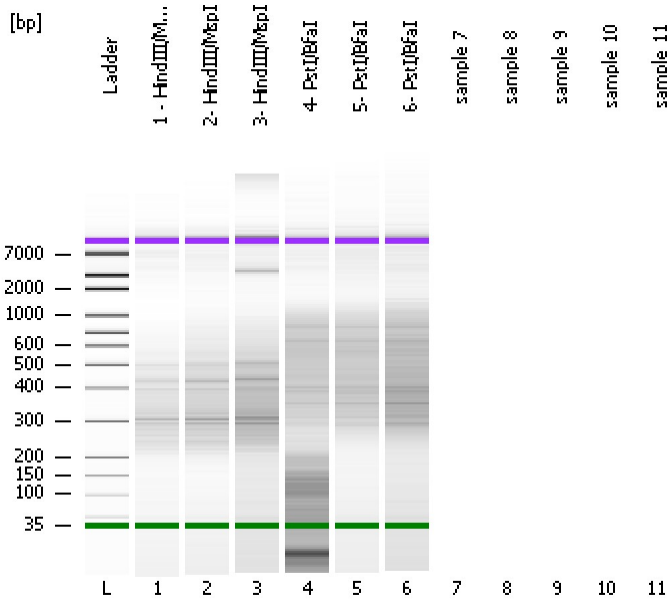


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
Modified: 3/9/2017 3:50:11 PM

Electrophoresis File Run Summary



Instrument Information:

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

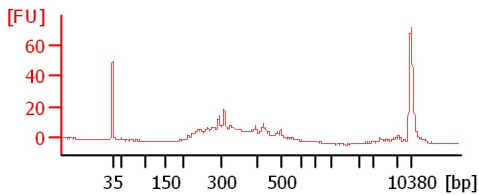
Assay Information:

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

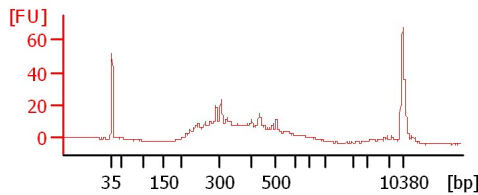
Chip Information:

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

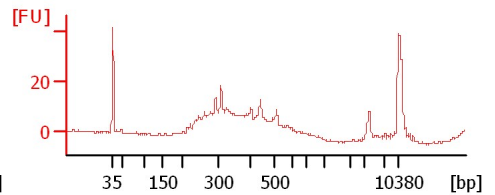
1 - HindIII/MspI



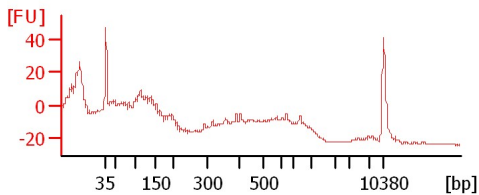
2- HindIII/MspI



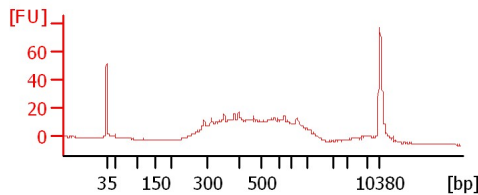
3- HindIII/MspI



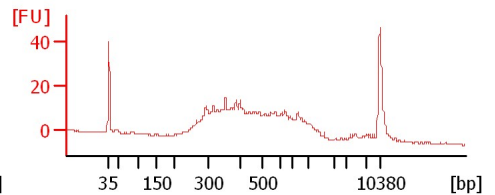
4- PstI/BfaI



5- PstI/BfaI



6- PstI/BfaI



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
 Modified: 3/9/2017 3:50:11 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
1 - HindIII/MspI		<input type="checkbox"/>	✓			
2- HindIII/MspI		<input type="checkbox"/>	✓			
3- HindIII/MspI		<input type="checkbox"/>	✓			
4- PstI/BfaI		<input type="checkbox"/>	✓			
5- PstI/BfaI		<input type="checkbox"/>	✓			
6- PstI/BfaI		<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\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
Modified: 3/9/2017 3:50:11 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

