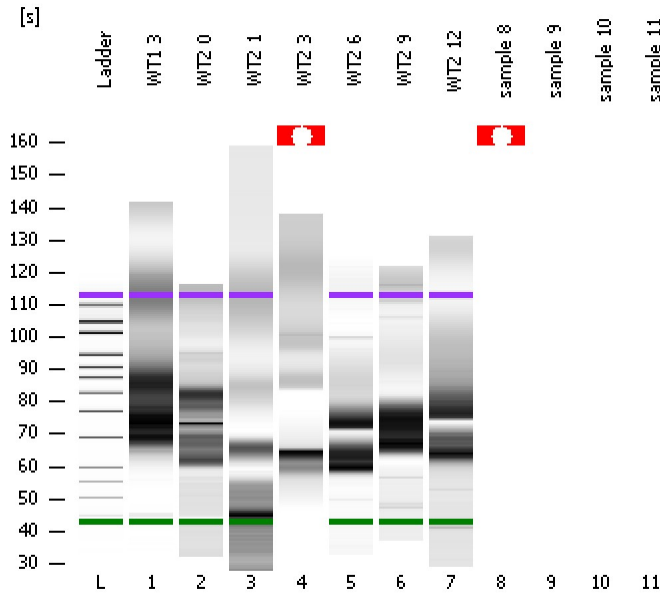


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
Modified: 6/6/2016 4:46:29 PM

Electrophoresis File Run Summary



Instrument Information:

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

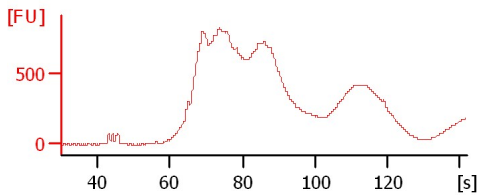
Assay Information:

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

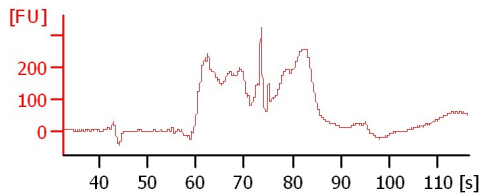
Chip Information:

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

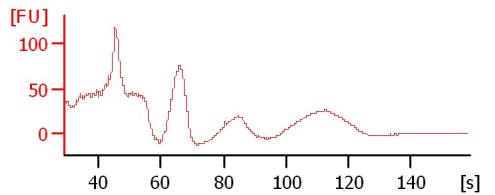
WT1 3



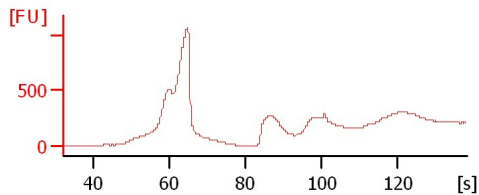
WT2 0



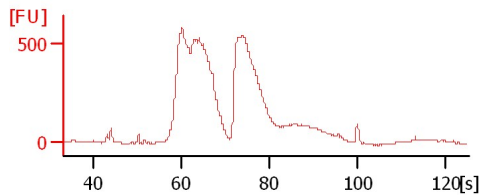
WT2 1



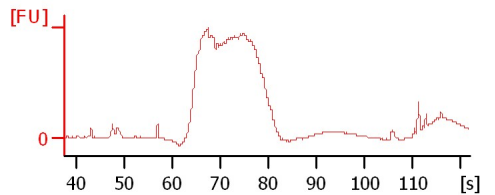
WT2 3



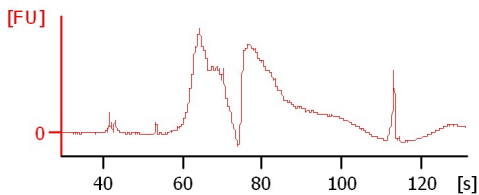
WT2 6



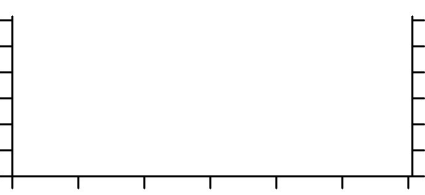
WT2 9



WT2 12



sample 8



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
WT1 3		<input type="checkbox"/>	✓			
WT2 0		<input type="checkbox"/>	✓			
WT2 1		<input type="checkbox"/>	✓			
WT2 3		<input type="checkbox"/>	✓			
WT2 6		<input type="checkbox"/>	✓			
WT2 9		<input type="checkbox"/>	✓			
WT2 12		<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\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
Modified: 6/6/2016 4:46:29 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

