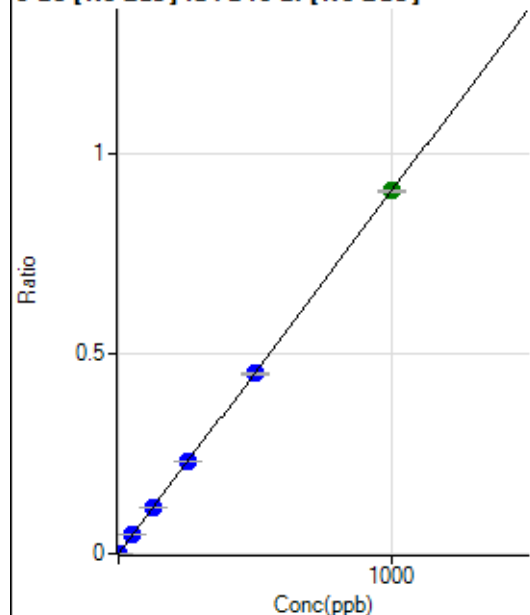


Batch Folder: D:\P8092018-MS.b\
Analysis File: P8092018-MS.batch.bin
DA Date-Time: 2018-09-20 22:14:39
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2018-09-20 13:48:23
2	005CALS.d	S01	2018-09-20 13:51:47
3	006CALS.d	S02	2018-09-20 13:55:52
4	007CALS.d	S03	2018-09-20 13:59:38
5	008CALS.d	S04	2018-09-20 14:03:24
6	009CALS.d	S05	2018-09-20 14:07:02
7	010CALS.d	S06	2018-09-20 14:10:35
8	011CALS.d	S07	2018-09-20 14:14:05
9	012CALS.d	S08	2018-09-20 14:17:30

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	164.82	0.0001	P	6.2
2	☐	0.100	0.080	253.71	0.0002	P	7.7
3	☐	1.000	1.028	1348.25	0.0011	P	1.6
4	☐	50.000	51.541	56600.47	0.0468	P	4.6
5	☐	125.000	127.434	147093.31	0.1156	P	0.8
6	☐	250.000	254.564	292310.23	0.2308	P	0.5
7	☐	500.000	496.128	590739.10	0.4496	P	0.9
8	☐	1000.000	1000.414	1176356.33	0.9065	A	0.3
9	☐			870.43	0.0007	P	10.7

$$y = 9.0602\text{E-}004 * x + 1.2863\text{E-}004$$

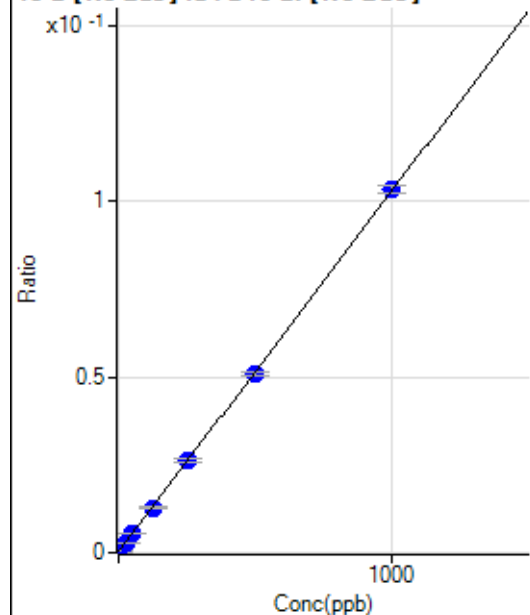
$$R = 1.0000$$

$$DL = 0.0265$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	355.57	0.0003	P	18.9
2	☐	2.500	2.609	688.94	0.0005	P	6.7
3	☐	25.000	22.583	3294.97	0.0026	P	9.8
4	☐	50.000	51.070	6668.47	0.0055	P	2.0
5	☐	125.000	121.780	16231.91	0.0128	P	2.4
6	☐	250.000	252.009	33061.31	0.0261	P	3.9
7	☐	500.000	492.192	66610.87	0.0507	P	2.6
8	☐	1000.000	1003.811	133801.40	0.1031	P	2.1
9	☐			7441.15	0.0058	P	6.2

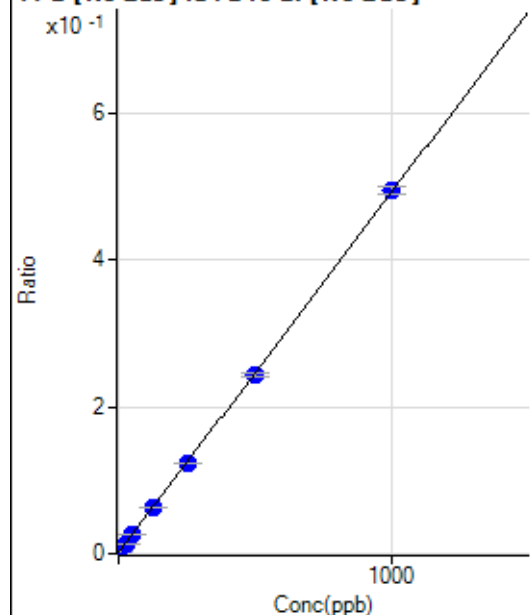
$$y = 1.0245\text{E-}004 * x + 2.7811\text{E-}004$$

$$R = 0.9999$$

$$DL = 1.54$$

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	1789.08	0.0014	P	2.4
2	☐	2.500	2.774	3483.92	0.0028	P	7.0
3	☐	25.000	23.396	16385.00	0.0129	P	3.3
4	☐	50.000	50.888	31858.37	0.0264	P	6.9
5	☐	125.000	125.084	79950.57	0.0628	P	2.9
6	☐	250.000	248.011	156050.45	0.1232	P	1.2
7	☐	500.000	492.192	319383.53	0.2431	P	2.0
8	☐	1000.000	1004.386	641822.50	0.4946	P	2.0
9	☐			33852.08	0.0263	P	6.4

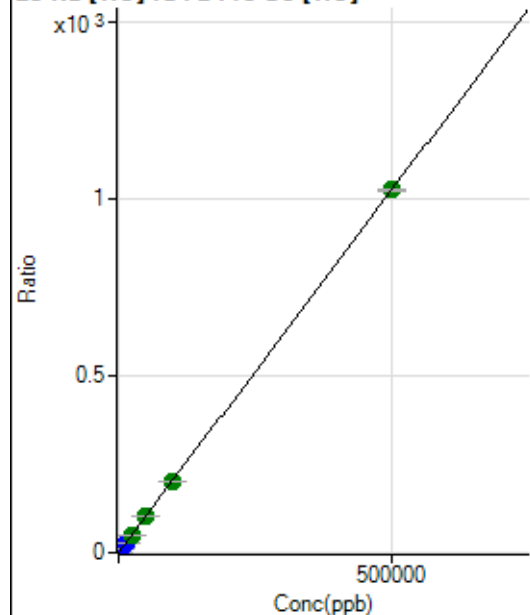
$$y = 4.9107\text{E-}004 * x + 0.0014$$

$$R = 1.0000$$

$$DL = 0.2021$$

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	5734.73	0.2307	P	6.2
2	☐	50.000	45.172	8047.06	0.3232	P	5.6
3	☐	500.000	475.368	29717.94	1.2041	P	1.8
4	☐	5000.000	4877.837	255641.02	10.2194	P	1.9
5	☐	12500.000	12201.219	638924.60	25.2160	P	1.6
6	☐	25000.000	24645.686	1288755.61	50.6993	A	3.0
7	☐	50000.000	49724.082	2559948.26	102.0541	A	1.0
8	☐	100000.00	97309.544	4908634.05	199.4981	A	0.7
9	☐	500000.00	500592.11	25330917.23	1,025.327	A	0.6

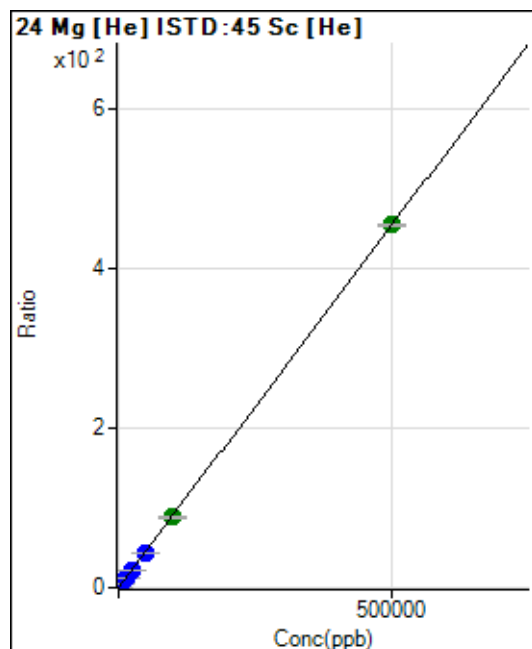
$$y = 0.0020 * x + 0.2307$$

$$R = 1.0000$$

$$DL = 20.86$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	205.57	0.0083	P	29.0
2	☐	50.000	54.777	1447.36	0.0581	P	16.4
3	☐	500.000	485.207	11088.13	0.4492	P	4.2
4	☐	5000.000	4791.071	109121.93	4.3622	P	1.4
5	☐	12500.000	12086.515	278496.73	10.9920	P	2.1
6	☐	25000.000	23901.869	552405.65	21.7293	P	2.5
7	☐	50000.000	48207.876	1099071.91	43.8176	P	0.5
8	☐	100000.00	97445.597	2178925.20	88.5629	A	1.3
9	☐	500000.00	500757.44	11242758.15	455.0760	A	0.6

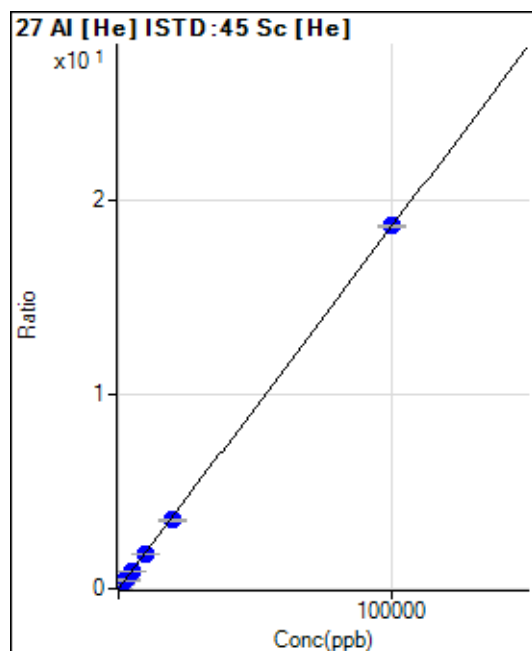
$$y = 9.0876\text{E-}004 * x + 0.0083$$

$$R = 1.0000$$

$$DL = 7.963$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15.00	0.0006	P	27.4
2	☐	2.000	5.422	40.01	0.0016	P	34.4
3	☐	20.000	21.766	115.03	0.0047	P	7.2
4	☐	1000.000	967.114	4525.24	0.1809	P	1.4
5	☐	2500.000	2393.336	11324.95	0.4468	P	2.0
6	☐	5000.000	4802.202	22770.63	0.8958	P	3.4
7	☐	10000.000	9530.116	44575.58	1.7772	P	1.1
8	☐	20000.000	18951.282	86932.57	3.5335	P	1.6
9	☐	100000.00	100269.61	461820.42	18.6930	P	0.4

$$y = 1.8642\text{E-}004 * x + 6.0163\text{E-}004$$

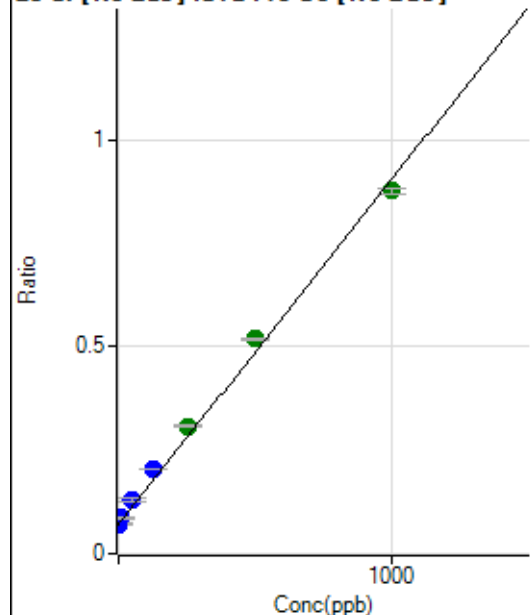
$$R = 0.9999$$

$$DL = 2.652$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	276830.31	0.0712	P	1.0
2	☐	1.000	3.938	285741.39	0.0745	P	0.6
3	☐	10.000	17.853	329087.73	0.0861	P	1.2
4	☐	50.000	69.131	472537.91	0.1288	P	5.9
5	☐	125.000	159.008	790710.47	0.2036	P	1.2
6	☐	250.000	285.136	1181094.80	0.3087	A	1.1
7	☐	500.000	537.248	2056937.46	0.5187	A	1.6
8	☐	1000.000	967.303	3497925.17	0.8770	A	1.3
9	☐			404546.37	0.1050	P	1.9

$$y = 8.3300\text{E-}004 * x + 0.0712$$

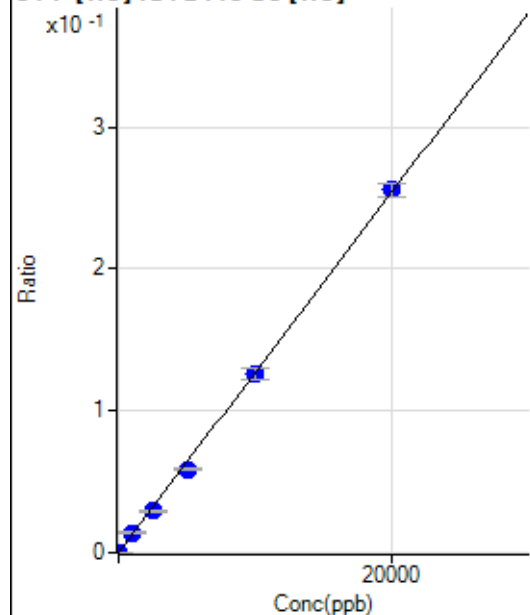
$$R = 0.9980$$

$$DL = 2.5$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	9.319	8.33	0.0003	P	173.
2	☐	0.000	-17.952	0.00	0.0000	P	
3	☐	0.000	8.633	8.33	0.0003	P	99.6
4	☐	1000.000	1067.658	344.47	0.0138	P	10.7
5	☐	2500.000	2332.643	755.61	0.0298	P	4.5
6	☐	5000.000	4618.403	1494.60	0.0588	P	0.7
7	☐	10000.000	9915.372	3158.84	0.1259	P	6.7
8	☐	20000.000	20155.250	6290.58	0.2557	P	3.9
9	☐			11.11	0.0005	P	44.7

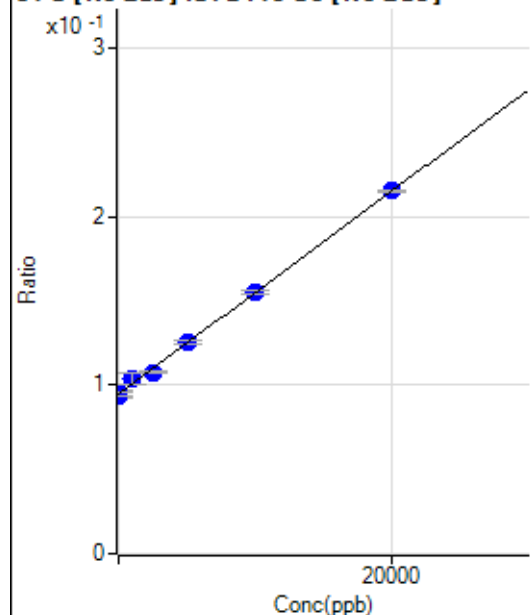
$$y = 1.2677\text{E-}005 * x + 2.2758\text{E-}004$$

$$R = 0.9997$$

$$DL = 73.72$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-252.988	363370.70	0.0934	P	1.0
2	☐	0.000	230.839	369725.57	0.0964	P	0.4
3	☐	0.000	22.149	363638.25	0.0951	P	1.8
4	☐	1000.000	1461.699	380750.71	0.1038	P	5.9
5	☐	2500.000	2128.013	418500.30	0.1078	P	0.4
6	☐	5000.000	5017.250	478854.61	0.1252	P	1.7
7	☐	10000.000	9991.887	615063.87	0.1551	P	1.9
8	☐	20000.000	20023.157	859581.27	0.2155	P	0.9
9	☐			346757.78	0.0900	P	0.9

