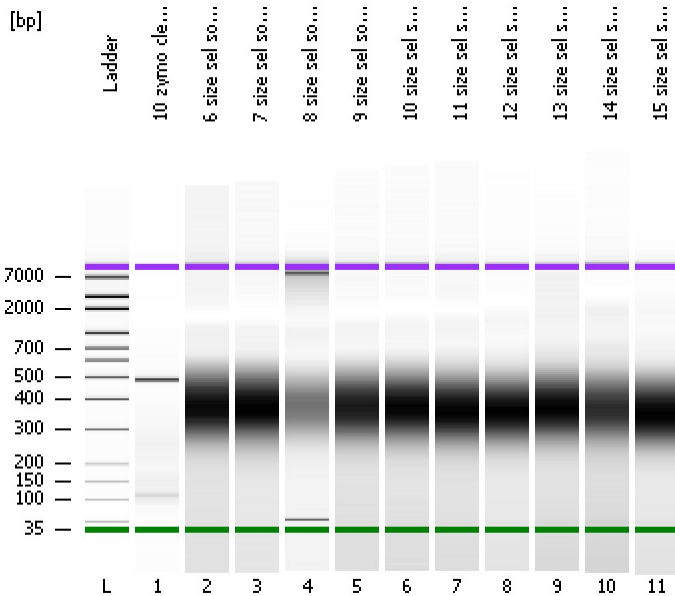


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
Modified: 5/18/2016 5:13:13 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

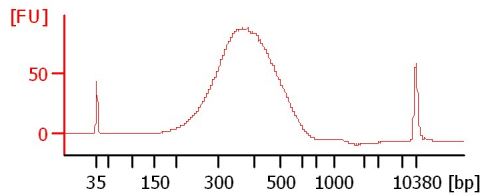
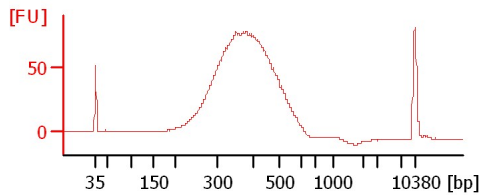
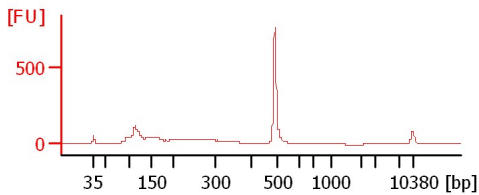
Chip Information:

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

10 zymo clean up

6 size sel soni DNA

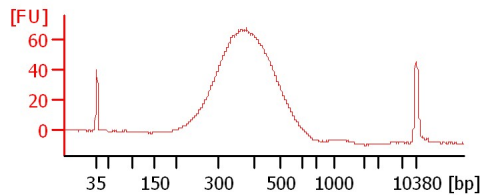
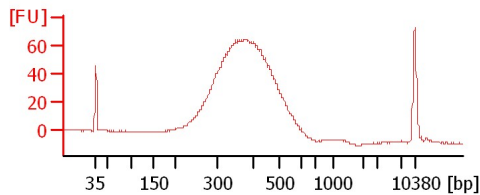
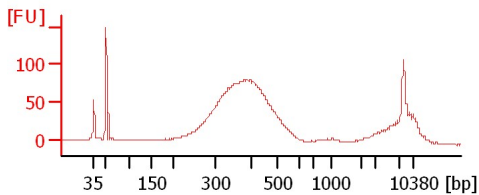
7 size sel soni DNA



8 size sel soni DNA

9 size sel soni DNA

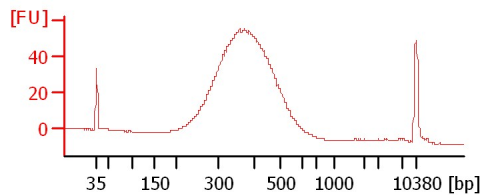
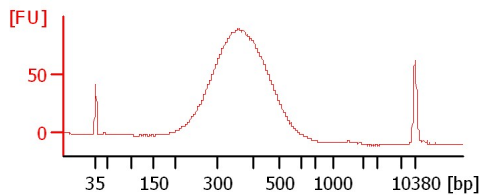
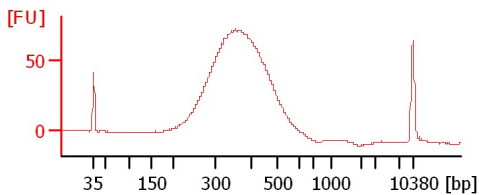
10 size sel soni DNA



11 size sel soni DNA

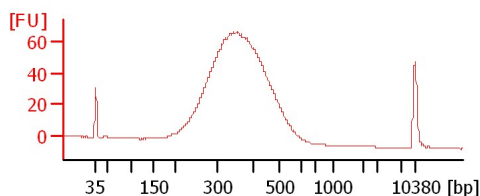
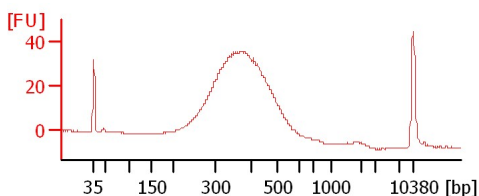
12 size sel soni DNA

13 size sel soni DNA



14 size sel soni DNA

15 size sel soni DNA



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
10 zymo clean up		<input type="checkbox"/>	✓			
6 size sel soni DNA		<input type="checkbox"/>	✓			
7 size sel soni DNA		<input type="checkbox"/>	✓			
8 size sel soni DNA		<input type="checkbox"/>	✓			
9 size sel soni DNA		<input type="checkbox"/>	✓			
10 size sel soni DNA		<input type="checkbox"/>	✓			
11 size sel soni DNA		<input type="checkbox"/>	✓			
12 size sel soni DNA		<input type="checkbox"/>	✓			
13 size sel soni DNA		<input type="checkbox"/>	✓			
14 size sel soni DNA		<input type="checkbox"/>	✓			
15 size sel soni DNA		<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\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
Modified: 5/18/2016 5:13:13 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

