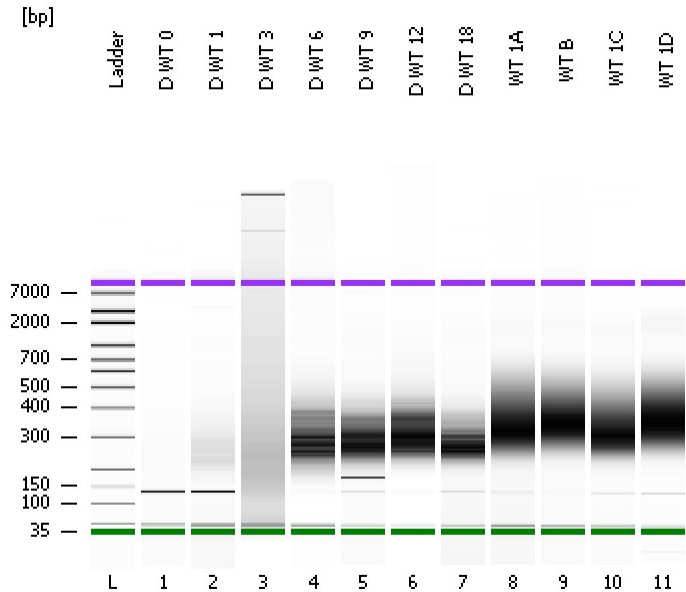


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
Modified: 7/6/2016 10:03:48 AM

Electrophoresis File Run Summary



Instrument Information:

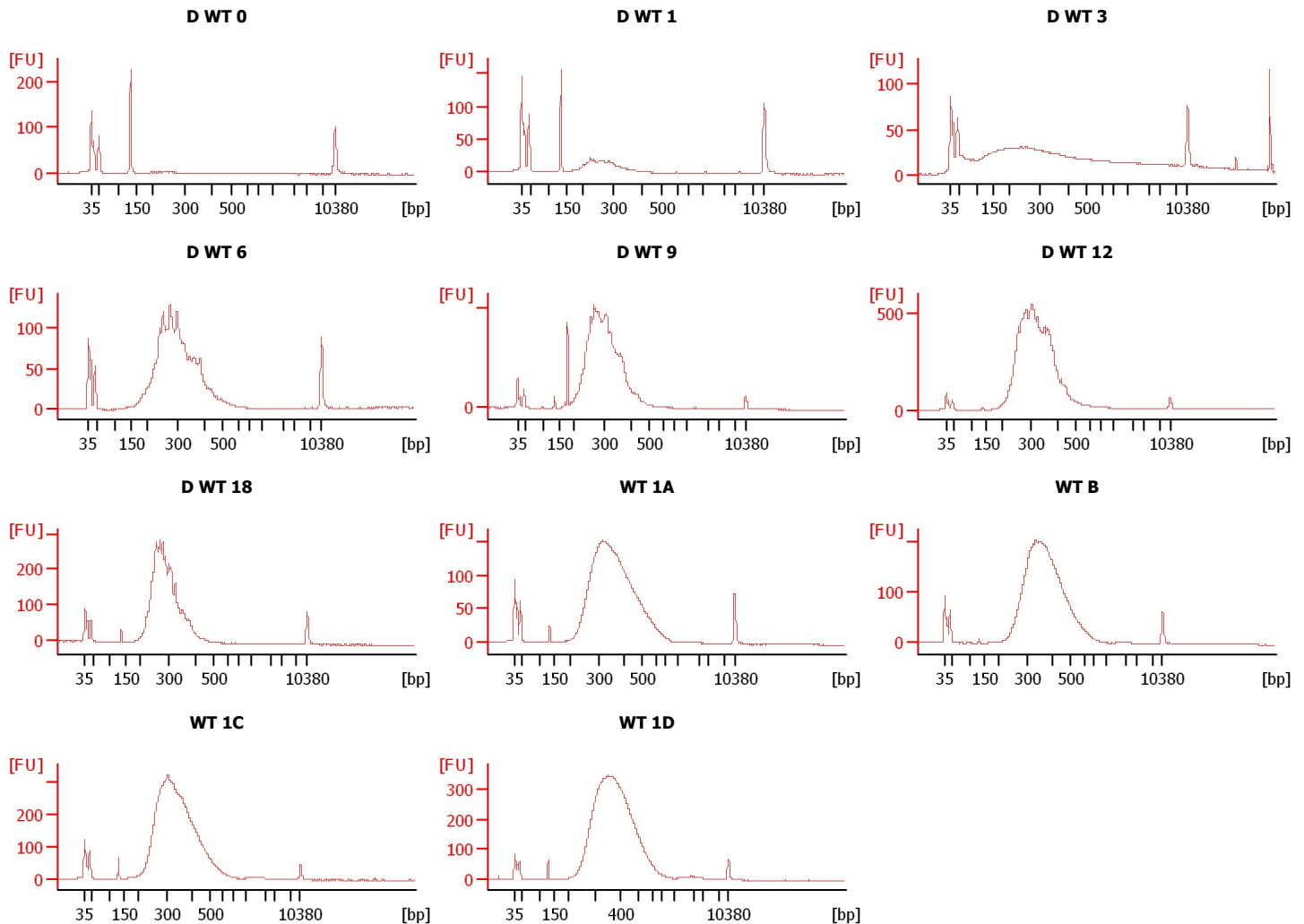
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
D WT 0		<input type="checkbox"/>	✓			
D WT 1		<input type="checkbox"/>	✓			
D WT 3		<input type="checkbox"/>	✓			
D WT 6		<input type="checkbox"/>	✓			
D WT 9		<input type="checkbox"/>	✓			
D WT 12		<input type="checkbox"/>	✓			
D WT 18		<input type="checkbox"/>	✓			
WT 1A		<input type="checkbox"/>	✓			
WT B		<input type="checkbox"/>	✓			
WT 1C		<input type="checkbox"/>	✓			
WT 1D		<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\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
Modified: 7/6/2016 10:03:48 AM

