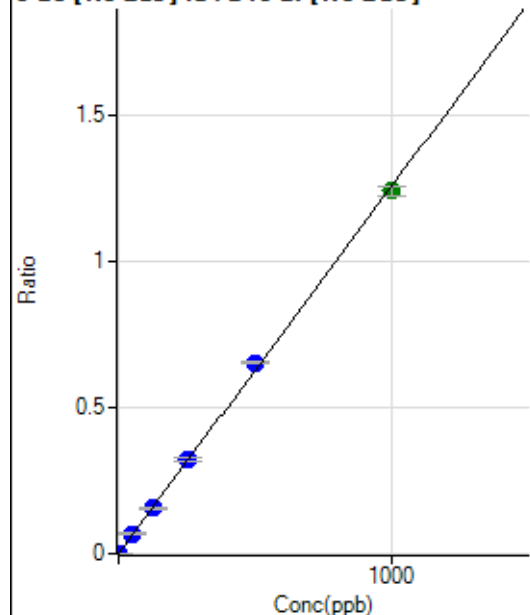


Batch Folder: D:\P8021219.b\
Analysis File: P8021219.batch.bin
DA Date-Time: 2019-02-12 19:23:37
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-02-12 15:55:08
2			
3	005CALS.d	S02	2019-02-12 16:02:54
4	006CALS.d	S03	2019-02-12 16:06:45
5	007CALS.d	S04	2019-02-12 16:10:34
6	008CALS.d	S05	2019-02-12 16:14:14
7	009CALS.d	S06	2019-02-12 16:17:51
8	010CALS.d	S07	2019-02-12 16:21:22
9	011CALS.d	S08	2019-02-12 16:24:46

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77.78	0.0001	P	28.8
2	☐	0.100					
3	☐	1.000	0.930	1724.58	0.0012	P	5.5
4	☐	50.000	54.489	93771.53	0.0685	P	8.4
5	☐	125.000	124.001	230375.12	0.1559	P	4.4
6	☐	250.000	255.607	459942.46	0.3213	P	4.5
7	☐	500.000	520.473	901568.92	0.6541	P	1.6
8	☐	1000.000	988.262	1778411.92	1.2420	A	2.5
9	☐			181.11	0.0001	P	25.2

$$y = 0.0013 * x + 5.7206E-005$$

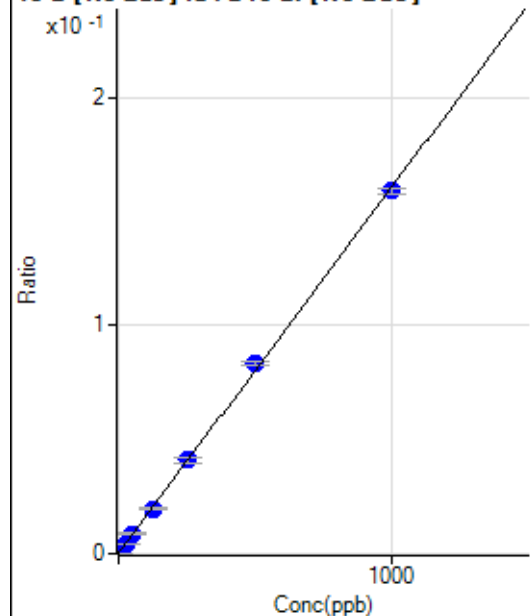
$$R = 0.9997$$

$$DL = 0.03931$$

$$BEC = 0.04552$$

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	297.24	0.0002	P	36.3
2	☐	2.500					
3	☐	25.000	23.756	5673.57	0.0040	P	4.2
4	☐	50.000	53.279	11974.96	0.0088	P	10.1
5	☐	125.000	121.728	29136.01	0.0197	P	6.2
6	☐	250.000	253.892	58545.69	0.0409	P	5.2
7	☐	500.000	517.348	114580.40	0.0831	P	2.0
8	☐	1000.000	990.629	227577.82	0.1589	P	1.9
9	☐			5879.23	0.0046	P	7.3

$$y = 1.6019E-004 * x + 2.2375E-004$$

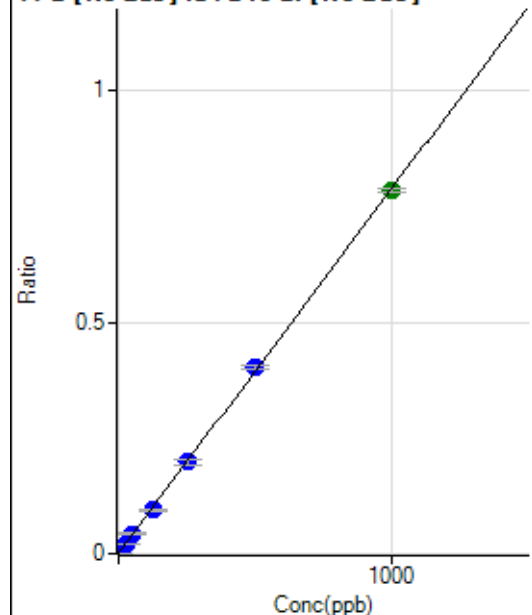
$$R = 0.9997$$

$$DL = 1.522$$

$$BEC = 1.397$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1361.24	0.0010	P	7.6
2	☐	2.500					
3	☐	25.000	23.327	27257.36	0.0194	P	4.4
4	☐	50.000	52.202	57608.15	0.0421	P	8.7
5	☐	125.000	119.468	140508.10	0.0951	P	4.5
6	☐	250.000	250.238	283425.93	0.1980	P	5.6
7	☐	500.000	511.939	556912.45	0.4041	P	1.9
8	☐	1000.000	994.594	1122955.27	0.7841	A	0.9
9	☐			28537.61	0.0221	P	6.4

$$y = 7.8733\text{E-}004 * x + 0.0010$$

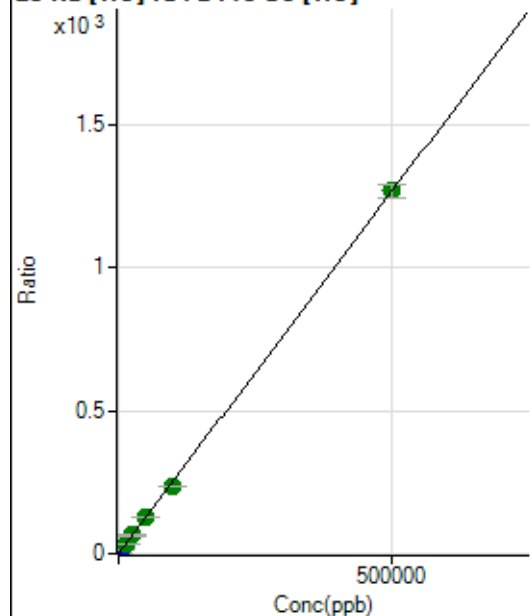
$$R = 0.9999$$

$$DL = 0.2925$$

$$BEC = 1.28$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	7277.20	0.1599	P	4.7
2	☐	50.000					
3	☐	500.000	478.083	61664.74	1.3668	P	2.6
4	☐	5000.000	4605.915	588148.60	11.7870	P	1.1
5	☐	12500.000	12867.117	1482406.72	32.6413	A	1.9
6	☐	25000.000	25351.351	2899534.31	64.1562	A	3.0
7	☐	50000.000	49772.831	5571934.19	125.8051	A	2.6
8	☐	100000.00	92217.599	11137304.33	232.9515	A	0.2
9	☐	500000.00	501556.41	59430788.83	1,266.274	A	3.5

$$y = 0.0025 * x + 0.1599$$

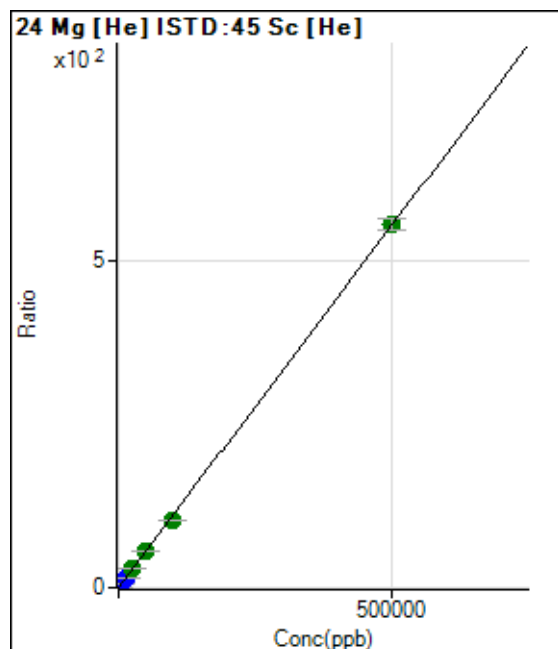
$$R = 0.9999$$

$$DL = 8.855$$

$$BEC = 63.36$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	244.46	0.0054	P	25.2
2	☐	50.000					
3	☐	500.000	493.407	24942.15	0.5527	P	1.3
4	☐	5000.000	4658.777	258118.93	5.1735	P	1.6
5	☐	12500.000	12661.406	638102.61	14.0509	P	2.0
6	☐	25000.000	26005.409	1304000.81	28.8537	A	3.2
7	☐	50000.000	50944.689	2503532.52	56.5194	A	1.8
8	☐	100000.00	92395.429	4900344.29	102.5015	A	0.8
9	☐	500000.00	501375.55	26105626.80	556.1915	A	3.3

$$y = 0.0011 * x + 0.0054$$

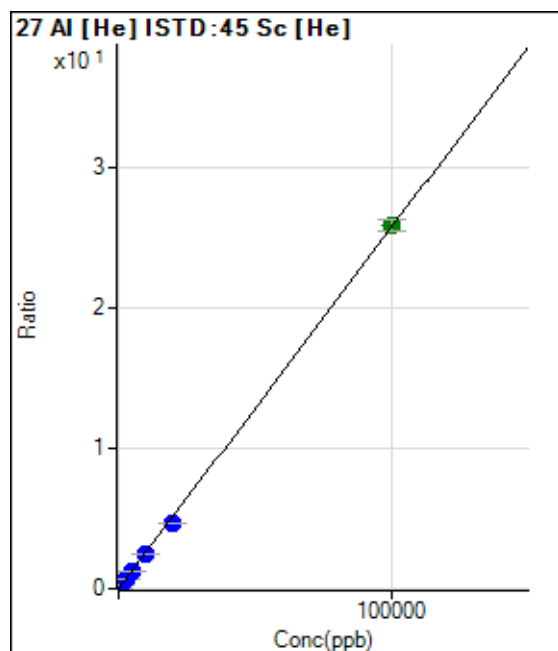
$$R = 0.9999$$

$$DL = 3.678$$

$$BEC = 4.859$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31.68	0.0007	P	44.3
2	☐	2.000					
3	☐	20.000	17.932	240.07	0.0053	P	11.4
4	☐	1000.000	909.338	11725.37	0.2351	P	3.6
5	☐	2500.000	2473.816	28986.82	0.6383	P	2.3
6	☐	5000.000	4897.988	57094.63	1.2631	P	2.1
7	☐	10000.000	9729.462	111115.06	2.5083	P	1.2
8	☐	20000.000	17999.919	221828.69	4.6398	P	0.4
9	☐	100000.00	100433.73	1214981.37	25.8857	A	3.2

$$y = 2.5773E-004 * x + 6.9836E-004$$

$$R = 0.9998$$

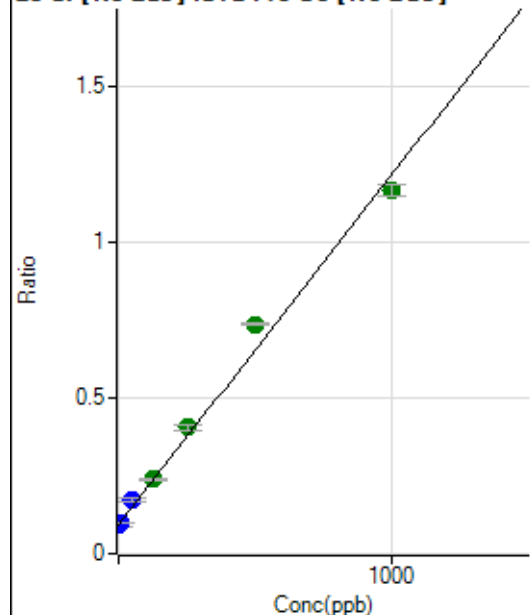
$$DL = 3.6$$

$$BEC = 2.71$$

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	396885.74	0.0933	P	11.0
2	☐	1.000					
3	☐	10.000	6.192	455961.79	0.1003	P	1.2
4	☐	50.000	71.335	741875.57	0.1732	P	9.4
5	☐	125.000	129.546	1110490.04	0.2384	A	3.8
6	☐	250.000	278.056	1801849.00	0.4047	A	5.5
7	☐	500.000	573.174	3153691.30	0.7353	A	0.4
8	☐	1000.000	954.802	5291672.95	1.1627	A	3.1
9	☐			945202.47	0.2281	P	7.4

$$y = 0.0011 * x + 0.0933$$

$$R = 0.9952$$

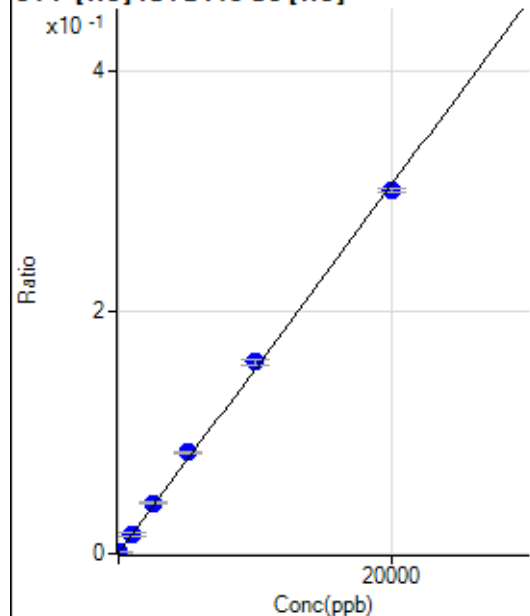
$$DL = 27.41$$

$$BEC = 83.32$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-26.281	11.11	0.0002	P	44.6
2	☐	0.000					
3	☐	0.000	26.281	47.22	0.0010	P	27.3
4	☐	1000.000	995.422	788.95	0.0158	P	12.2
5	☐	2500.000	2717.274	1911.32	0.0421	P	2.4
6	☐	5000.000	5446.137	3781.23	0.0837	P	2.9
7	☐	10000.000	10371.106	7029.82	0.1587	P	3.3
8	☐	20000.000	19675.982	14371.74	0.3006	P	1.2
9	☐			33.33	0.0007	P	47.0

$$y = 1.5243E-005 * x + 6.4577E-004$$

$$R = 0.9994$$

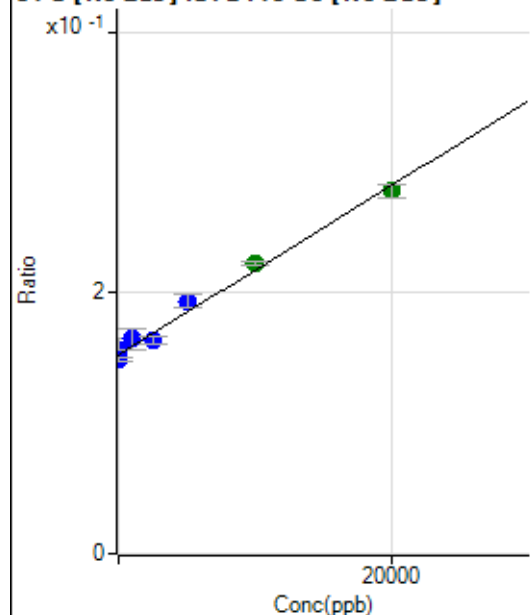
$$DL = 38.88$$

$$BEC = 42.36$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	587.231	664701.27	0.1563	P	11.0
2	☐	0.000					
3	☐	0.000	-587.231	676154.77	0.1487	P	1.8
4	☐	1000.000	1912.929	706113.24	0.1649	P	9.7
5	☐	2500.000	1654.748	760335.61	0.1632	P	3.5
6	☐	5000.000	6319.728	861608.33	0.1935	P	4.9
7	☐	10000.000	10780.333	954082.67	0.2224	A	0.9
8	☐	20000.000	19339.912	1265128.38	0.2780	A	3.4
9	☐			596096.40	0.1438	P	6.6

