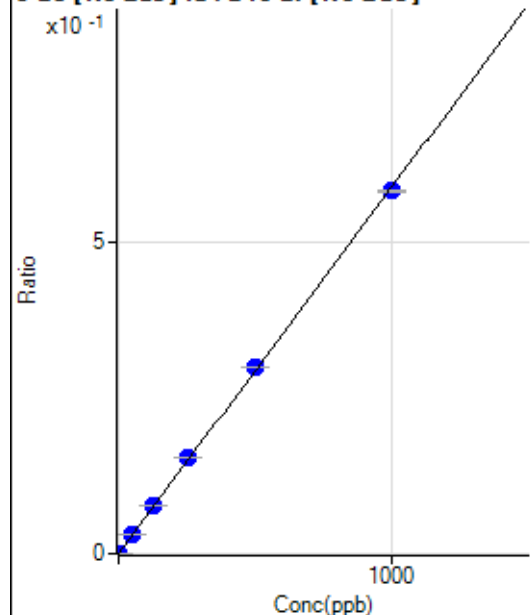


Batch Folder: D:\ICP-MS Data\P7062319-MS.b\
Analysis File: P7062319-MS.batch.bin
DA Date-Time: 2019-06-24 00:46:47
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-06-23 12:52:30
2	004CALS.d	S01	2019-06-23 12:56:05
3	005CALS.d	S02	2019-06-23 13:00:05
4	006CALS.d	S03	2019-06-23 13:04:01
5	007CALS.d	S04	2019-06-23 13:07:57
6	008CALS.d	S05	2019-06-23 13:11:52
7	009CALS.d	S06	2019-06-23 13:15:46
8	010CALS.d	S07	2019-06-23 13:19:36
9	012CALS.d	S08	2019-06-23 13:30:50

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.11	0.0000	P	18.9
2	☐	0.100	0.102	128.89	0.0001	P	24.8
3	☐	1.000	0.923	853.37	0.0006	P	9.4
4	☐	50.000	53.667	47553.15	0.0316	P	1.2
5	☐	125.000	132.498	113845.39	0.0780	P	0.5
6	☐	250.000	260.578	211028.36	0.1534	P	0.2
7	☐	500.000	510.981	395369.83	0.3008	P	0.1
8	☐	1000.000	990.745	744579.17	0.5832	P	0.4
9	☐			104.45	0.0001	P	10.1

$$y = 5.8863\text{E-}004 * x + 2.7650\text{E-}005$$

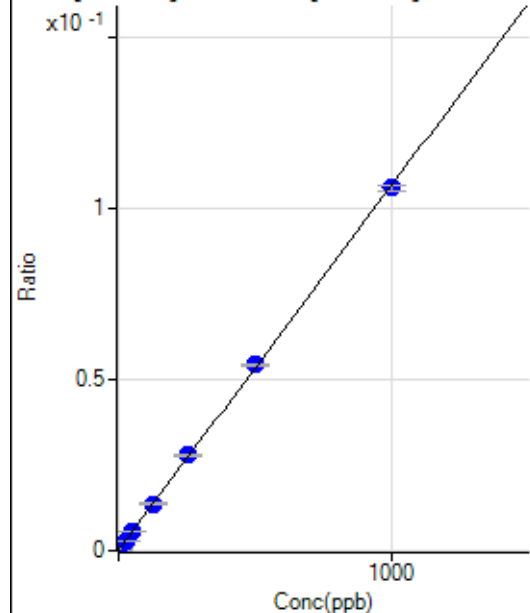
$$R = 0.9998$$

$$DL = 0.02668$$

$$BEC = 0.04697$$

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	313.90	0.0002	P	14.8
2	☐	2.500	2.550	711.15	0.0005	P	11.7
3	☐	25.000	23.089	3992.35	0.0027	P	1.9
4	☐	50.000	49.426	8241.48	0.0055	P	0.7
5	☐	125.000	126.096	19922.11	0.0137	P	3.4
6	☐	250.000	260.940	38547.17	0.0280	P	1.6
7	☐	500.000	507.921	71435.90	0.0544	P	0.8
8	☐	1000.000	993.244	135432.38	0.1061	P	1.8
9	☐			2255.81	0.0017	P	6.9

$$y = 1.0660\text{E-}004 * x + 2.1110\text{E-}004$$

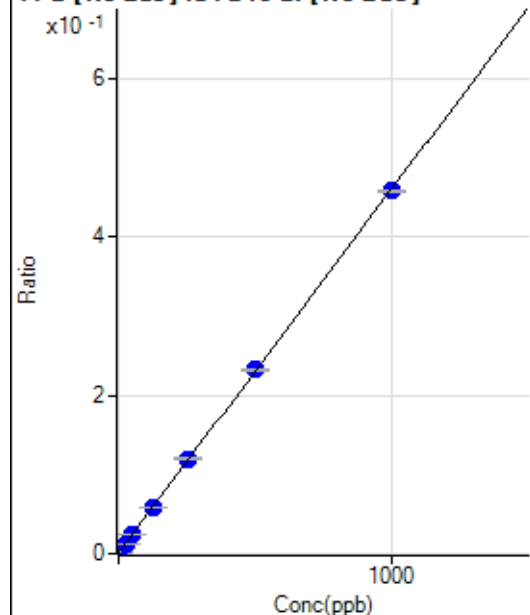
$$R = 0.9999$$

$$DL = 0.8801$$

$$BEC = 1.98$$

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	1372.34	0.0009	P	6.1
2	☐	2.500	2.243	2872.62	0.0020	P	3.8
3	☐	25.000	22.800	17026.78	0.0114	P	2.6
4	☐	50.000	49.487	35584.35	0.0237	P	3.0
5	☐	125.000	125.373	85393.83	0.0585	P	1.3
6	☐	250.000	258.725	164775.28	0.1198	P	0.9
7	☐	500.000	504.869	306081.95	0.2329	P	1.2
8	☐	1000.000	995.419	585067.60	0.4583	P	0.4
9	☐			9445.01	0.0069	P	3.4

$$y = 4.5946\text{E-}004 * x + 9.2265\text{E-}004$$

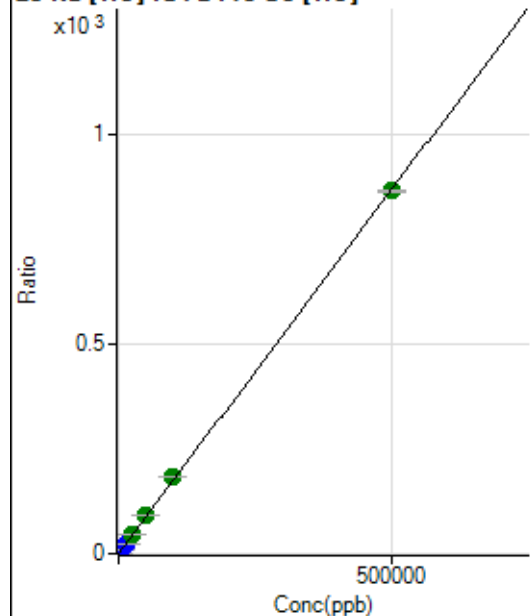
$$R = 0.9999$$

$$DL = 0.3689$$

$$BEC = 2.008$$

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	1861.31	0.0212	P	10.8
2	☐	50.000	48.004	9303.24	0.1044	P	2.7
3	☐	500.000	494.108	78365.91	0.8784	P	0.7
4	☐	5000.000	5332.987	814301.94	9.2741	P	0.3
5	☐	12500.000	13370.742	1917810.07	23.2198	P	0.6
6	☐	25000.000	27054.392	3590949.91	46.9614	A	0.5
7	☐	50000.000	53594.754	6975847.90	93.0097	A	0.8
8	☐	100000.00	105399.03	13534911.41	182.8918	A	1.1
9	☐	500000.00	498432.90	72279864.81	864.8178	A	0.3

$$y = 0.0017 * x + 0.0212$$

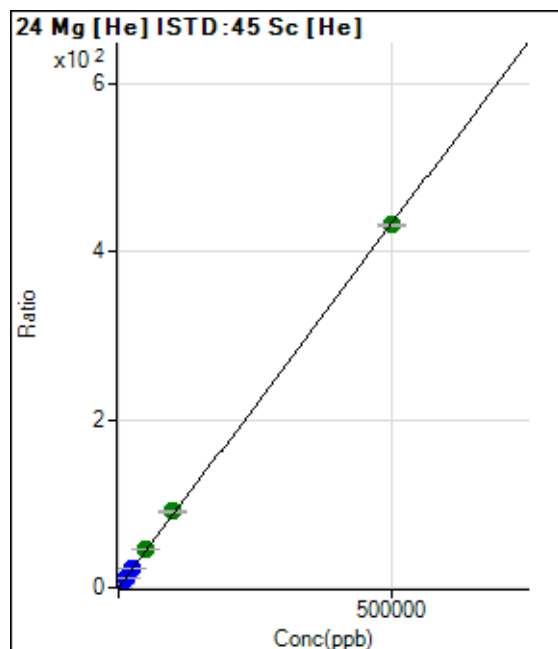
$$R = 0.9999$$

$$DL = 3.937$$

$$BEC = 12.19$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	202.79	0.0023	P	34.8
2	☐	50.000	51.211	4153.50	0.0466	P	2.8
3	☐	500.000	534.639	41480.47	0.4650	P	1.2
4	☐	5000.000	5460.060	415051.54	4.7271	P	0.7
5	☐	12500.000	13731.481	981601.41	11.8846	P	0.7
6	☐	25000.000	27188.812	1799221.27	23.5296	P	0.8
7	☐	50000.000	53717.629	3486401.51	46.4858	A	0.9
8	☐	100000.00	104536.40	6694610.87	90.4608	A	1.0
9	☐	500000.00	498576.09	36058268.52	431.4350	A	0.5

$$y = 8.6533\text{E-}004 * x + 0.0023$$

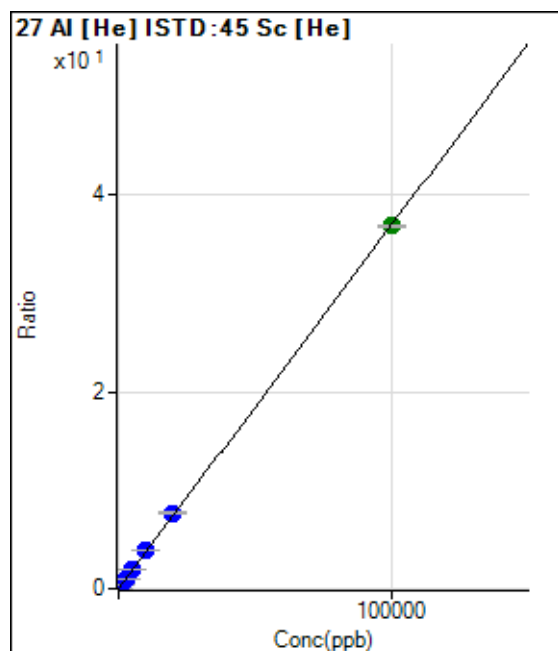
$$R = 0.9999$$

$$DL = 2.791$$

$$BEC = 2.671$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47.23	0.0005	P	21.9
2	☐	2.000	2.000	113.89	0.0013	P	32.5
3	☐	20.000	19.191	680.60	0.0076	P	14.7
4	☐	1000.000	1067.829	34716.28	0.3954	P	1.1
5	☐	2500.000	2690.053	82197.71	0.9952	P	1.4
6	☐	5000.000	5429.225	153555.64	2.0081	P	0.9
7	☐	10000.000	10701.979	296856.36	3.9578	P	0.4
8	☐	20000.000	20754.480	567973.49	7.6749	P	1.4
9	☐	100000.00	99752.015	3082817.23	36.8858	A	0.5

$$y = 3.6977\text{E-}004 * x + 5.3714\text{E-}004$$

$$R = 0.9999$$

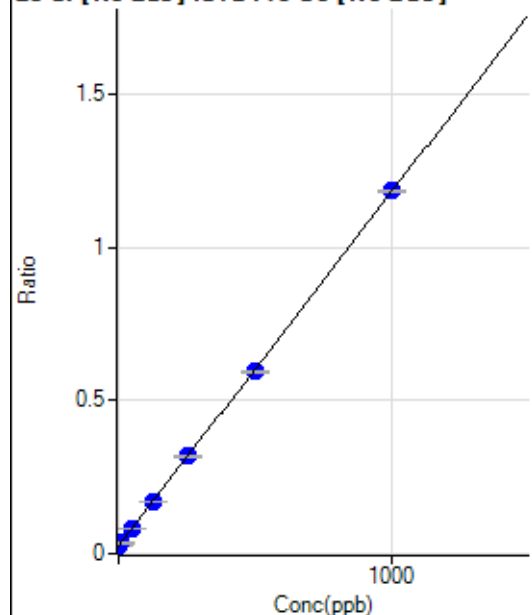
$$DL = 0.9526$$

$$BEC = 1.453$$

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	47024.99	0.0249	P	0.3
2	☐	1.000	0.913	48691.11	0.0259	P	0.7
3	☐	10.000	8.390	66063.17	0.0346	P	0.8
4	☐	50.000	51.109	159617.04	0.0839	P	0.4
5	☐	125.000	126.525	315181.68	0.1710	P	0.8
6	☐	250.000	253.228	541001.02	0.3173	P	0.5
7	☐	500.000	491.776	964550.58	0.5928	P	0.2
8	☐	1000.000	1003.075	1866911.02	1.1833	P	0.7
9	☐			91999.20	0.0548	P	3.7

$$y = 0.0012 * x + 0.0249$$

$$R = 0.9999$$

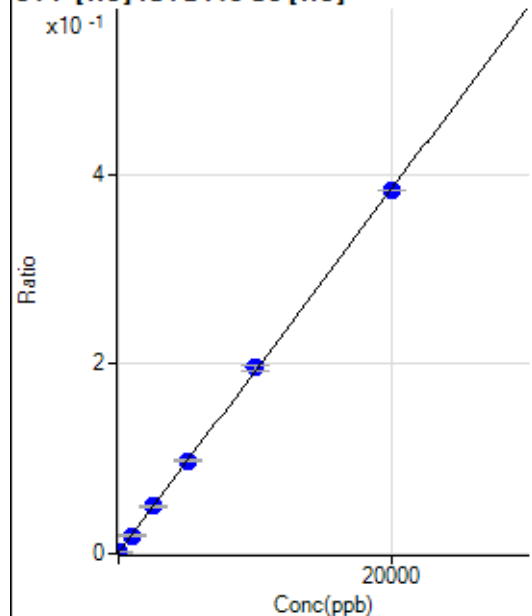
$$DL = 0.2029$$

$$BEC = 21.54$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-14.485	52.78	0.0006	P	44.8
2	☐	0.000	-16.326	50.00	0.0006	P	29.0
3	☐	0.000	30.811	130.56	0.0015	P	23.0
4	☐	1000.000	955.084	1683.51	0.0192	P	6.1
5	☐	2500.000	2554.524	4114.62	0.0498	P	3.7
6	☐	5000.000	5076.505	7504.97	0.0982	P	2.1
7	☐	10000.000	10157.347	14663.28	0.1955	P	2.4
8	☐	20000.000	19897.630	28283.33	0.3822	P	0.2
9	☐			52.78	0.0006	P	39.9

$$y = 1.9163E-005 * x + 8.7436E-004$$

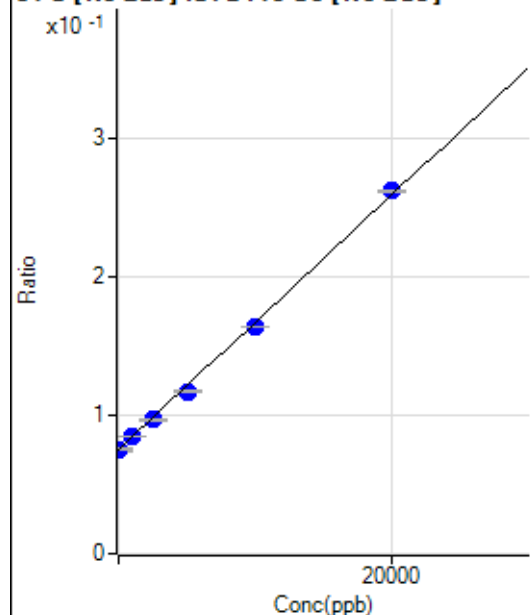
$$R = 0.9999$$

$$DL = 40.02$$

$$BEC = 45.63$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	19.871	142685.88	0.0755	P	0.6
2	☐	0.000	-28.557	140851.95	0.0750	P	2.5
3	☐	0.000	8.686	144048.09	0.0754	P	2.1
4	☐	1000.000	996.259	160657.16	0.0844	P	1.0
5	☐	2500.000	2343.384	178481.67	0.0968	P	1.3
6	☐	5000.000	4566.673	199928.49	0.1173	P	1.3
7	☐	10000.000	9645.819	266752.78	0.1640	P	0.5
8	☐	20000.000	20305.187	413266.74	0.2619	P	0.8
9	☐			130777.31	0.0779	P	0.5

