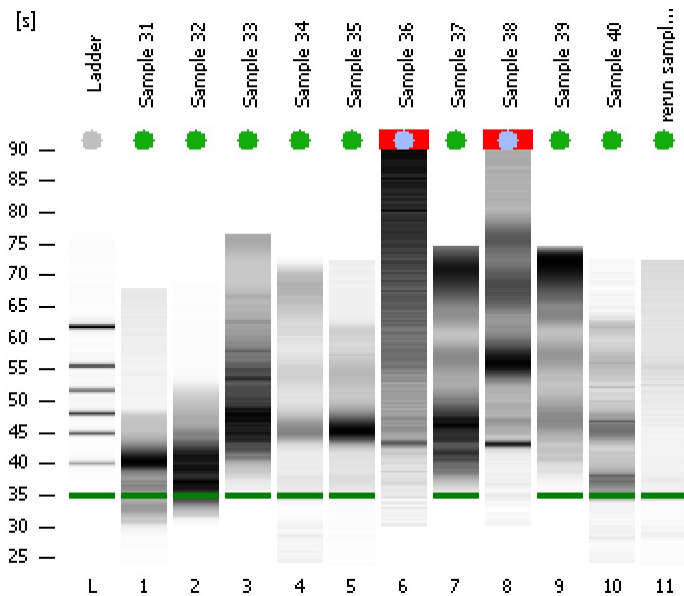


Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
Modified: 1/20/2015 11:54:24 AM

### Electrophoresis File Run Summary



#### Instrument Information:

Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

#### Assay Information:

Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\RNA\Small RNA Series II.xsy

Assay Class: Small RNA

Version: 1.2

Assay Comments: Small RNA Analysis 6 - 150 nucleotides

© Copyright 2007 - 2009 Agilent Technologies, Inc.

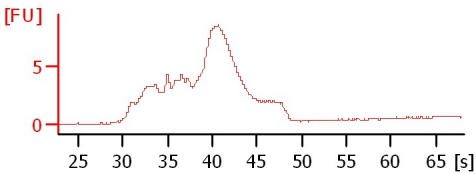
#### Chip Information:

Chip Lot #:

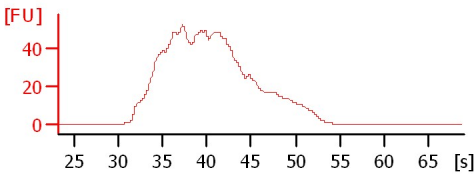
Reagent Kit Lot #:

Chip Comments:

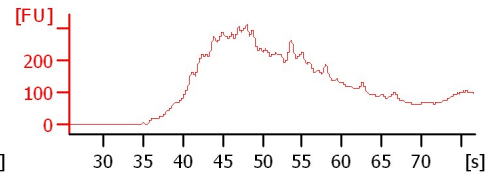
**Sample 31**  
69 % miRNA; Concentration: 7878.70 pg/μl



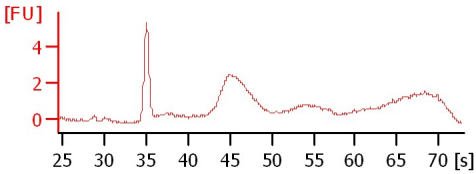
**Sample 32**  
76 % miRNA; Concentration: 2234.20 pg/μl



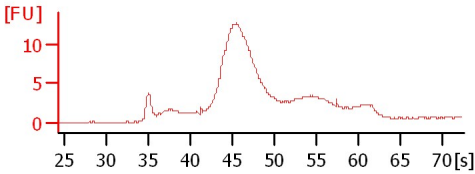
**Sample 33**  
46 % miRNA; Concentration: 111356.50 ...



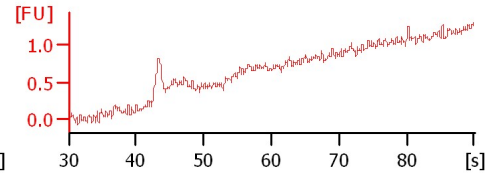
**Sample 34**  
37 % miRNA; Concentration: 580.10 pg/μl



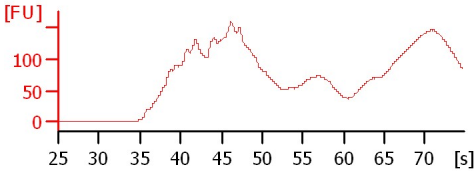
**Sample 35**  
45 % miRNA; Concentration: 3735.90 pg/μl



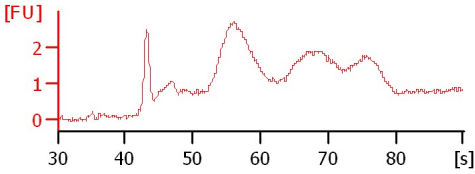
**Sample 36**  
All Other Samples



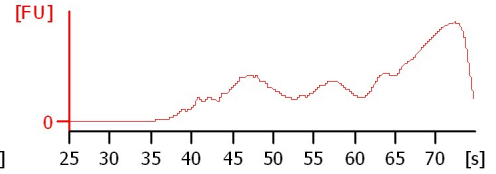
**Sample 37**  
56 % miRNA; Concentration: 154458.90 ...



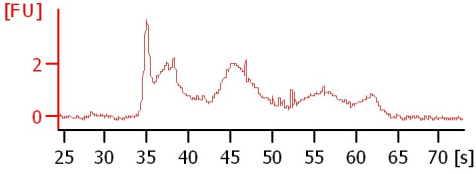
**Sample 38**  
All Other Samples



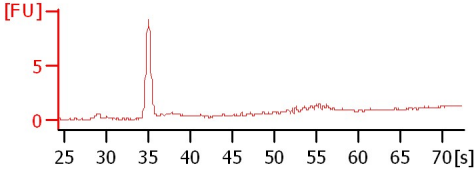
**Sample 39**  
33 % miRNA; Concentration: 158382.60 ...



