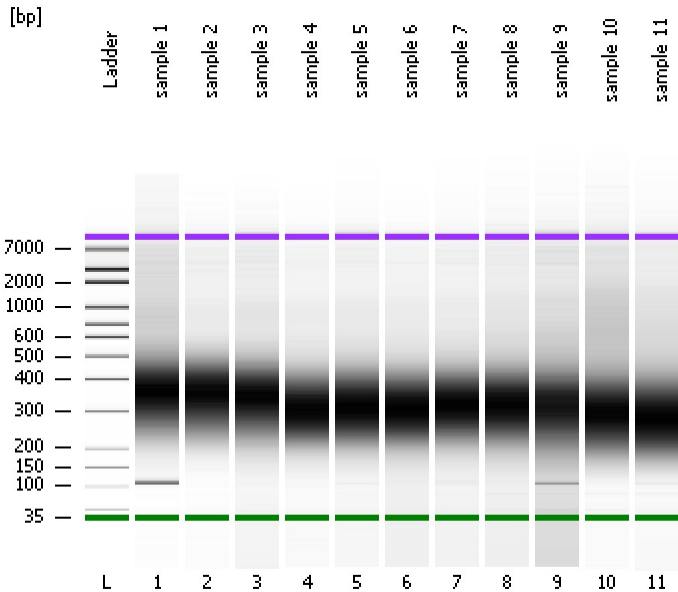


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
Modified: 3/18/2016 12:10:07 PM

### Electrophoresis File Run Summary



#### Instrument Information:

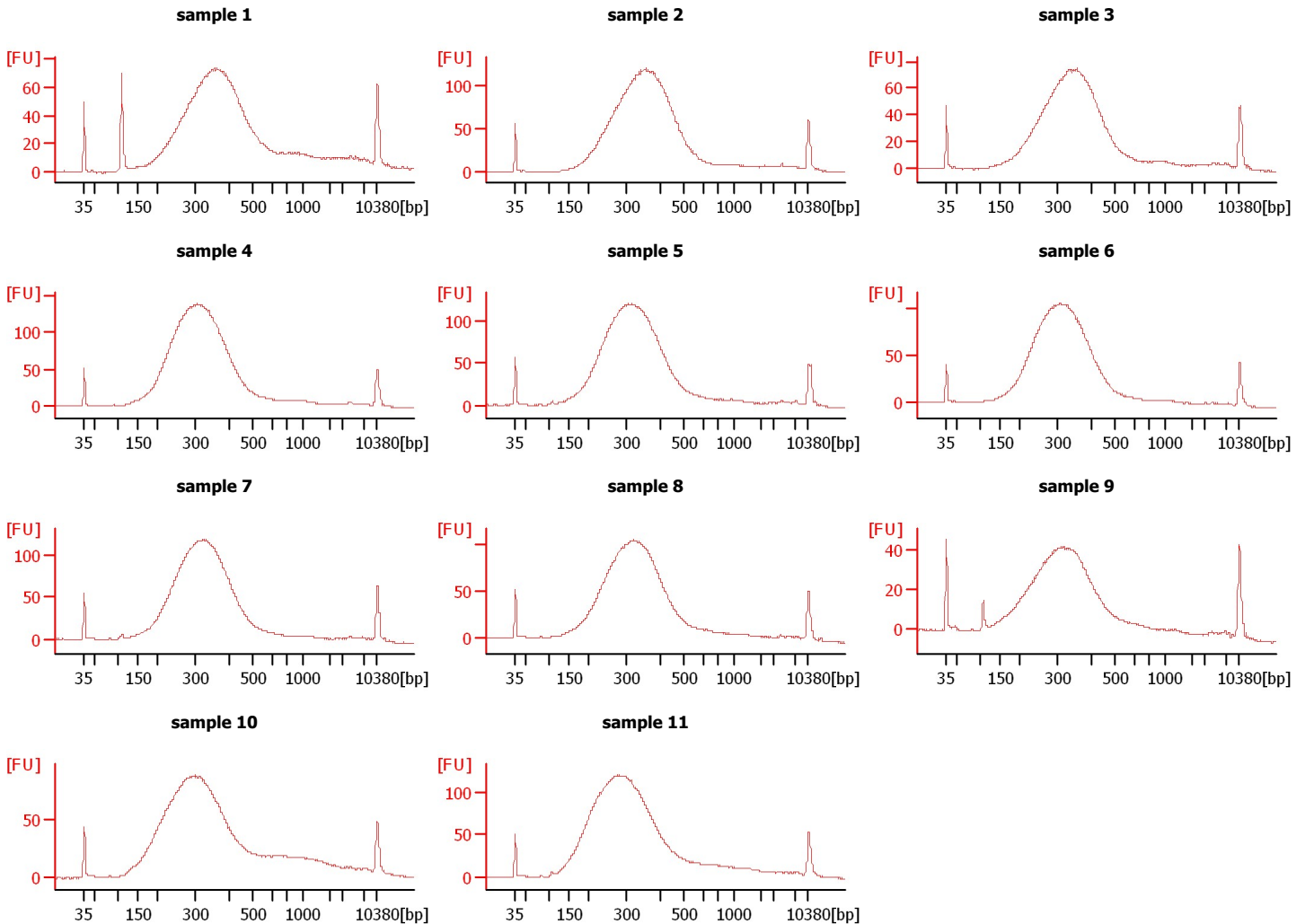
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

#### 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\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 1		<input type="checkbox"/>	✓			
sample 2		<input type="checkbox"/>	✓			
sample 3		<input type="checkbox"/>	✓			
sample 4		<input type="checkbox"/>	✓			
sample 5		<input type="checkbox"/>	✓			
sample 6		<input type="checkbox"/>	✓			
sample 7		<input type="checkbox"/>	✓			
sample 8		<input type="checkbox"/>	✓			
sample 9		<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\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
Modified: 3/18/2016 12:10:07 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

