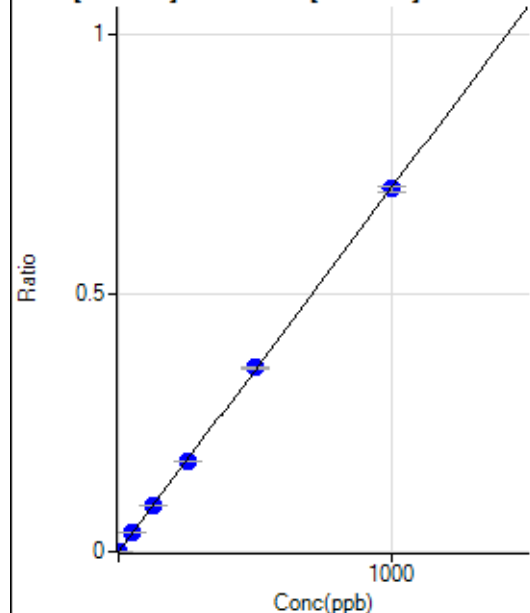


Batch Folder: D:\ICP-MS Data\P7103019 MS-2.b\
Analysis File: P7103019 MS-2.batch.bin
DA Date-Time: 2019-10-31 10:29:01
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-10-30 16:14:24
2	004CAL.S.d	S01	2019-10-30 16:17:58
3	005CAL.S.d	S02	2019-10-30 16:22:59
4	006CAL.S.d	S03	2019-10-30 16:26:54
5	007CAL.S.d	S04	2019-10-30 16:30:57
6	008CAL.S.d	S05	2019-10-30 16:34:44
7	009CAL.S.d	S06	2019-10-30 16:38:30
8	010CAL.S.d	S07	2019-10-30 16:42:14
9	011CAL.S.d	S08	2019-10-30 16:46:00

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	88.89	0.0000	P	18.6
2	☐	0.100	0.098	464.83	0.0001	P	8.7
3	☐	1.000	0.982	3946.91	0.0007	P	5.2
4	☐	50.000	50.770	199241.31	0.0358	P	0.9
5	☐	125.000	126.172	490121.22	0.0889	P	0.7
6	☐	250.000	250.142	959220.21	0.1761	P	0.2
7	☐	500.000	504.956	1916831.99	0.3556	P	0.8
8	☐	1000.000	997.301	3734503.93	0.7022	P	1.2
9	☐			635.22	0.0001	P	6.1

$$y = 7.0412\text{E-}004 * x + 1.5681\text{E-}005$$

$$R = 1.0000$$

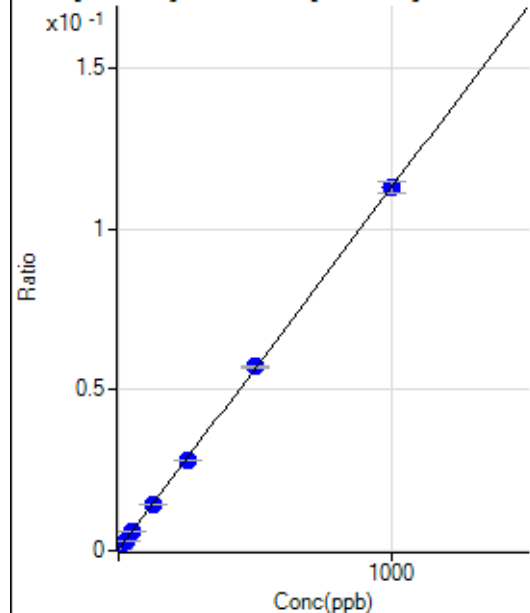
$$DL = 0.01244$$

$$BEC = 0.02227$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2011.34	0.0004	P	4.5
2	☐	2.500	2.568	3542.22	0.0006	P	1.5
3	☐	25.000	24.041	17071.33	0.0031	P	4.5
4	☐	50.000	49.570	33031.62	0.0059	P	1.8
5	☐	125.000	123.840	78786.12	0.0143	P	1.2
6	☐	250.000	247.113	153280.07	0.0281	P	1.2
7	☐	500.000	504.887	308025.65	0.0571	P	1.1
8	☐	1000.000	998.468	599093.62	0.1127	P	3.0
9	☐			26126.26	0.0053	P	6.2

$$y = 1.1247\text{E-}004 * x + 3.5484\text{E-}004$$

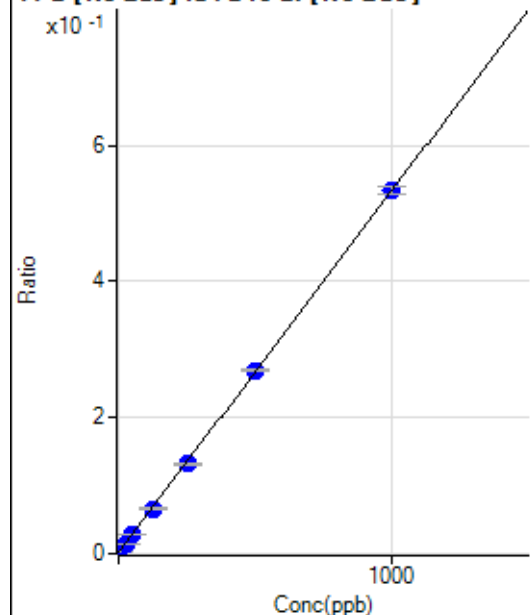
$$R = 1.0000$$

$$DL = 0.4289$$

$$BEC = 3.155$$

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	9820.26	0.0017	P	0.3
2	☐	2.500	2.196	15953.39	0.0029	P	1.1
3	☐	25.000	23.853	80358.97	0.0144	P	1.4
4	☐	50.000	49.192	155162.12	0.0279	P	0.6
5	☐	125.000	121.587	365694.41	0.0663	P	1.2
6	☐	250.000	244.998	717889.32	0.1318	P	1.5
7	☐	500.000	503.163	1449677.75	0.2689	P	0.8
8	☐	1000.000	1000.165	2833578.54	0.5328	P	2.2
9	☐			121815.52	0.0246	P	6.7

$$y = 5.3100\text{E-}004 * x + 0.0017$$

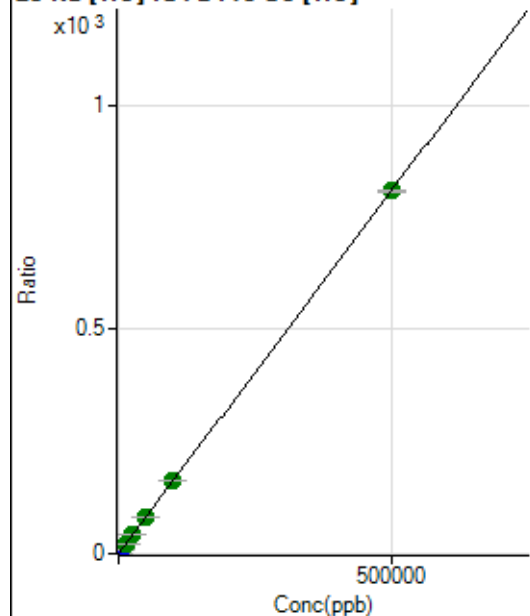
$$R = 1.0000$$

$$DL = 0.03037$$

$$BEC = 3.263$$

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	15678.24	0.0398	P	2.6
2	☐	50.000	46.058	45545.16	0.1144	P	2.7
3	☐	500.000	531.186	350667.06	0.8998	P	0.3
4	☐	5000.000	5185.219	3389677.29	8.4346	P	1.0
5	☐	12500.000	12707.743	8330196.89	20.6134	A	1.4
6	☐	25000.000	25420.778	16617705.75	41.1955	A	1.6
7	☐	50000.000	50497.341	33306444.15	81.7939	A	0.9
8	☐	100000.00	100273.75	67480120.26	162.3808	A	0.4
9	☐	500000.00	499867.40	329634229.5	809.3142	A	0.5

$$y = 0.0016 * x + 0.0398$$

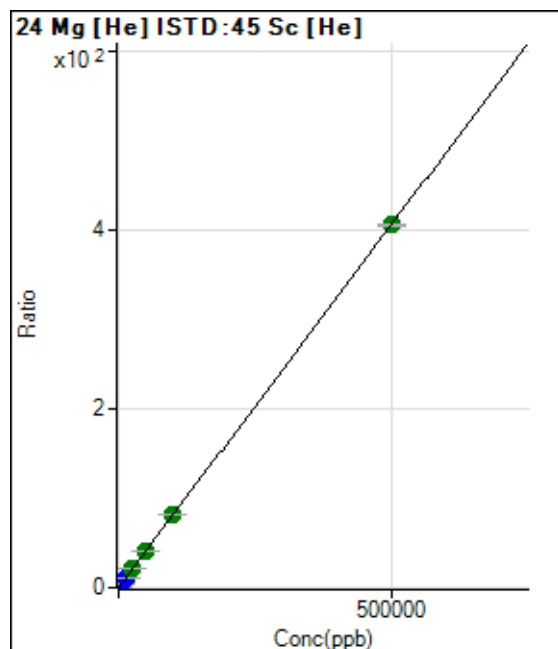
$$R = 1.0000$$

$$DL = 1.905$$

$$BEC = 24.59$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.59	0.0013	P	18.0
2	☐	50.000	47.622	15936.81	0.0400	P	9.2
3	☐	500.000	563.525	178881.47	0.4590	P	1.1
4	☐	5000.000	5262.726	1718198.89	4.2754	P	1.2
5	☐	12500.000	13049.149	4283207.99	10.5991	P	1.6
6	☐	25000.000	25907.803	8488189.51	21.0422	A	1.6
7	☐	50000.000	51223.762	16940609.23	41.6025	A	0.6
8	☐	100000.00	101029.21	34097859.79	82.0517	A	0.1
9	☐	500000.00	499609.97	165265209.2	405.7570	A	0.4

$$y = 8.1214\text{E-}004 * x + 0.0013$$

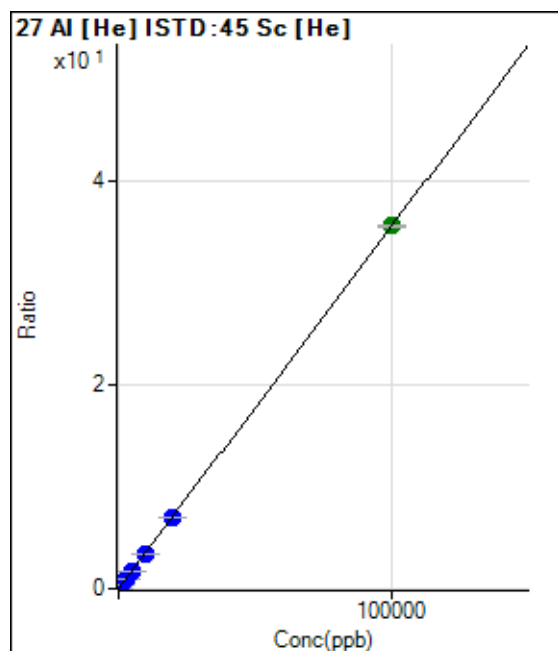
$$R = 1.0000$$

$$DL = 0.8943$$

$$BEC = 1.659$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0001	P	22.6
2	☐	2.000	1.725	300.02	0.0008	P	27.6
3	☐	20.000	20.528	2897.64	0.0074	P	4.0
4	☐	1000.000	994.766	142083.50	0.3536	P	1.4
5	☐	2500.000	2463.031	353677.14	0.8752	P	1.1
6	☐	5000.000	4901.970	702613.62	1.7417	P	0.9
7	☐	10000.000	9711.931	1405061.17	3.4505	P	0.7
8	☐	20000.000	19421.481	2867434.53	6.9001	P	0.2
9	☐	100000.00	100150.38	14492259.18	35.5808	A	0.8

$$y = 3.5527\text{E-}004 * x + 1.4101\text{E-}004$$

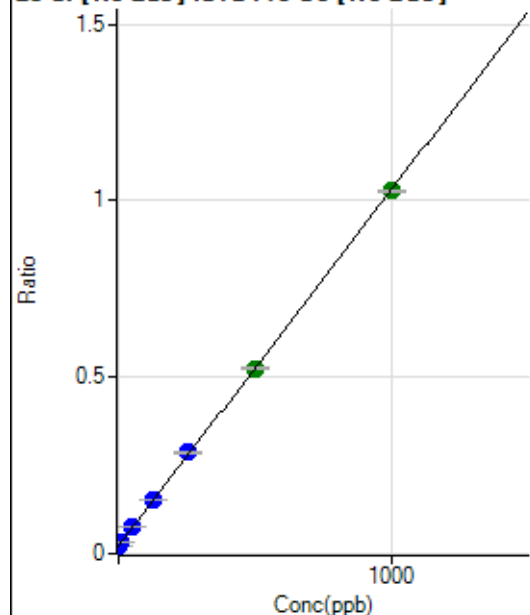
$$R = 1.0000$$

$$DL = 0.2694$$

$$BEC = 0.3969$$

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	237063.97	0.0218	P	0.1
2	☐	1.000	1.675	251235.82	0.0235	P	1.1
3	☐	10.000	10.494	343154.79	0.0324	P	0.2
4	☐	50.000	52.644	818762.85	0.0749	P	0.7
5	☐	125.000	130.267	1683569.51	0.1532	P	1.6
6	☐	250.000	262.497	3132220.34	0.2867	P	1.0
7	☐	500.000	499.101	5783939.45	0.5254	A	0.6
8	☐	1000.000	996.529	11399760.59	1.0273	A	0.7
9	☐			1525199.73	0.1443	P	0.7

$$y = 0.0010 * x + 0.0218$$

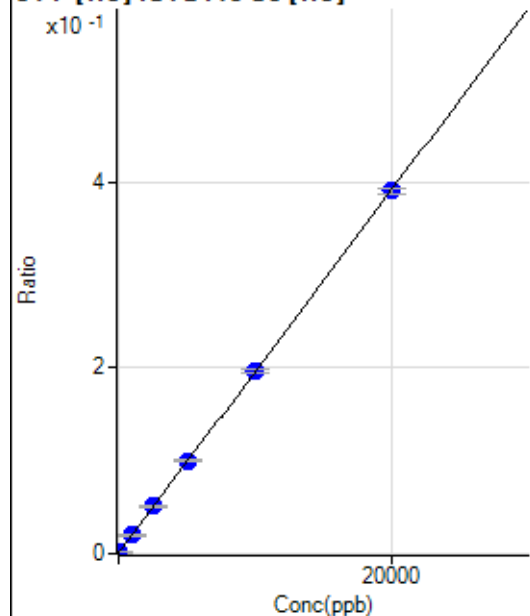
$$R = 0.9999$$

$$DL = 0.0529$$

$$BEC = 21.59$$

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	-17.532	88.89	0.0002	P	35.3
2	☐	0.000	-16.941	94.45	0.0002	P	5.3
3	☐	0.000	34.472	483.36	0.0012	P	10.2
4	☐	1000.000	997.849	8055.28	0.0200	P	6.8
5	☐	2500.000	2571.499	20514.86	0.0508	P	1.6
6	☐	5000.000	5061.451	40085.64	0.0994	P	1.9
7	☐	10000.000	10039.910	80040.10	0.1966	P	1.6
8	☐	20000.000	19955.852	162121.89	0.3901	P	1.3
9	☐			147.23	0.0004	P	11.6

