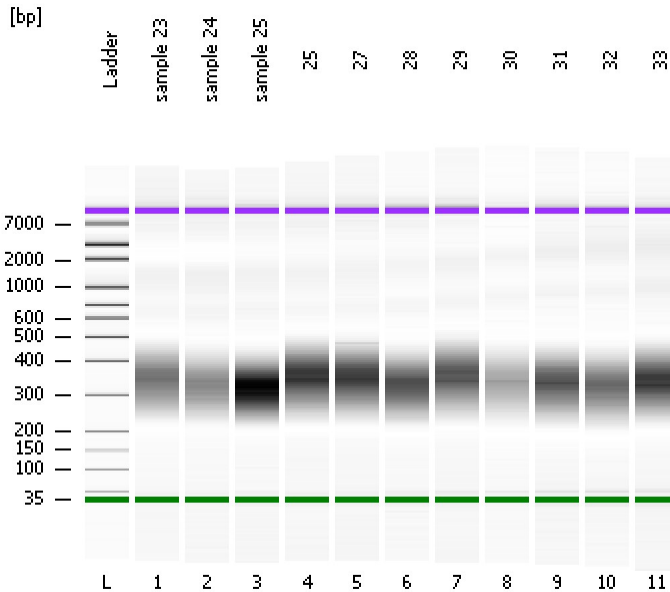


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
Modified: 3/15/2016 3:59:47 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

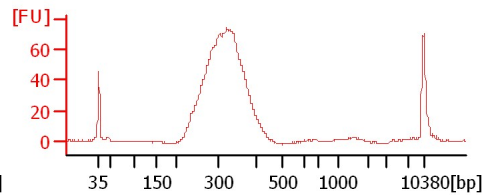
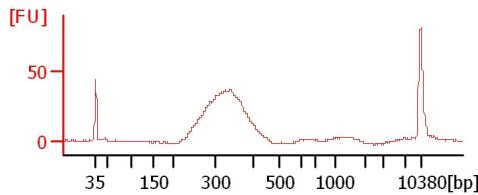
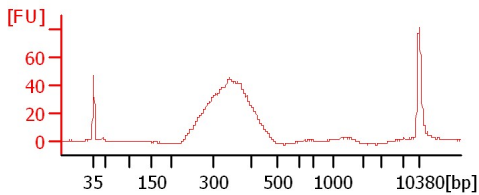
Chip Information:

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

sample 23

sample 24

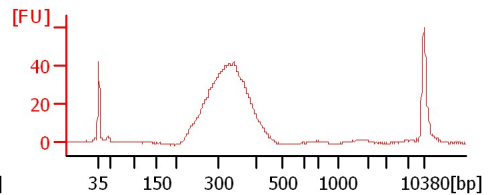
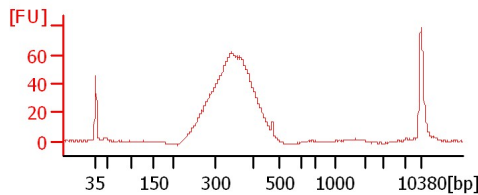
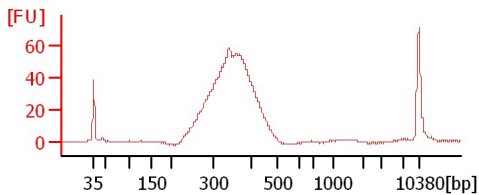
sample 25



25

27

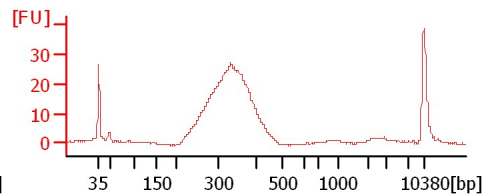
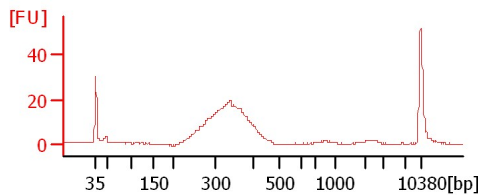
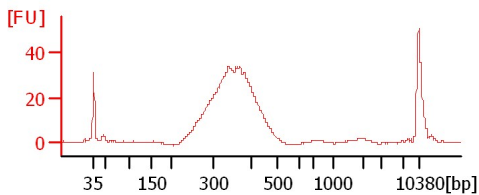
28



29

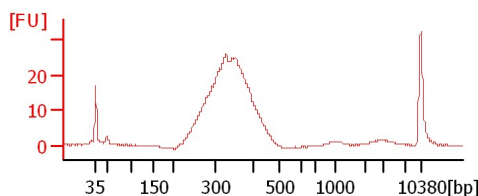
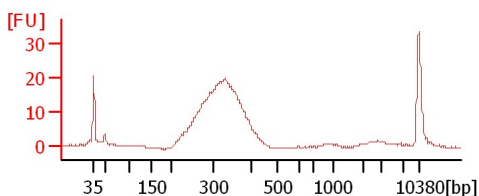
30

31



32

33



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 23		<input type="checkbox"/>	✓			
sample 24		<input type="checkbox"/>	✓			
sample 25		<input type="checkbox"/>	✓			
25		<input type="checkbox"/>	✓			
27		<input type="checkbox"/>	✓			
28		<input type="checkbox"/>	✓			
29		<input type="checkbox"/>	✓			
30		<input type="checkbox"/>	✓			
31		<input type="checkbox"/>	✓			
32		<input type="checkbox"/>	✓			
33		<input type="checkbox"/>	✓			
Ladder		<input type="checkbox"/>	✓			

**Chip Lot #**

**Reagent Kit Lot #**

**Chip Comments :**

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
Modified: 3/15/2016 3:59:47 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/μl] : 1950  
Uses Standard Area for Ladder Fragments  
Lower Marker Concentration [pg/μl] : 125  
Upper Marker Concentration [pg/μl] : 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

