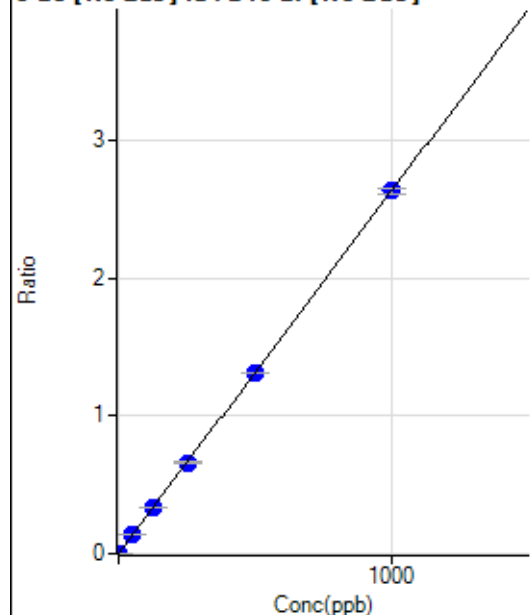


Batch Folder: D:\ICP-MS Data\P71105 2019MS.b\
Analysis File: P71105 2019MS.batch.bin
DA Date-Time: 2019-11-05 20:17:05
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-11-05 14:04:44
2	004CALS.d	S01	2019-11-05 14:08:18
3	005CALS.d	S02	2019-11-05 14:12:15
4	006CALS.d	S03	2019-11-05 14:16:10
5	007CALS.d	S04	2019-11-05 14:20:05
6	008CALS.d	S05	2019-11-05 14:23:57
7	009CALS.d	S06	2019-11-05 14:27:46
8	012CALS.d	S07	2019-11-05 14:43:08
9	013CALS.d	S08	2019-11-05 14:46:54

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	44.44	0.0000	P	33.7
2	☐	0.100	0.113	320.38	0.0003	P	7.2
3	☐	1.000	1.068	2681.79	0.0029	P	4.1
4	☐	50.000	50.945	127286.29	0.1344	P	1.3
5	☐	125.000	126.229	308965.91	0.3331	P	0.5
6	☐	250.000	251.279	610832.80	0.6630	P	0.6
7	☐	500.000	498.675	1211265.68	1.3156	P	0.8
8	☐	1000.000	1000.142	2431556.83	2.6385	P	1.2
9	☐			462.98	0.0006	P	7.6

$$y = 0.0026 * x + 4.8140E-005$$

$$R = 1.0000$$

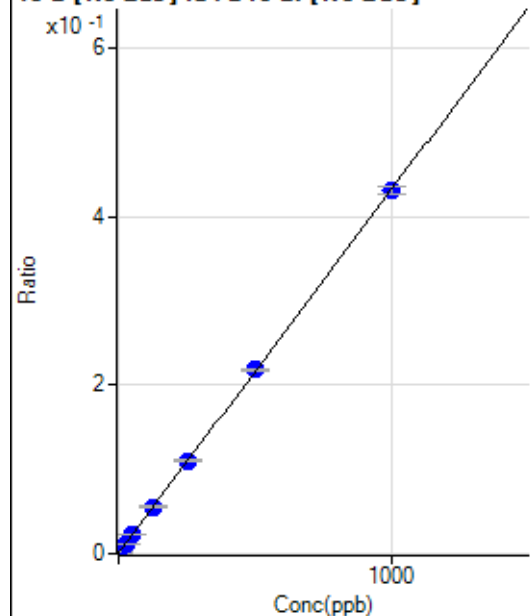
$$DL = 0.01843$$

$$BEC = 0.01825$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	633.37	0.0007	P	4.4
2	☐	2.500	2.711	1711.29	0.0019	P	10.2
3	☐	25.000	24.627	10595.77	0.0113	P	1.9
4	☐	50.000	50.067	21112.66	0.0223	P	1.1
5	☐	125.000	127.677	51759.47	0.0558	P	3.2
6	☐	250.000	253.704	101535.90	0.1102	P	1.8
7	☐	500.000	505.282	201439.54	0.2188	P	1.1
8	☐	1000.000	996.104	396883.40	0.4307	P	2.3
9	☐			15302.73	0.0185	P	7.2

$$y = 4.3166E-004 * x + 6.8532E-004$$

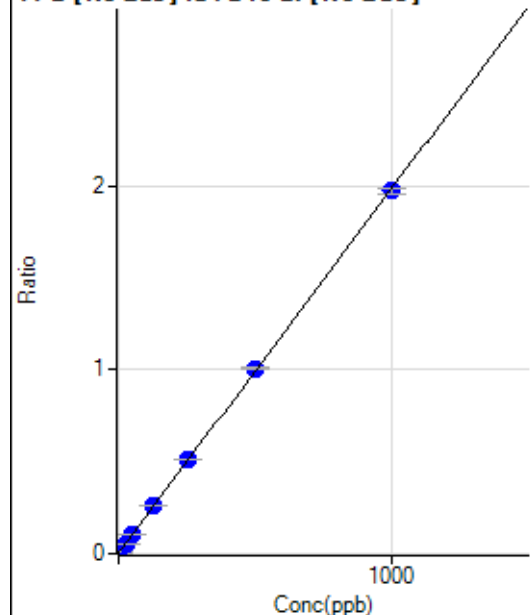
$$R = 1.0000$$

$$DL = 0.2116$$

$$BEC = 1.588$$

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	2861.50	0.0031	P	4.1
2	☐	2.500	2.784	7941.30	0.0086	P	3.7
3	☐	25.000	24.897	49027.95	0.0524	P	1.7
4	☐	50.000	51.149	98770.79	0.1043	P	0.9
5	☐	125.000	128.580	238924.24	0.2576	P	0.5
6	☐	250.000	257.343	472097.46	0.5124	P	0.5
7	☐	500.000	506.872	926374.14	1.0062	P	1.0
8	☐	1000.000	994.225	1816126.73	1.9706	P	1.6
9	☐			70853.57	0.0857	P	6.6

$$y = 0.0020 * x + 0.0031$$

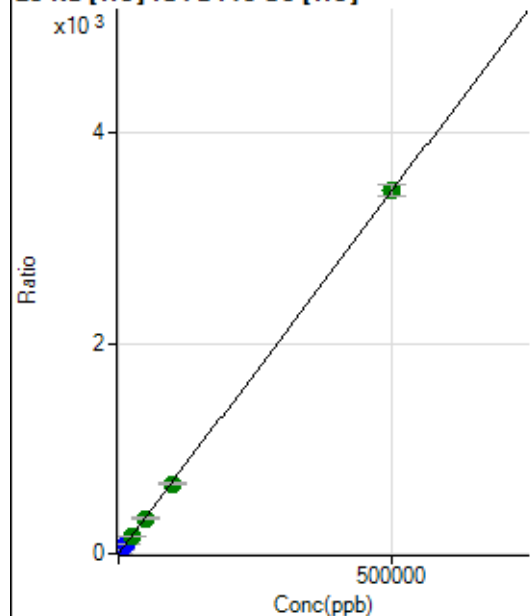
$$R = 0.9999$$

$$DL = 0.1939$$

$$BEC = 1.564$$

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	6323.83	0.1206	P	5.0
2	☐	50.000	51.651	24968.96	0.4765	P	1.8
3	☐	500.000	508.057	191150.54	3.6208	P	2.8
4	☐	5000.000	5094.587	1873351.52	35.2191	P	1.0
5	☐	12500.000	12392.669	4530307.96	85.4983	P	0.3
6	☐	25000.000	24345.019	9023495.17	167.8424	A	0.4
7	☐	50000.000	48420.122	18012714.99	333.7046	A	3.6
8	☐	100000.00	96716.752	37866257.44	666.4379	A	1.0
9	☐	500000.00	500849.11	184085933.2	3,450.654	A	3.2

$$y = 0.0069 * x + 0.1206$$

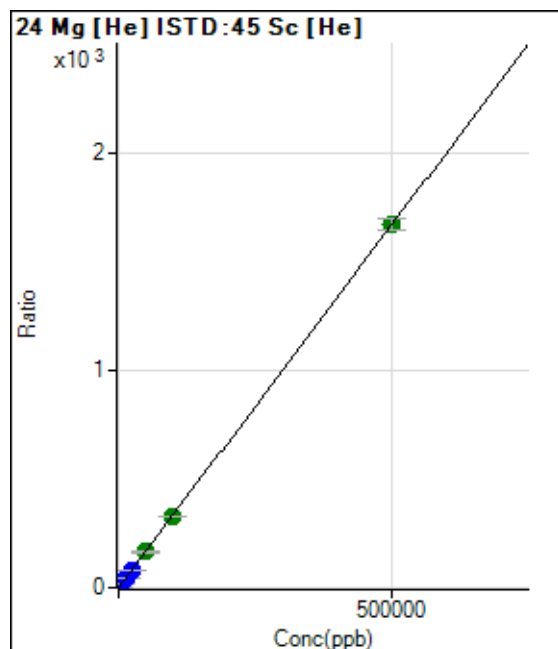
$$R = 1.0000$$

$$DL = 2.606$$

$$BEC = 17.51$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	180.56	0.0035	P	15.8
2	☐	50.000	55.415	9875.87	0.1885	P	2.4
3	☐	500.000	549.472	97005.38	1.8379	P	4.1
4	☐	5000.000	5217.368	926671.86	17.4221	P	1.5
5	☐	12500.000	12701.810	2247237.88	42.4095	P	0.9
6	☐	25000.000	24812.522	4453735.61	82.8421	P	0.5
7	☐	50000.000	49157.103	8858981.62	164.1184	A	3.6
8	☐	100000.00	98159.796	18620307.36	327.7178	A	1.2
9	☐	500000.00	500454.43	89134576.99	1,670.810	A	3.2

$$y = 0.0033 * x + 0.0035$$

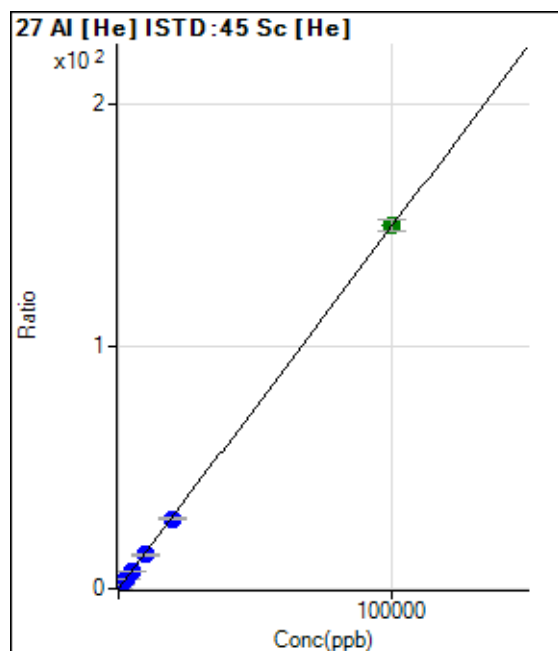
$$R = 1.0000$$

$$DL = 0.4898$$

$$BEC = 1.034$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	19.44	0.0004	P	64.3
2	☐	2.000	2.170	188.90	0.0036	P	6.7
3	☐	20.000	19.158	1527.93	0.0290	P	6.8
4	☐	1000.000	1003.020	79624.53	1.4970	P	1.5
5	☐	2500.000	2429.053	192075.30	3.6248	P	0.5
6	☐	5000.000	4756.432	381580.96	7.0976	P	0.7
7	☐	10000.000	9425.635	759194.31	14.0646	P	3.5
8	☐	20000.000	19216.900	1629155.86	28.6745	P	1.8
9	☐	100000.00	100227.97	7978783.51	149.5536	A	3.0

$$y = 0.0015 * x + 3.6864E-004$$

$$R = 1.0000$$

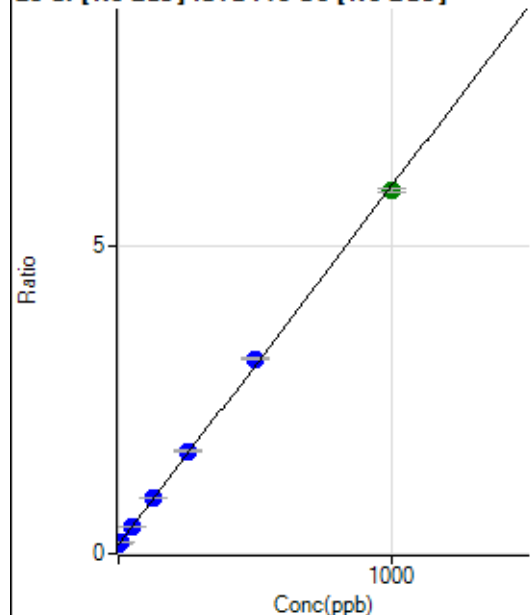
$$DL = 0.4766$$

$$BEC = 0.2471$$

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	186202.66	0.1443	P	2.0
2	☐	1.000	0.883	193951.74	0.1494	P	2.3
3	☐	10.000	7.619	246961.11	0.1887	P	1.4
4	☐	50.000	52.141	591215.93	0.4486	P	0.6
5	☐	125.000	131.535	1189491.24	0.9121	P	0.1
6	☐	250.000	261.359	2154242.28	1.6700	P	1.1
7	☐	500.000	518.606	4146122.88	3.1716	P	1.0
8	☐	1000.000	986.957	7879456.08	5.9056	A	1.2
9	☐			426177.04	0.3437	P	1.9

$$y = 0.0058 * x + 0.1443$$

$$R = 0.9997$$

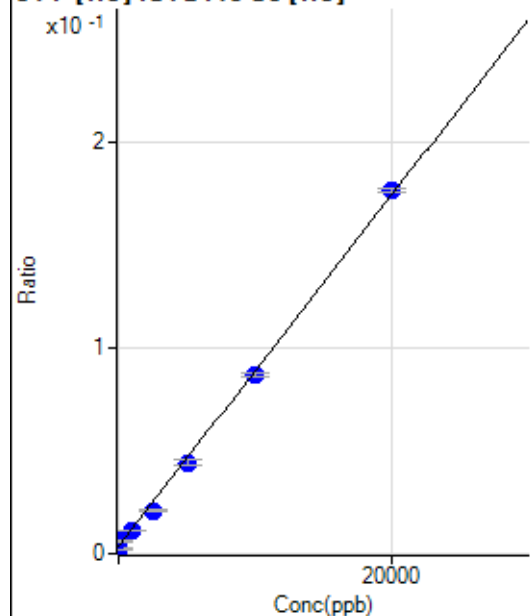
$$DL = 1.449$$

$$BEC = 24.72$$

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	-178.507	108.34	0.0021	P	34.9
2	☐	0.000	-153.541	119.45	0.0023	P	20.4
3	☐	0.000	332.048	338.90	0.0064	P	13.6
4	☐	1000.000	874.937	588.92	0.0111	P	4.1
5	☐	2500.000	2033.237	1111.20	0.0210	P	6.7
6	☐	5000.000	4738.099	2369.73	0.0441	P	6.0
7	☐	10000.000	9778.605	4709.29	0.0872	P	1.7
8	☐	20000.000	20240.771	10031.53	0.1766	P	1.1
9	☐			94.45	0.0018	P	27.9

$$y = 8.5452E-006 * x + 0.0036$$

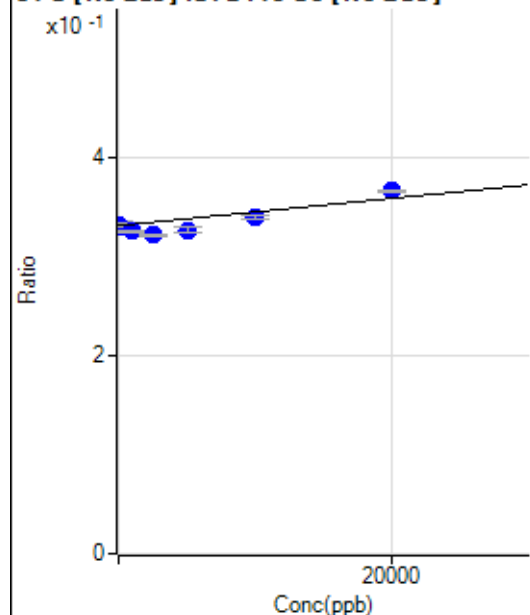
$$R = 0.9994$$

$$DL = 241.4$$

$$BEC = 420.4$$

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	-130.210	428407.51	0.3320	P	2.6
2	☐	0.000	-643.296	429971.42	0.3313	P	2.0
3	☐	0.000	773.506	435987.69	0.3332	P	1.2
4	☐	1000.000	-3986.391	430470.23	0.3267	P	0.7
5	☐	2500.000	-6776.505	420990.50	0.3228	P	0.7
6	☐	5000.000	-3535.444	422171.16	0.3273	P	1.9
7	☐	10000.000	6209.210	445379.31	0.3407	P	0.9
8	☐	20000.000	25438.139	489873.77	0.3672	P	0.9
9	☐			389520.07	0.3141	P	2.5

