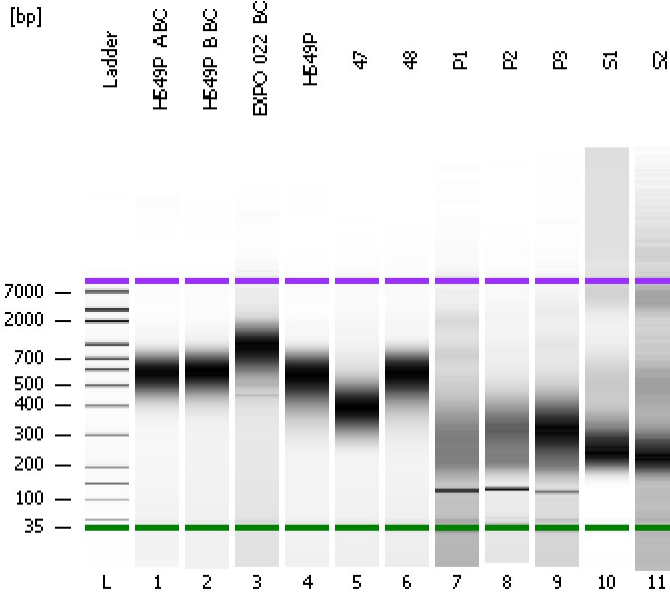


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
Modified: 7/11/2016 4:57:14 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

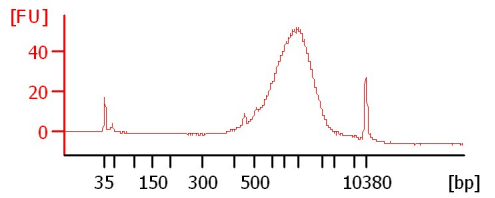
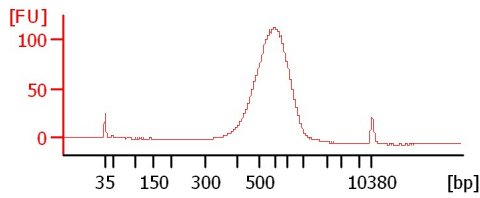
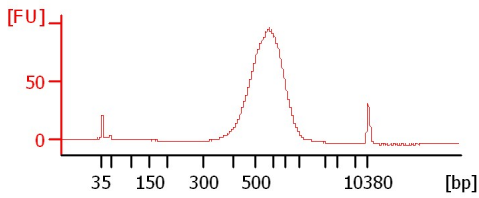
Chip Information:

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

H549P_A BC

H549P_B BC

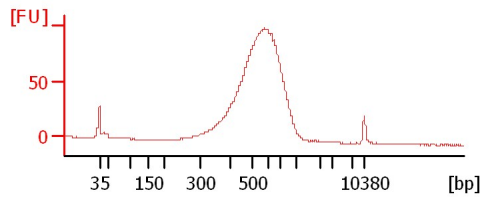
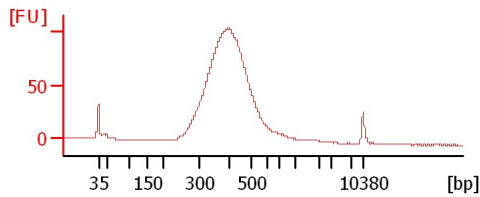
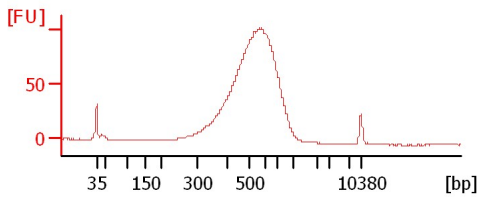
EXPO_022_BC



H549P

47

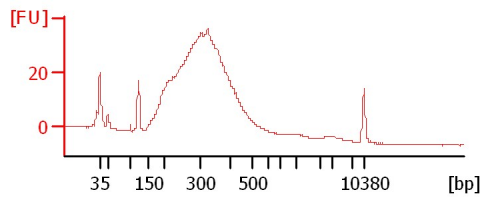
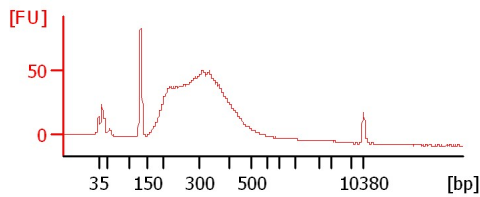
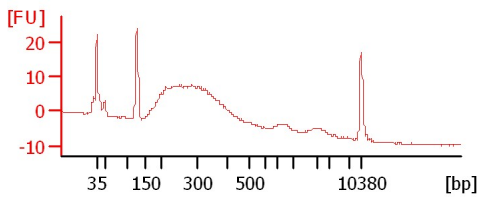
48



P1

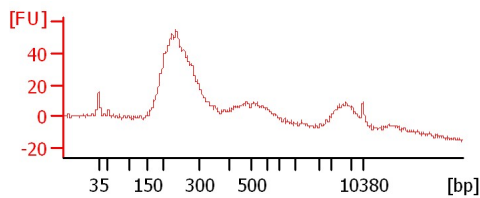
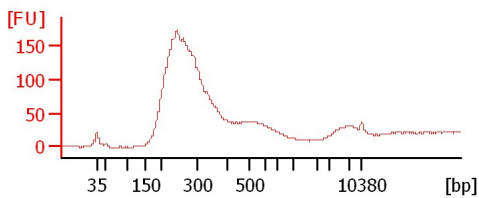
P2

P3



S1

S2



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
Modified: 7/11/2016 4:57:14 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
H549P_A BC		<input type="checkbox"/>	✓			
H549P_B BC		<input type="checkbox"/>	✓			
EXPO_022_BC		<input type="checkbox"/>	✓			
H549P		<input type="checkbox"/>	✓			
47	HiSeq_549 Library	<input type="checkbox"/>	✓			
48	HiSeq_549 Library	<input type="checkbox"/>	✓			
P1		<input type="checkbox"/>	✓			
P2		<input type="checkbox"/>	✓			
P3		<input type="checkbox"/>	✓			
S1		<input type="checkbox"/>	✓			
S2		<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\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
Modified: 7/11/2016 4:57:14 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

