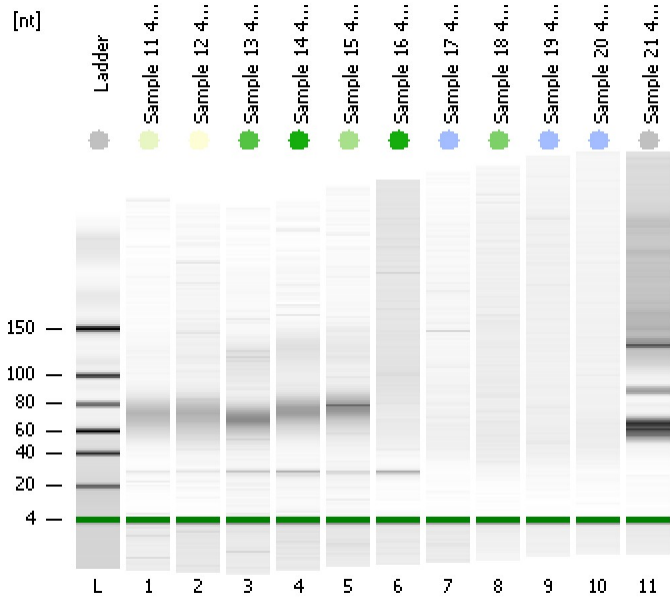


Assay Class: Small RNA  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
Modified: 5/6/2016 3:39:18 PM

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

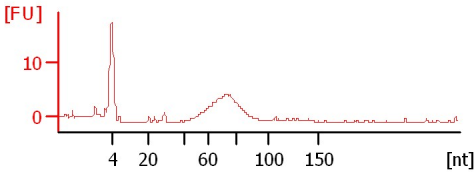
Assay Class: Small RNA  
Version: 1.2  
Assay Comments: Small RNA Analysis 6 - 150 nucleotides

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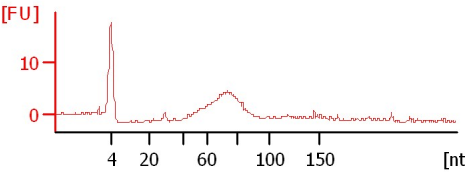
Chip Information:

Chip Lot #:   
Reagent Kit Lot #:   
Chip Comments:

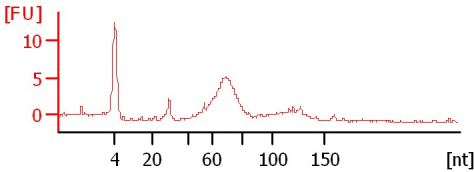
**Sample 11 48 h 10pmol**  
2 % miRNA; Concentration: 5.90 pg/μl



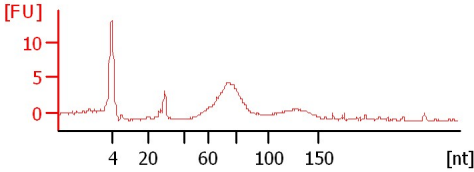
**Sample 12 48h 10pmol**  
1 % miRNA; Concentration: 2 pg/μl



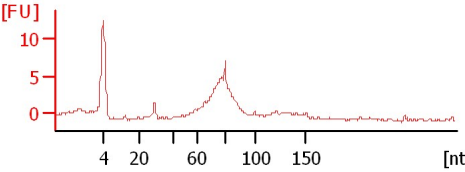
**Sample 13 48h 30pmol**  
9 % miRNA; Concentration: 43.30 pg/μl



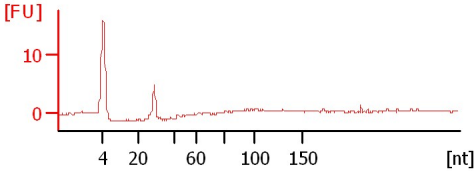
**Sample 14 48h 30pmol**  
14 % miRNA; Concentration: 67.60 pg/μl



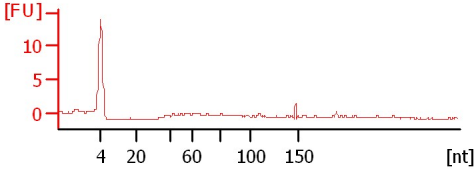
**Sample 15 48h 60pmol**  
5 % miRNA; Concentration: 22.10 pg/μl



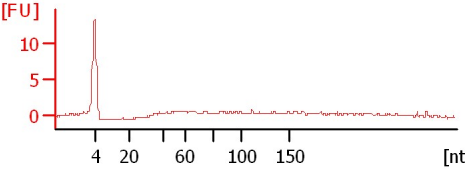
**Sample 16 48h 60pmol**  
36 % miRNA; Concentration: 78.10 pg/μl



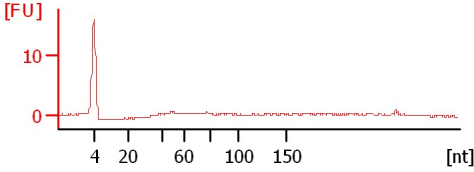
**Sample 17 48h inhibitor**  
All Other Samples



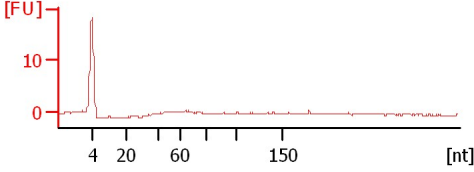
**Sample 18 48h inhibitor**  
7 % miRNA; Concentration: 15 pg/μl



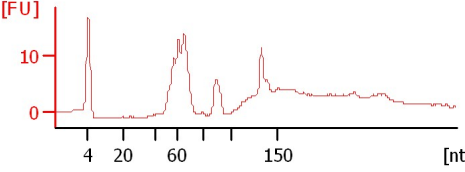
**Sample 19 48h control**  
All Other Samples



