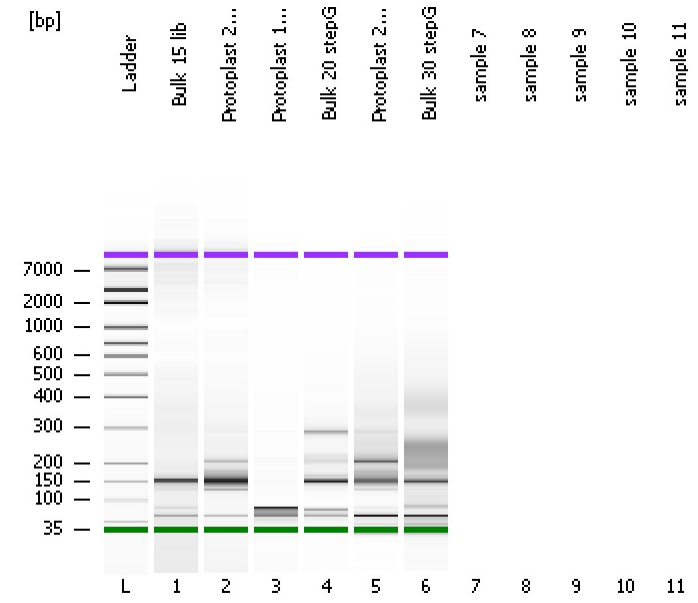
Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Electrophoresis File Run Summary



Instrument Information:

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

Assay Information:

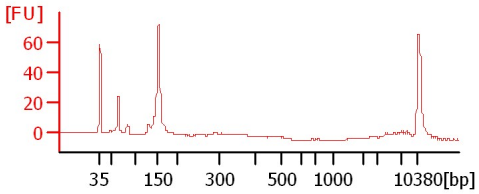
Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\dsDNA\High Sensitivity DNA.xsy

Assay Class: High Sensitivity DNA Assay
Version: 1.03
Assay Comments: Copyright © 2003-2010 Agilent Technologies

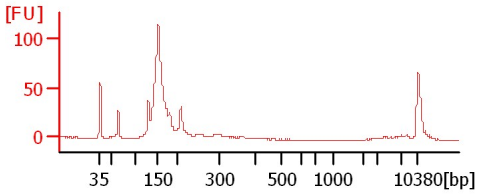
Chip Information:

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

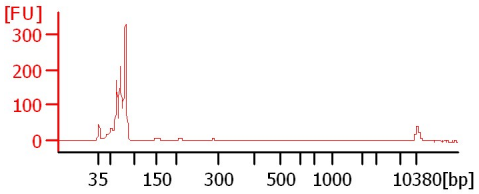
Bulk 15 lib



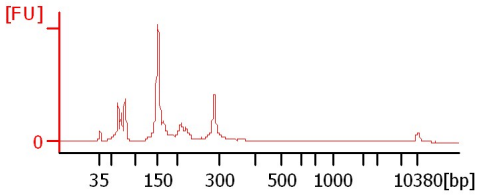
Protoplast 20 lib



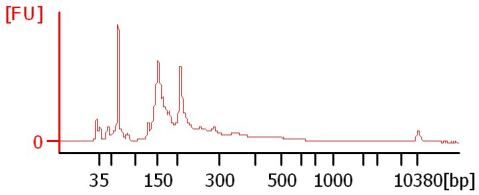
Protoplast 15 stepG



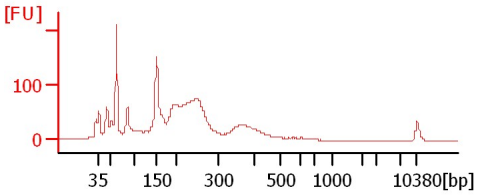
Bulk 20 stepG



Protoplast 25 stepG



Bulk 30 stepG



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Bulk 15 lib		☐	✔			
Protoplast 20 lib		☐	✔			
Protoplast 15 stepG		☐	✔			
Bulk 20 stepG		☐	✔			
Protoplast 25 stepG		☐	✔			
Bulk 30 stepG		☐	✔			
sample 7		☐				
sample 8		☐				
sample 9		☐				
sample 10		☐				
sample 11		☐				
Ladder		☐	✔			