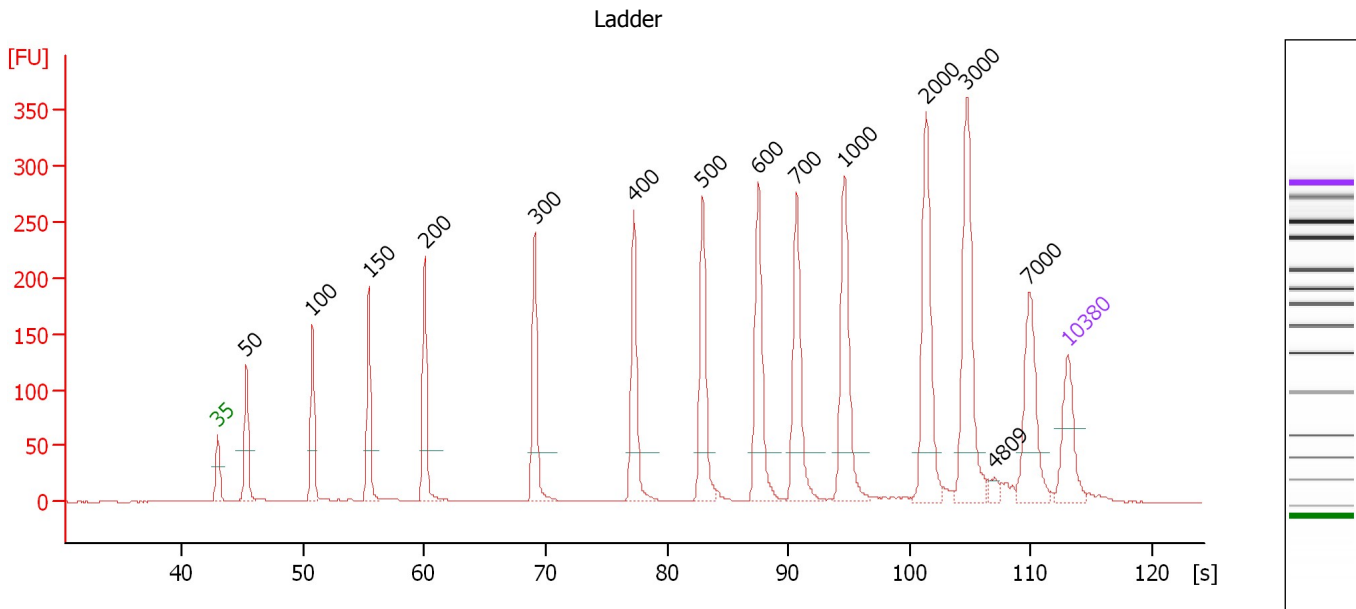
Ladder

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\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

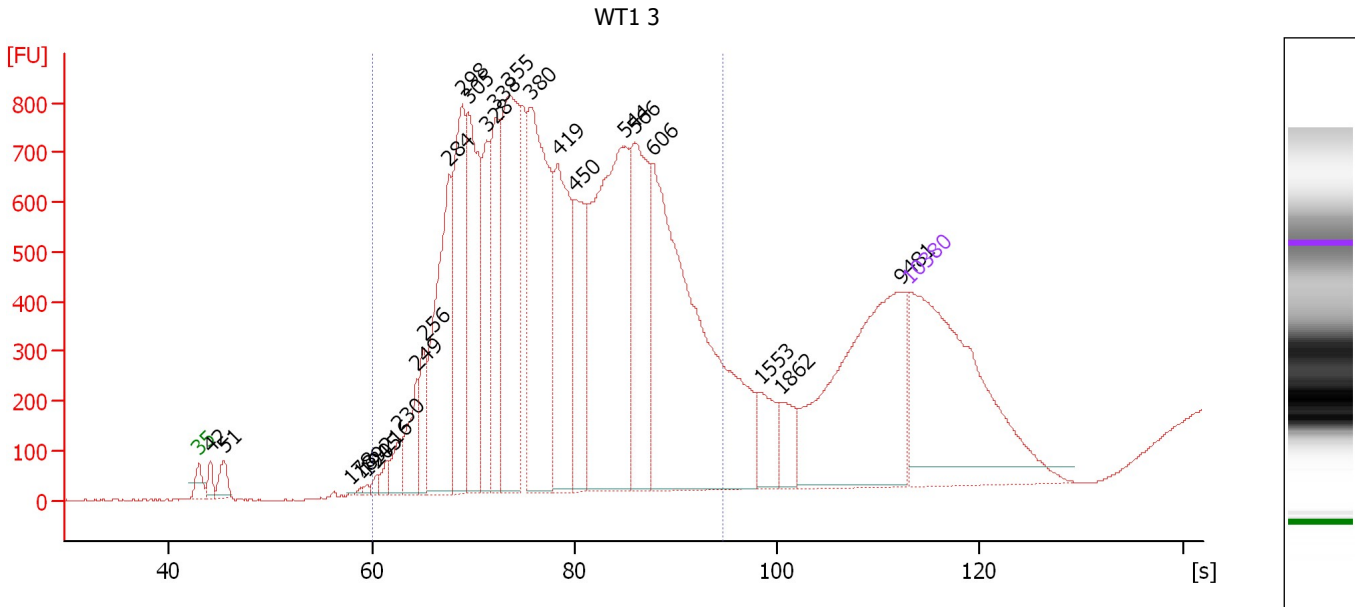
Peak table for Ladder

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	45.35
3	100	150.00	2,272.7	Ladder Peak	50.79
4	150	150.00	1,515.2	Ladder Peak	55.43
5	200	150.00	1,136.4	Ladder Peak	60.04
6	300	150.00	757.6	Ladder Peak	69.11
7	400	150.00	568.2	Ladder Peak	77.29
8	500	150.00	454.5	Ladder Peak	82.96
9	600	150.00	378.8	Ladder Peak	87.56
10	700	150.00	324.7	Ladder Peak	90.70
11	1,000	150.00	227.3	Ladder Peak	94.64
12	2,000	150.00	113.6	Ladder Peak	101.32
13	3,000	150.00	75.8	Ladder Peak	104.73
14	4,809	0.00	0.0		107.03
15	7,000	150.00	32.5	Ladder Peak	109.81
16	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : WT1 3