**Sample 20 48h control**  
All Other Samples










**Sample 21 48h TRNA 24h 10pmol**  
Number of Peaks: 15



Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

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

Sample Name	Sample Comment	Status	Result Label	Result Color
Sample 11 48 h 10pmol		✓	2 % miRNA; Concentration: 5.90 pg/μl	
Sample 12 48h 10pmol		✓	1 % miRNA; Concentration: 2 pg/μl	
Sample 13 48h 30pmol		✓	9 % miRNA; Concentration: 43.30 pg/μl	
Sample 14 48h 30pmol		✓	14 % miRNA; Concentration: 67.60 pg/μl	
Sample 15 48h 60pmol		✓	5 % miRNA; Concentration: 22.10 pg/μl	
Sample 16 48h 60pmol		✓	36 % miRNA; Concentration: 78.10 pg/μl	
Sample 17 48h inhibitor		✓	All Other Samples	
Sample 18 48h inhibitor		✓	7 % miRNA; Concentration: 15 pg/μl	
Sample 19 48h control		✓	All Other Samples	
Sample 20 48h control		✓	All Other Samples	
Sample 21 48h TRNA 24h 10pmol		✓	Number of Peaks: 15	
Ladder		✓	Number of Peaks: 6	

**Chip Lot #**

**Reagent Kit Lot #**

**Chip Comments :**

Assay Class: Small RNA  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
Modified: 5/6/2016 3:39:18 PM

**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/μl] : 2500  
Lower Marker Concentration [pg/μl] : 500  
Upper Marker Concentration [pg/μl] : 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

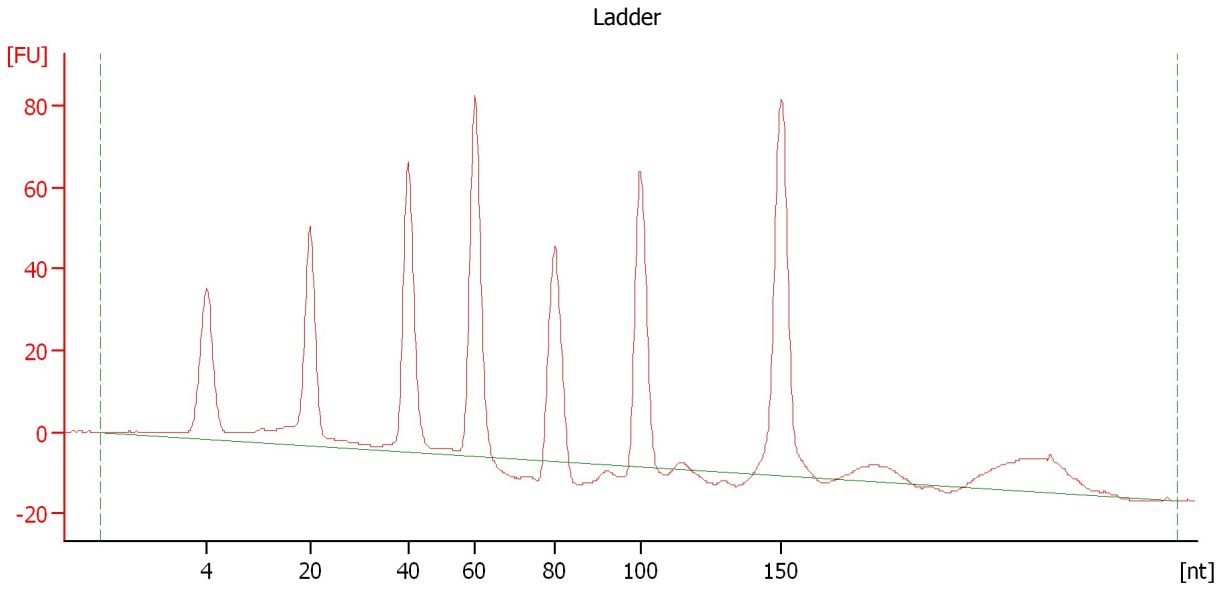
**Ladder**

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

Assay Class: Small RNA  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Result Flagging Color:

Result Flagging Label:

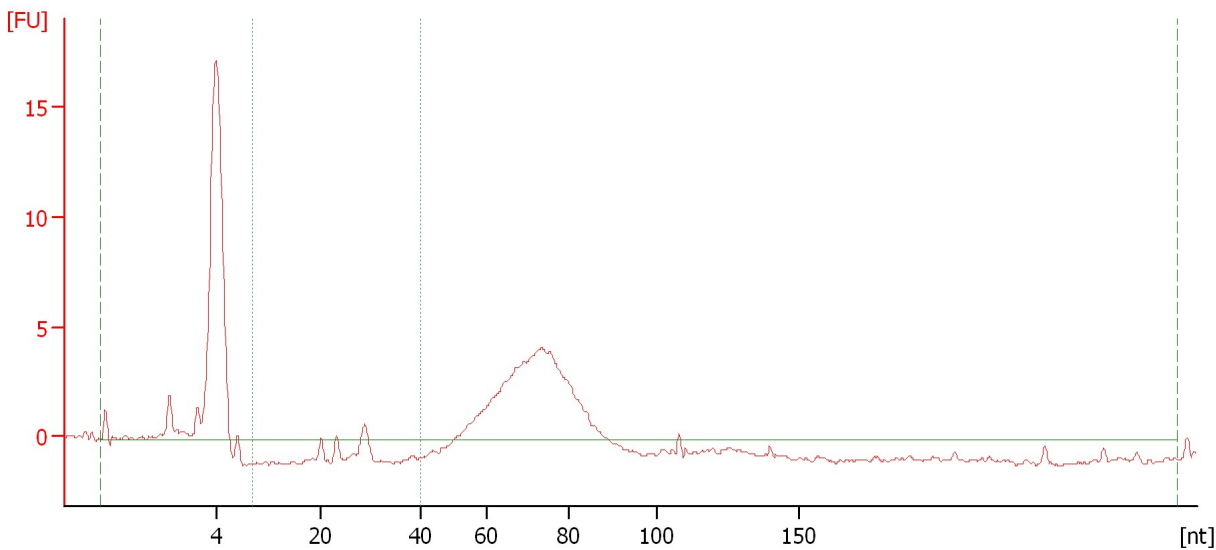
Number of Peaks: 6

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**

Sample 11 48 h 10pmol



**Overall Results for sample 1 : Sample 11 48 h 10pmol**

Small RNA Concentration [pg/μl]:	362.2	Result Flagging Color:	<span style="background-color: #d4edda; border: 1px solid #c3e6cb; display: inline-block; width: 20px; height: 10px;"></span>
miRNA Concentration [pg/μl]:	5.9	Result Flagging Label:	2 % miRNA; Concentration: 5.90 pg/μl
miRNA / Small RNA Ratio [%]:	2		

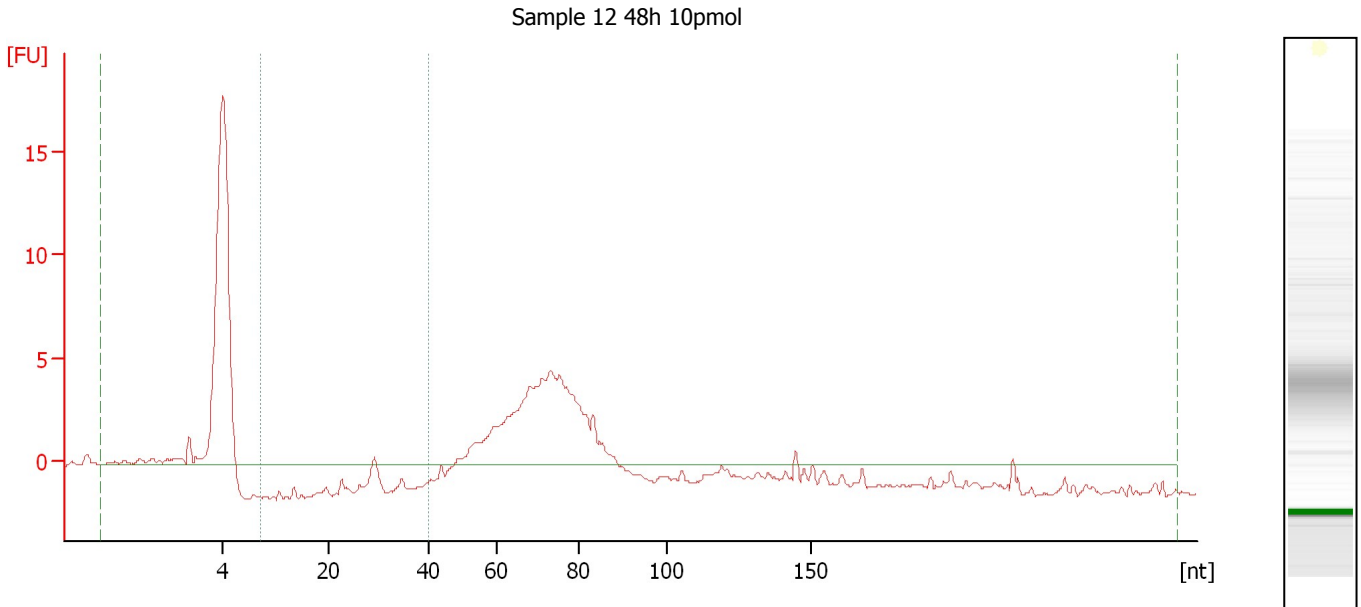
**Region table for sample 1 : Sample 11 48 h 10pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	283	40	84.3	362.2	100	<span style="background-color: #d4edda; border: 1px solid #c3e6cb; display: inline-block; width: 15px; height: 15px;"></span>
miRNA	10	40	28	5.6	5.9	2	<span style="background-color: #d4edda; border: 1px solid #c3e6cb; display: inline-block; width: 15px; height: 15px;"></span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Sample 12 48h 10pmol**

Small RNA Concentration [pg/μl]:	361.1	Result Flagging Color:	<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>
miRNA Concentration [pg/μl]:	2.0	Result Flagging Label:	1 % miRNA; Concentration: 2 pg/μl
miRNA / Small RNA Ratio [%]:	1		

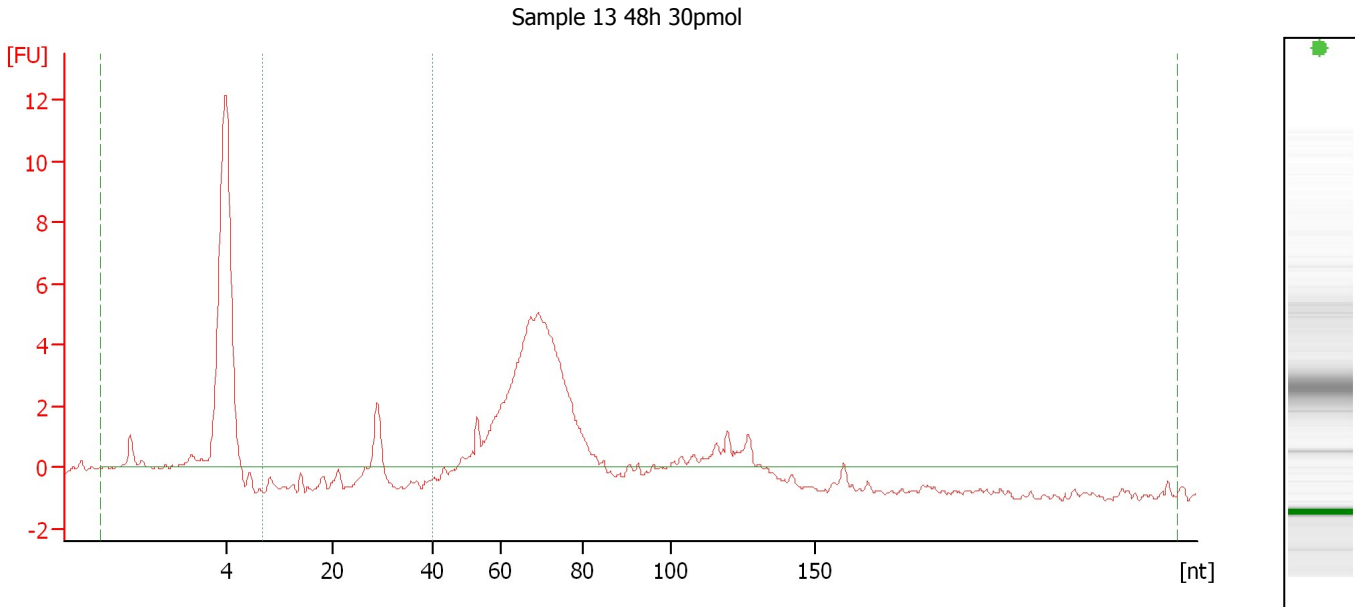
**Region table for sample 2 : Sample 12 48h 10pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	277	43	80.3	361.1	100	<span style="background-color: maroon; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span>
miRNA	10	40	29	0.7	2.0	1	<span style="background-color: green; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Sample 13 48h 30pmol**

Small RNA Concentration [pg/μl]:	502.2	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	43.3	Result Flagging Label:	9 % miRNA; Concentration: 43.30 pg/μl
miRNA / Small RNA Ratio [%]:	9		

**Region table for sample 3 : Sample 13 48h 30pmol**

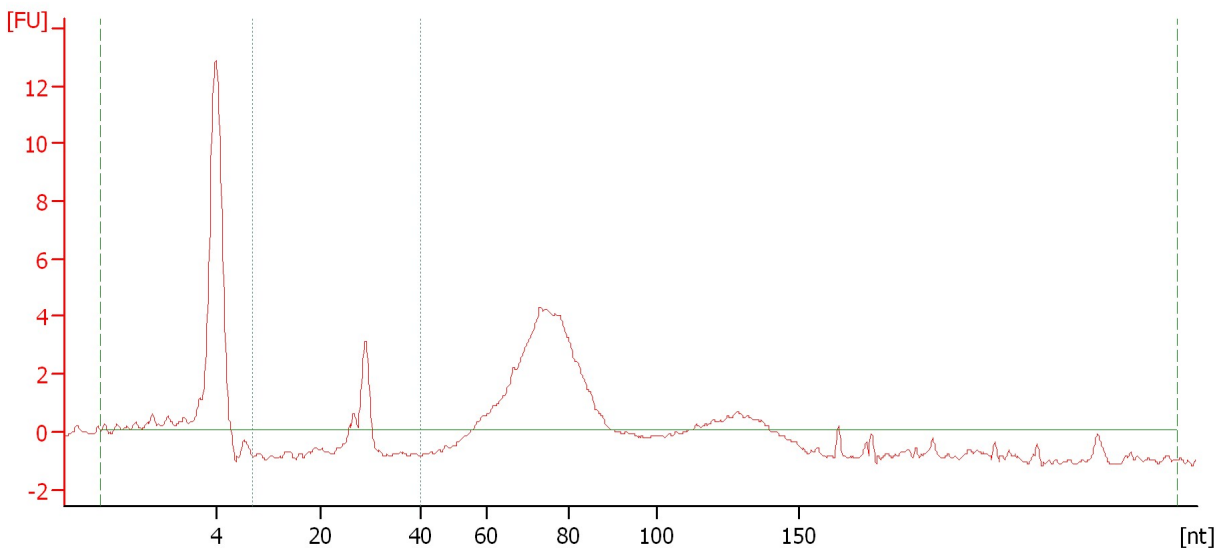
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	275	49	71.5	502.2	100	<span style="background-color: maroon; width: 15px; height: 15px; display: inline-block;"></span>
miRNA	10	40	29	1.9	43.3	9	<span style="background-color: green; width: 15px; height: 15px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**

Sample 14 48h 30pmol



**Overall Results for sample 4 : Sample 14 48h 30pmol**

Small RNA Concentration [pg/μl]:	492.0	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	67.6	Result Flagging Label:	14 % miRNA; Concentration: 67.60 pg/μl
miRNA / Small RNA Ratio [%]:	14		

**Region table for sample 4 : Sample 14 48h 30pmol**

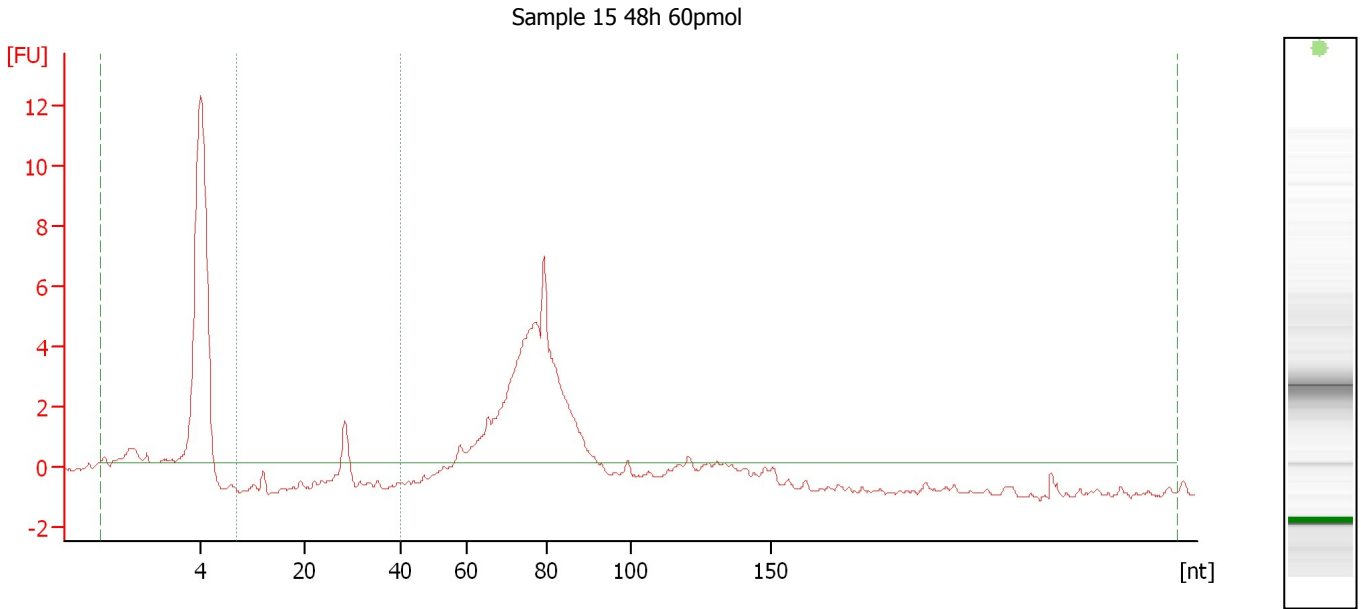
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	283	48	79.4	492.0	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	29	3.1	67.6	14	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>



Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : Sample 15 48h 60pmol**

Small RNA Concentration [pg/μl]:	462.0	Result Flagging Color:	<span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>
miRNA Concentration [pg/μl]:	22.1	Result Flagging Label:	5 % miRNA; Concentration: 22.10 pg/μl
miRNA / Small RNA Ratio [%]:	5		

**Region table for sample 5 : Sample 15 48h 60pmol**

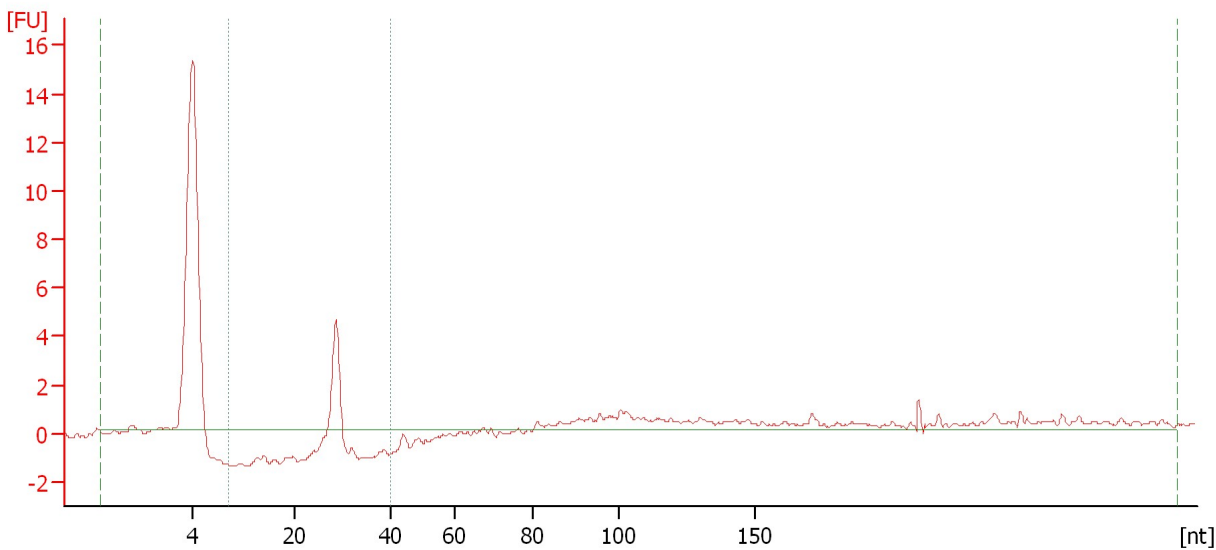
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	295	49	71.5	462.0	100	<span style="background-color: #800080; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>
miRNA	10	40	28	1.5	22.1	5	<span style="background-color: #008080; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**

Sample 16 48h 60pmol



**Overall Results for sample 6 : Sample 16 48h 60pmol**

Small RNA Concentration [pg/μl]:	219.6	Result Flagging Color:	<span style="background-color: green; color: black;">          </span>
miRNA Concentration [pg/μl]:	78.1	Result Flagging Label:	36 % miRNA; Concentration: 78.10 pg/μl
miRNA / Small RNA Ratio [%]:	36		

**Region table for sample 6 : Sample 16 48h 60pmol**

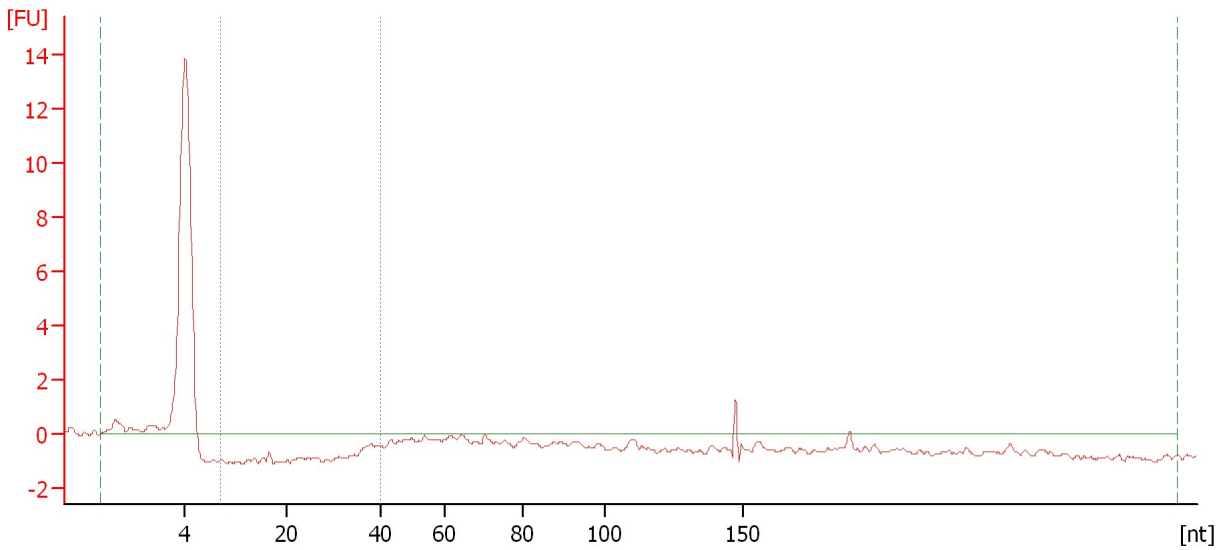
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	303	90	100.0	219.6	100	<span style="background-color: maroon; color: black;">          </span>
miRNA	10	40	29	2.0	78.1	36	<span style="background-color: green; color: black;">          </span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**

Sample 17 48h inhibitor



**Overall Results for sample 7 : Sample 17 48h inhibitor**

Small RNA Concentration [pg/μl]: 47.3      Result Flagging Color:   
 miRNA Concentration [pg/μl]: 0.0      Result Flagging Label: All Other Samples  
 miRNA / Small RNA Ratio [%]: 0

**Region table for sample 7 : Sample 17 48h inhibitor**

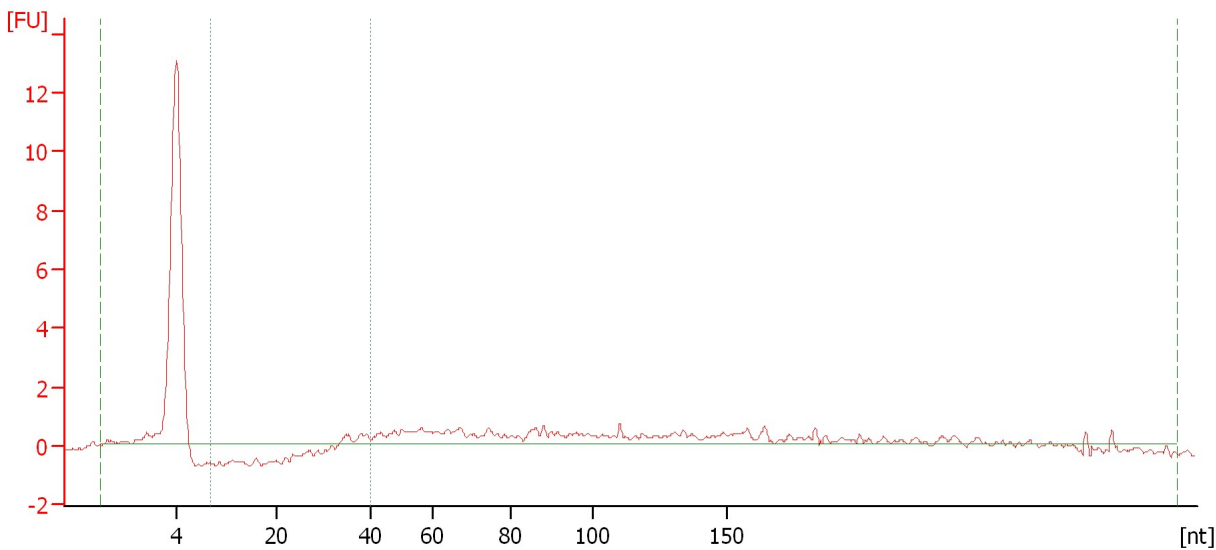
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	309	7	100.0	47.3	100	<span style="background-color: #800000; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>
miRNA	10	40	0	0.0	0.0	0	<span style="background-color: #008000; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**

Sample 18 48h inhibitor



**Overall Results for sample 8 : Sample 18 48h inhibitor**

Small RNA Concentration [pg/μl]:	214.9	Result Flagging Color:	<span style="background-color: #90EE90; display: inline-block; width: 15px; height: 10px;"></span>
miRNA Concentration [pg/μl]:	15.0	Result Flagging Label:	7 % miRNA; Concentration: 15 pg/μl
miRNA / Small RNA Ratio [%]:	7		

**Region table for sample 8 : Sample 18 48h inhibitor**

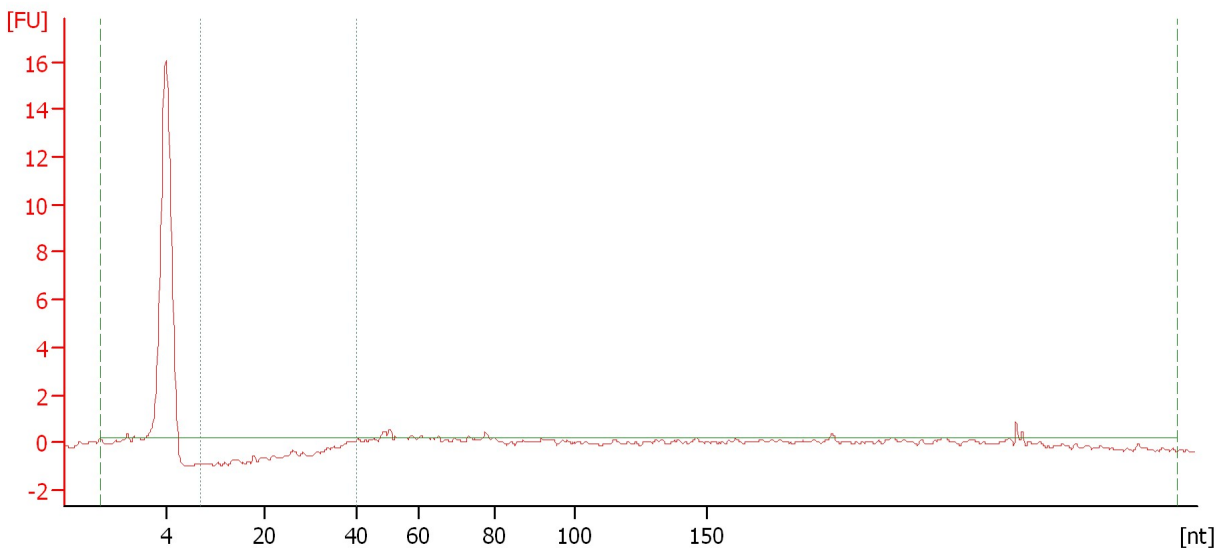
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	317	61	100.0	214.9	100	<span style="background-color: #800080; display: inline-block; width: 10px; height: 10px;"></span>
miRNA	10	40	37	4.9	15.0	7	<span style="background-color: #008080; display: inline-block; width: 10px; height: 10px;"></span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**

Sample 19 48h control



**Overall Results for sample 9 : Sample 19 48h control**

Small RNA Concentration [pg/μl]:	9.4	Result Flagging Color:	<span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>
miRNA Concentration [pg/μl]:	0.0	Result Flagging Label:	All Other Samples
miRNA / Small RNA Ratio [%]:	0		

**Region table for sample 9 : Sample 19 48h control**

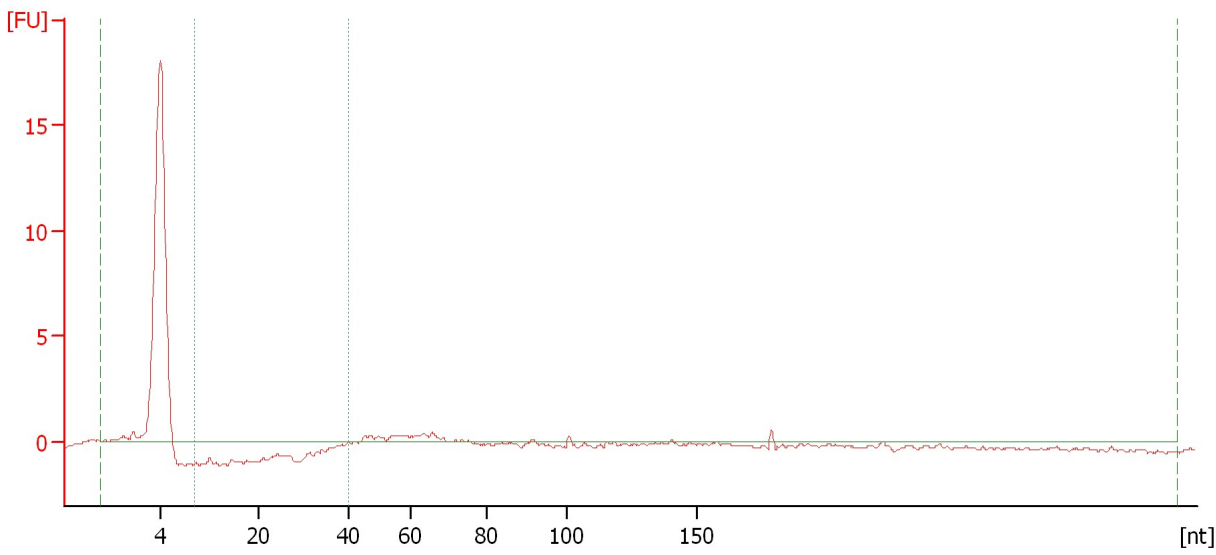
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color or
Small RNA	0	327	10	100.0	9.4	100	<span style="background-color: #800000; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>
miRNA	10	40	0	0.0	0.0	0	<span style="background-color: #008000; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**

Sample 20 48h control



**Overall Results for sample 10 : Sample 20 48h control**

Small RNA Concentration [pg/μl]:	35.8	Result Flagging Color:	<span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>
miRNA Concentration [pg/μl]:	0.0	Result Flagging Label:	All Other Samples
miRNA / Small RNA Ratio [%]:	0		

**Region table for sample 10 : Sample 20 48h control**

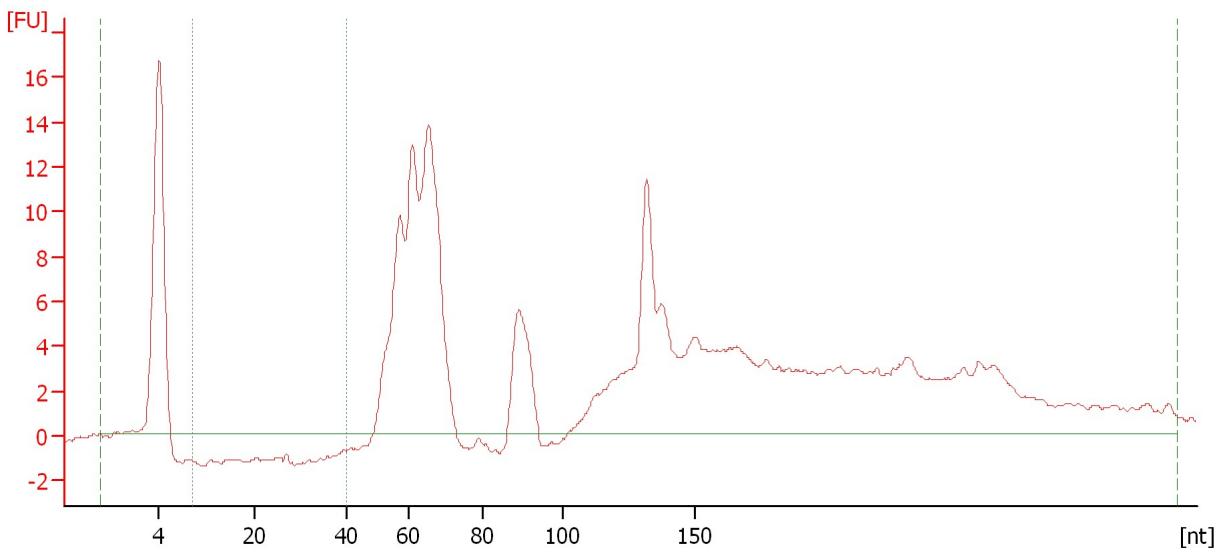
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	332	10	100.0	35.8	100	<span style="background-color: #800000; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>
miRNA	10	40	0	0.0	0.0	0	<span style="background-color: #008000; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**Electropherogram Summary Continued ...**