Chip Lot # **Reagent Kit Lot #**

Chip Comments :

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 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

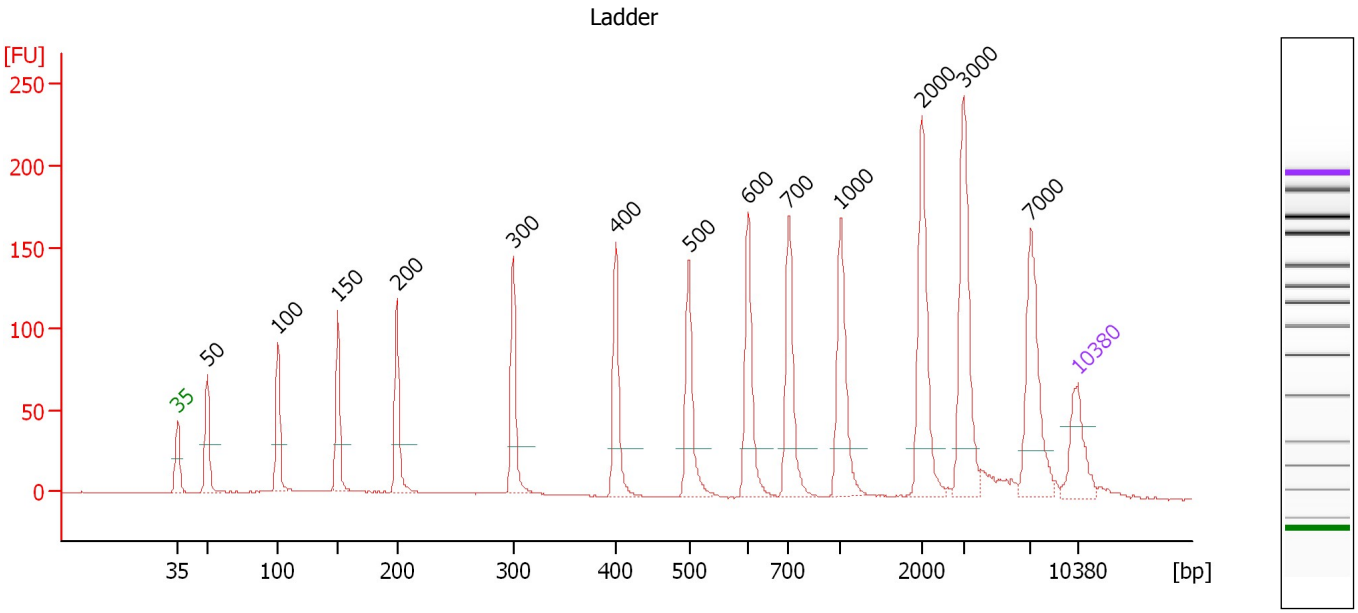
Ladder

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\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