$$y = 1.3763\text{E-}006 * x + 0.3321$$

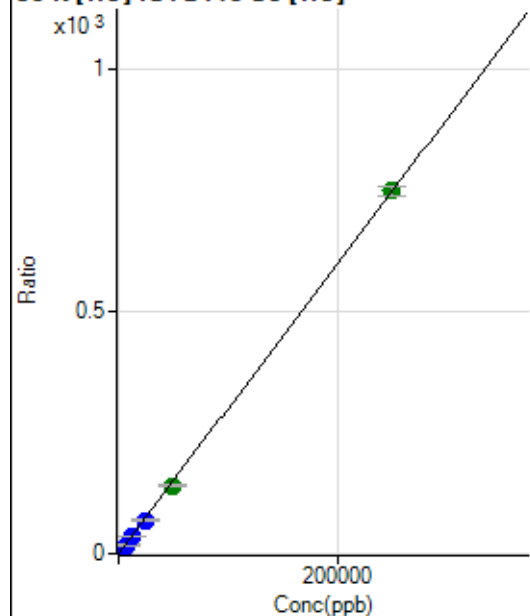
$$R = 0.8957$$

$$DL = 1.395\text{E}+04$$

$$BEC = 2.413\text{E}+05$$

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	20130.99	0.3842	P	1.8
2	☐	50.000	54.083	28567.08	0.5452	P	3.7
3	☐	500.000	496.862	98375.05	1.8638	P	3.8
4	☐	2500.000	2406.756	401718.53	7.5516	P	0.8
5	☐	6250.000	5848.786	943248.48	17.8022	P	0.9
6	☐	12500.000	11437.675	1851895.48	34.4462	P	0.6
7	☐	25000.000	22981.784	3715229.90	68.8252	P	3.4
8	☐	50000.000	47034.617	7980134.55	140.4558	A	1.6
9	☐	250000.00	250858.98	39879897.07	747.4558	A	2.7

$$y = 0.0030 * x + 0.3842$$

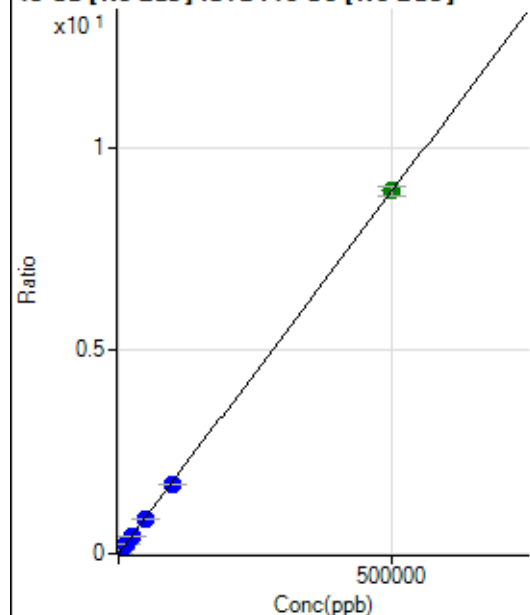
$$R = 0.9999$$

$$DL = 6.901$$

$$BEC = 129$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	88.89	0.0001	P	31.7
2	☐	50.000	45.347	1138.99	0.0009	P	4.4
3	☐	500.000	502.539	11813.44	0.0090	P	3.0
4	☐	5000.000	4876.330	114660.92	0.0870	P	0.8
5	☐	12500.000	12181.486	283320.53	0.2173	P	0.9
6	☐	25000.000	24287.985	558673.96	0.4331	P	2.4
7	☐	50000.000	48098.684	1121131.39	0.8576	P	1.1
8	☐	100000.00	95739.746	2277515.91	1.7070	P	1.3
9	☐	500000.00	501086.98	11078421.08	8.9341	A	2.4

$$y = 1.7829E-005 * x + 6.9136E-005$$

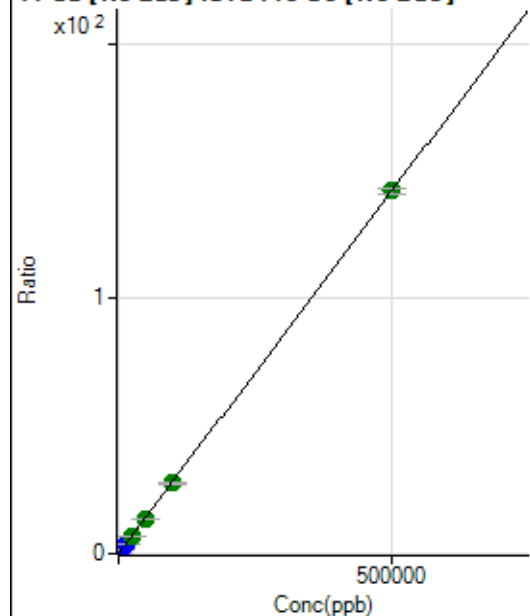
$$R = 1.0000$$

$$DL = 3.693$$

$$BEC = 3.878$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	6426.64	0.0050	P	3.2
2	☐	50.000	51.178	25350.27	0.0195	P	0.7
3	☐	500.000	502.055	193198.74	0.1477	P	1.1
4	☐	5000.000	4974.522	1869511.54	1.4187	P	0.5
5	☐	12500.000	12342.970	4580834.91	3.5127	P	0.8
6	☐	25000.000	24435.402	8964405.93	6.9491	A	0.9
7	☐	50000.000	48673.834	18090409.78	13.8373	A	0.6
8	☐	100000.00	97281.627	36892743.18	27.6509	A	1.1
9	☐	500000.00	500708.69	176473178.9	142.2987	A	1.6

$$y = 2.8418E-004 * x + 0.0050$$

$$R = 1.0000$$

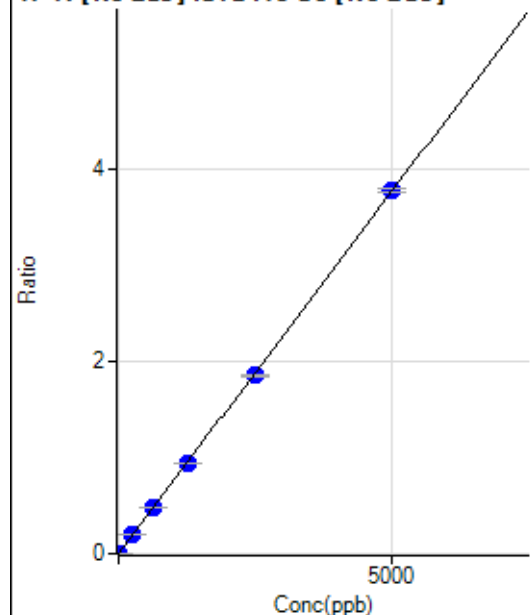
$$DL = 1.684$$

$$BEC = 17.52$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	72.22	0.0001	P	57.6
2	☐	0.500	0.458	519.48	0.0004	P	14.4
3	☐	5.000	5.370	5351.19	0.0041	P	7.6
4	☐	250.000	255.498	252835.66	0.1919	P	1.0
5	☐	625.000	627.045	613984.08	0.4708	P	0.6
6	☐	1250.000	1250.914	1211563.34	0.9392	P	0.8
7	☐	2500.000	2467.606	2421910.88	1.8526	P	0.7
8	☐	5000.000	5015.438	5023778.15	3.7653	P	1.0
9	☐			2364.18	0.0019	P	10.9

$$y = 7.5074\text{E-}004 * x + 5.6161\text{E-}005$$

$$R = 1.0000$$

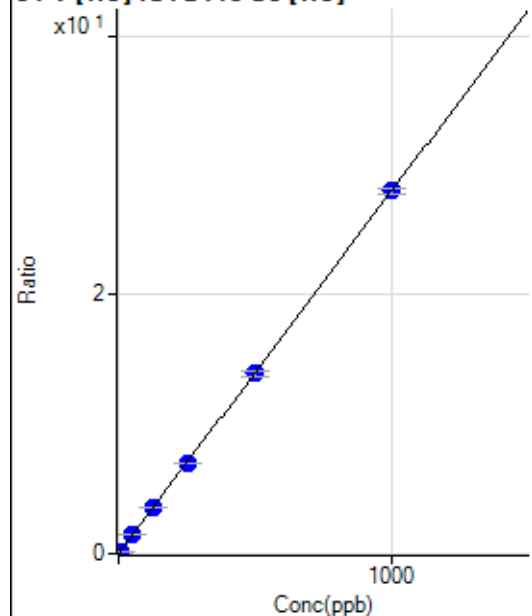
$$DL = 0.1294$$

$$BEC = 0.07481$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	4.44	0.0001	P	114.9
2	☐	0.500	0.561	828.93	0.0158	P	6.6
3	☐	5.000	5.741	8489.24	0.1609	P	5.3
4	☐	50.000	51.796	77168.51	1.4508	P	1.6
5	☐	125.000	126.575	187848.46	3.5453	P	0.9
6	☐	250.000	250.282	376880.57	7.0102	P	0.2
7	☐	500.000	498.020	752988.48	13.9490	P	3.3
8	☐	1000.000	1000.629	1592340.36	28.0265	P	1.7
9	☐			532.24	0.0100	P	5.1

$$y = 0.0280 * x + 8.4217\text{E-}005$$

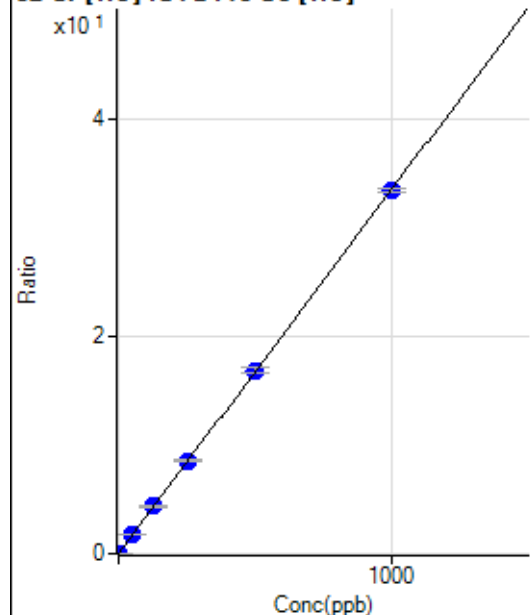
$$R = 1.0000$$

$$DL = 0.01037$$

$$BEC = 0.003007$$

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	506.68	0.0097	P	5.5
2	☐	0.200	0.219	891.15	0.0170	P	9.3
3	☐	2.000	2.179	4367.39	0.0827	P	3.3
4	☐	50.000	53.315	95566.45	1.7966	P	0.9
5	☐	125.000	129.424	230352.96	4.3475	P	0.9
6	☐	250.000	255.057	460112.77	8.5583	P	0.9
7	☐	500.000	502.724	910102.84	16.8593	P	3.2
8	☐	1000.000	996.655	1898551.14	33.4141	P	1.2
9	☐			71978.24	1.3491	P	2.9

$$y = 0.0335 * x + 0.0097$$

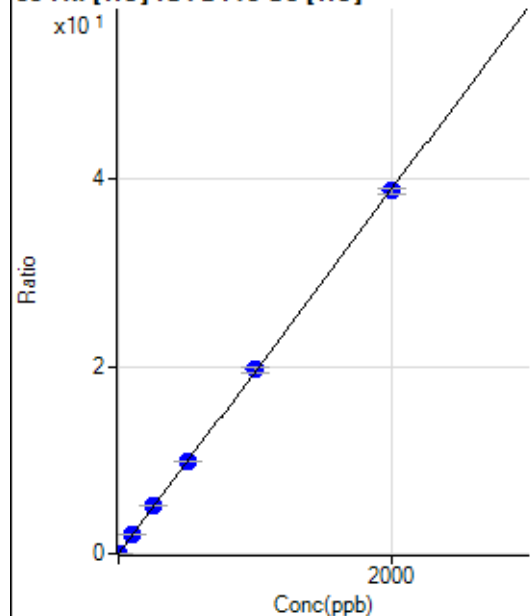
$$R = 1.0000$$

$$DL = 0.04769$$

$$BEC = 0.2885$$

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	156.67	0.0030	P	37.2
2	☐	0.100	0.106	265.56	0.0051	P	21.9
3	☐	1.000	1.276	1468.99	0.0278	P	1.5
4	☐	100.000	105.884	109609.96	2.0607	P	2.1
5	☐	250.000	259.994	267876.99	5.0557	P	0.7
6	☐	500.000	509.936	532940.96	9.9130	P	0.6
7	☐	1000.000	1008.315	1057851.32	19.5984	P	3.8
8	☐	2000.000	1991.815	2199429.92	38.7115	P	1.6
9	☐			8810.56	0.1652	P	5.9

$$y = 0.0194 * x + 0.0030$$

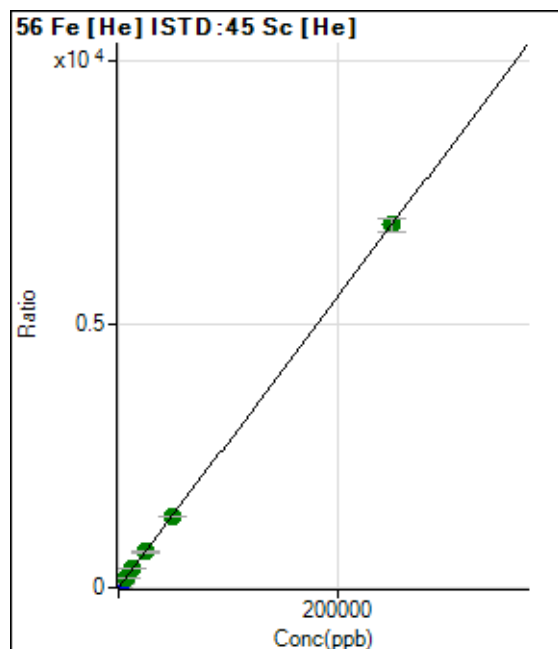
$$R = 1.0000$$

$$DL = 0.1723$$

$$BEC = 0.1544$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	3143.01	0.0600	P	5.0
2	☐	5.000	5.718	11406.57	0.2177	P	2.9
3	☐	50.000	58.150	87808.44	1.6635	P	3.3
4	☐	2500.000	2641.157	3877076.47	72.8895	P	1.1
5	☐	6250.000	6415.231	9376444.89	176.9590	A	0.6
6	☐	12500.000	12638.511	18739487.22	348.5649	A	0.5
7	☐	25000.000	24807.513	36928760.08	684.1232	A	3.5
8	☐	50000.000	49367.482	77350599.88	1,361.360	A	1.1
9	☐	250000.00	250133.28	367941548.9	6,897.445	A	3.5

$$y = 0.0276 * x + 0.0600$$

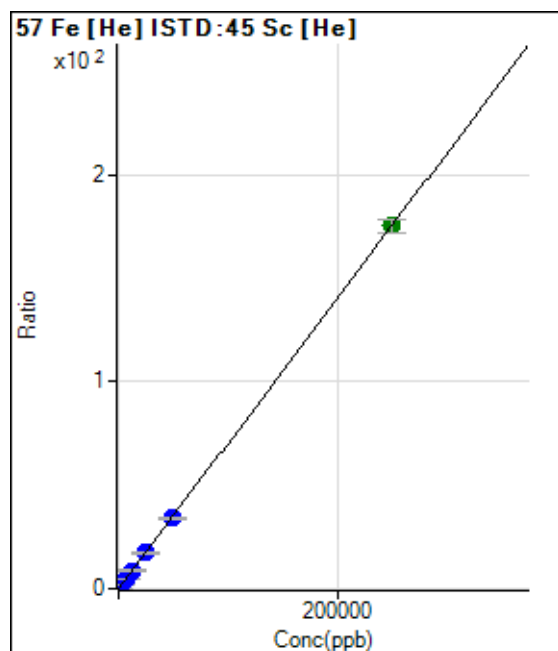
$$R = 1.0000$$

$$DL = 0.3287$$

$$BEC = 2.176$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	288.90	0.0055	P	6.7
2	☒	5.000					
3	☐	50.000	61.081	2548.44	0.0483	P	2.5
4	☐	2500.000	2625.154	98035.54	1.8432	P	1.9
5	☐	6250.000	6330.223	235089.57	4.4369	P	1.4
6	☐	12500.000	12592.815	474229.85	8.8209	P	0.5
7	☐	25000.000	24714.387	934118.17	17.3064	P	4.0
8	☐	50000.000	48643.727	1934973.15	34.0578	P	1.9
9	☐	250000.00	250291.91	9345977.64	175.2185	A	4.0

