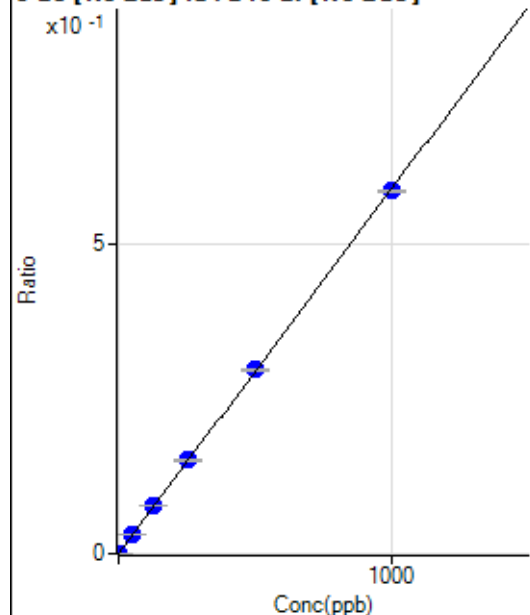


Batch Folder: D:\ICP-MS Data\P7102319MS .b\
Analysis File: P7102319MS .batch.bin
DA Date-Time: 2019-10-24 00:13:49
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-10-23 11:58:42
2	004CAL.S.d	S01	2019-10-23 12:02:15
3	005CAL.S.d	S02	2019-10-23 12:07:26
4	006CAL.S.d	S03	2019-10-23 12:11:19
5	007CAL.S.d	S04	2019-10-23 12:15:25
6	008CAL.S.d	S05	2019-10-23 12:19:12
7	009CAL.S.d	S06	2019-10-23 12:22:56
8	010CAL.S.d	S07	2019-10-23 12:26:40
9	011CAL.S.d	S08	2019-10-23 12:30:26

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	59.26	0.0000	P	26.
2	☐	0.100	0.095	435.20	0.0001	P	7.2
3	☐	1.000	1.062	4261.82	0.0006	P	4.6
4	☐	50.000	52.616	208566.33	0.0310	P	1.1
5	☐	125.000	131.438	505937.71	0.0775	P	0.9
6	☐	250.000	255.935	966670.01	0.1509	P	1.2
7	☐	500.000	505.440	1848877.07	0.2980	P	1.3
8	☐	1000.000	994.861	3537427.25	0.5865	P	0.3
9	☐			396.31	0.0001	P	14.

$$y = 5.8952E-004 * x + 9.2223E-006$$

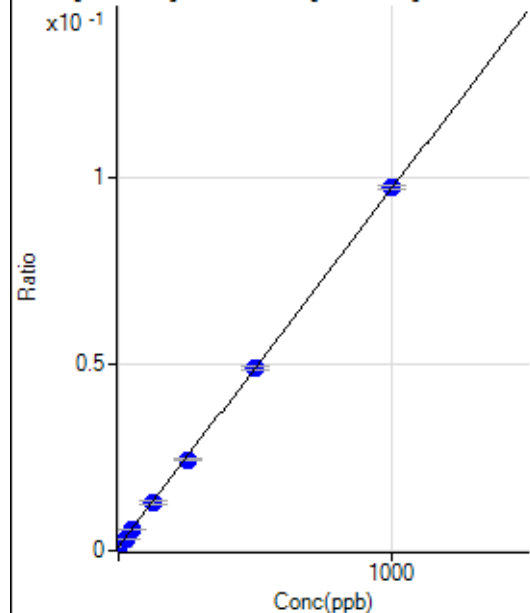
$$R = 0.9999$$

$$DL = 0.01246$$

$$BEC = 0.01564$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	6857.43	0.0011	P	1.0
2	☐	2.500	1.254	7907.93	0.0012	P	2.8
3	☐	25.000	22.674	21769.24	0.0032	P	3.2
4	☐	50.000	49.444	39068.26	0.0058	P	0.5
5	☐	125.000	123.701	84444.61	0.0129	P	4.8
6	☐	250.000	242.753	156055.38	0.0244	P	1.2
7	☐	500.000	497.948	303059.22	0.0488	P	1.8
8	☐	1000.000	1003.089	586919.65	0.0973	P	0.9
9	☐			29749.58	0.0053	P	3.8

$$y = 9.5945E-005 * x + 0.0011$$

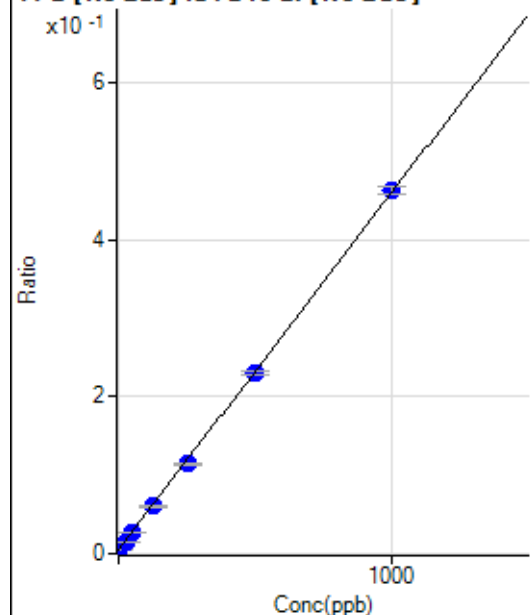
$$R = 1.0000$$

$$DL = 0.3421$$

$$BEC = 11.13$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	32942.39	0.0051	P	3.8
2	☐	2.500	1.226	37854.03	0.0057	P	1.3
3	☐	25.000	22.704	103770.67	0.0155	P	1.1
4	☐	50.000	49.381	185523.40	0.0276	P	1.0
5	☐	125.000	122.697	397942.44	0.0610	P	3.7
6	☐	250.000	240.186	733017.55	0.1144	P	1.7
7	☐	500.000	494.810	1428755.51	0.2303	P	2.3
8	☐	1000.000	1005.428	2790212.69	0.4626	P	2.0
9	☐			142626.07	0.0252	P	6.6

$$y = 4.5501\text{E-}004 * x + 0.0051$$

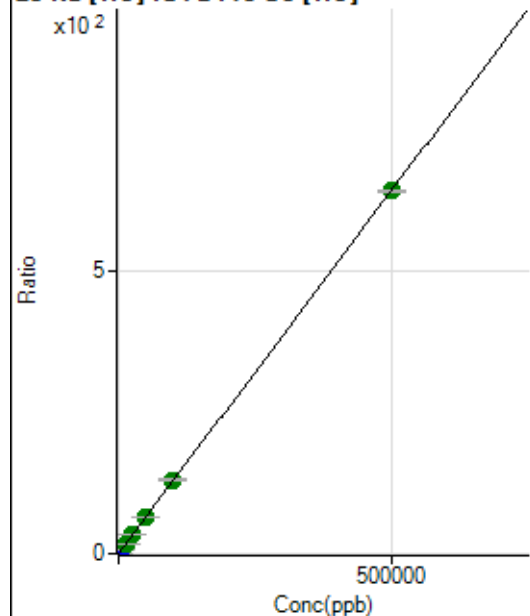
$$R = 0.9999$$

$$DL = 1.289$$

$$BEC = 11.28$$

Weight: <None>

Min Conc: 0

23 Na [He] ISTD:45 Sc [He]

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	27773.77	0.0446	P	1.7
2	☐	50.000	49.604	68950.83	0.1084	P	1.0
3	☐	500.000	534.296	453064.18	0.7316	P	0.8
4	☐	5000.000	5270.863	4114547.44	6.8217	P	0.2
5	☐	12500.000	12988.863	9856327.39	16.7451	A	0.2
6	☐	25000.000	25567.612	19206672.83	32.9183	A	0.2
7	☐	50000.000	51397.946	38069548.77	66.1297	A	0.5
8	☐	100000.00	101596.68	75279152.38	130.6729	A	0.8
9	☐	500000.00	499497.52	371389369.4	642.2750	A	0.4

$$y = 0.0013 * x + 0.0446$$

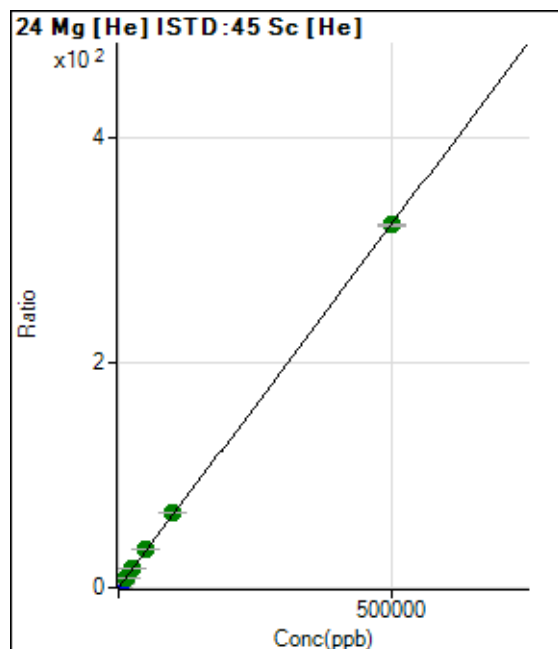
$$R = 1.0000$$

$$DL = 1.817$$

$$BEC = 34.72$$

Weight: <None>

Min Conc: 0



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	550.04	0.0009	P	14.
2	☐	50.000	52.960	22367.30	0.0352	P	1.4
3	☐	500.000	570.529	229262.03	0.3702	P	0.2
4	☐	5000.000	5352.900	2090585.03	3.4660	P	0.0
5	☐	12500.000	13252.871	5050241.87	8.5800	A	0.5
6	☐	25000.000	26139.437	9873357.34	16.9221	A	0.3
7	☐	50000.000	52367.979	19515954.78	33.9010	A	0.8
8	☐	100000.00	102670.42	38289296.34	66.4639	A	0.3
9	☐	500000.00	499149.72	186845441.6	323.1222	A	0.2

$$y = 6.4734\text{E-}004 * x + 8.8402\text{E-}004$$

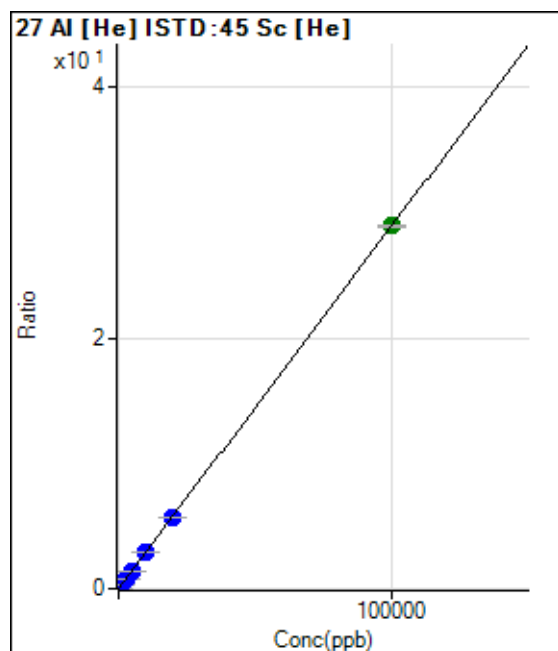
$$R = 1.0000$$

$$DL = 0.599$$

$$BEC = 1.366$$

Weight: <None>

Min Conc: 0



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1072.32	0.0017	P	7.7
2	☒	2.000					
3	☐	20.000	15.283	3806.19	0.0061	P	6.8
4	☐	1000.000	1005.896	176614.33	0.2928	P	1.5
5	☐	2500.000	2520.996	430426.55	0.7313	P	0.8
6	☐	5000.000	4979.626	841781.24	1.4428	P	0.9
7	☐	10000.000	9978.306	1663324.84	2.8893	P	0.6
8	☐	20000.000	19667.077	3279817.11	5.6932	P	0.8
9	☐	100000.00	100069.19	16746711.66	28.9607	A	0.8

$$y = 2.8939\text{E-}004 * x + 0.0017$$

$$R = 1.0000$$

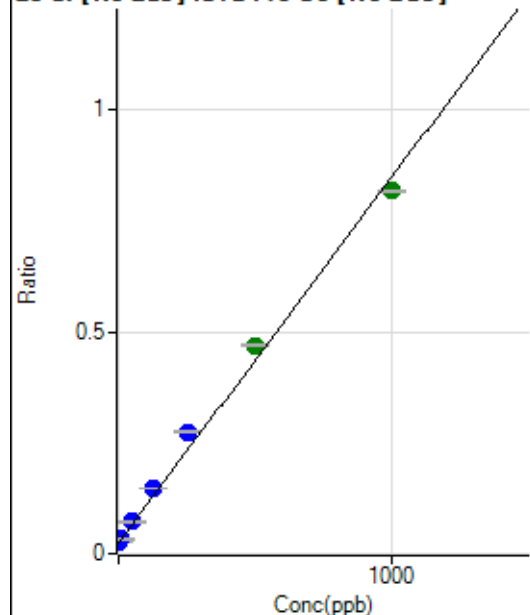
$$DL = 1.368$$

$$BEC = 5.955$$

Weight: <None>

Min Conc: 0

28 Si [No Gas] ISTD : 45 Sc [No Gas]



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	340761.17	0.0245	P	1.3
2	☐	1.000	0.564	353083.66	0.0250	P	1.9
3	☐	10.000	9.666	458829.41	0.0325	P	0.9
4	☐	50.000	57.155	1003255.11	0.0716	P	1.2
5	☐	125.000	150.542	2025872.59	0.1484	P	1.0
6	☐	250.000	302.317	3643823.22	0.2733	P	1.5
7	☐	500.000	539.810	6166286.59	0.4686	A	1.0
8	☐	1000.000	963.469	10783049.20	0.8172	A	0.3
9	☐			1412447.76	0.1109	P	1.1

$$y = 8.2272\text{E-}004 * x + 0.0245$$

$$R = 0.9970$$

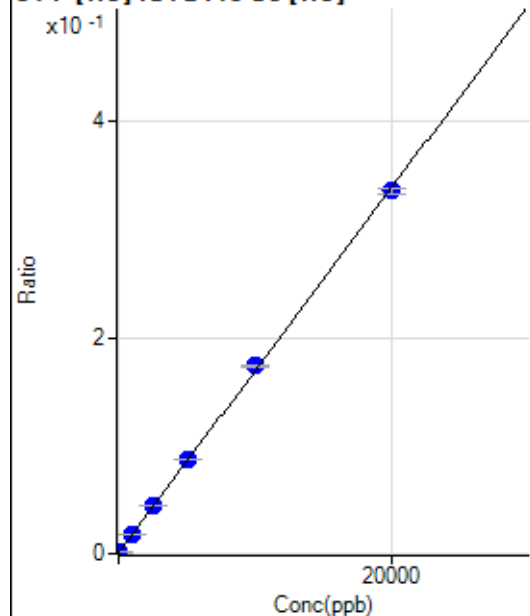
$$DL = 1.125$$

$$BEC = 29.82$$

Weight: <None>

Min Conc: 0

31 P [He] ISTD : 45 Sc [He]



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-22.325	144.45	0.0002	P	3.3
2	☐	0.000	-21.577	155.56	0.0002	P	16.
3	☐	0.000	43.903	836.17	0.0014	P	16.
4	☐	1000.000	1039.229	10951.68	0.0182	P	3.2
5	☐	2500.000	2599.355	26193.35	0.0445	P	3.0
6	☐	5000.000	5118.428	50781.73	0.0870	P	1.7
7	☐	10000.000	10236.846	99863.95	0.1735	P	1.4
8	☐	20000.000	19837.589	193337.78	0.3356	P	1.5
9	☐			191.68	0.0003	P	4.8

