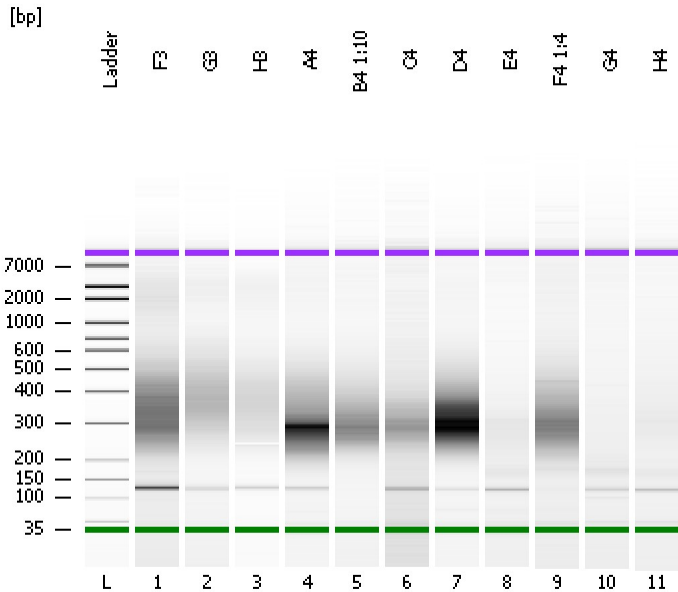


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
Modified: 9/23/2015 2:54:53 PM

### Electrophoresis File Run Summary



#### Instrument Information:

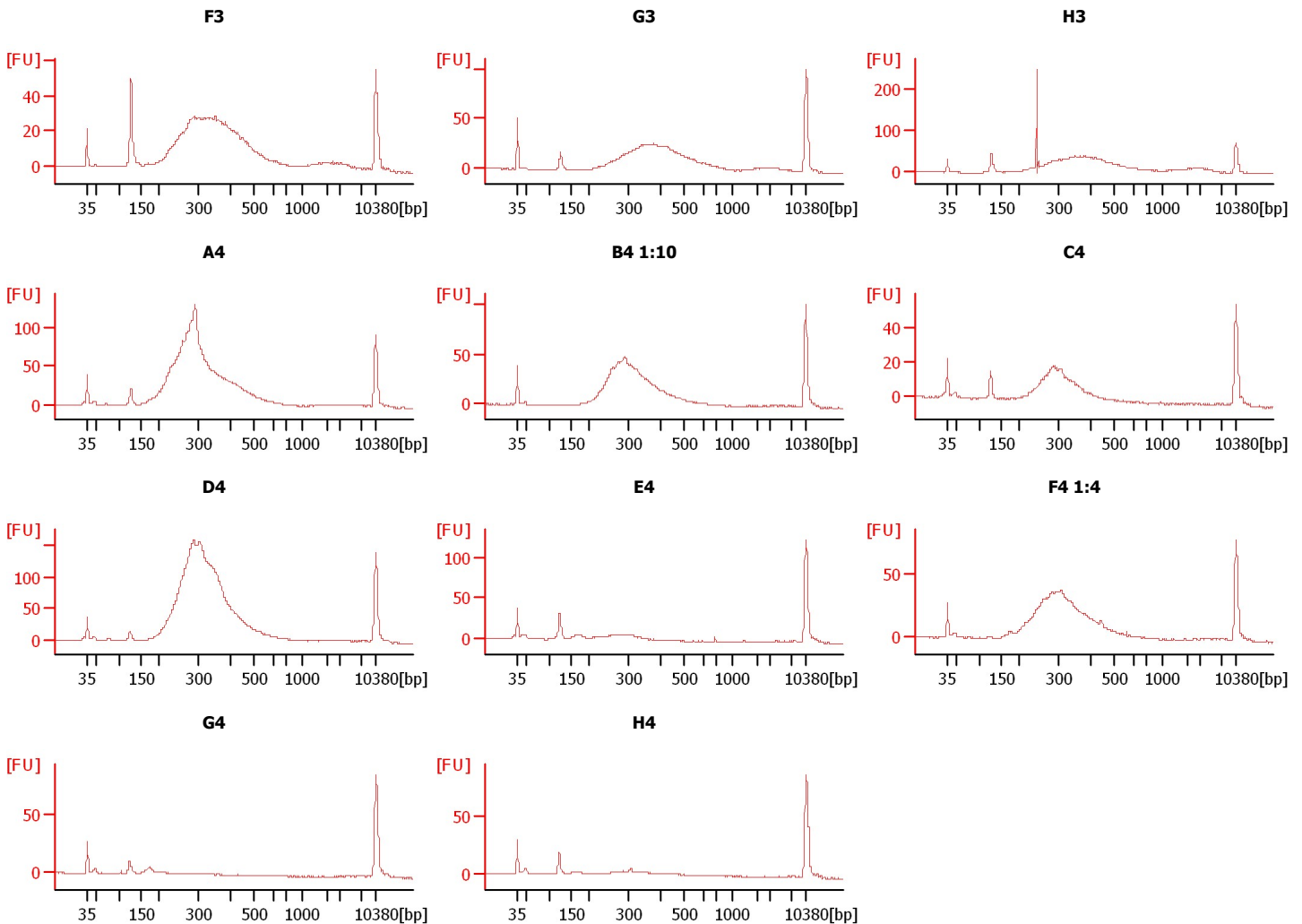
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

