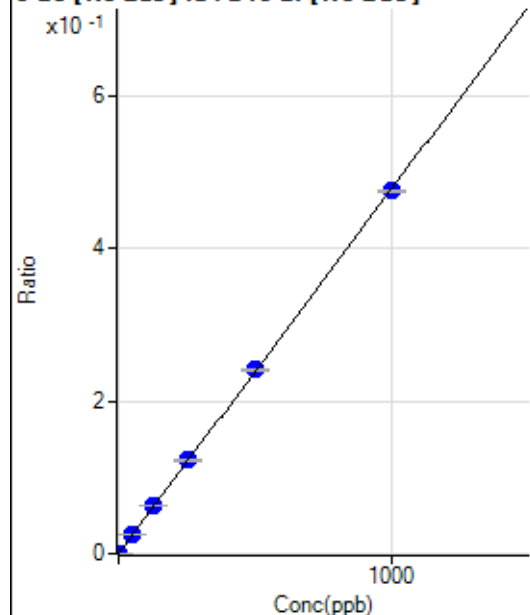


Batch Folder: D:\ICP-MS Data\P7101519 MS.b\
Analysis File: P7101519 MS.batch.bin
DA Date-Time: 2019-10-16 00:49:02
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-10-15 12:45:19
2	004CALS.d	S01	2019-10-15 12:48:53
3	005CALS.d	S02	2019-10-15 12:53:16
4	006CALS.d	S03	2019-10-15 12:57:11
5	007CALS.d	S04	2019-10-15 13:01:05
6	008CALS.d	S05	2019-10-15 13:04:57
7	009CALS.d	S06	2019-10-15 13:08:46
8	010CALS.d	S07	2019-10-15 13:12:33
9	011CALS.d	S08	2019-10-15 13:16:18

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.93	0.0000	P	15.8
2	☐	0.100	0.074	177.79	0.0001	P	6.1
3	☐	1.000	1.132	1626.06	0.0006	P	9.5
4	☐	50.000	52.215	68740.55	0.0250	P	1.2
5	☐	125.000	130.334	160511.50	0.0623	P	0.1
6	☐	250.000	257.466	300725.94	0.1230	P	1.7
7	☐	500.000	504.460	565060.14	0.2409	P	0.8
8	☐	1000.000	995.126	1049699.55	0.4751	P	0.8
9	☐			285.19	0.0001	P	30.6

$$y = 4.7745\text{E-}004 * x + 2.7223\text{E-}005$$

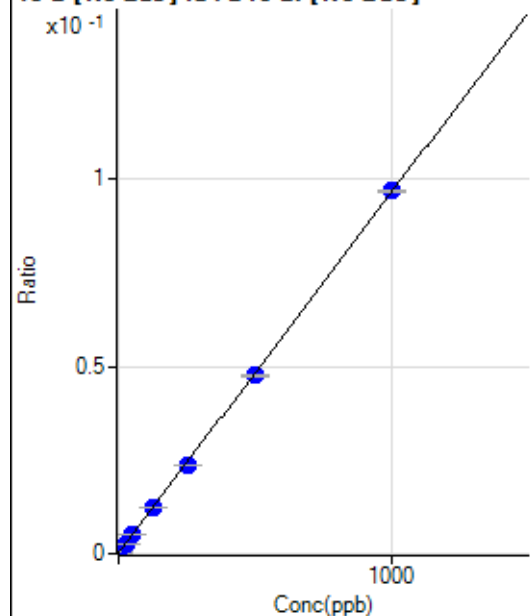
$$R = 0.9999$$

$$DL = 0.02695$$

$$BEC = 0.05702$$

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	466.70	0.0002	P	10.0
2	☐	2.500	2.365	1119.53	0.0004	P	1.4
3	☐	25.000	23.941	7093.62	0.0025	P	1.8
4	☐	50.000	49.853	13678.88	0.0050	P	2.0
5	☐	125.000	125.619	31614.34	0.0123	P	1.0
6	☐	250.000	244.107	57897.80	0.0237	P	1.0
7	☐	500.000	493.193	111774.85	0.0476	P	1.6
8	☐	1000.000	1004.834	214091.36	0.0969	P	0.4
9	☐			9344.92	0.0043	P	8.2

$$y = 9.6274\text{E-}005 * x + 1.6730\text{E-}004$$

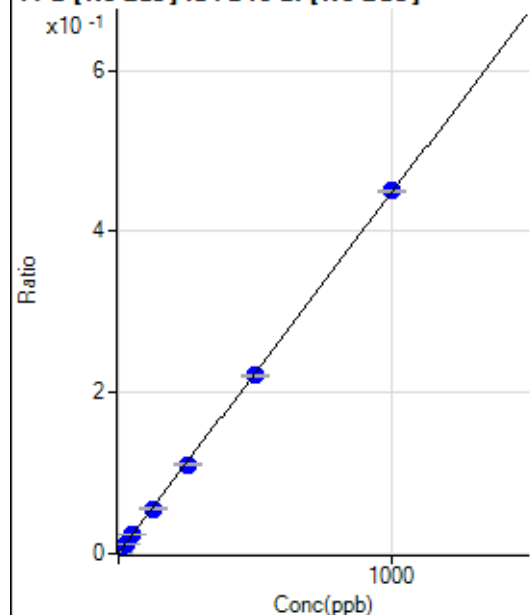
$$R = 0.9999$$

$$DL = 0.5211$$

$$BEC = 1.738$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1991.88	0.0007	P	4.4
2	☐	2.500	2.541	5245.56	0.0019	P	2.7
3	☐	25.000	24.147	33037.07	0.0115	P	1.9
4	☐	50.000	49.974	63542.65	0.0231	P	1.9
5	☐	125.000	123.677	144496.19	0.0560	P	1.5
6	☐	250.000	244.811	269641.05	0.1102	P	1.6
7	☐	500.000	492.769	518831.81	0.2212	P	1.3
8	☐	1000.000	1005.101	995021.17	0.4504	P	0.8
9	☐			43004.07	0.0196	P	7.2

$$y = 4.4739\text{E-}004 * x + 7.1390\text{E-}004$$

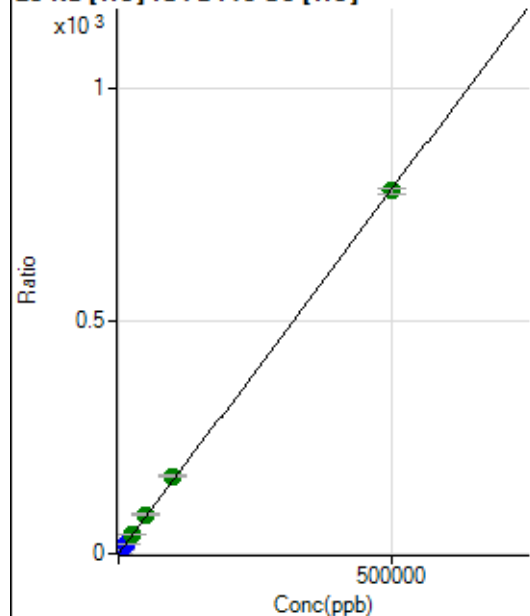
$$R = 0.9999$$

$$DL = 0.212$$

$$BEC = 1.596$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4898.21	0.0315	P	1.0
2	☐	50.000	51.507	17338.42	0.1120	P	1.8
3	☐	500.000	552.141	136364.72	0.8949	P	1.2
4	☐	5000.000	5391.934	1235988.50	8.4625	P	0.2
5	☐	12500.000	13569.547	2881393.12	21.2492	P	1.5
6	☐	25000.000	26557.796	5422738.53	41.5580	A	0.3
7	☐	50000.000	53789.382	10784700.59	84.1380	A	2.3
8	☐	100000.00	106561.49	20612470.95	166.6538	A	1.2
9	☐	500000.00	498200.16	117428216.5	779.0299	A	1.3

$$y = 0.0016 * x + 0.0315$$

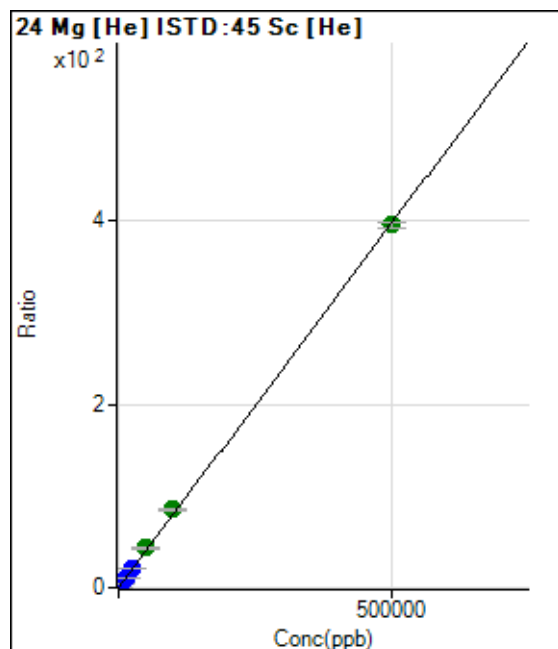
$$R = 0.9999$$

$$DL = 0.6079$$

$$BEC = 20.15$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	658.37	0.0042	P	20.0
2	☐	50.000	55.290	7449.34	0.0481	P	2.3
3	☐	500.000	585.988	71557.16	0.4696	P	0.9
4	☐	5000.000	5427.949	630143.17	4.3145	P	0.6
5	☐	12500.000	13702.029	1475938.77	10.8847	P	1.7
6	☐	25000.000	26654.833	2762472.59	21.1703	P	0.4
7	☐	50000.000	54406.499	5538152.81	43.2073	A	2.6
8	☐	100000.00	107468.72	10555414.99	85.3428	A	1.4
9	☐	500000.00	497948.44	59602697.86	395.4143	A	1.3

$$y = 7.9408\text{E-}004 * x + 0.0042$$

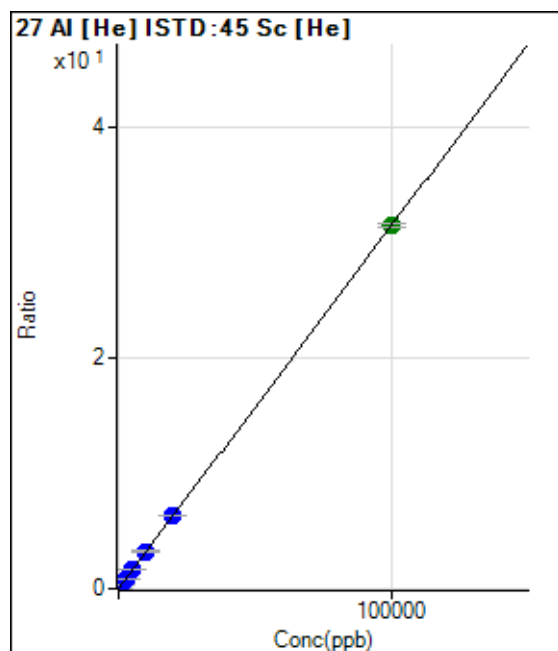
$$R = 0.9999$$

$$DL = 3.2$$

$$BEC = 5.336$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.89	0.0003	P	33.1
2	☒	2.000					
3	☐	20.000	21.222	1055.63	0.0069	P	5.9
4	☐	1000.000	1036.164	47671.19	0.3264	P	1.1
5	☐	2500.000	2599.555	110981.97	0.8185	P	2.2
6	☐	5000.000	5148.712	211505.19	1.6209	P	0.2
7	☐	10000.000	10305.948	415833.03	3.2442	P	2.4
8	☐	20000.000	20271.292	789230.17	6.3809	P	1.1
9	☐	100000.00	99904.860	4740178.45	31.4468	A	1.2

$$y = 3.1476\text{E-}004 * x + 2.5042\text{E-}004$$

$$R = 1.0000$$

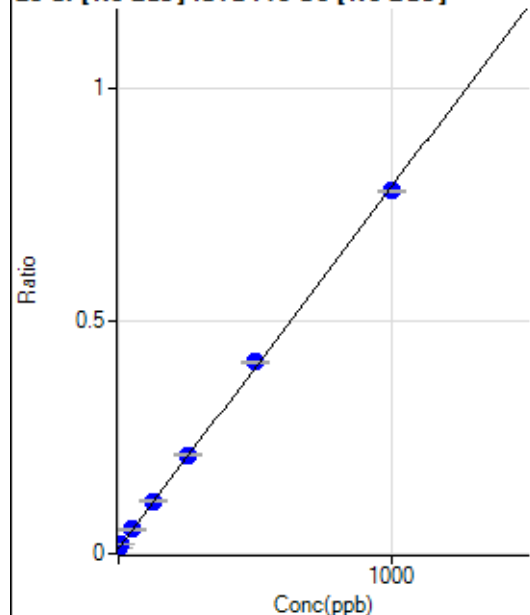
$$DL = 0.7904$$

$$BEC = 0.7956$$

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	46512.03	0.0115	P	0.5
2	☐	1.000	1.318	50929.37	0.0125	P	1.4
3	☐	10.000	9.707	77958.96	0.0190	P	2.7
4	☐	50.000	51.995	204634.60	0.0519	P	0.8
5	☐	125.000	131.172	422491.47	0.1135	P	0.9
6	☐	250.000	258.990	747373.88	0.2128	P	0.3
7	☐	500.000	515.534	1394905.63	0.4123	P	0.4
8	☐	1000.000	989.117	2526285.54	0.7804	P	0.6
9	☐			167591.91	0.0494	P	0.5

$$y = 7.7735E-004 * x + 0.0115$$

$$R = 0.9998$$

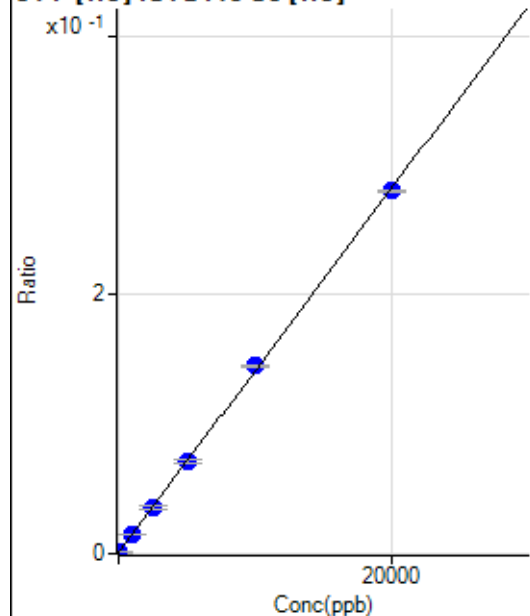
$$DL = 0.2247$$

$$BEC = 14.8$$

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	-29.406	41.67	0.0003	P	20.4
2	☐	0.000	-22.956	55.56	0.0004	P	22.9
3	☐	0.000	52.362	216.68	0.0014	P	24.3
4	☐	1000.000	1010.635	2178.02	0.0149	P	3.4
5	☐	2500.000	2497.393	4859.32	0.0358	P	7.7
6	☐	5000.000	5006.004	9286.59	0.0712	P	3.3
7	☐	10000.000	10268.120	18620.51	0.1453	P	1.3
8	☐	20000.000	19864.233	34680.05	0.2804	P	0.5
9	☐			58.34	0.0004	P	16.2

$$y = 1.4080E-005 * x + 6.8224E-004$$

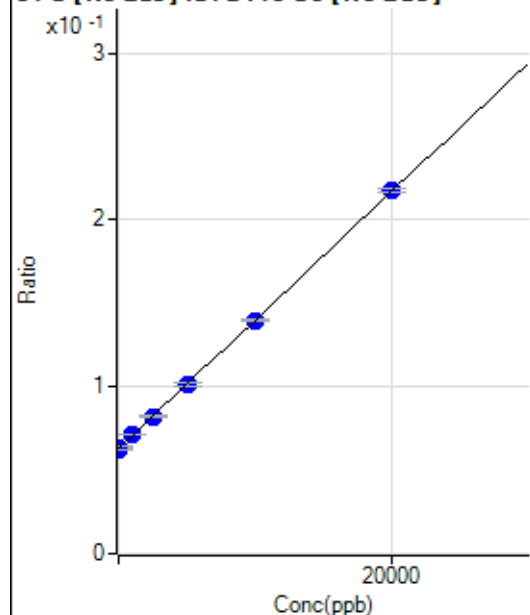
$$R = 0.9999$$

$$DL = 34.26$$

$$BEC = 48.45$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	68.288	257275.76	0.0636	P	1.0
2	☐	0.000	-70.719	254328.85	0.0625	P	0.4
3	☐	0.000	2.431	258291.61	0.0631	P	3.2
4	☐	1000.000	1100.925	282090.91	0.0716	P	0.5
5	☐	2500.000	2449.415	305171.81	0.0820	P	1.2
6	☐	5000.000	4981.555	356276.98	0.1015	P	1.4
7	☐	10000.000	9943.802	472635.88	0.1397	P	0.6
8	☐	20000.000	20033.987	703765.30	0.2174	P	1.2
9	☐			237093.37	0.0698	P	1.6

