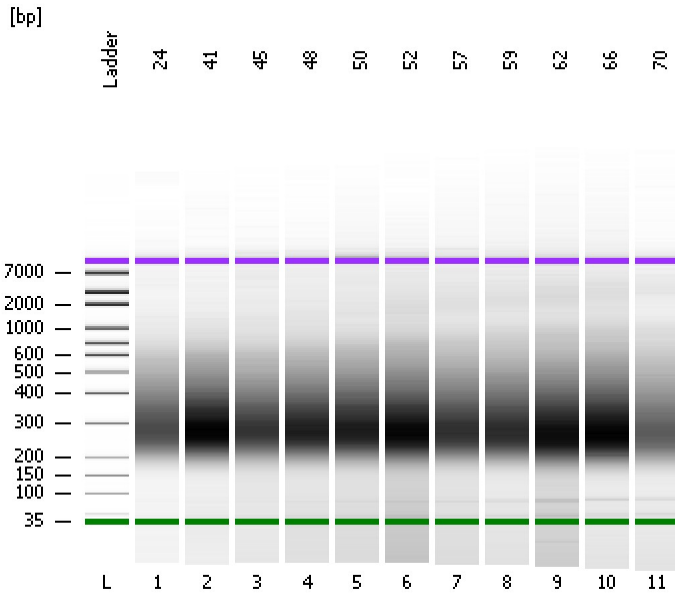


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
Modified: 8/31/2016 1:37:09 PM

Electrophoresis File Run Summary



Instrument Information:

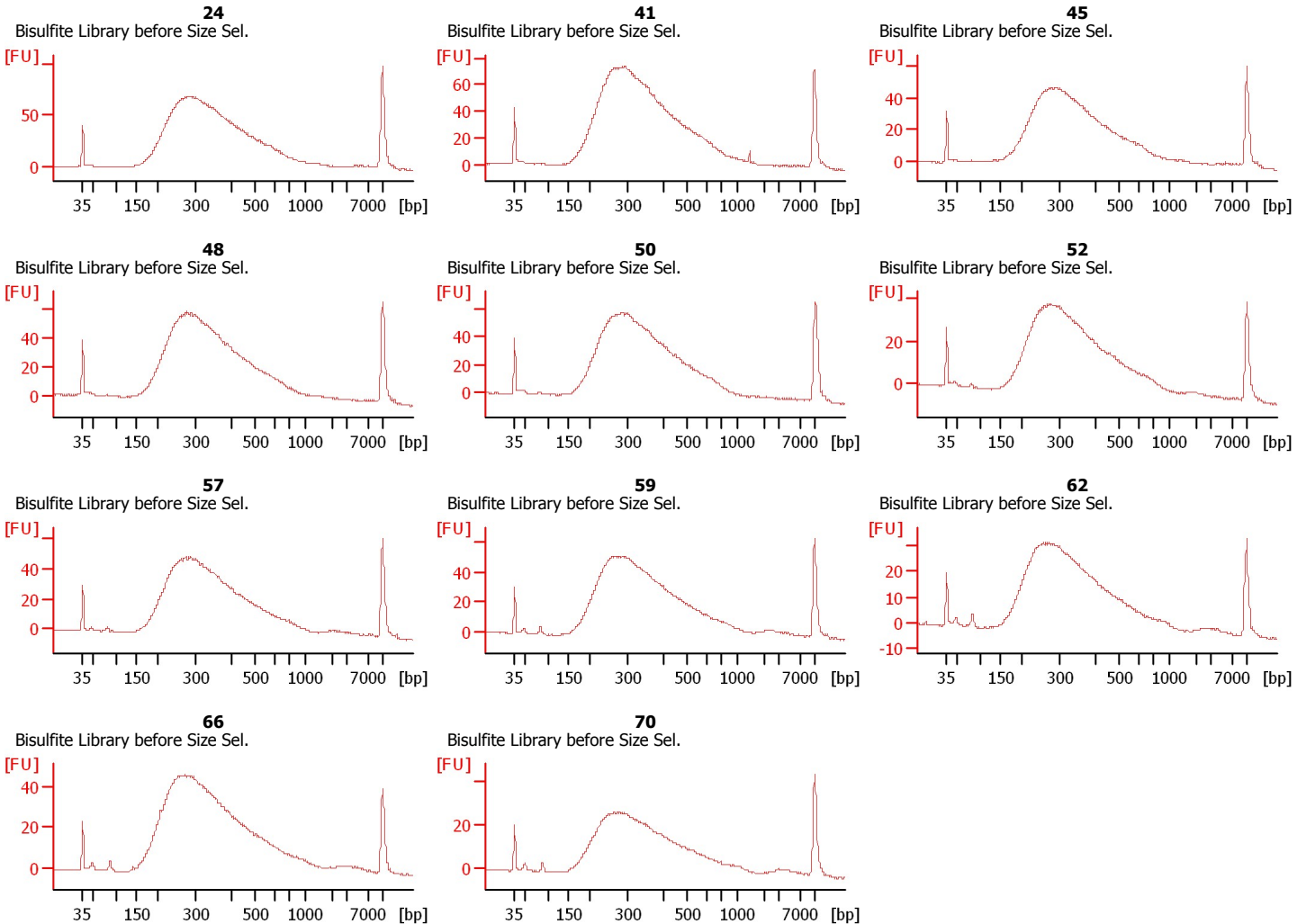
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
Modified: 8/31/2016 1:37:09 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
24	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
41	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
45	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
48	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
50	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
52	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
57	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
59	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
62	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
66	Bisulfite Library before Size Sel.	<input type="checkbox"/>	✓			
70	Bisulfite Library before Size Sel.	<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\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
Modified: 8/31/2016 1:37:09 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

