			2.22		P	173.
4	☐			14.44		P	53.3
5	☐			24.44		P	20.8
6	☐			40.00		P	28.9
7	☐			100.00		P	15.3
8	☐			195.56		P	23.2
9	☐			195.56		P	10.4

156 Dy [No Gas] No available calibration points

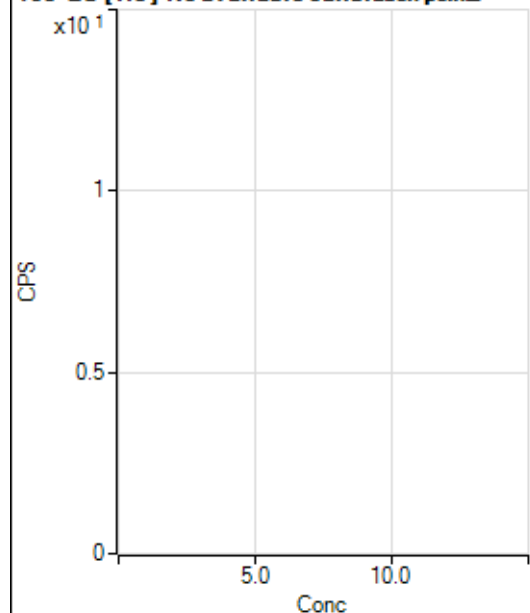
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			22.22		P	94.4
2	☐						
3	☐			19.44		P	89.2
4	☐			30.56		P	15.7
5	☐			86.12		P	5.6
6	☐			116.67		P	68.1
7	☐			125.01		P	24.0
8	☐			302.79		P	19.5
9	☐			172.23		P	19.6

156 Dy [He] No available calibration points

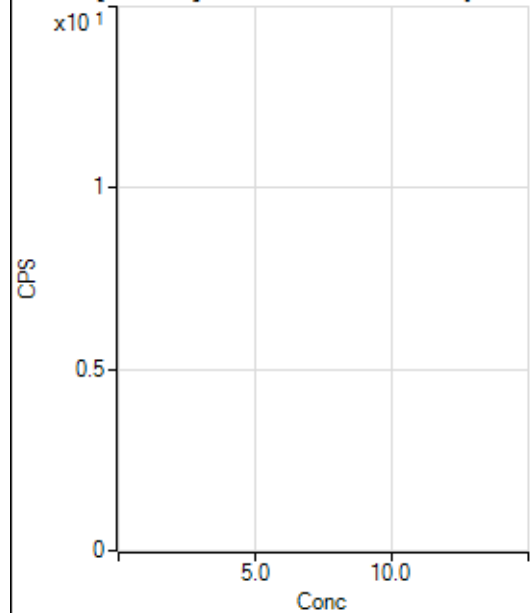
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	43.4
2	☐						
3	☐			15.55		P	24.8
4	☐			34.44		P	34.0
5	☐			76.67		P	15.7
6	☐			128.89		P	9.1
7	☐			243.34		P	6.0
8	☐			503.35		P	13.2
9	☐			102.23		P	10.0

160 Gd [No Gas] Noavailable calibration poin_

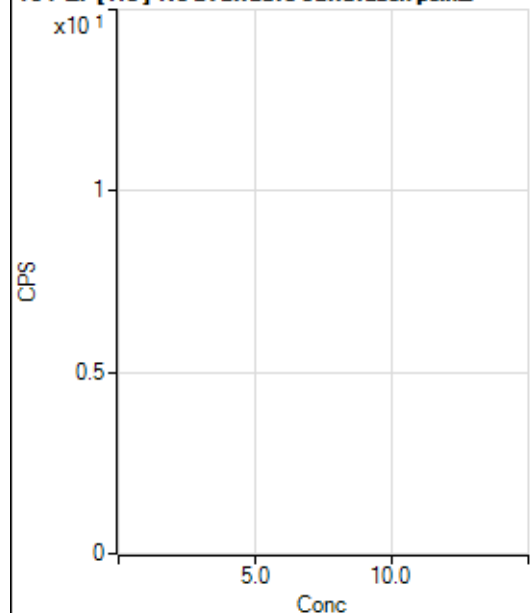
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			197.23		P	12.9
2	☐						
3	☐			280.57		P	15.2
4	☐			169.46		P	24.3
5	☐			216.68		P	26.9
6	☐			166.67		P	17.3
7	☐			263.90		P	29.8
8	☐			230.57		P	24.1
9	☐			300.02		P	11.1

160 Gd [He] No available calibration points

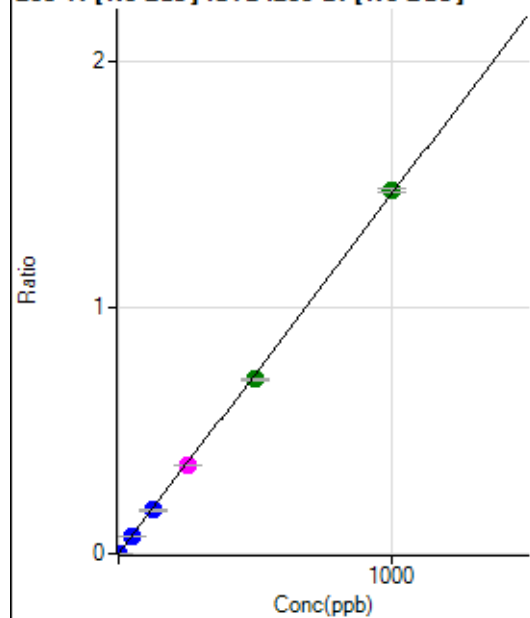
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			434.46		P	12.2
2	☐						
3	☐			428.90		P	10.8
4	☐			446.68		P	3.9
5	☐			428.90		P	6.8
6	☐			430.02		P	11.0
7	☐			433.35		P	11.9
8	☐			420.01		P	2.9
9	☐			491.13		P	5.5

