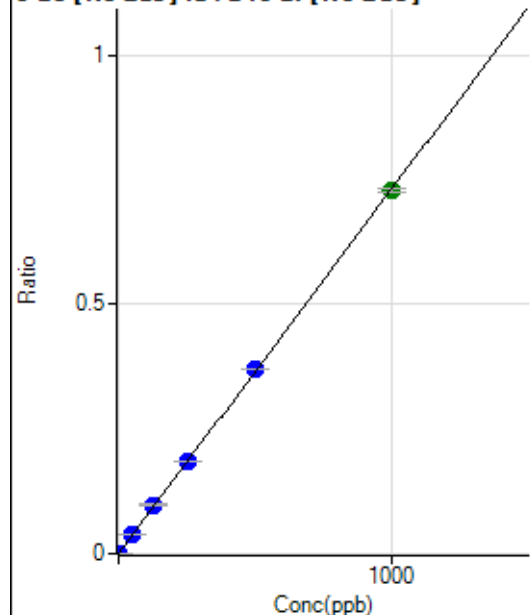


Batch Folder: D:\P8061918 MS.b\
Analysis File: P8061918 MS.batch.bin
DA Date-Time: 2018-06-19 18:44:27
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-06-19 14:20:00
2			
3	005CALS.d	S02	2018-06-19 14:27:23
4	006CALS.d	S03	2018-06-19 14:31:06
5	007CALS.d	S04	2018-06-19 14:34:47
6	008CALS.d	S05	2018-06-19 14:38:22
7	009CALS.d	S06	2018-06-19 14:41:52
8	010CALS.d	S07	2018-06-19 14:45:18
9	011CALS.d	S08	2018-06-19 14:48:38

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	40.74	0.0000	P	33.2
2	☐	0.100					
3	☐	1.000	1.092	1420.49	0.0008	P	12.6
4	☐	50.000	51.975	66957.47	0.0380	P	3.3
5	☐	125.000	132.173	169055.29	0.0966	P	4.0
6	☐	250.000	252.431	332270.78	0.1845	P	0.9
7	☐	500.000	505.448	664681.32	0.3694	P	0.2
8	☐	1000.000	995.673	1328783.28	0.7277	A	1.1
9	☐			420.39	0.0002	P	2.1

$$y = 7.3082\text{E-}004 * x + 2.2473\text{E-}005$$

$$R = 1.0000$$

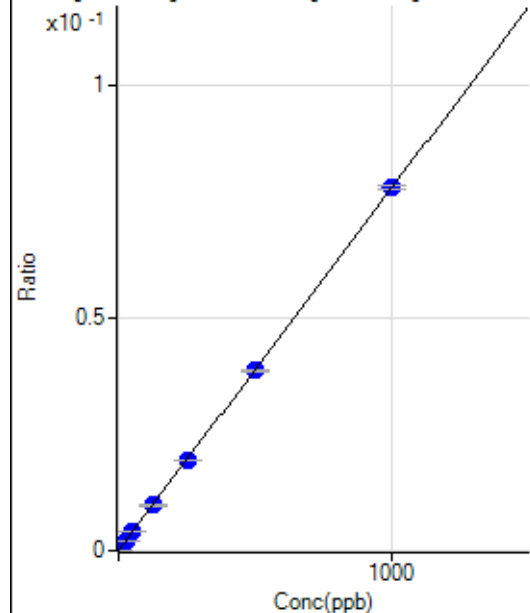
$$DL = 0.03066$$

$$BEC = 0.03075$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	105.56	0.0001	P	56.6
2	☐	2.500					
3	☐	25.000	24.699	3431.11	0.0020	P	6.1
4	☐	50.000	51.874	7207.61	0.0041	P	2.0
5	☐	125.000	125.866	17222.04	0.0098	P	3.5
6	☐	250.000	249.091	34971.31	0.0194	P	1.3
7	☐	500.000	497.472	69667.21	0.0387	P	1.0
8	☐	1000.000	1001.297	142220.62	0.0779	P	1.2
9	☐			6587.95	0.0036	P	8.6

$$y = 7.7717\text{E-}005 * x + 5.8416\text{E-}005$$

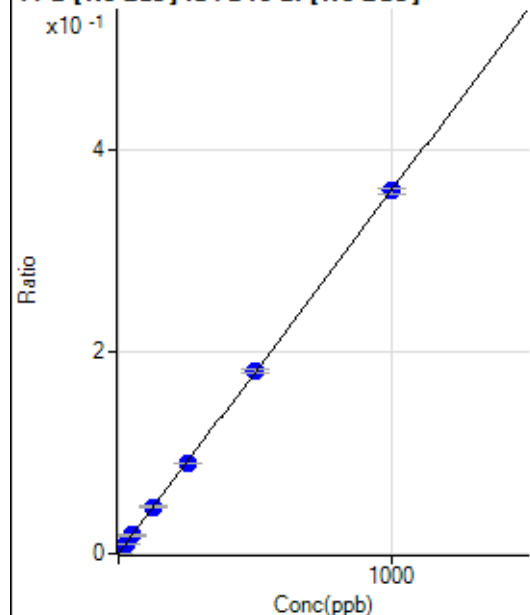
$$R = 1.0000$$

$$DL = 1.276$$

$$BEC = 0.7517$$

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	402.80	0.0002	P	8.0
2	☐	2.500					
3	☐	25.000	26.008	16582.52	0.0096	P	1.2
4	☐	50.000	50.435	32295.52	0.0183	P	4.4
5	☐	125.000	127.715	80632.53	0.0461	P	3.7
6	☐	250.000	248.961	161399.02	0.0896	P	1.3
7	☐	500.000	501.610	324443.50	0.1803	P	2.5
8	☐	1000.000	999.068	655506.25	0.3589	P	1.4
9	☐			31112.66	0.0168	P	9.6

$$y = 3.5905E-004 * x + 2.2273E-004$$

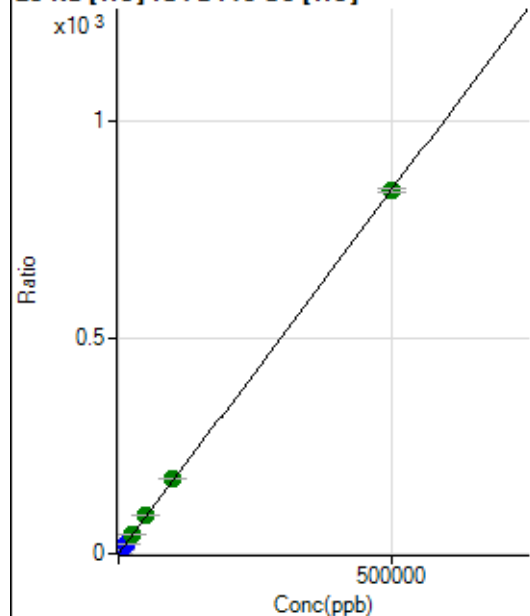
$$R = 1.0000$$

$$DL = 0.1492$$

$$BEC = 0.6203$$

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	5723.63	0.1417	P	0.6
2	☐	50.000					
3	☐	500.000	515.049	41065.71	1.0087	P	0.8
4	☐	5000.000	5262.600	372748.30	9.0004	P	1.7
5	☐	12500.000	13287.593	920284.06	22.5091	P	1.1
6	☐	25000.000	26793.106	1876960.03	45.2433	A	0.9
7	☐	50000.000	52590.921	3653972.52	88.6695	A	1.2
8	☐	100000.00	103322.57	7140752.68	174.0675	A	0.8
9	☐	500000.00	498964.40	35552262.25	840.0624	A	1.2

$$y = 0.0017 * x + 0.1417$$

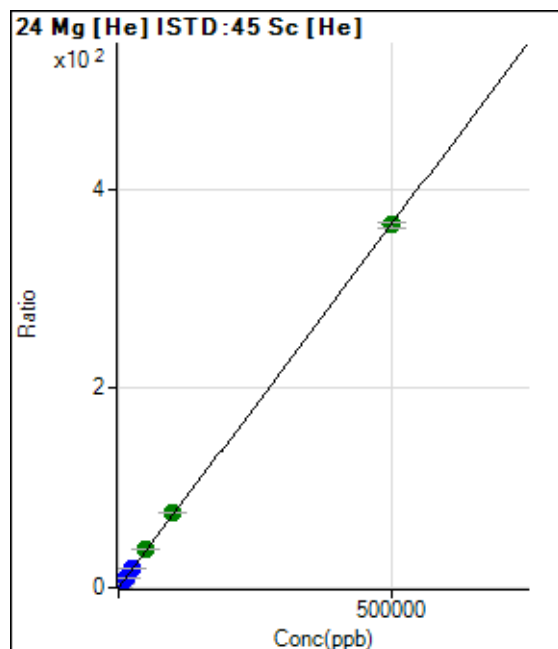
$$R = 1.0000$$

$$DL = 1.403$$

$$BEC = 84.19$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	155.56	0.0039	P	6.4
2	☐	50.000					
3	☐	500.000	505.294	15158.75	0.3723	P	2.3
4	☐	5000.000	5237.441	158342.26	3.8231	P	1.1
5	☐	12500.000	13258.190	395437.90	9.6720	P	1.2
6	☐	25000.000	25727.124	778479.46	18.7646	P	0.3
7	☐	50000.000	52114.689	1566218.88	38.0070	A	1.3
8	☐	100000.00	102875.76	3077851.44	75.0230	A	0.9
9	☐	500000.00	499155.68	15404036.11	363.9985	A	1.8

$$y = 7.2922\text{E-}004 * x + 0.0039$$

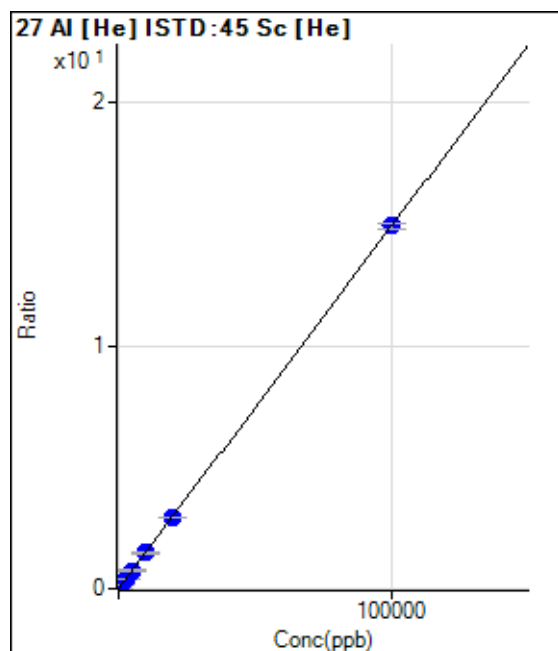
$$R = 1.0000$$

$$DL = 1.01$$

$$BEC = 5.283$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0006	P	100.
2	☐	2.000					
3	☐	20.000	18.719	138.90	0.0034	P	29.9
4	☐	1000.000	1020.664	6326.69	0.1528	P	3.9
5	☐	2500.000	2581.340	15759.36	0.3855	P	1.9
6	☐	5000.000	5025.091	31107.32	0.7498	P	1.4
7	☐	10000.000	9897.934	60831.43	1.4763	P	3.2
8	☐	20000.000	19722.230	120645.80	2.9410	P	1.5
9	☐	100000.00	100062.26	631345.12	14.9187	P	1.7

$$y = 1.4909\text{E-}004 * x + 6.1832\text{E-}004$$

$$R = 1.0000$$

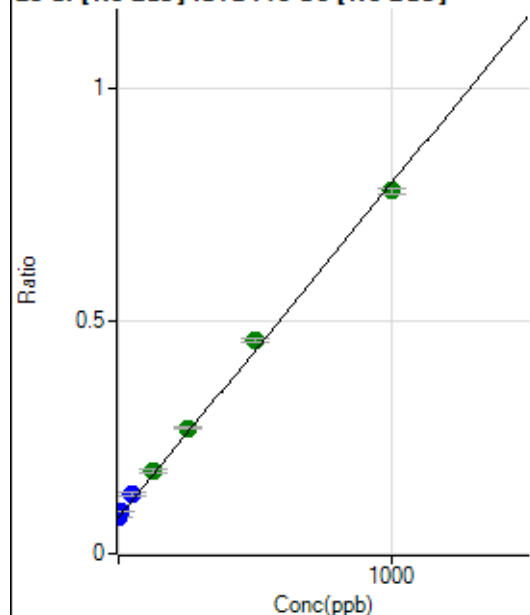
$$DL = 12.48$$

$$BEC = 4.147$$

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	420504.00	0.0780	P	1.0
2	☐	1.000					
3	☐	10.000	18.896	482141.42	0.0916	P	3.2
4	☐	50.000	69.101	670078.67	0.1277	P	4.4
5	☐	125.000	138.618	940024.35	0.1777	A	4.2
6	☐	250.000	267.500	1490718.71	0.2705	A	2.5
7	☐	500.000	531.662	2530283.56	0.4606	A	1.9
8	☐	1000.000	977.048	4276872.93	0.7812	A	1.4
9	☐			740707.01	0.1360	P	1.2

$$y = 7.1976\text{E-}004 * x + 0.0780$$

$$R = 0.9991$$

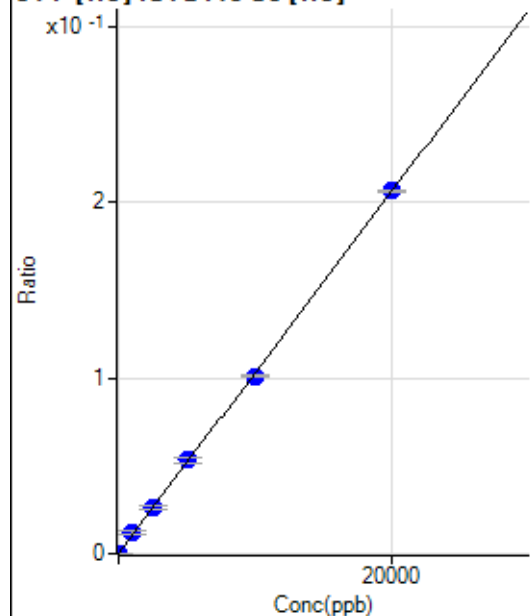
$$DL = 3.183$$

$$BEC = 108.3$$

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	-6.551	2.78	0.0001	P	173.
2	☐	0.000					
3	☐	0.000	6.551	8.33	0.0002	P	173.
4	☐	1000.000	1193.377	513.92	0.0124	P	18.4
5	☐	2500.000	2541.221	1075.09	0.0263	P	6.3
6	☐	5000.000	5173.340	2214.17	0.0534	P	6.8
7	☐	10000.000	9804.967	4164.67	0.1010	P	1.5
8	☐	20000.000	20039.360	8466.77	0.2064	P	0.7
9	☐			13.89	0.0003	P	68.1

$$y = 1.0292\text{E-}005 * x + 1.3630\text{E-}004$$

$$R = 0.9999$$

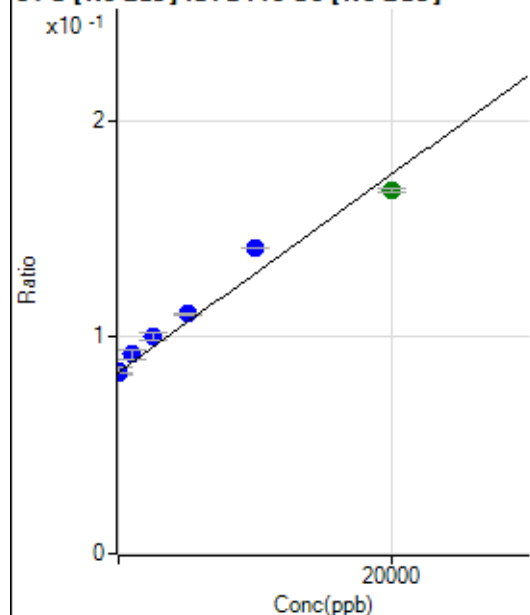
$$DL = 68.82$$

$$BEC = 13.24$$

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	-146.098	448553.74	0.0832	P	0.5
2	☐	0.000					
3	☐	0.000	146.098	444943.46	0.0845	P	3.2
4	☐	1000.000	1816.349	483348.79	0.0921	P	5.0
5	☐	2500.000	3654.080	531767.28	0.1005	P	3.1
6	☐	5000.000	5915.779	610972.21	0.1109	P	1.0
7	☐	10000.000	12548.659	775426.68	0.1412	P	0.1
8	☐	20000.000	18311.648	916864.63	0.1675	A	1.2
9	☐			431218.19	0.0792	P	1.1