$$y = 6.4890\text{E-}006 * x + 0.1525$$

$$R = 0.9927$$

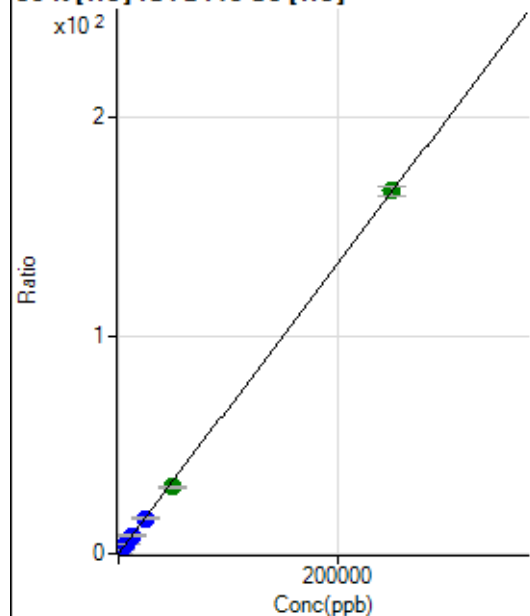
$$DL = 4600$$

$$BEC = 2.35\text{E}+04$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4567.59	0.1004	P	4.6
2	☐	50.000					
3	☐	500.000	469.243	18576.93	0.4116	P	1.2
4	☐	2500.000	2249.359	79429.77	1.5921	P	1.9
5	☐	6250.000	6123.125	188964.54	4.1609	P	1.9
6	☐	12500.000	12320.029	373792.87	8.2703	P	2.7
7	☐	25000.000	24382.553	720665.51	16.2695	P	1.8
8	☐	50000.000	45902.302	1460068.72	30.5401	A	0.9
9	☐	250000.00	250896.02	7815787.33	166.4797	A	2.4

$$y = 6.6314\text{E-}004 * x + 0.1004$$

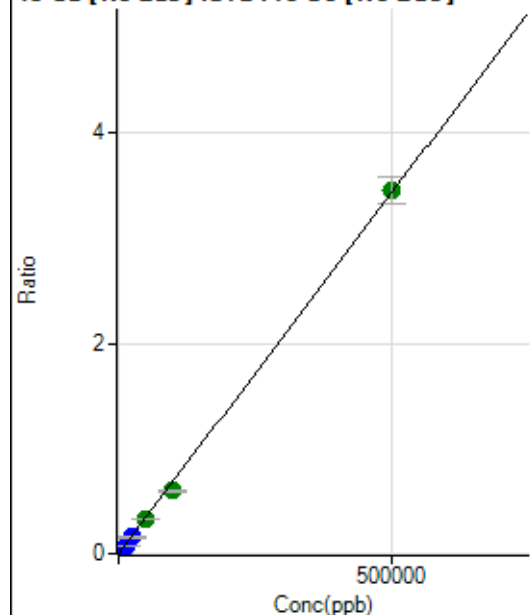
$$R = 0.9999$$

$$DL = 20.75$$

$$BEC = 151.5$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	492.24	0.0001	P	22.0
2	☐	50.000					
3	☐	500.000	420.208	13629.01	0.0030	P	3.0
4	☐	5000.000	4874.440	143598.68	0.0335	P	9.4
5	☐	12500.000	10937.049	349803.54	0.0751	P	2.9
6	☐	25000.000	23060.328	704283.09	0.1582	P	5.2
7	☐	50000.000	47222.559	1388902.13	0.3238	A	0.0
8	☐	100000.00	87688.420	2736264.37	0.6012	A	2.8
9	☐	500000.00	502877.45	14283630.48	3.4471	A	7.3

$$y = 6.8545\text{E-}006 * x + 1.1663\text{E-}004$$

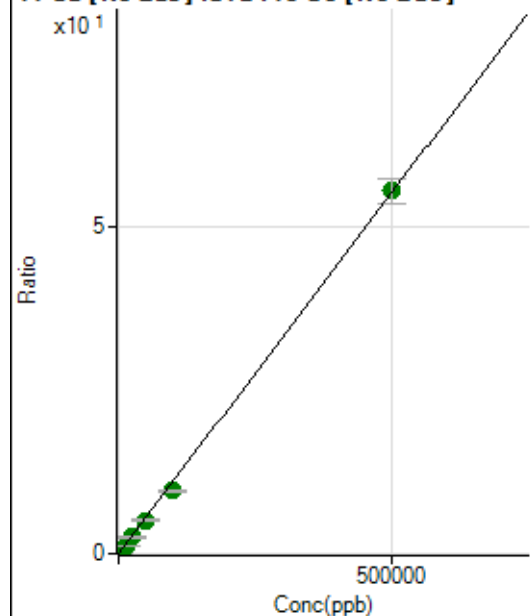
$$R = 0.9997$$

$$DL = 11.22$$

$$BEC = 17.02$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31720.47	0.0075	P	10.4
2	☐	50.000					
3	☐	500.000	414.823	242538.57	0.0533	P	1.9
4	☐	5000.000	4947.245	2376106.34	0.5546	A	8.8
5	☐	12500.000	10898.636	5649616.17	1.2128	A	3.4
6	☐	25000.000	22716.909	11220654.97	2.5198	A	4.9
7	☐	50000.000	46463.749	22072522.73	5.1461	A	0.9
8	☐	100000.00	86781.466	43711399.91	9.6051	A	3.7
9	☐	500000.00	503152.13	230616078.7	55.6538	A	7.2

$$y = 1.1060\text{E-}004 * x + 0.0075$$

$$R = 0.9996$$

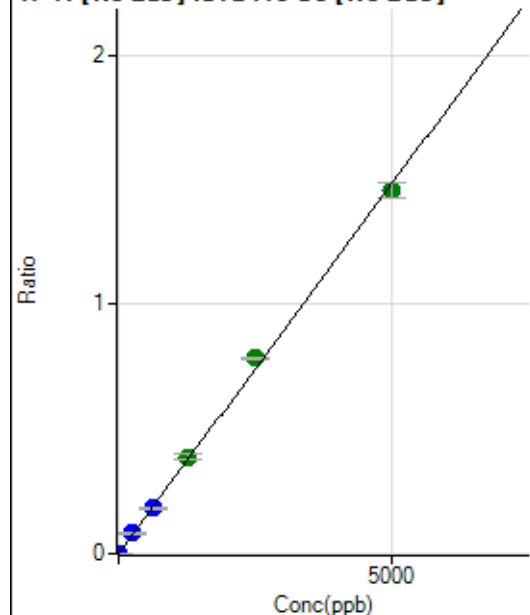
$$DL = 21$$

$$BEC = 67.41$$

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	194.46	0.0000	P	20.9
2	☐	0.500					
3	☐	5.000	5.079	7057.70	0.0016	P	5.3
4	☐	250.000	274.443	348855.02	0.0814	P	9.3
5	☐	625.000	620.568	857644.76	0.1841	P	3.4
6	☐	1250.000	1306.297	1725140.94	0.3875	A	5.5
7	☐	2500.000	2649.873	3371185.49	0.7860	A	1.1
8	☐	5000.000	4910.321	6627705.53	1.4564	A	4.1
9	☐			1225.11	0.0003	P	4.3

$$y = 2.9660\text{E-}004 * x + 4.5981\text{E-}005$$

$$R = 0.9992$$

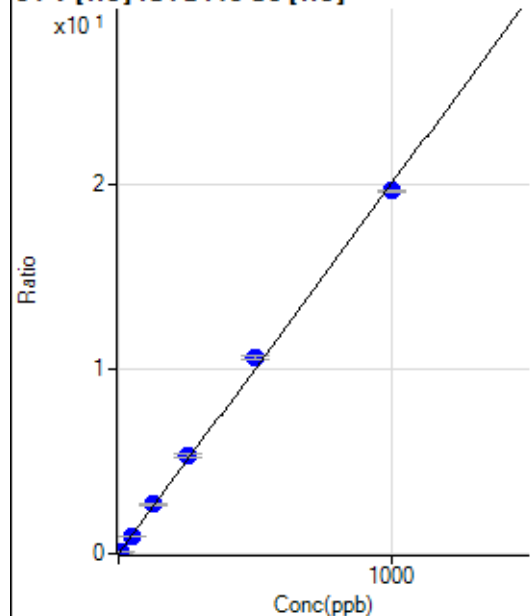
$$DL = 0.09726$$

$$BEC = 0.155$$

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	7.78	0.0002	P	48.9
2	☐	0.500					
3	☐	5.000	5.294	4794.23	0.1062	P	1.3
4	☐	50.000	48.554	48546.22	0.9729	P	0.7
5	☐	125.000	132.676	120723.55	2.6582	P	1.6
6	☐	250.000	266.059	240907.56	5.3304	P	2.9
7	☐	500.000	528.294	468825.14	10.5840	P	1.8
8	☐	1000.000	980.950	939557.97	19.6525	P	0.5
9	☐			145.56	0.0031	P	3.7

$$y = 0.0200 * x + 1.7039\text{E-}004$$

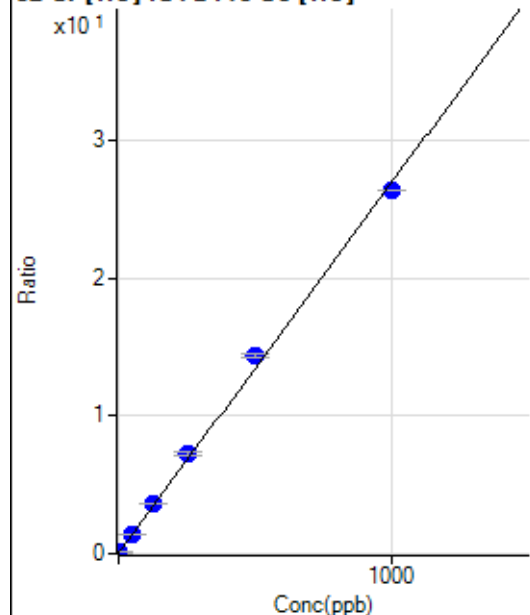
$$R = 0.9992$$

$$DL = 0.01248$$

$$BEC = 0.008505$$

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	1095.62	0.0241	P	6.2
2	☐	0.200					
3	☐	2.000	1.971	3474.94	0.0771	P	6.5
4	☐	50.000	48.818	66664.48	1.3360	P	0.7
5	☐	125.000	134.064	164699.08	3.6269	P	2.6
6	☐	250.000	268.576	327305.27	7.2418	P	2.8
7	☐	500.000	531.750	634044.49	14.3143	P	1.9
8	☐	1000.000	978.407	1258243.63	26.3177	P	0.1
9	☐			9879.18	0.2105	P	3.4

$$y = 0.0269 * x + 0.0241$$

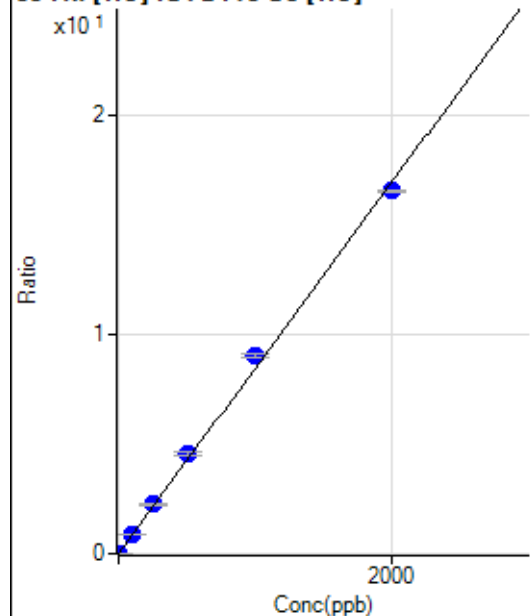
$$R = 0.9990$$

$$DL = 0.1675$$

$$BEC = 0.8972$$

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	27.78	0.0006	P	7.8
2	☐	0.100					
3	☐	1.000	1.144	464.46	0.0103	P	2.9
4	☐	100.000	99.324	41946.32	0.8406	P	0.7
5	☐	250.000	266.763	102485.66	2.2567	P	2.1
6	☐	500.000	538.285	205772.21	4.5531	P	3.1
7	☐	1000.000	1064.192	398689.49	9.0010	P	2.0
8	☐	2000.000	1956.271	791030.43	16.5457	P	0.7
9	☐			3143.74	0.0670	P	1.9

$$y = 0.0085 * x + 6.1119E-004$$

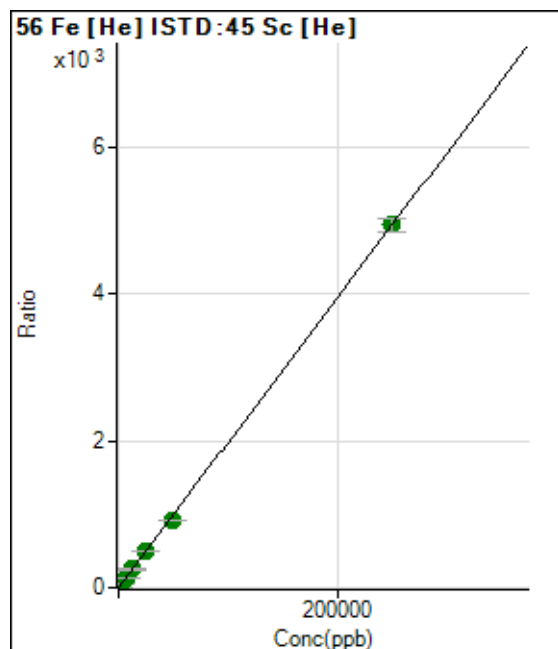
$$R = 0.9990$$

$$DL = 0.01688$$

$$BEC = 0.07227$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1557.54	0.0343	P	5.2
2	☐	5.000					
3	☐	50.000	54.074	49696.30	1.1017	P	3.4
4	☐	2500.000	2385.523	2351114.66	47.1232	A	1.7
5	☐	6250.000	6424.525	5760932.77	126.8510	A	1.7
6	☐	12500.000	12730.378	11358734.63	251.3253	A	2.9
7	☐	25000.000	25292.790	22116028.73	499.3008	A	2.0
8	☐	50000.000	46378.089	43768372.74	915.5137	A	1.0
9	☐	250000.00	250680.36	232244834.8	4,948.334	A	3.5