$$y = 9.1919\text{E-}006 * x + 0.0753$$

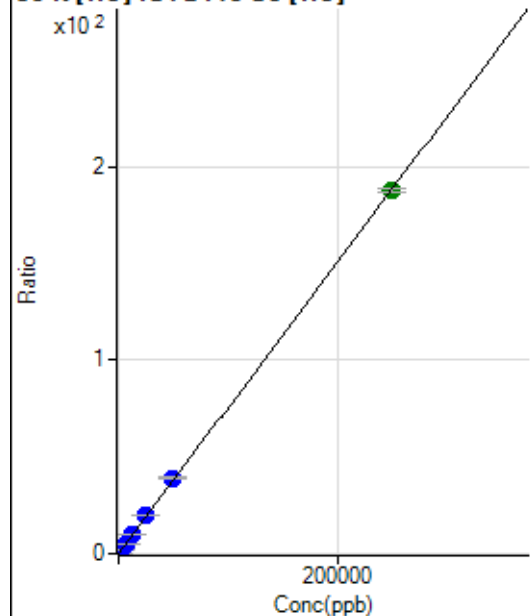
R = 0.9995

DL = 427.3

BEC = 8191

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	4431.40	0.0503	P	0.6
2	☐	50.000	56.292	8255.40	0.0927	P	2.2
3	☐	500.000	512.238	38876.76	0.4358	P	0.4
4	☐	2500.000	2745.670	185841.51	2.1165	P	0.4
5	☐	6250.000	6836.417	429068.76	5.1950	P	0.8
6	☐	12500.000	13671.958	790598.10	10.3390	P	0.1
7	☐	25000.000	26726.749	1512311.32	20.1633	P	0.3
8	☐	50000.000	51920.603	2895311.70	39.1228	P	0.9
9	☐	250000.00	249367.46	15688152.78	187.7102	A	1.0

$$y = 7.5254\text{E-}004 * x + 0.0503$$

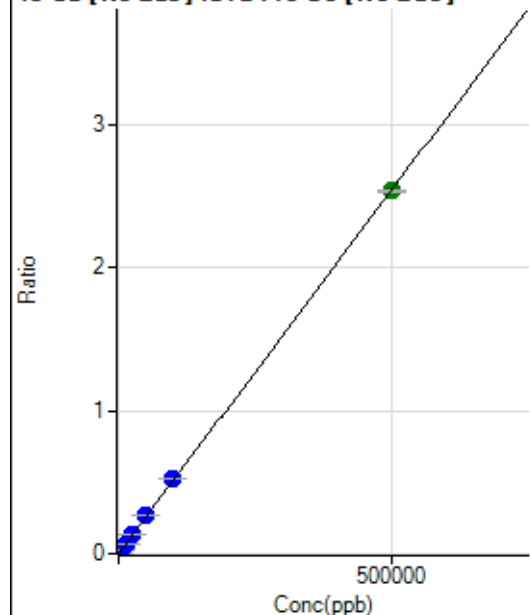
R = 0.9999

DL = 1.227

BEC = 66.83

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	52.78	0.0000	P	36.6
2	☐	50.000	48.343	513.92	0.0003	P	2.5
3	☐	500.000	494.182	4856.55	0.0025	P	2.2
4	☐	5000.000	5125.019	49634.07	0.0261	P	0.3
5	☐	12500.000	12705.101	119129.62	0.0646	P	0.7
6	☐	25000.000	26125.055	226534.26	0.1329	P	0.8
7	☐	50000.000	51857.526	429103.10	0.2637	P	0.4
8	☐	100000.00	102952.95	826007.86	0.5235	P	0.6
9	☐	500000.00	499161.03	4262567.72	2.5382	A	0.4

$$y = 5.0849\text{E-}006 * x + 2.7924\text{E-}005$$

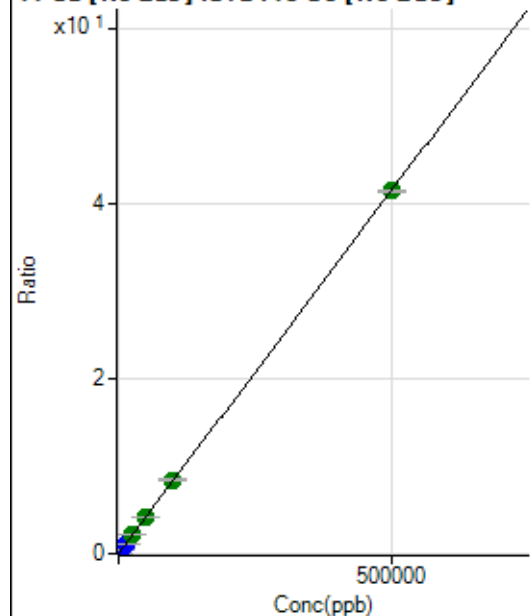
$$R = 1.0000$$

$$DL = 6.025$$

$$BEC = 5.491$$

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	2153.04	0.0011	P	4.8
2	☐	50.000	45.675	9255.99	0.0049	P	2.5
3	☐	500.000	478.237	78058.71	0.0408	P	1.0
4	☐	5000.000	5092.329	806365.71	0.4238	P	0.4
5	☐	12500.000	12479.818	1911539.82	1.0371	P	0.4
6	☐	25000.000	25619.209	3627561.10	2.1277	A	0.7
7	☐	50000.000	50968.646	6885879.06	4.2319	A	0.4
8	☐	100000.00	101815.64	13335870.96	8.4526	A	0.4
9	☐	500000.00	499508.64	69633845.31	41.4642	A	0.2

$$y = 8.3008\text{E-}005 * x + 0.0011$$

$$R = 1.0000$$

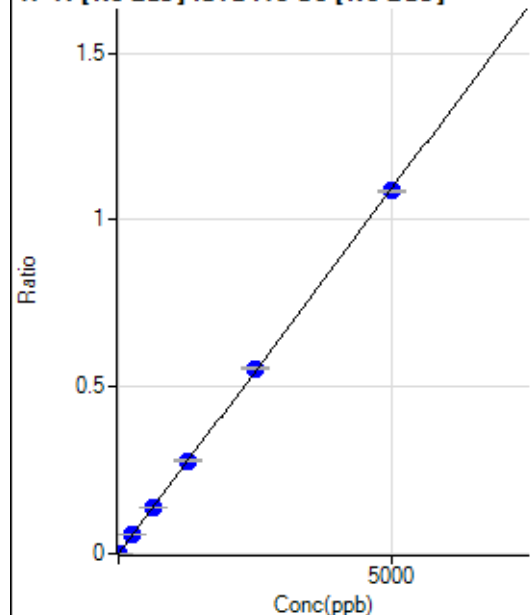
$$DL = 1.971$$

$$BEC = 13.72$$

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	27.78	0.0000	P	105.
2	☐	0.500	0.466	219.45	0.0001	P	21.3
3	☐	5.000	4.940	2091.90	0.0011	P	2.1
4	☐	250.000	253.027	105253.97	0.0553	P	0.7
5	☐	625.000	637.433	256861.31	0.1394	P	0.1
6	☐	1250.000	1274.451	474981.59	0.2786	P	1.1
7	☐	2500.000	2536.800	902261.37	0.5545	P	0.9
8	☐	5000.000	4973.782	1715397.85	1.0872	P	0.6
9	☐			419.47	0.0002	P	18.0

$$y = 2.1859\text{E-}004 * x + 1.4658\text{E-}005$$

$$R = 0.9999$$

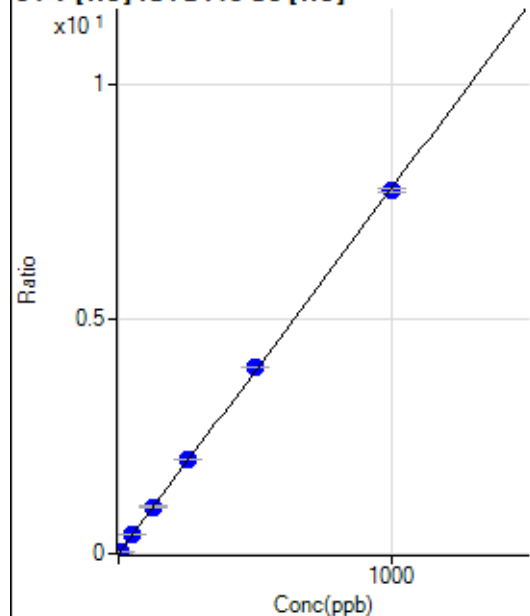
$$DL = 0.2116$$

$$BEC = 0.06706$$

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	3.33	0.0000	P	99.2
2	☐	0.500	0.496	347.79	0.0039	P	6.2
3	☐	5.000	5.082	3533.81	0.0396	P	5.3
4	☐	50.000	51.848	35461.60	0.4039	P	0.6
5	☐	125.000	128.868	82908.87	1.0038	P	0.3
6	☐	250.000	258.258	153814.80	2.0116	P	0.9
7	☐	500.000	508.539	297088.64	3.9610	P	0.1
8	☐	1000.000	993.090	572436.53	7.7351	P	1.0
9	☐			65.56	0.0008	P	15.9

$$y = 0.0078 * x + 3.7394\text{E-}005$$

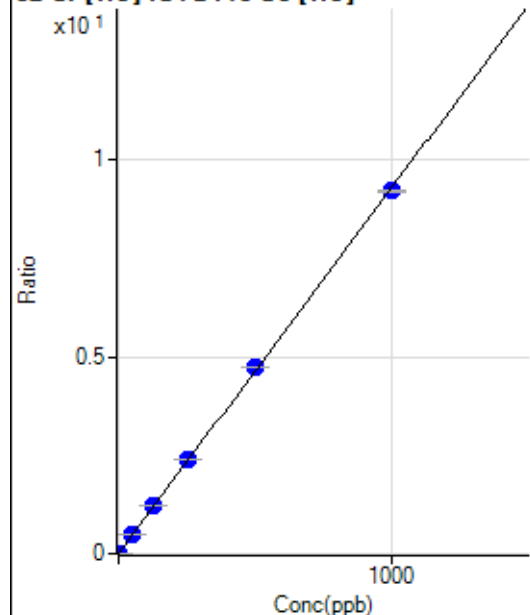
$$R = 0.9999$$

$$DL = 0.01429$$

$$BEC = 0.004801$$

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	210.00	0.0024	P	15.3
2	☐	0.200	0.212	387.79	0.0044	P	11.1
3	☐	2.000	2.026	1891.26	0.0212	P	4.8
4	☐	50.000	52.074	42653.84	0.4858	P	1.3
5	☐	125.000	130.901	100562.84	1.2176	P	0.8
6	☐	250.000	258.828	183912.73	2.4051	P	0.2
7	☐	500.000	509.352	354809.23	4.7308	P	0.6
8	☐	1000.000	992.276	681881.20	9.2138	P	0.8
9	☐			3064.81	0.0367	P	1.7

$$y = 0.0093 * x + 0.0024$$

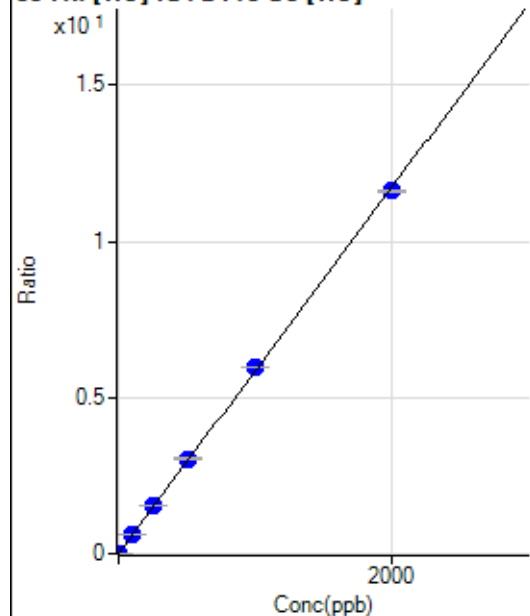
$$R = 0.9999$$

$$DL = 0.1182$$

$$BEC = 0.2571$$

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	26.67	0.0003	P	10.7
2	☐	0.100	0.078	67.78	0.0008	P	10.1
3	☐	1.000	1.012	555.57	0.0062	P	10.7
4	☐	100.000	103.179	53102.25	0.6048	P	0.7
5	☐	250.000	260.633	126143.75	1.5272	P	0.2
6	☐	500.000	520.085	233011.97	3.0472	P	0.5
7	☐	1000.000	1020.792	448563.03	5.9806	P	0.2
8	☐	2000.000	1983.094	859838.15	11.6183	P	0.5
9	☐			3284.87	0.0393	P	3.5

$$y = 0.0059 * x + 3.0230E-004$$

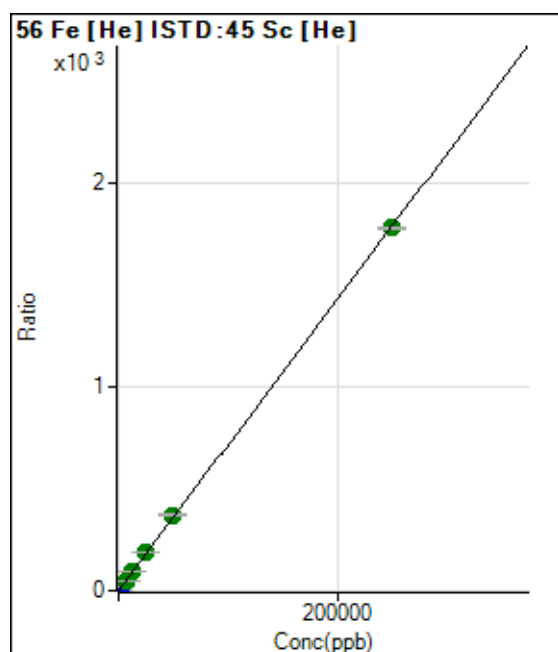
$$R = 0.9999$$

$$DL = 0.01661$$

$$BEC = 0.0516$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1420.47	0.0161	P	5.6
2	☐	5.000	4.640	4385.97	0.0492	P	0.8
3	☐	50.000	55.372	36687.04	0.4113	P	1.3
4	☐	2500.000	2772.959	1738814.49	19.8032	P	0.2
5	☐	6250.000	6801.538	4010112.93	48.5501	A	0.4
6	☐	12500.000	13620.847	7433358.79	97.2108	A	0.4
7	☐	25000.000	26737.655	14310981.80	190.8088	A	0.6
8	☐	50000.000	51961.921	27441020.52	370.8023	A	1.3
9	☐	250000.00	249361.28	148715873.6	1,779.390	A	0.6

$$y = 0.0071 * x + 0.0161$$

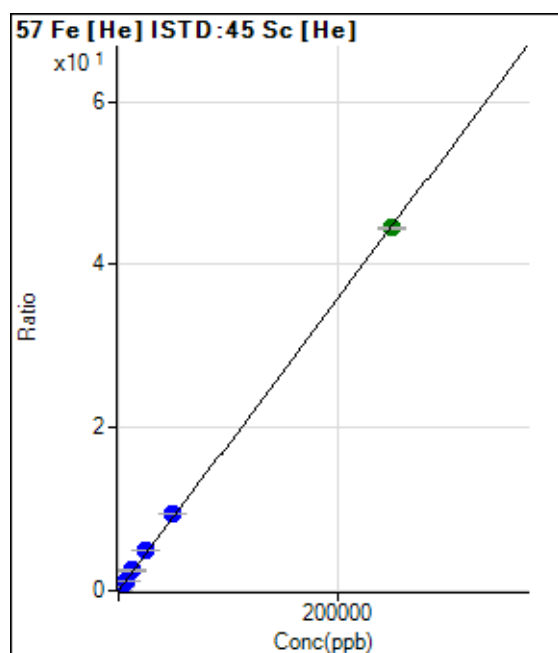
$$R = 0.9999$$

$$DL = 0.3766$$

$$BEC = 2.26$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57.34	0.0007	P	57.3
2	☐	5.000	3.868	119.69	0.0013	P	1.8
3	☐	50.000	59.014	998.08	0.0112	P	3.6
4	☐	2500.000	2787.258	43752.68	0.4983	P	0.4
5	☐	6250.000	6964.061	102756.47	1.2440	P	0.8
6	☐	12500.000	13880.522	189562.88	2.4789	P	1.3
7	☐	25000.000	27216.263	364494.16	4.8599	P	0.8
8	☐	50000.000	52732.445	696817.97	9.4157	P	0.8
9	☐	250000.00	249142.13	3717773.02	44.4832	A	0.9