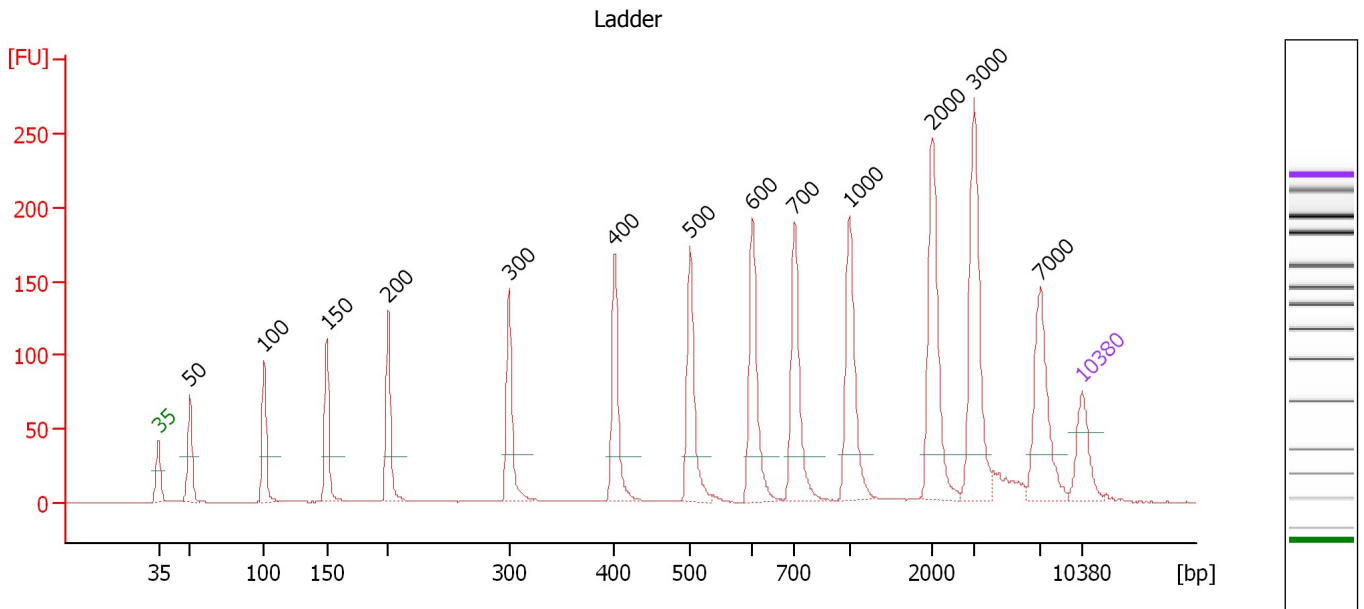
**Ladder**

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\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

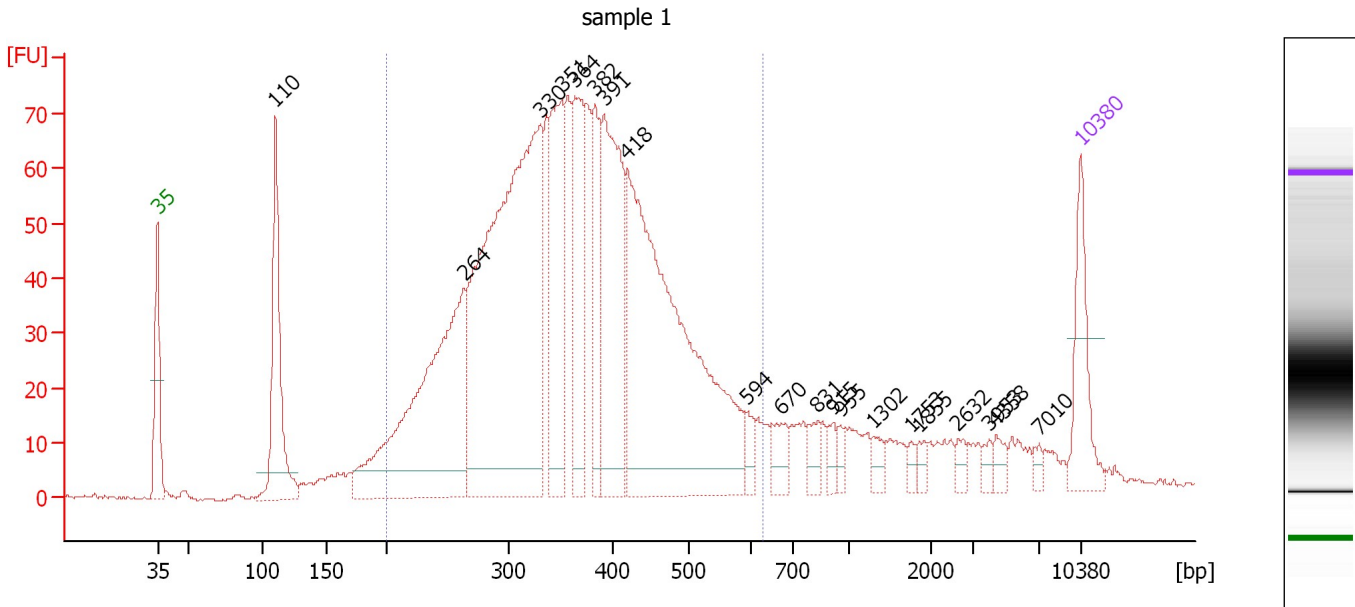
**Peak table for Ladder**

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	45.37
3	100	150.00	2,272.7	Ladder Peak	51.02
4	150	150.00	1,515.2	Ladder Peak	55.75
5	200	150.00	1,136.4	Ladder Peak	60.40
6	300	150.00	757.6	Ladder Peak	69.60
7	400	150.00	568.2	Ladder Peak	77.57
8	500	150.00	454.5	Ladder Peak	83.31
9	600	150.00	378.8	Ladder Peak	88.04
10	700	150.00	324.7	Ladder Peak	91.23
11	1,000	150.00	227.3	Ladder Peak	95.37
12	2,000	150.00	113.6	Ladder Peak	101.71
13	3,000	150.00	75.8	Ladder Peak	104.85
14	7,000	150.00	32.5	Ladder Peak	109.86
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 20                      Corr. Area 1: 1,634.6  
 Noise: 0.4

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

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	110	247.26	3,413.2		51.94
3	264	523.77	3,007.7		66.27
4	330	893.30	4,101.8		71.99
5	351	221.42	954.8		73.69
6	364	192.47	802.3		74.66
7	382	121.51	482.0		76.13
8	391	287.83	1,114.6		76.87
9	418	691.99	2,506.0		78.62
10	594	20.85	53.2		87.75
11	670	35.27	79.7		90.28
12	831	23.40	42.6		93.05
13	915	15.78	26.1		94.20
14	955	12.27	19.5		94.75
15	1,302	15.51	18.0		97.29
16	1,753	8.25	7.1		100.14
17	1,855	9.90	8.1		100.79
18	2,632	10.91	6.3		103.69
19	3,953	9.76	3.7		106.04
20	4,358	13.43	4.7		106.55
21	7,010	8.59	1.9		109.87
22	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**

... Region table for sample 1 :