**Sample 40**  
59 % miRNA; Concentration: 1585.10 pg/μl









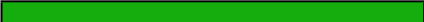





**rerun sample 8**  
33 % miRNA; Concentration: 214.50 pg/μl



Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electrophoresis File Run Summary (Chip Summary)**

| Sample Name    | Sample Comment | Status | Result Label                                     | Result Color  |
|----------------|----------------|--------|--|---|
| Sample 31      |                | ✓      | 69 % miRNA;<br>Concentration: 7878.70<br>pg/μl   |    |
| Sample 32      |                | ✓      | 76 % miRNA;<br>Concentration: 2234.20<br>pg/μl   |    |
| Sample 33      |                | ✓      | 46 % miRNA;<br>Concentration:<br>111356.50 pg/μl |    |
| Sample 34      |                | ✓      | 37 % miRNA;<br>Concentration: 580.10<br>pg/μl    |    |
| Sample 35      |                | ✓      | 45 % miRNA;<br>Concentration: 3735.90<br>pg/μl   |    |
| Sample 36      |                | ✓      | All Other Samples                                |    |
| Sample 37      |                | ✓      | 56 % miRNA;<br>Concentration:<br>154458.90 pg/μl |    |
| Sample 38      |                | ✓      | All Other Samples                                |    |
| Sample 39      |                | ✓      | 33 % miRNA;<br>Concentration:<br>158382.60 pg/μl |    |
| Sample 40      |                | ✓      | 59 % miRNA;<br>Concentration: 1585.10<br>pg/μl   |    |
| rerun sample 8 |                | ✓      | 33 % miRNA;<br>Concentration: 214.50<br>pg/μl    |  |
| Ladder         |                | ✓      | Number of Peaks: 6                               |  |

**Chip Lot #**

**Reagent Kit Lot #**

**Chip Comments :**

Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
Modified: 1/20/2015 11:54:24 AM

**Electrophoresis Assay Details**

**General Analysis Settings**

Number of Available Sample and Ladder Wells (Max.) : 12  
Minimum Visible Range [s] : 30  
Maximum Visible Range [s] : 90  
Start Analysis Time Range [s] : 31  
End Analysis Time Range [s] : 89  
Ladder Concentration [pg/ $\mu$ l] : 2500  
Lower Marker Concentration [pg/ $\mu$ l] : 500  
Upper Marker Concentration [pg/ $\mu$ l] : 0  
Used Lower Marker for Quantitation  
Standard Curve Fit is Logarithmic  
Show Data Aligned to Lower Marker

**Integrator Settings**

Integration Start Time [s] : 30  
Integration End Time [s] : 89  
Slope Threshold : 0.6  
Height Threshold [FU] : 3  
Area Threshold : 0.2  
Width Threshold [s] : 0.5  
Baseline Plateau [s] : 60

**Filter Settings**

Filter Width [s] : 0.5  
Polynomial Order : 4

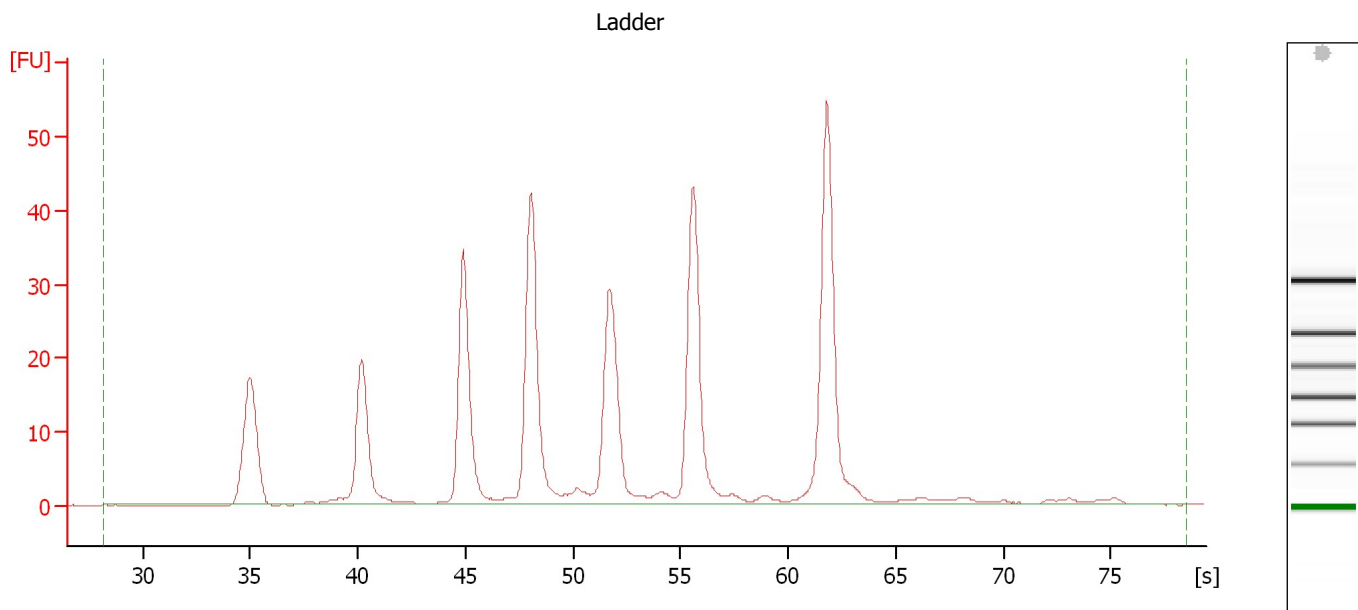
**Ladder**

| Ladder Peak | Size |
|-------------|------|
| 1           | 4    |
| 2           | 20   |
| 3           | 40   |
| 4           | 60   |
| 5           | 80   |
| 6           | 100  |
| 7           | 150  |

Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary**



**Overall Results for Ladder**

Result Flagging Color:

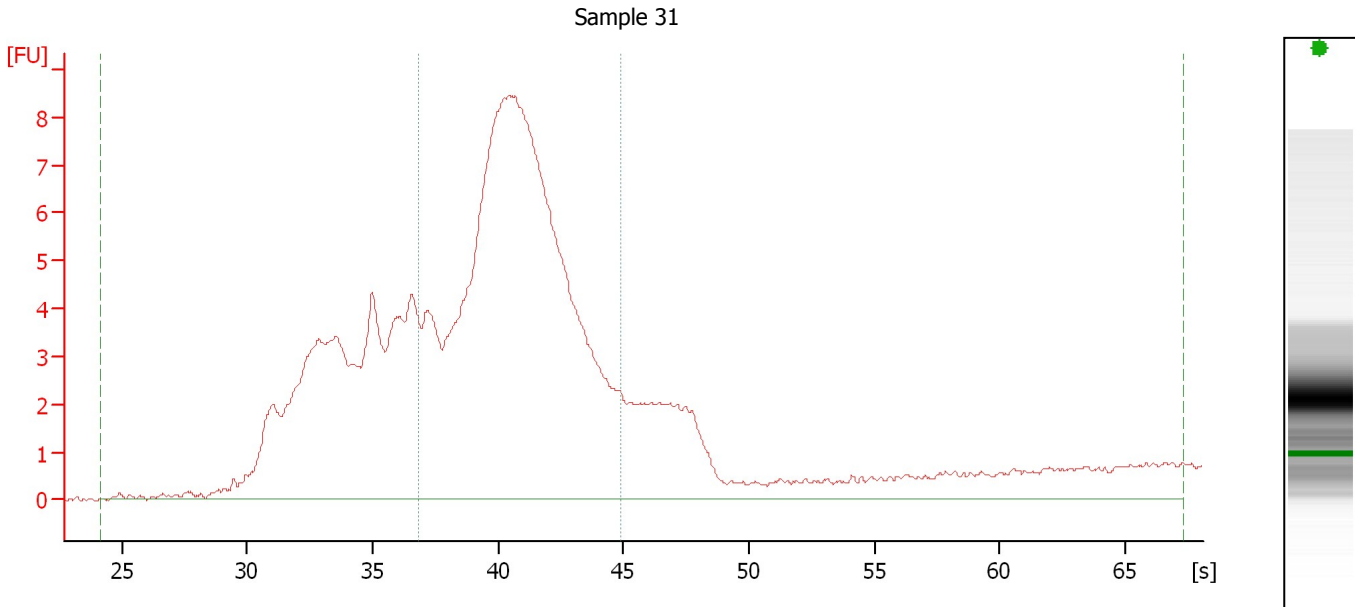
Result Flagging Label:

Number of Peaks: 6

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : Sample 31**

|                                  |          |                        |  |
|----------------------------------|----------|------------------------|--|
| Small RNA Concentration [pg/μl]: | 11,389.8 | Result Flagging Color: | <span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span> |
| miRNA Concentration [pg/μl]:     | 7,878.7  | Result Flagging Label: | 69 % miRNA;<br>Concentration:<br>7878.70 pg/μl   |
| miRNA / Small RNA Ratio [%]:     | 69       |                        |  |

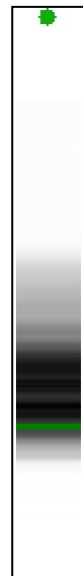
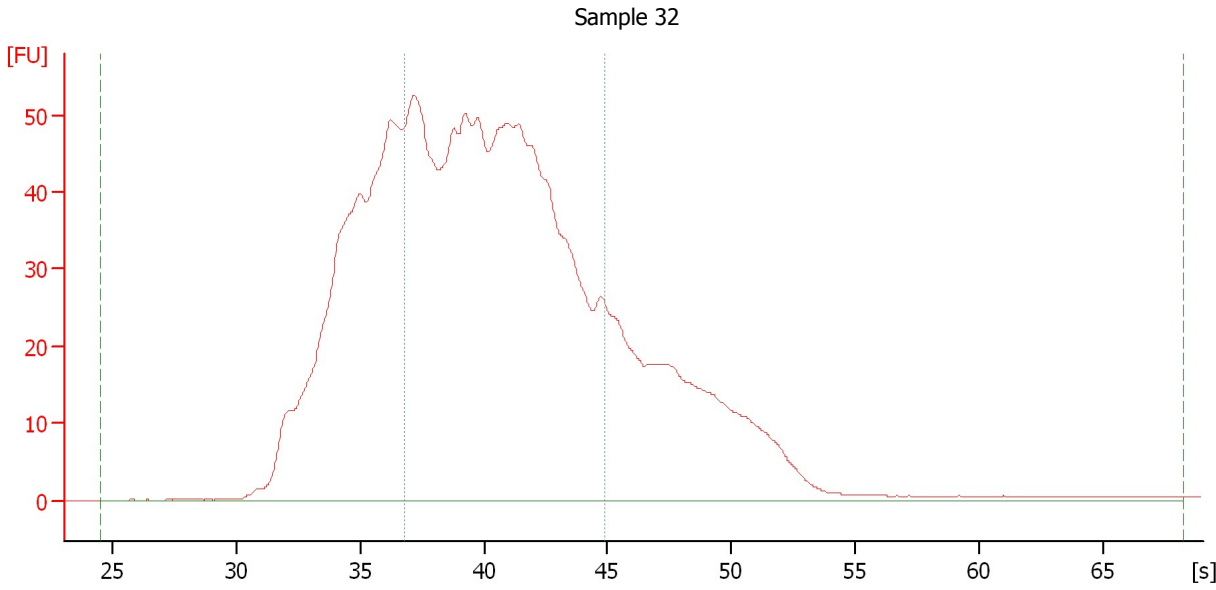
**Region table for sample 1 : Sample 31**

| Name      | From [nt] | To [nt] | Average Size [nt] | Size distribution in CV [%] | Conc. [pg/μl] | % of Total | Color   |
|-----------|-----------|---------|-------------------|-----------------------------|---------------|------------|---|
| Small RNA | 0         | 194     | 33                | 100.0                       | 11,389.8      | 100        | <span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span> |
| miRNA     | 10        | 40      | 23                | 32.6                        | 7,878.7       | 69         | <span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>  |

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Sample 32**

|                                  |         |                        |  |
|----------------------------------|---------|------------------------|--|
| Small RNA Concentration [pg/μl]: | 2,924.1 | Result Flagging Color: | <span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span> |
| miRNA Concentration [pg/μl]:     | 2,234.2 | Result Flagging Label: | 76 % miRNA;<br>Concentration:<br>2234.20 pg/μl   |
| miRNA / Small RNA Ratio [%]:     | 76      |                        |  |

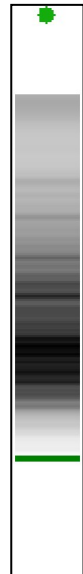
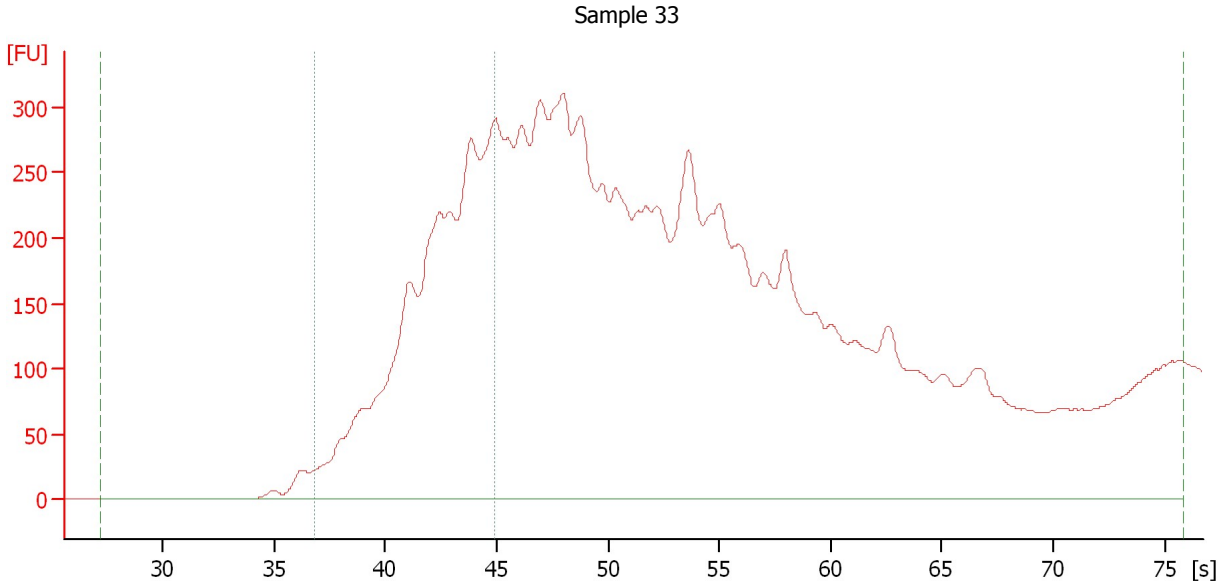
**Region table for sample 2 : Sample 32**

| Name      | From [nt] | To [nt] | Average Size [nt] | Size distribution in CV [%] | Conc. [pg/μl] | % of Total | Color   |
|-----------|-----------|---------|-------------------|-----------------------------|---------------|------------|---|
| Small RNA | 0         | 202     | 26                | 93.3                        | 2,924.1       | 100        | <span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span> |
| miRNA     | 10        | 40      | 22                | 37.7                        | 2,234.2       | 76         | <span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>  |

