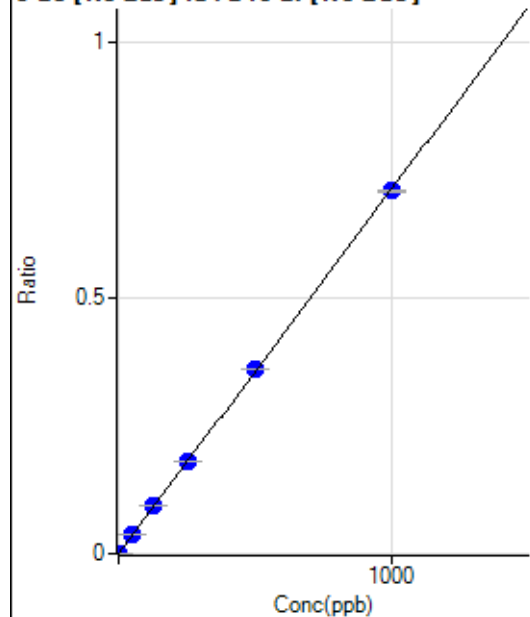


Batch Folder: D:\ICP-MS Data\1\DATA\P7032420.b\
Analysis File: P7032420.batch.bin
DA Date-Time: 2020-03-24 23:33:34
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2020-03-24 14:36:08
2	004CALS.d	S02	2020-03-24 14:39:41
3	005CALS.d	S03	2020-03-24 14:44:32
4	006CALS.d	S04	2020-03-24 14:48:47
5	007CALS.d	S05	2020-03-24 14:52:28
6	008CALS.d	S06	2020-03-24 14:56:01
7	009CALS.d	S07	2020-03-24 14:59:30
8	010CALS.d	S08	2020-03-24 15:03:00

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	100.00	0.0000	P	11.1
2	☐	1.000	0.978	3935.80	0.0007	P	4.4
3	☐	50.000	52.176	199354.76	0.0371	P	0.7
4	☐	125.000	132.661	488517.54	0.0944	P	1.1
5	☐	250.000	252.618	934448.10	0.1798	P	0.8
6	☐	500.000	505.525	1803460.87	0.3597	P	0.5
7	☐	1000.000	995.516	3487477.48	0.7084	P	0.5
8	☐			698.18	0.0002	P	15.2

$$y = 7.1156\text{E-}004 * x + 1.8263\text{E-}005$$

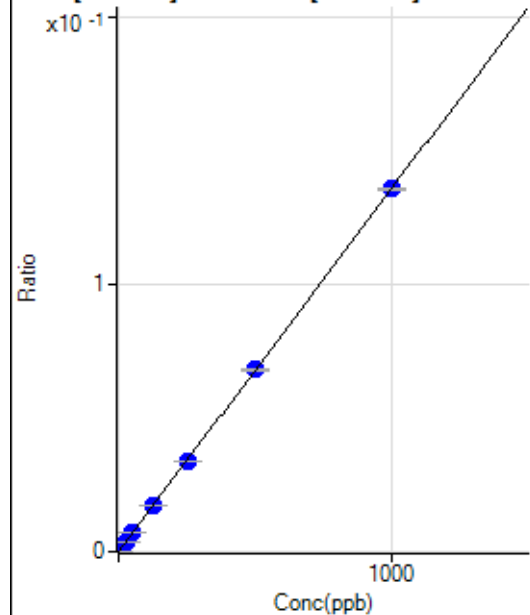
$$R = 1.0000$$

$$DL = 0.008517$$

$$BEC = 0.02567$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	255.57	0.0000	P	7.5
2	☐	25.000	24.390	18520.38	0.0034	P	3.2
3	☐	50.000	51.437	37770.45	0.0070	P	1.5
4	☐	125.000	127.287	89738.64	0.0173	P	1.4
5	☐	250.000	247.852	175316.44	0.0337	P	0.8
6	☐	500.000	500.726	341370.07	0.0681	P	0.1
7	☐	1000.000	999.831	669137.44	0.1359	P	0.2
8	☐			13665.02	0.0030	P	11.2

$$y = 1.3589\text{E-}004 * x + 4.6675\text{E-}005$$

$$R = 1.0000$$

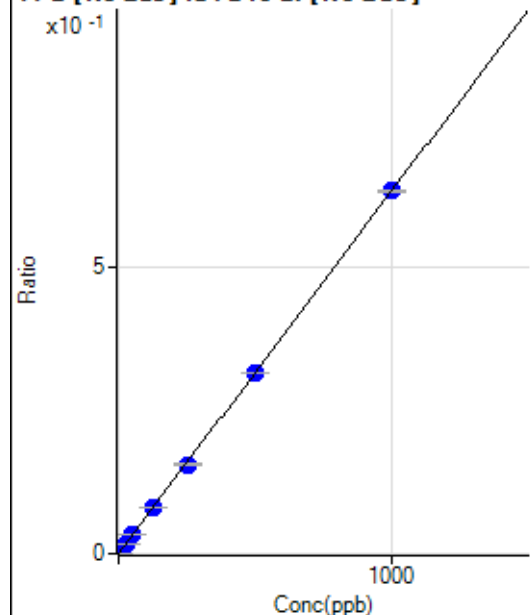
$$DL = 0.07697$$

$$BEC = 0.3435$$

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	1339.00	0.0002	P	9.8
2	☐	25.000	24.454	86483.47	0.0157	P	2.3
3	☐	50.000	51.964	177488.59	0.0331	P	0.9
4	☐	125.000	127.115	416690.52	0.0805	P	2.0
5	☐	250.000	246.093	809270.53	0.1557	P	1.8
6	☐	500.000	499.190	1582054.17	0.3156	P	0.5
7	☐	1000.000	1001.033	3114186.79	0.6326	P	0.5
8	☐			65382.04	0.0144	P	8.3

$$y = 6.3166\text{E-}004 * x + 2.4457\text{E-}004$$

$$R = 1.0000$$

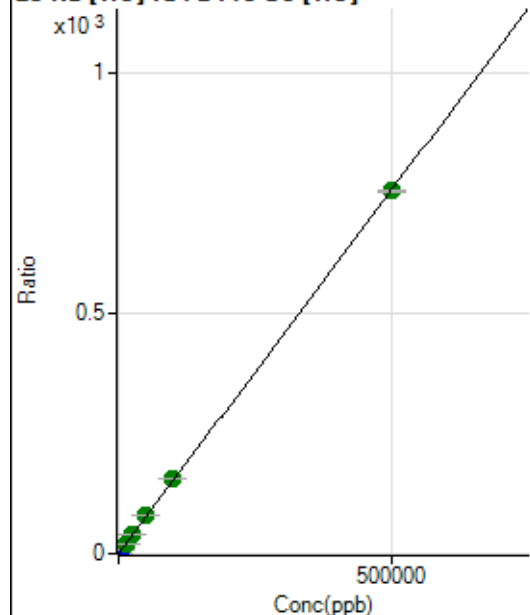
$$DL = 0.1139$$

$$BEC = 0.3872$$

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	11137.91	0.0256	P	5.3
2	☐	500.000	532.386	328238.44	0.8313	P	0.1
3	☐	5000.000	5914.901	3176973.86	8.9778	P	17.9
4	☐	12500.000	13096.177	7684337.06	19.8466	A	2.3
5	☐	25000.000	26304.174	15095094.95	39.8368	A	0.4
6	☐	50000.000	52498.549	29871207.26	79.4819	A	1.6
7	☐	100000.00	103639.16	58954490.21	156.8830	A	0.9
8	☐	500000.00	498933.01	275449325.6	755.1587	A	0.6

$$y = 0.0015 * x + 0.0256$$

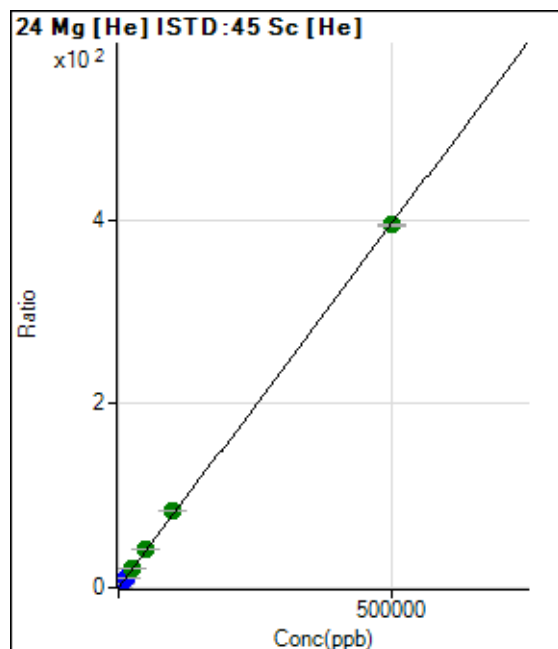
$$R = 1.0000$$

$$DL = 2.665$$

$$BEC = 16.89$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	255.57	0.0006	P	13.9
2	☐	500.000	550.148	172186.26	0.4361	P	0.3
3	☐	5000.000	6121.592	1715524.71	4.8466	P	17.6
4	☐	12500.000	13589.448	4165840.55	10.7583	P	1.2
5	☐	25000.000	27046.389	8112638.20	21.4111	A	1.3
6	☐	50000.000	53247.939	15842768.58	42.1528	A	1.2
7	☐	100000.00	105287.37	31322694.45	83.3483	A	0.6
8	☐	500000.00	498476.91	143936042.1	394.6056	A	0.4

$$y = 7.9162\text{E-}004 * x + 5.8800\text{E-}004$$

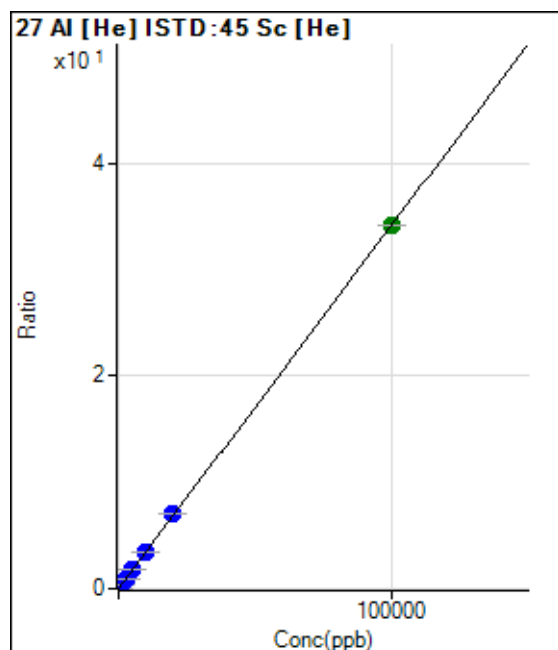
$$R = 0.9999$$

$$DL = 0.3089$$

$$BEC = 0.7428$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	22.22	0.0001	P	54.9
2	☐	20.000	21.341	2894.85	0.0073	P	1.2
3	☐	1000.000	1158.184	139820.27	0.3952	P	18.1
4	☐	2500.000	2596.984	343119.71	0.8861	P	1.5
5	☐	5000.000	5132.983	663604.10	1.7514	P	1.2
6	☐	10000.000	10159.033	1302739.14	3.4662	P	1.2
7	☐	20000.000	20520.859	2631129.94	7.0016	P	0.4
8	☐	100000.00	99869.269	12428971.46	34.0746	A	0.2

$$y = 3.4119\text{E-}004 * x + 5.0247\text{E-}005$$

$$R = 1.0000$$

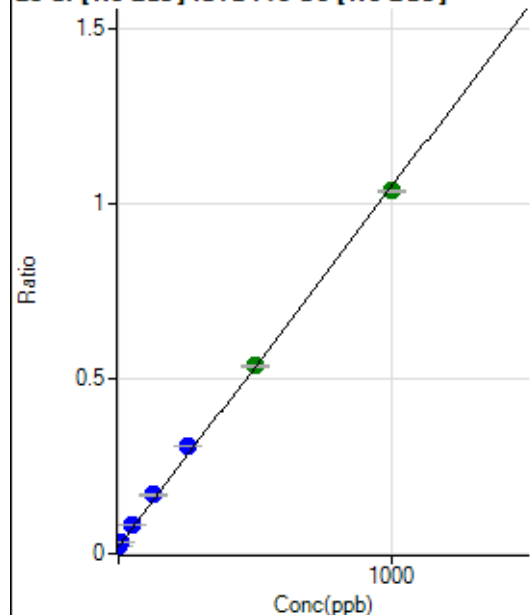
$$DL = 0.2423$$

$$BEC = 0.1473$$

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	238118.77	0.0204	P	1.7
2	☐	10.000	10.201	364440.18	0.0309	P	2.6
3	☐	50.000	60.525	948978.16	0.0826	P	2.1
4	☐	125.000	143.729	1871496.76	0.1682	P	1.0
5	☐	250.000	279.077	3421922.21	0.3072	P	1.2
6	☐	500.000	502.379	5943353.04	0.5367	A	0.8
7	☐	1000.000	988.672	11423087.84	1.0365	A	0.4
8	☐			489771.00	0.0479	P	1.0

$$y = 0.0010 * x + 0.0204$$

$$R = 0.9994$$

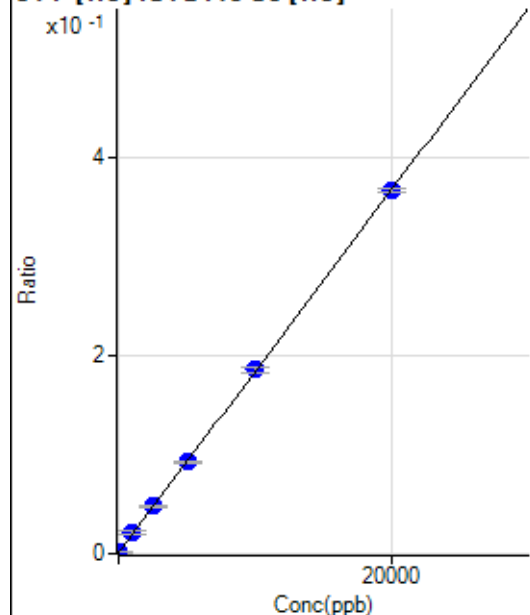
$$DL = 1.003$$

$$BEC = 19.9$$

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	-26.504	158.34	0.0004	P	30.9
2	☐	0.000	26.504	527.81	0.0013	P	8.9
3	☐	1000.000	1113.095	7518.86	0.0213	P	18.6
4	☐	2500.000	2559.889	18506.50	0.0478	P	1.5
5	☐	5000.000	5011.612	35145.16	0.0928	P	1.4
6	☐	10000.000	10075.985	69761.16	0.1856	P	2.5
7	☐	20000.000	19945.964	137770.81	0.3666	P	1.0
8	☐			236.12	0.0006	P	30.5

$$y = 1.8338E-005 * x + 8.5095E-004$$

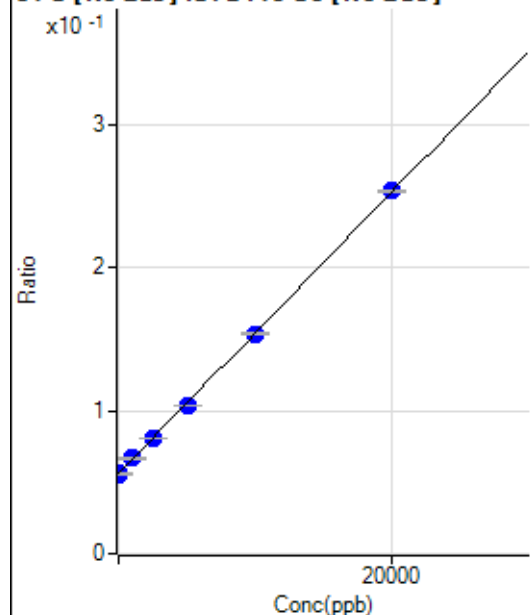
$$R = 1.0000$$

$$DL = 18.94$$

$$BEC = 46.4$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	49.800	658625.32	0.0565	P	1.0
2	☐	0.000	-49.800	654857.53	0.0556	P	1.4
3	☐	1000.000	1104.092	768417.16	0.0669	P	2.6
4	☐	2500.000	2509.415	898802.73	0.0808	P	0.7
5	☐	5000.000	4816.314	1152289.62	0.1035	P	0.8
6	☐	10000.000	9919.833	1701774.97	0.1537	P	1.0
7	☐	20000.000	20079.623	2795663.76	0.2537	P	0.5
8	☐			560668.66	0.0548	P	1.0

