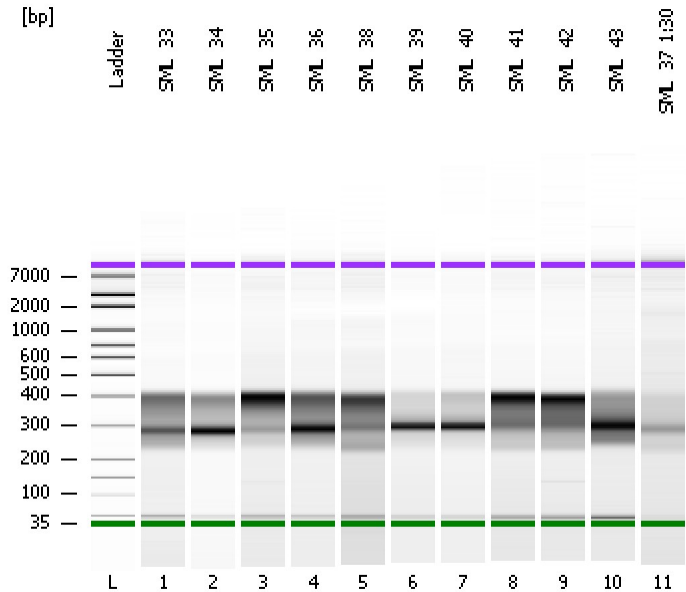


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
Modified: 3/17/2016 11:17:06 AM

### Electrophoresis File Run Summary



#### Instrument Information:

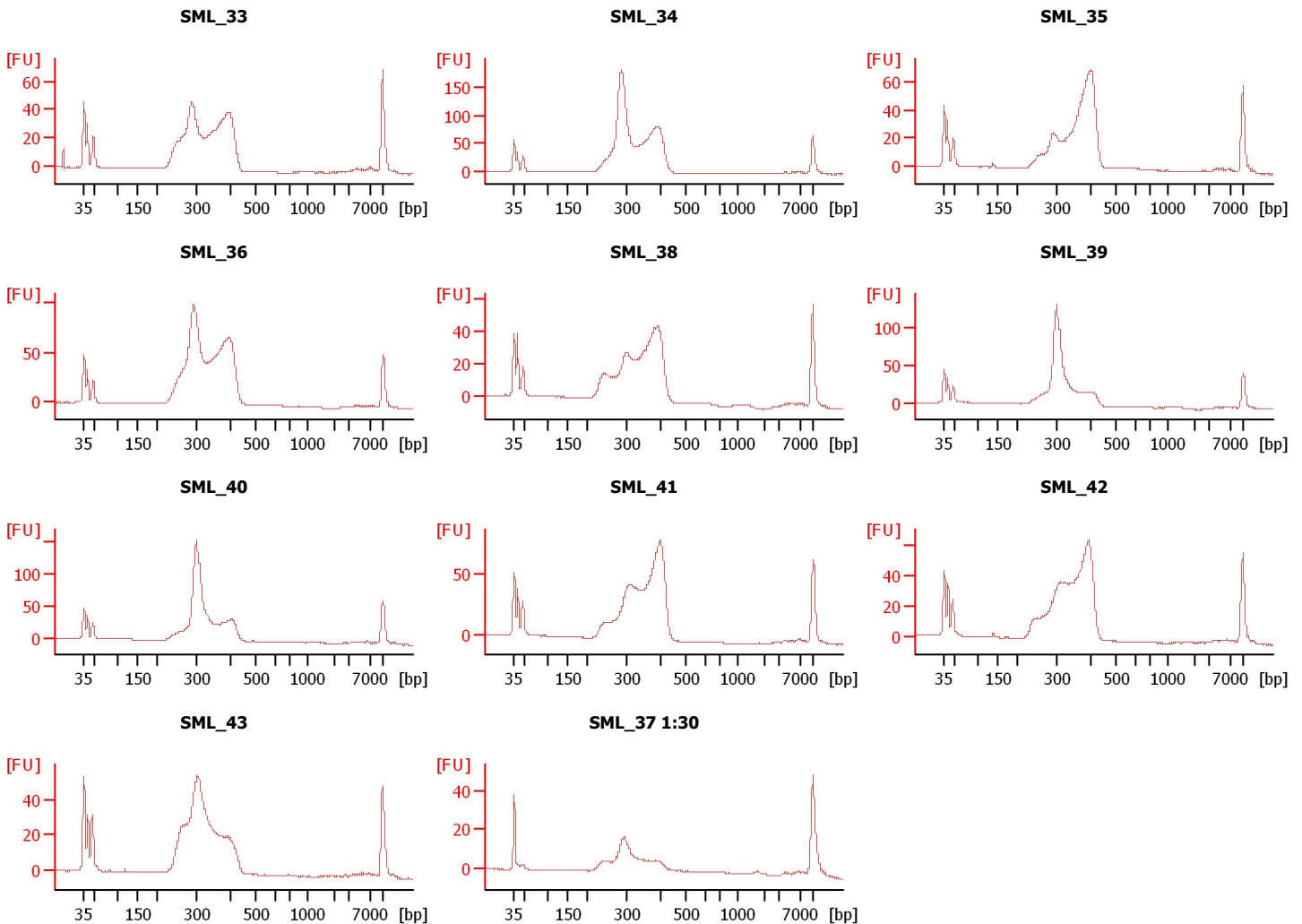
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

#### Assay Information:

Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\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\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
SML_33		<input type="checkbox"/>	✓			
SML_34		<input type="checkbox"/>	✓			
SML_35		<input type="checkbox"/>	✓			
SML_36		<input type="checkbox"/>	✓			
SML_38		<input type="checkbox"/>	✓			
SML_39		<input type="checkbox"/>	✓			
SML_40		<input type="checkbox"/>	✓			
SML_41		<input type="checkbox"/>	✓			
SML_42		<input type="checkbox"/>	✓			
SML_43		<input type="checkbox"/>	✓			
SML_37 1:30		<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\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
Modified: 3/17/2016 11:17:06 AM