$$y = 4.5679\text{E-}006 * x + 0.0838$$

$$R = 0.9845$$

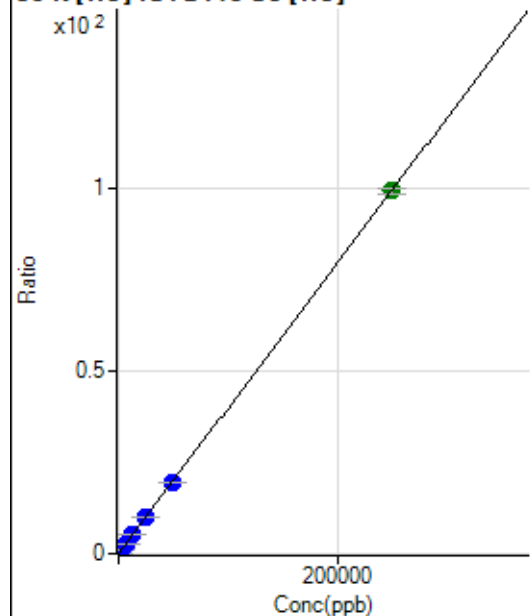
$$DL = 1013$$

$$BEC = 1.835\text{E}+04$$

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	2755.96	0.0682	P	4.5
2	☐	50.000					
3	☐	500.000	483.569	10573.90	0.2597	P	1.2
4	☐	2500.000	2508.196	43972.49	1.0615	P	0.8
5	☐	6250.000	6421.321	106756.17	2.6112	P	1.5
6	☐	12500.000	12651.298	210680.95	5.0783	P	1.0
7	☐	25000.000	24944.112	409877.12	9.9464	P	1.5
8	☐	50000.000	49371.973	804884.08	19.6201	P	0.8
9	☐	250000.00	250119.29	4194678.18	99.1186	A	1.5

$$y = 3.9601\text{E-}004 * x + 0.0682$$

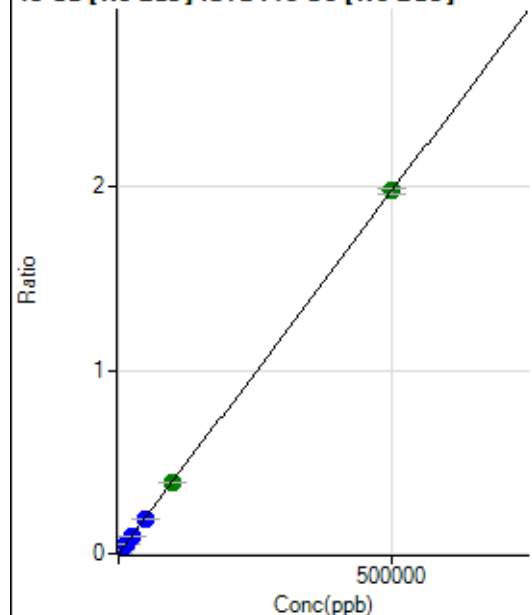
$$R = 1.0000$$

$$DL = 23.3$$

$$BEC = 172.3$$

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	961.19	0.0002	P	15.1
2	☐	50.000					
3	☐	500.000	469.925	10718.43	0.0020	P	5.5
4	☐	5000.000	5056.629	105816.34	0.0202	P	5.9
5	☐	12500.000	12591.204	264331.98	0.0500	P	3.6
6	☐	25000.000	24236.550	529227.78	0.0960	P	0.9
7	☐	50000.000	48631.509	1057443.14	0.1925	P	0.8
8	☐	100000.00	97766.757	2117688.24	0.3868	A	0.3
9	☐	500000.00	500618.85	10785590.86	1.9799	A	1.5

$$y = 3.9545\text{E-}006 * x + 1.7818\text{E-}004$$

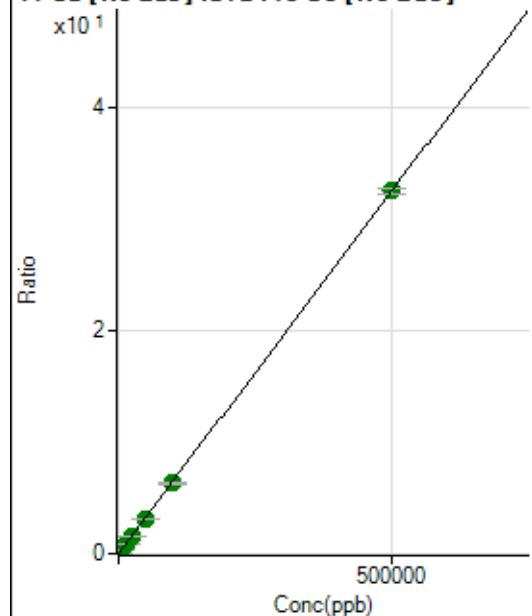
$$R = 1.0000$$

$$DL = 20.36$$

$$BEC = 45.06$$

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	21664.87	0.0040	P	2.5
2	☐	50.000					
3	☐	500.000	477.566	184185.10	0.0350	P	3.5
4	☐	5000.000	5161.765	1776405.57	0.3387	A	5.7
5	☐	12500.000	12667.265	4364703.31	0.8253	A	4.1
6	☐	25000.000	24081.710	8627289.69	1.5653	A	0.9
7	☐	50000.000	48451.890	17278049.17	3.1453	A	0.9
8	☐	100000.00	96967.657	34440910.49	6.2906	A	0.4
9	☐	500000.00	500801.41	176890567.8	32.4720	A	1.7

$$y = 6.4832\text{E-}005 * x + 0.0040$$

$$R = 1.0000$$

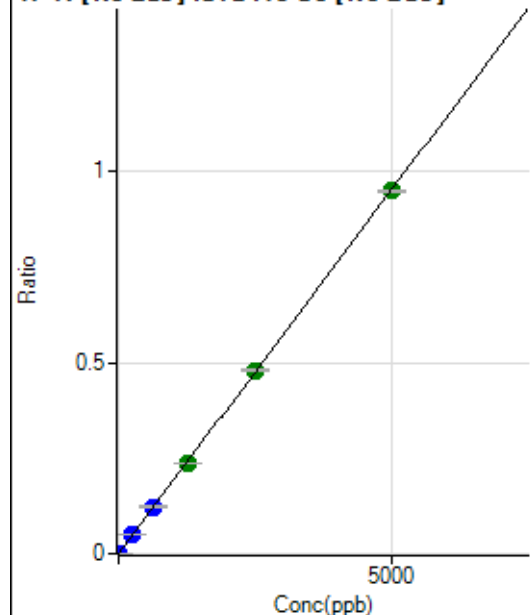
$$DL = 4.692$$

$$BEC = 61.96$$

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	172.23	0.0000	P	21.8
2	☐	0.500					
3	☐	5.000	4.959	5131.72	0.0010	P	12.2
4	☐	250.000	260.475	260424.69	0.0496	P	5.4
5	☐	625.000	642.992	648007.04	0.1225	P	3.4
6	☐	1250.000	1247.454	1309786.05	0.2376	A	0.3
7	☐	2500.000	2522.223	2639257.48	0.4804	A	0.6
8	☐	5000.000	4986.753	5200191.83	0.9499	A	0.9
9	☐			3442.25	0.0006	P	3.3

$$y = 1.9047\text{E-}004 * x + 3.1934\text{E-}005$$

$$R = 1.0000$$

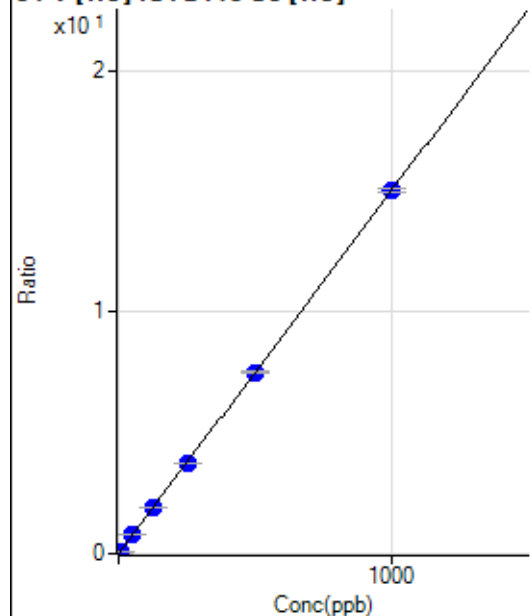
$$DL = 0.1096$$

$$BEC = 0.1677$$

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	18.89	0.0005	P	9.8
2	☐	0.500					
3	☐	5.000	4.732	2915.91	0.0716	P	5.1
4	☐	50.000	50.836	31687.15	0.7650	P	0.8
5	☐	125.000	126.787	77972.31	1.9071	P	1.4
6	☐	250.000	250.048	156021.69	3.7608	P	0.3
7	☐	500.000	500.210	310013.17	7.5228	P	1.1
8	☐	1000.000	999.619	616691.38	15.0331	P	0.9
9	☐			377.79	0.0089	P	9.1

$$y = 0.0150 * x + 4.6760\text{E-}004$$

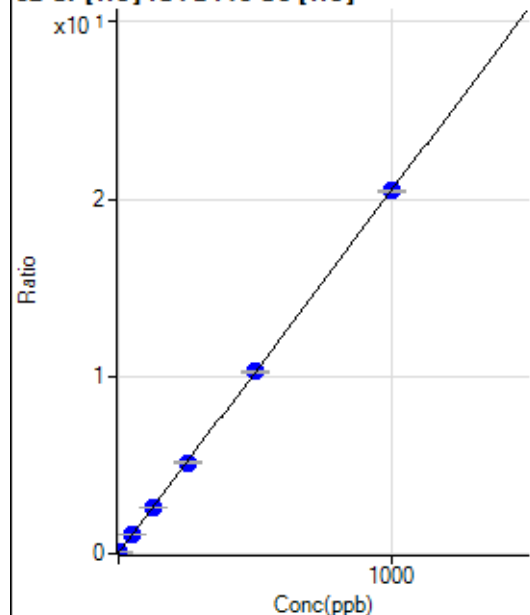
$$R = 1.0000$$

$$DL = 0.009103$$

$$BEC = 0.03109$$

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	753.37	0.0187	P	3.5
2	☐	0.200					
3	☐	2.000	2.029	2450.26	0.0602	P	6.0
4	☐	50.000	50.894	43910.00	1.0602	P	1.2
5	☐	125.000	127.885	107761.81	2.6357	P	1.3
6	☐	250.000	250.459	213411.54	5.1441	P	0.4
7	☐	500.000	501.313	423532.44	10.2777	P	1.4
8	☐	1000.000	998.823	839293.45	20.4589	P	0.8
9	☐			39820.01	0.9410	P	1.9

$$y = 0.0205 * x + 0.0187$$

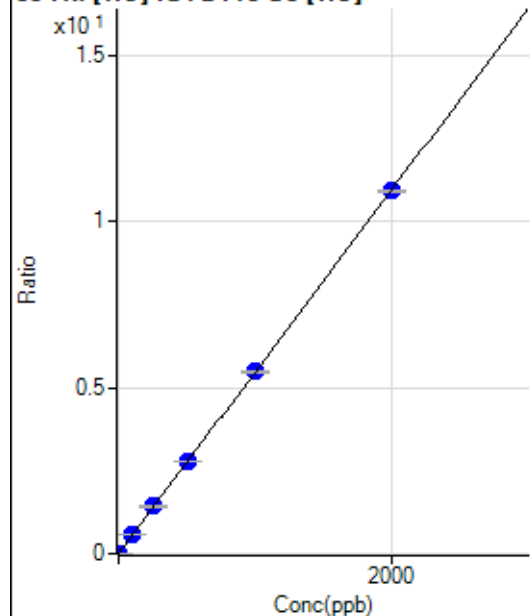
$$R = 1.0000$$

$$DL = 0.09572$$

$$BEC = 0.9115$$

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	30.00	0.0007	P	18.9
2	☐	0.100					
3	☐	1.000	1.084	272.23	0.0067	P	17.6
4	☐	100.000	102.009	23179.46	0.5597	P	1.3
5	☐	250.000	259.466	58152.79	1.4224	P	1.8
6	☐	500.000	505.516	114936.90	2.7705	P	1.0
7	☐	1000.000	1002.640	226412.88	5.4943	P	1.5
8	☐	2000.000	1996.017	448678.51	10.9371	P	0.4
9	☐			2415.80	0.0571	P	3.9

$$y = 0.0055 * x + 7.4233E-004$$

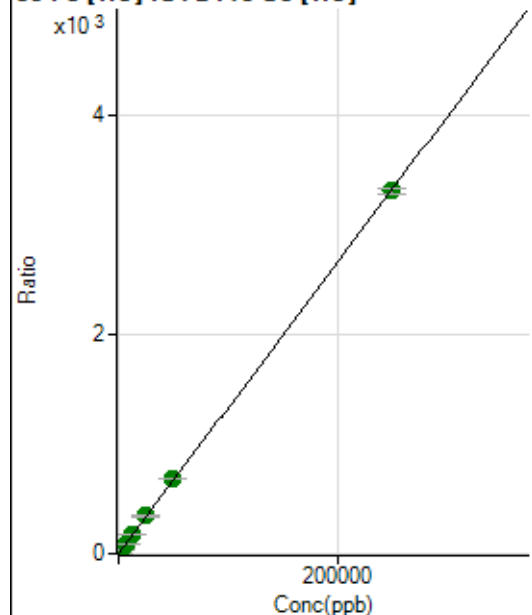
$$R = 1.0000$$

$$DL = 0.07664$$

$$BEC = 0.1355$$

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	1368.63	0.0339	P	4.3
2	☐	5.000					
3	☐	50.000	51.817	29385.20	0.7218	P	0.3
4	☐	2500.000	2693.408	1482400.22	35.7922	A	1.1
5	☐	6250.000	6675.767	3624981.25	88.6629	A	1.0
6	☐	12500.000	13066.503	7198210.00	173.5077	A	0.5
7	☐	25000.000	25896.638	14169553.09	343.8434	A	1.1
8	☐	50000.000	51333.621	27960157.57	681.5504	A	0.7
9	☐	250000.00	249602.70	140240467.9	3,313.814	A	1.4

