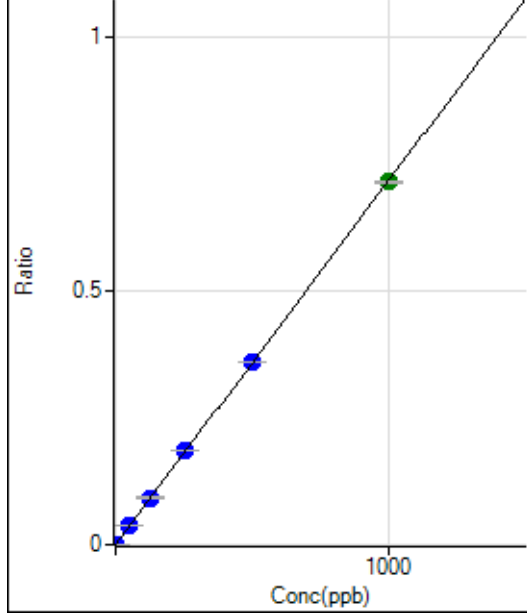


Calibration for 011ICV.d

Batch Folder: D:\ICP-MS Data\P7012820-MS.b\
 Analysis File: P7012820-MS.batch.bin
 DA Date-Time: 2020-01-29 03:37:30
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2020-01-28 14:39:26
2	004CALS.d	S02	2020-01-28 14:43:07
3	005CALS.d	S03	2020-01-28 14:48:03
4	006CALS.d	S04	2020-01-28 14:52:16
5	007CALS.d	S05	2020-01-28 14:56:10
6	008CALS.d	S06	2020-01-28 15:00:02
7	009CALS.d	S07	2020-01-28 15:03:54
8	010CALS.d	S08	2020-01-28 15:07:48

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	120.37	0.0000	P	13.1
2	☐	1.000	0.970	4925.03	0.0007	P	1.5
3	☐	50.000	50.956	247073.80	0.0365	P	0.5
4	☐	125.000	129.272	611043.23	0.0926	P	1.0
5	☐	250.000	257.425	1178434.29	0.1843	P	0.6
6	☐	500.000	500.771	2258040.82	0.3585	P	0.2
7	☐	1000.000	997.176	4447356.81	0.7139	A	0.6
8	☐			546.32	0.0001	P	14.6

$$y = 7.1592\text{E-}004 * x + 1.7465\text{E-}005$$

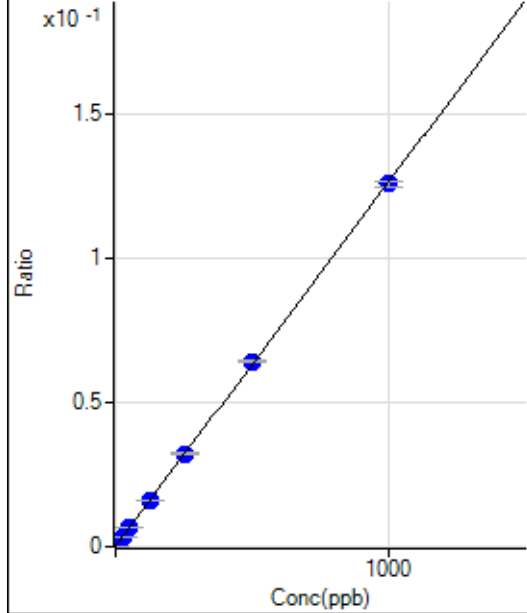
$$R = 1.0000$$

$$DL = 0.009621$$

$$BEC = 0.0244$$

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	1127.87	0.0002	P	4.6
2	☐	25.000	23.698	21833.21	0.0032	P	4.0
3	☐	50.000	50.059	43884.11	0.0065	P	2.8
4	☐	125.000	126.742	106694.83	0.0162	P	1.7
5	☐	250.000	252.871	205143.06	0.0321	P	1.7
6	☐	500.000	506.910	404047.94	0.0642	P	0.9
7	☐	1000.000	995.639	783988.93	0.1259	P	1.7
8	☐			19301.97	0.0033	P	8.8

$$y = 1.2624\text{E-}004 * x + 1.6369\text{E-}004$$

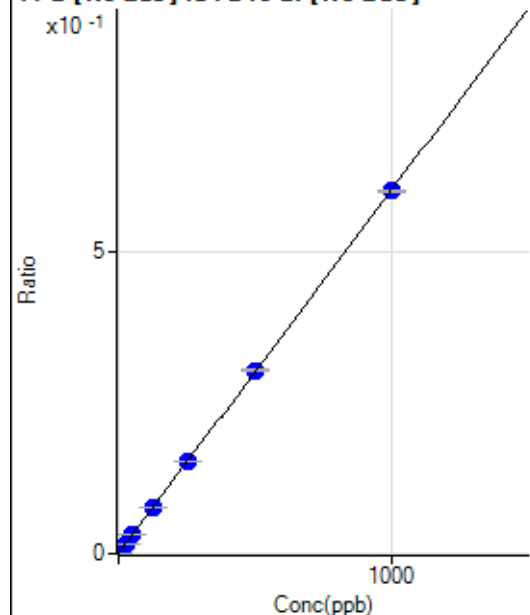
$$R = 1.0000$$

$$DL = 0.1808$$

$$BEC = 1.297$$

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	5520.68	0.0008	P	2.5
2	☐	25.000	23.619	103895.34	0.0150	P	1.5
3	☐	50.000	49.344	206425.40	0.0305	P	0.9
4	☐	125.000	126.855	509187.56	0.0771	P	1.4
5	☐	250.000	252.706	977404.37	0.1529	P	1.7
6	☐	500.000	502.667	1910077.97	0.3033	P	1.2
7	☐	1000.000	997.825	3745600.43	0.6013	P	0.5
8	☐			91735.09	0.0157	P	9.3

$$y = 6.0177\text{E-}004 * x + 8.0118\text{E-}004$$

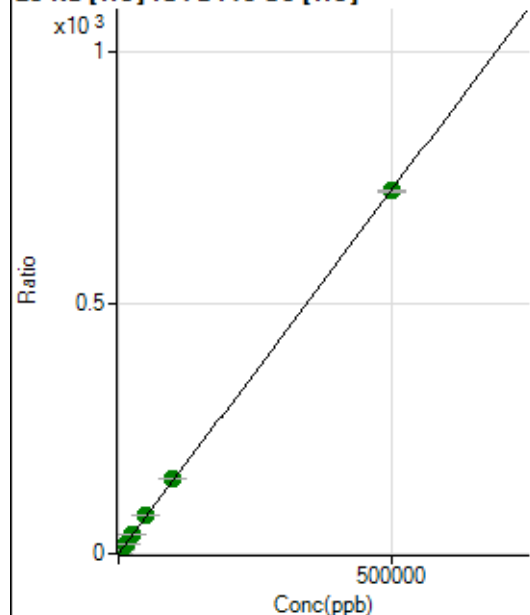
$$R = 1.0000$$

$$DL = 0.1017$$

$$BEC = 1.331$$

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	27500.99	0.0389	P	1.6
2	☐	500.000	445.303	489776.88	0.6841	P	5.3
3	☐	5000.000	5164.714	5085897.47	7.5225	A	0.9
4	☐	12500.000	13248.274	12650330.93	19.2355	A	0.5
5	☐	25000.000	26309.708	24864154.55	38.1614	A	0.2
6	☐	50000.000	51984.767	48684592.75	75.3644	A	0.2
7	☐	100000.00	102972.50	99694431.40	149.2452	A	0.3
8	☐	500000.00	499121.23	531975789.67	723.2613	A	0.4

$$y = 0.0014 * x + 0.0389$$

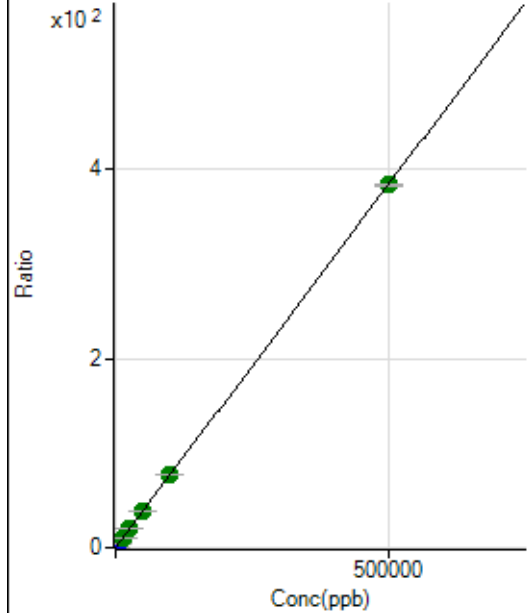
$$R = 1.0000$$

$$DL = 1.269$$

$$BEC = 26.84$$

Weight: <None>

Min Conc: 0

24 Mg [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	900.07	0.0013	P	10.2
2	☐	500.000	429.177	236725.61	0.3306	P	8.9
3	☐	5000.000	5226.813	2712428.36	4.0119	P	1.0
4	☐	12500.000	13280.861	6702642.08	10.1919	A	0.8
5	☐	25000.000	26126.943	13063022.86	20.0490	A	0.2
6	☐	50000.000	51512.014	25534393.45	39.5274	A	0.3
7	☐	100000.00	101417.27	51982406.72	77.8207	A	0.7
8	☐	500000.00	499487.27	281908759.08	383.2673	A	0.6

$$y = 7.6732\text{E-}004 * x + 0.0013$$

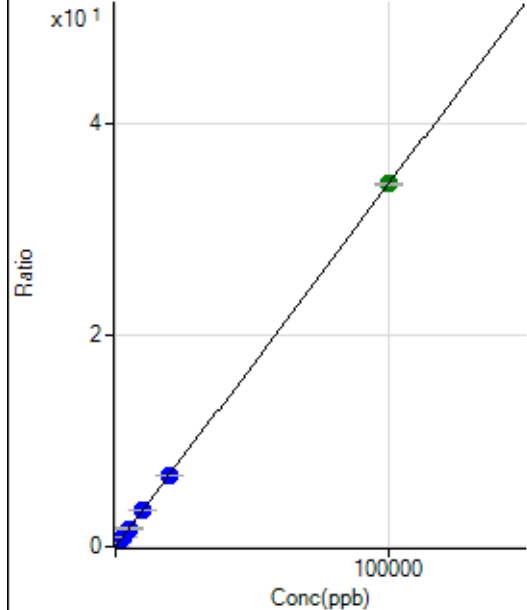
$$R = 1.0000$$

$$DL = 0.5073$$

$$BEC = 1.659$$

Weight: <None>

Min Conc: 0

27 Al [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	122.23	0.0002	P	24.5
2	☐	20.000	15.970	4036.84	0.0056	P	10.5
3	☐	1000.000	997.873	230937.51	0.3416	P	1.2
4	☐	2500.000	2558.009	575665.39	0.8753	P	0.5
5	☐	5000.000	5023.156	1119816.79	1.7187	P	0.8
6	☐	10000.000	9939.604	2196857.97	3.4007	P	0.1
7	☐	20000.000	19517.453	4460460.95	6.6776	P	0.7
8	☐	100000.00	100099.96	25189647.09	34.2468	A	0.4

$$y = 3.4212\text{E-}004 * x + 1.7298\text{E-}004$$

$$R = 1.0000$$

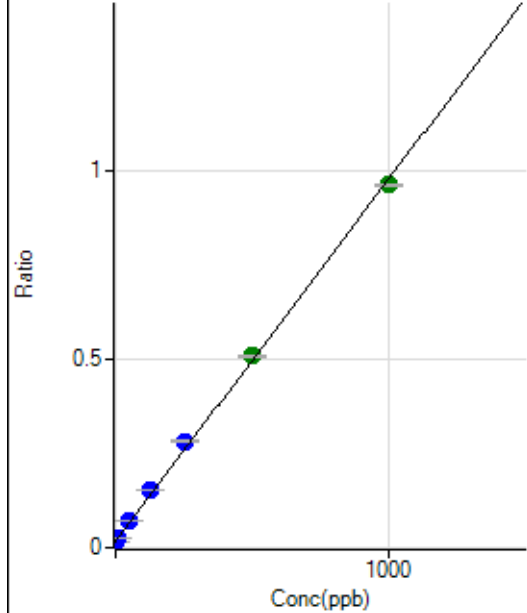
$$DL = 0.3713$$

$$BEC = 0.5056$$

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	285644.22	0.0168	P	0.9
2	☐	10.000	10.067	451037.72	0.0264	P	0.5
3	☐	50.000	55.857	1166435.23	0.0704	P	0.2
4	☐	125.000	139.966	2440172.26	0.1511	P	0.4
5	☐	250.000	276.854	4486026.06	0.2824	P	0.7
6	☐	500.000	511.881	7939395.49	0.5079	A	0.8
7	☐	1000.000	985.182	15334163.19	0.9620	A	0.6
8	☐			1066170.80	0.0693	P	0.9

$$y = 9.5939\text{E-}004 * x + 0.0168$$

$$R = 0.9994$$

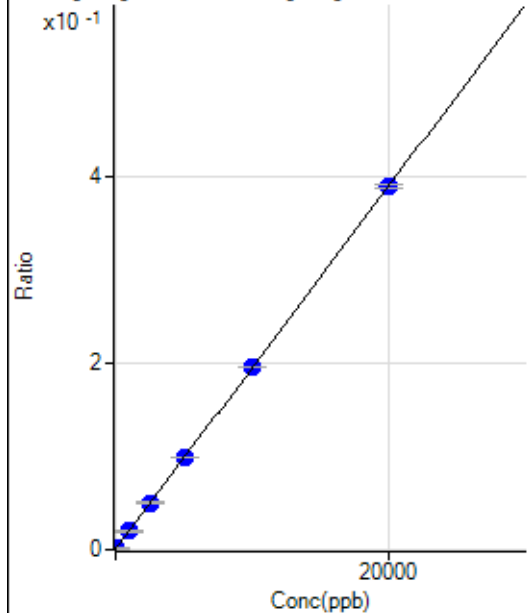
$$DL = 0.4714$$

$$BEC = 17.5$$

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	-15.728	333.35	0.0005	P	32.4
2	☐	0.000	15.728	775.05	0.0011	P	15.3
3	☐	1000.000	971.603	13281.41	0.0196	P	1.9
4	☐	2500.000	2543.840	32998.48	0.0502	P	1.4
5	☐	5000.000	5055.930	64476.09	0.0990	P	1.0
6	☐	10000.000	10043.777	126497.56	0.1958	P	0.6
7	☐	20000.000	19960.069	259438.72	0.3884	P	0.9
8	☐			452.81	0.0006	P	19.5

$$y = 1.9419\text{E-}005 * x + 7.7646\text{E-}004$$

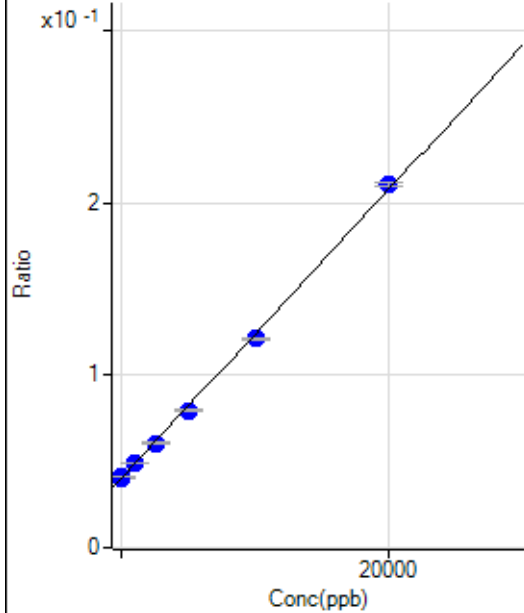
$$R = 1.0000$$

$$DL = 24.52$$

$$BEC = 39.98$$

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	-55.406	680747.32	0.0400	P	0.4
2	☐	0.000	55.406	698160.30	0.0409	P	1.0
3	☐	1000.000	1066.597	819090.70	0.0494	P	0.4
4	☐	2500.000	2390.120	977630.79	0.0605	P	1.2
5	☐	5000.000	4655.842	1263292.45	0.0795	P	0.7
6	☐	10000.000	9666.925	1900327.32	0.1216	P	0.9
7	☐	20000.000	20262.982	3354568.09	0.2104	P	0.9
8	☐			630654.18	0.0410	P	1.2