Number of peaks found: 25 Corr. Area 1: 19,921.9
 Noise: 2.2

Peak table for sample 1 : WT1 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	42	5.17	185.8		44.11
3	51	8.19	244.0		45.44
4	178	0.24	2.0		57.98
5	189	0.71	5.7		58.99
6	194	1.05	8.2		59.52
7	205	1.95	14.5		60.47
8	216	4.61	32.3		61.48
9	230	8.12	53.5		62.75
10	249	18.01	109.5		64.50
11	256	16.37	96.8		65.13
12	284	71.99	384.6		67.62
13	298	61.42	312.1		68.95
14	305	64.42	320.6		69.48
15	328	33.84	156.4		71.38
16	338	43.85	196.5		72.23
17	355	80.37	343.1		73.61
18	380	91.60	365.0		75.67
19	419	60.19	217.6		78.37
20	450	34.77	117.1		80.12
21	544	116.01	323.0		84.99
22	566	56.34	150.8		86.00
23	606	149.06	372.7		87.74
24	1,553	12.64	12.3		98.33
25	1,862	8.60	7.0		100.40

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...

... Peak table for sample 1 : WT1 3

Peak	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	9,481	75.49	12.1		112.15
27	10,380	75.00	10.9	Upper Marker	113.00

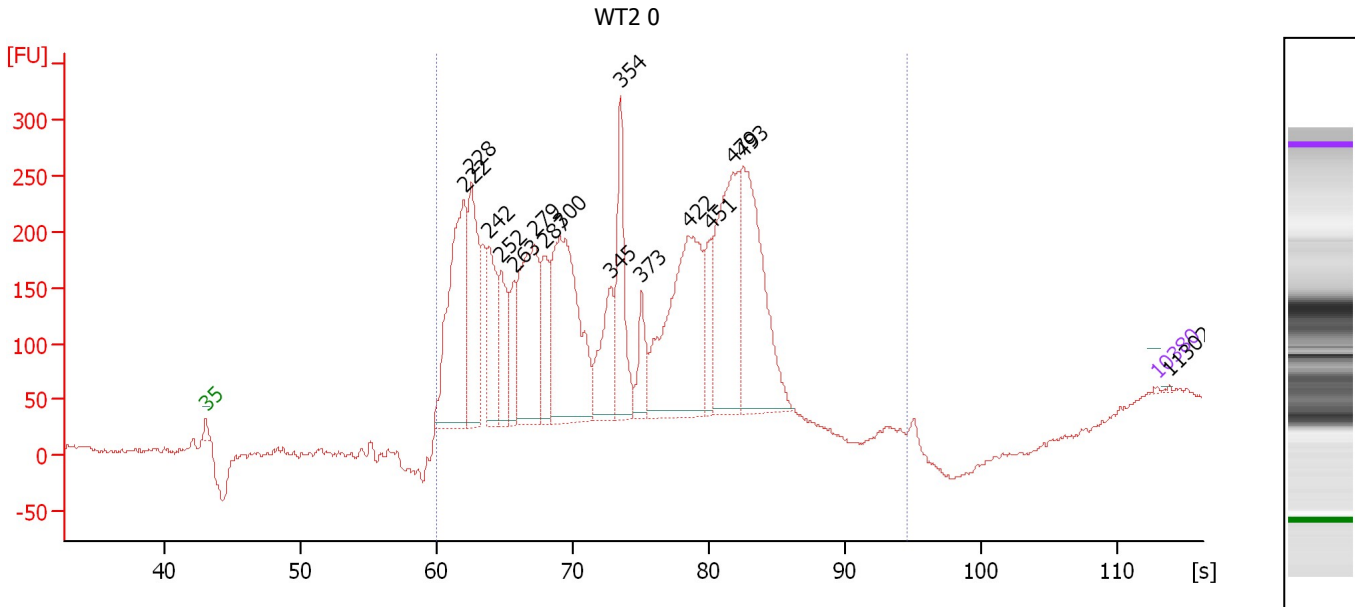
Region table for sample 1 : WT1 3

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/ μ l]	% of Total	Size distribution in CV [%]
200	1,000	449	19,921.9	3,157.9	812.31	88	33.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : WT2 0

Number of peaks found: 16 Corr. Area 1: 5,334.5
 Noise: 2.7

Peak table for sample 2 : WT2 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	222	26,871.36	183,669.3		62.00
3	228	16,326.76	108,608.3		62.55
4	242	11,272.57	70,536.4		63.86
5	252	7,454.76	44,871.5		64.73
6	263	5,772.24	33,248.5		65.75
7	279	19,751.17	107,368.7		67.18
8	287	8,154.57	43,050.7		67.93
9	300	27,386.80	138,489.8		69.07
10	345	8,645.35	37,920.8		72.83
11	354	11,505.87	49,297.0		73.50
12	373	4,374.60	17,772.9		75.08
13	422	26,635.11	95,729.0		78.51
14	451	4,891.32	16,437.6		80.17
15	479	21,100.04	66,678.9		81.79
16	493	22,295.55	68,561.8		82.54
17	10,380	75.00	10.9	Upper Marker	113.00
18	11,302	0.00	0.0		113.87