$$y = 0.0197 * x + 0.0343$$

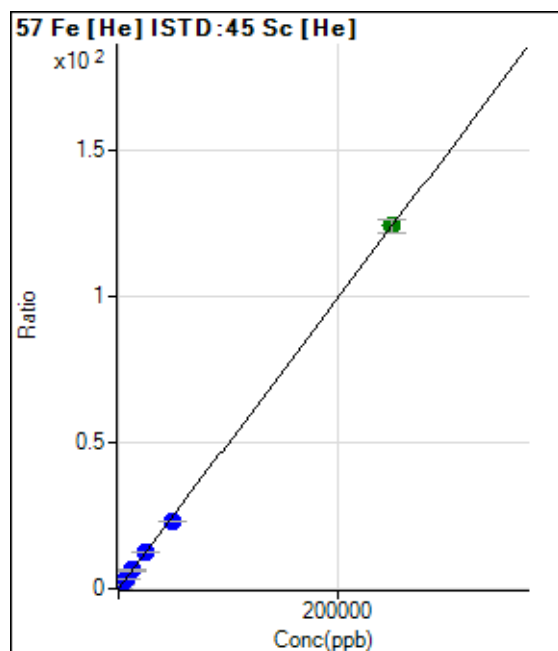
$$R = 0.9999$$

$$DL = 0.2702$$

$$BEC = 1.735$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.70	0.0012	P	25.4
2	☐	5.000					
3	☐	50.000	56.775	1320.48	0.0293	P	7.4
4	☐	2500.000	2362.008	58413.58	1.1707	P	1.6
5	☐	6250.000	6443.180	144921.36	3.1916	P	3.1
6	☐	12500.000	12794.014	286319.17	6.3362	P	3.8
7	☐	25000.000	25287.578	554673.07	12.5225	P	2.0
8	☐	50000.000	46670.607	1104914.39	23.1104	P	0.7
9	☐	250000.00	250618.96	5824106.67	124.0965	A	3.6

$$y = 4.9516E-004 * x + 0.0012$$

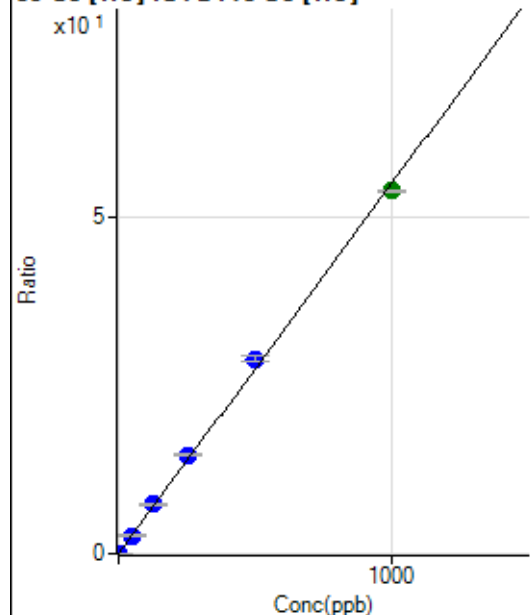
$$R = 0.9999$$

$$DL = 1.822$$

$$BEC = 2.392$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	127.78	0.0028	P	5.6
2	☐	0.100					
3	☐	1.000	1.052	2741.43	0.0608	P	3.1
4	☐	50.000	49.223	135365.82	2.7133	P	2.0
5	☐	125.000	133.663	334378.05	7.3629	P	2.0
6	☐	250.000	267.244	665208.44	14.7186	P	2.9
7	☐	500.000	527.428	1286520.61	29.0455	P	2.1
8	☐	1000.000	980.931	2582503.55	54.0175	A	0.5
9	☐			31126.06	0.6632	P	3.9

$$y = 0.0551 * x + 0.0028$$

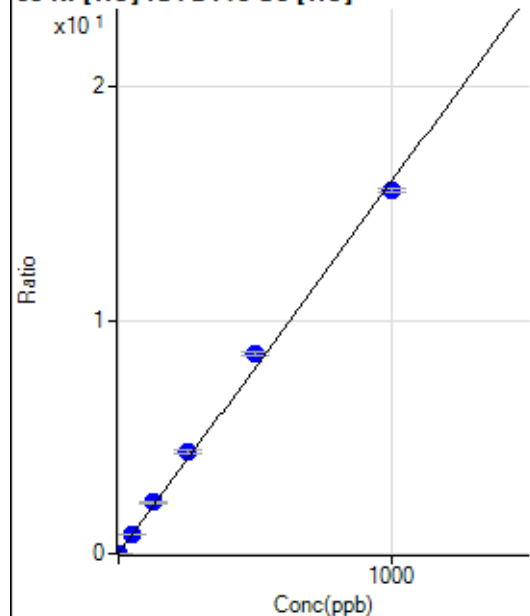
$$R = 0.9992$$

$$DL = 0.008602$$

$$BEC = 0.05106$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	50.00	0.0011	P	33.3
2	☐	0.100					
3	☐	1.000	1.122	856.71	0.0190	P	8.1
4	☐	50.000	50.459	40148.96	0.8047	P	1.9
5	☐	125.000	137.110	99215.79	2.1847	P	2.0
6	☐	250.000	273.487	196896.42	4.3567	P	3.1
7	☐	500.000	535.268	377647.70	8.5259	P	2.0
8	☐	1000.000	974.958	742357.18	15.5285	P	1.0
9	☐			9387.75	0.2000	P	3.5

$$y = 0.0159 * x + 0.0011$$

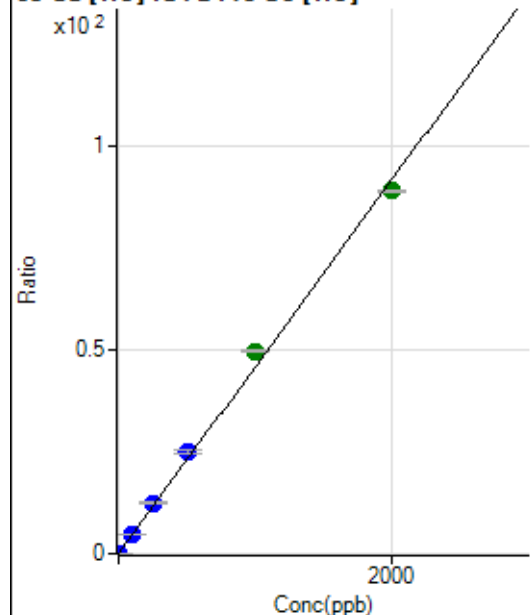
$$R = 0.9987$$

$$DL = 0.06861$$

$$BEC = 0.06875$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	572.25	0.0126	P	8.4
2	☐	0.200					
3	☐	2.000	2.137	4984.31	0.1105	P	3.2
4	☐	100.000	100.290	229920.05	4.6083	P	1.6
5	☐	250.000	272.672	567994.90	12.5075	P	2.2
6	☐	500.000	543.682	1126555.78	24.9263	P	2.9
7	☐	1000.000	1085.972	2204853.12	49.7762	A	1.8
8	☐	2000.000	1943.245	4257705.28	89.0600	A	0.9
9	☐			6085.89	0.1297	P	3.5

$$y = 0.0458 * x + 0.0126$$

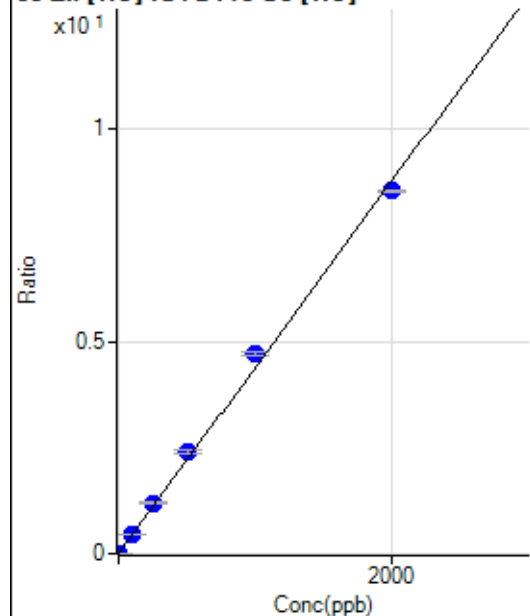
$$R = 0.9983$$

$$DL = 0.06937$$

$$BEC = 0.2746$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	65.55	0.0014	P	34.1
2	☐	0.200					
3	☐	2.000	2.413	542.24	0.0120	P	11.1
4	☐	100.000	101.371	22261.44	0.4462	P	1.7
5	☐	250.000	270.543	53964.63	1.1884	P	2.9
6	☐	500.000	548.162	108756.18	2.4065	P	3.2
7	☐	1000.000	1072.488	208491.67	4.7069	P	1.9
8	☐	2000.000	1949.079	408895.93	8.5529	P	0.6
9	☐			2114.64	0.0451	P	4.5

$$y = 0.0044 * x + 0.0014$$

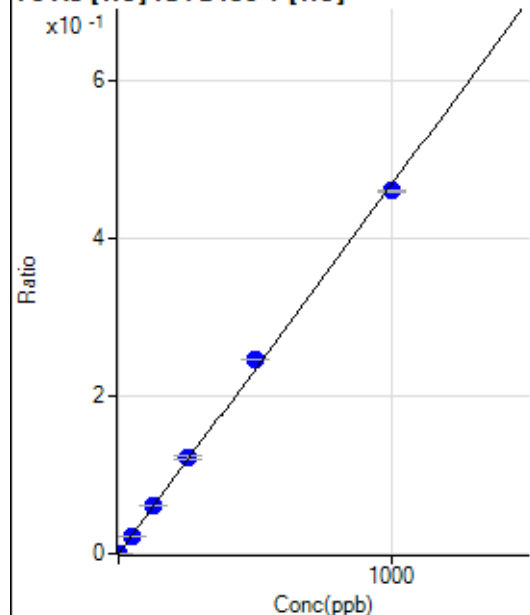
$$R = 0.9986$$

$$DL = 0.3346$$

$$BEC = 0.3274$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	4.32	0.0000	P	48.8
2	☐	0.100					
3	☐	1.000	1.010	144.45	0.0005	P	10.1
4	☐	50.000	47.944	7267.41	0.0224	P	3.1
5	☐	125.000	130.130	18145.94	0.0608	P	2.0
6	☐	250.000	259.353	36196.72	0.1212	P	3.6
7	☐	500.000	527.164	69901.52	0.2463	P	0.4
8	☐	1000.000	983.541	139657.23	0.4595	P	0.8
9	☐			230.87	0.0008	P	6.6

$$y = 4.6720\text{E-}004 * x + 1.4352\text{E-}005$$

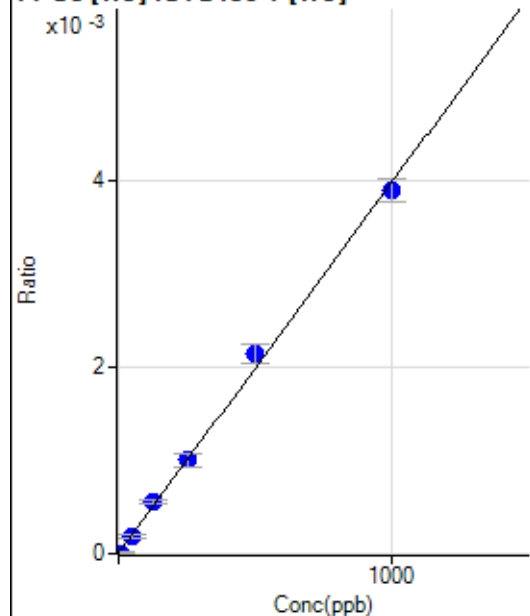
$$R = 0.9994$$

$$DL = 0.04499$$

$$BEC = 0.03072$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	0.500					
3	☐	5.000	0.957	2.22	0.0000	P	86.6
4	☐	50.000	46.547	61.11	0.0002	P	17.6
5	☐	125.000	139.988	166.67	0.0006	P	5.7
6	☐	250.000	251.233	297.79	0.0010	P	15.9
7	☐	500.000	539.573	607.80	0.0021	P	10.1
8	☐	1000.000	978.225	1180.07	0.0039	P	6.3
9	☐			2.22	0.0000	P	173.

$$y = 3.9643\text{E-}006 * x + 3.6281\text{E-}006$$

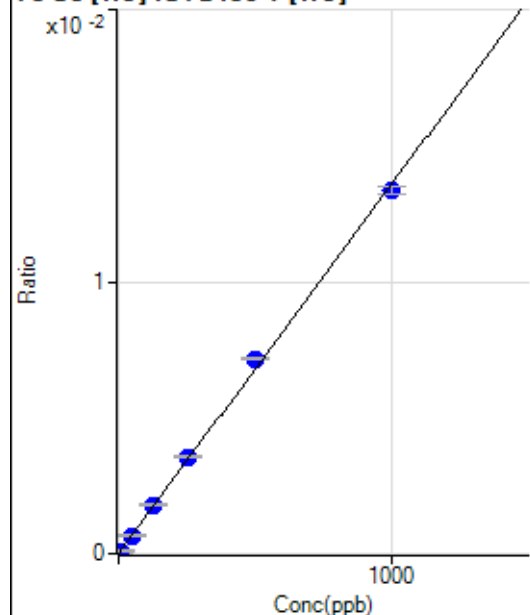
$$R = 0.9986$$

$$DL = 4.755$$

$$BEC = 0.9152$$

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	2.47	0.0000	P	115.
2	☐	0.500					
3	☐	5.000	6.000	26.55	0.0001	P	36.6
4	☐	50.000	48.351	215.44	0.0007	P	3.5
5	☐	125.000	131.289	533.96	0.0018	P	4.0
6	☐	250.000	262.259	1066.10	0.0036	P	1.0
7	☐	500.000	527.534	2034.12	0.0072	P	1.7
8	☐	1000.000	982.460	4053.72	0.0133	P	2.3
9	☐			6.17	0.0000	P	33.1

$$y = 1.3570\text{E-}005 * x + 8.2927\text{E-}006$$

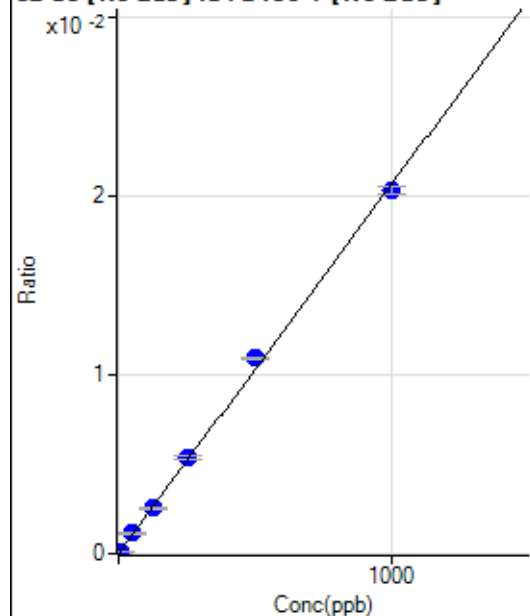
$$R = 0.9993$$

$$DL = 2.126$$

$$BEC = 0.6111$$

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	48.71	0.0000	P	266.
2	☐	0.500					
3	☐	5.000	5.175	810.84	0.0001	P	8.2
4	☐	50.000	55.682	7813.70	0.0012	P	9.9
5	☐	125.000	123.460	18801.85	0.0026	P	3.4
6	☐	250.000	259.899	37944.97	0.0054	P	5.0
7	☐	500.000	529.268	73910.02	0.0109	P	1.2
8	☐	1000.000	982.799	146344.19	0.0203	P	2.0
9	☐			15.66	0.0000	P	307.