$$y = 7.0003E-004 * x + 0.0055$$

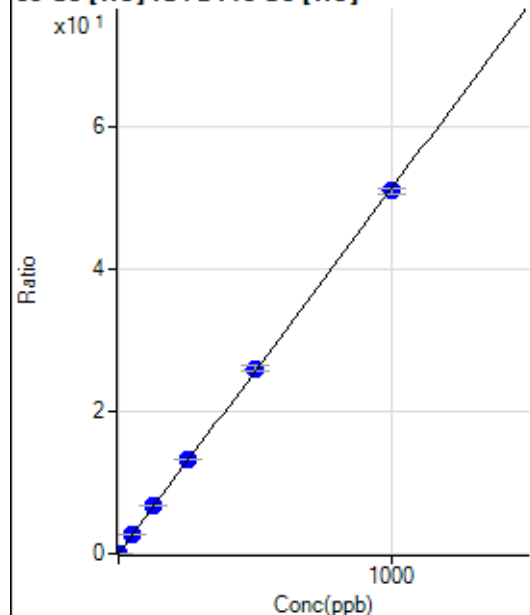
$$R = 1.0000$$

$$DL = 1.583$$

$$BEC = 7.871$$

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	47.78	0.0009	P	12.1
2	☐	0.100	0.096	305.56	0.0058	P	2.9
3	☐	1.000	1.157	3181.52	0.0603	P	6.6
4	☐	50.000	54.279	148273.83	2.7877	P	1.8
5	☐	125.000	131.689	358275.68	6.7622	P	1.8
6	☐	250.000	257.973	712120.08	13.2459	P	0.8
7	☐	500.000	507.103	1405557.34	26.0368	P	3.2
8	☐	1000.000	993.405	2898019.85	51.0048	P	1.4
9	☐			5986.87	0.1122	P	4.0

$$y = 0.0513 * x + 9.1264E-004$$

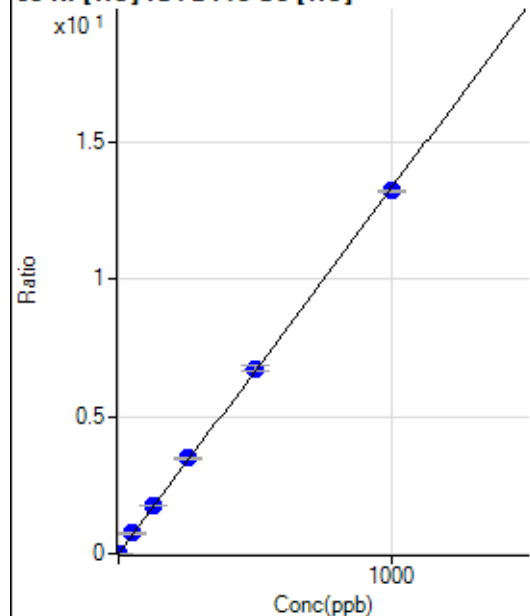
$$R = 0.9999$$

$$DL = 0.006463$$

$$BEC = 0.01778$$

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	26.67	0.0005	P	33.0
2	☐	0.100	0.128	115.56	0.0022	P	17.0
3	☐	1.000	1.123	816.70	0.0155	P	2.6
4	☐	50.000	55.224	39141.24	0.7359	P	2.5
5	☐	125.000	132.672	93640.41	1.7674	P	1.6
6	☐	250.000	260.579	186592.35	3.4707	P	0.6
7	☐	500.000	507.148	364615.12	6.7544	P	3.3
8	☐	1000.000	992.561	751094.68	13.2188	P	0.9
9	☐			19241.76	0.3607	P	3.0

$$y = 0.0133 * x + 5.0900E-004$$

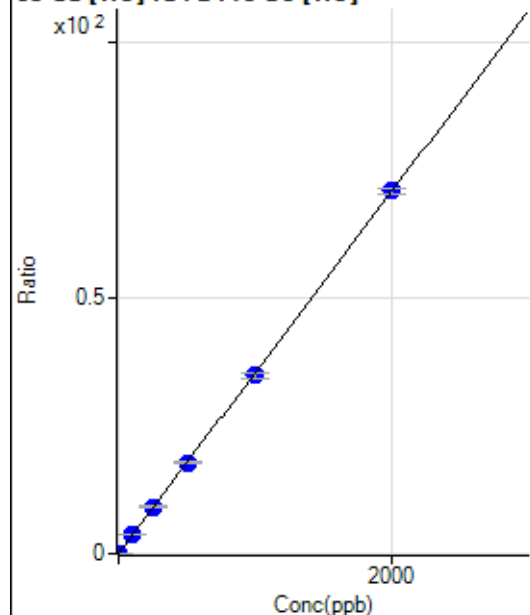
$$R = 0.9999$$

$$DL = 0.03785$$

$$BEC = 0.03822$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1100.06	0.0210	P	5.0
2	☐	0.200	0.227	1520.10	0.0290	P	2.6
3	☐	2.000	2.399	5585.60	0.1059	P	6.7
4	☐	100.000	107.613	203683.57	3.8292	P	0.7
5	☐	250.000	258.678	486132.27	9.1750	P	1.3
6	☐	500.000	503.698	959414.76	17.8458	P	1.1
7	☐	1000.000	984.068	1881113.86	34.8450	P	3.0
8	☐	2000.000	2005.576	4033537.58	70.9939	P	1.8
9	☐			7504.27	0.1406	P	0.3

$$y = 0.0354 * x + 0.0210$$

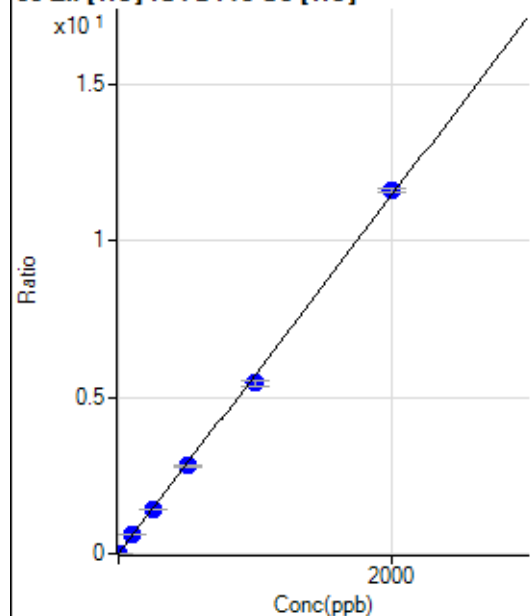
$$R = 0.9999$$

$$DL = 0.08889$$

$$BEC = 0.5932$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	53.34	0.0010	P	31.7
2	☐	0.200	1.604	534.46	0.0102	P	8.2
3	☐	2.000	2.557	826.70	0.0156	P	5.5
4	☐	100.000	105.995	32292.62	0.6071	P	1.7
5	☐	250.000	249.885	75767.98	1.4300	P	0.6
6	☐	500.000	488.654	150282.22	2.7953	P	0.3
7	☐	1000.000	953.230	294317.43	5.4520	P	3.1
8	☐	2000.000	2025.936	658304.87	11.5861	P	1.1
9	☐			8095.69	0.1518	P	4.4

$$y = 0.0057 * x + 0.0010$$

$$R = 0.9996$$

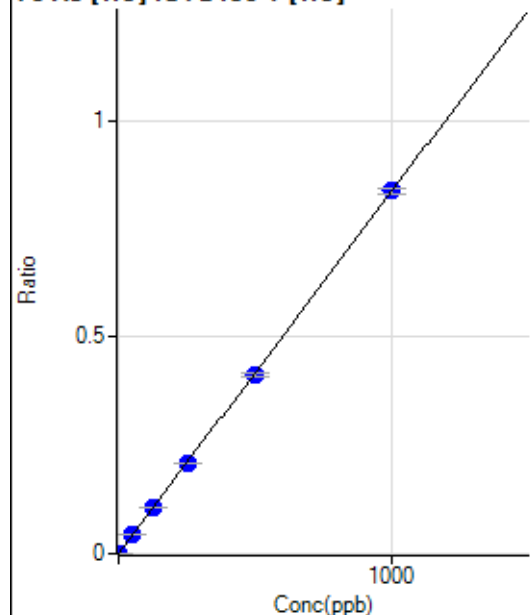
$$DL = 0.1686$$

$$BEC = 0.1775$$

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	3.70	0.0000	P	2.4
2	☐	0.100	0.096	22.22	0.0001	P	22.7
3	☐	1.000	1.117	218.52	0.0010	P	6.1
4	☐	50.000	50.983	9901.60	0.0427	P	1.2
5	☐	125.000	126.091	24164.60	0.1055	P	0.4
6	☐	250.000	250.900	48507.82	0.2099	P	0.7
7	☐	500.000	495.563	95647.38	0.4146	P	2.5
8	☐	1000.000	1001.808	199366.41	0.8381	P	1.5
9	☐			95.06	0.0004	P	12.2

$$y = 8.3655E-004 * x + 1.6368E-005$$

$$R = 1.0000$$

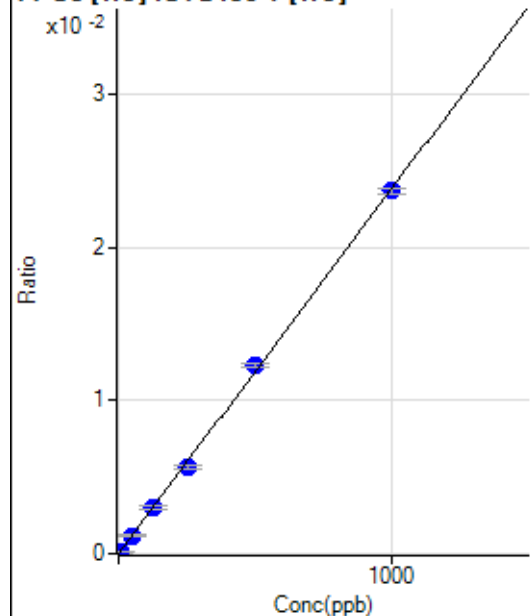
$$DL = 0.001429$$

$$BEC = 0.01957$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	0.810	4.44	0.0000	P	115.2
3	☐	5.000	6.290	34.45	0.0001	P	8.5
4	☐	50.000	49.260	272.23	0.0012	P	14.0
5	☐	125.000	127.347	694.47	0.0030	P	8.5
6	☐	250.000	237.099	1304.53	0.0056	P	3.5
7	☐	500.000	516.004	2836.99	0.0123	P	2.4
8	☐	1000.000	994.960	5635.63	0.0237	P	1.8
9	☐			5.56	0.0000	P	93.3

$$y = 2.3811E-005 * x + 0.0000E+000$$

$$R = 0.9997$$

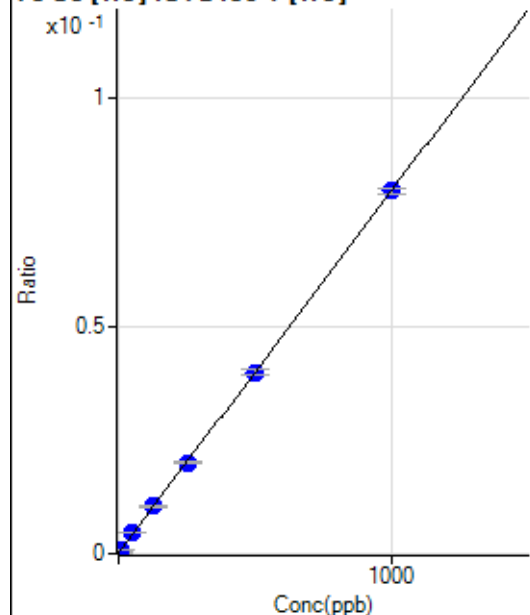
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	39.51	0.0002	P	23.6
2	☐	0.500	0.793	54.94	0.0002	P	33.3
3	☐	5.000	7.041	168.52	0.0007	P	12.8
4	☐	50.000	57.022	1093.88	0.0047	P	0.4
5	☐	125.000	128.109	2376.14	0.0104	P	2.8
6	☐	250.000	249.666	4632.26	0.0200	P	2.9
7	☐	500.000	499.138	9206.07	0.0399	P	2.7
8	☐	1000.000	999.765	18971.13	0.0797	P	1.6
9	☐			71.61	0.0003	P	18.4

$$y = 7.9593\text{E-}005 * x + 1.7534\text{E-}004$$

$$R = 1.0000$$

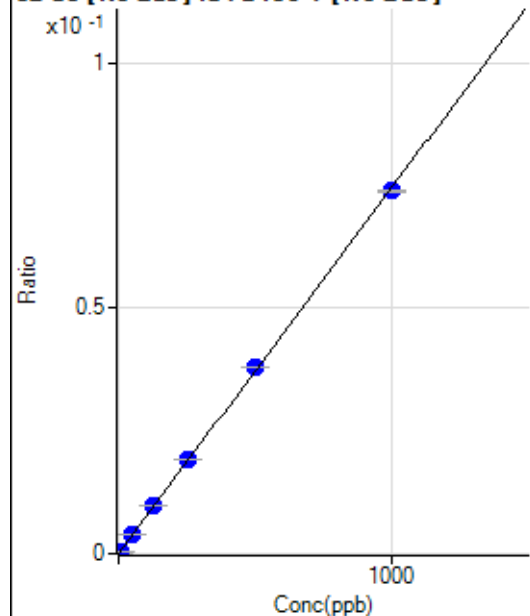
$$DL = 1.557$$

$$BEC = 2.203$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	-1.29	0.0000	P	-6748.
2	☒	0.500		118.97	0.0001	P	61.3
3	☐	5.000	6.440	867.04	0.0005	P	2.8
4	☐	50.000	53.972	7326.51	0.0040	P	1.7
5	☐	125.000	131.700	17618.50	0.0098	P	0.5
6	☐	250.000	257.967	34389.14	0.0192	P	0.2
7	☐	500.000	509.551	68671.47	0.0380	P	0.8
8	☐	1000.000	992.189	135095.93	0.0740	P	0.7
9	☐			129.67	0.0001	P	7.4

$$y = 7.4544\text{E-}005 * x - 8.3527\text{E-}007$$

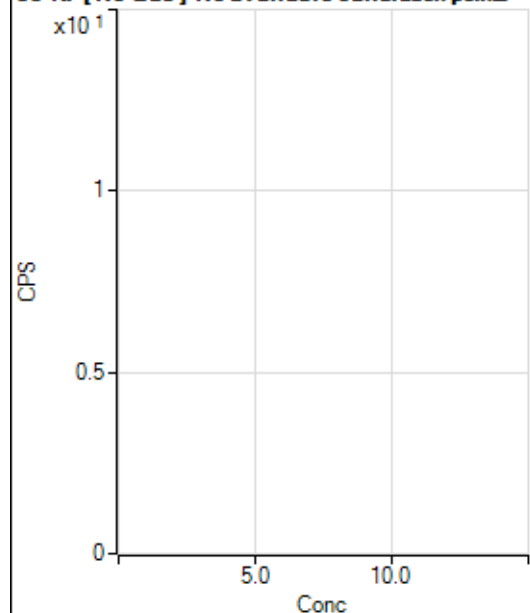
$$R = 0.9999$$

$$DL = 2.268$$

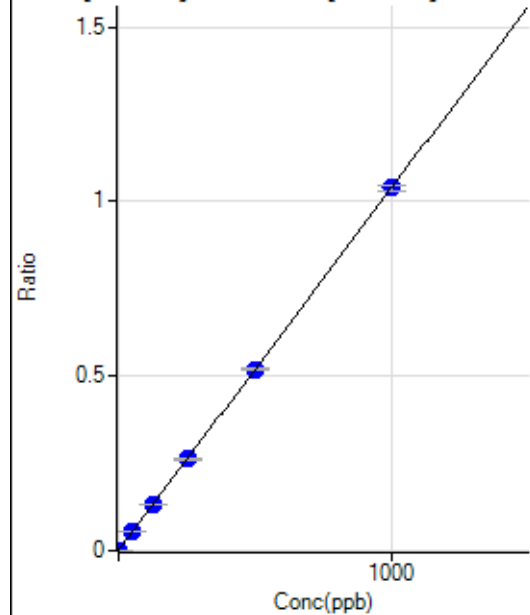
$$BEC = -0.01121$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			1036.72		P	8.2
2	☐			974.49		P	4.3
3	☐			987.83		P	3.4
4	☐			1035.61		P	6.9
5	☐			977.83		P	7.8
6	☐			974.49		P	5.3
7	☐			1011.16		P	5.6
8	☐			1020.05		P	9.1
9	☐			1018.94		P	8.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1669.62	0.0009	P	10.8
2	☐	0.100	0.042	1741.84	0.0010	P	13.2
3	☐	1.000	0.984	3536.71	0.0020	P	7.1
4	☐	50.000	50.619	97414.48	0.0535	P	1.7
5	☐	125.000	125.594	235685.07	0.1313	P	0.5
6	☐	250.000	251.365	468354.85	0.2619	P	1.7
7	☐	500.000	499.127	938476.33	0.5191	P	1.4
8	☐	1000.000	999.990	1897919.66	1.0391	P	1.5
9	☐			9609.18	0.0056	P	0.4

