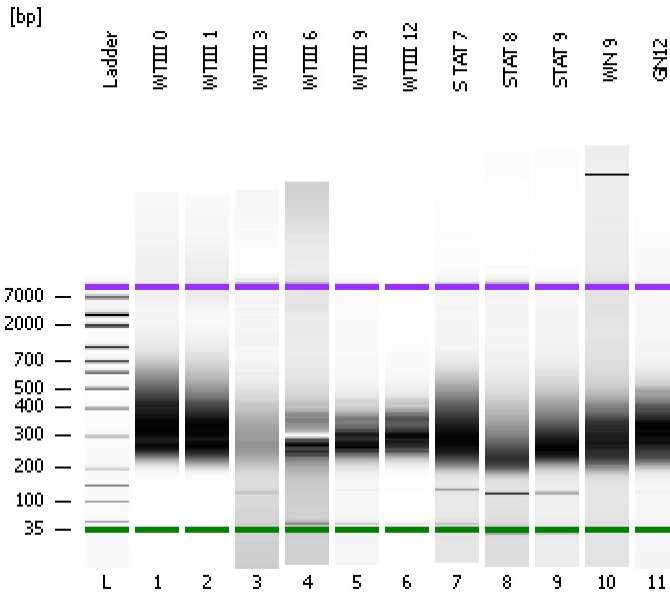


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
Modified: 8/8/2016 5:16:52 PM

Electrophoresis File Run Summary



Instrument Information:

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

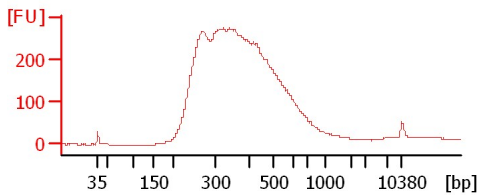
Assay Information:

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

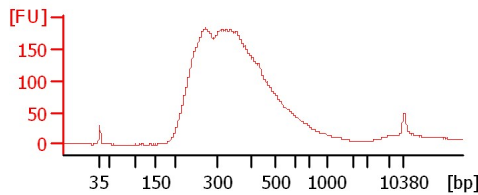
Chip Information:

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

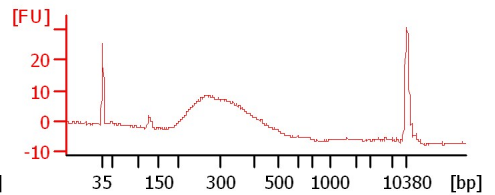
WTIII 0



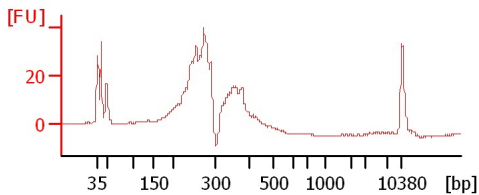
WTIII 1



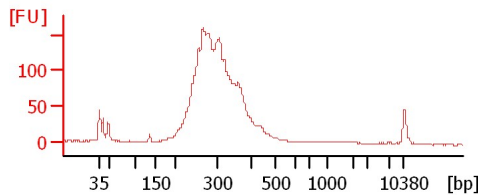
WTIII 3



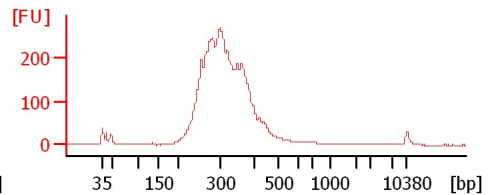
WTIII 6



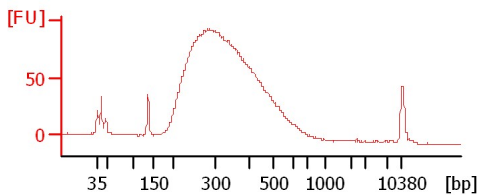
WTIII 9



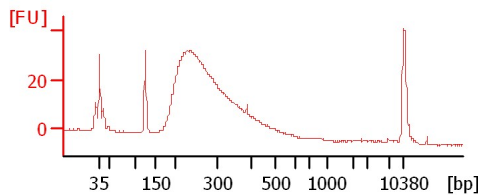
WTIII 12



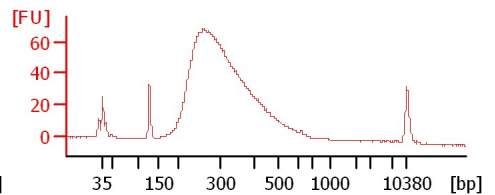
S T A T 7



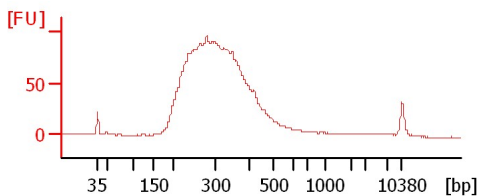
S T A T 8



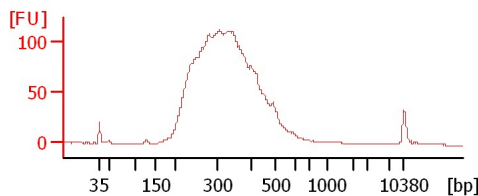
S T A T 9



W N 9



G N 1 2



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
Modified: 8/8/2016 5:16:52 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
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WTIII 1		<input type="checkbox"/>	✓			
WTIII 3		<input type="checkbox"/>	✓			
WTIII 6		<input type="checkbox"/>	✓			
WTIII 9		<input type="checkbox"/>	✓			
WTIII 12		<input type="checkbox"/>	✓			
S TAT 7		<input type="checkbox"/>	✓			
STAT 8		<input type="checkbox"/>	✓			
STAT 9		<input type="checkbox"/>	✓			
WN 9		<input type="checkbox"/>	✓			
GN12		<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\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
Modified: 8/8/2016 5:16:52 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

