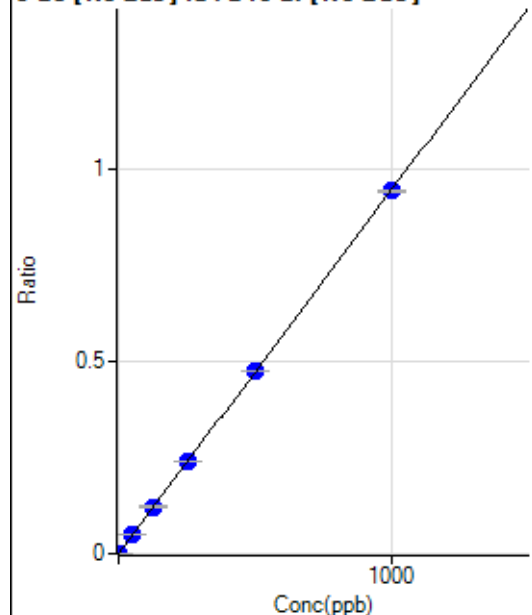


Calibration for 007CALS.d

Batch Folder: D:\ICP-MS Data\P7102117-MS.b\
 Analysis File: P7102117-MS.batch.bin
 DA Date-Time: 2017-10-21 17:10:49
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2017-10-21 14:37:49
2			
3	005CALS.d	S02	2017-10-21 14:45:29
4	006CALS.d	S03	2017-10-21 14:49:14
5	007CALS.d	S04	2017-10-21 14:52:59
6	008CALS.d	S05	2017-10-21 14:56:41
7	009CALS.d	S06	2017-10-21 15:00:19
8	010CALS.d	S07	2017-10-21 15:03:53
9	011CALS.d	S08	2017-10-21 15:07:22

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.78	0.0000	P	60.1
2	☐	0.100					
3	☐	1.000	0.932	1013.03	0.0009	P	2.9
4	☐	50.000	53.090	56540.54	0.0501	P	0.9
5	☐	125.000	129.364	139858.37	0.1221	P	0.3
6	☐	250.000	254.150	271364.11	0.2398	P	0.7
7	☐	500.000	501.556	523736.67	0.4733	P	0.3
8	☐	1000.000	997.485	1031382.56	0.9412	P	0.7
9	☐			388.90	0.0004	P	7.8

$$y = 9.4358\text{E-}004 * x + 2.4580\text{E-}005$$

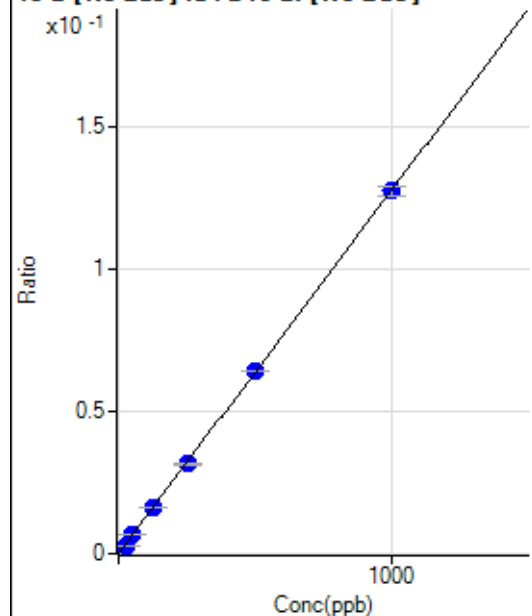
$$R = 1.0000$$

$$DL = 0.04695$$

$$BEC = 0.02605$$

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	83.34	0.0001	P	0.4
2	☐	2.500					
3	☐	25.000	22.396	3281.03	0.0029	P	5.2
4	☐	50.000	50.586	7360.45	0.0065	P	1.3
5	☐	125.000	125.838	18467.42	0.0161	P	2.7
6	☐	250.000	247.606	35809.94	0.0316	P	1.6
7	☐	500.000	503.466	71128.64	0.0643	P	0.6
8	☐	1000.000	998.797	139645.23	0.1274	P	2.8
9	☐			5312.27	0.0051	P	8.2

$$y = 1.2752\text{E-}004 * x + 7.3674\text{E-}005$$

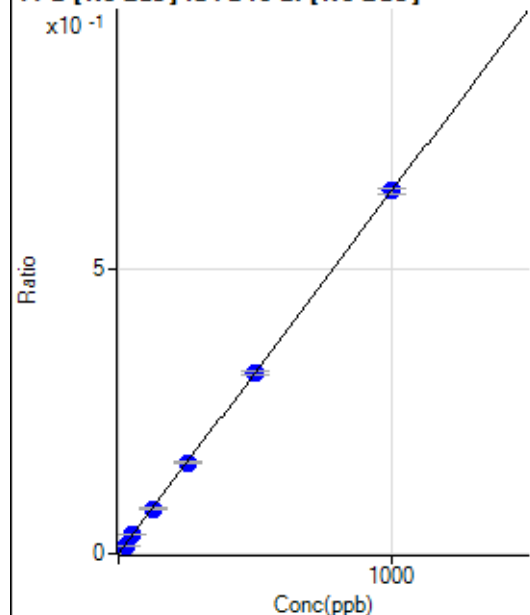
$$R = 1.0000$$

$$DL = 0.006218$$

$$BEC = 0.5777$$

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	397.25	0.0004	P	4.9
2	☐	2.500					
3	☐	25.000	22.484	16415.00	0.0147	P	2.8
4	☐	50.000	50.790	36851.35	0.0327	P	1.1
5	☐	125.000	123.521	90427.96	0.0789	P	2.8
6	☐	250.000	249.861	180268.47	0.1593	P	1.6
7	☐	500.000	498.525	351383.58	0.3175	P	1.8
8	☐	1000.000	1000.981	698245.00	0.6372	P	1.3
9	☐			25530.89	0.0244	P	10.1

$$y = 6.3624\text{E-}004 * x + 3.5113\text{E-}004$$

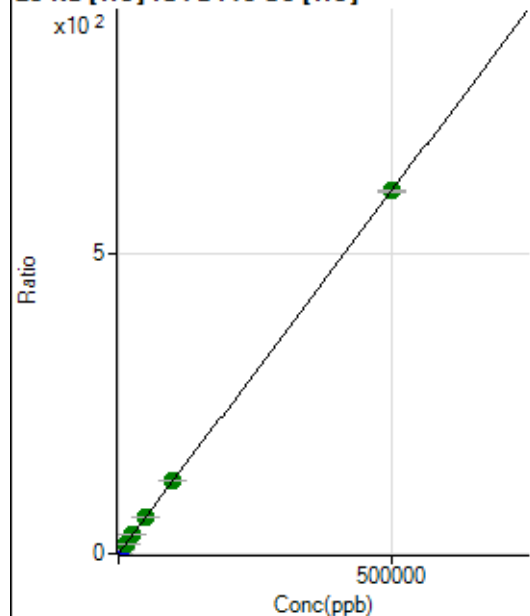
$$R = 1.0000$$

$$DL = 0.0817$$

$$BEC = 0.5519$$

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	13392.60	0.0573	P	4.9
2	☐	50.000					
3	☐	500.000	473.575	145716.58	0.6286	P	0.4
4	☐	5000.000	5244.984	1476630.66	6.3847	P	0.0
5	☐	12500.000	12947.840	3586644.35	15.6773	A	0.8
6	☐	25000.000	25373.679	6962879.15	30.6675	A	1.2
7	☐	50000.000	50205.972	13755620.97	60.6246	A	0.7
8	☐	100000.00	99668.601	27387887.42	120.2951	A	0.4
9	☐	500000.00	500013.37	137897053.0	603.2614	A	0.5

$$y = 0.0012 * x + 0.0573$$

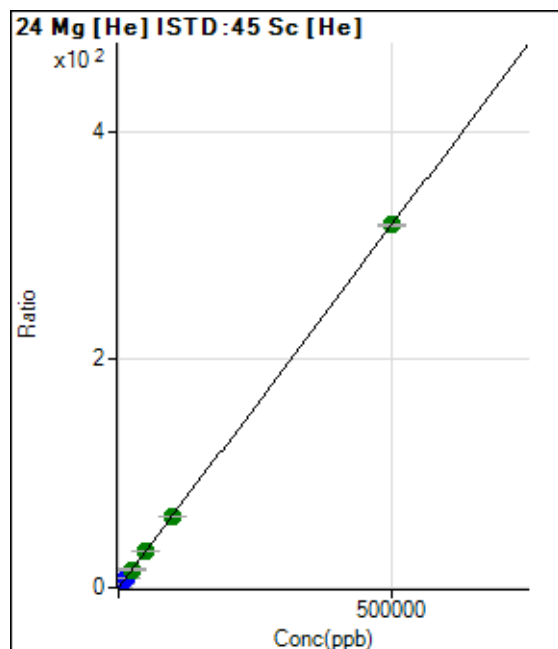
$$R = 1.0000$$

$$DL = 7.021$$

$$BEC = 47.51$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	611.15	0.0026	P	7.8
2	☐	50.000					
3	☐	500.000	461.050	68501.71	0.2955	P	1.4
4	☐	5000.000	5155.184	758041.26	3.2777	P	0.5
5	☐	12500.000	12761.223	1855376.23	8.1099	P	0.6
6	☐	25000.000	25061.475	3615619.05	15.9243	A	1.2
7	☐	50000.000	49376.297	7118260.92	31.3716	A	0.4
8	☐	100000.00	97847.197	14152686.77	62.1653	A	1.1
9	☐	500000.00	500481.81	72679974.54	317.9605	A	0.8

$$y = 6.3530E-004 * x + 0.0026$$

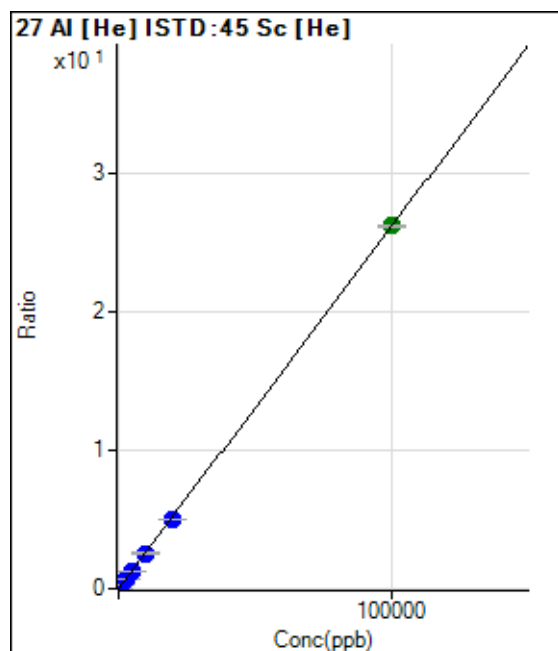
$$R = 1.0000$$

$$DL = 0.9603$$

$$BEC = 4.117$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94.45	0.0004	P	21.8
2	☐	2.000					
3	☐	20.000	16.803	1111.20	0.0048	P	3.4
4	☐	1000.000	999.996	60501.08	0.2616	P	0.5
5	☐	2500.000	2504.510	149751.18	0.6546	P	1.3
6	☐	5000.000	4963.764	294461.60	1.2969	P	0.8
7	☐	10000.000	9752.986	578065.67	2.5478	P	1.5
8	☐	20000.000	19307.301	1148201.42	5.0433	P	0.6
9	☐	100000.00	100164.94	5980717.67	26.1628	A	0.3

$$y = 2.6119E-004 * x + 4.0480E-004$$

$$R = 1.0000$$

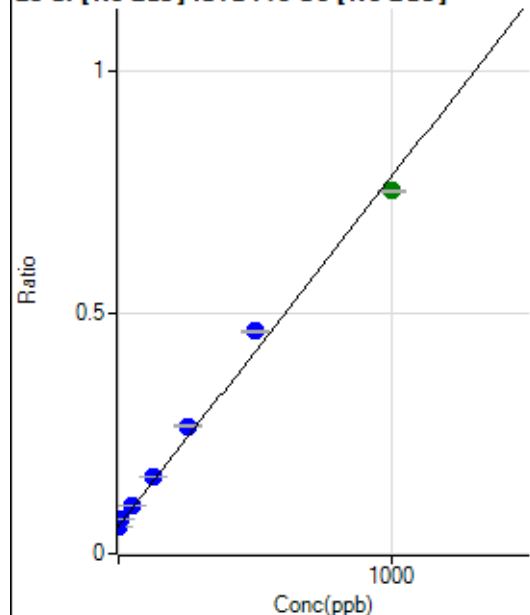
$$DL = 1.011$$

$$BEC = 1.55$$

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	284160.81	0.0574	P	1.0
2	☐	1.000					
3	☐	10.000	18.715	338310.26	0.0709	P	1.2
4	☐	50.000	59.880	479456.97	0.1007	P	0.5
5	☐	125.000	142.922	761095.29	0.1609	P	0.6
6	☐	250.000	286.432	1233266.64	0.2648	P	0.4
7	☐	500.000	557.634	2120896.47	0.4612	P	1.4
8	☐	1000.000	959.254	3468433.85	0.7520	A	0.4
9	☐			386373.51	0.0832	P	0.9

$$y = 7.2412\text{E-}004 * x + 0.0574$$

$$R = 0.9968$$

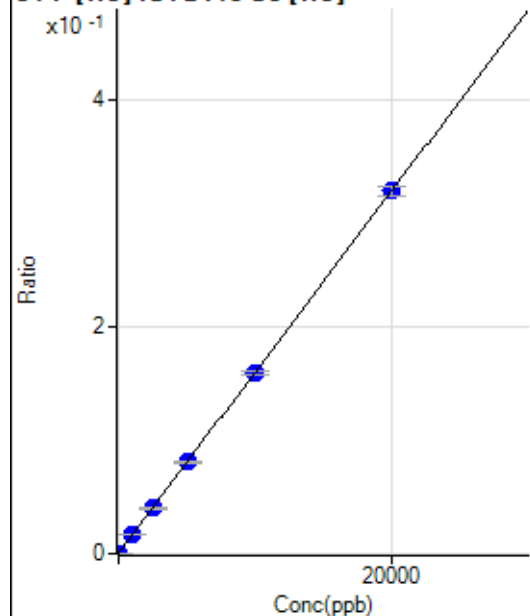
$$DL = 2.367$$

$$BEC = 79.25$$

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	-0.868	102.78	0.0004	P	3.2
2	☐	0.000					
3	☐	0.000	0.868	108.34	0.0005	P	22.9
4	☐	1000.000	1017.737	3864.55	0.0167	P	7.0
5	☐	2500.000	2495.419	9222.66	0.0403	P	3.5
6	☐	5000.000	5038.717	18375.81	0.0809	P	2.0
7	☐	10000.000	9959.842	36194.70	0.1595	P	1.7
8	☐	20000.000	20010.085	72858.75	0.3201	P	2.5
9	☐			108.34	0.0005	P	47.9

