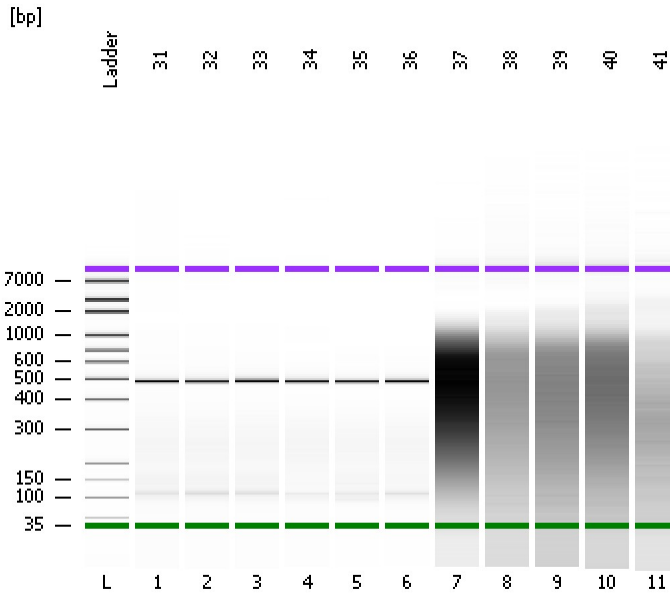


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
Modified: 5/17/2016 3:34:23 PM

### Electrophoresis File Run Summary



#### Instrument Information:

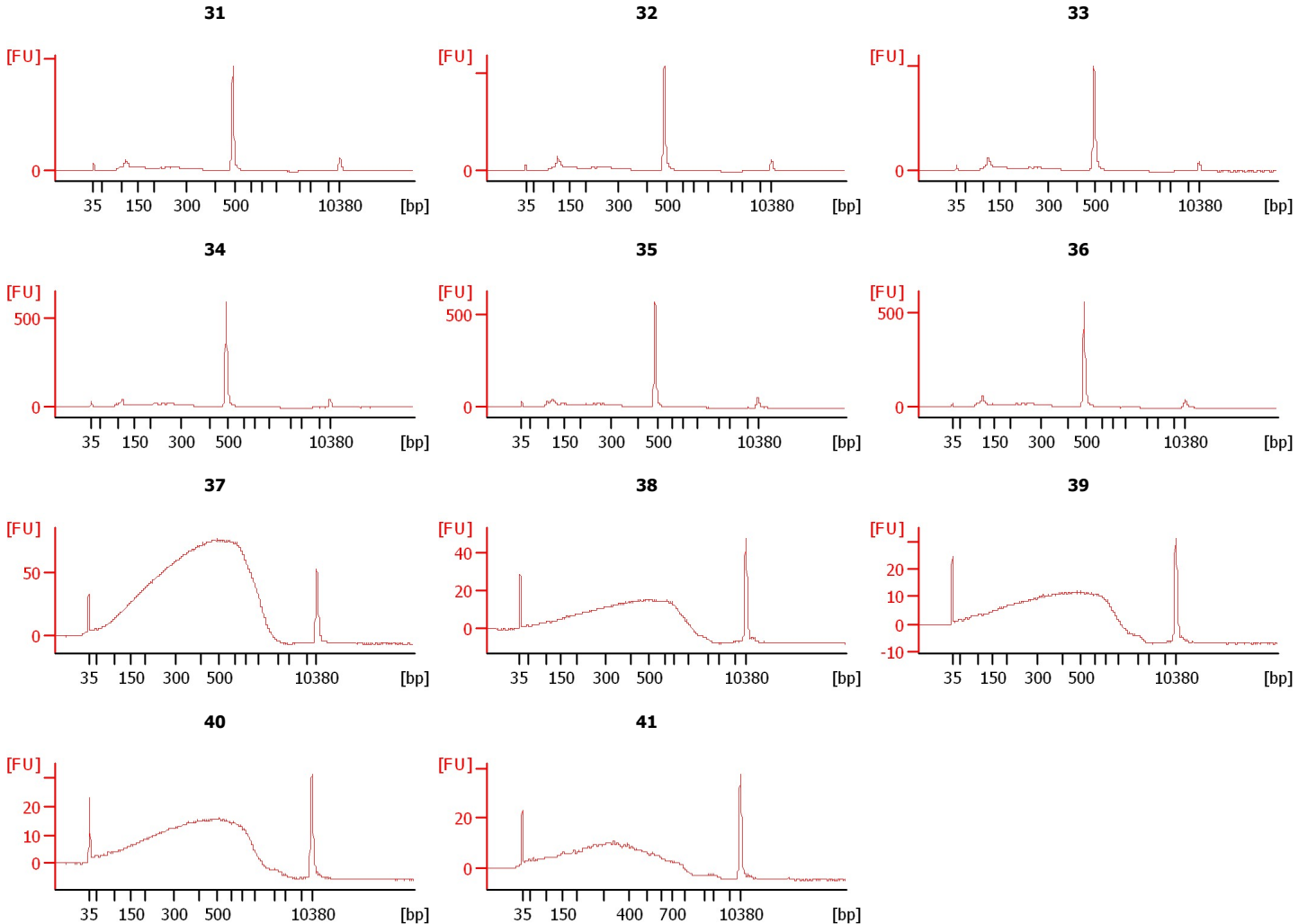
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

#### 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:



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
31		<input type="checkbox"/>	✓			
32		<input type="checkbox"/>	✓			
33		<input type="checkbox"/>	✓			
34		<input type="checkbox"/>	✓			
35		<input type="checkbox"/>	✓			
36		<input type="checkbox"/>	✓			
37		<input type="checkbox"/>	✓			
38		<input type="checkbox"/>	✓			
39		<input type="checkbox"/>	✓			
40		<input type="checkbox"/>	✓			
41		<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\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
Modified: 5/17/2016 3:34:23 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

