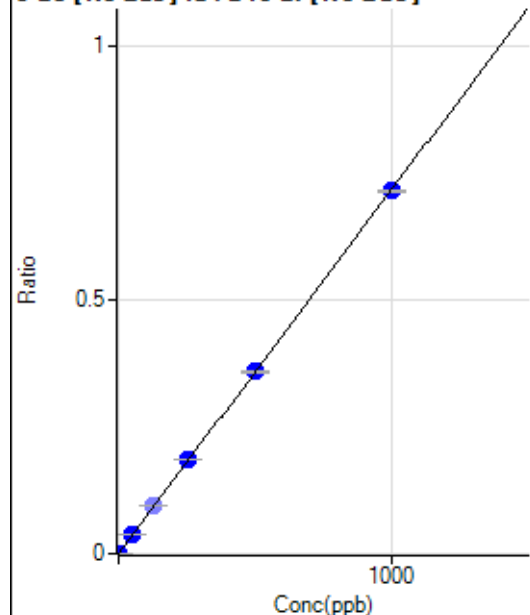


Batch Folder: D:\ICP-MS Data\P7042319MS.b\
Analysis File: P7042319MS.batch.bin
DA Date-Time: 2019-04-24 00:46:36
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-04-23 12:41:40
2			
3	005CALS.d	S02	2019-04-23 12:50:00
4	006CALS.d	S03	2019-04-23 12:53:56
5	007CALS.d	S04	2019-04-23 12:57:59
6	008CALS.d	S05	2019-04-23 13:01:48
7	009CALS.d	S06	2019-04-23 13:05:33
8	010CALS.d	S07	2019-04-23 13:09:18
9	011CALS.d	S08	2019-04-23 13:13:05

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	65.56	0.0000	P	7.8
2	☐	0.100					
3	☐	1.000	1.066	5802.32	0.0008	P	0.9
4	☐	50.000	54.281	285782.38	0.0390	P	0.4
5	☒	125.000		644367.31	0.0947	P	0.8
6	☐	250.000	259.367	1153830.07	0.1863	P	0.4
7	☐	500.000	500.920	2182462.85	0.3597	P	0.7
8	☐	1000.000	996.984	4337329.24	0.7160	P	0.3
9	☐			653.36	0.0001	P	12.8

$$y = 7.1812\text{E-}004 * x + 9.0897\text{E-}006$$

$$R = 0.9999$$

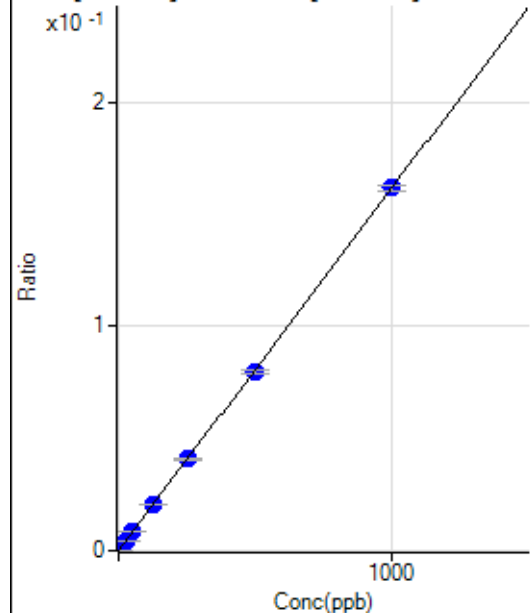
$$DL = 0.002958$$

$$BEC = 0.01266$$

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	544.48	0.0001	P	13.5
2	☐	2.500					
3	☐	25.000	24.830	30606.81	0.0041	P	2.5
4	☐	50.000	51.596	61637.59	0.0084	P	2.5
5	☐	125.000	127.399	140496.90	0.0207	P	1.5
6	☐	250.000	253.507	254136.35	0.0410	P	1.6
7	☐	500.000	494.282	484878.43	0.0799	P	2.8
8	☐	1000.000	1001.607	980672.37	0.1619	P	1.2
9	☐			27918.54	0.0050	P	12.5

$$y = 1.6155\text{E-}004 * x + 7.5499\text{E-}005$$

$$R = 1.0000$$

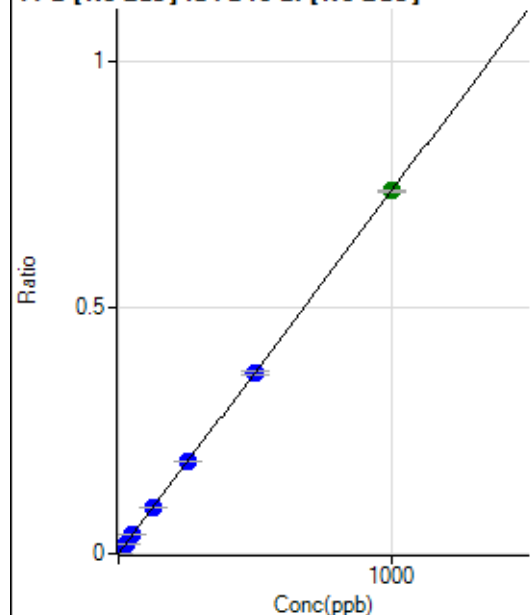
$$DL = 0.1889$$

$$BEC = 0.4674$$

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	2830.95	0.0004	P	6.9
2	☐	2.500					
3	☐	25.000	24.561	138182.29	0.0185	P	1.2
4	☐	50.000	52.107	283664.99	0.0387	P	1.6
5	☐	125.000	127.192	638756.33	0.0939	P	1.5
6	☐	250.000	253.973	1159107.37	0.1871	P	1.3
7	☐	500.000	497.506	2221609.21	0.3662	P	1.9
8	☐	1000.000	999.885	4456091.81	0.7356	A	0.6
9	☐			127911.82	0.0228	P	10.5

$$y = 7.3526\text{E-}004 * x + 3.9251\text{E-}004$$

$$R = 1.0000$$

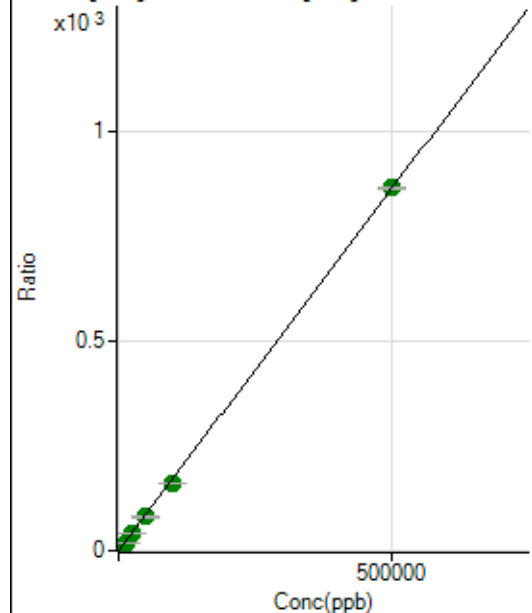
$$DL = 0.1109$$

$$BEC = 0.5338$$

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	9078.05	0.0125	P	4.8
2	☐	50.000					
3	☐	500.000	453.858	587626.15	0.7972	P	1.3
4	☐	5000.000	4686.580	5632262.15	8.1155	A	0.2
5	☐	12500.000	11908.180	12523311.65	20.6015	A	0.5
6	☐	25000.000	23584.051	23158316.32	40.7890	A	0.9
7	☐	50000.000	46547.971	45801828.80	80.4932	A	0.6
8	☐	100000.00	94079.726	93518200.01	162.6749	A	0.4
9	☐	500000.00	501618.03	512062328.11	867.3026	A	0.5

$$y = 0.0017 * x + 0.0125$$

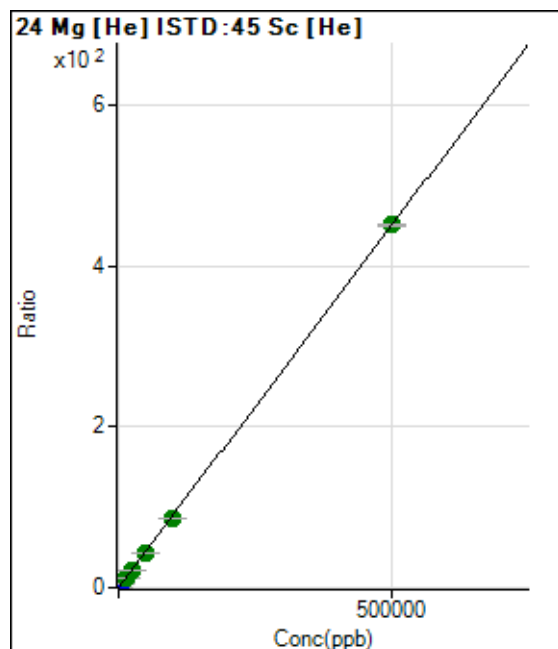
$$R = 0.9999$$

$$DL = 1.038$$

$$BEC = 7.217$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	308.35	0.0004	P	17.0
2	☐	50.000					
3	☐	500.000	488.692	324729.01	0.4405	P	1.1
4	☐	5000.000	4949.659	3093942.82	4.4580	P	0.2
5	☐	12500.000	12444.892	6813320.73	11.2082	A	0.3
6	☐	25000.000	24633.713	12595975.97	22.1854	A	0.8
7	☐	50000.000	48365.109	24785210.28	43.5577	A	0.3
8	☐	100000.00	96517.022	49969864.31	86.9229	A	0.3
9	☐	500000.00	500880.29	266328344.84	451.0893	A	0.6

$$y = 9.0059\text{E-}004 * x + 4.2391\text{E-}004$$

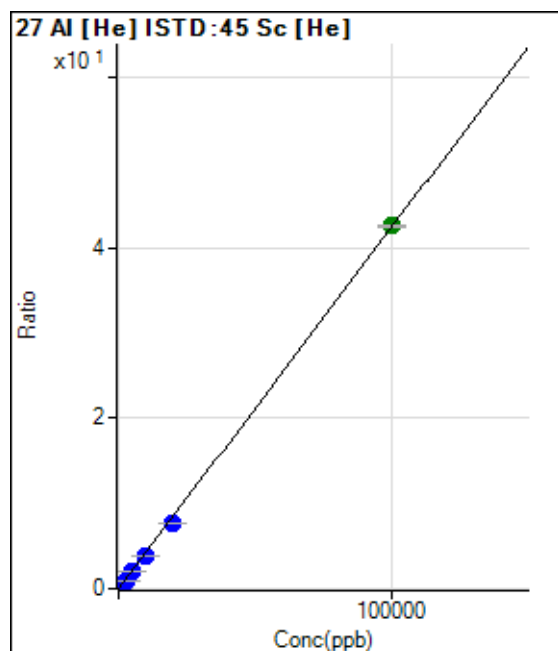
$$R = 1.0000$$

$$DL = 0.2407$$

$$BEC = 0.4707$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.34	0.0002	P	16.7
2	☐	2.000					
3	☐	20.000	18.123	5790.27	0.0079	P	2.9
4	☐	1000.000	944.227	277541.53	0.3999	P	0.7
5	☐	2500.000	2369.882	609963.29	1.0034	P	0.8
6	☐	5000.000	4654.410	1118826.56	1.9706	P	0.3
7	☐	10000.000	9161.761	2207091.78	3.8787	P	0.3
8	☐	20000.000	18338.550	4463128.97	7.7636	P	0.1
9	☐	100000.00	100437.20	25104154.73	42.5192	A	0.2

$$y = 4.2334\text{E-}004 * x + 1.8331\text{E-}004$$

$$R = 0.9998$$

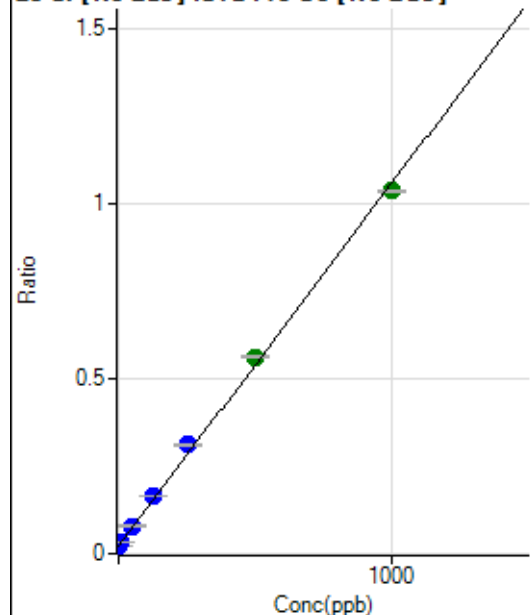
$$DL = 0.2168$$

$$BEC = 0.433$$

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	297392.14	0.0214	P	0.2
2	☐	1.000					
3	☐	10.000	9.797	444916.26	0.0316	P	0.6
4	☐	50.000	55.974	1086228.57	0.0794	P	1.9
5	☐	125.000	139.106	2059371.90	0.1655	P	1.6
6	☐	250.000	280.142	3476296.61	0.3115	P	1.8
7	☐	500.000	521.458	6171018.58	0.5614	A	1.1
8	☐	1000.000	979.676	11395232.72	1.0358	A	0.7
9	☐			676641.89	0.0647	P	0.8

$$y = 0.0010 * x + 0.0214$$

$$R = 0.9991$$

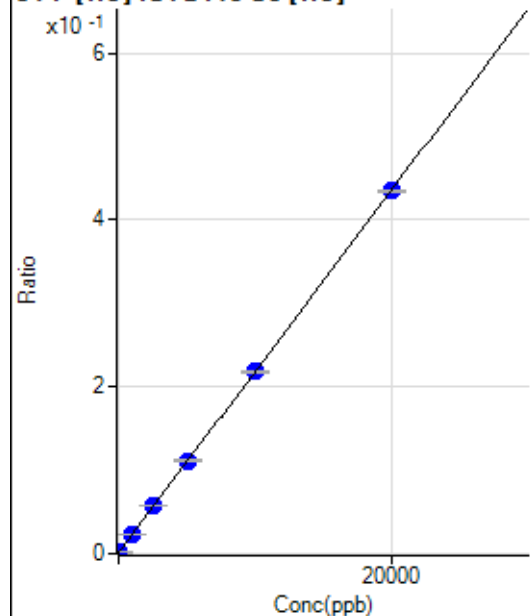
$$DL = 0.1094$$

$$BEC = 20.7$$

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	-28.853	275.01	0.0004	P	16.0
2	☐	0.000					
3	☐	0.000	28.853	1202.89	0.0016	P	2.3
4	☐	1000.000	1043.045	16423.66	0.0237	P	1.6
5	☐	2500.000	2581.044	34696.75	0.0571	P	0.6
6	☐	5000.000	5080.668	63237.70	0.1114	P	2.3
7	☐	10000.000	10010.969	124323.39	0.2185	P	1.2
8	☐	20000.000	19962.066	249886.58	0.4347	P	0.5
9	☐			363.91	0.0006	P	4.4

$$y = 2.1725E-005 * x + 0.0010$$

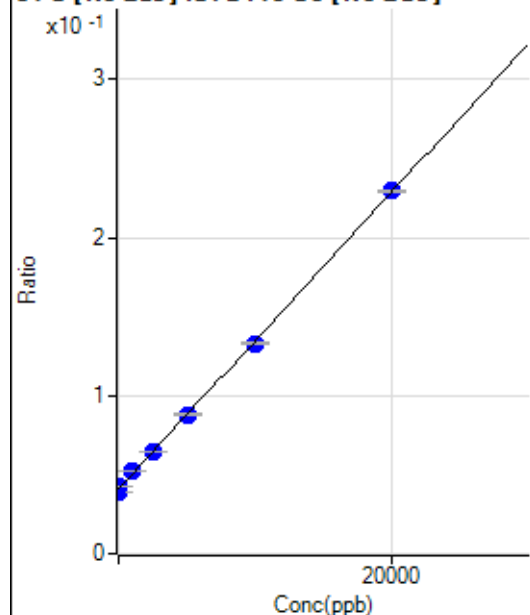
$$R = 1.0000$$

$$DL = 6.785$$

$$BEC = 46.26$$

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	-172.604	544171.93	0.0392	P	1.1
2	☐	0.000					
3	☐	0.000	172.604	598295.31	0.0425	P	0.6
4	☐	1000.000	1235.740	717736.88	0.0525	P	1.2
5	☐	2500.000	2526.254	803921.27	0.0646	P	0.3
6	☐	5000.000	5014.250	981753.12	0.0880	P	0.5
7	☐	10000.000	9807.516	1462032.10	0.1330	P	1.0
8	☐	20000.000	20077.611	2524865.03	0.2295	P	0.3
9	☐			396840.68	0.0379	P	1.1