$$y = 0.0133 * x + 0.0339$$

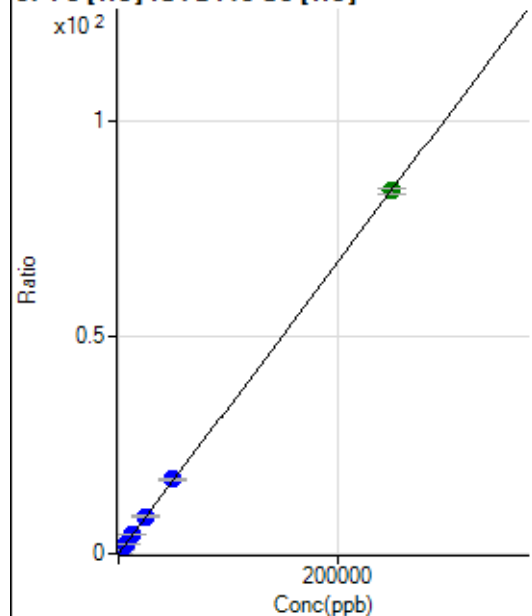
$$R = 1.0000$$

$$DL = 0.3268$$

$$BEC = 2.553$$

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	46.30	0.0011	P	68.6
2	☐	5.000					
3	☐	50.000	50.282	733.38	0.0180	P	10.9
4	☐	2500.000	2622.313	36496.50	0.8813	P	2.7
5	☐	6250.000	6635.725	91109.05	2.2284	P	1.1
6	☐	12500.000	12935.587	180173.26	4.3430	P	1.0
7	☐	25000.000	25754.403	356270.54	8.6456	P	1.4
8	☐	50000.000	51081.115	703394.31	17.1465	P	0.8
9	☐	250000.00	249675.69	3546669.49	83.8048	A	1.3

$$y = 3.3565E-004 * x + 0.0011$$

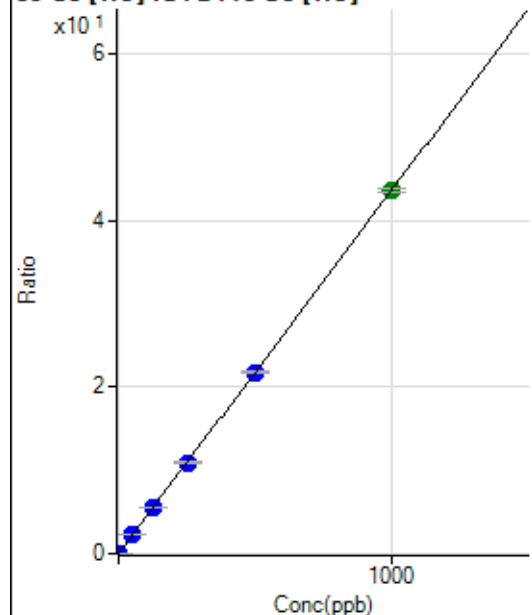
$$R = 1.0000$$

$$DL = 7.011$$

$$BEC = 3.406$$

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	96.67	0.0024	P	26.0
2	☐	0.100					
3	☐	1.000	1.023	1912.39	0.0470	P	5.0
4	☐	50.000	50.643	91541.75	2.2103	P	1.1
5	☐	125.000	128.143	228507.44	5.5890	P	1.0
6	☐	250.000	251.453	454895.63	10.9649	P	0.6
7	☐	500.000	500.172	898694.88	21.8082	P	1.2
8	☐	1000.000	999.126	1787028.72	43.5609	A	0.9
9	☐			3188.20	0.0753	P	1.5

$$y = 0.0436 * x + 0.0024$$

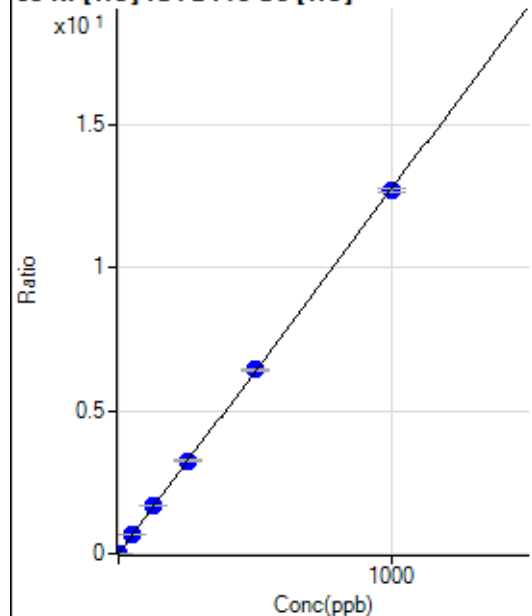
$$R = 1.0000$$

$$DL = 0.04286$$

$$BEC = 0.0549$$

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	54.44	0.0013	P	14.3
2	☐	0.100					
3	☐	1.000	1.061	605.58	0.0149	P	12.6
4	☐	50.000	52.320	27707.80	0.6689	P	2.6
5	☐	125.000	131.955	68893.99	1.6850	P	0.6
6	☐	250.000	255.338	135215.38	3.2593	P	0.8
7	☐	500.000	505.405	265798.19	6.4500	P	1.1
8	☐	1000.000	994.978	520837.81	12.6966	P	1.2
9	☐			15545.52	0.3673	P	1.3

$$y = 0.0128 * x + 0.0013$$

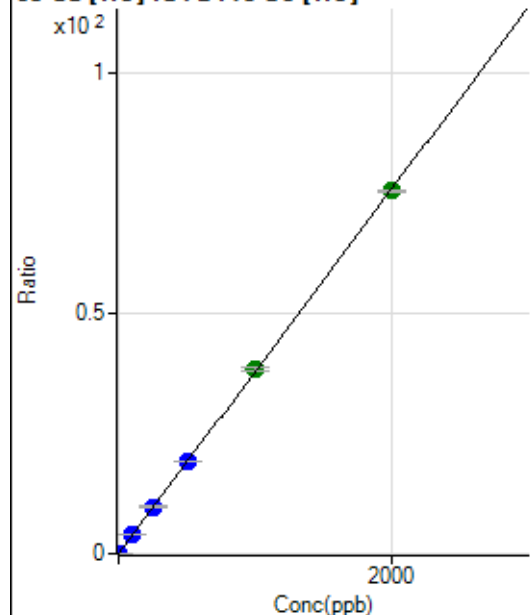
$$R = 0.9999$$

$$DL = 0.04538$$

$$BEC = 0.1057$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	286.68	0.0071	P	7.8
2	☐	0.200					
3	☐	2.000	2.081	3497.17	0.0859	P	2.1
4	☐	100.000	102.533	161084.22	3.8895	P	1.6
5	☐	250.000	257.294	398609.78	9.7495	P	1.0
6	☐	500.000	505.430	794261.33	19.1451	P	0.5
7	☐	1000.000	1012.352	1579833.24	38.3396	A	2.3
8	☐	2000.000	1991.428	3093643.25	75.4122	A	0.8
9	☐			7275.35	0.1719	P	1.7

$$y = 0.0379 * x + 0.0071$$

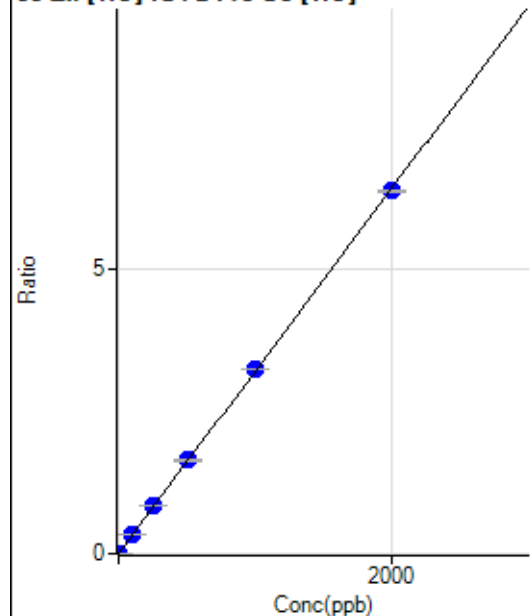
$$R = 1.0000$$

$$DL = 0.04382$$

$$BEC = 0.1874$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0017	P	11.9
2	☐	0.200					
3	☐	2.000	1.952	325.57	0.0080	P	6.5
4	☐	100.000	104.977	14021.70	0.3386	P	1.7
5	☐	250.000	261.710	34402.85	0.8415	P	1.1
6	☐	500.000	513.907	68478.18	1.6507	P	1.5
7	☐	1000.000	1012.222	133912.81	3.2495	P	0.8
8	☐	2000.000	1988.700	261833.68	6.3827	P	0.8
9	☐			1626.79	0.0384	P	4.1

$$y = 0.0032 * x + 0.0017$$

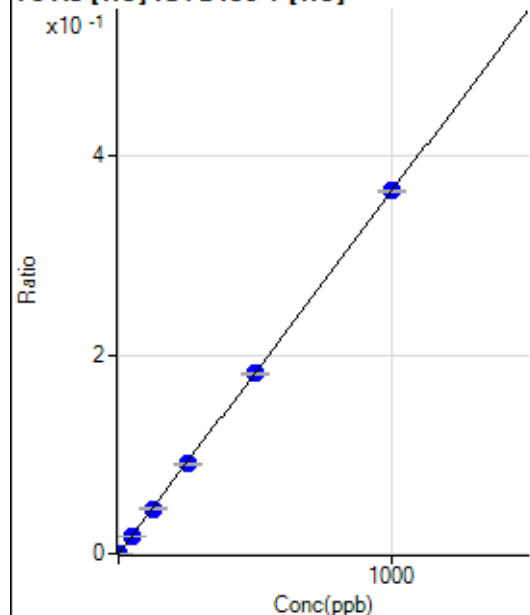
$$R = 0.9999$$

$$DL = 0.1932$$

$$BEC = 0.5399$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	4.32	0.0000	P	66.1
2	☐	0.100					
3	☐	1.000	1.024	102.47	0.0004	P	13.2
4	☐	50.000	49.367	4794.09	0.0180	P	3.5
5	☐	125.000	124.416	11979.35	0.0454	P	1.6
6	☐	250.000	247.355	23810.08	0.0902	P	1.6
7	☐	500.000	498.574	47546.90	0.1819	P	1.2
8	☐	1000.000	1001.479	93713.84	0.3653	P	0.5
9	☐			58.64	0.0002	P	26.1

$$y = 3.6478\text{E-}004 * x + 1.6573\text{E-}005$$

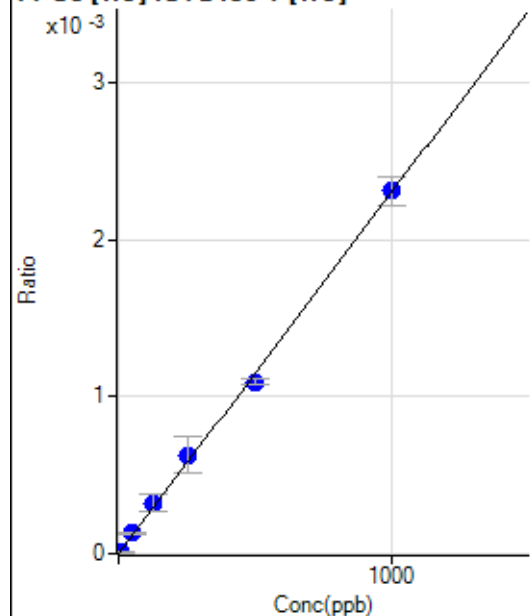
$$R = 1.0000$$

$$DL = 0.09012$$

$$BEC = 0.04543$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500					
3	☐	5.000	3.666	2.22	0.0000	P	173.
4	☐	50.000	56.221	34.44	0.0001	P	6.3
5	☐	125.000	140.811	85.56	0.0003	P	37.2
6	☐	250.000	272.520	165.56	0.0006	P	37.4
7	☐	500.000	476.070	286.68	0.0011	P	4.3
8	☐	1000.000	1004.054	593.36	0.0023	P	7.7
9	☐			0.00	0.0000	P	

$$y = 2.3036\text{E-}006 * x + 0.0000\text{E+}000$$

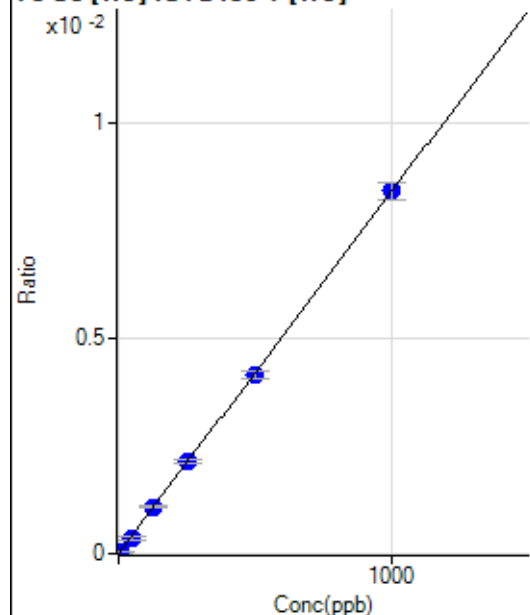
$$R = 0.9992$$

$$DL = 0$$

$$BEC = 0$$

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	1.23	0.0000	P	173.
2	☐	0.500					
3	☐	5.000	3.916	9.88	0.0000	P	28.2
4	☐	50.000	42.344	95.68	0.0004	P	15.0
5	☐	125.000	128.854	286.42	0.0011	P	5.9
6	☐	250.000	254.711	564.83	0.0021	P	2.5
7	☐	500.000	494.140	1084.62	0.0041	P	4.0
8	☐	1000.000	1001.658	2156.36	0.0084	P	5.0
9	☐			4.32	0.0000	P	65.8

$$y = 8.3874\text{E-}006 * x + 4.7065\text{E-}006$$

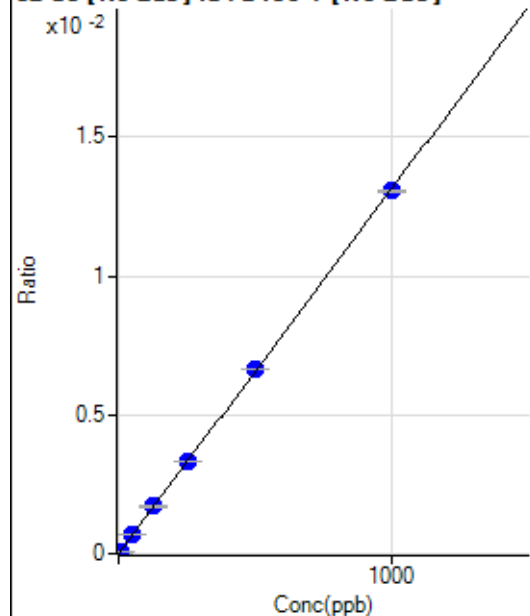
$$R = 0.9999$$

$$DL = 2.916$$

$$BEC = 0.5611$$

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	-26.67	0.0000	P	-82.
2	☐	0.500					
3	☐	5.000	5.146	539.57	0.0001	P	7.4
4	☐	50.000	52.264	5839.85	0.0007	P	2.0
5	☐	125.000	131.431	14620.95	0.0017	P	4.0
6	☐	250.000	254.023	29283.20	0.0033	P	1.2
7	☐	500.000	506.034	58542.92	0.0066	P	0.7
8	☐	1000.000	995.059	115992.51	0.0131	P	0.3
9	☐			82.96	0.0000	P	23.8

$$y = 1.3129\text{E-}005 * x - 3.0952\text{E-}006$$

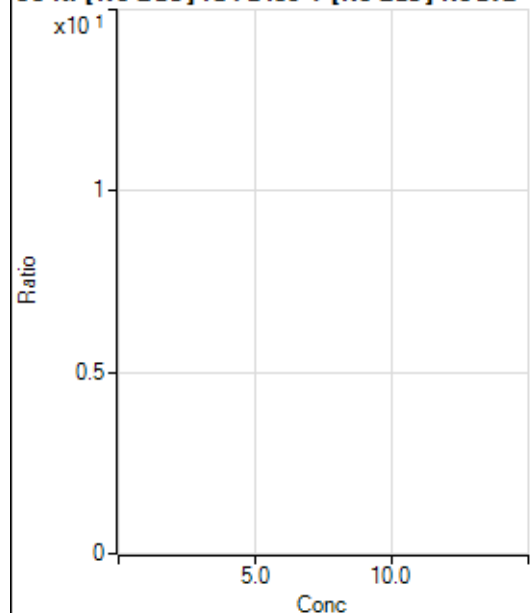
$$R = 1.0000$$

$$DL = 0.5808$$

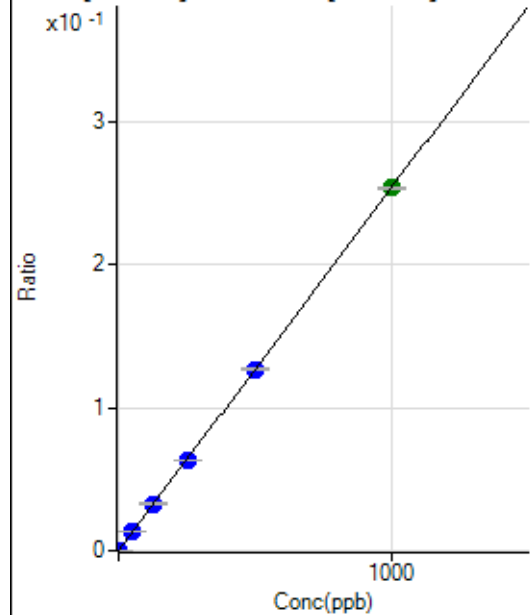
$$BEC = -0.2358$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] ISTD:89 Y [No Gas] No av_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			348.90	0.0000	P	8.7
2	☐						
3	☐			374.46	0.0000	P	7.1
4	☐			364.46	0.0000	P	10.2
5	☐			366.68	0.0000	P	10.1
6	☐			387.79	0.0000	P	6.9
7	☐			392.24	0.0000	P	7.8
8	☐			325.57	0.0000	P	7.0
9	☐			357.79	0.0000	P	12.1

