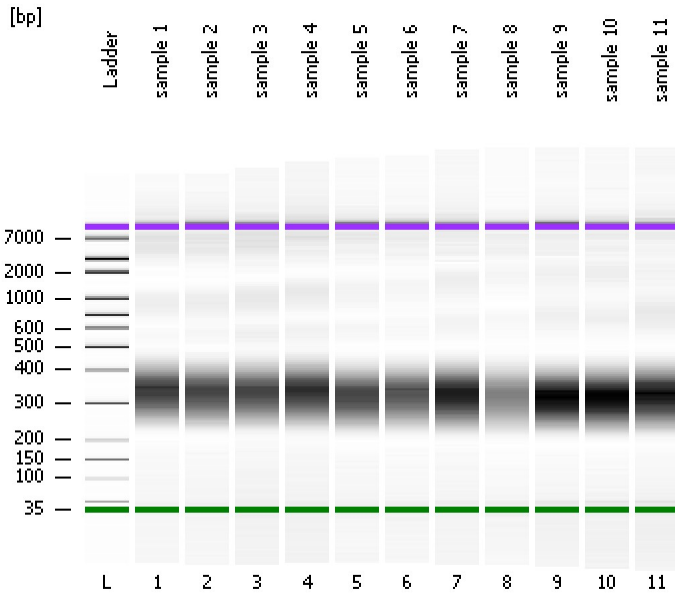


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
Modified: 3/16/2016 10:02:11 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

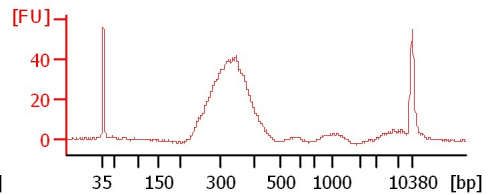
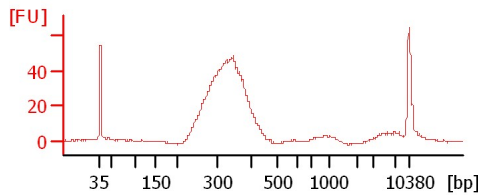
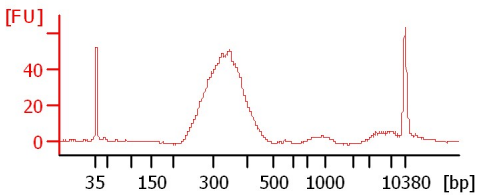
Chip Information:

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

sample 1

sample 2

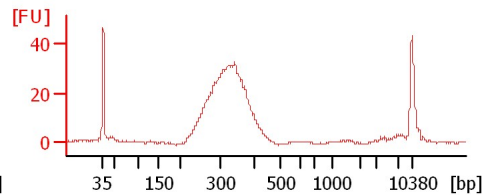
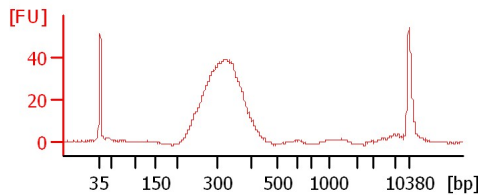
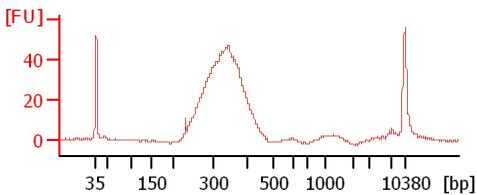
sample 3



sample 4

sample 5

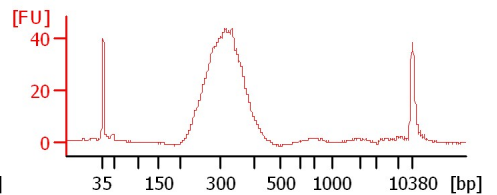
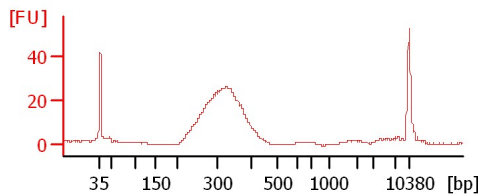
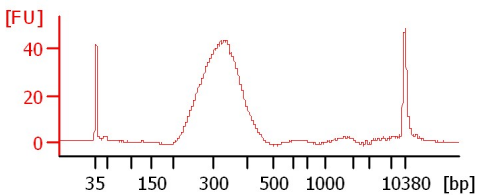
sample 6



sample 7

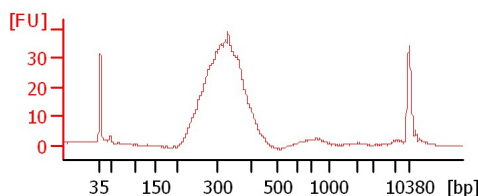
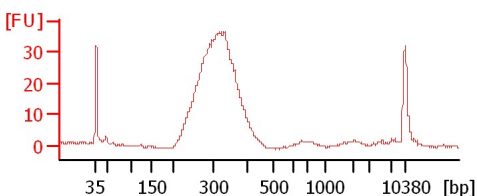
sample 8

sample 9



sample 10

sample 11



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

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\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
Modified: 3/16/2016 10:02:11 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] : 1
Area Threshold : 0.1
Width Threshold [s] : 0.6
Baseline Plateau [s] : 0.5

