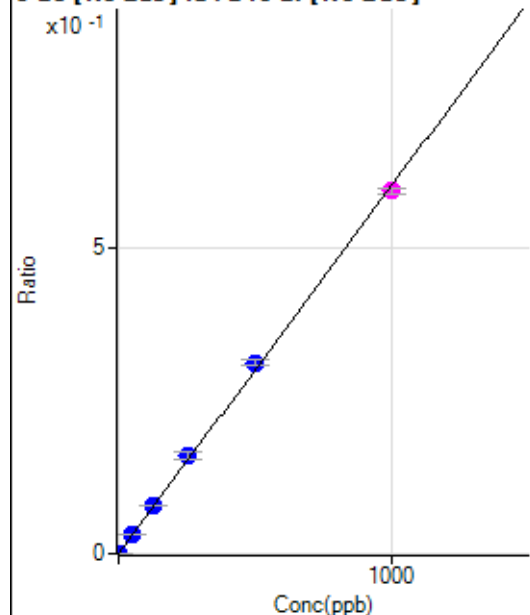


Batch Folder: D:\P8070818-MS.b\
Analysis File: P8070818-MS.batch.bin
DA Date-Time: 2018-07-08 19:41:03
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-07-08 12:40:53
2			
3	005CAL.S.d	S02	2018-07-08 12:48:23
4	006CAL.S.d	S03	2018-07-08 12:52:05
5	007CAL.S.d	S04	2018-07-08 12:55:47
6	008CAL.S.d	S05	2018-07-08 12:59:23
7	009CAL.S.d	S06	2018-07-08 13:02:53
8	010CAL.S.d	S07	2018-07-08 13:06:19
9	011CAL.S.d	S08	2018-07-08 13:09:42

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.30	0.0000	P	30.0
2	☐	0.100					
3	☐	1.000	0.983	1050.07	0.0006	P	4.2
4	☐	50.000	52.325	53951.45	0.0316	P	0.9
5	☐	125.000	129.539	131147.36	0.0781	P	0.5
6	☐	250.000	266.702	267301.08	0.1608	P	6.8
7	☐	500.000	517.956	529620.20	0.3123	P	3.1
8	☐	1000.000	986.163	1019579.35	0.5946	M	1.8
9	☐			368.53	0.0002	P	18.5

$$y = 6.0289\text{E-}004 * x + 2.8140\text{E-}005$$

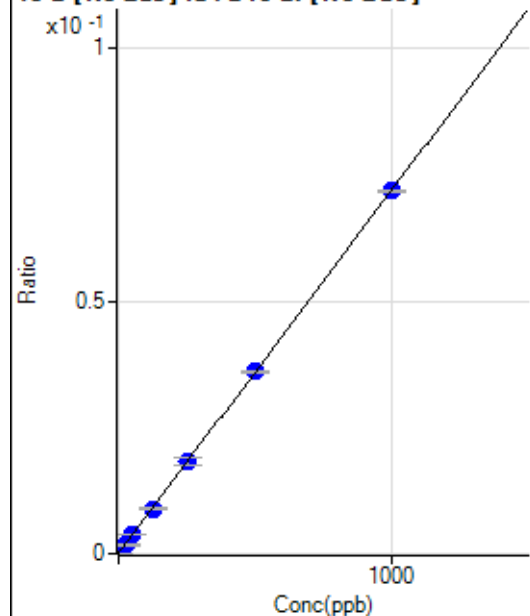
$$R = 0.9996$$

$$DL = 0.04198$$

$$BEC = 0.04667$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	119.45	0.0001	P	11.5
2	☐	2.500					
3	☐	25.000	23.103	2928.21	0.0017	P	15.3
4	☐	50.000	51.817	6482.31	0.0038	P	3.0
5	☐	125.000	122.913	14933.25	0.0089	P	4.1
6	☐	250.000	254.987	30547.24	0.0184	P	7.6
7	☐	500.000	500.340	61089.01	0.0360	P	1.6
8	☐	1000.000	998.801	123138.15	0.0718	P	0.2
9	☐			5440.17	0.0031	P	11.6

$$y = 7.1814\text{E-}005 * x + 7.2704\text{E-}005$$

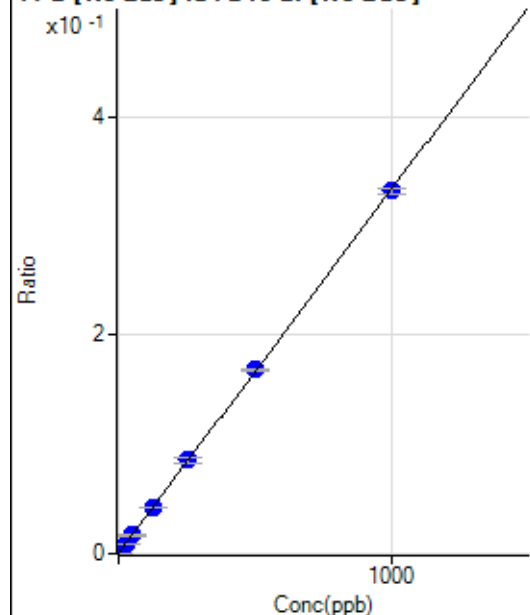
$$R = 1.0000$$

$$DL = 0.3497$$

$$BEC = 1.012$$

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	397.25	0.0002	P	8.6
2	☐	2.500					
3	☐	25.000	24.122	14010.24	0.0083	P	4.2
4	☐	50.000	50.280	29052.69	0.0170	P	4.0
5	☐	125.000	125.958	70869.93	0.0422	P	3.6
6	☐	250.000	256.172	142467.30	0.0856	P	4.7
7	☐	500.000	504.950	286031.26	0.1686	P	0.6
8	☐	1000.000	995.870	569827.78	0.3322	P	1.4
9	☐			25345.62	0.0142	P	10.2

$$y = 3.3337\text{E-}004 * x + 2.4149\text{E-}004$$

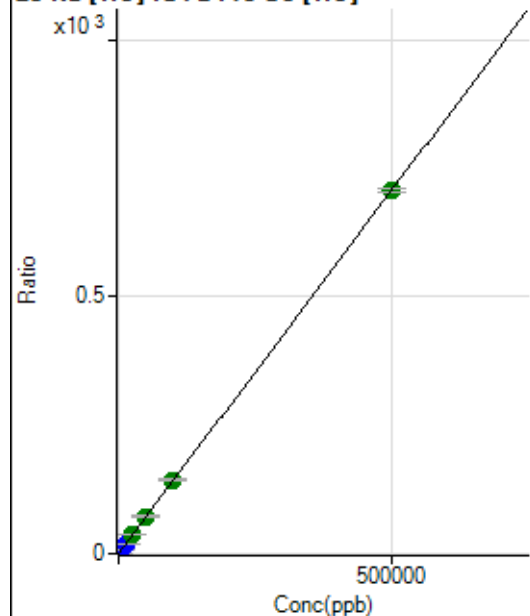
$$R = 1.0000$$

$$DL = 0.1862$$

$$BEC = 0.7244$$

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	3903.48	0.0916	P	6.8
2	☐	50.000					
3	☐	500.000	481.009	33507.38	0.7711	P	2.6
4	☐	5000.000	5066.814	304294.05	7.2494	P	1.6
5	☐	12500.000	12528.805	751415.34	17.7907	P	1.0
6	☐	25000.000	25491.443	1535873.47	36.1027	A	0.4
7	☐	50000.000	51407.380	2933765.86	72.7136	A	0.9
8	☐	100000.00	101623.95	5637830.55	143.6533	A	2.1
9	☐	500000.00	499508.53	29994737.82	705.7352	A	1.1

$$y = 0.0014 * x + 0.0916$$

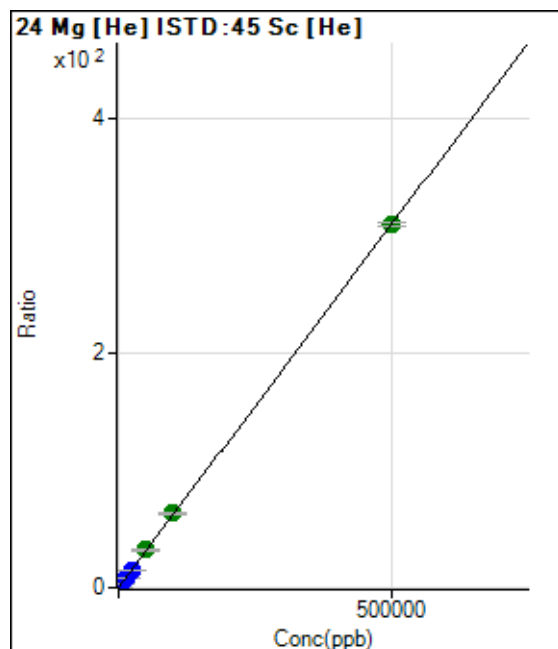
$$R = 1.0000$$

$$DL = 13.16$$

$$BEC = 64.85$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	155.57	0.0037	P	18.9
2	☐	50.000					
3	☐	500.000	489.045	13320.66	0.3066	P	2.3
4	☐	5000.000	5108.200	132971.85	3.1678	P	1.3
5	☐	12500.000	12492.448	326979.49	7.7418	P	1.0
6	☐	25000.000	24809.448	653923.47	15.3713	P	0.8
7	☐	50000.000	51706.240	1292244.19	32.0318	A	1.5
8	☐	100000.00	102722.73	2497094.20	63.6328	A	2.9
9	☐	500000.00	499293.47	13144948.64	309.2788	A	1.1

$$y = 6.1943\text{E-}004 * x + 0.0037$$

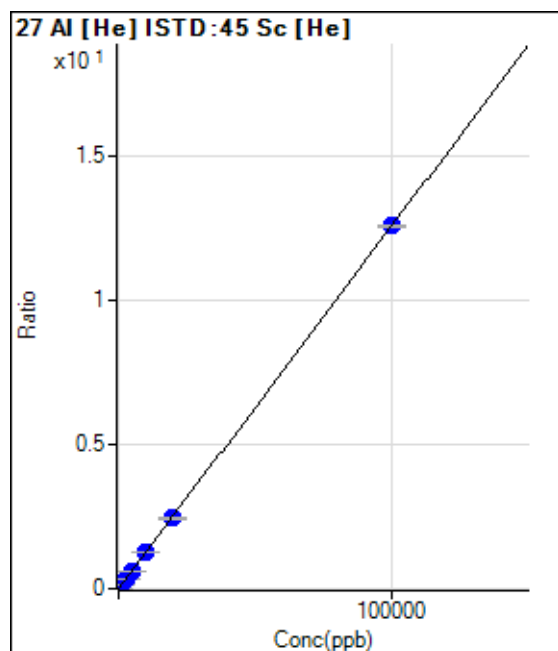
$$R = 1.0000$$

$$DL = 3.343$$

$$BEC = 5.907$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.55	0.0001	P	86.6
2	☐	2.000					
3	☐	20.000	19.304	111.12	0.0026	P	38.1
4	☐	1000.000	991.619	5242.88	0.1249	P	9.7
5	☐	2500.000	2419.393	12870.31	0.3047	P	1.1
6	☐	5000.000	4820.220	25813.26	0.6069	P	3.9
7	☐	10000.000	9869.089	50131.27	1.2424	P	0.8
8	☐	20000.000	19622.885	96944.28	2.4702	P	2.6
9	☐	100000.00	100099.60	535547.57	12.6002	P	0.5

$$y = 1.2588\text{E-}004 * x + 1.2930\text{E-}004$$

$$R = 1.0000$$

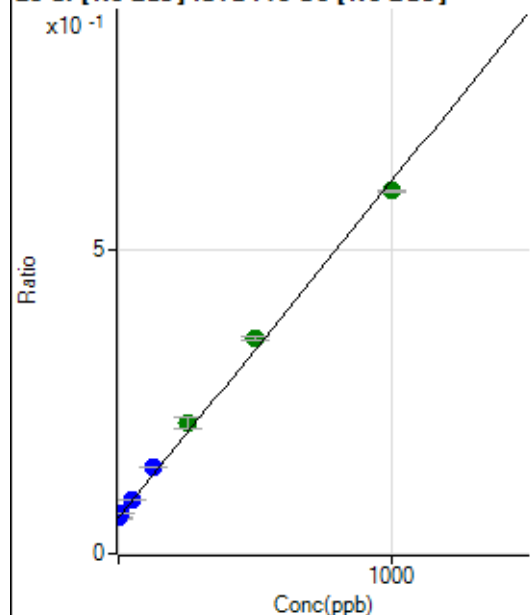
$$DL = 2.67$$

$$BEC = 1.027$$

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	299186.90	0.0588	P	1.8
2	☐	1.000					
3	☐	10.000	13.916	351877.27	0.0665	P	1.3
4	☐	50.000	54.163	477120.59	0.0887	P	0.6
5	☐	125.000	149.524	743379.30	0.1414	P	1.1
6	☐	250.000	282.369	1105181.57	0.2148	A	8.6
7	☐	500.000	534.606	1825576.80	0.3541	A	2.1
8	☐	1000.000	971.292	3048871.97	0.5953	A	0.8
9	☐			368757.24	0.0695	P	1.3

$$y = 5.5235E-004 * x + 0.0588$$

$$R = 0.9984$$

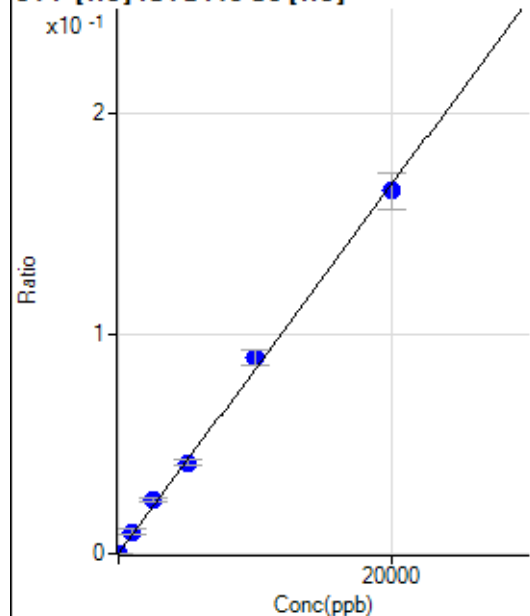
$$DL = 5.878$$

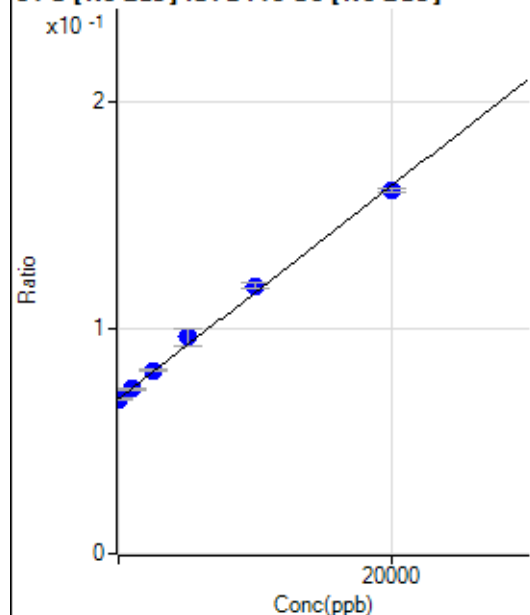
$$BEC = 106.5$$

Weight: <None>

Min Conc: 0

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



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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	96.918	351029.01	0.0690	P	1.8
2	☐	0.000					
3	☐	0.000	-96.918	360302.06	0.0681	P	1.2
4	☐	1000.000	944.245	392559.47	0.0730	P	1.0
5	☐	2500.000	2692.051	427143.98	0.0813	P	1.5
6	☐	5000.000	5772.282	493072.89	0.0958	P	7.9
7	☐	10000.000	10565.698	610432.29	0.1184	P	2.1
8	☐	20000.000	19502.862	822344.21	0.1606	P	1.0
9	☐			352970.05	0.0665	P	1.9