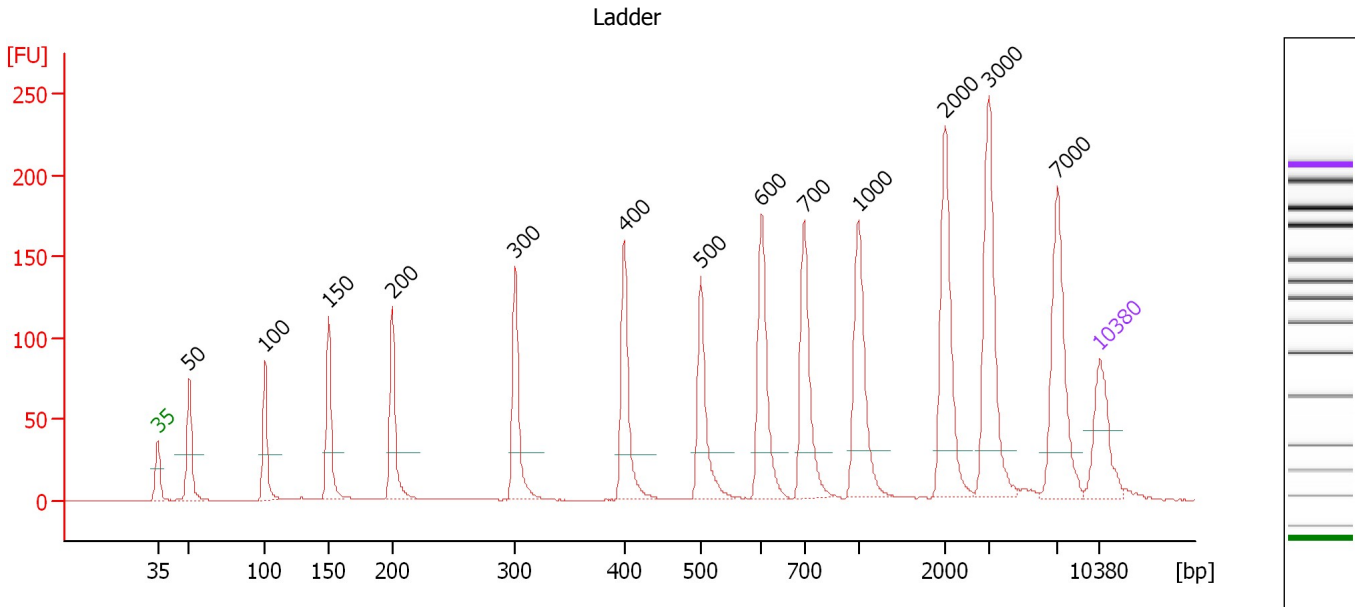
Ladder

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\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

Peak table for Ladder

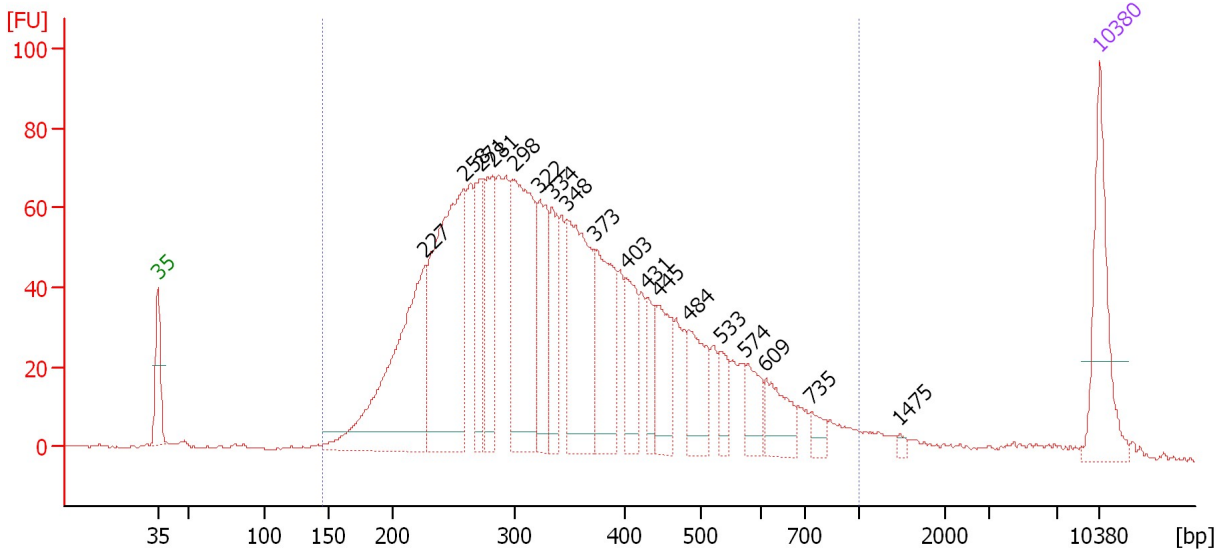
Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	50	150.00	4,545.5	Ladder Peak	45.35
3	100	150.00	2,272.7	Ladder Peak	50.97
4	150	150.00	1,515.2	Ladder Peak	55.71
5	200	150.00	1,136.4	Ladder Peak	60.45
6	300	150.00	757.6	Ladder Peak	69.59
7	400	150.00	568.2	Ladder Peak	77.66
8	500	150.00	454.5	Ladder Peak	83.33
9	600	150.00	378.8	Ladder Peak	87.87
10	700	150.00	324.7	Ladder Peak	91.05
11	1,000	150.00	227.3	Ladder Peak	95.06
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	109.87
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary Continued ...

24 [Bisulfite Library before Size Sel.]



Overall Results for sample 1 : 24

Number of peaks found: 18 Corr. Area 1: 1,964.1
 Noise: 0.3

Peak table for sample 1 : 24

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	227	277.58	1,854.3		62.90
3	258	318.02	1,867.2		65.76
4	271	86.15	481.7		66.94
5	281	97.35	524.5		67.88
6	298	218.80	1,110.7		69.45
7	322	94.71	445.5		71.37
8	334	61.29	278.3		72.31
9	348	174.45	760.1		73.44
10	373	113.87	462.1		75.51
11	403	59.95	225.4		77.83
12	431	32.68	114.9		79.40
13	445	60.69	206.8		80.19
14	484	64.09	200.7		82.41
15	533	24.00	68.2		84.82
16	574	33.01	87.1		86.69
17	609	41.05	102.1		88.17
18	735	12.97	26.7		91.52
19	1,475	3.88	4.0		98.12
20	10,380	75.00	10.9	Upper Marker	113.00