$$y = 7.7024\text{E-}006 * x + 0.0631$$

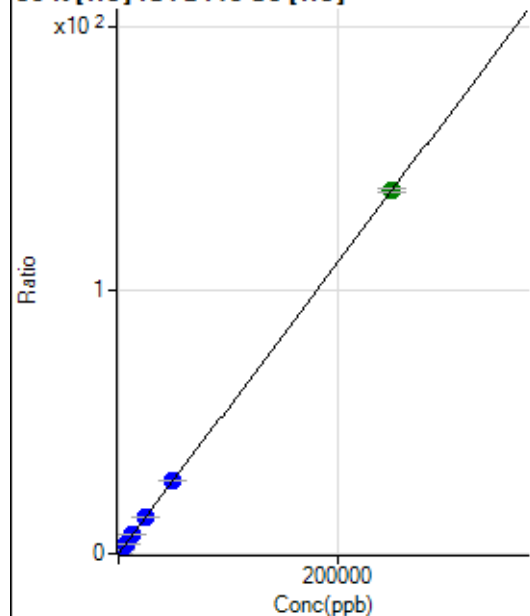
R = 1.0000

DL = 381

BEC = 8192

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4595.35	0.0296	P	5.2
2	☐	50.000	51.040	8916.92	0.0576	P	1.3
3	☐	500.000	546.735	50314.05	0.3302	P	2.3
4	☐	2500.000	2565.398	210348.98	1.4402	P	0.6
5	☐	6250.000	6453.058	485160.96	3.5780	P	1.8
6	☐	12500.000	12615.069	909028.33	6.9663	P	0.5
7	☐	25000.000	25246.391	1783298.78	13.9120	P	2.1
8	☐	50000.000	49890.366	3396853.55	27.4632	P	0.9
9	☐	250000.00	249985.71	20725549.59	137.4914	A	1.1

$$y = 5.4988\text{E-}004 * x + 0.0296$$

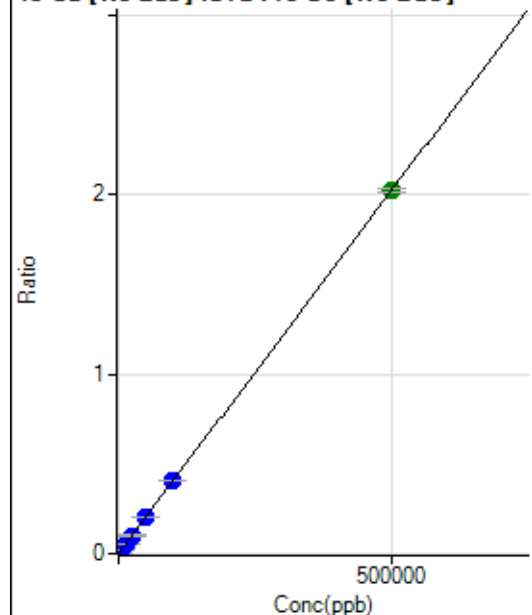
R = 1.0000

DL = 8.449

BEC = 53.76

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	125.01	0.0000	P	29.1
2	☐	50.000	46.220	886.18	0.0002	P	7.8
3	☐	500.000	514.782	8652.89	0.0021	P	1.2
4	☐	5000.000	5069.690	80940.79	0.0205	P	0.8
5	☐	12500.000	12752.218	192176.55	0.0516	P	1.0
6	☐	25000.000	25114.496	356803.39	0.1016	P	1.8
7	☐	50000.000	50660.143	693464.30	0.2049	P	0.5
8	☐	100000.00	101444.67	1328435.90	0.4104	P	0.7
9	☐	500000.00	499632.31	6863370.25	2.0210	A	1.0

$$y = 4.0449\text{E-}006 * x + 3.0916\text{E-}005$$

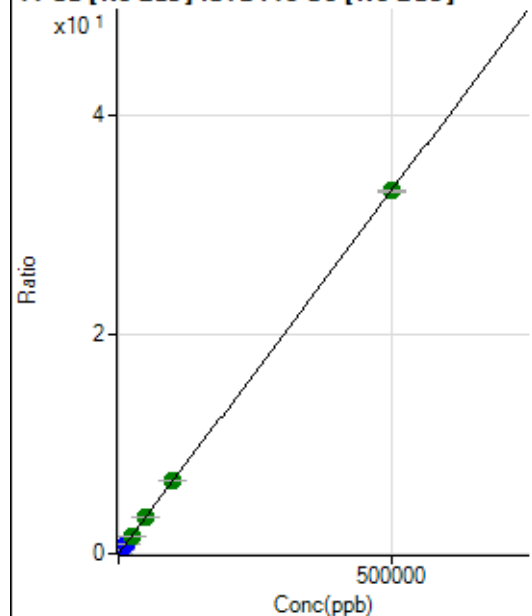
$$R = 1.0000$$

$$DL = 6.674$$

$$BEC = 7.643$$

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	3878.47	0.0010	P	3.5
2	☐	50.000	49.358	17210.63	0.0042	P	1.4
3	☐	500.000	510.594	142525.65	0.0348	P	3.1
4	☐	5000.000	4990.316	1308319.99	0.3320	P	0.2
5	☐	12500.000	12428.320	3072784.75	0.8253	P	1.6
6	☐	25000.000	24820.886	5784273.78	1.6472	A	0.9
7	☐	50000.000	50127.119	11253002.86	3.3257	A	0.1
8	☐	100000.00	101312.09	21756251.53	6.7207	A	0.6
9	☐	500000.00	499735.70	112562376.1	33.1468	A	0.8

$$y = 6.6327\text{E-}005 * x + 9.5901\text{E-}004$$

$$R = 1.0000$$

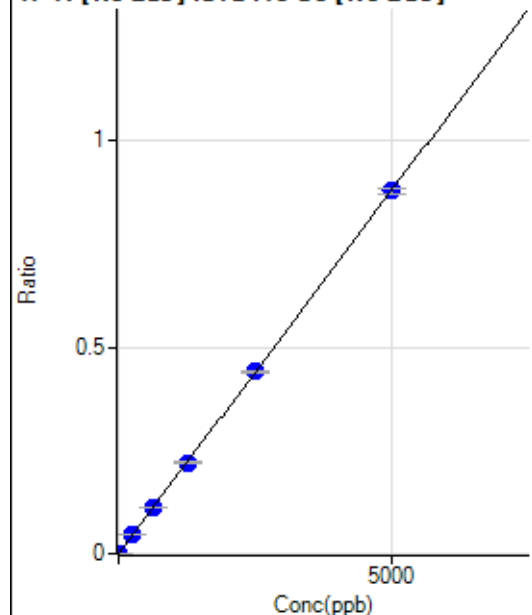
$$DL = 1.52$$

$$BEC = 14.46$$

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	83.34	0.0000	P	19.6
2	☐	0.500	0.527	461.14	0.0001	P	4.9
3	☐	5.000	5.383	3961.80	0.0010	P	2.7
4	☐	250.000	253.268	175760.06	0.0446	P	0.4
5	☐	625.000	635.328	416422.91	0.1118	P	1.2
6	☐	1250.000	1251.043	773212.82	0.2202	P	1.1
7	☐	2500.000	2503.164	1490714.89	0.4406	P	0.5
8	☐	5000.000	4996.702	2846773.55	0.8794	P	1.3
9	☐			1566.82	0.0005	P	8.2

$$y = 1.7600E-004 * x + 2.0597E-005$$

$$R = 1.0000$$

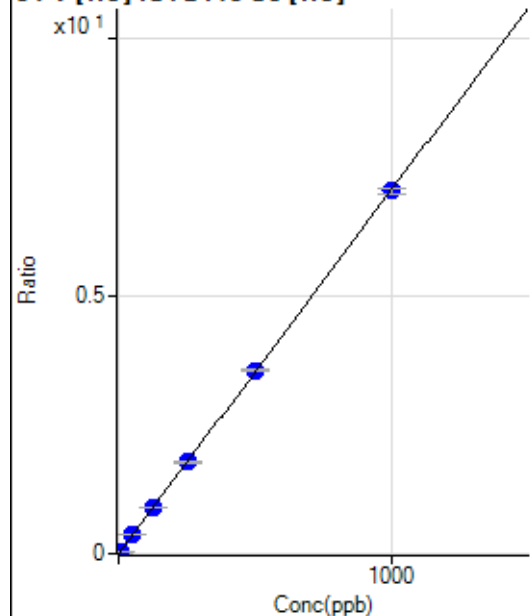
$$DL = 0.06888$$

$$BEC = 0.117$$

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	13.33	0.0001	P	65.9
2	☐	0.500	0.562	627.80	0.0041	P	3.6
3	☐	5.000	5.608	6056.90	0.0397	P	1.2
4	☐	50.000	51.102	52795.31	0.3615	P	0.9
5	☐	125.000	127.816	122587.15	0.9040	P	0.7
6	☐	250.000	251.233	231845.33	1.7768	P	0.6
7	☐	500.000	504.426	457272.98	3.5673	P	1.8
8	☐	1000.000	997.069	872124.63	7.0512	P	1.3
9	☐			247.78	0.0016	P	2.9

$$y = 0.0071 * x + 8.5733E-005$$

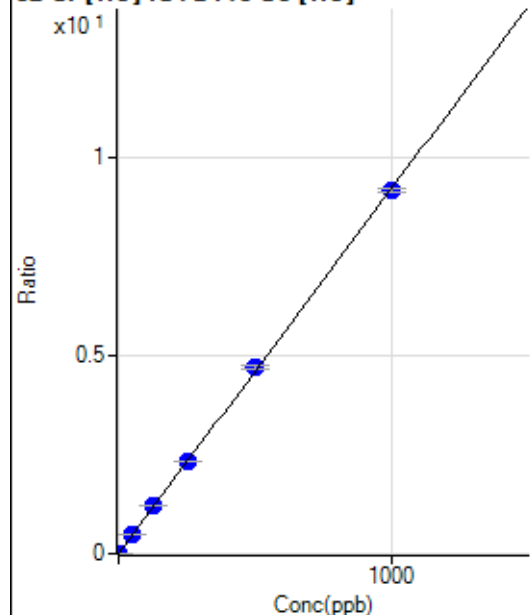
$$R = 1.0000$$

$$DL = 0.02397$$

$$BEC = 0.01212$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0018	P	5.7
2	☐	0.200	0.226	594.47	0.0038	P	3.7
3	☐	2.000	2.086	3194.84	0.0210	P	9.1
4	☐	50.000	51.696	69824.39	0.4781	P	0.7
5	☐	125.000	130.656	163486.65	1.2056	P	0.6
6	☐	250.000	254.202	305838.48	2.3439	P	0.6
7	☐	500.000	508.656	600952.19	4.6883	P	2.1
8	☐	1000.000	993.830	1132767.19	9.1585	P	1.2
9	☐			48292.28	0.3204	P	1.6

$$y = 0.0092 * x + 0.0018$$

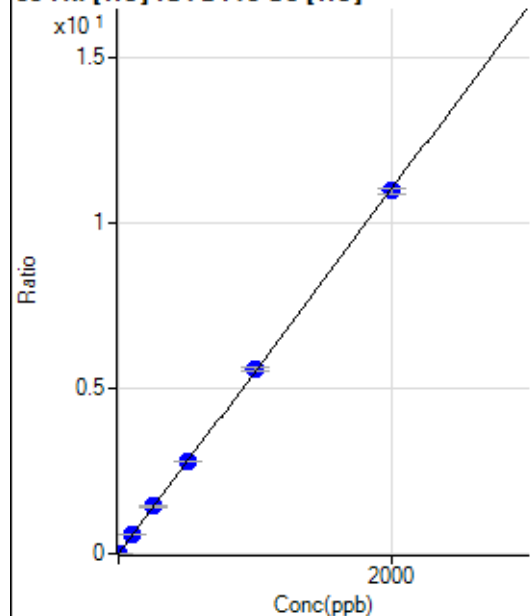
$$R = 0.9999$$

$$DL = 0.03241$$

$$BEC = 0.1909$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.78	0.0002	P	25.3
2	☐	0.100	0.113	124.45	0.0008	P	24.8
3	☐	1.000	1.169	1011.16	0.0066	P	1.9
4	☐	100.000	103.062	83157.71	0.5694	P	1.1
5	☐	250.000	259.325	194241.41	1.4324	P	0.8
6	☐	500.000	505.709	364468.47	2.7931	P	0.4
7	☐	1000.000	1015.039	718592.08	5.6061	P	2.1
8	☐	2000.000	1989.735	1359109.98	10.9891	P	1.8
9	☐			5987.97	0.0397	P	3.5

$$y = 0.0055 * x + 1.7879E-004$$

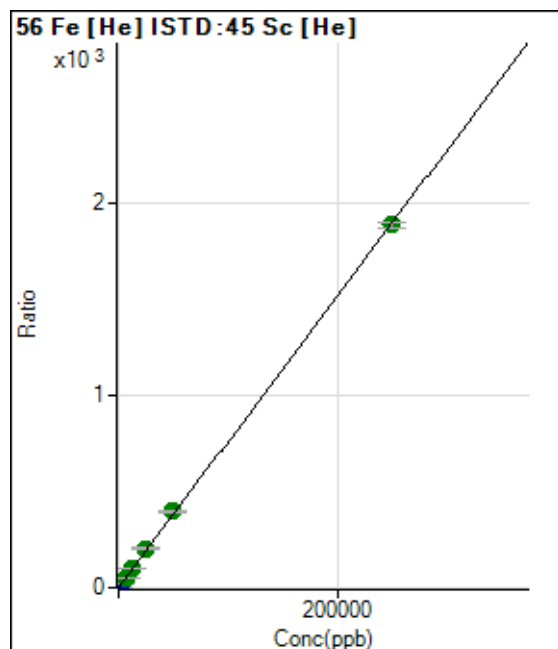
$$R = 0.9999$$

$$DL = 0.02455$$

$$BEC = 0.03237$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3270.82	0.0210	P	3.9
2	☐	5.000	4.050	8002.36	0.0517	P	3.7
3	☐	50.000	58.909	71192.61	0.4672	P	2.0
4	☐	2500.000	2744.044	3038356.72	20.8027	P	0.2
5	☐	6250.000	6828.239	7015053.80	51.7339	A	1.6
6	☐	12500.000	13341.450	13187168.70	101.0609	A	0.1
7	☐	25000.000	26854.390	26071882.30	203.3995	A	2.1
8	☐	50000.000	52487.780	49167460.36	397.5309	A	1.4
9	☐	250000.00	249258.03	284554248.9	1,887.746	A	1.3

$$y = 0.0076 * x + 0.0210$$

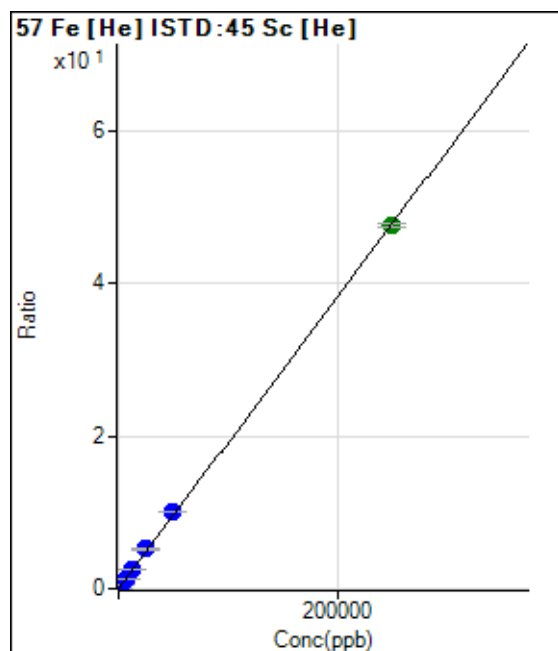
$$R = 0.9999$$

$$DL = 0.3253$$

$$BEC = 2.779$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	85.19	0.0005	P	45.7
2	☐	5.000	3.525	188.90	0.0012	P	20.6
3	☐	50.000	61.434	1870.54	0.0123	P	5.2
4	☐	2500.000	2758.799	76978.88	0.5270	P	1.3
5	☐	6250.000	6915.375	179027.50	1.3203	P	1.6
6	☐	12500.000	13536.175	337149.32	2.5838	P	0.6
7	☐	25000.000	27116.157	663373.18	5.1754	P	2.4
8	☐	50000.000	52823.771	1246886.83	10.0814	P	1.5
9	☐	250000.00	249152.59	7167380.43	47.5488	A	1.2

