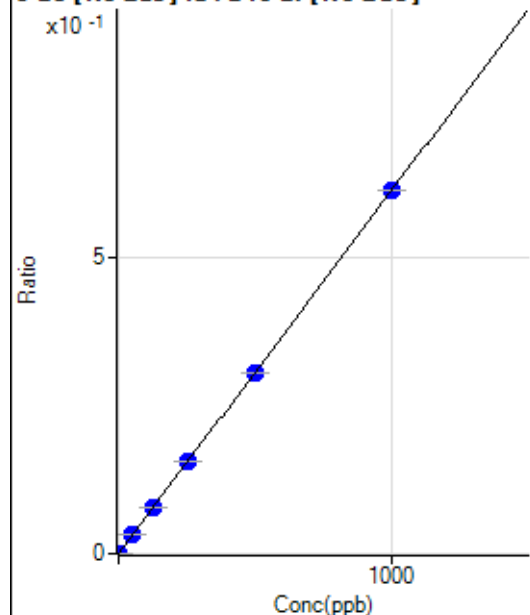


Batch Folder: D:\ICP-MS Data\P711032019 MS.b\
Analysis File: P711032019 MS.batch.bin
DA Date-Time: 2019-11-03 17:22:36
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-11-03 09:41:15
2	004CALS.d	S01	2019-11-03 09:44:49
3	005CALS.d	S02	2019-11-03 09:49:39
4	006CALS.d	S03	2019-11-03 09:53:34
5	007CALS.d	S04	2019-11-03 09:57:36
6	008CALS.d	S05	2019-11-03 10:01:25
7	009CALS.d	S06	2019-11-03 10:05:11
8	010CALS.d	S07	2019-11-03 10:08:56
9	011CALS.d	S08	2019-11-03 10:12:39

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77.78	0.0000	P	7.4
2	☐	0.100	0.130	518.54	0.0001	P	10.2
3	☐	1.000	1.031	3574.58	0.0006	P	1.3
4	☐	50.000	51.881	177668.73	0.0318	P	1.0
5	☐	125.000	128.887	438196.67	0.0789	P	0.6
6	☐	250.000	253.041	854426.58	0.1548	P	0.6
7	☐	500.000	498.456	1660962.96	0.3050	P	0.6
8	☐	1000.000	999.432	3307660.46	0.6115	P	0.1
9	☐			379.65	0.0001	P	26.1

$$y = 6.1182\text{E-}004 * x + 1.4057\text{E-}005$$

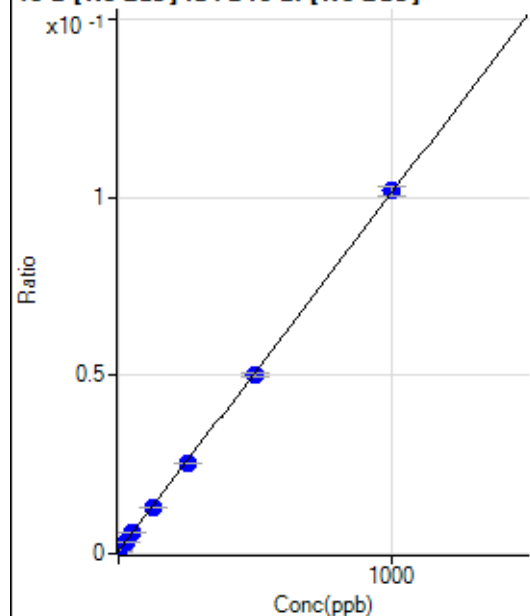
$$R = 1.0000$$

$$DL = 0.005105$$

$$BEC = 0.02298$$

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	3959.01	0.0007	P	3.4
2	☐	2.500	2.155	5173.32	0.0009	P	9.8
3	☐	25.000	24.272	17496.84	0.0032	P	0.6
4	☐	50.000	49.525	31881.67	0.0057	P	0.7
5	☐	125.000	121.332	71804.48	0.0129	P	1.2
6	☐	250.000	245.304	140165.41	0.0254	P	1.2
7	☐	500.000	490.955	272907.90	0.0501	P	2.5
8	☐	1000.000	1006.198	551552.90	0.1020	P	2.3
9	☐			22709.65	0.0045	P	6.1

$$y = 1.0062\text{E-}004 * x + 7.1526\text{E-}004$$

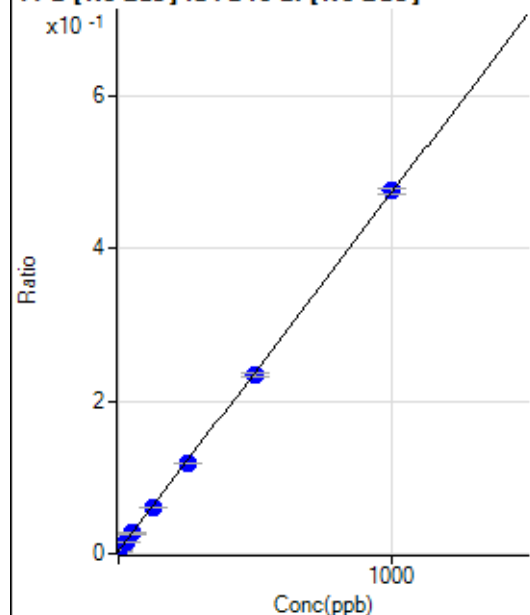
$$R = 0.9999$$

$$DL = 0.7286$$

$$BEC = 7.108$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18453.55	0.0033	P	1.8
2	☐	2.500	2.182	24197.93	0.0044	P	1.9
3	☐	25.000	24.615	82553.92	0.0149	P	1.8
4	☐	50.000	49.646	149142.66	0.0267	P	2.2
5	☐	125.000	121.897	336716.25	0.0606	P	1.0
6	☐	250.000	245.324	654470.42	0.1186	P	1.1
7	☐	500.000	492.918	1279202.80	0.2349	P	2.8
8	☐	1000.000	1005.126	2572451.73	0.4756	P	1.9
9	☐			105923.72	0.0208	P	6.2

$$y = 4.6981\text{E-}004 * x + 0.0033$$

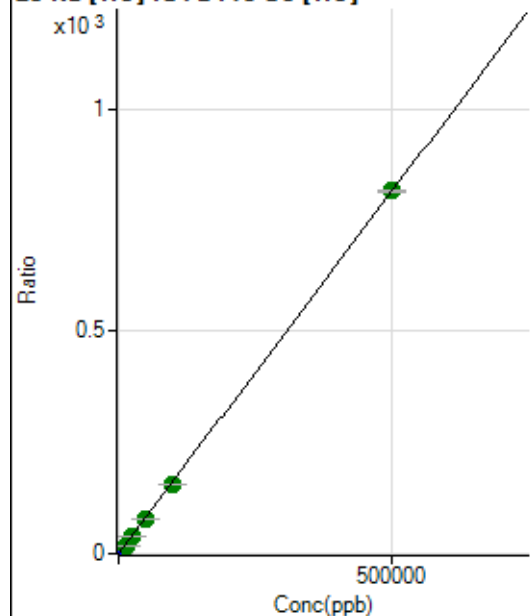
$$R = 1.0000$$

$$DL = 0.3924$$

$$BEC = 7.098$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10604.19	0.0281	P	4.0
2	☐	50.000	48.023	40366.06	0.1062	P	2.0
3	☐	500.000	499.696	314849.67	0.8408	P	0.2
4	☐	5000.000	4795.617	2972228.28	7.8274	P	0.9
5	☐	12500.000	11902.457	7258476.46	19.3854	A	0.4
6	☐	25000.000	23780.741	14361444.76	38.7033	A	0.5
7	☐	50000.000	47304.295	28804935.36	76.9603	A	0.3
8	☐	100000.00	95400.421	58528776.31	155.1802	A	0.5
9	☐	500000.00	501267.43	324299885.0	815.2516	A	0.5

$$y = 0.0016 * x + 0.0281$$

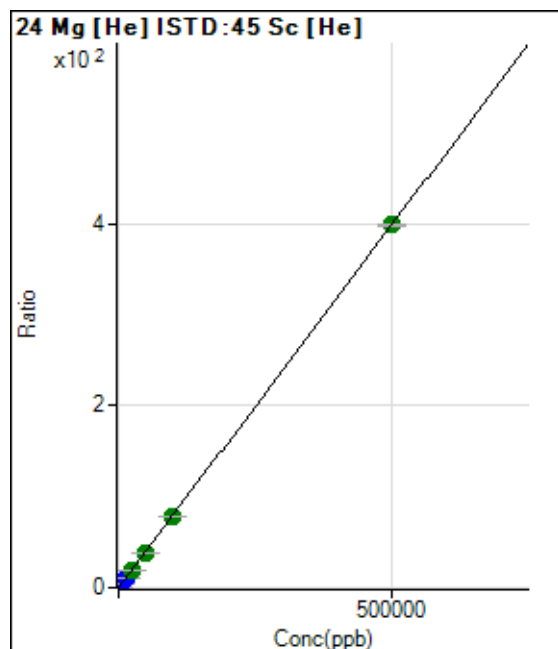
$$R = 0.9999$$

$$DL = 2.078$$

$$BEC = 17.3$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	636.15	0.0017	P	9.9
2	☐	50.000	50.131	15808.88	0.0416	P	3.0
3	☐	500.000	534.472	160006.66	0.4273	P	0.8
4	☐	5000.000	5006.465	1514498.63	3.9884	P	1.0
5	☐	12500.000	12395.370	3696546.17	9.8723	P	0.3
6	☐	25000.000	24480.082	7234118.39	19.4956	A	0.7
7	☐	50000.000	48673.630	14507843.21	38.7613	A	0.2
8	☐	100000.00	98039.012	29446116.98	78.0718	A	0.5
9	☐	500000.00	500553.34	158557518.8	398.6010	A	0.7

$$y = 7.9632\text{E-}004 * x + 0.0017$$

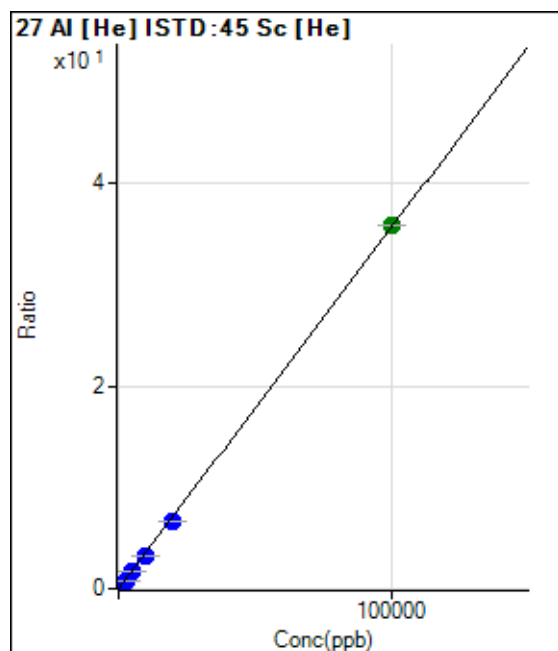
R = 1.0000

DL = 0.6288

BEC = 2.12

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61.11	0.0002	P	47.7
2	☐	2.000	1.821	308.35	0.0008	P	7.1
3	☐	20.000	17.976	2461.42	0.0066	P	3.8
4	☐	1000.000	937.208	126993.70	0.3344	P	0.8
5	☐	2500.000	2339.050	312441.06	0.8344	P	1.1
6	☐	5000.000	4659.171	616662.24	1.6619	P	1.5
7	☐	10000.000	9225.007	1231539.57	3.2904	P	1.0
8	☐	20000.000	18634.579	2506873.75	6.6465	P	0.5
9	☐	100000.00	100372.27	14240896.67	35.7999	A	0.1

$$y = 3.5667\text{E-}004 * x + 1.6209\text{E-}004$$

R = 0.9999

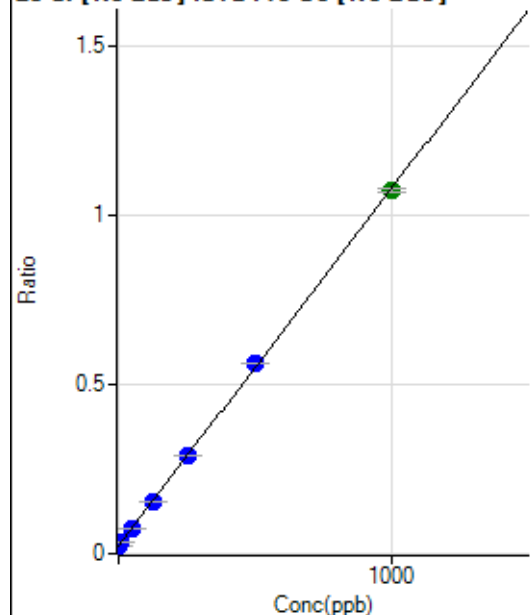
DL = 0.6505

BEC = 0.4545

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	211075.99	0.0231	P	0.4
2	☐	1.000	0.879	220712.45	0.0240	P	1.0
3	☐	10.000	8.823	297745.16	0.0324	P	0.8
4	☐	50.000	49.306	701061.88	0.0752	P	2.2
5	☐	125.000	124.783	1434895.97	0.1550	P	0.5
6	☐	250.000	253.376	2671308.35	0.2909	P	1.2
7	☐	500.000	511.320	5106902.37	0.5637	P	0.5
8	☐	1000.000	993.570	9693544.05	1.0735	A	1.0
9	☐			436618.45	0.0489	P	1.5

$$y = 0.0011 * x + 0.0231$$

$$R = 0.9999$$

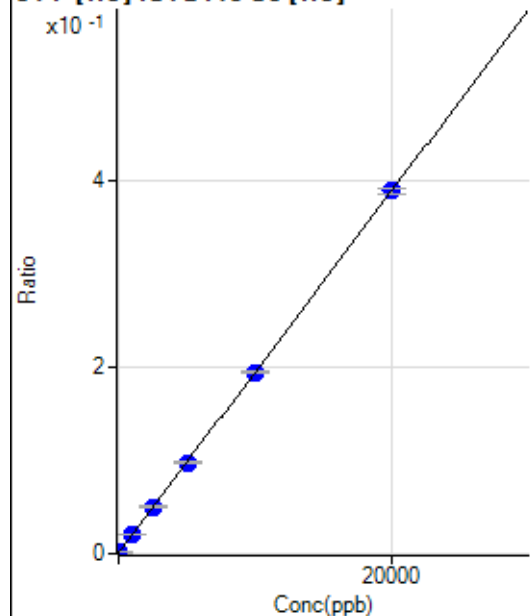
$$DL = 0.2338$$

$$BEC = 21.81$$

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	-20.848	86.12	0.0002	P	29.6
2	☐	0.000	-16.047	122.23	0.0003	P	32.4
3	☐	0.000	36.895	505.58	0.0014	P	10.8
4	☐	1000.000	1031.097	7846.82	0.0207	P	2.8
5	☐	2500.000	2541.002	18720.77	0.0500	P	2.7
6	☐	5000.000	5009.042	36345.06	0.0979	P	1.3
7	☐	10000.000	9965.816	72702.35	0.1942	P	1.2
8	☐	20000.000	20008.151	146856.47	0.3893	P	1.9
9	☐			152.78	0.0004	P	6.5