$$y = 4.7178\text{E-}006 * x + 0.0686$$

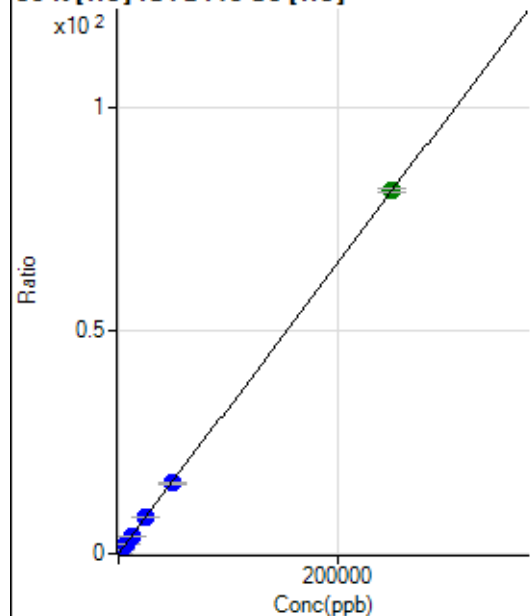
$$R = 0.9984$$

$$DL = 668.4$$

$$BEC = 1.453\text{E}+04$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1930.78	0.0453	P	5.2
2	☐	50.000					
3	☐	500.000	503.756	9072.78	0.2088	P	0.6
4	☐	2500.000	2589.477	37175.26	0.8856	P	0.4
5	☐	6250.000	6169.835	86470.15	2.0474	P	1.3
6	☐	12500.000	12397.657	173066.34	4.0683	P	0.7
7	☐	25000.000	24767.881	326073.52	8.0823	P	1.2
8	☐	50000.000	48347.156	617440.20	15.7335	P	2.5
9	☐	250000.00	250360.00	3454759.28	81.2847	A	0.9

$$y = 3.2449\text{E-}004 * x + 0.0453$$

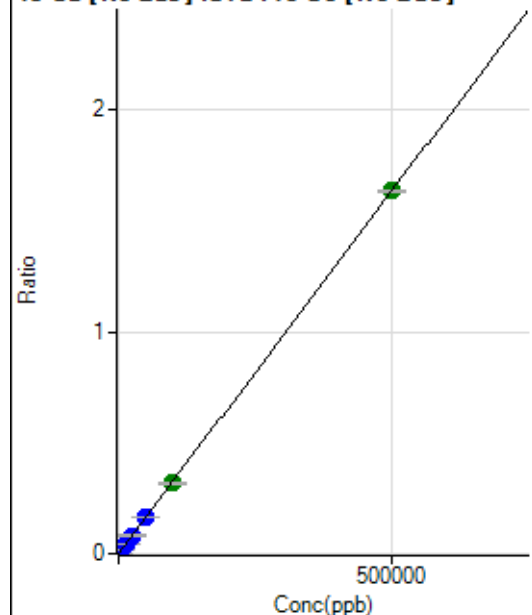
$$R = 1.0000$$

$$DL = 22$$

$$BEC = 139.7$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	527.81	0.0001	P	5.7
2	☐	50.000					
3	☐	500.000	476.839	8786.49	0.0017	P	0.7
4	☐	5000.000	4854.476	85773.07	0.0160	P	2.1
5	☐	12500.000	12169.097	209448.00	0.0398	P	0.5
6	☐	25000.000	25050.362	421386.08	0.0819	P	8.6
7	☐	50000.000	49572.427	835004.65	0.1620	P	1.9
8	☐	100000.00	96929.129	1621412.79	0.3166	A	0.5
9	☐	500000.00	500664.16	8674482.66	1.6348	A	0.8

$$y = 3.2651\text{E-}006 * x + 1.0375\text{E-}004$$

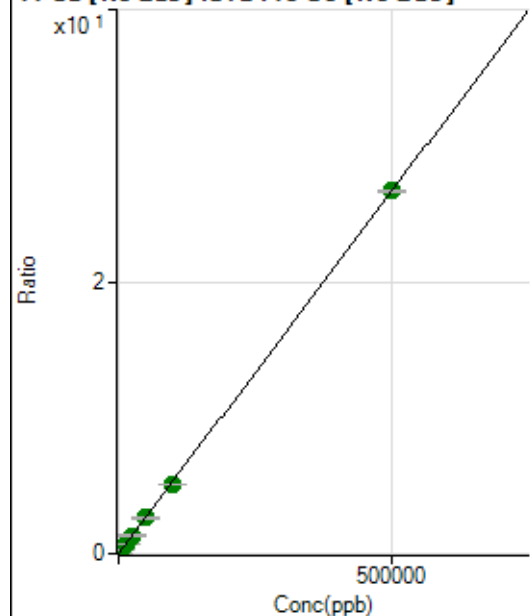
$$R = 1.0000$$

$$DL = 5.449$$

$$BEC = 31.78$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17603.57	0.0035	P	2.1
2	☐	50.000					
3	☐	500.000	466.911	149960.11	0.0283	P	1.0
4	☐	5000.000	4889.340	1419620.05	0.2640	A	0.3
5	☐	12500.000	12184.798	3432341.09	0.6528	A	0.4
6	☐	25000.000	24970.397	6867047.81	1.3342	A	8.1
7	☐	50000.000	49375.966	13584016.62	2.6349	A	2.0
8	☐	100000.00	96084.747	26242783.40	5.1242	A	1.2
9	☐	500000.00	500855.95	141649749.0	26.6963	A	0.4

$$y = 5.3294\text{E-}005 * x + 0.0035$$

$$R = 1.0000$$

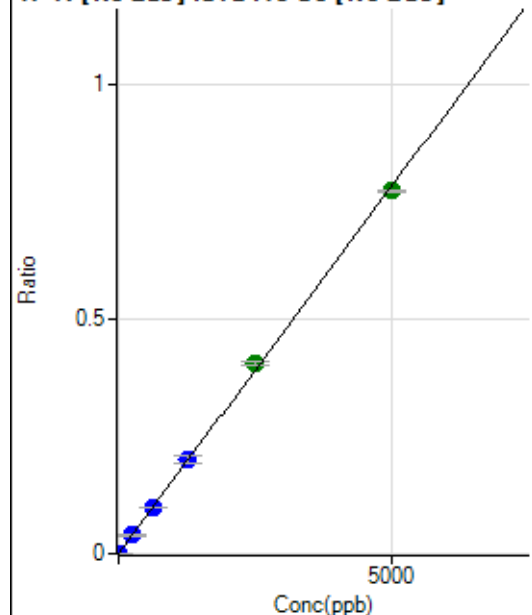
$$DL = 4.077$$

$$BEC = 64.94$$

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	88.89	0.0000	P	20.4
2	☐	0.500					
3	☐	5.000	4.900	4150.80	0.0008	P	1.3
4	☐	250.000	249.667	210193.59	0.0391	P	1.3
5	☐	625.000	626.840	515894.58	0.0981	P	0.3
6	☐	1250.000	1293.657	1042169.92	0.2025	P	8.2
7	☐	2500.000	2595.509	2094497.25	0.4063	A	2.0
8	☐	5000.000	4941.118	3961063.59	0.7734	A	0.8
9	☐			2336.42	0.0004	P	4.3

$$y = 1.5652E-004 * x + 1.7493E-005$$

$$R = 0.9997$$

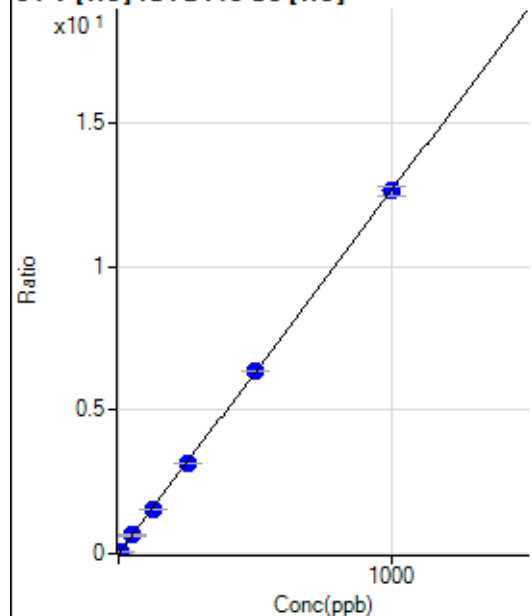
$$DL = 0.06827$$

$$BEC = 0.1118$$

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	8.89	0.0002	P	57.3
2	☐	0.500					
3	☐	5.000	4.730	2606.96	0.0600	P	2.4
4	☐	50.000	50.748	26936.11	0.6417	P	2.4
5	☐	125.000	123.551	65975.66	1.5621	P	1.2
6	☐	250.000	247.482	133099.71	3.1287	P	0.4
7	☐	500.000	502.982	256548.81	6.3586	P	0.7
8	☐	1000.000	999.284	495752.38	12.6325	P	2.4
9	☐			192.22	0.0045	P	11.3

$$y = 0.0126 * x + 2.0792E-004$$

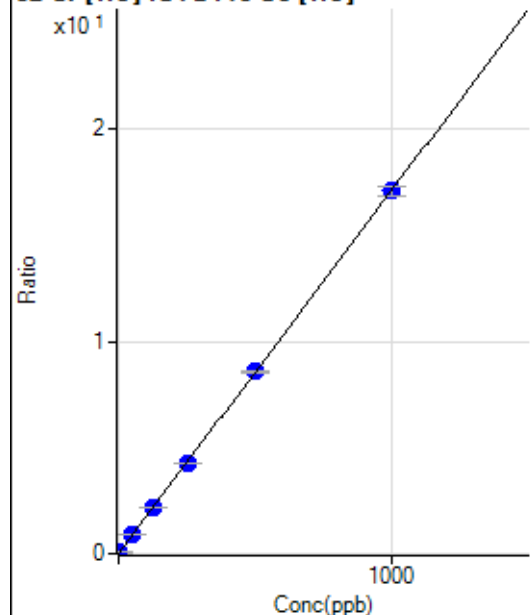
$$R = 1.0000$$

$$DL = 0.0283$$

$$BEC = 0.01645$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	402.23	0.0094	P	5.6
2	☐	0.200					
3	☐	2.000	2.156	2009.07	0.0462	P	2.9
4	☐	50.000	51.392	37234.03	0.8870	P	1.0
5	☐	125.000	124.471	90175.87	2.1349	P	0.7
6	☐	250.000	248.220	180712.02	4.2481	P	1.2
7	☐	500.000	501.890	346142.96	8.5798	P	1.3
8	☐	1000.000	999.496	670163.62	17.0770	P	2.4
9	☐			27486.08	0.6467	P	1.1

$$y = 0.0171 * x + 0.0094$$

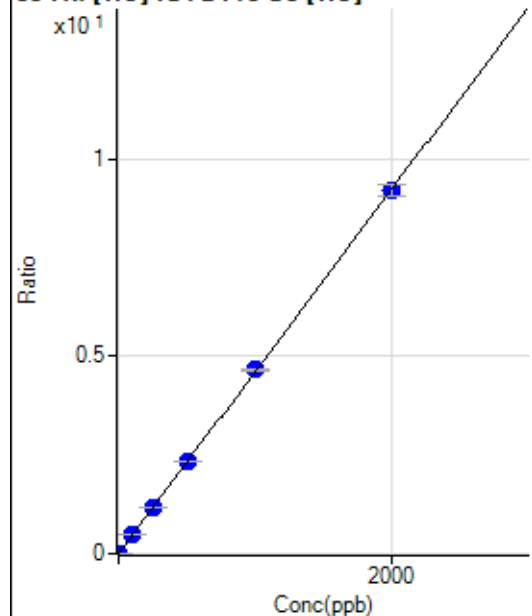
$$R = 1.0000$$

$$DL = 0.09336$$

$$BEC = 0.5524$$

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	24.44	0.0006	P	5.9
2	☐	0.100					
3	☐	1.000	1.039	233.34	0.0054	P	4.3
4	☐	100.000	104.656	20307.22	0.4838	P	2.8
5	☐	250.000	254.541	49664.85	1.1759	P	1.0
6	☐	500.000	506.431	99502.08	2.3390	P	1.0
7	☐	1000.000	1009.641	188106.80	4.6625	P	1.2
8	☐	2000.000	1992.771	361093.72	9.2020	P	3.2
9	☐			1914.61	0.0450	P	1.3

$$y = 0.0046 * x + 5.7312E-004$$

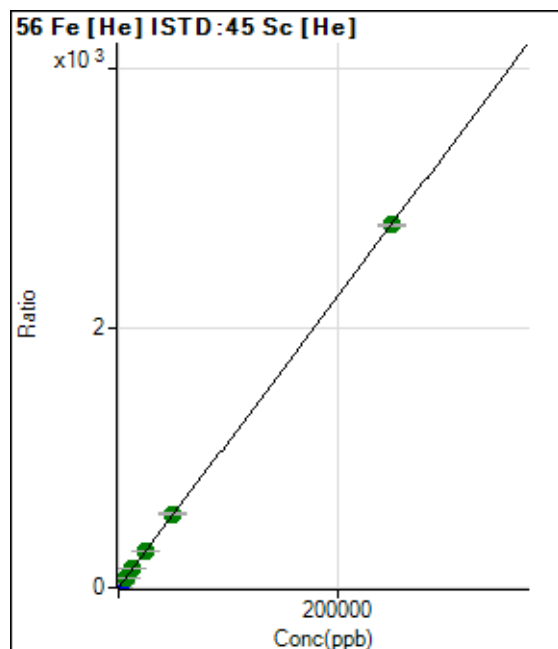
$$R = 1.0000$$

$$DL = 0.02181$$

$$BEC = 0.1241$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	944.51	0.0222	P	4.1
2	☐	5.000					
3	☐	50.000	51.796	26136.15	0.6015	P	1.4
4	☐	2500.000	2608.945	1225834.45	29.2038	P	1.6
5	☐	6250.000	6437.027	3041991.07	72.0217	A	0.8
6	☐	12500.000	12701.630	6044707.77	142.0925	A	0.8
7	☐	25000.000	25555.226	11533685.56	285.8627	A	0.7
8	☐	50000.000	50655.929	22235369.48	566.6193	A	2.8
9	☐	250000.00	249797.44	118756391.5	2,794.058	A	0.5

