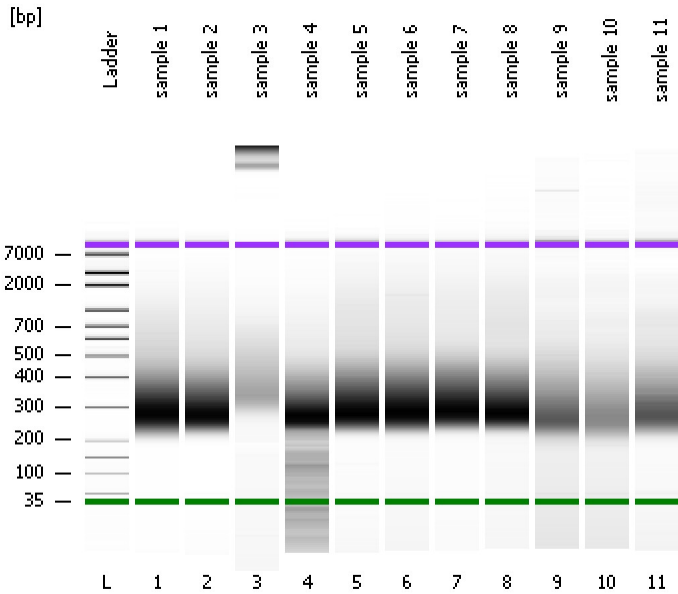


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
Modified: 6/15/2016 3:52:32 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

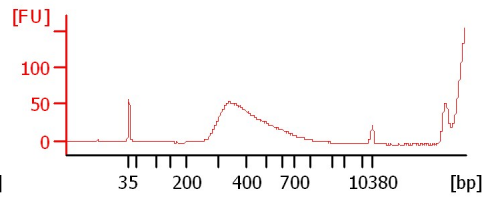
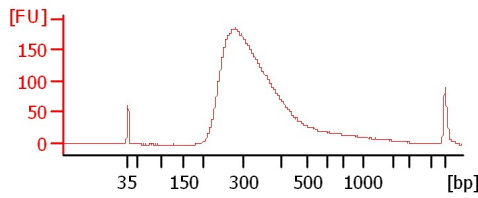
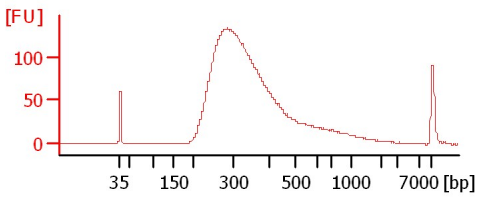
Chip Information:

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

sample 1

sample 2

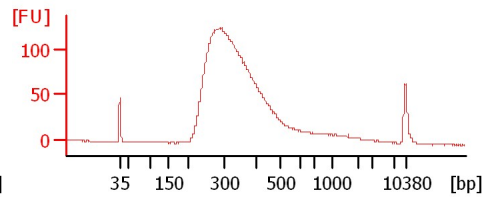
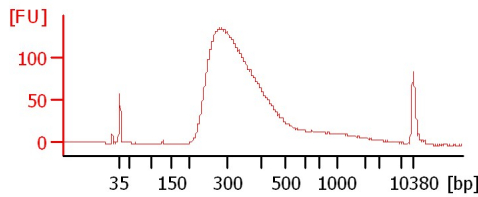
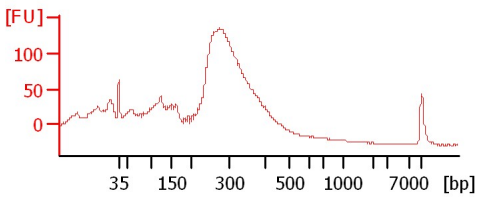
sample 3



sample 4

sample 5

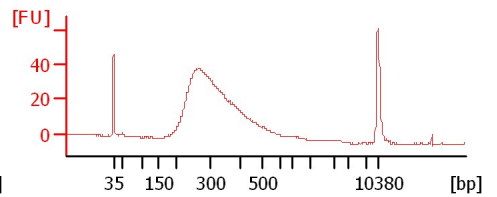
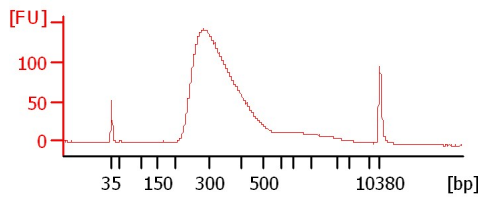
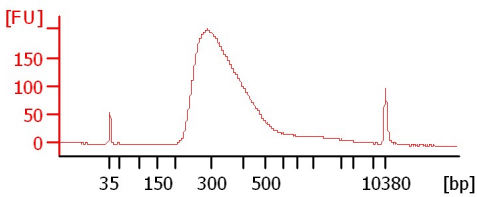
sample 6



sample 7

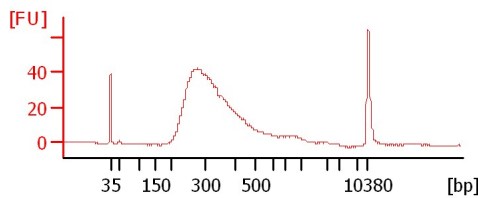
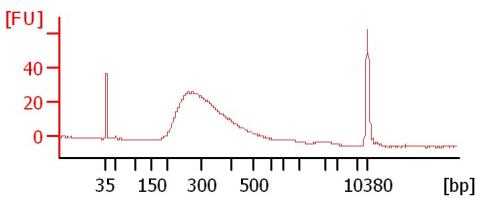
sample 8

sample 9



sample 10

sample 11



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 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\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
Modified: 6/15/2016 3:52:32 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

