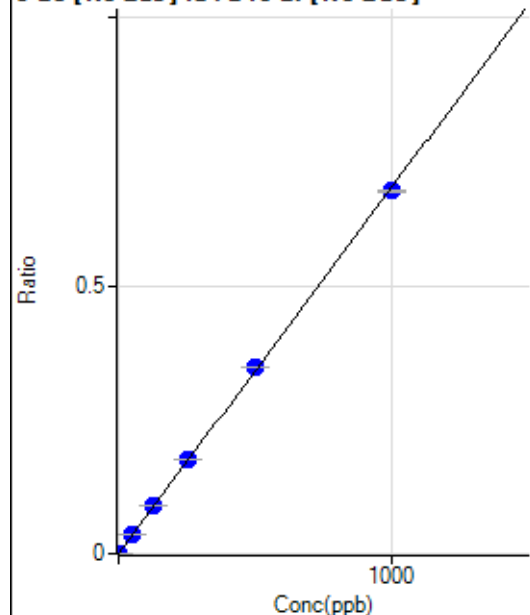


Batch Folder: D:\ICP-MS Data\P7122818 MS.b\
Analysis File: P7122818 MS.batch.bin
DA Date-Time: 2018-12-28 15:11:56
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-12-28 12:57:26
2	004CALS.d	S01	2018-12-28 13:01:00
3	005CALS.d	S02	2018-12-28 13:05:23
4	006CALS.d	S03	2018-12-28 13:09:17
5	007CALS.d	S04	2018-12-28 13:13:12
6	008CALS.d	S05	2018-12-28 13:17:02
7	009CALS.d	S06	2018-12-28 13:20:50
8	010CALS.d	S07	2018-12-28 13:24:35
9	011CALS.d	S08	2018-12-28 13:28:20

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.30	0.0000	P	7.2
2	☐	0.100	0.077	212.97	0.0001	P	17.5
3	☐	1.000	0.939	2077.98	0.0007	P	4.0
4	☐	50.000	53.013	117806.58	0.0362	P	0.2
5	☐	125.000	129.688	282184.53	0.0886	P	0.7
6	☐	250.000	258.771	547696.07	0.1767	P	0.3
7	☐	500.000	511.264	1063824.91	0.3491	P	0.4
8	☐	1000.000	991.439	2054817.91	0.6770	P	0.2
9	☐			238.90	0.0001	P	14.3

$$y = 6.8287\text{E-}004 * x + 1.4697\text{E-}005$$

$$R = 0.9999$$

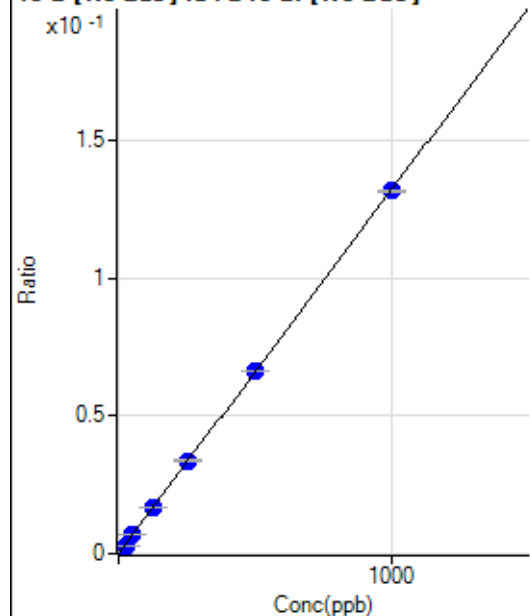
$$DL = 0.004654$$

$$BEC = 0.02152$$

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	258.35	0.0001	P	14.2
2	☐	2.500	2.222	1183.43	0.0004	P	9.6
3	☐	25.000	22.291	9586.79	0.0030	P	2.3
4	☐	50.000	50.553	21983.39	0.0068	P	1.7
5	☐	125.000	126.892	53643.16	0.0168	P	2.2
6	☐	250.000	255.063	104638.05	0.0338	P	2.2
7	☐	500.000	502.742	202539.84	0.0665	P	0.4
8	☐	1000.000	997.167	399910.26	0.1318	P	0.8
9	☐			10879.38	0.0035	P	8.5

$$y = 1.3206\text{E-}004 * x + 8.2006\text{E-}005$$

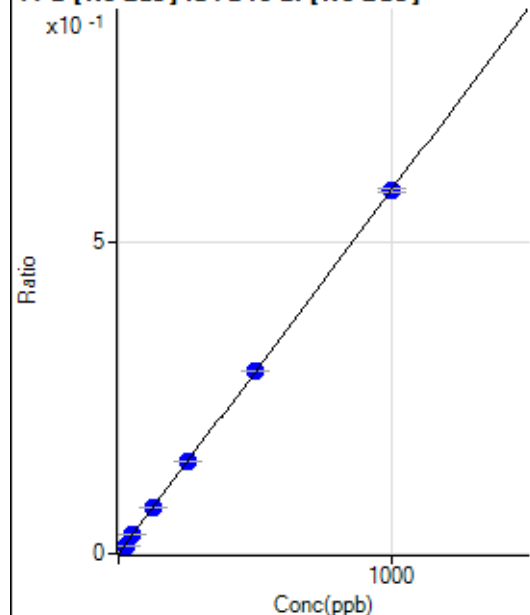
$$R = 1.0000$$

$$DL = 0.2649$$

$$BEC = 0.621$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1061.19	0.0003	P	7.9
2	☐	2.500	2.290	5273.34	0.0017	P	4.0
3	☐	25.000	22.258	42234.83	0.0133	P	2.0
4	☐	50.000	51.129	98184.67	0.0302	P	1.1
5	☐	125.000	125.540	234534.12	0.0736	P	0.6
6	☐	250.000	253.454	459542.32	0.1483	P	1.3
7	☐	500.000	502.402	894588.72	0.2936	P	0.2
8	☐	1000.000	997.881	1768877.80	0.5828	P	1.1
9	☐			46804.05	0.0151	P	7.8

$$y = 5.8372\text{E-}004 * x + 3.3677\text{E-}004$$

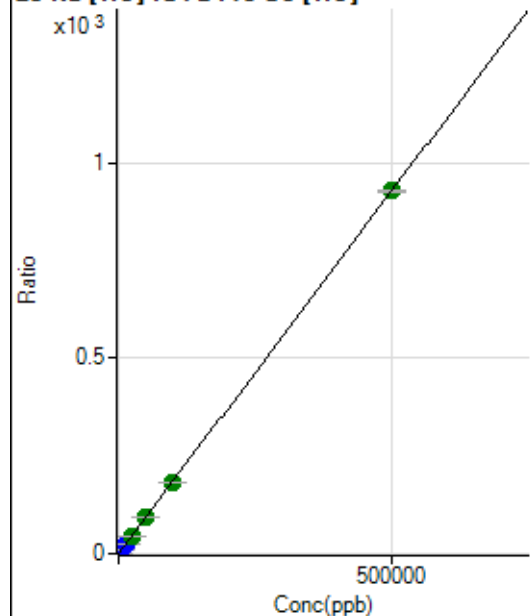
$$R = 1.0000$$

$$DL = 0.1369$$

$$BEC = 0.5769$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5190.00	0.0291	P	8.1
2	☐	50.000	43.309	19580.15	0.1094	P	2.5
3	☐	500.000	441.352	151968.14	0.8476	P	0.8
4	☐	5000.000	4925.603	1659794.13	9.1645	P	0.4
5	☐	12500.000	12345.872	3985103.82	22.9267	P	0.8
6	☐	25000.000	24670.221	7697789.58	45.7844	A	0.3
7	☐	50000.000	49701.192	15201656.94	92.2089	A	0.7
8	☐	100000.00	97727.398	30350830.54	181.2821	A	0.6
9	☐	500000.00	500505.54	160416045.2	928.3068	A	0.7

$$y = 0.0019 * x + 0.0291$$

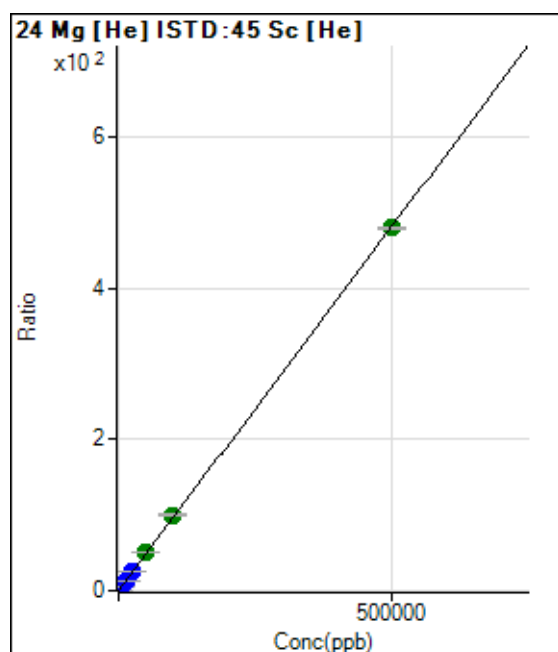
$$R = 1.0000$$

$$DL = 3.817$$

$$BEC = 15.66$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	88.89	0.0005	P	54.1
2	☐	50.000	45.422	7905.13	0.0442	P	7.6
3	☐	500.000	463.589	79974.59	0.4461	P	1.9
4	☐	5000.000	5348.750	931220.98	5.1416	P	0.1
5	☐	12500.000	13344.415	2229526.50	12.8268	P	1.0
6	☐	25000.000	26705.365	4315725.44	25.6689	P	0.4
7	☐	50000.000	53268.187	8440990.99	51.2003	A	0.6
8	☐	100000.00	104090.49	16750475.72	100.0493	A	0.7
9	☐	500000.00	498745.25	82838394.21	479.3801	A	0.8

$$y = 9.6117\text{E-}004 * x + 4.9721\text{E-}004$$

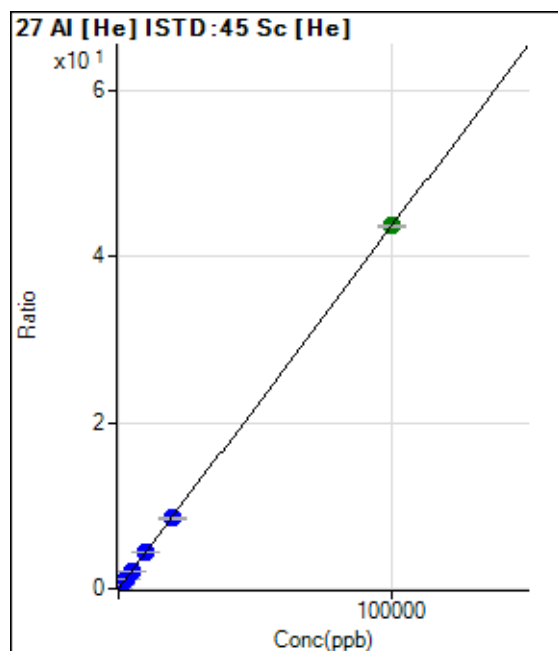
$$R = 0.9999$$

$$DL = 0.8392$$

$$BEC = 0.5173$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.89	0.0001	P	34.6
2	☐	2.000	2.097	177.79	0.0010	P	19.8
3	☐	20.000	18.653	1475.14	0.0082	P	10.8
4	☐	1000.000	984.193	77866.37	0.4299	P	0.7
5	☐	2500.000	2445.256	185646.10	1.0681	P	1.2
6	☐	5000.000	4937.627	362586.35	2.1566	P	0.9
7	☐	10000.000	9892.621	712313.69	4.3207	P	0.9
8	☐	20000.000	19398.969	1418518.04	8.4726	P	0.7
9	☐	100000.00	100135.59	7557436.45	43.7346	A	0.7

$$y = 4.3675\text{E-}004 * x + 7.7704\text{E-}005$$

$$R = 1.0000$$

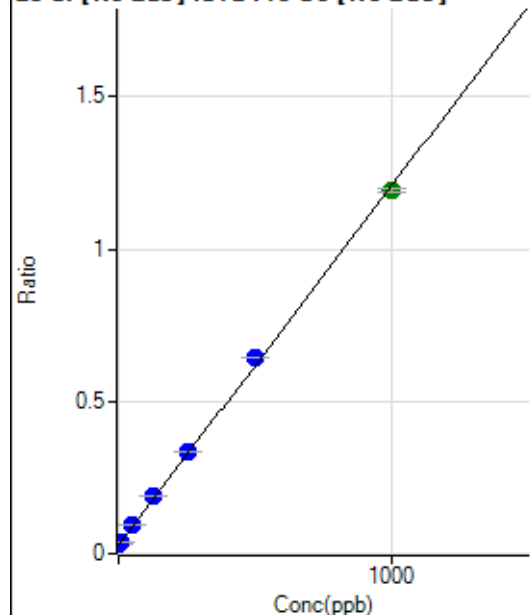
$$DL = 0.1847$$

$$BEC = 0.1779$$

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	124957.65	0.0286	P	0.8
2	☐	1.000	0.489	127346.79	0.0292	P	1.2
3	☐	10.000	8.105	167904.18	0.0381	P	1.3
4	☐	50.000	55.608	421683.12	0.0941	P	0.4
5	☐	125.000	135.318	822936.17	0.1881	P	0.9
6	☐	250.000	258.301	1401233.21	0.3330	P	0.3
7	☐	500.000	520.808	2641698.52	0.6424	P	0.3
8	☐	1000.000	985.970	4853603.45	1.1906	A	0.9
9	☐			576426.25	0.1410	P	0.8

$$y = 0.0012 * x + 0.0286$$

$$R = 0.9996$$

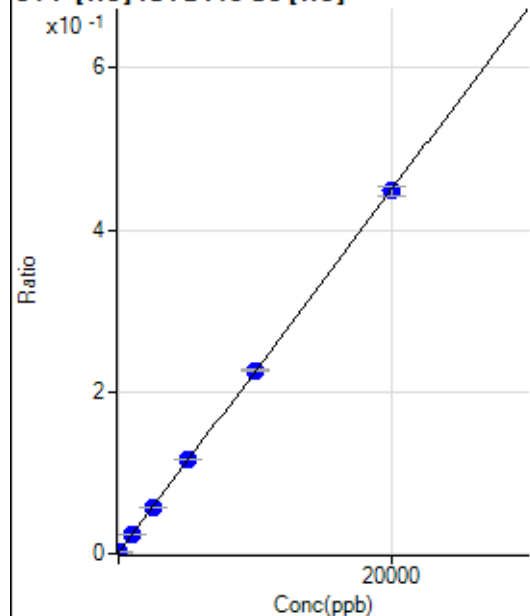
$$DL = 0.5979$$

$$BEC = 24.26$$

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	-10.070	155.56	0.0009	P	11.1
2	☐	0.000	-18.440	122.23	0.0007	P	14.2
3	☐	0.000	28.510	311.13	0.0017	P	1.8
4	☐	1000.000	1005.978	4284.12	0.0236	P	8.3
5	☐	2500.000	2526.075	10034.36	0.0577	P	1.3
6	☐	5000.000	5157.271	19624.64	0.1167	P	1.4
7	☐	10000.000	10040.267	37292.05	0.2262	P	0.6
8	☐	20000.000	19936.991	75017.02	0.4481	P	2.4
9	☐			166.67	0.0010	P	18.4

