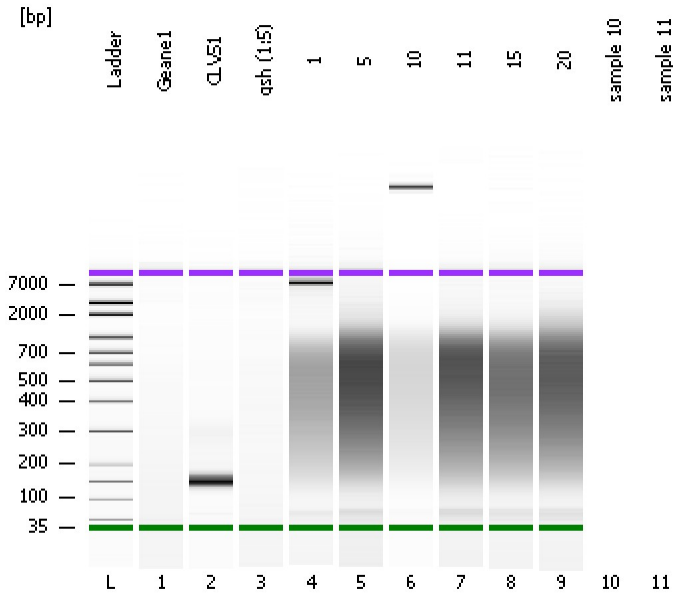


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
Modified: 2/1/2017 1:21:48 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

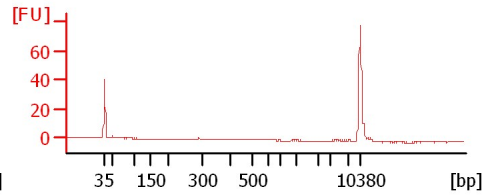
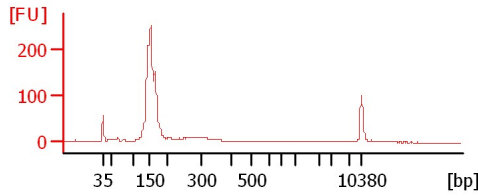
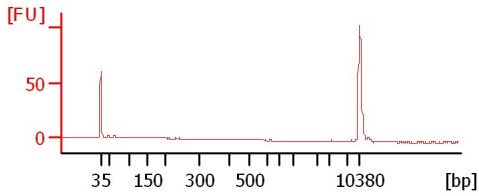
Chip Information:

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

Geane1

CLVS1

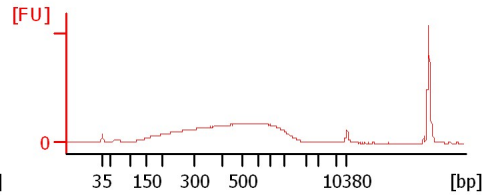
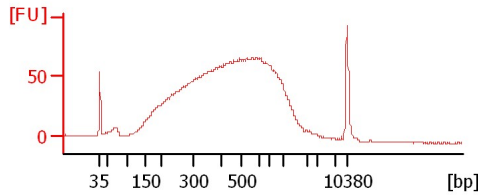
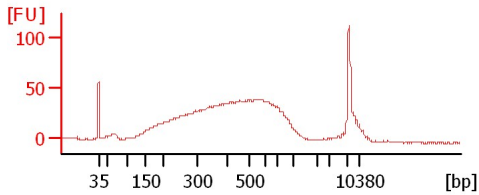
gsh (1:5)



1

5

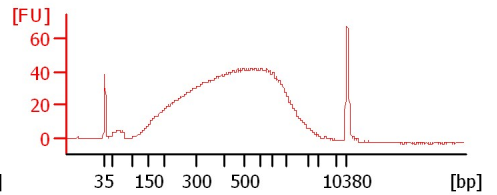
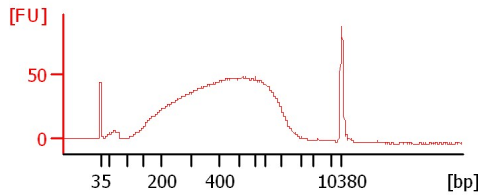
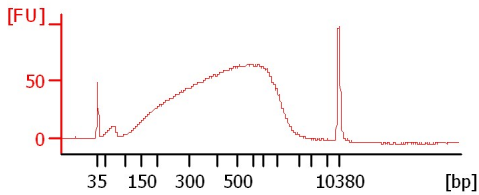
10



11

15

20



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Geane1		<input type="checkbox"/>	✓			
CLVS1		<input type="checkbox"/>	✓			
gsh (1:5)		<input type="checkbox"/>	✓			
1		<input type="checkbox"/>	✓			
5		<input type="checkbox"/>	✓			
10		<input type="checkbox"/>	✓			
11		<input type="checkbox"/>	✓			
15		<input type="checkbox"/>	✓			
20		<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\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
Modified: 2/1/2017 1:21:48 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