$$y = 9.8417\text{E-}006 * x + 0.0561$$

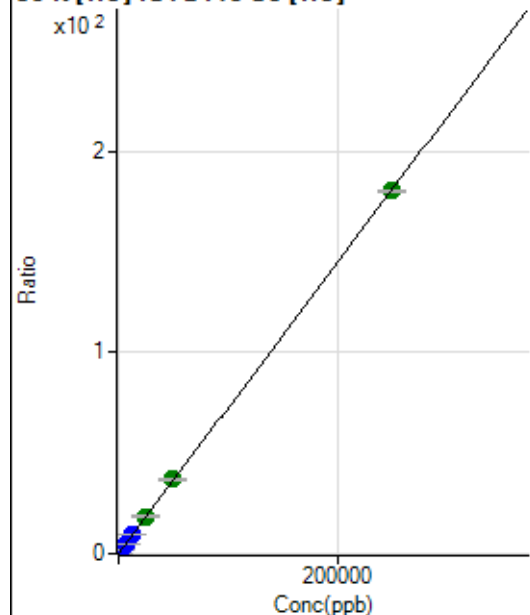
R = 0.9999

DL = 205

BEC = 5696

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	21235.49	0.0488	P	5.4
2	☐	500.000	536.852	172481.96	0.4368	P	1.1
3	☐	2500.000	2924.942	766165.37	2.1632	P	17.0
4	☐	6250.000	6515.832	1842737.56	4.7590	P	1.6
5	☐	12500.000	13055.455	3594444.53	9.4865	P	1.3
6	☐	25000.000	25715.442	7005097.47	18.6383	A	1.1
7	☐	50000.000	51125.639	13907132.25	37.0072	A	0.9
8	☐	250000.00	249664.58	65848671.61	180.5299	A	0.6

$$y = 7.2289\text{E-}004 * x + 0.0488$$

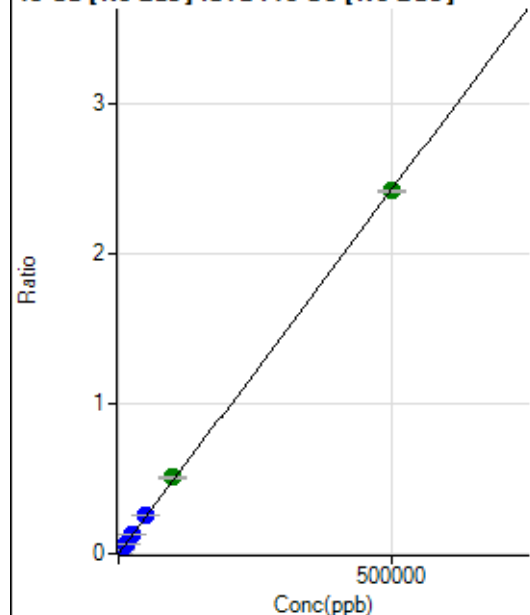
R = 1.0000

DL = 10.83

BEC = 67.44

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	372.24	0.0000	P	8.1
2	☐	500.000	527.000	30448.89	0.0026	P	3.8
3	☐	5000.000	5383.473	299766.57	0.0261	P	2.2
4	☐	12500.000	13516.040	728992.43	0.0655	P	0.9
5	☐	25000.000	26657.038	1438363.27	0.1291	P	1.0
6	☐	50000.000	52812.453	2832892.94	0.2558	P	0.8
7	☐	100000.00	104799.41	5594484.59	0.5076	A	1.0
8	☐	500000.00	498646.75	24720750.72	2.4153	A	0.5

$$y = 4.8436\text{E-}006 * x + 3.1975\text{E-}005$$

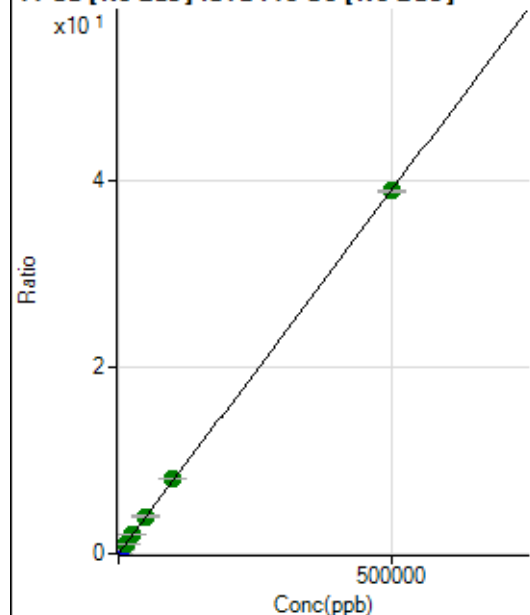
$$R = 0.9999$$

$$DL = 1.596$$

$$BEC = 6.602$$

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	6407.18	0.0006	P	4.0
2	☐	500.000	519.714	483768.03	0.0411	P	3.5
3	☐	5000.000	5303.933	4753772.72	0.4140	P	1.7
4	☐	12500.000	13080.402	11353453.46	1.0201	A	1.7
5	☐	25000.000	25947.418	22531803.28	2.0231	A	1.4
6	☐	50000.000	51516.328	44471850.30	4.0161	A	0.7
7	☐	100000.00	102898.09	88398932.53	8.0213	A	0.6
8	☐	500000.00	499203.80	398277975.5	38.9125	A	0.5

$$y = 7.7948\text{E-}005 * x + 5.5026\text{E-}004$$

$$R = 1.0000$$

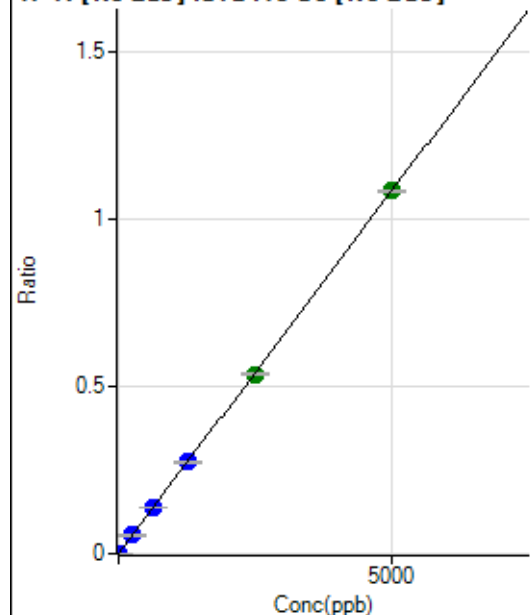
$$DL = 0.8473$$

$$BEC = 7.059$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	197.23	0.0000	P	29.1
2	☐	5.000	5.156	13381.63	0.0011	P	4.6
3	☐	250.000	253.506	631242.48	0.0550	P	2.0
4	☐	625.000	644.092	1554251.40	0.1396	P	1.1
5	☐	1250.000	1263.185	3050129.93	0.2739	P	0.9
6	☐	2500.000	2478.959	5951420.14	0.5374	A	0.8
7	☐	5000.000	5004.662	11957090.46	1.0850	A	0.6
8	☐			4981.60	0.0005	P	6.1

$$y = 2.1679E-004 * x + 1.6969E-005$$

$$R = 1.0000$$

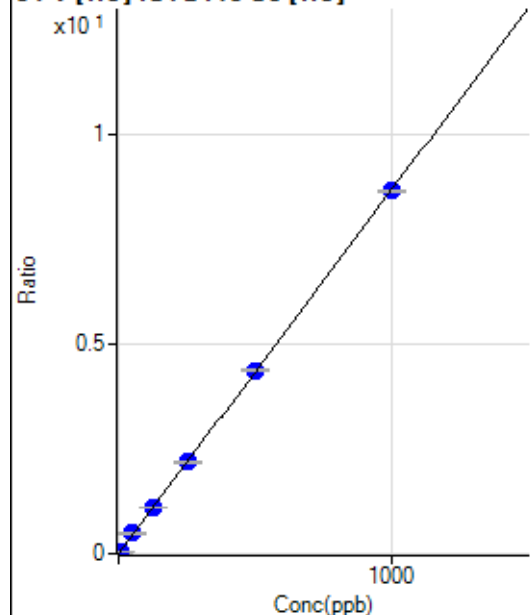
$$DL = 0.06823$$

$$BEC = 0.07828$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	13.33	0.0000	P	77.5
2	☐	5.000	5.211	17904.39	0.0453	P	1.6
3	☐	50.000	55.810	171909.32	0.4853	P	17.0
4	☐	125.000	125.930	424037.01	1.0951	P	1.5
5	☐	250.000	252.855	833102.50	2.1988	P	1.7
6	☐	500.000	502.886	1643581.14	4.3730	P	1.1
7	☐	1000.000	997.435	3259497.83	8.6735	P	0.3
8	☐			1196.74	0.0033	P	8.1

$$y = 0.0087 * x + 3.1179E-005$$

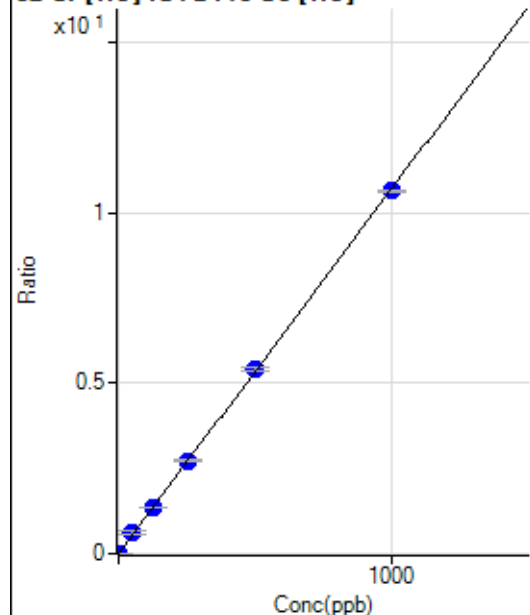
$$R = 1.0000$$

$$DL = 0.00834$$

$$BEC = 0.003586$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1096.73	0.0025	P	6.1
2	☐	2.000	2.106	9892.35	0.0251	P	1.1
3	☐	50.000	57.051	217078.90	0.6130	P	17.2
4	☐	125.000	127.423	528933.08	1.3660	P	1.4
5	☐	250.000	255.352	1036214.85	2.7349	P	1.6
6	☐	500.000	506.166	2036508.60	5.4187	P	1.4
7	☐	1000.000	994.924	4001649.04	10.6485	P	0.4
8	☐			98078.63	0.2689	P	1.3

$$y = 0.0107 * x + 0.0025$$

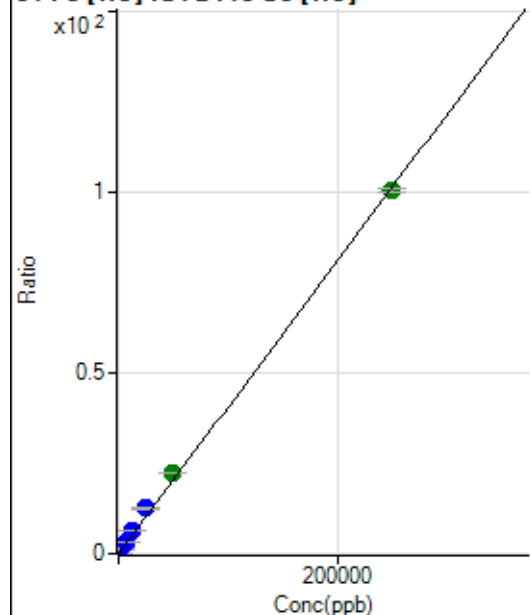
$$R = 0.9999$$

$$DL = 0.0432$$

$$BEC = 0.2354$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	480.51	0.0011	P	13.9
2	☐	50.000	69.616	11569.97	0.0293	P	2.2
3	☐	2500.000	3549.982	509585.29	1.4390	P	17.2
4	☐	6250.000	7934.664	1244940.00	3.2151	P	1.3
5	☐	12500.000	15818.426	2428070.82	6.4084	P	1.7
6	☐	25000.000	31069.053	4730178.66	12.5857	P	1.3
7	☐	50000.000	54915.339	8359774.69	22.2448	A	0.7
8	☐	250000.00	248191.48	36667144.19	100.5320	A	1.2

$$y = 4.0505E-004 * x + 0.0011$$

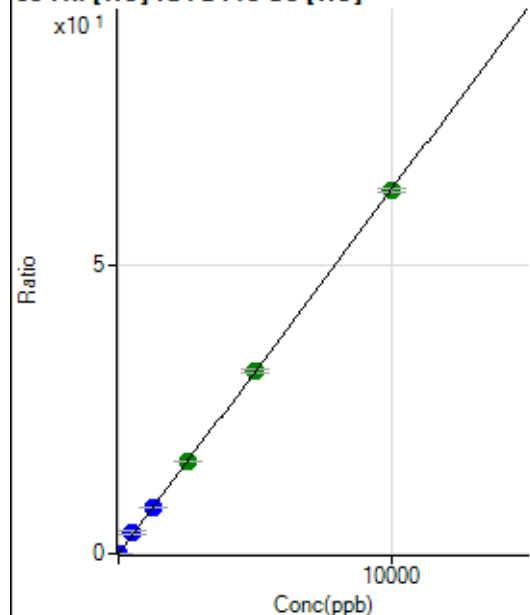
$$R = 0.9996$$

$$DL = 1.133$$

$$BEC = 2.727$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	56.10	0.0001	P	34.8
2	☐	1.000	1.055	2687.32	0.0068	P	5.6
3	☐	500.000	572.553	1282805.58	3.6235	P	17.5
4	☐	1250.000	1277.586	3130830.35	8.0853	P	1.1
5	☐	2500.000	2539.931	6090477.74	16.0739	A	1.1
6	☐	5000.000	5040.541	11988108.91	31.8989	A	2.0
7	☐	10000.000	9962.671	23693076.95	63.0483	A	1.0
8	☐			23158.27	0.0635	P	1.1

$$y = 0.0063 * x + 1.2788E-004$$

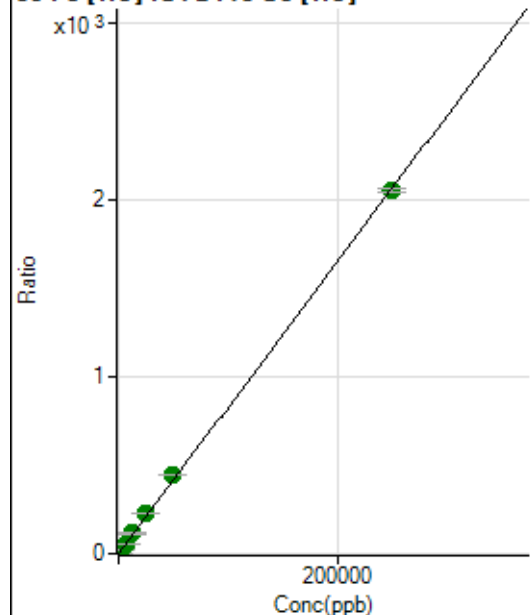
$$R = 1.0000$$

$$DL = 0.02109$$

$$BEC = 0.02021$$

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	5456.72	0.0125	P	1.8
2	☐	50.000	59.582	198656.17	0.5031	P	0.8
3	☐	2500.000	3116.997	9085411.66	25.6790	A	18.0
4	☐	6250.000	6964.100	22210828.27	57.3574	A	0.8
5	☐	12500.000	13956.614	43546931.07	114.9362	A	2.0
6	☐	25000.000	27589.054	85384386.17	227.1906	A	1.5
7	☐	50000.000	54129.763	167499029.6	445.7361	A	1.4
8	☐	250000.00	248818.28	747284979.6	2.048.870	A	1.2