$$y = 1.7854E-004 * x + 6.5278E-004$$

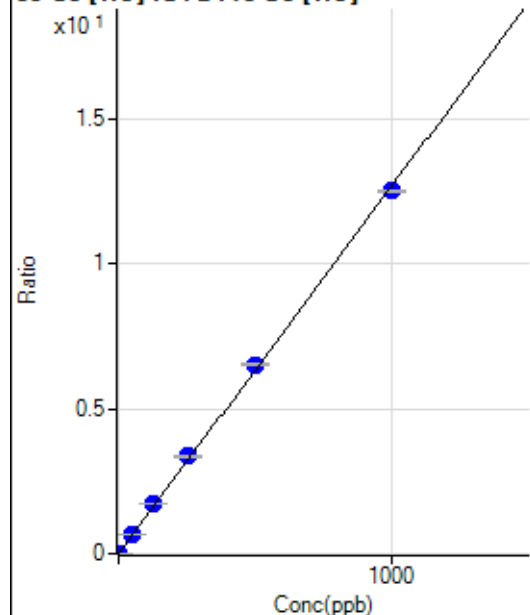
$$R = 0.9999$$

$$DL = 6.28$$

$$BEC = 3.656$$

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	13.33	0.0002	P	26.0
2	☐	0.100	0.109	136.67	0.0015	P	14.9
3	☐	1.000	0.995	1137.84	0.0128	P	5.4
4	☐	50.000	53.795	59820.25	0.6813	P	0.9
5	☐	125.000	134.511	140676.51	1.7032	P	0.6
6	☐	250.000	265.084	256659.94	3.3565	P	0.7
7	☐	500.000	514.305	488386.57	6.5119	P	1.1
8	☐	1000.000	987.698	925509.76	12.5057	P	0.6
9	☐			11807.12	0.1413	P	1.6

$$y = 0.0127 * x + 1.5169E-004$$

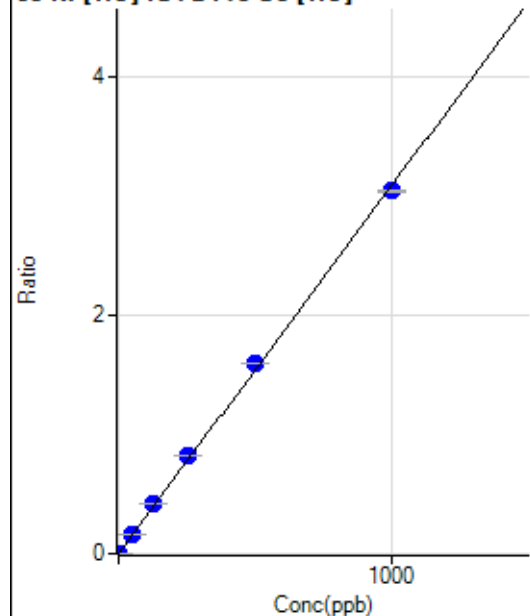
$$R = 0.9997$$

$$DL = 0.009359$$

$$BEC = 0.01198$$

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	18.89	0.0002	P	41.9
2	☐	0.100	0.144	58.89	0.0007	P	16.2
3	☐	1.000	0.960	283.34	0.0032	P	5.1
4	☐	50.000	54.349	14730.91	0.1678	P	0.9
5	☐	125.000	134.942	34379.28	0.4162	P	0.3
6	☐	250.000	266.095	62744.90	0.8206	P	0.9
7	☐	500.000	516.441	119433.40	1.5923	P	0.3
8	☐	1000.000	986.296	225044.64	3.0409	P	0.7
9	☐			2760.30	0.0330	P	3.3

$$y = 0.0031 * x + 2.1544E-004$$

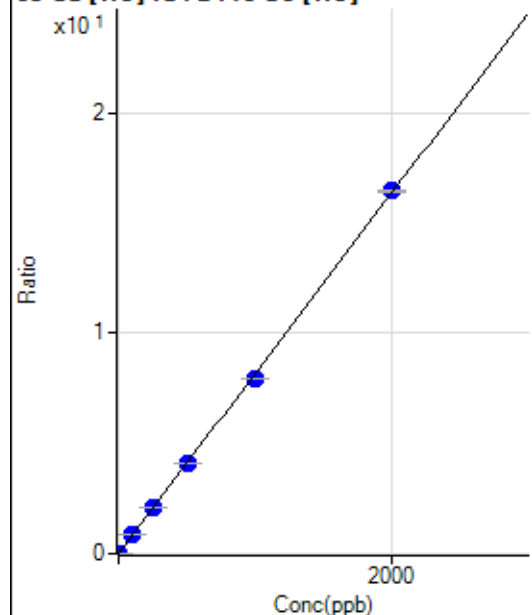
$$R = 0.9996$$

$$DL = 0.08783$$

$$BEC = 0.06988$$

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	155.56	0.0018	P	6.4
2	☐	0.200	0.164	276.67	0.0031	P	5.5
3	☐	2.000	2.022	1632.34	0.0183	P	0.9
4	☐	100.000	102.710	73895.23	0.8416	P	0.3
5	☐	250.000	256.290	173230.18	2.0973	P	0.4
6	☐	500.000	504.702	315692.41	4.1285	P	0.6
7	☐	1000.000	968.707	594230.17	7.9225	P	0.2
8	☐	2000.000	2013.549	1218581.32	16.4658	P	0.7
9	☐			1314.52	0.0157	P	9.3

$$y = 0.0082 * x + 0.0018$$

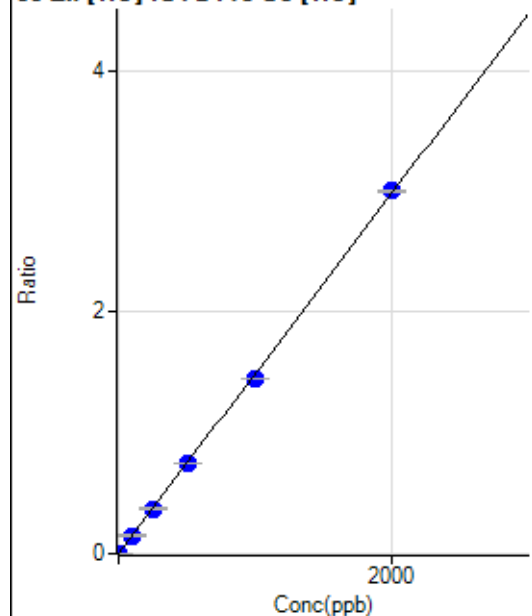
$$R = 0.9998$$

$$DL = 0.04151$$

$$BEC = 0.2158$$

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	58.89	0.0007	P	17.3
2	☐	0.200	0.172	82.22	0.0009	P	32.0
3	☐	2.000	1.766	294.45	0.0033	P	5.7
4	☐	100.000	100.580	13227.27	0.1506	P	1.3
5	☐	250.000	250.343	30885.01	0.3739	P	1.3
6	☐	500.000	497.471	56772.15	0.7424	P	0.2
7	☐	1000.000	969.745	108508.32	1.4466	P	0.6
8	☐	2000.000	2015.688	222488.01	3.0062	P	0.7
9	☐			1659.01	0.0198	P	3.7

$$y = 0.0015 * x + 6.6768E-004$$

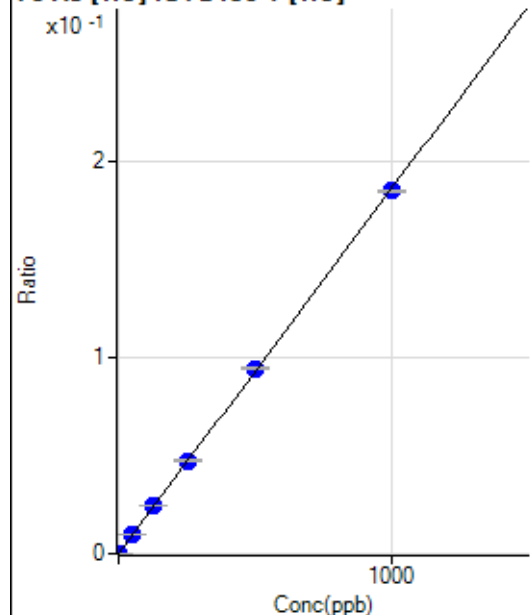
$$R = 0.9998$$

$$DL = 0.2329$$

$$BEC = 0.4478$$

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	3.09	0.0000	P	69.6
2	☐	0.100	0.080	9.26	0.0000	P	20.0
3	☐	1.000	0.846	68.52	0.0002	P	21.3
4	☐	50.000	52.911	4037.02	0.0099	P	0.8
5	☐	125.000	131.612	9582.24	0.0245	P	1.5
6	☐	250.000	255.488	17433.36	0.0475	P	1.1
7	☐	500.000	507.165	34010.72	0.0944	P	1.0
8	☐	1000.000	994.074	65425.77	0.1850	P	0.8
9	☐			96.30	0.0003	P	22.0

$$y = 1.8607E-004 * x + 7.4758E-006$$

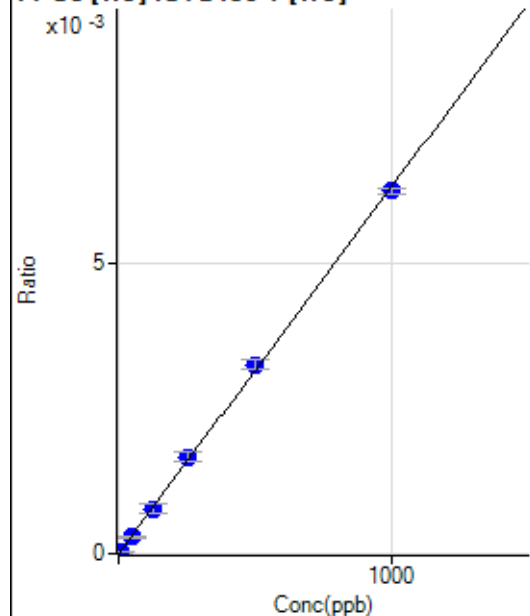
$$R = 0.9999$$

$$DL = 0.08388$$

$$BEC = 0.04018$$

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	0.422	1.11	0.0000	P	173.
3	☐	5.000	4.231	11.11	0.0000	P	45.5
4	☐	50.000	44.599	115.56	0.0003	P	10.5
5	☐	125.000	122.225	302.23	0.0008	P	19.4
6	☐	250.000	264.161	612.25	0.0017	P	10.4
7	☐	500.000	516.243	1175.62	0.0033	P	5.5
8	☐	1000.000	988.959	2211.32	0.0063	P	1.5
9	☐			2.22	0.0000	P	86.6

$$y = 6.3214E-006 * x + 0.0000E+000$$

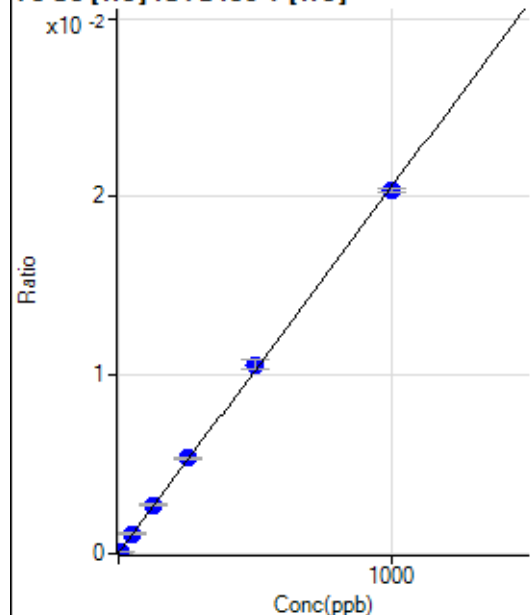
$$R = 0.9996$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	12.96	0.0000	P	24.6
2	☐	0.500	0.938	20.99	0.0001	P	27.2
3	☐	5.000	5.861	62.96	0.0002	P	8.7
4	☐	50.000	53.305	461.12	0.0011	P	5.7
5	☐	125.000	131.388	1067.33	0.0027	P	4.5
6	☐	250.000	258.829	1959.41	0.0053	P	1.5
7	☐	500.000	515.475	3824.61	0.0106	P	5.0
8	☐	1000.000	989.087	7192.58	0.0203	P	1.0
9	☐			12.96	0.0000	P	51.2

$$y = 2.0527\text{E-}005 * x + 3.1353\text{E-}005$$

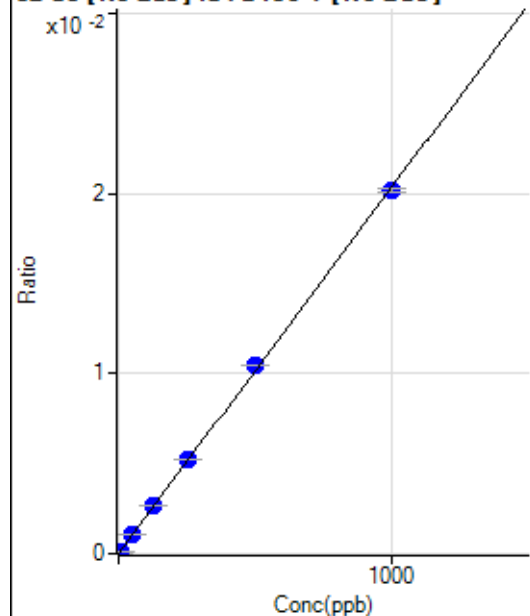
$$R = 0.9998$$

$$DL = 1.127$$

$$BEC = 1.527$$

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	21.07	0.0000	P	83.2
2	☐	0.500	0.497	46.29	0.0000	P	79.0
3	☐	5.000	5.606	318.98	0.0001	P	3.5
4	☐	50.000	51.274	2765.43	0.0010	P	3.4
5	☐	125.000	130.654	6817.35	0.0027	P	1.5
6	☐	250.000	257.338	12814.56	0.0052	P	1.0
7	☐	500.000	512.539	24456.22	0.0104	P	0.1
8	☐	1000.000	991.123	46143.97	0.0201	P	1.0
9	☐			17.12	0.0000	P	96.8

$$y = 2.0316\text{E-}005 * x + 8.0412\text{E-}006$$

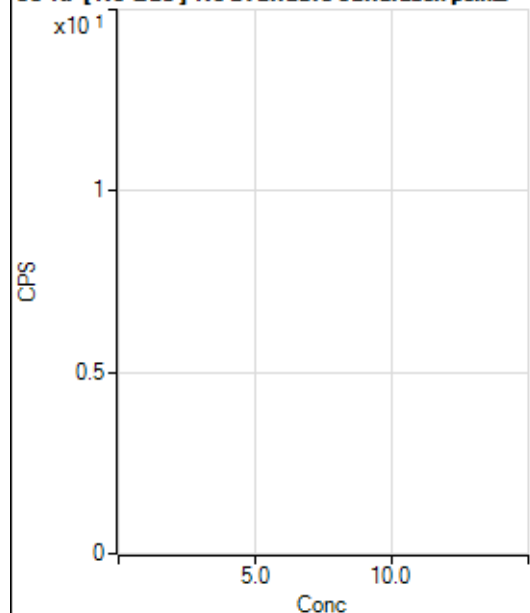
$$R = 0.9998$$

$$DL = 0.9881$$

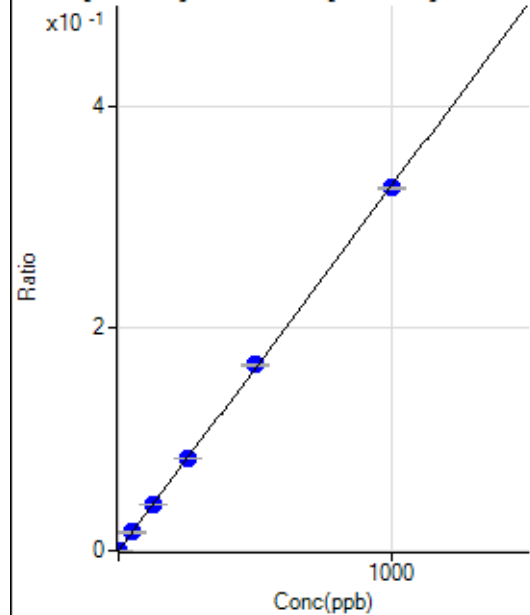
$$BEC = 0.3958$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			60.00		P	30.9
2	☐			61.11		P	35.1
3	☐			63.33		P	19.0
4	☐			67.78		P	17.3
5	☐			74.45		P	23.0
6	☐			64.44		P	21.5
7	☐			56.66		P	56.7
8	☐			54.44		P	33.7
9	☐			68.89		P	26.6