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	566.71	0.0001	P	23.8
2	☐	0.100					
3	☐	1.000	1.013	2700.41	0.0003	P	9.6
4	☐	50.000	51.255	111764.70	0.0131	P	3.4
5	☐	125.000	128.444	277333.18	0.0327	P	3.8
6	☐	250.000	249.288	556748.34	0.0633	P	0.3
7	☐	500.000	499.954	1119400.37	0.1270	P	1.1
8	☐	1000.000	999.708	2254363.87	0.2538	A	0.2
9	☐			81476.64	0.0093	P	0.9

$$y = 2.5385E-004 * x + 6.5885E-005$$

$$R = 1.0000$$

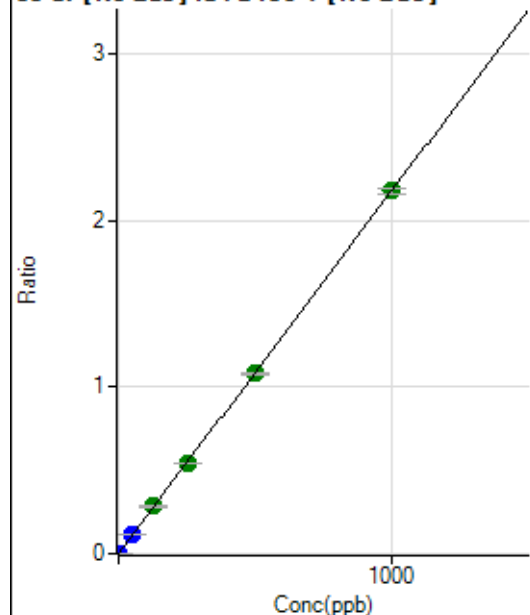
$$DL = 0.1854$$

$$BEC = 0.2595$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	169.45	0.0000	P	46.9
2	☐	0.100					
3	☐	1.000	1.075	19759.55	0.0024	P	2.5
4	☐	50.000	51.468	957518.15	0.1120	P	3.7
5	☐	125.000	130.374	2409101.20	0.2838	A	3.6
6	☐	250.000	250.691	4795823.37	0.5457	A	0.4
7	☐	500.000	496.744	9531616.27	1.0812	A	1.5
8	☐	1000.000	1000.710	19343094.36	2.1781	A	1.3
9	☐			698987.25	0.0800	P	1.4

$$y = 0.0022 * x + 1.9693E-005$$

$$R = 1.0000$$

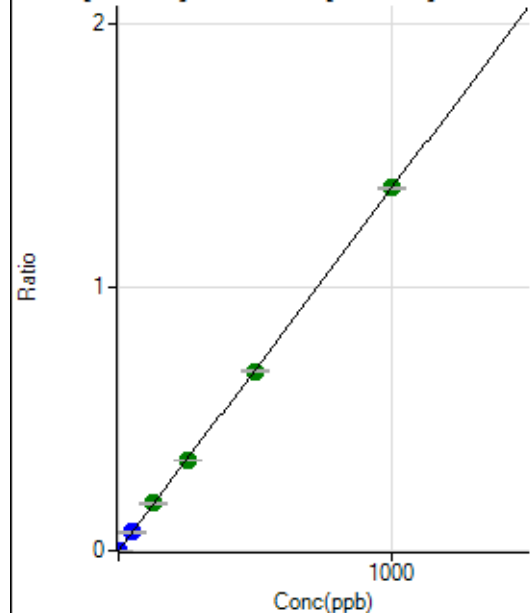
$$DL = 0.01272$$

$$BEC = 0.009048$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	875.07	0.0001	P	5.0
2	☐	0.100					
3	☐	1.000	0.955	11858.47	0.0014	P	3.2
4	☐	50.000	50.988	600591.66	0.0703	P	4.0
5	☐	125.000	130.517	1525683.80	0.1797	A	4.1
6	☐	250.000	251.675	3045475.76	0.3465	A	0.3
7	☐	500.000	494.942	6006544.75	0.6813	A	1.3
8	☐	1000.000	1001.371	12241148.28	1.3784	A	0.4
9	☐			5784.84	0.0007	P	9.6

$$y = 0.0014 * x + 1.0175E-004$$

$$R = 1.0000$$

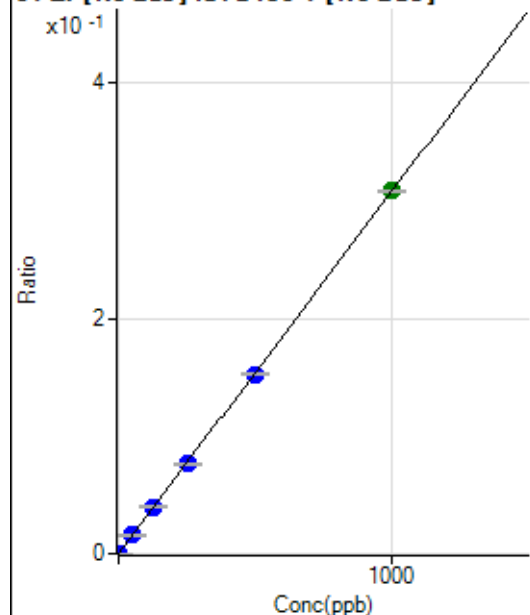
$$DL = 0.0111$$

$$BEC = 0.07392$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	158.34	0.0000	P	13.9
2	☐	0.100					
3	☐	1.000	0.870	2397.55	0.0003	P	2.5
4	☐	50.000	50.694	133466.46	0.0156	P	4.4
5	☐	125.000	128.171	335030.44	0.0395	P	3.5
6	☐	250.000	247.073	668478.08	0.0761	P	0.2
7	☐	500.000	496.082	1346126.76	0.1527	P	0.6
8	☐	1000.000	1002.260	2739483.76	0.3085	A	0.6
9	☐			1344.57	0.0002	P	3.8

$$y = 3.0776\text{E-}004 * x + 1.8405\text{E-}005$$

$$R = 1.0000$$

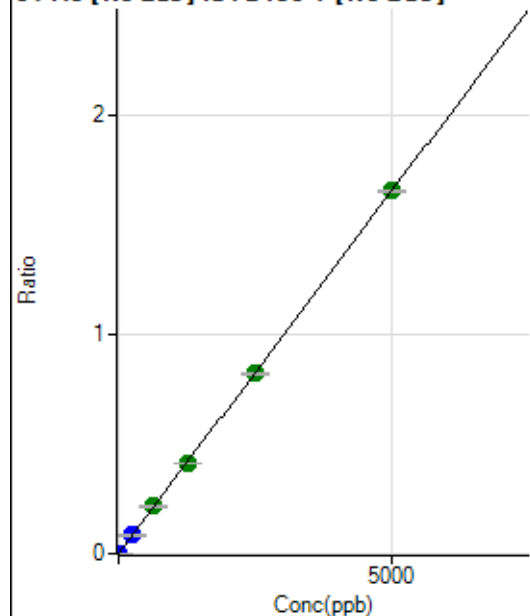
$$DL = 0.02487$$

$$BEC = 0.0598$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	386.13	0.0000	P	8.0
2	☐	0.500					
3	☐	5.000	4.742	13501.71	0.0016	P	3.4
4	☐	250.000	253.808	717257.46	0.0839	P	4.5
5	☐	625.000	653.855	1835459.33	0.2162	A	3.3
6	☐	1250.000	1246.817	3622616.36	0.4122	A	0.9
7	☐	2500.000	2482.770	7235582.37	0.8207	A	0.7
8	☐	5000.000	5005.614	14694713.87	1.6547	A	0.7
9	☐			21709.85	0.0025	P	2.8

$$y = 3.3056\text{E-}004 * x + 4.4870\text{E-}005$$

$$R = 1.0000$$

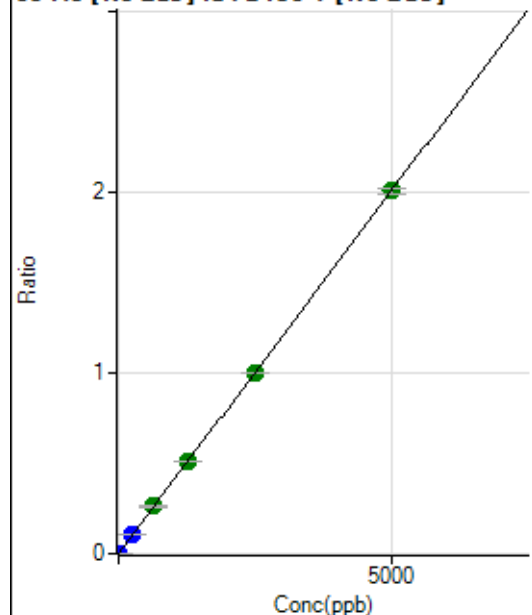
$$DL = 0.03242$$

$$BEC = 0.1357$$

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	102.78	0.0000	P	40.5
2	☐	0.500					
3	☐	5.000	5.006	16922.27	0.0020	P	4.5
4	☐	250.000	257.066	882060.01	0.1032	P	3.6
5	☐	625.000	654.683	2231092.89	0.2628	A	3.9
6	☐	1250.000	1263.733	4458956.26	0.5073	A	0.5
7	☐	2500.000	2488.430	8806898.64	0.9990	A	0.8
8	☐	5000.000	4998.288	17818854.22	2.0066	A	1.3
9	☐			34316.54	0.0039	P	1.7

$$y = 4.0145\text{E-}004 * x + 1.1965\text{E-}005$$

$$R = 1.0000$$

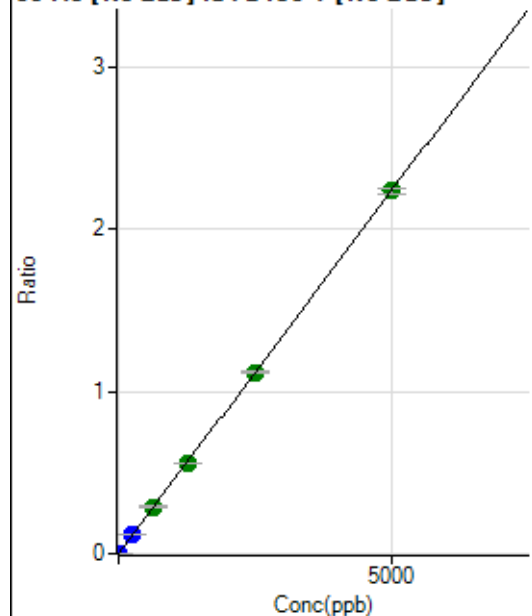
$$DL = 0.03626$$

$$BEC = 0.02981$$

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	233.35	0.0000	P	7.1
2	☐	0.500					
3	☐	5.000	5.072	19211.64	0.0023	P	2.5
4	☐	250.000	256.818	980906.73	0.1148	P	3.6
5	☐	625.000	646.452	2451831.98	0.2889	A	4.3
6	☐	1250.000	1253.494	4922575.50	0.5601	A	0.8
7	☐	2500.000	2495.132	9828370.70	1.1149	A	1.4
8	☐	5000.000	4998.538	19833121.45	2.2334	A	1.5
9	☐			39063.01	0.0045	P	1.6

$$y = 4.4681\text{E-}004 * x + 2.7126\text{E-}005$$

$$R = 1.0000$$

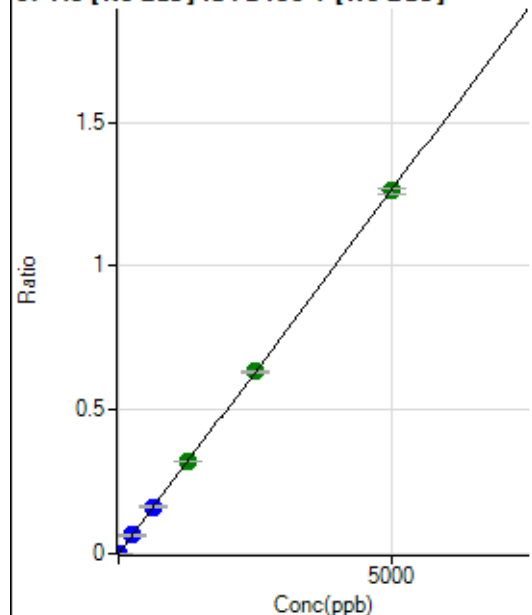
$$DL = 0.01292$$

$$BEC = 0.06071$$

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	141.68	0.0000	P	20.9
2	☐	0.500					
3	☐	5.000	5.133	11002.24	0.0013	P	3.5
4	☐	250.000	253.654	548127.77	0.0641	P	3.7
5	☐	625.000	640.700	1374987.26	0.1620	P	3.9
6	☐	1250.000	1269.652	2820953.58	0.3210	A	1.0
7	☐	2500.000	2503.716	5579803.59	0.6329	A	0.8
8	☐	5000.000	4991.084	11204335.50	1.2617	A	1.3
9	☐			21698.73	0.0025	P	3.3

$$y = 2.5279\text{E-}004 * x + 1.6481\text{E-}005$$

$$R = 1.0000$$

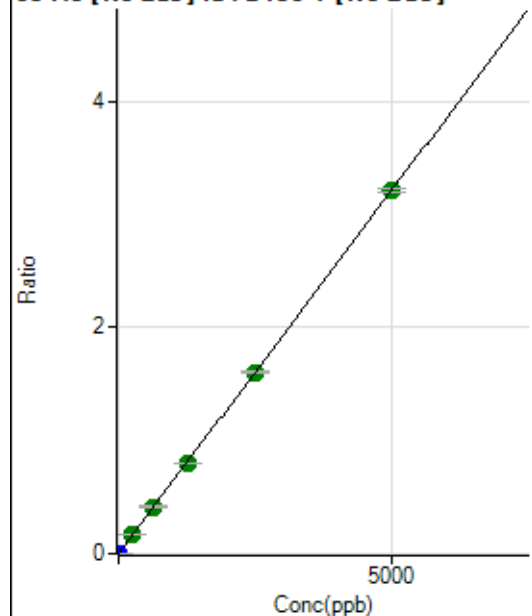
$$DL = 0.04086$$

$$BEC = 0.0652$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	211.12	0.0000	P	16.5
2	☐	0.500					
3	☐	5.000	5.092	27590.18	0.0033	P	3.4
4	☐	250.000	258.255	1417817.32	0.1659	A	3.5
5	☐	625.000	647.690	3531153.59	0.4160	A	4.2
6	☐	1250.000	1247.865	7044128.72	0.8015	A	1.0
7	☐	2500.000	2501.505	14164386.08	1.6067	A	0.5
8	☐	5000.000	4996.532	28498816.61	3.2092	A	1.0
9	☐			55063.00	0.0063	P	2.7