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			80.56		P	11.9
2	☐						
3	☐			63.89		P	19.9
4	☐			80.56		P	15.8
5	☐			108.34		P	26.7
6	☐			91.67		P	48.1
7	☐			116.67		P	7.1
8	☐			127.79		P	32.2
9	☐			133.34		P	41.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			54.44		P	25.5
2	☐						
3	☐			42.22		P	50.1
4	☐			48.89		P	7.9
5	☐			53.34		P	43.3
6	☐			54.44		P	18.7
7	☐			65.56		P	17.9
8	☐			61.11		P	28.0
9	☐			71.11		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	780.61	0.0000	P	6.9
2	☐	0.100					
3	☐	1.000	0.848	23471.64	0.0013	P	1.7
4	☐	50.000	47.750	1270837.51	0.0699	P	0.8
5	☐	125.000	121.880	3177851.31	0.1784	P	3.1
6	☐	250.000	245.978	6205710.64	0.3599	M	1.6
7	☐	500.000	484.367	11973820.41	0.7087	A	1.5
8	☐	1000.000	1009.325	23728963.73	1.4767	A	0.9
9	☐			3069.94	0.0002	P	9.1

$$y = 0.0015 * x + 4.1713E-005$$

$$R = 0.9998$$

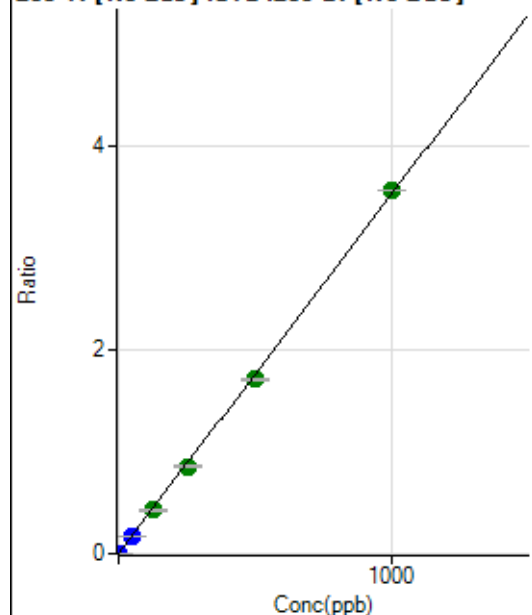
$$DL = 0.005911$$

$$BEC = 0.02851$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1991.91	0.0001	P	6.5
2	☐	0.100					
3	☐	1.000	0.854	56973.13	0.0031	P	0.8
4	☐	50.000	48.591	3111342.28	0.1711	P	1.4
5	☐	125.000	120.481	7559044.18	0.4242	A	2.2
6	☐	250.000	242.917	14745234.71	0.8552	A	1.5
7	☐	500.000	485.837	28897338.84	1.7102	A	0.8
8	☐	1000.000	1009.488	57100071.42	3.5534	A	0.1
9	☐			7747.04	0.0006	P	9.9

$$y = 0.0035 * x + 1.0644E-004$$

$$R = 0.9998$$

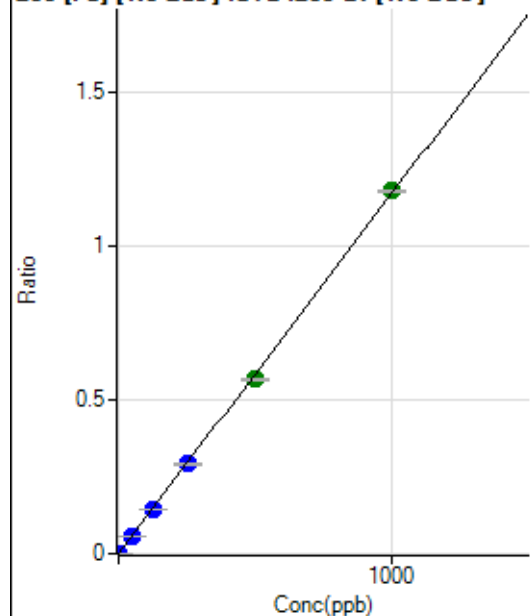
$$DL = 0.005859$$

$$BEC = 0.03024$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1494.58	0.0001	P	1.6
2	☐	0.100					
3	☐	1.000	0.874	20134.24	0.0011	P	4.7
4	☐	50.000	48.734	1035680.19	0.0570	P	1.1
5	☐	125.000	123.483	2570298.76	0.1442	P	1.2
6	☐	250.000	248.967	5012466.37	0.2907	P	1.6
7	☐	500.000	484.388	9554762.25	0.5655	A	1.1
8	☐	1000.000	1008.317	18914681.67	1.1771	A	0.7
9	☐			15385.24	0.0012	P	1.8