$$y = 8.3884\text{E-}006 * x + 0.0405$$

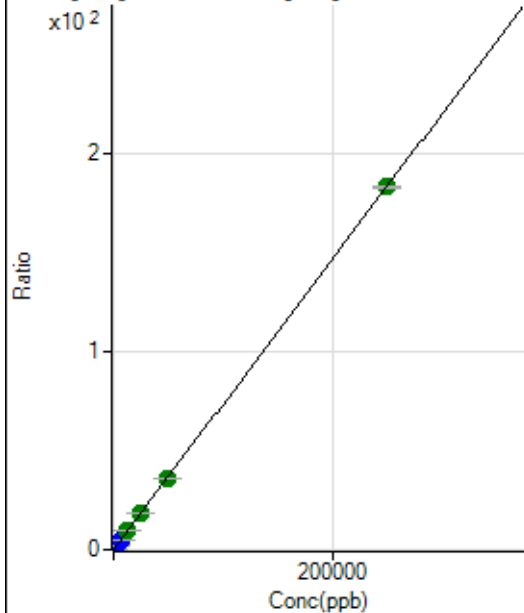
$$R = 0.9996$$

$$DL = 106$$

$$BEC = 4825$$

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	34616.42	0.0489	P	1.1
2	☐	500.000	440.891	265906.15	0.3714	P	5.0
3	☐	2500.000	2530.149	1284263.99	1.8995	P	1.0
4	☐	6250.000	6457.037	3138034.14	4.7716	P	0.8
5	☐	12500.000	12599.756	6036338.63	9.2645	A	0.3
6	☐	25000.000	24805.967	11752015.72	18.1921	A	0.5
7	☐	50000.000	49243.805	24091696.37	36.0660	A	0.3
8	☐	250000.00	250160.29	134614655.79	183.0170	A	0.7

$$y = 7.3140\text{E-}004 * x + 0.0489$$

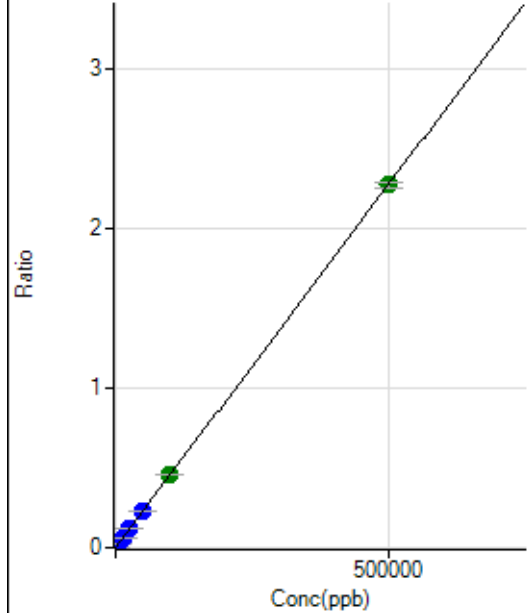
$$R = 1.0000$$

$$DL = 2.118$$

$$BEC = 66.92$$

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	352.80	0.0000	P	9.1
2	☐	500.000	498.379	39105.39	0.0023	P	1.1
3	☐	5000.000	5129.865	387986.71	0.0234	P	0.9
4	☐	12500.000	13081.045	963669.23	0.0597	P	0.4
5	☐	25000.000	26108.042	1891184.31	0.1191	P	0.4
6	☐	50000.000	51209.884	3650171.52	0.2335	P	0.5
7	☐	100000.00	101419.40	7371114.23	0.4624	A	0.7
8	☐	500000.00	499523.90	35006532.38	2.2775	A	1.7

$$y = 4.5592\text{E-}006 * x + 2.0728\text{E-}005$$

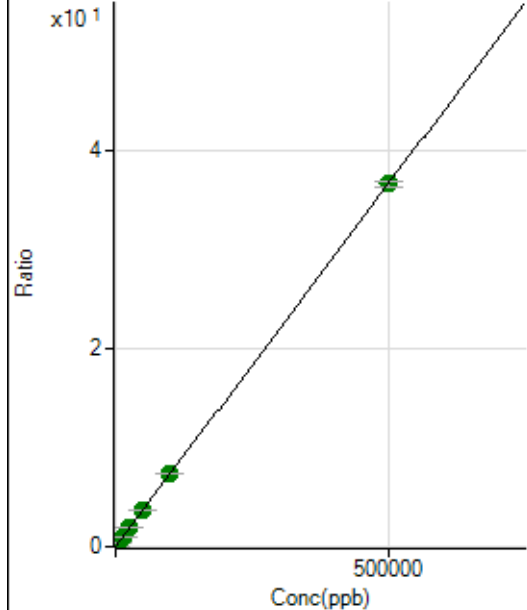
$$R = 1.0000$$

$$DL = 1.244$$

$$BEC = 4.546$$

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	14966.61	0.0009	P	3.8
2	☐	500.000	498.428	637007.33	0.0374	P	0.9
3	☐	5000.000	5053.933	6143870.15	0.3707	A	0.5
4	☐	12500.000	12915.265	15279436.28	0.9459	A	0.1
5	☐	25000.000	25879.698	30095832.62	1.8946	A	0.3
6	☐	50000.000	51069.238	58431368.67	3.7378	A	0.1
7	☐	100000.00	100518.16	117260192.90	7.3561	A	0.6
8	☐	500000.00	499734.53	562055640.34	36.5678	A	1.9

$$y = 7.3173\text{E-}005 * x + 8.7973\text{E-}004$$

$$R = 1.0000$$

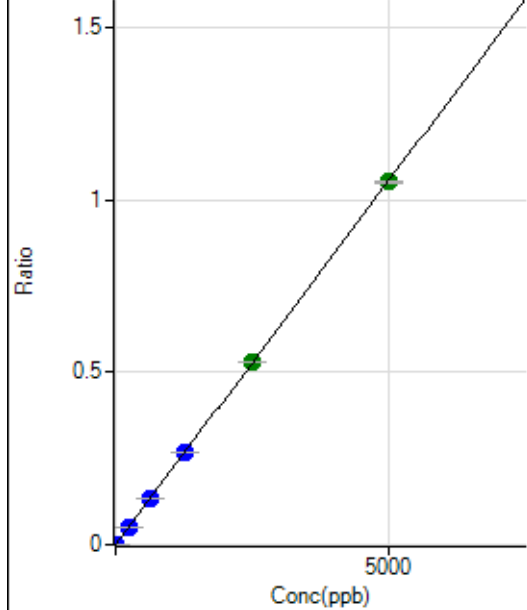
$$DL = 1.376$$

$$BEC = 12.02$$

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	211.12	0.0000	P	11.6
2	☐	5.000	4.957	18072.87	0.0011	P	1.9
3	☐	250.000	249.171	872654.26	0.0527	P	0.7
4	☐	625.000	640.178	2184843.52	0.1353	P	0.6
5	☐	1250.000	1275.832	4281835.95	0.2695	P	0.6
6	☐	2500.000	2508.812	8285818.16	0.5300	A	0.1
7	☐	5000.000	4987.280	16795959.40	1.0536	A	0.3
8	☐			4323.06	0.0003	P	3.8

$$y = 2.1126E-004 * x + 1.2403E-005$$

$$R = 1.0000$$

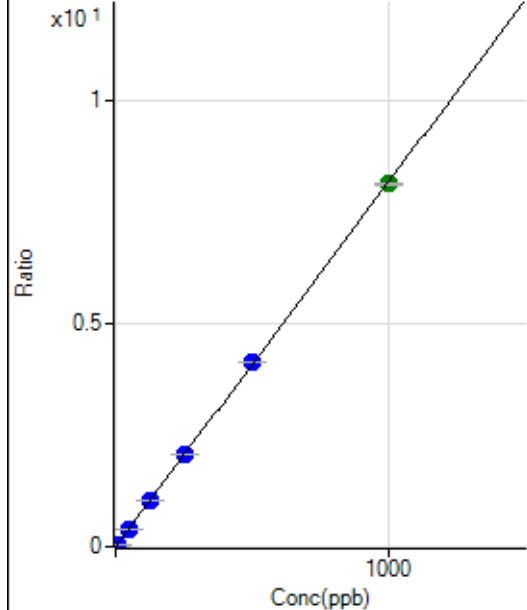
$$DL = 0.02047$$

$$BEC = 0.05871$$

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	31.11	0.0000	P	30.4
2	☐	5.000	4.180	24523.00	0.0342	P	8.6
3	☐	50.000	49.690	274923.41	0.4066	P	1.0
4	☐	125.000	128.670	692433.75	1.0529	P	0.7
5	☐	250.000	255.152	1360316.99	2.0878	P	0.3
6	☐	500.000	506.409	2676807.81	4.1437	P	0.3
7	☐	1000.000	995.068	5438883.88	8.1422	A	0.4
8	☐			2234.65	0.0030	P	3.5

$$y = 0.0082 * x + 4.3936E-005$$

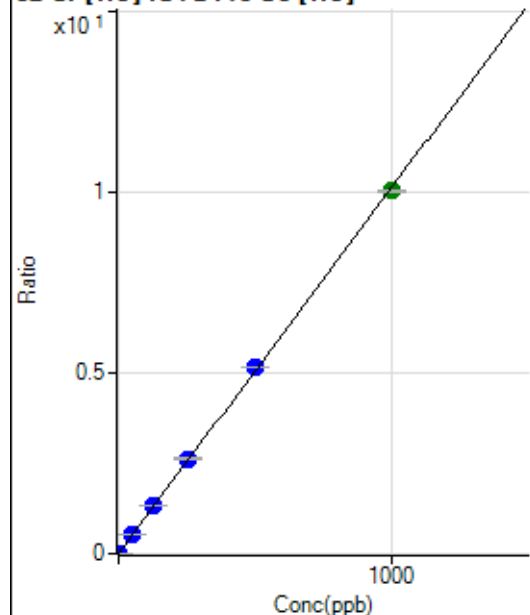
$$R = 0.9999$$

$$DL = 0.004902$$

$$BEC = 0.00537$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2096.85	0.0030	P	3.0
2	☐	2.000	1.640	14019.09	0.0196	P	7.1
3	☐	50.000	51.153	352437.02	0.5213	P	1.1
4	☐	125.000	131.951	881229.75	1.3400	P	0.8
5	☐	250.000	259.635	1716017.34	2.6338	P	0.2
6	☐	500.000	510.226	3341651.44	5.1729	P	0.3
7	☐	1000.000	991.552	6713182.05	10.0500	A	0.8
8	☐			126944.03	0.1726	P	0.2

$$y = 0.0101 * x + 0.0030$$

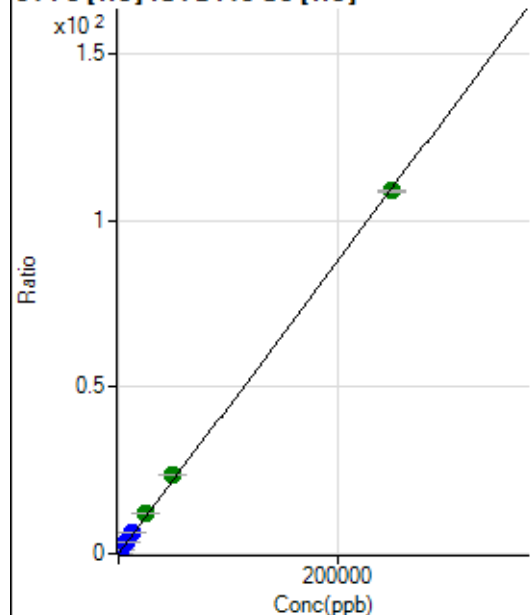
$$R = 0.9999$$

$$DL = 0.02651$$

$$BEC = 0.2926$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1077.83	0.0015	P	5.9
2	☐	50.000	48.424	16256.06	0.0227	P	9.5
3	☐	2500.000	2861.338	847040.68	1.2528	P	1.0
4	☐	6250.000	7402.374	2129879.91	3.2387	P	1.1
5	☐	12500.000	14471.302	4124268.91	6.3301	P	0.6
6	☐	25000.000	27799.856	7854488.22	12.1589	A	0.4
7	☐	50000.000	54634.222	15961067.49	23.8940	A	0.2
8	☐	250000.00	248662.18	79983726.74	108.7457	A	0.2

$$y = 4.3732E-004 * x + 0.0015$$

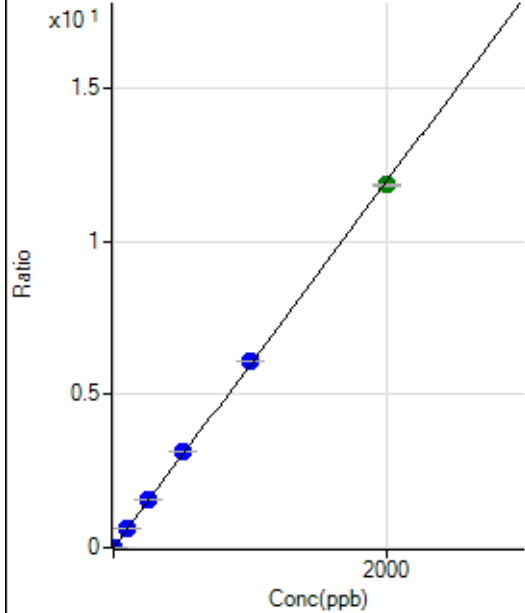
$$R = 0.9998$$

$$DL = 0.6195$$

$$BEC = 3.486$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	103.34	0.0001	P	3.8
2	☐	1.000	0.874	3847.24	0.0054	P	8.3
3	☐	100.000	102.420	414404.29	0.6129	P	1.2
4	☐	250.000	264.601	1041237.18	1.5833	P	0.7
5	☐	500.000	522.335	2036275.63	3.1253	P	0.4
6	☐	1000.000	1020.691	3945105.22	6.1070	P	0.2
7	☐	2000.000	1982.125	7921911.83	11.8594	A	0.7
8	☐			39521.94	0.0537	P	0.8

$$y = 0.0060 * x + 1.4614E-004$$

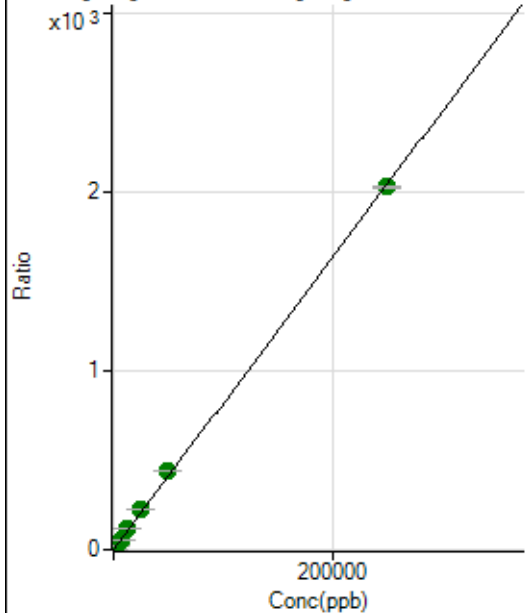
$$R = 0.9998$$

$$DL = 0.00278$$

$$BEC = 0.02443$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	10963.63	0.0155	P	2.9
2	☐	50.000	45.135	274988.47	0.3841	P	8.4
3	☐	2500.000	2756.084	15225470.02	22.5199	A	1.0
4	☐	6250.000	7116.878	38227464.74	58.1272	A	0.6
5	☐	12500.000	14032.323	74663994.26	114.5942	A	0.1
6	☐	25000.000	27419.048	144638797.68	223.9014	A	0.2
7	☐	50000.000	53880.331	293891717.68	439.9668	A	0.5
8	☐	250000.00	248881.18	1494723574.1	2,032.215	A	0.3