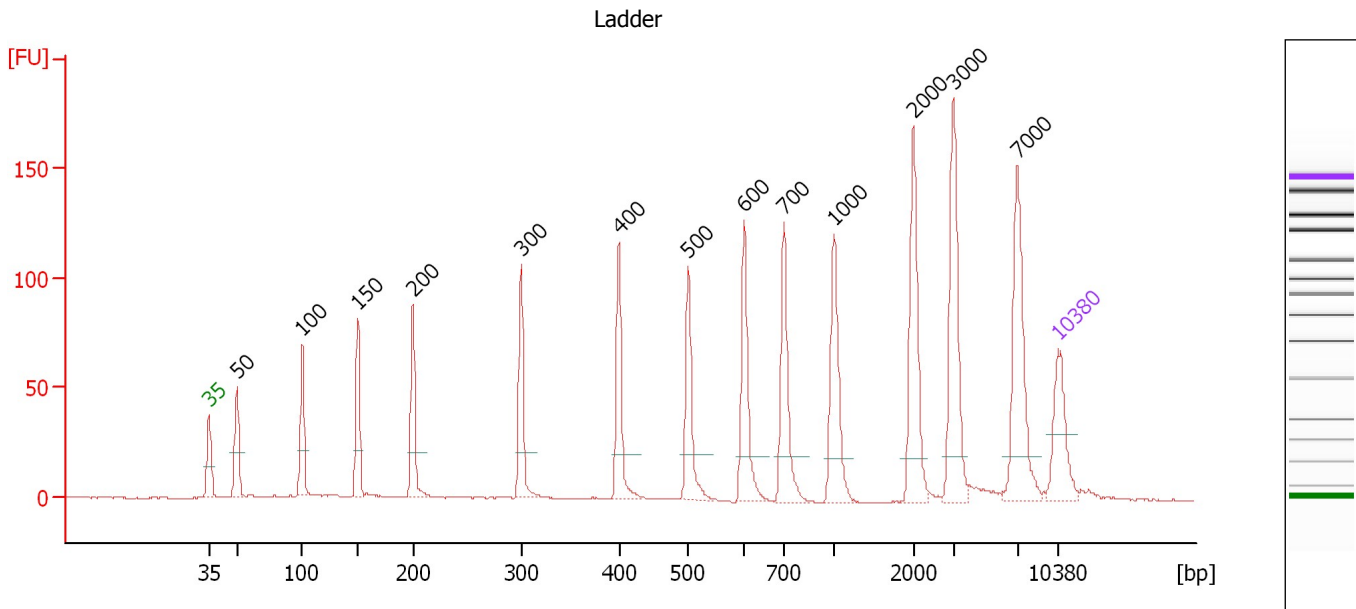
Ladder

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\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
 Modified: 3/9/2017 3:50:11 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