$$y = 9.3966\text{E-}006 * x + 0.0408$$

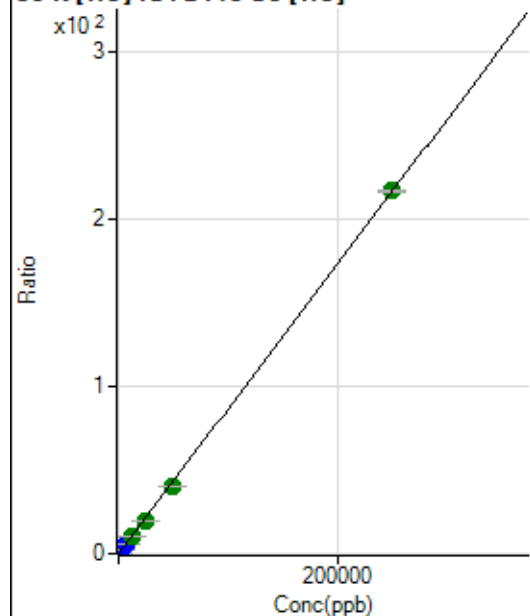
$$R = 0.9998$$

$$DL = 104$$

$$BEC = 4346$$

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	25767.74	0.0354	P	2.0
2	☐	50.000					
3	☐	500.000	465.456	322425.41	0.4374	P	0.3
4	☐	2500.000	2408.862	1468373.22	2.1158	P	0.5
5	☐	6250.000	6027.703	3185987.68	5.2411	P	0.9
6	☐	12500.000	11657.896	5736394.62	10.1035	A	0.5
7	☐	25000.000	23005.839	11325669.26	19.9038	A	0.4
8	☐	50000.000	46314.385	23014239.23	40.0337	A	0.6
9	☐	250000.00	250985.18	127993065.36	216.7925	A	0.6

$$y = 8.6363\text{E-}004 * x + 0.0354$$

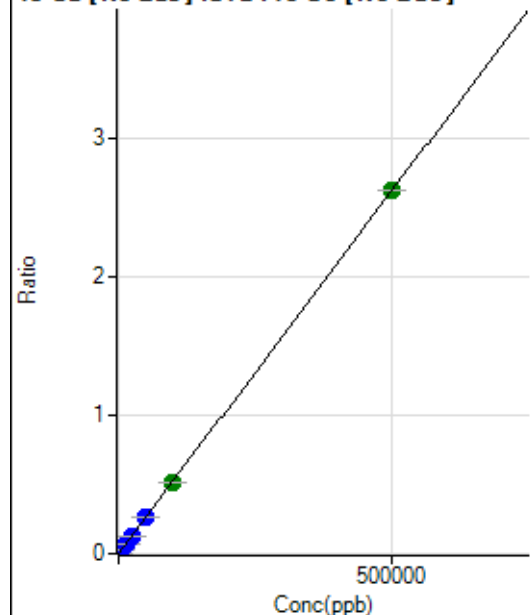
$$R = 0.9999$$

$$DL = 2.51$$

$$BEC = 41.01$$

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	330.57	0.0000	P	23.4
2	☐	50.000					
3	☐	500.000	468.304	34858.61	0.0025	P	0.3
4	☐	5000.000	5023.726	359944.50	0.0263	P	2.1
5	☐	12500.000	12525.816	815967.59	0.0656	P	1.2
6	☐	25000.000	25012.493	1460796.72	0.1309	P	1.0
7	☐	50000.000	49263.472	2833697.98	0.2578	P	0.5
8	☐	100000.00	98022.473	5642318.44	0.5129	A	0.2
9	☐	500000.00	500467.68	27390592.63	2.6184	A	0.1

$$y = 5.2319\text{E-}006 * x + 2.3829\text{E-}005$$

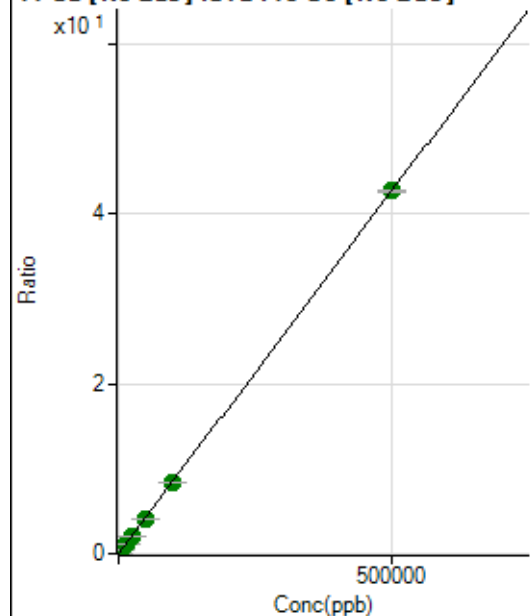
$$R = 1.0000$$

$$DL = 3.199$$

$$BEC = 4.555$$

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	13816.67	0.0010	P	4.1
2	☐	50.000					
3	☐	500.000	463.547	570893.21	0.0405	P	0.2
4	☐	5000.000	4949.283	5787638.15	0.4230	A	1.0
5	☐	12500.000	12340.180	13108658.54	1.0531	A	0.5
6	☐	25000.000	24667.729	23484814.41	2.1041	A	0.5
7	☐	50000.000	48698.159	45654536.79	4.1529	A	0.6
8	☐	100000.00	98482.694	92386047.20	8.3974	A	0.6
9	☐	500000.00	500454.79	446349321.09	42.6688	A	0.4

$$y = 8.5258\text{E-}005 * x + 9.9556\text{E-}004$$

$$R = 1.0000$$

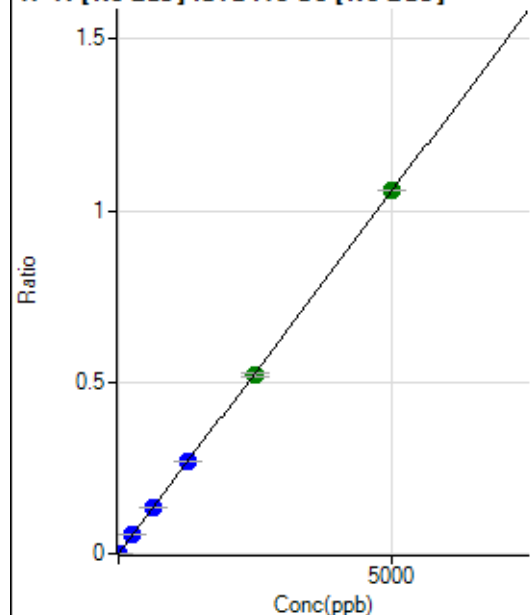
$$DL = 1.428$$

$$BEC = 11.68$$

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	227.79	0.0000	P	3.7
2	☐	0.500					
3	☐	5.000	5.147	15550.53	0.0011	P	1.9
4	☐	250.000	257.665	745034.97	0.0544	P	0.9
5	☐	625.000	638.346	1678792.17	0.1349	P	0.2
6	☐	1250.000	1271.786	2998739.95	0.2687	P	0.6
7	☐	2500.000	2469.213	5733975.04	0.5216	A	1.4
8	☐	5000.000	5007.895	11638617.19	1.0579	A	0.1
9	☐			6473.92	0.0006	P	1.6

$$y = 2.1124\text{E-}004 * x + 1.6414\text{E-}005$$

$$R = 1.0000$$

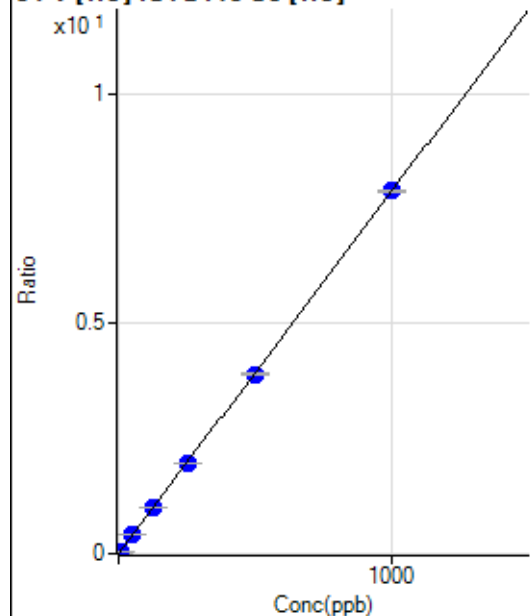
$$DL = 0.008568$$

$$BEC = 0.0777$$

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	7.78	0.0000	P	137.
2	☐	0.500					
3	☐	5.000	5.256	30538.43	0.0414	P	1.8
4	☐	50.000	50.790	277786.70	0.4003	P	0.4
5	☐	125.000	127.746	611955.27	1.0067	P	0.8
6	☐	250.000	250.545	1121015.88	1.9744	P	0.4
7	☐	500.000	495.773	2223163.61	3.9070	P	0.2
8	☐	1000.000	1001.593	4537553.86	7.8931	P	0.4
9	☐			904.49	0.0015	P	6.7

$$y = 0.0079 * x + 1.0680\text{E-}005$$

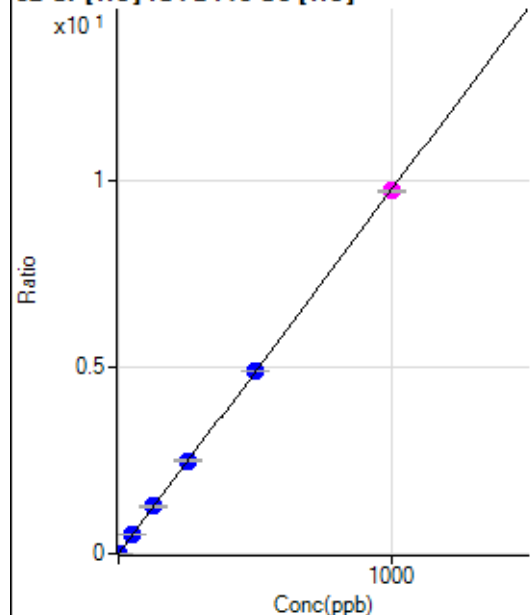
$$R = 1.0000$$

$$DL = 0.005598$$

$$BEC = 0.001355$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1876.82	0.0026	P	2.4
2	☐	0.200					
3	☐	2.000	2.000	16270.29	0.0221	P	1.1
4	☐	50.000	51.871	352622.09	0.5081	P	0.4
5	☐	125.000	129.767	770293.03	1.2672	P	0.9
6	☐	250.000	255.418	1414737.08	2.4918	P	0.7
7	☐	500.000	501.188	2780760.20	4.8869	P	0.5
8	☐	1000.000	997.362	5589172.97	9.7224	M	0.7
9	☐			77189.76	0.1307	P	1.3

$$y = 0.0097 * x + 0.0026$$

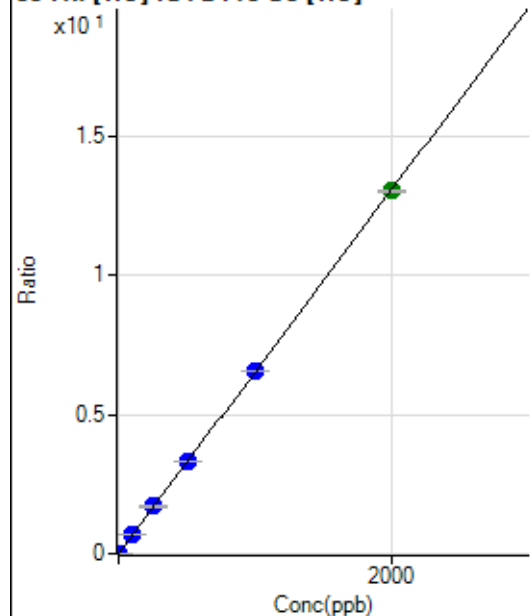
$$R = 1.0000$$

$$DL = 0.01928$$

$$BEC = 0.2647$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	104.45	0.0001	P	27.3
2	☐	0.100					
3	☐	1.000	1.020	5020.95	0.0068	P	4.6
4	☐	100.000	102.338	464517.59	0.6693	P	0.1
5	☐	250.000	259.277	1030633.64	1.6955	P	1.1
6	☐	500.000	510.146	1894046.48	3.3359	P	0.1
7	☐	1000.000	1002.883	3731609.74	6.5579	P	0.5
8	☐	2000.000	1994.746	7498416.42	13.0436	A	0.6
9	☐			25958.67	0.0440	P	0.6

$$y = 0.0065 * x + 1.4350E-004$$

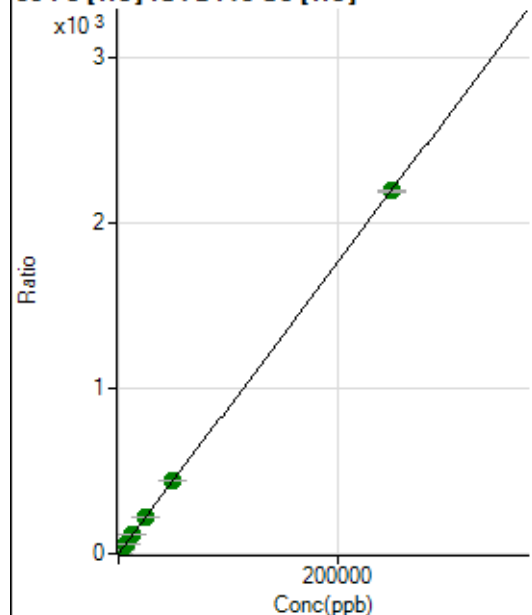
$$R = 1.0000$$

$$DL = 0.01799$$

$$BEC = 0.02195$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11180.47	0.0154	P	1.9
2	☐	5.000					
3	☐	50.000	53.310	356715.64	0.4839	P	0.7
4	☐	2500.000	2631.145	16060163.44	23.1408	A	0.6
5	☐	6250.000	6628.224	35421848.71	58.2716	A	0.7
6	☐	12500.000	13044.780	65104208.40	114.6675	A	0.4
7	☐	25000.000	25452.159	127299012.10	223.7175	A	0.6
8	☐	50000.000	50685.382	256105272.39	445.4954	A	0.2
9	☐	250000.00	249779.70	1296118414.1	2,195.359	A	0.5

$$y = 0.0088 * x + 0.0154$$

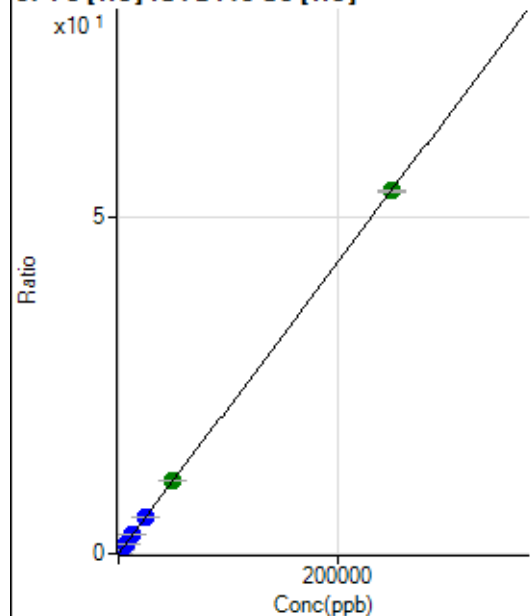
$$R = 1.0000$$

$$DL = 0.09999$$

$$BEC = 1.748$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.01	0.0003	P	7.8
2	☐	5.000					
3	☐	50.000	54.466	8921.50	0.0121	P	3.0
4	☐	2500.000	2607.439	390955.23	0.5633	P	0.3
5	☐	6250.000	6610.649	867830.30	1.4277	P	0.5
6	☐	12500.000	13016.748	1595896.66	2.8108	P	0.4
7	☐	25000.000	25502.097	3133377.18	5.5066	P	0.3
8	☐	50000.000	50535.709	6272858.47	10.9117	A	0.3
9	☐	250000.00	249806.72	31844381.96	53.9370	A	0.3