$$y = 0.0082 * x + 0.0155$$

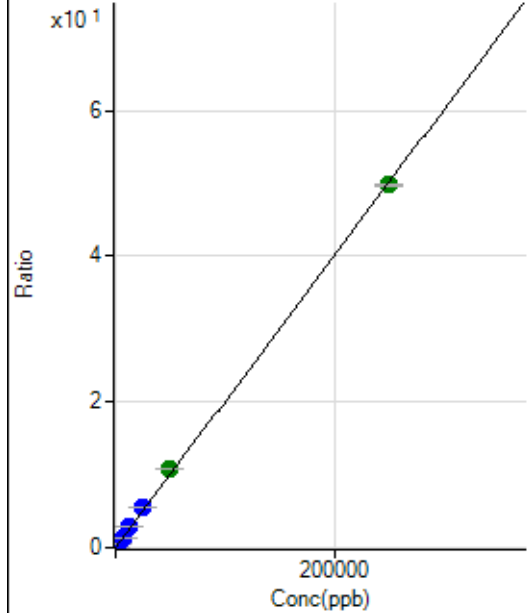
$$R = 0.9998$$

$$DL = 0.1657$$

$$BEC = 1.899$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	379.65	0.0005	P	2.4
2	☐	50.000	46.837	7100.06	0.0099	P	7.6
3	☐	2500.000	2789.375	378051.73	0.5592	P	0.7
4	☐	6250.000	7211.421	950159.78	1.4448	P	0.9
5	☐	12500.000	14260.076	1861068.20	2.8565	P	0.7
6	☐	25000.000	28033.895	3627209.23	5.6150	P	0.4
7	☐	50000.000	54338.656	7269718.56	10.8831	A	0.7
8	☐	250000.00	248713.94	36637119.34	49.8113	A	0.2

$$y = 2.0027E-004 * x + 5.3678E-004$$

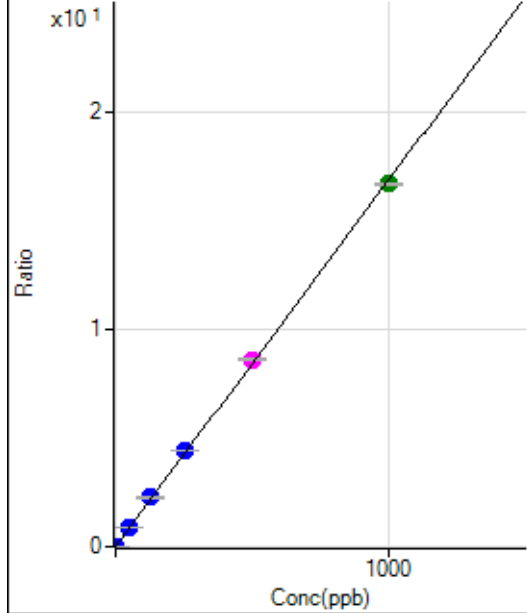
$$R = 0.9998$$

$$DL = 0.1964$$

$$BEC = 2.68$$

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	201.11	0.0003	P	7.9
2	☐	1.000	0.835	10285.99	0.0144	P	9.5
3	☐	50.000	52.223	595644.04	0.8810	P	1.4
4	☐	125.000	133.973	1486067.63	2.2596	P	0.3
5	☐	250.000	262.917	2889063.78	4.4341	P	0.6
6	☐	500.000	510.715	5564030.47	8.6130	M	0.6
7	☐	1000.000	990.181	11154613.72	16.6988	A	0.5
8	☐			22086.83	0.0300	P	1.4

$$y = 0.0169 * x + 2.8443E-004$$

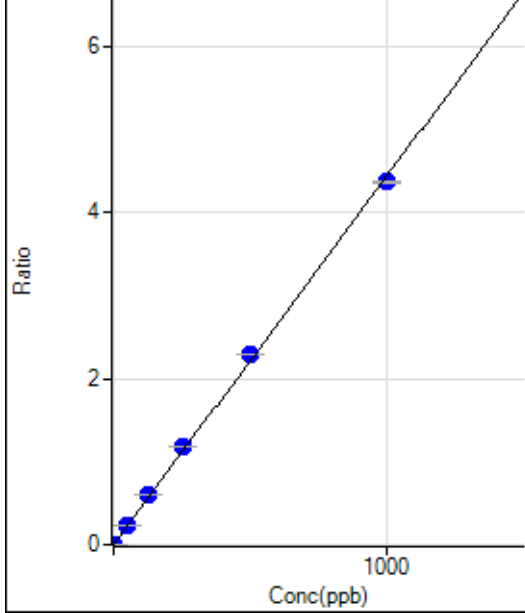
$$R = 0.9998$$

$$DL = 0.004015$$

$$BEC = 0.01687$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	82.22	0.0001	P	9.1
2	☐	1.000	0.967	3151.50	0.0044	P	7.5
3	☐	50.000	53.440	160266.65	0.2370	P	1.0
4	☐	125.000	136.670	398586.19	0.6060	P	0.3
5	☐	250.000	267.030	771425.56	1.1840	P	0.6
6	☐	500.000	516.831	1480323.42	2.2915	P	0.6
7	☐	1000.000	985.696	2919268.78	4.3703	P	0.4
8	☐			36351.87	0.0494	P	0.7

$$y = 0.0044 * x + 1.1631E-004$$

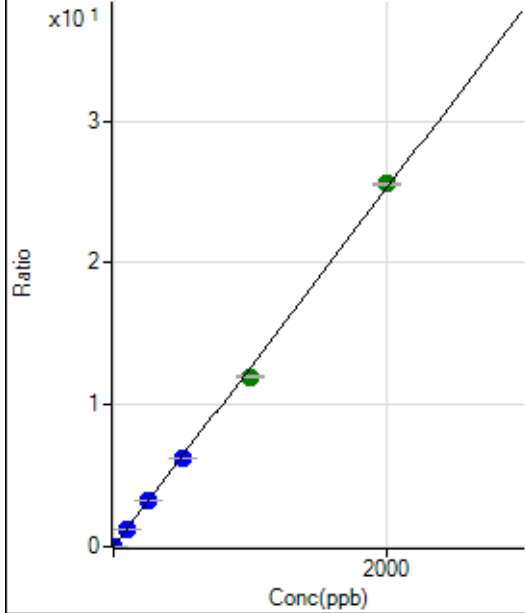
$$R = 0.9996$$

$$DL = 0.007157$$

$$BEC = 0.02623$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1361.20	0.0019	P	7.7
2	☐	2.000	1.637	16172.48	0.0226	P	6.4
3	☐	100.000	99.326	849102.11	1.2559	P	1.3
4	☐	250.000	254.763	2116429.50	3.2182	P	0.7
5	☐	500.000	496.267	4083187.78	6.2671	P	0.7
6	☐	1000.000	949.586	7745538.84	11.9900	A	0.5
7	☐	2000.000	2025.579	17082799.05	25.5739	A	0.6
8	☐			37717.58	0.0513	P	1.2

$$y = 0.0126 * x + 0.0019$$

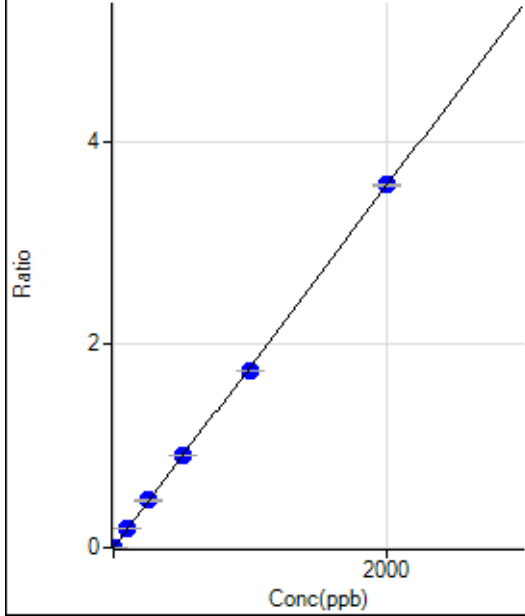
$$R = 0.9995$$

$$DL = 0.03533$$

$$BEC = 0.1525$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	501.13	0.0007	P	12.5
2	☐	2.000	2.526	3723.87	0.0052	P	6.7
3	☐	100.000	101.532	122685.39	0.1815	P	1.2
4	☐	250.000	260.487	305434.15	0.4644	P	0.7
5	☐	500.000	510.306	592350.69	0.9092	P	0.9
6	☐	1000.000	980.600	1128172.57	1.7464	P	0.4
7	☐	2000.000	2005.736	2385578.84	3.5714	P	0.8
8	☐			27464.87	0.0373	P	1.3

$$y = 0.0018 * x + 7.0859E-004$$

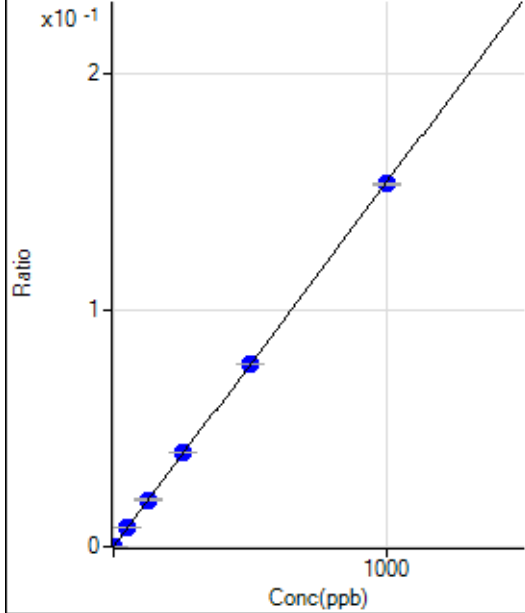
$$R = 0.9999$$

$$DL = 0.1489$$

$$BEC = 0.398$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	20.99	0.0000	P	22.1
2	☐	1.000	0.877	672.86	0.0001	P	9.7
3	☐	50.000	50.574	35992.61	0.0078	P	1.5
4	☐	125.000	129.087	89975.92	0.0199	P	1.0
5	☐	250.000	257.325	176118.17	0.0396	P	0.7
6	☐	500.000	502.888	342995.94	0.0774	P	0.2
7	☐	1000.000	996.185	691602.41	0.1533	P	0.5
8	☐			371.61	0.0001	P	5.7

$$y = 1.5392E-004 * x + 4.4087E-006$$

$$R = 1.0000$$

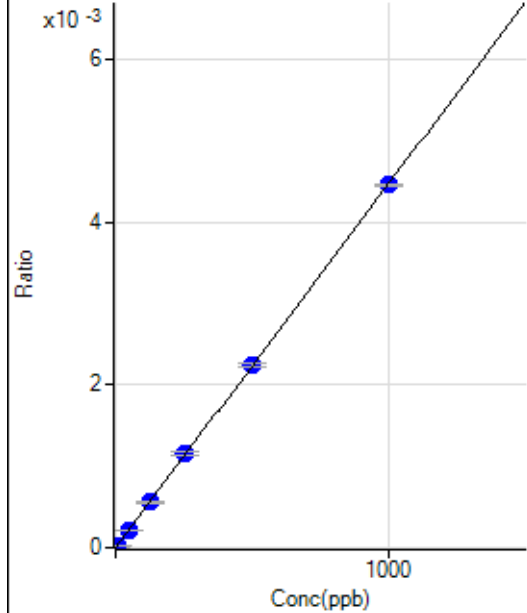
$$DL = 0.01898$$

$$BEC = 0.02864$$

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	1.11	0.0000	P	173.
2	☐	5.000	4.676	102.23	0.0000	P	40.2
3	☐	50.000	48.892	1012.28	0.0002	P	2.9
4	☐	125.000	124.286	2519.15	0.0006	P	5.3
5	☐	250.000	258.144	5136.55	0.0012	P	3.9
6	☐	500.000	501.359	9941.34	0.0022	P	2.7
7	☐	1000.000	997.431	20134.17	0.0045	P	0.5
8	☐			6.67	0.0000	P	131.

$$y = 4.4750\text{E-}006 * x + 2.3322\text{E-}007$$

$$R = 1.0000$$

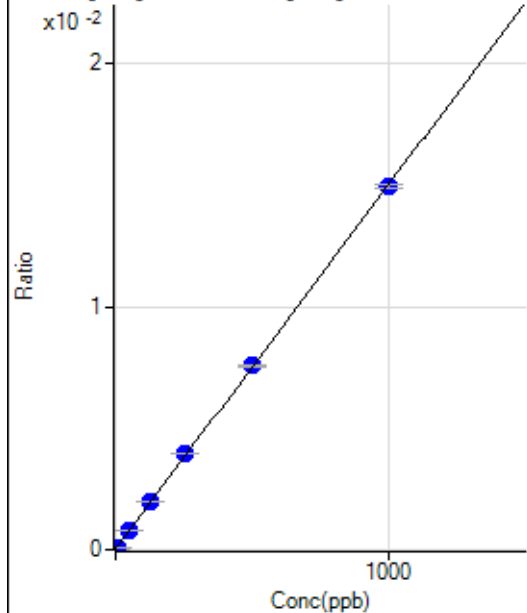
$$DL = 0.2708$$

$$BEC = 0.05212$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	99.38	0.0000	P	13.4
2	☐	5.000	4.896	454.95	0.0001	P	9.3
3	☐	50.000	51.126	3636.91	0.0008	P	1.9
4	☐	125.000	131.374	9008.42	0.0020	P	1.6
5	☐	250.000	262.029	17552.64	0.0039	P	1.3
6	☐	500.000	504.030	33560.97	0.0076	P	1.1
7	☐	1000.000	994.125	67287.12	0.0149	P	1.1
8	☐			132.72	0.0000	P	5.5

$$y = 1.4986\text{E-}005 * x + 2.0880\text{E-}005$$

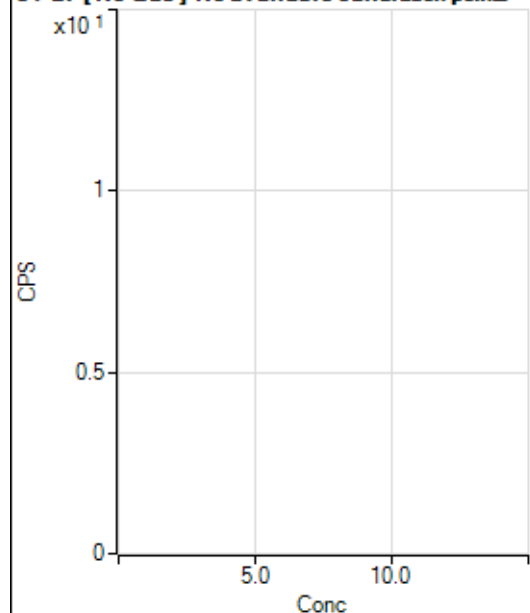
$$R = 0.9999$$

$$DL = 0.5583$$

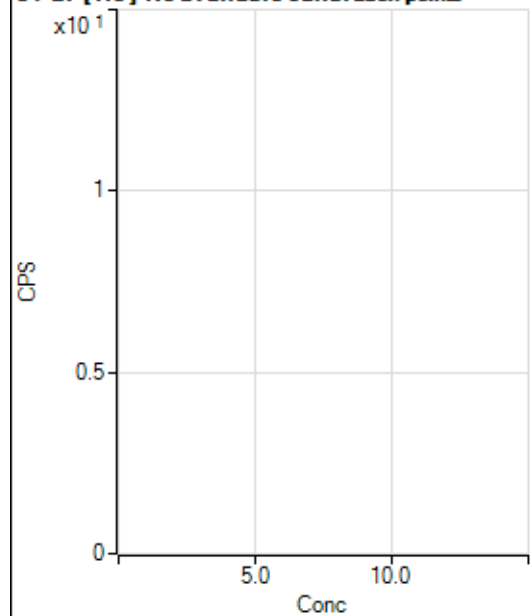
$$BEC = 1.393$$

Weight: <None>

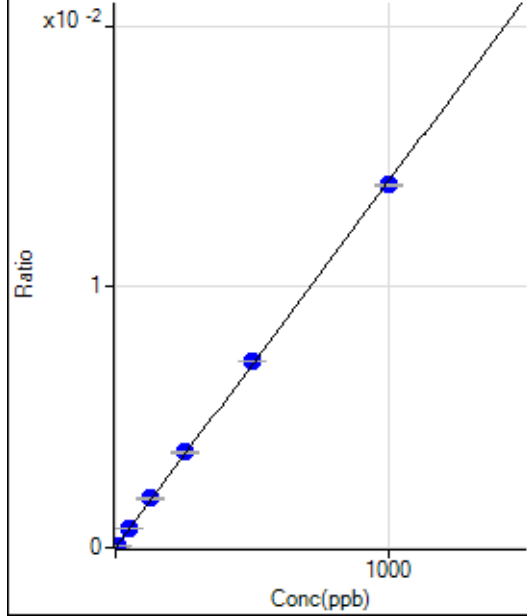
Min Conc: 0

81 Br [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			58900.32		P	2.3
2	☐			58629.22		P	1.6
3	☐			57620.57		P	1.2
4	☐			56199.80		P	2.0
5	☐			56458.25		P	2.5
6	☐			54632.43		P	2.5
7	☐			55945.40		P	0.3
8	☐			60414.74		P	1.0