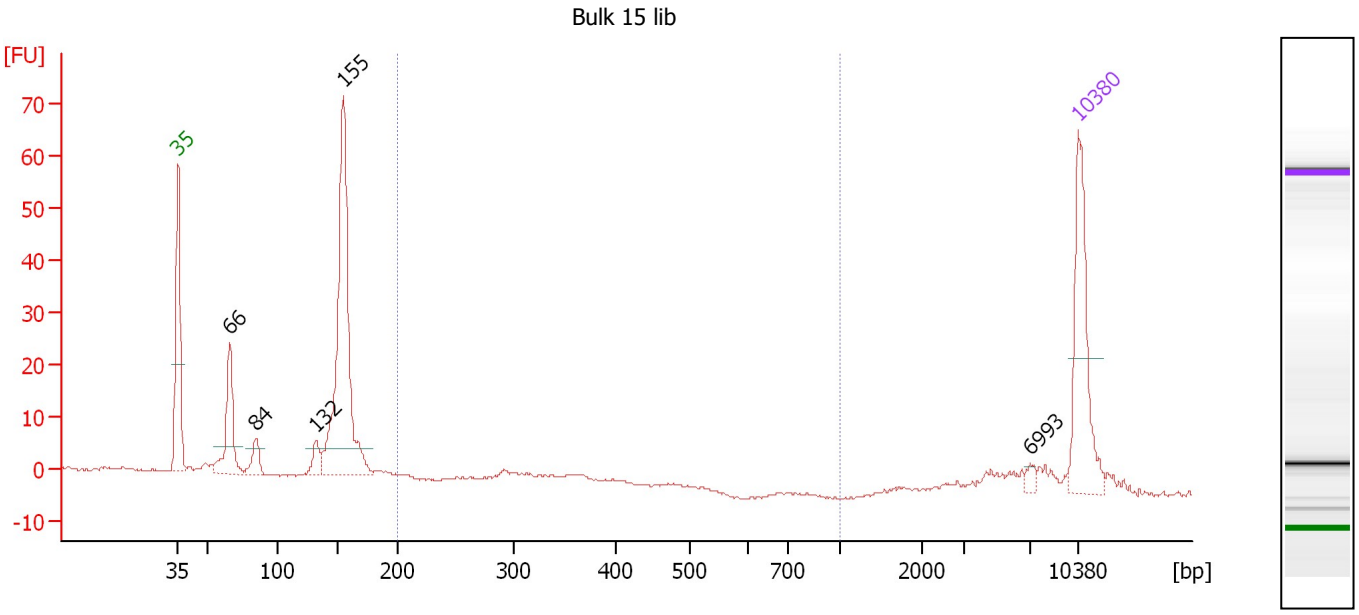
Peak table for Ladder

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	45.30
3		100	150.00	2,272.7	Ladder Peak	50.80
4		150	150.00	1,515.2	Ladder Peak	55.44
5		200	150.00	1,136.4	Ladder Peak	60.03
6		300	150.00	757.6	Ladder Peak	69.07
7		400	150.00	568.2	Ladder Peak	77.06
8		500	150.00	454.5	Ladder Peak	82.75
9		600	150.00	378.8	Ladder Peak	87.39
10		700	150.00	324.7	Ladder Peak	90.51
11		1,000	150.00	227.3	Ladder Peak	94.55
12		2,000	150.00	113.6	Ladder Peak	100.88
13		3,000	150.00	75.8	Ladder Peak	104.14
14		7,000	150.00	32.5	Ladder Peak	109.33
15		10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : Bulk 15 lib

Number of peaks found:	5	Corr. Area 1:	13.5
Noise:	0.3		

Peak table for sample 1 : Bulk 15 lib

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	66	74.37	1,718.0		47.01
3	84	22.20	398.4		49.09
4	132	18.34	210.6		53.76
5	155	276.33	2,703.5		55.89
6	6,993	4.79	1.0		109.32
7	10,380	75.00	10.9	Upper Marker	113.00