Filter Settings

Filter Width [s] : 0.5
Polynomial Order : 4

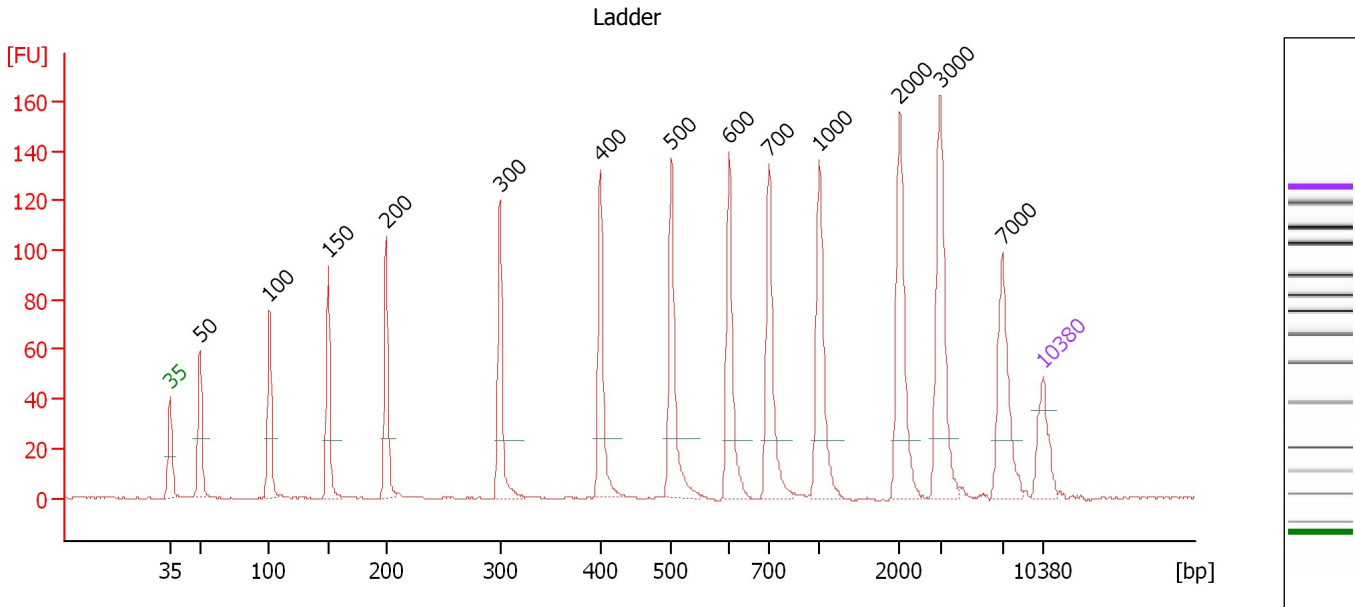
Ladder

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\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

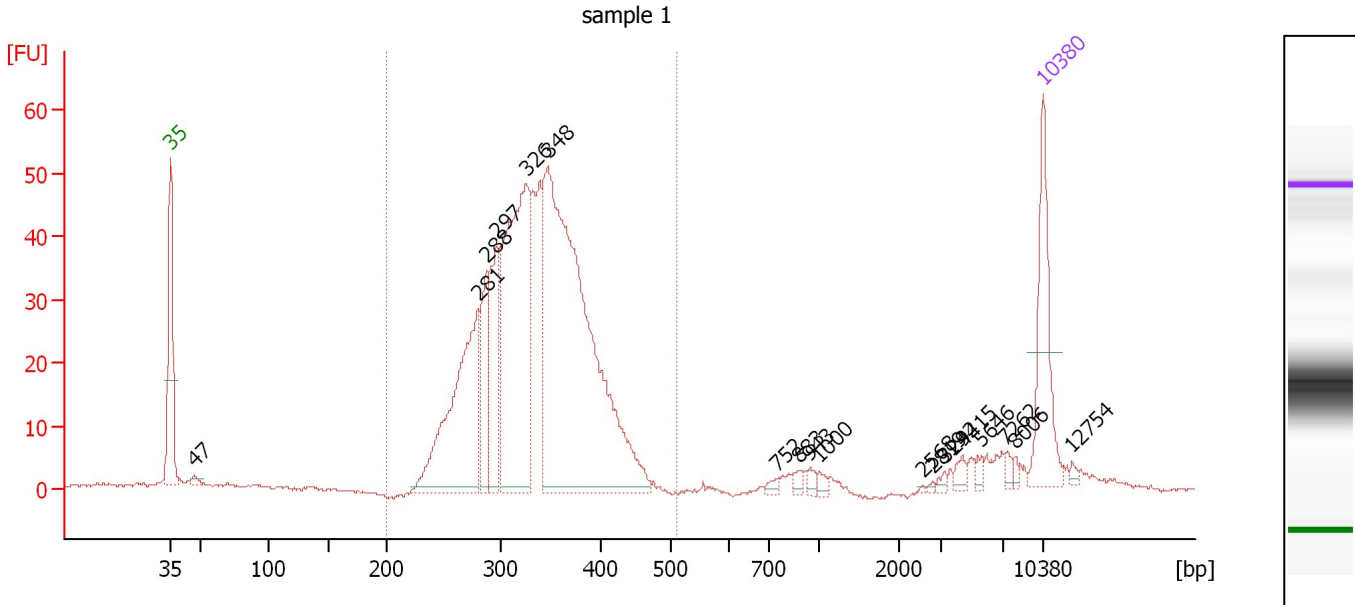
Peak table for Ladder

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	50.95
4	150	150.00	1,515.2	Ladder Peak	55.66
5	200	150.00	1,136.4	Ladder Peak	60.33
6	300	150.00	757.6	Ladder Peak	69.45
7	400	150.00	568.2	Ladder Peak	77.48
8	500	150.00	454.5	Ladder Peak	83.19
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	95.04
12	2,000	150.00	113.6	Ladder Peak	101.51
13	3,000	150.00	75.8	Ladder Peak	104.74
14	7,000	150.00	32.5	Ladder Peak	109.72
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : sample 1

Number of peaks found: 18 Corr. Area 1: 675.2
 Noise: 0.3

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	47	6.29	202.9		44.90
3	281	241.11	1,299.2		67.73
4	288	78.77	414.2		68.36
5	297	104.14	531.2		69.18
6	326	317.96	1,476.0		71.57
7	348	618.98	2,697.0		73.28
8	752	4.67	9.4		91.70
9	883	5.90	10.1		93.46
10	943	5.87	9.4		94.27
11	1,000	5.20	7.9		95.04
12	2,568	0.68	0.4		103.34
13	2,819	1.28	0.7		104.15
14	3,292	3.20	1.5		105.10
15	4,415	6.92	2.4		106.50
16	5,646	4.75	1.3		108.04
17	7,262	4.33	0.9		109.98
18	8,006	3.42	0.6		110.70
19	10,380	75.00	10.9	Upper Marker	113.00
20	12,754	0.00	0.0		115.30