$$y = 0.0010 * x + 9.3334E-004$$

$$R = 1.0000$$

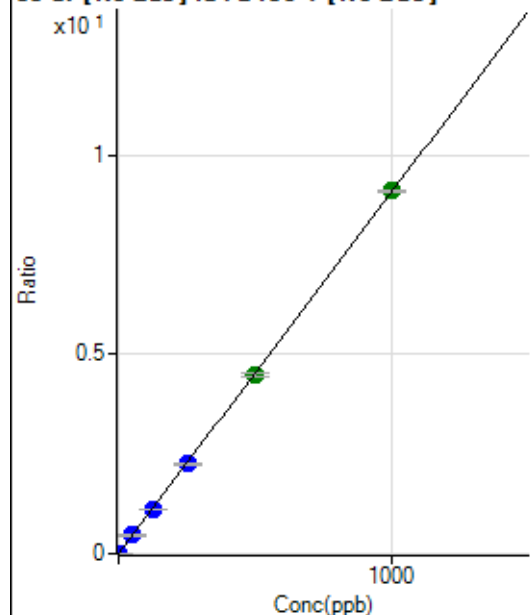
$$DL = 0.2916$$

$$BEC = 0.899$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	21.7
2	☐	0.100	0.105	1764.08	0.0010	P	7.1
3	☐	1.000	1.059	17438.95	0.0096	P	2.1
4	☐	50.000	50.736	837975.73	0.4601	P	1.4
5	☐	125.000	124.384	2024349.46	1.1279	P	0.8
6	☐	250.000	247.707	4016926.26	2.2462	P	0.9
7	☐	500.000	494.162	8100843.24	4.4810	A	1.5
8	☐	1000.000	1003.532	16622091.52	9.0998	A	0.6
9	☐			68604.15	0.0398	P	1.3

$$y = 0.0091 * x + 3.7280E-005$$

$$R = 1.0000$$

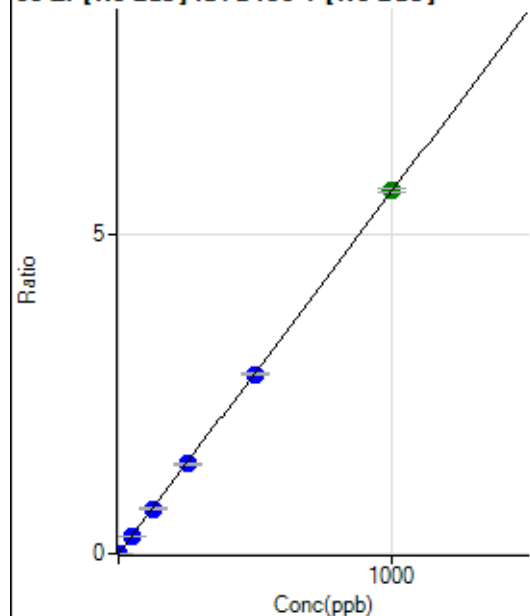
$$DL = 0.002676$$

$$BEC = 0.004111$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	144.45	0.0001	P	29.2
2	☐	0.100	0.082	972.30	0.0005	P	4.8
3	☐	1.000	0.919	9548.00	0.0053	P	2.7
4	☐	50.000	49.917	514163.85	0.2823	P	0.8
5	☐	125.000	124.669	1265109.71	0.7049	P	1.5
6	☐	250.000	247.246	2499993.24	1.3980	P	1.3
7	☐	500.000	495.812	5067955.67	2.8033	P	1.3
8	☐	1000.000	1002.828	10356987.73	5.6698	A	1.0
9	☐			3056.03	0.0018	P	8.7

$$y = 0.0057 * x + 8.0708E-005$$

$$R = 1.0000$$

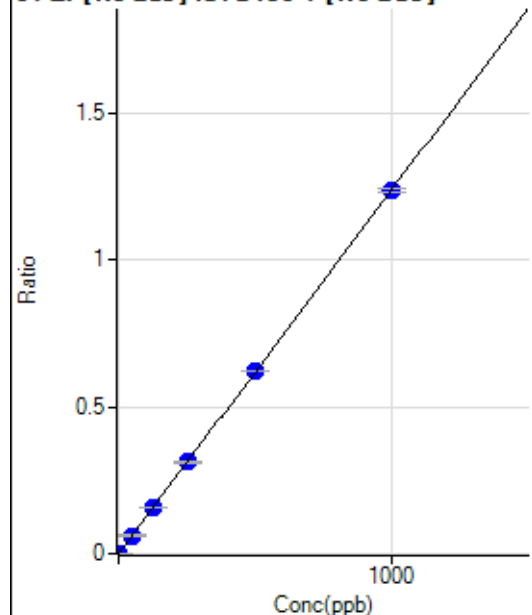
$$DL = 0.0125$$

$$BEC = 0.01428$$

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	36.11	0.0000	P	81.0
2	☐	0.100	0.103	263.90	0.0001	P	12.3
3	☐	1.000	0.939	2136.37	0.0012	P	2.6
4	☐	50.000	50.220	113096.36	0.0621	P	2.6
5	☐	125.000	125.965	279448.73	0.1557	P	0.8
6	☐	250.000	252.329	557761.87	0.3119	P	1.2
7	☐	500.000	502.510	1122915.23	0.6211	P	0.7
8	☐	1000.000	998.031	2253164.83	1.2336	P	1.2
9	☐			622.26	0.0004	P	7.1

$$y = 0.0012 * x + 2.0216E-005$$

$$R = 1.0000$$

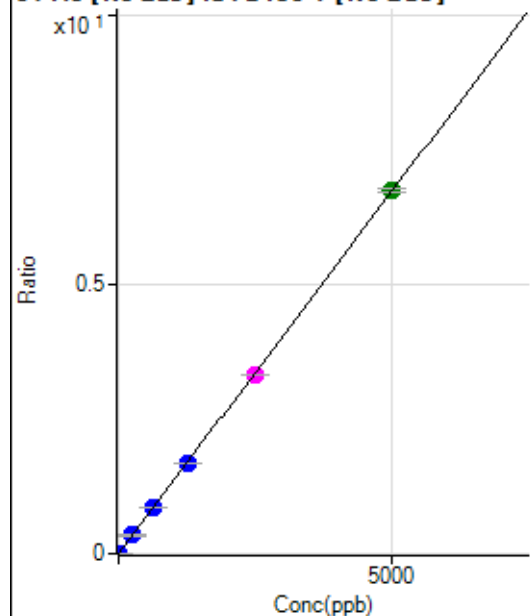
$$DL = 0.03976$$

$$BEC = 0.01636$$

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	58.34	0.0000	P	100.3
2	☐	0.500	0.505	1269.56	0.0007	P	5.3
3	☐	5.000	5.062	12375.23	0.0068	P	4.1
4	☐	250.000	253.282	620523.10	0.3407	P	1.2
5	☐	625.000	629.264	1518883.11	0.8463	P	0.5
6	☐	1250.000	1251.166	3009274.00	1.6827	P	0.5
7	☐	2500.000	2469.770	6005168.84	3.3215	M	0.5
8	☐	5000.000	5014.126	12317369.29	6.7434	A	1.0
9	☐			11399.45	0.0066	P	3.7

$$y = 0.0013 * x + 3.2708E-005$$

$$R = 1.0000$$

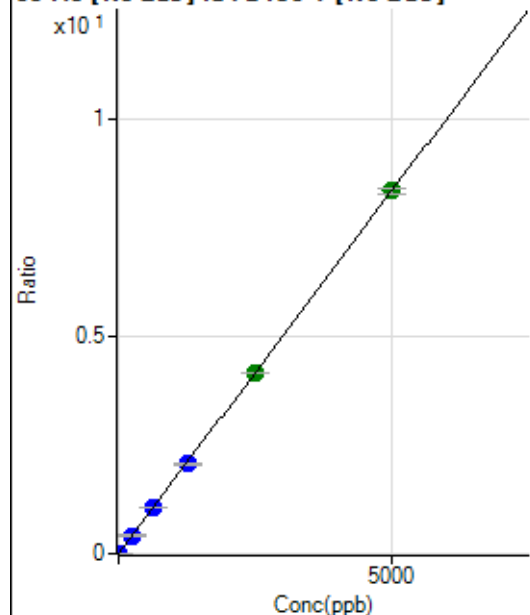
$$DL = 0.07319$$

$$BEC = 0.02432$$

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	52.78	0.0000	P	86.6
2	☐	0.500	0.527	1619.61	0.0009	P	0.6
3	☐	5.000	5.063	15306.02	0.0085	P	2.7
4	☐	250.000	251.882	763948.67	0.4194	P	0.6
5	☐	625.000	626.248	1871464.47	1.0427	P	0.7
6	☐	1250.000	1240.297	3693159.46	2.0651	P	1.4
7	☐	2500.000	2493.889	7507741.23	4.1524	A	0.9
8	☐	5000.000	5005.231	15221878.81	8.3338	A	1.4
9	☐			17900.83	0.0104	P	3.8

$$y = 0.0017 * x + 2.9459E-005$$

$$R = 1.0000$$

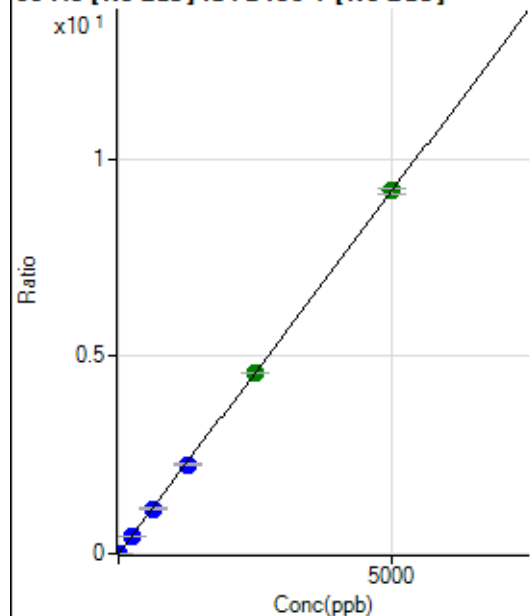
$$DL = 0.04598$$

$$BEC = 0.01769$$

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	97.23	0.0001	P	38.8
2	☐	0.500	0.491	1705.74	0.0010	P	3.5
3	☐	5.000	5.164	17255.51	0.0095	P	2.2
4	☐	250.000	250.553	838091.87	0.4601	P	0.3
5	☐	625.000	622.611	2052008.10	1.1433	P	0.5
6	☐	1250.000	1233.652	4051207.34	2.2653	P	1.0
7	☐	2500.000	2492.666	8275246.28	4.5771	A	0.8
8	☐	5000.000	5008.025	16796463.57	9.1959	A	1.3
9	☐			25081.44	0.0146	P	1.6

$$y = 0.0018 * x + 5.4402E-005$$

$$R = 1.0000$$

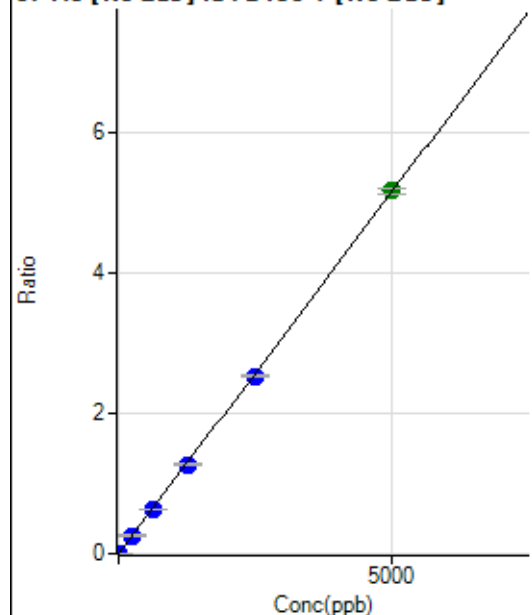
$$DL = 0.03451$$

$$BEC = 0.02963$$

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	41.67	0.0000	P	52.4
2	☐	0.500	0.479	922.30	0.0005	P	4.4
3	☐	5.000	5.005	9370.19	0.0052	P	3.8
4	☐	250.000	251.673	472001.34	0.2592	P	1.7
5	☐	625.000	619.279	1144400.68	0.6377	P	1.0
6	☐	1250.000	1235.456	2275038.90	1.2721	P	1.3
7	☐	2500.000	2460.967	4581175.54	2.5340	P	0.8
8	☐	5000.000	5023.784	9448432.76	5.1728	A	1.3
9	☐			10904.68	0.0063	P	3.2

$$y = 0.0010 * x + 2.3258E-005$$

$$R = 1.0000$$

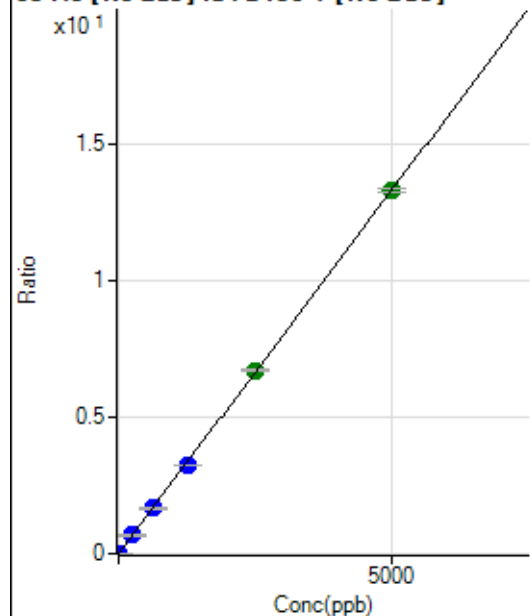
$$DL = 0.03554$$

$$BEC = 0.02259$$

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	55.56	0.0000	P	45.9
2	☐	0.500	0.491	2380.86	0.0013	P	7.6
3	☐	5.000	5.143	24755.78	0.0137	P	0.9
4	☐	250.000	252.265	1219676.98	0.6696	P	0.7
5	☐	625.000	622.286	2964488.44	1.6518	P	1.8
6	☐	1250.000	1226.115	5820592.58	3.2546	P	0.5
7	☐	2500.000	2521.138	12098685.68	6.6922	A	1.0
8	☐	5000.000	4995.628	24221110.61	13.2604	A	0.9
9	☐			27722.24	0.0161	P	0.8