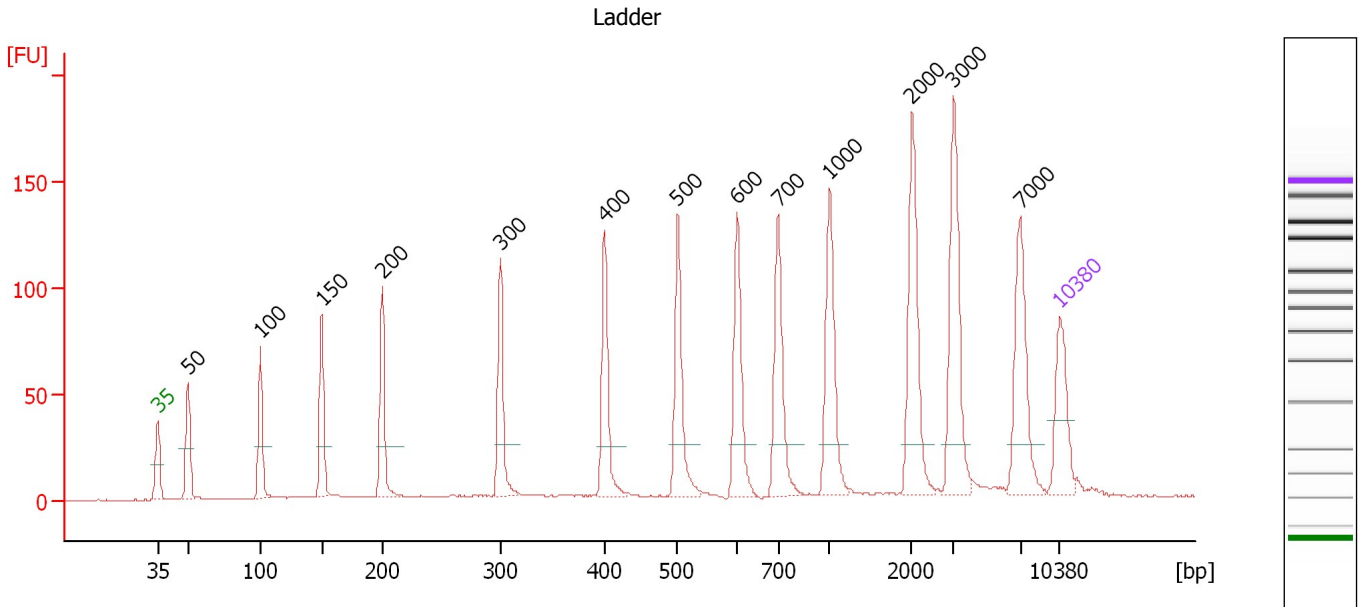
Ladder

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\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.3

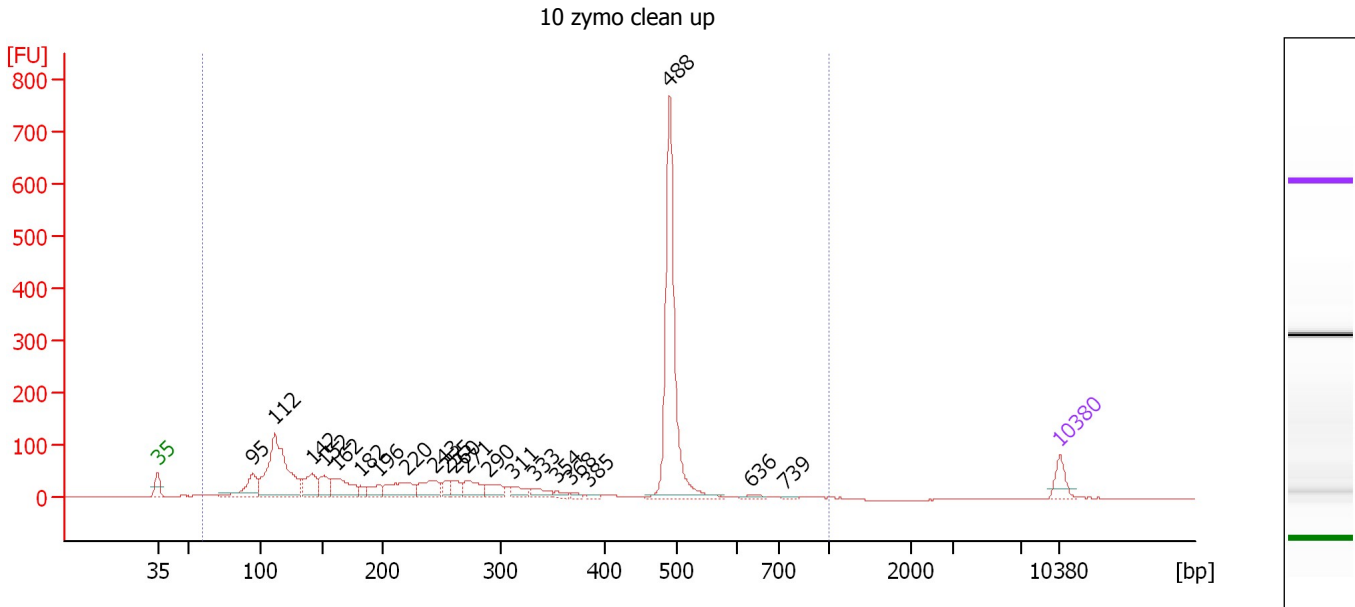
Peak table for Ladder

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	45.35
3	100	150.00	2,272.7	Ladder Peak	50.96
4	150	150.00	1,515.2	Ladder Peak	55.75
5	200	150.00	1,136.4	Ladder Peak	60.45
6	300	150.00	757.6	Ladder Peak	69.61
7	400	150.00	568.2	Ladder Peak	77.71
8	500	150.00	454.5	Ladder Peak	83.37
9	600	150.00	378.8	Ladder Peak	87.97
10	700	150.00	324.7	Ladder Peak	91.14
11	1,000	150.00	227.3	Ladder Peak	95.16
12	2,000	150.00	113.6	Ladder Peak	101.54
13	3,000	150.00	75.8	Ladder Peak	104.75
14	7,000	150.00	32.5	Ladder Peak	109.93
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : 10 zymo clean up

Number of peaks found: 21 Corr. Area 1: 2,172.4
 Noise: 0.3

Peak table for sample 1 : 10 zymo clean up

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	95	227.07	3,620.4		50.40
3	112	919.53	12,456.9		52.09
4	142	194.76	2,076.4		55.00
5	152	134.91	1,342.6		55.96
6	162	236.33	2,216.9		56.84
7	182	48.70	405.2		58.77
8	196	81.94	633.4		60.08
9	220	208.44	1,437.7		62.25
10	243	166.58	1,036.8		64.43
11	255	55.92	332.2		65.49
12	260	81.95	476.9		65.98
13	271	140.59	784.7		66.99
14	290	94.33	492.1		68.74
15	311	65.95	321.0		70.53
16	333	67.31	305.9		72.32
17	354	29.17	124.9		73.96
18	368	17.91	73.8		75.12
19	385	15.33	60.4		76.48
20	488	1,207.52	3,745.6		82.72
21	636	21.31	50.8		89.10
22	739	9.94	20.4		91.67
23	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...