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	119.45	0.0000	P	10.5
2	☐	0.100	0.091	194.45	0.0001	P	12.2
3	☐	1.000	0.922	911.19	0.0003	P	10.4
4	☐	50.000	50.005	43344.19	0.0165	P	1.3
5	☐	125.000	125.208	105311.86	0.0411	P	0.4
6	☐	250.000	253.835	203941.76	0.0833	P	0.6
7	☐	500.000	508.821	391899.97	0.1670	P	0.1
8	☐	1000.000	994.605	747640.62	0.3264	P	0.7
9	☐			3050.43	0.0013	P	0.9

$$y = 3.2810E-004 * x + 4.5569E-005$$

$$R = 0.9999$$

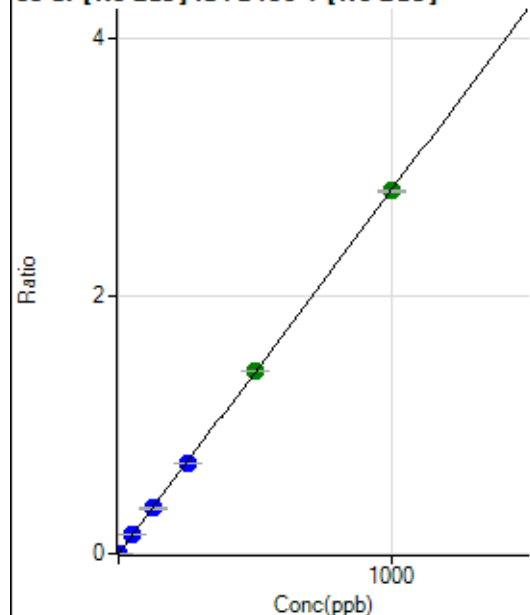
$$DL = 0.04363$$

$$BEC = 0.1389$$

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	105.56	0.0000	P	40.1
2	☐	0.100	0.093	777.84	0.0003	P	16.9
3	☐	1.000	0.947	7110.38	0.0027	P	1.1
4	☐	50.000	50.500	376136.13	0.1428	P	0.8
5	☐	125.000	124.860	903763.30	0.3529	P	1.0
6	☐	250.000	249.319	1724633.91	0.7047	P	0.5
7	☐	500.000	504.422	3345834.45	1.4257	A	0.3
8	☐	1000.000	997.952	6461223.71	2.8206	A	0.3
9	☐			25938.38	0.0110	P	2.1

$$y = 0.0028 * x + 4.0310E-005$$

$$R = 1.0000$$

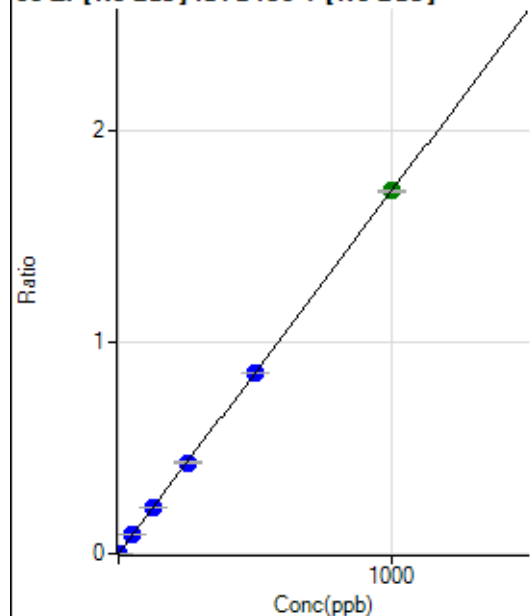
$$DL = 0.01714$$

$$BEC = 0.01426$$

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	236.13	0.0001	P	22.9
2	☐	0.100	0.102	686.16	0.0003	P	13.3
3	☐	1.000	0.940	4439.74	0.0017	P	4.7
4	☐	50.000	50.684	228553.07	0.0868	P	0.5
5	☐	125.000	126.659	554791.79	0.2167	P	0.8
6	☐	250.000	251.350	1052041.40	0.4299	P	1.0
7	☐	500.000	497.042	1994727.80	0.8499	P	0.3
8	☐	1000.000	1000.900	3920492.88	1.7115	A	0.3
9	☐			936.18	0.0004	P	16.0

$$y = 0.0017 * x + 9.0127E-005$$

$$R = 1.0000$$

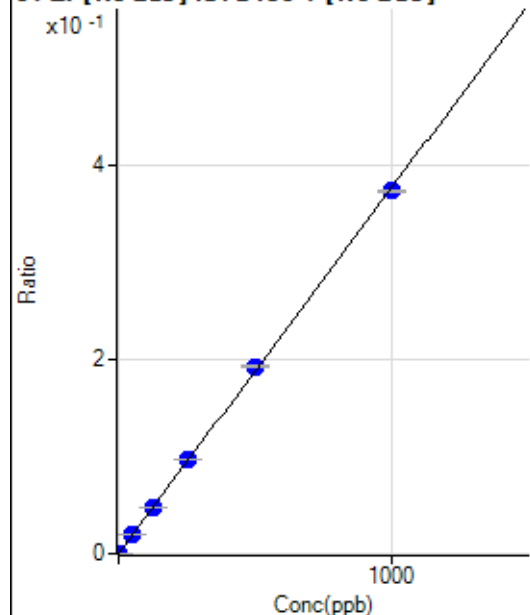
$$DL = 0.03624$$

$$BEC = 0.05271$$

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	27.78	0.0000	P	17.2
2	☐	0.100	0.129	152.78	0.0001	P	4.2
3	☐	1.000	0.922	936.18	0.0004	P	12.8
4	☐	50.000	50.881	50526.09	0.0192	P	1.2
5	☐	125.000	126.904	122444.66	0.0478	P	0.3
6	☐	250.000	256.531	236544.24	0.0966	P	0.8
7	☐	500.000	512.082	452741.26	0.1929	P	0.5
8	☐	1000.000	992.044	856117.67	0.3737	P	0.4
9	☐			233.35	0.0001	P	30.9

$$y = 3.7672\text{E-}004 * x + 1.0597\text{E-}005$$

$$R = 0.9999$$

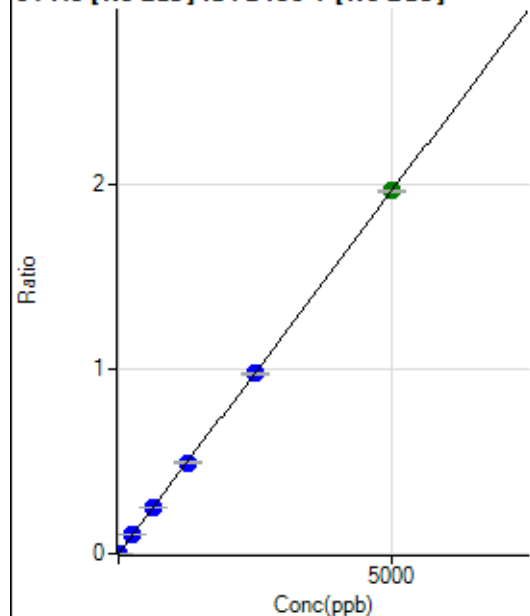
$$DL = 0.01452$$

$$BEC = 0.02813$$

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	80.56	0.0000	P	33.0
2	☐	0.500	0.463	547.26	0.0002	P	12.7
3	☐	5.000	4.849	5051.13	0.0019	P	5.8
4	☐	250.000	253.003	261231.99	0.0992	P	0.7
5	☐	625.000	634.682	636836.33	0.2487	P	0.7
6	☐	1250.000	1255.206	1203700.70	0.4918	P	0.9
7	☐	2500.000	2481.657	2281925.07	0.9723	P	0.1
8	☐	5000.000	5006.510	4493377.10	1.9615	A	0.6
9	☐			986.18	0.0004	P	5.3

$$y = 3.9179\text{E-}004 * x + 3.0716\text{E-}005$$

$$R = 1.0000$$

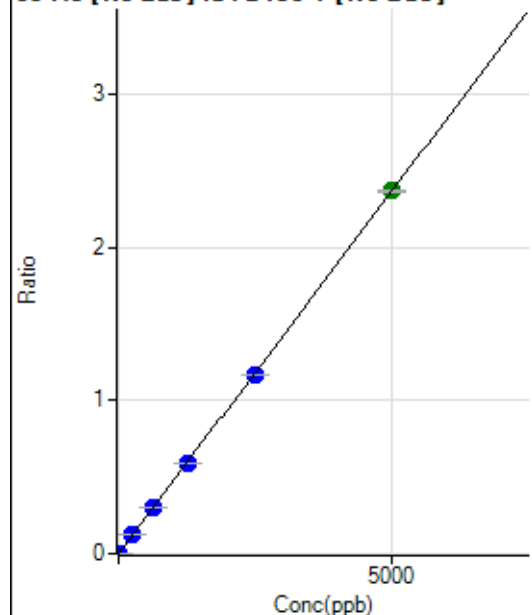
$$DL = 0.07771$$

$$BEC = 0.0784$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	114.
2	☐	0.500	0.552	686.16	0.0003	P	14.0
3	☐	5.000	5.076	6293.32	0.0024	P	4.1
4	☐	250.000	257.114	320451.30	0.1216	P	0.6
5	☐	625.000	636.013	770432.51	0.3009	P	0.7
6	☐	1250.000	1254.498	1452377.17	0.5934	P	0.8
7	☐	2500.000	2474.147	2746666.55	1.1704	P	0.3
8	☐	5000.000	5010.070	5429050.81	2.3700	A	0.5
9	☐			1297.33	0.0005	P	8.4

$$y = 4.7305E-004 * x + 4.2391E-006$$

$$R = 1.0000$$

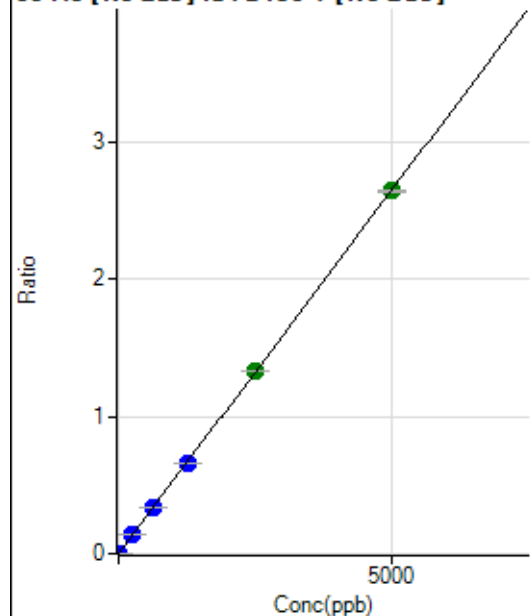
$$DL = 0.03076$$

$$BEC = 0.008961$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.22	0.0000	P	43.0
2	☐	0.500	0.504	711.16	0.0003	P	12.0
3	☐	5.000	5.045	7013.12	0.0027	P	3.7
4	☐	250.000	252.926	352954.82	0.1340	P	0.5
5	☐	625.000	628.123	851927.37	0.3327	P	0.6
6	☐	1250.000	1248.588	1618506.83	0.6613	P	0.5
7	☐	2500.000	2512.028	3122398.79	1.3305	A	0.3
8	☐	5000.000	4993.802	6058944.15	2.6450	A	0.3
9	☐			1864.09	0.0008	P	7.7

$$y = 5.2965E-004 * x + 8.4739E-006$$

$$R = 1.0000$$

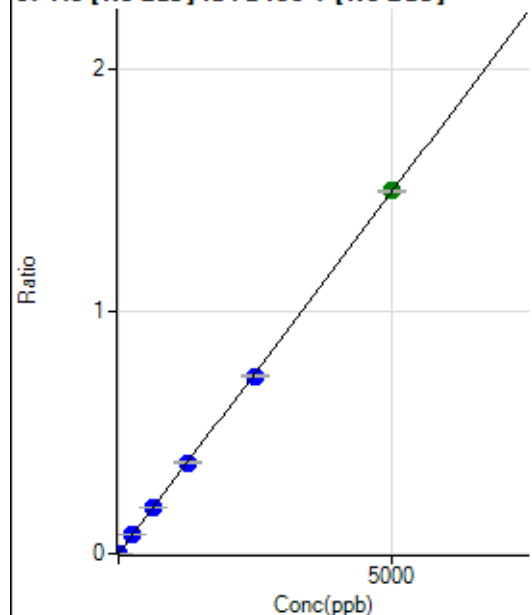
$$DL = 0.02066$$

$$BEC = 0.016$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	43.2
2	☐	0.500	0.594	469.47	0.0002	P	2.3
3	☐	5.000	4.923	3856.25	0.0015	P	0.5
4	☐	250.000	254.096	199895.82	0.0759	P	0.6
5	☐	625.000	630.006	481709.35	0.1881	P	1.3
6	☐	1250.000	1259.586	920458.55	0.3761	P	1.2
7	☐	2500.000	2458.377	1722622.17	0.7340	P	0.3
8	☐	5000.000	5017.584	3431909.54	1.4982	A	0.2
9	☐			644.49	0.0003	P	2.9

$$y = 2.9858\text{E-}004 * x + 4.2377\text{E-}006$$

$$R = 0.9999$$

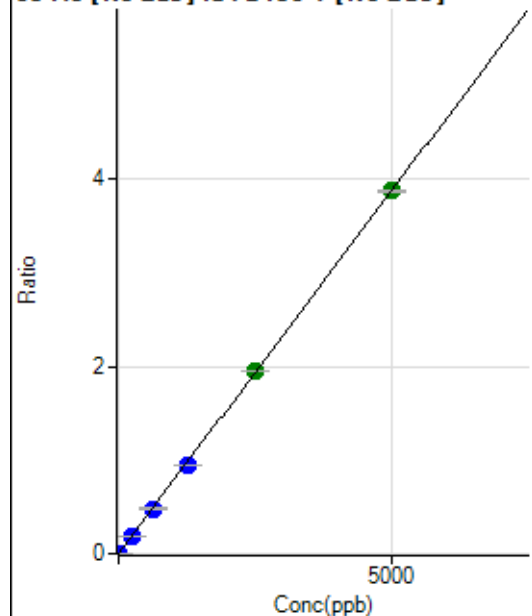
$$DL = 0.01841$$

$$BEC = 0.01419$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	100.
2	☐	0.500	0.495	1008.41	0.0004	P	3.1
3	☐	5.000	4.920	9998.28	0.0038	P	3.0
4	☐	250.000	250.584	512089.29	0.1944	P	0.2
5	☐	625.000	622.726	1236883.91	0.4830	P	1.2
6	☐	1250.000	1223.964	2323401.57	0.9494	P	0.7
7	☐	2500.000	2512.896	4574164.34	1.9491	A	0.3
8	☐	5000.000	5000.316	8884567.39	3.8785	A	0.2
9	☐			1583.50	0.0007	P	5.5