$$y = 0.0012 * x + 7.9871E-005$$

$$R = 0.9998$$

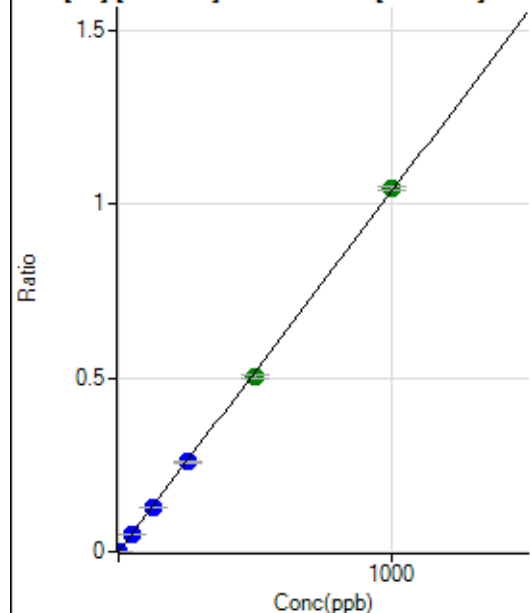
$$DL = 0.003208$$

$$BEC = 0.06842$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1242.70	0.0001	P	7.3
2	☐	0.100					
3	☐	1.000	0.846	17282.07	0.0009	P	1.9
4	☐	50.000	49.040	926051.75	0.0509	P	1.4
5	☐	125.000	123.245	2279845.99	0.1279	P	1.4
6	☐	250.000	249.302	4460426.89	0.2587	P	1.8
7	☐	500.000	486.808	8533464.54	0.5051	A	1.7
8	☐	1000.000	1007.038	16787786.49	1.0447	A	1.2
9	☐			12669.36	0.0010	P	1.5

$$y = 0.0010 * x + 6.6411E-005$$

$$R = 0.9999$$

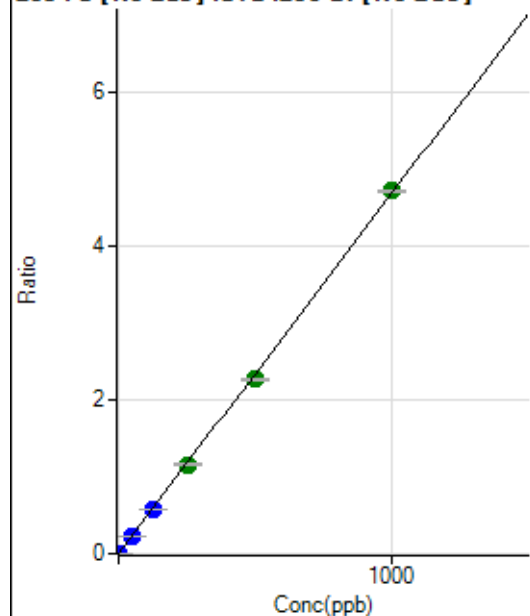
$$DL = 0.01409$$

$$BEC = 0.06402$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5641.39	0.0003	P	1.7
2	☐	0.100					
3	☐	1.000	0.869	79926.18	0.0044	P	1.2
4	☐	50.000	49.045	4177273.57	0.2298	P	1.4
5	☐	125.000	123.847	10333346.66	0.5798	P	0.8
6	☐	250.000	247.184	19946636.32	1.1568	A	2.0
7	☐	500.000	485.721	38403425.63	2.2729	A	1.1
8	☐	1000.000	1008.036	75794547.30	4.7168	A	0.7
9	☐			59448.03	0.0047	P	1.3

$$y = 0.0047 * x + 3.0148E-004$$

$$R = 0.9998$$

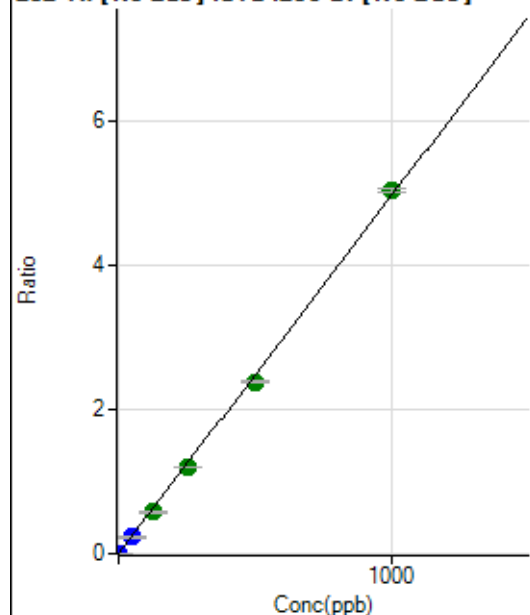
$$DL = 0.003254$$

$$BEC = 0.06443$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1163.05	0.0001	P	6.9
2	☐	0.100					
3	☐	1.000	0.796	73537.43	0.0040	P	0.7
4	☐	50.000	45.996	4157464.73	0.2287	P	2.3
5	☐	125.000	116.259	10299661.63	0.5780	A	1.8
6	☐	250.000	240.848	20645497.45	1.1973	A	0.7
7	☐	500.000	480.005	40317020.58	2.3860	A	0.6
8	☐	1000.000	1013.578	80960584.21	5.0383	A	1.1
9	☐			19144.33	0.0015	P	5.9