$$y = 0.0027 * x + 3.1081E-005$$

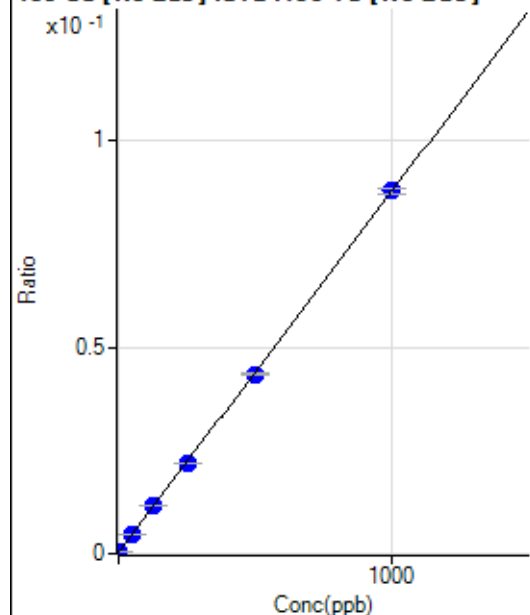
$$R = 1.0000$$

$$DL = 0.01614$$

$$BEC = 0.01171$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	641.71	0.0003	P	16.8
2	☐	0.100	-0.026	633.38	0.0003	P	16.3
3	☐	1.000	1.419	894.52	0.0004	P	3.8
4	☐	50.000	51.456	9828.81	0.0048	P	2.2
5	☐	125.000	129.981	23520.42	0.0117	P	3.1
6	☐	250.000	248.290	44323.32	0.0220	P	1.1
7	☐	500.000	493.595	88762.51	0.0434	P	1.4
8	☐	1000.000	1002.934	176599.92	0.0879	P	1.3
9	☐			666.71	0.0004	P	14.6

$$y = 8.7289\text{E-}005 * x + 3.1826\text{E-}004$$

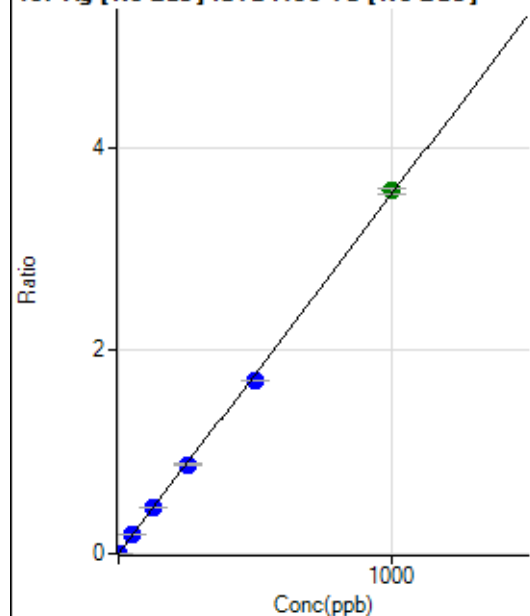
$$R = 1.0000$$

$$DL = 1.833$$

$$BEC = 3.646$$

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	41.67	0.0000	P	87.5
2	☐	0.100	0.107	800.06	0.0004	P	8.9
3	☐	1.000	1.048	7538.42	0.0037	P	1.8
4	☐	50.000	51.930	375208.70	0.1837	P	1.3
5	☐	125.000	126.601	902655.32	0.4477	P	0.5
6	☐	250.000	248.596	1771830.77	0.8791	P	1.1
7	☐	500.000	480.830	3477262.71	1.7003	P	0.7
8	☐	1000.000	1009.639	7175861.36	3.5702	A	1.4
9	☐			1675.17	0.0009	P	4.2

$$y = 0.0035 * x + 2.0700\text{E-}005$$

$$R = 0.9997$$

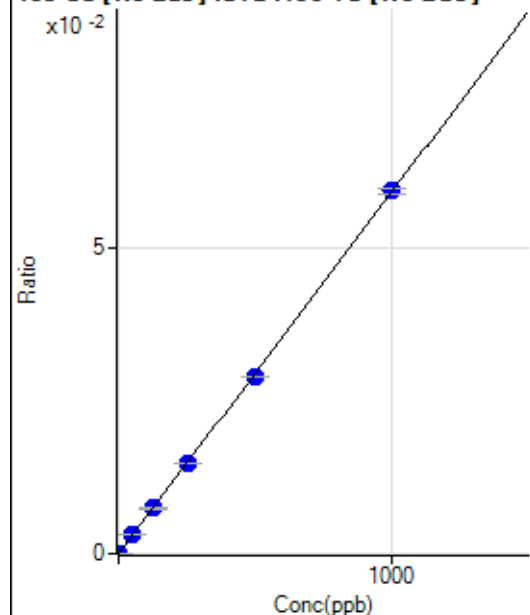
$$DL = 0.01536$$

$$BEC = 0.005854$$

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	2.78	0.0000	P	173.2
2	☐	0.100	0.128	18.06	0.0000	P	81.2
3	☐	1.000	1.090	133.34	0.0001	P	13.6
4	☐	50.000	53.257	6446.04	0.0032	P	0.7
5	☐	125.000	126.852	15147.27	0.0075	P	3.4
6	☐	250.000	251.670	30039.07	0.0149	P	0.5
7	☐	500.000	490.220	59372.91	0.0290	P	0.5
8	☐	1000.000	1004.078	119506.51	0.0595	P	1.6
9	☐			38.89	0.0000	P	21.9

$$y = 5.9217\text{E-}005 * x + 1.3588\text{E-}006$$

$$R = 0.9999$$

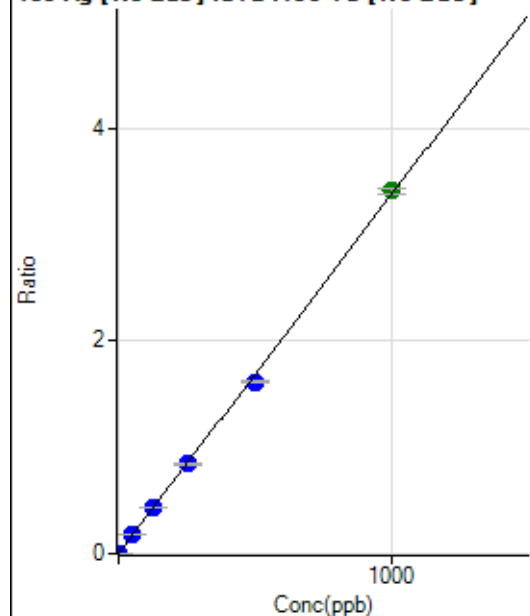
$$DL = 0.1192$$

$$BEC = 0.02295$$

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	11.11	0.0000	P	173.2
2	☐	0.100	0.109	752.83	0.0004	P	6.2
3	☐	1.000	1.072	7335.58	0.0036	P	2.9
4	☐	50.000	51.550	355486.92	0.1740	P	1.3
5	☐	125.000	127.103	864908.15	0.4290	P	0.6
6	☐	250.000	249.333	1696029.13	0.8415	P	0.3
7	☐	500.000	478.917	3305716.33	1.6164	P	0.6
8	☐	1000.000	1010.368	6853828.36	3.4100	A	1.5
9	☐			1586.27	0.0009	P	3.6

$$y = 0.0034 * x + 5.4368\text{E-}006$$

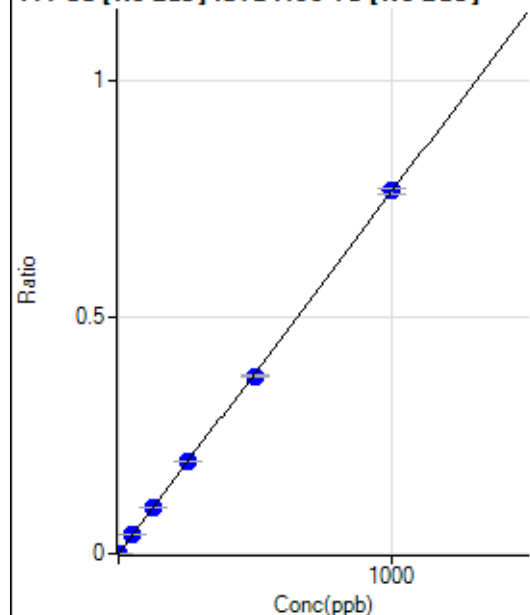
$$R = 0.9997$$

$$DL = 0.00837$$

$$BEC = 0.001611$$

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	458.36	0.0002	P	16.9
2	☐	0.100	0.090	593.23	0.0003	P	15.9
3	☐	1.000	1.106	2170.45	0.0011	P	2.8
4	☐	50.000	52.375	82257.83	0.0403	P	0.4
5	☐	125.000	128.731	198841.88	0.0986	P	0.9
6	☐	250.000	252.906	390060.13	0.1935	P	0.4
7	☐	500.000	491.238	768364.39	0.3757	P	0.4
8	☐	1000.000	1003.069	1541452.83	0.7669	P	1.4
9	☐			832.55	0.0004	P	2.7

$$y = 7.6434\text{E-}004 * x + 2.2733\text{E-}004$$

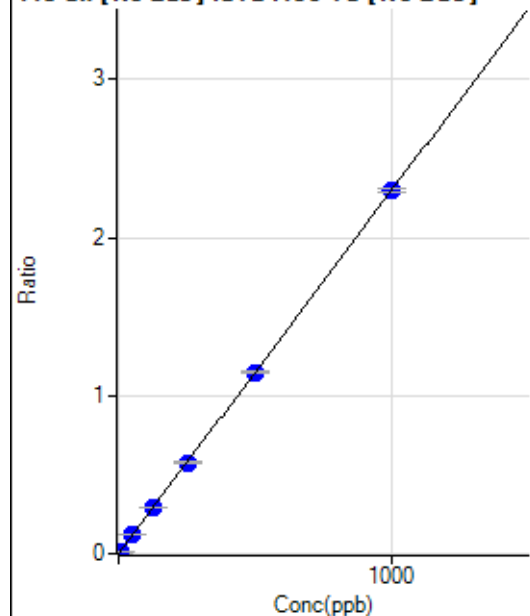
$$R = 0.9999$$

$$DL = 0.1506$$

$$BEC = 0.2974$$

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	272.23	0.0001	P	12.1
2	☐	0.500	0.508	2614.25	0.0013	P	6.4
3	☐	5.000	5.290	24867.43	0.0123	P	1.0
4	☐	50.000	51.917	244008.56	0.1194	P	0.3
5	☐	125.000	127.968	593116.22	0.2942	P	0.3
6	☐	250.000	250.969	1162503.79	0.5768	P	0.5
7	☐	500.000	500.261	2351016.96	1.1496	P	1.0
8	☐	1000.000	999.159	4614746.67	2.2959	P	1.1
9	☐			2567.00	0.0014	P	4.2

$$y = 0.0023 * x + 1.3482\text{E-}004$$

$$R = 1.0000$$

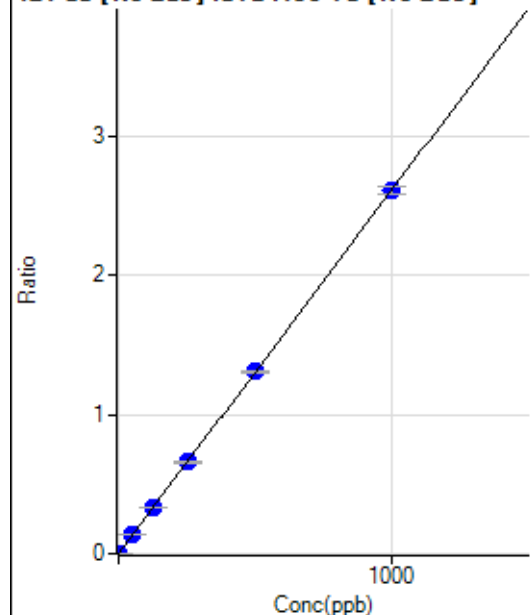
$$DL = 0.02128$$

$$BEC = 0.05868$$

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	44.45	0.0000	P	29.2
2	☐	0.200	0.208	1136.21	0.0006	P	10.3
3	☐	2.000	2.050	10885.27	0.0054	P	1.0
4	☐	50.000	51.661	275955.18	0.1351	P	0.9
5	☐	125.000	126.436	666410.65	0.3305	P	0.3
6	☐	250.000	251.668	1325924.32	0.6579	P	0.4
7	☐	500.000	501.226	2679579.57	1.3102	P	0.5
8	☐	1000.000	998.707	5246967.35	2.6106	P	1.9
9	☐			5593.02	0.0030	P	7.3

$$y = 0.0026 * x + 2.2047E-005$$

$$R = 1.0000$$

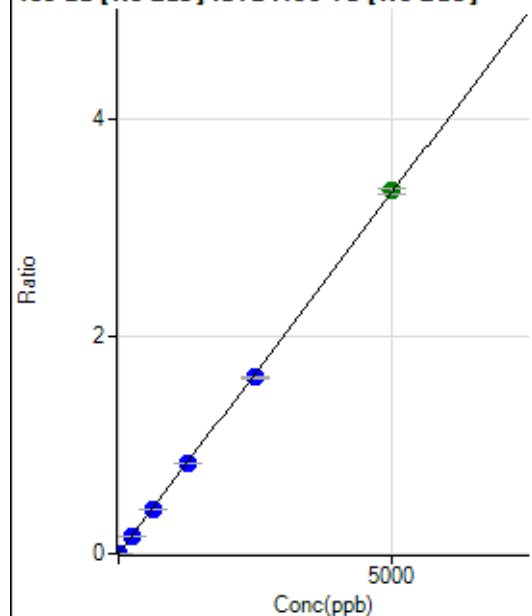
$$DL = 0.007397$$

$$BEC = 0.008434$$

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	27.78	0.0000	P	62.7
2	☐	1.000	1.029	1400.13	0.0007	P	6.1
3	☐	10.000	10.392	13996.47	0.0069	P	1.4
4	☐	250.000	252.272	342454.93	0.1676	P	0.8
5	☐	625.000	624.119	836052.60	0.4147	P	0.7
6	☐	1250.000	1245.127	1667293.09	0.8272	P	0.4
7	☐	2500.000	2442.214	3318235.62	1.6225	P	1.0
8	☐	5000.000	5030.107	6716731.92	3.3419	A	1.7
9	☐			1480.69	0.0008	P	11.5

$$y = 6.6437E-004 * x + 1.3754E-005$$

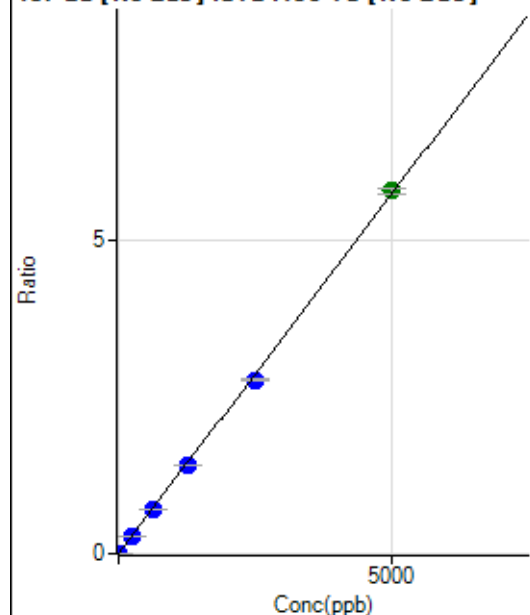
$$R = 0.9999$$

$$DL = 0.03893$$

$$BEC = 0.0207$$

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	38.89	0.0000	P	81.5
2	☐	1.000	1.115	2611.46	0.0013	P	6.2
3	☐	10.000	10.358	24127.51	0.0119	P	2.3
4	☐	250.000	251.442	590484.61	0.2890	P	1.4
5	☐	625.000	616.925	1429684.99	0.7091	P	0.4
6	☐	1250.000	1232.449	2854957.10	1.4166	P	1.3
7	☐	2500.000	2417.339	5682430.81	2.7784	P	0.5
8	☐	5000.000	5046.655	11658606.94	5.8005	A	1.5
9	☐			2839.30	0.0015	P	5.6