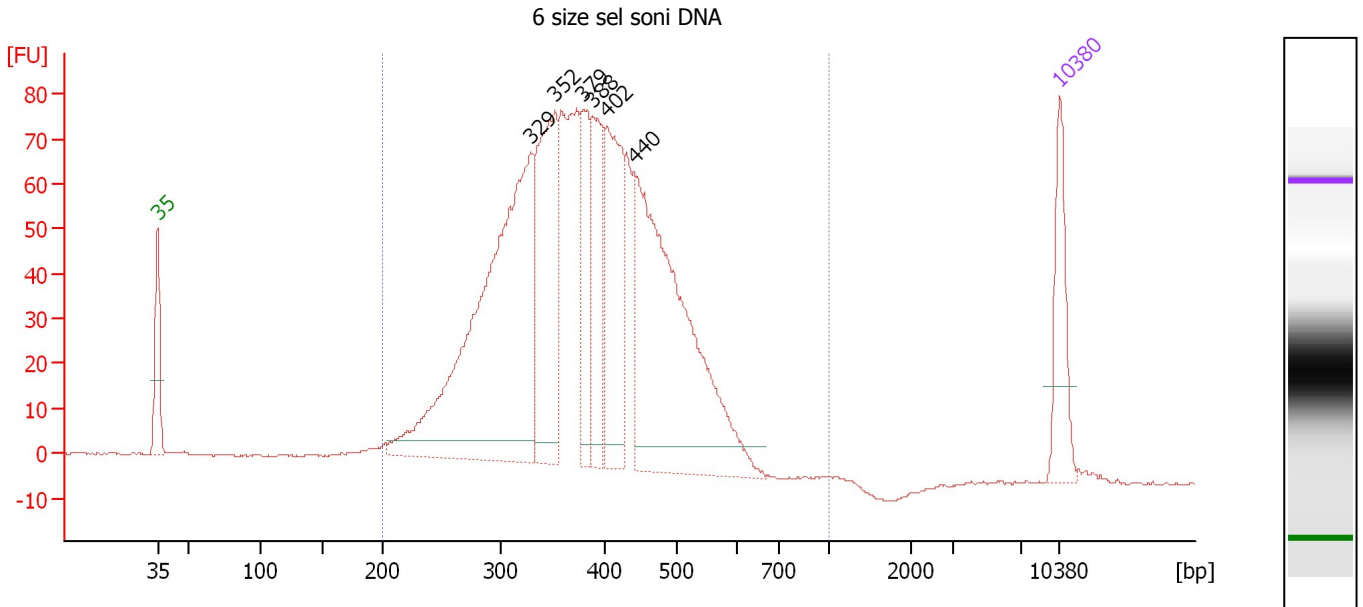
... Region table for sample 1 : 10 zymo clean up

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
59	1,000	329	2,172.4	32,401.0	4,088.62	99	49.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : 6 size sel soni DNA

Number of peaks found: 6 Corr. Area 1: 1,633.6
 Noise: 0.3

Peak table for sample 2 : 6 size sel soni DNA

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	329	716.42	3,301.1		71.95
3	352	288.23	1,240.5		73.83
4	379	125.11	500.4		76.00
5	388	134.25	523.8		76.77
6	402	208.46	785.5		77.83
7	440	541.12	1,861.4		80.00
8	10,380	75.00	10.9	Upper Marker	113.00

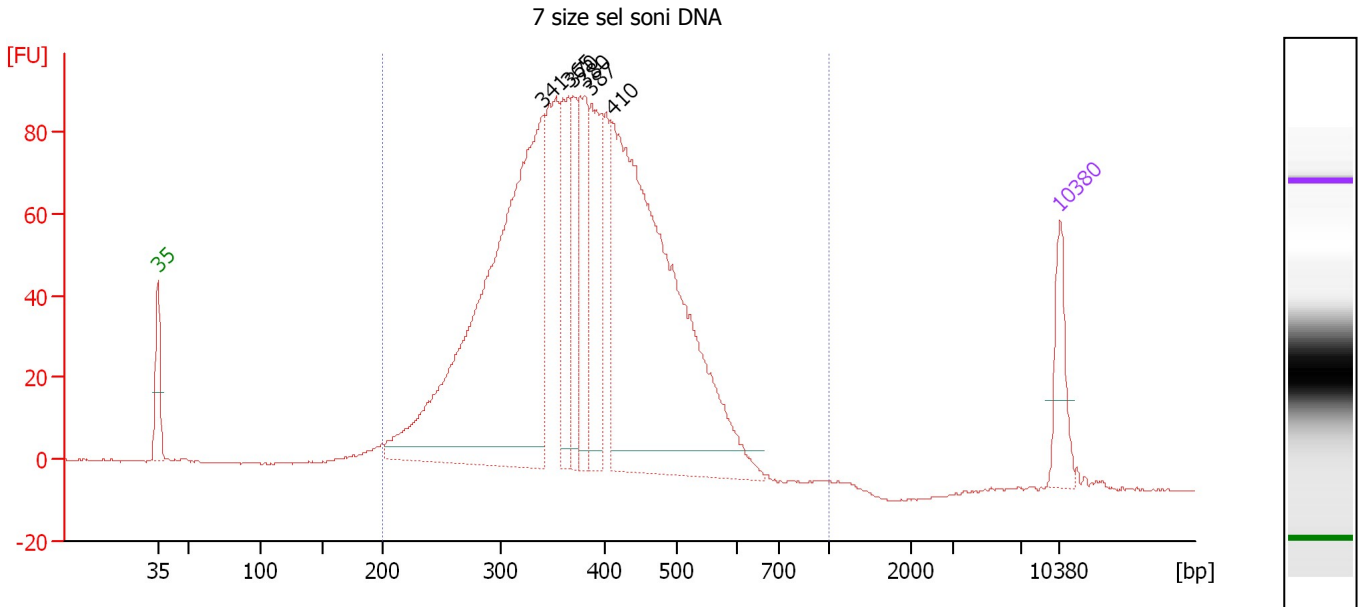
Region table for sample 2 : 6 size sel soni DNA