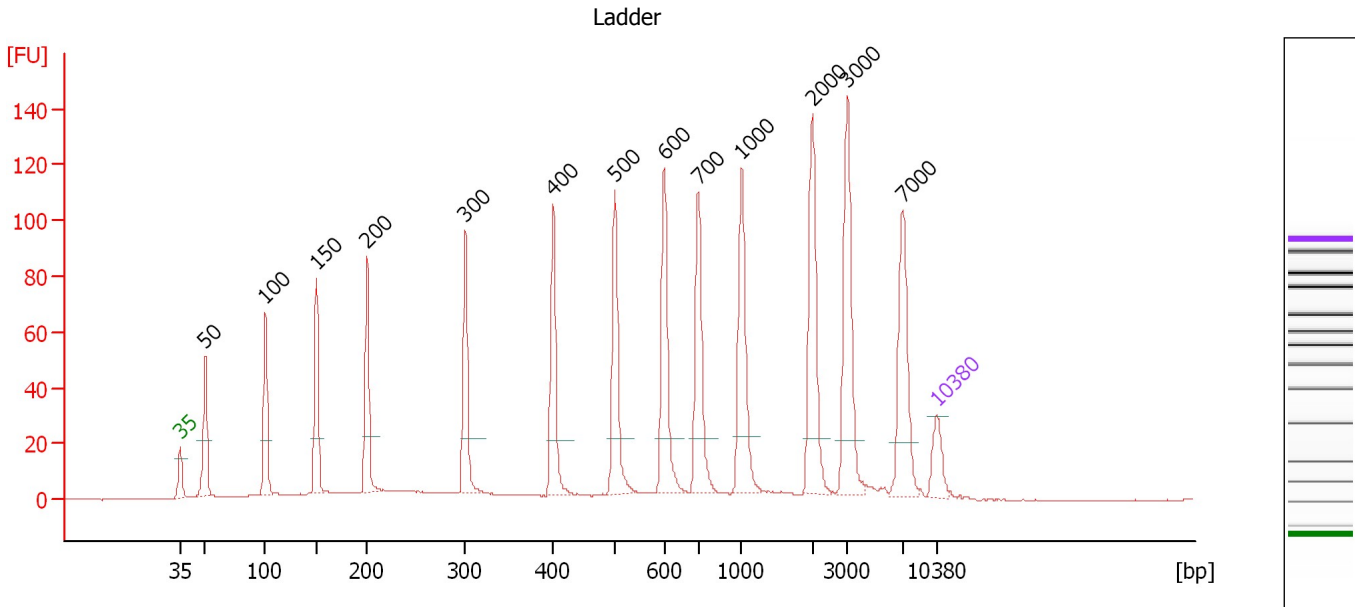
Ladder

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\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

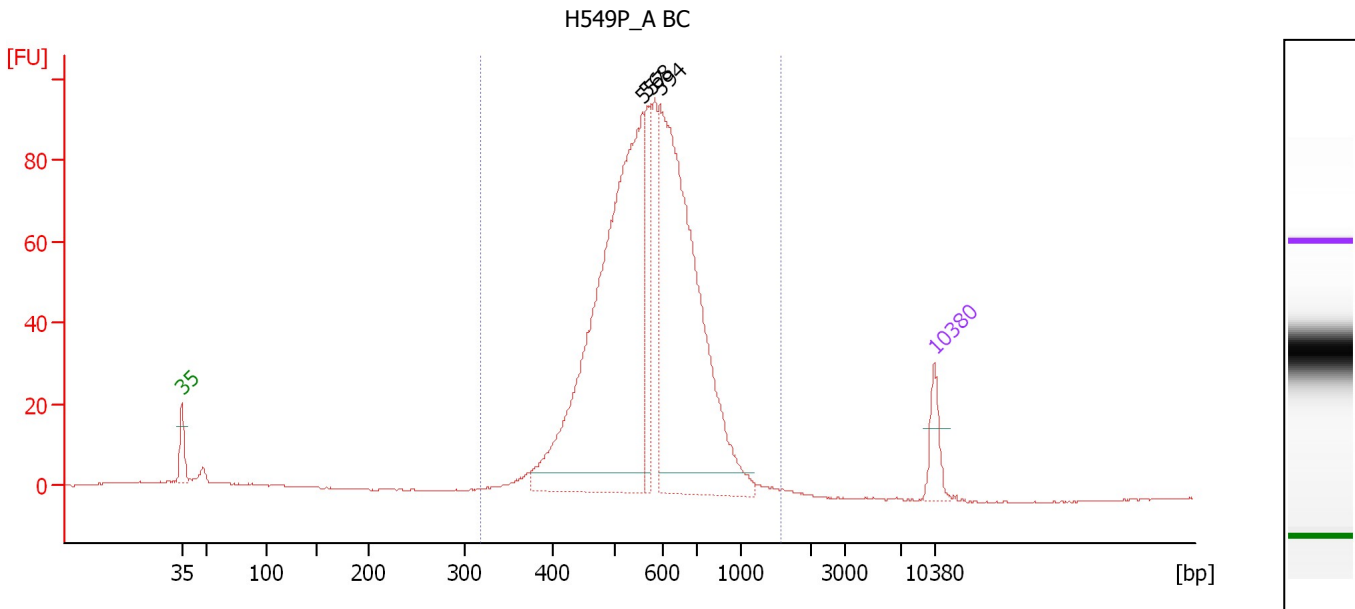
Peak table for Ladder

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	45.32
3	100	150.00	2,272.7	Ladder Peak	50.89
4	150	150.00	1,515.2	Ladder Peak	55.63
5	200	150.00	1,136.4	Ladder Peak	60.32
6	300	150.00	757.6	Ladder Peak	69.39
7	400	150.00	568.2	Ladder Peak	77.53
8	500	150.00	454.5	Ladder Peak	83.25
9	600	150.00	378.8	Ladder Peak	87.79
10	700	150.00	324.7	Ladder Peak	90.95
11	1,000	150.00	227.3	Ladder Peak	94.95
12	2,000	150.00	113.6	Ladder Peak	101.51
13	3,000	150.00	75.8	Ladder Peak	104.76
14	7,000	150.00	32.5	Ladder Peak	109.84
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : H549P A BC

Number of peaks found: 3 Corr. Area 1: 1,144.3
 Noise: 0.2

Peak table for sample 1 : H549P A BC

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	557	1,820.79	4,948.5		85.86
3	568	239.37	638.0		86.36
4	594	1,484.76	3,790.0		87.50
5	10,380	75.00	10.9	Upper Marker	113.00