$$y = 7.7564\text{E-}004 * x + 6.3488\text{E-}006$$

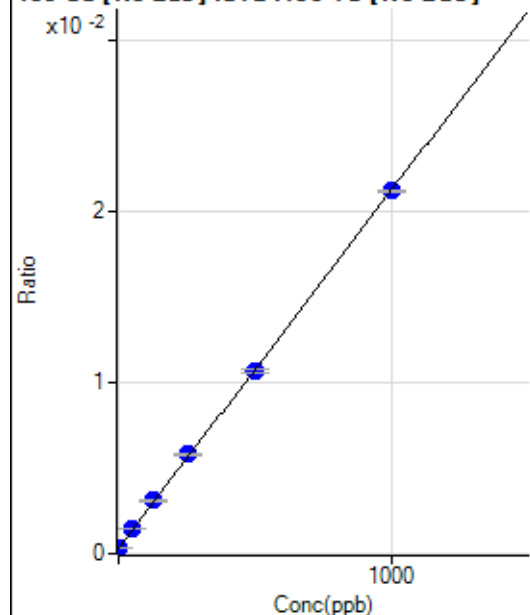
$$R = 1.0000$$

$$DL = 0.02456$$

$$BEC = 0.008185$$

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	1080.65	0.0003	P	10.1
2	☐	0.100	1.477	1133.43	0.0003	P	10.7
3	☐	1.000	2.357	1211.22	0.0004	P	7.1
4	☐	50.000	53.990	4937.14	0.0014	P	3.8
5	☐	125.000	133.033	10529.33	0.0031	P	5.2
6	☐	250.000	262.696	19494.60	0.0058	P	2.3
7	☐	500.000	495.867	35659.62	0.0107	P	1.9
8	☐	1000.000	997.687	70182.13	0.0212	P	0.4
9	☐			972.29	0.0003	P	6.2

$$y = 2.0928\text{E-}005 * x + 3.1085\text{E-}004$$

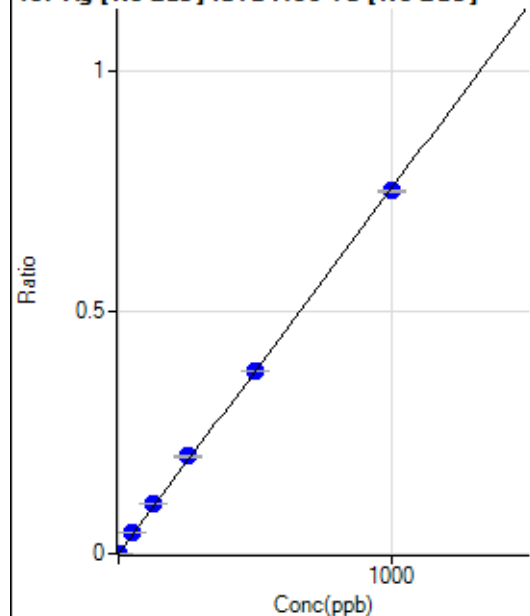
$$R = 0.9999$$

$$DL = 4.517$$

$$BEC = 14.85$$

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	19.44	0.0000	P	137.
2	☐	0.100	0.126	333.35	0.0001	P	7.5
3	☐	1.000	1.197	3061.58	0.0009	P	1.5
4	☐	50.000	57.336	148599.55	0.0434	P	1.4
5	☐	125.000	139.112	357969.16	0.1052	P	0.4
6	☐	250.000	265.942	674949.43	0.2011	P	1.2
7	☐	500.000	501.170	1264270.36	0.3790	P	0.5
8	☐	1000.000	993.298	2487529.57	0.7511	P	0.4
9	☐			88.89	0.0000	P	33.3

$$y = 7.5614\text{E-}004 * x + 5.5770\text{E-}006$$

$$R = 0.9998$$

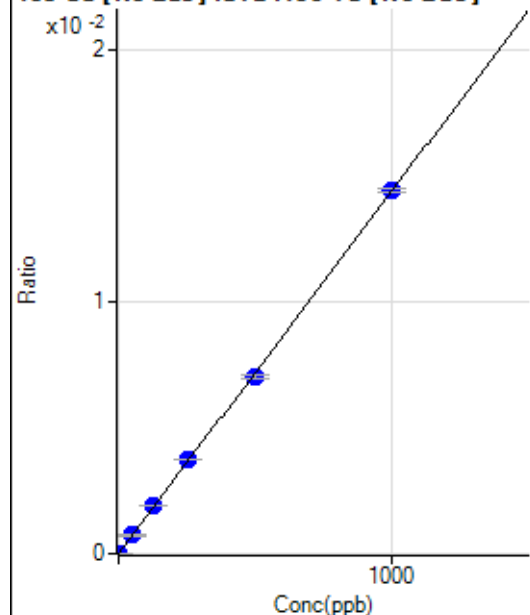
$$DL = 0.03046$$

$$BEC = 0.007376$$

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	2.78	0.0000	P	86.6
2	☐	0.100	0.063	5.56	0.0000	P	116.
3	☐	1.000	1.179	59.72	0.0000	P	34.3
4	☐	50.000	51.723	2553.06	0.0007	P	5.9
5	☐	125.000	134.118	6568.31	0.0019	P	0.9
6	☐	250.000	259.302	12523.79	0.0037	P	1.3
7	☐	500.000	489.410	23490.49	0.0070	P	1.7
8	☐	1000.000	1001.743	47733.12	0.0144	P	1.0
9	☐			8.33	0.0000	P	86.6

$$y = 1.4386\text{E-}005 * x + 7.9949\text{E-}007$$

$$R = 0.9998$$

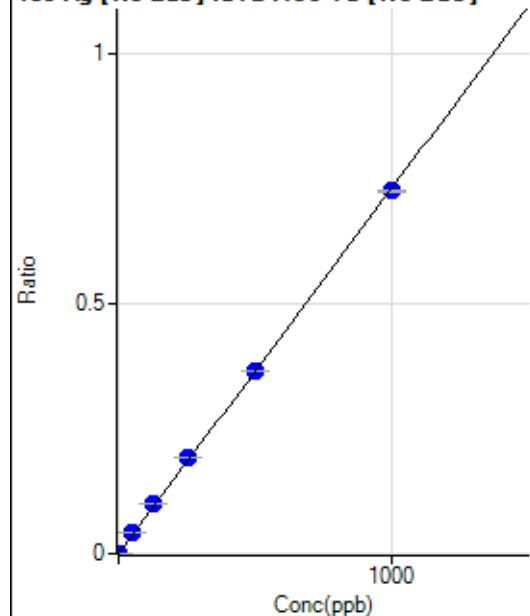
$$DL = 0.1444$$

$$BEC = 0.05557$$

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	11.11	0.0000	P	43.6
2	☐	0.100	0.118	297.24	0.0001	P	25.4
3	☐	1.000	1.177	2894.86	0.0009	P	1.1
4	☐	50.000	57.347	143228.91	0.0418	P	0.7
5	☐	125.000	138.489	343434.65	0.1009	P	1.4
6	☐	250.000	264.447	646825.50	0.1927	P	0.9
7	☐	500.000	500.882	1217767.86	0.3650	P	0.5
8	☐	1000.000	993.894	2398882.43	0.7243	P	0.6
9	☐			77.78	0.0000	P	38.0

$$y = 7.2874\text{E-}004 * x + 3.1982\text{E-}006$$

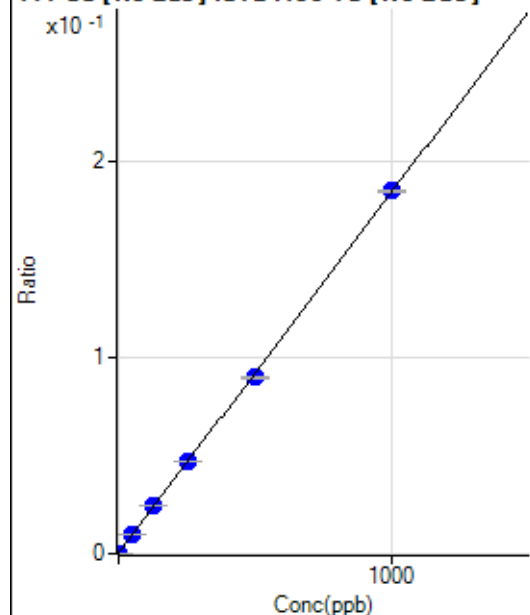
$$R = 0.9998$$

$$DL = 0.005744$$

$$BEC = 0.004389$$

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	755.90	0.0002	P	10.7
2	☐	0.100	0.204	845.07	0.0003	P	9.5
3	☐	1.000	1.134	1431.08	0.0004	P	4.5
4	☐	50.000	53.103	34154.97	0.0100	P	1.9
5	☐	125.000	130.039	81981.91	0.0241	P	0.1
6	☐	250.000	254.173	157351.73	0.0469	P	0.4
7	☐	500.000	486.717	298829.38	0.0896	P	0.7
8	☐	1000.000	1004.813	611688.04	0.1847	P	0.5
9	☐			710.89	0.0002	P	9.1

$$y = 1.8359\text{E-}004 * x + 2.1743\text{E-}004$$

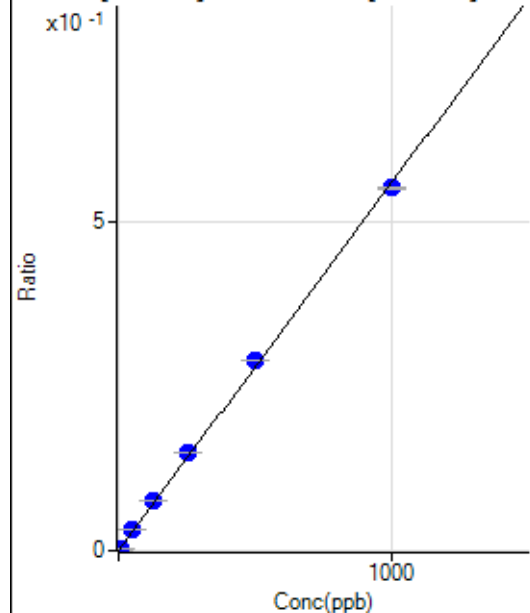
$$R = 0.9999$$

$$DL = 0.3788$$

$$BEC = 1.184$$

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	180.57	0.0001	P	30.9
2	☐	0.500	0.576	1239.00	0.0004	P	12.9
3	☐	5.000	5.472	10445.93	0.0031	P	0.4
4	☐	50.000	55.808	106921.26	0.0312	P	1.8
5	☐	125.000	136.356	259162.50	0.0762	P	0.3
6	☐	250.000	265.407	497370.35	0.1482	P	0.6
7	☐	500.000	515.597	960240.45	0.2878	P	0.2
8	☐	1000.000	986.638	1824029.97	0.5507	P	0.4
9	☐			583.37	0.0002	P	13.9

$$y = 5.5814\text{E-}004 * x + 5.1973\text{E-}005$$

$$R = 0.9997$$

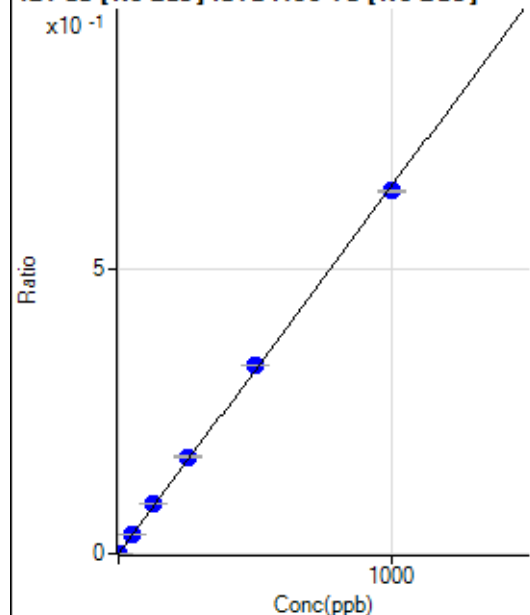
$$DL = 0.08645$$

$$BEC = 0.09312$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	114.
2	☐	0.200	0.207	452.80	0.0001	P	5.1
3	☐	2.000	1.998	4339.75	0.0013	P	4.6
4	☐	50.000	54.567	120476.76	0.0352	P	1.1
5	☐	125.000	134.666	295209.68	0.0868	P	1.2
6	☐	250.000	264.112	571097.51	0.1701	P	0.9
7	☐	500.000	514.359	1105451.05	0.3314	P	0.4
8	☐	1000.000	987.856	2107680.28	0.6364	P	0.4
9	☐			1997.45	0.0006	P	5.1

$$y = 6.4420\text{E-}004 * x + 3.1900\text{E-}006$$

$$R = 0.9997$$

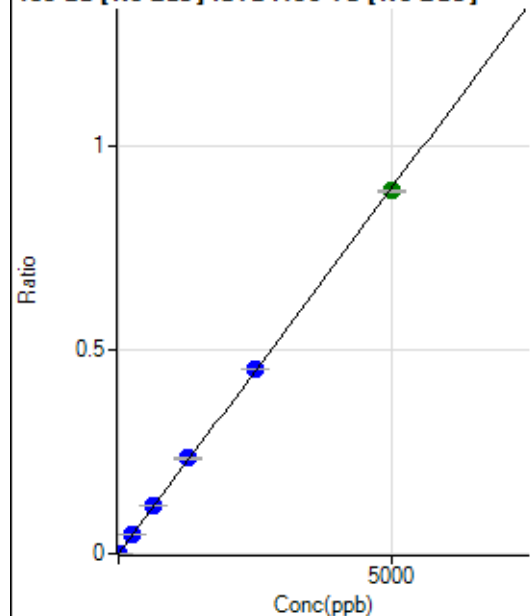
$$DL = 0.01699$$

$$BEC = 0.004952$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8.33	0.0000	P	99.8
2	☐	1.000	1.120	672.27	0.0002	P	6.5
3	☐	10.000	10.093	6084.90	0.0018	P	3.7
4	☐	250.000	268.170	164545.47	0.0480	P	0.6
5	☐	625.000	661.808	403201.99	0.1185	P	0.6
6	☐	1250.000	1304.773	784037.76	0.2336	P	1.1
7	☐	2500.000	2532.100	1512405.60	0.4533	P	0.3
8	☐	5000.000	4964.747	2943914.35	0.8889	A	0.3
9	☐			211.12	0.0001	P	15.0

$$y = 1.7904\text{E-}004 * x + 2.3940\text{E-}006$$

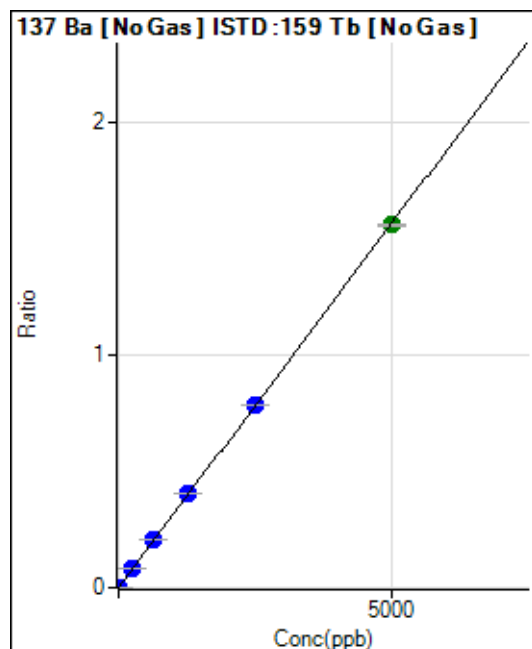
$$R = 0.9999$$

$$DL = 0.04004$$

$$BEC = 0.01337$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	11.11	0.0000	P	114.
2	☐	1.000	1.040	1086.19	0.0003	P	11.0
3	☐	10.000	10.509	11066.00	0.0033	P	4.1
4	☐	250.000	267.092	286339.01	0.0836	P	0.2
5	☐	625.000	659.168	701664.96	0.2062	P	1.0
6	☐	1250.000	1293.323	1357913.20	0.4046	P	0.9
7	☐	2500.000	2505.836	2615059.06	0.7839	P	0.1
8	☐	5000.000	4981.125	5160578.80	1.5582	A	0.3
9	☐			416.69	0.0001	P	8.4

