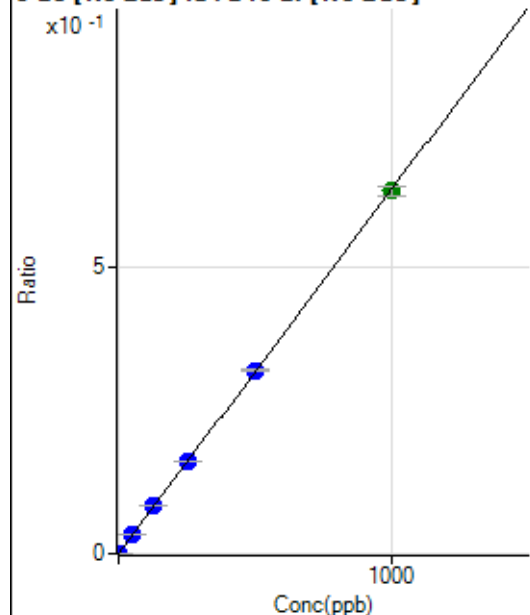


Calibration for 003CALB.d

Batch Folder: D:\ICP-MS Data\P7102219MS .b\
 Analysis File: P7102219MS .batch.bin
 DA Date-Time: 2019-10-23 01:39:58
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-10-22 11:34:36
2	004CALS.d	S01	2019-10-22 11:38:09
3	005CALS.d	S02	2019-10-22 11:43:15
4	006CALS.d	S03	2019-10-22 11:47:09
5	007CALS.d	S04	2019-10-22 11:51:15
6	008CALS.d	S05	2019-10-22 11:55:01
7	009CALS.d	S06	2019-10-22 12:02:11
8	010CALS.d	S07	2019-10-22 12:05:54
9	011CALS.d	S08	2019-10-22 12:09:40

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94.45	0.0000	P	15.6
2	☐	0.100	0.093	596.33	0.0001	P	8.1
3	☐	1.000	1.016	5588.22	0.0007	P	4.4
4	☐	50.000	50.318	273277.86	0.0320	P	0.4
5	☐	125.000	130.735	686751.46	0.0832	P	0.6
6	☐	250.000	252.384	1302372.17	0.1605	P	0.7
7	☐	500.000	504.386	2549332.90	0.3208	P	2.1
8	☐	1000.000	996.478	4882029.51	0.6337	A	2.7
9	☐			737.08	0.0001	P	7.0

$$y = 6.3594\text{E-}004 * x + 1.1700\text{E-}005$$

$$R = 1.0000$$

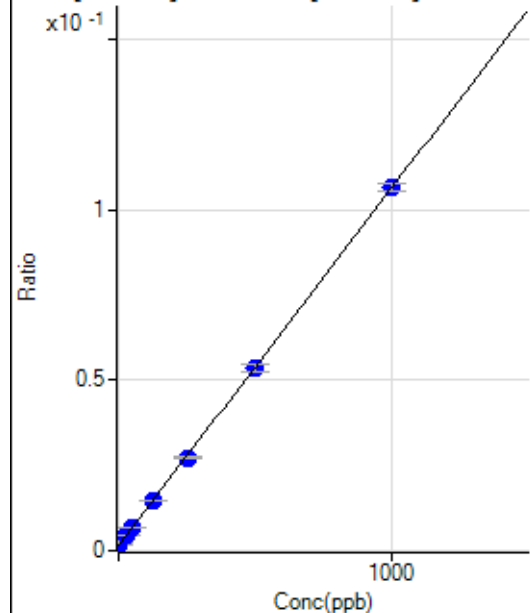
$$DL = 0.008617$$

$$BEC = 0.0184$$

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	11907.91	0.0015	P	1.9
2	☐	2.500	10.305	21443.76	0.0026	P	9.2
3	☐	25.000	29.091	38455.60	0.0045	P	1.7
4	☐	50.000	50.611	57925.50	0.0068	P	1.5
5	☐	125.000	127.150	122380.36	0.0148	P	1.6
6	☐	250.000	246.820	222105.92	0.0274	P	1.1
7	☐	500.000	499.009	427792.09	0.0538	P	4.0
8	☐	1000.000	1000.870	820515.95	0.1065	P	2.1
9	☐			40572.30	0.0056	P	8.4

$$y = 1.0493\text{E-}004 * x + 0.0015$$

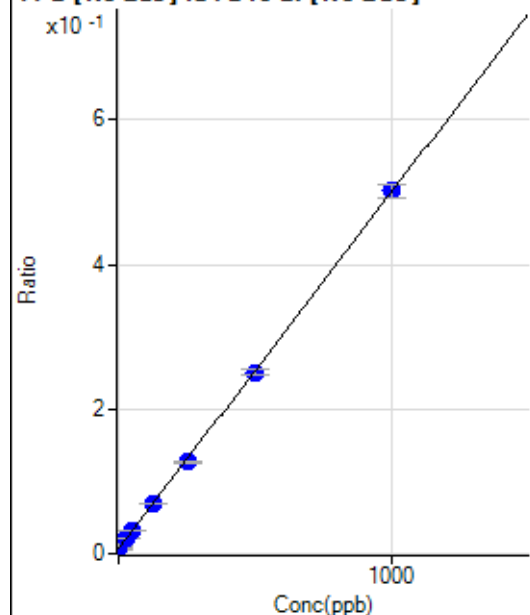
$$R = 1.0000$$

$$DL = 0.7959$$

$$BEC = 14.06$$

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	54797.74	0.0068	P	4.3
2	☐	2.500	10.344	99758.84	0.0119	P	9.5
3	☐	25.000	29.001	179206.11	0.0211	P	2.3
4	☐	50.000	49.401	266060.71	0.0312	P	1.5
5	☐	125.000	126.397	571232.06	0.0692	P	0.7
6	☐	250.000	244.800	1035261.02	0.1276	P	2.0
7	☐	500.000	495.377	1996577.35	0.2512	P	3.7
8	☐	1000.000	1003.347	3866191.62	0.5019	P	3.7
9	☐			183925.37	0.0255	P	6.6

$$y = 4.9348\text{E-}004 * x + 0.0068$$

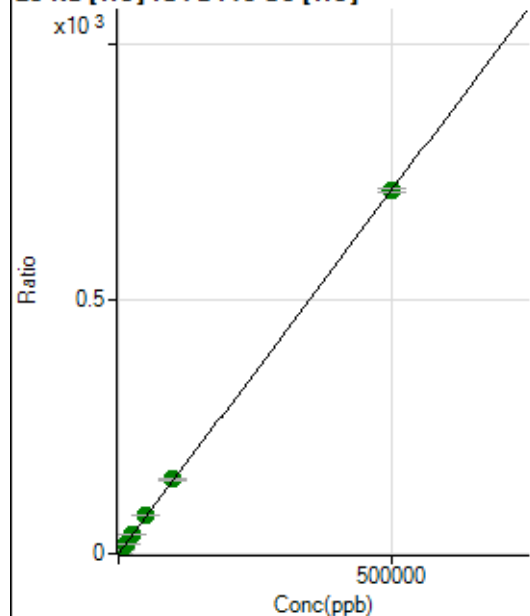
$$R = 0.9999$$

$$DL = 1.791$$

$$BEC = 13.76$$

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	21969.63	0.0324	P	1.5
2	☐	50.000	43.319	64207.90	0.0943	P	3.3
3	☐	500.000	513.903	517697.24	0.7662	P	0.3
4	☐	5000.000	5081.939	4965426.54	7.2884	A	1.5
5	☐	12500.000	13192.473	12525523.80	18.8685	A	1.4
6	☐	25000.000	26006.978	24145447.94	37.1649	A	0.3
7	☐	50000.000	53063.681	48258079.55	75.7960	A	2.0
8	☐	100000.00	101954.77	96740047.30	145.6021	A	2.9
9	☐	500000.00	499234.18	471363949.43	712.8321	A	1.0

$$y = 0.0014 * x + 0.0324$$

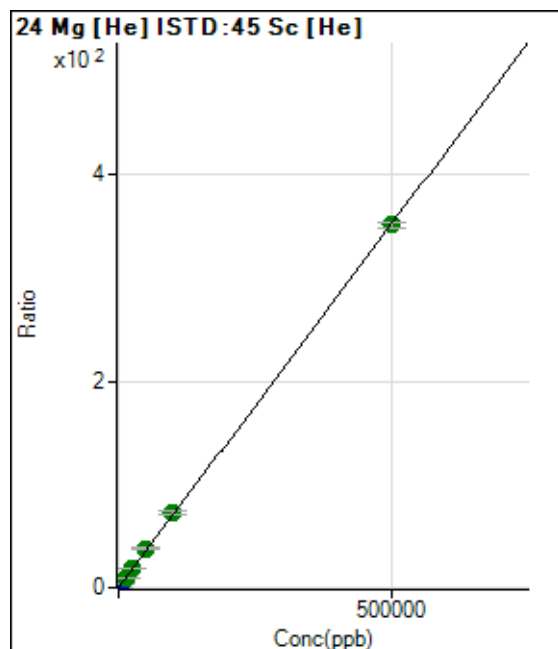
$$R = 1.0000$$

$$DL = 1.038$$

$$BEC = 22.73$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1633.50	0.0024	P	6.3
2	☐	50.000	43.401	22453.75	0.0330	P	7.2
3	☐	500.000	544.597	260802.53	0.3860	P	0.9
4	☐	5000.000	5206.730	2500019.48	3.6696	P	1.4
5	☐	12500.000	13529.098	6327123.80	9.5312	A	1.2
6	☐	25000.000	26604.141	12175217.11	18.7402	A	0.2
7	☐	50000.000	53801.060	24126725.37	37.8954	A	2.3
8	☐	100000.00	103241.56	48314374.00	72.7172	A	2.9
9	☐	500000.00	498863.53	232330802.42	351.3603	A	1.3

$$y = 7.0432\text{E-}004 * x + 0.0024$$

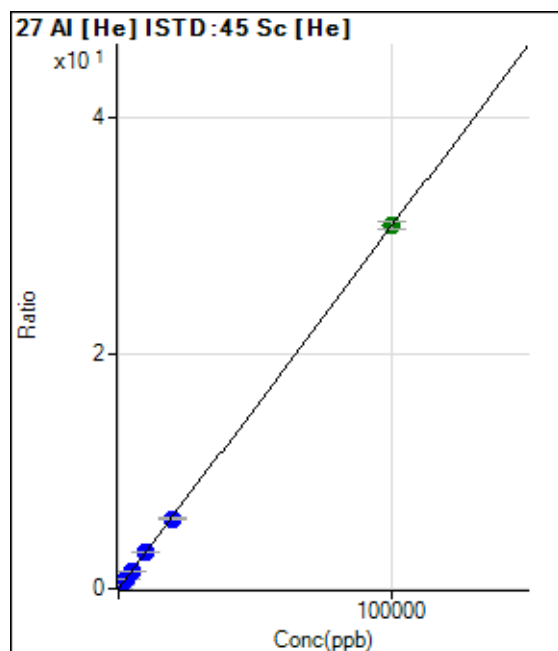
$$R = 1.0000$$

$$DL = 0.6423$$

$$BEC = 3.425$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216.68	0.0003	P	33.0
2	☐	2.000	0.934	413.92	0.0006	P	3.0
3	☐	20.000	18.976	4167.42	0.0062	P	4.9
4	☐	1000.000	968.811	203661.49	0.2989	P	1.5
5	☐	2500.000	2515.787	515005.50	0.7758	P	0.9
6	☐	5000.000	4944.826	990444.64	1.5245	P	0.3
7	☐	10000.000	10024.475	1967472.42	3.0902	P	2.2
8	☐	20000.000	19336.503	3960454.64	5.9605	P	2.6
9	☐	100000.00	100132.92	20407837.61	30.8650	A	2.2

$$y = 3.0824\text{E-}004 * x + 3.2003\text{E-}004$$

$$R = 1.0000$$

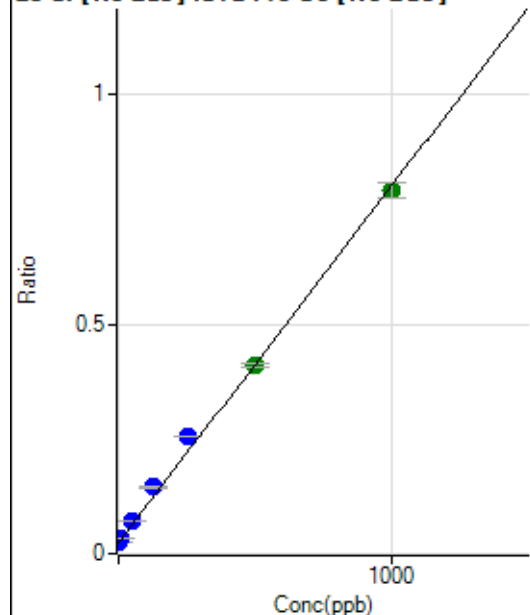
$$DL = 1.028$$

$$BEC = 1.038$$

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	390642.91	0.0241	P	0.3
2	☐	1.000	0.656	409568.84	0.0246	P	0.4
3	☐	10.000	10.172	537229.52	0.0320	P	0.4
4	☐	50.000	59.544	1178998.97	0.0704	P	2.0
5	☐	125.000	155.069	2369013.59	0.1447	P	0.6
6	☐	250.000	296.599	4119465.72	0.2547	P	0.7
7	☐	500.000	495.843	6619633.22	0.4096	A	1.9
8	☐	1000.000	986.192	12622629.80	0.7908	A	4.1
9	☐			684896.45	0.0446	P	1.9

$$y = 7.7741E-004 * x + 0.0241$$

$$R = 0.9985$$

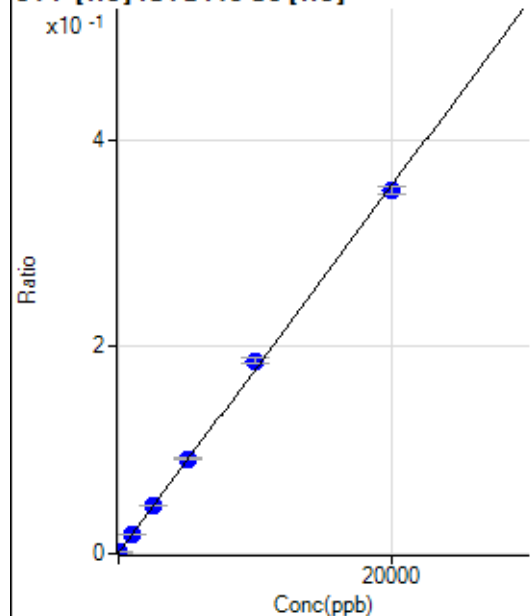
$$DL = 0.3094$$

$$BEC = 31.01$$

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	-16.369	219.46	0.0003	P	5.9
2	☐	0.000	-17.625	205.57	0.0003	P	4.1
3	☐	0.000	33.994	822.29	0.0012	P	10.4
4	☐	1000.000	989.763	12375.06	0.0182	P	1.5
5	☐	2500.000	2560.996	30551.86	0.0460	P	0.7
6	☐	5000.000	5132.008	59514.35	0.0916	P	1.1
7	☐	10000.000	10470.892	118579.99	0.1863	P	2.7
8	☐	20000.000	19724.439	232792.81	0.3503	P	2.2
9	☐			369.47	0.0006	P	15.7

$$y = 1.7730E-005 * x + 6.1436E-004$$

$$R = 0.9996$$

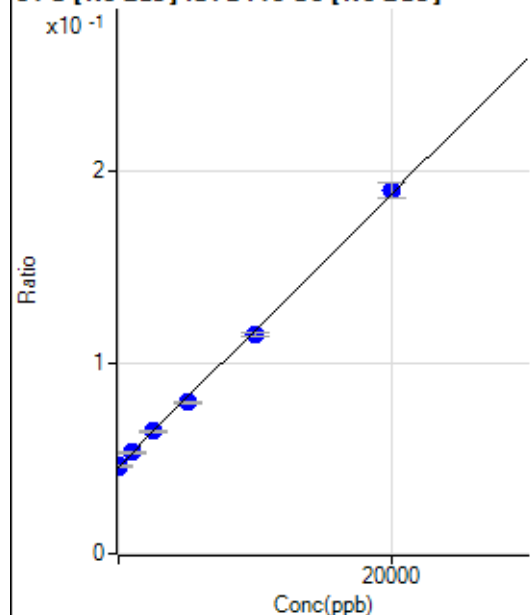
$$DL = 8.961$$

$$BEC = 34.65$$

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	-18.674	737485.01	0.0455	P	1.4
2	☐	0.000	-17.823	757272.35	0.0455	P	1.3
3	☐	0.000	36.496	770270.72	0.0459	P	1.1
4	☐	1000.000	1025.126	886743.64	0.0529	P	1.4
5	☐	2500.000	2562.644	1046319.50	0.0639	P	1.0
6	☐	5000.000	4723.233	1282259.90	0.0793	P	1.2
7	☐	10000.000	9683.151	1852102.45	0.1146	P	2.1
8	☐	20000.000	20218.529	3026824.39	0.1896	P	4.1
9	☐			568737.33	0.0370	P	2.4