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

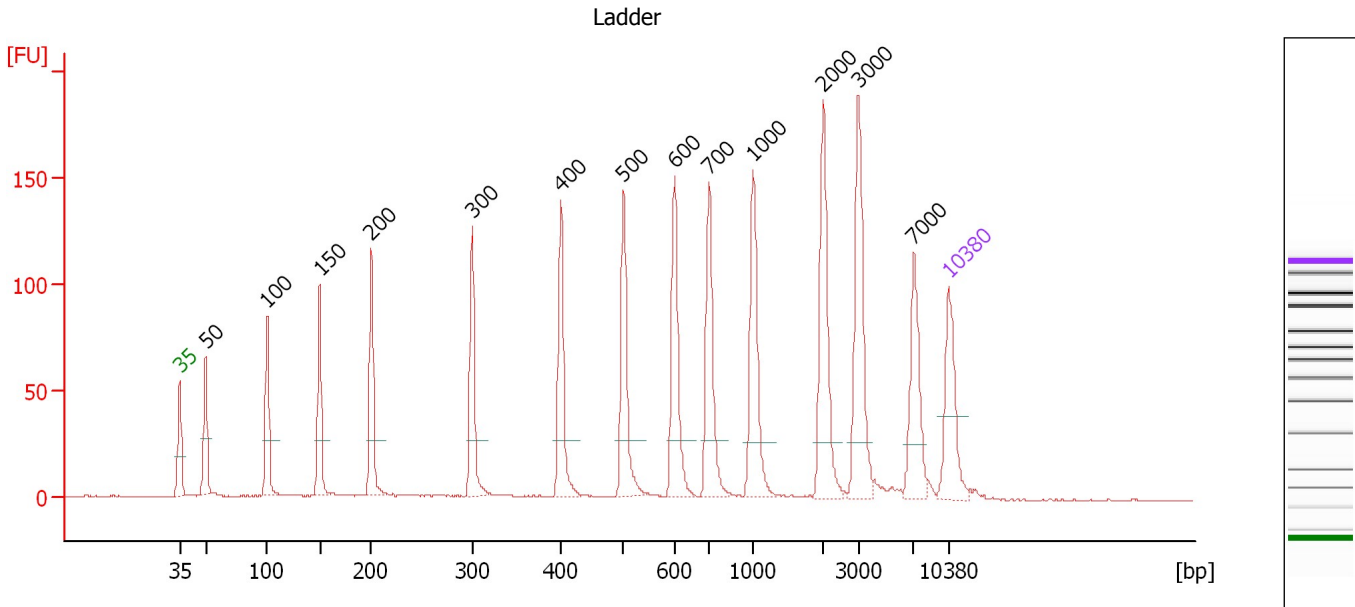
Ladder

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\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
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Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

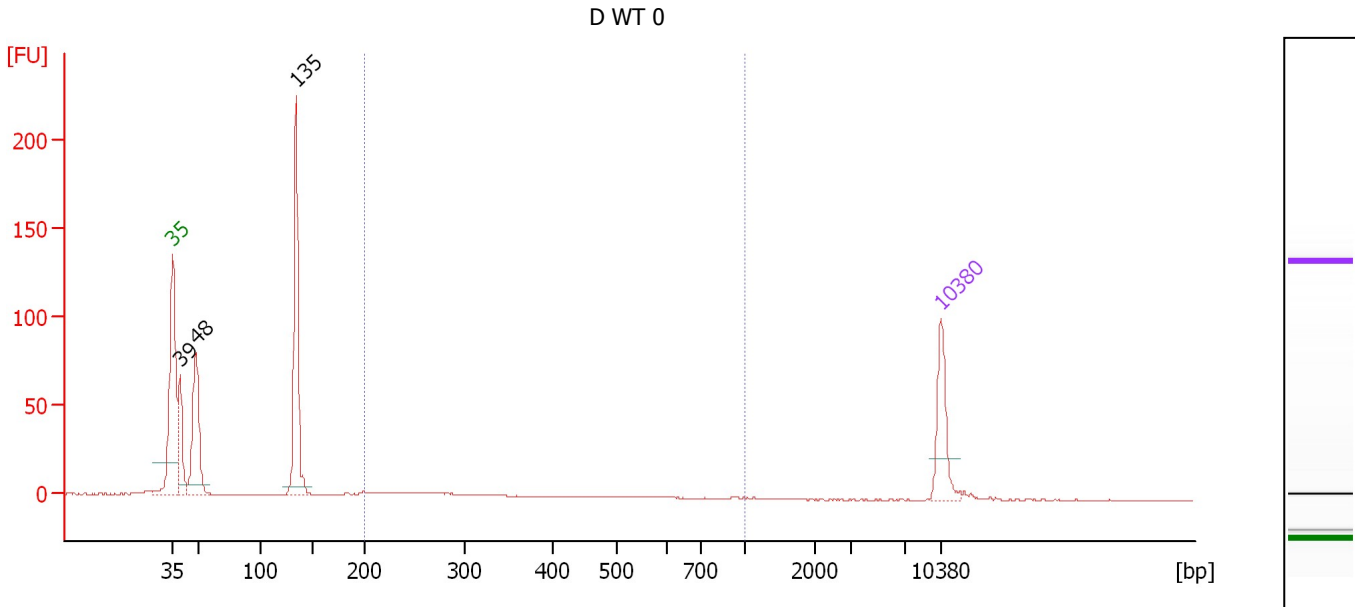
Peak table for Ladder

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	45.38
3	100	150.00	2,272.7	Ladder Peak	50.96
4	150	150.00	1,515.2	Ladder Peak	55.76
5	200	150.00	1,136.4	Ladder Peak	60.46
6	300	150.00	757.6	Ladder Peak	69.63
7	400	150.00	568.2	Ladder Peak	77.68
8	500	150.00	454.5	Ladder Peak	83.41
9	600	150.00	378.8	Ladder Peak	88.02
10	700	150.00	324.7	Ladder Peak	91.17
11	1,000	150.00	227.3	Ladder Peak	95.20
12	2,000	150.00	113.6	Ladder Peak	101.55
13	3,000	150.00	75.8	Ladder Peak	104.75
14	7,000	150.00	32.5	Ladder Peak	109.80
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : D WT 0

Number of peaks found: 3 Corr. Area 1: 29.5
 Noise: 0.2

Peak table for sample 1 : D WT 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	39	127.45	4,914.5		43.68
3	48	231.39	7,230.4		45.14
4	135	335.82	3,782.9		54.27
5	10,380	75.00	10.9	Upper Marker	113.00