$$y = 1.9428E-005 * x + 6.3356E-004$$

$$R = 1.0000$$

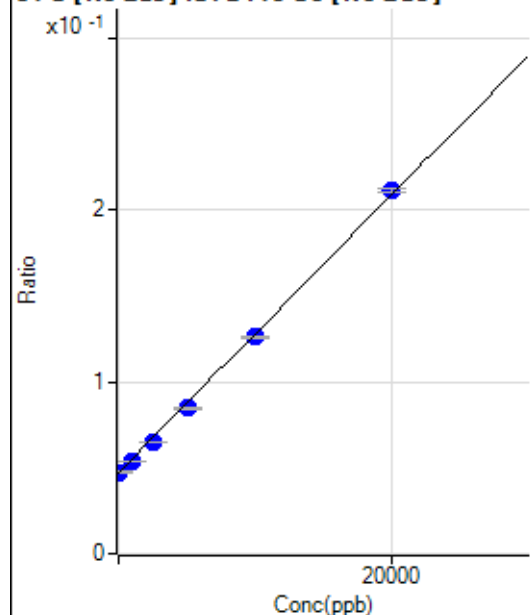
$$DL = 16.34$$

$$BEC = 32.61$$

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	-12.465	430958.94	0.0471	P	1.2
2	☐	0.000	-9.207	433436.23	0.0471	P	0.7
3	☐	0.000	21.672	435364.90	0.0474	P	0.9
4	☐	1000.000	792.960	499711.84	0.0536	P	0.5
5	☐	2500.000	2182.745	600117.17	0.0648	P	0.7
6	☐	5000.000	4626.093	776475.66	0.0846	P	0.3
7	☐	10000.000	9750.955	1141457.77	0.1260	P	0.5
8	☐	20000.000	20268.008	1905037.48	0.2110	P	1.0
9	☐			387327.79	0.0434	P	1.4

$$y = 8.0818\text{E-}006 * x + 0.0472$$

R = 0.9996

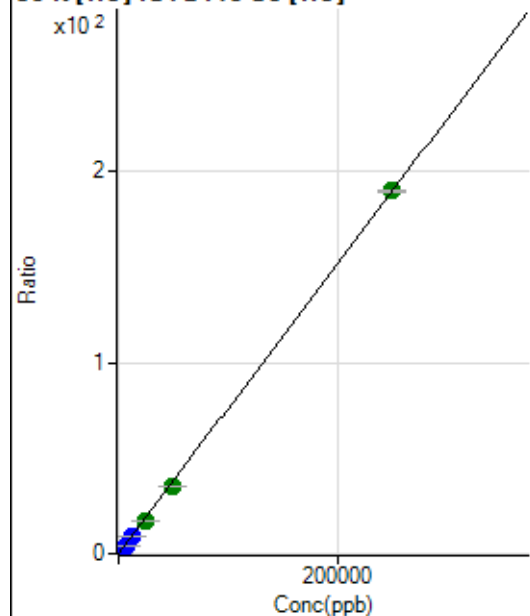
DL = 163.9

BEC = 5838

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	20629.01	0.0547	P	1.3
2	☐	50.000	48.581	34747.23	0.0915	P	1.1
3	☐	500.000	496.991	161137.77	0.4303	P	0.4
4	☐	2500.000	2369.116	700623.52	1.8451	P	0.8
5	☐	6250.000	5847.721	1675136.29	4.4739	P	1.0
6	☐	12500.000	11622.484	3279359.14	8.8378	P	0.8
7	☐	25000.000	23078.984	6548182.87	17.4955	A	0.8
8	☐	50000.000	46955.668	13404137.11	35.5391	A	0.3
9	☐	250000.00	250856.21	75432139.88	189.6264	A	0.3

$$y = 7.5570\text{E-}004 * x + 0.0547$$

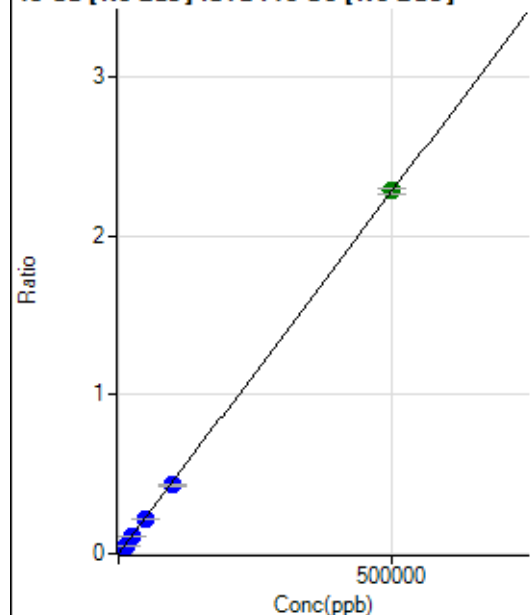
R = 0.9999

DL = 2.768

BEC = 72.44

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	155.56	0.0000	P	43.0
2	☐	50.000	48.559	2189.16	0.0002	P	3.9
3	☐	500.000	503.054	21193.67	0.0023	P	2.8
4	☐	5000.000	4778.743	202875.64	0.0218	P	0.1
5	☐	12500.000	11732.250	494275.72	0.0534	P	1.3
6	☐	25000.000	23658.312	988331.75	0.1076	P	1.1
7	☐	50000.000	47038.118	1938879.62	0.2140	P	0.4
8	☐	100000.00	94685.928	3889431.03	0.4308	P	0.9
9	☐	500000.00	501447.49	20379274.24	2.2812	A	1.3

$$y = 4.5491\text{E-}006 * x + 1.6979\text{E-}005$$

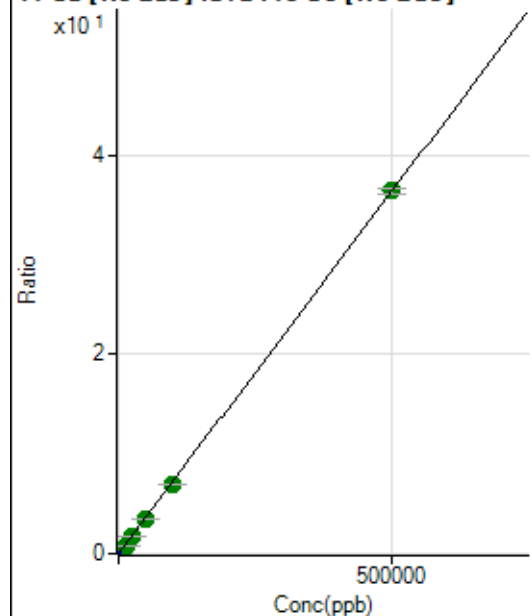
$$R = 0.9999$$

$$DL = 4.81$$

$$BEC = 3.732$$

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	11827.84	0.0013	P	2.8
2	☐	50.000	50.463	45610.40	0.0050	P	1.0
3	☐	500.000	498.373	344636.78	0.0375	P	1.2
4	☐	5000.000	4840.725	3290312.38	0.3529	P	0.5
5	☐	12500.000	11827.778	7964715.72	0.8603	A	0.6
6	☐	25000.000	23614.984	15759236.81	1.7164	A	0.2
7	☐	50000.000	47265.920	31113086.81	3.4341	A	0.1
8	☐	100000.00	95703.854	62771657.65	6.9519	A	0.8
9	☐	500000.00	501220.28	325198654.4	36.4032	A	1.6

$$y = 7.2627\text{E-}005 * x + 0.0013$$

$$R = 1.0000$$

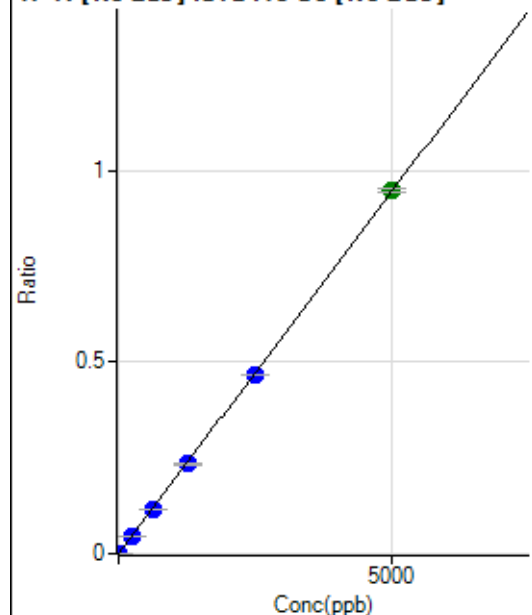
$$DL = 1.5$$

$$BEC = 17.79$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	102.78	0.0000	P	36.8
2	☐	0.500	0.516	1000.07	0.0001	P	8.7
3	☐	5.000	5.331	9361.67	0.0010	P	1.7
4	☐	250.000	248.530	437876.13	0.0470	P	0.5
5	☐	625.000	615.784	1076992.95	0.1163	P	0.7
6	☐	1250.000	1241.511	2153351.57	0.2345	P	0.9
7	☐	2500.000	2474.408	4234878.05	0.4674	P	0.5
8	☐	5000.000	5016.144	8555604.53	0.9476	A	0.9
9	☐			4317.49	0.0005	P	3.4

$$y = 1.8890\text{E-}004 * x + 1.1237\text{E-}005$$

$$R = 1.0000$$

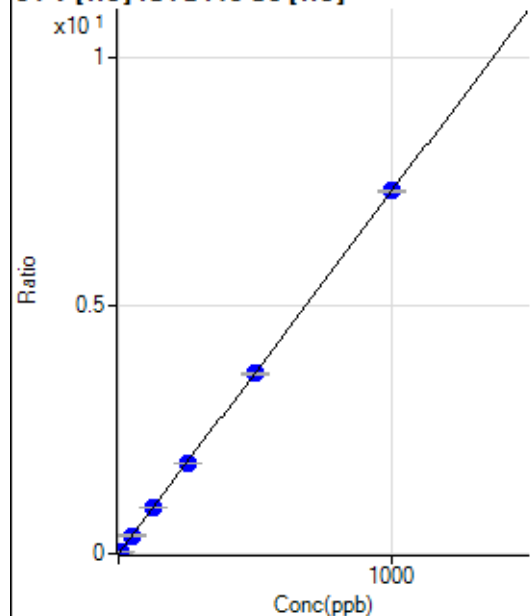
$$DL = 0.06574$$

$$BEC = 0.05948$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	4.45	0.0000	P	86.6
2	☐	0.500	0.548	1525.66	0.0040	P	10.7
3	☐	5.000	5.438	14886.59	0.0398	P	0.6
4	☐	50.000	50.253	139454.03	0.3672	P	1.1
5	☐	125.000	124.882	341714.48	0.9126	P	0.1
6	☐	250.000	248.344	673433.67	1.8149	P	0.8
7	☐	500.000	497.818	1361603.52	3.6379	P	0.8
8	☐	1000.000	1001.505	2760364.13	7.3188	P	0.4
9	☐			804.48	0.0020	P	5.0

$$y = 0.0073 * x + 1.1791\text{E-}005$$

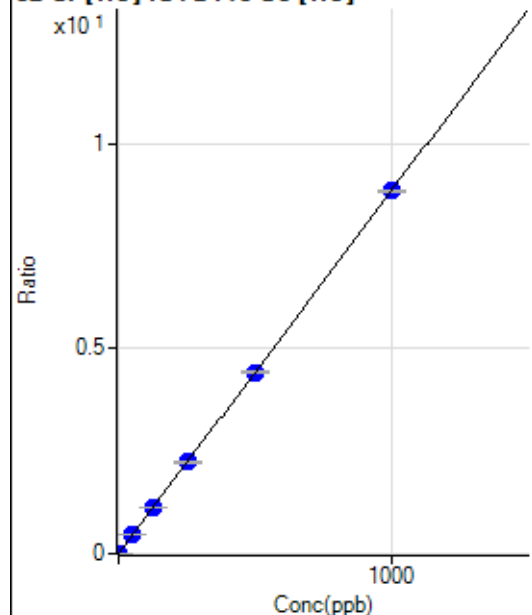
$$R = 1.0000$$

$$DL = 0.004192$$

$$BEC = 0.001614$$

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	972.27	0.0026	P	8.5
2	☐	0.200	0.187	1607.89	0.0042	P	7.3
3	☐	2.000	2.082	7867.78	0.0210	P	3.6
4	☐	50.000	51.207	173090.43	0.4558	P	1.4
5	☐	125.000	127.754	424388.11	1.1334	P	0.1
6	☐	250.000	251.743	827825.15	2.2309	P	0.6
7	☐	500.000	498.975	1654045.43	4.4193	P	1.1
8	☐	1000.000	999.672	3338367.97	8.8513	P	0.4
9	☐			135678.86	0.3411	P	0.7

$$y = 0.0089 * x + 0.0026$$

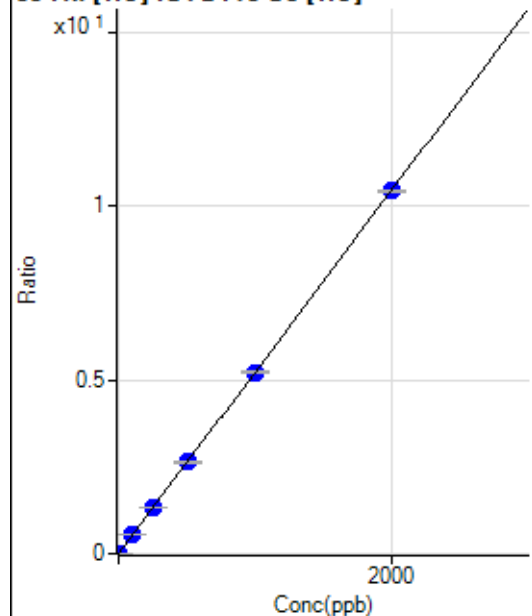
$$R = 1.0000$$

$$DL = 0.07446$$

$$BEC = 0.2914$$

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	352.23	0.0009	P	4.6
2	☐	0.100	0.090	533.35	0.0014	P	5.6
3	☐	1.000	1.158	2618.05	0.0070	P	4.1
4	☐	100.000	102.600	204096.43	0.5375	P	0.8
5	☐	250.000	256.380	502367.41	1.3417	P	0.3
6	☐	500.000	505.944	982104.97	2.6468	P	1.3
7	☐	1000.000	999.980	1957599.31	5.2304	P	1.0
8	☐	2000.000	1997.597	3940391.33	10.4474	P	0.8
9	☐			16457.52	0.0414	P	1.1