$$y = 1.9521E-005 * x + 5.6790E-004$$

$$R = 1.0000$$

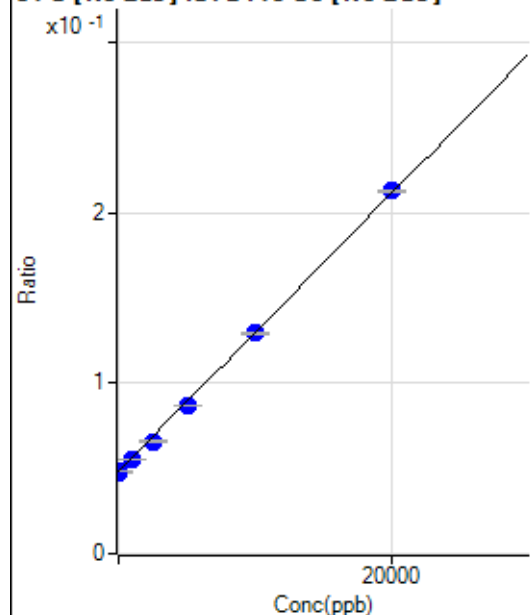
$$DL = 11.24$$

$$BEC = 29.09$$

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	-62.866	520609.15	0.0478	P	0.6
2	☐	0.000	9.460	518330.97	0.0484	P	0.9
3	☐	0.000	53.406	517185.81	0.0488	P	0.6
4	☐	1000.000	836.269	603131.11	0.0552	P	0.7
5	☐	2500.000	2158.467	724720.36	0.0660	P	0.7
6	☐	5000.000	4710.967	948063.08	0.0868	P	0.7
7	☐	10000.000	9919.203	1422580.09	0.1292	P	0.7
8	☐	20000.000	20163.535	2360528.39	0.2127	P	0.2
9	☐			480919.08	0.0455	P	0.4

$$y = 8.1521\text{E-}006 * x + 0.0484$$

$$R = 0.9998$$

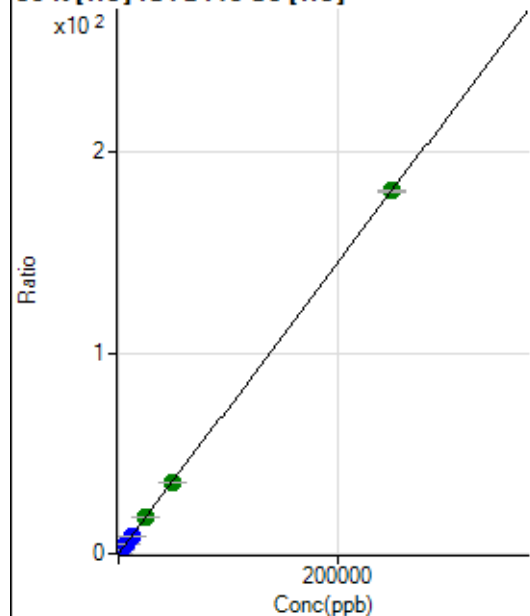
$$DL = 125.8$$

$$BEC = 5932$$

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	21647.26	0.0550	P	3.2
2	☐	50.000	43.336	34343.34	0.0862	P	1.5
3	☐	500.000	509.773	164808.05	0.4229	P	0.6
4	☐	2500.000	2499.411	747085.87	1.8590	P	0.6
5	☐	6250.000	6220.028	1836508.42	4.5444	P	0.6
6	☐	12500.000	12455.640	3648946.39	9.0450	P	0.6
7	☐	25000.000	24607.885	7254659.62	17.8161	A	0.9
8	☐	50000.000	49372.672	14831787.14	35.6905	A	0.1
9	☐	250000.00	250167.63	73565356.51	180.6176	A	0.6

$$y = 7.2177\text{E-}004 * x + 0.0550$$

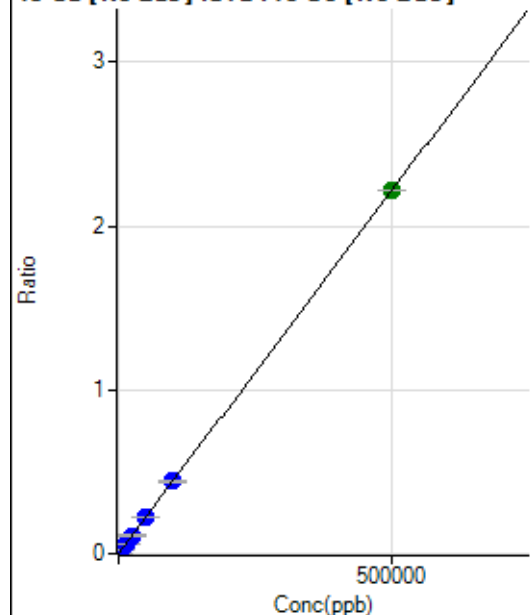
$$R = 1.0000$$

$$DL = 7.372$$

$$BEC = 76.16$$

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	216.68	0.0000	P	7.7
2	☐	50.000	49.617	2564.22	0.0002	P	9.8
3	☐	500.000	509.763	24137.20	0.0023	P	2.9
4	☐	5000.000	5059.416	245123.07	0.0224	P	0.8
5	☐	12500.000	12573.217	612006.00	0.0557	P	1.4
6	☐	25000.000	25171.152	1218227.35	0.1115	P	1.0
7	☐	50000.000	50130.170	2444212.86	0.2220	P	0.8
8	☐	100000.00	99711.441	4899963.91	0.4416	P	0.7
9	☐	500000.00	500033.70	23402621.88	2.2145	A	0.1

$$y = 4.4286E-006 * x + 1.9915E-005$$

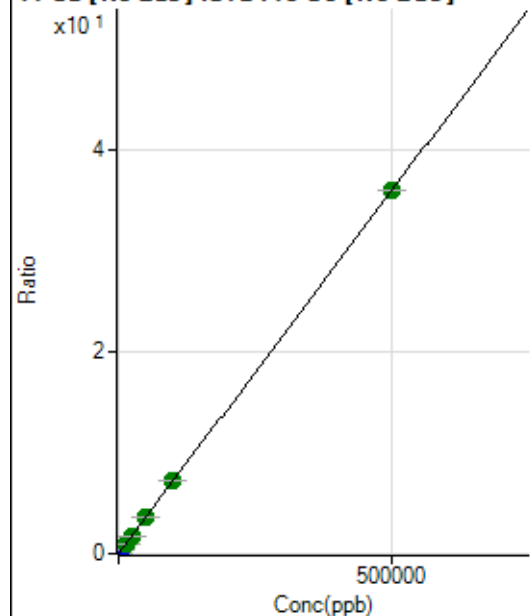
$$R = 1.0000$$

$$DL = 1.045$$

$$BEC = 4.497$$

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	12540.13	0.0012	P	2.1
2	☐	50.000	51.364	51814.84	0.0048	P	0.3
3	☐	500.000	513.447	403094.30	0.0380	P	0.2
4	☐	5000.000	5064.141	3988505.91	0.3649	P	0.6
5	☐	12500.000	12554.240	9920839.20	0.9029	A	0.3
6	☐	25000.000	25016.671	19646717.28	1.7981	A	0.8
7	☐	50000.000	50264.763	39759411.65	3.6116	A	0.3
8	☐	100000.00	99796.743	79552102.47	7.1694	A	0.7
9	☐	500000.00	500011.33	379561111.2	35.9161	A	0.1

$$y = 7.1828E-005 * x + 0.0012$$

$$R = 1.0000$$

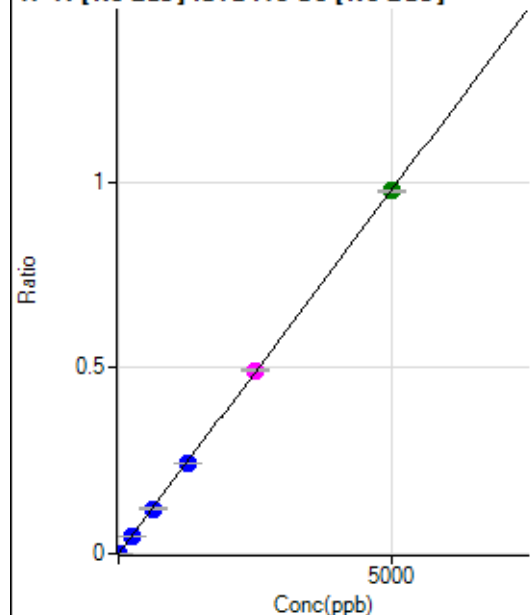
$$DL = 1.02$$

$$BEC = 16.05$$

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	163.90	0.0000	P	15.4
2	☐	0.500	0.555	1322.33	0.0001	P	11.4
3	☐	5.000	5.256	11051.80	0.0010	P	1.3
4	☐	250.000	249.331	533040.23	0.0488	P	1.1
5	☐	625.000	619.307	1330680.78	0.1211	P	1.2
6	☐	1250.000	1234.837	2638402.86	0.2415	P	0.7
7	☐	2500.000	2525.641	5436782.67	0.4939	M	0.6
8	☐	5000.000	4991.715	10830418.30	0.9761	A	0.2
9	☐			4145.20	0.0004	P	7.3

$$y = 1.9553\text{E-}004 * x + 1.5062\text{E-}005$$

$$R = 1.0000$$

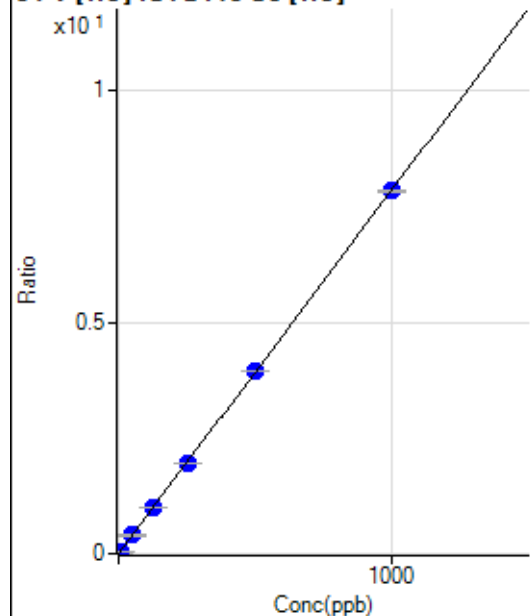
$$DL = 0.03558$$

$$BEC = 0.07703$$

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	16.66	0.0000	P	69.2
2	☐	0.500	0.478	1510.11	0.0038	P	6.4
3	☐	5.000	5.517	16879.83	0.0433	P	1.3
4	☐	50.000	50.431	158988.40	0.3956	P	0.9
5	☐	125.000	125.619	398196.75	0.9854	P	1.4
6	☐	250.000	249.629	789918.72	1.9581	P	0.8
7	☐	500.000	502.384	1604650.33	3.9406	P	0.5
8	☐	1000.000	998.799	3255692.38	7.8344	P	0.5
9	☐			955.61	0.0023	P	8.2

$$y = 0.0078 * x + 4.2240\text{E-}005$$

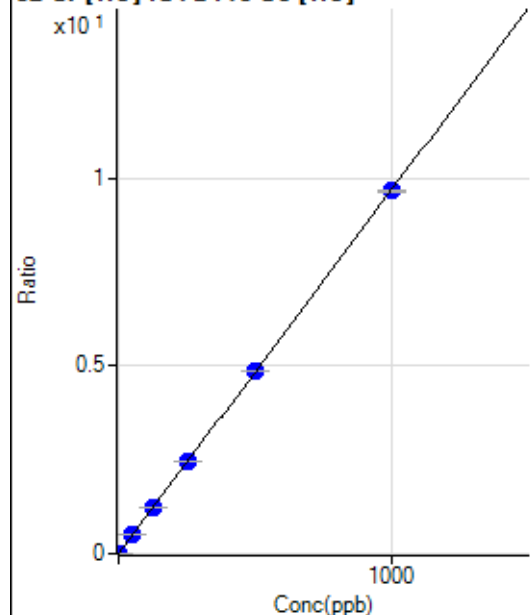
$$R = 1.0000$$

$$DL = 0.01118$$

$$BEC = 0.005385$$

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	680.03	0.0017	P	3.5
2	☐	0.200	0.197	1445.65	0.0036	P	5.6
3	☐	2.000	2.178	8889.51	0.0228	P	1.2
4	☐	50.000	51.849	202397.85	0.5036	P	0.6
5	☐	125.000	127.931	501158.02	1.2401	P	0.5
6	☐	250.000	253.327	989929.58	2.4539	P	0.9
7	☐	500.000	502.347	1980799.68	4.8644	P	0.6
8	☐	1000.000	997.536	4013430.25	9.6578	P	0.5
9	☐			144662.50	0.3552	P	1.3

$$y = 0.0097 * x + 0.0017$$

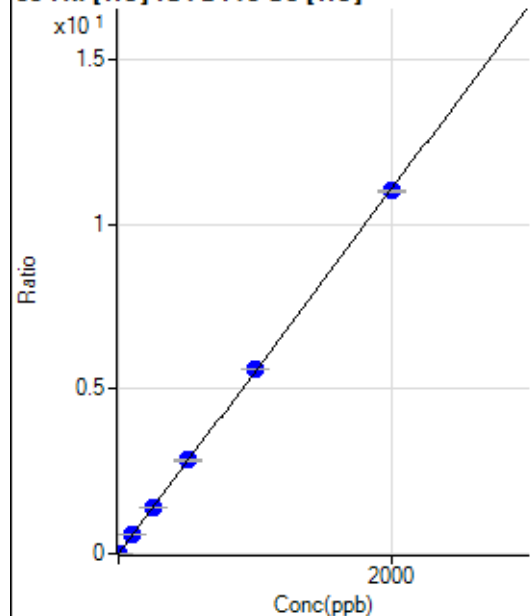
$$R = 1.0000$$

$$DL = 0.019$$

$$BEC = 0.1784$$

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	267.78	0.0007	P	21.5
2	☐	0.100	0.098	486.68	0.0012	P	11.2
3	☐	1.000	1.173	2798.09	0.0072	P	2.4
4	☐	100.000	103.657	231021.41	0.5749	P	0.6
5	☐	250.000	256.115	573585.59	1.4193	P	1.0
6	☐	500.000	511.657	1143588.94	2.8348	P	0.9
7	☐	1000.000	1011.669	2282202.52	5.6045	P	0.1
8	☐	2000.000	1990.304	4581713.51	11.0253	P	0.2
9	☐			17433.84	0.0428	P	0.6

