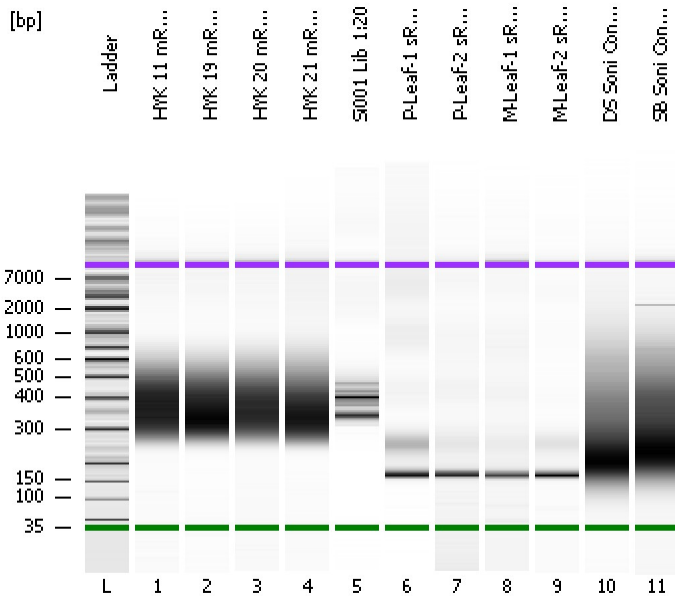


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
Modified: 8/27/2013 4:07:59 PM

Electrophoresis File Run Summary



Instrument Information:

Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

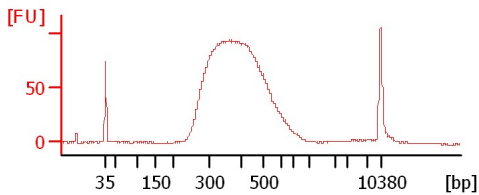
Assay Information:

Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\dsDNA\High Sensitivity DNA.xsy
Assay Class: High Sensitivity DNA Assay
Version: 1.03
Assay Comments: Copyright © 2003-2010 Agilent Technologies

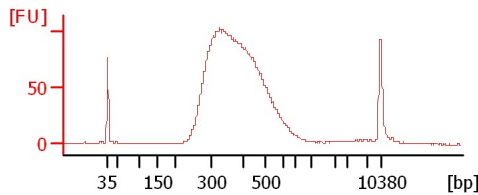
Chip Information:

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

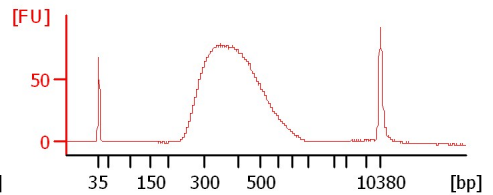
HYK 11 mRNA Lib 1:9



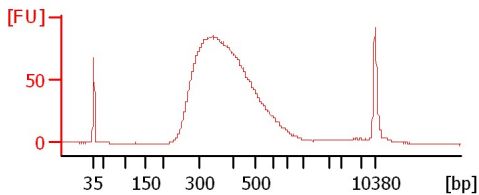
HYK 19 mRNA Lib 1:10



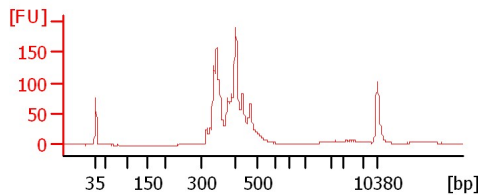
HYK 20 mRNA Lib 1:11



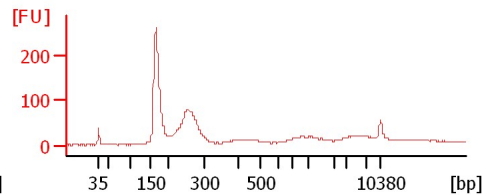
HYK 21 mRNA Lib 1:12



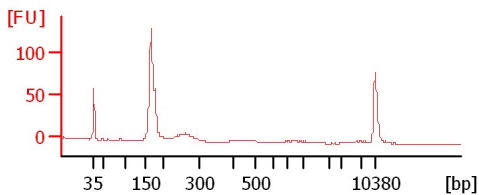
Si001 Lib 1:20



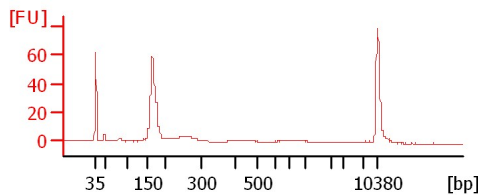
P-Leaf-1 sRNA Lib



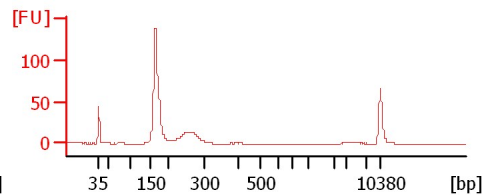
P-Leaf-2 sRNA Lib



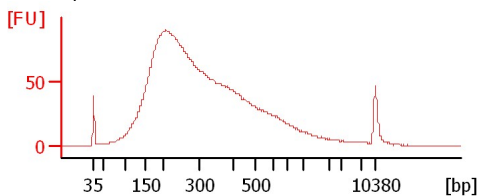
M-Leaf-1 sRNA Lib



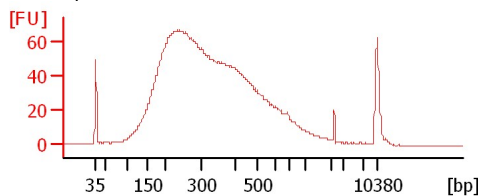
M-Leaf-2 sRNA Lib 1:2



DS Soni Concentrated



SB Soni Concentrated 1:4



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
Modified: 8/27/2013 4:07:59 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
HYK 11 mRNA Lib 1:9		<input type="checkbox"/>	✓			
HYK 19 mRNA Lib 1:10		<input type="checkbox"/>	✓			
HYK 20 mRNA Lib 1:11		<input type="checkbox"/>	✓			
HYK 21 mRNA Lib 1:12		<input type="checkbox"/>	✓			
Si001 Lib 1:20		<input type="checkbox"/>	✓			
P-Leaf-1 sRNA Lib		<input type="checkbox"/>	✓			
P-Leaf-2 sRNA Lib		<input type="checkbox"/>	✓			
M-Leaf-1 sRNA Lib		<input type="checkbox"/>	✓			
M-Leaf-2 sRNA Lib 1:2		<input type="checkbox"/>	✓			
DS Soni Concentrated	1X Ampure Beads	<input type="checkbox"/>	✓			
SB Soni Concentrated 1:4	1X Ampure Beads	<input type="checkbox"/>	✓			
Ladder		<input type="checkbox"/>				