$$y = 2.0670\text{E-}005 * x + 7.5629\text{E-}006$$

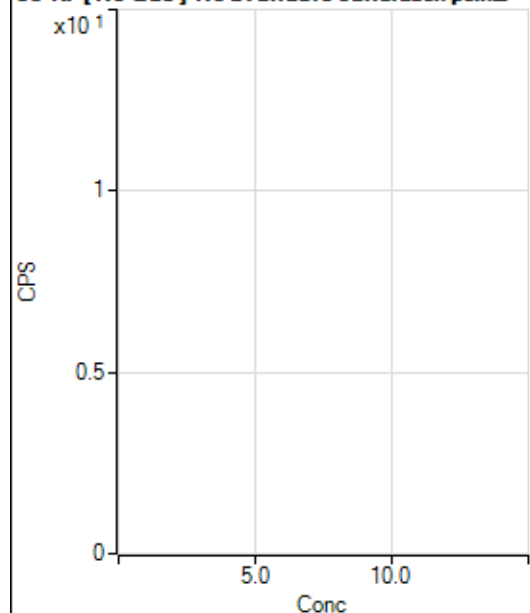
$$R = 0.9993$$

$$DL = 2.93$$

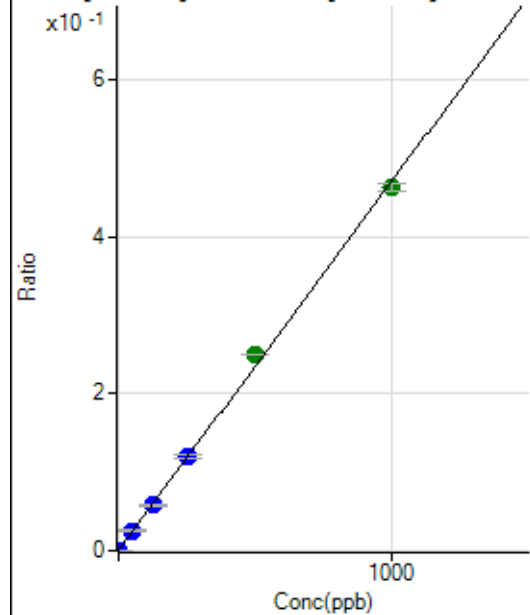
$$BEC = 0.3659$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1564.56		P	5.9
2	☐						
3	☐			1607.90		P	5.2
4	☐			1554.56		P	4.0
5	☐			1673.47		P	1.3
6	☐			1521.22		P	2.0
7	☐			1589.01		P	4.2
8	☐			1696.80		P	4.6
9	☐			1619.01		P	3.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2480.89	0.0004	P	7.8
2	☐	0.100					
3	☐	1.000	0.794	5281.85	0.0007	P	7.0
4	☐	50.000	53.703	172549.38	0.0256	P	9.7
5	☐	125.000	122.720	425859.48	0.0580	P	3.6
6	☐	250.000	255.001	846937.34	0.1201	P	4.8
7	☐	500.000	531.357	1686530.60	0.2498	A	0.6
8	☐	1000.000	983.171	3325838.79	0.4619	A	2.2
9	☐			14246.97	0.0022	P	6.9

$$y = 4.6938\text{E-}004 * x + 3.7356\text{E-}004$$

$$R = 0.9992$$

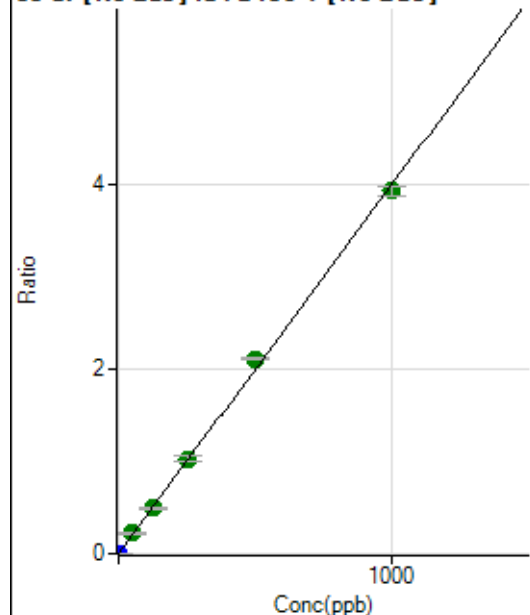
$$DL = 0.1852$$

$$BEC = 0.7959$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	163.90	0.0000	P	11.8
2	☐	0.100					
3	☐	1.000	0.824	23490.46	0.0033	P	1.8
4	☐	50.000	55.182	1488317.83	0.2205	A	8.9
5	☐	125.000	123.619	3628026.56	0.4940	A	4.5
6	☐	250.000	256.956	7243006.24	1.0268	A	5.0
7	☐	500.000	528.277	14252958.48	2.1111	A	0.8
8	☐	1000.000	984.036	28316679.45	3.9323	A	2.3
9	☐			106138.58	0.0165	P	7.1

$$y = 0.0040 * x + 2.4591E-005$$

$$R = 0.9994$$

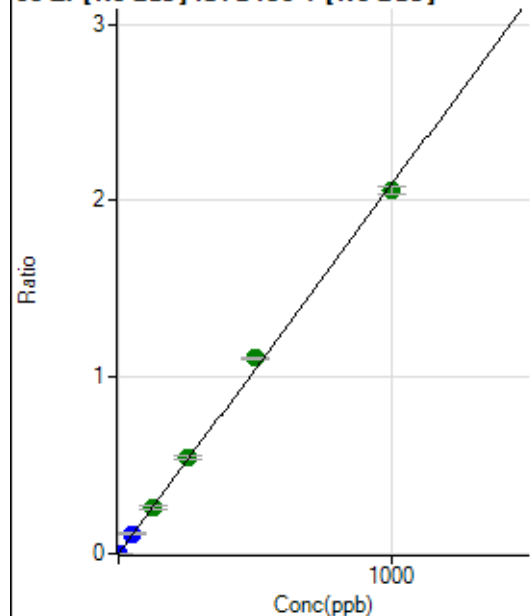
$$DL = 0.00218$$

$$BEC = 0.006154$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	527.81	0.0001	P	15.7
2	☐	0.100					
3	☐	1.000	0.905	13966.13	0.0020	P	3.5
4	☐	50.000	54.196	765092.57	0.1134	P	9.2
5	☐	125.000	125.198	1922675.43	0.2618	A	5.2
6	☐	250.000	258.921	3819227.78	0.5414	A	4.8
7	☐	500.000	529.079	7468681.24	1.1063	A	1.2
8	☐	1000.000	982.996	14801085.75	2.0553	A	2.1
9	☐			3567.32	0.0006	P	8.4

$$y = 0.0021 * x + 7.9510E-005$$

$$R = 0.9993$$

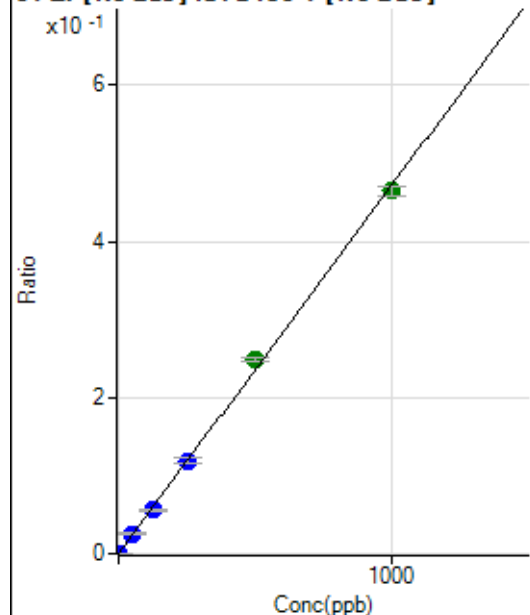
$$DL = 0.01787$$

$$BEC = 0.03803$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	125.01	0.0000	P	30.1
2	☐	0.100					
3	☐	1.000	0.923	3217.20	0.0005	P	3.5
4	☐	50.000	52.961	168753.75	0.0250	P	8.2
5	☐	125.000	119.991	415762.41	0.0566	P	4.3
6	☐	250.000	253.051	841970.36	0.1194	P	4.9
7	☐	500.000	528.124	1681683.74	0.2491	A	1.4
8	☐	1000.000	985.654	3347590.44	0.4649	A	2.5
9	☐			900.08	0.0001	P	13.9

$$y = 4.7163\text{E-}004 * x + 1.8650\text{E-}005$$

$$R = 0.9994$$

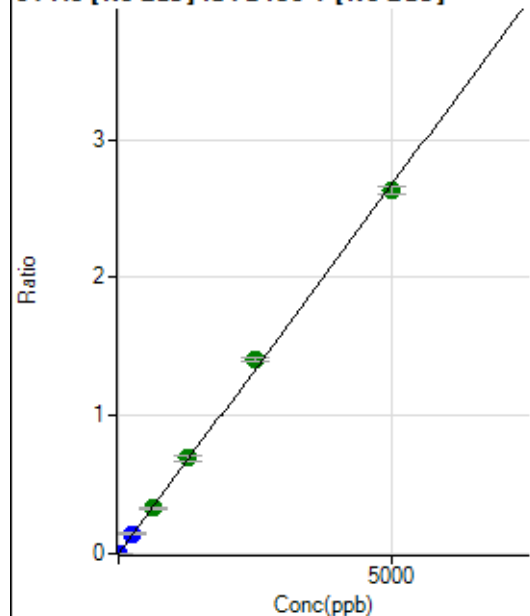
$$DL = 0.03566$$

$$BEC = 0.03954$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	252.79	0.0000	P	12.9
2	☐	0.500					
3	☐	5.000	4.610	17709.46	0.0025	P	0.8
4	☐	250.000	272.928	983881.39	0.1458	P	9.2
5	☐	625.000	621.916	2439870.19	0.3322	A	4.5
6	☐	1250.000	1291.735	4866905.10	0.6900	A	5.0
7	☐	2500.000	2636.408	9506977.38	1.4082	A	1.3
8	☐	5000.000	4920.601	18926394.00	2.6283	A	2.2
9	☐			6854.81	0.0011	P	5.5

$$y = 5.3413\text{E-}004 * x + 3.7707\text{E-}005$$

$$R = 0.9994$$

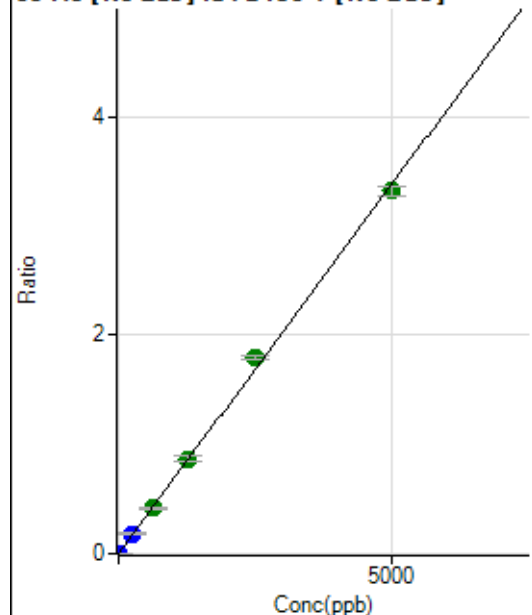
$$DL = 0.02738$$

$$BEC = 0.07059$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	127.79	0.0000	P	38.7
2	☐	0.500					
3	☐	5.000	4.664	22469.49	0.0032	P	1.0
4	☐	250.000	271.696	1238881.69	0.1836	P	9.3
5	☐	625.000	621.926	3086142.80	0.4203	A	5.1
6	☐	1250.000	1284.985	6123962.38	0.8683	A	5.5
7	☐	2500.000	2651.704	12096626.75	1.7919	A	2.0
8	☐	5000.000	4914.702	23914298.97	3.3211	A	2.9
9	☐			9626.07	0.0015	P	9.7

$$y = 6.7575E-004 * x + 1.9655E-005$$

$$R = 0.9993$$

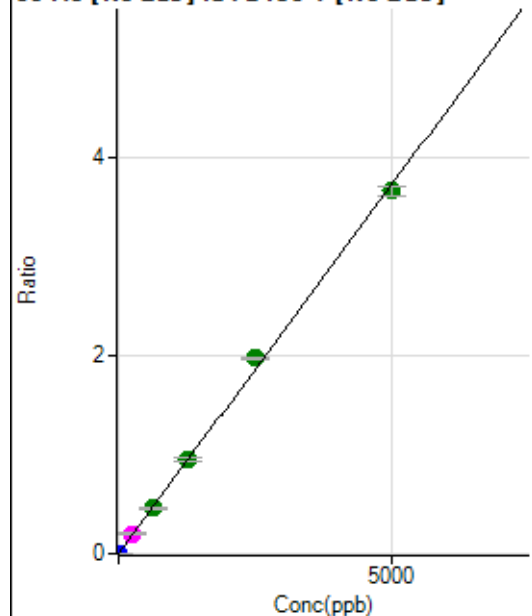
$$DL = 0.03379$$

$$BEC = 0.02909$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	191.68	0.0000	P	14.0
2	☐	0.500					
3	☐	5.000	4.771	25408.07	0.0036	P	2.7
4	☐	250.000	271.673	1367957.95	0.2027	M	8.9
5	☐	625.000	618.823	3391342.61	0.4617	A	3.6
6	☐	1250.000	1277.005	6719931.05	0.9527	A	5.0
7	☐	2500.000	2647.582	13335244.66	1.9752	A	1.2
8	☐	5000.000	4919.147	26425413.44	3.6698	A	2.8
9	☐			13182.01	0.0020	P	7.6

$$y = 7.4602E-004 * x + 2.8625E-005$$

$$R = 0.9993$$

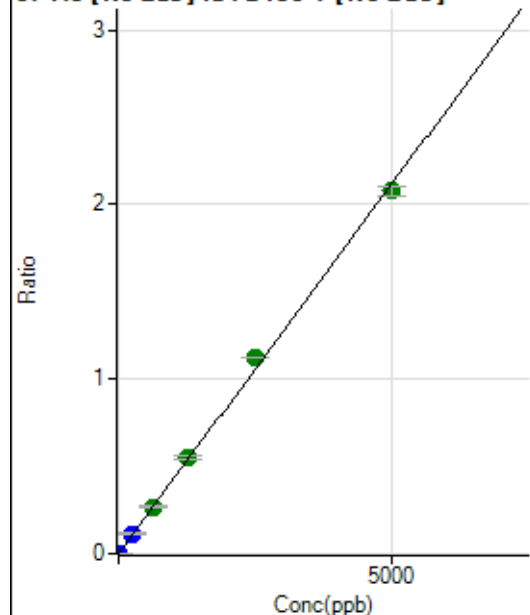
$$DL = 0.01608$$

$$BEC = 0.03837$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	166.68	0.0000	P	20.5
2	☐	0.500					
3	☐	5.000	4.606	13985.58	0.0020	P	2.2
4	☐	250.000	272.053	777050.70	0.1152	P	9.2
5	☐	625.000	626.965	1948808.81	0.2654	A	4.3
6	☐	1250.000	1295.585	3867619.36	0.5483	A	4.8
7	☐	2500.000	2652.003	7577420.66	1.1223	A	0.7
8	☐	5000.000	4911.254	14966200.68	2.0784	A	2.9
9	☐			6210.03	0.0010	P	10.3

$$y = 4.2319\text{E-}004 * x + 2.5311\text{E-}005$$

$$R = 0.9993$$

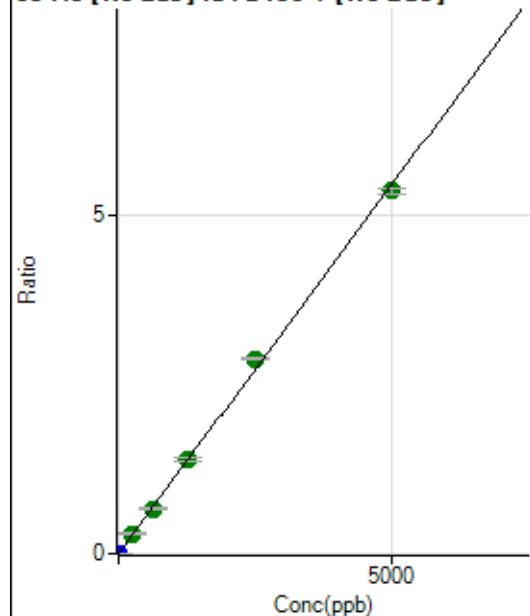
$$DL = 0.03682$$

$$BEC = 0.05981$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.56	0.0000	P	8.2
2	☐	0.500					
3	☐	5.000	4.640	35912.64	0.0051	P	5.1
4	☐	250.000	272.676	2000568.36	0.2965	A	9.3
5	☐	625.000	611.781	4886047.12	0.6652	A	3.9
6	☐	1250.000	1282.101	9834299.96	1.3941	A	4.6
7	☐	2500.000	2644.785	19414825.95	2.8757	A	1.1
8	☐	5000.000	4920.101	38525091.49	5.3497	A	1.8
9	☐			14894.89	0.0023	P	8.7