**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

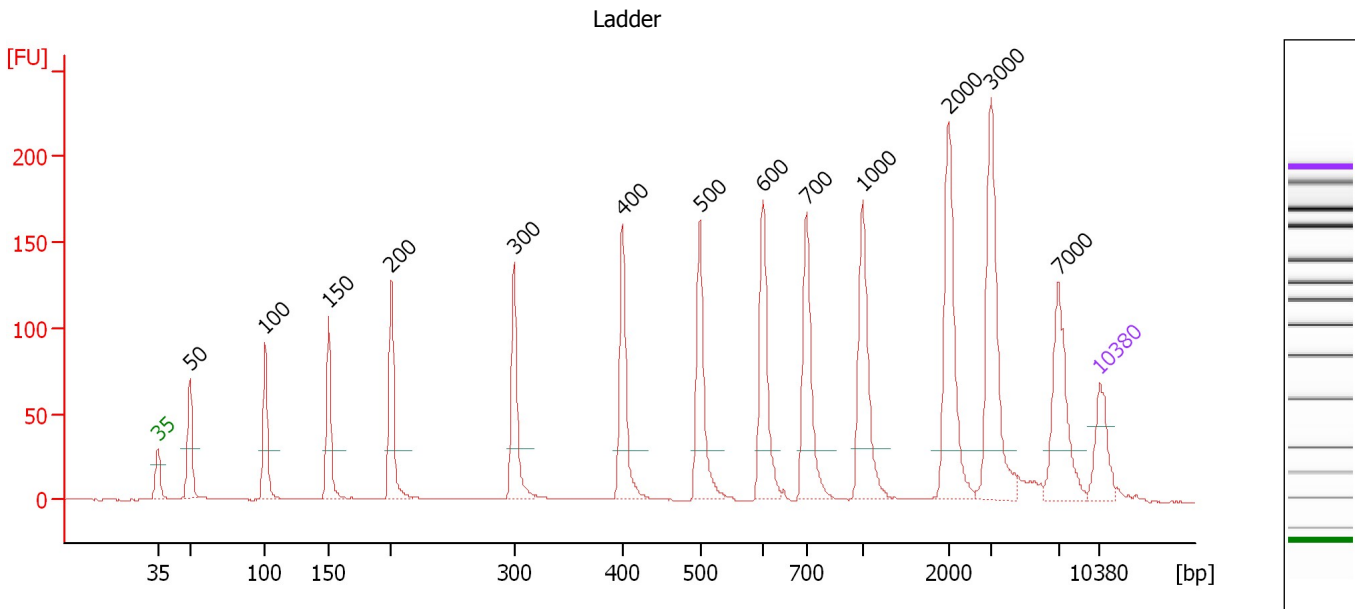
**Ladder**

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\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.3

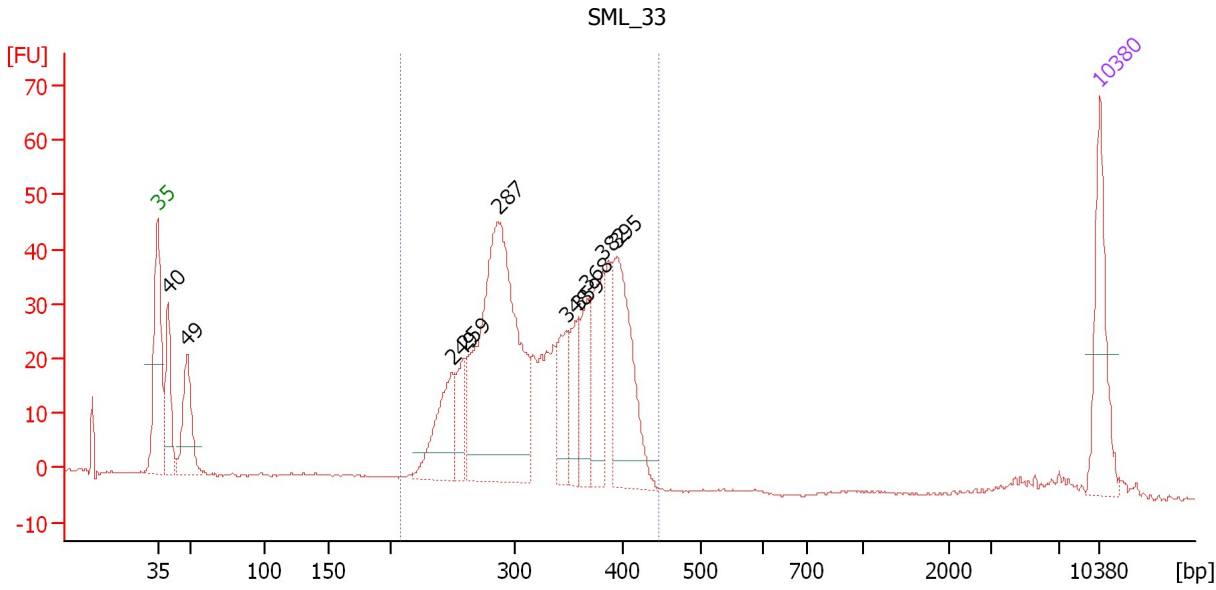
**Peak table for Ladder**

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	51.01
4	150	150.00	1,515.2	Ladder Peak	55.73
5	200	150.00	1,136.4	Ladder Peak	60.35
6	300	150.00	757.6	Ladder Peak	69.51
7	400	150.00	568.2	Ladder Peak	77.52
8	500	150.00	454.5	Ladder Peak	83.29
9	600	150.00	378.8	Ladder Peak	87.96
10	700	150.00	324.7	Ladder Peak	91.21
11	1,000	150.00	227.3	Ladder Peak	95.37
12	2,000	150.00	113.6	Ladder Peak	101.78
13	3,000	150.00	75.8	Ladder Peak	104.90
14	7,000	150.00	32.5	Ladder Peak	109.93
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : SML\_33**

Number of peaks found: 10                      Corr. Area 1: 646.3  
 Noise: 0.2

**Peak table for sample 1 : SML\_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	40	90.86	3,454.3		43.77
3	49	100.43	3,123.8		45.18
4	249	99.21	603.3		64.85
5	259	51.94	303.8		65.76
6	287	473.55	2,501.8		68.30
7	348	58.18	253.1		73.38
8	359	54.09	228.3		74.24
9	368	70.15	289.2		74.92
10	382	93.64	371.7		76.05
11	395	168.61	646.4		77.14
12	10,380	75.00	10.9	Upper Marker	113.00