$$y = 1.6887\text{E-}005 * x + 6.0917\text{E-}004$$

$$R = 0.9999$$

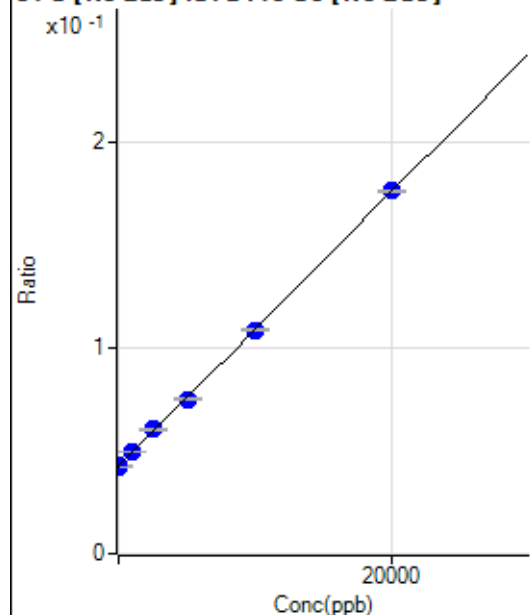
$$DL = 16.23$$

$$BEC = 36.07$$

Weight: <None>

Min Conc: 0

34 S [No Gas] ISTD:45 Sc [No Gas]



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	82.918	597735.79	0.0430	P	0.2
2	☐	0.000	-56.748	594710.98	0.0421	P	1.3
3	☐	0.000	-26.170	597517.84	0.0423	P	0.7
4	☐	1000.000	1031.200	692086.55	0.0494	P	0.6
5	☐	2500.000	2666.593	822824.96	0.0603	P	1.2
6	☐	5000.000	4890.034	1001591.01	0.0751	P	0.8
7	☐	10000.000	9934.534	1431112.01	0.1088	P	1.4
8	☐	20000.000	20037.840	2324786.34	0.1762	P	0.3
9	☐			451178.76	0.0354	P	1.3

$$y = 6.6728\text{E-}006 * x + 0.0425$$

$$R = 0.9999$$

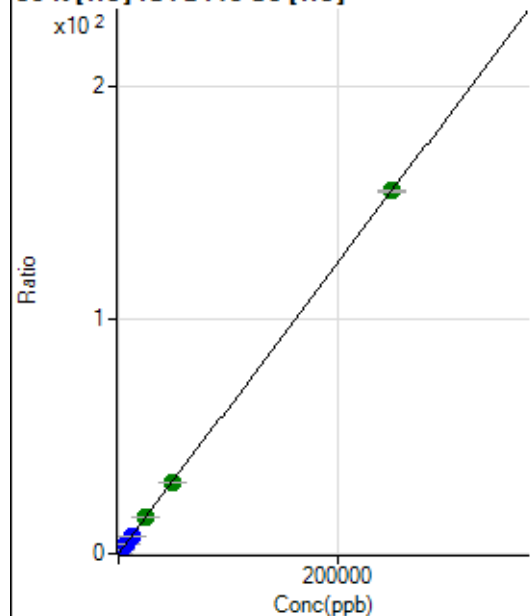
$$DL = 141.1$$

$$BEC = 6366$$

Weight: <None>

Min Conc: 0

39 K [He] ISTD:45 Sc [He]



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	31812.68	0.0511	P	1.7
2	☐	50.000	52.135	53062.26	0.0834	P	0.3
3	☐	500.000	519.870	231147.31	0.3733	P	0.6
4	☐	2500.000	2517.448	971712.55	1.6110	P	0.7
5	☐	6250.000	6280.714	2320793.35	3.9429	P	0.5
6	☐	12500.000	12491.902	4546062.34	7.7915	P	0.3
7	☐	25000.000	24857.511	8896302.63	15.4537	A	1.0
8	☐	50000.000	49292.419	17625310.81	30.5944	A	0.4
9	☐	250000.00	250155.18	89662167.28	155.0556	A	0.8

$$y = 6.1963\text{E-}004 * x + 0.0511$$

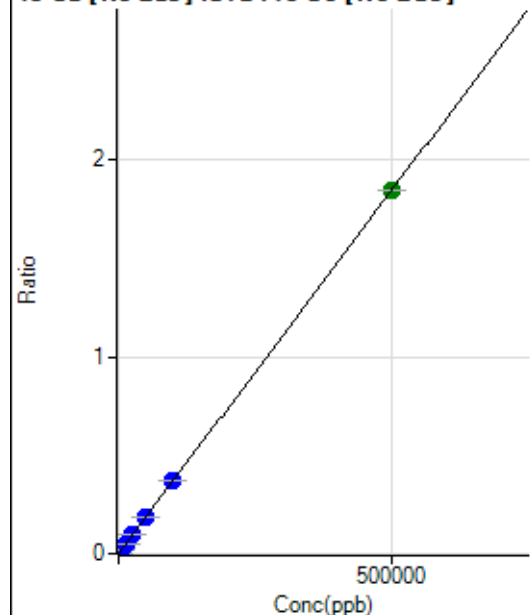
$$R = 1.0000$$

$$DL = 4.164$$

$$BEC = 82.52$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	288.91	0.0000	P	33.
2	☐	50.000	52.805	3042.11	0.0002	P	8.0
3	☐	500.000	519.708	27356.73	0.0019	P	2.6
4	☐	5000.000	5124.730	265201.71	0.0189	P	0.4
5	☐	12500.000	12890.407	649090.91	0.0475	P	0.4
6	☐	25000.000	25394.366	1248736.94	0.0936	P	1.0
7	☐	50000.000	50930.339	2470946.45	0.1878	P	0.8
8	☐	100000.00	101113.62	4919096.07	0.3728	P	0.5
9	☐	500000.00	499653.49	23454546.88	1.8422	A	0.1

$$y = 3.6868\text{E-}006 * x + 2.0809\text{E-}005$$

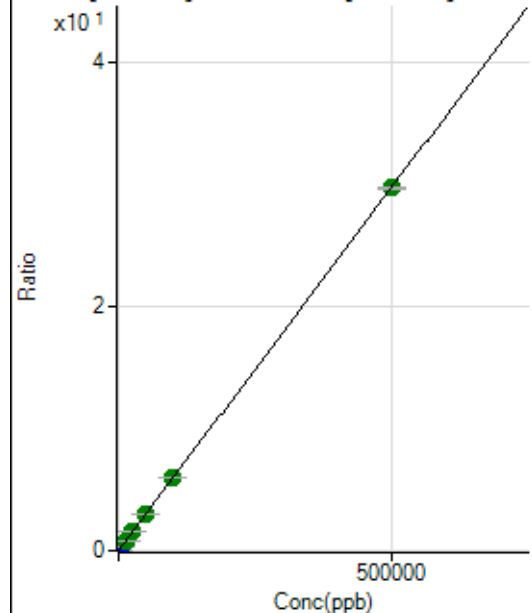
$$R = 1.0000$$

$$DL = 5.661$$

$$BEC = 5.644$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	22490.91	0.0016	P	0.7
2	☐	50.000	52.668	67089.86	0.0047	P	0.7
3	☐	500.000	522.388	461351.38	0.0327	P	0.5
4	☐	5000.000	5164.615	4326125.57	0.3086	P	0.5
5	☐	12500.000	12874.263	10467289.21	0.7667	A	0.7
6	☐	25000.000	25382.860	20137210.69	1.5101	A	0.9
7	☐	50000.000	50991.658	39897222.42	3.0321	A	0.5
8	☐	100000.00	101166.04	79350964.27	6.0139	A	0.7
9	☐	500000.00	499637.45	378083705.6	29.6952	A	0.7

$$y = 5.9430\text{E-}005 * x + 0.0016$$

$$R = 1.0000$$

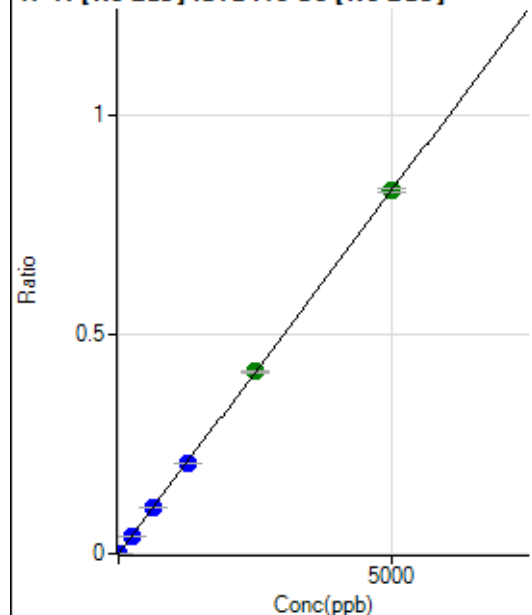
$$DL = 0.5864$$

$$BEC = 27.25$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	211.12	0.0000	P	12.
2	☐	0.500	0.572	1550.15	0.0001	P	7.3
3	☐	5.000	5.283	12541.92	0.0009	P	2.6
4	☐	250.000	249.207	577536.17	0.0412	P	0.3
5	☐	625.000	629.776	1420776.70	0.1041	P	0.6
6	☐	1250.000	1250.817	2756185.52	0.2067	P	0.2
7	☐	2500.000	2503.719	5443376.16	0.4137	A	1.0
8	☐	5000.000	4997.378	10894728.37	0.8257	A	1.2
9	☐			2908.73	0.0002	P	9.4

$$y = 1.6523E-004 * x + 1.5195E-005$$

$$R = 1.0000$$

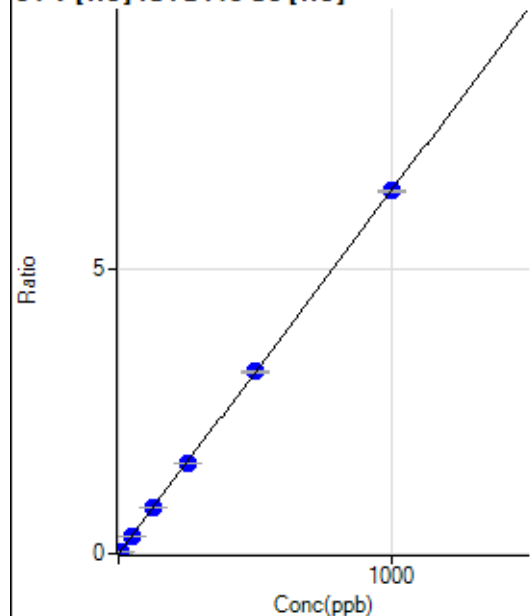
$$DL = 0.03379$$

$$BEC = 0.09196$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	22.22	0.0000	P	45.
2	☐	0.500	0.540	2220.20	0.0035	P	2.9
3	☐	5.000	5.503	21814.10	0.0352	P	1.9
4	☐	50.000	50.023	192969.13	0.3199	P	0.4
5	☐	125.000	125.550	472606.94	0.8029	P	0.7
6	☐	250.000	249.951	932635.76	1.5985	P	0.2
7	☐	500.000	501.574	1846517.35	3.2076	P	0.5
8	☐	1000.000	999.153	3680955.12	6.3896	P	0.4
9	☐			1281.19	0.0022	P	2.4

$$y = 0.0064 * x + 3.5711E-005$$

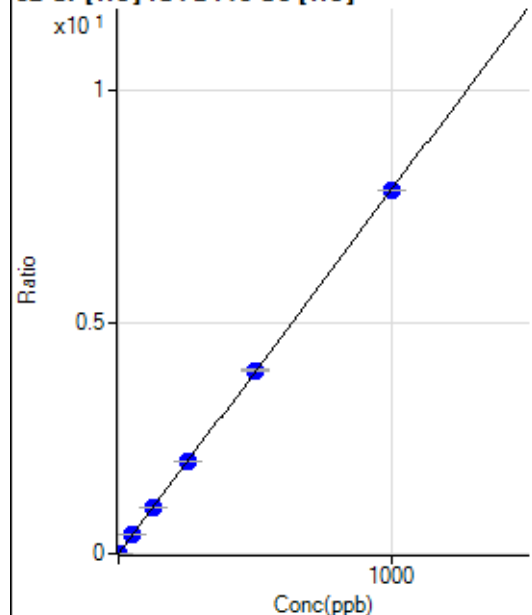
$$R = 1.0000$$

$$DL = 0.007676$$

$$BEC = 0.005584$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	867.82	0.0014	P	6.6
2	☐	0.200	0.182	1797.92	0.0028	P	5.5
3	☐	2.000	2.129	11221.08	0.0181	P	2.7
4	☐	50.000	51.058	242813.63	0.4026	P	0.7
5	☐	125.000	127.180	589007.33	1.0007	P	0.4
6	☐	250.000	253.047	1160881.61	1.9897	P	0.2
7	☐	500.000	504.074	2280871.10	3.9620	P	0.5
8	☐	1000.000	996.876	4513170.90	7.8341	P	0.1
9	☐			164204.12	0.2840	P	0.3

$$y = 0.0079 * x + 0.0014$$

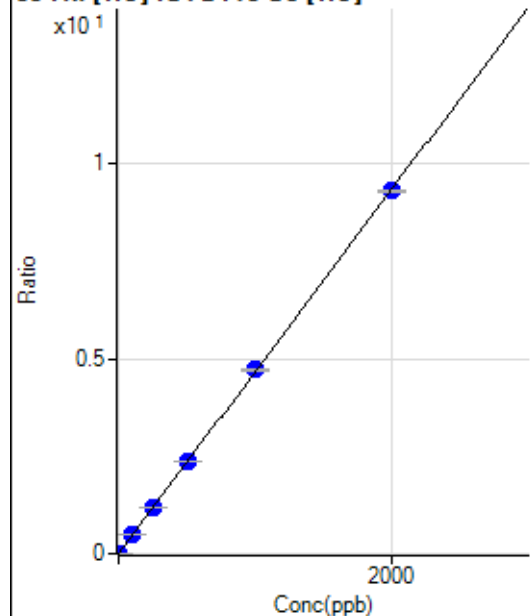
$$R = 1.0000$$

$$DL = 0.03492$$

$$BEC = 0.1775$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	123.34	0.0002	P	37.
2	☐	0.100	0.090	394.46	0.0006	P	6.7
3	☐	1.000	1.133	3397.11	0.0055	P	4.0
4	☐	100.000	102.827	289460.29	0.4799	P	0.6
5	☐	250.000	254.775	699716.68	1.1888	P	0.6
6	☐	500.000	504.023	1372044.74	2.3516	P	0.5
7	☐	1000.000	1010.482	2713916.63	4.7143	P	0.8
8	☐	2000.000	1993.015	5356597.42	9.2981	P	0.6
9	☐			20093.98	0.0347	P	0.6

$$y = 0.0047 * x + 1.9822E-004$$

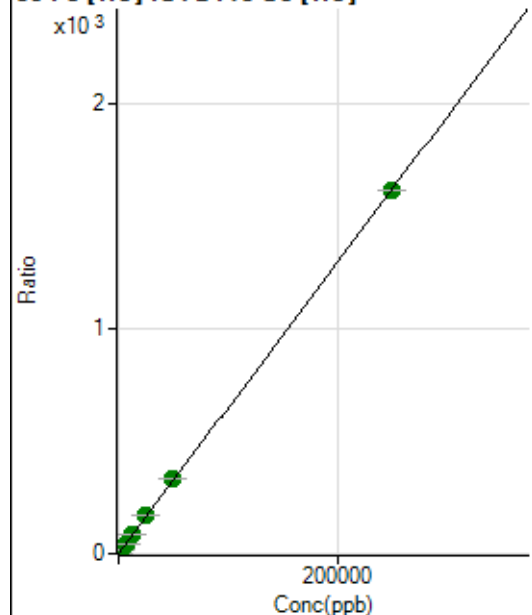
$$R = 1.0000$$

$$DL = 0.04772$$

$$BEC = 0.04249$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	8810.29	0.0142	P	3.4
2	☐	5.000	4.998	29550.64	0.0465	P	3.1
3	☐	50.000	57.101	237335.90	0.3833	P	0.6
4	☐	2500.000	2663.678	10393396.64	17.2316	A	0.4
5	☐	6250.000	6648.776	25303879.04	42.9904	A	0.9
6	☐	12500.000	13127.510	49515814.99	84.8675	A	0.5
7	☐	25000.000	26143.834	97290477.17	169.0021	A	0.5
8	☐	50000.000	51730.400	192637922.8	334.3880	A	0.3
9	☐	250000.00	249496.55	932540828.2	1,612.704	A	0.1