$$y = 0.0055 * x + 6.7962E-004$$

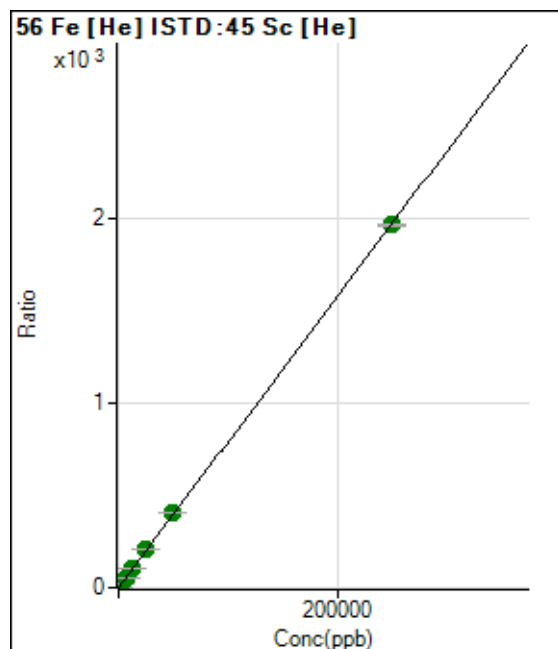
$$R = 1.0000$$

$$DL = 0.07932$$

$$BEC = 0.1227$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6859.18	0.0174	P	0.7
2	☐	5.000	4.090	19728.52	0.0495	P	5.7
3	☐	50.000	57.698	183409.12	0.4706	P	0.4
4	☐	2500.000	2677.122	8457805.98	21.0456	A	0.7
5	☐	6250.000	6592.872	20934484.73	51.8030	A	1.2
6	☐	12500.000	13132.050	41618931.03	103.1667	A	1.0
7	☐	25000.000	26068.116	83385860.20	204.7766	A	0.5
8	☐	50000.000	51307.121	167482209.3	403.0234	A	0.2
9	☐	250000.00	249589.81	798501543.7	1,960.489	A	0.7

$$y = 0.0079 * x + 0.0174$$

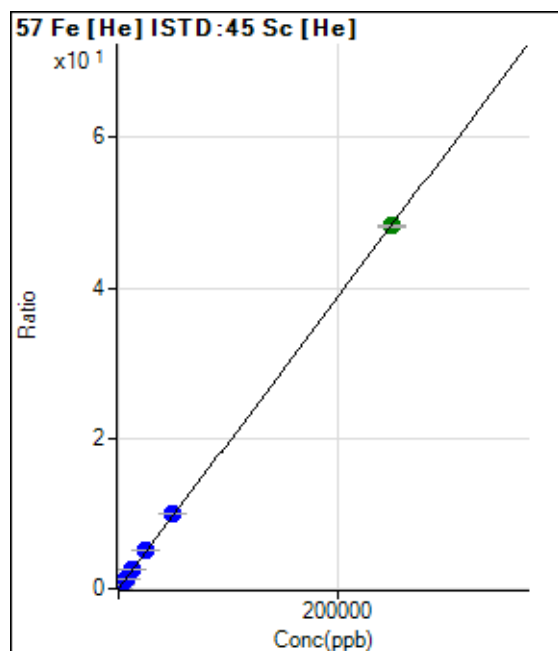
$$R = 1.0000$$

$$DL = 0.04922$$

$$BEC = 2.217$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0008	P	28.1
2	☐	5.000	3.894	637.07	0.0016	P	4.3
3	☐	50.000	59.627	4823.15	0.0124	P	7.2
4	☐	2500.000	2675.338	208204.23	0.5181	P	0.7
5	☐	6250.000	6595.170	515619.37	1.2759	P	1.2
6	☐	12500.000	13159.555	1026692.24	2.5450	P	0.8
7	☐	25000.000	26076.663	2053266.39	5.0423	P	0.4
8	☐	50000.000	51167.979	4111307.01	9.8933	P	0.1
9	☐	250000.00	249615.37	19656203.91	48.2596	A	0.5

$$y = 1.9333E-004 * x + 8.4691E-004$$

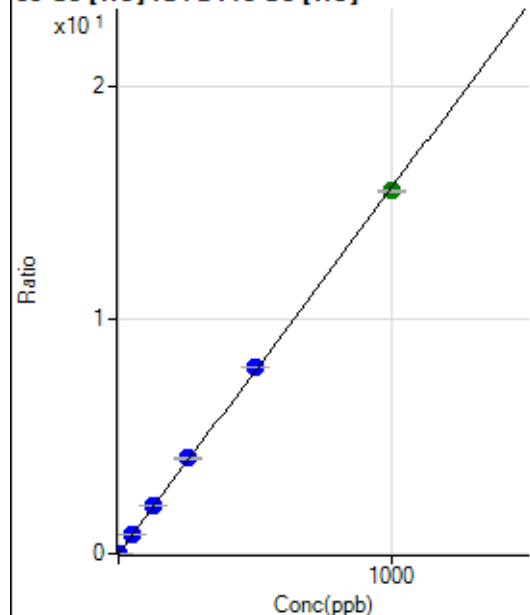
$$R = 1.0000$$

$$DL = 3.698$$

$$BEC = 4.381$$

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	170.00	0.0004	P	5.6
2	☐	0.100	0.086	705.58	0.0018	P	13.7
3	☐	1.000	1.073	6706.08	0.0172	P	0.5
4	☐	50.000	53.149	333968.78	0.8310	P	0.5
5	☐	125.000	130.340	823340.10	2.0373	P	0.5
6	☐	250.000	260.664	1643458.72	4.0739	P	1.3
7	☐	500.000	508.917	3238770.33	7.9535	P	0.3
8	☐	1000.000	992.050	6442763.93	15.5036	A	0.2
9	☐			14564.11	0.0358	P	3.2

$$y = 0.0156 * x + 4.3173E-004$$

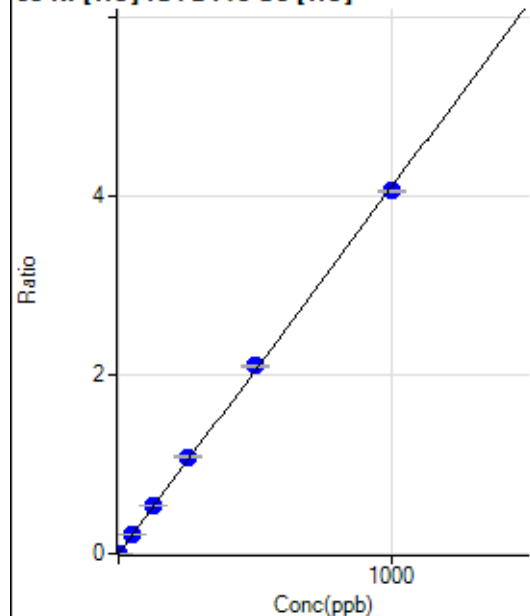
$$R = 0.9999$$

$$DL = 0.0046$$

$$BEC = 0.02763$$

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	55.56	0.0001	P	18.0
2	☐	0.100	0.088	200.00	0.0005	P	13.6
3	☐	1.000	1.148	1889.04	0.0048	P	2.9
4	☐	50.000	54.122	89231.64	0.2220	P	1.6
5	☐	125.000	132.117	218963.76	0.5418	P	0.6
6	☐	250.000	263.374	435663.23	1.0800	P	1.3
7	☐	500.000	511.658	854299.70	2.0979	P	0.2
8	☐	1000.000	989.731	1686385.17	4.0580	P	0.4
9	☐			42315.74	0.1039	P	1.0

$$y = 0.0041 * x + 1.4102E-004$$

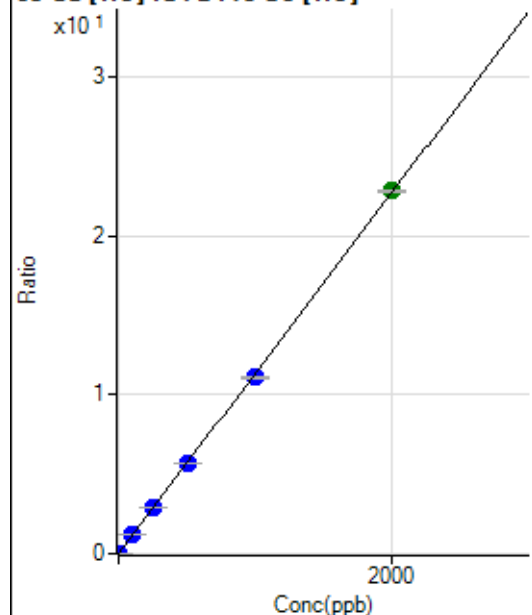
$$R = 0.9998$$

$$DL = 0.01862$$

$$BEC = 0.03439$$

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	1193.40	0.0030	P	4.4
2	☐	0.200	0.170	1977.94	0.0050	P	3.4
3	☐	2.000	2.137	10650.72	0.0273	P	0.9
4	☐	100.000	103.391	473679.36	1.1787	P	1.2
5	☐	250.000	255.037	1173174.60	2.9030	P	1.0
6	☐	500.000	503.390	2310351.22	5.7270	P	0.9
7	☐	1000.000	975.865	4519758.33	11.0994	P	0.3
8	☐	2000.000	2010.421	9501095.48	22.8632	A	0.3
9	☐			16035.64	0.0394	P	2.5

$$y = 0.0114 * x + 0.0030$$

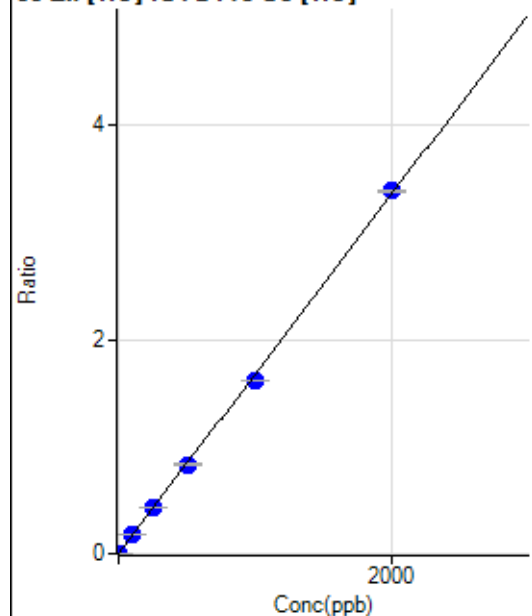
$$R = 0.9999$$

$$DL = 0.0355$$

$$BEC = 0.2665$$

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	286.67	0.0007	P	5.8
2	☒	0.200					
3	☐	2.000	2.477	1902.38	0.0049	P	1.7
4	☐	100.000	103.080	69743.59	0.1735	P	0.6
5	☐	250.000	253.438	172007.12	0.4256	P	1.2
6	☐	500.000	496.026	335758.46	0.8323	P	1.3
7	☐	1000.000	961.815	656928.67	1.6132	P	0.2
8	☐	2000.000	2019.502	1407299.35	3.3865	P	0.3
9	☐			13794.47	0.0339	P	2.6

$$y = 0.0017 * x + 7.2782E-004$$

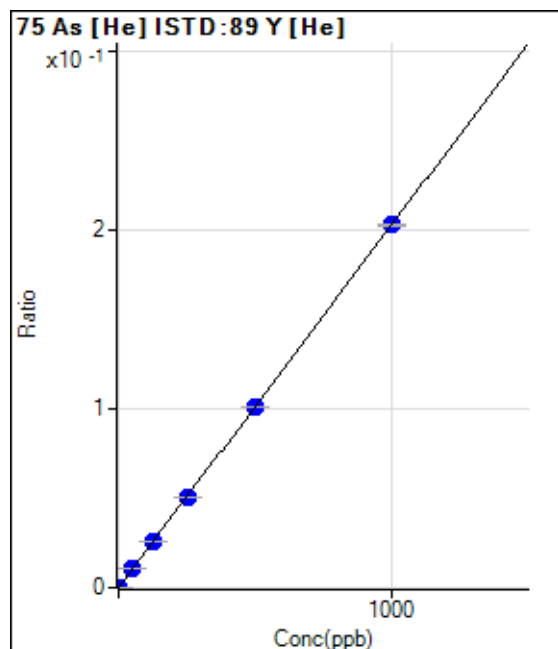
$$R = 0.9997$$

$$DL = 0.07554$$

$$BEC = 0.4341$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	9.26	0.0000	P	87.1
2	☐	0.100	0.103	50.62	0.0000	P	33.9
3	☐	1.000	1.050	424.70	0.0002	P	9.6
4	☐	50.000	51.458	20910.14	0.0104	P	0.4
5	☐	125.000	125.495	51210.81	0.0255	P	0.4
6	☐	250.000	249.782	102025.00	0.0507	P	0.5
7	☐	500.000	499.260	204220.97	0.1013	P	0.4
8	☐	1000.000	1000.290	409731.29	0.2030	P	0.7
9	☐			190.75	0.0001	P	7.7

$$y = 2.0295\text{E-}004 * x + 4.7427\text{E-}006$$

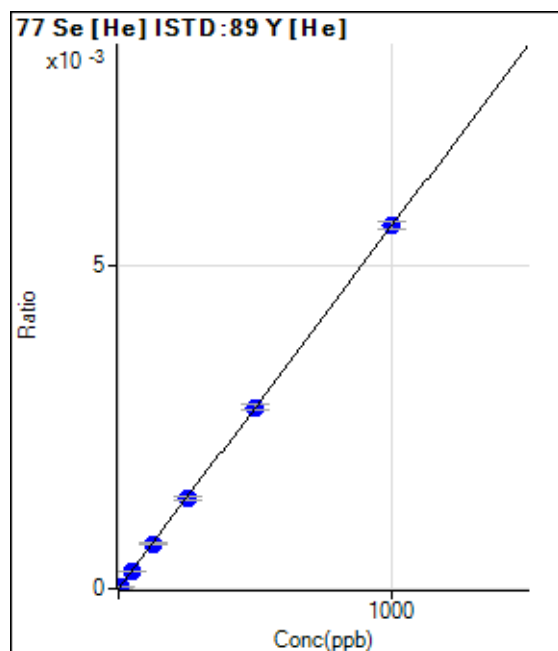
$$R = 1.0000$$

$$DL = 0.06107$$

$$BEC = 0.02337$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	0.402	4.44	0.0000	P	114.
3	☐	5.000	6.196	67.78	0.0000	P	10.3
4	☐	50.000	49.178	552.24	0.0003	P	2.9
5	☐	125.000	124.296	1402.32	0.0007	P	2.5
6	☐	250.000	247.780	2798.09	0.0014	P	4.3
7	☐	500.000	499.865	5653.42	0.0028	P	3.6
8	☐	1000.000	1000.746	11334.61	0.0056	P	2.2
9	☐			7.78	0.0000	P	107.