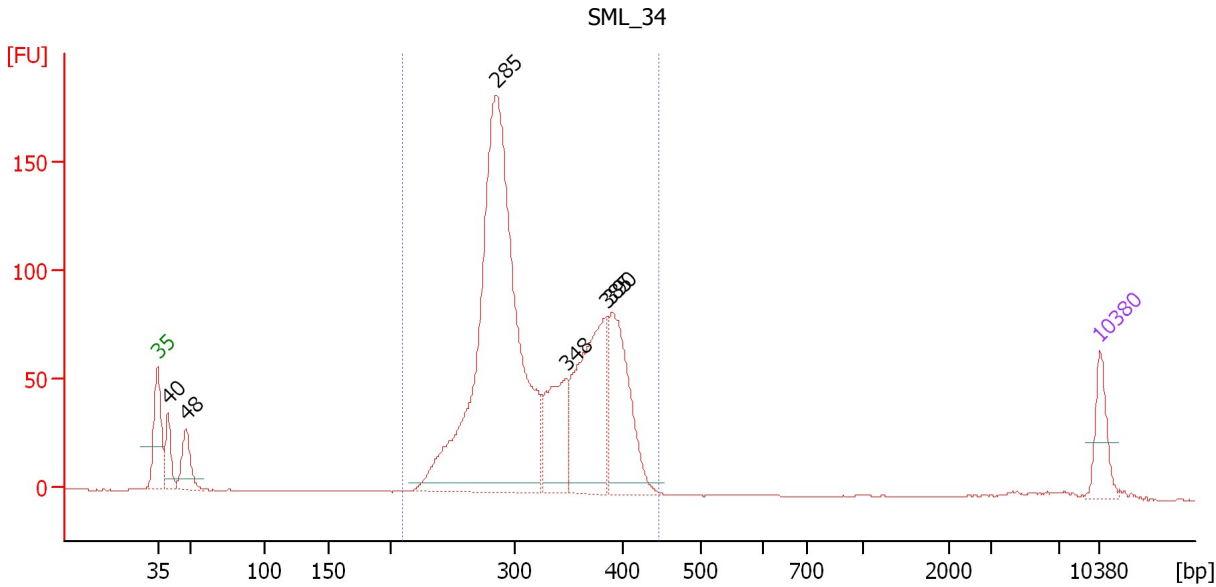
**Region table for sample 1 : SML\_33**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
208	447	329	646.3	5,877.8	1,228.87	88	16.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : SML\_34**

Number of peaks found: 6                      Corr. Area 1: 1,520.4  
 Noise: 0.2

**Peak table for sample 2 : SML\_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	40	105.52	4,012.0		43.77
3	48	128.07	4,032.2		45.08
4	285	1,819.27	9,673.6		68.13
5	348	248.91	1,082.6		73.38
6	385	462.74	1,820.7		76.32
7	390	359.96	1,397.8		76.73
8	10,380	75.00	10.9	Upper Marker	113.00

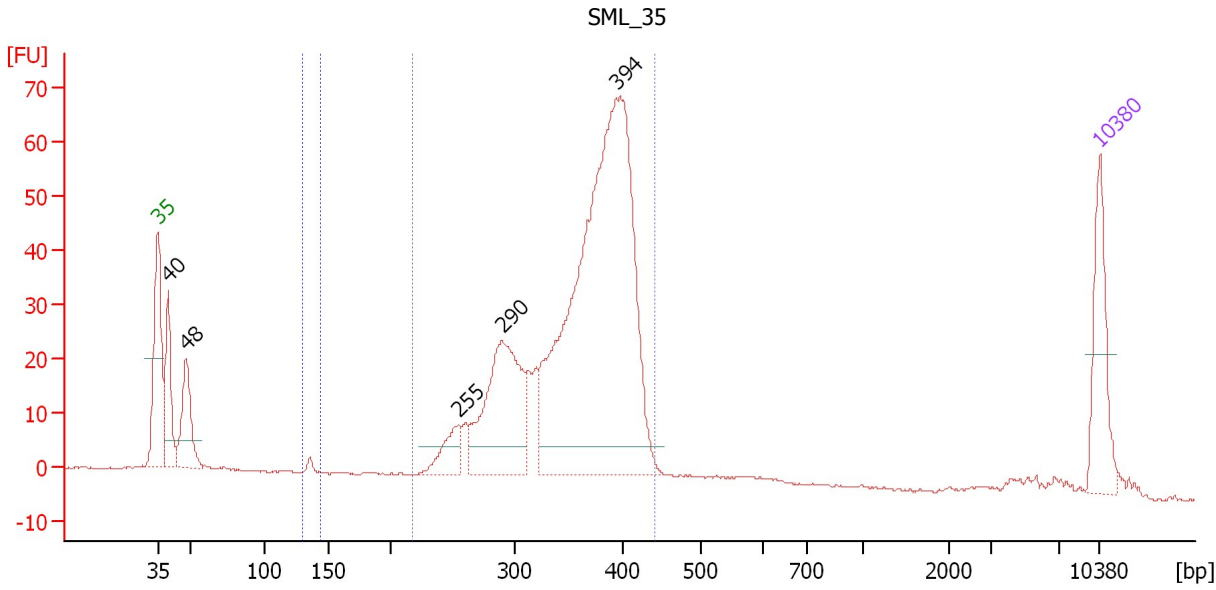
**Region table for sample 2 : SML\_34**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
210	447	323	1,520.4	14,106.7	2,913.54	94	15.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : SML\_35**

Number of peaks found: 5                      Corr. Area 1: 658.1  
 Noise: 0.2                                      Corr. Area 2: 3.5

**Peak table for sample 3 : SML\_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	40	102.18	3,878.4		43.78
3	48	100.70	3,158.7		45.11
4	255	49.69	295.1		65.40
5	290	237.38	1,241.4		68.57
6	394	843.01	3,239.7		77.06
7	10,380	75.00	10.9	Upper Marker	113.00