#### 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:



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
Modified: 9/23/2015 2:54:53 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
F3		<input type="checkbox"/>	✓			
G3		<input type="checkbox"/>	✓			
H3		<input type="checkbox"/>	✓			
A4		<input type="checkbox"/>	✓			
B4 1:10		<input type="checkbox"/>	✓			
C4		<input type="checkbox"/>	✓			
D4		<input type="checkbox"/>	✓			
E4		<input type="checkbox"/>	✓			
F4 1:4		<input type="checkbox"/>	✓			
G4		<input type="checkbox"/>	✓			
H4		<input type="checkbox"/>	✓			
Ladder		<input type="checkbox"/>	✓			

**Chip Lot #**

**Reagent Kit Lot #**

**Chip Comments :**

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
Modified: 9/23/2015 2:54:53 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

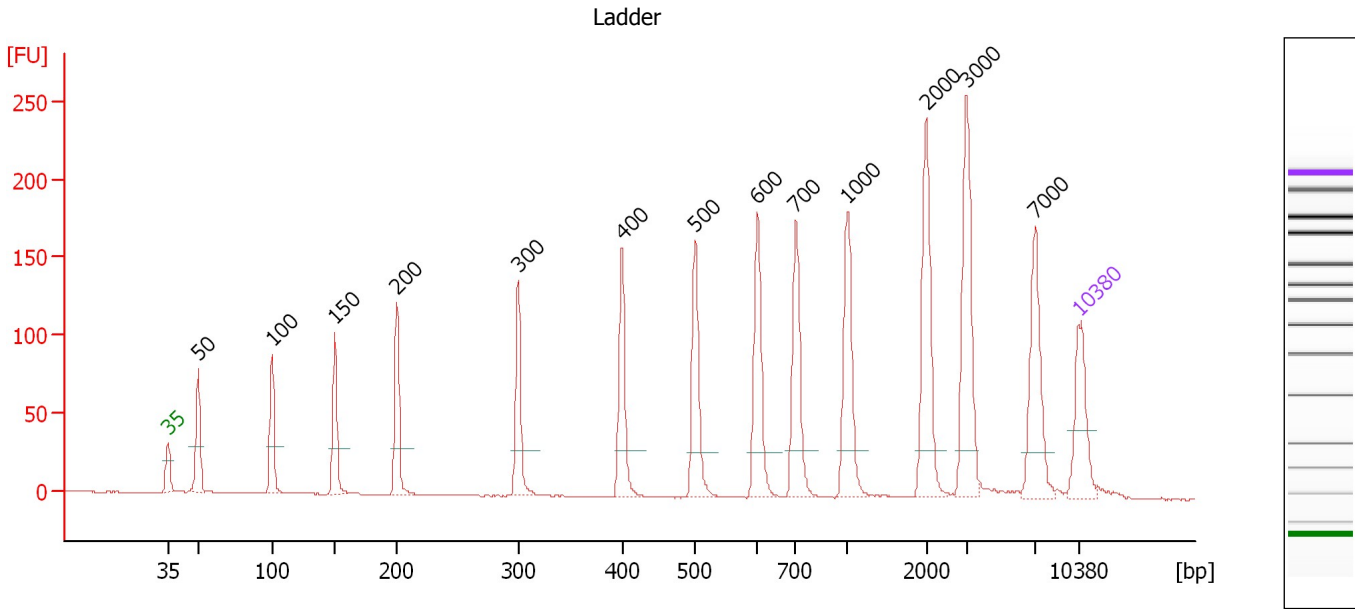
**Ladder**

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:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
 Modified: 9/23/2015 2:54:53 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

