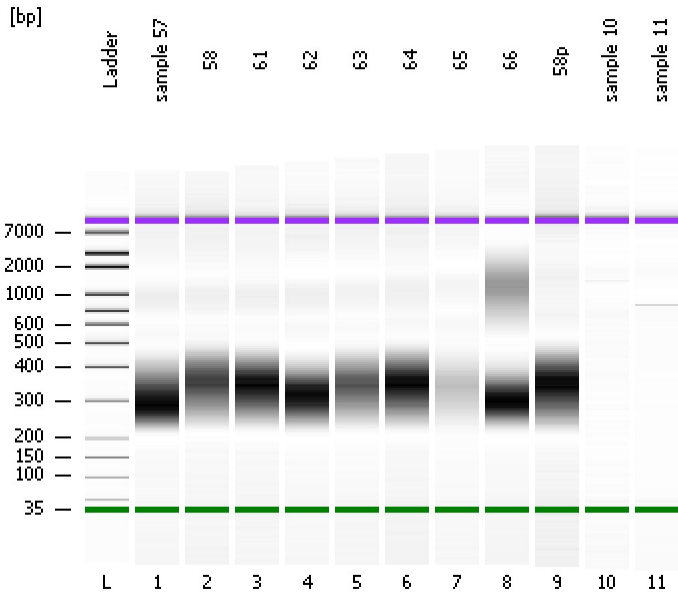


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
Modified: 4/4/2016 2:01:15 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

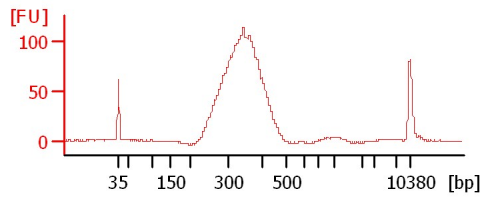
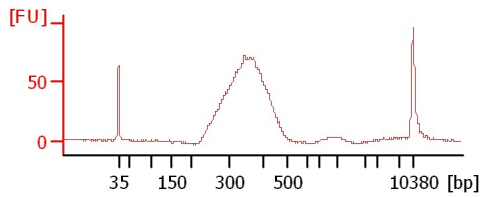
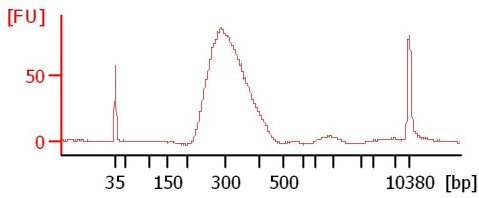
Chip Information:

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

sample 57

58

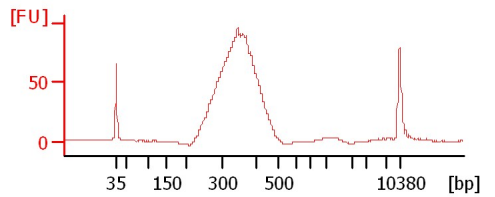
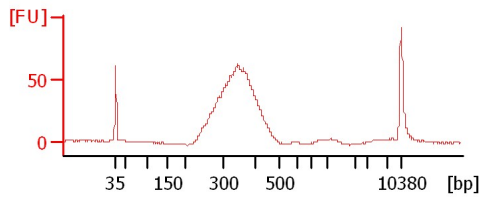
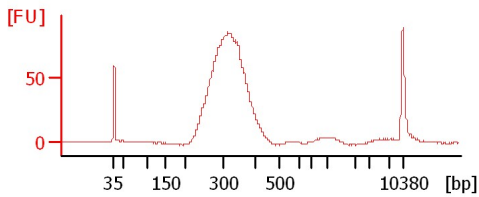
61



62

63

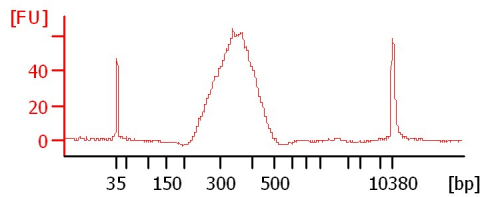
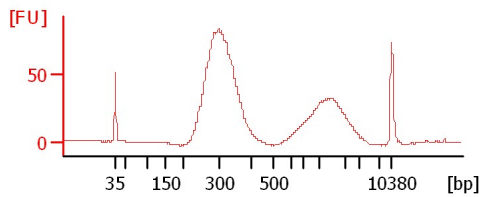
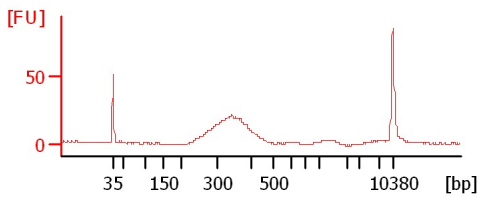
64



65

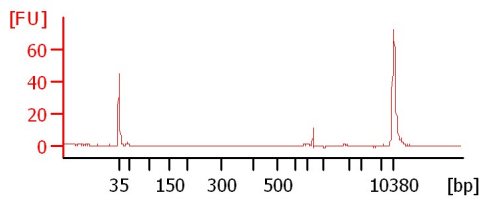
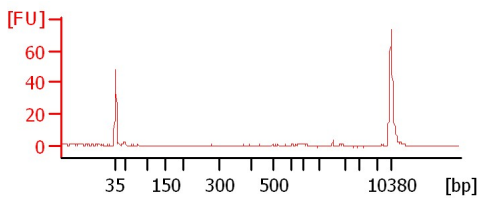
66

58p



sample 10

sample 11



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
Modified: 4/4/2016 2:01:15 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 57		<input type="checkbox"/>	✓			
58		<input type="checkbox"/>	✓			
61		<input type="checkbox"/>	✓			
62		<input type="checkbox"/>	✓			
63		<input type="checkbox"/>	✓			
64		<input type="checkbox"/>	✓			
65		<input type="checkbox"/>	✓			
66		<input type="checkbox"/>	✓			
58p		<input type="checkbox"/>	✓			
sample 10		<input type="checkbox"/>	✓			
sample 11		<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\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
Modified: 4/4/2016 2:01:15 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