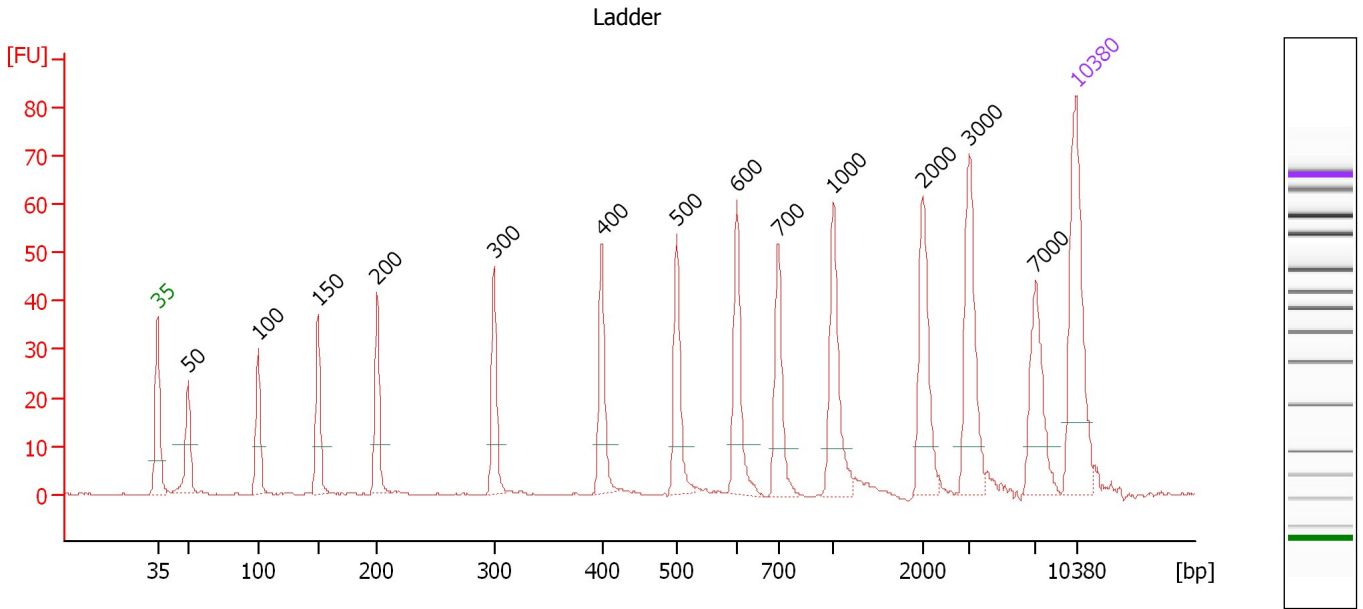
**Ladder**

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:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

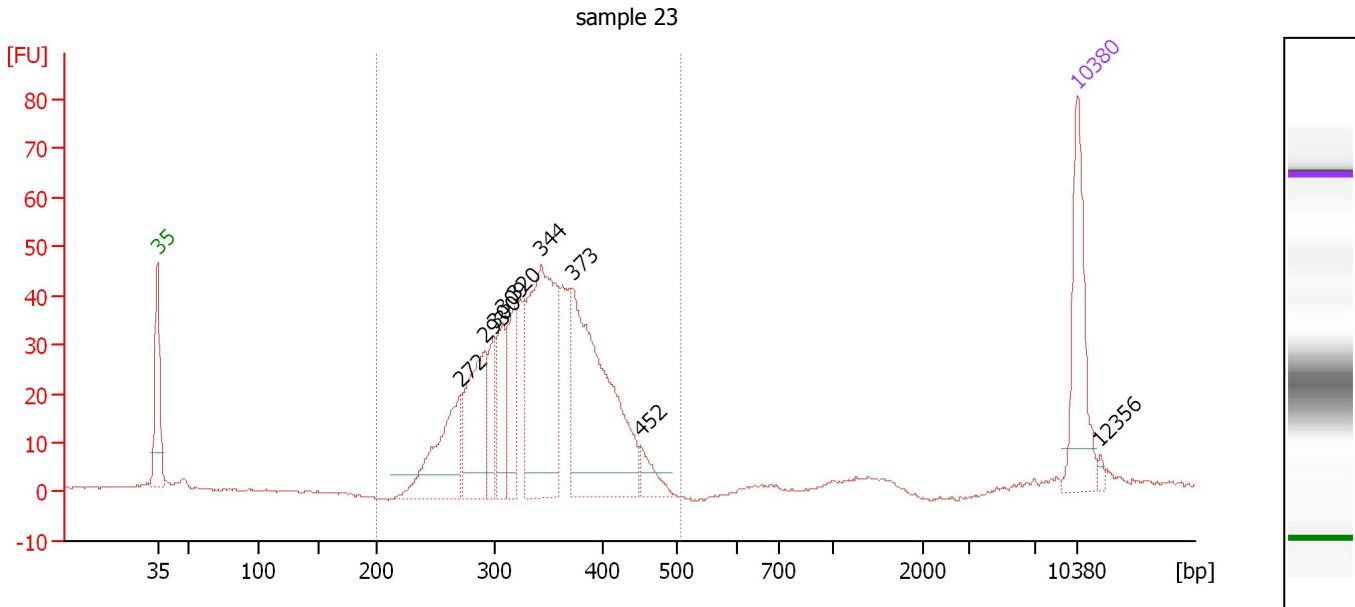
**Peak table for Ladder**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	50	150.00	4,545.5	Ladder Peak	45.33
3	100	150.00	2,272.7	Ladder Peak	50.66
4	150	150.00	1,515.2	Ladder Peak	55.23
5	200	150.00	1,136.4	Ladder Peak	59.71
6	300	150.00	757.6	Ladder Peak	68.62
7	400	150.00	568.2	Ladder Peak	76.86
8	500	150.00	454.5	Ladder Peak	82.55
9	600	150.00	378.8	Ladder Peak	87.11
10	700	150.00	324.7	Ladder Peak	90.29
11	1,000	150.00	227.3	Ladder Peak	94.50
12	2,000	150.00	113.6	Ladder Peak	101.27
13	3,000	150.00	75.8	Ladder Peak	104.85
14	7,000	150.00	32.5	Ladder Peak	109.91
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : sample 23**