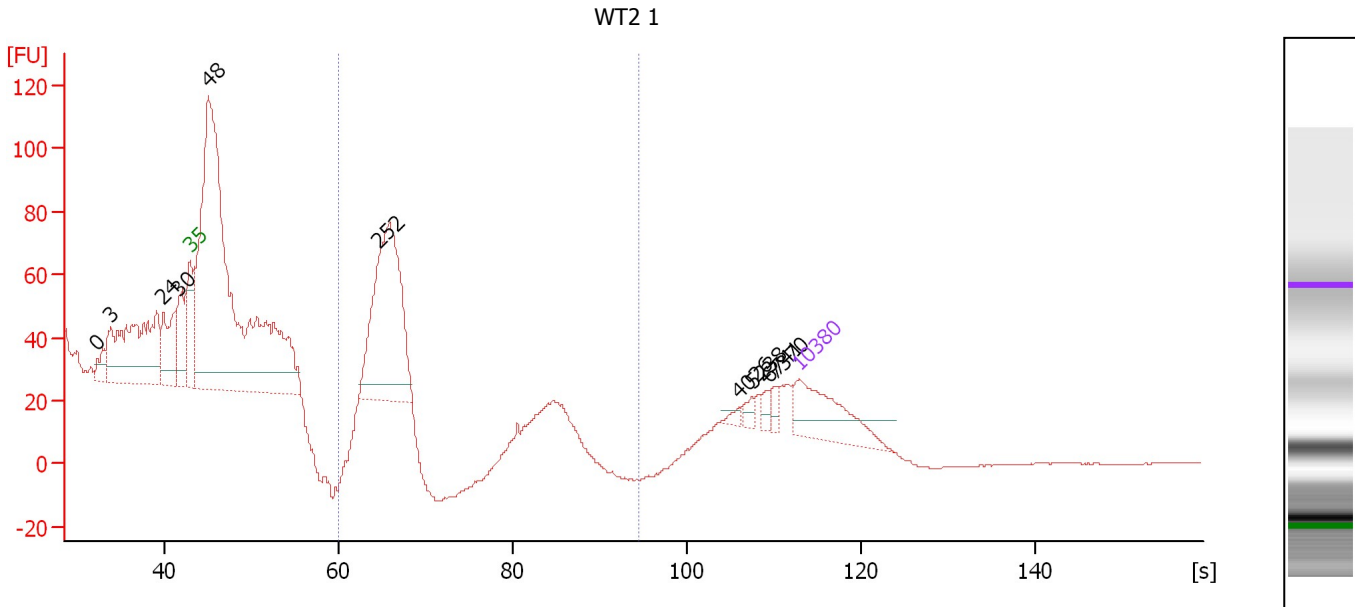
Region table for sample 2 : WT2 0

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	355	5,334.5	1,105,621.3	228,328.61	100	28.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : WT2 1

Number of peaks found: 10 Corr. Area 1: 222.8
 Noise: 0.1

Peak table for sample 3 : WT2 1

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	0	0.00	0.0		32.33
2	3	0.00	0.0		33.75
3	24	0.00	0.0		39.92
4	30	0.00	0.0		41.58
5	35	125.00	5,411.3	Lower Marker	43.00
6	48	1,142.09	35,743.8		45.10
7	252	345.84	2,083.3		64.71
8	4,026	4.76	1.8		106.03
9	5,238	8.73	2.5		107.57
10	6,741	8.91	2.0		109.48
11	7,370	8.33	1.7		110.16
12	10,380	75.00	10.9	Upper Marker	113.00

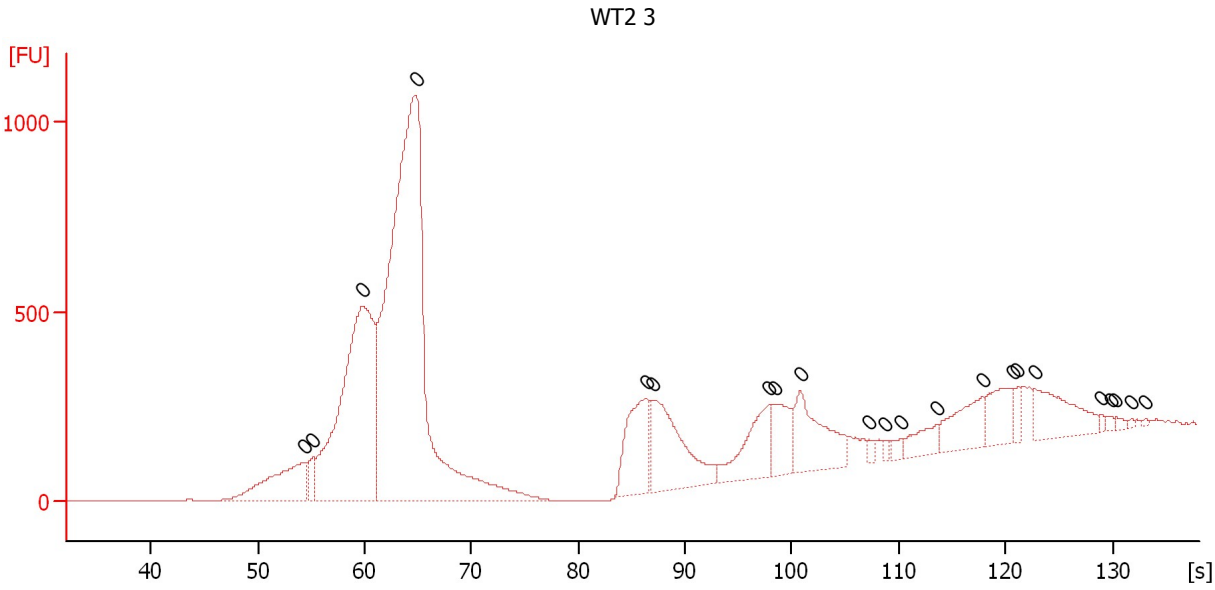
Region table for sample 3 : WT2 1

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	262	222.8	1,633.8	282.53	22	5.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : WT2 3