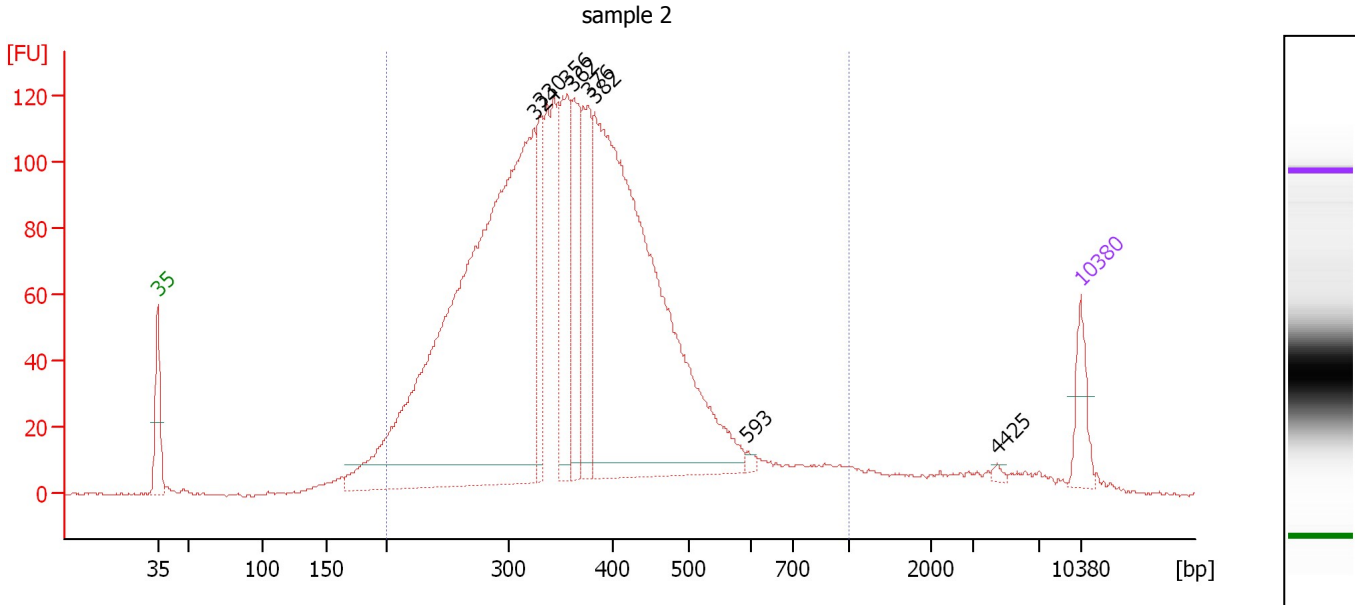
sample 1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	625	368	1,634.6	14,462.4	■ 3,236.14	81	24.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 8                      Corr. Area 1: 2,738.8  
 Noise: 0.4

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

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	324	2,508.80	11,718.3		71.54
3	330	222.37	1,020.6		72.00
4	356	357.01	1,519.5		74.06
5	362	281.74	1,180.1		74.52
6	376	284.20	1,146.6		75.62
7	382	1,876.53	7,445.7		76.12
8	593	10.73	27.4		87.71
9	4,425	7.36	2.5		106.63
10	10,380	75.00	10.9	Upper Marker	113.00

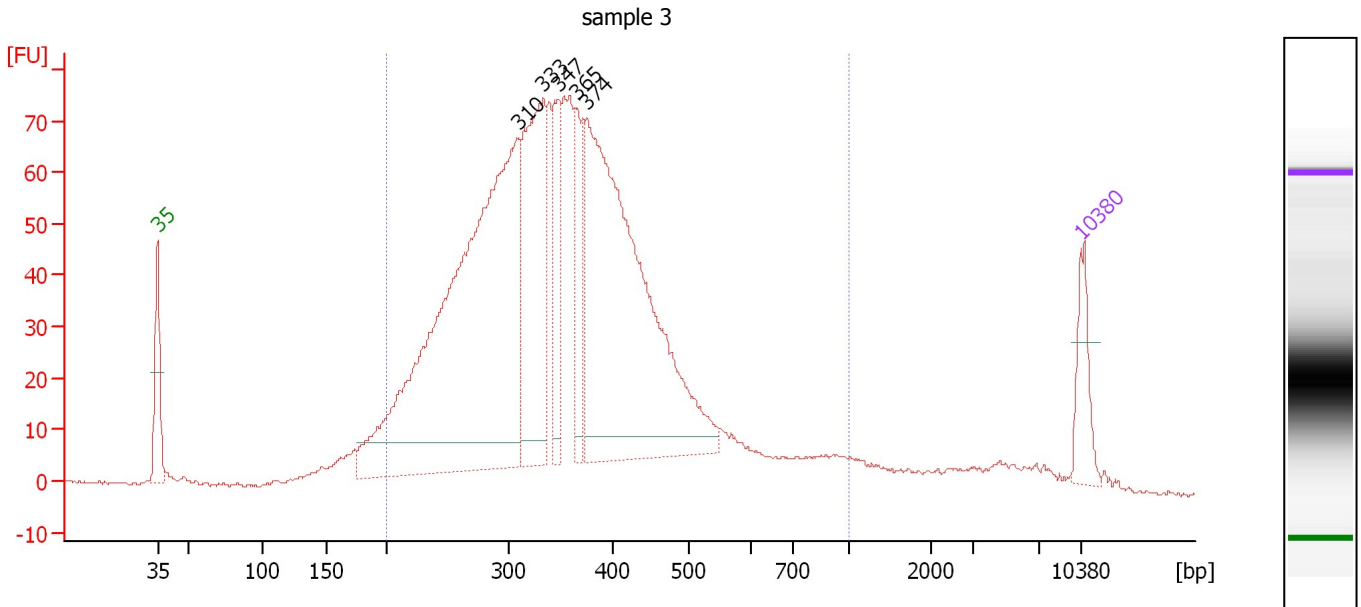
**Region table for sample 2 : sample 2**

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	371	2,738.8	29,552.6	6,564.84	93	29.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 5                      Corr. Area 1: 1,718.6  
 Noise: 0.4

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

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	310	1,601.77	7,839.3		70.36
3	333	511.93	2,330.5		72.21
4	347	167.94	732.6		73.37
5	365	144.40	599.8		74.76
6	374	1,164.53	4,717.0		75.50
7	10,380	75.00	10.9	Upper Marker	113.00