Number of peaks found: 9                      Corr. Area 1: 643.9  
 Noise: 0.2

**Peak table for sample 1 : sample 23**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	272	113.39	631.6		66.12
3	293	111.32	576.1		67.97
4	300	45.00	227.0		68.65
5	309	55.32	271.6		69.33
6	320	57.86	273.8		70.28
7	344	229.77	1,012.9		72.22
8	373	260.03	1,057.0		74.61
9	452	21.73	72.9		79.81
10	10,380	75.00	10.9	Upper Marker	113.00
11	12,356	0.00	0.0		114.81

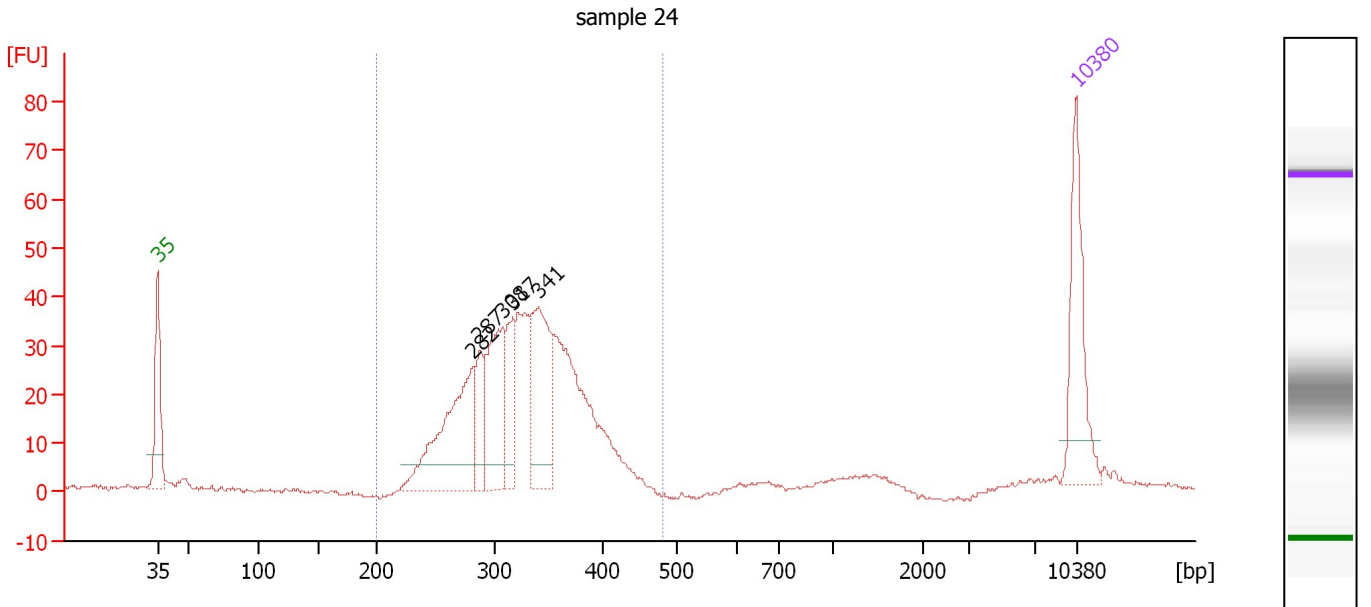
**Region table for sample 1 : sample 23**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	506	343	643.9	4,371.4	962.66	91	14.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : sample 24**

Number of peaks found: 5                      Corr. Area 1: 511.0  
 Noise: 0.5

**Peak table for sample 2 : sample 24**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	282	164.43	882.2		67.05
3	287	43.65	230.1		67.50
4	308	110.00	542.0		69.24
5	317	50.91	243.1		70.04
6	341	121.47	539.5		72.01
7	10,380	75.00	10.9	Upper Marker	113.00

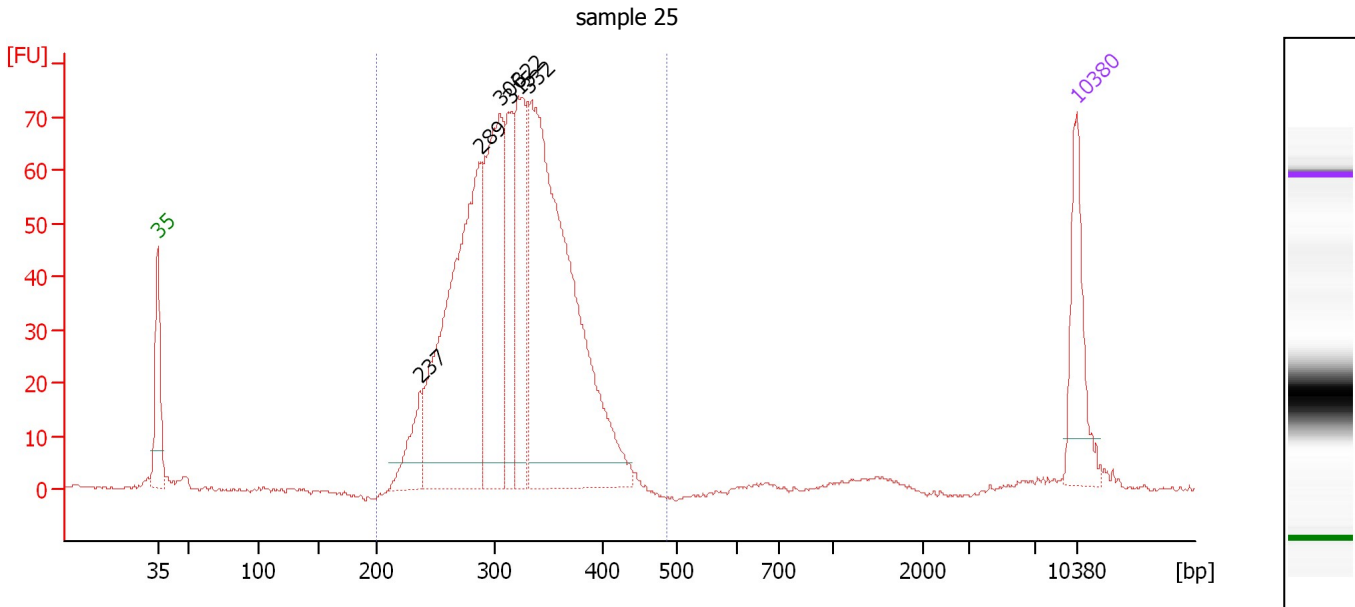
**Region table for sample 2 : sample 24**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	481	328	511.0	3,734.1	788.32	93	13.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : sample 25**