$$y = 0.0050 * x + 6.2161E-005$$

$$R = 0.9997$$

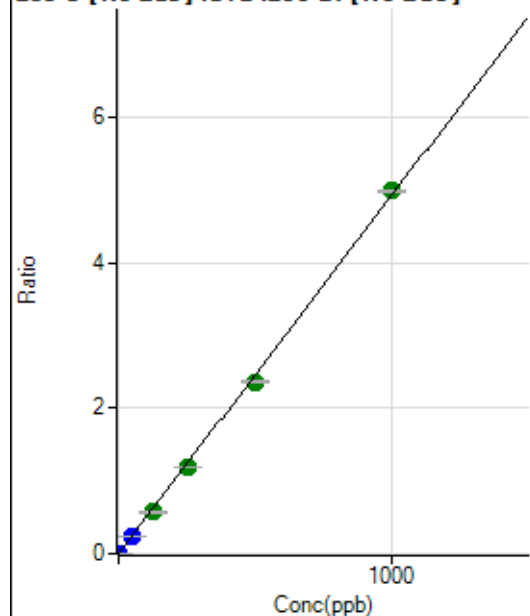
$$DL = 0.002596$$

$$BEC = 0.01251$$

Weight: <None>

Min Conc: 0

238 U [No Gas] ISTD :209 Bi [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	138.90	0.0000	P	24.8
2	☐	0.100					
3	☐	1.000	0.801	72350.24	0.0040	P	2.1
4	☐	50.000	46.191	4135533.88	0.2275	P	2.1
5	☐	125.000	115.823	10164579.05	0.5704	A	2.2
6	☐	250.000	241.558	20513362.26	1.1896	A	1.0
7	☐	500.000	480.538	39985972.77	2.3665	A	0.7
8	☐	1000.000	1013.179	80178914.29	4.9897	A	0.5
9	☐			4626.08	0.0004	P	10.6

$$y = 0.0049 * x + 7.4202E-006$$

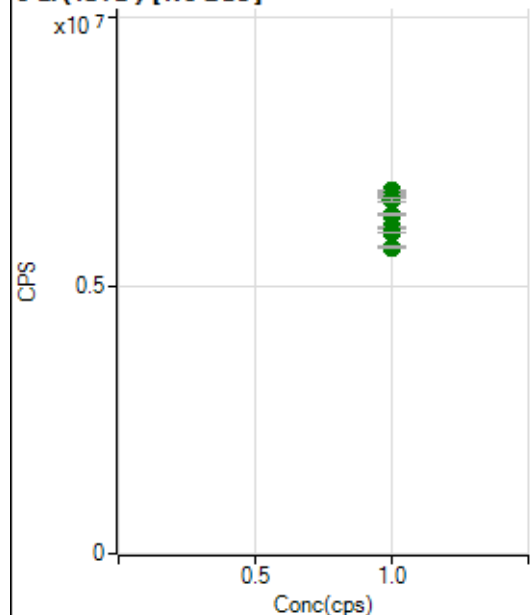
$$R = 0.9997$$

$$DL = 0.001121$$

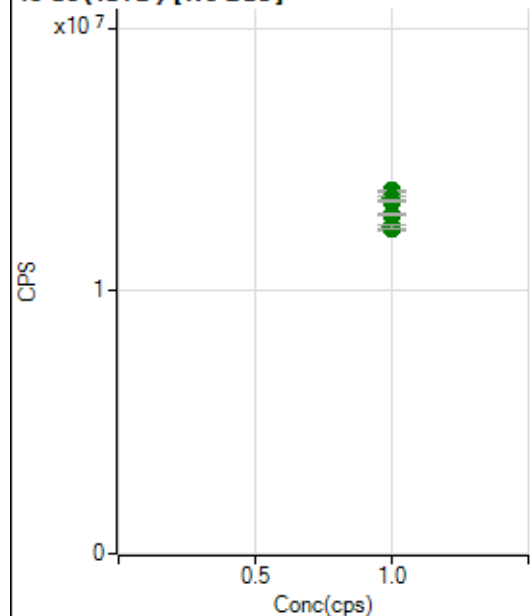
$$BEC = 0.001507$$

Weight: <None>

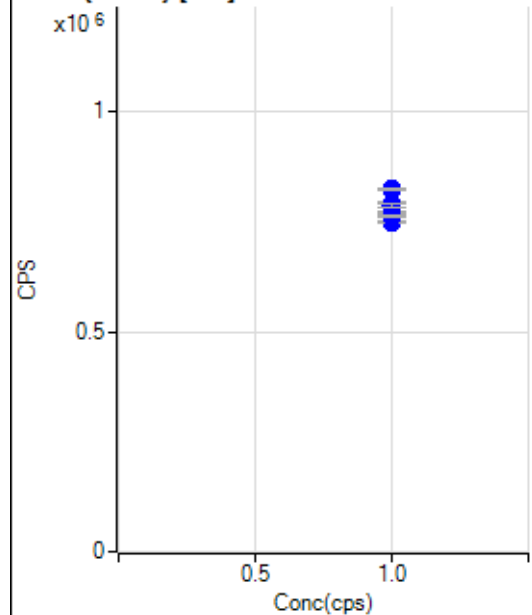
Min Conc: 0

6 Li (ISTD) [No Gas]

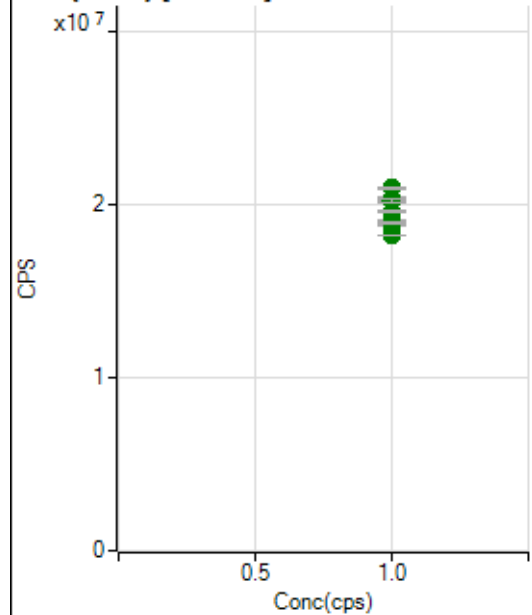
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6762564.34		A	0.4
2	☐	1.000					
3	☐	1.000		6681620.05		A	0.5
4	☐	1.000		6603792.90		A	0.9
5	☐	1.000		6319690.23		A	0.4
6	☐	1.000		6078145.74		A	0.3
7	☐	1.000		6085260.66		A	0.3
8	☐	1.000		5975028.98		A	0.1
9	☐	1.000		5715589.08		A	0.7