Number of peaks found: 0 Noise: 0.2

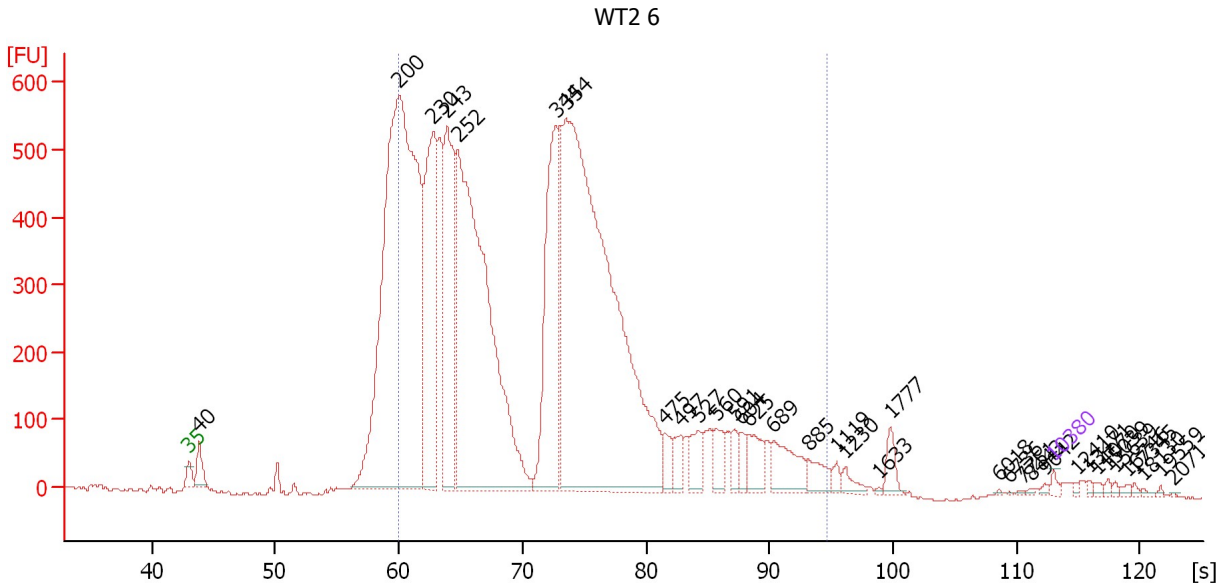
Peak table for sample 4 : WT2 3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	0	0.00	0.0		54.30
2	0	0.00	0.0		55.20
3	0	0.00	0.0		59.80
4	0	0.00	0.0		64.80
5	0	0.00	0.0		86.35
6	0	0.00	0.0		86.90
7	0	0.00	0.0		97.95
8	0	0.00	0.0		98.50
9	0	0.00	0.0		100.80
10	0	0.00	0.0		107.20
11	0	0.00	0.0		108.70
12	0	0.00	0.0		110.25
13	0	0.00	0.0		113.65
14	0	0.00	0.0		117.90
15	0	0.00	0.0		120.70
16	0	0.00	0.0		121.15
17	0	0.00	0.0		122.75
18	0	0.00	0.0		129.00
19	0	0.00	0.0		129.85
20	0	0.00	0.0		130.30
21	0	0.00	0.0		131.80
22	0	0.00	0.0		133.05

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : WT2 6

Number of peaks found: 35 Corr. Area 1: 12,668.0
 Noise: 2.0

Peak table for sample 5 : WT2 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	649.00	24,410.0		43.83
3	200	20,727.89	157,331.9		60.00
4	230	6,134.37	40,360.6		62.78
5	243	5,032.24	31,409.4		63.91
6	252	14,259.48	85,621.3		64.78
7	344	4,614.42	20,333.2		72.70
8	354	18,950.70	81,124.1		73.52
9	475	430.31	1,371.3		81.57
10	497	436.71	1,331.5		82.78
11	527	554.38	1,592.6		84.22
12	560	469.32	1,268.7		85.74
13	591	294.60	755.6		87.13
14	604	321.01	804.7		87.70
15	625	599.26	1,452.4		88.35
16	689	945.48	2,079.7		90.35
17	885	411.76	704.8		93.13
18	1,119	131.06	177.4		95.43
19	1,230	188.55	232.3		96.17
20	1,633	19.46	18.1		98.87
21	1,777	302.16	257.7		99.83
22	6,018	13.26	3.3		108.57
23	6,736	9.54	2.1		109.48
24	7,751	19.34	3.8		110.52
25	8,443	20.36	3.7		111.17

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...