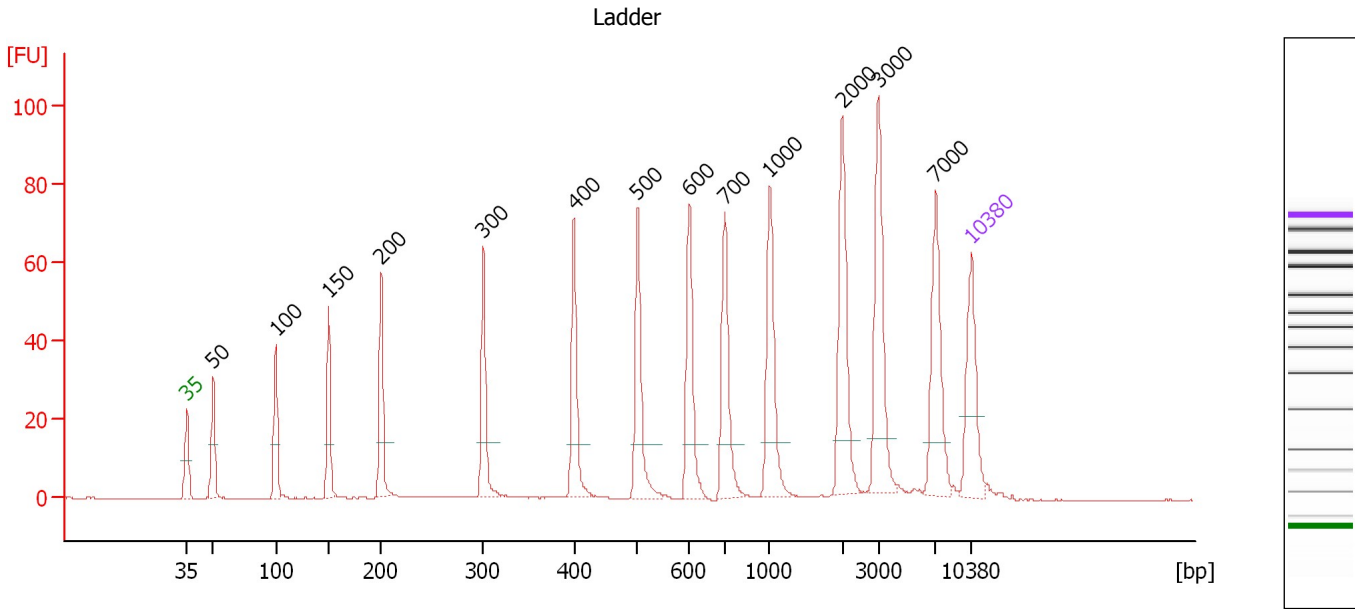
**Ladder**

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\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
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**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

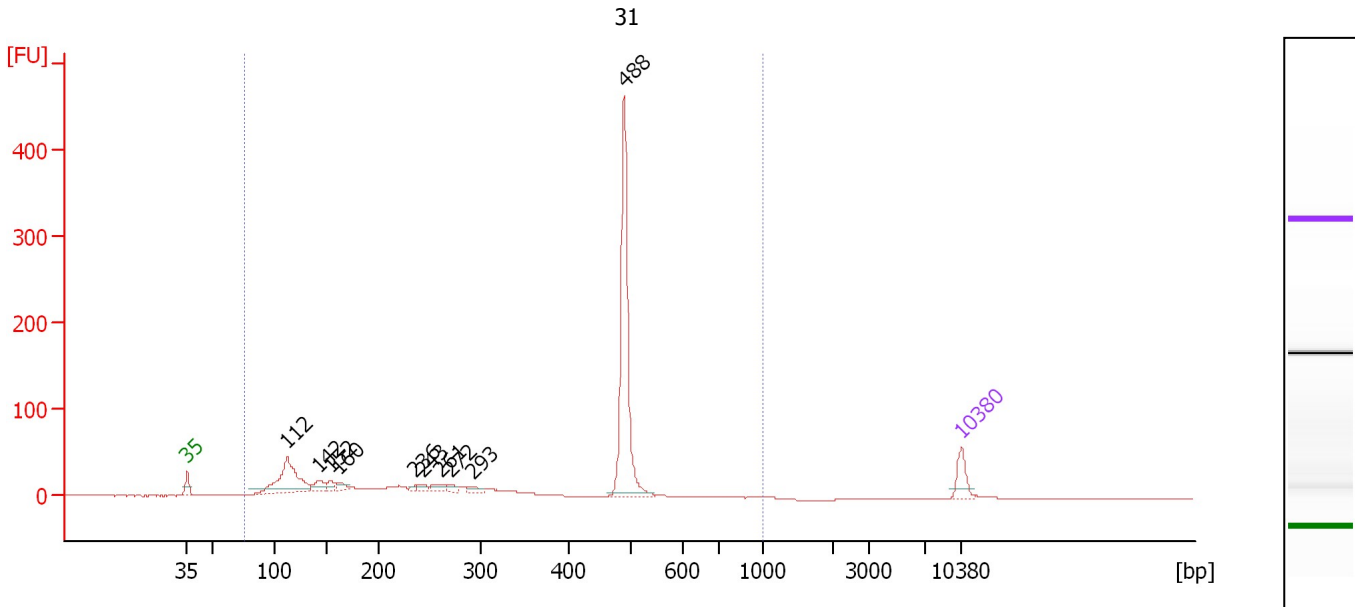
**Peak table for Ladder**

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	45.38
3	100	150.00	2,272.7	Ladder Peak	50.94
4	150	150.00	1,515.2	Ladder Peak	55.69
5	200	150.00	1,136.4	Ladder Peak	60.35
6	300	150.00	757.6	Ladder Peak	69.47
7	400	150.00	568.2	Ladder Peak	77.55
8	500	150.00	454.5	Ladder Peak	83.20
9	600	150.00	378.8	Ladder Peak	87.81
10	700	150.00	324.7	Ladder Peak	91.00
11	1,000	150.00	227.3	Ladder Peak	94.99
12	2,000	150.00	113.6	Ladder Peak	101.45
13	3,000	150.00	75.8	Ladder Peak	104.64
14	7,000	150.00	32.5	Ladder Peak	109.77
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

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 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : 31**

Number of peaks found: 10                      Corr. Area 1: 988.8  
 Noise: 0.2

**Peak table for sample 1 : 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	112	479.90	6,500.3		52.06
3	142	76.17	811.1		54.96
4	152	45.43	451.4		55.92
5	160	44.13	417.2		56.64
6	236	14.14	91.0		63.59
7	243	26.54	165.2		64.31
8	261	43.54	252.4		65.95
9	272	29.00	161.6		66.91
10	293	32.22	166.6		68.84
11	488	905.69	2,811.3		82.53
12	10,380	75.00	10.9	Upper Marker	113.00

