

=====3:51:05 PM=====

Initial Sample Wt: /2017 2:51:41 PM=====

Initial Sample Vol: /2017 3:03:52 PM=====

Dilution:

Sample Prep Vol:

Wash Time: 90

Auto Dilution Factor: 1

Replicate Data: stock sol 10x

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Rh 343.489	618582.6	618582.6			3:05:30 PM
2	Rh 343.489	626902.4	626902.4			3:05:34 PM
3	Rh 343.489	624101.7	624101.7			3:05:36 PM

Mean Data: stock sol 10x

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Rh 343.489	623195.6				4233.25	0.68%

Plasma has extinguished
=====

Align View XY Axial for analyte Mn 257.610

X-position	Y-position	Intensity
-2.0	15.0	1949413.2
-1.6	15.0	2702081.5
-1.2	15.0	3880191.7
-0.8	15.0	5075922.2
-0.4	15.0	6300830.9
0.0	15.0	7165456.5
0.4	15.0	7353272.7
0.8	15.0	7269729.4
1.2	15.0	6755181.8
1.6	15.0	5914555.5
2.0	15.0	4697530.4
0.4	10.0	567717.2
0.4	10.5	803046.5
0.4	11.0	1218568.1
0.4	11.5	2091406.8
0.4	12.0	3117673.6
0.4	12.5	4297278.2
0.4	13.0	5485953.2
0.4	13.5	6941875.0
0.4	14.0	7686514.8
0.4	14.5	7635316.6
0.4	15.0	7350780.3
0.4	15.5	6787708.6
0.4	16.0	5644341.2
0.4	16.5	4427314.5
0.4	17.0	3054394.5
0.4	17.5	2189516.7
0.4	18.0	1481157.3
0.4	18.5	928176.3
0.4	19.0	477194.0
0.4	19.5	258218.7
0.4	20.0	119557.3
-0.4	14.0	6558031.8
0.0	14.0	7256670.7
0.4	14.0	7659616.3
0.8	14.0	7678591.8
1.2	14.0	6910704.0
0.8	12.0	3573826.3
0.8	12.5	4266804.1
0.8	13.0	5592767.1
0.8	13.5	6871897.5
0.8	14.0	7329518.4
0.8	14.5	7833838.7
0.8	15.0	7257636.4
0.8	15.5	6439460.8
0.8	16.0	5512872.0

1/31/2017 3:33:35 PM aligned for analyte Mn 257.610

X viewing position set to 0.8 mm having Peak intensity 7833838.7 for Axial viewing

Y viewing position set to 14.5 mm having Peak intensity 7833838.7 for Axial viewing

Align View X Radial for analyte Mn 257.610

X-position	Y-position	Intensity
-7.0	15.0	198805.1
-6.5	15.0	203315.5
-6.0	15.0	227330.5
-5.5	15.0	309588.7
-5.0	15.0	458443.7
-4.5	15.0	680961.0
-4.0	15.0	945177.1
-3.5	15.0	1054340.4
-3.0	15.0	4512604.3
-2.5	15.0	9089190.6
-2.0	15.0	13960796.2
-1.5	15.0	17868865.7
-1.0	15.0	19657202.4
-0.5	15.0	19454213.1
0.0	15.0	18055677.2
0.5	15.0	15942177.7
1.0	15.0	12748920.7
1.5	15.0	8124253.2
2.0	15.0	1467373.3
2.5	15.0	952270.6
3.0	15.0	1402931.7
3.5	15.0	1205061.2
4.0	15.0	1002726.1
4.5	15.0	999668.1
5.0	15.0	914346.4
5.5	15.0	788826.8
6.0	15.0	648444.9
6.5	15.0	581703.9
7.0	15.0	531766.5

1/31/2017 3:40:56 PM aligned for analyte Mn 257.610

X viewing position set to -1.0 mm having Peak intensity 19657202.4 for Radial viewing

Analysis Begun

Start Time: 1/31/2017 3:49:48 PM

Logged In Analyst: jjlord

Spectrometer: Optima 8000

Plasma On Time: 1/31/2017 3:13:51 PM

Technique: ICP Continuous

Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\jjlord01_31_17.sif

Batch ID: 040516mchen

Results Data Set: jjlord01-26-17_2

Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1

Sample ID: Calib Blank 1

Analyst:

Initial Sample Wt:

Dilution:

Wash Time:

Autosampler Location: 9

Date Collected: 1/31/2017 3:49:49 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: Calib Blank 1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Rh 343.489	643.3	643.3	[0.00] ppm		3:51:31 PM
2	Rh 343.489	776.2	776.2	[0.00] ppm		3:51:40 PM
3	Rh 343.489	629.3	629.3	[0.00] ppm		3:51:47 PM

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Rh 343.489	682.9	81.10	11.88%	[0.00]	ppm

Sequence No.: 2
Sample ID: 0.1 ppm
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 90