... Peak table for sample 5 : WT2 6

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	9,642	34.34	5.4		112.30
27	10,380	75.00	10.9	Upper Marker	113.00
28	12,410	0.00	0.0		114.91
29	13,471	0.00	0.0		115.91
30	14,070	0.00	0.0		116.48
31	15,039	0.00	0.0		117.39
32	15,639	0.00	0.0		117.96
33	16,746	0.00	0.0		119.00
34	17,345	0.00	0.0		119.57
35	18,130	0.00	0.0		120.30
36	19,559	0.00	0.0		121.65
37	20,713	0.00	0.0		122.74

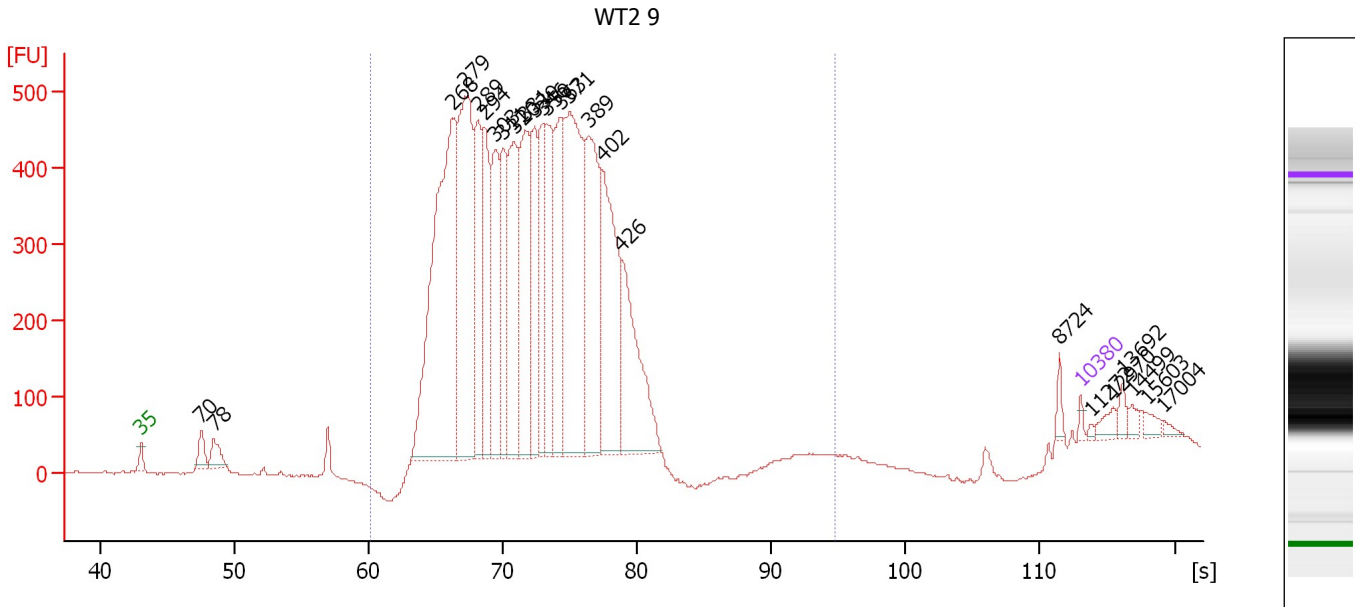
Region table for sample 5 : WT2 6

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	345	12,668.0	346,546.9	67,246.21	85	38.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : WT2 9

Number of peaks found: 25 Corr. Area 1: 10,645.5
 Noise: 1.1

Peak table for sample 6 : WT2 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	70	501.15	10,904.0		47.48
3	78	570.07	11,060.3		48.40
4	268	9,622.54	54,469.3		66.17
5	279	5,862.55	31,872.1		67.17
6	289	2,632.72	13,810.1		68.09
7	294	2,627.46	13,534.4		68.57
8	303	2,605.67	13,017.4		69.38
9	311	2,120.32	10,326.4		70.02
10	320	3,155.43	14,922.0		70.78
11	331	3,318.50	15,183.4		71.66
12	339	2,101.61	9,393.7		72.30
13	346	1,938.37	8,480.6		72.90
14	350	2,219.53	9,615.7		73.18
15	363	2,609.47	10,893.8		74.26
16	371	5,641.65	23,025.0		74.94
17	389	3,641.98	14,191.0		76.38
18	402	3,691.36	13,928.5		77.38
19	426	2,870.92	10,204.3		78.78
20	8,724	157.83	27.4		111.44
21	10,380	75.00	10.9	Upper Marker	113.00
22	11,272	0.00	0.0		113.84
23	12,970	0.00	0.0		115.44
24	13,692	0.00	0.0		116.12
25	14,499	0.00	0.0		116.88


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...**... Peak table for sample 6 : WT2 9**

Peak	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	15,603	0.00	0.0		117.92
27	17,004	0.00	0.0		119.24

