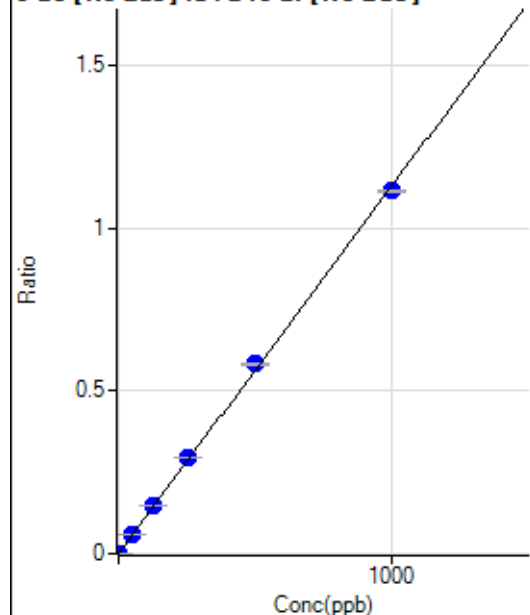


Calibration for 005CALS.d

Batch Folder: D:\ICP-MS Data\P7050919MS.b\
 Analysis File: P7050919MS.batch.bin
 DA Date-Time: 2019-05-09 22:09:27
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-05-09 13:53:32
2			
3	005CALS.d	S02	2019-05-09 14:01:32
4	006CALS.d	S03	2019-05-09 14:05:29
5	007CALS.d	S04	2019-05-09 14:09:40
6	008CALS.d	S05	2019-05-09 14:13:31
7	009CALS.d	S06	2019-05-09 14:17:20
8	010CALS.d	S07	2019-05-09 14:21:06
9	011CALS.d	S08	2019-05-09 14:24:54

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	65.56	0.0000	P	34.2
2	☐	0.100					
3	☐	1.000	1.028	2808.08	0.0012	P	4.7
4	☐	50.000	53.529	141242.31	0.0604	P	0.3
5	☐	125.000	131.946	340077.17	0.1489	P	1.7
6	☐	250.000	261.892	668339.57	0.2955	P	0.5
7	☐	500.000	516.090	1312102.70	0.5823	P	0.9
8	☐	1000.000	987.937	2449125.71	1.1146	P	0.4
9	☐			410.01	0.0002	P	24.1

$$y = 0.0011 * x + 2.7593E-005$$

$$R = 0.9997$$

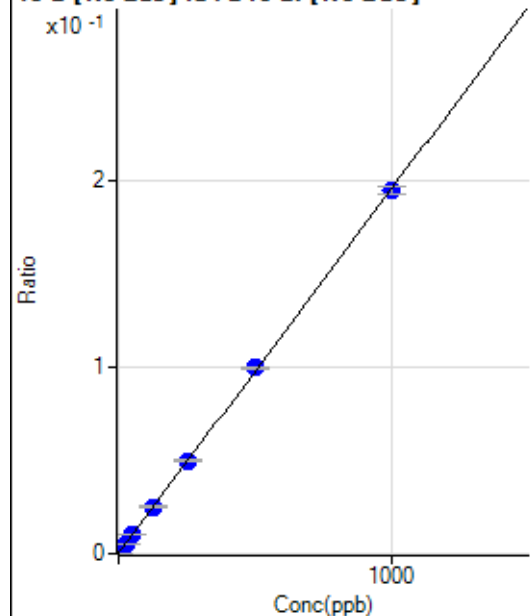
$$DL = 0.02506$$

$$BEC = 0.02446$$

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	475.03	0.0002	P	10.5
2	☐	2.500					
3	☐	25.000	24.311	11713.31	0.0050	P	4.1
4	☐	50.000	51.152	23858.45	0.0102	P	1.7
5	☐	125.000	128.133	57719.15	0.0253	P	1.4
6	☐	250.000	252.777	112292.90	0.0496	P	1.8
7	☐	500.000	508.445	224579.33	0.0997	P	0.3
8	☐	1000.000	994.651	427957.38	0.1948	P	2.0
9	☐			9803.54	0.0048	P	7.4

$$y = 1.9562E-004 * x + 1.9967E-004$$

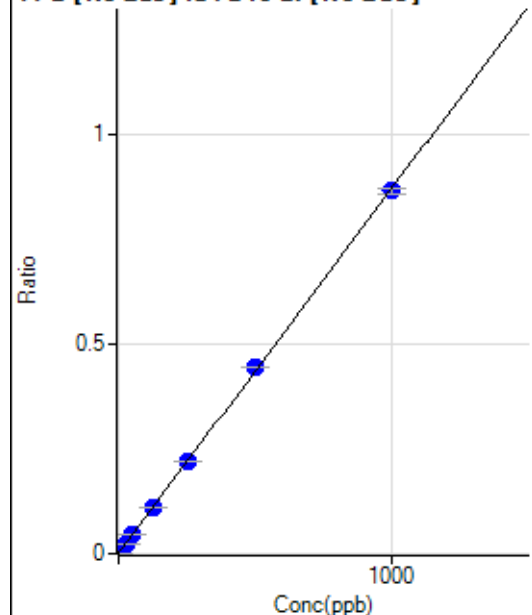
$$R = 0.9999$$

$$DL = 0.3201$$

$$BEC = 1.021$$

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	1914.08	0.0008	P	7.3
2	☐	2.500					
3	☐	25.000	24.261	51775.48	0.0219	P	1.8
4	☐	50.000	51.014	105597.86	0.0452	P	0.5
5	☐	125.000	124.813	249790.90	0.1094	P	1.3
6	☐	250.000	252.413	498343.09	0.2203	P	1.6
7	☐	500.000	510.370	1002069.50	0.4447	P	0.4
8	☐	1000.000	994.203	1901638.00	0.8655	P	1.4
9	☐			43277.04	0.0214	P	6.2

$$y = 8.6971\text{E-}004 * x + 8.0464\text{E-}004$$

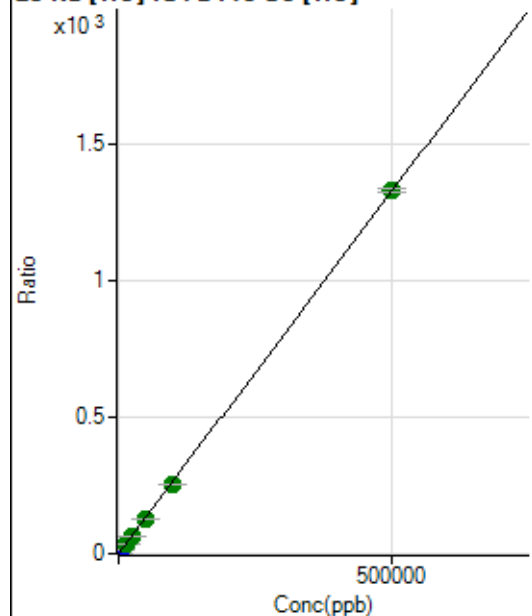
$$R = 0.9999$$

$$DL = 0.2032$$

$$BEC = 0.9252$$

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	3981.25	0.0214	P	4.1
2	☐	50.000					
3	☐	500.000	469.417	235689.37	1.2659	P	1.0
4	☐	5000.000	4925.222	2338839.88	13.0785	P	0.8
5	☐	12500.000	12267.159	5755399.91	32.5423	A	0.9
6	☐	25000.000	24613.746	11510025.52	65.2739	A	0.8
7	☐	50000.000	48917.445	22655749.64	129.7043	A	0.6
8	☐	100000.00	95667.174	43726468.34	253.6405	A	1.2
9	☐	500000.00	501000.73	224689960.5	1,328.202	A	1.2

$$y = 0.0027 * x + 0.0214$$

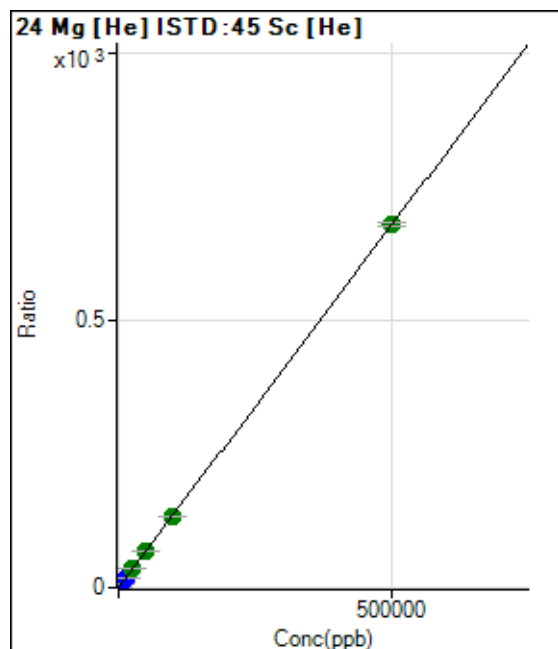
$$R = 1.0000$$

$$DL = 1.003$$

$$BEC = 8.075$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	197.23	0.0011	P	18.5
2	☐	50.000					
3	☐	500.000	499.018	126358.87	0.6787	P	0.7
4	☐	5000.000	5072.448	1231923.83	6.8887	P	1.1
5	☐	12500.000	12660.680	3040765.00	17.1924	P	0.5
6	☐	25000.000	25339.393	6067347.27	34.4082	A	0.8
7	☐	50000.000	50237.850	11915235.51	68.2167	A	0.9
8	☐	100000.00	97710.137	22872414.92	132.6771	A	1.5
9	☐	500000.00	500412.47	114948484.5	679.4880	A	1.2

$$y = 0.0014 * x + 0.0011$$

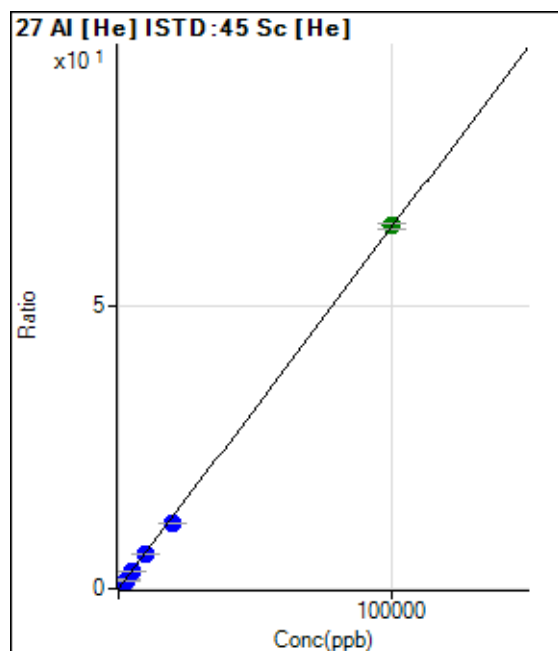
$$R = 1.0000$$

$$DL = 0.4338$$

$$BEC = 0.7804$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.12	0.0005	P	30.0
2	☐	2.000					
3	☐	20.000	18.268	2253.03	0.0121	P	10.0
4	☐	1000.000	952.864	108631.36	0.6074	P	1.5
5	☐	2500.000	2382.178	268453.02	1.5179	P	1.2
6	☐	5000.000	4723.267	530640.42	3.0092	P	0.6
7	☐	10000.000	9412.087	1047301.01	5.9960	P	1.0
8	☐	20000.000	18214.422	2000419.25	11.6032	P	0.6
9	☐	100000.00	100433.16	10822986.61	63.9770	A	1.3

$$y = 6.3701E-004 * x + 4.6347E-004$$

$$R = 0.9998$$

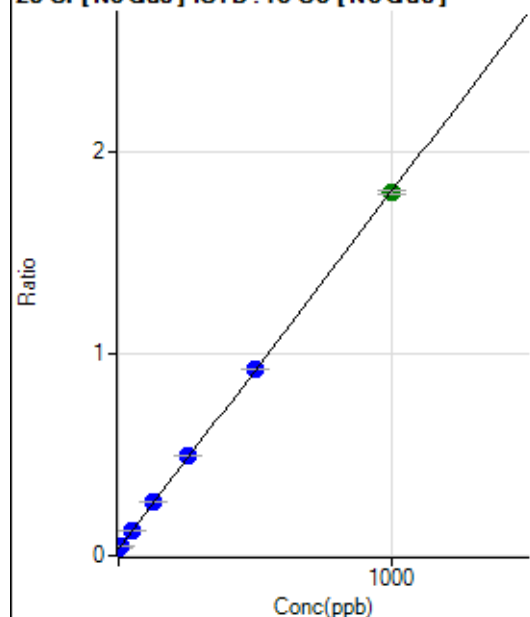
$$DL = 0.6557$$

$$BEC = 0.7276$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	135976.87	0.0336	P	1.7
2	☐	1.000					
3	☐	10.000	8.977	199782.85	0.0494	P	0.7
4	☐	50.000	52.331	495684.59	0.1260	P	1.0
5	☐	125.000	131.214	1008331.26	0.2653	P	2.3
6	☐	250.000	261.180	1865176.10	0.4948	P	0.6
7	☐	500.000	500.602	3473871.65	0.9177	P	0.2
8	☐	1000.000	996.021	6613095.11	1.7926	A	1.1
9	☐			525915.33	0.1523	P	1.8

$$y = 0.0018 * x + 0.0336$$

$$R = 0.9999$$

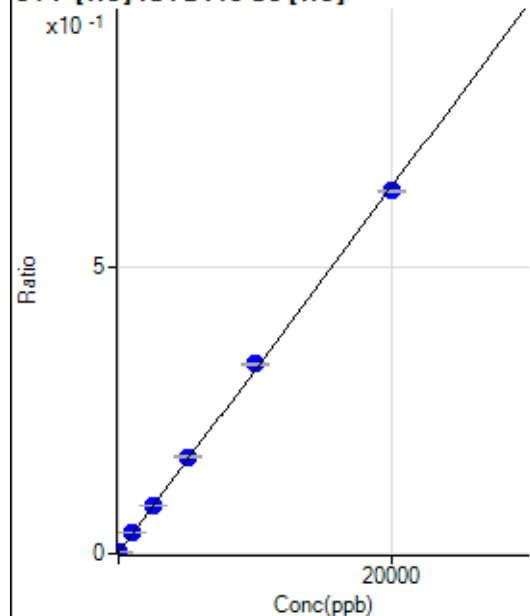
$$DL = 0.9661$$

$$BEC = 19.01$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-31.277	125.01	0.0007	P	27.1
2	☐	0.000					
3	☐	0.000	31.277	497.25	0.0027	P	14.1
4	☐	1000.000	1060.635	6354.40	0.0355	P	1.2
5	☐	2500.000	2553.941	14718.86	0.0832	P	1.6
6	☐	5000.000	5212.010	29638.76	0.1681	P	1.8
7	☐	10000.000	10314.018	57809.86	0.3310	P	0.9
8	☐	20000.000	19780.214	109164.50	0.6332	P	0.7
9	☐			211.12	0.0012	P	16.3

$$y = 3.1927E-005 * x + 0.0017$$

$$R = 0.9997$$

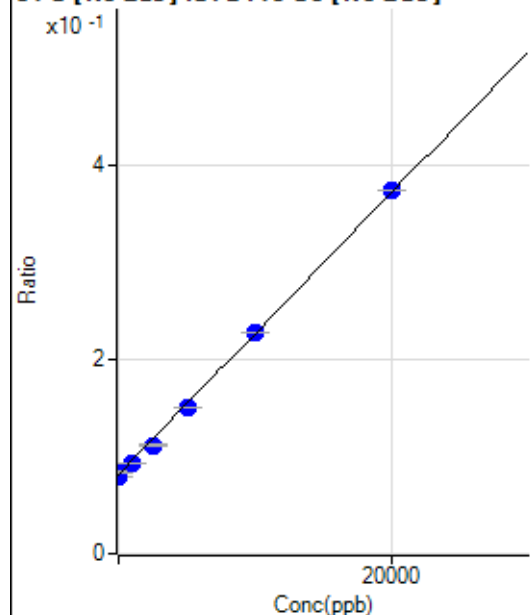
$$DL = 26.21$$

$$BEC = 52.34$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-157.987	321847.80	0.0795	P	0.4
2	☐	0.000					
3	☐	0.000	157.987	339758.61	0.0841	P	0.9
4	☐	1000.000	780.583	366326.17	0.0931	P	1.0
5	☐	2500.000	2051.180	424001.18	0.1116	P	2.5
6	☐	5000.000	4749.217	568217.11	0.1508	P	0.5
7	☐	10000.000	10064.618	862918.29	0.2280	P	0.5
8	☐	20000.000	20097.460	1378561.60	0.3737	P	0.1
9	☐			248526.50	0.0720	P	1.8