$$y = 0.0065 * x + 0.0142$$

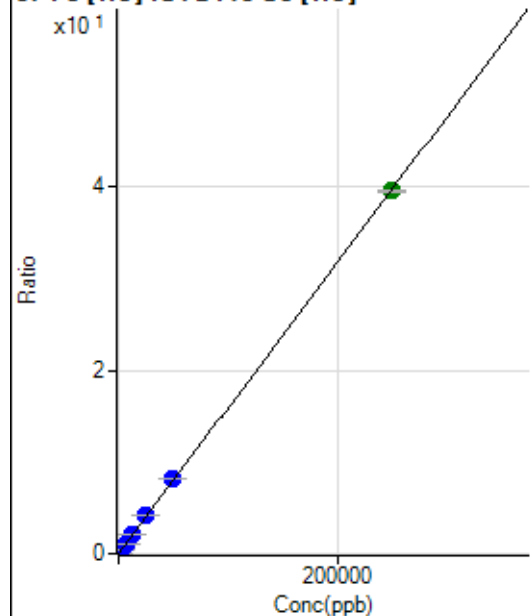
$$R = 1.0000$$

$$DL = 0.2219$$

$$BEC = 2.191$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	372.24	0.0006	P	6.5
2	☐	5.000	5.950	979.69	0.0015	P	6.6
3	☐	50.000	59.663	6223.71	0.0101	P	4.2
4	☐	2500.000	2677.795	256240.46	0.4248	P	1.4
5	☐	6250.000	6644.608	619957.93	1.0533	P	1.3
6	☐	12500.000	13118.424	1212984.79	2.0789	P	0.1
7	☐	25000.000	26149.102	2385233.39	4.1434	P	0.8
8	☐	50000.000	51675.001	4716752.77	8.1874	P	0.6
9	☐	250000.00	249507.52	22857962.32	39.5297	A	0.3

$$y = 1.5843E-004 * x + 5.9827E-004$$

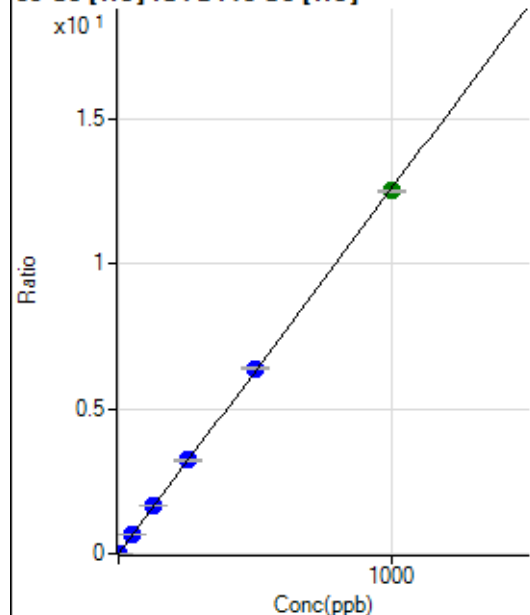
$$R = 1.0000$$

$$DL = 0.7383$$

$$BEC = 3.776$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	134.45	0.0002	P	19.
2	☐	0.100	0.097	916.71	0.0014	P	6.9
3	☐	1.000	1.073	8500.36	0.0137	P	3.2
4	☐	50.000	52.598	399730.50	0.6627	P	0.2
5	☐	125.000	129.923	963362.90	1.6367	P	0.3
6	☐	250.000	255.618	1878693.83	3.2199	P	0.2
7	☐	500.000	508.011	3683732.17	6.3990	P	0.6
8	☐	1000.000	993.845	7211735.65	12.5184	A	0.4
9	☐			14396.14	0.0249	P	1.5

$$y = 0.0126 * x + 2.1609E-004$$

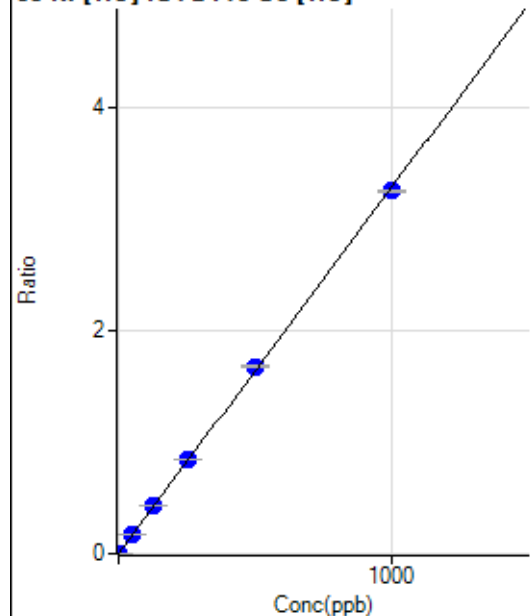
$$R = 0.9999$$

$$DL = 0.009918$$

$$BEC = 0.01716$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	60.00	0.0001	P	20.
2	☐	0.100	0.125	322.23	0.0005	P	7.5
3	☐	1.000	1.114	2322.44	0.0038	P	3.3
4	☐	50.000	53.832	106583.69	0.1767	P	0.6
5	☐	125.000	132.641	256207.85	0.4353	P	0.2
6	☐	250.000	258.993	495831.64	0.8498	P	0.5
7	☐	500.000	511.089	965350.07	1.6769	P	0.8
8	☐	1000.000	991.060	1873251.93	3.2516	P	0.5
9	☐			47074.34	0.0814	P	0.6

$$y = 0.0033 * x + 9.6432E-005$$

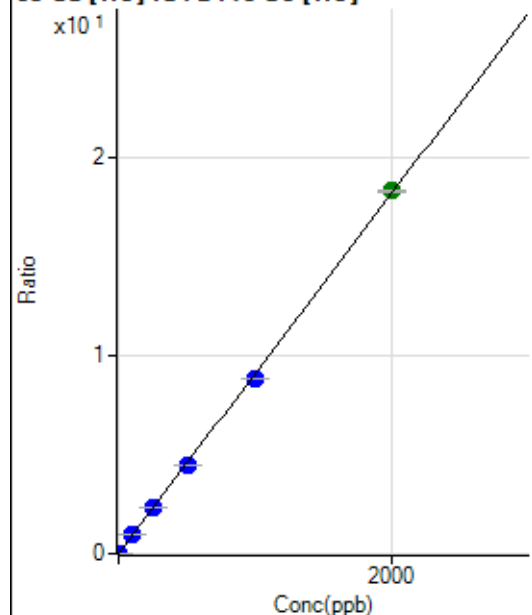
$$R = 0.9998$$

$$DL = 0.01766$$

$$BEC = 0.02939$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1720.13	0.0028	P	3.2
2	☐	0.200	0.212	2983.69	0.0047	P	2.2
3	☐	2.000	2.125	13689.91	0.0221	P	1.6
4	☐	100.000	102.104	562160.60	0.9320	P	1.1
5	☐	250.000	252.458	1354055.17	2.3005	P	0.4
6	☐	500.000	493.451	2621889.82	4.4938	P	0.7
7	☐	1000.000	972.999	5099519.09	8.8583	P	0.7
8	☐	2000.000	2014.725	10565198.94	18.3394	A	0.4
9	☐			17984.57	0.0311	P	1.9

$$y = 0.0091 * x + 0.0028$$

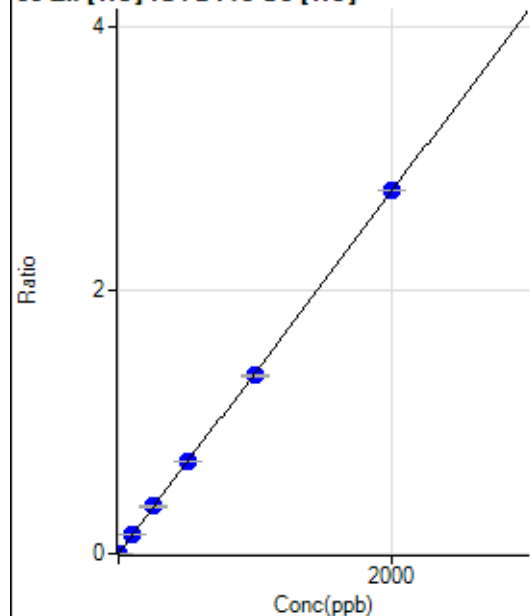
$$R = 0.9999$$

$$DL = 0.02951$$

$$BEC = 0.3038$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	547.80	0.0009	P	12.
2	☐	0.200	0.257	784.48	0.0012	P	5.9
3	☐	2.000	2.304	2506.92	0.0040	P	5.1
4	☐	100.000	105.015	87621.97	0.1453	P	0.5
5	☐	250.000	260.298	211171.97	0.3588	P	1.0
6	☐	500.000	513.149	412185.78	0.7064	P	0.5
7	☐	1000.000	983.816	779225.70	1.3536	P	0.8
8	☐	2000.000	2003.266	1587291.96	2.7553	P	0.1
9	☐			15938.87	0.0276	P	0.8

$$y = 0.0014 * x + 8.8043E-004$$

$$R = 0.9999$$

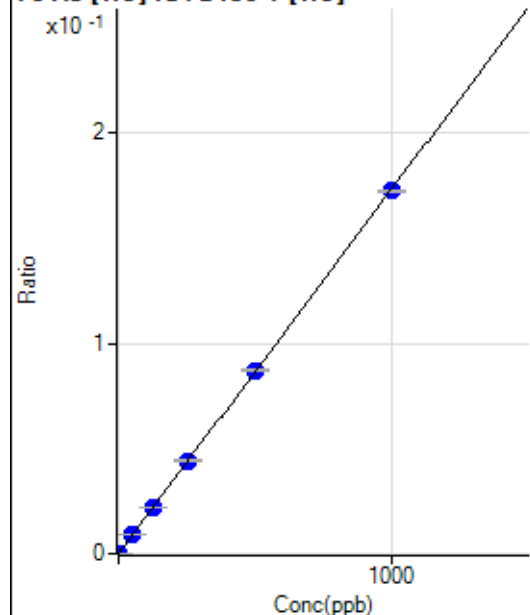
$$DL = 0.2342$$

$$BEC = 0.6403$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9.88	0.0000	P	39.
2	☐	0.100	0.091	57.41	0.0000	P	15.
3	☐	1.000	1.087	569.15	0.0002	P	7.5
4	☐	50.000	52.054	26210.04	0.0090	P	0.4
5	☐	125.000	128.944	62903.08	0.0224	P	0.3
6	☐	250.000	255.835	123932.06	0.0443	P	0.8
7	☐	500.000	504.077	241984.90	0.0874	P	0.6
8	☐	1000.000	995.907	475067.44	0.1726	P	0.5
9	☐			175.31	0.0001	P	6.4

$$y = 1.7332\text{E-}004 * x + 3.3321\text{E-}006$$

$$R = 1.0000$$

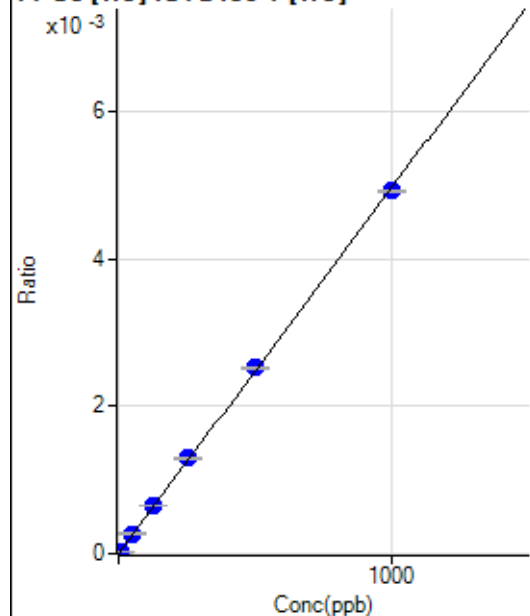
$$DL = 0.0225$$

$$BEC = 0.01922$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	0.670	10.00	0.0000	P	57.
3	☐	5.000	6.642	97.78	0.0000	P	23.
4	☐	50.000	54.327	782.26	0.0003	P	8.4
5	☐	125.000	132.283	1845.71	0.0007	P	2.6
6	☐	250.000	261.176	3618.29	0.0013	P	3.3
7	☐	500.000	508.040	6976.22	0.0025	P	0.9
8	☐	1000.000	992.051	13536.50	0.0049	P	0.5
9	☐			8.89	0.0000	P	21.

$$y = 4.9579\text{E-}006 * x + 0.0000\text{E+}000$$

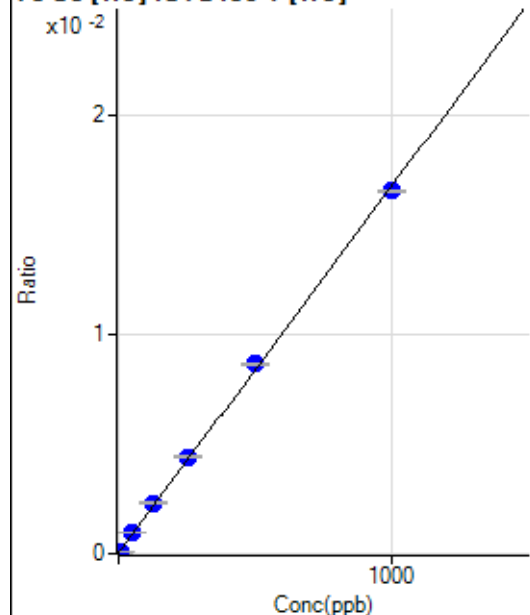
$$R = 0.9999$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	106.79	0.0000	P	10.
2	☐	0.500	0.830	150.00	0.0000	P	3.6
3	☐	5.000	5.195	364.21	0.0001	P	4.2
4	☐	50.000	53.481	2696.57	0.0009	P	1.9
5	☐	125.000	136.458	6510.15	0.0023	P	1.9
6	☐	250.000	261.676	12304.68	0.0044	P	1.2
7	☐	500.000	515.457	23925.98	0.0086	P	1.0
8	☐	1000.000	987.745	45467.85	0.0165	P	0.4
9	☐			106.18	0.0000	P	25.

$$y = 1.6689E-005 * x + 3.6041E-005$$

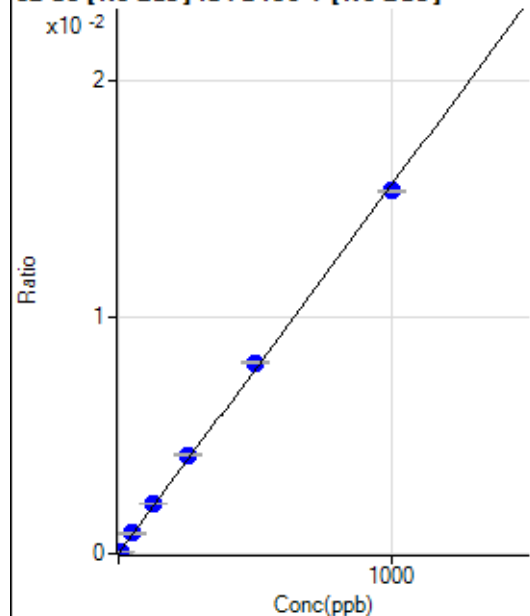
$$R = 0.9997$$

$$DL = 0.7081$$

$$BEC = 2.16$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	195.24	0.0000	P	12.
2	☒	0.500					
3	☐	5.000	5.823	2221.06	0.0001	P	7.4
4	☐	50.000	54.483	18929.07	0.0009	P	1.6
5	☐	125.000	135.765	45755.57	0.0021	P	0.7
6	☐	250.000	267.651	88305.88	0.0042	P	0.8
7	☐	500.000	518.900	170735.01	0.0081	P	1.1
8	☐	1000.000	984.563	322926.73	0.0153	P	0.9
9	☐			393.91	0.0000	P	51.

$$y = 1.5544E-005 * x + 8.9067E-006$$

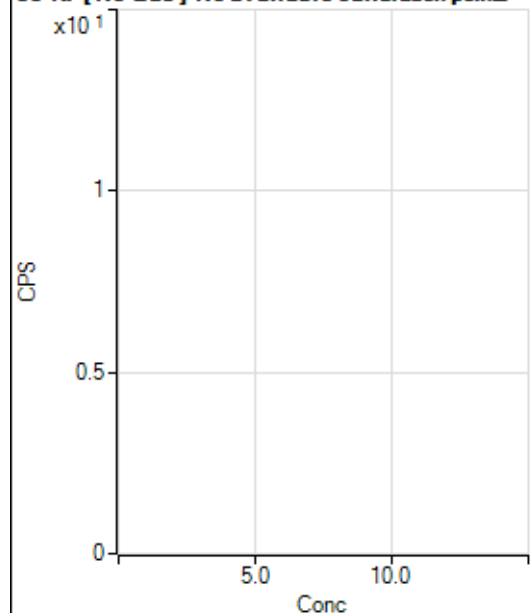
$$R = 0.9995$$

$$DL = 0.2193$$

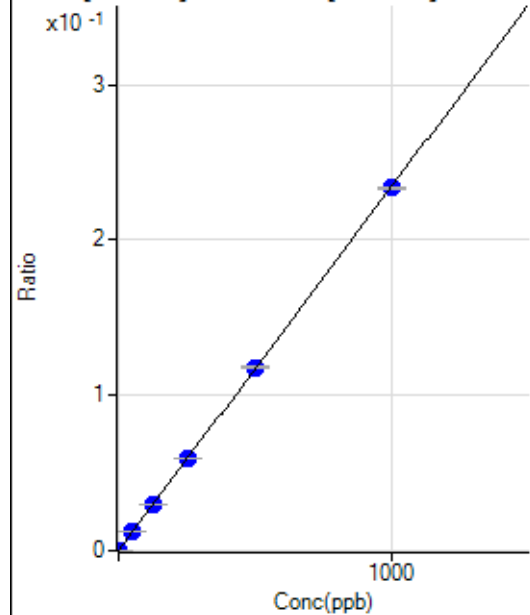
$$BEC = 0.573$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			2064.63		P	1.7
2	☐			2202.42		P	4.1
3	☐			2077.96		P	4.3
4	☐			2063.52		P	5.4
5	☐			2107.97		P	3.5
6	☐			2133.53		P	2.2
7	☐			2054.63		P	4.6
8	☐			2016.84		P	3.9
9	☐			1985.72		P	6.4