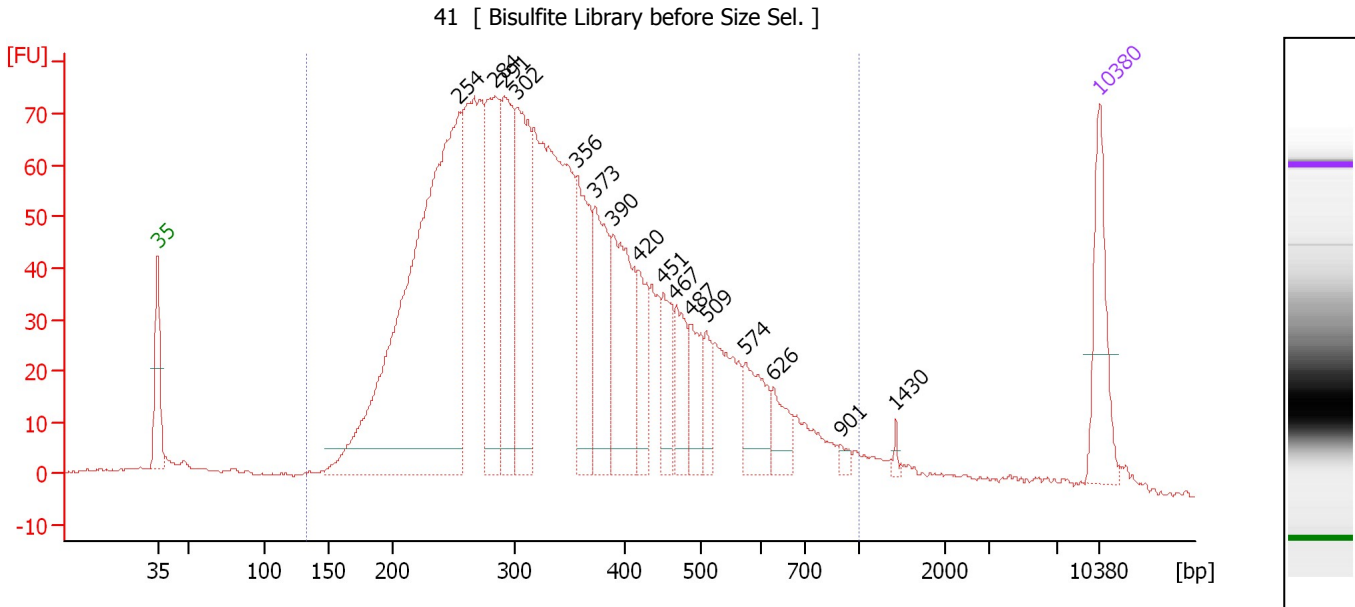
Region table for sample 1 : 24

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
145	1,000	360	1,964.1	11,074.0	2,248.11	97	36.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : 41

Number of peaks found: 16 Corr. Area 1: 2,138.3
 Noise: 0.3

Peak table for sample 2 : 41

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	893.28	5,319.3		65.43
3	284	216.03	1,154.0		68.10
4	291	192.75	1,004.8		68.74
5	302	214.06	1,075.2		69.73
6	356	141.12	600.3		74.12
7	373	138.46	562.9		75.46
8	390	165.65	643.8		76.84
9	420	62.57	226.0		78.77
10	451	64.12	215.5		80.54
11	467	60.84	197.2		81.48
12	487	54.16	168.3		82.62
13	509	31.32	93.2		83.76
14	574	66.24	175.0		86.67
15	626	35.98	87.1		88.70
16	901	7.94	13.4		93.73
17	1,430	4.09	4.3		97.83
18	10,380	75.00	10.9	Upper Marker	113.00

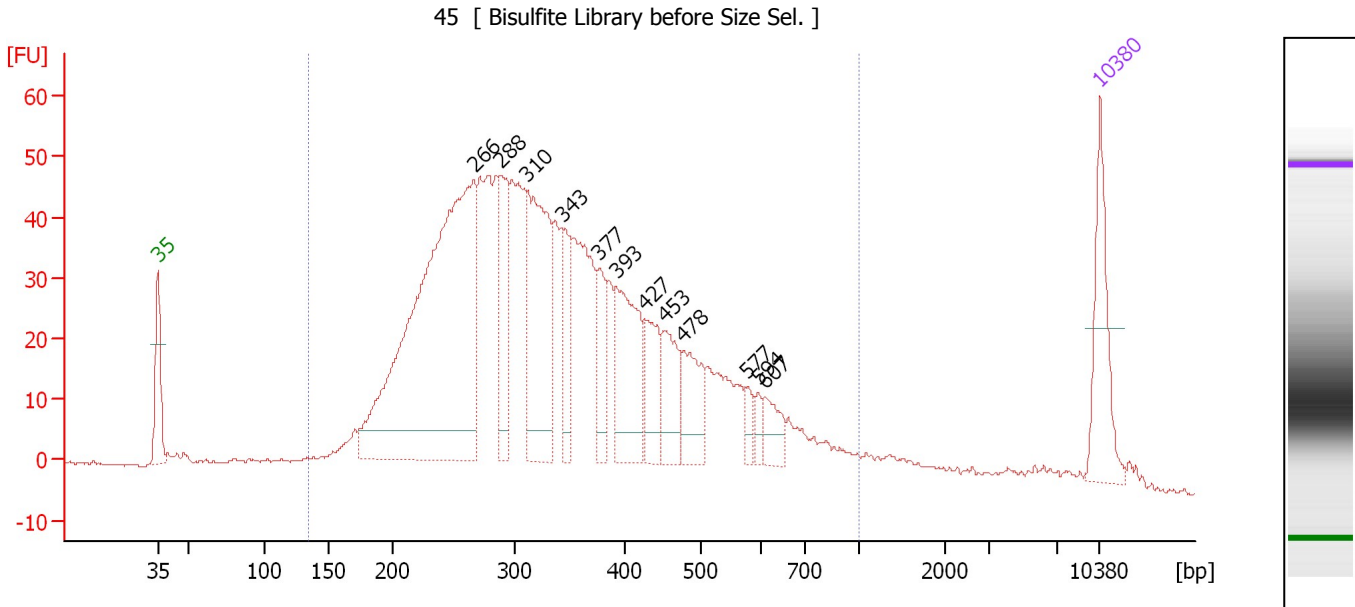
Region table for sample 2 : 41

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
133	1,000	357	2,138.3	18,047.8	3,609.05	95	37.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

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 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : 45

Number of peaks found: 12 Corr. Area 1: 1,377.6
 Noise: 0.3

Peak table for sample 3 : 45

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	266	746.44	4,249.1		66.50
3	288	106.17	557.6		68.54
4	310	236.85	1,156.1		70.43
5	343	65.58	289.6		73.07
6	377	53.83	216.3		75.81
7	393	136.34	526.3		77.05
8	427	65.76	233.3		79.19
9	453	67.13	224.8		80.64
10	478	67.67	214.5		82.08
11	577	15.59	41.0		86.81
12	594	14.12	36.0		87.61
13	607	29.81	74.4		88.11
14	10,380	75.00	10.9	Upper Marker	113.00