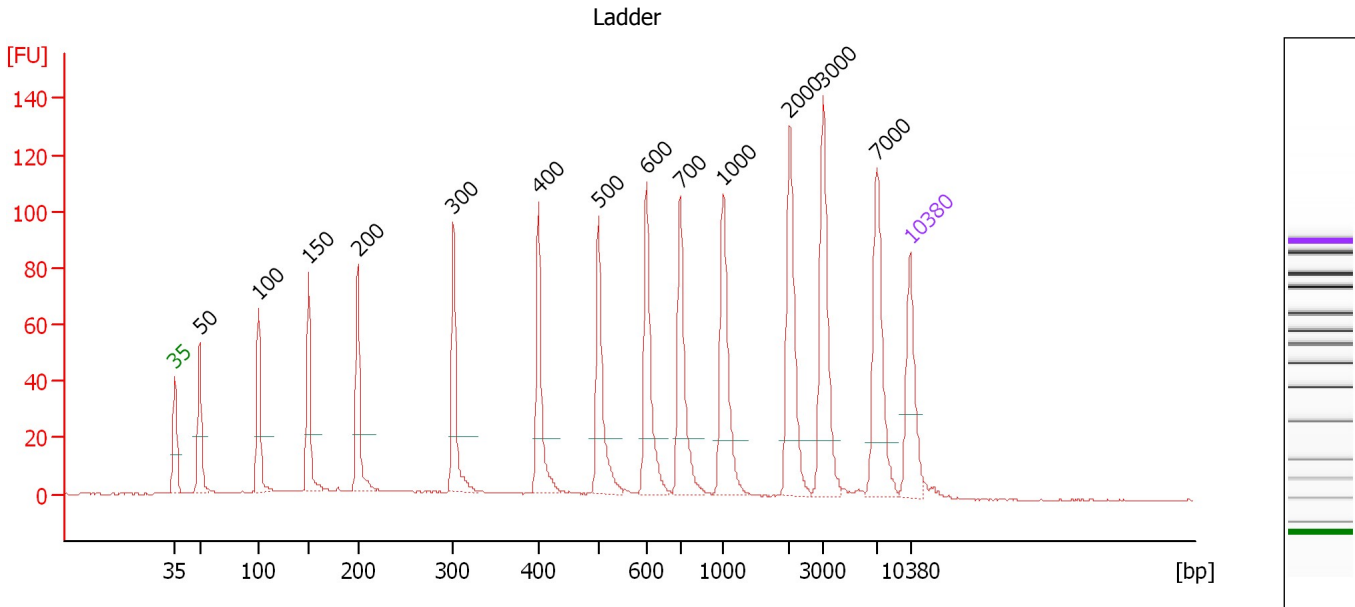
Ladder

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\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

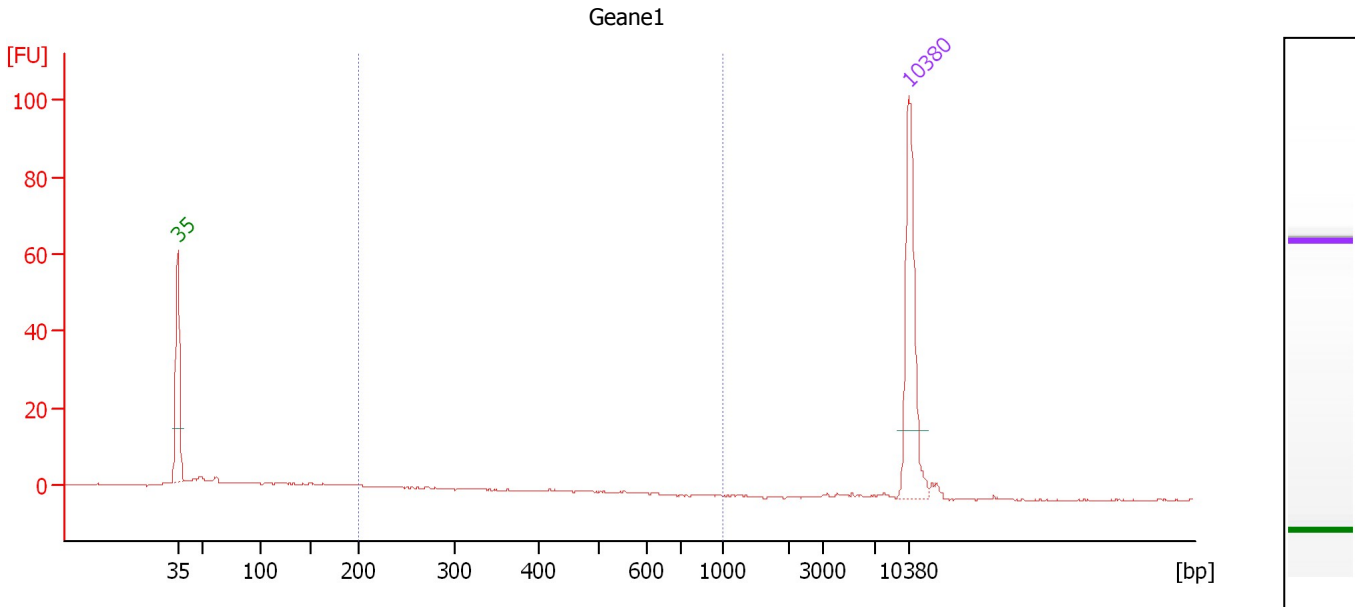
Peak table for Ladder

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	50.97
4	150	150.00	1,515.2	Ladder Peak	55.74
5	200	150.00	1,136.4	Ladder Peak	60.41
6	300	150.00	757.6	Ladder Peak	69.55
7	400	150.00	568.2	Ladder Peak	77.62
8	500	150.00	454.5	Ladder Peak	83.36
9	600	150.00	378.8	Ladder Peak	87.92
10	700	150.00	324.7	Ladder Peak	91.12
11	1,000	150.00	227.3	Ladder Peak	95.23
12	2,000	150.00	113.6	Ladder Peak	101.53
13	3,000	150.00	75.8	Ladder Peak	104.73
14	7,000	150.00	32.5	Ladder Peak	109.85
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : Geane1

Number of peaks found: 0 Corr. Area 1: 10.7
 Noise: 0.1

Peak table for sample 1 : Geane1

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	10,380	75.00	10.9	Upper Marker	113.00