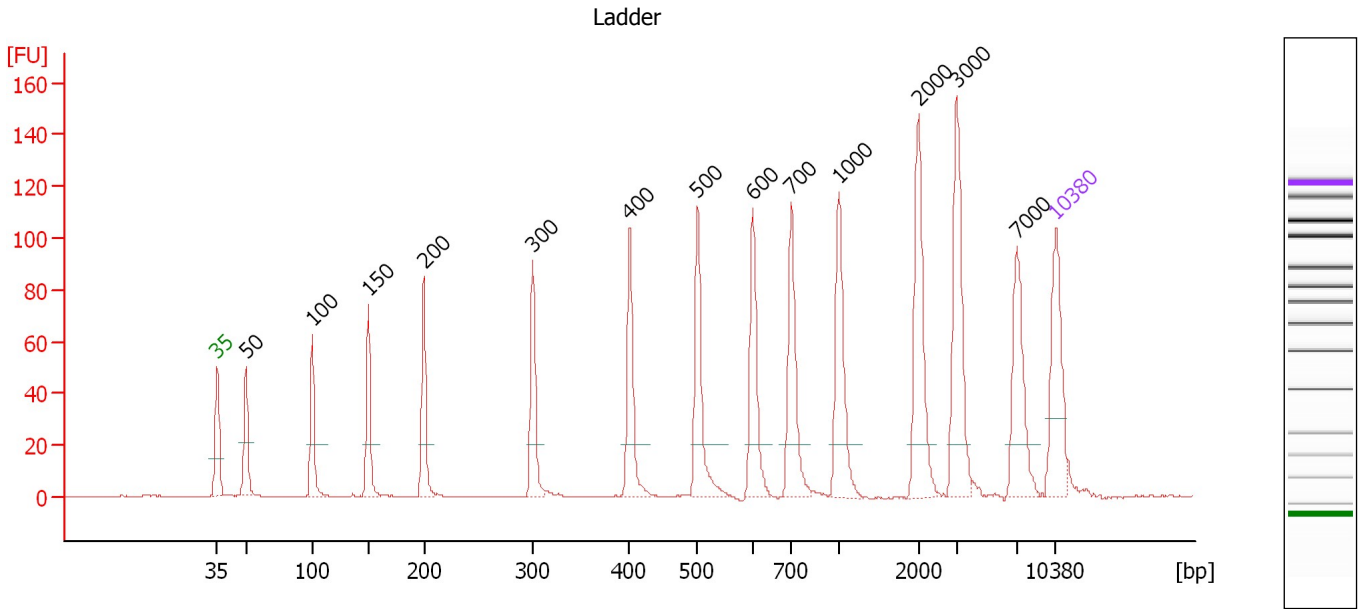
**Ladder**

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\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

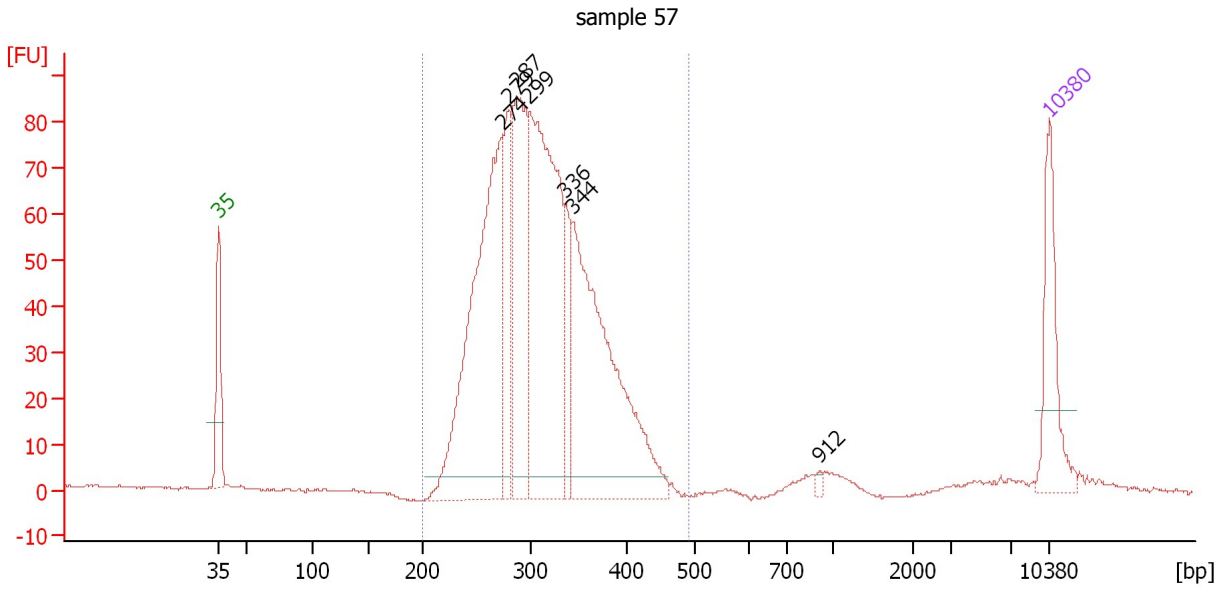
**Peak table for Ladder**

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	45.40
3	100	150.00	2,272.7	Ladder Peak	50.93
4	150	150.00	1,515.2	Ladder Peak	55.60
5	200	150.00	1,136.4	Ladder Peak	60.23
6	300	150.00	757.6	Ladder Peak	69.32
7	400	150.00	568.2	Ladder Peak	77.42
8	500	150.00	454.5	Ladder Peak	83.12
9	600	150.00	378.8	Ladder Peak	87.71
10	700	150.00	324.7	Ladder Peak	90.91
11	1,000	150.00	227.3	Ladder Peak	94.88
12	2,000	150.00	113.6	Ladder Peak	101.56
13	3,000	150.00	75.8	Ladder Peak	104.72
14	7,000	150.00	32.5	Ladder Peak	109.75
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : sample 57**

Number of peaks found: 7                      Corr. Area 1: 1,261.2  
 Noise: 0.3

**Peak table for sample 1 : sample 57**

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	274	496.72	2,750.8		66.92
3	279	129.23	701.7		67.41
4	287	262.95	1,388.4		68.13
5	299	467.63	2,371.0		69.21
6	336	69.07	311.6		72.22
7	344	428.76	1,887.5		72.90
8	912	4.28	7.1		93.71
9	10,380	75.00	10.9	Upper Marker	113.00