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

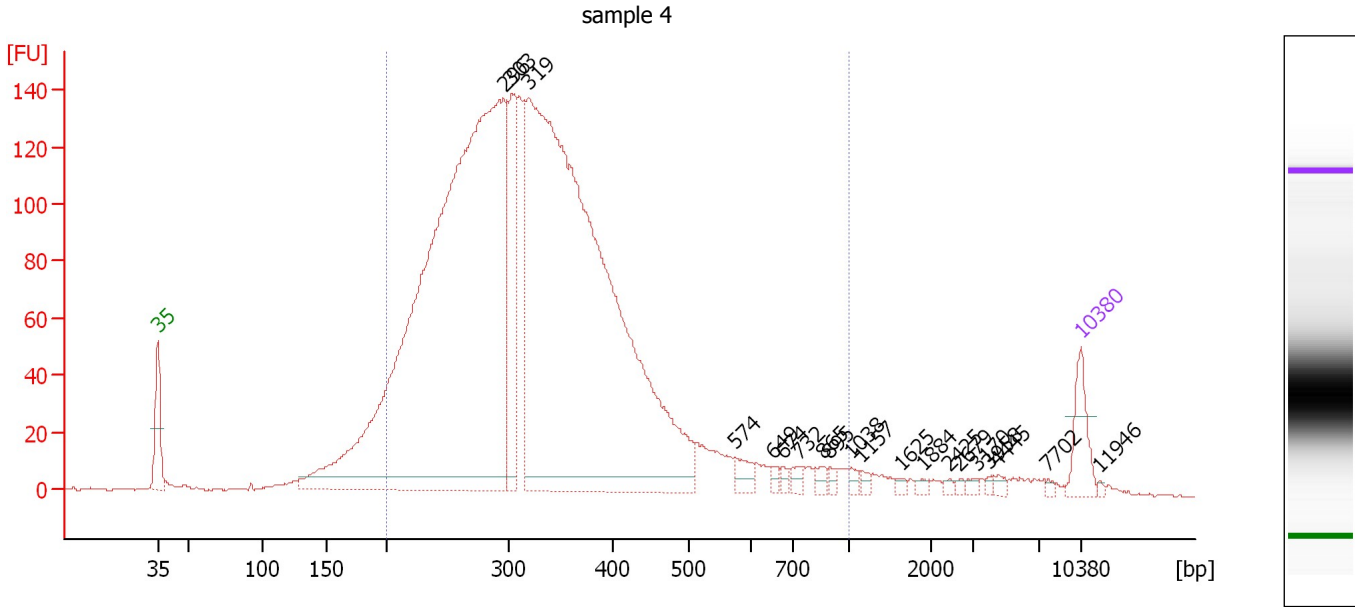
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	367	1,718.6	21,222.0	4,630.51	91	31.6



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : sample 4**

Number of peaks found: 20                      Corr. Area 1: 3,122.0  
 Noise: 0.4

**Peak table for sample 4 : sample 4**

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	3,408.84	17,428.2		69.26
3	303	309.25	1,547.1		69.83
4	319	3,218.66	15,298.2		71.09
5	574	38.86	102.5		86.83
6	649	13.38	31.2		89.60
7	674	12.26	27.6		90.40
8	732	19.71	40.8		91.67
9	865	17.43	30.5		93.50
10	895	11.76	19.9		93.93
11	1,038	13.36	19.5		95.62
12	1,157	10.94	14.3		96.37
13	1,625	8.52	7.9		99.33
14	1,884	8.84	7.1		100.97
15	2,425	7.02	4.4		103.04
16	2,679	5.36	3.0		103.84
17	3,170	9.06	4.3		105.06
18	3,958	5.88	2.3		106.05
19	4,445	10.04	3.4		106.66
20	7,702	5.32	1.0		110.51
21	10,380	75.00	10.9	Upper Marker	113.00
22	11,946	0.00	0.0		114.46

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**

... Region table for sample 4 :

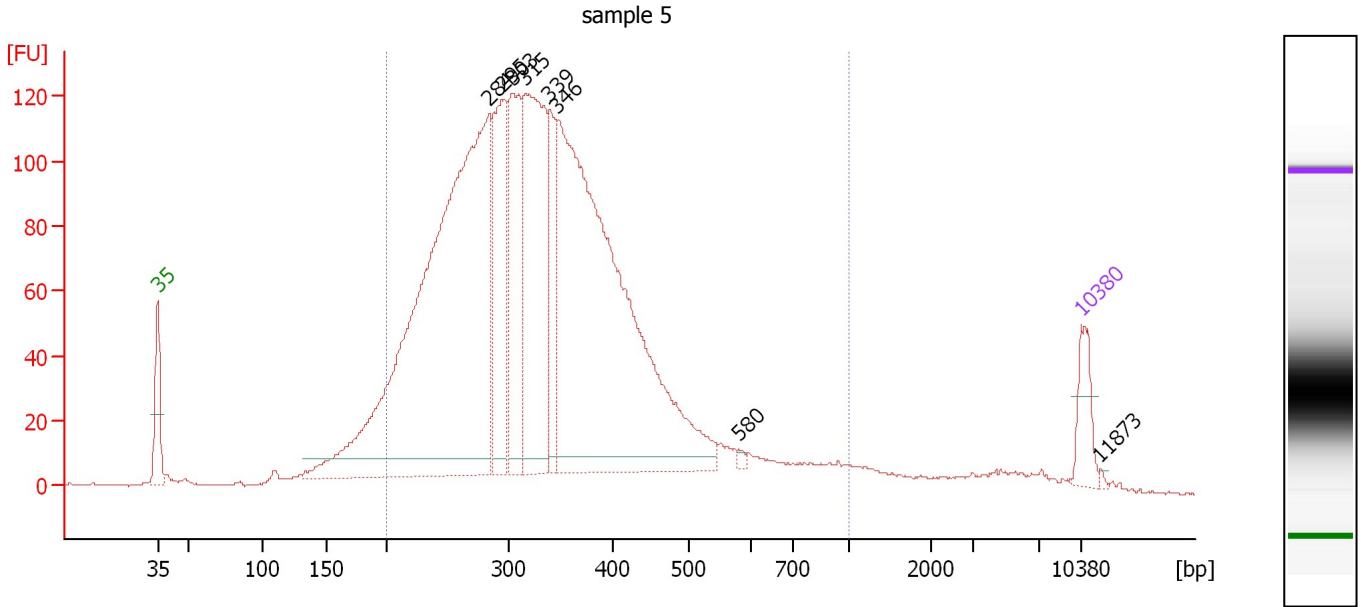
sample 4

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	339	3,122.0	35,401.4	7,190.82	91	32.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : sample 5**

Number of peaks found: 8                      Corr. Area 1: 2,810.7  
 Noise: 0.3

**Peak table for sample 5 : sample 5**

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	284	2,309.91	12,318.0		68.14
3	295	432.22	2,223.5		69.09
4	303	413.99	2,068.1		69.86
5	315	739.72	3,554.5		70.82
6	339	213.50	953.2		72.73
7	346	1,899.04	8,317.1		73.26
8	580	9.74	25.4		87.10
9	10,380	75.00	10.9	Upper Marker	113.00
10	11,873	0.00	0.0		114.39