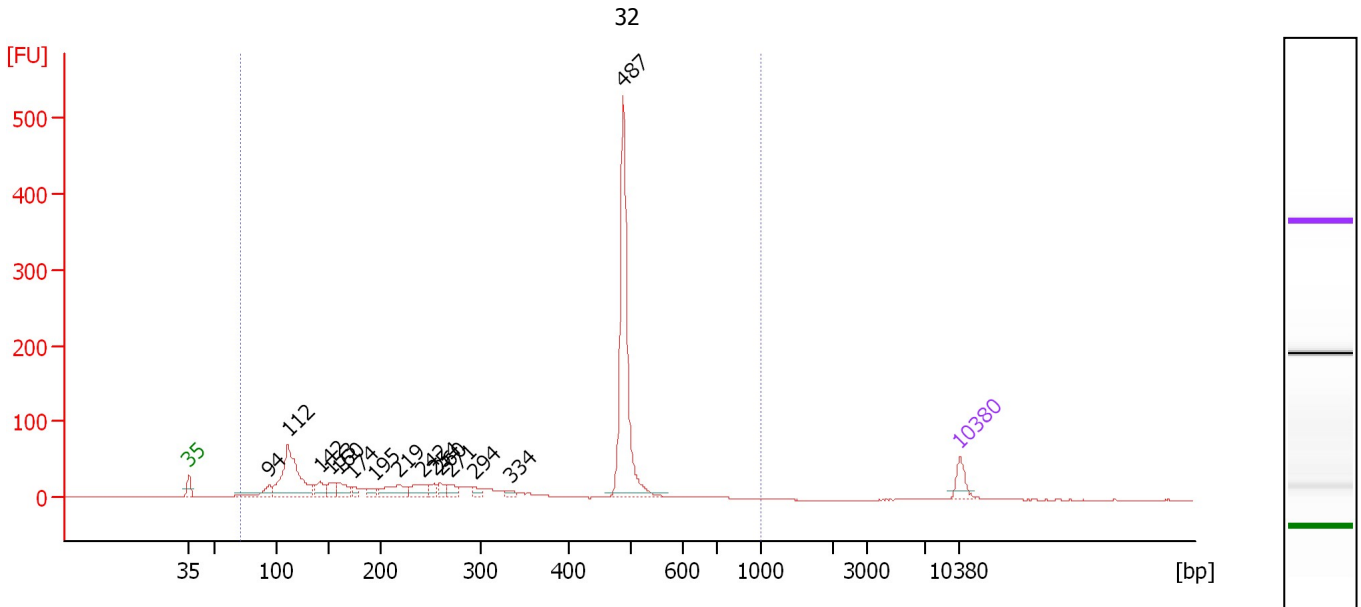
**Region table for sample 1 : 31**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
75	1,000	350	988.8	18,555.8	2,555.23	99	45.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : 32**

Number of peaks found: 15                      Corr. Area 1: 1,266.8  
 Noise: 0.1

**Peak table for sample 2 : 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	94	86.59	1,390.3		50.31
3	112	713.46	9,673.7		52.05
4	142	96.74	1,033.7		54.91
5	153	91.57	906.4		55.97
6	160	96.53	912.2		56.65
7	174	38.98	339.7		57.91
8	195	38.34	297.6		59.89
9	219	151.64	1,046.9		62.12
10	242	109.17	684.2		64.15
11	254	43.07	256.4		65.32
12	260	49.75	289.5		65.85
13	271	57.90	323.1		66.87
14	294	34.87	179.9		68.90
15	334	24.76	112.4		72.19
16	487	1,117.41	3,478.3		82.45
17	10,380	75.00	10.9	Upper Marker	113.00

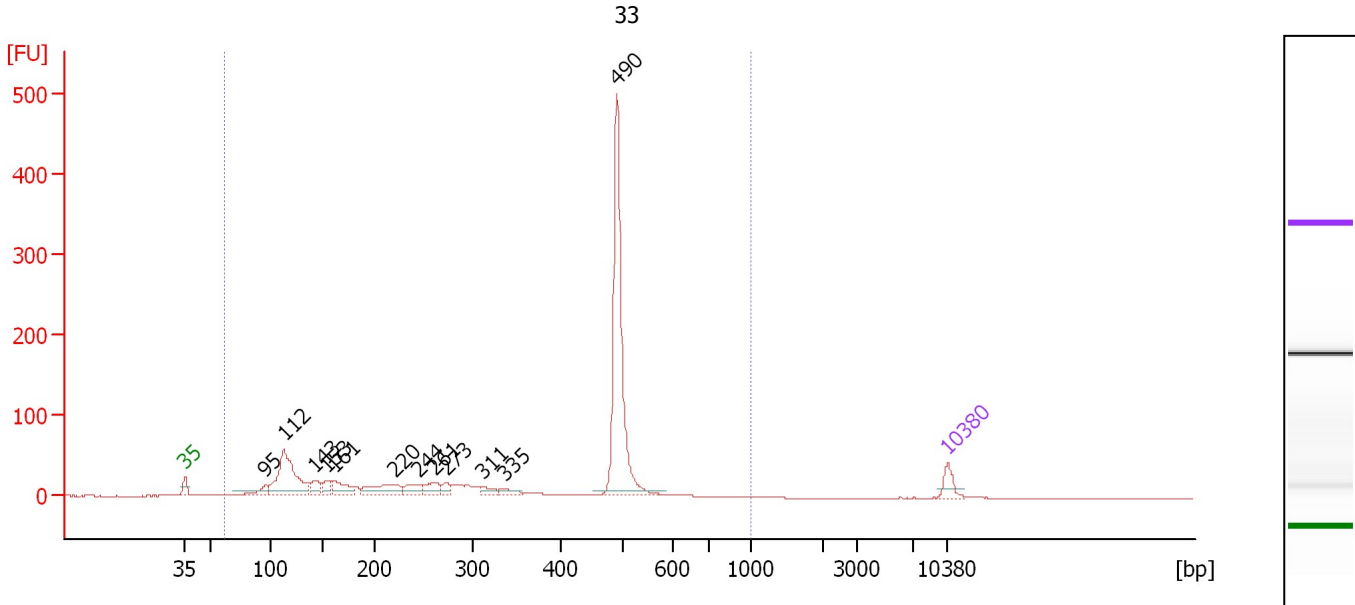
**Region table for sample 2 : 32**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
71	1,000	345	1,266.8	25,143.1	3,375.66	98	46.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : 33**

