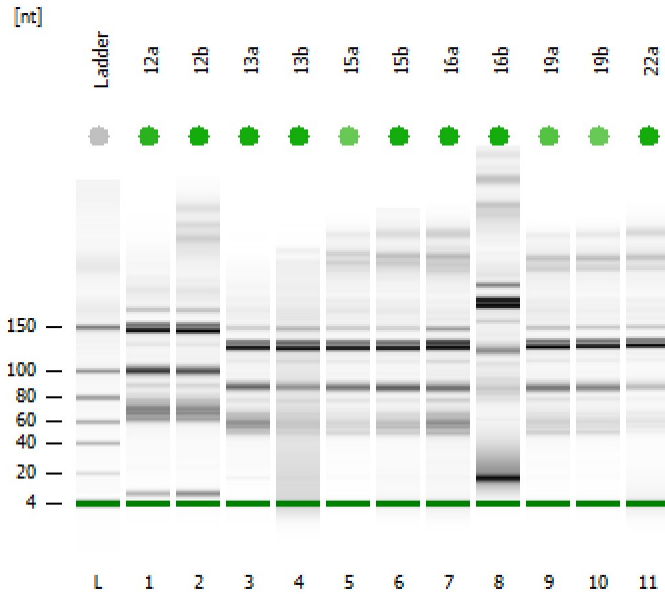


Assay Class: Small RNA  
Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
Modified: 12/11/2019 12:10:49 PM

Electrophoresis File Run Summary



Instrument Information:

Instrument Name: DE34903152      Firmware: C.01.069  
Serial#: DE34903152      Type: G2938C

Assay Information:

Assay Origin Path: C:\Program Files (x86)\Agilent\2100 bioanalyzer\2100 expert\assays\RNA\Small RNA Series II.xsy

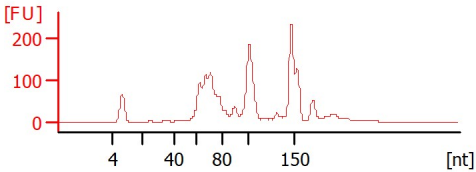
Assay Class: Small RNA  
Version: 1.2  
Assay Comments: Small RNA Analysis 6 - 150 nucleotides

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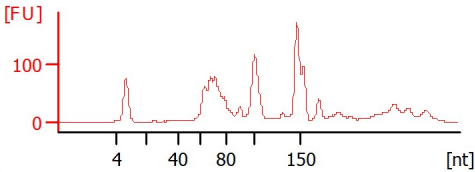
Chip Information:

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

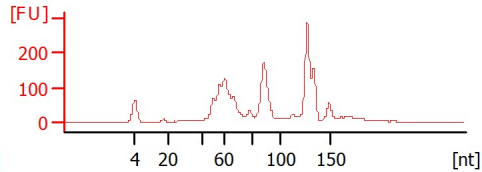
**12a**  
11 % miRNA; Concentration: 42584.10 p...



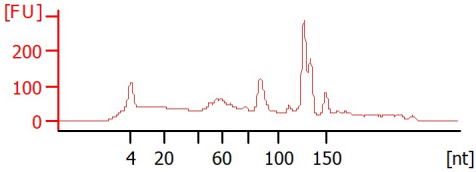
**12b**  
12 % miRNA; Concentration: 28637.70 p...



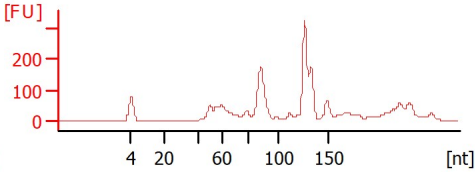
**13a**  
12 % miRNA; Concentration: 2120.40 pg/μl



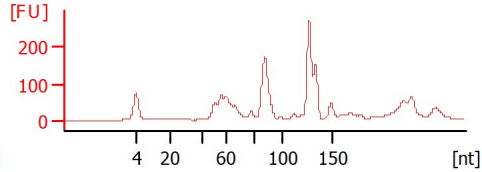
**13b**  
46 % miRNA; Concentration: 4455.90 pg/μl



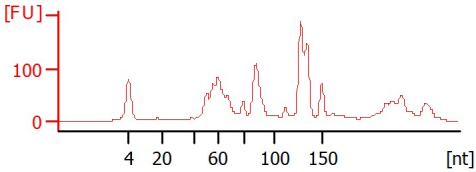
**15a**  
8 % miRNA; Concentration: 1183.60 pg/μl



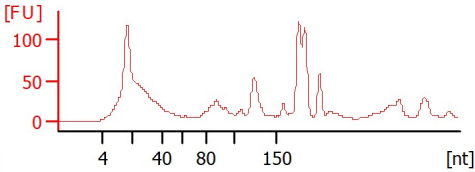
**15b**  
13 % miRNA; Concentration: 1443.30 pg/μl



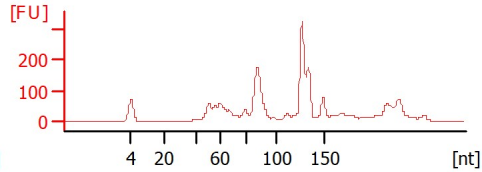
**16a**  
14 % miRNA; Concentration: 1519.90 pg/μl



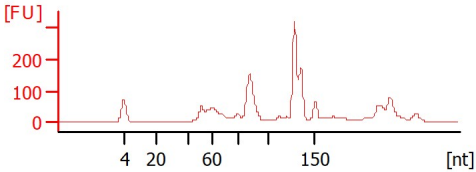
**16b**  
72 % miRNA; Concentration: 505203.50 ...



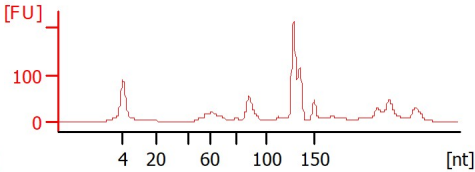
**19a**  
9 % miRNA; Concentration: 1358 pg/μl



**19b**  
8 % miRNA; Concentration: 1073.80 pg/μl















**22a**  
15 % miRNA; Concentration: 638.30 pg/μl



Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

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

Sample Name	Sample Comment	Status	Result Label	Result Color
12a		✓	11 % miRNA; Concentration: 42584.10 pg/μl	
12b		✓	12 % miRNA; Concentration: 28637.70 pg/μl	
13a		✓	12 % miRNA; Concentration: 2120.40 pg/μl	
13b		✓	46 % miRNA; Concentration: 4455.90 pg/μl	
15a		✓	8 % miRNA; Concentration: 1183.60 pg/μl	
15b		✓	13 % miRNA; Concentration: 1443.30 pg/μl	
16a		✓	14 % miRNA; Concentration: 1519.90 pg/μl	
16b		✓	72 % miRNA; Concentration: 505203.50 pg/μl	
19a		✓	9 % miRNA; Concentration: 1358 pg/μl	
19b		✓	8 % miRNA; Concentration: 1073.80 pg/μl	
22a		✓	15 % miRNA; Concentration: 638.30 pg/μl	
Ladder		✓	Number of Peaks: 5	

Chip Lot #

Reagent Kit Lot #

Chip Comments :

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 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

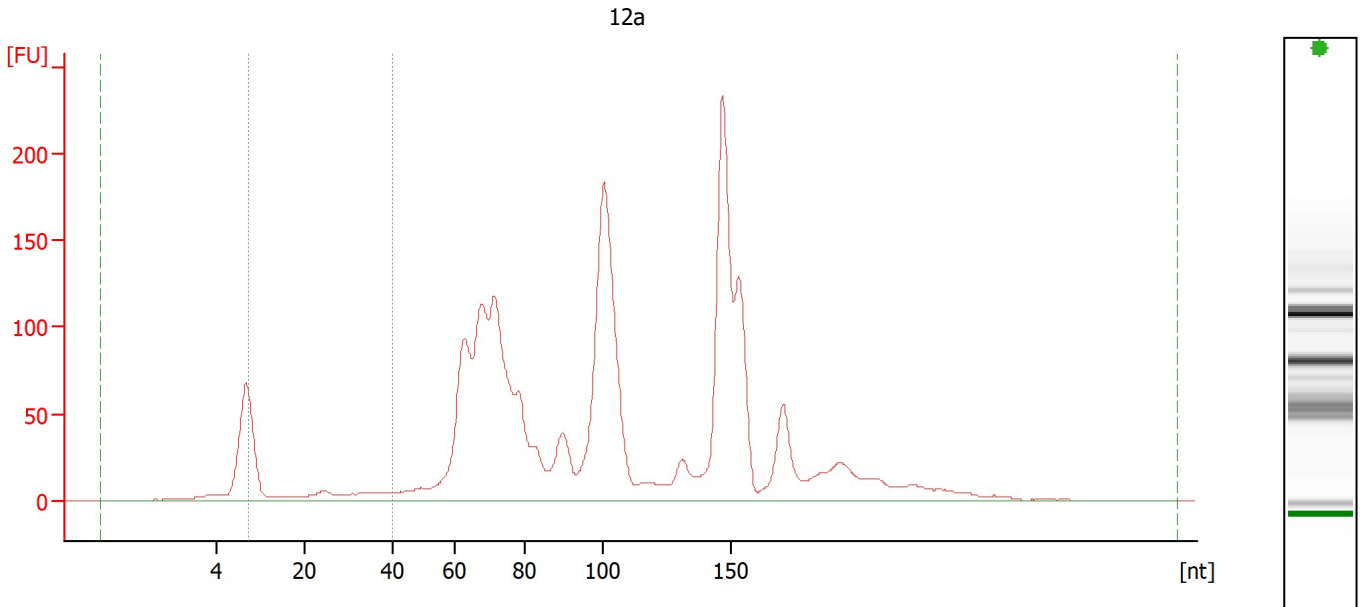
**Ladder**

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

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary**



**Overall Results for sample 1 : 12a**

Small RNA Concentration [pg/μl]:	404,859.8	Result Flagging Color:	<span style="background-color: green; color: green;"> </span>
miRNA Concentration [pg/μl]:	42,584.1	Result Flagging Label:	11 % miRNA; Concentration: 42584.10 pg/μl
miRNA / Small RNA Ratio [%]:	11		

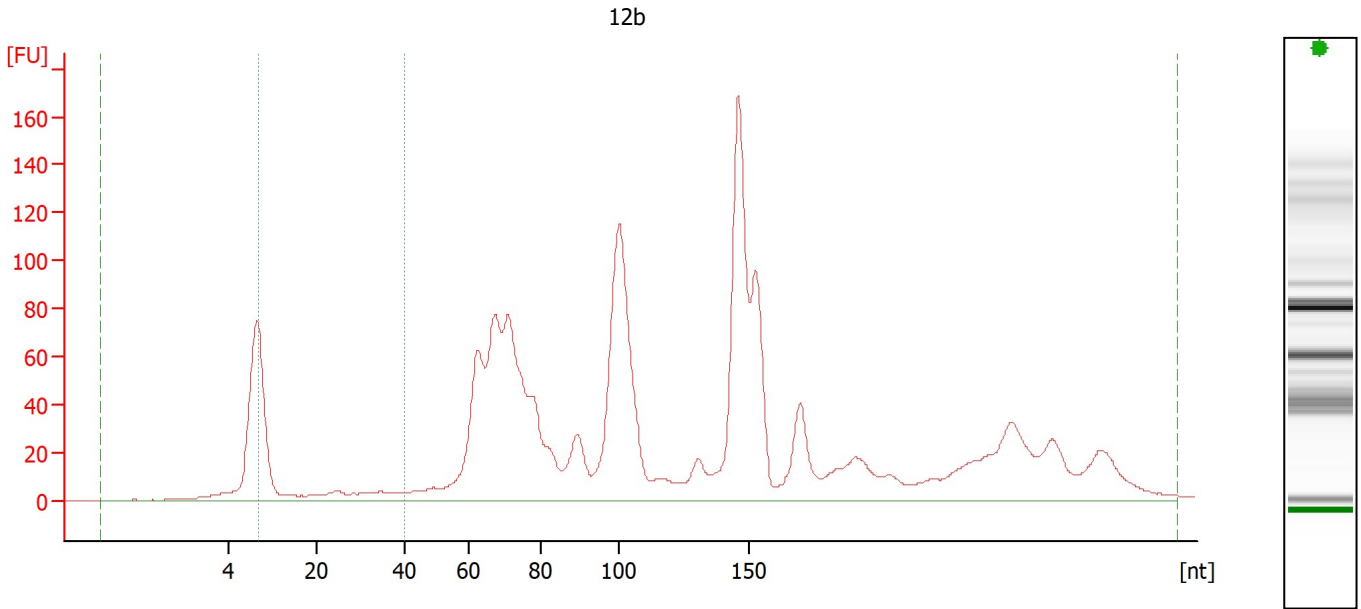
**Region table for sample 1 : 12a**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	323	108	47.2	404,859.8	100	<span style="background-color: maroon; color: maroon;"> </span>
miRNA	10	40	18	54.6	42,584.1	11	<span style="background-color: green; color: green;"> </span>

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : 12b**

Small RNA Concentration [pg/μl]: 240,608.9  
 miRNA Concentration [pg/μl]: 28,637.7  
 miRNA / Small RNA Ratio [%]: 12

Result Flagging Color:    
 Result Flagging Label: 12 % miRNA;  
 Concentration:  
 28637.70 pg/μl

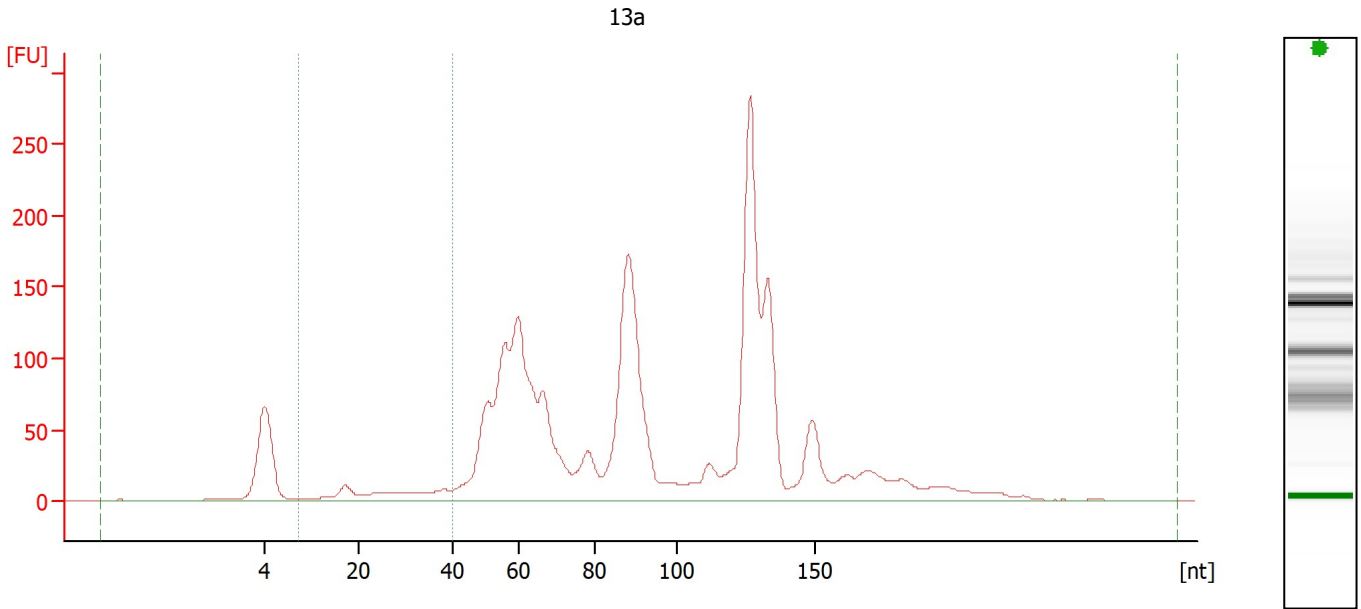
**Region table for sample 2 : 12b**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	314	131	57.8	240,608.9	100	<span style="background-color: maroon; color: maroon;"> </span>
miRNA	10	40	17	56.7	28,637.7	12	<span style="background-color: green; color: green;"> </span>

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : 13a**

Small RNA Concentration [pg/μl]:	18,205.8	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	2,120.4	Result Flagging Label:	12 % miRNA; Concentration: 2120.40 pg/μl
miRNA / Small RNA Ratio [%]:	12		

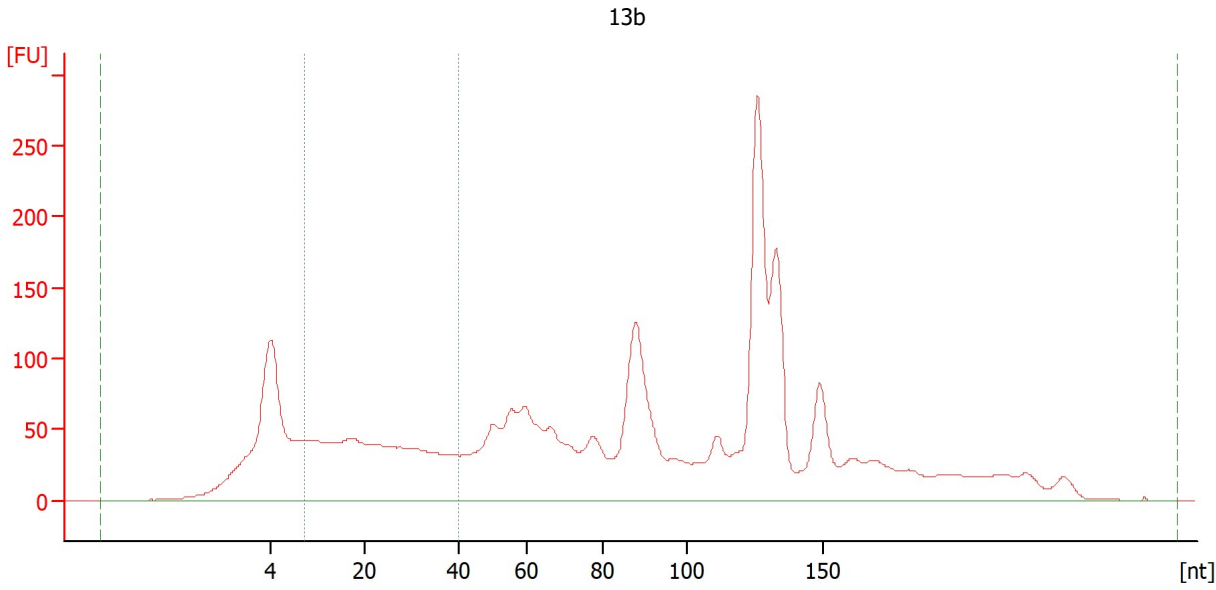
**Region table for sample 3 : 13a**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	282	96	48.3	18,205.8	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	26	32.1	2,120.4	12	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : 13b**

Small RNA Concentration [pg/μl]: 9,779.9  
 miRNA Concentration [pg/μl]: 4,455.9  
 miRNA / Small RNA Ratio [%]: 46

Result Flagging Color:             
 Result Flagging Label: 46 % miRNA;  
 Concentration:  
 4455.90 pg/μl

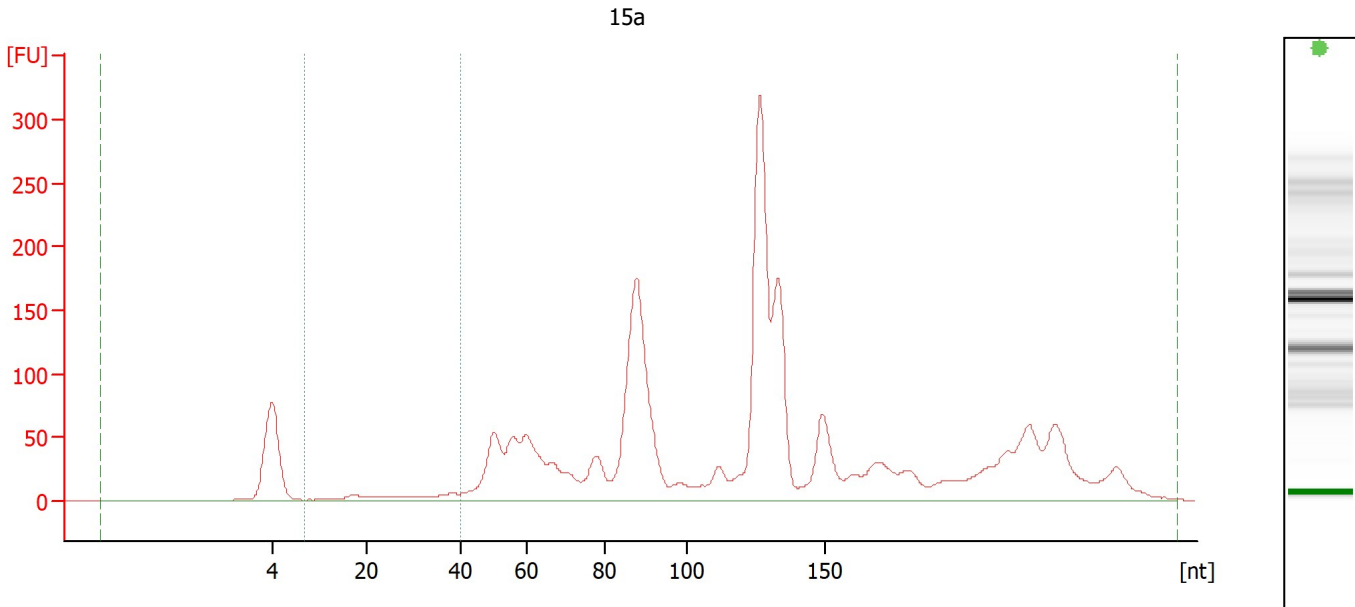
**Region table for sample 4 : 13b**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	278	88	68.8	9,779.9	100	<span style="background-color: maroon; color: black;">          </span>
miRNA	10	40	23	38.0	4,455.9	46	<span style="background-color: green; color: black;">          </span>

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : 15a**

Small RNA Concentration [pg/μl]: 14,314.0  
 miRNA Concentration [pg/μl]: 1,183.6  
 miRNA / Small RNA Ratio [%]: 8

Result Flagging Color:   
 Result Flagging Label: 8 % miRNA;  
 Concentration: 1183.60 pg/μl

**Region table for sample 5 : 15a**

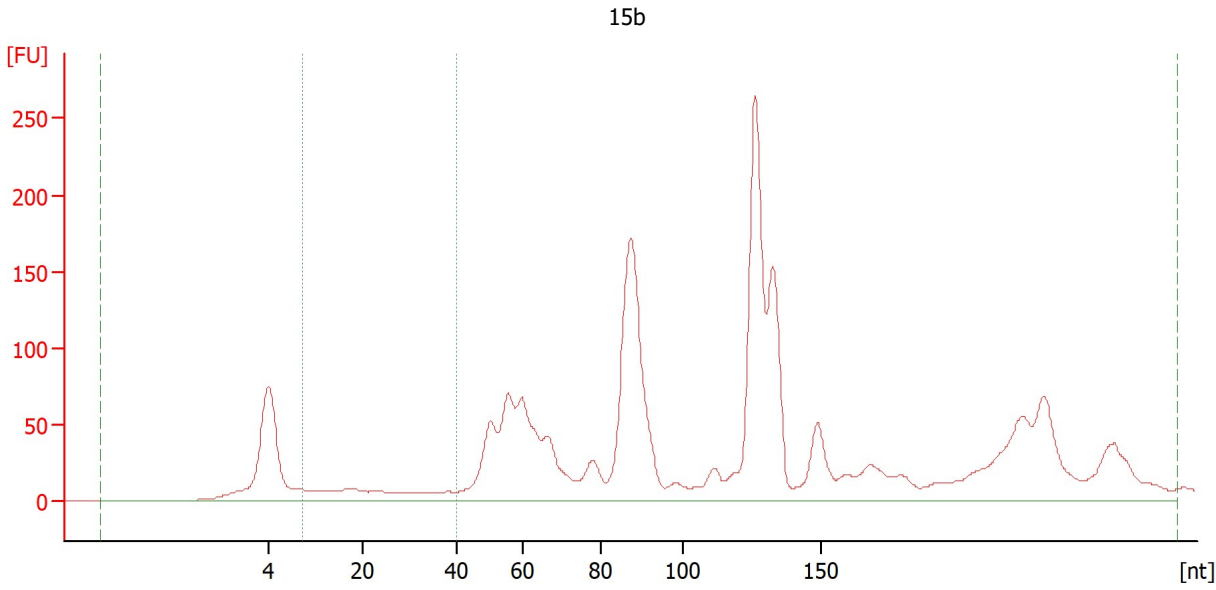
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	277	127	50.6	14,313.9	100	<span style="background-color: #800000; display: inline-block; width: 10px; height: 10px;"></span>
miRNA	10	40	27	31.6	1,183.6	8	<span style="background-color: #008000; display: inline-block; width: 10px; height: 10px;"></span>



Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : 15b**

Small RNA Concentration [pg/μl]: 10,795.9  
 miRNA Concentration [pg/μl]: 1,443.3  
 miRNA / Small RNA Ratio [%]: 13

Result Flagging Color:    
 Result Flagging Label: 13 % miRNA;  
 Concentration: 1443.30 pg/μl

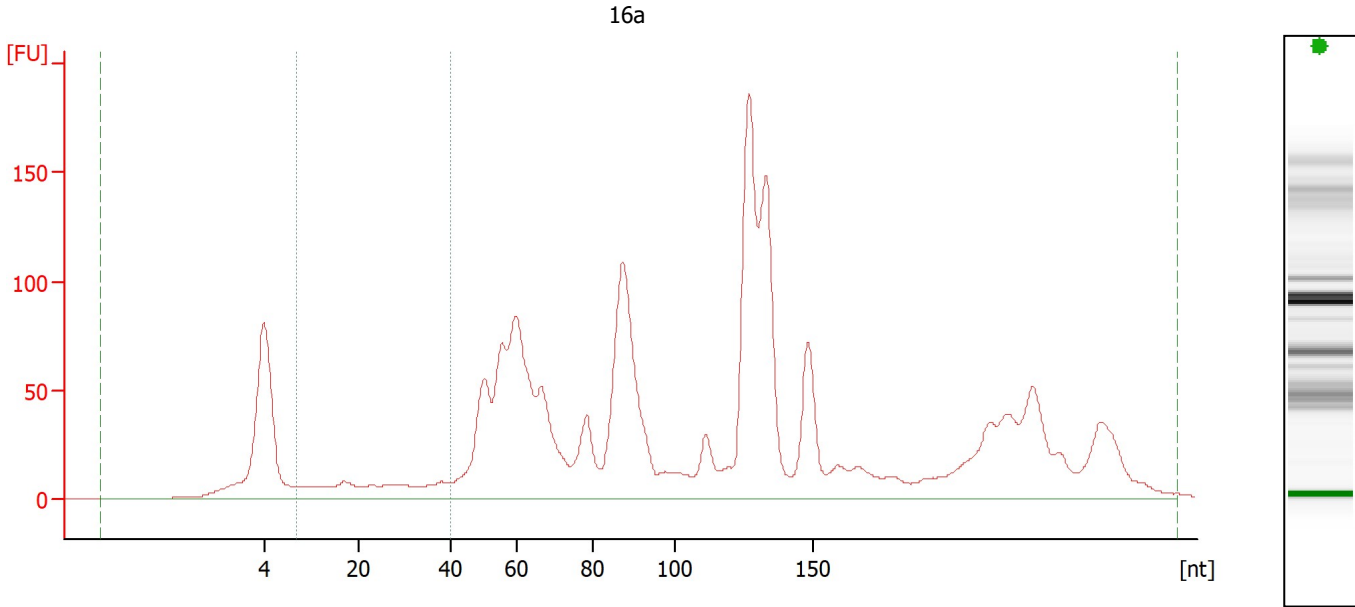
**Region table for sample 6 : 15b**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	279	124	57.3	10,795.9	100	<span style="background-color: maroon; color: maroon;"> </span>
miRNA	10	40	23	38.7	1,443.3	13	<span style="background-color: green; color: green;"> </span>

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : 16a**

Small RNA Concentration [pg/μl]: 10,483.0  
 miRNA Concentration [pg/μl]: 1,519.9  
 miRNA / Small RNA Ratio [%]: 14

Result Flagging Color:             
 Result Flagging Label: 14 % miRNA;  
 Concentration: 1519.90 pg/μl

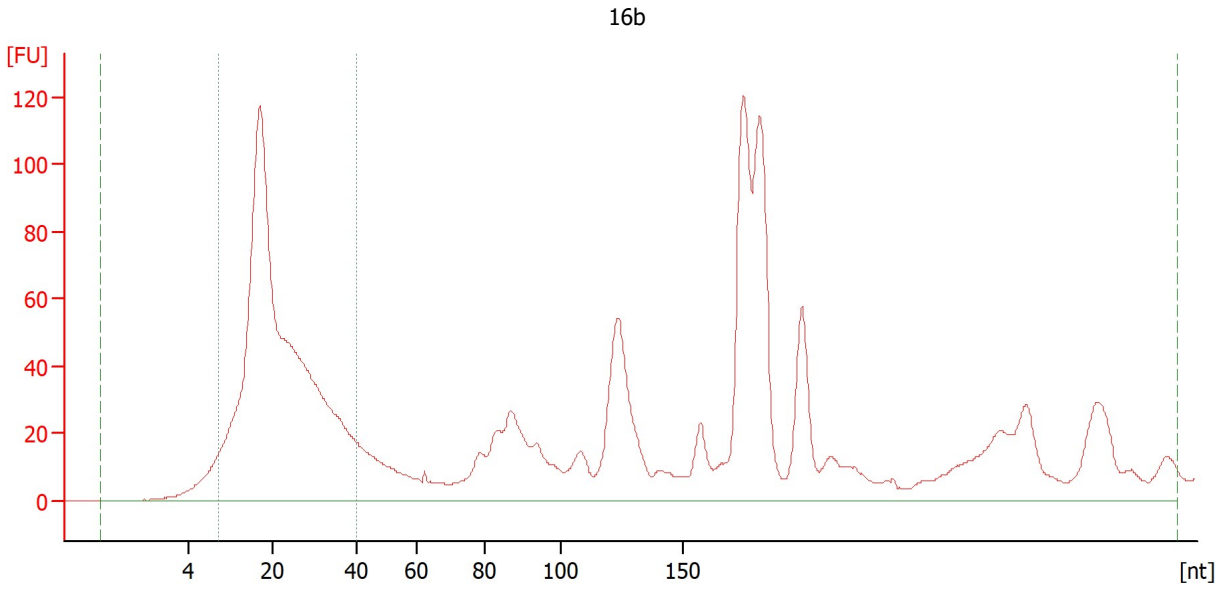
**Region table for sample 7 : 16a**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	283	119	60.0	10,483.0	100	<span style="background-color: maroon; color: black;">          </span>
miRNA	10	40	24	36.6	1,519.9	14	<span style="background-color: green; color: black;">          </span>

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : 16b**

Small RNA Concentration [pg/μl]: 702,746.9  
 miRNA Concentration [pg/μl]: 505,203.5  
 miRNA / Small RNA Ratio [%]: 72

Result Flagging Color:    
 Result Flagging Label: 72 % miRNA;  
 Concentration:  
 505203.50 pg/μl

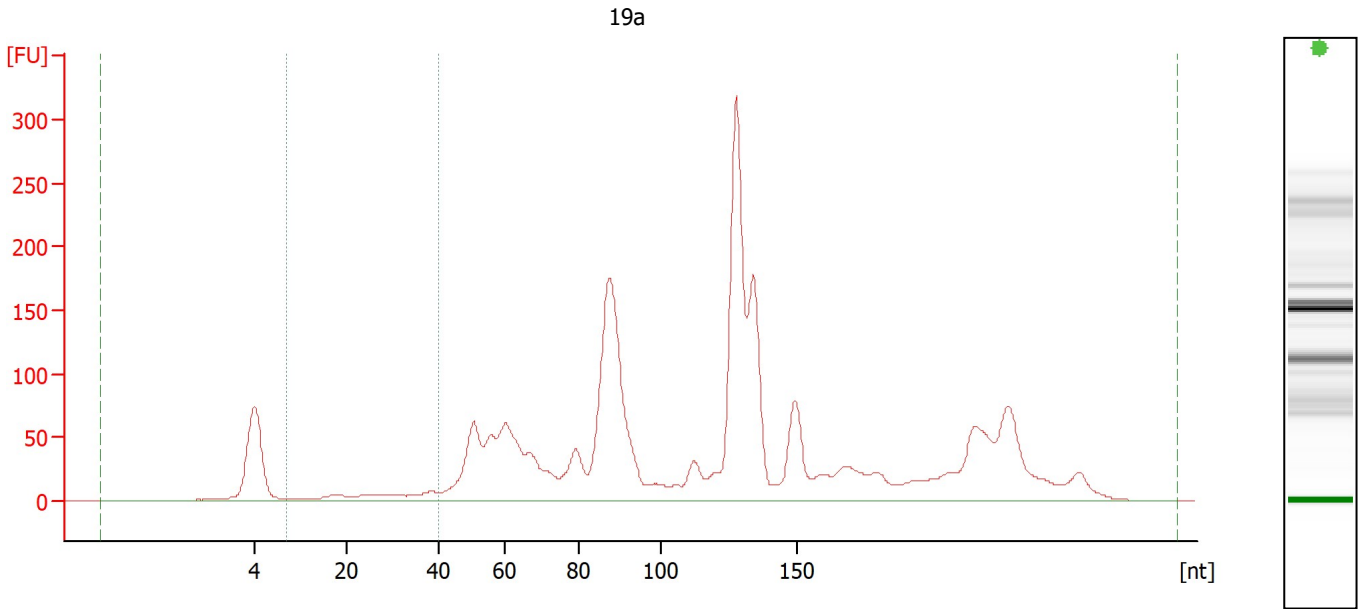
**Region table for sample 8 : 16b**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	350	133	74.8	702,746.9	100	<span style="background-color: purple; color: purple;"> </span>
miRNA	10	40	22	32.8	505,203.5	72	<span style="background-color: green; color: green;"> </span>

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : 19a**

Small RNA Concentration [pg/μl]:	15,453.5	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	1,358.0	Result Flagging Label:	9 % miRNA; Concentration: 1358 pg/μl
miRNA / Small RNA Ratio [%]:	9		

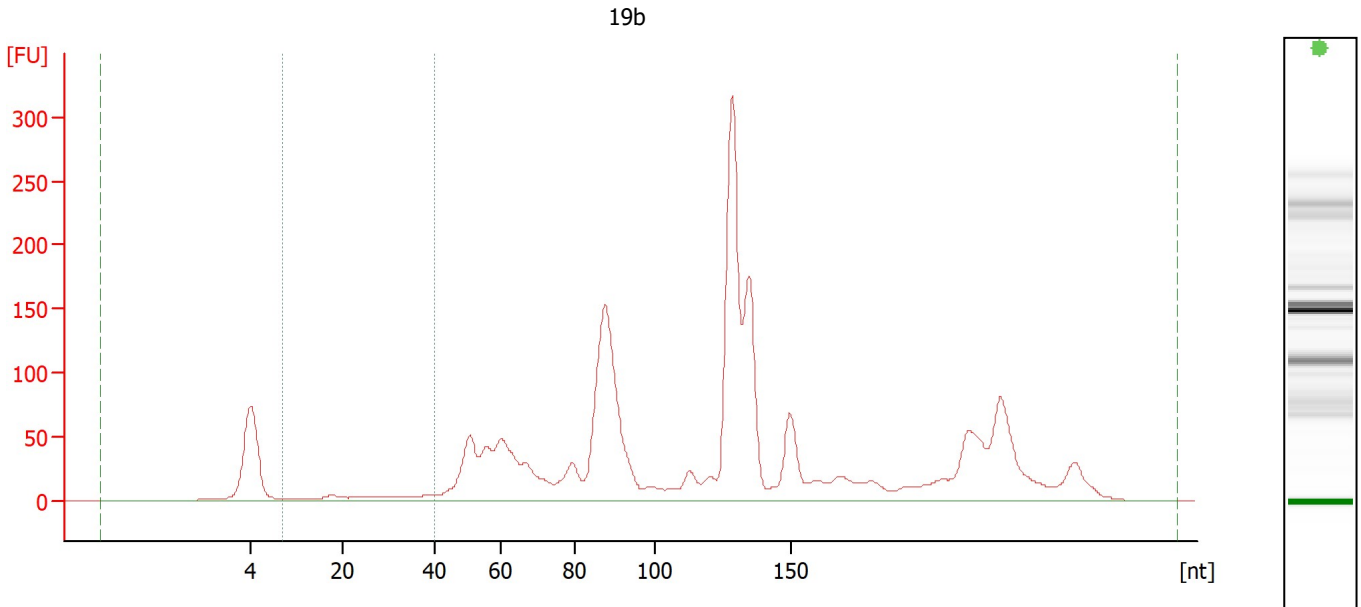
**Region table for sample 9 : 19a**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	291	124	50.9	15,453.5	100	<span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	32.3	1,358.0	9	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : 19b**

Small RNA Concentration [pg/μl]:	13,088.9	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	1,073.8	Result Flagging Label:	8 % miRNA; Concentration: 1073.80 pg/μl
miRNA / Small RNA Ratio [%]:	8		

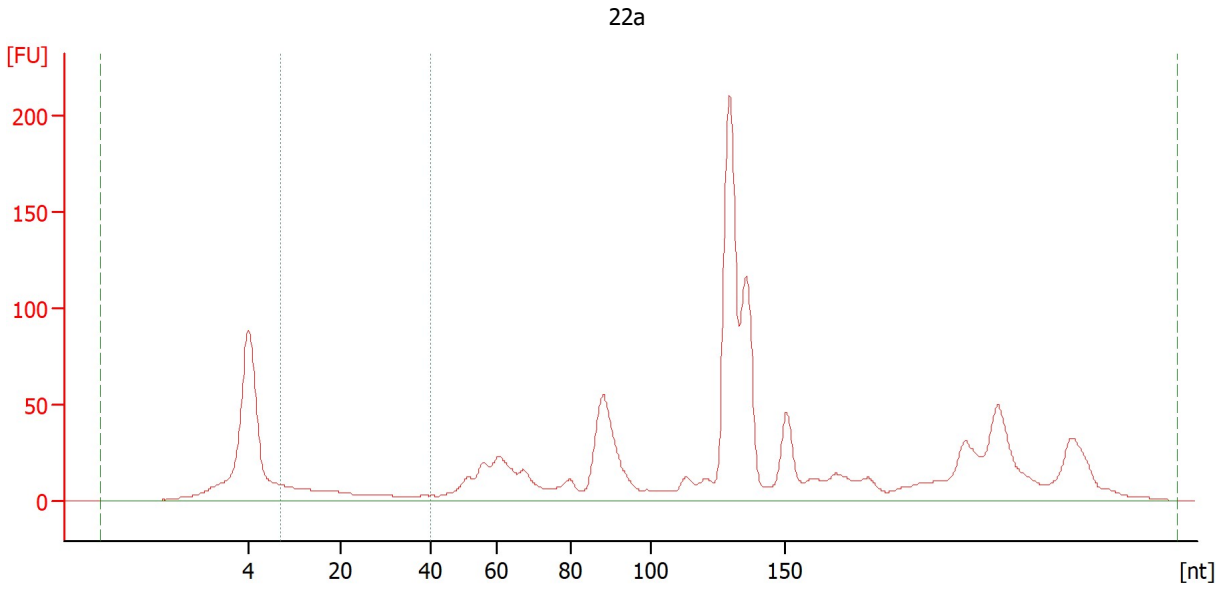
**Region table for sample 10 : 19b**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	294	128	51.4	13,088.9	100	<span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	26	34.4	1,073.8	8	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : 22a**

Small RNA Concentration [pg/μl]: 4,373.6  
 miRNA Concentration [pg/μl]: 638.3  
 miRNA / Small RNA Ratio [%]: 15

Result Flagging Color:             
 Result Flagging Label: 15 % miRNA;  
 Concentration: 638.30  
 pg/μl

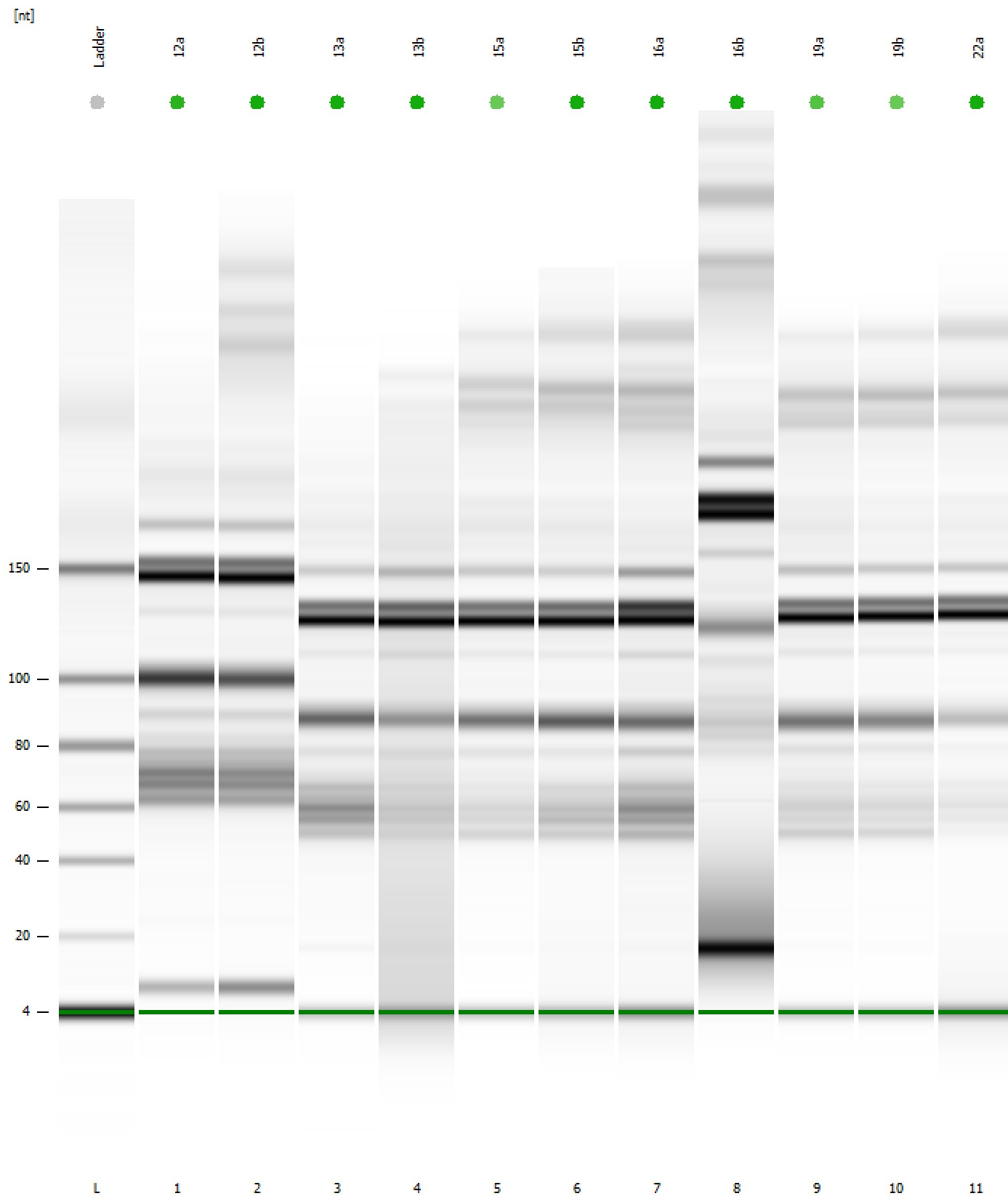
**Region table for sample 11 : 22a**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	296	128	60.3	4,373.6	100	<span style="background-color: #800040; color: black;">          </span>
miRNA	10	40	20	42.1	638.3	15	<span style="background-color: #008080; color: black;">          </span>