$$y = 1.4525E-005 * x + 0.0818$$

$$R = 0.9996$$

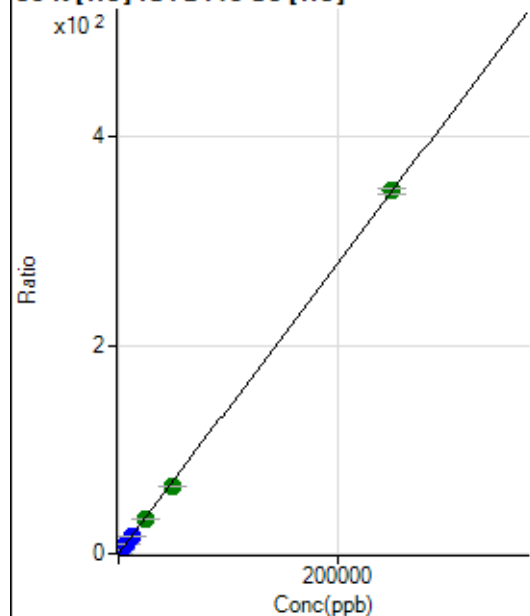
$$DL = 110$$

$$BEC = 5630$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	13737.45	0.0739	P	1.6
2	☐	50.000					
3	☐	500.000	467.813	134748.31	0.7237	P	0.2
4	☐	2500.000	2430.769	617051.43	3.4505	P	1.2
5	☐	6250.000	6022.344	1492668.99	8.4395	P	0.5
6	☐	12500.000	12072.771	2970308.51	16.8442	P	0.2
7	☐	25000.000	23907.019	5813738.07	33.2833	A	0.4
8	☐	50000.000	46548.118	11160022.65	64.7342	A	1.1
9	☐	250000.00	250827.48	58954502.01	348.5005	A	1.4

$$y = 0.0014 * x + 0.0739$$

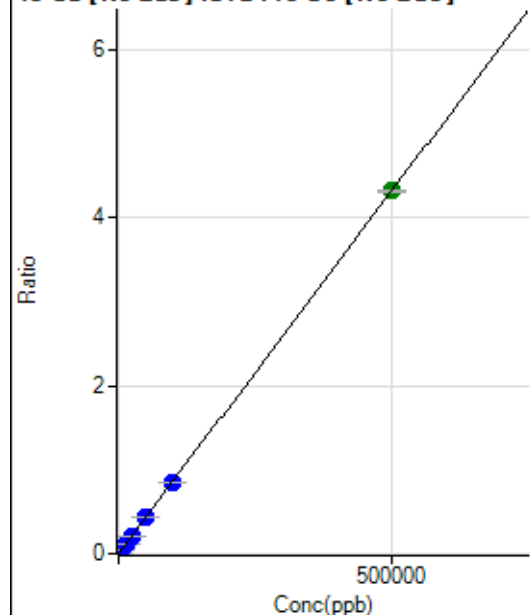
$$R = 0.9999$$

$$DL = 2.625$$

$$BEC = 53.17$$

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	197.23	0.0000	P	20.5
2	☐	50.000					
3	☐	500.000	478.834	16882.47	0.0042	P	1.1
4	☐	5000.000	4986.605	169341.97	0.0430	P	0.6
5	☐	12500.000	12495.336	409636.86	0.1078	P	2.5
6	☐	25000.000	24960.494	811369.17	0.2153	P	0.6
7	☐	50000.000	49932.667	1629908.16	0.4306	P	0.9
8	☐	100000.00	97950.857	3115860.27	0.8446	P	0.2
9	☐	500000.00	500418.80	14904125.85	4.3148	A	0.6

$$y = 8.6222\text{E-}006 * x + 4.8661\text{E-}005$$

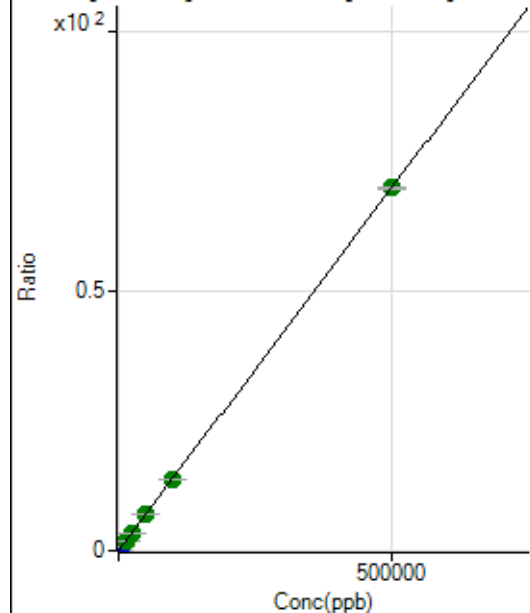
$$R = 1.0000$$

$$DL = 3.476$$

$$BEC = 5.644$$

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	7585.73	0.0019	P	2.4
2	☐	50.000					
3	☐	500.000	469.661	272974.49	0.0675	P	1.1
4	☐	5000.000	5009.381	2763103.71	0.7023	P	0.4
5	☐	12500.000	12497.302	6648387.78	1.7493	A	2.3
6	☐	25000.000	24859.641	13109040.22	3.4779	A	0.5
7	☐	50000.000	49859.419	26398349.72	6.9735	A	0.2
8	☐	100000.00	98269.576	50698158.42	13.7425	A	0.4
9	☐	500000.00	500367.16	241678155.4	69.9664	A	0.7

$$y = 1.3983\text{E-}004 * x + 0.0019$$

$$R = 1.0000$$

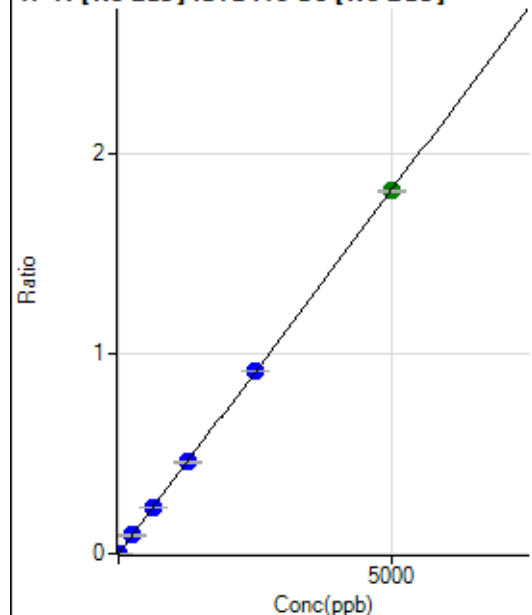
$$DL = 0.9763$$

$$BEC = 13.4$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111.12	0.0000	P	21.6
2	☐	0.500					
3	☐	5.000	4.951	7368.83	0.0018	P	4.8
4	☐	250.000	251.828	359550.96	0.0914	P	0.6
5	☐	625.000	631.319	870598.53	0.2291	P	2.1
6	☐	1250.000	1256.997	1718995.65	0.4561	P	0.3
7	☐	2500.000	2515.944	3455431.24	0.9128	P	0.1
8	☐	5000.000	4989.397	6677917.04	1.8102	A	0.4
9	☐			2892.06	0.0008	P	1.9

$$y = 3.6279\text{E-}004 * x + 2.7436\text{E-}005$$

$$R = 1.0000$$

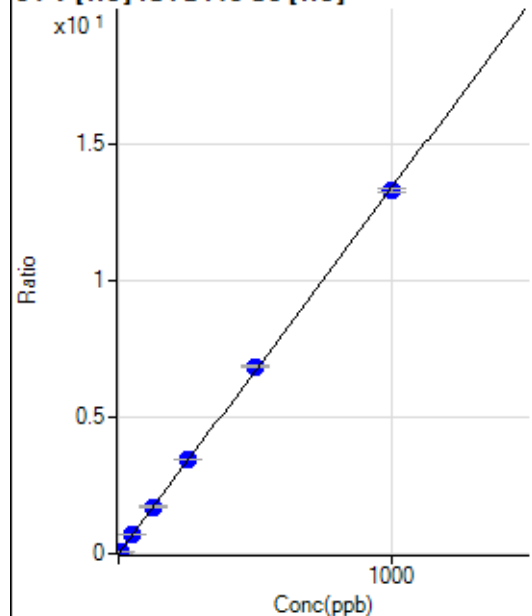
$$DL = 0.04894$$

$$BEC = 0.07563$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4.45	0.0000	P	86.6
2	☐	0.500					
3	☐	5.000	5.228	13037.03	0.0700	P	0.7
4	☐	50.000	51.263	122746.54	0.6864	P	1.7
5	☐	125.000	128.283	303752.79	1.7176	P	1.5
6	☐	250.000	255.837	604010.26	3.4253	P	0.5
7	☐	500.000	511.639	1196518.90	6.8502	P	0.7
8	☐	1000.000	992.247	2290286.65	13.2849	P	0.9
9	☐			315.57	0.0019	P	8.7

$$y = 0.0134 * x + 2.3964\text{E-}005$$

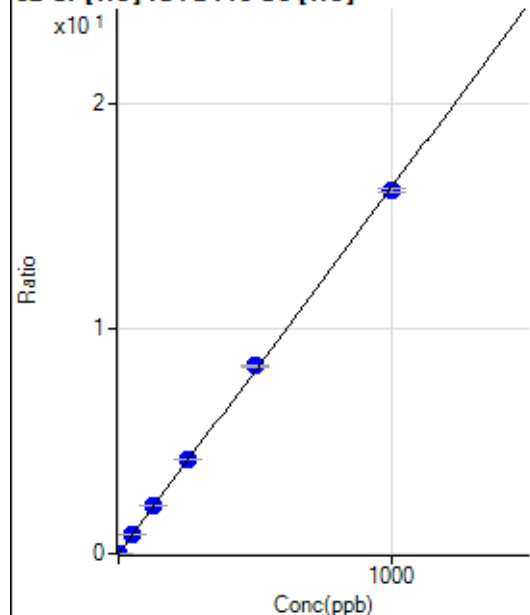
$$R = 0.9999$$

$$DL = 0.00465$$

$$BEC = 0.00179$$

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	713.37	0.0038	P	12.3
2	☐	0.200					
3	☐	2.000	2.019	6835.01	0.0367	P	0.5
4	☐	50.000	52.320	153018.83	0.8556	P	1.8
5	☐	125.000	129.881	374666.65	2.1184	P	1.0
6	☐	250.000	259.214	744860.52	4.2240	P	0.4
7	☐	500.000	512.218	1457284.34	8.3431	P	0.9
8	☐	1000.000	990.861	2781787.32	16.1358	P	1.0
9	☐			8461.44	0.0500	P	2.2

$$y = 0.0163 * x + 0.0038$$

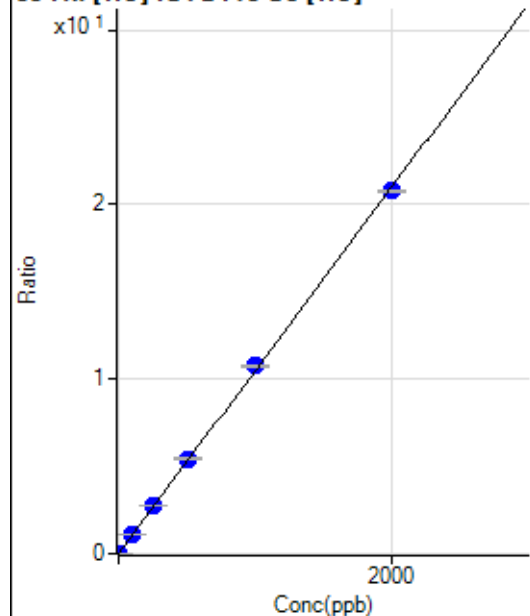
$$R = 0.9998$$

$$DL = 0.08669$$

$$BEC = 0.2355$$

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	32.22	0.0002	P	31.3
2	☐	0.100					
3	☐	1.000	1.078	2137.97	0.0115	P	4.7
4	☐	100.000	104.662	196361.51	1.0980	P	1.6
5	☐	250.000	259.998	482356.09	2.7274	P	0.9
6	☐	500.000	519.658	961214.82	5.4510	P	0.5
7	☐	1000.000	1024.631	1877376.72	10.7479	P	0.5
8	☐	2000.000	1981.287	3582913.84	20.7825	P	0.8
9	☐			8298.03	0.0490	P	0.6

$$y = 0.0105 * x + 1.7313E-004$$

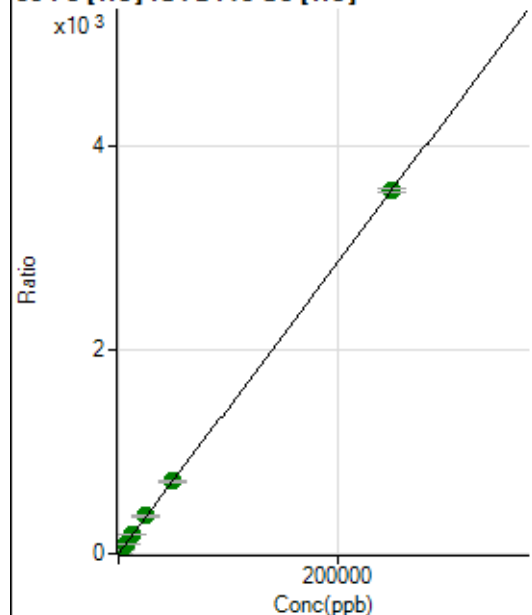
$$R = 0.9998$$

$$DL = 0.01548$$

$$BEC = 0.01651$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3752.44	0.0202	P	1.9
2	☐	5.000					
3	☐	50.000	53.110	144647.63	0.7769	P	1.1
4	☐	2500.000	2605.374	6641900.21	37.1403	A	1.3
5	☐	6250.000	6514.025	16417408.93	92.8289	A	1.0
6	☐	12500.000	13038.898	32761985.45	185.7923	A	0.6
7	☐	25000.000	25860.957	64362756.07	368.4749	A	0.5
8	☐	50000.000	49817.497	122367728.6	709.7964	A	1.0
9	☐	250000.00	249915.80	602365198.6	3,560.703	A	1.1

$$y = 0.0142 * x + 0.0202$$

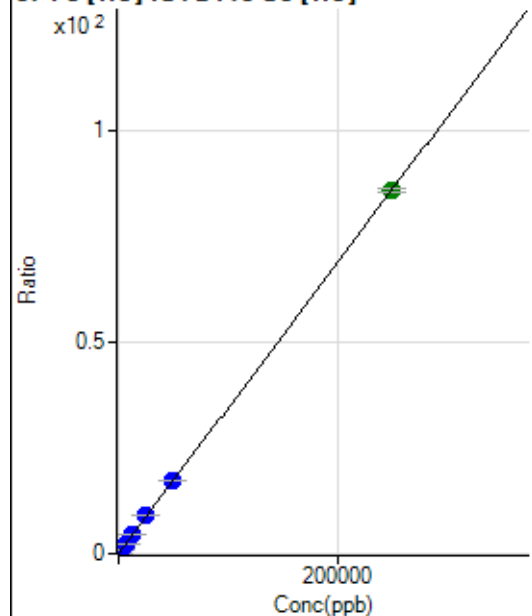
$$R = 1.0000$$

$$DL = 0.08247$$

$$BEC = 1.416$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	148.15	0.0008	P	33.6
2	☐	5.000					
3	☐	50.000	55.790	3717.24	0.0200	P	2.2
4	☐	2500.000	2650.469	162994.22	0.9114	P	1.1
5	☐	6250.000	6621.034	402467.88	2.2756	P	0.8
6	☐	12500.000	13178.136	798570.93	4.5285	P	0.7
7	☐	25000.000	25976.821	1559123.79	8.9259	P	0.5
8	☐	50000.000	50399.879	2985591.41	17.3171	P	0.3
9	☐	250000.00	249777.65	14518062.13	85.8190	A	1.1