$$y = 5.6115\text{E-}006 * x + 0.0000\text{E+}000$$

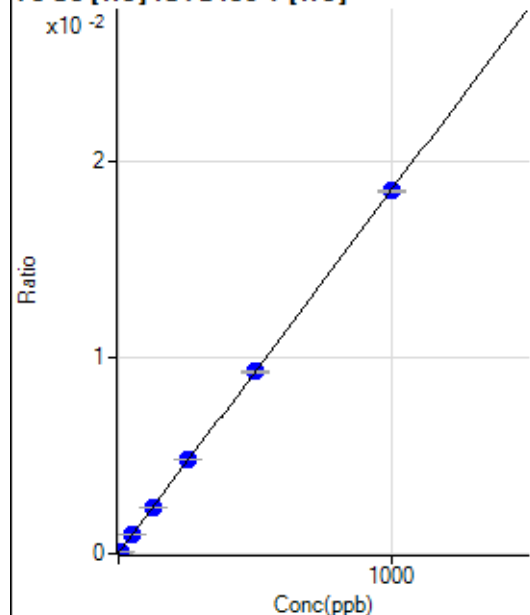
$$R = 1.0000$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.71	0.0000	P	18.1
2	☐	0.500	0.451	70.99	0.0000	P	12.8
3	☐	5.000	5.339	246.30	0.0001	P	2.3
4	☐	50.000	51.841	1975.46	0.0010	P	1.5
5	☐	125.000	126.982	4780.46	0.0024	P	1.9
6	☐	250.000	256.470	9608.81	0.0048	P	0.8
7	☐	500.000	500.228	18716.47	0.0093	P	1.3
8	☐	1000.000	997.927	37336.18	0.0185	P	0.6
9	☐			77.78	0.0000	P	8.4

$$y = 1.8510\text{E-}005 * x + 2.7512\text{E-}005$$

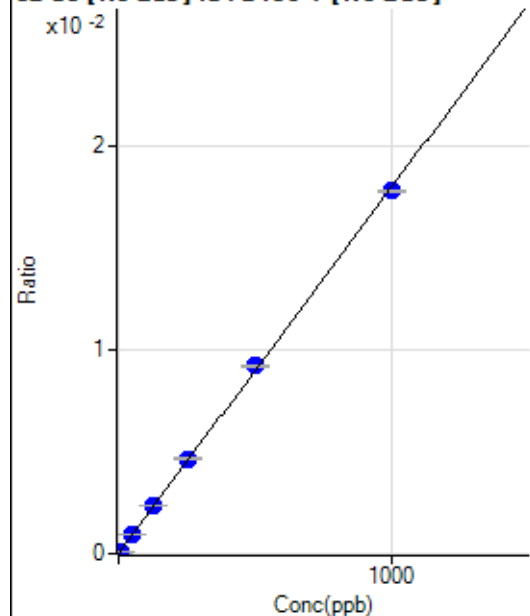
$$R = 1.0000$$

$$DL = 0.8088$$

$$BEC = 1.486$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	210.30	0.0000	P	74.8
2	☒	0.500					
3	☐	5.000	6.047	1974.88	0.0001	P	3.6
4	☐	50.000	53.845	16432.23	0.0010	P	0.9
5	☐	125.000	131.952	40445.78	0.0024	P	1.2
6	☐	250.000	258.557	78450.64	0.0046	P	1.1
7	☐	500.000	512.878	156172.48	0.0092	P	1.0
8	☐	1000.000	990.355	302143.50	0.0178	P	0.4
9	☐			692.98	0.0000	P	27.3

$$y = 1.7922\text{E-}005 * x + 1.2481\text{E-}005$$

$$R = 0.9998$$

$$DL = 1.563$$

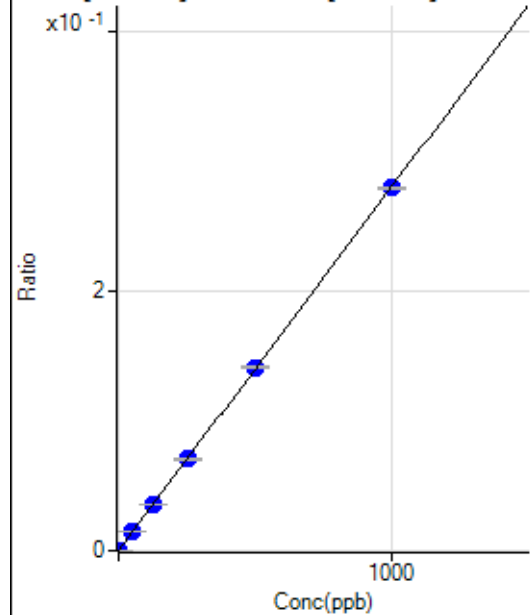
$$BEC = 0.6964$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1689.01		P	7.3
2	☐			1672.35		P	8.7
3	☐			1641.23		P	2.1
4	☐			1630.12		P	6.3
5	☐			1729.02		P	4.3
6	☐			1696.80		P	7.8
7	☐			1731.24		P	4.1
8	☐			1747.91		P	3.2
9	☐			1732.35		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	2636.46	0.0002	P	8.5
2	☐	0.100	0.135	3219.93	0.0002	P	1.8
3	☐	1.000	1.103	7607.86	0.0005	P	2.8
4	☐	50.000	50.594	240906.55	0.0143	P	0.4
5	☐	125.000	125.794	602242.83	0.0354	P	1.3
6	☐	250.000	250.855	1189341.85	0.0704	P	0.2
7	☐	500.000	503.717	2397136.82	0.1413	P	0.5
8	☐	1000.000	997.799	4757752.80	0.2797	P	0.8
9	☐			21194.20	0.0013	P	4.3

$$y = 2.8015E-004 * x + 1.5653E-004$$

$$R = 1.0000$$

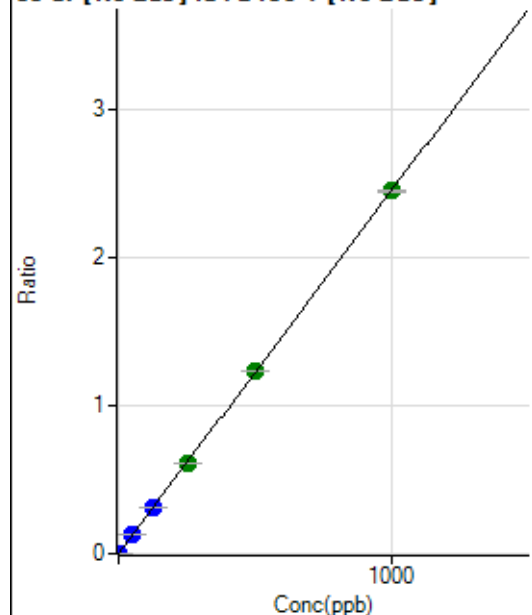
$$DL = 0.1431$$

$$BEC = 0.5587$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	361.13	0.0000	P	13.9
2	☐	0.100	0.099	4364.74	0.0003	P	3.9
3	☐	1.000	1.027	41402.40	0.0025	P	0.7
4	☐	50.000	50.878	2093169.08	0.1245	P	0.3
5	☐	125.000	126.686	5274360.62	0.3100	P	0.9
6	☐	250.000	248.163	10253950.23	0.6072	A	0.7
7	☐	500.000	501.495	20821883.45	1.2271	A	0.4
8	☐	1000.000	999.457	41602659.96	2.4455	A	0.3
9	☐			163126.31	0.0101	P	1.2

$$y = 0.0024 * x + 2.1444E-005$$

$$R = 1.0000$$

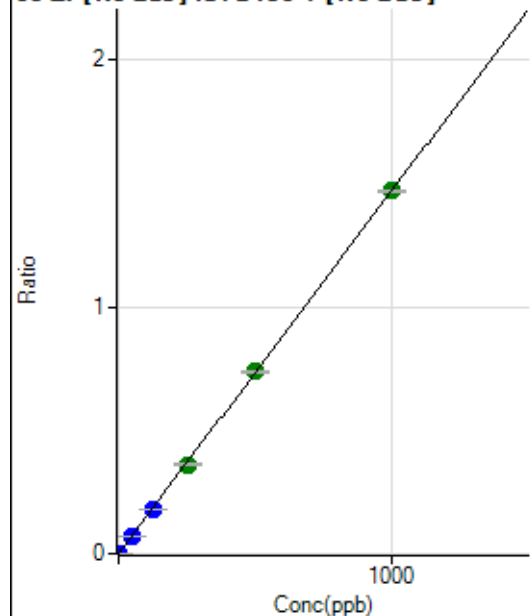
$$DL = 0.003652$$

$$BEC = 0.008764$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1008.41	0.0001	P	10.9
2	☐	0.100	0.089	3156.03	0.0002	P	2.4
3	☐	1.000	0.917	22991.48	0.0014	P	2.0
4	☐	50.000	49.908	1232934.45	0.0733	P	0.9
5	☐	125.000	124.218	3104445.53	0.1825	P	0.4
6	☐	250.000	246.038	6101270.75	0.3613	A	0.6
7	☐	500.000	501.234	12488991.60	0.7360	A	0.8
8	☐	1000.000	1000.476	24990955.25	1.4691	A	0.3
9	☐			6712.97	0.0004	P	4.5

$$y = 0.0015 * x + 5.9889E-005$$

$$R = 1.0000$$

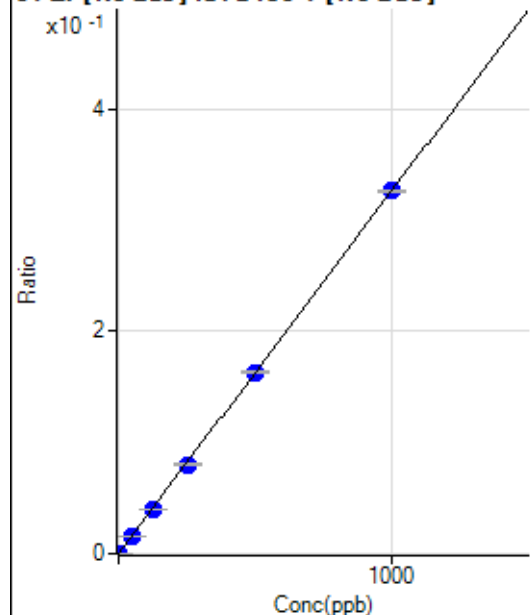
$$DL = 0.01333$$

$$BEC = 0.04079$$

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	188.90	0.0000	P	8.8
2	☐	0.100	0.092	680.60	0.0000	P	3.1
3	☐	1.000	0.966	5331.79	0.0003	P	4.7
4	☐	50.000	49.611	272297.82	0.0162	P	1.0
5	☐	125.000	123.630	686542.39	0.0403	P	0.6
6	☐	250.000	246.541	1358437.32	0.0805	P	1.3
7	☐	500.000	500.439	2770681.66	0.1633	P	0.9
8	☐	1000.000	1000.836	5555157.68	0.3266	P	0.4
9	☐			1544.60	0.0001	P	13.1

$$y = 3.2627\text{E-}004 * x + 1.1215\text{E-}005$$

$$R = 1.0000$$

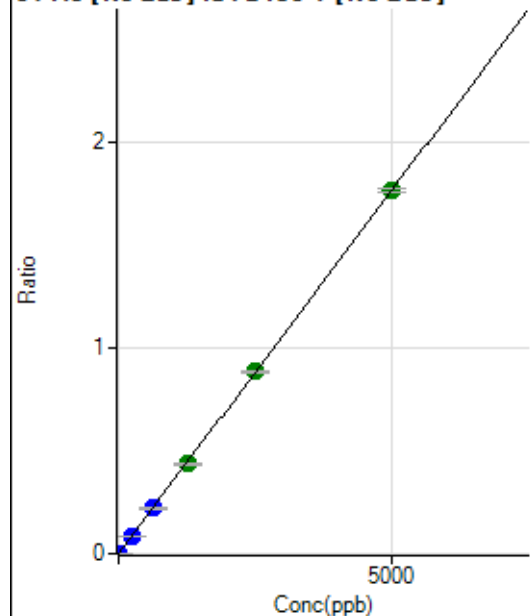
$$DL = 0.009118$$

$$BEC = 0.03437$$

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	463.92	0.0000	P	13.2
2	☐	0.500	0.478	3253.28	0.0002	P	3.0
3	☐	5.000	4.852	28429.20	0.0017	P	2.9
4	☐	250.000	249.755	1481875.75	0.0881	P	0.1
5	☐	625.000	623.785	3745421.18	0.2201	P	0.5
6	☐	1250.000	1233.880	7351562.32	0.4354	A	1.0
7	☐	2500.000	2509.507	15024615.79	0.8855	A	0.5
8	☐	5000.000	4999.441	30007082.27	1.7640	A	1.0
9	☐			24380.11	0.0015	P	3.8

$$y = 3.5283\text{E-}004 * x + 2.7554\text{E-}005$$

$$R = 1.0000$$

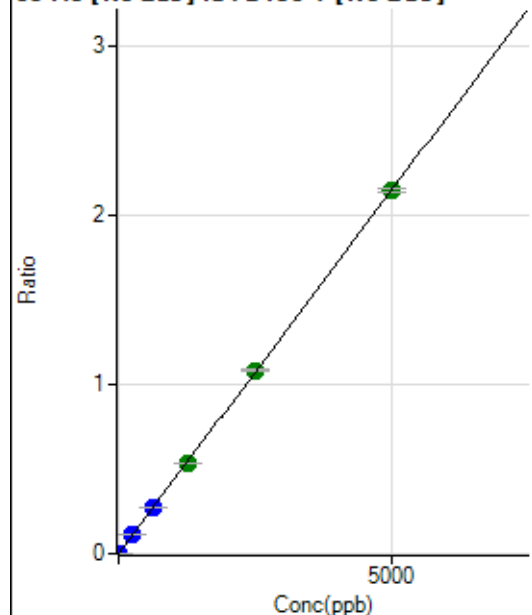
$$DL = 0.03096$$

$$BEC = 0.07809$$

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	152.78	0.0000	P	34.5
2	☐	0.500	0.498	3697.86	0.0002	P	3.7
3	☐	5.000	5.074	35773.53	0.0022	P	2.5
4	☐	250.000	252.209	1821682.35	0.1084	P	0.3
5	☐	625.000	628.090	4591403.66	0.2698	P	0.4
6	☐	1250.000	1243.452	9020315.22	0.5342	A	1.0
7	☐	2500.000	2516.561	18345059.61	1.0812	A	1.1
8	☐	5000.000	4992.860	36488609.85	2.1450	A	1.0
9	☐			38397.30	0.0024	P	2.5

$$y = 4.2962\text{E-}004 * x + 9.0688\text{E-}006$$

$$R = 1.0000$$

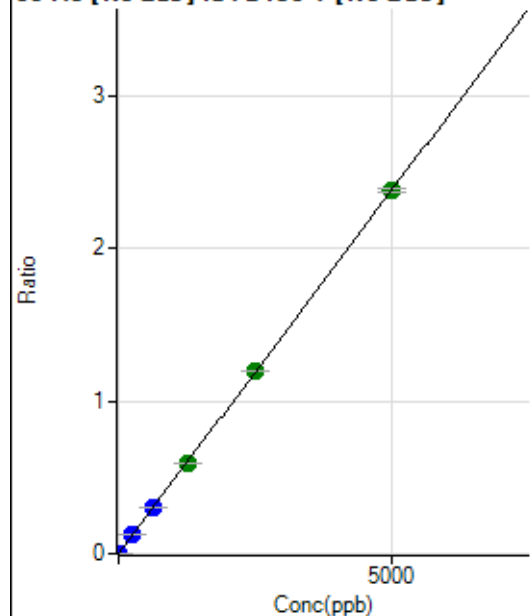
$$DL = 0.02185$$

$$BEC = 0.02111$$

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	313.91	0.0000	P	19.8
2	☐	0.500	0.488	4148.01	0.0003	P	8.0
3	☐	5.000	5.188	40591.96	0.0025	P	0.7
4	☐	250.000	252.838	2020127.71	0.1202	P	0.4
5	☐	625.000	627.250	5071675.46	0.2981	P	0.8
6	☐	1250.000	1243.307	9976267.58	0.5908	A	1.0
7	☐	2500.000	2509.725	20236865.56	1.1926	A	0.3
8	☐	5000.000	4996.387	40388343.26	2.3743	A	1.0
9	☐			56733.51	0.0035	P	1.3

