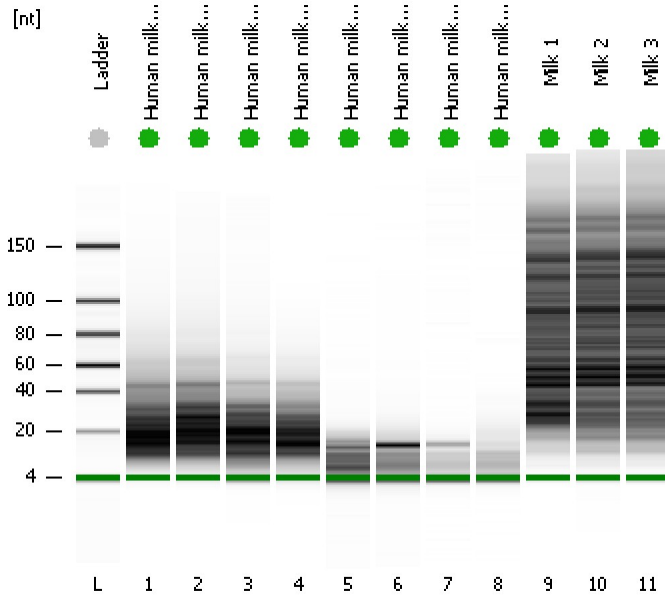


Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
Modified: 3/12/2012 11:11:45 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

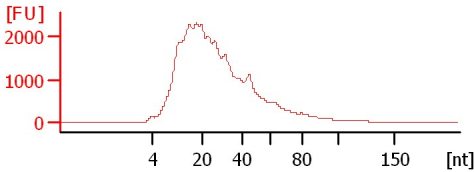
Assay Class: Small RNA  
Version: 1.2  
Assay Comments: Small RNA Analysis 6 - 150 nucleotides

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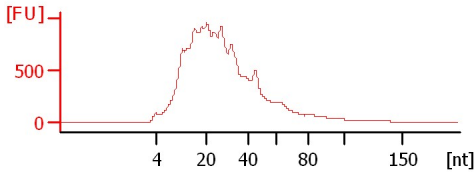
Chip Information:

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

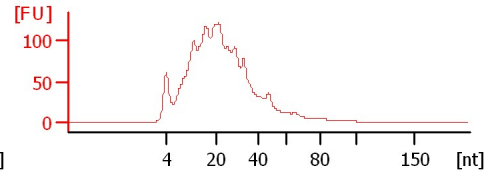
**Human milk 1 w/o IH**  
98 % miRNA; Concentration: 97722.50 p...



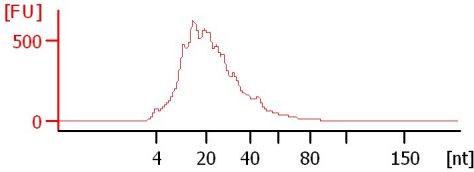
**Human milk 2 w/o IH**  
89 % miRNA; Concentration: 59060.60 p...



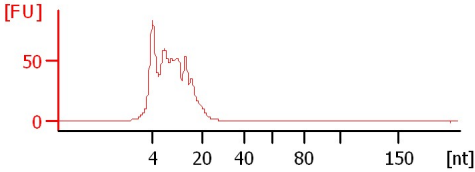
**Human milk 3 w/o IH**  
91 % miRNA; Concentration: 11161 pg/μl



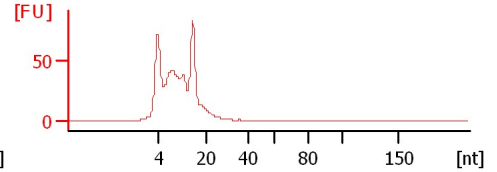
**Human milk 4 w/o IH**  
92 % miRNA; Concentration: 37868.50 p...



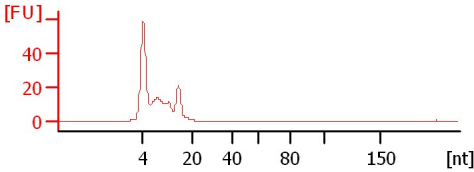
**Human milk 1 w IH**  
76 % miRNA; Concentration: 1410.20 pg/μl



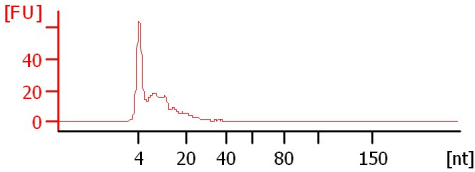
**Human milk 2 w IH**  
80 % miRNA; Concentration: 1690.50 pg/μl



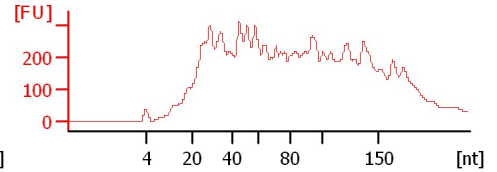
**Human milk 3 w IH**  
76 % miRNA; Concentration: 615.90 pg/μl



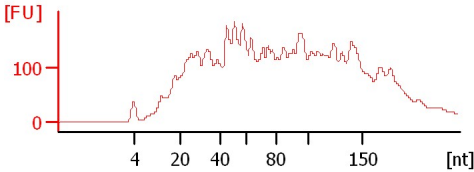
**Human milk 4 w IH**  
79 % miRNA; Concentration: 773.10 pg/μl



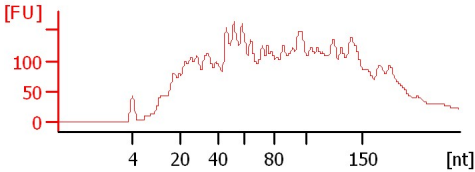
**Milk 1**  
49 % miRNA; Concentration: 36384 pg/μl