$$y = 3.4358E-004 * x + 7.9591E-004$$

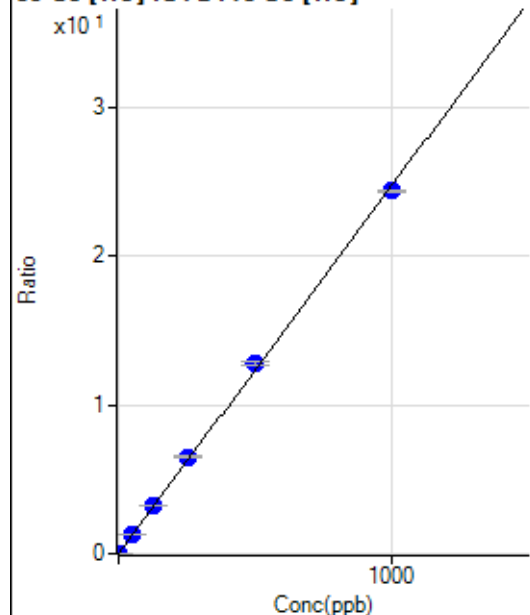
$$R = 1.0000$$

$$DL = 2.336$$

$$BEC = 2.317$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	34.44	0.0002	P	5.5
2	☐	0.100					
3	☐	1.000	1.068	4953.13	0.0266	P	3.3
4	☐	50.000	53.680	237508.28	1.3281	P	1.2
5	☐	125.000	132.146	578219.82	3.2692	P	0.2
6	☐	250.000	263.555	1149737.63	6.5200	P	0.6
7	☐	500.000	517.568	2236364.10	12.8037	P	1.1
8	☐	1000.000	986.750	4208402.16	24.4102	P	0.6
9	☐			48592.48	0.2872	P	0.9

$$y = 0.0247 * x + 1.8517E-004$$

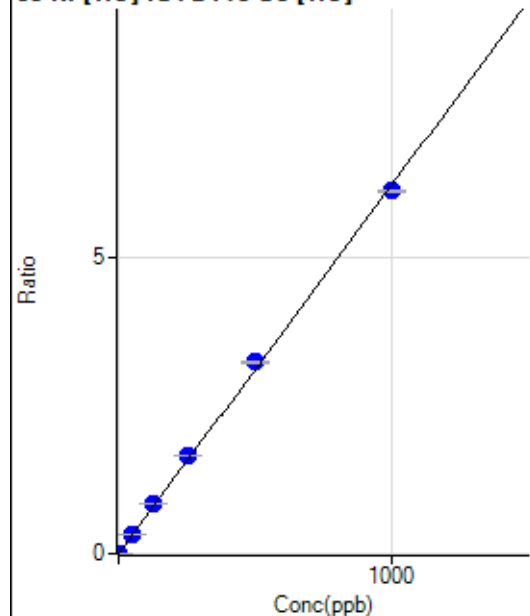
$$R = 0.9997$$

$$DL = 0.001233$$

$$BEC = 0.007485$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	65.56	0.0004	P	13.0
2	☐	0.100					
3	☐	1.000	1.068	1306.75	0.0070	P	3.4
4	☐	50.000	54.319	60673.81	0.3393	P	0.3
5	☐	125.000	134.679	148688.76	0.8407	P	0.6
6	☐	250.000	266.141	292893.30	1.6610	P	0.5
7	☐	500.000	519.464	566217.54	3.2416	P	0.7
8	☐	1000.000	984.807	1059436.64	6.1452	P	0.8
9	☐			10168.11	0.0601	P	2.5

$$y = 0.0062 * x + 3.5253E-004$$

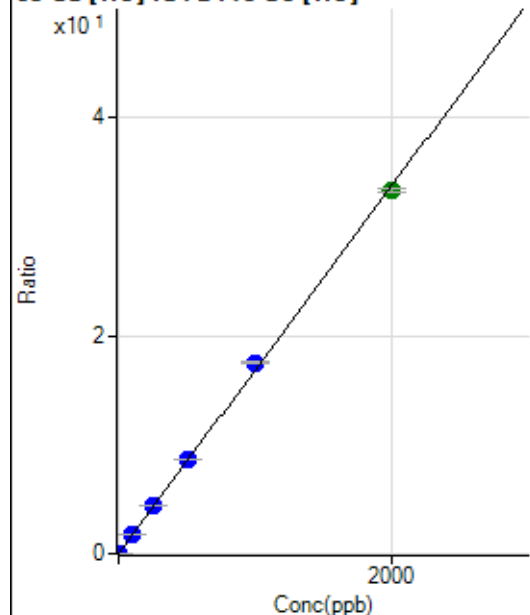
$$R = 0.9996$$

$$DL = 0.022$$

$$BEC = 0.0565$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	448.90	0.0024	P	6.7
2	☐	0.200					
3	☐	2.000	2.062	6928.41	0.0372	P	1.3
4	☐	100.000	105.833	319809.05	1.7883	P	1.1
5	☐	250.000	262.431	783681.37	4.4309	P	0.3
6	☐	500.000	515.578	1534653.05	8.7027	P	0.1
7	☐	1000.000	1040.081	3066069.92	17.5536	P	0.8
8	☐	2000.000	1974.220	5743798.25	33.3170	A	0.9
9	☐			3808.32	0.0225	P	3.4

$$y = 0.0169 * x + 0.0024$$

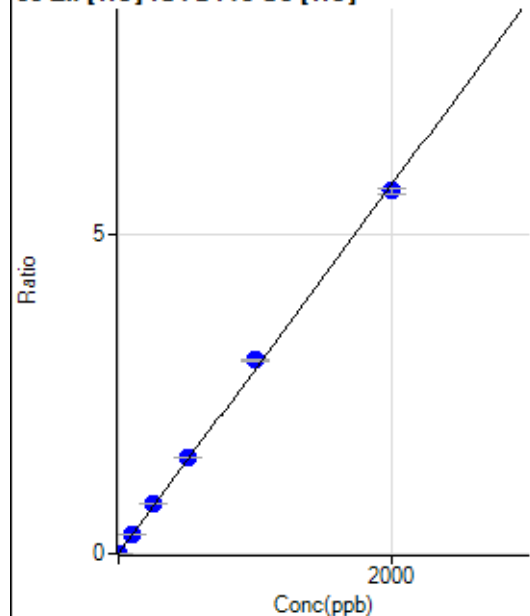
$$R = 0.9997$$

$$DL = 0.02858$$

$$BEC = 0.143$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	292.23	0.0016	P	3.1
2	☐	0.200					
3	☐	2.000	1.992	1364.53	0.0073	P	5.6
4	☐	100.000	108.545	56399.72	0.3154	P	0.3
5	☐	250.000	266.856	136730.08	0.7731	P	0.6
6	☐	500.000	520.295	265536.59	1.5058	P	0.9
7	☐	1000.000	1049.428	530215.96	3.0356	P	0.8
8	☐	2000.000	1967.678	980991.40	5.6903	P	1.2
9	☐			5601.15	0.0331	P	4.4

$$y = 0.0029 * x + 0.0016$$

$$R = 0.9995$$

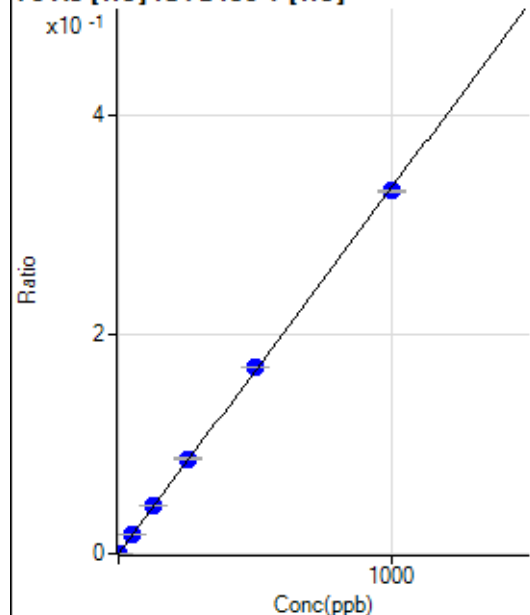
$$DL = 0.05$$

$$BEC = 0.5435$$

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	6.79	0.0000	P	68.8
2	☐	0.100					
3	☐	1.000	1.056	361.74	0.0004	P	3.9
4	☐	50.000	51.961	16918.54	0.0174	P	2.1
5	☐	125.000	129.762	41856.35	0.0434	P	0.5
6	☐	250.000	259.401	83078.52	0.0867	P	1.1
7	☐	500.000	510.698	162125.16	0.1706	P	0.3
8	☐	1000.000	991.607	308543.29	0.3313	P	0.6
9	☐			394.45	0.0004	P	2.7

$$y = 3.3407\text{E-}004 * x + 6.7568\text{E-}006$$

$$R = 0.9999$$

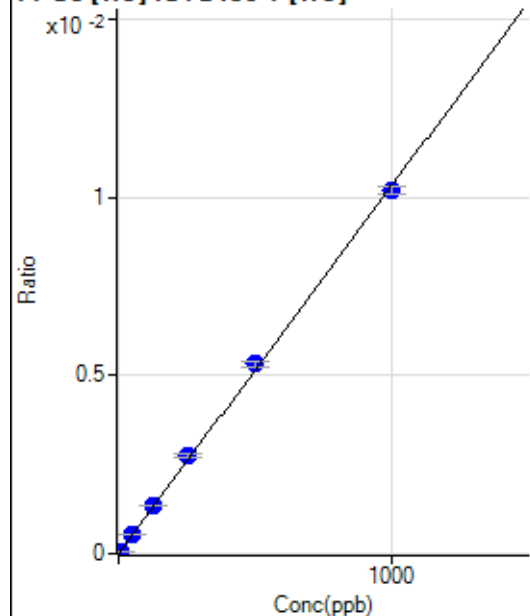
$$DL = 0.04176$$

$$BEC = 0.02023$$

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	4.920	51.11	0.0001	P	9.8
4	☐	50.000	51.801	521.13	0.0005	P	5.0
5	☐	125.000	132.407	1320.08	0.0014	P	1.4
6	☐	250.000	266.227	2635.84	0.0027	P	4.9
7	☐	500.000	516.120	5064.30	0.0053	P	2.6
8	☐	1000.000	986.868	9491.02	0.0102	P	2.2
9	☐			1.11	0.0000	P	173.

$$y = 1.0327\text{E-}005 * x + 0.0000\text{E+}000$$

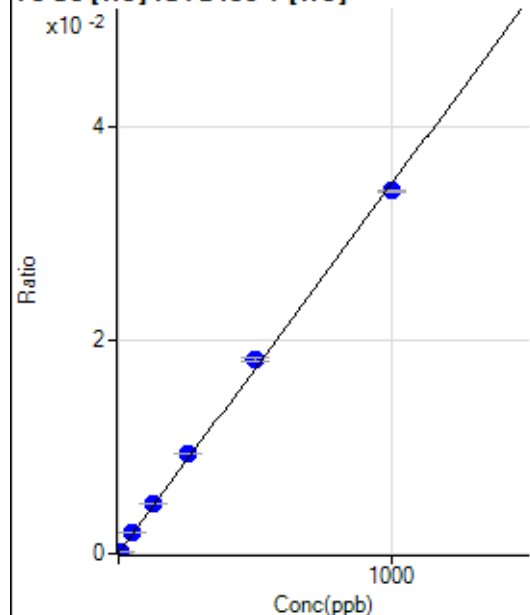
$$R = 0.9996$$

$$DL = 0$$

$$BEC = 0$$

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	54.32	0.0001	P	19.3
2	☐	0.500					
3	☐	5.000	5.452	243.83	0.0002	P	8.8
4	☐	50.000	55.243	1912.49	0.0020	P	1.7
5	☐	125.000	133.078	4491.47	0.0047	P	1.7
6	☐	250.000	269.189	8968.88	0.0094	P	1.6
7	☐	500.000	524.669	17280.11	0.0182	P	1.7
8	☐	1000.000	981.594	31643.76	0.0340	P	0.6
9	☐			51.85	0.0001	P	10.7

$$y = 3.4556E-005 * x + 5.4021E-005$$

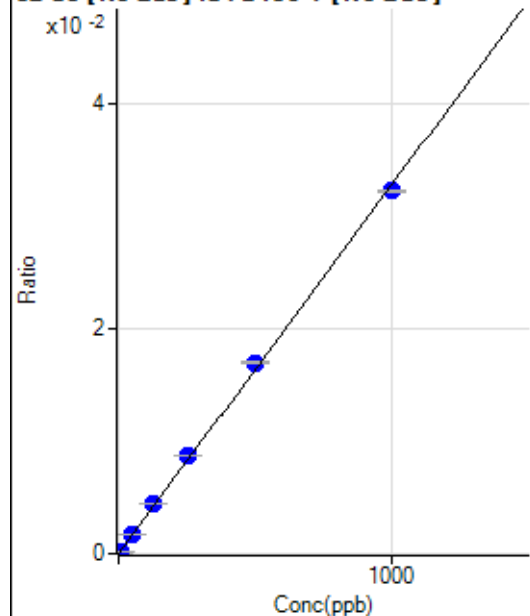
$$R = 0.9993$$

$$DL = 0.9038$$

$$BEC = 1.563$$

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	15.22	0.0000	P	269.
2	☐	0.500					
3	☐	5.000	5.525	1134.97	0.0002	P	0.8
4	☐	50.000	54.076	10736.01	0.0018	P	0.9
5	☐	125.000	135.920	26252.17	0.0045	P	0.9
6	☐	250.000	267.368	51484.70	0.0088	P	0.4
7	☐	500.000	518.961	100379.04	0.0170	P	0.2
8	☐	1000.000	984.606	187315.09	0.0323	P	0.3
9	☐			58.02	0.0000	P	80.6

$$y = 3.2775E-005 * x + 2.4277E-006$$

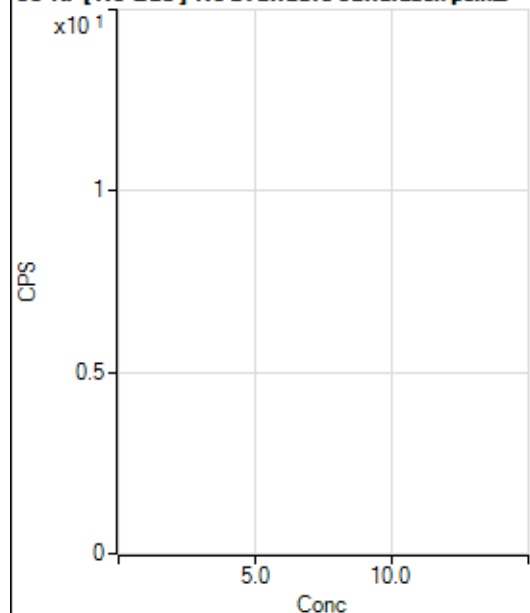
$$R = 0.9995$$

$$DL = 0.5994$$

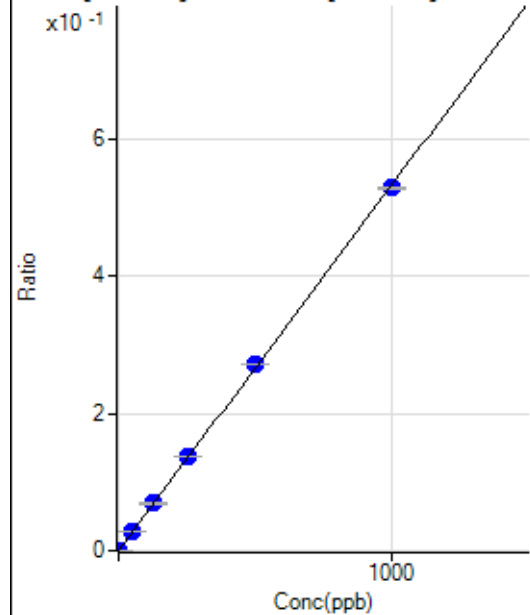
$$BEC = 0.07407$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			355.57		P	5.7
2	☐						
3	☐			340.01		P	5.2
4	☐			304.45		P	11.4
5	☐			324.45		P	4.2
6	☐			315.56		P	13.6
7	☐			334.45		P	14.1
8	☐			362.23		P	3.2
9	☐			400.01		P	8.2