$$y = 1.5972\text{E-}005 * x + 4.5341\text{E-}004$$

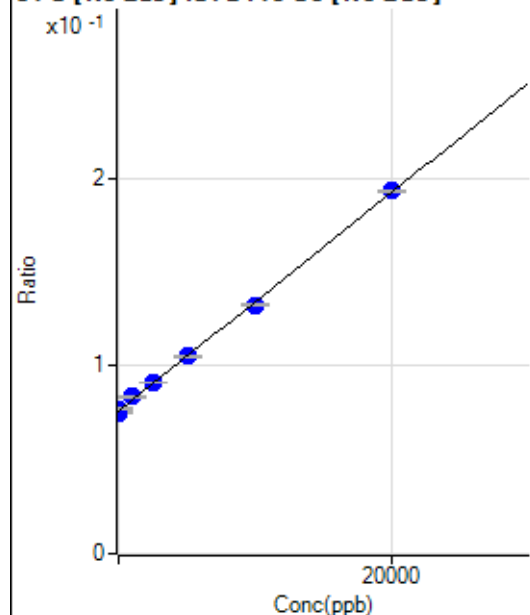
$$R = 1.0000$$

$$DL = 11.38$$

$$BEC = 28.39$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-157.741	372422.24	0.0752	P	0.8
2	☐	0.000					
3	☐	0.000	157.741	367446.46	0.0770	P	1.2
4	☐	1000.000	1336.520	399378.08	0.0839	P	1.1
5	☐	2500.000	2615.532	432284.52	0.0914	P	0.8
6	☐	5000.000	4972.276	489559.63	0.1051	P	0.8
7	☐	10000.000	9692.974	609974.41	0.1326	P	1.1
8	☐	20000.000	20129.177	892329.57	0.1935	P	0.6
9	☐			354696.11	0.0764	P	0.9

$$y = 5.8294\text{E-}006 * x + 0.0761$$

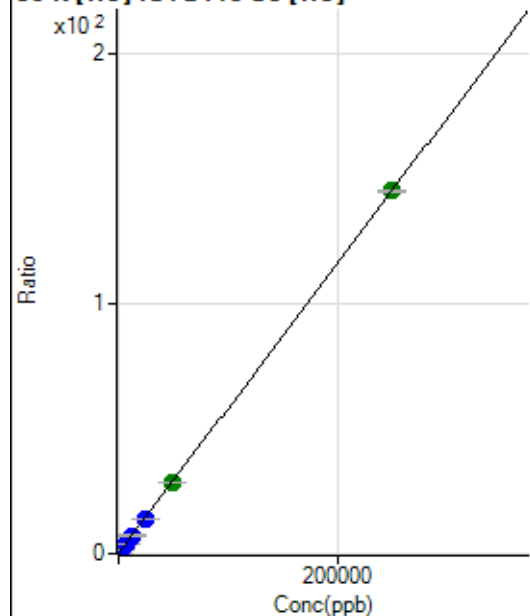
$$R = 0.9996$$

$$DL = 392.6$$

$$BEC = 1.306\text{E}+04$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25851.09	0.1106	P	2.2
2	☐	50.000					
3	☐	500.000	451.645	86272.56	0.3722	P	0.3
4	☐	2500.000	2518.985	363016.10	1.5696	P	0.6
5	☐	6250.000	6243.883	852679.21	3.7271	P	0.6
6	☐	12500.000	12403.851	1656307.64	7.2950	P	1.1
7	☐	25000.000	24256.130	3212845.01	14.1599	P	0.7
8	☐	50000.000	48648.766	6440193.55	28.2882	A	1.0
9	☐	250000.00	250349.50	33172550.39	145.1145	A	0.2

$$y = 5.7921\text{E-}004 * x + 0.1106$$

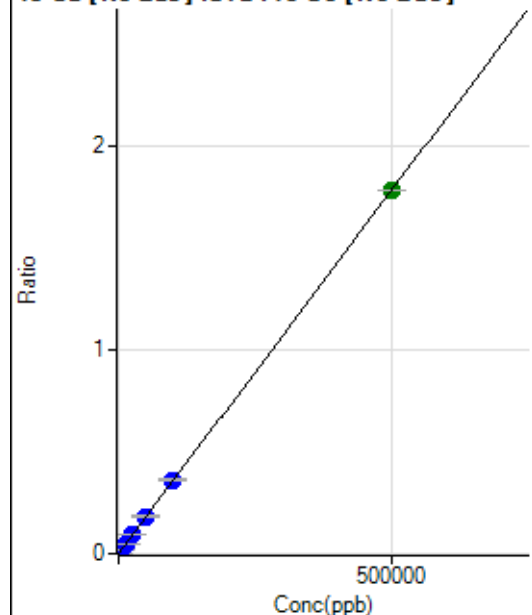
$$R = 1.0000$$

$$DL = 12.47$$

$$BEC = 190.9$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	447.25	0.0001	P	5.0
2	☐	50.000					
3	☐	500.000	458.329	8233.19	0.0017	P	3.3
4	☐	5000.000	5218.891	89087.48	0.0187	P	0.5
5	☐	12500.000	12979.830	219613.78	0.0464	P	1.6
6	☐	25000.000	25989.524	432480.70	0.0929	P	1.0
7	☐	50000.000	51434.297	844782.15	0.1837	P	1.1
8	☐	100000.00	101891.78	1677948.83	0.3638	P	0.6
9	☐	500000.00	499414.59	8281259.65	1.7828	A	0.1

$$y = 3.5696\text{E-}006 * x + 9.0298\text{E-}005$$

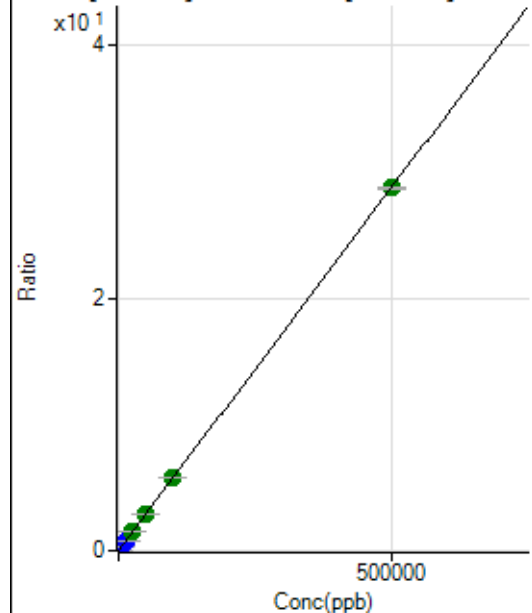
$$R = 1.0000$$

$$DL = 3.769$$

$$BEC = 25.3$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32556.30	0.0066	P	2.1
2	☐	50.000					
3	☐	500.000	460.841	157564.27	0.0330	P	1.5
4	☐	5000.000	5196.871	1451641.34	0.3050	P	0.8
5	☐	12500.000	12839.193	3519403.98	0.7439	P	0.8
6	☐	25000.000	25604.673	6879096.59	1.4771	A	1.0
7	☐	50000.000	50977.366	13495103.25	2.9342	A	0.5
8	☐	100000.00	101267.78	26854822.82	5.8225	A	0.8
9	☐	500000.00	499608.06	133315522.4	28.6995	A	0.5

$$y = 5.7431\text{E-}005 * x + 0.0066$$

$$R = 1.0000$$

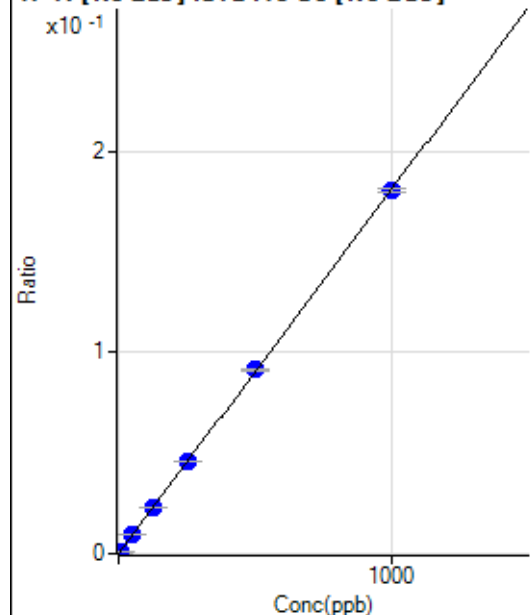
$$DL = 7.241$$

$$BEC = 114.5$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.34	0.0000	P	15.9
2	☐	0.500					
3	☐	5.000	4.451	3970.13	0.0008	P	3.3
4	☐	50.000	50.726	43799.28	0.0092	P	1.4
5	☐	125.000	126.137	108080.31	0.0228	P	0.7
6	☐	250.000	255.681	215554.62	0.0463	P	0.2
7	☐	500.000	504.342	419733.82	0.0913	P	1.0
8	☐	1000.000	996.233	831392.57	0.1803	P	1.0
9	☐			644.48	0.0001	P	10.4

$$y = 1.8091\text{E-}004 * x + 2.6910\text{E-}005$$

$$R = 1.0000$$

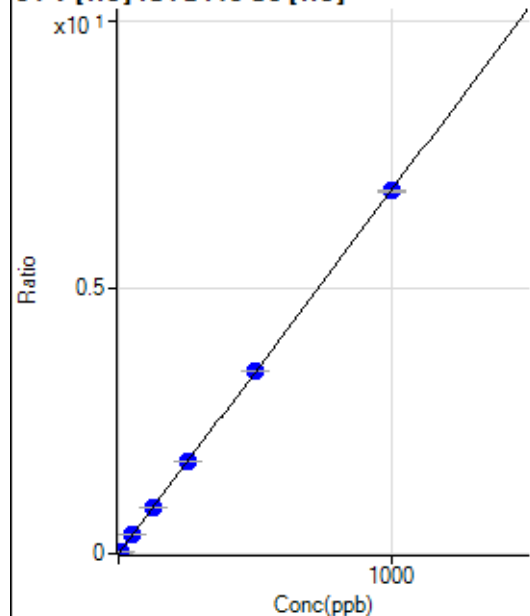
$$DL = 0.07077$$

$$BEC = 0.1487$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	88.7
2	☐	0.500					
3	☐	5.000	4.637	7353.05	0.0317	P	1.7
4	☐	50.000	51.173	80858.08	0.3496	P	0.5
5	☐	125.000	127.646	199504.17	0.8720	P	0.6
6	☐	250.000	252.573	391767.11	1.7254	P	0.6
7	☐	500.000	501.555	777442.16	3.4263	P	0.3
8	☐	1000.000	998.192	1552520.06	6.8190	P	0.4
9	☐			325.57	0.0014	P	8.8

$$y = 0.0068 * x + 4.2804\text{E-}005$$

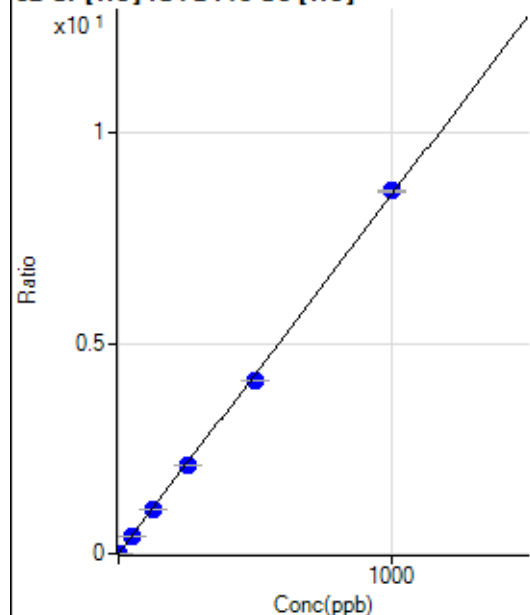
$$R = 1.0000$$

$$DL = 0.01667$$

$$BEC = 0.006266$$

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	1306.75	0.0056	P	5.3
2	☐	0.200					
3	☐	2.000	1.842	4933.12	0.0213	P	2.0
4	☐	50.000	49.347	98506.30	0.4259	P	1.4
5	☐	125.000	123.131	241240.53	1.0545	P	0.3
6	☐	250.000	243.731	472684.78	2.0818	P	0.1
7	☐	500.000	481.082	931142.09	4.1036	P	0.5
8	☐	1000.000	1011.293	1962582.13	8.6201	P	0.3
9	☐			25027.01	0.1095	P	1.2

$$y = 0.0085 * x + 0.0056$$

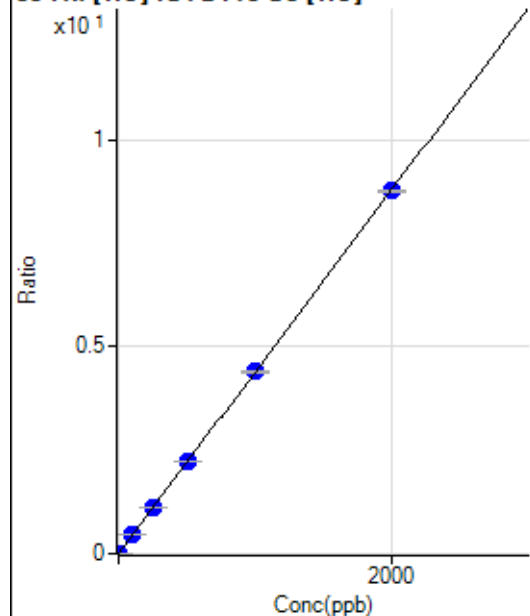
$$R = 0.9997$$

$$DL = 0.1037$$

$$BEC = 0.6565$$

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	113.34	0.0005	P	19.7
2	☐	0.100					
3	☐	1.000	0.864	992.27	0.0043	P	2.2
4	☐	100.000	103.897	105670.70	0.4569	P	0.5
5	☐	250.000	257.278	258687.48	1.1307	P	0.4
6	☐	500.000	510.512	509323.36	2.2432	P	0.9
7	☐	1000.000	1001.715	998609.73	4.4011	P	0.7
8	☐	2000.000	1995.410	1995882.64	8.7665	P	0.4
9	☐			6031.32	0.0264	P	3.9

$$y = 0.0044 * x + 4.8419E-004$$

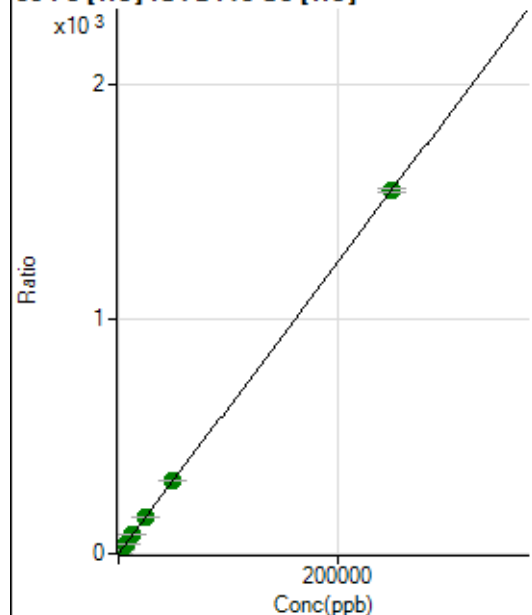
$$R = 1.0000$$

$$DL = 0.06525$$

$$BEC = 0.1102$$

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	4767.57	0.0204	P	3.8
2	☐	5.000					
3	☐	50.000	50.742	77474.40	0.3342	P	1.2
4	☐	2500.000	2648.753	3793249.19	16.4019	A	0.6
5	☐	6250.000	6528.757	9242267.57	40.3981	A	0.8
6	☐	12500.000	12839.453	18033714.06	79.4273	A	1.0
7	☐	25000.000	25305.479	35515832.04	156.5246	A	0.5
8	☐	50000.000	50746.070	71455572.90	313.8645	A	0.9
9	☐	250000.00	249794.80	353130152.3	1,544.901	A	1.0

