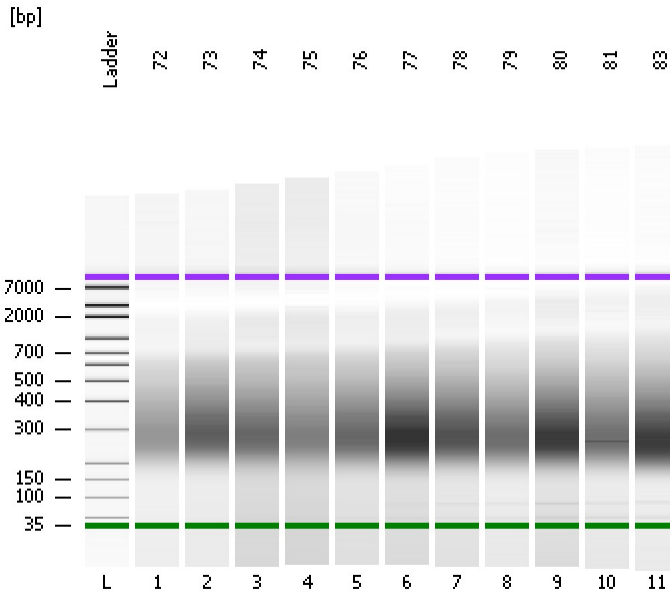


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
Modified: 9/6/2016 4:13:55 PM

Electrophoresis File Run Summary



Instrument Information:

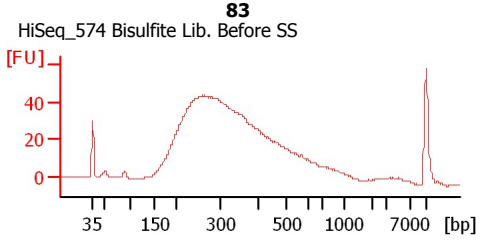
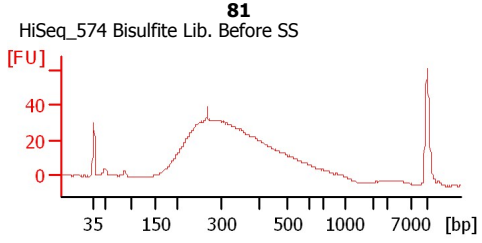
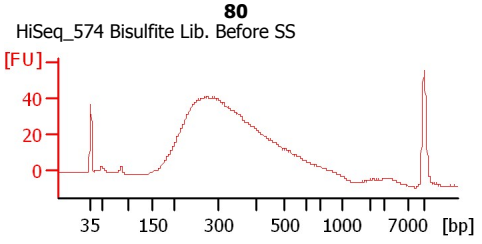
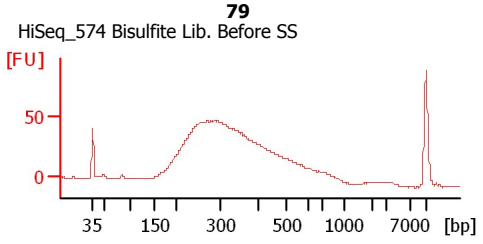
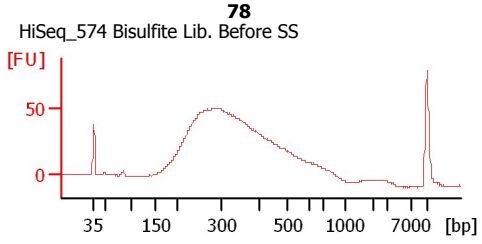
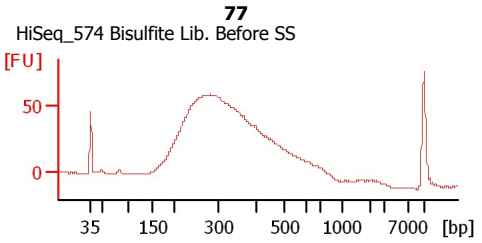
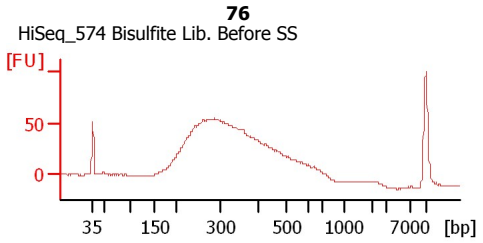
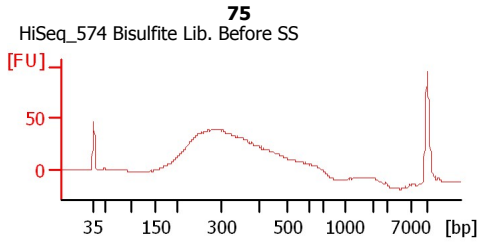
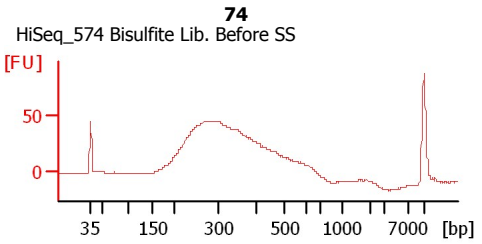
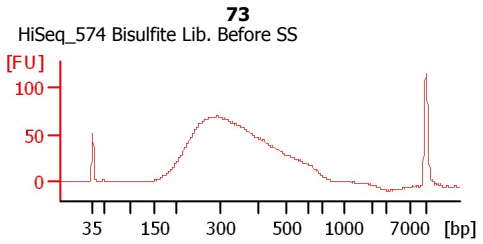
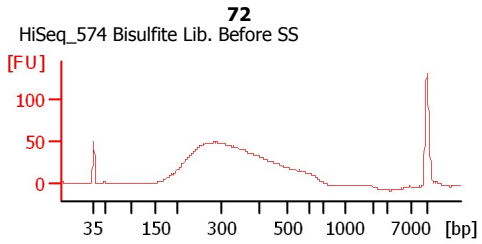
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
Modified: 9/6/2016 4:13:55 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
72	HiSeq_574 Bisulfite Lib. Before SS	<input type="checkbox"/>	✓			
73	HiSeq_574 Bisulfite Lib. Before SS	<input type="checkbox"/>	✓			
74	HiSeq_574 Bisulfite Lib. Before SS	<input type="checkbox"/>	✓			
75	HiSeq_574 Bisulfite Lib. Before SS	<input type="checkbox"/>	✓			
76	HiSeq_574 Bisulfite Lib. Before SS	<input type="checkbox"/>	✓			
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78	HiSeq_574 Bisulfite Lib. Before SS	<input type="checkbox"/>	✓			
79	HiSeq_574 Bisulfite Lib. Before SS	<input type="checkbox"/>	✓			
80	HiSeq_574 Bisulfite Lib. Before SS	<input type="checkbox"/>	✓			
81	HiSeq_574 Bisulfite Lib. Before SS	<input type="checkbox"/>	✓			
83	HiSeq_574 Bisulfite Lib. Before SS	<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\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
Modified: 9/6/2016 4:13:55 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