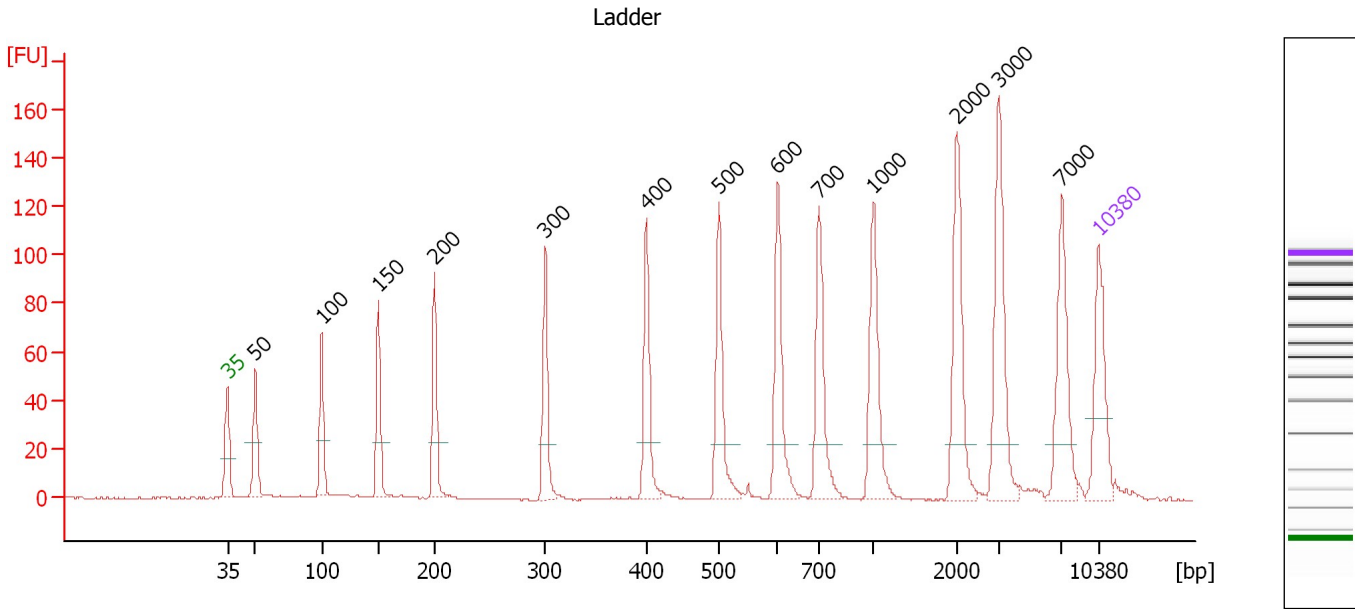
Ladder

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\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
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Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

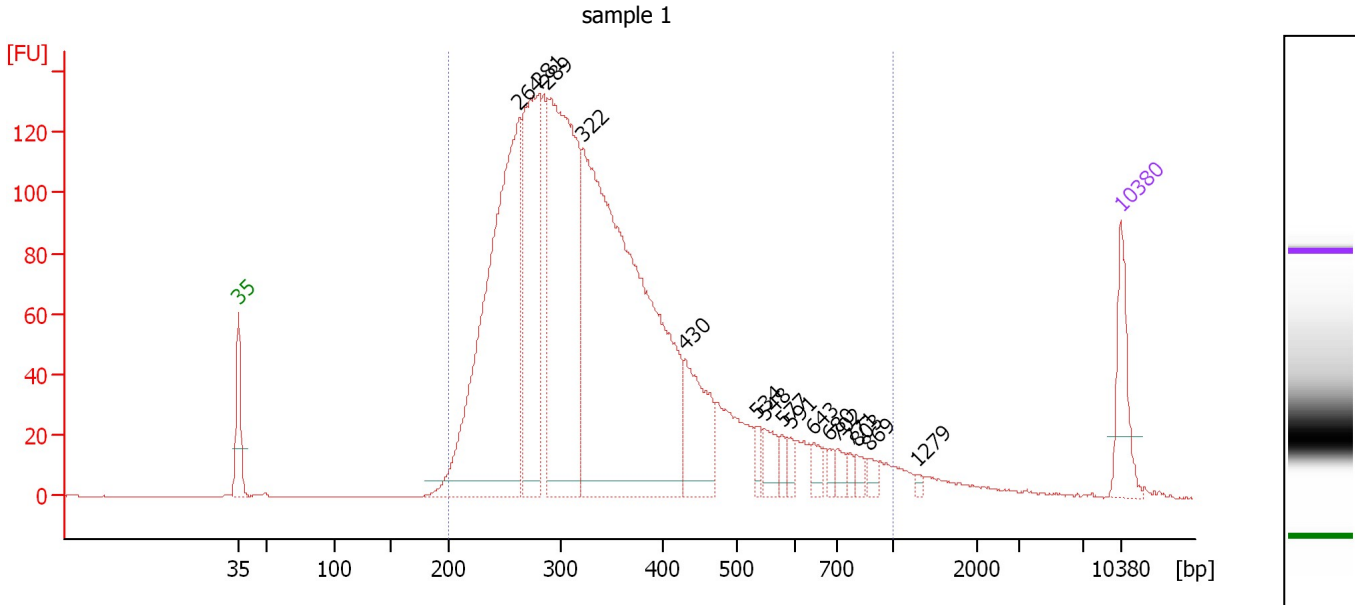
Peak table for Ladder

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	45.23
3	100	150.00	2,272.7	Ladder Peak	50.58
4	150	150.00	1,515.2	Ladder Peak	55.12
5	200	150.00	1,136.4	Ladder Peak	59.62
6	300	150.00	757.6	Ladder Peak	68.53
7	400	150.00	568.2	Ladder Peak	76.67
8	500	150.00	454.5	Ladder Peak	82.50
9	600	150.00	378.8	Ladder Peak	87.21
10	700	150.00	324.7	Ladder Peak	90.51
11	1,000	150.00	227.3	Ladder Peak	94.92
12	2,000	150.00	113.6	Ladder Peak	101.65
13	3,000	150.00	75.8	Ladder Peak	104.99
14	7,000	150.00	32.5	Ladder Peak	110.04
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : sample 1

Number of peaks found: 16 Corr. Area 1: 2,876.9
 Noise: 0.2

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	264	986.21	5,668.4		65.29
3	281	465.35	2,511.9		66.81
4	289	798.56	4,190.0		67.53
5	322	1,383.96	6,512.1		70.32
6	430	170.09	598.7		78.44
7	534	20.04	56.8		84.11
8	548	42.22	116.8		84.75
9	577	19.06	50.0		86.14
10	591	15.53	39.8		86.78
11	643	22.03	51.9		88.64
12	680	12.60	28.0		89.86
13	702	17.72	38.2		90.54
14	771	10.84	21.3		91.56
15	803	16.24	30.7		92.02
16	869	13.73	23.9		92.99
17	1,279	5.80	6.9		96.80
18	10,380	75.00	10.9	Upper Marker	113.00