$$y = 0.0112 * x + 0.0222$$

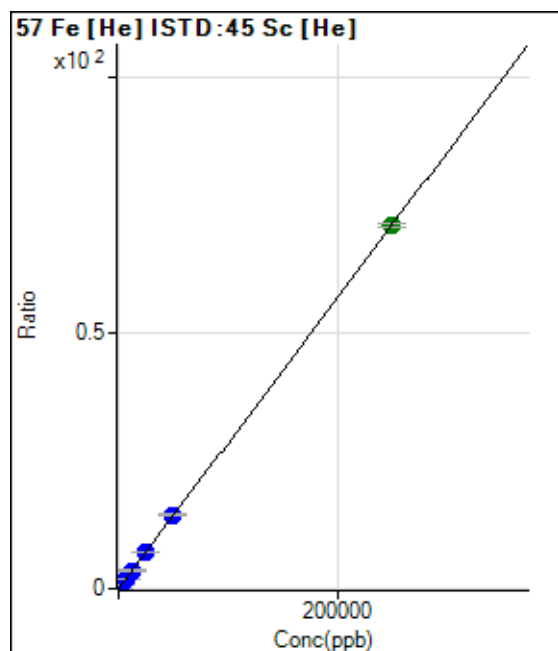
$$R = 1.0000$$

$$DL = 0.2452$$

$$BEC = 1.982$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42.59	0.0010	P	37.9
2	☐	5.000					
3	☐	50.000	49.177	650.03	0.0150	P	12.5
4	☐	2500.000	2580.558	30790.14	0.7335	P	1.0
5	☐	6250.000	6317.462	75771.82	1.7942	P	2.2
6	☐	12500.000	12566.378	151789.57	3.5680	P	0.3
7	☐	25000.000	25305.078	289839.06	7.1840	P	1.0
8	☐	50000.000	50439.482	561888.70	14.3185	P	2.8
9	☐	250000.00	249875.78	3014601.77	70.9296	A	1.2

$$y = 2.8386E-004 * x + 9.9520E-004$$

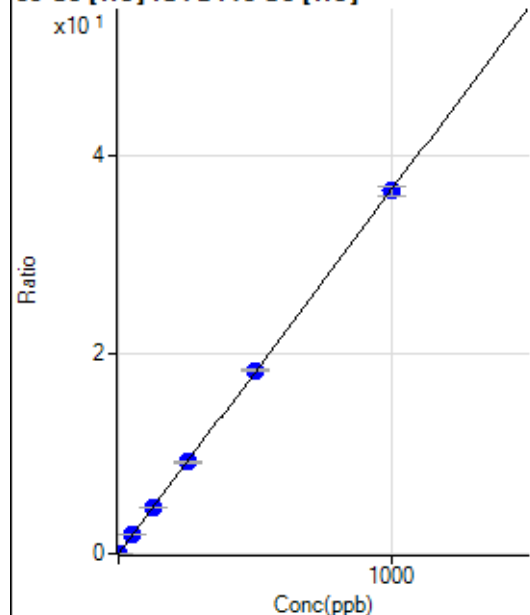
$$R = 1.0000$$

$$DL = 3.988$$

$$BEC = 3.506$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0023	P	11.9
2	☐	0.100					
3	☐	1.000	1.013	1706.80	0.0393	P	3.5
4	☐	50.000	51.525	79126.46	1.8851	P	1.8
5	☐	125.000	126.038	194623.15	4.6079	P	0.7
6	☐	250.000	251.243	390656.53	9.1831	P	0.8
7	☐	500.000	503.743	742762.49	18.4098	P	1.0
8	☐	1000.000	997.612	1430693.31	36.4566	P	2.4
9	☐			18751.69	0.4412	P	0.5

$$y = 0.0365 * x + 0.0023$$

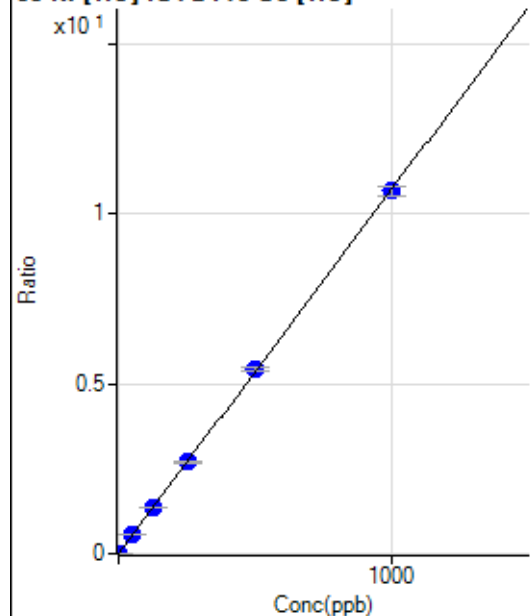
$$R = 1.0000$$

$$DL = 0.02204$$

$$BEC = 0.06198$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0015	P	15.2
2	☐	0.100					
3	☐	1.000	1.066	561.14	0.0129	P	10.6
4	☐	50.000	52.080	23498.92	0.5599	P	3.2
5	☐	125.000	126.248	57237.26	1.3550	P	0.6
6	☐	250.000	251.305	114679.71	2.6958	P	1.3
7	☐	500.000	506.434	219112.12	5.4312	P	1.4
8	☐	1000.000	996.197	419210.81	10.6822	P	2.4
9	☐			14506.61	0.3413	P	2.7

$$y = 0.0107 * x + 0.0015$$

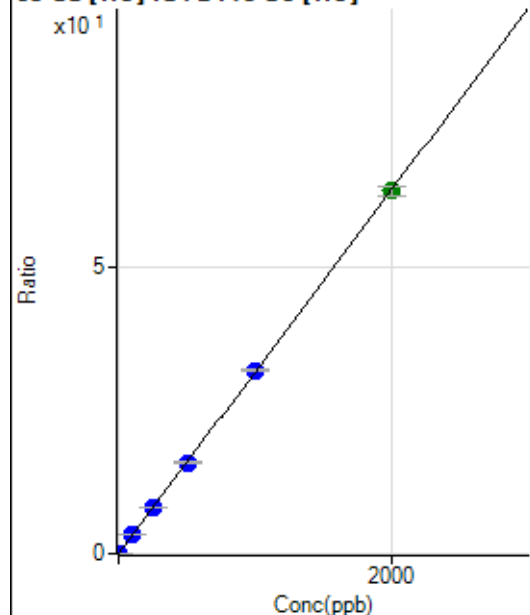
$$R = 1.0000$$

$$DL = 0.0634$$

$$BEC = 0.1388$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	361.12	0.0085	P	11.7
2	☐	0.200					
3	☐	2.000	2.083	3239.33	0.0745	P	2.2
4	☐	100.000	102.178	136383.29	3.2490	P	0.7
5	☐	250.000	250.363	335707.86	7.9485	P	1.1
6	☐	500.000	499.756	674582.77	15.8578	P	1.4
7	☐	1000.000	1008.791	1291062.89	32.0014	P	1.3
8	☐	2000.000	1995.511	2483894.94	63.2944	A	2.5
9	☐			4518.59	0.1063	P	4.5

$$y = 0.0317 * x + 0.0085$$

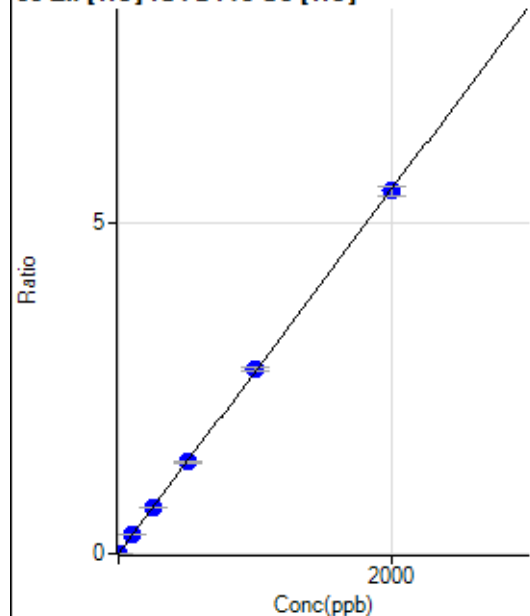
$$R = 1.0000$$

$$DL = 0.09424$$

$$BEC = 0.2674$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.00	0.0026	P	12.8
2	☐	0.200					
3	☐	2.000	1.956	346.68	0.0080	P	12.1
4	☐	100.000	104.875	12243.35	0.2917	P	2.6
5	☐	250.000	252.175	29474.86	0.6977	P	1.9
6	☐	500.000	504.532	59270.59	1.3934	P	2.0
7	☐	1000.000	1012.293	112668.48	2.7930	P	2.3
8	☐	2000.000	1992.205	215606.85	5.4942	P	2.8
9	☐			1693.47	0.0398	P	2.5

$$y = 0.0028 * x + 0.0026$$

$$R = 1.0000$$

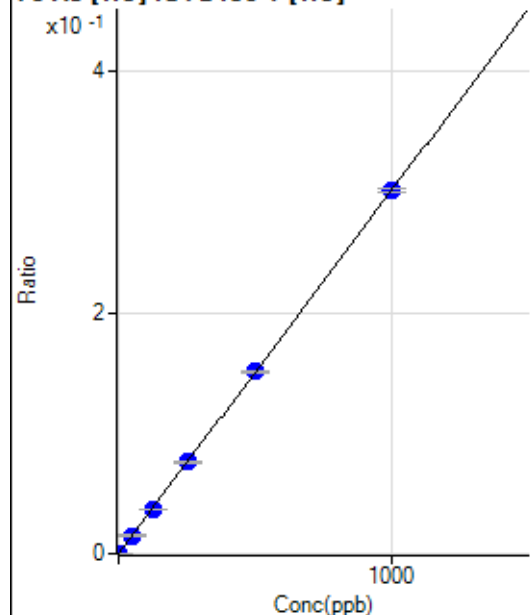
$$DL = 0.3612$$

$$BEC = 0.938$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	3.09	0.0000	P	92.1
2	☐	0.100					
3	☐	1.000	1.052	96.91	0.0003	P	14.7
4	☐	50.000	50.007	4361.22	0.0151	P	2.2
5	☐	125.000	122.752	10613.41	0.0370	P	1.4
6	☐	250.000	251.833	21673.25	0.0759	P	1.2
7	☐	500.000	501.212	40951.92	0.1510	P	1.0
8	☐	1000.000	999.216	78888.20	0.3010	P	1.2
9	☐			150.62	0.0005	P	3.6

$$y = 3.0126\text{E-}004 * x + 1.0779\text{E-}005$$

$$R = 1.0000$$

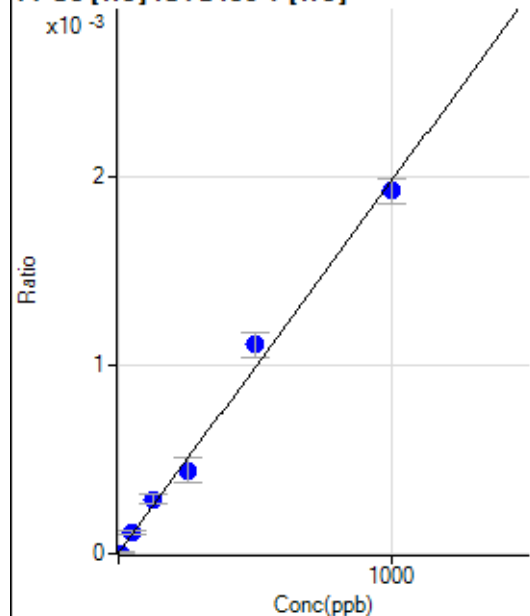
$$DL = 0.09883$$

$$BEC = 0.03578$$

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
2	☐	0.500					
3	☐	5.000	-0.052	1.11	0.0000	P	173.2
4	☐	50.000	54.321	32.22	0.0001	P	20.1
5	☐	125.000	145.065	83.34	0.0003	P	17.5
6	☐	250.000	222.535	126.67	0.0004	P	30.0
7	☐	500.000	560.495	301.12	0.0011	P	11.7
8	☐	1000.000	973.919	505.58	0.0019	P	6.6
9	☐			2.22	0.0000	P	86.6

$$y = 1.9760\text{E-}006 * x + 3.8395\text{E-}006$$

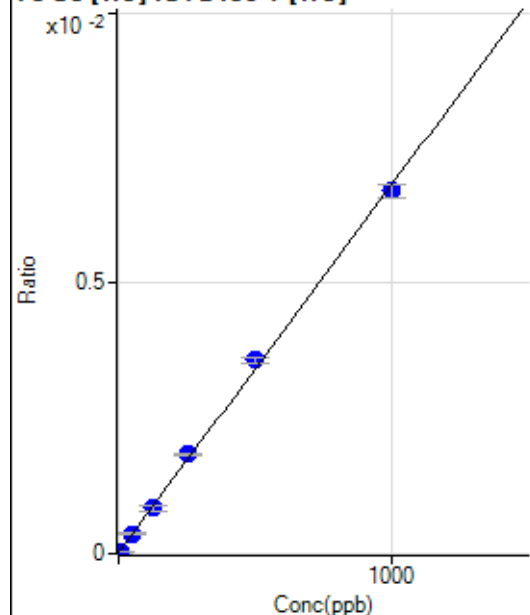
$$R = 0.9966$$

$$DL = 10.1$$

$$BEC = 1.943$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.56	0.0000	P	88.2
2	☐	0.500					
3	☐	5.000	2.390	10.49	0.0000	P	44.1
4	☐	50.000	52.084	108.03	0.0004	P	8.2
5	☐	125.000	121.573	242.60	0.0008	P	14.2
6	☐	250.000	266.923	524.09	0.0018	P	3.6
7	☐	500.000	523.834	971.65	0.0036	P	2.8
8	☐	1000.000	984.189	1759.39	0.0067	P	3.7
9	☐			1.23	0.0000	P	86.6