$$y = 2.1591E-004 * x + 3.4360E-004$$

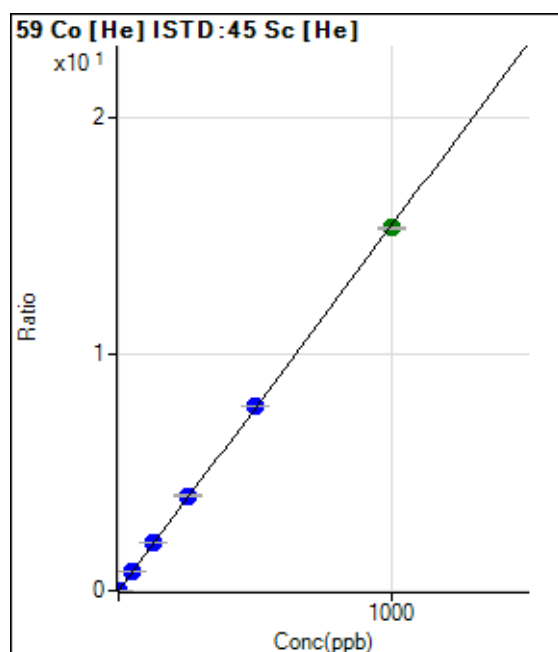
$$R = 1.0000$$

$$DL = 0.3718$$

$$BEC = 1.591$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	134.45	0.0002	P	3.7
2	☐	0.100					
3	☐	1.000	1.013	11641.44	0.0158	P	0.7
4	☐	50.000	53.393	571210.78	0.8230	P	0.6
5	☐	125.000	132.777	1243936.31	2.0464	P	1.1
6	☐	250.000	260.338	2278063.65	4.0123	P	0.4
7	☐	500.000	505.142	4429936.88	7.7851	P	0.5
8	☐	1000.000	993.703	8803900.22	15.3144	A	0.2
9	☐			105687.09	0.1790	P	1.4

$$y = 0.0154 * x + 1.8480E-004$$

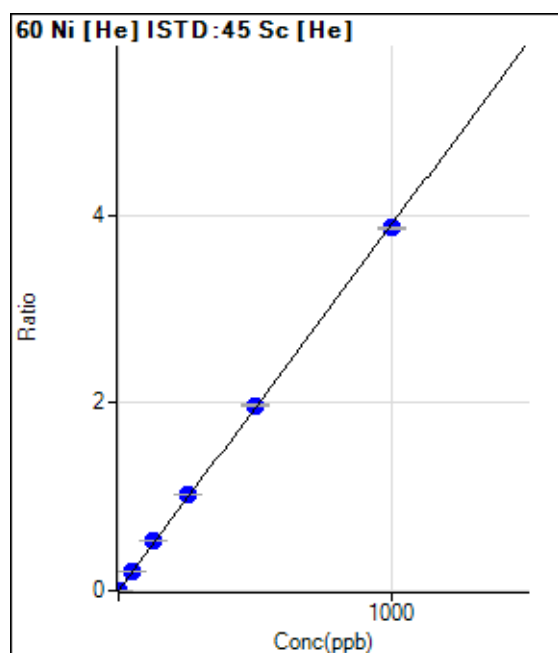
$$R = 0.9999$$

$$DL = 0.001346$$

$$BEC = 0.01199$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	228.89	0.0003	P	14.9
2	☐	0.100					
3	☐	1.000	1.102	3398.22	0.0046	P	2.1
4	☐	50.000	54.907	148801.34	0.2144	P	0.5
5	☐	125.000	135.343	320967.40	0.5280	P	1.0
6	☐	250.000	264.108	584860.74	1.0301	P	0.6
7	☐	500.000	506.803	1124629.98	1.9764	P	0.4
8	☐	1000.000	991.533	2222743.56	3.8665	P	0.5
9	☐			36900.90	0.0625	P	0.3

$$y = 0.0039 * x + 3.1460E-004$$

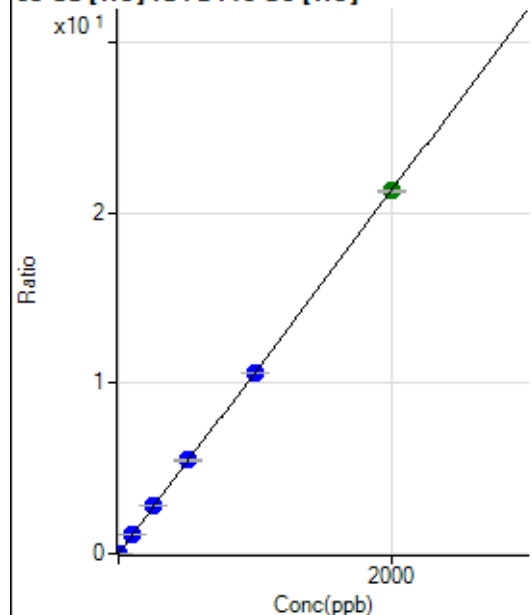
$$R = 0.9998$$

$$DL = 0.03601$$

$$BEC = 0.08068$$

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	1810.15	0.0025	P	4.4
2	☐	0.200					
3	☐	2.000	2.093	18272.72	0.0248	P	0.4
4	☐	100.000	107.155	794262.76	1.1444	P	0.8
5	☐	250.000	264.876	1717343.76	2.8253	P	1.0
6	☐	500.000	514.700	3115689.92	5.4877	P	0.7
7	☐	1000.000	991.665	6015027.83	10.5707	P	0.1
8	☐	2000.000	1998.275	12243796.76	21.2982	A	0.4
9	☐			12631.17	0.0214	P	1.1

$$y = 0.0107 * x + 0.0025$$

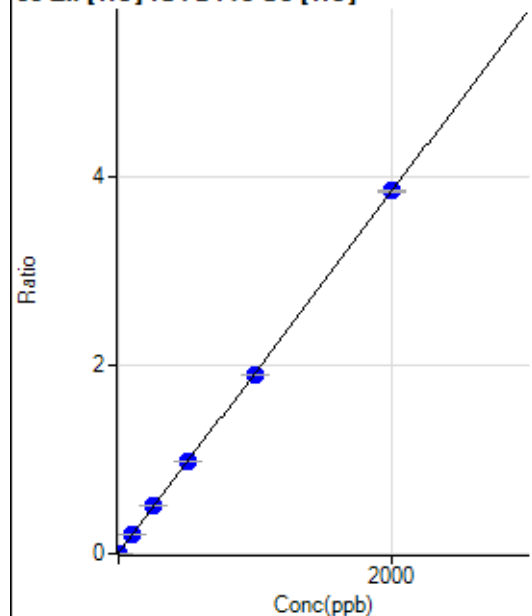
$$R = 0.9999$$

$$DL = 0.03067$$

$$BEC = 0.2335$$

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	2510.26	0.0035	P	2.8
2	☐	0.200					
3	☐	2.000	2.115	5542.24	0.0075	P	0.5
4	☐	100.000	104.186	141493.84	0.2039	P	0.3
5	☐	250.000	262.312	308836.81	0.5081	P	0.8
6	☐	500.000	512.215	561428.81	0.9888	P	0.3
7	☐	1000.000	983.089	1078121.59	1.8947	P	0.2
8	☐	2000.000	2003.654	2217892.61	3.8580	P	0.4
9	☐			20688.20	0.0350	P	2.3

$$y = 0.0019 * x + 0.0035$$

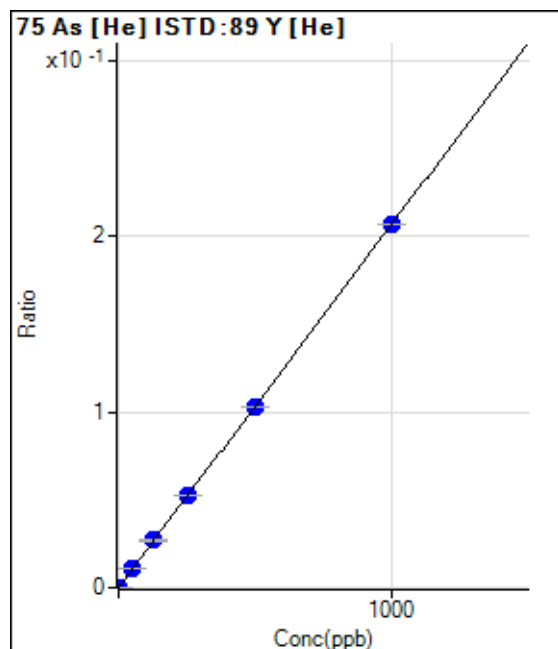
$$R = 0.9999$$

$$DL = 0.1482$$

$$BEC = 1.794$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	11.11	0.0000	P	33.9
2	☐	0.100					
3	☐	1.000	1.047	830.89	0.0002	P	0.5
4	☐	50.000	53.529	39886.66	0.0111	P	0.4
5	☐	125.000	130.889	87360.71	0.0271	P	1.9
6	☐	250.000	253.104	159972.69	0.0523	P	0.6
7	☐	500.000	498.482	314402.84	0.1031	P	0.1
8	☐	1000.000	999.070	627954.56	0.2066	P	0.2
9	☐			847.56	0.0003	P	4.3

$$y = 2.0678\text{E-}004 * x + 2.9816\text{E-}006$$

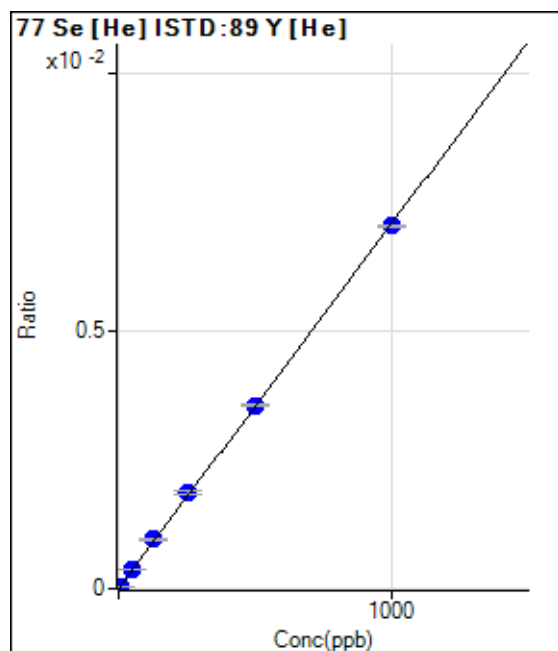
$$R = 1.0000$$

$$DL = 0.01465$$

$$BEC = 0.01442$$

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					
3	☐	5.000	6.092	163.34	0.0000	P	9.7
4	☐	50.000	53.814	1373.43	0.0004	P	4.5
5	☐	125.000	135.224	3091.49	0.0010	P	1.6
6	☐	250.000	264.402	5724.55	0.0019	P	4.0
7	☐	500.000	500.947	10824.20	0.0035	P	1.0
8	☐	1000.000	994.452	21413.81	0.0070	P	0.4
9	☐			10.00	0.0000	P	57.6

$$y = 7.0840\text{E-}006 * x + 0.0000\text{E+}000$$

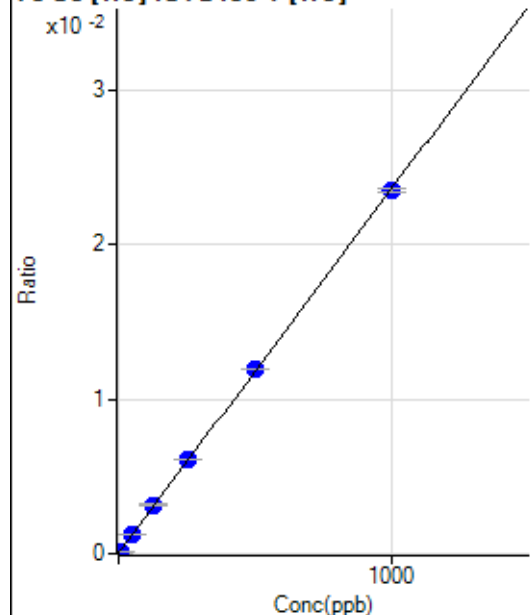
$$R = 0.9999$$

$$DL = 0$$

$$BEC = 0$$

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	114.82	0.0000	P	14.3
2	☐	0.500					
3	☐	5.000	5.517	608.66	0.0002	P	2.7
4	☐	50.000	53.380	4641.52	0.0013	P	0.9
5	☐	125.000	133.045	10216.03	0.0032	P	1.3
6	☐	250.000	258.845	18733.13	0.0061	P	0.8
7	☐	500.000	504.327	36336.13	0.0119	P	0.5
8	☐	1000.000	994.448	71309.09	0.0235	P	1.0
9	☐			98.15	0.0000	P	15.3

$$y = 2.3560E-005 * x + 3.0787E-005$$

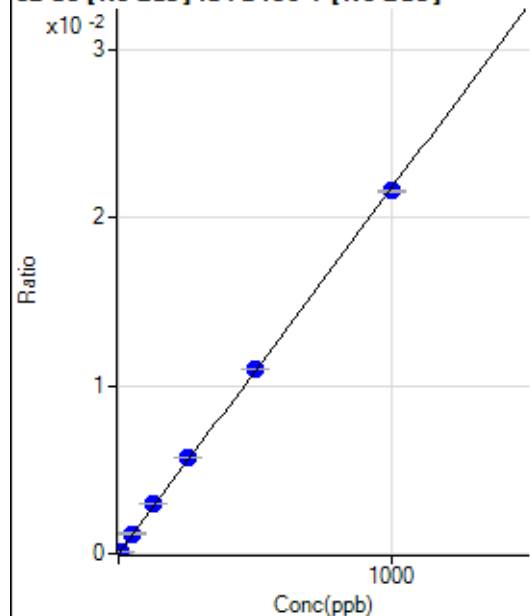
$$R = 0.9999$$

$$DL = 0.5624$$

$$BEC = 1.307$$

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	108.48	0.0000	P	31.3
2	☐	0.500					
3	☐	5.000	5.581	2780.77	0.0001	P	1.2
4	☐	50.000	54.818	25673.09	0.0012	P	1.1
5	☐	125.000	134.942	58544.95	0.0029	P	0.4
6	☐	250.000	262.439	105094.44	0.0057	P	0.8
7	☐	500.000	505.128	200464.35	0.0110	P	0.6
8	☐	1000.000	992.839	392116.62	0.0216	P	0.5
9	☐			160.04	0.0000	P	14.5

$$y = 2.1752E-005 * x + 4.9893E-006$$

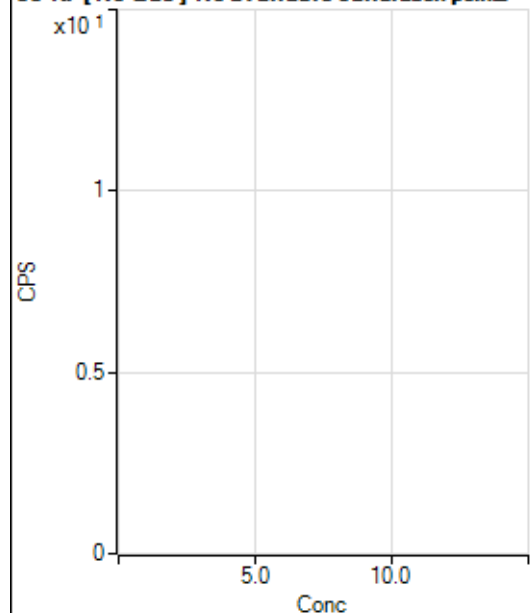
$$R = 0.9999$$

$$DL = 0.2154$$

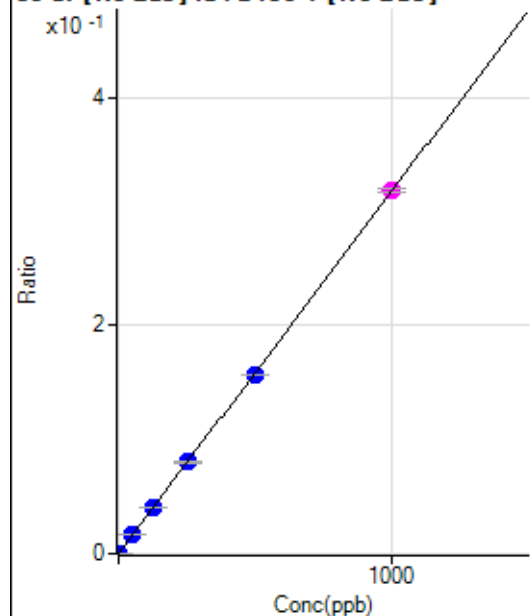
$$BEC = 0.2294$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			646.69		P	5.0
2	☐						
3	☐			656.69		P	4.3
4	☐			672.25		P	4.0
5	☐			624.47		P	2.2
6	☐			545.58		P	15.5
7	☐			534.47		P	7.4
8	☐			577.80		P	6.7
9	☐			714.48		P	6.1