$$y = 0.0011 * x + 1.9289E-005$$

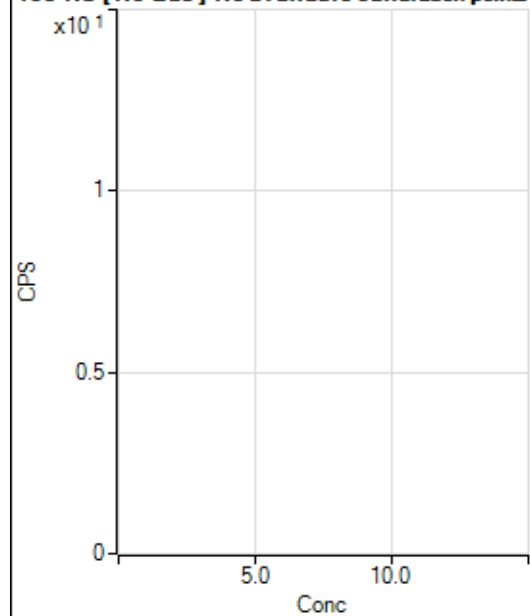
$$R = 0.9998$$

$$DL = 0.04105$$

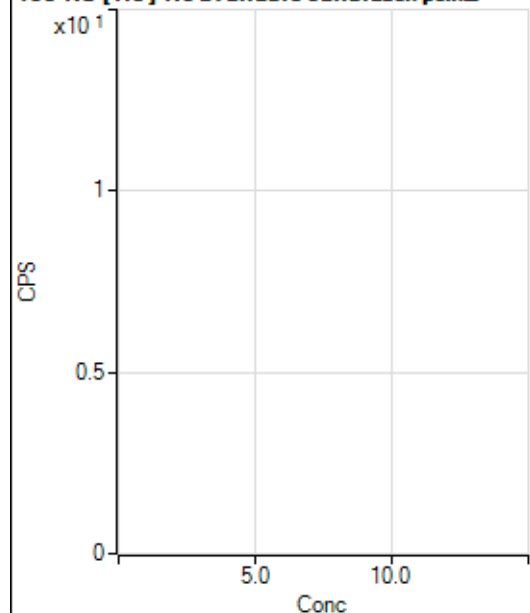
$$BEC = 0.01678$$

Weight: <None>

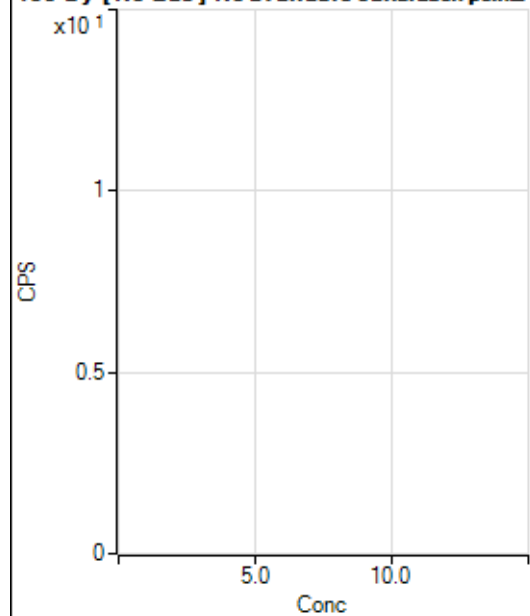
Min Conc: 0

150 Nd [No Gas] No available calibration points

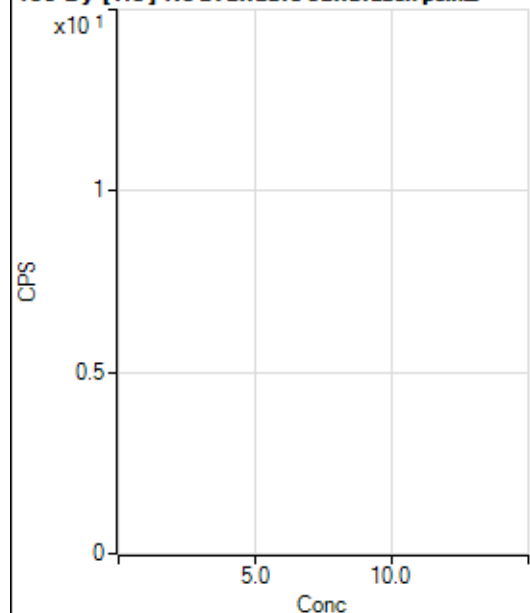
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			6.67		P	173.2
2	☐			15.56		P	89.2
3	☐			11.11		P	34.6
4	☐			51.11		P	54.3
5	☐			75.56		P	33.4
6	☐			115.56		P	16.7
7	☐			242.23		P	8.8
8	☐			488.91		P	8.8
9	☐			60.00		P	11.1

150 Nd [He] No available calibration points

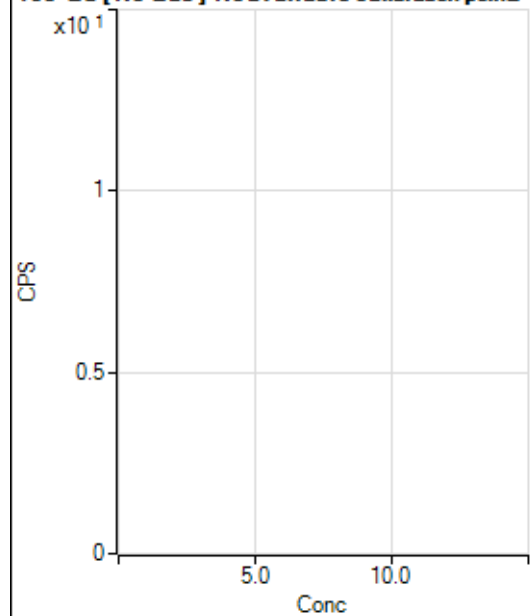
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	21.6
2	☐			6.67		P	50.0
3	☐			14.44		P	58.1
4	☐			8.89		P	43.3
5	☐			12.22		P	41.7
6	☐			16.67		P	20.0
7	☐			17.78		P	43.3
8	☐			52.22		P	13.3
9	☐			25.56		P	32.8

156 Dy [No Gas] No available calibration points

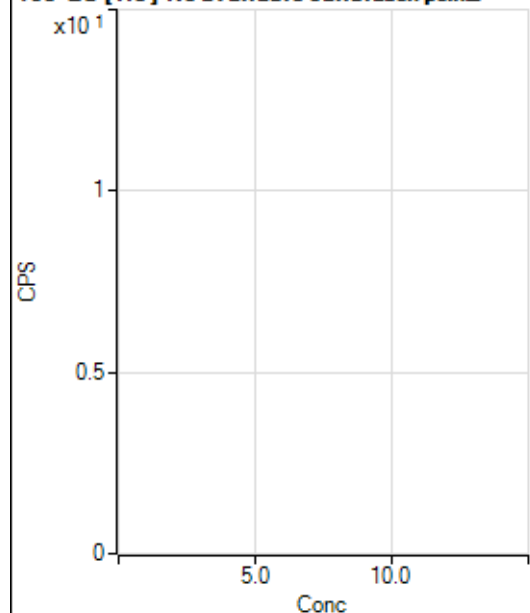
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			30.56		P	41.7
2	☐			13.89		P	124.9
3	☐			36.11		P	26.7
4	☐			19.44		P	89.2
5	☐			22.22		P	57.3
6	☐			33.33		P	50.0
7	☐			69.45		P	18.3
8	☐			130.56		P	18.4
9	☐			47.22		P	27.0

156 Dy [He] No available calibration points

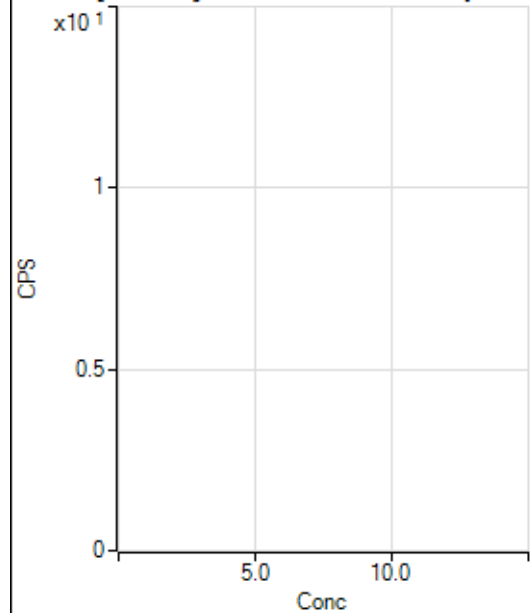
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			25.56		P	30.1
2	☐			14.45		P	26.7
3	☐			15.55		P	24.8
4	☐			25.56		P	19.9
5	☐			34.44		P	5.6
6	☐			45.56		P	16.9
7	☐			78.89		P	4.9
8	☐			131.11		P	3.9
9	☐			27.78		P	48.5

160 Gd [No Gas] Noavailable calibration poin_

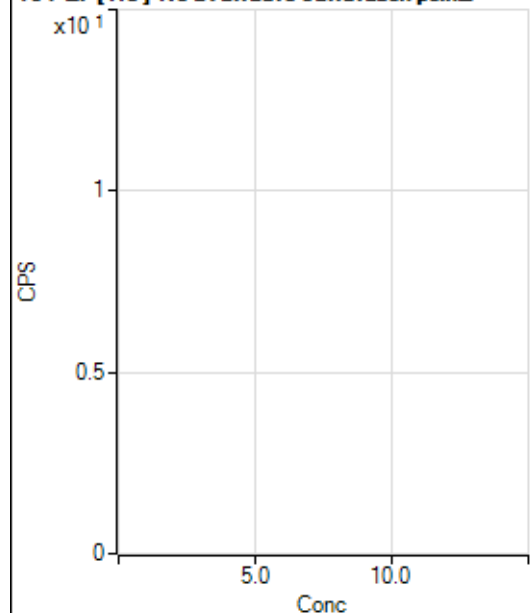
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			22.22		P	43.3
2	☐			22.22		P	43.3
3	☐			13.89		P	69.3
4	☐			19.45		P	24.7
5	☐			16.67		P	86.6
6	☐			36.11		P	35.3
7	☐			41.67		P	60.0
8	☐			61.11		P	20.8
9	☐			27.78		P	45.8

160 Gd [He] No available calibration points

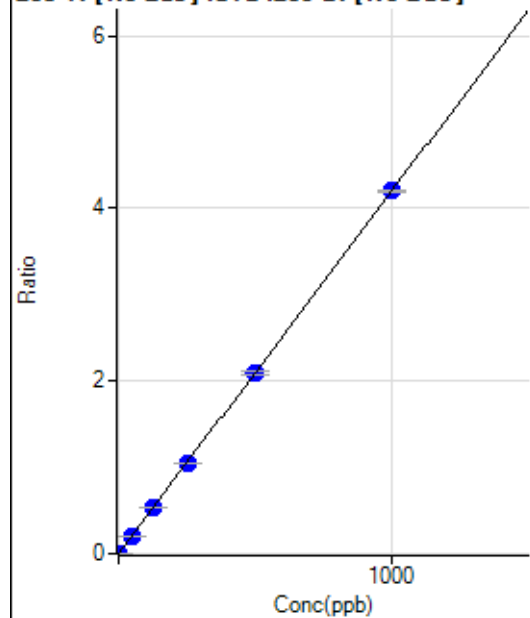
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			44.44		P	31.2
2	☐			44.44		P	18.9
3	☐			51.11		P	15.1
4	☐			57.78		P	14.5
5	☐			60.00		P	5.5
6	☐			44.45		P	15.6
7	☐			45.55		P	15.2
8	☐			53.33		P	10.8
9	☐			58.89		P	17.3

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			27.78		P	34.6
2	☐			44.45		P	10.8
3	☐			36.11		P	66.6
4	☐			44.44		P	21.7
5	☐			44.45		P	28.7
6	☐			36.11		P	66.6
7	☐			36.11		P	93.3
8	☐			33.34		P	43.3
9	☐			38.89		P	75.3

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			47.78		P	10.7
2	☐			35.55		P	37.9
3	☐			41.11		P	63.0
4	☐			32.22		P	36.3
5	☐			37.78		P	31.0
6	☐			45.55		P	8.5
7	☐			43.33		P	7.7
8	☐			53.33		P	16.5
9	☐			38.89		P	35.7

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	394.47	0.0003	P	9.7
2	☐	0.100	0.109	952.86	0.0008	P	11.0
3	☐	1.000	1.043	5679.24	0.0047	P	0.8
4	☐	50.000	49.678	255145.00	0.2087	P	0.9
5	☐	125.000	125.616	628508.22	0.5273	P	1.0
6	☐	250.000	247.652	1231521.63	1.0393	P	0.5
7	☐	500.000	498.018	2441801.59	2.0896	P	1.5
8	☐	1000.000	1001.517	4684583.44	4.2019	P	0.4
9	☐			1844.66	0.0019	P	11.0

$$y = 0.0042 * x + 3.2659E-004$$

$$R = 1.0000$$

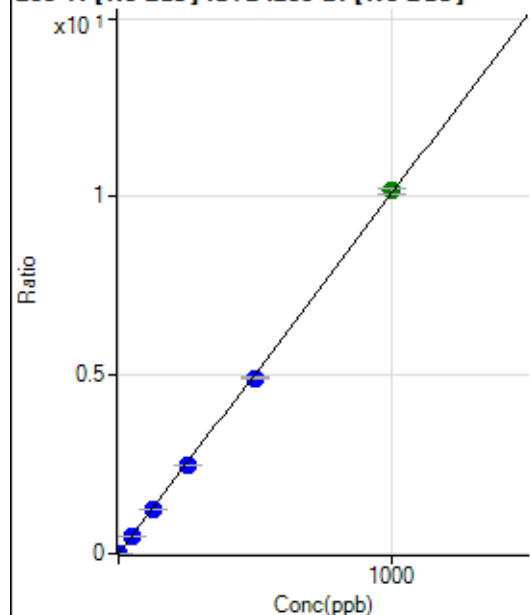
$$DL = 0.02257$$

$$BEC = 0.07785$$

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	563.93	0.0005	P	12.0
2	☐	0.100	0.095	1727.97	0.0014	P	4.6
3	☐	1.000	1.003	12770.62	0.0106	P	4.2
4	☐	50.000	49.448	610054.61	0.4991	P	1.1
5	☐	125.000	123.014	1479110.15	1.2409	P	0.2
6	☐	250.000	245.214	2930428.17	2.4730	P	1.0
7	☐	500.000	487.155	5740573.79	4.9126	P	1.1
8	☐	1000.000	1007.895	11329908.94	10.1634	A	1.6
9	☐			4025.79	0.0042	P	7.3

$$y = 0.0101 * x + 4.6676E-004$$

$$R = 0.9999$$

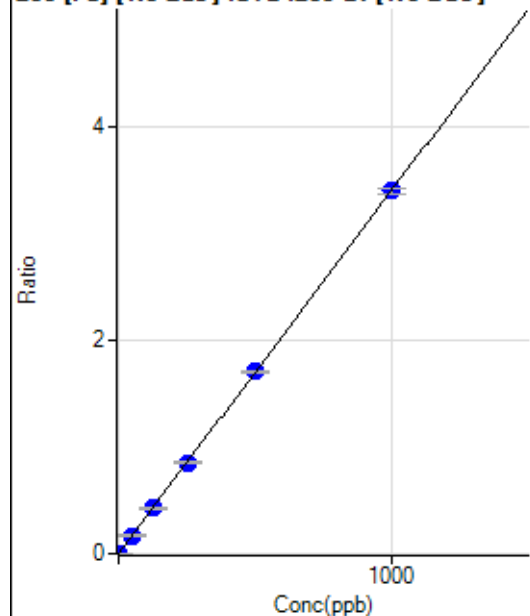
$$DL = 0.01666$$

$$BEC = 0.04629$$

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	627.81	0.0005	P	9.8
2	☐	0.100	0.112	1092.67	0.0009	P	12.4
3	☐	1.000	1.012	4784.33	0.0040	P	3.9
4	☐	50.000	50.016	208736.36	0.1708	P	1.1
5	☐	125.000	124.406	505298.93	0.4240	P	1.8
6	☐	250.000	250.501	1010929.75	0.8532	P	1.2
7	☐	500.000	501.164	1994056.19	1.7064	P	1.0
8	☐	1000.000	999.366	3792776.88	3.4023	P	1.6
9	☐			10915.90	0.0115	P	4.3

$$y = 0.0034 * x + 5.1980E-004$$

$$R = 1.0000$$

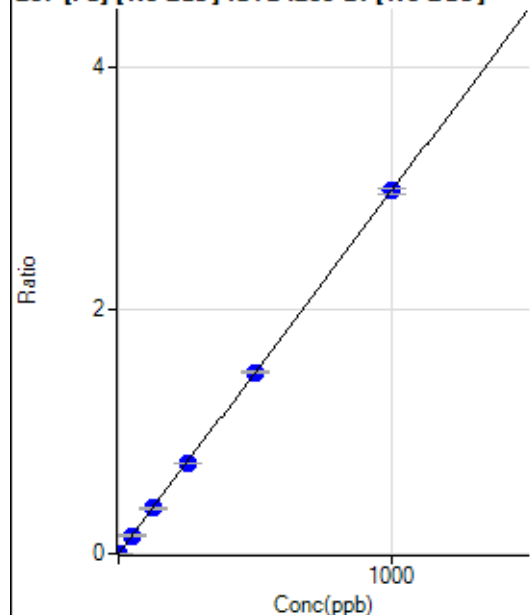
$$DL = 0.04471$$

$$BEC = 0.1527$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	681.52	0.0006	P	1.1
2	☐	0.100	0.085	990.81	0.0008	P	3.9
3	☐	1.000	1.008	4304.52	0.0036	P	2.8
4	☐	50.000	50.046	182844.93	0.1496	P	1.2
5	☐	125.000	124.917	444043.82	0.3725	P	0.9
6	☐	250.000	248.011	875713.24	0.7391	P	1.3
7	☐	500.000	500.725	1743068.34	1.4916	P	0.8
8	☐	1000.000	1000.143	3320693.85	2.9788	P	1.7
9	☐			9575.96	0.0101	P	5.0