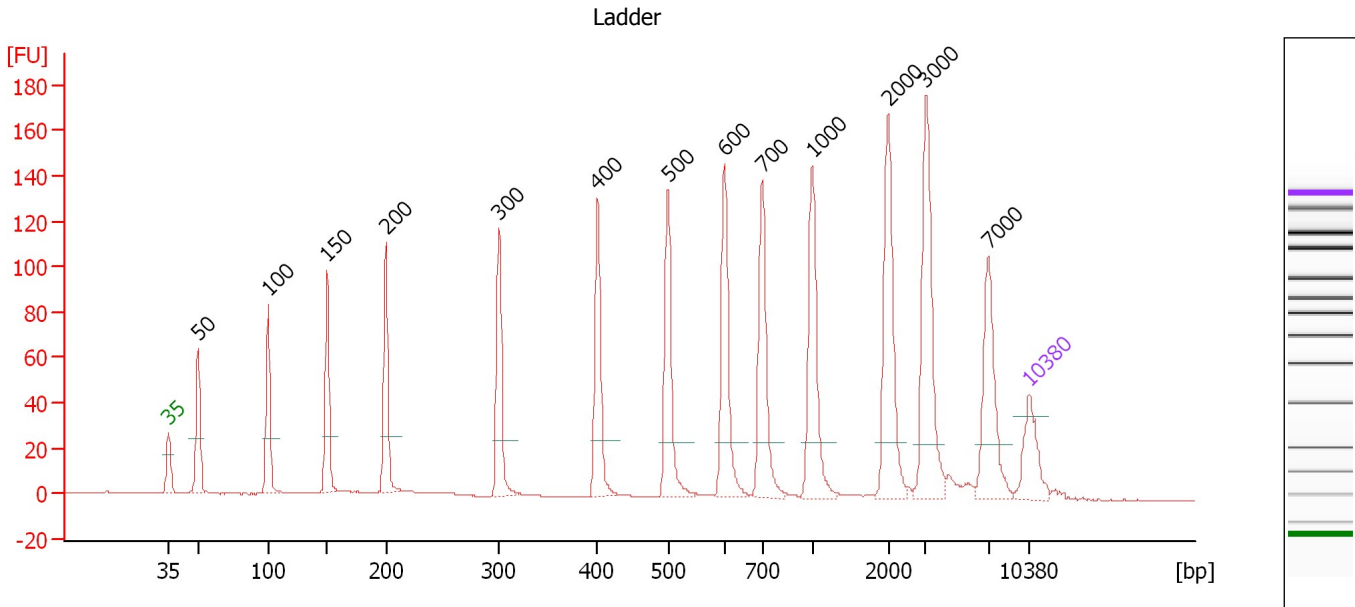
Ladder

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\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

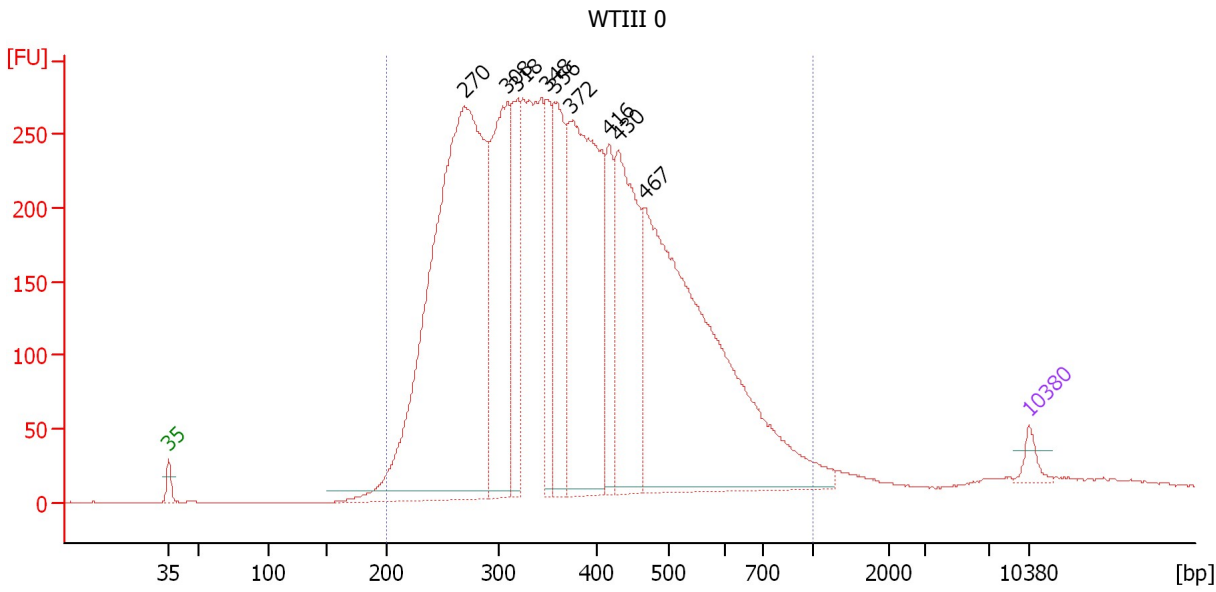
Peak table for Ladder

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	45.39
3	100	150.00	2,272.7	Ladder Peak	51.10
4	150	150.00	1,515.2	Ladder Peak	55.93
5	200	150.00	1,136.4	Ladder Peak	60.65
6	300	150.00	757.6	Ladder Peak	69.90
7	400	150.00	568.2	Ladder Peak	77.90
8	500	150.00	454.5	Ladder Peak	83.62
9	600	150.00	378.8	Ladder Peak	88.19
10	700	150.00	324.7	Ladder Peak	91.27
11	1,000	150.00	227.3	Ladder Peak	95.35
12	2,000	150.00	113.6	Ladder Peak	101.52
13	3,000	150.00	75.8	Ladder Peak	104.60
14	7,000	150.00	32.5	Ladder Peak	109.67
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : WTIII 0

Number of peaks found: 9 Corr. Area 1: 7,748.6
 Noise: 0.2

Peak table for sample 1 : WTIII 0

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	270	6,313.01	35,463.9		67.10
3	308	1,837.26	9,032.2		70.55
4	318	885.20	4,212.8		71.37
5	348	669.53	2,918.6		73.70
6	356	1,035.82	4,410.6		74.37
7	372	2,697.99	10,978.7		75.69
8	416	591.01	2,150.5		78.84
9	430	1,603.31	5,652.7		79.60
10	467	4,269.88	13,850.6		81.74
11	10,380	75.00	10.9	Upper Marker	113.00