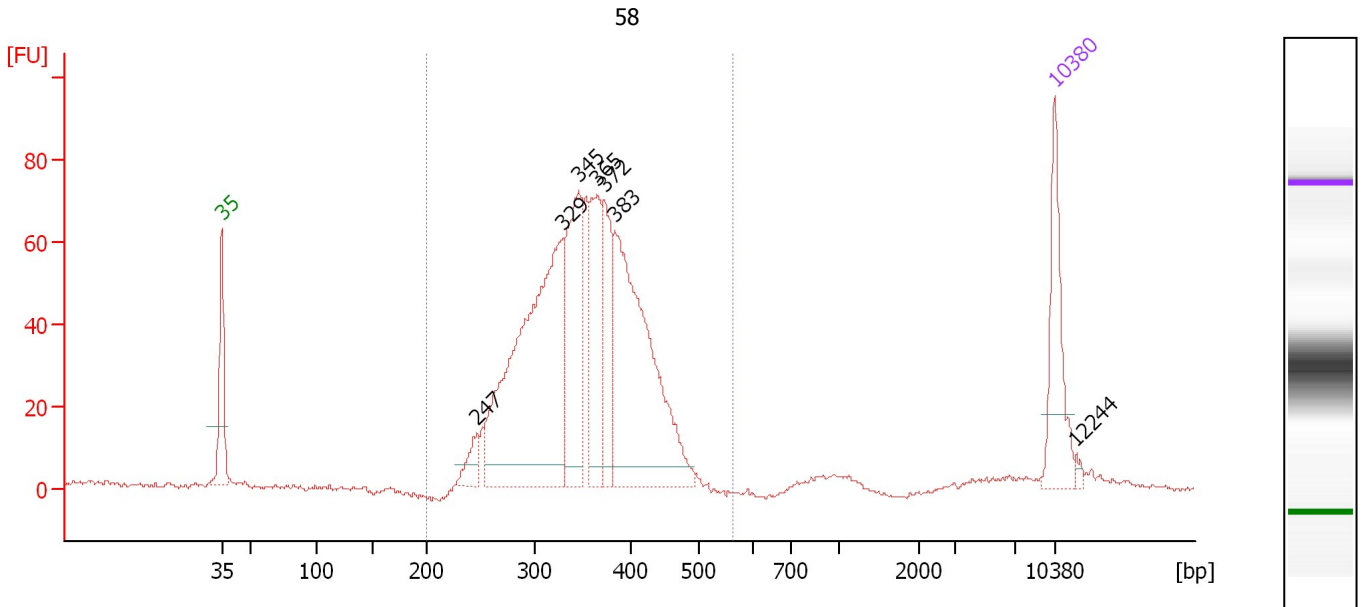
**Region table for sample 1 : sample 57**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	492	311	1,261.2	8,816.1	1,757.14	96	15.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : 58**

Number of peaks found: 7                      Corr. Area 1: 1,062.5  
 Noise: 0.6

**Peak table for sample 2 : 58**

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	247	30.63	188.2		64.47
3	329	474.19	2,186.3		71.64
4	345	190.43	835.8		72.98
5	365	121.51	505.0		74.55
6	372	98.64	402.0		75.13
7	383	354.60	1,401.5		76.07
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,244	0.00	0.0		114.79

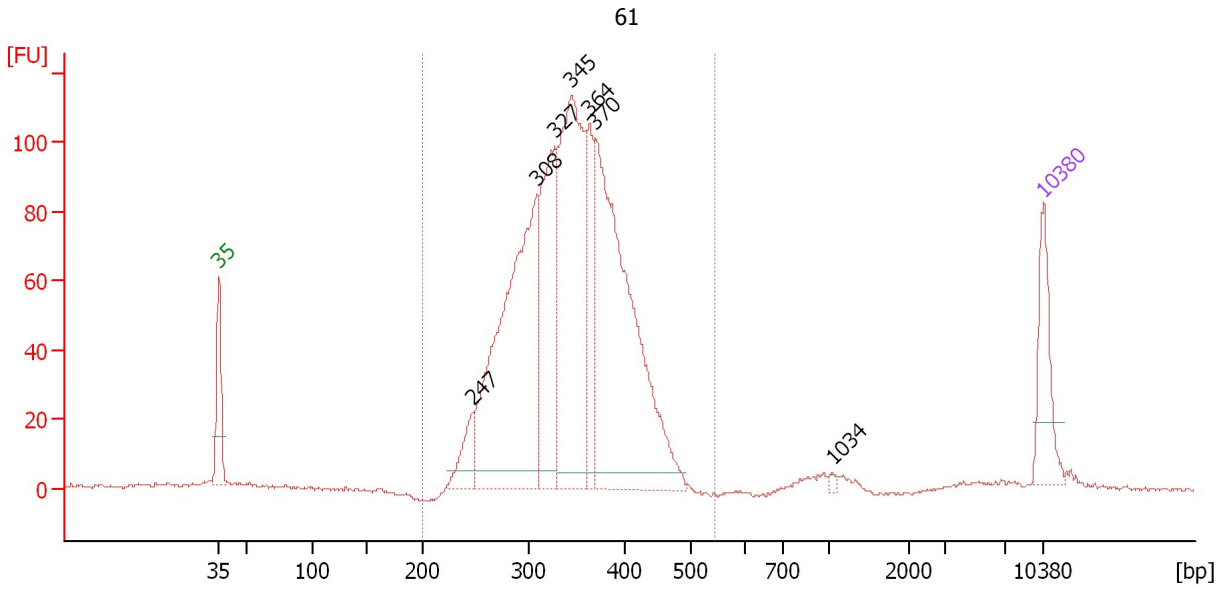
**Region table for sample 2 : 58**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	561	351	1,062.5	6,026.2	1,352.41	97	15.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : 61**

Number of peaks found: 7                      Corr. Area 1: 1,605.6  
 Noise: 0.6

**Peak table for sample 3 : 61**

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	247	62.49	383.0		64.52
3	308	629.95	3,094.2		70.00
4	327	290.05	1,344.3		71.50
5	345	494.19	2,171.6		72.95
6	364	129.88	540.9		74.49
7	370	657.19	2,691.4		74.99
8	1,034	4.23	6.2		95.10
9	10,380	75.00	10.9	Upper Marker	113.00