Number of peaks found: 12                      Corr. Area 1: 1,242.6  
 Noise: 0.1

**Peak table for sample 3 : 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	95	95.64	1,524.4		50.39
3	112	772.11	10,471.9		52.05
4	143	119.37	1,268.3		54.98
5	153	93.42	922.2		56.01
6	161	175.59	1,654.3		56.70
7	220	227.27	1,564.8		62.18
8	244	117.75	730.7		64.38
9	261	109.15	634.1		65.89
10	273	63.13	350.2		67.02
11	311	56.97	277.7		70.34
12	335	53.39	241.4		72.30
13	490	1,457.62	4,509.7		82.62
14	10,380	75.00	10.9	Upper Marker	113.00

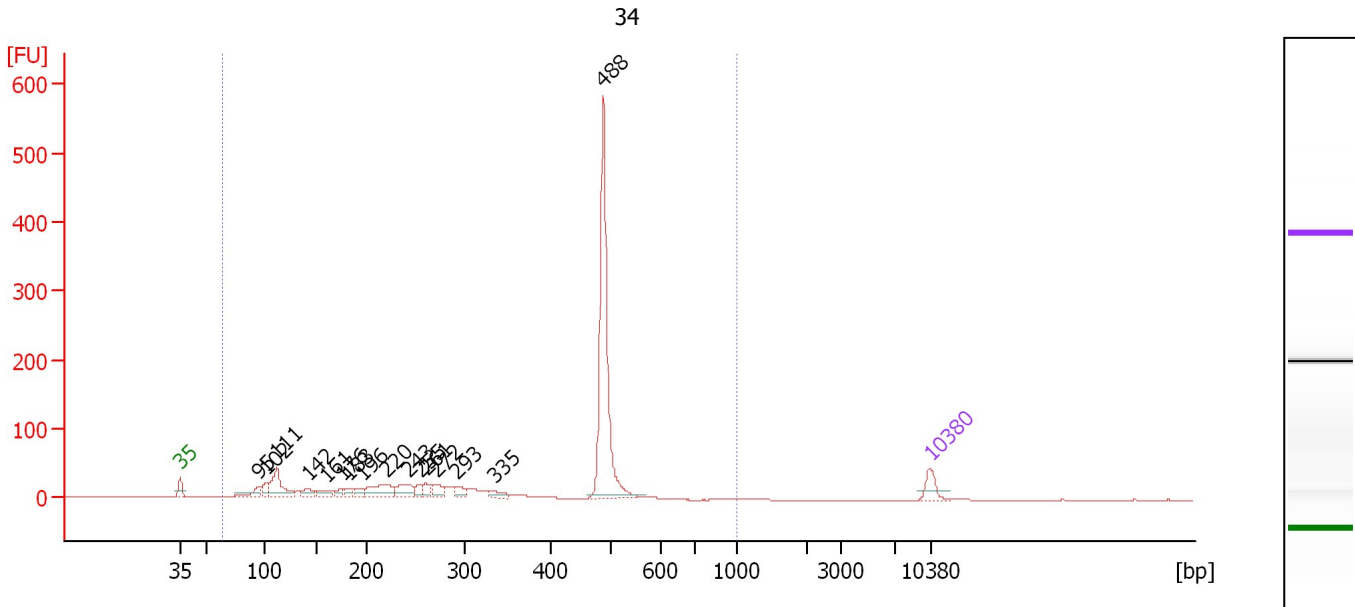
**Region table for sample 3 : 33**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
62	1,000	358	1,242.6	29,103.1	4,052.80	99	44.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : 34**

Number of peaks found: 16                      Corr. Area 1: 1,197.0  
 Noise: 0.1

**Peak table for sample 4 : 34**

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	95	89.39	1,428.0		50.36
3	102	89.89	1,337.6		51.11
4	111	304.93	4,153.1		52.00
5	142	84.32	898.9		54.94
6	161	79.28	747.7		56.68
7	176	41.70	359.8		58.07
8	183	55.24	457.1		58.77
9	196	59.45	458.5		60.01
10	220	209.85	1,442.8		62.20
11	243	144.16	897.9		64.29
12	255	54.27	322.1		65.39
13	261	71.46	414.4		65.94
14	272	94.28	525.9		66.88
15	293	62.89	324.7		68.87
16	335	55.81	252.3		72.30
17	488	1,333.24	4,142.8		82.50
18	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : 34**

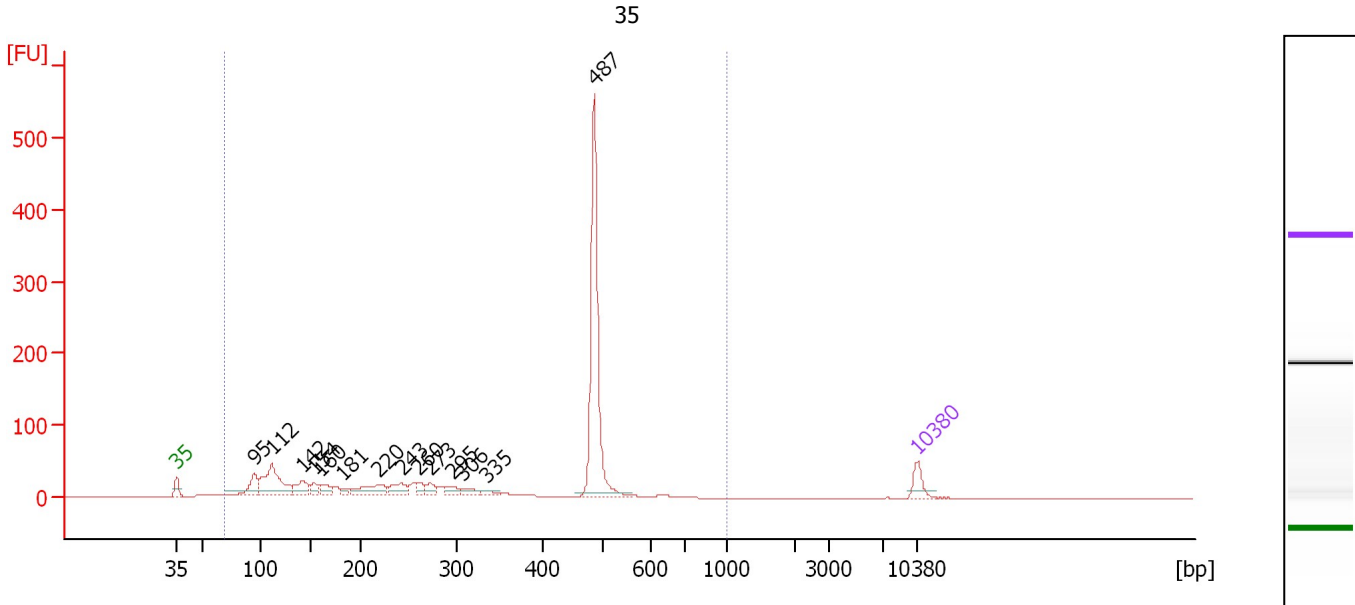
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
65	1,000	365	1,197.0	22,362.6	3,355.25	99	40.7