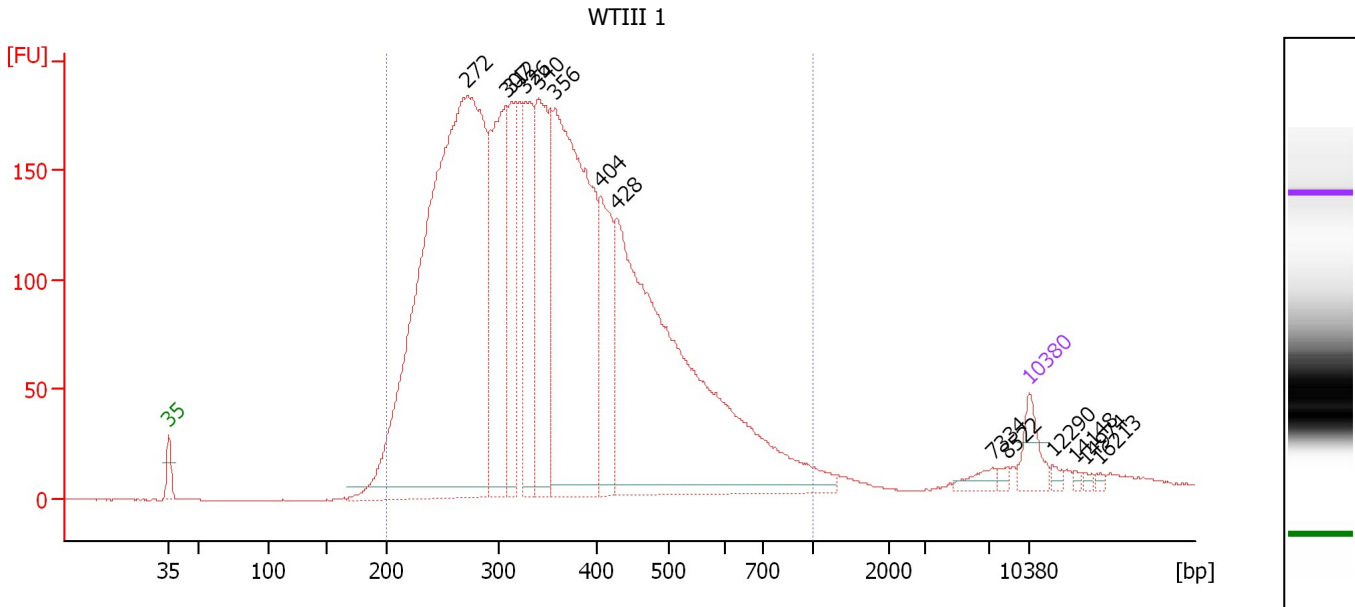
Region table for sample 1 : WTIII 0

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	390	7,748.6	96,243.5	21,799.75	96	32.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : WTIII 1

Number of peaks found: 14 Corr. Area 1: 4,876.8
 Noise: 0.3

Peak table for sample 2 : WTIII 1

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	272	3,377.37	18,806.0		67.32
3	307	775.59	3,833.5		70.42
4	312	334.03	1,620.8		70.88
5	326	447.78	2,079.6		72.00
6	340	646.99	2,881.2		73.12
7	356	1,545.48	6,575.5		74.39
8	404	383.12	1,435.4		78.15
9	428	1,977.87	7,009.3		79.48
10	7,334	32.00	6.6		110.00
11	8,522	10.99	2.0		111.17
12	10,380	75.00	10.9	Upper Marker	113.00
13	12,290	0.00	0.0		114.88
14	14,148	0.00	0.0		116.71
15	14,974	0.00	0.0		117.53
16	16,213	0.00	0.0		118.75

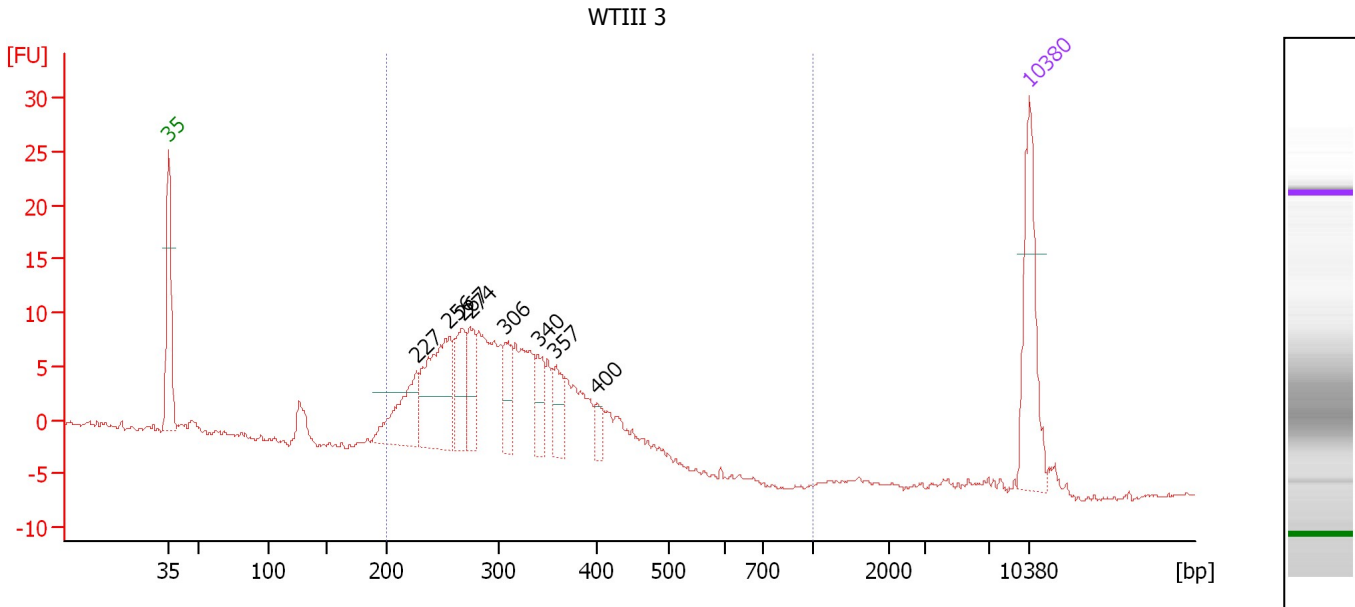
Region table for sample 2 : WTIII 1

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	367	4,876.8	44,483.9	9,554.01	95	33.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : WTIII 3