$$y = 4.7520\text{E-}004 * x + 1.8637\text{E-}005$$

$$R = 1.0000$$

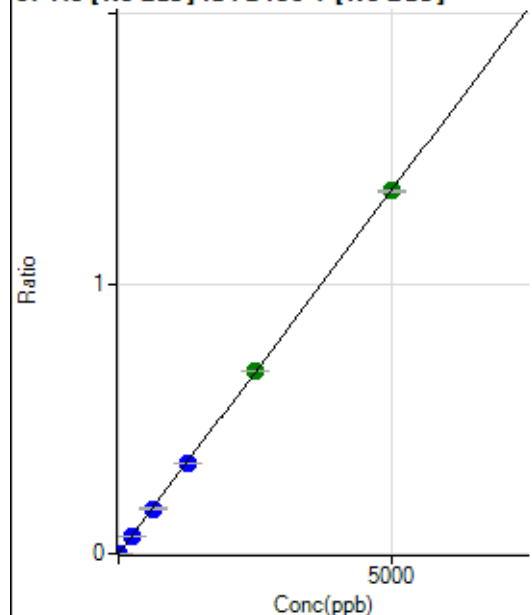
$$DL = 0.02329$$

$$BEC = 0.03922$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	97.23	0.0000	P	4.8
2	☐	0.500	0.475	2214.16	0.0001	P	4.6
3	☐	5.000	5.220	23036.04	0.0014	P	1.4
4	☐	250.000	250.647	1133360.94	0.0674	P	0.6
5	☐	625.000	618.965	2832356.75	0.1665	P	1.3
6	☐	1250.000	1239.001	5626842.88	0.3332	P	0.7
7	☐	2500.000	2519.145	11496362.58	0.6775	A	0.6
8	☐	5000.000	4993.899	22848715.79	1.3431	A	0.3
9	☐			22921.97	0.0014	P	1.5

$$y = 2.6895E-004 * x + 5.7733E-006$$

$$R = 1.0000$$

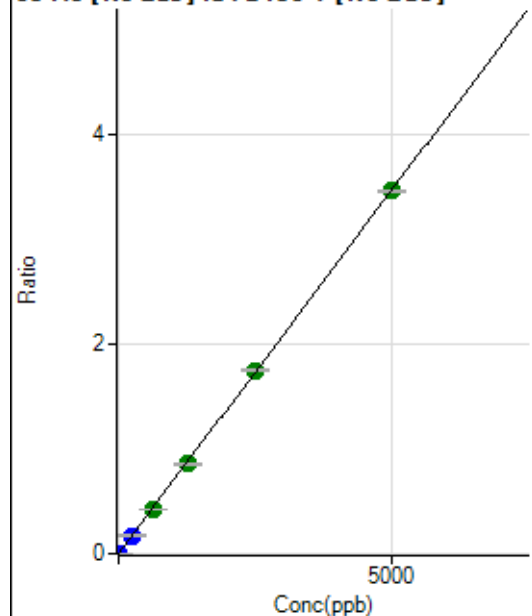
$$DL = 0.003099$$

$$BEC = 0.02147$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	258.35	0.0000	P	29.7
2	☐	0.500	0.504	6051.52	0.0004	P	3.7
3	☐	5.000	5.213	59410.68	0.0036	P	1.6
4	☐	250.000	250.959	2929864.78	0.1743	P	0.8
5	☐	625.000	615.896	7276749.64	0.4277	A	1.0
6	☐	1250.000	1232.277	14449216.99	0.8557	A	0.7
7	☐	2500.000	2521.391	29708896.84	1.7509	A	0.8
8	☐	5000.000	4994.825	59003921.46	3.4684	A	0.2
9	☐			60197.77	0.0037	P	2.6

$$y = 6.9441E-004 * x + 1.5344E-005$$

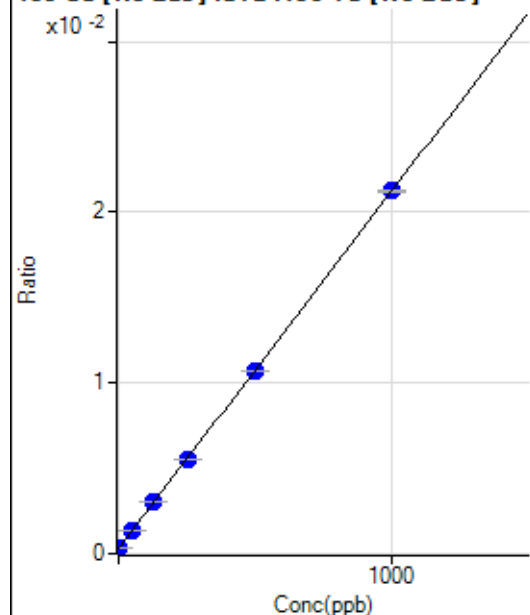
$$R = 1.0000$$

$$DL = 0.01969$$

$$BEC = 0.0221$$

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	6337.79	0.0003	P	3.5
2	☐	0.100	-0.088	6223.86	0.0003	P	2.0
3	☐	1.000	1.052	6632.44	0.0003	P	4.0
4	☐	50.000	50.901	28833.03	0.0014	P	3.4
5	☐	125.000	129.023	64006.66	0.0030	P	0.5
6	☐	250.000	249.208	116950.16	0.0055	P	0.3
7	☐	500.000	496.618	227055.07	0.0107	P	0.7
8	☐	1000.000	1001.341	448869.04	0.0213	P	0.6
9	☐			6479.57	0.0003	P	8.1

$$y = 2.0924\text{E-}005 * x + 3.0090\text{E-}004$$

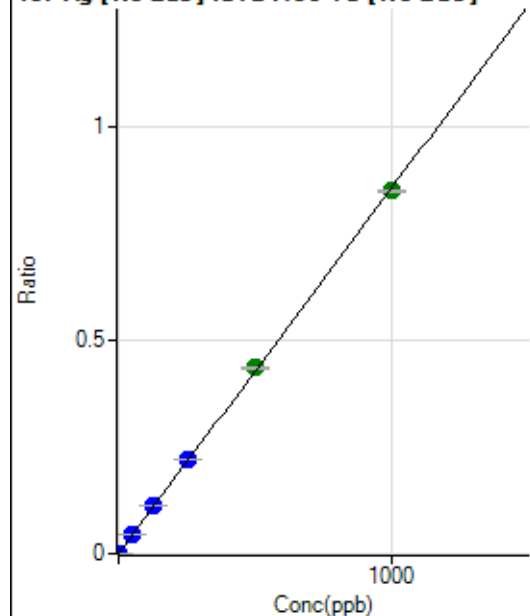
$$R = 1.0000$$

$$DL = 1.511$$

$$BEC = 14.38$$

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	200.01	0.0000	P	6.7
2	☐	0.100	0.101	2000.24	0.0001	P	10.1
3	☐	1.000	1.072	19027.36	0.0009	P	3.2
4	☐	50.000	52.858	954259.01	0.0452	P	0.2
5	☐	125.000	129.450	2361526.87	0.1107	P	0.1
6	☐	250.000	257.239	4664691.47	0.2200	P	0.7
7	☐	500.000	509.073	9244516.61	0.4353	A	0.8
8	☐	1000.000	992.954	17933003.87	0.8491	A	0.2
9	☐			3389.43	0.0002	P	3.1

$$y = 8.5513\text{E-}004 * x + 9.4953\text{E-}006$$

$$R = 0.9999$$

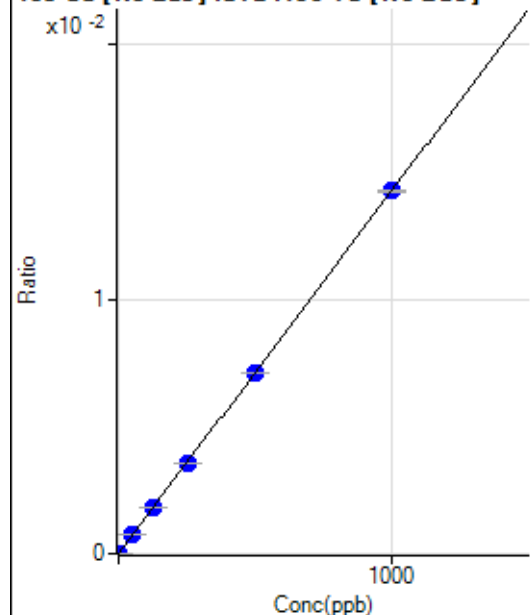
$$DL = 0.002237$$

$$BEC = 0.0111$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	13.89	0.0000	P	69.8
2	☐	0.100	0.131	52.78	0.0000	P	23.8
3	☐	1.000	1.116	340.29	0.0000	P	11.2
4	☐	50.000	52.158	15710.34	0.0007	P	2.1
5	☐	125.000	127.946	38925.77	0.0018	P	1.0
6	☐	250.000	251.055	75911.96	0.0036	P	0.3
7	☐	500.000	497.572	150660.91	0.0071	P	0.6
8	☐	1000.000	1000.474	301275.13	0.0143	P	0.8
9	☐			125.00	0.0000	P	17.3

$$y = 1.4257\text{E-}005 * x + 6.6074\text{E-}007$$

$$R = 1.0000$$

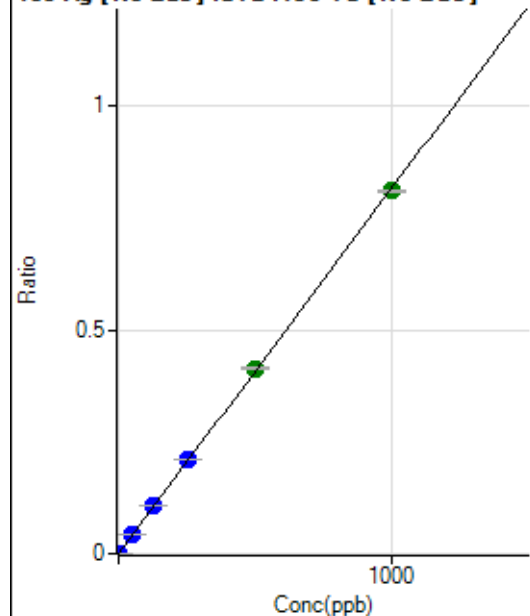
$$DL = 0.097$$

$$BEC = 0.04634$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	172.23	0.0000	P	41.8
2	☐	0.100	0.098	1827.97	0.0001	P	5.6
3	☐	1.000	1.093	18462.74	0.0009	P	1.1
4	☐	50.000	52.980	911752.13	0.0432	P	0.2
5	☐	125.000	130.885	2276099.27	0.1067	P	0.7
6	☐	250.000	257.297	4447806.96	0.2098	P	0.9
7	☐	500.000	507.045	8777402.97	0.4133	A	1.0
8	☐	1000.000	993.769	17108940.31	0.8101	A	0.8
9	☐			3147.71	0.0002	P	2.0

$$y = 8.1518\text{E-}004 * x + 8.2015\text{E-}006$$

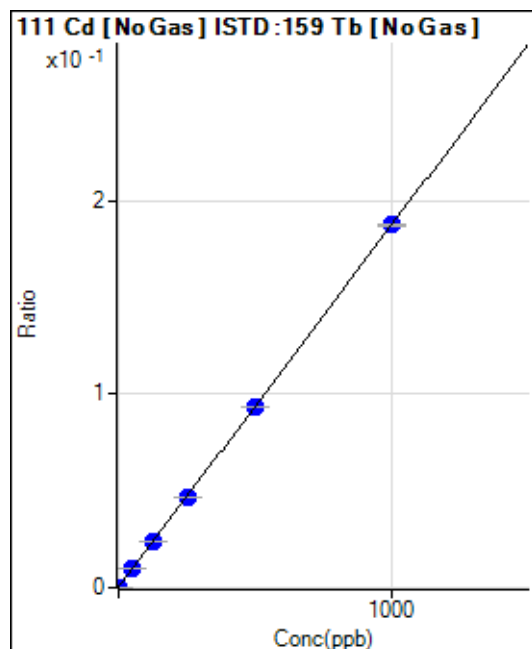
$$R = 0.9999$$

$$DL = 0.01262$$

$$BEC = 0.01006$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4469.79	0.0002	P	3.2
2	☐	0.100	0.093	4778.10	0.0002	P	3.0
3	☐	1.000	1.058	8431.55	0.0004	P	0.6
4	☐	50.000	51.553	208337.49	0.0099	P	0.3
5	☐	125.000	128.245	517029.02	0.0242	P	1.0
6	☐	250.000	250.376	999148.76	0.0471	P	0.5
7	☐	500.000	497.153	1982340.99	0.0934	P	0.6
8	☐	1000.000	1000.846	3964509.36	0.1877	P	0.2
9	☐			5412.14	0.0003	P	4.6

$$y = 1.8735E-004 * x + 2.1222E-004$$

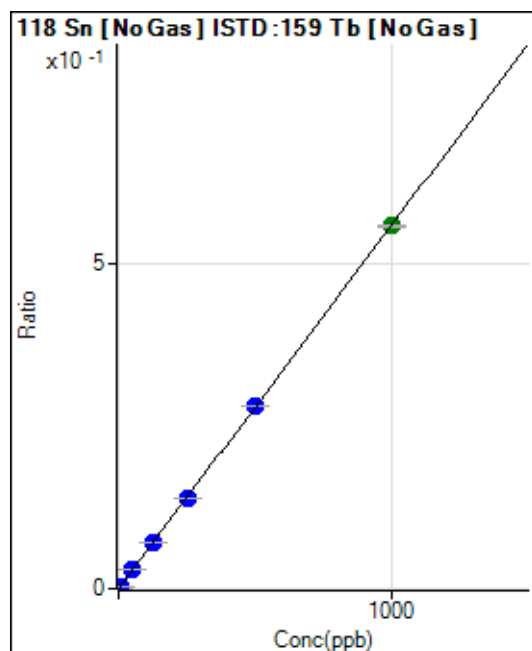
$$R = 1.0000$$

$$DL = 0.1074$$

$$BEC = 1.133$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1402.91	0.0001	P	2.2
2	☐	0.500	0.505	7257.73	0.0003	P	4.1
3	☐	5.000	5.281	62033.68	0.0030	P	2.7
4	☐	50.000	50.630	599078.14	0.0284	P	0.9
5	☐	125.000	125.566	1499414.25	0.0703	P	0.8
6	☐	250.000	250.180	2968279.67	0.1400	P	0.2
7	☐	500.000	502.994	5975215.02	0.2814	P	0.9
8	☐	1000.000	998.354	11793681.60	0.5584	A	0.2
9	☐			5787.56	0.0003	P	2.9

$$y = 5.5927E-004 * x + 6.6627E-005$$

$$R = 1.0000$$

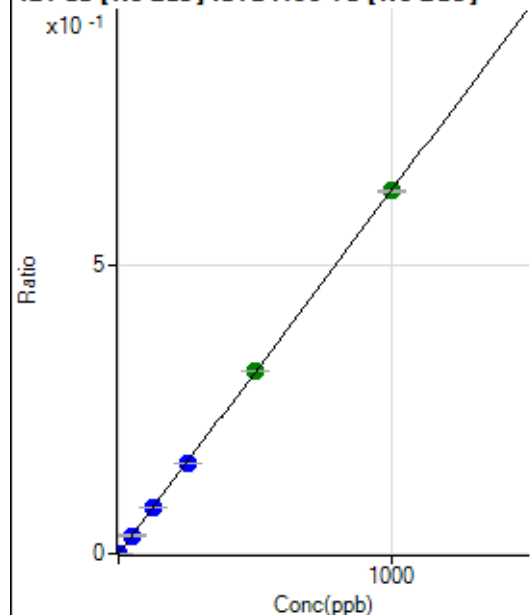
$$DL = 0.007892$$

$$BEC = 0.1191$$

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	297.24	0.0000	P	32.9
2	☐	0.200	0.190	2789.29	0.0001	P	4.4
3	☐	2.000	1.986	26013.82	0.0013	P	1.2
4	☐	50.000	50.173	668011.03	0.0316	P	0.5
5	☐	125.000	125.606	1689640.01	0.0792	P	0.1
6	☐	250.000	249.388	3334293.95	0.1573	P	0.9
7	☐	500.000	503.116	6736542.34	0.3172	A	0.2
8	☐	1000.000	998.511	13296424.34	0.6296	A	0.3
9	☐			12514.49	0.0006	P	3.3