86 Sr [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	13.4
2	☐	0.100					
3	☐	1.000	1.050	4006.28	0.0006	P	1.7
4	☐	50.000	51.112	165052.18	0.0273	P	1.3
5	☐	125.000	128.860	404368.89	0.0687	P	1.1
6	☐	250.000	256.070	800834.52	0.1363	P	0.5
7	☐	500.000	509.850	1601375.40	0.2714	P	0.1
8	☐	1000.000	993.019	3067415.78	0.5285	P	0.3
9	☐			12258.49	0.0023	P	3.3

$$y = 5.3211\text{E-}004 * x + 8.8781\text{E-}005$$

$$R = 0.9999$$

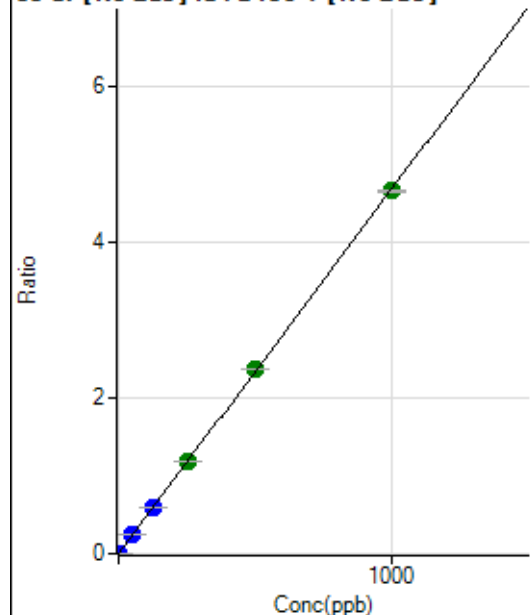
$$DL = 0.06688$$

$$BEC = 0.1668$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	394.47	0.0001	P	2.9
2	☐	0.100					
3	☐	1.000	0.960	28223.00	0.0046	P	1.4
4	☐	50.000	50.621	1435146.39	0.2372	P	0.1
5	☐	125.000	126.767	3498435.67	0.5940	P	1.8
6	☐	250.000	252.777	6957008.93	1.1845	A	0.1
7	☐	500.000	506.667	14008755.00	2.3741	A	0.2
8	☐	1000.000	995.720	27079534.28	4.6655	A	0.3
9	☐			105737.89	0.0199	P	1.0

$$y = 0.0047 * x + 6.3043E-005$$

$$R = 1.0000$$

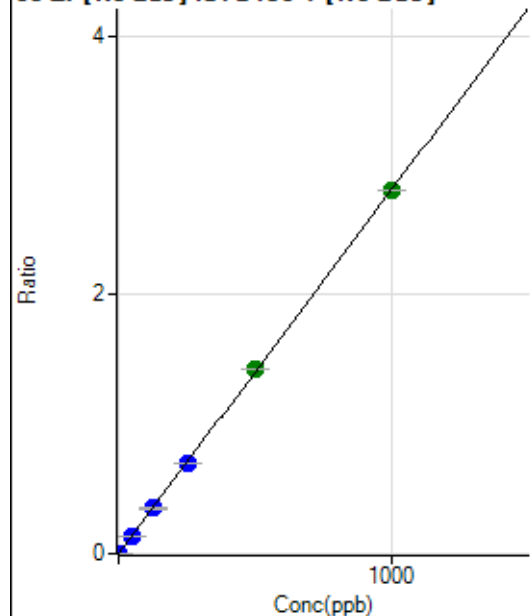
$$DL = 0.001165$$

$$BEC = 0.01345$$

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	372.24	0.0001	P	18.6
2	☐	0.100					
3	☐	1.000	0.924	16426.69	0.0027	P	1.2
4	☐	50.000	49.772	846491.07	0.1399	P	0.4
5	☐	125.000	125.362	2075205.10	0.3524	P	1.9
6	☐	250.000	248.610	4104077.83	0.6987	P	0.3
7	☐	500.000	505.567	8384191.94	1.4209	A	0.3
8	☐	1000.000	997.530	16271800.54	2.8035	A	0.2
9	☐			4442.55	0.0008	P	5.7

$$y = 0.0028 * x + 5.9520E-005$$

$$R = 1.0000$$

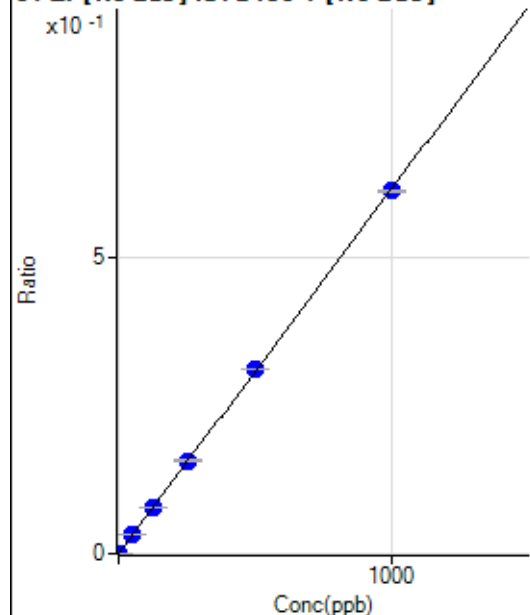
$$DL = 0.01183$$

$$BEC = 0.02118$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	69.45	0.0000	P	24.7
2	☐	0.100					
3	☐	1.000	0.993	3847.90	0.0006	P	3.5
4	☐	50.000	51.258	190801.83	0.0315	P	1.1
5	☐	125.000	128.146	464325.20	0.0788	P	1.6
6	☐	250.000	255.637	923700.53	0.1573	P	1.0
7	☐	500.000	506.165	1837356.01	0.3114	P	0.3
8	☐	1000.000	995.052	3552837.66	0.6121	P	0.4
9	☐			1094.54	0.0002	P	8.3

$$y = 6.1515\text{E-}004 * x + 1.1093\text{E-}005$$

$$R = 1.0000$$

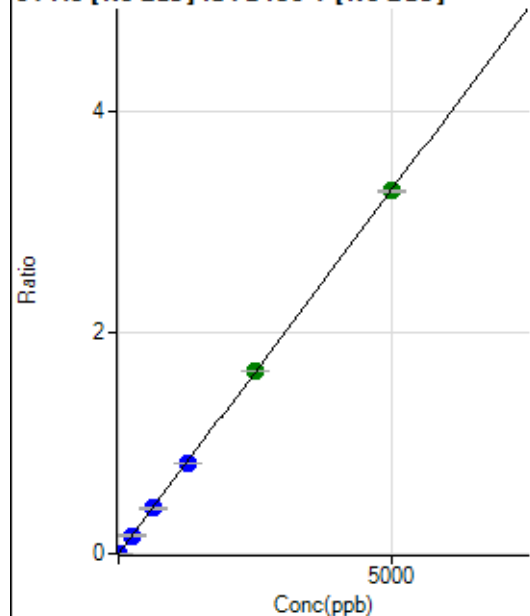
$$DL = 0.01334$$

$$BEC = 0.01803$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	211.12	0.0000	P	19.6
2	☐	0.500					
3	☐	5.000	4.896	20098.16	0.0032	P	4.5
4	☐	250.000	250.982	997390.15	0.1649	P	0.6
5	☐	625.000	628.617	2431659.95	0.4129	P	2.3
6	☐	1250.000	1246.071	4807264.56	0.8185	P	0.5
7	☐	2500.000	2523.001	9778546.57	1.6572	A	0.2
8	☐	5000.000	4988.981	19019375.43	3.2769	A	0.4
9	☐			8352.80	0.0016	P	11.8

$$y = 6.5681\text{E-}004 * x + 3.3730\text{E-}005$$

$$R = 1.0000$$

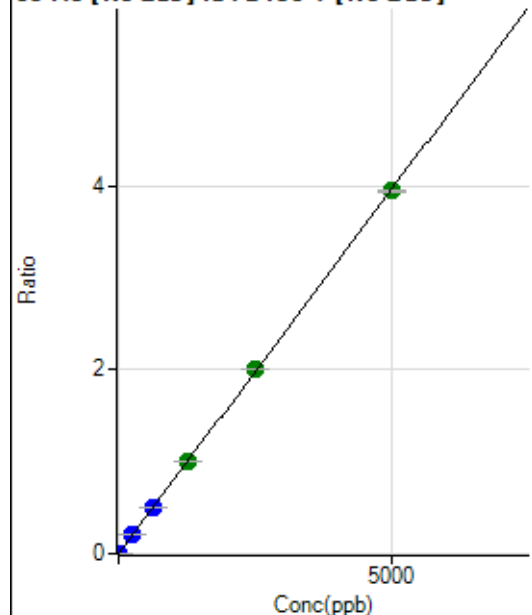
$$DL = 0.03024$$

$$BEC = 0.05135$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	91.67	0.0000	P	32.5
2	☐	0.500					
3	☐	5.000	5.064	24872.57	0.0040	P	2.7
4	☐	250.000	252.306	1207662.04	0.1996	P	0.3
5	☐	625.000	633.956	2954166.54	0.5016	P	1.6
6	☐	1250.000	1259.412	5852817.53	0.9965	A	0.1
7	☐	2500.000	2530.566	11814597.66	2.0022	A	0.1
8	☐	5000.000	4981.129	22874873.95	3.9411	A	0.2
9	☐			12503.22	0.0024	P	10.0

$$y = 7.9121\text{E-}004 * x + 1.4640\text{E-}005$$

$$R = 1.0000$$

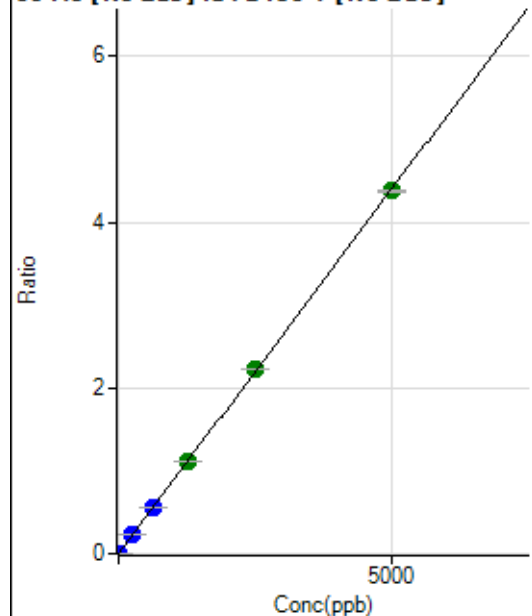
$$DL = 0.01802$$

$$BEC = 0.0185$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.90	0.0000	P	31.3
2	☐	0.500					
3	☐	5.000	5.124	28058.95	0.0045	P	0.8
4	☐	250.000	253.342	1346834.44	0.2227	P	0.6
5	☐	625.000	636.555	3294444.67	0.5594	P	1.7
6	☐	1250.000	1263.266	6520172.63	1.1101	A	0.3
7	☐	2500.000	2531.650	13126904.37	2.2246	A	0.6
8	☐	5000.000	4979.247	25395351.96	4.3754	A	0.3
9	☐			18067.77	0.0034	P	8.1

$$y = 8.7872\text{E-}004 * x + 3.4166\text{E-}005$$

$$R = 1.0000$$

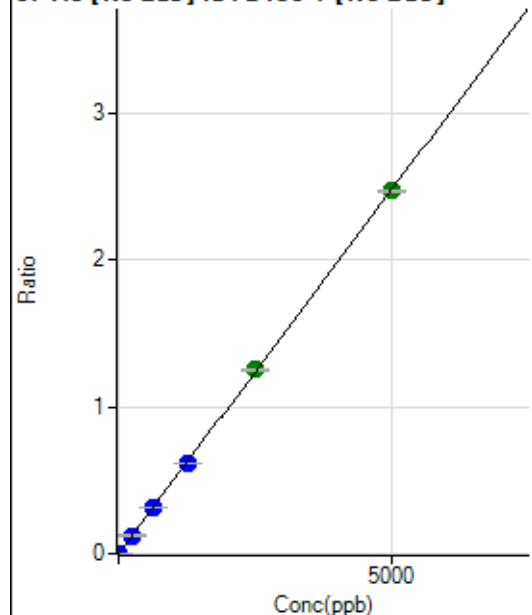
$$DL = 0.03649$$

$$BEC = 0.03888$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.56	0.0000	P	25.7
2	☐	0.500					
3	☐	5.000	5.140	15814.86	0.0026	P	1.5
4	☐	250.000	250.879	751200.74	0.1242	P	0.3
5	☐	625.000	634.948	1850775.06	0.3143	P	2.2
6	☐	1250.000	1245.189	3619890.23	0.6163	P	0.2
7	☐	2500.000	2525.100	7374601.12	1.2498	A	0.7
8	☐	5000.000	4987.365	14327232.61	2.4685	A	0.6
9	☐			7493.94	0.0014	P	8.7

$$y = 4.9494\text{E-}004 * x + 1.2868\text{E-}005$$

$$R = 1.0000$$

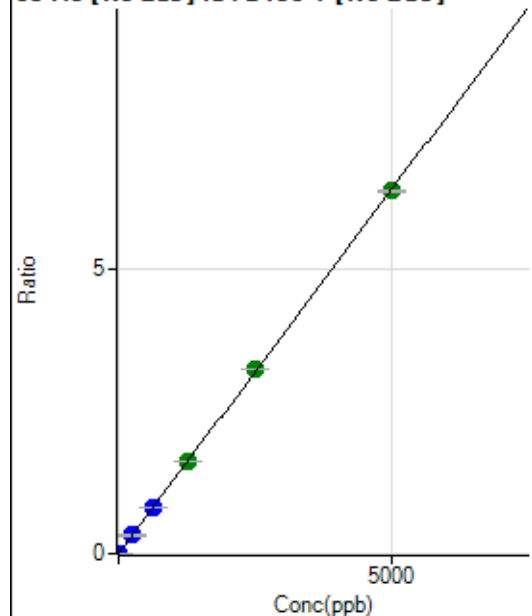
$$DL = 0.02005$$

$$BEC = 0.026$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	169.45	0.0000	P	28.5
2	☐	0.500					
3	☐	5.000	5.084	40383.15	0.0065	P	0.6
4	☐	250.000	250.935	1941619.94	0.3210	P	0.4
5	☐	625.000	632.009	4760717.99	0.8084	P	1.9
6	☐	1250.000	1257.673	9448274.26	1.6086	A	0.2
7	☐	2500.000	2529.069	19087411.19	3.2347	A	0.5
8	☐	5000.000	4982.624	36989121.66	6.3728	A	0.4
9	☐			18379.31	0.0035	P	13.8