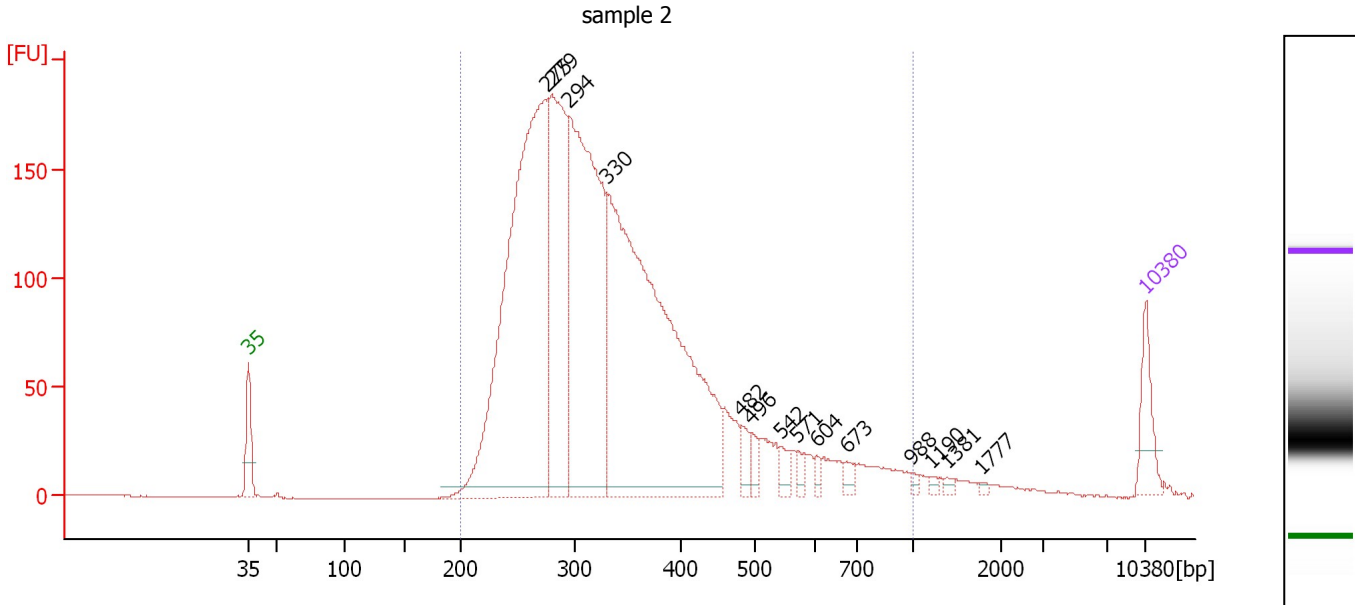
Region table for sample 1 : sample 1

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	357	2,876.9	20,477.6	4,272.44	98	35.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : sample 2

Number of peaks found: 14 Corr. Area 1: 3,624.3
 Noise: 0.3

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	275	1,716.43	9,445.9		66.33
3	279	719.49	3,906.6		66.67
4	294	1,164.63	5,992.7		68.04
5	330	1,805.40	8,296.7		70.95
6	482	39.89	125.3		81.47
7	496	31.59	96.5		82.26
8	542	31.99	89.5		84.47
9	571	17.36	46.1		85.84
10	604	16.12	40.5		87.34
11	673	21.57	48.6		89.63
12	988	8.79	13.5		94.74
13	1,190	8.33	10.6		96.20
14	1,381	8.05	8.8		97.49
15	1,777	4.66	4.0		100.15
16	10,380	75.00	10.9	Upper Marker	113.00

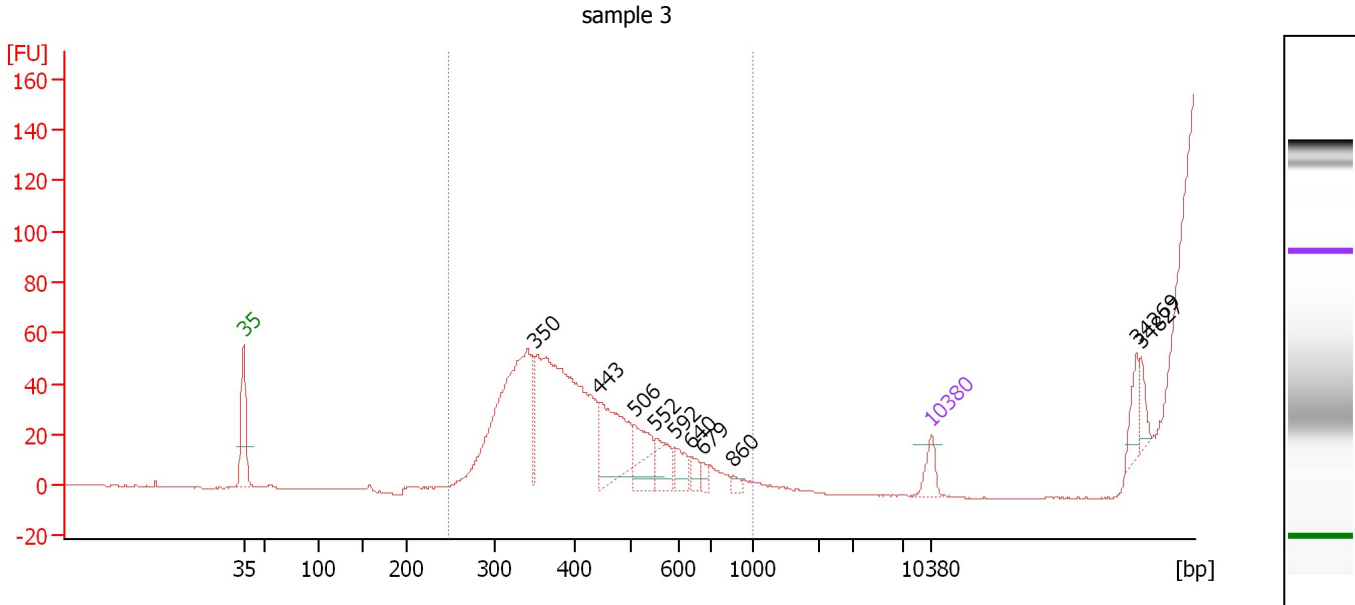
Region table for sample 2 : sample 2

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	349	3,624.3	27,842.9	5,767.48	98	33.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : sample 3