$$y = 0.0082 * x + 0.0125$$

$$R = 0.9998$$

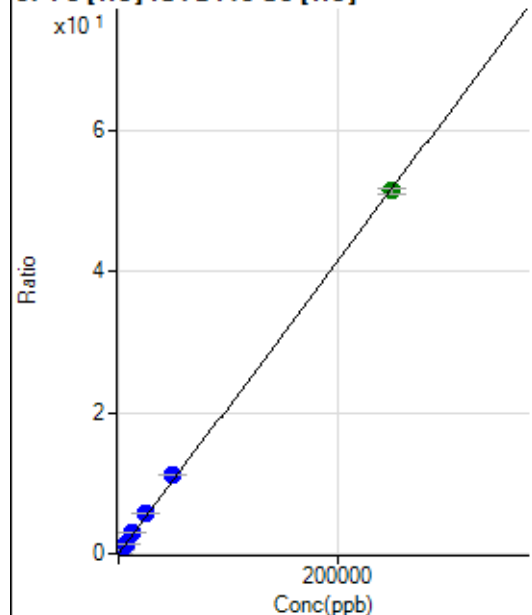
$$DL = 0.08154$$

$$BEC = 1.52$$

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	203.71	0.0005	P	23.3
2	☐	50.000	59.367	5036.19	0.0128	P	7.0
3	☐	2500.000	3114.863	228707.33	0.6452	P	16.3
4	☐	6250.000	7007.555	561864.31	1.4510	P	1.5
5	☐	12500.000	13980.400	1096682.67	2.8944	P	1.4
6	☐	25000.000	27576.632	2145493.61	5.7088	P	1.7
7	☐	50000.000	54039.206	4203846.88	11.1866	P	0.3
8	☐	250000.00	248835.38	18786388.38	51.5094	A	1.8

$$y = 2.0700\text{E-}004 * x + 4.6757\text{E-}004$$

$$R = 0.9998$$

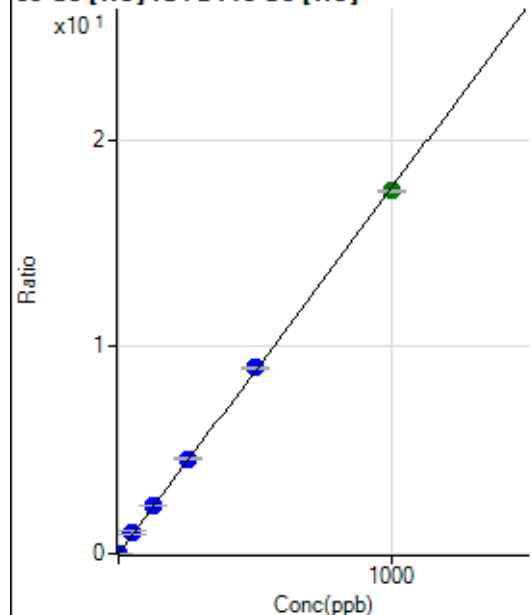
$$DL = 1.576$$

$$BEC = 2.259$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	108.89	0.0002	P	10.4
2	☐	1.000	1.048	7407.54	0.0188	P	4.0
3	☐	50.000	58.331	365083.69	1.0311	P	17.3
4	☐	125.000	130.035	889960.61	2.2982	P	0.8
5	☐	250.000	259.166	1735428.20	4.5803	P	1.5
6	☐	500.000	508.575	3377844.64	8.9878	P	1.6
7	☐	1000.000	992.375	6590516.64	17.5376	A	0.5
8	☐			12217.44	0.0335	P	3.3

$$y = 0.0177 * x + 2.4927\text{E-}004$$

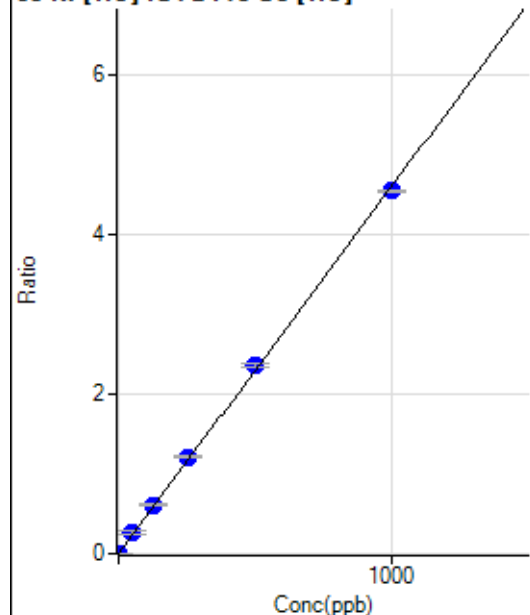
$$R = 0.9999$$

$$DL = 0.004381$$

$$BEC = 0.01411$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	74.45	0.0002	P	22.7
2	☐	1.000	1.255	2343.56	0.0059	P	1.0
3	☐	50.000	59.424	96748.52	0.2731	P	16.7
4	☐	125.000	132.854	236313.35	0.6103	P	1.7
5	☐	250.000	262.902	457518.51	1.2076	P	1.9
6	☐	500.000	513.592	886527.27	2.3588	P	1.4
7	☐	1000.000	988.526	1706064.90	4.5400	P	0.8
8	☐			27004.01	0.0740	P	1.9

$$y = 0.0046 * x + 1.7034E-004$$

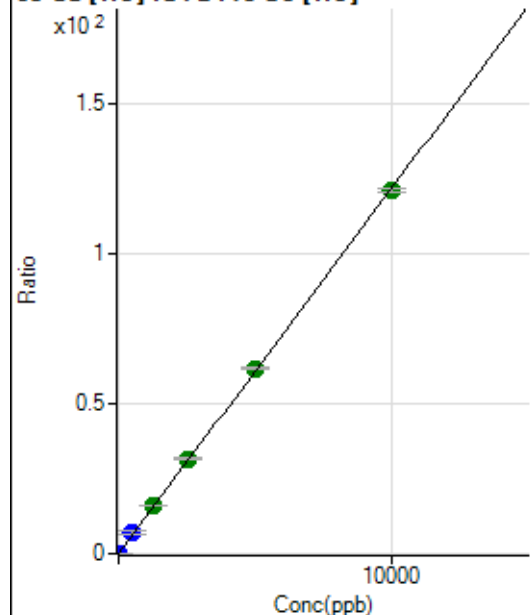
$$R = 0.9998$$

$$DL = 0.02522$$

$$BEC = 0.03709$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	864.49	0.0020	P	1.3
2	☐	2.000	2.145	11097.69	0.0281	P	0.7
3	☐	500.000	591.929	2552527.60	7.2101	P	17.5
4	☐	1250.000	1309.384	6175043.31	15.9468	A	1.1
5	☐	2500.000	2591.148	11955734.82	31.5553	A	1.9
6	☐	5000.000	5062.991	23172448.54	61.6559	A	1.3
7	☐	10000.000	9933.698	45457808.76	120.9682	A	0.9
8	☐			15172.47	0.0416	P	1.8

$$y = 0.0122 * x + 0.0020$$

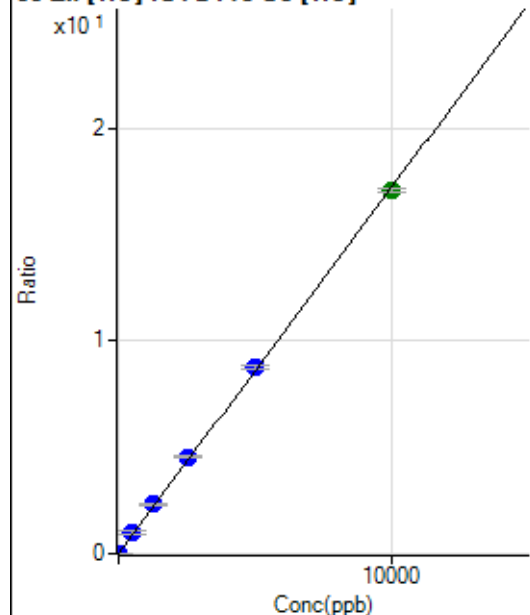
$$R = 0.9999$$

$$DL = 0.006533$$

$$BEC = 0.1628$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1300.08	0.0030	P	4.1
2	☐	2.000	2.580	2931.45	0.0074	P	1.3
3	☐	500.000	600.156	366765.42	1.0361	P	17.5
4	☐	1250.000	1339.947	894268.62	2.3095	P	1.6
5	☐	2500.000	2641.900	1724223.52	4.5506	P	1.3
6	☐	5000.000	5083.253	3289668.95	8.7531	P	1.4
7	☐	10000.000	9906.647	6409287.75	17.0558	A	1.2
8	☐			22411.84	0.0614	P	1.5

$$y = 0.0017 * x + 0.0030$$

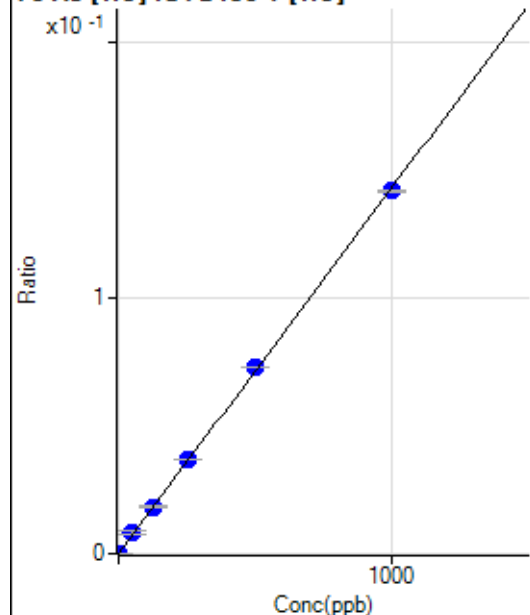
$$R = 0.9998$$

$$DL = 0.2139$$

$$BEC = 1.733$$

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	12.34	0.0000	P	24.5
2	☐	1.000	1.004	425.32	0.0001	P	12.4
3	☐	50.000	56.859	21339.78	0.0081	P	14.1
4	☐	125.000	128.313	52328.19	0.0184	P	2.2
5	☐	250.000	257.744	102336.22	0.0369	P	1.2
6	☐	500.000	508.898	201128.11	0.0728	P	0.2
7	☐	1000.000	992.858	390985.48	0.1420	P	0.6
8	☐			213.59	0.0001	P	4.8

$$y = 1.4300E-004 * x + 3.9553E-006$$

$$R = 0.9999$$

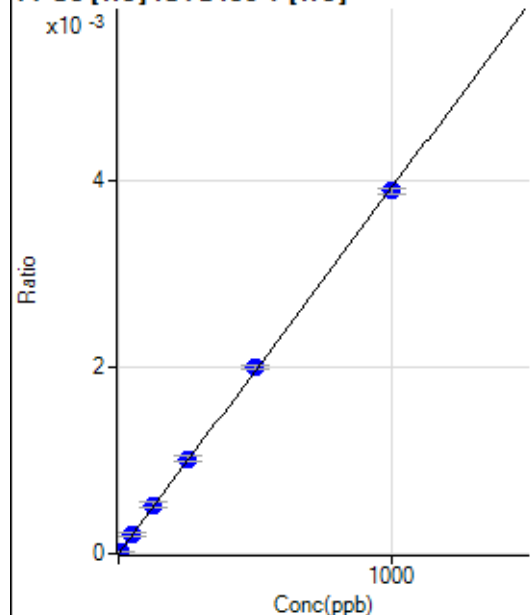
$$DL = 0.02032$$

$$BEC = 0.02766$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	5.000	5.114	57.78	0.0000	P	9.1
3	☐	50.000	52.577	542.24	0.0002	P	13.0
4	☐	125.000	133.602	1492.33	0.0005	P	9.2
5	☐	250.000	257.771	2804.76	0.0010	P	6.1
6	☐	500.000	510.067	5526.71	0.0020	P	3.0
7	☐	1000.000	991.819	10709.67	0.0039	P	1.6
8	☐			7.78	0.0000	P	25.1

$$y = 3.9213\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9999$$

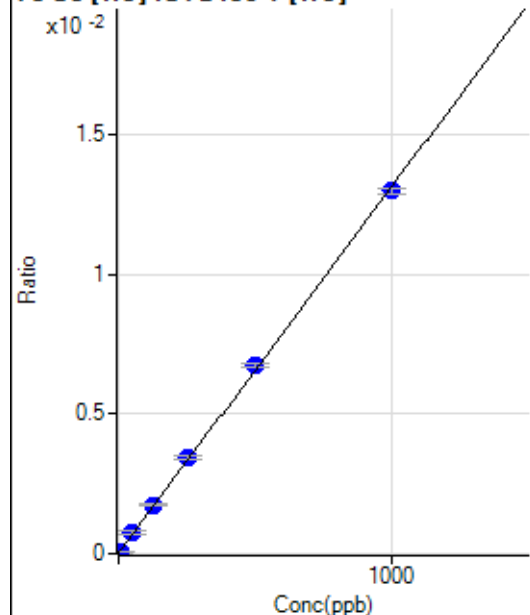
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	58.64	0.0000	P	32.4
2	☐	5.000	5.652	267.91	0.0001	P	3.7
3	☐	50.000	58.066	2044.61	0.0008	P	15.9
4	☐	125.000	132.200	4998.43	0.0018	P	3.1
5	☐	250.000	262.095	9596.45	0.0035	P	3.2
6	☐	500.000	512.261	18623.75	0.0067	P	1.7
7	☐	1000.000	989.539	35800.40	0.0130	P	1.7
8	☐			65.44	0.0000	P	13.5

$$y = 1.3119\text{E-}005 * x + 1.8830\text{E-}005$$

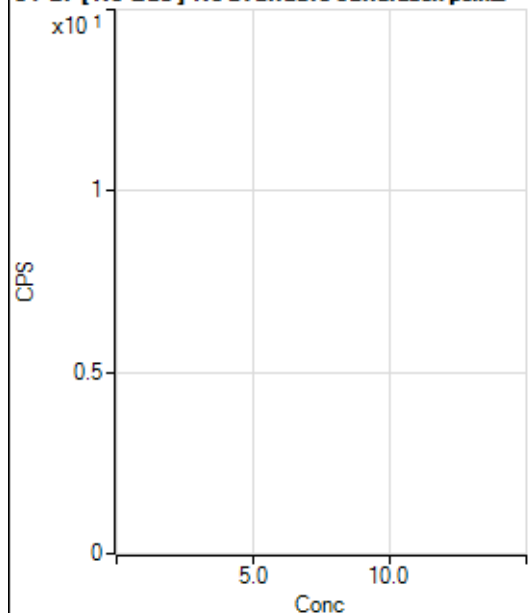
$$R = 0.9998$$

$$DL = 1.395$$

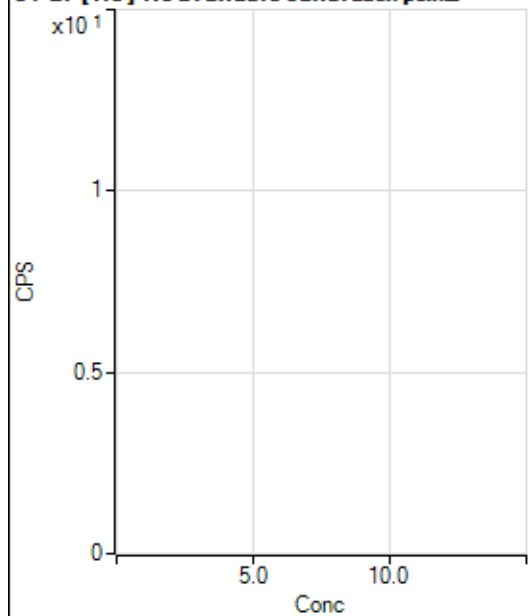
$$BEC = 1.435$$

Weight: <None>

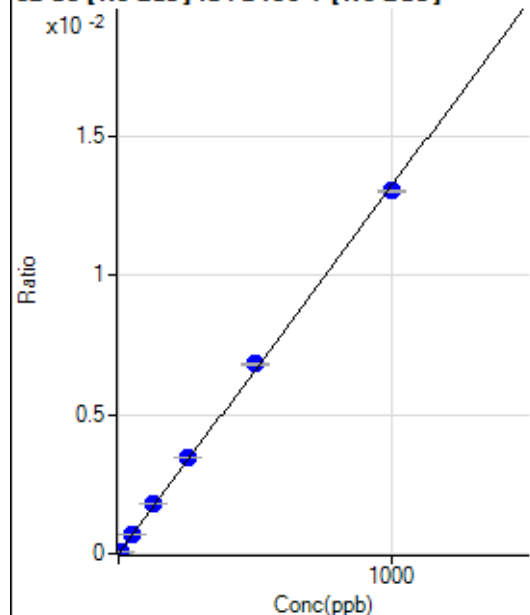
Min Conc: 0

81 Br [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			60753.33		P	1.4
2	☐			60883.57		P	3.0
3	☐			61312.94		P	0.5
4	☐			58066.49		P	1.3
5	☐			57453.22		P	0.6
6	☐			57707.90		P	0.2
7	☐			58960.57		P	1.5
8	☐			53604.30		P	1.6