$$y = 7.1214\text{E-}006 * x + 0.0456$$

$$R = 0.9997$$

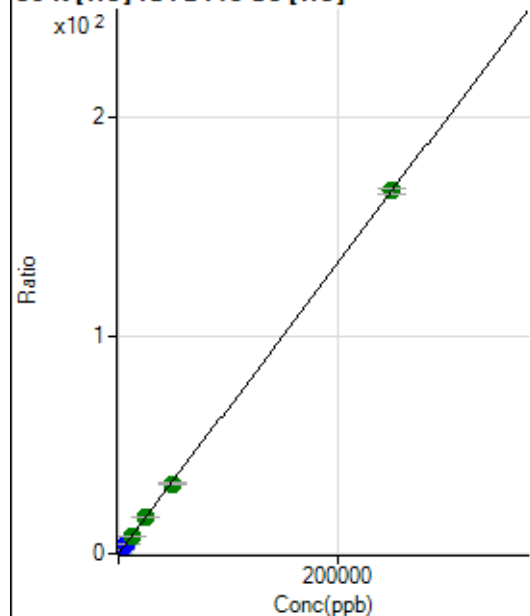
$$DL = 239.8$$

$$BEC = 6409$$

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	35473.79	0.0524	P	2.7
2	☐	50.000	47.492	57149.72	0.0839	P	2.5
3	☐	500.000	490.348	255446.38	0.3781	P	1.2
4	☐	2500.000	2391.549	1117873.44	1.6408	P	0.8
5	☐	6250.000	6239.329	2785565.17	4.1964	P	1.8
6	☐	12500.000	12341.661	5359579.11	8.2495	A	0.3
7	☐	25000.000	25028.166	10617011.35	16.6756	A	2.3
8	☐	50000.000	48152.692	21285408.29	32.0345	A	2.5
9	☐	250000.00	250375.93	109993138.57	166.3472	A	1.5

$$y = 6.6418\text{E-}004 * x + 0.0524$$

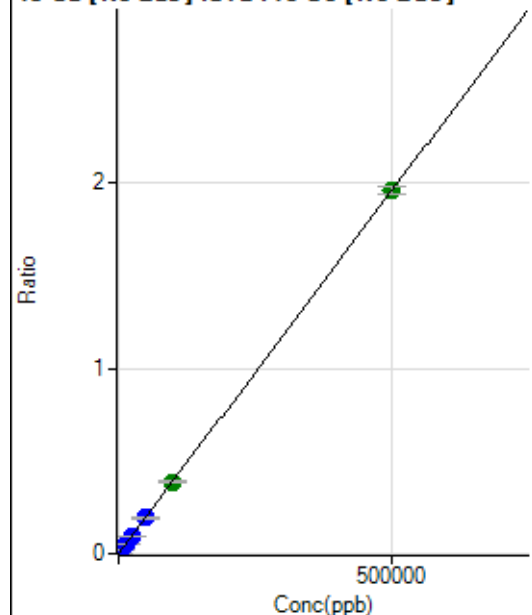
$$R = 1.0000$$

$$DL = 6.479$$

$$BEC = 78.89$$

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	444.47	0.0000	P	15.6
2	☐	50.000	47.610	3558.92	0.0002	P	5.2
3	☐	500.000	494.900	32996.17	0.0020	P	0.4
4	☐	5000.000	4869.509	319974.86	0.0191	P	1.5
5	☐	12500.000	12705.041	815559.94	0.0498	P	0.4
6	☐	25000.000	24838.465	1574385.34	0.0973	P	0.6
7	☐	50000.000	49338.059	3124149.61	0.1933	P	2.4
8	☐	100000.00	99064.212	6196810.30	0.3881	A	2.9
9	☐	500000.00	500257.61	30092098.24	1.9598	A	2.1

$$y = 3.9176\text{E-}006 * x + 2.7415\text{E-}005$$

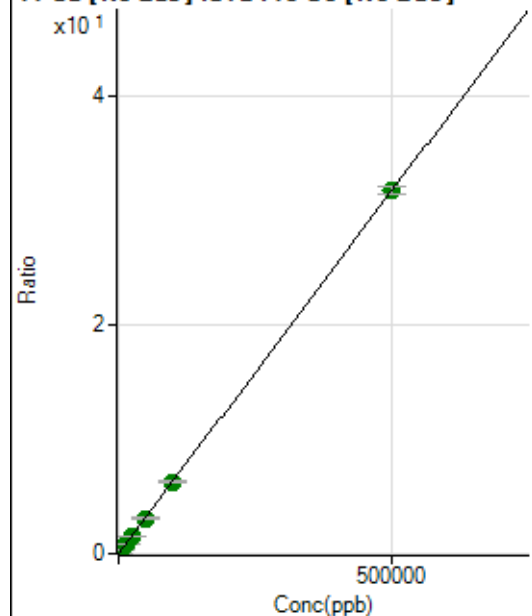
$$R = 1.0000$$

$$DL = 3.267$$

$$BEC = 6.998$$

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	28802.16	0.0018	P	1.2
2	☐	50.000	47.826	80031.55	0.0048	P	0.9
3	☐	500.000	490.054	551325.50	0.0329	P	0.7
4	☐	5000.000	4795.468	5123205.76	0.3059	A	0.9
5	☐	12500.000	12608.269	13122264.88	0.8013	A	0.4
6	☐	25000.000	24756.031	25420162.20	1.5716	A	0.6
7	☐	50000.000	48971.413	50216705.29	3.1071	A	1.9
8	☐	100000.00	98653.933	99894799.46	6.2575	A	3.6
9	☐	500000.00	500383.61	487229766.45	31.7313	A	2.0

$$y = 6.3410\text{E-}005 * x + 0.0018$$

$$R = 1.0000$$

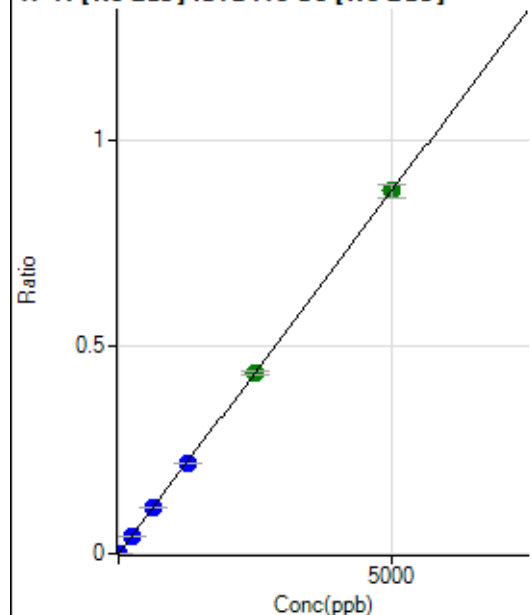
$$DL = 1.005$$

$$BEC = 28.03$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	244.46	0.0000	P	15.1
2	☐	0.500	0.547	1847.42	0.0001	P	12.0
3	☐	5.000	5.047	15105.57	0.0009	P	2.0
4	☐	250.000	241.118	708343.61	0.0423	P	0.9
5	☐	625.000	633.860	1820182.20	0.1111	P	0.4
6	☐	1250.000	1245.115	3531121.30	0.2183	P	0.6
7	☐	2500.000	2493.841	7066613.96	0.4372	A	2.0
8	☐	5000.000	5003.637	14004938.86	0.8773	A	3.5
9	☐			4000.69	0.0003	P	0.9

$$y = 1.7532E-004 * x + 1.5080E-005$$

$$R = 1.0000$$

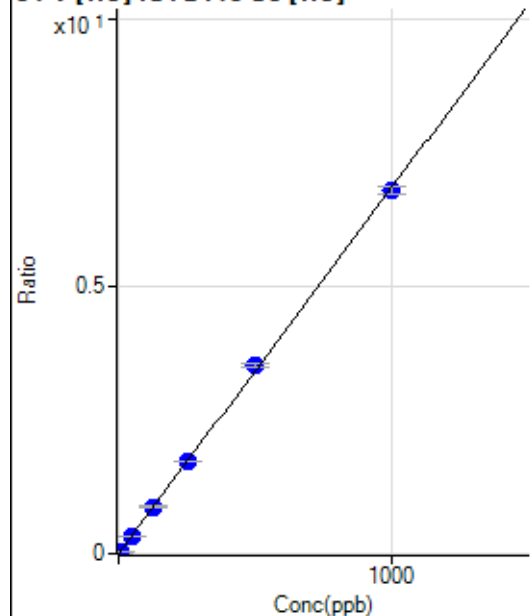
$$DL = 0.03892$$

$$BEC = 0.08601$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45.55	0.0001	P	28.8
2	☐	0.500	0.426	2026.84	0.0030	P	8.1
3	☐	5.000	5.223	24166.64	0.0358	P	1.3
4	☐	50.000	48.554	226144.68	0.3319	P	1.0
5	☐	125.000	127.627	579079.85	0.8724	P	2.0
6	☐	250.000	251.402	1116427.02	1.7184	P	0.5
7	☐	500.000	515.219	2242232.71	3.5216	P	1.7
8	☐	1000.000	991.783	4504477.71	6.7790	P	2.2
9	☐			1857.93	0.0028	P	0.9

$$y = 0.0068 * x + 6.7193E-005$$

$$R = 0.9998$$

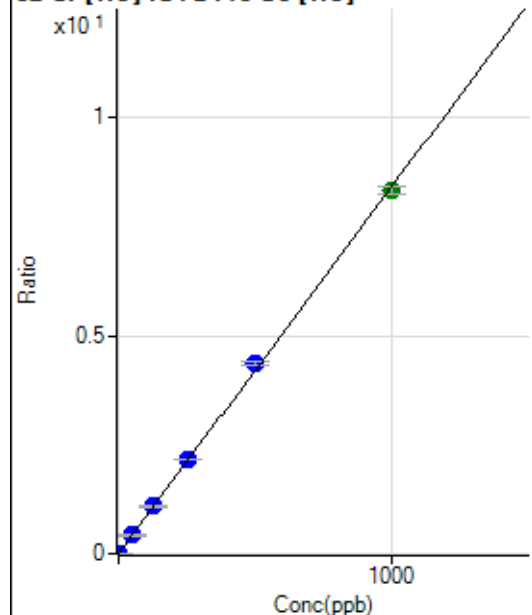
$$DL = 0.008505$$

$$BEC = 0.009831$$

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	1037.83	0.0015	P	9.7
2	☐	0.200	0.147	1886.82	0.0028	P	4.3
3	☐	2.000	2.061	12741.23	0.0189	P	1.8
4	☐	50.000	49.820	286307.15	0.4202	P	1.3
5	☐	125.000	129.666	724372.32	1.0913	P	2.1
6	☐	250.000	255.215	1394522.91	2.1465	P	0.7
7	☐	500.000	517.727	2771366.90	4.3527	P	1.9
8	☐	1000.000	989.258	5525641.72	8.3157	A	2.1
9	☐			201552.34	0.3048	P	1.4

$$y = 0.0084 * x + 0.0015$$

$$R = 0.9998$$

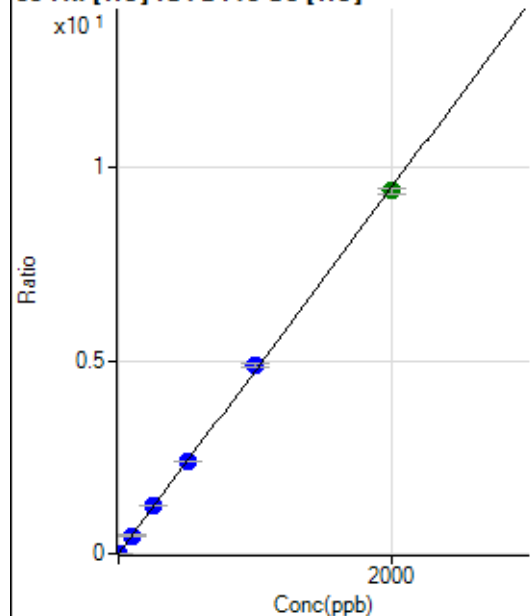
$$DL = 0.05296$$

$$BEC = 0.1824$$

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	101.11	0.0001	P	9.6
2	☐	0.100	0.083	370.01	0.0005	P	21.5
3	☐	1.000	1.067	3520.48	0.0052	P	2.6
4	☐	100.000	99.675	322230.08	0.4730	P	1.1
5	☐	250.000	259.914	818538.94	1.2331	P	1.6
6	☐	500.000	508.384	1566882.81	2.4117	P	0.1
7	☐	1000.000	1030.828	3113540.99	4.8900	P	1.6
8	☐	2000.000	1981.267	6245372.41	9.3986	A	1.9
9	☐			24103.28	0.0365	P	2.2

$$y = 0.0047 * x + 1.4929E-004$$

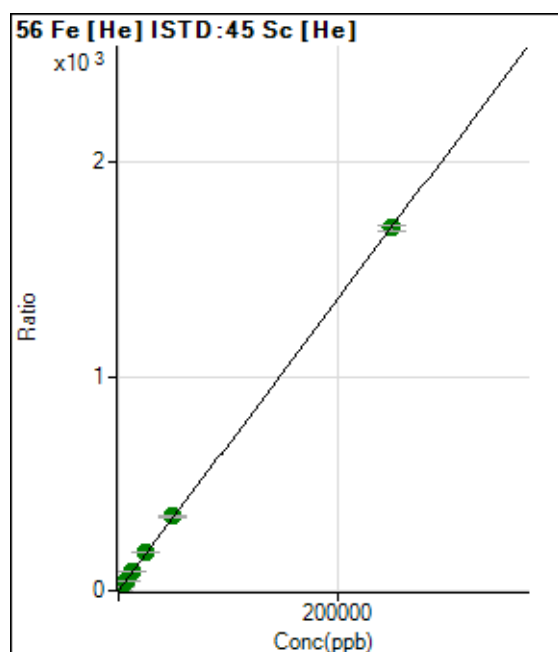
$$R = 0.9998$$

$$DL = 0.009028$$

$$BEC = 0.03147$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12752.12	0.0188	P	1.6
2	☐	5.000	3.263	27895.63	0.0410	P	7.5
3	☐	50.000	53.878	259724.05	0.3844	P	0.4
4	☐	2500.000	2567.733	11882104.55	17.4408	A	1.1
5	☐	6250.000	6688.036	30136145.35	45.3969	A	1.2
6	☐	12500.000	13186.168	58138008.71	89.4865	A	0.4
7	☐	25000.000	26586.106	114861848.86	180.4045	A	1.9
8	☐	50000.000	51034.045	230094484.77	346.2828	A	2.3
9	☐	250000.00	249588.64	1119773906.5	1,693.467	A	1.7

$$y = 0.0068 * x + 0.0188$$

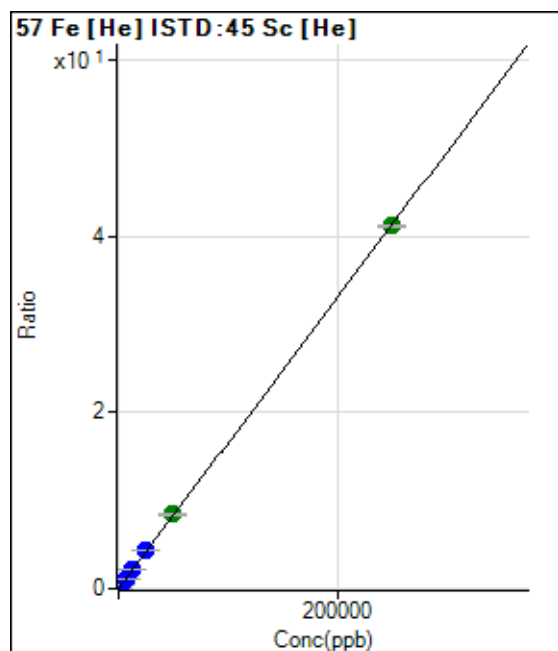
$$R = 1.0000$$

$$DL = 0.1334$$

$$BEC = 2.776$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	566.70	0.0008	P	2.2
2	☐	5.000	3.296	940.80	0.0014	P	9.9
3	☐	50.000	57.764	7009.27	0.0104	P	4.0
4	☐	2500.000	2583.109	291155.75	0.4274	P	1.1
5	☐	6250.000	6696.821	734564.37	1.1066	P	1.8
6	☐	12500.000	13275.869	1424718.62	2.1929	P	0.4
7	☐	25000.000	26750.283	2812662.80	4.4178	P	2.3
8	☐	50000.000	50998.569	5596074.32	8.4217	A	2.1
9	☐	250000.00	249574.46	27250933.02	41.2104	A	0.8