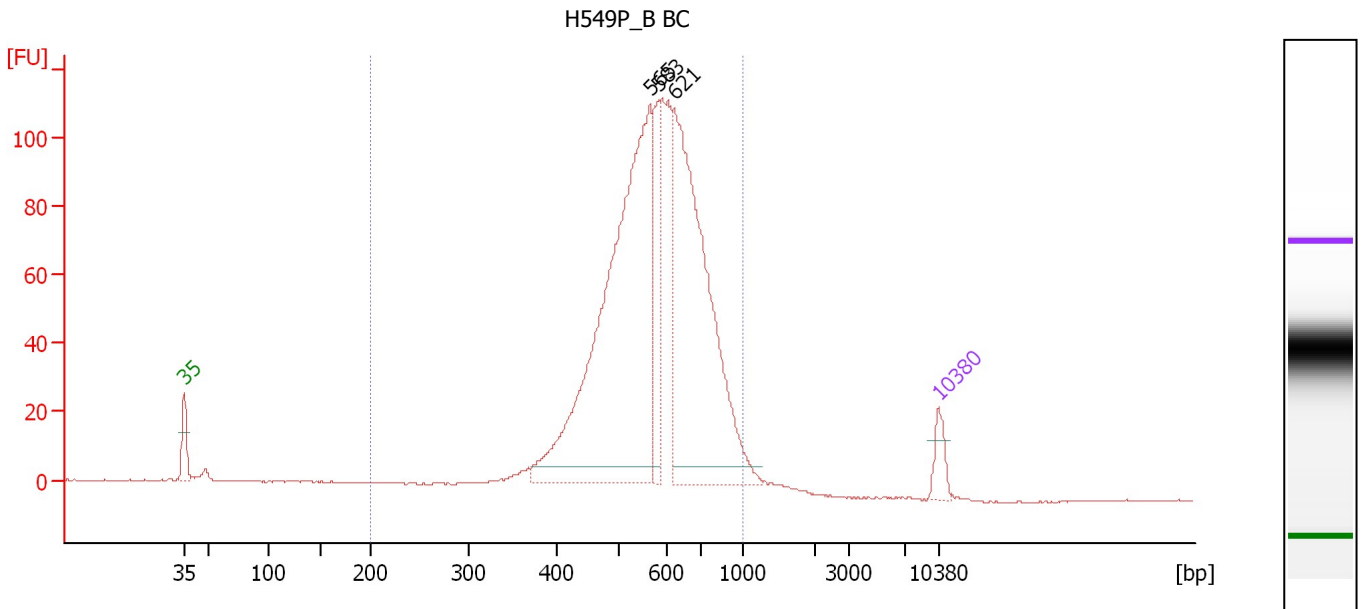
Region table for sample 1 : H549P A BC

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
318	1,578	584	1,144.3	10,693.0	3,926.42	96	21.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : H549P B BC

Number of peaks found: 3 Corr. Area 1: 1,390.6
 Noise: 0.2

Peak table for sample 2 : H549P B BC

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	565	2,362.37	6,331.6		86.22
3	583	309.19	803.9		87.01
4	621	1,703.04	4,157.2		88.45
5	10,380	75.00	10.9	Upper Marker	113.00

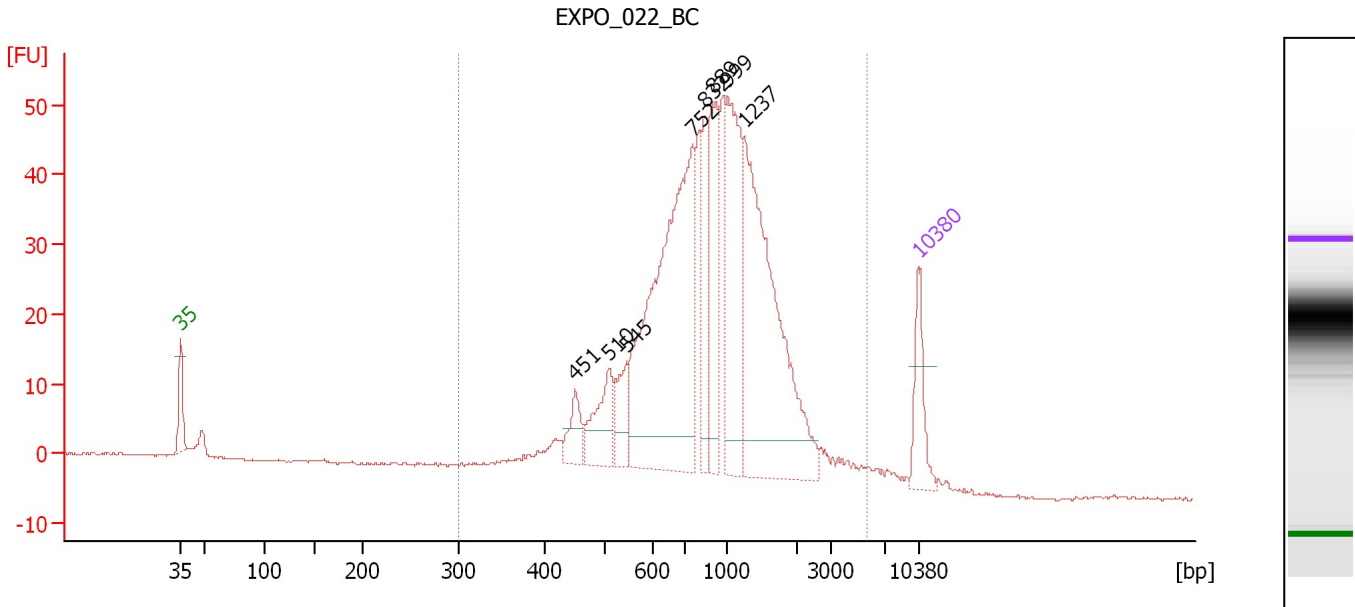
Region table for sample 2 : H549P B BC

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	587	1,390.6	14,797.1	5,411.74	96	20.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : EXPO_022_BC

Number of peaks found: 8 Corr. Area 1: 779.4
 Noise: 0.2

Peak table for sample 3 : EXPO_022_BC

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	451	60.63	203.6		80.45
3	510	115.49	343.3		83.69
4	545	76.41	212.3		85.31
5	752	768.46	1,548.5		91.64
6	832	124.28	226.4		92.70
7	889	192.24	327.7		93.46
8	999	285.20	432.6		94.93
9	1,237	548.14	671.4		96.50
10	10,380	75.00	10.9	Upper Marker	113.00