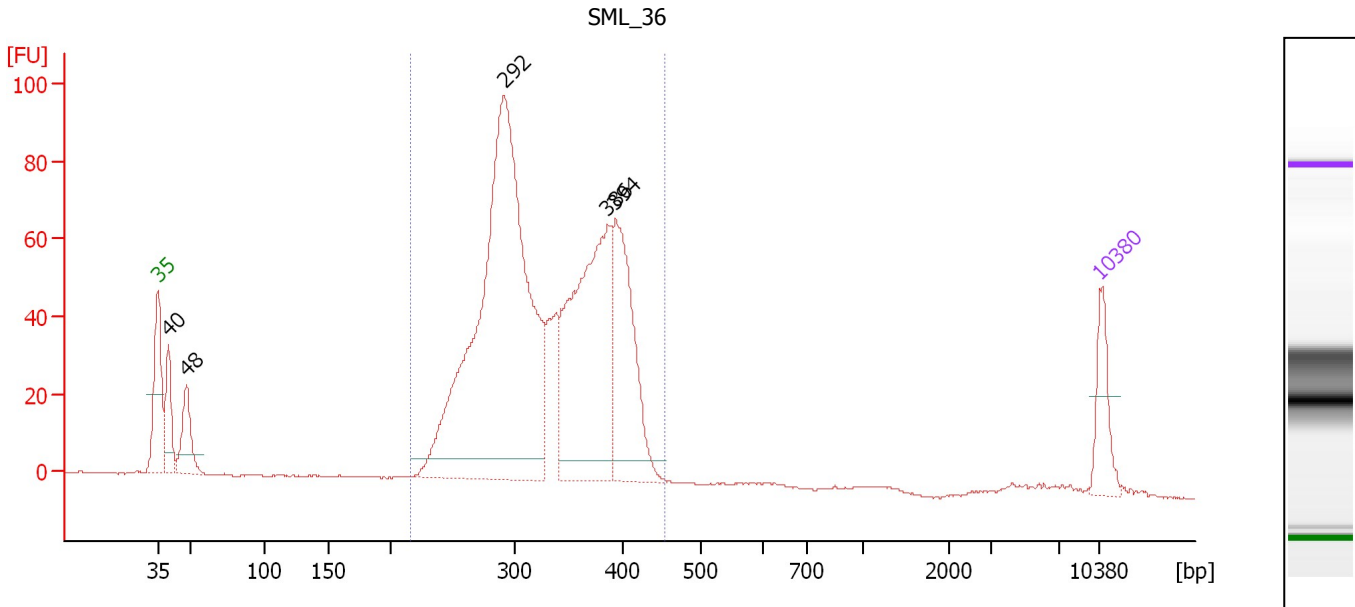
**Region table for sample 3 : SML\_35**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
130	143	135	3.5	101.4	9.06	0	2.0
217	443	356	658.1	5,609.6	1,281.08	82	13.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : SML\_36**

Number of peaks found: 5                      Corr. Area 1: 1,144.0  
 Noise: 0.2

**Peak table for sample 4 : SML\_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	40	119.56	4,521.6		43.80
3	48	131.55	4,118.1		45.13
4	292	1,530.23	7,944.8		68.76
5	386	641.51	2,516.6		76.42
6	394	364.24	1,401.1		77.03
7	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : SML\_36**

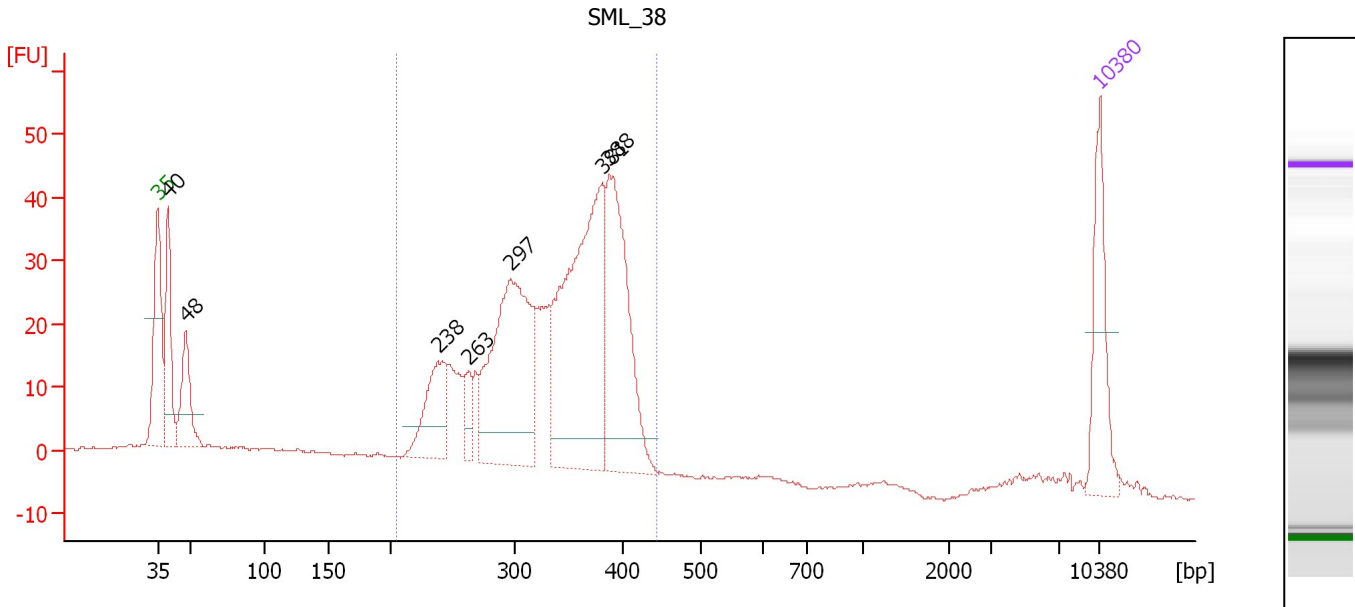
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
215	455	330	1,144.0	13,030.6	2,752.39	91	15.4



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : SML\_38**

Number of peaks found: 7                      Corr. Area 1: 608.0  
 Noise: 0.2

**Peak table for sample 5 : SML\_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	40	119.25	4,498.5		43.82
3	48	92.80	2,925.7		45.07
4	238	96.64	615.3		63.83
5	263	29.74	171.5		66.09
6	297	308.73	1,575.4		69.23
7	381	366.07	1,454.5		76.02
8	388	231.34	903.5		76.55
9	10,380	75.00	10.9	Upper Marker	113.00