**Milk 2**  
48 % miRNA; Concentration: 19845.80 p...















**Milk 3**  
46 % miRNA; Concentration: 17017.10 p...



Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

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

Sample Name	Sample Comment	Status	Result Label	Result Color
Human milk 1 w/o IH		✓	98 % miRNA; Concentration: 97722.50 pg/μl	
Human milk 2 w/o IH		✓	89 % miRNA; Concentration: 59060.60 pg/μl	
Human milk 3 w/o IH		✓	91 % miRNA; Concentration: 11161 pg/μl	
Human milk 4 w/o IH		✓	92 % miRNA; Concentration: 37868.50 pg/μl	
Human milk 1 w IH		✓	76 % miRNA; Concentration: 1410.20 pg/μl	
Human milk 2 w IH		✓	80 % miRNA; Concentration: 1690.50 pg/μl	
Human milk 3 w IH		✓	76 % miRNA; Concentration: 615.90 pg/μl	
Human milk 4 w IH		✓	79 % miRNA; Concentration: 773.10 pg/μl	
Milk 1		✓	49 % miRNA; Concentration: 36384 pg/μl	
Milk 2		✓	48 % miRNA; Concentration: 19845.80 pg/μl	
Milk 3		✓	46 % miRNA; Concentration: 17017.10 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\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
Modified: 3/12/2012 11:11:45 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

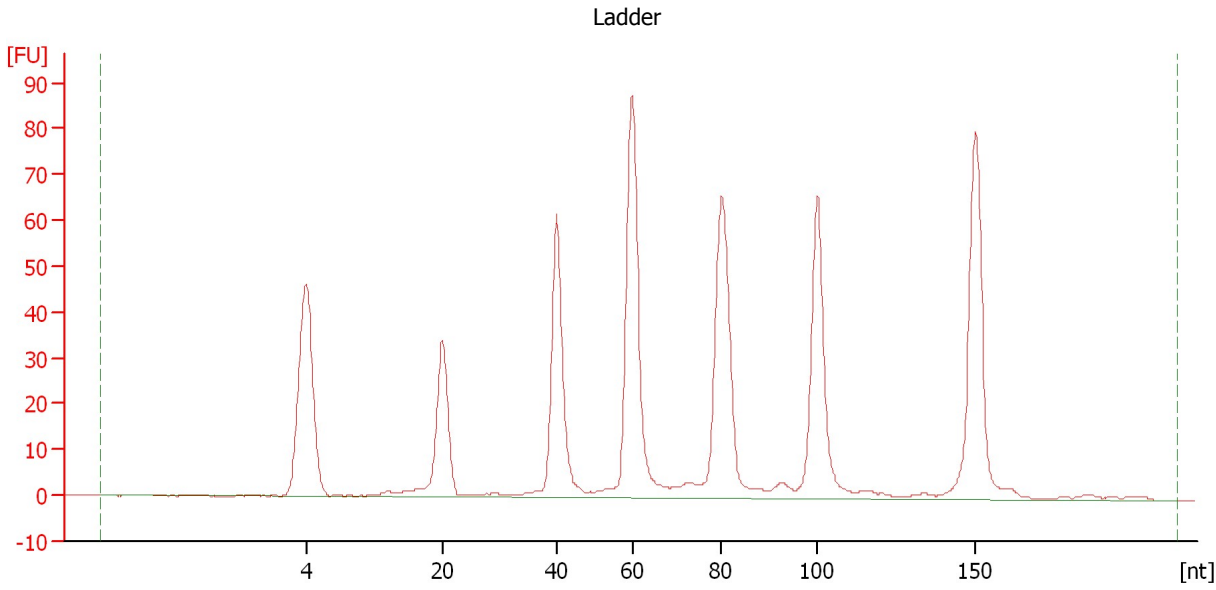
### Ladder

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\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary**



**Overall Results for Ladder**

Result Flagging Color:

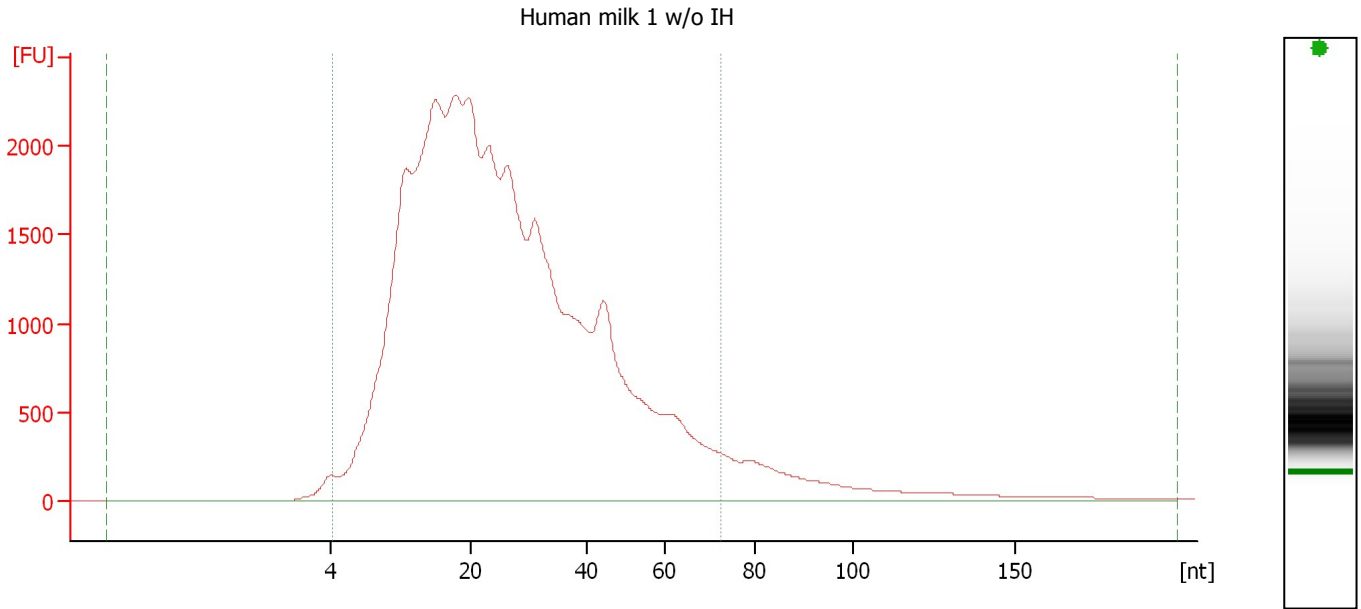
Result Flagging Label:

Number of Peaks: 6

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : Human milk 1 w/o IH**

Small RNA Concentration [pg/μl]:	99,805.2	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	97,722.5	Result Flagging Label:	98 % miRNA; Concentration: 97722.50 pg/μl
miRNA / Small RNA Ratio [%]:	98		

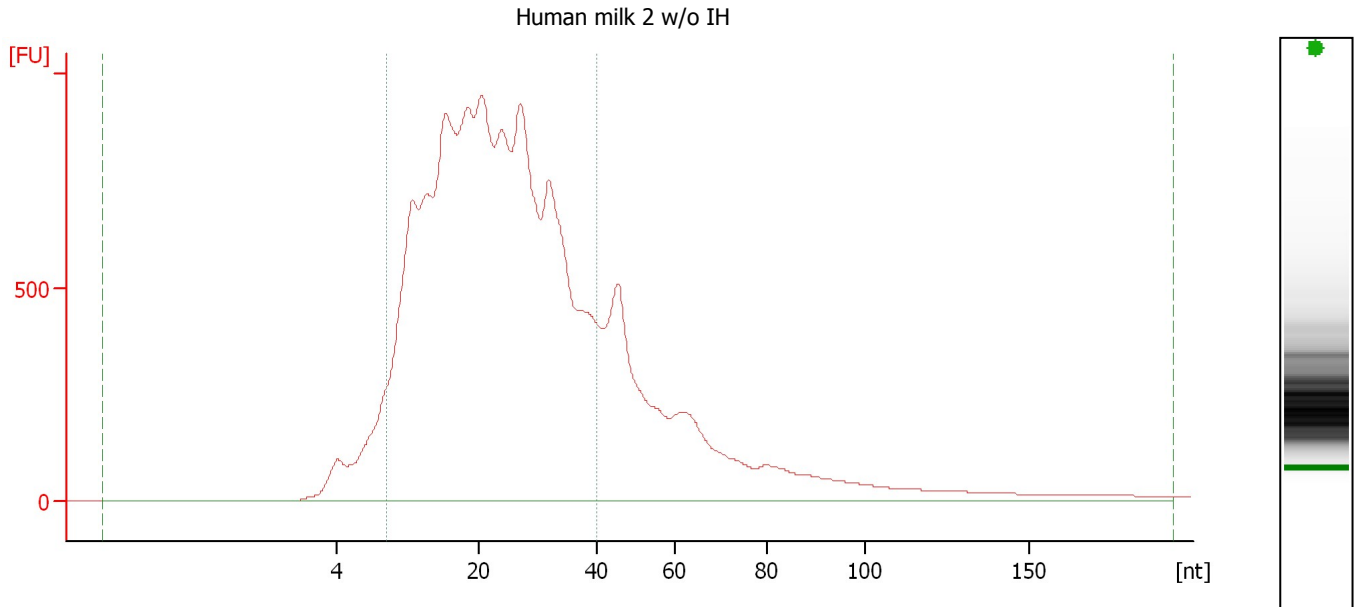
**Region table for sample 1 : Human milk 1 w/o IH**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	200	32	77.3	99,805.2	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	4	72	27	54.4	97,722.5	98	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Human milk 2 w/o IH**

Small RNA Concentration [pg/μl]:	66,539.5	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	59,060.6	Result Flagging Label:	89 % miRNA; Concentration: 59060.60 pg/μl
miRNA / Small RNA Ratio [%]:	89		

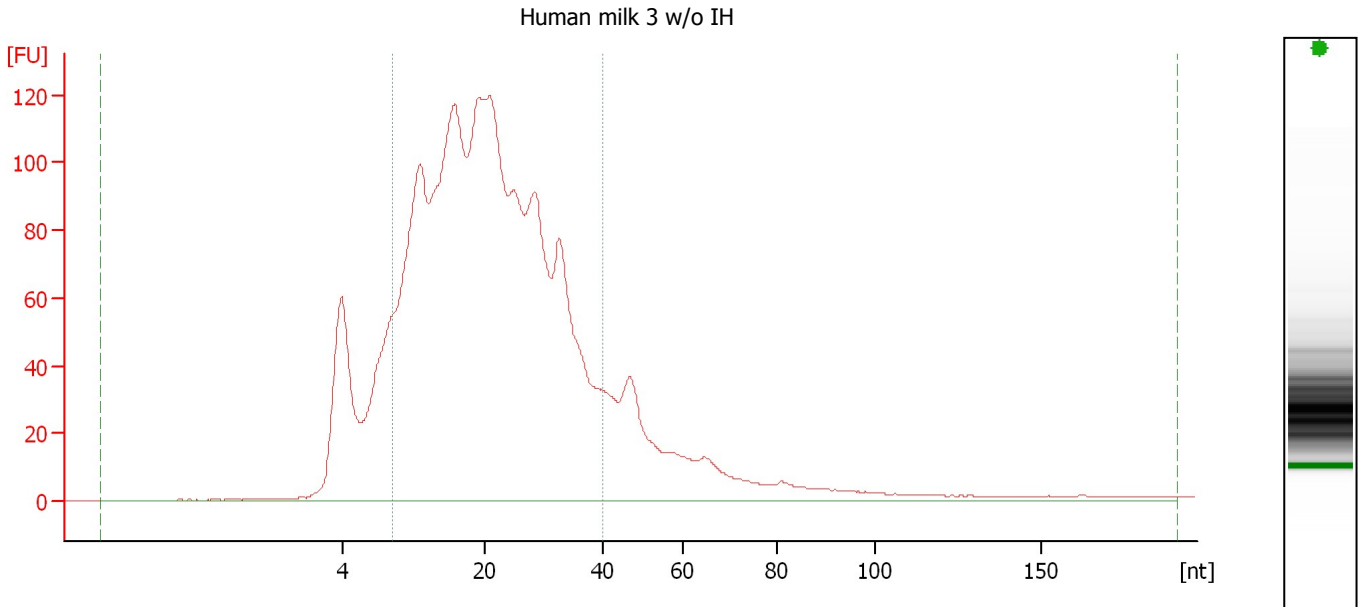
**Region table for sample 2 : Human milk 2 w/o IH**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	194	33	79.2	66,539.5	100	<span style="background-color: #800000; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	23	34.7	59,060.6	89	<span style="background-color: #008000; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Human milk 3 w/o IH**