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1083.43	0.0000	P	18.2
2	☐	0.100					
3	☐	1.000	0.942	7674.57	0.0003	P	4.1
4	☐	50.000	50.868	347341.06	0.0162	P	1.1
5	☐	125.000	127.135	804564.81	0.0404	P	2.2
6	☐	250.000	253.225	1479641.11	0.0804	P	1.5
7	☐	500.000	494.327	2863005.77	0.1570	P	0.4
8	☐	1000.000	1001.720	5774108.85	0.3181	M	1.2
9	☐			24569.14	0.0015	P	0.7

$$y = 3.1749\text{E-}004 * x + 4.9822\text{E-}005$$

$$R = 1.0000$$

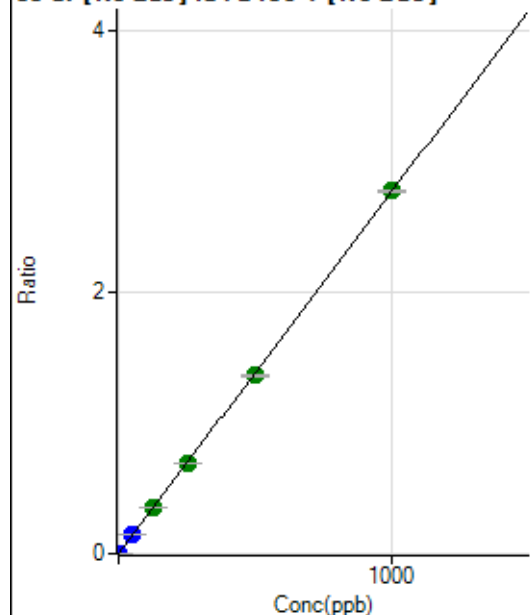
$$DL = 0.08563$$

$$BEC = 0.1569$$

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	352.80	0.0000	P	17.8
2	☐	0.100					
3	☐	1.000	0.946	58001.50	0.0026	P	0.9
4	☐	50.000	50.970	3025600.46	0.1411	P	1.1
5	☐	125.000	125.652	6926066.47	0.3479	A	0.6
6	☐	250.000	250.123	12736135.61	0.6924	A	0.8
7	☐	500.000	493.197	24897604.37	1.3653	A	0.9
8	☐	1000.000	1003.241	50414157.72	2.7772	A	0.5
9	☐			208076.54	0.0124	P	0.6

$$y = 0.0028 * x + 1.6236E-005$$

$$R = 1.0000$$

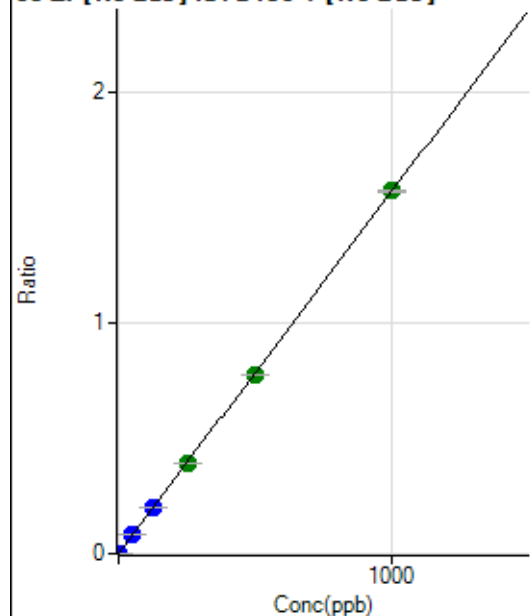
$$DL = 0.00314$$

$$BEC = 0.005865$$

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	1627.94	0.0001	P	5.4
2	☐	0.100					
3	☐	1.000	0.934	33838.05	0.0015	P	1.1
4	☐	50.000	51.223	1722205.29	0.0803	P	1.2
5	☐	125.000	127.287	3971992.41	0.1995	P	0.7
6	☐	250.000	249.991	7205535.49	0.3917	A	0.3
7	☐	500.000	494.715	14135441.63	0.7751	A	0.4
8	☐	1000.000	1002.298	28505451.68	1.5703	A	0.2
9	☐			11035.23	0.0007	P	3.1

$$y = 0.0016 * x + 7.4901E-005$$

$$R = 1.0000$$

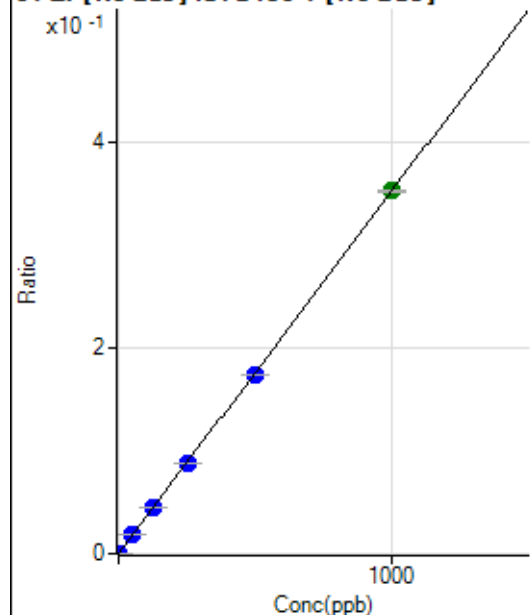
$$DL = 0.007783$$

$$BEC = 0.04781$$

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	322.24	0.0000	P	22.2
2	☐	0.100					
3	☐	1.000	0.939	7607.91	0.0003	P	1.8
4	☐	50.000	50.925	385270.18	0.0180	P	0.7
5	☐	125.000	127.540	895541.50	0.0450	P	1.0
6	☐	250.000	251.659	1632282.41	0.0887	P	0.3
7	☐	500.000	495.532	3186189.63	0.1747	P	0.2
8	☐	1000.000	1001.455	6409245.41	0.3531	A	0.3
9	☐			2289.17	0.0001	P	4.9

$$y = 3.5255E-004 * x + 1.4825E-005$$

$$R = 1.0000$$

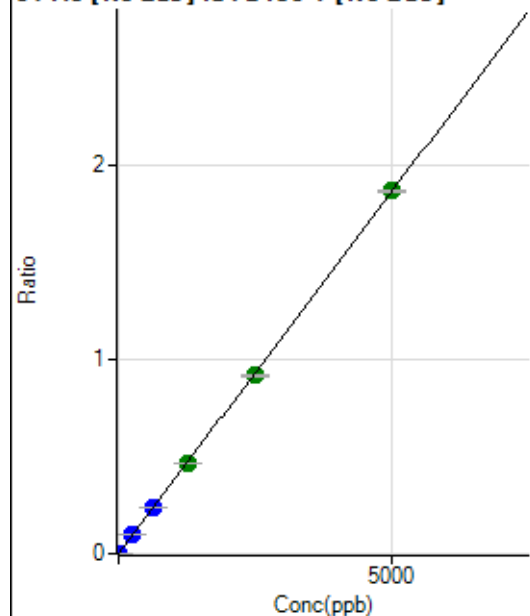
$$DL = 0.02804$$

$$BEC = 0.04205$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	611.16	0.0000	P	7.5
2	☐	0.500					
3	☐	5.000	5.067	42040.75	0.0019	P	2.2
4	☐	250.000	257.539	2052442.04	0.0957	P	0.8
5	☐	625.000	641.291	4744948.72	0.2383	P	1.0
6	☐	1250.000	1249.836	8543188.99	0.4644	A	0.6
7	☐	2500.000	2462.418	16686054.89	0.9150	A	0.9
8	☐	5000.000	5016.419	33836698.67	1.8640	A	0.3
9	☐			21121.92	0.0013	P	4.7

$$y = 3.7158E-004 * x + 2.8123E-005$$

$$R = 0.9999$$

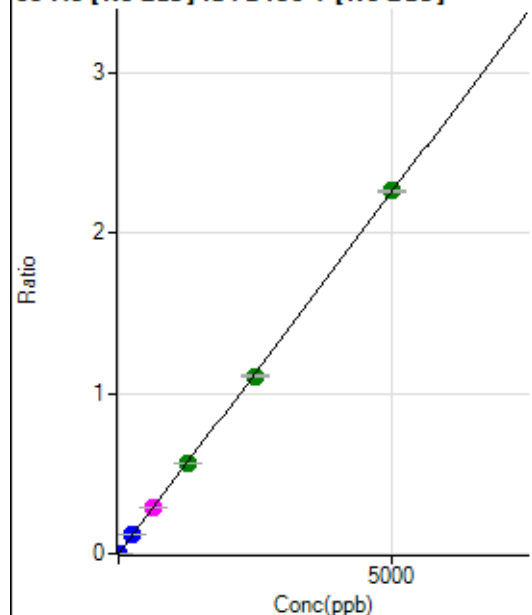
$$DL = 0.01707$$

$$BEC = 0.07568$$

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	100.01	0.0000	P	21.3
2	☐	0.500					
3	☐	5.000	5.125	50994.90	0.0023	P	0.6
4	☐	250.000	258.165	2498250.82	0.1165	P	1.2
5	☐	625.000	641.820	5766800.17	0.2897	M	2.2
6	☐	1250.000	1245.700	10341727.14	0.5622	A	0.2
7	☐	2500.000	2455.876	20212542.12	1.1084	A	0.9
8	☐	5000.000	5020.626	41132231.82	2.2659	A	0.3
9	☐			30820.49	0.0018	P	6.2

$$y = 4.5132\text{E-}004 * x + 4.5974\text{E-}006$$

$$R = 0.9999$$

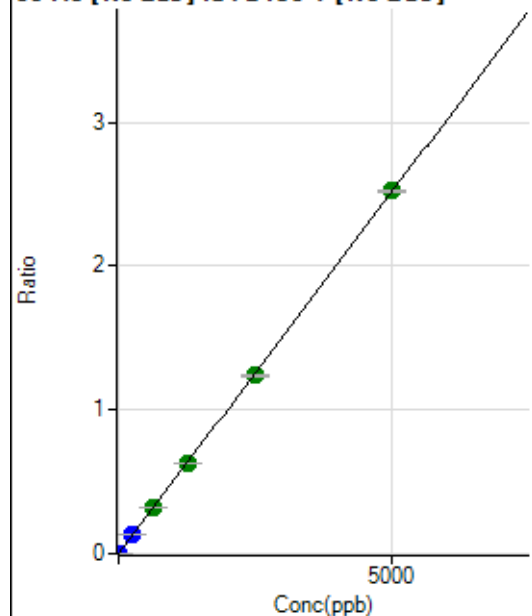
$$DL = 0.00652$$

$$BEC = 0.01019$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	258.35	0.0000	P	14.6
2	☐	0.500					
3	☐	5.000	5.126	56947.83	0.0026	P	0.3
4	☐	250.000	258.389	2784941.66	0.1299	P	0.7
5	☐	625.000	628.619	6291513.47	0.3160	A	0.4
6	☐	1250.000	1248.142	11540154.08	0.6274	A	0.3
7	☐	2500.000	2461.206	22559415.09	1.2371	A	1.0
8	☐	5000.000	5018.989	45793975.33	2.5227	A	0.5
9	☐			43010.23	0.0026	P	3.6

$$y = 5.0263\text{E-}004 * x + 1.1894\text{E-}005$$

$$R = 1.0000$$

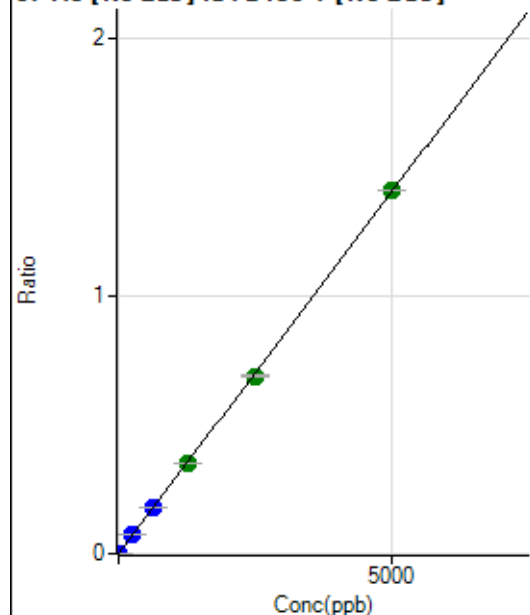
$$DL = 0.01037$$

$$BEC = 0.02366$$

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	77.78	0.0000	P	16.3
2	☐	0.500					
3	☐	5.000	5.066	31368.90	0.0014	P	1.0
4	☐	250.000	258.020	1553203.87	0.0724	P	1.0
5	☐	625.000	640.129	3578275.69	0.1797	P	0.7
6	☐	1250.000	1252.803	6469619.11	0.3517	A	0.6
7	☐	2500.000	2458.082	12584491.51	0.6901	A	0.9
8	☐	5000.000	5017.966	25572734.42	1.4088	A	0.1
9	☐			17987.15	0.0011	P	3.9

$$y = 2.8074\text{E-}004 * x + 3.5786\text{E-}006$$

$$R = 0.9999$$

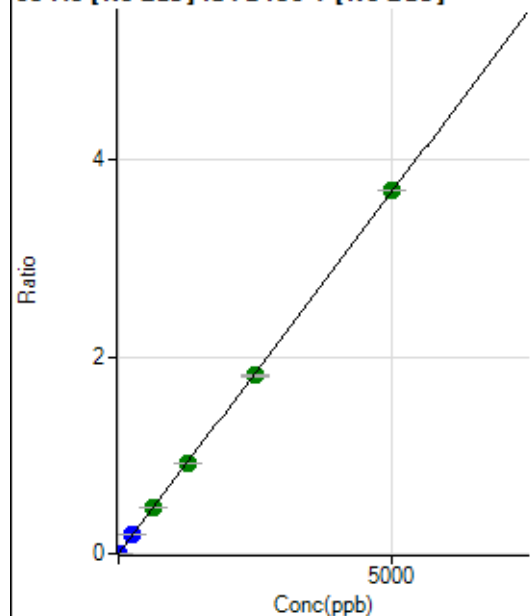
$$DL = 0.006231$$

$$BEC = 0.01275$$

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	80.56	0.0000	P	52.6
2	☐	0.500					
3	☐	5.000	5.060	81764.97	0.0037	P	1.3
4	☐	250.000	256.603	4036365.63	0.1883	P	1.1
5	☐	625.000	626.958	9158578.85	0.4600	A	0.4
6	☐	1250.000	1252.196	16897559.41	0.9187	A	0.8
7	☐	2500.000	2461.032	32925038.93	1.8055	A	0.8
8	☐	5000.000	5018.360	66831061.22	3.6816	A	0.0
9	☐			44662.71	0.0027	P	4.8