81 Br [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			43.38		P	48.0
2	☐			46.71		P	12.4
3	☐			43.38		P	58.1
4	☐			60.06		P	0.0
5	☐			53.39		P	28.6
6	☐			46.71		P	53.9
7	☐			63.40		P	50.8
8	☐			56.73		P	62.0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-1.86	0.0000	P	-941.
2	☐	5.000	5.644	1925.54	0.0001	P	5.1
3	☐	50.000	53.080	17867.04	0.0007	P	0.9
4	☐	125.000	135.965	44292.99	0.0018	P	0.4
5	☐	250.000	262.718	87217.90	0.0035	P	0.3
6	☐	500.000	516.222	168774.60	0.0068	P	0.6
7	☐	1000.000	987.182	325396.16	0.0130	P	0.5
8	☐			303.02	0.0000	P	23.7

$$y = 1.3215E-005 * x - 7.6653E-008$$

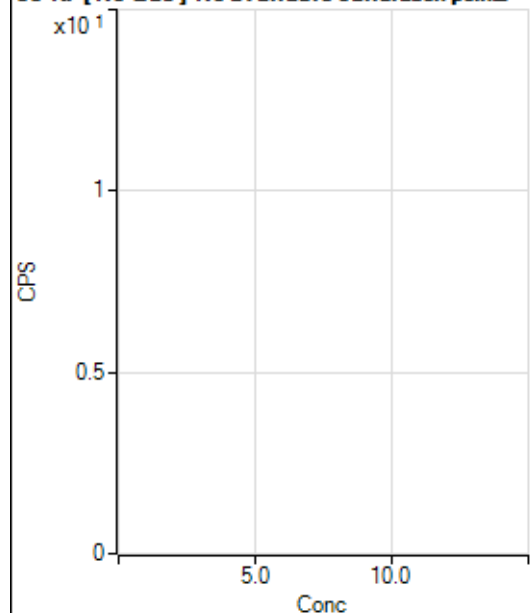
$$R = 0.9997$$

$$DL = 0.1638$$

$$BEC = -0.005801$$

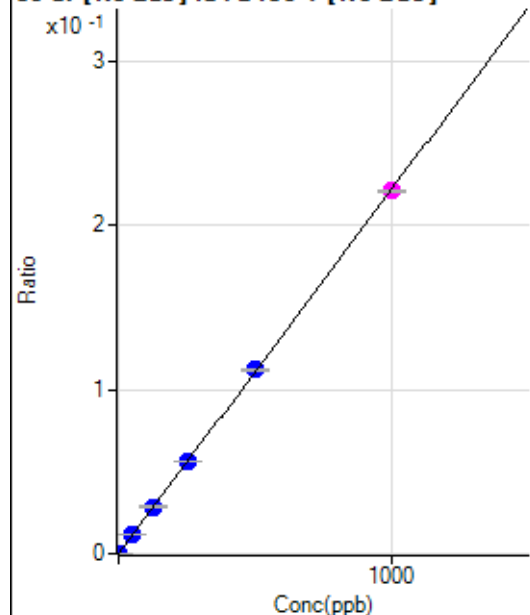
Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			372.23		P	5.8
2	☐			391.12		P	4.3
3	☐			443.35		P	12.1
4	☐			401.12		P	8.2
5	☐			340.01		P	17.3
6	☐			428.90		P	7.8
7	☐			446.68		P	2.0
8	☐			478.90		P	11.1

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	558.37	0.0000	P	11.7
2	☐	1.000	0.981	6187.72	0.0002	P	3.6
3	☐	50.000	50.761	287171.85	0.0113	P	1.5
4	☐	125.000	129.181	706432.61	0.0287	P	1.2
5	☐	250.000	252.743	1407964.60	0.0560	P	0.7
6	☐	500.000	505.188	2770954.88	0.1120	P	0.9
7	☐	1000.000	996.160	5508263.80	0.2208	M	0.4
8	☐			11766.40	0.0005	P	1.9

$$y = 2.2166\text{E-}004 * x + 2.1876\text{E-}005$$

$$R = 1.0000$$

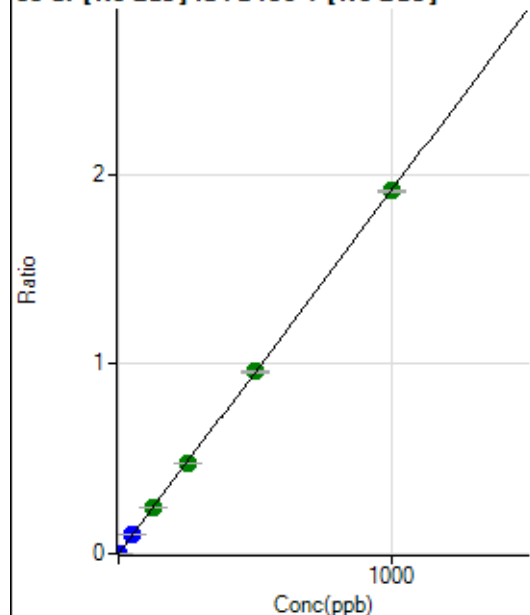
$$DL = 0.03478$$

$$BEC = 0.09869$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	211.12	0.0000	P	32.5
2	☐	1.000	1.007	50043.62	0.0019	P	2.7
3	☐	50.000	51.226	2497060.58	0.0980	P	1.5
4	☐	125.000	128.292	6052049.22	0.2455	A	1.0
5	☐	250.000	249.458	11992162.85	0.4773	A	0.5
6	☐	500.000	501.884	23759789.07	0.9604	A	1.3
7	☐	1000.000	998.721	47670280.23	1.9111	A	0.2
8	☐			95698.70	0.0042	P	0.9

$$y = 0.0019 * x + 8.2855\text{E-}006$$

$$R = 1.0000$$

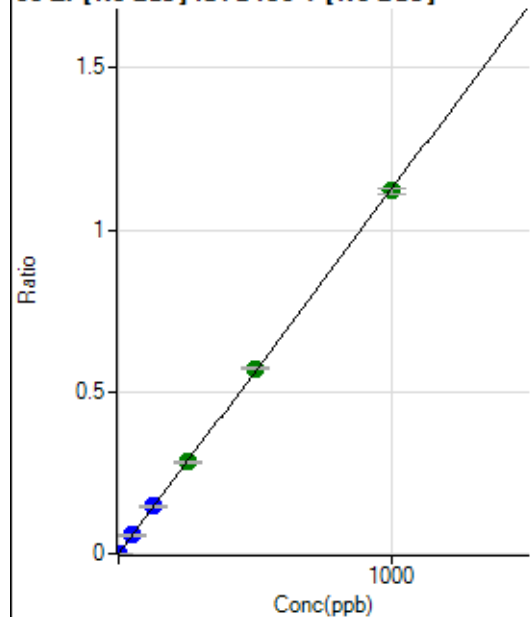
$$DL = 0.004218$$

$$BEC = 0.00433$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1614.05	0.0001	P	2.5
2	☐	1.000	0.801	24925.38	0.0010	P	4.5
3	☐	50.000	50.265	1442140.67	0.0566	P	1.3
4	☐	125.000	129.227	3585623.43	0.1455	P	1.3
5	☐	250.000	251.217	7102067.08	0.2827	A	0.7
6	☐	500.000	507.974	14141158.13	0.5716	A	0.5
7	☐	1000.000	995.167	27927071.11	1.1197	A	1.6
8	☐			11107.57	0.0005	P	8.4

$$y = 0.0011 * x + 6.3240E-005$$

$$R = 0.9999$$

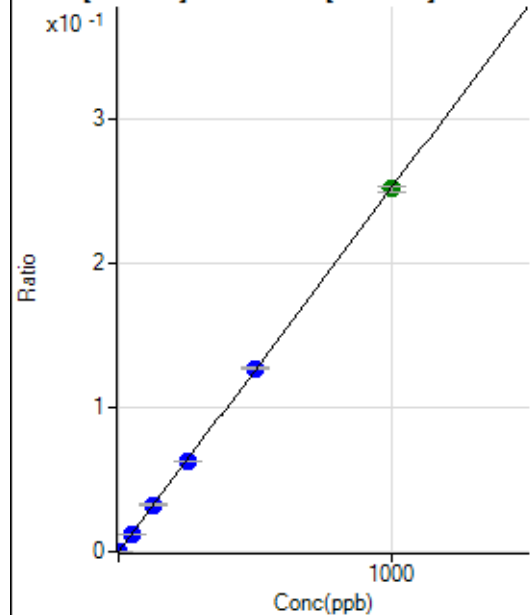
$$DL = 0.004251$$

$$BEC = 0.05621$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	313.91	0.0000	P	10.2
2	☐	1.000	0.815	5634.66	0.0002	P	3.9
3	☐	50.000	49.766	320248.14	0.0126	P	1.6
4	☐	125.000	128.823	801777.93	0.0325	P	1.6
5	☐	250.000	250.161	1586483.20	0.0631	P	0.6
6	☐	500.000	503.703	3145512.77	0.1271	P	0.6
7	☐	1000.000	997.642	6280430.56	0.2518	A	1.3
8	☐			2594.80	0.0001	P	2.5

$$y = 2.5238E-004 * x + 1.2301E-005$$

$$R = 1.0000$$

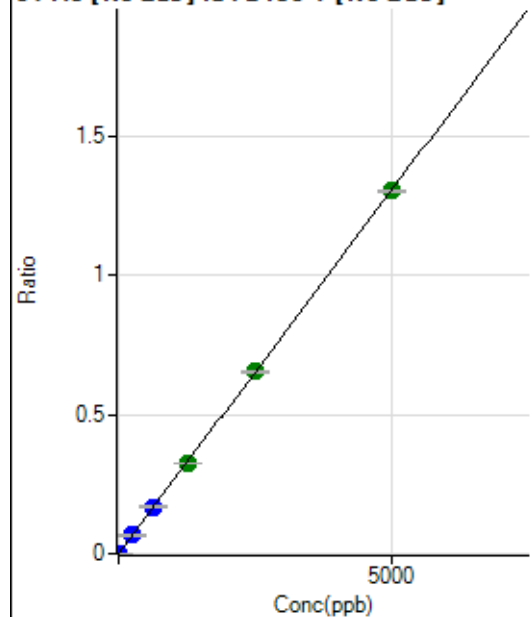
$$DL = 0.01491$$

$$BEC = 0.04874$$

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	630.60	0.0000	P	12.2
2	☐	5.000	4.816	33120.03	0.0013	P	1.8
3	☐	250.000	252.474	1677945.17	0.0659	P	1.5
4	☐	625.000	646.828	4159372.66	0.1687	P	1.1
5	☐	1250.000	1247.010	8171430.31	0.3253	A	0.2
6	☐	2500.000	2511.595	16206860.08	0.6551	A	1.2
7	☐	5000.000	4992.098	32476429.55	1.3020	A	0.6
8	☐			25826.95	0.0011	P	3.0

$$y = 2.6081E-004 * x + 2.4700E-005$$

$$R = 1.0000$$

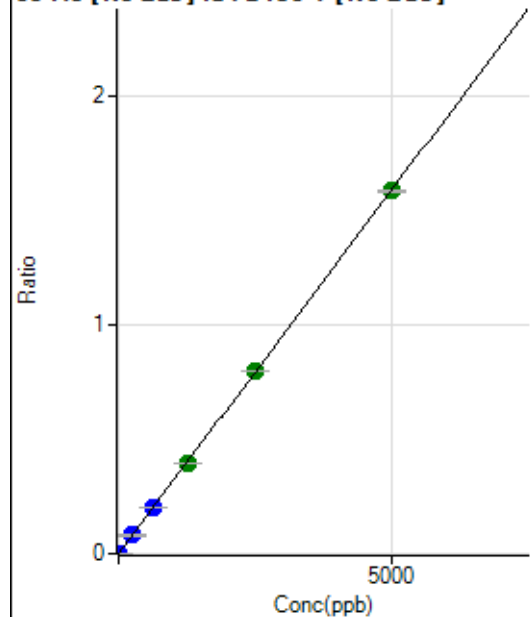
$$DL = 0.03466$$

$$BEC = 0.0947$$

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	69.45	0.0000	P	70.3
2	☐	5.000	5.279	43400.29	0.0017	P	1.4
3	☐	250.000	252.124	2038958.03	0.0800	P	0.9
4	☐	625.000	641.925	5023828.50	0.2038	P	1.3
5	☐	1250.000	1244.020	9921495.19	0.3949	A	0.1
6	☐	2500.000	2516.222	19762878.92	0.7988	A	0.4
7	☐	5000.000	4991.162	39521102.97	1.5845	A	0.8
8	☐			36820.67	0.0016	P	0.7

$$y = 3.1745E-004 * x + 2.7231E-006$$

$$R = 1.0000$$

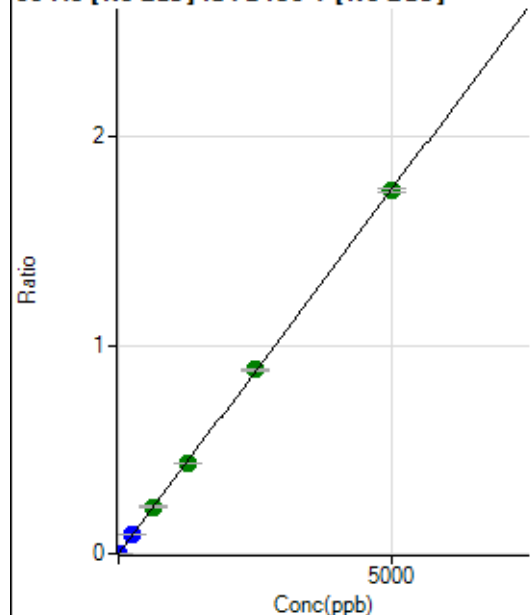
$$DL = 0.0181$$

$$BEC = 0.008578$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	261.12	0.0000	P	26.4
2	☐	5.000	5.192	47215.25	0.0018	P	1.8
3	☐	250.000	255.041	2272415.83	0.0892	P	1.3
4	☐	625.000	646.567	5575110.19	0.2261	A	0.6
5	☐	1250.000	1248.620	10971051.72	0.4367	A	0.6
6	☐	2500.000	2530.623	21897147.02	0.8851	A	1.0
7	☐	5000.000	4982.086	43460655.83	1.7425	A	1.2
8	☐			61073.47	0.0027	P	3.2

$$y = 3.4974\text{E-}004 * x + 1.0219\text{E-}005$$

$$R = 1.0000$$

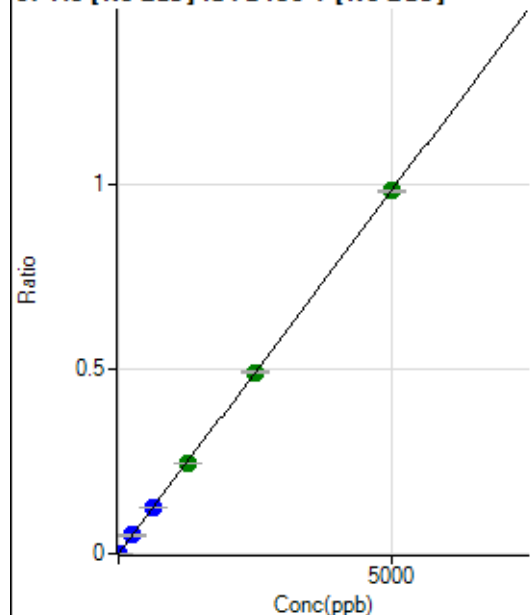
$$DL = 0.02313$$

$$BEC = 0.02922$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	43.9
2	☐	5.000	5.157	26330.84	0.0010	P	4.1
3	☐	250.000	252.833	1268849.14	0.0498	P	1.4
4	☐	625.000	643.987	3127792.74	0.1269	P	0.6
5	☐	1250.000	1248.375	6178795.36	0.2459	A	0.6
6	☐	2500.000	2497.039	12170634.47	0.4919	A	1.1
7	☐	5000.000	4999.372	24567046.55	0.9849	A	0.5
8	☐			22913.54	0.0010	P	0.6