$$y = 6.4227\text{E-}004 * x + 2.4560\text{E-}005$$

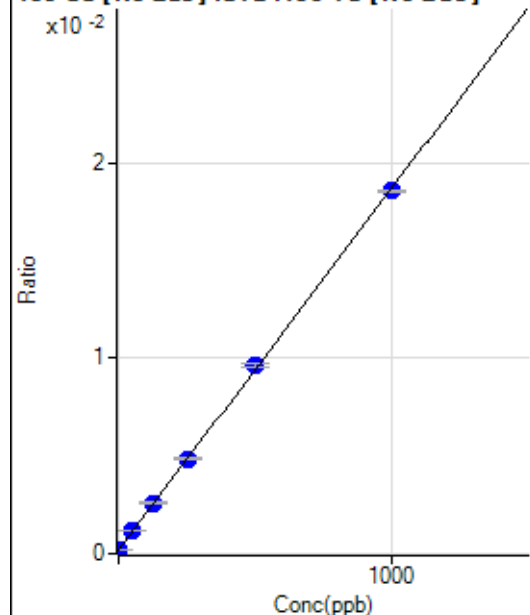
$$R = 1.0000$$

$$DL = 0.01895$$

$$BEC = 0.03824$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1780.76	0.0002	P	9.6
2	☐	0.100					
3	☐	1.000	2.193	2116.94	0.0002	P	2.3
4	☐	50.000	53.371	11377.54	0.0012	P	2.2
5	☐	125.000	130.757	25154.95	0.0026	P	3.5
6	☐	250.000	252.445	48769.71	0.0049	P	1.8
7	☐	500.000	510.440	96958.26	0.0096	P	2.0
8	☐	1000.000	993.279	192409.11	0.0186	P	0.6
9	☐			2039.13	0.0002	P	8.0

$$y = 1.8503E-005 * x + 1.8398E-004$$

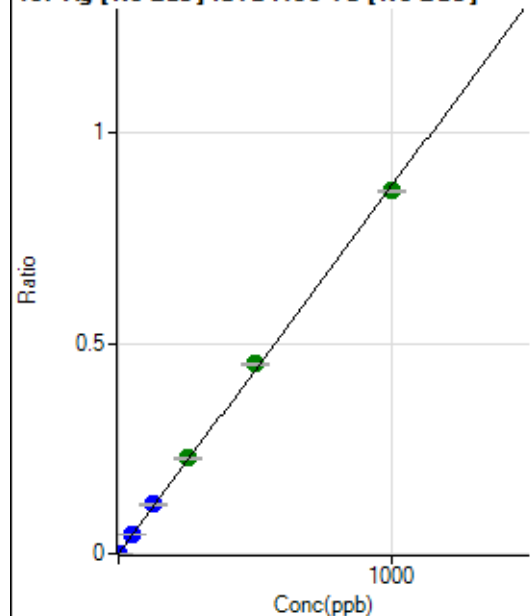
$$R = 0.9999$$

$$DL = 2.856$$

$$BEC = 9.943$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	61.11	0.0000	P	16.3
2	☐	0.100					
3	☐	1.000	1.082	8953.37	0.0010	P	6.1
4	☐	50.000	53.176	450583.44	0.0464	P	2.6
5	☐	125.000	133.672	1126889.26	0.1166	P	3.4
6	☐	250.000	260.223	2280629.15	0.2270	A	1.4
7	☐	500.000	517.350	4545168.24	0.4513	A	1.2
8	☐	1000.000	987.527	8930261.57	0.8615	A	0.7
9	☐			1358.47	0.0001	P	1.4

$$y = 8.7240E-004 * x + 6.3192E-006$$

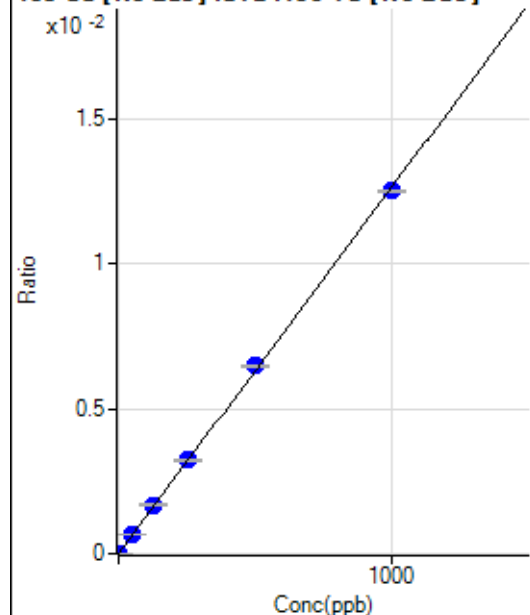
$$R = 0.9997$$

$$DL = 0.003542$$

$$BEC = 0.007243$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	6.95	0.0000	P	68.6
2	☐	0.100					
3	☐	1.000	1.082	136.12	0.0000	P	21.6
4	☐	50.000	52.195	6403.04	0.0007	P	2.7
5	☐	125.000	133.147	16240.63	0.0017	P	3.2
6	☐	250.000	256.791	32549.36	0.0032	P	2.2
7	☐	500.000	512.432	65104.87	0.0065	P	1.4
8	☐	1000.000	990.958	129592.01	0.0125	P	0.3
9	☐			65.28	0.0000	P	32.1

$$y = 1.2615\text{E-}005 * x + 7.1584\text{E-}007$$

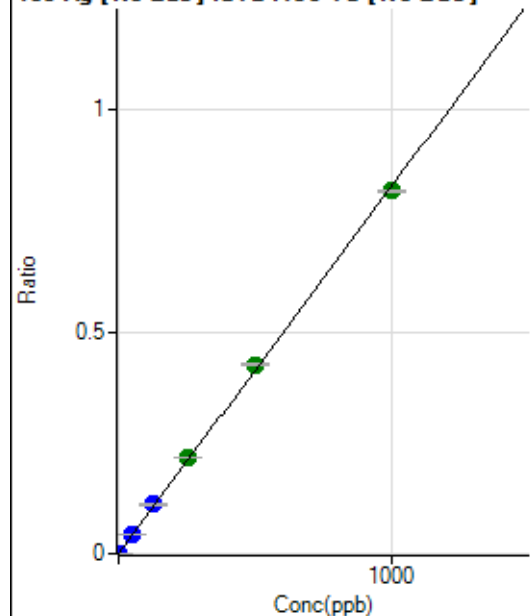
$$R = 0.9998$$

$$DL = 0.1167$$

$$BEC = 0.05674$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	55.56	0.0000	P	38.4
2	☐	0.100					
3	☐	1.000	1.071	8411.35	0.0009	P	5.1
4	☐	50.000	53.135	427361.40	0.0440	P	2.5
5	☐	125.000	133.695	1069957.36	0.1107	P	2.5
6	☐	250.000	261.252	2173285.25	0.2163	A	1.2
7	☐	500.000	515.804	4301045.67	0.4271	A	1.7
8	☐	1000.000	988.041	8480872.84	0.8182	A	0.4
9	☐			1255.68	0.0001	P	11.5

$$y = 8.2806\text{E-}004 * x + 5.7489\text{E-}006$$

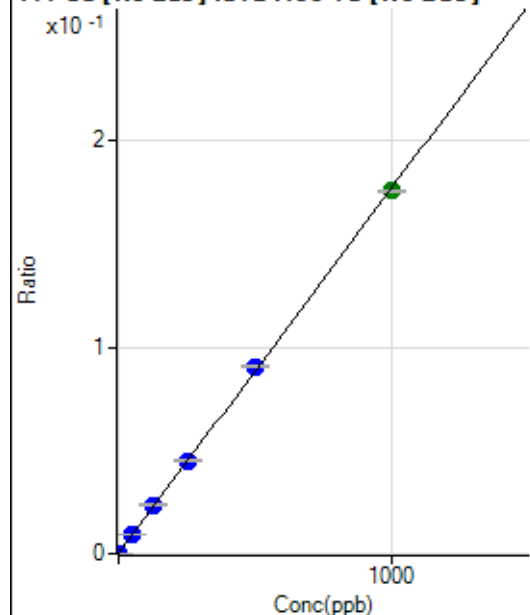
$$R = 0.9997$$

$$DL = 0.007988$$

$$BEC = 0.006943$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1245.83	0.0001	P	9.2
2	☐	0.100					
3	☐	1.000	1.117	3078.39	0.0003	P	2.0
4	☐	50.000	52.517	91544.12	0.0094	P	2.6
5	☐	125.000	132.234	227471.01	0.0235	P	3.1
6	☐	250.000	253.150	451523.88	0.0449	P	1.2
7	☐	500.000	510.930	912199.05	0.0906	P	1.1
8	☐	1000.000	992.718	1823154.50	0.1759	A	0.5
9	☐			1873.38	0.0002	P	2.4

$$y = 1.7704\text{E-}004 * x + 1.2871\text{E-}004$$

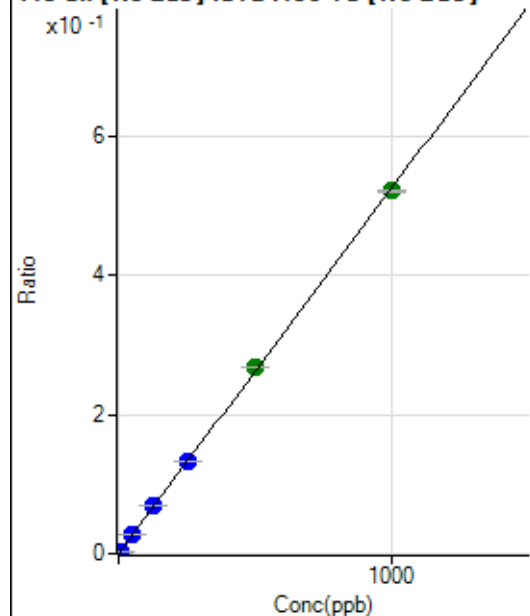
$$R = 0.9999$$

$$DL = 0.2003$$

$$BEC = 0.727$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	561.15	0.0001	P	10.4
2	☐	0.500					
3	☐	5.000	5.456	27523.75	0.0029	P	1.5
4	☐	50.000	51.870	264695.30	0.0273	P	2.5
5	☐	125.000	131.034	664511.12	0.0688	P	3.0
6	☐	250.000	253.408	1335402.99	0.1329	P	1.1
7	☐	500.000	509.663	2691783.33	0.2673	A	0.6
8	☐	1000.000	993.467	5400293.26	0.5210	A	0.4
9	☐			19066.95	0.0019	P	3.1

$$y = 5.2435\text{E-}004 * x + 5.8011\text{E-}005$$

$$R = 0.9999$$

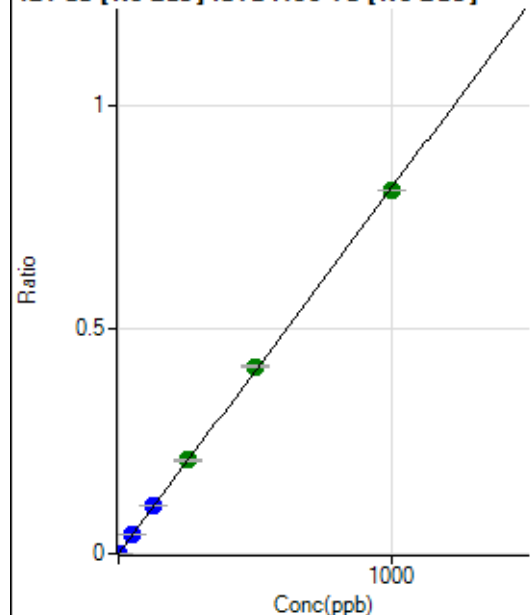
$$DL = 0.03438$$

$$BEC = 0.1106$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.12	0.0000	P	34.7
2	☐	0.200					
3	☐	2.000	2.021	15587.51	0.0017	P	5.9
4	☐	50.000	51.436	406909.30	0.0419	P	2.5
5	☐	125.000	131.061	1031606.33	0.1067	P	2.7
6	☐	250.000	255.717	2092345.97	0.2083	A	0.8
7	☐	500.000	511.012	4191168.15	0.4162	A	0.9
8	☐	1000.000	992.235	8376679.09	0.8081	A	0.2
9	☐			21128.71	0.0021	P	7.3

$$y = 8.1443\text{E-}004 * x + 8.9124\text{E-}006$$

$$R = 0.9999$$

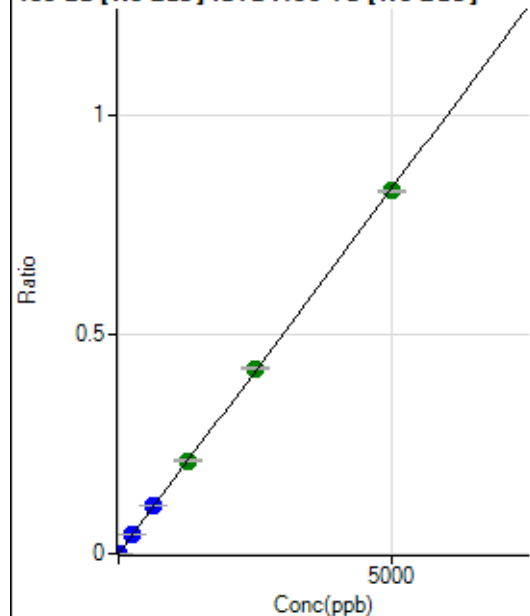
$$DL = 0.0114$$

$$BEC = 0.01094$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.56	0.0000	P	42.2
2	☐	1.000					
3	☐	10.000	10.290	16168.86	0.0017	P	3.5
4	☐	250.000	256.447	414575.29	0.0427	P	2.2
5	☐	625.000	658.174	1058639.25	0.1095	P	2.8
6	☐	1250.000	1273.027	2128534.84	0.2119	A	1.4
7	☐	2500.000	2537.601	4253259.51	0.4224	A	0.5
8	☐	5000.000	4970.973	8576159.13	0.8274	A	0.3
9	☐			3850.75	0.0004	P	11.5

$$y = 1.6644\text{E-}004 * x + 3.1619\text{E-}006$$

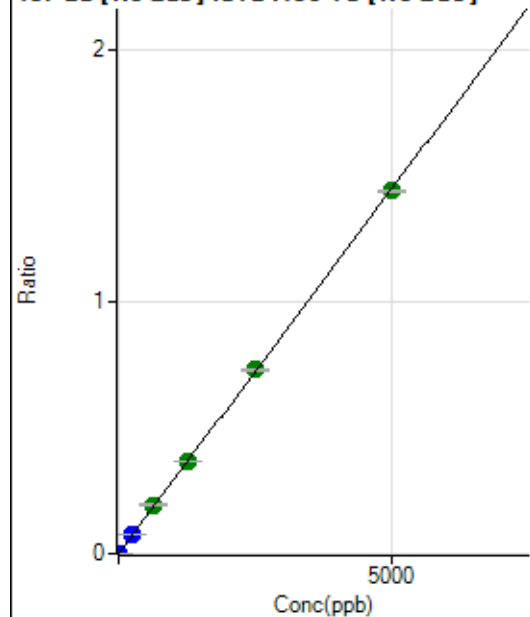
$$R = 0.9999$$

$$DL = 0.02404$$

$$BEC = 0.019$$

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	63.89	0.0000	P	19.1
2	☐	1.000					
3	☐	10.000	10.225	27944.33	0.0030	P	5.2
4	☐	250.000	259.100	728504.11	0.0750	P	2.3
5	☐	625.000	665.764	1862452.17	0.1927	A	3.1
6	☐	1250.000	1272.093	3699466.44	0.3683	A	0.9
7	☐	2500.000	2521.849	7351925.60	0.7300	A	0.2
8	☐	5000.000	4978.002	14937647.90	1.4411	A	0.6
9	☐			6215.61	0.0006	P	0.2