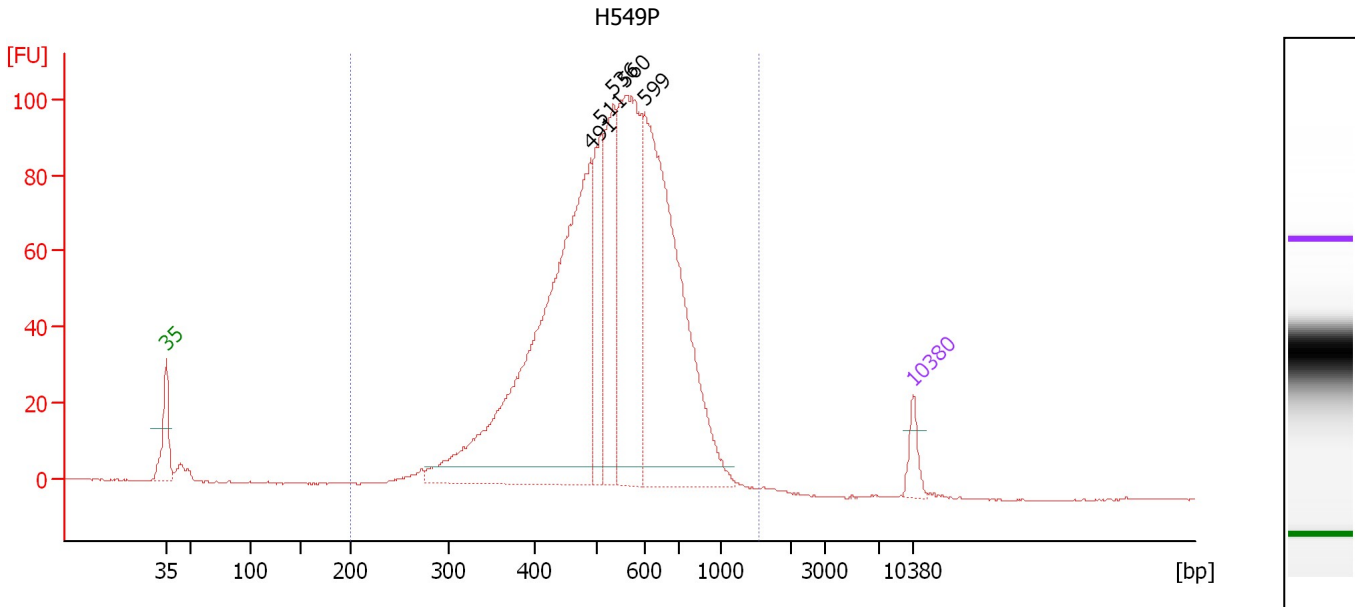
Region table for sample 3 : EXPO_022_BC

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
300	5,740	1,033	779.4	5,140.7	2,658.14	95	59.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : H549P

Number of peaks found: 5 Corr. Area 1: 1,647.2
 Noise: 0.2

Peak table for sample 4 : H549P

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	491	2,719.17	8,387.0		82.75
3	511	465.36	1,378.6		83.77
4	536	638.46	1,804.0		84.90
5	560	1,182.80	3,200.9		85.97
6	599	1,919.40	4,852.8		87.76
7	10,380	75.00	10.9	Upper Marker	113.00

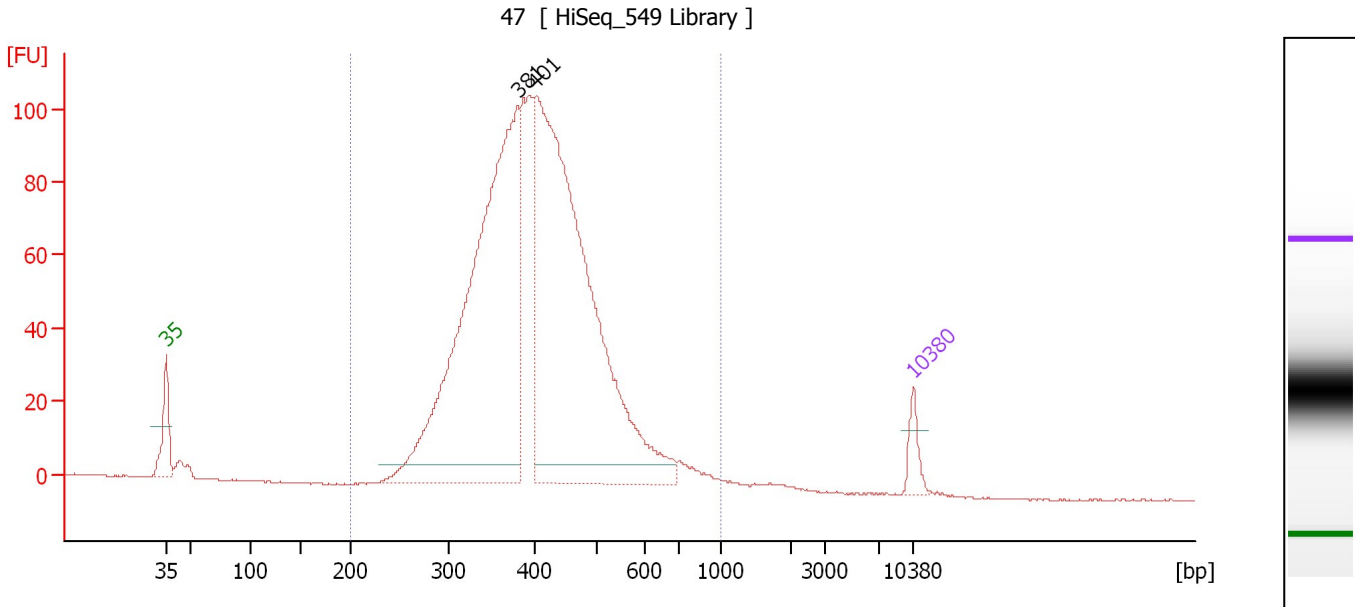
Region table for sample 4 : H549P

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,543	545	1,647.2	22,192.8	7,337.47	99	25.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : 47

Number of peaks found: 2 Corr. Area 1: 1,712.1
 Noise: 0.2

Peak table for sample 5 : 47

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	381	3,052.47	12,151.3		75.95
3	401	3,302.38	12,465.4		77.61
4	10,380	75.00	10.9	Upper Marker	113.00