$$y = 1.9701\text{E-}004 * x + 1.9583\text{E-}006$$

$$R = 1.0000$$

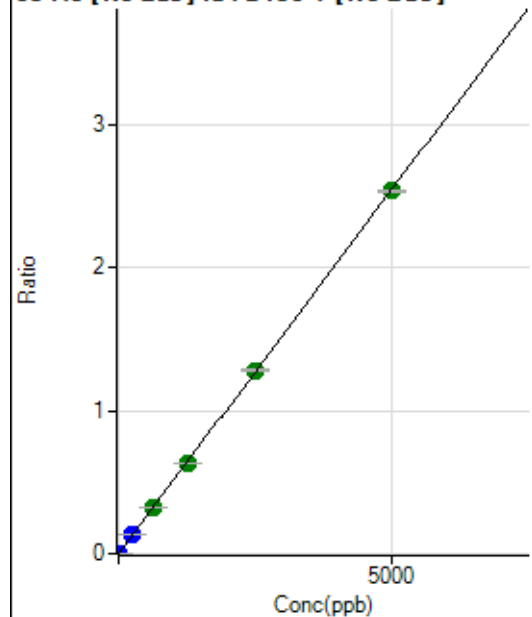
$$DL = 0.01309$$

$$BEC = 0.00994$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	111.12	0.0000	P	57.6
2	☐	5.000	5.241	68956.41	0.0027	P	1.9
3	☐	250.000	252.359	3265845.97	0.1282	P	0.9
4	☐	625.000	640.144	8016979.95	0.3252	A	0.7
5	☐	1250.000	1250.768	15962964.25	0.6354	A	0.1
6	☐	2500.000	2522.794	31708167.38	1.2816	A	0.2
7	☐	5000.000	4986.399	63183105.58	2.5331	A	0.8
8	☐			57452.90	0.0025	P	1.2

$$y = 5.0800\text{E-}004 * x + 4.3669\text{E-}006$$

$$R = 1.0000$$

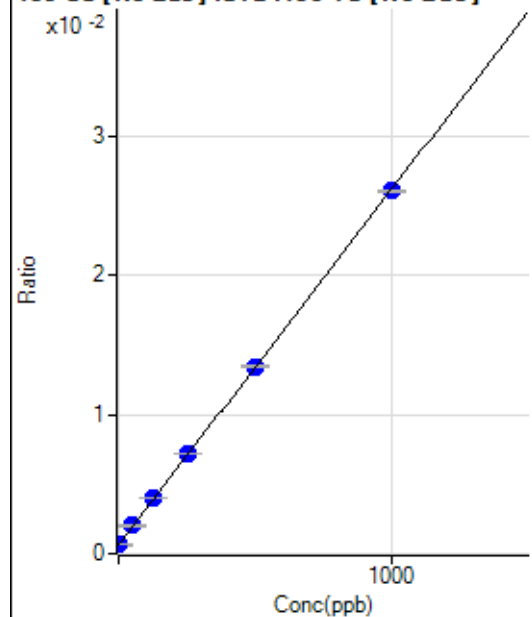
$$DL = 0.01485$$

$$BEC = 0.008596$$

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	13423.61	0.0006	P	2.3
2	☐	1.000	1.873	14293.91	0.0007	P	0.4
3	☐	50.000	54.259	42127.73	0.0020	P	1.4
4	☐	125.000	133.063	82462.60	0.0040	P	1.3
5	☐	250.000	256.330	150138.90	0.0072	P	1.6
6	☐	500.000	502.673	277972.80	0.0135	P	1.2
7	☐	1000.000	995.860	534548.91	0.0261	P	0.3
8	☐			12391.99	0.0007	P	3.6

$$y = 2.5557\text{E-}005 * x + 6.2398\text{E-}004$$

$$R = 1.0000$$

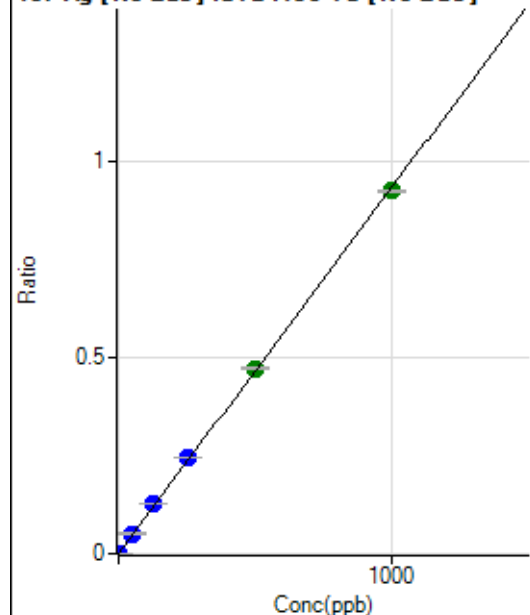
$$DL = 1.664$$

$$BEC = 24.42$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	198.02	0.0000	P	18.3
2	☐	1.000	1.100	21989.57	0.0010	P	1.0
3	☐	50.000	55.150	1075761.41	0.0514	P	2.9
4	☐	125.000	137.217	2617934.34	0.1278	P	0.9
5	☐	250.000	261.769	5100641.62	0.2437	P	0.3
6	☐	500.000	507.110	9743802.71	0.4722	A	1.0
7	☐	1000.000	991.718	18930320.46	0.9234	A	0.4
8	☐			4983.94	0.0003	P	3.5

$$y = 9.3111\text{E-}004 * x + 9.1991\text{E-}006$$

$$R = 0.9998$$

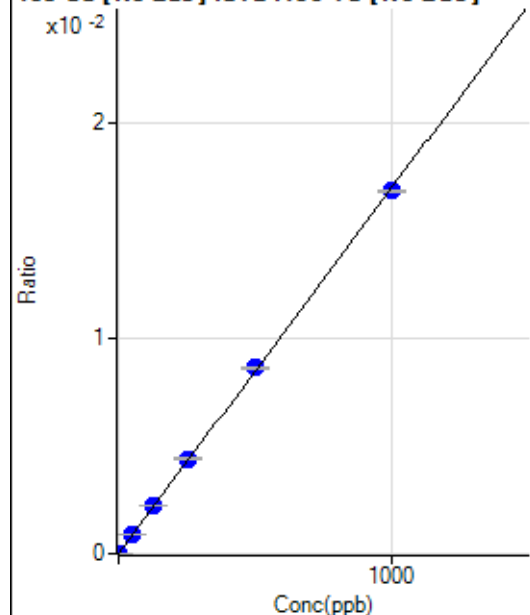
$$DL = 0.005417$$

$$BEC = 0.00988$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	36.11	0.0000	P	23.5
2	☐	1.000	0.811	327.79	0.0000	P	9.1
3	☐	50.000	53.533	19036.69	0.0009	P	3.3
4	☐	125.000	132.667	46099.92	0.0023	P	1.4
5	☐	250.000	259.217	91968.33	0.0044	P	1.2
6	☐	500.000	508.141	177740.89	0.0086	P	1.4
7	☐	1000.000	992.490	344866.57	0.0168	P	0.2
8	☐			158.34	0.0000	P	11.3

$$y = 1.6948\text{E-}005 * x + 1.6776\text{E-}006$$

$$R = 0.9999$$

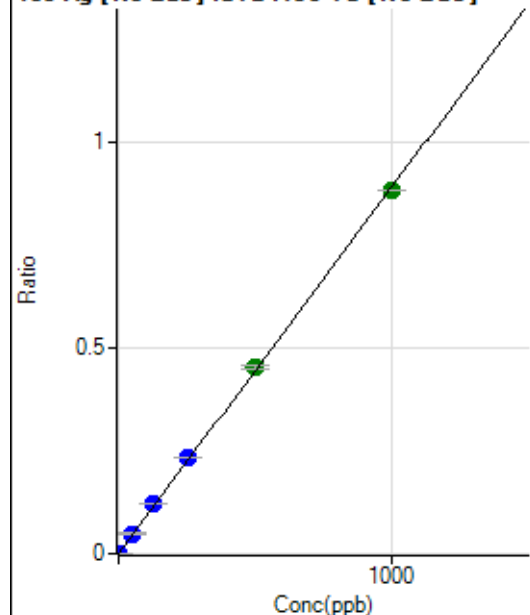
$$DL = 0.06987$$

$$BEC = 0.09899$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	16.0
2	☐	1.000	1.117	21238.98	0.0010	P	3.3
3	☐	50.000	54.792	1023499.46	0.0489	P	1.8
4	☐	125.000	136.334	2490449.81	0.1216	P	1.3
5	☐	250.000	262.176	4891629.32	0.2338	P	0.8
6	☐	500.000	509.078	9366179.72	0.4539	A	1.4
7	☐	1000.000	990.761	18109636.00	0.8834	A	0.2
8	☐			4903.87	0.0003	P	1.8

$$y = 8.9160\text{E-}004 * x + 2.3229\text{E-}006$$

$$R = 0.9998$$

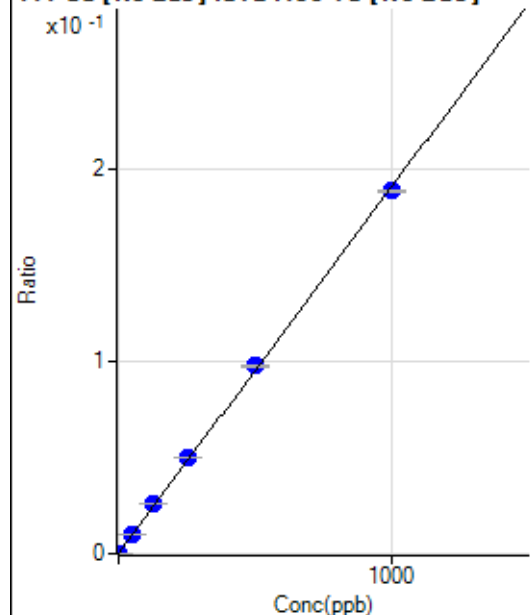
$$DL = 0.001251$$

$$BEC = 0.002605$$

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	2686.95	0.0001	P	2.5
2	☐	1.000	1.065	6974.27	0.0003	P	0.9
3	☐	50.000	53.590	216478.05	0.0103	P	2.2
4	☐	125.000	135.261	530454.99	0.0259	P	1.9
5	☐	250.000	260.924	1042781.37	0.0498	P	0.9
6	☐	500.000	512.081	2015596.30	0.0977	P	1.4
7	☐	1000.000	989.766	3868026.79	0.1887	P	0.6
8	☐			3499.86	0.0002	P	5.5

$$y = 1.9050\text{E-}004 * x + 1.2490\text{E-}004$$

$$R = 0.9998$$

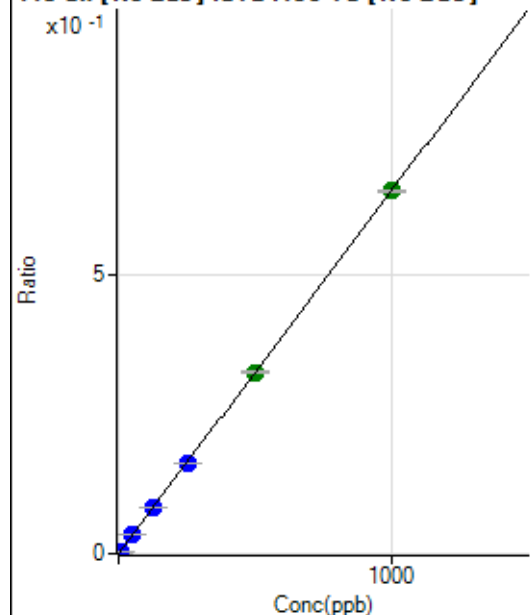
$$DL = 0.04939$$

$$BEC = 0.6556$$

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	1033.42	0.0000	P	11.0
2	☐	5.000	5.085	71275.76	0.0034	P	1.6
3	☐	50.000	51.366	699813.60	0.0334	P	3.0
4	☐	125.000	128.310	1708513.43	0.0834	P	1.0
5	☐	250.000	251.194	3415271.74	0.1632	P	0.3
6	☐	500.000	499.070	6690201.76	0.3242	A	1.0
7	☐	1000.000	999.684	13312371.57	0.6494	A	0.3
8	☐			15609.33	0.0009	P	3.2

$$y = 6.4952E-004 * x + 4.8060E-005$$

$$R = 1.0000$$

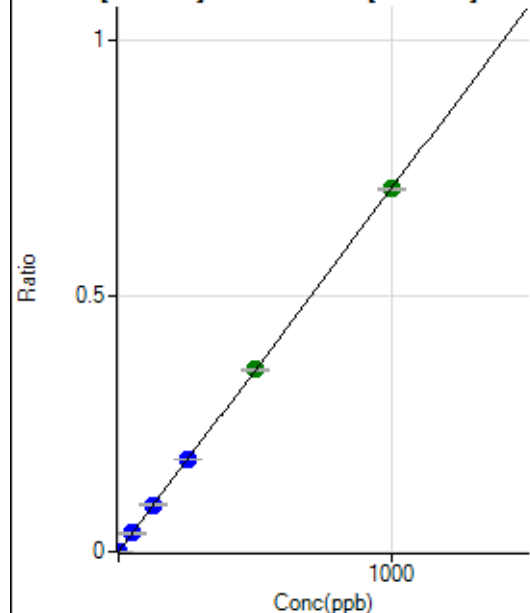
$$DL = 0.02441$$

$$BEC = 0.07399$$

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	147.23	0.0000	P	16.2
2	☐	2.000	1.970	29854.82	0.0014	P	1.1
3	☐	50.000	50.782	754297.59	0.0360	P	2.4
4	☐	125.000	128.898	1872432.85	0.0914	P	1.3
5	☐	250.000	252.415	3744963.80	0.1790	P	0.3
6	☐	500.000	500.403	7320713.88	0.3548	A	1.6
7	☐	1000.000	998.668	14515027.24	0.7080	A	0.4
8	☐			20629.72	0.0011	P	8.4

$$y = 7.0896E-004 * x + 6.8439E-006$$

$$R = 1.0000$$

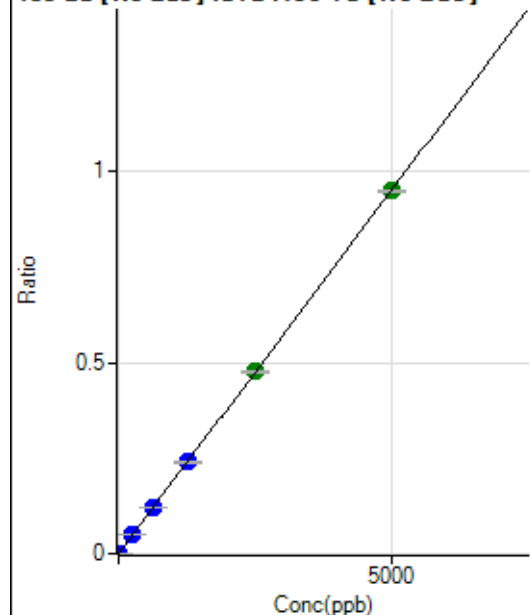
$$DL = 0.004701$$

$$BEC = 0.009653$$

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	55.56	0.0000	P	22.5
2	☐	10.000	10.247	41490.78	0.0020	P	2.1
3	☐	250.000	257.272	1024396.91	0.0489	P	2.8
4	☐	625.000	644.672	2510940.36	0.1225	P	0.8
5	☐	1250.000	1259.580	5010414.35	0.2394	P	0.8
6	☐	2500.000	2502.975	9817994.92	0.4758	A	1.4
7	☐	5000.000	4993.294	19458457.38	0.9492	A	0.6
8	☐			34947.73	0.0019	P	1.0