Number of peaks found: 10 Corr. Area 1: 0.5
 Noise: 0.3

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	350	52.56	227.8		72.57
3	443	638.16	2,181.2		79.19
4	506	266.69	798.8		82.78
5	552	162.47	446.0		84.95
6	592	114.48	292.9		86.84
7	640	67.74	160.4		88.53
8	679	39.83	88.8		89.83
9	860	26.95	47.5		92.87
10	10,380	75.00	10.9	Upper Marker	113.00
11	34,269	0.00	0.0		133.89
12	34,827	0.00	0.0		134.38

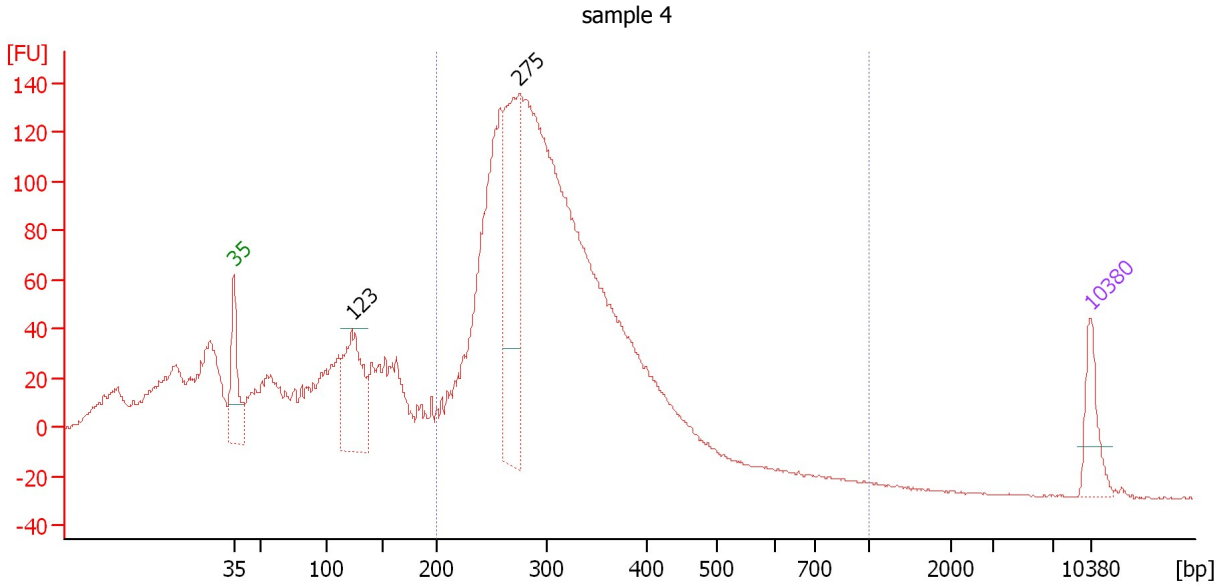
Region table for sample 3 : sample 3

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
247	1,000	341	0.5	11.6	2.60	100	0.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 4 : sample 4

Height Threshold [FU] : 50

Overall Results for sample 4 : sample 4

Number of peaks found: 2 Corr. Area 1: 2,361.6
 Noise: 0.4

Peak table for sample 4 : sample 4

Pea k	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	123	343.02	4,240.2		52.63
3	275	508.06	2,797.6		66.32
4	10,380	75.00	10.9	Upper Marker	113.00

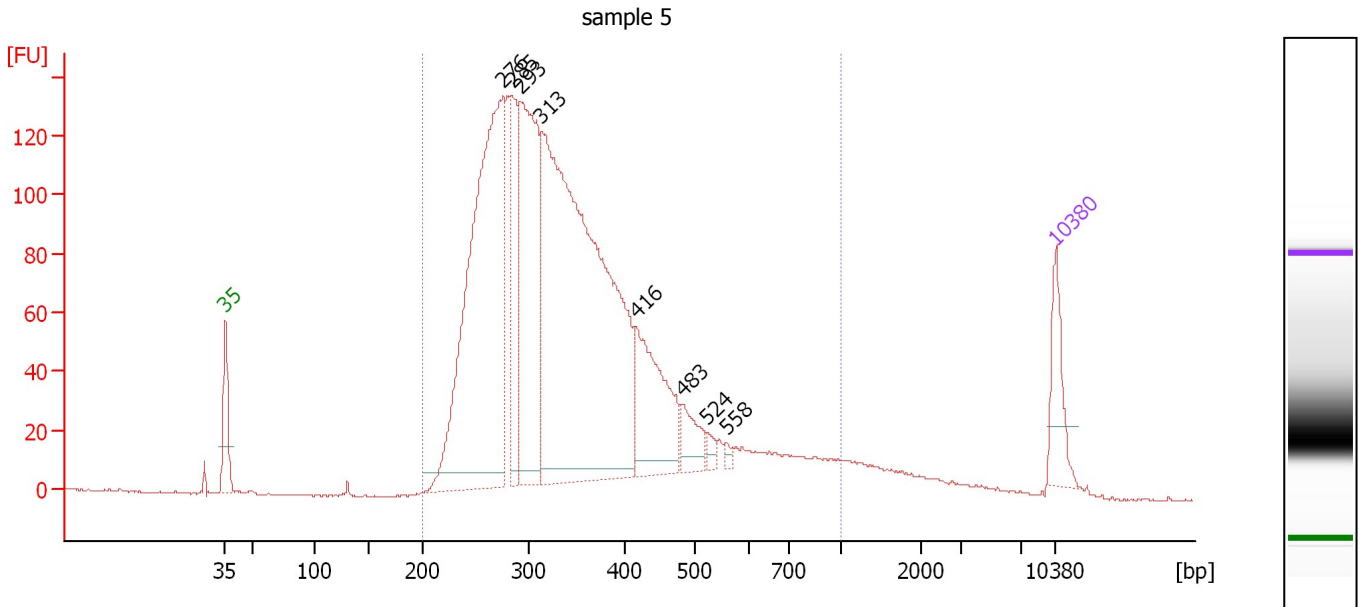
Region table for sample 4 : sample 4

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	309	2,361.6	19,406.8	3,782.61	64	19.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : sample 5