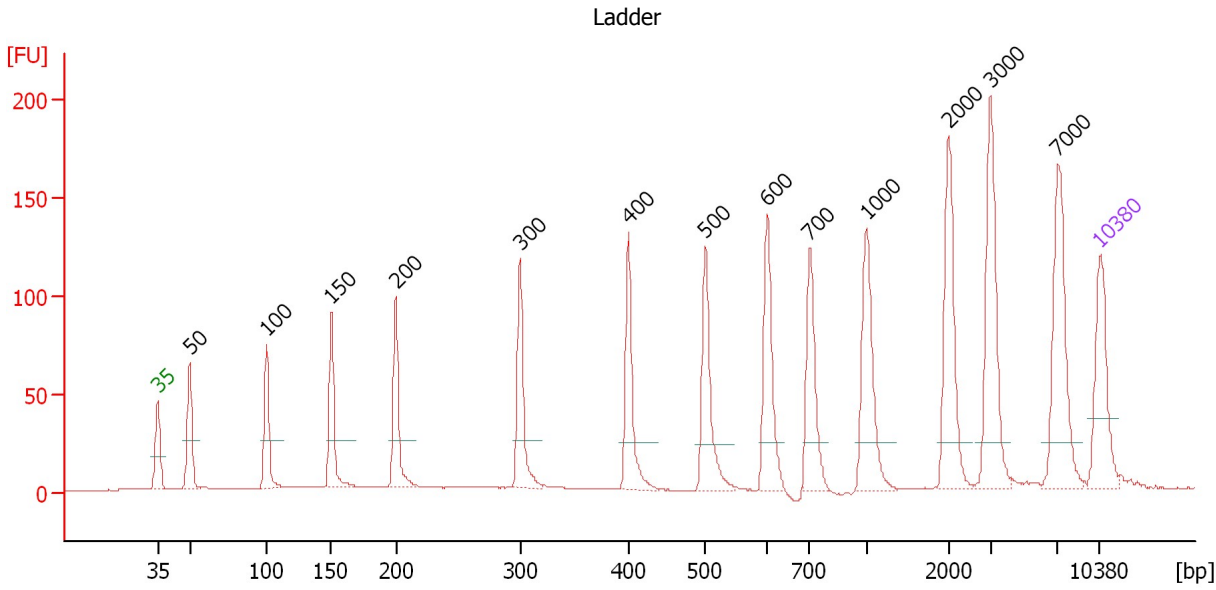
Ladder

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\2016-09-06\2016-09-06_002.xad

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Electropherogram Summary



Overall Results for Ladder

Noise: 0.3

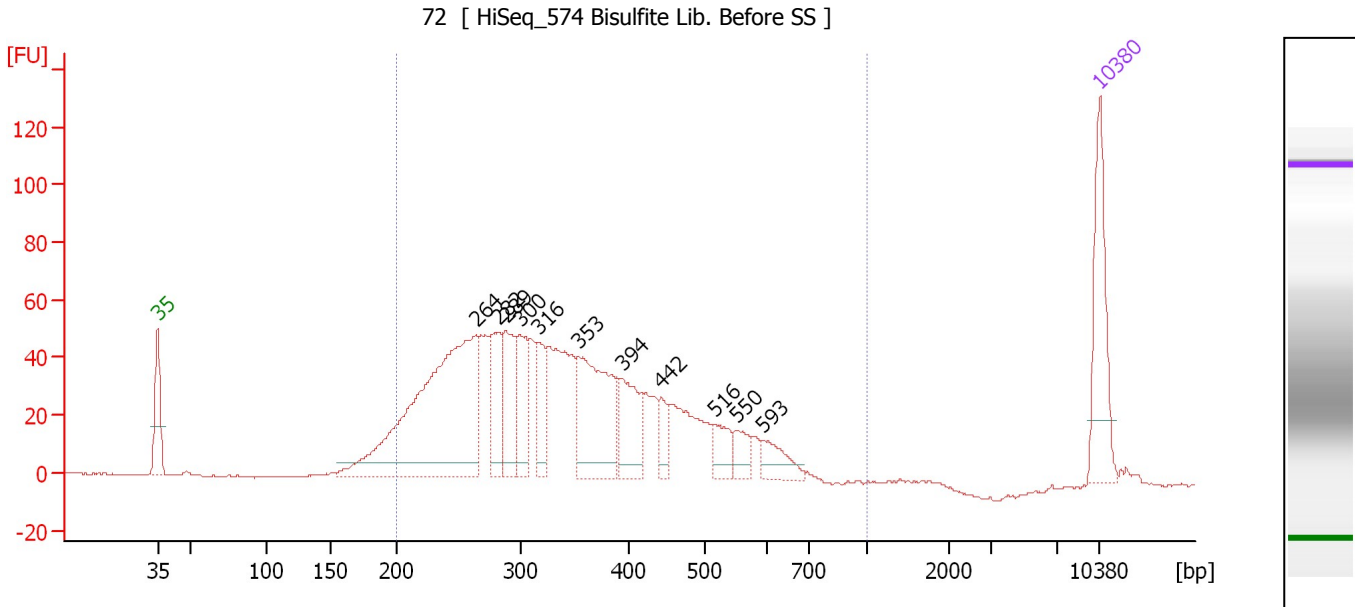
Peak table for Ladder

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	45.40
3	100	150.00	2,272.7	Ladder Peak	51.09
4	150	150.00	1,515.2	Ladder Peak	55.90
5	200	150.00	1,136.4	Ladder Peak	60.71
6	300	150.00	757.6	Ladder Peak	69.93
7	400	150.00	568.2	Ladder Peak	77.98
8	500	150.00	454.5	Ladder Peak	83.71
9	600	150.00	378.8	Ladder Peak	88.33
10	700	150.00	324.7	Ladder Peak	91.42
11	1,000	150.00	227.3	Ladder Peak	95.68
12	2,000	150.00	113.6	Ladder Peak	101.72
13	3,000	150.00	75.8	Ladder Peak	104.86
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\2016-09-06\2016-09-06_002.xad

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Electropherogram Summary Continued ...