81 Br [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			136.82		P	40.3
2	☐			100.11		P	40.0
3	☐			53.39		P	21.7
4	☐			70.07		P	37.8
5	☐			60.06		P	60.1
6	☐			66.73		P	22.9
7	☐			73.41		P	34.3
8	☐			106.78		P	28.6

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	29.05	0.0000	P	65.3
2	☐	5.000	5.430	2887.33	0.0001	P	1.8
3	☐	50.000	52.353	26951.83	0.0007	P	0.5
4	☐	125.000	134.358	68098.05	0.0019	P	0.7
5	☐	250.000	261.195	131827.98	0.0037	P	1.2
6	☐	500.000	510.138	253495.63	0.0072	P	0.3
7	☐	1000.000	990.843	498301.44	0.0139	P	0.8
8	☐			473.70	0.0000	P	13.5

$$y = 1.4046E-005 * x + 7.7493E-007$$

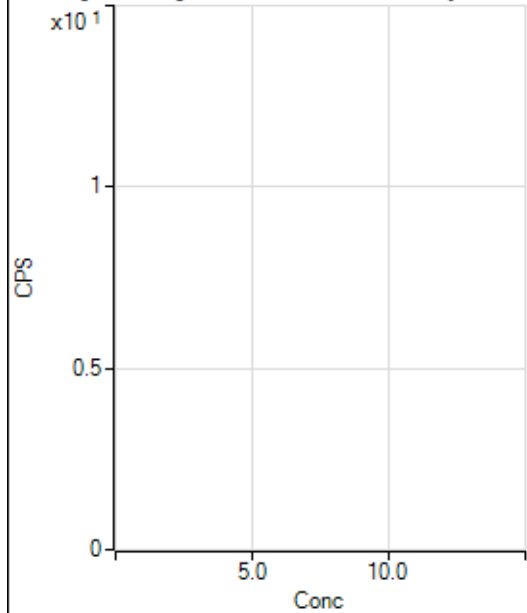
R = 0.9998

DL = 0.108

BEC = 0.05517

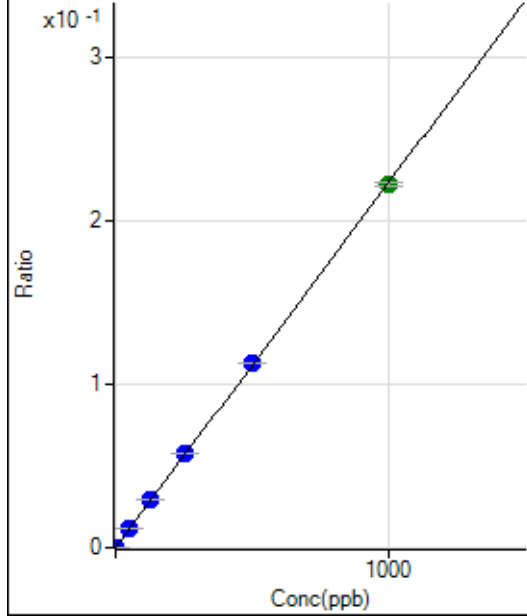
Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			1046.72		P	2.5
2	☐			1044.50		P	4.8
3	☐			1104.51		P	2.2
4	☐			998.94		P	10.1
5	☐			986.72		P	2.9
6	☐			952.27		P	7.6
7	☐			1028.94		P	4.3
8	☐			1066.72		P	3.8

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1675.16	0.0000	P	1.9
2	☐	1.000	0.969	9787.05	0.0003	P	2.0
3	☐	50.000	50.582	415054.61	0.0113	P	0.6
4	☐	125.000	129.307	1042766.95	0.0289	P	0.4
5	☐	250.000	258.627	2075729.49	0.0578	P	0.6
6	☐	500.000	505.646	3994427.52	0.1129	P	0.6
7	☐	1000.000	994.453	7949417.80	0.2220	A	1.0
8	☐			17102.49	0.0005	P	2.0

$$y = 2.2323\text{E-}004 * x + 4.4755\text{E-}005$$

$$R = 0.9999$$

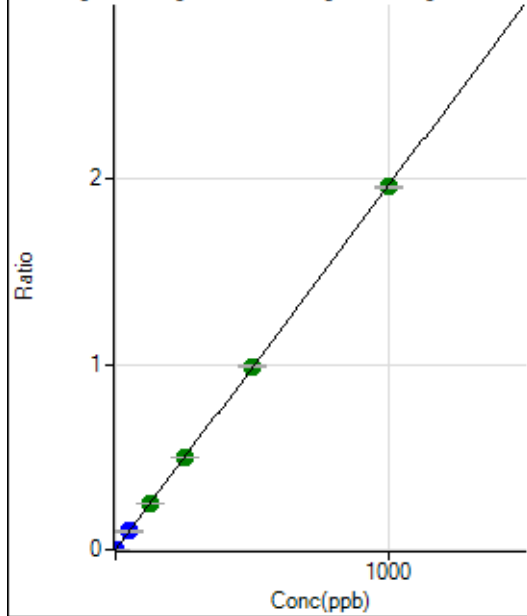
$$DL = 0.01129$$

$$BEC = 0.2005$$

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	250.01	0.0000	P	10.2
2	☐	1.000	0.967	71400.81	0.0019	P	1.6
3	☐	50.000	50.291	3614001.30	0.0987	P	0.7
4	☐	125.000	127.497	9025595.25	0.2502	A	0.2
5	☐	250.000	254.980	17978300.58	0.5004	A	0.4
6	☐	500.000	503.975	34988617.80	0.9891	A	0.5
7	☐	1000.000	996.441	70017284.90	1.9556	A	0.2
8	☐			137015.73	0.0041	P	2.9

$$y = 0.0020 * x + 6.6803\text{E-}006$$

$$R = 1.0000$$

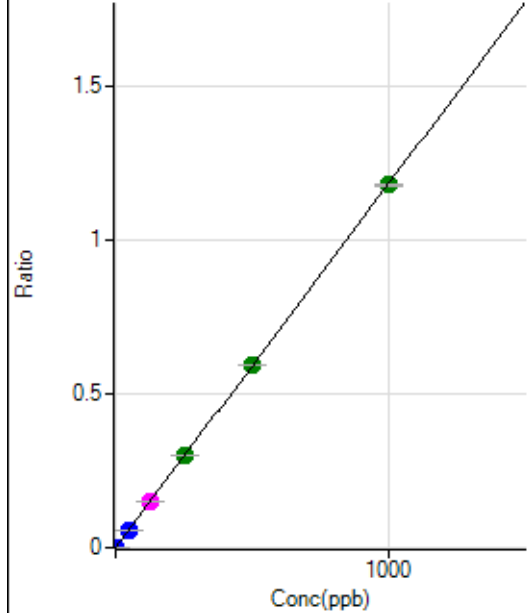
$$DL = 0.001043$$

$$BEC = 0.003404$$

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	1894.66	0.0001	P	3.8
2	☐	1.000	0.767	35904.52	0.0010	P	5.7
3	☐	50.000	49.251	2136348.27	0.0583	P	0.1
4	☐	125.000	127.000	5423960.84	0.1504	M	0.4
5	☐	250.000	253.222	10769811.18	0.2998	A	0.4
6	☐	500.000	503.334	21076658.81	0.5958	A	0.2
7	☐	1000.000	997.315	42267856.50	1.1805	A	0.4
8	☐			13484.72	0.0004	P	2.9

$$y = 0.0012 * x + 5.0615E-005$$

$$R = 1.0000$$

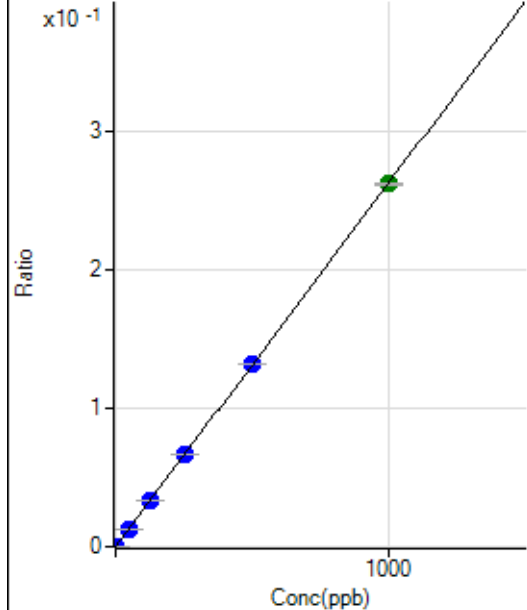
$$DL = 0.004834$$

$$BEC = 0.04276$$

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	436.14	0.0000	P	21.0
2	☐	1.000	0.754	7844.14	0.0002	P	3.8
3	☐	50.000	49.795	478524.26	0.0131	P	0.3
4	☐	125.000	128.233	1213325.67	0.0336	P	0.7
5	☐	250.000	253.968	2393035.95	0.0666	P	0.3
6	☐	500.000	501.067	4648309.30	0.1314	P	0.5
7	☐	1000.000	998.081	9371041.79	0.2617	A	0.5
8	☐			3017.12	0.0001	P	2.3

$$y = 2.6223E-004 * x + 1.1651E-005$$

$$R = 1.0000$$

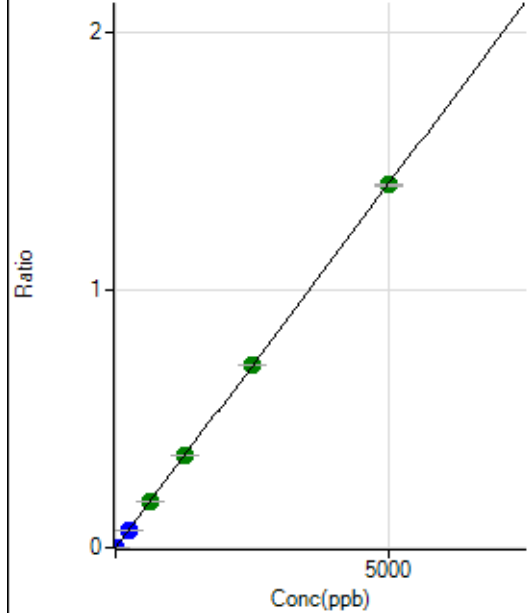
$$DL = 0.02798$$

$$BEC = 0.04443$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	788.94	0.0000	P	11.4
2	☐	5.000	4.643	49829.82	0.0013	P	0.6
3	☐	250.000	249.503	2574899.02	0.0703	P	0.9
4	☐	625.000	641.003	6515906.66	0.1806	A	0.6
5	☐	1250.000	1272.507	12882817.47	0.3586	A	0.4
6	☐	2500.000	2510.335	25023397.09	0.7074	A	0.2
7	☐	5000.000	4987.230	50315886.89	1.4053	A	0.7
8	☐			29060.97	0.0009	P	2.0

$$y = 2.8178\text{E-}004 * x + 2.1082\text{E-}005$$

$$R = 1.0000$$

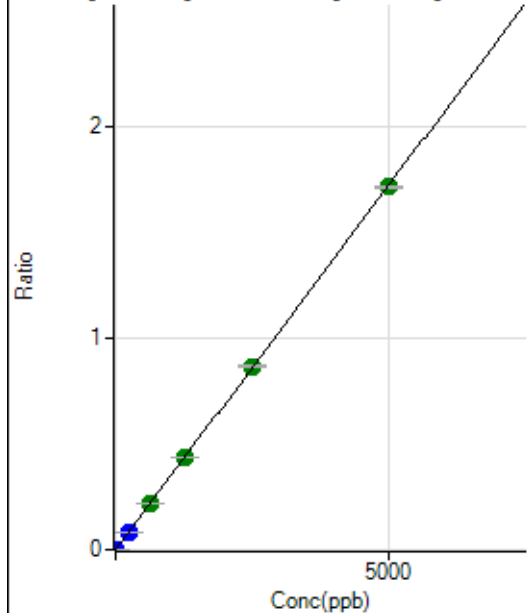
$$DL = 0.02568$$

$$BEC = 0.07481$$

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	277.79	0.0000	P	9.4
2	☐	5.000	5.024	65051.53	0.0017	P	0.4
3	☐	250.000	250.457	3154582.95	0.0862	P	0.3
4	☐	625.000	641.152	7955011.11	0.2205	A	0.5
5	☐	1250.000	1270.224	15697382.82	0.4369	A	0.2
6	☐	2500.000	2521.264	30677849.99	0.8672	A	0.4
7	☐	5000.000	4982.270	61357676.37	1.7138	A	0.6
8	☐			43756.96	0.0013	P	0.9

$$y = 3.4397\text{E-}004 * x + 7.4206\text{E-}006$$

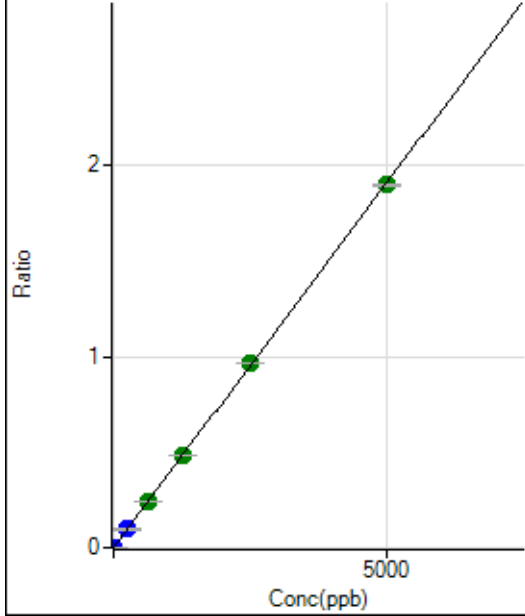
$$R = 1.0000$$

$$DL = 0.006083$$

$$BEC = 0.02157$$

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	519.48	0.0000	P	5.4
2	☐	5.000	5.017	72197.46	0.0019	P	1.6
3	☐	250.000	250.931	3502931.24	0.0957	P	0.3
4	☐	625.000	642.137	8830042.82	0.2448	A	0.7
5	☐	1250.000	1272.848	17433031.29	0.4852	A	0.6
6	☐	2500.000	2528.590	34098448.68	0.9639	A	0.2
7	☐	5000.000	4977.804	67940292.49	1.8976	A	0.4
8	☐			72239.28	0.0022	P	0.6

$$y = 3.8121E-004 * x + 1.3880E-005$$

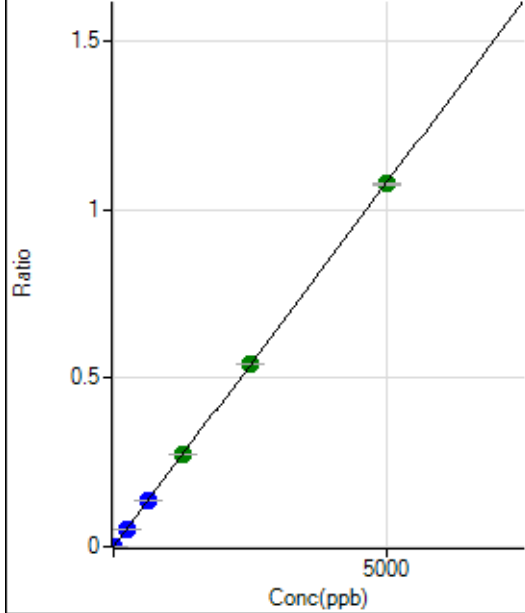
$$R = 1.0000$$

$$DL = 0.005947$$

$$BEC = 0.03641$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	211.12	0.0000	P	5.8
2	☐	5.000	5.025	40890.13	0.0011	P	0.7
3	☐	250.000	249.081	1970006.75	0.0538	P	1.2
4	☐	625.000	640.723	4992134.05	0.1384	P	0.3
5	☐	1250.000	1269.114	9848658.12	0.2741	A	0.3
6	☐	2500.000	2511.601	19190874.39	0.5425	A	0.0
7	☐	5000.000	4987.502	38570542.18	1.0773	A	0.8
8	☐			25595.90	0.0008	P	1.7