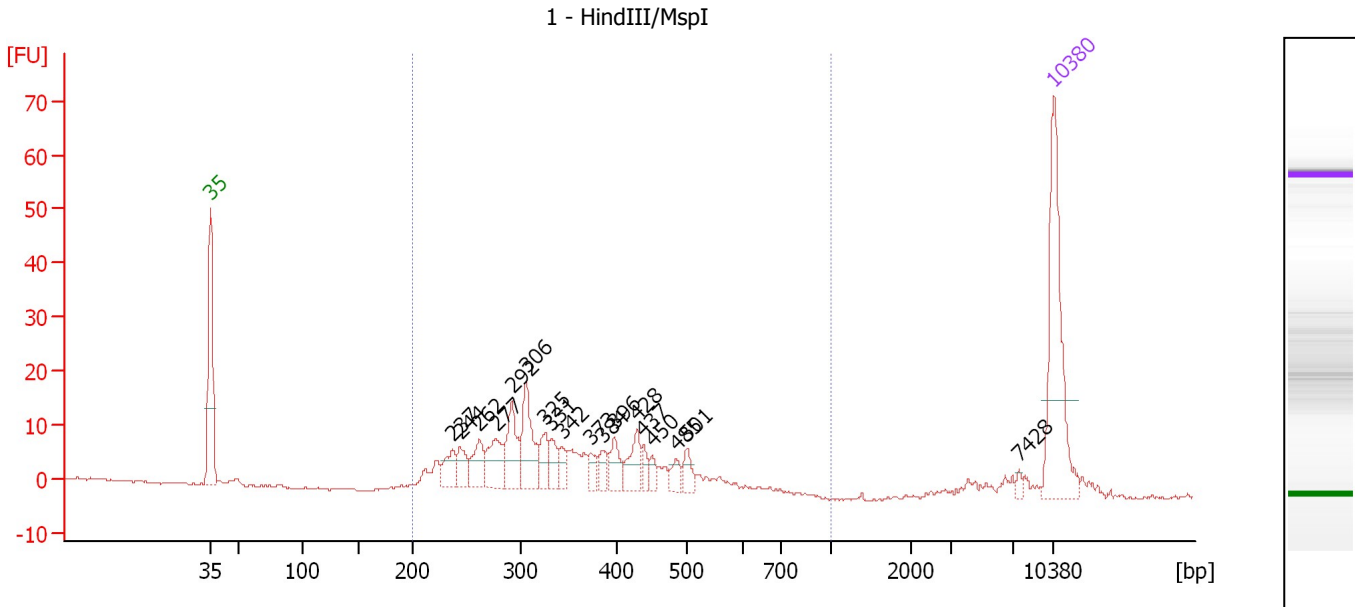
Peak table for Ladder

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	45.29
3	100	150.00	2,272.7	Ladder Peak	50.66
4	150	150.00	1,515.2	Ladder Peak	55.28
5	200	150.00	1,136.4	Ladder Peak	59.81
6	300	150.00	757.6	Ladder Peak	68.74
7	400	150.00	568.2	Ladder Peak	76.79
8	500	150.00	454.5	Ladder Peak	82.51
9	600	150.00	378.8	Ladder Peak	87.13
10	700	150.00	324.7	Ladder Peak	90.39
11	1,000	150.00	227.3	Ladder Peak	94.57
12	2,000	150.00	113.6	Ladder Peak	101.08
13	3,000	150.00	75.8	Ladder Peak	104.38
14	7,000	150.00	32.5	Ladder Peak	109.66
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
 Modified: 3/9/2017 3:50:11 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : 1 - HindIII/MspI

Number of peaks found: 18 Corr. Area 1: 220.5
 Noise: 0.2

Peak table for sample 1 : 1 - HindIII/MspI

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	237	19.22	123.0		63.09
3	244	17.14	106.6		63.71
4	262	23.56	136.5		65.30
5	277	31.30	171.3		66.67
6	292	36.94	191.9		68.00
7	306	44.13	218.7		69.19
8	325	17.68	82.5		70.74
9	331	15.01	68.6		71.27
10	342	10.02	44.3		72.16
11	373	9.13	37.1		74.59
12	384	9.53	37.6		75.48
13	396	15.67	59.9		76.50
14	428	21.53	76.2		78.40
15	437	7.77	27.0		78.88
16	450	6.46	21.8		79.64
17	485	8.82	27.6		81.63
18	501	10.95	33.1		82.56
19	7,428	2.57	0.5		110.08
20	10,380	75.00	10.9	Upper Marker	113.00

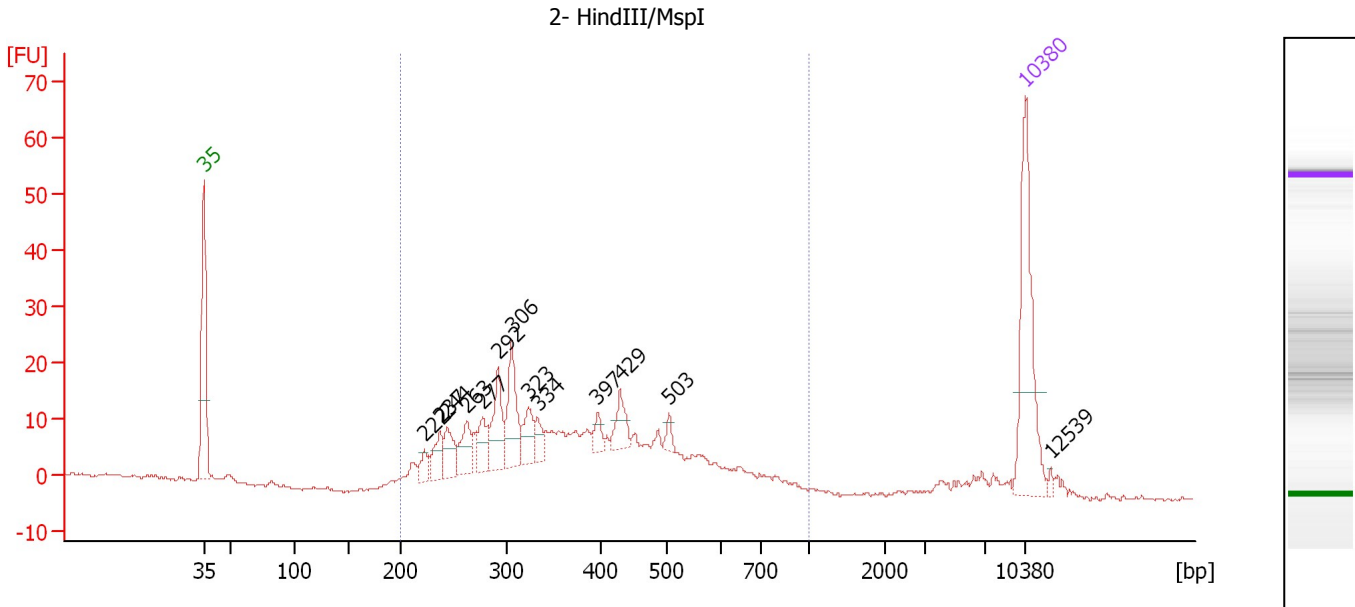
Region table for sample 1 : 1 - HindIII/MspI