$$y = 1.6512E-004 * x + 8.3706E-004$$

$$R = 1.0000$$

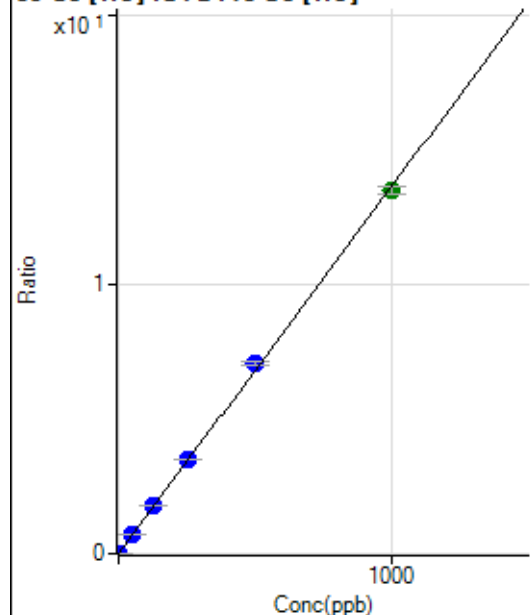
$$DL = 0.3401$$

$$BEC = 5.069$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	187.78	0.0003	P	22.8
2	☐	0.100	0.078	913.38	0.0013	P	7.3
3	☐	1.000	1.029	9674.45	0.0143	P	2.1
4	☐	50.000	50.622	470752.69	0.6910	P	0.3
5	☐	125.000	130.184	1179262.45	1.7765	P	1.5
6	☐	250.000	256.682	2275464.85	3.5024	P	0.4
7	☐	500.000	518.309	4502636.15	7.0720	P	2.0
8	☐	1000.000	988.496	8962173.41	13.4872	A	2.0
9	☐			18088.02	0.0274	P	2.2

$$y = 0.0136 * x + 2.7766E-004$$

$$R = 0.9997$$

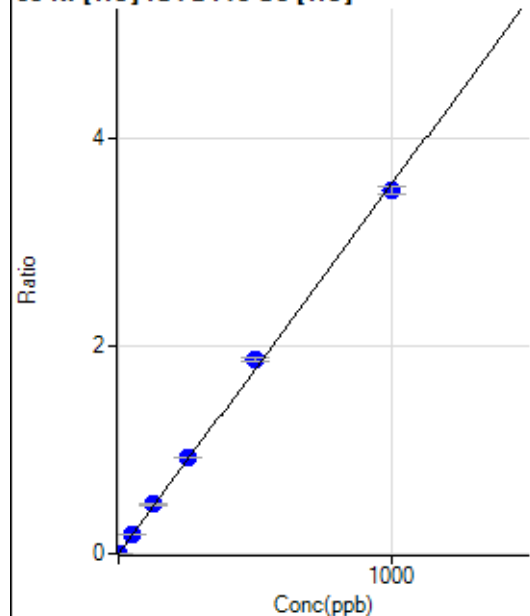
$$DL = 0.01393$$

$$BEC = 0.02035$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.56	0.0001	P	38.0
2	☐	0.100	0.094	302.23	0.0004	P	2.3
3	☐	1.000	1.112	2743.64	0.0041	P	1.0
4	☐	50.000	51.963	125802.27	0.1847	P	0.9
5	☐	125.000	133.301	314311.61	0.4735	P	1.9
6	☐	250.000	261.497	603423.75	0.9288	P	0.8
7	☐	500.000	527.216	1192187.24	1.8725	P	1.9
8	☐	1000.000	982.382	2318405.92	3.4890	P	1.9
9	☐			58973.79	0.0892	P	2.0

$$y = 0.0036 * x + 1.1178E-004$$

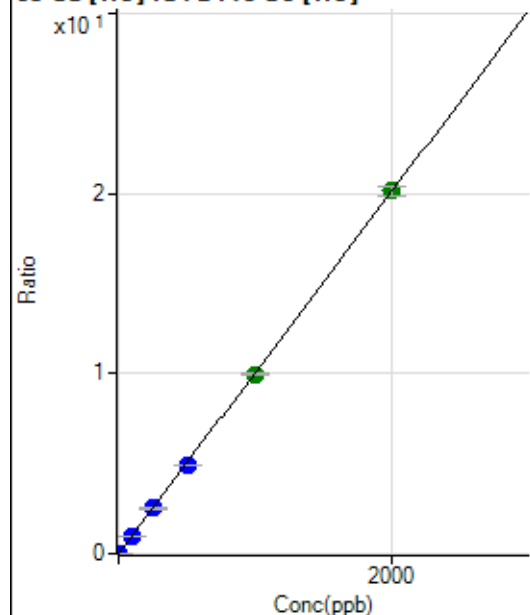
$$R = 0.9994$$

$$DL = 0.03587$$

$$BEC = 0.03147$$

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	1611.23	0.0024	P	1.2
2	☐	0.200	0.177	2828.10	0.0042	P	6.5
3	☐	2.000	1.961	14906.67	0.0221	P	1.4
4	☐	100.000	97.354	667247.86	0.9794	P	0.8
5	☐	250.000	252.285	1682128.10	2.5342	P	2.2
6	☐	500.000	492.417	3212119.67	4.9441	P	0.5
7	☐	1000.000	992.655	6344237.82	9.9643	A	1.9
8	☐	2000.000	2005.415	13373343.97	20.1280	A	2.9
9	☐			22759.04	0.0344	P	1.7

$$y = 0.0100 * x + 0.0024$$

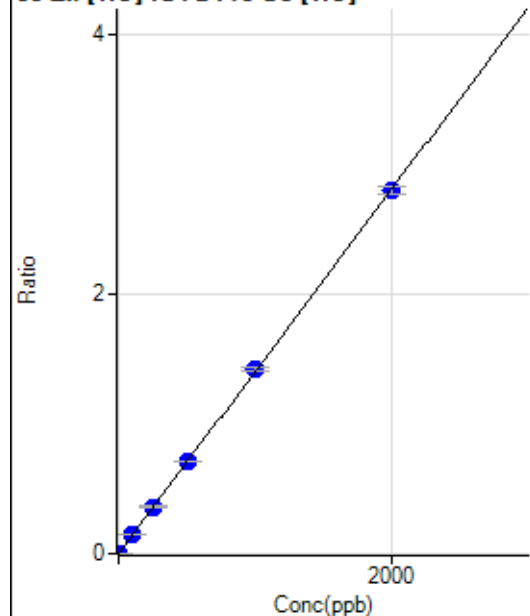
$$R = 1.0000$$

$$DL = 0.008874$$

$$BEC = 0.2371$$

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	420.01	0.0006	P	3.0
2	☒	0.200					
3	☐	2.000	2.089	2398.01	0.0035	P	2.0
4	☐	100.000	100.962	96869.80	0.1422	P	1.7
5	☐	250.000	257.669	240239.50	0.3619	P	2.0
6	☐	500.000	503.931	459482.76	0.7072	P	0.6
7	☐	1000.000	1011.480	903431.33	1.4189	P	1.8
8	☐	2000.000	1992.271	1856700.56	2.7942	P	2.3
9	☐			19152.76	0.0290	P	2.5

$$y = 0.0014 * x + 6.2043E-004$$

$$R = 1.0000$$

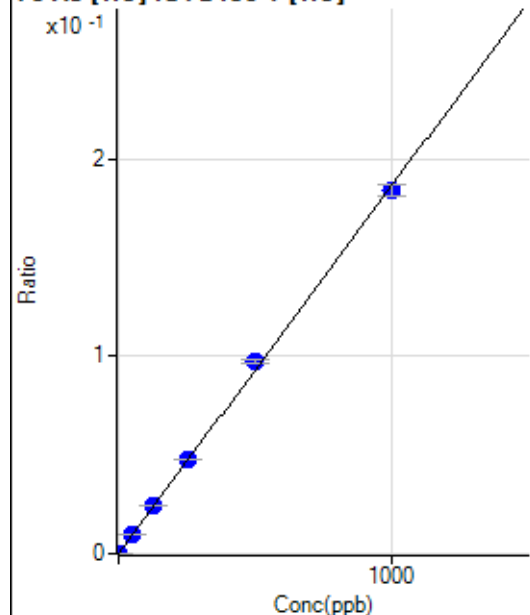
$$DL = 0.04016$$

$$BEC = 0.4425$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	8.64	0.0000	P	44.3
2	☐	0.100	0.091	61.73	0.0000	P	5.7
3	☐	1.000	0.980	572.86	0.0002	P	5.8
4	☐	50.000	50.266	29421.11	0.0094	P	0.3
5	☐	125.000	129.529	73398.79	0.0241	P	1.2
6	☐	250.000	254.927	142036.30	0.0475	P	0.6
7	☐	500.000	522.632	283547.93	0.0974	P	1.3
8	☐	1000.000	986.873	558848.98	0.1839	P	3.1
9	☐			260.50	0.0001	P	5.3

$$y = 1.8638\text{E-}004 * x + 2.7831\text{E-}006$$

$$R = 0.9996$$

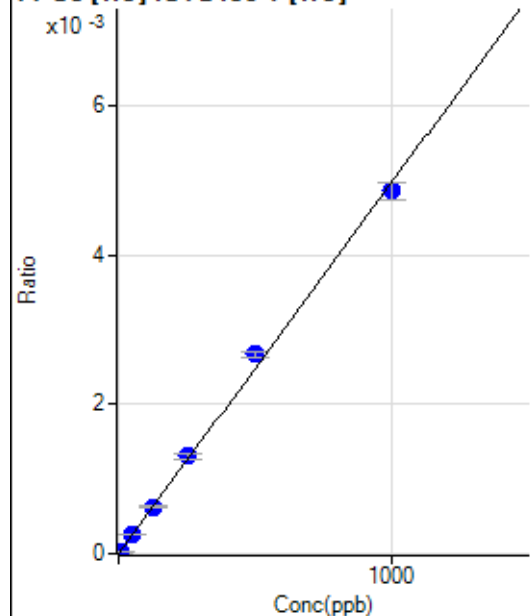
$$DL = 0.01985$$

$$BEC = 0.01493$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	0.645	10.00	0.0000	P	33.5
3	☐	5.000	6.296	96.67	0.0000	P	3.4
4	☐	50.000	51.388	802.25	0.0003	P	4.3
5	☐	125.000	125.516	1896.82	0.0006	P	3.3
6	☐	250.000	263.151	3910.59	0.0013	P	5.8
7	☐	500.000	536.840	7769.98	0.0027	P	2.2
8	☐	1000.000	978.152	14772.15	0.0049	P	4.5
9	☐			8.89	0.0000	P	42.7

$$y = 4.9717\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9989$$

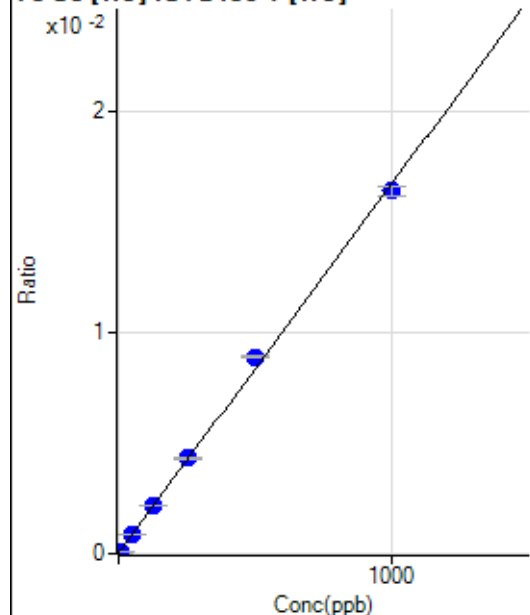
$$DL = 0$$

$$BEC = 0$$

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	100.00	0.0000	P	9.1
2	☐	0.500	0.622	132.72	0.0000	P	23.4
3	☐	5.000	5.408	378.40	0.0001	P	3.7
4	☐	50.000	50.918	2770.66	0.0009	P	3.1
5	☐	125.000	129.285	6662.08	0.0022	P	1.5
6	☐	250.000	256.568	12906.44	0.0043	P	1.7
7	☐	500.000	531.816	25949.83	0.0089	P	1.1
8	☐	1000.000	981.867	49926.35	0.0164	P	2.6
9	☐			147.53	0.0000	P	11.2

$$y = 1.6702\text{E-}005 * x + 3.2224\text{E-}005$$

$$R = 0.9993$$

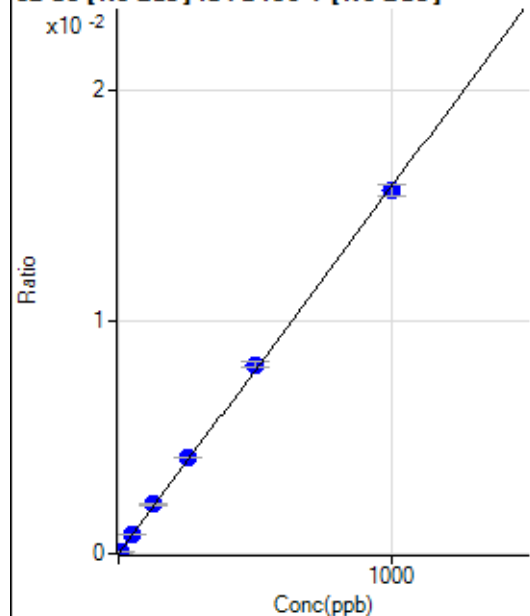
$$DL = 0.5267$$

$$BEC = 1.929$$

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	25.49	0.0000	P	783.
2	☒	0.500					
3	☐	5.000	5.814	2332.20	0.0001	P	2.6
4	☐	50.000	52.691	20908.64	0.0008	P	1.0
5	☐	125.000	133.910	52024.03	0.0021	P	2.2
6	☐	250.000	260.651	100554.66	0.0041	P	0.4
7	☐	500.000	515.209	198376.47	0.0082	P	3.0
8	☐	1000.000	988.480	378342.40	0.0157	P	3.1
9	☐			483.11	0.0000	P	3.8

$$y = 1.5832\text{E-}005 * x + 1.0561\text{E-}006$$

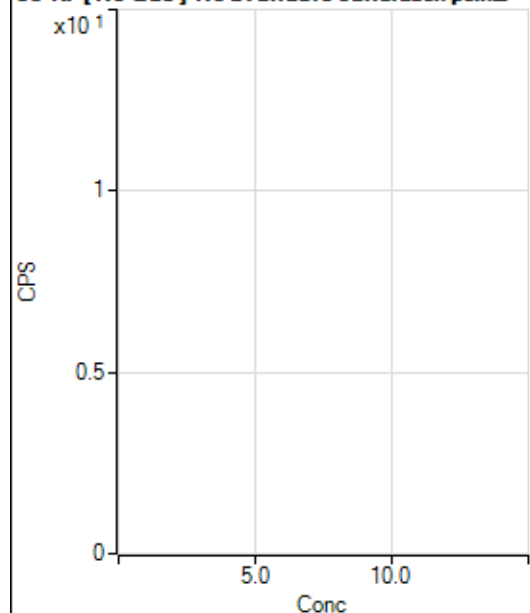
$$R = 0.9997$$

$$DL = 1.568$$

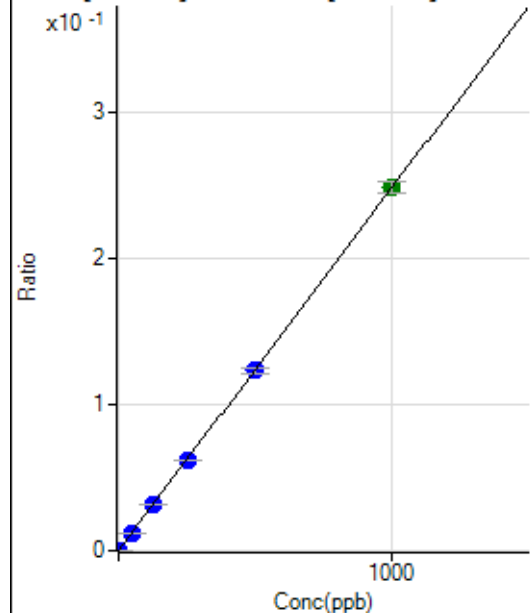
$$BEC = 0.06671$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2433.58		P	4.7
2	☐			2441.36		P	4.0
3	☐			2370.23		P	4.0
4	☐			2374.68		P	5.2
5	☐			2320.23		P	4.5
6	☐			2305.78		P	2.3
7	☐			2339.12		P	4.9
8	☐			2414.69		P	4.5
9	☐			2362.45		P	2.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	3731.19	0.0002	P	0.5
2	☐	0.100	0.115	4550.91	0.0002	P	5.3
3	☐	1.000	0.944	9762.01	0.0004	P	1.0
4	☐	50.000	49.098	307974.44	0.0123	P	0.5
5	☐	125.000	127.852	779631.65	0.0318	P	0.4
6	☐	250.000	249.733	1508825.90	0.0619	P	0.4
7	☐	500.000	496.949	2993421.94	0.1231	P	2.6
8	☐	1000.000	1001.281	5991682.73	0.2479	A	3.1
9	☐			27115.40	0.0012	P	2.3