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : 35**

Number of peaks found: 14                      Corr. Area 1: 1,270.0  
 Noise: 0.1

**Peak table for sample 5 : 35**

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	95	184.90	2,956.8		50.35
3	112	492.13	6,665.1		52.06
4	142	148.08	1,579.1		54.94
5	154	79.36	781.8		56.04
6	160	89.70	847.8		56.65
7	181	34.83	290.9		58.61
8	220	192.82	1,330.2		62.14
9	243	115.79	720.9		64.30
10	260	56.34	328.4		65.81
11	273	63.79	354.5		66.97
12	295	61.29	314.5		69.04
13	306	51.74	255.8		69.99
14	335	35.94	162.8		72.26
15	487	1,156.82	3,597.3		82.48
16	10,380	75.00	10.9	Upper Marker	113.00

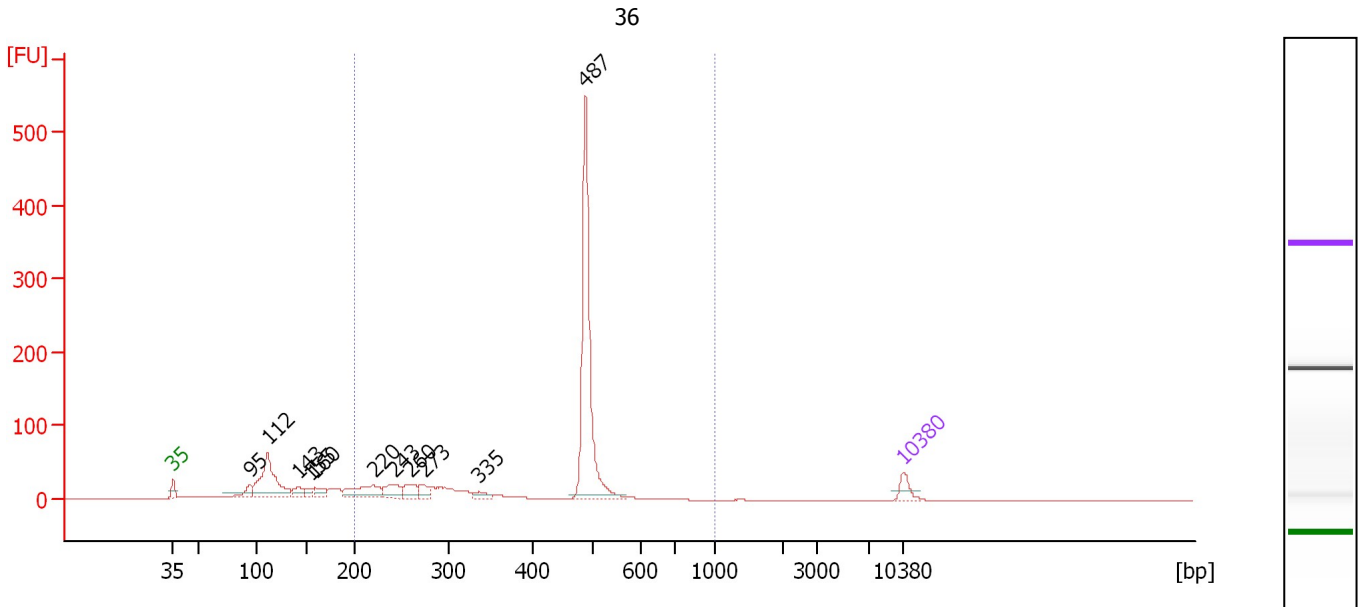
**Region table for sample 5 : 35**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
70	1,000	349	1,270.0	24,809.3	3,375.92	98	45.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : 36**

Number of peaks found: 11                      Corr. Area 1: 887.3  
 Noise: 0.1

**Peak table for sample 6 : 36**

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	95	107.33	1,715.5		50.36
3	112	737.90	10,013.4		52.04
4	143	109.77	1,164.4		55.01
5	155	56.39	550.1		56.18
6	160	98.30	929.5		56.64
7	220	281.75	1,936.4		62.21
8	243	163.11	1,015.3		64.31
9	260	137.56	801.0		65.84
10	273	100.15	555.6		67.01
11	335	60.08	271.9		72.28
12	487	1,548.61	4,813.2		82.50
13	10,380	75.00	10.9	Upper Marker	113.00