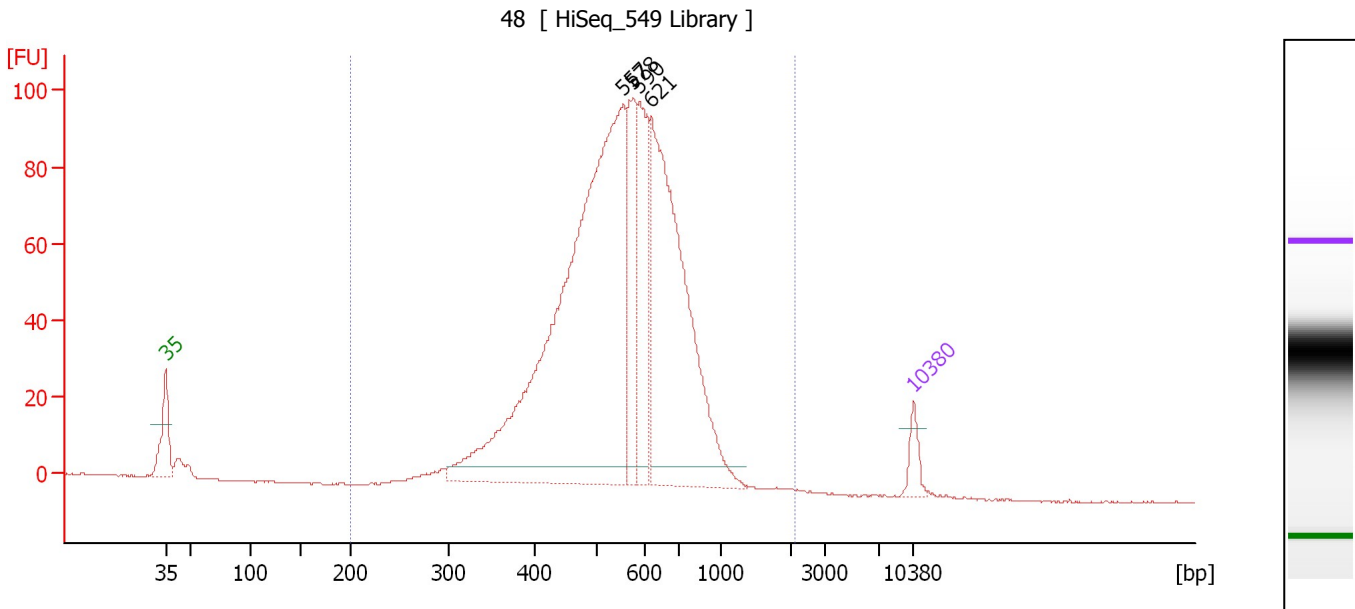
Region table for sample 5 : 47

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	414	1,712.1	28,451.6	7,361.94	98	22.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : 48

Number of peaks found: 4 Corr. Area 1: 1,498.3
 Noise: 0.1

Peak table for sample 6 : 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	557	3,709.79	10,095.5		85.83
3	578	505.77	1,326.7		86.78
4	590	540.61	1,387.5		87.35
5	621	1,834.03	4,474.1		88.46
6	10,380	75.00	10.9	Upper Marker	113.00

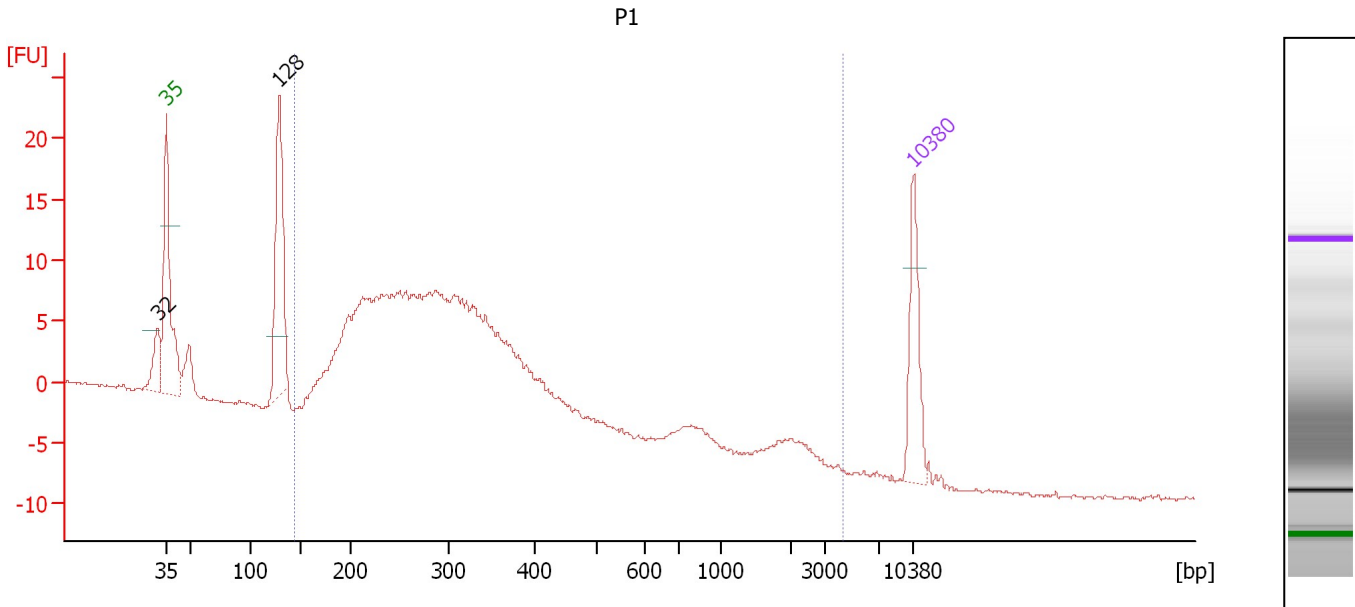
Region table for sample 6 : 48

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	2,118	567	1,498.3	21,238.0	7,326.73	99	26.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : P1

Number of peaks found: 2 Corr. Area 1: 276.6
 Noise: 0.1

Peak table for sample 7 : P1

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	32	0.00	0.0		42.20
2	35	125.00	5,411.3	Lower Marker	43.00
3	128	248.35	2,931.2		53.58
4	10,380	75.00	10.9	Upper Marker	113.00