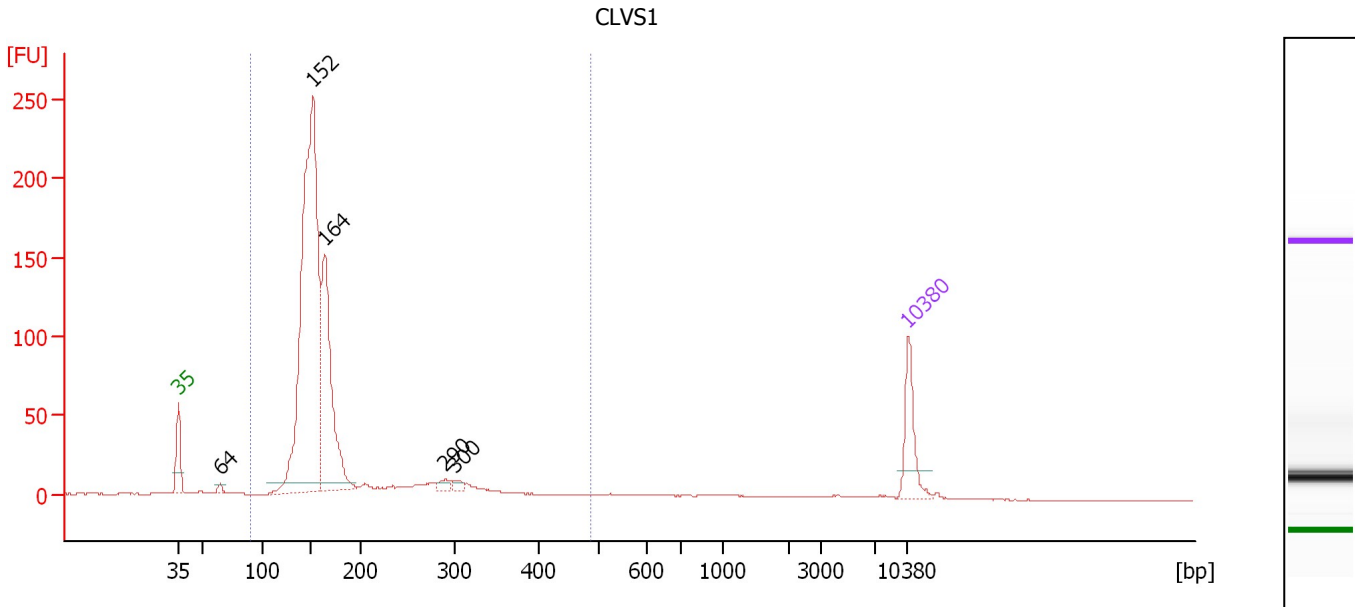
Region table for sample 1 : Geane1

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	294	10.7	79.0	13.98	17	29.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

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 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : CLVS1

Number of peaks found: 5 Corr. Area 1: 1,284.3
 Noise: 0.2

Peak table for sample 2 : CLVS1

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	64	10.96	257.9		46.99
3	152	1,299.43	12,983.2		55.89
4	164	482.65	4,467.3		57.02
5	290	16.43	85.8		68.64
6	300	14.31	72.4		69.51
7	10,380	75.00	10.9	Upper Marker	113.00

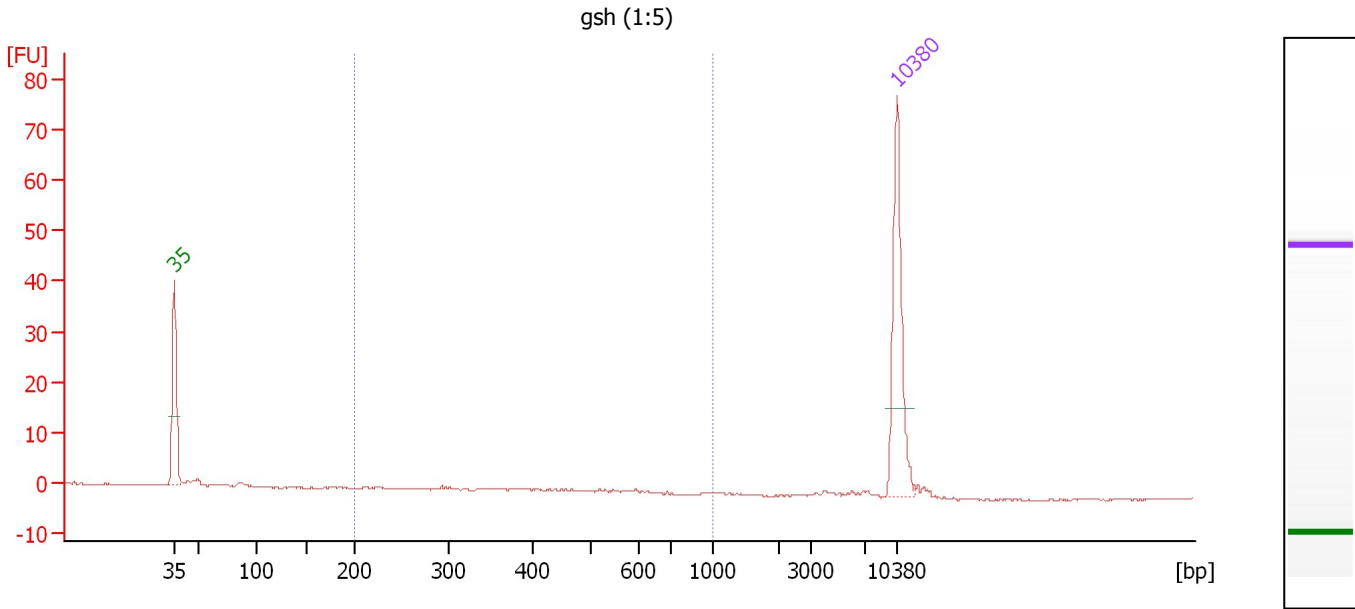
Region table for sample 2 : CLVS1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
91	486	173	1,284.3	19,582.0	2,063.82	95	31.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