$$y = 3.1281\text{E-}004 * x + 3.1900\text{E-}006$$

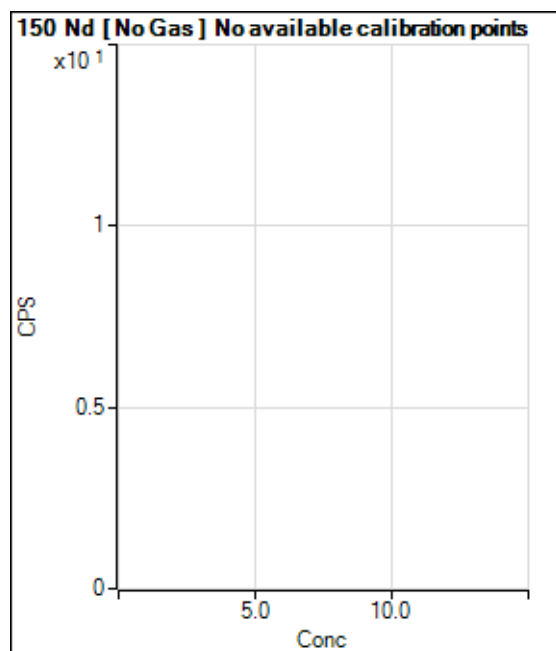
$$R = 0.9999$$

$$DL = 0.03498$$

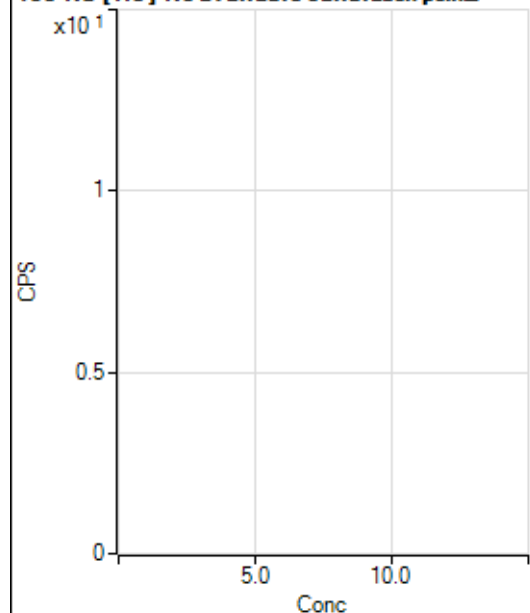
$$BEC = 0.0102$$

Weight: <None>

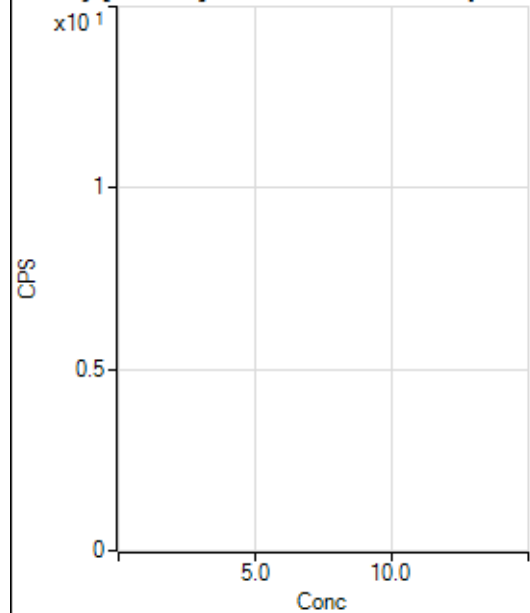
Min Conc: 0



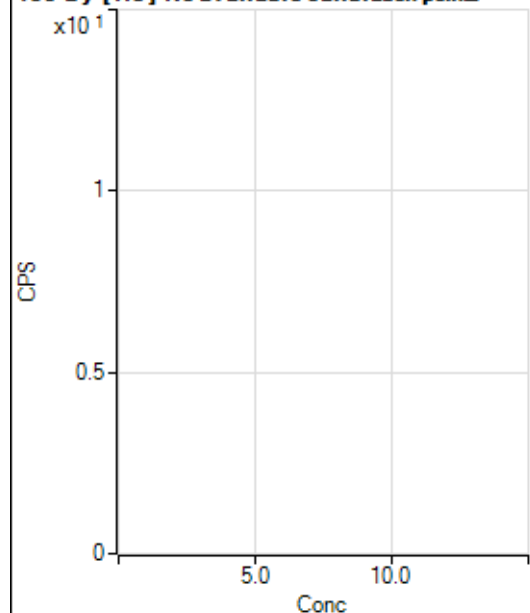
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐			2.22		P	173.
3	☐			2.22		P	173.
4	☐			8.89		P	114.
5	☐			37.78		P	20.4
6	☐			88.89		P	24.1
7	☐			126.67		P	10.5
8	☐			273.34		P	8.8
9	☐			55.56		P	25.0

150 Nd [He] No available calibration points

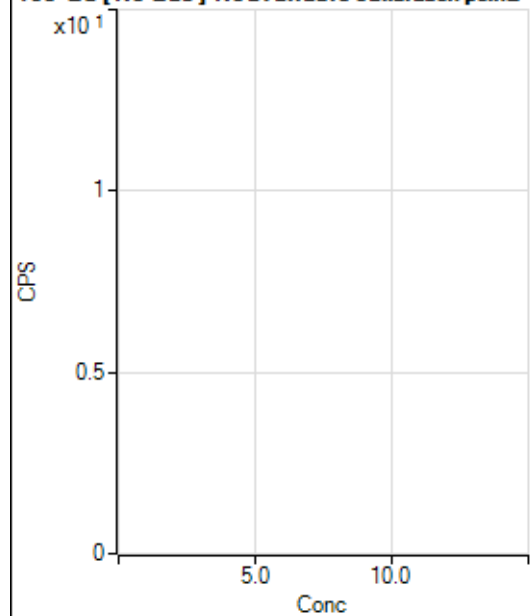
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐			0.00		P	
3	☐			0.00		P	
4	☐			2.22		P	86.6
5	☐			6.67		P	50.0
6	☐			6.67		P	86.6
7	☐			6.67		P	100.
8	☐			28.89		P	43.7
9	☐			22.22		P	22.9

156 Dy [No Gas] No available calibration points

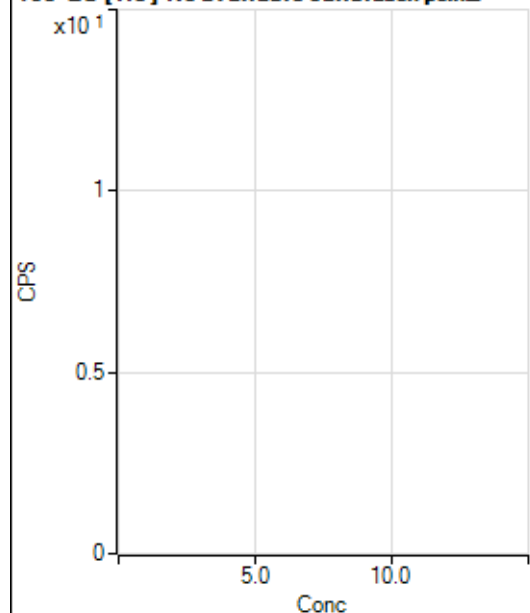
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐			2.78		P	173.
3	☐			0.00		P	
4	☐			2.78		P	173.
5	☐			11.11		P	114.
6	☐			5.55		P	86.6
7	☐			27.78		P	45.8
8	☐			27.78		P	96.4
9	☐			13.89		P	69.3

156 Dy [He] No available calibration points

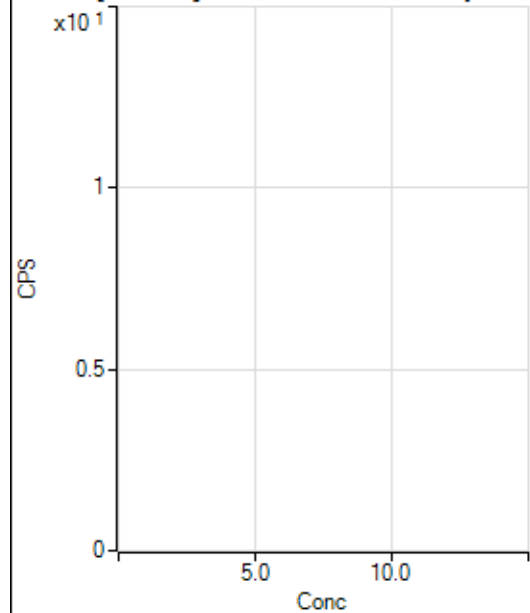
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐			1.11		P	173.
3	☐			1.11		P	173.
4	☐			6.67		P	50.0
5	☐			11.11		P	34.6
6	☐			18.89		P	44.4
7	☐			37.78		P	31.0
8	☐			57.78		P	6.7
9	☐			11.11		P	62.5

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

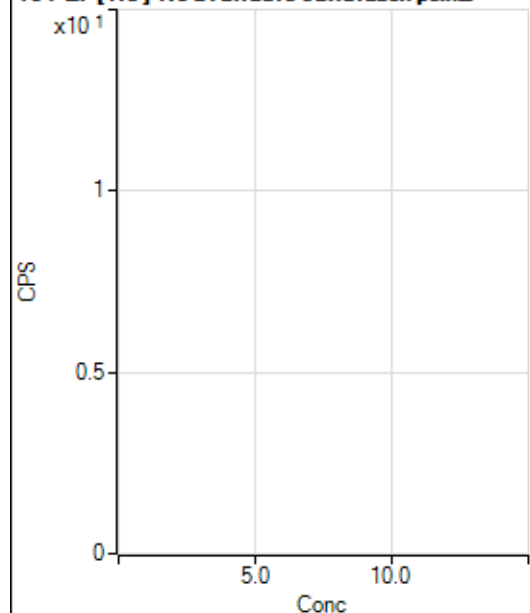
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.33		P	100.
2	☐			30.56		P	41.7
3	☐			16.66		P	86.6
4	☐			19.44		P	65.5
5	☐			5.56		P	173.
6	☐			11.11		P	114.
7	☐			11.11		P	114.
8	☐			8.33		P	100.
9	☐			16.66		P	86.6

160 Gd [He] No available calibration points

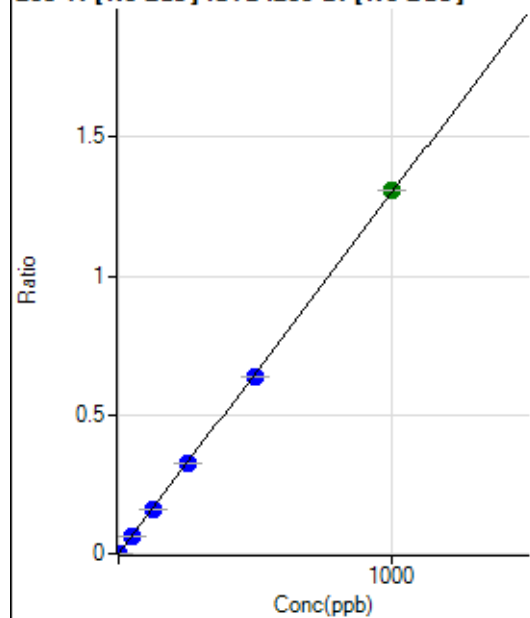
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			50.00		P	17.6
2	☐			42.22		P	12.1
3	☐			41.11		P	18.7
4	☐			44.44		P	21.7
5	☐			50.00		P	30.5
6	☐			38.89		P	17.8
7	☐			46.67		P	18.9
8	☐			52.22		P	13.3
9	☐			55.55		P	24.3

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	43.3
2	☐			5.55		P	86.6
3	☐			5.56		P	173.
4	☐			5.56		P	173.
5	☐			16.67		P	50.0
6	☐			5.55		P	86.6
7	☐			8.33		P	0.0
8	☐			5.56		P	173.
9	☐			11.11		P	86.6

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	50.0
2	☐			6.67		P	50.0
3	☐			5.55		P	124.
4	☐			5.55		P	124.
5	☐			1.11		P	173.
6	☐			5.55		P	69.3
7	☐			10.00		P	57.7
8	☐			1.11		P	173.
9	☐			5.56		P	34.7

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	36.11	0.0000	P	12.8
2	☐	0.100	0.088	294.46	0.0001	P	17.6
3	☐	1.000	0.893	2683.73	0.0012	P	4.7
4	☐	50.000	48.478	146332.37	0.0630	P	1.0
5	☐	125.000	122.419	363889.93	0.1590	P	0.8
6	☐	250.000	248.942	731485.15	0.3234	P	0.6
7	☐	500.000	490.511	1433764.13	0.6372	P	0.8
8	☐	1000.000	1005.408	2831164.19	1.3060	A	0.0
9	☐			230.57	0.0001	P	8.2

$$y = 0.0013 * x + 1.5696E-005$$

$$R = 0.9999$$

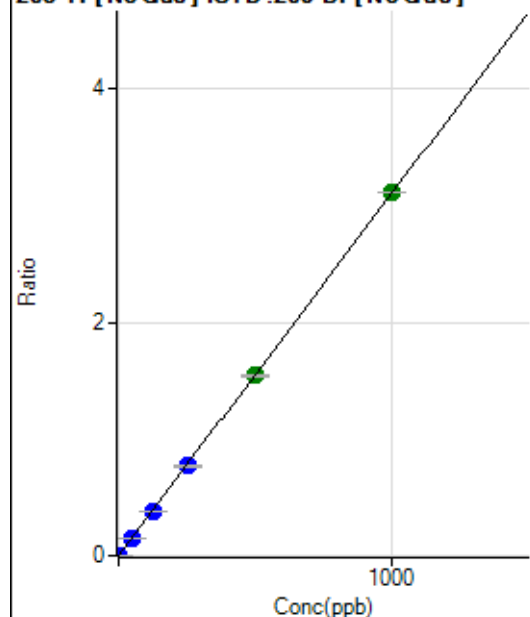
$$DL = 0.004657$$

$$BEC = 0.01208$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	105.56	0.0000	P	40.2
2	☐	0.100	0.100	811.17	0.0004	P	18.6
3	☐	1.000	0.878	6312.86	0.0028	P	3.8
4	☐	50.000	48.726	350945.02	0.1511	P	1.3
5	☐	125.000	123.249	874150.80	0.3820	P	1.1
6	☐	250.000	247.248	1733432.40	0.7663	P	0.6
7	☐	500.000	497.178	3467551.25	1.5410	A	0.5
8	☐	1000.000	1002.382	6734865.64	3.1067	A	0.1
9	☐			497.25	0.0003	P	9.5

$$y = 0.0031 * x + 4.5964E-005$$

$$R = 1.0000$$

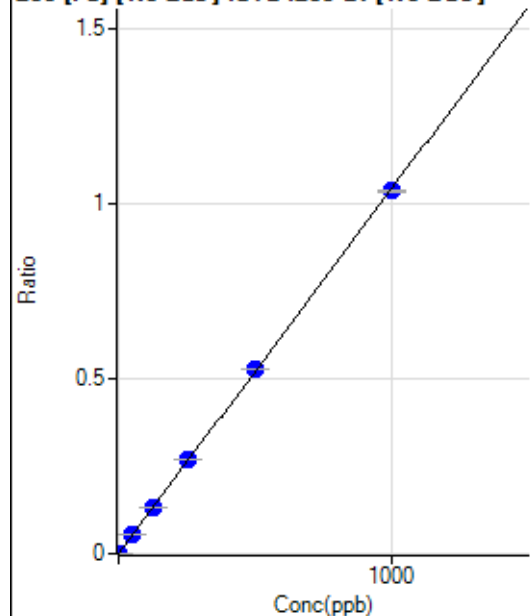
$$DL = 0.01788$$

$$BEC = 0.01483$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.30	0.0000	P	23.6
2	☐	0.100	0.098	325.94	0.0001	P	4.4
3	☐	1.000	0.929	2302.12	0.0010	P	2.2
4	☐	50.000	51.078	123628.38	0.0532	P	0.7
5	☐	125.000	127.938	304828.60	0.1332	P	0.5
6	☐	250.000	259.519	611162.85	0.2702	P	0.9
7	☐	500.000	505.281	1183743.08	0.5260	P	0.4
8	☐	1000.000	994.559	2244442.41	1.0353	P	0.2
9	☐			1557.55	0.0008	P	6.9