$$y = 0.0062 * x + 0.0204$$

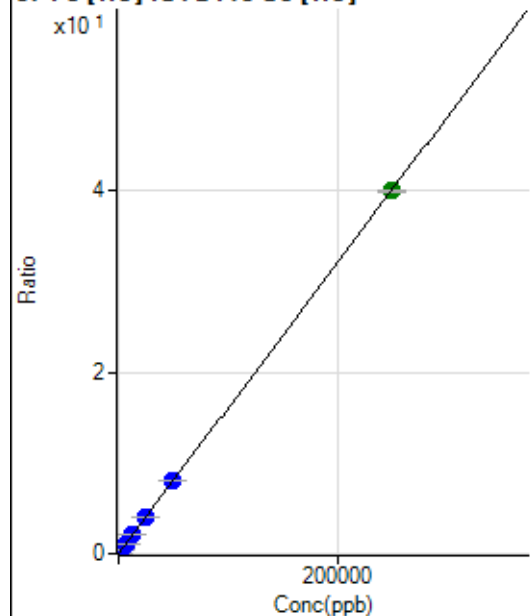
$$R = 1.0000$$

$$DL = 0.3719$$

$$BEC = 3.299$$

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	214.82	0.0009	P	7.9
2	☐	5.000					
3	☐	50.000	50.754	2094.65	0.0090	P	2.8
4	☐	2500.000	2648.480	98174.71	0.4245	P	0.2
5	☐	6250.000	6610.302	242073.44	1.0581	P	0.8
6	☐	12500.000	13017.683	472909.39	2.0829	P	1.0
7	☐	25000.000	25516.426	926187.80	4.0818	P	0.1
8	☐	50000.000	50544.620	1840647.78	8.0846	P	0.2
9	☐	250000.00	249803.05	9132883.77	39.9524	A	0.4

$$y = 1.5993E-004 * x + 9.1923E-004$$

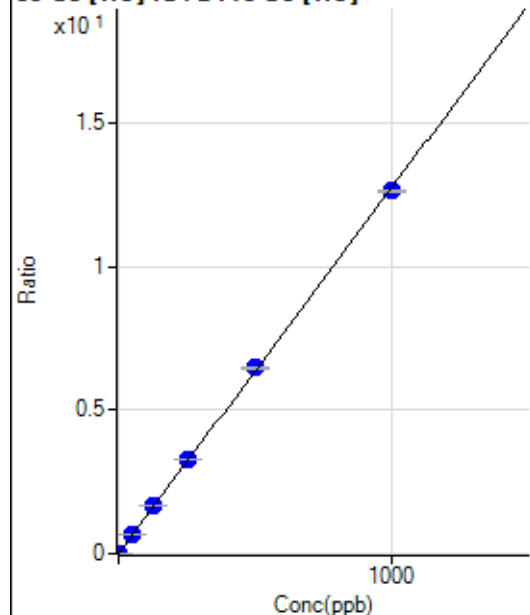
$$R = 1.0000$$

$$DL = 1.354$$

$$BEC = 5.748$$

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	128.89	0.0006	P	11.4
2	☐	0.100					
3	☐	1.000	0.960	2964.79	0.0128	P	3.3
4	☐	50.000	53.578	158107.24	0.6836	P	0.8
5	☐	125.000	132.448	386453.30	1.6892	P	0.8
6	☐	250.000	258.547	748554.96	3.2969	P	1.0
7	☐	500.000	509.253	1473300.67	6.4933	P	0.8
8	☐	1000.000	992.127	2879977.73	12.6498	P	0.3
9	☐			3763.87	0.0165	P	0.9

$$y = 0.0127 * x + 5.5179E-004$$

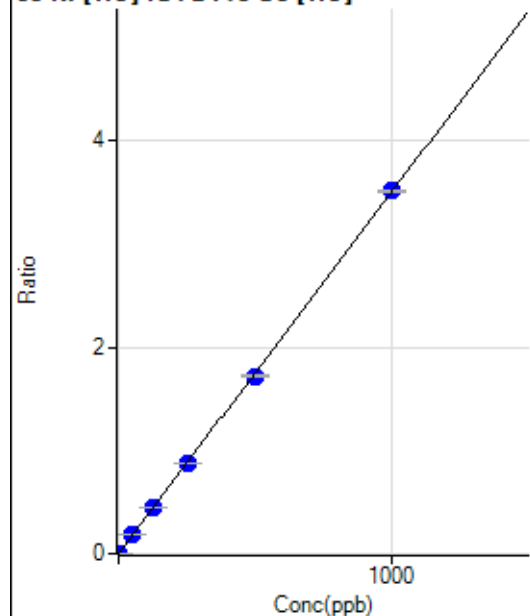
$$R = 0.9999$$

$$DL = 0.01483$$

$$BEC = 0.04328$$

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	94.45	0.0004	P	16.8
2	☐	0.100					
3	☐	1.000	0.993	898.93	0.0039	P	4.2
4	☐	50.000	52.274	42375.78	0.1832	P	1.0
5	☐	125.000	127.478	102092.39	0.4462	P	0.2
6	☐	250.000	250.629	199108.98	0.8770	P	1.4
7	☐	500.000	491.772	390353.16	1.7203	P	0.3
8	☐	1000.000	1003.533	799161.62	3.5102	P	0.3
9	☐			7916.69	0.0346	P	0.7

$$y = 0.0035 * x + 4.0349E-004$$

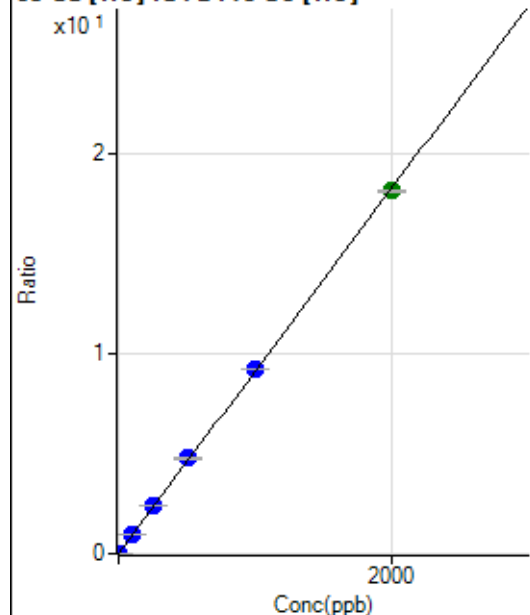
$$R = 0.9999$$

$$DL = 0.05802$$

$$BEC = 0.1154$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	942.27	0.0040	P	5.6
2	☐	0.200					
3	☐	2.000	1.976	5113.20	0.0221	P	1.7
4	☐	100.000	108.362	229580.68	0.9927	P	0.7
5	☐	250.000	264.851	553744.89	2.4204	P	0.7
6	☐	500.000	521.376	1080952.67	4.7609	P	0.9
7	☐	1000.000	1009.922	2091644.86	9.2183	P	0.4
8	☐	2000.000	1987.421	4129155.67	18.1367	A	0.4
9	☐			7497.59	0.0328	P	3.3

$$y = 0.0091 * x + 0.0040$$

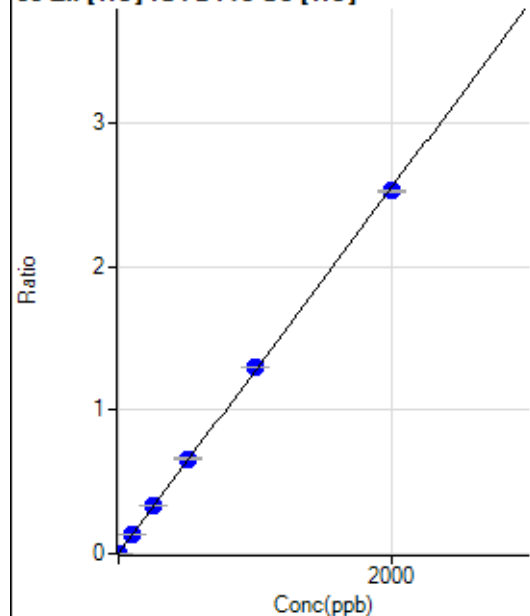
$$R = 0.9999$$

$$DL = 0.07445$$

$$BEC = 0.4419$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	383.35	0.0016	P	3.6
2	☐	0.200					
3	☐	2.000	2.170	1021.17	0.0044	P	3.0
4	☐	100.000	106.304	31712.29	0.1371	P	0.9
5	☐	250.000	263.826	77299.04	0.3379	P	0.5
6	☐	500.000	518.609	150433.70	0.6626	P	1.8
7	☐	1000.000	1020.930	295608.56	1.3028	P	0.6
8	☐	2000.000	1982.839	575708.61	2.5287	P	0.3
9	☐			2013.50	0.0088	P	5.3

$$y = 0.0013 * x + 0.0016$$

$$R = 0.9999$$

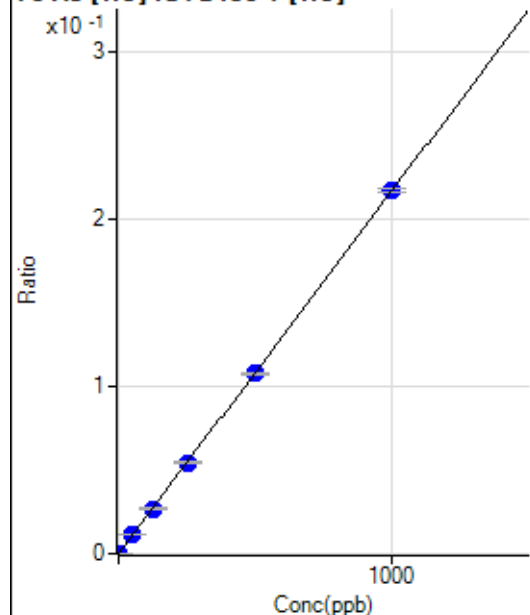
$$DL = 0.1389$$

$$BEC = 1.287$$

Weight: <None>

Min Conc: 0

75 As [He] ISTD:89 Y [He]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1.85	0.0000	P	99.1
2	☐	0.100					
3	☐	1.000	0.973	235.81	0.0002	P	9.9
4	☐	50.000	50.801	12293.53	0.0110	P	1.2
5	☐	125.000	124.672	30264.21	0.0270	P	2.3
6	☐	250.000	251.235	59987.77	0.0545	P	0.9
7	☐	500.000	496.822	118939.21	0.1078	P	1.4
8	☐	1000.000	1001.281	238412.06	0.2172	P	1.2
9	☐			115.43	0.0001	P	22.4

$$y = 2.1688\text{E-}004 * x + 1.6494\text{E-}006$$

$$R = 1.0000$$

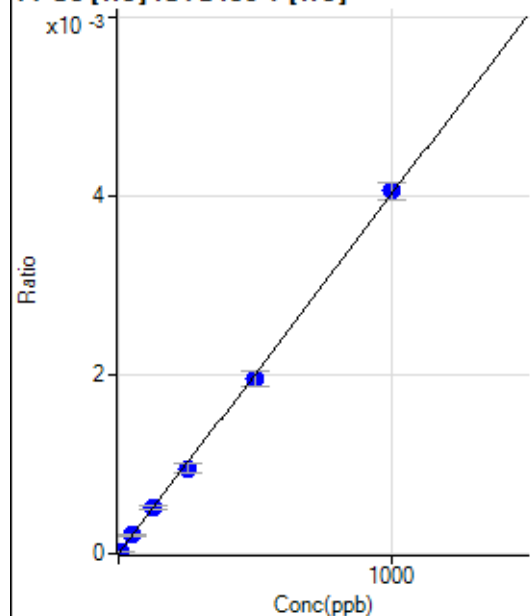
$$DL = 0.02261$$

$$BEC = 0.007605$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500					
3	☐	5.000	5.221	23.33	0.0000	P	86.4
4	☐	50.000	50.837	227.78	0.0002	P	13.6
5	☐	125.000	128.247	576.69	0.0005	P	5.1
6	☐	250.000	237.552	1051.17	0.0010	P	9.5
7	☐	500.000	486.755	2157.98	0.0020	P	9.4
8	☐	1000.000	1009.286	4450.75	0.0041	P	4.5
9	☐			0.00	0.0000	P	

$$y = 4.0175\text{E-}006 * x + 0.0000\text{E+}000$$

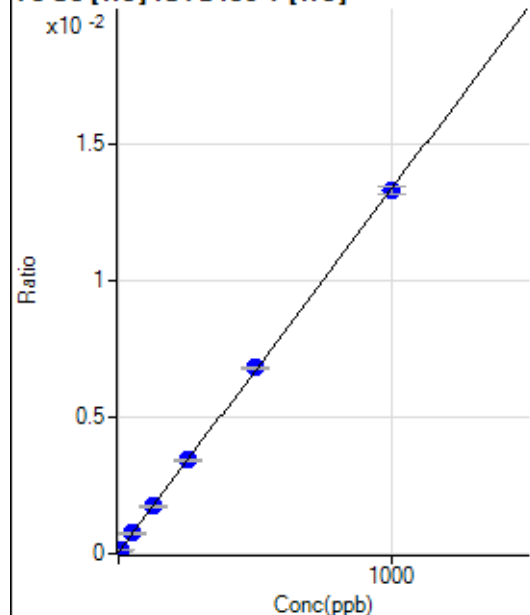
$$R = 0.9998$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	59.26	0.0001	P	20.2
2	☐	0.500					
3	☐	5.000	4.968	132.72	0.0001	P	3.2
4	☐	50.000	53.398	853.12	0.0008	P	7.0
5	☐	125.000	126.926	1952.62	0.0017	P	3.0
6	☐	250.000	254.515	3791.89	0.0034	P	2.4
7	☐	500.000	507.630	7524.23	0.0068	P	0.9
8	☐	1000.000	994.646	14606.19	0.0133	P	2.0
9	☐			63.58	0.0001	P	14.7

$$y = 1.3323\text{E-}005 * x + 5.3478\text{E-}005$$

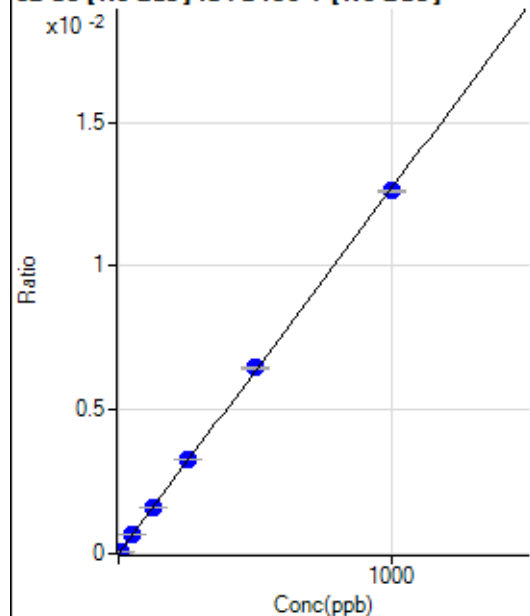
$$R = 0.9999$$

$$DL = 2.427$$

$$BEC = 4.014$$

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	11.48	0.0000	P	337.
2	☐	0.500					
3	☐	5.000	5.093	508.50	0.0001	P	9.4
4	☐	50.000	51.262	5047.51	0.0007	P	2.0
5	☐	125.000	128.139	12539.23	0.0016	P	0.8
6	☐	250.000	257.474	24877.71	0.0033	P	0.8
7	☐	500.000	508.744	48345.85	0.0065	P	1.6
8	☐	1000.000	993.304	95348.26	0.0126	P	0.5
9	☐			86.13	0.0000	P	58.6