$$y = 2.4739E-004 * x + 1.5610E-004$$

$$R = 1.0000$$

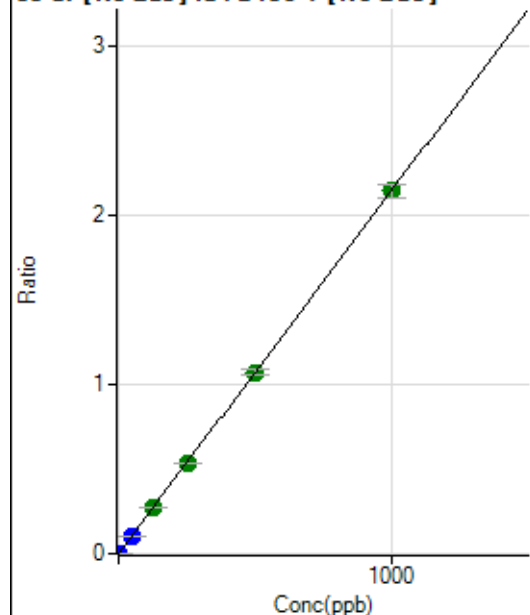
$$DL = 0.009876$$

$$BEC = 0.631$$

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	527.81	0.0000	P	14.1
2	☐	0.100	0.098	5740.28	0.0002	P	2.1
3	☐	1.000	0.981	53236.07	0.0021	P	0.9
4	☐	50.000	48.920	2627190.92	0.1049	P	0.3
5	☐	125.000	127.748	6721231.40	0.2740	A	0.8
6	☐	250.000	250.747	13102055.59	0.5378	A	0.5
7	☐	500.000	499.880	26073938.08	1.0722	A	2.5
8	☐	1000.000	999.584	51825679.28	2.1440	A	3.4
9	☐			207019.01	0.0090	P	3.1

$$y = 0.0021 * x + 2.2078E-005$$

$$R = 1.0000$$

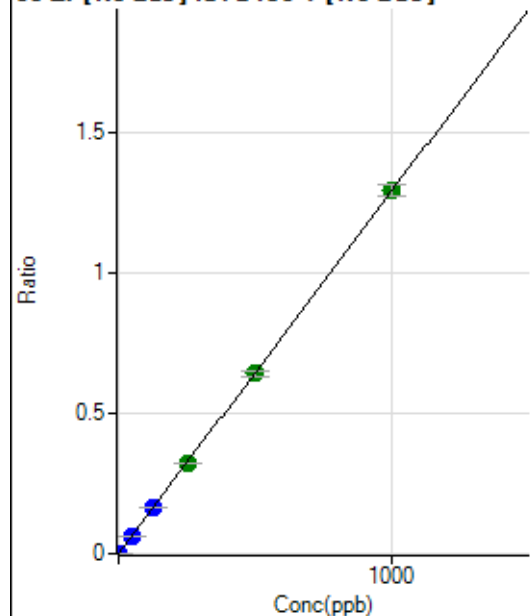
$$DL = 0.004369$$

$$BEC = 0.01029$$

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	1522.38	0.0001	P	11.7
2	☐	0.100	0.089	4417.55	0.0002	P	3.7
3	☐	1.000	0.872	29759.46	0.0012	P	1.8
4	☐	50.000	48.188	1557415.50	0.0622	P	0.1
5	☐	125.000	127.608	4038290.97	0.1646	P	1.5
6	☐	250.000	248.128	7797593.92	0.3201	A	0.3
7	☐	500.000	497.665	15609976.39	0.6419	A	2.9
8	☐	1000.000	1001.400	31222753.47	1.2916	A	3.2
9	☐			10401.46	0.0005	P	1.8

$$y = 0.0013 * x + 6.3695E-005$$

$$R = 1.0000$$

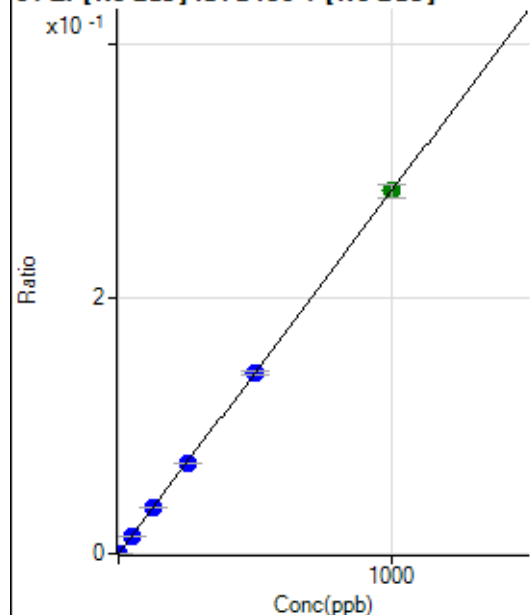
$$DL = 0.0173$$

$$BEC = 0.04939$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	272.24	0.0000	P	4.9
2	☐	0.100	0.076	813.95	0.0000	P	15.7
3	☐	1.000	0.849	6329.44	0.0003	P	1.3
4	☐	50.000	48.134	342611.41	0.0137	P	1.4
5	☐	125.000	127.928	891745.39	0.0364	P	1.6
6	☐	250.000	250.513	1734186.72	0.0712	P	0.4
7	☐	500.000	497.984	3440983.89	0.1415	P	2.6
8	☐	1000.000	1000.607	6871902.93	0.2843	A	3.7
9	☐			2222.50	0.0001	P	4.2

$$y = 2.8412\text{E-}004 * x + 1.1390\text{E-}005$$

$$R = 1.0000$$

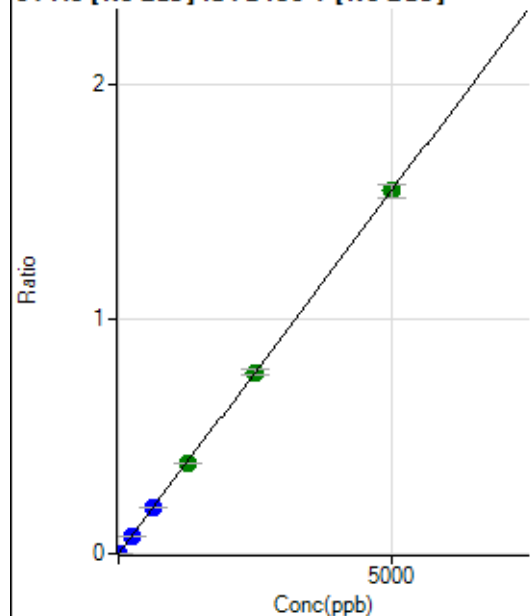
$$DL = 0.005869$$

$$BEC = 0.04009$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	627.82	0.0000	P	1.7
2	☐	0.500	0.453	4097.99	0.0002	P	2.2
3	☐	5.000	4.716	37124.29	0.0015	P	1.9
4	☐	250.000	241.923	1870350.98	0.0747	P	0.4
5	☐	625.000	643.407	4872829.15	0.1987	P	1.2
6	☐	1250.000	1251.506	9413305.42	0.3864	A	0.3
7	☐	2500.000	2497.327	18749150.77	0.7710	A	3.1
8	☐	5000.000	4999.063	37306860.55	1.5434	A	3.7
9	☐			33192.22	0.0014	P	1.8

$$y = 3.0873\text{E-}004 * x + 2.6265\text{E-}005$$

$$R = 1.0000$$

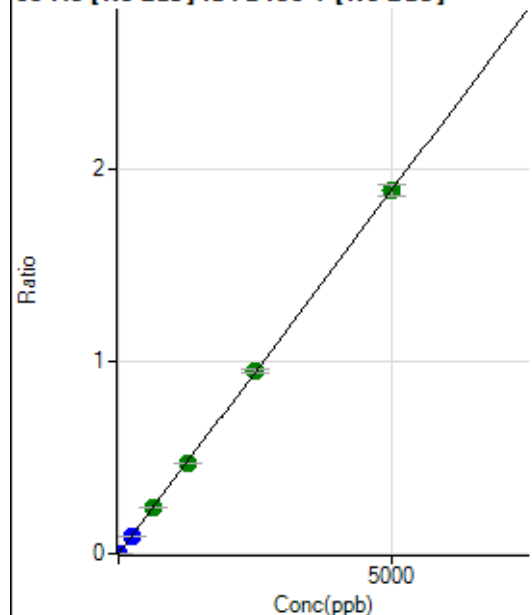
$$DL = 0.004439$$

$$BEC = 0.08507$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	280.57	0.0000	P	9.8
2	☐	0.500	0.498	4926.06	0.0002	P	4.1
3	☐	5.000	4.917	46830.51	0.0019	P	1.8
4	☐	250.000	242.774	2296765.48	0.0918	P	0.8
5	☐	625.000	633.240	5869678.34	0.2393	A	0.6
6	☐	1250.000	1250.412	11511211.80	0.4725	A	0.5
7	☐	2500.000	2511.226	23076721.87	0.9490	A	2.7
8	☐	5000.000	4993.615	45616637.83	1.8870	A	3.1
9	☐			49809.95	0.0022	P	1.9

$$y = 3.7789\text{E-}004 * x + 1.1741\text{E-}005$$

$$R = 1.0000$$

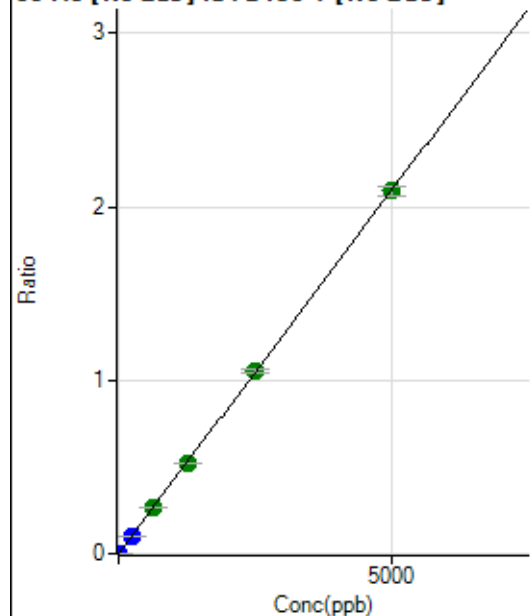
$$DL = 0.009145$$

$$BEC = 0.03107$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	469.47	0.0000	P	14.1
2	☐	0.500	0.488	5531.84	0.0002	P	5.2
3	☐	5.000	4.921	52113.06	0.0021	P	1.1
4	☐	250.000	240.547	2522542.46	0.1008	P	0.9
5	☐	625.000	633.114	6504722.15	0.2652	A	1.2
6	☐	1250.000	1249.302	12747685.88	0.5233	A	0.6
7	☐	2500.000	2508.884	25554889.63	1.0509	A	2.7
8	☐	5000.000	4995.191	50579406.34	2.0923	A	2.9
9	☐			73593.56	0.0032	P	2.1

$$y = 4.1885\text{E-}004 * x + 1.9646\text{E-}005$$

$$R = 1.0000$$

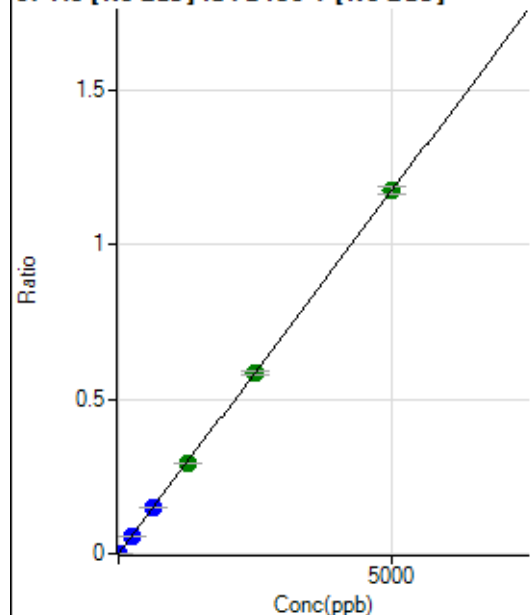
$$DL = 0.01979$$

$$BEC = 0.04691$$

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	161.12	0.0000	P	12.8
2	☐	0.500	0.489	2997.67	0.0001	P	3.6
3	☐	5.000	5.025	29720.80	0.0012	P	4.1
4	☐	250.000	241.020	1416723.51	0.0566	P	1.3
5	☐	625.000	638.850	3679320.09	0.1500	P	1.1
6	☐	1250.000	1248.360	7140785.92	0.2931	A	0.5
7	☐	2500.000	2496.876	14257194.24	0.5863	A	2.5
8	☐	5000.000	5000.690	28387744.73	1.1742	A	2.3
9	☐			30642.28	0.0013	P	3.9

$$y = 2.3480E-004 * x + 6.7396E-006$$

$$R = 1.0000$$

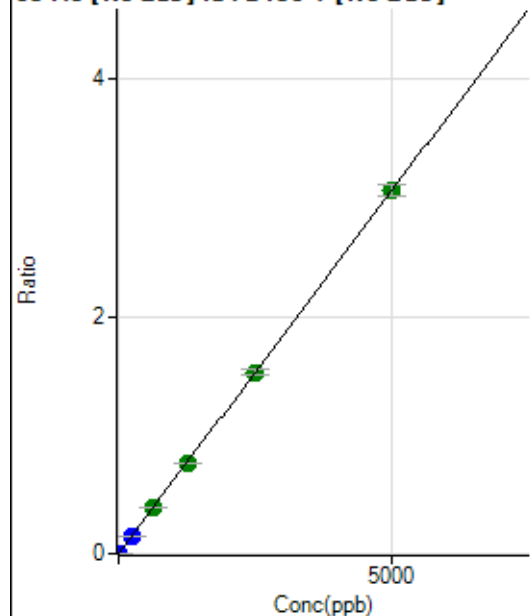
$$DL = 0.01103$$

$$BEC = 0.0287$$

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	386.13	0.0000	P	2.8
2	☐	0.500	0.498	7908.08	0.0003	P	2.1
3	☐	5.000	4.907	75559.01	0.0030	P	1.3
4	☐	250.000	242.056	3705461.02	0.1480	P	0.6
5	☐	625.000	632.579	9487935.02	0.3868	A	0.5
6	☐	1250.000	1249.447	18612083.92	0.7640	A	0.4
7	☐	2500.000	2497.450	37136220.62	1.5271	A	2.7
8	☐	5000.000	5000.863	73919138.46	3.0579	A	3.2
9	☐			77994.00	0.0034	P	2.2