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	347	220.5	1,579.3	334.99	95	24.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
 Modified: 3/9/2017 3:50:11 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : 2- HindIII/MspI

Number of peaks found: 13 Corr. Area 1: 362.0
 Noise: 0.3

Peak table for sample 2 : 2- HindIII/MspI

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	222	11.35	77.5		61.77
3	237	21.55	137.9		63.09
4	244	24.23	150.5		63.73
5	263	26.14	150.7		65.41
6	277	21.68	118.4		66.73
7	292	40.82	211.6		68.05
8	306	46.31	229.2		69.23
9	323	22.96	107.7		70.59
10	334	13.01	59.1		71.45
11	397	9.69	37.0		76.55
12	429	18.88	66.7		78.45
13	503	6.11	18.4		82.64
14	10,380	75.00	10.9	Upper Marker	113.00
15	12,539	0.00	0.0		115.14

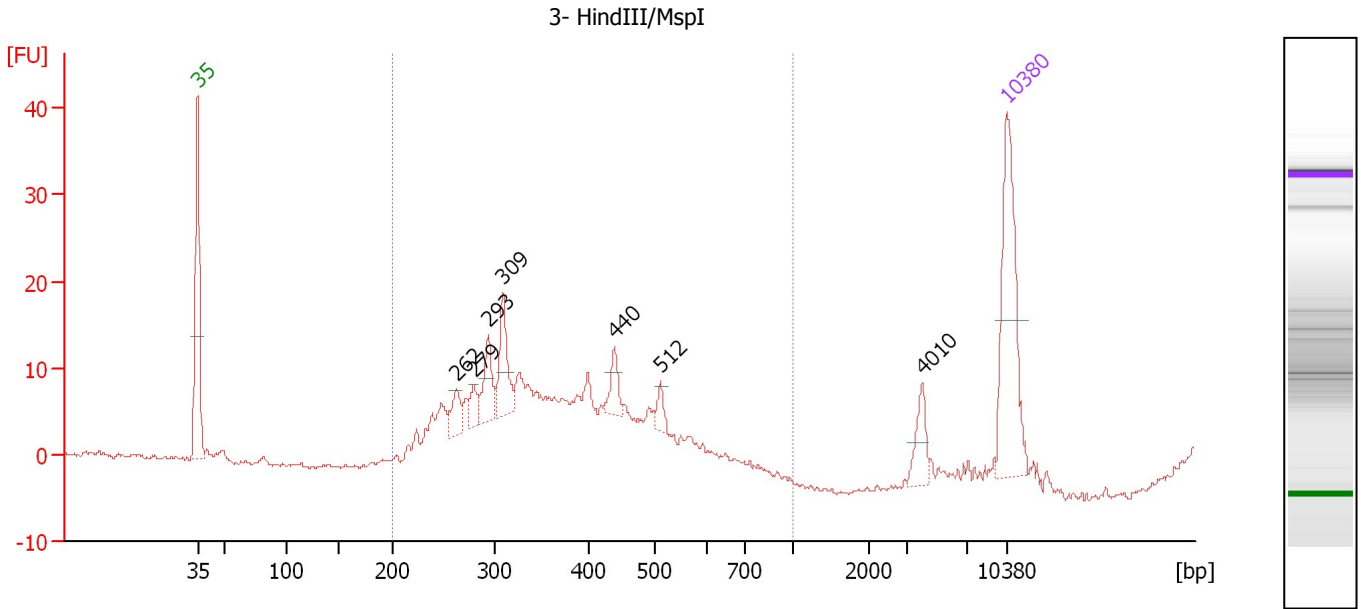
Region table for sample 2 : 2- HindIII/MspI

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	387	362.0	2,590.8	583.03	95	32.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
 Modified: 3/9/2017 3:50:11 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : 3- HindIII/MspI