Number of peaks found: 8 Corr. Area 1: 194.7
 Noise: 0.2

Peak table for sample 3 : WTIII 3

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	74.70	498.6		63.15
3	256	127.04	751.0		65.86
4	267	54.40	308.3		66.88
5	274	43.65	241.4		67.49
6	306	36.78	182.3		70.36
7	340	34.35	153.3		73.07
8	357	30.66	130.2		74.45
9	400	13.84	52.5		77.87
10	10,380	75.00	10.9	Upper Marker	113.00

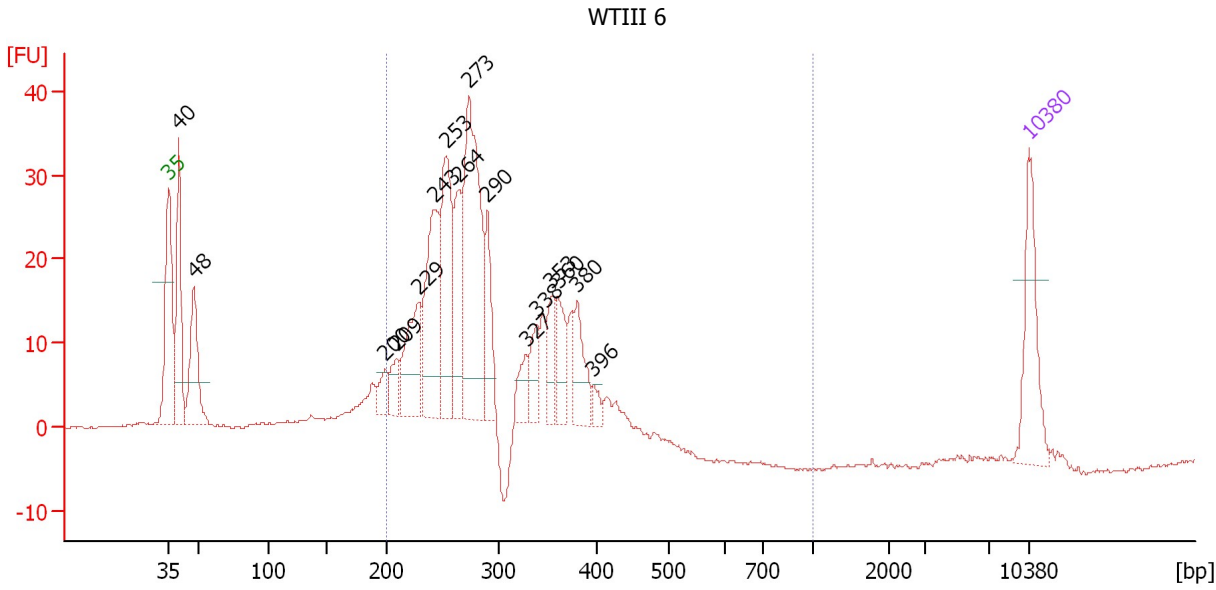
Region table for sample 3 : WTIII 3

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	307	194.7	3,358.1	649.48	97	19.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : WTIII 6

Number of peaks found: 16 Corr. Area 1: 391.1
 Noise: 0.2

Peak table for sample 4 : WTIII 6

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	154.12	5,806.0		43.83
3	48	117.58	3,708.0		45.08
4	200	24.52	185.8		60.64
5	209	31.65	229.0		61.52
6	229	102.59	678.4		63.34
7	243	163.80	1,020.7		64.64
8	253	160.03	957.5		65.57
9	264	98.09	562.0		66.61
10	273	280.44	1,557.1		67.39
11	290	72.32	378.2		68.95
12	327	29.66	137.4		72.06
13	338	36.45	163.4		72.94
14	353	39.66	170.3		74.13
15	360	49.94	210.1		74.70
16	380	54.85	219.0		76.26
17	396	12.36	47.3		77.56
18	10,380	75.00	10.9	Upper Marker	113.00

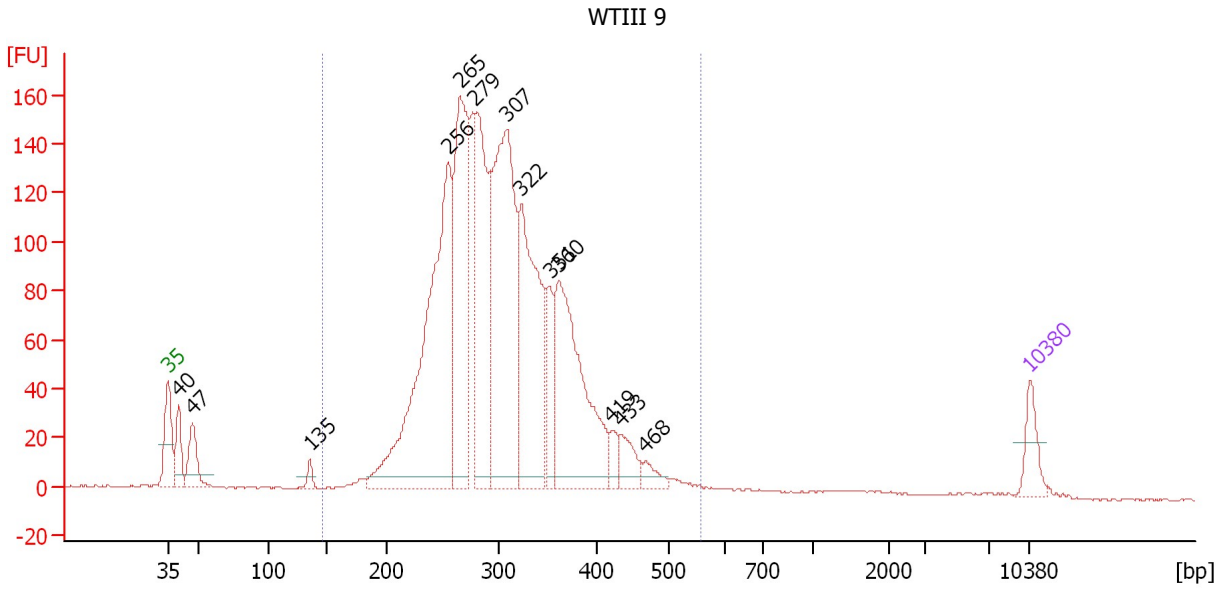
Region table for sample 4 : WTIII 6

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	288	391.1	7,066.0	1,290.34	80	18.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : WTIII 9