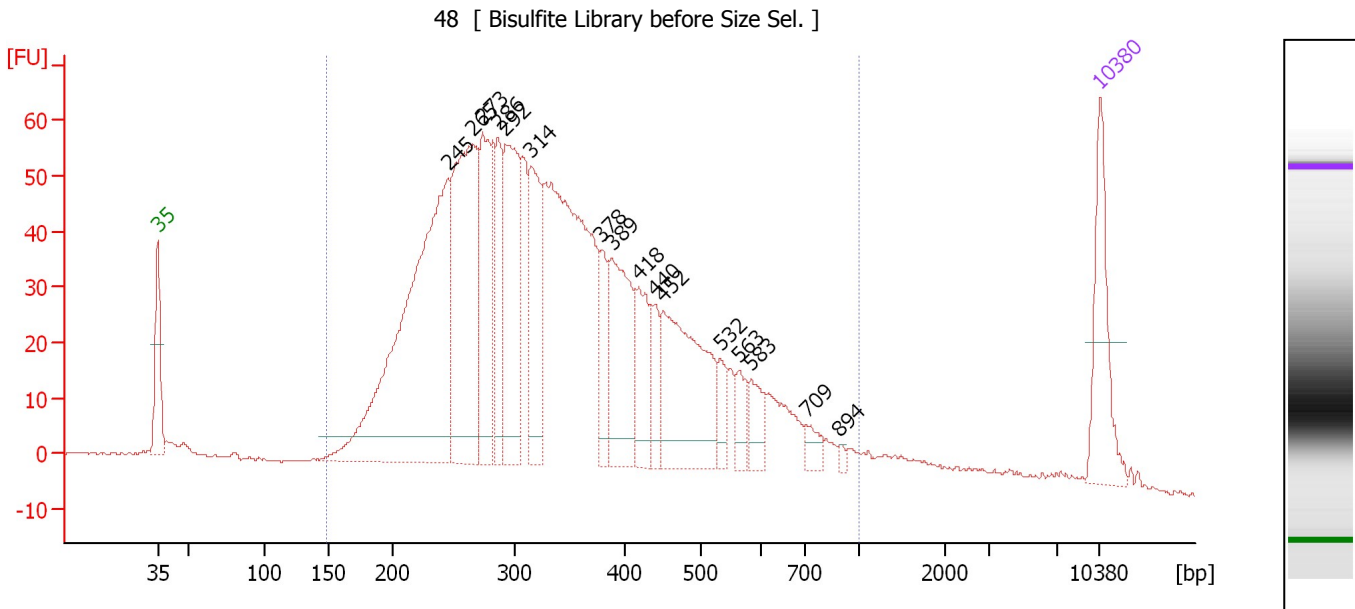
Region table for sample 3 : 45

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
134	1,000	358	1,377.6	13,758.8	2,755.61	95	37.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

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 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : 48

Number of peaks found: 16 Corr. Area 1: 1,650.0
 Noise: 0.2

Peak table for sample 4 : 48

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	572.31	3,538.5		64.57
3	265	308.43	1,760.5		66.43
4	273	174.59	968.4		67.14
5	286	99.14	525.5		68.30
6	292	192.32	998.2		68.85
7	314	123.39	595.5		70.72
8	378	53.03	212.7		75.86
9	389	146.33	570.1		76.77
10	418	68.66	248.9		78.68
11	440	39.81	137.0		79.94
12	452	193.36	648.4		80.60
13	532	25.82	73.5		84.78
14	563	26.19	70.5		86.19
15	583	28.94	75.2		87.10
16	709	16.19	34.6		91.18
17	894	4.39	7.4		93.65
18	10,380	75.00	10.9	Upper Marker	113.00

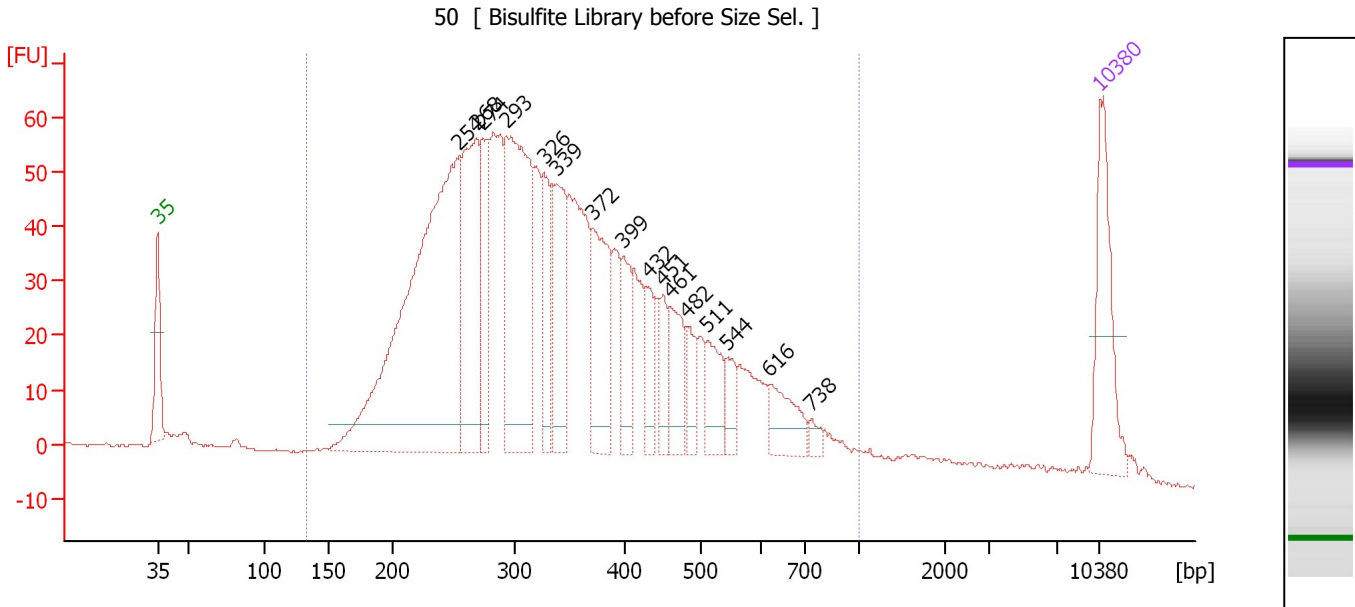
Region table for sample 4 : 48

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
148	1,000	358	1,650.0	14,069.0	2,838.80	95	37.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : 50