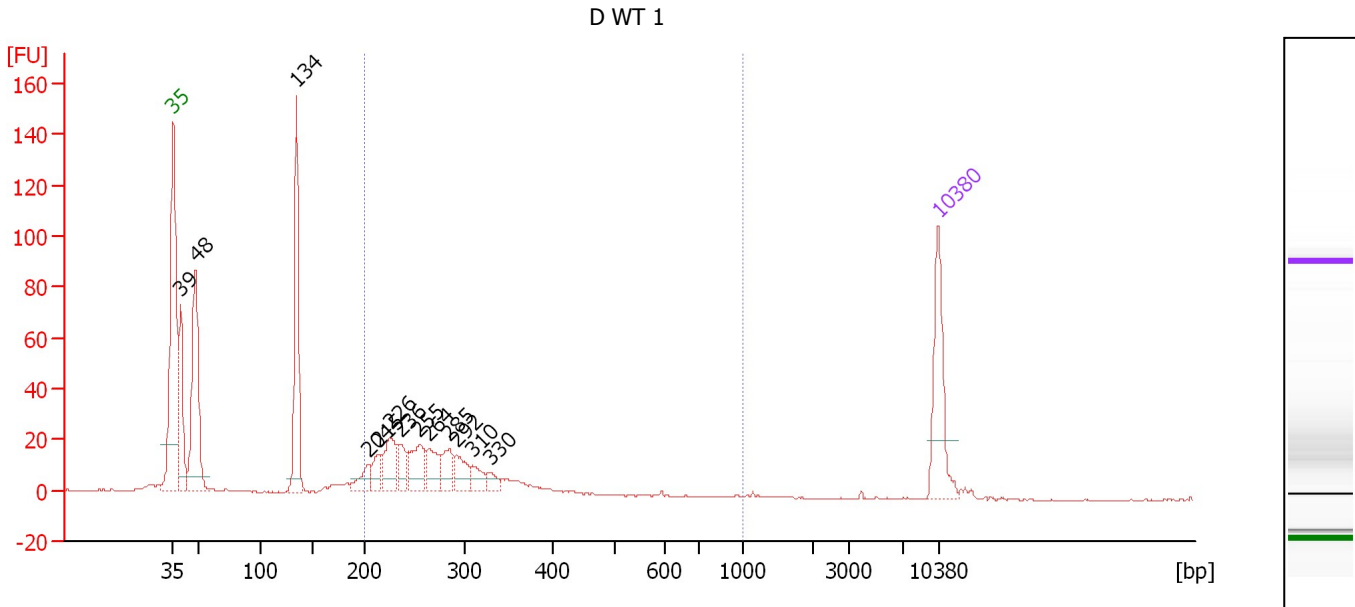
Region table for sample 1 : D WT 0

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	284	29.5	241.5	42.16	7	35.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : D WT 1

Number of peaks found: 13 Corr. Area 1: 309.4
 Noise: 0.2

Peak table for sample 2 : D WT 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	39	124.63	4,803.8		43.68
3	48	229.63	7,259.1		45.05
4	134	192.86	2,172.7		54.27
5	204	29.47	218.6		60.85
6	215	27.95	197.1		61.83
7	226	56.32	377.5		62.85
8	236	32.85	210.7		63.78
9	255	53.39	316.8		65.54
10	264	39.51	226.4		66.37
11	285	33.06	175.7		68.27
12	292	33.68	174.7		68.90
13	310	22.04	107.8		70.41
14	330	12.88	59.2		72.02
15	10,380	75.00	10.9	Upper Marker	113.00

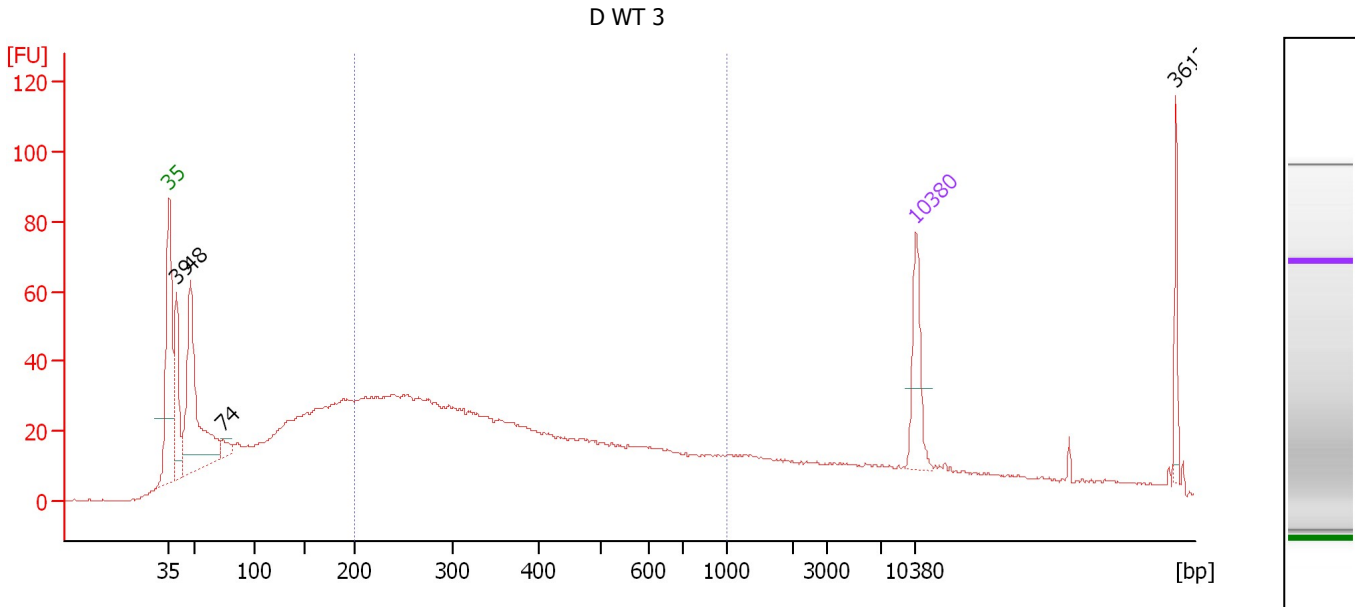
Region table for sample 2 : D WT 1

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	275	309.4	2,260.6	396.91	44	19.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : D WT 3

Number of peaks found: 4 Corr. Area 1: 964.3
 Noise: 0.3

Peak table for sample 3 : D WT 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	39	181.42	6,974.1		43.70
3	48	428.45	13,544.9		45.05
4	74	23.58	480.4		48.10
5	10,380	75.00	10.9	Upper Marker	113.00
6	36,121	0.00	0.0		137.38