$$y = 2.2419E-005 * x + 0.0011$$

$$R = 1.0000$$

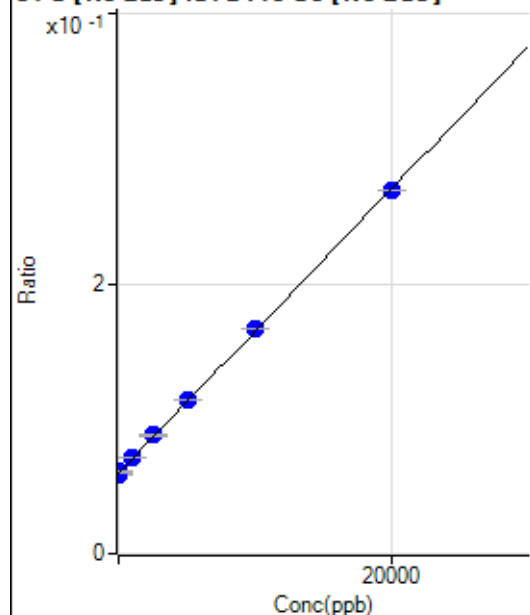
$$DL = 9.993$$

$$BEC = 48.89$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-84.078	256756.70	0.0588	P	1.2
2	☐	0.000	-22.161	259351.14	0.0594	P	1.2
3	☐	0.000	106.239	267438.53	0.0608	P	1.1
4	☐	1000.000	1097.388	318976.54	0.0712	P	0.2
5	☐	2500.000	2703.335	385606.52	0.0881	P	1.4
6	☐	5000.000	5154.681	479533.24	0.1140	P	0.5
7	☐	10000.000	10191.862	686953.34	0.1671	P	0.2
8	☐	20000.000	19835.113	1095294.34	0.2687	P	0.1
9	☐			266454.69	0.0652	P	0.2

$$y = 1.0539E-005 * x + 0.0596$$

R = 0.9998

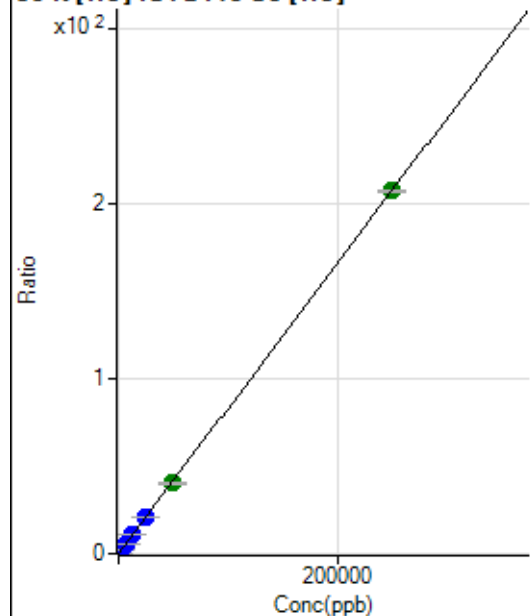
DL = 194.3

BEC = 5659

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10812.71	0.0605	P	2.8
2	☐	50.000	45.374	17547.17	0.0980	P	4.5
3	☐	500.000	451.886	77854.10	0.4342	P	0.3
4	☐	2500.000	2537.308	391005.97	2.1589	P	0.5
5	☐	6250.000	6267.705	911528.22	5.2441	P	0.8
6	☐	12500.000	12565.390	1757373.48	10.4524	P	0.2
7	☐	25000.000	25105.880	3433109.93	20.8238	P	0.5
8	☐	50000.000	48496.971	6725387.61	40.1688	A	0.6
9	☐	250000.00	250286.03	35779593.86	207.0539	A	0.5

$$y = 8.2703E-004 * x + 0.0605$$

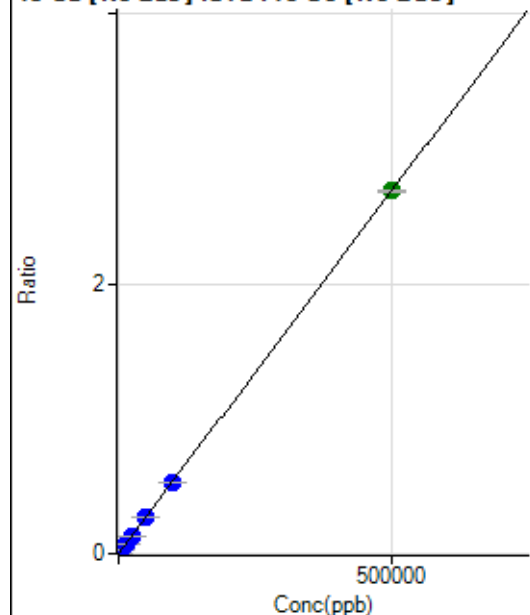
R = 1.0000

DL = 6.197

BEC = 73.16

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	97.23	0.0000	P	26.6
2	☐	50.000	48.227	1227.89	0.0003	P	11.6
3	☐	500.000	438.143	10454.09	0.0024	P	3.1
4	☐	5000.000	5011.640	120661.48	0.0269	P	0.6
5	☐	12500.000	12386.844	291180.97	0.0665	P	0.3
6	☐	25000.000	24920.527	563221.42	0.1339	P	1.1
7	☐	50000.000	49995.450	1104175.49	0.2685	P	0.4
8	☐	100000.00	99025.790	2167972.25	0.5318	P	0.5
9	☐	500000.00	500202.04	10978547.81	2.6863	A	0.3

$$y = 5.3703\text{E-}006 * x + 2.2263\text{E-}005$$

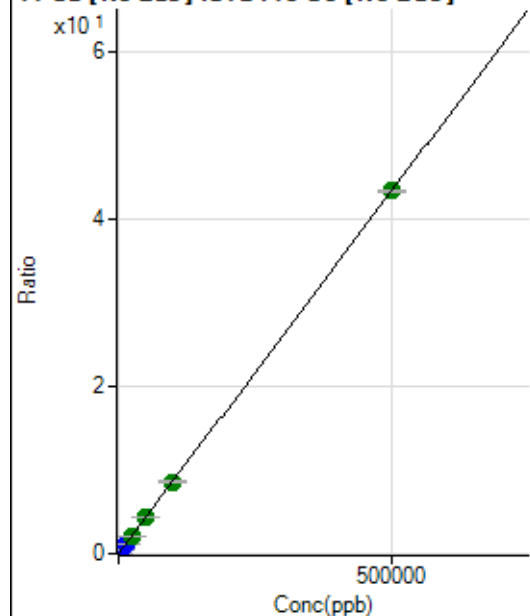
$$R = 1.0000$$

$$DL = 3.302$$

$$BEC = 4.145$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2919.89	0.0007	P	5.2
2	☐	50.000	46.725	20612.35	0.0047	P	2.9
3	☐	500.000	447.797	173933.59	0.0395	P	0.9
4	☐	5000.000	4958.650	1930033.66	0.4309	P	0.8
5	☐	12500.000	12397.419	4708969.72	1.0762	P	0.9
6	☐	25000.000	24857.485	9076683.36	2.1572	A	0.4
7	☐	50000.000	49879.160	17797157.34	4.3279	A	0.3
8	☐	100000.00	99342.979	35135957.04	8.6192	A	0.2
9	☐	500000.00	500153.64	177331602.5	43.3915	A	0.5

$$y = 8.6755\text{E-}005 * x + 6.6810\text{E-}004$$

$$R = 1.0000$$

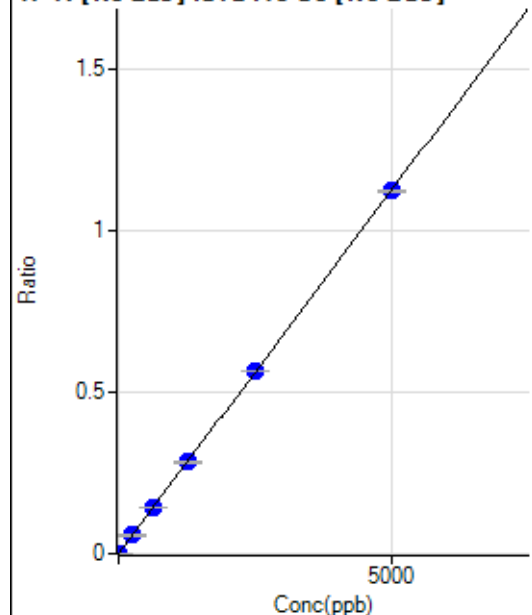
$$DL = 1.192$$

$$BEC = 7.701$$

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	27.78	0.0000	P	62.3
2	☐	0.500	0.520	538.93	0.0001	P	7.2
3	☐	5.000	4.751	4737.08	0.0011	P	4.9
4	☐	250.000	251.442	253702.91	0.0566	P	0.2
5	☐	625.000	624.109	615067.38	0.1406	P	0.7
6	☐	1250.000	1259.606	1193681.45	0.2837	P	0.5
7	☐	2500.000	2513.150	2327501.55	0.5660	P	0.8
8	☐	5000.000	4991.063	4582266.55	1.1241	P	0.2
9	☐			1980.77	0.0005	P	0.4

$$y = 2.2522\text{E-}004 * x + 6.3467\text{E-}006$$

$$R = 1.0000$$

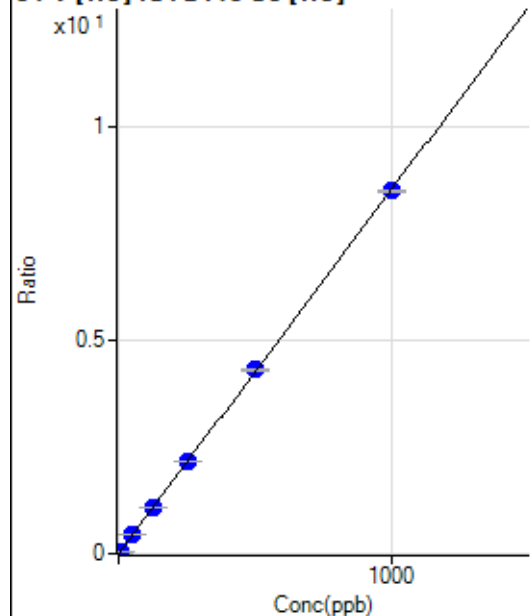
$$DL = 0.05263$$

$$BEC = 0.02818$$

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	4.44	0.0000	P	43.5
2	☐	0.500	0.490	752.26	0.0042	P	7.7
3	☐	5.000	4.697	7178.51	0.0400	P	2.6
4	☐	50.000	50.938	78593.44	0.4340	P	0.7
5	☐	125.000	126.795	187751.02	1.0802	P	1.0
6	☐	250.000	253.500	363082.34	2.1595	P	0.2
7	☐	500.000	505.311	709673.56	4.3046	P	0.8
8	☐	1000.000	996.200	1420825.31	8.4864	P	0.7
9	☐			241.12	0.0014	P	6.9

$$y = 0.0085 * x + 2.4872\text{E-}005$$

$$R = 1.0000$$

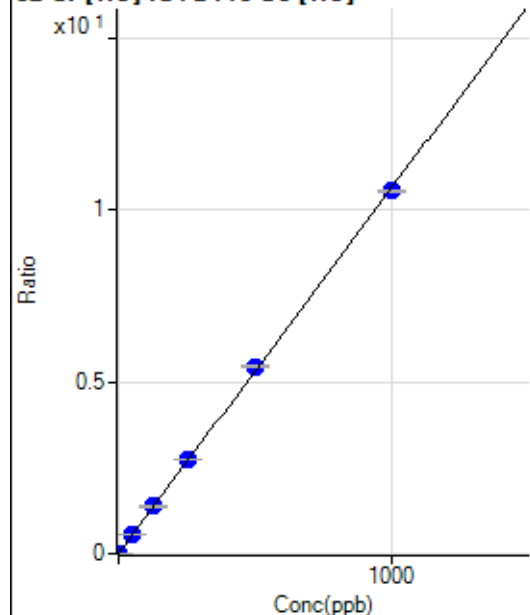
$$DL = 0.003813$$

$$BEC = 0.00292$$

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	453.35	0.0025	P	12.3
2	☐	0.200	0.189	813.37	0.0045	P	8.1
3	☐	2.000	1.848	3976.16	0.0222	P	5.1
4	☐	50.000	52.114	100728.58	0.5562	P	0.4
5	☐	125.000	128.784	238240.75	1.3706	P	1.2
6	☐	250.000	256.865	459207.70	2.7313	P	0.8
7	☐	500.000	510.638	894731.88	5.4272	P	0.9
8	☐	1000.000	992.386	1765479.00	10.5449	P	0.5
9	☐			27926.70	0.1616	P	1.3

$$y = 0.0106 * x + 0.0025$$

$$R = 0.9999$$

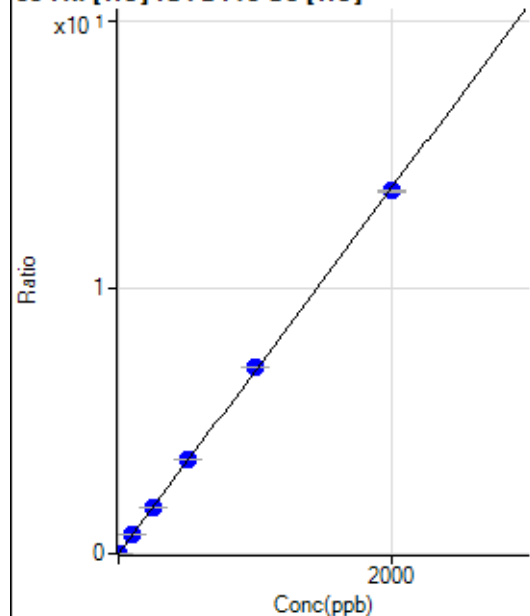
$$DL = 0.08852$$

$$BEC = 0.2389$$

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	70.00	0.0004	P	21.4
2	☐	0.100	0.119	216.67	0.0012	P	13.4
3	☐	1.000	0.926	1210.07	0.0067	P	4.0
4	☐	100.000	103.263	128427.54	0.7091	P	1.1
5	☐	250.000	256.880	306530.14	1.7635	P	0.5
6	☐	500.000	513.437	592539.44	3.5243	P	0.9
7	☐	1000.000	1021.197	1155581.53	7.0093	P	0.6
8	☐	2000.000	1985.019	2281081.16	13.6245	P	0.4
9	☐			13285.09	0.0769	P	1.4

$$y = 0.0069 * x + 3.9150E-004$$

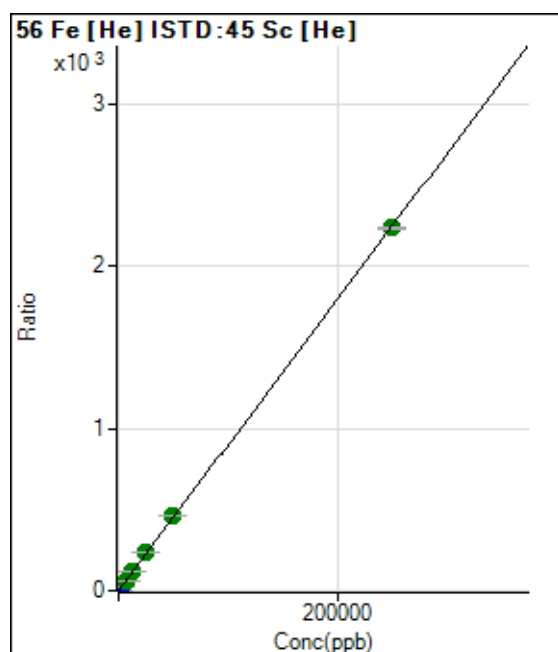
$$R = 0.9999$$

$$DL = 0.03663$$

$$BEC = 0.05704$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2641.05	0.0148	P	5.9
2	☐	5.000	5.377	11280.52	0.0630	P	3.3
3	☐	50.000	52.271	86723.27	0.4837	P	0.2
4	☐	2500.000	2743.614	4460349.61	24.6274	P	0.3
5	☐	6250.000	6698.754	10447870.25	60.1084	A	1.1
6	☐	12500.000	13381.866	20186023.37	120.0616	A	0.1
7	☐	25000.000	26609.192	39356042.55	238.7221	A	0.7
8	☐	50000.000	51738.749	77710654.51	464.1559	A	0.5
9	☐	250000.00	249433.58	386673934.5	2,237.648	A	0.7