Sample 21 48h TRNA 24h 10pmol



**Overall Results for sample 11 : Sample 21 48h TRNA 24h 10pmol**

Small RNA Concentration [pg/μl]: 1,479.2      Result Flagging Color:   
 miRNA Concentration [pg/μl]: 0.0      Result Flagging Label: Number of Peaks: 15  
 miRNA / Small RNA Ratio [%]: 0

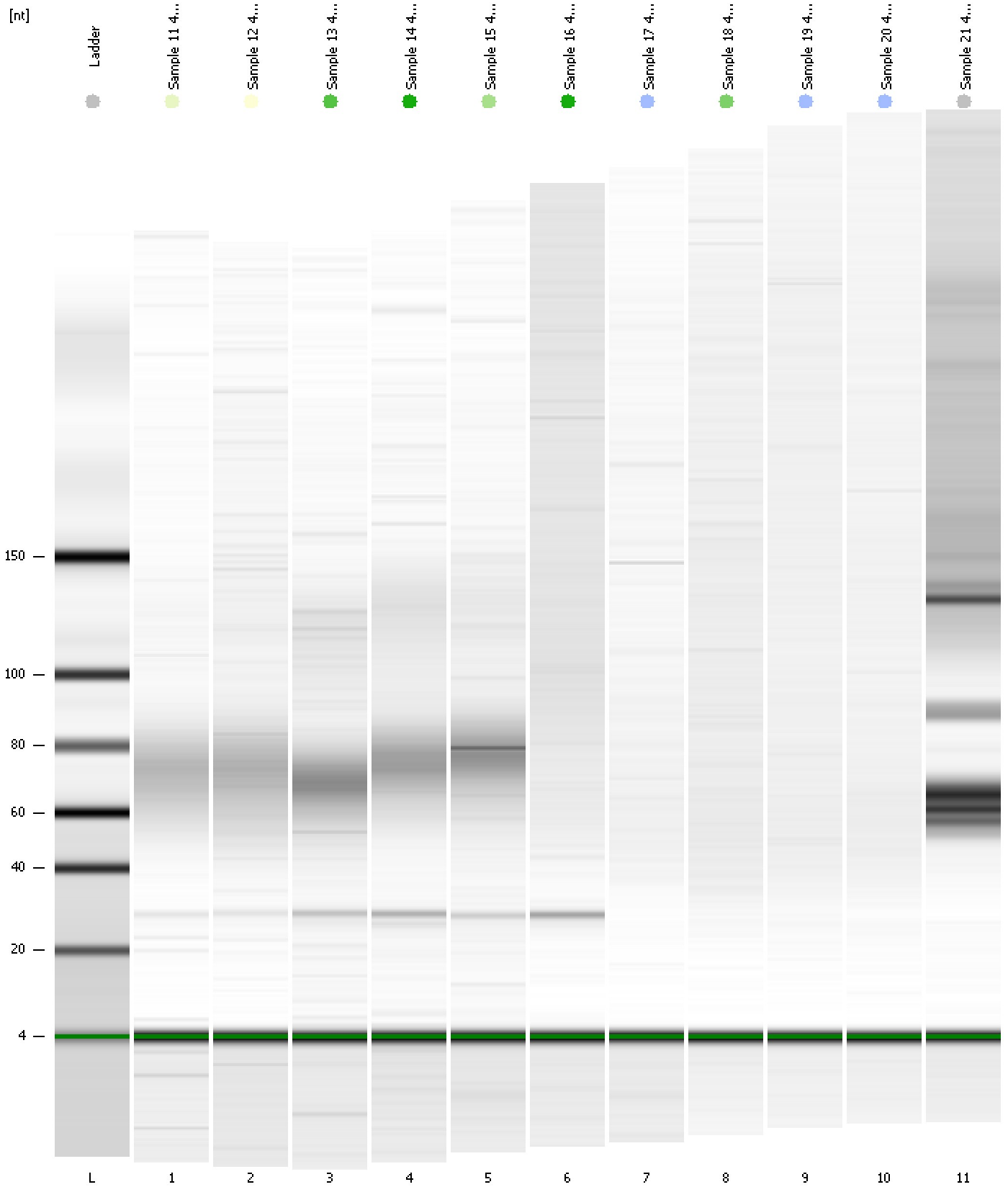
**Region table for sample 11 : Sample 21 48h TRNA 24h 10pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	334	145	59.4	1,479.2	100	<span style="background-color: #800000; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>
miRNA	10	40	0	0.0	0.0	0	<span style="background-color: #008000; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>

Assay Class: Small RNA  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad

Created: 5/6/2016 3:08:31 PM  
Modified: 5/6/2016 3:39:18 PM

Gel Image





Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_003.xad  
 Created: 5/6/2016 3:08:31 PM  
 Modified: 5/6/2016 3:39:18 PM

**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		5/6/2016 3:39:15 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-05-06\2016-05-06_003.xad)		Instrument	Run		5/6/2016 3:08:37 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		5/6/2016 3:08:37 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/6/2016 3:08:37 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/6/2016 3:08:37 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		5/6/2016 3:08:37 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/6/2016 3:08:37 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/6/2016 3:08:37 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1