Number of peaks found: 16 Corr. Area 1: 1,681.9
 Noise: 0.2

Peak table for sample 5 : 50

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	599.07	3,577.3		65.36
3	268	197.34	1,116.9		66.64
4	274	92.24	510.4		67.20
5	293	284.55	1,472.3		68.94
6	326	77.04	358.0		71.69
7	339	103.33	462.2		72.72
8	372	112.39	458.2		75.37
9	399	48.67	184.6		77.62
10	432	35.18	123.5		79.46
11	451	32.68	109.9		80.53
12	461	54.37	178.9		81.09
13	482	29.41	92.4		82.31
14	511	45.95	136.1		83.85
15	544	25.07	69.8		85.33
16	616	43.81	107.7		88.39
17	738	8.29	17.0		91.56
18	10,380	75.00	10.9	Upper Marker	113.00

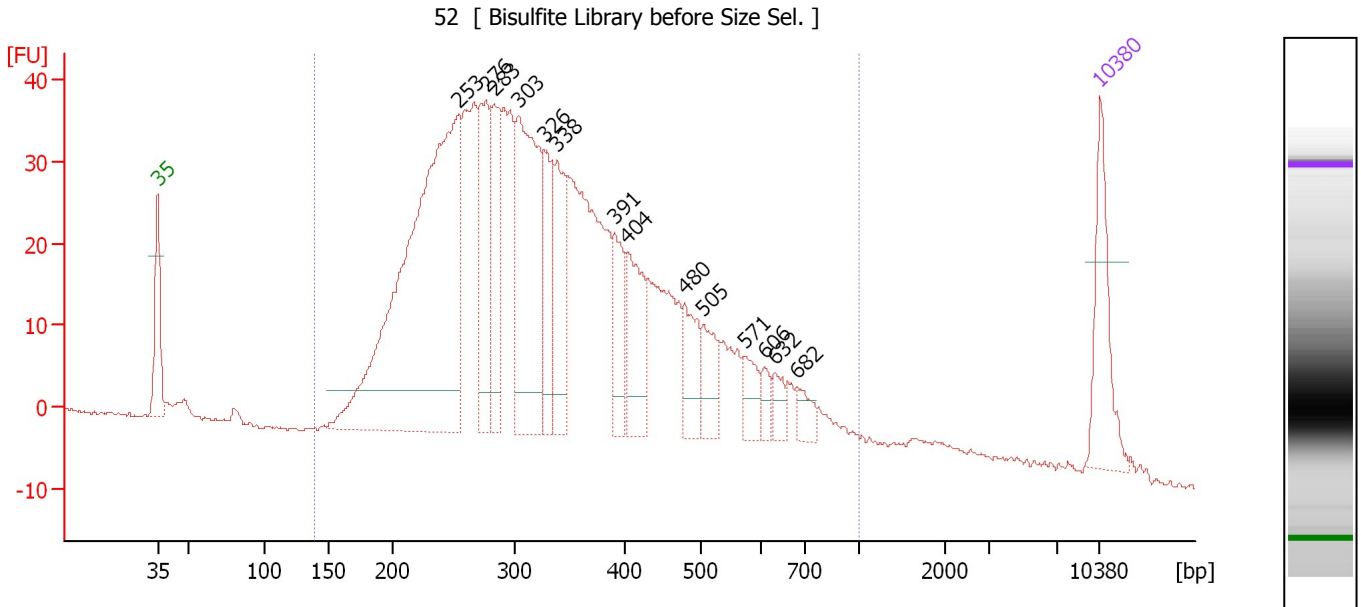
Region table for sample 5 : 50

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
133	1,000	359	1,681.9	12,934.3	2,613.25	95	37.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

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Electropherogram Summary Continued ...



Overall Results for sample 6 : 52

Number of peaks found: 14 Corr. Area 1: 1,129.2
 Noise: 0.2

Peak table for sample 6 : 52

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	253	762.95	4,564.4		65.32
3	276	132.99	730.6		67.38
4	283	105.69	565.6		68.05
5	303	276.22	1,380.0		69.86
6	326	87.65	407.0		71.71
7	338	121.58	544.3		72.69
8	391	67.62	261.7		76.97
9	404	90.51	339.3		77.90
10	480	59.39	187.6		82.18
11	505	46.54	139.6		83.57
12	571	30.91	82.0		86.56
13	606	15.91	39.8		88.05
14	632	19.06	45.7		88.88
15	682	21.13	47.0		90.47
16	10,380	75.00	10.9	Upper Marker	113.00

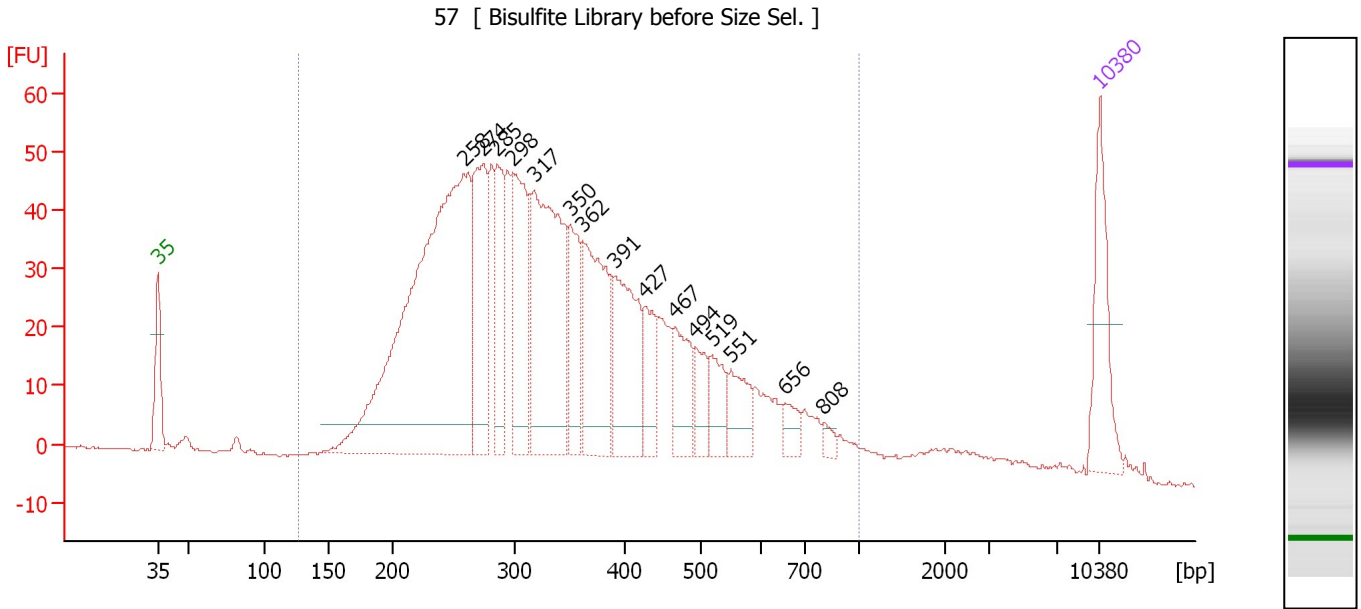
Region table for sample 6 : 52

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
139	1,000	355	1,129.2	14,702.0	2,938.32	96	37.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : 57

