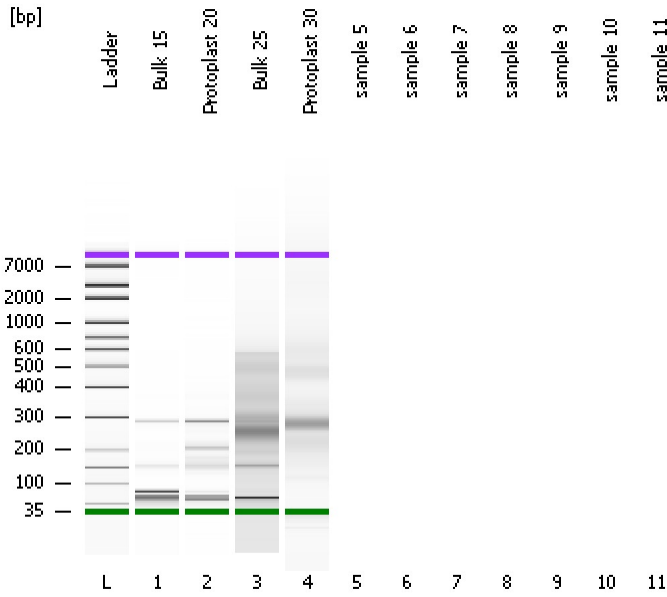


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09\_003.xad

Created: 3/9/2017 1:17:14 PM  
Modified: 3/9/2017 1:38:34 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

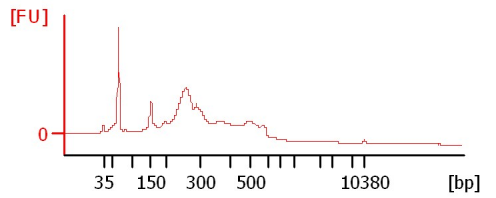
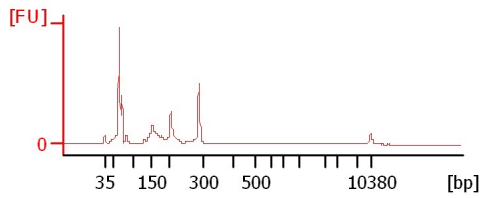
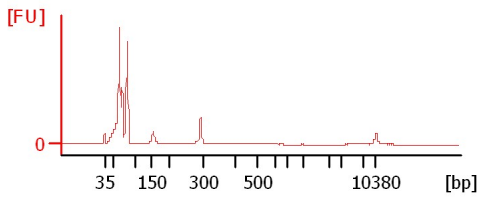
Chip Information:

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

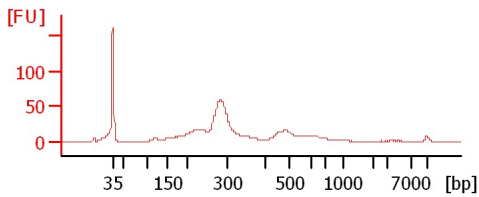
**Bulk 15**

**Protoplast 20**

**Bulk 25**



**Protoplast 30**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09\_003.xad

Created: 3/9/2017 1:17:14 PM  
 Modified: 3/9/2017 1:38:34 PM

**Electrophoresis File Run Summary (Chip Summary)**

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Bulk 15		<input type="checkbox"/>	✓			
Protoplast 20		<input type="checkbox"/>	✓			
Bulk 25		<input type="checkbox"/>	✓			
Protoplast 30		<input type="checkbox"/>	✓			
sample 5		<input type="checkbox"/>				
sample 6		<input type="checkbox"/>				
sample 7		<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\2017-03-09\2017-03-09\_003.xad

Created: 3/9/2017 1:17:14 PM  
Modified: 3/9/2017 1:38:34 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