$$y = 7.3363\text{E-}004 * x + 3.6985\text{E-}006$$

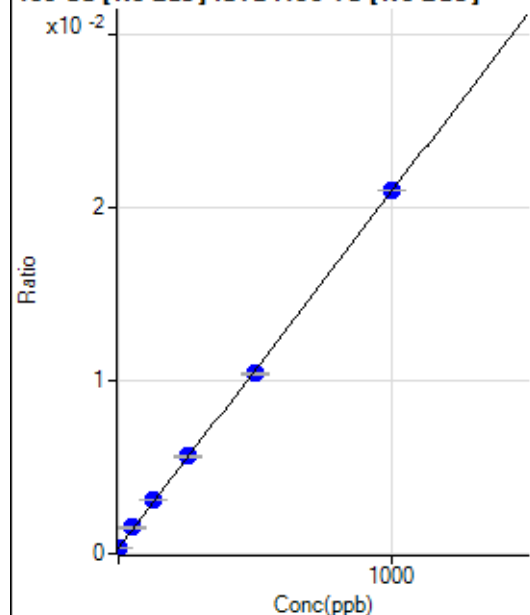
$$R = 1.0000$$

$$DL = 0.007961$$

$$BEC = 0.005041$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9778.76	0.0003	P	2.2
2	☐	0.100					
3	☐	1.000	1.509	10854.63	0.0004	P	5.8
4	☐	50.000	57.340	45638.54	0.0015	P	1.6
5	☐	125.000	136.482	91869.58	0.0031	P	1.8
6	☐	250.000	257.352	158048.79	0.0056	P	0.9
7	☐	500.000	488.989	293142.94	0.0104	P	0.5
8	☐	1000.000	1001.864	590303.89	0.0209	P	0.1
9	☐			8416.75	0.0003	P	1.7

$$y = 2.0573\text{E-}005 * x + 3.2546\text{E-}004$$

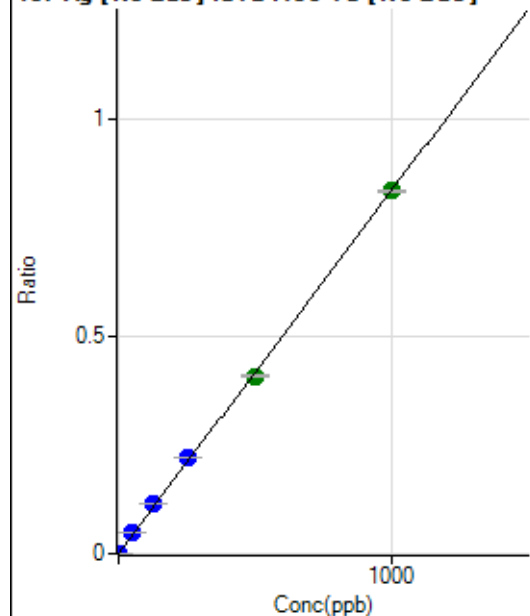
$$R = 0.9998$$

$$DL = 1.047$$

$$BEC = 15.82$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	791.72	0.0000	P	11.2
2	☐	0.100					
3	☐	1.000	1.102	28802.50	0.0009	P	2.7
4	☐	50.000	59.030	1494684.41	0.0493	P	0.6
5	☐	125.000	139.722	3420026.60	0.1166	P	0.8
6	☐	250.000	263.667	6189254.31	0.2201	P	0.5
7	☐	500.000	489.818	11538815.97	0.4088	A	1.1
8	☐	1000.000	999.382	23516992.71	0.8341	A	0.7
9	☐			3439.45	0.0001	P	8.9

$$y = 8.3460\text{E-}004 * x + 2.6351\text{E-}005$$

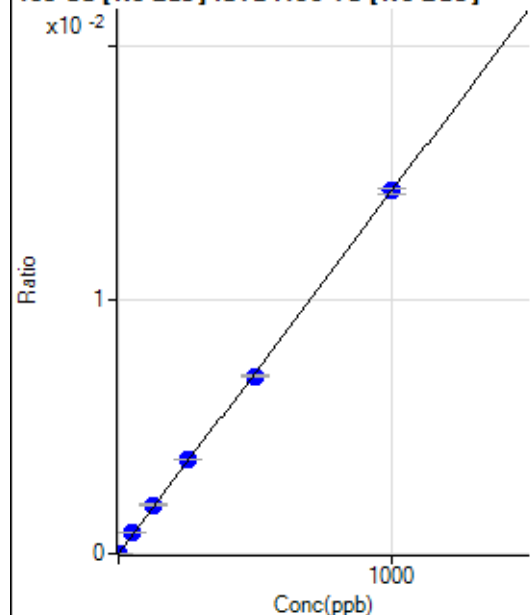
$$R = 0.9997$$

$$DL = 0.01057$$

$$BEC = 0.03157$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	25.00	0.0000	P	0.6
2	☐	0.100					
3	☐	1.000	1.045	479.19	0.0000	P	13.8
4	☐	50.000	56.443	24454.70	0.0008	P	1.1
5	☐	125.000	135.033	56540.33	0.0019	P	1.1
6	☐	250.000	259.549	104212.91	0.0037	P	0.8
7	☐	500.000	489.851	197377.41	0.0070	P	0.7
8	☐	1000.000	1001.111	402911.35	0.0143	P	1.3
9	☐			108.34	0.0000	P	16.4

$$y = 1.4274\text{E-}005 * x + 8.3201\text{E-}007$$

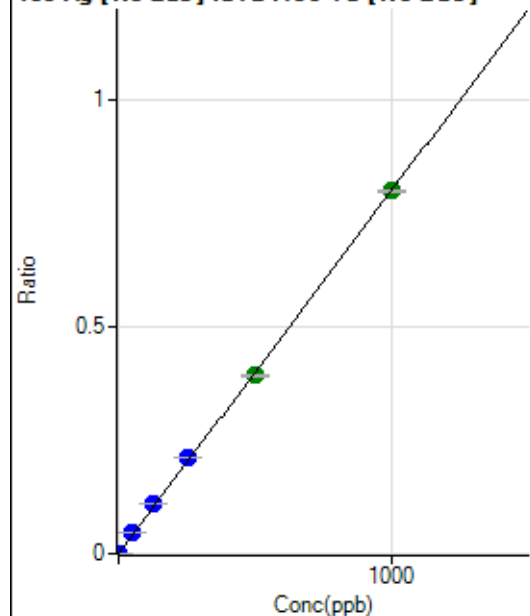
$$R = 0.9998$$

$$DL = 0.001136$$

$$BEC = 0.05829$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	605.60	0.0000	P	16.1
2	☐	0.100					
3	☐	1.000	1.081	26982.07	0.0009	P	1.5
4	☐	50.000	58.515	1421805.89	0.0469	P	0.9
5	☐	125.000	138.137	3244751.96	0.1107	P	1.5
6	☐	250.000	263.502	5936116.58	0.2111	P	0.5
7	☐	500.000	490.412	11087313.61	0.3928	A	1.1
8	☐	1000.000	999.351	22568401.02	0.8005	A	0.8
9	☐			3300.53	0.0001	P	7.9

$$y = 8.0098\text{E-}004 * x + 2.0140\text{E-}005$$

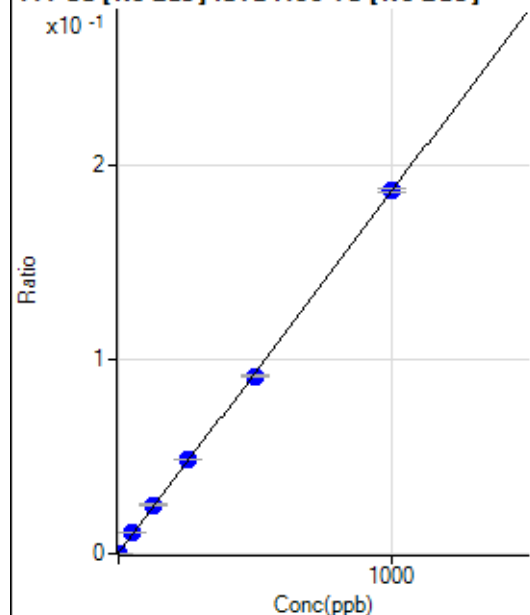
$$R = 0.9998$$

$$DL = 0.01211$$

$$BEC = 0.02514$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	6837.36	0.0002	P	2.3
2	☐	0.100					
3	☐	1.000	1.113	13253.08	0.0004	P	4.4
4	☐	50.000	55.949	323646.93	0.0107	P	0.8
5	☐	125.000	134.298	741831.11	0.0253	P	1.6
6	☐	250.000	257.154	1356583.52	0.0482	P	0.3
7	☐	500.000	490.256	2589874.36	0.0918	P	1.0
8	☐	1000.000	1001.624	5278703.19	0.1872	P	1.0
9	☐			6693.72	0.0003	P	3.5

$$y = 1.8670\text{E-}004 * x + 2.2756\text{E-}004$$

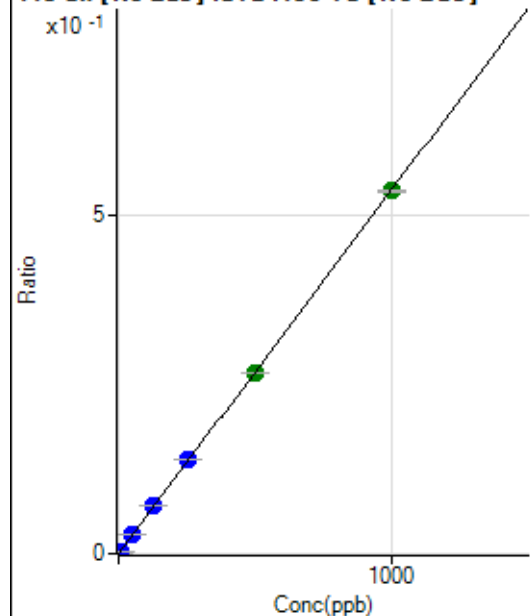
$$R = 0.9999$$

$$DL = 0.08357$$

$$BEC = 1.219$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1330.68	0.0000	P	13.0
2	☐	0.500					
3	☐	5.000	5.420	90163.68	0.0030	P	0.5
4	☐	50.000	54.913	897574.67	0.0296	P	0.2
5	☐	125.000	133.120	2102174.07	0.0717	P	0.9
6	☐	250.000	260.136	3938766.84	0.1401	P	0.8
7	☐	500.000	497.017	7551640.36	0.2676	A	0.8
8	☐	1000.000	997.695	15141136.45	0.5370	A	0.6
9	☐			9425.78	0.0004	P	3.9

$$y = 5.3823\text{E-}004 * x + 4.4302\text{E-}005$$

$$R = 0.9999$$

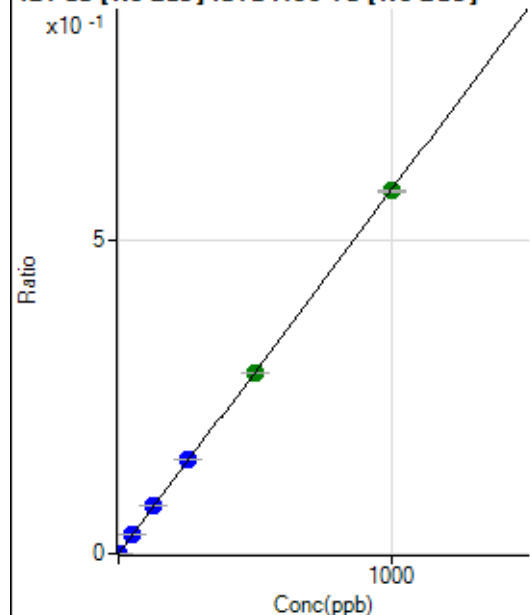
$$DL = 0.03218$$

$$BEC = 0.08231$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	52.78	0.0000	P	63.5
2	☐	0.200					
3	☐	2.000	2.068	36504.02	0.0012	P	0.7
4	☐	50.000	55.022	965874.89	0.0319	P	0.9
5	☐	125.000	133.436	2264969.17	0.0772	P	1.1
6	☐	250.000	260.737	4244796.23	0.1509	P	0.4
7	☐	500.000	497.080	8121670.06	0.2878	A	1.0
8	☐	1000.000	997.470	16279807.83	0.5774	A	0.4
9	☐			18852.23	0.0007	P	3.6

$$y = 5.7889\text{E-}004 * x + 1.7519\text{E-}006$$

$$R = 0.9999$$

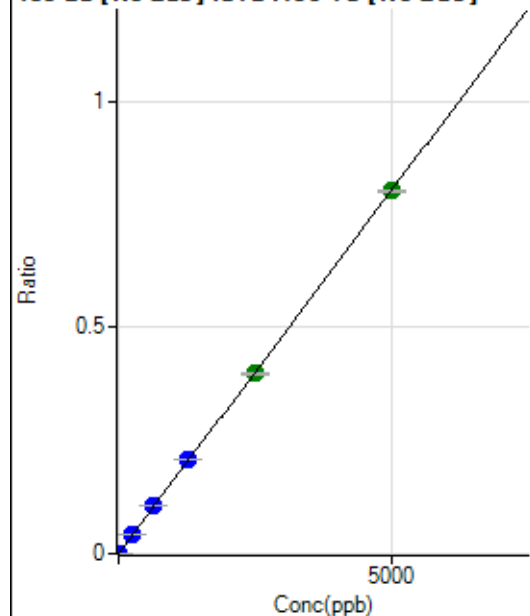
$$DL = 0.005763$$

$$BEC = 0.003026$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	94.45	0.0000	P	22.8
2	☐	1.000					
3	☐	10.000	10.784	52815.26	0.0017	P	0.9
4	☐	250.000	270.061	1315059.57	0.0434	P	1.1
5	☐	625.000	659.819	3106811.33	0.1060	P	1.1
6	☐	1250.000	1295.480	5850380.99	0.2080	P	0.9
7	☐	2500.000	2477.270	11228010.32	0.3978	A	0.6
8	☐	5000.000	4994.638	22612609.36	0.8020	A	0.5
9	☐			4459.24	0.0002	P	6.9

$$y = 1.6058\text{E-}004 * x + 3.1457\text{E-}006$$

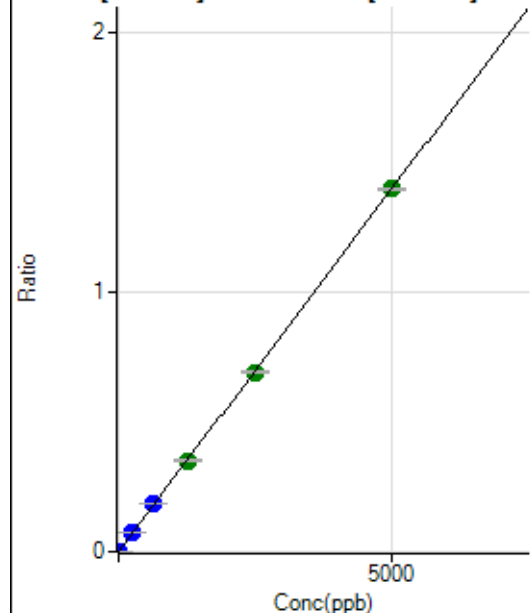
$$R = 0.9999$$

$$DL = 0.01339$$

$$BEC = 0.01959$$

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	77.78	0.0000	P	27.5
2	☐	1.000					
3	☐	10.000	10.550	89865.38	0.0030	P	1.1
4	☐	250.000	270.217	2290618.48	0.0755	P	0.9
5	☐	625.000	660.279	5412219.52	0.1846	P	1.2
6	☐	1250.000	1258.186	9891581.56	0.3517	A	0.6
7	☐	2500.000	2478.328	19554692.63	0.6928	A	0.8
8	☐	5000.000	5003.368	39434938.38	1.3987	A	0.3
9	☐			7532.94	0.0003	P	4.2