Number of peaks found: 6                      Corr. Area 1: 1,019.6  
 Noise: 0.4

**Peak table for sample 3 : sample 25**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	237	64.53	411.8		63.04
3	289	463.23	2,430.1		67.62
4	306	276.07	1,367.4		69.10
5	315	123.60	594.2		69.87
6	322	165.14	776.4		70.45
7	332	655.60	2,991.3		71.26
8	10,380	75.00	10.9	Upper Marker	113.00

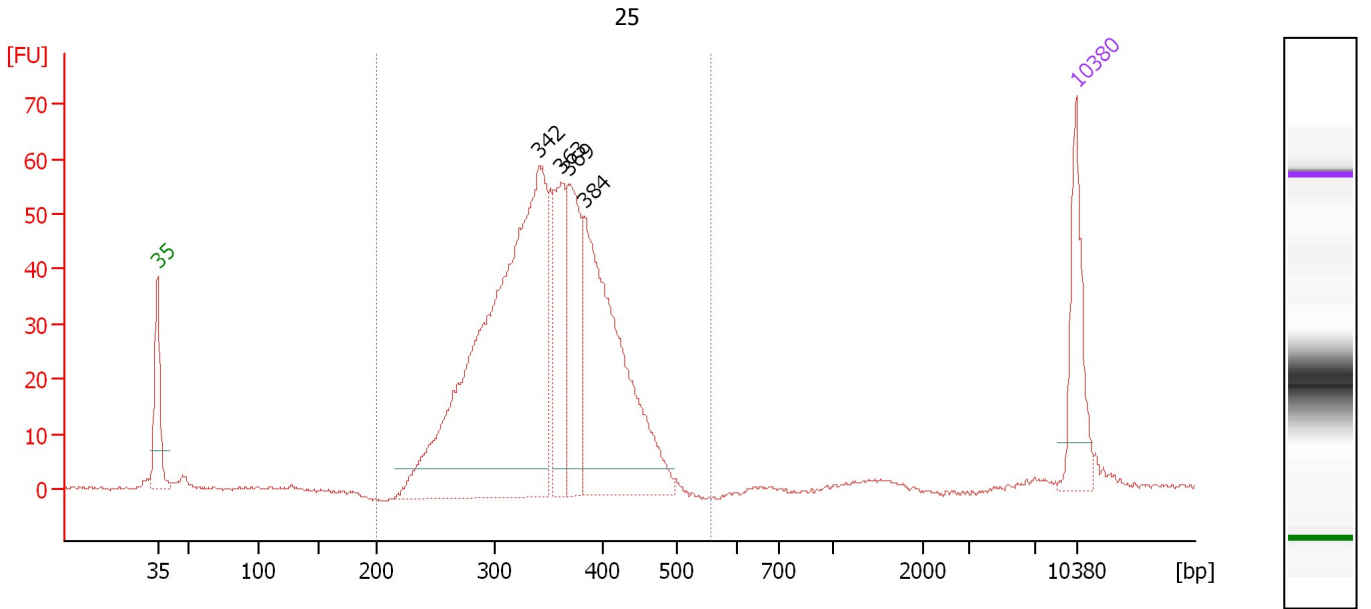
**Region table for sample 3 : sample 25**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	488	319	1,019.6	8,525.1	1,751.01	97	13.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : 25**

Number of peaks found: 4                      Corr. Area 1: 823.7  
 Noise: 0.3

**Peak table for sample 4 : 25**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	342	781.73	3,467.3		72.05
3	363	124.77	521.4		73.77
4	369	153.44	630.7		74.27
5	384	377.80	1,490.4		75.55
6	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : 25**

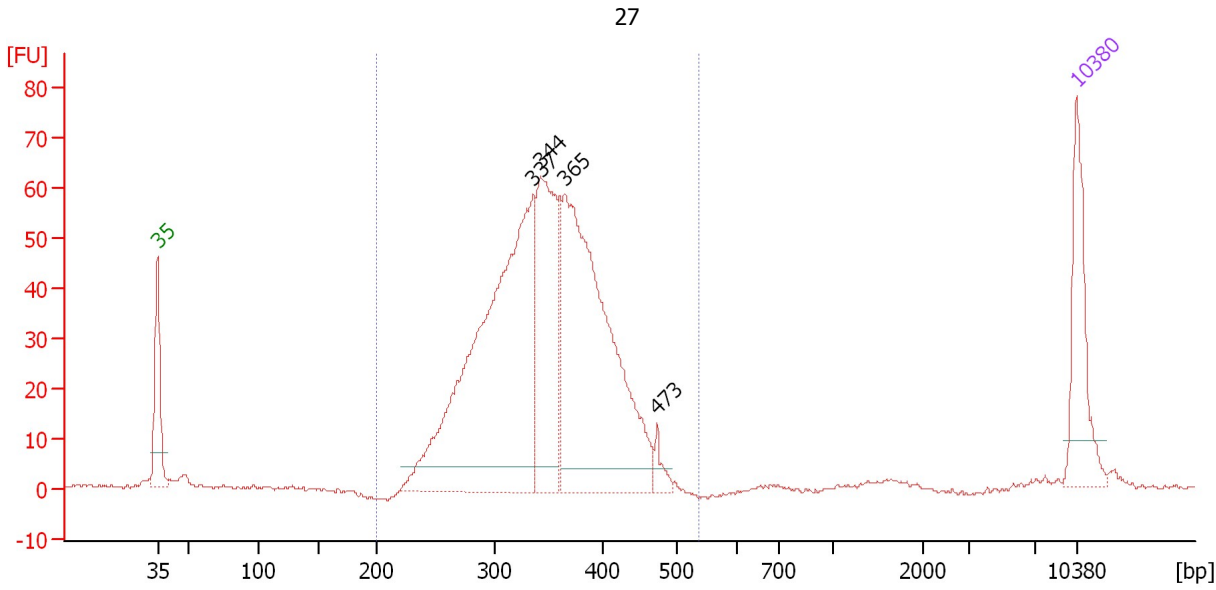
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	556	351	823.7	6,502.7	1,461.96	97	14.8