Chip Lot #

Reagent Kit Lot #

Chip Comments :

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
Modified: 8/27/2013 4:07:59 PM

Electrophoresis Assay Details

General Analysis Settings

Number of Available Sample and Ladder Wells (Max.) : 12
Minimum Visible Range [s] : 32
Maximum Visible Range [s] : 138
Start Analysis Time Range [s] : 33
End Analysis Time Range [s] : 137.5
Ladder Concentration [pg/ μ l] : 1950
Uses Standard Area for Ladder Fragments
Lower Marker Concentration [pg/ μ l] : 125
Upper Marker Concentration [pg/ μ l] : 75
Used Upper Marker for Quantitation
Standard Curve Fit is Point to Point
Show Data Aligned to Lower and Upper Marker

Integrator Settings

Integration Start Time [s] : 33.05
Integration End Time [s] : 137
Slope Threshold : 0.8
Height Threshold [FU] : 5
Area Threshold : 0.1
Width Threshold [s] : 0.6
Baseline Plateau [s] : 0.5

Filter Settings

Filter Width [s] : 0.5
Polynomial Order : 4

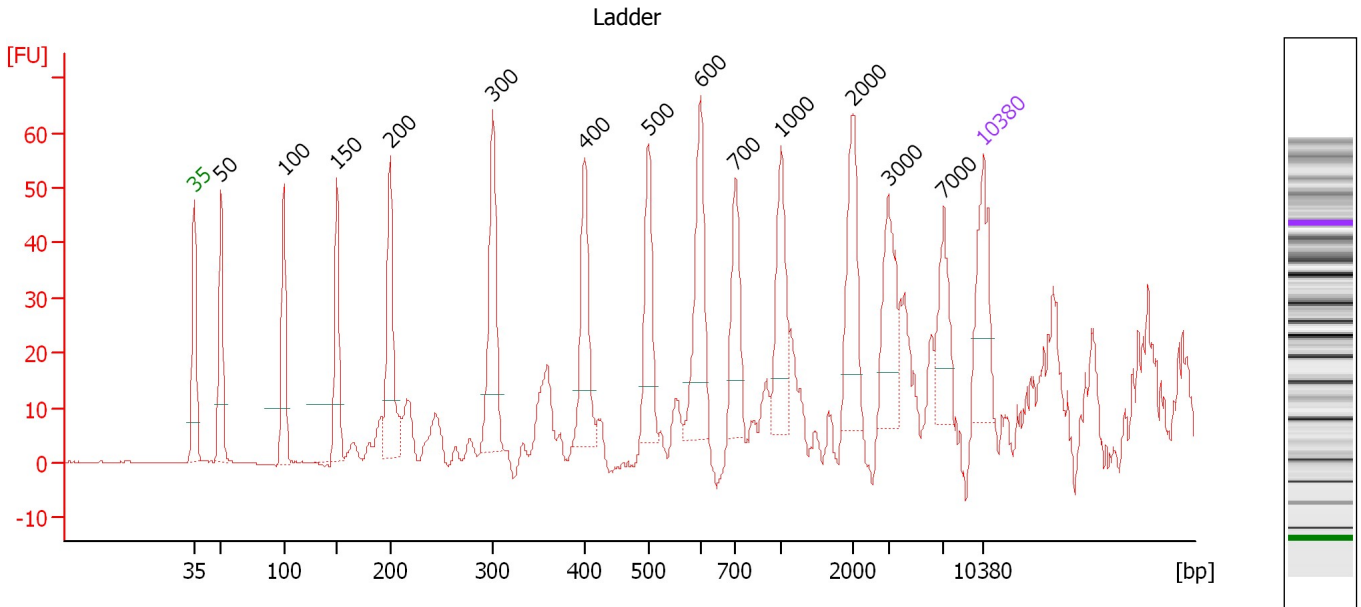
Ladder

Ladder Peak	Size	Area
1	35	160
2	50	210
3	100	208
4	150	221
5	200	242
6	300	270
7	400	305
8	500	306
9	600	336
10	700	321
11	1000	366
12	2000	413
13	3000	411
14	7000	400
15	10380	214