45 Sc (ISTD) [No Gas]

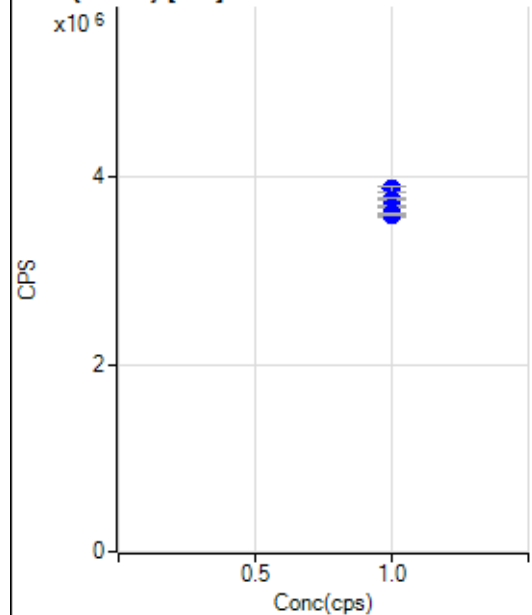
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		13801050.48		A	0.4
2	☐	1.000					
3	☐	1.000		13538561.07		A	1.3
4	☐	1.000		13404777.73		A	0.3
5	☐	1.000		12906045.86		A	0.5
6	☐	1.000		12345692.38		A	0.3
7	☐	1.000		12411892.73		A	1.4
8	☐	1.000		12344400.80		A	0.1
9	☐	1.000		12435899.06		A	1.2

45 Sc (ISTD) [He]

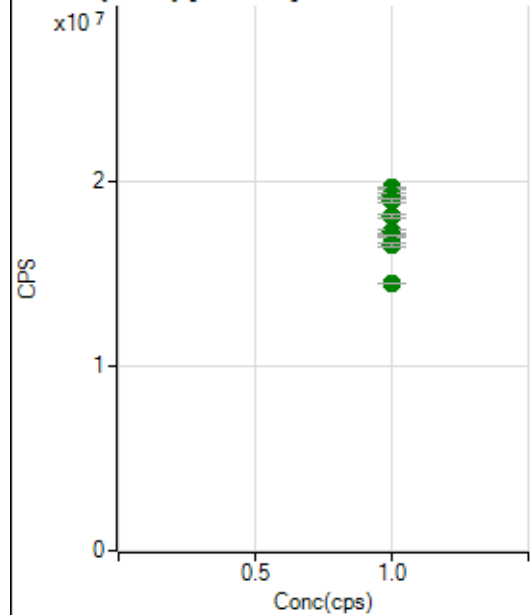
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		824554.75		P	0.3
2	☐	1.000					
3	☐	1.000		822701.74		P	0.4
4	☐	1.000		792724.14		P	0.4
5	☐	1.000		770351.06		P	0.4
6	☐	1.000		748113.28		P	0.6
7	☐	1.000		762451.55		P	0.2
8	☐	1.000		763325.30		P	0.6
9	☐	1.000		785419.42		P	1.1

89 Y (ISTD) [No Gas]

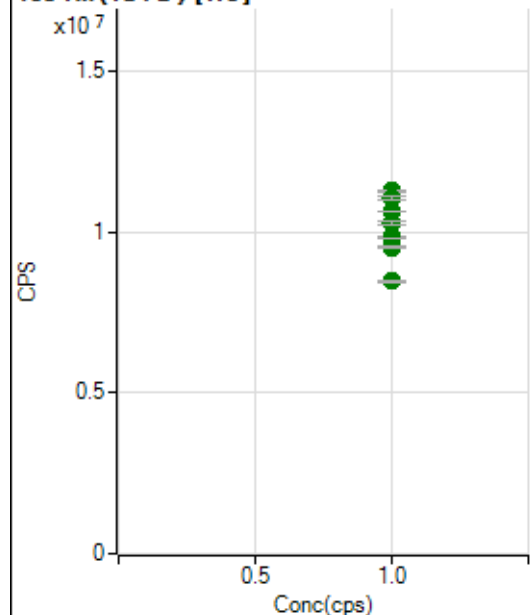
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		20967766.77		A	0.9
2	☐	1.000					
3	☐	1.000		20334795.39		A	1.5
4	☐	1.000		20194023.87		A	1.3
5	☐	1.000		19611081.37		A	0.6
6	☐	1.000		18806432.64		A	0.6
7	☐	1.000		19051933.19		A	0.4
8	☐	1.000		18907550.83		A	0.5
9	☐	1.000		18207258.62		A	0.1