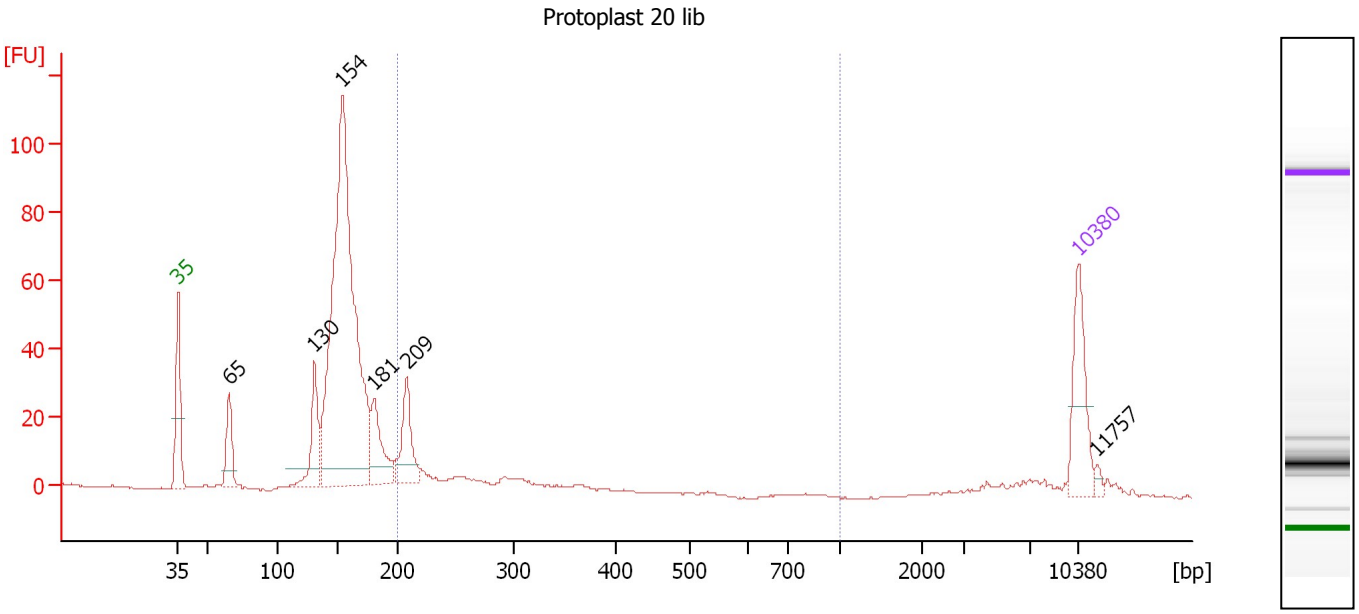
Region table for sample 1 : Bulk 15 lib

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	326	13.5	106.1	22.46	6	12.5

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : Protoplast 20 lib

Number of peaks found:	6	Corr. Area 1:	108.5
Noise:	0.2		

Peak table for sample 2 : Protoplast 20 lib

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	67.71	1,575.8		46.96
3	130	98.88	1,149.0		53.62
4	154	866.72	8,535.5		55.79
5	181	90.64	760.1		58.26
6	209	89.10	647.0		60.81
7	10,380	75.00	10.9	Upper Marker	113.00
8	11,757	0.00	0.0		114.50

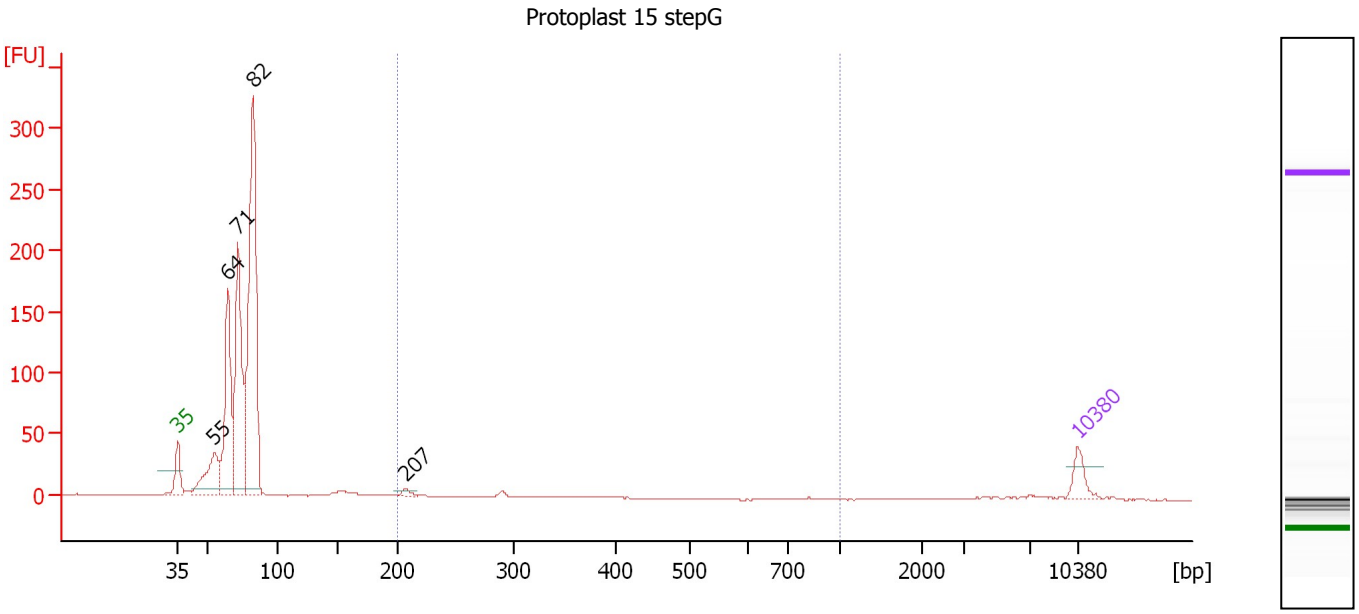
Region table for sample 2 : Protoplast 20 lib