$$y = 0.0010 * x + 4.1898E-005$$

$$R = 0.9999$$

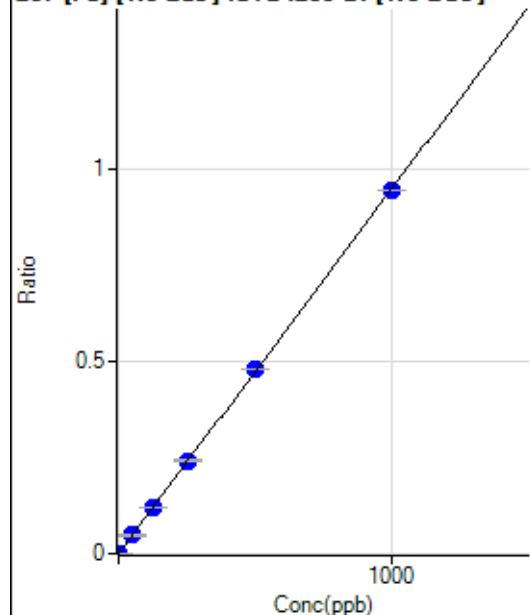
$$DL = 0.02849$$

$$BEC = 0.04025$$

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	87.04	0.0000	P	10.2
2	☐	0.100	0.085	266.68	0.0001	P	24.0
3	☐	1.000	0.878	1985.39	0.0009	P	4.1
4	☐	50.000	50.398	111086.31	0.0478	P	1.6
5	☐	125.000	125.853	273084.90	0.1193	P	0.3
6	☐	250.000	254.908	546699.40	0.2417	P	1.0
7	☐	500.000	506.091	1079731.66	0.4798	P	0.4
8	☐	1000.000	995.601	2046162.50	0.9439	P	0.0
9	☐			1277.88	0.0007	P	5.9

$$y = 9.4801\text{E-}004 * x + 3.7862\text{E-}005$$

$$R = 1.0000$$

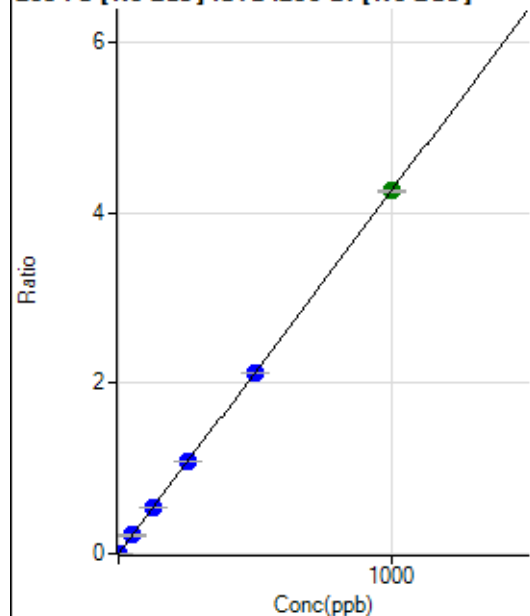
$$DL = 0.01226$$

$$BEC = 0.03994$$

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	372.23	0.0002	P	6.9
2	☐	0.100	0.095	1279.69	0.0006	P	6.6
3	☐	1.000	0.918	9299.72	0.0041	P	2.7
4	☐	50.000	50.347	499044.30	0.2148	P	0.9
5	☐	125.000	125.702	1226551.15	0.5360	P	0.2
6	☐	250.000	253.960	2449326.02	1.0828	P	0.5
7	☐	500.000	498.209	4779918.35	2.1241	P	0.1
8	☐	1000.000	999.801	9240246.75	4.2624	A	0.2
9	☐			5828.45	0.0031	P	4.5

$$y = 0.0043 * x + 1.6190\text{E-}004$$

$$R = 1.0000$$

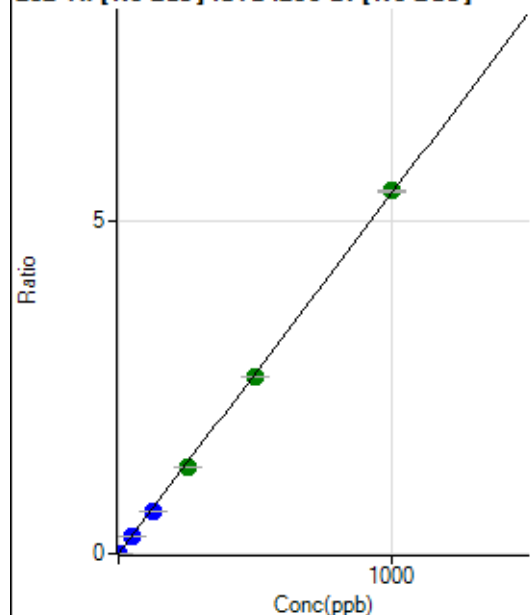
$$DL = 0.007889$$

$$BEC = 0.03798$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37.04	0.0000	P	17.8
2	☐	0.100	0.087	1109.34	0.0005	P	8.8
3	☐	1.000	0.859	10654.66	0.0047	P	1.9
4	☐	50.000	46.254	582147.38	0.2506	P	0.9
5	☐	125.000	117.461	1455957.31	0.6363	P	0.8
6	☐	250.000	241.713	2961767.54	1.3094	A	0.6
7	☐	500.000	492.060	5998126.76	2.6655	A	0.4
8	☐	1000.000	1007.171	11827302.93	5.4558	A	0.6
9	☐			438.91	0.0002	P	20.0

$$y = 0.0054 * x + 1.6113E-005$$

$$R = 0.9999$$

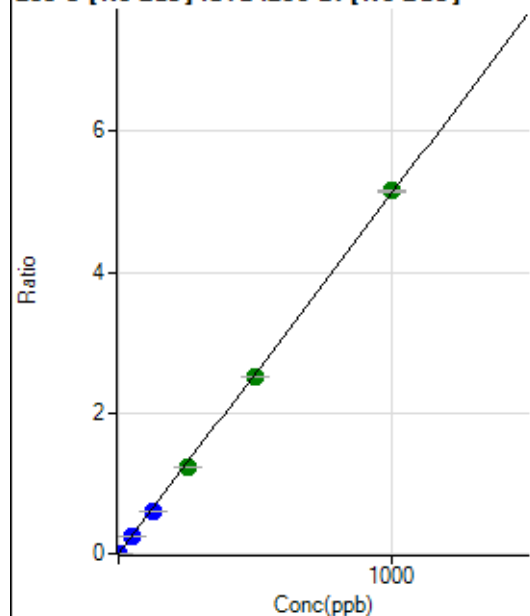
$$DL = 0.001586$$

$$BEC = 0.002975$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.89	0.0000	P	91.4
2	☐	0.100	0.088	1027.87	0.0005	P	6.7
3	☐	1.000	0.912	10657.64	0.0047	P	3.3
4	☐	50.000	46.277	549936.53	0.2367	P	0.1
5	☐	125.000	116.240	1360374.43	0.5945	P	0.4
6	☐	250.000	241.641	2795663.74	1.2359	A	0.9
7	☐	500.000	491.398	5656095.70	2.5133	A	0.7
8	☐	1000.000	1007.672	11172729.24	5.1539	A	0.4
9	☐			202.79	0.0001	P	4.5

$$y = 0.0051 * x + 6.0323E-006$$

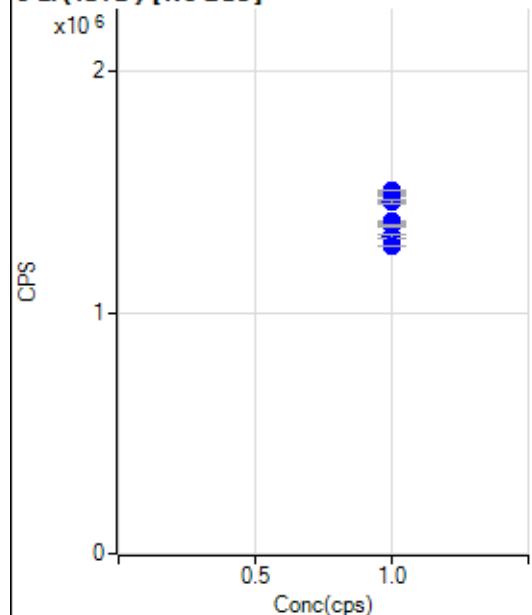
$$R = 0.9999$$

$$DL = 0.003234$$

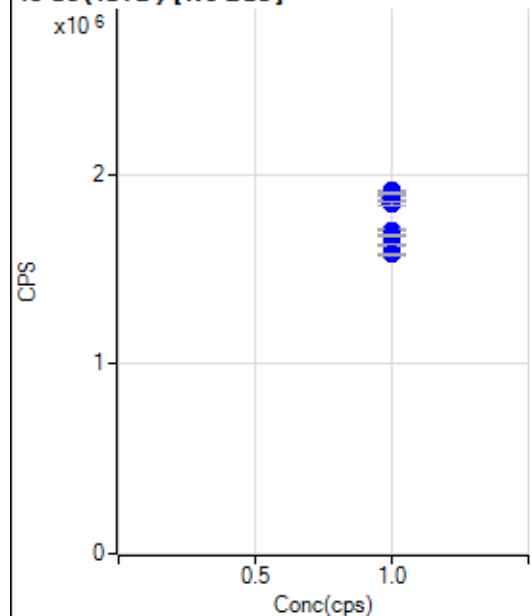
$$BEC = 0.001179$$

Weight: <None>

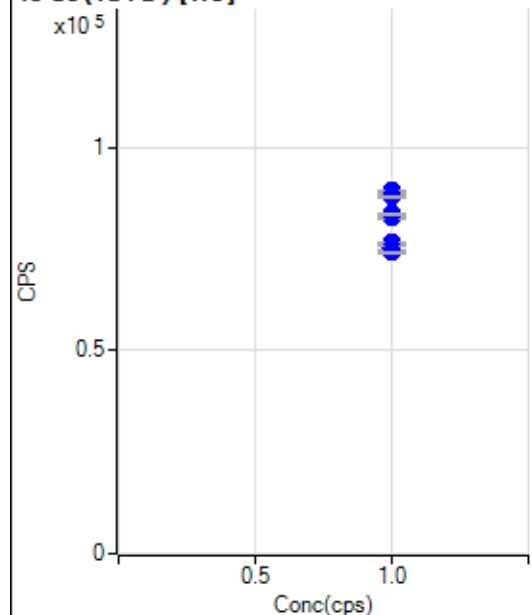
Min Conc: 0

6 Li (ISTD) [No Gas]

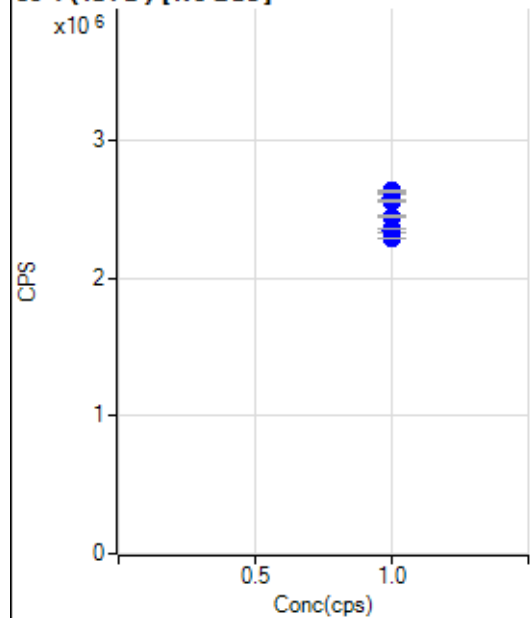
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1487271.23		P	0.2
2	☐	1.000		1470644.80		P	2.0
3	☐	1.000		1493921.55		P	0.5
4	☐	1.000		1504000.06		P	0.0
5	☐	1.000		1459173.74		P	0.9
6	☐	1.000		1375559.73		P	1.1
7	☐	1.000		1314362.46		P	1.0
8	☐	1.000		1276684.62		P	0.4
9	☐	1.000		1360646.69		P	0.5

45 Sc (ISTD) [No Gas]

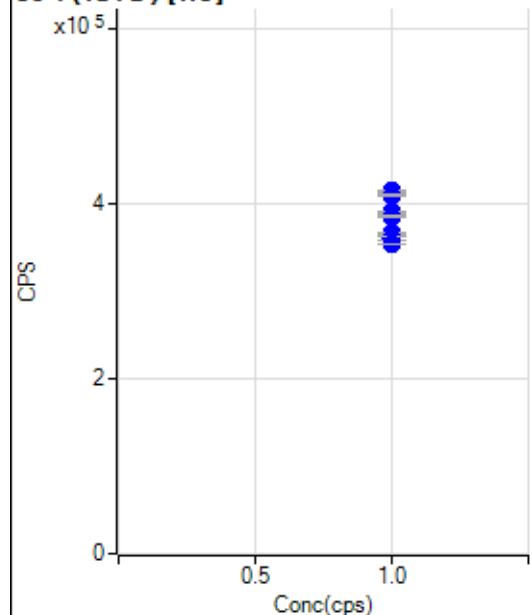
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1890613.21		P	0.4
2	☐	1.000		1877960.39		P	1.9
3	☐	1.000		1911433.18		P	0.7
4	☐	1.000		1902532.88		P	0.4
5	☐	1.000		1843250.17		P	0.9
6	☐	1.000		1704849.65		P	0.7
7	☐	1.000		1627073.89		P	1.1
8	☐	1.000		1577723.82		P	0.7
9	☐	1.000		1679355.57		P	0.6

45 Sc (ISTD) [He]

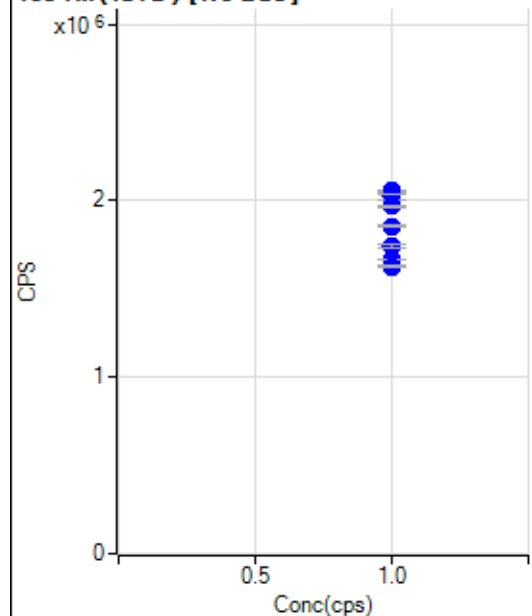
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		88100.91		P	1.8
2	☐	1.000		89084.45		P	1.1
3	☐	1.000		89211.81		P	0.6
4	☐	1.000		87804.97		P	0.4
5	☐	1.000		82596.31		P	0.8
6	☐	1.000		76467.07		P	0.5
7	☐	1.000		75004.35		P	1.3
8	☐	1.000		74009.17		P	0.8
9	☐	1.000		83578.47		P	0.4

89 Y (ISTD) [No Gas]

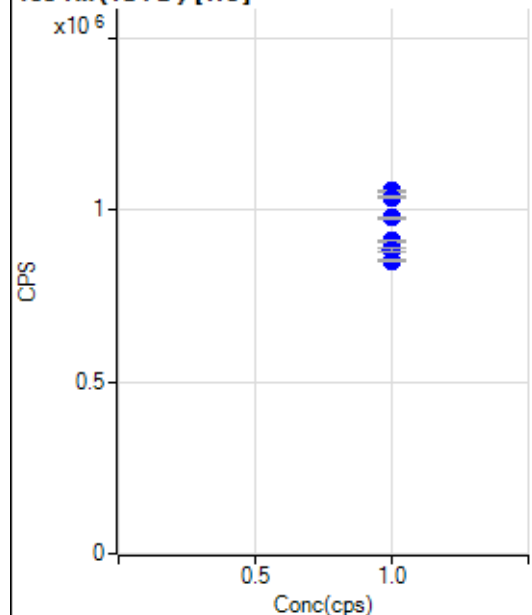
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2620955.05		P	0.3
2	☐	1.000		2583678.45		P	2.3
3	☐	1.000		2615850.74		P	0.7
4	☐	1.000		2634619.23		P	0.4
5	☐	1.000		2560675.31		P	0.4
6	☐	1.000		2447391.85		P	0.6
7	☐	1.000		2346847.14		P	1.0
8	☐	1.000		2290753.33		P	0.4
9	☐	1.000		2359411.95		P	0.3