Number of peaks found: 13 Corr. Area 1: 2,430.2
 Noise: 0.3

Peak table for sample 5 : WTIII 9

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	128.83	4,884.4		43.79
3	47	154.90	4,968.0		44.95
4	135	30.91	347.0		54.47
5	256	1,400.23	8,300.7		65.79
6	265	828.37	4,731.5		66.68
7	279	696.45	3,783.2		67.95
8	307	1,107.82	5,463.7		70.47
9	322	727.14	3,417.9		71.68
10	351	183.15	790.0		74.00
11	360	734.10	3,085.6		74.74
12	419	52.60	190.1		79.00
13	433	88.74	310.5		79.79
14	468	46.73	151.3		81.79
15	10,380	75.00	10.9	Upper Marker	113.00

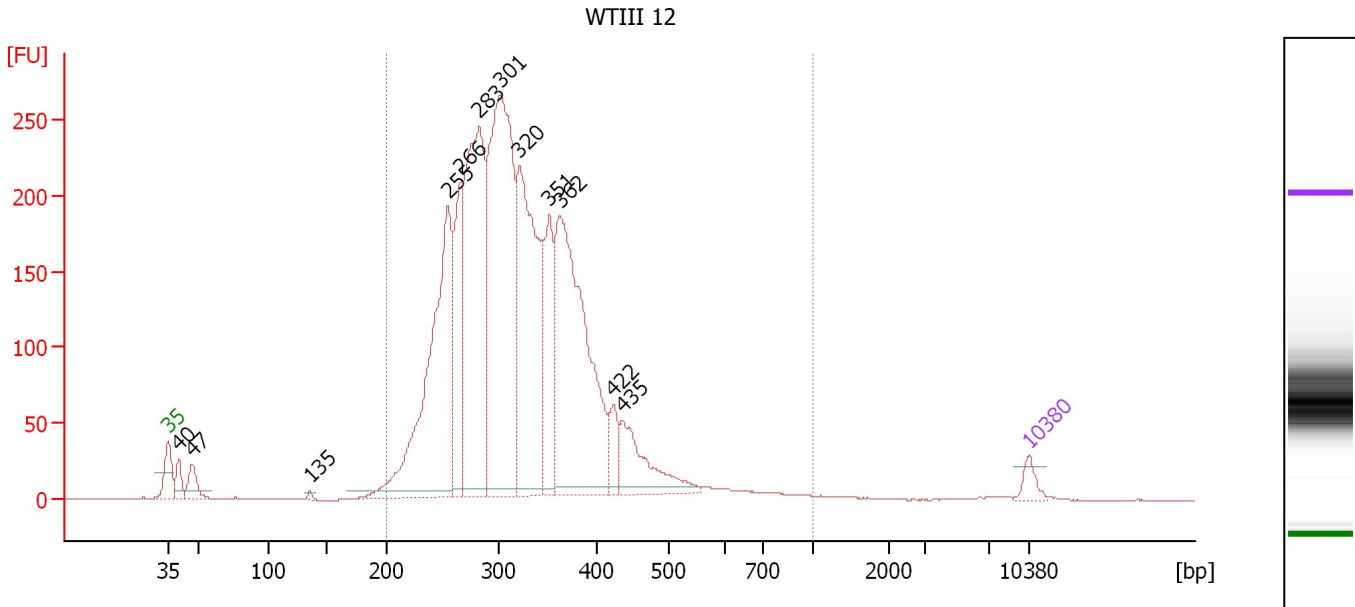
Region table for sample 5 : WTIII 9

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
146	560	306	2,430.2	32,682.8	6,311.36	95	19.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : WTIII 12

Number of peaks found: 12 Corr. Area 1: 4,181.3
 Noise: 0.2

Peak table for sample 6 : WTIII 12

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	159.51	6,034.0		43.80
3	47	203.47	6,541.4		44.93
4	135	20.97	235.6		54.47
5	255	2,671.32	15,878.6		65.73
6	266	891.85	5,081.7		66.74
7	283	2,585.90	13,858.2		68.30
8	301	3,290.49	16,574.5		69.96
9	320	2,172.50	10,279.5		71.51
10	351	835.09	3,604.6		73.98
11	362	2,635.38	11,038.5		74.84
12	422	201.68	723.5		79.18
13	435	545.73	1,898.7		79.93
14	10,380	75.00	10.9	Upper Marker	113.00

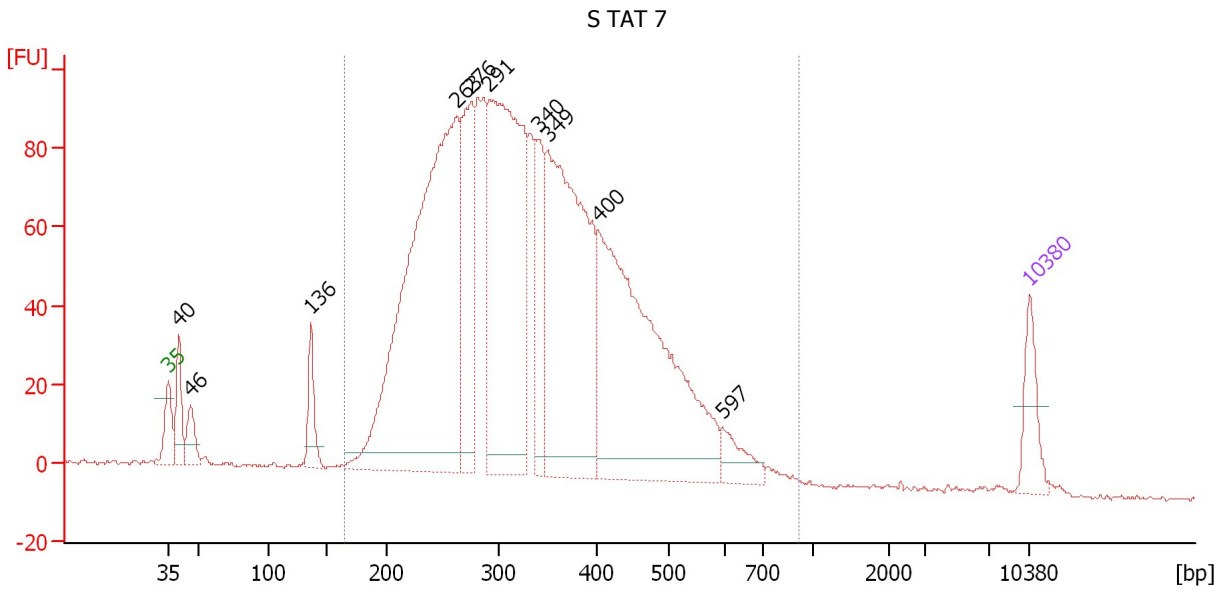
Region table for sample 6 : WTIII 12

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	326	4,181.3	79,581.0	16,195.58	97	23.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : S TAT 7