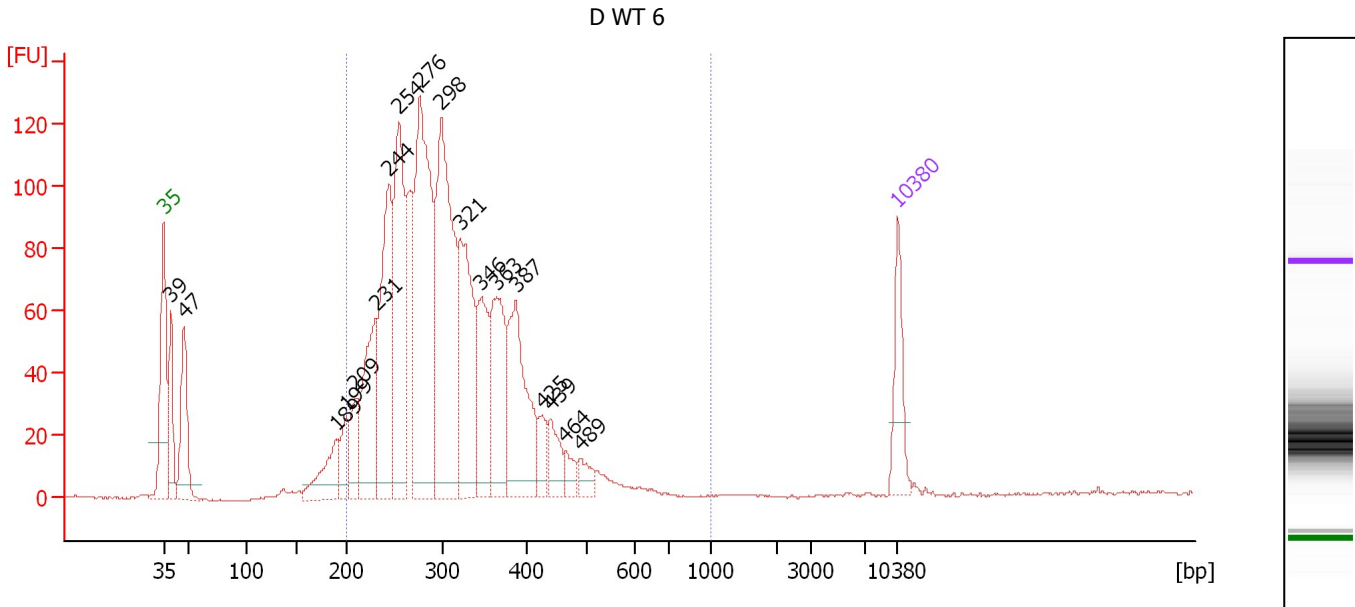
Region table for sample 3 : D WT 3

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	397	964.3	9,808.3	2,072.98	47	44.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

Electropherogram Summary Continued ...



Overall Results for sample 4 : D WT 6

Number of peaks found: 18 Corr. Area 1: 2,053.9
 Noise: 0.3

Peak table for sample 4 : D WT 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	39	149.70	5,790.4		43.66
3	47	198.09	6,360.1		44.93
4	189	117.46	939.4		59.47
5	199	65.10	495.2		60.39
6	209	90.08	652.6		61.30
7	231	241.68	1,586.9		63.28
8	244	350.54	2,176.2		64.50
9	254	378.44	2,257.1		65.42
10	276	600.18	3,292.2		67.45
11	298	545.26	2,768.6		69.49
12	321	319.42	1,508.1		71.32
13	346	167.16	733.0		73.30
14	363	211.33	881.6		74.72
15	387	257.90	1,010.9		76.60
16	425	46.79	166.6		79.14
17	439	57.55	198.7		79.91
18	464	28.99	94.7		81.33
19	489	30.44	94.2		82.80
20	10,380	75.00	10.9	Upper Marker	113.00

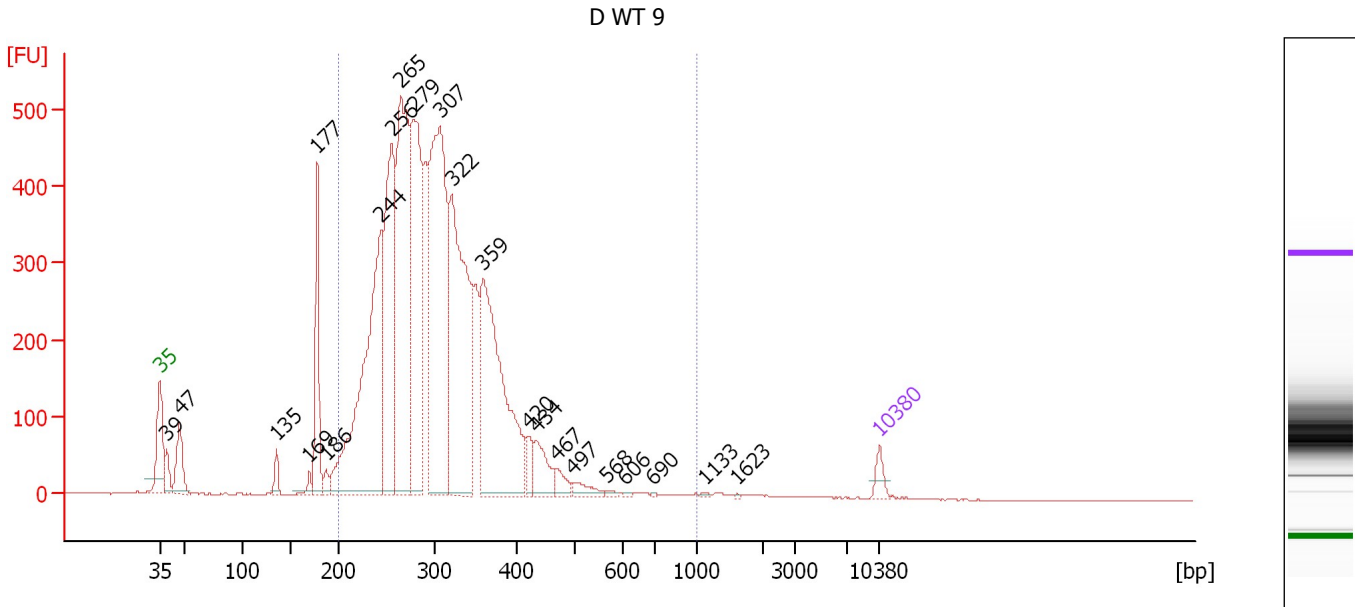
Region table for sample 4 : D WT 6

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	310	2,053.9	17,921.7	3,473.09	90	22.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
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Electropherogram Summary Continued ...



Overall Results for sample 5 : D WT 9

Number of peaks found: 22 Corr. Area 1: 8,128.9
 Noise: 0.3

Peak table for sample 5 : D WT 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	39	169.92	6,558.6		43.67
3	47	439.11	14,123.4		44.92
4	135	120.90	1,352.9		54.36
5	169	69.22	621.7		57.52
6	177	745.31	6,381.1		58.30
7	186	90.30	734.3		59.18
8	244	2,871.61	17,815.1		64.52
9	256	1,831.18	10,857.5		65.56
10	265	2,568.86	14,679.1		66.44
11	279	1,969.82	10,707.9		67.68
12	307	2,945.12	14,519.6		70.22
13	322	2,426.84	11,414.4		71.41
14	359	2,158.32	9,096.8		74.42
15	420	141.24	509.5		78.83
16	434	279.52	976.8		79.61
17	467	121.59	394.4		81.53
18	497	99.84	304.4		83.24
19	568	18.56	49.5		86.56
20	606	11.35	28.4		88.21
21	690	7.60	16.7		90.86
22	1,133	11.22	15.0		96.04
23	1,623	5.45	5.1		99.16
24	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
Modified: 7/6/2016 10:03:48 AM

Electropherogram Summary Continued ...