$$y = 0.0052 * x + 9.3473E-004$$

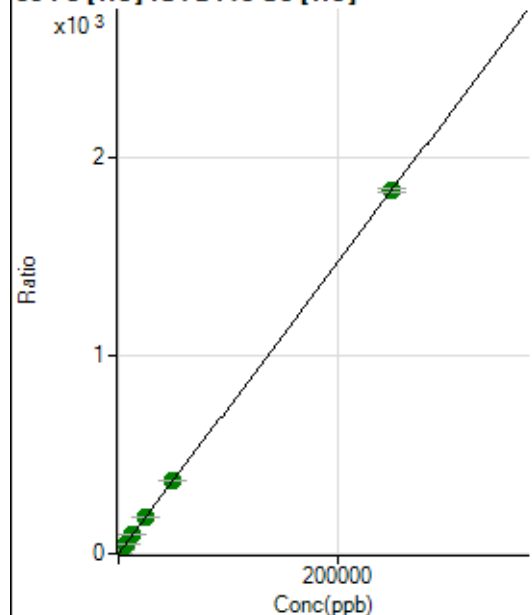
$$R = 1.0000$$

$$DL = 0.02451$$

$$BEC = 0.1787$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5808.70	0.0154	P	2.4
2	☐	5.000	5.170	20284.83	0.0534	P	2.8
3	☐	50.000	57.158	162989.21	0.4353	P	0.6
4	☐	2500.000	2588.912	7226888.70	19.0321	A	1.0
5	☐	6250.000	6464.161	17784743.69	47.4976	A	0.2
6	☐	12500.000	12792.981	34874040.36	93.9855	A	0.9
7	☐	25000.000	25283.889	69517409.43	185.7368	A	0.7
8	☐	50000.000	50638.412	140296642.0	371.9771	A	0.3
9	☐	250000.00	249823.03	730017357.0	1,835.076	A	1.1

$$y = 0.0073 * x + 0.0154$$

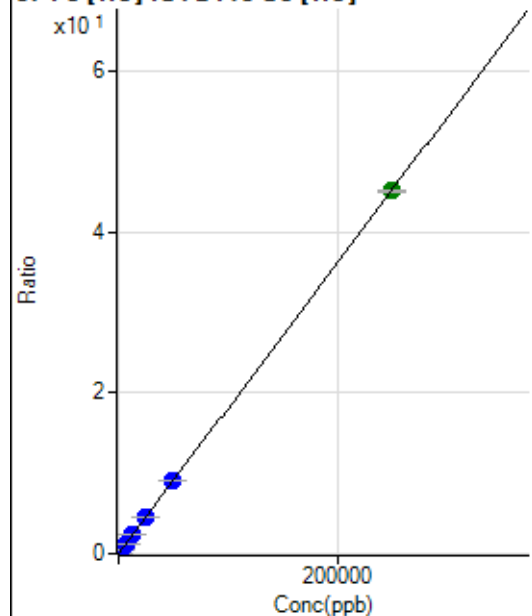
$$R = 1.0000$$

$$DL = 0.1508$$

$$BEC = 2.098$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	248.16	0.0007	P	15.1
2	☐	5.000	5.963	659.29	0.0017	P	15.2
3	☐	50.000	57.924	4161.82	0.0111	P	3.8
4	☐	2500.000	2617.785	179690.57	0.4732	P	0.8
5	☐	6250.000	6475.853	437940.85	1.1696	P	0.7
6	☐	12500.000	12800.876	857654.43	2.3114	P	0.8
7	☐	25000.000	25219.778	1704136.90	4.5531	P	0.8
8	☐	50000.000	50084.904	3410179.65	9.0416	P	0.4
9	☐	250000.00	249939.17	17947446.00	45.1177	A	0.3

$$y = 1.8051E-004 * x + 6.5864E-004$$

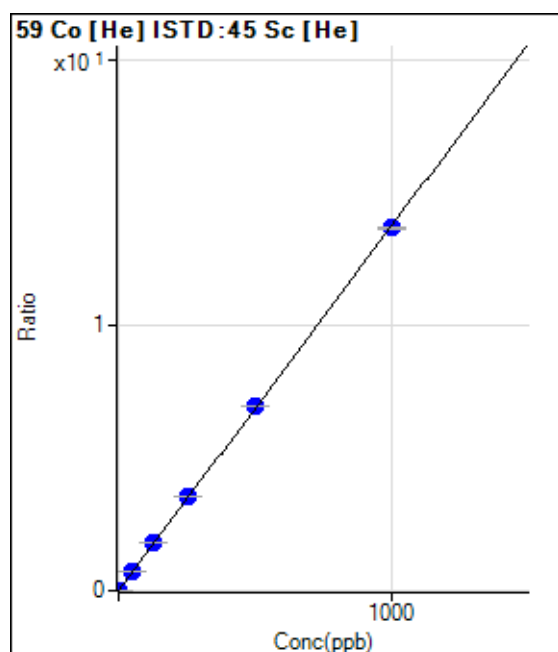
$$R = 1.0000$$

$$DL = 1.65$$

$$BEC = 3.649$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0003	P	8.9
2	☐	0.100	0.107	661.14	0.0017	P	16.8
3	☐	1.000	1.116	5846.81	0.0156	P	3.2
4	☐	50.000	52.691	275223.50	0.7248	P	1.3
5	☐	125.000	130.154	670223.21	1.7900	P	0.6
6	☐	250.000	256.902	1310914.97	3.5329	P	0.7
7	☐	500.000	505.332	2600898.02	6.9490	P	0.2
8	☐	1000.000	994.829	5159546.10	13.6800	P	0.2
9	☐			10970.91	0.0276	P	2.4

$$y = 0.0138 * x + 2.6539E-004$$

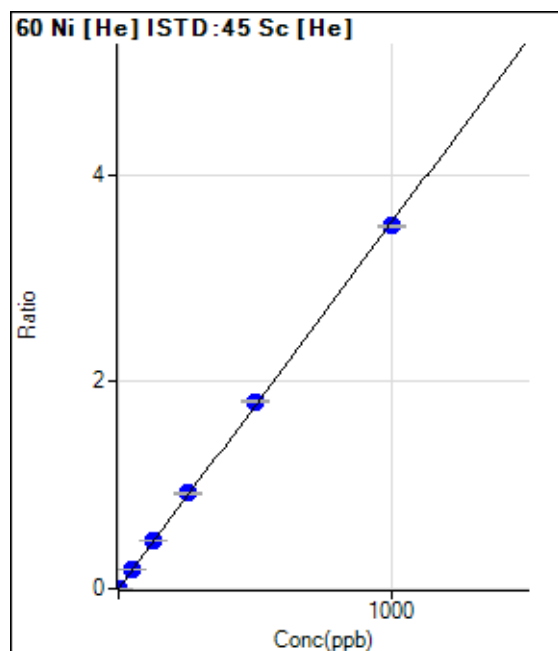
$$R = 0.9999$$

$$DL = 0.005165$$

$$BEC = 0.0193$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57.78	0.0002	P	13.5
2	☐	0.100	0.101	194.45	0.0005	P	19.9
3	☐	1.000	1.187	1630.12	0.0044	P	2.8
4	☐	50.000	53.367	71773.55	0.1890	P	2.1
5	☐	125.000	132.226	175283.31	0.4681	P	1.4
6	☐	250.000	260.126	341679.25	0.9208	P	0.8
7	☐	500.000	511.157	677168.70	1.8092	P	0.5
8	☐	1000.000	990.818	1322669.75	3.5069	P	0.3
9	☐			36894.33	0.0927	P	1.4

$$y = 0.0035 * x + 1.5334E-004$$

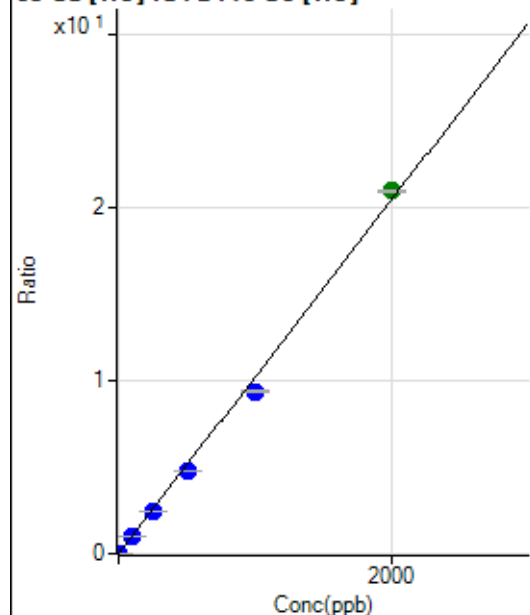
$$R = 0.9998$$

$$DL = 0.0175$$

$$BEC = 0.04332$$

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	1198.96	0.0032	P	8.1
2	☐	0.200	0.197	1972.39	0.0052	P	3.2
3	☐	2.000	2.020	8915.07	0.0238	P	2.0
4	☐	100.000	96.870	376880.60	0.9925	P	1.2
5	☐	250.000	240.162	919590.71	2.4560	P	0.8
6	☐	500.000	470.193	1783080.74	4.8053	P	1.0
7	☐	1000.000	915.765	3501757.76	9.3560	P	0.7
8	☐	2000.000	2050.955	7901466.76	20.9498	A	0.6
9	☐			14446.18	0.0363	P	0.7

$$y = 0.0102 * x + 0.0032$$

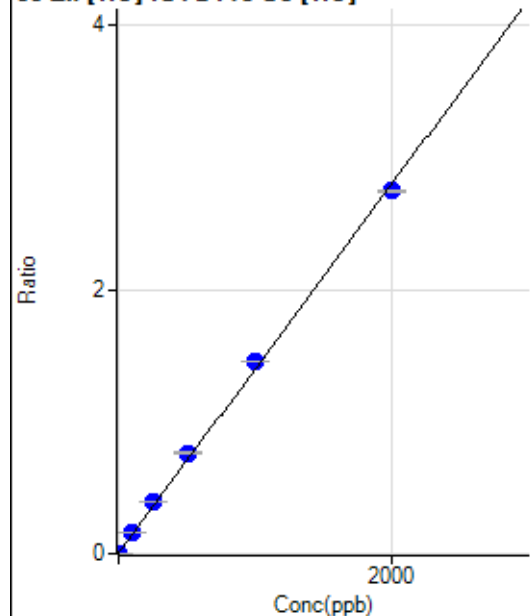
$$R = 0.9987$$

$$DL = 0.07568$$

$$BEC = 0.3115$$

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	1202.29	0.0032	P	5.8
2	☐	0.200	0.151	1292.31	0.0034	P	3.4
3	☐	2.000	2.425	2462.47	0.0066	P	6.7
4	☐	100.000	112.988	61095.26	0.1609	P	1.4
5	☐	250.000	279.684	147362.23	0.3936	P	1.4
6	☐	500.000	543.197	282515.96	0.7614	P	1.4
7	☐	1000.000	1039.850	544433.92	1.4546	P	0.7
8	☐	2000.000	1964.915	1035614.36	2.7458	P	0.3
9	☐			16146.92	0.0406	P	0.9

$$y = 0.0014 * x + 0.0032$$

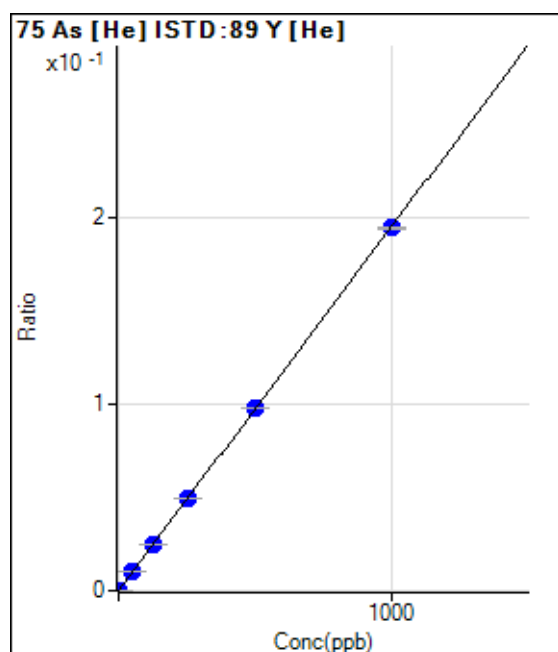
$$R = 0.9994$$

$$DL = 0.3946$$

$$BEC = 2.286$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.41	0.0000	P	50.3
2	☐	0.100	0.104	44.45	0.0000	P	13.6
3	☐	1.000	1.098	391.37	0.0002	P	5.5
4	☐	50.000	51.872	18344.97	0.0101	P	2.2
5	☐	125.000	127.288	44521.53	0.0248	P	0.1
6	☐	250.000	255.874	88274.25	0.0499	P	0.1
7	☐	500.000	502.752	174182.53	0.0981	P	0.1
8	☐	1000.000	996.776	342167.02	0.1945	P	0.2
9	☐			122.84	0.0001	P	11.4

$$y = 1.9514\text{E-}004 * x + 4.1214\text{E-}006$$

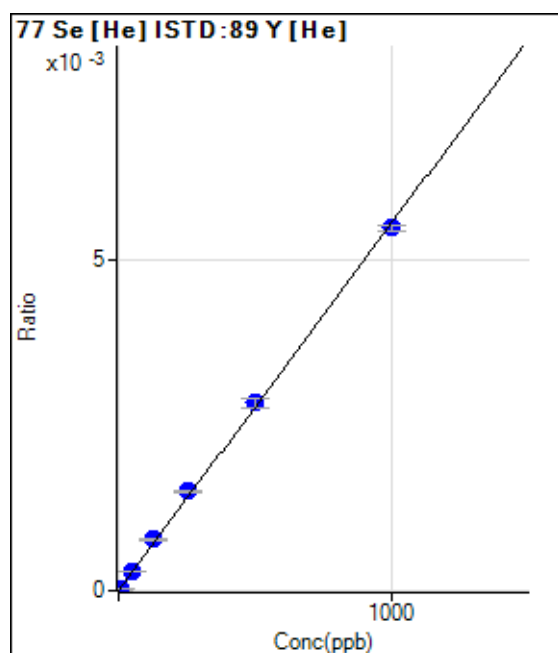
$$R = 1.0000$$

$$DL = 0.03187$$

$$BEC = 0.02112$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	0.500	0.109	2.22	0.0000	P	86.6
3	☐	5.000	7.152	72.22	0.0000	P	14.9
4	☐	50.000	53.144	535.57	0.0003	P	2.3
5	☐	125.000	140.170	1395.65	0.0008	P	4.4
6	☐	250.000	269.630	2646.96	0.0015	P	2.5
7	☐	500.000	511.102	5037.62	0.0028	P	4.9
8	☐	1000.000	987.478	9644.46	0.0055	P	1.9
9	☐			5.55	0.0000	P	125.