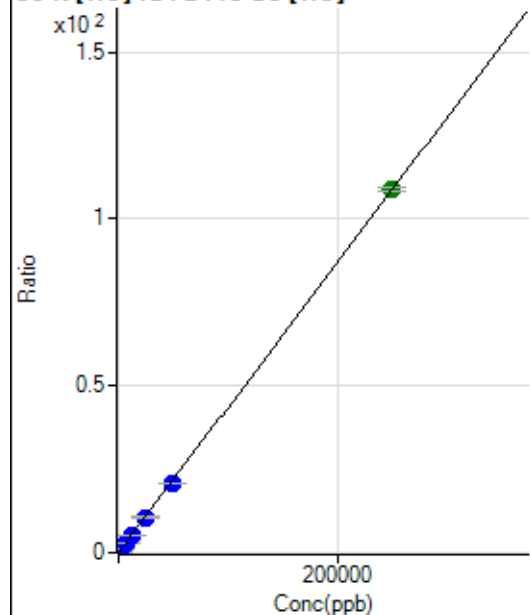
$$y = 6.0194\text{E-}006 * x + 0.0950$$

$$R = 0.9993$$

$$DL = 512$$

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	2075.24	0.0834	P	1.9
2	☐	50.000	55.486	2678.16	0.1075	P	3.7
3	☐	500.000	486.526	7263.31	0.2943	P	4.9
4	☐	2500.000	2440.884	28554.90	1.1414	P	0.3
5	☐	6250.000	6118.376	69296.12	2.7355	P	3.3
6	☐	12500.000	12166.645	136177.97	5.3571	P	2.9
7	☐	25000.000	24333.954	266644.77	10.6311	P	1.2
8	☐	50000.000	48015.839	514119.44	20.8961	P	0.9
9	☐	250000.00	250484.01	2684250.41	108.6567	A	1.1

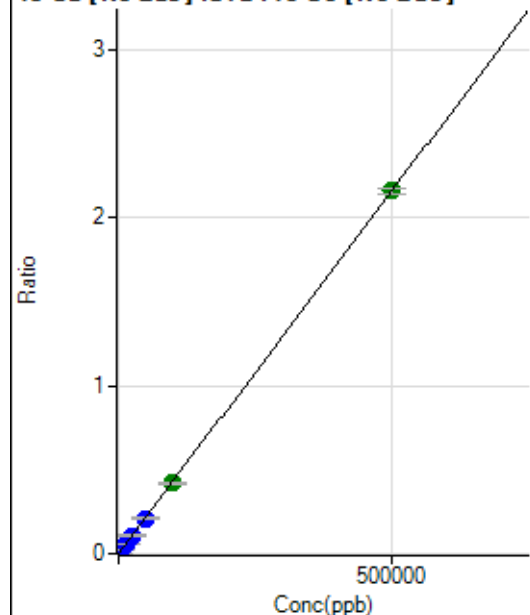
$$y = 4.3345\text{E-}004 * x + 0.0834$$

$$R = 1.0000$$

$$DL = 11.19$$

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	472.25	0.0001	P	26.5
2	☐	50.000	53.311	1350.13	0.0004	P	2.5
3	☐	500.000	476.364	8327.81	0.0022	P	3.9
4	☐	5000.000	4967.515	79247.04	0.0216	P	3.2
5	☐	12500.000	12297.548	206645.38	0.0532	P	0.5
6	☐	25000.000	25094.638	414969.41	0.1085	P	1.5
7	☐	50000.000	48864.791	837053.55	0.2111	P	2.0
8	☐	100000.00	96895.160	1669225.40	0.4185	A	1.1
9	☐	500000.00	500735.16	8333424.32	2.1621	A	1.8

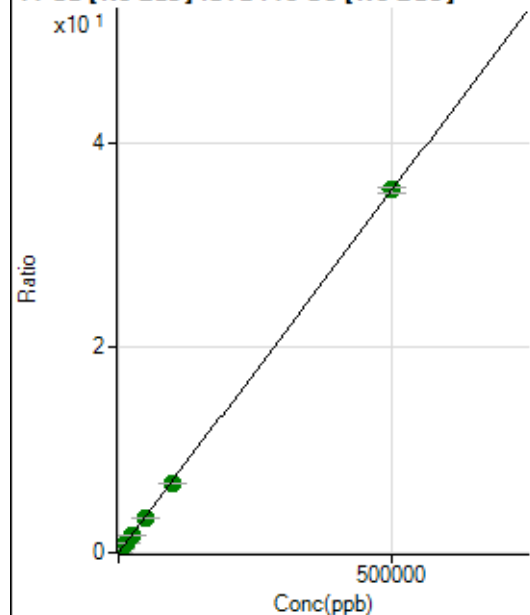
$$y = 4.3176\text{E-}006 * x + 1.2172\text{E-}004$$

$$R = 1.0000$$

$$DL = 22.45$$

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	15918.05	0.0041	P	5.2
2	☐	50.000	47.630	28632.91	0.0075	P	1.8
3	☐	500.000	475.512	144195.38	0.0377	P	1.8
4	☐	5000.000	5017.162	1318332.21	0.3588	A	3.3
5	☐	12500.000	12363.044	3409533.19	0.8781	A	1.1
6	☐	25000.000	24905.916	6751827.15	1.7648	A	1.1
7	☐	50000.000	48588.608	13637261.42	3.4391	A	1.6
8	☐	100000.00	95632.702	26983786.71	6.7649	A	1.1
9	☐	500000.00	501022.58	136541336.3	35.4244	A	1.3

$$y = 7.0696\text{E-}005 * x + 0.0041$$

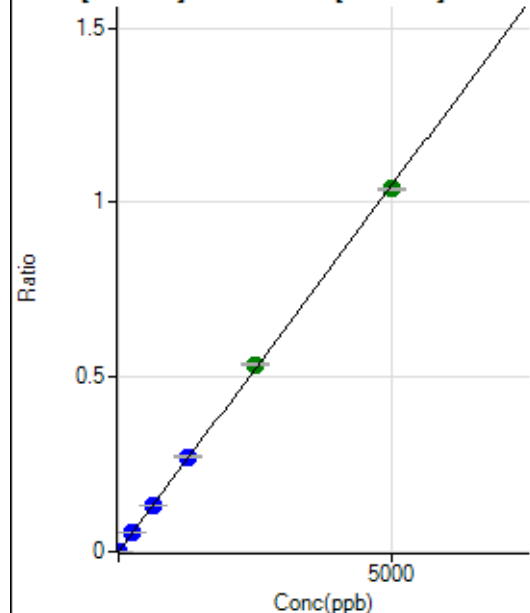
$$R = 1.0000$$

$$DL = 8.975$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	72.23	0.0000	P	13.5
2	☐	0.500	0.623	572.26	0.0001	P	24.5
3	☐	5.000	5.321	4336.99	0.0011	P	5.5
4	☐	250.000	257.266	198245.17	0.0540	P	3.1
5	☐	625.000	638.705	520038.55	0.1339	P	0.4
6	☐	1250.000	1294.804	1038619.71	0.2715	P	1.3
7	☐	2500.000	2560.586	2128869.13	0.5369	A	1.6
8	☐	5000.000	4956.429	4145178.13	1.0392	A	0.6
9	☐			2311.42	0.0006	P	1.9

$$y = 2.0966E-004 * x + 1.8577E-005$$

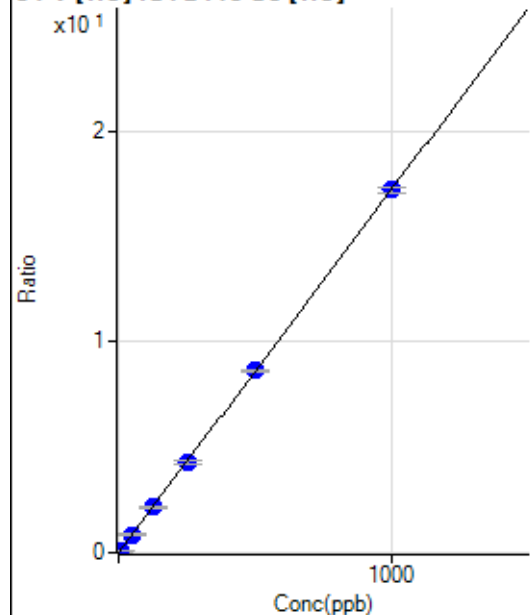
$$R = 0.9998$$

$$DL = 0.03597$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0001	P	173.
2	☐	0.500	0.476	207.78	0.0083	P	8.7
3	☐	5.000	5.068	2159.10	0.0875	P	5.6
4	☐	50.000	49.713	21431.05	0.8568	P	2.9
5	☐	125.000	125.346	54729.93	2.1601	P	2.0
6	☐	250.000	248.653	108933.70	4.2850	P	2.4
7	☐	500.000	501.866	216920.20	8.6484	P	1.0
8	☐	1000.000	999.375	423692.28	17.2216	P	1.5
9	☐			230.01	0.0093	P	10.0

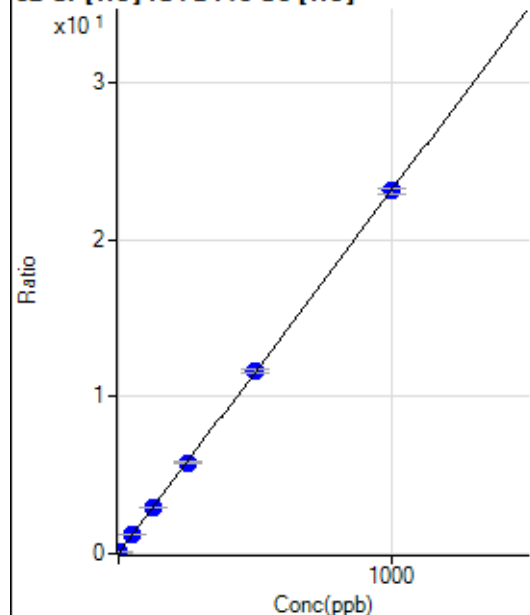
$$y = 0.0172 * x + 1.3184E-004$$

$$R = 1.0000$$

$$DL = 0.03976$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	410.01	0.0165	P	2.1
2	☐	0.200	0.228	542.24	0.0218	P	4.7
3	☐	2.000	2.068	1589.01	0.0644	P	5.7
4	☐	50.000	50.686	29766.27	1.1899	P	1.7
5	☐	125.000	124.988	73735.23	2.9102	P	1.9
6	☐	250.000	249.288	147136.91	5.7879	P	2.6
7	☐	500.000	502.438	292168.51	11.6487	P	1.2
8	☐	1000.000	998.926	569387.09	23.1432	P	1.3
9	☐			26341.62	1.0663	P	1.3

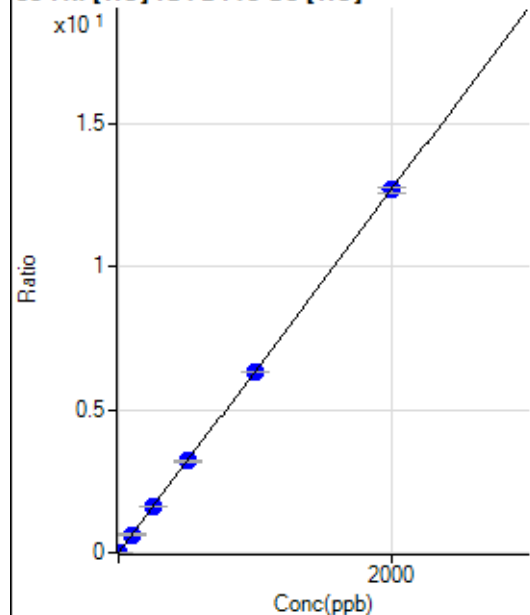
$$y = 0.0232 * x + 0.0165$$

$$R = 1.0000$$

$$DL = 0.04415$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	40.00	0.0016	P	32.0
2	☐	0.100	0.034	45.56	0.0018	P	17.8
3	☐	1.000	0.839	171.12	0.0069	P	15.9
4	☐	100.000	99.865	15887.01	0.6351	P	2.2
5	☐	250.000	251.553	40477.56	1.5973	P	1.0
6	☐	500.000	504.809	81459.01	3.2039	P	1.8
7	☐	1000.000	999.487	159075.05	6.3419	P	0.3
8	☐	2000.000	1998.867	311997.49	12.6815	P	1.4
9	☐			1579.01	0.0640	P	7.1

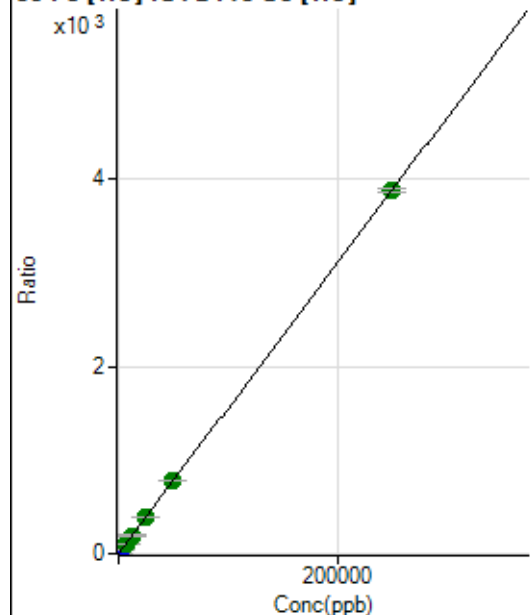
$$y = 0.0063 * x + 0.0016$$

$$R = 1.0000$$

$$DL = 0.2446$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1079.71	0.0433	P	13.8
2	☐	5.000	5.279	3117.11	0.1251	P	5.7
3	☐	50.000	50.943	20552.64	0.8328	P	1.3
4	☐	2500.000	2506.900	972915.11	38.8936	P	1.7
5	☐	6250.000	6367.405	2501671.47	98.7213	A	0.7
6	☐	12500.000	12469.052	4913292.01	193.2807	A	2.8
7	☐	25000.000	25091.870	9754718.16	388.9011	A	0.5
8	☐	50000.000	49849.913	19009044.64	772.5854	A	0.4
9	☐	250000.00	250019.37	95721937.33	3,874.683	A	1.0

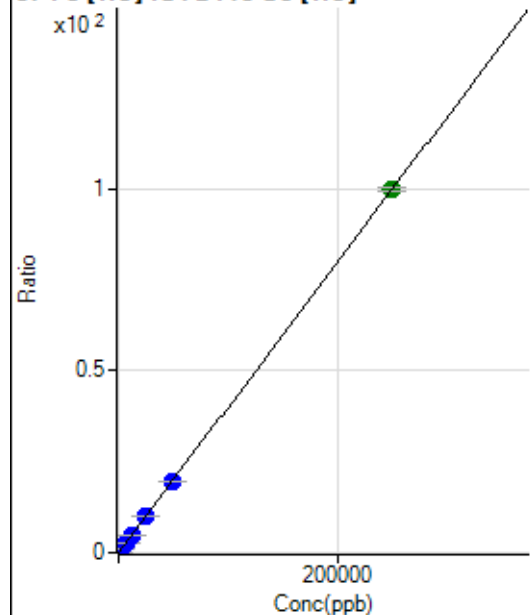
$$y = 0.0155 * x + 0.0433$$

$$R = 1.0000$$

$$DL = 1.153$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0013	P	2.8
2	☐	5.000	7.812	111.11	0.0045	P	16.3
3	☐	50.000	50.617	531.51	0.0215	P	11.6
4	☐	2500.000	2467.667	24651.95	0.9855	P	3.1
5	☐	6250.000	6129.022	61974.83	2.4457	P	1.7
6	☐	12500.000	12165.689	123381.66	4.8533	P	2.4
7	☐	25000.000	24682.724	246941.16	9.8454	P	0.9
8	☐	50000.000	48880.544	479663.07	19.4960	P	1.1
9	☐	250000.00	250275.68	2465970.86	99.8169	A	0.9