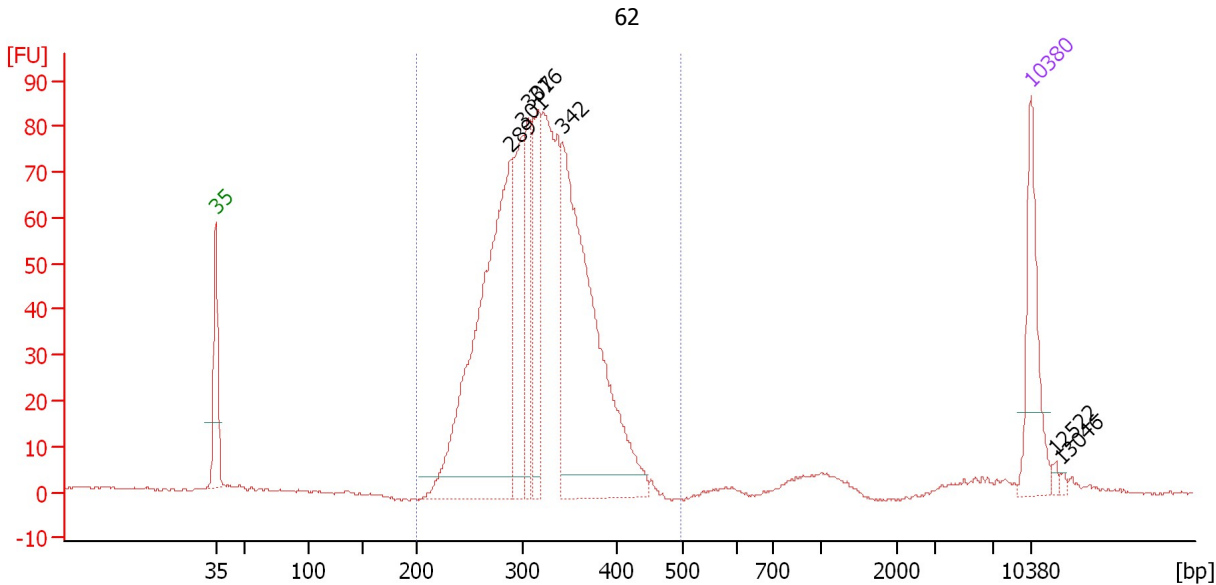
**Region table for sample 3 : 61**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	542	343	1,605.6	10,286.1	2,262.30	97	14.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : 62**

Number of peaks found: 7                      Corr. Area 1: 1,150.7  
 Noise: 0.2

**Peak table for sample 4 : 62**

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	289	531.67	2,787.5		68.32
3	301	153.07	770.0		69.42
4	307	99.60	491.8		69.87
5	316	115.04	551.8		70.61
6	342	484.06	2,141.6		72.76
7	10,380	75.00	10.9	Upper Marker	113.00
8	12,522	0.00	0.0		115.06
9	13,046	0.00	0.0		115.56

**Region table for sample 4 : 62**

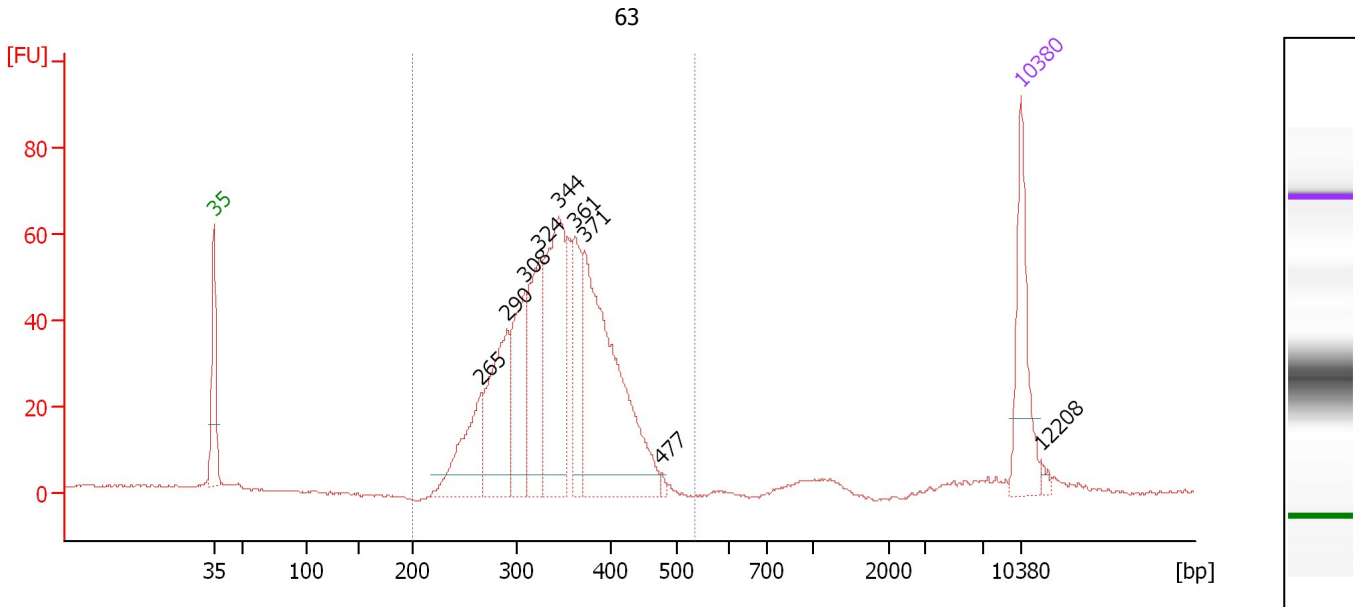
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	495	318	1,150.7	7,828.2	1,606.21	96	13.6



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : 63**

Number of peaks found: 9                      Corr. Area 1: 871.2  
 Noise: 0.3

**Peak table for sample 5 : 63**

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	265	108.25	617.8		66.18
3	290	151.48	791.7		68.40
4	308	121.61	598.1		69.97
5	324	131.05	613.8		71.22
6	344	234.04	1,030.6		72.89
7	361	89.20	374.2		74.28
8	371	333.29	1,359.4		75.11
9	477	3.85	12.2		81.82
10	10,380	75.00	10.9	Upper Marker	113.00
11	12,208	0.00	0.0		114.76