Small RNA Concentration [pg/μl]:	12,295.6	Result Flagging Color:	<span style="background-color: green; color: black;"> </span>
miRNA Concentration [pg/μl]:	11,161.0	Result Flagging Label:	91 % miRNA; Concentration: 11161 pg/μl
miRNA / Small RNA Ratio [%]:	91		

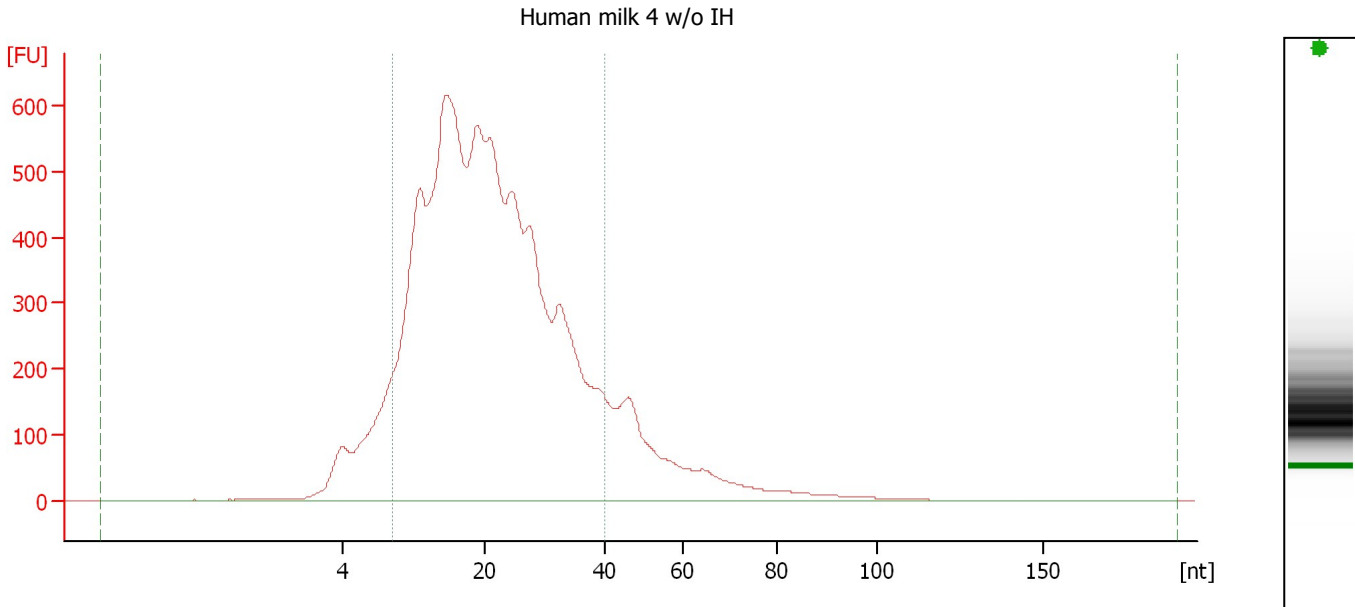
**Region table for sample 3 : Human milk 3 w/o IH**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Col or
Small RNA	0	191	27	84.4	12,295.6	100	<span style="background-color: purple; color: black;"> </span>
miRNA	10	40	22	35.6	11,161.0	91	<span style="background-color: green; color: black;"> </span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : Human milk 4 w/o IH**

Small RNA Concentration [pg/μl]:	41,029.9	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	37,868.5	Result Flagging Label:	92 % miRNA; Concentration: 37868.50 pg/μl
miRNA / Small RNA Ratio [%]:	92		

**Region table for sample 4 : Human milk 4 w/o IH**

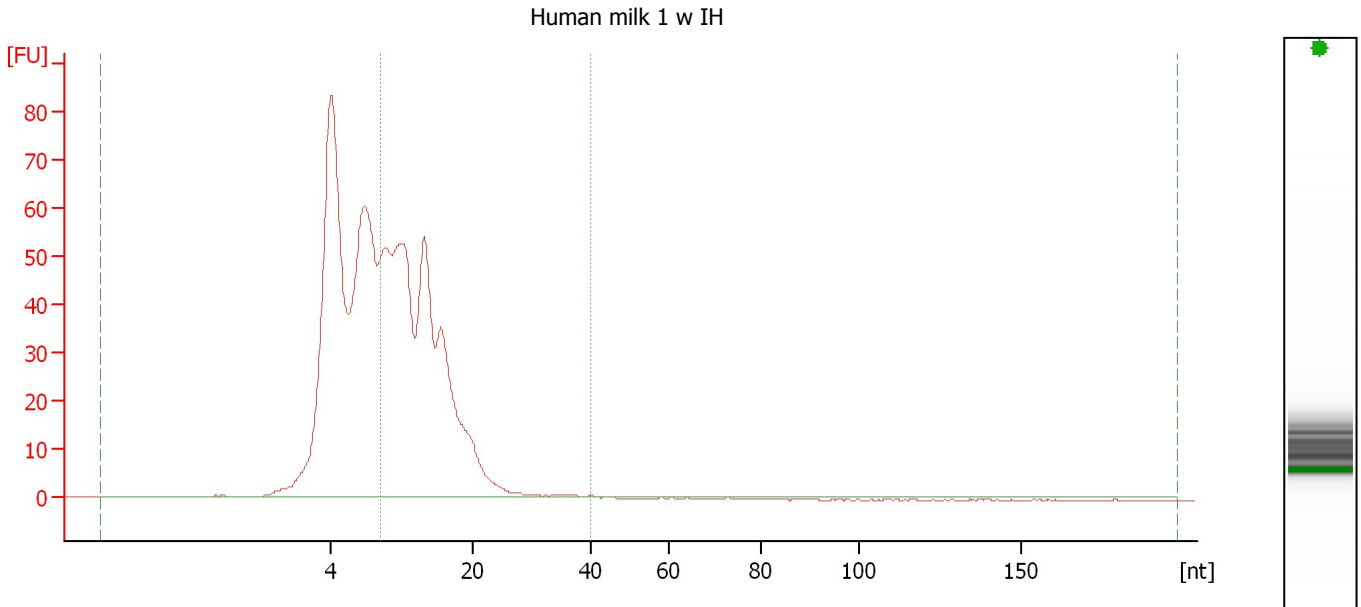
Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	190	24	60.1	41,029.9	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	21	35.4	37,868.5	92	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>



Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : Human milk 1 w IH**

Small RNA Concentration [pg/μl]:	1,855.4	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	1,410.2	Result Flagging Label:	76 % miRNA; Concentration: 1410.20 pg/μl
miRNA / Small RNA Ratio [%]:	76		

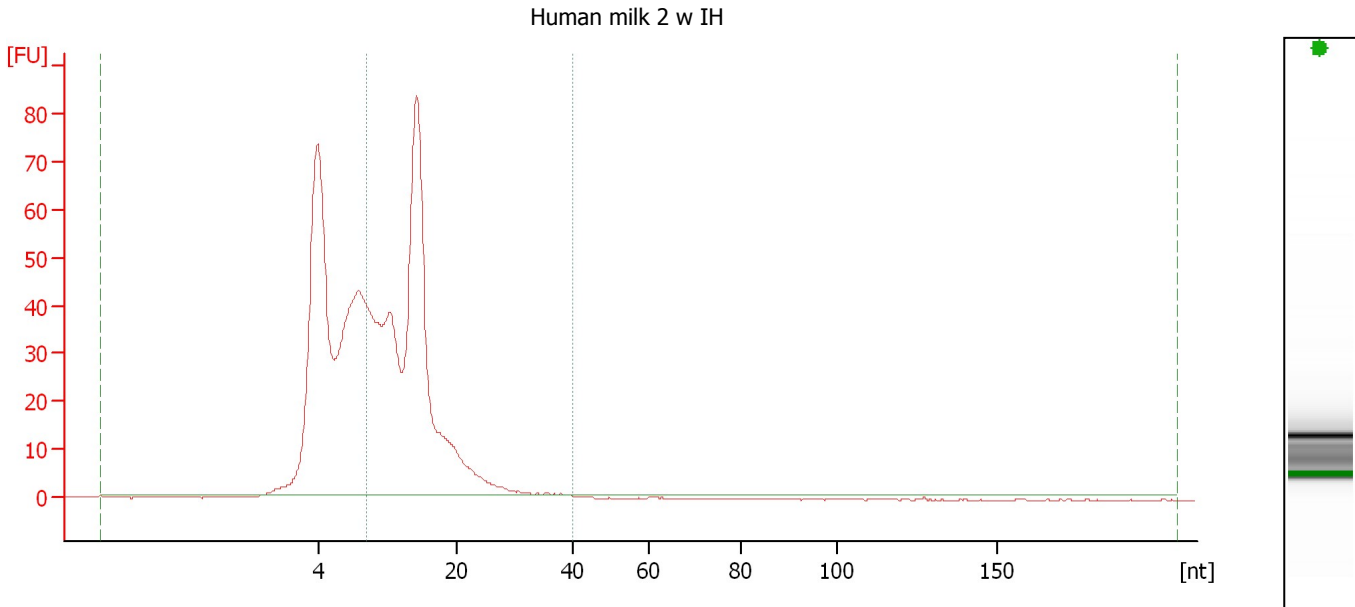
**Region table for sample 5 : Human milk 1 w IH**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	197	10	53.4	1,855.4	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	14	25.3	1,410.2	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\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : Human milk 2 w IH**

Small RNA Concentration [pg/μl]:	2,114.9	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	1,690.5	Result Flagging Label:	80 % miRNA; Concentration: 1690.50 pg/μl
miRNA / Small RNA Ratio [%]:	80		

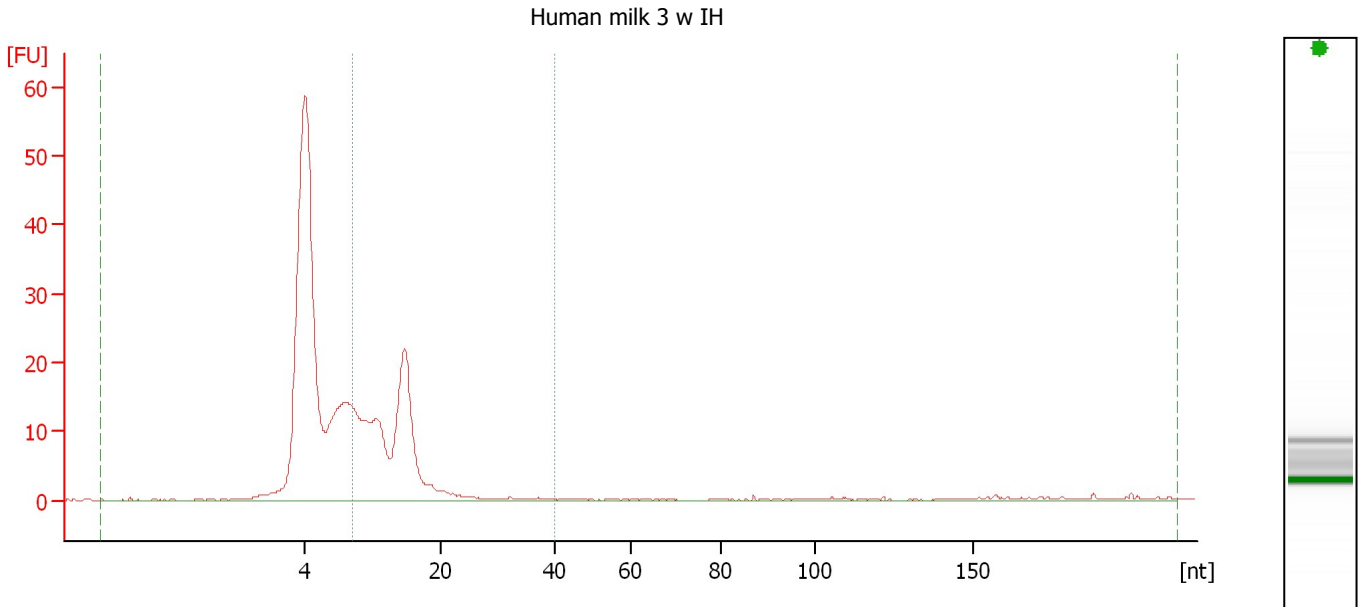
**Region table for sample 6 : Human milk 2 w IH**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	205	11	52.5	2,114.9	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	15	25.6	1,690.5	80	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Human milk 3 w IH**