$$y = 1.9084E-004 * x + 5.4805E-004$$

$$R = 0.9999$$

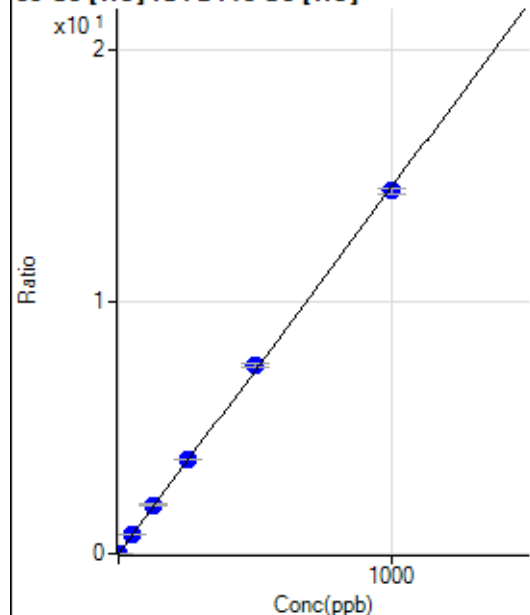
$$DL = 3.935$$

$$BEC = 2.872$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.11	0.0003	P	49.2
2	☐	0.100	0.101	268.90	0.0017	P	19.6
3	☐	1.000	1.127	2540.26	0.0167	P	8.1
4	☐	50.000	53.412	113717.20	0.7786	P	0.3
5	☐	125.000	133.421	263679.52	1.9445	P	0.9
6	☐	250.000	258.848	492221.99	3.7722	P	0.2
7	☐	500.000	513.082	958400.90	7.4768	P	2.0
8	☐	1000.000	990.024	1784351.75	14.4268	P	1.4
9	☐			26311.50	0.1745	P	1.3

$$y = 0.0146 * x + 2.6412E-004$$

$$R = 0.9998$$

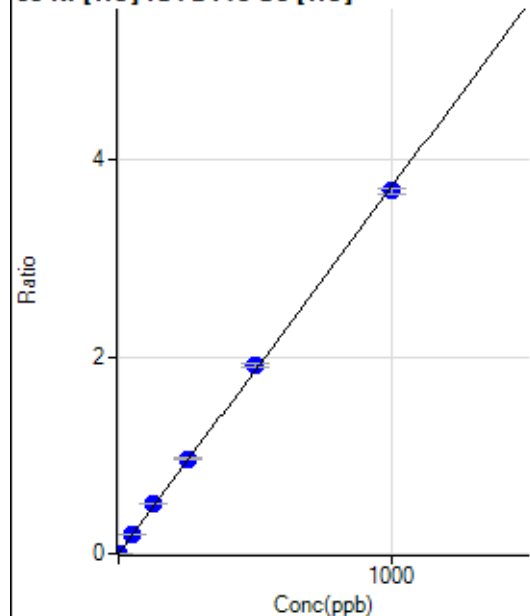
$$DL = 0.02676$$

$$BEC = 0.01813$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0004	P	9.6
2	☐	0.100	0.072	107.78	0.0007	P	20.6
3	☐	1.000	1.126	704.47	0.0046	P	1.7
4	☐	50.000	54.576	29755.94	0.2037	P	1.2
5	☐	125.000	134.531	68013.67	0.5016	P	0.9
6	☐	250.000	258.879	125887.70	0.9647	P	1.0
7	☐	500.000	514.389	245667.12	1.9165	P	2.2
8	☐	1000.000	989.166	455783.29	3.6850	P	1.2
9	☐			17666.37	0.1172	P	3.2

$$y = 0.0037 * x + 4.2876E-004$$

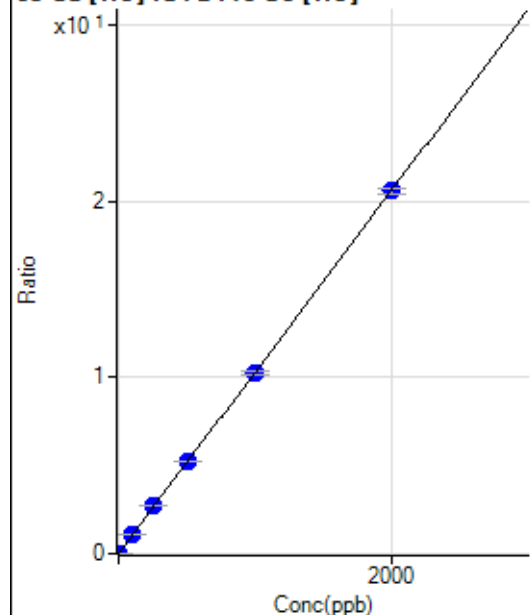
$$R = 0.9998$$

$$DL = 0.033$$

$$BEC = 0.1151$$

Weight: <None>

Min Conc: 0

63 Cu [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	657.80	0.0042	P	2.3
2	☐	0.200	0.238	1034.50	0.0067	P	9.2
3	☐	2.000	2.154	4023.95	0.0264	P	3.9
4	☐	100.000	105.582	159427.30	1.0916	P	0.7
5	☐	250.000	262.652	367358.20	2.7091	P	1.4
6	☐	500.000	508.939	684469.47	5.2455	P	0.2
7	☐	1000.000	994.880	1313864.04	10.2499	P	2.0
8	☐	2000.000	1998.464	2546058.17	20.5852	P	1.3
9	☐			5841.27	0.0388	P	1.7

$$y = 0.0103 * x + 0.0042$$

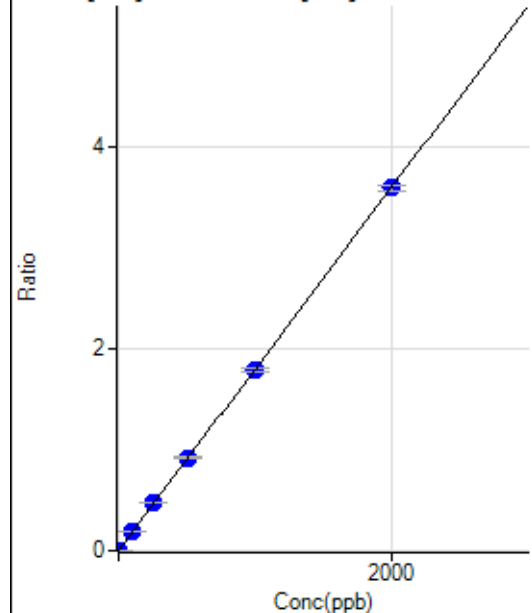
$$R = 1.0000$$

$$DL = 0.02895$$

$$BEC = 0.4109$$

Weight: <None>

Min Conc: 0

66 Zn [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	208.89	0.0013	P	6.1
2	☒	0.200					
3	☐	2.000	2.428	868.93	0.0057	P	1.0
4	☐	100.000	104.619	27615.16	0.1891	P	0.8
5	☐	250.000	262.567	64074.21	0.4725	P	0.5
6	☐	500.000	512.286	120125.70	0.9206	P	0.5
7	☐	1000.000	995.204	229071.96	1.7871	P	2.1
8	☐	2000.000	1997.524	443486.56	3.5857	P	1.4
9	☐			6383.72	0.0424	P	2.1

$$y = 0.0018 * x + 0.0013$$

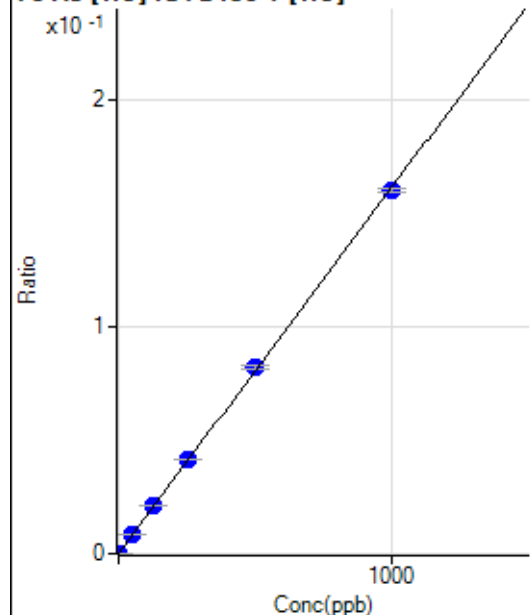
$$R = 1.0000$$

$$DL = 0.1371$$

$$BEC = 0.7488$$

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	3.70	0.0000	P	132.2
2	☐	0.100	0.100	16.67	0.0000	P	40.2
3	☐	1.000	1.064	138.89	0.0002	P	4.4
4	☐	50.000	53.247	6565.73	0.0086	P	1.2
5	☐	125.000	131.177	15170.33	0.0212	P	2.0
6	☐	250.000	259.155	28730.82	0.0418	P	0.6
7	☐	500.000	510.345	55977.40	0.0823	P	2.3
8	☐	1000.000	991.604	104515.02	0.1600	P	1.1
9	☐			175.93	0.0002	P	5.6

$$y = 1.6134\text{E-}004 * x + 4.5536\text{E-}006$$

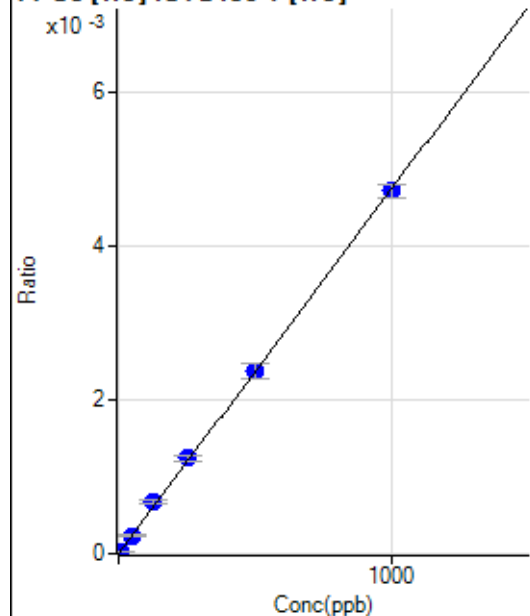
$$R = 0.9999$$

$$DL = 0.112$$

$$BEC = 0.02822$$

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	0.000	0.00	0.0000	P	
3	☐	5.000	5.970	22.22	0.0000	P	23.8
4	☐	50.000	50.090	181.12	0.0002	P	14.4
5	☐	125.000	140.626	476.68	0.0007	P	8.7
6	☐	250.000	261.036	848.93	0.0012	P	7.0
7	☐	500.000	500.802	1610.12	0.0024	P	9.2
8	☐	1000.000	994.878	3074.82	0.0047	P	3.6
9	☐			3.33	0.0000	P	100.9

$$y = 4.7314\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9998$$

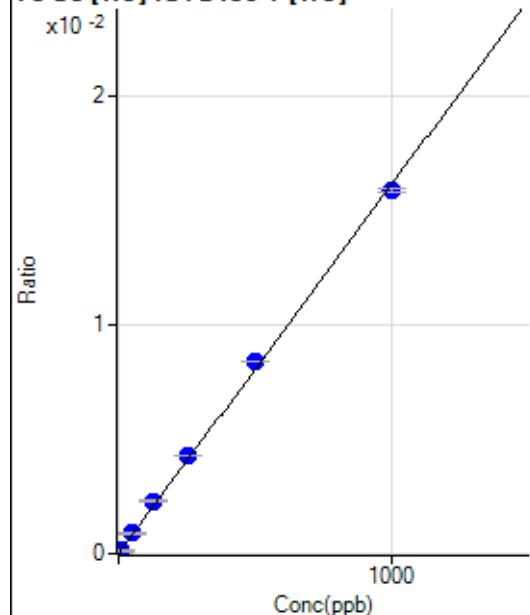
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4.32	0.0000	P	24.5
2	☐	0.500	0.902	16.05	0.0000	P	14.2
3	☐	5.000	7.548	100.00	0.0001	P	8.5
4	☐	50.000	54.676	677.18	0.0009	P	2.2
5	☐	125.000	141.091	1634.06	0.0023	P	3.2
6	☐	250.000	266.452	2954.03	0.0043	P	1.1
7	☐	500.000	521.090	5712.89	0.0084	P	0.8
8	☐	1000.000	983.084	10353.76	0.0158	P	1.2
9	☐			8.03	0.0000	P	53.0

$$y = 1.6115\text{E-}005 * x + 5.3249\text{E-}006$$

$$R = 0.9995$$

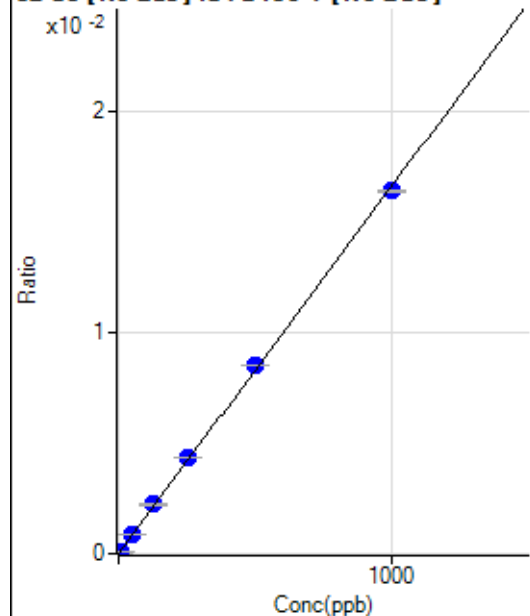
$$DL = 0.2433$$

$$BEC = 0.3304$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-4.94	0.0000	P	-777.
2	☒	0.500					
3	☐	5.000	5.774	690.00	0.0001	P	18.3
4	☐	50.000	53.586	6213.05	0.0009	P	1.4
5	☐	125.000	134.276	14888.95	0.0022	P	1.4
6	☐	250.000	262.541	27810.40	0.0044	P	0.8
7	☐	500.000	514.466	53272.52	0.0085	P	0.6
8	☐	1000.000	988.289	98468.24	0.0164	P	0.5
9	☐			61.40	0.0000	P	64.7

$$y = 1.6574\text{E-}005 * x - 6.5649\text{E-}007$$

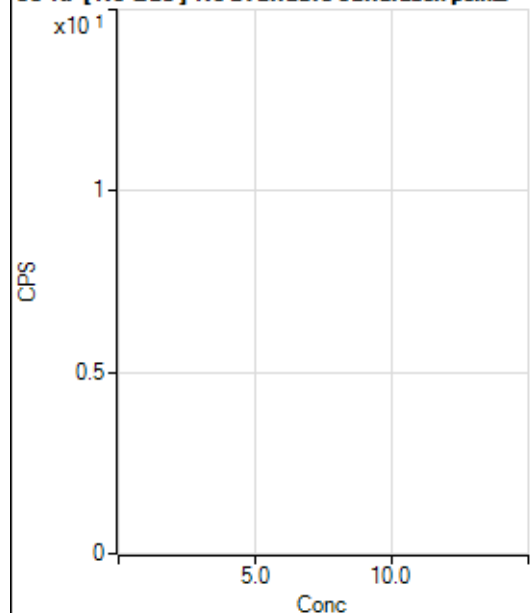
$$R = 0.9997$$

$$DL = 0.9244$$

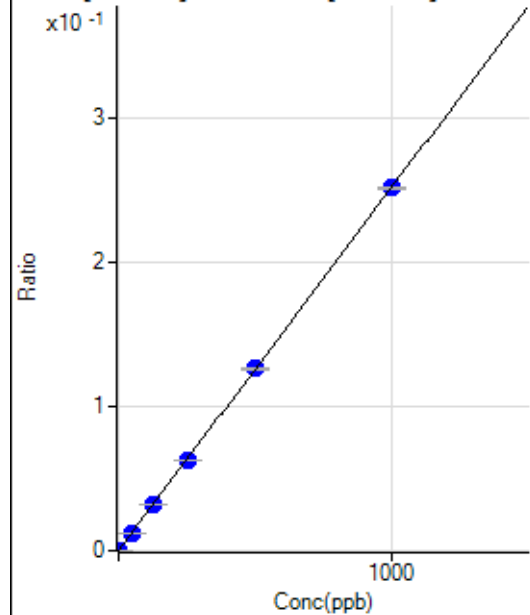
$$BEC = -0.03961$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			555.57		P	5.4
2	☐			545.58		P	9.5
3	☐			557.80		P	18.2
4	☐			595.58		P	8.4
5	☐			526.69		P	7.7
6	☐			515.57		P	9.2
7	☐			475.57		P	4.0
8	☐			448.90		P	12.7
9	☐			493.35		P	11.2