... Region table for sample 5 :

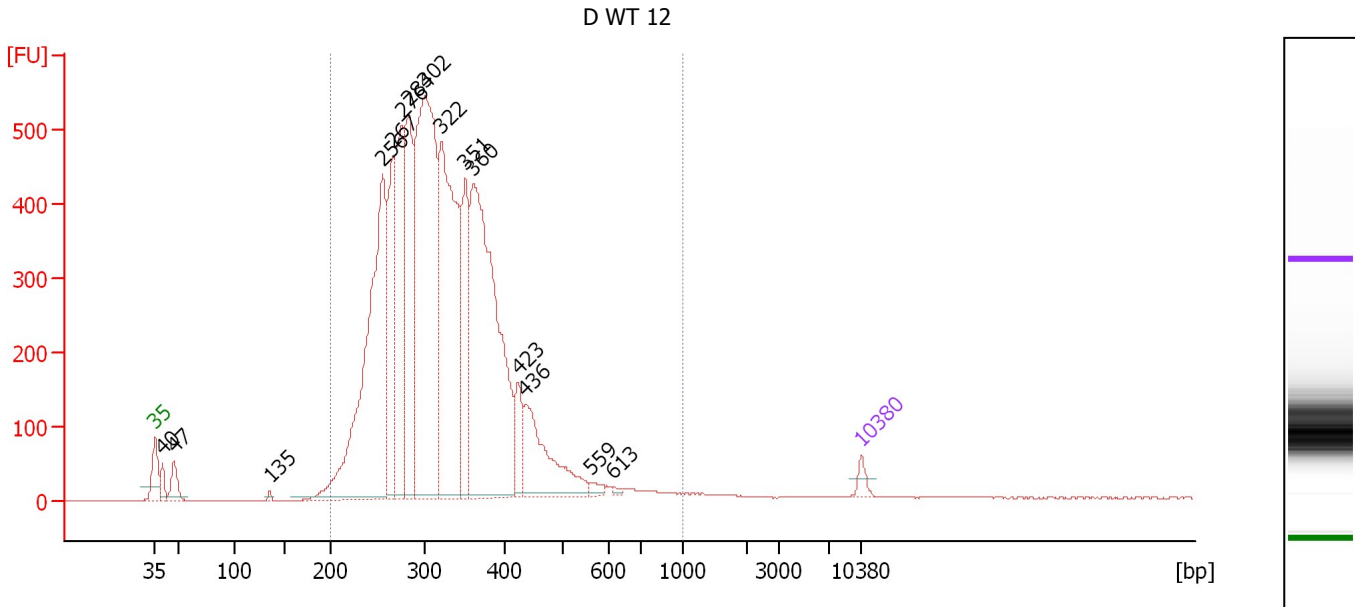
D WT 9

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	308	8,128.9	95,941.5	18,603.91	92	22.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

Electropherogram Summary Continued ...



Overall Results for sample 6 : D WT 12

Number of peaks found: 15 Corr. Area 1: 9,536.1
 Noise: 0.1

Peak table for sample 6 : D WT 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	191.52	7,315.5		43.74
3	47	312.49	10,073.4		44.90
4	135	36.61	409.5		54.36
5	256	4,479.78	26,558.4		65.56
6	267	1,382.33	7,858.5		66.56
7	276	1,933.20	10,600.6		67.46
8	284	1,848.68	9,869.6		68.15
9	302	4,781.17	23,995.4		69.78
10	322	3,635.98	17,131.2		71.37
11	351	1,204.07	5,196.1		73.75
12	360	4,451.75	18,721.3		74.49
13	423	385.88	1,383.5		78.98
14	436	1,113.18	3,872.9		79.72
15	559	69.58	188.7		86.11
16	613	26.19	64.7		88.43
17	10,380	75.00	10.9	Upper Marker	113.00

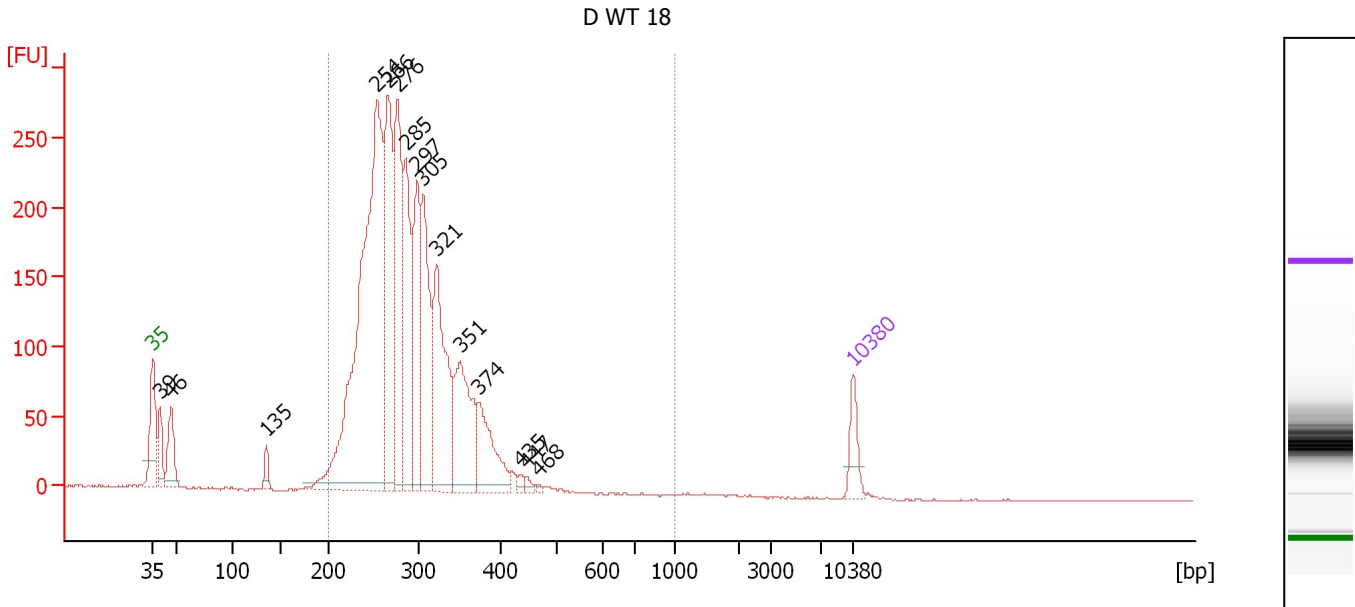
Region table for sample 6 : D WT 12

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	328	9,536.1	124,712.4	25,508.48	98	23.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
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Electropherogram Summary Continued ...



Overall Results for sample 7 : D WT 18

Number of peaks found: 15 Corr. Area 1: 3,502.2
 Noise: 0.3

Peak table for sample 7 : D WT 18

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	39	131.82	5,072.5		43.69
3	46	203.03	6,624.4		44.81
4	135	47.09	527.0		54.36
5	254	2,022.93	12,079.1		65.39
6	266	718.39	4,092.6		66.51
7	276	610.22	3,344.7		67.47
8	285	499.04	2,651.7		68.27
9	297	437.91	2,231.3		69.39
10	305	503.25	2,500.5		70.03
11	321	560.52	2,641.7		71.36
12	351	412.79	1,780.5		73.76
13	374	262.93	1,065.8		75.57
14	435	17.61	61.4		79.68
15	447	15.07	51.1		80.37
16	468	6.80	22.0		81.60
17	10,380	75.00	10.9	Upper Marker	113.00