$$y = 2.8948E-004 * x + 6.5946E-006$$

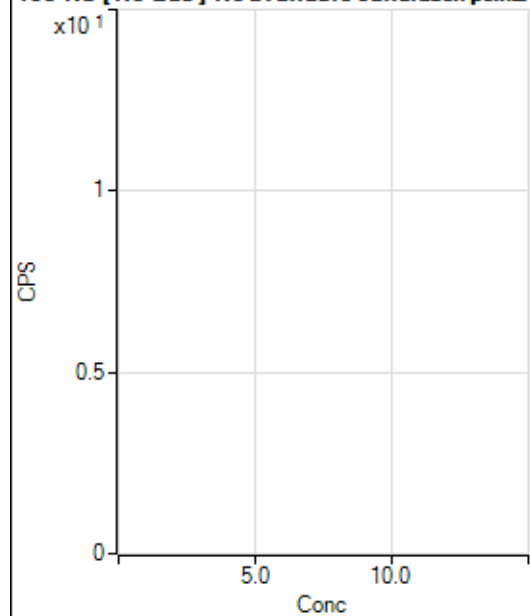
$$R = 1.0000$$

$$DL = 0.01308$$

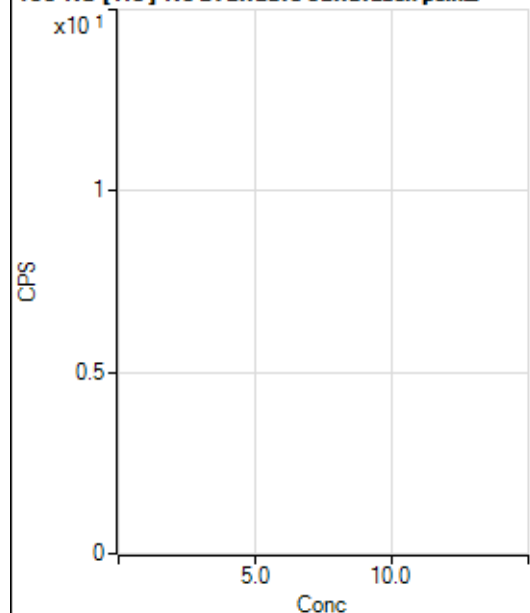
$$BEC = 0.02278$$

Weight: <None>

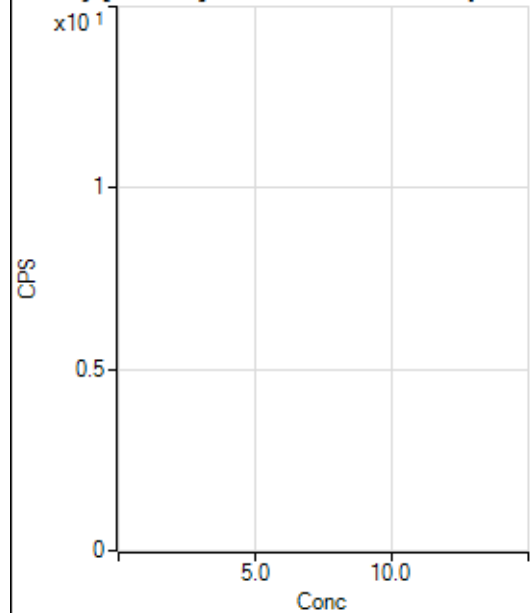
Min Conc: 0

150 Nd [No Gas] No available calibration points

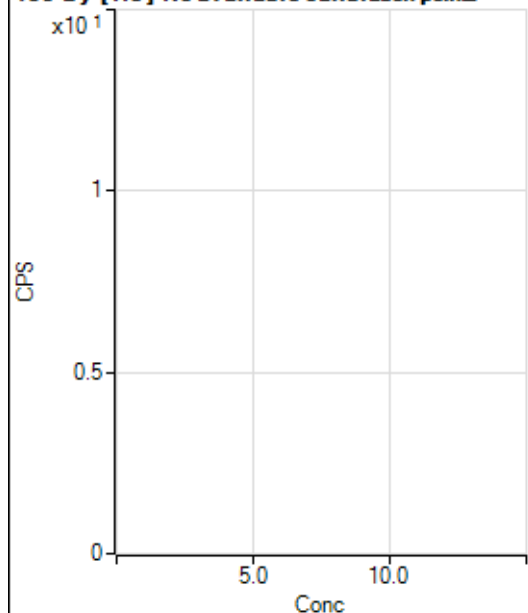
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			20.00		P	57.7
2	☐						
3	☐			6.67		P	100.
4	☐			31.11		P	49.5
5	☐			31.11		P	75.3
6	☐			88.89		P	45.2
7	☐			162.23		P	21.1
8	☐			502.25		P	15.8
9	☐			86.67		P	13.3

150 Nd [He] No available calibration points

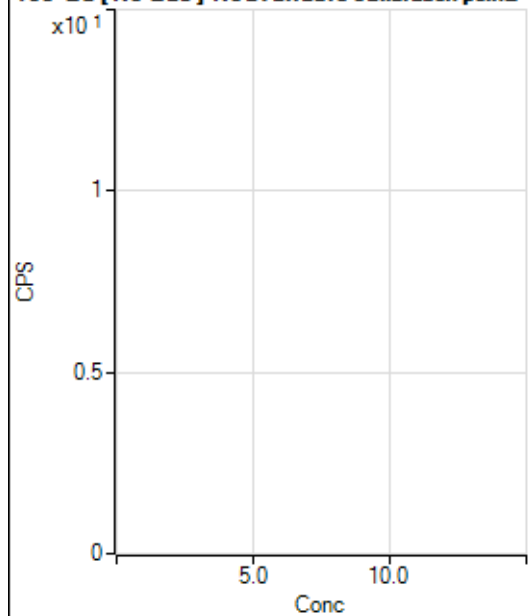
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			0.00		P	
4	☐			0.00		P	
5	☐			2.22		P	173.
6	☐			4.44		P	43.4
7	☐			2.22		P	86.6
8	☐			36.66		P	15.7
9	☐			18.89		P	62.0

156 Dy [No Gas] No available calibration points

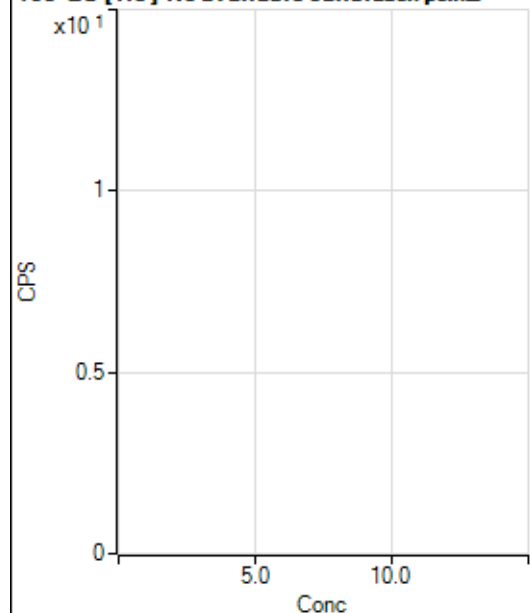
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			22.22		P	43.3
2	☐						
3	☐			13.89		P	91.6
4	☐			13.89		P	34.7
5	☐			41.67		P	34.6
6	☐			27.78		P	91.6
7	☐			63.89		P	19.9
8	☐			222.23		P	11.5
9	☐			133.34		P	33.1

156 Dy [He] No available calibration points

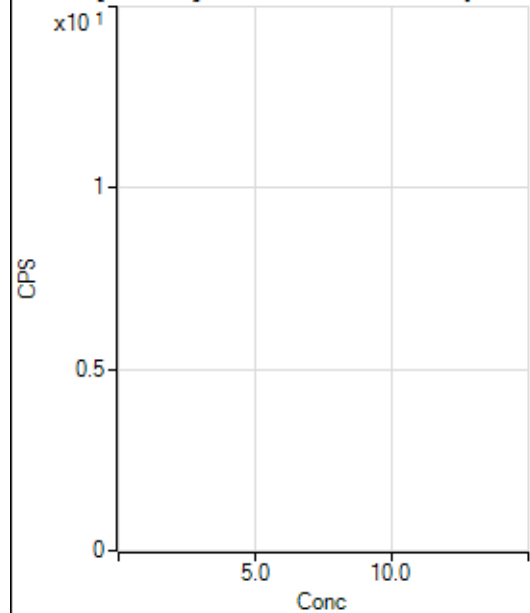
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐						
3	☐			1.11		P	173.
4	☐			0.00		P	
5	☐			2.22		P	86.6
6	☐			2.22		P	173.
7	☐			1.11		P	173.
8	☐			35.56		P	5.4
9	☐			21.11		P	9.1

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

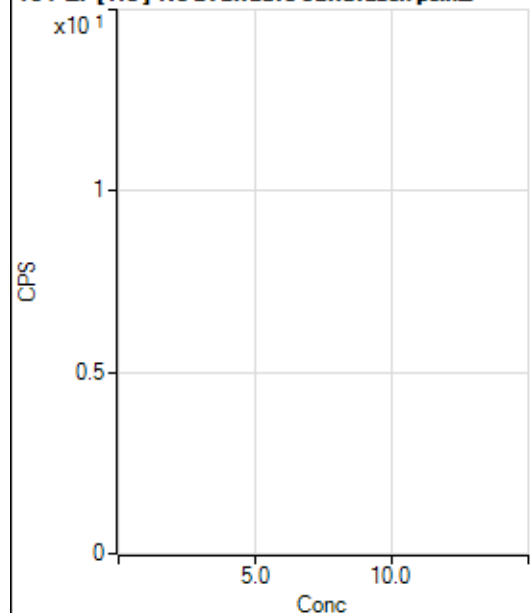
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			80.56		P	33.3
2	☐						
3	☐			58.33		P	37.8
4	☐			61.11		P	20.8
5	☐			69.45		P	54.1
6	☐			86.12		P	48.7
7	☐			66.67		P	37.5
8	☐			225.01		P	25.7
9	☐			86.11		P	39.1

160 Gd [He] No available calibration points

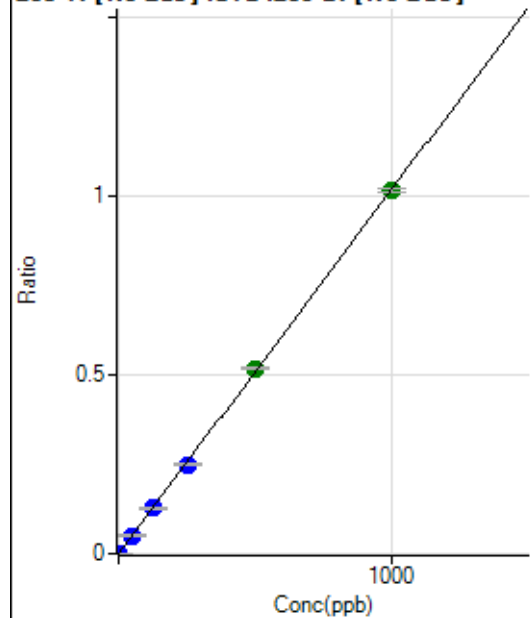
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	50.0
2	☐						
3	☐			7.78		P	24.7
4	☐			10.00		P	88.2
5	☐			10.00		P	57.7
6	☐			6.67		P	50.0
7	☐			10.00		P	100.
8	☐			52.22		P	20.5
9	☐			18.89		P	71.3

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			22.22		P	57.3
2	☐						
3	☐			44.45		P	57.3
4	☐			55.56		P	31.2
5	☐			25.00		P	88.2
6	☐			44.45		P	39.0
7	☐			52.78		P	9.1
8	☐			102.78		P	9.4
9	☐			61.11		P	28.4

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐						
3	☐			14.44		P	81.1
4	☐			14.44		P	35.3
5	☐			10.00		P	33.3
6	☐			2.22		P	173.
7	☐			8.89		P	57.3
8	☐			23.33		P	14.3
9	☐			8.89		P	78.1

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	88.89	0.0000	P	19.5
2	☐	0.100					
3	☐	1.000	1.037	6126.77	0.0011	P	2.2
4	☐	50.000	49.620	293175.29	0.0506	P	3.1
5	☐	125.000	126.116	741341.55	0.1285	P	4.2
6	☐	250.000	245.556	1500989.48	0.2502	P	1.2
7	☐	500.000	508.630	3091345.40	0.5182	A	1.1
8	☐	1000.000	996.675	6214019.63	1.0155	A	1.2
9	☐			3920.25	0.0007	P	7.2

$$y = 0.0010 * x + 1.5082E-005$$

$$R = 0.9999$$

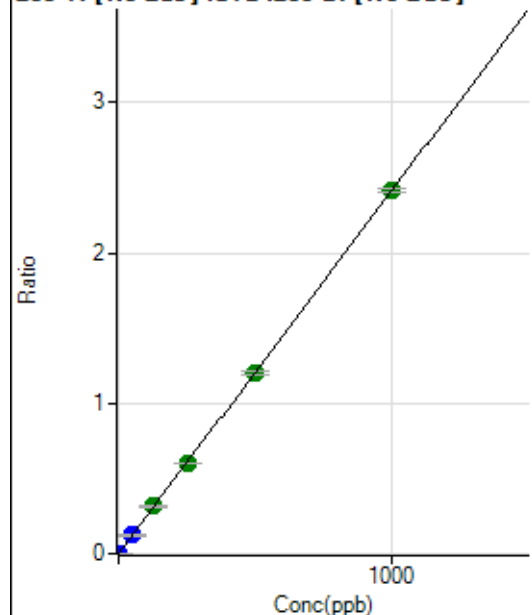
$$DL = 0.008662$$

$$BEC = 0.0148$$

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	213.90	0.0000	P	19.8
2	☐	0.100					
3	☐	1.000	1.008	14097.34	0.0025	P	4.8
4	☐	50.000	50.394	705144.55	0.1216	P	3.1
5	☐	125.000	130.612	1818192.36	0.3152	A	4.3
6	☐	250.000	249.485	3611590.10	0.6020	A	1.0
7	☐	500.000	498.496	7175149.03	1.2028	A	1.3
8	☐	1000.000	1000.159	14767803.63	2.4132	A	0.9
9	☐			9348.36	0.0017	P	3.8

$$y = 0.0024 * x + 3.6285E-005$$

$$R = 1.0000$$

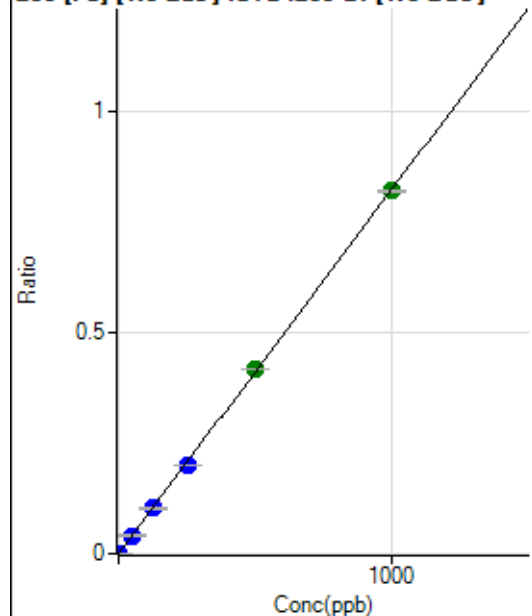
$$DL = 0.008945$$

$$BEC = 0.01504$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	151.86	0.0000	P	6.7
2	☐	0.100					
3	☐	1.000	0.976	4728.83	0.0008	P	3.6
4	☐	50.000	49.995	238374.38	0.0411	P	2.2
5	☐	125.000	126.246	598687.70	0.1038	P	4.0
6	☐	250.000	244.851	1207347.08	0.2012	P	0.7
7	☐	500.000	507.509	2488087.93	0.4171	A	0.6
8	☐	1000.000	997.377	5015920.08	0.8196	A	0.8
9	☐			30747.17	0.0055	P	1.8