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	927.84	0.0001	P	8.2
2	☐	0.100	0.046	1000.08	0.0001	P	7.2
3	☐	1.000	1.005	2755.92	0.0004	P	5.2
4	☐	50.000	49.713	88372.00	0.0126	P	0.2
5	☐	125.000	126.595	213803.38	0.0319	P	0.6
6	☐	250.000	249.554	401764.74	0.0629	P	0.9
7	☐	500.000	501.308	788104.87	0.1261	P	0.5
8	☐	1000.000	999.273	1510757.97	0.2513	P	0.6
9	☐			7085.37	0.0011	P	1.5

$$y = 2.5135E-004 * x + 1.2652E-004$$

$$R = 1.0000$$

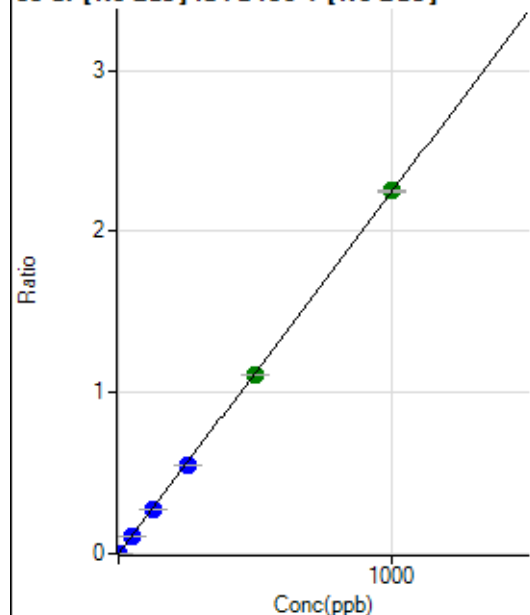
$$DL = 0.1232$$

$$BEC = 0.5034$$

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	236.12	0.0000	P	14.9
2	☐	0.100	0.099	1850.19	0.0003	P	4.8
3	☐	1.000	0.998	16526.81	0.0023	P	2.3
4	☐	50.000	49.222	773526.91	0.1105	P	0.6
5	☐	125.000	123.550	1855621.09	0.2773	P	1.1
6	☐	250.000	243.330	3490496.95	0.5461	P	0.9
7	☐	500.000	496.795	6965850.59	1.1148	A	0.1
8	☐	1000.000	1003.490	13537582.60	2.2518	A	0.7
9	☐			58165.67	0.0094	P	1.1

$$y = 0.0022 * x + 3.2217E-005$$

$$R = 1.0000$$

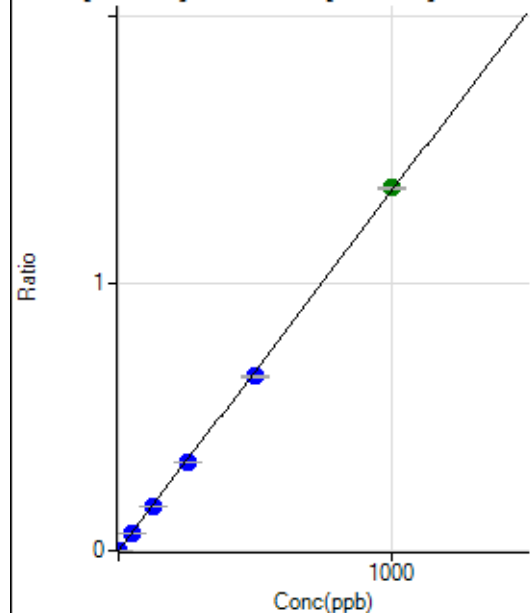
$$DL = 0.006397$$

$$BEC = 0.01436$$

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	555.59	0.0001	P	7.7
2	☐	0.100	0.089	1414.02	0.0002	P	1.3
3	☐	1.000	0.911	9467.39	0.0013	P	2.9
4	☐	50.000	49.780	469333.76	0.0670	P	1.0
5	☐	125.000	124.618	1122275.95	0.1677	P	1.3
6	☐	250.000	245.234	2109046.71	0.3299	P	0.6
7	☐	500.000	484.207	4070079.65	0.6514	P	0.2
8	☐	1000.000	1009.147	8160988.90	1.3575	A	0.5
9	☐			3178.27	0.0005	P	3.1

$$y = 0.0013 * x + 7.5736E-005$$

$$R = 0.9998$$

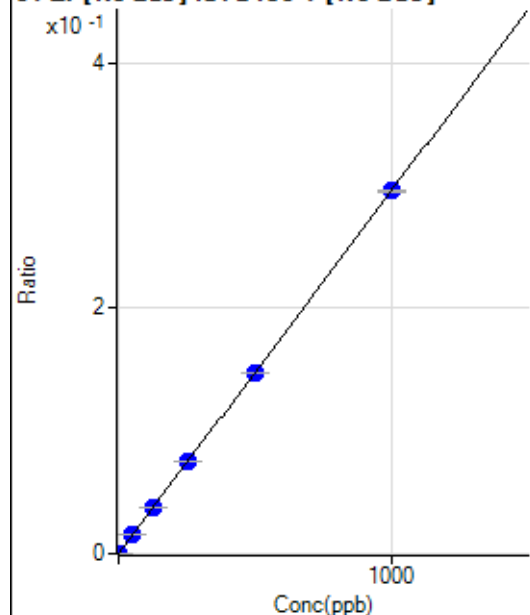
$$DL = 0.013$$

$$BEC = 0.05631$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.01	0.0000	P	33.9
2	☐	0.100	0.085	330.57	0.0000	P	25.9
3	☐	1.000	0.950	2191.94	0.0003	P	1.2
4	☐	50.000	51.185	106045.96	0.0151	P	1.0
5	☐	125.000	127.825	252951.90	0.0378	P	0.9
6	☐	250.000	252.025	476245.11	0.0745	P	0.2
7	☐	500.000	498.685	921002.89	0.1474	P	0.7
8	☐	1000.000	999.739	1776372.91	0.2955	P	0.2
9	☐			794.50	0.0001	P	2.3

$$y = 2.9553\text{E-}004 * x + 2.0422\text{E-}005$$

$$R = 1.0000$$

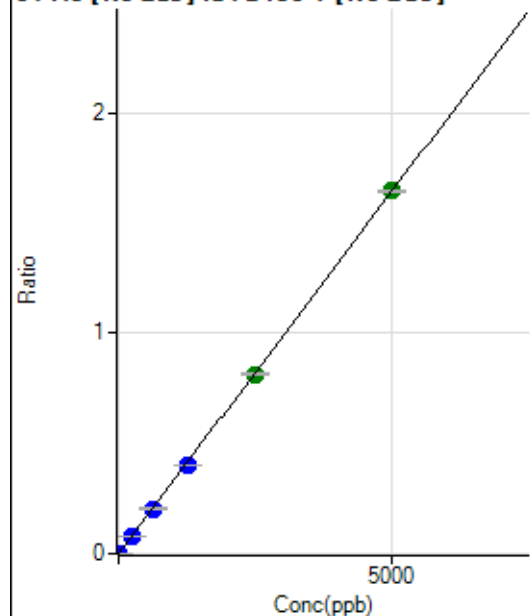
$$DL = 0.07035$$

$$BEC = 0.0691$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	225.01	0.0000	P	10.1
2	☐	0.500	0.485	1375.13	0.0002	P	4.4
3	☐	5.000	4.828	11744.14	0.0016	P	6.3
4	☐	250.000	249.965	574714.79	0.0821	P	0.8
5	☐	625.000	624.404	1371933.62	0.2050	P	1.6
6	☐	1250.000	1220.907	2562134.61	0.4008	P	0.6
7	☐	2500.000	2484.973	5097195.03	0.8158	A	0.4
8	☐	5000.000	5014.863	9897062.64	1.6463	A	0.5
9	☐			9236.70	0.0015	P	4.3

$$y = 3.2827\text{E-}004 * x + 3.0688\text{E-}005$$

$$R = 1.0000$$

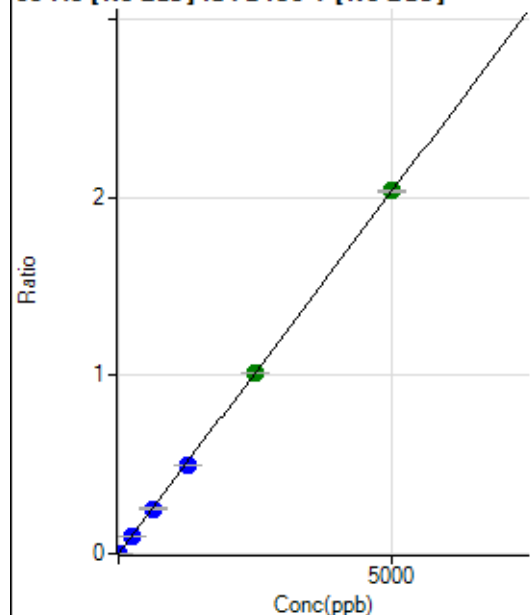
$$DL = 0.02837$$

$$BEC = 0.09348$$

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	150.00	0.0000	P	25.6
2	☐	0.500	0.475	1547.38	0.0002	P	3.2
3	☐	5.000	5.036	15036.20	0.0021	P	6.3
4	☐	250.000	249.094	709481.85	0.1013	P	0.4
5	☐	625.000	619.208	1685497.78	0.2519	P	1.7
6	☐	1250.000	1212.189	3151687.33	0.4930	P	0.3
7	☐	2500.000	2496.077	6343403.18	1.0152	A	0.5
8	☐	5000.000	5012.184	12255620.67	2.0386	A	0.4
9	☐			14502.41	0.0024	P	2.7

$$y = 4.0672\text{E-}004 * x + 2.0457\text{E-}005$$

$$R = 1.0000$$

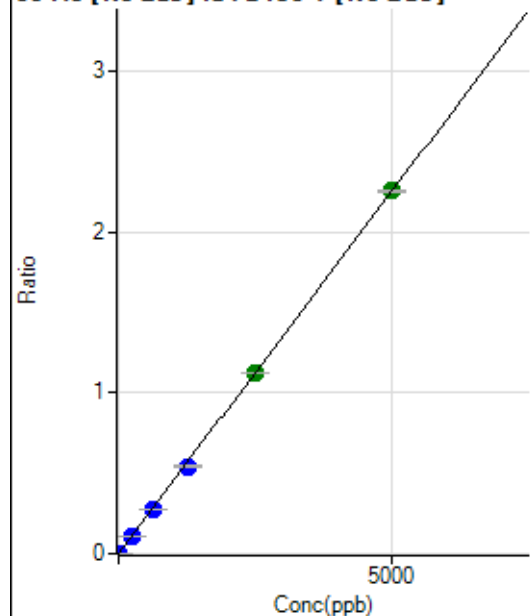
$$DL = 0.0387$$

$$BEC = 0.0503$$

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	127.78	0.0000	P	36.7
2	☐	0.500	0.522	1825.20	0.0003	P	2.9
3	☐	5.000	5.093	16782.74	0.0023	P	4.8
4	☐	250.000	250.019	787511.51	0.1125	P	0.4
5	☐	625.000	619.870	1866116.64	0.2788	P	1.1
6	☐	1250.000	1208.096	3473773.86	0.5434	P	1.0
7	☐	2500.000	2498.831	7023290.87	1.1240	A	0.6
8	☐	5000.000	5011.701	13552860.02	2.2544	A	0.7
9	☐			15534.03	0.0025	P	3.9

$$y = 4.4982\text{E-}004 * x + 1.7404\text{E-}005$$

$$R = 1.0000$$

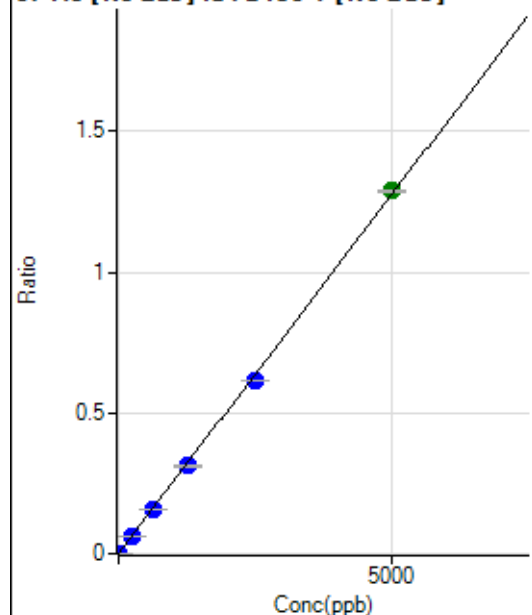
$$DL = 0.04254$$

$$BEC = 0.03869$$

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	111.12	0.0000	P	22.2
2	☐	0.500	0.500	1033.41	0.0001	P	13.0
3	☐	5.000	5.075	9517.41	0.0013	P	3.9
4	☐	250.000	249.094	444678.03	0.0635	P	0.6
5	☐	625.000	621.034	1059603.34	0.1583	P	0.8
6	☐	1250.000	1219.754	1987724.46	0.3110	P	0.4
7	☐	2500.000	2406.426	3833114.32	0.6135	P	0.4
8	☐	5000.000	5054.890	7746889.41	1.2886	A	0.6
9	☐			8986.49	0.0015	P	4.1

$$y = 2.5492\text{E-}004 * x + 1.5167\text{E-}005$$

$$R = 0.9997$$

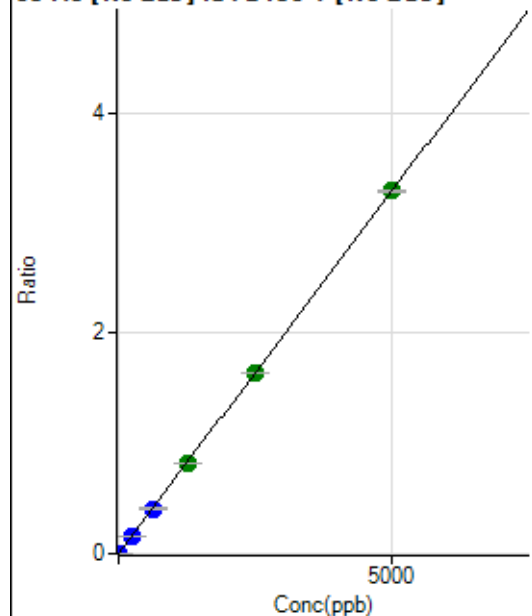
$$DL = 0.0397$$

$$BEC = 0.0595$$

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	211.12	0.0000	P	19.9
2	☐	0.500	0.502	2600.35	0.0004	P	5.8
3	☐	5.000	5.177	24961.56	0.0034	P	4.4
4	☐	250.000	250.715	1154527.94	0.1649	P	0.3
5	☐	625.000	621.571	2735671.94	0.4088	P	1.3
6	☐	1250.000	1242.018	5221191.26	0.8168	A	0.5
7	☐	2500.000	2488.170	10224193.11	1.6363	A	0.2
8	☐	5000.000	5008.303	19800417.98	3.2935	A	0.2
9	☐			22933.04	0.0037	P	2.2