$$y = 1.9009\text{E-}004 * x + 2.5809\text{E-}006$$

$$R = 1.0000$$

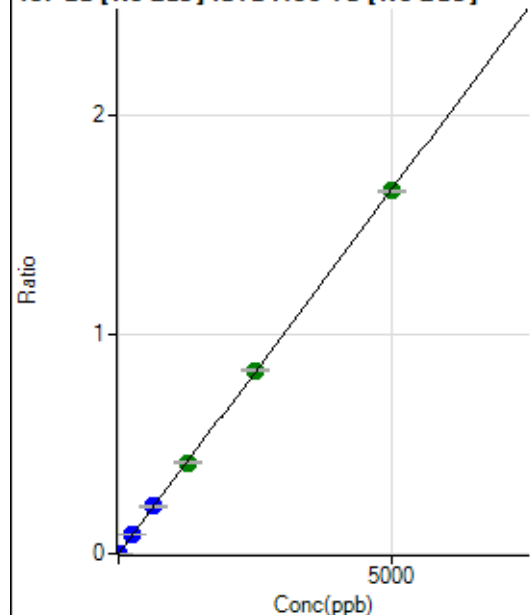
$$DL = 0.009161$$

$$BEC = 0.01358$$

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	80.56	0.0000	P	36.0
2	☐	10.000	10.320	72853.14	0.0034	P	1.7
3	☐	250.000	257.145	1785760.35	0.0852	P	2.2
4	☐	625.000	650.944	4421045.28	0.2158	P	1.4
5	☐	1250.000	1254.732	8704045.51	0.4159	A	1.0
6	☐	2500.000	2515.402	17207290.32	0.8339	A	0.9
7	☐	5000.000	4987.515	33895103.19	1.6534	A	0.2
8	☐			61687.67	0.0034	P	2.1

$$y = 3.3150\text{E-}004 * x + 3.7409\text{E-}006$$

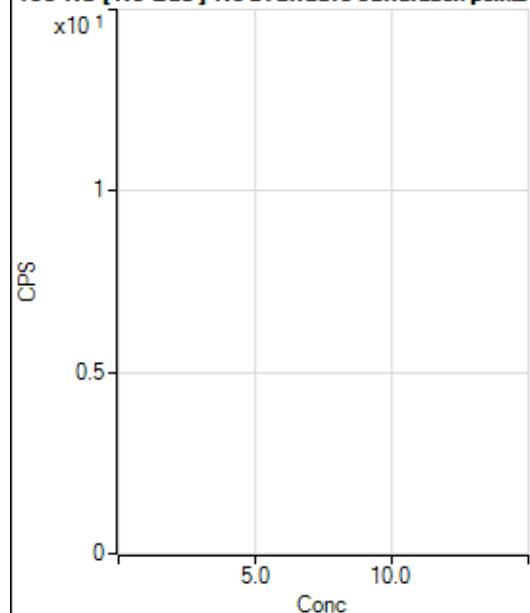
$$R = 1.0000$$

$$DL = 0.0122$$

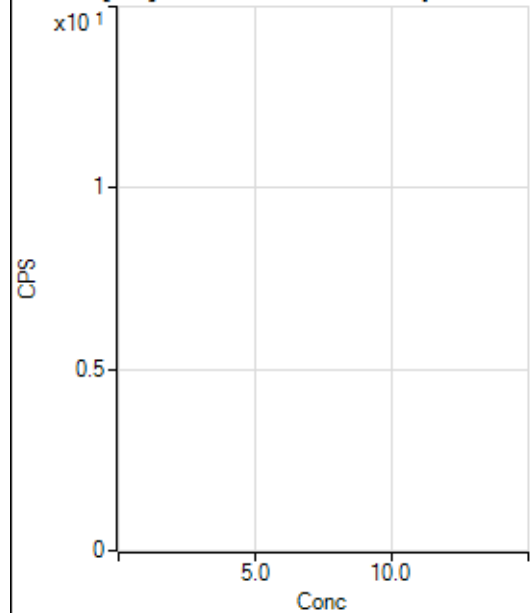
$$BEC = 0.01128$$

Weight: <None>

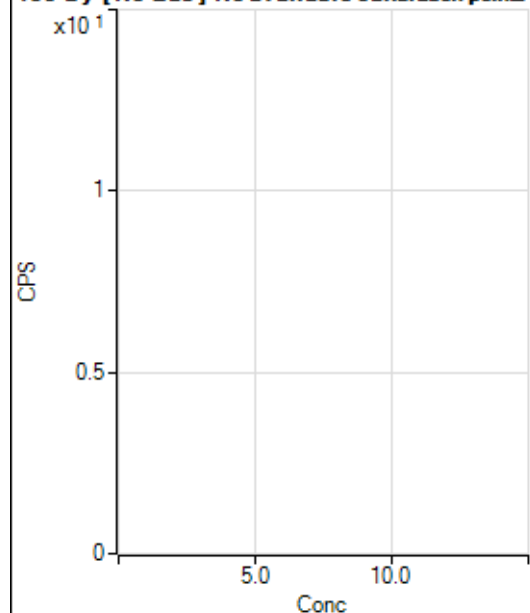
Min Conc: 0

150 Nd [No Gas] No available calibration points

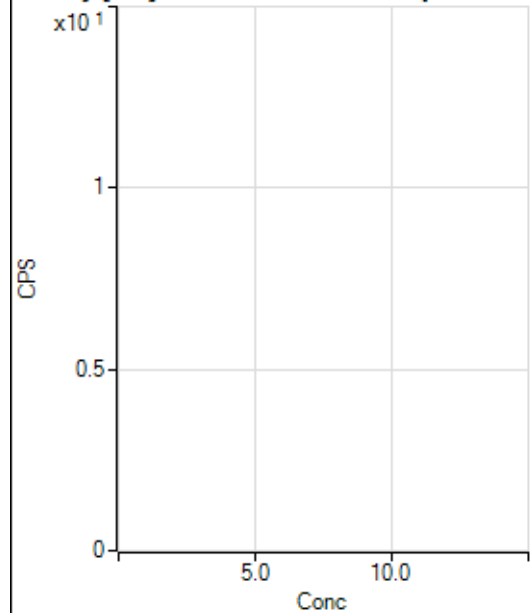
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	114.5
2	☐			22.22		P	96.4
3	☐			173.34		P	3.8
4	☐			404.46		P	14.8
5	☐			700.04		P	4.2
6	☐			1486.81		P	6.2
7	☐			2909.31		P	5.0
8	☐			208.90		P	21.2

150 Nd [He] No available calibration points

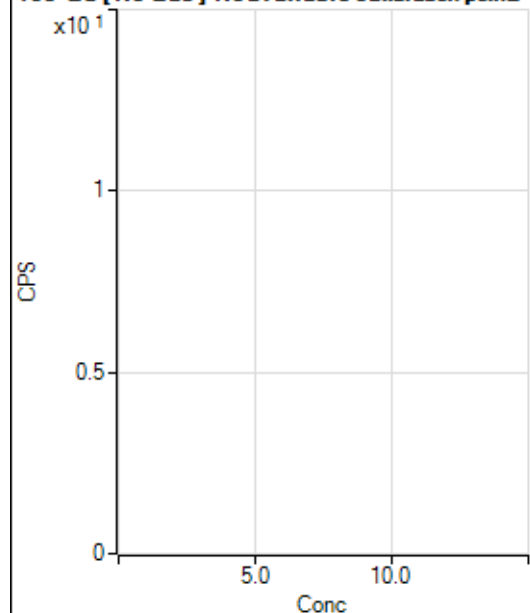
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.2
2	☐			0.00		P	
3	☐			13.33		P	50.0
4	☐			22.22		P	48.2
5	☐			46.67		P	12.4
6	☐			87.78		P	12.2
7	☐			187.78		P	10.4
8	☐			61.11		P	47.7

156 Dy [No Gas] No available calibration points

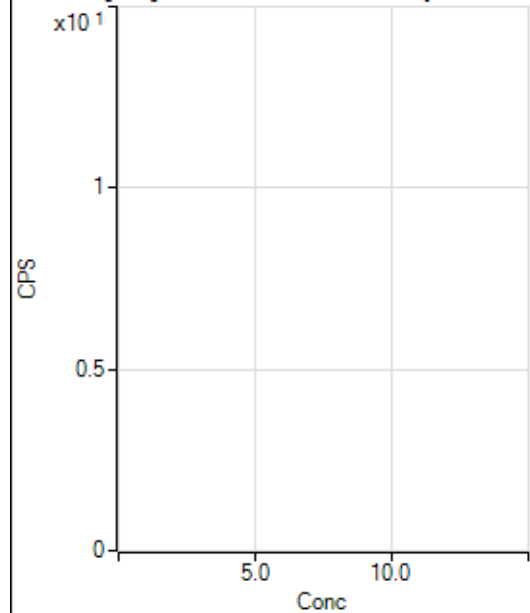
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			41.67		P	20.0
2	☐			55.56		P	45.8
3	☐			80.56		P	15.8
4	☐			113.90		P	16.9
5	☐			155.56		P	3.1
6	☐			352.80		P	13.0
7	☐			636.15		P	16.8
8	☐			1000.08		P	8.7

156 Dy [He] No available calibration points

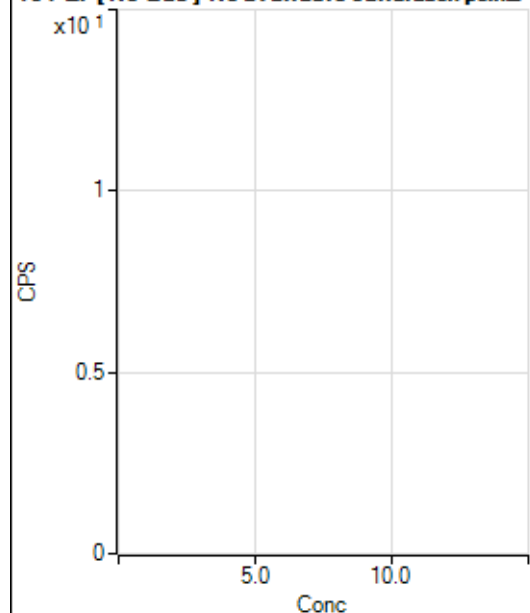
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			14.44		P	13.4
2	☐			17.78		P	65.8
3	☐			43.33		P	33.5
4	☐			75.56		P	6.7
5	☐			138.89		P	9.7
6	☐			190.01		P	7.0
7	☐			400.01		P	14.7
8	☐			478.90		P	10.3

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

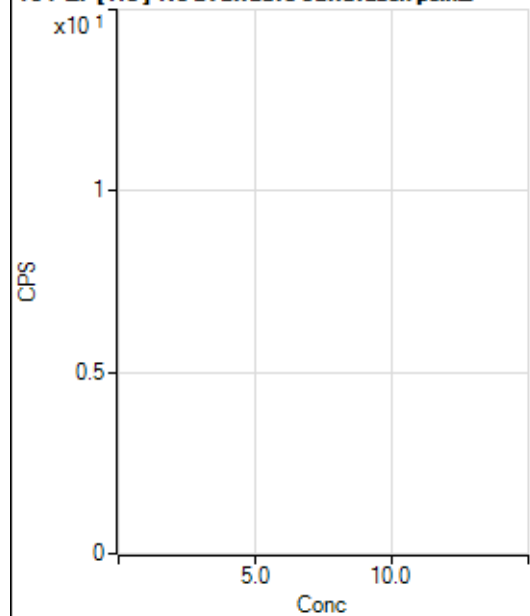
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			116.67		P	18.9
2	☐			116.67		P	18.9
3	☐			136.12		P	43.4
4	☐			147.23		P	22.9
5	☐			230.57		P	29.4
6	☐			255.57		P	29.4
7	☐			377.80		P	8.9
8	☐			1225.12		P	5.1

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			311.12		P	5.3
2	☐			281.12		P	5.5
3	☐			306.68		P	17.1
4	☐			314.45		P	15.3
5	☐			314.45		P	11.9
6	☐			343.35		P	14.0
7	☐			371.12		P	10.8
8	☐			774.48		P	3.7

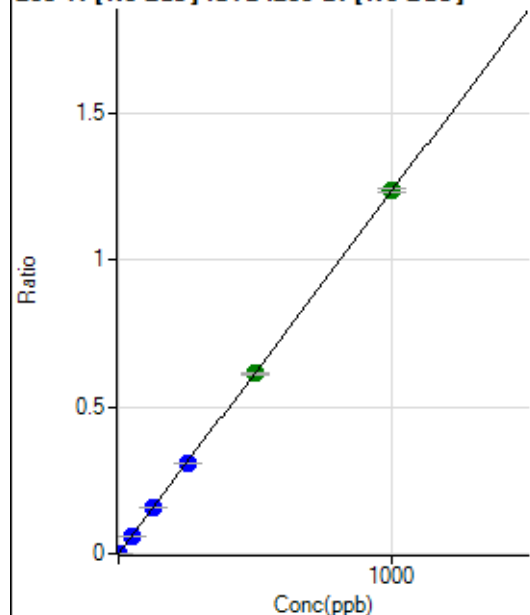
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			86.11		P	63.0
2	☐			77.78		P	22.3
3	☐			133.34		P	18.7
4	☐			97.23		P	27.6
5	☐			116.67		P	28.6
6	☐			133.34		P	22.5
7	☐			119.45		P	10.7
8	☐			194.45		P	24.4

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			56.67		P	35.8
2	☐			41.11		P	16.9
3	☐			37.78		P	20.4
4	☐			48.89		P	14.2
5	☐			50.00		P	0.0
6	☐			61.11		P	37.1
7	☐			63.33		P	5.3
8	☐			100.00		P	17.3

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	211.12	0.0000	P	10.1
2	☐	1.000	0.943	15220.37	0.0012	P	2.4
3	☐	50.000	49.124	765645.61	0.0606	P	0.9
4	☐	125.000	125.693	1889656.05	0.1549	P	0.2
5	☐	250.000	250.497	3769012.58	0.3087	P	0.6
6	☐	500.000	496.649	7335163.79	0.6120	A	1.0
7	☐	1000.000	1001.508	14280234.52	1.2341	A	1.0
8	☐			4245.31	0.0005	P	5.9

$$y = 0.0012 * x + 1.6229E-005$$

$$R = 1.0000$$

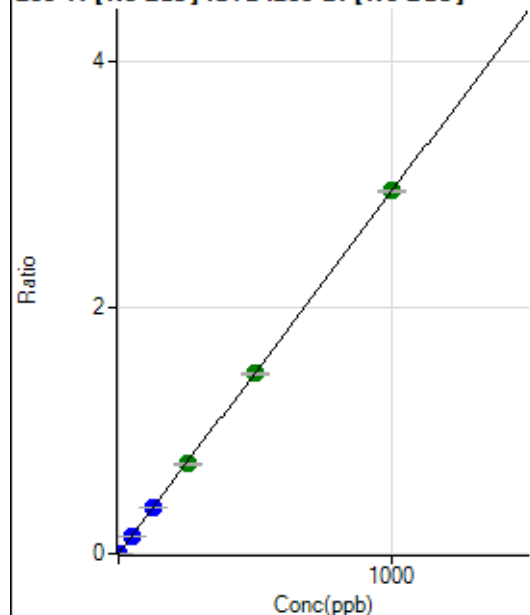
$$DL = 0.004003$$

$$BEC = 0.01317$$

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	605.60	0.0000	P	18.0
2	☐	1.000	0.960	37041.62	0.0029	P	2.3
3	☐	50.000	49.521	1841448.41	0.1456	P	1.9
4	☐	125.000	126.160	4525558.48	0.3710	P	0.4
5	☐	250.000	248.444	8918990.74	0.7305	A	1.3
6	☐	500.000	497.113	17518352.13	1.4616	A	0.9
7	☐	1000.000	1001.711	34077829.93	2.9452	A	0.7
8	☐			10435.09	0.0011	P	3.4

$$y = 0.0029 * x + 4.6724E-005$$

$$R = 1.0000$$

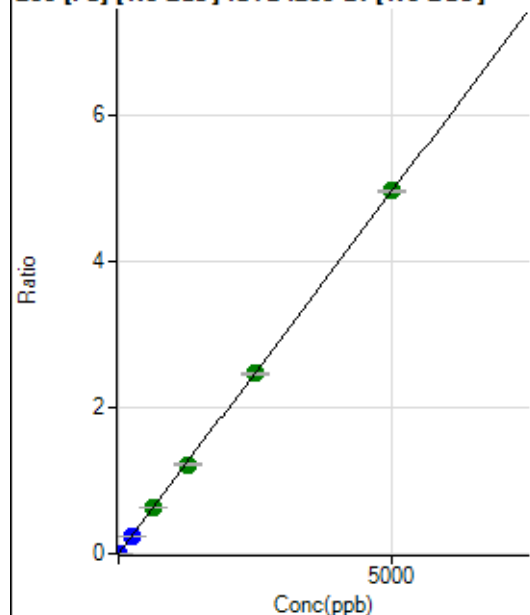
$$DL = 0.008596$$

$$BEC = 0.01589$$

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	577.81	0.0000	P	3.6
2	☐	1.000	0.977	13088.25	0.0010	P	2.3
3	☐	250.000	248.086	3112858.95	0.2462	P	1.7
4	☐	625.000	624.539	7559849.01	0.6197	A	0.0
5	☐	1250.000	1232.151	14927178.00	1.2226	A	0.7
6	☐	2500.000	2485.760	29560700.43	2.4664	A	1.2
7	☐	5000.000	5011.735	57539579.53	4.9727	A	0.2
8	☐			51605.98	0.0056	P	1.0