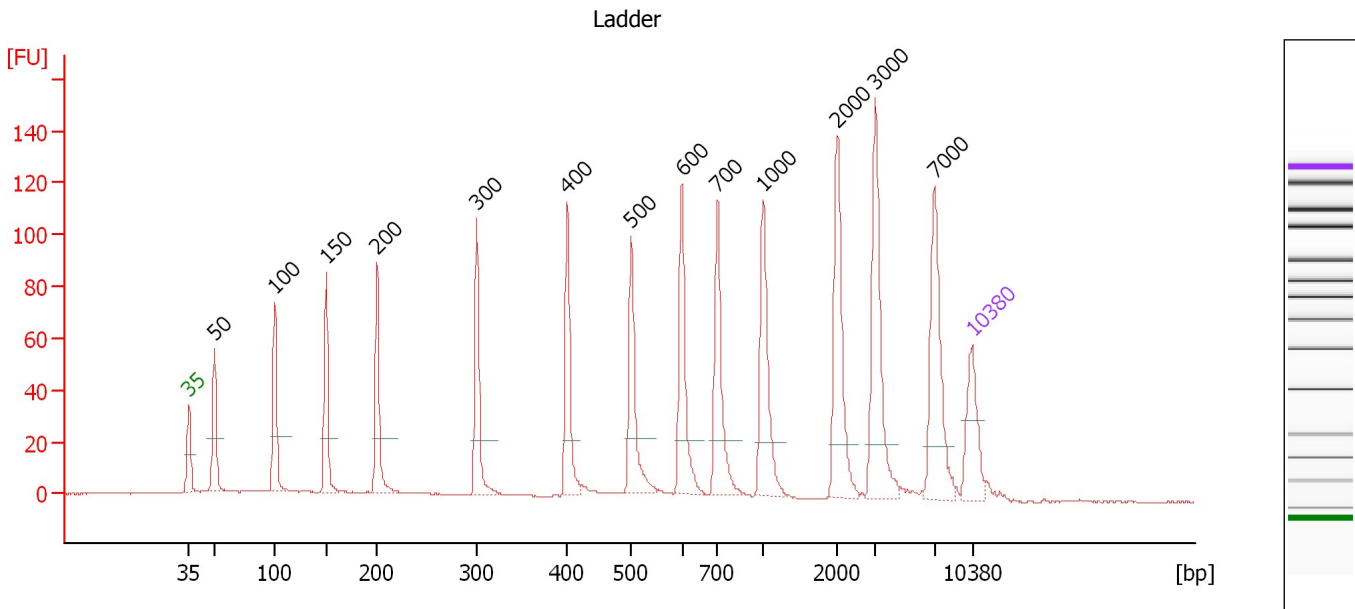
**Ladder**

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\2017-03-09\2017-03-09\_003.xad

Created: 3/9/2017 1:17:14 PM  
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**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