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

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3272.72	0.0001	P	2.6
2	☐	0.100	0.121	3911.83	0.0002	P	4.1
3	☐	1.000	1.060	8880.92	0.0004	P	5.7
4	☐	50.000	50.513	264937.38	0.0120	P	0.7
5	☐	125.000	128.032	650535.41	0.0301	P	0.3
6	☐	250.000	252.995	1257933.85	0.0594	P	0.8
7	☐	500.000	504.177	2499554.16	0.1182	P	0.4
8	☐	1000.000	996.758	4925357.45	0.2336	P	0.6
9	☐			22115.06	0.0011	P	1.4

$$y = 2.3416E-004 * x + 1.4925E-004$$

$$R = 1.0000$$

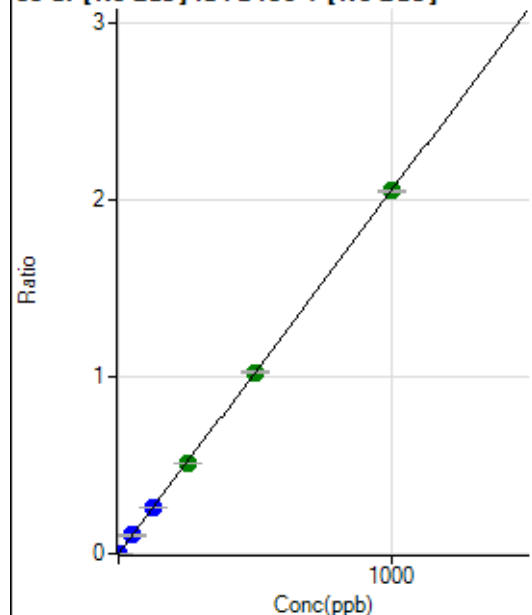
$$DL = 0.04906$$

$$BEC = 0.6374$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	277.79	0.0000	P	17.
2	☐	0.100	0.104	4967.72	0.0002	P	1.1
3	☐	1.000	1.022	47156.29	0.0021	P	0.3
4	☐	50.000	50.338	2284956.89	0.1033	P	0.3
5	☐	125.000	126.904	5622584.24	0.2604	P	0.3
6	☐	250.000	250.621	10892446.95	0.5143	A	0.2
7	☐	500.000	500.217	21703373.40	1.0264	A	0.5
8	☐	1000.000	999.481	43249398.19	2.0508	A	0.5
9	☐			166657.61	0.0083	P	1.0

$$y = 0.0021 * x + 1.2675E-005$$

$$R = 1.0000$$

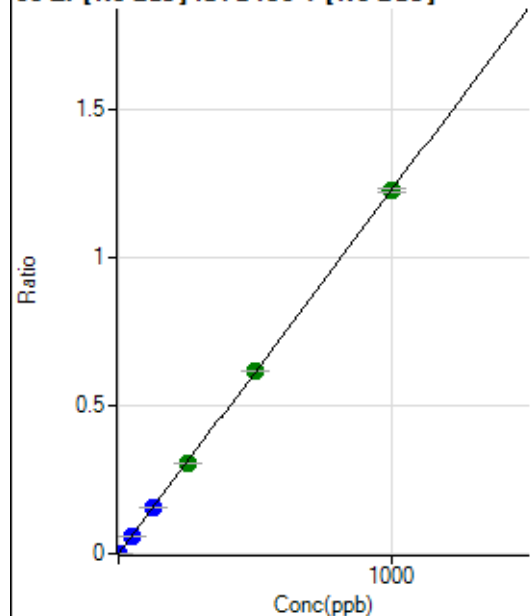
$$DL = 0.003229$$

$$BEC = 0.006177$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1294.56	0.0001	P	6.4
2	☐	0.100	0.081	3492.22	0.0002	P	1.8
3	☐	1.000	0.883	25531.84	0.0011	P	2.8
4	☐	50.000	49.713	1350525.06	0.0611	P	0.8
5	☐	125.000	125.707	3331551.88	0.1543	P	0.6
6	☐	250.000	248.315	6454607.09	0.3047	A	0.0
7	☐	500.000	504.380	13087614.01	0.6189	A	0.3
8	☐	1000.000	998.157	25828513.08	1.2248	A	1.2
9	☐			7146.54	0.0004	P	2.8

$$y = 0.0012 * x + 5.9052E-005$$

$$R = 1.0000$$

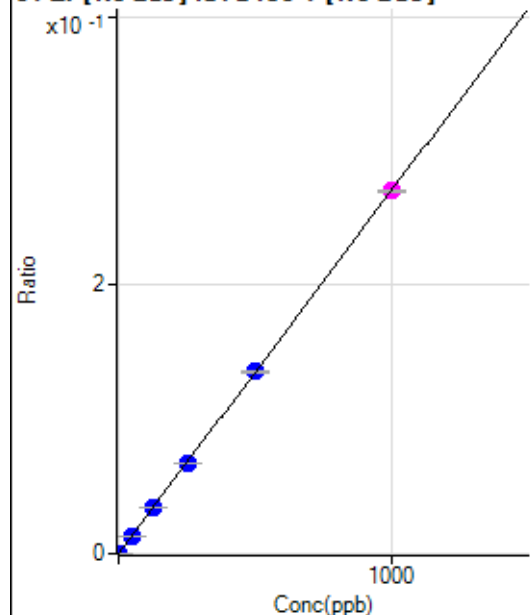
$$DL = 0.009196$$

$$BEC = 0.04813$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	247.23	0.0000	P	24.
2	☐	0.100	0.071	672.27	0.0000	P	9.4
3	☐	1.000	0.900	5693.03	0.0003	P	5.1
4	☐	50.000	49.957	299077.51	0.0135	P	0.4
5	☐	125.000	126.462	738619.86	0.0342	P	0.8
6	☐	250.000	249.276	1428036.21	0.0674	P	1.0
7	☐	500.000	501.996	2870842.03	0.1358	P	1.0
8	☐	1000.000	999.003	5697491.45	0.2702	M	0.6
9	☐			1450.14	0.0001	P	7.1

$$y = 2.7043\text{E-}004 * x + 1.1270\text{E-}005$$

$$R = 1.0000$$

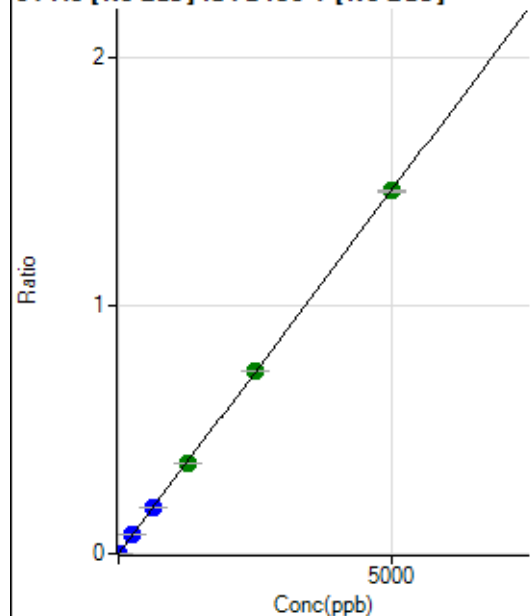
$$DL = 0.03062$$

$$BEC = 0.04167$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	533.37	0.0000	P	7.6
2	☐	0.500	0.500	3756.19	0.0002	P	7.6
3	☐	5.000	4.952	32902.76	0.0015	P	0.7
4	☐	250.000	252.281	1632683.11	0.0738	P	0.2
5	☐	625.000	637.303	4025129.17	0.1864	P	0.4
6	☐	1250.000	1248.628	7735674.83	0.3652	A	0.5
7	☐	2500.000	2510.658	15527919.44	0.7343	A	0.8
8	☐	5000.000	4993.362	30800516.31	1.4605	A	0.3
9	☐			25345.55	0.0013	P	0.8

$$y = 2.9248\text{E-}004 * x + 2.4330\text{E-}005$$

$$R = 1.0000$$

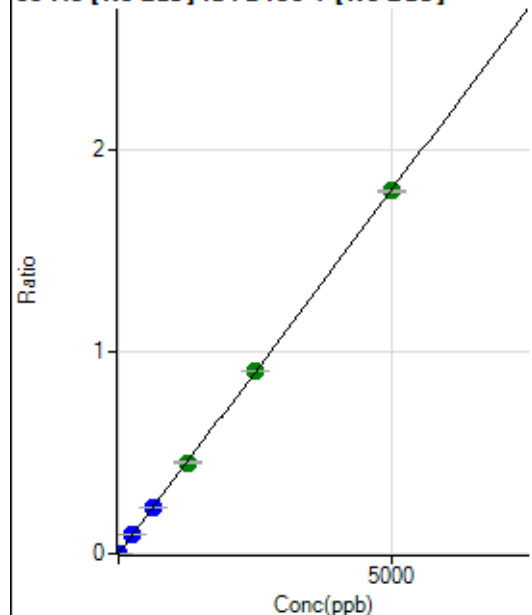
$$DL = 0.01886$$

$$BEC = 0.08319$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	161.12	0.0000	P	17.
2	☐	0.500	0.535	4395.28	0.0002	P	6.1
3	☐	5.000	5.311	42809.62	0.0019	P	1.3
4	☐	250.000	252.888	2010609.96	0.0909	P	0.4
5	☐	625.000	638.872	4957803.15	0.2296	P	0.5
6	☐	1250.000	1255.291	9556044.83	0.4512	A	0.4
7	☐	2500.000	2512.939	19098201.64	0.9032	A	0.7
8	☐	5000.000	4990.329	37824399.46	1.7936	A	0.6
9	☐			38608.72	0.0019	P	0.7

$$y = 3.5941\text{E-}004 * x + 7.3514\text{E-}006$$

$$R = 1.0000$$

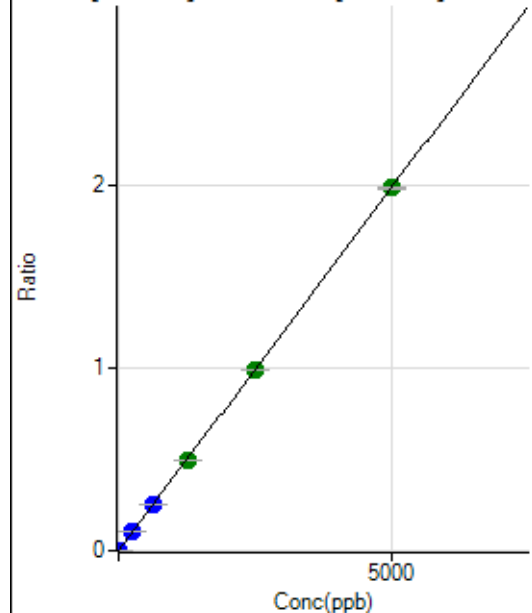
$$DL = 0.01044$$

$$BEC = 0.02045$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	288.90	0.0000	P	14.
2	☐	0.500	0.542	5040.00	0.0002	P	3.6
3	☐	5.000	5.132	45922.46	0.0021	P	1.1
4	☐	250.000	252.540	2223046.95	0.1005	P	0.4
5	☐	625.000	633.413	5442109.93	0.2521	P	0.5
6	☐	1250.000	1253.057	10561122.11	0.4986	A	0.4
7	☐	2500.000	2498.762	21024998.91	0.9943	A	0.3
8	☐	5000.000	4998.676	41946463.78	1.9890	A	0.8
9	☐			59623.08	0.0030	P	1.7

$$y = 3.9791\text{E-}004 * x + 1.3181\text{E-}005$$

$$R = 1.0000$$

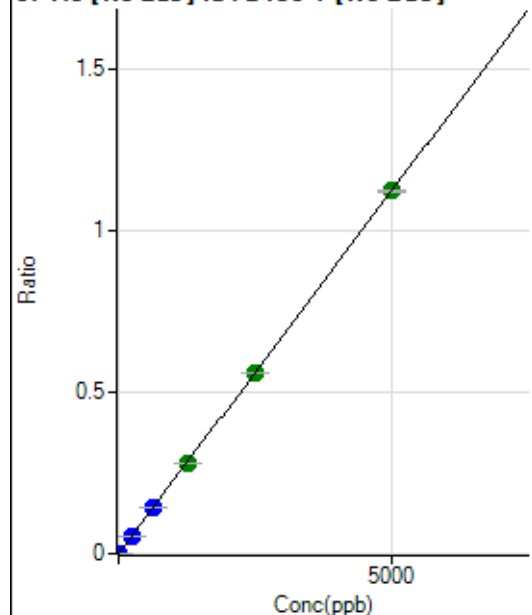
$$DL = 0.01448$$

$$BEC = 0.03313$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	91.67	0.0000	P	23.
2	☐	0.500	0.543	2778.17	0.0001	P	3.0
3	☐	5.000	5.135	25868.72	0.0012	P	2.6
4	☐	250.000	250.063	1242707.66	0.0562	P	1.0
5	☐	625.000	629.682	3054399.55	0.1415	P	0.1
6	☐	1250.000	1245.618	5927088.41	0.2798	A	0.7
7	☐	2500.000	2497.314	11863124.05	0.5610	A	0.6
8	☐	5000.000	5001.850	23697138.90	1.1237	A	0.4
9	☐			24494.09	0.0012	P	3.1

$$y = 2.2465E-004 * x + 4.1804E-006$$

$$R = 1.0000$$

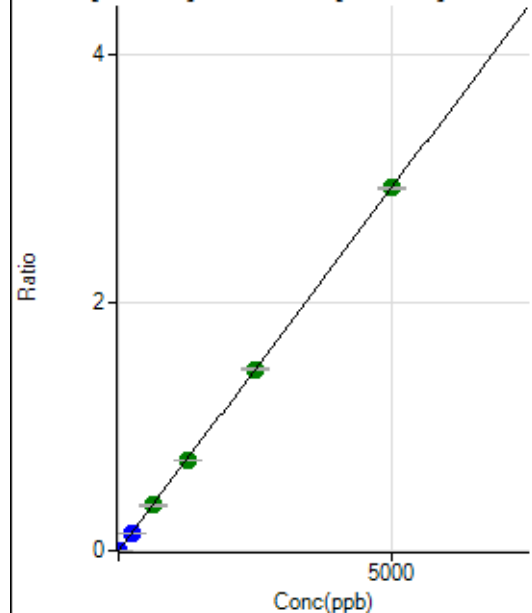
$$DL = 0.01337$$

$$BEC = 0.01861$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	175.01	0.0000	P	24.
2	☐	0.500	0.530	6999.24	0.0003	P	4.1
3	☐	5.000	5.206	68110.59	0.0030	P	1.3
4	☐	250.000	249.259	3220024.81	0.1456	P	0.8
5	☐	625.000	623.241	7858558.59	0.3640	A	0.6
6	☐	1250.000	1247.126	15426170.48	0.7283	A	0.9
7	☐	2500.000	2502.430	30902326.73	1.4614	A	0.4
8	☐	5000.000	4999.760	61575753.46	2.9198	A	0.2
9	☐			61396.94	0.0031	P	1.5