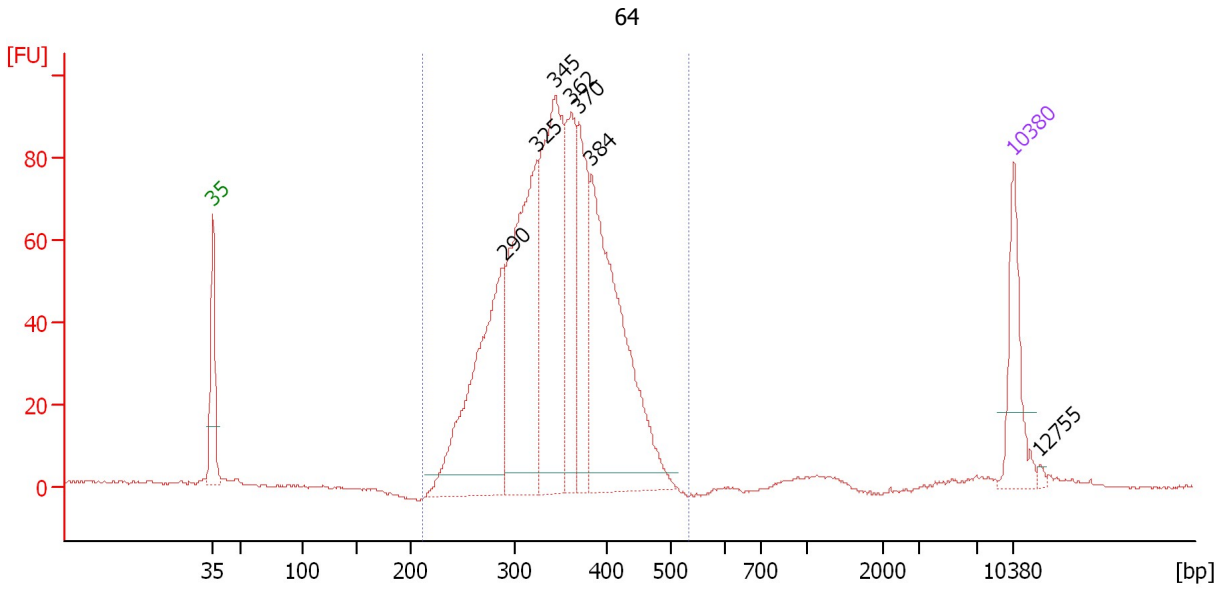
**Region table for sample 5 : 63**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	536	343	871.2	5,222.4	1,147.02	95	14.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : 64**

Number of peaks found: 7                      Corr. Area 1: 1,338.1  
 Noise: 0.3

**Peak table for sample 6 : 64**

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	290	386.32	2,015.5		68.45
3	325	397.38	1,853.1		71.34
4	345	403.93	1,773.8		72.97
5	362	173.99	728.8		74.32
6	370	171.36	701.1		75.02
7	384	446.92	1,762.8		76.14
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,755	0.00	0.0		115.28

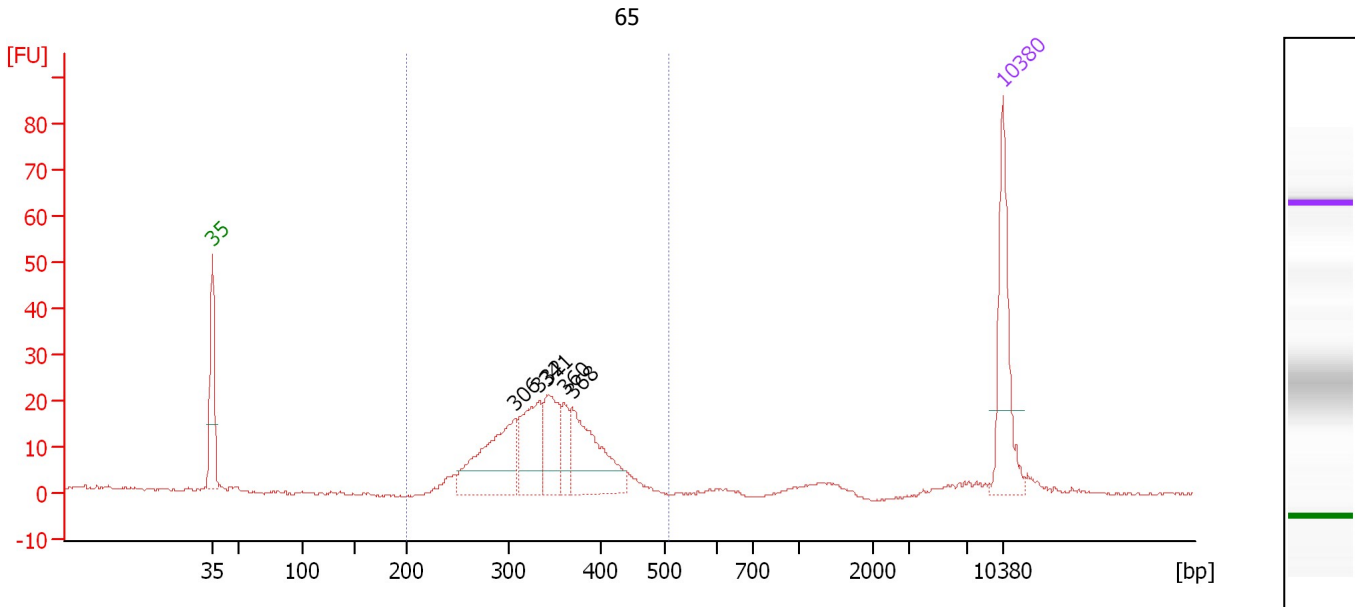
**Region table for sample 6 : 64**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
212	533	347	1,338.1	8,550.9	1,898.57	98	14.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : 65**

Number of peaks found: 5                      Corr. Area 1: 266.4  
 Noise: 0.3

**Peak table for sample 7 : 65**

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	306	124.39	616.9		69.76
3	332	82.27	375.1		71.93
4	341	65.46	290.8		72.64
5	360	28.22	118.9		74.15
6	368	107.56	442.3		74.86
7	10,380	75.00	10.9	Upper Marker	113.00

