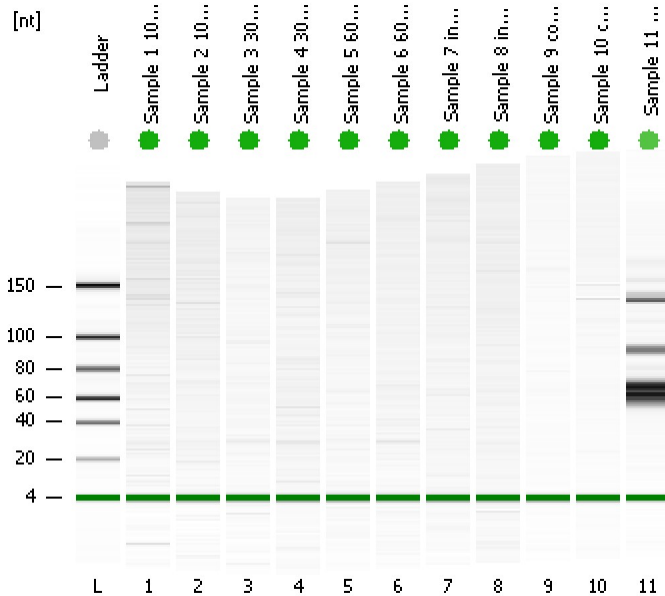


Assay Class: Small RNA  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_002.xad

Created: 5/6/2016 2:26:00 PM  
Modified: 5/6/2016 2:57:59 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

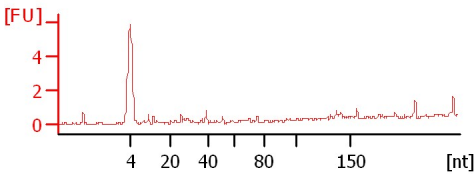
Assay Class: Small RNA  
Version: 1.2  
Assay Comments: Small RNA Analysis 6 - 150 nucleotides

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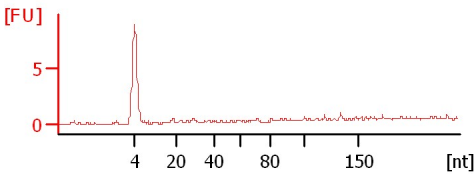
Chip Information:

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

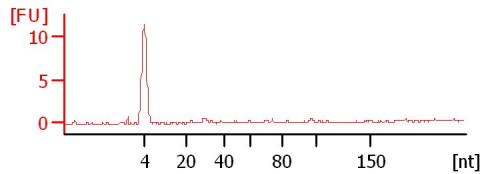
**Sample 1 10pmol**  
40 % miRNA; Concentration: 288.80 pg/µl



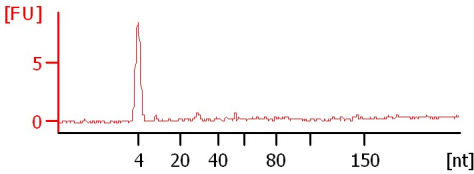
**Sample 2 10pmol**  
40 % miRNA; Concentration: 230.30 pg/µl



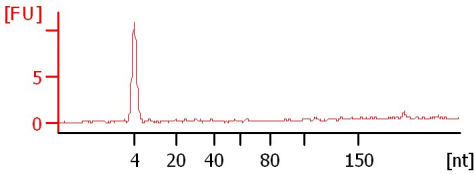
**Sample 3 30pmol**  
43 % miRNA; Concentration: 150.60 pg/µl



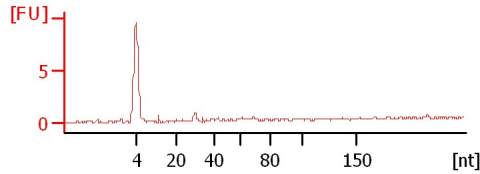
**Sample 4 30pmol**  
47 % miRNA; Concentration: 205.80 pg/µl



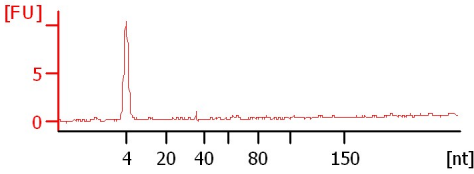
**Sample 5 60pmol**  
37 % miRNA; Concentration: 151 pg/µl



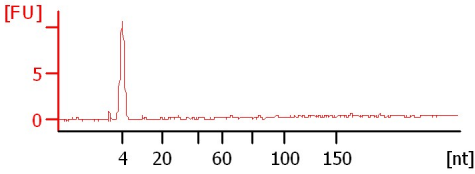
**Sample 6 60pmol**  
38 % miRNA; Concentration: 189.80 pg/µl



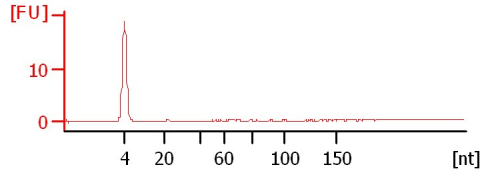
**Sample 7 inhibitor 30pmol**  
39 % miRNA; Concentration: 267.70 pg/µl



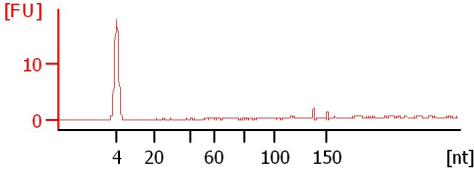
**Sample 8 inhibitor 30pmol**  
27 % miRNA; Concentration: 78.70 pg/µl



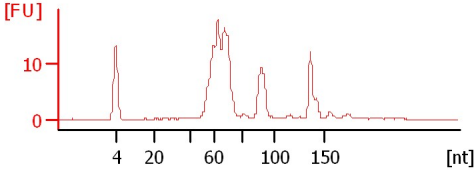
**Sample 9 control**  
24 % miRNA; Concentration: 16 pg/µl



**Sample 10 control**  
14 % miRNA; Concentration: 19.60 pg/µl















**Sample 11 T.RNA 10pmol**  
9 % miRNA; Concentration: 142.50 pg/µl



Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

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

Sample Name	Sample Comment	Status	Result Label	Result Color
Sample 1 10pmol		✓	40 % miRNA; Concentration: 288.80 pg/μl	
Sample 2 10pmol		✓	40 % miRNA; Concentration: 230.30 pg/μl	
Sample 3 30 pmol		✓	43 % miRNA; Concentration: 150.60 pg/μl	
Sample 4 30 pmol		✓	47 % miRNA; Concentration: 205.80 pg/μl	
Sample 5 60pmol		✓	37 % miRNA; Concentration: 151 pg/μl	
Sample 6 60pmol		✓	38 % miRNA; Concentration: 189.80 pg/μl	
Sample 7 inhibitor 30pmol		✓	39 % miRNA; Concentration: 267.70 pg/μl	
Sample 8 inhibitor 30pmol		✓	27 % miRNA; Concentration: 78.70 pg/μl	
Sample 9 control		✓	24 % miRNA; Concentration: 16 pg/μl	
Sample 10 control		✓	14 % miRNA; Concentration: 19.60 pg/μl	
Sample 11 T.RNA 10pmol		✓	9 % miRNA; Concentration: 142.50 pg/μl	
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\_002.xad

Created: 5/6/2016 2:26:00 PM  
Modified: 5/6/2016 2:57:59 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

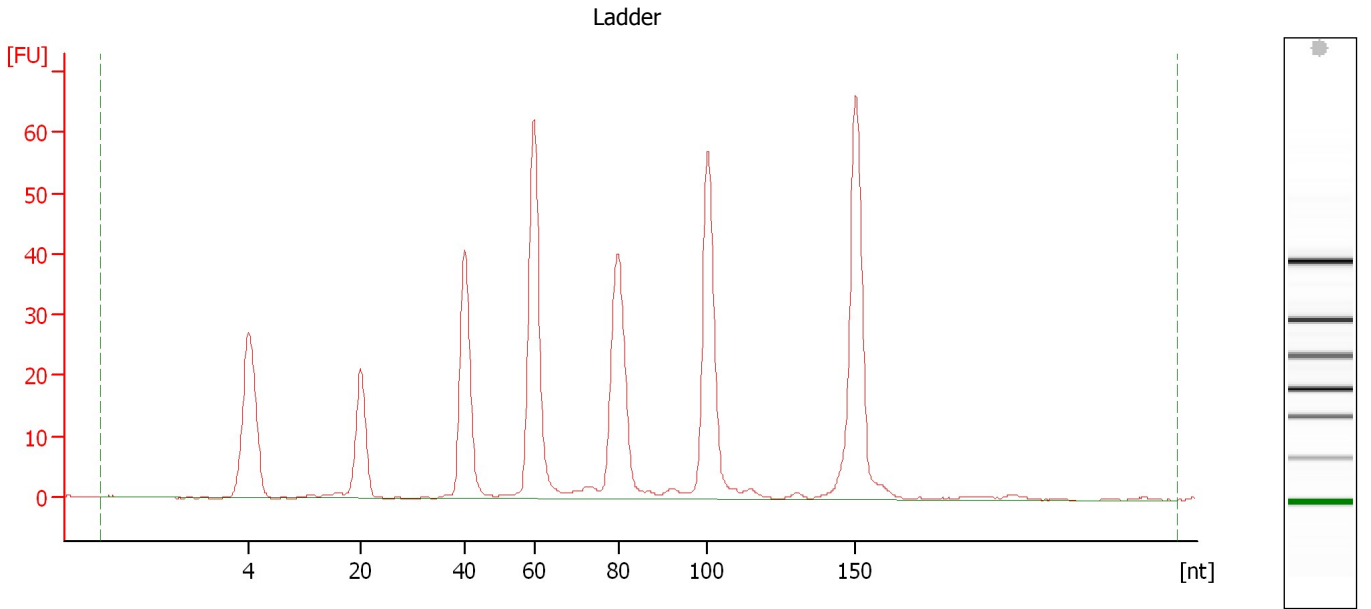
**Ladder**

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\_002.xad

Created: 5/6/2016 2:26:00 PM  
Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Result Flagging Color:

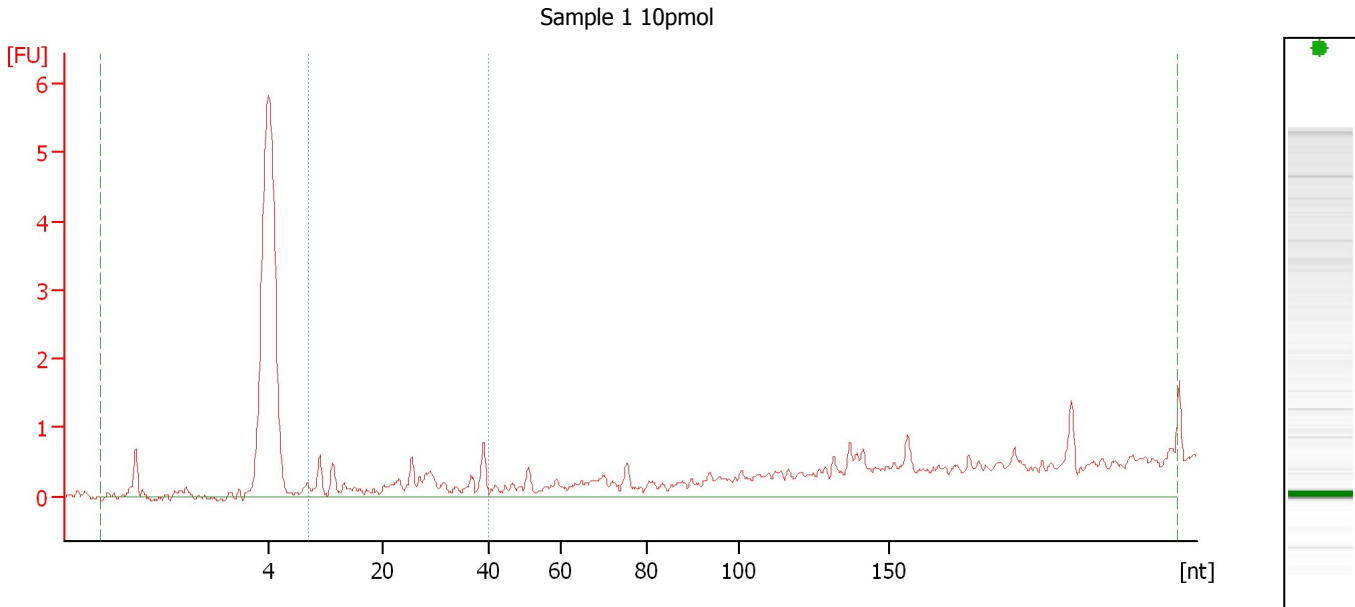
Result Flagging Label:

Number of Peaks: 6

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : Sample 1 10pmol**

Small RNA Concentration [pg/μl]:	721.4	Result Flagging Color:	<span style="background-color: green; color: green;"> </span>
miRNA Concentration [pg/μl]:	288.8	Result Flagging Label:	40 % miRNA; Concentration: 288.80 pg/μl
miRNA / Small RNA Ratio [%]:	40		

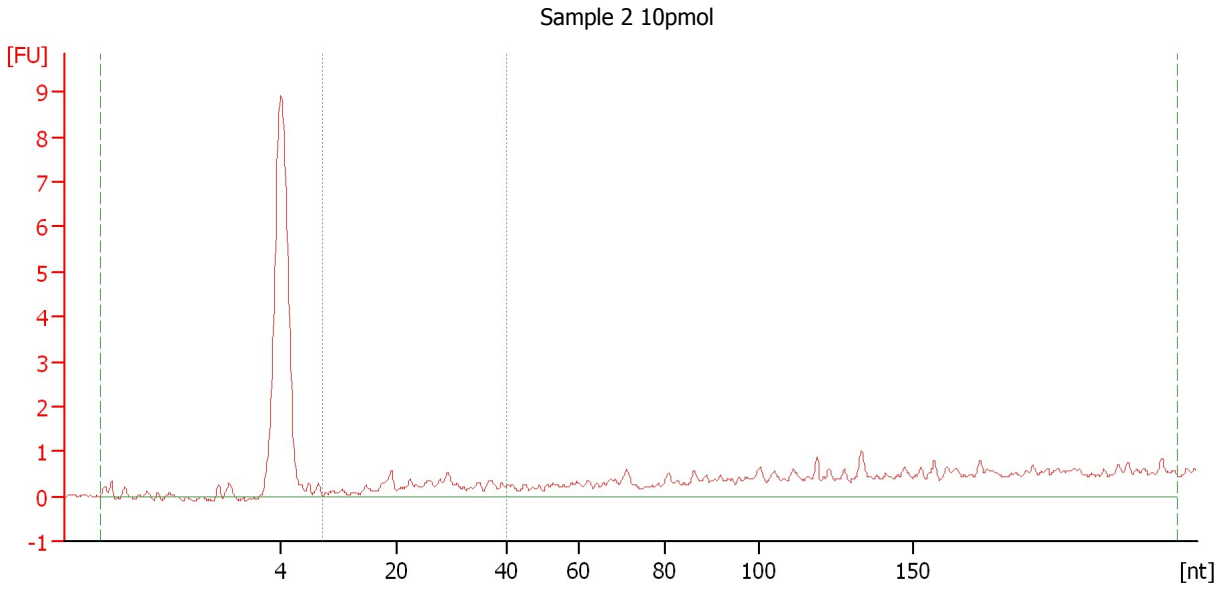
**Region table for sample 1 : Sample 1 10pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	244	106	79.4	721.4	100	<span style="background-color: maroon; color: maroon;"> </span>
miRNA	10	40	25	37.3	288.8	40	<span style="background-color: green; color: green;"> </span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Sample 2 10pmol**

Small RNA Concentration [pg/μl]:	573.7	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	230.3	Result Flagging Label:	40 % miRNA; Concentration: 230.30 pg/μl
miRNA / Small RNA Ratio [%]:	40		

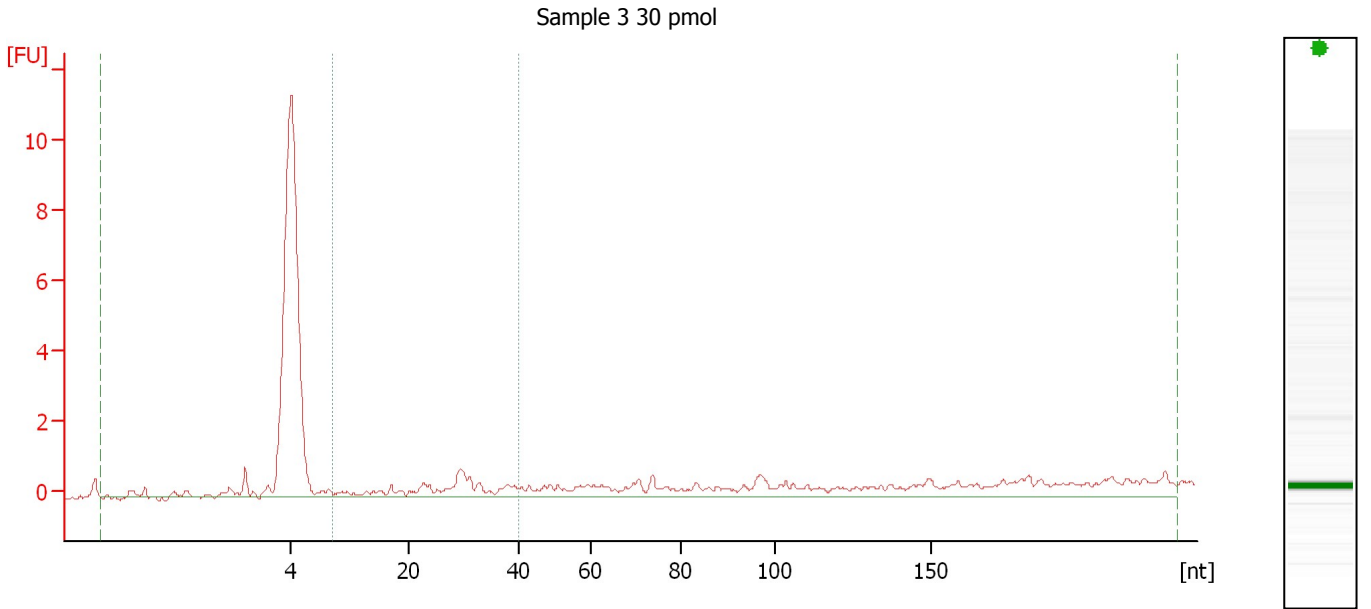
**Region table for sample 2 : Sample 2 10pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	235	91	86.6	573.7	100	<span style="background-color: maroon; width: 15px; height: 15px; display: inline-block;"></span>
miRNA	10	40	26	30.6	230.3	40	<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\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Sample 3 30 pmol**

Small RNA Concentration [pg/μl]:	349.6	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	150.6	Result Flagging Label:	43 % miRNA; Concentration: 150.60 pg/μl
miRNA / Small RNA Ratio [%]:	43		

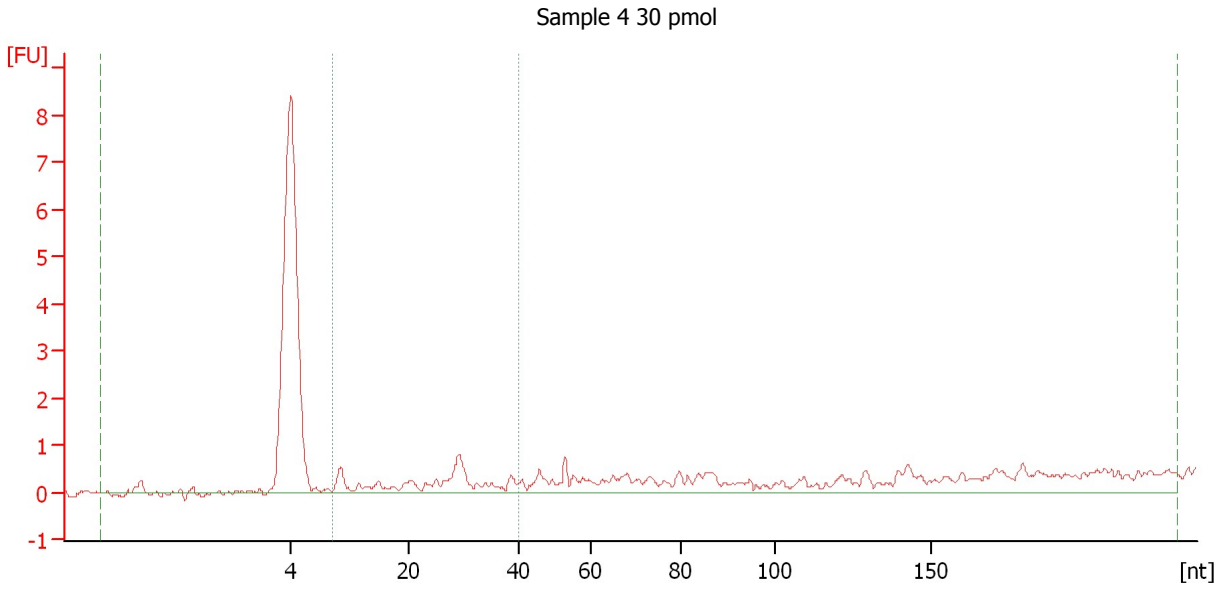
**Region table for sample 3 : Sample 3 30 pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	229	67	100.0	349.6	100	<span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	28.4	150.6	43	<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\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : Sample 4 30 pmol**

Small RNA Concentration [pg/μl]:	438.6	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	205.8	Result Flagging Label:	47 % miRNA; Concentration: 205.80 pg/μl
miRNA / Small RNA Ratio [%]:	47		

**Region table for sample 4 : Sample 4 30 pmol**

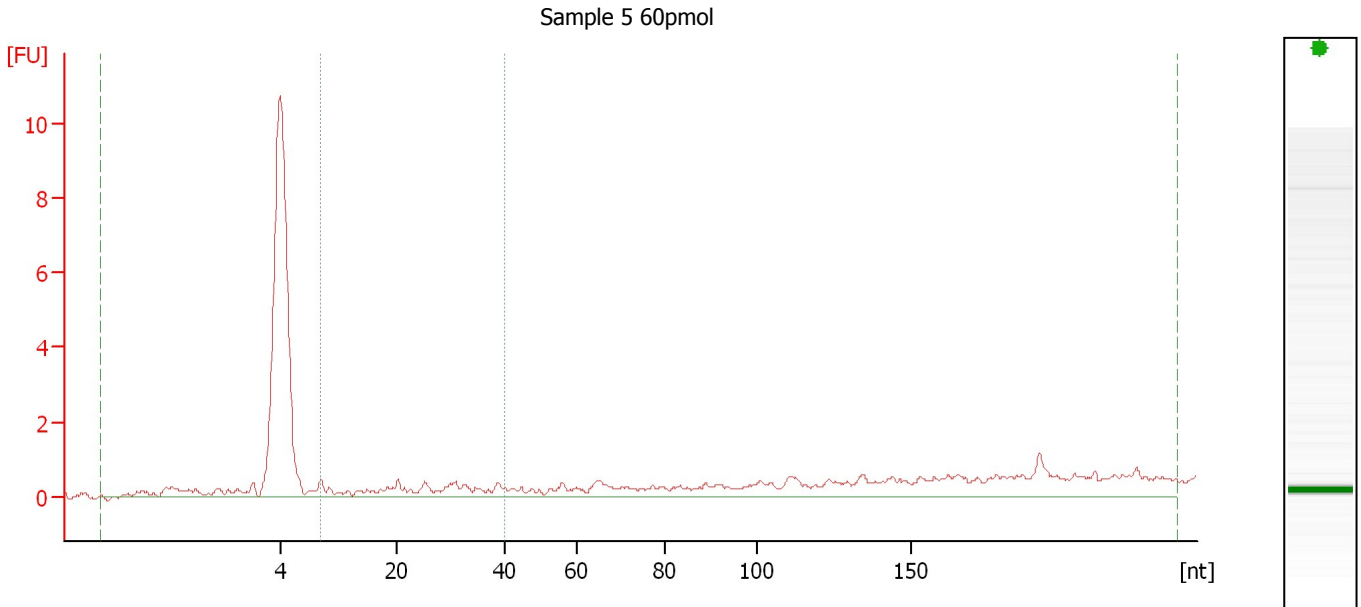
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	229	77	100.0	438.6	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	25	34.5	205.8	47	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>



Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : Sample 5 60pmol**

Small RNA Concentration [pg/μl]:	407.2	Result Flagging Color:	<span style="background-color: green; color: black;"> </span>
miRNA Concentration [pg/μl]:	151.0	Result Flagging Label:	37 % miRNA; Concentration: 151 pg/μl
miRNA / Small RNA Ratio [%]:	37		

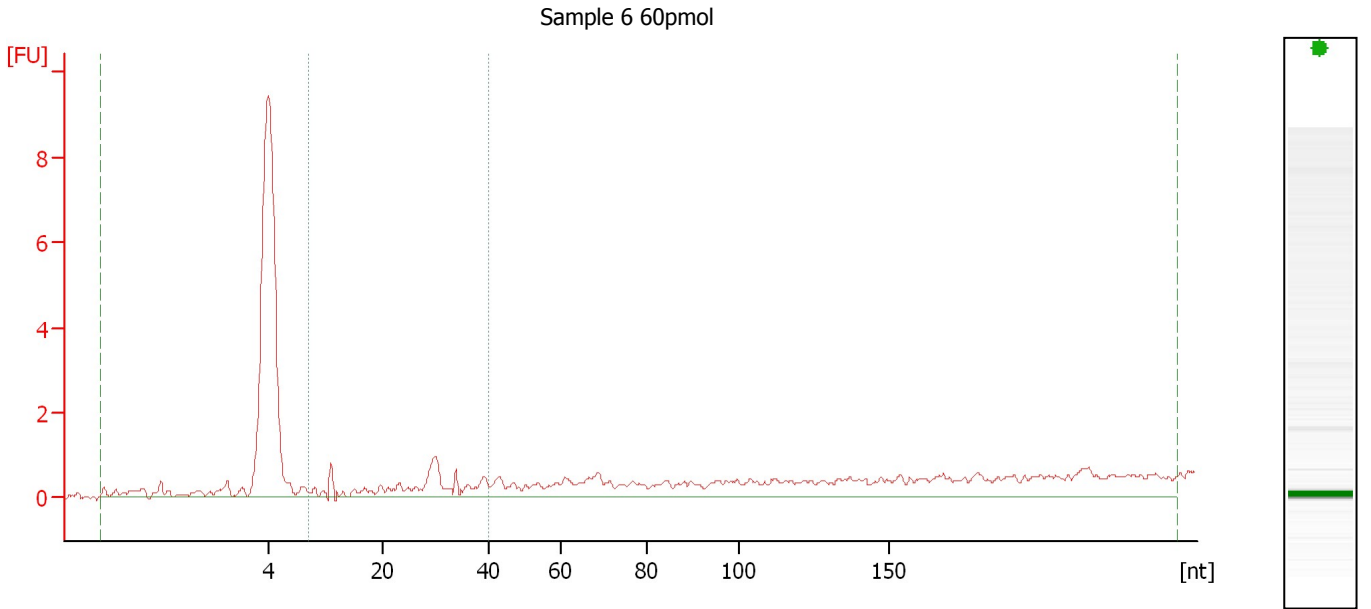
**Region table for sample 5 : Sample 5 60pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	236	83	98.9	407.2	100	<span style="background-color: purple; color: black;"> </span>
miRNA	10	40	25	35.2	151.0	37	<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\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : Sample 6 60pmol**

Small RNA Concentration [pg/μl]:	496.8	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	189.8	Result Flagging Label:	38 % miRNA; Concentration: 189.80 pg/μl
miRNA / Small RNA Ratio [%]:	38		

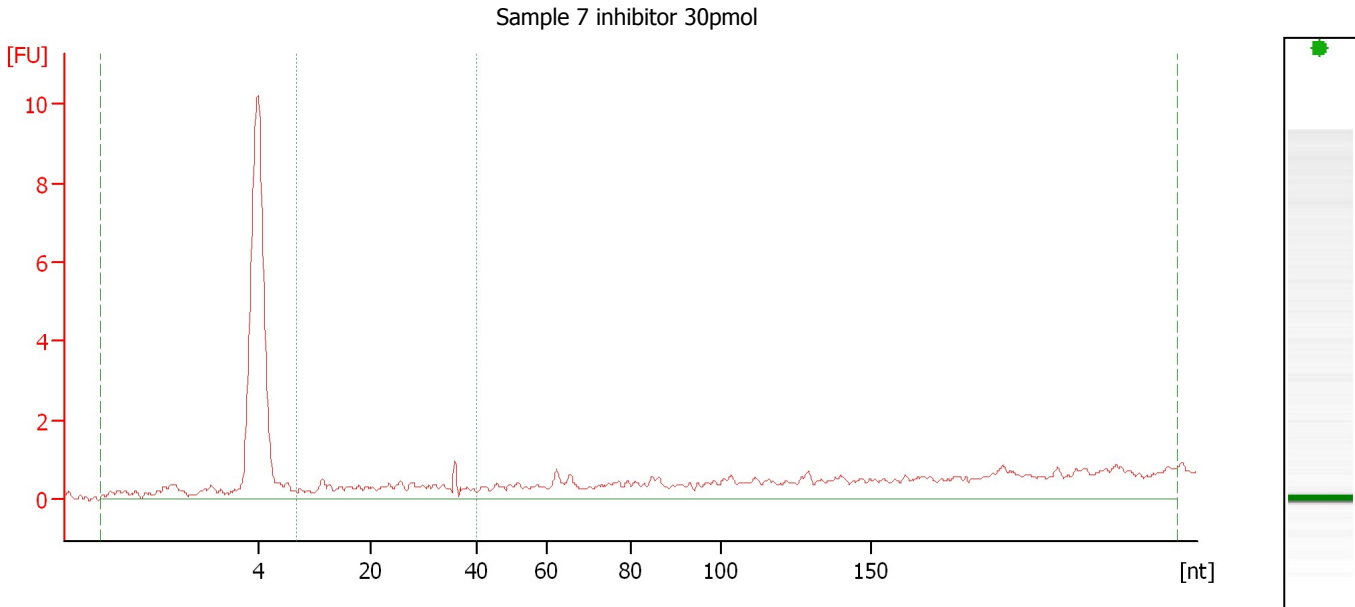
**Region table for sample 6 : Sample 6 60pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	244	85	96.4	496.8	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	30.8	189.8	38	<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\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Sample 7 inhibitor 30pmol**

Small RNA Concentration [pg/μl]:	681.6	Result Flagging Color:	<span style="background-color: green; color: green;">████████</span>
miRNA Concentration [pg/μl]:	267.7	Result Flagging Label:	39 % miRNA; Concentration: 267.70 pg/μl
miRNA / Small RNA Ratio [%]:	39		

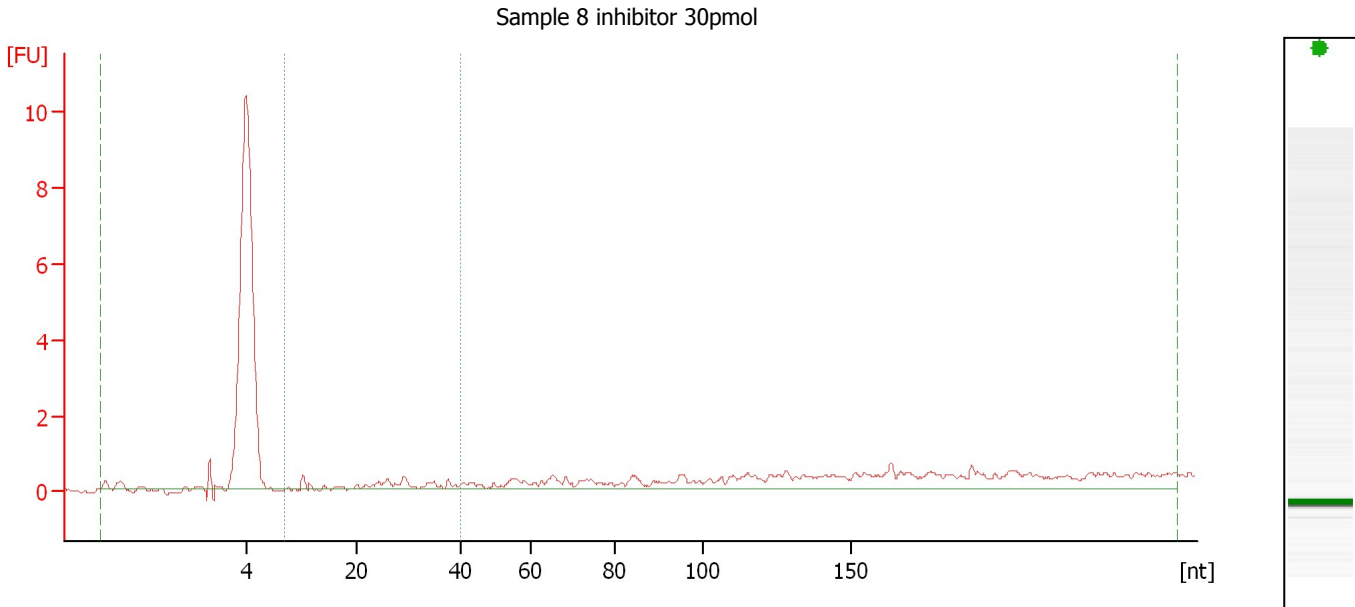
**Region table for sample 7 : Sample 7 inhibitor 30pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	252	94	92.0	681.6	100	<span style="background-color: maroon; color: maroon;">████</span>
miRNA	10	40	24	35.7	267.7	39	<span style="background-color: green; color: green;">████</span>

Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : Sample 8 inhibitor 30pmol**

Small RNA Concentration [pg/μl]:	287.7	Result Flagging Color:	<span style="background-color: green; color: black;">          </span>
miRNA Concentration [pg/μl]:	78.7	Result Flagging Label:	27 % miRNA; Concentration: 78.70 pg/μl
miRNA / Small RNA Ratio [%]:	27		

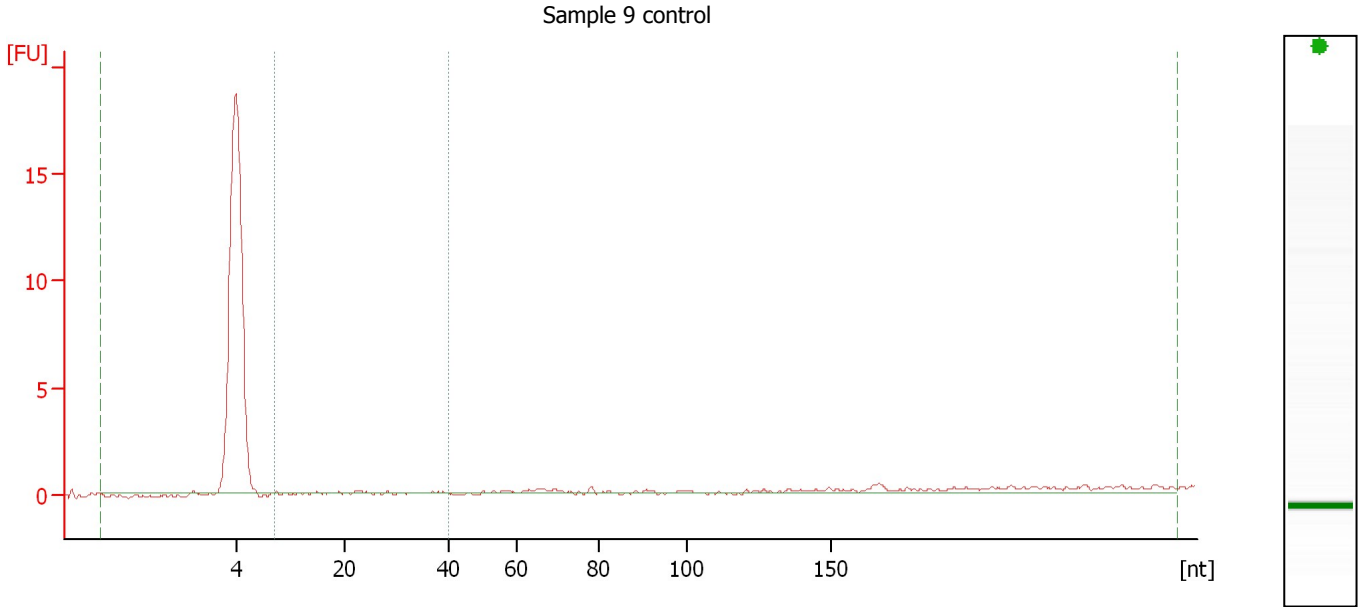
**Region table for sample 8 : Sample 8 inhibitor 30pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	260	90	98.3	287.7	100	<span style="background-color: maroon; color: black;">          </span>
miRNA	10	40	26	30.8	78.7	27	<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\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



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

Small RNA Concentration [pg/μl]:	66.9	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	16.0	Result Flagging Label:	24 % miRNA; Concentration: 16 pg/μl
miRNA / Small RNA Ratio [%]:	24		

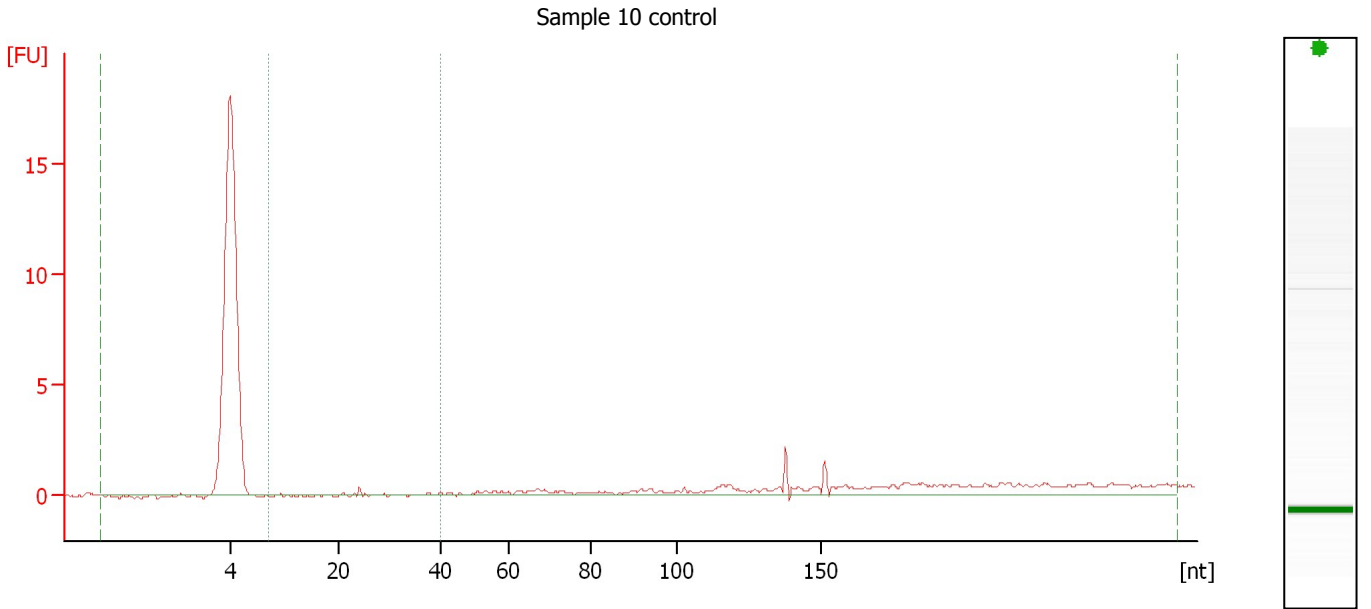
**Region table for sample 9 : Sample 9 control**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	268	56	100.0	66.9	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	25	34.3	16.0	24	<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\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



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

Small RNA Concentration [pg/μl]:	141.7	Result Flagging Color:	<span style="background-color: green; color: black;"> </span>
miRNA Concentration [pg/μl]:	19.6	Result Flagging Label:	14 % miRNA; Concentration: 19.60 pg/μl
miRNA / Small RNA Ratio [%]:	14		

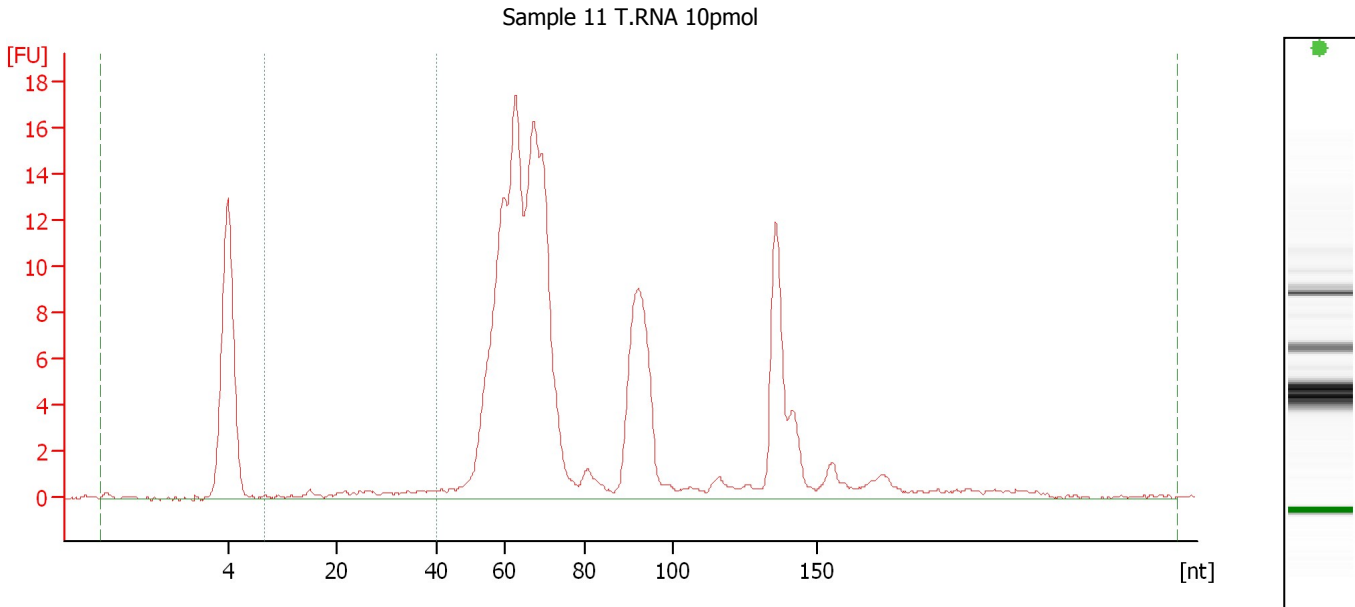
**Region table for sample 10 : Sample 10 control**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	273	87	100.0	141.7	100	<span style="background-color: maroon; color: black;"> </span>
miRNA	10	40	27	29.8	19.6	14	<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\_002.xad

Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : Sample 11 T.RNA 10pmol**

Small RNA Concentration [pg/μl]:	1,600.1	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	142.5	Result Flagging Label:	9 % miRNA; Concentration: 142.50 pg/μl
miRNA / Small RNA Ratio [%]:	9		

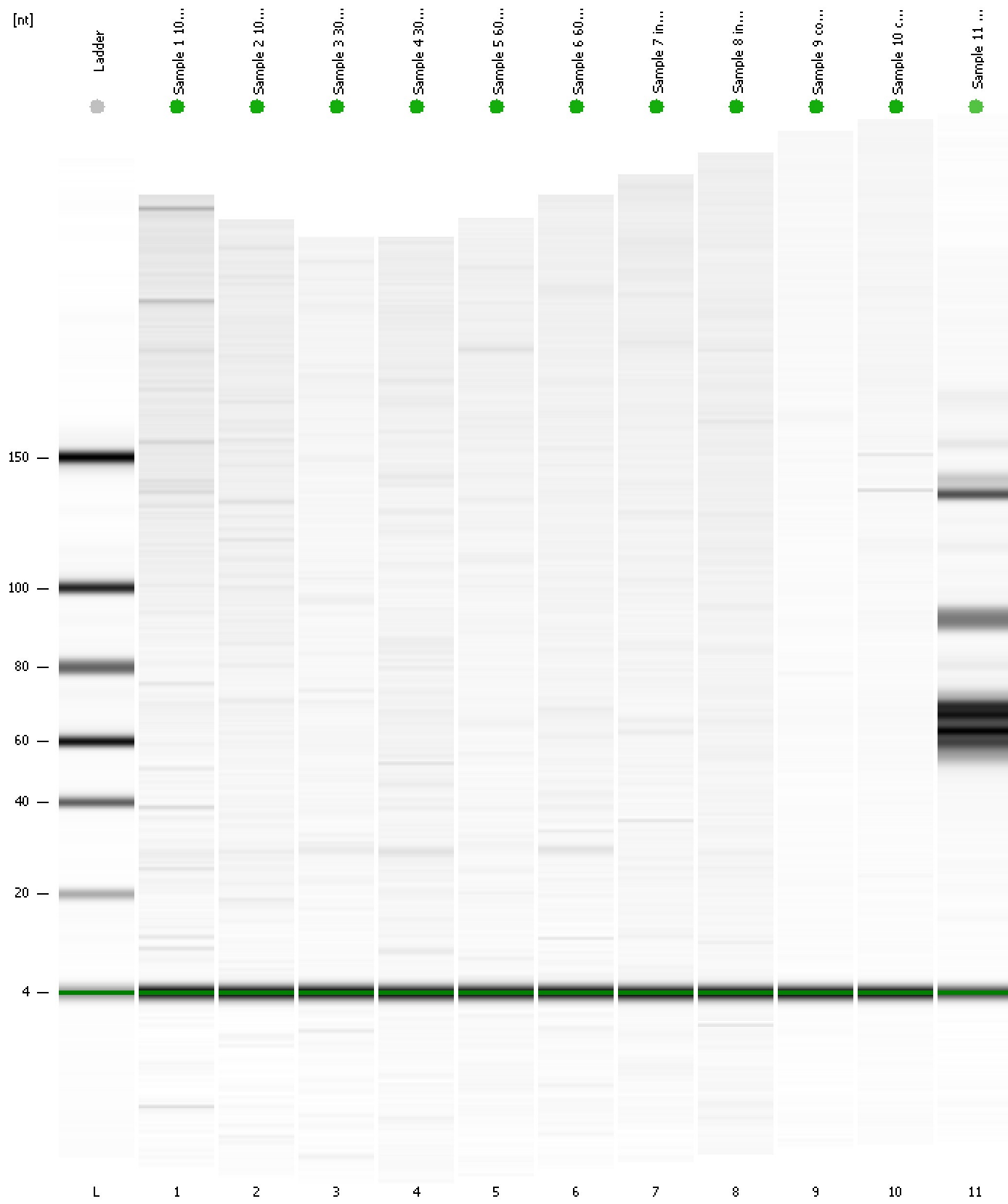
**Region table for sample 11 : Sample 11 T.RNA 10pmol**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	275	78	57.7	1,600.1	100	<span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	31.0	142.5	9	<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\_002.xad

Created: 5/6/2016 2:26:00 PM  
Modified: 5/6/2016 2:57:59 PM

**Gel Image**





Assay Class: Small RNA  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-06\2016-05-06\_002.xad  
 Created: 5/6/2016 2:26:00 PM  
 Modified: 5/6/2016 2:57:59 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 2:57:57 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_002.xad)		Instrument	Run		5/6/2016 2:26:05 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		5/6/2016 2:26:05 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/6/2016 2:26:05 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/6/2016 2:26:05 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		5/6/2016 2:26:05 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/6/2016 2:26:05 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/6/2016 2:26:05 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1