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	255	108.5	1,272.3	205.00	16	23.4

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : Protoplast 15 stepG

Number of peaks found:	5	Corr. Area 1:	15.7
Noise:	0.2		

Peak table for sample 3 : Protoplast 15 stepG

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	55	377.14	10,394.2		45.84
3	64	787.88	18,559.9		46.87
4	71	1,066.67	22,623.0		47.66
5	82	1,788.93	33,007.3		48.83
6	207	28.75	210.1		60.70
7	10,380	75.00	10.9	Upper Marker	113.00

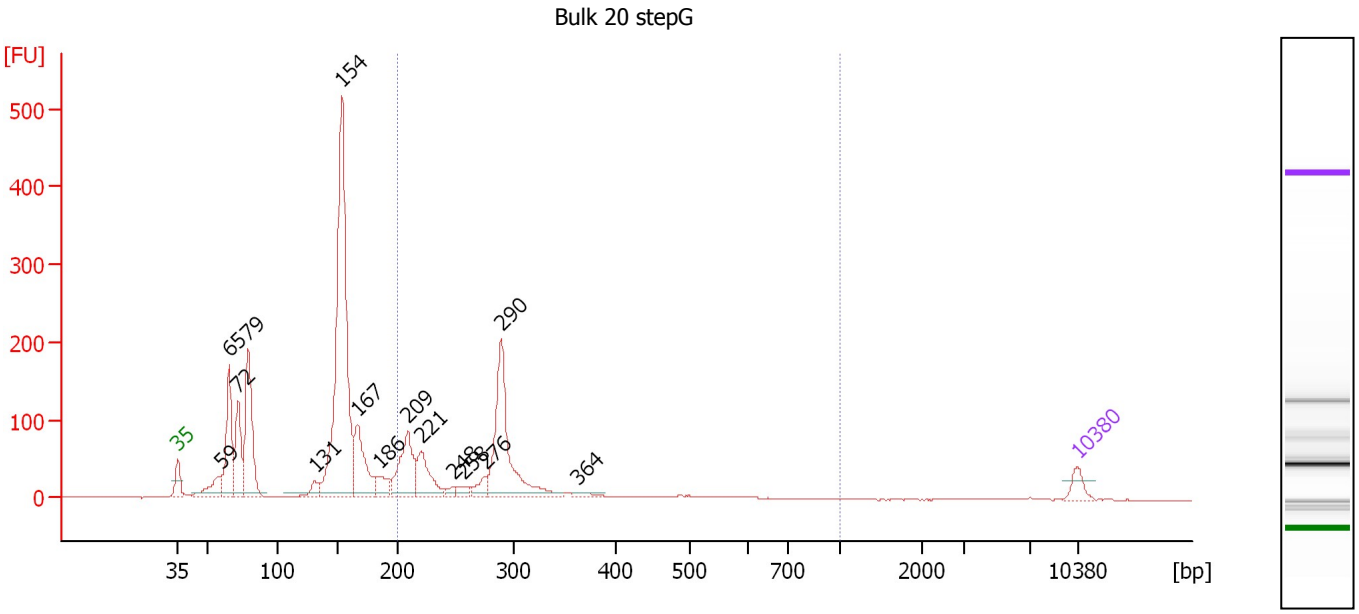
Region table for sample 3 : Protoplast 15 stepG

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	243	15.7	327.8	51.35	1	28.7