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : 27**

Number of peaks found: 4                      Corr. Area 1: 862.3  
 Noise: 0.4

**Peak table for sample 5 : 27**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	337	579.05	2,604.4		71.66
3	344	216.35	954.1		72.21
4	365	482.54	2,003.8		73.96
5	473	15.17	48.6		81.02
6	10,380	75.00	10.9	Upper Marker	113.00

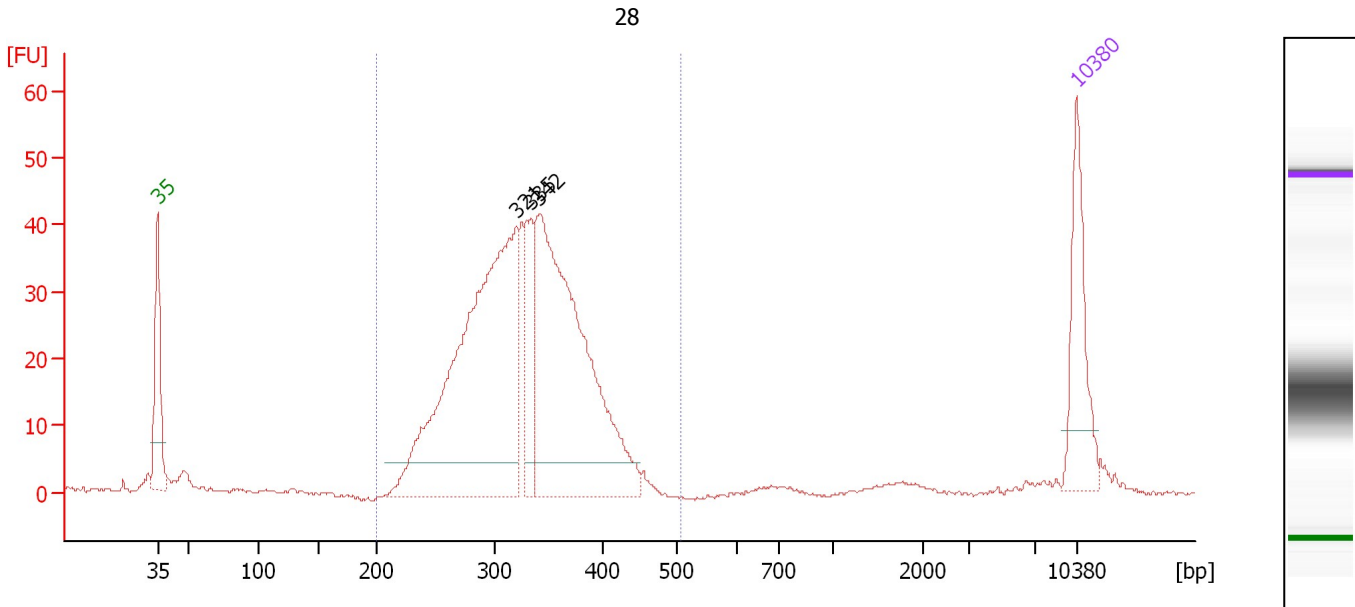
**Region table for sample 5 : 27**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	539	348	862.3	5,769.8	1,287.02	97	14.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : 28**

Number of peaks found: 3                      Corr. Area 1: 580.6  
 Noise: 0.3

**Peak table for sample 6 : 28**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	321	548.15	2,585.4		70.37
3	335	80.10	362.5		71.48
4	342	457.64	2,026.7		72.09
5	10,380	75.00	10.9	Upper Marker	113.00

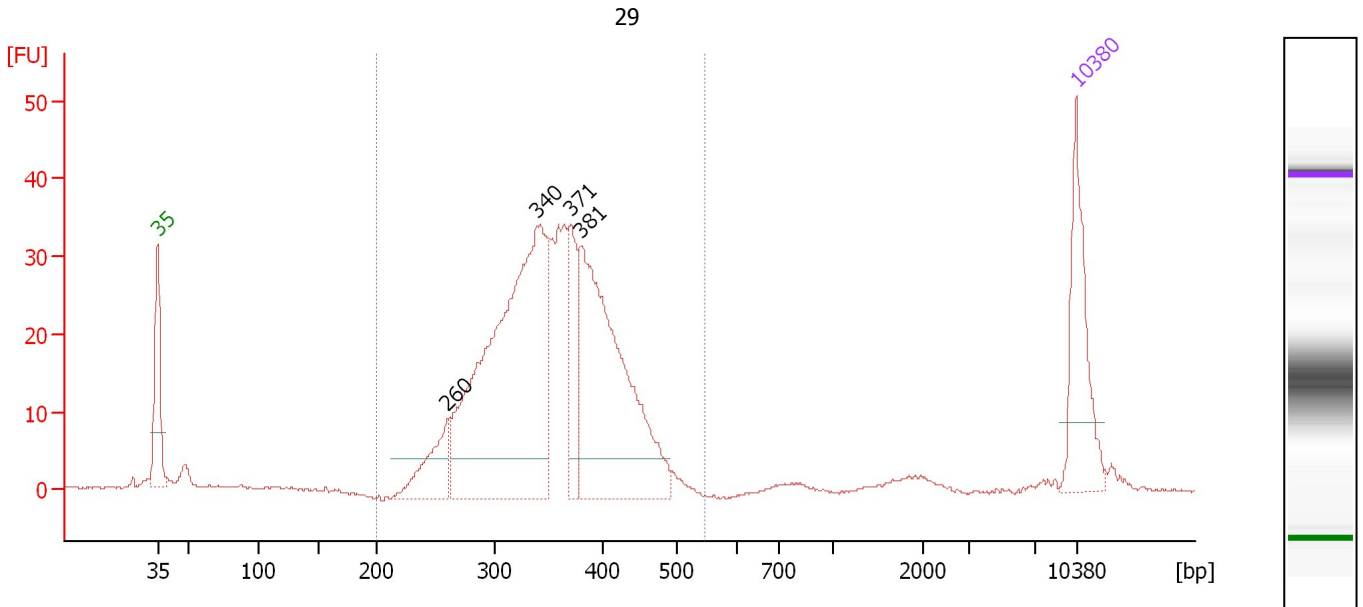
**Region table for sample 6 : 28**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	506	327	580.6	5,320.1	1,119.23	95	14.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : 29**