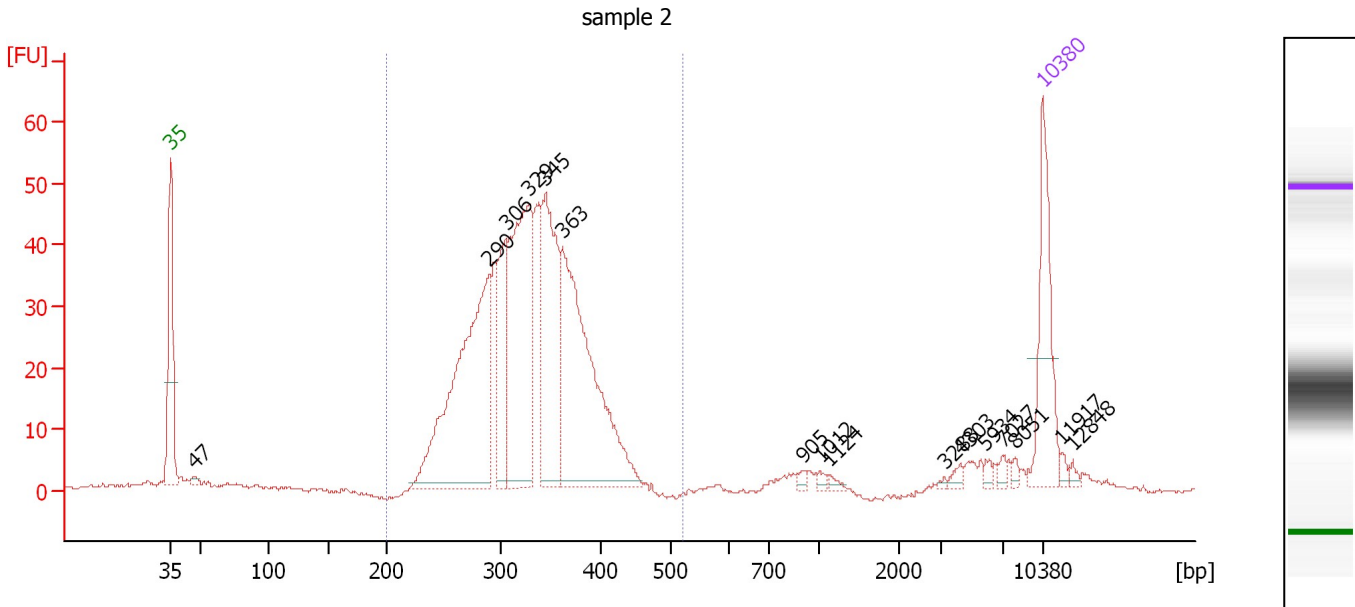
Region table for sample 1 : sample 1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	510	334	675.2	6,687.7	1,438.65	92	13.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : sample 2

Number of peaks found: 16 Corr. Area 1: 654.9
 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	47	4.91	158.4		44.90
3	290	324.41	1,693.2		68.56
4	306	93.17	461.6		69.92
5	329	246.12	1,133.9		71.77
6	345	185.42	813.9		73.08
7	363	297.75	1,244.2		74.48
8	905	3.52	5.9		93.76
9	1,012	3.16	4.7		95.12
10	1,124	3.41	4.6		95.84
11	3,288	1.44	0.7		105.10
12	4,303	4.74	1.7		106.36
13	5,934	3.84	1.0		108.39
14	7,027	4.78	1.0		109.75
15	8,051	3.48	0.7		110.74
16	10,380	75.00	10.9	Upper Marker	113.00
17	11,917	0.00	0.0		114.49
18	12,848	0.00	0.0		115.39

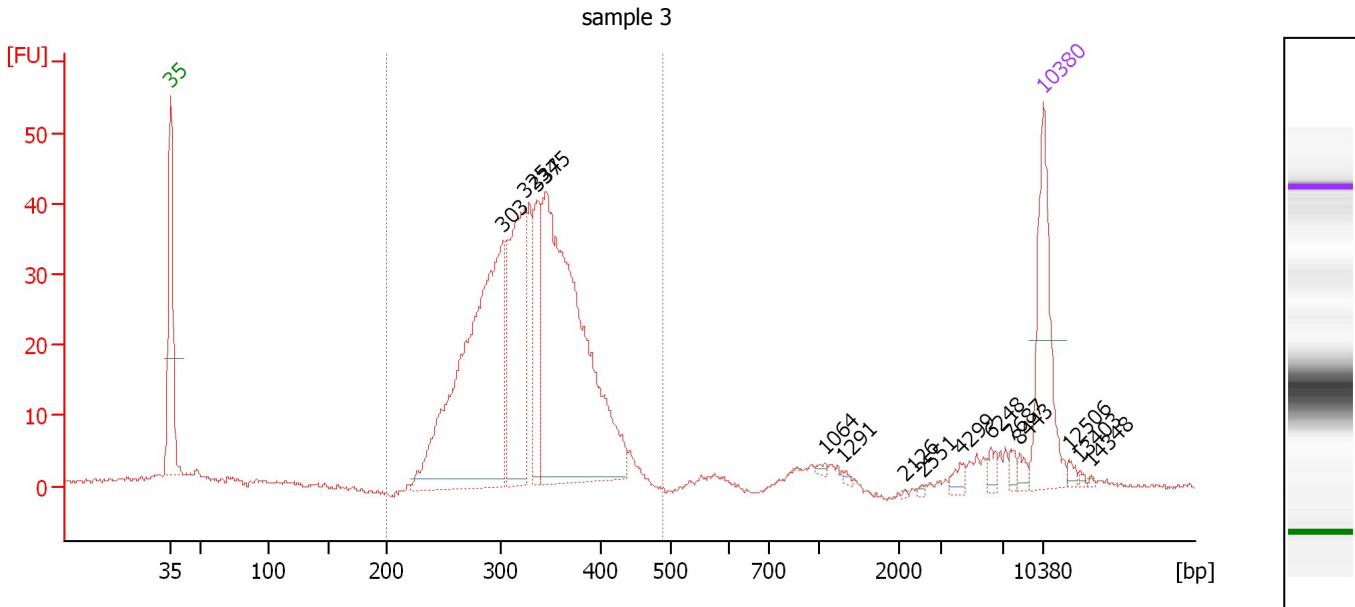
Region table for sample 2 : sample 2

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	521	328	654.9	6,143.4	1,298.51	90	13.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : sample 3