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : Bulk 20 stepG

Number of peaks found:	15	Corr. Area 1:	826.2
Noise:	0.2		

Peak table for sample 4 : Bulk 20 stepG

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	59	266.94	6,798.8		46.34
3	65	702.06	16,271.8		46.99
4	72	456.14	9,637.9		47.69
5	79	931.10	17,868.9		48.48
6	131	114.85	1,329.3		53.67
7	154	2,959.67	29,208.0		55.76
8	167	574.68	5,227.5		56.96
9	186	143.14	1,168.7		58.71
10	209	537.02	3,892.0		60.85
11	221	345.65	2,367.7		61.95
12	248	45.65	278.7		64.39
13	258	65.80	387.0		65.24
14	276	99.01	544.0		66.88
15	290	1,037.60	5,429.3		68.13
16	364	30.58	127.4		74.16
17	10,380	75.00	10.9	Upper Marker	113.00

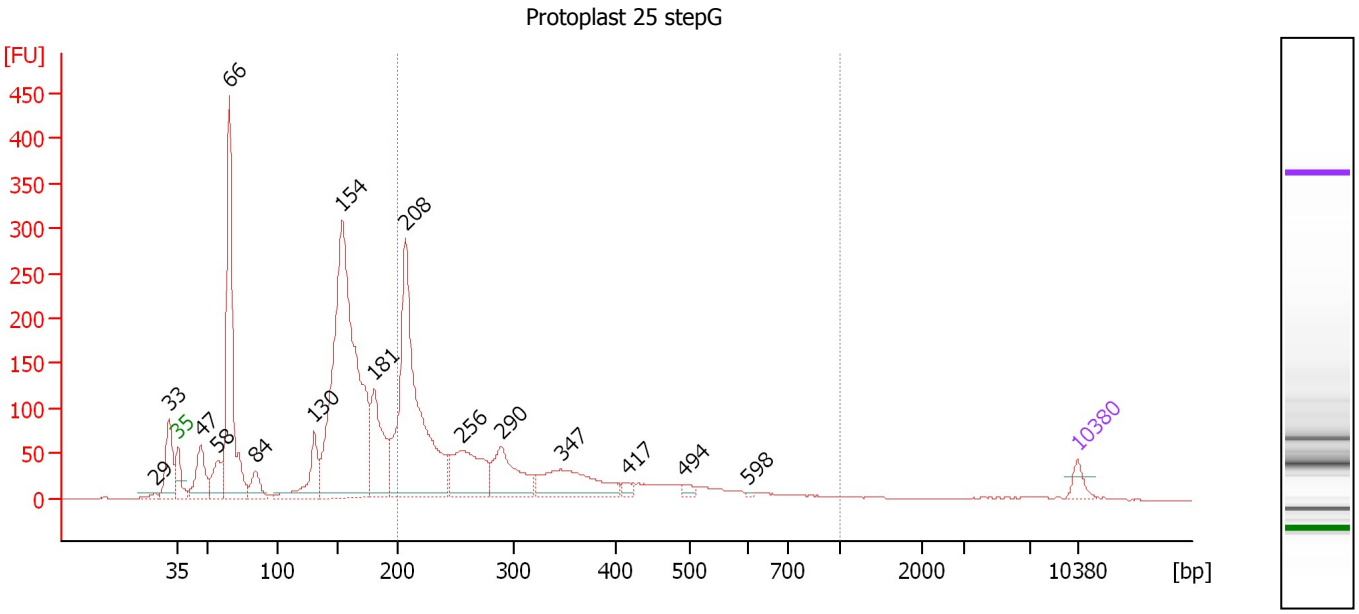
Region table for sample 4 : Bulk 20 stepG

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	289	826.2	13,391.1	2,402.61	31	29.9

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : Protoplast 25 stepG

Number of peaks found:	16	Corr. Area 1:	1,632.3
Noise:	0.2		

Peak table for sample 5 : Protoplast 25 stepG

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	29	0.00	0.0		41.19
2	33	0.00	0.0		42.35
3	35	125.00	5,411.3	Lower Marker	43.00
4	47	453.43	14,768.2		44.76
5	58	298.65	7,868.3		46.12
6	66	2,084.52	48,045.0		47.03
7	84	196.98	3,552.0		49.04
8	130	462.28	5,369.6		53.63
9	154	4,159.56	40,968.5		55.79
10	181	800.43	6,711.0		58.26
11	208	2,644.52	19,290.6		60.73
12	256	712.06	4,211.7		65.11
13	290	564.32	2,952.7		68.13
14	347	600.36	2,622.7		72.81
15	417	44.13	160.5		78.00
16	494	44.46	136.3		82.43
17	598	8.69	22.0		87.32
18	10,380	75.00	10.9	Upper Marker	113.00