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Sample 33**

|                                  |           |                        |  |
|----------------------------------|-----------|------------------------|--|
| Small RNA Concentration [pg/μl]: | 244,342.0 | Result Flagging Color: | <span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span> |
| miRNA Concentration [pg/μl]:     | 111,356.5 | Result Flagging Label: | 46 % miRNA;<br>Concentration:<br>111356.50 pg/μl   |
| miRNA / Small RNA Ratio [%]:     | 46        |                        |  |

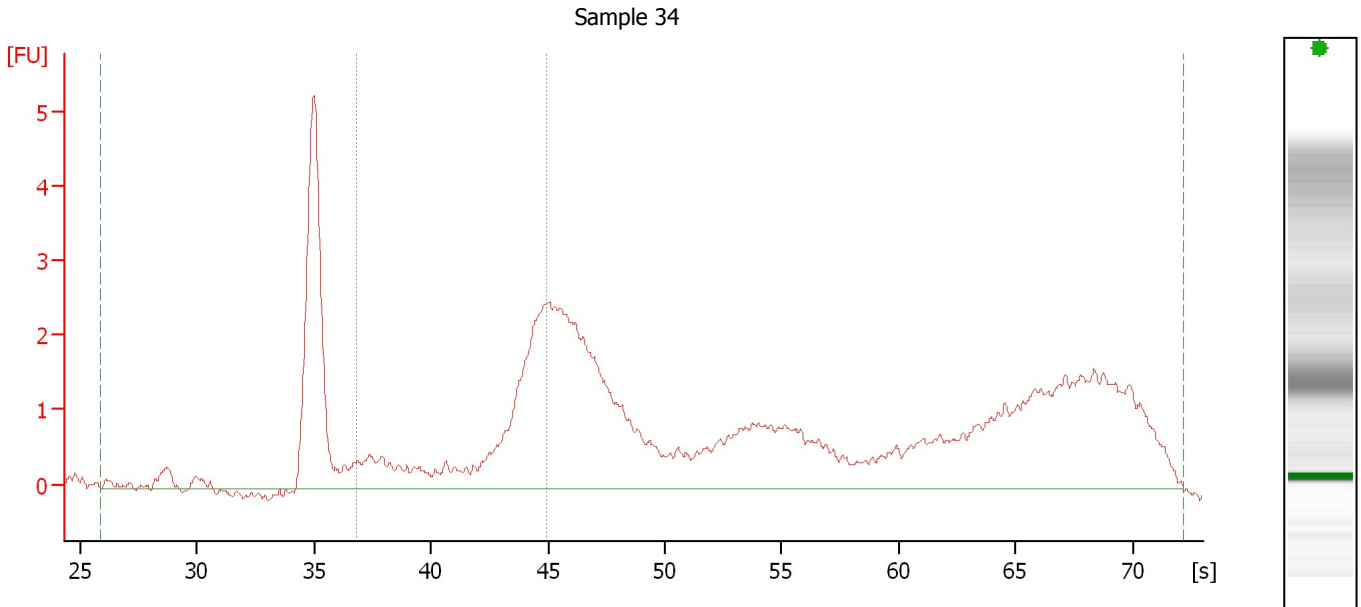
**Region table for sample 3 : Sample 33**

| Name      | From [nt] | To [nt] | Average Size [nt] | Size distribution in CV [%] | Conc. [pg/μl] | % of Total | Color  |
|-----------|-----------|---------|-------------------|-----------------------------|---------------|------------|--|
| Small RNA | 0         | 263     | 97                | 66.1                        | 244,342.0     | 100        | <span style="background-color: #800040; width: 15px; height: 10px; display: inline-block;"></span> |
| miRNA     | 10        | 40      | 29                | 26.7                        | 111,356.5     | 46         | <span style="background-color: #006400; width: 15px; height: 10px; display: inline-block;"></span> |

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : Sample 34**

|                                  |         |                        |  |
|----------------------------------|---------|------------------------|--|
| Small RNA Concentration [pg/μl]: | 1,558.2 | Result Flagging Color: | <span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span> |
| miRNA Concentration [pg/μl]:     | 580.1   | Result Flagging Label: | 37 % miRNA;<br>Concentration: 580.10<br>pg/μl  |
| miRNA / Small RNA Ratio [%]:     | 37      |                        |  |

**Region table for sample 4 : Sample 34**

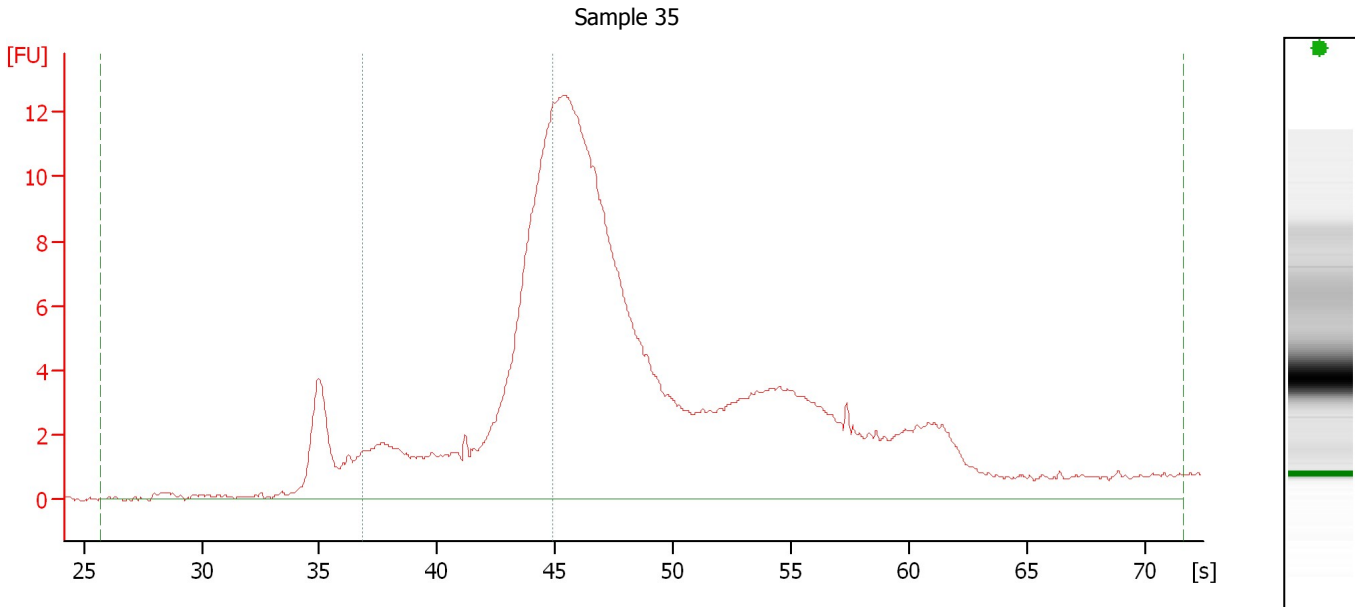
| Name      | From [nt] | To [nt] | Average Size [nt] | Size distribution in CV [%] | Conc. [pg/μl] | % of Total | Color   |
|-----------|-----------|---------|-------------------|-----------------------------|---------------|------------|---|
| Small RNA | 0         | 233     | 97                | 74.5                        | 1,558.2       | 100        | <span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span> |
| miRNA     | 10        | 40      | 30                | 31.2                        | 580.1         | 37         | <span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>  |



Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : Sample 35**

|                                  |         |                        |   |
|----------------------------------|---------|------------------------|---|
| Small RNA Concentration [pg/μl]: | 8,248.4 | Result Flagging Color: | <span style="background-color: green; color: green;"> </span> |
| miRNA Concentration [pg/μl]:     | 3,735.9 | Result Flagging Label: | 45 % miRNA;<br>Concentration:<br>3735.90 pg/μl                |
| miRNA / Small RNA Ratio [%]:     | 45      |                        |   |

**Region table for sample 5 : Sample 35**

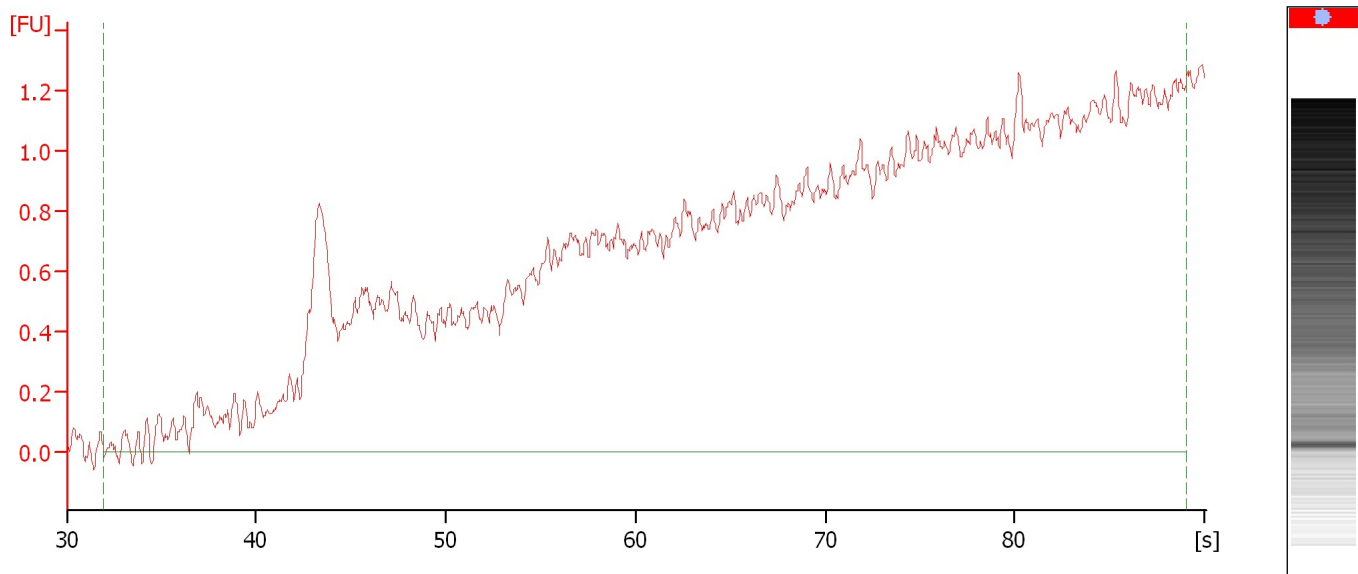
| Name      | From [nt] | To [nt] | Average Size [nt] | Size distribution in CV [%] | Conc. [pg/μl] | % of Total | Color   |
|-----------|-----------|---------|-------------------|-----------------------------|---------------|------------|---|
| Small RNA | 0         | 229     | 68                | 67.6                        | 8,248.4       | 100        | <span style="background-color: maroon; color: maroon;"> </span> |
| miRNA     | 10        | 40      | 30                | 29.8                        | 3,735.9       | 45         | <span style="background-color: green; color: green;"> </span>   |

Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**

Sample 36



**Overall Results for sample 6 : Sample 36**

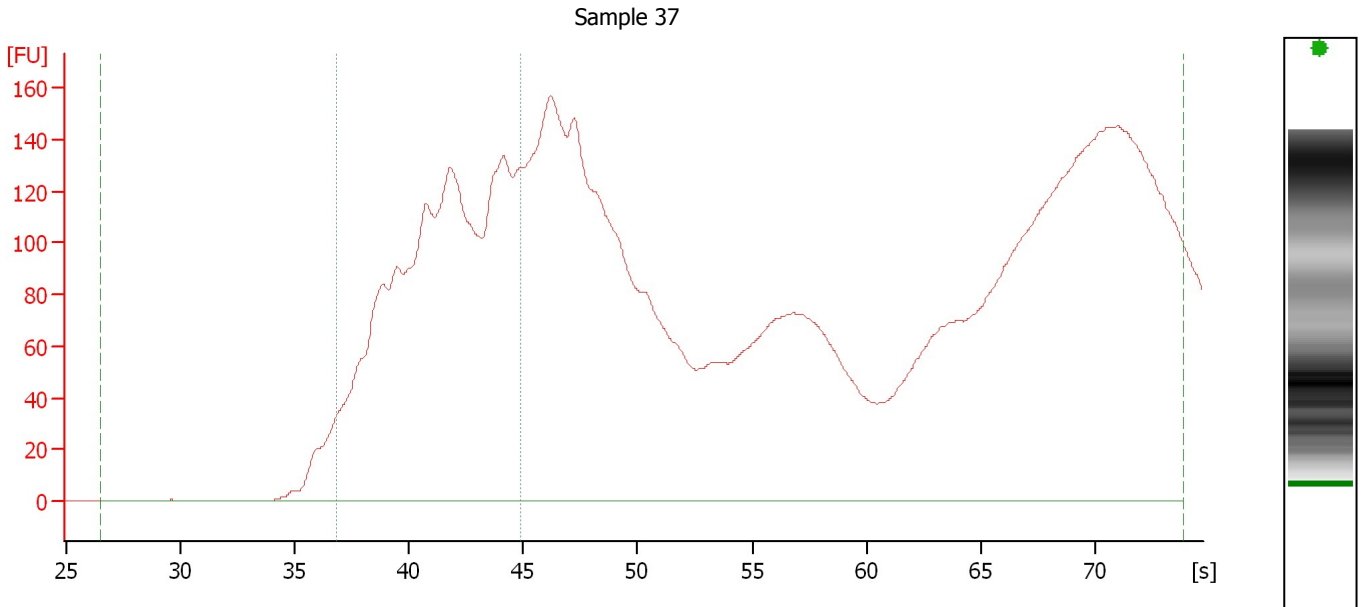
Result Flagging Color:

Result Flagging Label: All Other Samples

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Sample 37**

|                                  |           |                        |  |
|----------------------------------|-----------|------------------------|--|
| Small RNA Concentration [pg/μl]: | 273,739.3 | Result Flagging Color: | <span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span> |
| miRNA Concentration [pg/μl]:     | 154,458.9 | Result Flagging Label: | 56 % miRNA;<br>Concentration:<br>154458.90 pg/μl   |
| miRNA / Small RNA Ratio [%]:     | 56        |                        |  |

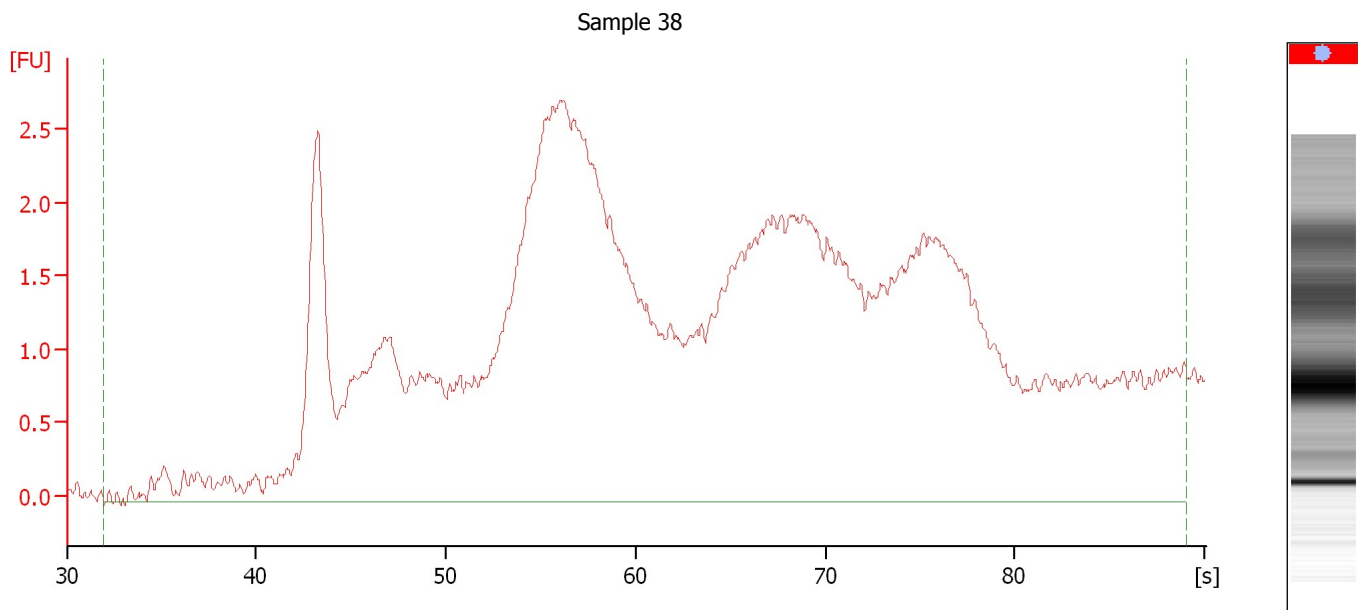
**Region table for sample 7 : Sample 37**

| Name      | From [nt] | To [nt] | Average Size [nt] | Size distribution in CV [%] | Conc. [pg/μl] | % of Total | Color   |
|-----------|-----------|---------|-------------------|-----------------------------|---------------|------------|---|
| Small RNA | 0         | 247     | 113               | 68.6                        | 273,739.3     | 100        | <span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span> |
| miRNA     | 10        | 40      | 26                | 32.4                        | 154,458.9     | 56         | <span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>  |

Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : Sample 38**

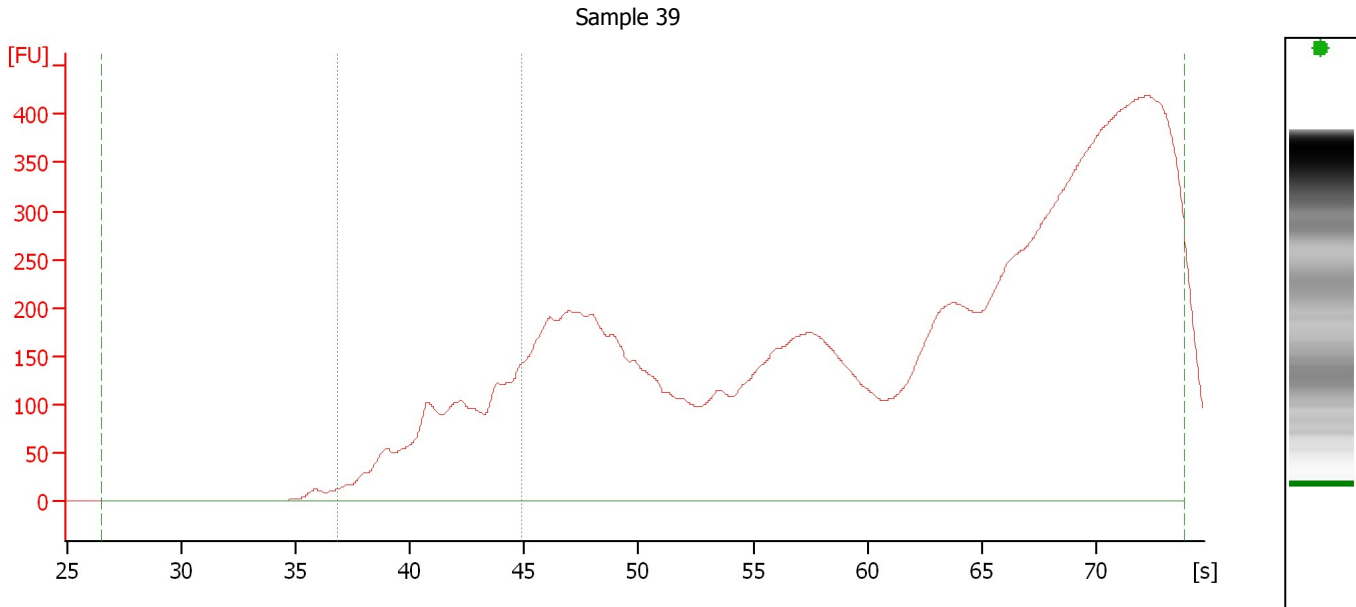
Result Flagging Color:

Result Flagging Label: All Other Samples

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : Sample 39**

|                                  |           |                        |  |
|----------------------------------|-----------|------------------------|--|
| Small RNA Concentration [pg/μl]: | 478,677.7 | Result Flagging Color: | <span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span> |
| miRNA Concentration [pg/μl]:     | 158,382.6 | Result Flagging Label: | 33 % miRNA;<br>Concentration:<br>158382.60 pg/μl   |
| miRNA / Small RNA Ratio [%]:     | 33        |                        |  |

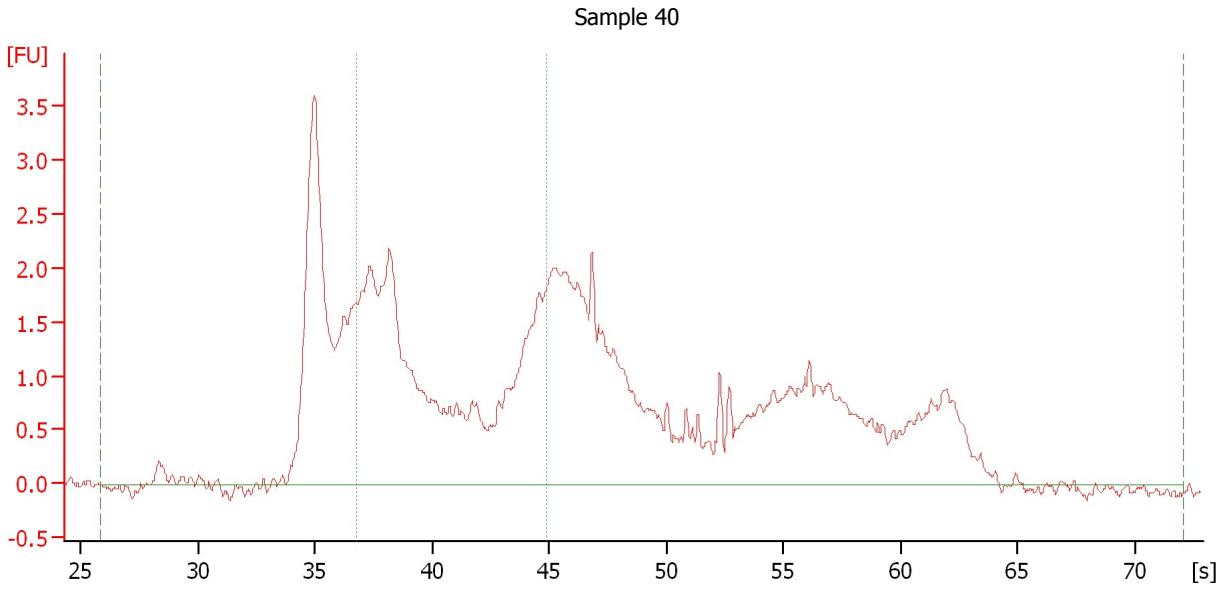
**Region table for sample 9 : Sample 39**

| Name      | From [nt] | To [nt] | Average Size [nt] | Size distribution in CV [%] | Conc. [pg/μl] | % of Total | Color   |
|-----------|-----------|---------|-------------------|-----------------------------|---------------|------------|---|
| Small RNA | 0         | 247     | 146               | 49.8                        | 478,677.7     | 100        | <span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span> |
| miRNA     | 10        | 40      | 28                | 29.0                        | 158,382.6     | 33         | <span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>  |

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : Sample 40**

|                                  |         |                        |  |
|----------------------------------|---------|------------------------|--|
| Small RNA Concentration [pg/μl]: | 2,672.0 | Result Flagging Color: | <span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span> |
| miRNA Concentration [pg/μl]:     | 1,585.1 | Result Flagging Label: | 59 % miRNA;<br>Concentration:<br>1585.10 pg/μl   |
| miRNA / Small RNA Ratio [%]:     | 59      |                        |  |

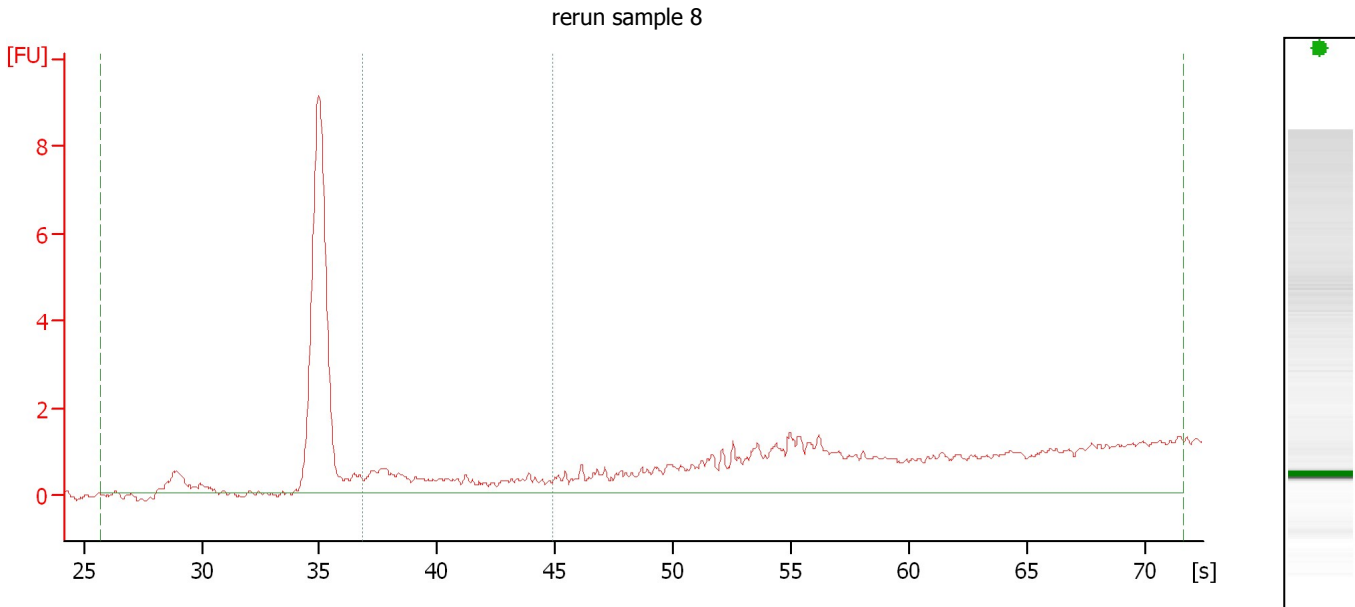
**Region table for sample 10 : Sample 40**

| Name      | From [nt] | To [nt] | Average Size [nt] | Size distribution in CV [%] | Conc. [pg/μl] | % of Total | Color   |
|-----------|-----------|---------|-------------------|-----------------------------|---------------|------------|---|
| Small RNA | 0         | 232     | 53                | 84.0                        | 2,672.0       | 100        | <span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span> |
| miRNA     | 10        | 40      | 22                | 45.6                        | 1,585.1       | 59         | <span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>  |