Number of peaks found: 15 Corr. Area 1: 544.9
 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	303	400.78	2,002.4		69.71
3	325	166.37	775.8		71.45
4	337	70.63	317.1		72.46
5	345	420.57	1,844.7		73.10
6	1,064	2.19	3.1		95.45
7	1,291	1.83	2.2		96.92
8	2,126	0.76	0.5		101.91
9	2,551	1.24	0.7		103.29
10	4,299	5.93	2.1		106.36
11	6,248	6.18	1.5		108.79
12	7,687	4.63	0.9		110.39
13	8,443	4.82	0.9		111.12
14	10,380	75.00	10.9	Upper Marker	113.00
15	12,506	0.00	0.0		115.06
16	13,403	0.00	0.0		115.93
17	14,348	0.00	0.0		116.85

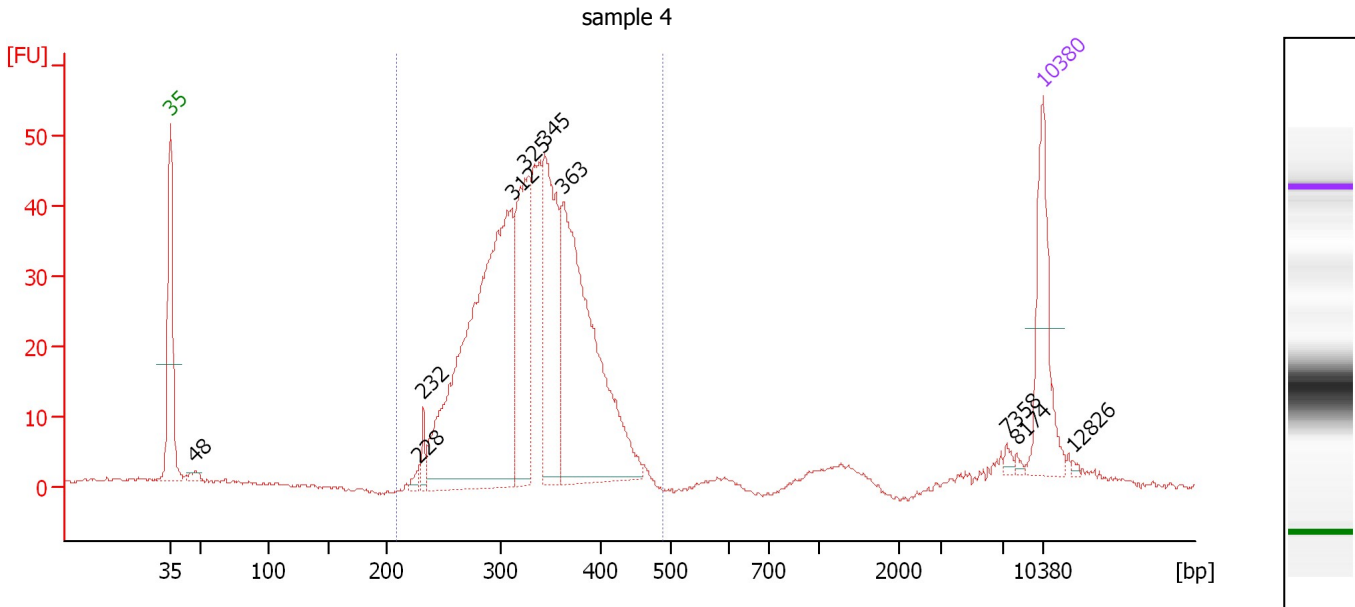
Region table for sample 3 : sample 3

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	487	329	544.9	5,220.8	1,107.87	92	13.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 4 : sample 4

Number of peaks found: 10 Corr. Area 1: 638.2
 Noise: 0.3

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	48	8.21	261.2		45.00
3	228	6.72	44.7		62.86
4	232	16.40	107.0		63.28
5	312	523.80	2,545.3		70.40
6	325	167.06	779.9		71.42
7	345	180.23	792.0		73.05
8	363	348.77	1,454.5		74.53
9	7,358	3.67	0.8		110.07
10	8,174	2.27	0.4		110.86
11	10,380	75.00	10.9	Upper Marker	113.00
12	12,826	0.00	0.0		115.37

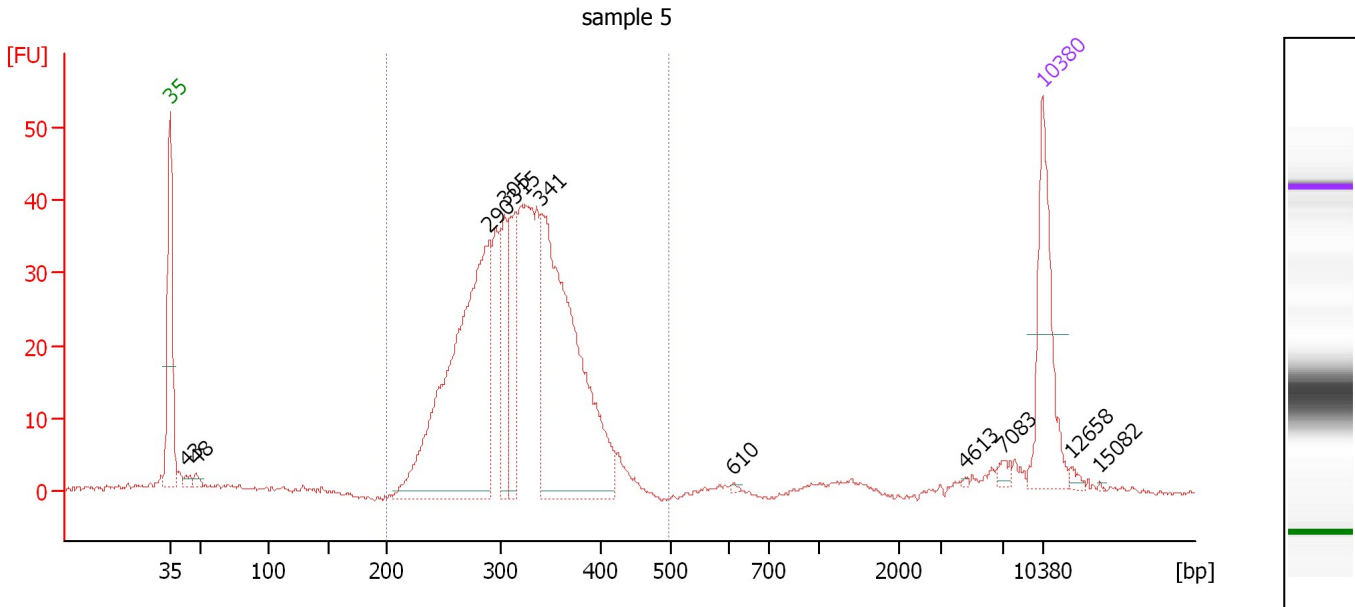
Region table for sample 4 : sample 4

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
209	488	332	638.2	6,417.1	1,369.88	93	14.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 5 : sample 5