$$y = 5.5509\text{E-}006 * x + 6.1157\text{E-}007$$

$$R = 0.9996$$

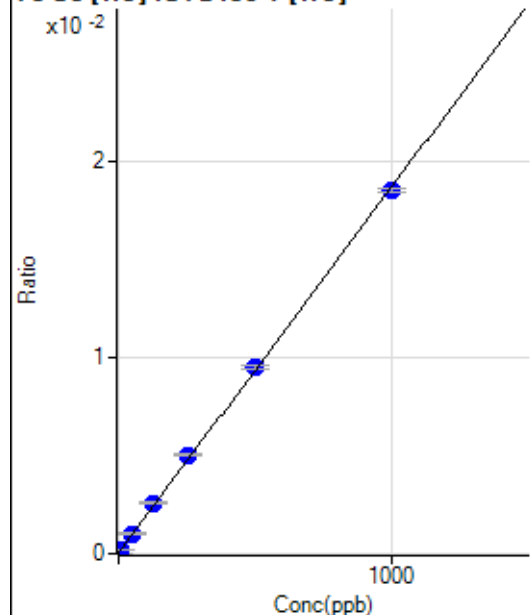
$$DL = 0.5725$$

$$BEC = 0.1102$$

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	68.52	0.0000	P	12.1
2	☐	0.500	0.493	85.80	0.0000	P	3.0
3	☐	5.000	5.980	267.91	0.0001	P	2.0
4	☐	50.000	52.670	1847.05	0.0010	P	2.2
5	☐	125.000	137.041	4643.37	0.0026	P	0.6
6	☐	250.000	267.041	8861.40	0.0050	P	1.4
7	☐	500.000	508.300	16879.04	0.0095	P	1.8
8	☐	1000.000	989.946	32504.90	0.0185	P	1.2
9	☐			88.89	0.0000	P	31.9

$$y = 1.8628E-005 * x + 3.8134E-005$$

$$R = 0.9997$$

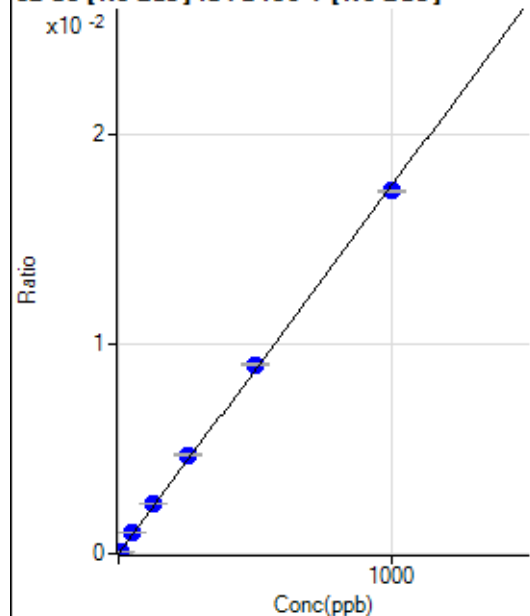
$$DL = 0.7461$$

$$BEC = 2.047$$

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	24.64	0.0000	P	162.
2	☐	0.500	0.507	145.52	0.0000	P	88.3
3	☐	5.000	6.031	1467.45	0.0001	P	3.5
4	☐	50.000	55.696	13505.21	0.0010	P	1.6
5	☐	125.000	137.163	32885.82	0.0024	P	1.0
6	☐	250.000	268.585	63849.26	0.0047	P	1.0
7	☐	500.000	513.872	121186.60	0.0090	P	0.6
8	☐	1000.000	986.607	231073.12	0.0173	P	0.3
9	☐			209.14	0.0000	P	23.7

$$y = 1.7548E-005 * x + 1.8061E-006$$

$$R = 0.9996$$

$$DL = 0.5013$$

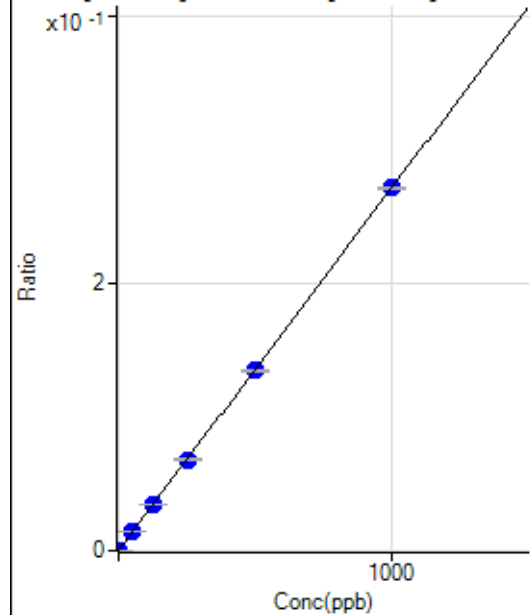
$$BEC = 0.1029$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1370.09		P	1.8
2	☐			1435.65		P	11.9
3	☐			1353.42		P	3.1
4	☐			1345.64		P	6.0
5	☐			1423.43		P	0.4
6	☐			1261.18		P	8.0
7	☐			1425.66		P	8.6
8	☐			1432.32		P	1.9
9	☐			1460.10		P	4.9

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2116.91	0.0002	P	2.2
2	☐	0.100	0.147	2639.24	0.0002	P	3.9
3	☐	1.000	1.049	5982.06	0.0004	P	1.5
4	☐	50.000	50.697	191470.12	0.0139	P	1.0
5	☐	125.000	125.823	467243.53	0.0342	P	0.4
6	☐	250.000	251.185	923159.73	0.0682	P	0.6
7	☐	500.000	497.810	1813198.41	0.1349	P	0.9
8	☐	1000.000	1000.661	3617955.25	0.2711	P	0.5
9	☐			17572.46	0.0014	P	0.7

$$y = 2.7076E-004 * x + 1.5448E-004$$

$$R = 1.0000$$

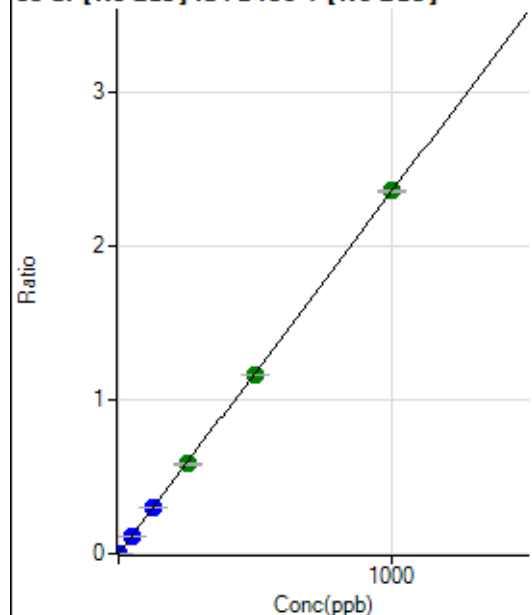
$$DL = 0.03693$$

$$BEC = 0.5705$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	202.79	0.0000	P	12.8
2	☐	0.100	0.104	3520.02	0.0003	P	5.9
3	☐	1.000	1.042	33612.59	0.0025	P	0.9
4	☐	50.000	50.252	1629325.31	0.1181	P	0.6
5	☐	125.000	125.379	4023469.84	0.2947	P	0.1
6	☐	250.000	247.610	7881710.59	0.5820	A	0.4
7	☐	500.000	495.150	15637521.53	1.1638	A	0.7
8	☐	1000.000	1002.962	31459871.54	2.3573	A	0.3
9	☐			133511.53	0.0103	P	1.2

$$y = 0.0024 * x + 1.4793E-005$$

$$R = 1.0000$$

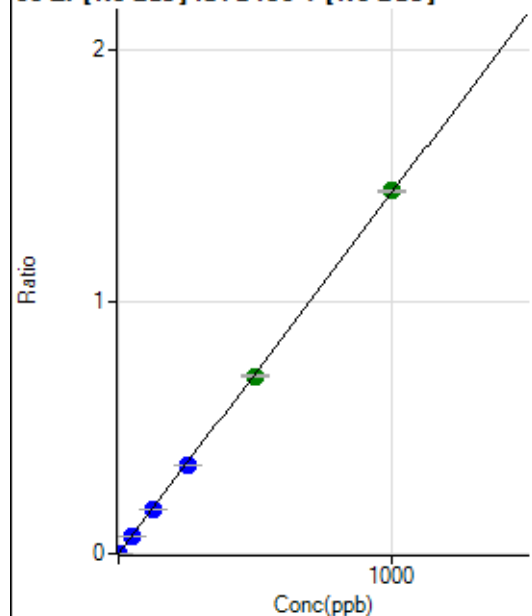
$$DL = 0.002411$$

$$BEC = 0.006294$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	844.51	0.0001	P	13.0
2	☐	0.100	0.076	2314.18	0.0002	P	2.7
3	☐	1.000	0.870	17822.78	0.0013	P	2.6
4	☐	50.000	49.222	972212.36	0.0705	P	0.8
5	☐	125.000	122.884	2401192.70	0.1759	P	0.1
6	☐	250.000	246.567	4778124.46	0.3528	P	0.7
7	☐	500.000	491.686	9453002.82	0.7035	A	0.6
8	☐	1000.000	1005.319	19196230.29	1.4384	A	0.2
9	☐			5134.46	0.0004	P	1.9

$$y = 0.0014 * x + 6.1658E-005$$

$$R = 0.9999$$

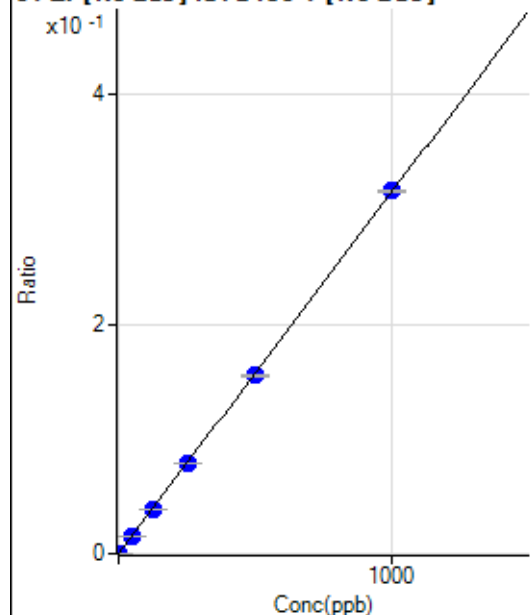
$$DL = 0.01686$$

$$BEC = 0.0431$$

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	152.79	0.0000	P	37.8
2	☐	0.100	0.090	536.15	0.0000	P	6.2
3	☐	1.000	0.870	3881.27	0.0003	P	10.9
4	☐	50.000	49.657	215604.24	0.0156	P	0.7
5	☐	125.000	123.694	531368.15	0.0389	P	0.7
6	☐	250.000	248.870	1060284.66	0.0783	P	0.7
7	☐	500.000	493.047	2084023.70	0.1551	P	0.9
8	☐	1000.000	1003.940	4214593.19	0.3158	P	0.5
9	☐			1133.43	0.0001	P	3.0

$$y = 3.1455\text{E-}004 * x + 1.1168\text{E-}005$$

$$R = 1.0000$$

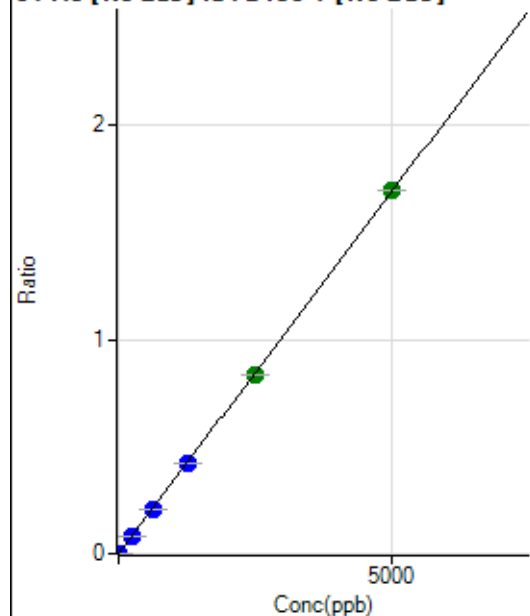
$$DL = 0.0403$$

$$BEC = 0.0355$$

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	347.24	0.0000	P	8.5
2	☐	0.500	0.459	2450.30	0.0002	P	8.4
3	☐	5.000	4.907	22933.12	0.0017	P	2.2
4	☐	250.000	248.335	1156612.38	0.0839	P	0.4
5	☐	625.000	619.876	2857080.73	0.2093	P	0.2
6	☐	1250.000	1243.333	5683939.93	0.4197	P	0.6
7	☐	2500.000	2471.476	11209903.12	0.8343	A	0.5
8	☐	5000.000	5016.653	22599895.99	1.6934	A	0.1
9	☐			20646.11	0.0016	P	2.0

$$y = 3.3755\text{E-}004 * x + 2.5332\text{E-}005$$

$$R = 1.0000$$

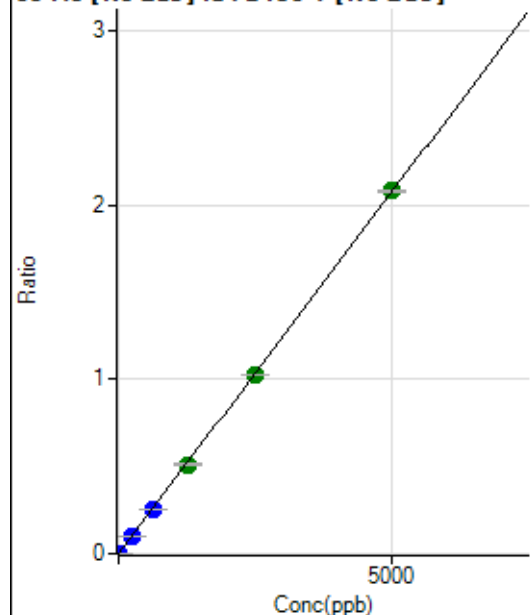
$$DL = 0.01922$$

$$BEC = 0.07505$$

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	55.56	0.0000	P	46.5
2	☐	0.500	0.546	3136.59	0.0002	P	5.6
3	☐	5.000	5.203	29503.67	0.0022	P	2.2
4	☐	250.000	246.698	1412335.98	0.1024	P	1.2
5	☐	625.000	610.431	3459067.52	0.2534	P	0.5
6	☐	1250.000	1234.778	6940464.13	0.5125	A	0.9
7	☐	2500.000	2471.621	13783809.51	1.0258	A	0.2
8	☐	5000.000	5019.981	27806145.76	2.0835	A	0.5
9	☐			30683.96	0.0024	P	0.9

$$y = 4.1504E-004 * x + 4.0625E-006$$

$$R = 1.0000$$

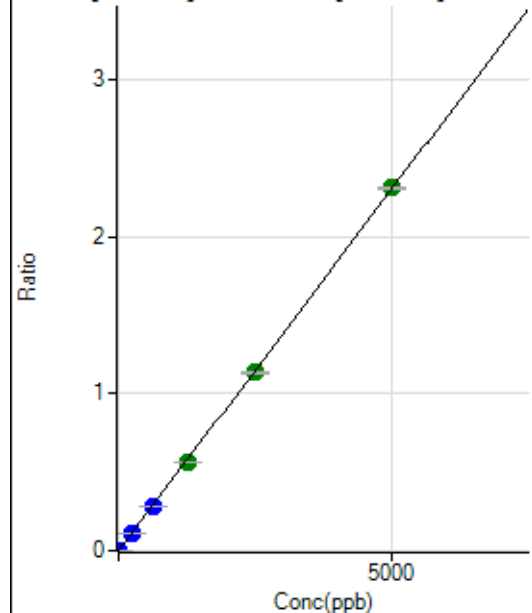
$$DL = 0.01366$$

$$BEC = 0.009788$$

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	222.24	0.0000	P	17.9
2	☐	0.500	0.509	3400.54	0.0003	P	3.5
3	☐	5.000	5.216	32900.00	0.0024	P	1.8
4	☐	250.000	246.288	1561083.24	0.1132	P	0.7
5	☐	625.000	615.366	3860353.47	0.2827	P	0.1
6	☐	1250.000	1227.838	7640216.66	0.5642	A	0.3
7	☐	2500.000	2465.850	15223242.53	1.1330	A	0.6
8	☐	5000.000	5024.005	30805846.52	2.3083	A	0.4
9	☐			47014.88	0.0036	P	0.9