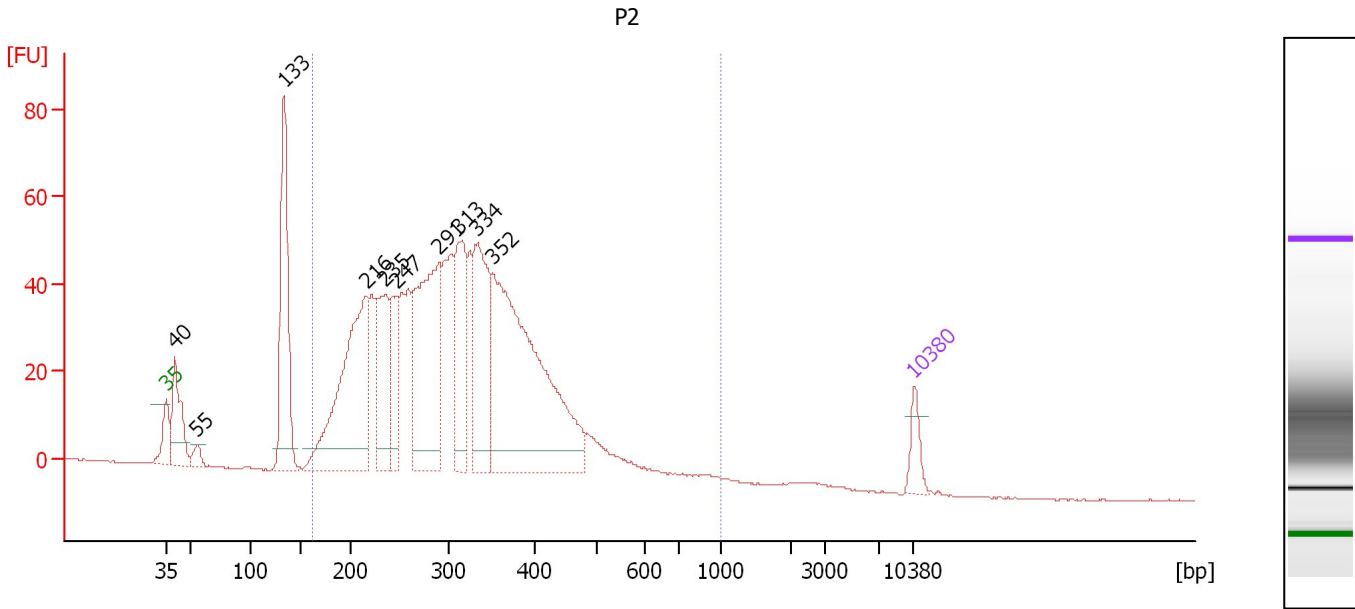
Region table for sample 7 : P1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
144	4,288	347	276.6	8,311.7	1,508.39	83	80.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : P2

Number of peaks found: 10 Corr. Area 1: 1,280.6
 Noise: 0.1

Peak table for sample 8 : P2

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	40	382.43	14,404.9		43.81
3	55	64.83	1,776.8		45.91
4	133	888.40	10,104.7		54.04
5	216	1,112.93	7,818.2		61.74
6	235	481.20	3,099.1		63.52
7	247	273.33	1,679.9		64.54
8	291	993.79	5,173.9		68.58
9	313	493.88	2,389.7		70.46
10	334	627.26	2,848.5		72.13
11	352	1,661.93	7,163.6		73.58
12	10,380	75.00	10.9	Upper Marker	113.00

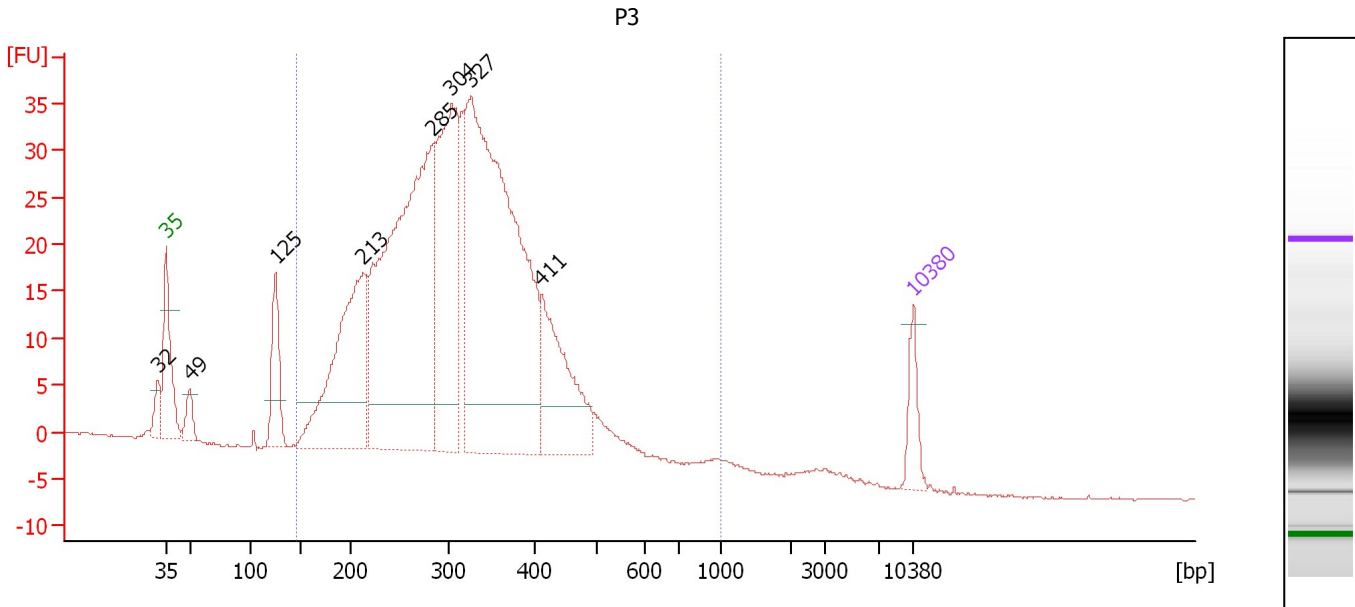
Region table for sample 8 : P2

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
162	1,000	317	1,280.6	38,362.4	7,241.82	88	29.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : P3

Number of peaks found: 8 Corr. Area 1: 813.1
 Noise: 0.1

Peak table for sample 9 : P3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	32	0.00	0.0		42.23
2	35	125.00	5,411.3	Lower Marker	43.00
3	49	77.52	2,384.1		45.20
4	125	243.69	2,956.1		53.25
5	213	807.81	5,755.3		61.46
6	285	1,650.14	8,774.9		68.02
7	304	797.70	3,973.4		69.73
8	327	1,891.89	8,778.7		71.55
9	411	402.64	1,484.0		78.17
10	10,380	75.00	10.9	Upper Marker	113.00