$$y = 0.0090 * x + 0.0148$$

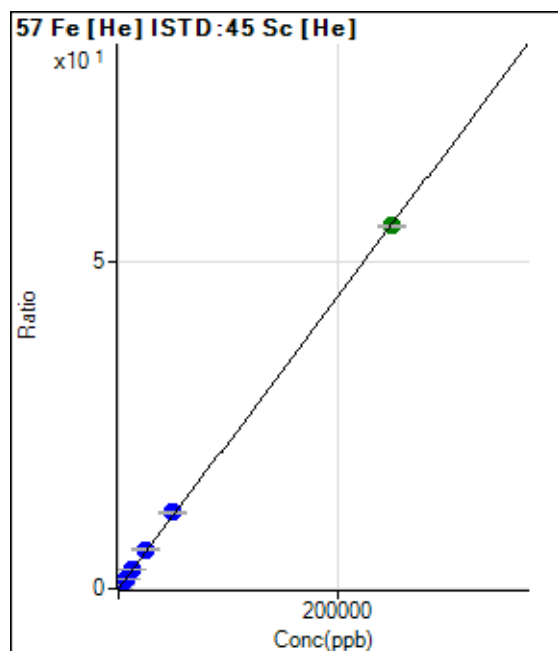
$$R = 1.0000$$

$$DL = 0.2919$$

$$BEC = 1.647$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	74.08	0.0004	P	16.4
2	☐	5.000	6.030	314.83	0.0018	P	22.4
3	☐	50.000	52.572	2176.15	0.0121	P	12.5
4	☐	2500.000	2788.972	112725.79	0.6224	P	0.6
5	☐	6250.000	6805.347	263861.99	1.5180	P	1.0
6	☐	12500.000	13605.330	510175.00	3.0345	P	0.7
7	☐	25000.000	27001.777	992773.73	6.0219	P	0.9
8	☐	50000.000	52266.046	1951512.14	11.6559	P	0.5
9	☐	250000.00	249274.57	9606074.41	55.5896	A	0.2

$$y = 2.2300E-004 * x + 4.1413E-004$$

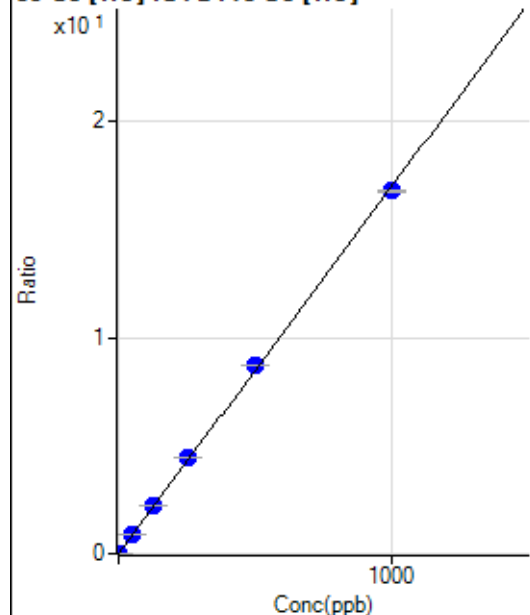
$$R = 0.9999$$

$$DL = 0.9161$$

$$BEC = 1.857$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61.11	0.0003	P	8.2
2	☐	0.100	0.092	341.12	0.0019	P	4.3
3	☐	1.000	0.994	3083.71	0.0172	P	4.4
4	☐	50.000	53.763	165289.54	0.9127	P	0.9
5	☐	125.000	131.789	388792.86	2.2367	P	0.4
6	☐	250.000	261.949	747408.76	4.4455	P	0.3
7	☐	500.000	514.460	1439321.02	8.7304	P	0.6
8	☐	1000.000	988.746	2809253.78	16.7788	P	0.4
9	☐			34615.39	0.2003	P	0.4

$$y = 0.0170 * x + 3.4194E-004$$

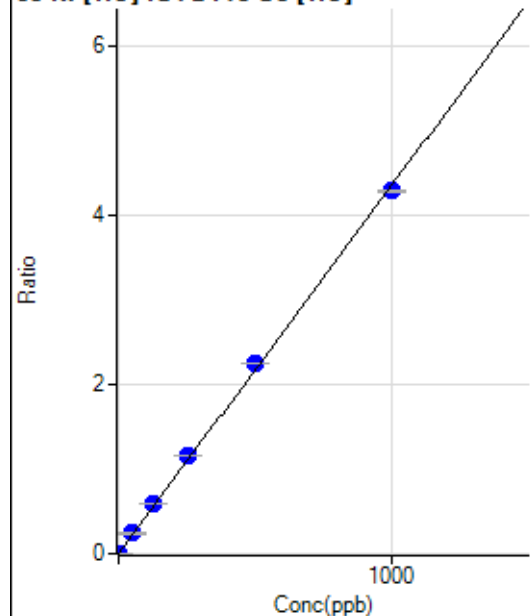
$$R = 0.9998$$

$$DL = 0.004976$$

$$BEC = 0.02015$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42.22	0.0002	P	26.9
2	☐	0.100	0.163	168.95	0.0009	P	53.9
3	☐	1.000	1.030	844.48	0.0047	P	12.0
4	☐	50.000	54.971	43307.25	0.2391	P	1.0
5	☐	125.000	135.117	102101.22	0.5874	P	1.2
6	☐	250.000	265.795	194235.53	1.1553	P	0.5
7	☐	500.000	517.203	370582.50	2.2478	P	0.6
8	☐	1000.000	985.937	717404.74	4.2848	P	0.3
9	☐			13579.79	0.0786	P	2.6

$$y = 0.0043 * x + 2.3588E-004$$

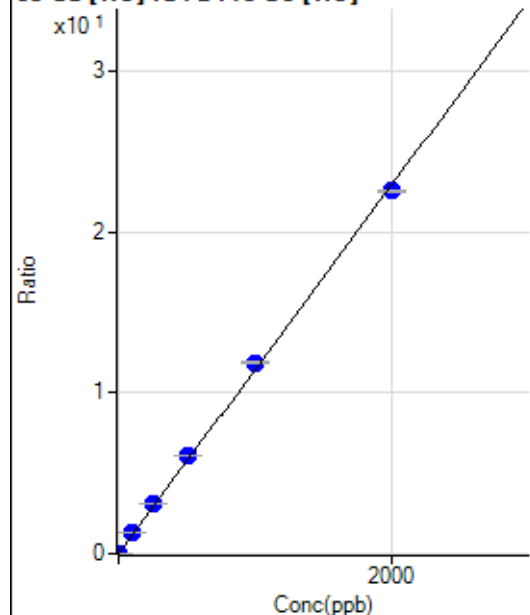
$$R = 0.9996$$

$$DL = 0.04383$$

$$BEC = 0.05428$$

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	387.79	0.0022	P	4.1
2	☐	0.200	0.213	824.48	0.0046	P	3.8
3	☐	2.000	2.059	4614.13	0.0257	P	3.5
4	☐	100.000	110.738	229891.04	1.2693	P	0.4
5	☐	250.000	270.231	537863.76	3.0943	P	0.6
6	☐	500.000	534.653	1028958.76	6.1200	P	0.5
7	☐	1000.000	1037.613	1957792.25	11.8753	P	0.7
8	☐	2000.000	1969.465	3773523.80	22.5382	P	0.5
9	☐			5127.66	0.0297	P	3.7

$$y = 0.0114 * x + 0.0022$$

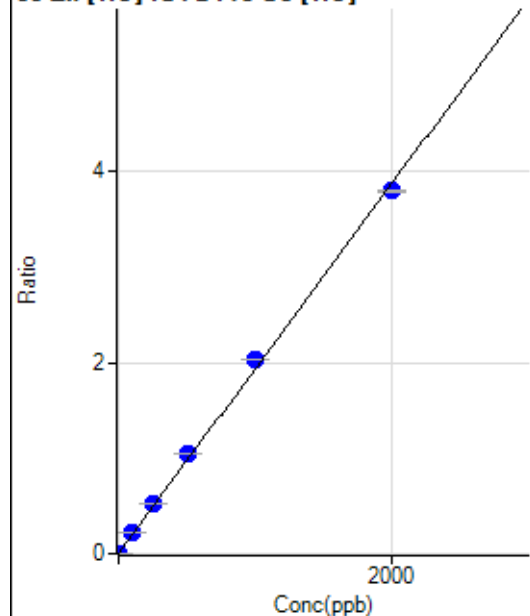
$$R = 0.9996$$

$$DL = 0.02351$$

$$BEC = 0.1897$$

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	355.56	0.0020	P	5.3
2	☐	0.200	0.307	462.24	0.0026	P	11.7
3	☐	2.000	1.934	1026.72	0.0057	P	2.3
4	☐	100.000	110.676	39077.88	0.2158	P	0.7
5	☐	250.000	271.492	91501.95	0.5264	P	0.6
6	☐	500.000	539.416	175511.55	1.0439	P	0.8
7	☐	1000.000	1047.859	334020.20	2.0260	P	0.4
8	☐	2000.000	1962.996	635167.53	3.7937	P	0.5
9	☐			5254.36	0.0304	P	4.1

$$y = 0.0019 * x + 0.0020$$

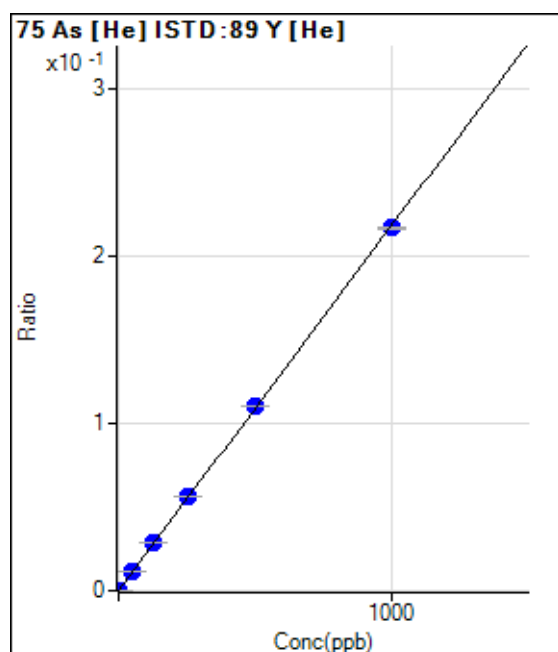
$$R = 0.9993$$

$$DL = 0.1636$$

$$BEC = 1.03$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	3.70	0.0000	P	99.6
2	☐	0.100	0.136	32.10	0.0000	P	29.8
3	☐	1.000	0.935	200.00	0.0002	P	6.1
4	☐	50.000	52.196	11017.21	0.0114	P	1.1
5	☐	125.000	130.221	26445.07	0.0284	P	1.2
6	☐	250.000	258.048	51024.21	0.0562	P	1.6
7	☐	500.000	506.468	98704.67	0.1103	P	0.7
8	☐	1000.000	993.991	193869.16	0.2166	P	0.4
9	☐			249.39	0.0003	P	5.3

$$y = 2.1787\text{E-}004 * x + 3.8369\text{E-}006$$

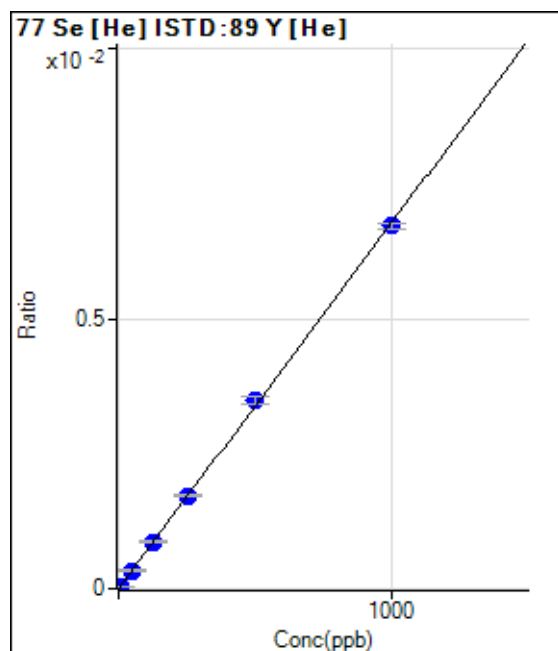
$$R = 0.9999$$

$$DL = 0.05262$$

$$BEC = 0.01761$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	0.000	0.00	0.0000	P	
3	☐	5.000	5.265	34.44	0.0000	P	27.1
4	☐	50.000	49.765	326.68	0.0003	P	10.4
5	☐	125.000	127.682	806.70	0.0009	P	4.5
6	☐	250.000	253.202	1557.88	0.0017	P	2.5
7	☐	500.000	513.805	3114.83	0.0035	P	3.7
8	☐	1000.000	991.973	6020.22	0.0067	P	1.4
9	☐			1.11	0.0000	P	173.2

$$y = 6.7791\text{E-}006 * x + 0.0000\text{E+}000$$

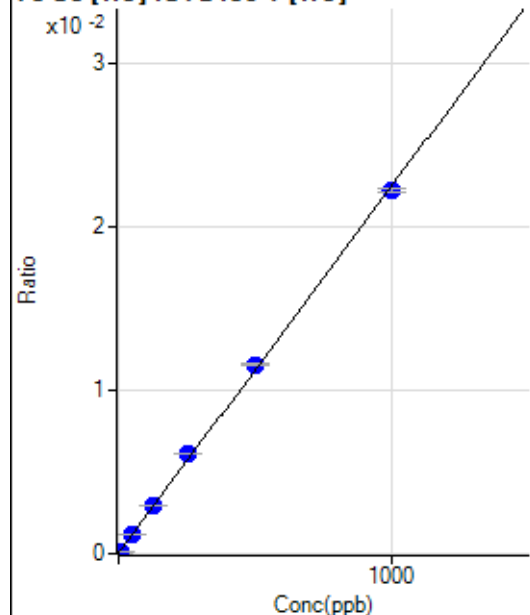
$$R = 0.9999$$

$$DL = 0$$

$$BEC = 0$$

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	33.34	0.0000	P	9.0
2	☐	0.500	0.356	40.74	0.0000	P	11.9
3	☐	5.000	4.601	132.72	0.0001	P	7.8
4	☐	50.000	52.660	1177.22	0.0012	P	2.8
5	☐	125.000	130.085	2751.52	0.0030	P	1.3
6	☐	250.000	269.587	5518.99	0.0061	P	0.5
7	☐	500.000	513.200	10327.20	0.0115	P	0.8
8	☐	1000.000	987.737	19863.66	0.0222	P	1.1
9	☐			33.95	0.0000	P	21.3

$$y = 2.2429\text{E-}005 * x + 3.4554\text{E-}005$$

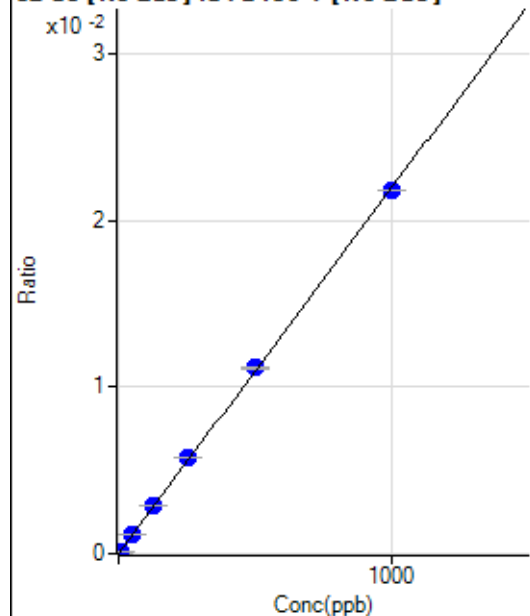
$$R = 0.9997$$

$$DL = 0.4139$$

$$BEC = 1.541$$

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	-6.17	0.0000	P	-526.
2	☐	0.500	0.683	95.39	0.0000	P	47.9
3	☐	5.000	5.301	786.58	0.0001	P	13.5
4	☐	50.000	52.872	8036.13	0.0012	P	0.7
5	☐	125.000	130.519	19394.26	0.0029	P	0.1
6	☐	250.000	261.720	37663.29	0.0057	P	0.5
7	☐	500.000	507.969	72416.29	0.0111	P	0.7
8	☐	1000.000	992.250	140589.36	0.0218	P	0.1
9	☐			81.56	0.0000	P	59.5