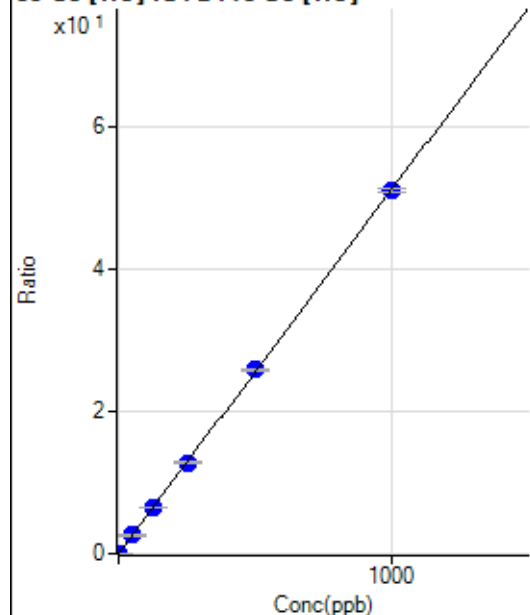
$$y = 3.9882E-004 * x + 0.0013$$

$$R = 1.0000$$

$$DL = 0.2774$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	50.00	0.0020	P	11.1
2	☐	0.100	0.102	180.00	0.0072	P	5.0
3	☐	1.000	1.042	1365.65	0.0553	P	7.5
4	☐	50.000	50.503	64719.62	2.5872	P	1.4
5	☐	125.000	126.531	164154.43	6.4790	P	2.1
6	☐	250.000	250.382	325848.87	12.8188	P	3.0
7	☐	500.000	505.239	648728.73	25.8647	P	1.2
8	☐	1000.000	997.069	1255760.96	51.0410	P	1.2
9	☐			15746.90	0.6374	P	1.3

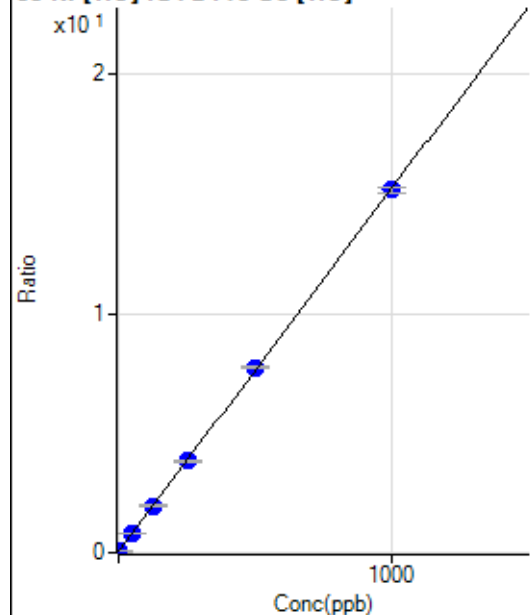
$$y = 0.0512 * x + 0.0020$$

$$R = 1.0000$$

$$DL = 0.01308$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1034.50	0.0416	P	2.2
2	☐	0.100	-0.387	888.94	0.0357	P	11.7
3	☐	1.000	0.978	1392.32	0.0564	P	3.0
4	☐	50.000	51.017	20428.49	0.8166	P	1.5
5	☐	125.000	126.823	49874.61	1.9683	P	1.3
6	☐	250.000	248.956	97202.74	3.8238	P	3.0
7	☐	500.000	506.843	194172.29	7.7417	P	1.4
8	☐	1000.000	996.561	373509.83	15.1817	P	1.4
9	☐			14454.36	0.5852	P	2.8

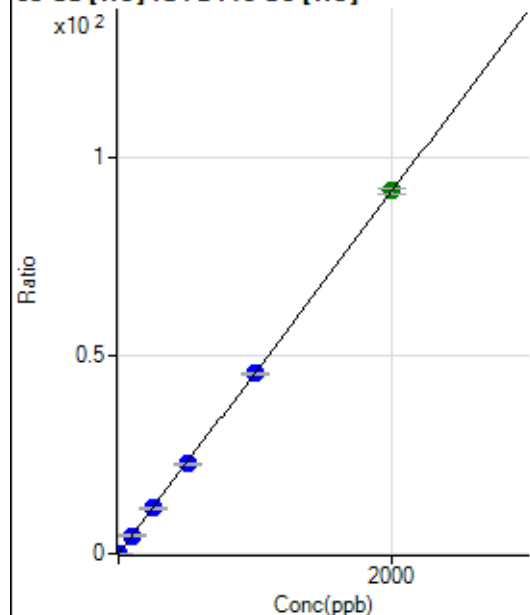
$$y = 0.0152 * x + 0.0416$$

$$R = 1.0000$$

$$DL = 0.1813$$

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	891.15	0.0358	P	2.9
2	☐	0.200	0.142	1053.39	0.0423	P	8.0
3	☐	2.000	2.081	3223.76	0.1306	P	3.0
4	☐	100.000	100.043	114952.85	4.5951	P	0.5
5	☐	250.000	250.650	290337.38	11.4589	P	1.9
6	☐	500.000	493.404	572527.54	22.5221	P	2.7
7	☐	1000.000	995.138	1138402.08	45.3880	P	1.2
8	☐	2000.000	2003.997	2247835.56	91.3654	A	1.4
9	☐			5363.35	0.2171	P	2.7

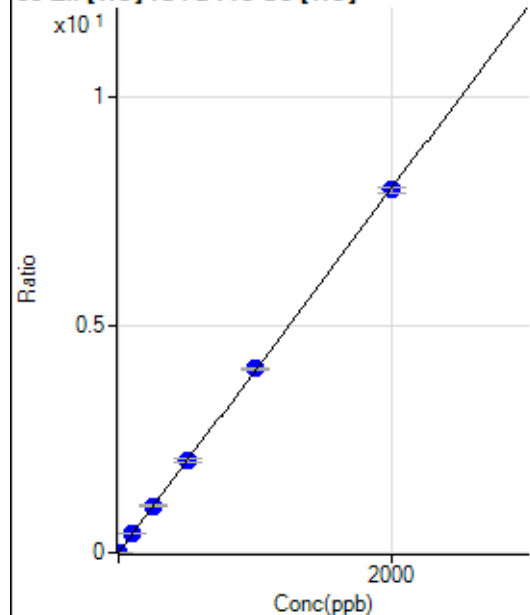
$$y = 0.0456 * x + 0.0358$$

$$R = 1.0000$$

$$DL = 0.06883$$

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	67.78	0.0027	P	18.7
2	☐	0.200	0.256	93.34	0.0038	P	26.9
3	☐	2.000	2.334	297.78	0.0121	P	10.4
4	☐	100.000	103.180	10387.39	0.4152	P	1.1
5	☐	250.000	254.499	25847.60	1.0202	P	2.9
6	☐	500.000	504.339	51323.60	2.0190	P	3.0
7	☐	1000.000	1012.738	101624.46	4.0516	P	1.1
8	☐	2000.000	1991.824	195982.88	7.9659	P	1.3
9	☐			1762.37	0.0714	P	6.4

$$y = 0.0040 * x + 0.0027$$

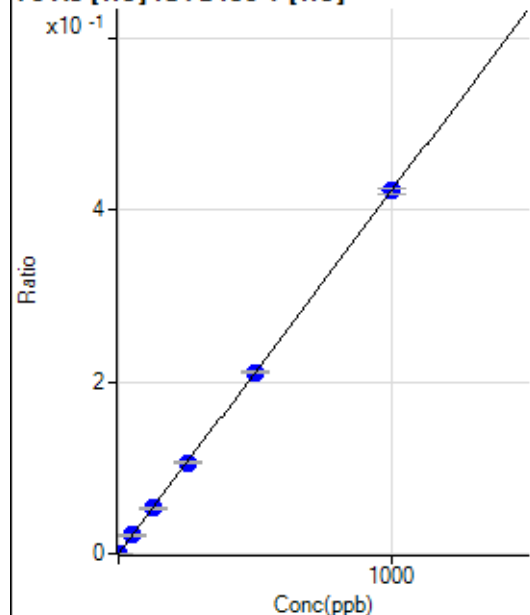
$$R = 1.0000$$

$$DL = 0.384$$

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	49.4
2	☐	0.100	0.070	9.26	0.0001	P	19.7
3	☐	1.000	1.059	80.87	0.0005	P	16.5
4	☐	50.000	50.326	3652.37	0.0213	P	3.5
5	☐	125.000	124.593	9160.51	0.0527	P	1.7
6	☐	250.000	251.195	18567.48	0.1061	P	1.6
7	☐	500.000	499.766	36771.02	0.2112	P	0.7
8	☐	1000.000	999.853	71843.31	0.4224	P	1.4
9	☐			125.93	0.0007	P	7.5

$$y = 4.2246\text{E-}004 * x + 2.5389\text{E-}005$$

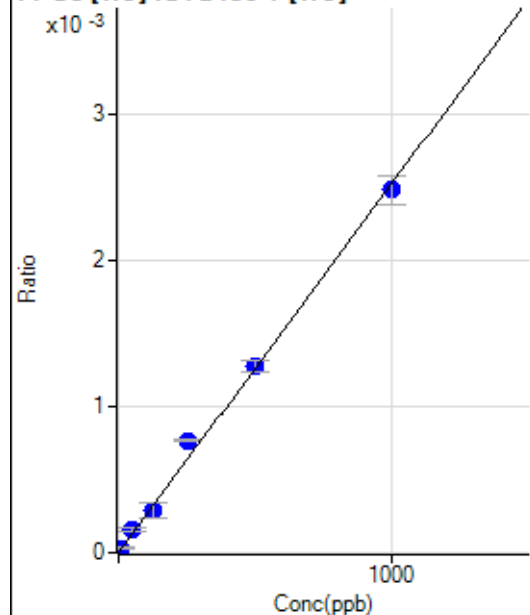
$$R = 1.0000$$

$$DL = 0.08914$$

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	0.00	0.0000	P	
2	☐	0.500	0.000	0.00	0.0000	P	
3	☐	5.000	12.880	5.56	0.0000	P	34.6
4	☐	50.000	64.156	27.78	0.0002	P	13.2
5	☐	125.000	113.942	50.00	0.0003	P	37.0
6	☐	250.000	304.822	134.45	0.0008	P	1.3
7	☐	500.000	505.993	222.23	0.0013	P	6.4
8	☐	1000.000	983.933	422.24	0.0025	P	7.8
9	☐			1.11	0.0000	P	173.

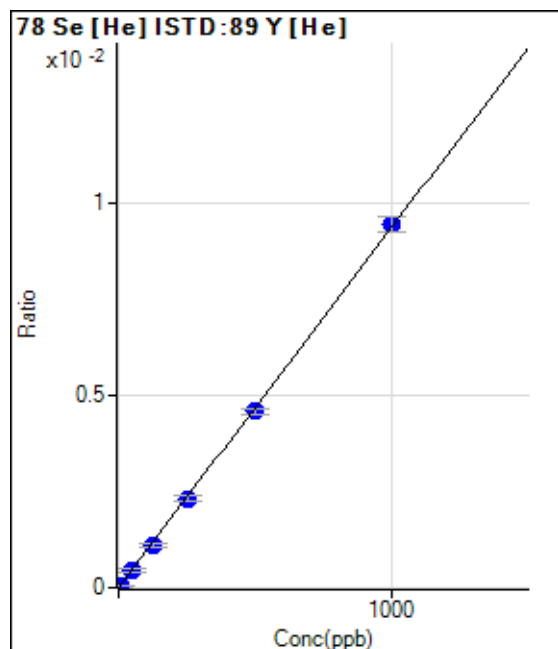
$$y = 2.5216\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9982$$

$$DL = 0$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.23	0.0000	P	173.
2	☐	0.500	0.013	1.23	0.0000	P	86.6
3	☐	5.000	6.173	11.11	0.0001	P	17.4
4	☐	50.000	48.407	79.01	0.0005	P	17.8
5	☐	125.000	115.819	190.13	0.0011	P	11.2
6	☐	250.000	246.211	404.95	0.0023	P	6.4
7	☐	500.000	488.639	798.80	0.0046	P	4.1
8	☐	1000.000	1007.850	1608.13	0.0095	P	4.2
9	☐			1.85	0.0000	P	100.

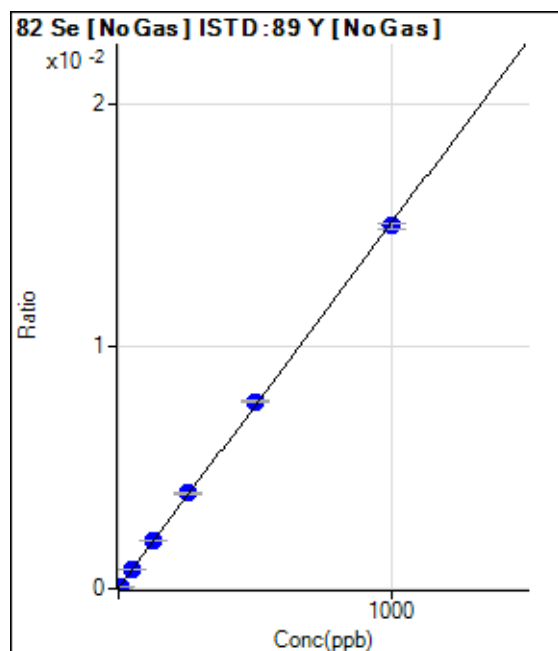
$$y = 9.3739E-006 * x + 7.1465E-006$$

$$R = 0.9999$$

$$DL = 3.961$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.91	0.0000	P	6.7
2	☐	0.500	0.440	225.27	0.0000	P	15.1
3	☐	5.000	5.035	682.87	0.0001	P	3.8
4	☐	50.000	51.761	5111.80	0.0008	P	5.3
5	☐	125.000	128.713	13268.51	0.0020	P	2.1
6	☐	250.000	259.803	26319.88	0.0039	P	1.9
7	☐	500.000	510.315	53238.12	0.0077	P	1.1
8	☐	1000.000	991.840	104120.42	0.0150	P	1.4
9	☐			291.63	0.0000	P	5.9

$$y = 1.5058E-005 * x + 2.7431E-005$$

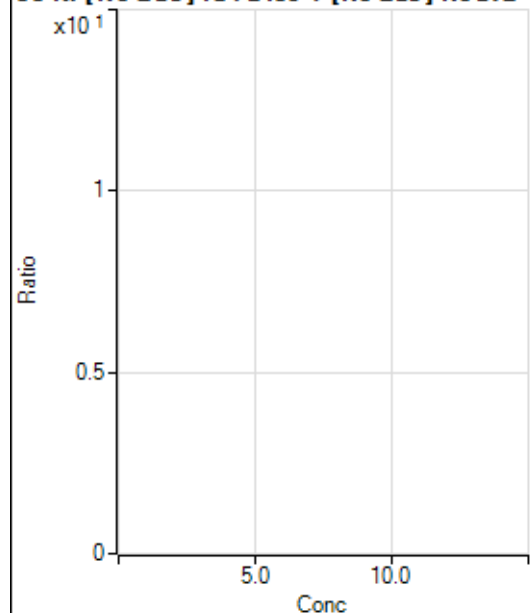
$$R = 0.9999$$

$$DL = 0.3674$$

Weight: <None>

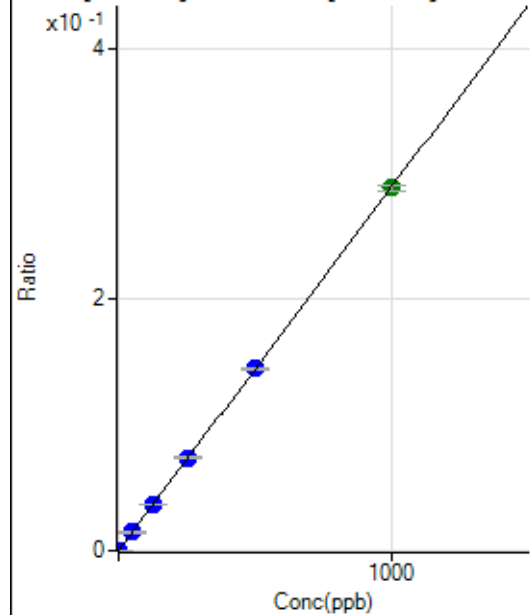
Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			362.23	0.0001	P	4.6
2	☐			395.57	0.0001	P	11.0
3	☐			335.57	0.0001	P	11.4
4	☐			323.35	0.0001	P	3.5
5	☐			370.01	0.0001	P	14.6
6	☐			370.01	0.0001	P	6.5
7	☐			366.68	0.0001	P	12.4
8	☐			405.57	0.0001	P	1.8
9	☐			356.68	0.0001	P	9.9