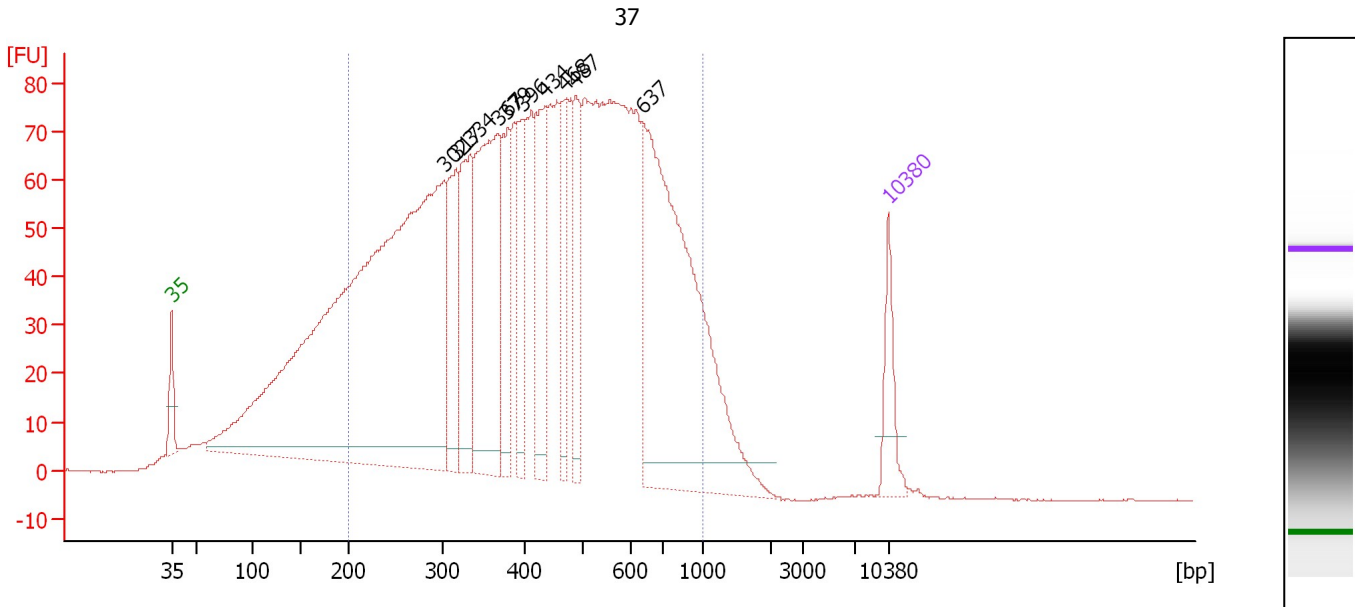
**Region table for sample 6 : 36**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	425	887.3	11,035.0	2,673.82	69	25.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : 37**

Number of peaks found: 10                      Corr. Area 1: 2,885.8  
 Noise: 0.1

**Peak table for sample 7 : 37**

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	302	2,383.87	11,968.3		69.61
3	317	227.63	1,089.3		70.81
4	334	270.70	1,227.9		72.22
5	367	523.06	2,160.0		74.88
6	379	186.84	747.9		75.81
7	396	145.32	556.1		77.22
8	434	259.02	904.8		79.46
9	468	135.54	438.9		81.39
10	487	165.09	513.4		82.48
11	637	957.74	2,278.3		88.99
12	10,380	75.00	10.9	Upper Marker	113.00

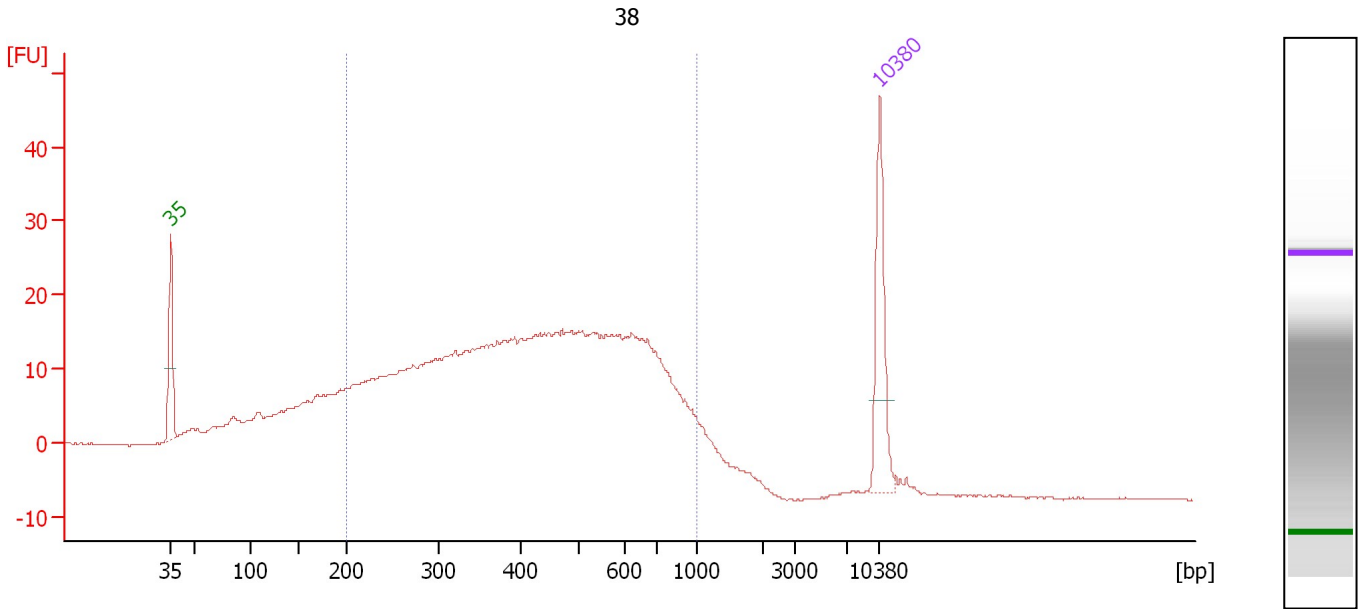
**Region table for sample 7 : 37**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	456	2,885.8	25,764.1	6,305.63	81	38.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : 38**

Number of peaks found: 0                      Corr. Area 1: 660.7  
 Noise: 0.1

**Peak table for sample 8 : 38**

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	10,380	75.00	10.9	Upper Marker	113.00