Number of peaks found: 8 Corr. Area 1: 2,759.7
 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	276	1,057.99	5,801.1		66.42
3	285	213.79	1,137.0		67.19
4	293	535.31	2,763.6		67.95
5	313	1,515.07	7,327.0		69.62
6	416	259.85	945.9		77.62
7	483	65.79	206.2		81.53
8	524	14.99	43.3		83.64
9	558	8.80	23.9		85.22
10	10,380	75.00	10.9	Upper Marker	113.00

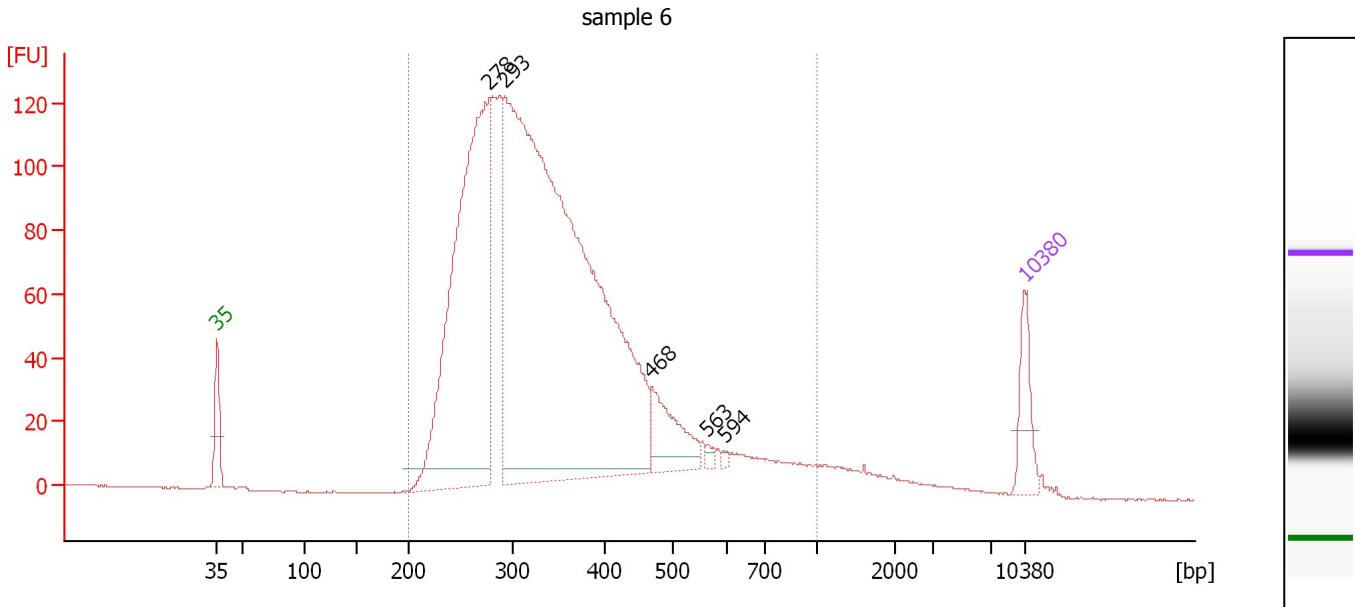
Region table for sample 5 : sample 5

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	361	2,759.7	19,727.8	4,205.30	96	34.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : sample 6

Number of peaks found: 5 Corr. Area 1: 2,526.3
 Noise: 0.2

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	278	1,306.65	7,114.9		66.59
3	293	2,757.93	14,247.8		67.93
4	468	151.53	490.6		80.63
5	563	10.96	29.5		85.48
6	594	6.30	16.1		86.91
7	10,380	75.00	10.9	Upper Marker	113.00

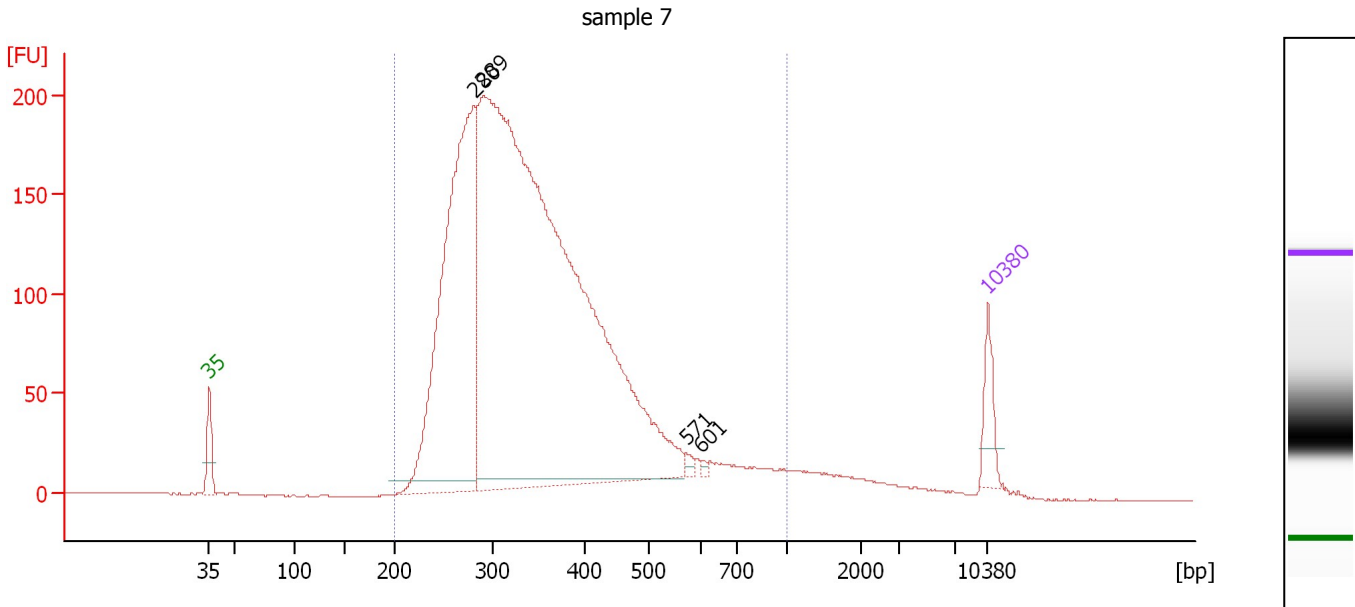
Region table for sample 6 : sample 6

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	356	2,526.3	22,115.2	4,692.08	97	32.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : sample 7