$$y = 1.2690\text{E-}005 * x + 1.3695\text{E-}006$$

$$R = 0.9999$$

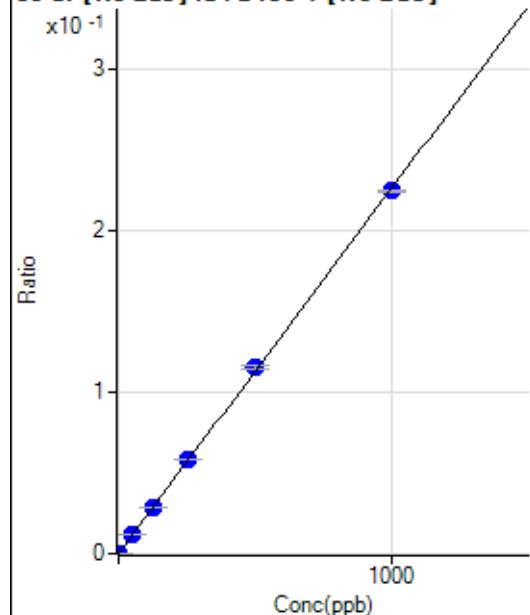
$$DL = 1.093$$

$$BEC = 0.1079$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	500.03	0.0001	P	2.9
2	☐	0.100					
3	☐	1.000	0.942	2111.37	0.0003	P	5.6
4	☐	50.000	51.656	90850.66	0.0117	P	1.2
5	☐	125.000	127.589	222596.63	0.0289	P	0.7
6	☐	250.000	257.608	443455.44	0.0583	P	0.9
7	☐	500.000	508.408	860497.07	0.1149	P	2.1
8	☐	1000.000	993.488	1698210.91	0.2245	P	0.5
9	☐			59083.20	0.0081	P	1.2

$$y = 2.2595E-004 * x + 6.1104E-005$$

$$R = 0.9999$$

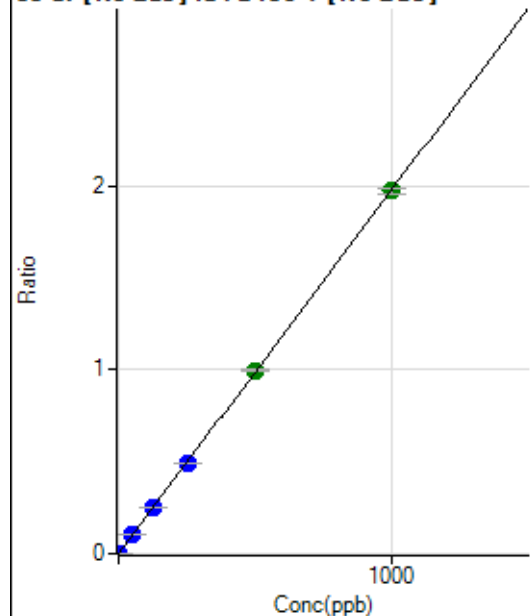
$$DL = 0.02379$$

$$BEC = 0.2704$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	327.80	0.0000	P	20.7
2	☐	0.100					
3	☐	1.000	0.934	14569.03	0.0019	P	1.6
4	☐	50.000	51.108	783457.42	0.1012	P	1.4
5	☐	125.000	125.814	1918795.44	0.2490	P	0.4
6	☐	250.000	249.043	3751462.93	0.4929	P	0.6
7	☐	500.000	504.230	7471944.70	0.9980	A	0.7
8	☐	1000.000	997.967	14936634.71	1.9751	A	1.8
9	☐			502007.13	0.0686	P	1.4

$$y = 0.0020 * x + 4.0072E-005$$

$$R = 1.0000$$

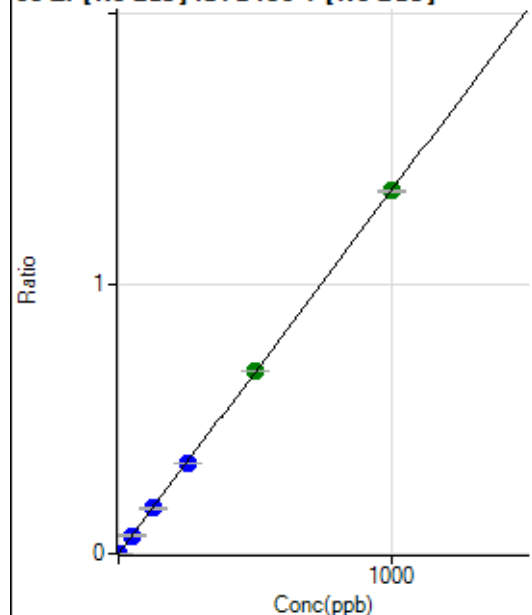
$$DL = 0.01259$$

$$BEC = 0.02025$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	597.26	0.0001	P	8.0
2	☐	0.100					
3	☐	1.000	0.869	9578.56	0.0012	P	4.4
4	☐	50.000	50.149	522931.20	0.0675	P	0.5
5	☐	125.000	124.862	1294761.78	0.1680	P	0.9
6	☐	250.000	248.685	2546645.98	0.3346	P	0.9
7	☐	500.000	503.791	5074916.22	0.6778	A	0.6
8	☐	1000.000	998.443	10158871.93	1.3433	A	0.6
9	☐			2278.05	0.0003	P	2.4

$$y = 0.0013 * x + 7.2946E-005$$

$$R = 1.0000$$

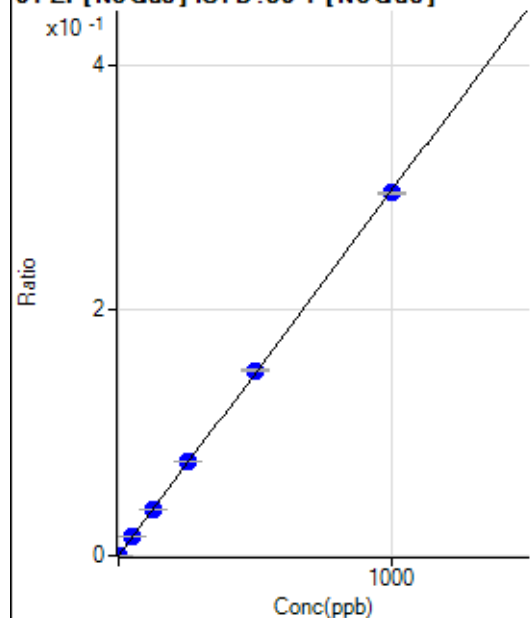
$$DL = 0.01305$$

$$BEC = 0.05422$$

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	125.00	0.0000	P	39.6
2	☐	0.100					
3	☐	1.000	0.900	2183.59	0.0003	P	5.7
4	☐	50.000	50.692	116925.08	0.0151	P	1.8
5	☐	125.000	127.896	293381.63	0.0381	P	1.0
6	☐	250.000	256.895	581987.40	0.0765	P	0.8
7	☐	500.000	507.323	1130566.41	0.1510	P	0.9
8	☐	1000.000	994.218	2237983.75	0.2959	P	0.3
9	☐			561.15	0.0001	P	6.8

$$y = 2.9762E-004 * x + 1.5243E-005$$

$$R = 0.9999$$

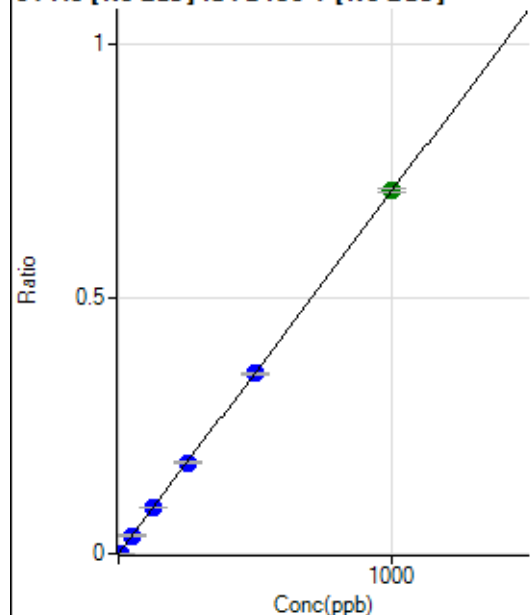
$$DL = 0.0609$$

$$BEC = 0.05122$$

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	166.67	0.0000	P	25.6
2	☐	0.500					
3	☐	5.000	1.961	10904.57	0.0014	P	1.0
4	☐	50.000	50.297	276956.21	0.0358	P	0.7
5	☐	125.000	125.164	685587.22	0.0890	P	0.3
6	☐	250.000	251.071	1358227.79	0.1785	P	1.2
7	☐	500.000	496.363	2641471.46	0.3528	P	1.3
8	☐	1000.000	1001.530	5383517.22	0.7119	A	1.1
9	☐			5112.23	0.0007	P	3.3

$$y = 7.1075\text{E-}004 * x + 2.0330\text{E-}005$$

$$R = 1.0000$$

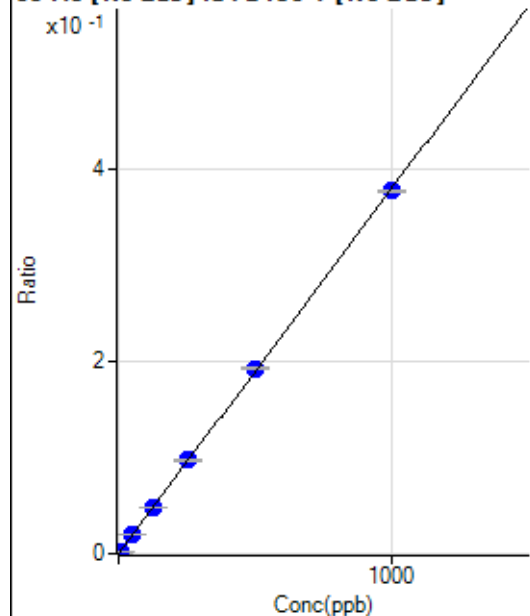
$$DL = 0.02195$$

$$BEC = 0.0286$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	72.23	0.0000	P	24.1
2	☐	0.500					
3	☐	5.000	4.639	13659.80	0.0018	P	2.6
4	☐	50.000	51.236	150832.01	0.0195	P	1.4
5	☐	125.000	126.713	371095.36	0.0482	P	0.6
6	☐	250.000	255.972	740417.60	0.0973	P	1.0
7	☐	500.000	507.517	1444117.29	0.1929	P	1.3
8	☐	1000.000	994.474	2858399.89	0.3779	P	0.7
9	☐			7452.24	0.0010	P	2.9

$$y = 3.8004\text{E-}004 * x + 8.8280\text{E-}006$$

$$R = 0.9999$$

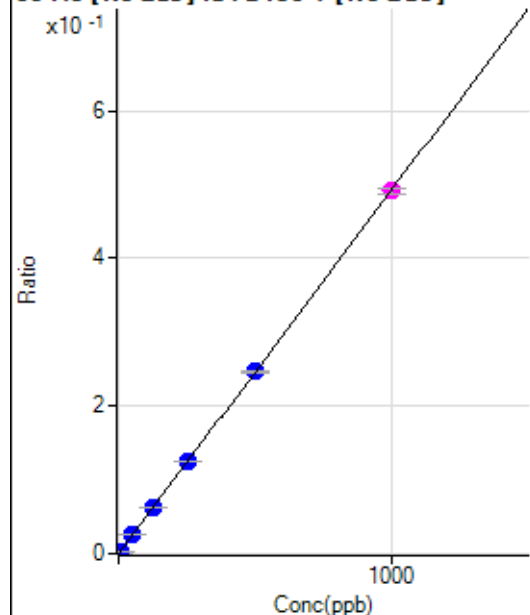
$$DL = 0.01677$$

$$BEC = 0.02323$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	147.23	0.0000	P	3.6
2	☐	0.500					
3	☐	5.000	3.953	15150.31	0.0020	P	2.0
4	☐	50.000	50.308	192003.14	0.0248	P	0.3
5	☐	125.000	125.791	477494.60	0.0620	P	0.9
6	☐	250.000	253.911	951923.33	0.1251	P	0.7
7	☐	500.000	501.580	1849821.74	0.2471	P	0.7
8	☐	1000.000	998.123	3718518.14	0.4916	M	1.5
9	☐			9642.56	0.0013	P	3.9

$$y = 4.9254\text{E-}004 * x + 1.7993\text{E-}005$$

$$R = 1.0000$$

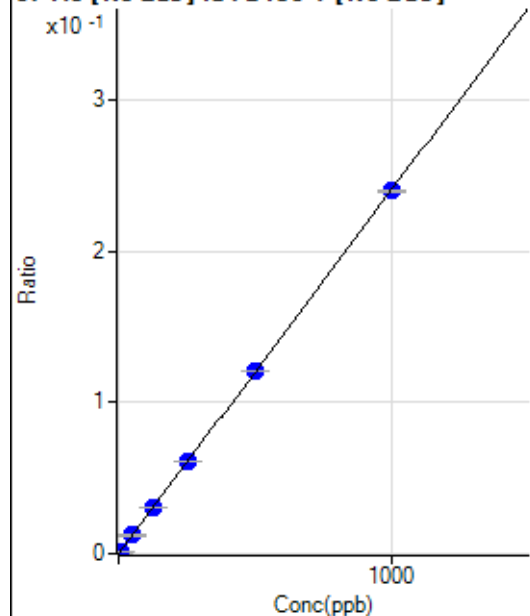
$$DL = 0.003919$$

$$BEC = 0.03653$$

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	50.00	0.0000	P	17.0
2	☐	0.500					
3	☐	5.000	4.593	8552.93	0.0011	P	2.5
4	☐	50.000	50.262	93519.65	0.0121	P	1.9
5	☐	125.000	126.224	233631.00	0.0303	P	0.9
6	☐	250.000	253.019	462545.94	0.0608	P	1.2
7	☐	500.000	503.124	904827.29	0.1209	P	0.6
8	☐	1000.000	997.519	1812045.81	0.2396	P	0.7
9	☐			4714.84	0.0006	P	1.9

$$y = 2.4019\text{E-}004 * x + 6.1133\text{E-}006$$

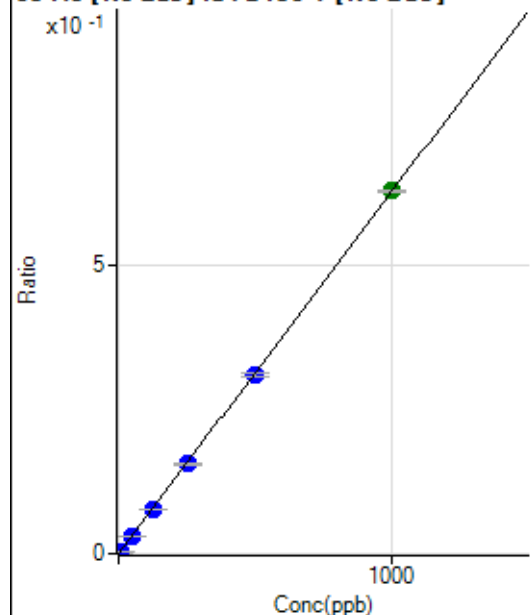
$$R = 1.0000$$

$$DL = 0.01298$$

$$BEC = 0.02545$$

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	97.23	0.0000	P	33.6
2	☐	0.500					
3	☐	5.000	4.431	21494.88	0.0028	P	0.7
4	☐	50.000	49.974	242445.20	0.0313	P	1.8
5	☐	125.000	123.509	596102.95	0.0774	P	1.6
6	☐	250.000	248.170	1183083.46	0.1555	P	1.2
7	☐	500.000	494.883	2320873.12	0.3100	P	1.3
8	☐	1000.000	1003.207	4752475.98	0.6284	A	0.3
9	☐			11927.68	0.0016	P	3.1