$$y = 5.8399E-004 * x + 7.9870E-006$$

$$R = 1.0000$$

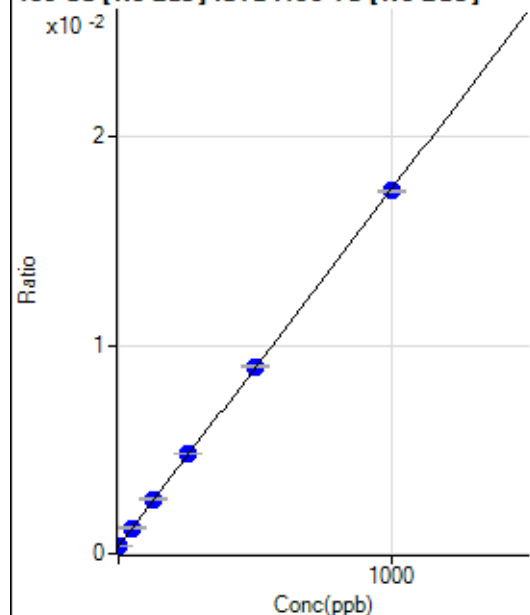
$$DL = 0.009927$$

$$BEC = 0.01368$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9767.71	0.0004	P	3.7
2	☐	0.100	-0.450	9556.41	0.0004	P	3.4
3	☐	1.000	-0.221	9803.80	0.0004	P	2.8
4	☐	50.000	51.468	33816.32	0.0012	P	0.8
5	☐	125.000	131.615	70015.13	0.0026	P	1.3
6	☐	250.000	258.373	126813.95	0.0048	P	1.0
7	☐	500.000	502.867	238739.05	0.0090	P	1.0
8	☐	1000.000	995.574	464433.39	0.0174	P	0.4
9	☐			7435.60	0.0003	P	4.4

$$y = 1.7115\text{E-}005 * x + 3.6333\text{E-}004$$

$$R = 0.9999$$

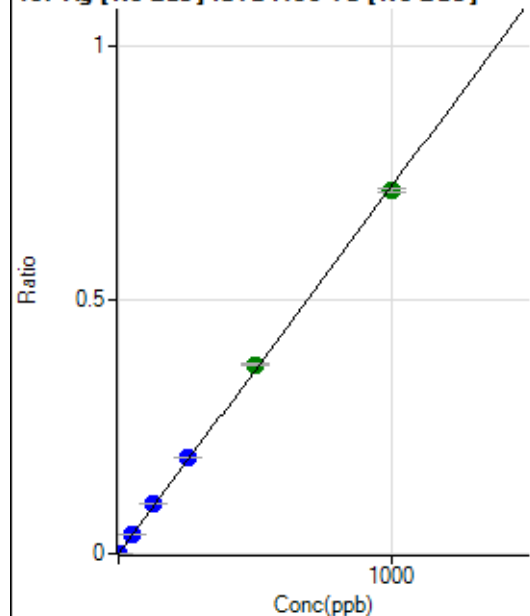
$$DL = 2.368$$

$$BEC = 21.23$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	250.01	0.0000	P	11.
2	☐	0.100	0.118	2542.00	0.0001	P	3.3
3	☐	1.000	1.112	22168.09	0.0008	P	0.9
4	☐	50.000	54.161	1064075.90	0.0392	P	0.3
5	☐	125.000	134.825	2608189.12	0.0974	P	1.1
6	☐	250.000	261.631	5010959.05	0.1891	P	0.6
7	☐	500.000	514.835	9902866.89	0.3721	A	0.8
8	☐	1000.000	988.238	19060270.22	0.7142	A	1.1
9	☐			3725.65	0.0002	P	0.8

$$y = 7.2269\text{E-}004 * x + 9.2999\text{E-}006$$

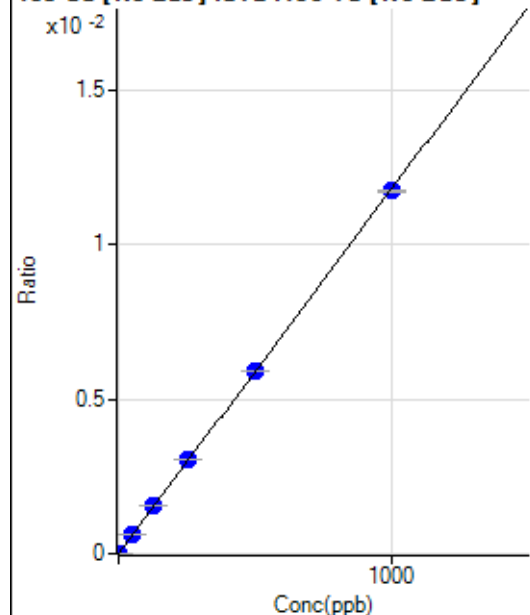
$$R = 0.9997$$

$$DL = 0.004484$$

$$BEC = 0.01287$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	19.44	0.0000	P	80.
2	☐	0.100	0.149	66.67	0.0000	P	16.
3	☐	1.000	1.168	395.85	0.0000	P	7.6
4	☐	50.000	52.449	16851.94	0.0006	P	1.8
5	☐	125.000	132.404	41864.92	0.0016	P	0.4
6	☐	250.000	260.295	81468.85	0.0031	P	0.1
7	☐	500.000	502.362	157896.78	0.0059	P	0.3
8	☐	1000.000	995.197	313627.87	0.0118	P	0.8
9	☐			104.17	0.0000	P	42.

$$y = 1.1808\text{E-}005 * x + 7.2164\text{E-}007$$

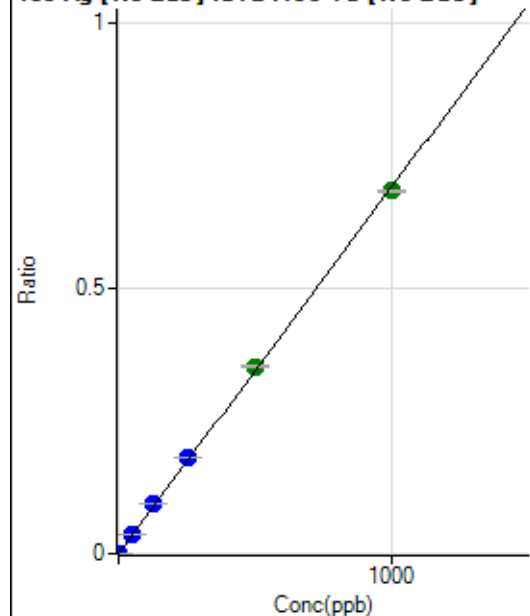
$$R = 0.9999$$

$$DL = 0.1481$$

$$BEC = 0.06112$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	172.23	0.0000	P	7.6
2	☐	0.100	0.108	2172.48	0.0001	P	3.4
3	☐	1.000	1.129	21433.67	0.0008	P	0.9
4	☐	50.000	54.180	1016962.50	0.0374	P	0.5
5	☐	125.000	135.297	2500709.41	0.0934	P	0.3
6	☐	250.000	261.411	4783618.86	0.1805	P	0.5
7	☐	500.000	510.888	9388852.29	0.3528	A	0.8
8	☐	1000.000	990.207	18247823.67	0.6837	A	0.4
9	☐			3422.77	0.0001	P	7.2

$$y = 6.9050\text{E-}004 * x + 6.4070\text{E-}006$$

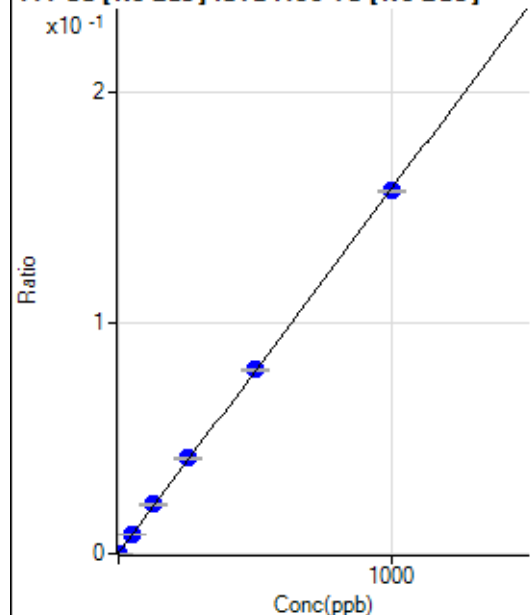
$$R = 0.9998$$

$$DL = 0.002122$$

$$BEC = 0.009279$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	6876.57	0.0003	P	3.6
2	☒	0.100					
3	☐	1.000	0.991	11232.26	0.0004	P	1.7
4	☐	50.000	53.466	235982.29	0.0087	P	0.5
5	☐	125.000	133.030	568037.07	0.0212	P	1.0
6	☐	250.000	260.301	1094007.82	0.0413	P	0.4
7	☐	500.000	503.356	2118293.96	0.0796	P	0.5
8	☐	1000.000	994.570	4190416.87	0.1570	P	0.2
9	☐			5954.26	0.0002	P	3.6

$$y = 1.5761\text{E-}004 * x + 2.5579\text{E-}004$$

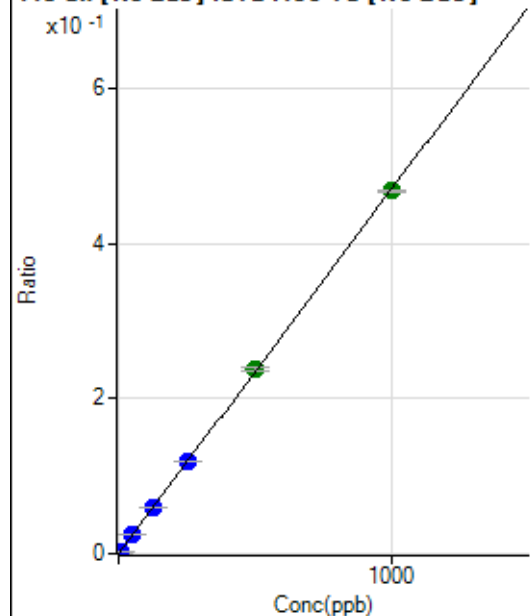
$$R = 0.9999$$

$$DL = 0.174$$

$$BEC = 1.623$$

Weight: <None>

Min Conc: 0

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

	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1400.13	0.0001	P	8.2
2	☐	0.500	0.548	8308.38	0.0003	P	3.5
3	☐	5.000	5.392	70418.90	0.0026	P	2.1
4	☐	50.000	51.276	655447.76	0.0241	P	1.2
5	☐	125.000	128.777	1619053.07	0.0605	P	0.4
6	☐	250.000	252.105	3136786.70	0.1184	P	1.1
7	☐	500.000	506.609	6329021.02	0.2378	A	1.2
8	☐	1000.000	995.631	12471392.73	0.4673	A	0.7
9	☐			6271.12	0.0003	P	4.4

$$y = 4.6930\text{E-}004 * x + 5.2083\text{E-}005$$

$$R = 1.0000$$

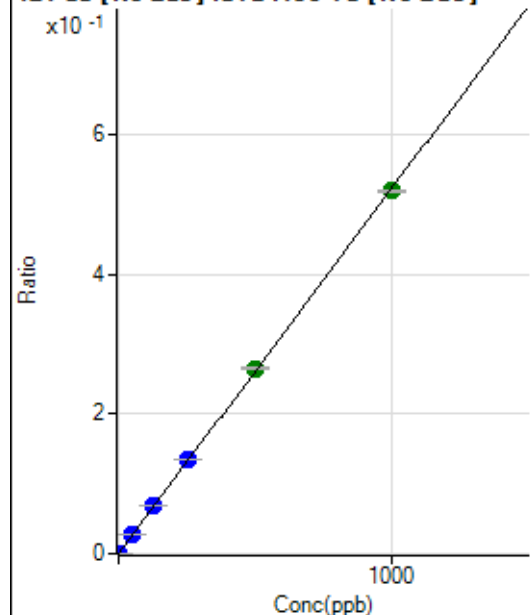
$$DL = 0.02728$$

$$BEC = 0.111$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	147.23	0.0000	P	16.
2	☐	0.200	0.204	3008.79	0.0001	P	4.9
3	☐	2.000	2.062	29493.22	0.0011	P	1.8
4	☐	50.000	51.125	725225.85	0.0267	P	0.0
5	☐	125.000	130.410	1821569.72	0.0681	P	0.8
6	☐	250.000	256.338	3544958.93	0.1338	P	0.6
7	☐	500.000	506.927	7040309.62	0.2645	A	0.9
8	☐	1000.000	994.220	13846211.42	0.5188	A	0.6
9	☐			13395.87	0.0005	P	5.8

$$y = 5.2182\text{E-}004 * x + 5.4789\text{E-}006$$

$$R = 0.9999$$

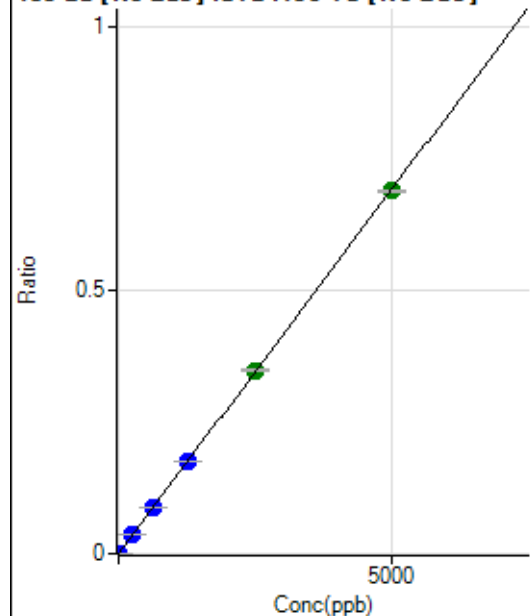
$$DL = 0.005293$$

$$BEC = 0.0105$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	88.89	0.0000	P	28.
2	☐	1.000	1.084	4106.34	0.0002	P	2.1
3	☐	10.000	10.573	39861.10	0.0015	P	0.5
4	☐	250.000	256.477	961710.25	0.0354	P	1.1
5	☐	625.000	641.361	2368288.75	0.0885	P	1.0
6	☐	1250.000	1266.778	4631290.16	0.1748	P	0.6
7	☐	2500.000	2521.358	9257426.68	0.3478	A	0.8
8	☐	5000.000	4982.756	18345173.32	0.6874	A	0.8
9	☐			2875.42	0.0001	P	2.6

$$y = 1.3795\text{E-}004 * x + 3.3051\text{E-}006$$

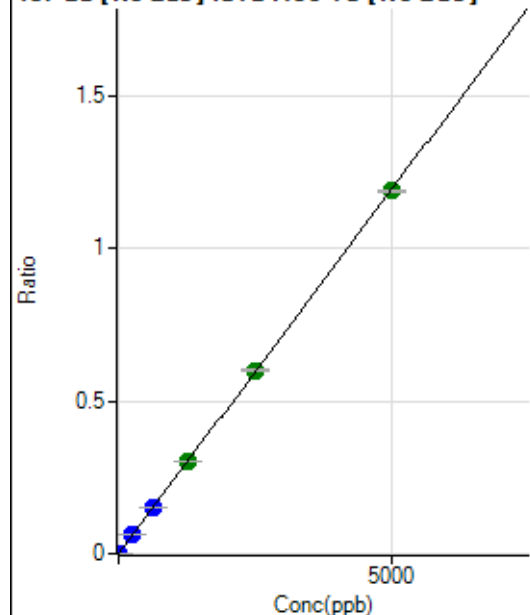
$$R = 1.0000$$

$$DL = 0.02047$$

$$BEC = 0.02396$$

Weight: <None>

Min Conc: 0

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

	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	150.01	0.0000	P	5.1
2	☐	1.000	1.038	6813.05	0.0003	P	2.5
3	☐	10.000	10.639	69418.37	0.0025	P	1.1
4	☐	250.000	255.884	1660706.81	0.0611	P	0.4
5	☐	625.000	642.213	4104403.56	0.1533	P	0.9
6	☐	1250.000	1263.768	7996775.01	0.3018	A	0.4
7	☐	2500.000	2520.991	16020464.42	0.6019	A	0.7
8	☐	5000.000	4983.616	31757385.09	1.1900	A	0.4
9	☐			5067.80	0.0002	P	9.6