Number of peaks found: 4                      Corr. Area 1: 482.7  
 Noise: 0.2

**Peak table for sample 7 : 29**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	260	63.45	369.6		65.06
3	340	476.55	2,125.0		71.90
4	371	69.70	284.5		74.49
5	381	304.52	1,211.1		75.29
6	10,380	75.00	10.9	Upper Marker	113.00

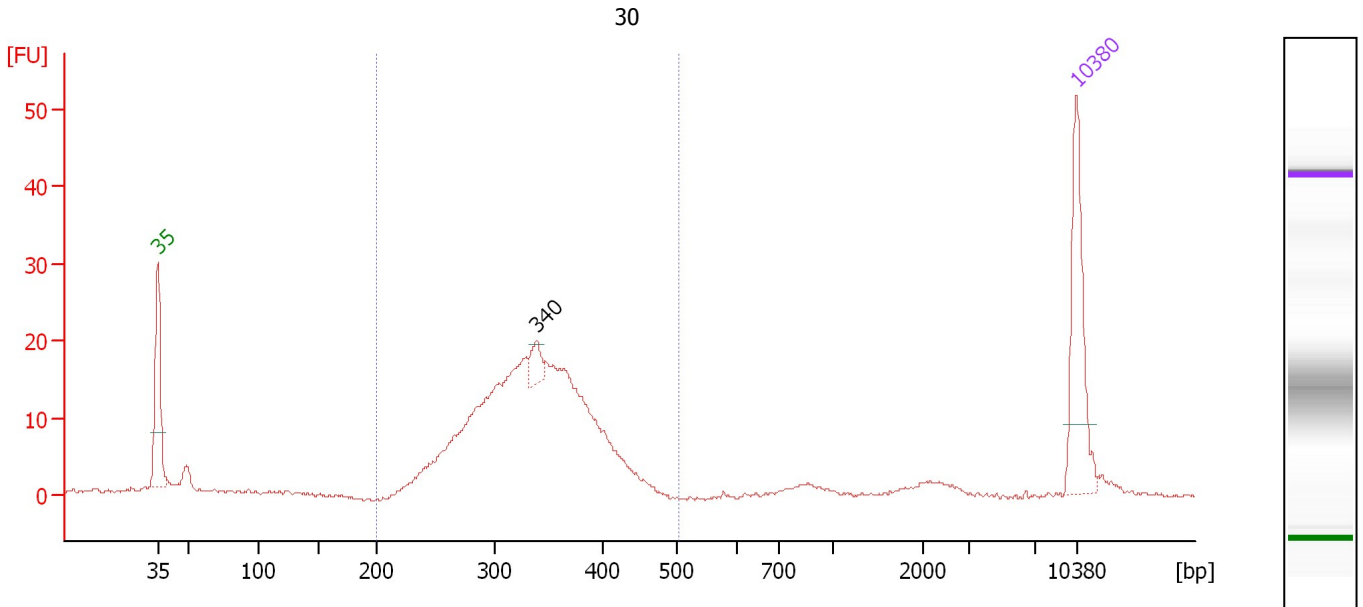
**Region table for sample 7 : 29**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	549	354	482.7	4,311.4	978.00	97	14.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : 30**

Number of peaks found: 1                      Corr. Area 1: 251.8  
 Noise: 0.2

**Peak table for sample 8 : 30**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	340	17.09	76.1		71.92
3	10,380	75.00	10.9	Upper Marker	113.00

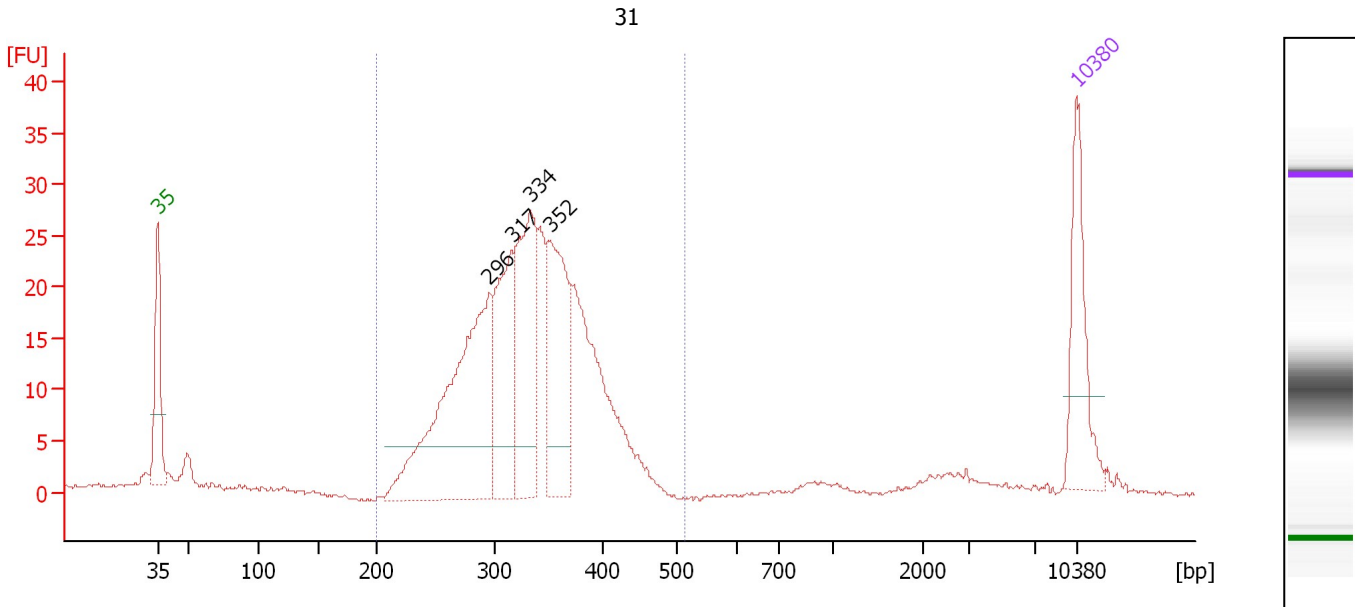
**Region table for sample 8 : 30**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	505	335	251.8	2,992.5	644.39	89	14.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : 31**