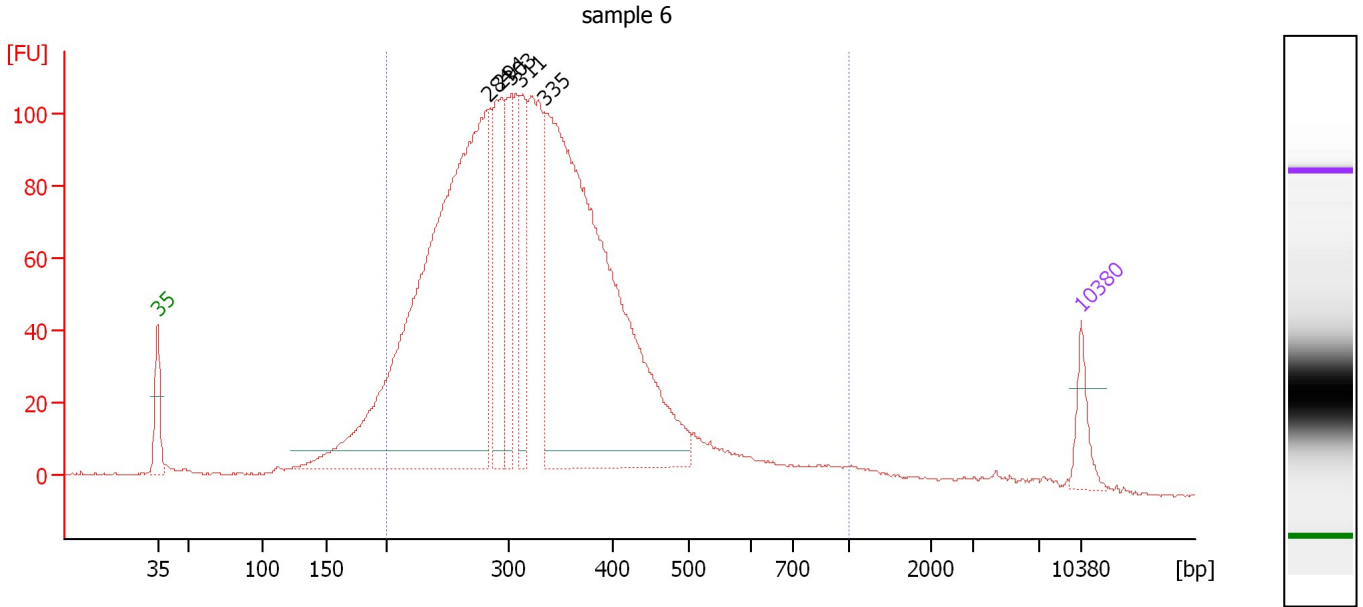
**Region table for sample 5 : sample 5**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	346	2,810.7	31,188.0	6,431.53	90	32.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : sample 6**

Number of peaks found: 5                      Corr. Area 1: 2,410.8  
 Noise: 0.3

**Peak table for sample 6 : sample 6**

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	284	2,640.81	14,093.3		68.12
3	294	416.14	2,145.6		69.03
4	303	282.48	1,414.4		69.80
5	311	276.59	1,347.2		70.48
6	335	2,296.49	10,378.5		72.41
7	10,380	75.00	10.9	Upper Marker	113.00

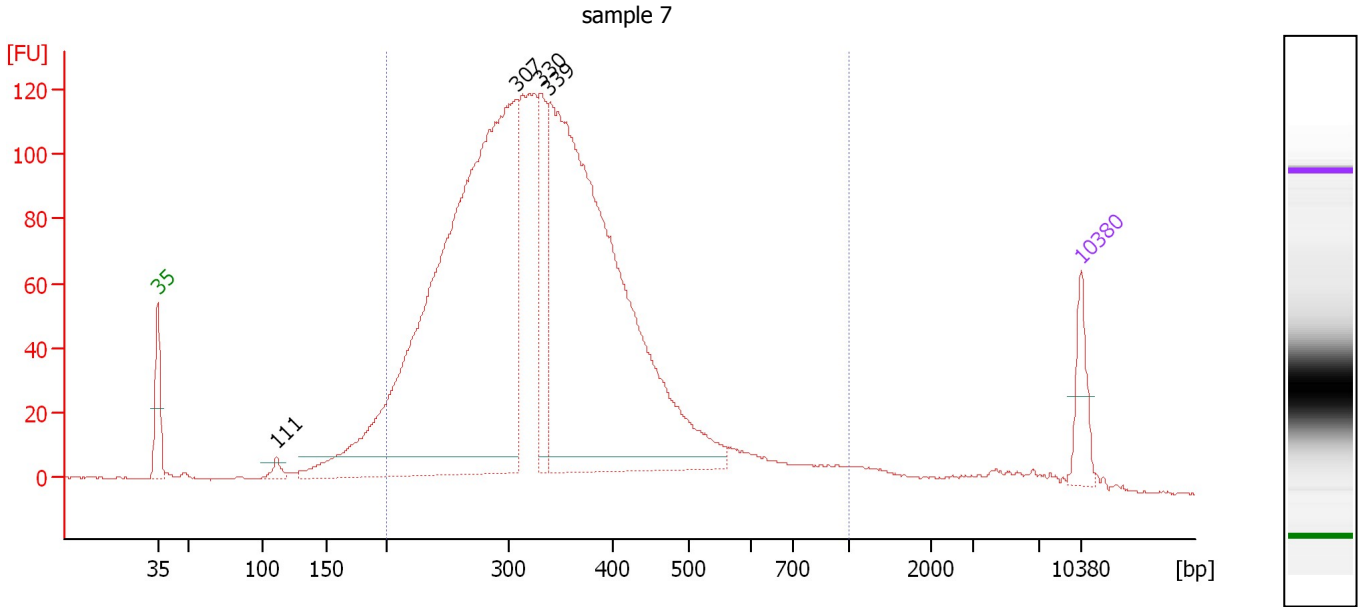
**Region table for sample 6 : sample 6**

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	338	2,410.8	35,317.8	7,183.38	91	31.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : sample 7**

Number of peaks found: 4                      Corr. Area 1: 2,659.3  
 Noise: 0.3

**Peak table for sample 7 : sample 7**

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	111	27.87	381.2		52.04
3	307	2,438.55	12,032.8		70.16
4	330	243.71	1,117.8		72.02
5	339	1,984.15	8,869.9		72.70
6	10,380	75.00	10.9	Upper Marker	113.00