$$y = 6.3050\text{E-}004 * x + 1.4122\text{E-}005$$

$$R = 1.0000$$

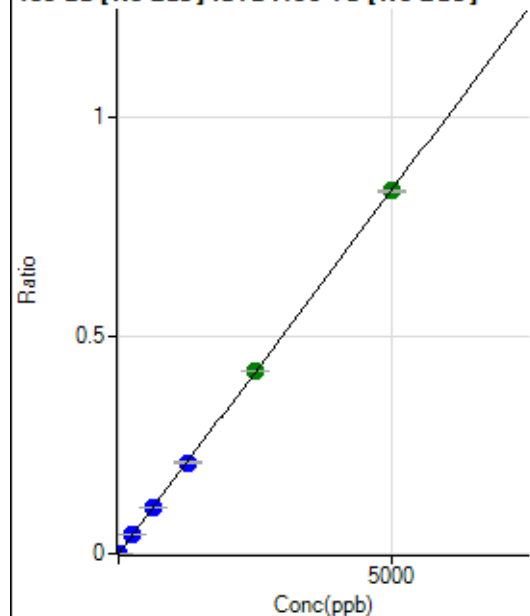
$$DL = 0.02211$$

$$BEC = 0.0224$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	94.45	0.0000	P	29.1
2	☐	1.000	1.084	3850.71	0.0002	P	4.9
3	☐	10.000	10.411	35730.18	0.0017	P	0.1
4	☐	250.000	252.571	888551.37	0.0421	P	0.6
5	☐	625.000	625.770	2224742.95	0.1043	P	0.1
6	☐	1250.000	1253.816	4430777.87	0.2090	P	0.6
7	☐	2500.000	2514.062	8897426.33	0.4190	A	0.5
8	☐	5000.000	4991.789	17569961.16	0.8319	A	0.4
9	☐			3697.89	0.0002	P	5.0

$$y = 1.6666\text{E-}004 * x + 4.4912\text{E-}006$$

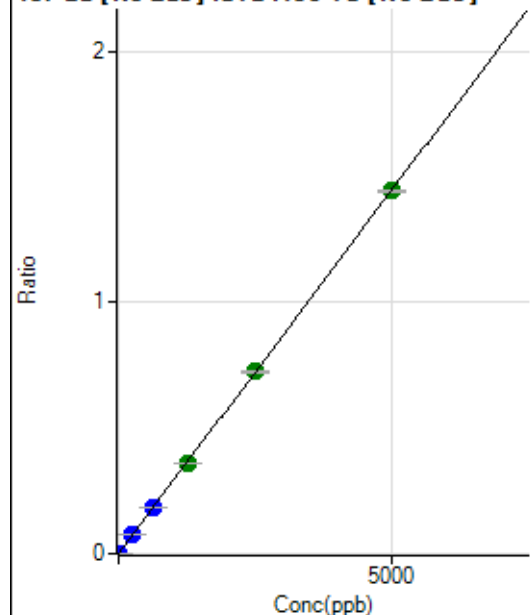
$$R = 1.0000$$

$$DL = 0.02352$$

$$BEC = 0.02695$$

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	238.90	0.0000	P	4.5
2	☐	1.000	1.012	6326.70	0.0003	P	3.7
3	☐	10.000	10.467	62399.23	0.0030	P	1.4
4	☐	250.000	253.172	1545389.61	0.0732	P	1.1
5	☐	625.000	624.894	3854620.05	0.1807	P	0.4
6	☐	1250.000	1248.901	7657607.72	0.3611	A	0.1
7	☐	2500.000	2511.083	15418456.94	0.7261	A	1.3
8	☐	5000.000	4994.587	30501472.21	1.4442	A	0.5
9	☐			6346.20	0.0003	P	7.8

$$y = 2.8915E-004 * x + 1.1346E-005$$

$$R = 1.0000$$

$$DL = 0.005354$$

$$BEC = 0.03924$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			15.55		P	24.8
2	☐			17.78		P	43.3
3	☐			15.55		P	24.8
4	☐			53.34		P	33.1
5	☐			211.12		P	16.2
6	☐			391.13		P	15.8
7	☐			613.37		P	19.6
8	☐			1375.67		P	9.1
9	☐			193.34		P	39.8

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	137.
2	☐			6.67		P	100.
3	☐			8.89		P	57.3
4	☐			13.33		P	25.0
5	☐			12.22		P	63.0
6	☐			35.55		P	10.8
7	☐			46.67		P	25.8
8	☐			114.45		P	1.7
9	☐			52.22		P	24.2

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			108.34		P	26.7
2	☐			97.22		P	4.9
3	☐			113.89		P	4.2
4	☐			222.23		P	18.9
5	☐			108.34		P	20.4
6	☐			125.01		P	NaN
7	☐			216.68		P	6.7
8	☐			530.59		P	16.8
9	☐			225.01		P	60.6

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			22.22		P	37.8
2	☐			23.34		P	49.5
3	☐			28.89		P	63.5
4	☐			41.11		P	24.8
5	☐			57.78		P	26.0
6	☐			86.67		P	36.7
7	☐			147.78		P	12.4
8	☐			322.23		P	16.8
9	☐			56.67		P	17.6

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			130.56		P	30.2
2	☐			94.45		P	27.0
3	☐			116.67		P	7.1
4	☐			119.45		P	14.5
5	☐			113.90		P	44.1
6	☐			169.45		P	34.9
7	☐			105.56		P	12.1
8	☐			166.68		P	15.0
9	☐			147.23		P	8.6

160 Gd [He] No available calibration points

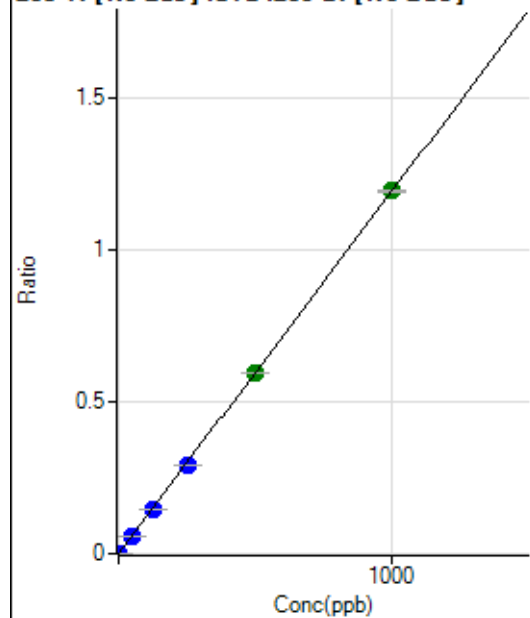
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			300.01		P	12.6
2	☐			276.68		P	9.9
3	☐			276.67		P	10.7
4	☐			328.90		P	22.1
5	☐			310.01		P	10.8
6	☐			277.79		P	10.5
7	☐			322.23		P	8.6
8	☐			317.79		P	8.8
9	☐			324.46		P	7.7

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			88.89		P	30.1
2	☐			100.01		P	33.3
3	☐			119.45		P	24.5
4	☐			108.34		P	46.2
5	☐			119.45		P	17.6
6	☐			138.90		P	12.5
7	☐			122.23		P	14.2
8	☐			152.79		P	24.6
9	☐			163.90		P	11.7

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			63.34		P	13.9
2	☐			74.45		P	27.0
3	☐			73.34		P	19.8
4	☐			68.89		P	11.2
5	☐			61.11		P	3.1
6	☐			77.78		P	17.3
7	☐			67.78		P	20.5
8	☐			81.11		P	17.1
9	☐			74.44		P	29.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	725.05	0.0001	P	6.5
2	☐	0.100	0.100	2183.61	0.0002	P	3.7
3	☐	1.000	0.961	14658.64	0.0012	P	1.4
4	☐	50.000	48.398	710877.44	0.0577	P	0.4
5	☐	125.000	122.245	1774702.33	0.1457	P	0.8
6	☐	250.000	244.535	3499714.62	0.2913	P	0.8
7	☐	500.000	498.817	6980328.67	0.5942	A	0.4
8	☐	1000.000	1002.382	13674475.13	1.1941	A	0.8
9	☐			4206.43	0.0004	P	10.0

$$y = 0.0012 * x + 5.8333E-005$$

$$R = 1.0000$$

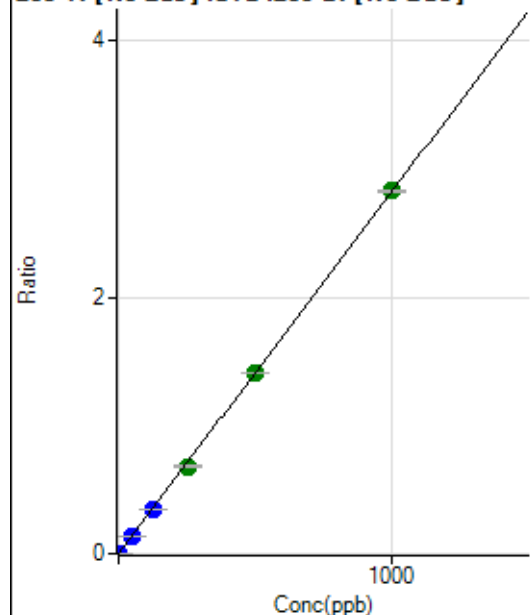
$$DL = 0.00949$$

$$BEC = 0.04897$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1425.13	0.0001	P	2.4
2	☐	0.100	0.099	4839.99	0.0004	P	1.8
3	☐	1.000	0.962	34471.03	0.0028	P	0.8
4	☐	50.000	48.378	1682550.55	0.1366	P	0.5
5	☐	125.000	122.831	4222795.32	0.3466	P	0.5
6	☐	250.000	241.619	8189272.84	0.6817	A	0.6
7	☐	500.000	497.982	16503406.79	1.4050	A	0.2
8	☐	1000.000	1003.456	32419427.46	2.8309	A	0.5
9	☐			9378.73	0.0010	P	6.1

$$y = 0.0028 * x + 1.1466E-004$$

$$R = 1.0000$$

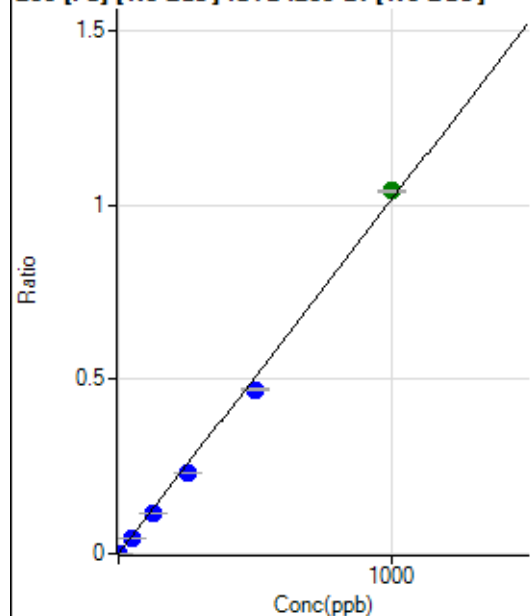
$$DL = 0.002919$$

$$BEC = 0.04064$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1163.05	0.0001	P	10.3
2	☐	0.100	0.079	2131.72	0.0002	P	8.2
3	☐	1.000	0.900	12265.33	0.0010	P	1.6
4	☐	50.000	45.281	567406.24	0.0461	P	0.5
5	☐	125.000	114.248	1414104.41	0.1161	P	0.3
6	☐	250.000	227.435	2774548.70	0.2310	P	1.1
7	☐	500.000	464.012	5534484.44	0.4712	P	0.6
8	☐	1000.000	1025.215	11920047.03	1.0409	A	0.7
9	☐			26057.61	0.0027	P	0.9

$$y = 0.0010 * x + 9.3592E-005$$

$$R = 0.9988$$

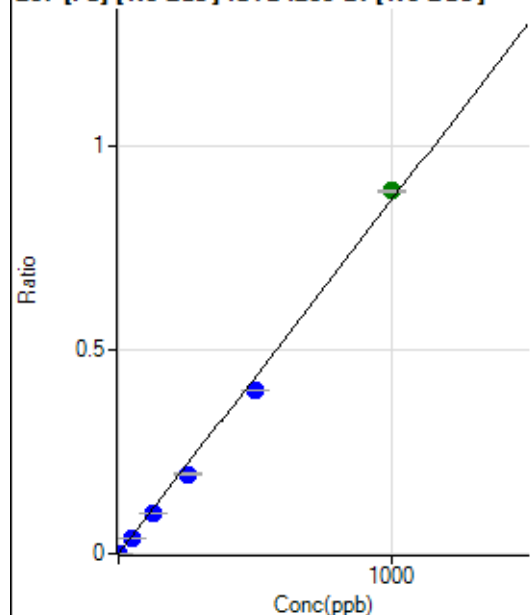
$$DL = 0.02843$$

$$BEC = 0.09219$$

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	1079.70	0.0001	P	3.0
2	☐	0.100	0.086	1977.98	0.0002	P	4.1
3	☐	1.000	0.901	10576.75	0.0009	P	3.0
4	☐	50.000	44.949	481388.21	0.0391	P	0.8
5	☐	125.000	112.915	1194364.45	0.0980	P	0.7
6	☐	250.000	225.449	2350261.39	0.1957	P	1.1
7	☐	500.000	463.291	4721969.44	0.4020	P	0.7
8	☐	1000.000	1026.255	10195958.39	0.8904	A	0.8
9	☐			22332.55	0.0023	P	4.0

$$y = 8.6749\text{E-}004 * x + 8.6858\text{E-}005$$

$$R = 0.9987$$

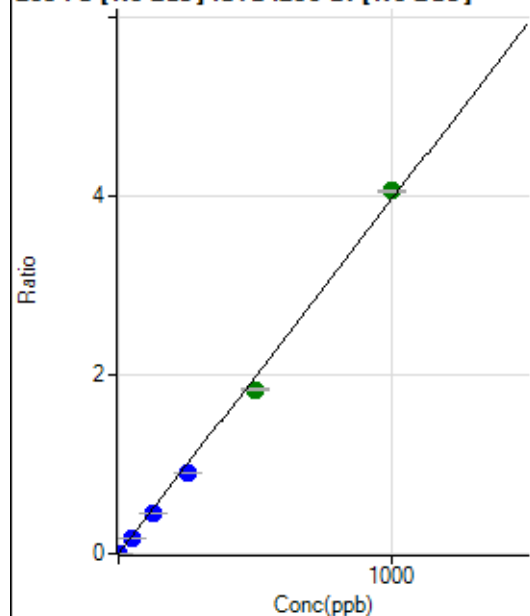
$$DL = 0.009127$$

$$BEC = 0.1001$$

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	4178.14	0.0003	P	2.2
2	☐	0.100	0.087	8343.84	0.0007	P	3.9
3	☐	1.000	0.905	47706.77	0.0039	P	1.3
4	☐	50.000	45.363	2215099.23	0.1798	P	0.7
5	☐	125.000	114.240	5510682.76	0.4523	P	0.2
6	☐	250.000	227.732	10827631.52	0.9014	P	0.9
7	☐	500.000	464.414	21588735.04	1.8379	A	0.4
8	☐	1000.000	1024.937	46444536.98	4.0557	A	0.5
9	☐			101466.77	0.0104	P	1.1