$$y = 2.7955E-004 * x + 2.5910E-006$$

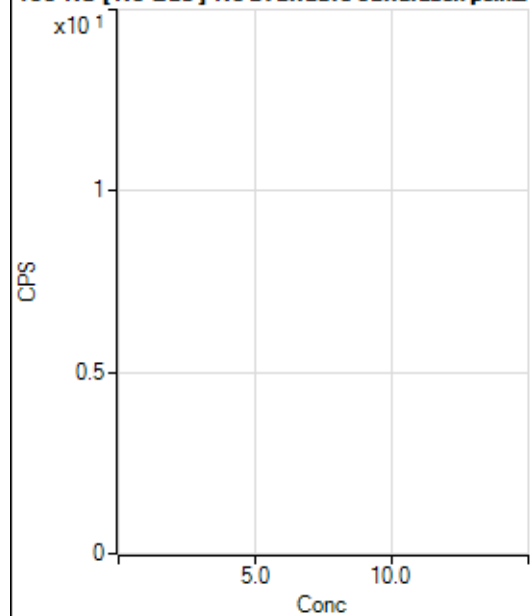
$$R = 1.0000$$

$$DL = 0.007659$$

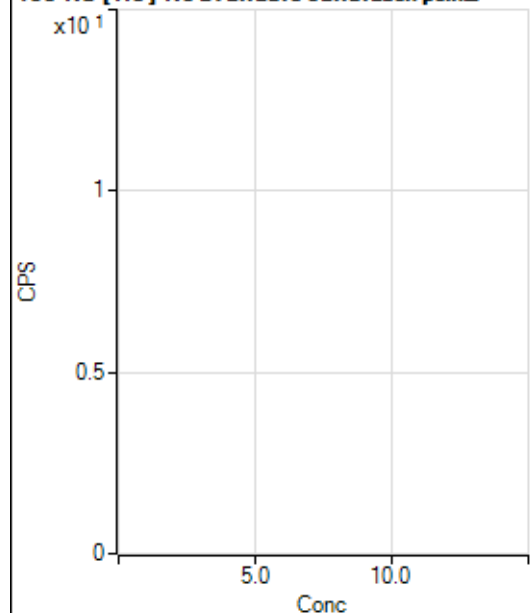
$$BEC = 0.009268$$

Weight: <None>

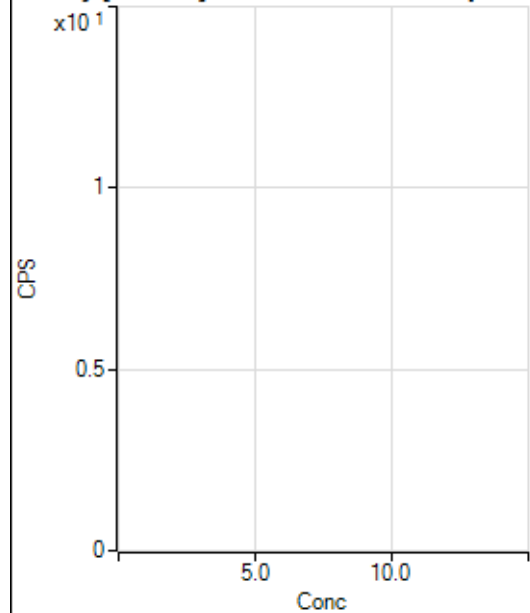
Min Conc: 0

150 Nd [No Gas] No available calibration points

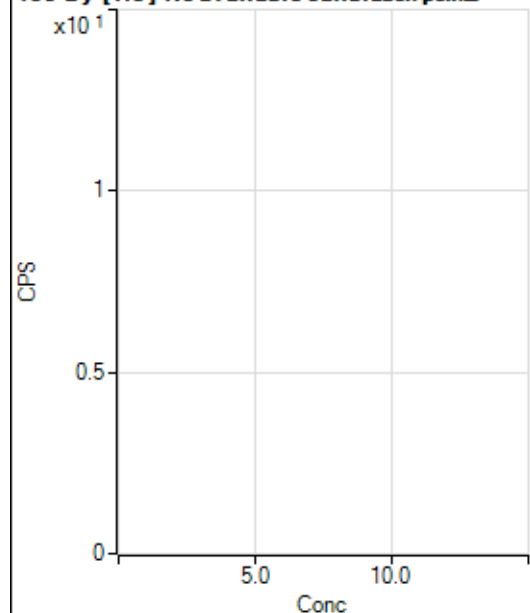
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			2.22		P	173.
2	☐						
3	☐			15.56		P	65.5
4	☐			144.45		P	30.0
5	☐			308.90		P	17.6
6	☐			553.37		P	4.8
7	☐			1053.41		P	4.6
8	☐			2084.68		P	3.2
9	☐			397.80		P	8.6

150 Nd [He] No available calibration points

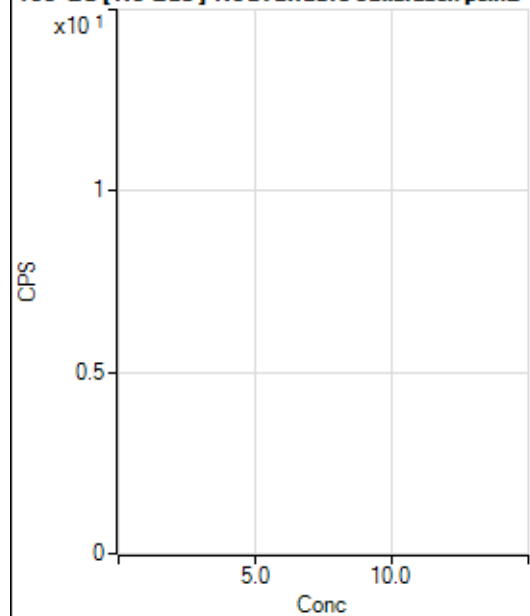
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			3.33		P	173.
2	☐						
3	☐			3.33		P	0.0
4	☐			22.22		P	8.7
5	☐			32.22		P	31.6
6	☐			57.78		P	29.6
7	☐			110.00		P	8.0
8	☐			213.34		P	19.5
9	☐			153.34		P	20.7

156 Dy [No Gas] No available calibration points

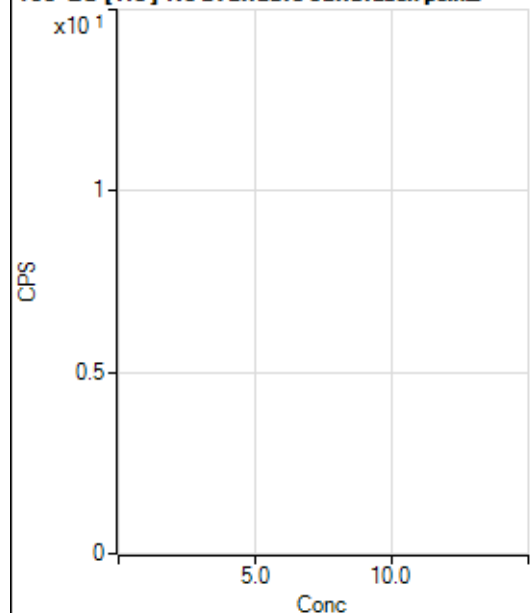
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.89		P	91.6
2	☐						
3	☐			27.78		P	69.3
4	☐			36.11		P	70.5
5	☐			86.12		P	24.4
6	☐			97.23		P	13.1
7	☐			250.01		P	26.0
8	☐			311.13		P	9.4
9	☐			222.23		P	17.7

156 Dy [He] No available calibration points

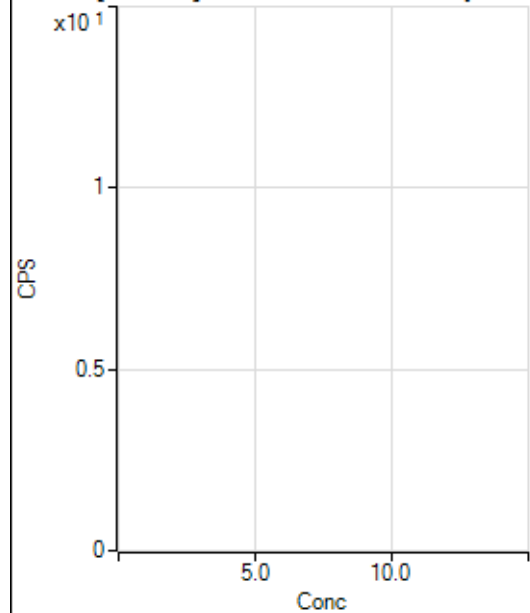
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	99.0
2	☐						
3	☐			10.00		P	66.7
4	☐			30.00		P	19.2
5	☐			75.56		P	25.5
6	☐			112.22		P	30.3
7	☐			227.79		P	13.5
8	☐			420.01		P	4.4
9	☐			128.89		P	9.1

160 Gd [No Gas] Noavailable calibration poin_

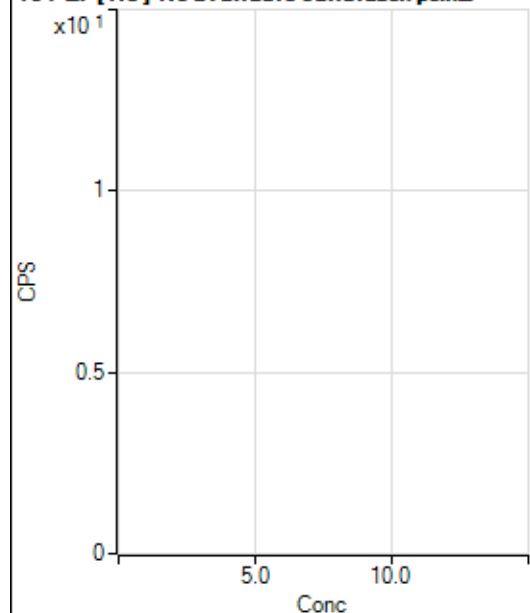
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			125.01		P	34.6
2	☐						
3	☐			144.45		P	6.7
4	☐			113.89		P	40.3
5	☐			138.90		P	28.4
6	☐			161.12		P	16.6
7	☐			169.45		P	19.9
8	☐			219.46		P	2.2
9	☐			313.90		P	12.0

160 Gd [He] No available calibration points

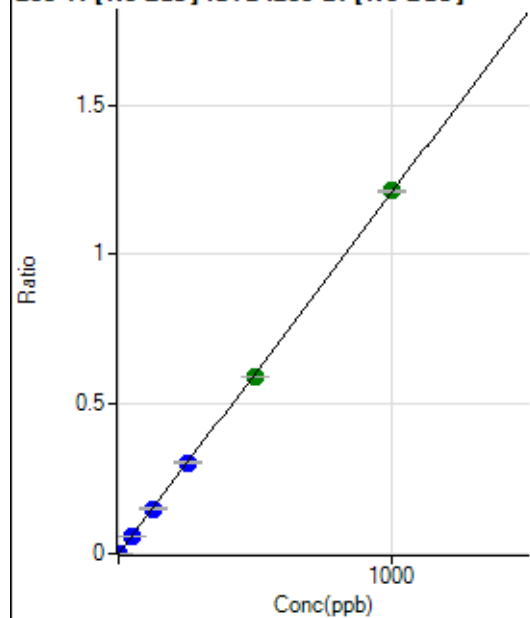
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			451.13		P	12.6
2	☐						
3	☐			457.79		P	7.1
4	☐			478.91		P	8.2
5	☐			386.68		P	7.5
6	☐			386.68		P	11.0
7	☐			402.24		P	2.9
8	☐			423.35		P	8.0
9	☐			456.68		P	2.6

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			105.56		P	38.9
2	☐						
3	☐			108.34		P	20.4
4	☐			91.67		P	31.5
5	☐			116.67		P	7.1
6	☐			125.01		P	23.1
7	☐			113.90		P	23.5
8	☐			147.23		P	22.9
9	☐			175.01		P	31.2

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			45.55		P	15.2
2	☐						
3	☐			54.44		P	33.7
4	☐			57.78		P	3.3
5	☐			51.11		P	7.5
6	☐			61.11		P	8.3
7	☐			70.00		P	39.0
8	☐			54.44		P	17.7
9	☐			82.23		P	14.2

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	147.23	0.0000	P	39.5
2	☐	0.100					
3	☐	1.000	0.917	24005.85	0.0011	P	2.9
4	☐	50.000	49.354	1272637.76	0.0596	P	1.1
5	☐	125.000	124.884	3118650.37	0.1507	P	2.2
6	☐	250.000	252.094	6098756.08	0.3042	P	1.0
7	☐	500.000	488.926	11621973.35	0.5900	A	0.3
8	☐	1000.000	1005.060	23069426.56	1.2128	A	0.7
9	☐			4175.86	0.0003	P	13.3

$$y = 0.0012 * x + 6.9368E-006$$

$$R = 0.9999$$

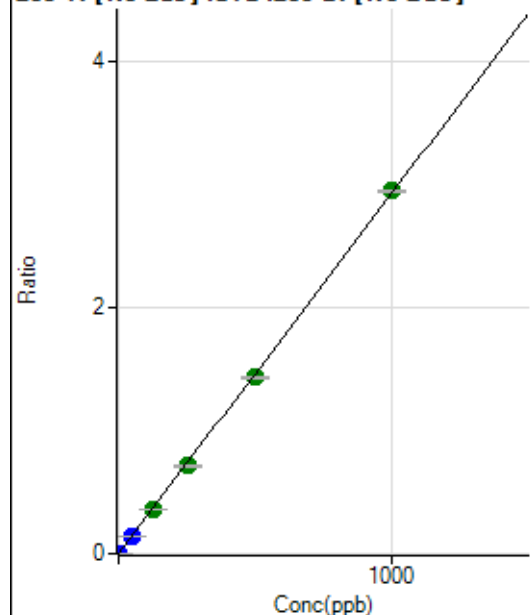
$$DL = 0.006813$$

$$BEC = 0.005749$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	322.24	0.0000	P	14.6
2	☐	0.100					
3	☐	1.000	0.908	57734.45	0.0027	P	0.7
4	☐	50.000	49.078	3073118.15	0.1438	P	1.0
5	☐	125.000	121.941	7395123.86	0.3573	A	1.1
6	☐	250.000	243.076	14279834.00	0.7123	A	0.8
7	☐	500.000	488.852	28217597.85	1.4324	A	0.5
8	☐	1000.000	1007.734	56168736.67	2.9528	A	0.8
9	☐			9834.67	0.0006	P	7.7

$$y = 0.0029 * x + 1.5189E-005$$

$$R = 0.9999$$

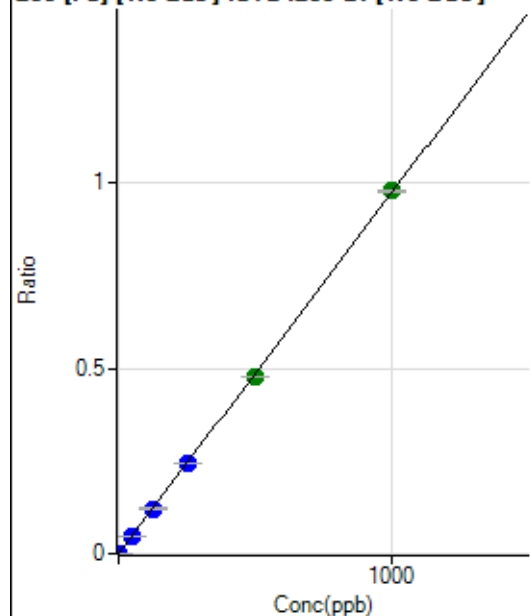
$$DL = 0.002274$$

$$BEC = 0.005184$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	609.29	0.0000	P	7.7
2	☐	0.100					
3	☐	1.000	0.942	20369.84	0.0009	P	1.7
4	☐	50.000	49.710	1033588.94	0.0484	P	0.7
5	☐	125.000	124.761	2511505.84	0.1214	P	1.7
6	☐	250.000	251.036	4895104.68	0.2442	P	0.4
7	☐	500.000	488.839	9365303.57	0.4754	A	0.4
8	☐	1000.000	1005.366	18598607.13	0.9777	A	0.6
9	☐			25517.56	0.0017	P	1.1