Overall Results for sample 1 : 72

Number of peaks found: 11 Corr. Area 1: 1,304.4
 Noise: 0.3

Peak table for sample 1 : 72

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	417.70	2,393.8		66.65
3	282	69.01	370.7		68.28
4	289	75.28	395.3		68.87
5	300	71.84	363.1		69.91
6	316	45.75	219.1		71.25
7	353	148.56	637.2		74.22
8	394	66.88	257.3		77.48
9	442	22.87	78.3		80.40
10	516	29.46	86.5		84.46
11	550	21.09	58.0		86.04
12	593	27.55	70.4		88.02
13	10,380	75.00	10.9	Upper Marker	113.00

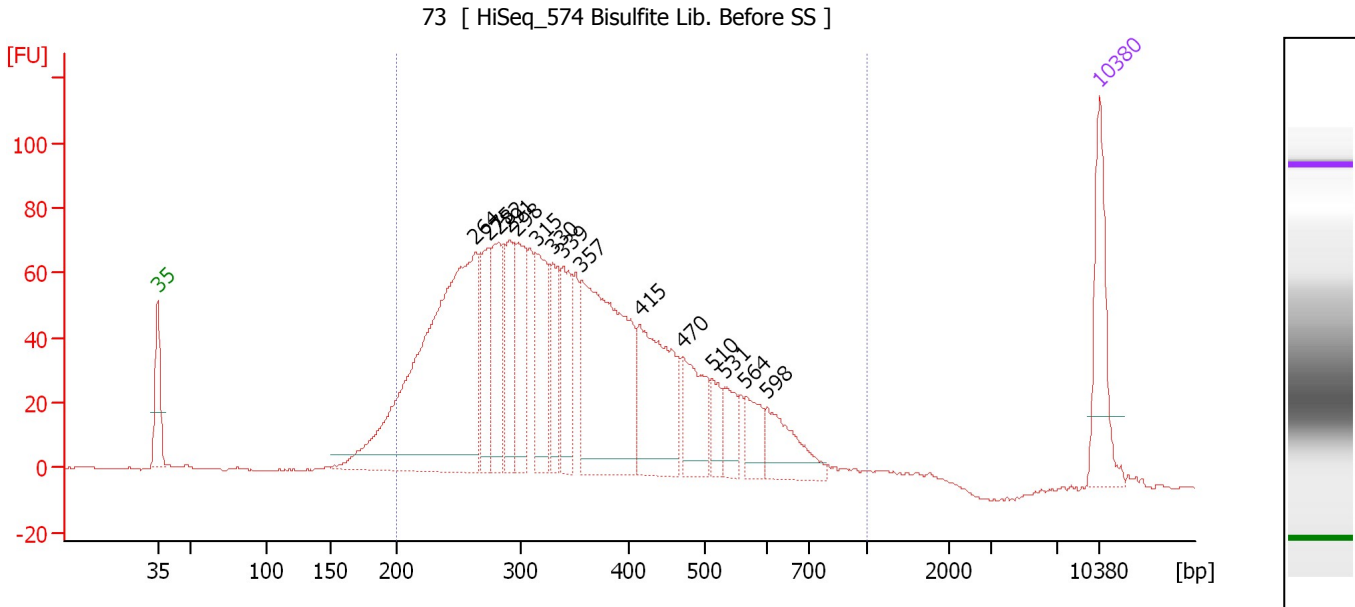
Region table for sample 1 : 72

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	1,304.4	6,364.5	1,316.64	96	29.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

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 Modified: 9/6/2016 4:13:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : 73

Number of peaks found: 15 Corr. Area 1: 1,922.6
 Noise: 0.2

Peak table for sample 2 : 73

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	586.98	3,368.0		66.62
3	275	82.15	452.8		67.61
4	282	106.37	570.6		68.31
5	291	81.97	426.6		69.11
6	298	102.43	521.4		69.71
7	315	108.23	520.1		71.16
8	330	67.41	309.3		72.36
9	339	78.40	349.9		73.11
10	357	305.57	1,297.4		74.50
11	415	165.13	602.6		78.85
12	470	82.38	265.6		81.99
13	510	30.62	90.9		84.19
14	531	35.06	100.1		85.14
15	564	36.85	98.9		86.69
16	598	62.40	158.1		88.24
17	10,380	75.00	10.9	Upper Marker	113.00

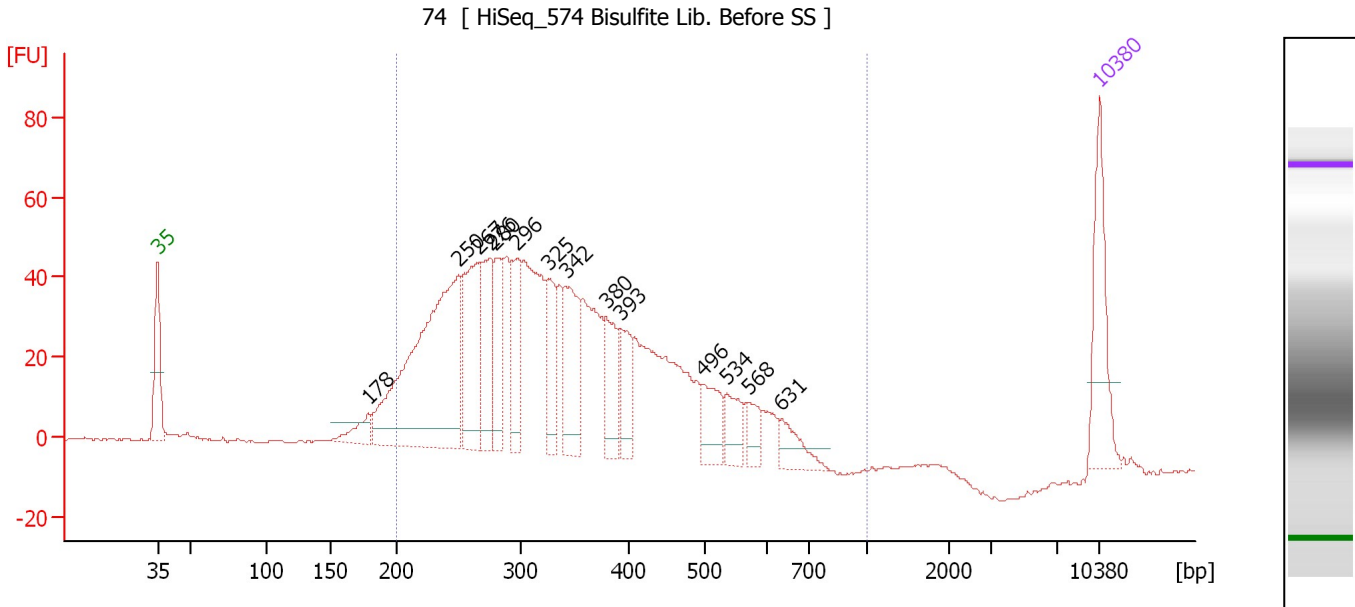
Region table for sample 2 : 73

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	363	1,922.6	10,011.9	2,114.03	95	32.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

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Electropherogram Summary Continued ...