$$y = 2.1600E-004 * x + 5.6400E-006$$

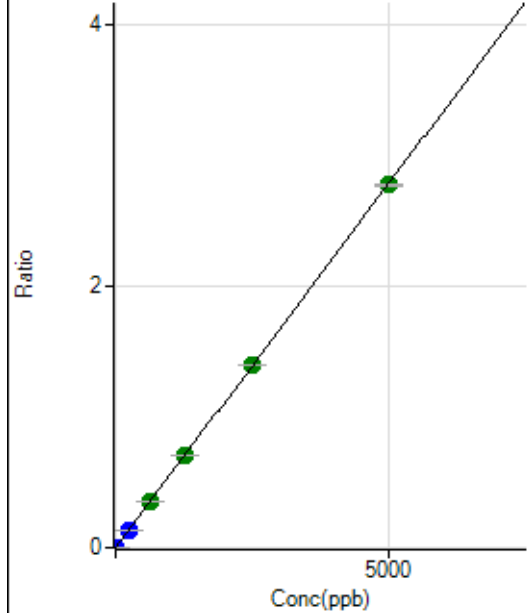
$$R = 1.0000$$

$$DL = 0.004573$$

$$BEC = 0.02611$$

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	430.58	0.0000	P	7.7
2	☐	5.000	4.981	104131.31	0.0028	P	1.5
3	☐	250.000	248.616	5057292.69	0.1381	P	1.0
4	☐	625.000	638.257	12790060.62	0.3546	A	0.8
5	☐	1250.000	1272.493	25397481.64	0.7069	A	0.4
6	☐	2500.000	2514.027	49405731.31	1.3967	A	0.1
7	☐	5000.000	4985.775	99169579.99	2.7698	A	0.4
8	☐			62198.04	0.0019	P	1.1

$$y = 5.5555\text{E-}004 * x + 1.1502\text{E-}005$$

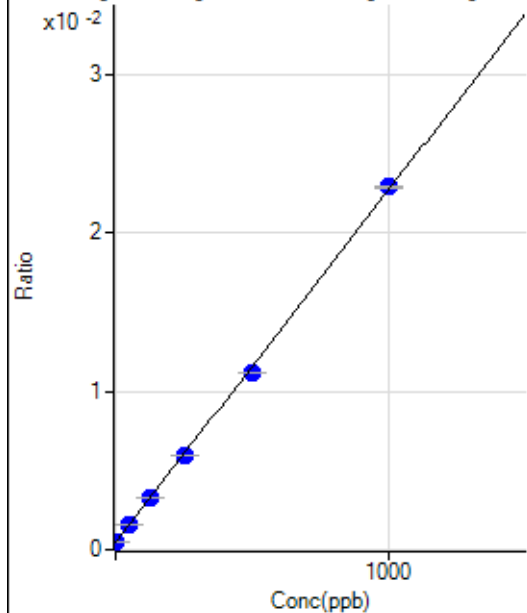
$$R = 1.0000$$

$$DL = 0.004812$$

$$BEC = 0.0207$$

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	16588.04	0.0005	P	2.3
2	☐	1.000	1.291	17558.75	0.0005	P	3.4
3	☐	50.000	51.059	57149.35	0.0016	P	1.5
4	☐	125.000	127.991	119776.20	0.0033	P	0.9
5	☐	250.000	248.103	216352.74	0.0060	P	1.0
6	☐	500.000	481.988	400009.32	0.0112	P	0.9
7	☐	1000.000	1009.053	817677.16	0.0229	P	0.4
8	☐			16076.40	0.0005	P	0.4

$$y = 2.2279\text{E-}005 * x + 4.5574\text{E-}004$$

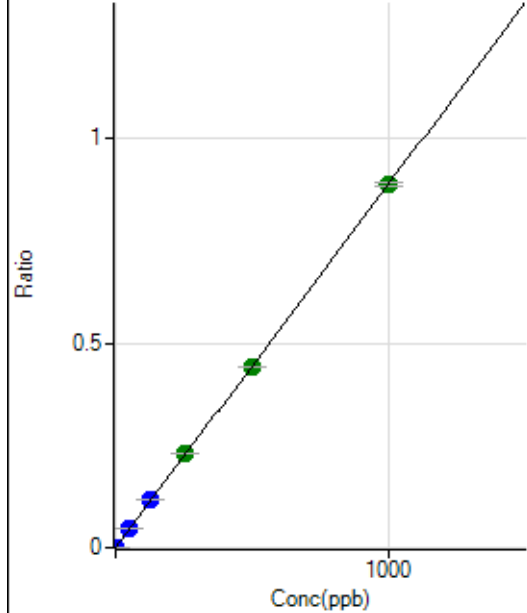
$$R = 0.9997$$

$$DL = 1.382$$

$$BEC = 20.46$$

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	313.91	0.0000	P	8.1
2	☐	1.000	1.008	32738.87	0.0009	P	2.4
3	☐	50.000	53.647	1709295.39	0.0477	P	0.3
4	☐	125.000	133.571	4296279.48	0.1186	P	0.2
5	☐	250.000	258.722	8309334.13	0.2298	A	0.5
6	☐	500.000	497.151	15777710.94	0.4415	A	0.3
7	☐	1000.000	997.990	31597482.30	0.8863	A	0.9
8	☐			7821.95	0.0003	P	4.5

$$y = 8.8811\text{E-}004 * x + 8.6213\text{E-}006$$

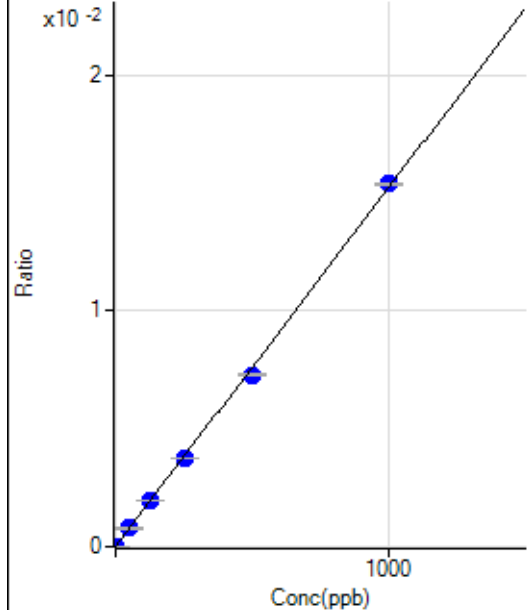
$$R = 0.9999$$

$$DL = 0.002355$$

$$BEC = 0.009708$$

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	45.83	0.0000	P	45.9
2	☐	1.000	0.954	572.24	0.0000	P	2.2
3	☐	50.000	50.899	27851.27	0.0008	P	1.9
4	☐	125.000	128.488	70905.55	0.0020	P	2.2
5	☐	250.000	247.377	136288.46	0.0038	P	1.0
6	☐	500.000	478.130	260261.96	0.0073	P	0.6
7	☐	1000.000	1011.110	549042.20	0.0154	P	0.6
8	☐			183.34	0.0000	P	20.2

$$y = 1.5230\text{E-}005 * x + 1.2617\text{E-}006$$

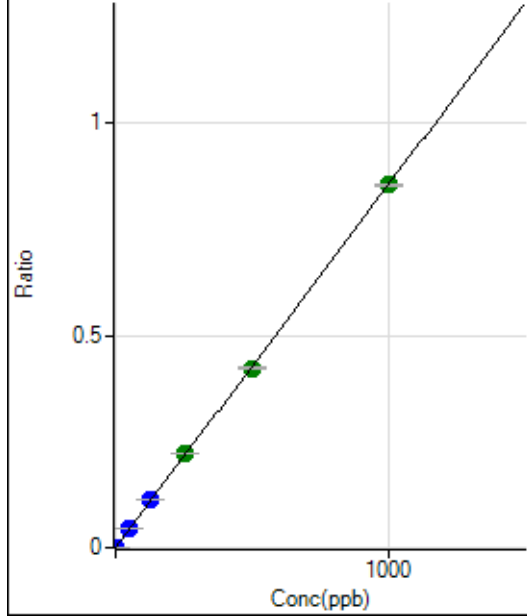
$$R = 0.9996$$

$$DL = 0.114$$

$$BEC = 0.08284$$

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	150.01	0.0000	P	20.1
2	☐	1.000	1.026	31970.41	0.0009	P	2.4
3	☐	50.000	53.314	1636345.75	0.0456	P	0.5
4	☐	125.000	132.922	4118252.70	0.1137	P	1.0
5	☐	250.000	258.546	7999221.36	0.2212	A	0.5
6	☐	500.000	494.916	15131110.06	0.4234	A	0.8
7	☐	1000.000	999.250	30477786.79	0.8549	A	0.9
8	☐			7274.43	0.0002	P	5.2

$$y = 8.5557\text{E-}004 * x + 4.1211\text{E-}006$$

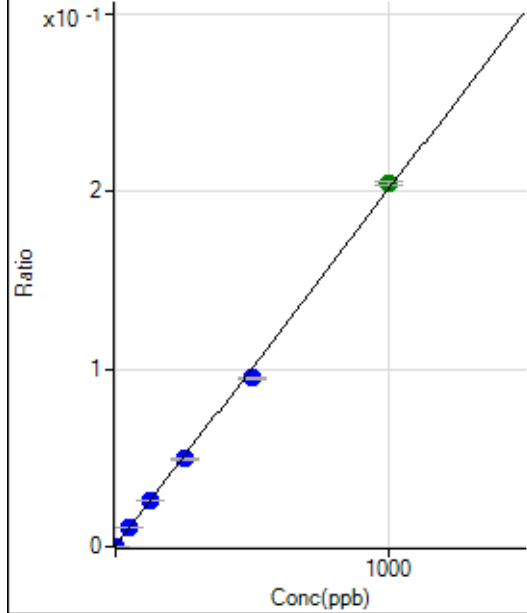
$$R = 0.9999$$

$$DL = 0.002909$$

$$BEC = 0.004817$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	11692.04	0.0003	P	2.1
2	☐	1.000	1.009	18978.57	0.0005	P	3.0
3	☐	50.000	49.756	369754.28	0.0103	P	0.2
4	☐	125.000	125.862	926466.88	0.0256	P	0.4
5	☐	250.000	245.052	1790164.03	0.0495	P	1.2
6	☐	500.000	470.808	3388305.69	0.0948	P	0.5
7	☐	1000.000	1015.738	7279383.34	0.2042	A	1.0
8	☐			12437.74	0.0004	P	0.7

$$y = 2.0072\text{E-}004 * x + 3.2123\text{E-}004$$

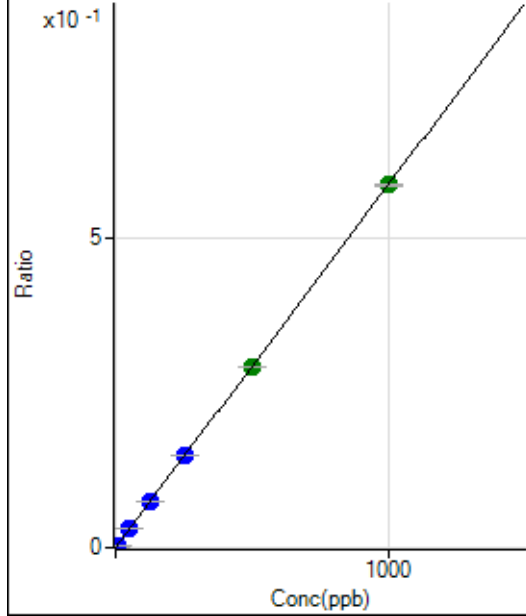
$$R = 0.9994$$

$$DL = 0.1013$$

$$BEC = 1.6$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1903.00	0.0001	P	2.4
2	☐	5.000	4.995	108357.76	0.0030	P	1.6
3	☐	50.000	50.641	1070311.74	0.0298	P	0.5
4	☐	125.000	128.718	2743554.77	0.0758	P	0.7
5	☐	250.000	254.327	5411411.49	0.1496	P	0.4
6	☐	500.000	498.740	10484589.30	0.2934	A	0.4
7	☐	1000.000	999.052	20950495.09	0.5877	A	0.7
8	☐			12136.34	0.0004	P	3.3

$$y = 5.8819\text{E-}004 * x + 5.2270\text{E-}005$$

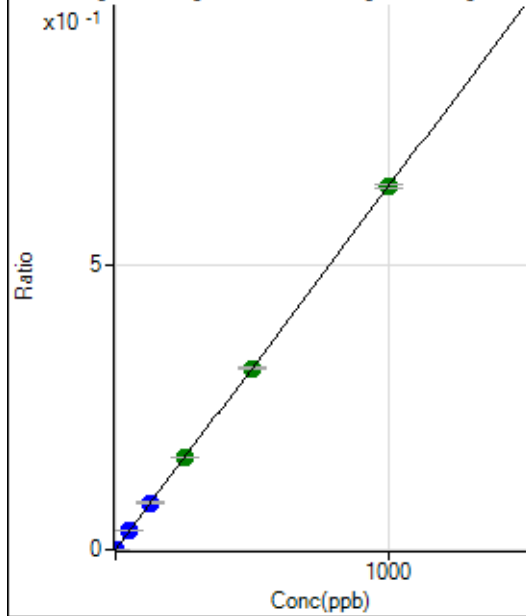
$$R = 1.0000$$

$$DL = 0.006399$$

$$BEC = 0.08887$$

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	525.03	0.0000	P	20.6
2	☐	2.000	1.968	45976.35	0.0013	P	3.0
3	☐	50.000	50.747	1160925.35	0.0324	P	0.4
4	☐	125.000	129.394	2987529.34	0.0825	P	0.5
5	☐	250.000	253.612	5846681.60	0.1617	A	0.7
6	☐	500.000	499.974	11389696.00	0.3187	A	0.2
7	☐	1000.000	998.523	22692279.15	0.6365	A	1.0
8	☐			30183.53	0.0010	P	8.4

$$y = 6.3747\text{E-}004 * x + 1.4406\text{E-}005$$

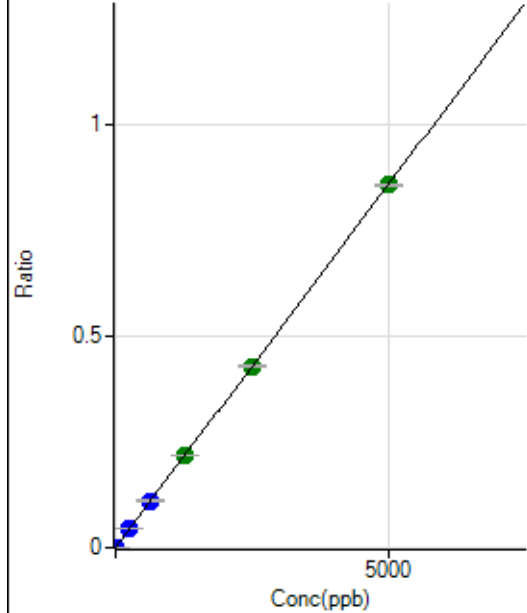
$$R = 1.0000$$

$$DL = 0.01394$$

$$BEC = 0.0226$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	77.78	0.0000	P	54.1
2	☐	10.000	10.095	62812.03	0.0017	P	1.8
3	☐	250.000	255.013	1568698.91	0.0437	P	0.8
4	☐	625.000	646.446	4014345.40	0.1109	P	1.1
5	☐	1250.000	1264.739	7842640.71	0.2169	A	1.0
6	☐	2500.000	2500.257	15321201.91	0.4288	A	0.1
7	☐	5000.000	4993.255	30524823.95	0.8563	A	0.9
8	☐			52190.85	0.0017	P	2.1