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

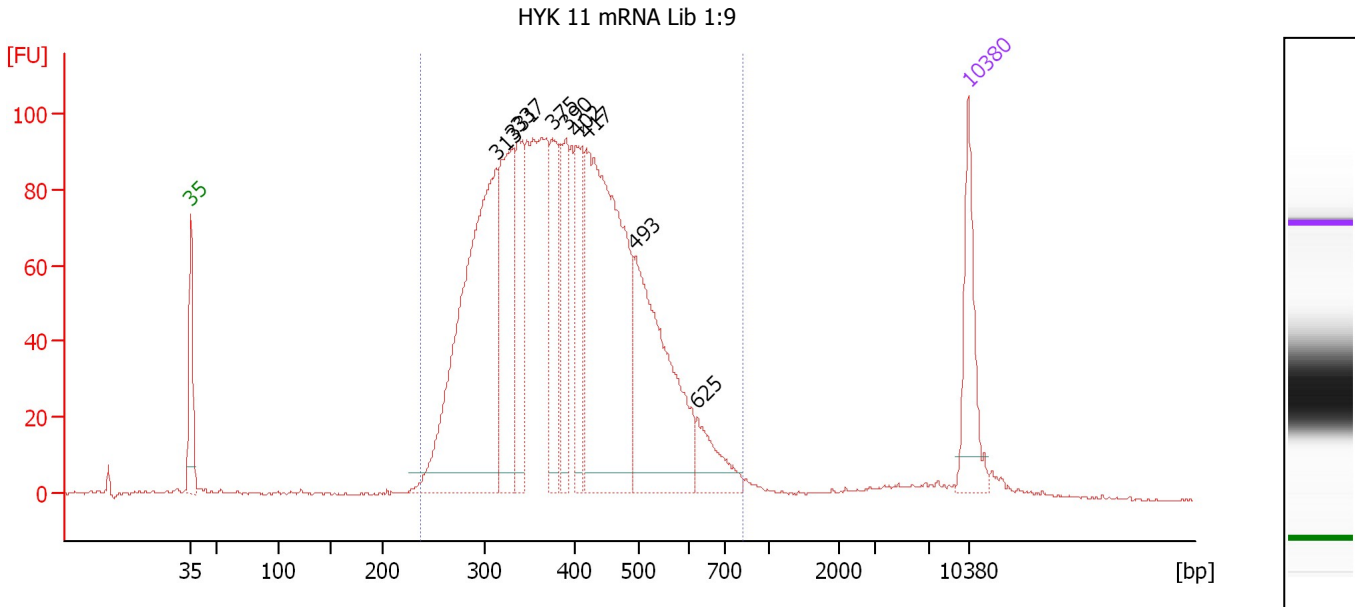
Peak table for Ladder

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	150.00	4,545.5	Ladder Peak
3	100	150.00	2,272.7	Ladder Peak
4	150	150.00	1,515.2	Ladder Peak
5	200	150.00	1,136.4	Ladder Peak
6	300	150.00	757.6	Ladder Peak
7	400	150.00	568.2	Ladder Peak
8	500	150.00	454.5	Ladder Peak
9	600	150.00	378.8	Ladder Peak
10	700	150.00	324.7	Ladder Peak
11	1,000	150.00	227.3	Ladder Peak
12	2,000	150.00	113.6	Ladder Peak
13	3,000	150.00	75.8	Ladder Peak
14	7,000	150.00	32.5	Ladder Peak
15	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : HYK 11 mRNA Lib 1:9

Number of peaks found: 9 Corr. Area 1: 2,211.8
 Noise: 0.4

Peak table for sample 1 : HYK 11 mRNA Lib 1:9

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	313	565.10	2,739.1	
3	331	220.65	1,008.6	
4	337	138.41	621.6	
5	375	120.95	489.3	
6	390	109.83	426.8	
7	402	112.10	423.0	
8	417	475.92	1,730.0	
9	493	296.28	910.6	
10	625	53.21	129.0	
11	10,380	75.00	10.9	Upper Marker

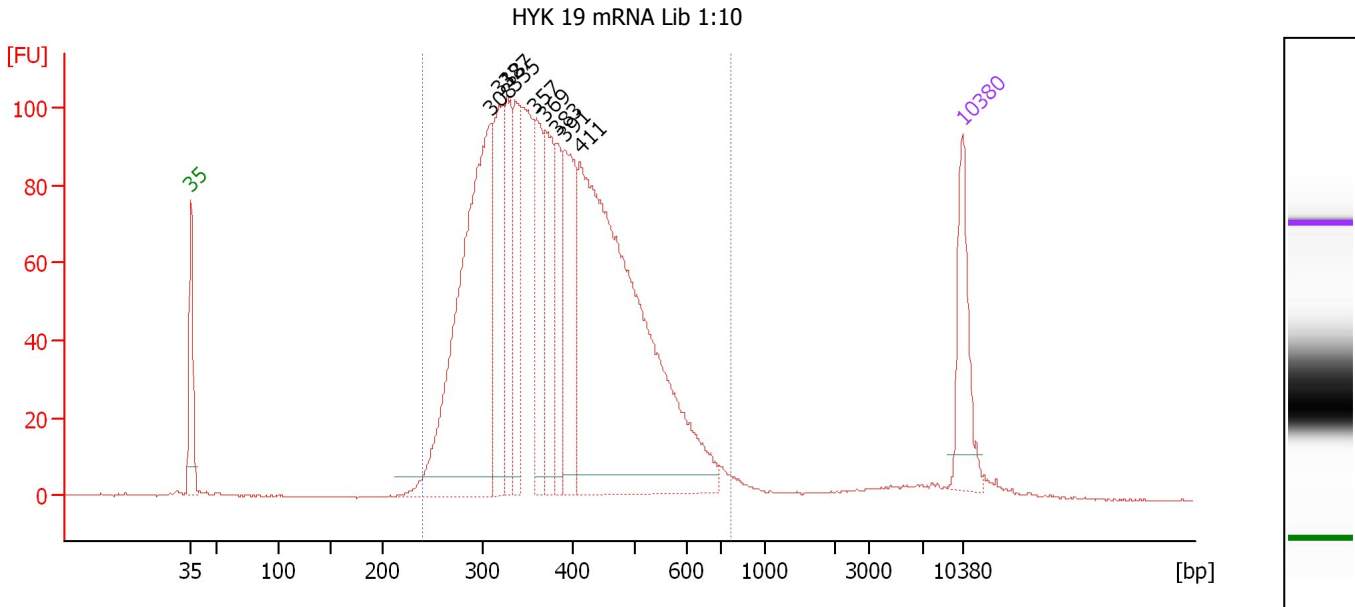
Region table for sample 1 : HYK 11 mRNA Lib 1:9

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
237	824	401	10,334.8	2,534.20	2,211.8	97	24.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : HYK 19 mRNA Lib 1:10

Number of peaks found: 9 Corr. Area 1: 2,206.0
 Noise: 0.1

Peak table for sample 2 : HYK 19 mRNA Lib 1:10

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	308	575.88	2,832.7	
3	318	174.84	832.7	
4	327	141.81	657.0	
5	335	130.54	590.8	
6	357	139.26	590.4	
7	369	138.08	566.5	
8	383	91.22	360.9	
9	391	173.64	672.4	
10	411	810.33	2,984.7	
11	10,380	75.00	10.9	Upper Marker

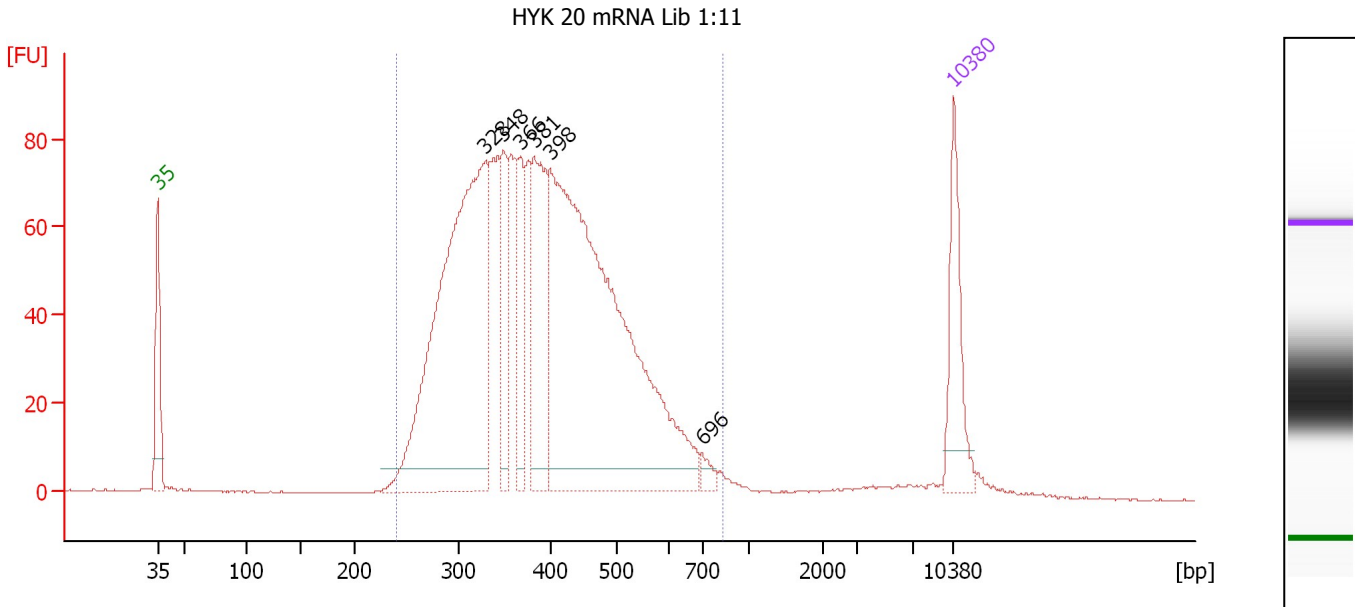
Region table for sample 2 : HYK 19 mRNA Lib 1:10