Overall Results for sample 3 : 74

Number of peaks found: 14 Corr. Area 1: 1,210.9
 Noise: 0.3

Peak table for sample 3 : 74

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	178	29.42	249.9		58.63
3	250	397.59	2,405.9		65.36
4	267	140.14	795.8		66.87
5	276	95.95	527.5		67.68
6	280	69.34	375.2		68.09
7	296	71.77	366.8		69.60
8	325	64.45	300.0		71.98
9	342	102.31	452.6		73.35
10	380	53.35	213.0		76.33
11	393	51.46	198.5		77.39
12	496	46.97	143.6		83.46
13	534	36.16	102.6		85.28
14	568	23.79	63.4		86.85
15	631	31.32	75.2		89.28
16	10,380	75.00	10.9	Upper Marker	113.00

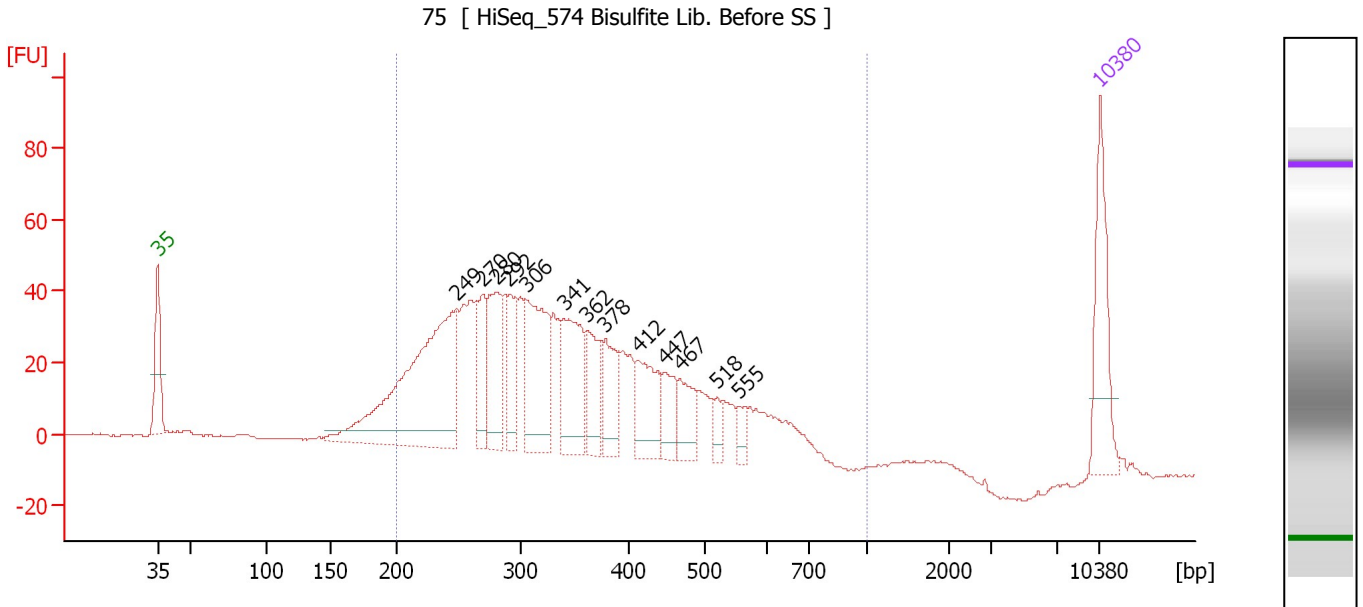
Region table for sample 3 : 74

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	346	1,210.9	8,467.0	1,739.92	93	29.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
 Modified: 9/6/2016 4:13:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : 75

Number of peaks found: 13 Corr. Area 1: 1,083.7
 Noise: 0.3

Peak table for sample 4 : 75

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	249	352.70	2,150.2		65.18
3	270	61.41	344.2		67.19
4	280	92.51	500.0		68.12
5	292	55.56	288.8		69.15
6	306	138.32	685.7		70.38
7	341	113.03	502.5		73.21
8	362	64.13	268.5		74.91
9	378	59.61	239.0		76.20
10	412	72.34	266.0		78.67
11	447	40.18	136.2		80.68
12	467	42.01	136.3		81.81
13	518	15.95	46.7		84.54
14	555	13.65	37.3		86.24
15	10,380	75.00	10.9	Upper Marker	113.00

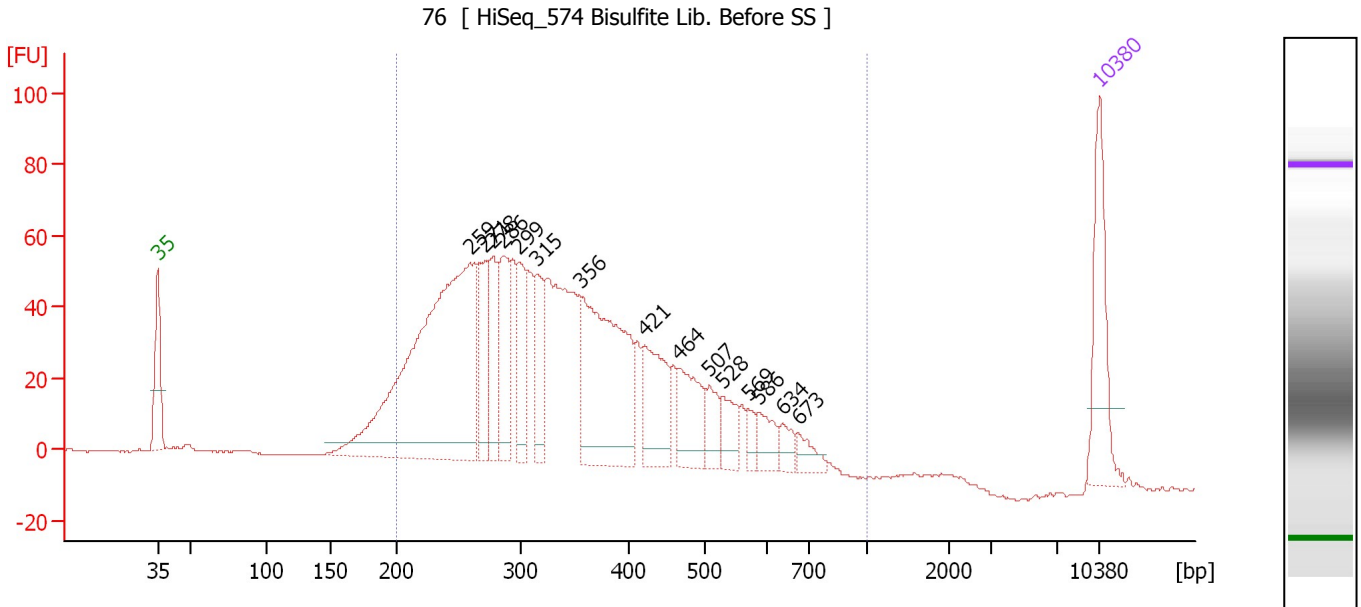
Region table for sample 4 : 75

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	1,083.7	6,790.5	1,398.05	92	30.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