$$y = 0.0011 * x + 2.7199\text{E-}005$$

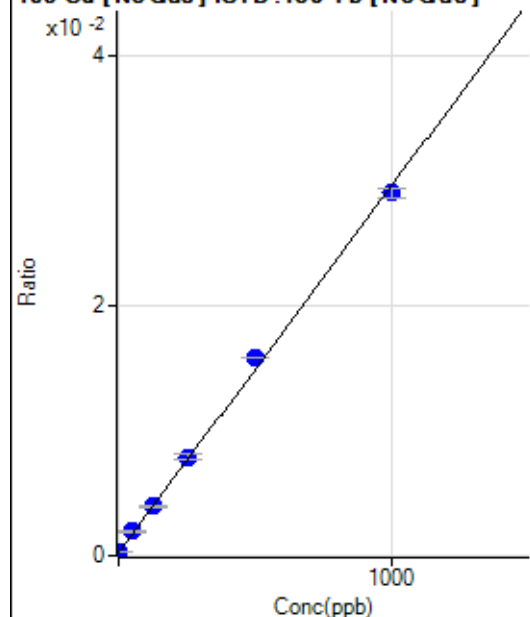
$$R = 0.9993$$

$$DL = 0.006164$$

$$BEC = 0.02501$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1839.11	0.0002	P	4.1
2	☐	0.100					
3	☐	1.000	0.330	2050.26	0.0003	P	9.4
4	☐	50.000	57.310	14867.15	0.0019	P	9.2
5	☐	125.000	125.826	33626.39	0.0039	P	2.6
6	☐	250.000	260.652	65423.74	0.0079	P	5.4
7	☐	500.000	531.691	127102.43	0.0159	P	0.4
8	☐	1000.000	981.023	245632.89	0.0291	P	2.3
9	☐			1777.99	0.0002	P	3.2

$$y = 2.9374\text{E-}005 * x + 2.4333\text{E-}004$$

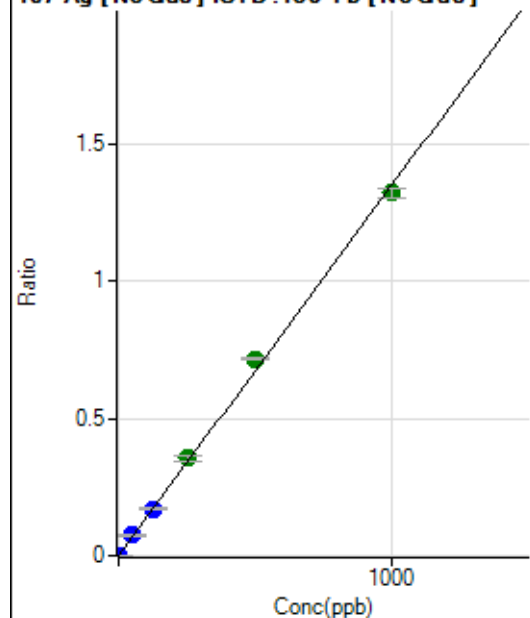
$$R = 0.9992$$

$$DL = 1.028$$

$$BEC = 8.284$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	250.02	0.0000	P	7.5
2	☐	0.100					
3	☐	1.000	1.145	12773.27	0.0016	P	3.3
4	☐	50.000	56.857	592044.30	0.0768	P	10.1
5	☐	125.000	126.956	1462661.20	0.1714	P	3.9
6	☐	250.000	264.209	2953940.82	0.3567	A	5.5
7	☐	500.000	531.187	5746010.24	0.7171	A	0.7
8	☐	1000.000	980.266	11184984.19	1.3233	A	2.8
9	☐			1275.12	0.0002	P	8.4

$$y = 0.0013 * x + 3.3123\text{E-}005$$

$$R = 0.9992$$

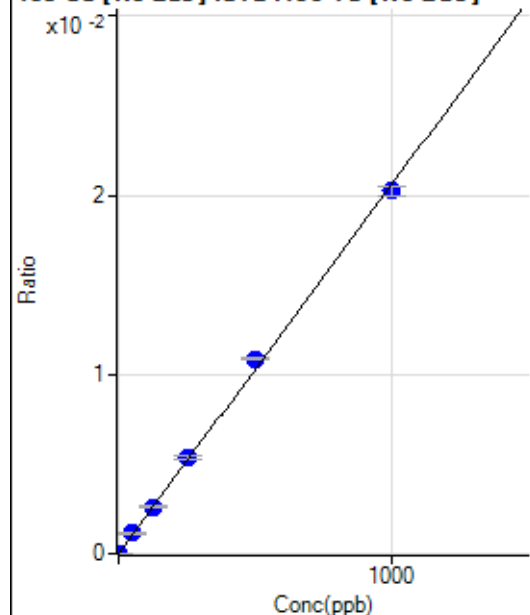
$$DL = 0.0055$$

$$BEC = 0.02454$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9.72	0.0000	P	60.7
2	☐	0.100					
3	☐	1.000	1.213	212.51	0.0000	P	12.4
4	☐	50.000	55.514	8814.21	0.0011	P	11.7
5	☐	125.000	125.873	22118.44	0.0026	P	5.0
6	☐	250.000	259.702	44297.82	0.0053	P	5.1
7	☐	500.000	527.535	87037.27	0.0109	P	1.1
8	☐	1000.000	983.422	171153.85	0.0202	P	2.5
9	☐			22.22	0.0000	P	55.5

$$y = 2.0589\text{E-}005 * x + 1.2493\text{E-}006$$

$$R = 0.9994$$

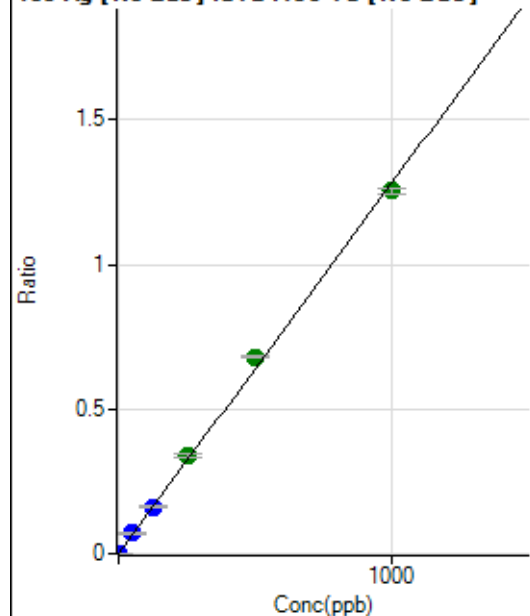
$$DL = 0.1105$$

$$BEC = 0.06068$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	227.79	0.0000	P	6.8
2	☐	0.100					
3	☐	1.000	1.126	11908.56	0.0015	P	3.6
4	☐	50.000	56.947	562680.76	0.0730	P	9.5
5	☐	125.000	126.861	1386321.22	0.1625	P	4.3
6	☐	250.000	265.723	2819044.53	0.3403	A	4.6
7	☐	500.000	531.010	5448644.83	0.6800	A	1.3
8	☐	1000.000	979.984	10608657.53	1.2550	A	1.6
9	☐			1088.98	0.0002	P	11.1

$$y = 0.0013 * x + 2.9935\text{E-}005$$

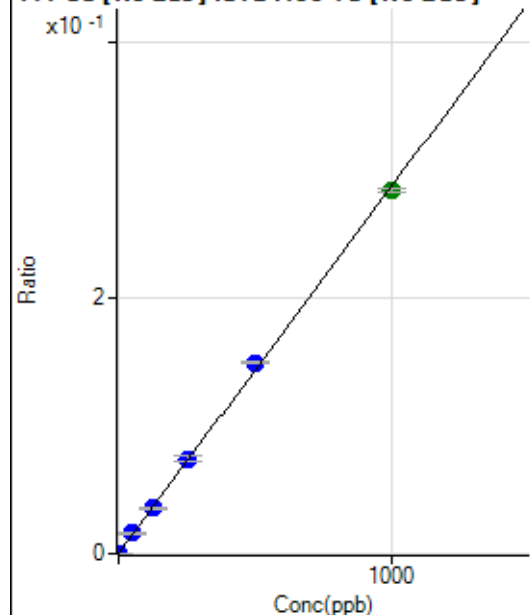
$$R = 0.9991$$

$$DL = 0.004772$$

$$BEC = 0.02338$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1293.06	0.0002	P	4.8
2	☐	0.100					
3	☐	1.000	0.885	3442.21	0.0004	P	4.1
4	☐	50.000	56.137	125442.06	0.0163	P	10.1
5	☐	125.000	124.110	305095.02	0.0358	P	4.7
6	☐	250.000	257.469	612847.99	0.0740	P	5.6
7	☐	500.000	519.882	1195961.88	0.1493	P	1.0
8	☐	1000.000	987.996	2396660.97	0.2835	A	1.2
9	☐			1333.20	0.0002	P	3.3

$$y = 2.8677\text{E-}004 * x + 1.7115\text{E-}004$$

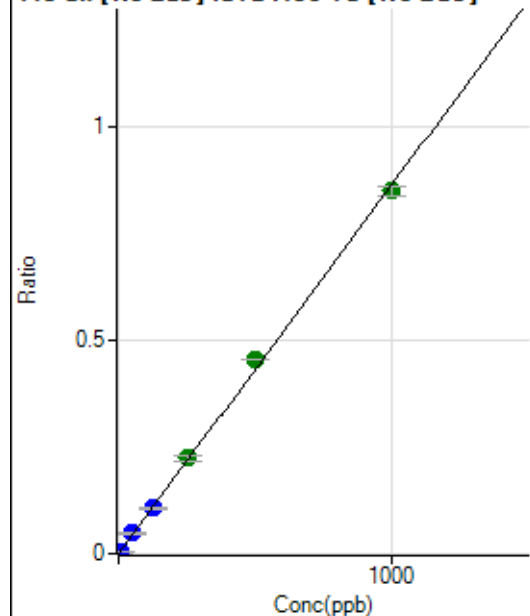
$$R = 0.9997$$

$$DL = 0.08657$$

$$BEC = 0.5968$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	563.93	0.0001	P	21.0
2	☐	0.500					
3	☐	5.000	4.988	35420.37	0.0044	P	4.6
4	☐	50.000	55.435	369012.26	0.0479	P	10.5
5	☐	125.000	124.212	914421.85	0.1072	P	4.1
6	☐	250.000	259.536	1853424.87	0.2238	A	6.0
7	☐	500.000	525.839	3633505.55	0.4534	A	0.5
8	☐	1000.000	984.523	7175500.60	0.8489	A	2.6
9	☐			4242.53	0.0006	P	2.7

$$y = 8.6219\text{E-}004 * x + 7.5493\text{E-}005$$

$$R = 0.9994$$

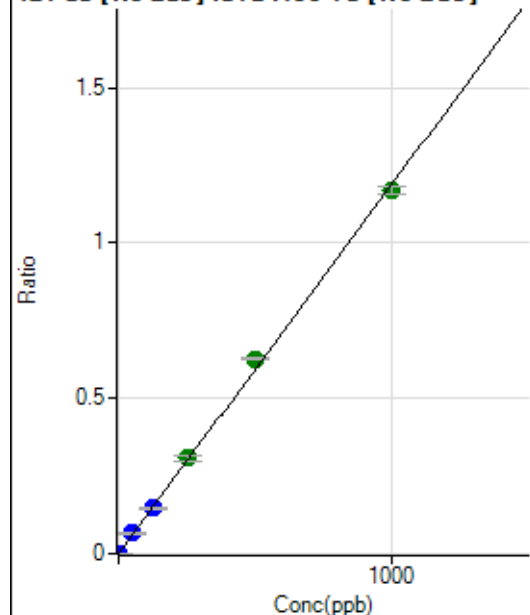
$$DL = 0.05523$$

$$BEC = 0.08756$$

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	175.01	0.0000	P	40.6
2	☐	0.200					
3	☐	2.000	1.875	18224.35	0.0023	P	2.0
4	☐	50.000	55.225	505734.24	0.0656	P	10.8
5	☐	125.000	124.360	1260475.76	0.1477	P	4.5
6	☐	250.000	260.267	2560098.32	0.3092	A	5.9
7	☐	500.000	527.703	5022789.78	0.6268	A	1.0
8	☐	1000.000	983.401	9874164.28	1.1681	A	2.1
9	☐			11683.37	0.0016	P	8.8

$$y = 0.0012 * x + 2.3463E-005$$

$$R = 0.9994$$

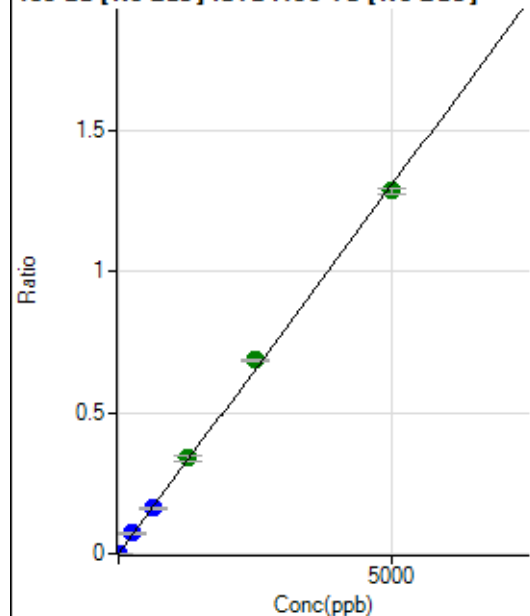
$$DL = 0.02404$$

$$BEC = 0.01975$$

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	50.00	0.0000	P	60.1
2	☐	1.000					
3	☐	10.000	9.702	20544.45	0.0025	P	2.2
4	☐	250.000	275.359	553833.32	0.0718	P	10.4
5	☐	625.000	615.613	1370370.43	0.1606	P	4.4
6	☐	1250.000	1294.505	2796617.33	0.3377	A	5.8
7	☐	2500.000	2627.777	5493253.59	0.6856	A	1.0
8	☐	5000.000	4924.891	10861239.48	1.2849	A	1.8
9	☐			1063.98	0.0001	P	12.9

$$y = 2.6089E-004 * x + 6.8641E-006$$

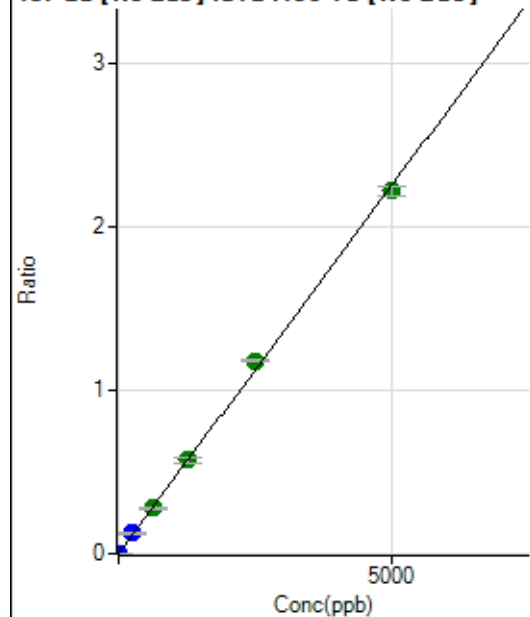
$$R = 0.9995$$

$$DL = 0.04741$$

$$BEC = 0.02631$$

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	77.78	0.0000	P	48.3
2	☐	1.000					
3	☐	10.000	9.958	36314.85	0.0045	P	1.7
4	☐	250.000	277.917	963377.85	0.1249	P	9.8
5	☐	625.000	624.616	2395416.76	0.2808	A	4.3
6	☐	1250.000	1271.374	4731229.71	0.5714	A	6.1
7	☐	2500.000	2624.692	9452833.11	1.1797	A	0.7
8	☐	5000.000	4930.963	18733422.64	2.2163	A	2.5
9	☐			1855.77	0.0003	P	4.8