Number of peaks found: 7 Corr. Area 1: 220.3
 Noise: 0.2

Peak table for sample 3 : 3- HindIII/MspI

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	262	17.31	100.0		65.38
3	279	11.77	63.8		66.90
4	293	28.52	147.3		68.15
5	309	36.69	180.1		69.44
6	440	15.55	53.5		79.08
7	512	8.62	25.5		83.05
8	4,010	17.24	6.5		105.71
9	10,380	75.00	10.9	Upper Marker	113.00

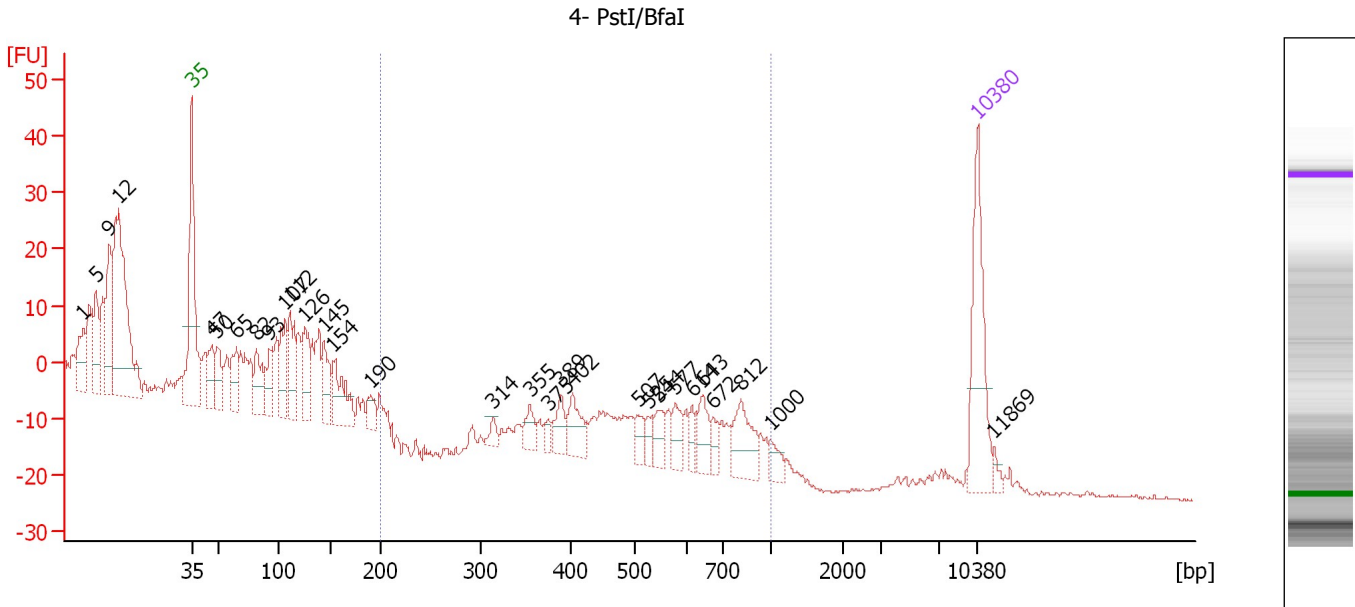
Region table for sample 3 : 3- HindIII/MspI

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	362	220.3	2,184.0	483.61	97	23.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
 Modified: 3/9/2017 3:50:11 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : 4- PstI/BfaI

Number of peaks found: 30 Corr. Area 1: 64.0
 Noise: 0.4

Peak table for sample 4 : 4- PstI/BfaI

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	1	0.00	0.0		33.31
2	5	0.00	0.0		34.45
3	9	0.00	0.0		35.63
4	12	0.00	0.0		36.44
5	35	125.00	5,411.3	Lower Marker	43.00
6	47	38.15	1,242.5		44.76
7	50	40.03	1,221.8		45.23
8	65	39.97	925.5		46.94
9	82	50.14	923.7		48.75
10	93	34.44	561.9		49.89
11	107	58.57	828.2		51.32
12	112	61.70	836.3		51.74
13	126	51.49	618.2		53.07
14	145	43.57	456.2		54.79
15	154	59.70	589.2		55.59
16	190	17.72	141.6		58.87
17	314	8.87	42.8		69.90
18	355	18.07	77.2		73.13
19	375	7.82	31.6		74.74
20	389	21.87	85.2		75.89
21	402	31.82	119.8		76.93
22	507	14.52	43.4		82.82
23	525	11.24	32.4		83.68
24	544	18.40	51.3		84.53
25	577	19.27	50.6		86.05

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
 Modified: 3/9/2017 3:50:11 PM

Electropherogram Summary Continued ...