$$y = 1.7148\text{E-}004 * x + 2.1307\text{E-}006$$

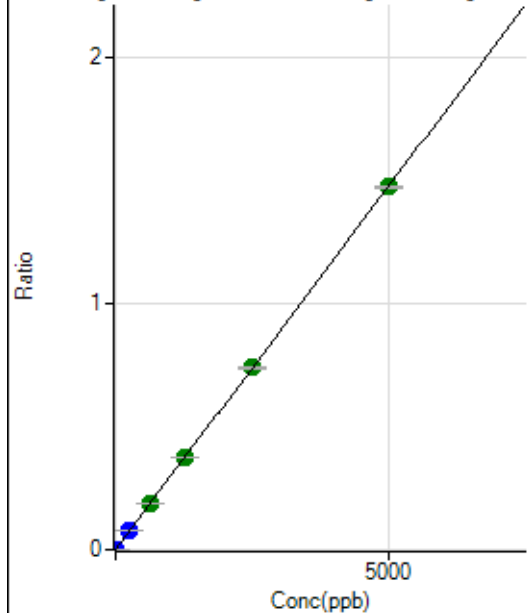
$$R = 1.0000$$

$$DL = 0.02016$$

$$BEC = 0.01243$$

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	180.57	0.0000	P	10.5
2	☐	10.000	10.045	107701.48	0.0030	P	0.6
3	☐	250.000	255.835	2710678.58	0.0756	P	0.3
4	☐	625.000	639.867	6844000.76	0.1890	A	0.9
5	☐	1250.000	1266.676	13529433.29	0.3741	A	0.6
6	☐	2500.000	2501.027	26397606.32	0.7387	A	0.2
7	☐	5000.000	4993.168	52576481.04	1.4748	A	0.9
8	☐			87980.95	0.0028	P	0.9

$$y = 2.9537\text{E-}004 * x + 4.9598\text{E-}006$$

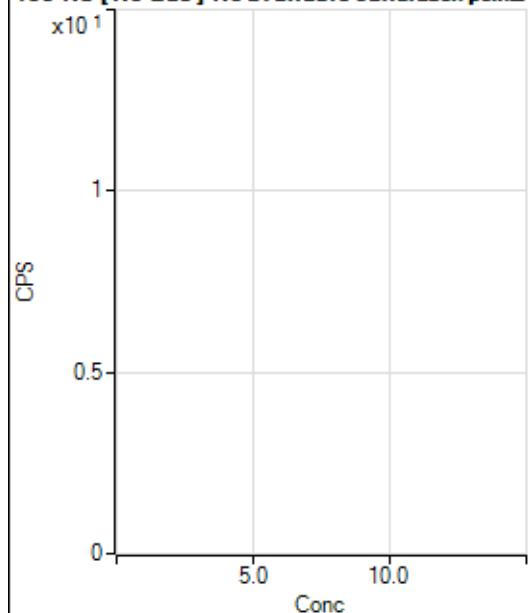
$$R = 1.0000$$

$$DL = 0.005271$$

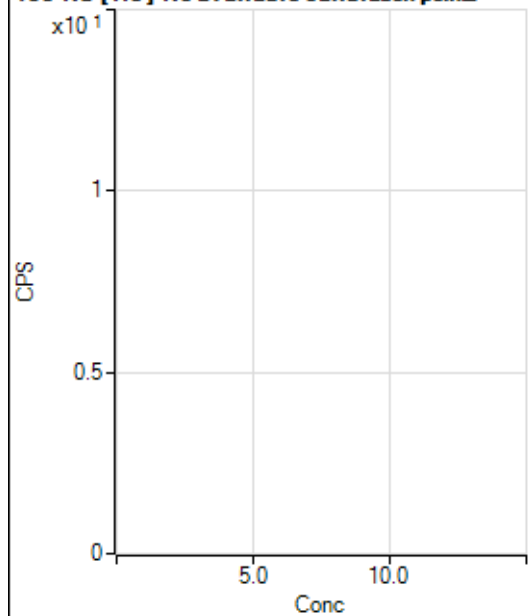
$$BEC = 0.01679$$

Weight: <None>

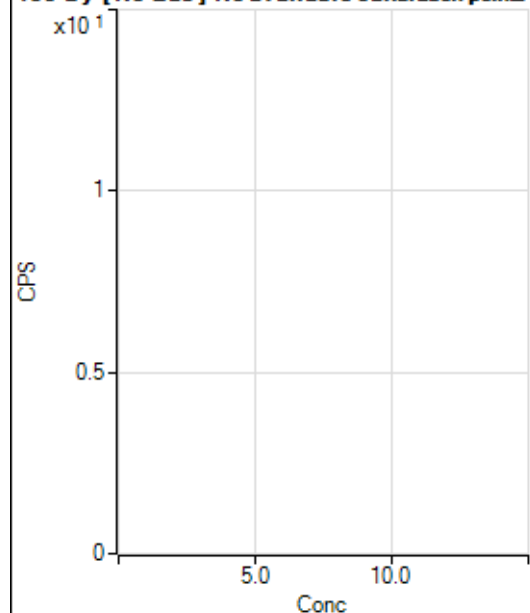
Min Conc: 0

150 Nd [No Gas] No available calibration points

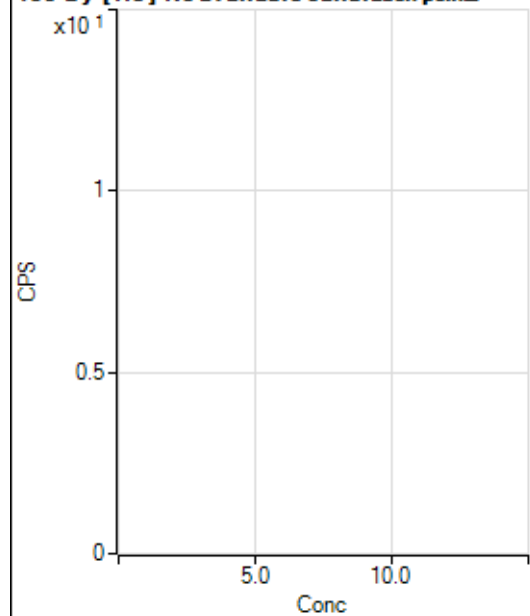
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			15.56		P	49.5
2	☐			13.33		P	50.0
3	☐			200.01		P	24.0
4	☐			431.13		P	12.5
5	☐			775.61		P	10.0
6	☐			1722.40		P	6.9
7	☐			2998.21		P	3.2
8	☐			293.35		P	15.9

150 Nd [He] No available calibration points

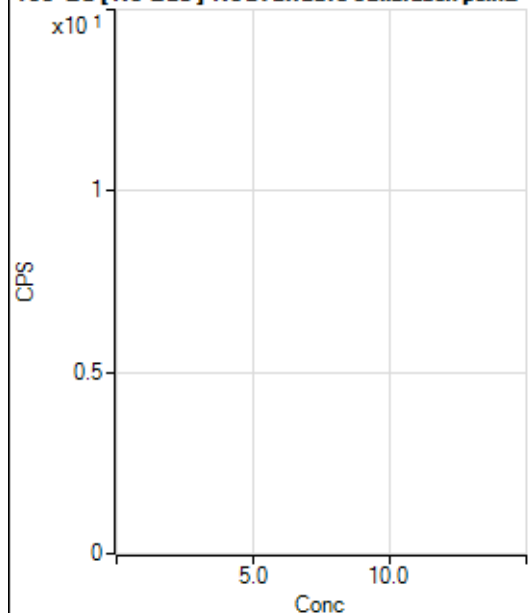
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	114.
2	☐			6.67		P	50.0
3	☐			15.55		P	68.9
4	☐			43.34		P	35.2
5	☐			65.56		P	16.4
6	☐			132.23		P	1.5
7	☐			260.01		P	10.0
8	☐			104.45		P	8.0

156 Dy [No Gas] No available calibration points

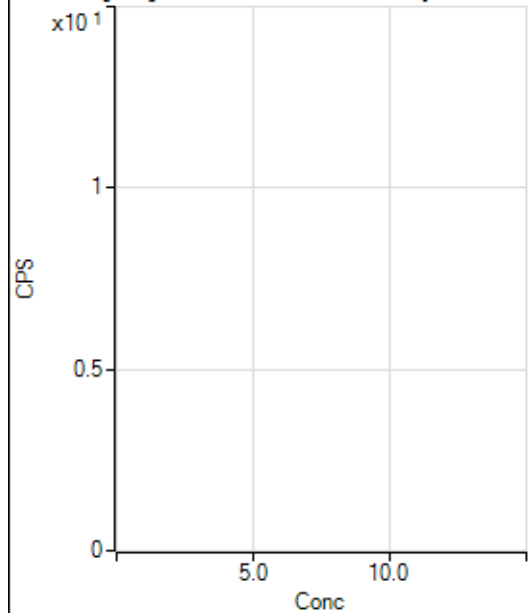
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			52.78		P	55.5
2	☐			69.45		P	25.0
3	☐			80.56		P	36.3
4	☐			127.78		P	10.0
5	☐			225.01		P	9.8
6	☐			372.25		P	14.6
7	☐			911.18		P	1.9
8	☐			1480.70		P	6.2

156 Dy [He] No available calibration points

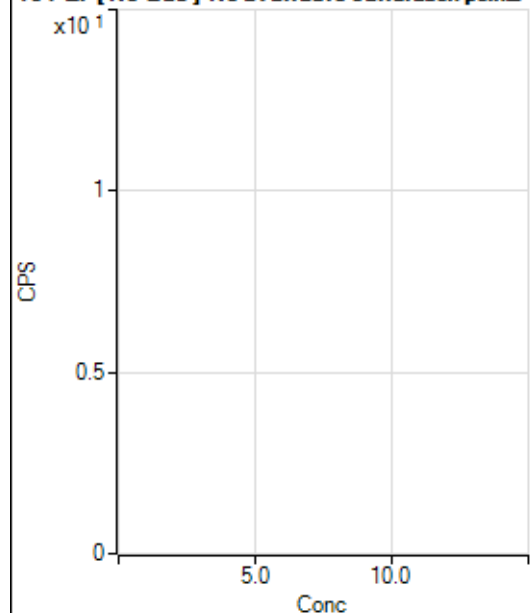
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			26.67		P	25.0
2	☐			26.67		P	66.2
3	☐			74.45		P	9.3
4	☐			104.45		P	3.7
5	☐			158.89		P	12.3
6	☐			356.68		P	7.3
7	☐			715.59		P	5.2
8	☐			826.70		P	2.1

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

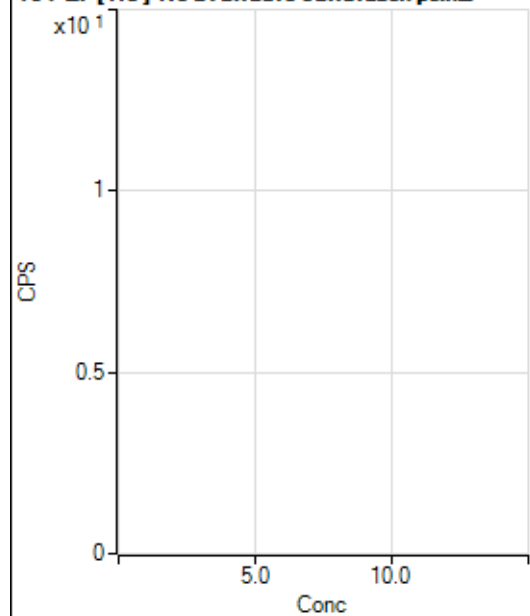
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			300.02		P	10.0
2	☐			255.57		P	10.0
3	☐			322.24		P	36.2
4	☐			302.80		P	30.7
5	☐			419.47		P	9.2
6	☐			419.47		P	28.5
7	☐			605.59		P	9.0
8	☐			1855.76		P	6.1

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			582.24		P	9.9
2	☐			676.70		P	2.0
3	☐			638.91		P	4.7
4	☐			652.25		P	6.7
5	☐			678.92		P	4.5
6	☐			683.36		P	2.2
7	☐			713.36		P	5.3
8	☐			1435.66		P	4.5

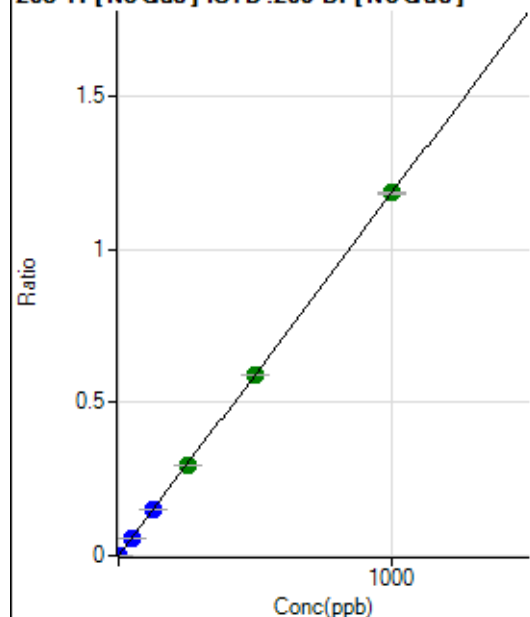
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			169.45		P	37.6
2	☐			172.23		P	29.2
3	☐			163.90		P	19.3
4	☐			233.35		P	3.6
5	☐			197.23		P	8.8
6	☐			219.46		P	2.2
7	☐			261.13		P	25.6
8	☐			350.02		P	9.5

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			78.89		P	31.1
2	☐			84.45		P	26.3
3	☐			98.89		P	12.8
4	☐			93.34		P	10.7
5	☐			88.89		P	15.2
6	☐			114.45		P	19.4
7	☐			111.12		P	12.1
8	☐			183.34		P	19.2

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1200.11	0.0001	P	9.5
2	☐	1.000	0.932	26346.35	0.0012	P	1.0
3	☐	50.000	48.423	1296849.34	0.0573	P	0.6
4	☐	125.000	126.147	3362496.78	0.1492	P	0.2
5	☐	250.000	250.184	6525378.79	0.2959	A	1.1
6	☐	500.000	497.769	12648575.98	0.5886	A	0.4
7	☐	1000.000	1001.005	24883678.68	1.1836	A	0.8
8	☐			6071.10	0.0004	P	1.1

$$y = 0.0012 * x + 5.1885E-005$$

$$R = 1.0000$$

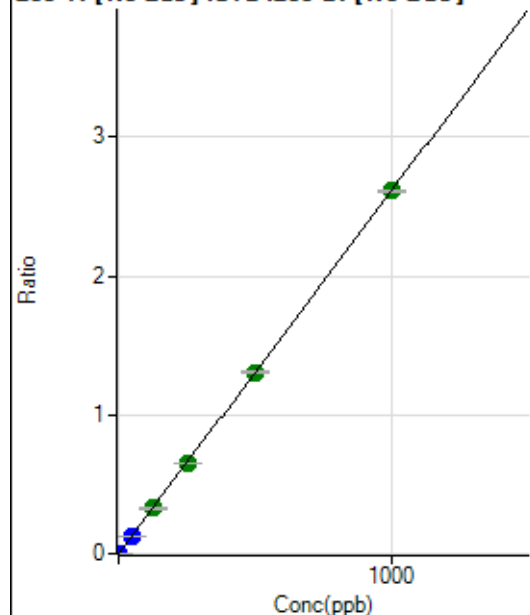
$$DL = 0.01244$$

$$BEC = 0.04388$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2054.92	0.0001	P	6.1
2	☐	1.000	0.926	57249.47	0.0025	P	2.8
3	☐	50.000	48.292	2856369.26	0.1262	P	0.8
4	☐	125.000	124.576	7334862.41	0.3255	A	0.5
5	☐	250.000	249.872	14396608.95	0.6527	A	0.2
6	☐	500.000	500.749	28107815.06	1.3080	A	0.5
7	☐	1000.000	999.796	54902591.05	2.6115	A	0.4
8	☐			13403.18	0.0008	P	3.8

$$y = 0.0026 * x + 8.8811E-005$$

$$R = 1.0000$$

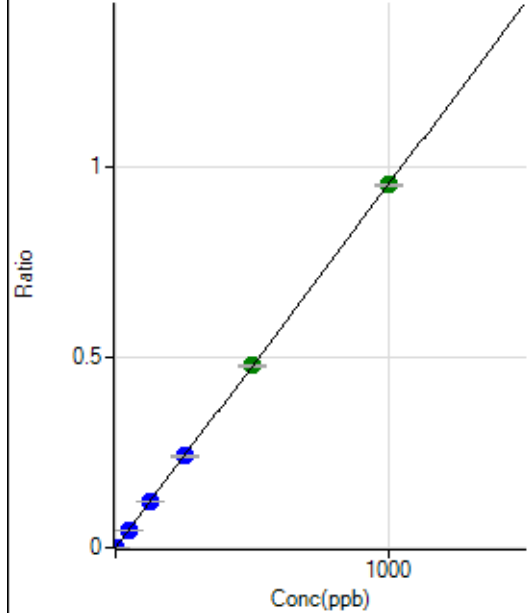
$$DL = 0.006216$$

$$BEC = 0.034$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1294.55	0.0001	P	11.5
2	☐	1.000	0.940	21772.04	0.0010	P	2.8
3	☐	50.000	49.050	1061184.17	0.0469	P	0.8
4	☐	125.000	126.110	2715035.62	0.1205	P	0.2
5	☐	250.000	251.810	5304564.64	0.2405	P	0.6
6	☐	500.000	500.886	10279494.91	0.4784	A	0.2
7	☐	1000.000	999.013	20056463.87	0.9540	A	0.7
8	☐			78292.47	0.0048	P	0.5