Small RNA Concentration [pg/μl]:	805.5	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	615.9	Result Flagging Label:	76 % miRNA; Concentration: 615.90 pg/μl
miRNA / Small RNA Ratio [%]:	76		

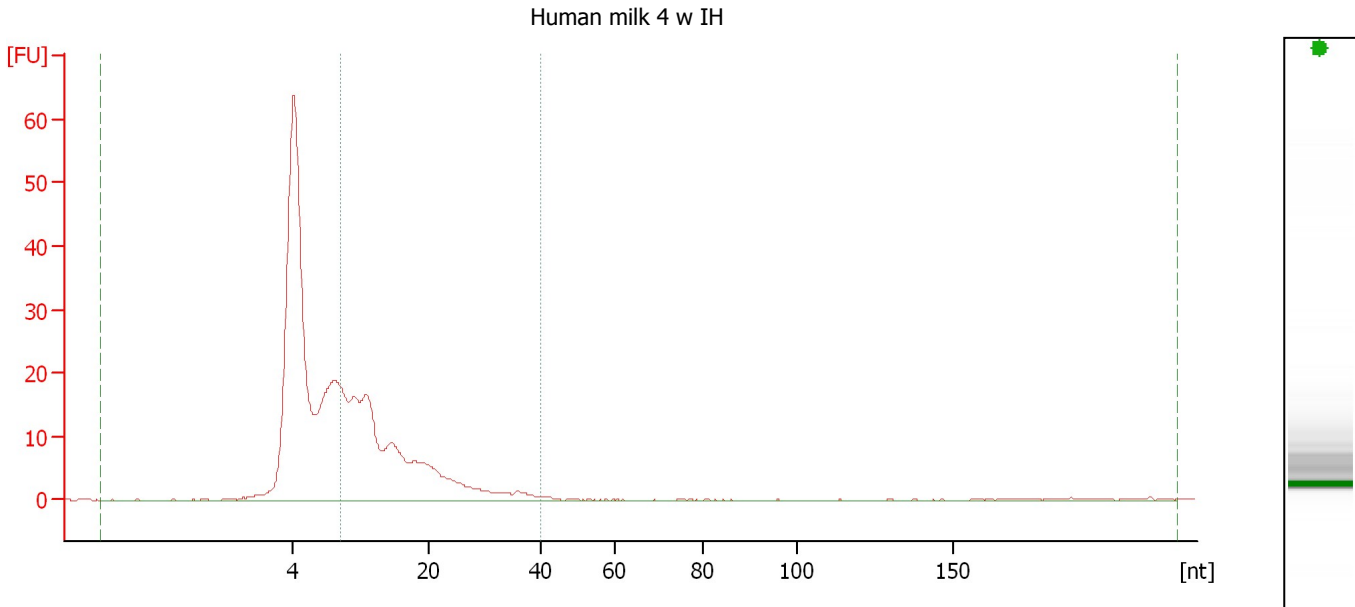
**Region table for sample 7 : Human milk 3 w IH**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	214	13	100.0	805.5	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	14	27.4	615.9	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\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : Human milk 4 w IH**

Small RNA Concentration [pg/μl]:	979.0	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	773.1	Result Flagging Label:	79 % miRNA; Concentration: 773.10 pg/μl
miRNA / Small RNA Ratio [%]:	79		

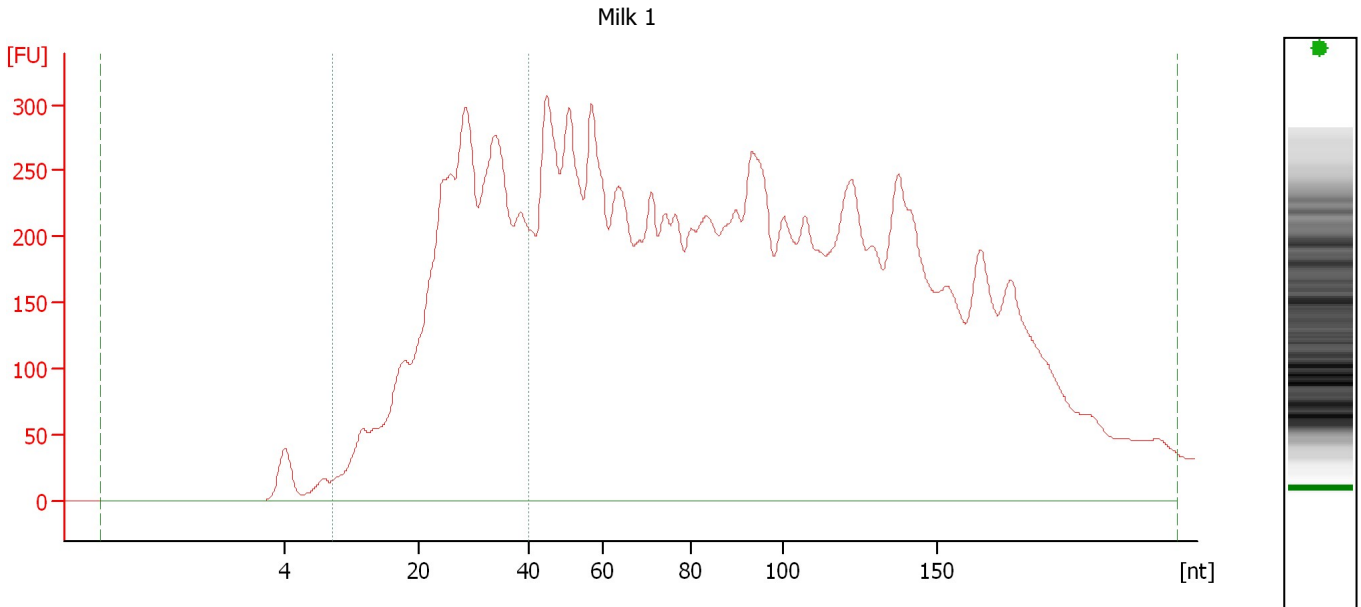
**Region table for sample 8 : Human milk 4 w IH**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	222	13	100.0	979.0	100	<span style="background-color: #800000; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	16	39.1	773.1	79	<span style="background-color: #008000; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : Milk 1**