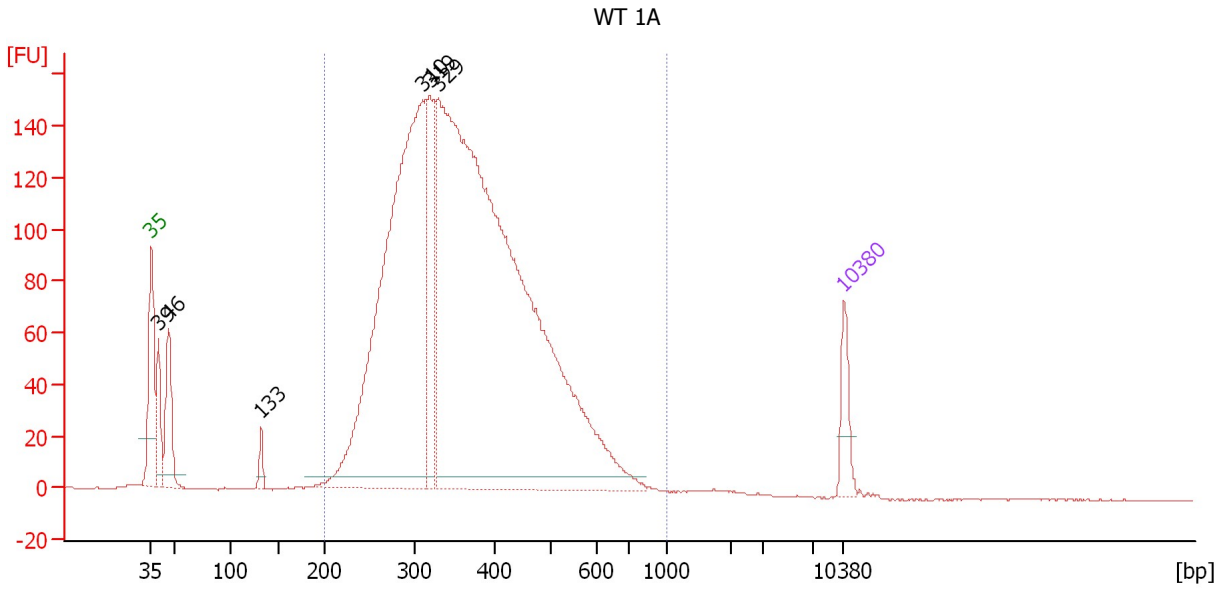
Region table for sample 7 : D WT 18

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	290	3,502.2	32,655.1	6,081.14	94	16.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
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Electropherogram Summary Continued ...



Overall Results for sample 8 : WT 1A

Number of peaks found: 6 Corr. Area 1: 3,217.3
 Noise: 0.2

Peak table for sample 8 : WT 1A

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	39	153.29	5,891.8		43.70
3	46	244.34	8,068.7		44.72
4	133	44.67	509.9		54.10
5	310	1,972.98	9,646.4		70.43
6	319	387.98	1,845.1		71.13
7	329	3,772.62	17,358.2		71.99
8	10,380	75.00	10.9	Upper Marker	113.00

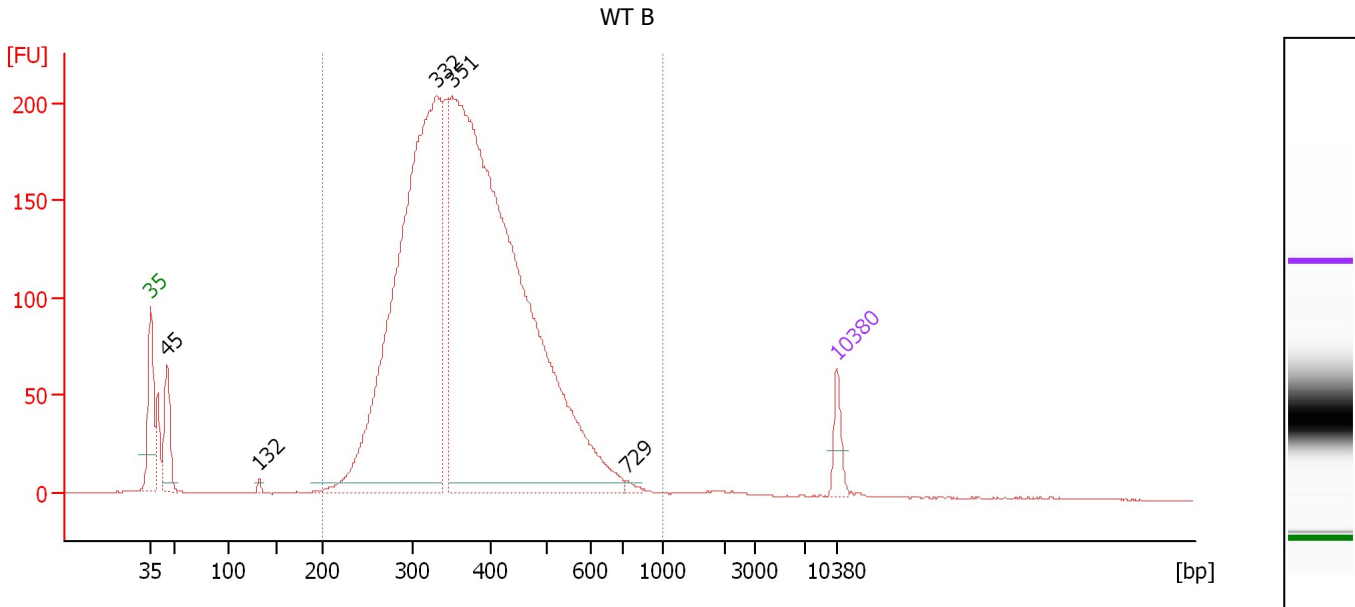
Region table for sample 8 : WT 1A

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	3,217.3	26,125.9	5,912.70	94	25.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

Electropherogram Summary Continued ...



Overall Results for sample 9 : WT B

Number of peaks found: 5 Corr. Area 1: 3,940.1
 Noise: 0.2

Peak table for sample 9 : WT B

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	45	316.13	10,572.6		44.63
3	132	16.22	185.9		54.05
4	332	3,409.48	15,579.2		72.18
5	351	5,183.51	22,363.3		73.75
6	729	16.09	33.5		91.55
7	10,380	75.00	10.9	Upper Marker	113.00