$$y = 2.1942\text{E-}005 * x - 8.9275\text{E-}007$$

$$R = 0.9999$$

$$DL = 0.6424$$

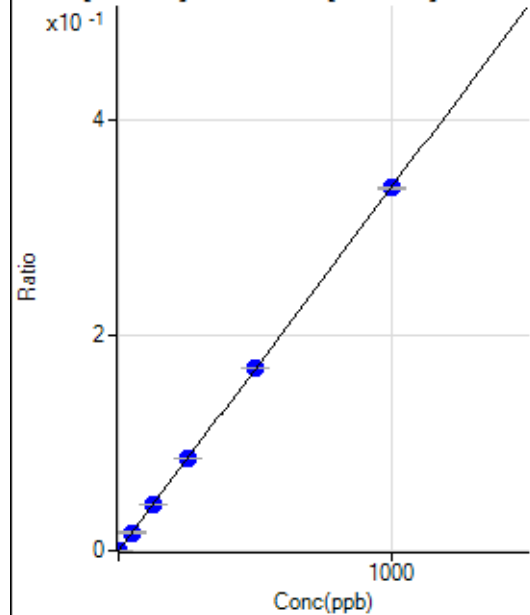
$$BEC = -0.04069$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			266.67		P	8.7
2	☐			251.12		P	17.3
3	☐			267.79		P	25.4
4	☐			233.34		P	2.9
5	☐			294.45		P	5.6
6	☐			240.01		P	6.4
7	☐			234.45		P	10.7
8	☐			250.01		P	8.0
9	☐			315.56		P	10.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	438.91	0.0001	P	9.1
2	☐	0.100	0.103	658.37	0.0001	P	9.3
3	☐	1.000	0.962	2630.90	0.0004	P	3.1
4	☐	50.000	50.061	117275.76	0.0169	P	0.7
5	☐	125.000	125.639	286989.99	0.0424	P	1.1
6	☐	250.000	253.738	560816.48	0.0855	P	0.5
7	☐	500.000	501.418	1097372.03	0.1689	P	0.4
8	☐	1000.000	998.274	2170877.52	0.3362	P	0.3
9	☐			9653.67	0.0015	P	3.8

$$y = 3.3669\text{E-}004 * x + 6.2437\text{E-}005$$

$$R = 1.0000$$

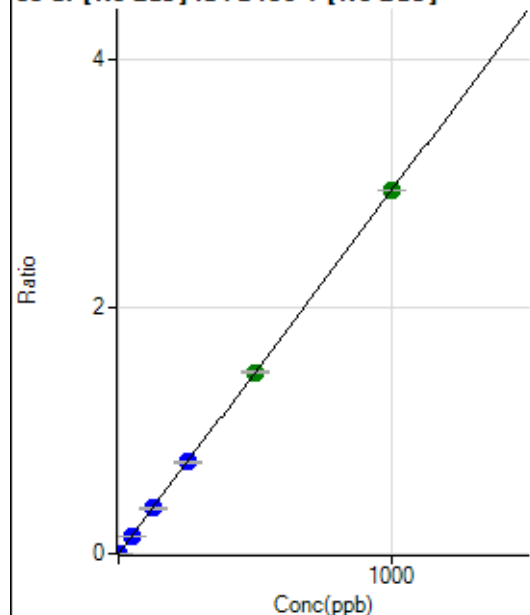
$$DL = 0.05059$$

$$BEC = 0.1854$$

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	127.78	0.0000	P	33.0
2	☐	0.100	0.087	1858.53	0.0003	P	4.2
3	☐	1.000	0.880	17745.01	0.0026	P	0.8
4	☐	50.000	50.162	1022857.02	0.1475	P	0.3
5	☐	125.000	124.763	2485860.99	0.3670	P	0.6
6	☐	250.000	251.980	4861431.49	0.7411	P	0.4
7	☐	500.000	500.295	9561041.88	1.4714	A	0.3
8	☐	1000.000	999.379	18980931.50	2.9393	A	0.2
9	☐			82601.61	0.0131	P	0.8

$$y = 0.0029 * x + 1.8164E-005$$

$$R = 1.0000$$

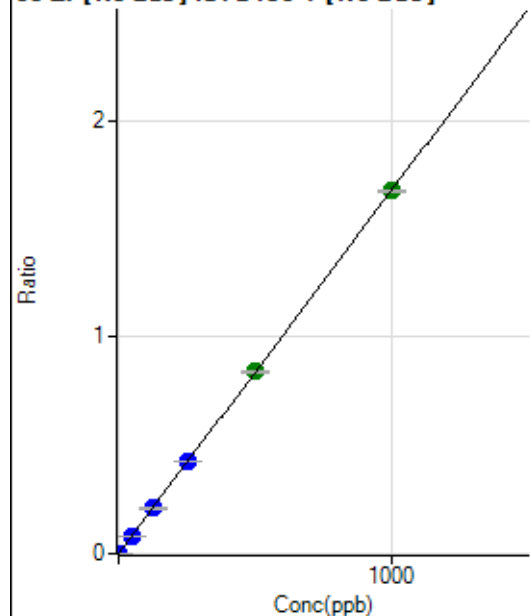
$$DL = 0.006105$$

$$BEC = 0.006176$$

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	358.36	0.0001	P	10.6
2	☐	0.100	0.092	1394.57	0.0002	P	11.8
3	☐	1.000	0.902	10659.93	0.0016	P	2.8
4	☐	50.000	49.866	580596.44	0.0838	P	0.2
5	☐	125.000	124.510	1416143.71	0.2090	P	0.4
6	☐	250.000	252.029	2775312.71	0.4231	P	0.4
7	☐	500.000	501.415	5469233.89	0.8417	A	0.5
8	☐	1000.000	998.854	10827394.43	1.6767	A	0.2
9	☐			4520.35	0.0007	P	5.2

$$y = 0.0017 * x + 5.1010E-005$$

$$R = 1.0000$$

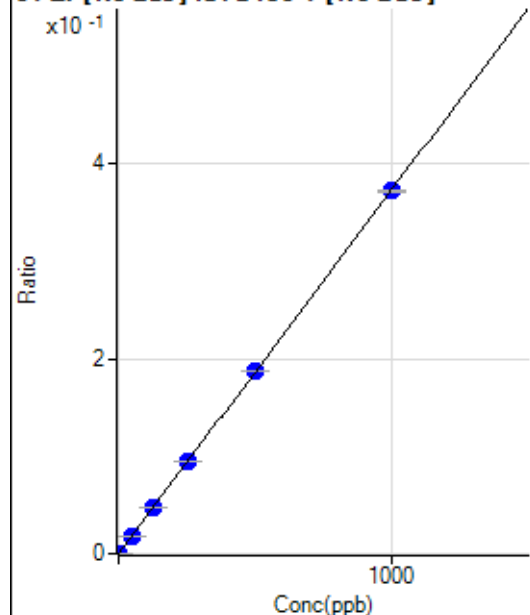
$$DL = 0.009666$$

$$BEC = 0.03039$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	91.67	0.0000	P	17.7
2	☐	0.100	0.081	291.68	0.0000	P	21.6
3	☐	1.000	0.859	2269.73	0.0003	P	2.9
4	☐	50.000	49.522	128068.81	0.0185	P	0.5
5	☐	125.000	125.677	317466.45	0.0469	P	0.6
6	☐	250.000	253.452	619867.31	0.0945	P	0.4
7	☐	500.000	502.247	1216648.13	0.1872	P	0.6
8	☐	1000.000	997.953	2402461.40	0.3720	P	0.3
9	☐			1052.86	0.0002	P	7.9

$$y = 3.7278\text{E-}004 * x + 1.3038\text{E-}005$$

$$R = 1.0000$$

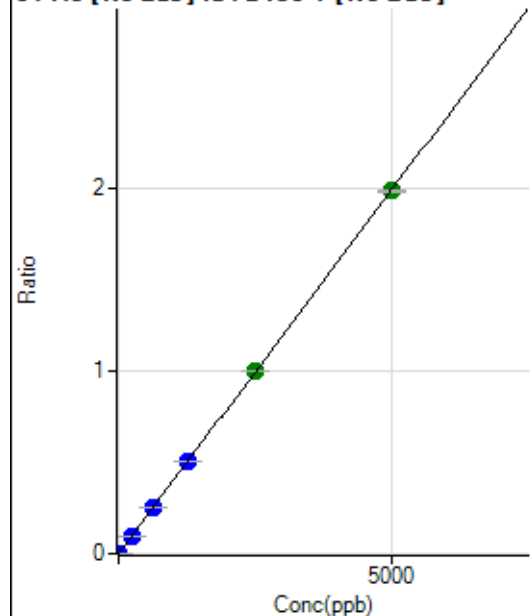
$$DL = 0.01862$$

$$BEC = 0.03497$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	161.12	0.0000	P	3.3
2	☐	0.500	0.479	1447.36	0.0002	P	14.8
3	☐	5.000	4.721	12956.44	0.0019	P	2.9
4	☐	250.000	249.986	689974.11	0.0995	P	0.7
5	☐	625.000	628.346	1694523.72	0.2501	P	0.5
6	☐	1250.000	1268.244	3311688.92	0.5049	P	0.1
7	☐	2500.000	2511.108	6495057.96	0.9996	A	0.3
8	☐	5000.000	4989.468	12825608.62	1.9861	A	0.4
9	☐			9434.05	0.0015	P	3.0

$$y = 3.9805\text{E-}004 * x + 2.2927\text{E-}005$$

$$R = 1.0000$$

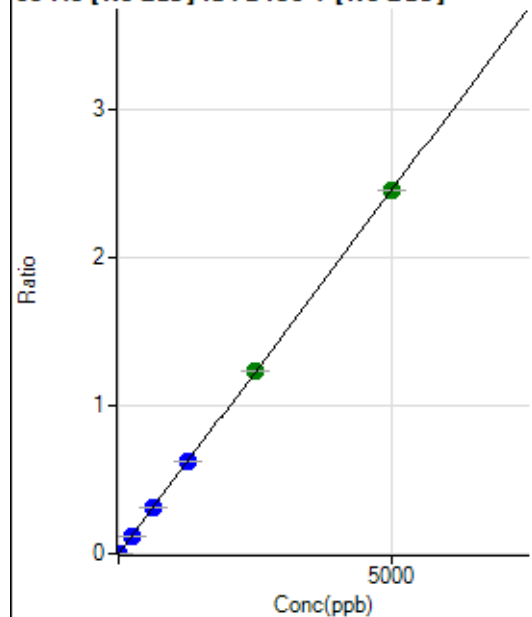
$$DL = 0.00567$$

$$BEC = 0.0576$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.89	0.0000	P	173.2
2	☐	0.500	0.504	1691.84	0.0002	P	4.5
3	☐	5.000	4.794	16065.23	0.0024	P	3.4
4	☐	250.000	248.830	847974.45	0.1223	P	0.7
5	☐	625.000	625.357	2082529.91	0.3074	P	0.3
6	☐	1250.000	1261.657	4068508.47	0.6202	P	0.5
7	☐	2500.000	2508.790	8013655.56	1.2333	A	0.1
8	☐	5000.000	4992.705	15849377.61	2.4543	A	0.1
9	☐			13943.38	0.0022	P	2.5

$$y = 4.9158\text{E-}004 * x + 1.9825\text{E-}006$$

$$R = 1.0000$$

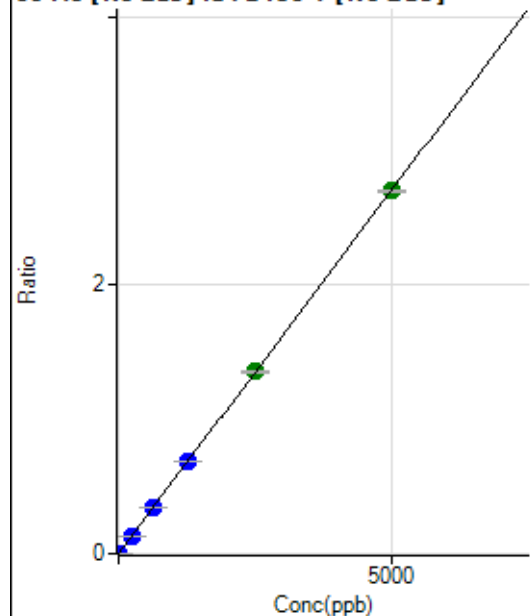
$$DL = 0.02096$$

$$BEC = 0.004033$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	37.0
2	☐	0.500	0.487	1850.20	0.0003	P	6.1
3	☐	5.000	4.737	17544.75	0.0026	P	1.3
4	☐	250.000	250.513	940855.06	0.1357	P	0.4
5	☐	625.000	628.844	2307803.61	0.3407	P	0.6
6	☐	1250.000	1270.643	4515481.00	0.6884	P	0.3
7	☐	2500.000	2502.633	8809544.38	1.3558	A	0.2
8	☐	5000.000	4993.017	17467349.35	2.7049	A	0.5
9	☐			20190.10	0.0032	P	1.4

$$y = 5.4173\text{E-}004 * x + 9.4764\text{E-}006$$

$$R = 1.0000$$

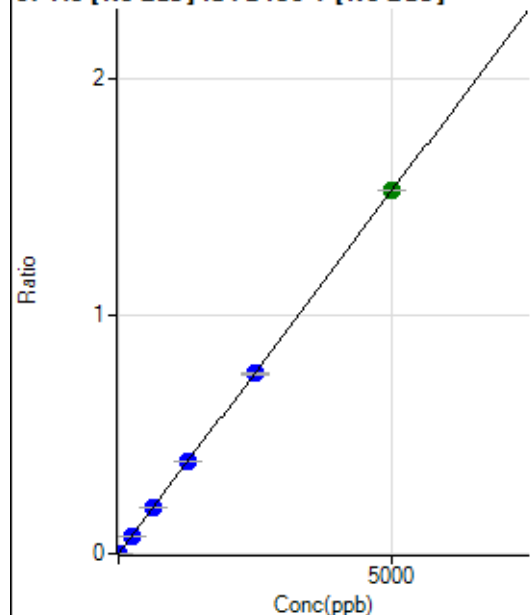
$$DL = 0.01944$$

$$BEC = 0.01749$$

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	13.89	0.0000	P	91.9
2	☐	0.500	0.421	883.40	0.0001	P	8.4
3	☐	5.000	4.707	9792.67	0.0014	P	6.9
4	☐	250.000	249.246	527077.20	0.0760	P	0.4
5	☐	625.000	624.626	1290764.21	0.1905	P	0.2
6	☐	1250.000	1265.563	2532342.87	0.3861	P	0.4
7	☐	2500.000	2483.531	4922592.04	0.7576	P	0.6
8	☐	5000.000	5004.429	9858081.56	1.5266	A	0.2
9	☐			7977.53	0.0013	P	3.0

$$y = 3.0504E-004 * x + 1.9756E-006$$

$$R = 1.0000$$

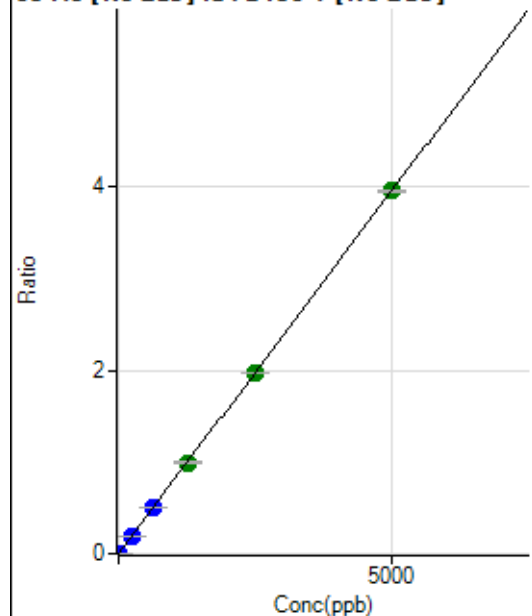
$$DL = 0.01785$$

$$BEC = 0.006476$$

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	33.33	0.0000	P	24.5
2	☐	0.500	0.480	2600.34	0.0004	P	2.8
3	☐	5.000	4.717	25420.84	0.0037	P	2.4
4	☐	250.000	248.577	1361429.47	0.1964	P	0.7
5	☐	625.000	623.288	3335853.68	0.4924	P	0.1
6	☐	1250.000	1255.579	6506810.35	0.9920	A	0.7
7	☐	2500.000	2492.515	12795425.81	1.9692	A	0.4
8	☐	5000.000	5002.633	25522726.61	3.9523	A	0.2
9	☐			19792.32	0.0031	P	1.4