Number of peaks found: 10 Corr. Area 1: 2,423.9
 Noise: 0.4

Peak table for sample 7 : S TAT 7

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	116.15	4,385.7		43.82
3	46	75.28	2,464.4		44.79
4	136	102.44	1,140.5		54.59
5	263	1,514.14	8,715.3		66.50
6	276	351.94	1,934.9		67.64
7	291	993.56	5,175.4		69.05
8	340	206.01	916.9		73.13
9	349	899.09	3,900.4		73.84
10	400	971.20	3,675.9		77.92
11	597	66.68	169.4		88.03
12	10,380	75.00	10.9	Upper Marker	113.00

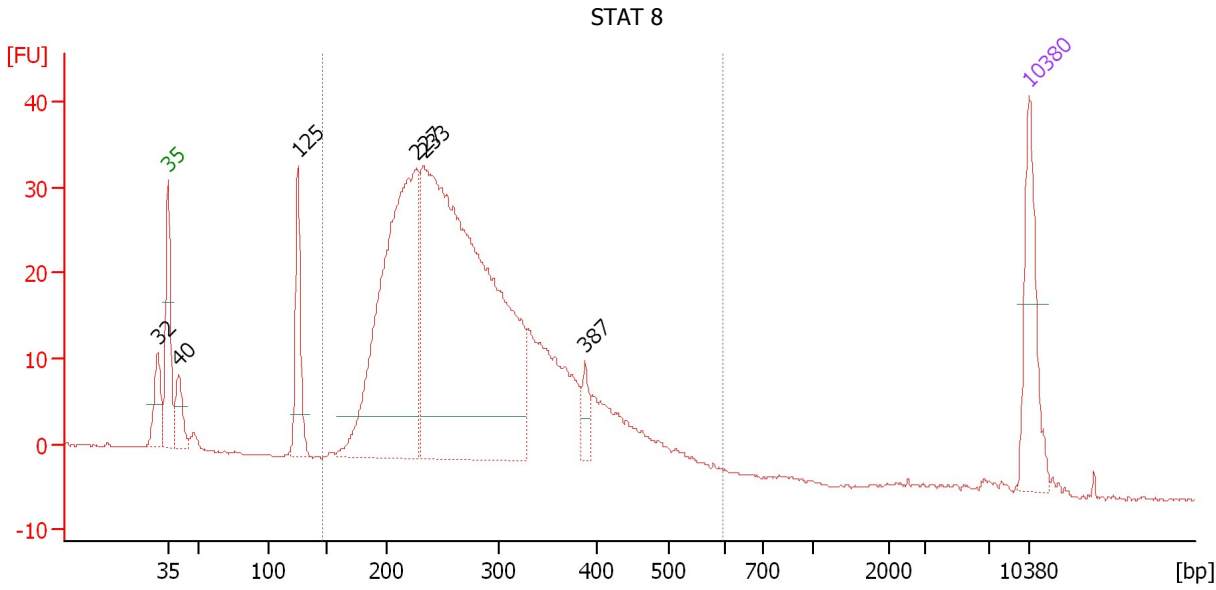
Region table for sample 7 : S TAT 7

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
165	923	341	2,423.9	27,306.0	5,535.65	95	29.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : STAT 8

Number of peaks found: 6 Corr. Area 1: 614.8
 Noise: 0.1

Peak table for sample 8 : STAT 8

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	32	0.00	0.0		42.11
2	35	125.00	5,411.3	Lower Marker	43.00
3	40	45.19	1,715.2		43.78
4	125	103.62	1,256.3		53.51
5	227	529.87	3,530.4		63.18
6	233	938.56	6,091.4		63.74
7	387	24.21	94.9		76.83
8	10,380	75.00	10.9	Upper Marker	113.00

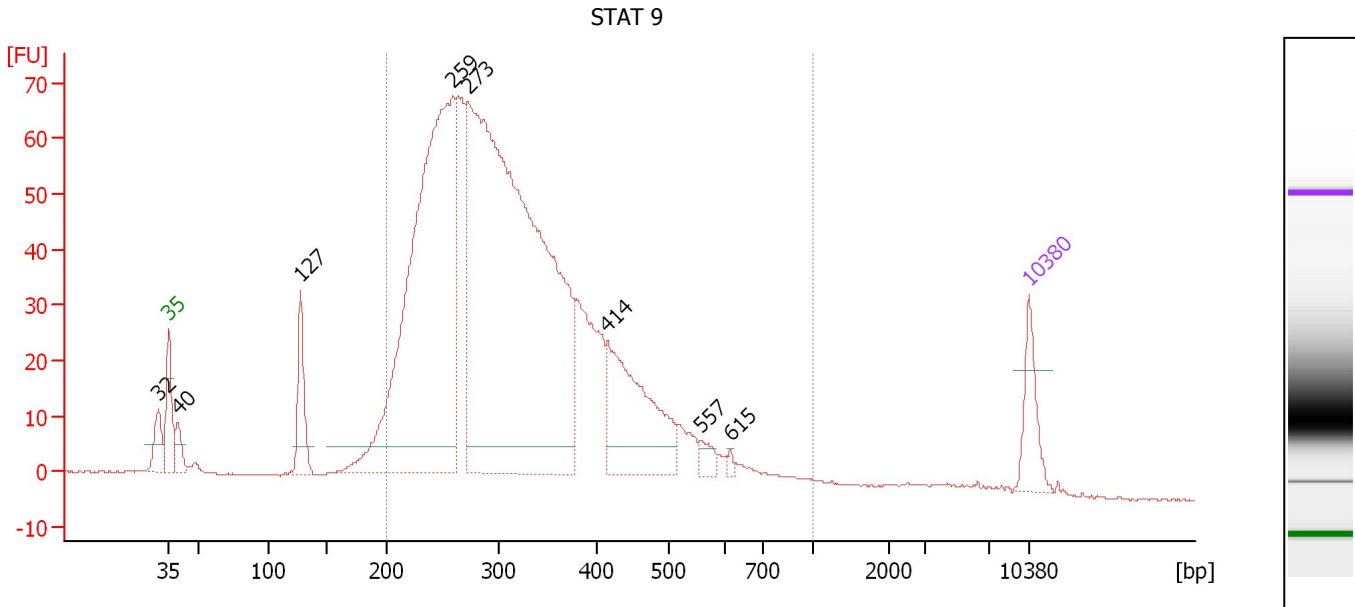
Region table for sample 8 : STAT 8

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
146	599	281	614.8	10,081.1	1,732.35	91	25.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : STAT 9