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	577.82	0.0001	P	8.3
2	☐	0.100	0.090	741.72	0.0001	P	16.3
3	☐	1.000	0.996	2475.34	0.0004	P	1.4
4	☐	50.000	50.680	93459.04	0.0147	P	3.8
5	☐	125.000	125.824	246204.24	0.0365	P	1.5
6	☐	250.000	255.963	495071.23	0.0741	P	2.0
7	☐	500.000	501.154	1001031.60	0.1450	P	1.4
8	☐	1000.000	997.795	2008439.52	0.2886	A	1.3
9	☐			9826.23	0.0015	P	2.2

$$y = 2.8917E-004 * x + 8.6211E-005$$

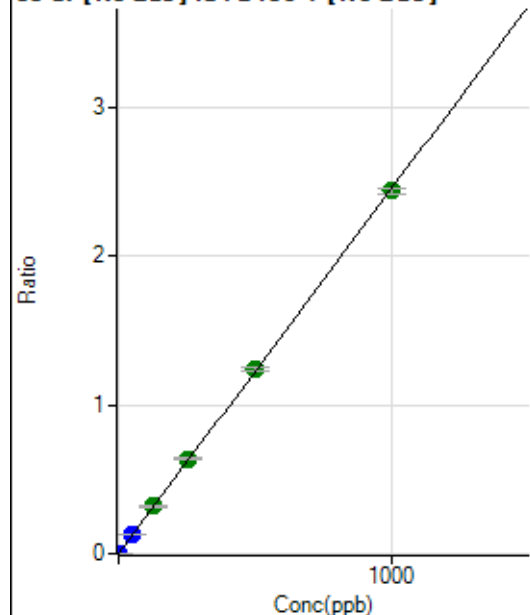
$$R = 1.0000$$

$$DL = 0.07411$$

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	472.25	0.0001	P	5.0
2	☐	0.100	0.110	2253.06	0.0003	P	7.1
3	☐	1.000	1.030	17180.93	0.0026	P	0.8
4	☐	50.000	51.947	809084.60	0.1276	P	3.4
5	☐	125.000	129.281	2142749.87	0.3174	A	0.7
6	☐	250.000	258.954	4247103.87	0.6357	A	1.6
7	☐	500.000	506.162	8577419.90	1.2424	A	1.2
8	☐	1000.000	994.048	16979440.83	2.4400	A	1.3
9	☐			77361.25	0.0116	P	1.4

$$y = 0.0025 * x + 7.0437E-005$$

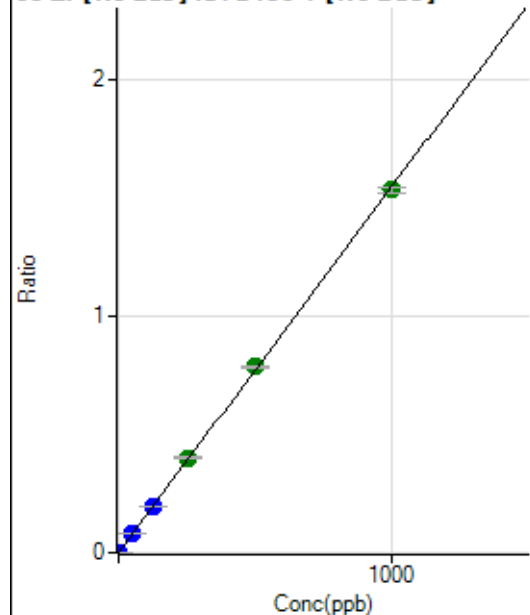
$$R = 0.9999$$

$$DL = 0.004302$$

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	680.61	0.0001	P	7.0
2	☐	0.100	0.083	1514.05	0.0002	P	12.9
3	☐	1.000	0.956	10423.87	0.0016	P	3.8
4	☐	50.000	50.790	497525.56	0.0785	P	3.3
5	☐	125.000	127.269	1326081.07	0.1964	P	1.1
6	☐	250.000	259.789	2678312.08	0.4009	A	1.4
7	☐	500.000	509.681	5428716.74	0.7863	A	0.9
8	☐	1000.000	992.389	10653802.32	1.5310	A	1.4
9	☐			3333.90	0.0005	P	3.6

$$y = 0.0015 * x + 1.0151E-004$$

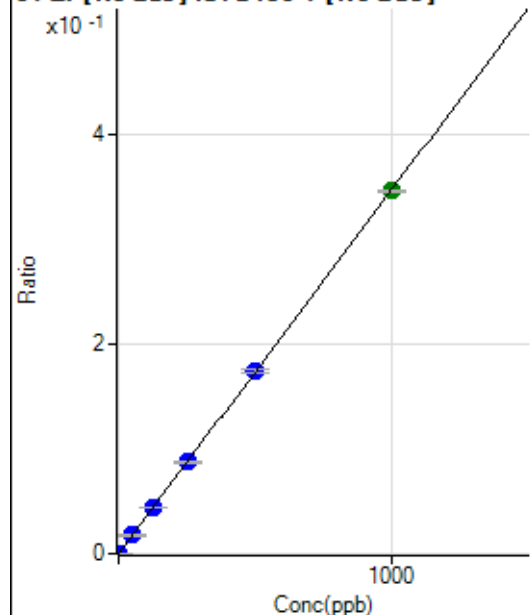
$$R = 0.9999$$

$$DL = 0.01378$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	130.56	0.0000	P	13.2
2	☐	0.100	0.094	344.46	0.0001	P	19.4
3	☐	1.000	0.886	2158.61	0.0003	P	0.3
4	☐	50.000	50.382	110793.22	0.0175	P	4.3
5	☐	125.000	125.095	292798.73	0.0434	P	0.8
6	☐	250.000	252.675	585182.26	0.0876	P	1.4
7	☐	500.000	503.274	1204150.63	0.1744	P	1.6
8	☐	1000.000	997.663	2406165.12	0.3458	A	0.8
9	☐			716.72	0.0001	P	14.3

$$y = 3.4655\text{E-}004 * x + 1.9474\text{E-}005$$

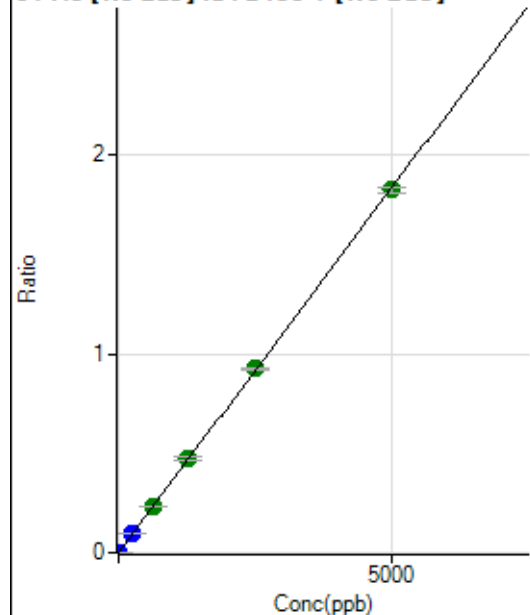
$$R = 1.0000$$

$$DL = 0.02221$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	305.57	0.0000	P	21.7
2	☐	0.500	0.497	1505.71	0.0002	P	8.9
3	☐	5.000	5.030	12514.62	0.0019	P	2.9
4	☐	250.000	256.387	597070.54	0.0942	P	4.5
5	☐	625.000	637.584	1580992.89	0.2342	A	2.4
6	☐	1250.000	1294.537	3176446.04	0.4755	A	2.5
7	☐	2500.000	2523.531	6398709.78	0.9268	A	1.1
8	☐	5000.000	4975.208	12715592.73	1.8272	A	1.4
9	☐			18332.45	0.0027	P	2.7

$$y = 3.6726\text{E-}004 * x + 4.5561\text{E-}005$$

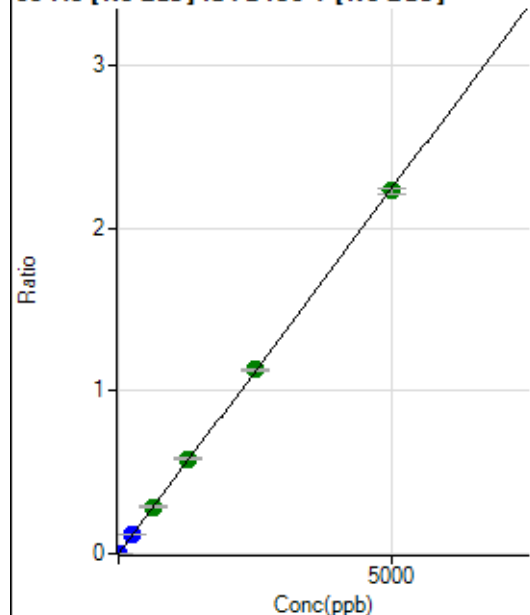
$$R = 0.9999$$

$$DL = 0.08069$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	147.23	0.0000	P	3.3
2	☐	0.500	0.461	1511.27	0.0002	P	6.3
3	☐	5.000	5.065	15150.80	0.0023	P	0.2
4	☐	250.000	256.011	727127.06	0.1147	P	4.2
5	☐	625.000	643.800	1947048.48	0.2884	A	1.3
6	☐	1250.000	1303.135	3899989.97	0.5838	A	2.2
7	☐	2500.000	2525.242	7809597.83	1.1312	A	1.2
8	☐	5000.000	4971.444	15497224.31	2.2270	A	1.5
9	☐			30387.72	0.0046	P	1.7

$$y = 4.4795\text{E-}004 * x + 2.1963\text{E-}005$$

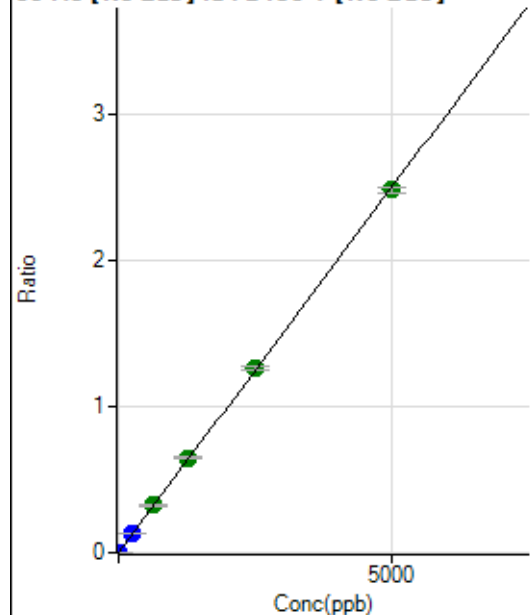
$$R = 0.9999$$

$$DL = 0.004897$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	238.90	0.0000	P	26.7
2	☐	0.500	0.462	1758.53	0.0003	P	5.7
3	☐	5.000	4.874	16316.02	0.0025	P	3.3
4	☐	250.000	255.386	807837.38	0.1274	P	3.6
5	☐	625.000	645.664	2174026.87	0.3220	A	1.5
6	☐	1250.000	1300.013	4332010.04	0.6484	A	1.3
7	☐	2500.000	2530.684	8712604.19	1.2621	A	1.9
8	☐	5000.000	4969.302	17245368.44	2.4783	A	1.8
9	☐			33776.61	0.0051	P	2.5

$$y = 4.9871\text{E-}004 * x + 3.5660\text{E-}005$$

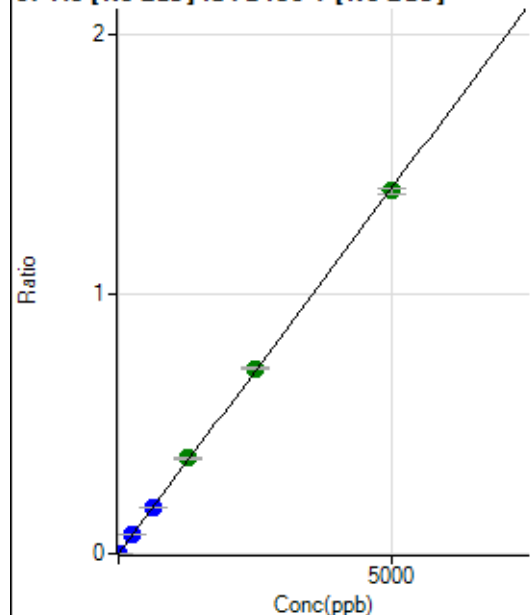
$$R = 0.9999$$

$$DL = 0.05732$$

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	122.23	0.0000	P	39.7
2	☐	0.500	0.549	1141.77	0.0002	P	8.4
3	☐	5.000	5.072	9573.25	0.0014	P	2.2
4	☐	250.000	255.303	456505.13	0.0720	P	3.1
5	☐	625.000	630.397	1199613.81	0.1777	P	1.3
6	☐	1250.000	1313.452	2473491.57	0.3702	A	1.7
7	☐	2500.000	2534.259	4931298.55	0.7143	A	1.3
8	☐	5000.000	4966.068	9740220.96	1.3997	A	1.7
9	☐			18594.02	0.0028	P	4.8

$$y = 2.8185E-004 * x + 1.8217E-005$$

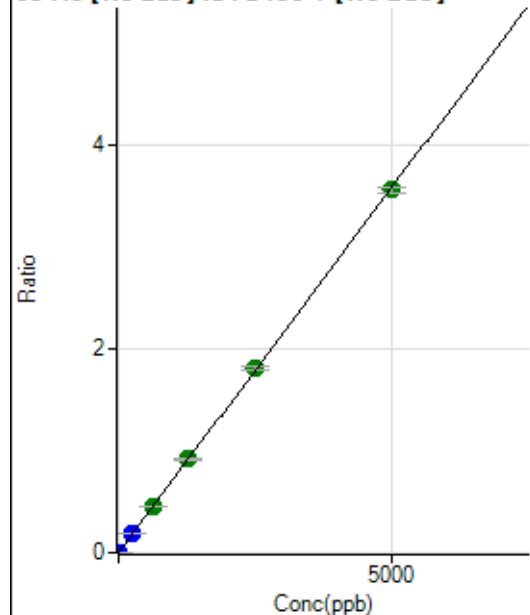
$$R = 0.9999$$

$$DL = 0.07707$$

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	244.46	0.0000	P	33.8
2	☐	0.500	0.477	2500.36	0.0004	P	6.3
3	☐	5.000	5.013	23977.71	0.0036	P	1.9
4	☐	250.000	257.560	1169827.16	0.1845	P	3.7
5	☐	625.000	638.844	3088751.63	0.4575	A	0.4
6	☐	1250.000	1286.877	6156337.81	0.9216	A	2.7
7	☐	2500.000	2533.622	12524936.39	1.8143	A	1.9
8	☐	5000.000	4971.861	24775289.10	3.5603	A	1.9
9	☐			47916.28	0.0072	P	0.7