$$y = 4.5945E-004 * x + 1.6205E-005$$

$$R = 1.0000$$

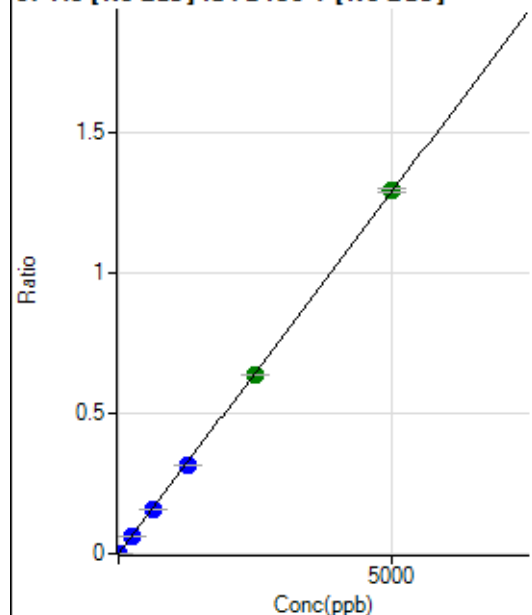
$$DL = 0.01897$$

$$BEC = 0.03527$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44.45	0.0000	P	28.1
2	☐	0.500	0.519	1861.31	0.0001	P	6.6
3	☐	5.000	5.236	18432.07	0.0014	P	3.6
4	☐	250.000	248.077	881454.26	0.0639	P	0.6
5	☐	625.000	619.956	2180236.68	0.1597	P	0.4
6	☐	1250.000	1231.058	4294380.26	0.3171	P	0.2
7	☐	2500.000	2476.746	8572084.92	0.6380	A	0.5
8	☐	5000.000	5017.089	17246411.32	1.2923	A	0.9
9	☐			19213.66	0.0015	P	1.4

$$y = 2.5758\text{E-}004 * x + 3.2398\text{E-}006$$

$$R = 1.0000$$

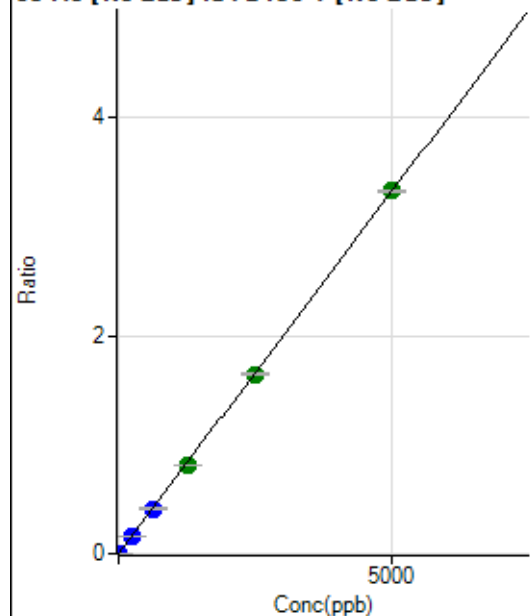
$$DL = 0.01059$$

$$BEC = 0.01258$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	141.67	0.0000	P	11.1
2	☐	0.500	0.538	4984.40	0.0004	P	2.0
3	☐	5.000	5.372	48712.02	0.0036	P	0.9
4	☐	250.000	249.057	2277907.19	0.1651	P	0.7
5	☐	625.000	622.959	5639401.60	0.4131	P	0.7
6	☐	1250.000	1231.258	11055862.31	0.8164	A	0.5
7	☐	2500.000	2481.643	22108909.00	1.6454	A	1.0
8	☐	5000.000	5014.166	44367670.44	3.3246	A	0.8
9	☐			48522.45	0.0038	P	1.4

$$y = 6.6303\text{E-}004 * x + 1.0334\text{E-}005$$

$$R = 1.0000$$

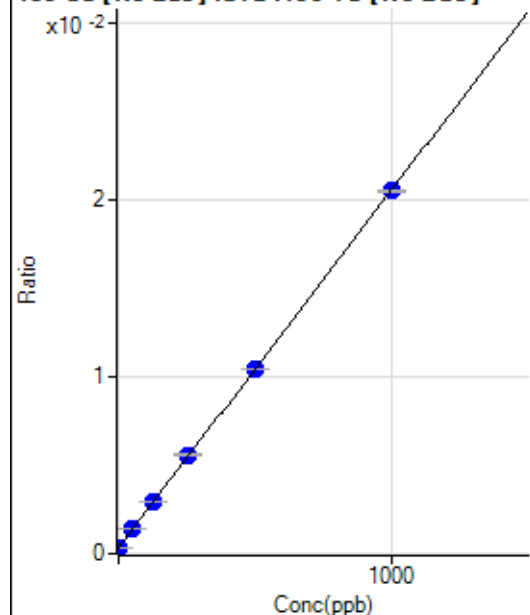
$$DL = 0.005205$$

$$BEC = 0.01559$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5565.22	0.0003	P	4.4
2	☐	0.100	-0.332	5442.93	0.0003	P	2.9
3	☐	1.000	0.993	5873.68	0.0004	P	1.0
4	☐	50.000	52.159	22877.65	0.0014	P	1.7
5	☐	125.000	129.687	47898.63	0.0030	P	1.0
6	☐	250.000	257.645	89331.39	0.0056	P	2.1
7	☐	500.000	499.206	167382.00	0.0104	P	0.4
8	☐	1000.000	997.792	326500.36	0.0205	P	0.8
9	☐			4728.78	0.0003	P	5.1

$$y = 2.0243\text{E-}005 * x + 3.4369\text{E-}004$$

$$R = 1.0000$$

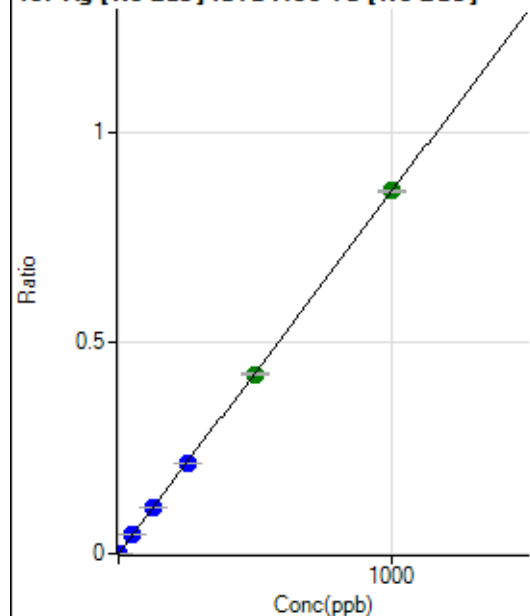
$$DL = 2.222$$

$$BEC = 16.98$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	169.45	0.0000	P	23.1
2	☐	0.100	0.124	1891.88	0.0001	P	3.0
3	☐	1.000	1.263	17689.49	0.0011	P	2.8
4	☐	50.000	51.829	727874.76	0.0445	P	1.0
5	☐	125.000	128.071	1774853.55	0.1100	P	0.3
6	☐	250.000	250.251	3454385.11	0.2150	P	1.5
7	☐	500.000	495.287	6814512.74	0.4254	A	0.5
8	☐	1000.000	1001.818	13676735.72	0.8605	A	0.4
9	☐			2183.60	0.0001	P	3.1

$$y = 8.5890\text{E-}004 * x + 1.0462\text{E-}005$$

$$R = 1.0000$$

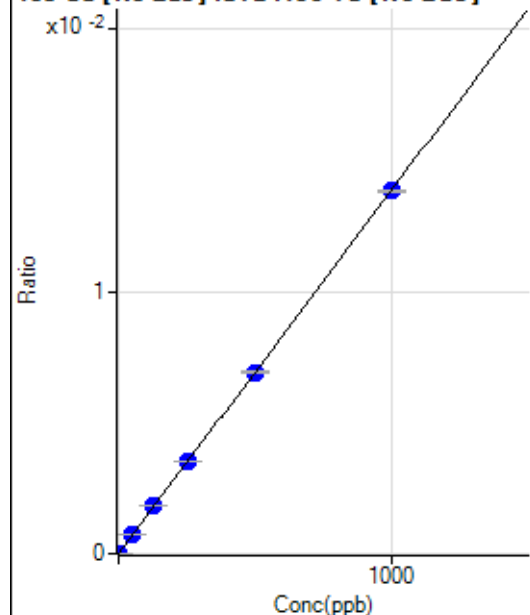
$$DL = 0.008439$$

$$BEC = 0.01218$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18.05	0.0000	P	47.9
2	☐	0.100	0.087	37.50	0.0000	P	22.0
3	☐	1.000	0.839	205.56	0.0000	P	12.5
4	☐	50.000	53.539	12138.77	0.0007	P	3.6
5	☐	125.000	131.036	29298.65	0.0018	P	0.4
6	☐	250.000	253.578	56459.66	0.0035	P	1.3
7	☐	500.000	499.584	110854.55	0.0069	P	0.8
8	☐	1000.000	998.382	219802.38	0.0138	P	0.4
9	☐			68.06	0.0000	P	13.9

$$y = 1.3850\text{E-}005 * x + 1.1141\text{E-}006$$

$$R = 1.0000$$

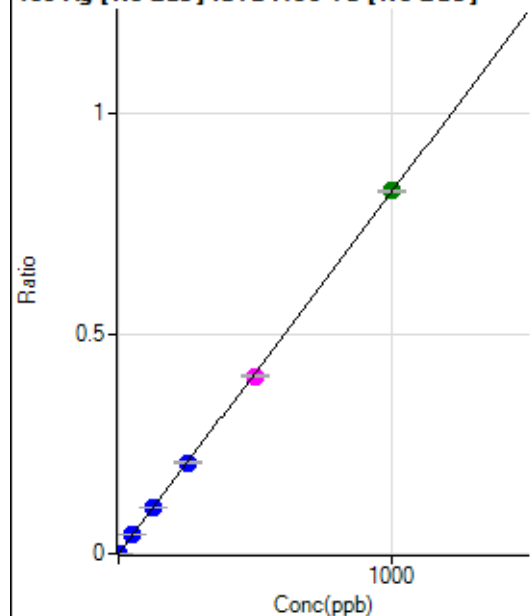
$$DL = 0.1156$$

$$BEC = 0.08044$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	91.67	0.0000	P	0.3
2	☐	0.100	0.125	1747.41	0.0001	P	7.8
3	☐	1.000	1.258	16777.18	0.0010	P	1.7
4	☐	50.000	52.094	699492.55	0.0428	P	0.5
5	☐	125.000	128.423	1701770.95	0.1055	P	1.1
6	☐	250.000	251.823	3323850.18	0.2068	P	0.9
7	☐	500.000	490.984	6459460.43	0.4032	M	1.5
8	☐	1000.000	1003.520	13099988.23	0.8242	A	0.4
9	☐			1989.12	0.0001	P	3.8

$$y = 8.2129\text{E-}004 * x + 5.6609\text{E-}006$$

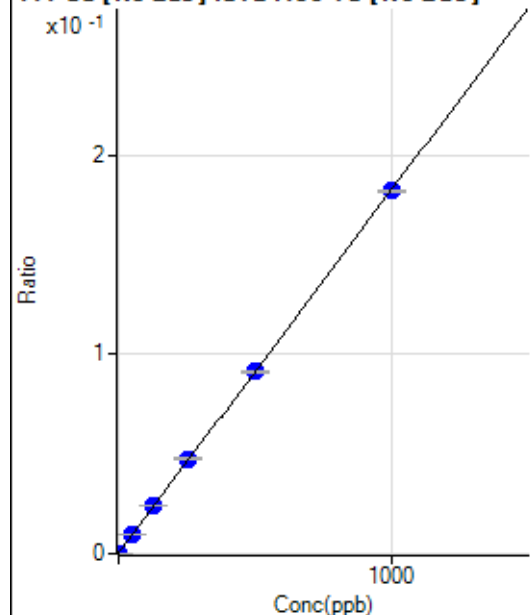
$$R = 0.9999$$

$$DL = 5.481\text{E-}05$$

$$BEC = 0.006893$$

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	3899.68	0.0002	P	4.3
2	☐	0.100	0.083	4133.82	0.0003	P	3.0
3	☐	1.000	1.092	7104.21	0.0004	P	2.4
4	☐	50.000	52.829	161532.98	0.0099	P	0.6
5	☐	125.000	131.507	391064.57	0.0242	P	0.4
6	☐	250.000	259.501	764870.47	0.0476	P	1.5
7	☐	500.000	498.991	1462482.54	0.0913	P	1.1
8	☐	1000.000	997.174	2896179.17	0.1822	P	0.2
9	☐			3948.65	0.0003	P	3.7

$$y = 1.8249\text{E-}004 * x + 2.4083\text{E-}004$$

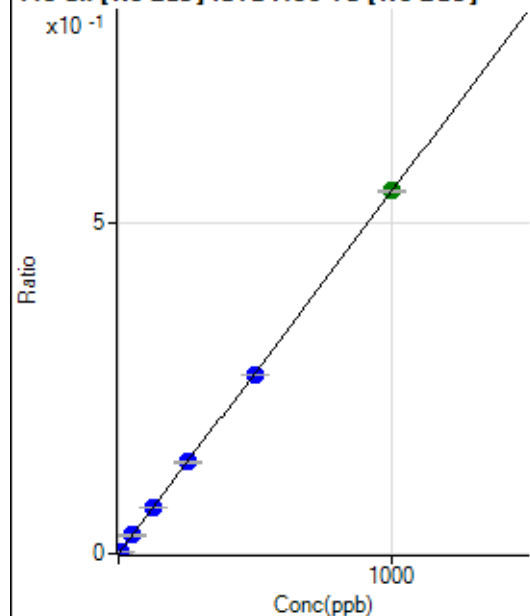
$$R = 0.9999$$

$$DL = 0.1686$$

$$BEC = 1.32$$

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	877.84	0.0001	P	5.3
2	☐	0.500	0.545	5701.39	0.0004	P	2.2
3	☐	5.000	5.365	48364.97	0.0030	P	2.2
4	☐	50.000	50.407	452678.15	0.0277	P	0.6
5	☐	125.000	125.988	1115280.47	0.0691	P	1.0
6	☐	250.000	252.388	2224611.25	0.1384	P	1.4
7	☐	500.000	494.494	4343759.17	0.2712	P	0.5
8	☐	1000.000	1002.010	8732802.37	0.5494	A	0.7
9	☐			4534.25	0.0003	P	1.7

$$y = 5.4828\text{E-}004 * x + 5.4208\text{E-}005$$

$$R = 1.0000$$

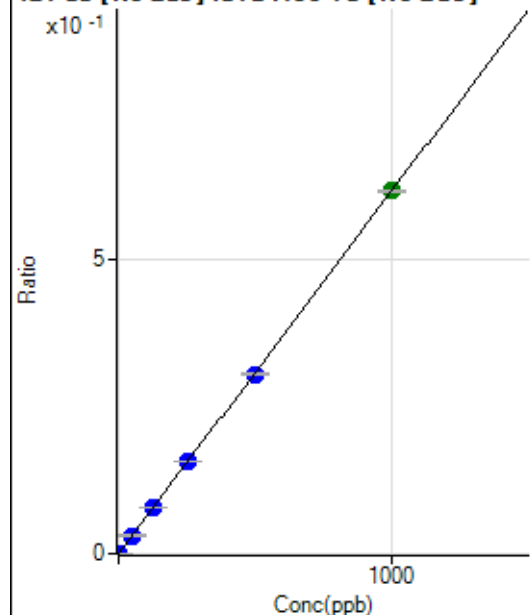
$$DL = 0.01576$$

$$BEC = 0.09887$$

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	94.45	0.0000	P	22.3
2	☐	0.200	0.191	1994.68	0.0001	P	6.4
3	☐	2.000	2.097	20980.34	0.0013	P	1.1
4	☐	50.000	50.371	508081.10	0.0311	P	0.5
5	☐	125.000	126.700	1261135.02	0.0782	P	0.8
6	☐	250.000	253.925	2517505.00	0.1567	P	1.2
7	☐	500.000	495.532	4897014.21	0.3057	P	0.5
8	☐	1000.000	1001.022	9815547.96	0.6176	A	0.5
9	☐			9347.97	0.0006	P	4.1