$$y = 0.0040 * x + 3.3615\text{E-}004$$

$$R = 0.9988$$

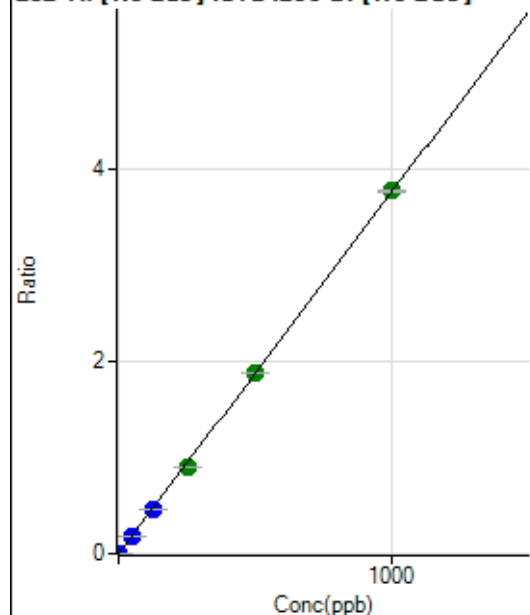
$$DL = 0.005708$$

$$BEC = 0.08496$$

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	1983.55	0.0002	P	1.4
2	☐	0.100	0.080	5662.51	0.0005	P	4.6
3	☐	1.000	0.873	41917.15	0.0034	P	3.3
4	☐	50.000	47.152	2184824.30	0.1774	P	0.9
5	☐	125.000	120.642	5525542.49	0.4536	P	0.5
6	☐	250.000	239.794	10827178.48	0.9014	A	1.1
7	☐	500.000	498.166	21994357.32	1.8724	A	0.0
8	☐	1000.000	1004.156	43220544.48	3.7740	A	0.6
9	☐			8125.08	0.0008	P	8.3

$$y = 0.0038 * x + 1.5958E-004$$

$$R = 0.9999$$

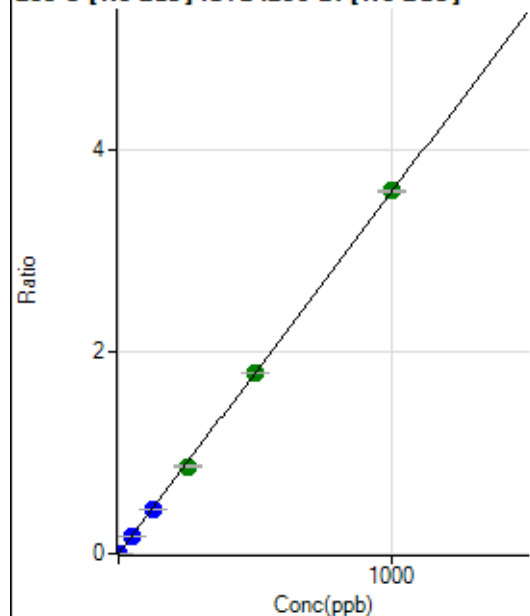
$$DL = 0.001726$$

$$BEC = 0.04246$$

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	2205.84	0.0002	P	0.9
2	☐	0.100	0.092	6232.33	0.0005	P	9.1
3	☐	1.000	0.955	43826.15	0.0036	P	1.3
4	☐	50.000	47.798	2109846.95	0.1713	P	1.2
5	☐	125.000	121.806	5314172.60	0.4362	P	0.4
6	☐	250.000	241.228	10374490.94	0.8637	A	1.9
7	☐	500.000	498.632	20969458.11	1.7852	A	0.3
8	☐	1000.000	1003.386	41135689.46	3.5921	A	0.3
9	☐			5657.09	0.0006	P	8.6

$$y = 0.0036 * x + 1.7747E-004$$

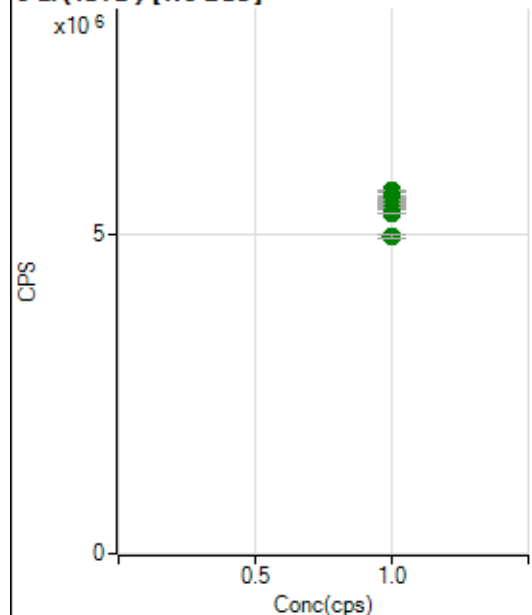
$$R = 1.0000$$

$$DL = 0.001369$$

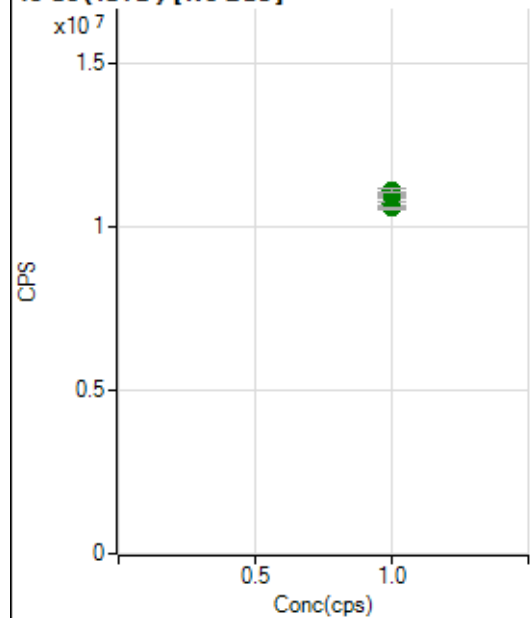
$$BEC = 0.04957$$

Weight: <None>

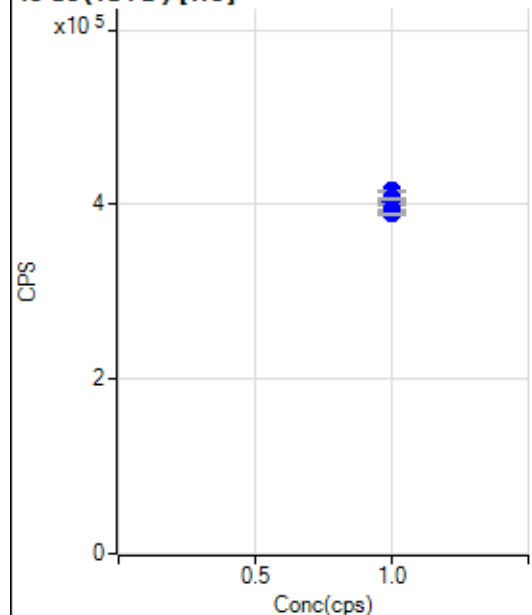
Min Conc: 0

6 Li (ISTD) [No Gas]

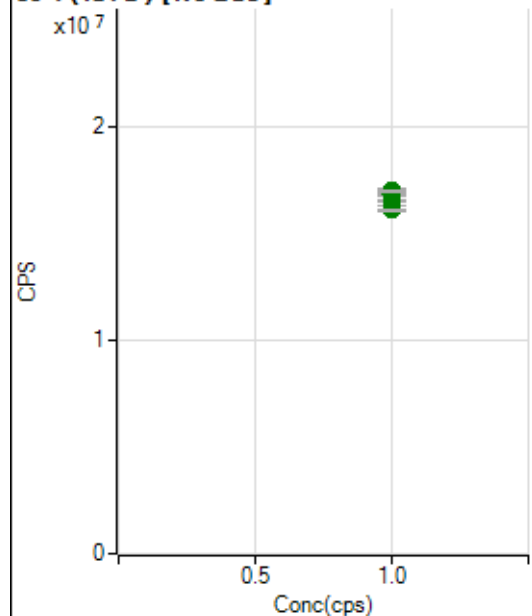
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5667803.46		A	0.3
2	☐	1.000		5503634.01		A	0.8
3	☐	1.000		5581152.63		A	0.2
4	☐	1.000		5570813.67		A	0.6
5	☐	1.000		5516050.13		A	0.8
6	☐	1.000		5445624.50		A	0.3
7	☐	1.000		5391052.63		A	0.5
8	☐	1.000		5318019.51		A	0.2
9	☐	1.000		4958064.55		A	0.7

45 Sc (ISTD) [No Gas]

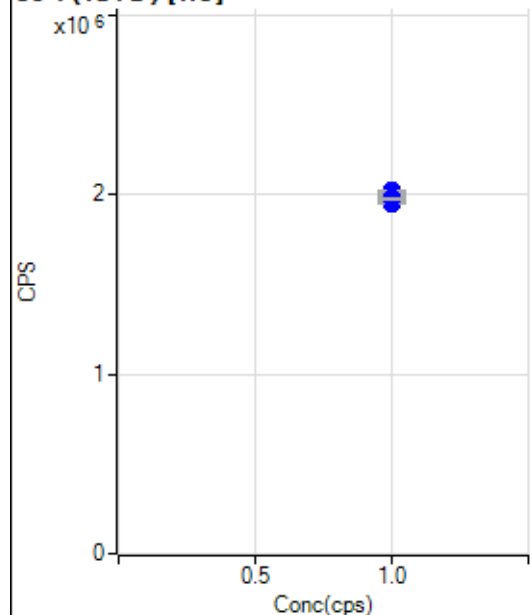
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10880299.55		A	0.1
2	☐	1.000		10701279.75		A	0.9
3	☐	1.000		10598619.42		A	0.4
4	☐	1.000		10930660.66		A	0.7
5	☐	1.000		10987770.56		A	0.6
6	☐	1.000		10926984.79		A	0.6
7	☐	1.000		11008832.54		A	0.4
8	☐	1.000		11096135.58		A	1.1
9	☐	1.000		10568079.49		A	0.9

45 Sc (ISTD) [He]

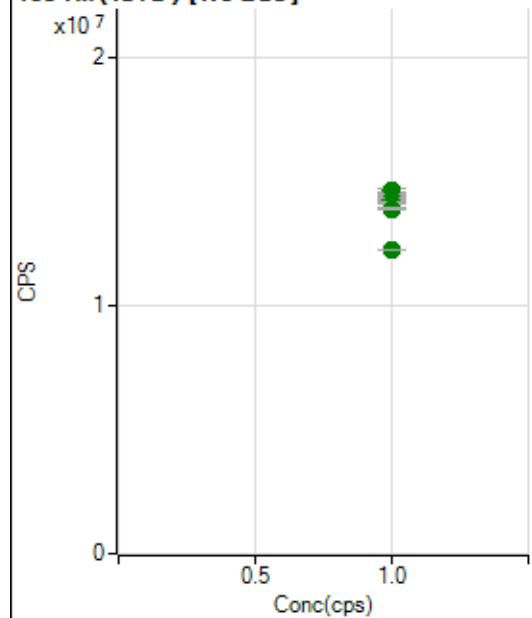
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		393826.00		P	0.4
2	☐	1.000		398195.76		P	0.3
3	☐	1.000		389715.80		P	0.6
4	☐	1.000		401888.28		P	0.5
5	☐	1.000		404139.16		P	0.8
6	☐	1.000		403437.28		P	1.2
7	☐	1.000		407212.18		P	0.7
8	☐	1.000		415565.72		P	0.3
9	☐	1.000		407306.47		P	0.6

89 Y (ISTD) [No Gas]

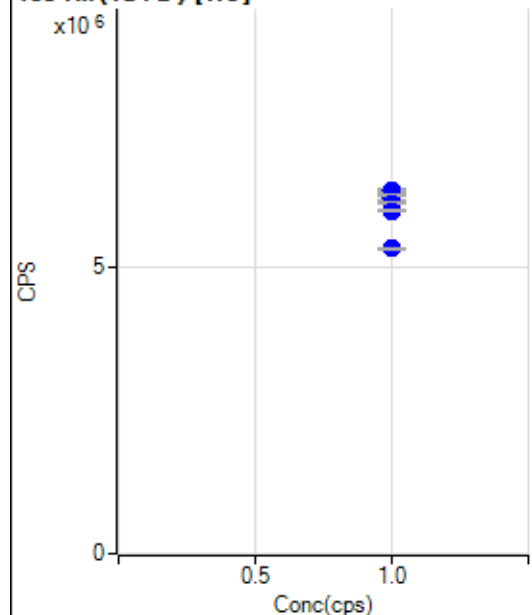
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16839996.55		A	0.3
2	☐	1.000		16567519.20		A	0.3
3	☐	1.000		16342387.39		A	0.3
4	☐	1.000		16810951.28		A	0.2
5	☐	1.000		17014848.50		A	1.0
6	☐	1.000		16885822.25		A	0.8
7	☐	1.000		16968237.38		A	0.4
8	☐	1.000		17011486.41		A	0.9
9	☐	1.000		16102839.76		A	0.7

89 Y (ISTD) [He]

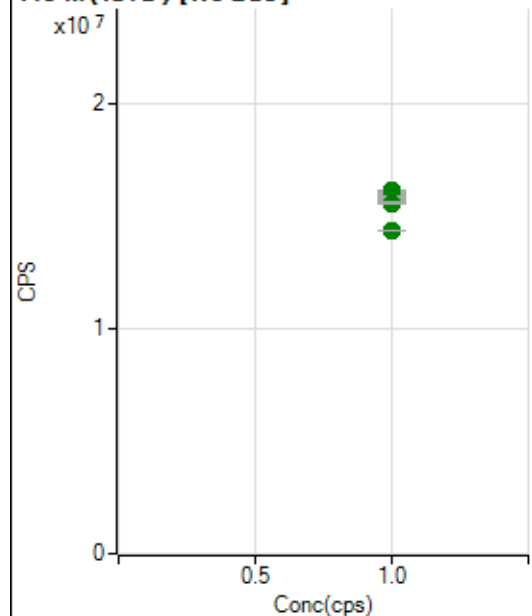
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1951865.18		P	0.2
2	☐	1.000		1979820.47		P	0.5
3	☐	1.000		1949429.41		P	0.3
4	☐	1.000		2001357.05		P	0.5
5	☐	1.000		2010390.09		P	0.8
6	☐	1.000		2012453.35		P	0.2
7	☐	1.000		2015443.31		P	0.3
8	☐	1.000		2018351.60		P	0.6
9	☐	1.000		1974699.03		P	0.3