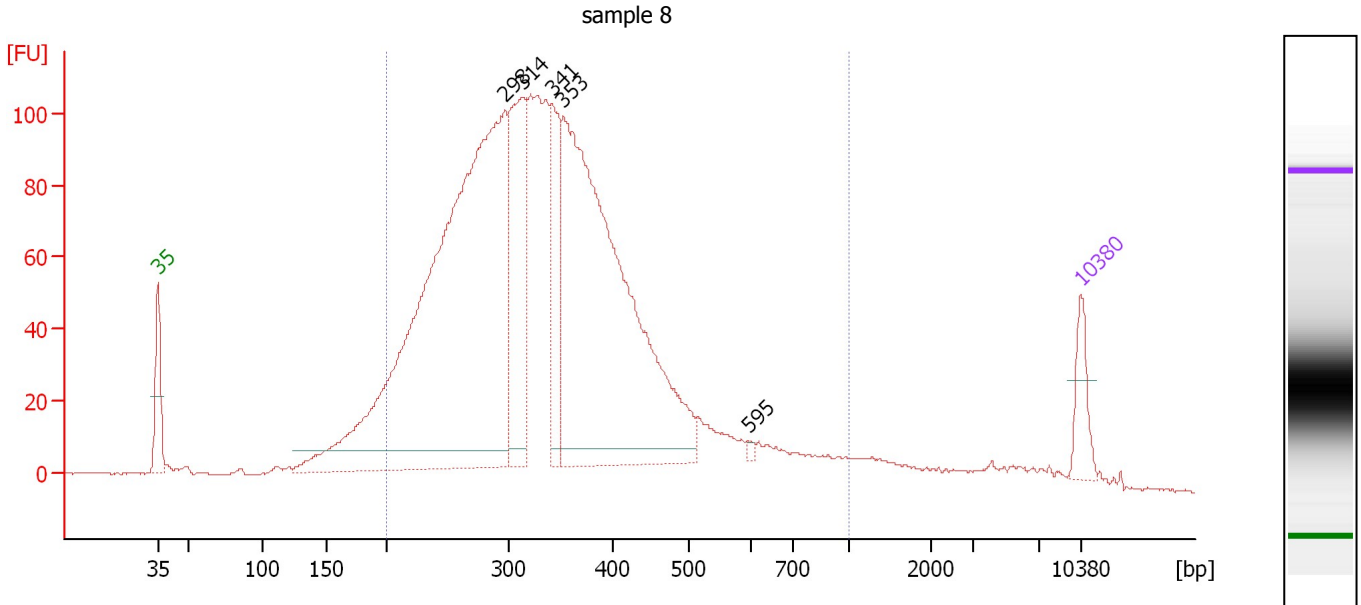
**Region table for sample 7 : sample 7**

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	347	2,659.3	26,508.6	5,527.98	91	30.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : sample 8**

Number of peaks found: 5                      Corr. Area 1: 2,443.5  
 Noise: 0.3

**Peak table for sample 8 : sample 8**

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	298	2,538.72	12,918.0		69.39
3	314	486.83	2,348.1		70.72
4	341	263.57	1,169.8		72.89
5	353	1,718.34	7,385.8		73.78
6	595	8.03	20.4		87.79
7	10,380	75.00	10.9	Upper Marker	113.00

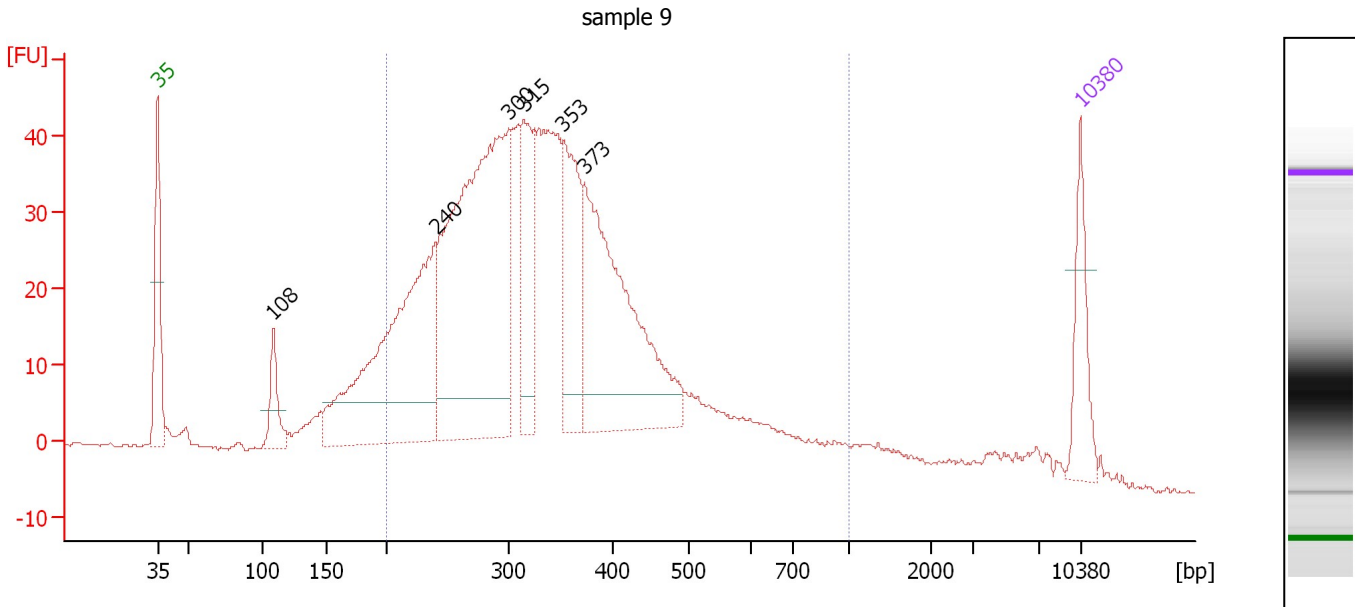
**Region table for sample 8 : sample 8**

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	351	2,443.5	29,436.2	6,150.95	90	32.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

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 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : sample 9**

Number of peaks found: 6                      Corr. Area 1: 1,072.3  
 Noise: 0.3

**Peak table for sample 9 : sample 9**

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	108	73.88	1,037.0		51.77
3	240	566.39	3,574.7		64.08
4	300	805.61	4,068.1		69.60
5	315	177.78	853.8		70.83
6	353	196.46	844.2		73.79
7	373	453.50	1,842.2		75.41
8	10,380	75.00	10.9	Upper Marker	113.00