Number of peaks found: 8 Corr. Area 1: 1,340.7
 Noise: 0.1

Peak table for sample 9 : STAT 9

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	32	0.00	0.0		42.15
2	35	125.00	5,411.3	Lower Marker	43.00
3	40	56.61	2,165.1		43.73
4	127	156.13	1,859.9		53.73
5	259	1,544.40	9,019.6		66.15
6	273	2,317.52	12,868.6		67.39
7	414	352.36	1,290.8		78.68
8	557	26.82	72.9		86.24
9	615	9.21	22.7		88.67
10	10,380	75.00	10.9	Upper Marker	113.00

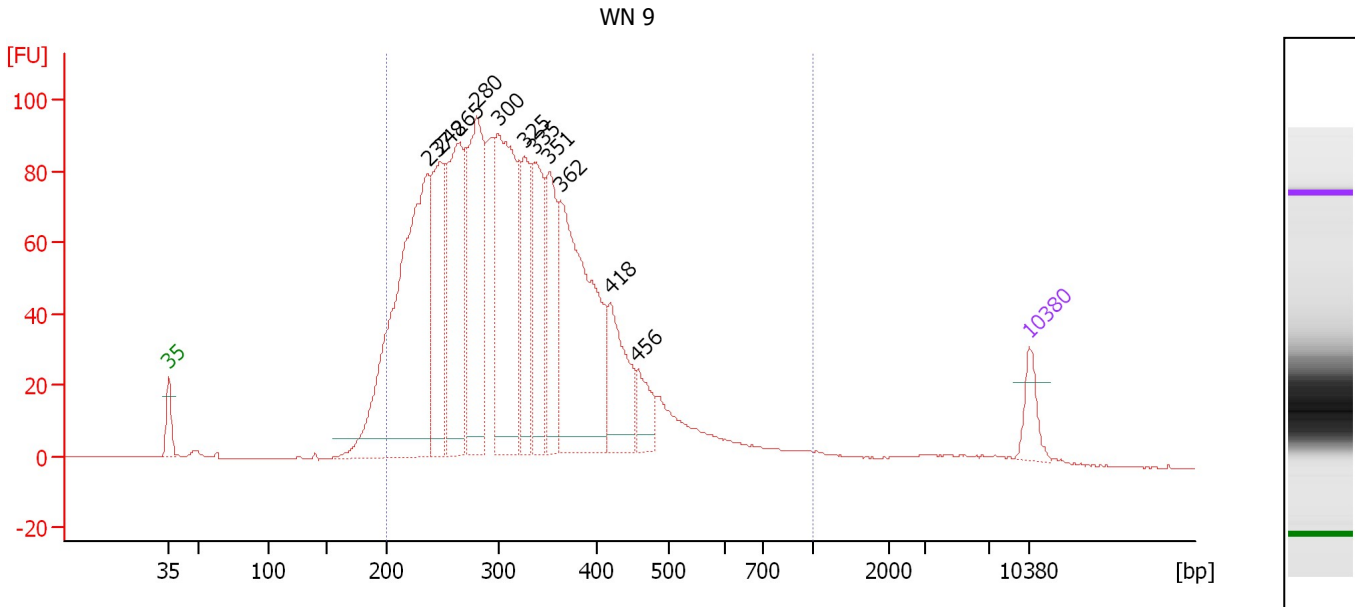
Region table for sample 9 : STAT 9

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	324	1,340.7	24,591.8	4,823.05	93	28.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : WN 9

Number of peaks found: 11 Corr. Area 1: 2,079.5
 Noise: 0.1

Peak table for sample 10 : WN 9

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	1,547.69	9,874.9		64.11
3	248	565.61	3,456.6		65.08
4	265	733.66	4,201.9		66.62
5	280	775.84	4,199.3		68.04
6	300	891.35	4,507.4		69.86
7	325	343.02	1,598.3		71.91
8	335	368.44	1,665.8		72.71
9	351	356.41	1,539.6		73.96
10	362	927.97	3,882.5		74.87
11	418	293.97	1,066.4		78.91
12	456	121.32	402.7		81.13
13	10,380	75.00	10.9	Upper Marker	113.00