$$y = 9.7249E-004 * x + 2.8718E-005$$

$$R = 0.9999$$

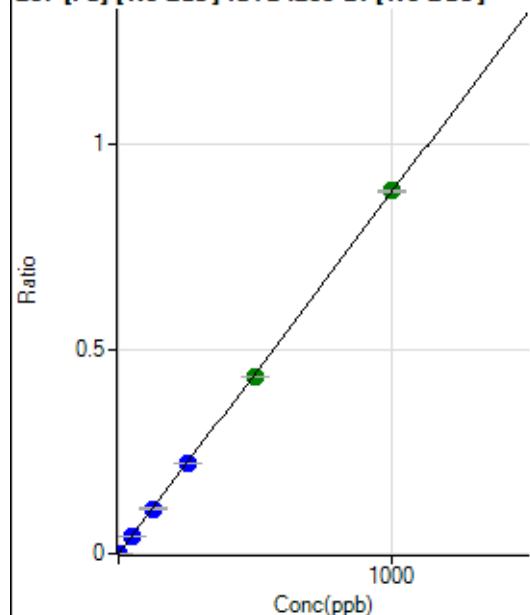
$$DL = 0.006849$$

$$BEC = 0.02953$$

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	496.33	0.0000	P	17.3
2	☐	0.100					
3	☐	1.000	0.895	17560.11	0.0008	P	1.9
4	☐	50.000	49.631	937032.80	0.0439	P	1.0
5	☐	125.000	125.007	2285159.72	0.1104	P	1.5
6	☐	250.000	252.236	4466436.85	0.2228	P	0.4
7	☐	500.000	489.472	8515439.43	0.4323	A	0.8
8	☐	1000.000	1004.723	16878597.72	0.8873	A	0.4
9	☐			22369.35	0.0015	P	0.2

$$y = 8.8312\text{E-}004 * x + 2.3393\text{E-}005$$

$$R = 0.9999$$

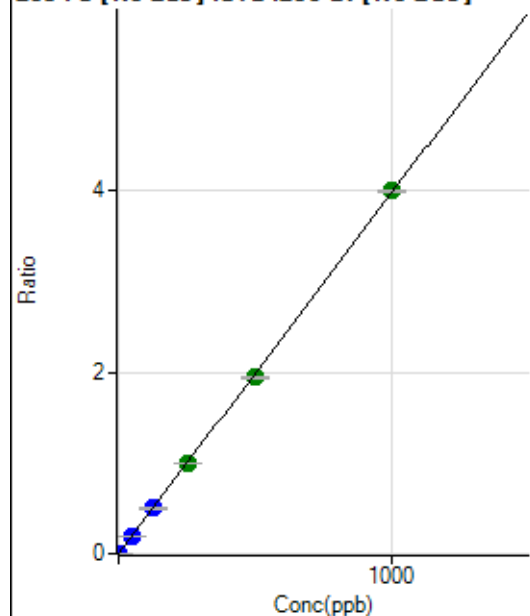
$$DL = 0.01372$$

$$BEC = 0.02649$$

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	2470.54	0.0001	P	2.9
2	☐	0.100					
3	☐	1.000	0.926	81819.57	0.0038	P	1.1
4	☐	50.000	49.673	4217807.41	0.1974	P	0.7
5	☐	125.000	125.502	10317661.81	0.4985	P	1.5
6	☐	250.000	248.128	19759286.55	0.9856	A	0.3
7	☐	500.000	489.771	38318577.02	1.9452	A	0.9
8	☐	1000.000	1005.536	75966956.68	3.9936	A	0.8
9	☐			101509.97	0.0066	P	0.2

$$y = 0.0040 * x + 1.1645\text{E-}004$$

$$R = 0.9999$$

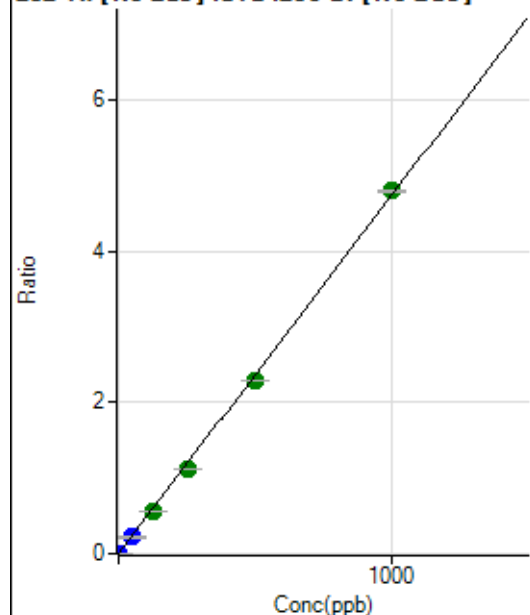
$$DL = 0.002514$$

$$BEC = 0.02932$$

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	205.56	0.0000	P	7.9
2	☐	0.100					
3	☐	1.000	0.811	82967.10	0.0038	P	1.4
4	☐	50.000	45.880	4638323.60	0.2171	P	1.3
5	☐	125.000	116.203	11378752.80	0.5498	A	0.6
6	☐	250.000	237.257	22505063.47	1.1225	A	0.4
7	☐	500.000	483.101	45024840.82	2.2857	A	0.9
8	☐	1000.000	1012.941	91164687.22	4.7925	A	0.2
9	☐			13299.74	0.0009	P	10.6

$$y = 0.0047 * x + 9.6893E-006$$

$$R = 0.9997$$

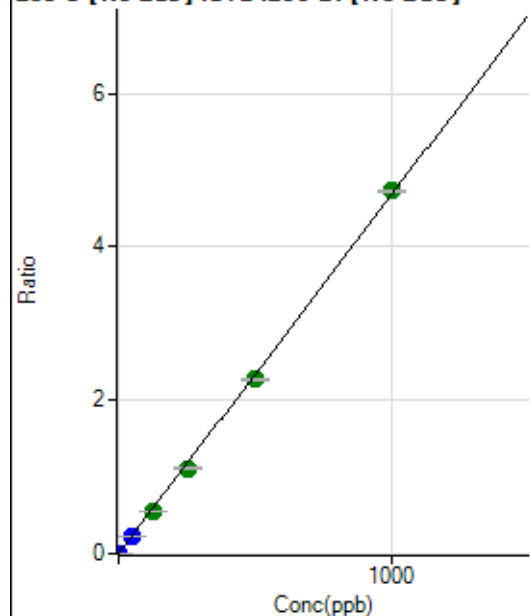
$$DL = 0.0004876$$

$$BEC = 0.002048$$

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	108.34	0.0000	P	41.1
2	☐	0.100					
3	☐	1.000	0.830	83886.88	0.0039	P	1.8
4	☐	50.000	46.158	4614651.97	0.2160	P	1.2
5	☐	125.000	116.232	11255578.29	0.5438	A	0.4
6	☐	250.000	238.215	22345494.60	1.1146	A	0.5
7	☐	500.000	486.392	44828423.22	2.2757	A	1.3
8	☐	1000.000	1011.039	89985213.82	4.7305	A	0.2
9	☐			8822.84	0.0006	P	16.8

$$y = 0.0047 * x + 5.1119E-006$$

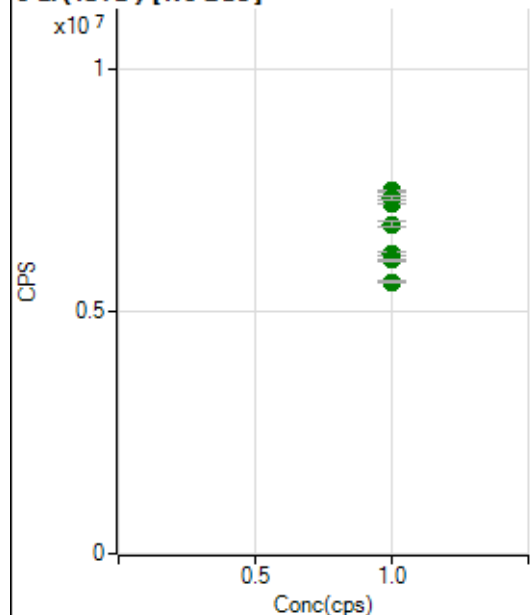
$$R = 0.9998$$

$$DL = 0.001346$$

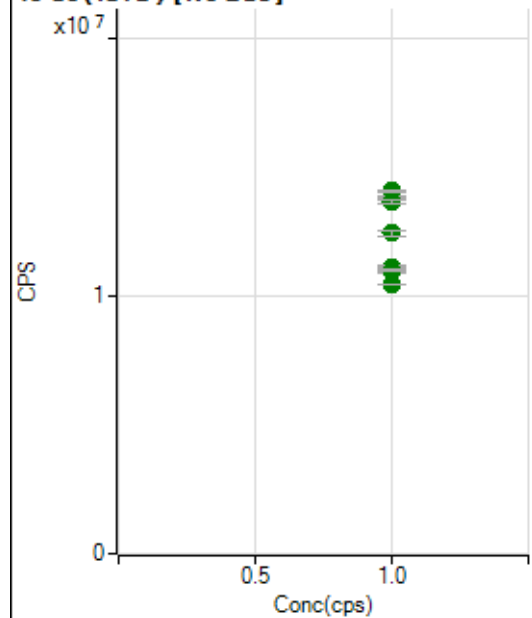
$$BEC = 0.001093$$

Weight: <None>

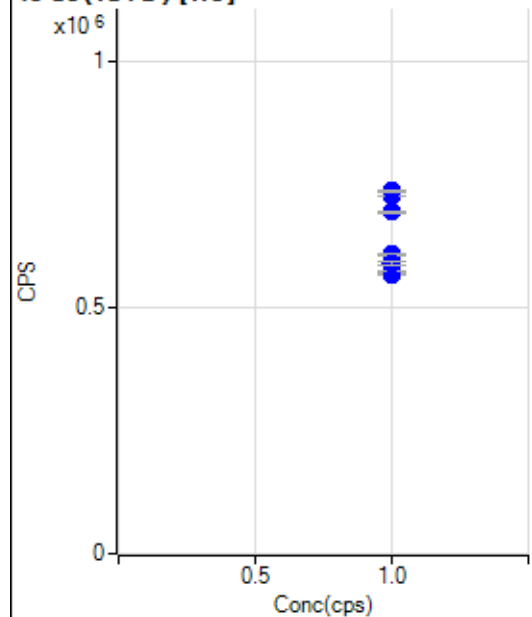
Min Conc: 0

6 Li (ISTD) [No Gas]

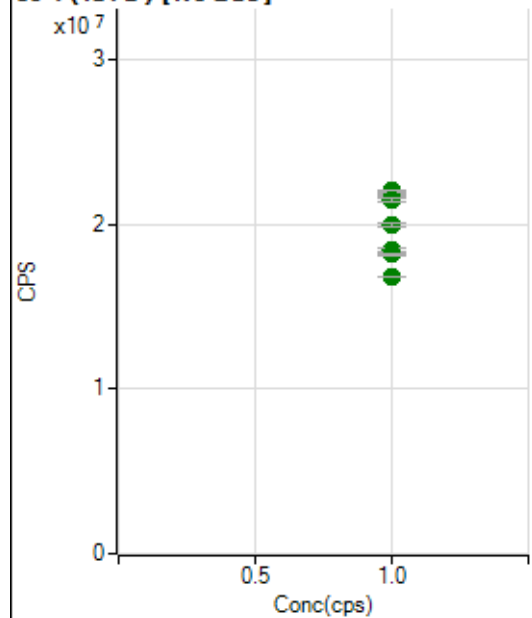
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7212260.05		A	0.1
2	☐	1.000					
3	☐	1.000		7488991.47		A	0.4
4	☐	1.000		7329891.17		A	1.1
5	☐	1.000		6802865.32		A	1.8
6	☐	1.000		6194657.68		A	0.9
7	☐	1.000		6067102.64		A	0.6
8	☐	1.000		6058050.58		A	0.2
9	☐	1.000		5611369.22		A	0.6

45 Sc (ISTD) [No Gas]

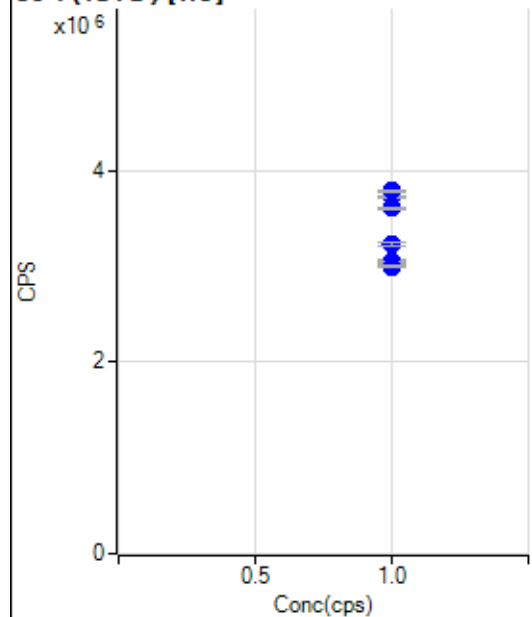
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13876013.33		A	0.6
2	☐	1.000					
3	☐	1.000		14090337.47		A	0.4
4	☐	1.000		13684860.90		A	1.4
5	☐	1.000		12448410.78		A	1.8
6	☐	1.000		11161711.36		A	1.2
7	☐	1.000		10993751.11		A	1.1
8	☐	1.000		11001630.28		A	0.5
9	☐	1.000		10460794.85		A	0.1

45 Sc (ISTD) [He]

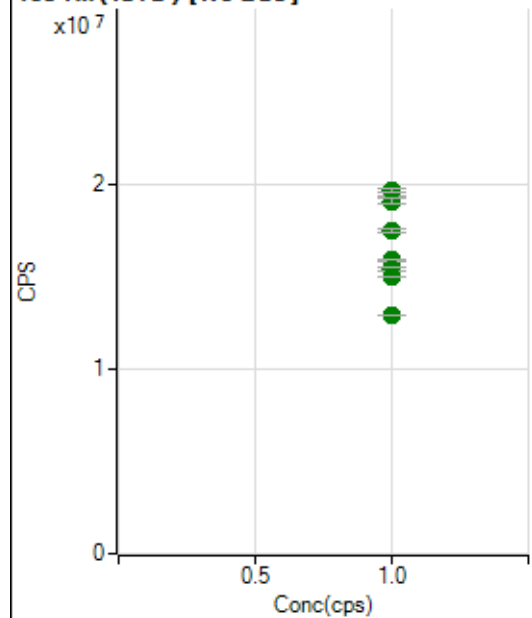
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		727538.99		P	0.2
2	☐	1.000					
3	☐	1.000		737140.72		P	0.3
4	☐	1.000		694010.81		P	0.3
5	☐	1.000		607880.88		P	1.1
6	☐	1.000		567768.79		P	0.3
7	☐	1.000		569026.51		P	0.5
8	☐	1.000		574878.01		P	0.3
9	☐	1.000		590410.84		P	1.2

89 Y (ISTD) [No Gas]

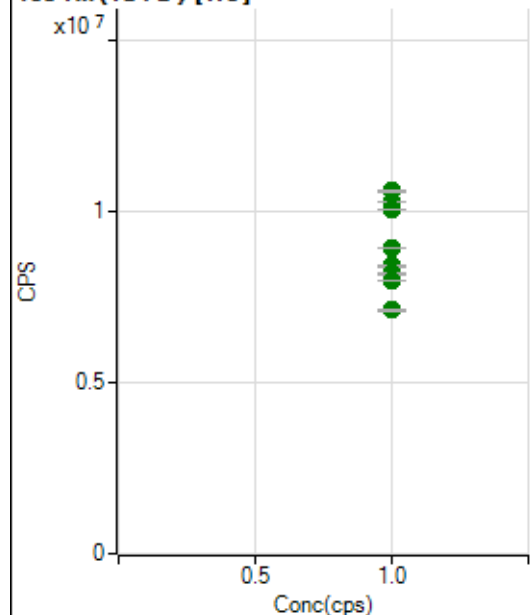
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		21732007.73		A	0.7
2	☐	1.000					
3	☐	1.000		22003406.06		A	0.6
4	☐	1.000		21442667.73		A	1.2
5	☐	1.000		19911846.65		A	1.3
6	☐	1.000		18394806.67		A	1.0
7	☐	1.000		18236795.70		A	0.8
8	☐	1.000		18152594.03		A	0.2
9	☐	1.000		16837824.89		A	0.1