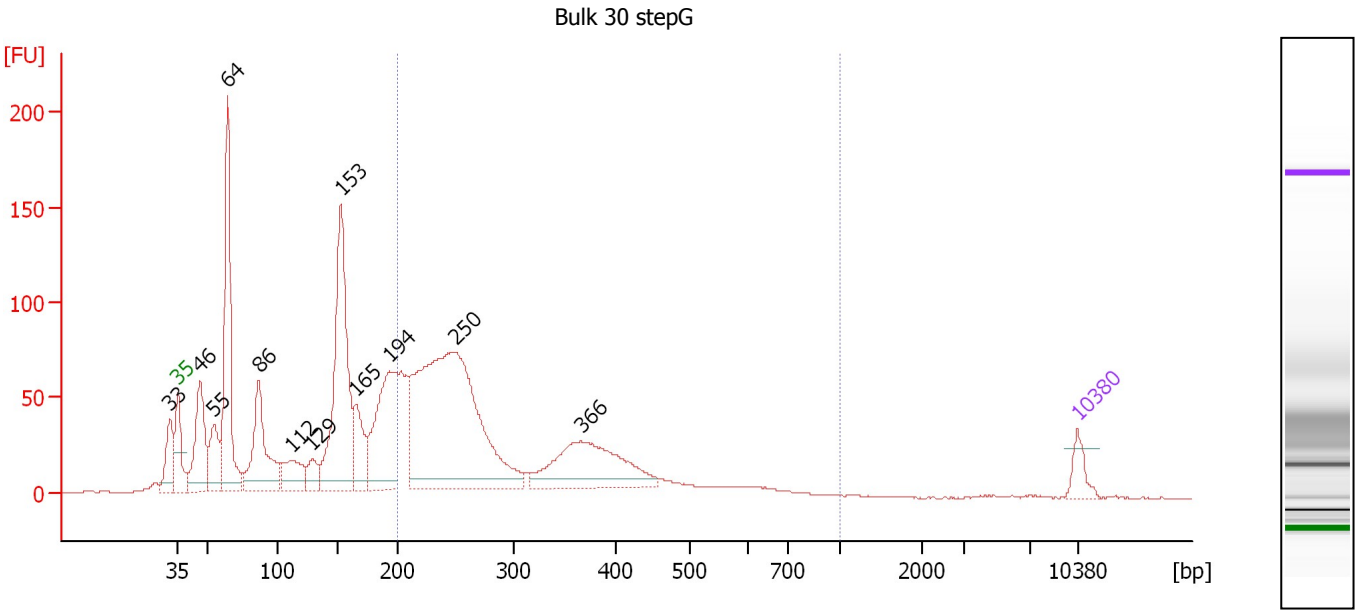
Region table for sample 5 : Protoplast 25 stepG

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	309	1,632.3	28,364.7	4,993.08	39	40.7

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : Bulk 30 stepG

Number of peaks found:	12	Corr. Area 1:	1,130.3
Noise:	0.2		

Peak table for sample 6 : Bulk 30 stepG

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	33	0.00	0.0		42.39
2	35	125.00	5,411.3	Lower Marker	43.00
3	46	521.92	17,108.1		44.72
4	55	276.88	7,649.7		45.83
5	64	1,056.74	25,013.9		46.84
6	86	617.96	10,827.6		49.31
7	112	231.37	3,138.2		51.89
8	129	112.96	1,331.0		53.45
9	153	1,286.06	12,770.3		55.68
10	165	269.12	2,467.7		56.84
11	194	769.56	6,015.0		59.46
12	250	2,276.13	13,785.7		64.57
13	366	656.97	2,717.8		74.36
14	10,380	75.00	10.9	Upper Marker	113.00