103 Rh (ISTD) [No Gas]

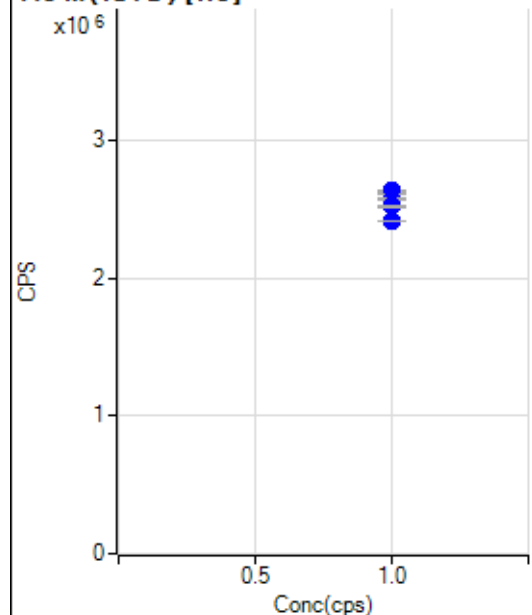
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14612007.27		A	0.9
2	☐	1.000		14357464.73		A	0.5
3	☐	1.000		14263641.29		A	0.5
4	☐	1.000		14574447.55		A	0.1
5	☐	1.000		14467081.75		A	0.7
6	☐	1.000		14257077.23		A	1.4
7	☐	1.000		14099635.73		A	0.5
8	☐	1.000		13898681.91		A	0.8
9	☐	1.000		12239186.21		A	0.1

103 Rh (ISTD) [He]

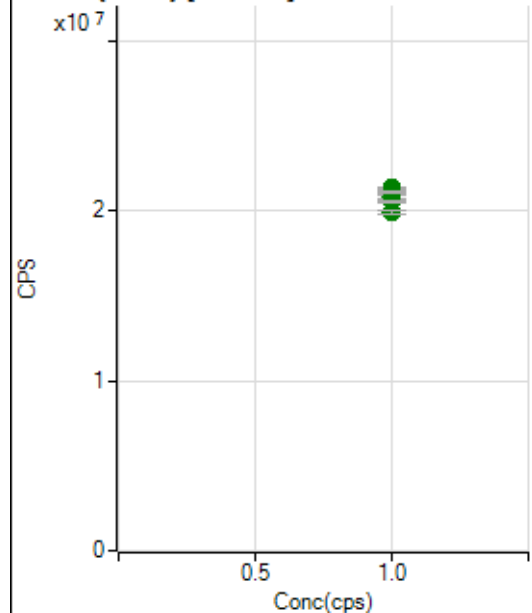
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6227535.05		P	0.2
2	☐	1.000		6306094.14		P	0.4
3	☐	1.000		6199313.38		P	0.6
4	☐	1.000		6323675.39		P	1.1
5	☐	1.000		6285859.49		P	0.8
6	☐	1.000		6262744.98		P	0.6
7	☐	1.000		6105717.55		P	0.5
8	☐	1.000		5978137.27		P	0.5
9	☐	1.000		5322664.23		P	0.4

115 In (ISTD) [No Gas]

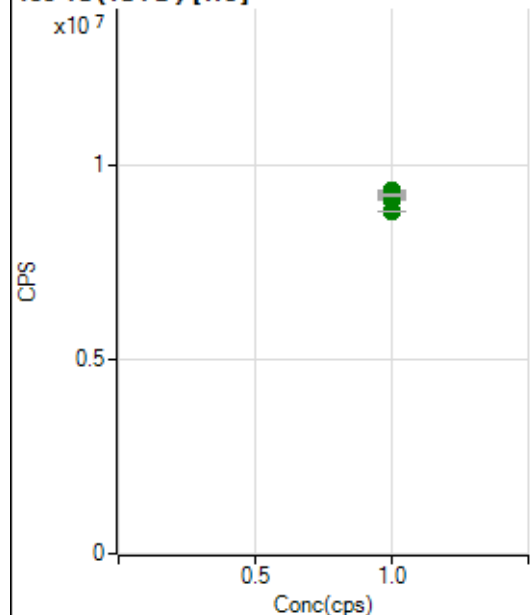
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16073860.67		A	0.5
2	☐	1.000		15883340.36		A	0.9
3	☐	1.000		15737539.92		A	0.4
4	☐	1.000		16141813.19		A	0.3
5	☐	1.000		16089184.95		A	0.3
6	☐	1.000		15954243.66		A	0.4
7	☐	1.000		15859743.28		A	0.5
8	☐	1.000		15601893.20		A	0.6
9	☐	1.000		14403645.65		A	0.1

115 In (ISTD) [He]

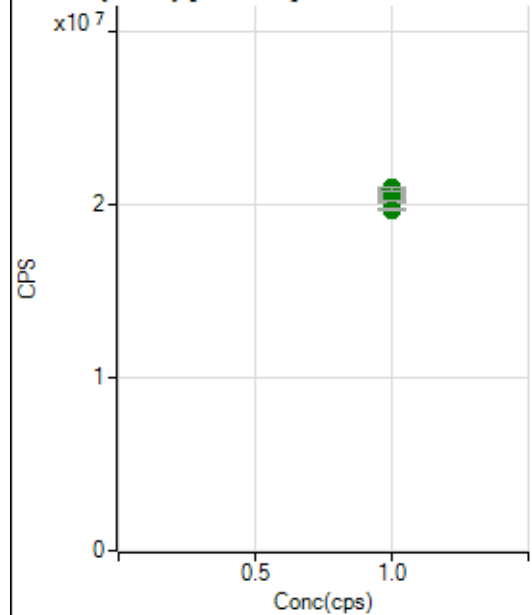
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2581432.74		P	0.2
2	☐	1.000		2628330.20		P	0.2
3	☐	1.000		2580402.98		P	1.1
4	☐	1.000		2638381.94		P	0.8
5	☐	1.000		2637329.98		P	0.2
6	☐	1.000		2614413.29		P	0.0
7	☐	1.000		2577657.29		P	0.2
8	☐	1.000		2528903.24		P	0.4
9	☐	1.000		2422084.23		P	0.3

159 Tb (ISTD) [No Gas]

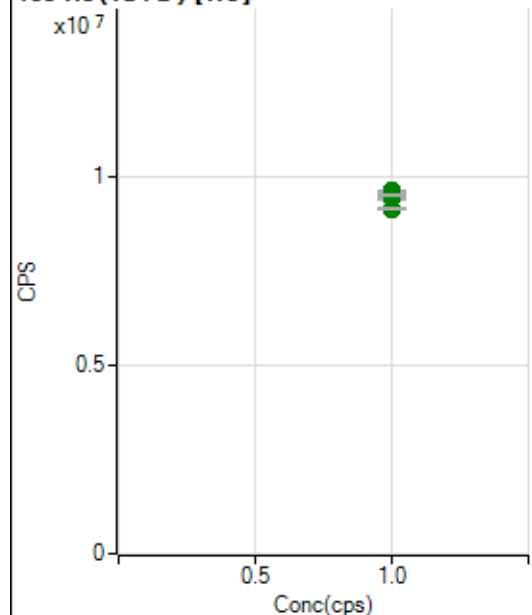
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		21059252.60		A	1.0
2	☐	1.000		20810116.77		A	0.8
3	☐	1.000		20540563.72		A	0.3
4	☐	1.000		21107283.99		A	0.2
5	☐	1.000		21331489.96		A	0.3
6	☐	1.000		21204239.82		A	0.8
7	☐	1.000		21235666.90		A	0.5
8	☐	1.000		21119765.94		A	0.4
9	☐	1.000		19902530.54		A	0.8

159 Tb (ISTD) [He]

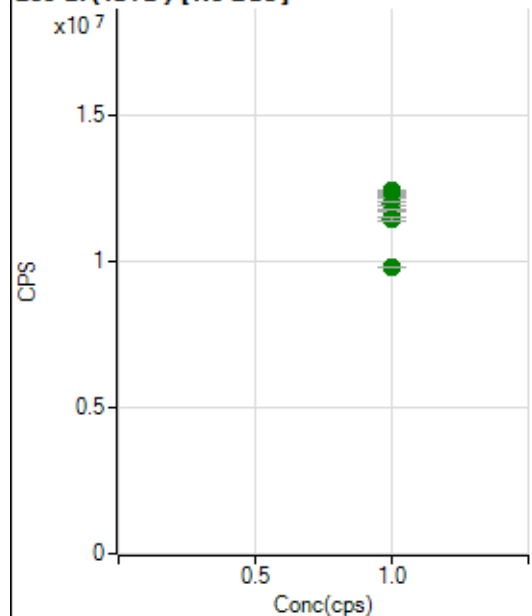
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9243380.42		A	1.1
2	☐	1.000		9194515.70		A	0.3
3	☐	1.000		9145451.11		A	0.8
4	☐	1.000		9247376.25		A	0.3
5	☐	1.000		9309479.24		A	0.1
6	☐	1.000		9361863.33		A	0.5
7	☐	1.000		9255801.60		A	0.5
8	☐	1.000		9250888.34		A	0.5
9	☐	1.000		8822879.17		A	0.3

165 Ho (ISTD) [No Gas]

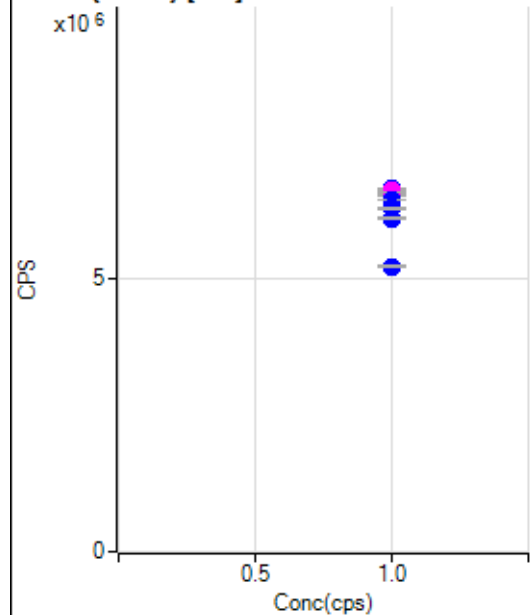
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		20624250.63		A	0.7
2	☐	1.000		20378596.63		A	0.3
3	☐	1.000		20160448.37		A	0.8
4	☐	1.000		20821880.15		A	0.1
5	☐	1.000		20945535.02		A	0.7
6	☐	1.000		20824924.60		A	0.4
7	☐	1.000		20932637.27		A	0.4
8	☐	1.000		20899196.13		A	0.9
9	☐	1.000		19703343.15		A	0.4

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9472380.62		A	1.1
2	☐	1.000		9489136.04		A	0.4
3	☐	1.000		9444561.80		A	0.6
4	☐	1.000		9536036.73		A	0.8
5	☐	1.000		9649407.15		A	0.6
6	☐	1.000		9591653.12		A	0.5
7	☐	1.000		9607794.58		A	0.3
8	☐	1.000		9536455.13		A	0.7
9	☐	1.000		9172997.43		A	0.7

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12429885.72		A	0.4
2	☐	1.000		12266958.43		A	0.7
3	☐	1.000		12182406.62		A	0.4
4	☐	1.000		12318144.19		A	0.2
5	☐	1.000		12182487.53		A	0.2
6	☐	1.000		12012737.94		A	1.0
7	☐	1.000		11746599.82		A	0.5
8	☐	1.000		11452029.83		A	0.9
9	☐	1.000		9800452.22		A	0.3

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6533360.74		P	0.5
2	☐	1.000		6652851.43		P	0.8
3	☐	1.000		6598526.71		M	0.4
4	☐	1.000		6615709.90		M	0.3
5	☐	1.000		6589580.46		M	0.3
6	☐	1.000		6458852.99		P	0.2
7	☐	1.000		6294763.87		P	0.2
8	☐	1.000		6108695.15		P	0.8
9	☐	1.000		5233690.58		P	0.7

US EPA Tune Check Sample Report

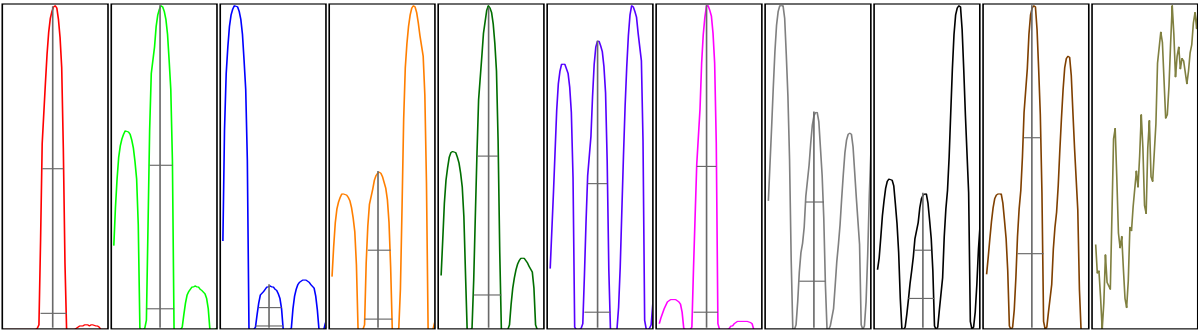
Batch Folder D:\ICP-MS Data\P7103019 MS-2.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	17054	0.66	5.00	
24	169417	0.68	5.00	
25	22487	0.72	5.00	
26	26278	0.39	5.00	
59	124820	0.69	5.00	
113	16410	0.68	5.00	
115	197339	0.23	5.00	
206	46051	0.65	5.00	
207	47256	0.57	5.00	
208	100368	0.53	5.00	
220	74	2.44		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	16907	16975	17067	17138	17182
24	167915	168543	169785	170639	170200
25	22298	22357	22610	22490	22681
26	26187	26226	26202	26375	26400
59	123855	124127	124843	125304	125972
113	16222	16410	16459	16520	16438
115	197071	196976	197983	197629	197036
206	45703	45970	46132	46512	45939
207	46925	47042	47359	47594	47362
208	99994	99705	101084	100477	100580
220	76	75	72	72	75

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	28701	8.95	8.9 - 9.1		0.781	0.900	
24	267321	23.90	23.9 - 24.1		0.788	0.900	
25	35562	24.90	24.9 - 25.1		0.789	0.900	
26	41202	25.90	25.9 - 26.1		0.788	0.900	
59	209827	58.95	58.9 - 59.1		0.794	0.900	
113	29741	112.95	112.9 - 113.1		0.774	0.900	
115	360975	114.95	114.9 - 115.1		0.734	0.900	
206	84308	205.90	205.9 - 206.1		0.762	0.900	
207	76389	206.90	206.9 - 207.1		0.721	0.900	
208	181987	207.90	207.9 - 208.1		0.745	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	7.2	V	Deflect	13.4	V
Extract 2	-125.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-55	V	Cell Exit	-50	V			

Cell Parameters

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

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	28643	0.50	
89	23020	0.63	
205	37927	0.65	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	28865	28651	28664	28512	28523
89	23248	23080	22912	22952	22907
205	38050	38298	37757	37706	37824

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	7.2	V	Deflect	2.6	V
Extract 2	-130.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-60	V	Cell Exit	-60	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	Yes		OctP Bias	-18.0	V	Energy Discrimination		5.0 V
He Flow	4.1	mL/min	OctP RF	190	V			