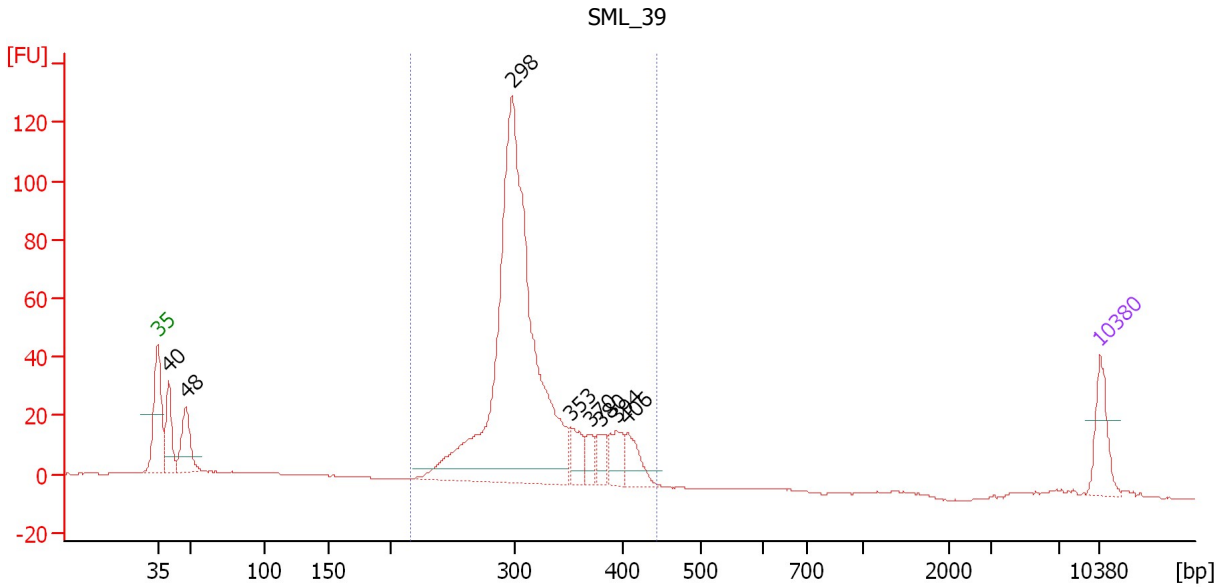
**Region table for sample 5 : SML\_38**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
204	444	334	608.0	5,937.2	1,259.88	80	16.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : SML\_39**

Number of peaks found: 8                      Corr. Area 1: 711.0  
 Noise: 0.2

**Peak table for sample 6 : SML\_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	40	132.58	5,025.3		43.79
3	48	141.09	4,448.4		45.07
4	298	1,616.29	8,212.4		69.34
5	353	66.95	287.6		73.73
6	370	37.60	154.0		75.11
7	380	46.27	184.6		75.90
8	394	69.82	268.5		77.04
9	406	78.50	292.8		77.88
10	10,380	75.00	10.9	Upper Marker	113.00

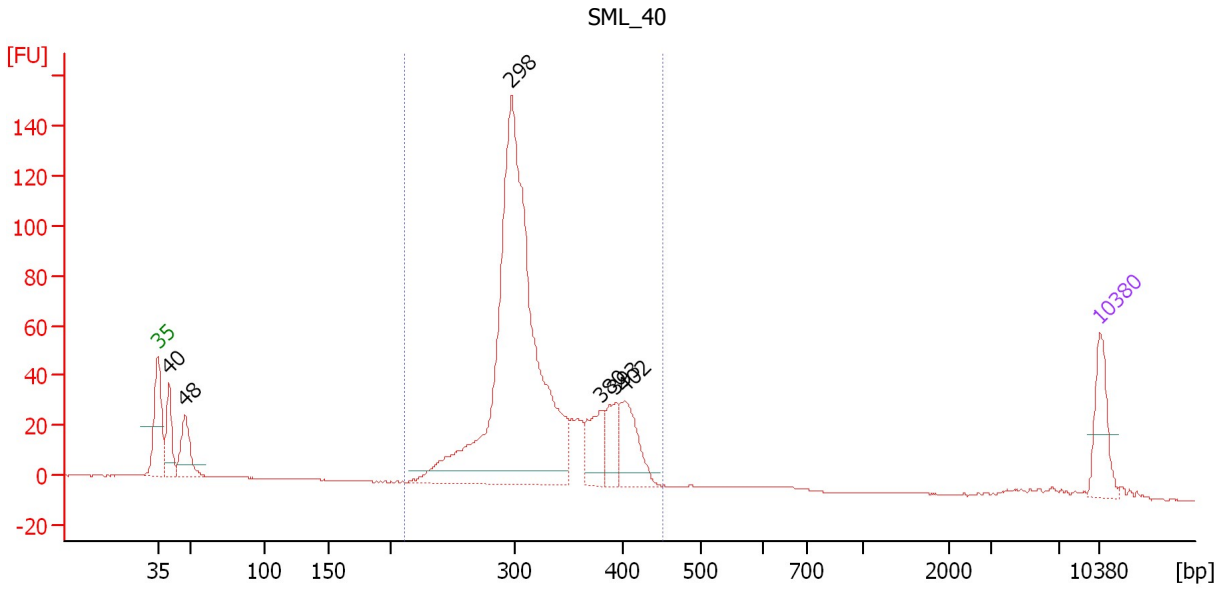
**Region table for sample 6 : SML\_39**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
216	445	317	711.0	9,467.2	1,944.86	83	12.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : SML\_40**

Number of peaks found: 6                      Corr. Area 1: 894.0  
 Noise: 0.2

**Peak table for sample 7 : SML\_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	40	102.72	3,853.0		43.86
3	48	105.13	3,317.9		45.06
4	298	1,315.80	6,699.0		69.29
5	380	91.97	366.5		75.94
6	393	71.38	274.9		76.99
7	402	117.40	442.2		77.65
8	10,380	75.00	10.9	Upper Marker	113.00