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
239	772	391	10,668.0	2,566.78	2,206.0	96	23.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : HYK 20 mRNA Lib 1:11

Number of peaks found: 6 Corr. Area 1: 1,747.3
 Noise: 0.1

Peak table for sample 3 : HYK 20 mRNA Lib 1:11

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	328	679.97	3,137.5	
3	348	92.43	402.1	
4	366	80.73	333.9	
5	381	177.30	704.3	
6	398	826.53	3,144.0	
7	696	11.43	24.9	
8	10,380	75.00	10.9	Upper Marker

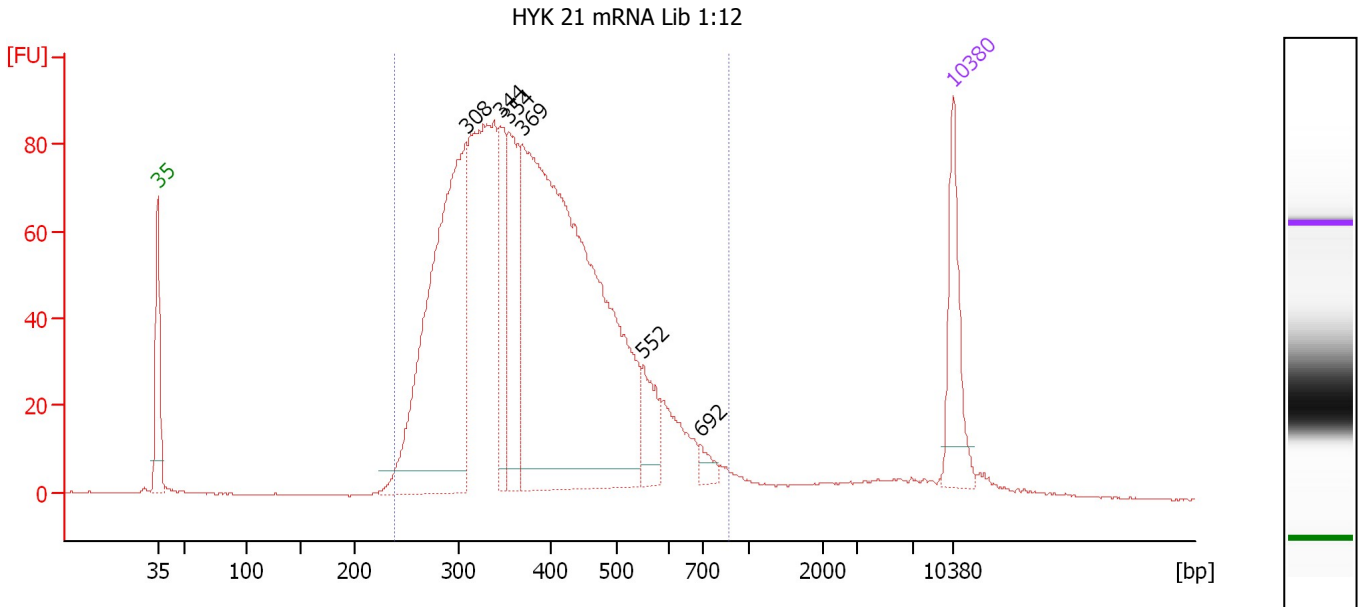
Region table for sample 3 : HYK 20 mRNA Lib 1:11

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
241	829	399	9,017.7	2,203.10	1,747.3	96	24.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : HYK 21 mRNA Lib 1:12

Number of peaks found: 6 Corr. Area 1: 1,884.7
 Noise: 0.2

Peak table for sample 4 : HYK 21 mRNA Lib 1:12

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	308	567.33	2,793.4	
3	344	107.71	473.9	
4	354	156.87	672.2	
5	369	953.59	3,916.9	
6	552	52.18	143.2	
7	692	14.53	31.8	
8	10,380	75.00	10.9	Upper Marker

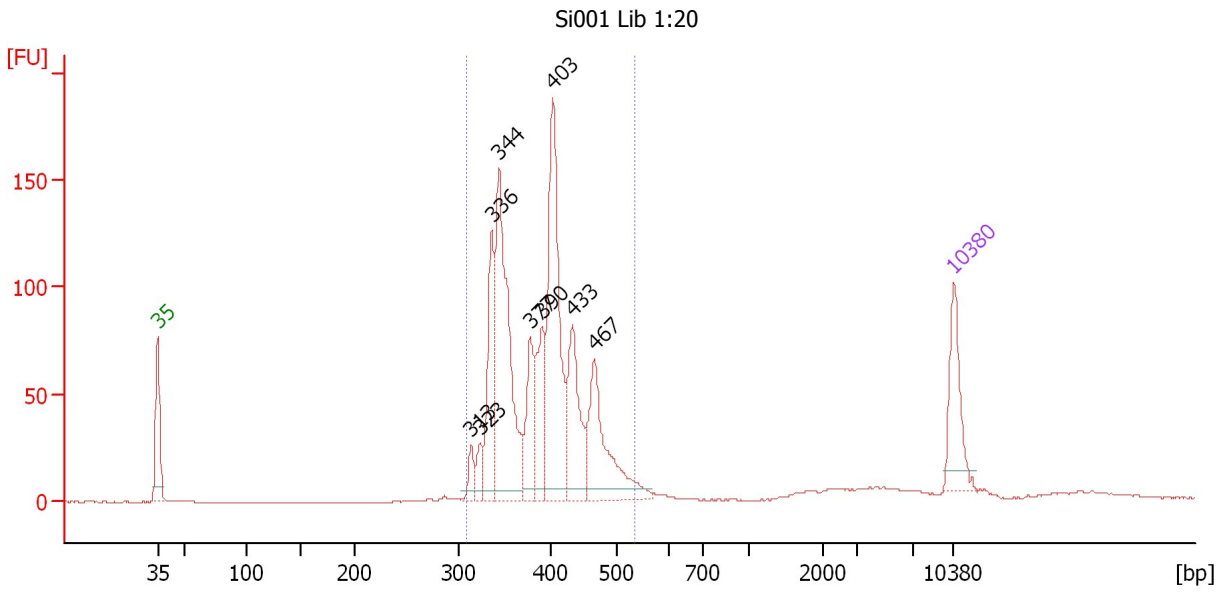
Region table for sample 4 : HYK 21 mRNA Lib 1:12