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : rerun sample 8**

|                                  |       |                        |  |
|----------------------------------|-------|------------------------|--|
| Small RNA Concentration [pg/μl]: | 653.0 | Result Flagging Color: | <span style="background-color: green; color: black;">████████</span> |
| miRNA Concentration [pg/μl]:     | 214.5 | Result Flagging Label: | 33 % miRNA;<br>Concentration: 214.50<br>pg/μl                        |
| miRNA / Small RNA Ratio [%]:     | 33    |                        |  |

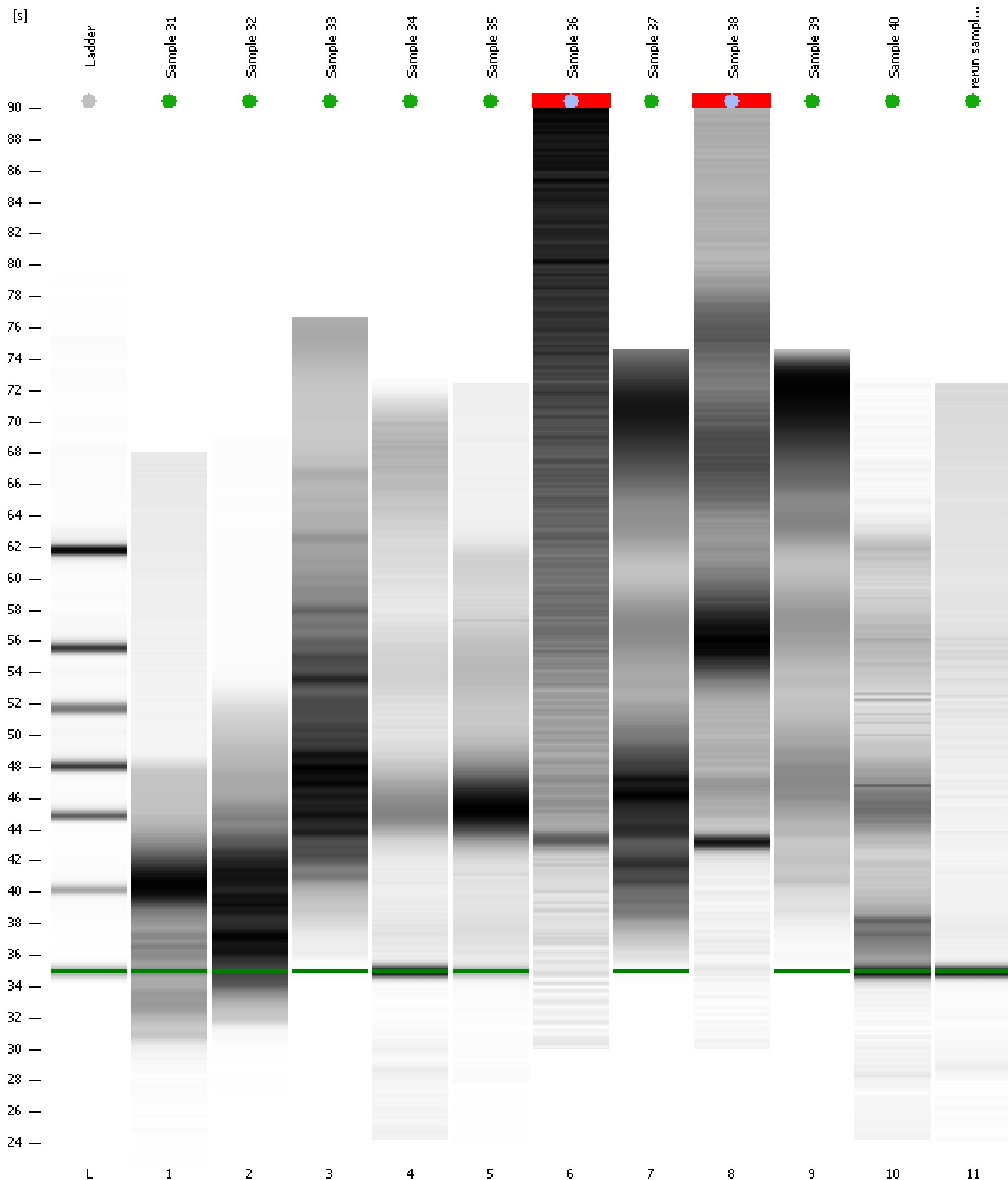
**Region table for sample 11 : rerun sample 8**

| Name      | From [nt] | To [nt] | Average Size [nt] | Size distribution in CV [%] | Conc. [pg/μl] | % of Total | Color   |
|-----------|-----------|---------|-------------------|-----------------------------|---------------|------------|---|
| Small RNA | 0         | 229     | 99                | 76.3                        | 653.0         | 100        | <span style="background-color: purple; color: black;">████</span> |
| miRNA     | 10        | 40      | 22                | 41.7                        | 214.5         | 33         | <span style="background-color: green; color: black;">████</span>  |

Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
Modified: 1/20/2015 11:54:24 AM

**Gel Image**





Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-01-20\2015-01-20\_002.xad

Created: 1/20/2015 11:23:37 AM  
 Modified: 1/20/2015 11:54:24 AM

**Run Logbook**

| Description   | Number | Source     | Category | Sub Category | Time                  | Time Zone                           | User     | Host     |
|---|--------|------------|----------|--------------|-----------------------|-------------------------------------|----------|----------|
| Run ended on port 1 (Number of wells acquired: 12)  |        | Instrument | Run      |              | 1/20/2015 11:54:21 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2015-01-20\2015-01-20_002.xad) |        | Instrument | Run      |              | 1/20/2015 11:23:42 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Product Number : G2938B   |        | Instrument | Run      |              | 1/20/2015 11:23:42 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Name :  |        | Instrument | Run      |              | 1/20/2015 11:23:42 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Vendor : Agilent Technologies   |        | Instrument | Run      |              | 1/20/2015 11:23:42 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Serial# : DE13701086  |        | Instrument | Run      |              | 1/20/2015 11:23:42 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Firmware : C.01.069   |        | Instrument | Run      |              | 1/20/2015 11:23:42 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Cartridge : Electrode   |        | Instrument | Run      |              | 1/20/2015 11:23:42 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |