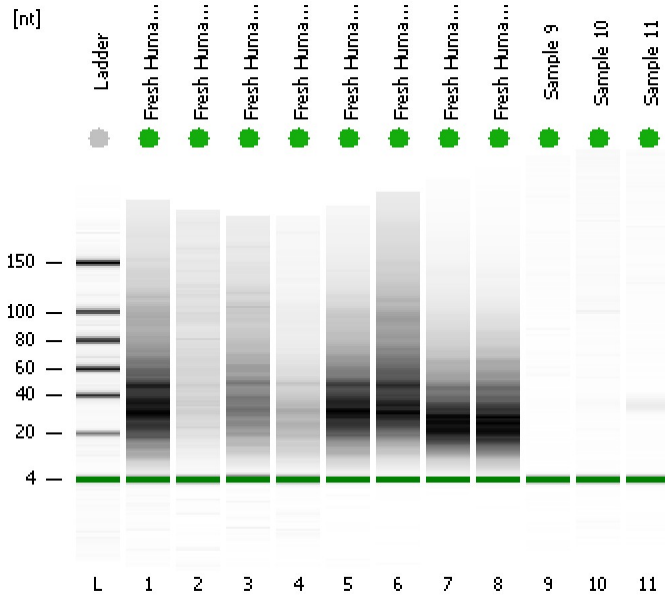


Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
Modified: 4/9/2012 2:31:41 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

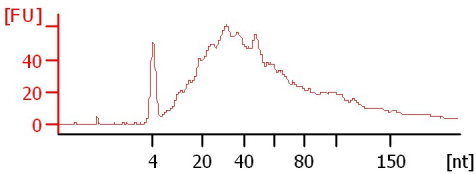
Assay Class: Small RNA  
Version: 1.2  
Assay Comments: Small RNA Analysis 6 - 150 nucleotides

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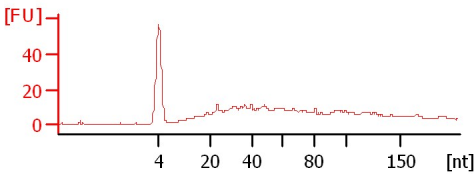
Chip Information:

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

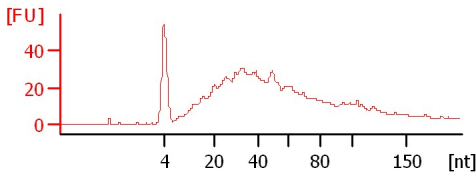
**Fresh Human milk-1 w/I**  
68 % miRNA; Concentration: 5139.80 pg/µl



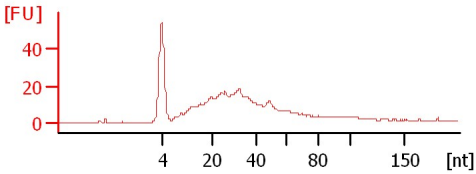
**Fresh Human milk-2 w/I**  
52 % miRNA; Concentration: 844.10 pg/µl



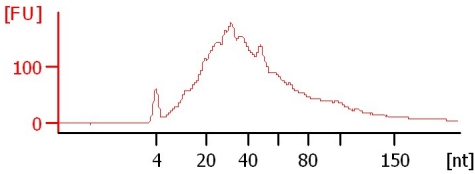
**Fresh Human milk-3 w/I**  
65 % miRNA; Concentration: 2548.70 pg/µl



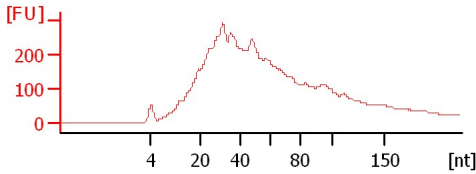
**Fresh Human milk-4 w/I**  
76 % miRNA; Concentration: 1611 pg/µl



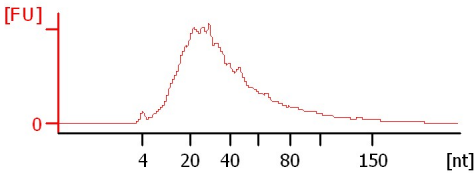
**Fresh Human milk -1 wo/I**  
73 % miRNA; Concentration: 11426.70 p...



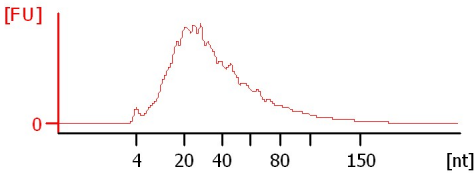
**Fresh Human milk-2 wo/I**  
63 % miRNA; Concentration: 18746.20 p...



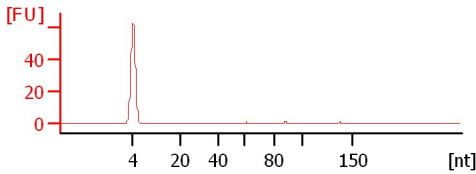
**Fresh Human milk-3 wo/I**  
82 % miRNA; Concentration: 34757.40 p...



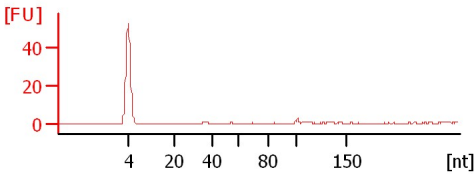
**Fresh Human milk-4 wo/I**  
81 % miRNA; Concentration: 26858.20 p...



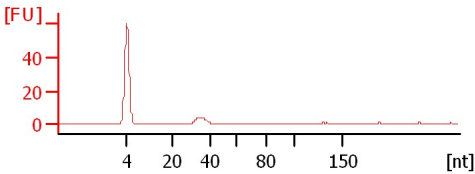
**Sample 9**  
22 % miRNA; Concentration: 16.30 pg/µl



**Sample 10**  
27 % miRNA; Concentration: 32.60 pg/µl















**Sample 11**  
60 % miRNA; Concentration: 100.30 pg/µl



Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

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

Sample Name	Sample Comment	Status	Result Label	Result Color
Fresh Human milk-1 w/I		✓	68 % miRNA; Concentration: 5139.80 pg/μl	
Fresh Human milk-2 w/I		✓	52 % miRNA; Concentration: 844.10 pg/μl	
Fresh Human milk-3 w/I		✓	65 % miRNA; Concentration: 2548.70 pg/μl	
Fresh Human milk-4 w/I		✓	76 % miRNA; Concentration: 1611 pg/μl	
Fresh Human milk -1 wo/I		✓	73 % miRNA; Concentration: 11426.70 pg/μl	
Fresh Human milk-2 wo/I		✓	63 % miRNA; Concentration: 18746.20 pg/μl	
Fresh Human milk-3 wo/I		✓	82 % miRNA; Concentration: 34757.40 pg/μl	
Fresh Human milk-4 wo/I		✓	81 % miRNA; Concentration: 26858.20 pg/μl	
Sample 9		✓	22 % miRNA; Concentration: 16.30 pg/μl	
Sample 10		✓	27 % miRNA; Concentration: 32.60 pg/μl	
Sample 11		✓	60 % miRNA; Concentration: 100.30 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\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
Modified: 4/9/2012 2:31:41 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/ $\mu$ 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

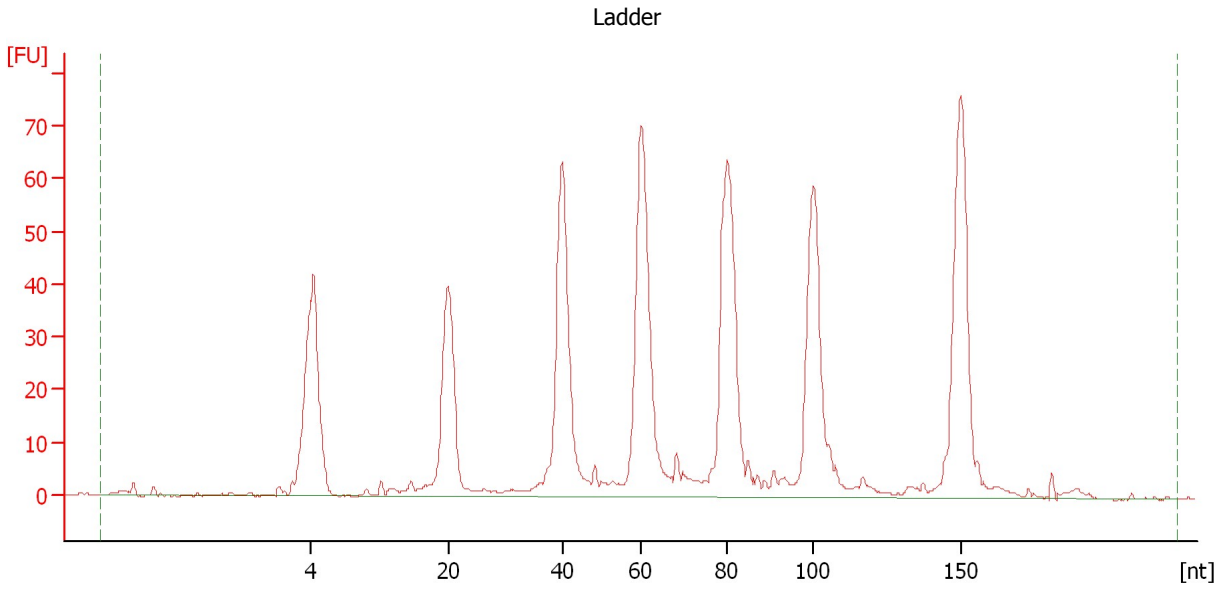
### Ladder

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\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Result Flagging Color:

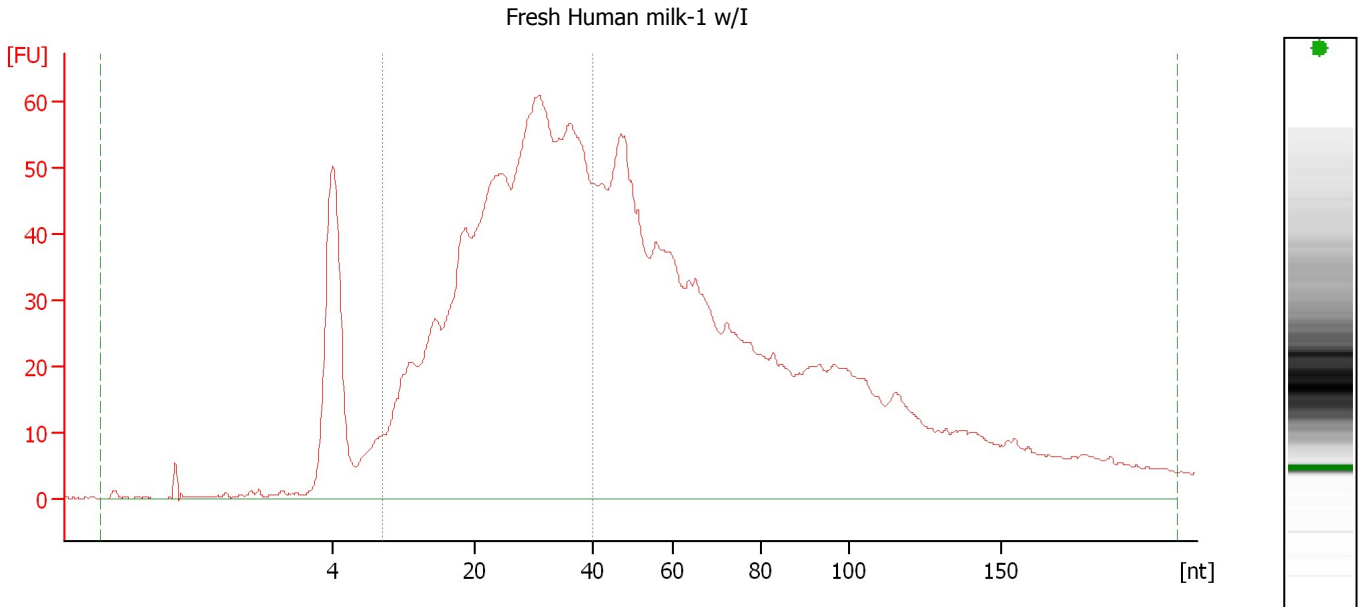
Result Flagging Label:

Number of Peaks: 6

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : Fresh Human milk-1 w/I**

Small RNA Concentration [pg/μl]:	7,600.0	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	5,139.8	Result Flagging Label:	68 % miRNA; Concentration: 5139.80 pg/μl
miRNA / Small RNA Ratio [%]:	68		

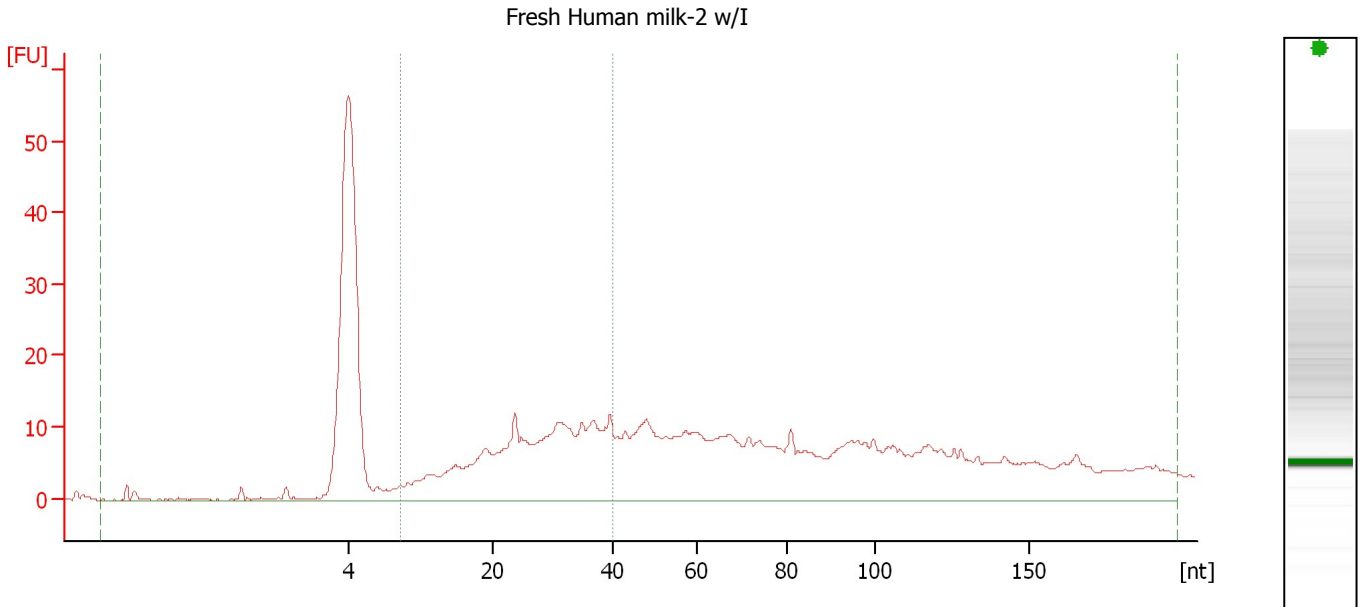
**Region table for sample 1 : Fresh Human milk-1 w/I**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	208	56	76.6	7,600.0	100	<span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	26	30.8	5,139.8	68	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Fresh Human milk-2 w/I**

Small RNA Concentration [pg/μl]:	1,621.9	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	844.1	Result Flagging Label:	52 % miRNA; Concentration: 844.10 pg/μl
miRNA / Small RNA Ratio [%]:	52		

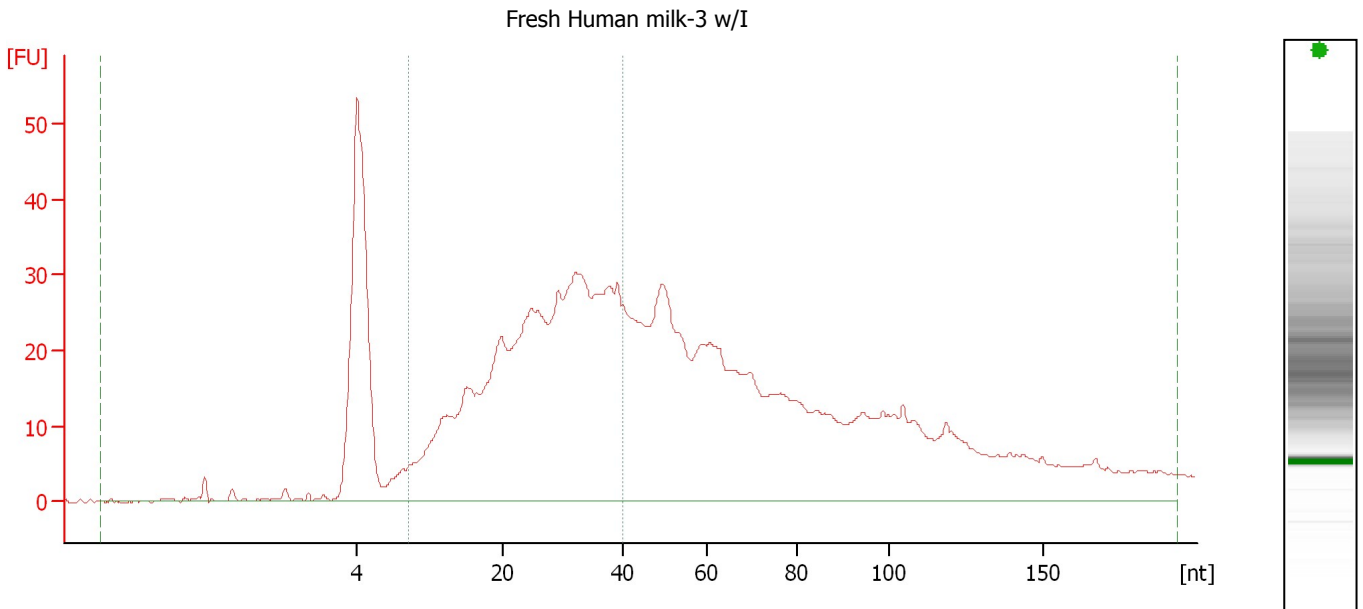
**Region table for sample 2 : Fresh Human milk-2 w/I**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	197	66	81.1	1,621.9	100	<span style="background-color: #800000; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	31.1	844.1	52	<span style="background-color: #008000; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Fresh Human milk-3 w/I**

Small RNA Concentration [pg/μl]:	3,935.2	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	2,548.7	Result Flagging Label:	65 % miRNA; Concentration: 2548.70 pg/μl
miRNA / Small RNA Ratio [%]:	65		

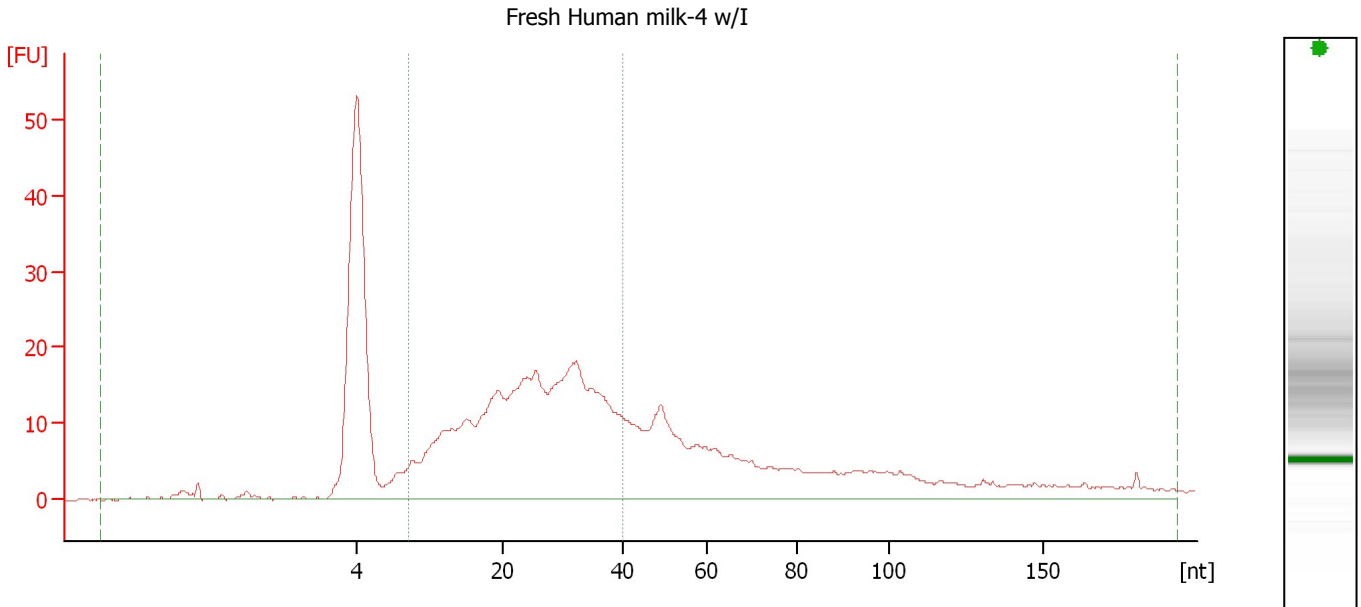
**Region table for sample 3 : Fresh Human milk-3 w/I**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	193	56	76.2	3,935.2	100	<span style="background-color: #800000; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	30.6	2,548.7	65	<span style="background-color: #008000; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : Fresh Human milk-4 w/I**

Small RNA Concentration [pg/μl]:	2,126.0	Result Flagging Color:	<span style="background-color: green; color: black;">████████</span>
miRNA Concentration [pg/μl]:	1,611.0	Result Flagging Label:	76 % miRNA; Concentration: 1611 pg/μl
miRNA / Small RNA Ratio [%]:	76		

**Region table for sample 4 : Fresh Human milk-4 w/I**

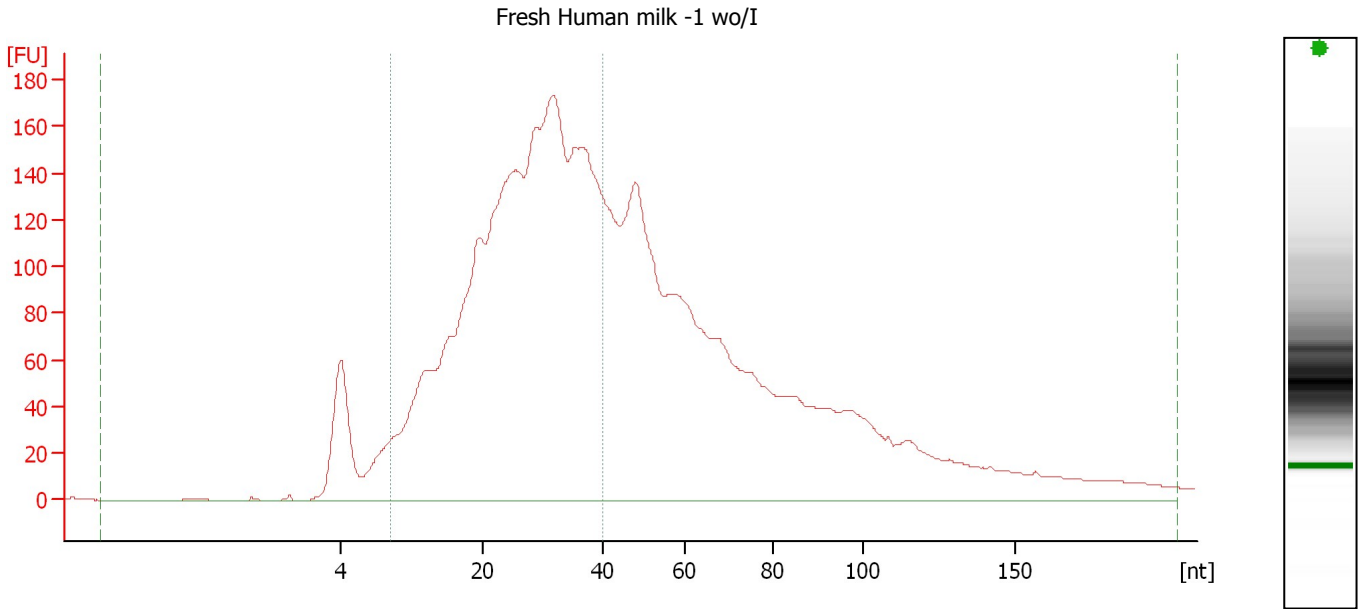
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	193	42	96.0	2,126.0	100	<span style="background-color: maroon; color: black;">████</span>
miRNA	10	40	25	32.6	1,611.0	76	<span style="background-color: green; color: black;">████</span>



Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : Fresh Human milk -1 wo/I**

Small RNA Concentration [pg/μl]:	15,704.9	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	11,426.7	Result Flagging Label:	73 % miRNA; Concentration: 11426.70 pg/μl
miRNA / Small RNA Ratio [%]:	73		

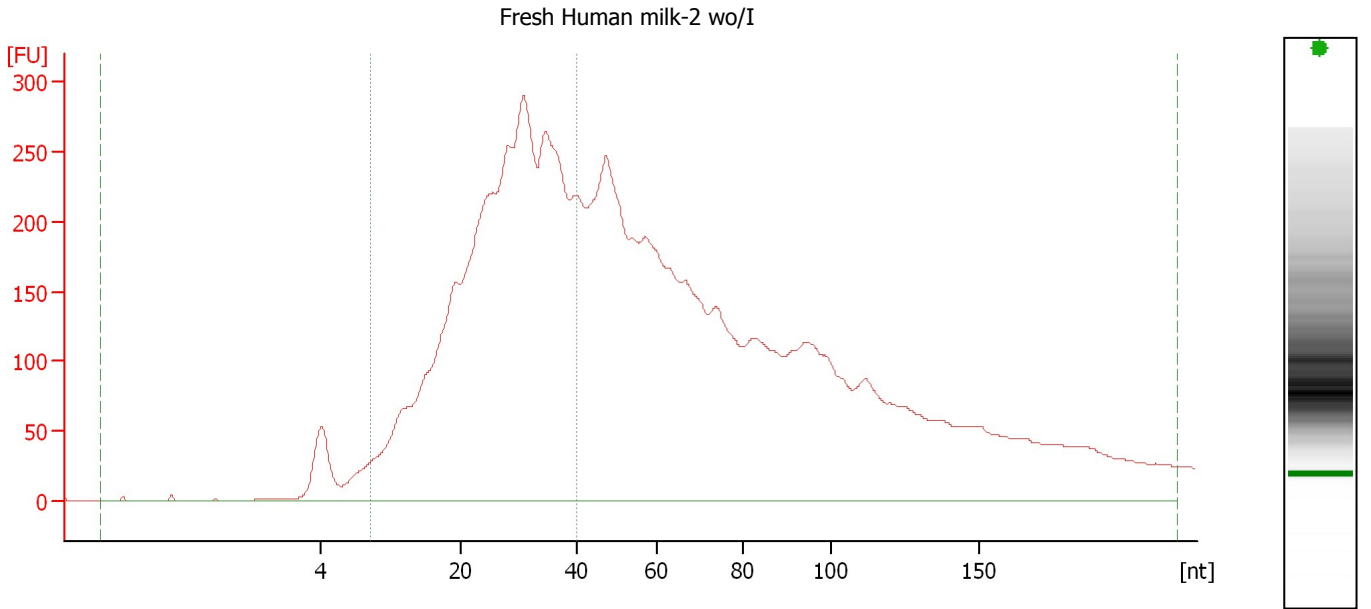
**Region table for sample 5 : Fresh Human milk -1 wo/I**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	203	50	72.5	15,704.9	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	30.0	11,426.7	73	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : Fresh Human milk-2 wo/I**

Small RNA Concentration [pg/μl]:	29,823.8	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	18,746.3	Result Flagging Label:	63 % miRNA; Concentration: 18746.20 pg/μl
miRNA / Small RNA Ratio [%]:	63		

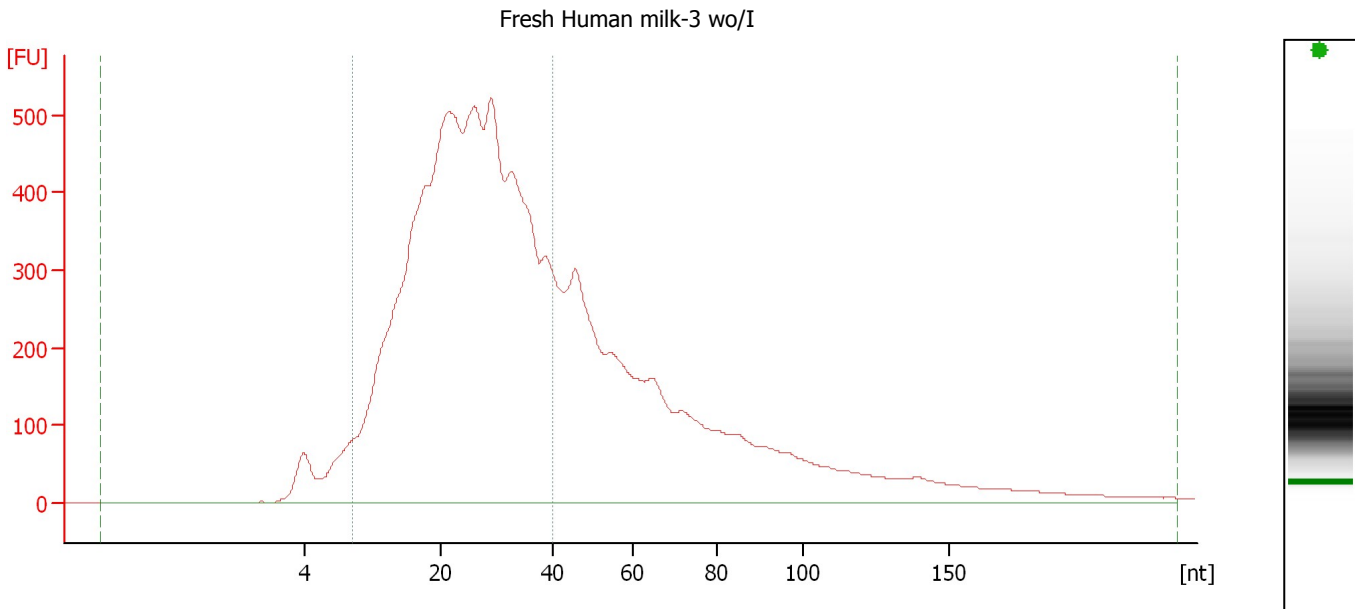
**Region table for sample 6 : Fresh Human milk-2 wo/I**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	216	66	71.1	29,823.8	100	<span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	28.2	18,746.2	63	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Fresh Human milk-3 wo/I**

Small RNA Concentration [pg/μl]:	42,558.7	Result Flagging Color:	<span style="background-color: green; color: black;">          </span>
miRNA Concentration [pg/μl]:	34,757.4	Result Flagging Label:	82 % miRNA; Concentration: 34757.40 pg/μl
miRNA / Small RNA Ratio [%]:	82		

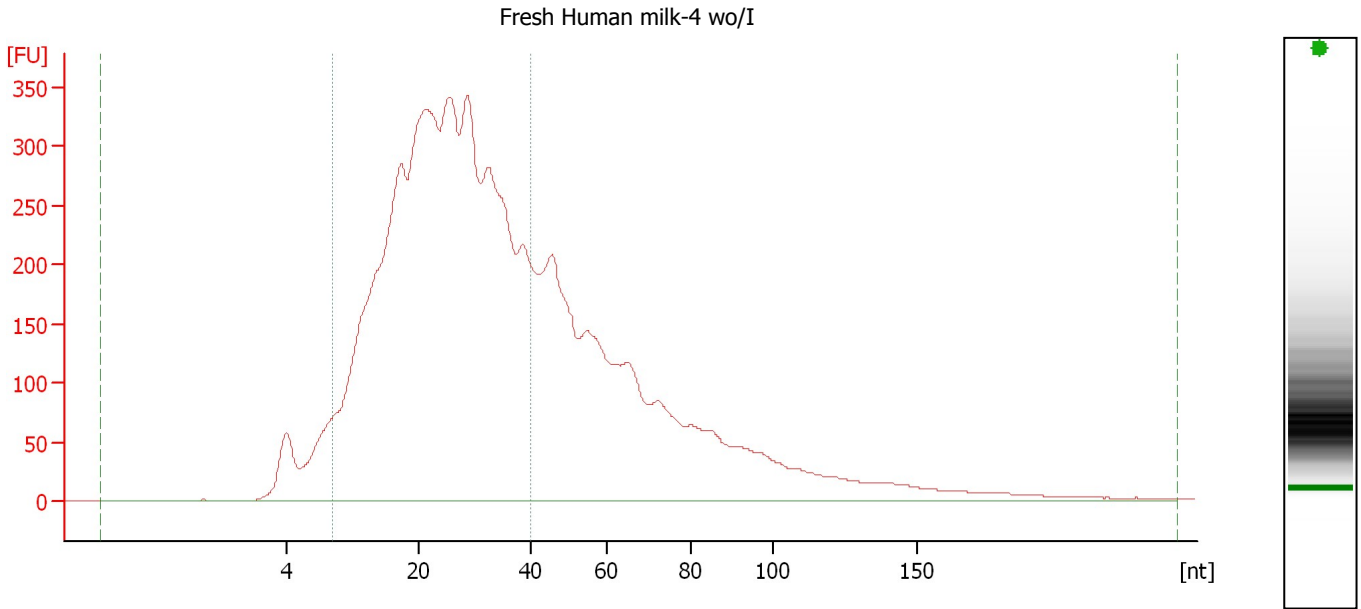
**Region table for sample 7 : Fresh Human milk-3 wo/I**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	228	44	80.3	42,558.7	100	<span style="background-color: maroon; color: black;">          </span>
miRNA	10	40	25	31.1	34,757.4	82	<span style="background-color: green; color: black;">          </span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : Fresh Human milk-4 wo/I**

Small RNA Concentration [pg/μl]:	32,990.3	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	26,858.2	Result Flagging Label:	81 % miRNA; Concentration: 26858.20 pg/μl
miRNA / Small RNA Ratio [%]:	81		

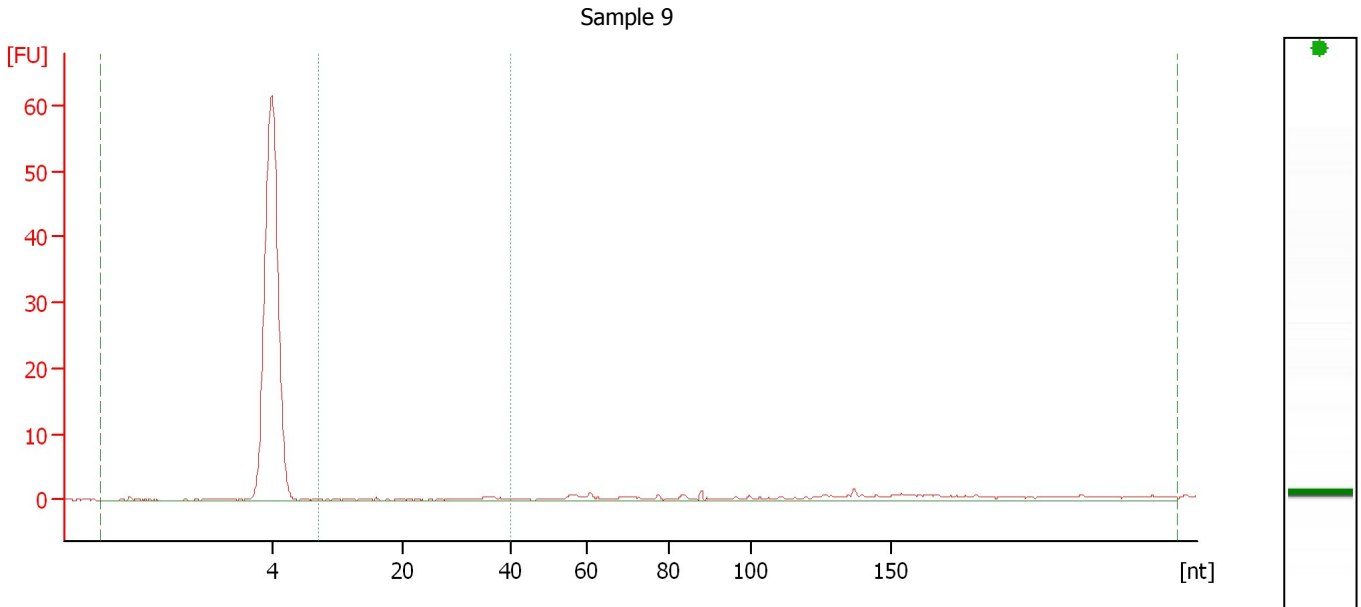
**Region table for sample 8 : Fresh Human milk-4 wo/I**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	241	41	77.6	32,990.3	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	25	32.1	26,858.2	81	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



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

Small RNA Concentration [pg/μl]:	75.3	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	16.3	Result Flagging Label:	22 % miRNA; Concentration: 16.30 pg/μl
miRNA / Small RNA Ratio [%]:	22		

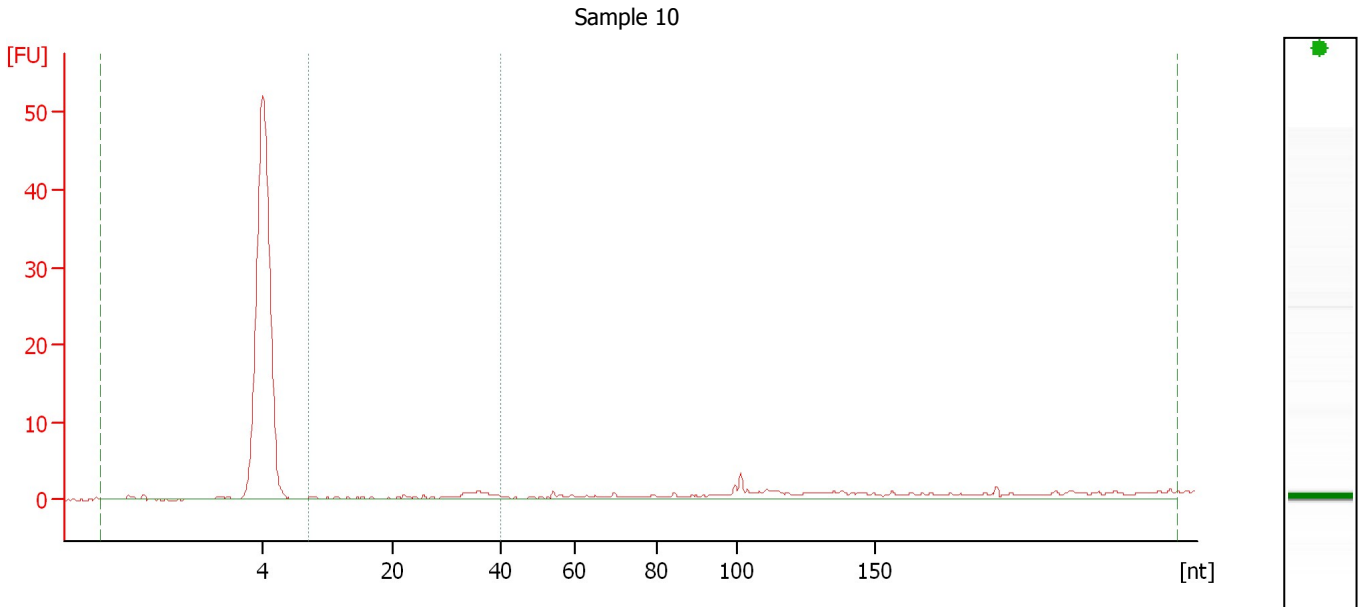
**Region table for sample 9 : Sample 9**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	252	38	100.0	75.3	100	<span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	36.2	16.3	22	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



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

Small RNA Concentration [pg/μl]:	122.4	Result Flagging Color:	<span style="background-color: green; color: black;"> </span>
miRNA Concentration [pg/μl]:	32.6	Result Flagging Label:	27 % miRNA; Concentration: 32.60 pg/μl
miRNA / Small RNA Ratio [%]:	27		

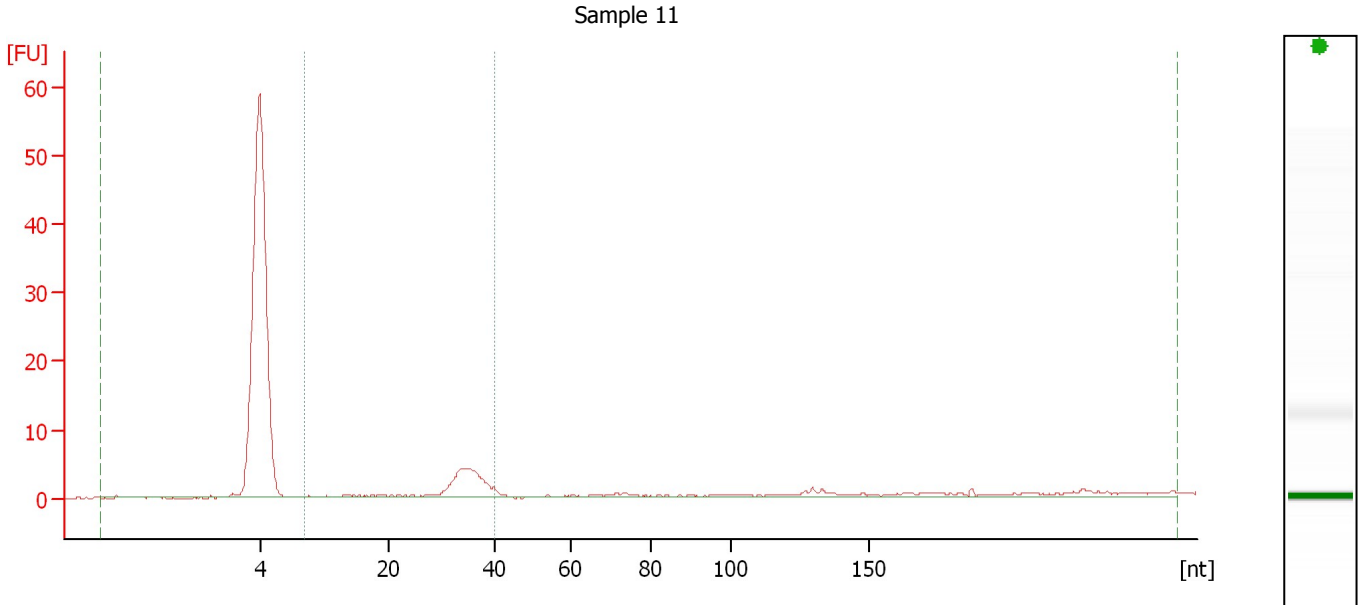
**Region table for sample 10 : Sample 10**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	259	53	100.0	122.4	100	<span style="background-color: maroon; color: black;"> </span>
miRNA	10	40	29	30.3	32.6	27	<span style="background-color: darkgreen; color: black;"> </span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : Sample 11**

Small RNA Concentration [pg/μl]:	168.1	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	100.3	Result Flagging Label:	60 % miRNA; Concentration: 100.30 pg/μl
miRNA / Small RNA Ratio [%]:	60		

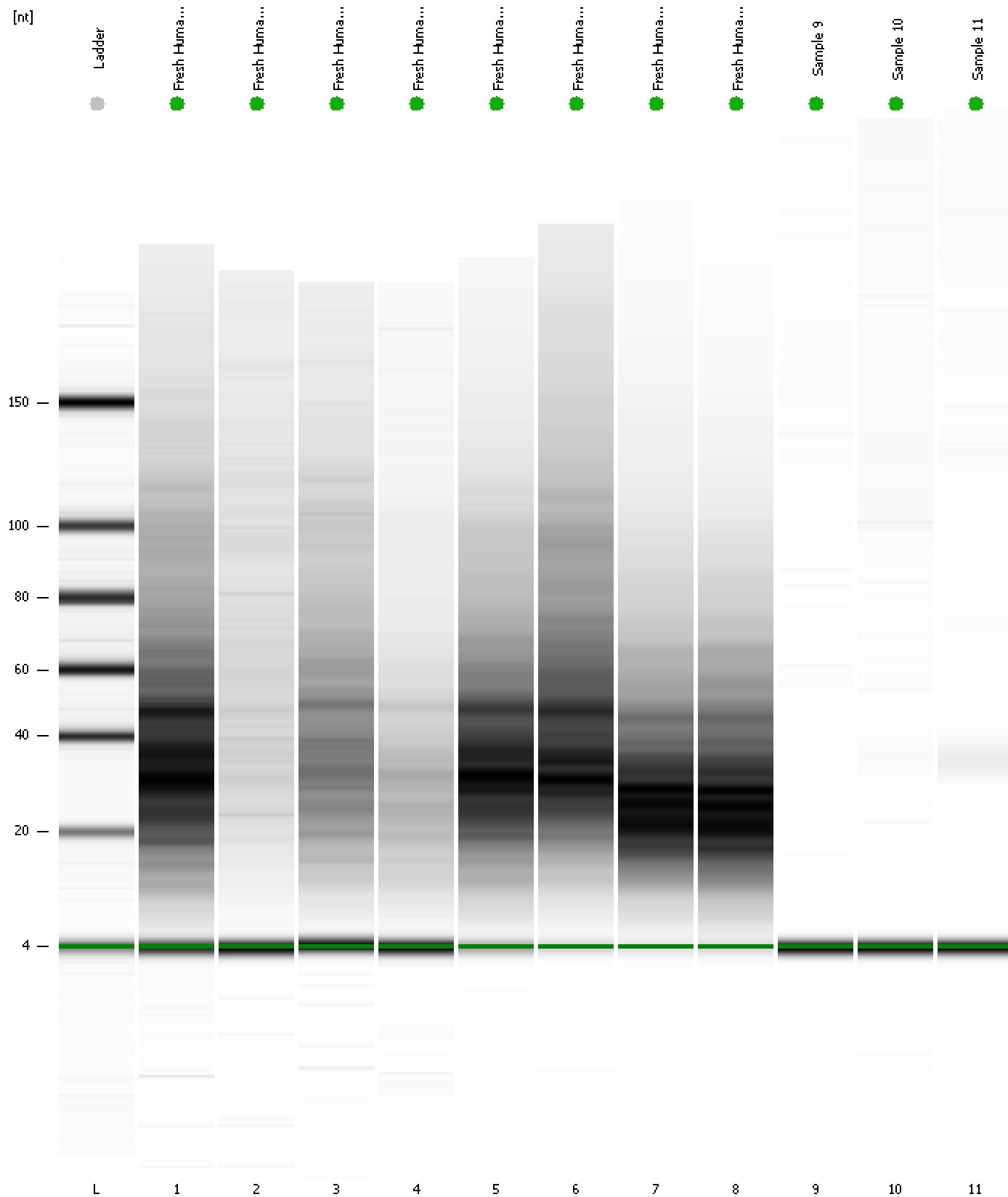
**Region table for sample 11 : Sample 11**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	262	44	100.0	168.1	100	<span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	32	22.0	100.3	60	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
Modified: 4/9/2012 2:31:41 PM

**Gel Image**





Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-04-09\2012-04-09\_005.xad

Created: 4/9/2012 1:59:42 PM  
 Modified: 4/9/2012 2:31:41 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		4/9/2012 2:31:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2012-04-09\2012-04-09_005.xad)		Instrument	Run		4/9/2012 1:59:47 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		4/9/2012 1:59:47 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		4/9/2012 1:59:47 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		4/9/2012 1:59:47 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		4/9/2012 1:59:47 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		4/9/2012 1:59:47 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		4/9/2012 1:59:47 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1