$$y = 7.1609E-004 * x + 3.6433E-005$$

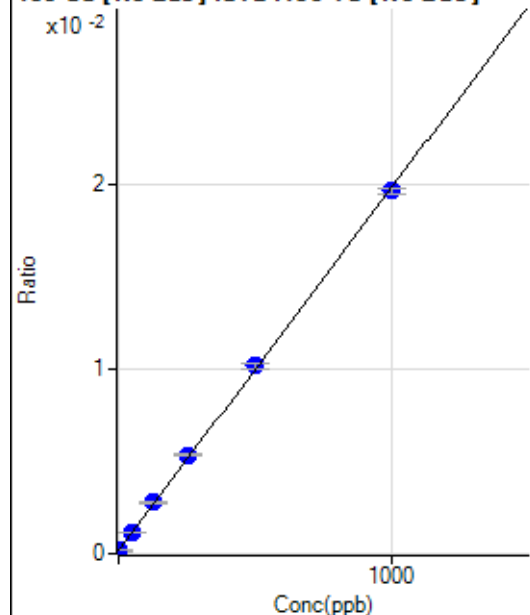
$$R = 0.9999$$

$$DL = 0.05157$$

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	1355.69	0.0002	P	4.2
2	☐	0.100	-0.347	1266.79	0.0002	P	6.2
3	☐	1.000	1.448	1558.51	0.0002	P	7.6
4	☐	50.000	51.798	9428.73	0.0012	P	1.7
5	☐	125.000	133.039	23265.47	0.0028	P	1.7
6	☐	250.000	262.509	44627.90	0.0053	P	2.0
7	☐	500.000	508.616	88992.95	0.0102	P	2.3
8	☐	1000.000	991.469	173975.91	0.0197	P	1.3
9	☐			1494.60	0.0002	P	7.3

$$y = 1.9689\text{E-}005 * x + 1.6077\text{E-}004$$

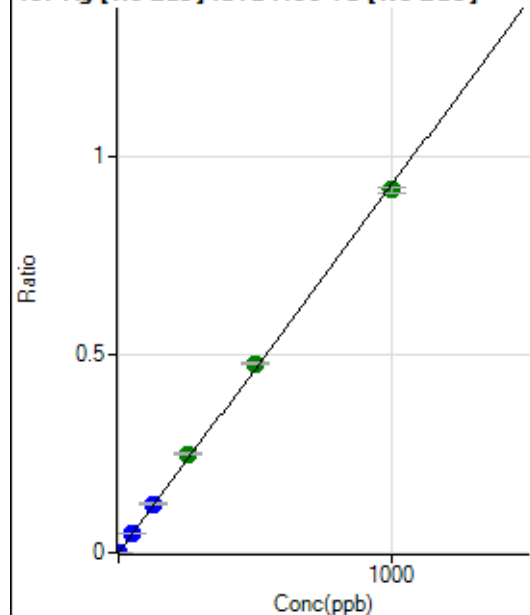
$$R = 0.9998$$

$$DL = 1.027$$

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	100.00	0.0000	P	22.0
2	☐	0.100	0.104	891.74	0.0001	P	7.6
3	☐	1.000	1.029	7944.39	0.0010	P	2.8
4	☐	50.000	53.457	395496.70	0.0495	P	3.0
5	☐	125.000	133.153	1032671.93	0.1234	P	0.8
6	☐	250.000	267.463	2075502.35	0.2478	A	2.0
7	☐	500.000	514.728	4172034.47	0.4770	A	1.2
8	☐	1000.000	987.078	8084981.00	0.9146	A	1.4
9	☐			1100.10	0.0001	P	16.2

$$y = 9.2661\text{E-}004 * x + 1.1860\text{E-}005$$

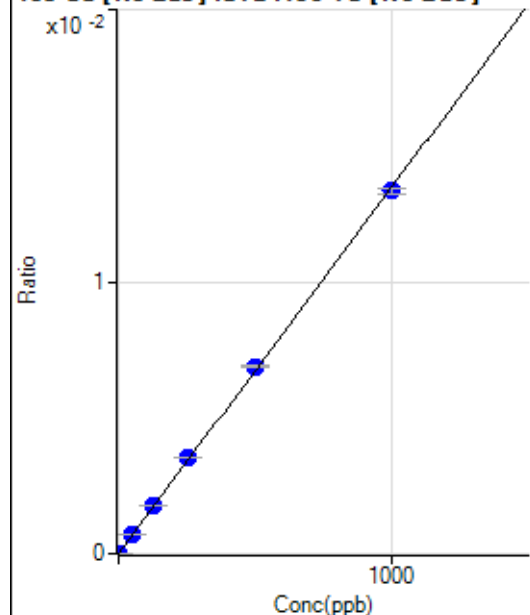
$$R = 0.9997$$

$$DL = 0.008464$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	8.33	0.0000	P	86.6
2	☐	0.100	0.128	22.22	0.0000	P	47.6
3	☐	1.000	1.192	140.28	0.0000	P	1.9
4	☐	50.000	52.381	5634.63	0.0007	P	4.6
5	☐	125.000	131.551	14834.81	0.0018	P	1.0
6	☐	250.000	262.405	29605.00	0.0035	P	1.2
7	☐	500.000	510.185	60108.49	0.0069	P	1.2
8	☐	1000.000	990.868	117964.30	0.0133	P	1.6
9	☐			55.56	0.0000	P	29.0

$$y = 1.3467\text{E-}005 * x + 9.8565\text{E-}007$$

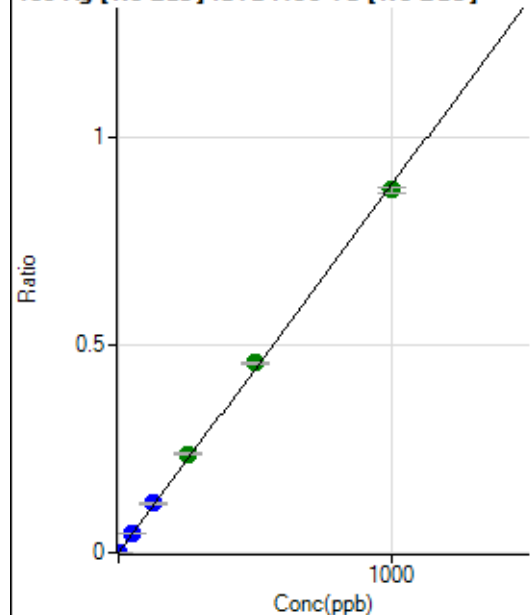
$$R = 0.9998$$

$$DL = 0.1902$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	55.56	0.0000	P	23.0
2	☐	0.100	0.104	811.17	0.0001	P	8.4
3	☐	1.000	1.029	7552.47	0.0009	P	2.0
4	☐	50.000	53.187	375857.87	0.0471	P	3.0
5	☐	125.000	133.521	989172.84	0.1182	P	1.5
6	☐	250.000	266.895	1978503.93	0.2363	A	1.9
7	☐	500.000	515.387	3990753.91	0.4562	A	1.0
8	☐	1000.000	986.859	7721952.60	0.8736	A	1.4
9	☐			1072.32	0.0001	P	5.4

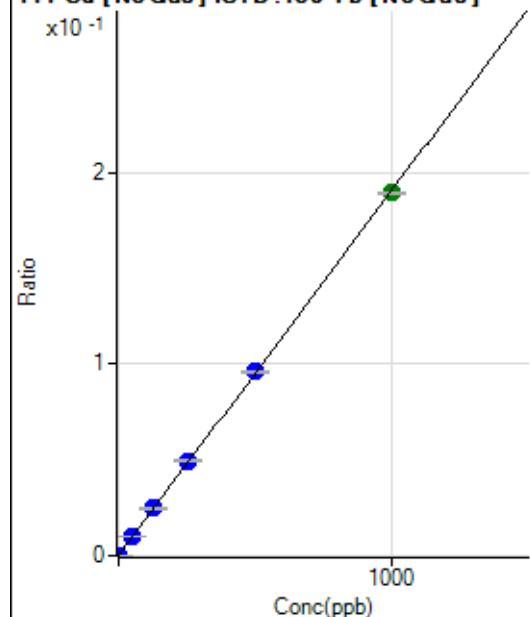
$$y = 8.8521\text{E-}004 * x + 6.5903\text{E-}006$$

$$R = 0.9997$$

$$DL = 0.005142$$

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	947.32	0.0001	P	3.3
2	☐	0.100	0.073	1039.26	0.0001	P	5.7
3	☐	1.000	1.072	2602.61	0.0003	P	1.7
4	☐	50.000	51.912	79658.30	0.0100	P	3.1
5	☐	125.000	129.307	206650.81	0.0247	P	1.1
6	☐	250.000	260.414	415522.18	0.0496	P	1.2
7	☐	500.000	504.698	840175.88	0.0961	P	1.4
8	☐	1000.000	994.413	1672032.45	0.1891	A	0.6
9	☐			1454.57	0.0002	P	9.5

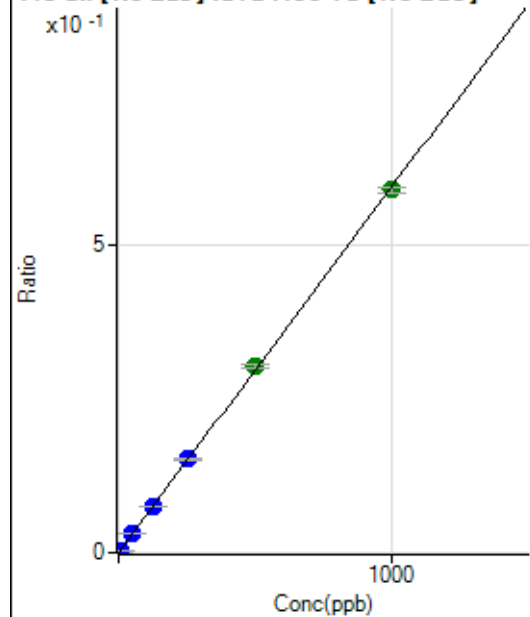
$$y = 1.9010E-004 * x + 1.1235E-004$$

$$R = 0.9999$$

$$DL = 0.05782$$

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	2022.47	0.0002	P	8.4
2	☐	0.500	0.513	4475.96	0.0005	P	5.5
3	☐	5.000	5.064	26702.72	0.0032	P	3.2
4	☐	50.000	51.055	243787.01	0.0305	P	2.6
5	☐	125.000	127.568	635510.48	0.0759	P	1.4
6	☐	250.000	256.878	1278560.20	0.1527	P	1.6
7	☐	500.000	510.001	2649294.85	0.3029	A	1.5
8	☐	1000.000	992.906	5210461.62	0.5894	A	1.3
9	☐			13551.96	0.0016	P	2.2

$$y = 5.9341E-004 * x + 2.3987E-004$$

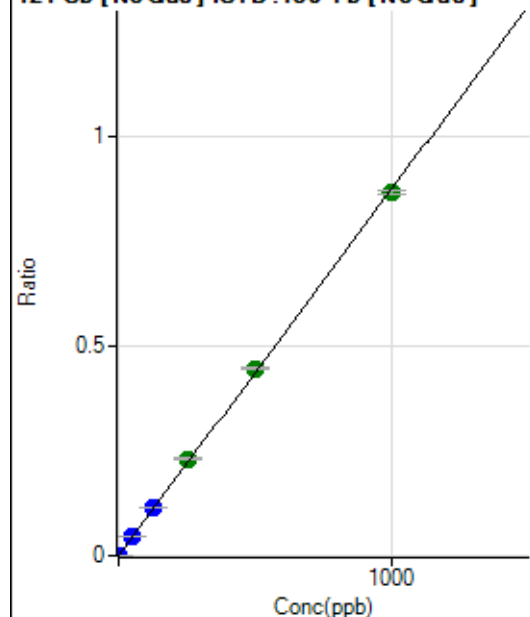
$$R = 0.9999$$

$$DL = 0.1022$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	177.79	0.0000	P	17.4
2	☐	0.200	0.212	1697.41	0.0002	P	6.3
3	☐	2.000	2.012	14661.49	0.0018	P	4.5
4	☐	50.000	50.553	353440.59	0.0443	P	2.4
5	☐	125.000	129.586	949256.55	0.1134	P	1.1
6	☐	250.000	263.406	1930599.63	0.2305	A	1.8
7	☐	500.000	511.663	3917133.42	0.4478	A	0.7
8	☐	1000.000	990.216	7660409.03	0.8666	A	1.2
9	☐			21570.94	0.0025	P	2.8

$$y = 8.7515\text{E-}004 * x + 2.1077\text{E-}005$$

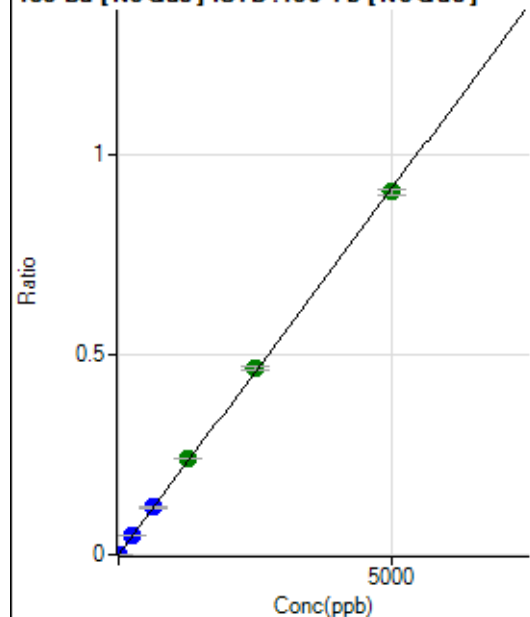
$$R = 0.9998$$

$$DL = 0.01258$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.67	0.0000	P	33.9
2	☐	1.000	1.058	1636.30	0.0002	P	1.3
3	☐	10.000	10.270	15540.43	0.0019	P	2.4
4	☐	250.000	256.735	375702.33	0.0471	P	3.3
5	☐	625.000	647.160	992885.80	0.1186	P	1.8
6	☐	1250.000	1311.690	2013812.13	0.2405	A	1.6
7	☐	2500.000	2546.406	4083484.16	0.4668	A	1.5
8	☐	5000.000	4958.267	8034938.03	0.9090	A	1.6
9	☐			1891.90	0.0002	P	11.9

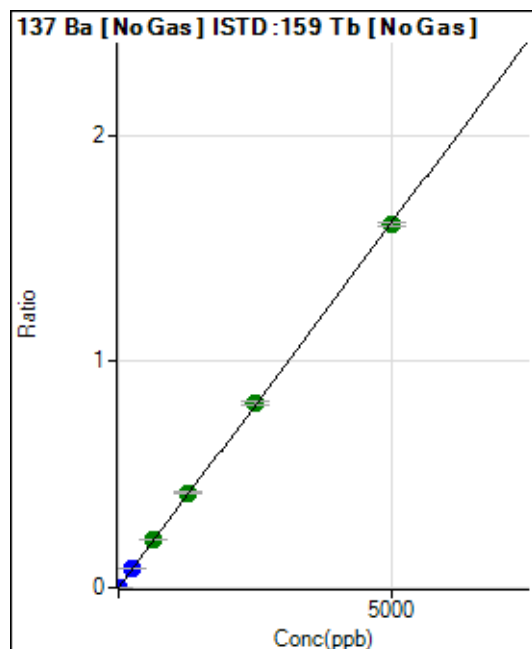
$$y = 1.8333\text{E-}004 * x + 4.9341\text{E-}006$$

$$R = 0.9998$$

$$DL = 0.02734$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	77.78	0.0000	P	45.1
2	☐	1.000	1.008	2750.42	0.0003	P	3.3
3	☐	10.000	9.938	26438.55	0.0032	P	1.2
4	☐	250.000	256.259	659379.24	0.0826	P	3.0
5	☐	625.000	651.919	1758359.48	0.2101	A	1.6
6	☐	1250.000	1299.965	3508408.46	0.4190	A	2.8
7	☐	2500.000	2523.739	7114529.59	0.8134	A	1.7
8	☐	5000.000	4971.962	14164778.27	1.6024	A	1.2
9	☐			3228.32	0.0004	P	6.9