89 Y (ISTD) [He]

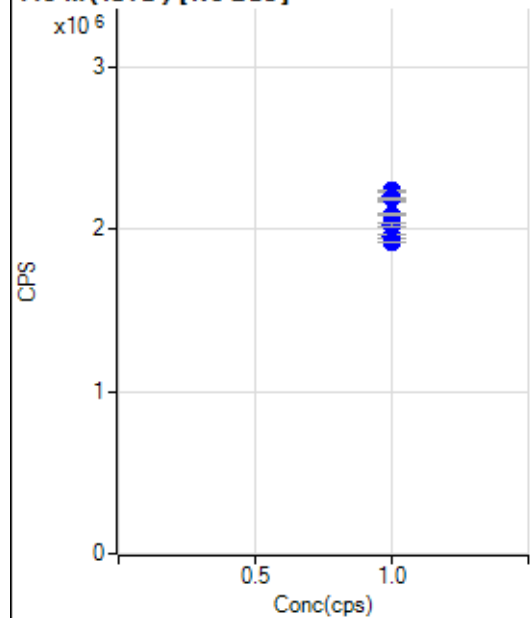
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		413243.71		P	0.3
2	☐	1.000		414905.73		P	0.3
3	☐	1.000		415143.30		P	0.4
4	☐	1.000		409758.69		P	0.6
5	☐	1.000		391174.05		P	0.4
6	☐	1.000		366646.04		P	0.8
7	☐	1.000		360384.82		P	1.3
8	☐	1.000		353711.58		P	0.3
9	☐	1.000		385094.25		P	0.6

103 Rh (ISTD) [No Gas]

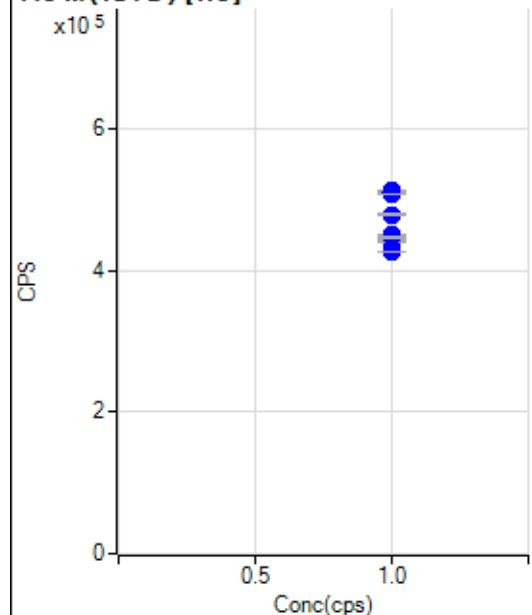
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2044691.58		P	0.6
2	☐	1.000		2030413.48		P	2.6
3	☐	1.000		2055459.20		P	0.6
4	☐	1.000		2039109.40		P	0.1
5	☐	1.000		1968407.51		P	0.7
6	☐	1.000		1855223.09		P	0.8
7	☐	1.000		1742880.96		P	1.4
8	☐	1.000		1666782.16		P	0.4
9	☐	1.000		1626889.57		P	0.3

103 Rh (ISTD) [He]

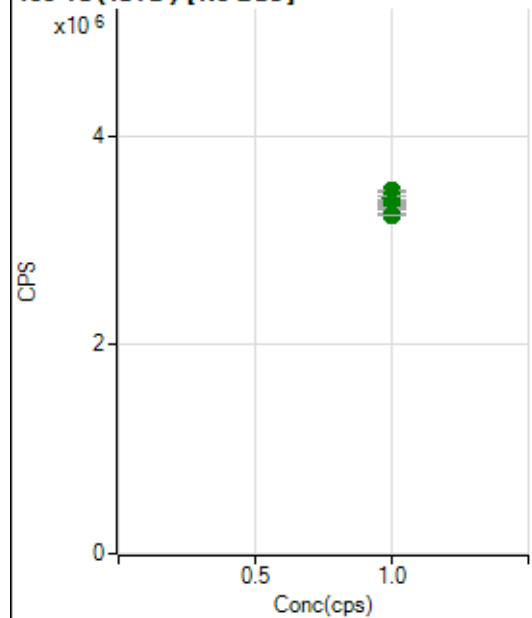
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1052493.66		P	0.5
2	☐	1.000		1053585.73		P	0.4
3	☐	1.000		1054132.72		P	0.3
4	☐	1.000		1034849.59		P	0.4
5	☐	1.000		976515.94		P	0.4
6	☐	1.000		908378.34		P	0.7
7	☐	1.000		883146.82		P	1.0
8	☐	1.000		851576.60		P	0.3
9	☐	1.000		850832.17		P	0.5

115 In (ISTD) [No Gas]

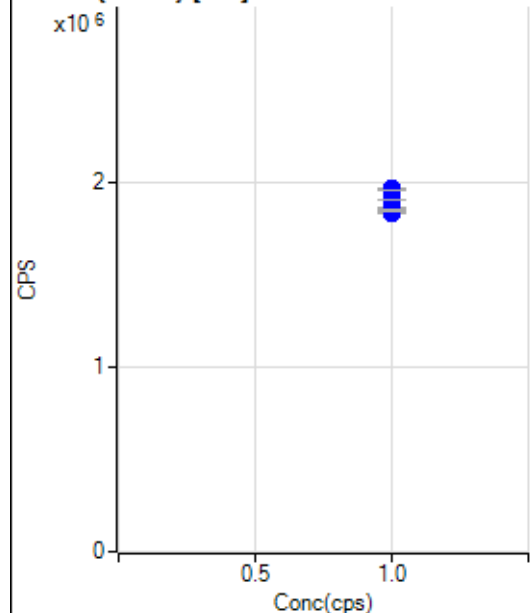
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2234561.38		P	0.5
2	☐	1.000		2200694.06		P	2.5
3	☐	1.000		2227265.29		P	0.2
4	☐	1.000		2235199.28		P	0.2
5	☐	1.000		2187820.33		P	0.6
6	☐	1.000		2090668.00		P	0.9
7	☐	1.000		2025252.18		P	1.1
8	☐	1.000		1953614.66		P	0.9
9	☐	1.000		1920686.13		P	0.3

115 In (ISTD) [He]

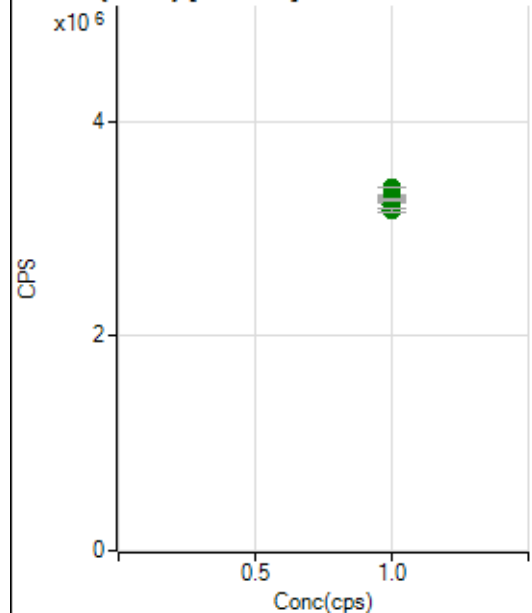
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		510531.30		P	0.5
2	☐	1.000		511823.11		P	0.3
3	☐	1.000		510778.71		P	0.9
4	☐	1.000		506367.23		P	0.1
5	☐	1.000		478575.80		P	0.9
6	☐	1.000		449859.45		P	0.3
7	☐	1.000		440339.40		P	0.6
8	☐	1.000		425141.70		P	0.3
9	☐	1.000		447289.05		P	0.7

159 Tb (ISTD) [No Gas]

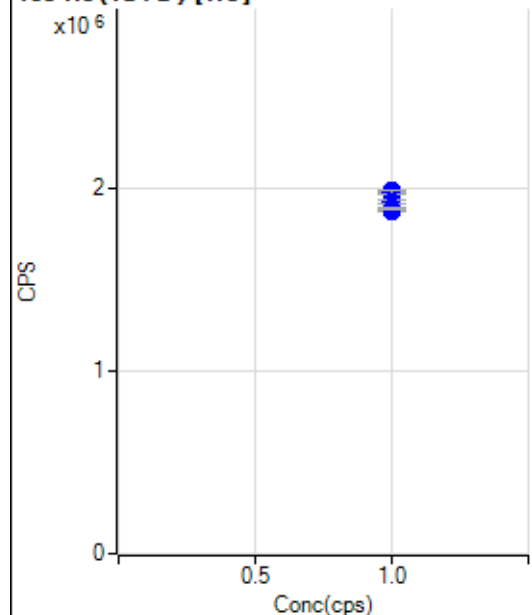
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3476332.41		A	0.3
2	☐	1.000		3311396.62		A	2.5
3	☐	1.000		3362820.26		A	0.2
4	☐	1.000		3427060.75		A	0.4
5	☐	1.000		3402993.07		A	1.1
6	☐	1.000		3356439.15		A	0.7
7	☐	1.000		3336137.24		A	0.5
8	☐	1.000		3311964.22		A	0.4
9	☐	1.000		3242900.89		A	0.5

159 Tb (ISTD) [He]

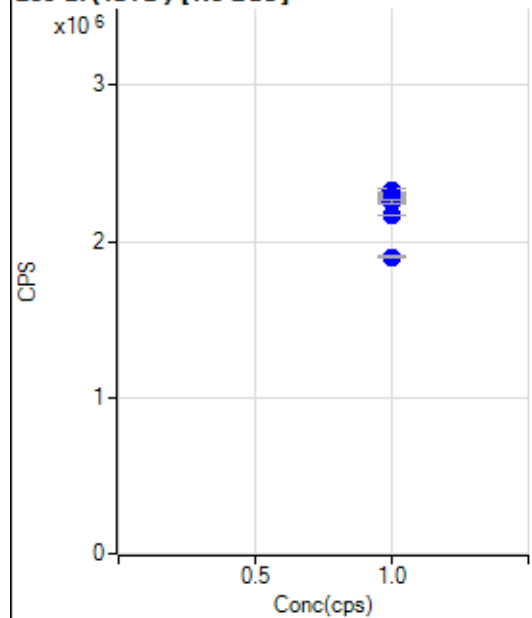
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1953062.49		P	0.3
2	☐	1.000		1961777.11		P	0.4
3	☐	1.000		1960911.71		P	0.6
4	☐	1.000		1955030.58		P	0.5
5	☐	1.000		1901081.24		P	0.2
6	☐	1.000		1840426.92		P	0.7
7	☐	1.000		1855102.61		P	1.0
8	☐	1.000		1834139.69		P	0.5
9	☐	1.000		1843781.20		P	0.6

165 Ho (ISTD) [No Gas]

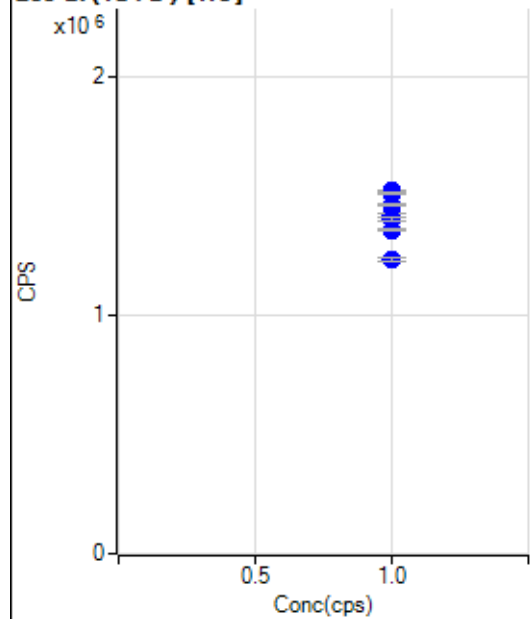
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3383703.42		A	0.1
2	☐	1.000		3231654.87		A	2.1
3	☐	1.000		3261993.39		A	0.7
4	☐	1.000		3300820.78		A	0.4
5	☐	1.000		3307053.83		A	0.2
6	☐	1.000		3278026.27		A	0.2
7	☐	1.000		3289350.72		A	0.4
8	☐	1.000		3271985.49		A	0.4
9	☐	1.000		3171661.01		A	0.9

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1982545.49		P	0.3
2	☐	1.000		1989310.39		P	0.2
3	☐	1.000		1978040.54		P	0.2
4	☐	1.000		1982579.26		P	0.7
5	☐	1.000		1930081.10		P	0.6
6	☐	1.000		1880794.92		P	0.8
7	☐	1.000		1902757.83		P	1.4
8	☐	1.000		1878029.38		P	0.3
9	☐	1.000		1890387.52		P	0.8

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2299664.93		P	0.5
2	☐	1.000		2266142.56		P	2.7
3	☐	1.000		2282598.04		P	0.3
4	☐	1.000		2323395.07		P	1.1
5	☐	1.000		2288141.58		P	0.2
6	☐	1.000		2262012.24		P	0.7
7	☐	1.000		2250338.58		P	1.0
8	☐	1.000		2167827.00		P	0.1
9	☐	1.000		1902500.25		P	0.2

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1522816.97		P	0.2
2	☐	1.000		1522840.15		P	0.4
3	☐	1.000		1518916.87		P	0.7
4	☐	1.000		1509654.32		P	0.5
5	☐	1.000		1463243.87		P	0.5
6	☐	1.000		1420005.92		P	0.8
7	☐	1.000		1404867.13		P	1.1
8	☐	1.000		1359242.26		P	0.5
9	☐	1.000		1233967.84		P	0.9

US EPA Tune Check Sample Report

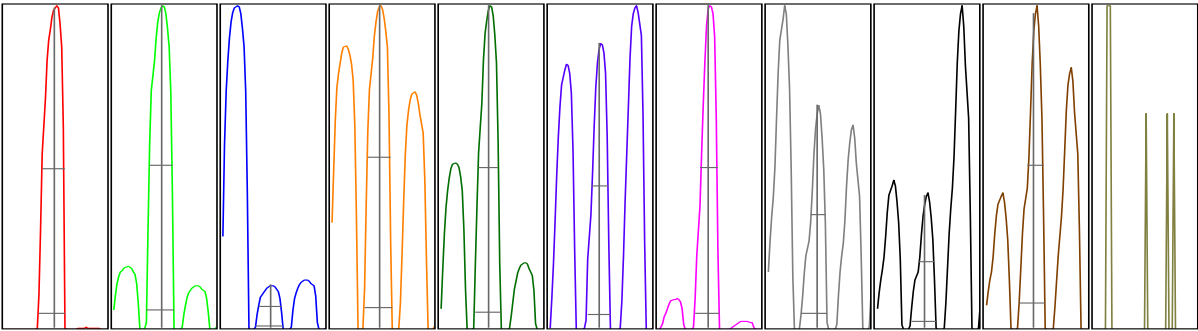
Batch Folder D:\ICP-MS Data\P7062319-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	4773	0.83	5.00	
24	104606	0.83	5.00	
25	14109	1.05	5.00	
26	15899	1.04	5.00	
59	21268	1.00	5.00	
113	2697	1.12	5.00	
115	32011	0.73	5.00	
206	9402	0.74	5.00	
207	8766	1.34	5.00	
208	20578	1.03	5.00	
220	0	223.61		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	4818	4807	4722	4770	4749
24	105255	105149	103153	105016	104456
25	14198	14160	13852	14217	14116
26	15983	15957	15609	16017	15928
59	21306	21477	20911	21353	21291
113	2685	2712	2650	2713	2725
115	32009	32091	31613	32198	32143
206	9364	9428	9307	9489	9424
207	8685	8771	8618	8904	8855
208	20398	20597	20329	20815	20749
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	7959	9.00	8.9 - 9.1		0.773	0.900	
24	169087	23.95	23.9 - 24.1		0.786	0.900	
25	22743	24.95	24.9 - 25.1		0.787	0.900	
26	25957	25.95	25.9 - 26.1		0.811	0.900	
59	38514	58.95	58.9 - 59.1		0.775	0.900	
113	5591	113.00	112.9 - 113.1		0.687	0.900	
115	67299	115.00	114.9 - 115.1		0.715	0.900	
206	20766	206.00	205.9 - 206.1		0.737	0.900	
207	18485	206.95	206.9 - 207.1		0.729	0.900	
208	43781	207.95	207.9 - 208.1		0.739	0.900	
220	0	219.90	-		0.050		

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	7.0	V	Deflect	13.4	V
Extract 2	-85.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-45	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	140	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	5273	0.41	
89	10482	0.27	
205	9084	0.73	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	5304	5285	5258	5252	5267
89	10513	10510	10471	10454	10459
205	9149	9105	9036	9135	8995

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	7.4	V	Deflect	1.6	V
Extract 2	-80.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-45	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			