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	383	1,633.6	10,265.2	2,438.09	98	21.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : 7 size sel soni DNA

Number of peaks found: 6 Corr. Area 1: 1,909.0
 Noise: 0.2

Peak table for sample 3 : 7 size sel soni DNA

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	341	1,270.84	5,648.3		72.92
3	365	185.55	769.2		74.92
4	370	161.51	661.9		75.26
5	380	169.09	674.4		76.08
6	387	226.29	885.8		76.66
7	410	1,168.63	4,320.7		78.27
8	10,380	75.00	10.9	Upper Marker	113.00

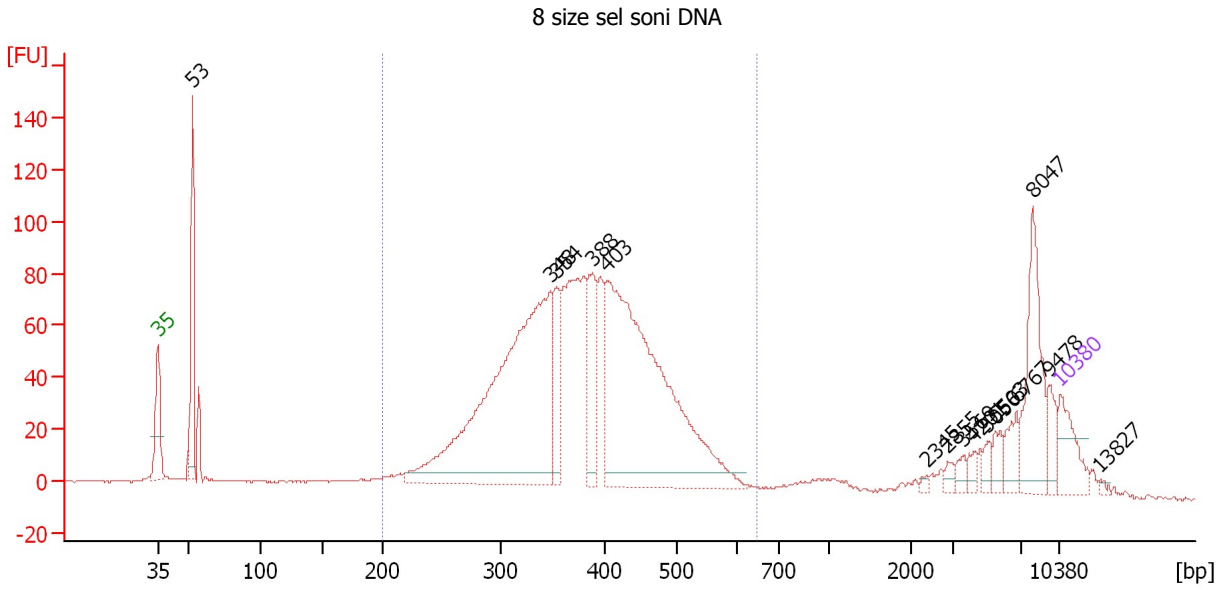
Region table for sample 3 : 7 size sel soni DNA

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	383	1,909.0	16,029.1	3,783.52	98	21.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : 8 size sel soni DNA

Number of peaks found: 15 Corr. Area 1: 1,576.2
 Noise: 0.3

Peak table for sample 4 : 8 size sel soni DNA

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	53	260.53	7,435.4		45.70
3	348	1,119.90	4,871.8		73.52
4	354	134.78	577.4		73.96
5	388	164.26	642.3		76.70
6	403	1,045.35	3,934.8		77.86
7	2,345	5.94	3.8		102.65
8	2,855	13.92	7.4		104.29
9	3,569	15.63	6.6		105.49
10	4,201	16.10	5.8		106.31
11	5,056	20.86	6.3		107.42
12	5,503	28.40	7.8		107.99
13	6,767	43.85	9.8		109.63
14	8,047	177.97	33.5		110.88
15	9,478	38.31	6.1		112.18
16	10,380	75.00	10.9	Upper Marker	113.00
17	13,827	0.00	0.0		116.13

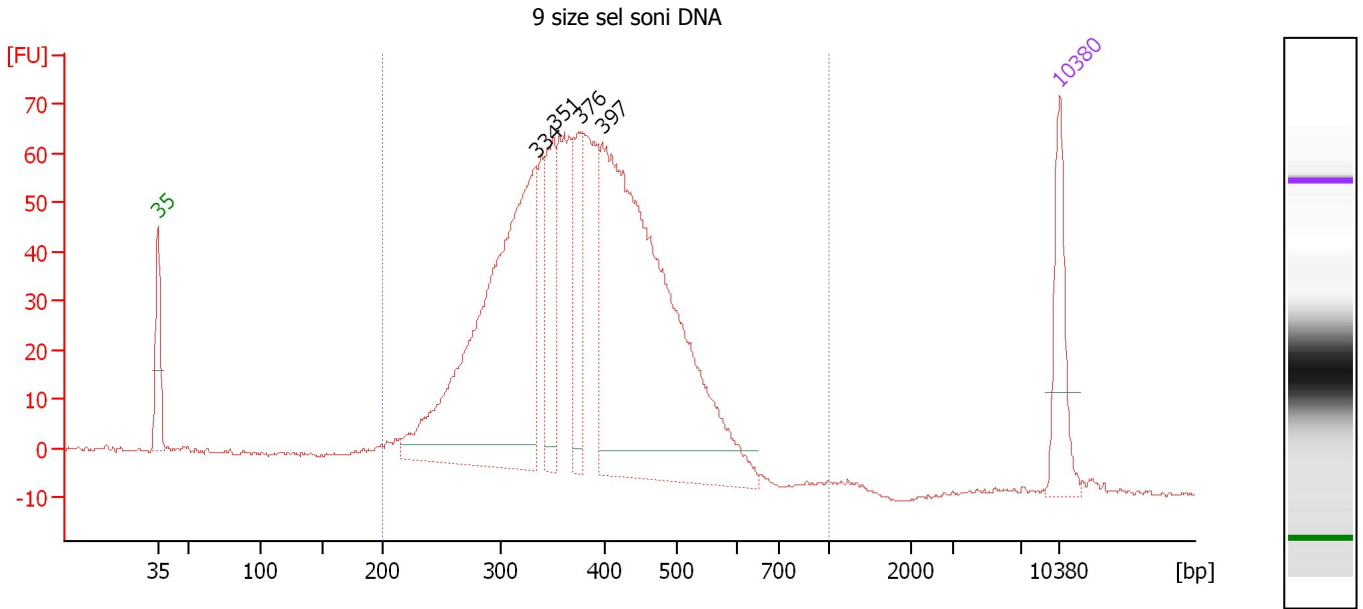
Region table for sample 4 : 8 size sel soni DNA