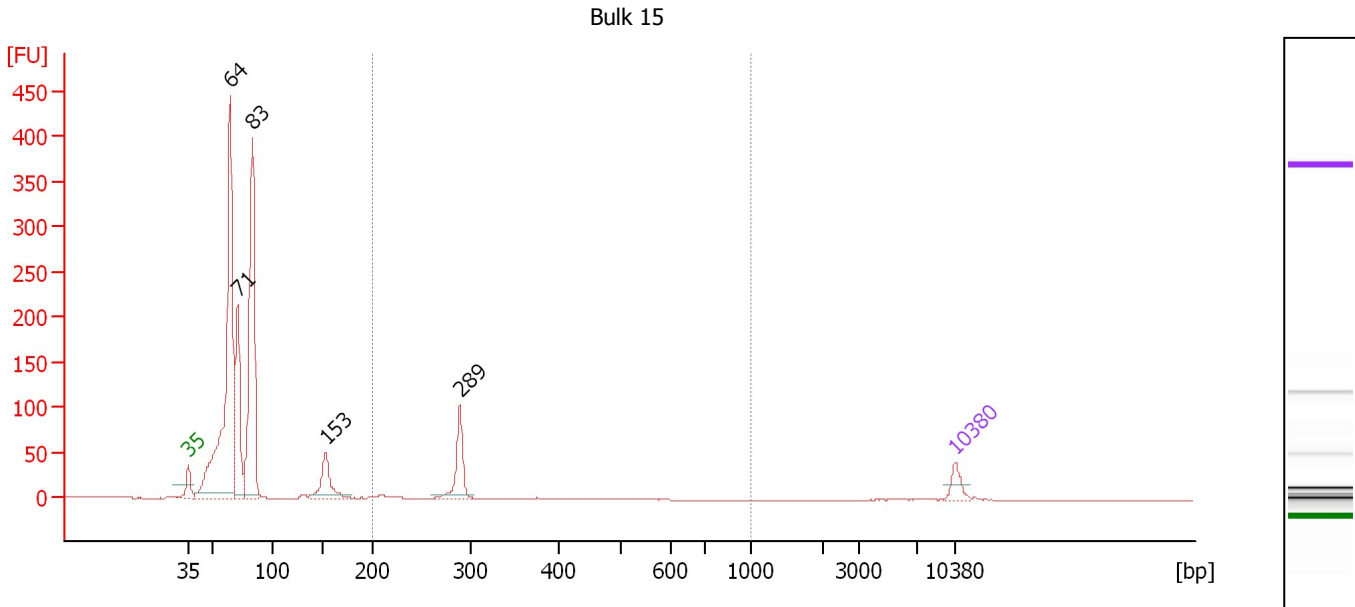
**Peak table for Ladder**

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	45.29
3	100	150.00	2,272.7	Ladder Peak	50.71
4	150	150.00	1,515.2	Ladder Peak	55.29
5	200	150.00	1,136.4	Ladder Peak	59.86
6	300	150.00	757.6	Ladder Peak	68.76
7	400	150.00	568.2	Ladder Peak	76.81
8	500	150.00	454.5	Ladder Peak	82.52
9	600	150.00	378.8	Ladder Peak	87.05
10	700	150.00	324.7	Ladder Peak	90.24
11	1,000	150.00	227.3	Ladder Peak	94.33
12	2,000	150.00	113.6	Ladder Peak	100.95
13	3,000	150.00	75.8	Ladder Peak	104.33
14	7,000	150.00	32.5	Ladder Peak	109.57
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09\_003.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : Bulk 15**

Number of peaks found: 5                      Corr. Area 1: 124.0  
 Noise: 0.2

**Peak table for sample 1 : Bulk 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	64	2,963.07	69,747.7		46.85
3	71	859.03	18,424.2		47.53
4	83	1,893.98	34,491.8		48.89
5	153	339.56	3,362.9		55.56
6	289	332.35	1,739.5		67.83
7	10,380	75.00	10.9	Upper Marker	113.00

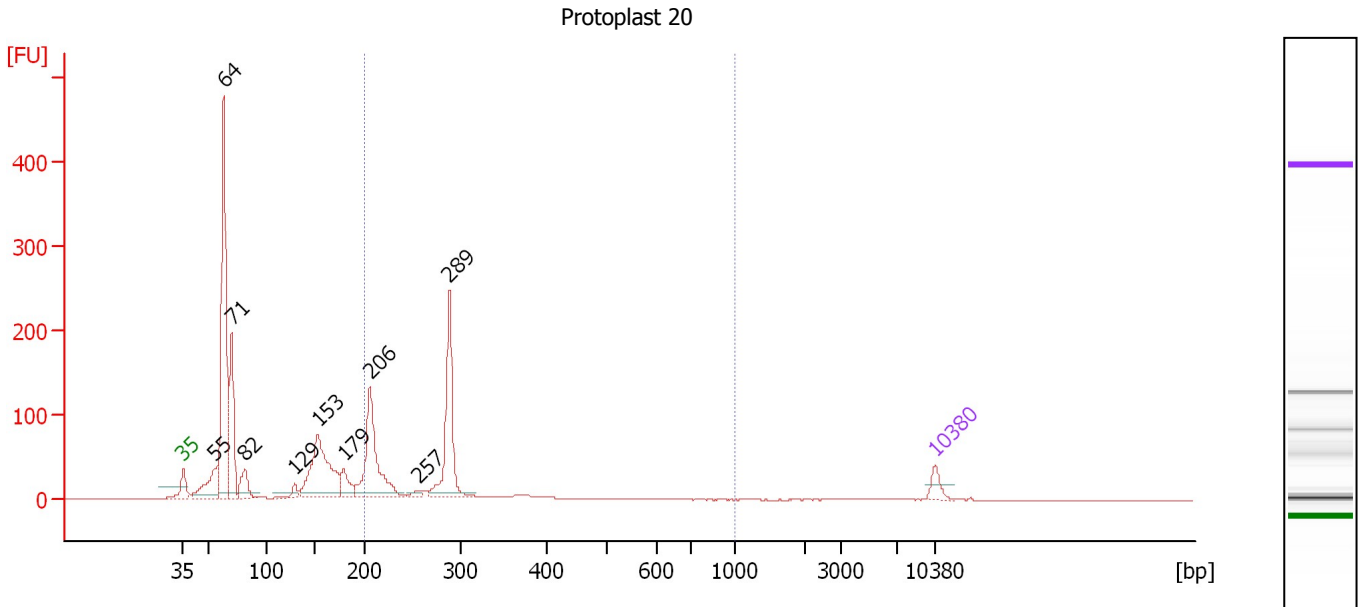
**Region table for sample 1 : Bulk 15**

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	286	124.0	2,028.1	380.76	7	10.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09\_003.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Protoplast 20**