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 Modified: 9/6/2016 4:13:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : 76

Number of peaks found: 15 Corr. Area 1: 1,500.0
 Noise: 0.2

Peak table for sample 5 : 76

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	259	563.20	3,288.6		66.19
3	271	75.04	419.0		67.29
4	278	69.55	378.9		67.91
5	286	84.62	448.2		68.64
6	299	69.58	352.5		69.84
7	315	58.84	282.9		71.15
8	356	247.97	1,055.6		74.43
9	421	86.18	310.3		79.17
10	464	69.20	225.8		81.67
11	507	29.94	89.6		84.02
12	528	28.08	80.6		85.01
13	569	13.01	34.7		86.89
14	586	26.58	68.7		87.67
15	634	16.82	40.2		89.39
16	673	18.52	41.7		90.59
17	10,380	75.00	10.9	Upper Marker	113.00

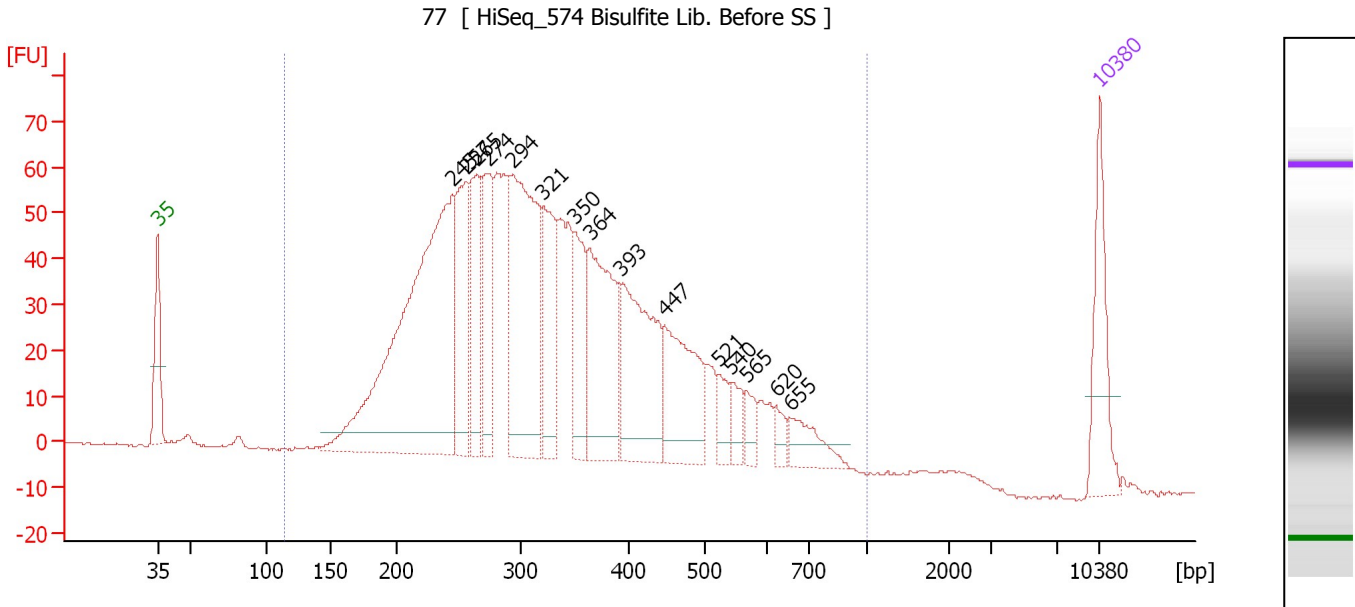
Region table for sample 5 : 76

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	353	1,500.0	8,634.2	1,787.93	94	31.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
 Modified: 9/6/2016 4:13:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : 77

Number of peaks found: 15 Corr. Area 1: 1,695.6
 Noise: 0.2

Peak table for sample 6 : 77

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	645.42	3,990.3		64.87
3	257	142.43	841.1		65.93
4	265	128.44	733.8		66.72
5	274	126.87	700.5		67.57
6	294	317.46	1,636.1		69.38
7	321	130.39	615.8		71.61
8	350	98.21	424.5		73.99
9	364	198.81	826.7		75.11
10	393	200.12	772.1		77.39
11	447	142.81	483.9		80.68
12	521	27.80	80.9		84.66
13	540	27.86	78.2		85.56
14	565	21.03	56.3		86.73
15	620	16.74	40.9		88.96
16	655	41.55	96.1		90.02
17	10,380	75.00	10.9	Upper Marker	113.00

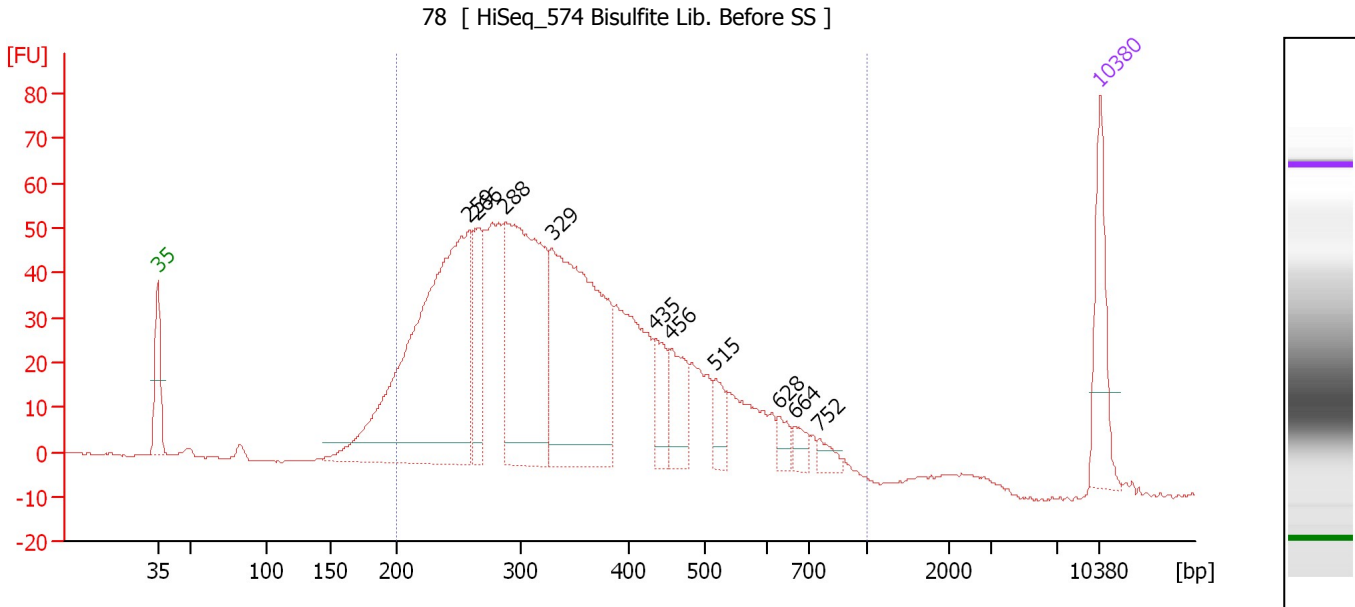
Region table for sample 6 : 77

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
114	1,000	343	1,695.6	14,058.6	2,743.83	99	34.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
 Modified: 9/6/2016 4:13:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : 78