Number of peaks found: 15 Corr. Area 1: 1,409.2
 Noise: 0.2

Peak table for sample 7 : 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	258	763.87	4,485.0		65.76
3	274	166.47	922.2		67.17
4	285	95.79	509.3		68.22
5	298	156.91	797.5		69.42
6	317	311.22	1,486.0		70.99
7	350	93.37	403.7		73.66
8	362	173.44	725.8		74.60
9	391	144.82	561.7		76.90
10	427	56.16	199.2		79.20
11	467	67.47	218.9		81.45
12	494	36.45	111.9		82.97
13	519	43.77	127.9		84.17
14	551	47.99	132.0		85.64
15	656	20.11	46.4		89.67
16	808	9.09	17.1		92.49
17	10,380	75.00	10.9	Upper Marker	113.00

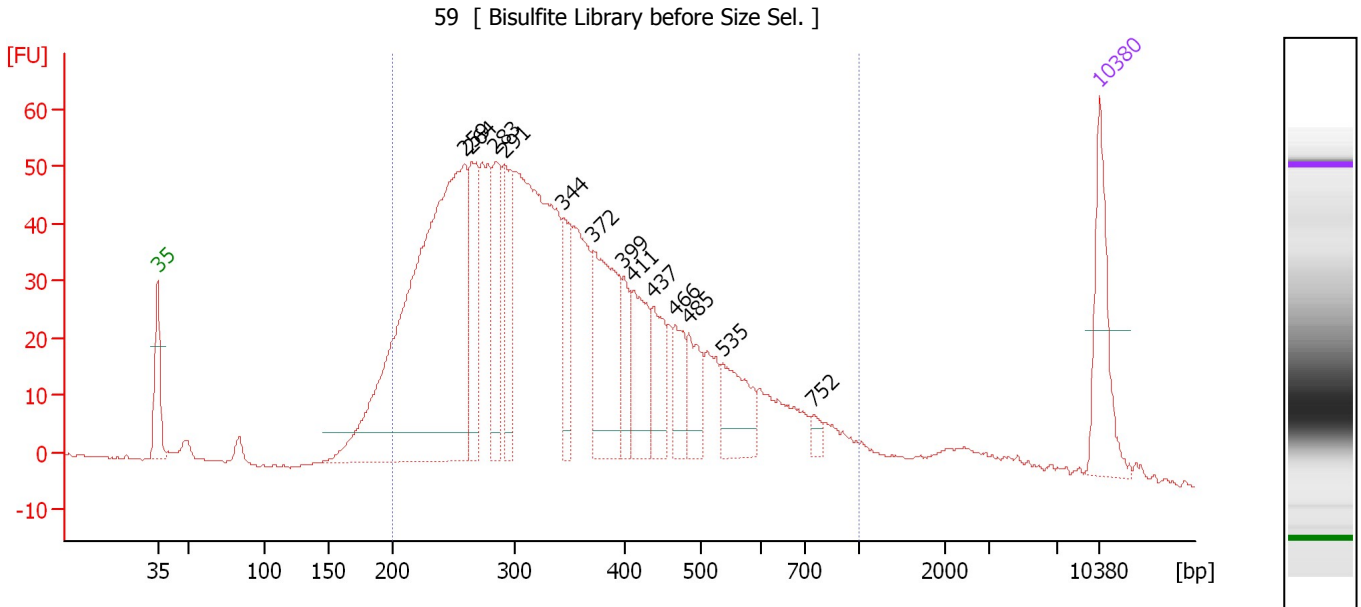
Region table for sample 7 : 57

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
127	1,000	361	1,409.2	13,431.1	2,710.27	94	38.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

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Electropherogram Summary Continued ...



Overall Results for sample 8 : 59

Number of peaks found: 13 Corr. Area 1: 1,429.9
 Noise: 0.2

Peak table for sample 8 : 59

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	767.74	4,492.3		65.84
3	264	127.65	732.2		66.32
4	283	106.73	570.8		68.06
5	291	95.57	496.9		68.81
6	344	69.12	304.3		73.15
7	372	163.61	666.9		75.38
8	399	45.16	171.4		77.60
9	411	84.12	310.0		78.29
10	437	60.18	208.5		79.78
11	466	43.23	140.5		81.42
12	485	48.26	150.8		82.48
13	535	70.53	199.8		84.92
14	752	10.00	20.1		91.75
15	10,380	75.00	10.9	Upper Marker	113.00