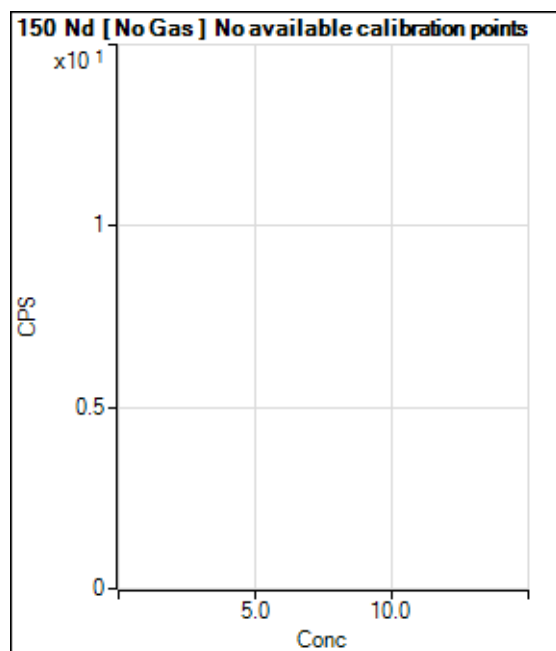
$$y = 3.2229\text{E-}004 * x + 9.2352\text{E-}006$$

$$R = 0.9999$$

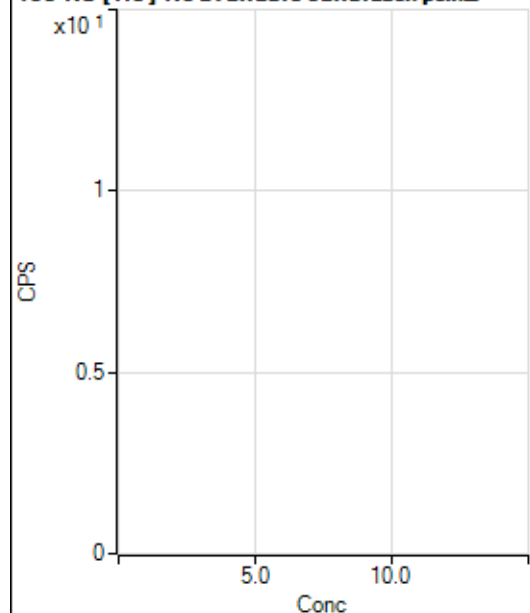
$$DL = 0.03876$$

Weight: <None>

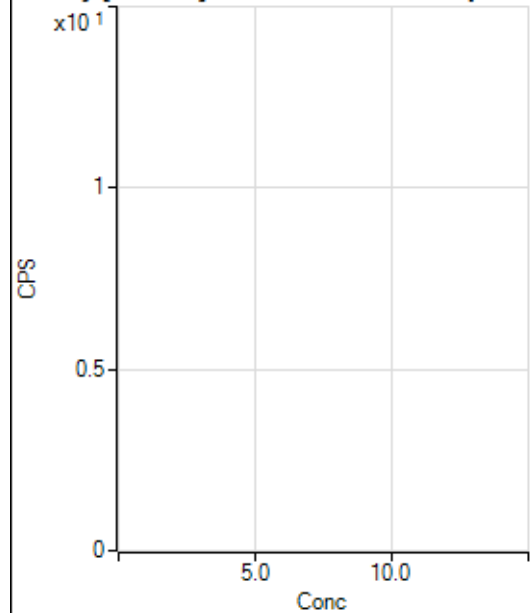
Min Conc: 0



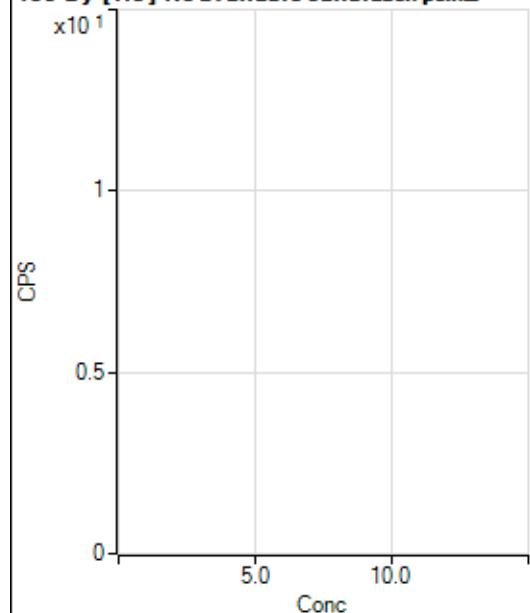
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.45		P	86.6
2	☐			15.55		P	24.8
3	☐			8.89		P	173.
4	☐			35.56		P	10.8
5	☐			51.11		P	41.9
6	☐			75.56		P	13.5
7	☐			186.68		P	21.7
8	☐			331.13		P	18.3
9	☐			104.45		P	7.4

150 Nd [He] No available calibration points

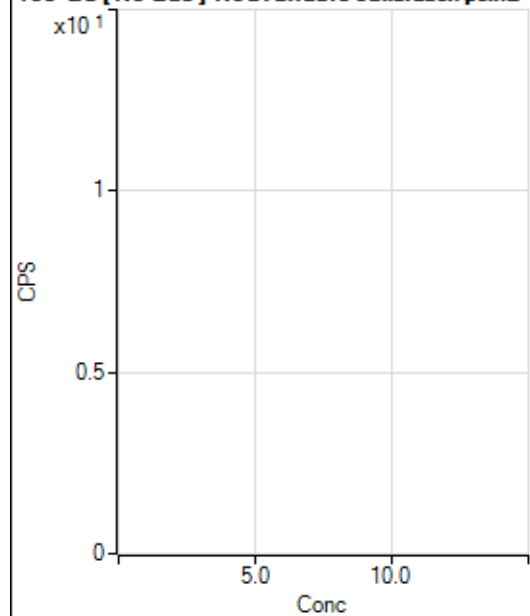
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐			0.00		P	
3	☐			0.00		P	
4	☐			0.00		P	
5	☐			0.00		P	
6	☐			0.00		P	
7	☐			1.11		P	173.
8	☐			8.89		P	94.4
9	☐			15.56		P	61.9

156 Dy [No Gas] No available calibration points

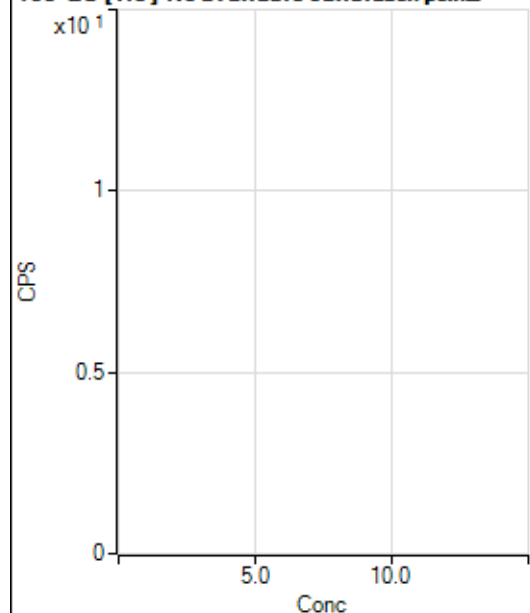
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.89		P	34.7
2	☐			19.45		P	89.2
3	☐			8.33		P	0.0
4	☐			19.44		P	49.5
5	☐			22.22		P	57.3
6	☐			38.89		P	49.5
7	☐			55.56		P	8.7
8	☐			136.12		P	7.1
9	☐			100.01		P	46.4

156 Dy [He] No available calibration points

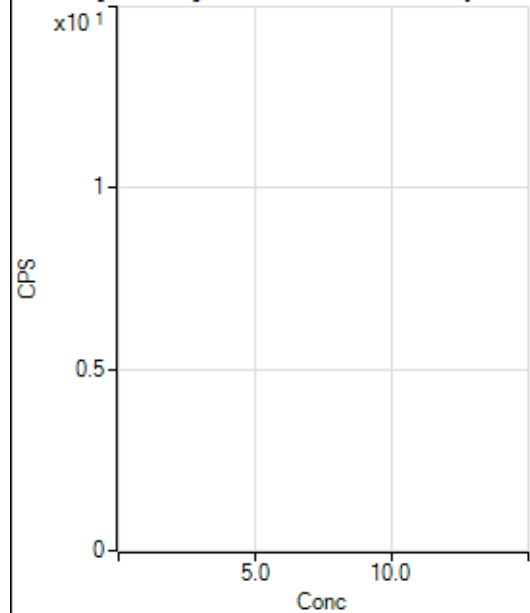
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	43.4
2	☐			1.11		P	173.
3	☐			1.11		P	173.
4	☐			3.33		P	100.
5	☐			1.11		P	173.
6	☐			1.11		P	173.
7	☐			4.44		P	43.4
8	☐			16.67		P	20.0
9	☐			18.89		P	20.4

160 Gd [No Gas] Noavailable calibration poin_

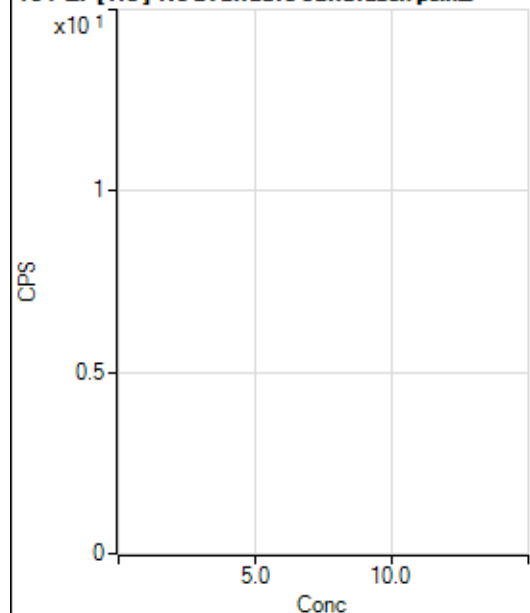
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			72.23		P	13.3
2	☐			69.45		P	25.0
3	☐			63.89		P	19.9
4	☐			38.89		P	44.6
5	☐			77.78		P	16.4
6	☐			50.00		P	44.1
7	☐			97.23		P	13.1
8	☐			100.01		P	22.0
9	☐			88.89		P	14.3

160 Gd [He] No available calibration points

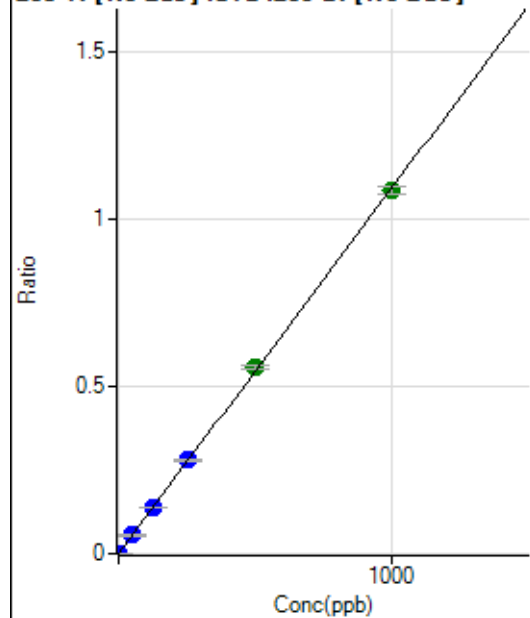
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.55		P	69.3
2	☐			6.67		P	50.0
3	☐			6.67		P	50.0
4	☐			11.11		P	45.8
5	☐			6.67		P	100.
6	☐			10.00		P	88.2
7	☐			10.00		P	33.3
8	☐			17.78		P	39.0
9	☐			12.22		P	78.7

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			44.44		P	60.3
2	☐			33.34		P	43.3
3	☐			36.11		P	74.2
4	☐			41.67		P	40.0
5	☐			30.56		P	31.5
6	☐			47.23		P	20.4
7	☐			41.67		P	34.7
8	☐			38.89		P	53.9
9	☐			55.56		P	22.9

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	114.
2	☐			7.78		P	65.5
3	☐			4.44		P	43.4
4	☐			3.33		P	100.
5	☐			4.45		P	86.6
6	☐			7.78		P	24.7
7	☐			4.45		P	86.6
8	☐			6.67		P	50.0
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	213.90	0.0000	P	6.7
2	☐	0.100	0.081	686.17	0.0001	P	8.6
3	☐	1.000	1.000	6079.53	0.0011	P	2.5
4	☐	50.000	50.156	283994.51	0.0547	P	3.3
5	☐	125.000	126.477	747645.67	0.1378	P	0.9
6	☐	250.000	255.354	1508936.83	0.2782	P	2.2
7	☐	500.000	510.063	3123685.75	0.5557	A	1.4
8	☐	1000.000	993.437	6137849.27	1.0823	A	2.0
9	☐			4111.96	0.0008	P	6.0

$$y = 0.0011 * x + 3.8853E-005$$

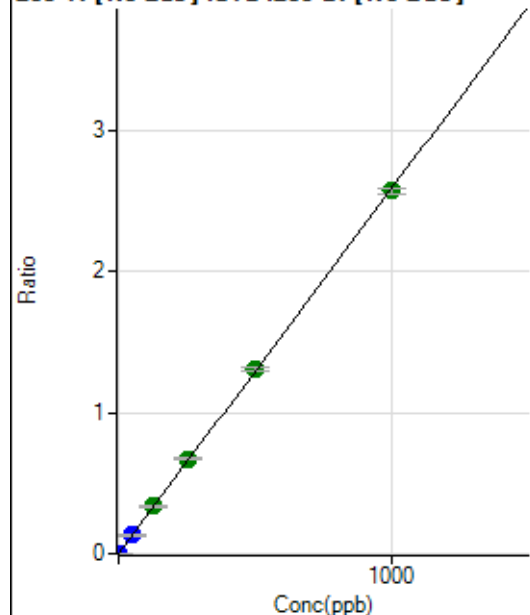
$$R = 0.9999$$

$$DL = 0.007163$$

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	447.25	0.0001	P	29.5
2	☐	0.100	0.105	1911.35	0.0004	P	2.6
3	☐	1.000	1.020	14659.04	0.0027	P	2.7
4	☐	50.000	50.396	677924.33	0.1305	P	2.6
5	☐	125.000	129.311	1815507.92	0.3347	A	1.2
6	☐	250.000	259.231	3638200.95	0.6708	A	2.4
7	☐	500.000	506.002	7360133.59	1.3093	A	1.5
8	☐	1000.000	994.132	14589459.70	2.5724	A	1.3
9	☐			10382.52	0.0020	P	2.9

$$y = 0.0026 * x + 8.1356E-005$$

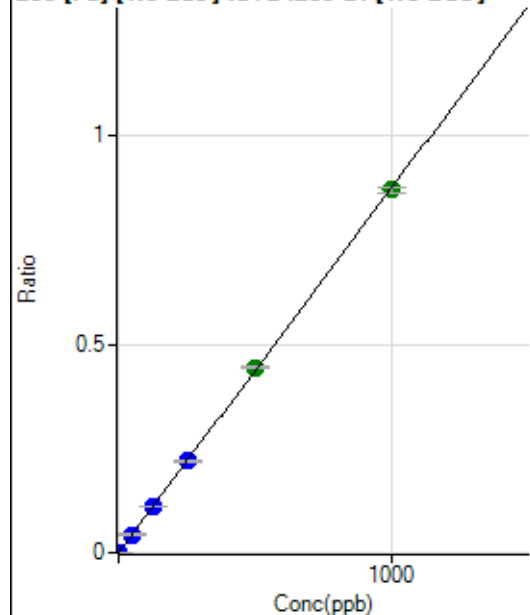
$$R = 0.9999$$

$$DL = 0.02785$$

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	324.09	0.0001	P	9.3
2	☐	0.100	0.090	742.64	0.0001	P	2.2
3	☐	1.000	1.053	5284.59	0.0010	P	1.7
4	☐	50.000	49.914	227293.36	0.0437	P	2.9
5	☐	125.000	126.102	599086.23	0.1104	P	0.4
6	☐	250.000	252.665	1199787.85	0.2212	P	2.2
7	☐	500.000	508.697	2503194.18	0.4453	A	1.8
8	☐	1000.000	994.852	4938907.52	0.8709	A	1.8
9	☐			28341.45	0.0054	P	2.2