$$y = 6.1147E-004 * x + 1.6156E-005$$

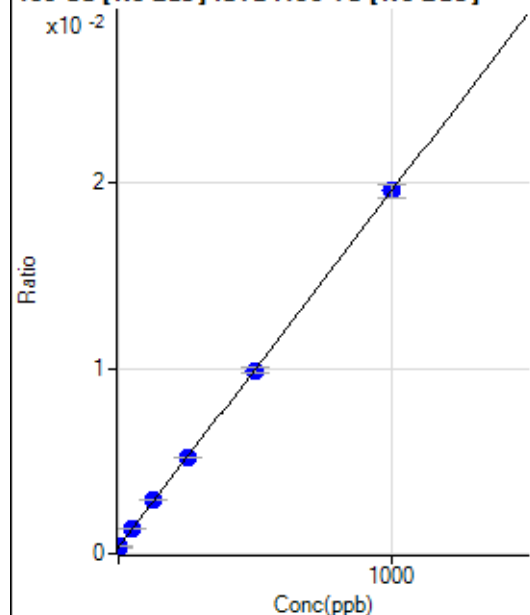
$$R = 1.0000$$

$$DL = 0.002182$$

$$BEC = 0.02642$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9962.22	0.0004	P	1.5
2	☐	0.100	-0.239	10245.78	0.0004	P	2.1
3	☐	1.000	0.574	10673.94	0.0004	P	1.5
4	☐	50.000	52.231	38985.27	0.0014	P	1.4
5	☐	125.000	132.355	82105.40	0.0029	P	1.8
6	☐	250.000	251.277	147498.38	0.0052	P	1.3
7	☐	500.000	496.353	280595.25	0.0099	P	3.0
8	☐	1000.000	1000.474	549369.07	0.0196	P	3.5
9	☐			8447.30	0.0003	P	0.9

$$y = 1.9202\text{E-}005 * x + 3.6268\text{E-}004$$

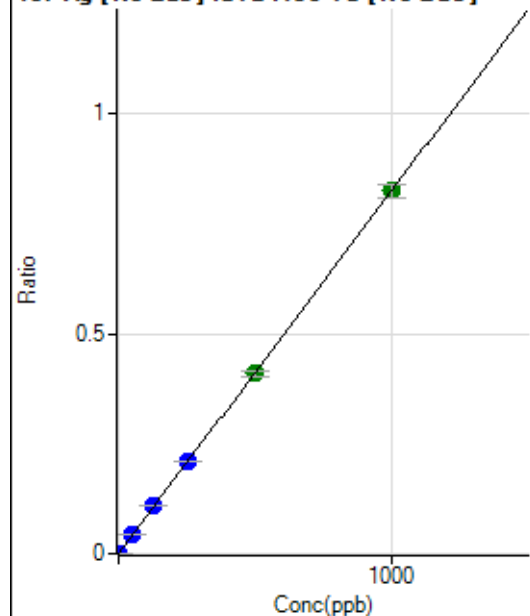
$$R = 1.0000$$

$$DL = 0.8704$$

$$BEC = 18.89$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	247.24	0.0000	P	11.9
2	☐	0.100	0.100	2625.37	0.0001	P	4.6
3	☐	1.000	0.982	23361.90	0.0008	P	3.0
4	☐	50.000	51.195	1204788.63	0.0422	P	0.6
5	☐	125.000	132.515	3087836.42	0.1092	P	0.2
6	☐	250.000	253.465	5939124.74	0.2089	P	0.8
7	☐	500.000	495.959	11593007.12	0.4087	A	2.5
8	☐	1000.000	1000.155	23135569.79	0.8242	A	3.4
9	☐			5212.29	0.0002	P	2.0

$$y = 8.2411\text{E-}004 * x + 8.9941\text{E-}006$$

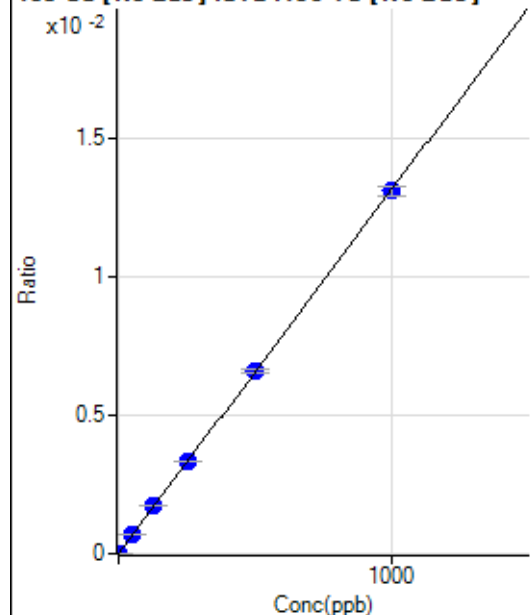
$$R = 1.0000$$

$$DL = 0.003889$$

$$BEC = 0.01091$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0000	P	43.3
2	☐	0.100	0.168	88.89	0.0000	P	13.2
3	☐	1.000	0.958	384.74	0.0000	P	1.6
4	☐	50.000	52.148	19554.03	0.0007	P	0.7
5	☐	125.000	132.216	49057.15	0.0017	P	1.2
6	☐	250.000	254.220	94835.00	0.0033	P	0.7
7	☐	500.000	502.031	186799.74	0.0066	P	2.3
8	☐	1000.000	996.920	367092.74	0.0131	P	3.0
9	☐			158.34	0.0000	P	8.8

$$y = 1.3117E-005 * x + 9.0853E-007$$

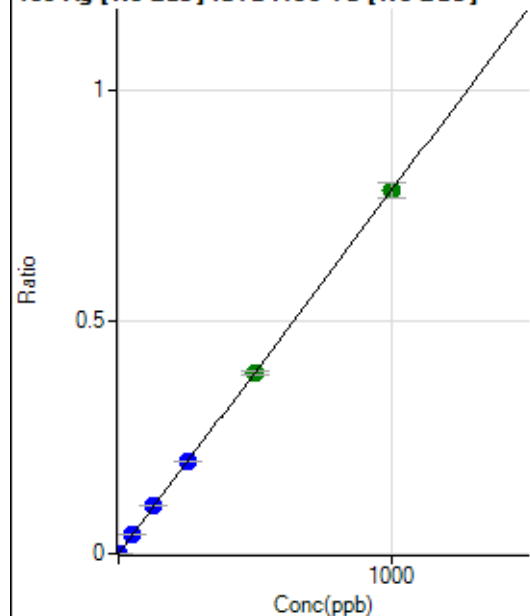
$$R = 1.0000$$

$$DL = 0.09001$$

$$BEC = 0.06926$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77.78	0.0000	P	63.1
2	☐	0.100	0.096	2233.61	0.0001	P	6.1
3	☐	1.000	0.973	21851.06	0.0008	P	1.8
4	☐	50.000	51.433	1149893.53	0.0403	P	0.7
5	☐	125.000	133.313	2951494.94	0.1044	P	0.8
6	☐	250.000	253.548	5644900.77	0.1985	P	0.8
7	☐	500.000	499.129	11086162.92	0.3908	A	2.2
8	☐	1000.000	998.438	21941062.47	0.7818	A	4.1
9	☐			5159.50	0.0002	P	1.7

$$y = 7.8305E-004 * x + 2.8444E-006$$

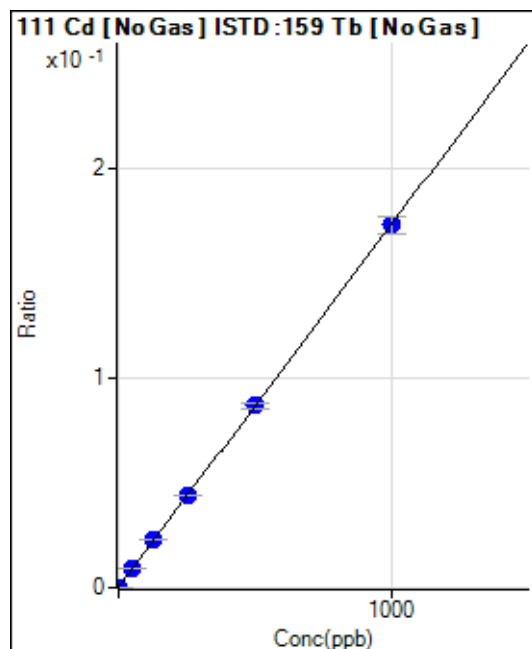
$$R = 1.0000$$

$$DL = 0.006872$$

$$BEC = 0.003632$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7036.61	0.0003	P	1.6
2	☐	0.100	0.074	7695.96	0.0003	P	2.3
3	☐	1.000	0.996	12243.71	0.0004	P	1.3
4	☐	50.000	51.745	263201.47	0.0092	P	0.6
5	☐	125.000	132.721	657204.16	0.0232	P	0.9
6	☐	250.000	253.257	1254538.12	0.0441	P	0.3
7	☐	500.000	499.619	2461875.68	0.0868	P	2.4
8	☐	1000.000	998.324	4859731.47	0.1732	P	4.4
9	☐			7081.53	0.0003	P	1.6

$$y = 1.7321\text{E-}004 * x + 2.5617\text{E-}004$$

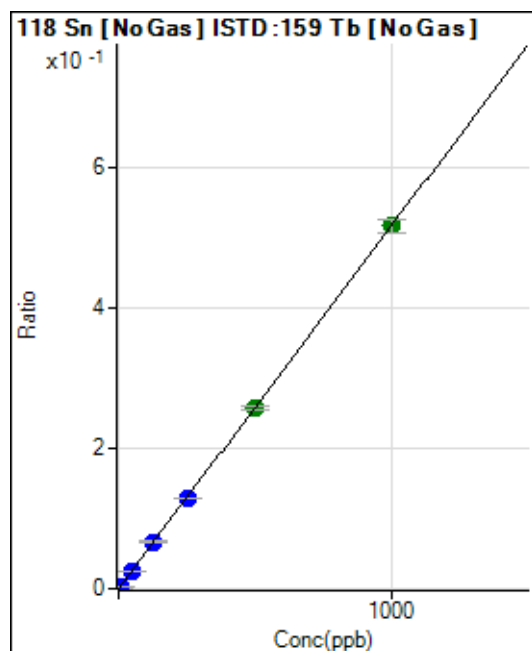
$$R = 1.0000$$

$$DL = 0.06968$$

$$BEC = 1.479$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1205.66	0.0000	P	3.9
2	☐	0.500	0.533	9147.80	0.0003	P	1.5
3	☐	5.000	5.081	76349.50	0.0027	P	0.6
4	☐	50.000	49.422	731355.57	0.0256	P	1.2
5	☐	125.000	129.574	1896934.57	0.0671	P	0.8
6	☐	250.000	251.177	3696750.13	0.1300	P	0.3
7	☐	500.000	498.820	7322860.23	0.2582	A	1.8
8	☐	1000.000	999.752	14521642.69	0.5174	A	3.6
9	☐			7944.26	0.0003	P	5.3

$$y = 5.1747\text{E-}004 * x + 4.3902\text{E-}005$$

$$R = 1.0000$$

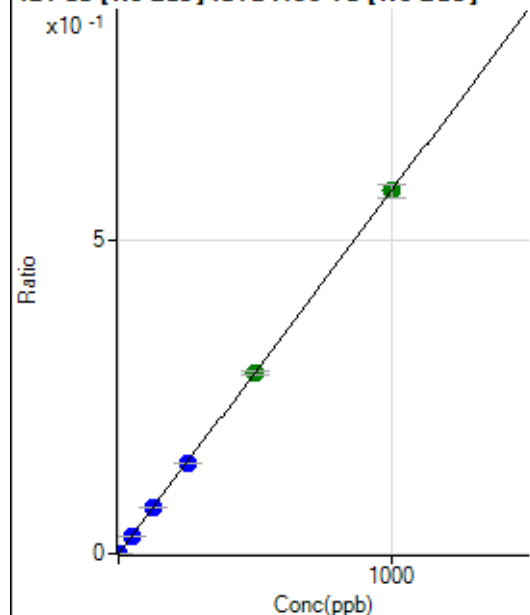
$$DL = 0.009967$$

$$BEC = 0.08484$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.89	0.0000	P	32.1
2	☐	0.200	0.196	3375.55	0.0001	P	5.8
3	☐	2.000	1.908	31720.17	0.0011	P	1.7
4	☐	50.000	49.172	814255.19	0.0285	P	1.3
5	☐	125.000	128.446	2106210.51	0.0745	P	0.7
6	☐	250.000	250.956	4138211.21	0.1455	P	0.3
7	☐	500.000	499.175	8211368.76	0.2895	A	2.3
8	☐	1000.000	999.784	16272607.31	0.5798	A	4.0
9	☐			15178.28	0.0006	P	1.4

$$y = 5.7996\text{E-}004 * x + 4.1364\text{E-}006$$

$$R = 1.0000$$

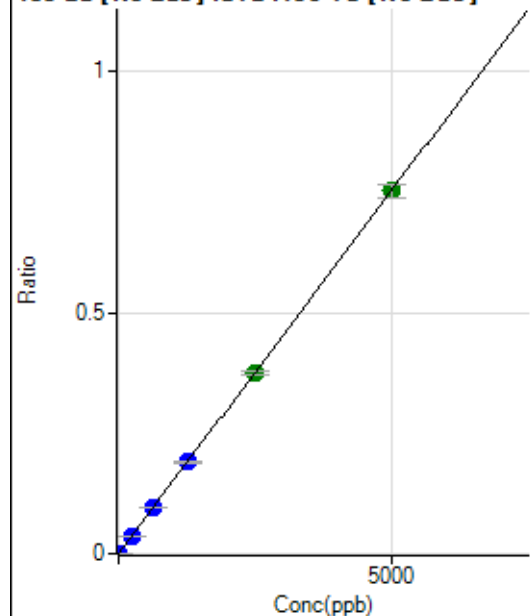
$$DL = 0.006862$$

$$BEC = 0.007132$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	125.00	0.0000	P	10.8
2	☐	1.000	0.994	4414.78	0.0002	P	5.4
3	☐	10.000	9.968	43039.95	0.0015	P	1.6
4	☐	250.000	248.324	1068439.09	0.0374	P	1.2
5	☐	625.000	643.938	2743621.78	0.0970	P	0.9
6	☐	1250.000	1258.391	5391753.20	0.1896	P	0.2
7	☐	2500.000	2495.670	10667277.23	0.3761	A	2.2
8	☐	5000.000	4997.784	21138059.85	0.7531	A	3.6
9	☐			4789.92	0.0002	P	3.9

$$y = 1.5069\text{E-}004 * x + 4.5481\text{E-}006$$

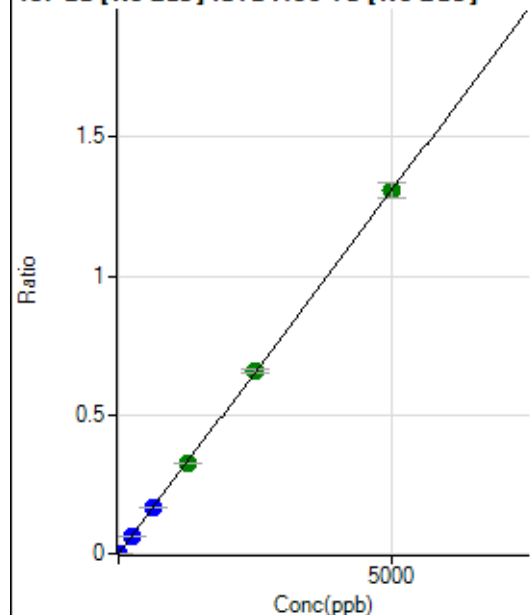
$$R = 1.0000$$

$$DL = 0.009743$$

$$BEC = 0.03018$$

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	225.01	0.0000	P	5.7
2	☐	1.000	1.023	7885.92	0.0003	P	0.2
3	☐	10.000	9.946	74503.14	0.0026	P	1.7
4	☐	250.000	246.629	1841137.56	0.0645	P	0.8
5	☐	625.000	645.954	4775101.23	0.1689	P	0.4
6	☐	1250.000	1245.587	9259263.31	0.3257	A	0.9
7	☐	2500.000	2504.478	18573546.60	0.6548	A	2.1
8	☐	5000.000	4996.414	36660515.40	1.3063	A	4.1
9	☐			8099.89	0.0003	P	4.7