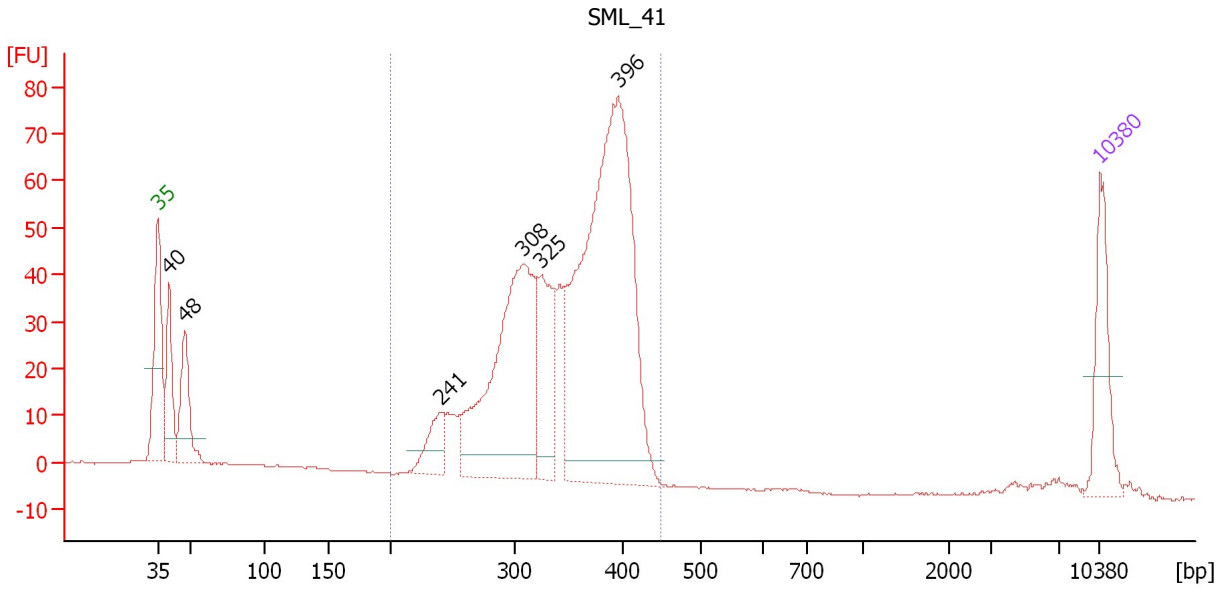
**Region table for sample 7 : SML\_40**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
212	451	322	894.0	7,852.2	1,639.39	90	13.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : SML\_41**

Number of peaks found: 6                      Corr. Area 1: 844.6  
 Noise: 0.2

**Peak table for sample 8 : SML\_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	40	105.94	3,964.7		43.87
3	48	115.86	3,689.1		45.00
4	241	57.65	362.6		64.10
5	308	428.28	2,107.6		70.14
6	325	139.48	651.3		71.47
7	396	731.21	2,797.1		77.21
8	10,380	75.00	10.9	Upper Marker	113.00

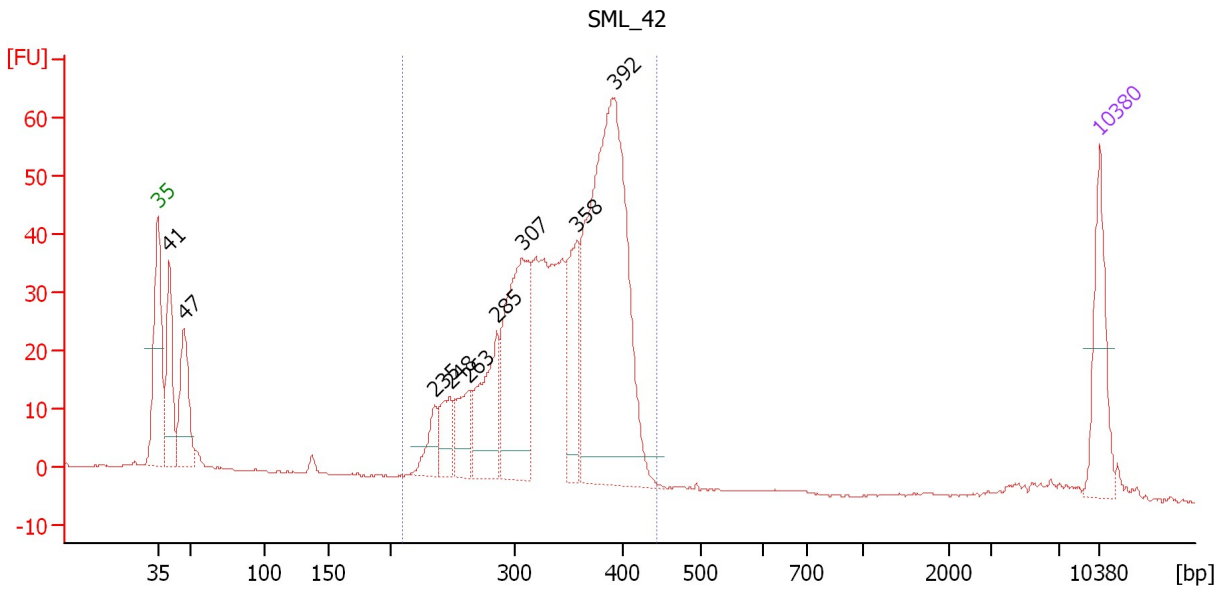
**Region table for sample 8 : SML\_41**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	450	347	844.6	6,565.8	1,461.24	88	14.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : SML\_42**

Number of peaks found: 9                      Corr. Area 1: 716.3  
 Noise: 0.2

**Peak table for sample 9 : SML\_42**

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	41	121.82	4,553.3		43.88
3	47	118.77	3,798.1		44.96
4	235	41.97	270.3		63.58
5	248	52.15	319.1		64.71
6	263	62.58	360.7		66.11
7	285	126.43	671.0		68.18
8	307	248.26	1,224.2		70.09
9	358	106.32	450.5		74.12
10	392	582.81	2,250.1		76.91
11	10,380	75.00	10.9	Upper Marker	113.00