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 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : gsh (1:5)

Number of peaks found: 0 Corr. Area 1: 0.1
 Noise: 0.2

Peak table for sample 3 : gsh (1:5)

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	10,380	75.00	10.9	Upper Marker	113.00

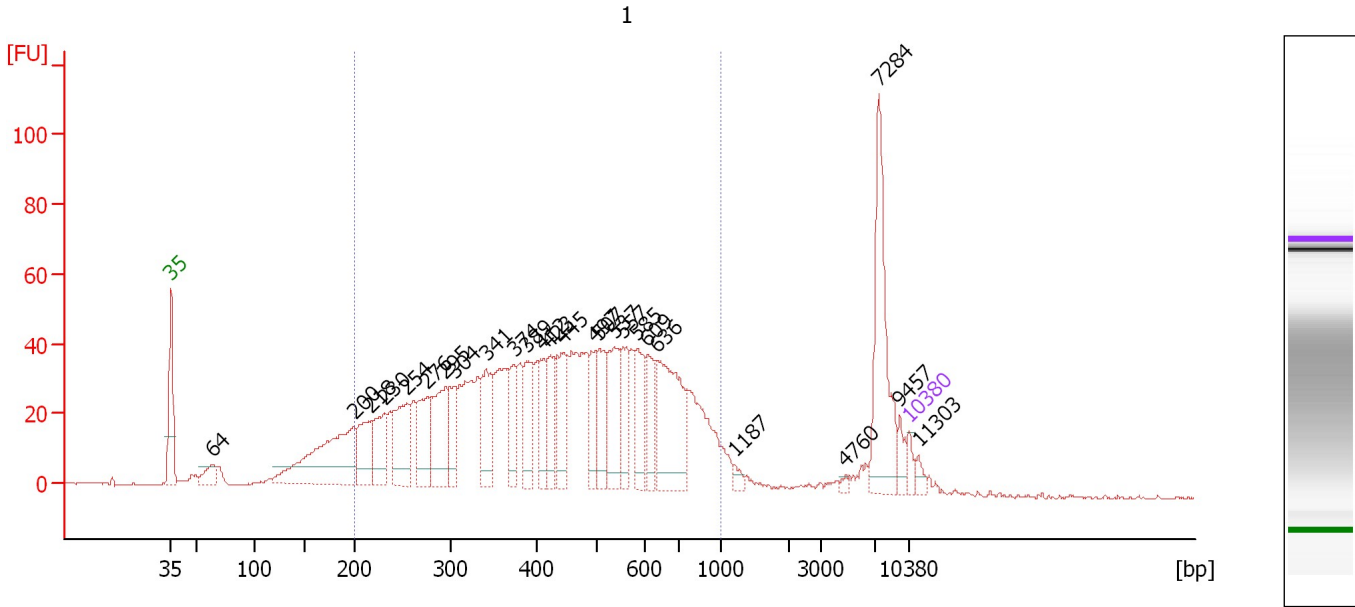
Region table for sample 3 : gsh (1:5)

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	466	0.1	0.8	0.21	3	27.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : 1

Number of peaks found: 26 Corr. Area 1: 1,413.7
 Noise: 0.2

Peak table for sample 4 : 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	64	237.32	5,621.6		46.95
3	200	1,630.82	12,362.8		60.40
4	218	545.56	3,799.1		62.02
5	230	543.54	3,575.8		63.18
6	254	700.25	4,175.2		65.36
7	276	617.40	3,393.0		67.33
8	295	755.74	3,887.9		69.05
9	304	366.01	1,821.5		69.91
10	341	632.46	2,806.7		72.89
11	374	380.21	1,540.3		75.52
12	389	454.40	1,769.7		76.74
13	412	324.78	1,194.6		78.30
14	423	330.15	1,183.9		78.91
15	445	483.66	1,648.4		80.17
16	497	351.74	1,073.2		83.16
17	507	400.48	1,197.4		83.66
18	537	605.38	1,709.2		85.03
19	557	354.19	964.2		85.94
20	585	442.72	1,145.9		87.26
21	609	314.61	782.5		88.22
22	636	1,059.45	2,523.7		89.08
23	1,187	55.27	70.6		96.41
24	4,760	30.56	9.7		106.98
25	7,284	987.67	205.5		110.12

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...

... Peak table for sample 4 : 1

Peak	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	9,457	99.39	15.9		112.14
27	10,380	75.00	10.9	Upper Marker	113.00
28	11,303	0.00	0.0		113.86