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
237	863	393	9,871.2	2,356.44	1,884.7	95	26.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : Si001 Lib 1:20

Number of peaks found: 9 Corr. Area 1: 1,130.6
 Noise: 0.1

Peak table for sample 5 : Si001 Lib 1:20

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	313	26.81	129.7	
3	323	29.32	137.4	
4	336	143.61	648.4	
5	344	353.03	1,556.6	
6	377	91.51	367.7	
7	390	101.40	393.9	
8	403	315.11	1,185.7	
9	433	139.65	488.8	
10	467	175.14	568.7	
11	10,380	75.00	10.9	Upper Marker

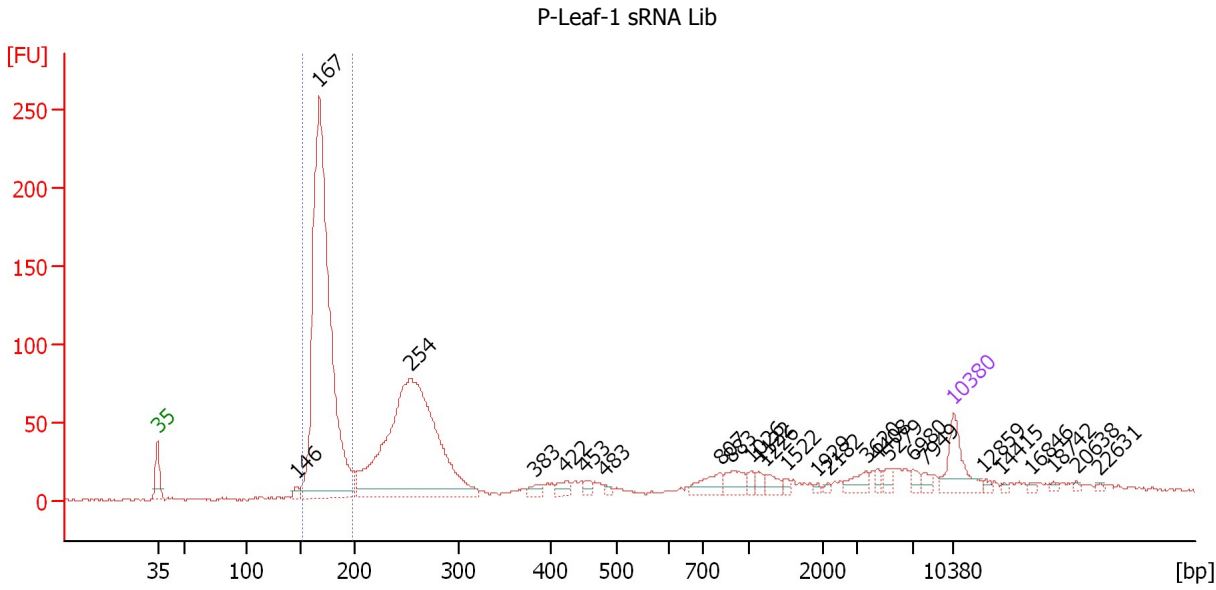
Region table for sample 5 : Si001 Lib 1:20

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
308	536	392	5,292.4	1,347.90	1,130.6	93	12.3	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : P-Leaf-1 sRNA Lib

Number of peaks found: 26 Corr. Area 1: 746.9
 Noise: 0.7

Peak table for sample 6 : P-Leaf-1 sRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	146	16.57	172.0	
3	167	1,590.12	14,428.4	
4	254	1,117.79	6,680.1	
5	383	18.83	74.6	
6	422	23.35	83.8	
7	453	14.71	49.2	
8	483	9.33	29.3	
9	807	45.77	86.0	
10	883	42.10	72.2	
11	1,026	13.89	20.5	
12	1,122	12.93	17.5	
13	1,226	21.19	26.2	
14	1,522	8.12	8.1	
15	1,929	4.27	3.4	
16	2,182	5.23	3.6	
17	3,620	27.57	11.5	
18	4,408	10.87	3.7	
19	5,279	17.10	4.9	
20	6,980	15.12	3.3	
21	7,949	11.77	2.2	
22	10,380	75.00	10.9	Upper Marker
23	12,859	0.00	0.0	
24	14,415	0.00	0.0	
25	16,846	0.00	0.0	
26	18,742	0.00	0.0	


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...**... Peak table for sample 6 : P-Leaf-1 sRNA Lib**

Peak	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations
27	20,638	0.00	0.0	
28	22,631	0.00	0.0	