Number of peaks found: 11 Corr. Area 1: 555.3
 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	43	5.85	207.4		44.22
3	48	5.58	176.0		45.07
4	290	397.10	2,071.6		68.57
5	305	73.70	366.2		69.84
6	315	73.83	355.3		70.64
7	341	351.75	1,562.0		72.76
8	610	1.36	3.4		88.13
9	4,613	0.77	0.3		106.75
10	7,083	5.21	1.1		109.80
11	10,380	75.00	10.9	Upper Marker	113.00
12	12,658	0.00	0.0		115.21
13	15,082	0.00	0.0		117.56

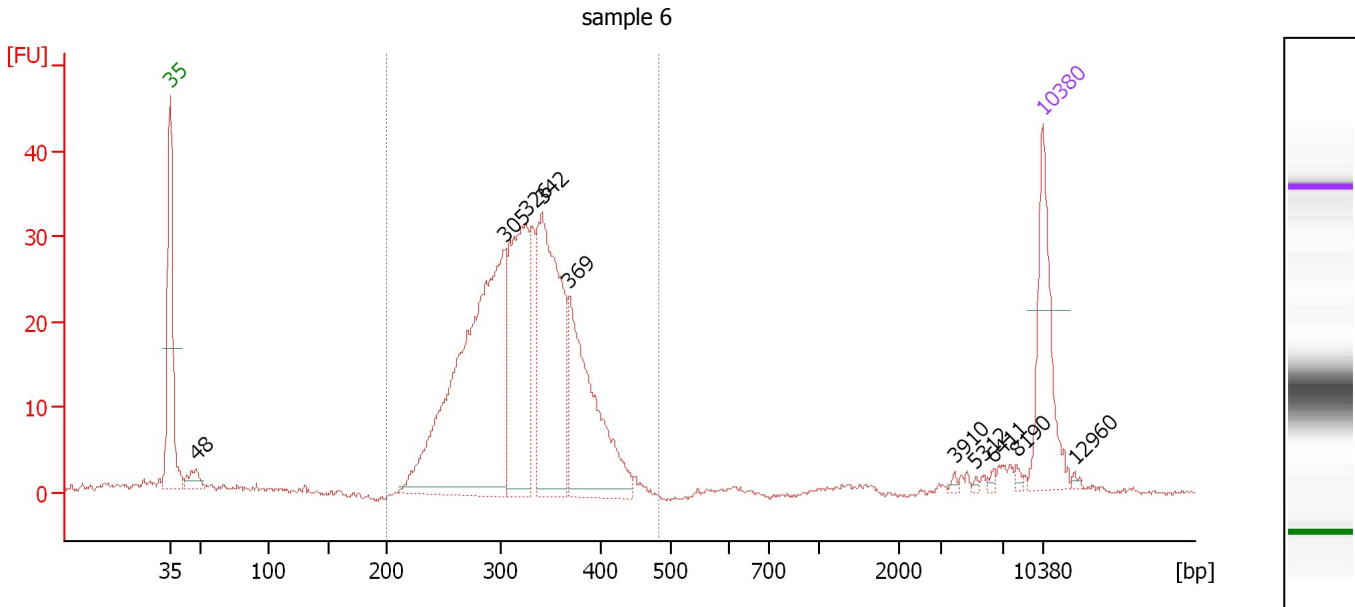
Region table for sample 5 : sample 5

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	496	319	555.3	5,497.9	1,128.74	94	14.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 6 : sample 6

Number of peaks found: 10 Corr. Area 1: 438.8
 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	48	19.57	620.6		45.03
3	305	462.00	2,298.6		69.81
4	326	196.37	912.0		71.56
5	342	249.80	1,106.3		72.83
6	369	183.83	755.8		74.96
7	3,910	2.26	0.9		105.87
8	5,312	1.46	0.4		107.62
9	6,411	2.18	0.5		108.99
10	8,190	2.57	0.5		110.88
11	10,380	75.00	10.9	Upper Marker	113.00
12	12,960	0.00	0.0		115.50

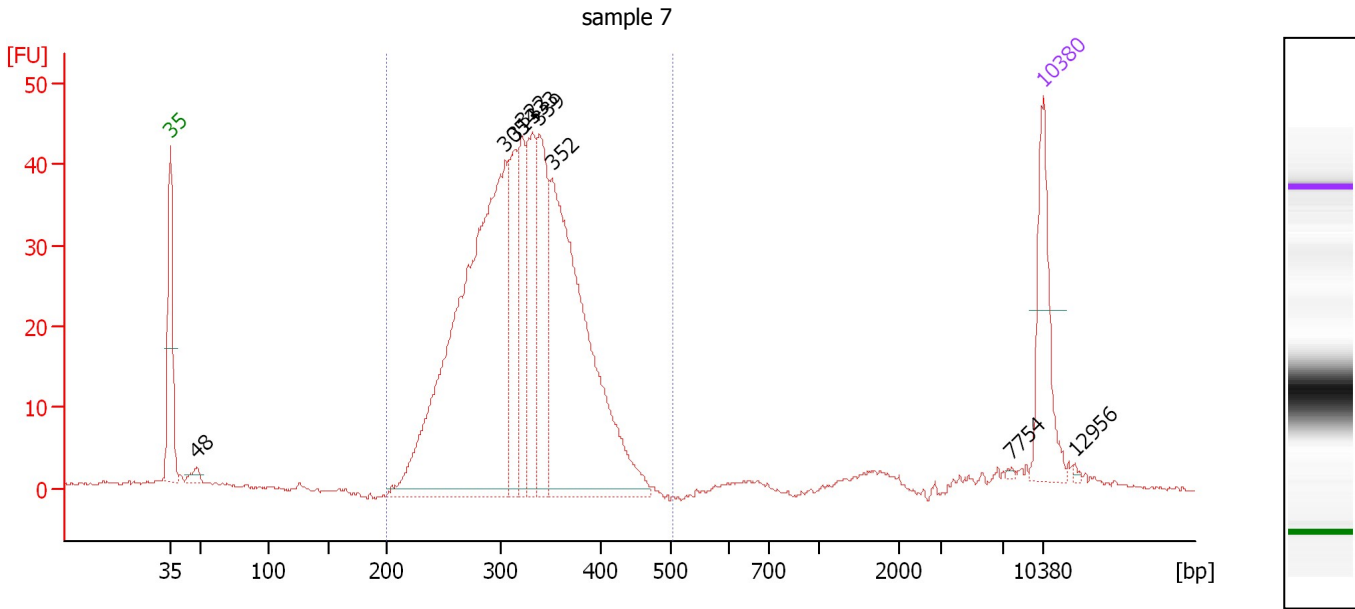
Region table for sample 6 : sample 6

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	481	323	438.8	5,428.3	1,128.91	93	14.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 7 : sample 7