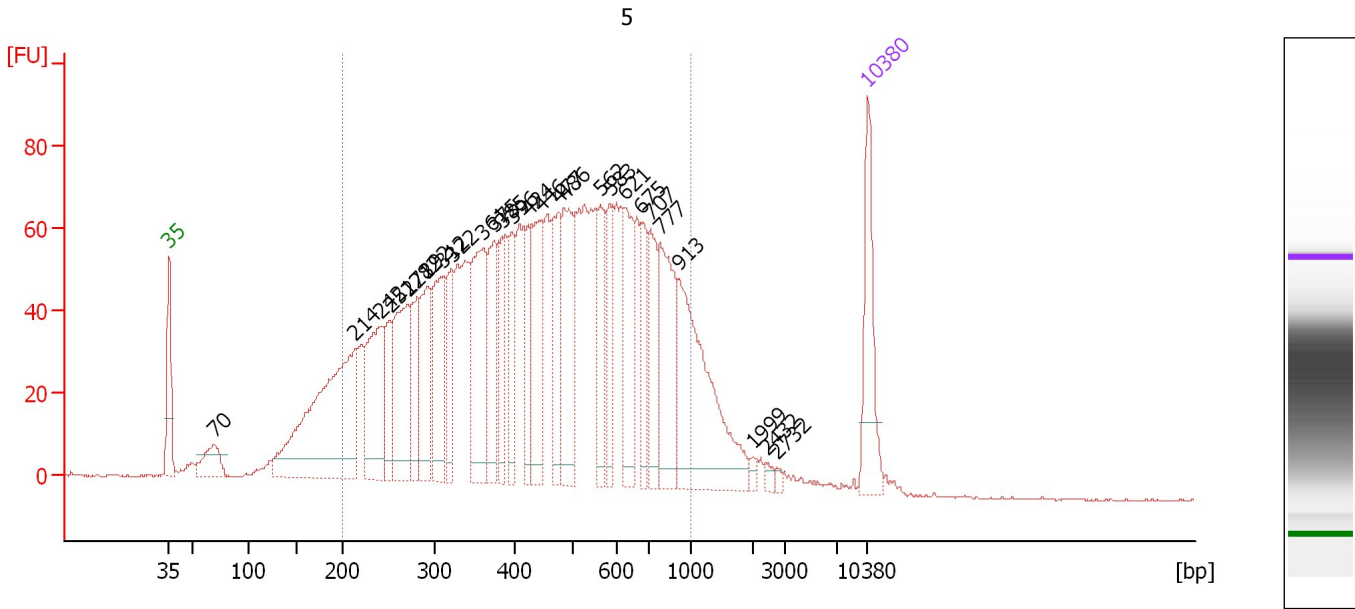
Region table for sample 4 : 1

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	460	1,413.7	61,763.8	15,332.21	79	37.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : 5

Number of peaks found: 27 Corr. Area 1: 2,388.0
 Noise: 0.2

Peak table for sample 5 : 5

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	53.38	1,159.5		47.59
3	214	373.88	2,647.4		61.69
4	242	152.39	954.0		64.25
5	251	62.55	377.0		65.11
6	271	150.86	842.7		66.92
7	282	85.40	459.2		67.88
8	292	107.36	556.5		68.84
9	312	128.31	623.6		70.50
10	322	70.22	330.0		71.35
11	361	160.39	672.5		74.50
12	375	95.44	385.3		75.62
13	385	65.79	259.2		76.37
14	396	65.63	250.8		77.33
15	424	71.02	253.9		78.99
16	446	106.64	362.1		80.27
17	477	86.67	275.3		82.03
18	486	133.74	416.7		82.57
19	562	66.07	178.1		86.20
20	583	60.08	156.1		87.16
21	621	88.12	215.0		88.60
22	675	55.27	124.1		90.31
23	707	73.09	156.7		91.22
24	777	120.90	235.8		92.18
25	913	212.20	352.0		94.05

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
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Electropherogram Summary Continued ...

... Peak table for sample 5 : 5

Peak	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	1,999	6.00	4.5		101.52
27	2,432	5.53	3.4		102.91
28	2,732	3.51	1.9		103.87
29	10,380	75.00	10.9	Upper Marker	113.00

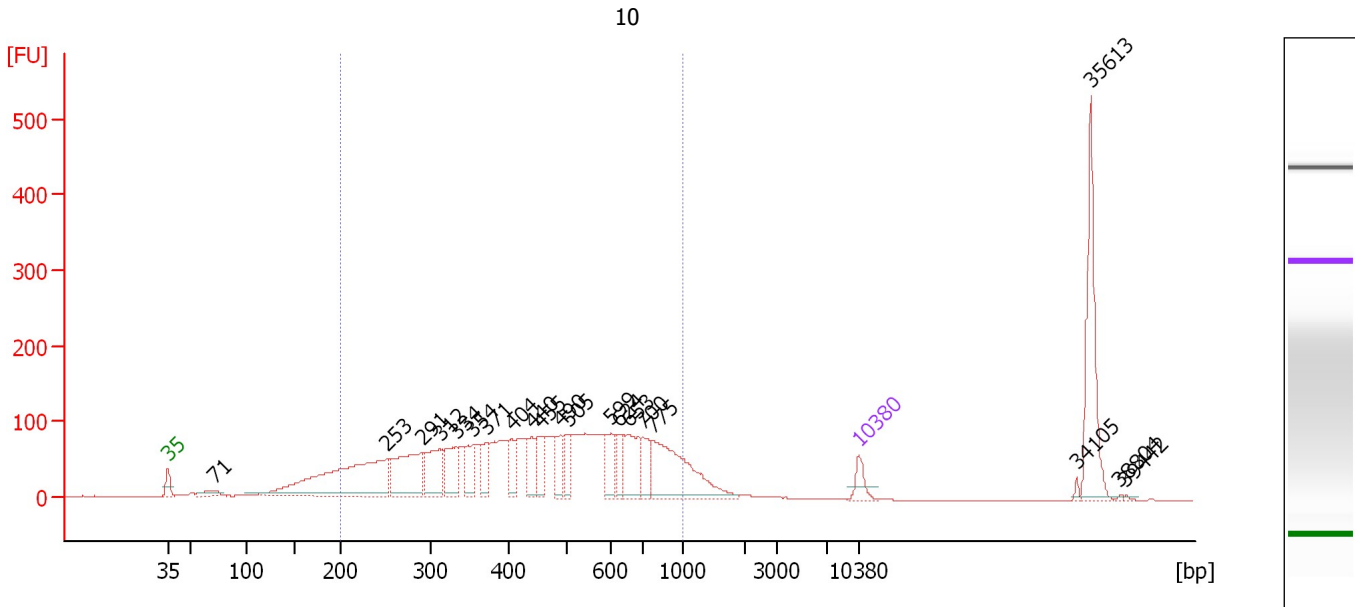
Region table for sample 5 : 5

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	474	2,388.0	11,963.1	3,015.49	85	38.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : 10