$$y = 9.5491\text{E-}004 * x + 5.5940\text{E-}005$$

$$R = 1.0000$$

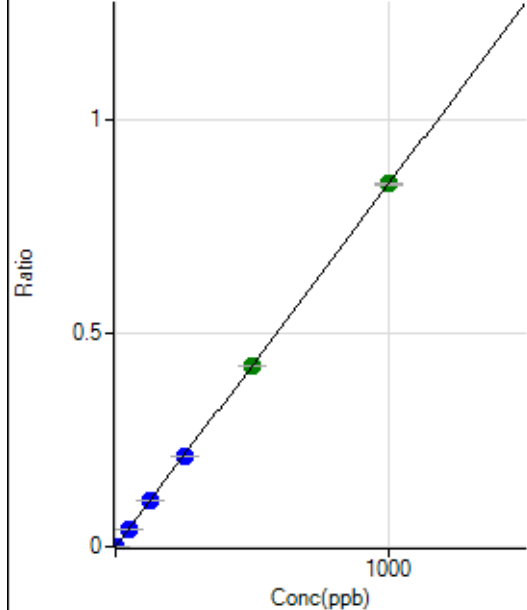
$$DL = 0.02016$$

$$BEC = 0.05858$$

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	1242.69	0.0001	P	7.1
2	☐	1.000	0.925	19164.27	0.0008	P	3.0
3	☐	50.000	48.840	939598.21	0.0415	P	0.7
4	☐	125.000	125.395	2400484.60	0.1065	P	0.4
5	☐	250.000	250.735	4696574.41	0.2129	P	0.3
6	☐	500.000	497.788	9083488.51	0.4227	A	0.1
7	☐	1000.000	1000.931	17867645.77	0.8499	A	0.6
8	☐			70382.57	0.0043	P	1.8

$$y = 8.4906\text{E-}004 * x + 5.3688\text{E-}005$$

$$R = 1.0000$$

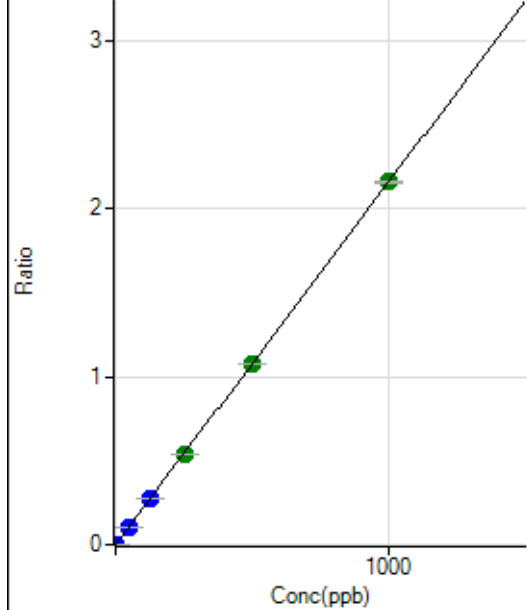
$$DL = 0.0134$$

$$BEC = 0.06323$$

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	2691.09	0.0001	P	4.0
2	☐	1.000	0.932	48509.72	0.0021	P	1.3
3	☐	50.000	48.990	2391917.73	0.1057	P	0.1
4	☐	125.000	126.115	6127445.30	0.2719	P	0.8
5	☐	250.000	249.489	11861411.89	0.5378	A	0.4
6	☐	500.000	497.957	23063852.26	1.0733	A	0.3
7	☐	1000.000	1001.060	45358372.31	2.1575	A	0.5
8	☐			177083.80	0.0108	P	2.4

$$y = 0.0022 * x + 1.1630E-004$$

$$R = 1.0000$$

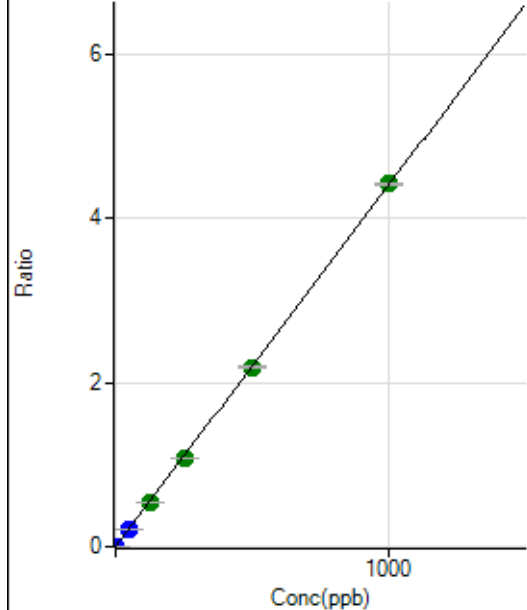
$$DL = 0.006536$$

$$BEC = 0.05396$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2761.50	0.0001	P	9.6
2	☐	1.000	0.659	68996.03	0.0030	P	3.1
3	☐	50.000	45.469	4532188.93	0.2003	P	0.6
4	☐	125.000	119.864	11893416.47	0.5278	A	0.3
5	☐	250.000	246.098	23897345.21	1.0835	A	0.3
6	☐	500.000	496.193	46940075.12	2.1844	A	0.9
7	☐	1000.000	1003.748	92897021.52	4.4187	A	0.2
8	☐			18022.18	0.0011	P	7.5

$$y = 0.0044 * x + 1.1934E-004$$

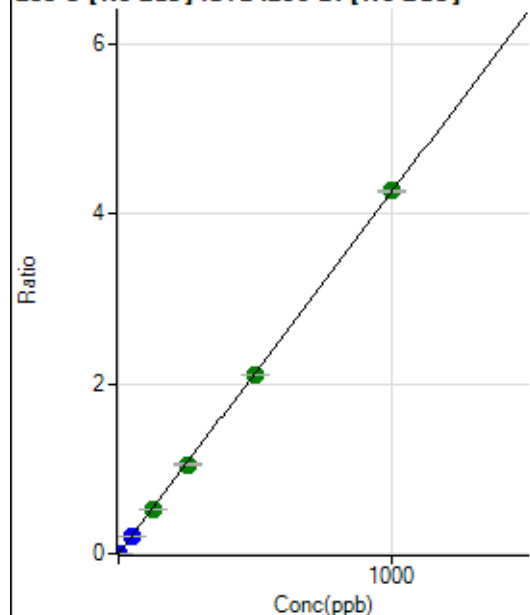
$$R = 1.0000$$

$$DL = 0.007772$$

$$BEC = 0.02711$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2005.82	0.0001	P	2.1
2	☐	1.000	0.871	86699.39	0.0038	P	1.3
3	☐	50.000	46.660	4500295.72	0.1989	P	1.1
4	☐	125.000	121.169	11635276.56	0.5163	A	0.8
5	☐	250.000	247.179	23228647.39	1.0532	A	0.3
6	☐	500.000	495.717	45384316.64	2.1120	A	0.5
7	☐	1000.000	1003.493	89881729.79	4.2753	A	0.3
8	☐			12631.65	0.0008	P	5.8

$$y = 0.0043 * x + 8.6677E-005$$

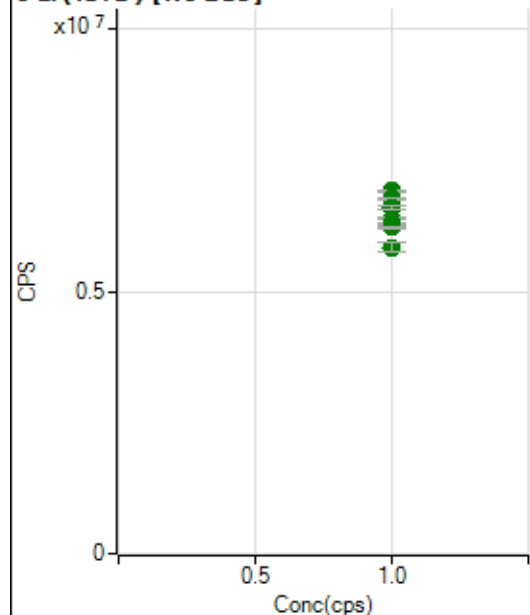
$$R = 1.0000$$

$$DL = 0.001284$$

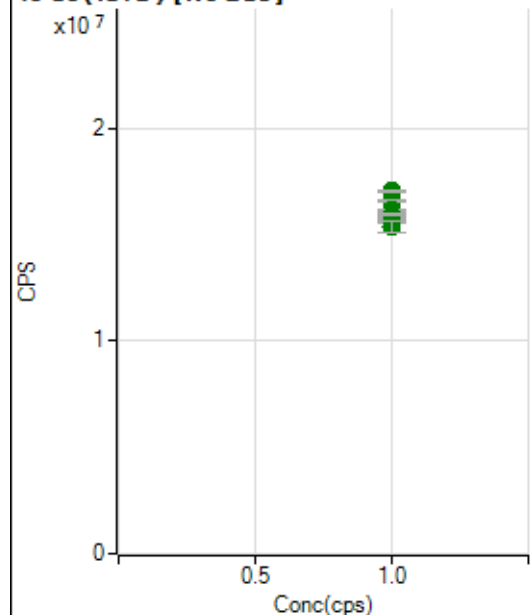
$$BEC = 0.02035$$

Weight: <None>

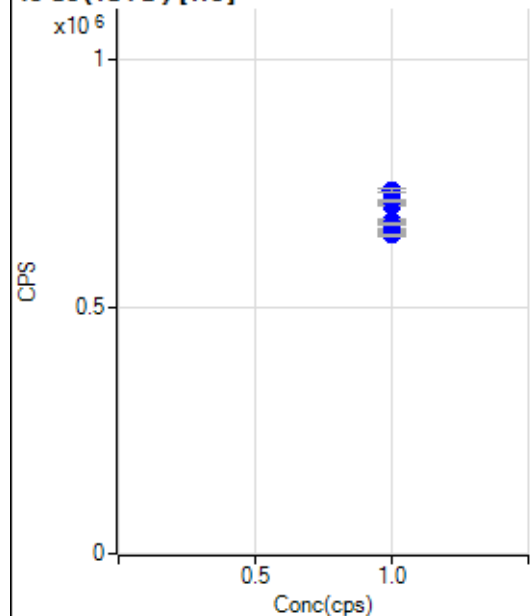
Min Conc: 0

6 Li (ISTD) [No Gas]

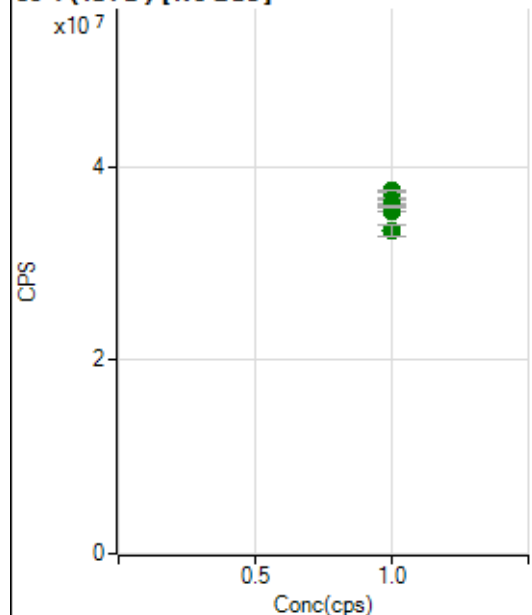
	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		6890885.94		A	0.2
2	☐	1.000		6919772.40		A	0.3
3	☐	1.000		6769425.04		A	0.7
4	☐	1.000		6601420.46		A	0.8
5	☐	1.000		6393469.56		A	0.6
6	☐	1.000		6298038.38		A	0.6
7	☐	1.000		6229561.30		A	0.4
8	☐	1.000		5840521.58		A	3.4

45 Sc (ISTD) [No Gas]

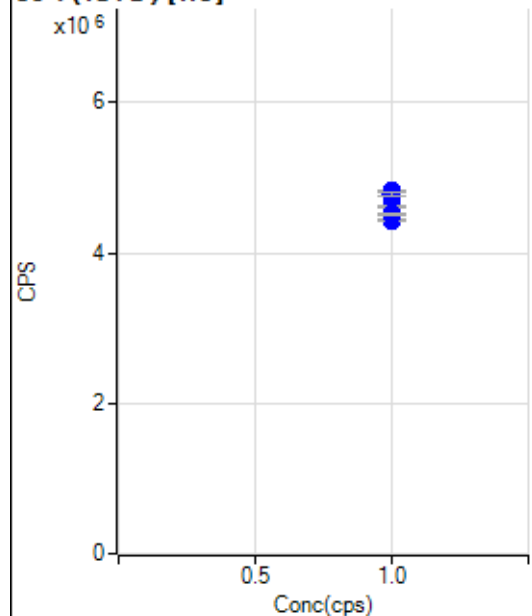
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		17015657.50		A	0.7
2	☐	1.000		17054869.48		A	0.3
3	☐	1.000		16574137.00		A	0.6
4	☐	1.000		16152858.70		A	0.7
5	☐	1.000		15885345.67		A	0.5
6	☐	1.000		15632836.29		A	0.7
7	☐	1.000		15941122.23		A	0.9
8	☐	1.000		15377100.00		A	3.6

45 Sc (ISTD) [He]

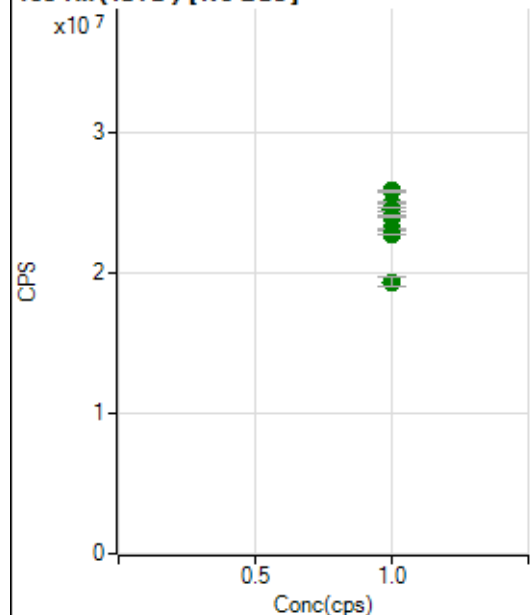
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		707200.81		P	0.7
2	☐	1.000		715698.27		P	1.0
3	☐	1.000		676073.00		P	0.7
4	☐	1.000		657670.66		P	0.8
5	☐	1.000		651551.28		P	0.7
6	☐	1.000		645993.48		P	0.4
7	☐	1.000		668000.92		P	0.8
8	☐	1.000		735517.23		P	0.9

89 Y (ISTD) [No Gas]

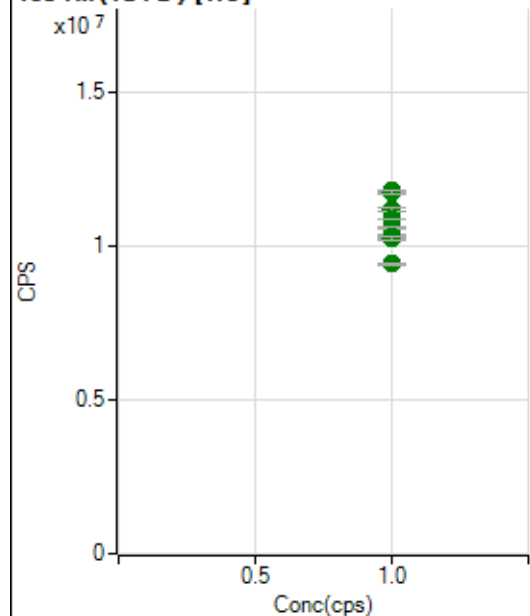
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		37430003.61		A	0.3
2	☐	1.000		37479469.72		A	0.2
3	☐	1.000		36614615.01		A	0.9
4	☐	1.000		36069542.52		A	0.4
5	☐	1.000		35926468.07		A	0.7
6	☐	1.000		35374075.86		A	0.4
7	☐	1.000		35803945.02		A	0.8
8	☐	1.000		33380887.56		A	3.0