$$y = 6.8019\text{E-}006 * x + 1.9200\text{E-}005$$

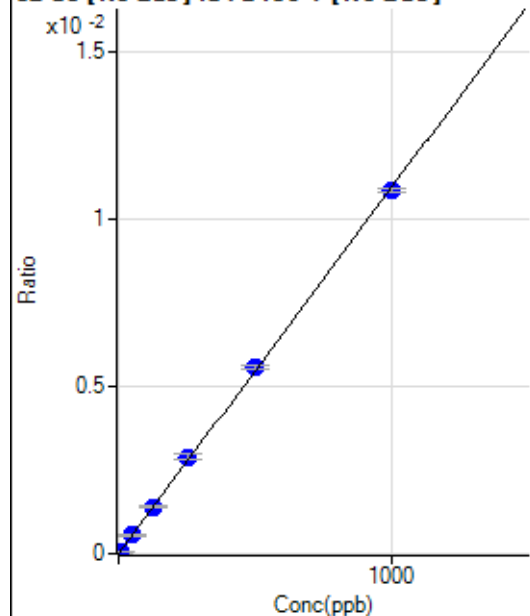
$$R = 0.9994$$

$$DL = 7.471$$

$$BEC = 2.823$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-9.10	0.0000	P	-183.
2	☐	0.500					
3	☐	5.000	4.682	440.96	0.0001	P	11.3
4	☐	50.000	50.307	4855.77	0.0005	P	2.0
5	☐	125.000	128.425	12278.83	0.0014	P	1.3
6	☐	250.000	264.250	24837.41	0.0029	P	5.6
7	☐	500.000	509.750	49201.86	0.0056	P	2.6
8	☐	1000.000	991.120	95323.25	0.0108	P	0.9
9	☐			64.52	0.0000	P	18.9

$$y = 1.0945\text{E-}005 * x - 1.0613\text{E-}006$$

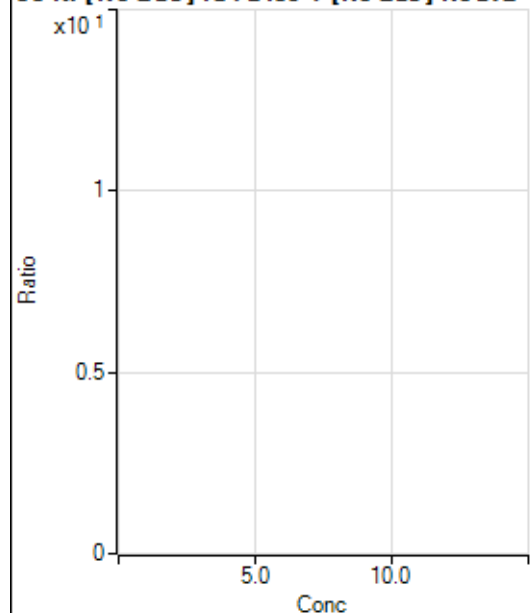
$$R = 0.9998$$

$$DL = 0.535$$

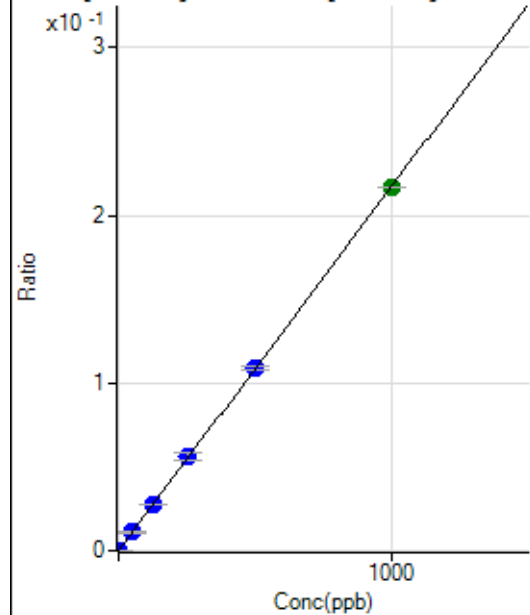
$$BEC = -0.09697$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] ISTD:89 Y [No Gas] No av_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			303.34	0.0000	P	8.0
2	☐						
3	☐			350.01	0.0000	P	6.4
4	☐			330.01	0.0000	P	12.1
5	☐			283.34	0.0000	P	5.3
6	☐			326.68	0.0000	P	10.0
7	☐			313.34	0.0000	P	12.4
8	☐			333.34	0.0000	P	5.7
9	☐			340.01	0.0000	P	4.1

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	477.81	0.0001	P	15.2
2	☐	0.100					
3	☐	1.000	1.020	2439.22	0.0003	P	4.4
4	☐	50.000	50.114	96604.24	0.0109	P	2.2
5	☐	125.000	124.448	236664.35	0.0271	P	0.6
6	☐	250.000	258.783	482882.63	0.0562	P	6.4
7	☐	500.000	502.560	962731.88	0.1091	P	2.0
8	☐	1000.000	996.587	1901570.77	0.2164	A	0.2
9	☐			9484.32	0.0011	P	2.2

$$y = 2.1706E-004 * x + 5.6211E-005$$

$$R = 0.9999$$

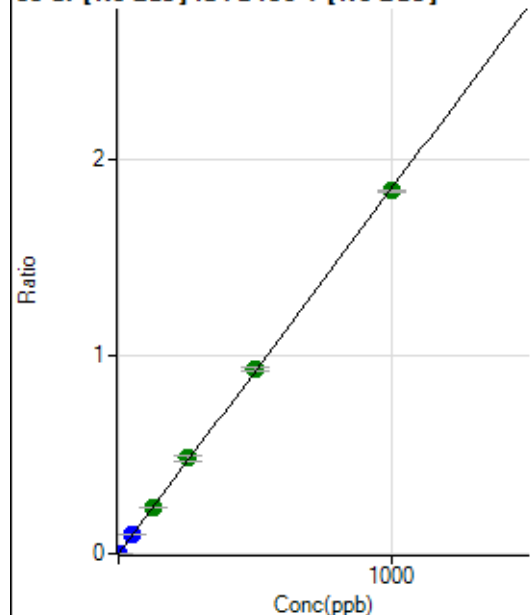
$$DL = 0.1184$$

$$BEC = 0.259$$

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	108.34	0.0000	P	26.9
2	☐	0.100					
3	☐	1.000	1.012	16555.16	0.0019	P	2.2
4	☐	50.000	50.482	824759.01	0.0933	P	0.4
5	☐	125.000	126.902	2051320.77	0.2346	A	0.6
6	☐	250.000	262.204	4163404.78	0.4848	A	6.3
7	☐	500.000	505.797	8249386.64	0.9352	A	1.5
8	☐	1000.000	993.788	16146640.29	1.8374	A	0.8
9	☐			75961.93	0.0084	P	1.3

$$y = 0.0018 * x + 1.2734E-005$$

$$R = 0.9999$$

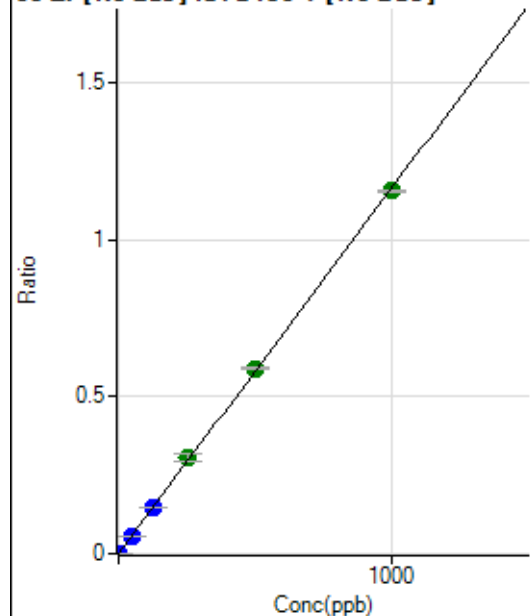
$$DL = 0.005567$$

$$BEC = 0.006887$$

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	616.71	0.0001	P	9.1
2	☐	0.100					
3	☐	1.000	0.957	10418.28	0.0012	P	1.5
4	☐	50.000	49.145	505877.98	0.0573	P	0.4
5	☐	125.000	124.562	1267698.33	0.1450	P	0.8
6	☐	250.000	262.444	2622869.46	0.3054	A	6.6
7	☐	500.000	507.671	5211257.28	0.5908	A	1.9
8	☐	1000.000	993.151	10156093.54	1.1557	A	0.7
9	☐			2678.19	0.0003	P	12.9

$$y = 0.0012 * x + 7.2555E-005$$

$$R = 0.9999$$

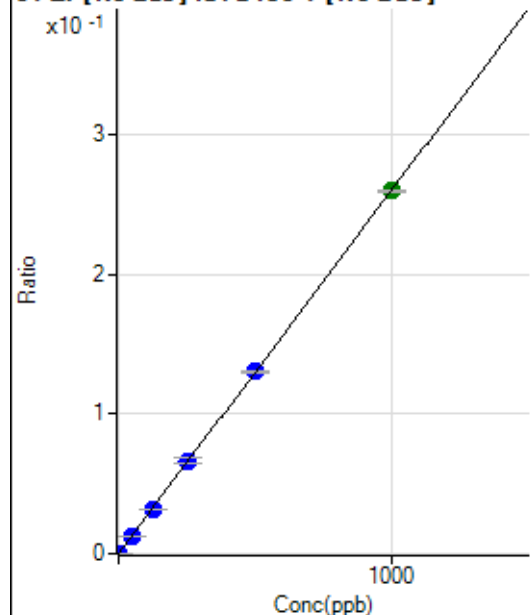
$$DL = 0.01701$$

$$BEC = 0.06235$$

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	163.90	0.0000	P	6.5
2	☐	0.100					
3	☐	1.000	0.898	2225.30	0.0003	P	4.6
4	☐	50.000	48.504	111793.16	0.0127	P	1.2
5	☐	125.000	122.618	279367.29	0.0320	P	0.4
6	☐	250.000	255.035	570767.13	0.0664	P	5.7
7	☐	500.000	500.453	1149955.85	0.1304	P	1.8
8	☐	1000.000	998.887	2286502.07	0.2602	A	0.7
9	☐			611.16	0.0001	P	3.4

$$y = 2.6046E-004 * x + 1.9295E-005$$

$$R = 1.0000$$

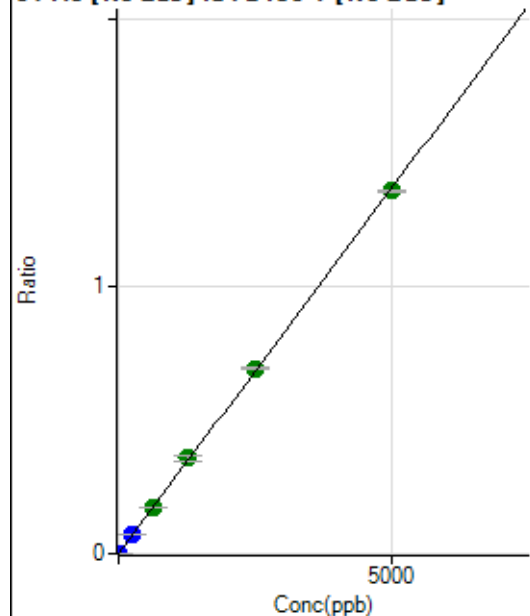
$$DL = 0.01437$$

$$BEC = 0.07408$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	275.02	0.0000	P	2.3
2	☐	0.500					
3	☐	5.000	4.920	12111.44	0.0014	P	1.9
4	☐	250.000	250.807	606699.55	0.0687	P	0.4
5	☐	625.000	632.002	1512320.02	0.1730	A	0.3
6	☐	1250.000	1306.037	3069104.19	0.3574	A	6.8
7	☐	2500.000	2537.002	6124558.04	0.6943	A	1.6
8	☐	5000.000	4966.574	11944245.84	1.3592	A	0.8
9	☐			17456.36	0.0019	P	6.6

$$y = 2.7366E-004 * x + 3.2365E-005$$

$$R = 0.9999$$

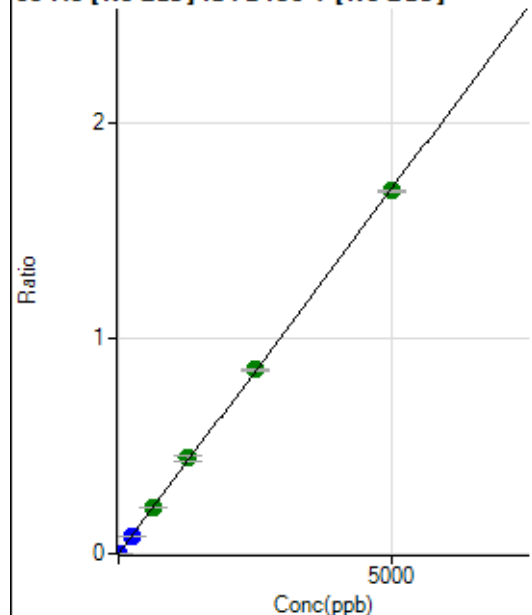
$$DL = 0.008162$$

$$BEC = 0.1183$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	97.23	0.0000	P	35.8
2	☐	0.500					
3	☐	5.000	4.785	14324.83	0.0016	P	1.6
4	☐	250.000	247.876	741224.03	0.0839	P	0.6
5	☐	625.000	633.095	1873071.05	0.2143	A	0.4
6	☐	1250.000	1305.515	3793958.90	0.4418	A	6.5
7	☐	2500.000	2523.233	7532616.66	0.8539	A	1.5
8	☐	5000.000	4973.599	14790955.37	1.6831	A	0.8
9	☐			27425.82	0.0030	P	5.3

$$y = 3.3840\text{E-}004 * x + 1.1445\text{E-}005$$

$$R = 0.9999$$

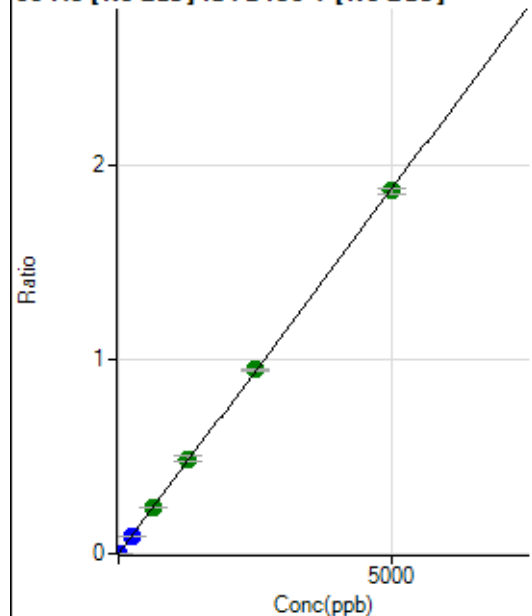
$$DL = 0.03634$$

$$BEC = 0.03382$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	188.90	0.0000	P	35.5
2	☐	0.500					
3	☐	5.000	4.967	16599.62	0.0019	P	2.2
4	☐	250.000	248.966	827207.45	0.0936	P	0.4
5	☐	625.000	632.042	2077699.96	0.2376	A	0.4
6	☐	1250.000	1305.102	4214474.14	0.4907	A	6.1
7	☐	2500.000	2520.517	8359956.96	0.9477	A	1.1
8	☐	5000.000	4975.138	16437374.15	1.8705	A	1.3
9	☐			31576.54	0.0035	P	3.2