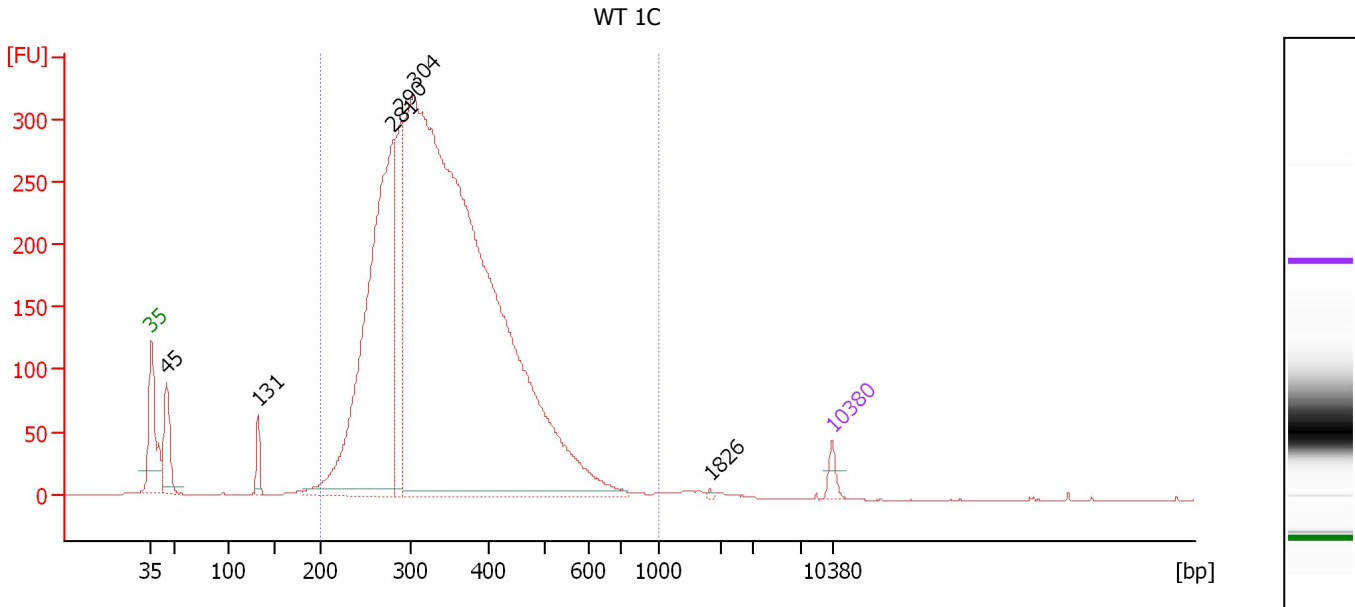
Region table for sample 9 : WT B

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	380	3,940.1	37,691.1	8,841.76	94	23.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

Electropherogram Summary Continued ...



Overall Results for sample 10 : WT 1C

Number of peaks found: 6 Corr. Area 1: 5,989.6
 Noise: 0.2

Peak table for sample 10 : WT 1C

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	45	641.77	21,593.2		44.59
3	131	194.56	2,244.9		53.96
4	281	4,920.33	26,534.0		67.89
5	290	1,115.68	5,830.5		68.71
6	304	15,336.34	76,389.1		69.97
7	1,826	10.40	8.6		100.45
8	10,380	75.00	10.9	Upper Marker	113.00

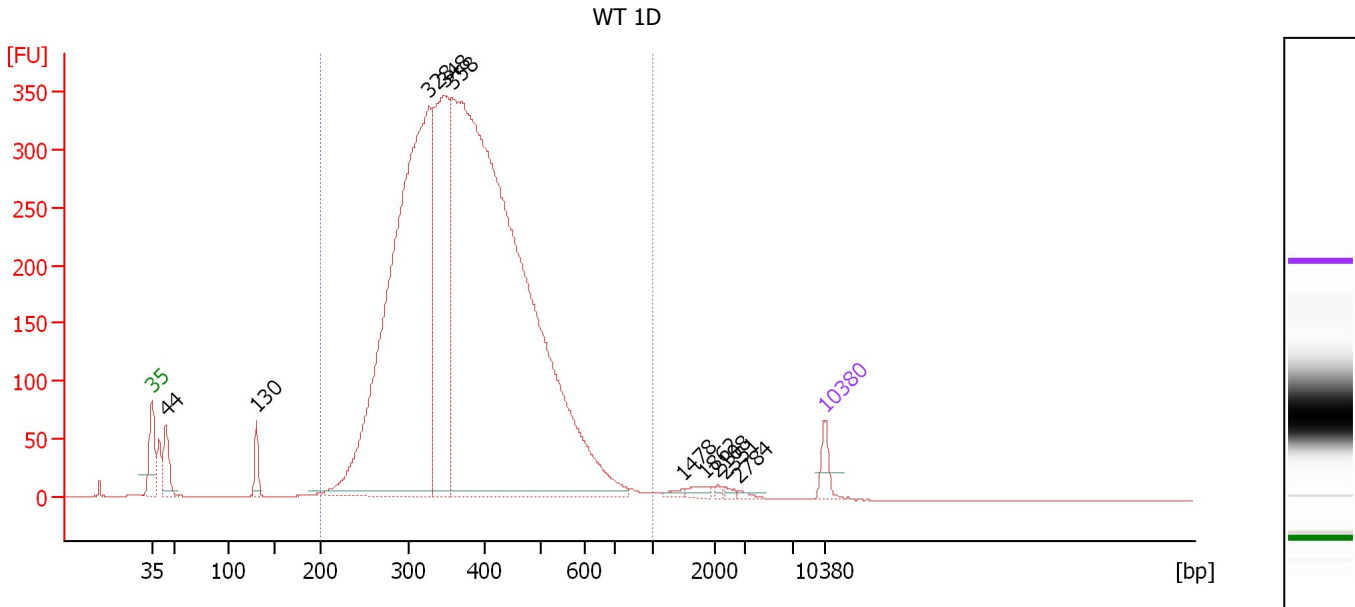
Region table for sample 10 : WT 1C

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	348	5,989.6	91,624.9	19,687.18	96	24.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

Electropherogram Summary Continued ...



Overall Results for sample 11 : WT 1D

Number of peaks found: 10 Corr. Area 1: 7,036.2
 Noise: 0.2

Peak table for sample 11 : WT 1D

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	44	259.79	8,924.1		44.44
3	130	129.25	1,501.3		53.88
4	328	4,631.06	21,409.4		71.87
5	348	1,605.65	6,996.2		73.48
6	358	7,851.45	33,222.6		74.31
7	1,478	19.30	19.8		98.23
8	1,862	32.30	26.3		100.68
9	2,108	11.09	8.0		101.90
10	2,351	14.07	9.1		102.67
11	2,784	12.08	6.6		104.06
12	10,380	75.00	10.9	Upper Marker	113.00