$$y = 6.5761\text{E-}004 * x + 2.8802\text{E-}005$$

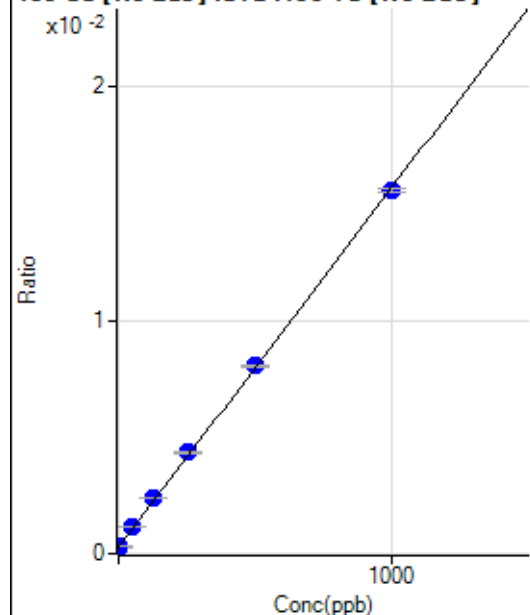
$$R = 1.0000$$

$$DL = 0.02611$$

$$BEC = 0.0438$$

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	3470.01	0.0003	P	7.8
2	☐	0.100	1.029	3578.38	0.0003	P	7.6
3	☐	1.000	2.245	3834.03	0.0003	P	3.9
4	☐	50.000	55.386	13840.64	0.0011	P	1.5
5	☐	125.000	137.234	28501.83	0.0024	P	0.9
6	☐	250.000	264.253	50716.67	0.0043	P	1.5
7	☐	500.000	505.143	92906.41	0.0081	P	0.6
8	☐	1000.000	992.066	173985.87	0.0156	P	1.2
9	☐			3075.47	0.0003	P	3.5

$$y = 1.5407\text{E-}005 * x + 2.7062\text{E-}004$$

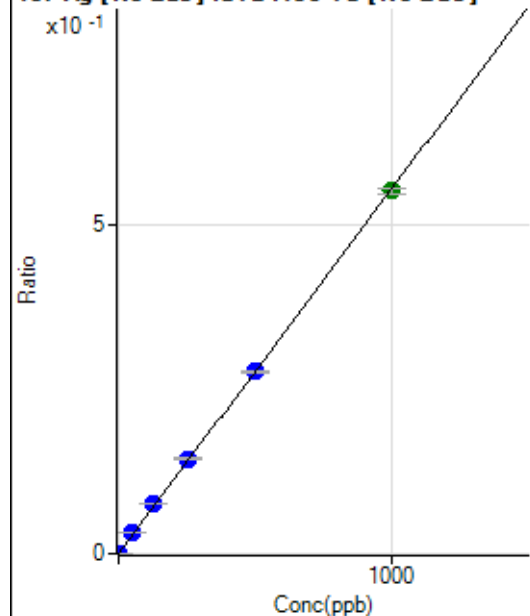
$$R = 0.9998$$

$$DL = 4.104$$

$$BEC = 17.56$$

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	133.34	0.0000	P	11.1
2	☒	0.100					
3	☐	1.000	1.232	8700.27	0.0007	P	5.7
4	☐	50.000	56.417	385048.87	0.0313	P	0.3
5	☐	125.000	138.111	914535.23	0.0765	P	0.8
6	☐	250.000	260.518	1686085.63	0.1443	P	0.8
7	☐	500.000	500.244	3197390.76	0.2772	P	0.9
8	☐	1000.000	995.288	6167590.11	0.5514	A	1.3
9	☐			1552.92	0.0001	P	10.0

$$y = 5.5403\text{E-}004 * x + 1.0399\text{E-}005$$

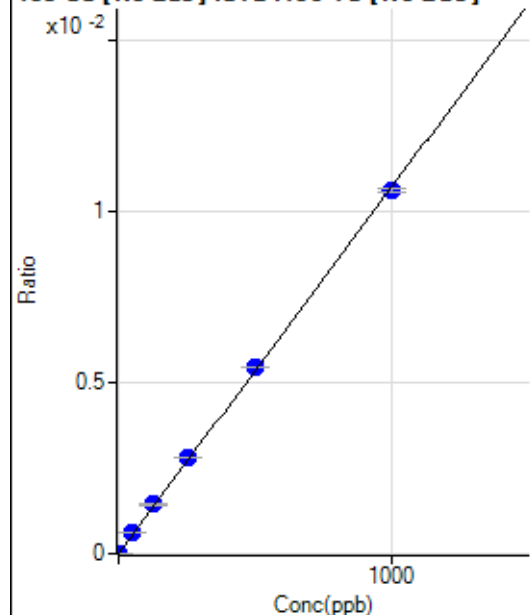
$$R = 0.9999$$

$$DL = 0.006243$$

$$BEC = 0.01877$$

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	11.11	0.0000	P	43.4
2	☐	0.100	0.064	19.44	0.0000	P	54.0
3	☐	1.000	0.945	137.50	0.0000	P	20.9
4	☐	50.000	55.649	7350.65	0.0006	P	0.8
5	☐	125.000	134.514	17228.76	0.0014	P	1.2
6	☐	250.000	262.308	32827.17	0.0028	P	1.4
7	☐	500.000	510.187	63052.28	0.0055	P	0.1
8	☐	1000.000	990.358	118656.32	0.0106	P	0.9
9	☐			45.83	0.0000	P	15.0

$$y = 1.0711\text{E-}005 * x + 8.6636\text{E-}007$$

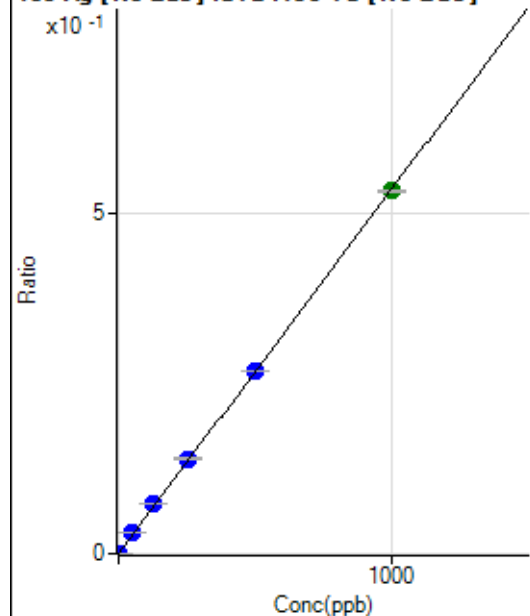
$$R = 0.9998$$

$$DL = 0.1052$$

$$BEC = 0.08089$$

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	97.23	0.0000	P	25.9
2	☐	0.100	0.129	958.41	0.0001	P	4.8
3	☐	1.000	1.217	8291.65	0.0007	P	4.1
4	☐	50.000	56.566	373669.76	0.0303	P	0.6
5	☐	125.000	137.242	879665.41	0.0736	P	0.9
6	☐	250.000	260.291	1630670.19	0.1396	P	0.8
7	☐	500.000	499.186	3088590.93	0.2677	P	0.1
8	☐	1000.000	995.976	5974581.77	0.5341	A	0.7
9	☐			1475.14	0.0001	P	10.7

$$y = 5.3630\text{E-}004 * x + 7.5786\text{E-}006$$

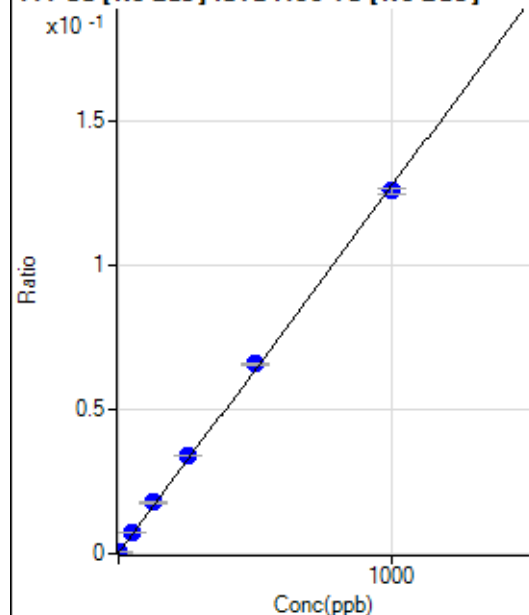
$$R = 0.9999$$

$$DL = 0.011$$

$$BEC = 0.01413$$

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	2461.79	0.0002	P	8.0
2	☒	0.100					
3	☐	1.000	1.217	4353.84	0.0003	P	5.5
4	☐	50.000	55.986	89906.99	0.0073	P	0.5
5	☐	125.000	137.432	210823.65	0.0176	P	1.1
6	☐	250.000	264.401	394384.74	0.0338	P	0.9
7	☐	500.000	514.740	756227.93	0.0655	P	0.6
8	☐	1000.000	987.176	1404070.39	0.1255	P	1.3
9	☐			2464.09	0.0002	P	4.9

$$y = 1.2697\text{E-}004 * x + 1.9199\text{E-}004$$

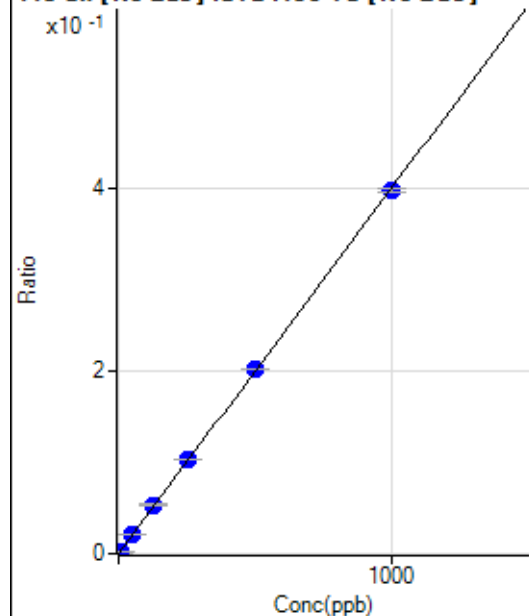
$$R = 0.9997$$

$$DL = 0.3618$$

$$BEC = 1.512$$

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	588.93	0.0000	P	11.2
2	☐	0.500	0.598	3556.17	0.0003	P	3.8
3	☐	5.000	5.673	29036.54	0.0023	P	3.9
4	☐	50.000	54.046	266420.14	0.0216	P	0.3
5	☐	125.000	134.004	640234.15	0.0536	P	0.9
6	☐	250.000	258.945	1208748.96	0.1035	P	0.8
7	☐	500.000	507.380	2338664.70	0.2027	P	0.0
8	☐	1000.000	992.742	4435827.75	0.3966	P	1.1
9	☐			2903.21	0.0003	P	2.2

$$y = 3.9945\text{E-}004 * x + 4.5919\text{E-}005$$

$$R = 0.9999$$

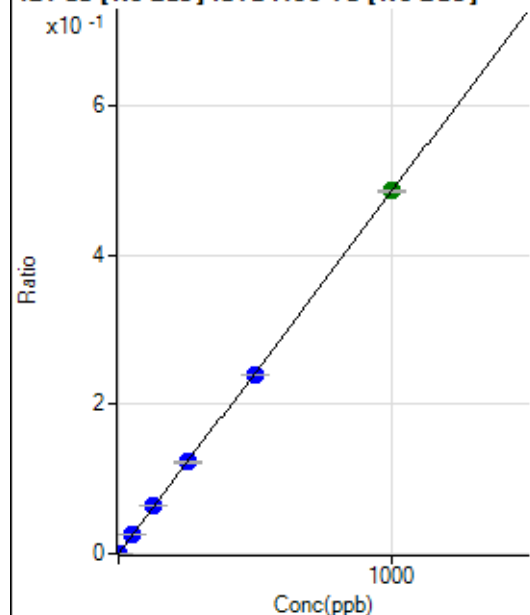
$$DL = 0.03878$$

$$BEC = 0.115$$

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	86.11	0.0000	P	31.4
2	☐	0.200	0.219	1411.25	0.0001	P	7.0
3	☐	2.000	2.050	12595.02	0.0010	P	2.5
4	☐	50.000	52.325	313020.72	0.0254	P	0.8
5	☐	125.000	130.469	757271.50	0.0634	P	0.5
6	☐	250.000	252.265	1431090.74	0.1225	P	0.8
7	☐	500.000	493.414	2764456.14	0.2396	P	0.2
8	☐	1000.000	1001.927	5442470.48	0.4866	A	0.7
9	☐			8903.17	0.0008	P	1.9

$$y = 4.8563\text{E-}004 * x + 6.7183\text{E-}006$$

$$R = 1.0000$$

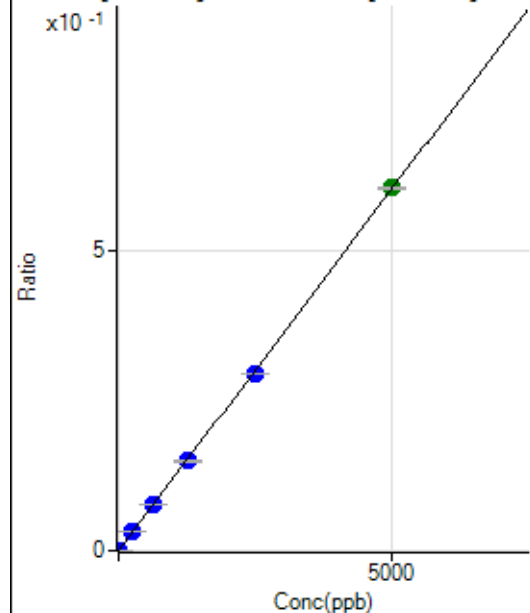
$$DL = 0.01303$$

$$BEC = 0.01383$$

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	94.45	0.0000	P	13.2
2	☐	1.000	1.061	1686.29	0.0001	P	4.0
3	☐	10.000	10.752	16340.76	0.0013	P	3.8
4	☐	250.000	259.464	384501.52	0.0312	P	0.5
5	☐	625.000	644.105	926145.95	0.0775	P	0.7
6	☐	1250.000	1241.391	1744583.40	0.1494	P	1.1
7	☐	2500.000	2449.848	3400224.55	0.2947	P	0.8
8	☐	5000.000	5024.365	6761181.14	0.6045	A	0.6
9	☐			1550.15	0.0001	P	13.0

$$y = 1.2031\text{E-}004 * x + 7.3636\text{E-}006$$

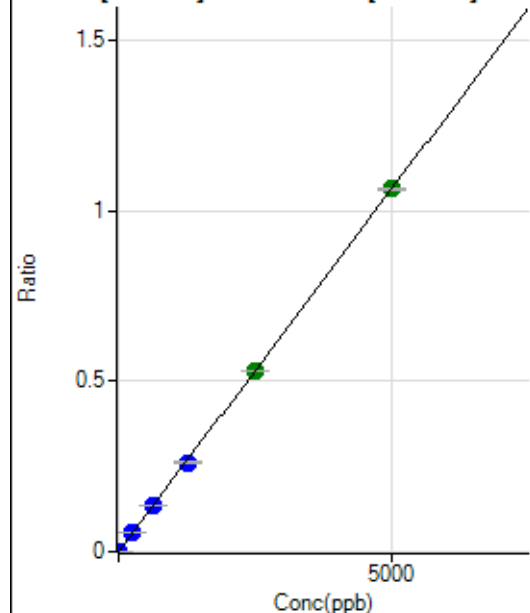
$$R = 0.9999$$

$$DL = 0.02431$$

$$BEC = 0.06121$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	105.56	0.0000	P	16.7
2	☐	1.000	1.034	2853.19	0.0002	P	3.3
3	☐	10.000	10.827	29064.64	0.0023	P	2.3
4	☐	250.000	257.015	673888.06	0.0547	P	0.1
5	☐	625.000	637.165	1621052.03	0.1356	P	0.9
6	☐	1250.000	1231.460	3062250.01	0.2622	P	1.1
7	☐	2500.000	2495.029	6127681.78	0.5312	A	0.1
8	☐	5000.000	5005.248	11918065.72	1.0655	A	0.8
9	☐			2761.51	0.0002	P	9.3

$$y = 2.1288\text{E-}004 * x + 8.2340\text{E-}006$$

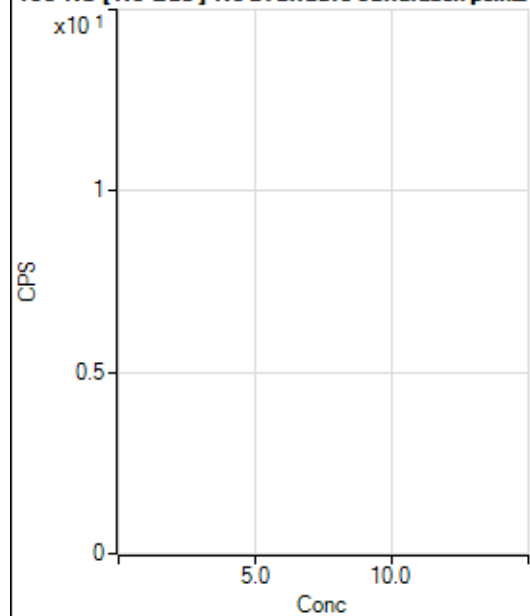
$$R = 1.0000$$

$$DL = 0.01944$$

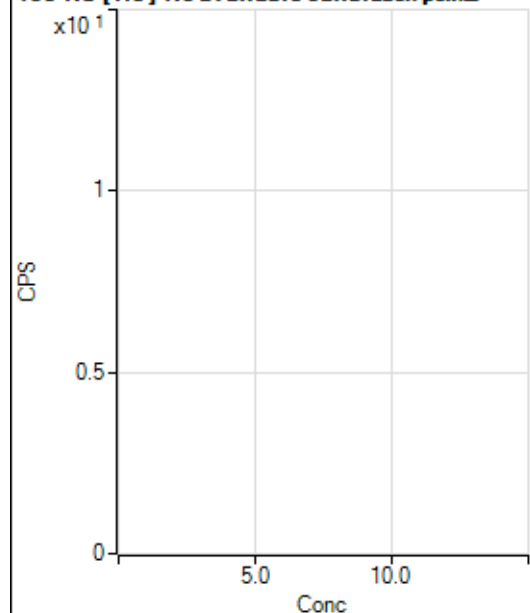
$$BEC = 0.03868$$

Weight: <None>

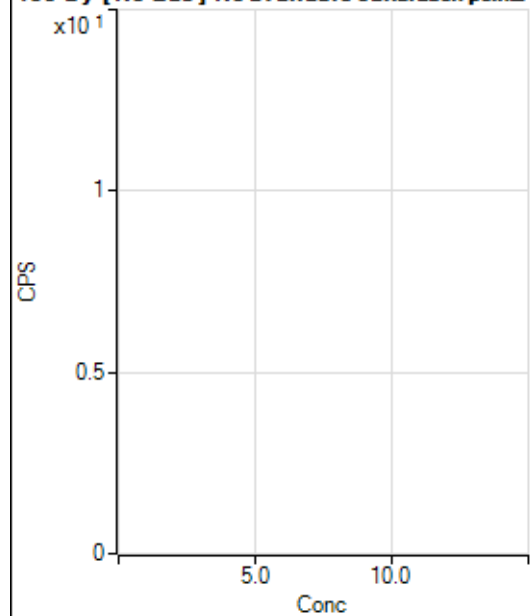
Min Conc: 0

150 Nd [No Gas] No available calibration points

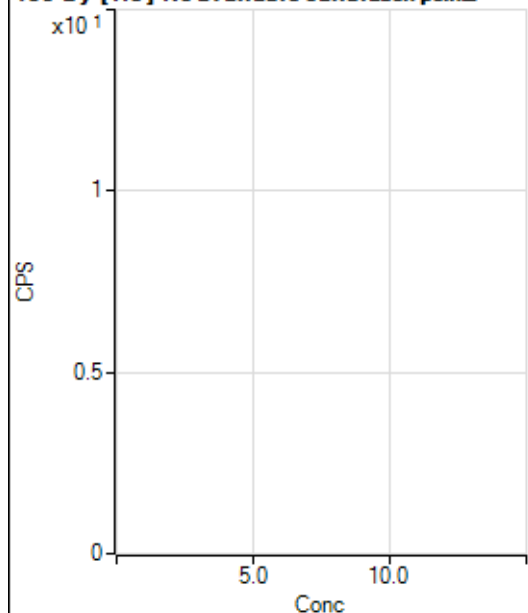
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	173.2
2	☐			8.89		P	114.5
3	☐			13.33		P	100.0
4	☐			51.11		P	15.1
5	☐			137.78		P	5.6
6	☐			168.90		P	6.0
7	☐			295.57		P	13.8
8	☐			588.93		P	3.5
9	☐			77.78		P	32.5

150 Nd [He] No available calibration points

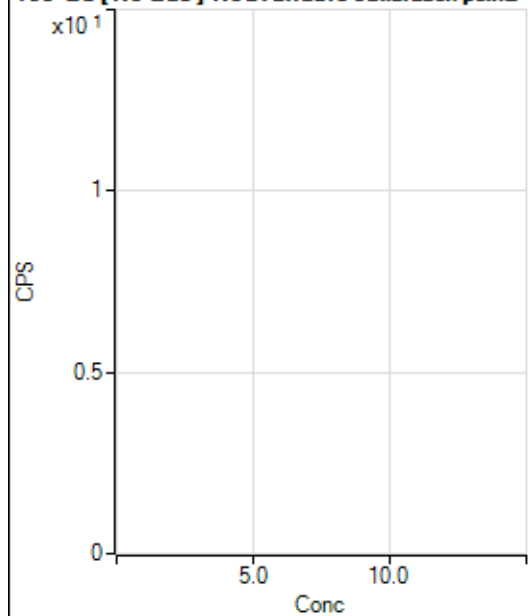
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	43.4
2	☐			7.78		P	49.5
3	☐			12.22		P	68.7
4	☐			10.00		P	33.3
5	☐			10.00		P	33.3
6	☐			32.22		P	29.8
7	☐			28.89		P	17.6
8	☐			42.22		P	22.8
9	☐			26.67		P	12.5

156 Dy [No Gas] No available calibration points

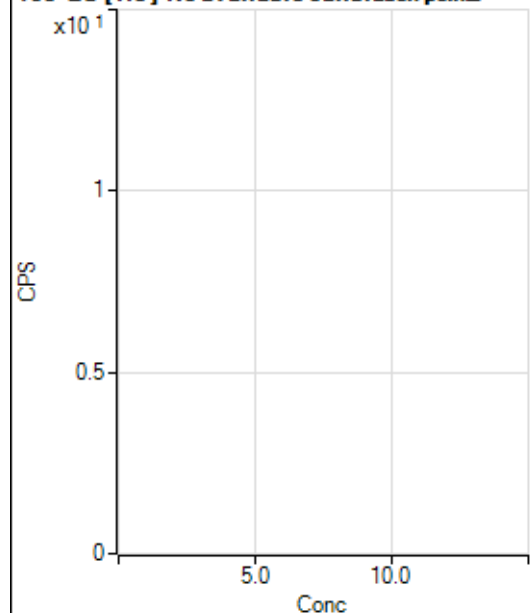
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			33.33		P	50.0
2	☐			13.89		P	124.9
3	☐			5.56		P	173.2
4	☐			50.00		P	28.9
5	☐			41.67		P	20.0
6	☐			38.89		P	32.7
7	☐			91.67		P	18.2
8	☐			136.12		P	24.7
9	☐			44.45		P	28.7

156 Dy [He] No available calibration points

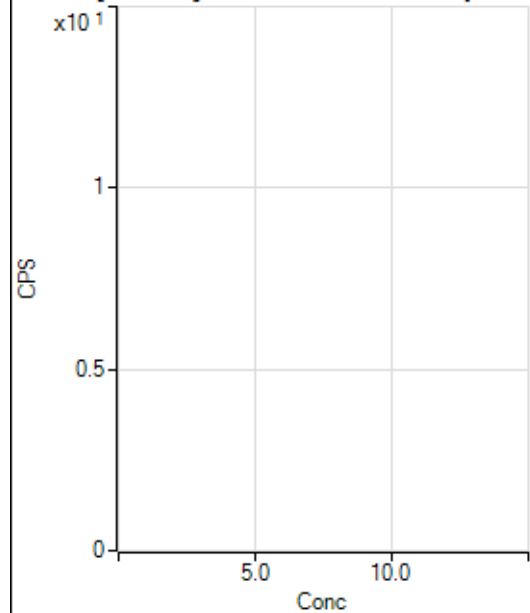
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			14.45		P	26.7
2	☐			24.45		P	64.4
3	☐			20.00		P	33.4
4	☐			25.56		P	30.1
5	☐			40.00		P	22.0
6	☐			44.44		P	26.3
7	☐			64.45		P	31.6
8	☐			80.00		P	19.1
9	☐			37.78		P	31.0

160 Gd [No Gas] Noavailable calibration poin_

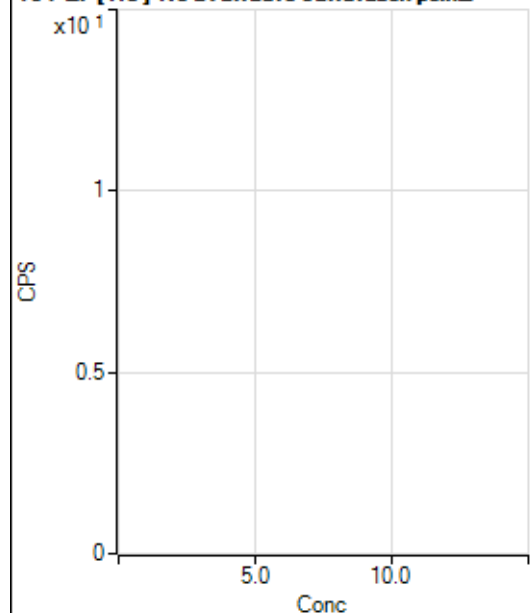
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			66.67		P	12.5
2	☐			72.22		P	29.0
3	☐			72.23		P	17.6
4	☐			66.67		P	54.5
5	☐			88.89		P	19.5
6	☐			61.12		P	34.3
7	☐			94.45		P	18.4
8	☐			83.33		P	17.3
9	☐			66.67		P	12.5

160 Gd [He] No available calibration points

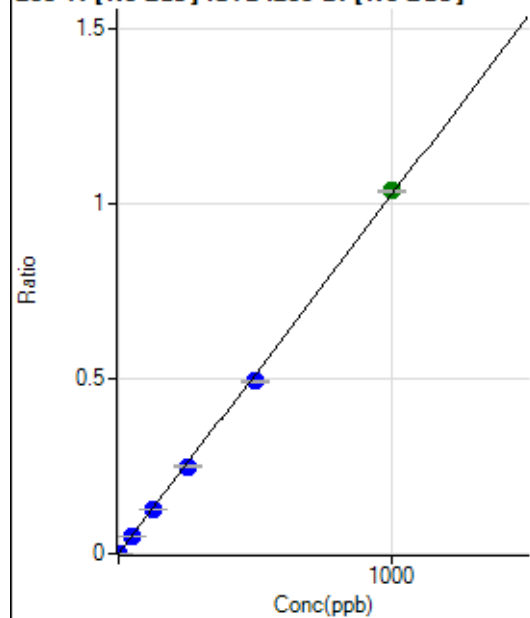
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			114.45		P	20.7
2	☐			120.00		P	12.7
3	☐			114.45		P	24.3
4	☐			123.34		P	2.7
5	☐			132.23		P	10.5
6	☐			112.22		P	32.7
7	☐			118.89		P	4.3
8	☐			123.34		P	5.4
9	☐			137.78		P	16.1

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			69.45		P	25.0
2	☐			52.78		P	24.1
3	☐			83.34		P	36.1
4	☐			77.78		P	43.3
5	☐			58.34		P	14.3
6	☐			72.23		P	37.1
7	☐			91.67		P	18.2
8	☐			66.67		P	25.0
9	☐			61.11		P	41.7

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			61.11		P	37.1
2	☐			71.11		P	7.2
3	☐			55.55		P	6.9
4	☐			57.78		P	13.3
5	☐			62.22		P	16.4
6	☐			67.78		P	33.5
7	☐			52.22		P	35.2
8	☐			52.22		P	44.8
9	☐			53.33		P	16.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	794.51	0.0001	P	16.3
2	☐	0.100	0.090	1575.16	0.0002	P	3.3
3	☐	1.000	0.980	9690.04	0.0011	P	2.9
4	☐	50.000	49.278	435711.72	0.0506	P	0.7
5	☐	125.000	123.579	1059653.78	0.1267	P	0.4
6	☐	250.000	243.524	2022690.82	0.2496	P	1.3
7	☐	500.000	480.501	3858949.44	0.4924	P	0.4
8	☐	1000.000	1011.582	7742994.70	1.0365	A	0.4
9	☐			3420.02	0.0005	P	9.1

$$y = 0.0010 * x + 8.6995E-005$$

$$R = 0.9997$$

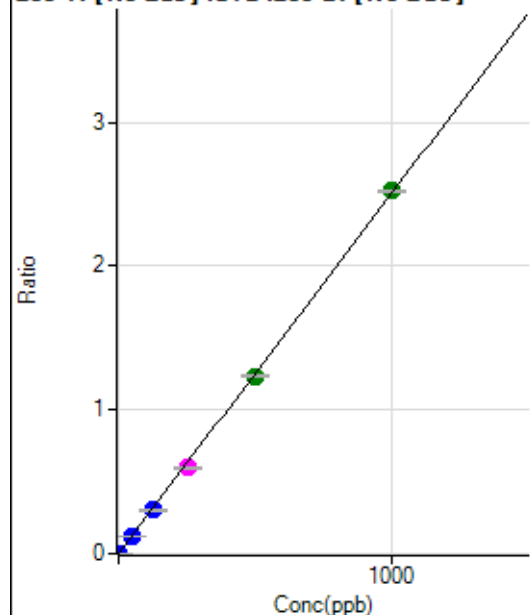
$$DL = 0.04162$$

$$BEC = 0.08491$$

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	1230.67	0.0001	P	4.6
2	☐	0.100	0.098	3347.80	0.0004	P	1.9
3	☐	1.000	1.008	23624.60	0.0027	P	4.1
4	☐	50.000	48.436	1046434.78	0.1215	P	0.4
5	☐	125.000	120.384	2523128.53	0.3017	P	1.1
6	☐	250.000	237.606	4823867.95	0.5953	M	3.2
7	☐	500.000	492.914	9677911.41	1.2348	A	0.7
8	☐	1000.000	1007.297	18849671.95	2.5233	A	0.7
9	☐			7866.54	0.0012	P	8.1

$$y = 0.0025 * x + 1.3479E-004$$

$$R = 0.9999$$

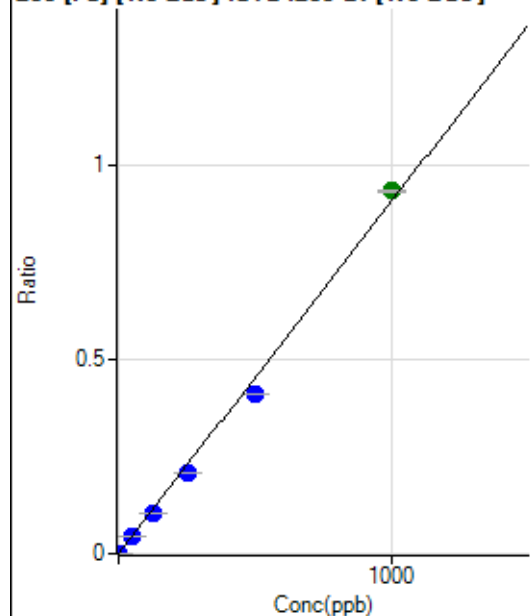
$$DL = 0.007385$$

$$BEC = 0.05381$$

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	1092.67	0.0001	P	6.3
2	☐	0.100	0.105	1883.53	0.0002	P	5.8
3	☐	1.000	1.069	9663.01	0.0011	P	3.1
4	☐	50.000	46.480	363671.90	0.0422	P	0.6
5	☐	125.000	116.132	880581.58	0.1053	P	0.8
6	☐	250.000	229.563	1685784.38	0.2080	P	1.2
7	☐	500.000	453.575	3220170.93	0.4109	P	0.4
8	☐	1000.000	1029.606	6966343.10	0.9325	A	0.4
9	☐			8275.02	0.0012	P	2.8