Number of peaks found: 10                      Corr. Area 1: 612.3  
 Noise: 0.2

**Peak table for sample 2 : Protoplast 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	55	422.49	11,536.6		45.88
3	64	2,276.57	54,129.6		46.78
4	71	853.39	18,318.0		47.52
5	82	243.71	4,526.8		48.71
6	129	80.19	940.5		53.38
7	153	1,081.06	10,736.8		55.52
8	179	207.37	1,753.5		57.95
9	206	983.04	7,231.6		60.39
10	257	52.54	309.4		64.96
11	289	891.49	4,672.3		67.79
12	10,380	75.00	10.9	Upper Marker	113.00

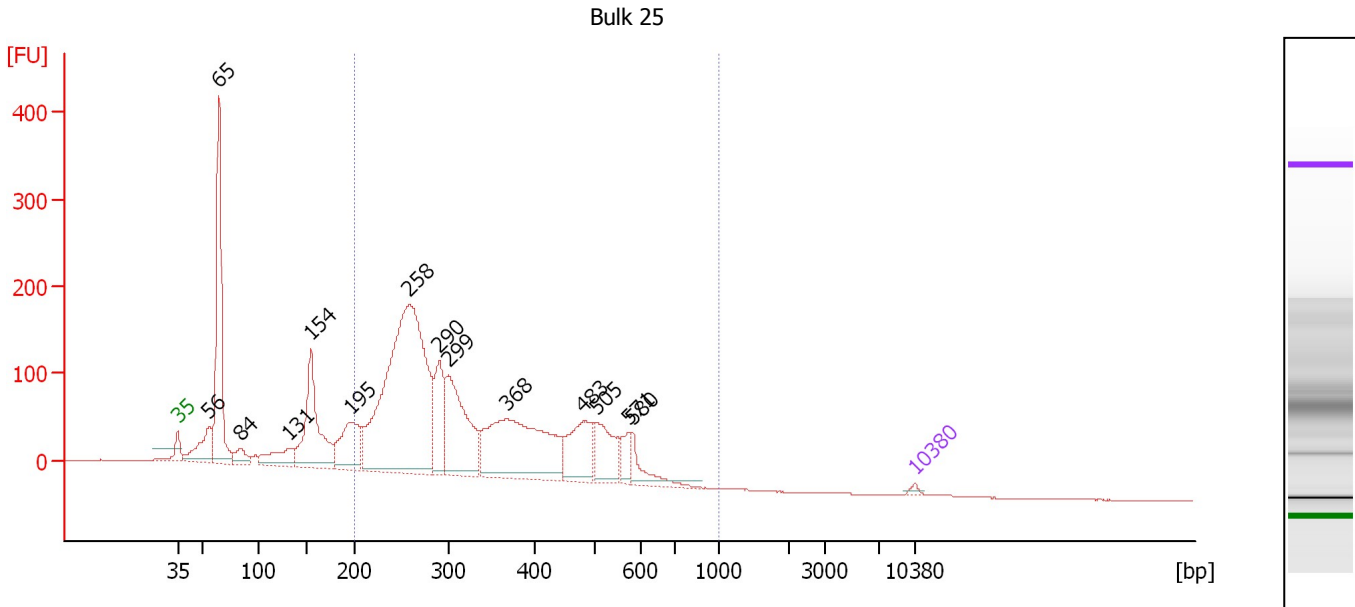
**Region table for sample 2 : Protoplast 20**

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	271	612.3	12,424.9	2,142.41	32	25.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09\_003.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Bulk 25**

Number of peaks found: 14                      Corr. Area 1: 3,051.8  
 Noise: 0.2