$$y = 3.7597\text{E-}004 * x + 2.2216\text{E-}005$$

$$R = 0.9999$$

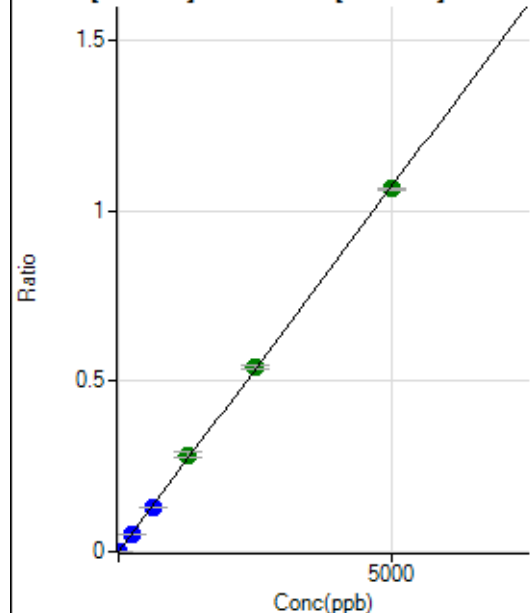
$$DL = 0.06296$$

$$BEC = 0.05909$$

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	69.45	0.0000	P	7.5
2	☐	0.500					
3	☐	5.000	4.794	9100.75	0.0010	P	4.5
4	☐	250.000	245.755	465592.44	0.0527	P	0.5
5	☐	625.000	615.249	1153219.18	0.1319	P	0.4
6	☐	1250.000	1319.213	2429467.37	0.2828	A	5.9
7	☐	2500.000	2529.176	4783485.57	0.5423	A	1.5
8	☐	5000.000	4969.540	9363087.62	1.0655	A	0.7
9	☐			17328.42	0.0019	P	1.5

$$y = 2.1440\text{E-}004 * x + 8.1760\text{E-}006$$

$$R = 0.9998$$

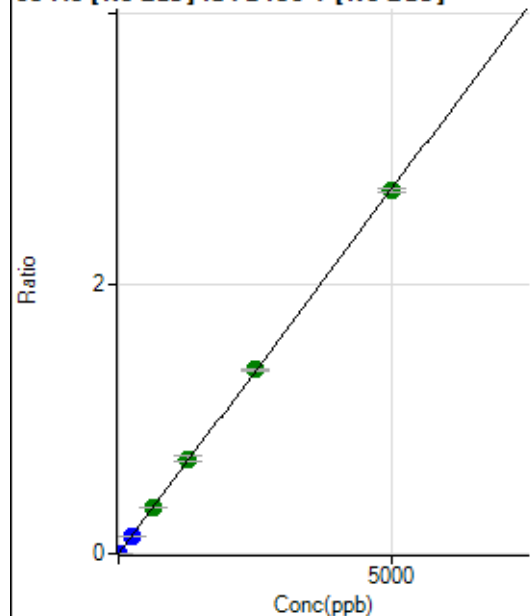
$$DL = 0.008603$$

$$BEC = 0.03814$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.12	0.0000	P	5.1
2	☐	0.500					
3	☐	5.000	4.876	23326.60	0.0027	P	2.5
4	☐	250.000	249.000	1188530.38	0.1345	P	1.1
5	☐	625.000	631.344	2981526.24	0.3411	A	0.5
6	☐	1250.000	1303.789	6047725.91	0.7043	A	6.6
7	☐	2500.000	2519.678	12007053.83	1.3611	A	1.2
8	☐	5000.000	4975.971	23620905.04	2.6879	A	1.0
9	☐			44248.30	0.0049	P	2.9

$$y = 5.4017\text{E-}004 * x + 2.1906\text{E-}005$$

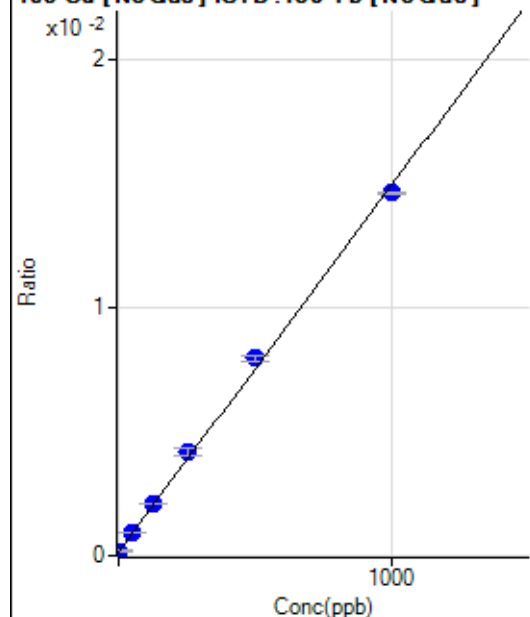
$$R = 0.9999$$

$$DL = 0.006178$$

$$BEC = 0.04055$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1558.49	0.0002	P	2.3
2	☐	0.100					
3	☐	1.000	1.693	1850.22	0.0002	P	9.3
4	☐	50.000	52.689	9551.05	0.0009	P	3.0
5	☐	125.000	130.935	21206.36	0.0021	P	2.5
6	☐	250.000	272.783	42275.52	0.0042	P	6.3
7	☐	500.000	527.558	83693.07	0.0079	P	2.2
8	☐	1000.000	979.648	159819.96	0.0146	P	0.3
9	☐			1769.65	0.0002	P	6.0

$$y = 1.4744\text{E-}005 * x + 1.6003\text{E-}004$$

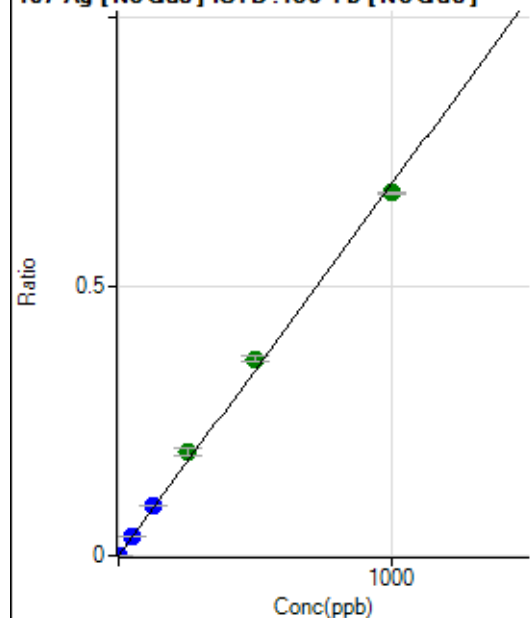
$$R = 0.9991$$

$$DL = 0.7431$$

$$BEC = 10.85$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.11	0.0000	P	14.4
2	☐	0.100					
3	☐	1.000	1.085	7519.10	0.0008	P	2.4
4	☐	50.000	53.865	378611.34	0.0371	P	0.4
5	☐	125.000	134.448	939956.26	0.0927	P	1.5
6	☐	250.000	277.425	1932009.55	0.1913	A	7.6
7	☐	500.000	529.367	3846920.83	0.3649	A	2.8
8	☐	1000.000	977.086	7371246.87	0.6736	A	0.3
9	☐			922.29	0.0001	P	11.9

$$y = 6.8938\text{E-}004 * x + 3.7111\text{E-}006$$

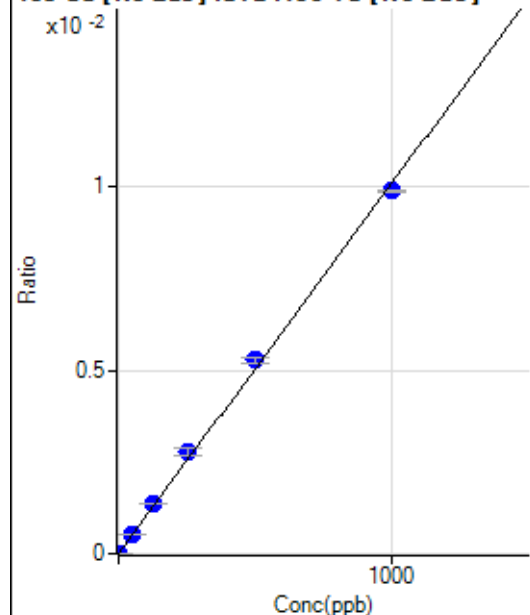
$$R = 0.9989$$

$$DL = 0.002322$$

$$BEC = 0.005383$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.78	0.0000	P	86.6
2	☐	0.100					
3	☐	1.000	1.074	111.11	0.0000	P	8.3
4	☐	50.000	53.506	5501.24	0.0005	P	1.1
5	☐	125.000	133.604	13659.96	0.0013	P	0.6
6	☐	250.000	274.693	27965.42	0.0028	P	8.2
7	☐	500.000	524.039	55682.74	0.0053	P	3.1
8	☐	1000.000	980.556	108164.04	0.0099	P	0.5
9	☐			45.83	0.0000	P	63.1

$$y = 1.0080\text{E-}005 * x + 2.8681\text{E-}007$$

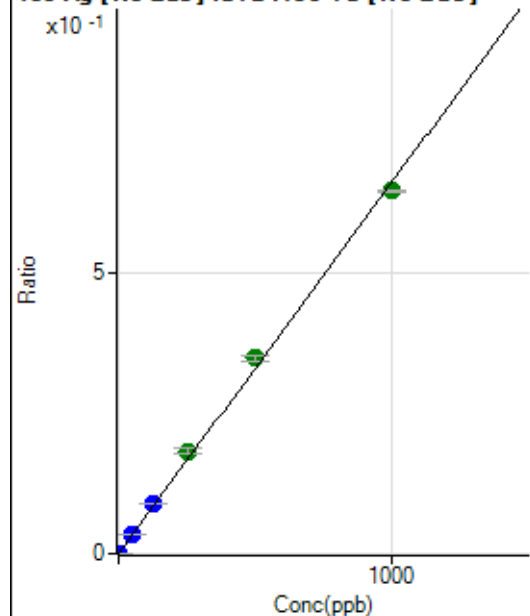
$$R = 0.9992$$

$$DL = 0.07393$$

$$BEC = 0.02845$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.67	0.0000	P	40.1
2	☐	0.100					
3	☐	1.000	1.114	7391.25	0.0007	P	1.2
4	☐	50.000	53.870	362351.36	0.0355	P	0.9
5	☐	125.000	134.507	899986.49	0.0887	P	1.2
6	☐	250.000	277.125	1847161.56	0.1828	A	7.2
7	☐	500.000	527.012	3665038.84	0.3477	A	2.7
8	☐	1000.000	978.330	7062824.72	0.6454	A	0.5
9	☐			861.28	0.0001	P	25.0

$$y = 6.5970\text{E-}004 * x + 4.2832\text{E-}006$$

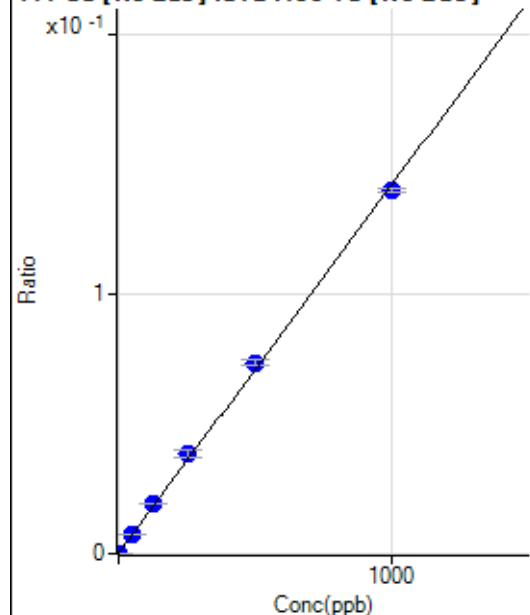
$$R = 0.9990$$

$$DL = 0.007816$$

$$BEC = 0.006493$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1097.33	0.0001	P	1.7
2	☐	0.100					
3	☐	1.000	1.087	2666.10	0.0003	P	4.0
4	☐	50.000	53.095	77834.35	0.0076	P	0.7
5	☐	125.000	133.134	192437.43	0.0190	P	1.0
6	☐	250.000	271.528	389779.56	0.0386	P	7.3
7	☐	500.000	518.064	774914.70	0.0735	P	2.4
8	☐	1000.000	984.415	1527369.21	0.1396	P	0.9
9	☐			1569.18	0.0001	P	2.4

$$y = 1.4167\text{E-}004 * x + 1.1267\text{E-}004$$

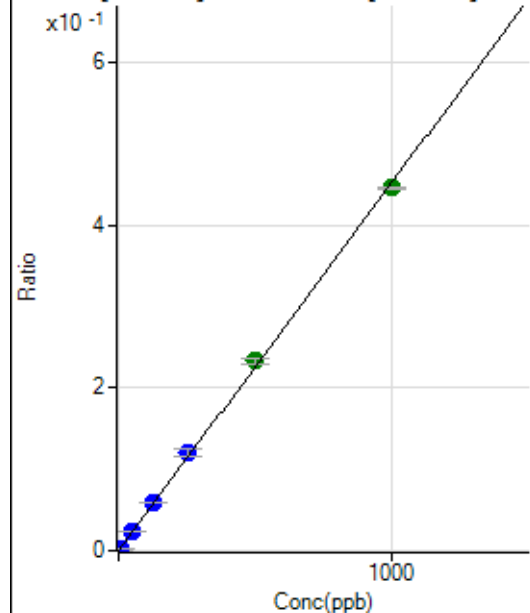
$$R = 0.9995$$

$$DL = 0.04154$$

$$BEC = 0.7953$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.14	0.0000	P	3.3
2	☐	0.500					
3	☐	5.000	5.173	23802.64	0.0024	P	2.1
4	☐	50.000	51.463	237357.61	0.0233	P	0.5
5	☐	125.000	129.765	594641.42	0.0586	P	1.6
6	☐	250.000	265.656	1212159.22	0.1200	P	7.6
7	☐	500.000	517.183	2462047.93	0.2336	A	3.0
8	☐	1000.000	986.825	4876641.52	0.4456	A	0.3
9	☐			12767.76	0.0012	P	3.8

$$y = 4.5153\text{E-}004 * x + 4.4786\text{E-}005$$

$$R = 0.9996$$

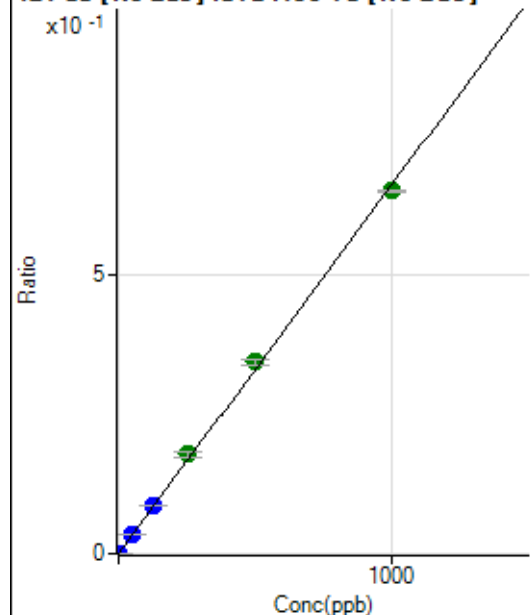
$$DL = 0.00969$$

$$BEC = 0.09919$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.89	0.0000	P	28.2
2	☐	0.200					
3	☐	2.000	2.110	14005.16	0.0014	P	6.0
4	☐	50.000	51.489	346890.77	0.0340	P	0.7
5	☐	125.000	130.180	872274.99	0.0860	P	1.1
6	☐	250.000	269.677	1800730.70	0.1782	A	6.6
7	☐	500.000	519.571	3619114.53	0.3433	A	2.3
8	☐	1000.000	984.573	7118791.48	0.6505	A	0.3
9	☐			19968.73	0.0018	P	7.2