$$y = 2.3877\text{E-}004 * x + 5.5788\text{E-}006$$

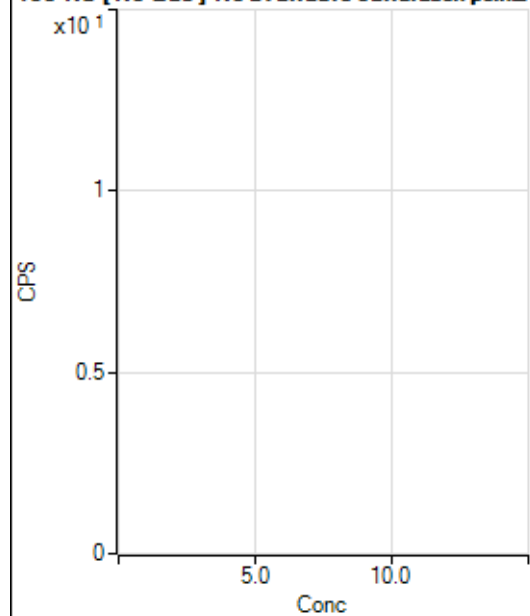
$$R = 1.0000$$

$$DL = 0.003573$$

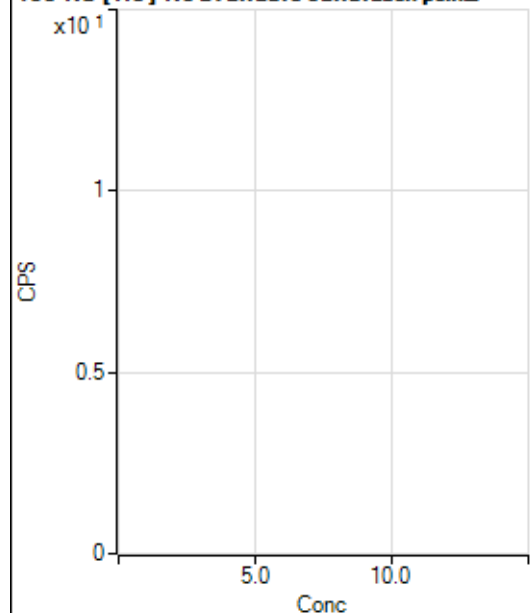
$$BEC = 0.02336$$

Weight: <None>

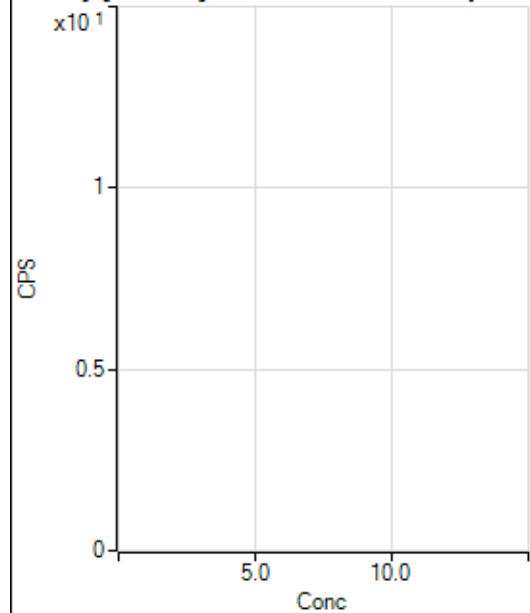
Min Conc: 0

150 Nd [No Gas] No available calibration points

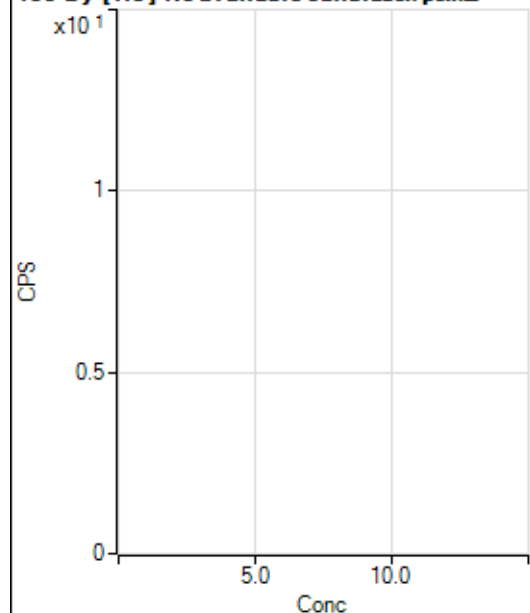
	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			4.45		P	86.
2	☐			15.56		P	49.
3	☐			22.22		P	75.
4	☐			53.34		P	25.
5	☐			157.78		P	17.
6	☐			351.13		P	10.
7	☐			582.26		P	13.
8	☐			1240.10		P	10.
9	☐			144.45		P	27.

150 Nd [He] No available calibration points

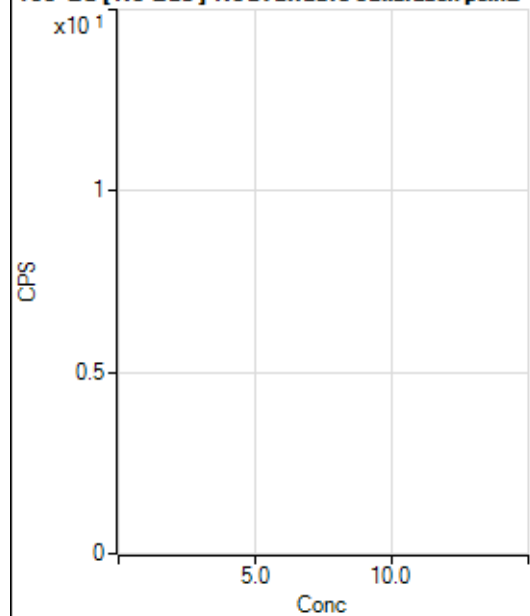
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			14.44		P	53.
2	☐			14.45		P	48.
3	☐			8.89		P	21.
4	☐			10.00		P	88.
5	☐			25.56		P	37.
6	☐			31.11		P	22.
7	☐			66.67		P	10.
8	☐			91.11		P	7.6
9	☐			48.89		P	17.

156 Dy [No Gas] No available calibration points

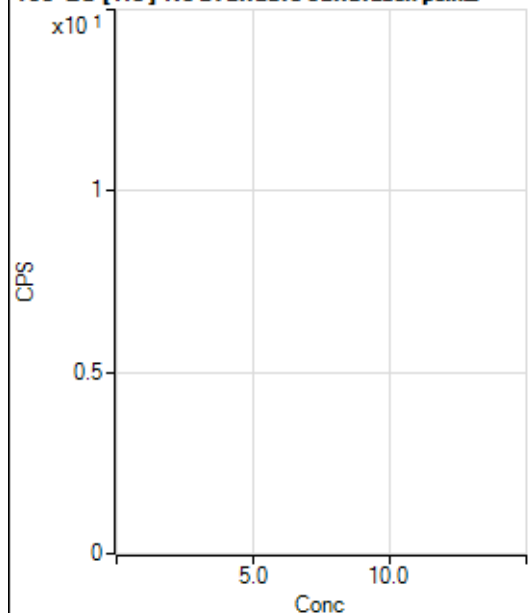
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			41.67		P	40.
2	☐			55.56		P	48.
3	☐			36.11		P	13.
4	☐			50.00		P	33.
5	☐			69.45		P	45.
6	☐			119.45		P	22.
7	☐			161.12		P	29.
8	☐			355.58		P	23.
9	☐			75.00		P	33.

156 Dy [He] No available calibration points

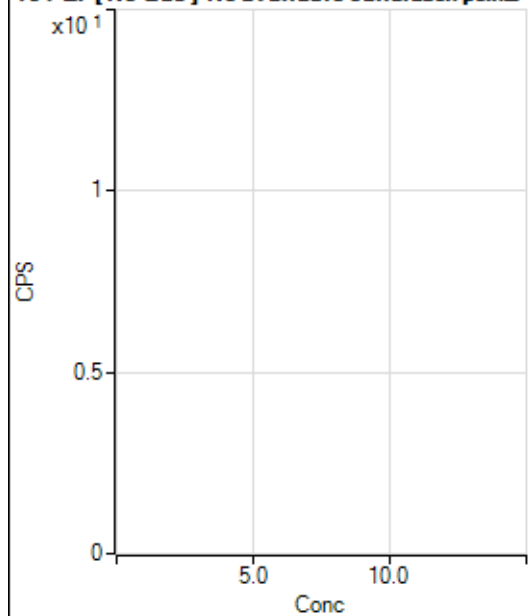
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			18.89		P	83.
2	☐			41.11		P	18.
3	☐			33.33		P	26.
4	☐			35.56		P	62.
5	☐			46.67		P	35.
6	☐			85.56		P	9.8
7	☐			180.00		P	1.9
8	☐			326.68		P	6.2
9	☐			61.11		P	11.

160 Gd [No Gas] Noavailable calibration poin_

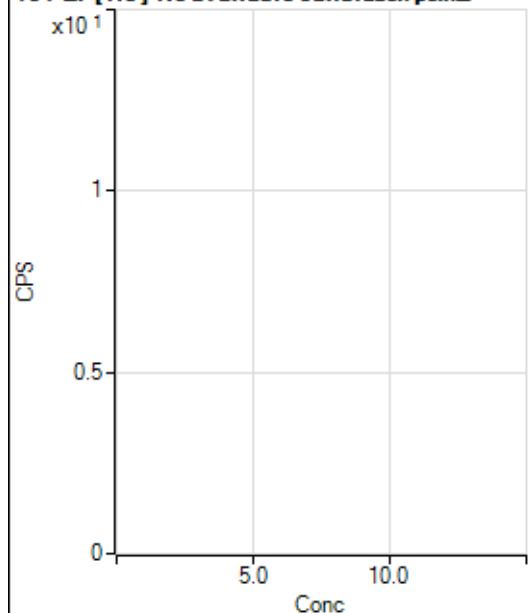
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			244.46		P	10.
2	☐			188.90		P	9.2
3	☐			163.90		P	16.
4	☐			191.68		P	26.
5	☐			219.46		P	21.
6	☐			186.12		P	21.
7	☐			250.01		P	3.3
8	☐			255.57		P	12.
9	☐			172.23		P	29.

160 Gd [He] No available calibration points

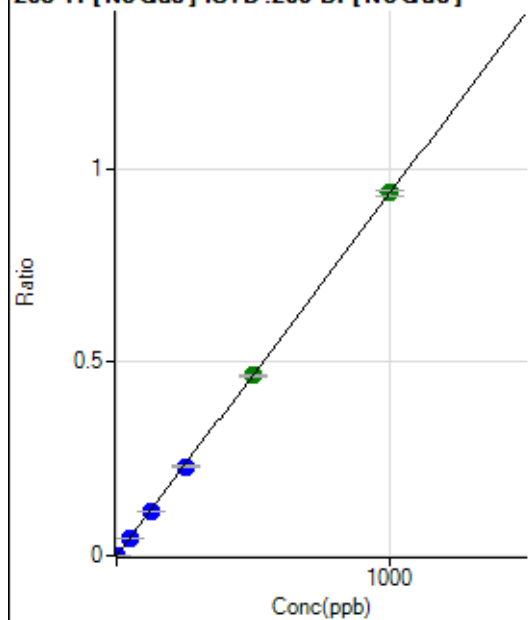
	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			437.79		P	3.8
2	☐			454.46		P	12.
3	☐			432.24		P	9.6
4	☐			407.79		P	10.
5	☐			391.12		P	2.0
6	☐			418.90		P	10.
7	☐			366.68		P	8.3
8	☐			430.02		P	0.8
9	☐			405.57		P	8.4

164 Er [No Gas] No available calibration points

	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			152.79		P	8.3
2	☐			141.68		P	10.
3	☐			136.12		P	3.5
4	☐			138.90		P	27.
5	☐			158.34		P	48.
6	☐			150.01		P	22.
7	☐			169.45		P	32.
8	☐			191.68		P	30.
9	☐			219.45		P	22.

164 Er [He] No available calibration points

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			92.23		P	17.
2	☐			74.45		P	34.
3	☐			100.00		P	17.
4	☐			93.33		P	31.
5	☐			95.56		P	12.
6	☐			102.22		P	32.
7	☐			78.89		P	23.
8	☐			101.11		P	16.
9	☐			102.23		P	14.

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

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	755.61	0.0000	P	6.8
2	☐	0.100	0.099	2358.67	0.0001	P	10.
3	☐	1.000	0.970	16441.38	0.0010	P	1.4
4	☐	50.000	49.201	792386.20	0.0461	P	0.0
5	☐	125.000	123.294	1948189.54	0.1154	P	1.1
6	☐	250.000	246.972	3823130.64	0.2312	P	0.5
7	☐	500.000	497.495	7638947.74	0.4656	A	0.9
8	☐	1000.000	1002.263	15040984.19	0.9379	A	1.3
9	☐			3636.76	0.0003	P	4.0

$$y = 9.3576E-004 * x + 4.4105E-005$$

$$R = 1.0000$$

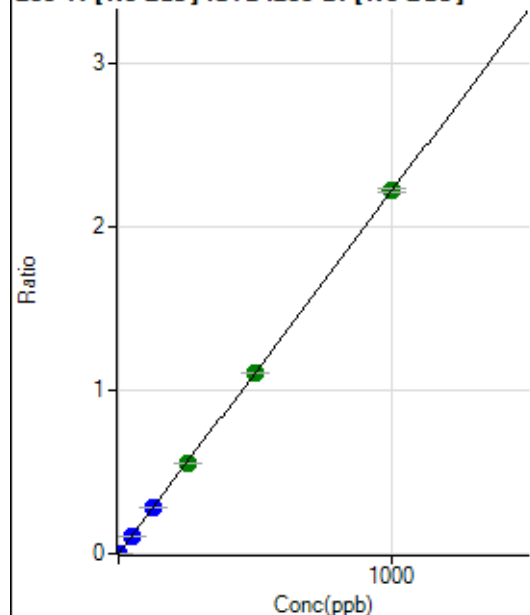
$$DL = 0.009572$$

$$BEC = 0.04713$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1486.26	0.0001	P	3.5
2	☐	0.100	0.096	5154.01	0.0003	P	2.8
3	☐	1.000	0.993	39476.42	0.0023	P	0.2
4	☐	50.000	49.798	1897199.04	0.1103	P	0.6
5	☐	125.000	125.673	4698065.73	0.2783	P	0.4
6	☐	250.000	247.207	9053639.09	0.5474	A	0.2
7	☐	500.000	498.621	18114781.48	1.1040	A	0.2
8	☐	1000.000	1001.314	35552800.80	2.2170	A	1.1
9	☐			8503.06	0.0006	P	4.3

$$y = 0.0022 * x + 8.6750E-005$$

$$R = 1.0000$$

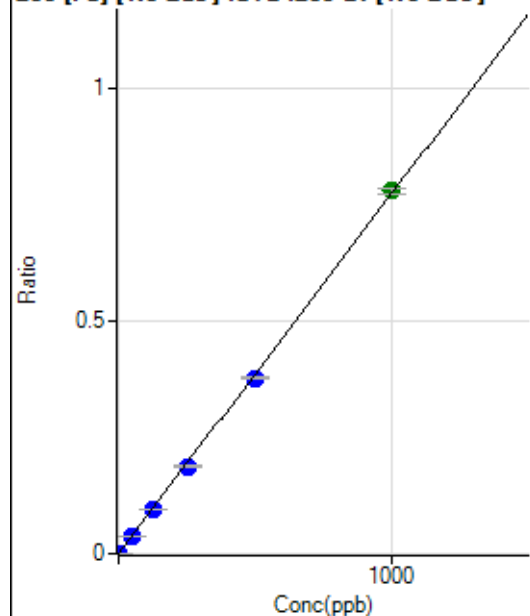
$$DL = 0.004147$$

$$BEC = 0.03918$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1222.32	0.0001	P	3.0
2	☐	0.100	0.097	2520.68	0.0001	P	2.9
3	☐	1.000	0.969	14181.99	0.0008	P	0.8
4	☐	50.000	48.318	643557.34	0.0374	P	0.7
5	☐	125.000	121.640	1588743.84	0.0941	P	0.6
6	☐	250.000	242.820	3106301.31	0.1878	P	1.5
7	☐	500.000	487.647	6187859.46	0.3771	P	0.6
8	☐	1000.000	1008.476	12504783.73	0.7798	A	1.8
9	☐			28480.92	0.0021	P	1.2