Number of peaks found: 9 Corr. Area 1: 615.7
 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	48	11.49	360.3		45.11
3	305	688.93	3,421.3		69.86
4	314	116.55	562.3		70.58
5	322	96.03	451.3		71.25
6	333	124.26	566.0		72.07
7	339	144.98	647.6		72.60
8	352	455.91	1,963.9		73.60
9	7,754	1.49	0.3		110.45
10	10,380	75.00	10.9	Upper Marker	113.00
11	12,956	0.00	0.0		115.50

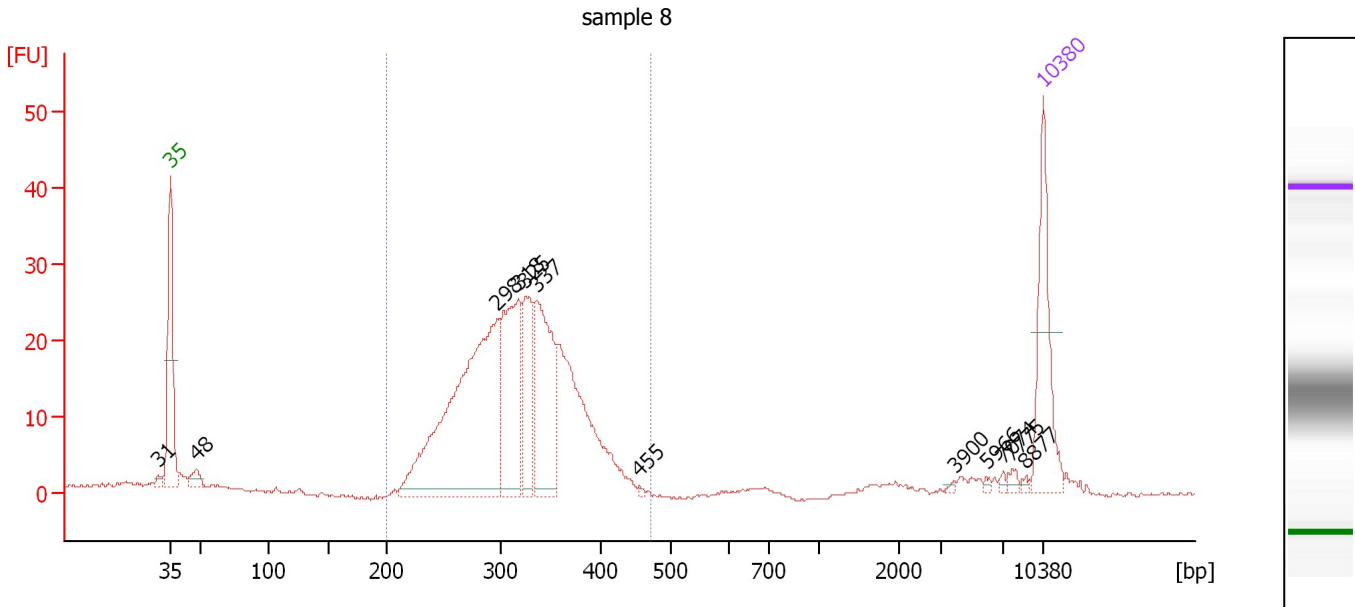
Region table for sample 7 : sample 7

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	504	323	615.7	7,555.3	1,565.95	95	14.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

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 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 8 : sample 8

Number of peaks found: 12 Corr. Area 1: 356.5
 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	31	0.00	0.0		41.98
2	35	125.00	5,411.3	Lower Marker	43.00
3	48	14.95	470.2		45.09
4	298	394.11	2,006.2		69.23
5	318	157.20	747.9		70.93
6	325	83.24	387.9		71.47
7	337	145.00	651.5		72.44
8	455	2.11	7.0		80.65
9	3,900	1.48	0.6		105.86
10	5,966	2.08	0.5		108.43
11	7,074	2.44	0.5		109.79
12	7,775	3.97	0.8		110.47
13	8,877	2.02	0.3		111.54
14	10,380	75.00	10.9	Upper Marker	113.00