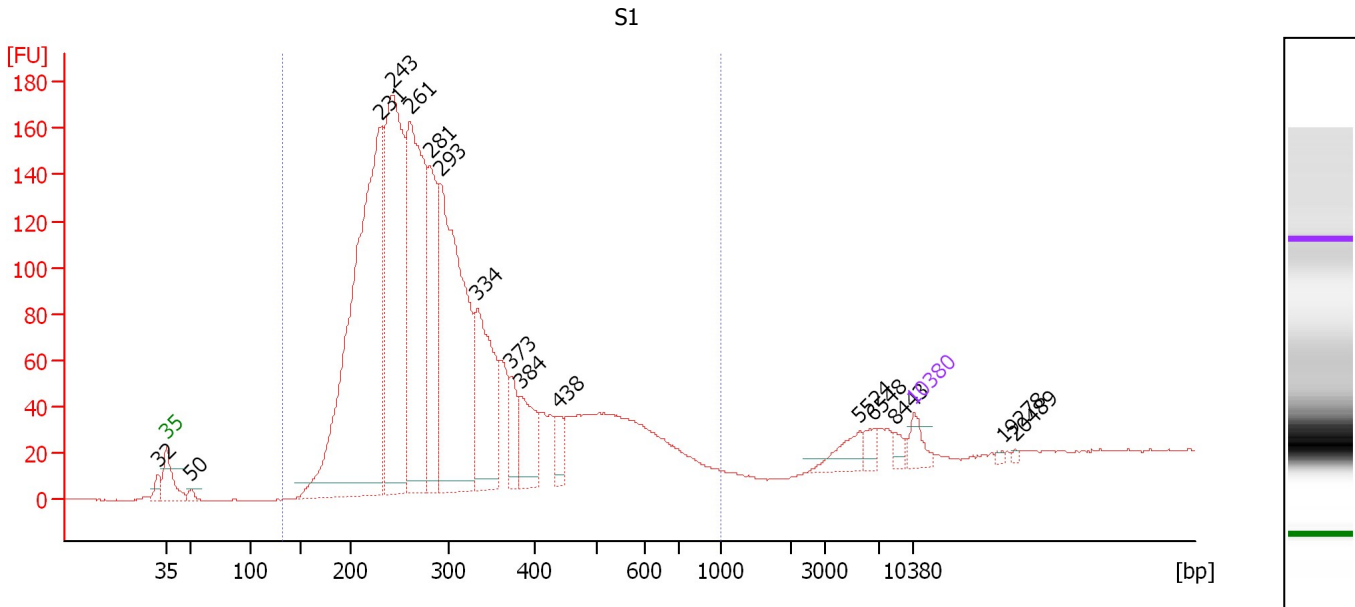
Region table for sample 9 : P3

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
146	1,000	318	813.1	31,350.0	5,974.21	95	27.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : S1

Number of peaks found: 16 Corr. Area 1: 3,017.9
 Noise: 0.2

Peak table for sample 10 : S1

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	32	0.00	0.0		42.26
2	35	125.00	5,411.3	Lower Marker	43.00
3	50	38.12	1,155.1		45.32
4	231	3,345.57	21,943.5		63.13
5	243	2,060.51	12,823.2		64.26
6	261	1,771.88	10,289.8		65.84
7	281	792.51	4,266.2		67.71
8	293	1,911.73	9,896.8		68.73
9	334	797.00	3,613.3		72.18
10	373	184.60	749.6		75.34
11	384	289.52	1,143.8		76.19
12	438	113.30	392.1		79.70
13	5,524	112.54	30.9		107.97
14	6,548	56.53	13.1		109.27
15	8,443	35.73	6.4		111.19
16	10,380	75.00	10.9	Upper Marker	113.00
17	19,278	0.00	0.0		121.31
18	20,489	0.00	0.0		122.44

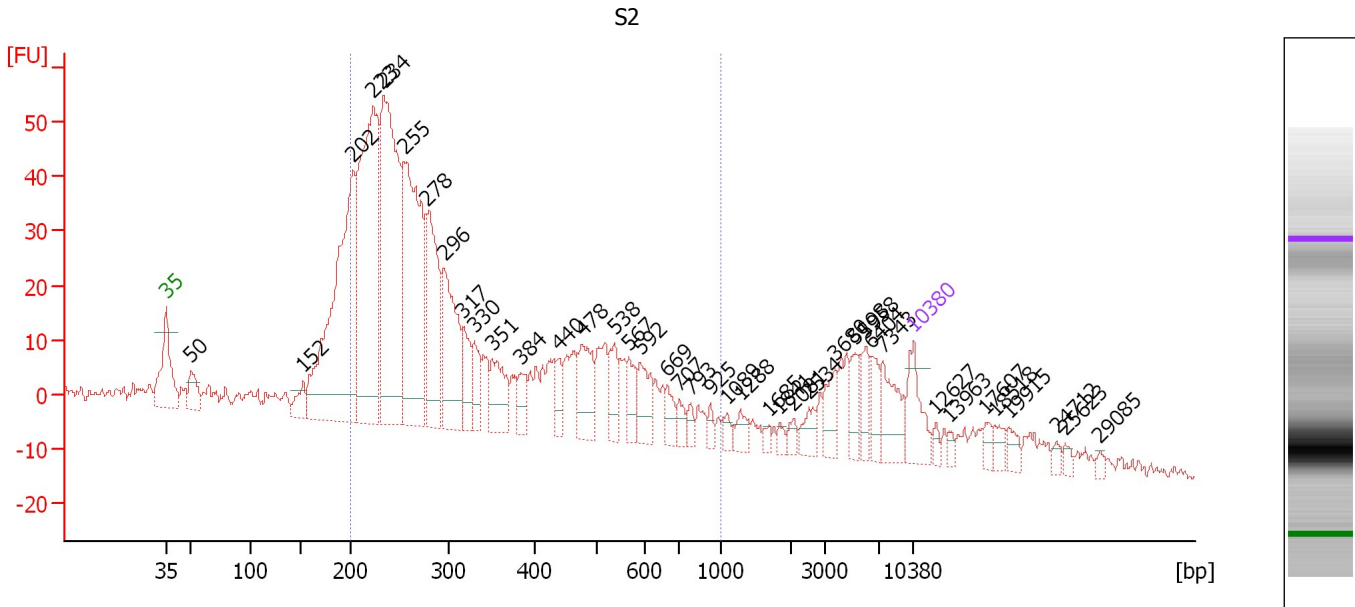
Region table for sample 10 : S1

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	310	3,017.9	67,793.2	12,270.81	96	35.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : S2