Number of peaks found: 21 Corr. Area 1: 3,005.4
 Noise: 0.2

Peak table for sample 6 : 10

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	71	86.36	1,837.8		47.75
3	253	1,313.34	7,865.5		65.25
4	291	588.78	3,067.5		68.71
5	312	364.91	1,770.0		70.55
6	334	266.04	1,207.6		72.27
7	354	186.66	799.2		73.90
8	371	155.82	637.1		75.25
9	404	156.51	587.2		77.84
10	440	178.87	616.5		79.89
11	455	148.04	493.4		80.75
12	490	157.97	488.0		82.81
13	505	147.10	441.7		83.56
14	599	195.81	495.2		87.88
15	624	120.27	292.0		88.69
16	653	291.84	677.4		89.61
17	700	175.47	379.7		91.13
18	775	677.12	1,323.6		92.15
19	10,380	75.00	10.9	Upper Marker	113.00
20	34,105	0.00	0.0		135.09
21	35,613	0.00	0.0		136.50
22	38,804	0.00	0.0		139.47
23	39,442	0.00	0.0		140.06

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...

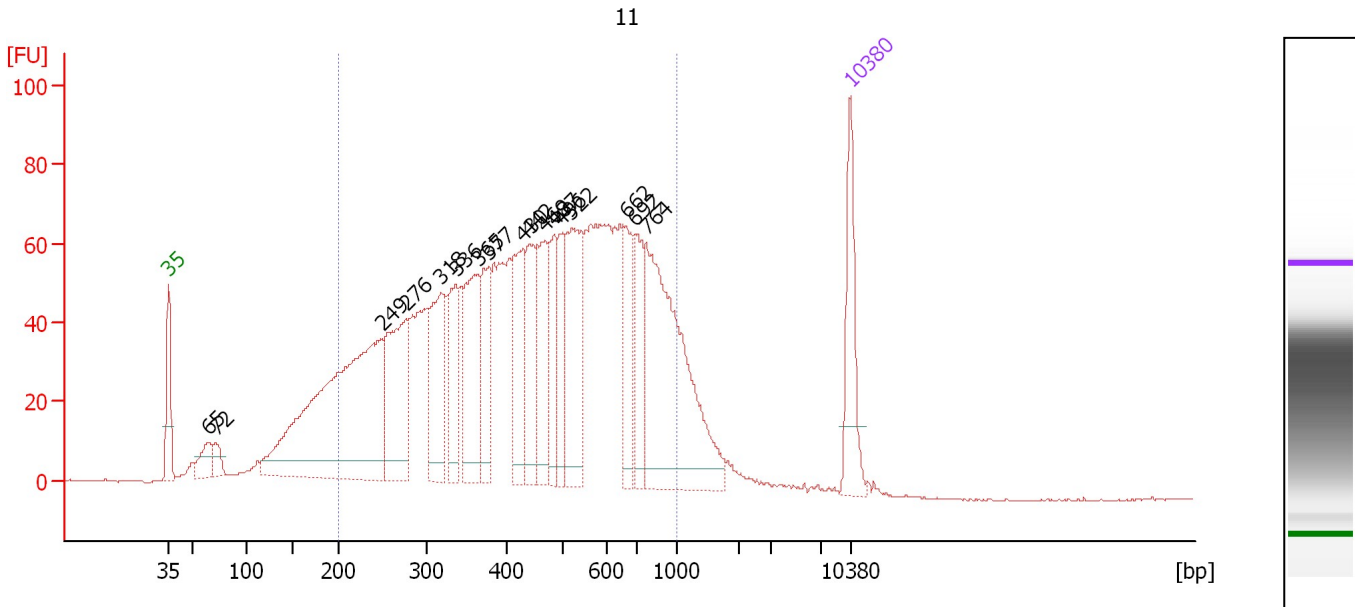
... Region table for sample 6 : 10

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	474	3,005.4	24,838.1	6,253.76	78	39.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
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Electropherogram Summary Continued ...



Overall Results for sample 7 : 11

Number of peaks found: 17 Corr. Area 1: 2,267.3
 Noise: 0.2

Peak table for sample 7 : 11

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	65	39.92	932.4		47.05
3	72	24.26	508.9		47.87
4	249	570.56	3,473.9		64.88
5	276	196.76	1,078.6		67.39
6	318	149.77	713.6		71.00
7	336	92.33	416.0		72.48
8	365	145.99	605.3		74.83
9	377	88.74	356.7		75.76
10	430	112.79	397.9		79.31
11	442	91.37	313.3		80.02
12	469	95.61	309.1		81.55
13	487	86.63	269.7		82.59
14	496	68.10	207.9		83.14
15	522	162.10	470.8		84.34
16	662	69.27	158.4		89.92
17	692	75.72	165.9		90.85
18	764	340.13	674.5		92.00
19	10,380	75.00	10.9	Upper Marker	113.00