$$y = 9.9221\text{E-}004 * x + 4.4465\text{E-}005$$

$$R = 1.0000$$

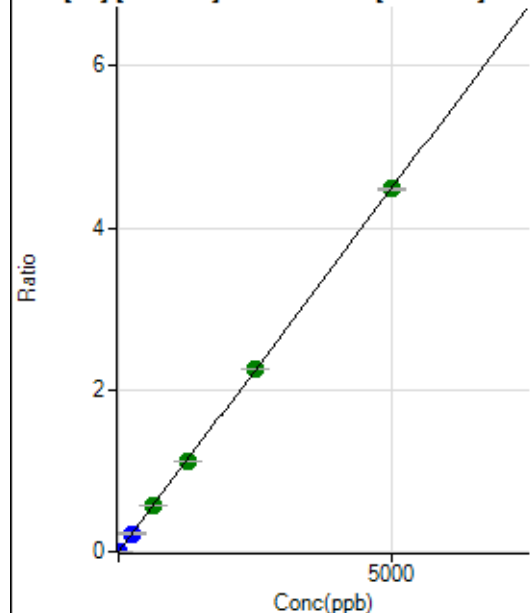
$$DL = 0.004877$$

$$BEC = 0.04481$$

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	524.10	0.0000	P	8.1
2	☐	1.000	0.948	11501.56	0.0009	P	6.3
3	☐	250.000	249.691	2832631.95	0.2240	P	1.4
4	☐	625.000	628.930	6883020.35	0.5642	A	0.2
5	☐	1250.000	1248.002	13669504.13	1.1196	A	0.9
6	☐	2500.000	2514.409	27035089.03	2.2556	A	0.3
7	☐	5000.000	4992.819	51824893.75	4.4789	A	0.7
8	☐			46563.51	0.0050	P	2.2

$$y = 8.9707\text{E-}004 * x + 4.0299\text{E-}005$$

$$R = 1.0000$$

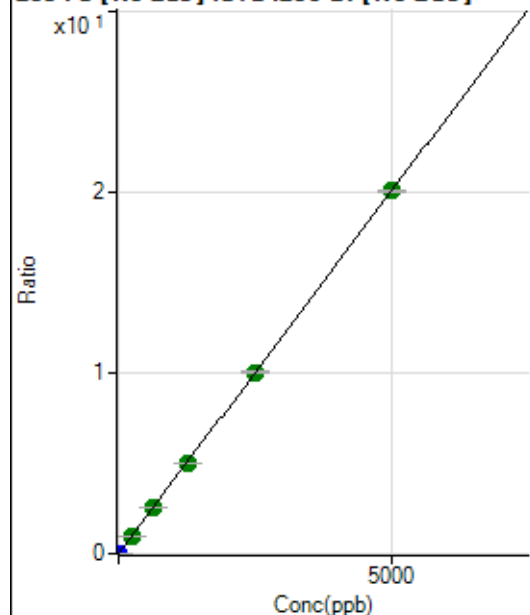
$$DL = 0.01095$$

$$BEC = 0.04492$$

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	2333.49	0.0002	P	2.2
2	☐	1.000	0.972	52701.59	0.0041	P	2.3
3	☐	250.000	246.925	12531504.30	0.9911	A	1.6
4	☐	625.000	625.288	30612718.56	2.5095	A	0.5
5	☐	1250.000	1245.837	61045888.87	4.9999	A	0.3
6	☐	2500.000	2499.247	120212478.8	10.0299	A	0.6
7	☐	5000.000	5001.535	232248543.6	20.0719	A	0.3
8	☐			209422.13	0.0225	P	1.0

$$y = 0.0040 * x + 1.7965E-004$$

$$R = 1.0000$$

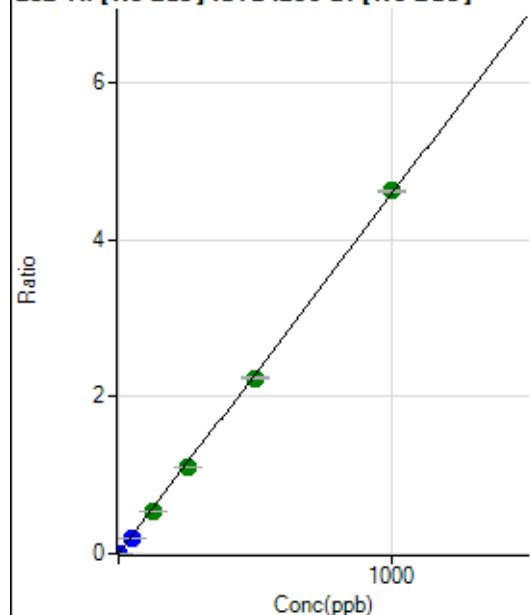
$$DL = 0.002967$$

$$BEC = 0.04477$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5403.13	0.0004	P	2.4
2	☐	1.000	0.676	45356.68	0.0035	P	5.0
3	☐	50.000	44.661	2592928.47	0.2051	P	1.4
4	☐	125.000	119.083	6661717.69	0.5461	A	0.6
5	☐	250.000	239.996	13432766.27	1.1002	A	0.3
6	☐	500.000	488.806	26850528.38	2.2403	A	0.9
7	☐	1000.000	1009.105	53510680.36	4.6245	A	0.7
8	☐			28711.67	0.0031	P	2.5

$$y = 0.0046 * x + 4.1577E-004$$

$$R = 0.9999$$

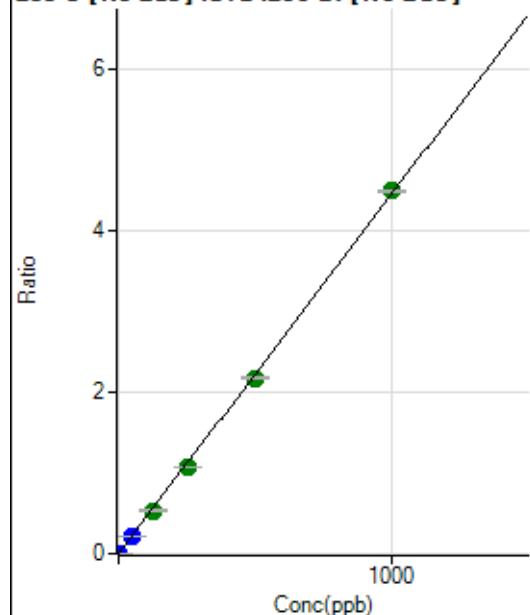
$$DL = 0.006523$$

$$BEC = 0.09073$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	75.00	0.0000	P	12.6
2	☐	1.000	0.875	50301.21	0.0039	P	3.7
3	☐	50.000	46.052	2589042.79	0.2048	P	1.4
4	☐	125.000	119.949	6505796.07	0.5333	A	0.7
5	☐	250.000	240.971	13081448.64	1.0714	A	0.8
6	☐	500.000	487.643	25985724.37	2.1682	A	1.2
7	☐	1000.000	1009.265	51923595.60	4.4875	A	0.5
8	☐			8416.99	0.0009	P	2.4

$$y = 0.0044 * x + 5.7804E-006$$

$$R = 0.9998$$

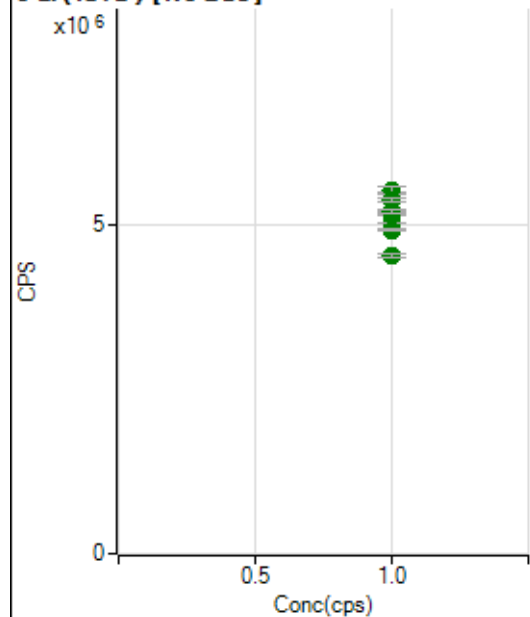
$$DL = 0.0004915$$

$$BEC = 0.0013$$

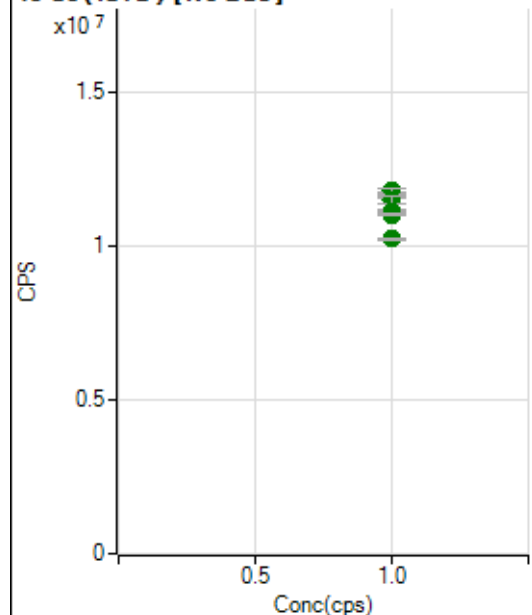
Weight: <None>

Min Conc: 0

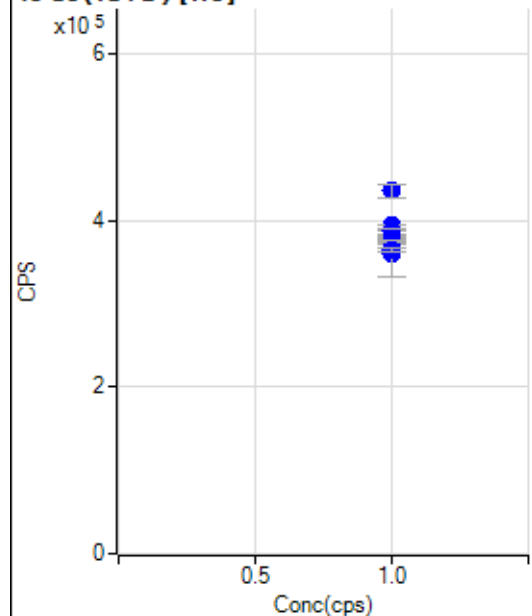
6 Li (ISTD) [No Gas]



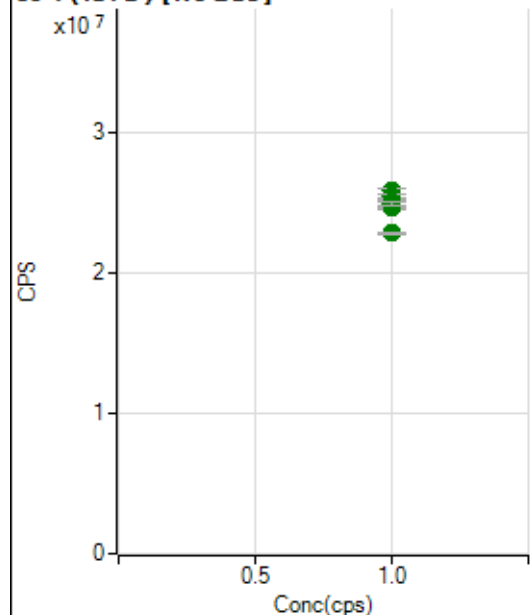
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		5475306.17		A	0.3
2	☐	1.000		5512815.54		A	2.2
3	☐	1.000		5367328.36		A	1.1
4	☐	1.000		5174724.37		A	1.4
5	☐	1.000		5198183.64		A	0.8
6	☐	1.000		5013396.97		A	0.1
7	☐	1.000		4923181.07		A	0.3
8	☐	1.000		4529878.13		A	0.7

45 Sc (ISTD) [No Gas]

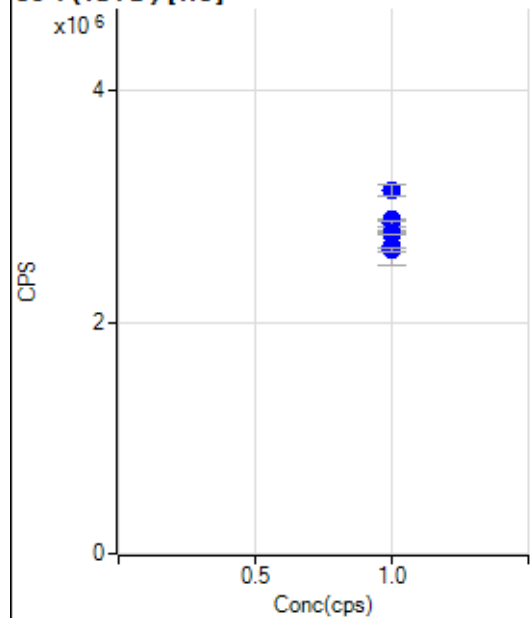
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11648071.22		A	1.5
2	☐	1.000		11786634.96		A	1.8
3	☐	1.000		11486035.39		A	2.3
4	☐	1.000		11130348.58		A	1.0
5	☐	1.000		11137929.42		A	0.7
6	☐	1.000		11073750.25		A	1.0
7	☐	1.000		11020814.14		A	0.5
8	☐	1.000		10235347.56		A	0.4

45 Sc (ISTD) [He]

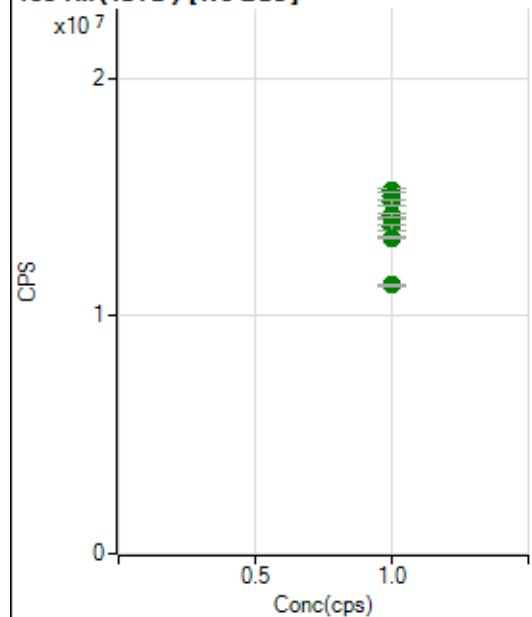
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		436172.37		P	3.8
2	☐	1.000		394833.86		P	0.2
3	☐	1.000		360579.55		P	15.6
4	☐	1.000		387261.15		P	1.2
5	☐	1.000		378935.25		P	1.1
6	☐	1.000		375885.82		P	1.6
7	☐	1.000		375797.57		P	0.6
8	☐	1.000		364762.11		P	1.1

89 Y (ISTD) [No Gas]

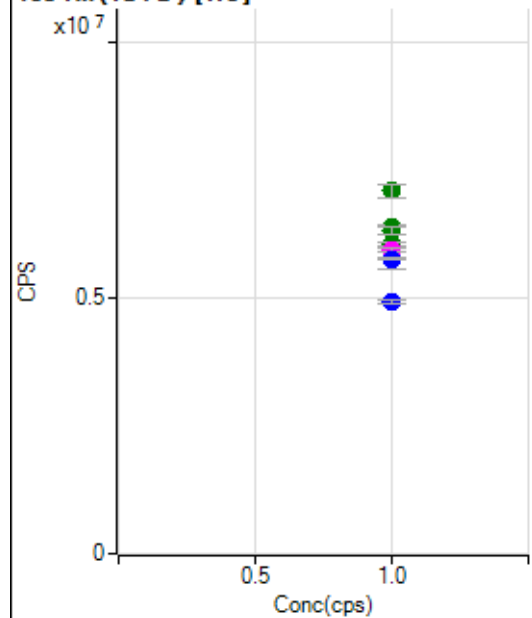
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		25522499.62		A	0.9
2	☐	1.000		25861626.56		A	1.8
3	☐	1.000		25476117.40		A	1.5
4	☐	1.000		24653171.30		A	0.7
5	☐	1.000		25122762.96		A	0.4
6	☐	1.000		24741445.74		A	0.6
7	☐	1.000		24944124.91		A	1.0
8	☐	1.000		22831876.33		A	0.6