$$y = 8.7530E-004 * x + 5.8922E-005$$

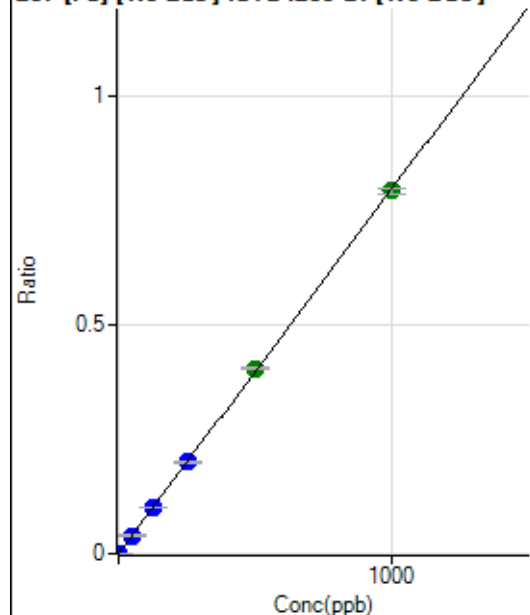
$$R = 0.9999$$

$$DL = 0.01873$$

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	259.27	0.0000	P	15.8
2	☐	0.100	0.096	666.70	0.0001	P	14.0
3	☐	1.000	0.981	4463.89	0.0008	P	3.8
4	☐	50.000	49.682	205795.40	0.0396	P	2.5
5	☐	125.000	125.243	541298.55	0.0998	P	0.3
6	☐	250.000	251.465	1086303.03	0.2003	P	2.3
7	☐	500.000	507.762	2273368.51	0.4044	A	0.6
8	☐	1000.000	995.738	4497339.16	0.7930	A	1.8
9	☐			23902.60	0.0046	P	0.8

$$y = 7.9634\text{E-}004 * x + 4.7191\text{E-}005$$

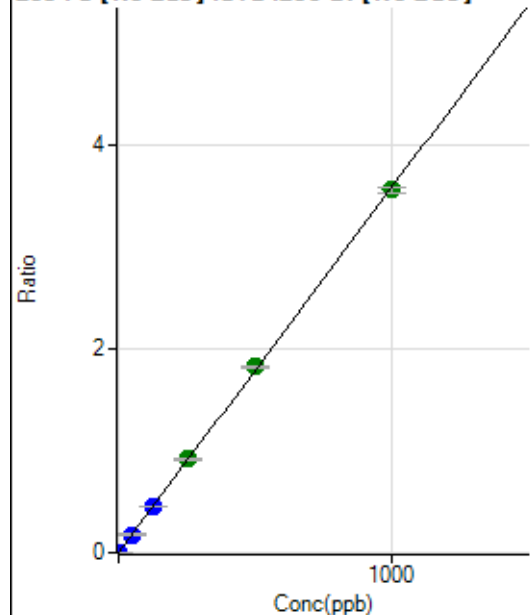
$$R = 1.0000$$

$$DL = 0.02816$$

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	1175.99	0.0002	P	11.0
2	☐	0.100	0.097	3035.43	0.0006	P	0.8
3	☐	1.000	1.004	20527.45	0.0038	P	1.3
4	☐	50.000	49.797	927155.29	0.1785	P	2.8
5	☐	125.000	125.325	2434837.52	0.4488	P	0.1
6	☐	250.000	256.140	4973872.04	0.9171	A	2.4
7	☐	500.000	508.687	10237354.36	1.8212	A	1.2
8	☐	1000.000	994.091	20183035.58	3.5587	A	1.7
9	☐			110219.14	0.0212	P	1.7

$$y = 0.0036 * x + 2.1389\text{E-}004$$

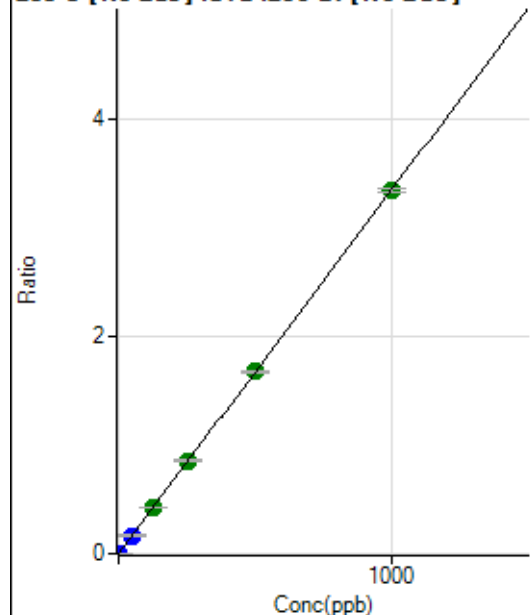
$$R = 0.9999$$

$$DL = 0.0198$$

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	113.89	0.0000	P	28.6
2	☐	0.100	0.103	1972.49	0.0004	P	7.3
3	☐	1.000	1.018	18433.93	0.0034	P	0.8
4	☐	50.000	49.918	866324.23	0.1667	P	2.5
5	☐	125.000	127.669	2313213.27	0.4264	A	1.0
6	☐	250.000	255.424	4626814.12	0.8531	A	2.4
7	☐	500.000	501.146	9408813.49	1.6738	A	1.3
8	☐	1000.000	997.741	18900700.60	3.3323	A	1.0
9	☐			2553.17	0.0005	P	9.5

$$y = 0.0033 * x + 2.0736E-005$$

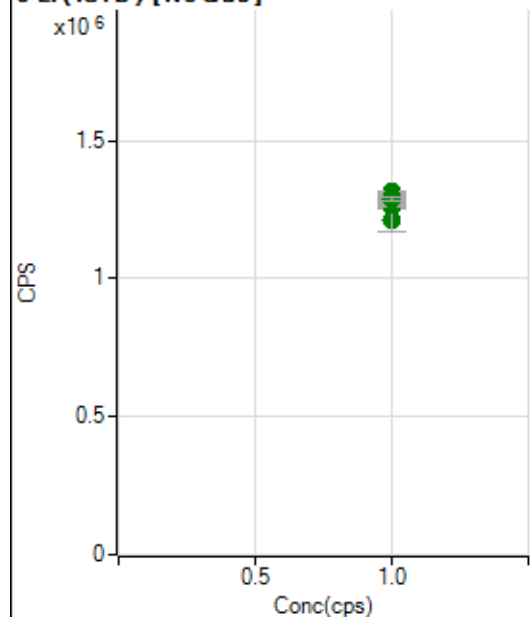
$$R = 1.0000$$

$$DL = 0.005326$$

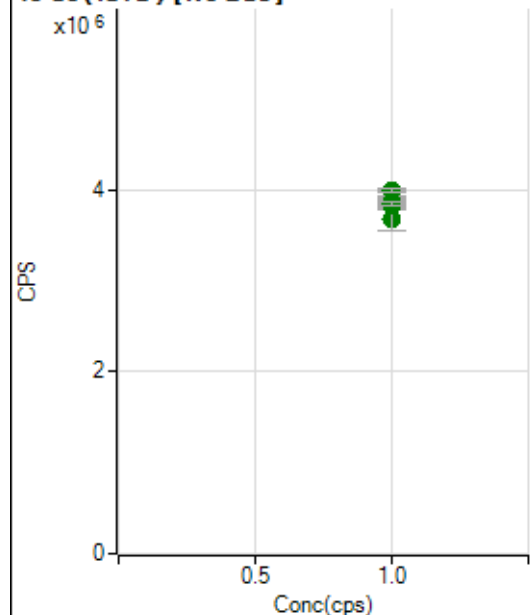
Weight: <None>

Min Conc: 0

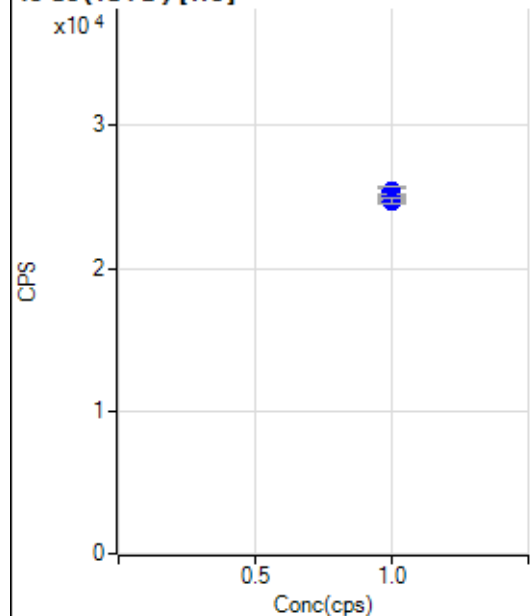
6 Li (ISTD) [No Gas]



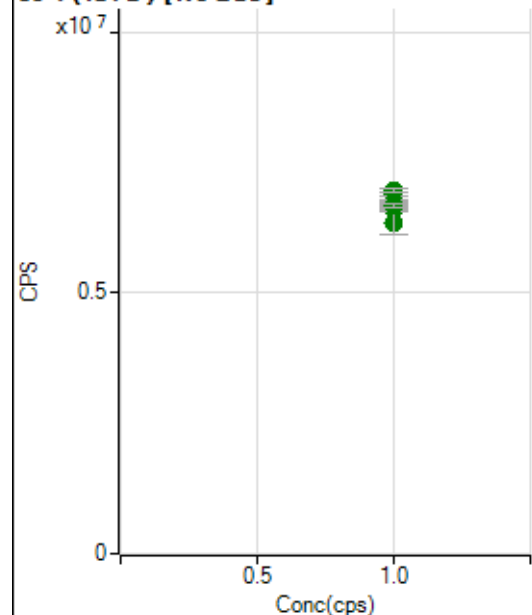
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1280536.73		A	1.7
2	☐	1.000		1262774.15		A	1.1
3	☐	1.000		1271483.31		A	0.3
4	☐	1.000		1211389.58		A	7.3
5	☐	1.000		1272620.58		A	0.4
6	☐	1.000		1266710.28		A	0.6
7	☐	1.000		1313897.85		A	0.7
8	☐	1.000		1297681.47		A	0.8
9	☐	1.000		1287714.76		A	1.4

45 Sc (ISTD) [No Gas]

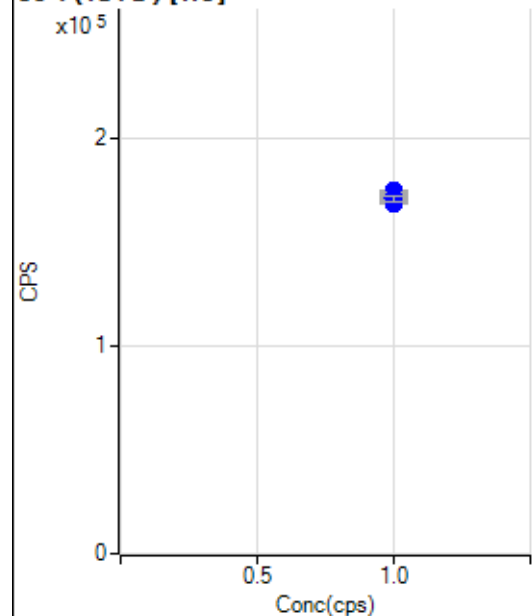
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3888856.86		A	1.4
2	☐	1.000		3836965.58		A	0.4
3	☐	1.000		3824289.24		A	1.6
4	☐	1.000		3679518.66		A	7.1
5	☐	1.000		3883005.21		A	0.8
6	☐	1.000		3826020.09		A	1.1
7	☐	1.000		3966006.95		A	1.6
8	☐	1.000		3989021.18		A	0.9
9	☐	1.000		3854747.92		A	1.0

45 Sc (ISTD) [He]

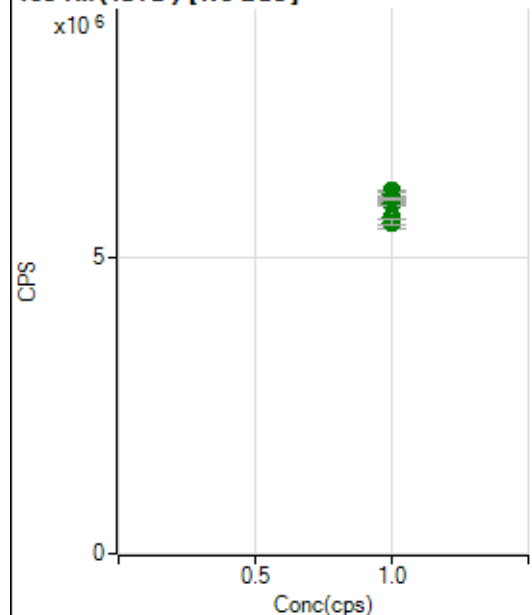
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		24882.21		P	2.7
2	☐	1.000		24913.40		P	1.7
3	☐	1.000		24680.78		P	0.6
4	☐	1.000		25016.89		P	0.8
5	☐	1.000		25343.02		P	1.9
6	☐	1.000		25432.14		P	2.5
7	☐	1.000		25083.63		P	1.1
8	☐	1.000		24605.04		P	1.1
9	☐	1.000		24706.40		P	1.4

89 Y (ISTD) [No Gas]

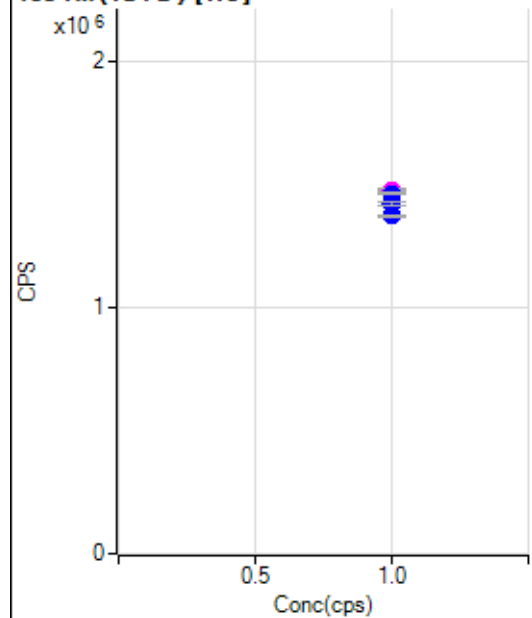
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6703704.42		A	0.4
2	☐	1.000		6606423.72		A	1.2
3	☐	1.000		6613237.89		A	1.5
4	☐	1.000		6352347.20		A	7.7
5	☐	1.000		6751433.72		A	0.9
6	☐	1.000		6682541.71		A	1.8
7	☐	1.000		6904316.43		A	1.2
8	☐	1.000		6959512.33		A	1.0
9	☐	1.000		6674984.20		A	1.5