Number of peaks found: 4 Corr. Area 1: 3,927.9
 Noise: 0.2

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	280	1,590.78	8,597.6		66.78
3	289	4,611.15	24,134.2		67.60
4	571	15.08	40.0		85.86
5	601	7.04	17.7		87.25
6	10,380	75.00	10.9	Upper Marker	113.00

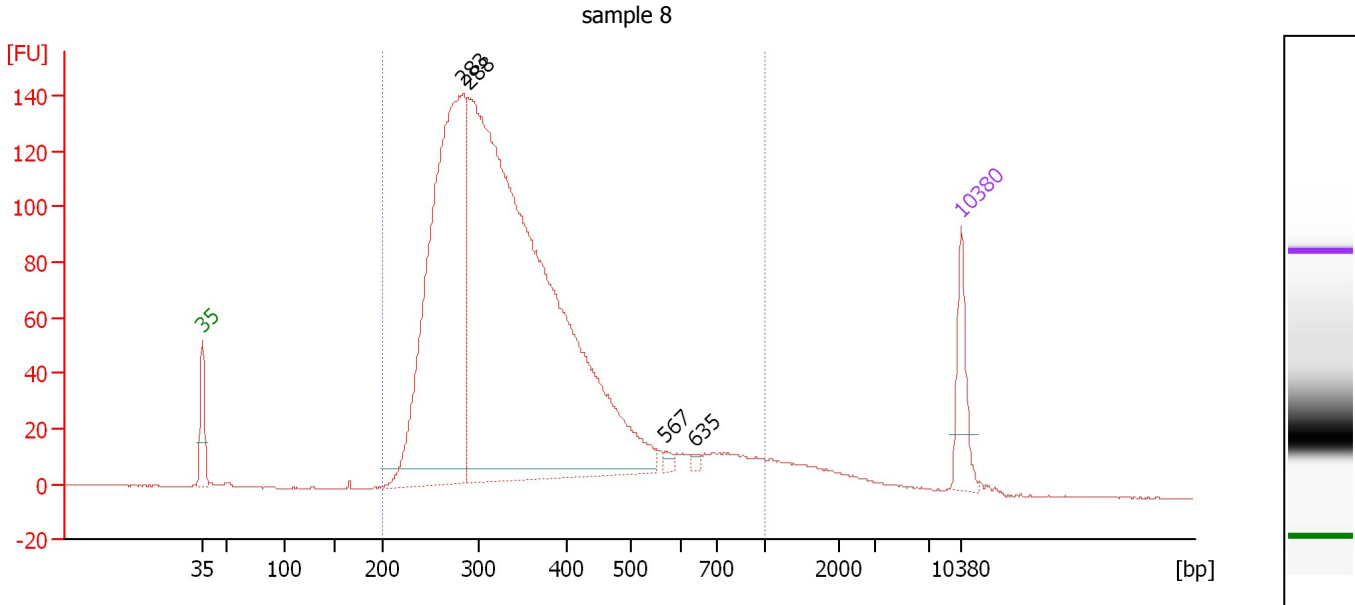
Region table for sample 7 : sample 7

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	360	3,927.9	28,338.8	6,112.14	97	31.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : sample 8

Number of peaks found: 4 Corr. Area 1: 2,645.0
 Noise: 0.2

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	283	1,236.73	6,611.6		67.05
3	288	2,526.90	13,276.1		67.50
4	567	10.13	27.1		85.65
5	635	6.98	16.7		88.35
6	10,380	75.00	10.9	Upper Marker	113.00

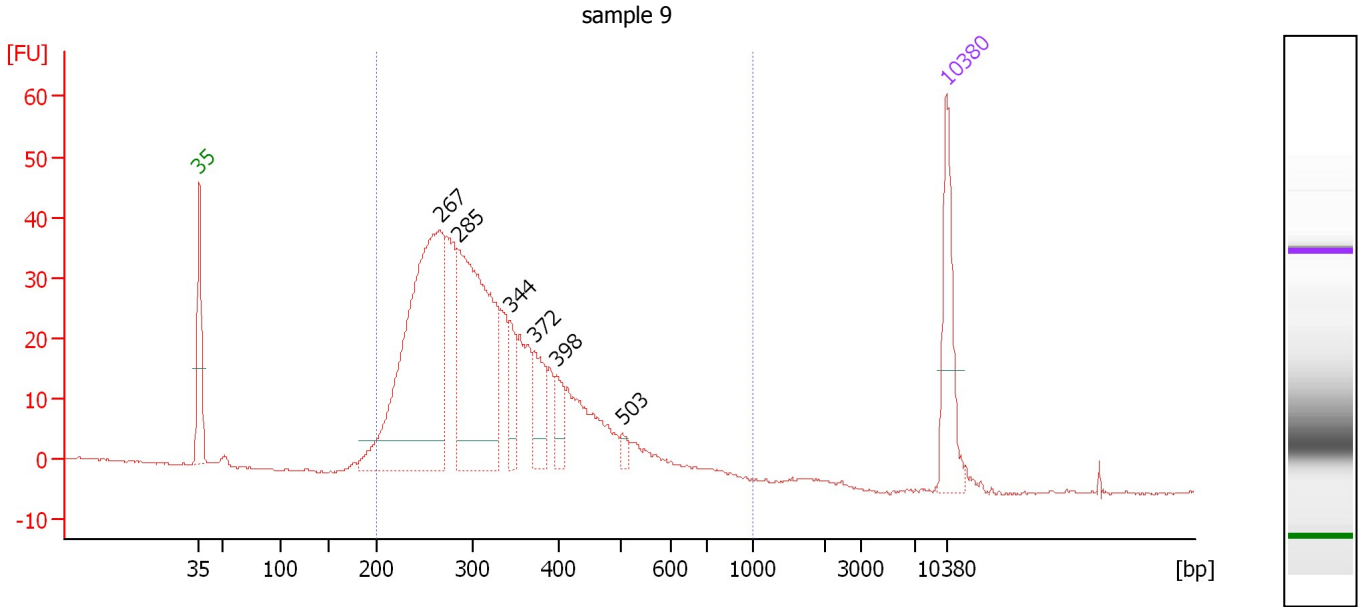
Region table for sample 8 : sample 8

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	358	2,645.0	18,099.3	3,843.42	96	34.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : sample 9