Autosampler Location: 10
Date Collected: 1/31/2017 3:53:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 0.1 ppm

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Rh 343.489	92229.1	91546.2	[0.1]	ppm	3:55:14 PM
2	Rh 343.489	92112.0	91429.0	[0.1]	ppm	3:55:19 PM
3	Rh 343.489	92233.3	91550.4	[0.1]	ppm	3:55:24 PM

Mean Data: 0.1 ppm

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Rh 343.489	91508.5	68.87	0.08%	[0.1]	ppm

Sequence No.: 3
Sample ID: 0.5 ppm
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 90

Autosampler Location: 11
Date Collected: 1/31/2017 3:57:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 0.5 ppm

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Rh 343.489	206111.6	205428.6	[0.5]	ppm	3:58:49 PM
2	Rh 343.489	202751.9	202069.0	[0.5]	ppm	3:58:54 PM
3	Rh 343.489	203519.7	202836.7	[0.5]	ppm	3:58:57 PM

Mean Data: 0.5 ppm

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Rh 343.489	203444.8	1760.44	0.87%	[0.5]	ppm

Sequence No.: 4
Sample ID: 1 ppm
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 90

Autosampler Location: 12
Date Collected: 1/31/2017 4:00:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 1 ppm

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Rh 343.489	772060.1	771377.1	[1]	ppm	4:02:21 PM
2	Rh 343.489	776040.3	775357.3	[1]	ppm	4:02:25 PM
3	Rh 343.489	779641.9	778959.0	[1]	ppm	4:02:27 PM

Mean Data: 1 ppm

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Rh 343.489	775231.1	3792.48	0.49%	[1]	ppm

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=====
Sequence No.: 5                      Autosampler Location: 13
Sample ID: 5 ppm                    Date Collected: 1/31/2017 4:04:10 PM
Analyst:                           Data Type: Original
Initial Sample Wt:                  Initial Sample Vol:
Dilution:                          Sample Prep Vol:
Wash Time: 90                       Auto Dilution Factor: 1
=====
```

Replicate Data: 5 ppm

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Rh 343.489	1925591.2	1924908.2	[5] ppm		4:05:50 PM
2	Rh 343.489	1949207.5	1948524.5	[5] ppm		4:05:53 PM
3	Rh 343.489	1969798.9	1969115.9	[5] ppm		4:05:56 PM

Mean Data: 5 ppm

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib Units
Rh 343.489	1947516.2	22121.09	1.14%	[5] ppm	

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=====
Sequence No.: 6                      Autosampler Location: 14
Sample ID: 10 ppm                   Date Collected: 1/31/2017 4:07:39 PM
Analyst:                           Data Type: Original
Initial Sample Wt:                  Initial Sample Vol:
Dilution:                          Sample Prep Vol:
Wash Time: 90                       Auto Dilution Factor: 1
=====
```

Replicate Data: 10 ppm

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Rh 343.489	6145659.1	6144976.2	[10] ppm		4:09:17 PM
2	Rh 343.489	6085845.4	6085162.5	[10] ppm		4:09:20 PM
3	Rh 343.489	6152799.0	6152116.1	[10] ppm		4:09:23 PM

Mean Data: 10 ppm

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib Units
Rh 343.489	6127418.3	36768.29	0.60%	[10] ppm	

```
=====
Sequence No.: 7                      Autosampler Location: 15
Sample ID: 20 ppm                   Date Collected: 1/31/2017 4:11:05 PM
Analyst:                           Data Type: Original
Initial Sample Wt:                  Initial Sample Vol:
Dilution:                          Sample Prep Vol:
Wash Time: 90                       Auto Dilution Factor: 1
=====
```

Replicate Data: 20 ppm

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Rh 343.489	5939583.4	5938900.5	[20] ppm		4:12:44 PM
2	Rh 343.489	6036157.0	6035474.1	[20] ppm		4:12:48 PM
3	Rh 343.489	6049412.4	6048729.5	[20] ppm		4:12:51 PM

Mean Data: 20 ppm

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib Units
Rh 343.489	6007701.4	59950.78	1.00%	[20] ppm	

Standard intensity and concentration values are not in the same order.

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Rh 343.489	6	Lin, Calc Int	403207.8	336900	0.00000	0.916209	

Calibration data for Rh 343.489

Equation: Linear, Calculated Intercept

ID	Mean Signal (Em)	Entered Conc. ppm	Calculated Conc. ppm	Standard Deviation	%RSD
Calib Blank 1	0.0	0	-1.197	81.10	11.88
0.1 ppm	91508.5	0.1	-0.925	68.87	0.08
0.5 ppm	203444.8	0.5	-0.593	1760.44	0.87
1 ppm	775231.1	1.0	1.104	3792.48	0.49
5 ppm	1947516.2	5.0	4.584	22121.09	1.14
10 ppm	6127418.3	10.0	16.991	36768.29	0.60
20 ppm	6007701.4	20.0	16.636	59950.78	1.00