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	650	382	1,576.2	13,537.5	3,226.69	76	19.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : 9 size sel soni DNA

Number of peaks found: 4 Corr. Area 1: 1,357.9
 Noise: 0.3

Peak table for sample 5 : 9 size sel soni DNA

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	334	663.26	3,009.0		72.36
3	351	127.77	551.1		73.77
4	376	91.37	368.1		75.77
5	397	824.21	3,145.1		77.47
6	10,380	75.00	10.9	Upper Marker	113.00

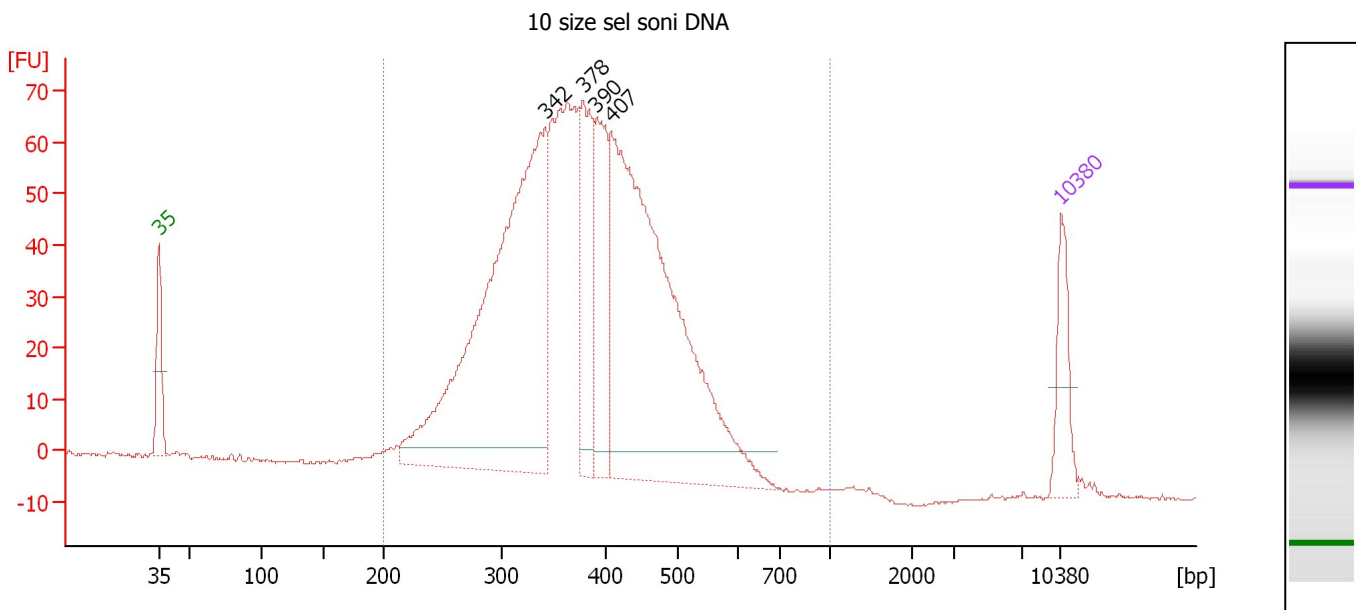
Region table for sample 5 : 9 size sel soni DNA

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	381	1,357.9	9,026.4	2,136.50	97	20.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : 10 size sel soni DNA

Number of peaks found: 4 Corr. Area 1: 1,387.9
 Noise: 0.3

Peak table for sample 6 : 10 size sel soni DNA

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	342	1,095.38	4,852.5		73.01
3	378	223.90	896.9		75.95
4	390	219.15	851.1		76.91
5	407	1,008.41	3,751.1		78.13
6	10,380	75.00	10.9	Upper Marker	113.00

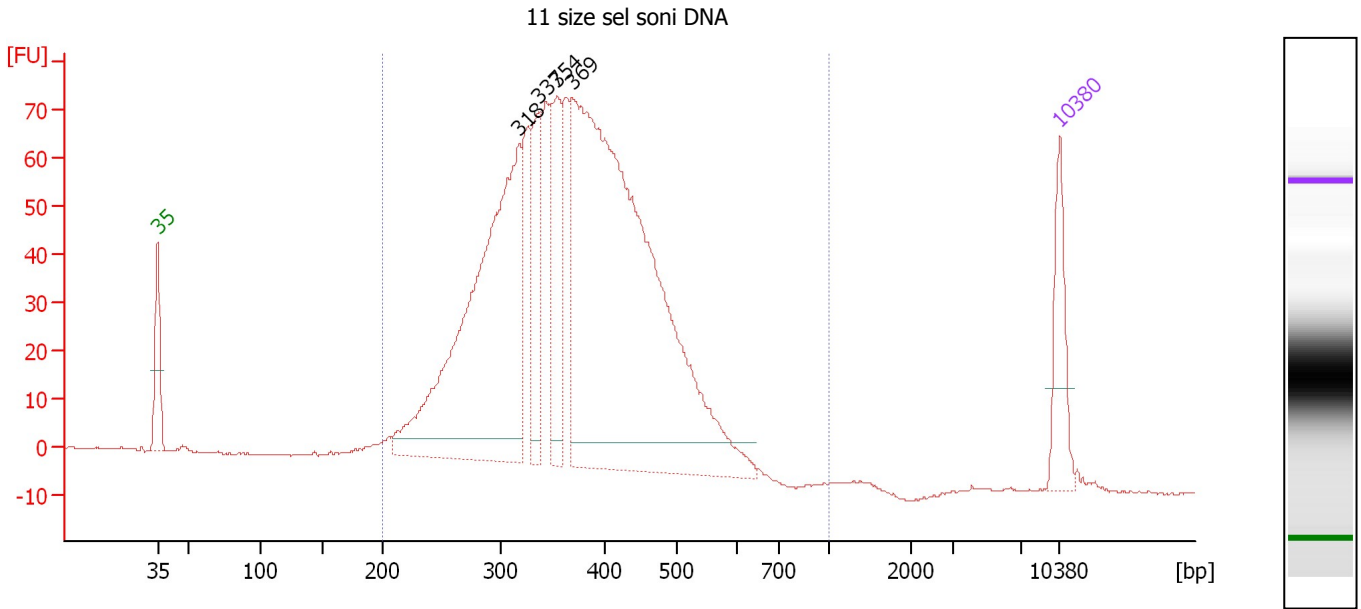
Region table for sample 6 : 10 size sel soni DNA