$$y = 0.0030 * x + 5.6437E-004$$

$$R = 1.0000$$

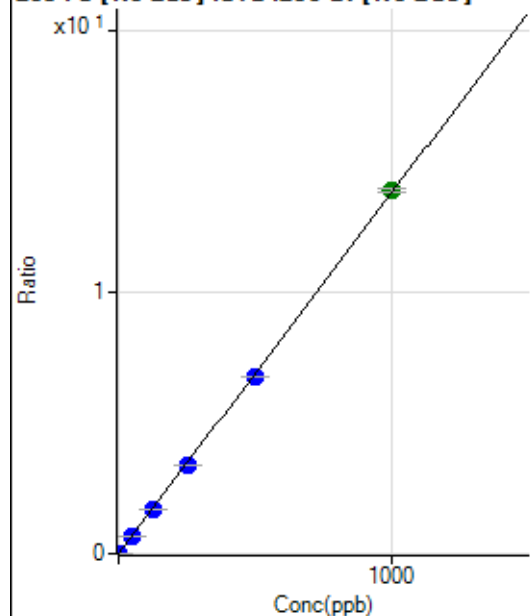
$$DL = 0.006138$$

$$BEC = 0.1895$$

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	2385.33	0.0020	P	2.1
2	☐	0.100	0.095	3978.11	0.0033	P	5.4
3	☐	1.000	0.991	18881.58	0.0156	P	2.6
4	☐	50.000	49.356	834523.94	0.6828	P	1.4
5	☐	125.000	122.673	2019075.64	1.6940	P	1.2
6	☐	250.000	244.146	3992502.01	3.3696	P	0.9
7	☐	500.000	490.878	7914391.27	6.7728	P	0.9
8	☐	1000.000	1006.348	15476755.01	13.8828	A	1.1
9	☐			43480.86	0.0459	P	3.7

$$y = 0.0138 * x + 0.0020$$

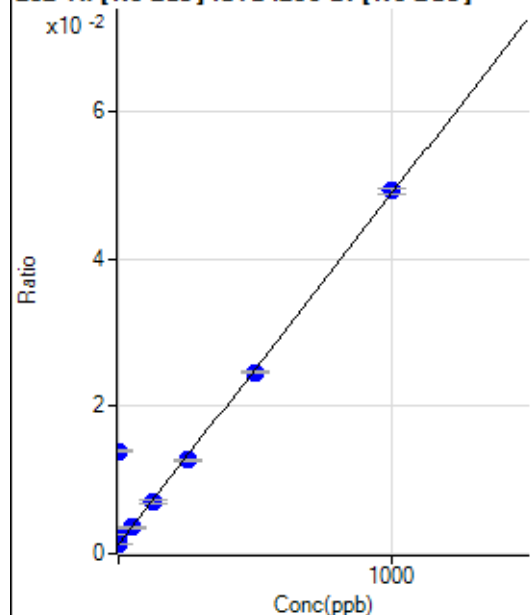
$$R = 0.9999$$

$$DL = 0.009227$$

$$BEC = 0.1432$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1542.74	0.0013	P	4.6
2	☐	0.100	26.808	3094.90	0.0026	P	2.4
3	☐	1.000	265.764	16829.85	0.0139	P	2.1
4	☐	50.000	48.611	4391.61	0.0036	P	4.4
5	☐	125.000	121.907	8447.44	0.0071	P	5.6
6	☐	250.000	240.359	15083.21	0.0127	P	2.8
7	☐	500.000	489.502	28752.60	0.0246	P	1.1
8	☐	1000.000	1007.848	54964.40	0.0493	P	1.3
9	☐			1759.43	0.0019	P	7.1

$$y = 4.7653\text{E-}005 * x + 0.0013$$

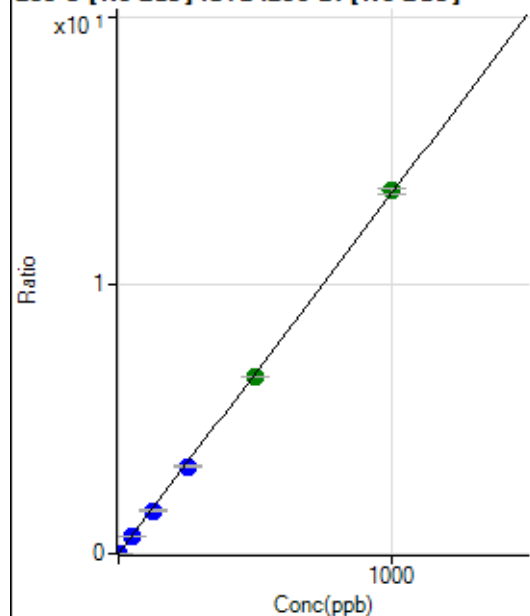
$$R = 0.9638$$

$$DL = 3.676$$

$$BEC = 26.8$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2264.19	0.0019	P	7.6
2	☐	0.100	0.091	3750.69	0.0031	P	2.7
3	☐	1.000	0.971	17971.53	0.0149	P	3.3
4	☐	50.000	48.202	792058.00	0.6480	P	0.7
5	☐	125.000	119.681	1914152.39	1.6061	P	1.6
6	☐	250.000	241.595	3839333.81	3.2402	P	1.1
7	☐	500.000	490.914	7692108.51	6.5822	A	0.4
8	☐	1000.000	1007.399	15055425.34	13.5052	A	1.4
9	☐			4117.51	0.0043	P	3.4

$$y = 0.0134 * x + 0.0019$$

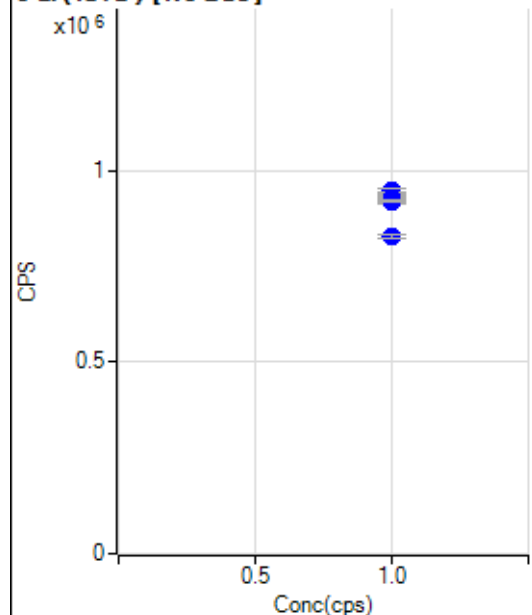
$$R = 0.9999$$

$$DL = 0.03192$$

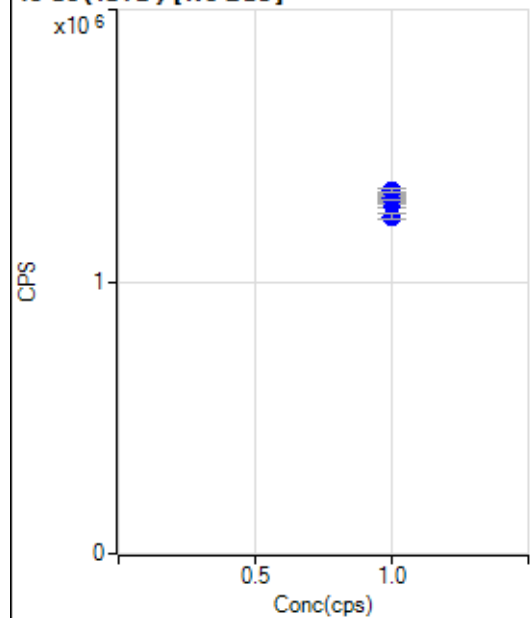
$$BEC = 0.1398$$

Weight: <None>

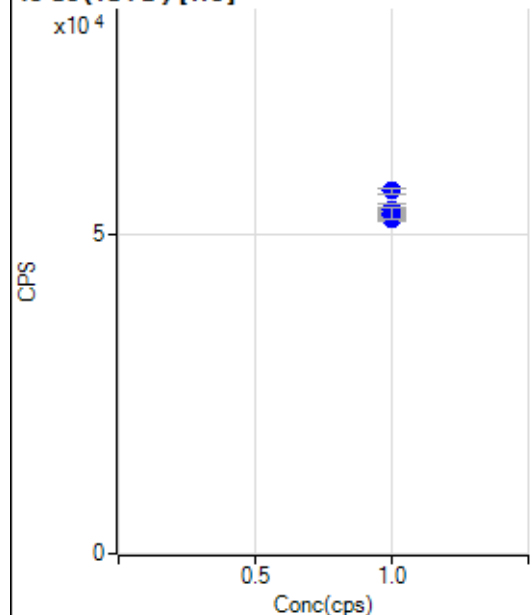
Min Conc: 0

6 Li (ISTD) [No Gas]

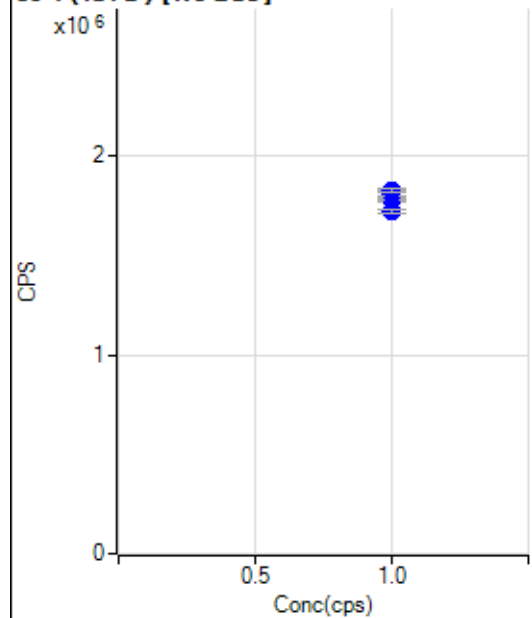
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		924338.21		P	0.6
2	☐	1.000		923037.82		P	1.6
3	☐	1.000		936281.43		P	0.9
4	☐	1.000		946828.82		P	1.1
5	☐	1.000		927684.83		P	0.5
6	☐	1.000		921392.22		P	0.3
7	☐	1.000		920718.47		P	0.7
8	☐	1.000		921611.69		P	0.7
9	☐	1.000		826728.55		P	1.0

45 Sc (ISTD) [No Gas]

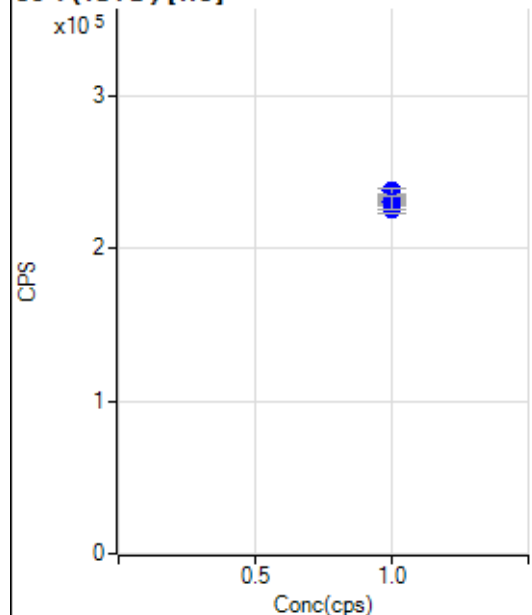
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1291016.75		P	2.3
2	☐	1.000		1298311.09		P	2.0
3	☐	1.000		1308517.01		P	0.8
4	☐	1.000		1317828.55		P	0.9
5	☐	1.000		1304121.18		P	0.6
6	☐	1.000		1290073.05		P	0.9
7	☐	1.000		1307337.13		P	1.1
8	☐	1.000		1334295.67		P	1.0
9	☐	1.000		1240422.10		P	2.1

45 Sc (ISTD) [He]

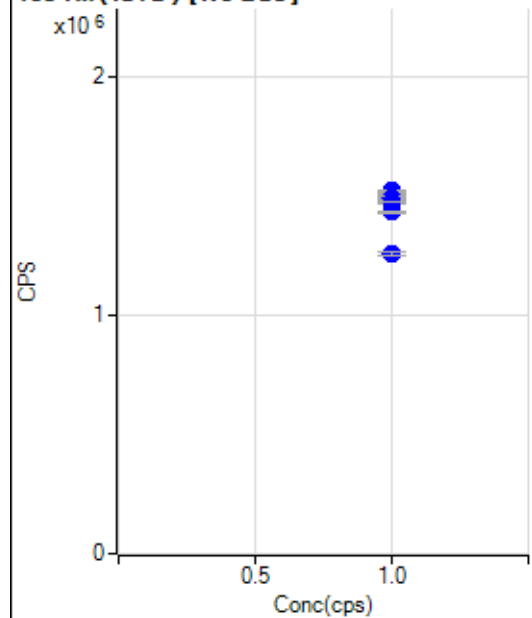
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		52409.37		P	1.6
2	☐	1.000		52415.01		P	1.6
3	☐	1.000		52823.18		P	3.2
4	☐	1.000		53195.42		P	1.2
5	☐	1.000		52988.05		P	1.0
6	☐	1.000		53761.89		P	0.1
7	☐	1.000		54017.18		P	3.0
8	☐	1.000		56824.37		P	1.4
9	☐	1.000		53386.18		P	3.3

89 Y (ISTD) [No Gas]

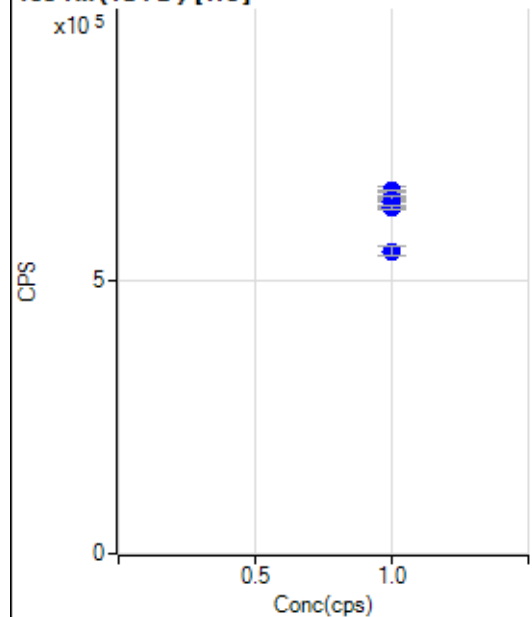
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1788605.93		P	0.5
2	☐	1.000		1785117.13		P	2.0
3	☐	1.000		1809522.46		P	1.0
4	☐	1.000		1821418.27		P	0.7
5	☐	1.000		1794756.94		P	0.7
6	☐	1.000		1788392.22		P	0.5
7	☐	1.000		1807990.72		P	0.9
8	☐	1.000		1826659.45		P	0.9
9	☐	1.000		1723710.36		P	1.6

89 Y(ISTD) [He]

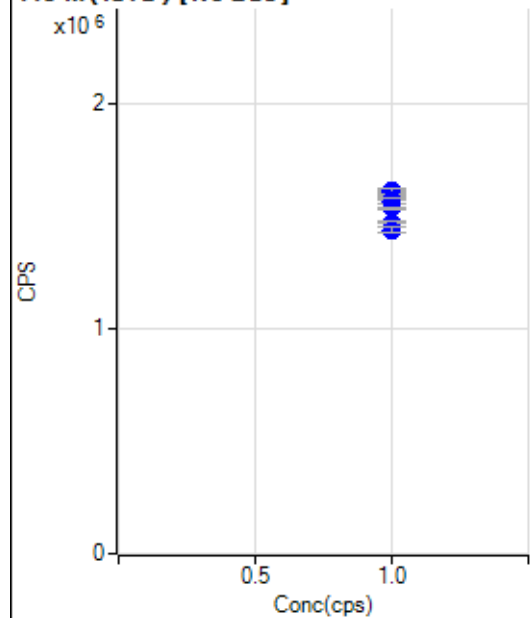
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		226141.69		P	2.4
2	☐	1.000		230815.94		P	0.9
3	☐	1.000		229629.04		P	2.9
4	☐	1.000		232057.03		P	0.9
5	☐	1.000		229057.71		P	0.8
6	☐	1.000		231096.41		P	0.6
7	☐	1.000		230808.75		P	2.6
8	☐	1.000		237923.58		P	1.6
9	☐	1.000		230154.01		P	4.2