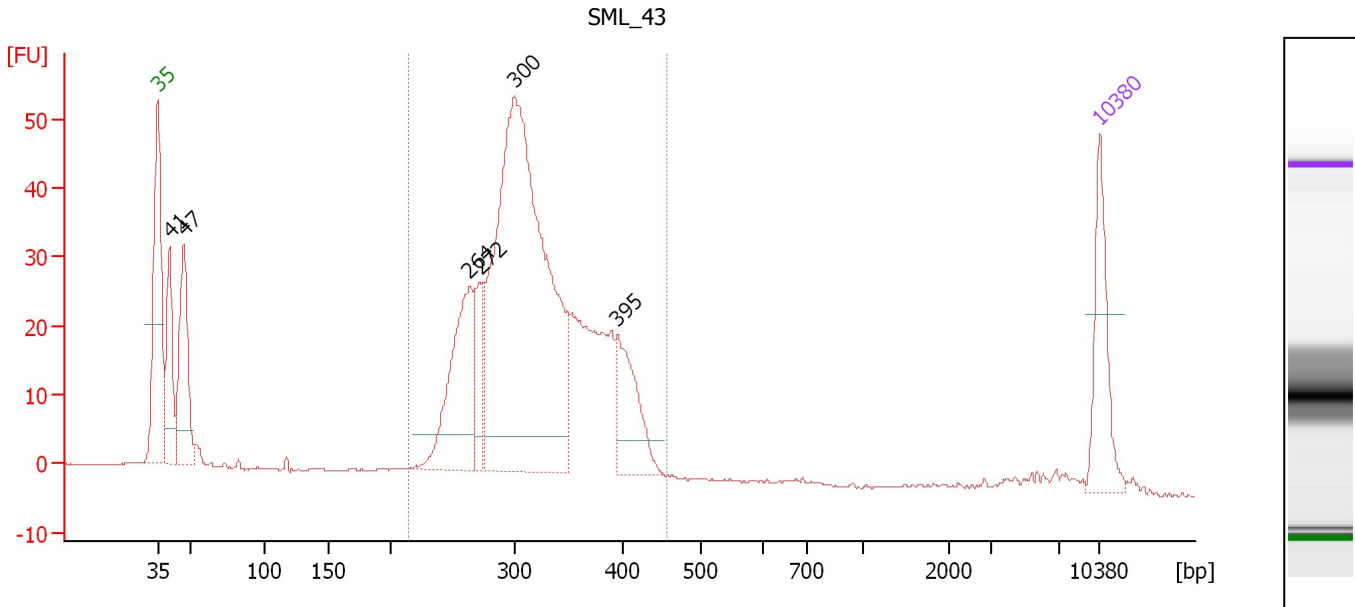
**Region table for sample 9 : SML\_42**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
208	445	341	716.3	7,058.3	1,543.13	86	14.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : SML\_43**

Number of peaks found: 6                      Corr. Area 1: 601.3  
 Noise: 0.2

**Peak table for sample 10 : SML\_43**

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	41	115.43	4,308.6		43.89
3	47	170.36	5,472.3		44.93
4	264	198.24	1,139.4		66.18
5	272	69.15	384.9		66.96
6	300	832.91	4,204.9		69.52
7	395	103.57	397.0		77.14
8	10,380	75.00	10.9	Upper Marker	113.00

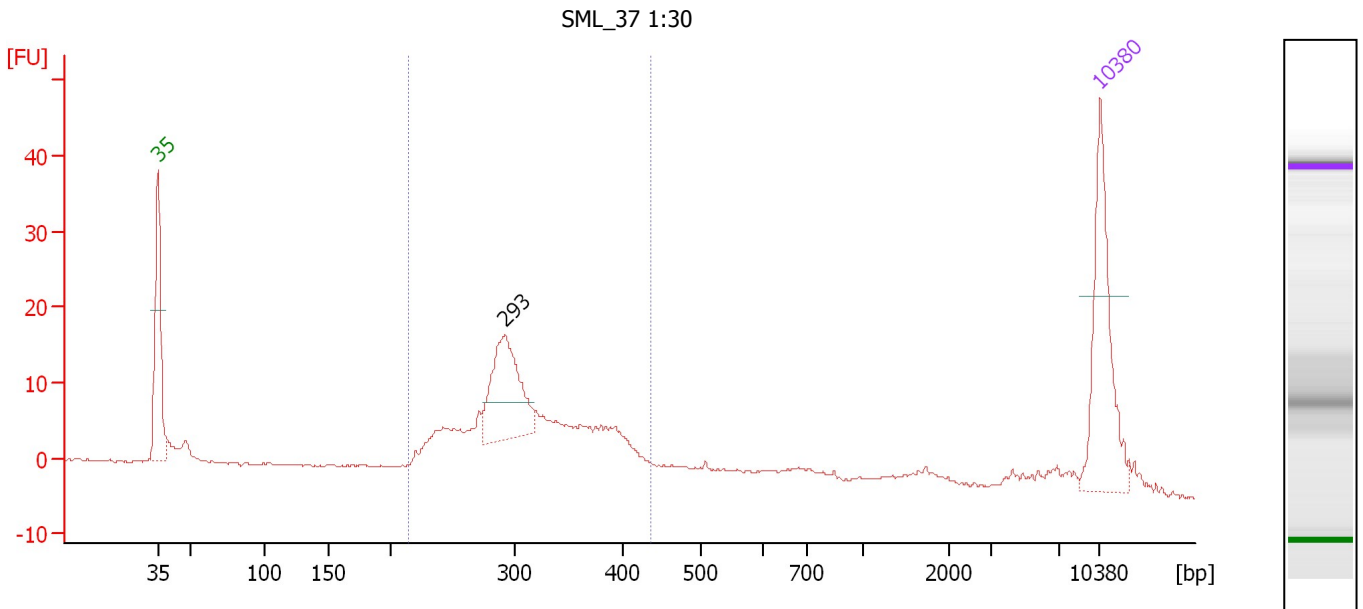
**Region table for sample 10 : SML\_43**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
214	456	320	601.3	7,060.9	1,454.27	84	14.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : SML\_37 1:30**

Number of peaks found: 1                      Corr. Area 1: 177.0  
 Noise: 0.2

**Peak table for sample 11 : SML\_37 1:30**

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	293	94.73	490.7		68.82
3	10,380	75.00	10.9	Upper Marker	113.00