$$y = 0.0013 * x + 2.7067\text{E-}005$$

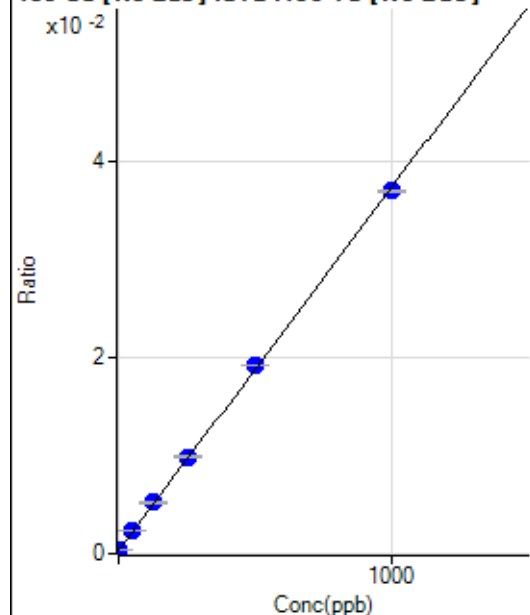
$$R = 1.0000$$

$$DL = 0.01809$$

$$BEC = 0.02116$$

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	2516.99	0.0003	P	5.5
2	☐	0.100					
3	☐	1.000	1.457	2917.11	0.0004	P	5.4
4	☐	50.000	55.764	18752.03	0.0024	P	1.1
5	☐	125.000	133.862	41196.94	0.0053	P	3.1
6	☐	250.000	258.916	78388.85	0.0099	P	2.0
7	☐	500.000	510.654	153595.79	0.0192	P	1.0
8	☐	1000.000	991.047	294463.62	0.0369	P	0.5
9	☐			2361.40	0.0003	P	5.3

$$y = 3.6937E-005 * x + 3.1113E-004$$

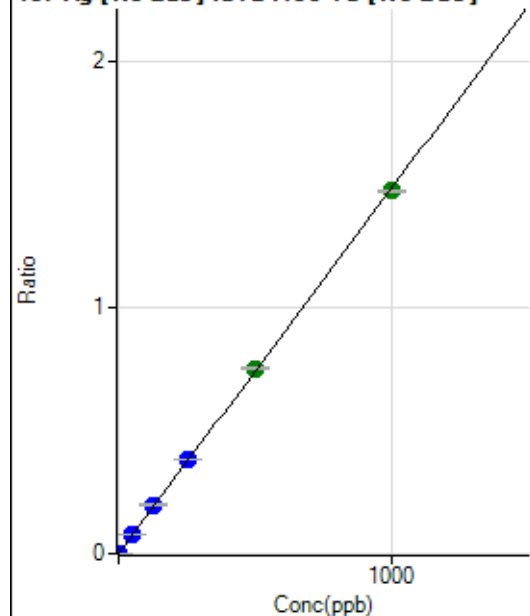
$$R = 0.9999$$

$$DL = 1.401$$

$$BEC = 8.423$$

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	102.78	0.0000	P	20.4
2	☐	0.100					
3	☐	1.000	1.110	13287.36	0.0017	P	1.7
4	☐	50.000	54.591	641618.27	0.0811	P	1.0
5	☐	125.000	133.636	1556657.28	0.1986	P	2.4
6	☐	250.000	256.792	3028965.09	0.3815	P	1.0
7	☐	500.000	507.216	6037541.58	0.7536	A	0.5
8	☐	1000.000	993.385	11772252.00	1.4759	A	0.6
9	☐			1252.89	0.0002	P	19.0

$$y = 0.0015 * x + 1.2705E-005$$

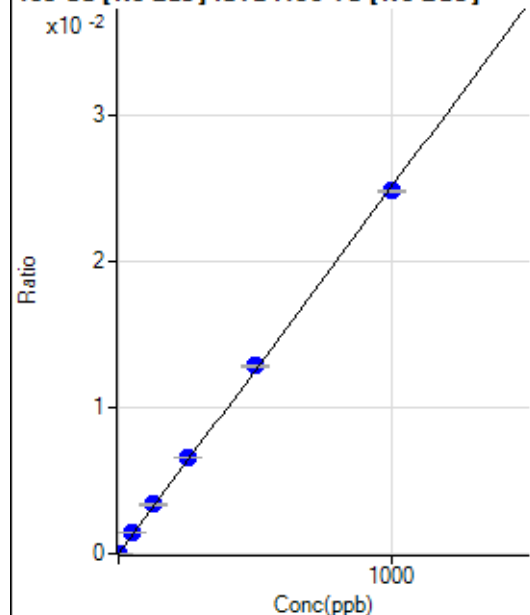
$$R = 0.9999$$

$$DL = 0.005246$$

$$BEC = 0.008552$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	6.94	0.0000	P	91.6
2	☐	0.100					
3	☐	1.000	1.128	233.34	0.0000	P	9.3
4	☐	50.000	55.968	11124.01	0.0014	P	1.9
5	☐	125.000	134.837	26551.50	0.0034	P	3.2
6	☐	250.000	262.690	52384.15	0.0066	P	1.1
7	☐	500.000	511.917	103009.29	0.0129	P	0.5
8	☐	1000.000	989.341	198195.35	0.0248	P	0.8
9	☐			51.39	0.0000	P	19.0

$$y = 2.5116\text{E-}005 * x + 8.6007\text{E-}007$$

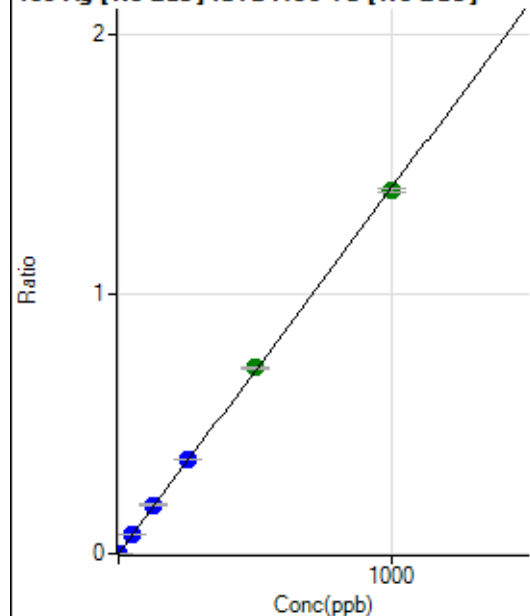
$$R = 0.9998$$

$$DL = 0.09414$$

$$BEC = 0.03424$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	55.56	0.0000	P	17.5
2	☐	0.100					
3	☐	1.000	1.121	12703.43	0.0016	P	3.0
4	☐	50.000	54.721	610730.79	0.0772	P	0.0
5	☐	125.000	133.904	1481263.50	0.1889	P	2.2
6	☐	250.000	258.045	2890651.50	0.3641	P	0.4
7	☐	500.000	509.288	5756767.49	0.7186	A	1.0
8	☐	1000.000	991.996	11164174.03	1.3997	A	1.0
9	☐			1141.77	0.0002	P	26.0

$$y = 0.0014 * x + 6.8688\text{E-}006$$

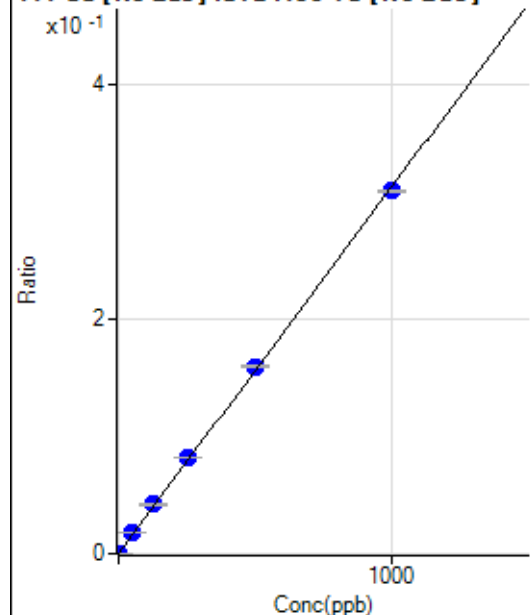
$$R = 0.9999$$

$$DL = 0.002553$$

$$BEC = 0.004868$$

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	1004.72	0.0001	P	5.6
2	☐	0.100					
3	☐	1.000	1.026	3552.40	0.0004	P	6.8
4	☐	50.000	55.085	136980.11	0.0173	P	0.4
5	☐	125.000	134.885	331022.87	0.0422	P	3.0
6	☐	250.000	262.431	651364.27	0.0820	P	0.2
7	☐	500.000	510.694	1278052.98	0.1595	P	1.2
8	☐	1000.000	990.055	2466008.61	0.3092	P	0.9
9	☐			1318.33	0.0002	P	8.8

$$y = 3.1216\text{E-}004 * x + 1.2420\text{E-}004$$

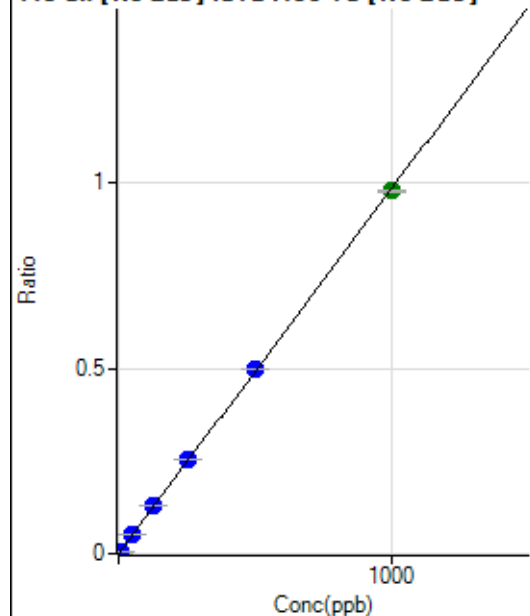
$$R = 0.9998$$

$$DL = 0.06643$$

$$BEC = 0.3979$$

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	383.35	0.0000	P	17.5
2	☐	0.500					
3	☐	5.000	5.307	42175.21	0.0053	P	2.3
4	☐	50.000	52.806	411806.31	0.0521	P	0.5
5	☐	125.000	131.987	1019685.27	0.1301	P	2.4
6	☐	250.000	257.246	2012258.70	0.2535	P	0.6
7	☐	500.000	505.076	3986511.46	0.4976	P	0.5
8	☐	1000.000	994.635	7815724.48	0.9799	A	0.5
9	☐			3458.91	0.0005	P	11.1

$$y = 9.8513\text{E-}004 * x + 4.7397\text{E-}005$$

$$R = 0.9999$$

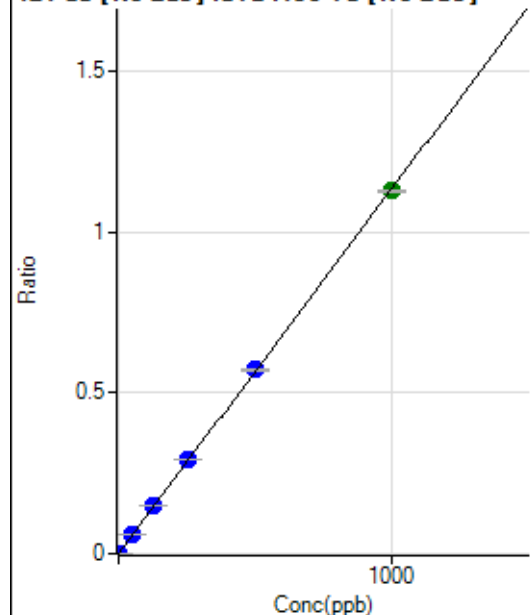
$$DL = 0.02519$$

$$BEC = 0.04811$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	50.2
2	☐	0.200					
3	☐	2.000	1.915	17453.17	0.0022	P	2.7
4	☐	50.000	52.410	469657.31	0.0594	P	1.0
5	☐	125.000	130.999	1163418.30	0.1484	P	2.1
6	☐	250.000	256.918	2310458.17	0.2910	P	0.6
7	☐	500.000	504.317	4576504.70	0.5713	P	0.6
8	☐	1000.000	995.242	8991829.54	1.1273	A	0.7
9	☐			11927.73	0.0016	P	4.8

$$y = 0.0011 * x + 1.4427E-005$$

$$R = 1.0000$$

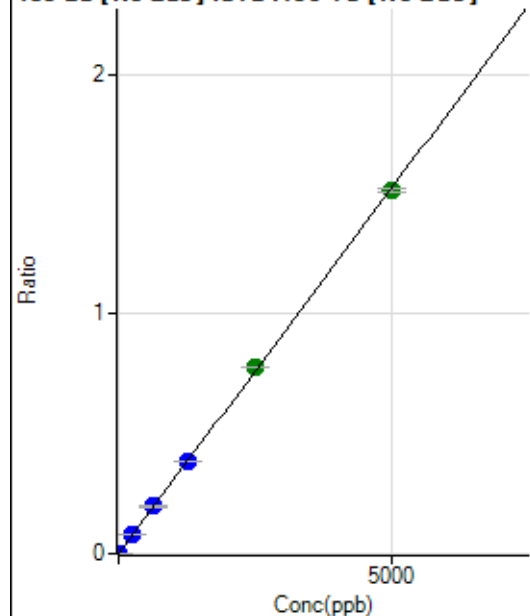
$$DL = 0.01916$$

$$BEC = 0.01274$$

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	16.67	0.0000	P	49.7
2	☐	1.000					
3	☐	10.000	10.202	24853.47	0.0031	P	0.8
4	☐	250.000	261.050	628830.09	0.0795	P	0.7
5	☐	625.000	645.317	1540692.52	0.1965	P	2.5
6	☐	1250.000	1268.936	3068134.70	0.3865	P	0.5
7	☐	2500.000	2552.661	6228024.14	0.7774	A	0.8
8	☐	5000.000	4965.843	12062687.08	1.5124	A	1.1
9	☐			1830.76	0.0003	P	28.1

$$y = 3.0455E-004 * x + 2.0579E-006$$

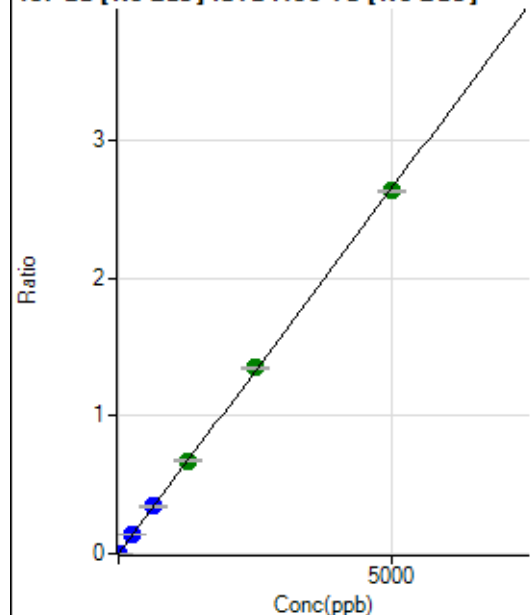
$$R = 0.9999$$

$$DL = 0.01007$$

$$BEC = 0.006757$$

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	44.45	0.0000	P	11.1
2	☐	1.000					
3	☐	10.000	10.067	42792.21	0.0054	P	1.3
4	☐	250.000	261.543	1098903.63	0.1389	P	0.4
5	☐	625.000	650.877	2710695.79	0.3458	P	2.0
6	☐	1250.000	1275.258	5378107.76	0.6774	A	0.7
7	☐	2500.000	2545.586	10833146.77	1.3523	A	0.6
8	☐	5000.000	4967.081	21045568.87	2.6386	A	0.6
9	☐			3211.64	0.0004	P	22.6