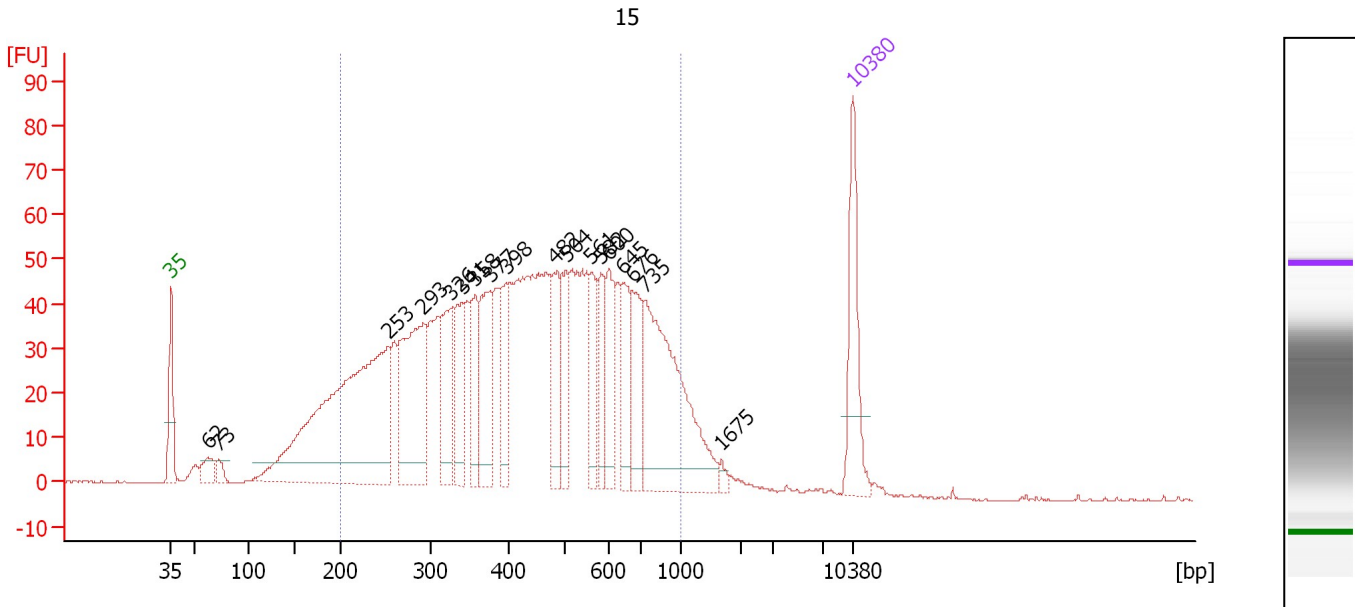
Region table for sample 7 : 11

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	478	2,267.3	11,099.0	2,812.73	84	39.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : 15

Number of peaks found: 18 Corr. Area 1: 1,729.6
 Noise: 0.1

Peak table for sample 8 : 15

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	62	27.25	661.1		46.78
3	73	14.36	299.2		47.93
4	253	521.67	3,121.2		65.28
5	293	213.90	1,107.0		68.89
6	326	94.70	439.6		71.68
7	341	74.46	330.5		72.88
8	358	62.01	262.2		74.25
9	377	105.51	424.5		75.73
10	398	57.15	217.8		77.43
11	482	68.75	215.9		82.35
12	504	67.80	203.7		83.56
13	561	54.57	147.5		86.13
14	582	49.30	128.3		87.11
15	600	65.04	164.2		87.93
16	645	62.73	147.4		89.36
17	676	63.77	143.0		90.34
18	735	247.38	510.0		91.60
19	1,675	5.74	5.2		99.48
20	10,380	75.00	10.9	Upper Marker	113.00

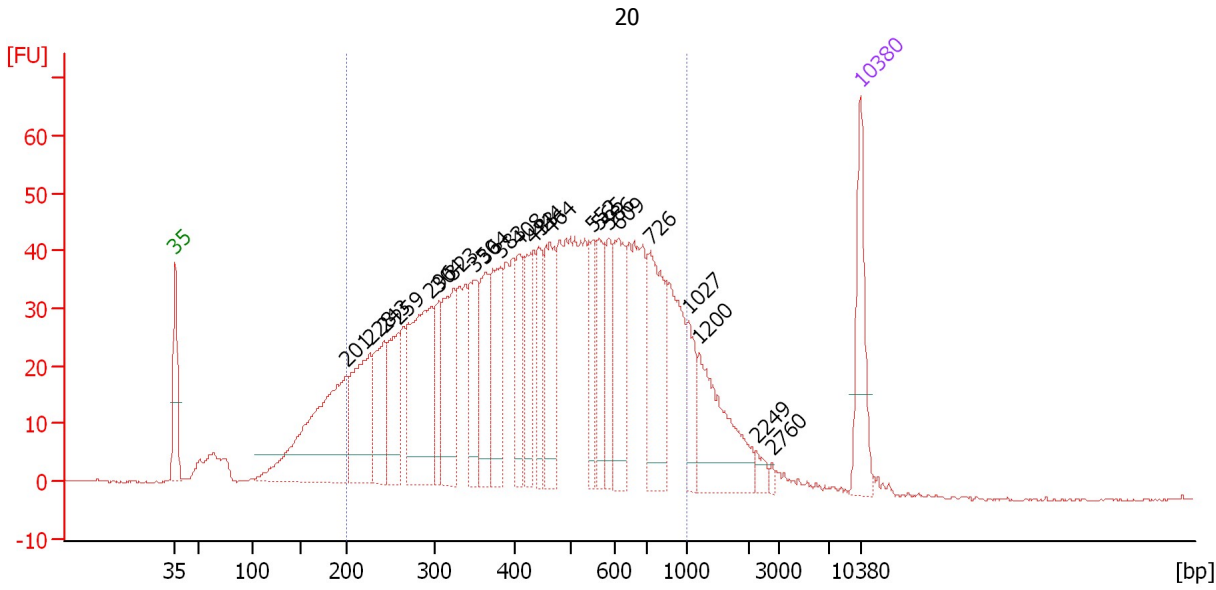
Region table for sample 8 : 15

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	464	1,729.6	9,510.0	2,361.37	86	38.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : 20