$$y = 7.9004E-004 * x + 4.7397E-006$$

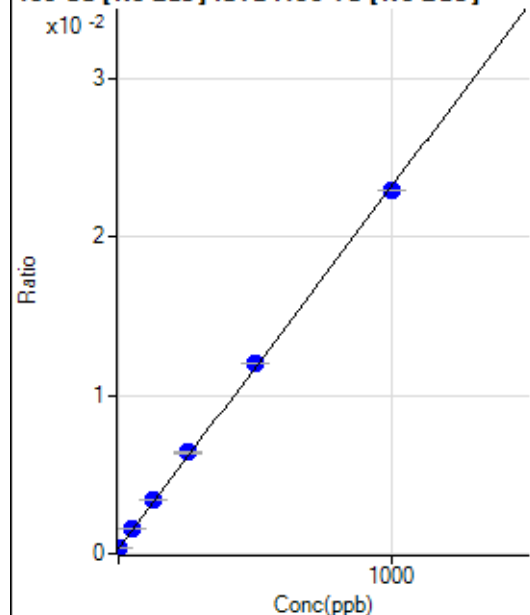
$$R = 1.0000$$

$$DL = 0.004418$$

$$BEC = 0.005999$$

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	3028.24	0.0003	P	4.9
2	☐	0.100	1.681	3214.41	0.0004	P	8.3
3	☐	1.000	3.561	3645.11	0.0004	P	4.2
4	☐	50.000	55.233	14813.89	0.0016	P	2.2
5	☐	125.000	136.643	32017.55	0.0034	P	1.2
6	☐	250.000	267.047	59079.48	0.0064	P	2.1
7	☐	500.000	512.268	111575.63	0.0120	P	0.2
8	☐	1000.000	987.884	213576.59	0.0229	P	0.2
9	☐			3178.27	0.0004	P	5.6

$$y = 2.2874\text{E-}005 * x + 3.1497\text{E-}004$$

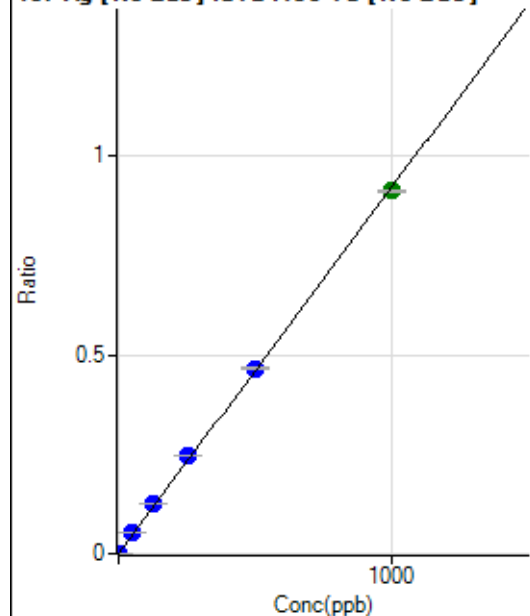
$$R = 0.9997$$

$$DL = 2.016$$

$$BEC = 13.77$$

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	72.23	0.0000	P	13.2
2	☐	0.100	0.114	1025.08	0.0001	P	8.2
3	☐	1.000	1.037	8850.32	0.0010	P	4.6
4	☐	50.000	56.196	485552.60	0.0517	P	1.1
5	☐	125.000	137.140	1174738.15	0.1262	P	1.7
6	☐	250.000	266.994	2260413.89	0.2458	P	0.3
7	☐	500.000	505.965	4318675.36	0.4657	P	0.4
8	☐	1000.000	990.941	8502800.02	0.9122	A	0.5
9	☐			600.04	0.0001	P	4.5

$$y = 9.2050\text{E-}004 * x + 7.5117\text{E-}006$$

$$R = 0.9998$$

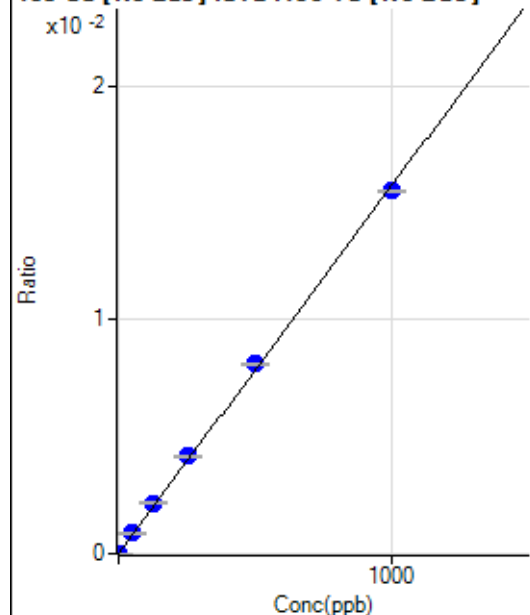
$$DL = 0.003233$$

$$BEC = 0.00816$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9.72	0.0000	P	89.1
2	☐	0.100	0.130	27.78	0.0000	P	17.4
3	☐	1.000	1.088	166.67	0.0000	P	21.3
4	☐	50.000	55.188	8158.05	0.0009	P	1.8
5	☐	125.000	138.098	20227.17	0.0022	P	0.9
6	☐	250.000	264.325	38254.53	0.0042	P	0.9
7	☐	500.000	515.609	75223.40	0.0081	P	0.6
8	☐	1000.000	986.718	144706.96	0.0155	P	0.5
9	☐			38.89	0.0000	P	27.9

$$y = 1.5732\text{E-}005 * x + 1.0122\text{E-}006$$

$$R = 0.9997$$

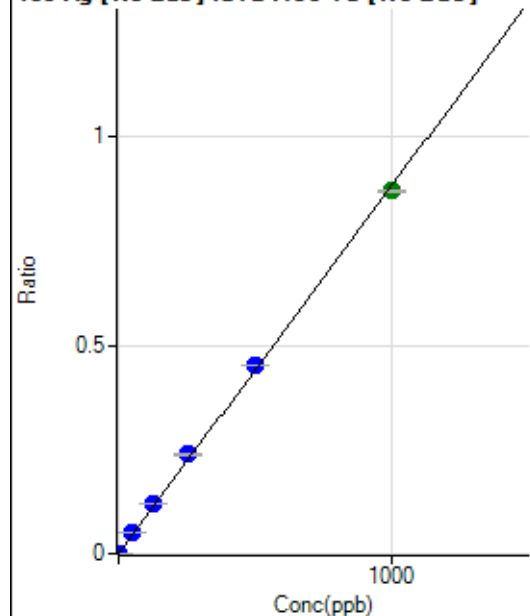
$$DL = 0.172$$

$$BEC = 0.06434$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.56	0.0000	P	31.9
2	☐	0.100	0.106	880.62	0.0001	P	15.7
3	☐	1.000	1.084	8830.93	0.0010	P	1.6
4	☐	50.000	56.523	468355.16	0.0499	P	0.5
5	☐	125.000	138.100	1134643.55	0.1219	P	0.6
6	☐	250.000	269.830	2190911.96	0.2382	P	0.5
7	☐	500.000	512.570	4195935.73	0.4525	P	0.7
8	☐	1000.000	986.794	8120587.42	0.8712	A	0.7
9	☐			516.70	0.0001	P	3.4

$$y = 8.8283\text{E-}004 * x + 3.1804\text{E-}006$$

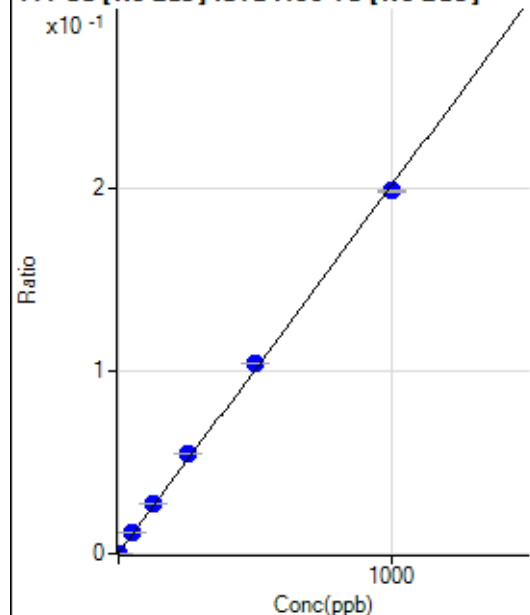
$$R = 0.9996$$

$$DL = 0.003442$$

$$BEC = 0.003603$$

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	2115.74	0.0002	P	4.5
2	☐	0.100	0.227	2416.76	0.0003	P	8.1
3	☐	1.000	1.219	4278.12	0.0005	P	2.5
4	☐	50.000	55.628	107076.43	0.0114	P	0.7
5	☐	125.000	136.211	257003.93	0.0276	P	0.7
6	☐	250.000	268.828	499318.50	0.0543	P	0.0
7	☐	500.000	516.289	964946.96	0.1041	P	0.3
8	☐	1000.000	985.465	1849698.73	0.1984	P	0.2
9	☐			2350.34	0.0003	P	5.5

$$y = 2.0114\text{E-}004 * x + 2.2006\text{E-}004$$

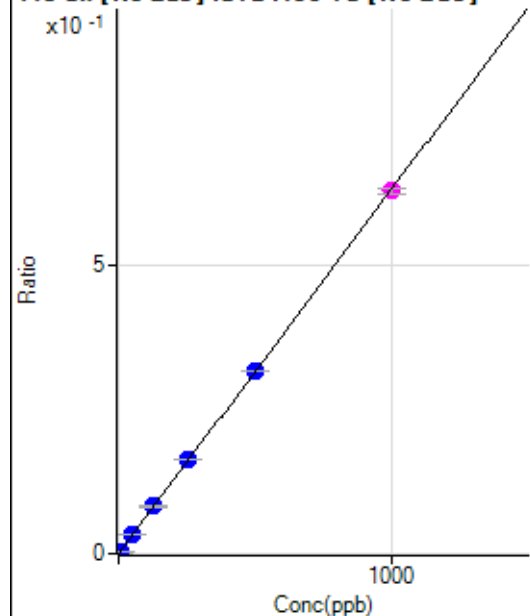
$$R = 0.9996$$

$$DL = 0.1493$$

$$BEC = 1.094$$

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	361.13	0.0000	P	19.4
2	☐	0.500	0.514	3298.23	0.0004	P	11.0
3	☐	5.000	4.882	28755.35	0.0031	P	3.0
4	☐	50.000	52.974	315070.54	0.0336	P	0.4
5	☐	125.000	130.064	766488.25	0.0824	P	1.3
6	☐	250.000	258.679	1506345.95	0.1638	P	0.4
7	☐	500.000	502.482	2949742.43	0.3181	P	0.3
8	☐	1000.000	995.808	5876187.03	0.6304	M	1.4
9	☐			5067.81	0.0006	P	5.0

$$y = 6.3301\text{E-}004 * x + 3.7550\text{E-}005$$

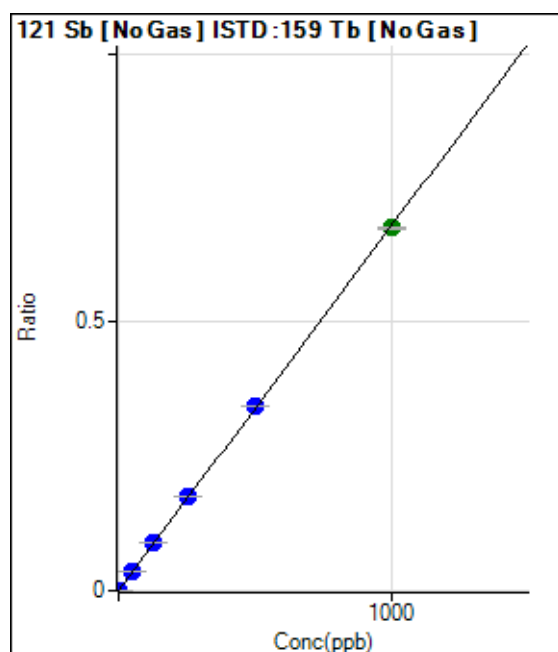
$$R = 0.9999$$

$$DL = 0.03449$$

$$BEC = 0.05932$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0000	P	88.1
2	☐	0.200	0.183	1152.89	0.0001	P	6.2
3	☐	2.000	1.917	12002.86	0.0013	P	1.8
4	☐	50.000	52.678	336003.27	0.0358	P	0.2
5	☐	125.000	130.362	824408.02	0.0886	P	1.2
6	☐	250.000	259.435	1621501.27	0.1763	P	0.2
7	☐	500.000	505.305	3184120.36	0.3434	P	0.5
8	☐	1000.000	994.185	6297784.04	0.6756	A	0.5
9	☐			7179.97	0.0008	P	4.6

$$y = 6.7957\text{E-}004 * x + 2.6012\text{E-}006$$

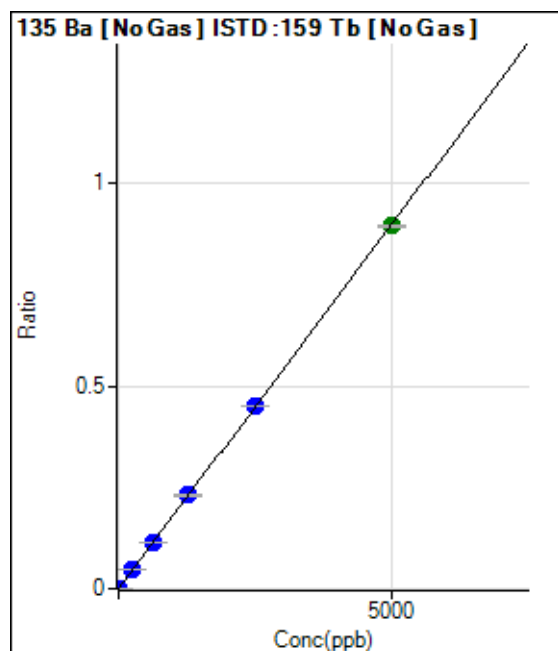
$$R = 0.9999$$

$$DL = 0.01012$$

$$BEC = 0.003828$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.89	0.0000	P	81.4
2	☐	1.000	0.929	1552.93	0.0002	P	10.2
3	☐	10.000	9.636	15940.29	0.0017	P	1.4
4	☐	250.000	259.935	437974.83	0.0467	P	0.8
5	☐	625.000	642.491	1073331.12	0.1153	P	1.0
6	☐	1250.000	1282.729	2117808.29	0.2303	P	0.5
7	☐	2500.000	2510.578	4179092.58	0.4507	P	0.1
8	☐	5000.000	4983.846	8339760.78	0.8947	A	0.7
9	☐			1266.78	0.0001	P	3.8