$$y = 8.2178E-004 * x + 2.5774E-005$$

$$R = 0.9999$$

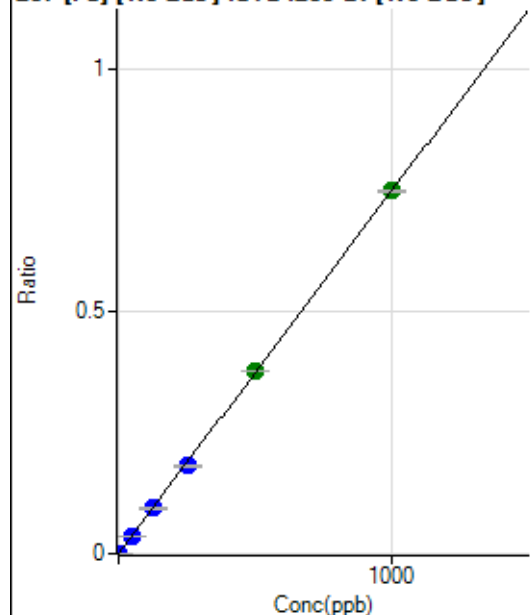
$$DL = 0.006268$$

$$BEC = 0.03136$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	157.41	0.0000	P	35.5
2	☐	0.100					
3	☐	1.000	0.915	4067.46	0.0007	P	2.1
4	☐	50.000	49.382	214413.60	0.0370	P	2.5
5	☐	125.000	125.108	540329.54	0.0936	P	3.7
6	☐	250.000	242.289	1087918.02	0.1813	P	1.1
7	☐	500.000	502.741	2244491.99	0.3762	A	0.6
8	☐	1000.000	1000.575	4582501.38	0.7488	A	0.4
9	☐			26110.78	0.0047	P	0.4

$$y = 7.4833\text{E-}004 * x + 2.6694\text{E-}005$$

$$R = 1.0000$$

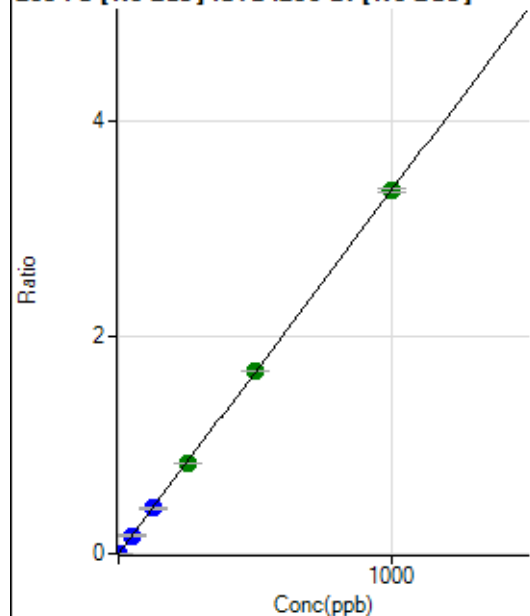
$$DL = 0.03795$$

$$BEC = 0.03567$$

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	631.51	0.0001	P	14.2
2	☐	0.100					
3	☐	1.000	0.948	18783.86	0.0033	P	2.2
4	☐	50.000	49.686	966657.25	0.1667	P	2.6
5	☐	125.000	125.950	2437493.92	0.4225	P	3.7
6	☐	250.000	247.892	4987798.81	0.8314	A	0.9
7	☐	500.000	503.586	10074512.57	1.6888	A	0.7
8	☐	1000.000	998.631	20493884.54	3.3489	A	0.9
9	☐			122172.25	0.0218	P	1.2

$$y = 0.0034 * x + 1.0719\text{E-}004$$

$$R = 1.0000$$

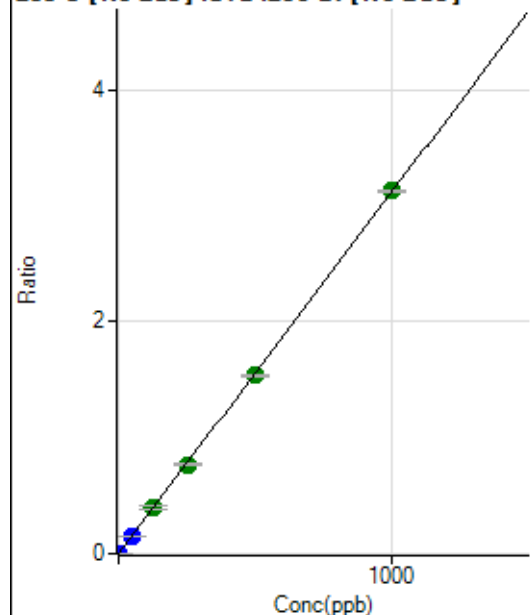
$$DL = 0.01364$$

$$BEC = 0.03197$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.57	0.0000	P	12.8
2	☐	0.100					
3	☐	1.000	0.966	17371.27	0.0030	P	5.5
4	☐	50.000	49.069	886508.51	0.1529	P	3.3
5	☐	125.000	127.621	2294025.11	0.3977	A	4.5
6	☐	250.000	247.332	4623664.56	0.7706	A	0.6
7	☐	500.000	492.988	9163475.21	1.5360	A	0.7
8	☐	1000.000	1003.892	19141144.00	3.1279	A	0.8
9	☐			3156.12	0.0006	P	9.2

$$y = 0.0031 * x + 3.0663E-005$$

$$R = 1.0000$$

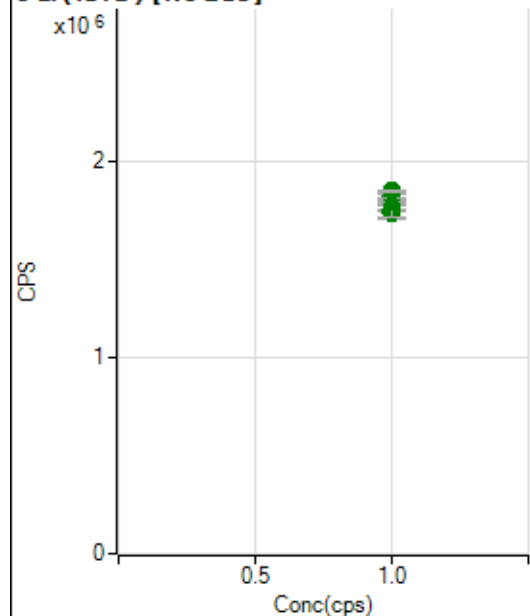
$$DL = 0.003777$$

$$BEC = 0.009841$$

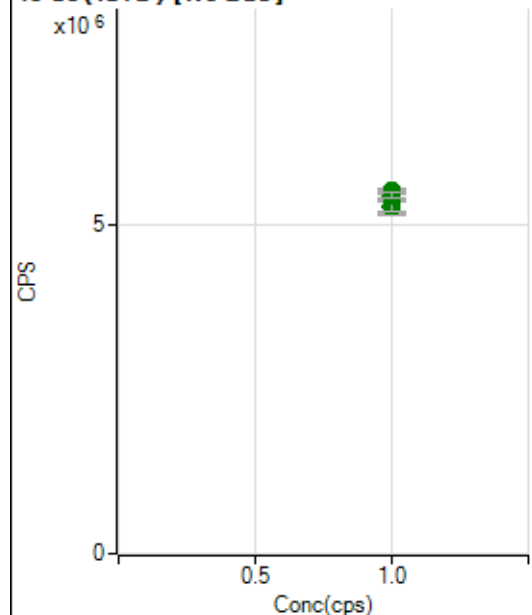
Weight: <None>

Min Conc: 0

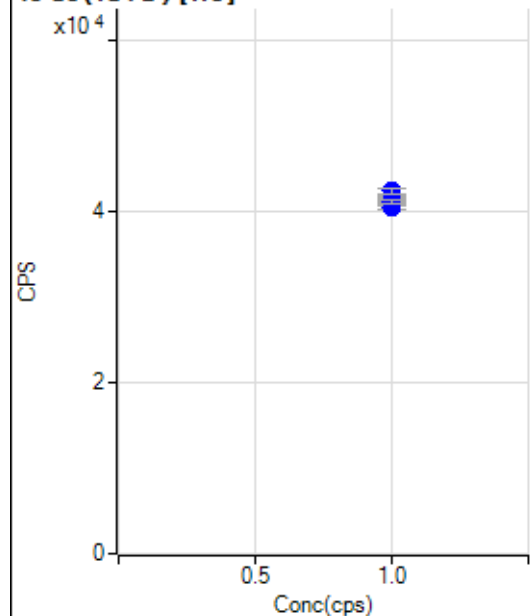
6 Li (ISTD) [No Gas]



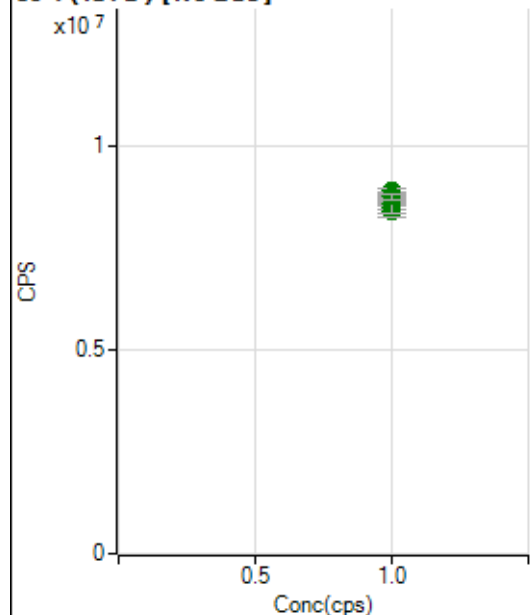
	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1809355.70		A	1.3
2	☐	1.000					
3	☐	1.000		1734737.25		A	2.9
4	☐	1.000		1762536.59		A	2.1
5	☐	1.000		1751547.75		A	3.9
6	☐	1.000		1800959.05		A	0.7
7	☐	1.000		1799291.50		A	0.4
8	☐	1.000		1826149.59		A	0.8
9	☐	1.000		1852830.60		A	0.7

45 Sc (ISTD) [No Gas]

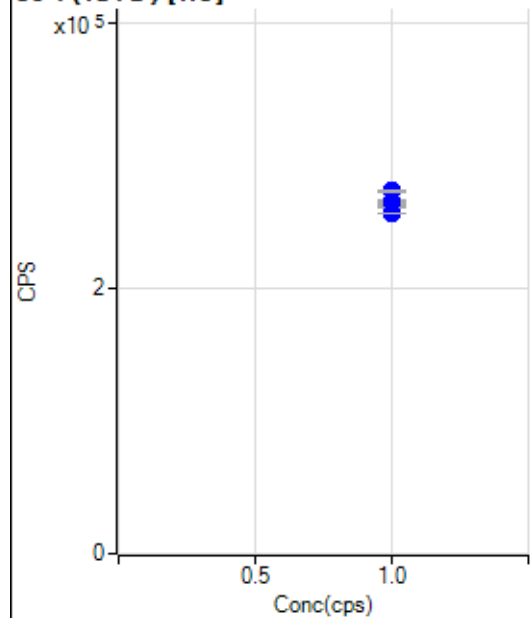
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5393794.95		A	0.7
2	☐	1.000					
3	☐	1.000		5269372.08		A	3.2
4	☐	1.000		5254703.72		A	4.7
5	☐	1.000		5293693.22		A	3.3
6	☐	1.000		5511887.06		A	1.2
7	☐	1.000		5493599.65		A	0.7
8	☐	1.000		5474981.42		A	0.9
9	☐	1.000		5448488.88		A	1.7

45 Sc (ISTD) [He]

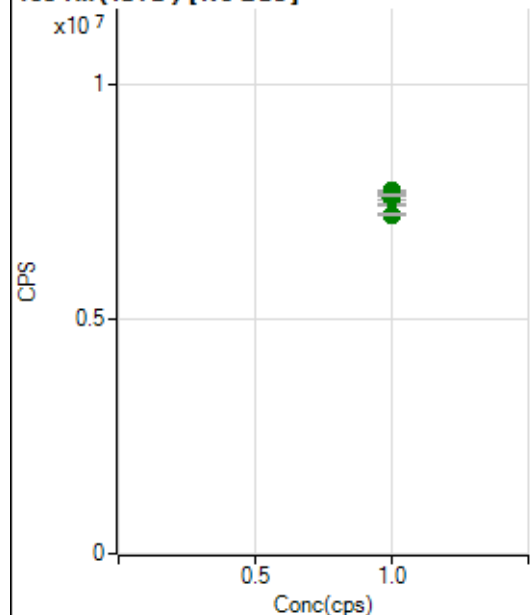
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		40385.83		P	0.6
2	☐	1.000					
3	☐	1.000		40710.16		P	0.6
4	☐	1.000		41421.05		P	1.4
5	☐	1.000		40886.15		P	0.4
6	☐	1.000		41486.83		P	0.4
7	☐	1.000		41211.57		P	0.8
8	☐	1.000		41024.38		P	0.9
9	☐	1.000		42325.99		P	1.6

89 Y (ISTD) [No Gas]

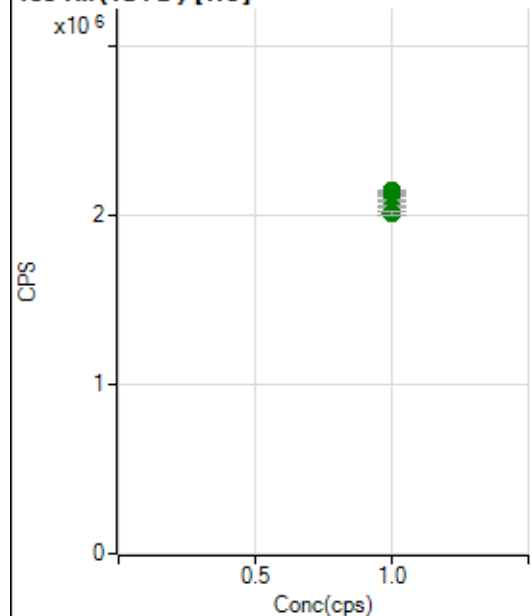
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8602296.75		A	0.7
2	☐	1.000					
3	☐	1.000		8380339.94		A	3.7
4	☐	1.000		8553188.83		A	3.4
5	☐	1.000		8496425.22		A	3.6
6	☐	1.000		8789032.86		A	0.6
7	☐	1.000		8816054.94		A	0.6
8	☐	1.000		8881055.15		A	1.0
9	☐	1.000		8736411.81		A	1.2

89 Y (ISTD) [He]

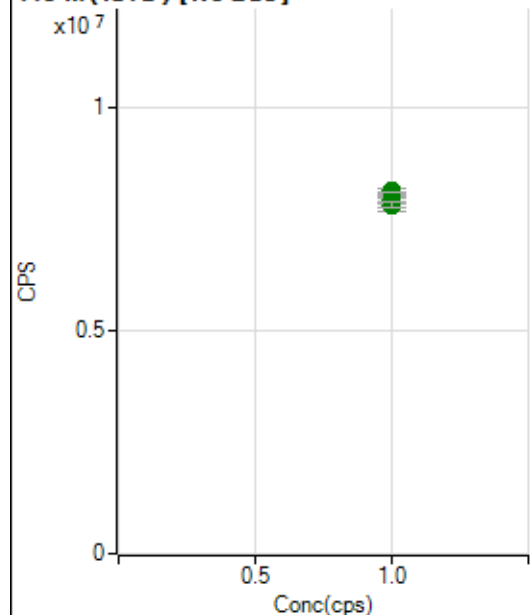
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		261326.08		P	0.6
2	☐	1.000					
3	☐	1.000		262774.47		P	0.5
4	☐	1.000		266025.39		P	0.8
5	☐	1.000		263861.98		P	0.2
6	☐	1.000		263827.99		P	0.5
7	☐	1.000		261413.75		P	0.2
8	☐	1.000		256512.90		P	0.2
9	☐	1.000		273768.33		P	0.3