$$y = 9.0560E-004 * x + 1.1971E-004$$

$$R = 0.9983$$

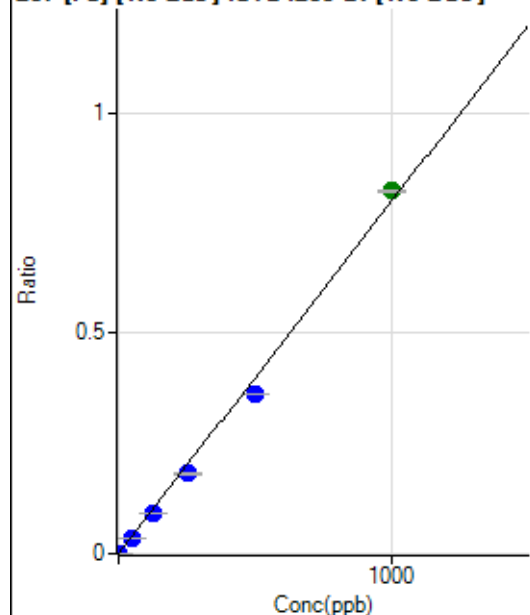
$$DL = 0.02502$$

$$BEC = 0.1322$$

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	1057.48	0.0001	P	3.2
2	☐	0.100	0.097	1696.46	0.0002	P	2.3
3	☐	1.000	1.002	8143.46	0.0009	P	2.5
4	☐	50.000	46.088	318249.22	0.0369	P	0.4
5	☐	125.000	115.972	775945.16	0.0928	P	1.4
6	☐	250.000	227.933	1476833.45	0.1822	P	1.4
7	☐	500.000	453.951	2843582.01	0.3628	P	0.2
8	☐	1000.000	1029.865	6147957.02	0.8230	A	0.4
9	☐			7539.37	0.0011	P	4.7

$$y = 7.9900\text{E-}004 * x + 1.1584\text{E-}004$$

$$R = 0.9983$$

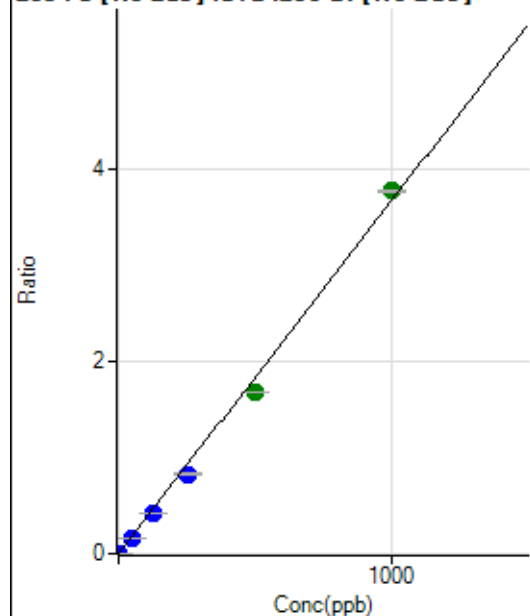
$$DL = 0.01392$$

$$BEC = 0.145$$

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	3889.20	0.0004	P	1.3
2	☐	0.100	0.099	6926.81	0.0008	P	1.9
3	☐	1.000	1.019	37028.24	0.0042	P	3.3
4	☐	50.000	45.761	1452084.23	0.1685	P	0.5
5	☐	125.000	114.808	3531165.82	0.4222	P	0.7
6	☐	250.000	224.902	6699588.81	0.8267	P	1.2
7	☐	500.000	459.565	13235620.64	1.6888	A	0.3
8	☐	1000.000	1027.978	28215858.79	3.7771	A	0.5
9	☐			33355.97	0.0049	P	2.3

$$y = 0.0037 * x + 4.2603\text{E-}004$$

$$R = 0.9985$$

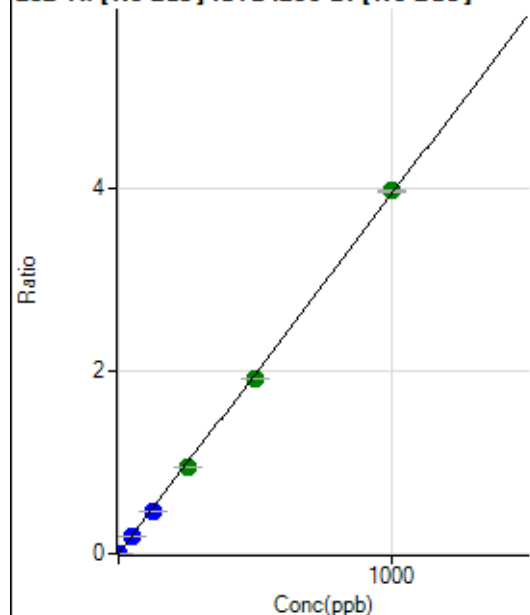
$$DL = 0.004399$$

$$BEC = 0.116$$

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	2694.81	0.0003	P	4.4
2	☐	0.100	0.076	5232.68	0.0006	P	4.1
3	☐	1.000	0.858	32594.72	0.0037	P	5.0
4	☐	50.000	46.668	1584319.71	0.1839	P	0.6
5	☐	125.000	117.484	3867911.89	0.4625	P	1.4
6	☐	250.000	241.812	7712192.47	0.9516	A	1.0
7	☐	500.000	487.422	15031073.02	1.9179	A	0.2
8	☐	1000.000	1009.442	29668496.73	3.9716	A	0.7
9	☐			10799.24	0.0016	P	5.2

$$y = 0.0039 * x + 2.9518E-004$$

$$R = 0.9998$$

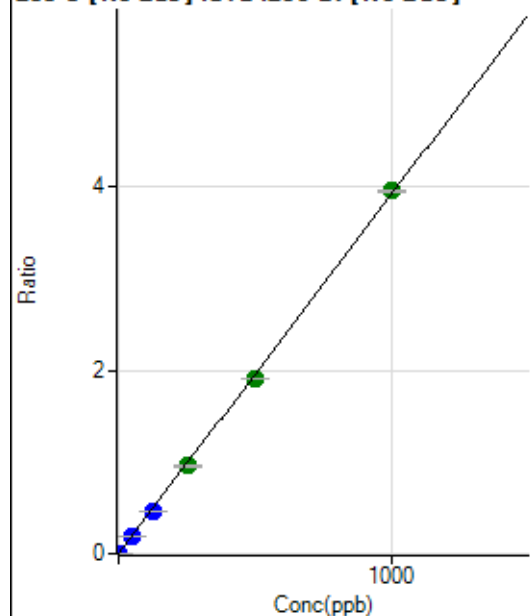
$$DL = 0.009808$$

$$BEC = 0.07503$$

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	3514.52	0.0004	P	4.2
2	☐	0.100	0.090	6493.55	0.0007	P	1.9
3	☐	1.000	0.955	36697.22	0.0041	P	5.4
4	☐	50.000	47.430	1607012.21	0.1865	P	0.6
5	☐	125.000	118.920	3906677.17	0.4671	P	0.8
6	☐	250.000	243.343	7743096.62	0.9554	A	1.0
7	☐	500.000	486.543	14968407.71	1.9099	A	0.7
8	☐	1000.000	1009.281	29593194.41	3.9615	A	0.8
9	☐			7919.42	0.0012	P	13.6

$$y = 0.0039 * x + 3.8502E-004$$

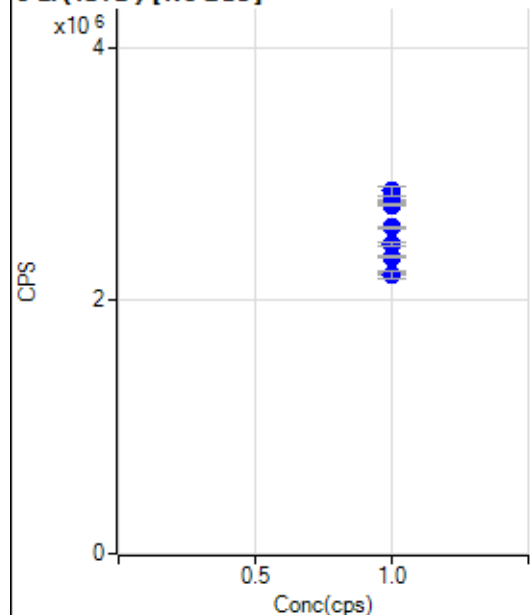
$$R = 0.9998$$

$$DL = 0.01227$$

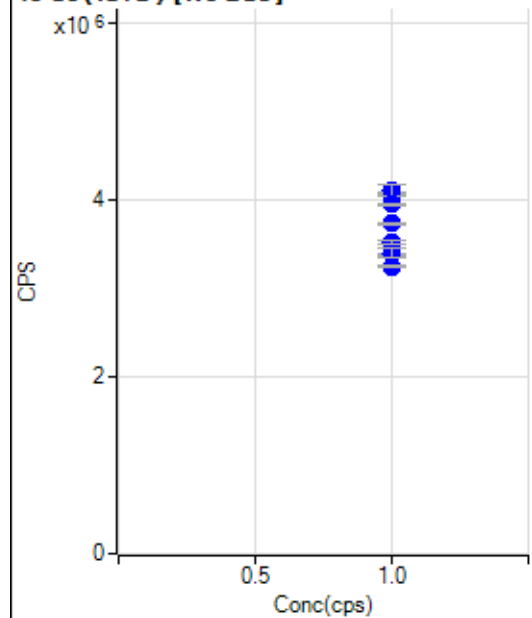
$$BEC = 0.0981$$

Weight: <None>

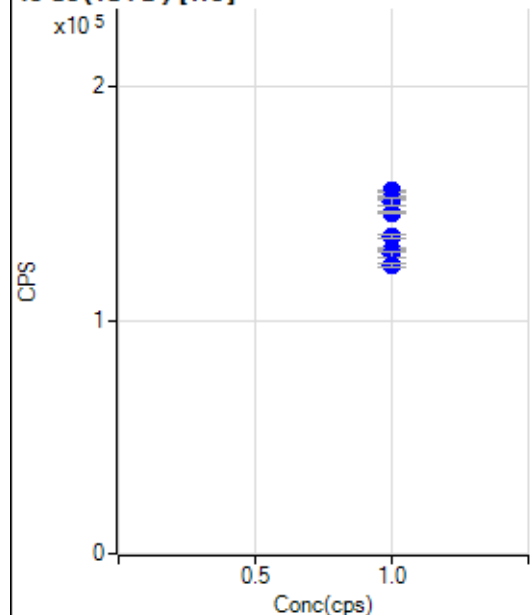
Min Conc: 0

6 Li (ISTD) [No Gas]

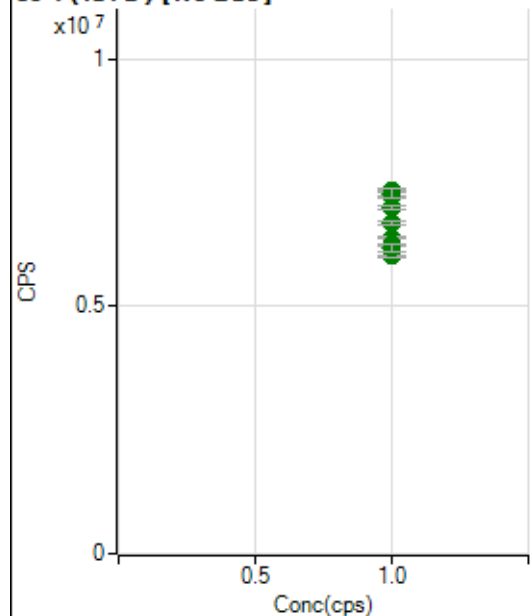
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2790485.41		P	0.5
2	☐	1.000		2834228.22		P	0.1
3	☐	1.000		2869208.78		P	2.4
4	☐	1.000		2754234.82		P	0.6
5	☐	1.000		2578299.93		P	0.9
6	☐	1.000		2446067.55		P	0.9
7	☐	1.000		2345832.12		P	0.5
8	☐	1.000		2209238.46		P	0.3
9	☐	1.000		2200471.75		P	2.7

45 Sc (ISTD) [No Gas]

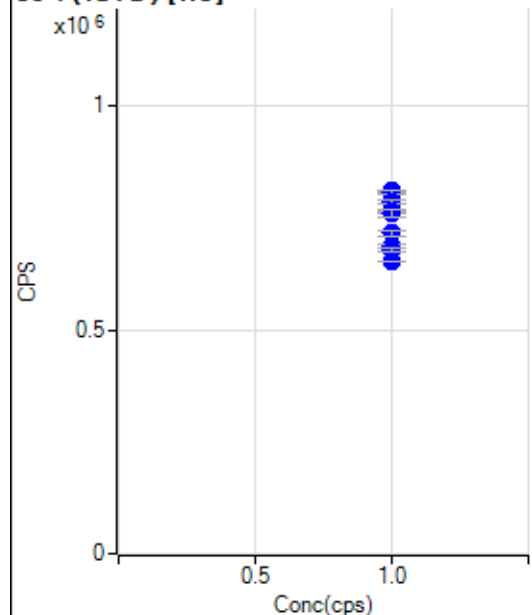
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4043993.62		P	0.4
2	☐	1.000		4066005.43		P	0.7
3	☐	1.000		4095299.83		P	3.2
4	☐	1.000		3941328.34		P	1.0
5	☐	1.000		3723632.50		P	1.0
6	☐	1.000		3511694.56		P	1.1
7	☐	1.000		3383632.37		P	0.6
8	☐	1.000		3237276.96		P	0.7
9	☐	1.000		3395433.69		P	2.8

45 Sc (ISTD) [He]

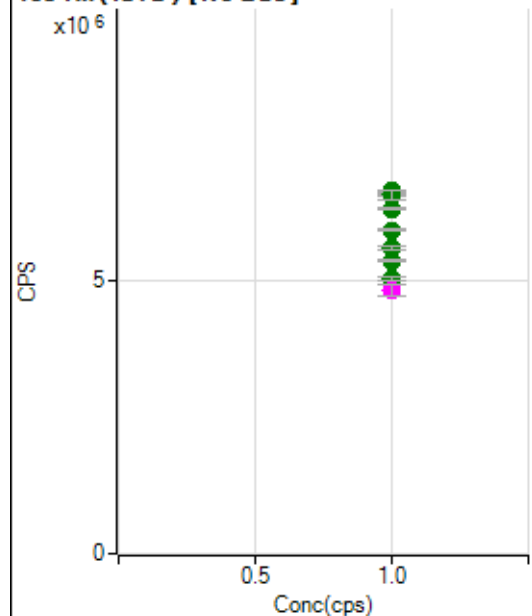
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		155442.69		P	0.5
2	☐	1.000		154739.23		P	0.1
3	☐	1.000		152404.44		P	1.4
4	☐	1.000		146055.73		P	0.3
5	☐	1.000		135615.52		P	1.2
6	☐	1.000		130487.05		P	0.5
7	☐	1.000		128207.53		P	1.5
8	☐	1.000		123697.59		P	1.4
9	☐	1.000		150758.41		P	1.9

89 Y (ISTD) [No Gas]

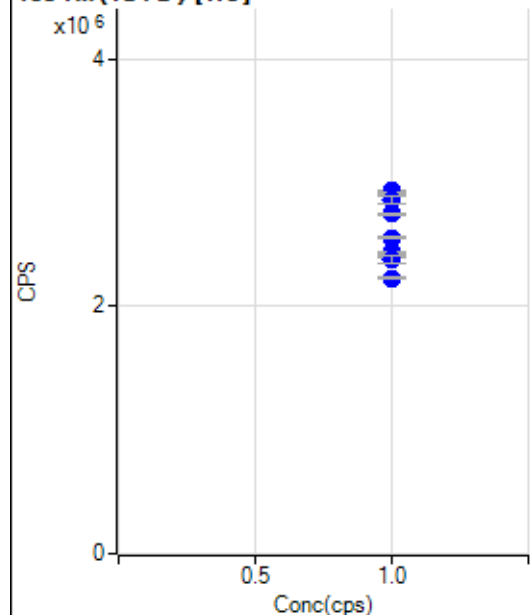
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7333879.75		A	0.7
2	☐	1.000		7242147.60		A	0.1
3	☐	1.000		7276618.92		A	2.7
4	☐	1.000		7001407.12		A	0.8
5	☐	1.000		6692810.39		A	1.1
6	☐	1.000		6392414.77		A	0.6
7	☐	1.000		6248414.21		A	0.7
8	☐	1.000		6011910.19		A	0.4
9	☐	1.000		6166026.16		A	2.5