Number of peaks found: 10 Corr. Area 1: 1,391.9
 Noise: 0.3

Peak table for sample 7 : 78

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	259	666.87	3,897.7		66.17
3	266	94.52	539.0		66.77
4	288	419.11	2,204.9		68.82
5	329	443.57	2,040.9		72.29
6	435	52.70	183.6		79.98
7	456	66.60	221.5		81.17
8	515	32.02	94.2		84.42
9	628	18.30	44.2		89.18
10	664	16.80	38.3		90.32
11	752	15.07	30.4		92.16
12	10,380	75.00	10.9	Upper Marker	113.00

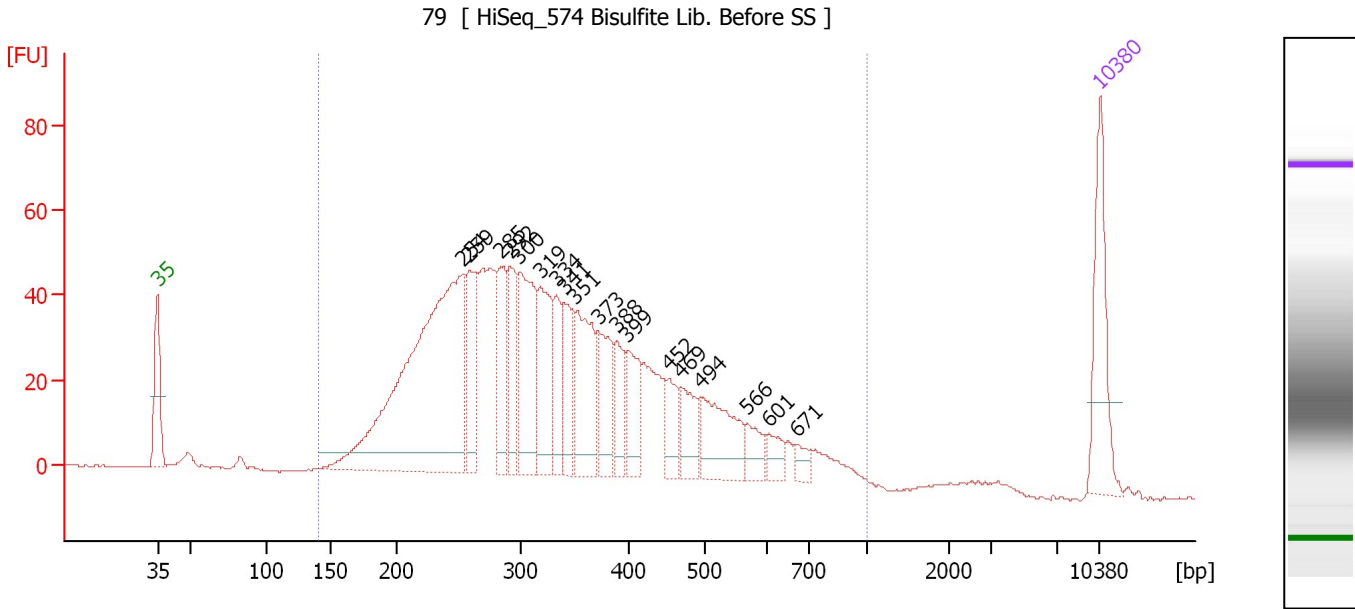
Region table for sample 7 : 78

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	1,391.9	11,136.4	2,315.01	95	33.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

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 Modified: 9/6/2016 4:13:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : 79

Number of peaks found: 18 Corr. Area 1: 1,306.5
 Noise: 0.3

Peak table for sample 8 : 79

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	254	525.13	3,137.0		65.66
3	259	90.47	529.2		66.15
4	285	80.99	431.1		68.51
5	292	73.70	382.7		69.17
6	300	126.91	641.9		69.89
7	319	95.01	451.8		71.43
8	334	57.62	261.6		72.64
9	341	58.79	261.1		73.24
10	351	112.91	487.8		74.01
11	373	64.42	261.9		75.77
12	388	40.88	159.5		77.04
13	399	52.68	199.9		77.92
14	452	37.82	126.9		80.94
15	469	42.38	136.9		81.93
16	494	84.30	258.6		83.36
17	566	24.44	65.4		86.77
18	601	19.84	50.0		88.37
19	671	13.95	31.5		90.51
20	10,380	75.00	10.9	Upper Marker	113.00