Correlation Coef.: 0.916209 Slope: 336900 Intercept: 403207.8

Sequence No.: 8

Sample ID: 0.5 g/ml 20x

Analyst:

Initial Sample Wt:

Dilution:

Wash Time: 90

Autosampler Location: 16

Date Collected: 1/31/2017 4:14:32 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 0.5 g/ml 20x

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Rh 343.489	133291.7	132608.8	-0.803 ppm	-0.803 mg/L	4:16:12 PM
2	Rh 343.489	132057.5	131374.5	-0.807 ppm	-0.807 mg/L	4:16:16 PM
3	Rh 343.489	132010.4	131327.4	-0.807 ppm	-0.807 mg/L	4:16:20 PM

Mean Data: 0.5 g/ml 20x

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Rh 343.489	131770.3	-0.806 ppm	0.0022	-0.806 mg/L	0.0022	0.27%

Sequence No.: 9

Sample ID: 0.25 g/ml 20x

Analyst:

Initial Sample Wt:

Dilution:

Wash Time: 90

Autosampler Location: 17

Date Collected: 1/31/2017 4:18:03 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 0.25 g/ml 20x

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Rh 343.489	193576.4	192893.5	-0.624 ppm	-0.624 mg/L	4:19:42 PM
2	Rh 343.489	189650.5	188967.6	-0.636 ppm	-0.636 mg/L	4:19:47 PM
3	Rh 343.489	190660.0	189977.1	-0.633 ppm	-0.633 mg/L	4:19:50 PM

Mean Data: 0.25 g/ml 20x

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Rh 343.489	190612.7	-0.631 ppm	0.0061	-0.631 mg/L	0.0061	0.96%

Sequence No.: 10

Sample ID: 0.1 g/ml 20x

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 18

Date Collected: 1/31/2017 4:21:32 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Wash Time: 90

Auto Dilution Factor: 1

Replicate Data: 0.1 g/ml 20x

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Rh 343.489	202124.4	201441.4	-0.599 ppm	-0.599 mg/L	4:23:11 PM
2	Rh 343.489	204446.3	203763.3	-0.592 ppm	-0.592 mg/L	4:23:14 PM
3	Rh 343.489	201477.7	200794.8	-0.601 ppm	-0.601 mg/L	4:23:18 PM

Mean Data: 0.1 g/ml 20x

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Rh 343.489	201999.9	-0.597 ppm	0.0046	-0.597 mg/L	0.0046	0.78%

=====

Sequence No.: 11

Sample ID: 0.05 g/ml 20x

Analyst:

Initial Sample Wt:

Dilution:

Wash Time: 90

Autosampler Location: 19

Date Collected: 1/31/2017 4:25:00 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 0.05 g/ml 20x

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Rh 343.489	234550.8	233867.8	-0.503 ppm	-0.503 mg/L	4:26:39 PM
2	Rh 343.489	230539.0	229856.1	-0.515 ppm	-0.515 mg/L	4:26:44 PM
3	Rh 343.489	237378.2	236695.3	-0.494 ppm	-0.494 mg/L	4:26:47 PM

Mean Data: 0.05 g/ml 20x

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Rh 343.489	233473.1	-0.504 ppm	0.0102	-0.504 mg/L	0.0102	2.02%

=====

Sequence No.: 12

Sample ID: 0.025 g/ml 20x

Analyst:

Initial Sample Wt:

Dilution:

Wash Time: 90

Autosampler Location: 20

Date Collected: 1/31/2017 4:28:30 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 0.025 g/ml 20x

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Rh 343.489	231783.5	231100.5	-0.511 ppm	-0.511 mg/L	4:30:09 PM
2	Rh 343.489	231868.2	231185.3	-0.511 ppm	-0.511 mg/L	4:30:12 PM
3	Rh 343.489	234541.3	233858.4	-0.503 ppm	-0.503 mg/L	4:30:16 PM

Mean Data: 0.025 g/ml 20x

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Rh 343.489	232048.1	-0.508 ppm	0.0047	-0.508 mg/L	0.0047	0.92%

=====

Sequence No.: 13

Sample ID: stock sol 20x

Analyst:

Initial Sample Wt:

Dilution:

Wash Time: 90

Autosampler Location: 21

Date Collected: 1/31/2017 4:31:59 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: stock sol 20x

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Rh 343.489	271695.9	271012.9	-0.392 ppm	-0.392 mg/L	4:33:37 PM
2	Rh 343.489	264177.4	263494.5	-0.415 ppm	-0.415 mg/L	4:33:42 PM
3	Rh 343.489	265779.7	265096.7	-0.410 ppm	-0.410 mg/L	4:33:44 PM

Mean Data: stock sol 20x

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Rh 343.489	266534.7	-0.406 ppm	0.0118	-0.406 mg/L	0.0118	2.90%