Number of peaks found: 40 Corr. Area 1: 951.6
 Noise: 1.2

Peak table for sample 11 : S2

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	73.32	2,218.9		45.33
3	152	51.35	511.7		55.82
4	202	798.79	5,981.2		60.53
5	223	765.95	5,204.8		62.40
6	234	747.46	4,835.2		63.42
7	255	620.73	3,690.5		65.29
8	278	301.10	1,641.2		67.39
9	296	264.66	1,354.3		69.04
10	317	87.05	415.7		70.80
11	330	73.49	336.9		71.87
12	351	111.57	481.1		73.58
13	384	47.29	186.5		76.24
14	440	50.05	172.4		79.82
15	478	116.31	369.0		81.97
16	538	64.88	182.7		84.98
17	567	57.73	154.3		86.28
18	592	76.13	194.9		87.42
19	669	35.64	80.7		89.97
20	707	26.99	57.8		91.05
21	793	18.41	35.2		92.18
22	925	16.71	27.4		93.94
23	1,089	15.73	21.9		95.53
24	1,288	27.20	32.0		96.83
25	1,685	9.36	8.4		99.44

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 PM

Electropherogram Summary Continued ...

... Peak table for sample 11 : S2

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	1,841	11.66	9.6		100.46
27	2,081	15.59	11.4		101.77
28	2,534	30.24	18.1		103.24
29	3,680	49.27	20.3		105.63
30	5,198	41.40	12.1		107.55
31	5,958	45.67	11.6		108.52
32	6,404	42.71	10.1		109.09
33	7,343	83.92	17.3		110.16
34	10,380	75.00	10.9	Upper Marker	113.00
35	12,627	0.00	0.0		115.10
36	13,963	0.00	0.0		116.35
37	17,607	0.00	0.0		119.75
38	18,518	0.00	0.0		120.60
39	19,915	0.00	0.0		121.91
40	24,712	0.00	0.0		126.39
41	25,623	0.00	0.0		127.24
42	29,085	0.00	0.0		130.47

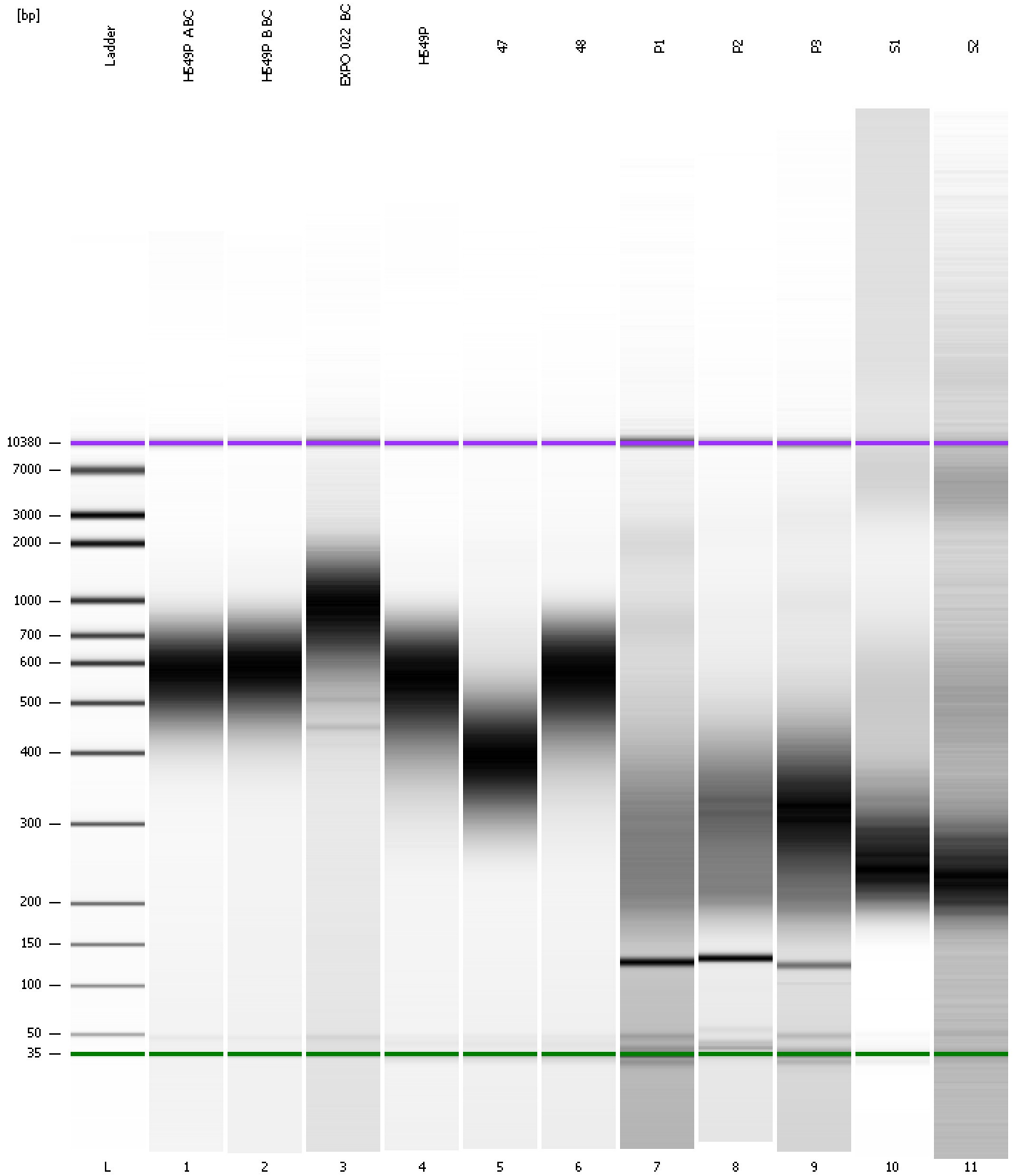
Region table for sample 11 : S2

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	347	951.6	21,453.9	4,063.29	69	44.3

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

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Modified: 7/11/2016 4:57:14 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-11\2016-07-11_004.xad

Created: 7/11/2016 4:15:56 PM
 Modified: 7/11/2016 4:57:14 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		7/11/2016 4:57:13 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\2016-07-11\2016-07-11_004.xad)		Instrument	Run		7/11/2016 4:16:01 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		7/11/2016 4:16:01 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		7/11/2016 4:16:01 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		7/11/2016 4:16:01 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		7/11/2016 4:16:01 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		7/11/2016 4:16:01 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		7/11/2016 4:16:01 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1