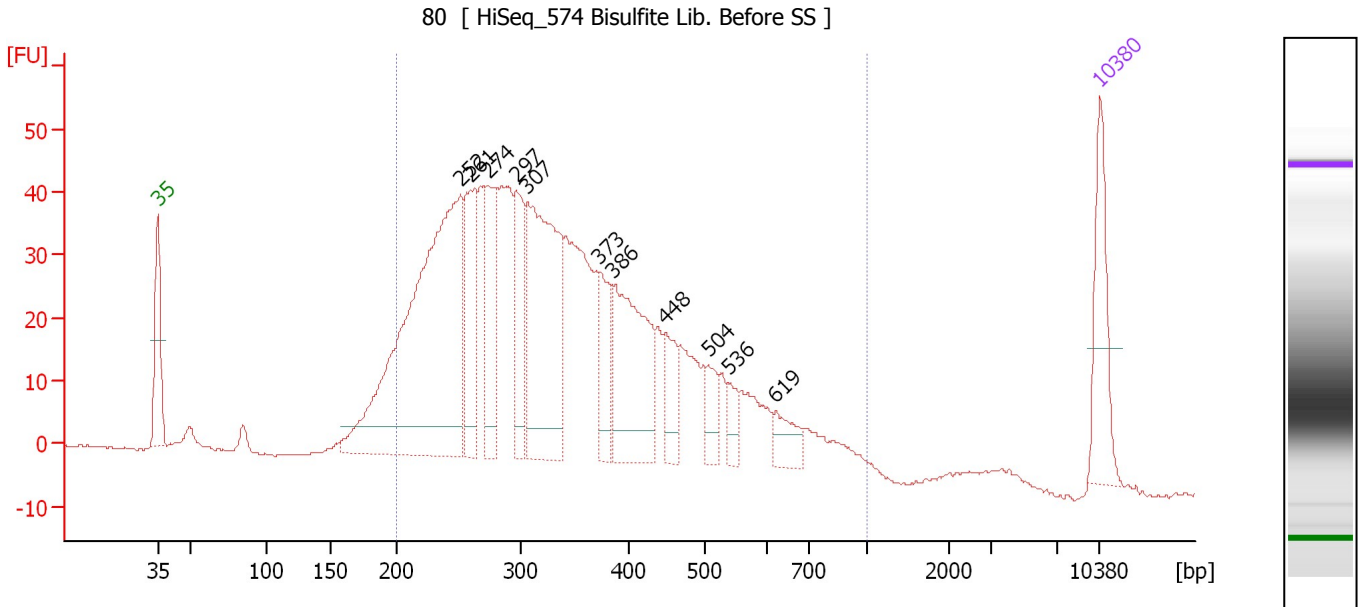
Region table for sample 8 : 79

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
141	1,000	348	1,306.5	10,002.5	1,974.42	99	36.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
 Modified: 9/6/2016 4:13:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : 80

Number of peaks found: 11 Corr. Area 1: 1,070.6
 Noise: 0.2

Peak table for sample 9 : 80

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	252	641.15	3,852.3		65.52
3	261	117.16	681.2		66.30
4	274	123.32	680.8		67.57
5	297	99.31	507.2		69.62
6	307	316.57	1,564.7		70.46
7	373	74.64	303.4		75.78
8	386	196.48	771.6		76.84
9	448	48.95	165.6		80.72
10	504	36.09	108.6		83.88
11	536	22.49	63.6		85.38
12	619	31.48	77.0		88.93
13	10,380	75.00	10.9	Upper Marker	113.00

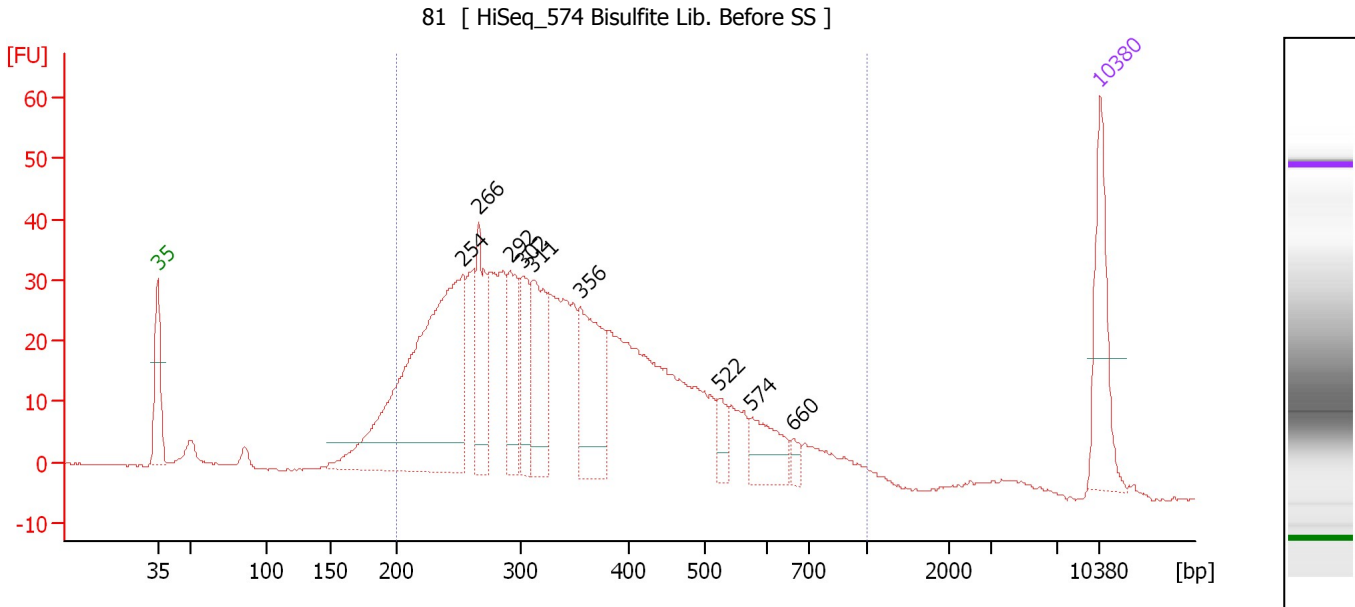
Region table for sample 9 : 80

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	1,070.6	11,432.1	2,346.23	94	34.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
 Modified: 9/6/2016 4:13:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : 81

Number of peaks found: 9 Corr. Area 1: 861.7
 Noise: 0.2

Peak table for sample 10 : 81

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	254	489.45	2,925.0		65.65
3	266	113.01	643.1		66.82
4	292	84.48	438.9		69.16
5	302	65.79	329.9		70.11
6	311	109.55	533.3		70.83
7	356	136.37	581.1		74.40
8	522	24.30	70.6		84.72
9	574	52.09	137.5		87.12
10	660	10.52	24.1		90.19
11	10,380	75.00	10.9	Upper Marker	113.00