$$y = 2.6145E-004 * x + 8.1890E-006$$

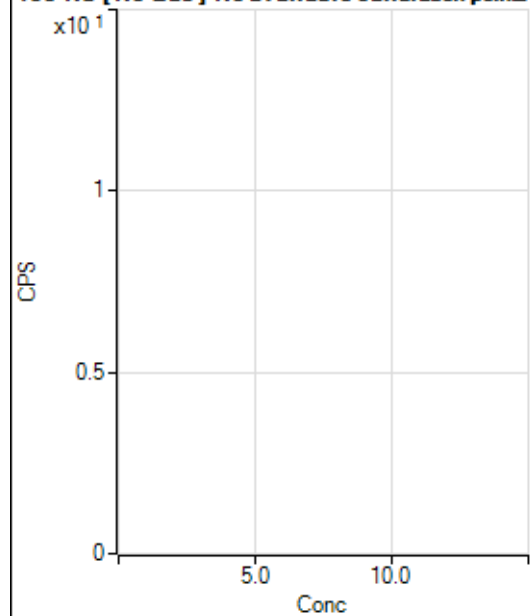
$$R = 1.0000$$

$$DL = 0.005331$$

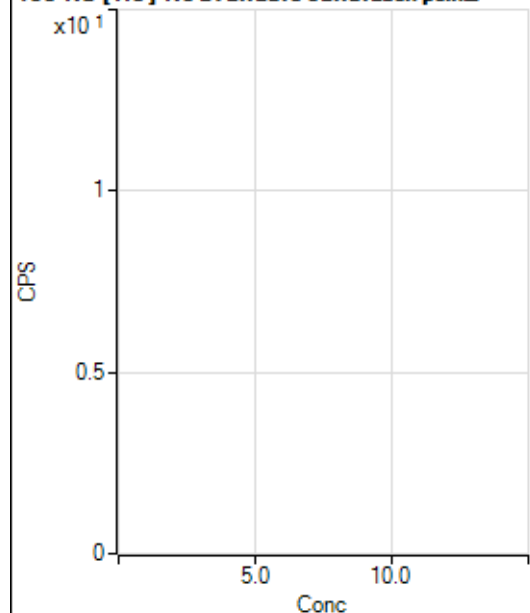
$$BEC = 0.03132$$

Weight: <None>

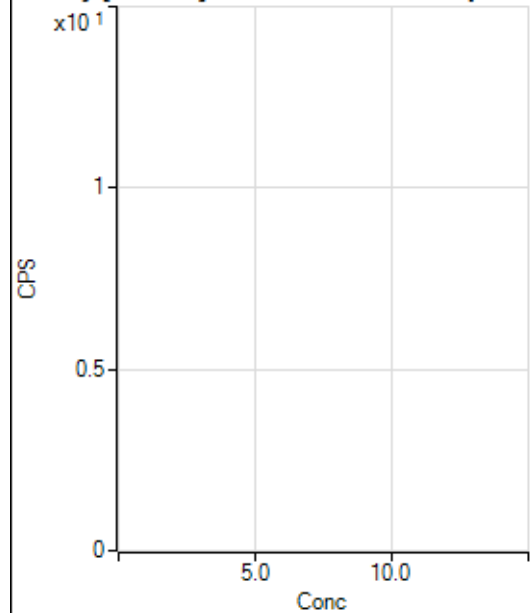
Min Conc: 0

150 Nd [No Gas] No available calibration points

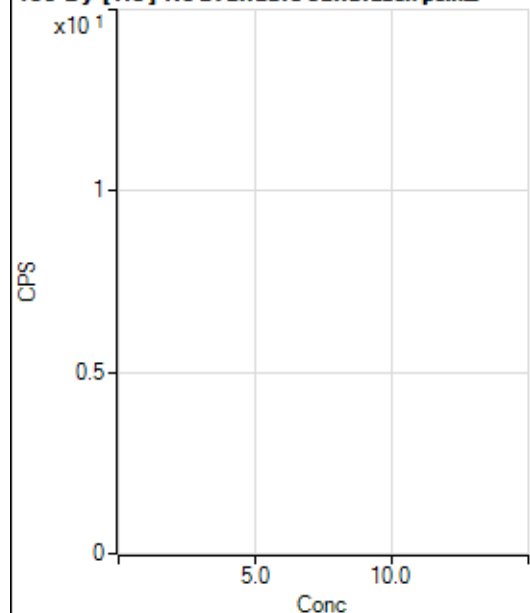
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			11.11		P	91.7
2	☐			11.11		P	34.6
3	☐			11.11		P	91.7
4	☐			97.78		P	3.9
5	☐			215.57		P	21.9
6	☐			366.68		P	6.6
7	☐			660.04		P	4.6
8	☐			1400.12		P	4.4
9	☐			180.01		P	7.4

150 Nd [He] No available calibration points

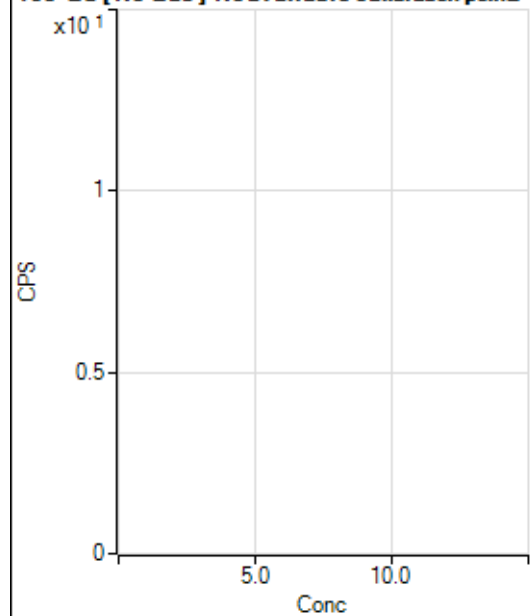
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	57.3
2	☐			6.67		P	132.
3	☐			8.89		P	21.6
4	☐			22.22		P	48.2
5	☐			27.78		P	18.3
6	☐			41.11		P	30.7
7	☐			62.22		P	40.6
8	☐			135.56		P	25.6
9	☐			74.44		P	11.3

156 Dy [No Gas] No available calibration points

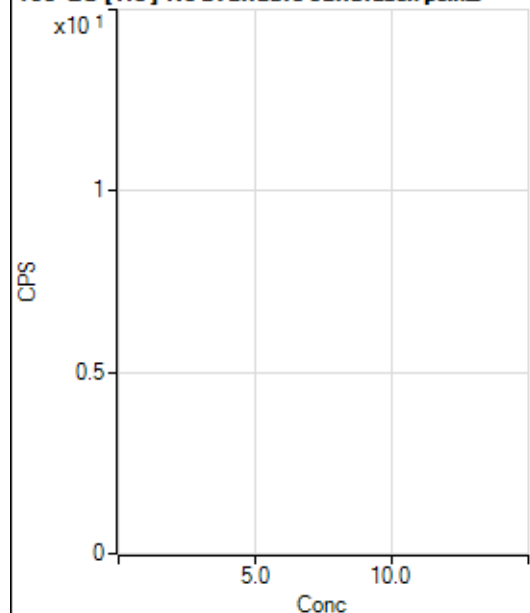
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			30.55		P	15.7
2	☐			50.00		P	16.7
3	☐			52.78		P	24.1
4	☐			91.67		P	27.3
5	☐			88.89		P	5.4
6	☐			113.89		P	34.6
7	☐			186.12		P	33.6
8	☐			361.13		P	7.4
9	☐			75.00		P	29.4

156 Dy [He] No available calibration points

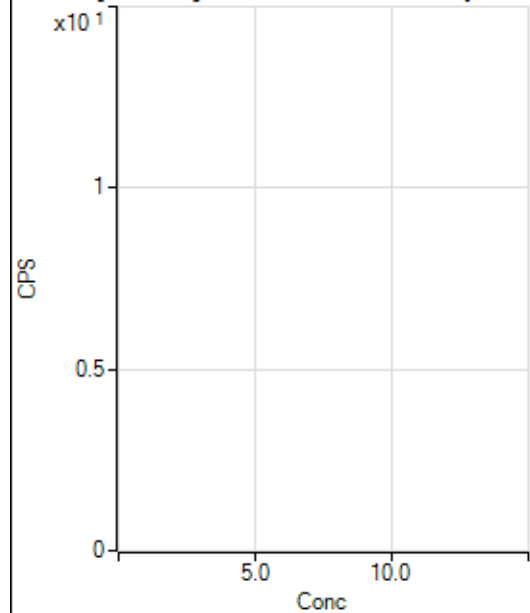
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			30.00		P	29.4
2	☐			22.22		P	31.2
3	☐			27.78		P	18.3
4	☐			50.00		P	29.1
5	☐			65.55		P	24.0
6	☐			118.89		P	9.0
7	☐			174.45		P	5.8
8	☐			360.01		P	6.5
9	☐			63.33		P	13.9

160 Gd [No Gas] Noavailable calibration poin_

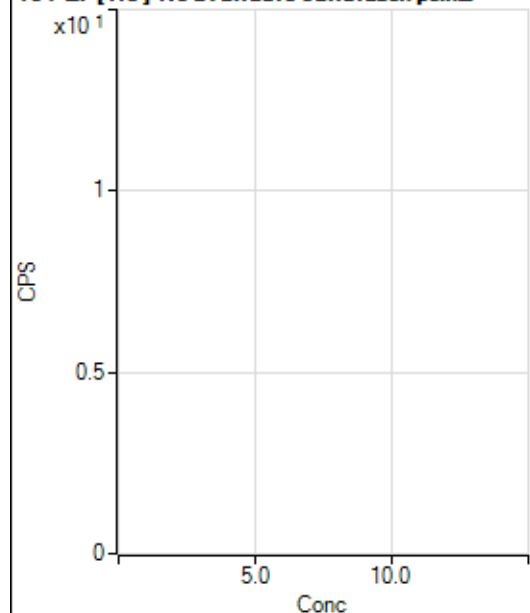
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			225.01		P	28.0
2	☐			219.46		P	14.4
3	☐			205.57		P	20.8
4	☐			213.90		P	20.0
5	☐			222.23		P	39.4
6	☐			211.12		P	22.8
7	☐			236.12		P	4.1
8	☐			250.02		P	23.3
9	☐			244.46		P	15.4

160 Gd [He] No available calibration points

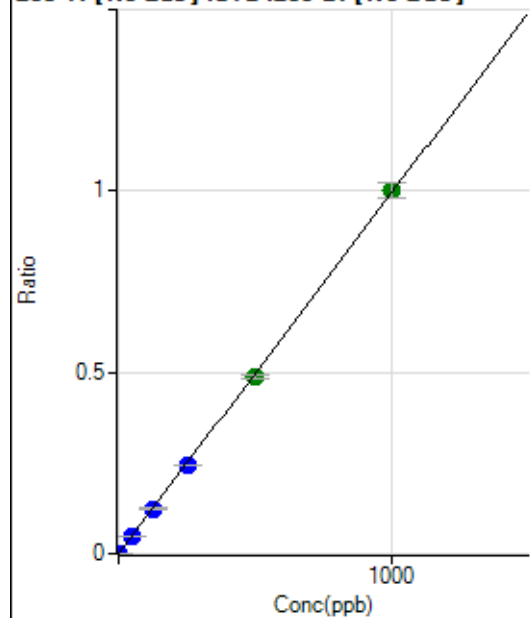
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			354.45		P	6.3
2	☐			350.01		P	9.4
3	☐			385.57		P	13.9
4	☐			370.01		P	9.5
5	☐			375.57		P	8.8
6	☐			323.34		P	15.9
7	☐			376.68		P	5.5
8	☐			402.24		P	11.1
9	☐			375.57		P	2.0

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			111.12		P	37.8
2	☐			155.57		P	43.6
3	☐			188.90		P	33.1
4	☐			136.12		P	28.9
5	☐			180.56		P	11.6
6	☐			166.67		P	17.3
7	☐			175.01		P	20.8
8	☐			200.01		P	18.2
9	☐			147.23		P	6.5

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			82.23		P	14.2
2	☐			98.89		P	29.5
3	☐			83.33		P	16.0
4	☐			87.78		P	12.2
5	☐			102.23		P	11.5
6	☐			92.23		P	15.0
7	☐			103.34		P	3.2
8	☐			92.23		P	5.5
9	☐			103.33		P	14.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	677.83	0.0000	P	7.1
2	☐	0.100	0.096	2378.09	0.0001	P	7.6
3	☐	1.000	0.944	17234.04	0.0010	P	2.0
4	☐	50.000	47.175	822120.04	0.0469	P	0.9
5	☐	125.000	124.826	2111266.28	0.1241	P	0.8
6	☐	250.000	245.107	4162337.59	0.2437	P	0.4
7	☐	500.000	490.421	8204389.24	0.4875	A	1.8
8	☐	1000.000	1006.176	16138267.90	1.0002	A	4.4
9	☐			4762.19	0.0003	P	7.4

$$y = 9.9400\text{E-}004 * x + 3.9876\text{E-}005$$

$$R = 0.9999$$

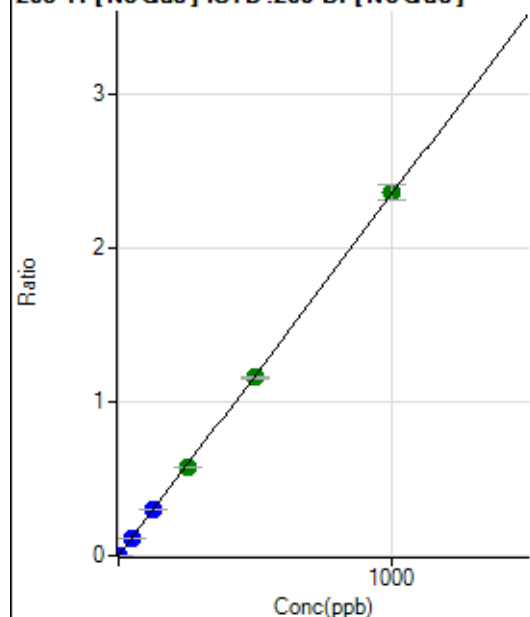
$$DL = 0.008543$$

$$BEC = 0.04012$$

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	1236.23	0.0001	P	4.0
2	☐	0.100	0.086	4853.91	0.0003	P	2.4
3	☐	1.000	0.926	39615.43	0.0022	P	2.2
4	☐	50.000	47.864	1971216.97	0.1125	P	0.7
5	☐	125.000	127.392	5092733.66	0.2994	P	0.6
6	☐	250.000	244.276	9804301.26	0.5740	A	1.2
7	☐	500.000	493.467	19513463.28	1.1595	A	1.4
8	☐	1000.000	1004.505	38083960.92	2.3602	A	4.3
9	☐			11027.22	0.0008	P	2.1

$$y = 0.0023 * x + 7.2739E-005$$

$$R = 0.9999$$

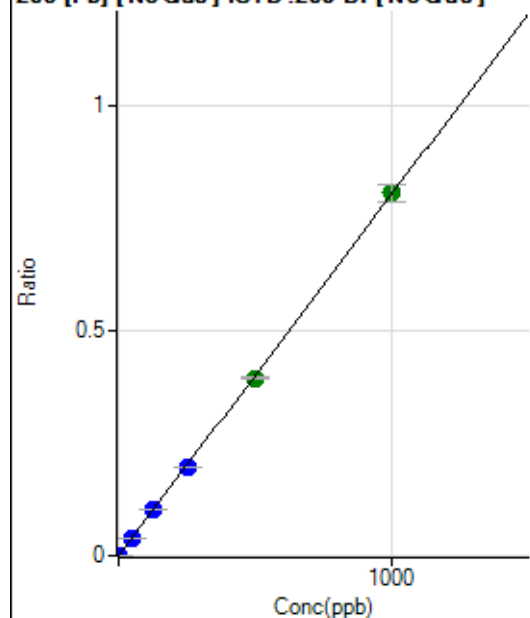
$$DL = 0.003741$$

$$BEC = 0.03096$$

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	987.10	0.0001	P	4.4
2	☐	0.100	0.091	2320.64	0.0001	P	5.7
3	☐	1.000	0.909	13892.78	0.0008	P	3.2
4	☐	50.000	47.275	666643.48	0.0381	P	0.5
5	☐	125.000	126.179	1726222.42	0.1015	P	0.8
6	☐	250.000	245.780	3375462.84	0.1976	P	1.1
7	☐	500.000	492.121	6658109.06	0.3956	A	0.8
8	☐	1000.000	1004.983	13034554.69	0.8078	A	4.5
9	☐			30828.81	0.0023	P	1.9