89 Y (ISTD) [He]

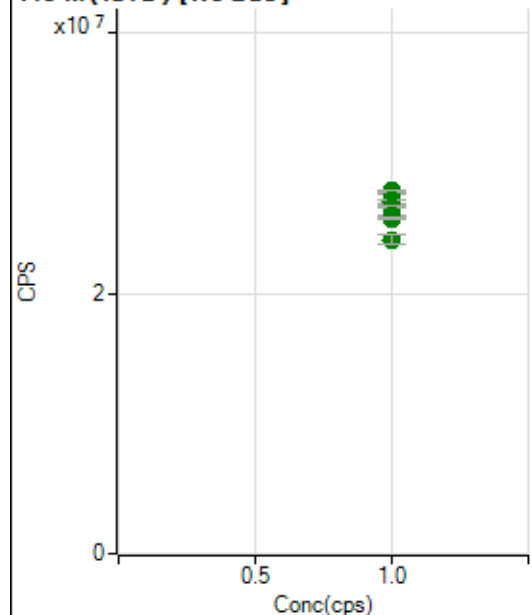
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4760379.58		P	0.1
2	☐	1.000		4825095.59		P	0.5
3	☐	1.000		4621209.72		P	0.7
4	☐	1.000		4527496.32		P	0.3
5	☐	1.000		4446132.75		P	0.5
6	☐	1.000		4430993.58		P	0.6
7	☐	1.000		4510438.06		P	0.9
8	☐	1.000		4792878.58		P	1.1

103 Rh (ISTD) [No Gas]

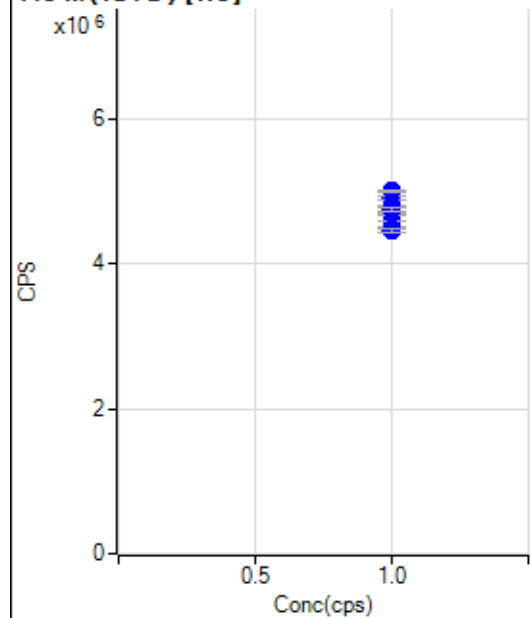
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		25812409.78		A	0.5
2	☐	1.000		25790525.75		A	0.1
3	☐	1.000		24951132.50		A	0.8
4	☐	1.000		24463870.16		A	0.9
5	☐	1.000		23959914.08		A	0.6
6	☐	1.000		23089541.49		A	0.5
7	☐	1.000		22721727.59		A	0.2
8	☐	1.000		19324992.10		A	3.2

103 Rh (ISTD) [He]

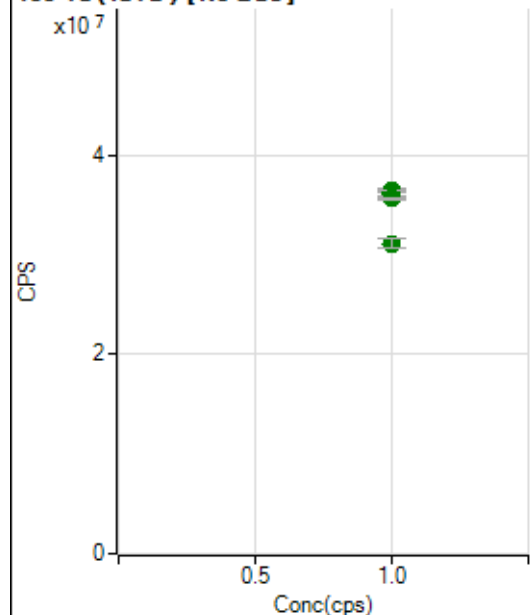
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		11772969.13		A	0.6
2	☐	1.000		11734522.74		A	0.6
3	☐	1.000		11168614.28		A	0.6
4	☐	1.000		10857738.59		A	0.4
5	☐	1.000		10575687.96		A	0.6
6	☐	1.000		10302442.28		A	0.9
7	☐	1.000		10233375.89		A	0.8
8	☐	1.000		9393506.80		A	0.6

115 In (ISTD) [No Gas]

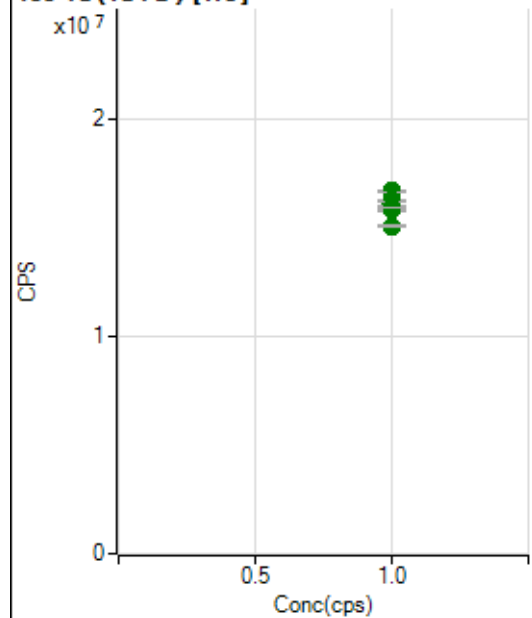
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		27762381.83		A	0.6
2	☐	1.000		27871958.48		A	0.4
3	☐	1.000		27186219.55		A	0.4
4	☐	1.000		27061732.90		A	0.8
5	☐	1.000		26658722.44		A	0.4
6	☐	1.000		25933772.18		A	0.3
7	☐	1.000		25754549.72		A	0.5
8	☐	1.000		24126319.79		A	2.9

115 In (ISTD) [He]

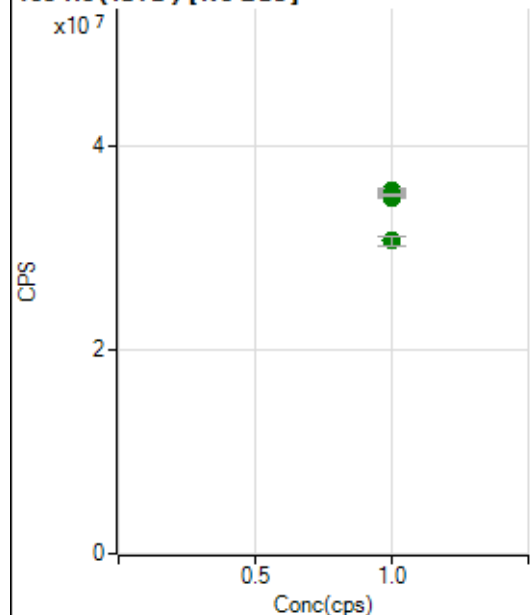
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4905015.89		P	0.6
2	☐	1.000		5001795.18		P	0.6
3	☐	1.000		4785782.43		P	0.5
4	☐	1.000		4688379.07		P	0.6
5	☐	1.000		4581791.28		P	0.4
6	☐	1.000		4483193.16		P	0.7
7	☐	1.000		4459767.67		P	1.1
8	☐	1.000		4740003.30		P	1.1

159 Tb (ISTD) [No Gas]

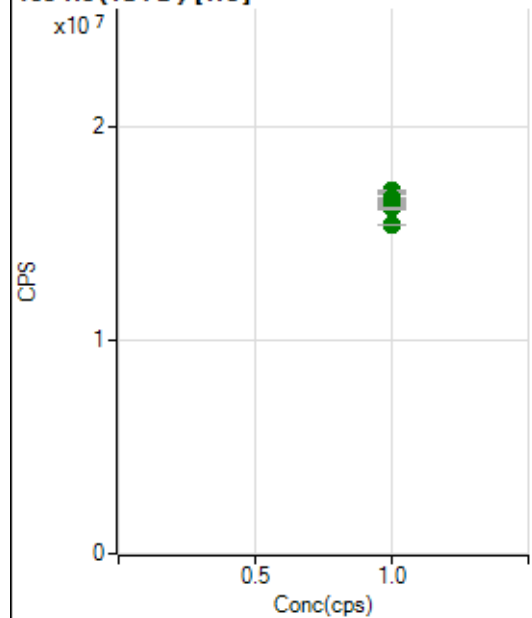
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		36401708.90		A	0.9
2	☐	1.000		36240193.90		A	0.1
3	☐	1.000		35870005.30		A	0.4
4	☐	1.000		36214386.96		A	1.4
5	☐	1.000		36162802.24		A	1.2
6	☐	1.000		35734310.02		A	0.5
7	☐	1.000		35649863.36		A	0.4
8	☐	1.000		31137465.09		A	2.7

159 Tb (ISTD) [He]

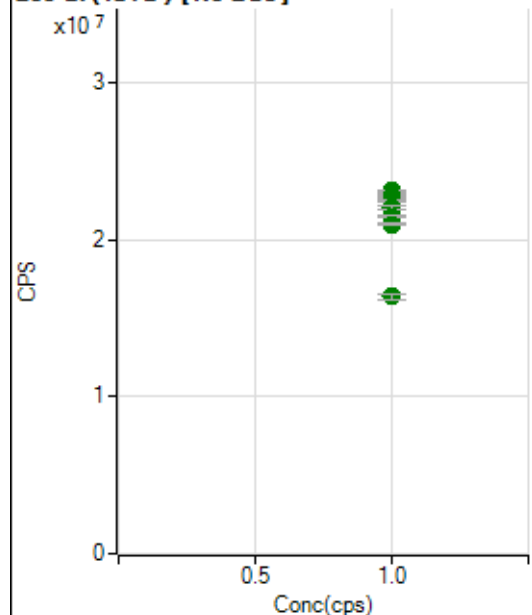
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		16662334.61		A	0.5
2	☐	1.000		16596947.81		A	0.2
3	☐	1.000		16258796.28		A	0.2
4	☐	1.000		16089212.12		A	0.8
5	☐	1.000		15813914.49		A	1.0
6	☐	1.000		15776047.54		A	0.9
7	☐	1.000		15895001.15		A	0.5
8	☐	1.000		15030073.39		A	0.5

165 Ho (ISTD) [No Gas]

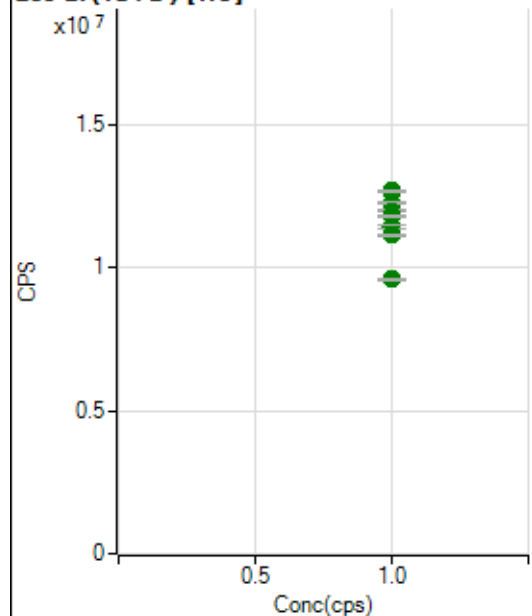
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		35624238.30		A	0.8
2	☐	1.000		35667128.23		A	0.1
3	☐	1.000		35345372.67		A	0.8
4	☐	1.000		35609961.21		A	1.3
5	☐	1.000		35424721.28		A	0.6
6	☐	1.000		34996588.63		A	0.0
7	☐	1.000		35255053.22		A	0.5
8	☐	1.000		30732568.74		A	3.1

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16967806.27		A	0.7
2	☐	1.000		17014354.47		A	0.4
3	☐	1.000		16660921.42		A	0.8
4	☐	1.000		16494904.89		A	0.4
5	☐	1.000		16361365.31		A	0.8
6	☐	1.000		16198610.45		A	1.0
7	☐	1.000		16209701.15		A	0.3
8	☐	1.000		15419194.21		A	0.1

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		23139108.27		A	0.7
2	☐	1.000		22834944.10		A	0.4
3	☐	1.000		22629878.00		A	0.6
4	☐	1.000		22535437.17		A	0.6
5	☐	1.000		22055921.34		A	0.9
6	☐	1.000		21489075.79		A	0.5
7	☐	1.000		21023720.94		A	0.7
8	☐	1.000		16415619.48		A	2.1

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12667678.42		A	0.3
2	☐	1.000		12648912.17		A	0.4
3	☐	1.000		12232183.84		A	0.6
4	☐	1.000		11971223.71		A	0.5
5	☐	1.000		11796731.21		A	0.9
6	☐	1.000		11408756.08		A	0.7
7	☐	1.000		11123232.89		A	0.5
8	☐	1.000		9592823.61		A	0.8

US EPA Tune Check Sample Report

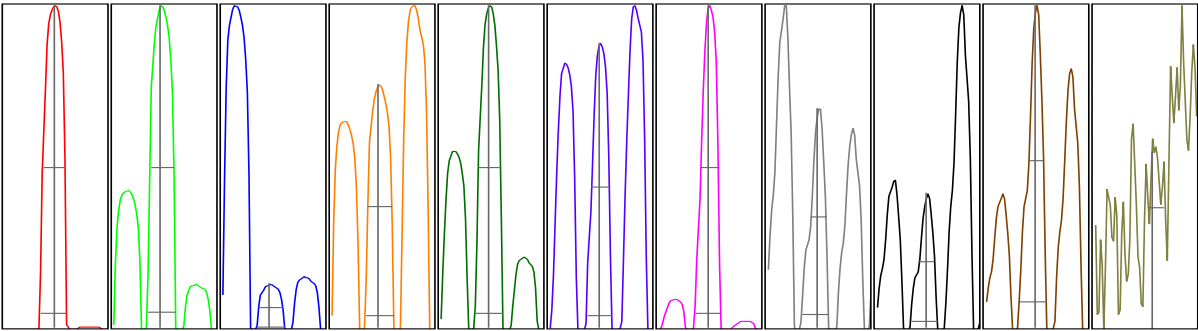
Batch Folder D:\ICP-MS Data\P7012820-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	21874	0.52	5.00	
24	356728	1.07	5.00	
25	48703	0.91	5.00	
26	57409	0.91	5.00	
59	219486	0.54	5.00	
113	26658	0.44	5.00	
115	317449	0.63	5.00	
206	70822	1.04	5.00	
207	65752	1.05	5.00	
208	154126	0.61	5.00	
220	68	2.27		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	21828	21923	21708	21896	22014
24	359208	354312	351494	357678	360947
25	49080	48378	48184	48648	49225
26	57700	57086	56696	57545	58016
59	220010	218723	218079	219456	221165
113	26645	26671	26510	26627	26839
115	319278	316963	314287	317662	319057
206	70788	69936	70343	71225	71820
207	65013	65356	65419	66453	66522
208	153652	153624	153111	155108	155137
220	66	68	70	67	69

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	34983	9.00	8.9 - 9.1		0.783	0.900	
24	541630	23.90	23.9 - 24.1		0.830	0.900	
25	74352	24.90	24.9 - 25.1		0.804	0.900	
26	87427	25.90	25.9 - 26.1		0.832	0.900	
59	362668	58.95	58.9 - 59.1		0.808	0.900	
113	50868	113.00	112.9 - 113.1		0.733	0.900	
115	615467	115.00	114.9 - 115.1		0.755	0.900	
206	147355	206.00	205.9 - 206.1		0.777	0.900	
207	134047	207.00	206.9 - 207.1		0.776	0.900	
208	321479	208.00	207.9 - 208.1		0.780	0.900	
220	70	220.25	-				

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

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.5	V	Deflect	14.0	V
Extract 2	-155.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-65	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	170	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	52179	0.65	
89	86198	0.77	
205	56477	0.53	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	52786	52029	52022	52061	51999
89	87283	86189	86169	85536	85816
205	56822	56783	56216	56266	56296

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.2	V	Deflect	2.2	V
Extract 2	-165.0	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			