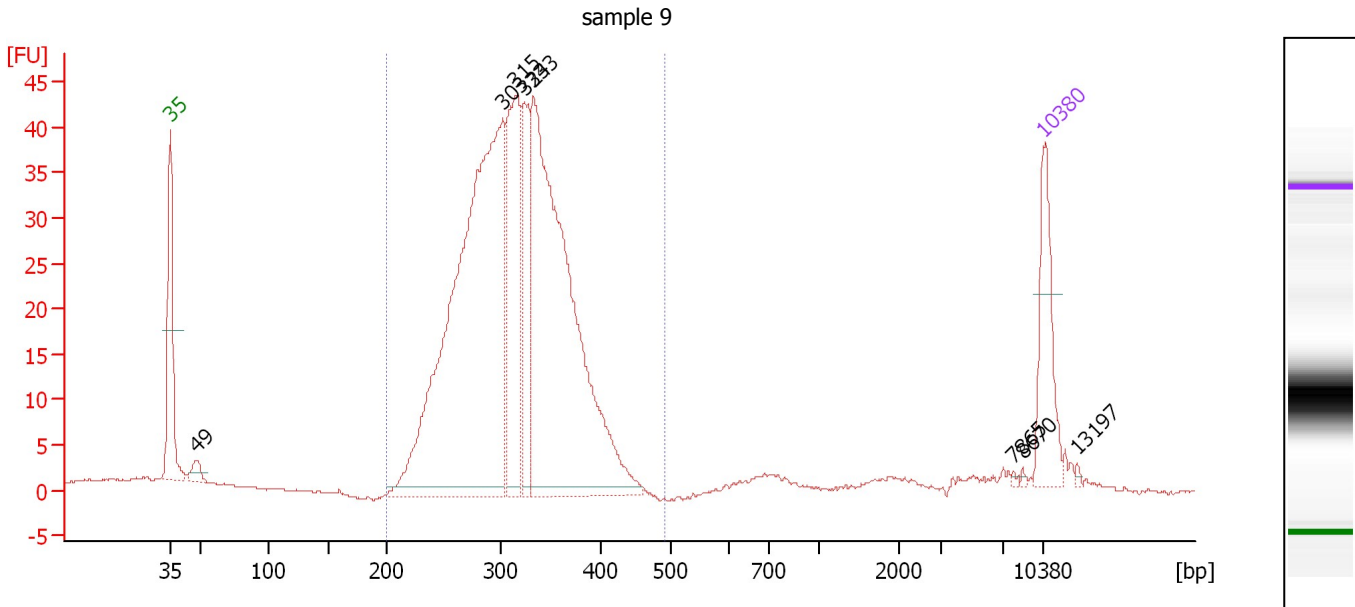
Region table for sample 8 : sample 8

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	471	319	356.5	4,733.0	968.89	88	14.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

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 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 9 : sample 9

Number of peaks found: 8 Corr. Area 1: 577.2
 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	49	17.74	553.8		45.15
3	303	855.02	4,276.4		69.68
4	315	228.64	1,099.5		70.66
5	324	116.32	543.6		71.39
6	333	667.31	3,033.6		72.12
7	7,865	1.48	0.3		110.56
8	8,670	1.44	0.3		111.34
9	10,380	75.00	10.9	Upper Marker	113.00
10	13,197	0.00	0.0		115.73

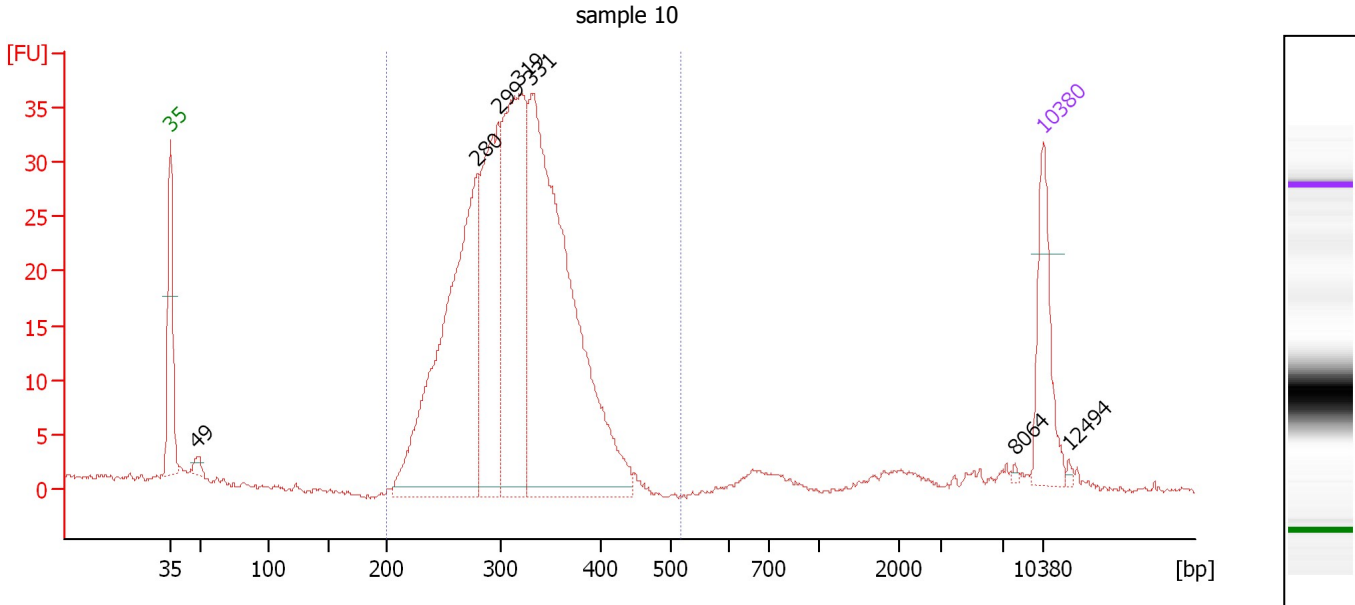
Region table for sample 9 : sample 9

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	490	315	577.2	8,985.4	1,823.83	93	13.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 10 : sample 10

Number of peaks found: 7 Corr. Area 1: 489.9
 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	49	10.84	338.2		45.15
3	280	514.94	2,788.8		67.60
4	299	284.21	1,442.6		69.31
5	319	364.70	1,732.4		70.97
6	331	700.50	3,205.5		71.95
7	8,064	1.80	0.3		110.75
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,494	0.00	0.0		115.05