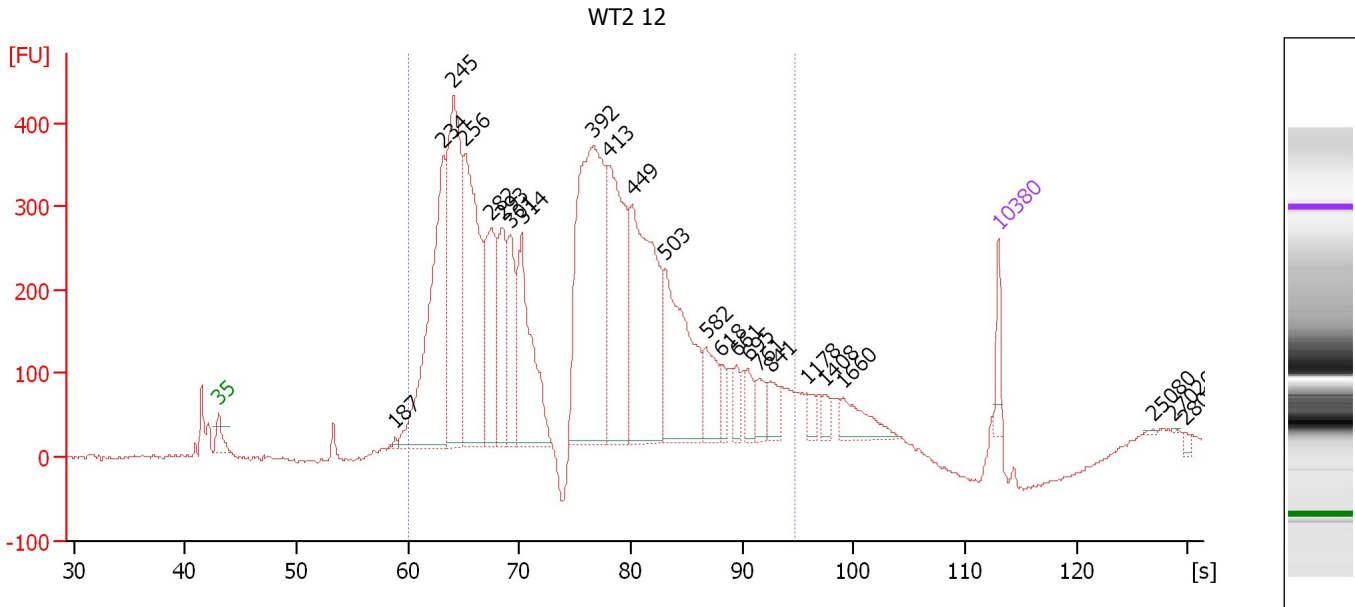
Region table for sample 6 : WT2 9

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/ μ l]	% of Total	Size distribution in CV [%]
200	1,000	336	10,645.5	268,750.6	 57,329.59	96	16.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : WT2 12

Number of peaks found: 24 Corr. Area 1: 8,654.5
 Noise: 2.1

Peak table for sample 7 : WT2 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	187	14.41	116.5		58.88
3	234	1,240.76	8,019.3		63.16
4	245	1,211.51	7,507.6		64.07
5	256	1,127.20	6,666.9		65.13
6	282	577.30	3,105.8		67.44
7	293	404.07	2,087.4		68.50
8	301	350.82	1,767.1		69.17
9	314	671.97	3,245.2		70.23
10	392	1,493.36	5,773.6		76.63
11	413	860.03	3,155.7		78.02
12	449	1,046.75	3,528.7		80.09
13	503	715.99	2,158.4		83.08
14	582	194.81	507.1		86.73
15	618	70.09	171.8		88.13
16	661	78.73	180.5		89.47
17	695	81.67	178.1		90.53
18	761	86.48	172.3		91.49
19	841	88.90	160.1		92.55
20	1,178	45.31	58.3		95.82
21	1,408	43.41	46.7		97.36
22	1,660	125.69	114.7		99.05
23	10,380	75.00	10.9	Upper Marker	113.00
24	25,080	0.00	0.0		126.86
25	27,020	0.00	0.0		128.68

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...**... Peak table for sample 7 : WT2 12**

Peak	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	28,092	0.00	0.0		129.69

Region table for sample 7 : WT2 12

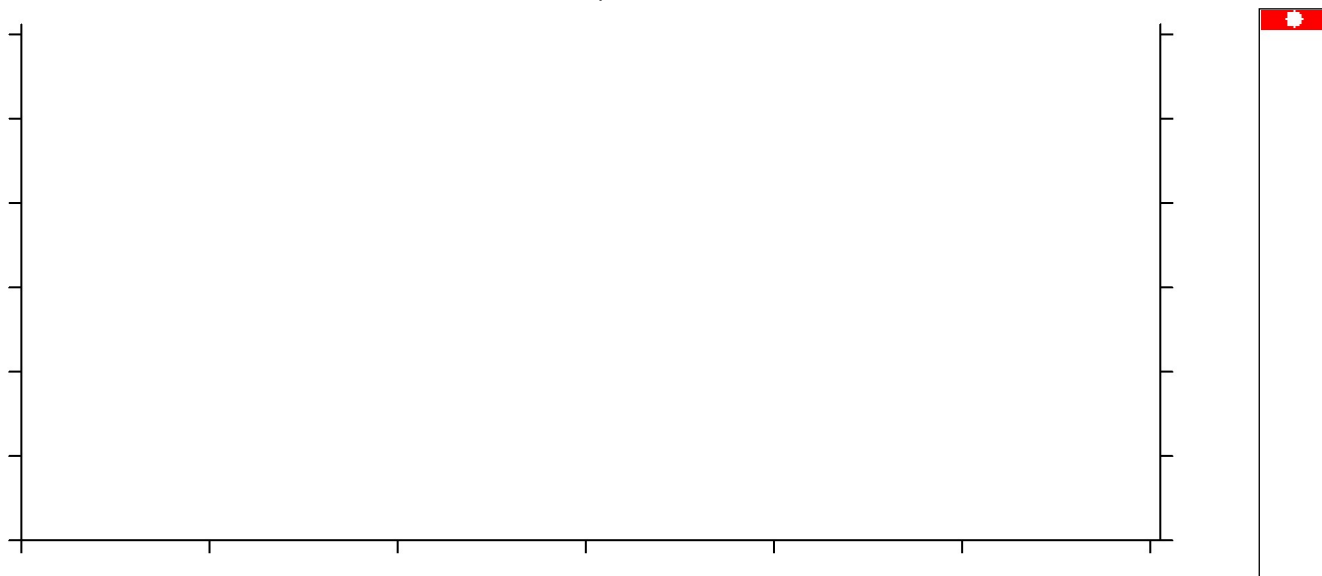
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/ μ l]	% of Total	Size distribution in CV [%]
200	1,000	395	8,654.5	47,916.0	10,481.62	93	38.1