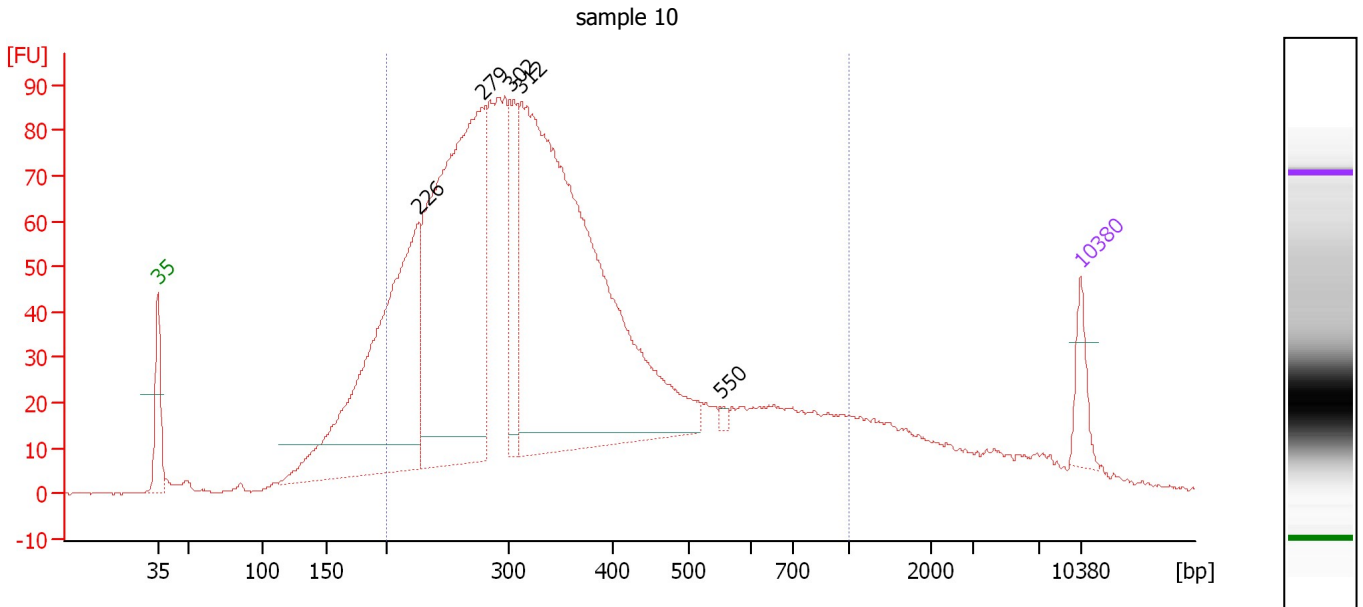
**Region table for sample 9 : sample 9**

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	355	1,072.3	14,609.4	3,040.45	84	34.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 5                      Corr. Area 1: 2,214.8  
 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	226	1,327.62	8,907.2		62.77
3	279	1,720.59	9,342.9		67.67
4	302	240.67	1,208.1		69.74
5	312	2,469.70	12,002.4		70.54
6	550	10.90	30.0		85.66
7	10,380	75.00	10.9	Upper Marker	113.00

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

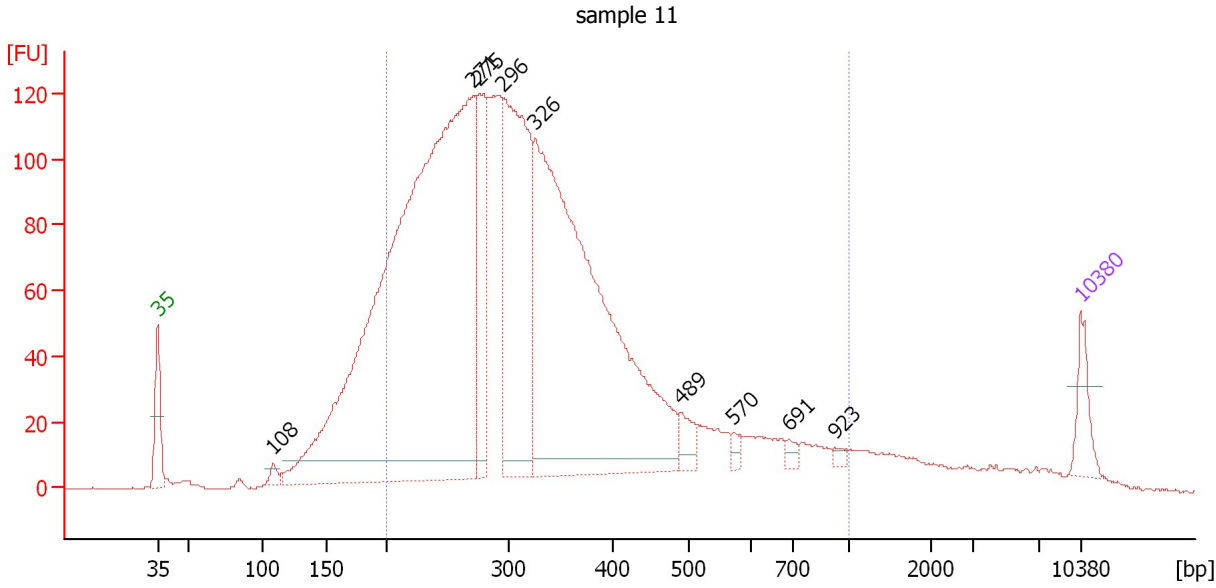
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	366	2,214.8	35,426.5	7,308.11	81	41.2



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 9                      Corr. Area 1: 2,882.8  
 Noise: 0.3

**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	108	25.59	358.9		51.77
3	271	3,564.97	19,919.3		66.94
4	275	397.99	2,189.0		67.34
5	296	967.65	4,953.9		69.23
6	326	2,160.49	10,047.2		71.65
7	489	65.10	201.8		82.66
8	570	17.92	47.6		86.63
9	691	19.80	43.4		90.94
10	923	12.32	20.2		94.31
11	10,380	75.00	10.9	Upper Marker	113.00