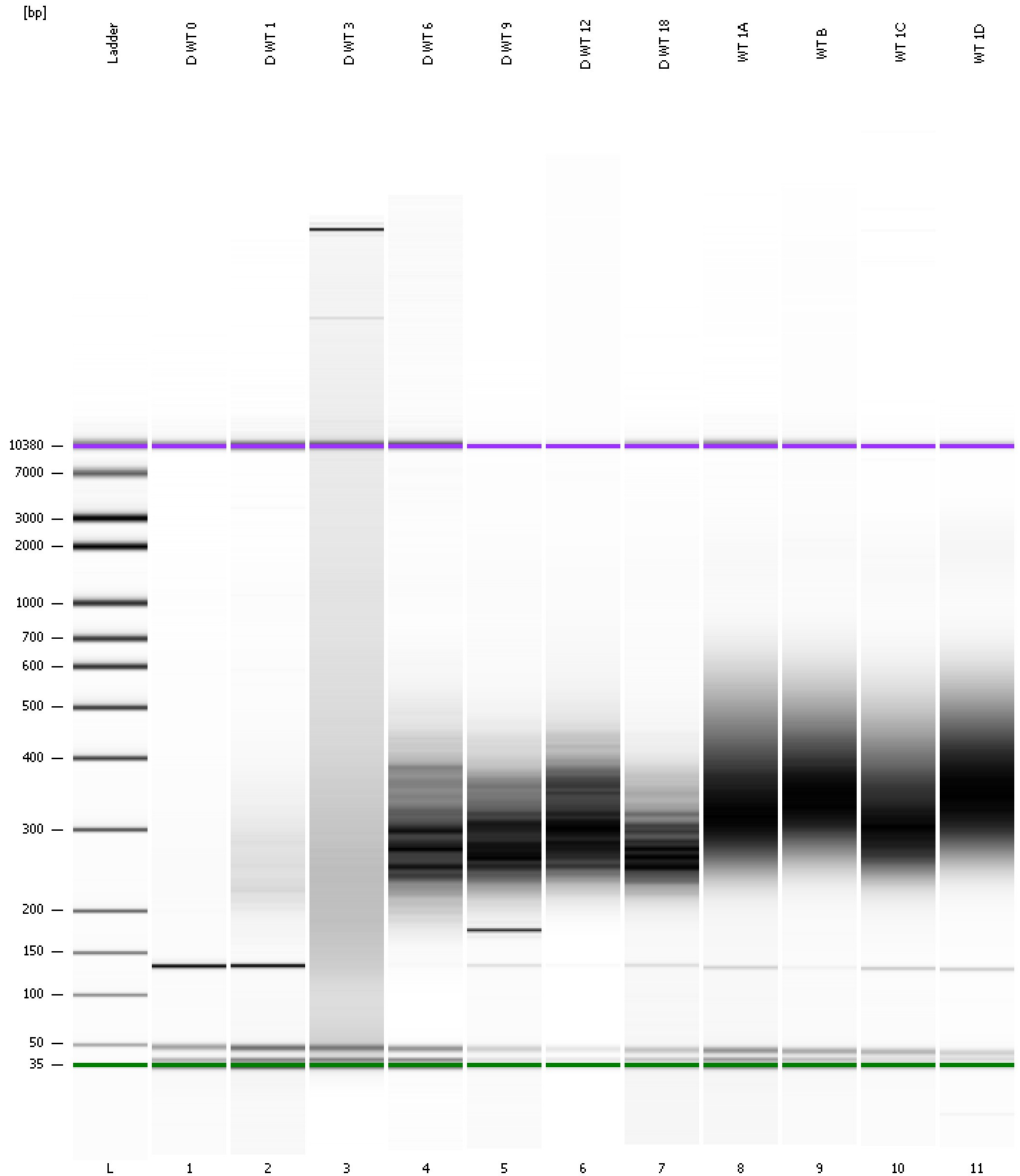
Region table for sample 11 : WT 1D

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	384	7,036.2	58,400.2	13,821.79	96	23.9

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
Modified: 7/6/2016 10:03:48 AM

Gel Image

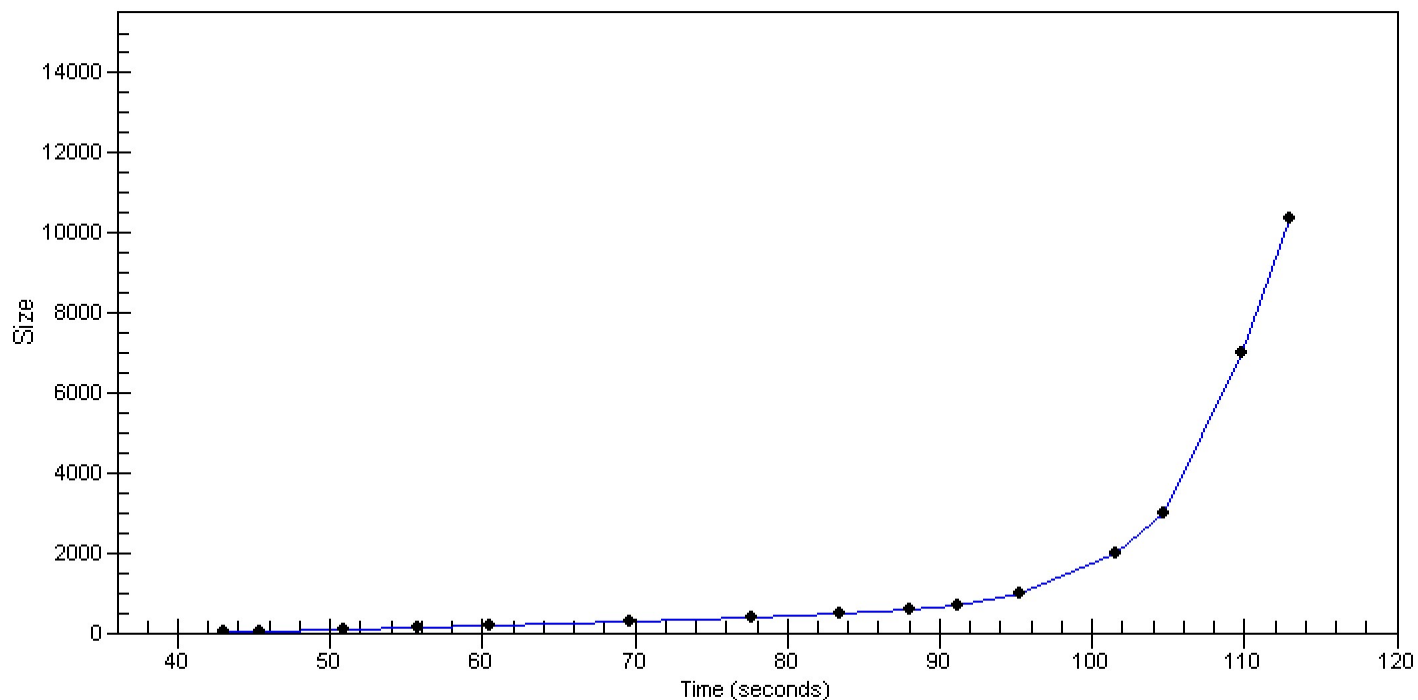


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
Modified: 7/6/2016 10:03:48 AM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad

Created: 7/6/2016 9:22:20 AM
 Modified: 7/6/2016 10:03:48 AM

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		7/6/2016 10:03:39 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-07-06\2016-07-06_001.xad)		Instrument	Run		7/6/2016 9:22:25 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		7/6/2016 9:22:25 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		7/6/2016 9:22:25 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		7/6/2016 9:22:25 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		7/6/2016 9:22:25 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		7/6/2016 9:22:25 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		7/6/2016 9:22:25 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1