Small RNA Concentration [pg/μl]: 74,098.9  
 miRNA Concentration [pg/μl]: 36,384.0  
 miRNA / Small RNA Ratio [%]: 49

Result Flagging Color:             
 Result Flagging Label: 49 % miRNA;  
 Concentration: 36384  
 pg/μl

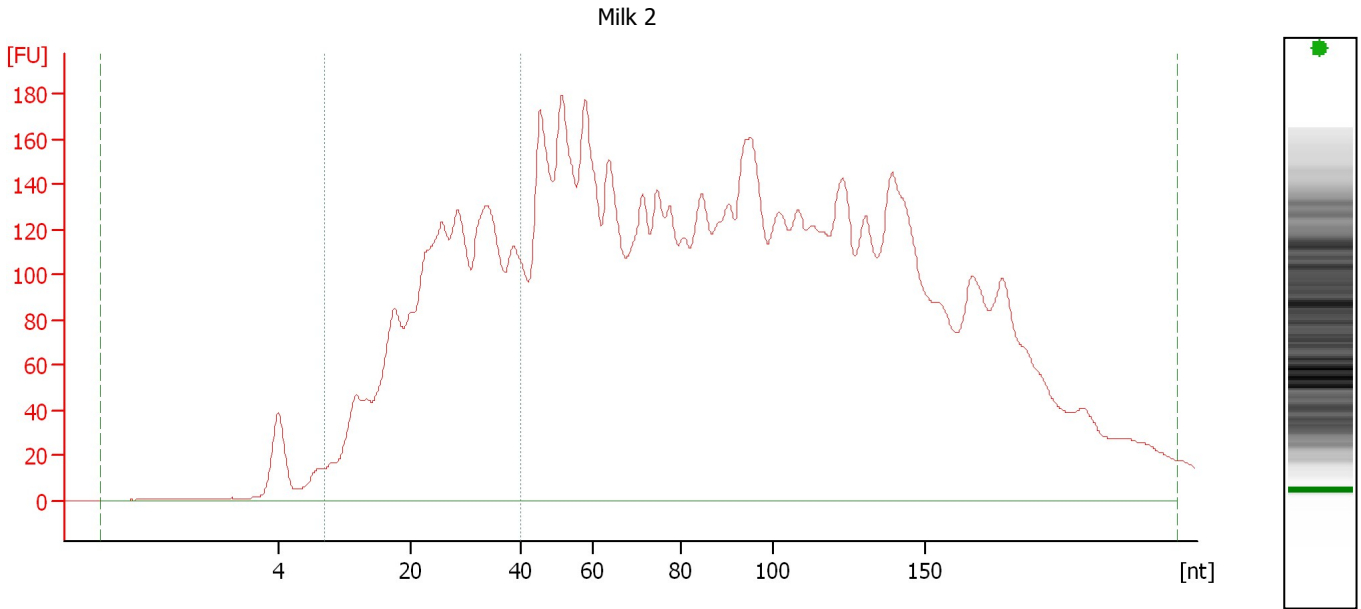
**Region table for sample 9 : Milk 1**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	227	90	58.6	74,098.9	100	<span style="background-color: maroon; color: black;">          </span>
miRNA	10	40	28	26.1	36,384.0	49	<span style="background-color: green; color: black;">          </span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : Milk 2**

Small RNA Concentration [pg/μl]:	41,591.1	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	19,845.8	Result Flagging Label:	48 % miRNA; Concentration: 19845.80 pg/μl
miRNA / Small RNA Ratio [%]:	48		

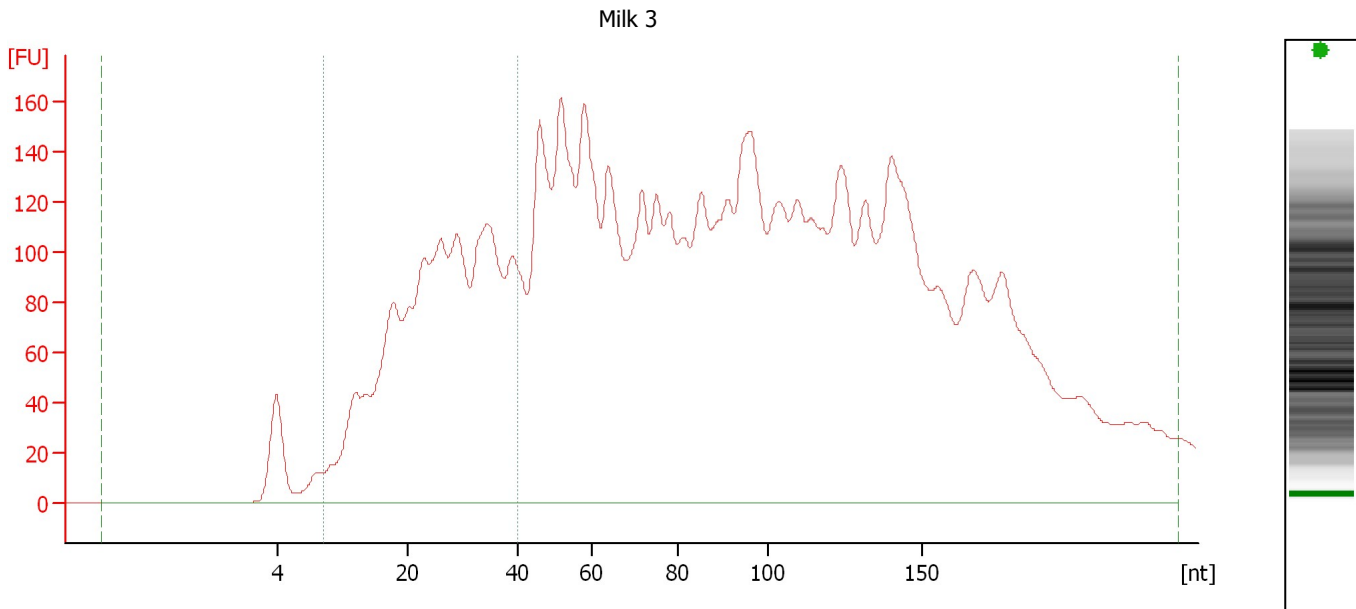
**Region table for sample 10 : Milk 2**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	232	91	58.8	41,591.1	100	<span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	27	29.6	19,845.8	48	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : Milk 3**