$$y = 6.6071\text{E-}004 * x + 6.5732\text{E-}006$$

$$R = 0.9995$$

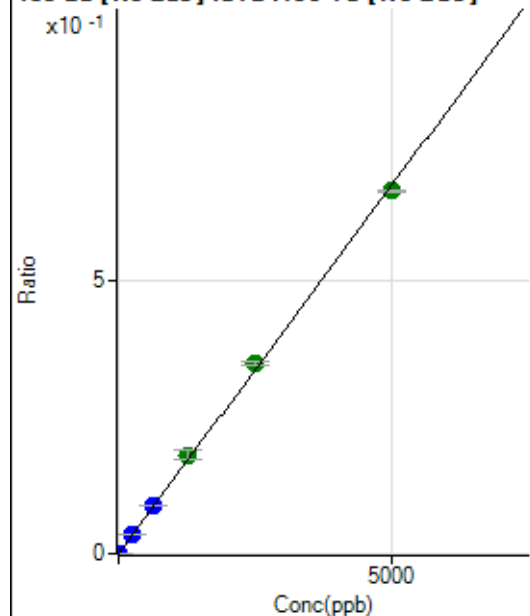
$$DL = 0.008431$$

$$BEC = 0.009949$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.78	0.0000	P	35.2
2	☐	1.000					
3	☐	10.000	10.094	13621.48	0.0014	P	1.1
4	☐	250.000	257.907	354127.31	0.0347	P	0.6
5	☐	625.000	644.376	880119.82	0.0868	P	1.1
6	☐	1250.000	1342.737	1826131.64	0.1808	A	8.3
7	☐	2500.000	2590.275	3677300.60	0.3488	A	2.7
8	☐	5000.000	4928.860	7263808.84	0.6638	A	0.7
9	☐			1052.88	0.0001	P	6.1

$$y = 1.3467\text{E-}004 * x + 2.8576\text{E-}006$$

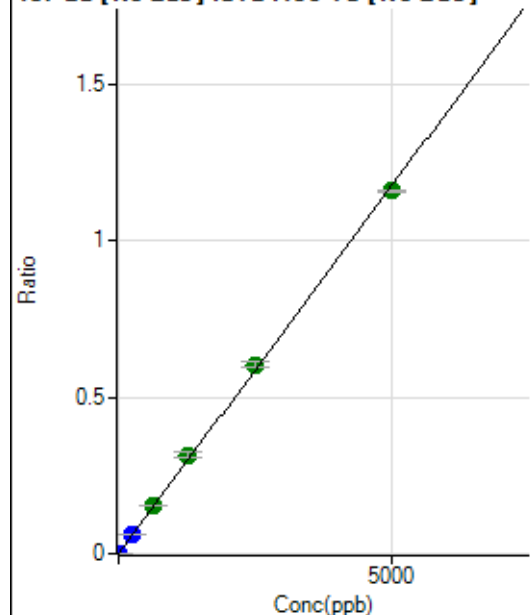
$$R = 0.9996$$

$$DL = 0.02242$$

$$BEC = 0.02122$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	38.89	0.0000	P	44.5
2	☐	1.000					
3	☐	10.000	10.232	24092.39	0.0024	P	2.9
4	☐	250.000	257.597	617464.81	0.0606	P	0.7
5	☐	625.000	649.344	1548276.79	0.1527	A	1.7
6	☐	1250.000	1346.349	3198039.35	0.3165	A	7.2
7	☐	2500.000	2573.758	6377823.75	0.6051	A	3.5
8	☐	5000.000	4935.610	12698082.84	1.1604	A	0.7
9	☐			1958.58	0.0002	P	7.8

$$y = 2.3510E-004 * x + 3.9945E-006$$

$$R = 0.9996$$

$$DL = 0.0227$$

$$BEC = 0.01699$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			8.89		P	43.3
4	☐			22.22		P	45.8
5	☐			35.56		P	43.3
6	☐			84.45		P	29.9
7	☐			126.67		P	9.1
8	☐			228.90		P	14.9
9	☐			100.00		P	17.6

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			0.00		P	
4	☐			1.11		P	173.2
5	☐			0.00		P	
6	☐			6.66		P	86.6
7	☐			2.22		P	173.2
8	☐			3.33		P	173.2
9	☐			18.89		P	40.7

156 Dy [No Gas] No available calibration points

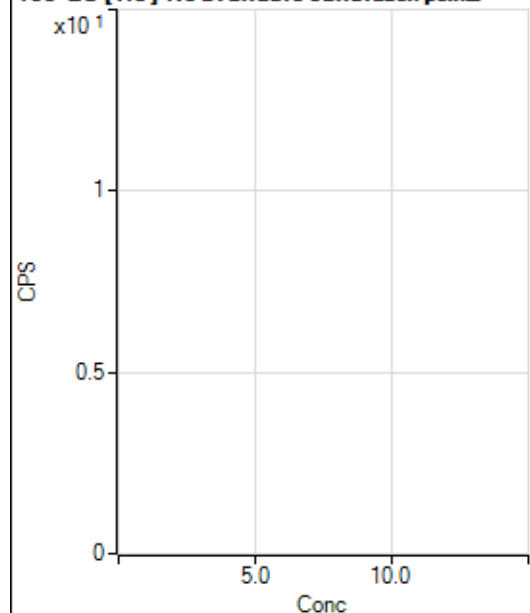
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.56		P	173.2
2	☐						
3	☐			22.22		P	21.6
4	☐			8.33		P	0.0
5	☐			19.45		P	24.7
6	☐			30.55		P	68.6
7	☐			47.22		P	27.0
8	☐			52.78		P	18.2
9	☐			58.33		P	51.5

156 Dy [He] No available calibration points

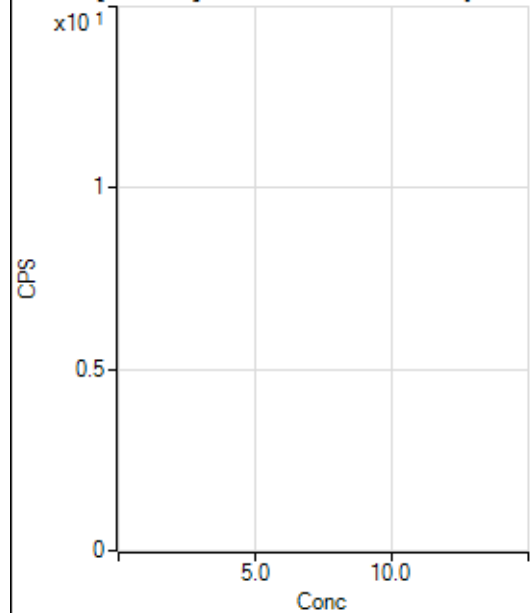
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.2
2	☐						
3	☐			0.00		P	
4	☐			1.11		P	173.2
5	☐			3.33		P	100.1
6	☐			5.56		P	91.6
7	☐			2.22		P	86.6
8	☐			7.78		P	89.2
9	☐			5.56		P	34.7

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			66.67		P	12.5
2	☐						
3	☐			50.00		P	44.1
4	☐			44.45		P	65.8
5	☐			58.34		P	24.7
6	☐			69.45		P	25.0
7	☐			72.23		P	24.0
8	☐			80.56		P	26.0
9	☐			58.33		P	37.8

160 Gd [He] No available calibration points

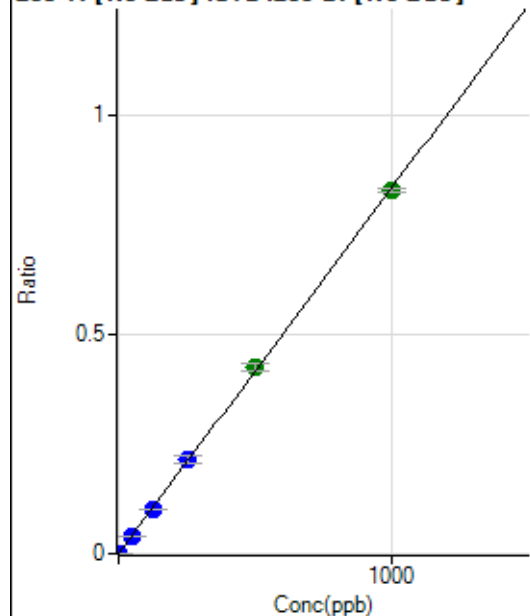
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			10.00		P	57.8
2	☐						
3	☐			13.33		P	25.0
4	☐			7.78		P	24.7
5	☐			7.78		P	99.0
6	☐			3.33		P	0.0
7	☐			6.67		P	50.0
8	☐			13.33		P	66.2
9	☐			28.89		P	85.1

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			41.67		P	34.7
2	☐						
3	☐			50.00		P	44.1
4	☐			22.22		P	57.3
5	☐			36.11		P	26.7
6	☐			36.11		P	70.5
7	☐			41.67		P	60.0
8	☐			55.56		P	37.7
9	☐			47.22		P	10.2

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.56		P	34.7
2	☐						
3	☐			7.78		P	65.5
4	☐			5.56		P	34.7
5	☐			5.55		P	69.3
6	☐			2.22		P	173.2
7	☐			5.56		P	91.6
8	☐			7.78		P	24.7
9	☐			10.00		P	33.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	202.79	0.0000	P	20.0
2	☐	0.100					
3	☐	1.000	0.990	5220.75	0.0009	P	6.0
4	☐	50.000	49.222	254376.68	0.0411	P	0.5
5	☐	125.000	122.490	628865.96	0.1023	P	1.2
6	☐	250.000	258.588	1313043.12	0.2159	P	6.8
7	☐	500.000	510.590	2731913.32	0.4263	A	3.6
8	☐	1000.000	992.911	5497595.39	0.8291	A	1.0
9	☐			3322.81	0.0005	P	5.0

$$y = 8.3494\text{E-}004 * x + 3.4037\text{E-}005$$

$$R = 0.9999$$

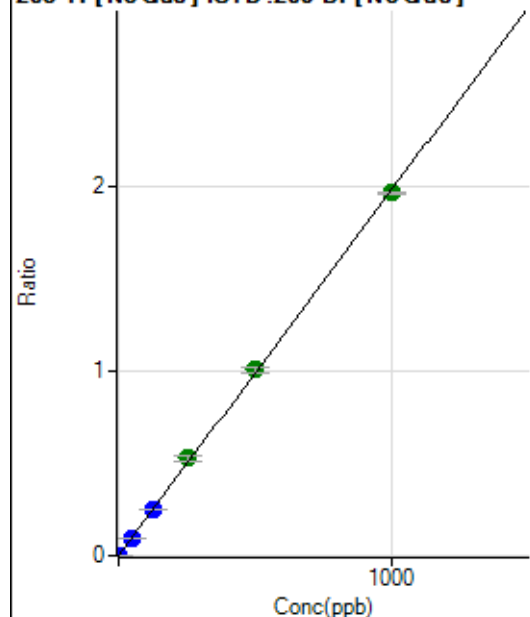
$$DL = 0.02445$$

$$BEC = 0.04077$$

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	491.70	0.0001	P	4.5
2	☐	0.100					
3	☐	1.000	0.995	12481.72	0.0021	P	4.1
4	☐	50.000	49.387	606906.69	0.0981	P	0.2
5	☐	125.000	123.901	1512706.21	0.2461	P	0.5
6	☐	250.000	265.703	3208149.10	0.5276	A	6.8
7	☐	500.000	507.896	6462809.78	1.0084	A	2.6
8	☐	1000.000	992.294	13064659.23	1.9701	A	0.5
9	☐			7958.41	0.0013	P	4.9

$$y = 0.0020 * x + 8.2404E-005$$

$$R = 0.9998$$

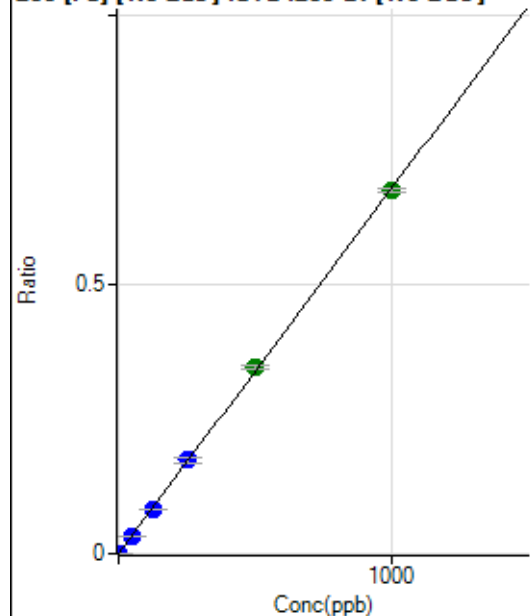
$$DL = 0.00555$$

$$BEC = 0.04151$$

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	157.41	0.0000	P	20.3
2	☐	0.100					
3	☐	1.000	0.997	4250.84	0.0007	P	0.8
4	☐	50.000	48.708	204075.21	0.0330	P	0.3
5	☐	125.000	122.753	510984.06	0.0831	P	0.7
6	☐	250.000	256.410	1055500.62	0.1736	P	6.9
7	☐	500.000	509.880	2212140.12	0.3452	A	2.6
8	☐	1000.000	993.803	4461020.47	0.6727	A	1.2
9	☐			24483.31	0.0039	P	2.0

$$y = 6.7691E-004 * x + 2.6338E-005$$

$$R = 0.9999$$

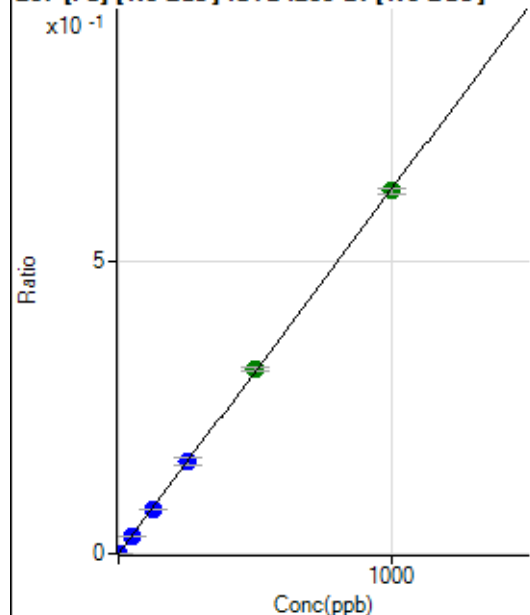
$$DL = 0.02374$$

$$BEC = 0.03891$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.30	0.0000	P	14.4
2	☐	0.100					
3	☐	1.000	0.966	3804.41	0.0006	P	6.3
4	☐	50.000	48.049	185609.57	0.0300	P	0.8
5	☐	125.000	120.870	463862.09	0.0755	P	0.8
6	☐	250.000	252.487	957880.98	0.1576	P	7.8
7	☐	500.000	508.145	2032850.36	0.3172	A	2.3
8	☐	1000.000	995.920	4121575.79	0.6216	A	1.6
9	☐			20587.61	0.0033	P	2.8