89 Y (ISTD) [He]

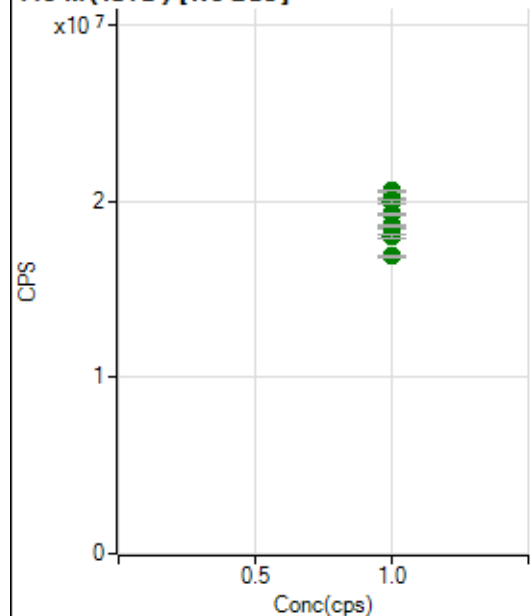
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3876083.31		P	1.6
2	☐	1.000					
3	☐	1.000		3877525.88		P	1.3
4	☐	1.000		3769893.35		P	0.6
5	☐	1.000		3680164.42		P	0.6
6	☐	1.000		3588089.32		P	0.3
7	☐	1.000		3617314.98		P	0.5
8	☐	1.000		3586530.85		P	0.9
9	☐	1.000		3605321.93		P	0.9

103 Rh (ISTD) [No Gas]

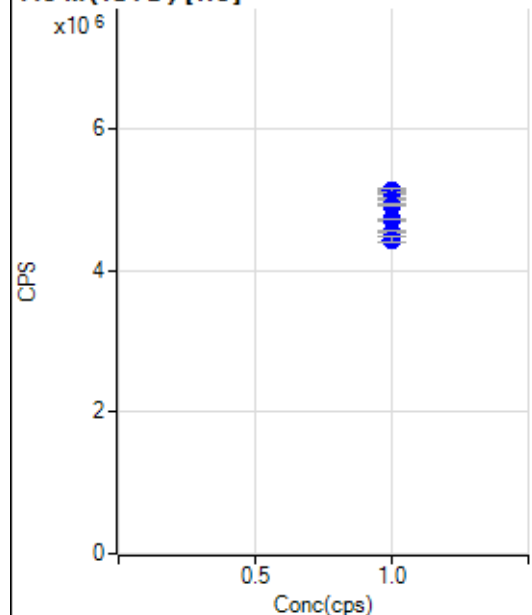
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		19674497.84		A	0.6
2	☐	1.000					
3	☐	1.000		19319673.00		A	1.2
4	☐	1.000		18943775.77		A	1.1
5	☐	1.000		18147189.82		A	0.6
6	☐	1.000		17326405.77		A	1.0
7	☐	1.000		17061340.32		A	0.7
8	☐	1.000		16583938.56		A	0.8
9	☐	1.000		14527233.66		A	0.2

103 Rh (ISTD) [He]

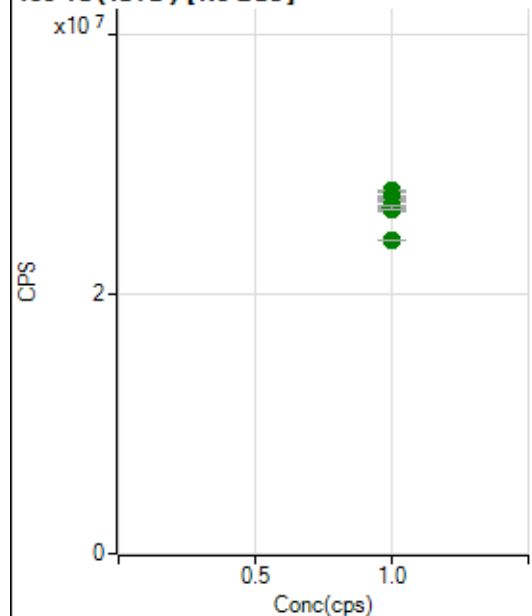
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		11289212.33		A	0.7
2	☐	1.000					
3	☐	1.000		11076143.17		A	1.4
4	☐	1.000		10657228.87		A	0.1
5	☐	1.000		10293096.37		A	1.1
6	☐	1.000		9875502.84		A	0.3
7	☐	1.000		9807802.42		A	0.3
8	☐	1.000		9532798.96		A	0.3
9	☐	1.000		8480554.18		A	0.8

115 In (ISTD) [No Gas]

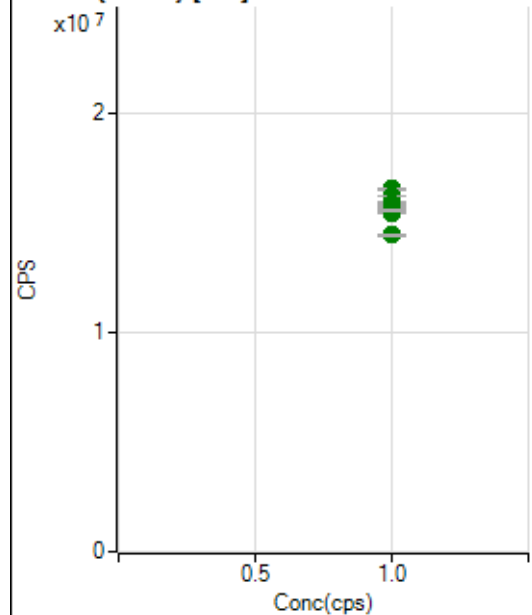
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		20597270.13		A	0.4
2	☐	1.000					
3	☐	1.000		20113517.83		A	0.4
4	☐	1.000		19985897.56		A	1.0
5	☐	1.000		19295702.20		A	0.8
6	☐	1.000		18471249.66		A	0.5
7	☐	1.000		18627076.31		A	0.6
8	☐	1.000		18023987.40		A	1.3
9	☐	1.000		16873016.50		A	0.4