89 Y (ISTD) [He]

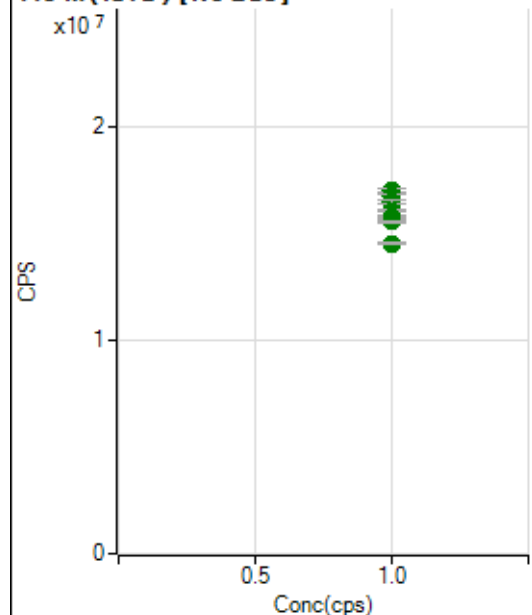
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3132362.52		P	3.4
2	☐	1.000		2881670.79		P	0.5
3	☐	1.000		2654126.11		P	12.4
4	☐	1.000		2851972.63		P	2.0
5	☐	1.000		2776498.50		P	1.5
6	☐	1.000		2763586.80		P	0.7
7	☐	1.000		2753664.65		P	0.2
8	☐	1.000		2619497.51		P	1.2

103 Rh (ISTD) [No Gas]

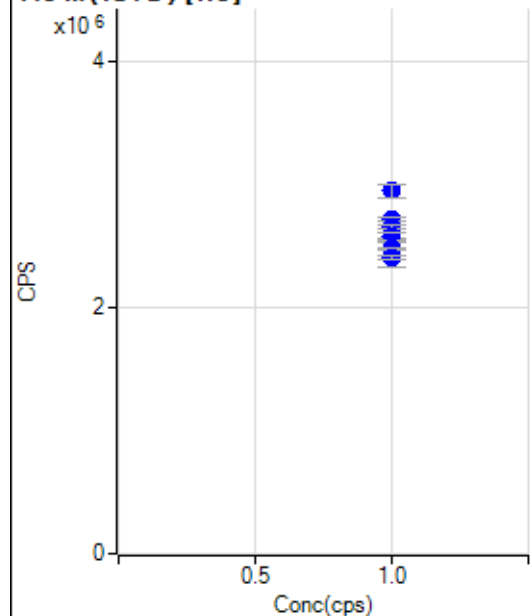
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		15262623.80		A	1.0
2	☐	1.000		15042703.11		A	2.3
3	☐	1.000		14777819.50		A	1.6
4	☐	1.000		14116525.62		A	0.8
5	☐	1.000		14230451.87		A	0.7
6	☐	1.000		13744117.16		A	1.7
7	☐	1.000		13303363.97		A	1.0
8	☐	1.000		11300931.36		A	0.7

103 Rh (ISTD) [He]

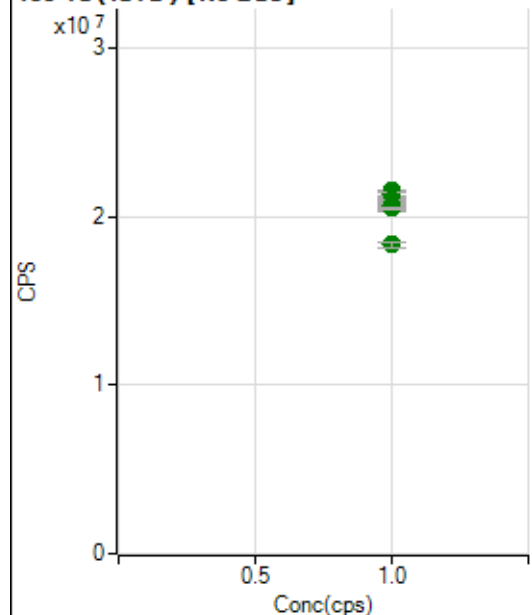
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7102280.17		A	3.9
2	☐	1.000		6408088.31		A	0.5
3	☐	1.000		5912656.72		A	12.0
4	☐	1.000		6327881.57		A	2.2
5	☐	1.000		6062737.97		A	1.1
6	☐	1.000		5949163.24		M	1.0
7	☐	1.000		5762819.92		P	0.6
8	☐	1.000		4927606.87		P	1.1

115 In (ISTD) [No Gas]

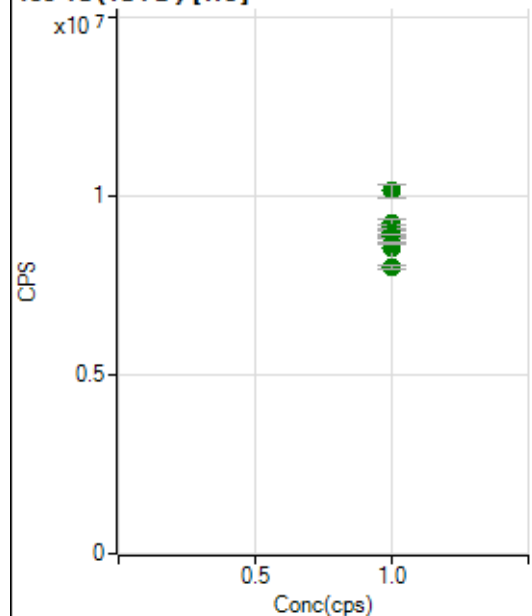
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16988059.33		A	1.0
2	☐	1.000		16716556.93		A	1.9
3	☐	1.000		16466658.18		A	1.3
4	☐	1.000		15819725.72		A	0.8
5	☐	1.000		16041722.05		A	0.6
6	☐	1.000		15714682.90		A	0.1
7	☐	1.000		15548943.43		A	0.5
8	☐	1.000		14533551.71		A	0.2

115 In (ISTD) [He]

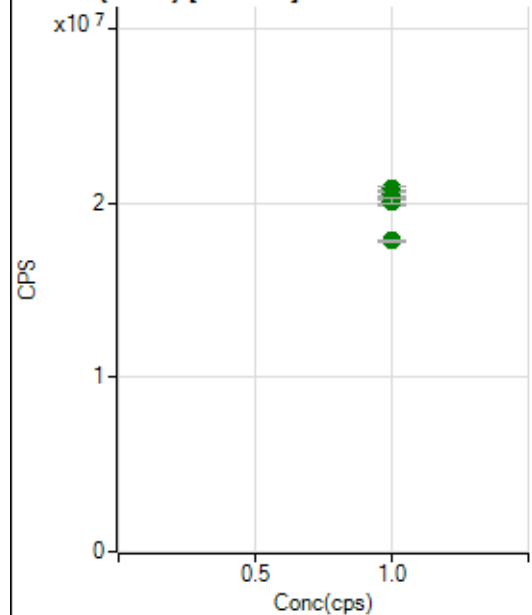
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2944491.02		P	3.5
2	☐	1.000		2715292.71		P	1.0
3	☐	1.000		2484667.97		P	12.8
4	☐	1.000		2651698.08		P	1.5
5	☐	1.000		2580561.99		P	1.9
6	☐	1.000		2533517.66		P	0.8
7	☐	1.000		2474507.51		P	0.3
8	☐	1.000		2406812.29		P	1.0

159 Tb (ISTD) [No Gas]

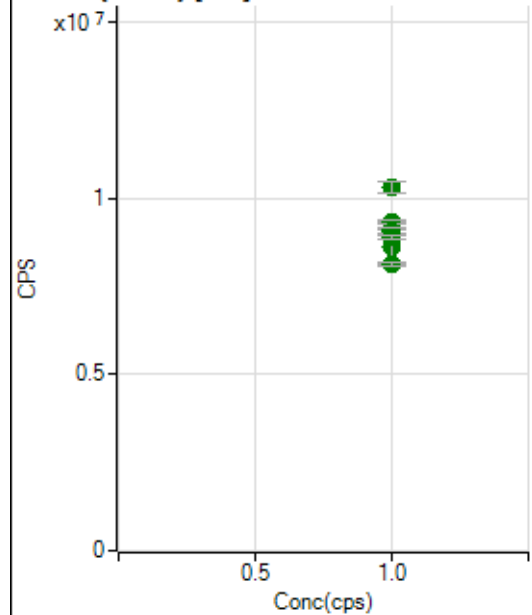
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		21510646.34		A	0.7
2	☐	1.000		21274628.02		A	1.4
3	☐	1.000		20956309.27		A	2.7
4	☐	1.000		20490580.81		A	1.5
5	☐	1.000		20926380.52		A	0.4
6	☐	1.000		20637350.25		A	1.2
7	☐	1.000		20500729.55		A	0.5
8	☐	1.000		18308595.70		A	1.6

159 Tb (ISTD) [He]

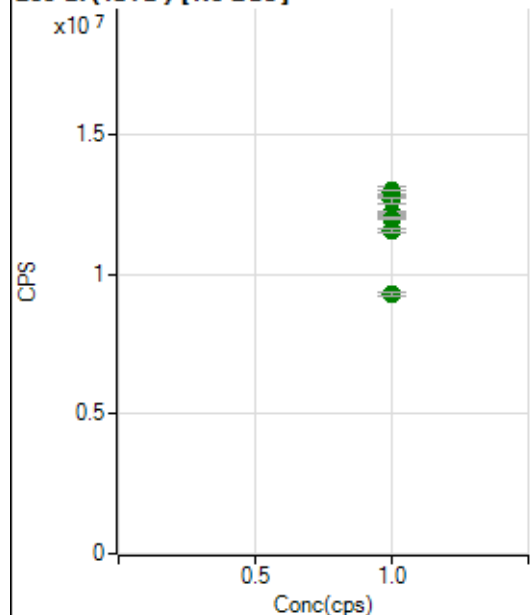
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10153010.40		A	3.9
2	☐	1.000		9155424.66		A	1.0
3	☐	1.000		8555628.76		A	11.8
4	☐	1.000		9272593.13		A	1.5
5	☐	1.000		8973554.66		A	2.6
6	☐	1.000		8883695.77		A	1.0
7	☐	1.000		8690087.58		A	0.5
8	☐	1.000		8021213.91		A	1.9

165 Ho (ISTD) [No Gas]

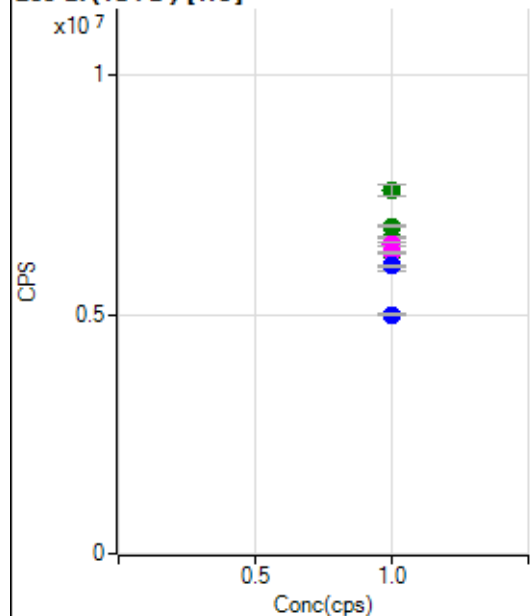
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		20811038.86		A	1.1
2	☐	1.000		20607458.03		A	1.6
3	☐	1.000		20463804.42		A	2.5
4	☐	1.000		20045068.31		A	1.6
5	☐	1.000		20519468.58		A	0.9
6	☐	1.000		20263551.36		A	0.3
7	☐	1.000		20120880.12		A	1.5
8	☐	1.000		17850770.98		A	0.7

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10290837.00		A	3.2
2	☐	1.000		9353441.94		A	1.0
3	☐	1.000		8630622.02		A	11.5
4	☐	1.000		9312527.22		A	1.0
5	☐	1.000		9135577.36		A	2.5
6	☐	1.000		9080232.92		A	1.3
7	☐	1.000		8897653.69		A	0.8
8	☐	1.000		8148463.00		A	1.3

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12991538.69		A	2.0
2	☐	1.000		12918642.31		A	1.9
3	☐	1.000		12646014.26		A	1.7
4	☐	1.000		12198893.29		A	0.9
5	☐	1.000		12209631.07		A	0.5
6	☐	1.000		11985494.40		A	0.6
7	☐	1.000		11571001.77		A	1.0
8	☐	1.000		9297318.54		A	1.7

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7587458.36		A	3.0
2	☐	1.000		6856178.02		A	1.0
3	☐	1.000		6261778.31		A	11.7
4	☐	1.000		6613967.96		A	0.9
5	☐	1.000		6485398.58		M	1.4
6	☐	1.000		6298637.82		M	0.5
7	☐	1.000		6017937.27		P	0.4
8	☐	1.000		4991425.24		P	1.0

US EPA Tune Check Sample Report

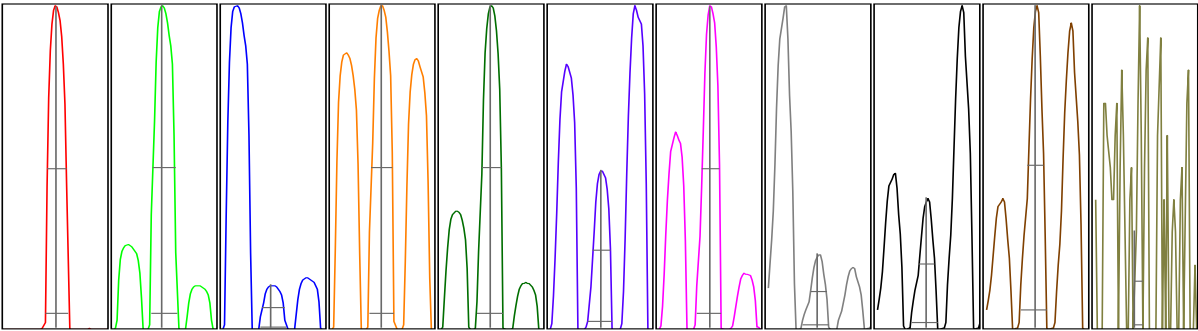
Batch Folder D:\ICP-MS Data\1\DATA\P7032420.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	16146	2.98	5.00	
24	213359	2.61	5.00	
25	28627	2.63	5.00	
26	32794	2.80	5.00	
59	111267	2.96	5.00	
113	20098	2.20	5.00	
115	67390	1.73	5.00	
206	24148	2.48	5.00	
207	20109	2.70	5.00	
208	49438	2.50	5.00	
220	0	27.16		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	15373	16430	16043	16264	16617
24	206063	210124	214513	215286	220807
25	27418	28995	28560	28716	29443
26	31424	33544	32506	32788	33710
59	106134	113767	110312	111720	114402
113	19412	20373	19958	20193	20554
115	68068	68890	66201	66259	67532
206	23213	24382	23997	24337	24813
207	19265	20431	19951	20216	20683
208	47479	50165	49088	49789	50669
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	29124	9.05	8.9 - 9.1		0.691	0.900	
24	349150	23.95	23.9 - 24.1		0.784	0.900	
25	47318	24.95	24.9 - 25.1		0.780	0.900	
26	55383	26.00	25.9 - 26.1		0.740	0.900	
59	194962	59.00	58.9 - 59.1		0.766	0.900	
113	38612	113.05	112.9 - 113.1		0.695	0.900	
115	129048	115.05	114.9 - 115.1		0.730	0.900	
206	49696	206.00	205.9 - 206.1		0.776	0.900	
207	41783	207.00	206.9 - 207.1		0.771	0.900	
208	103649	208.00	207.9 - 208.1		0.773	0.900	
220	0	219.70	-		0.246		

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

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.5	V	Deflect	12.0	V
Extract 2	-115.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-55	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	180	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	24423	1.52	
89	71570	1.74	
205	57416	1.08	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	24000	24065	24730	24792	24528
89	69860	70790	72580	72840	71781
205	57099	56878	58243	57911	56947

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.1	V	Deflect	0.8	V
Extract 2	-120.0	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			