89 Y (ISTD) [He]

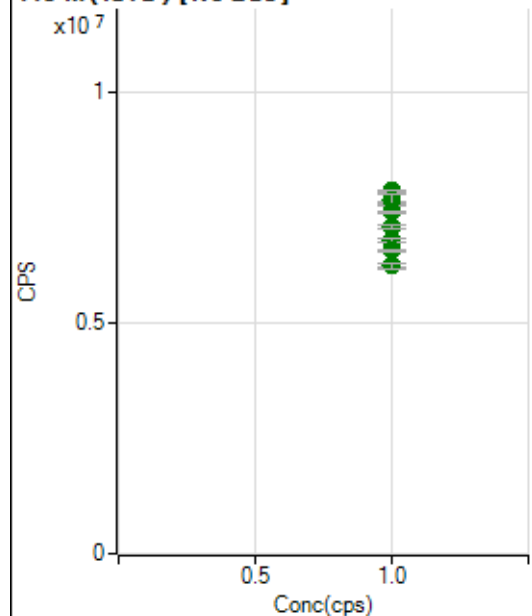
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		810911.24		P	0.4
2	☐	1.000		808627.46		P	0.8
3	☐	1.000		787895.00		P	1.3
4	☐	1.000		763904.42		P	0.5
5	☐	1.000		716790.90		P	1.5
6	☐	1.000		687112.07		P	1.3
7	☐	1.000		679918.06		P	1.3
8	☐	1.000		653296.07		P	0.6
9	☐	1.000		760418.55		P	2.2

103 Rh (ISTD) [No Gas]

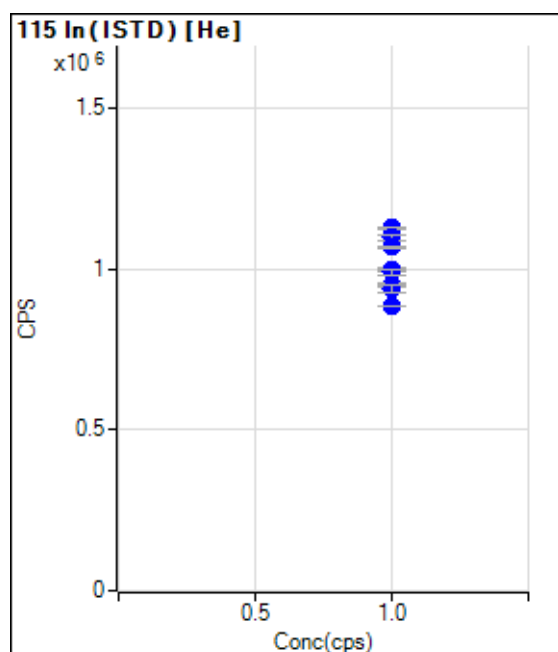
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6666402.62		A	0.7
2	☐	1.000		6581763.86		A	0.5
3	☐	1.000		6593986.82		A	2.8
4	☐	1.000		6339164.59		A	0.3
5	☐	1.000		5953433.94		A	0.9
6	☐	1.000		5618546.09		A	1.1
7	☐	1.000		5382449.99		A	0.9
8	☐	1.000		5052987.48		A	0.7
9	☐	1.000		4837216.43		M	4.7

103 Rh (ISTD) [He]

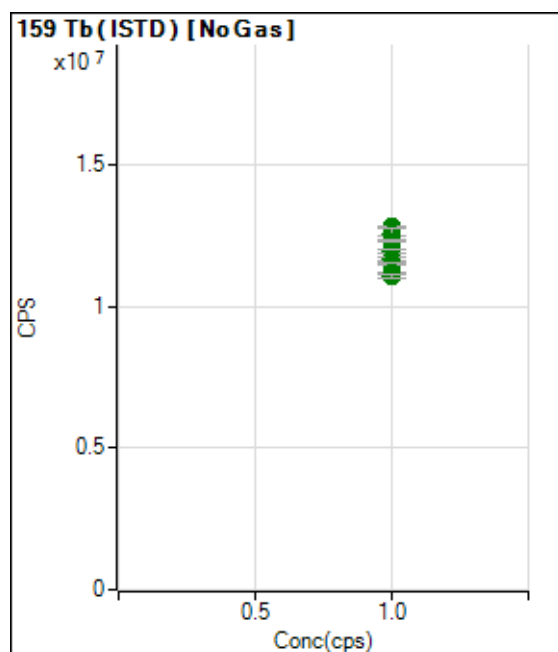
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2933084.85		P	0.5
2	☐	1.000		2916939.26		P	0.6
3	☐	1.000		2855392.22		P	2.3
4	☐	1.000		2747568.05		P	0.5
5	☐	1.000		2556321.49		P	1.0
6	☐	1.000		2435488.80		P	1.0
7	☐	1.000		2372611.20		P	1.8
8	☐	1.000		2225528.75		P	0.5
9	☐	1.000		2379799.15		P	2.1

115 In (ISTD) [No Gas]

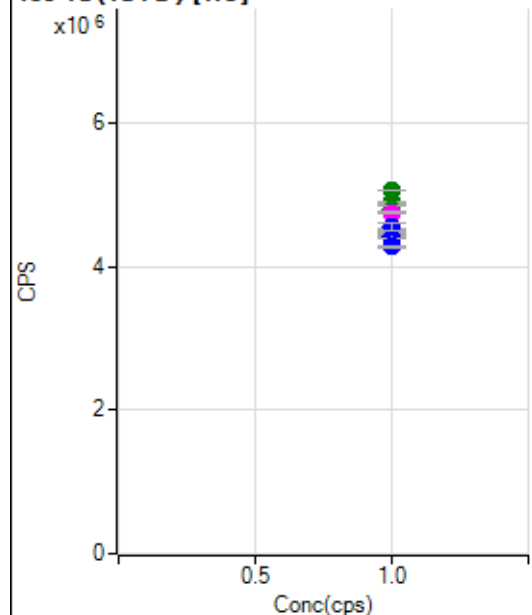
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7865184.66		A	0.3
2	☐	1.000		7625379.32		A	0.5
3	☐	1.000		7672718.62		A	3.6
4	☐	1.000		7400882.58		A	1.0
5	☐	1.000		7094995.41		A	1.1
6	☐	1.000		6784258.61		A	1.0
7	☐	1.000		6585778.84		A	0.7
8	☐	1.000		6251948.22		A	1.0
9	☐	1.000		6237549.04		A	1.9



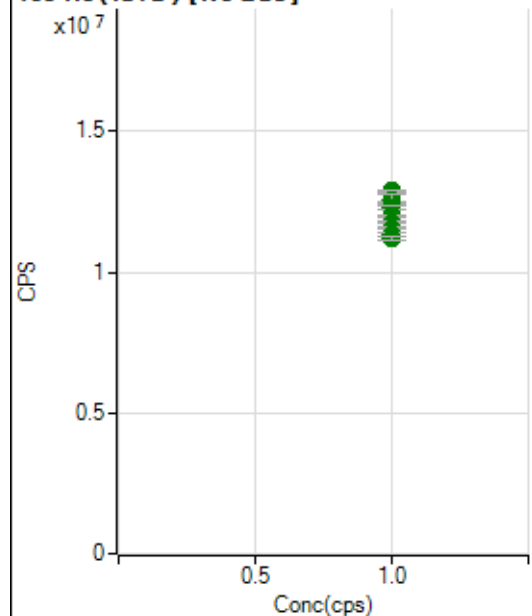
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1127886.36		P	0.4
2	☐	1.000		1126227.47		P	0.6
3	☐	1.000		1099924.12		P	1.6
4	☐	1.000		1067323.46		P	0.4
5	☐	1.000		998251.73		P	1.2
6	☐	1.000		952434.38		P	1.3
7	☐	1.000		936566.86		P	2.4
8	☐	1.000		882874.26		P	0.2
9	☐	1.000		990641.57		P	2.1



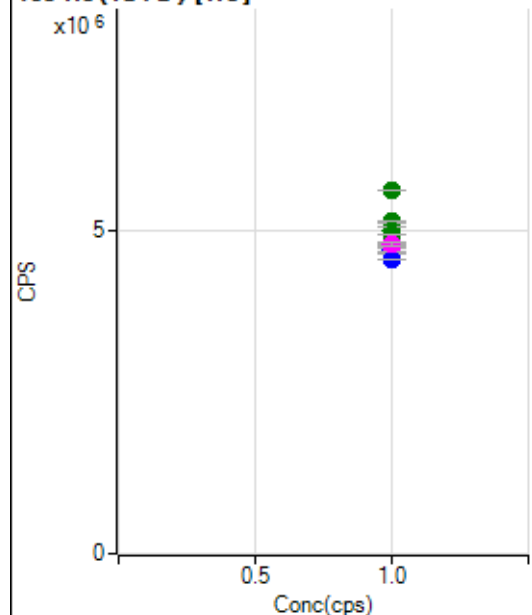
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12824269.67		A	0.3
2	☐	1.000		12491933.01		A	0.2
3	☐	1.000		12570596.76		A	3.2
4	☐	1.000		12314793.15		A	0.6
5	☐	1.000		11950848.71		A	0.8
6	☐	1.000		11681457.88		A	0.9
7	☐	1.000		11536626.63		A	0.6
8	☐	1.000		11185729.00		A	1.1
9	☐	1.000		11095665.39		A	0.9

159 Tb (ISTD) [He]

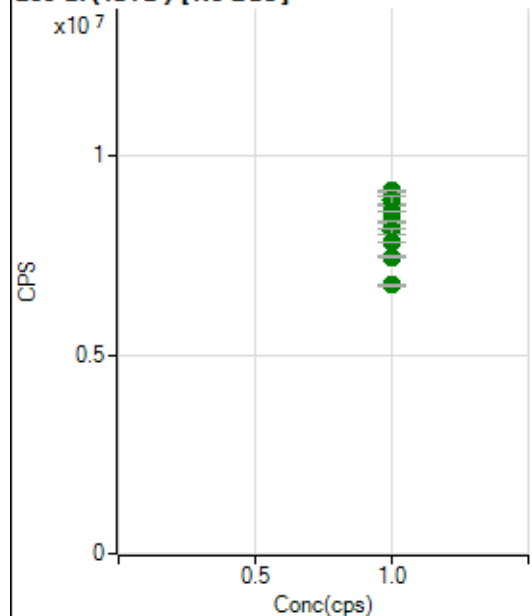
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5051860.20		A	0.1
2	☐	1.000		4891094.51		A	0.8
3	☐	1.000		4790270.45		A	2.5
4	☐	1.000		4748891.60		M	0.6
5	☐	1.000		4562012.19		P	1.3
6	☐	1.000		4430033.37		P	0.8
7	☐	1.000		4430628.82		P	1.8
8	☐	1.000		4283527.92		P	0.6
9	☐	1.000		4555418.65		P	2.0

165 Ho (ISTD) [No Gas]

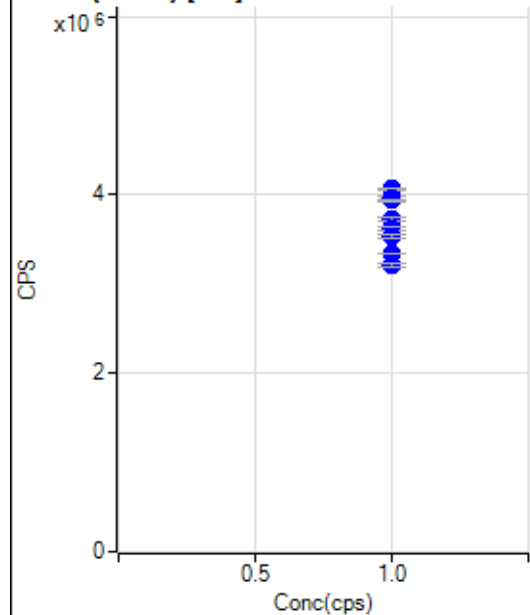
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12891135.62		A	0.6
2	☐	1.000		12459490.12		A	0.3
3	☐	1.000		12569855.84		A	3.4
4	☐	1.000		12305747.41		A	0.7
5	☐	1.000		11992496.28		A	0.4
6	☐	1.000		11784774.57		A	0.8
7	☐	1.000		11565551.65		A	0.7
8	☐	1.000		11309341.40		A	1.2
9	☐	1.000		11206062.49		A	0.7

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5604083.80		A	0.1
2	☐	1.000		5126522.56		A	0.5
3	☐	1.000		4994119.34		A	2.1
4	☐	1.000		4931435.45		A	0.5
5	☐	1.000		4743336.59		M	1.1
6	☐	1.000		4686035.38		P	1.3
7	☐	1.000		4647959.13		M	0.8
8	☐	1.000		4546323.68		P	0.4
9	☐	1.000		4790808.99		M	1.1

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9129184.93		A	0.5
2	☐	1.000		8786096.12		A	0.4
3	☐	1.000		8888125.70		A	2.8
4	☐	1.000		8615281.89		A	0.3
5	☐	1.000		8363697.03		A	0.6
6	☐	1.000		8104997.93		A	1.2
7	☐	1.000		7837407.87		A	0.5
8	☐	1.000		7470512.60		A	0.8
9	☐	1.000		6754707.26		A	0.3

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4062856.29		P	0.5
2	☐	1.000		4065011.71		P	0.5
3	☐	1.000		3969926.30		P	1.1
4	☐	1.000		3933697.13		P	0.4
5	☐	1.000		3735641.96		P	1.0
6	☐	1.000		3613377.97		P	1.3
7	☐	1.000		3535694.43		P	1.5
8	☐	1.000		3342864.12		P	0.2
9	☐	1.000		3212371.41		P	1.5

US EPA Tune Check Sample Report

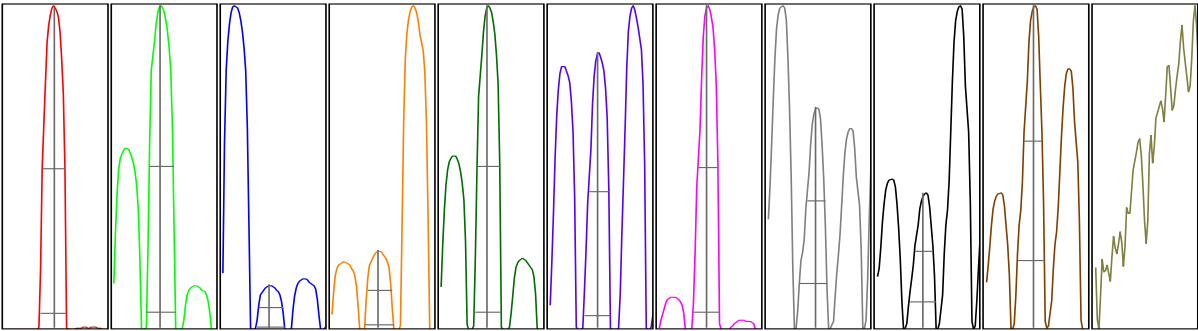
Batch Folder D:\ICP-MS Data\P7101519 MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	6624	1.31	5.00	
24	71229	1.40	5.00	
25	9624	1.52	5.00	
26	11287	1.43	5.00	
59	47630	1.29	5.00	
113	8226	0.89	5.00	
115	94936	0.93	5.00	
206	32679	0.39	5.00	
207	32667	0.50	5.00	
208	70601	0.52	5.00	
220	126	3.10		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	6726	6676	6652	6543	6526
24	72577	71662	71389	70452	70064
25	9814	9727	9605	9521	9456
26	11479	11417	11280	11144	11114
59	48251	48197	47683	47127	46891
113	8257	8312	8254	8184	8124
115	95990	95153	95462	94263	93813
206	32545	32765	32850	32664	32573
207	32696	32745	32883	32516	32493
208	70421	71073	70910	70301	70298
220	124	124	130	131	123

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	10669	9.00	8.9 - 9.1		0.783	0.900	
24	109519	23.90	23.9 - 24.1		0.832	0.900	
25	14673	24.90	24.9 - 25.1		0.832	0.900	
26	17056	25.90	25.9 - 26.1		0.834	0.900	
59	77256	58.90	58.9 - 59.1		0.785	0.900	
113	14347	112.95	112.9 - 113.1		0.777	0.900	
115	169077	114.95	114.9 - 115.1		0.767	0.900	
206	57667	205.95	205.9 - 206.1		0.794	0.900	
207	52155	206.90	206.9 - 207.1		0.760	0.900	
208	124154	207.95	207.9 - 208.1		0.782	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	5.4	V	Deflect	11.8	V
Extract 2	-95.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-50	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	140	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	11449	0.48	
89	10213	0.65	
205	25960	0.33	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	11509	11472	11477	11378	11406
89	10262	10282	10225	10174	10119
205	26063	25959	26005	25939	25834

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	5.8	V	Deflect	1.2	V
Extract 2	-105.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-55	V	Cell Exit	-60	V			

Cell Parameters

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