Number of peaks found: 4                      Corr. Area 1: 361.9  
 Noise: 0.2

**Peak table for sample 9 : 31**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	296	335.00	1,713.2		68.29
3	317	143.08	684.4		70.00
4	334	182.37	827.0		71.43
5	352	156.86	675.1		72.90
6	10,380	75.00	10.9	Upper Marker	113.00

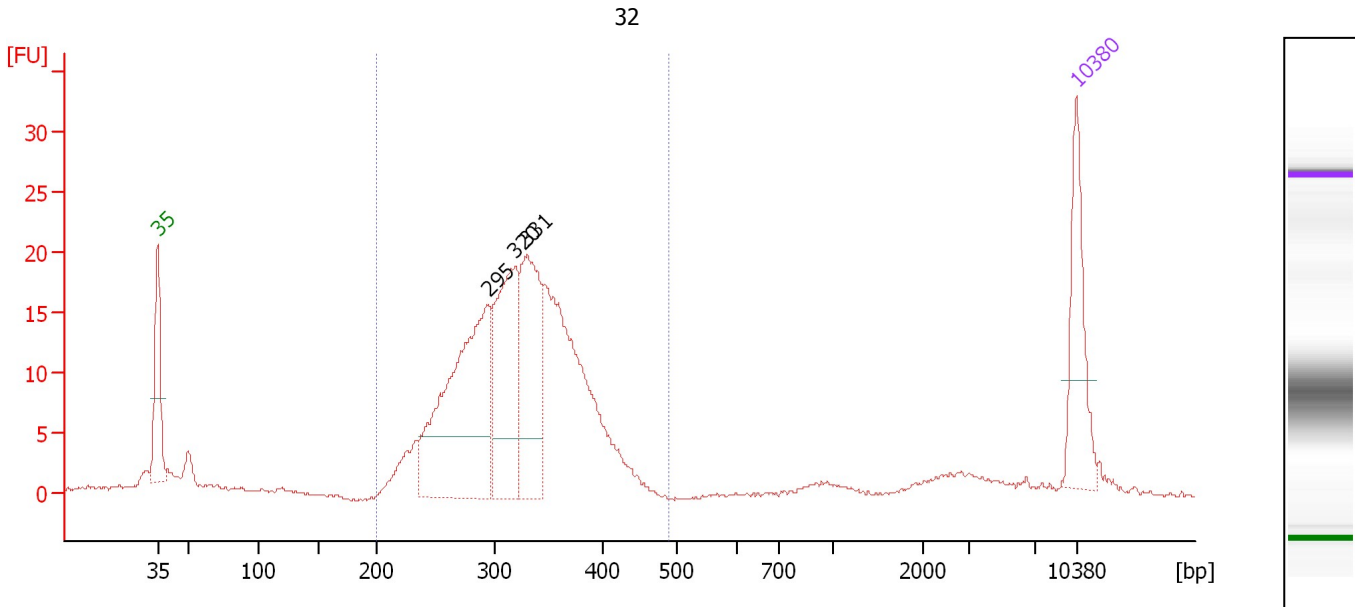
**Region table for sample 9 : 31**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	514	332	361.9	5,047.5	1,076.30	92	14.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : 32**

Number of peaks found: 3                      Corr. Area 1: 269.5  
 Noise: 0.1

**Peak table for sample 10 : 32**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	295	319.22	1,639.3		68.18
3	320	182.49	864.4		70.25
4	331	163.72	748.7		71.20
5	10,380	75.00	10.9	Upper Marker	113.00

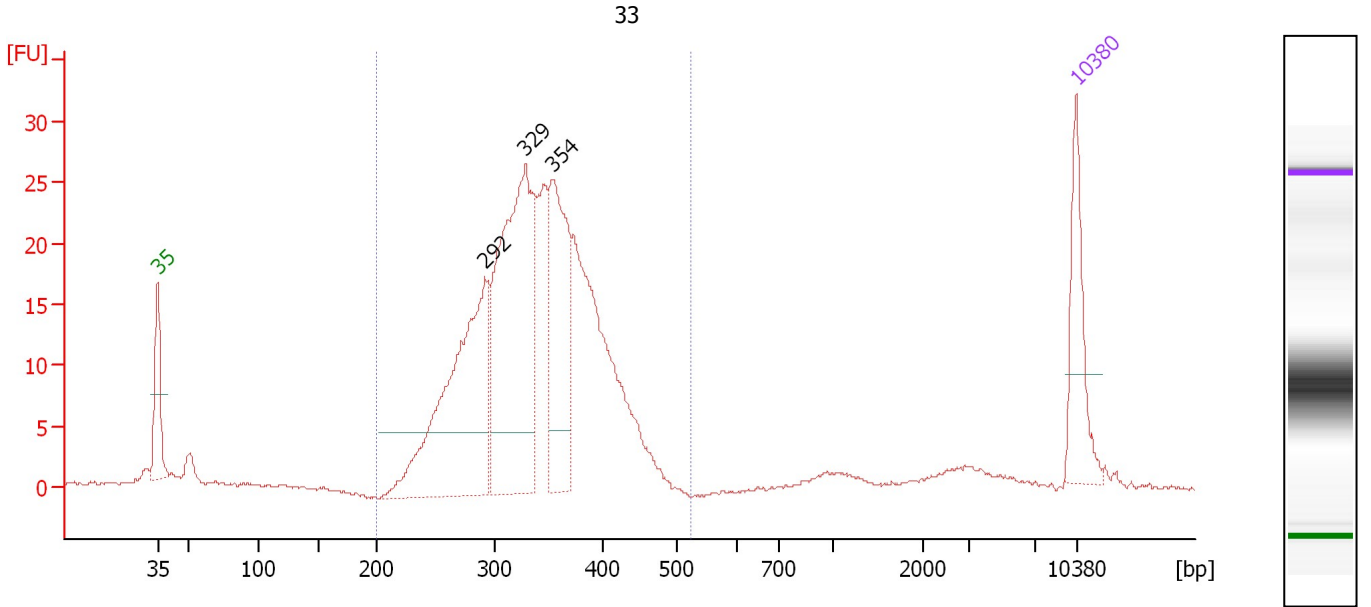
**Region table for sample 10 : 32**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	489	322	269.5	4,927.6	1,018.39	87	14.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : 33**