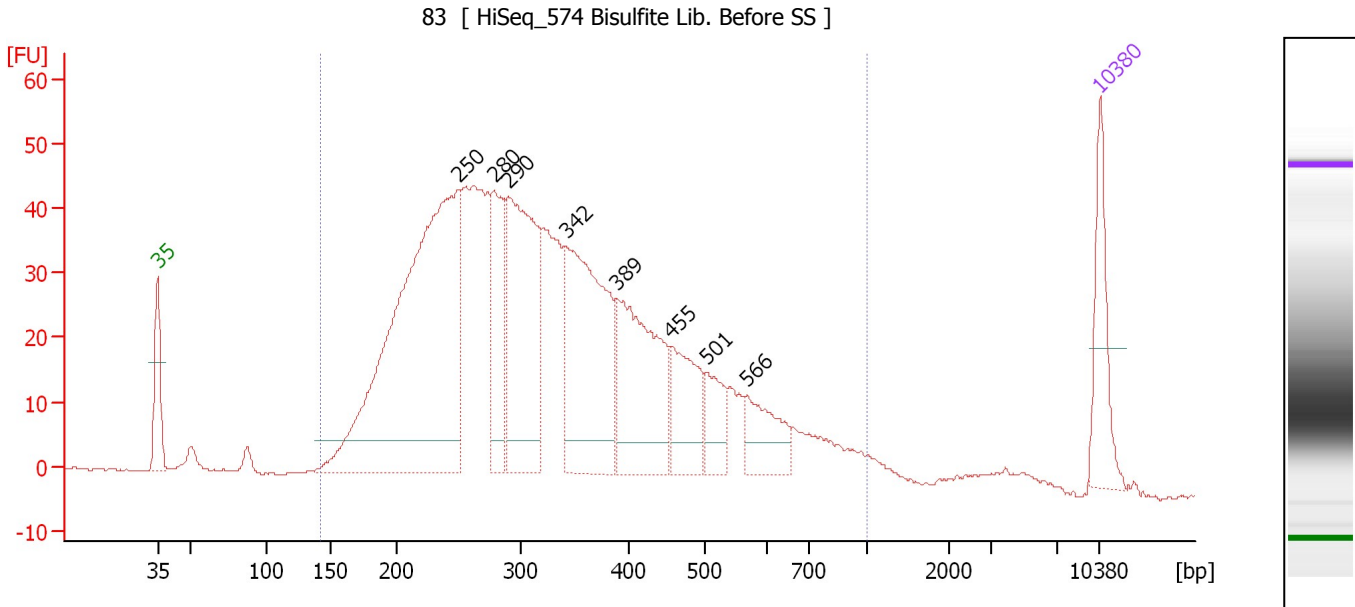
Region table for sample 10 : 81

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	861.7	8,421.4	1,751.11	93	35.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
 Modified: 9/6/2016 4:13:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : 83

Number of peaks found: 8 Corr. Area 1: 1,212.1
 Noise: 0.2

Peak table for sample 11 : 83

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	250	845.15	5,117.8		65.34
3	280	146.22	792.7		68.04
4	290	328.13	1,711.5		69.05
5	342	333.13	1,474.8		73.33
6	389	241.36	939.8		77.10
7	455	108.96	362.6		81.15
8	501	57.25	173.3		83.74
9	566	73.85	197.5		86.78
10	10,380	75.00	10.9	Upper Marker	113.00

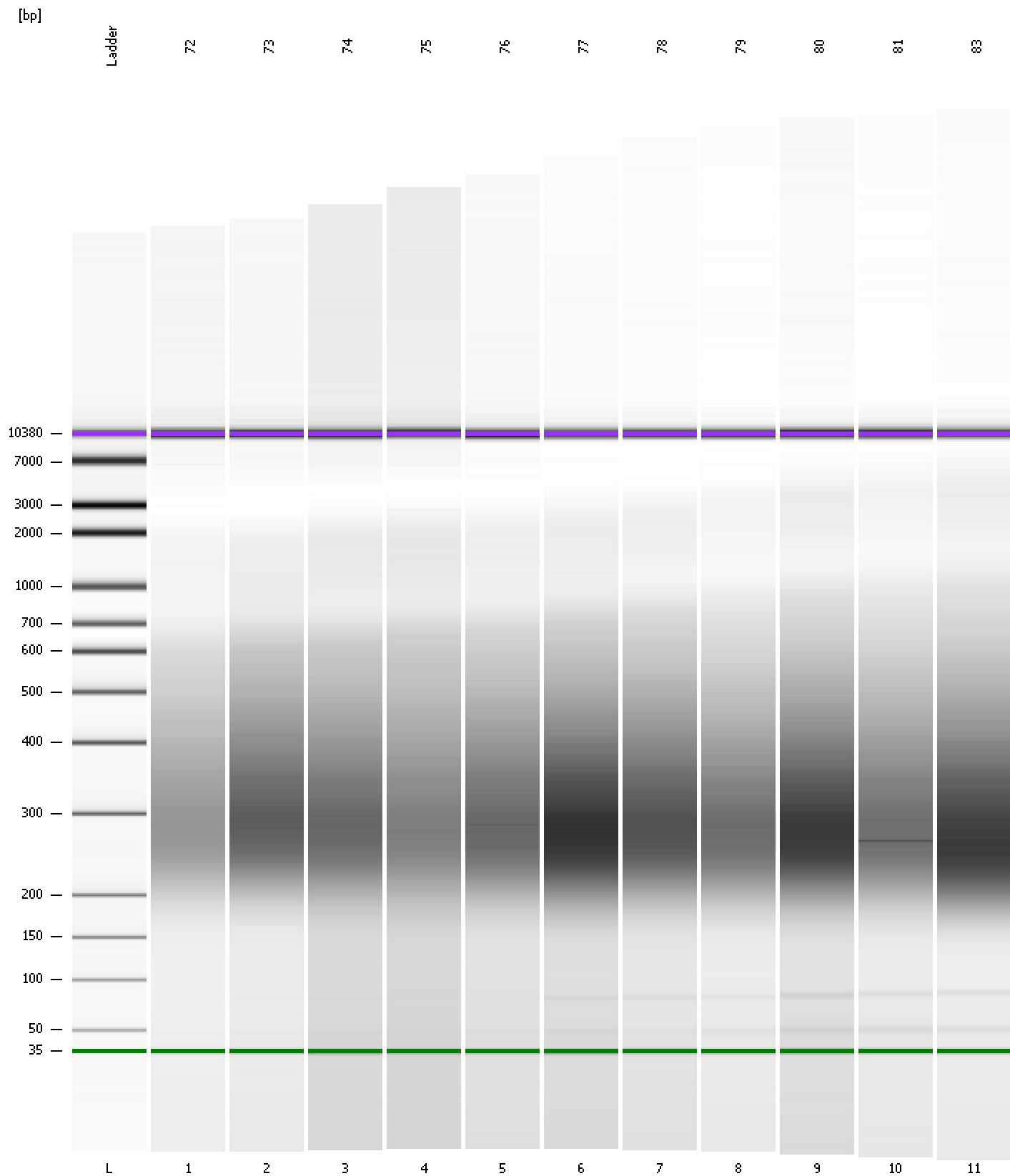
Region table for sample 11 : 83

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
142	1,000	346	1,212.1	14,994.3	2,883.60	98	39.3

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad

Created: 9/6/2016 2:12:47 PM
Modified: 9/6/2016 4:13:55 PM

Gel Image



Assay Class: High Sensitivity DNA Assay Created: 9/6/2016 2:12:47 PM
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-06\2016-09-06_002.xad Modified: 9/6/2016 4:13:55 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		9/6/2016 2:54:07 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\2016-09-06\2016-09-06_002.xad)		Instrument	Run		9/6/2016 2:12:53 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		9/6/2016 2:12:53 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		9/6/2016 2:12:53 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		9/6/2016 2:12:53 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		9/6/2016 2:12:53 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		9/6/2016 2:12:53 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		9/6/2016 2:12:53 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1