103 Rh(ISTD) [No Gas]

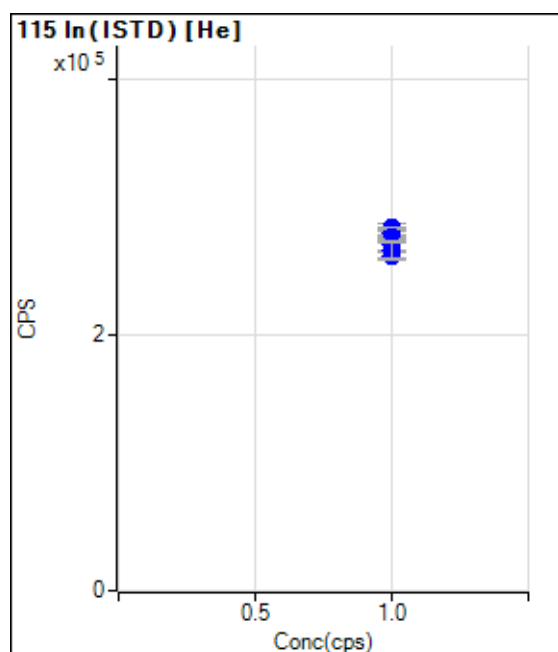
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1501360.60		P	0.9
2	☐	1.000		1502110.60		P	2.4
3	☐	1.000		1510306.63		P	0.7
4	☐	1.000		1520277.52		P	0.7
5	☐	1.000		1487031.26		P	1.3
6	☐	1.000		1467700.88		P	0.2
7	☐	1.000		1474206.05		P	0.3
8	☐	1.000		1433028.76		P	0.7
9	☐	1.000		1257878.19		P	1.1

103 Rh (ISTD) [He]

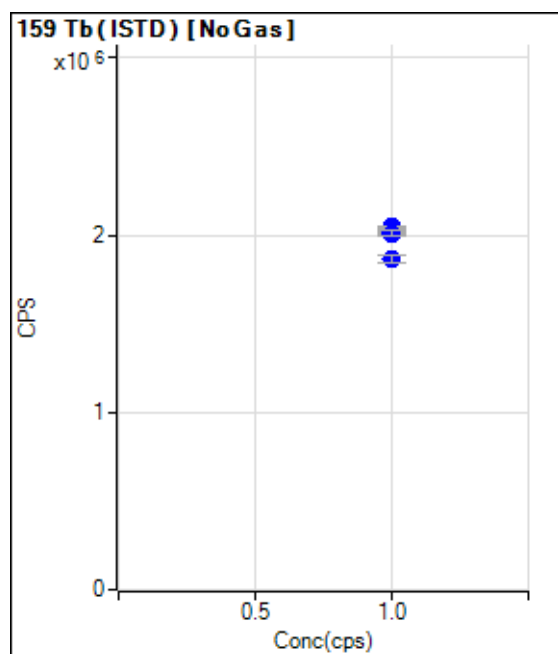
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		651128.61		P	3.0
2	☐	1.000		662742.65		P	0.2
3	☐	1.000		659394.57		P	3.5
4	☐	1.000		662452.59		P	0.4
5	☐	1.000		645191.11		P	0.5
6	☐	1.000		647456.37		P	0.4
7	☐	1.000		643651.54		P	3.3
8	☐	1.000		632202.20		P	1.1
9	☐	1.000		553143.25		P	3.7

115 In (ISTD) [No Gas]

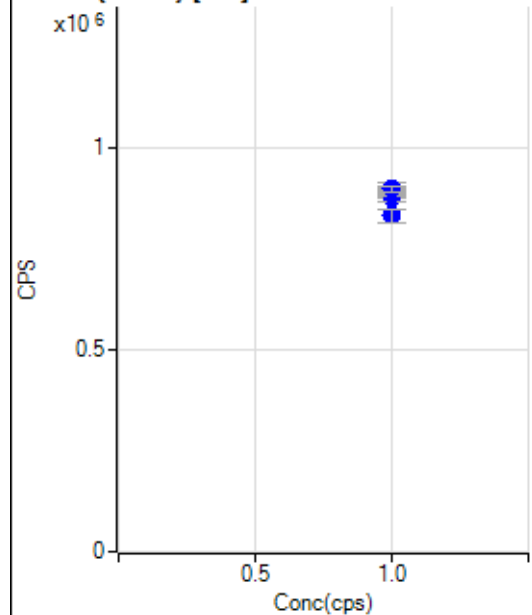
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		1602250.58		P	1.1
2	☐	1.000		1600511.37		P	2.0
3	☐	1.000		1612463.53		P	1.7
4	☐	1.000		1614933.98		P	1.3
5	☐	1.000		1578164.06		P	0.8
6	☐	1.000		1570025.94		P	1.3
7	☐	1.000		1539125.92		P	0.6
8	☐	1.000		1476470.93		P	0.7
9	☐	1.000		1440424.44		P	1.6



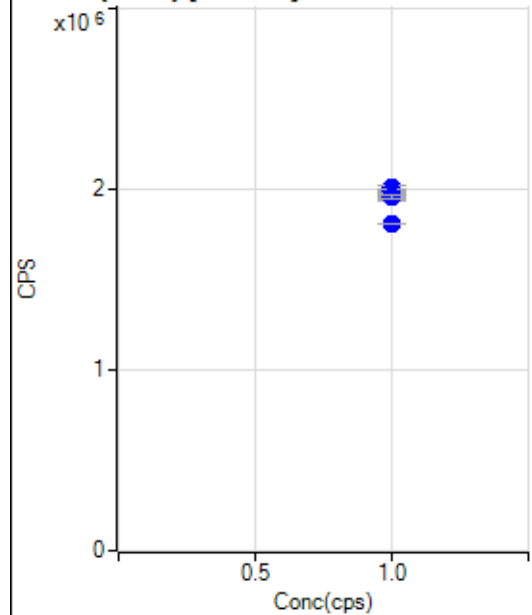
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		280792.80		P	1.5
2	☐	1.000		282680.85		P	0.7
3	☐	1.000		283547.66		P	3.3
4	☐	1.000		284178.16		P	0.3
5	☐	1.000		276749.41		P	0.5
6	☐	1.000		274504.08		P	0.3
7	☐	1.000		270503.91		P	2.9
8	☐	1.000		261847.97		P	1.9
9	☐	1.000		267022.70		P	4.5



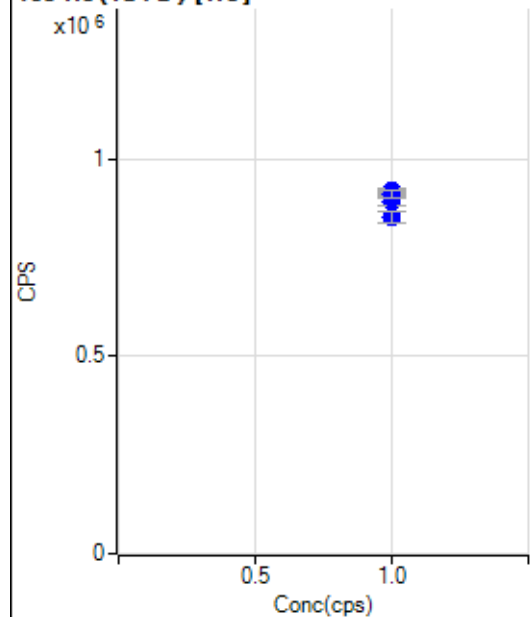
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2018749.68		P	1.1
2	☐	1.000		2007327.40		P	1.4
3	☐	1.000		2023438.75		P	0.8
4	☐	1.000		2043182.12		P	1.0
5	☐	1.000		2016235.61		P	0.6
6	☐	1.000		2015480.23		P	0.7
7	☐	1.000		2045170.23		P	0.7
8	☐	1.000		2010124.80		P	1.2
9	☐	1.000		1861471.52		P	2.1

159 Tb (ISTD) [He]

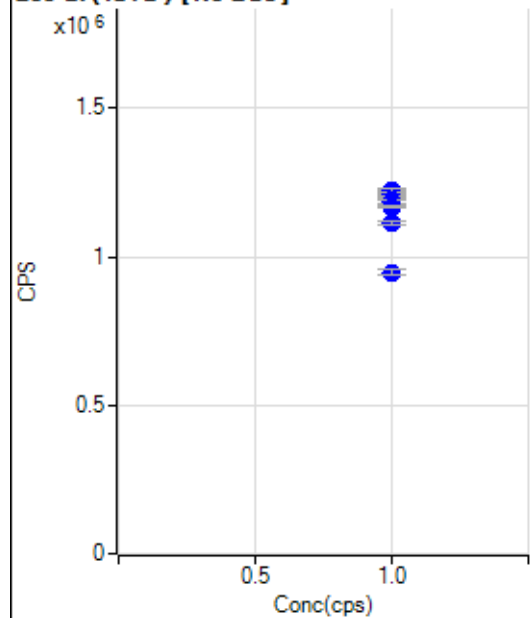
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		877225.62		P	2.5
2	☐	1.000		886421.94		P	0.3
3	☐	1.000		888606.99		P	2.7
4	☐	1.000		895233.46		P	0.8
5	☐	1.000		883307.47		P	0.7
6	☐	1.000		896365.38		P	0.8
7	☐	1.000		896493.59		P	4.0
8	☐	1.000		897066.26		P	1.5
9	☐	1.000		830847.81		P	3.8

165 Ho (ISTD) [No Gas]

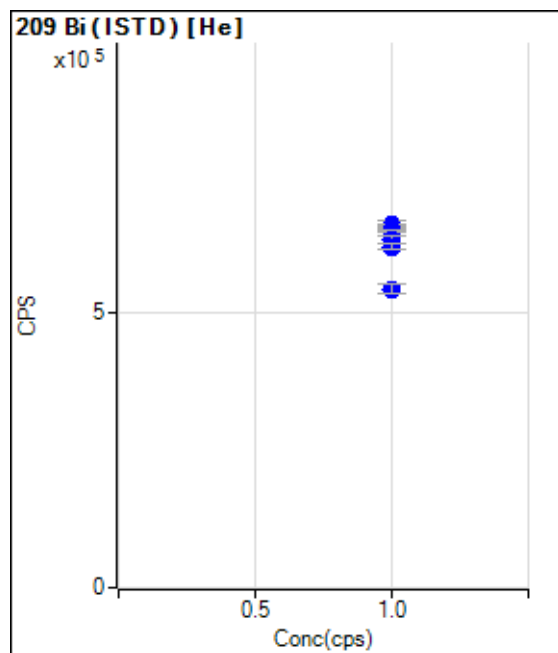
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		1965772.87		P	0.2
2	☐	1.000		1962321.37		P	3.0
3	☐	1.000		1963484.72		P	0.9
4	☐	1.000		2007848.13		P	1.1
5	☐	1.000		1973069.95		P	1.9
6	☐	1.000		1978567.62		P	0.9
7	☐	1.000		1989820.01		P	1.0
8	☐	1.000		1961611.85		P	1.0
9	☐	1.000		1811577.36		P	0.1

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		891464.81		P	2.4
2	☐	1.000		903487.98		P	0.8
3	☐	1.000		909515.98		P	1.9
4	☐	1.000		911299.97		P	0.6
5	☐	1.000		908443.40		P	0.5
6	☐	1.000		919530.39		P	0.4
7	☐	1.000		913528.28		P	3.0
8	☐	1.000		911260.92		P	1.8
9	☐	1.000		851992.60		P	3.5

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		1207624.76		P	0.6
2	☐	1.000		1210925.51		P	2.5
3	☐	1.000		1207337.70		P	1.5
4	☐	1.000		1222406.01		P	1.1
5	☐	1.000		1192039.27		P	1.8
6	☐	1.000		1184938.71		P	0.9
7	☐	1.000		1168609.85		P	0.9
8	☐	1.000		1114876.02		P	0.9
9	☐	1.000		947646.38		P	2.2



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		651487.46		P	1.2
2	☐	1.000		659671.75		P	0.3
3	☐	1.000		658082.76		P	2.6
4	☐	1.000		658599.16		P	0.3
5	☐	1.000		649558.80		P	0.4
6	☐	1.000		648722.21		P	0.5
7	☐	1.000		634323.33		P	2.2
8	☐	1.000		619784.11		P	1.5
9	☐	1.000		542520.56		P	3.2

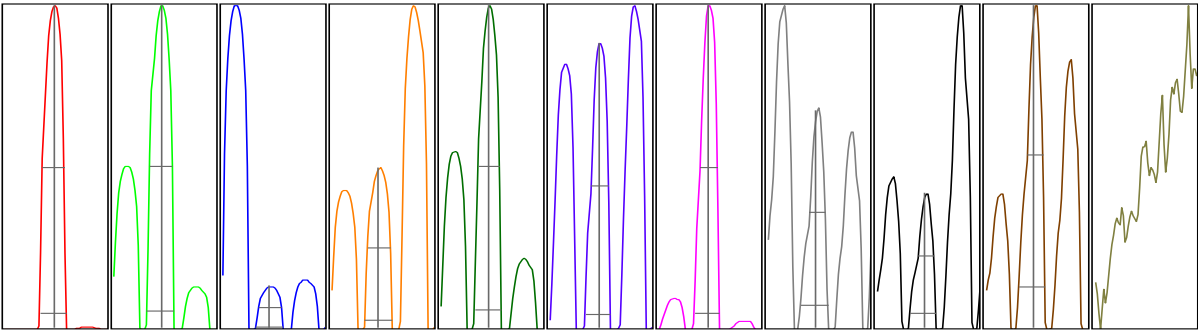
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P71105 2019MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count	RSD%	RSD%	RSD%
	(Mean)	(Actual)	(Required)	(Flag)
9	10261	1.02	5.00	
24	81338	1.07	5.00	
25	10851	0.83	5.00	
26	12714	0.88	5.00	
59	50431	0.92	5.00	
113	5874	1.10	5.00	
115	68447	0.56	5.00	
206	14549	0.80	5.00	
207	13549	0.75	5.00	
208	31101	0.58	5.00	
220	79	3.80		

Mass	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
	Count	Count	Count	Count	Count
9	10119	10178	10345	10323	10340
24	79862	81419	81494	81761	82154
25	10697	10854	10913	10873	10919
26	12542	12686	12745	12752	12844
59	49668	50322	50672	50691	50804
113	5788	5821	5913	5923	5925
115	68261	68181	68289	68388	69114
206	14369	14523	14550	14641	14663
207	13415	13671	13491	13617	13552
208	30832	31011	31196	31171	31295
220	81	82	75	76	79

Integration Time [sec] = 0.1



Mass	Peak	Axis	Axis	Axis	Width-X%	Width-X%	Width-
	Height	(Actual)	(Required)	(Flag)	(Actual)	(Required)	X%
9	17443	9.00	8.9 - 9.1		0.780	0.900	
24	131790	23.95	23.9 - 24.1		0.785	0.900	
25	17500	24.90	24.9 - 25.1		0.787	0.900	
26	20260	25.90	25.9 - 26.1		0.788	0.900	
59	86084	58.95	58.9 - 59.1		0.783	0.900	
113	11207	113.00	112.9 - 113.1		0.733	0.900	
115	133293	115.00	114.9 - 115.1		0.731	0.900	
206	28803	205.95	205.9 - 206.1		0.787	0.900	
207	26028	206.95	206.9 - 207.1		0.745	0.900	
208	61921	207.95	207.9 - 208.1		0.754	0.900	
220			-				

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

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.1	V	Deflect	13.4	V
Extract 2	-115.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-60	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	RSD%	RSD%
	(Mean)	(Actual)	(Required)
59	12226	2.07	
89	9698	2.15	
205	11850	1.78	

Mass	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
	Count	Count	Count	Count	Count
59	12397	12555	12085	11915	12180
89	9777	9988	9701	9428	9595
205	11874	12196	11772	11637	11771

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.1	V	Deflect	1.6	V
Extract 2	-130.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-55	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			