$$y = 6.1692\text{E-}004 * x + 5.8329\text{E-}006$$

$$R = 1.0000$$

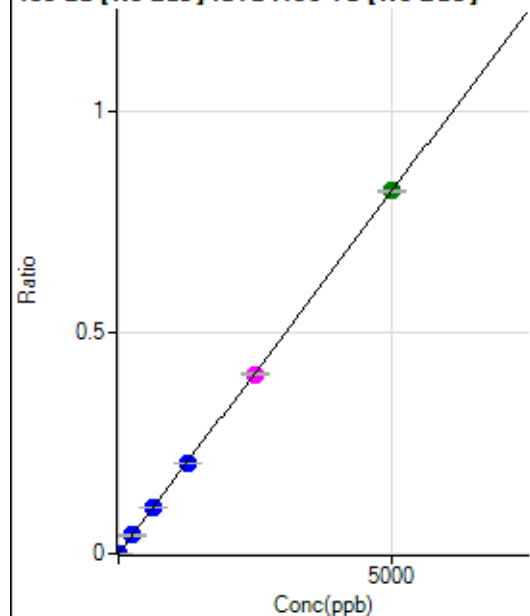
$$DL = 0.006326$$

$$BEC = 0.009455$$

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	75.01	0.0000	P	29.5
2	☐	1.000	1.085	2939.34	0.0002	P	7.2
3	☐	10.000	10.690	28285.24	0.0018	P	0.5
4	☐	250.000	253.041	676131.61	0.0414	P	0.8
5	☐	625.000	629.887	1660992.01	0.1030	P	0.4
6	☐	1250.000	1252.852	3290710.32	0.2048	P	1.2
7	☐	2500.000	2479.059	6490435.87	0.4052	M	0.4
8	☐	5000.000	5008.993	13012393.52	0.8187	A	0.6
9	☐			2147.48	0.0001	P	7.2

$$y = 1.6344\text{E-}004 * x + 4.6324\text{E-}006$$

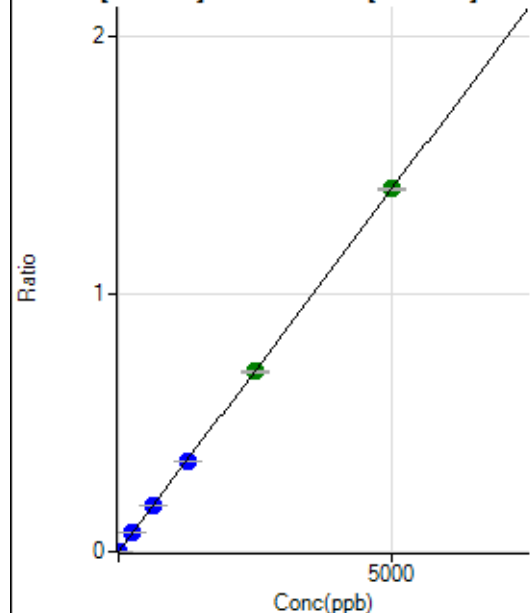
$$R = 1.0000$$

$$DL = 0.02507$$

$$BEC = 0.02834$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	147.23	0.0000	P	25.3
2	☐	1.000	1.097	5140.06	0.0003	P	3.0
3	☐	10.000	10.671	48677.78	0.0030	P	1.3
4	☐	250.000	252.806	1164283.07	0.0712	P	0.3
5	☐	625.000	628.706	2857302.24	0.1771	P	1.0
6	☐	1250.000	1251.104	5663754.82	0.3524	P	1.1
7	☐	2500.000	2484.384	11210325.51	0.6998	A	1.0
8	☐	5000.000	5006.927	22417488.35	1.4104	A	0.3
9	☐			3620.07	0.0002	P	5.7

$$y = 2.8169E-004 * x + 9.0883E-006$$

$$R = 1.0000$$

$$DL = 0.02447$$

$$BEC = 0.03226$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			11.11		P	34.6
2	☐			13.33		P	50.0
3	☐			8.89		P	43.3
4	☐			57.78		P	6.7
5	☐			108.89		P	27.6
6	☐			222.23		P	34.6
7	☐			504.47		P	7.3
8	☐			902.28		P	14.6
9	☐			128.89		P	16.6

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.55		P	69.3
2	☐			5.55		P	69.3
3	☐			7.78		P	89.2
4	☐			12.22		P	31.5
5	☐			20.00		P	60.1
6	☐			34.44		P	24.3
7	☐			51.11		P	10.0
8	☐			67.78		P	14.2
9	☐			51.11		P	43.4

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			44.44		P	43.3
2	☐			50.00		P	16.7
3	☐			38.89		P	12.4
4	☐			58.34		P	28.6
5	☐			66.67		P	64.9
6	☐			75.00		P	40.1
7	☐			127.78		P	37.7
8	☐			269.46		P	26.3
9	☐			66.67		P	45.1

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			24.44		P	20.8
2	☐			17.78		P	28.6
3	☐			36.67		P	32.8
4	☐			26.67		P	25.0
5	☐			62.22		P	35.7
6	☐			80.00		P	19.1
7	☐			124.45		P	7.7
8	☐			216.67		P	14.7
9	☐			31.11		P	24.7

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			116.67		P	32.7
2	☐			125.01		P	17.6
3	☐			83.34		P	26.5
4	☐			88.89		P	19.5
5	☐			66.67		P	33.1
6	☐			136.12		P	18.7
7	☐			136.12		P	28.9
8	☐			122.23		P	25.8
9	☐			136.12		P	9.4

160 Gd [He] No available calibration points

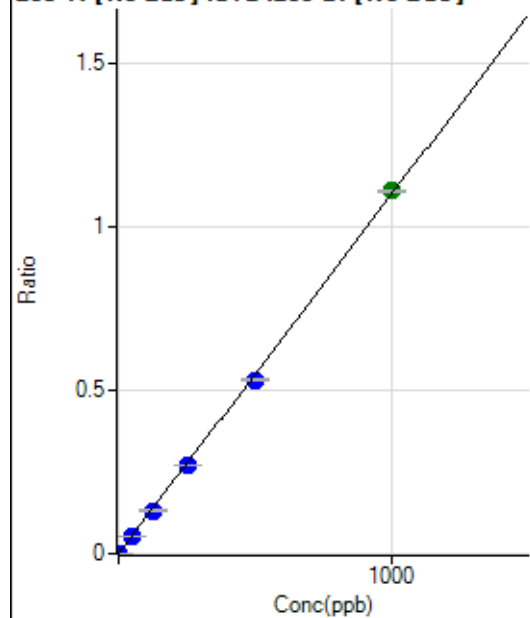
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			193.34		P	17.0
2	☐			197.78		P	10.2
3	☐			230.01		P	13.8
4	☐			187.78		P	19.1
5	☐			226.67		P	10.3
6	☐			222.23		P	7.4
7	☐			250.01		P	10.1
8	☐			193.34		P	7.5
9	☐			227.78		P	16.1

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			77.78		P	27.0
2	☐			102.78		P	18.7
3	☐			113.90		P	23.5
4	☐			122.23		P	15.7
5	☐			88.89		P	19.5
6	☐			127.78		P	15.1
7	☐			94.45		P	18.4
8	☐			108.34		P	13.3
9	☐			111.12		P	26.3

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			63.33		P	5.3
2	☐			63.33		P	19.0
3	☐			55.56		P	9.2
4	☐			68.89		P	7.4
5	☐			50.00		P	37.1
6	☐			58.89		P	37.7
7	☐			67.78		P	19.9
8	☐			56.67		P	32.7
9	☐			66.67		P	21.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	450.03	0.0000	P	10.1
2	☐	0.100	0.102	1552.93	0.0002	P	10.5
3	☐	1.000	1.003	11241.40	0.0011	P	2.3
4	☐	50.000	48.738	531305.34	0.0536	P	0.4
5	☐	125.000	120.210	1284951.56	0.1322	P	0.9
6	☐	250.000	245.136	2565833.57	0.2695	P	0.7
7	☐	500.000	483.581	4975599.37	0.5316	P	0.8
8	☐	1000.000	1010.087	9973945.27	1.1103	A	0.7
9	☐			2867.10	0.0004	P	8.8

$$y = 0.0011 * x + 4.4423E-005$$

$$R = 0.9998$$

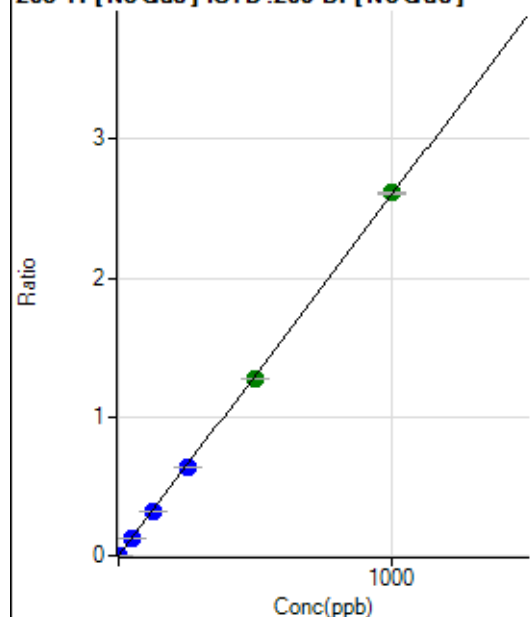
$$DL = 0.01229$$

$$BEC = 0.04041$$

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	972.30	0.0001	P	7.5
2	☐	0.100	0.093	3342.22	0.0003	P	3.9
3	☐	1.000	0.991	26157.21	0.0027	P	2.6
4	☐	50.000	48.952	1260440.64	0.1272	P	0.1
5	☐	125.000	121.543	3068771.75	0.3157	P	0.6
6	☐	250.000	245.316	6065250.74	0.6370	P	0.5
7	☐	500.000	490.443	11919881.43	1.2735	A	0.9
8	☐	1000.000	1006.434	23475109.03	2.6132	A	0.3
9	☐			6090.58	0.0008	P	5.6

$$y = 0.0026 * x + 9.5997E-005$$

$$R = 0.9999$$

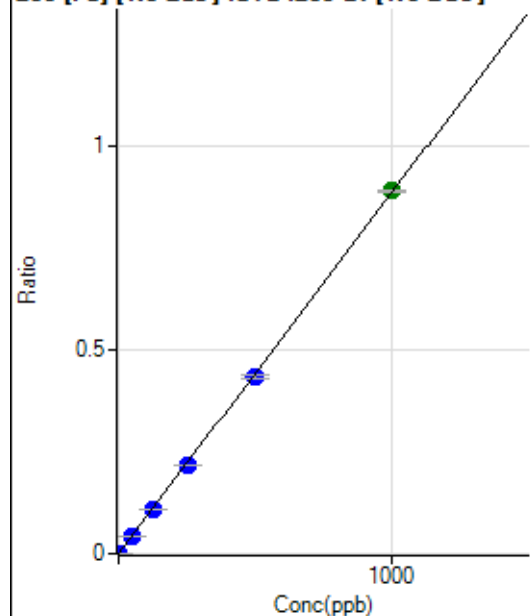
$$DL = 0.008287$$

$$BEC = 0.03697$$

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	1444.57	0.0001	P	11.3
2	☐	0.100	0.108	2363.25	0.0002	P	2.3
3	☐	1.000	1.014	10207.90	0.0010	P	0.9
4	☐	50.000	49.025	432047.61	0.0436	P	0.5
5	☐	125.000	121.557	1048863.51	0.1079	P	0.3
6	☐	250.000	246.914	2085190.09	0.2190	P	0.5
7	☐	500.000	491.139	4076051.57	0.4355	P	1.6
8	☐	1000.000	1005.681	8009295.09	0.8916	A	0.5
9	☐			22721.67	0.0029	P	1.9

$$y = 8.8642E-004 * x + 1.4259E-004$$

$$R = 0.9999$$

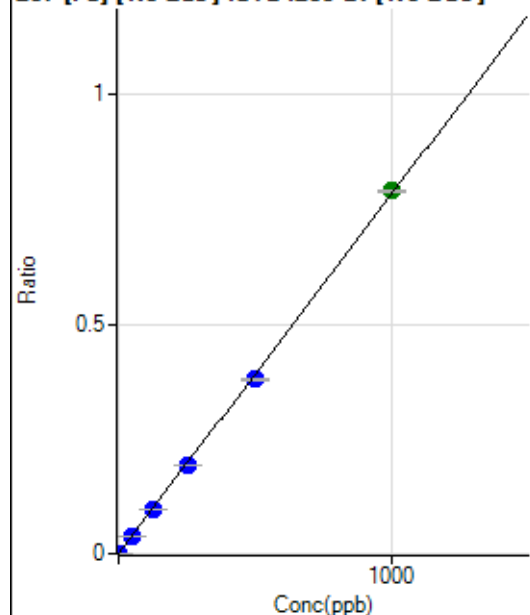
$$DL = 0.05461$$

$$BEC = 0.1609$$

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	1368.63	0.0001	P	3.8
2	☐	0.100	0.095	2072.44	0.0002	P	5.4
3	☐	1.000	0.987	8893.99	0.0009	P	2.1
4	☐	50.000	48.735	379263.87	0.0383	P	0.6
5	☐	125.000	121.136	922850.97	0.0949	P	0.5
6	☐	250.000	245.113	1827522.54	0.1919	P	0.3
7	☐	500.000	484.618	3550901.96	0.3794	P	1.0
8	☐	1000.000	1009.459	7097552.65	0.7901	A	0.3
9	☐			19568.62	0.0025	P	2.0

$$y = 7.8256E-004 * x + 1.3511E-004$$

$$R = 0.9998$$

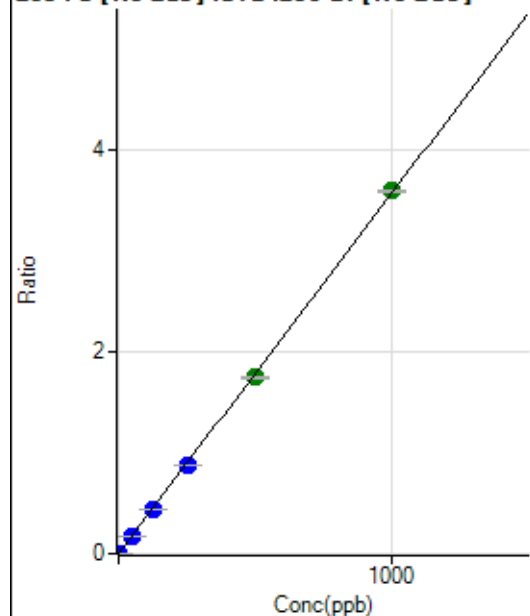
$$DL = 0.01963$$

$$BEC = 0.1727$$

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	5791.38	0.0006	P	5.1
2	☐	0.100	0.097	9090.35	0.0009	P	3.8
3	☐	1.000	0.991	40256.23	0.0041	P	0.9
4	☐	50.000	48.797	1729837.34	0.1746	P	0.3
5	☐	125.000	121.239	4208065.98	0.4329	P	0.3
6	☐	250.000	245.331	8333959.23	0.8753	P	0.3
7	☐	500.000	488.846	16320254.99	1.7436	A	0.7
8	☐	1000.000	1007.275	32268908.65	3.5922	A	0.5
9	☐			89805.26	0.0116	P	1.3