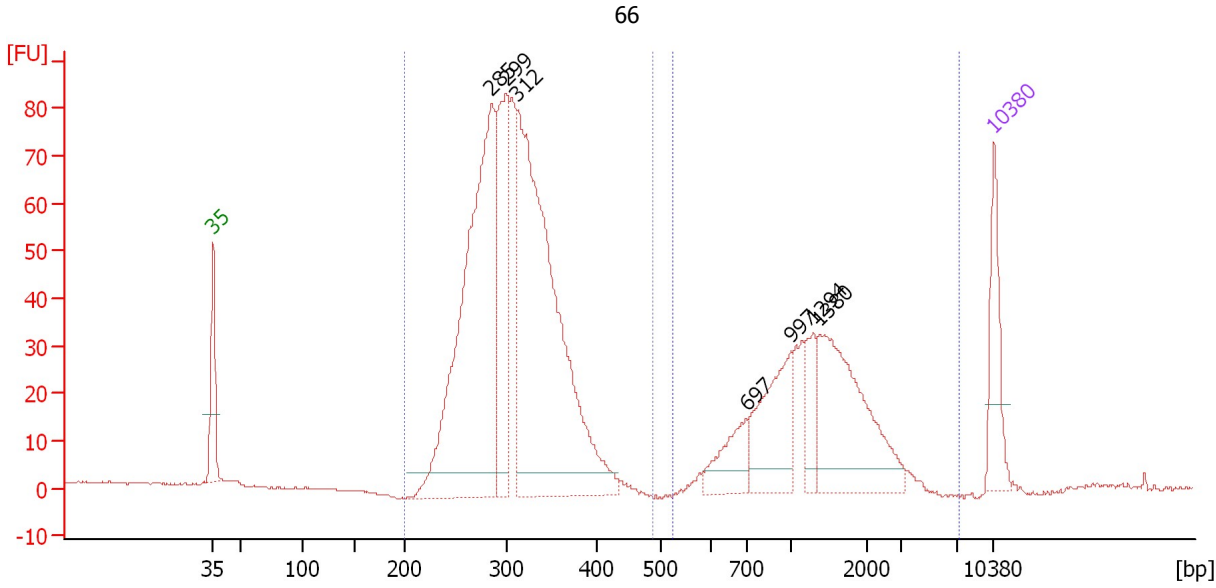
**Region table for sample 7 : 65**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	508	339	266.4	1,845.3	402.70	93	13.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : 66**

Number of peaks found: 7                      Corr. Area 1: 987.6  
 Noise: 0.2                                      Corr. Area 2: 356.9

**Peak table for sample 8 : 66**

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	285	772.48	4,113.6		67.91
3	299	265.84	1,345.9		69.25
4	312	865.12	4,207.1		70.25
5	697	75.02	163.1		90.81
6	997	135.05	205.3		94.83
7	1,294	51.06	59.8		96.84
8	1,380	225.63	247.8		97.41
9	10,380	75.00	10.9	Upper Marker	113.00

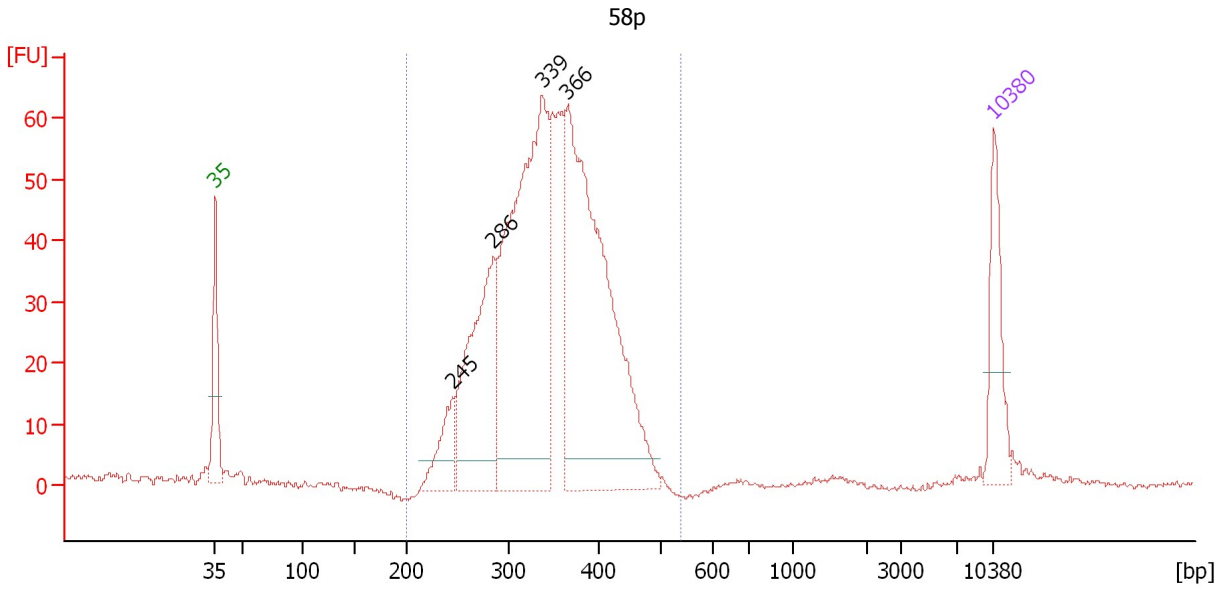
**Region table for sample 8 : 66**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	487	307	987.6	9,595.4	1,910.27	73	12.5
523	7,182	1,361	356.9	684.9	506.97	26	43.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : 58p**

Number of peaks found: 4                      Corr. Area 1: 933.7  
 Noise: 0.5

**Peak table for sample 9 : 58p**

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	245	80.78	499.2		64.34
3	286	309.58	1,641.2		68.03
4	339	650.26	2,910.4		72.44
5	366	663.75	2,745.3		74.69
6	10,380	75.00	10.9	Upper Marker	113.00