$$y = 1.7952\text{E-}004 * x + 4.0518\text{E-}006$$

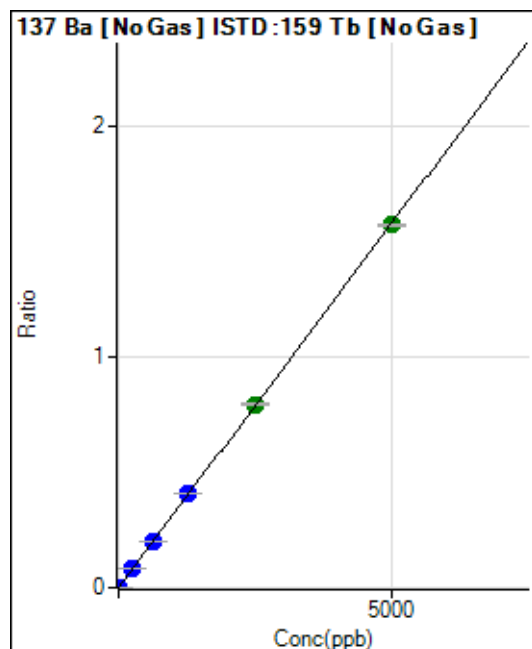
$$R = 1.0000$$

$$DL = 0.05515$$

$$BEC = 0.02257$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	50.00	0.0000	P	43.9
2	☐	1.000	1.004	2930.99	0.0003	P	8.7
3	☐	10.000	9.619	27970.65	0.0030	P	1.1
4	☐	250.000	260.158	771000.78	0.0821	P	0.6
5	☐	625.000	642.445	1887802.08	0.2029	P	0.5
6	☐	1250.000	1288.521	3741827.47	0.4069	P	0.3
7	☐	2500.000	2514.385	7361632.46	0.7939	A	0.6
8	☐	5000.000	4980.489	14658861.26	1.5726	A	0.5
9	☐			2208.60	0.0002	P	0.6

$$y = 3.1575E-004 * x + 5.1969E-006$$

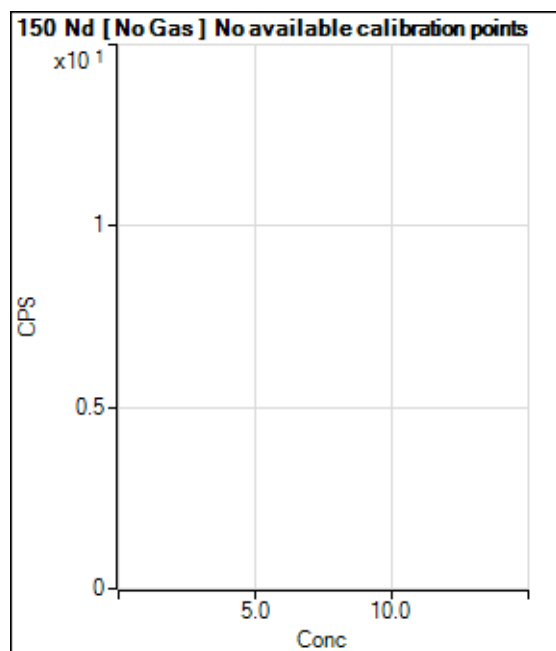
$$R = 1.0000$$

$$DL = 0.02166$$

$$BEC = 0.01646$$

Weight: <None>

Min Conc: 0



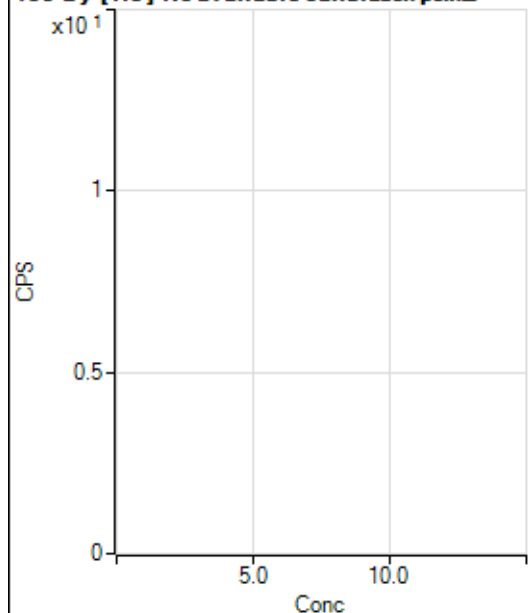
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.2
2	☐			2.22		P	173.2
3	☐			2.22		P	173.2
4	☐			46.67		P	14.3
5	☐			155.56		P	26.2
6	☐			262.24		P	10.6
7	☐			557.81		P	4.5
8	☐			922.29		P	8.9
9	☐			171.12		P	22.2

150 Nd [He] No available calibration points

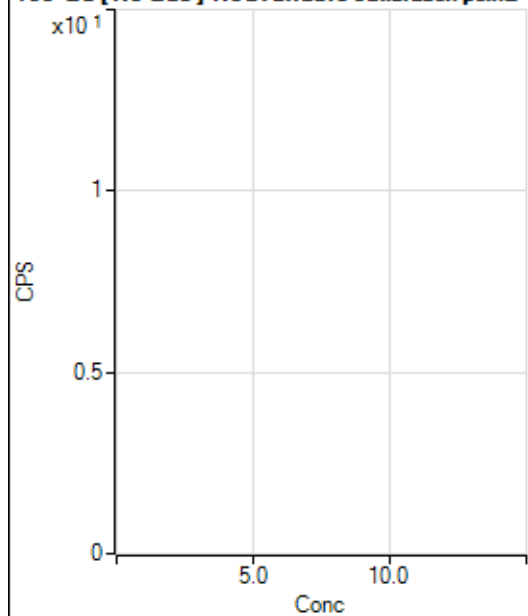
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐			1.11		P	173.2
3	☐			1.11		P	173.2
4	☐			6.67		P	50.0
5	☐			8.89		P	57.3
6	☐			20.00		P	44.1
7	☐			48.89		P	25.8
8	☐			88.89		P	14.2
9	☐			56.66		P	27.0

156 Dy [No Gas] No available calibration points

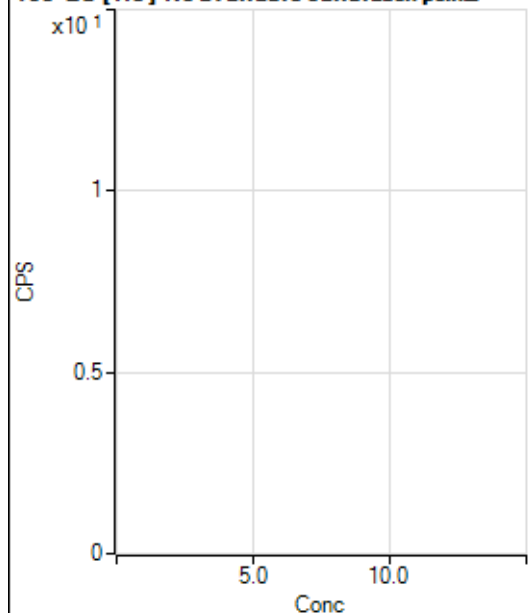
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	173.2
2	☐			47.22		P	36.7
3	☐			25.00		P	66.7
4	☐			22.22		P	21.6
5	☐			36.11		P	35.3
6	☐			80.56		P	21.5
7	☐			116.67		P	18.9
8	☐			169.45		P	22.2
9	☐			75.01		P	19.2

156 Dy [He] No available calibration points

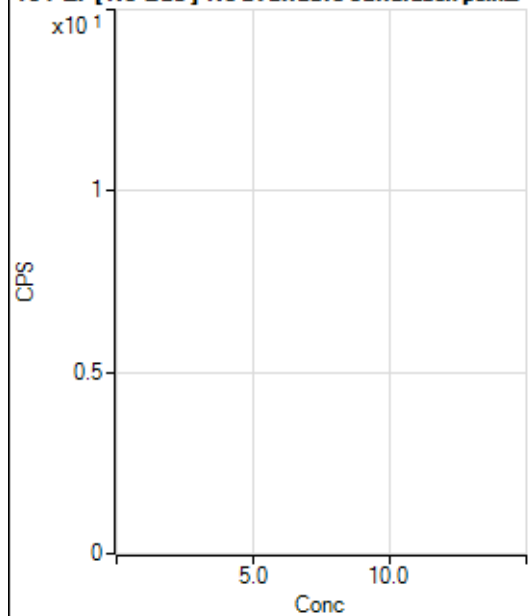
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.55		P	69.3
2	☐			4.45		P	86.6
3	☐			5.55		P	124.9
4	☐			21.11		P	18.2
5	☐			26.67		P	21.7
6	☐			50.00		P	40.5
7	☐			86.67		P	3.8
8	☐			182.23		P	13.9
9	☐			33.33		P	17.3

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			33.33		P	25.0
2	☐			50.00		P	16.7
3	☐			47.23		P	56.7
4	☐			47.22		P	10.2
5	☐			38.89		P	53.9
6	☐			38.89		P	32.7
7	☐			36.11		P	53.3
8	☐			75.00		P	19.2
9	☐			108.34		P	27.7

160 Gd [He] No available calibration points

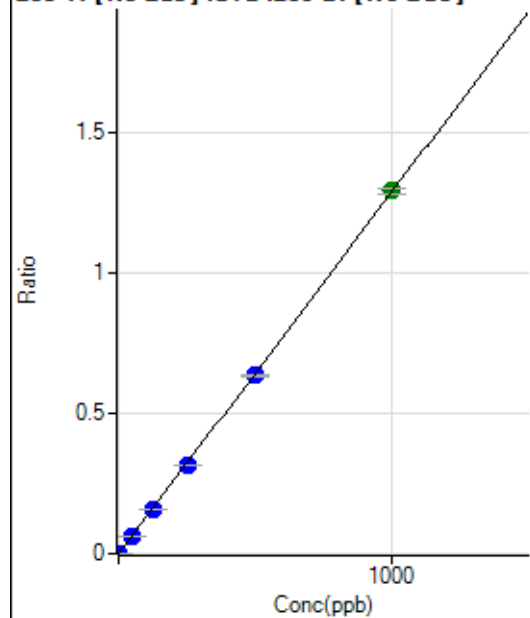
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			161.11		P	10.6
2	☐			143.34		P	12.1
3	☐			137.78		P	9.8
4	☐			127.78		P	15.9
5	☐			146.67		P	3.9
6	☐			152.22		P	14.9
7	☐			135.56		P	17.4
8	☐			154.45		P	18.0
9	☐			122.23		P	17.7

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			27.78		P	45.8
2	☐			30.56		P	56.8
3	☐			50.00		P	28.9
4	☐			22.22		P	78.1
5	☐			22.22		P	43.3
6	☐			27.78		P	62.5
7	☐			36.11		P	13.3
8	☐			36.11		P	74.2
9	☐			55.56		P	74.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			15.56		P	32.7
2	☐			4.45		P	86.6
3	☐			21.11		P	48.2
4	☐			21.11		P	9.1
5	☐			10.00		P	0.0
6	☐			8.89		P	21.6
7	☐			15.55		P	44.6
8	☐			24.44		P	34.3
9	☐			22.22		P	31.2

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	50.00	0.0000	P	44.2
2	☐	0.100	0.079	719.50	0.0001	P	11.6
3	☐	1.000	0.850	7338.45	0.0011	P	5.8
4	☐	50.000	48.188	419484.89	0.0619	P	0.3
5	☐	125.000	121.763	1036099.94	0.1565	P	0.3
6	☐	250.000	246.836	2072809.72	0.3173	P	0.6
7	☐	500.000	492.834	4105298.53	0.6335	P	0.6
8	☐	1000.000	1004.869	8215854.96	1.2916	A	1.3
9	☐			1519.61	0.0003	P	13.1

$$y = 0.0013 * x + 7.1098E-006$$

$$R = 1.0000$$

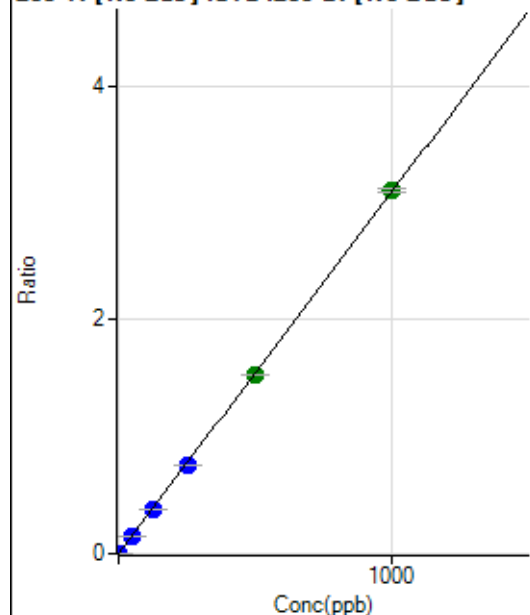
$$DL = 0.007341$$

$$BEC = 0.005532$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	211.13	0.0000	P	10.1
2	☐	0.100	0.088	2003.02	0.0003	P	5.0
3	☐	1.000	0.875	18240.93	0.0027	P	1.9
4	☐	50.000	48.351	1011343.79	0.1493	P	0.5
5	☐	125.000	121.805	2490273.58	0.3762	P	0.2
6	☐	250.000	245.909	4961515.13	0.7594	P	0.3
7	☐	500.000	495.535	9917547.62	1.5303	A	0.2
8	☐	1000.000	1003.737	19717759.12	3.0997	A	0.9
9	☐			3517.29	0.0006	P	9.6

$$y = 0.0031 * x + 3.0013E-005$$

$$R = 1.0000$$

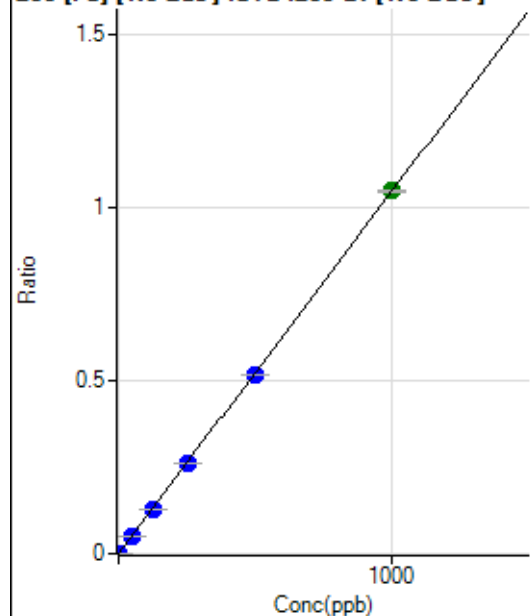
$$DL = 0.00294$$

$$BEC = 0.009719$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	524.10	0.0001	P	8.2
2	☐	0.100	0.083	1064.89	0.0002	P	3.6
3	☐	1.000	0.846	6394.31	0.0010	P	3.2
4	☐	50.000	48.866	346042.92	0.0511	P	1.5
5	☐	125.000	122.861	849747.93	0.1284	P	0.5
6	☐	250.000	248.752	1697442.63	0.2598	P	0.2
7	☐	500.000	495.390	3352839.49	0.5173	P	0.4
8	☐	1000.000	1002.941	6662384.53	1.0473	A	0.7
9	☐			7763.57	0.0014	P	2.4

$$y = 0.0010 * x + 7.4478E-005$$

$$R = 1.0000$$

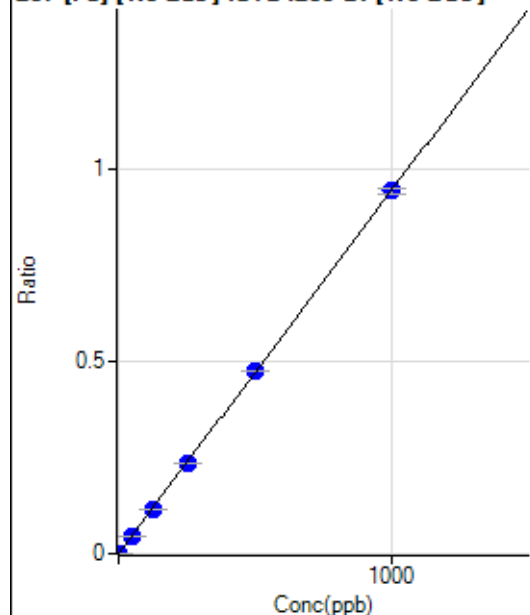
$$DL = 0.01758$$

$$BEC = 0.07133$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	392.61	0.0001	P	12.2
2	☐	0.100	0.109	1046.37	0.0002	P	5.0
3	☐	1.000	0.864	5816.26	0.0009	P	2.4
4	☐	50.000	49.181	314630.05	0.0465	P	0.2
5	☐	125.000	124.089	775459.22	0.1171	P	0.3
6	☐	250.000	250.315	1543407.20	0.2362	P	0.4
7	☐	500.000	501.403	3066406.35	0.4732	P	0.3
8	☐	1000.000	999.375	5998509.74	0.9430	P	1.4
9	☐			6714.84	0.0012	P	4.9