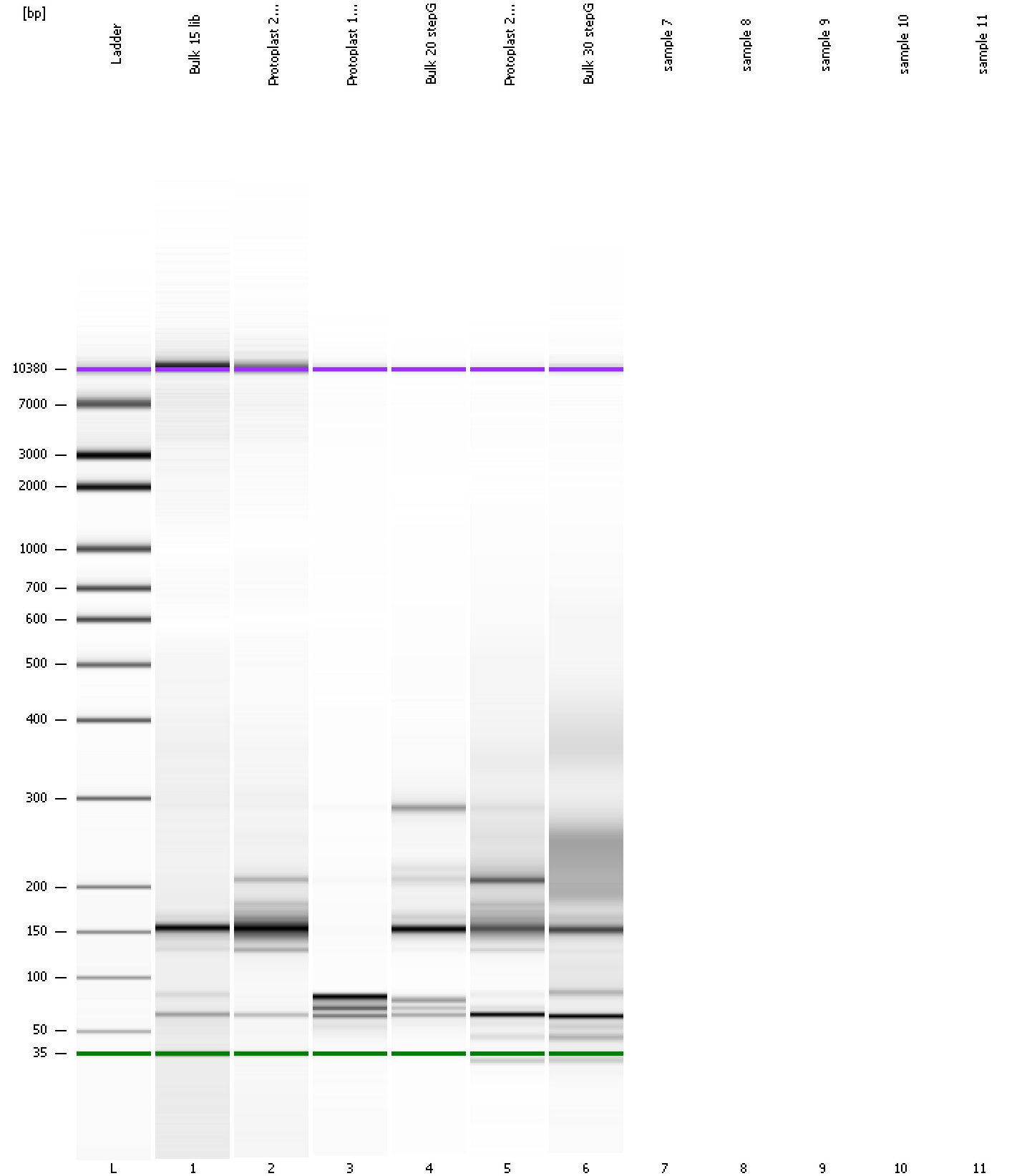
Region table for sample 6 : Bulk 30 stepG

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	304	1,130.3	21,870.0	3,904.40	46	35.2

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 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
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-15\2017-03-15_001.xad

Created: 3/15/2017 3:52:05 PM
Modified: 3/15/2017 4:20:32 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		3/15/2017 4:19:05 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\2017-03-15\2017-03-15_001.xad)		Instrument	Run		3/15/2017 3:52:10 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/15/2017 3:52:10 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/15/2017 3:52:10 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/15/2017 3:52:10 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/15/2017 3:52:10 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/15/2017 3:52:10 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/15/2017 3:52:10 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1