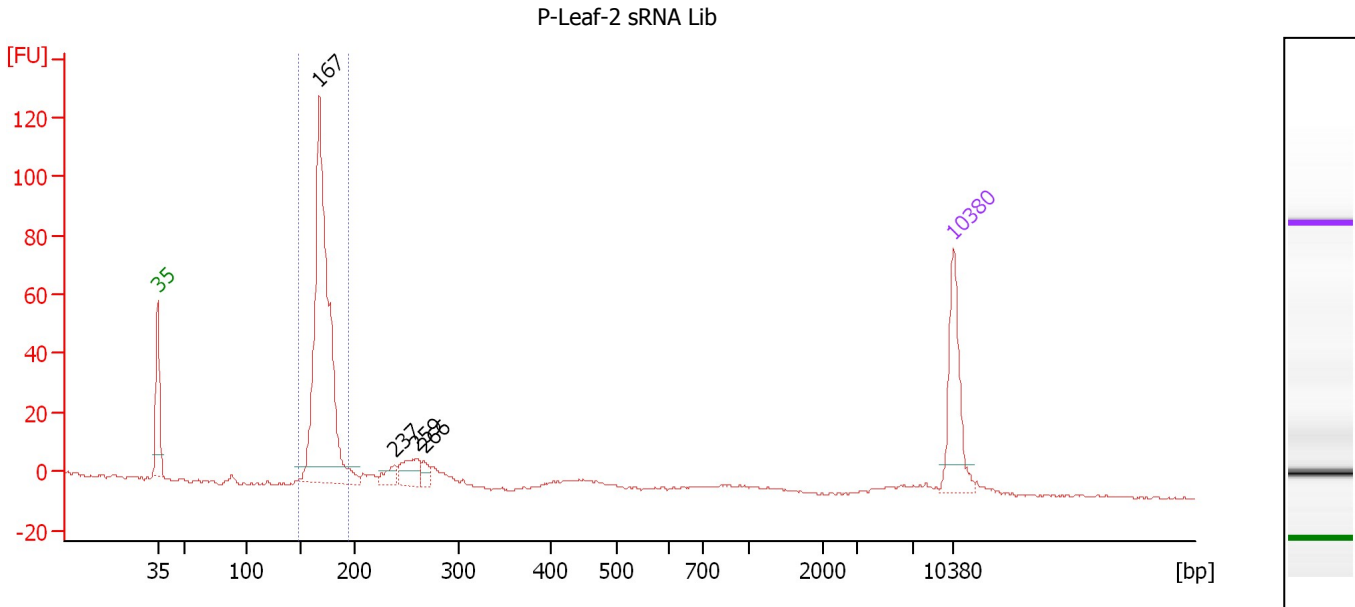
Region table for sample 6 : P-Leaf-1 sRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/ μ l]	Corr. Area	% of Total	Size distribution in CV [%]	Color
151	198	171	13,861.8	1,560.33	746.9	41	5.1	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : P-Leaf-2 sRNA Lib

Number of peaks found: 4 Corr. Area 1: 291.1
 Noise: 0.4

Peak table for sample 7 : P-Leaf-2 sRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	167	546.39	4,966.7	
3	237	20.85	133.1	
4	259	39.77	232.3	
5	266	14.98	85.3	
6	10,380	75.00	10.9	Upper Marker

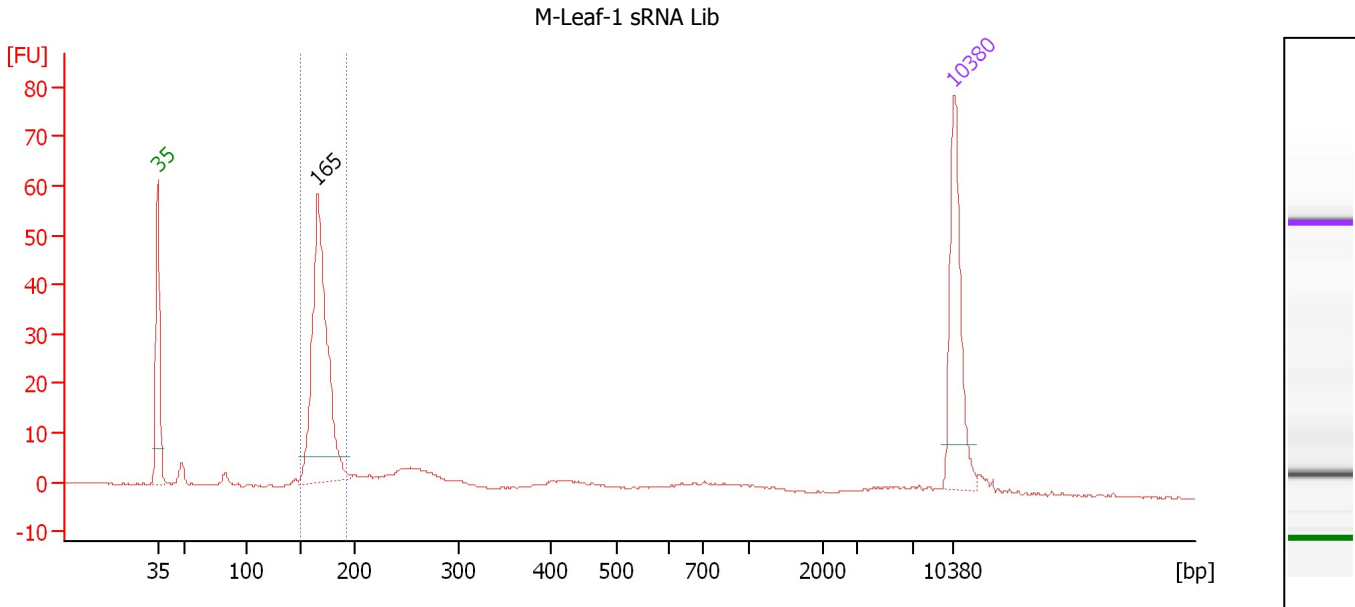
Region table for sample 7 : P-Leaf-2 sRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
147	194	170	4,567.9	513.04	291.1	77	4.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : M-Leaf-1 sRNA Lib

Number of peaks found: 1 Corr. Area 1: 153.3
 Noise: 0.1

Peak table for sample 8 : M-Leaf-1 sRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	165	263.37	2,417.7	
3	10,380	75.00	10.9	Upper Marker

Region table for sample 8 : M-Leaf-1 sRNA Lib

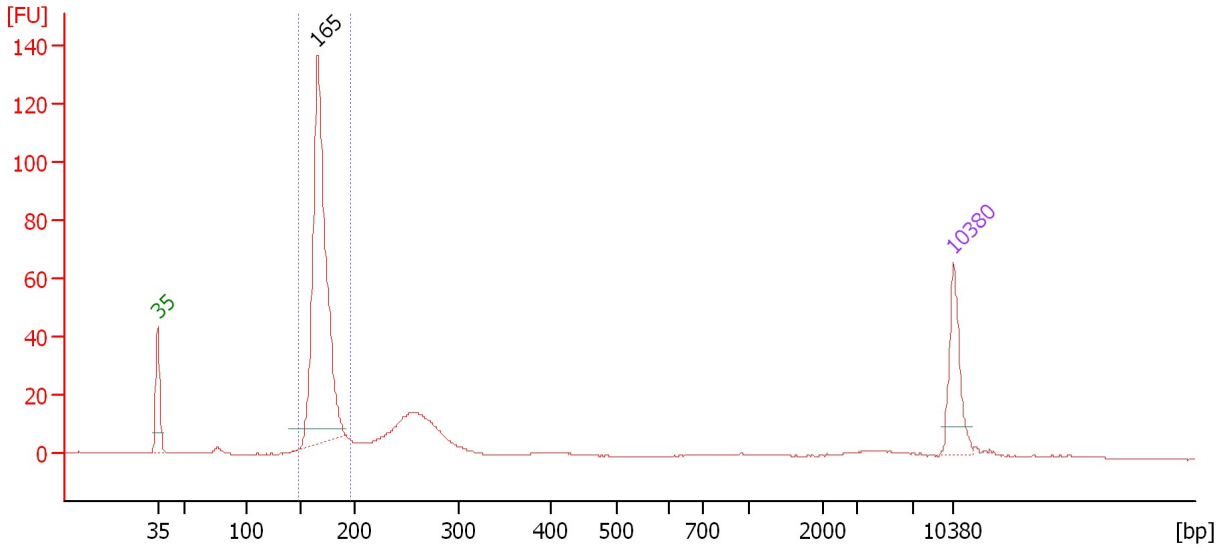
From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
150	193	168	2,448.1	272.13	153.3	58	4.6	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...