$$y = 8.0377E-004 * x + 5.8096E-005$$

$$R = 0.9999$$

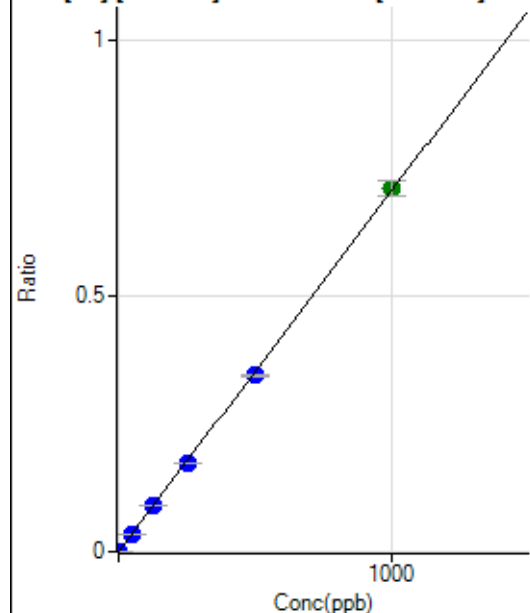
$$DL = 0.009596$$

$$BEC = 0.07228$$

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	892.65	0.0001	P	13.0
2	☐	0.100	0.098	2150.23	0.0001	P	6.3
3	☐	1.000	0.921	12372.74	0.0007	P	2.9
4	☐	50.000	47.278	585239.86	0.0334	P	0.2
5	☐	125.000	125.864	1511530.21	0.0889	P	0.5
6	☐	250.000	245.665	2961469.65	0.1734	P	1.3
7	☐	500.000	490.116	5820595.50	0.3459	P	1.0
8	☐	1000.000	1006.054	11454329.66	0.7099	A	4.4
9	☐			27827.82	0.0020	P	5.0

$$y = 7.0556E-004 * x + 5.2559E-005$$

$$R = 0.9999$$

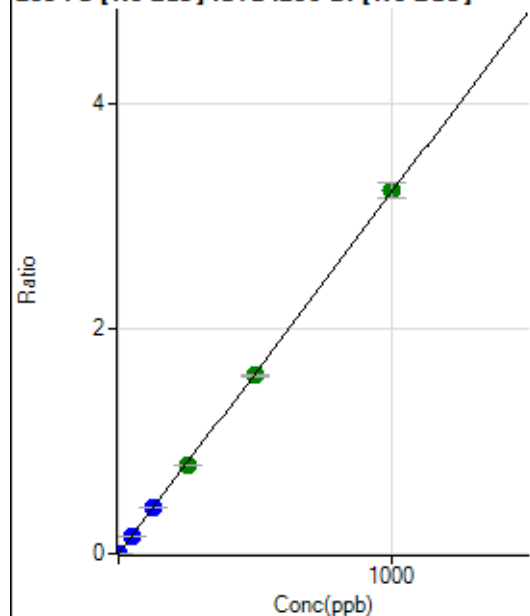
$$DL = 0.02915$$

$$BEC = 0.07449$$

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	3583.63	0.0002	P	4.8
2	☐	0.100	0.095	9090.32	0.0005	P	3.8
3	☐	1.000	0.925	56101.51	0.0032	P	0.5
4	☐	50.000	47.224	2661596.36	0.1519	P	0.1
5	☐	125.000	126.108	6896128.12	0.4054	P	0.7
6	☐	250.000	245.363	13469674.37	0.7886	A	0.7
7	☐	500.000	493.650	26697099.21	1.5863	A	1.1
8	☐	1000.000	1004.335	52071952.09	3.2272	A	4.4
9	☐			124618.03	0.0092	P	2.1

$$y = 0.0032 * x + 2.1091E-004$$

$$R = 1.0000$$

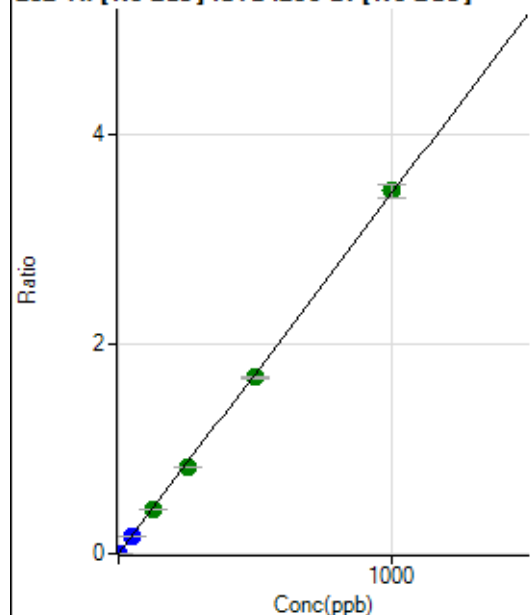
$$DL = 0.009487$$

$$BEC = 0.06564$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2235.45	0.0001	P	6.1
2	☐	0.100	0.076	6900.19	0.0004	P	2.0
3	☐	1.000	0.827	52286.32	0.0030	P	0.1
4	☐	50.000	45.559	2739138.52	0.1564	P	0.4
5	☐	125.000	122.269	7135334.54	0.4194	A	0.9
6	☐	250.000	240.386	14083171.38	0.8245	A	1.0
7	☐	500.000	490.370	28304170.77	1.6818	A	1.2
8	☐	1000.000	1007.782	55780393.84	3.4562	A	3.5
9	☐			13839.11	0.0010	P	2.6

$$y = 0.0034 * x + 1.3158E-004$$

$$R = 0.9999$$

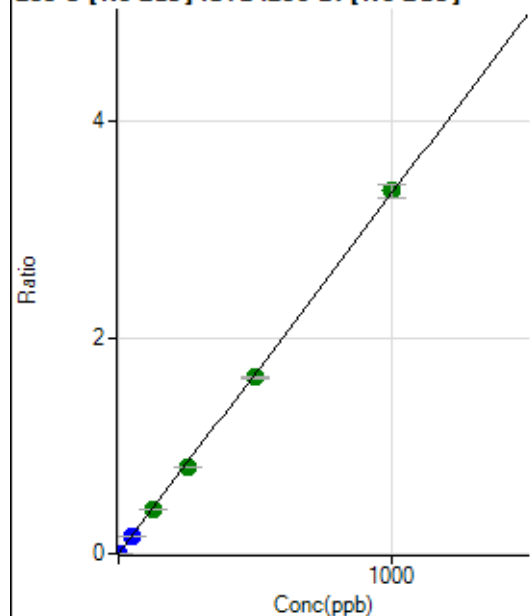
$$DL = 0.007013$$

$$BEC = 0.03837$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2280.87	0.0001	P	7.1
2	☐	0.100	0.089	7613.67	0.0004	P	2.7
3	☐	1.000	0.895	54958.59	0.0031	P	2.6
4	☐	50.000	46.059	2692079.71	0.1537	P	0.4
5	☐	125.000	122.990	6977093.82	0.4101	A	0.4
6	☐	250.000	241.352	13745821.83	0.8047	A	0.9
7	☐	500.000	489.767	27480866.93	1.6329	A	1.1
8	☐	1000.000	1007.727	54213422.74	3.3596	A	4.1
9	☐			9075.83	0.0007	P	3.9

$$y = 0.0033 * x + 1.3426E-004$$

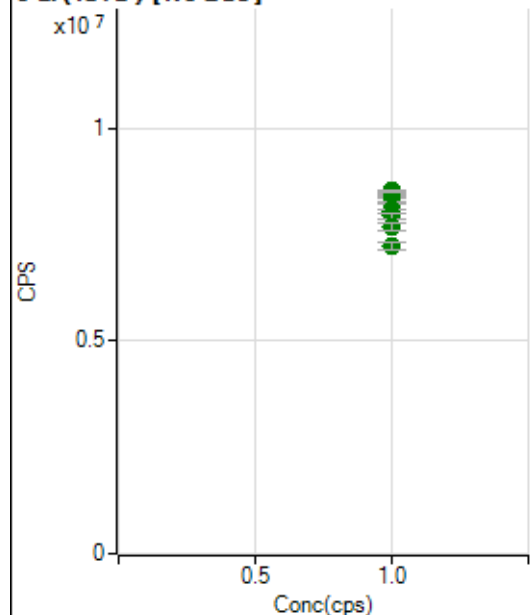
$$R = 0.9999$$

$$DL = 0.008536$$

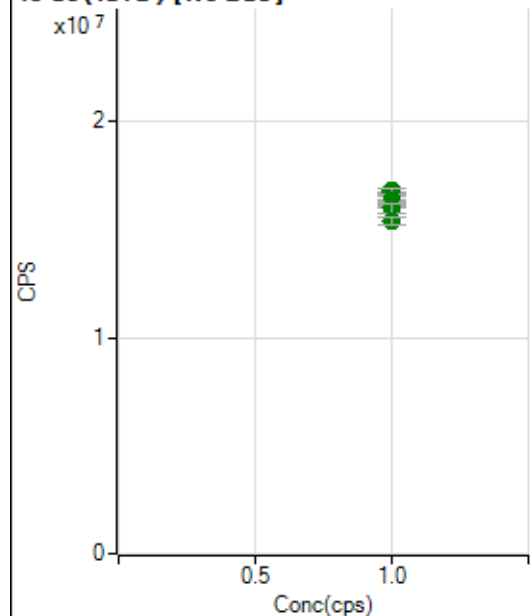
$$BEC = 0.04027$$

Weight: <None>

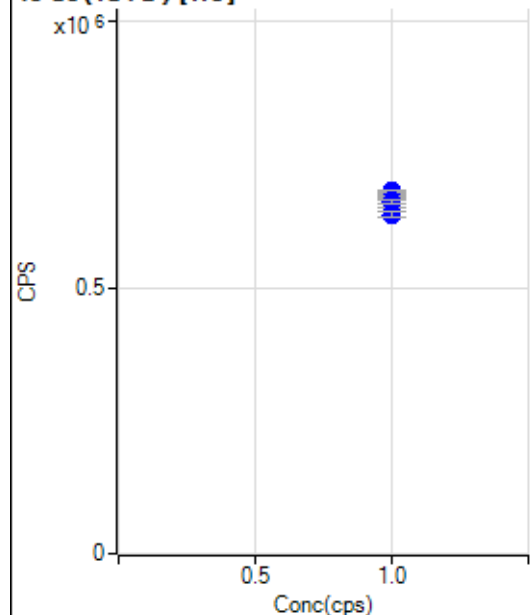
Min Conc: 0

6 Li (ISTD) [No Gas]

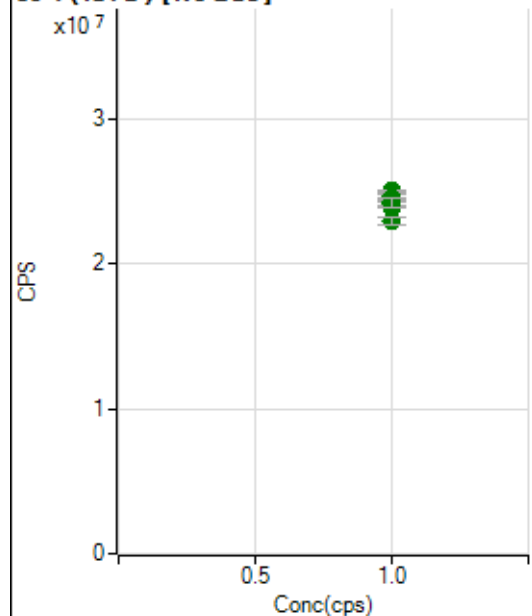
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8072408.56		A	1.1
2	☐	1.000		8389806.96		A	0.4
3	☐	1.000		8493533.00		A	0.3
4	☐	1.000		8536875.29		A	0.6
5	☐	1.000		8259240.43		A	0.5
6	☐	1.000		8113906.34		A	0.1
7	☐	1.000		7949102.80		A	1.4
8	☐	1.000		7707221.62		A	2.4
9	☐	1.000		7231294.89		A	2.2

45 Sc (ISTD) [No Gas]

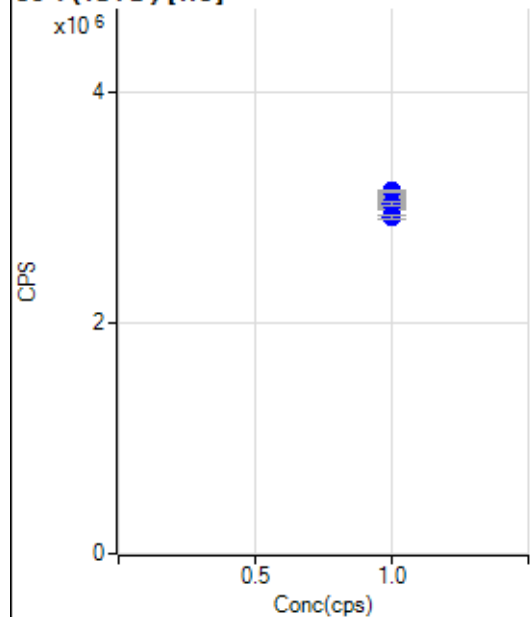
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16205898.63		A	0.4
2	☐	1.000		16639352.98		A	1.1
3	☐	1.000		16781795.69		A	0.9
4	☐	1.000		16751578.85		A	1.5
5	☐	1.000		16376730.75		A	0.2
6	☐	1.000		16175321.89		A	0.9
7	☐	1.000		16165315.29		A	1.6
8	☐	1.000		15976223.45		A	3.2
9	☐	1.000		15359207.64		A	2.2

45 Sc (ISTD) [He]

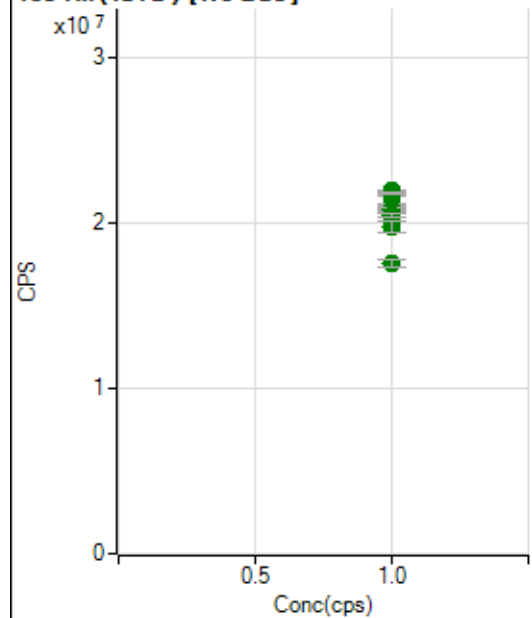
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		677068.68		P	0.8
2	☐	1.000		680879.81		P	0.5
3	☐	1.000		675679.90		P	0.6
4	☐	1.000		681310.42		P	0.6
5	☐	1.000		663923.48		P	1.7
6	☐	1.000		649688.72		P	0.2
7	☐	1.000		636826.01		P	1.7
8	☐	1.000		664660.25		P	1.9
9	☐	1.000		661291.63		P	1.0

89 Y (ISTD) [No Gas]

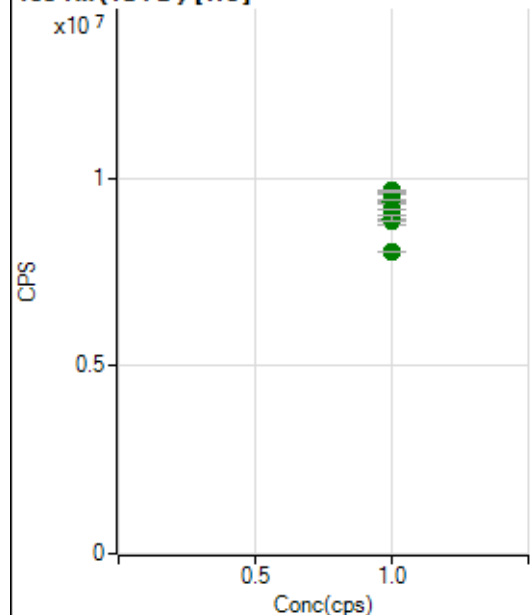
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		23902176.87		A	0.3
2	☐	1.000		24665158.25		A	0.8
3	☐	1.000		25046748.79		A	0.4
4	☐	1.000		25033261.02		A	0.8
5	☐	1.000		24528826.02		A	0.7
6	☐	1.000		24361089.08		A	0.5
7	☐	1.000		24326560.19		A	2.0
8	☐	1.000		24186611.86		A	2.6
9	☐	1.000		22952481.32		A	2.5