... Peak table for sample 4 : 4- PstI/BfaI

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	614	11.76	29.0		87.58
27	643	25.36	59.8		88.53
28	672	12.82	28.9		89.48
29	812	41.55	77.5		91.95
30	1,000	12.18	18.5		94.56
31	10,380	75.00	10.9	Upper Marker	113.00
32	11,869	0.00	0.0		114.47

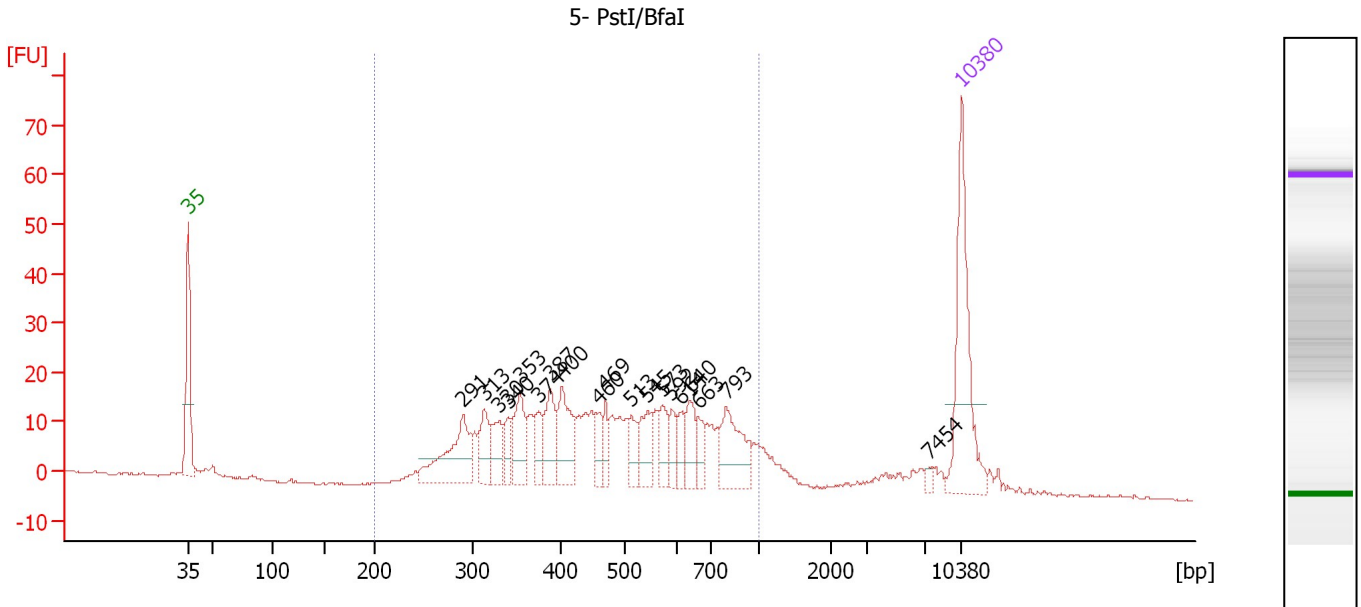
Region table for sample 4 : 4- PstI/BfaI

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	616	64.0	264.8	100.03	17	23.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
 Modified: 3/9/2017 3:50:11 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : 5- PstI/BfaI

Number of peaks found: 19 Corr. Area 1: 494.8
 Noise: 0.2

Peak table for sample 5 : 5- PstI/BfaI

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	291	68.63	357.9		67.89
3	313	27.56	133.2		69.82
4	330	26.47	121.5		71.17
5	340	16.74	74.5		71.99
6	353	35.95	154.3		73.01
7	374	19.55	79.2		74.70
8	387	34.01	133.1		75.76
9	400	41.68	157.7		76.82
10	460	14.51	47.8		80.20
11	469	14.70	47.5		80.73
12	513	17.69	52.3		83.09
13	545	25.70	71.5		84.59
14	573	18.71	49.5		85.89
15	592	13.53	34.6		86.76
16	614	12.39	30.6		87.58
17	640	23.65	56.0		88.44
18	663	12.22	27.9		89.17
19	793	45.37	86.7		91.68
20	7,454	3.02	0.6		110.11
21	10,380	75.00	10.9	Upper Marker	113.00