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	382	1,387.9	12,889.4	3,058.89	99	20.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : 11 size sel soni DNA

Number of peaks found: 4 Corr. Area 1: 1,501.0
 Noise: 0.2

Peak table for sample 7 : 11 size sel soni DNA

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	318	788.99	3,761.7		71.05
3	337	131.73	592.8		72.58
4	354	171.79	735.8		73.96
5	369	1,320.42	5,423.7		75.19
6	10,380	75.00	10.9	Upper Marker	113.00

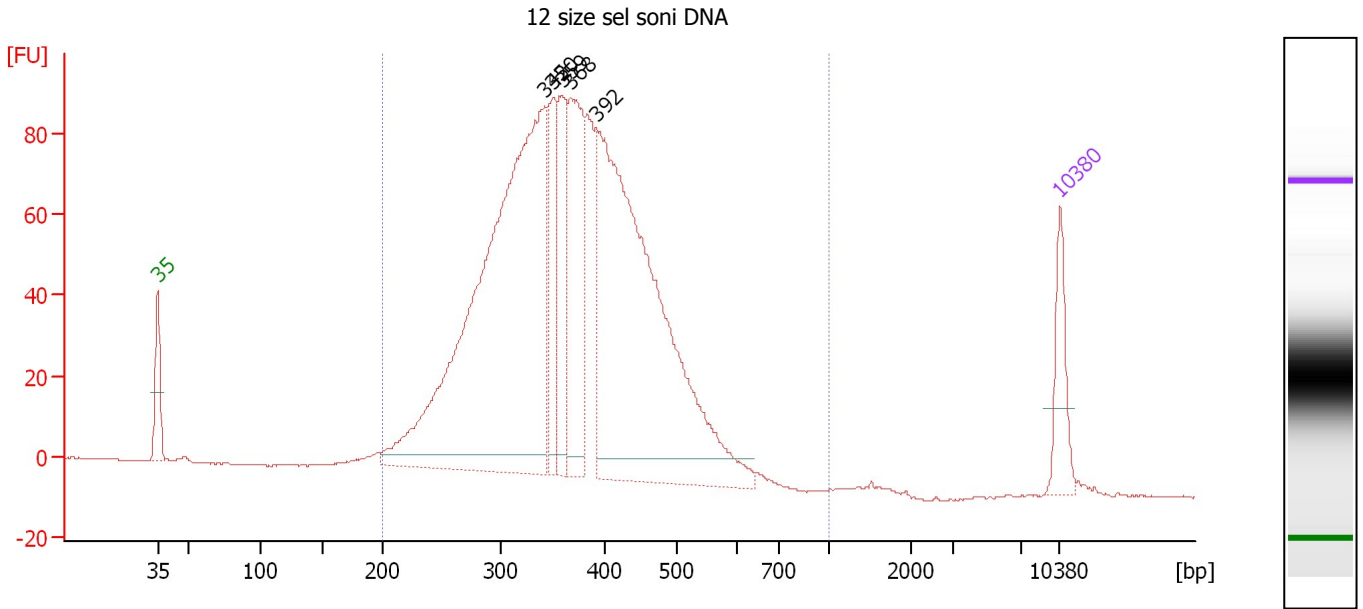
Region table for sample 7 : 11 size sel soni DNA

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	1,501.0	11,991.9	2,767.28	99	20.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : 12 size sel soni DNA

Number of peaks found: 5 Corr. Area 1: 1,766.2
 Noise: 0.2

Peak table for sample 8 : 12 size sel soni DNA

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	342	1,412.09	6,252.1		73.03
3	350	163.68	708.8		73.65
4	359	186.87	789.1		74.38
5	368	324.51	1,336.9		75.10
6	392	1,136.79	4,393.4		77.07
7	10,380	75.00	10.9	Upper Marker	113.00

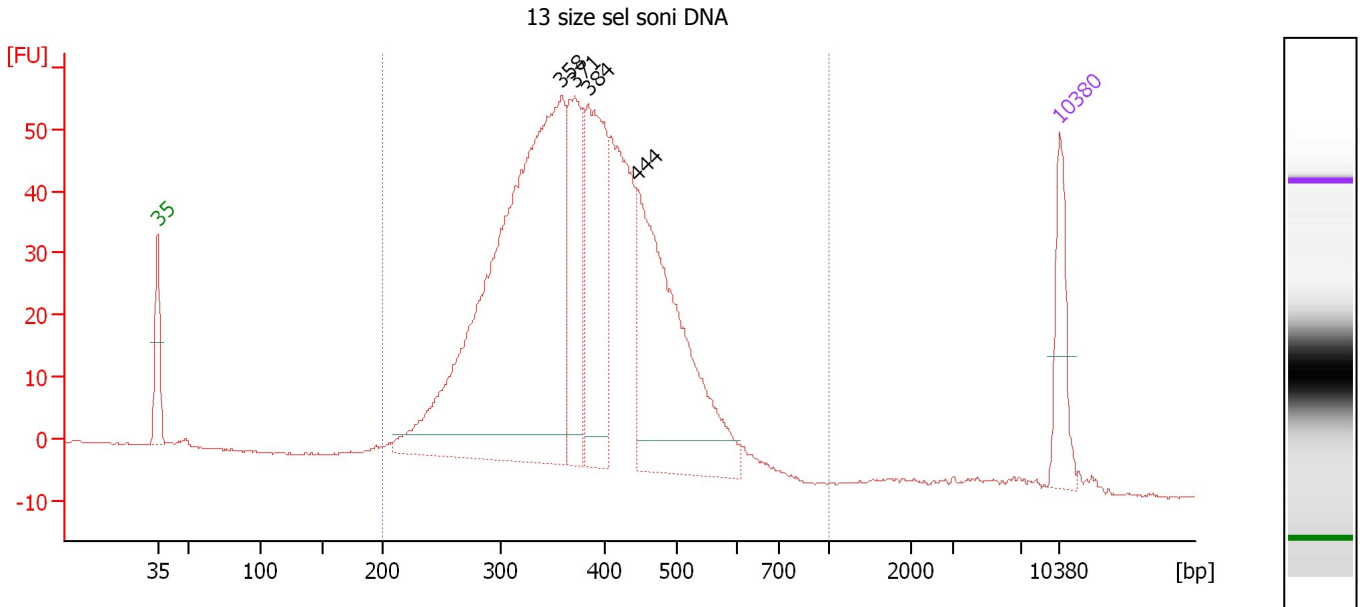
Region table for sample 8 : 12 size sel soni DNA