$$y = 6.2636\text{E-}004 * x + 1.1908\text{E-}005$$

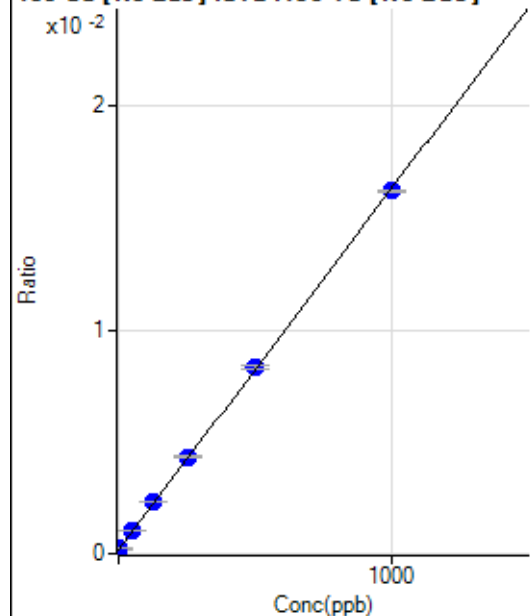
$$R = 1.0000$$

$$DL = 0.01915$$

$$BEC = 0.01901$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1744.62	0.0002	P	5.2
2	☐	0.100					
3	☐	1.000	2.670	2033.58	0.0002	P	1.8
4	☐	50.000	52.159	9442.44	0.0010	P	2.3
5	☐	125.000	131.545	21138.69	0.0023	P	1.5
6	☐	250.000	256.403	39453.32	0.0043	P	2.2
7	☐	500.000	506.329	74937.09	0.0083	P	1.8
8	☐	1000.000	994.307	146912.07	0.0162	P	0.8
9	☐			1825.19	0.0002	P	8.3

$$y = 1.6120\text{E-}005 * x + 1.7716\text{E-}004$$

$$R = 0.9999$$

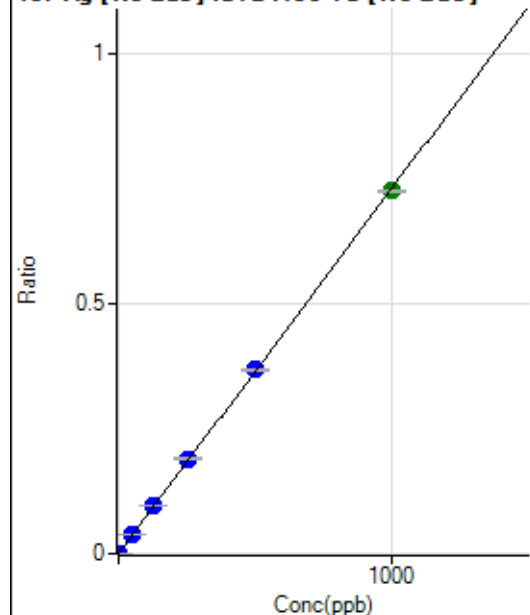
$$DL = 1.723$$

$$BEC = 10.99$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.56	0.0000	P	15.4
2	☐	0.100					
3	☐	1.000	1.000	6801.89	0.0007	P	0.3
4	☐	50.000	53.122	358976.36	0.0387	P	0.9
5	☐	125.000	131.018	877998.96	0.0954	P	0.7
6	☐	250.000	260.309	1735271.96	0.1896	P	1.6
7	☐	500.000	503.695	3296590.03	0.3669	P	1.0
8	☐	1000.000	994.667	6567650.10	0.7245	A	0.8
9	☐			833.40	0.0001	P	8.1

$$y = 7.2833\text{E-}004 * x + 8.1758\text{E-}006$$

$$R = 0.9999$$

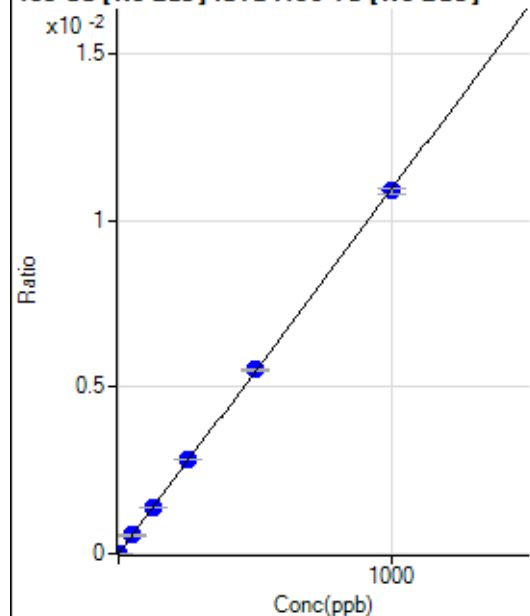
$$DL = 0.005194$$

$$BEC = 0.01123$$

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	11.11	0.0000	P	57.0
2	☐	0.100					
3	☐	1.000	1.066	118.06	0.0000	P	6.3
4	☐	50.000	50.793	5164.94	0.0006	P	4.6
5	☐	125.000	127.117	12806.01	0.0014	P	2.7
6	☐	250.000	258.660	25912.84	0.0028	P	1.6
7	☐	500.000	503.962	49563.05	0.0055	P	0.8
8	☐	1000.000	995.550	98756.44	0.0109	P	1.6
9	☐			22.22	0.0000	P	29.3

$$y = 1.0942\text{E-}005 * x + 1.1265\text{E-}006$$

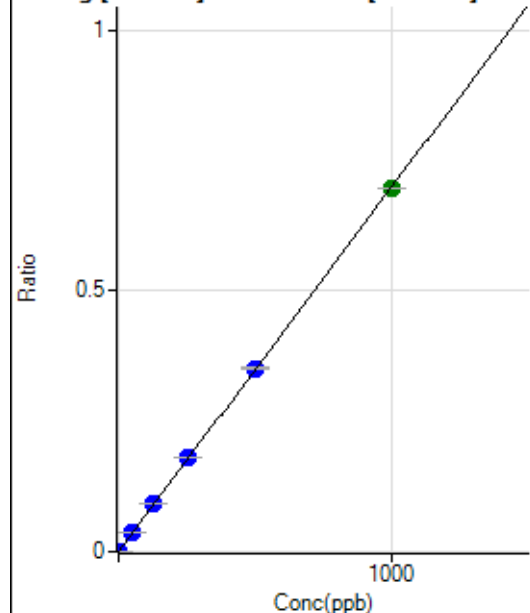
$$R = 0.9999$$

$$DL = 0.1762$$

$$BEC = 0.103$$

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	50.00	0.0000	P	17.1
2	☐	0.100					
3	☐	1.000	0.983	6390.62	0.0007	P	1.5
4	☐	50.000	52.722	341927.03	0.0369	P	1.7
5	☐	125.000	130.371	838534.47	0.0911	P	0.5
6	☐	250.000	258.484	1653972.40	0.1807	P	0.8
7	☐	500.000	502.871	3158936.22	0.3516	P	1.1
8	☐	1000.000	995.636	6309891.98	0.6960	A	0.1
9	☐			838.95	0.0001	P	4.0

$$y = 6.9908\text{E-}004 * x + 5.0791\text{E-}006$$

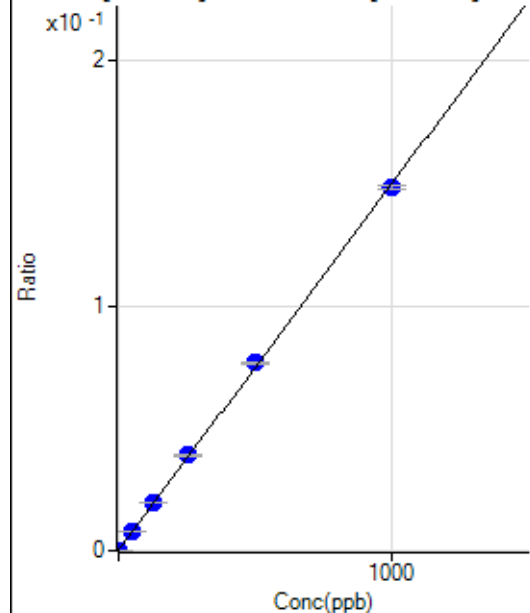
$$R = 0.9999$$

$$DL = 0.00372$$

$$BEC = 0.007265$$

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	1228.73	0.0001	P	6.2
2	☐	0.100					
3	☐	1.000	1.001	2534.00	0.0003	P	1.1
4	☐	50.000	52.647	74118.09	0.0080	P	0.7
5	☐	125.000	131.280	181585.82	0.0197	P	0.6
6	☐	250.000	260.949	357942.22	0.0391	P	1.4
7	☐	500.000	512.617	689264.85	0.0767	P	0.9
8	☐	1000.000	990.037	1341947.01	0.1480	P	1.0
9	☐			1432.92	0.0002	P	7.9

$$y = 1.4939\text{E-}004 * x + 1.2478\text{E-}004$$

$$R = 0.9998$$

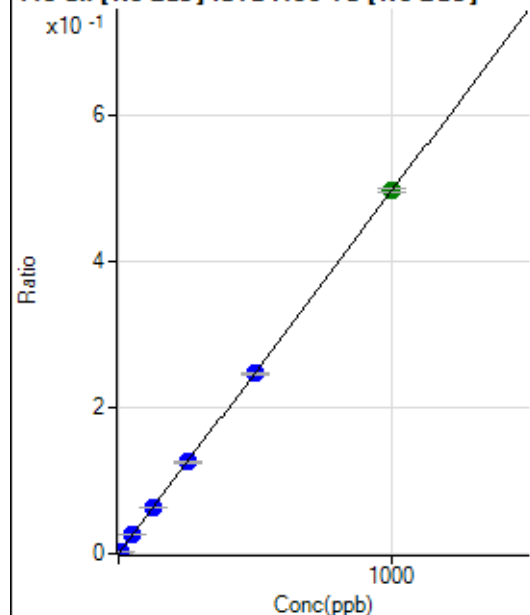
$$DL = 0.155$$

$$BEC = 0.8352$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	650.04	0.0001	P	15.2
2	☐	0.500					
3	☐	5.000	4.470	21072.06	0.0023	P	0.8
4	☐	50.000	50.558	233088.73	0.0251	P	0.1
5	☐	125.000	125.685	573757.86	0.0624	P	0.7
6	☐	250.000	252.596	1146554.95	0.1253	P	1.2
7	☐	500.000	496.599	2212305.24	0.2462	P	1.9
8	☐	1000.000	1000.940	4498294.37	0.4962	A	0.9
9	☐			5631.91	0.0006	P	5.0

$$y = 4.9567\text{E-}004 * x + 6.6005\text{E-}005$$

$$R = 1.0000$$

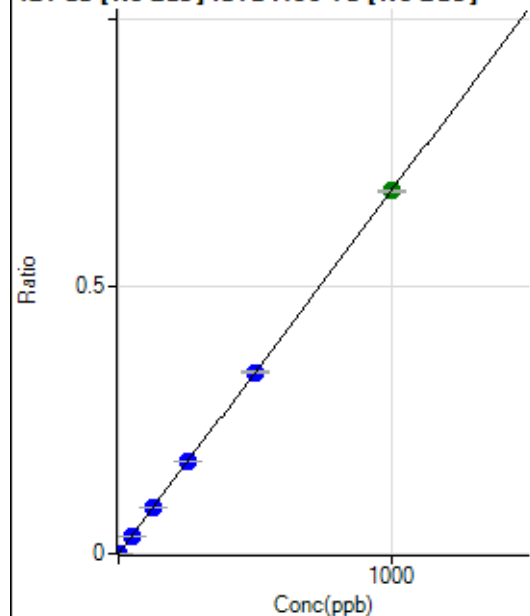
$$DL = 0.06057$$

$$BEC = 0.1332$$

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	122.23	0.0000	P	31.2
2	☐	0.200					
3	☐	2.000	1.779	11263.29	0.0012	P	2.7
4	☐	50.000	50.031	315083.83	0.0340	P	1.1
5	☐	125.000	126.373	789170.03	0.0858	P	0.5
6	☐	250.000	253.389	1574075.04	0.1720	P	1.0
7	☐	500.000	498.588	3040643.49	0.3384	P	1.2
8	☐	1000.000	999.686	6150535.99	0.6785	A	0.8
9	☐			16093.16	0.0018	P	7.0

$$y = 6.7867\text{E-}004 * x + 1.2403\text{E-}005$$

$$R = 1.0000$$

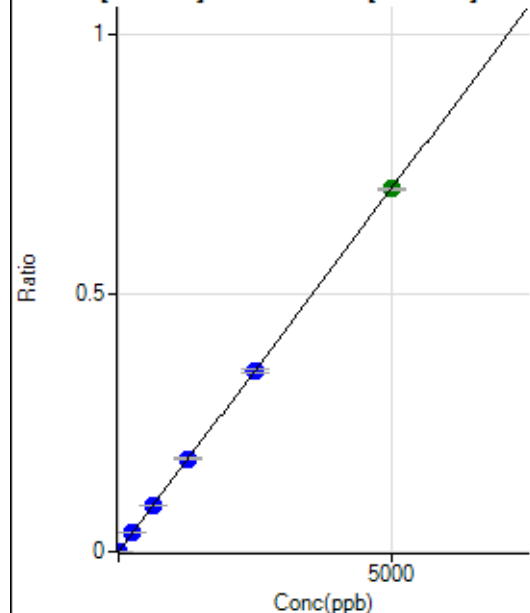
$$DL = 0.01711$$

$$BEC = 0.01828$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0000	P	33.3
2	☐	1.000					
3	☐	10.000	9.211	11969.53	0.0013	P	3.9
4	☐	250.000	253.455	330217.40	0.0356	P	1.0
5	☐	625.000	636.319	822199.52	0.0894	P	0.5
6	☐	1250.000	1278.101	1642876.92	0.1795	P	1.3
7	☐	2500.000	2492.252	3145084.73	0.3500	P	1.6
8	☐	5000.000	4995.263	6359915.72	0.7015	A	0.6
9	☐			1727.95	0.0002	P	7.7

$$y = 1.4044\text{E-}004 * x + 2.5384\text{E-}006$$

$$R = 1.0000$$

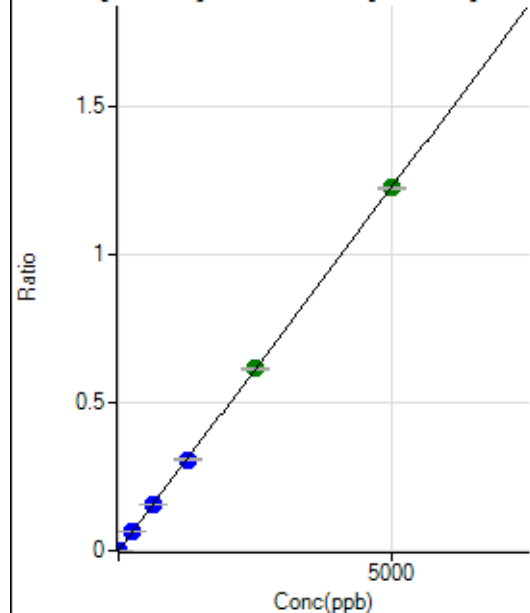
$$DL = 0.01803$$

$$BEC = 0.01807$$

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	75.00	0.0000	P	10.8
2	☐	1.000					
3	☐	10.000	9.183	20874.81	0.0023	P	1.1
4	☐	250.000	253.475	576888.62	0.0622	P	1.1
5	☐	625.000	630.416	1422902.79	0.1547	P	0.1
6	☐	1250.000	1249.516	2805557.66	0.3065	P	1.3
7	☐	2500.000	2508.179	5529093.44	0.6153	A	0.7
8	☐	5000.000	4995.182	11108912.05	1.2254	A	0.5
9	☐			2872.64	0.0003	P	2.9

$$y = 2.4532\text{E-}004 * x + 7.6131\text{E-}006$$

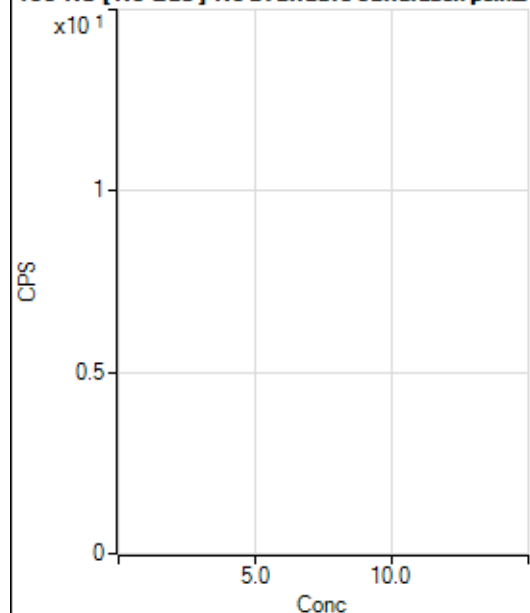
$$R = 1.0000$$

$$DL = 0.01001$$

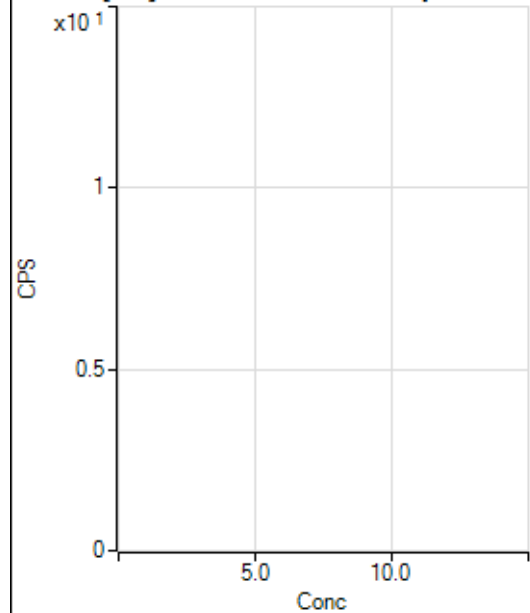
$$BEC = 0.03103$$

Weight: <None>

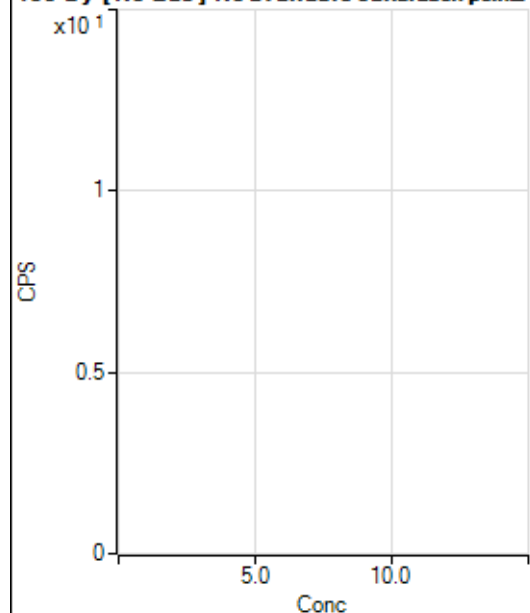
Min Conc: 0

150 Nd [No Gas] No available calibration points

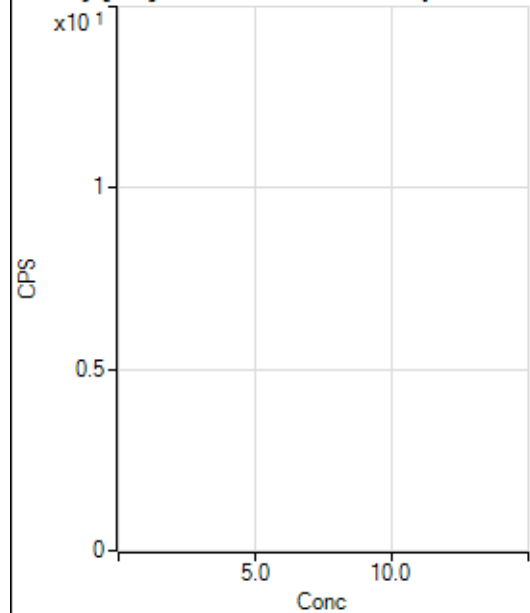
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	173.
2	☐						
3	☐			4.44		P	173.
4	☐			17.78		P	43.3
5	☐			40.00		P	44.1
6	☐			75.56		P	27.0
7	☐			102.23		P	15.1
8	☐			213.34		P	16.5
9	☐			60.00		P	33.3

150 Nd [He] No available calibration points

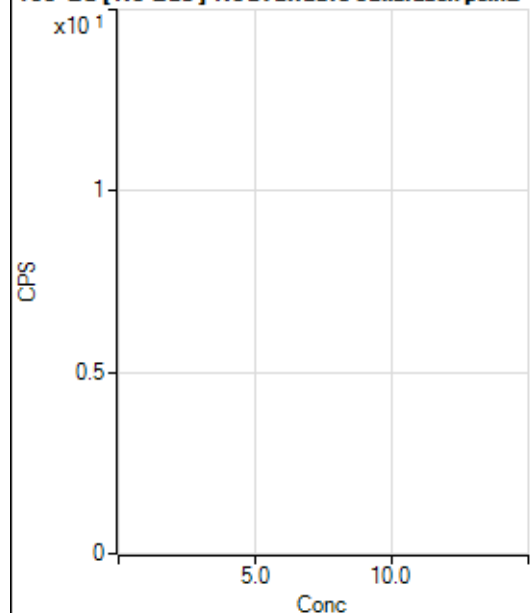
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			1.11		P	173.
4	☐			0.00		P	
5	☐			2.22		P	86.6
6	☐			4.45		P	86.6
7	☐			18.89		P	36.7
8	☐			17.78		P	28.6
9	☐			22.22		P	31.2

156 Dy [No Gas] No available calibration points

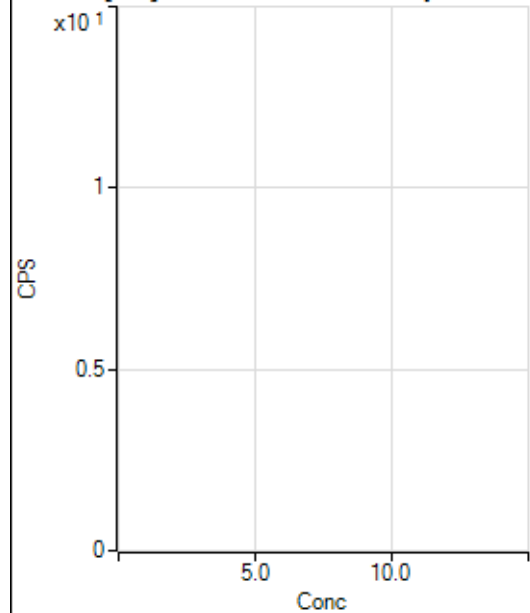
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.55		P	86.6
2	☐						
3	☐			8.33		P	100.
4	☐			11.11		P	43.3
5	☐			22.22		P	21.6
6	☐			41.67		P	20.0
7	☐			50.00		P	16.7
8	☐			119.45		P	4.0
9	☐			50.00		P	44.1

156 Dy [He] No available calibration points

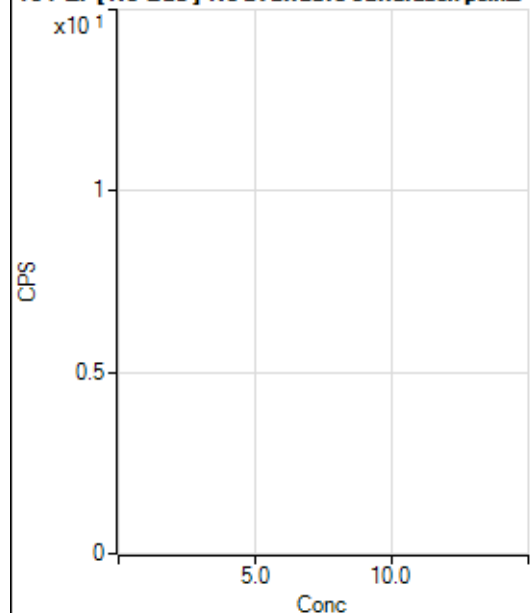
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			3.33		P	100.
2	☐						
3	☐			2.22		P	173.
4	☐			6.67		P	50.0
5	☐			11.11		P	62.5
6	☐			11.11		P	105.
7	☐			31.11		P	52.9
8	☐			53.33		P	10.8
9	☐			30.00		P	22.2

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

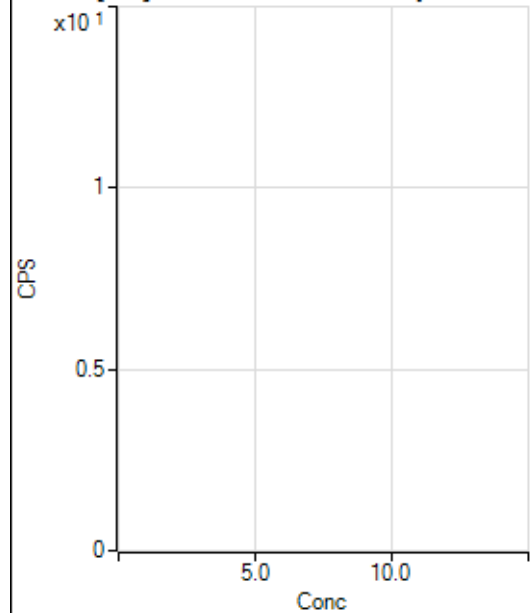
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			44.45		P	10.8
2	☐						
3	☐			41.67		P	20.0
4	☐			52.78		P	39.7
5	☐			52.78		P	24.1
6	☐			58.33		P	51.5
7	☐			72.23		P	43.7
8	☐			69.45		P	38.6
9	☐			80.56		P	52.1

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			57.78		P	18.5
2	☐						
3	☐			51.11		P	39.9
4	☐			45.55		P	46.5
5	☐			55.56		P	22.7
6	☐			62.22		P	27.0
7	☐			64.44		P	13.0
8	☐			74.45		P	21.2
9	☐			55.55		P	30.2

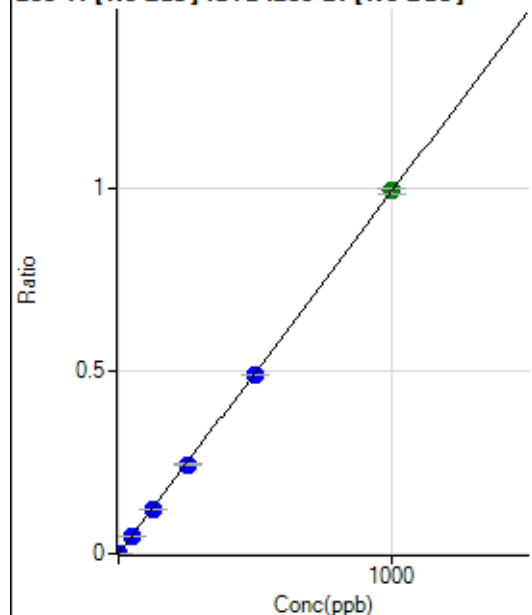
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			22.22		P	21.6
2	☐						
3	☐			38.89		P	68.9
4	☐			16.66		P	86.6
5	☐			38.89		P	89.2
6	☐			22.22		P	43.3
7	☐			50.00		P	76.4
8	☐			30.56		P	31.5
9	☐			33.33		P	25.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			14.44		P	13.4
2	☐						
3	☐			7.78		P	49.5
4	☐			11.11		P	34.6
5	☐			13.33		P	25.0
6	☐			10.00		P	57.7
7	☐			21.11		P	9.1
8	☐			17.78		P	65.8
9	☐			17.78		P	21.7

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	6.9
2	☐	0.100					
3	☐	1.000	0.916	4667.69	0.0009	P	4.6
4	☐	50.000	49.973	249538.81	0.0496	P	0.7
5	☐	125.000	124.320	624090.74	0.1233	P	0.1
6	☐	250.000	246.977	1232241.19	0.2449	P	0.8
7	☐	500.000	495.556	2395512.12	0.4914	P	0.6
8	☐	1000.000	1003.064	4797523.15	0.9946	A	1.7
9	☐			1711.30	0.0004	P	12.2

$$y = 9.9159\text{E-}004 * x + 2.1111\text{E-}005$$

$$R = 1.0000$$

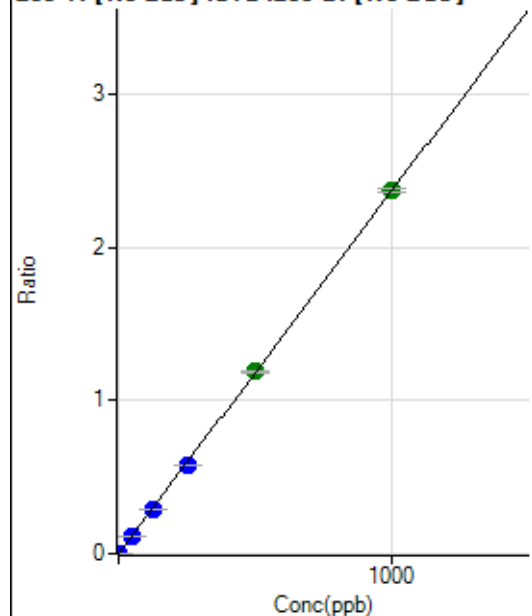
$$DL = 0.004383$$

$$BEC = 0.02129$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	244.46	0.0000	P	14.2
2	☐	0.100					
3	☐	1.000	0.914	11080.11	0.0022	P	1.9
4	☐	50.000	50.034	595916.37	0.1184	P	0.9
5	☐	125.000	122.319	1464596.67	0.2893	P	0.7
6	☐	250.000	242.751	2888889.23	0.5742	P	0.5
7	☐	500.000	501.934	5787334.81	1.1872	A	1.3
8	☐	1000.000	1001.179	11421893.14	2.3680	A	1.0
9	☐			4039.68	0.0009	P	7.5

$$y = 0.0024 * x + 4.4237\text{E-}005$$

$$R = 1.0000$$

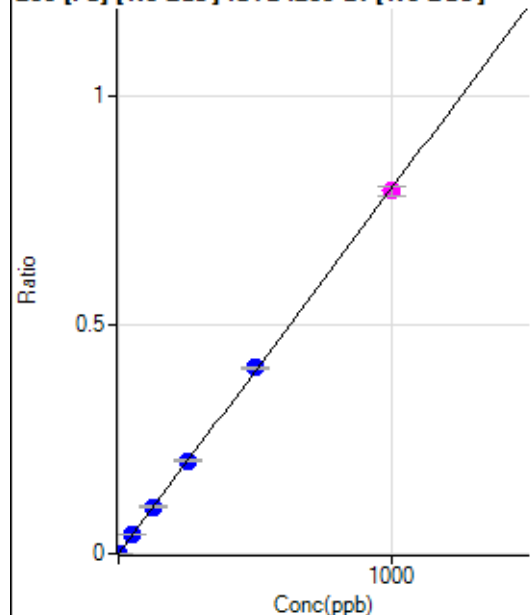
$$DL = 0.007953$$

$$BEC = 0.0187$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	679.67	0.0001	P	11.8
2	☐	0.100					
3	☐	1.000	0.917	4298.95	0.0009	P	5.0
4	☐	50.000	51.679	208308.55	0.0414	P	0.2
5	☐	125.000	128.294	519057.68	0.1025	P	1.0
6	☐	250.000	255.021	1024982.02	0.2037	P	0.9
7	☐	500.000	509.266	1982578.94	0.4067	P	0.8
8	☐	1000.000	993.616	3827127.72	0.7934	M	2.5
9	☐			5777.34	0.0014	P	1.0

$$y = 7.9837\text{E-}004 * x + 1.2300\text{E-}004$$

$$R = 0.9999$$

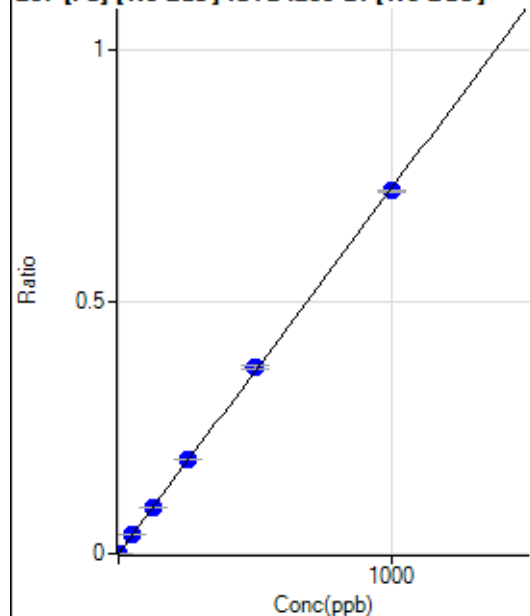
$$DL = 0.0544$$

$$BEC = 0.1541$$

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	637.07	0.0001	P	7.8
2	☐	0.100					
3	☐	1.000	0.945	4021.09	0.0008	P	0.3
4	☐	50.000	51.640	189097.20	0.0376	P	1.0
5	☐	125.000	126.915	466491.86	0.0922	P	0.5
6	☐	250.000	255.976	934600.45	0.1858	P	0.3
7	☐	500.000	510.190	1804202.20	0.3701	P	1.4
8	☐	1000.000	993.090	3474501.75	0.7203	P	0.9
9	☐			4715.76	0.0011	P	3.7

$$y = 7.2523\text{E-}004 * x + 1.1528\text{E-}004$$

$$R = 0.9999$$

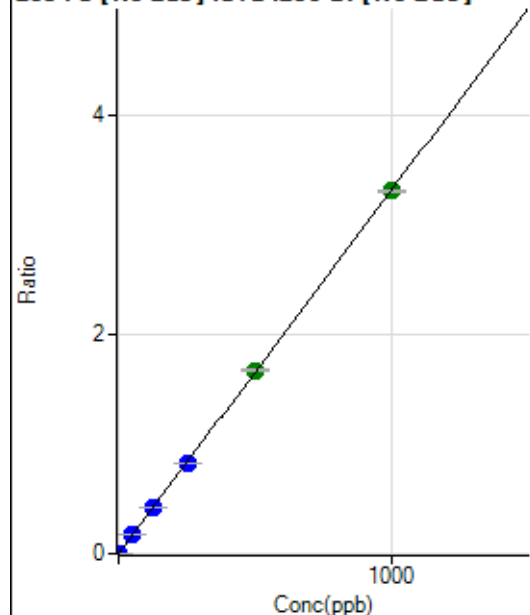
$$DL = 0.03713$$

$$BEC = 0.159$$

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	2866.88	0.0005	P	5.3
2	☐	0.100					
3	☐	1.000	0.915	17847.79	0.0036	P	3.2
4	☐	50.000	50.792	849602.00	0.1688	P	0.7
5	☐	125.000	124.651	2092847.64	0.4135	P	0.1
6	☐	250.000	249.288	4157630.05	0.8264	P	0.2
7	☐	500.000	504.394	8147970.55	1.6715	A	1.0
8	☐	1000.000	997.985	15949743.21	3.3066	A	0.8
9	☐			22320.93	0.0052	P	1.7

$$y = 0.0033 * x + 5.1884E-004$$

$$R = 1.0000$$

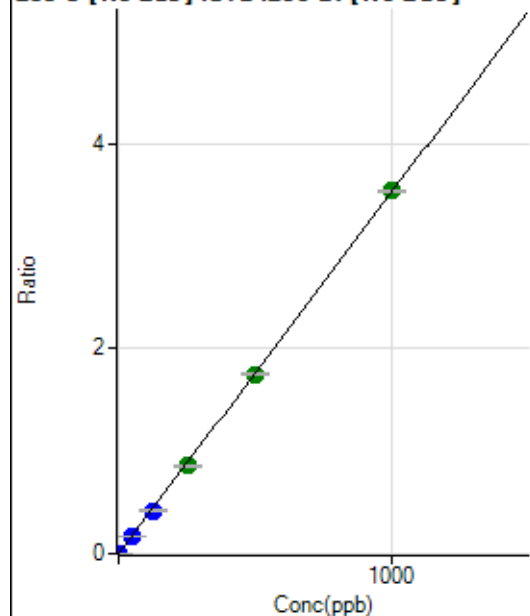
$$DL = 0.02478$$

$$BEC = 0.1566$$

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	69.45	0.0000	P	36.9
2	☐	0.100					
3	☐	1.000	0.877	15621.13	0.0031	P	3.9
4	☐	50.000	48.512	861683.36	0.1712	P	1.0
5	☐	125.000	119.627	2136541.26	0.4221	P	1.6
6	☐	250.000	243.245	4318184.77	0.8583	A	0.9
7	☐	500.000	497.052	8549898.37	1.7538	A	1.5
8	☐	1000.000	1003.909	17085898.82	3.5422	A	0.4
9	☐			1111.21	0.0003	P	14.6

$$y = 0.0035 * x + 1.2576E-005$$

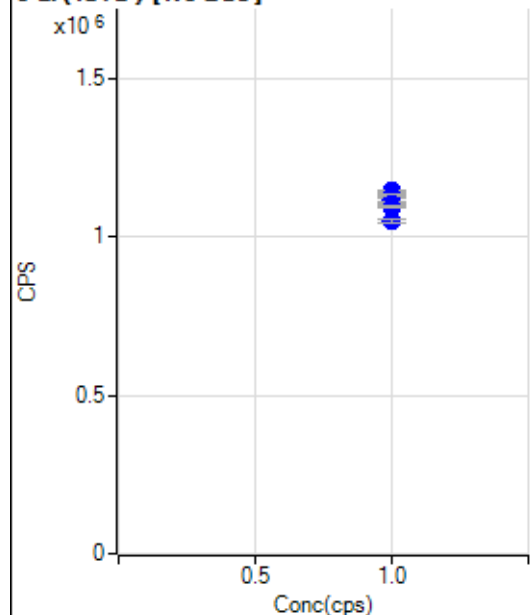
$$R = 1.0000$$

$$DL = 0.003944$$

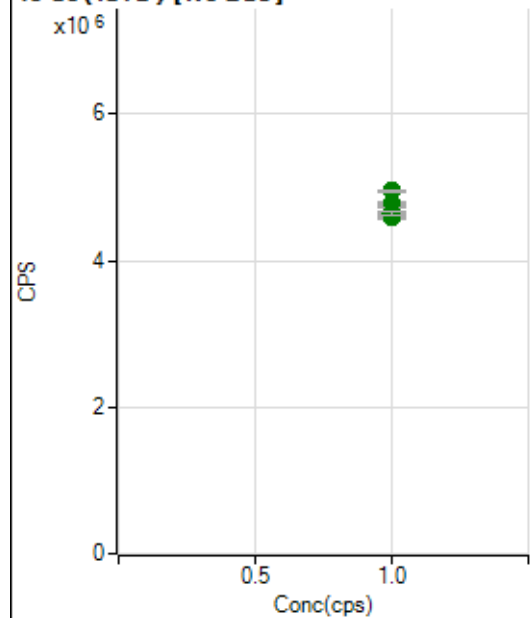
$$BEC = 0.003564$$

Weight: <None>

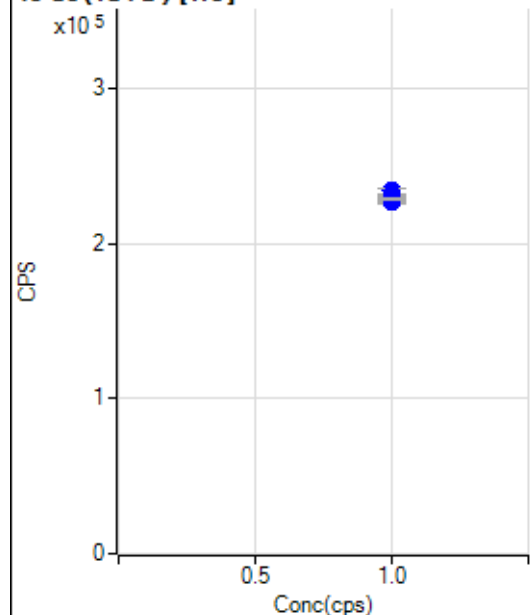
Min Conc: 0

6 Li (ISTD) [No Gas]

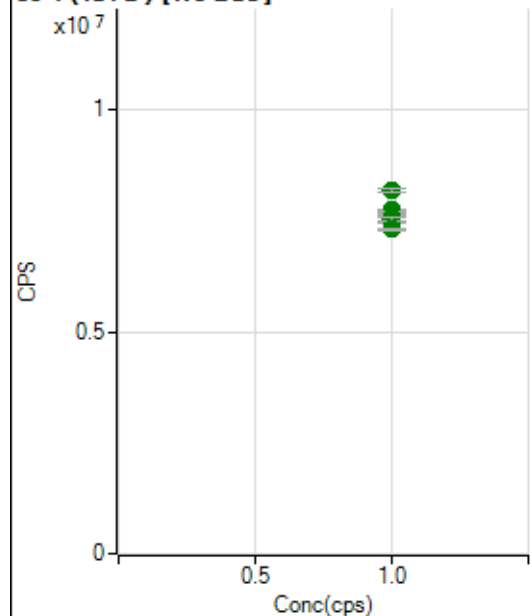
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1131203.47		P	0.4
2	☐	1.000					
3	☐	1.000		1120083.84		P	1.1
4	☐	1.000		1128116.70		P	0.1
5	☐	1.000		1145531.22		P	0.2
6	☐	1.000		1131460.55		P	0.3
7	☐	1.000		1106606.81		P	0.3
8	☐	1.000		1095779.71		P	0.2
9	☐	1.000		1048142.81		P	1.2

45 Sc (ISTD) [No Gas]

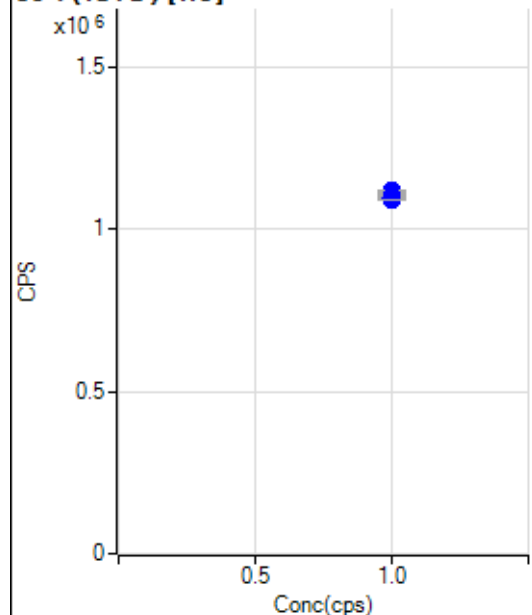
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4951827.41		A	0.7
2	☐	1.000					
3	☐	1.000		4769509.92		A	1.4
4	☐	1.000		4759052.10		A	0.5
5	☐	1.000		4730816.56		A	0.2
6	☐	1.000		4657384.26		A	0.5
7	☐	1.000		4599358.52		A	1.3
8	☐	1.000		4612280.88		A	0.4
9	☐	1.000		4645113.86		A	0.6

45 Sc (ISTD) [He]

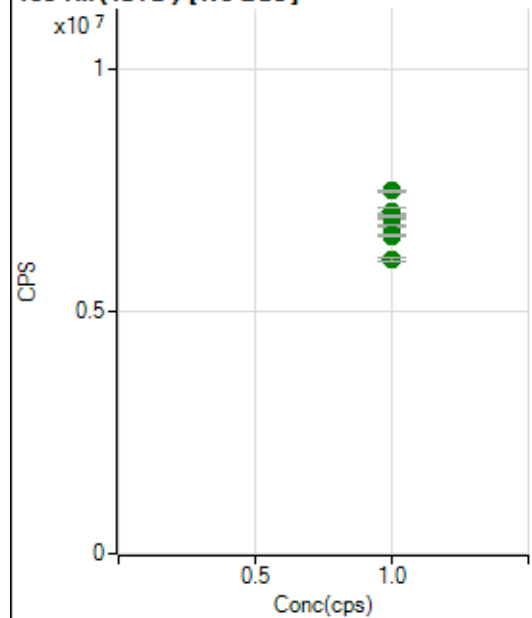
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		233762.49		P	1.6
2	☐	1.000					
3	☐	1.000		231802.48		P	0.2
4	☐	1.000		231274.96		P	0.6
5	☐	1.000		228781.55		P	0.4
6	☐	1.000		227059.09		P	0.8
7	☐	1.000		226907.91		P	1.1
8	☐	1.000		227673.25		P	0.7
9	☐	1.000		228592.80		P	1.0

89 Y (ISTD) [No Gas]

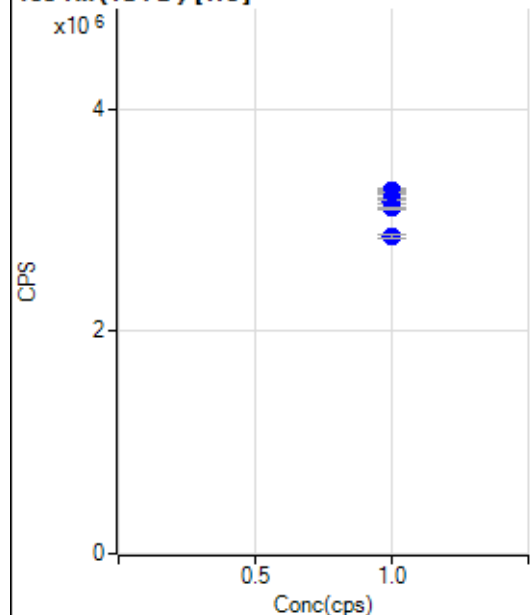
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8183700.29		A	1.1
2	☐	1.000					
3	☐	1.000		7712155.09		A	1.9
4	☐	1.000		7743137.18		A	0.8
5	☐	1.000		7704963.29		A	0.8
6	☐	1.000		7610796.34		A	0.7
7	☐	1.000		7487398.36		A	0.8
8	☐	1.000		7563128.85		A	1.0
9	☐	1.000		7314944.61		A	0.8

89 Y(ISTD) [He]

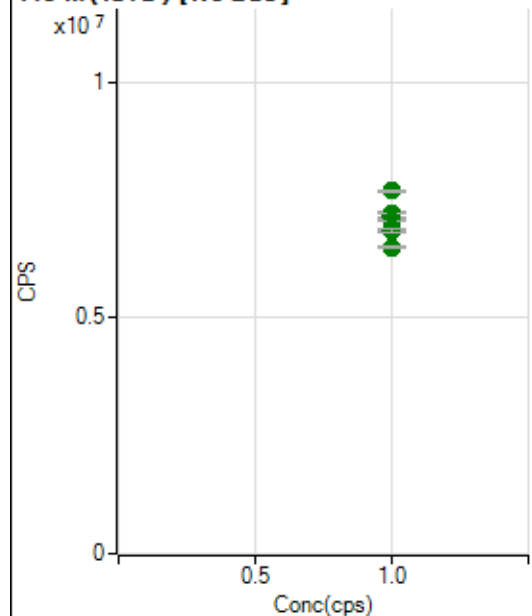
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1109663.00		P	1.8
2	☐	1.000					
3	☐	1.000		1109081.59		P	0.5
4	☐	1.000		1115681.99		P	0.7
5	☐	1.000		1119324.06		P	0.7
6	☐	1.000		1100956.20		P	0.9
7	☐	1.000		1103839.32		P	0.5
8	☐	1.000		1097935.60		P	0.9
9	☐	1.000		1091001.83		P	0.4