$$y = 0.0036 * x + 5.7170E-004$$

$$R = 0.9999$$

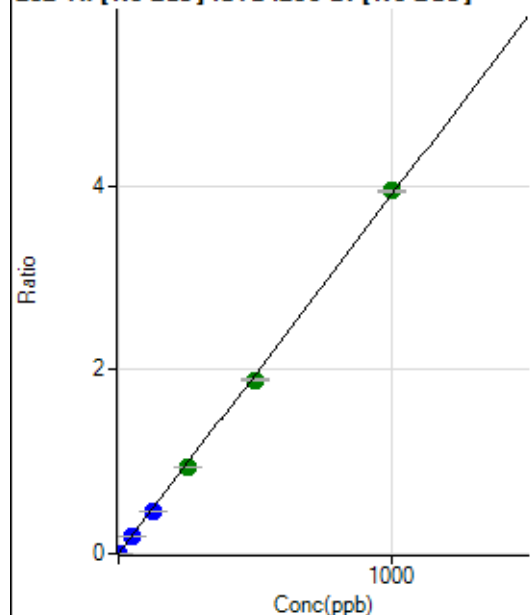
$$DL = 0.0246$$

$$BEC = 0.1603$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1585.33	0.0002	P	2.7
2	☐	0.100	0.078	4573.16	0.0005	P	2.4
3	☐	1.000	0.848	33909.26	0.0035	P	1.4
4	☐	50.000	46.549	1798197.94	0.1815	P	0.7
5	☐	125.000	117.350	4444849.35	0.4572	P	0.6
6	☐	250.000	239.199	8871538.05	0.9318	A	0.5
7	☐	500.000	483.788	17638682.45	1.8845	A	1.0
8	☐	1000.000	1011.935	35408430.65	3.9416	A	0.4
9	☐			6144.21	0.0008	P	6.1

$$y = 0.0039 * x + 1.5650E-004$$

$$R = 0.9997$$

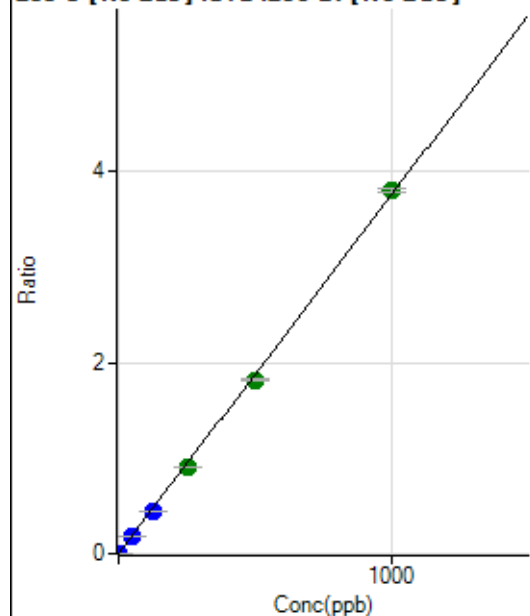
$$DL = 0.003226$$

$$BEC = 0.04018$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1880.79	0.0002	P	6.5
2	☐	0.100	0.102	5640.37	0.0006	P	4.7
3	☐	1.000	0.951	36830.91	0.0038	P	1.8
4	☐	50.000	47.205	1759255.99	0.1775	P	0.4
5	☐	125.000	119.015	4348555.70	0.4473	P	0.9
6	☐	250.000	241.380	8635787.26	0.9070	A	0.5
7	☐	500.000	484.095	17024771.39	1.8189	A	1.4
8	☐	1000.000	1010.995	34121878.54	3.7985	A	1.0
9	☐			3867.43	0.0005	P	6.0

$$y = 0.0038 * x + 1.8568E-004$$

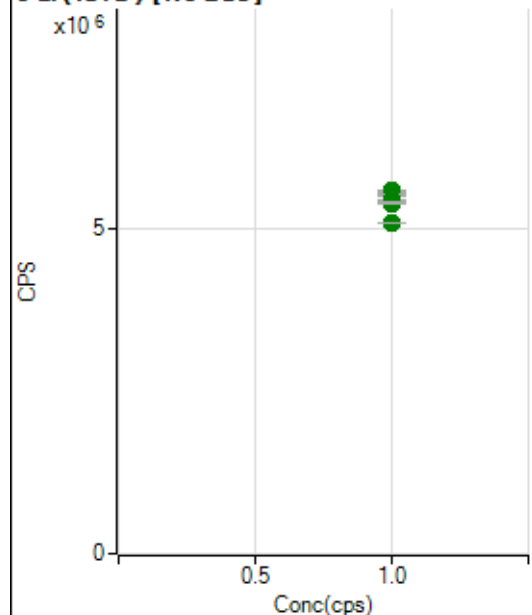
$$R = 0.9998$$

$$DL = 0.009588$$

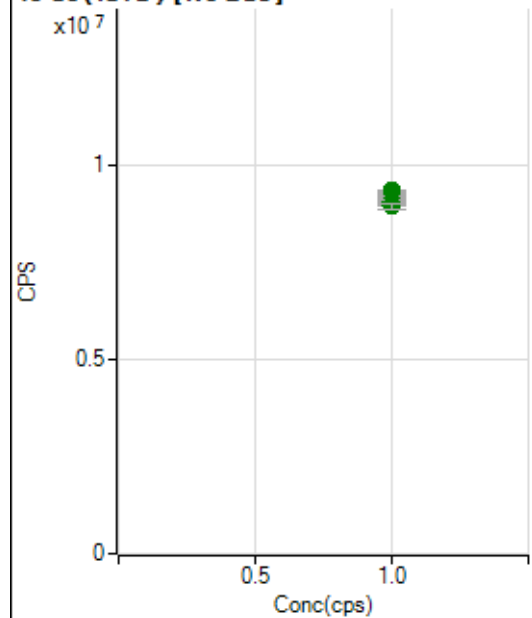
$$BEC = 0.04942$$

Weight: <None>

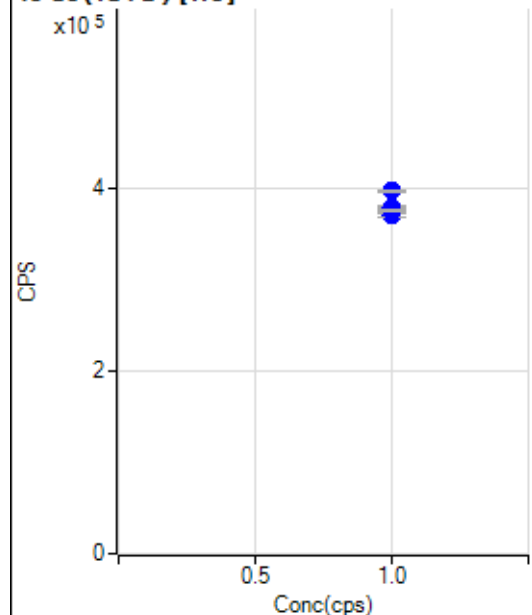
Min Conc: 0

6 Li (ISTD) [No Gas]

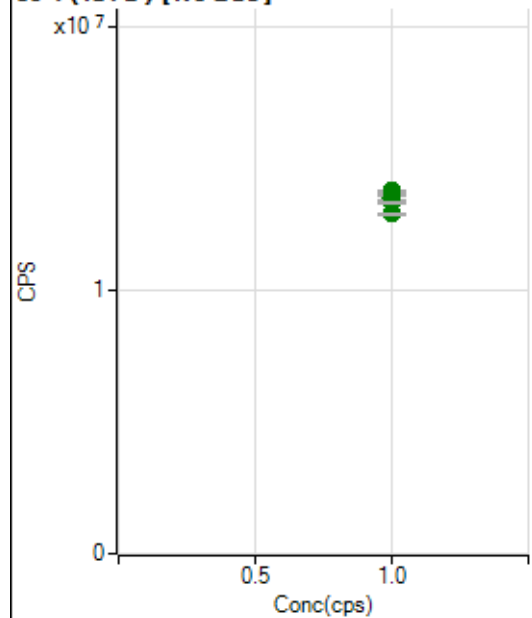
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5534090.82		A	0.8
2	☐	1.000		5550209.92		A	0.6
3	☐	1.000		5541085.61		A	0.6
4	☐	1.000		5594813.32		A	0.4
5	☐	1.000		5556159.99		A	0.8
6	☐	1.000		5518626.38		A	0.5
7	☐	1.000		5446170.48		A	0.7
8	☐	1.000		5409249.85		A	0.4
9	☐	1.000		5099291.38		A	0.1

45 Sc (ISTD) [No Gas]

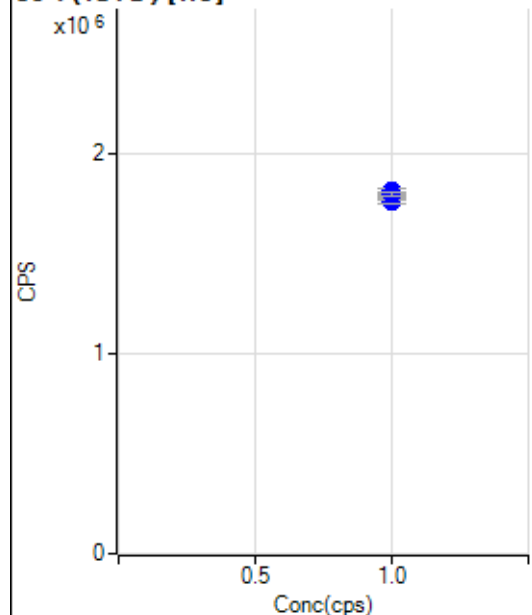
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9153941.01		A	0.3
2	☐	1.000		9201454.37		A	0.5
3	☐	1.000		9193759.76		A	0.6
4	☐	1.000		9324976.86		A	0.7
5	☐	1.000		9258071.13		A	0.3
6	☐	1.000		9181714.44		A	0.3
7	☐	1.000		9060142.47		A	0.3
8	☐	1.000		9029923.47		A	1.4
9	☐	1.000		8934995.25		A	1.8

45 Sc (ISTD) [He]

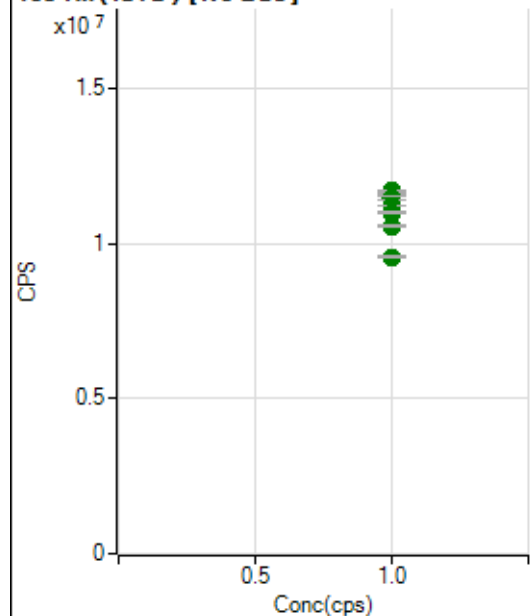
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		376841.86		P	0.2
2	☐	1.000		379943.14		P	0.2
3	☐	1.000		374460.88		P	0.2
4	☐	1.000		379745.55		P	1.0
5	☐	1.000		374433.46		P	0.4
6	☐	1.000		371074.22		P	0.7
7	☐	1.000		374285.92		P	0.4
8	☐	1.000		377162.94		P	0.5
9	☐	1.000		397789.31		P	0.9

89 Y (ISTD) [No Gas]

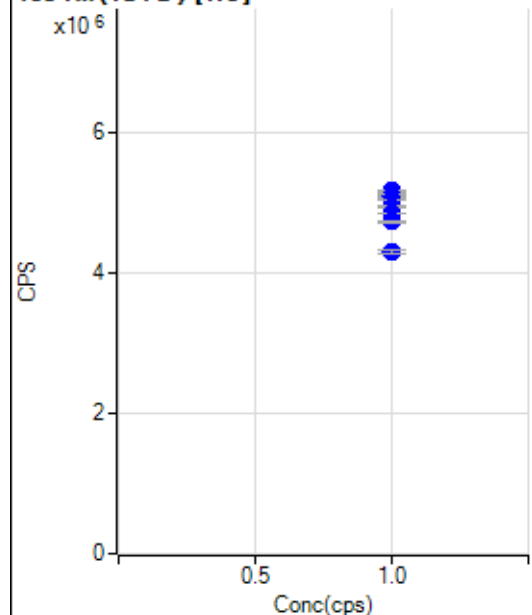
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		13703484.24		A	0.7
2	☐	1.000		13589560.91		A	0.3
3	☐	1.000		13636514.52		A	0.7
4	☐	1.000		13793908.68		A	0.7
5	☐	1.000		13652936.04		A	0.1
6	☐	1.000		13542947.72		A	0.9
7	☐	1.000		13436798.55		A	0.2
8	☐	1.000		13345840.63		A	0.8
9	☐	1.000		12915738.70		A	0.4

89 Y (ISTD) [He]

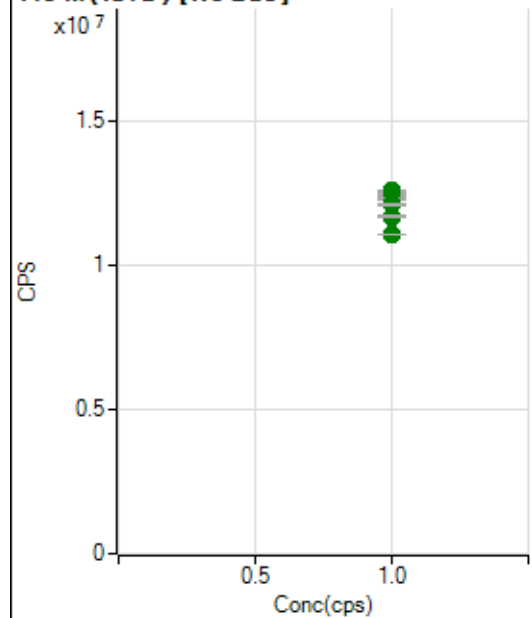
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1797362.40		P	0.9
2	☐	1.000		1813379.14		P	1.0
3	☐	1.000		1791703.31		P	0.1
4	☐	1.000		1811893.95		P	1.1
5	☐	1.000		1792136.10		P	0.6
6	☐	1.000		1767798.10		P	0.1
7	☐	1.000		1775382.99		P	0.4
8	☐	1.000		1759113.34		P	0.8
9	☐	1.000		1793305.60		P	1.0