Assay Class: Small RNA  
Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
Modified: 12/11/2019 12:10:49 PM

**Gel Image**

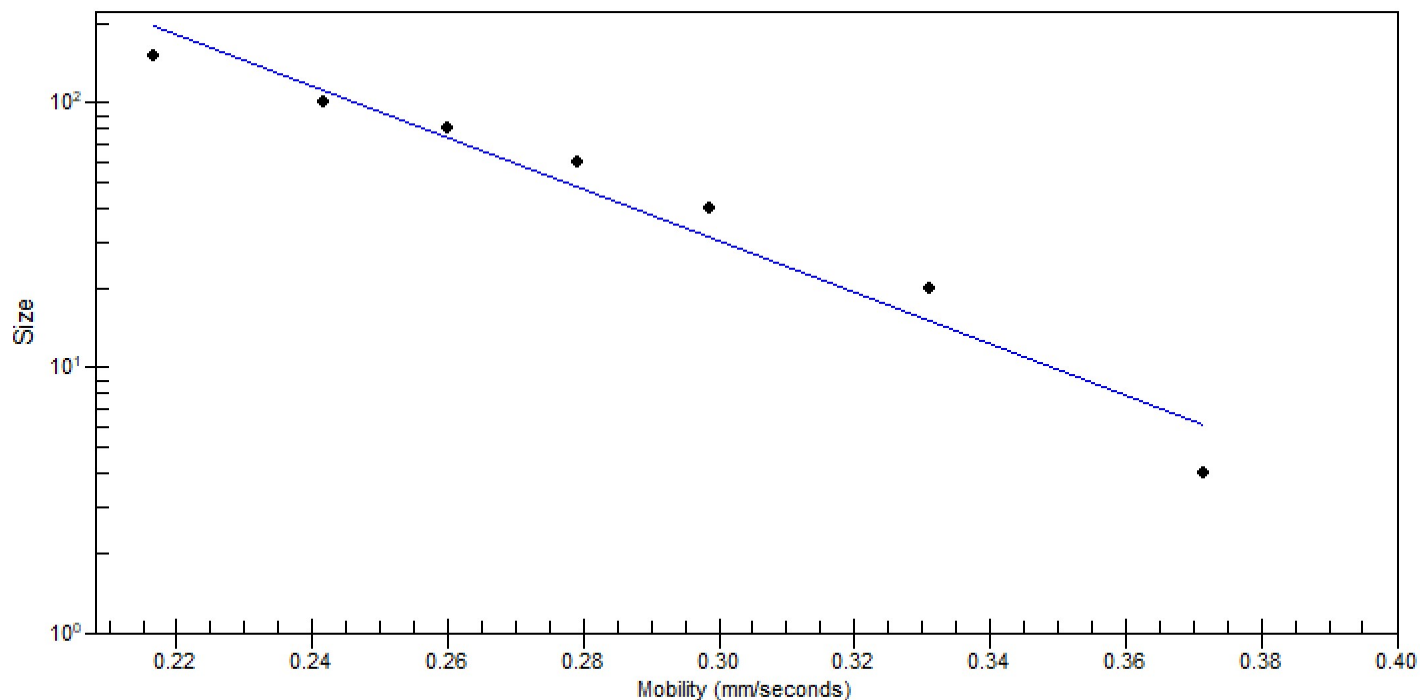


Assay Class: Small RNA  
Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
Modified: 12/11/2019 12:10:49 PM

**Curves**

**Standard Curve**





Assay Class: Small RNA  
 Data Path: Z:\XADs\2019-12-11\Bioanalyzer1\_Small RNA\_2019-12-11\_003.xad

Created: 12/11/2019 11:32:55 AM  
 Modified: 12/11/2019 12:10:49 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		12/11/2019 12:03:38 PM	(GMT --08:00) Pacific Standard Time	sbsuser	DESKTOP-4UNV VOB
Run started on port 1 (File: Z:\XADs\2019-12-11\Bioanalyze r1_Small RNA_2019-12-11_003.xad)		Instrument	Run		12/11/2019 11:33:00 AM	(GMT --08:00) Pacific Standard Time	sbsuser	DESKTOP-4UNV VOB
Product Number : G2938C		Instrument	Run		12/11/2019 11:33:00 AM	(GMT --08:00) Pacific Standard Time	sbsuser	DESKTOP-4UNV VOB
Name :		Instrument	Run		12/11/2019 11:33:00 AM	(GMT --08:00) Pacific Standard Time	sbsuser	DESKTOP-4UNV VOB
Vendor : Agilent Technologies		Instrument	Run		12/11/2019 11:33:00 AM	(GMT --08:00) Pacific Standard Time	sbsuser	DESKTOP-4UNV VOB
Serial# : DE34903152		Instrument	Run		12/11/2019 11:33:00 AM	(GMT --08:00) Pacific Standard Time	sbsuser	DESKTOP-4UNV VOB
Firmware : C.01.069		Instrument	Run		12/11/2019 11:33:00 AM	(GMT --08:00) Pacific Standard Time	sbsuser	DESKTOP-4UNV VOB
Cartridge : Electrode		Instrument	Run		12/11/2019 11:33:00 AM	(GMT --08:00) Pacific Standard Time	sbsuser	DESKTOP-4UNV VOB