$$y = 5.3121\text{E-}004 * x + 5.4951\text{E-}006$$

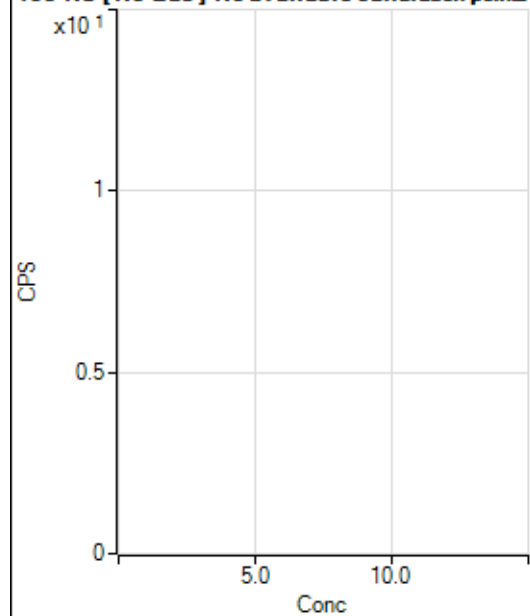
$$R = 0.9999$$

$$DL = 0.003433$$

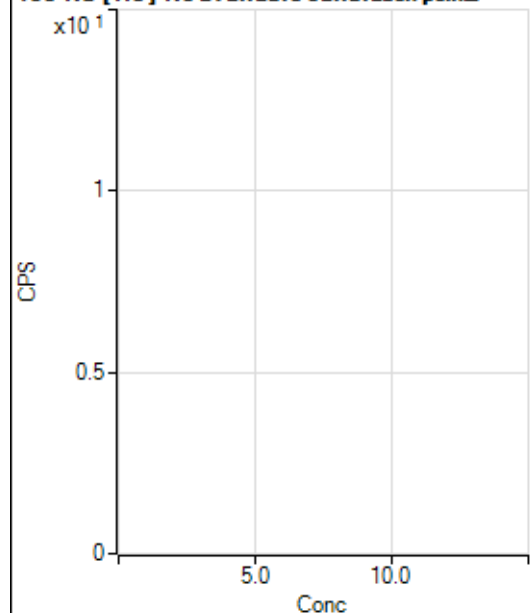
$$BEC = 0.01034$$

Weight: <None>

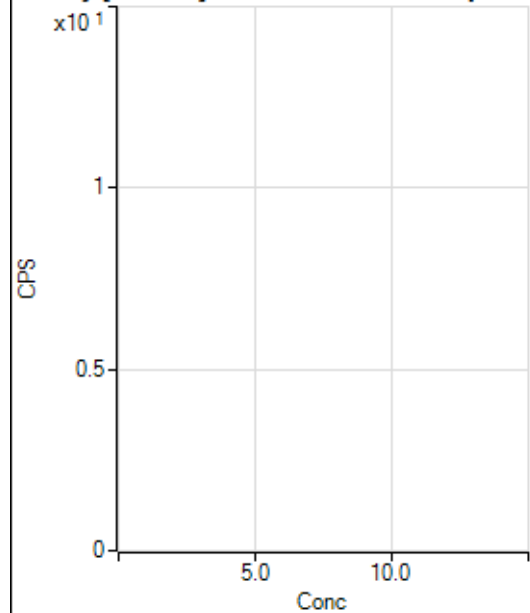
Min Conc: 0

150 Nd [No Gas] No available calibration points

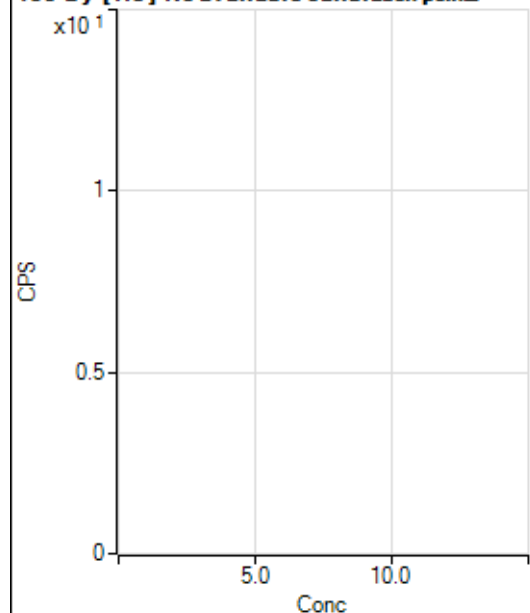
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐						
3	☐			11.11		P	34.6
4	☐			60.00		P	33.3
5	☐			122.23		P	30.0
6	☐			286.68		P	0.0
7	☐			588.92		P	5.3
8	☐			955.62		P	2.6
9	☐			160.01		P	23.2

150 Nd [He] No available calibration points

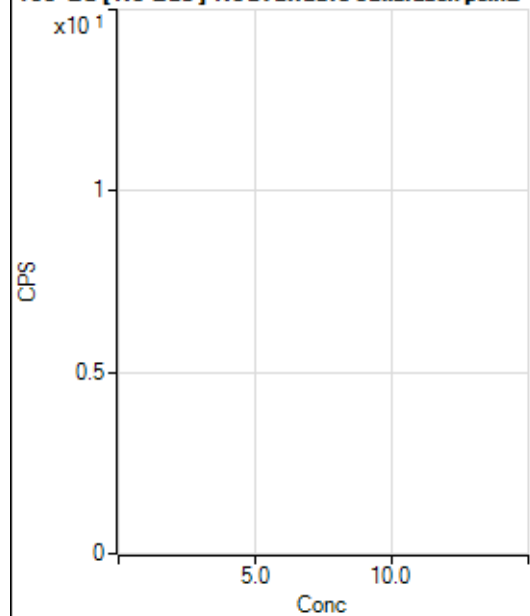
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐						
3	☐			4.44		P	114.
4	☐			6.66		P	86.6
5	☐			14.44		P	58.1
6	☐			38.89		P	9.9
7	☐			67.78		P	36.9
8	☐			122.23		P	6.9
9	☐			85.56		P	13.7

156 Dy [No Gas] No available calibration points

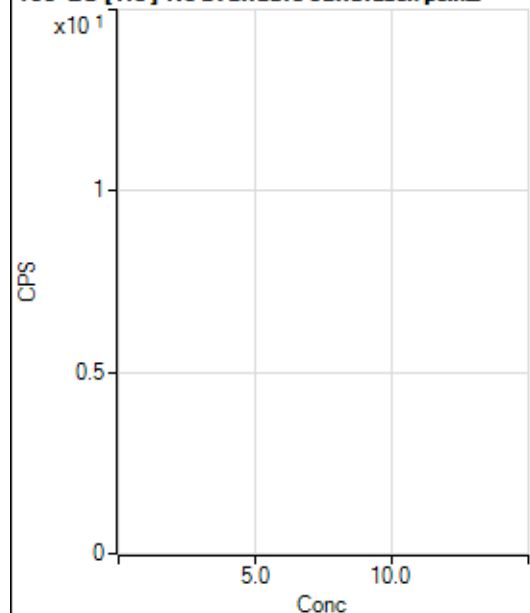
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.55		P	86.6
2	☐						
3	☐			5.56		P	173.
4	☐			25.00		P	88.2
5	☐			30.55		P	15.7
6	☐			72.23		P	24.0
7	☐			113.90		P	37.5
8	☐			161.12		P	19.6
9	☐			97.23		P	24.7

156 Dy [He] No available calibration points

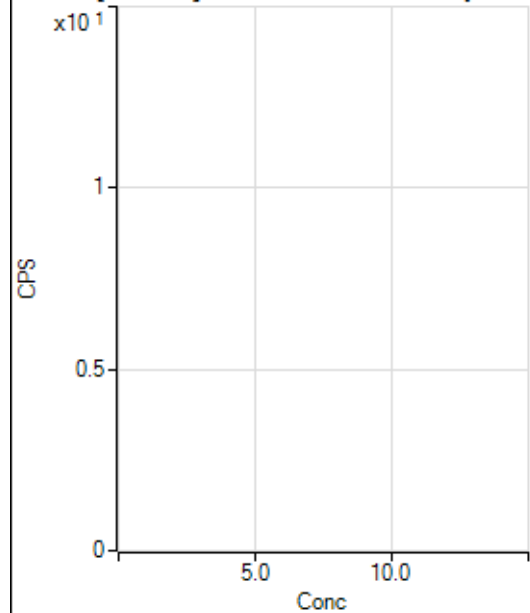
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	86.6
2	☐						
3	☐			2.22		P	86.6
4	☐			14.44		P	70.5
5	☐			40.00		P	25.0
6	☐			60.00		P	43.4
7	☐			127.78		P	4.0
8	☐			252.23		P	19.9
9	☐			51.11		P	32.2

160 Gd [No Gas] Noavailable calibration poin_

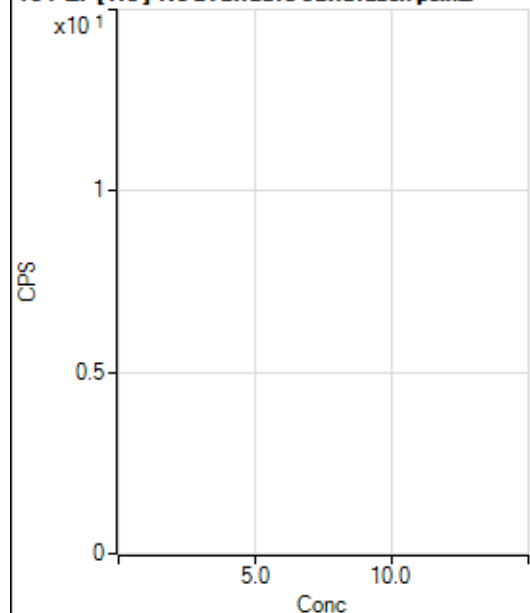
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			47.22		P	36.7
2	☐						
3	☐			36.11		P	48.0
4	☐			44.44		P	60.3
5	☐			25.00		P	100.
6	☐			52.78		P	24.1
7	☐			44.45		P	39.0
8	☐			69.45		P	27.7
9	☐			80.56		P	52.1

160 Gd [He] No available calibration points

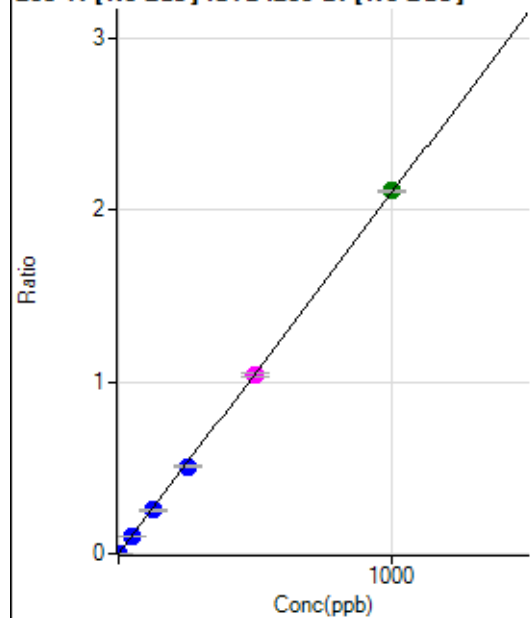
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			128.89		P	9.1
2	☐						
3	☐			146.67		P	8.2
4	☐			123.34		P	32.4
5	☐			121.11		P	24.7
6	☐			143.33		P	20.1
7	☐			133.34		P	18.0
8	☐			116.67		P	4.9
9	☐			161.11		P	19.7

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			16.67		P	50.0
2	☐						
3	☐			38.89		P	107.
4	☐			27.78		P	45.8
5	☐			41.67		P	52.9
6	☐			22.22		P	21.6
7	☐			50.00		P	88.2
8	☐			50.00		P	44.1
9	☐			25.00		P	33.3

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			12.22		P	15.7
2	☐						
3	☐			13.33		P	75.0
4	☐			14.44		P	13.4
5	☐			13.33		P	25.0
6	☐			10.00		P	57.8
7	☐			15.55		P	24.8
8	☐			28.89		P	13.3
9	☐			33.34		P	17.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	105.56	0.0000	P	32.2
2	☐	0.100					
3	☐	1.000	0.891	9934.70	0.0019	P	4.8
4	☐	50.000	48.122	531891.75	0.1010	P	0.4
5	☐	125.000	120.578	1326479.30	0.2531	P	2.5
6	☐	250.000	241.665	2636025.41	0.5072	P	1.2
7	☐	500.000	494.825	5313729.07	1.0386	M	2.0
8	☐	1000.000	1005.318	10460210.74	2.1100	A	0.7
9	☐			1355.70	0.0003	P	17.5

$$y = 0.0021 * x + 1.9476E-005$$

$$R = 0.9999$$

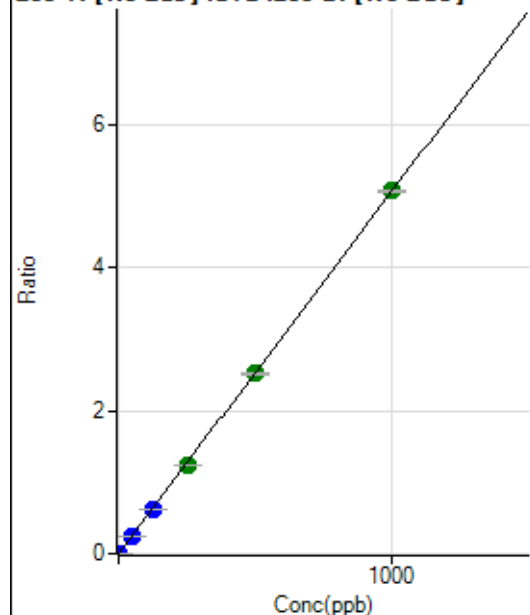
$$DL = 0.008968$$

$$BEC = 0.00928$$

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	236.12	0.0000	P	21.1
2	☐	0.100					
3	☐	1.000	0.910	24456.67	0.0047	P	1.9
4	☐	50.000	48.322	1288284.75	0.2447	P	0.8
5	☐	125.000	121.342	3219890.02	0.6144	P	2.4
6	☐	250.000	243.812	6414878.23	1.2344	A	0.6
7	☐	500.000	498.202	12904988.14	2.5223	A	1.2
8	☐	1000.000	1002.987	25172600.91	5.0778	A	0.6
9	☐			3500.64	0.0008	P	21.5

$$y = 0.0051 * x + 4.3412E-005$$

$$R = 1.0000$$

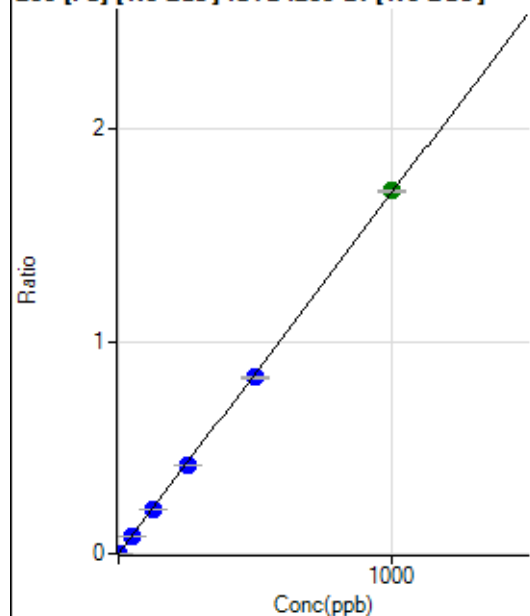
$$DL = 0.005417$$

$$BEC = 0.008575$$

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	359.27	0.0001	P	15.0
2	☐	0.100					
3	☐	1.000	0.960	8919.92	0.0017	P	3.8
4	☐	50.000	48.902	437517.30	0.0831	P	0.3
5	☐	125.000	123.028	1095112.89	0.2090	P	2.6
6	☐	250.000	244.040	2153661.07	0.4144	P	0.6
7	☐	500.000	490.375	4260359.58	0.8327	P	1.1
8	☐	1000.000	1006.604	8472965.52	1.7092	A	0.2
9	☐			7493.08	0.0018	P	1.3