$$y = 4.4946E-004 * x + 1.0216E-005$$

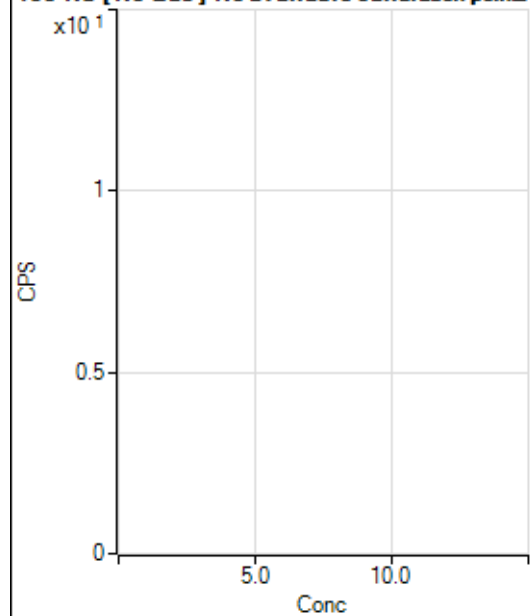
$$R = 0.9995$$

$$DL = 0.03292$$

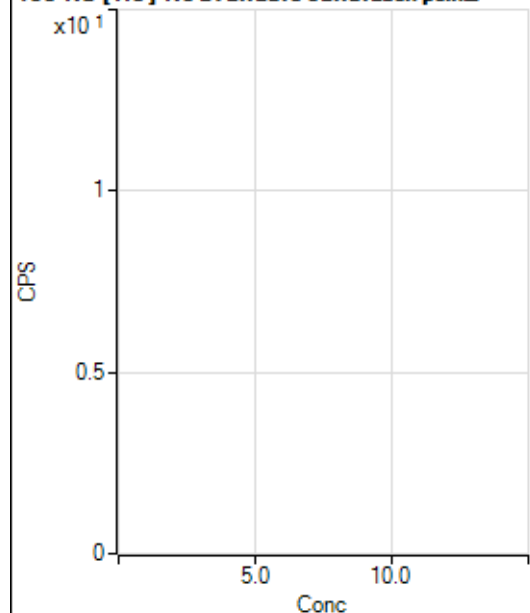
$$BEC = 0.02273$$

Weight: <None>

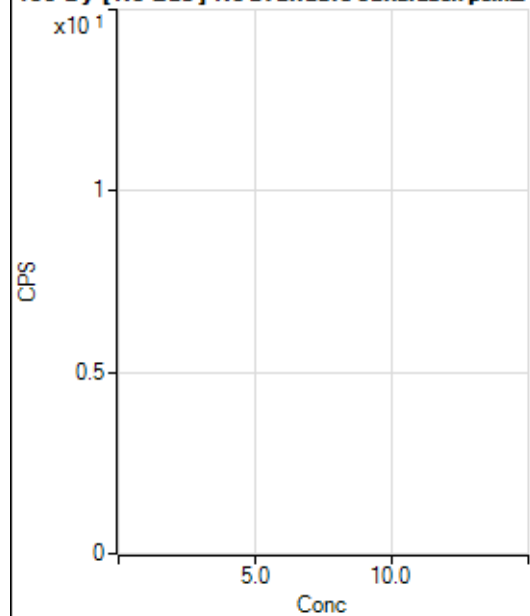
Min Conc: 0

150 Nd [No Gas] No available calibration points

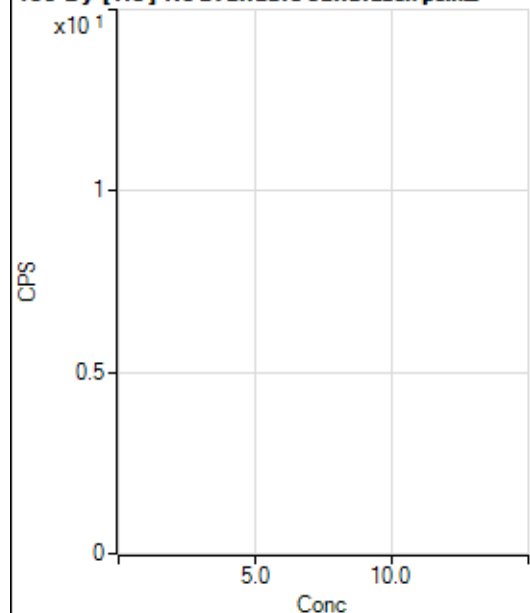
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	43.3
2	☐						
3	☐			20.00		P	0.0
4	☐			55.56		P	42.1
5	☐			71.11		P	14.3
6	☐			133.34		P	39.1
7	☐			273.35		P	8.8
8	☐			471.14		P	8.3
9	☐			200.01		P	8.8

150 Nd [He] No available calibration points

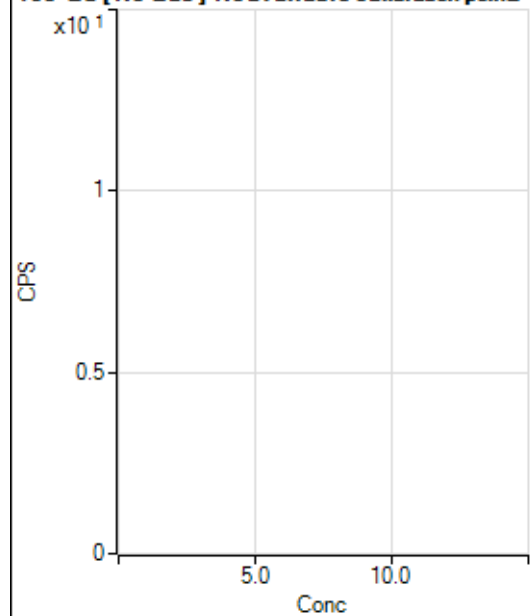
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			0.00		P	
4	☐			0.00		P	
5	☐			0.00		P	
6	☐			4.44		P	43.4
7	☐			12.22		P	68.7
8	☐			10.00		P	33.3
9	☐			33.33		P	20.0

156 Dy [No Gas] No available calibration points

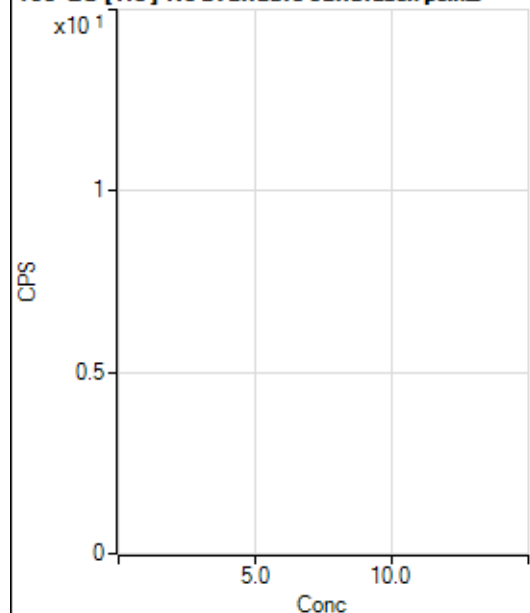
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.89		P	69.3
2	☐						
3	☐			47.22		P	50.9
4	☐			25.00		P	33.3
5	☐			33.33		P	50.0
6	☐			44.45		P	39.0
7	☐			80.56		P	33.3
8	☐			116.67		P	39.8
9	☐			88.90		P	56.5

156 Dy [He] No available calibration points

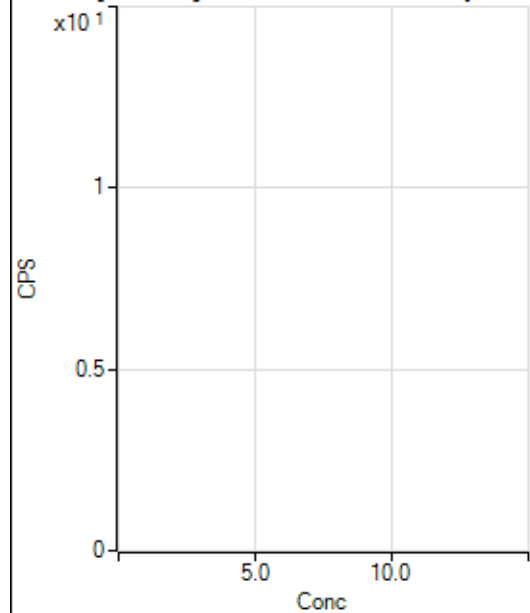
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐						
3	☐			5.56		P	91.6
4	☐			0.00		P	
5	☐			1.11		P	173.
6	☐			7.78		P	24.7
7	☐			14.44		P	70.5
8	☐			4.44		P	114.
9	☐			17.78		P	60.3

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

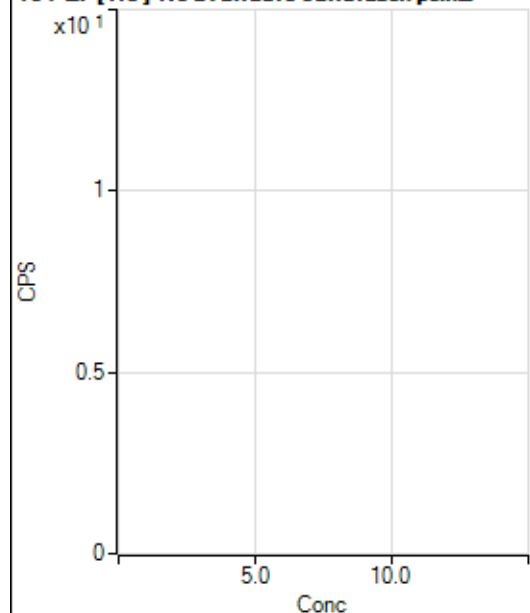
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			41.67		P	20.0
2	☐						
3	☐			61.11		P	39.4
4	☐			66.67		P	33.1
5	☐			41.67		P	40.0
6	☐			69.45		P	18.3
7	☐			94.45		P	31.0
8	☐			108.34		P	13.3
9	☐			122.23		P	27.6

160 Gd [He] No available calibration points

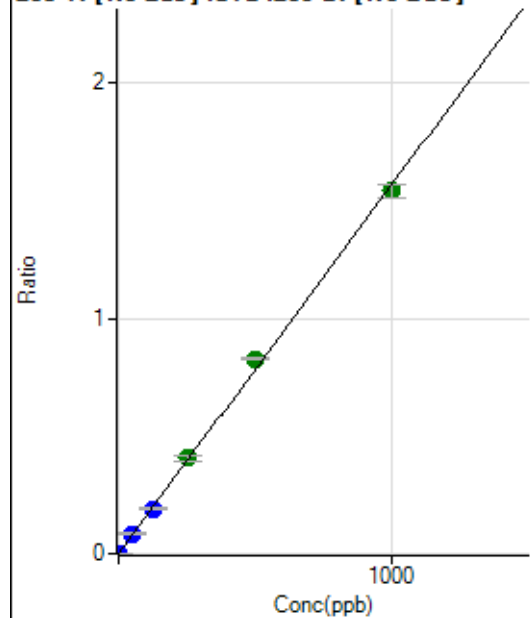
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			12.22		P	56.8
2	☐						
3	☐			7.78		P	65.5
4	☐			8.89		P	21.6
5	☐			8.89		P	21.6
6	☐			10.00		P	0.0
7	☐			11.11		P	45.8
8	☐			13.33		P	25.0
9	☐			17.78		P	75.8

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			27.78		P	34.6
2	☐						
3	☐			27.78		P	75.5
4	☐			41.67		P	34.6
5	☐			33.33		P	43.3
6	☐			55.56		P	34.6
7	☐			30.56		P	15.7
8	☐			66.67		P	37.5
9	☐			33.33		P	50.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.56		P	91.6
2	☐						
3	☐			11.11		P	62.5
4	☐			3.33		P	0.0
5	☐			4.44		P	114.
6	☐			5.56		P	91.6
7	☐			13.33		P	50.0
8	☐			8.89		P	57.3
9	☐			12.22		P	68.7

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	363.91	0.0001	P	40.4
2	☐	0.100					
3	☐	1.000	0.934	7674.92	0.0015	P	6.4
4	☐	50.000	53.865	396991.59	0.0845	P	9.6
5	☐	125.000	121.250	997984.77	0.1900	P	2.7
6	☐	250.000	258.899	2051519.34	0.4057	A	5.4
7	☐	500.000	527.670	4035938.50	0.8268	A	1.0
8	☐	1000.000	984.216	7845558.68	1.5421	A	3.5
9	☐			730.62	0.0002	P	13.1

$$y = 0.0016 * x + 7.9464E-005$$

$$R = 0.9994$$

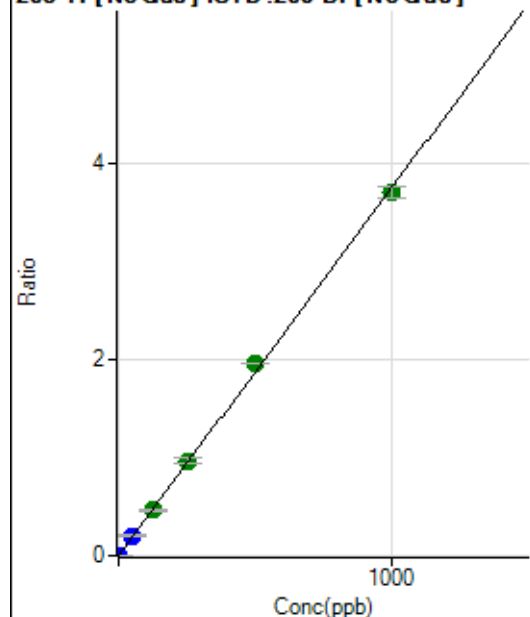
$$DL = 0.06152$$

$$BEC = 0.05072$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	888.97	0.0002	P	13.3
2	☐	0.100					
3	☐	1.000	0.906	17796.56	0.0036	P	3.6
4	☐	50.000	54.308	956091.81	0.2034	P	9.3
5	☐	125.000	123.106	2420257.93	0.4609	A	2.2
6	☐	250.000	256.807	4859331.84	0.9612	A	5.8
7	☐	500.000	522.275	9541426.60	1.9546	A	0.6
8	☐	1000.000	987.182	18795258.23	3.6943	A	3.2
9	☐			1747.43	0.0004	P	11.7

$$y = 0.0037 * x + 1.8992E-004$$

$$R = 0.9996$$

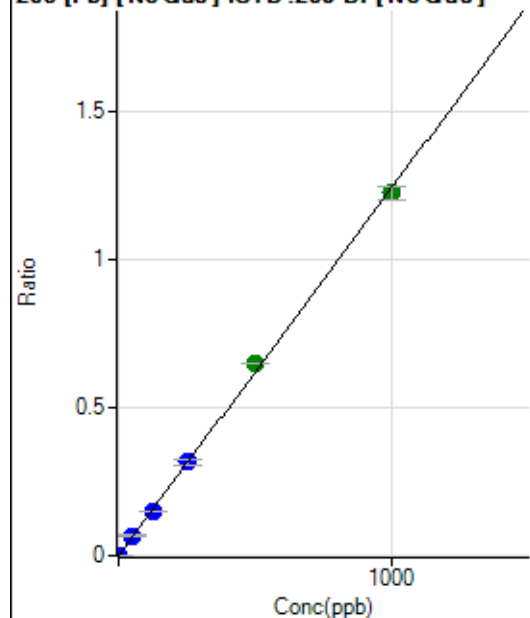
$$DL = 0.0202$$

$$BEC = 0.05075$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	481.51	0.0001	P	20.9
2	☐	0.100					
3	☐	1.000	0.912	6149.81	0.0012	P	3.7
4	☐	50.000	53.937	315500.92	0.0671	P	9.5
5	☐	125.000	120.896	789474.26	0.1503	P	2.6
6	☐	250.000	253.952	1596088.01	0.3157	P	5.7
7	☐	500.000	524.545	3182606.44	0.6520	A	0.1
8	☐	1000.000	987.056	6240863.80	1.2267	A	3.5
9	☐			8493.83	0.0021	P	4.7