Number of peaks found: 6 Corr. Area 1: 753.9
 Noise: 0.2

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	267	505.39	2,870.8		65.57
3	285	354.42	1,882.8		67.22
4	344	43.24	190.5		72.11
5	372	54.63	222.4		74.41
6	398	31.72	120.8		76.50
7	503	9.51	28.7		82.64
8	10,380	75.00	10.9	Upper Marker	113.00

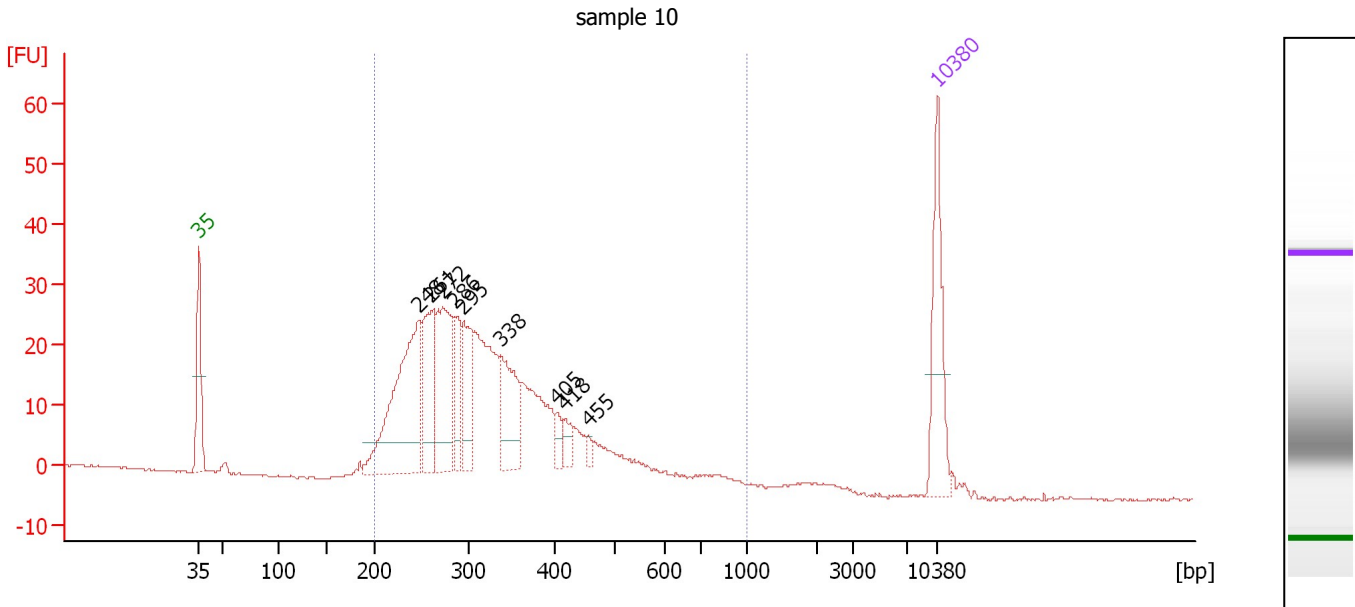
Region table for sample 9 : sample 9

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	329	753.9	7,125.7	1,422.07	98	28.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : sample 10

Number of peaks found: 9 Corr. Area 1: 563.3
 Noise: 0.2

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	248	238.73	1,457.8		63.91
3	261	103.72	603.1		65.02
4	272	131.64	732.0		66.08
5	286	51.03	270.3		67.29
6	295	76.24	392.1		68.05
7	338	88.73	397.6		71.64
8	405	13.30	49.8		76.94
9	418	16.53	59.9		77.75
10	455	7.17	23.9		79.87
11	10,380	75.00	10.9	Upper Marker	113.00