$$y = 6.2410E-004 * x + 2.4543E-005$$

$$R = 0.9999$$

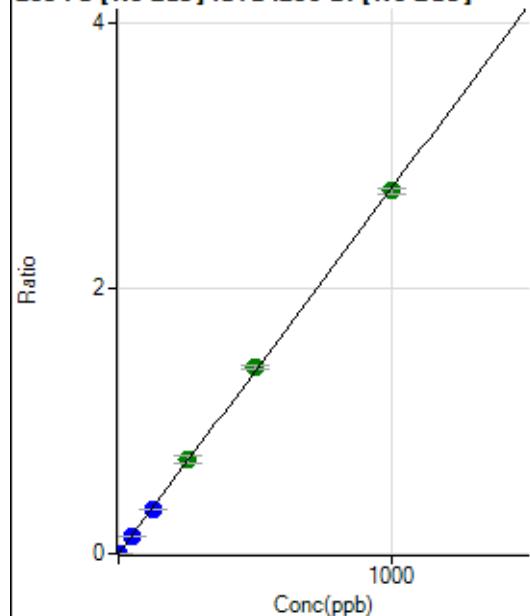
$$DL = 0.01696$$

$$BEC = 0.03933$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	737.07	0.0001	P	2.1
2	☐	0.100					
3	☐	1.000	0.980	17134.71	0.0028	P	2.3
4	☐	50.000	48.727	831595.54	0.1345	P	0.6
5	☐	125.000	123.162	2088149.02	0.3397	P	0.7
6	☐	250.000	258.722	4337193.63	0.7134	A	7.2
7	☐	500.000	509.780	9008998.00	1.4056	A	2.2
8	☐	1000.000	993.223	18158614.76	2.7384	A	1.4
9	☐			96454.90	0.0154	P	1.3

$$y = 0.0028 * x + 1.2352E-004$$

$$R = 0.9999$$

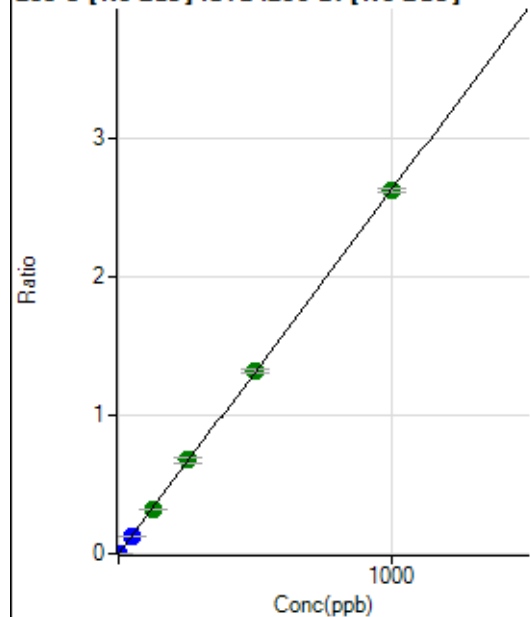
$$DL = 0.002832$$

$$BEC = 0.0448$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	61.12	0.0000	P	8.4
2	☐	0.100					
3	☐	1.000	0.965	15421.37	0.0025	P	2.4
4	☐	50.000	47.818	776453.55	0.1255	P	0.8
5	☐	125.000	123.579	1994570.03	0.3244	A	0.2
6	☐	250.000	256.484	4092753.95	0.6733	A	7.7
7	☐	500.000	501.971	8445185.00	1.3178	A	2.9
8	☐	1000.000	997.680	17367909.94	2.6191	A	1.2
9	☐			1364.03	0.0002	P	2.1

$$y = 0.0026 * x + 1.0245E-005$$

$$R = 1.0000$$

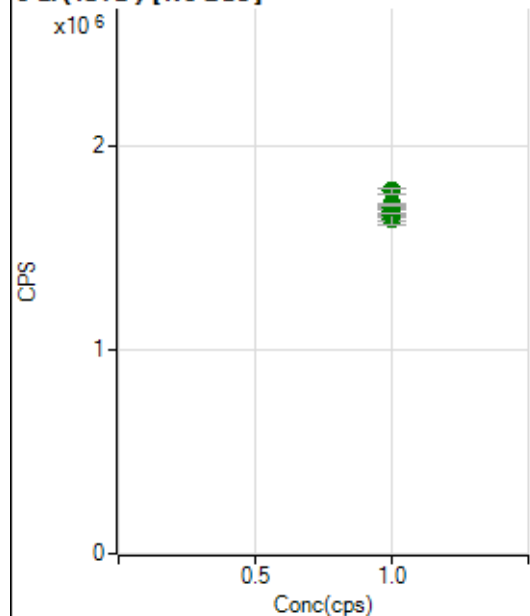
$$DL = 0.0009808$$

$$BEC = 0.003903$$

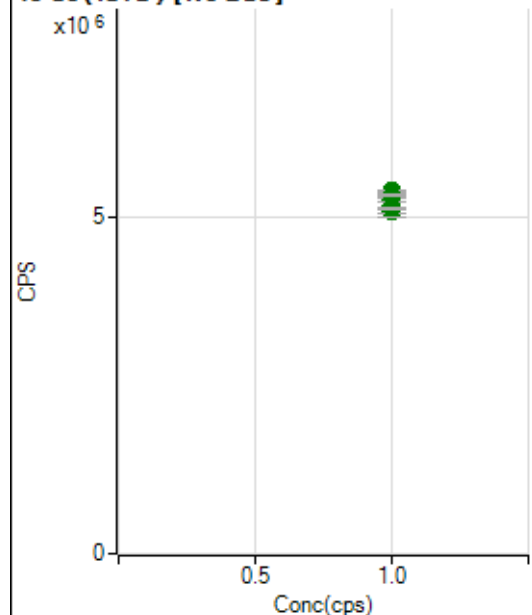
Weight: <None>

Min Conc: 0

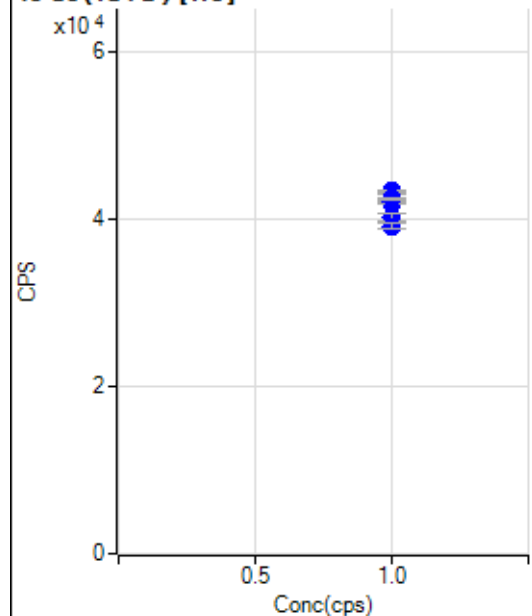
6 Li (ISTD) [No Gas]



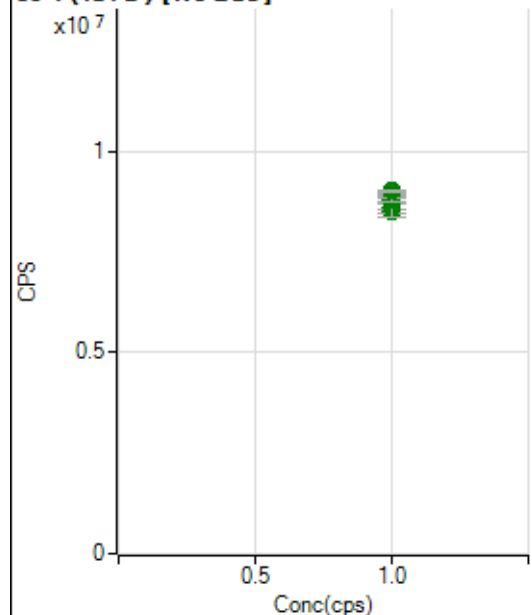
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1643992.37		A	1.2
2	☐	1.000					
3	☐	1.000		1691698.69		A	0.5
4	☐	1.000		1708704.75		A	0.2
5	☐	1.000		1678790.09		A	2.0
6	☐	1.000		1666740.49		A	6.2
7	☐	1.000		1696856.90		A	2.8
8	☐	1.000		1715029.99		A	1.1
9	☐	1.000		1782668.29		A	1.4

45 Sc (ISTD) [No Gas]

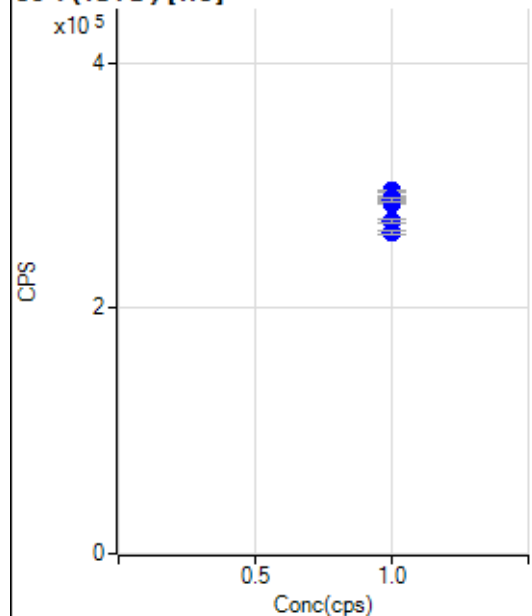
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5086872.16		A	1.2
2	☐	1.000					
3	☐	1.000		5291015.92		A	1.2
4	☐	1.000		5376687.75		A	0.8
5	☐	1.000		5257348.68		A	1.7
6	☐	1.000		5167269.56		A	7.4
7	☐	1.000		5156728.63		A	1.9
8	☐	1.000		5121621.30		A	0.8
9	☐	1.000		5306065.22		A	0.6

45 Sc (ISTD) [He]

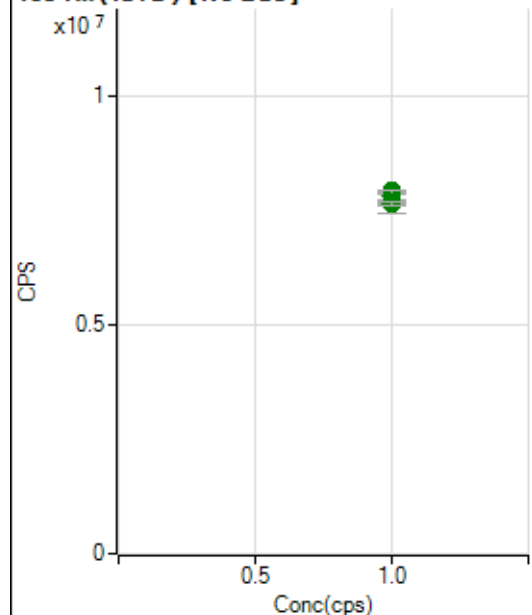
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		42616.88		P	2.0
2	☐	1.000					
3	☐	1.000		43452.62		P	0.6
4	☐	1.000		41978.37		P	0.7
5	☐	1.000		42240.06		P	1.5
6	☐	1.000		42542.25		P	0.8
7	☐	1.000		40350.25		P	2.0
8	☐	1.000		39254.86		P	1.8
9	☐	1.000		42504.23		P	0.9

89 Y (ISTD) [No Gas]

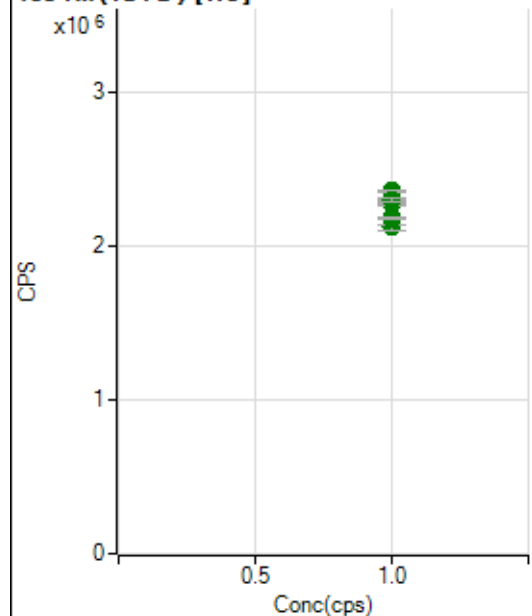
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8496491.40		A	0.8
2	☐	1.000					
3	☐	1.000		8785159.24		A	0.7
4	☐	1.000		8835368.48		A	0.5
5	☐	1.000		8742479.73		A	1.5
6	☐	1.000		8608628.69		A	5.7
7	☐	1.000		8823039.52		A	2.0
8	☐	1.000		8788148.55		A	0.7
9	☐	1.000		9006169.59		A	0.2

89 Y (ISTD) [He]

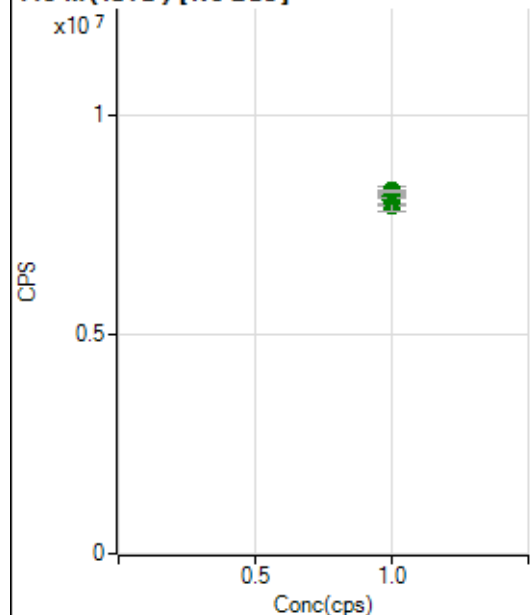
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		287818.55		P	1.0
2	☐	1.000					
3	☐	1.000		295768.68		P	0.4
4	☐	1.000		289302.16		P	1.6
5	☐	1.000		286917.40		P	0.8
6	☐	1.000		285632.91		P	0.2
7	☐	1.000		271190.14		P	1.2
8	☐	1.000		262084.40		P	1.5
9	☐	1.000		288963.90		P	1.2