$$y = 0.0012 * x + 1.0369E-004$$

$$R = 0.9995$$

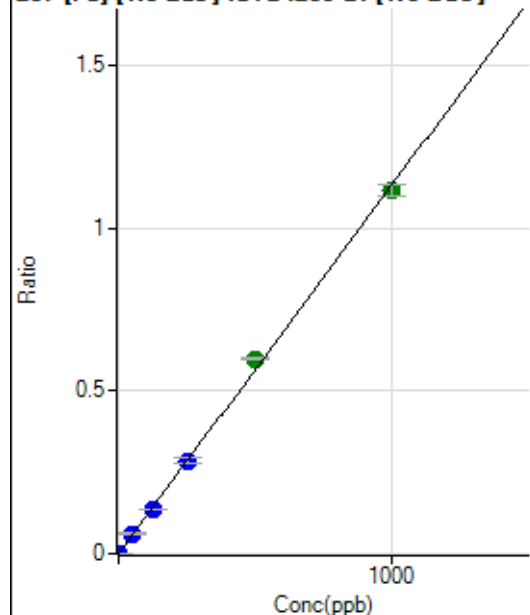
$$DL = 0.05228$$

$$BEC = 0.08344$$

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	409.28	0.0001	P	21.8
2	☐	0.100					
3	☐	1.000	0.833	5125.27	0.0010	P	7.3
4	☐	50.000	53.743	286348.07	0.0610	P	10.2
5	☐	125.000	120.318	716036.17	0.1364	P	2.4
6	☐	250.000	252.676	1447188.31	0.2862	P	5.7
7	☐	500.000	528.636	2923160.16	0.5988	A	0.8
8	☐	1000.000	985.411	5678369.63	1.1161	A	3.2
9	☐			7094.81	0.0017	P	11.8

$$y = 0.0011 * x + 8.7985E-005$$

$$R = 0.9994$$

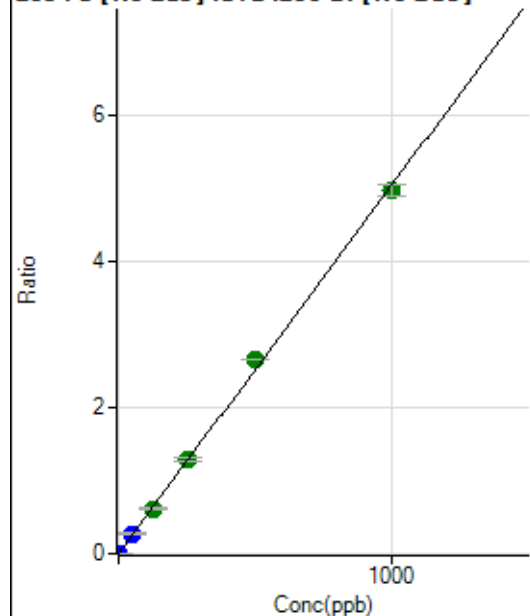
$$DL = 0.05081$$

$$BEC = 0.07769$$

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	1763.07	0.0004	P	16.8
2	☐	0.100					
3	☐	1.000	0.899	24419.30	0.0049	P	4.3
4	☐	50.000	54.049	1283343.56	0.2731	P	9.6
5	☐	125.000	121.645	3224904.21	0.6141	A	2.6
6	☐	250.000	256.230	6538116.36	1.2932	A	5.6
7	☐	500.000	526.492	12969676.24	2.6568	A	0.5
8	☐	1000.000	985.413	25297139.86	4.9722	A	3.2
9	☐			33001.06	0.0080	P	7.7

$$y = 0.0050 * x + 3.7859E-004$$

$$R = 0.9994$$

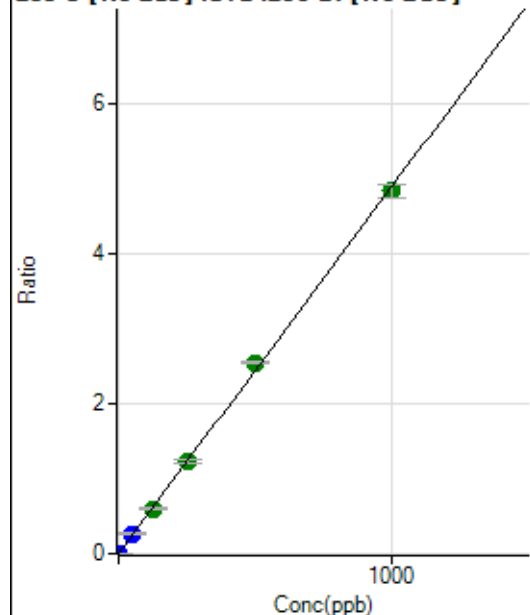
$$DL = 0.03781$$

$$BEC = 0.07504$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.12	0.0000	P	14.5
2	☐	0.100					
3	☐	1.000	0.903	22128.92	0.0045	P	3.0
4	☐	50.000	53.807	1239269.61	0.2636	P	8.8
5	☐	125.000	121.666	3129262.00	0.5960	A	3.1
6	☐	250.000	253.197	6272053.09	1.2402	A	4.9
7	☐	500.000	519.767	12427755.92	2.5460	A	1.2
8	☐	1000.000	989.544	24658089.96	4.8470	A	3.7
9	☐			605.60	0.0001	P	1.9

$$y = 0.0049 * x + 2.8754E-005$$

$$R = 0.9997$$

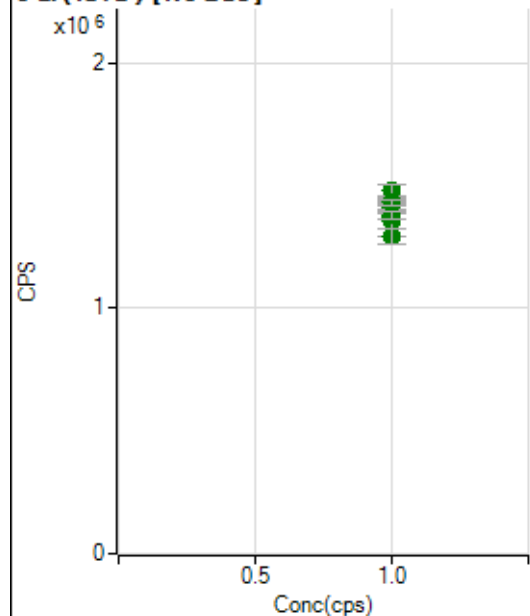
$$DL = 0.002554$$

$$BEC = 0.00587$$

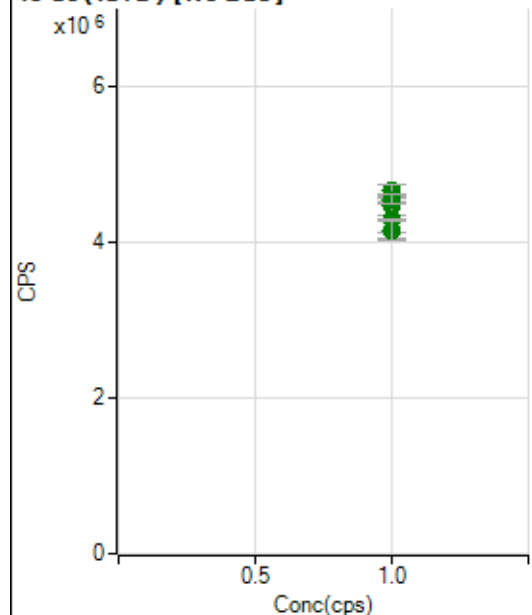
Weight: <None>

Min Conc: 0

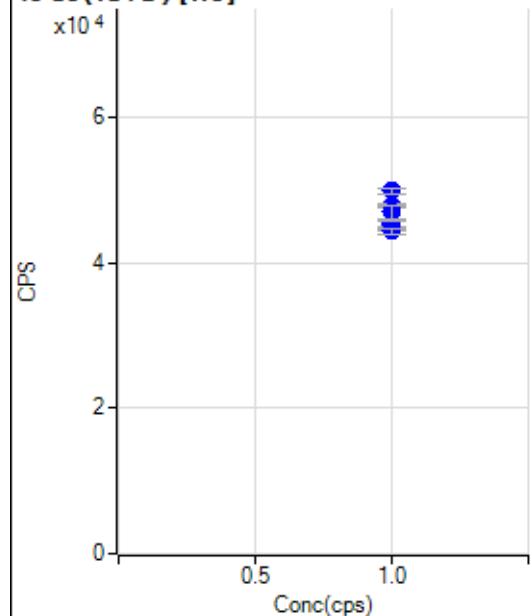
6 Li (ISTD) [No Gas]



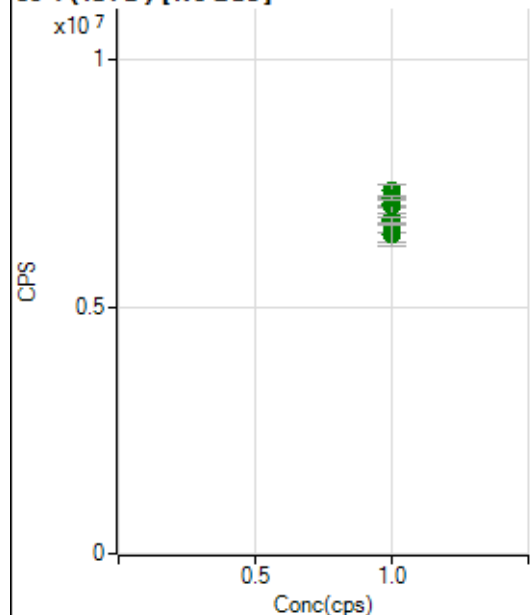
	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1356405.42		A	8.8
2	☐	1.000					
3	☐	1.000		1408242.27		A	3.3
4	☐	1.000		1374068.77		A	7.5
5	☐	1.000		1479549.79		A	3.9
6	☐	1.000		1433286.49		A	3.8
7	☐	1.000		1378594.72		A	2.0
8	☐	1.000		1432254.52		A	1.4
9	☐	1.000		1293622.67		A	4.5

45 Sc (ISTD) [No Gas]

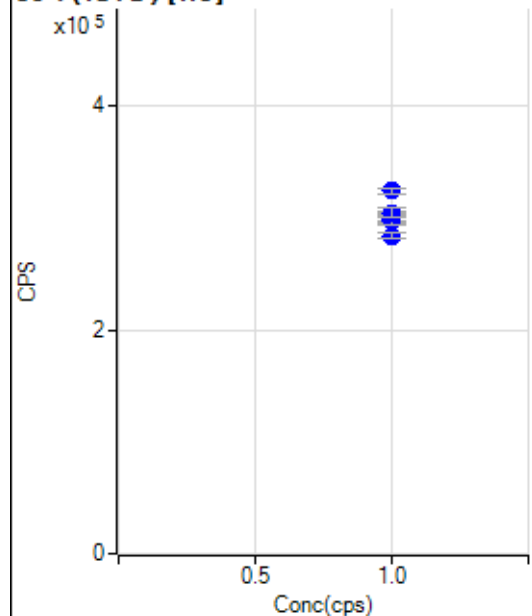
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4287382.00		A	11.0
2	☐	1.000					
3	☐	1.000		4548596.93		A	1.7
4	☐	1.000		4306412.90		A	8.7
5	☐	1.000		4661593.86		A	3.1
6	☐	1.000		4460275.19		A	5.1
7	☐	1.000		4289358.77		A	1.0
8	☐	1.000		4553618.33		A	2.4
9	☐	1.000		4155785.16		A	6.0

45 Sc (ISTD) [He]

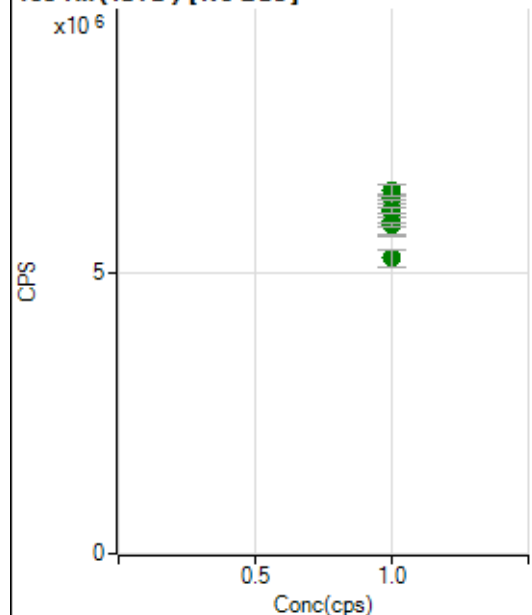
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		45476.81		P	1.9
2	☐	1.000					
3	☐	1.000		45135.83		P	2.9
4	☐	1.000		49901.64		P	1.7
5	☐	1.000		45424.51		P	1.8
6	☐	1.000		45219.76		P	2.8
7	☐	1.000		44306.42		P	2.1
8	☐	1.000		47810.01		P	1.2
9	☐	1.000		46971.75		P	3.5

89 Y (ISTD) [No Gas]

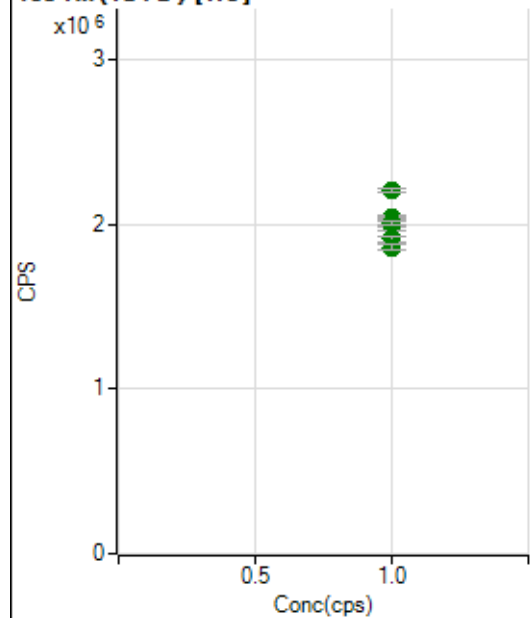
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6676594.14		A	10.4
2	☐	1.000					
3	☐	1.000		7084352.81		A	1.9
4	☐	1.000		6782068.93		A	8.4
5	☐	1.000		7351933.15		A	3.6
6	☐	1.000		7064738.99		A	4.8
7	☐	1.000		6751973.58		A	1.5
8	☐	1.000		7202614.62		A	1.4
9	☐	1.000		6459514.35		A	6.6