M-Leaf-2 sRNA Lib 1:2



Overall Results for sample 9 : M-Leaf-2 sRNA Lib 1:2

Number of peaks found: 1 Corr. Area 1: 328.2
 Noise: 0.1

Peak table for sample 9 : M-Leaf-2 sRNA Lib 1:2

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	165	704.25	6,464.9	
3	10,380	75.00	10.9	Upper Marker

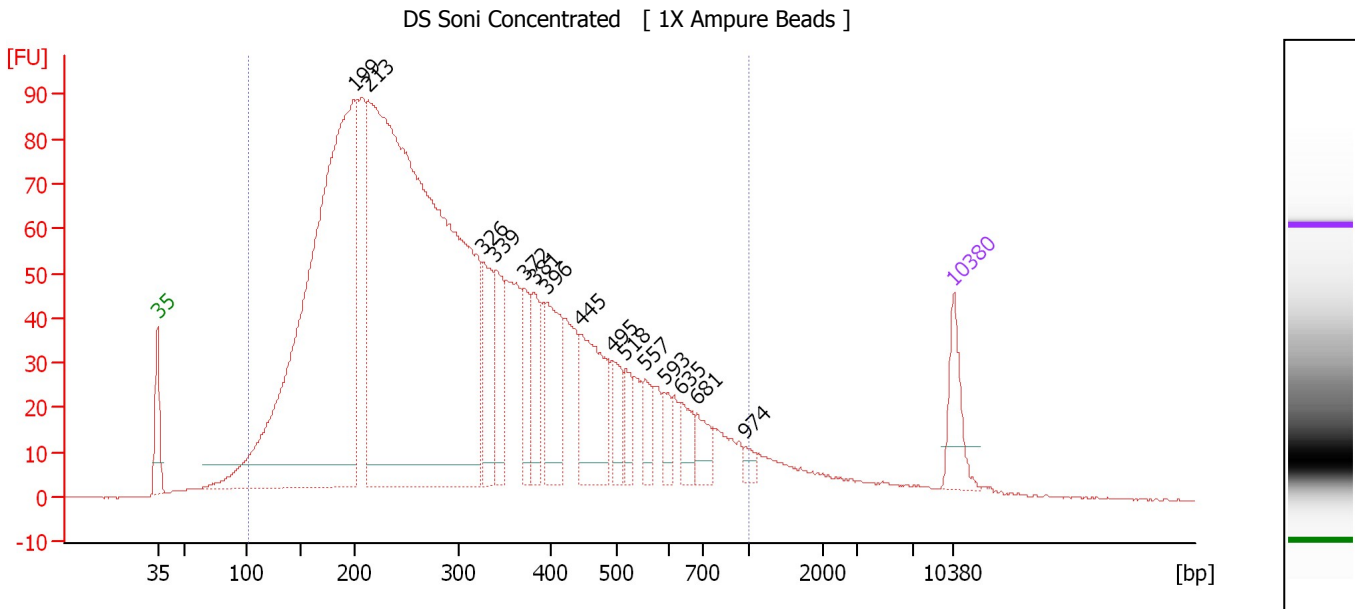
Region table for sample 9 : M-Leaf-2 sRNA Lib 1:2

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
148	196	169	6,932.2	772.02	328.2	64	4.7	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : DS Soni Concentrated

Number of peaks found: 15 Corr. Area 1: 2,812.6
 Noise: 0.1

Peak table for sample 10 : DS Soni Concentrated

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	199	2,076.03	15,807.4	
3	213	3,136.24	22,326.9	
4	326	171.32	795.9	
5	339	151.68	677.7	
6	372	101.27	413.0	
7	381	116.64	463.5	
8	396	197.99	758.4	
9	445	231.27	787.8	
10	495	73.98	226.4	
11	518	52.90	154.7	
12	557	51.78	140.8	
13	593	38.40	98.1	
14	635	53.38	127.3	
15	681	50.99	113.5	
16	974	18.03	28.0	
17	10,380	75.00	10.9	Upper Marker

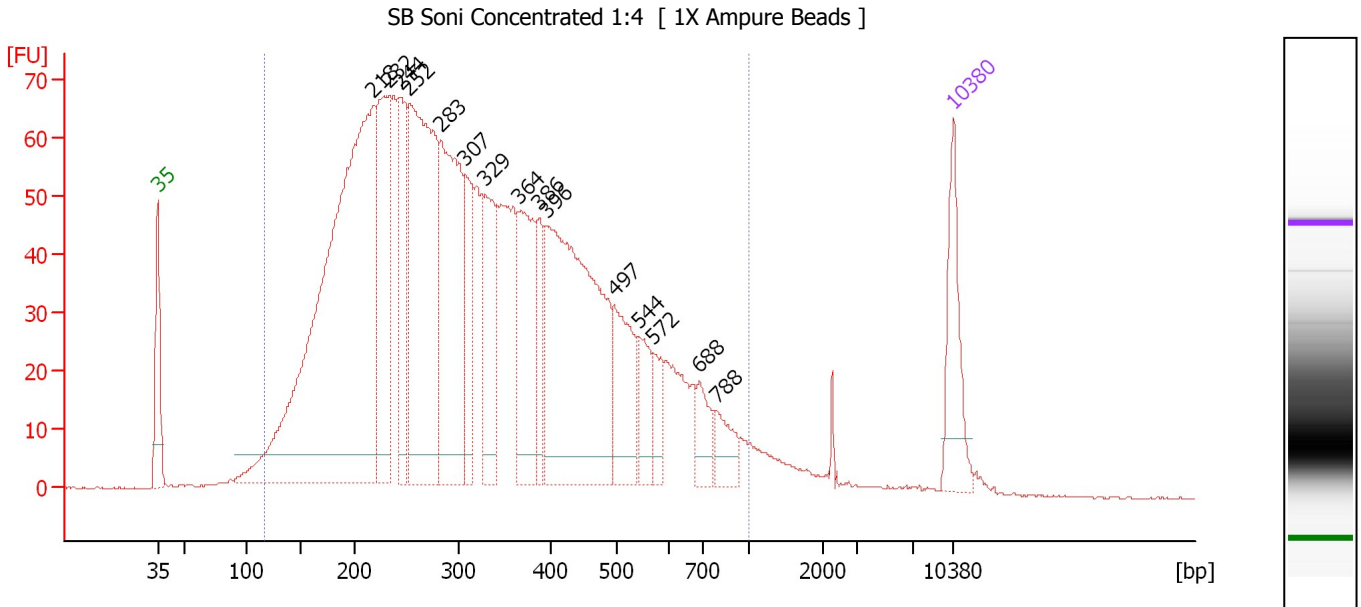
Region table for sample 10 : DS Soni Concentrated