$$y = 7.7317E-004 * x + 7.1343E-005$$

$$R = 0.9999$$

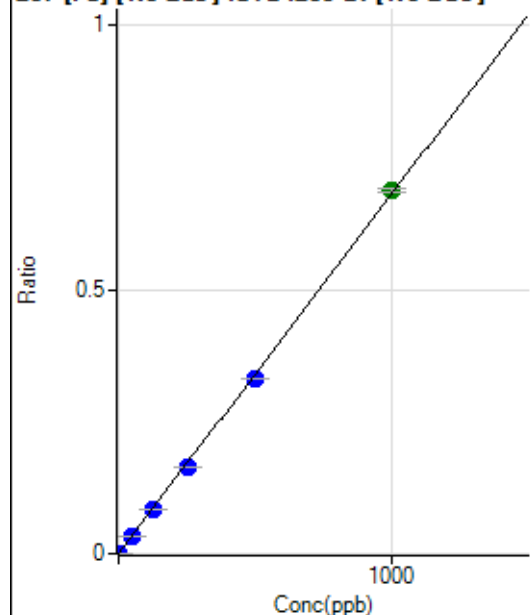
$$DL = 0.008332$$

$$BEC = 0.09227$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1220.46	0.0001	P	10.
2	☐	0.100	0.091	2292.85	0.0001	P	2.9
3	☐	1.000	0.956	12467.33	0.0007	P	1.5
4	☐	50.000	48.189	564866.56	0.0329	P	0.5
5	☐	125.000	121.385	1394978.21	0.0826	P	0.5
6	☐	250.000	241.184	2714701.94	0.1641	P	1.3
7	☐	500.000	486.817	5434914.70	0.3312	P	0.3
8	☐	1000.000	1009.338	11011864.25	0.6867	A	1.1
9	☐			25374.73	0.0019	P	3.5

$$y = 6.8024\text{E-}004 * x + 7.1240\text{E-}005$$

$$R = 0.9998$$

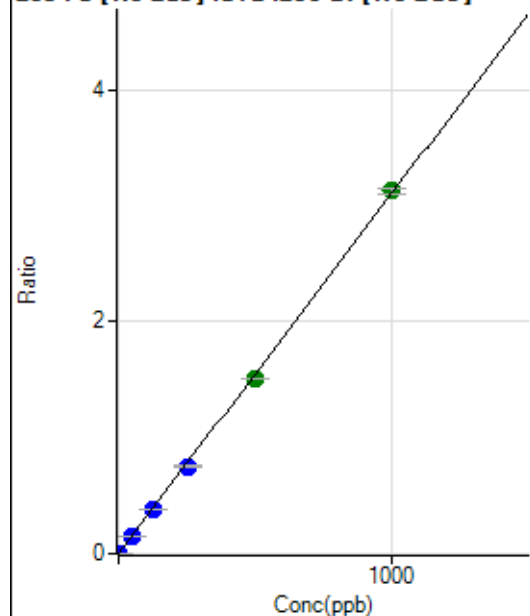
$$DL = 0.0324$$

$$BEC = 0.1047$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	4752.31	0.0003	P	2.5
2	☐	0.100	0.097	9931.36	0.0006	P	3.4
3	☐	1.000	0.963	56412.81	0.0033	P	0.4
4	☐	50.000	48.337	2582074.53	0.1502	P	0.3
5	☐	125.000	121.562	6367767.97	0.3772	P	0.3
6	☐	250.000	243.019	12468698.95	0.7539	P	0.8
7	☐	500.000	487.890	24829310.22	1.5132	A	0.3
8	☐	1000.000	1008.313	50146553.20	3.1270	A	1.3
9	☐			114296.76	0.0084	P	1.0

$$y = 0.0031 * x + 2.7738\text{E-}004$$

$$R = 0.9999$$

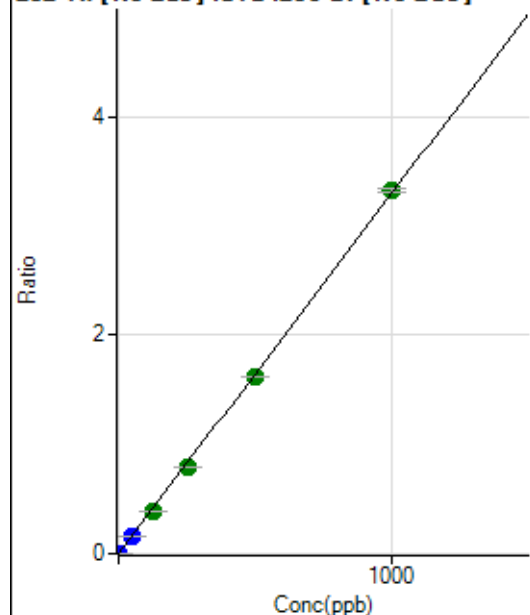
$$DL = 0.006719$$

$$BEC = 0.08945$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2231.74	0.0001	P	3.6
2	☐	0.100	0.075	6494.37	0.0004	P	1.3
3	☐	1.000	0.832	49598.00	0.0029	P	2.9
4	☐	50.000	46.595	2642331.71	0.1537	P	0.1
5	☐	125.000	118.883	6614964.90	0.3919	A	0.3
6	☐	250.000	239.891	13076752.96	0.7906	A	0.9
7	☐	500.000	490.674	26533025.36	1.6170	A	0.4
8	☐	1000.000	1008.126	53277548.88	3.3222	A	0.9
9	☐			11199.53	0.0008	P	4.0

$$y = 0.0033 * x + 1.3026E-004$$

$$R = 0.9999$$

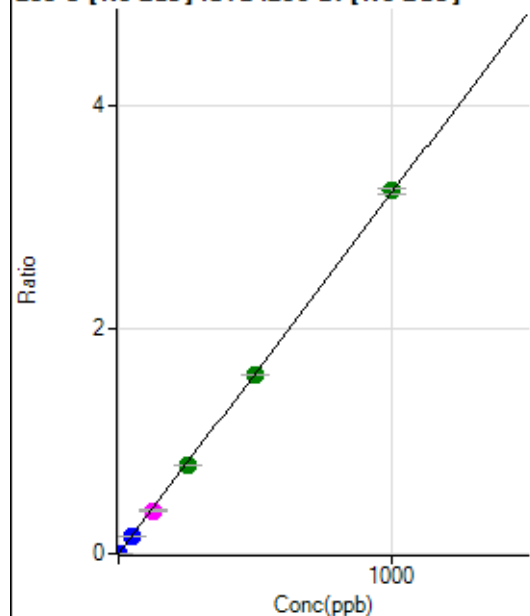
$$DL = 0.004229$$

$$BEC = 0.03953$$

Weight: <None>

Min Conc: 0

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



	R _{jc} t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2261.42	0.0001	P	4.4
2	☐	0.100	0.093	7444.12	0.0004	P	2.3
3	☐	1.000	0.923	53611.62	0.0031	P	0.7
4	☐	50.000	46.931	2600295.63	0.1512	P	0.2
5	☐	125.000	119.816	6513925.19	0.3859	M	0.9
6	☐	250.000	243.093	12947051.85	0.7828	A	0.3
7	☐	500.000	494.391	26119283.74	1.5919	A	0.4
8	☐	1000.000	1005.333	51906068.52	3.2369	A	1.8
9	☐			5673.70	0.0004	P	2.7

$$y = 0.0032 * x + 1.3200E-004$$

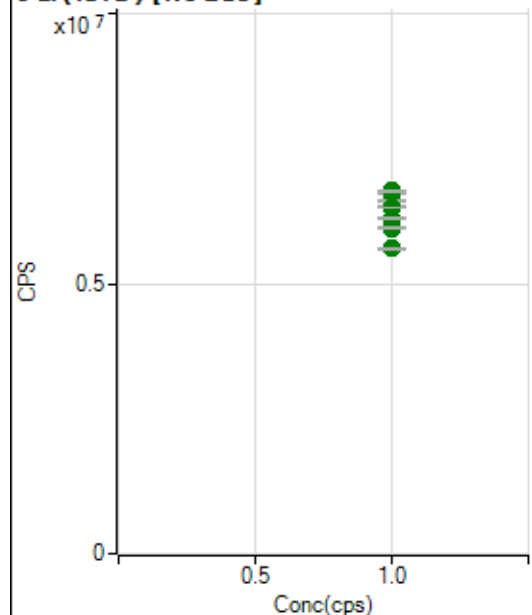
$$R = 0.9999$$

$$DL = 0.005436$$

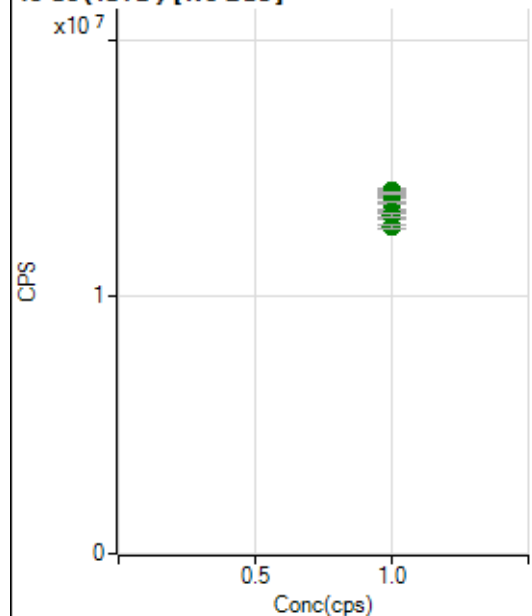
$$BEC = 0.041$$

Weight: <None>

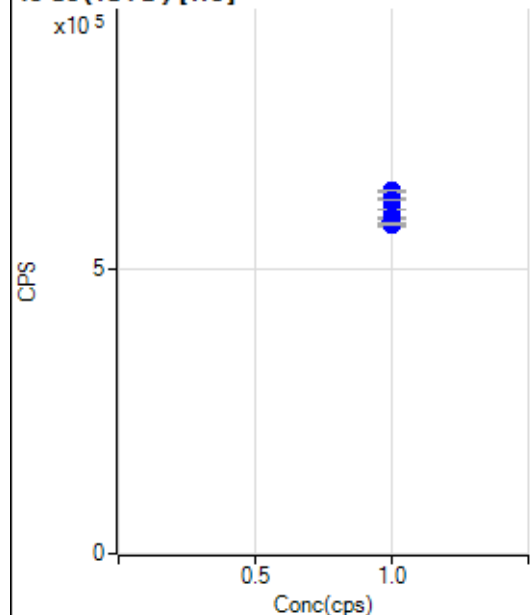
Min Conc: 0

6 Li (ISTD) [No Gas]

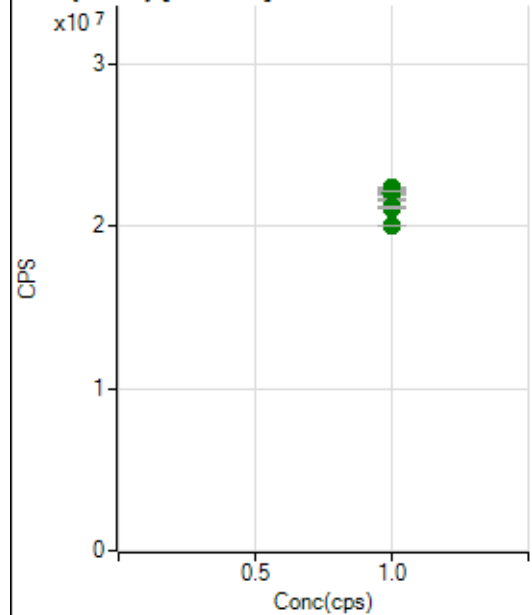
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6420496.92		A	0.5
2	☐	1.000		6655034.28		A	0.3
3	☐	1.000		6712290.53		A	1.0
4	☐	1.000		6722040.87		A	0.2
5	☐	1.000		6528878.37		A	0.7
6	☐	1.000		6406433.59		A	0.3
7	☐	1.000		6205154.91		A	0.8
8	☐	1.000		6031427.48		A	0.3
9	☐	1.000		5650939.08		A	0.9

45 Sc (ISTD) [No Gas]

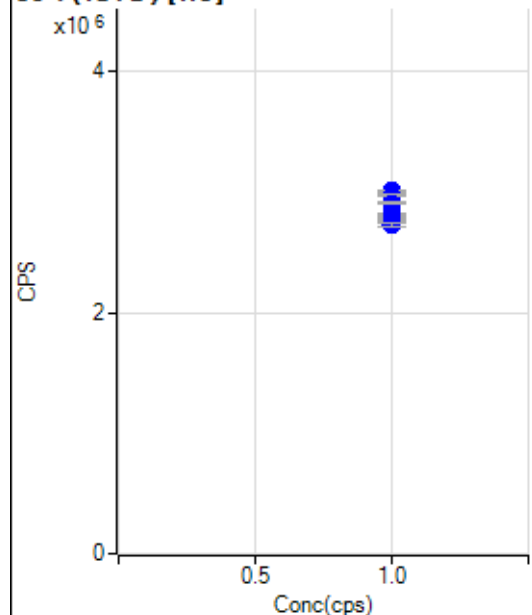
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13889872.01		A	0.4
2	☐	1.000		14127362.12		A	1.6
3	☐	1.000		14124175.84		A	0.8
4	☐	1.000		14020698.23		A	0.3
5	☐	1.000		13652232.94		A	0.8
6	☐	1.000		13335187.01		A	0.6
7	☐	1.000		13158871.13		A	1.5
8	☐	1.000		13195059.24		A	1.0
9	☐	1.000		12732110.88		A	0.9

45 Sc (ISTD) [He]

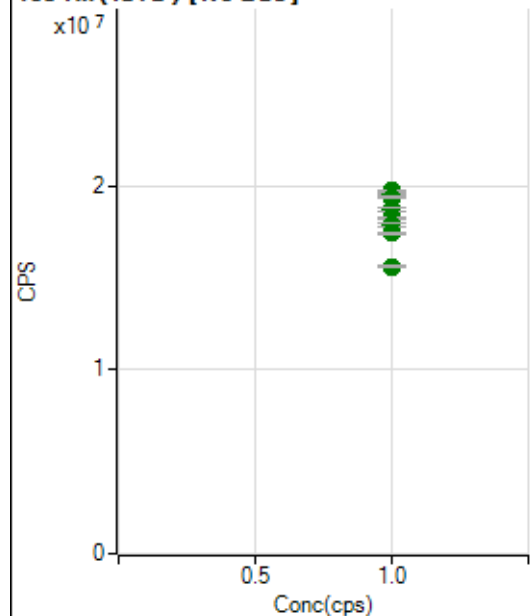
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		622201.75		P	0.0
2	☐	1.000		635987.78		P	0.8
3	☐	1.000		619274.14		P	0.2
4	☐	1.000		603160.50		P	0.3
5	☐	1.000		588610.34		P	0.5
6	☐	1.000		583463.66		P	0.8
7	☐	1.000		575683.54		P	0.4
8	☐	1.000		576092.53		P	0.3
9	☐	1.000		578246.84		P	0.5

89 Y (ISTD) [No Gas]

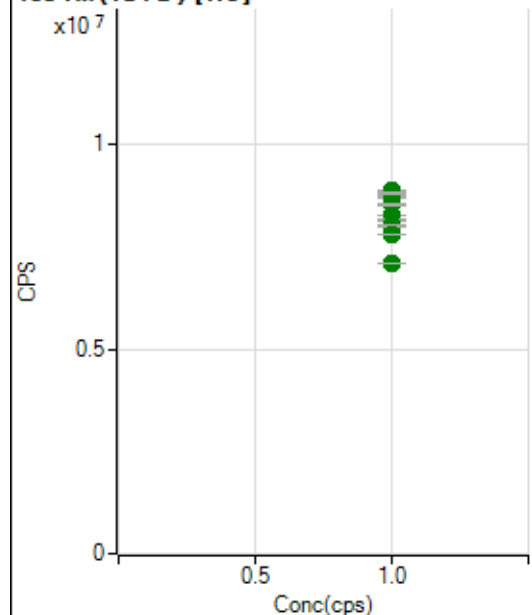
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		21926163.56		A	0.4
2	☐	1.000		22038316.34		A	1.0
3	☐	1.000		22343352.17		A	0.5
4	☐	1.000		22119536.06		A	0.2
5	☐	1.000		21591509.68		A	0.7
6	☐	1.000		21180739.69		A	0.3
7	☐	1.000		21145436.63		A	0.5
8	☐	1.000		21089049.96		A	0.6
9	☐	1.000		20030908.87		A	0.4