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
Modified: 6/6/2016 4:46:29 PM

Electropherogram Summary Continued ...

sample 8



Setpoint Deviations for sample 8 : sample 8

End Analysis Time Range [s] : 15.8

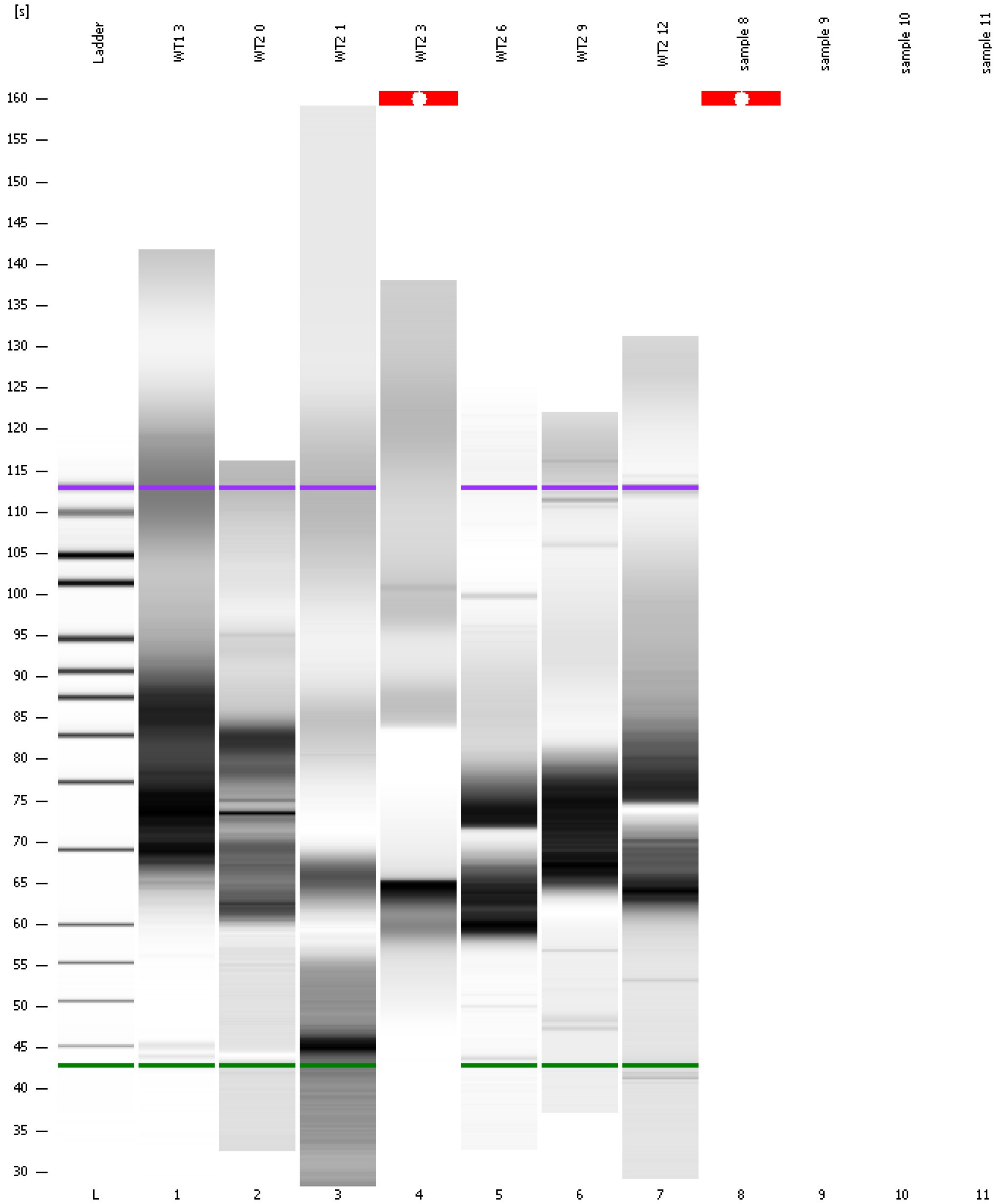
Overall Results for sample 8 : sample 8

Noise: 2.0

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
Modified: 6/6/2016 4:46:29 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
Modified: 6/6/2016 4:46:29 PM

Invalid Samples

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
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-06\2016-06-06_007.xad

Created: 6/6/2016 4:15:50 PM
 Modified: 6/6/2016 4:46:29 PM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run aborted on port 1		Instrument	Run		6/6/2016 4:46:28 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\2016-06-06\2016-06-06_007.xad)		Instrument	Run		6/6/2016 4:15:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		6/6/2016 4:15:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		6/6/2016 4:15:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		6/6/2016 4:15:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		6/6/2016 4:15:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		6/6/2016 4:15:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		6/6/2016 4:15:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1