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
101	1,000	319	48,714.2	7,752.02	2,812.6	95	48.9	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : SB Soni Concentrated 1:4

Number of peaks found: 15 Corr. Area 1: 2,287.0
 Noise: 0.2

Peak table for sample 11 : SB Soni Concentrated 1:4

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	218	1,077.87	7,506.8	
3	232	256.03	1,671.3	
4	244	154.80	962.3	
5	252	467.51	2,805.7	
6	283	328.67	1,761.4	
7	307	105.68	522.0	
8	329	162.85	750.2	
9	364	163.50	680.2	
10	386	66.00	258.8	
11	396	478.96	1,834.8	
12	497	114.70	349.4	
13	544	55.79	155.3	
14	572	34.40	91.1	
15	688	39.55	87.1	
16	788	37.07	71.3	
17	10,380	75.00	10.9	Upper Marker

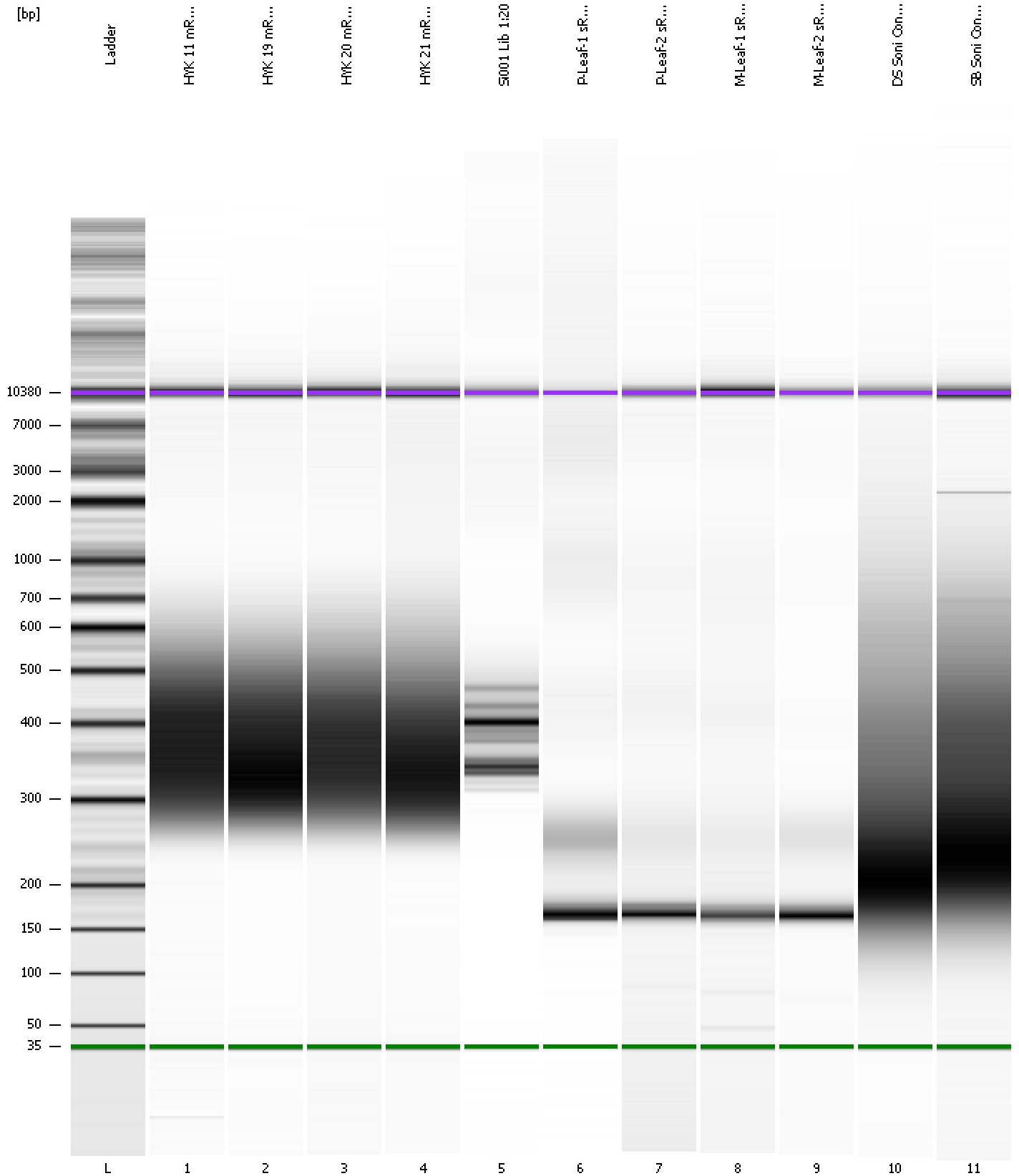
Region table for sample 11 : SB Soni Concentrated 1:4

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
116	1,000	342	24,345.5	4,291.26	2,287.0	96	44.5	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
Modified: 8/27/2013 4:07:59 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad

Created: 8/27/2013 3:25:30 PM
 Modified: 8/27/2013 4:07:59 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		8/27/2013 4:06:49 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-08-27\2013-08-27_007.xad)		Instrument	Run		8/27/2013 3:25:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		8/27/2013 3:25:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		8/27/2013 3:25:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		8/27/2013 3:25:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		8/27/2013 3:25:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		8/27/2013 3:25:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		8/27/2013 3:25:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1