89 Y (ISTD) [He]

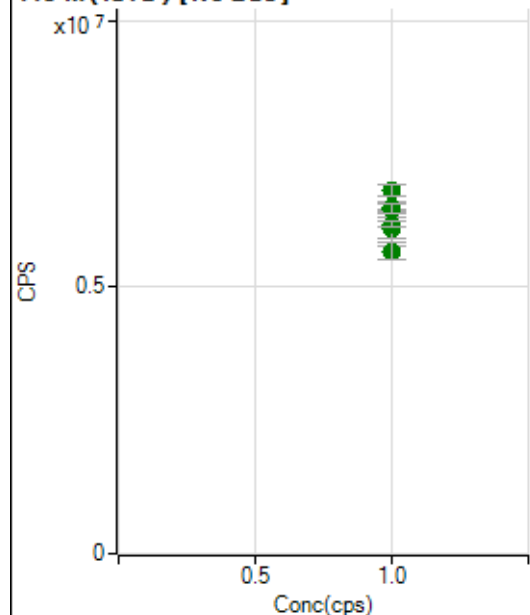
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		299955.98		P	1.8
2	☐	1.000					
3	☐	1.000		297386.80		P	2.2
4	☐	1.000		324215.61		P	1.5
5	☐	1.000		298449.80		P	1.5
6	☐	1.000		298939.42		P	3.5
7	☐	1.000		283812.95		P	1.7
8	☐	1.000		303939.40		P	1.4
9	☐	1.000		304715.74		P	3.0

103 Rh (ISTD) [No Gas]

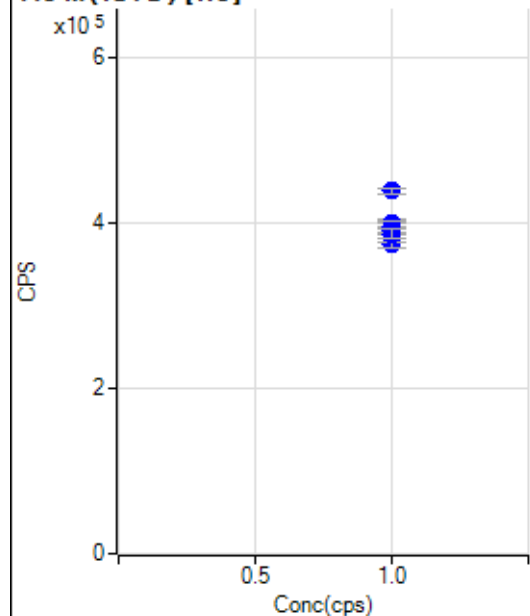
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6000903.39		A	11.3
2	☐	1.000					
3	☐	1.000		6344314.68		A	2.5
4	☐	1.000		5938640.84		A	8.1
5	☐	1.000		6481859.48		A	3.3
6	☐	1.000		6162472.83		A	5.0
7	☐	1.000		5886404.60		A	1.2
8	☐	1.000		6124186.38		A	1.6
9	☐	1.000		5277040.87		A	5.9

103 Rh (ISTD) [He]

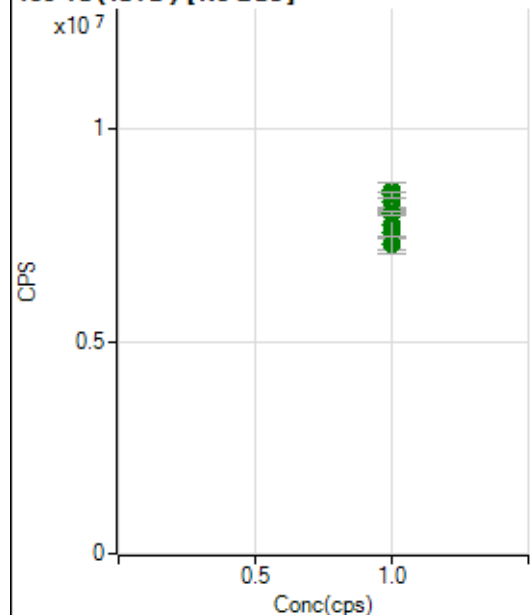
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2041186.71		A	2.0
2	☐	1.000					
3	☐	1.000		2012369.62		A	2.3
4	☐	1.000		2206108.54		A	0.9
5	☐	1.000		2022745.37		A	2.5
6	☐	1.000		1998168.04		A	3.1
7	☐	1.000		1912838.57		A	1.9
8	☐	1.000		2013901.55		A	1.2
9	☐	1.000		1861813.81		A	2.1

115 In (ISTD) [No Gas]

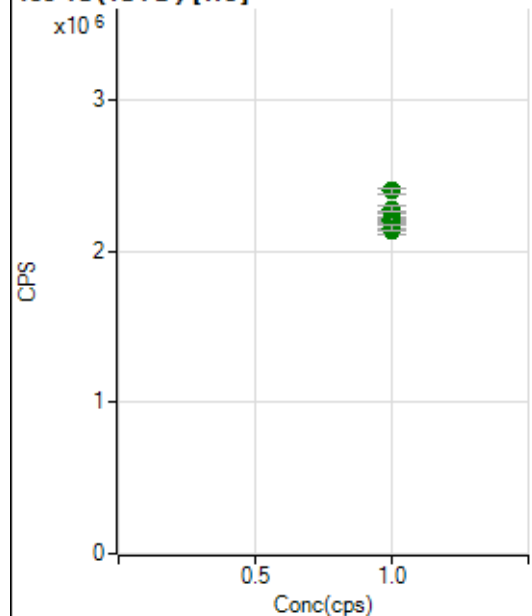
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6087287.40		A	10.3
2	☐	1.000					
3	☐	1.000		6506556.86		A	2.6
4	☐	1.000		6187751.41		A	8.8
5	☐	1.000		6808959.07		A	3.2
6	☐	1.000		6458310.47		A	4.1
7	☐	1.000		6186348.98		A	1.5
8	☐	1.000		6478166.01		A	2.7
9	☐	1.000		5672089.10		A	5.6

115 In (ISTD) [He]

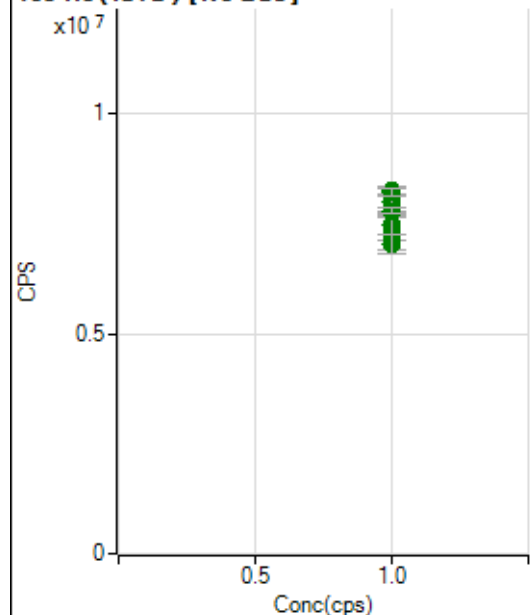
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		399831.66		P	2.1
2	☐	1.000					
3	☐	1.000		398898.08		P	2.2
4	☐	1.000		438679.31		P	1.5
5	☐	1.000		396390.63		P	1.3
6	☐	1.000		395691.79		P	3.3
7	☐	1.000		373189.69		P	1.8
8	☐	1.000		389845.50		P	1.8
9	☐	1.000		387032.64		P	2.6

159 Tb (ISTD) [No Gas]

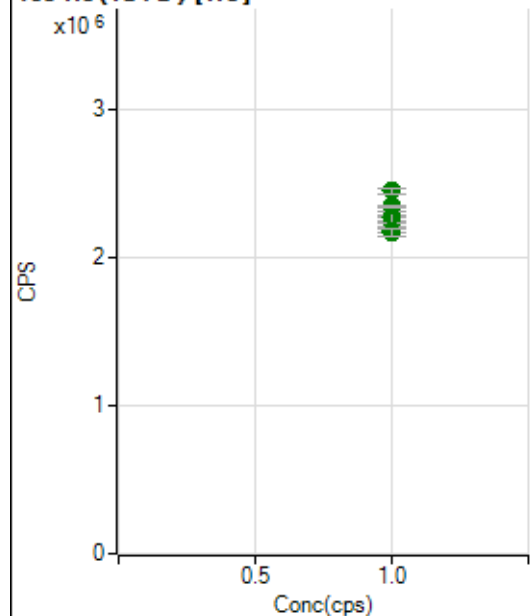
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7573817.60		A	10.7
2	☐	1.000					
3	☐	1.000		8096875.64		A	1.8
4	☐	1.000		7755821.69		A	8.8
5	☐	1.000		8542076.05		A	4.1
6	☐	1.000		8297534.81		A	5.3
7	☐	1.000		8013366.13		A	1.3
8	☐	1.000		8454794.32		A	1.6
9	☐	1.000		7267685.79		A	5.8

159 Tb (ISTD) [He]

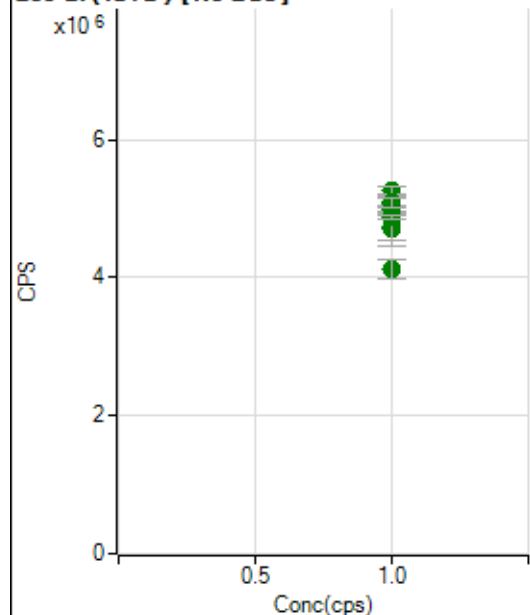
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2197150.54		A	1.5
2	☐	1.000					
3	☐	1.000		2173813.96		A	2.7
4	☐	1.000		2401378.70		A	1.4
5	☐	1.000		2208124.57		A	1.4
6	☐	1.000		2215723.54		A	3.4
7	☐	1.000		2133961.20		A	1.5
8	☐	1.000		2284170.66		A	1.3
9	☐	1.000		2152777.56		A	1.7

165 Ho (ISTD) [No Gas]

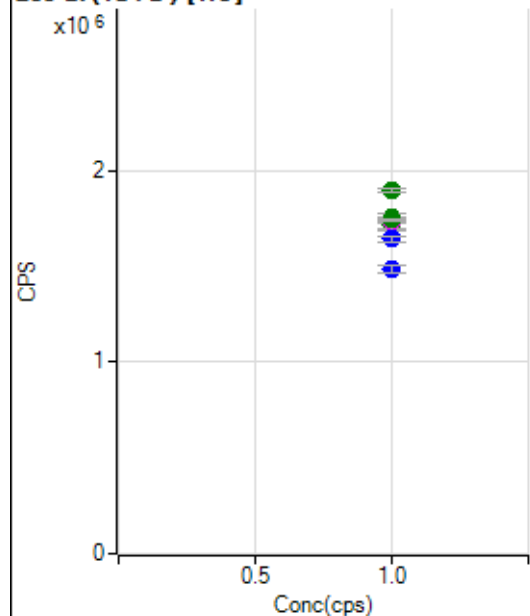
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7280187.66		A	10.7
2	☐	1.000					
3	☐	1.000		7773676.04		A	2.1
4	☐	1.000		7463063.01		A	8.8
5	☐	1.000		8252327.61		A	2.6
6	☐	1.000		7996197.40		A	4.9
7	☐	1.000		7802224.48		A	1.4
8	☐	1.000		8239805.91		A	2.0
9	☐	1.000		7050903.41		A	6.1

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2237646.01		A	2.7
2	☐	1.000					
3	☐	1.000		2214039.29		A	1.5
4	☐	1.000		2451340.21		A	1.3
5	☐	1.000		2268904.05		A	1.8
6	☐	1.000		2280085.29		A	3.4
7	☐	1.000		2188679.27		A	2.1
8	☐	1.000		2347280.96		A	0.7
9	☐	1.000		2169551.89		A	2.6

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4709939.48		A	10.3
2	☐	1.000					
3	☐	1.000		4974082.95		A	2.5
4	☐	1.000		4724712.78		A	8.4
5	☐	1.000		5253873.15		A	3.0
6	☐	1.000		5065665.86		A	5.1
7	☐	1.000		4881627.08		A	1.0
8	☐	1.000		5090710.20		A	2.7
9	☐	1.000		4122419.14		A	6.2

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1754311.66		A	2.7
2	☐	1.000					
3	☐	1.000		1714537.82		A	1.6
4	☐	1.000		1895869.68		A	1.1
5	☐	1.000		1747958.83		A	1.6
6	☐	1.000		1735733.60		M	5.3
7	☐	1.000		1645136.31		P	1.6
8	☐	1.000		1744242.04		A	1.0
9	☐	1.000		1486835.66		P	2.4

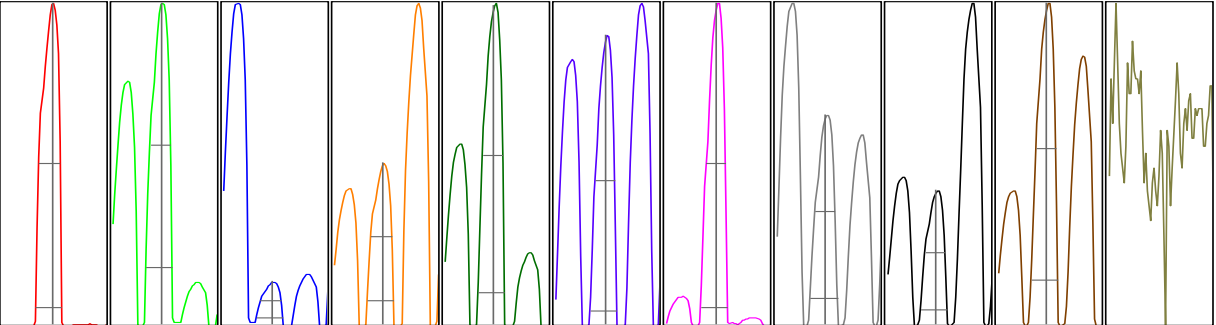
US EPA Tune Check Sample Report

Batch Folder D:\P8021219.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	6591	3.11	5.00	
24	74984	3.26	5.00	
25	10350	3.07	5.00	
26	12628	3.06	5.00	
59	66767	3.40	5.00	
113	8596	3.29	5.00	
115	105023	3.01	5.00	
206	23014	2.86	5.00	
207	21523	3.07	5.00	
208	49110	2.88	5.00	
220	1	26.56		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	6261	6769	6537	6739	6649
24	71106	76187	74269	77419	75936
25	9852	10563	10217	10619	10498
26	12014	12846	12521	13008	12751
59	63107	68329	66134	68702	67561
113	8150	8869	8505	8771	8683
115	100181	107591	104031	108018	105297
206	21979	23292	22755	23564	23479
207	20407	21828	21443	21932	22006
208	46820	49949	48649	50153	49977
220	1	1	2	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	11608	9.00	8.9 - 9.1		0.739	0.900	
24	130742	23.95	23.9 - 24.1		0.746	0.900	
25	17784	24.95	24.9 - 25.1		0.755	0.900	
26	20986	25.95	25.9 - 26.1		0.748	0.900	
59	119037	58.95	58.9 - 59.1		0.752	0.900	
113	16064	113.00	112.9 - 113.1		0.767	0.900	
115	196152	115.00	114.9 - 115.1		0.773	0.900	
206	40616	205.95	205.9 - 206.1		0.782	0.900	
207	36849	206.95	206.9 - 207.1		0.757	0.900	
208	88114	207.95	207.9 - 208.1		0.760	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	9.6	V	Deflect	14.6	V
Extract 2	-225.0	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 V
He Flow	0.0	mL/min	OctP RF	200	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	9459	4.54	
89	4217	4.44	
205	13421	3.85	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	9433	9411	9861	9805	8785
89	4216	4193	4353	4403	3922
205	13372	13437	13989	13702	12606

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	9.6	V	Deflect	2.4	V
Extract 2	-225.0	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 V
He Flow	5.0	mL/min	OctP RF	200	V			