103 Rh(ISTD) [No Gas]

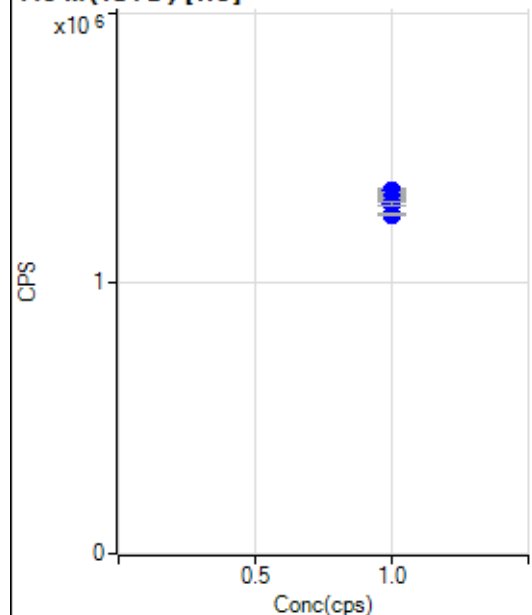
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7486984.80		A	0.8
2	☐	1.000					
3	☐	1.000		7072844.61		A	1.8
4	☐	1.000		6944909.18		A	0.7
5	☐	1.000		6953059.10		A	0.5
6	☐	1.000		6759046.07		A	1.0
7	☐	1.000		6589809.57		A	0.4
8	☐	1.000		6560157.18		A	0.6
9	☐	1.000		6071239.76		A	1.0

103 Rh (ISTD) [He]

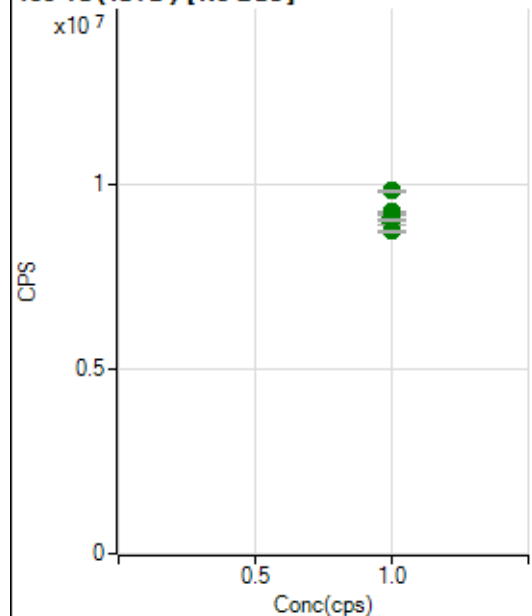
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3256290.75		P	1.5
2	☐	1.000					
3	☐	1.000		3242236.03		P	0.7
4	☐	1.000		3265608.98		P	0.6
5	☐	1.000		3250183.22		P	0.7
6	☐	1.000		3193624.43		P	0.3
7	☐	1.000		3170472.00		P	1.3
8	☐	1.000		3111711.51		P	0.7
9	☐	1.000		2856142.32		P	0.6

115 In (ISTD) [No Gas]

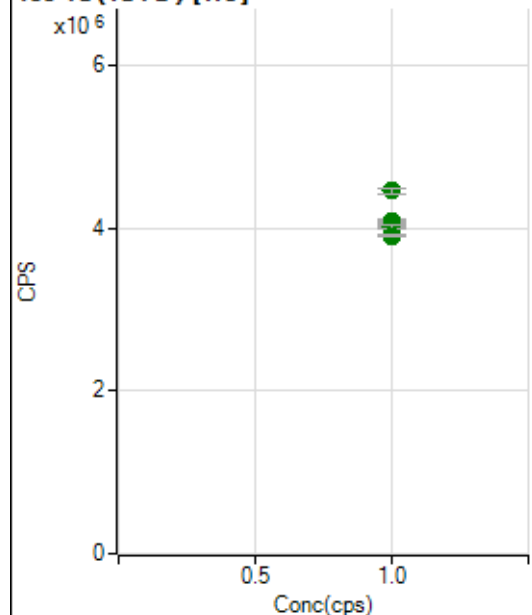
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7697277.50		A	0.6
2	☐	1.000					
3	☐	1.000		7204168.99		A	2.0
4	☐	1.000		7169826.61		A	1.2
5	☐	1.000		7159684.35		A	1.3
6	☐	1.000		7056609.18		A	0.2
7	☐	1.000		6878274.09		A	1.0
8	☐	1.000		6859479.77		A	1.0
9	☐	1.000		6502458.83		A	0.8

115 In (ISTD) [He]

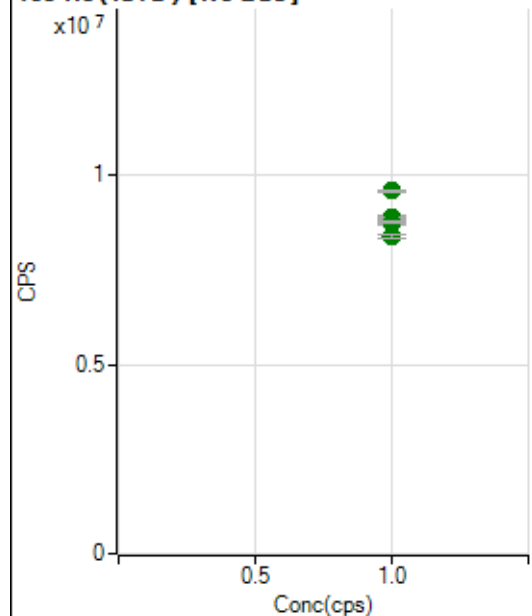
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1336770.24		P	1.5
2	☐	1.000					
3	☐	1.000		1332756.49		P	0.5
4	☐	1.000		1342356.51		P	1.3
5	☐	1.000		1334869.31		P	0.7
6	☐	1.000		1318051.63		P	0.1
7	☐	1.000		1315066.74		P	0.6
8	☐	1.000		1294155.93		P	0.7
9	☐	1.000		1255576.46		P	0.3

159 Tb (ISTD) [No Gas]

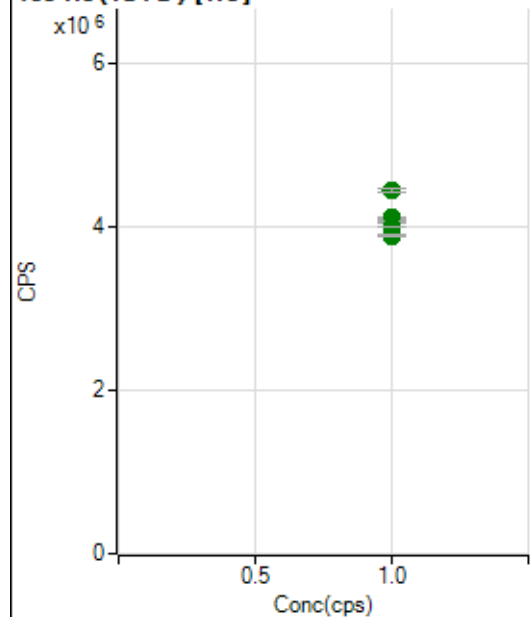
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9849257.08		A	0.5
2	☐	1.000					
3	☐	1.000		9235623.27		A	1.5
4	☐	1.000		9276644.10		A	0.7
5	☐	1.000		9200173.54		A	0.3
6	☐	1.000		9153446.04		A	1.2
7	☐	1.000		8986183.34		A	1.0
8	☐	1.000		9065538.06		A	0.5
9	☐	1.000		8750743.89		A	0.6

159 Tb (ISTD) [He]

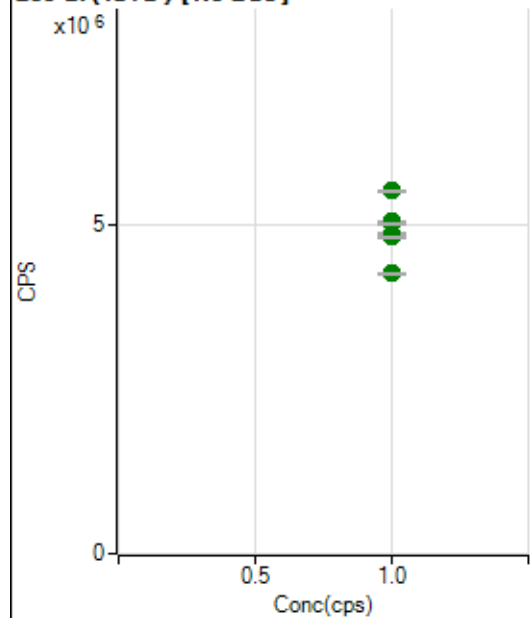
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4458556.43		A	1.8
2	☐	1.000					
3	☐	1.000		4082294.63		A	1.1
4	☐	1.000		4058396.57		A	1.2
5	☐	1.000		4083852.82		A	0.3
6	☐	1.000		4062410.63		A	0.7
7	☐	1.000		4043216.99		A	0.8
8	☐	1.000		4010938.45		A	1.1
9	☐	1.000		3903379.91		A	0.4

165 Ho (ISTD) [No Gas]

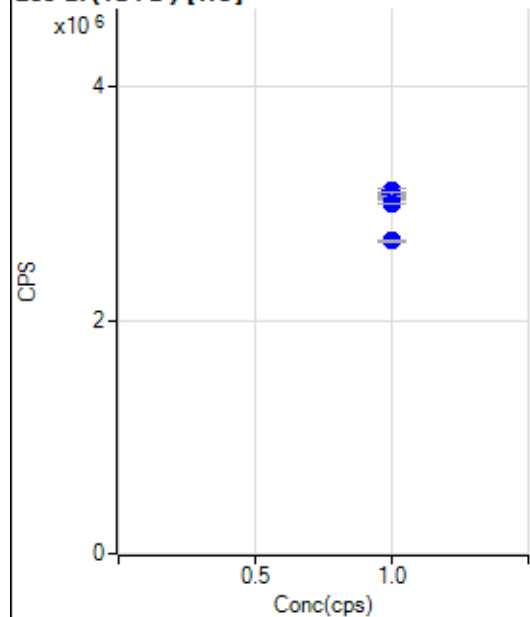
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9579715.67		A	0.6
2	☐	1.000					
3	☐	1.000		8833614.35		A	1.6
4	☐	1.000		8856699.51		A	0.7
5	☐	1.000		8888748.72		A	0.8
6	☐	1.000		8843894.38		A	0.5
7	☐	1.000		8711433.53		A	0.2
8	☐	1.000		8748494.73		A	0.7
9	☐	1.000		8358666.42		A	1.1

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4441608.65		A	0.9
2	☐	1.000					
3	☐	1.000		4110929.77		A	0.4
4	☐	1.000		4072837.89		A	0.7
5	☐	1.000		4088963.86		A	0.4
6	☐	1.000		4081357.54		A	0.7
7	☐	1.000		4063268.27		A	0.7
8	☐	1.000		4001923.41		A	0.6
9	☐	1.000		3891115.39		A	0.8

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5525982.97		A	0.3
2	☐	1.000					
3	☐	1.000		5024380.17		A	0.8
4	☐	1.000		5033800.06		A	0.3
5	☐	1.000		5061761.63		A	0.7
6	☐	1.000		5031295.20		A	0.4
7	☐	1.000		4874833.47		A	0.5
8	☐	1.000		4823518.85		A	0.3
9	☐	1.000		4266058.37		A	0.5

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3063043.43		P	1.5
2	☐	1.000					
3	☐	1.000		3065865.16		P	0.6
4	☐	1.000		3077916.86		P	0.4
5	☐	1.000		3111183.81		P	1.1
6	☐	1.000		3066653.67		P	0.4
7	☐	1.000		3077067.83		P	1.0
8	☐	1.000		3001596.48		P	0.2
9	☐	1.000		2680925.59		P	0.9

US EPA Tune Check Sample Report

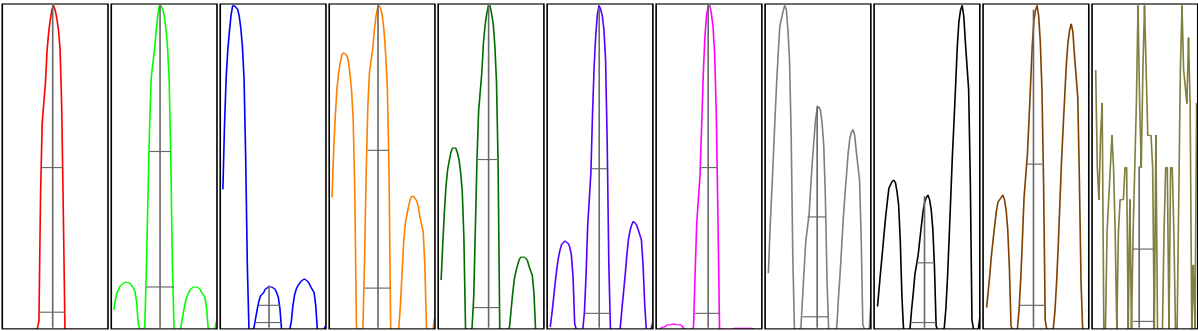
Batch Folder D:\ICP-MS Data\P7102117-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	4390	1.18	5.00	
24	257190	1.15	5.00	
25	34290	1.26	5.00	
26	39899	1.05	5.00	
59	42696	1.61	5.00	
113	16026	2.28	5.00	
115	349562	0.78	5.00	
206	13714	1.55	5.00	
207	12228	1.59	5.00	
208	28922	2.44	5.00	
220	0	46.48		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	4319	4405	4383	4463	4378
24	256430	258058	258455	260464	252542
25	34222	33966	34856	34588	33818
26	39873	39355	40532	39838	39898
59	42709	41756	43391	42311	43312
113	16031	15701	16203	15658	16536
115	351915	346016	349882	347650	352345
206	13366	13714	13717	13885	13888
207	11989	12316	12053	12432	12348
208	28071	29238	28450	29896	28956
220	0	0	0	0	0

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	7598	8.95	8.9 - 9.1		0.739	0.900	
24	429924	23.90	23.9 - 24.1		0.784	0.900	
25	56916	24.90	24.9 - 25.1		0.751	0.900	
26	66626	25.90	25.9 - 26.1		0.759	0.900	
59	74719	58.95	58.9 - 59.1		0.761	0.900	
113	32002	113.00	112.9 - 113.1		0.742	0.900	
115	684657	115.00	114.9 - 115.1		0.730	0.900	
206	27147	206.00	205.9 - 206.1		0.771	0.900	
207	23988	206.95	206.9 - 207.1		0.731	0.900	
208	57955	207.95	207.9 - 208.1		0.739	0.900	
220	0	219.85	-		0.643		

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	9.5	V	Deflect	14.2	V
Extract 2	-215.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-95	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	190	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	11872	0.34	
89	5337	0.89	
205	11965	0.47	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	11940	11860	11840	11846	11873
89	5392	5381	5314	5281	5316
205	12018	11897	12020	11972	11919

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min	S/C Temp		2 °C
RF Matching	1.80	V	Option Gas	0.0	%	Gas Switch		Dilution Gas
Smpl Depth	9.0	mm	Nebulizer Pump	0.10	rpm	Makeup/Dilution Gas		0.37 L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	9.5	V	Deflect	2.4	V
Extract 2	-215.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-100	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			