89 Y (ISTD) [He]

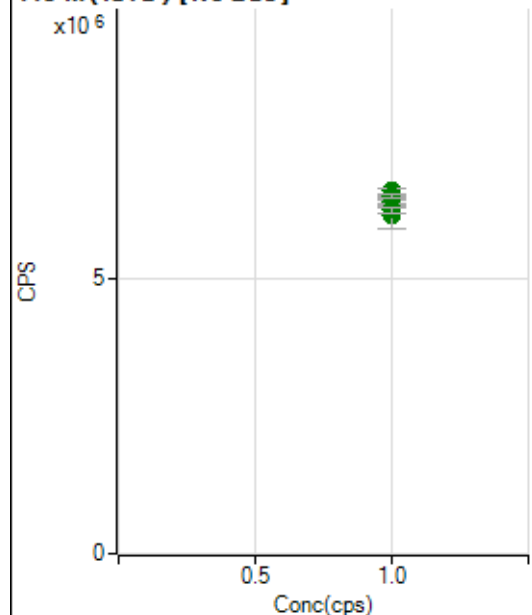
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		170170.39		P	1.3
2	☐	1.000		169045.19		P	0.7
3	☐	1.000		171059.81		P	0.8
4	☐	1.000		171585.91		P	0.8
5	☐	1.000		173951.31		P	0.2
6	☐	1.000		174920.89		P	0.4
7	☐	1.000		174145.87		P	0.6
8	☐	1.000		170091.67		P	1.0
9	☐	1.000		171246.42		P	1.6

103 Rh (ISTD) [No Gas]

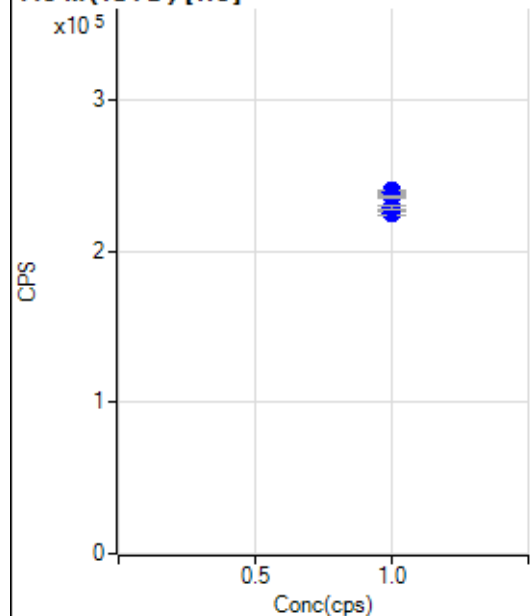
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6134892.72		A	0.8
2	☐	1.000		5953587.81		A	1.3
3	☐	1.000		5969345.14		A	1.4
4	☐	1.000		5699529.25		A	7.5
5	☐	1.000		6013669.49		A	0.5
6	☐	1.000		5926014.45		A	1.0
7	☐	1.000		6078328.52		A	1.4
8	☐	1.000		6002812.98		A	0.8
9	☐	1.000		5600766.01		A	1.5

103 Rh (ISTD) [He]

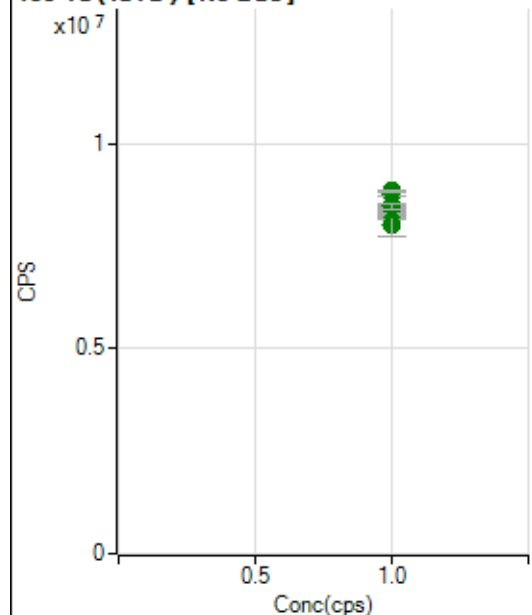
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1464211.65		P	0.8
2	☐	1.000		1467391.30		P	0.3
3	☐	1.000		1464666.05		P	1.0
4	☐	1.000		1467534.59		P	0.7
5	☐	1.000		1473681.11		P	0.0
6	☐	1.000		1474176.30		M	0.9
7	☐	1.000		1461646.75		P	0.5
8	☐	1.000		1422101.46		P	0.9
9	☐	1.000		1372114.02		P	0.7

115 In (ISTD) [No Gas]

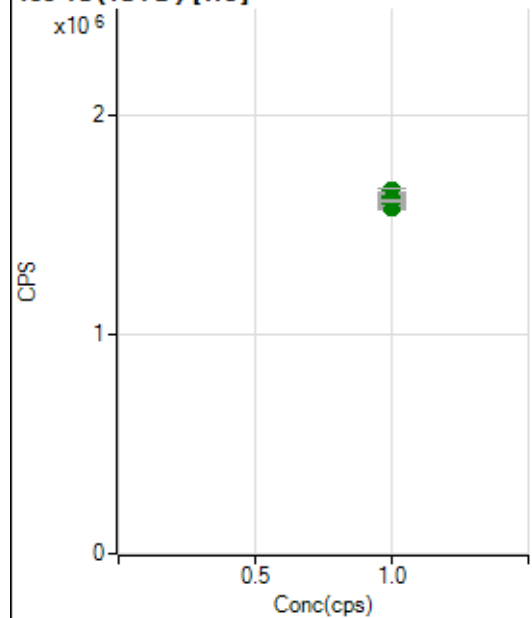
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6513291.76		A	0.6
2	☐	1.000		6412278.77		A	0.9
3	☐	1.000		6405951.73		A	1.3
4	☐	1.000		6170831.50		A	7.4
5	☐	1.000		6535941.57		A	0.8
6	☐	1.000		6406365.80		A	1.1
7	☐	1.000		6617859.15		A	1.5
8	☐	1.000		6527831.64		A	1.2
9	☐	1.000		6267447.68		A	1.5

115 In (ISTD) [He]

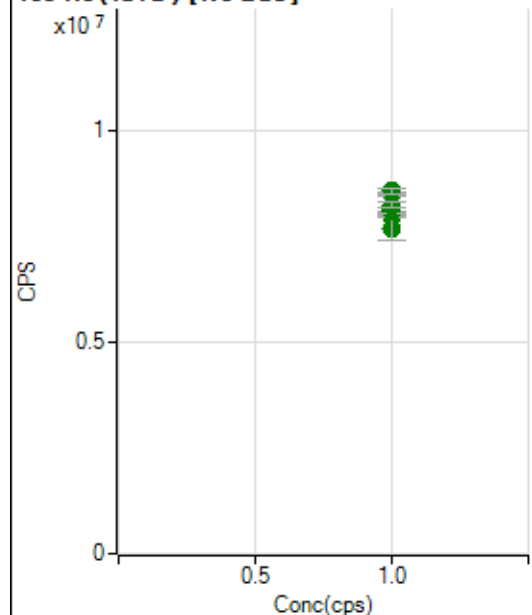
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		236986.34		P	0.5
2	☐	1.000		236437.12		P	0.3
3	☐	1.000		236777.54		P	1.2
4	☐	1.000		237803.10		P	0.7
5	☐	1.000		239750.36		P	0.7
6	☐	1.000		238479.41		P	1.2
7	☐	1.000		236175.33		P	0.5
8	☐	1.000		224498.33		P	1.2
9	☐	1.000		228838.28		P	1.0

159 Tb (ISTD) [No Gas]

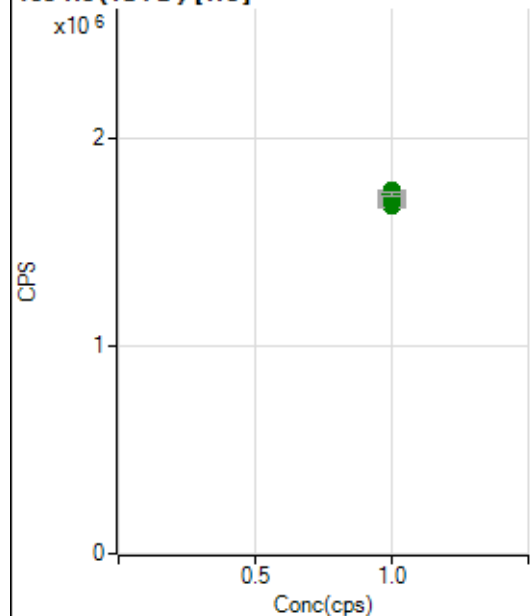
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8431075.92		A	0.7
2	☐	1.000		8228508.97		A	0.5
3	☐	1.000		8231515.43		A	1.4
4	☐	1.000		7991996.13		A	6.5
5	☐	1.000		8369350.85		A	1.0
6	☐	1.000		8375788.63		A	1.6
7	☐	1.000		8747693.69		A	0.9
8	☐	1.000		8840120.77		A	0.9
9	☐	1.000		8467628.21		A	1.6

159 Tb (ISTD) [He]

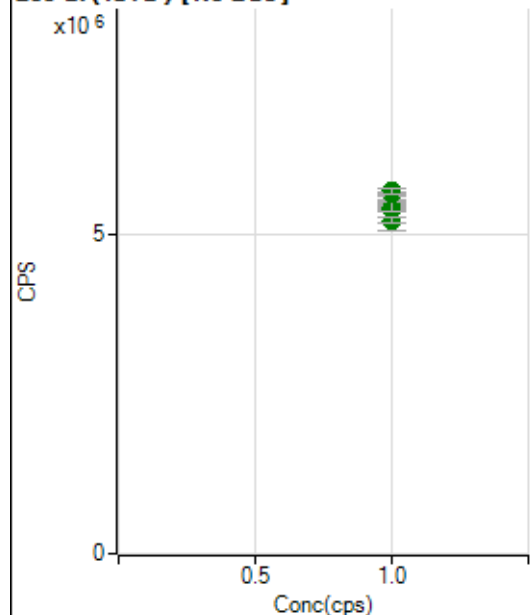
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1601692.30		A	1.9
2	☐	1.000		1576461.71		A	0.9
3	☐	1.000		1588768.67		A	1.1
4	☐	1.000		1596695.48		A	1.3
5	☐	1.000		1622934.86		A	0.8
6	☐	1.000		1633595.17		A	1.7
7	☐	1.000		1654184.92		A	1.1
8	☐	1.000		1622907.56		A	1.8
9	☐	1.000		1611925.01		A	0.5

165 Ho (ISTD) [No Gas]

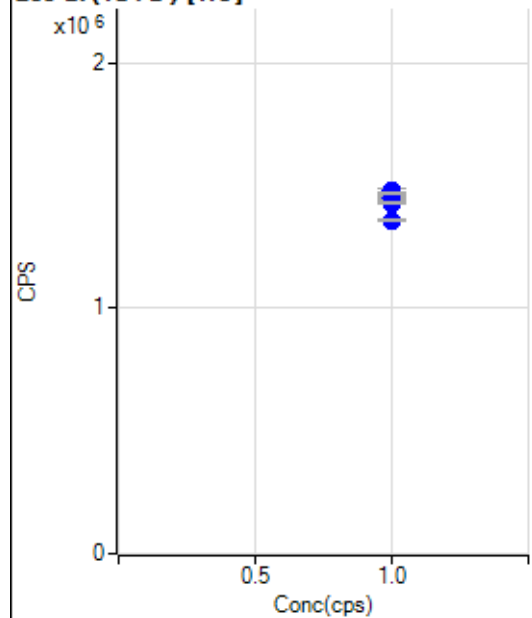
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8198476.14		A	0.2
2	☐	1.000		7980386.81		A	0.2
3	☐	1.000		7982415.63		A	0.4
4	☐	1.000		7692490.62		A	7.1
5	☐	1.000		8151467.72		A	1.0
6	☐	1.000		8117260.25		A	1.4
7	☐	1.000		8502874.58		A	1.5
8	☐	1.000		8582138.47		A	1.4
9	☐	1.000		8251504.18		A	1.7

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1695766.55		A	1.4
2	☐	1.000		1678648.43		A	0.6
3	☐	1.000		1673620.29		A	0.9
4	☐	1.000		1698825.46		A	0.9
5	☐	1.000		1714636.76		A	0.5
6	☐	1.000		1736769.97		A	1.2
7	☐	1.000		1747224.54		A	0.8
8	☐	1.000		1721737.72		A	1.3
9	☐	1.000		1731667.28		A	1.1

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5502116.17		A	1.4
2	☐	1.000		5398014.64		A	1.1
3	☐	1.000		5389786.20		A	1.1
4	☐	1.000		5199955.65		A	5.9
5	☐	1.000		5424731.93		A	0.1
6	☐	1.000		5425501.58		A	2.5
7	☐	1.000		5621894.22		A	1.2
8	☐	1.000		5672303.74		A	1.4
9	☐	1.000		5202888.26		A	1.7

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1461288.52		P	1.3
2	☐	1.000		1466906.23		P	0.5
3	☐	1.000		1449941.28		P	1.4
4	☐	1.000		1471168.21		P	0.7
5	☐	1.000		1473579.08		P	0.3
6	☐	1.000		1479429.93		P	1.7
7	☐	1.000		1472385.38		P	0.5
8	☐	1.000		1430172.24		P	0.8
9	☐	1.000		1358341.70		P	0.6

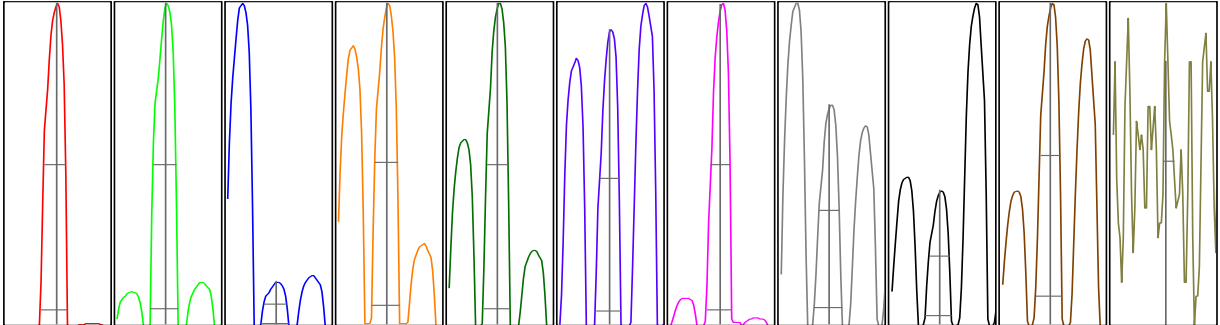
US EPA Tune Check Sample Report

Batch Folder D:\P8092018-MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	7306	1.01	5.00	
24	670385	0.62	5.00	
25	91624	0.39	5.00	
26	104730	0.72	5.00	
59	66846	0.63	5.00	
113	9377	0.68	5.00	
115	118395	1.00	5.00	
206	28283	0.72	5.00	
207	25817	0.78	5.00	
208	60826	0.64	5.00	
220	1	18.62		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7189	7356	7348	7359	7277
24	667411	669706	670713	677283	666811
25	91468	91362	91287	92104	91897
26	104232	105100	104862	105690	103767
59	66115	67192	66902	67022	67000
113	9365	9469	9407	9308	9335
115	119666	119704	117511	117457	117636
206	27963	28311	28236	28447	28460
207	25525	25823	25780	25869	26087
208	60129	61033	61000	60963	61005
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	12512	9.00	8.9 - 9.1		0.777	0.900	
24	1115794	23.95	23.9 - 24.1		0.786	0.900	
25	151567	24.95	24.9 - 25.1		0.786	0.900	
26	174742	25.95	25.9 - 26.1		0.785	0.900	
59	115149	58.95	58.9 - 59.1		0.780	0.900	
113	17425	113.00	112.9 - 113.1		0.731	0.900	
115	218713	115.00	114.9 - 115.1		0.731	0.900	
206	50665	205.95	205.9 - 206.1		0.787	0.900	
207	45914	206.95	206.9 - 207.1		0.740	0.900	
208	109872	207.95	207.9 - 208.1		0.754	0.900	
220	1	220.10	-				

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	10.0	V	Deflect	14.0	V
Extract 2	-230.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-95	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	7465	1.15	
89	77129	1.16	
205	12953	0.60	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	7463	7415	7441	7394	7611
89	77128	76840	76436	76580	78662
205	12917	12889	12987	12898	13073

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	10.0	V	Deflect	3.4	V
Extract 2	-230.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-95	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			