**Peak table for sample 3 : Bulk 25**

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	56	1,829.61	49,123.0		45.98
3	65	6,797.27	157,756.0		46.95
4	84	657.98	11,879.9		48.97
5	131	1,320.38	15,307.8		53.52
6	154	4,455.41	43,856.7		55.64
7	195	2,403.64	18,636.7		59.44
8	258	14,605.81	85,851.6		65.00
9	290	2,099.08	10,982.9		67.83
10	299	4,078.67	20,652.1		68.69
11	368	5,977.80	24,635.1		74.21
12	483	2,109.23	6,619.4		81.54
13	505	1,497.55	4,492.3		82.75
14	571	516.75	1,371.0		85.74
15	580	791.13	2,066.7		86.14
16	10,380	75.00	10.9	Upper Marker	113.00

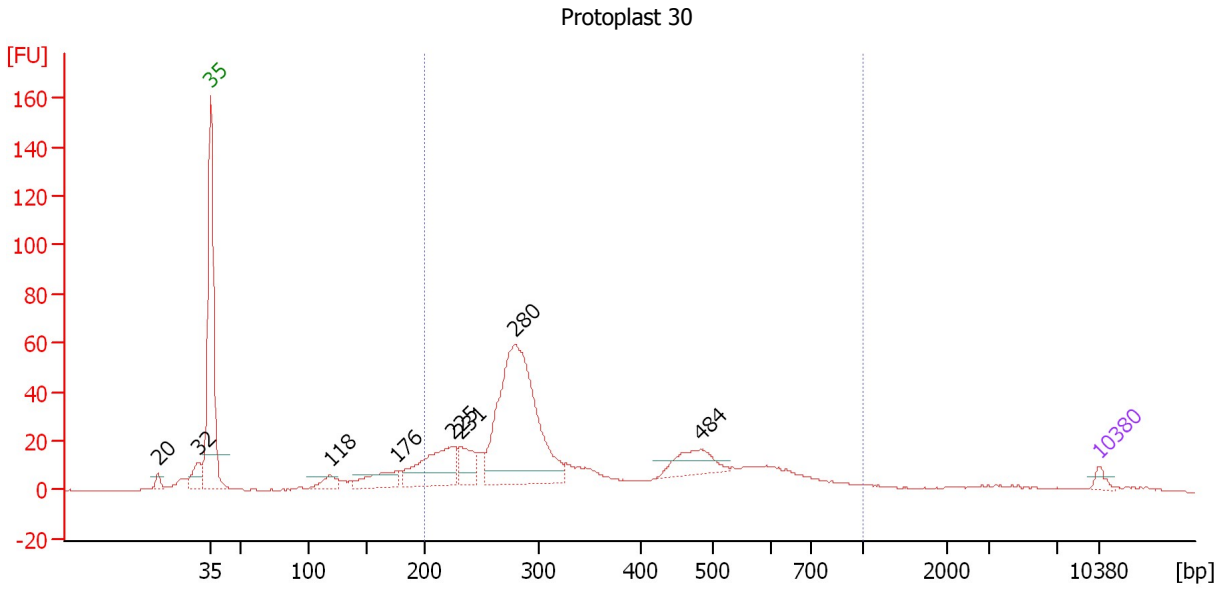
**Region table for sample 3 : Bulk 25**

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	340	3,051.8	159,755.5	31,874.06	69	31.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09\_003.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : Protoplast 30**

Number of peaks found: 8                      Corr. Area 1: 679.9  
 Noise: 0.2

**Peak table for sample 4 : Protoplast 30**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	20	0.00	0.0		38.83
2	32	0.00	0.0		42.02
3	35	125.00	5,411.3	Lower Marker	43.00
4	118	258.92	3,320.5		52.37
5	176	515.03	4,428.3		57.68
6	225	1,237.15	8,313.5		62.13
7	231	508.32	3,334.8		62.61
8	280	4,247.02	23,012.7		66.95
9	484	547.70	1,713.3		81.63
10	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : Protoplast 30**