$$y = 0.0017 * x + 6.6276E-005$$

$$R = 0.9999$$

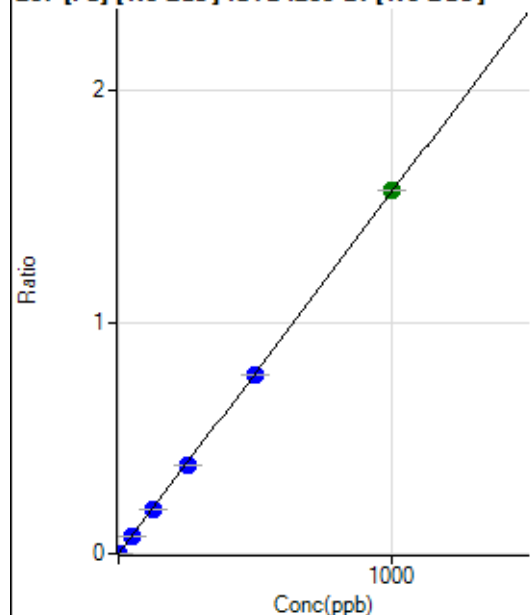
$$DL = 0.01758$$

$$BEC = 0.03903$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	414.84	0.0001	P	7.0
2	☐	0.100					
3	☐	1.000	0.888	7696.89	0.0015	P	6.0
4	☐	50.000	48.790	401635.41	0.0763	P	0.8
5	☐	125.000	122.715	1005110.64	0.1917	P	1.5
6	☐	250.000	244.821	1987604.08	0.3825	P	0.8
7	☐	500.000	494.818	3954785.22	0.7729	P	0.5
8	☐	1000.000	1004.232	7776173.09	1.5686	A	0.1
9	☐			6329.48	0.0015	P	5.8

$$y = 0.0016 * x + 7.6423E-005$$

$$R = 1.0000$$

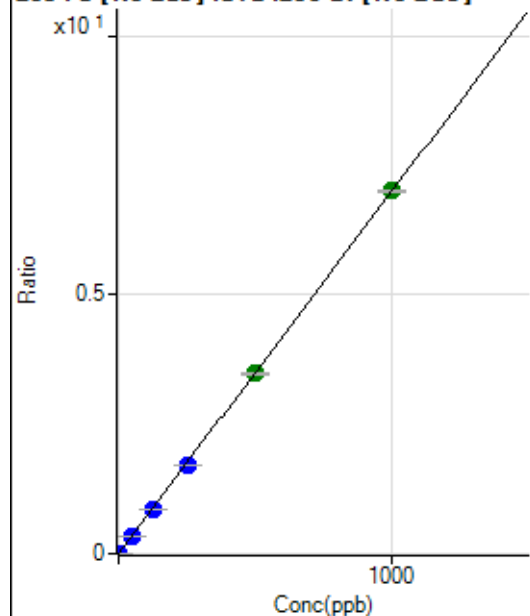
$$DL = 0.01031$$

$$BEC = 0.04893$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1826.03	0.0003	P	4.4
2	☐	0.100					
3	☐	1.000	0.931	35992.46	0.0068	P	3.0
4	☐	50.000	48.999	1804903.27	0.3428	P	0.4
5	☐	125.000	123.070	4510068.00	0.8605	P	2.2
6	☐	250.000	244.944	8898456.69	1.7123	P	0.7
7	☐	500.000	498.172	17816494.20	3.4821	A	0.7
8	☐	1000.000	1002.469	34735062.87	7.0067	A	0.3
9	☐			29782.50	0.0071	P	2.5

$$y = 0.0070 * x + 3.3669E-004$$

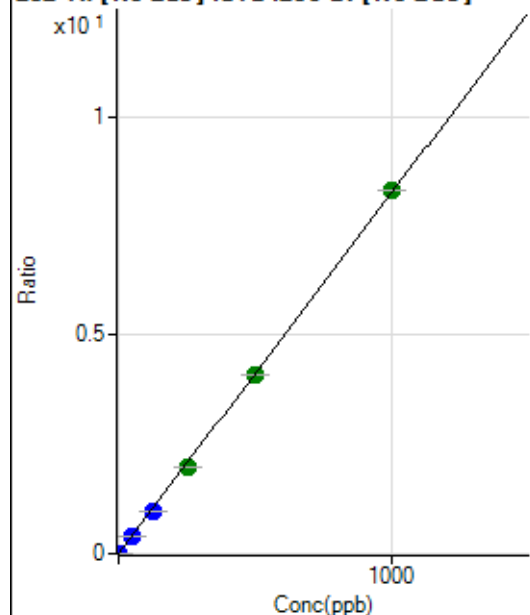
$$R = 1.0000$$

$$DL = 0.00631$$

$$BEC = 0.04817$$

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	446.32	0.0001	P	6.7
2	☐	0.100					
3	☐	1.000	0.843	37034.41	0.0070	P	2.5
4	☐	50.000	46.332	2014991.28	0.3827	P	0.3
5	☐	125.000	117.868	5102098.09	0.9735	P	2.3
6	☐	250.000	238.945	10255098.61	1.9733	A	0.6
7	☐	500.000	495.685	20945024.78	4.0935	A	0.9
8	☐	1000.000	1005.996	41184908.79	8.3078	A	0.1
9	☐			7643.26	0.0018	P	19.1

$$y = 0.0083 * x + 8.2212E-005$$

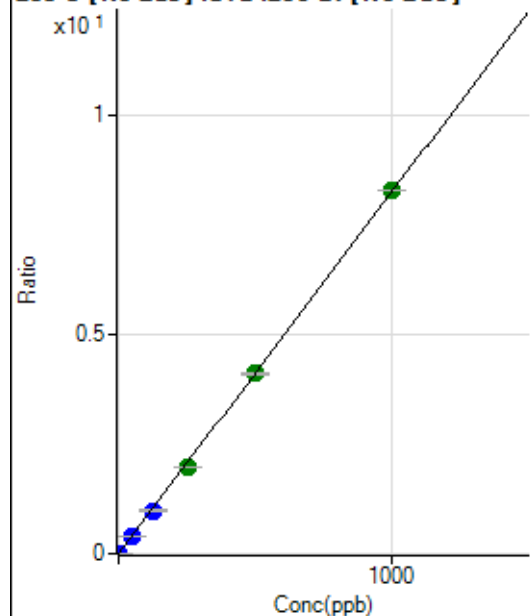
$$R = 0.9999$$

$$DL = 0.002013$$

$$BEC = 0.009955$$

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	58.34	0.0000	P	13.3
2	☐	0.100					
3	☐	1.000	0.865	37530.12	0.0071	P	1.6
4	☐	50.000	46.641	2023433.68	0.3843	P	1.0
5	☐	125.000	119.020	5139689.87	0.9807	P	2.5
6	☐	250.000	240.177	10284279.74	1.9789	A	0.3
7	☐	500.000	498.380	21010635.37	4.1064	A	0.8
8	☐	1000.000	1004.181	41017062.37	8.2739	A	0.2
9	☐			3545.14	0.0008	P	38.0

$$y = 0.0082 * x + 1.0744E-005$$

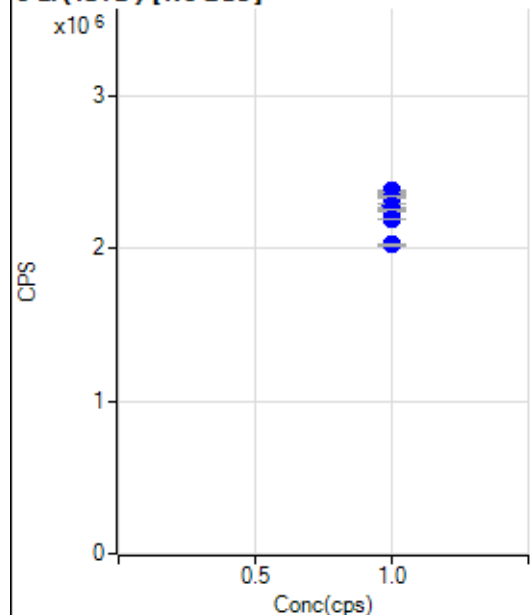
$$R = 0.9999$$

$$DL = 0.0005196$$

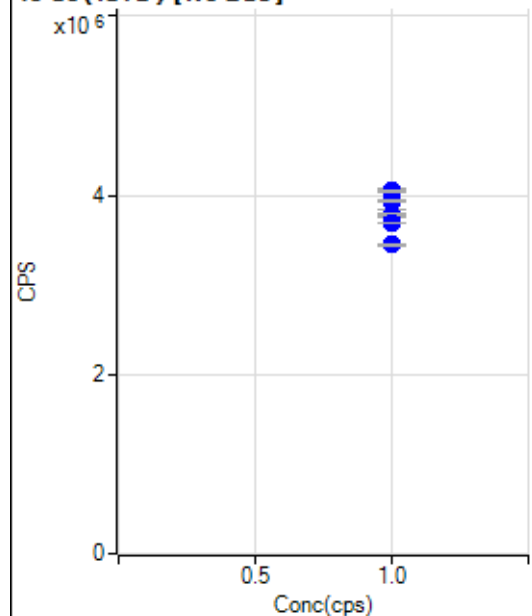
$$BEC = 0.001304$$

Weight: <None>

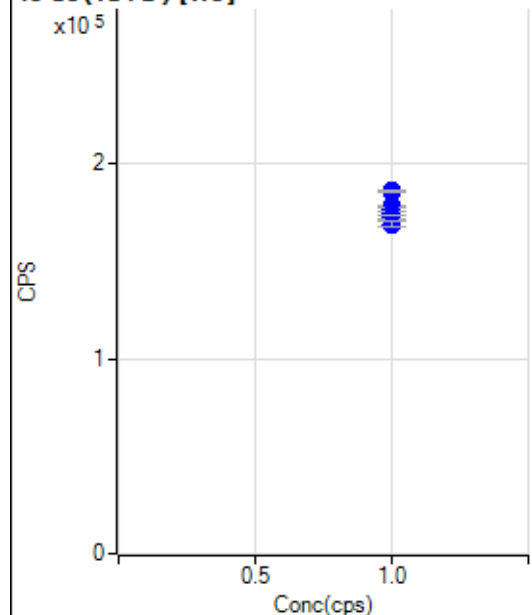
Min Conc: 0

6 Li (ISTD) [No Gas]

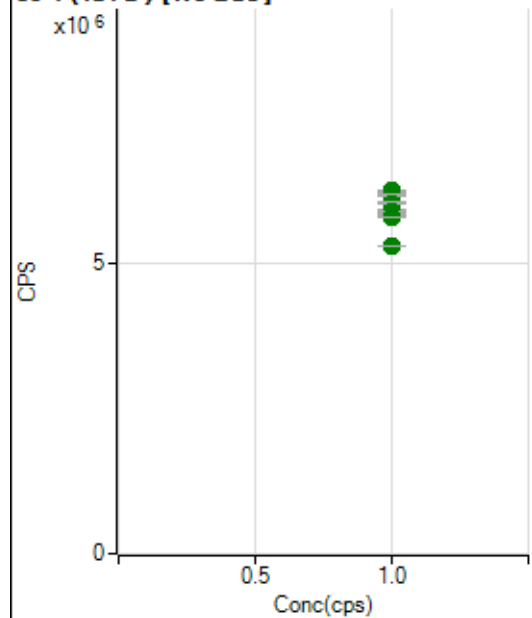
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2378174.52		P	0.5
2	☐	1.000					
3	☐	1.000		2363522.39		P	0.6
4	☐	1.000		2337696.59		P	0.4
5	☐	1.000		2284339.29		P	1.1
6	☐	1.000		2261699.76		P	0.4
7	☐	1.000		2253438.69		P	0.7
8	☐	1.000		2197243.00		P	0.2
9	☐	1.000		2027394.49		P	0.5

45 Sc (ISTD) [No Gas]

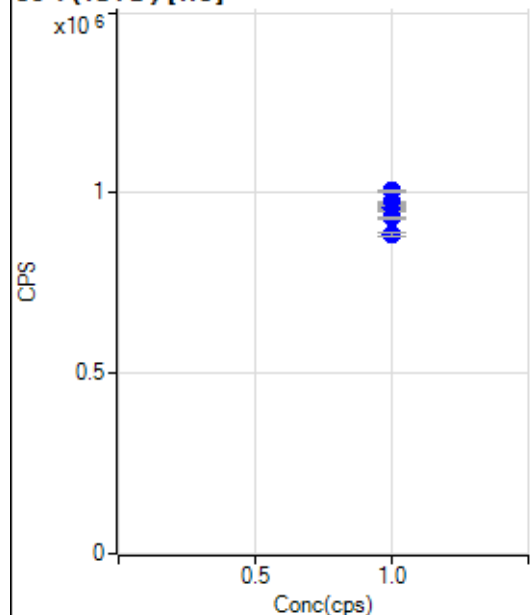
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4049605.86		P	1.0
2	☐	1.000					
3	☐	1.000		4041541.98		P	0.5
4	☐	1.000		3934221.83		P	0.7
5	☐	1.000		3801703.39		P	2.0
6	☐	1.000		3769242.75		P	0.4
7	☐	1.000		3785527.52		P	0.8
8	☐	1.000		3689143.62		P	0.1
9	☐	1.000		3454302.38		P	0.7

45 Sc (ISTD) [He]

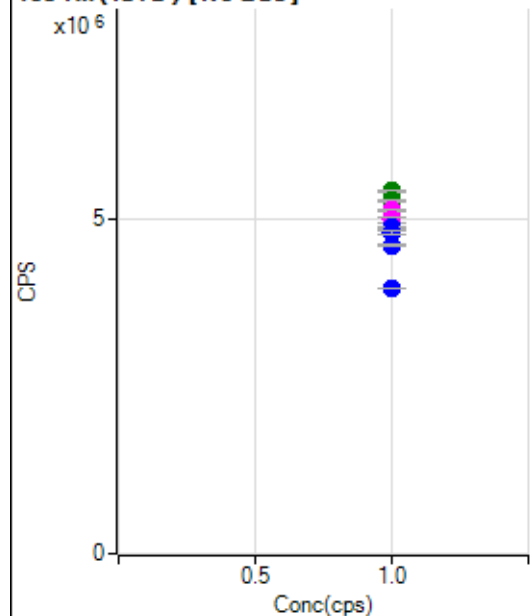
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		186001.83		P	0.6
2	☐	1.000					
3	☐	1.000		186193.24		P	0.4
4	☐	1.000		178828.88		P	0.3
5	☐	1.000		176870.35		P	1.2
6	☐	1.000		176341.60		P	0.9
7	☐	1.000		174679.30		P	1.1
8	☐	1.000		172409.85		P	1.1
9	☐	1.000		169187.98		P	1.4

89 Y (ISTD) [No Gas]

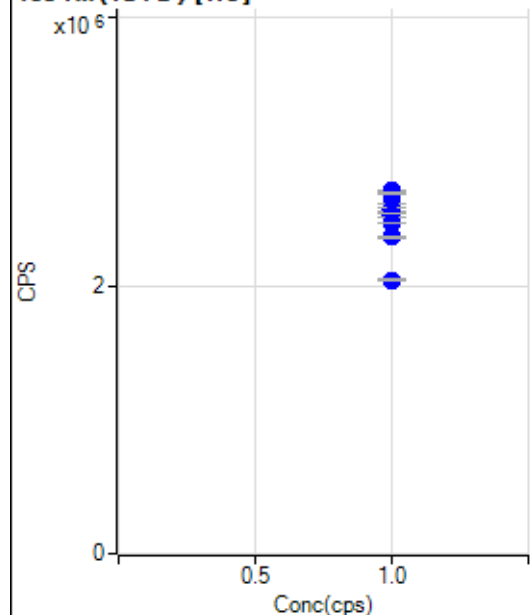
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6256737.27		A	0.4
2	☐	1.000					
3	☐	1.000		6185164.98		A	0.4
4	☐	1.000		6049145.53		A	0.3
5	☐	1.000		5890401.44		A	1.6
6	☐	1.000		5873581.09		A	0.7
7	☐	1.000		5900735.61		A	0.6
8	☐	1.000		5804177.48		A	0.3
9	☐	1.000		5304115.34		A	0.1