115 In (ISTD) [He]

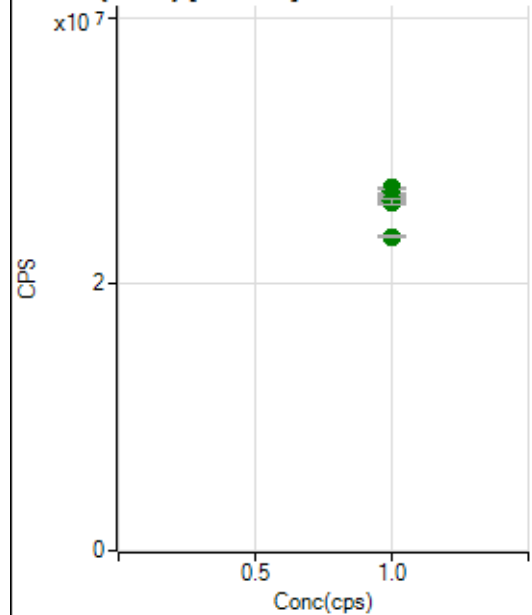
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5116045.99		P	1.0
2	☐	1.000					
3	☐	1.000		5130818.75		P	0.9
4	☐	1.000		5007440.66		P	0.6
5	☐	1.000		4924441.44		P	0.6
6	☐	1.000		4722715.45		P	0.9
7	☐	1.000		4741182.49		P	0.2
8	☐	1.000		4545727.20		P	0.7
9	☐	1.000		4440597.61		P	1.6

159 Tb (ISTD) [No Gas]

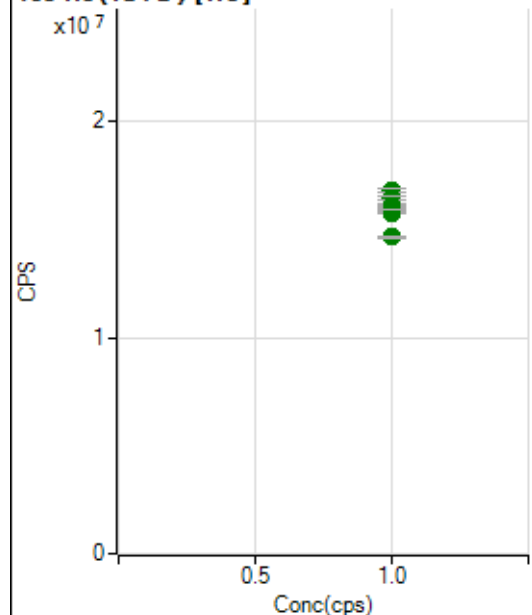
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		27918494.03		A	0.7
2	☐	1.000					
3	☐	1.000		27279350.43		A	0.5
4	☐	1.000		27453563.76		A	0.8
5	☐	1.000		27191829.87		A	0.5
6	☐	1.000		26442541.00		A	0.4
7	☐	1.000		26726407.93		A	0.7
8	☐	1.000		26642685.71		A	1.4
9	☐	1.000		24071683.25		A	0.1

159 Tb (ISTD) [He]

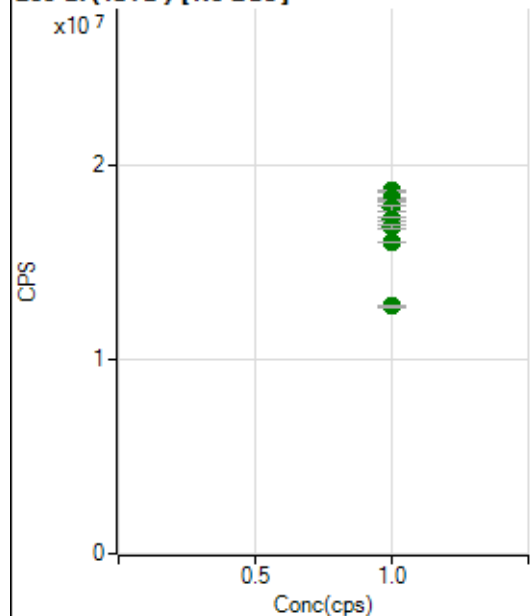
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16585334.89		A	0.7
2	☐	1.000					
3	☐	1.000		16256662.26		A	0.2
4	☐	1.000		15909910.32		A	0.7
5	☐	1.000		15805863.52		A	1.0
6	☐	1.000		15493602.69		A	0.4
7	☐	1.000		15772484.90		A	0.4
8	☐	1.000		15605950.88		A	0.8
9	☐	1.000		14483785.48		A	0.4