89 Y(ISTD) [He]

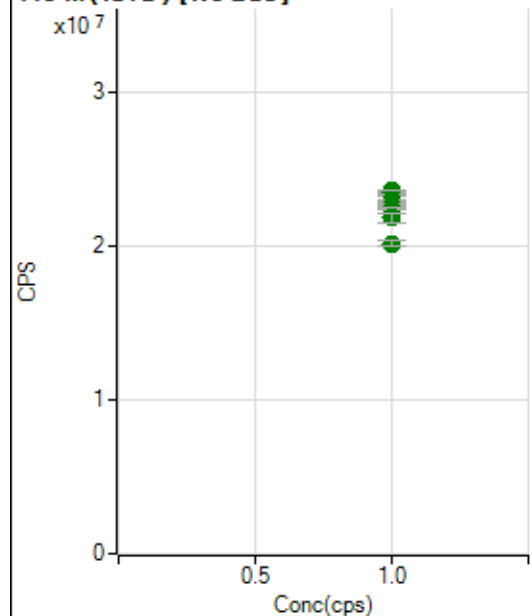
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3104374.85		P	0.6
2	☐	1.000		3118712.14		P	0.8
3	☐	1.000		3088135.48		P	0.2
4	☐	1.000		3139492.73		P	0.7
5	☐	1.000		3040209.99		P	1.1
6	☐	1.000		2989244.54		P	0.5
7	☐	1.000		2911030.13		P	0.8
8	☐	1.000		3039814.78		P	2.5
9	☐	1.000		3026158.36		P	0.9

103 Rh(ISTD) [No Gas]

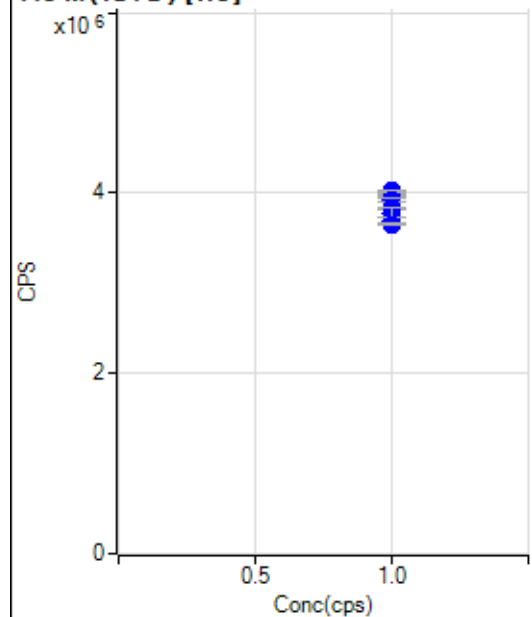
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		20980245.43		A	1.0
2	☐	1.000		21664500.83		A	0.5
3	☐	1.000		21951733.48		A	0.3
4	☐	1.000		21791268.71		A	0.5
5	☐	1.000		21109867.49		A	0.3
6	☐	1.000		20818085.01		A	1.2
7	☐	1.000		20468736.40		A	0.8
8	☐	1.000		19806510.86		A	3.4
9	☐	1.000		17574644.84		A	2.4

103 Rh (ISTD) [He]

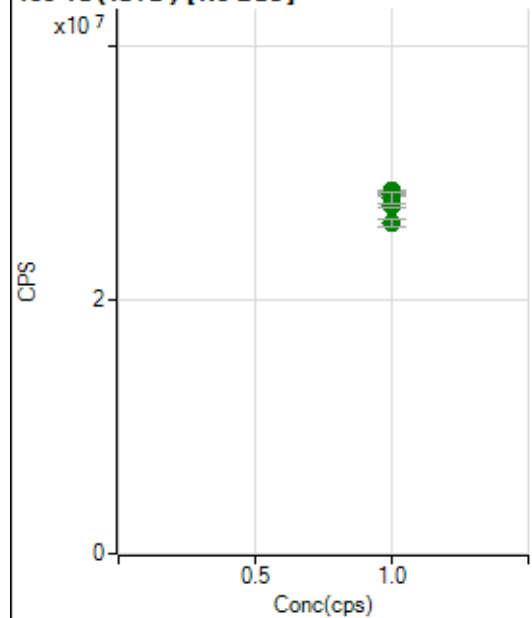
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9397941.81		A	0.7
2	☐	1.000		9584171.32		A	0.5
3	☐	1.000		9639185.83		A	0.5
4	☐	1.000		9672727.43		A	0.5
5	☐	1.000		9383550.56		A	1.5
6	☐	1.000		9170016.60		A	0.2
7	☐	1.000		8856665.70		A	1.5
8	☐	1.000		8941326.46		A	1.8
9	☐	1.000		8047339.81		A	0.4

115 In (ISTD) [No Gas]

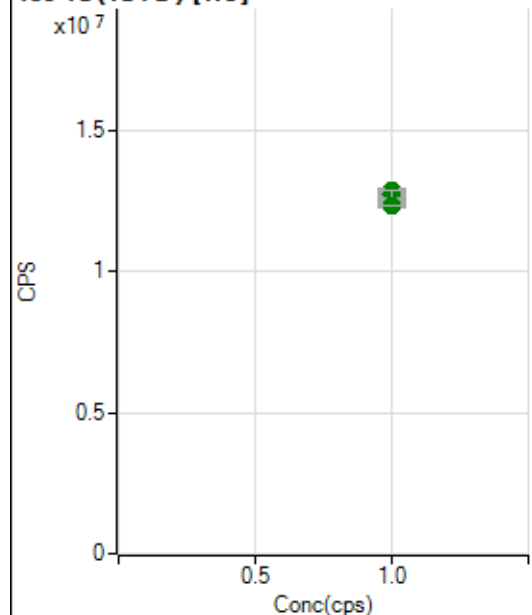
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		22368674.51		A	0.8
2	☐	1.000		23284856.13		A	0.7
3	☐	1.000		23538948.21		A	0.8
4	☐	1.000		23468934.12		A	1.1
5	☐	1.000		22910927.21		A	0.3
6	☐	1.000		22617414.60		A	0.3
7	☐	1.000		22375224.08		A	0.8
8	☐	1.000		21823269.93		A	2.9
9	☐	1.000		20147268.21		A	2.2

115 In (ISTD) [He]

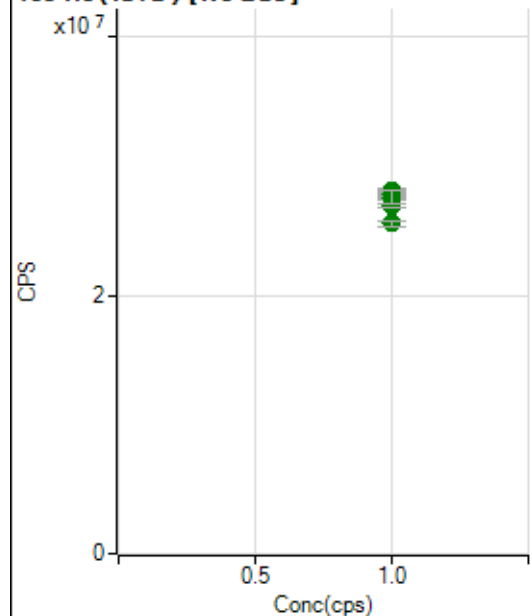
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3981911.87		P	1.1
2	☐	1.000		4020013.28		P	0.6
3	☐	1.000		3984866.45		P	0.6
4	☐	1.000		4023677.97		P	0.7
5	☐	1.000		3922781.94		P	1.2
6	☐	1.000		3829202.22		P	0.7
7	☐	1.000		3697195.16		P	1.5
8	☐	1.000		3777267.68		P	2.8
9	☐	1.000		3654691.86		P	0.3

159 Tb (ISTD) [No Gas]

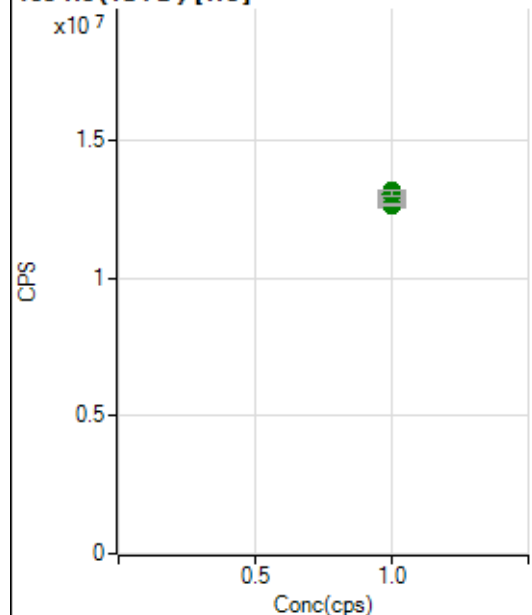
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		27470725.15		A	1.1
2	☐	1.000		28612045.41		A	0.4
3	☐	1.000		28563730.68		A	0.8
4	☐	1.000		28550287.35		A	0.8
5	☐	1.000		28272695.41		A	0.3
6	☐	1.000		28432004.86		A	0.4
7	☐	1.000		28369485.97		A	1.4
8	☐	1.000		28088627.92		A	3.3
9	☐	1.000		26054769.61		A	2.5

159 Tb (ISTD) [He]

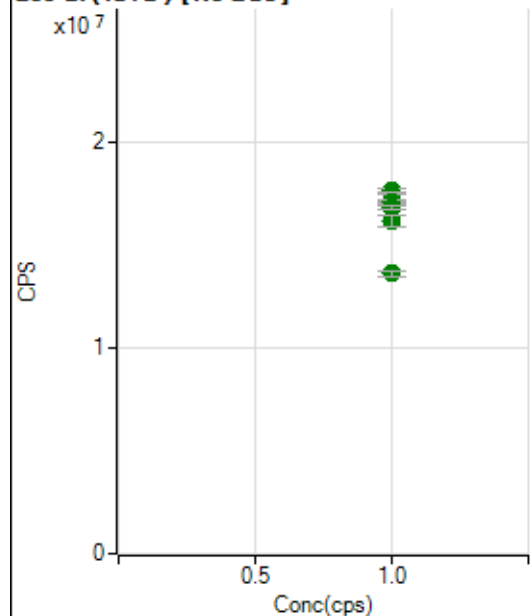
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12404296.07		A	0.7
2	☐	1.000		12875467.72		A	0.7
3	☐	1.000		12784360.37		A	0.2
4	☐	1.000		12868261.75		A	1.5
5	☐	1.000		12773605.64		A	1.4
6	☐	1.000		12619974.95		A	0.7
7	☐	1.000		12386195.37		A	1.5
8	☐	1.000		12757118.70		A	2.1
9	☐	1.000		12343227.18		A	0.2

165 Ho (ISTD) [No Gas]

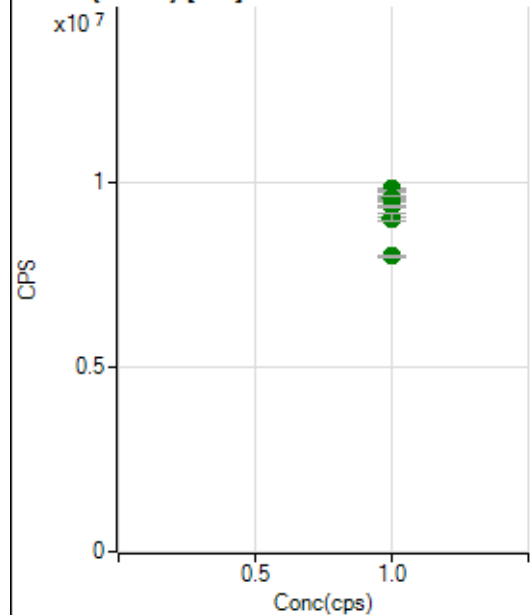
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		26959658.59		A	1.2
2	☐	1.000		28101336.05		A	1.0
3	☐	1.000		27826782.22		A	0.7
4	☐	1.000		27931862.77		A	0.8
5	☐	1.000		27527016.24		A	0.7
6	☐	1.000		27797919.37		A	1.2
7	☐	1.000		27915884.31		A	1.2
8	☐	1.000		27616731.17		A	3.6
9	☐	1.000		25559954.22		A	1.5

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12714371.20		A	0.4
2	☐	1.000		13158859.39		A	0.5
3	☐	1.000		13031037.03		A	0.4
4	☐	1.000		13079849.67		A	0.6
5	☐	1.000		12989121.05		A	1.1
6	☐	1.000		12898657.31		A	0.6
7	☐	1.000		12632449.12		A	1.3
8	☐	1.000		13048686.89		A	1.6
9	☐	1.000		12654034.12		A	0.4

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16995909.33		A	1.0
2	☐	1.000		17631525.71		A	0.9
3	☐	1.000		17623548.90		A	1.2
4	☐	1.000		17517038.07		A	0.3
5	☐	1.000		17010890.44		A	0.5
6	☐	1.000		17081570.58		A	1.0
7	☐	1.000		16830563.92		A	0.9
8	☐	1.000		16152016.42		A	3.5
9	☐	1.000		13621605.07		A	1.7

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9524450.62		A	0.5
2	☐	1.000		9811483.67		A	0.3
3	☐	1.000		9766169.23		A	0.2
4	☐	1.000		9748120.41		A	0.9
5	☐	1.000		9564528.75		A	1.6
6	☐	1.000		9349934.03		A	0.5
7	☐	1.000		8985987.30		A	1.3
8	☐	1.000		9052676.05		A	1.8
9	☐	1.000		7984023.70		A	0.3

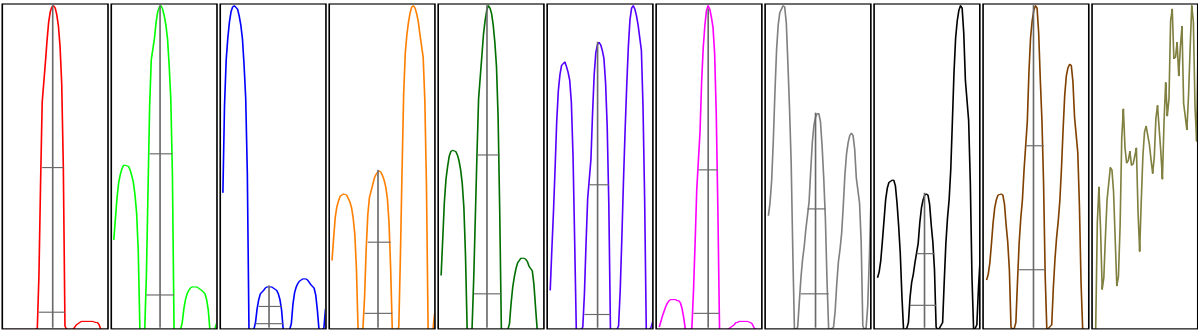
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7102219MS .b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count	RSD%	RSD%	RSD%
	(Mean)	(Actual)	(Required)	(Flag)
9	25171	0.42	5.00	
24	251575	0.83	5.00	
25	33817	0.54	5.00	
26	40585	0.43	5.00	
59	192488	0.68	5.00	
113	23018	0.79	5.00	
115	274044	0.77	5.00	
206	60025	0.90	5.00	
207	57790	0.64	5.00	
208	129722	0.58	5.00	
220	78	2.79		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	25011	25154	25191	25198	25303
24	250490	253325	249599	250181	254279
25	33794	33926	33521	33841	34005
26	40527	40608	40320	40698	40773
59	191667	192937	190690	193130	194013
113	22863	22996	22829	23154	23247
115	271858	273784	272266	275507	276804
206	59207	60019	59866	60568	60462
207	57371	58028	57417	57978	58154
208	128666	129591	129752	129804	130797
220	76	80	79	81	76

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	41329	8.95	8.9 - 9.1		0.781	0.900	
24	392213	23.90	23.9 - 24.1		0.807	0.900	
25	52149	24.90	24.9 - 25.1		0.798	0.900	
26	61306	25.90	25.9 - 26.1		0.813	0.900	
59	318440	58.90	58.9 - 59.1		0.800	0.900	
113	41378	112.95	112.9 - 113.1		0.774	0.900	
115	497300	115.00	114.9 - 115.1		0.773	0.900	
206	110453	205.95	205.9 - 206.1		0.797	0.900	
207	100214	206.95	206.9 - 207.1		0.748	0.900	
208	238947	207.95	207.9 - 208.1		0.782	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	6.6	V	Deflect	13.2	V
Extract 2	-150.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-70	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	47309	2.51	
89	36333	2.52	
205	50186	2.23	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	47398	49324	46658	46814	46351
89	36088	37928	36085	35966	35596
205	50443	52033	49522	49616	49315

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	6.5	V	Deflect	2.2	V
Extract 2	-150.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-70	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			