89 Y (ISTD) [He]

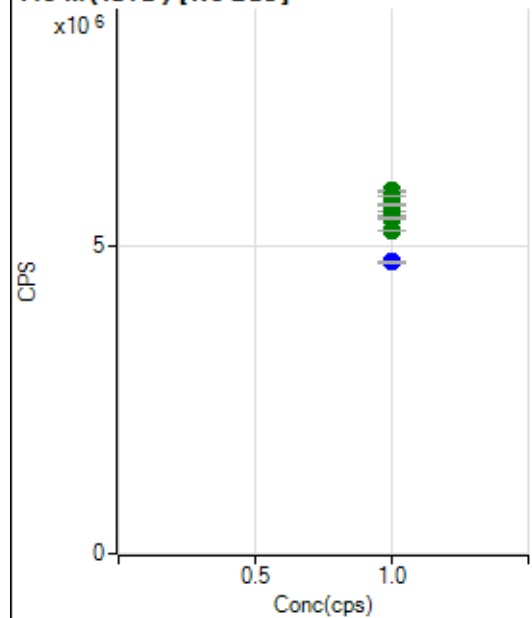
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1005402.53		P	0.3
2	☐	1.000					
3	☐	1.000		1005942.22		P	0.3
4	☐	1.000		974320.11		P	0.4
5	☐	1.000		965395.37		P	0.7
6	☐	1.000		958628.47		P	1.2
7	☐	1.000		950244.03		P	0.3
8	☐	1.000		931415.04		P	0.7
9	☐	1.000		885431.24		P	0.9

103 Rh (ISTD) [No Gas]

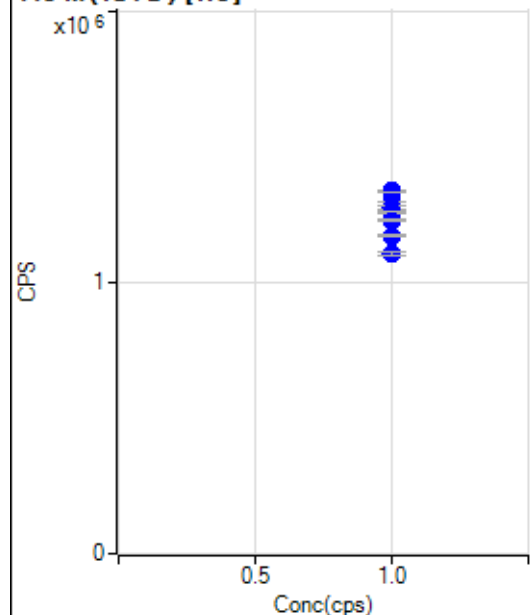
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5431580.07		A	0.5
2	☐	1.000					
3	☐	1.000		5293811.14		A	0.4
4	☐	1.000		5150845.47		M	0.6
5	☐	1.000		4998080.97		M	2.2
6	☐	1.000		4884437.48		P	0.6
7	☐	1.000		4803701.54		P	0.8
8	☐	1.000		4613048.98		P	0.4
9	☐	1.000		3972050.00		P	0.5

103 Rh (ISTD) [He]

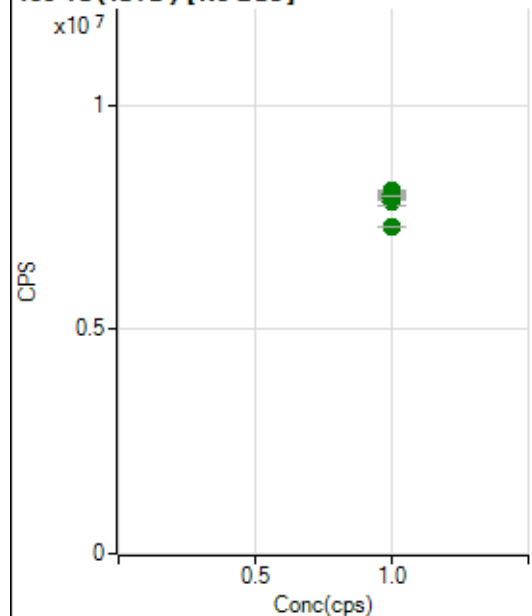
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2709638.26		P	0.3
2	☐	1.000					
3	☐	1.000		2691434.82		P	0.4
4	☐	1.000		2615442.90		P	0.3
5	☐	1.000		2572405.85		P	1.0
6	☐	1.000		2525737.64		P	1.3
7	☐	1.000		2470981.51		P	0.5
8	☐	1.000		2367332.76		P	0.5
9	☐	1.000		2040098.29		P	0.8

115 In (ISTD) [No Gas]

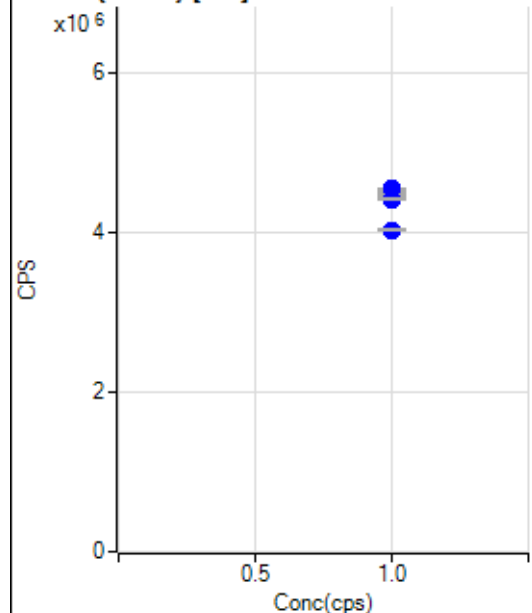
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5892116.60		A	0.4
2	☐	1.000					
3	☐	1.000		5813039.29		A	0.3
4	☐	1.000		5660832.53		A	0.4
5	☐	1.000		5508195.76		A	2.2
6	☐	1.000		5486713.61		A	0.5
7	☐	1.000		5442504.22		A	0.8
8	☐	1.000		5242495.56		A	0.1
9	☐	1.000		4734661.77		P	0.6

115 In (ISTD) [He]

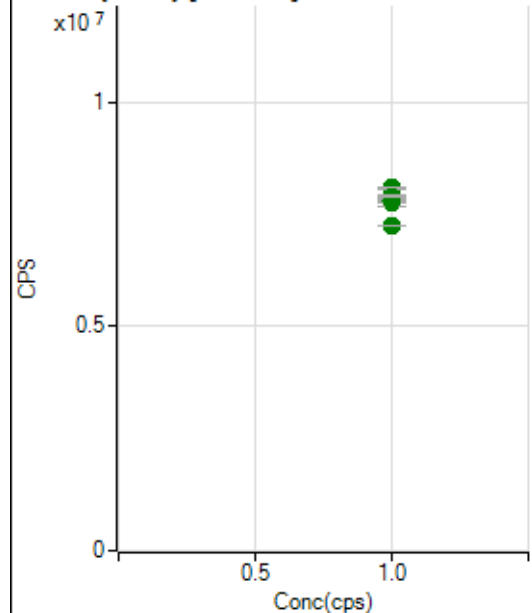
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1340037.61		P	0.4
2	☐	1.000					
3	☐	1.000		1334585.17		P	0.2
4	☐	1.000		1301183.31		P	0.2
5	☐	1.000		1279779.71		P	0.8
6	☐	1.000		1262716.66		P	0.8
7	☐	1.000		1232299.16		P	0.2
8	☐	1.000		1173035.74		P	0.7
9	☐	1.000		1108712.10		P	1.0

159 Tb (ISTD) [No Gas]

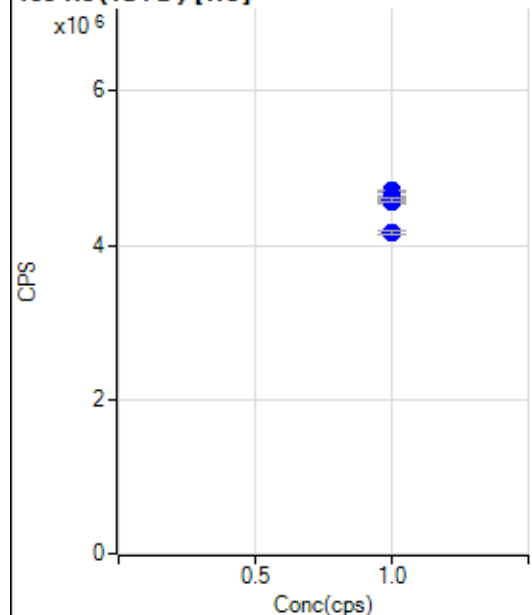
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8089747.59		A	0.4
2	☐	1.000					
3	☐	1.000		7993649.47		A	0.6
4	☐	1.000		7909094.19		A	0.3
5	☐	1.000		7842314.47		A	2.3
6	☐	1.000		7939118.56		A	0.8
7	☐	1.000		8011571.76		A	1.2
8	☐	1.000		7976200.02		A	0.3
9	☐	1.000		7283674.96		A	0.3

159 Tb (ISTD) [He]

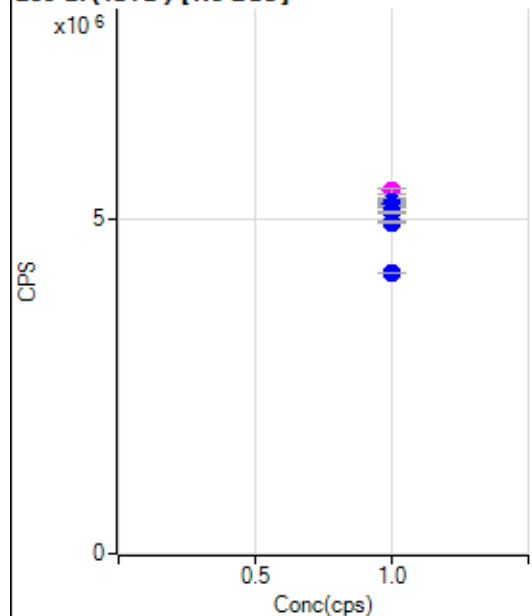
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4550534.90		P	0.4
2	☐	1.000					
3	☐	1.000		4519132.36		P	0.1
4	☐	1.000		4505401.77		P	0.5
5	☐	1.000		4514877.05		P	1.1
6	☐	1.000		4488092.05		P	1.0
7	☐	1.000		4483412.05		P	0.1
8	☐	1.000		4416284.27		P	0.5
9	☐	1.000		4033367.44		P	0.8

165 Ho (ISTD) [No Gas]

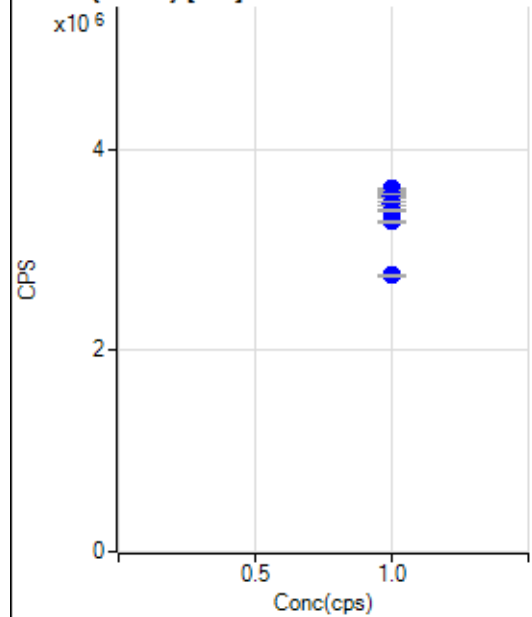
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8091457.56		A	0.7
2	☐	1.000					
3	☐	1.000		7858545.84		A	0.2
4	☐	1.000		7793765.71		A	0.5
5	☐	1.000		7743636.37		A	2.2
6	☐	1.000		7805665.80		A	0.6
7	☐	1.000		7866044.97		A	0.6
8	☐	1.000		7903071.18		A	0.7
9	☐	1.000		7266452.33		A	0.1

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4703352.40		P	0.6
2	☐	1.000					
3	☐	1.000		4629749.62		P	0.2
4	☐	1.000		4595674.24		P	0.4
5	☐	1.000		4588840.24		P	1.0
6	☐	1.000		4573288.85		P	1.2
7	☐	1.000		4596484.27		P	0.1
8	☐	1.000		4584532.36		P	1.0
9	☐	1.000		4167539.84		P	0.8

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5424891.52		M	1.9
2	☐	1.000					
3	☐	1.000		5257744.78		P	0.4
4	☐	1.000		5265237.73		P	0.4
5	☐	1.000		5243123.88		P	2.4
6	☐	1.000		5196901.17		P	0.3
7	☐	1.000		5116585.76		P	0.5
8	☐	1.000		4957412.08		P	0.2
9	☐	1.000		4204838.03		P	0.1

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3607765.57		P	0.2
2	☐	1.000					
3	☐	1.000		3589235.12		P	0.5
4	☐	1.000		3545669.05		P	0.3
5	☐	1.000		3532899.11		P	1.1
6	☐	1.000		3458486.93		P	1.2
7	☐	1.000		3391120.68		P	0.6
8	☐	1.000		3285152.42		P	0.8
9	☐	1.000		2747963.45		P	1.1

US EPA Tune Check Sample Report

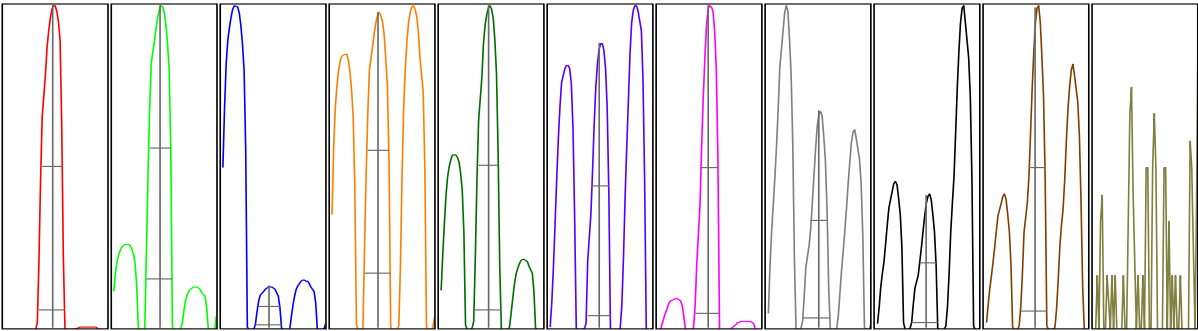
Batch Folder D:\ICP-MS Data\P7050919MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	10790	0.28	5.00	
24	199887	0.31	5.00	
25	26678	0.47	5.00	
26	30396	0.39	5.00	
59	69186	0.50	5.00	
113	9201	0.59	5.00	
115	110639	0.26	5.00	
206	28434	0.78	5.00	
207	25995	0.82	5.00	
208	61657	0.55	5.00	
220	0	25.00		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	10791	10766	10780	10771	10842
24	198868	199775	200448	200043	200304
25	26515	26576	26801	26777	26719
26	30277	30488	30308	30355	30553
59	68644	69390	69289	69079	69529
113	9112	9234	9186	9225	9246
115	110268	110429	110807	110717	110971
206	28068	28470	28505	28456	28671
207	25653	25930	26085	26124	26182
208	61079	61905	61711	61683	61910
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	18595	8.95	8.9 - 9.1		0.777	0.900	
24	328164	23.90	23.9 - 24.1		0.754	0.900	
25	43251	24.90	24.9 - 25.1		0.749	0.900	
26	49791	25.90	25.9 - 26.1		0.750	0.900	
59	122185	58.95	58.9 - 59.1		0.775	0.900	
113	18342	113.00	112.9 - 113.1		0.688	0.900	
115	218301	115.00	114.9 - 115.1		0.713	0.900	
206	58257	206.05	205.9 - 206.1		0.782	0.900	
207	52581	207.00	206.9 - 207.1		0.746	0.900	
208	126364	208.00	207.9 - 208.1		0.758	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	7.9	V	Deflect	13.6	V
Extract 2	-100.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-55	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	160	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	17702	0.64	
89	72262	0.40	
205	29204	0.56	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	17648	17703	17767	17843	17548
89	72055	72202	72181	72763	72106
205	29263	29128	29271	29396	28965

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	8.3	V	Deflect	1.8	V
Extract 2	-115.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-60	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			