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	1,766.2	15,042.1	3,461.97	99	20.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : 13 size sel soni DNA

Number of peaks found: 4 Corr. Area 1: 1,114.7
 Noise: 0.2

Peak table for sample 9 : 13 size sel soni DNA

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	358	1,137.90	4,814.1		74.32
3	371	222.84	910.0		75.36
4	384	300.69	1,186.8		76.41
5	444	479.53	1,635.3		80.22
6	10,380	75.00	10.9	Upper Marker	113.00

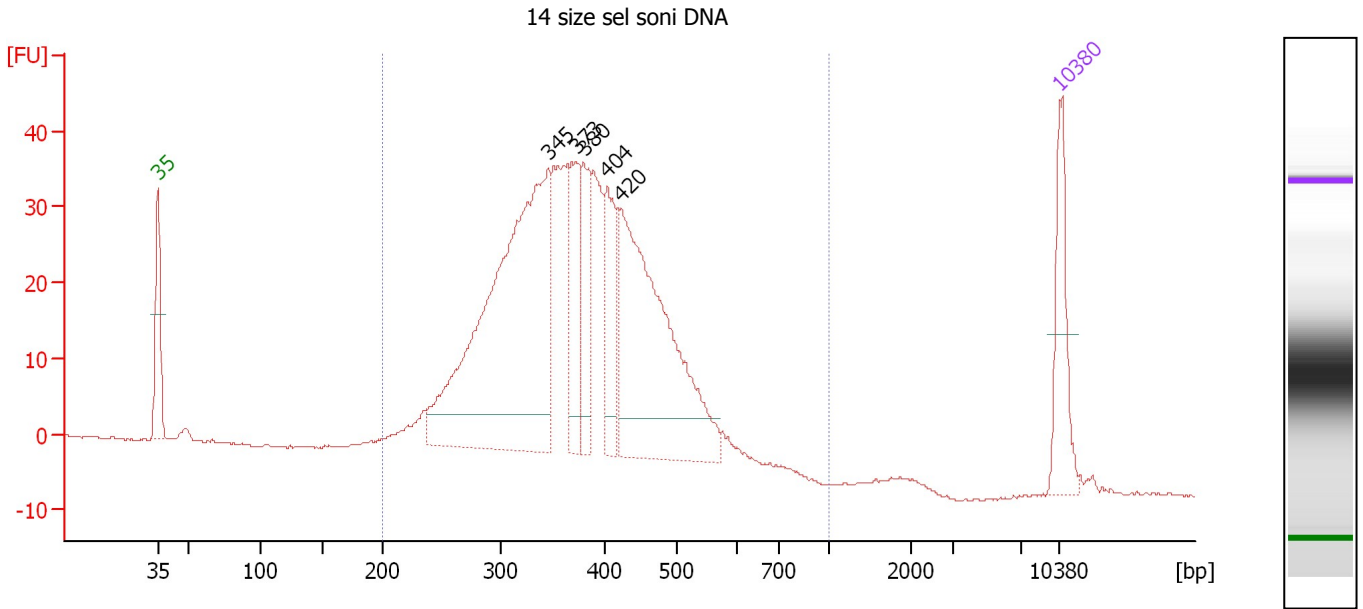
Region table for sample 9 : 13 size sel soni DNA

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	381	1,114.7	10,697.6	2,535.73	99	20.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : 14 size sel soni DNA

Number of peaks found: 5 Corr. Area 1: 732.8
 Noise: 0.2

Peak table for sample 10 : 14 size sel soni DNA

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	345	648.01	2,842.8		73.29
3	373	112.52	457.5		75.50
4	380	97.32	388.2		76.08
5	404	99.21	372.4		77.92
6	420	405.75	1,462.2		78.87
7	10,380	75.00	10.9	Upper Marker	113.00

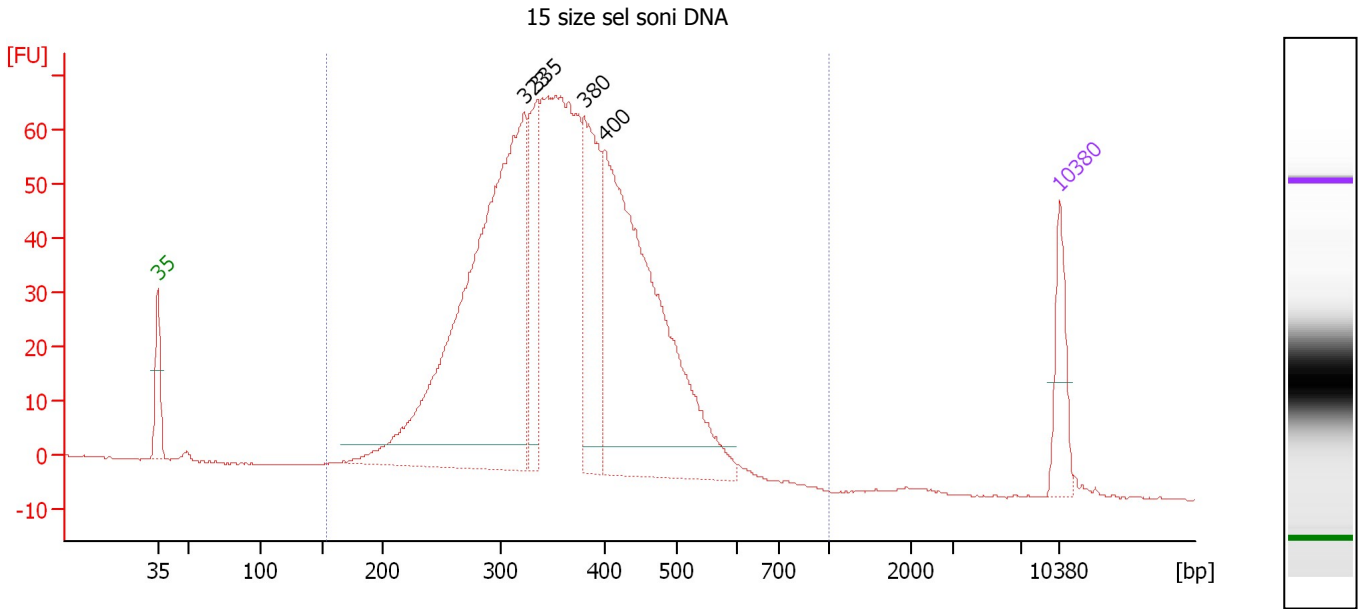
Region table for sample 10 : 14 size sel soni DNA