89 Y(ISTD) [He]

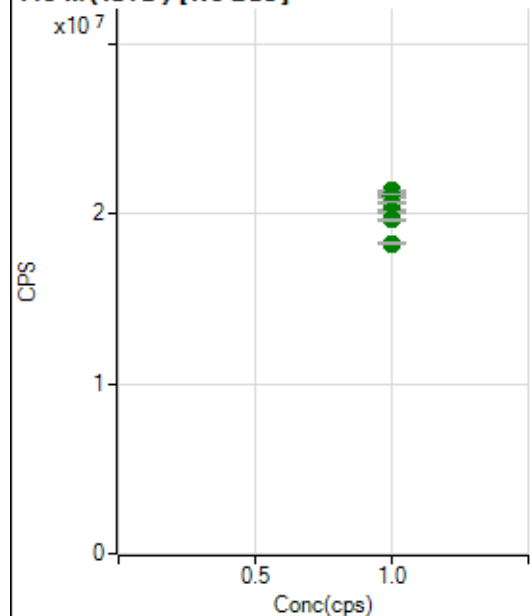
	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		2963862.94		P	0.4
2	☐	1.000		3006896.14		P	0.6
3	☐	1.000		2967586.69		P	0.4
4	☐	1.000		2904008.81		P	0.3
5	☐	1.000		2814183.78		P	0.6
6	☐	1.000		2794626.94		P	0.7
7	☐	1.000		2769614.51		P	0.3
8	☐	1.000		2752170.90		P	0.3
9	☐	1.000		2724956.87		P	1.2

103 Rh(ISTD) [No Gas]

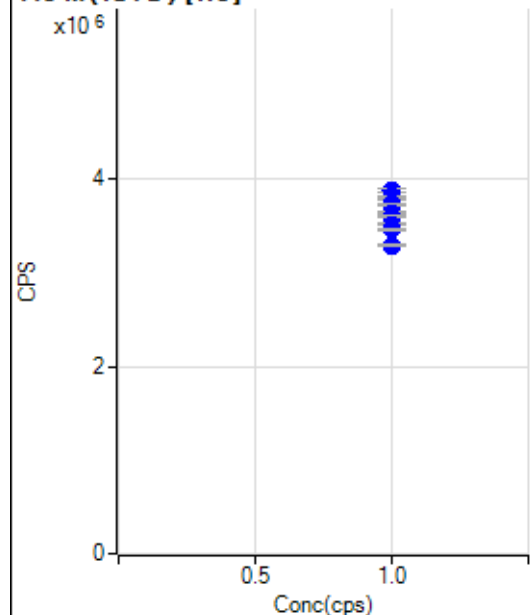
	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		19470327.87		A	0.7
2	☐	1.000		19549889.50		A	1.1
3	☐	1.000		19754924.22		A	0.7
4	☐	1.000		19418041.23		A	1.0
5	☐	1.000		18713540.70		A	1.2
6	☐	1.000		18278841.73		A	0.5
7	☐	1.000		17889168.45		A	1.0
8	☐	1.000		17481410.29		A	0.6
9	☐	1.000		15651137.50		A	0.4

103 Rh (ISTD) [He]

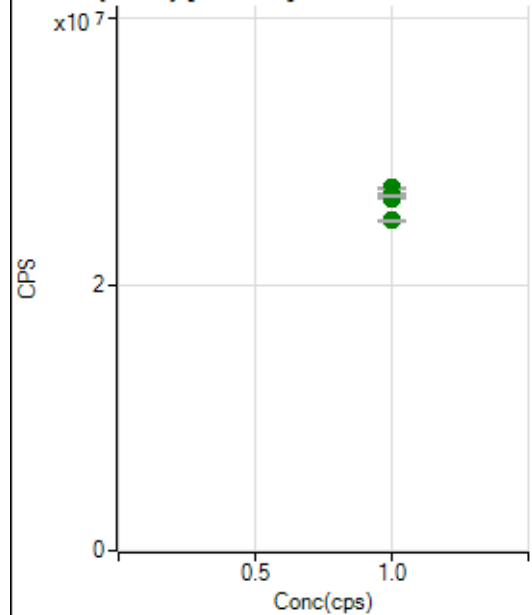
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8736974.38		A	0.5
2	☐	1.000		8876036.19		A	0.5
3	☐	1.000		8808939.59		A	0.4
4	☐	1.000		8539389.38		A	0.2
5	☐	1.000		8284809.11		A	0.1
6	☐	1.000		8169383.56		A	0.7
7	☐	1.000		8033959.47		A	0.4
8	☐	1.000		7801483.98		A	0.0
9	☐	1.000		7104703.44		A	0.5

115 In (ISTD) [No Gas]

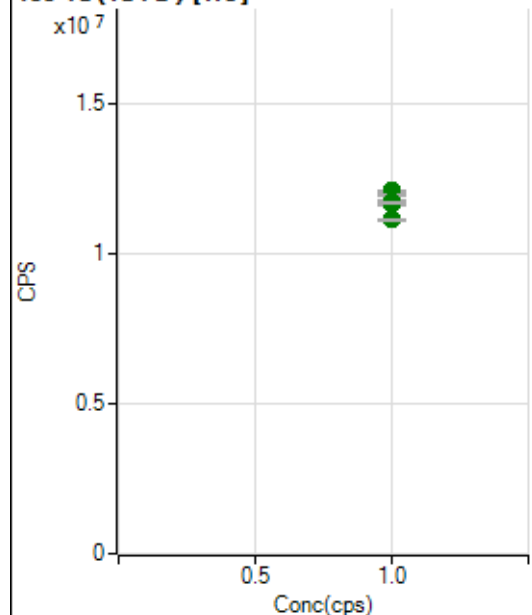
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		21247470.14		A	1.0
2	☐	1.000		21127152.06		A	1.0
3	☐	1.000		21327672.39		A	0.4
4	☐	1.000		21050719.46		A	1.0
5	☐	1.000		20628999.66		A	0.8
6	☐	1.000		20171613.26		A	0.8
7	☐	1.000		20065436.73		A	0.6
8	☐	1.000		19632968.04		A	0.8
9	☐	1.000		18236983.46		A	0.6

115 In (ISTD) [He]

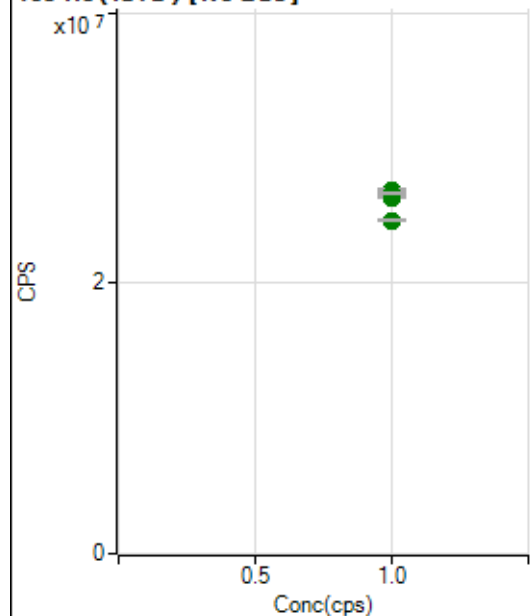
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3792778.37		P	0.6
2	☐	1.000		3879535.74		P	1.1
3	☐	1.000		3815975.53		P	0.3
4	☐	1.000		3737906.60		P	0.4
5	☐	1.000		3644245.20		P	0.5
6	☐	1.000		3604403.76		P	0.6
7	☐	1.000		3520569.98		P	0.6
8	☐	1.000		3465950.00		P	0.2
9	☐	1.000		3300179.17		P	0.5

159 Tb (ISTD) [No Gas]

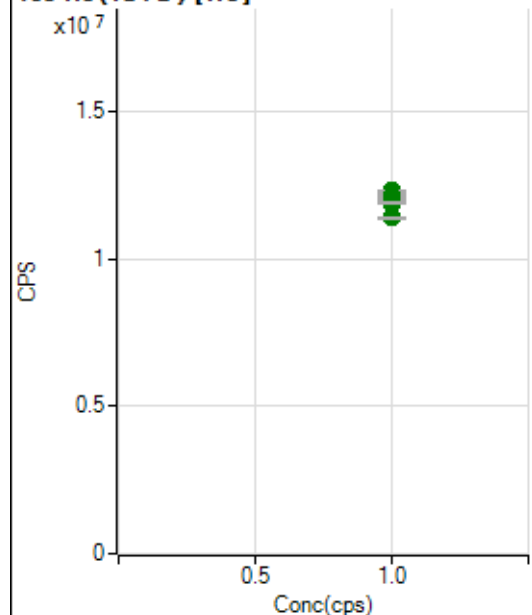
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		26885255.16		A	0.5
2	☐	1.000		26873023.49		A	0.2
3	☐	1.000		27266337.65		A	0.0
4	☐	1.000		27178702.09		A	0.3
5	☐	1.000		26766220.43		A	0.6
6	☐	1.000		26500580.99		A	0.1
7	☐	1.000		26615473.21		A	0.9
8	☐	1.000		26688288.21		A	0.5
9	☐	1.000		24808207.13		A	0.5

159 Tb (ISTD) [He]

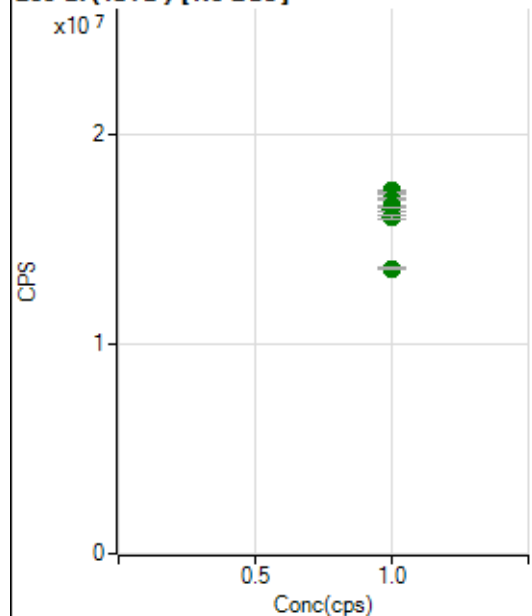
	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		12002139.82		A	0.3
2	☐	1.000		12082489.82		A	0.5
3	☐	1.000		12011938.02		A	0.5
4	☐	1.000		11932017.88		A	0.5
5	☐	1.000		11724828.99		A	0.2
6	☐	1.000		11662135.66		A	0.7
7	☐	1.000		11724087.88		A	0.6
8	☐	1.000		11682463.02		A	0.7
9	☐	1.000		11112954.00		A	0.5

165 Ho (ISTD) [No Gas]

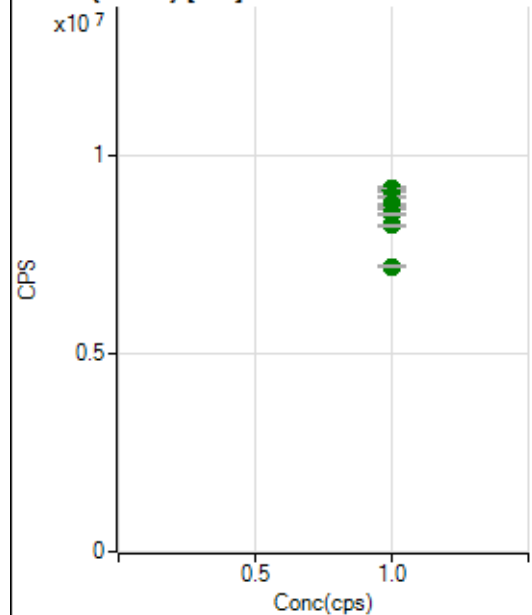
	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		26400952.32		A	0.5
2	☐	1.000		26441486.88		A	0.3
3	☐	1.000		26850241.57		A	0.3
4	☐	1.000		26798081.85		A	1.3
5	☐	1.000		26476899.03		A	0.3
6	☐	1.000		26363104.93		A	0.4
7	☐	1.000		26387634.62		A	0.8
8	☐	1.000		26664581.85		A	0.9
9	☐	1.000		24660644.99		A	0.4

165 Ho (ISTD) [He]

	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		12196049.82		A	0.3
2	☐	1.000		12292921.35		A	0.6
3	☐	1.000		12266622.45		A	0.5
4	☐	1.000		12112664.96		A	0.2
5	☐	1.000		11981668.57		A	0.4
6	☐	1.000		11987706.76		A	0.7
7	☐	1.000		11960083.29		A	0.2
8	☐	1.000		11878633.85		A	0.2
9	☐	1.000		11389154.14		A	0.8

209 Bi (ISTD) [No Gas]

	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		17132458.63		A	0.2
2	☐	1.000		17205850.02		A	1.0
3	☐	1.000		17278731.55		A	0.4
4	☐	1.000		17194335.02		A	0.4
5	☐	1.000		16879966.42		A	0.6
6	☐	1.000		16539507.39		A	0.1
7	☐	1.000		16408287.25		A	0.9
8	☐	1.000		16038026.98		A	1.2
9	☐	1.000		13585593.27		A	0.7

209 Bi (ISTD) [He]

	Rjc t	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		9178013.89		A	0.4
2	☐	1.000		9164635.14		A	1.2
3	☐	1.000		9148726.18		A	0.6
4	☐	1.000		8976986.67		A	0.5
5	☐	1.000		8790293.76		A	0.3
6	☐	1.000		8688452.72		A	0.8
7	☐	1.000		8547298.90		A	0.7
8	☐	1.000		8260031.48		A	0.4
9	☐	1.000		7207481.00		A	0.5

US EPA Tune Check Sample Report

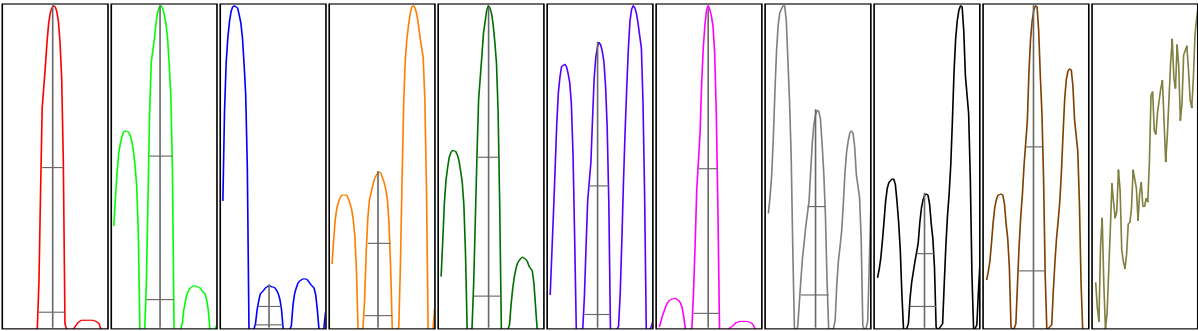
Batch Folder D:\ICP-MS Data\P7102319MS .b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	20029	0.90	5.00	
24	204827	0.69	5.00	
25	27421	0.53	5.00	
26	32689	0.39	5.00	
59	164471	0.38	5.00	
113	20979	0.76	5.00	
115	246308	0.55	5.00	
206	58517	0.78	5.00	
207	56122	0.56	5.00	
208	126481	0.80	5.00	
220	80	1.95		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	19879	19973	19864	20153	20278
24	204443	204148	203354	205120	207070
25	27287	27249	27487	27506	27576
26	32723	32511	32630	32728	32855
59	164213	163792	164354	164515	165484
113	20950	20882	20904	20899	21259
115	245798	245701	246574	244962	248503
206	58563	58321	58227	58186	59285
207	55837	56043	56488	55821	56423
208	124846	126533	127534	126473	127020
220	82	78	80	80	79

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	32926	8.95	8.9 - 9.1		0.780	0.900	
24	319073	23.90	23.9 - 24.1		0.809	0.900	
25	42727	24.90	24.9 - 25.1		0.795	0.900	
26	49875	25.90	25.9 - 26.1		0.816	0.900	
59	269618	58.95	58.9 - 59.1		0.802	0.900	
113	38041	112.95	112.9 - 113.1		0.773	0.900	
115	447981	115.00	114.9 - 115.1		0.771	0.900	
206	107606	205.95	205.9 - 206.1		0.798	0.900	
207	97185	206.95	206.9 - 207.1		0.749	0.900	
208	231394	207.95	207.9 - 208.1		0.782	0.900	
220			-				

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

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.6	V	Deflect	14.0	V
Extract 2	-145.0	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	190	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	40431	3.16	
89	32773	3.25	
205	44797	2.55	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	41351	39814	38455	41213	41323
89	33556	32388	31066	33363	33490
205	45673	43661	43454	45410	45786

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	7.9	V	Deflect	1.8	V
Extract 2	-155.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-75	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			