103 Rh (ISTD) [No Gas]

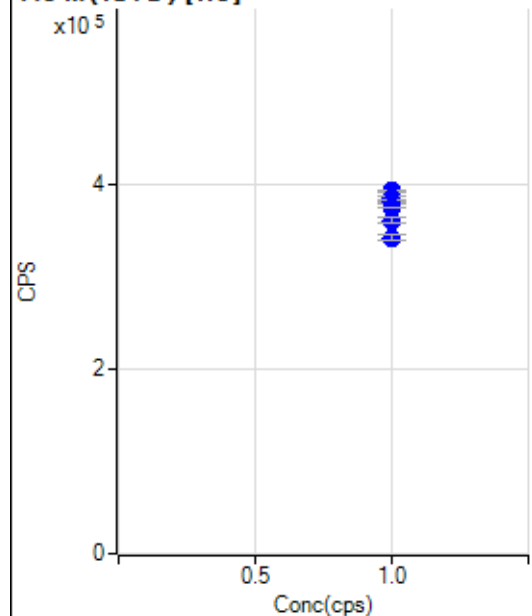
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7673035.33		A	0.5
2	☐	1.000					
3	☐	1.000		7860789.85		A	0.3
4	☐	1.000		7913153.04		A	0.5
5	☐	1.000		7782315.54		A	1.2
6	☐	1.000		7634874.22		A	6.0
7	☐	1.000		7791482.03		A	3.1
8	☐	1.000		7657266.92		A	0.6
9	☐	1.000		7630083.50		A	0.8

103 Rh (ISTD) [He]

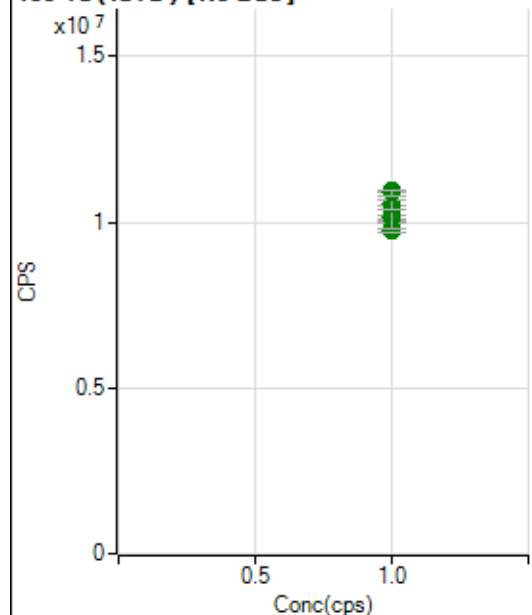
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2300193.52		A	0.9
2	☐	1.000					
3	☐	1.000		2363254.58		A	0.5
4	☐	1.000		2298844.24		A	1.4
5	☐	1.000		2279135.12		A	0.6
6	☐	1.000		2305849.90		A	1.1
7	☐	1.000		2190588.56		A	0.4
8	☐	1.000		2123764.64		A	1.7
9	☐	1.000		2184330.54		A	0.7

115 In (ISTD) [No Gas]

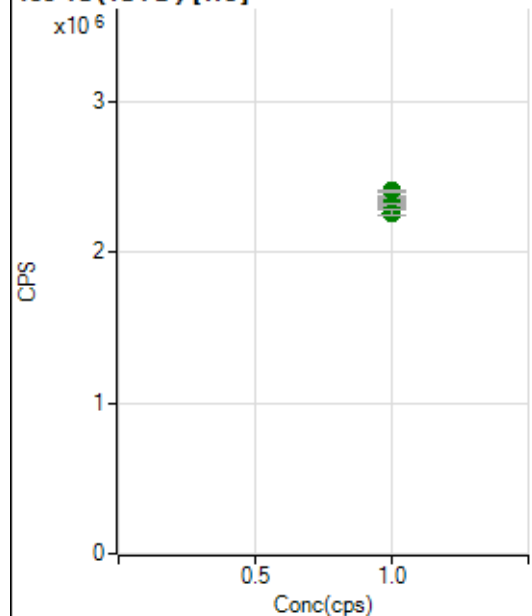
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7961402.41		A	0.4
2	☐	1.000					
3	☐	1.000		8199774.69		A	0.4
4	☐	1.000		8288441.39		A	0.6
5	☐	1.000		8195080.82		A	0.8
6	☐	1.000		8103612.92		A	6.6
7	☐	1.000		8216209.00		A	2.1
8	☐	1.000		8179188.51		A	1.4
9	☐	1.000		8287998.13		A	0.4

115 In (ISTD) [He]

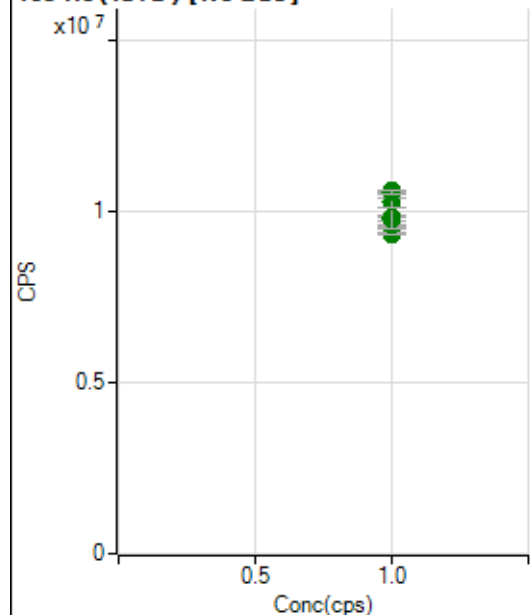
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		385215.40		P	1.6
2	☐	1.000					
3	☐	1.000		393999.32		P	0.2
4	☐	1.000		385809.49		P	1.6
5	☐	1.000		382360.69		P	0.5
6	☐	1.000		382200.56		P	0.9
7	☐	1.000		361636.37		P	1.7
8	☐	1.000		342888.29		P	1.7
9	☐	1.000		375931.92		P	0.4

159 Tb (ISTD) [No Gas]

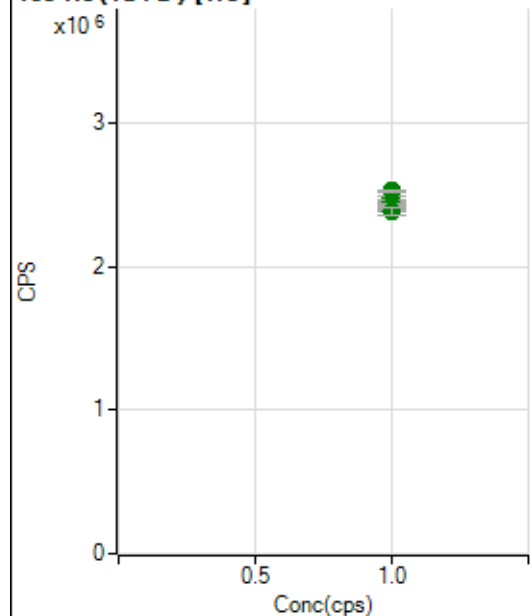
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9739317.01		A	1.0
2	☐	1.000					
3	☐	1.000		9999204.30		A	0.4
4	☐	1.000		10194914.22		A	0.3
5	☐	1.000		10141521.44		A	1.3
6	☐	1.000		10136039.64		A	6.7
7	☐	1.000		10546684.70		A	2.7
8	☐	1.000		10943333.31		A	0.5
9	☐	1.000		10886585.53		A	1.3

159 Tb (ISTD) [He]

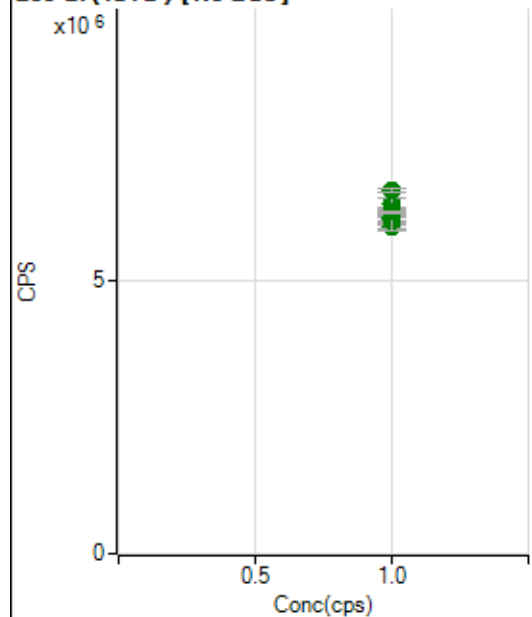
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2318944.69		A	1.9
2	☐	1.000					
3	☐	1.000		2363764.62		A	0.4
4	☐	1.000		2329516.46		A	1.3
5	☐	1.000		2336521.44		A	0.6
6	☐	1.000		2365824.41		A	0.3
7	☐	1.000		2310262.83		A	0.7
8	☐	1.000		2262319.86		A	1.6
9	☐	1.000		2405778.94		A	0.3

165 Ho (ISTD) [No Gas]

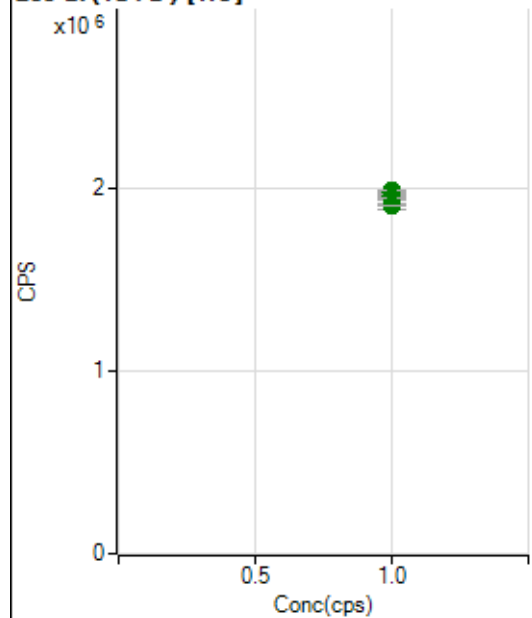
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9341914.88		A	0.8
2	☐	1.000					
3	☐	1.000		9573030.34		A	0.3
4	☐	1.000		9833340.24		A	0.6
5	☐	1.000		9781303.43		A	1.5
6	☐	1.000		9794684.59		A	6.7
7	☐	1.000		10246833.65		A	2.3
8	☐	1.000		10589584.00		A	0.7
9	☐	1.000		10553274.37		A	0.7

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2400143.59		A	1.8
2	☐	1.000					
3	☐	1.000		2476393.66		A	0.6
4	☐	1.000		2422823.44		A	2.1
5	☐	1.000		2436611.01		A	0.5
6	☐	1.000		2450008.42		A	0.9
7	☐	1.000		2428226.68		A	0.5
8	☐	1.000		2380005.61		A	2.6
9	☐	1.000		2524586.98		A	0.8

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5967199.84		A	1.2
2	☐	1.000					
3	☐	1.000		6064485.19		A	0.3
4	☐	1.000		6184617.55		A	0.6
5	☐	1.000		6147790.33		A	1.7
6	☐	1.000		6099341.51		A	6.8
7	☐	1.000		6411888.59		A	2.7
8	☐	1.000		6631679.28		A	1.2
9	☐	1.000		6243925.18		A	0.8

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1939017.96		A	1.8
2	☐	1.000					
3	☐	1.000		1988628.25		A	0.7
4	☐	1.000		1958280.62		A	1.2
5	☐	1.000		1947001.69		A	0.5
6	☐	1.000		1979867.16		A	1.1
7	☐	1.000		1948419.66		A	0.1
8	☐	1.000		1904393.93		A	1.5
9	☐	1.000		1907953.46		A	0.4

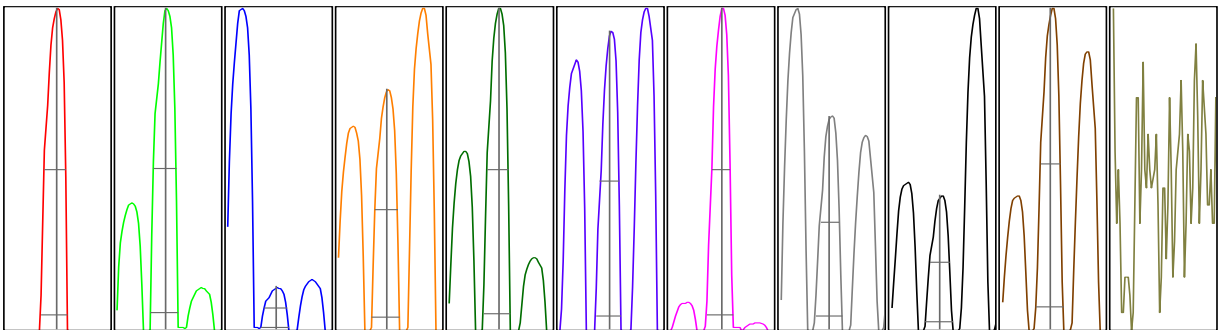
US EPA Tune Check Sample Report

Batch Folder D:\P8070818-MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	5807	1.03	5.00	
24	97051	1.37	5.00	
25	12947	1.26	5.00	
26	15165	1.32	5.00	
59	59919	0.37	5.00	
113	7905	1.64	5.00	
115	98491	2.78	5.00	
206	21305	2.25	5.00	
207	19330	2.03	5.00	
208	46081	1.89	5.00	
220	1	14.17		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	5742	5838	5755	5886	5814
24	96179	97184	96561	99286	96046
25	12798	13067	12979	13131	12760
26	15038	15272	15214	15405	14894
59	59815	59736	60064	60237	59744
113	8060	7710	7879	7906	7969
115	102535	95197	96977	98636	99109
206	21735	20780	21604	20787	21621
207	19705	18965	19532	18852	19597
208	46981	45419	46368	44930	46706
220	1	1	1	1	1

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	10061	9.00	8.9 - 9.1		0.772	0.900	
24	161498	23.95	23.9 - 24.1		0.785	0.900	
25	21581	24.95	24.9 - 25.1		0.786	0.900	
26	25515	25.95	25.9 - 26.1		0.784	0.900	
59	104798	59.00	58.9 - 59.1		0.776	0.900	
113	15076	113.00	112.9 - 113.1		0.727	0.900	
115	185629	115.05	114.9 - 115.1		0.765	0.900	
206	38869	205.95	205.9 - 206.1		0.776	0.900	
207	35433	206.95	206.9 - 207.1		0.770	0.900	
208	84913	207.95	207.9 - 208.1		0.775	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
Plasma Mode		HMI	Aerosol Dilution		HMI-8			

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	9.0	V	Deflect	14.2	V
Extract 2	-205.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-90	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
He Flow	0.0	mL/min	OctP RF	180	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	7978	0.34	
89	7959	0.37	
205	11484	0.50	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	8020	7972	7988	7950	7962
89	7987	7961	7980	7912	7952
205	11494	11571	11469	11411	11476

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Plasma Mode		HMI	Aerosol Dilution		HMI-8			

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	9.0	V	Deflect	2.0	V
Extract 2	-205.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-90	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
He Flow	5.0	mL/min	OctP RF	200	V			