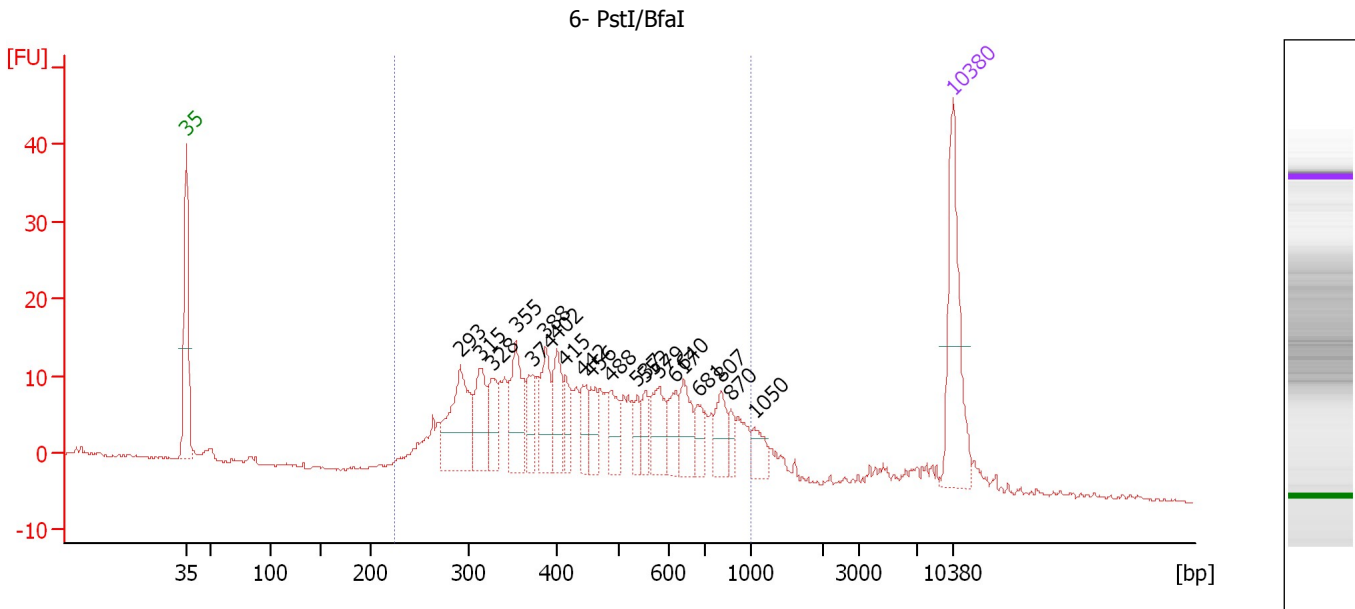
Region table for sample 5 : 5- PstI/BfaI

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	499	494.8	2,212.6	621.87	88	34.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
 Modified: 3/9/2017 3:50:11 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : 6- PstI/BfaI

Number of peaks found: 20 Corr. Area 1: 418.6
 Noise: 0.2

Peak table for sample 6 : 6- PstI/BfaI

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	293	91.38	473.3		68.07
3	315	50.54	242.9		69.97
4	328	32.30	149.2		70.99
5	355	62.16	265.6		73.13
6	374	27.33	110.8		74.69
7	388	42.95	167.8		75.81
8	402	39.67	149.7		76.88
9	415	21.07	76.9		77.66
10	442	22.36	76.6		79.22
11	456	21.73	72.2		80.00
12	488	27.39	85.0		81.85
13	537	17.71	49.9		84.23
14	552	17.35	47.6		84.91
15	579	33.84	88.5		86.18
16	617	24.72	60.7		87.69
17	640	30.87	73.1		88.42
18	681	16.87	37.5		89.78
19	807	26.19	49.2		91.87
20	870	10.86	18.9		92.75
21	1,050	15.61	22.5		94.89
22	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
Modified: 3/9/2017 3:50:11 PM

Electropherogram Summary Continued ...