103 Rh (ISTD) [No Gas]

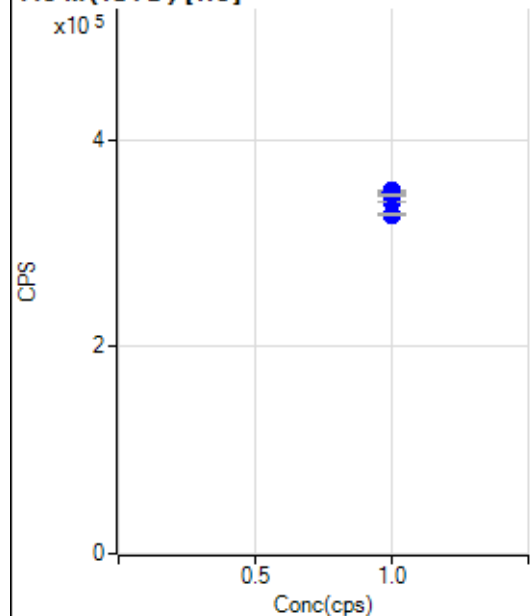
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7690946.61		A	0.8
2	☐	1.000					
3	☐	1.000		7549645.65		A	3.6
4	☐	1.000		7643522.74		A	2.2
5	☐	1.000		7568272.91		A	3.0
6	☐	1.000		7737334.55		A	0.7
7	☐	1.000		7696098.17		A	0.6
8	☐	1.000		7637668.92		A	0.7
9	☐	1.000		7232903.98		A	0.6

103 Rh (ISTD) [He]

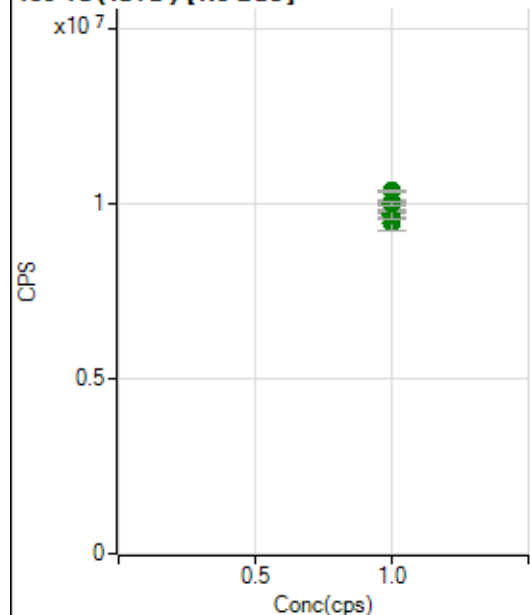
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2125413.22		A	0.7
2	☐	1.000					
3	☐	1.000		2143492.22		A	0.7
4	☐	1.000		2133170.79		A	0.8
5	☐	1.000		2128725.89		A	0.7
6	☐	1.000		2111915.19		A	0.1
7	☐	1.000		2089877.00		A	0.5
8	☐	1.000		2047876.81		A	0.3
9	☐	1.000		2011198.27		A	0.7

115 In (ISTD) [No Gas]

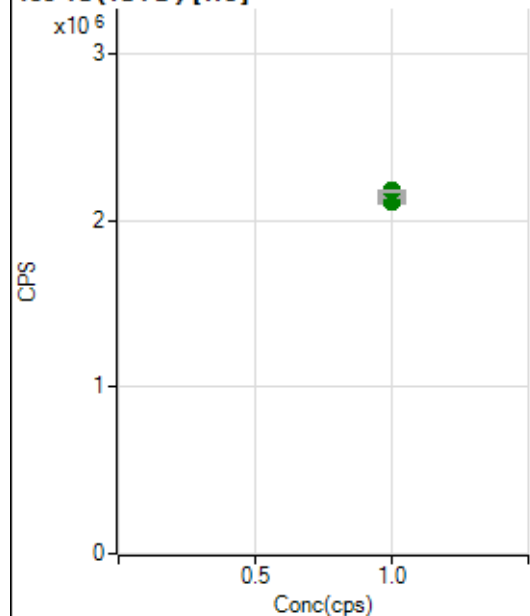
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8002287.82		A	0.6
2	☐	1.000					
3	☐	1.000		7842245.60		A	4.5
4	☐	1.000		7918223.57		A	2.3
5	☐	1.000		7874016.99		A	3.6
6	☐	1.000		8126044.79		A	1.1
7	☐	1.000		8087010.98		A	0.7
8	☐	1.000		8098736.57		A	0.4
9	☐	1.000		7814476.05		A	1.4

115 In (ISTD) [He]

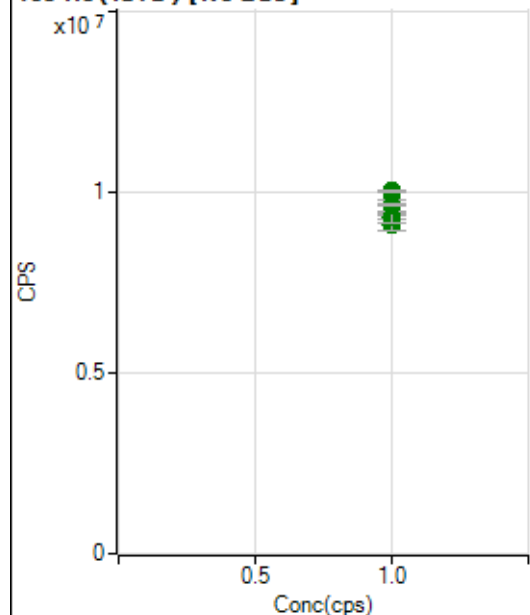
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		347147.76		P	1.3
2	☐	1.000					
3	☐	1.000		349772.99		P	0.5
4	☐	1.000		350387.73		P	0.6
5	☐	1.000		349525.70		P	0.9
6	☐	1.000		346400.46		P	0.3
7	☐	1.000		340104.36		P	0.2
8	☐	1.000		327525.80		P	0.7
9	☐	1.000		346618.97		P	0.5

159 Tb (ISTD) [No Gas]

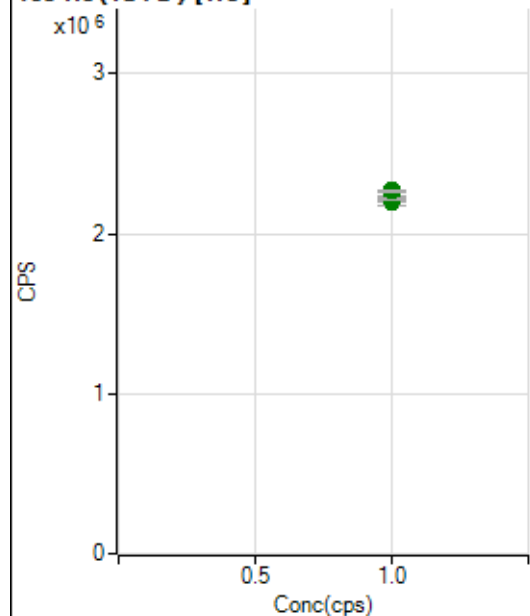
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9677659.16		A	0.9
2	☐	1.000					
3	☐	1.000		9432526.94		A	3.9
4	☐	1.000		9715133.05		A	2.2
5	☐	1.000		9668220.83		A	2.5
6	☐	1.000		10046227.00		A	0.6
7	☐	1.000		10070625.82		A	0.7
8	☐	1.000		10365738.80		A	0.3
9	☐	1.000		10005615.20		A	1.0

159 Tb (ISTD) [He]

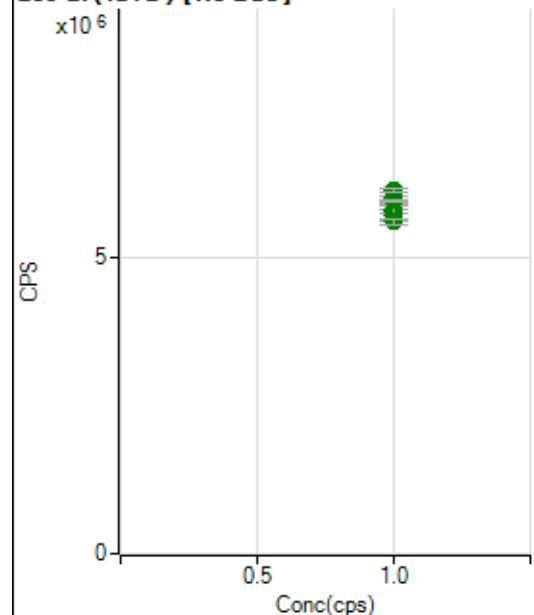
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2106139.61		A	0.9
2	☐	1.000					
3	☐	1.000		2124047.15		A	0.7
4	☐	1.000		2130468.02		A	0.6
5	☐	1.000		2141833.39		A	0.4
6	☐	1.000		2142607.85		A	0.4
7	☐	1.000		2148374.34		A	0.7
8	☐	1.000		2137641.63		A	0.3
9	☐	1.000		2177223.98		A	0.9

165 Ho (ISTD) [No Gas]

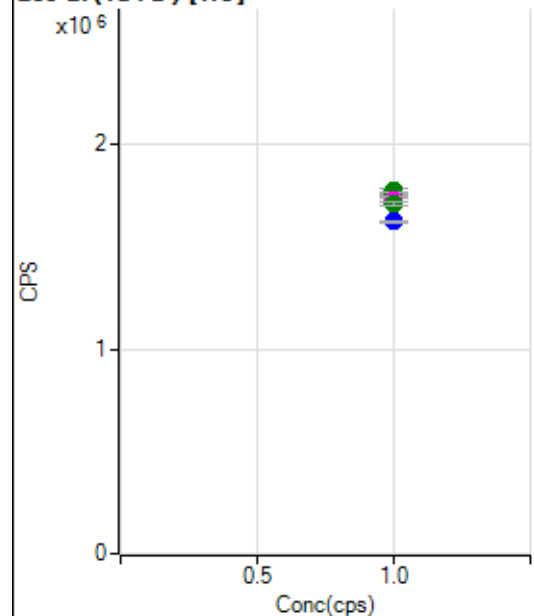
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9336337.80		A	1.2
2	☐	1.000					
3	☐	1.000		9110294.74		A	3.6
4	☐	1.000		9329976.51		A	1.8
5	☐	1.000		9306433.63		A	3.2
6	☐	1.000		9690254.30		A	0.3
7	☐	1.000		9796753.26		A	0.2
8	☐	1.000		10041700.74		A	0.4
9	☐	1.000		9655757.60		A	0.9

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2194092.26		A	1.3
2	☐	1.000					
3	☐	1.000		2206675.49		A	0.4
4	☐	1.000		2216479.05		A	0.7
5	☐	1.000		2228539.60		A	0.4
6	☐	1.000		2234785.40		A	0.5
7	☐	1.000		2220416.15		A	1.0
8	☐	1.000		2218981.25		A	0.5
9	☐	1.000		2267086.06		A	0.8

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5894771.72		A	1.2
2	☐	1.000					
3	☐	1.000		5717876.17		A	3.2
4	☐	1.000		5800262.28		A	2.4
5	☐	1.000		5775426.58		A	4.0
6	☐	1.000		5999693.73		A	0.8
7	☐	1.000		5965552.48		A	0.6
8	☐	1.000		6119874.56		A	0.9
9	☐	1.000		5602794.78		A	2.0

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1760977.15		A	0.7
2	☐	1.000					
3	☐	1.000		1774991.62		A	1.5
4	☐	1.000		1766020.58		A	0.3
5	☐	1.000		1753237.96		M	1.5
6	☐	1.000		1757988.79		A	1.7
7	☐	1.000		1734294.30		M	1.6
8	☐	1.000		1710161.45		A	1.0
9	☐	1.000		1624838.26		P	0.4

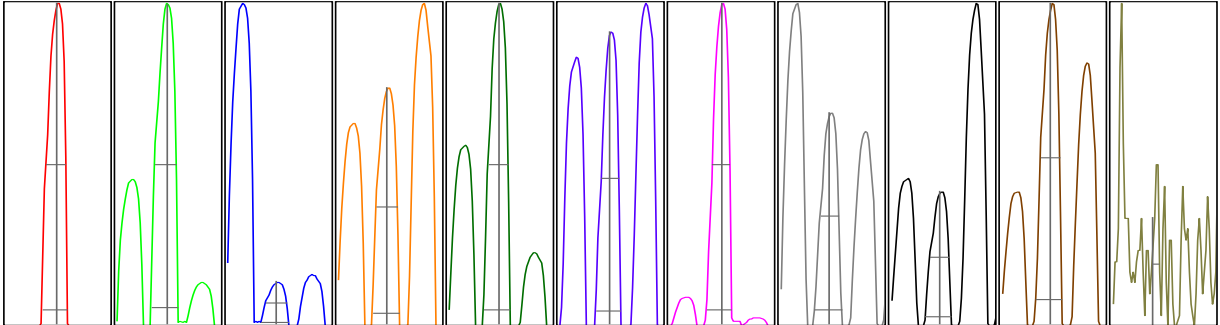
US EPA Tune Check Sample Report

Batch Folder D:\P8061918 MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	5792	2.88	5.00	
24	98213	1.79	5.00	
25	13156	1.56	5.00	
26	15283	1.49	5.00	
59	59724	1.85	5.00	
113	7267	2.30	5.00	
115	90349	2.93	5.00	
206	19339	3.08	5.00	
207	17733	2.74	5.00	
208	42228	2.42	5.00	
220	1	8.20		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	5656	5944	5574	5918	5868
24	98893	99483	96173	100008	96509
25	13166	13252	12981	13442	12940
26	15331	15375	15244	15539	14924
59	59949	57835	60454	60559	59822
113	7347	7123	7438	7056	7373
115	91881	89366	93216	86330	90951
206	19535	19217	19886	18369	19689
207	17788	17508	18144	17025	18202
208	42090	41871	43038	40783	43356
220	1	1	1	1	1

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	10420	9.00	8.9 - 9.1		0.735	0.900	
24	167883	24.00	23.9 - 24.1		0.782	0.900	
25	22657	24.95	24.9 - 25.1		0.787	0.900	
26	26589	25.95	25.9 - 26.1		0.779	0.900	
59	108039	59.00	58.9 - 59.1		0.767	0.900	
113	14215	113.00	112.9 - 113.1		0.723	0.900	
115	175019	115.05	114.9 - 115.1		0.721	0.900	
206	36399	205.95	205.9 - 206.1		0.774	0.900	
207	33327	206.95	206.9 - 207.1		0.733	0.900	
208	80042	207.95	207.9 - 208.1		0.743	0.900	
220	1	219.70	-				

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
Plasma Mode		HMI	Aerosol Dilution		HMI-8			

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	10.4	V	Deflect	13.6	V
Extract 2	-250.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-100	V	Cell Exit	-50	V			

Cell Parameters

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

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	7402	0.38	
89	6957	0.47	
205	9918	0.43	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	7394	7436	7405	7414	7360
89	6915	6983	6964	6990	6931
205	9853	9968	9938	9924	9906

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Plasma Mode		HMI	Aerosol Dilution		HMI-8			

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	10.4	V	Deflect	2.4	V
Extract 2	-250.0	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	5.0	mL/min	OctP RF	180	V			