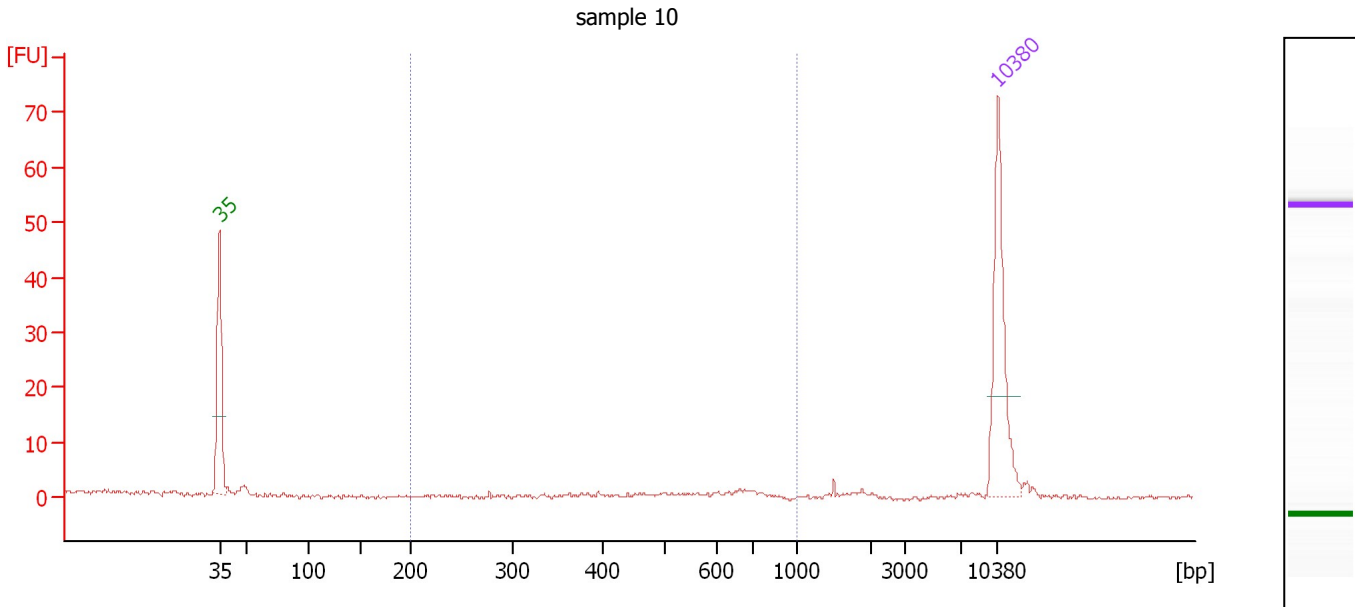
**Region table for sample 9 : 58p**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	580	345	933.7	8,324.6	1,831.59	98	15.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : sample 10**

Number of peaks found: 0                      Corr. Area 1: 3.7  
 Noise: 0.3

**Peak table for sample 10 : sample 10**

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

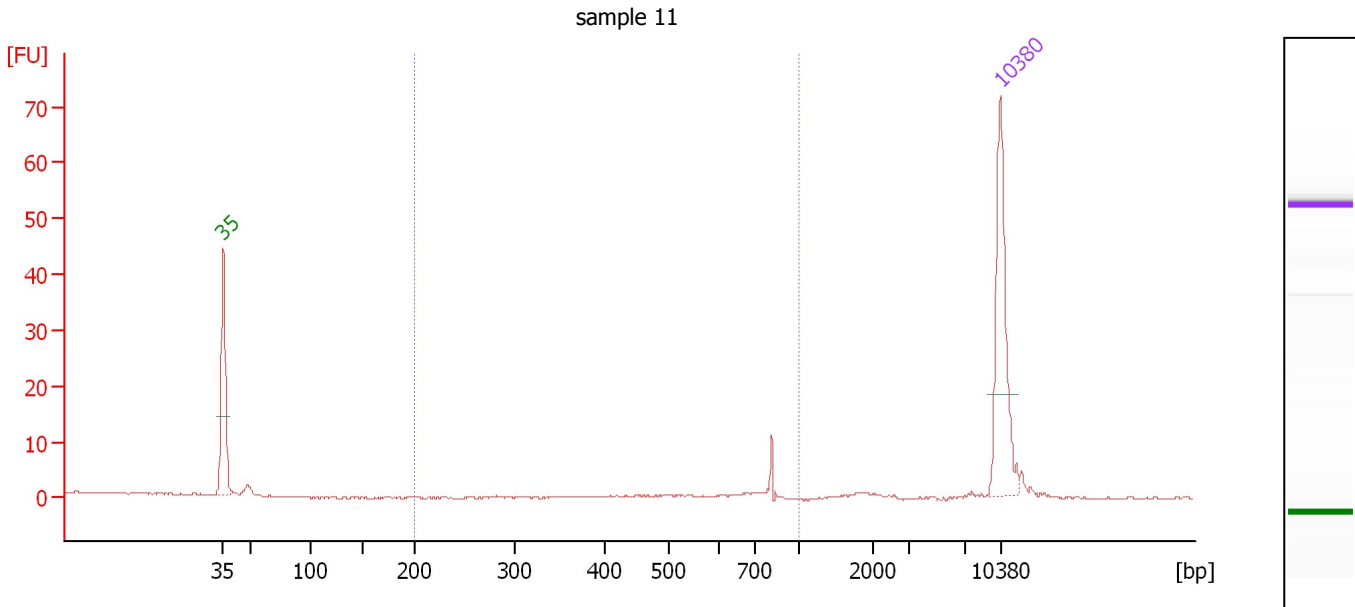
**Region table for sample 10 : sample 10**

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	608	3.7	15.1	5.71	27	17.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
 Modified: 4/4/2016 2:01:15 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : sample 11**