103 Rh (ISTD) [No Gas]

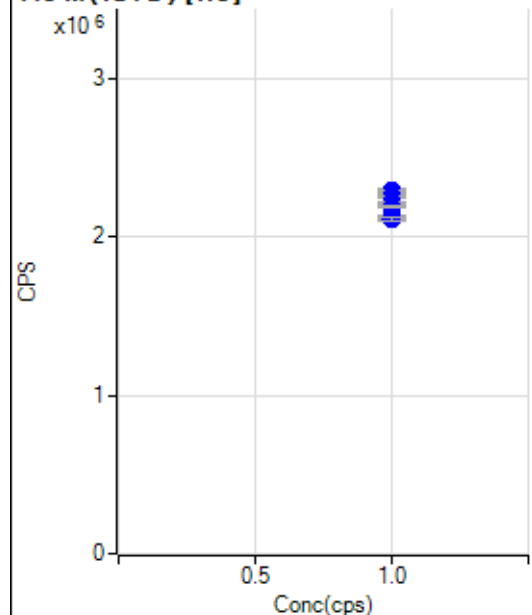
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11634143.40		A	0.3
2	☐	1.000		11574488.02		A	0.2
3	☐	1.000		11683206.34		A	0.7
4	☐	1.000		11653415.80		A	0.4
5	☐	1.000		11452024.12		A	0.7
6	☐	1.000		11208102.60		A	0.2
7	☐	1.000		10968116.05		A	0.6
8	☐	1.000		10555510.39		A	0.8
9	☐	1.000		9555032.94		A	0.3

103 Rh (ISTD) [He]

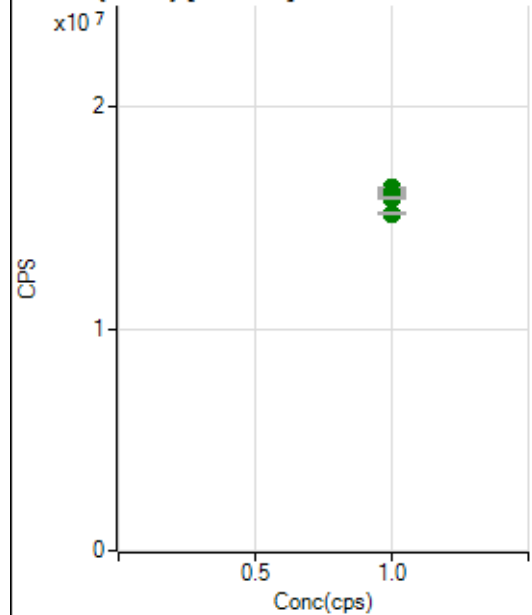
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5135934.33		P	0.5
2	☐	1.000		5177751.97		P	0.2
3	☐	1.000		5097307.70		P	0.4
4	☐	1.000		5106974.82		P	1.2
5	☐	1.000		5045573.36		P	0.2
6	☐	1.000		4953058.16		P	0.4
7	☐	1.000		4855672.98		P	0.3
8	☐	1.000		4735212.29		P	0.8
9	☐	1.000		4303082.09		P	1.2

115 In (ISTD) [No Gas]

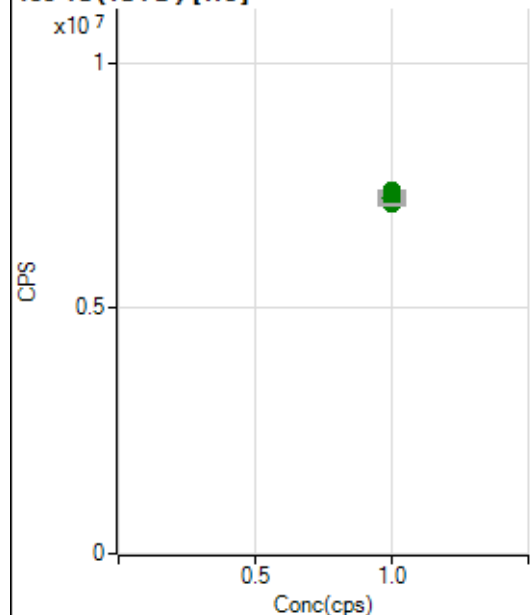
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12546868.58		A	0.8
2	☐	1.000		12544359.58		A	0.9
3	☐	1.000		12547054.57		A	0.4
4	☐	1.000		12570304.17		A	0.3
5	☐	1.000		12439798.47		A	0.6
6	☐	1.000		12298436.09		A	0.8
7	☐	1.000		12097692.15		A	0.6
8	☐	1.000		11692757.74		A	0.6
9	☐	1.000		11075518.17		A	0.1

115 In (ISTD) [He]

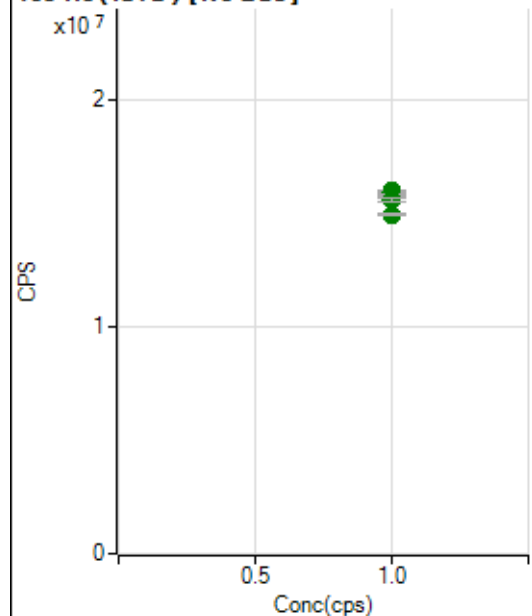
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2276903.15		P	1.0
2	☐	1.000		2292787.36		P	0.9
3	☐	1.000		2259825.76		P	0.7
4	☐	1.000		2289885.38		P	0.6
5	☐	1.000		2254740.77		P	0.4
6	☐	1.000		2222518.74		P	0.5
7	☐	1.000		2190493.62		P	0.6
8	☐	1.000		2128590.87		P	1.1
9	☐	1.000		2113371.05		P	1.3

159 Tb (ISTD) [No Gas]

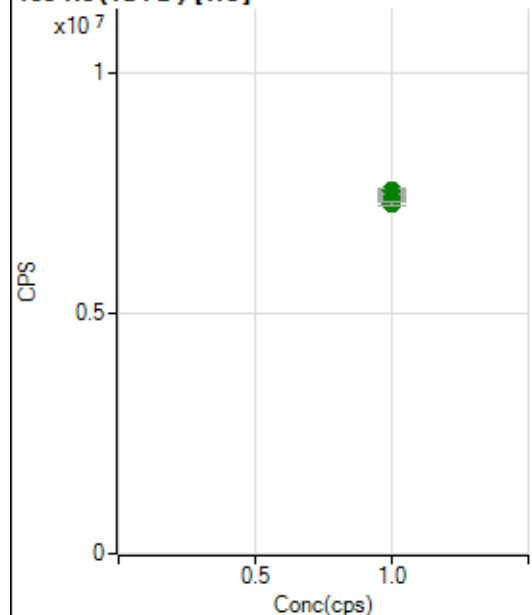
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16193536.70		A	0.3
2	☐	1.000		16152491.15		A	0.2
3	☐	1.000		16145719.48		A	0.3
4	☐	1.000		16347406.28		A	0.6
5	☐	1.000		16133549.76		A	0.6
6	☐	1.000		16072158.09		A	1.6
7	☐	1.000		16018542.26		A	0.3
8	☐	1.000		15894333.51		A	0.4
9	☐	1.000		15189626.30		A	0.3

159 Tb (ISTD) [He]

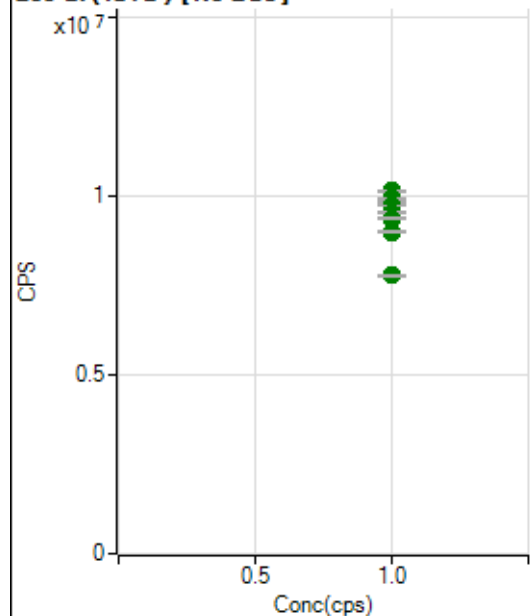
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7396433.29		A	0.2
2	☐	1.000		7337901.56		A	0.8
3	☐	1.000		7343047.67		A	0.7
4	☐	1.000		7345593.22		A	0.8
5	☐	1.000		7291775.52		A	0.4
6	☐	1.000		7293794.75		A	0.7
7	☐	1.000		7260601.07		A	1.1
8	☐	1.000		7196559.27		A	0.3
9	☐	1.000		7123445.45		A	0.3

165 Ho (ISTD) [No Gas]

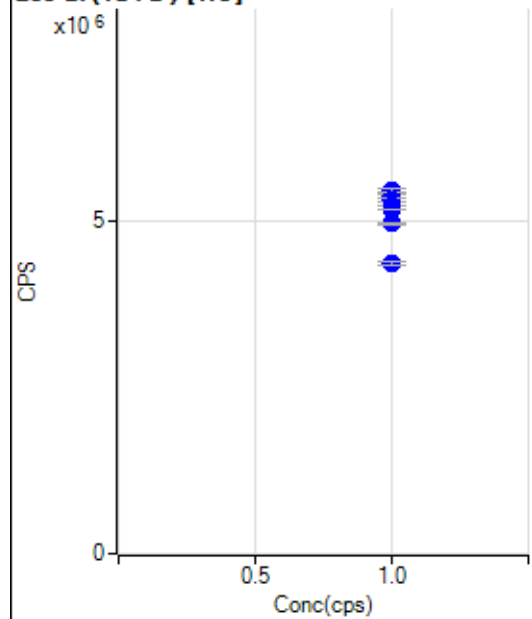
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		15947472.06		A	0.5
2	☐	1.000		15927411.12		A	0.4
3	☐	1.000		15922701.05		A	0.7
4	☐	1.000		16006012.34		A	0.7
5	☐	1.000		15943841.50		A	0.7
6	☐	1.000		15941911.12		A	1.4
7	☐	1.000		15827287.85		A	0.6
8	☐	1.000		15647438.37		A	1.1
9	☐	1.000		14953678.81		A	0.6

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7544164.47		A	0.4
2	☐	1.000		7532721.14		A	0.9
3	☐	1.000		7515010.58		A	0.7
4	☐	1.000		7558401.42		A	0.9
5	☐	1.000		7468580.37		A	0.4
6	☐	1.000		7425330.37		A	0.8
7	☐	1.000		7482486.21		A	0.6
8	☐	1.000		7378889.96		A	0.3
9	☐	1.000		7281607.12		A	1.0

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10129439.50		A	0.2
2	☐	1.000		9909626.45		A	0.5
3	☐	1.000		9803858.67		A	0.3
4	☐	1.000		9909453.05		A	0.4
5	☐	1.000		9721399.16		A	0.3
6	☐	1.000		9520794.72		A	0.5
7	☐	1.000		9360305.55		A	0.8
8	☐	1.000		8983260.84		A	0.6
9	☐	1.000		7772236.13		A	0.4

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5380244.99		P	0.7
2	☐	1.000		5430340.06		P	0.6
3	☐	1.000		5420297.49		P	0.4
4	☐	1.000		5455143.81		P	1.1
5	☐	1.000		5327594.26		P	0.9
6	☐	1.000		5236131.28		P	0.4
7	☐	1.000		5174789.64		P	0.3
8	☐	1.000		4966243.01		P	0.6
9	☐	1.000		4368088.27		P	1.1

US EPA Tune Check Sample Report

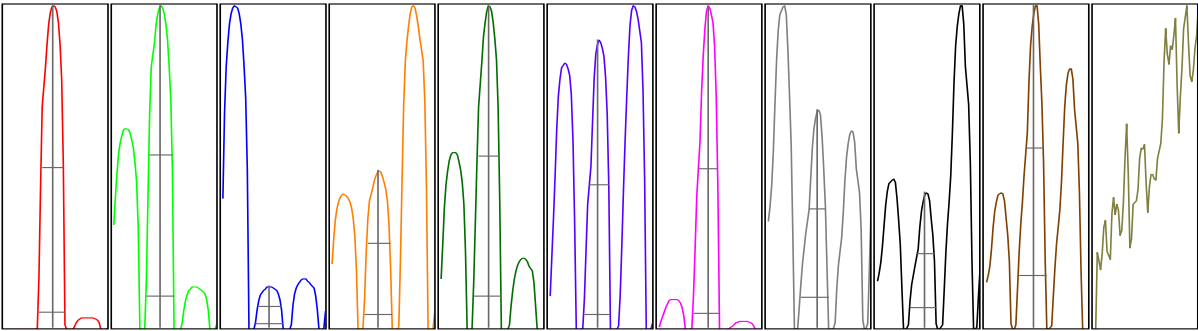
Batch Folder D:\ICP-MS Data\P711032019 MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	14903	0.79	5.00	
24	140861	0.65	5.00	
25	18817	0.73	5.00	
26	22421	0.56	5.00	
59	101140	0.64	5.00	
113	12561	0.83	5.00	
115	148065	1.04	5.00	
206	33643	0.78	5.00	
207	32114	0.85	5.00	
208	72859	0.80	5.00	
220	61	4.39		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	14765	15046	14937	14802	14968
24	139359	141108	141303	140762	141774
25	18640	18966	18931	18727	18821
26	22251	22426	22568	22351	22508
59	100094	101836	101340	101029	101399
113	12390	12581	12643	12545	12646
115	145961	150132	148722	147523	147985
206	33284	33985	33757	33512	33678
207	32006	32520	32236	31809	31999
208	72072	73621	73158	72626	72816
220	65	62	59	60	61

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	24507	8.95	8.9 - 9.1		0.781	0.900	
24	220735	23.90	23.9 - 24.1		0.807	0.900	
25	29346	24.90	24.9 - 25.1		0.797	0.900	
26	34398	25.90	25.9 - 26.1		0.813	0.900	
59	166575	58.95	58.9 - 59.1		0.801	0.900	
113	22606	112.95	112.9 - 113.1		0.772	0.900	
115	268857	115.00	114.9 - 115.1		0.771	0.900	
206	62266	206.00	205.9 - 206.1		0.803	0.900	
207	56478	206.95	206.9 - 207.1		0.752	0.900	
208	133676	207.95	207.9 - 208.1		0.791	0.900	
220			-				

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	6.7	V	Deflect	13.6	V
Extract 2	-120.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-55	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	170	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	24670	0.40	
89	20810	0.30	
205	27884	0.55	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	24700	24732	24775	24617	24528
89	20730	20889	20855	20790	20784
205	28157	27846	27818	27802	27798

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	7.0	V	Deflect	1.4	V
Extract 2	-125.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-55	V	Cell Exit	-60	V			

Cell Parameters

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