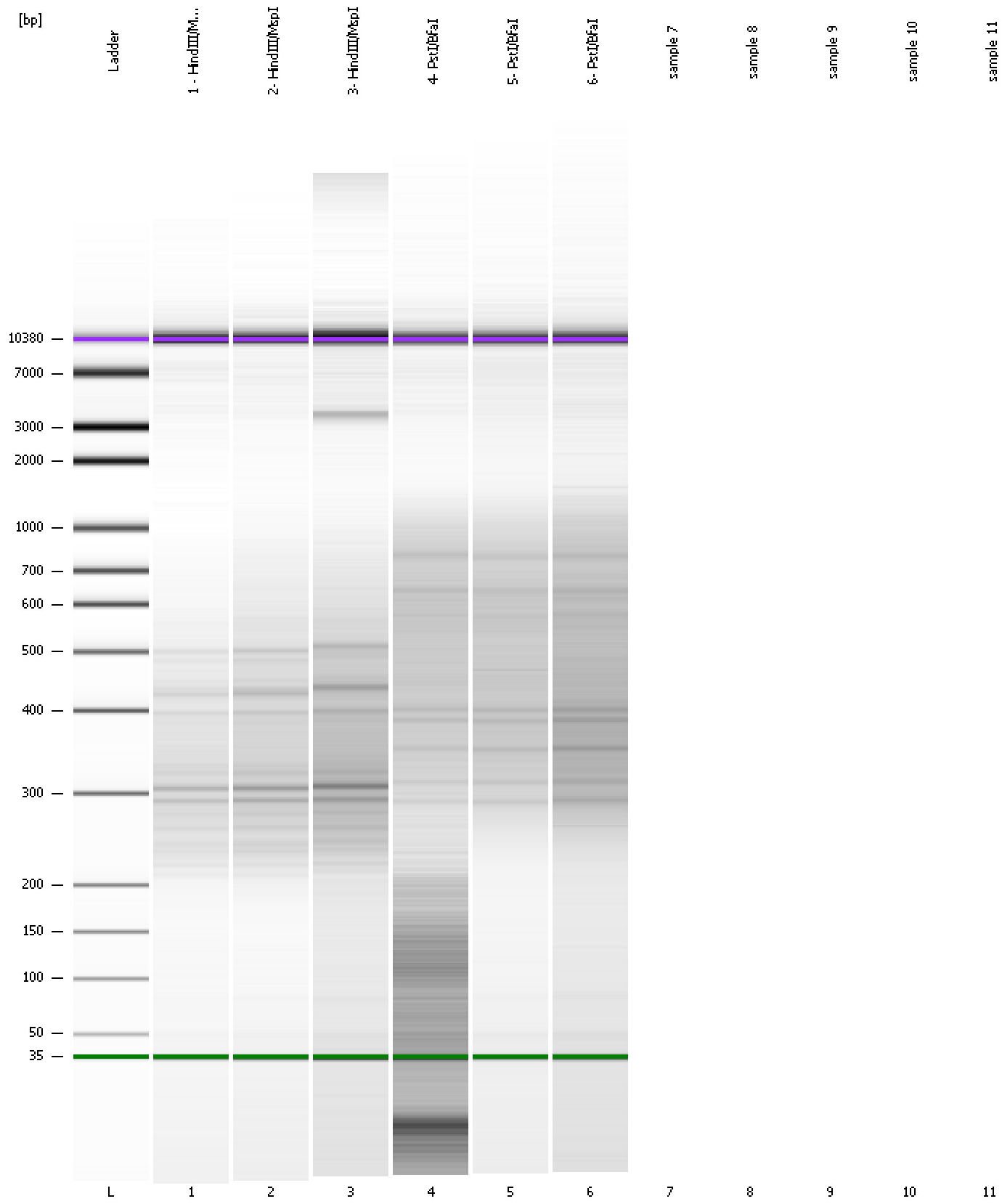
... Region table for sample 6 : 6- PstI/BfaI

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
225	1,000	480	418.6	3,207.2	862.06	88	36.2

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
Modified: 3/9/2017 3:50:11 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad

Created: 3/9/2017 3:21:39 PM
Modified: 3/9/2017 3:50:11 PM

Invalid Samples

Sample 7 has not been run, no results available.

Sample 8 has not been run, no results available.

Sample 9 has not been run, no results available.

Sample 10 has not been run, no results available.

Sample 11 has not been run, no results available.

Assay Class: High Sensitivity DNA Assay Created: 3/9/2017 3:21:39 PM
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09_005.xad Modified: 3/9/2017 3:50:11 PM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 7)		Instrument	Run		3/9/2017 3:48:40 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\2017-03-09\2017-03-09_005.xad)		Instrument	Run		3/9/2017 3:21:45 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/9/2017 3:21:45 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/9/2017 3:21:45 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/9/2017 3:21:45 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/9/2017 3:21:45 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/9/2017 3:21:45 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/9/2017 3:21:45 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1