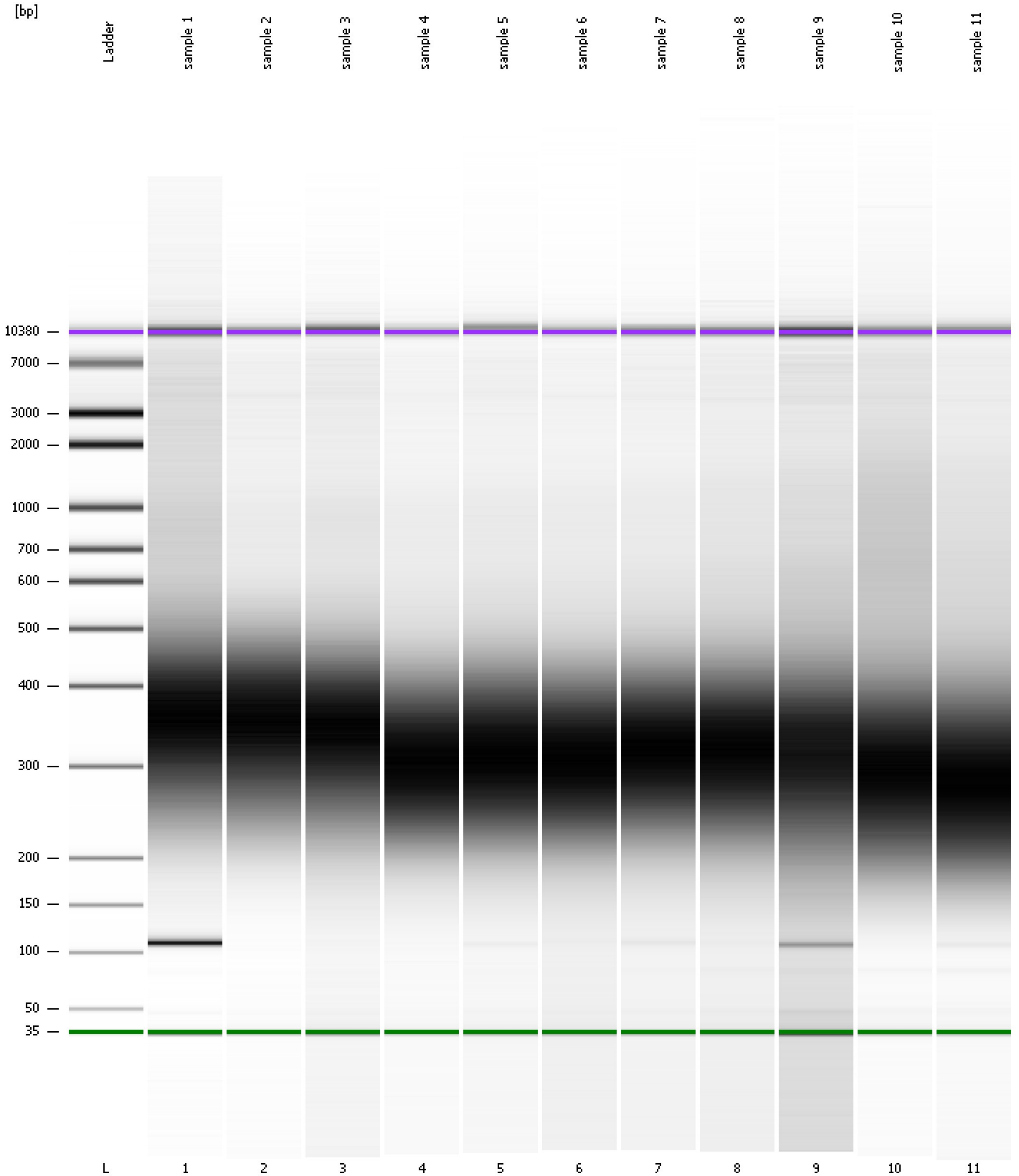
**Region table for sample 11 : sample 11**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	342	2,882.8	38,919.9	7,701.13	83	38.3

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
Modified: 3/18/2016 12:10:07 PM

**Gel Image**

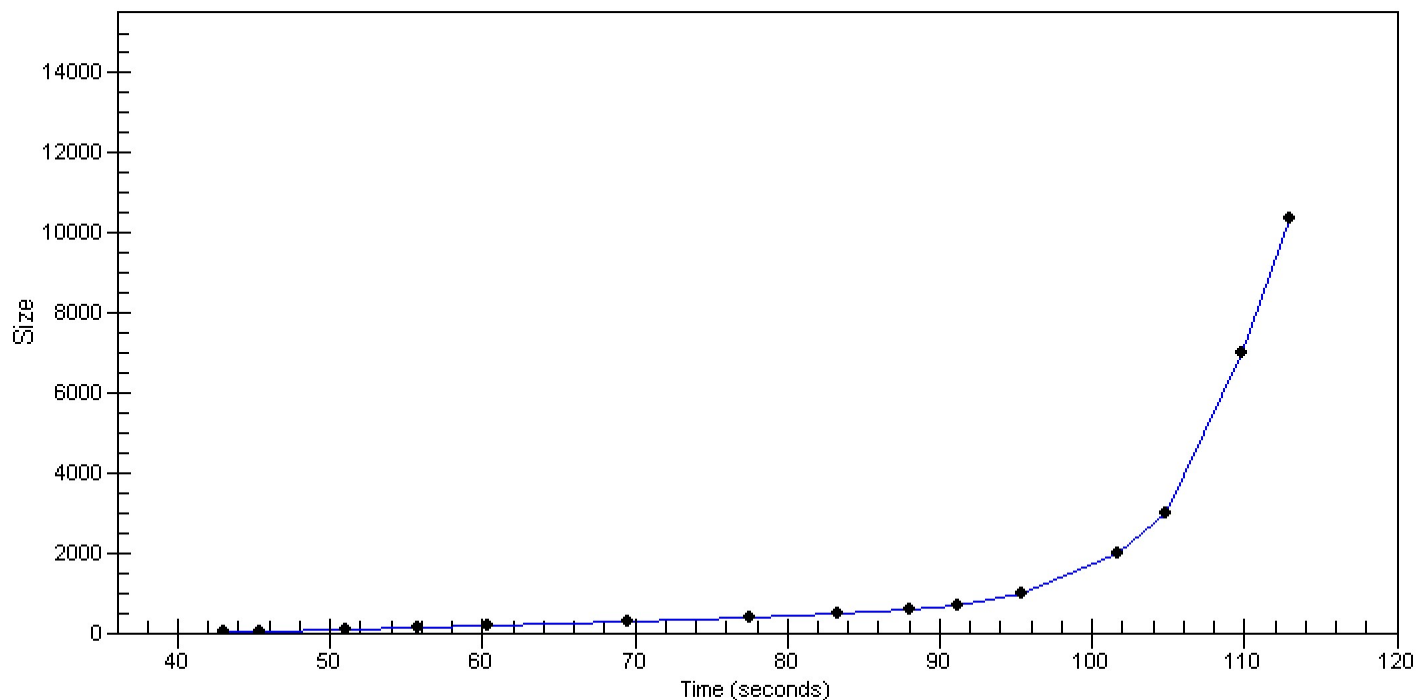


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
Modified: 3/18/2016 12:10:07 PM

**Curves**

**Standard Curve**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-18\2016-03-18\_002.xad

Created: 3/18/2016 11:29:39 AM  
 Modified: 3/18/2016 12:10:07 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		3/18/2016 12:10:06 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\2016-03-18\2016-03-18_002.xad)		Instrument	Run		3/18/2016 11:29:45 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/18/2016 11:29:45 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/18/2016 11:29:45 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/18/2016 11:29:45 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/18/2016 11:29:45 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/18/2016 11:29:45 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/18/2016 11:29:45 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1