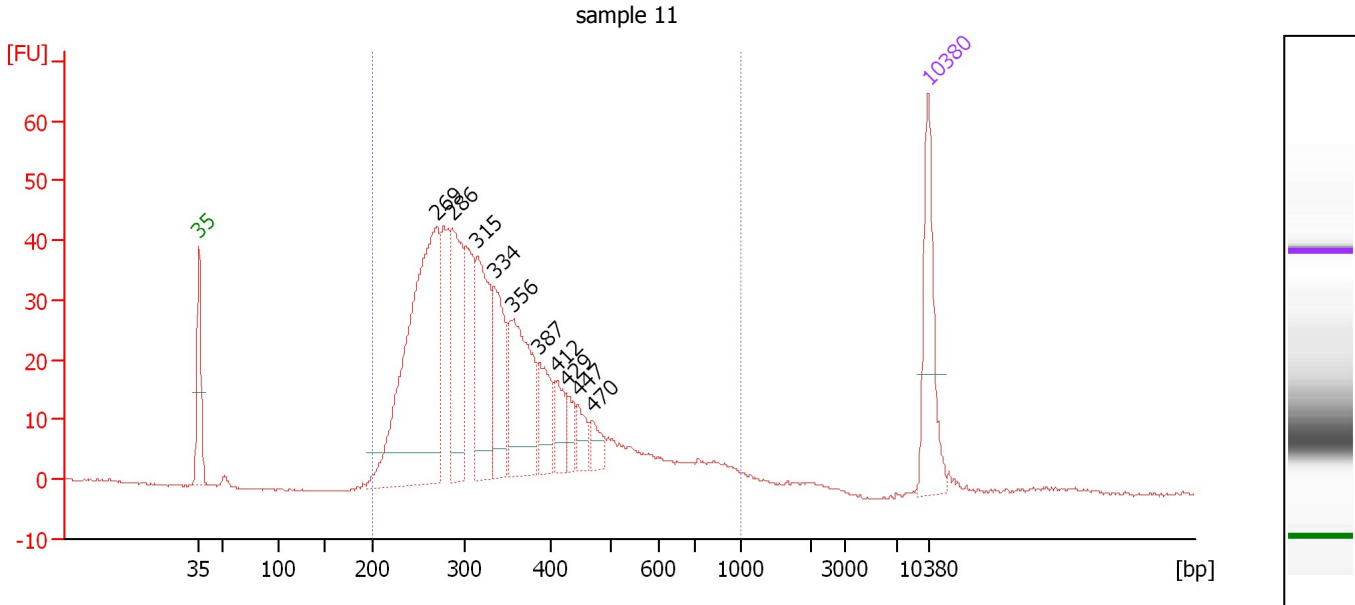
Region table for sample 10 : sample 10

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	332	563.3	5,827.8	1,161.47	98	31.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : sample 11

Number of peaks found: 10 Corr. Area 1: 838.1
 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	269	426.46	2,400.3		65.79
3	286	132.64	703.0		67.27
4	315	145.07	698.4		69.73
5	334	88.89	403.0		71.32
6	356	138.52	590.2		73.06
7	387	51.91	203.2		75.62
8	412	34.21	125.9		77.36
9	429	20.95	74.1		78.33
10	447	23.27	78.9		79.41
11	470	19.43	62.7		80.74
12	10,380	75.00	10.9	Upper Marker	113.00

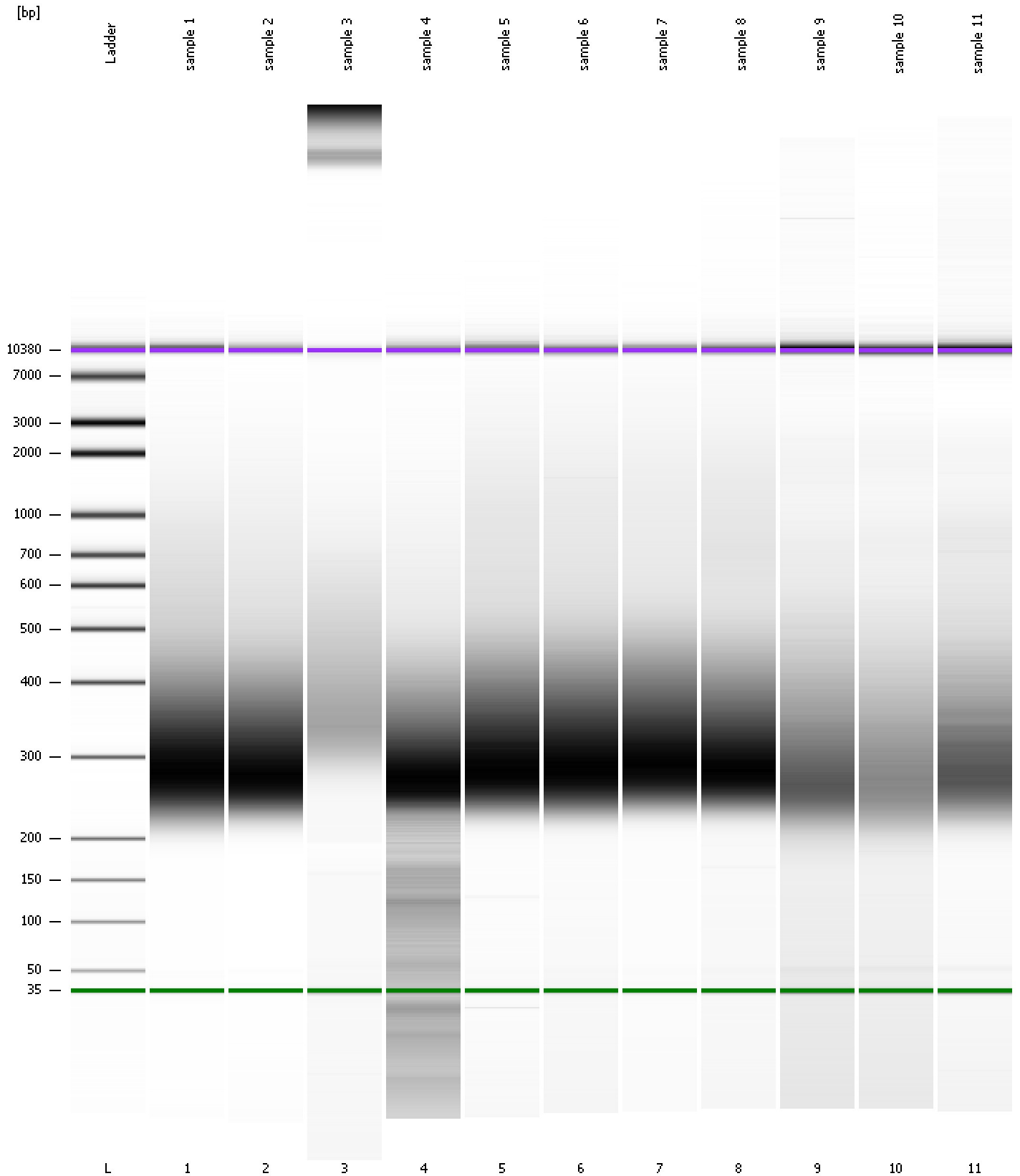
Region table for sample 11 : sample 11

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	353	838.1	7,158.7	1,489.42	98	34.9

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
Modified: 6/15/2016 3:52:32 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-15\2016-06-15_002.xad

Created: 6/15/2016 3:05:32 PM
 Modified: 6/15/2016 3:52:32 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		6/15/2016 3:46:49 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\2016-06-15\2016-06-15_002.xad)		Instrument	Run		6/15/2016 3:05:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		6/15/2016 3:05:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		6/15/2016 3:05:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		6/15/2016 3:05:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		6/15/2016 3:05:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		6/15/2016 3:05:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		6/15/2016 3:05:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1