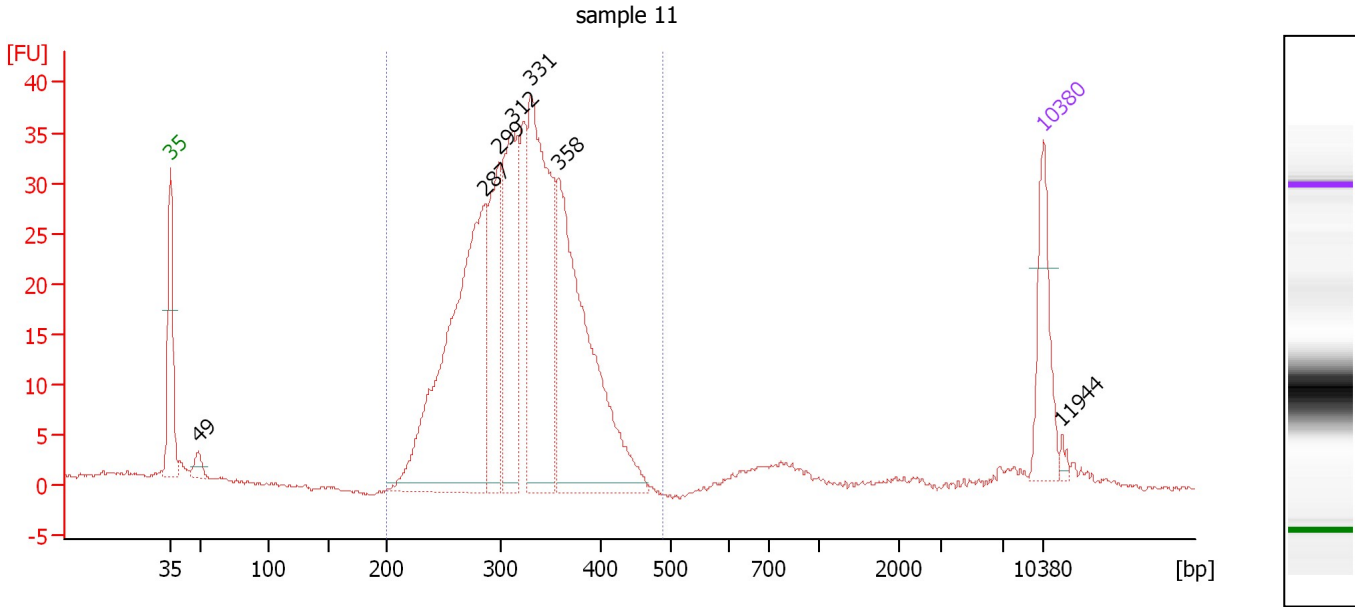
Region table for sample 10 : sample 10

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	516	314	489.9	8,756.6	1,772.12	93	14.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 AM

Electropherogram Summary Continued ...



Overall Results for sample 11 : sample 11

Number of peaks found: 7 Corr. Area 1: 493.9
 Noise: 0.2

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	49	19.06	587.3		45.25
3	287	543.10	2,864.0		68.29
4	299	178.44	903.8		69.37
5	312	220.77	1,072.8		70.39
6	331	381.74	1,749.3		71.91
7	358	427.95	1,811.0		74.11
8	10,380	75.00	10.9	Upper Marker	113.00
9	11,944	0.00	0.0		114.52

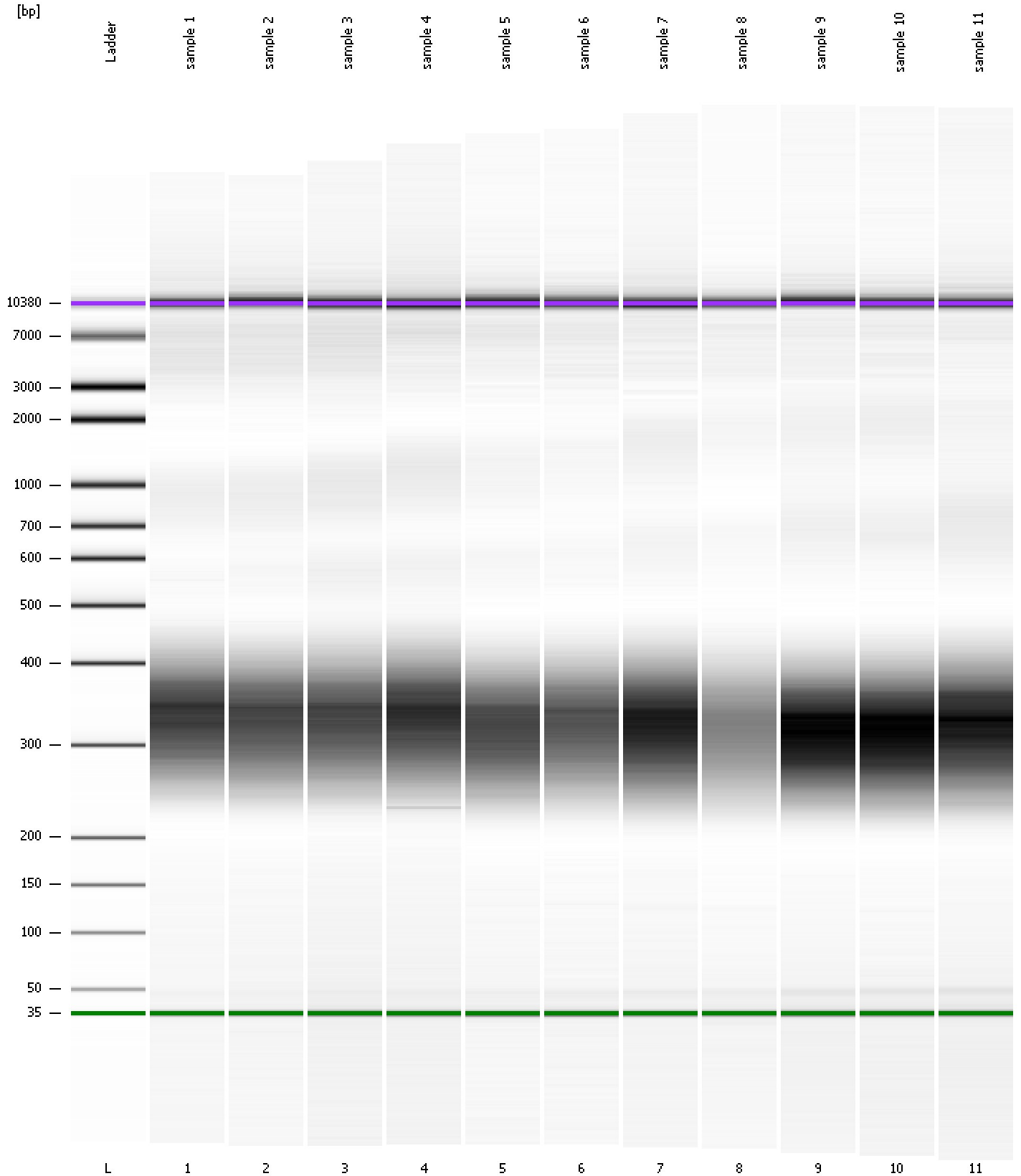
Region table for sample 11 : sample 11

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	488	321	493.9	8,694.2	1,796.23	92	14.4

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
Modified: 3/16/2016 10:02:11 AM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad

Created: 3/9/2016 2:10:35 PM
 Modified: 3/16/2016 10:02:11 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		3/9/2016 2:51:54 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-03-09\2016-03-09_001.xad)		Instrument	Run		3/9/2016 2:10:41 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/9/2016 2:10:41 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/9/2016 2:10:41 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/9/2016 2:10:41 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/9/2016 2:10:41 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/9/2016 2:10:41 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/9/2016 2:10:41 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1