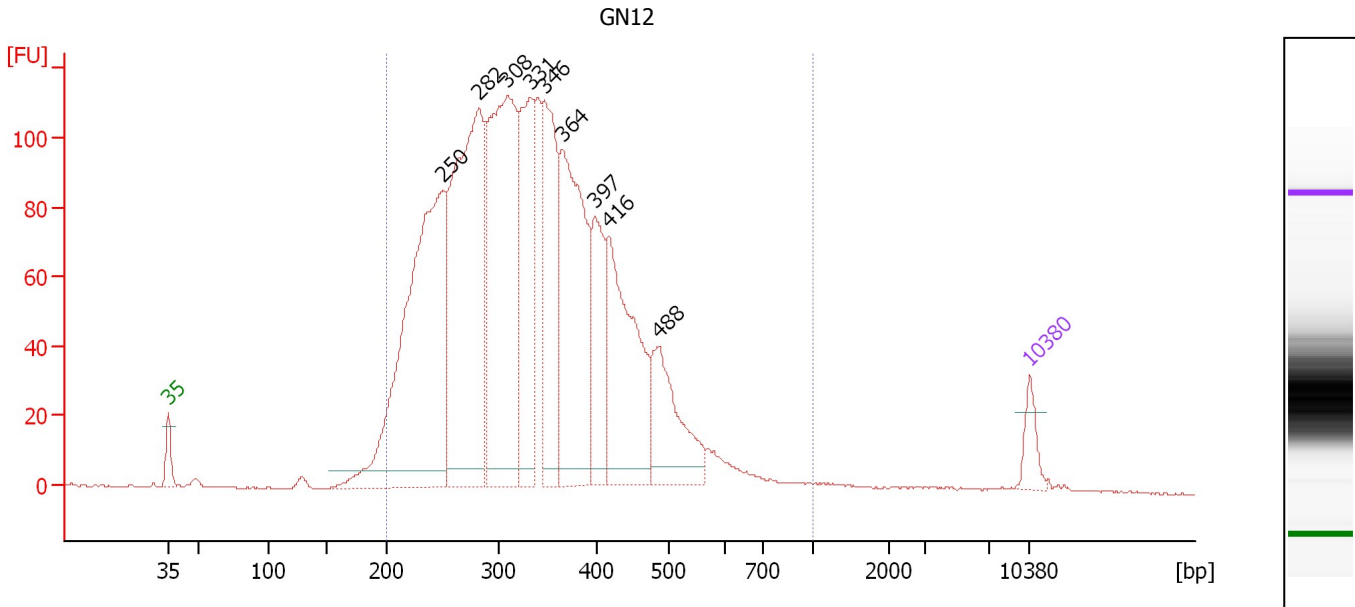
Region table for sample 10 : WN 9

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	328	2,079.5	39,482.2	7,810.11	94	30.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
 Modified: 8/8/2016 5:16:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : GN12

Number of peaks found: 9 Corr. Area 1: 2,554.1
 Noise: 0.2

Peak table for sample 11 : GN12

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	2,009.58	12,162.9		65.30
3	282	1,732.57	9,312.9		68.22
4	308	1,571.94	7,723.9		70.57
5	331	705.94	3,229.2		72.40
6	346	684.45	3,001.5		73.54
7	364	1,032.58	4,297.1		75.03
8	397	413.28	1,577.5		77.66
9	416	808.83	2,947.7		78.80
10	488	428.39	1,330.7		82.92
11	10,380	75.00	10.9	Upper Marker	113.00

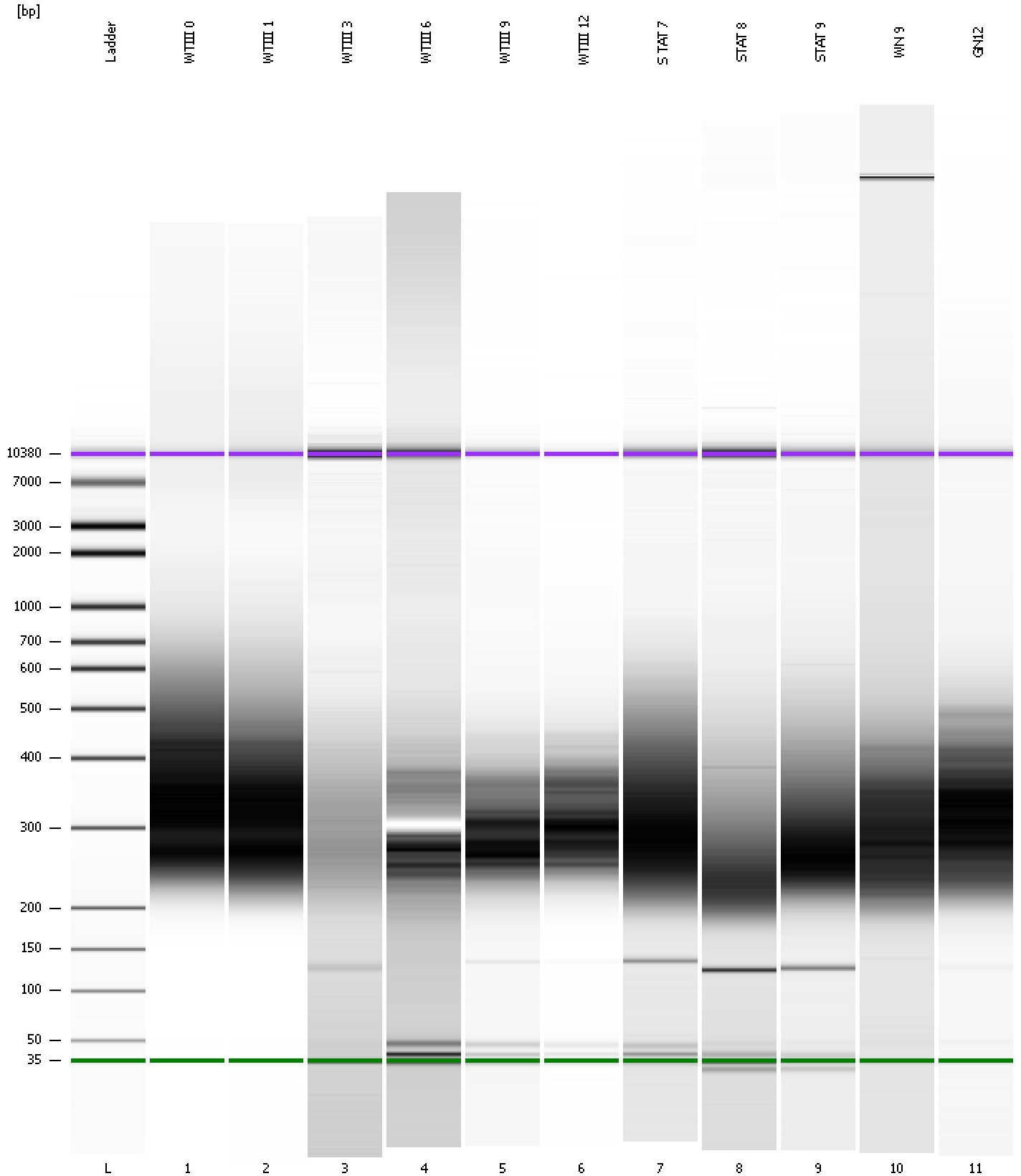
Region table for sample 11 : GN12

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	342	2,554.1	48,939.5	10,117.14	96	27.8

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad

Created: 8/8/2016 4:37:10 PM
Modified: 8/8/2016 5:16:52 PM

Gel Image



Assay Class: High Sensitivity DNA Assay Created: 8/8/2016 4:37:10 PM
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-08\2016-08-08_003.xad Modified: 8/8/2016 5:16:52 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		8/8/2016 5:18:29 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\2016-08-08\2016-08-08_003.xad)		Instrument	Run		8/8/2016 4:37:16 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		8/8/2016 4:37:16 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		8/8/2016 4:37:16 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		8/8/2016 4:37:16 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		8/8/2016 4:37:16 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		8/8/2016 4:37:16 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		8/8/2016 4:37:16 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1