165 Ho (ISTD) [No Gas]

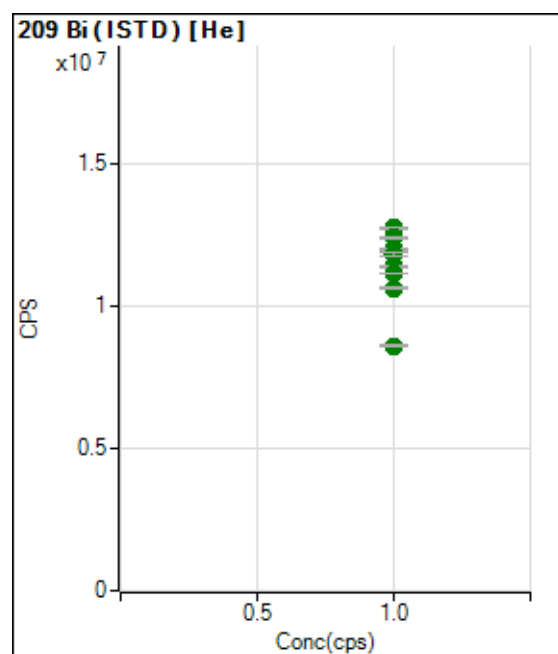
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		27217713.46		A	0.8
2	☐	1.000					
3	☐	1.000		26971534.63		A	0.9
4	☐	1.000		26730849.55		A	1.0
5	☐	1.000		26669035.32		A	0.2
6	☐	1.000		26052560.48		A	0.6
7	☐	1.000		26184656.66		A	0.9
8	☐	1.000		26235524.89		A	1.7
9	☐	1.000		23569094.62		A	0.8

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16790633.08		A	0.9
2	☐	1.000					
3	☐	1.000		16459128.09		A	0.6
4	☐	1.000		16127988.51		A	0.5
5	☐	1.000		16016213.23		A	0.7
6	☐	1.000		15783522.68		A	0.3
7	☐	1.000		16013267.40		A	0.5
8	☐	1.000		15935923.37		A	0.3
9	☐	1.000		14679431.73		A	0.6

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		18712082.50		A	0.2
2	☐	1.000					
3	☐	1.000		18307646.95		A	0.9
4	☐	1.000		18181209.17		A	0.8
5	☐	1.000		17824743.76		A	1.9
6	☐	1.000		17244884.46		A	1.3
7	☐	1.000		16897312.80		A	1.1
8	☐	1.000		16069053.23		A	0.2
9	☐	1.000		12756968.84		A	1.1



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12763631.90		A	0.5
2	☐	1.000					
3	☐	1.000		12436748.84		A	0.5
4	☐	1.000		12027458.02		A	0.4
5	☐	1.000		11839353.57		A	0.9
6	☐	1.000		11405363.65		A	0.9
7	☐	1.000		11162175.25		A	0.1
8	☐	1.000		10634369.01		A	0.4
9	☐	1.000		8609458.27		A	0.6

US EPA Tune Check Sample Report

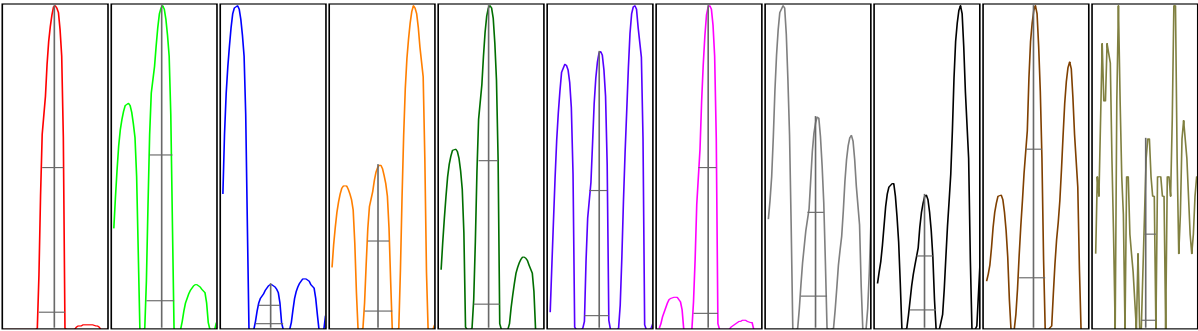
Batch Folder D:\ICP-MS Data\P7031119-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	32105	2.18	5.00	
24	292636	1.88	5.00	
25	39877	1.77	5.00	
26	46627	2.35	5.00	
59	222537	2.22	5.00	
113	26777	2.14	5.00	
115	314662	2.29	5.00	
206	82613	1.69	5.00	
207	80082	2.00	5.00	
208	181964	2.18	5.00	
220	0	56.52		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	32590	32594	32271	30899	32169
24	297138	297642	293245	284132	291022
25	40214	40484	40212	38704	39770
26	47724	47356	46780	44895	46378
59	226768	225925	223604	214368	222023
113	27370	27179	26815	25895	26625
115	319266	321835	316368	303424	312417
206	83444	83397	83221	80150	82851
207	81316	80898	80715	77321	80161
208	186229	183730	182670	175550	181639
220	0	1	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	53199	9.00	8.9 - 9.1		0.781	0.900	
24	480417	23.95	23.9 - 24.1		0.806	0.900	
25	65724	24.95	24.9 - 25.1		0.772	0.900	
26	75258	25.90	25.9 - 26.1		0.797	0.900	
59	395228	58.95	58.9 - 59.1		0.752	0.900	
113	52585	113.00	112.9 - 113.1		0.693	0.900	
115	615085	115.00	114.9 - 115.1		0.717	0.900	
206	162788	205.95	205.9 - 206.1		0.750	0.900	
207	148833	206.95	206.9 - 207.1		0.749	0.900	
208	360082	207.95	207.9 - 208.1		0.744	0.900	
220	1	220.05	-		0.438		

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	8.7	V	Deflect	13.6	V
Extract 2	-160.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-100	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	200	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	68222	0.52	
89	58997	0.77	
205	84547	0.58	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	67917	68498	68089	68693	67912
89	58548	59634	59303	58726	58774
205	83934	84819	84823	85048	84111

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	9.4	V	Deflect	1.8	V
Extract 2	-145.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-75	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			