$$y = 9.4354\text{E-}004 * x + 5.5800\text{E-}005$$

$$R = 1.0000$$

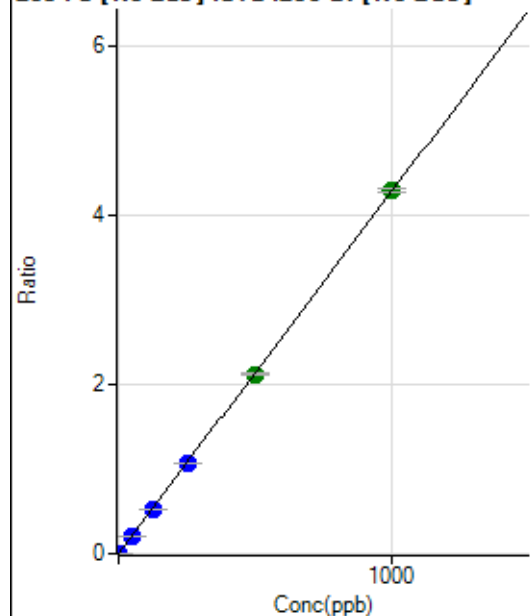
$$DL = 0.02172$$

$$BEC = 0.05914$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1942.71	0.0003	P	3.1
2	☐	0.100	0.096	4533.77	0.0007	P	2.7
3	☐	1.000	0.855	26251.63	0.0039	P	0.9
4	☐	50.000	48.743	1412760.81	0.2086	P	0.9
5	☐	125.000	122.616	3471321.80	0.5244	P	0.1
6	☐	250.000	248.023	6927897.54	1.0604	P	0.1
7	☐	500.000	496.700	13760903.40	2.1233	A	0.2
8	☐	1000.000	1002.505	27259473.64	4.2853	A	1.1
9	☐			30566.38	0.0055	P	1.5

$$y = 0.0043 * x + 2.7613\text{E-}004$$

$$R = 1.0000$$

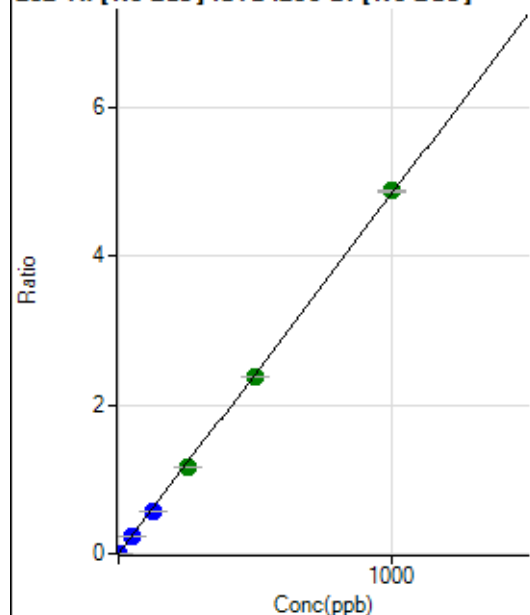
$$DL = 0.006098$$

$$BEC = 0.0646$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.78	0.0000	P	34.9
2	☐	0.100	0.079	2555.88	0.0004	P	0.2
3	☐	1.000	0.819	26514.42	0.0040	P	1.9
4	☐	50.000	45.958	1506929.72	0.2225	P	0.6
5	☐	125.000	117.226	3757283.16	0.5676	P	0.4
6	☐	250.000	239.440	7574048.60	1.1593	A	0.5
7	☐	500.000	490.227	15382566.55	2.3735	A	0.2
8	☐	1000.000	1008.701	31067962.73	4.8838	A	0.8
9	☐			4460.15	0.0008	P	11.5

$$y = 0.0048 * x + 3.9518E-006$$

$$R = 0.9999$$

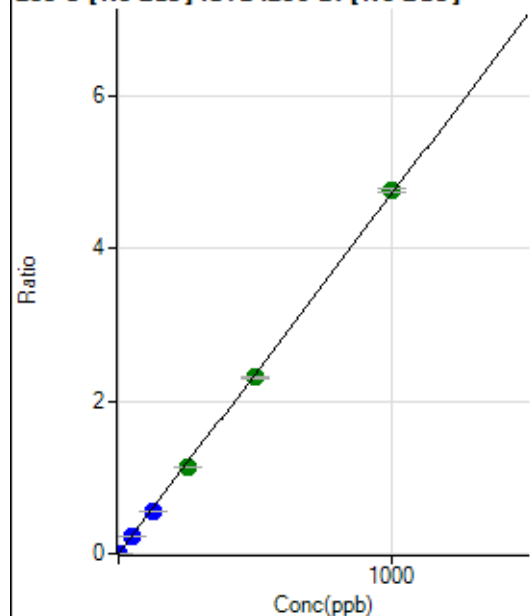
$$DL = 0.0008548$$

$$BEC = 0.0008162$$

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	47.23	0.0000	P	56.8
2	☐	0.100	0.087	2753.20	0.0004	P	7.8
3	☐	1.000	0.812	25628.99	0.0038	P	1.5
4	☐	50.000	46.345	1480583.57	0.2186	P	0.2
5	☐	125.000	117.880	3681252.77	0.5561	P	0.5
6	☐	250.000	239.837	7391813.97	1.1314	A	0.5
7	☐	500.000	489.770	14973483.15	2.3104	A	0.3
8	☐	1000.000	1008.729	30270518.73	4.7585	A	1.1
9	☐			1764.09	0.0003	P	5.7

$$y = 0.0047 * x + 6.7216E-006$$

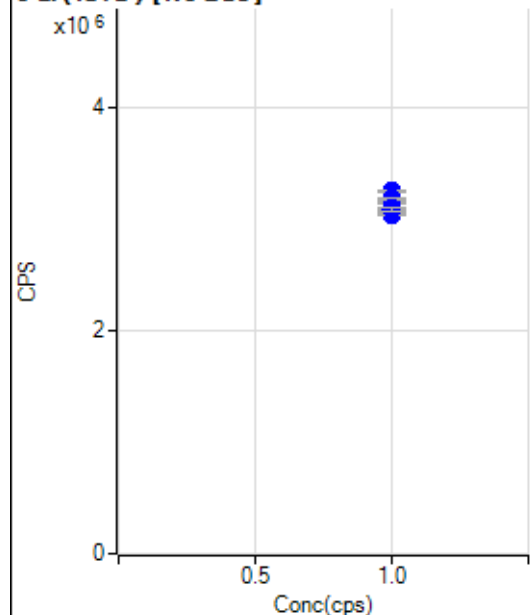
$$R = 0.9999$$

$$DL = 0.00243$$

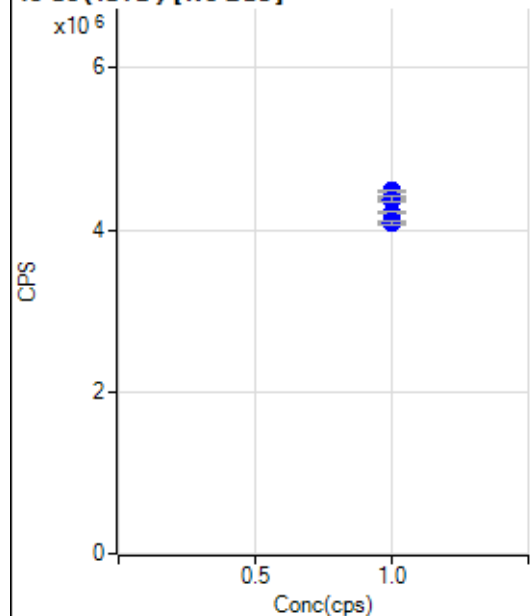
$$BEC = 0.001425$$

Weight: <None>

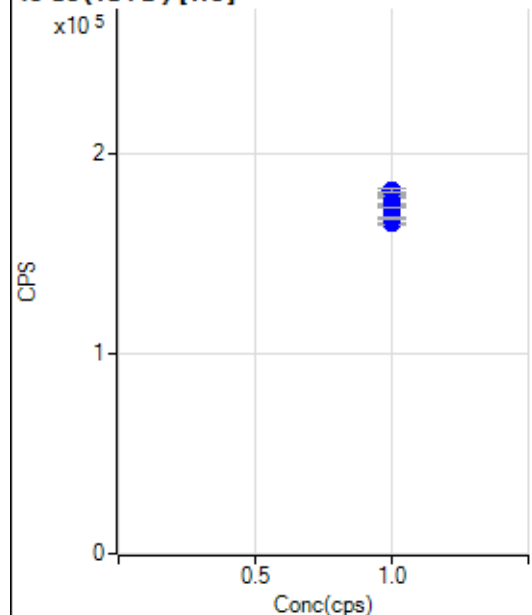
Min Conc: 0

6 Li (ISTD) [No Gas]

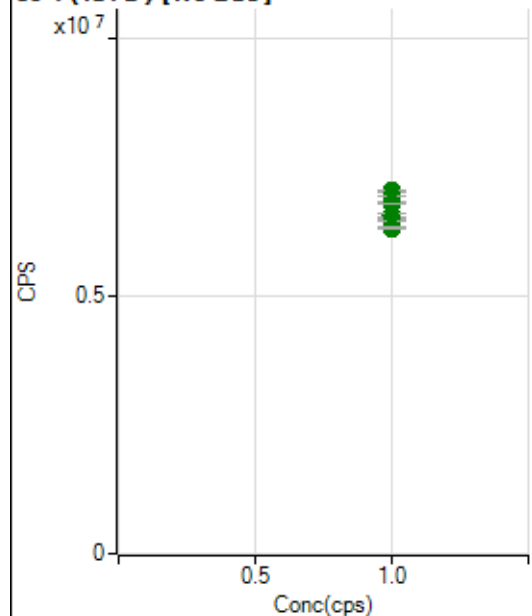
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3150820.26		P	0.4
2	☐	1.000		3151183.81		P	0.3
3	☐	1.000		3168365.44		P	0.4
4	☐	1.000		3252955.82		P	0.6
5	☐	1.000		3185889.33		P	0.7
6	☐	1.000		3099173.88		P	0.6
7	☐	1.000		3046952.77		P	0.1
8	☐	1.000		3034993.57		P	0.1
9	☐	1.000		3091387.25		P	1.2

45 Sc (ISTD) [No Gas]

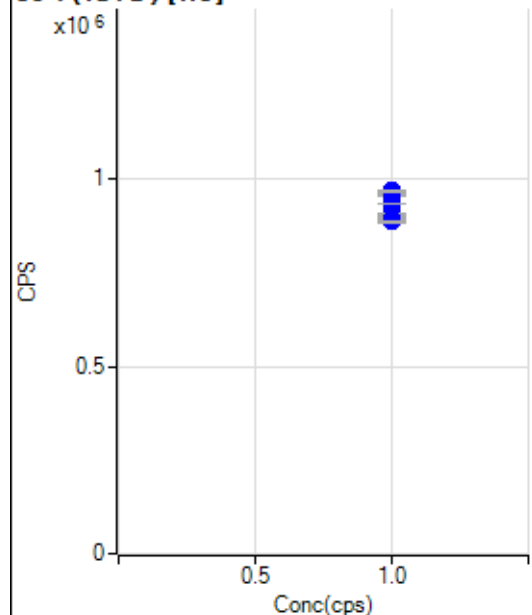
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4370142.37		P	0.4
2	☐	1.000		4365670.32		P	0.3
3	☐	1.000		4401658.52		P	0.6
4	☐	1.000		4479625.06		P	0.6
5	☐	1.000		4375857.04		P	1.4
6	☐	1.000		4207640.11		P	0.5
7	☐	1.000		4112167.63		P	0.2
8	☐	1.000		4076499.74		P	0.2
9	☐	1.000		4086894.92		P	1.0

45 Sc (ISTD) [He]

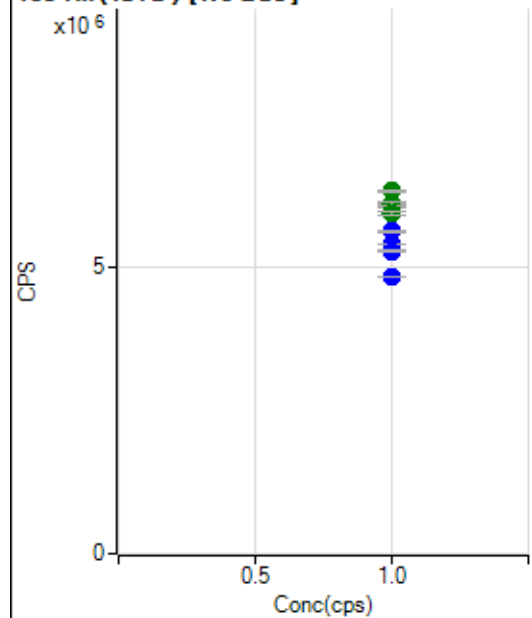
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		178716.52		P	0.9
2	☐	1.000		179008.34		P	0.2
3	☐	1.000		179293.15		P	0.5
4	☐	1.000		181117.01		P	1.0
5	☐	1.000		173824.97		P	0.6
6	☐	1.000		168130.19		P	0.4
7	☐	1.000		164867.77		P	0.9
8	☐	1.000		167428.56		P	0.8
9	☐	1.000		172803.88		P	0.3

89 Y (ISTD) [No Gas]

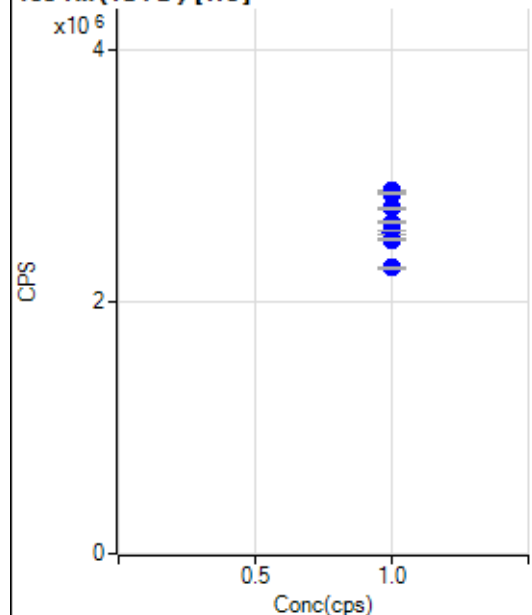
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7027764.83		A	0.5
2	☐	1.000		6770514.83		A	0.2
3	☐	1.000		6811722.74		A	0.6
4	☐	1.000		6932308.16		A	0.4
5	☐	1.000		6774284.41		A	0.4
6	☐	1.000		6559716.57		A	0.7
7	☐	1.000		6497825.04		A	0.3
8	☐	1.000		6457705.81		A	0.1
9	☐	1.000		6305765.25		A	0.7

89 Y (ISTD) [He]

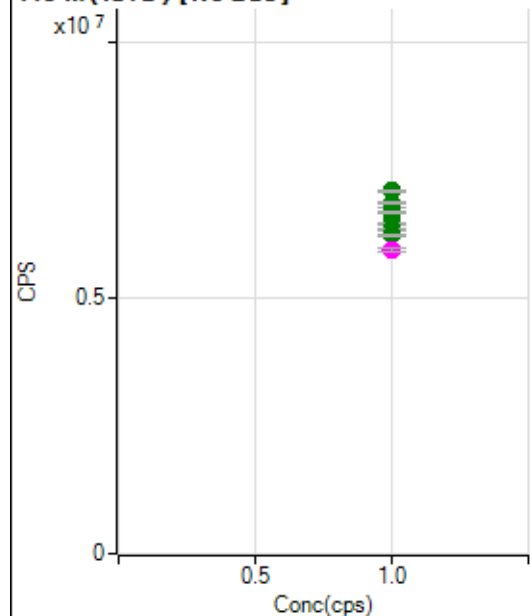
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		964362.95		P	0.7
2	☐	1.000		957658.79		P	0.2
3	☐	1.000		963133.50		P	1.1
4	☐	1.000		968435.93		P	0.7
5	☐	1.000		931993.62		P	0.0
6	☐	1.000		907542.68		P	0.4
7	☐	1.000		894547.85		P	1.3
8	☐	1.000		895215.24		P	0.6
9	☐	1.000		886019.69		P	0.7