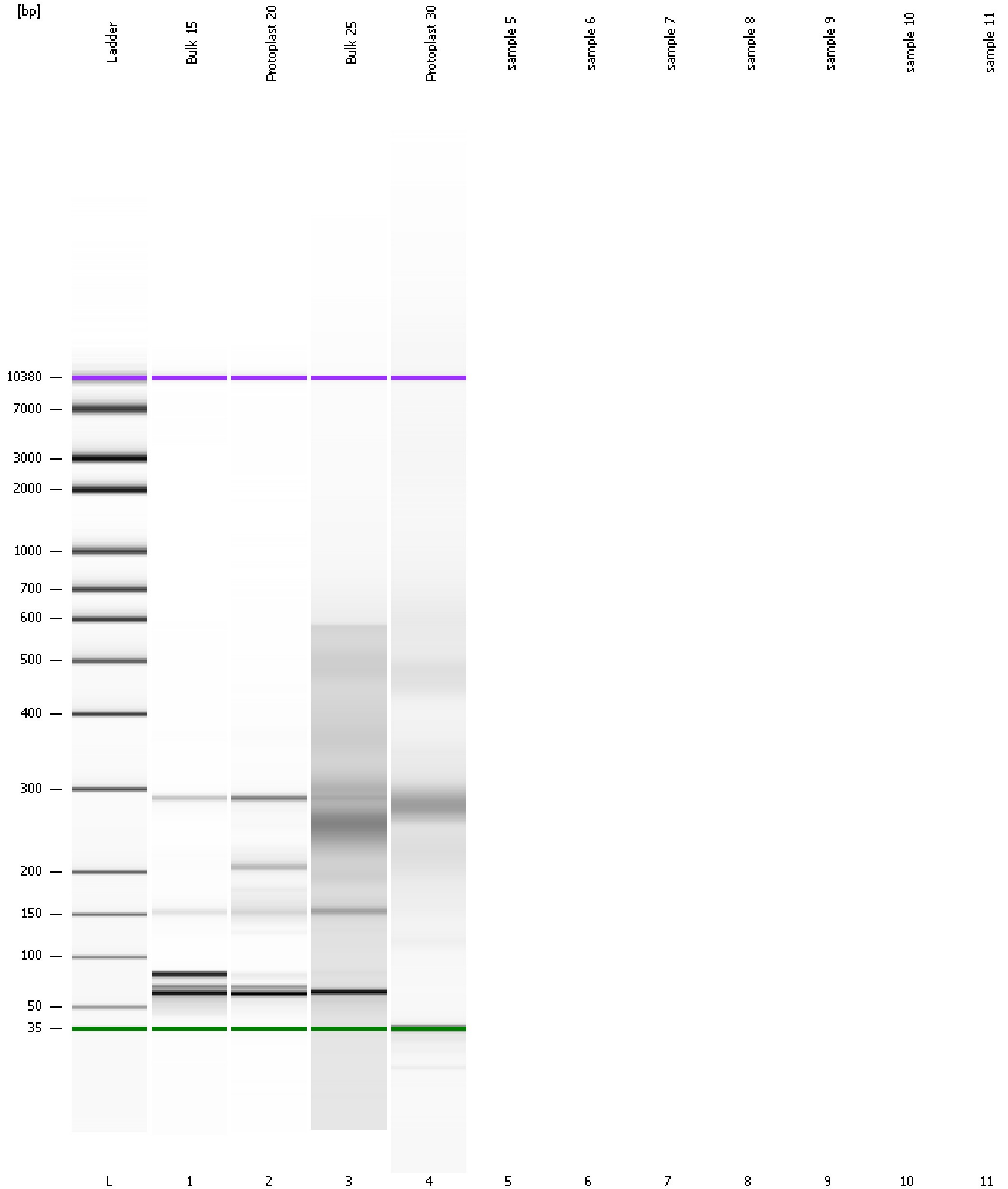
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	377	679.9	49,299.8	10,253.45	73	41.8



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09\_003.xad

Created: 3/9/2017 1:17:14 PM  
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**Gel Image**



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09\_003.xad

Created: 3/9/2017 1:17:14 PM  
Modified: 3/9/2017 1:38:34 PM

**Invalid Samples**

Sample 5 has not been run, no results available.

Sample 6 has not been run, no results available.

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 Created: 3/9/2017 1:17:14 PM  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-09\2017-03-09\_003.xad Modified: 3/9/2017 1:38:34 PM

**Run Logbook**

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 5)		Instrument	Run		3/9/2017 1:38:33 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\2017-03-09\2017-03-09_003.xad)		Instrument	Run		3/9/2017 1:17:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/9/2017 1:17:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/9/2017 1:17:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/9/2017 1:17:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/9/2017 1:17:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/9/2017 1:17:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/9/2017 1:17:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1