Number of peaks found: 23 Corr. Area 1: 1,520.2
 Noise: 0.2

Peak table for sample 9 : 20

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	201	304.34	2,296.2		60.49
3	228	163.99	1,091.5		62.94
4	243	107.38	669.1		64.35
5	259	98.53	577.2		65.77
6	296	238.96	1,224.7		69.15
7	304	61.87	307.8		69.91
8	323	133.31	624.6		71.44
9	350	86.53	374.9		73.56
10	364	100.86	419.9		74.70
11	383	109.30	432.6		76.23
12	408	72.73	270.0		78.08
13	433	86.17	301.7		79.50
14	444	68.16	232.5		80.15
15	464	115.85	378.2		81.30
16	552	58.44	160.6		85.71
17	565	70.69	189.7		86.31
18	586	55.77	144.2		87.29
19	609	104.88	260.9		88.21
20	726	139.49	291.0		91.48
21	1,027	44.38	65.5		95.40
22	1,200	124.40	157.0		96.49
23	2,249	10.19	6.9		102.32
24	2,760	4.01	2.2		103.96
25	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
Modified: 2/1/2017 1:21:48 PM

Electropherogram Summary Continued ...

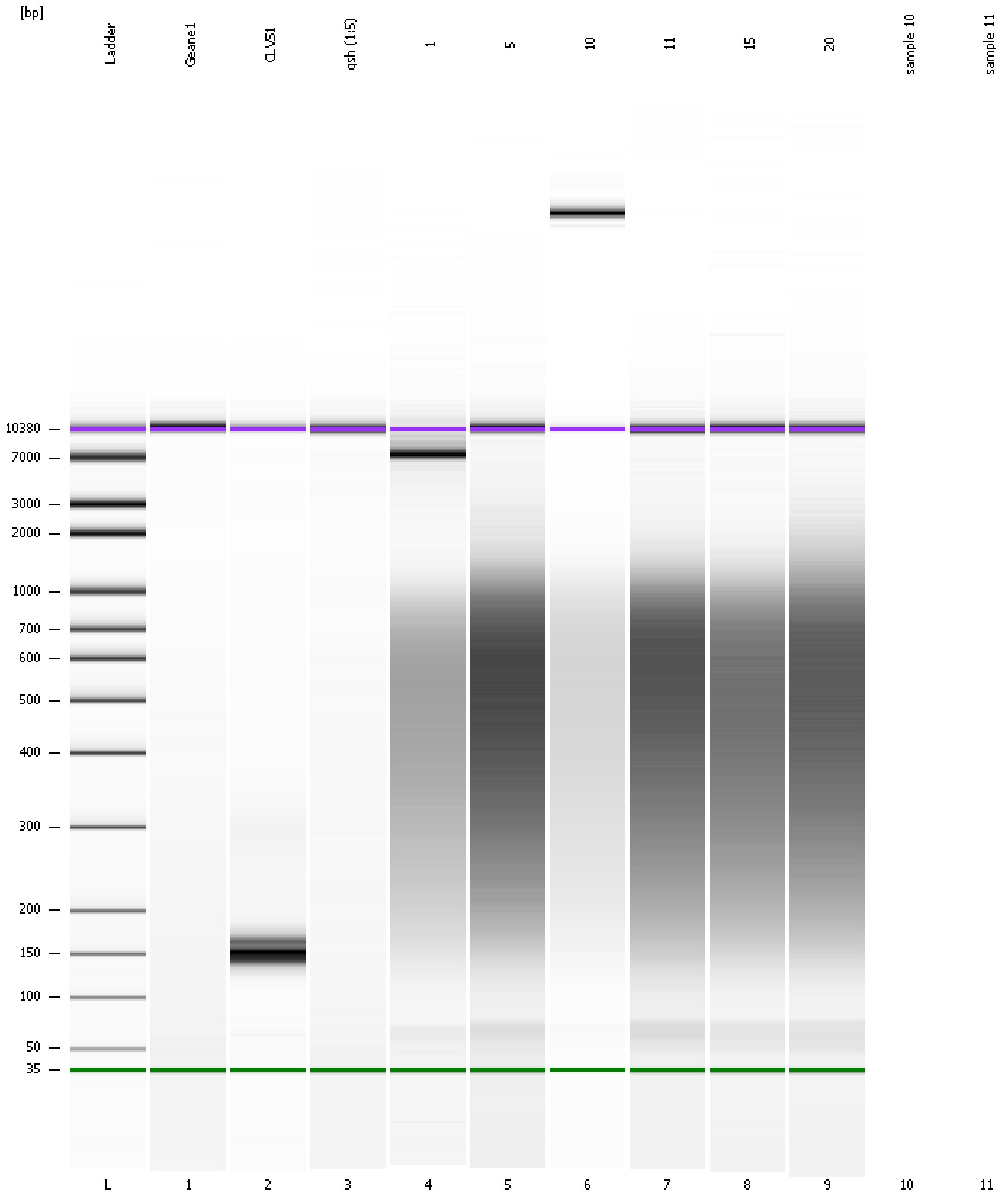
... Region table for sample 9 : 20

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	474	1,520.2	11,200.9	2,823.48	83	39.2

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
Modified: 2/1/2017 1:21:48 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
Modified: 2/1/2017 1:21:48 PM

Invalid Samples

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\2017-02-01\2017-02-01_002.xad

Created: 2/1/2017 12:46:15 PM
 Modified: 2/1/2017 1:21:48 PM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 10)		Instrument	Run		2/1/2017 1:21:48 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\2017-02-01\2017-02-01_002.xad)		Instrument	Run		2/1/2017 12:46:20 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		2/1/2017 12:46:20 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		2/1/2017 12:46:20 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		2/1/2017 12:46:20 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		2/1/2017 12:46:20 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		2/1/2017 12:46:20 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		2/1/2017 12:46:20 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1