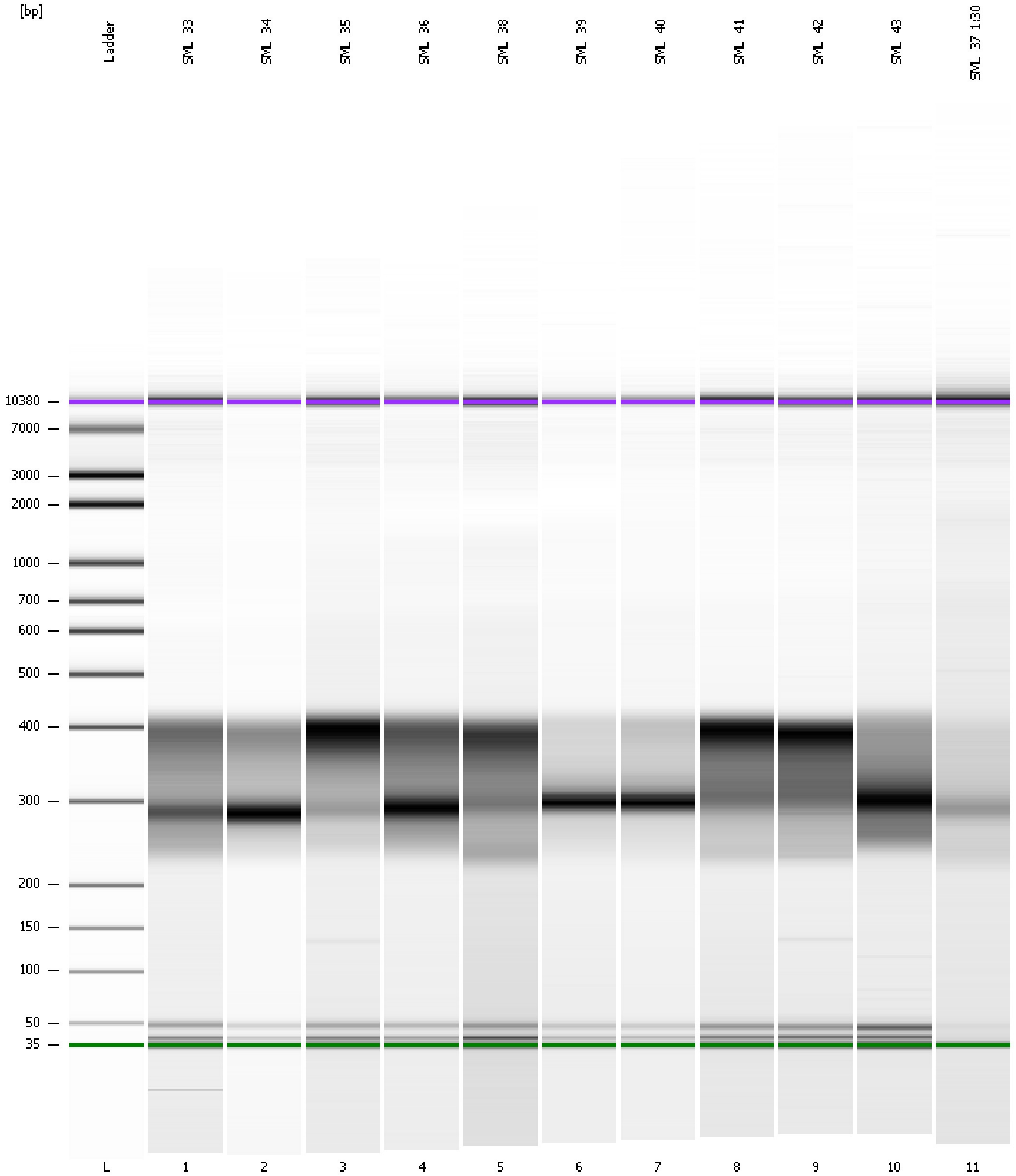
**Region table for sample 11 : SML\_37 1:30**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
214	437	313	177.0	1,718.1	344.64	73	16.0

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
Modified: 3/17/2016 11:17:06 AM

**Gel Image**



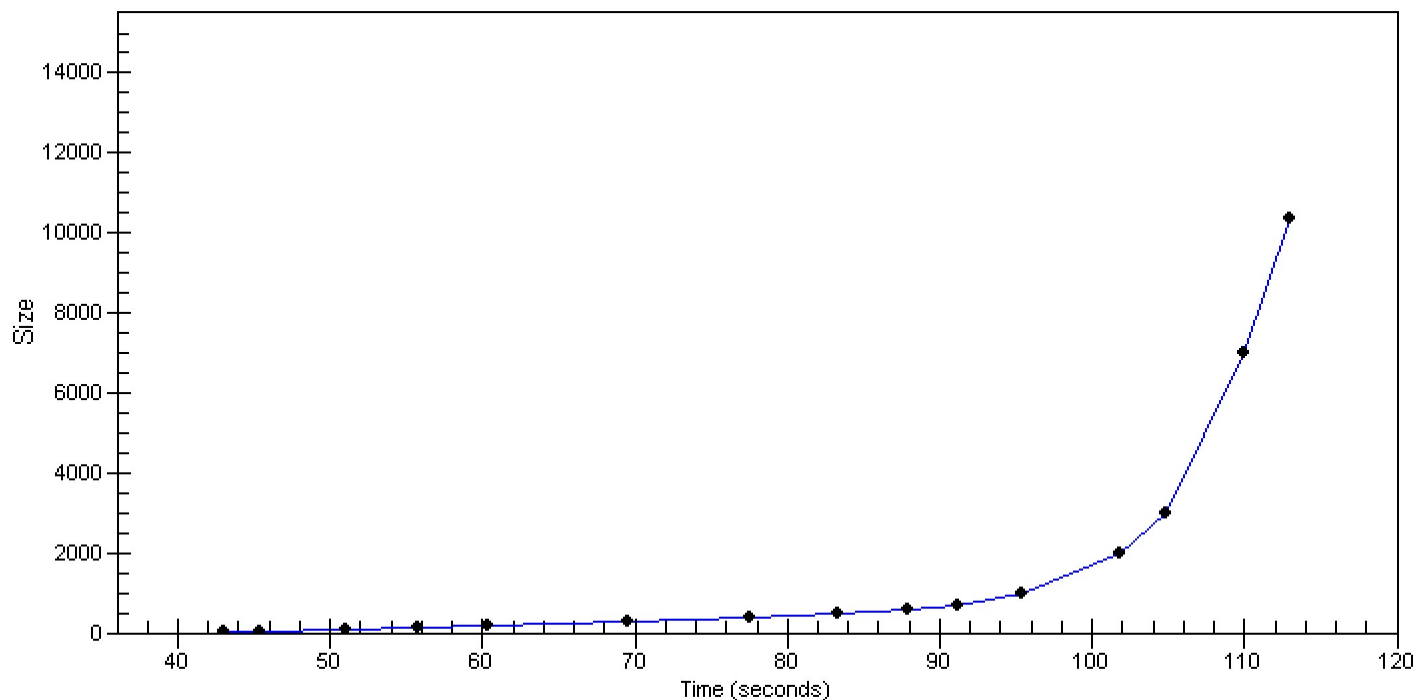


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
Modified: 3/17/2016 11:17:06 AM

**Curves**

**Standard Curve**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-17\2016-03-17\_001.xad

Created: 3/17/2016 10:29:08 AM  
 Modified: 3/17/2016 11:17:06 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		3/17/2016 11:10:26 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-03-17\2016-03-17_001.xad)		Instrument	Run		3/17/2016 10:29:13 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/17/2016 10:29:13 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/17/2016 10:29:13 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/17/2016 10:29:13 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/17/2016 10:29:13 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/17/2016 10:29:13 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/17/2016 10:29:13 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1