Number of peaks found: 3                      Corr. Area 1: 350.4  
 Noise: 0.1

**Peak table for sample 11 : 33**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	292	365.77	1,894.9		67.95
3	329	427.05	1,963.8		71.05
4	354	209.70	897.5		73.07
5	10,380	75.00	10.9	Upper Marker	113.00

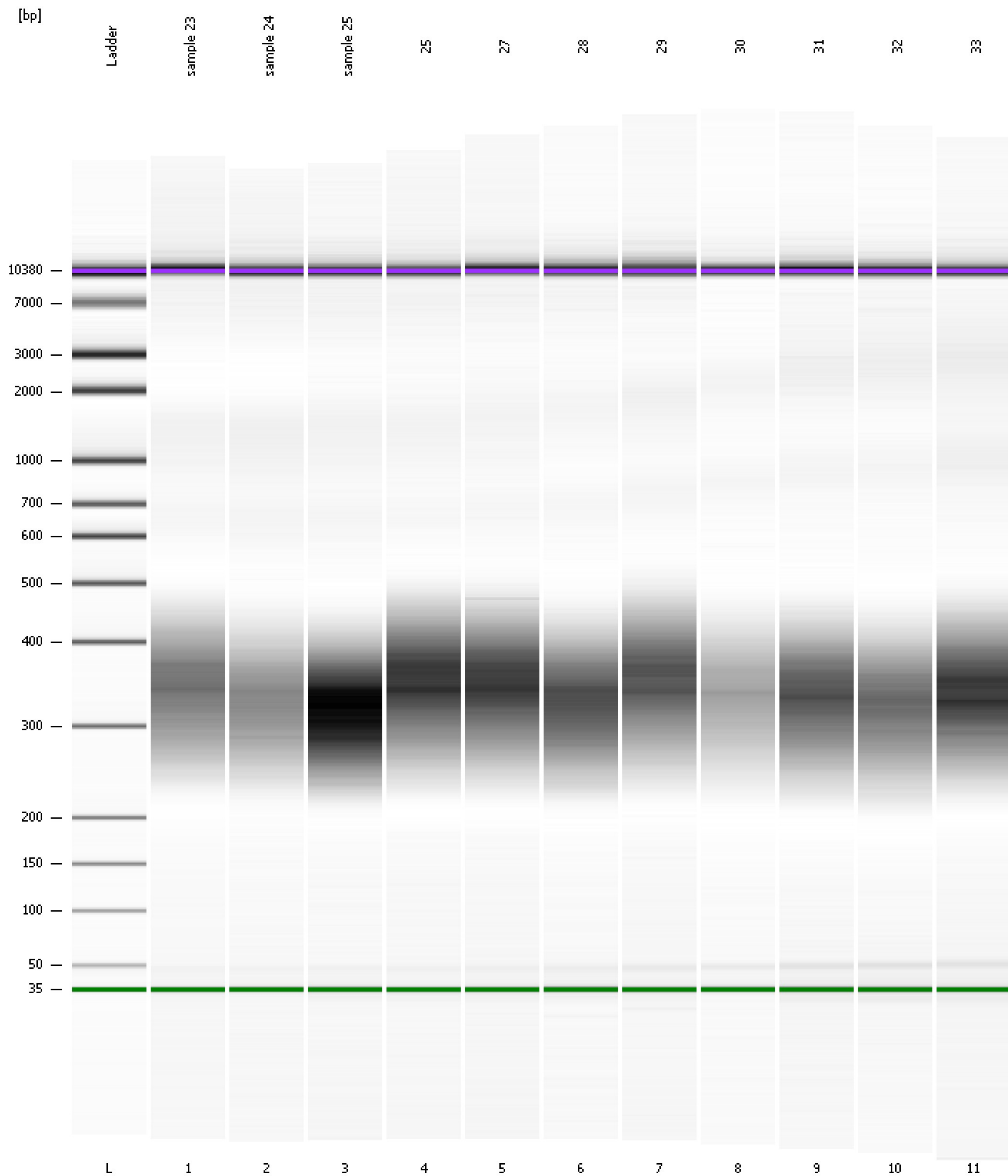
**Region table for sample 11 : 33**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	523	339	350.4	6,468.0	1,407.22	94	14.7

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
Modified: 3/15/2016 3:59:47 PM

**Gel Image**





Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_004.xad

Created: 3/15/2016 3:16:52 PM  
 Modified: 3/15/2016 3:59:47 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		3/15/2016 3:57:20 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\2016-03-15\2016-03-15_004.xad)		Instrument	Run		3/15/2016 3:16:57 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/15/2016 3:16:57 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/15/2016 3:16:57 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/15/2016 3:16:57 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/15/2016 3:16:57 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/15/2016 3:16:57 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/15/2016 3:16:57 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1