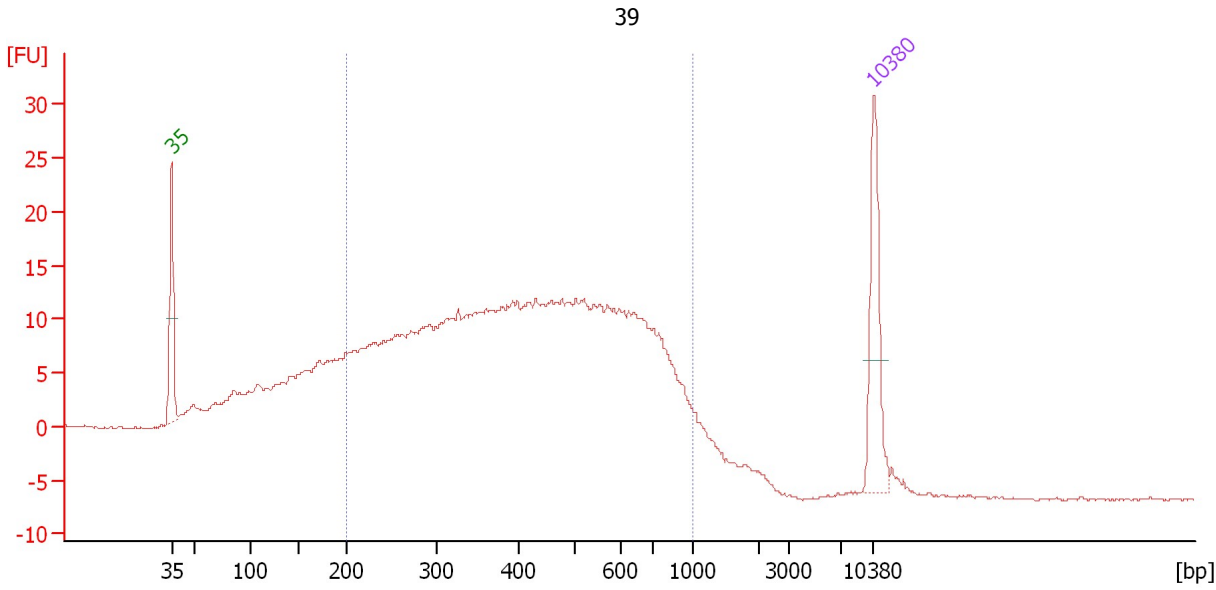
**Region table for sample 8 : 38**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	457	660.7	6,671.5	1,639.11	79	38.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : 39**

Number of peaks found: 0                      Corr. Area 1: 541.5  
 Noise: 0.1

**Peak table for sample 9 : 39**

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	10,380	75.00	10.9	Upper Marker	113.00

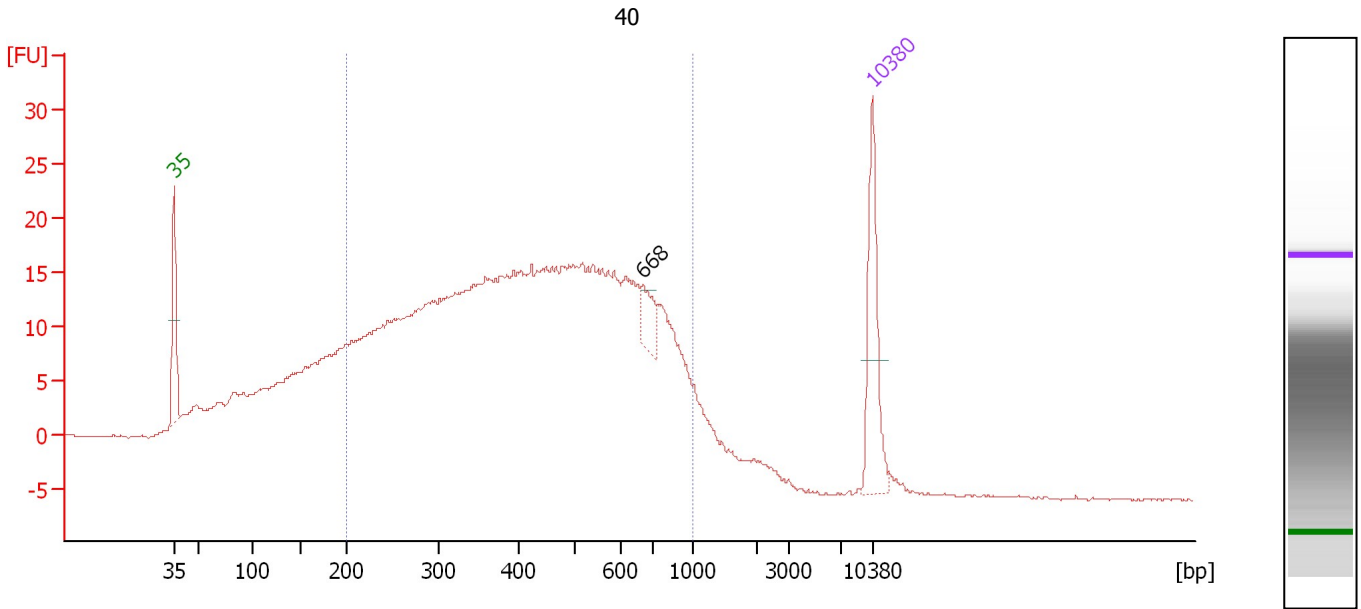
**Region table for sample 9 : 39**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	451	541.5	7,145.1	1,727.61	77	38.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : 40**

Number of peaks found: 1                      Corr. Area 1: 662.5  
 Noise: 0.1

**Peak table for sample 10 : 40**

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	668	26.15	59.3		89.97
3	10,380	75.00	10.9	Upper Marker	113.00