103 Rh (ISTD) [No Gas]

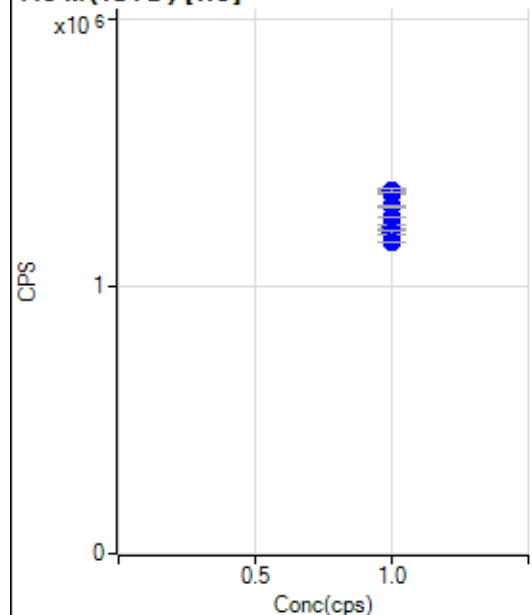
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6321992.81		A	0.3
2	☐	1.000		6021080.04		A	0.1
3	☐	1.000		6073792.89		A	0.6
4	☐	1.000		6095361.81		A	0.7
5	☐	1.000		5923628.48		A	0.9
6	☐	1.000		5619299.78		P	0.6
7	☐	1.000		5405765.35		P	0.1
8	☐	1.000		5268639.92		P	0.4
9	☐	1.000		4826371.46		P	0.5

103 Rh (ISTD) [He]

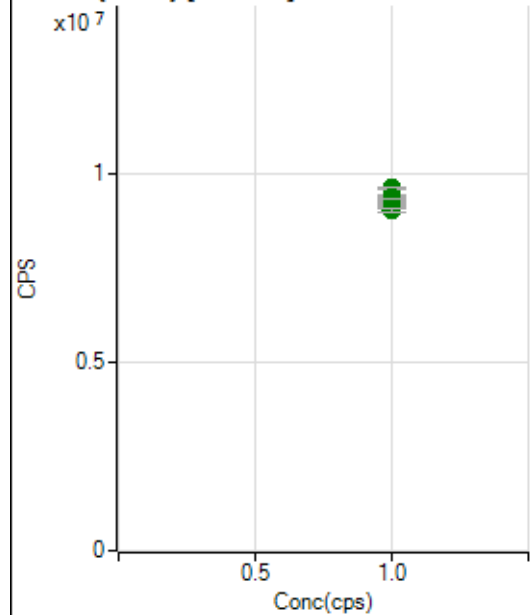
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2879640.58		P	0.8
2	☐	1.000		2864315.58		P	0.2
3	☐	1.000		2858071.52		P	0.8
4	☐	1.000		2867265.76		P	0.5
5	☐	1.000		2742344.44		P	0.4
6	☐	1.000		2628440.17		P	0.4
7	☐	1.000		2554425.95		P	1.2
8	☐	1.000		2495258.49		P	0.8
9	☐	1.000		2268999.38		P	0.5

115 In (ISTD) [No Gas]

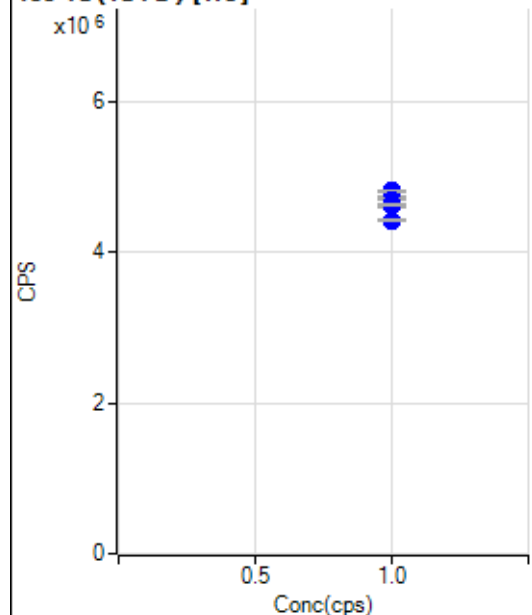
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7105649.14		A	0.6
2	☐	1.000		6713678.94		A	0.1
3	☐	1.000		6782108.67		A	0.4
4	☐	1.000		6860899.02		A	0.5
5	☐	1.000		6676481.45		A	0.7
6	☐	1.000		6474568.45		A	0.6
7	☐	1.000		6350128.73		A	0.2
8	☐	1.000		6233958.99		A	0.4
9	☐	1.000		5947589.83		M	1.1

115 In (ISTD) [He]

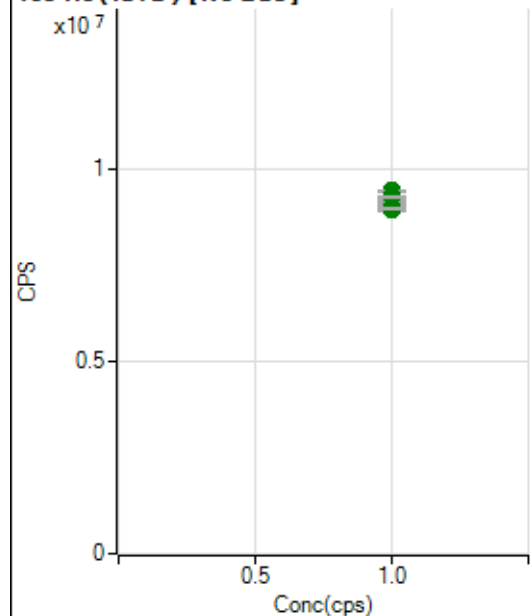
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1352380.37		P	0.7
2	☐	1.000		1344809.98		P	0.2
3	☐	1.000		1354852.71		P	1.0
4	☐	1.000		1357039.98		P	1.0
5	☐	1.000		1300104.48		P	0.6
6	☐	1.000		1258669.59		P	0.1
7	☐	1.000		1224864.37		P	1.1
8	☐	1.000		1197762.49		P	1.2
9	☐	1.000		1165230.98		P	0.3

159 Tb (ISTD) [No Gas]

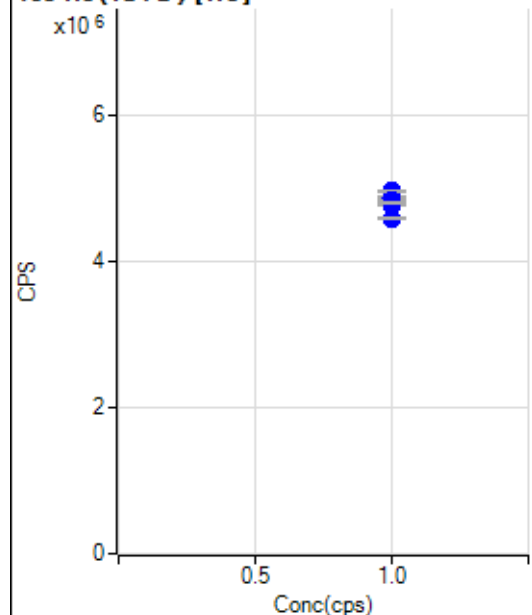
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9614317.36		A	0.3
2	☐	1.000		9096447.92		A	0.4
3	☐	1.000		9193888.27		A	0.5
4	☐	1.000		9385382.57		A	0.4
5	☐	1.000		9306462.22		A	1.2
6	☐	1.000		9197037.78		A	0.4
7	☐	1.000		9272631.32		A	0.3
8	☐	1.000		9321539.24		A	0.1
9	☐	1.000		9024612.57		A	0.9

159 Tb (ISTD) [He]

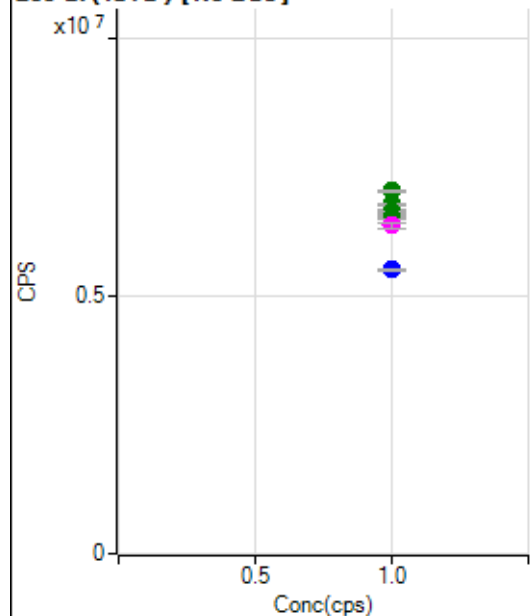
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4734864.51		P	0.8
2	☐	1.000		4724199.37		P	0.3
3	☐	1.000		4727036.66		P	1.0
4	☐	1.000		4811473.26		P	0.8
5	☐	1.000		4703144.37		P	0.4
6	☐	1.000		4628913.37		P	0.5
7	☐	1.000		4611764.31		P	1.2
8	☐	1.000		4633803.09		P	0.7
9	☐	1.000		4416939.62		P	0.7

165 Ho (ISTD) [No Gas]

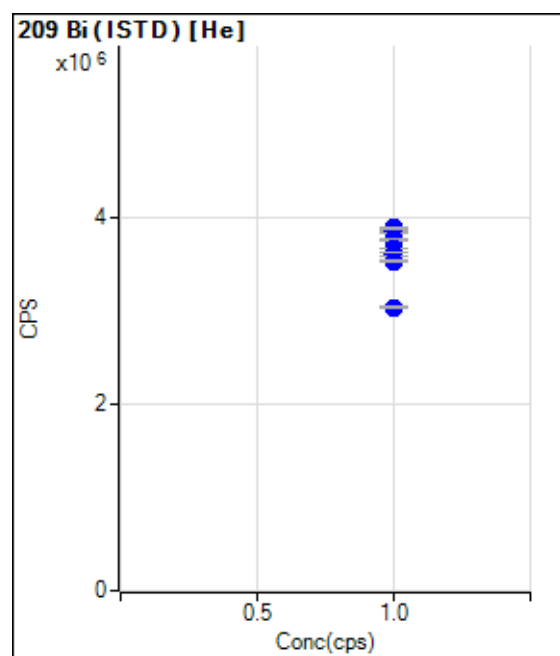
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9435622.17		A	0.5
2	☐	1.000		8931135.44		A	0.6
3	☐	1.000		9016508.97		A	0.5
4	☐	1.000		9235381.37		A	0.4
5	☐	1.000		9147232.41		A	0.4
6	☐	1.000		9087692.05		A	0.4
7	☐	1.000		9163304.72		A	0.2
8	☐	1.000		9296193.78		A	0.6
9	☐	1.000		8982367.56		A	0.5

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4883258.09		P	0.8
2	☐	1.000		4860432.88		P	0.5
3	☐	1.000		4868108.71		P	0.9
4	☐	1.000		4967491.87		P	0.9
5	☐	1.000		4843382.36		P	0.5
6	☐	1.000		4774269.76		P	0.2
7	☐	1.000		4780998.58		P	1.0
8	☐	1.000		4808569.44		P	0.8
9	☐	1.000		4584550.28		P	0.7

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7035376.00		A	0.5
2	☐	1.000		6615016.22		A	0.8
3	☐	1.000		6676381.71		A	0.5
4	☐	1.000		6772069.97		A	0.4
5	☐	1.000		6619951.64		A	0.4
6	☐	1.000		6533292.33		A	0.4
7	☐	1.000		6480852.68		A	0.2
8	☐	1.000		6361777.82		M	1.3
9	☐	1.000		5509649.99		P	0.5



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3881049.11		P	0.6
2	☐	1.000		3869200.88		P	0.5
3	☐	1.000		3863541.71		P	1.1
4	☐	1.000		3893998.83		P	0.6
5	☐	1.000		3761372.45		P	0.6
6	☐	1.000		3675293.66		P	0.2
7	☐	1.000		3616274.42		P	1.2
8	☐	1.000		3536203.17		P	0.8
9	☐	1.000		3038538.94		P	0.6

US EPA Tune Check Sample Report

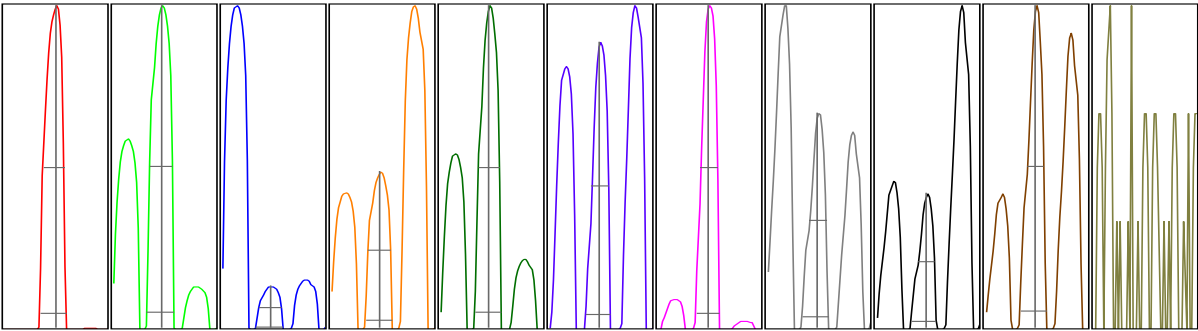
Batch Folder D:\ICP-MS Data\P7122818 MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	8153	0.81	5.00	
24	65305	0.69	5.00	
25	8619	0.69	5.00	
26	9864	0.90	5.00	
59	46649	0.51	5.00	
113	6441	1.19	5.00	
115	77732	2.30	5.00	
206	20146	1.15	5.00	
207	18404	0.92	5.00	
208	44359	0.64	5.00	
220	0	64.36		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	8042	8155	8168	8182	8218
24	64749	64922	65435	65762	65656
25	8544	8564	8651	8673	8660
26	9747	9808	9870	9935	9961
59	46247	46736	46755	46652	46855
113	6547	6494	6418	6365	6383
115	80114	78921	77494	76273	75857
206	19817	20201	20181	20074	20457
207	18106	18438	18492	18513	18470
208	43913	44269	44442	44523	44649
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	14336	9.05	8.9 - 9.1		0.775	0.900	
24	105702	23.95	23.9 - 24.1		0.785	0.900	
25	14054	24.95	24.9 - 25.1		0.786	0.900	
26	16199	25.95	25.9 - 26.1		0.784	0.900	
59	82095	58.95	58.9 - 59.1		0.773	0.900	
113	13004	113.00	112.9 - 113.1		0.714	0.900	
115	157194	115.00	114.9 - 115.1		0.685	0.900	
206	41349	206.00	205.9 - 206.1		0.767	0.900	
207	37824	207.00	206.9 - 207.1		0.740	0.900	
208	90625	208.00	207.9 - 208.1		0.771	0.900	
220			-				

X% = 5 Integration Time [sec] = 0.1 Acquisition Time [sec] = 268 Y Axis = Linear

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.5	V	Deflect	14.4	V
Extract 2	-85.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-45	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	11216	0.89	
89	15482	1.06	
205	18083	0.64	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	11235	11368	11102	11219	11155
89	15604	15676	15262	15472	15396
205	18103	18232	17988	18145	17947

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	6.8	V	Deflect	1.4	V
Extract 2	-95.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-50	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			