89 Y(ISTD) [He]

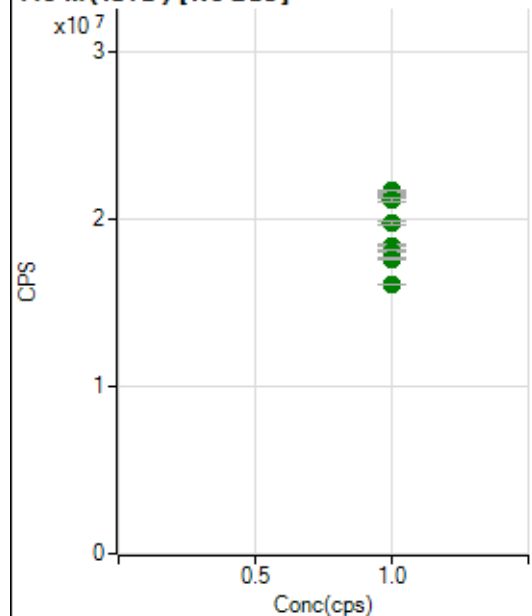
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3731059.49		P	0.6
2	☐	1.000					
3	☐	1.000		3785814.87		P	0.4
4	☐	1.000		3602593.94		P	0.5
5	☐	1.000		3227570.23		P	0.9
6	☐	1.000		3056459.26		P	0.3
7	☐	1.000		3050189.85		P	0.5
8	☐	1.000		3039689.16		P	0.4
9	☐	1.000		2998837.21		P	0.9

103 Rh(ISTD) [No Gas]

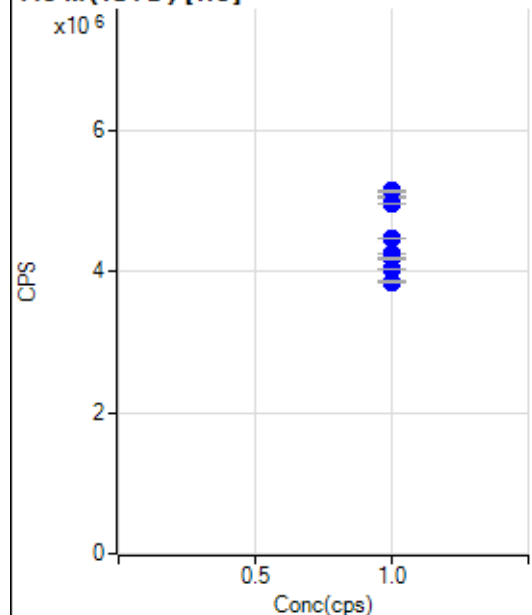
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		19339435.50		A	0.3
2	☐	1.000					
3	☐	1.000		19604407.38		A	0.9
4	☐	1.000		19041624.04		A	1.4
5	☐	1.000		17470178.51		A	1.4
6	☐	1.000		15882455.74		A	0.7
7	☐	1.000		15379199.13		A	0.9
8	☐	1.000		14963038.53		A	0.3
9	☐	1.000		12888244.21		A	0.4

103 Rh (ISTD) [He]

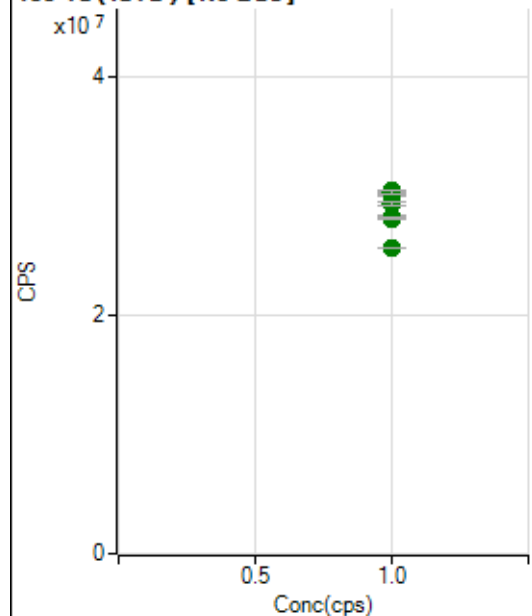
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10261086.86		A	0.0
2	☐	1.000					
3	☐	1.000		10604475.54		A	0.3
4	☐	1.000		10058619.15		A	0.3
5	☐	1.000		8935480.70		A	0.6
6	☐	1.000		8416603.14		A	0.3
7	☐	1.000		8196711.34		A	0.6
8	☐	1.000		7979092.93		A	0.3
9	☐	1.000		7128078.23		A	1.0

115 In (ISTD) [No Gas]

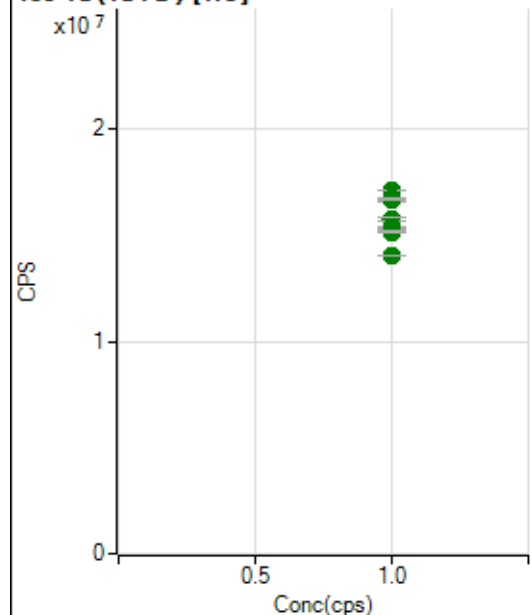
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		21413417.22		A	0.3
2	☐	1.000					
3	☐	1.000		21675306.61		A	0.3
4	☐	1.000		21143501.17		A	1.5
5	☐	1.000		19787357.87		A	1.3
6	☐	1.000		18401688.87		A	0.7
7	☐	1.000		18090262.57		A	1.0
8	☐	1.000		17625996.09		A	0.2
9	☐	1.000		16061636.92		A	0.1

115 In (ISTD) [He]

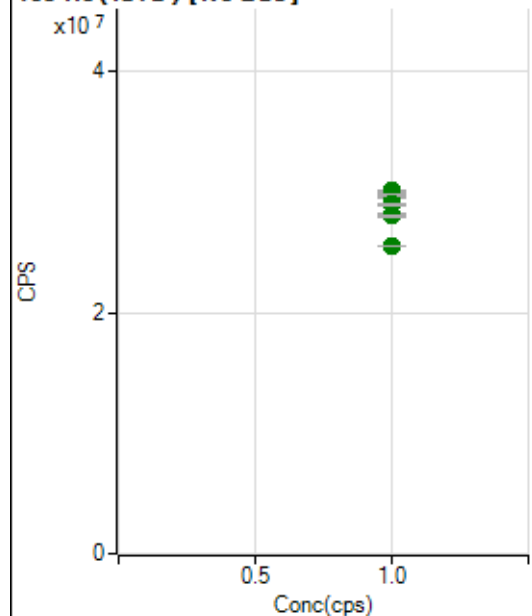
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5053279.97		P	0.4
2	☐	1.000					
3	☐	1.000		5140301.96		P	0.6
4	☐	1.000		4956681.17		P	0.1
5	☐	1.000		4468191.52		P	0.4
6	☐	1.000		4251982.07		P	0.4
7	☐	1.000		4185853.83		P	0.4
8	☐	1.000		4039211.69		P	0.3
9	☐	1.000		3854764.65		P	1.1

159 Tb (ISTD) [No Gas]

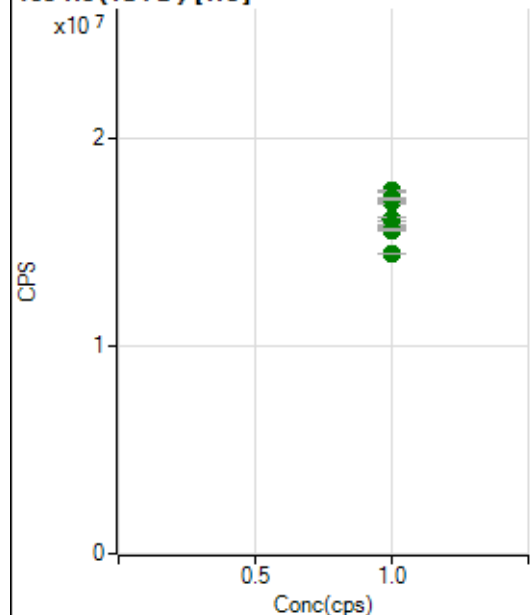
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		30048475.94		A	0.6
2	☐	1.000					
3	☐	1.000		30444623.44		A	0.3
4	☐	1.000		30323444.82		A	0.6
5	☐	1.000		29323595.95		A	1.1
6	☐	1.000		28122517.08		A	0.1
7	☐	1.000		28226178.19		A	1.0
8	☐	1.000		28194154.03		A	0.4
9	☐	1.000		25626827.40		A	0.3

159 Tb (ISTD) [He]

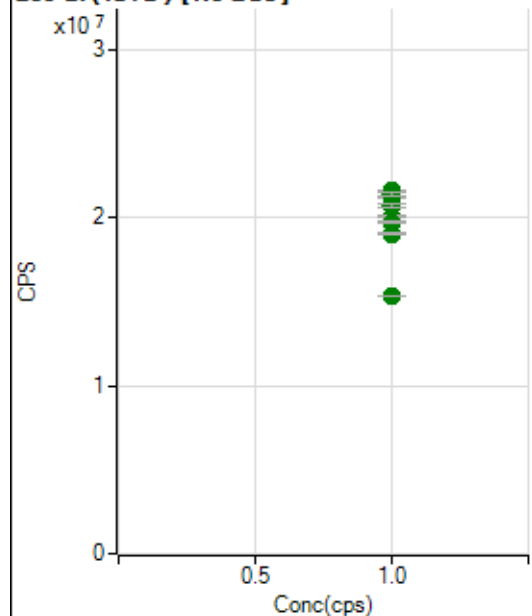
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16670794.75		A	0.7
2	☐	1.000					
3	☐	1.000		17099041.27		A	0.1
4	☐	1.000		16736453.50		A	0.4
5	☐	1.000		15752148.93		A	0.8
6	☐	1.000		15371938.80		A	0.3
7	☐	1.000		15313570.47		A	0.3
8	☐	1.000		15163493.52		A	0.4
9	☐	1.000		14056196.73		A	0.3

165 Ho (ISTD) [No Gas]

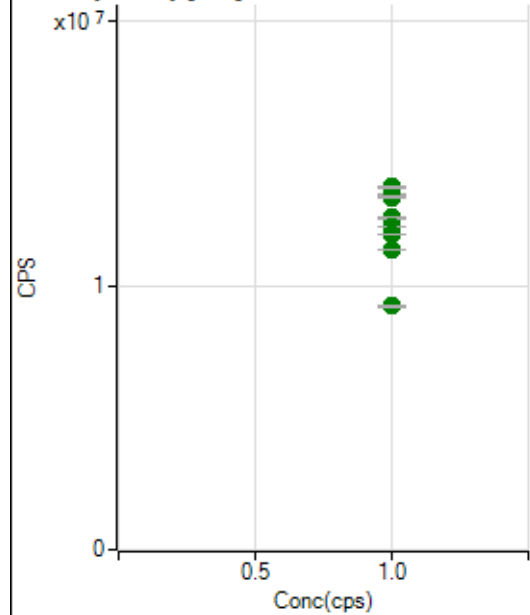
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		29587807.26		A	0.4
2	☐	1.000					
3	☐	1.000		30106430.19		A	0.4
4	☐	1.000		29802397.19		A	0.7
5	☐	1.000		28980657.24		A	0.9
6	☐	1.000		28038626.67		A	0.5
7	☐	1.000		28061404.10		A	0.9
8	☐	1.000		28018452.36		A	0.4
9	☐	1.000		25534546.58		A	0.4

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16935000.16		A	0.7
2	☐	1.000					
3	☐	1.000		17486119.60		A	0.5
4	☐	1.000		17099974.88		A	0.2
5	☐	1.000		16120290.59		A	0.7
6	☐	1.000		15847588.24		A	0.2
7	☐	1.000		15808924.49		A	0.4
8	☐	1.000		15584868.24		A	0.4
9	☐	1.000		14465304.09		A	0.3

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		21213424.41		A	0.4
2	☐	1.000					
3	☐	1.000		21569283.57		A	0.7
4	☐	1.000		21368383.01		A	0.7
5	☐	1.000		20696951.22		A	0.8
6	☐	1.000		20048732.06		A	0.5
7	☐	1.000		19699374.29		A	0.6
8	☐	1.000		19022323.88		A	0.4
9	☐	1.000		15289150.47		A	0.3

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13416729.66		A	0.3
2	☐	1.000					
3	☐	1.000		13721667.57		A	0.2
4	☐	1.000		13343482.02		A	0.5
5	☐	1.000		12562942.04		A	0.4
6	☐	1.000		12194584.82		A	0.2
7	☐	1.000		11935841.63		A	0.2
8	☐	1.000		11372247.61		A	0.0
9	☐	1.000		9228933.96		A	0.6

US EPA Tune Check Sample Report

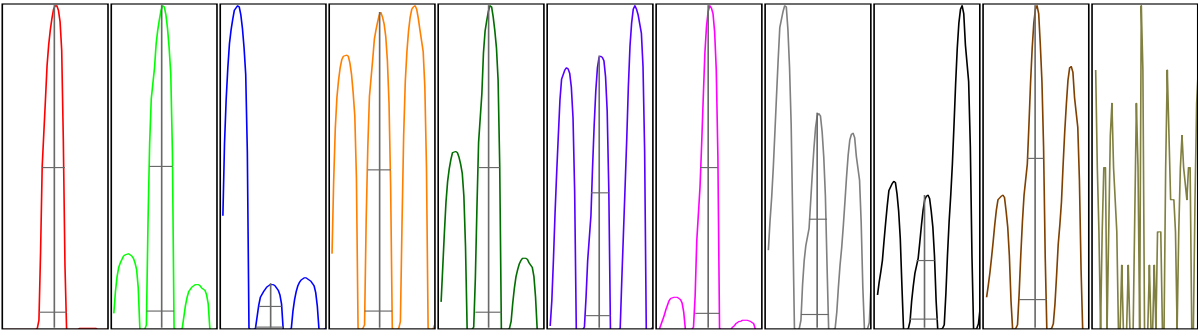
Batch Folder D:\ICP-MS Data\P7042319MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	23133	0.76	5.00	
24	442339	0.63	5.00	
25	61353	1.20	5.00	
26	70206	0.65	5.00	
59	170646	0.84	5.00	
113	22378	0.64	5.00	
115	264216	0.79	5.00	
206	74361	0.48	5.00	
207	69067	0.51	5.00	
208	162838	0.66	5.00	
220	0	92.44		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	23323	23283	23120	23044	22895
24	446055	443526	441864	441825	438427
25	61938	62238	60858	61259	60472
26	70637	70486	70488	69742	69677
59	172070	171267	171567	169731	168595
113	22499	22417	22502	22309	22163
115	266647	265363	264985	261907	262176
206	74293	74230	74723	74695	73864
207	69073	69506	68701	69324	68731
208	164021	163819	162814	161863	161674
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	39569	9.00	8.9 - 9.1		0.781	0.900	
24	704974	23.95	23.9 - 24.1		0.788	0.900	
25	97514	24.95	24.9 - 25.1		0.788	0.900	
26	112512	25.95	25.9 - 26.1		0.788	0.900	
59	290303	58.95	58.9 - 59.1		0.779	0.900	
113	43250	113.00	112.9 - 113.1		0.727	0.900	
115	514309	115.00	114.9 - 115.1		0.722	0.900	
206	145100	206.00	205.9 - 206.1		0.780	0.900	
207	130910	206.95	206.9 - 207.1		0.776	0.900	
208	317749	208.00	207.9 - 208.1		0.789	0.900	
220	0	219.80	-		0.300		

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	8.0	V	Deflect	14.4	V
Extract 2	-105.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-50	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	190	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	46296	0.49	
89	172446	0.69	
205	70710	0.28	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	46452	46458	46472	46023	46075
89	172734	174030	172619	172106	170741
205	70731	70719	70961	70737	70402

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

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	Yes		OctP Bias	-18.0	V	Energy Discrimination		5.0 V
He Flow	4.1	mL/min	OctP RF	200	V			