Number of peaks found: 0                      Corr. Area 1: 3.1  
 Noise: 0.1

**Peak table for sample 11 : sample 11**

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

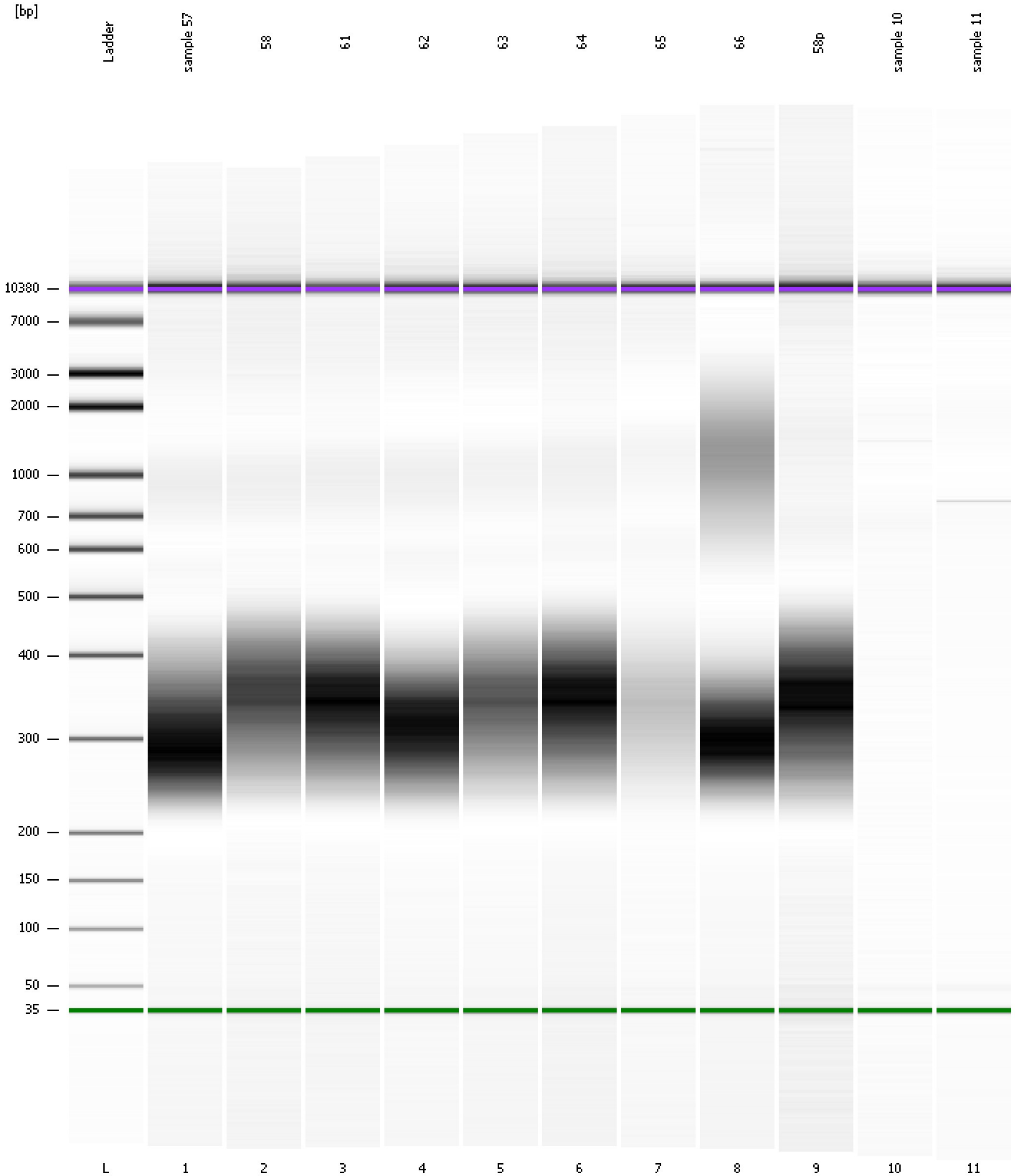
**Region table for sample 11 : sample 11**

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	790	3.1	9.2	4.77	37	5.5

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
Modified: 4/4/2016 2:01:15 PM

**Gel Image**



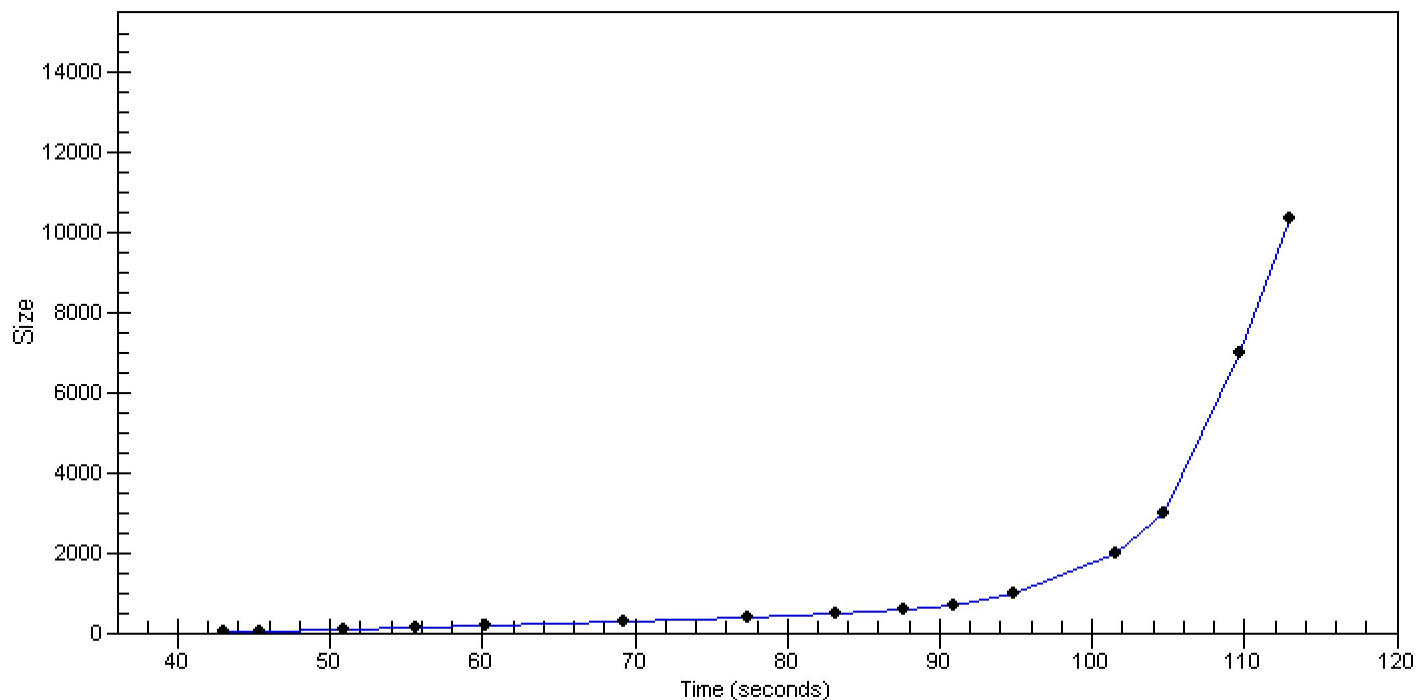


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad

Created: 4/4/2016 1:19:15 PM  
Modified: 4/4/2016 2:01:15 PM

**Curves**

**Standard Curve**



Assay Class: High Sensitivity DNA Assay Created: 4/4/2016 1:19:15 PM  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-04\2016-04-04\_002.xad Modified: 4/4/2016 2:01:15 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		4/4/2016 2:00:32 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\2016-04-04\2016-04-04_002.xad)		Instrument	Run		4/4/2016 1:19:20 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		4/4/2016 1:19:20 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		4/4/2016 1:19:20 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		4/4/2016 1:19:20 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		4/4/2016 1:19:20 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		4/4/2016 1:19:20 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		4/4/2016 1:19:20 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1