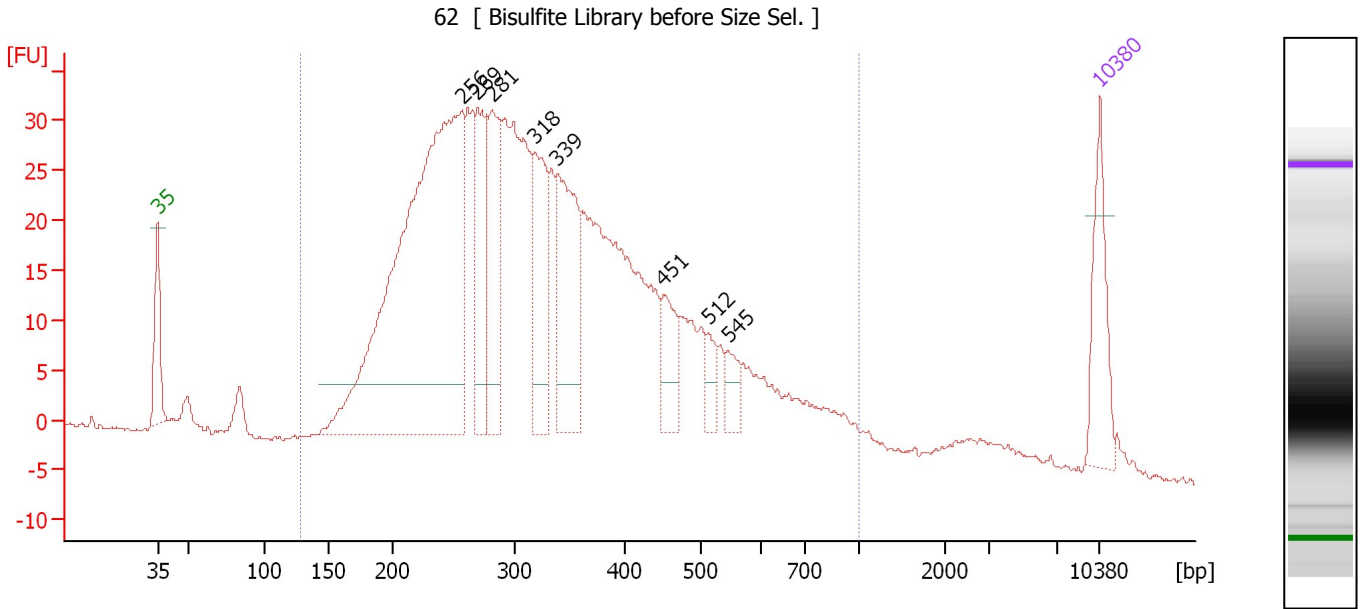
Region table for sample 8 : 59

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	369	1,429.9	12,657.0	2,647.87	90	38.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : 62

Number of peaks found: 8 Corr. Area 1: 937.1
 Noise: 0.2

Peak table for sample 9 : 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	256	941.15	5,565.7		65.59
3	269	150.53	847.9		66.76
4	281	153.81	830.4		67.82
5	318	148.15	706.8		71.01
6	339	199.64	893.1		72.71
7	451	63.21	212.1		80.58
8	512	28.19	83.4		83.87
9	545	27.38	76.2		85.36
10	10,380	75.00	10.9	Upper Marker	113.00

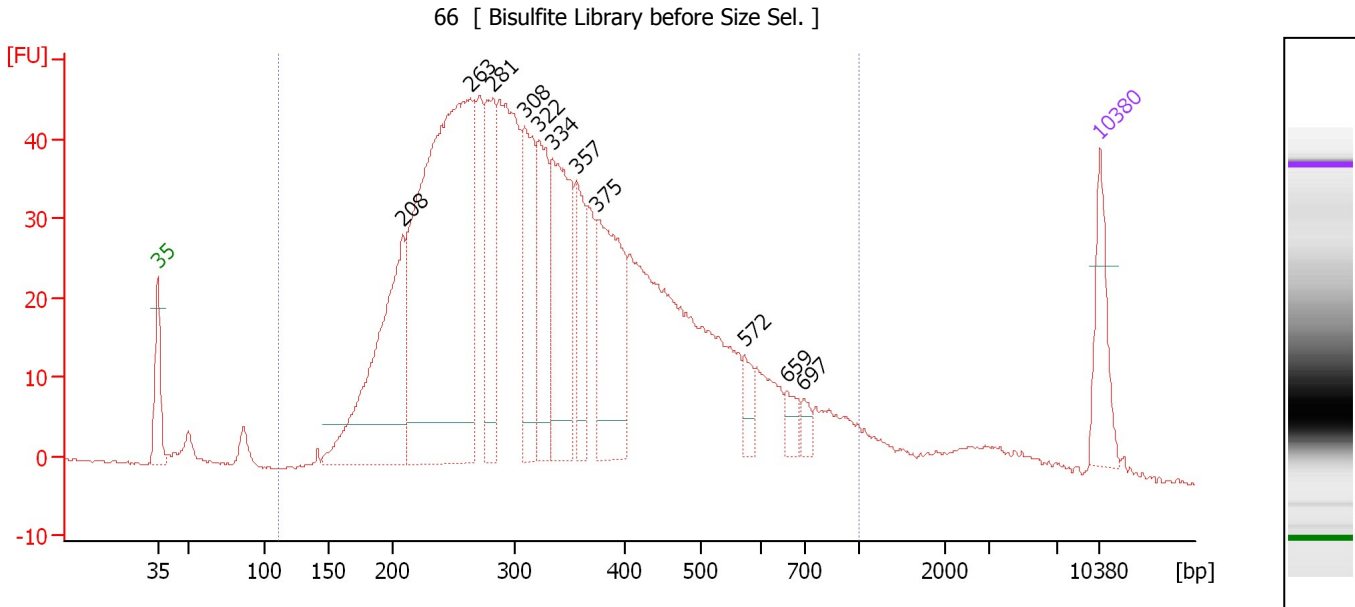
Region table for sample 9 : 62

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
128	1,000	351	937.1	16,425.0	3,204.31	95	39.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

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 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : 66

Number of peaks found: 11 Corr. Area 1: 1,324.6
 Noise: 0.2

Peak table for sample 10 : 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	208	443.73	3,230.4		61.19
3	263	1,069.55	6,162.0		66.21
4	281	180.84	974.8		67.86
5	308	204.79	1,006.4		70.26
6	322	170.82	804.9		71.33
7	334	265.11	1,202.2		72.34
8	357	104.22	442.8		74.16
9	375	259.42	1,047.8		75.65
10	572	32.51	86.1		86.59
11	659	26.20	60.3		89.74
12	697	15.40	33.5		90.96
13	10,380	75.00	10.9	Upper Marker	113.00