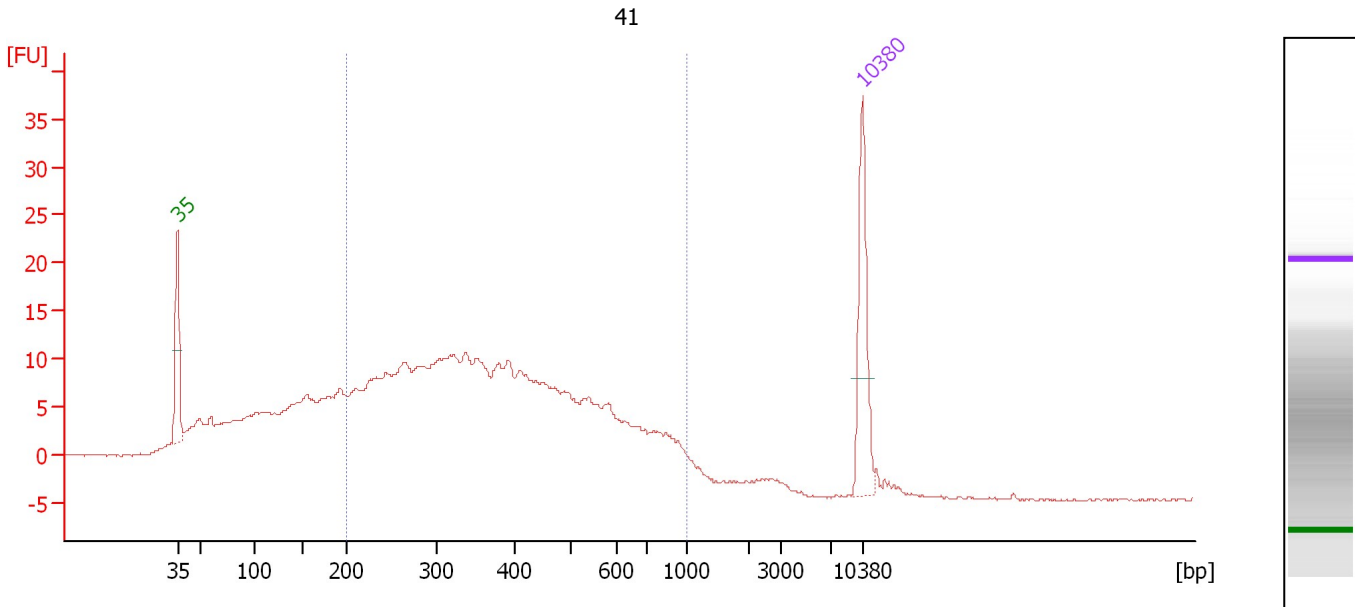
**Region table for sample 10 : 40**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	456	662.5	8,864.0	2,163.24	77	38.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : 41**

Number of peaks found: 0                      Corr. Area 1: 387.3  
 Noise: 0.1

**Peak table for sample 11 : 41**

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	10,380	75.00	10.9	Upper Marker	113.00

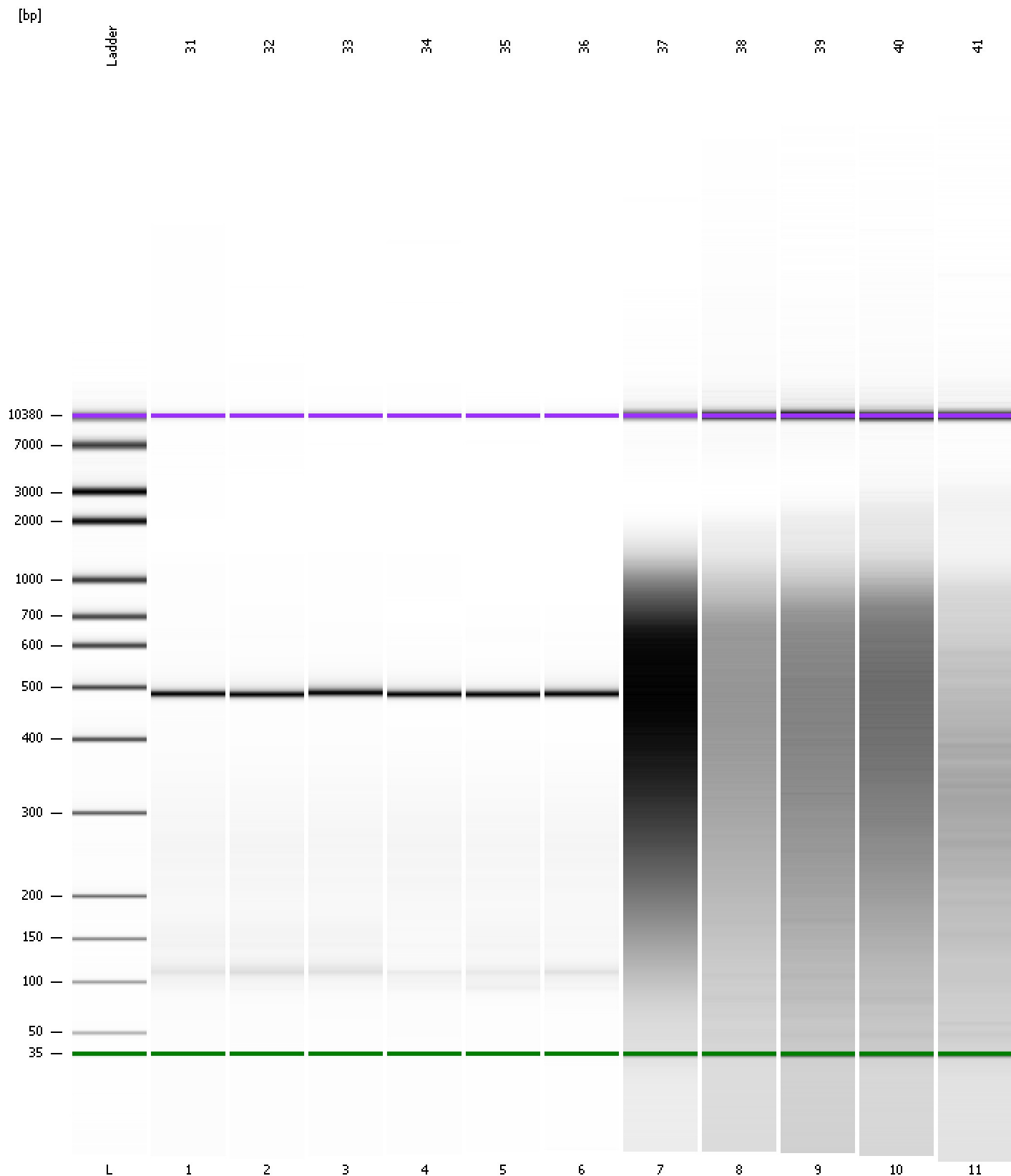
**Region table for sample 11 : 41**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	407	387.3	5,744.0	1,282.01	69	39.5

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
Modified: 5/17/2016 3:34:23 PM

**Gel Image**





Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-17\2016-05-17\_005.xad

Created: 5/17/2016 2:53:54 PM  
 Modified: 5/17/2016 3:34:23 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		5/17/2016 3:34:22 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\2016-05-17\2016-05-17_005.xad)		Instrument	Run		5/17/2016 2:54:00 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		5/17/2016 2:54:00 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/17/2016 2:54:00 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/17/2016 2:54:00 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		5/17/2016 2:54:00 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/17/2016 2:54:00 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/17/2016 2:54:00 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1