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	376	732.8	7,691.5	1,802.76	99	20.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : 15 size sel soni DNA

Number of peaks found: 4 Corr. Area 1: 1,360.0
 Noise: 0.1

Peak table for sample 11 : 15 size sel soni DNA

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	323	1,186.38	5,564.3		71.48
3	335	177.31	800.8		72.48
4	380	290.68	1,159.0		76.09
5	400	854.88	3,241.2		77.68
6	10,380	75.00	10.9	Upper Marker	113.00

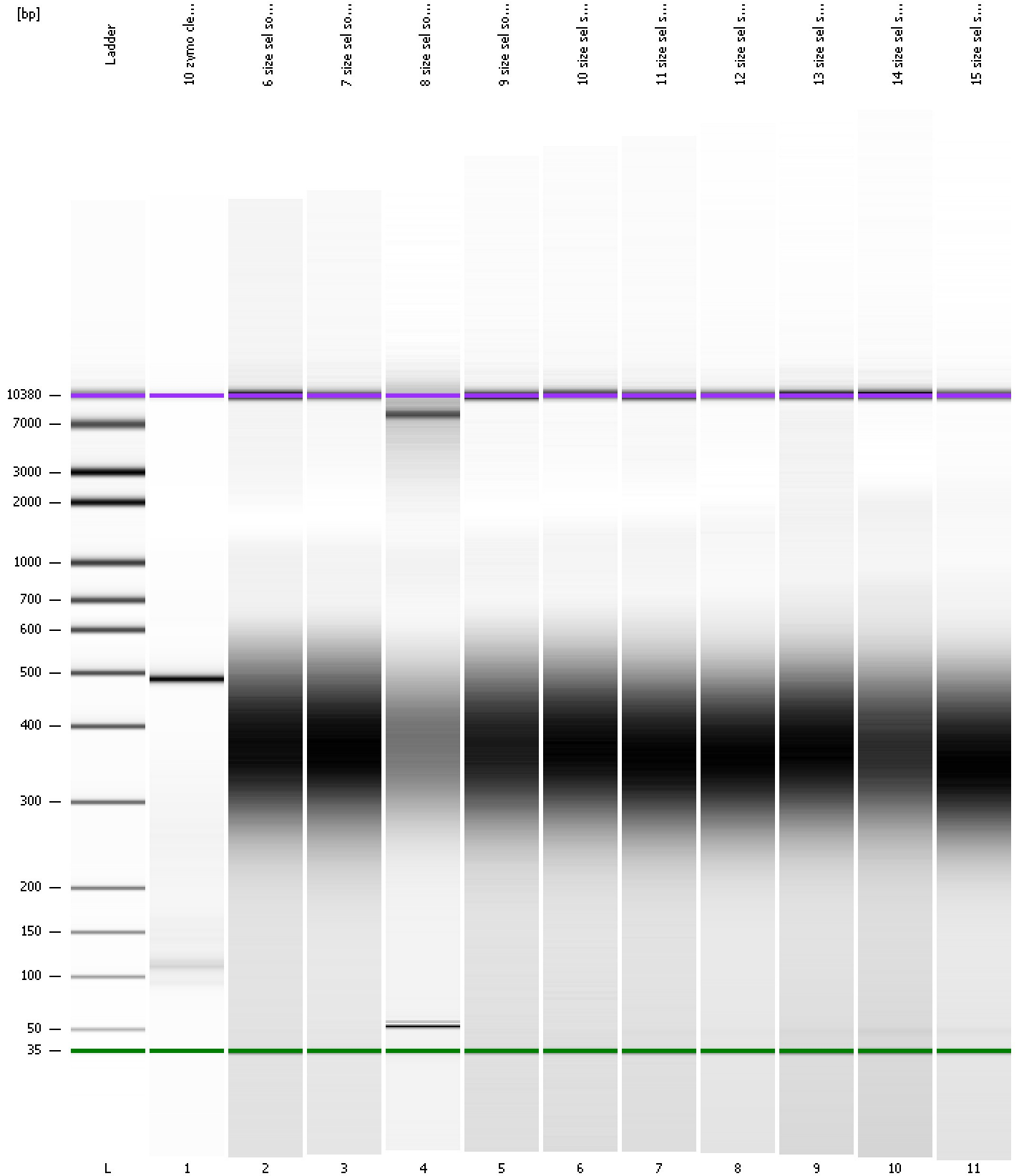
Region table for sample 11 : 15 size sel soni DNA

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
153	1,000	362	1,360.0	14,920.2	3,348.06	100	21.1

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad

Created: 5/18/2016 4:32:24 PM
Modified: 5/18/2016 5:13:13 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-18\2016-05-18_002.xad
 Created: 5/18/2016 4:32:24 PM
 Modified: 5/18/2016 5:13:13 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		5/18/2016 5:12:55 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\2016-05-18\2016-05-18_002.xad)		Instrument	Run		5/18/2016 4:32:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		5/18/2016 4:32:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/18/2016 4:32:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/18/2016 4:32:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		5/18/2016 4:32:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/18/2016 4:32:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/18/2016 4:32:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1