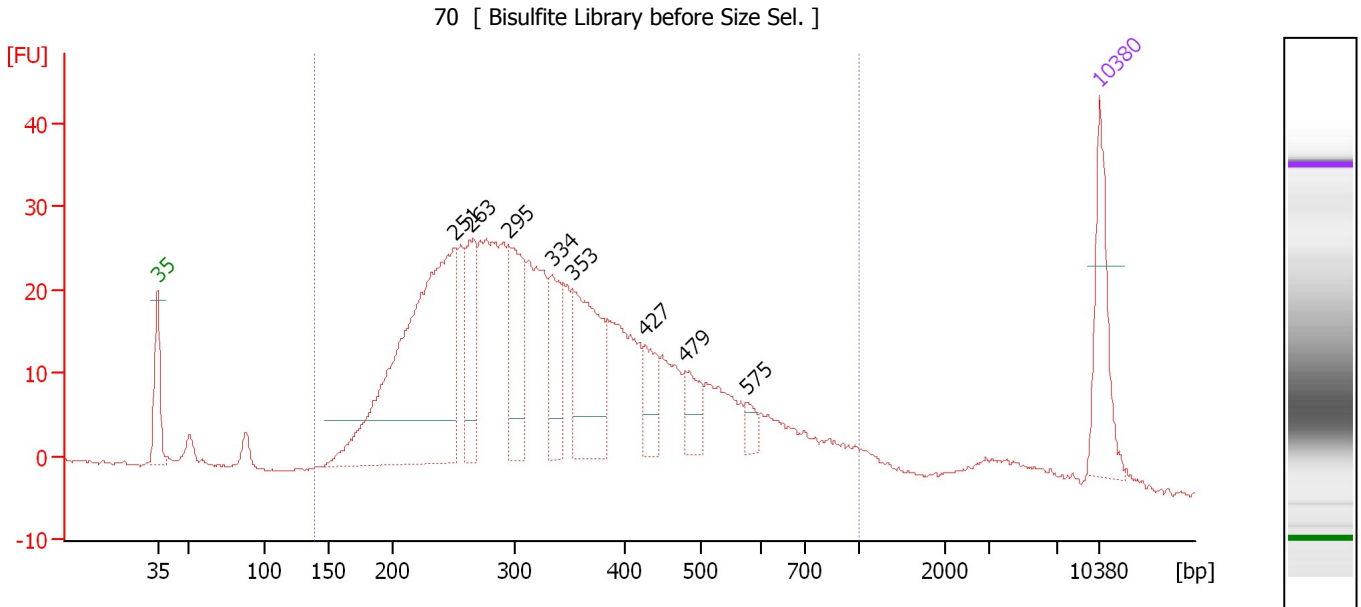
Region table for sample 10 : 66

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
111	1,000	359	1,324.6	22,643.5	4,476.45	94	40.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
 Modified: 8/31/2016 1:37:09 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : 70

Number of peaks found: 8 Corr. Area 1: 772.6
 Noise: 0.3

Peak table for sample 11 : 70

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	251	547.25	3,299.7		65.14
3	263	103.75	597.7		66.21
4	295	123.62	634.6		69.15
5	334	80.63	366.2		72.30
6	353	162.33	697.0		73.86
7	427	46.37	164.4		79.20
8	479	39.29	124.3		82.14
9	575	13.49	35.5		86.74
10	10,380	75.00	10.9	Upper Marker	113.00

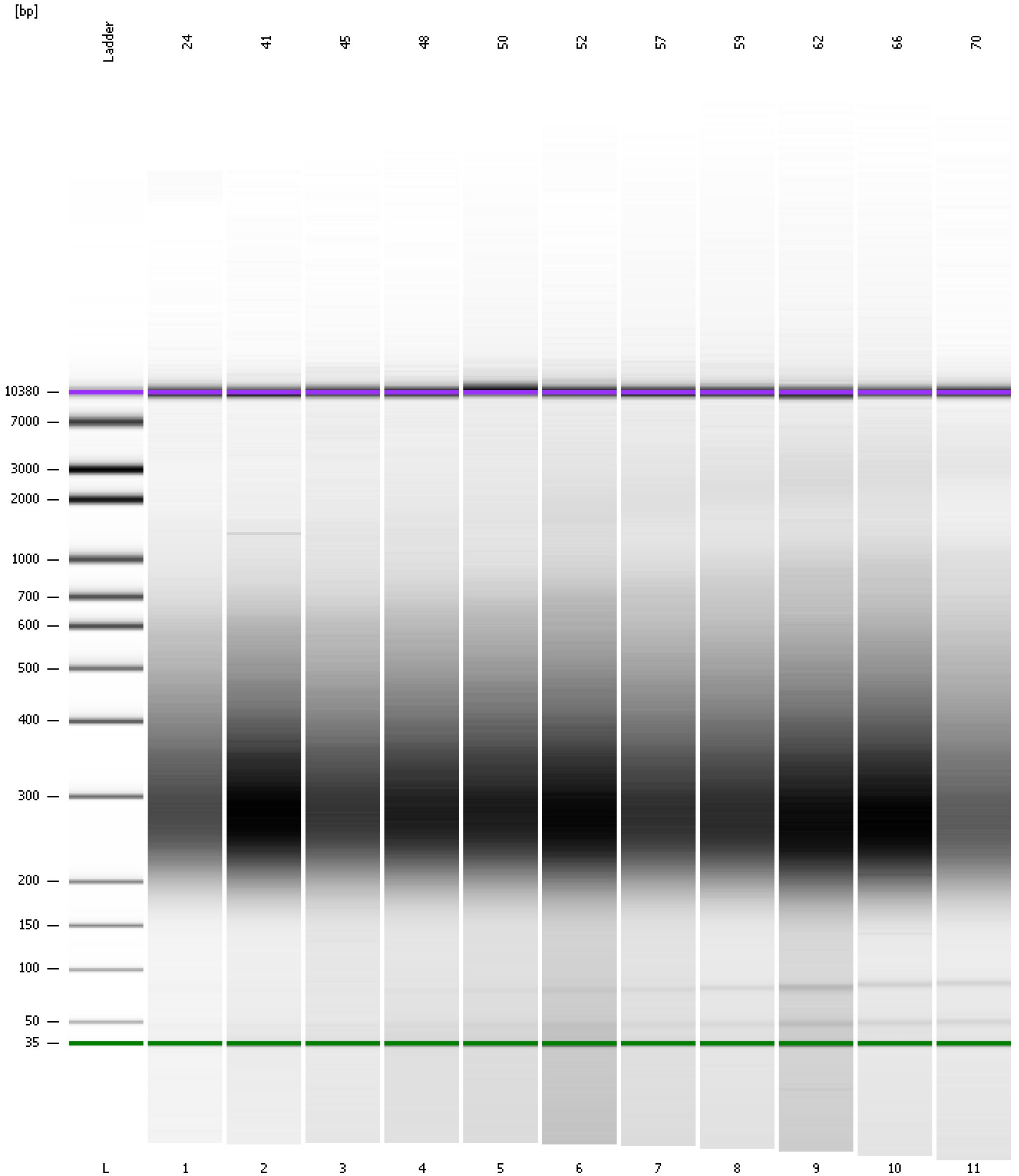
Region table for sample 11 : 70

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
139	1,000	360	772.6	11,029.2	2,200.56	95	39.8

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
Modified: 8/31/2016 1:37:09 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-31\2016-08-31_002.xad

Created: 8/31/2016 12:54:29 PM
 Modified: 8/31/2016 1:37:09 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		8/31/2016 1:35:48 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\2016-08-31\2016-08-31_002.xad)		Instrument	Run		8/31/2016 12:54:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		8/31/2016 12:54:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		8/31/2016 12:54:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		8/31/2016 12:54:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		8/31/2016 12:54:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		8/31/2016 12:54:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		8/31/2016 12:54:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1