Small RNA Concentration [pg/μl]:	36,663.2	Result Flagging Color:	<span style="background-color: green; width: 20px; height: 10px; display: inline-block;"></span>
miRNA Concentration [pg/μl]:	17,017.1	Result Flagging Label:	46 % miRNA; Concentration: 17017.10 pg/μl
miRNA / Small RNA Ratio [%]:	46		

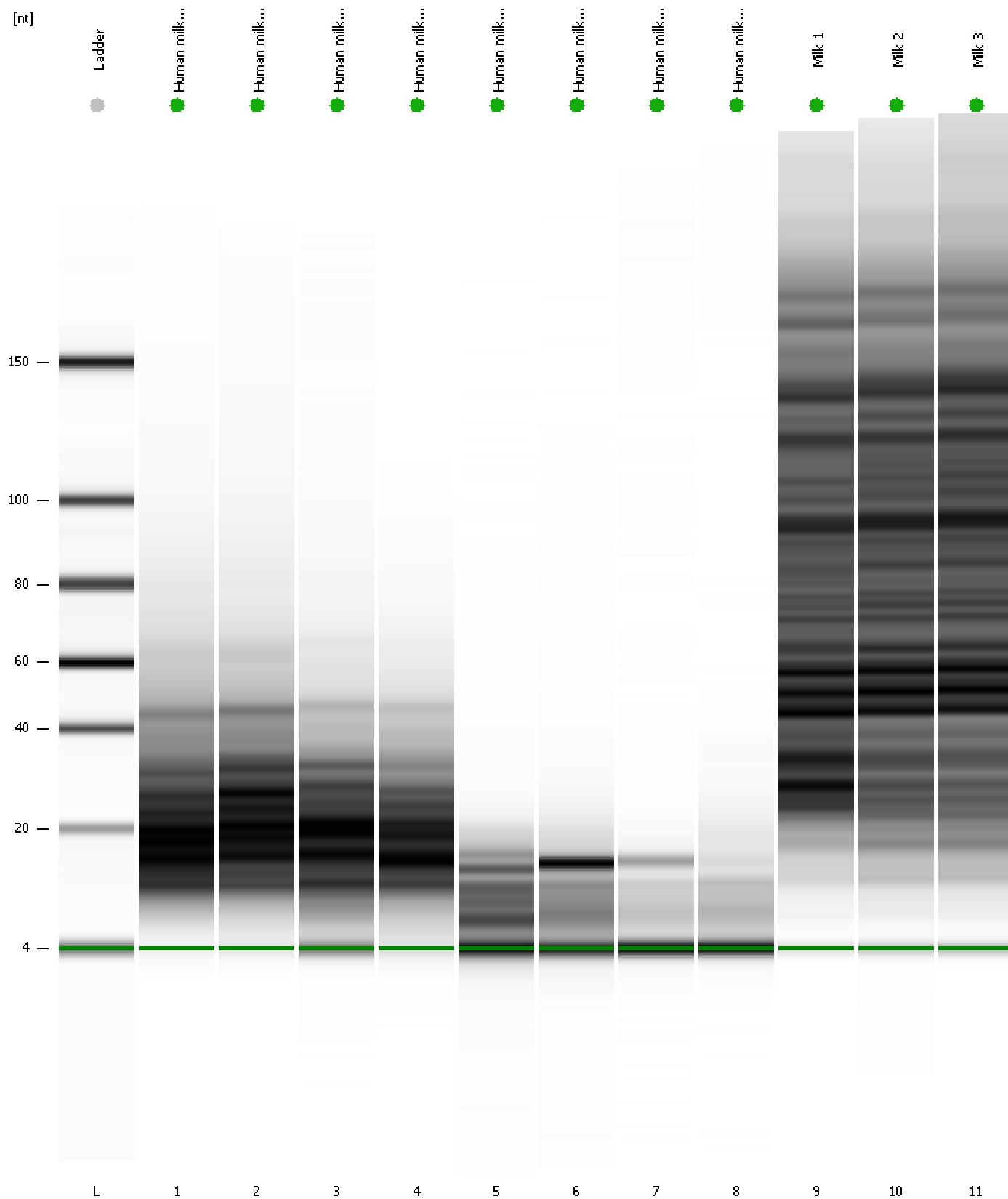
**Region table for sample 11 : Milk 3**

Name	From [nt]	To [nt]	Average Size [nt]	Size distribution in CV [%]	Conc. [pg/μl]	% of Total	Color
Small RNA	0	234	95	58.5	36,663.2	100	<span style="background-color: maroon; width: 15px; height: 10px; display: inline-block;"></span>
miRNA	10	40	26	30.1	17,017.1	46	<span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span>

Assay Class: Small RNA  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
Modified: 3/12/2012 11:11:45 AM

**Gel Image**





Assay Class: Small RNA  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-03-12\2012-03-12\_001.xad

Created: 3/12/2012 10:36:23 AM  
 Modified: 3/12/2012 11:11:45 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		3/12/2012 11:08:20 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2012-03-12\2012-03-12_001.xad)		Instrument	Run		3/12/2012 10:36:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/12/2012 10:36:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/12/2012 10:36:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/12/2012 10:36:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/12/2012 10:36:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/12/2012 10:36:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/12/2012 10:36:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1