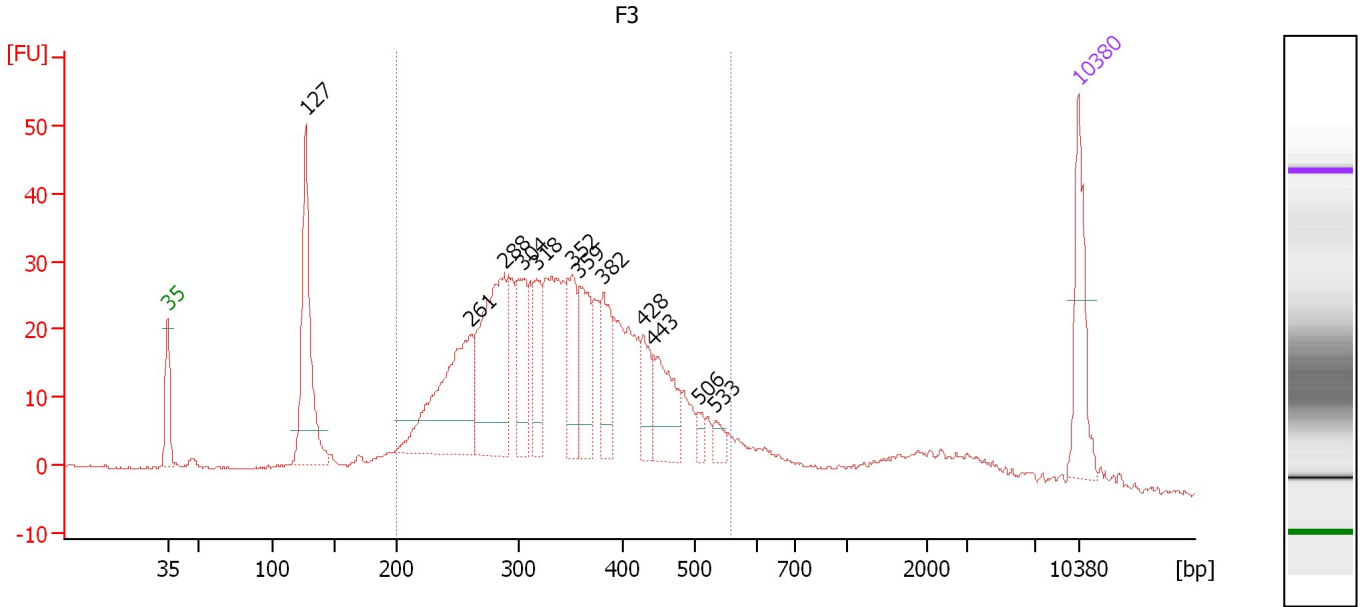
**Peak table for Ladder**

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	45.33
3	100	150.00	2,272.7	Ladder Peak	51.00
4	150	150.00	1,515.2	Ladder Peak	55.85
5	200	150.00	1,136.4	Ladder Peak	60.60
6	300	150.00	757.6	Ladder Peak	69.93
7	400	150.00	568.2	Ladder Peak	77.93
8	500	150.00	454.5	Ladder Peak	83.56
9	600	150.00	378.8	Ladder Peak	88.36
10	700	150.00	324.7	Ladder Peak	91.28
11	1,000	150.00	227.3	Ladder Peak	95.26
12	2,000	150.00	113.6	Ladder Peak	101.30
13	3,000	150.00	75.8	Ladder Peak	104.40
14	7,000	150.00	32.5	Ladder Peak	109.71
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
 Modified: 9/23/2015 2:54:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : F3**

Number of peaks found: 12                      Corr. Area 1: 734.5  
 Noise: 0.2

**Peak table for sample 1 : F3**

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	127	245.30	2,930.5		53.60
3	261	236.64	1,371.4		66.33
4	288	242.40	1,274.2		68.83
5	304	98.65	491.3		70.27
6	318	63.42	302.1		71.38
7	352	80.16	344.8		74.11
8	359	92.99	392.3		74.67
9	382	75.05	297.9		76.47
10	428	52.21	184.7		79.53
11	443	85.39	291.9		80.36
12	506	13.21	39.6		83.83
13	533	16.21	46.1		85.13
14	10,380	75.00	10.9	Upper Marker	113.00

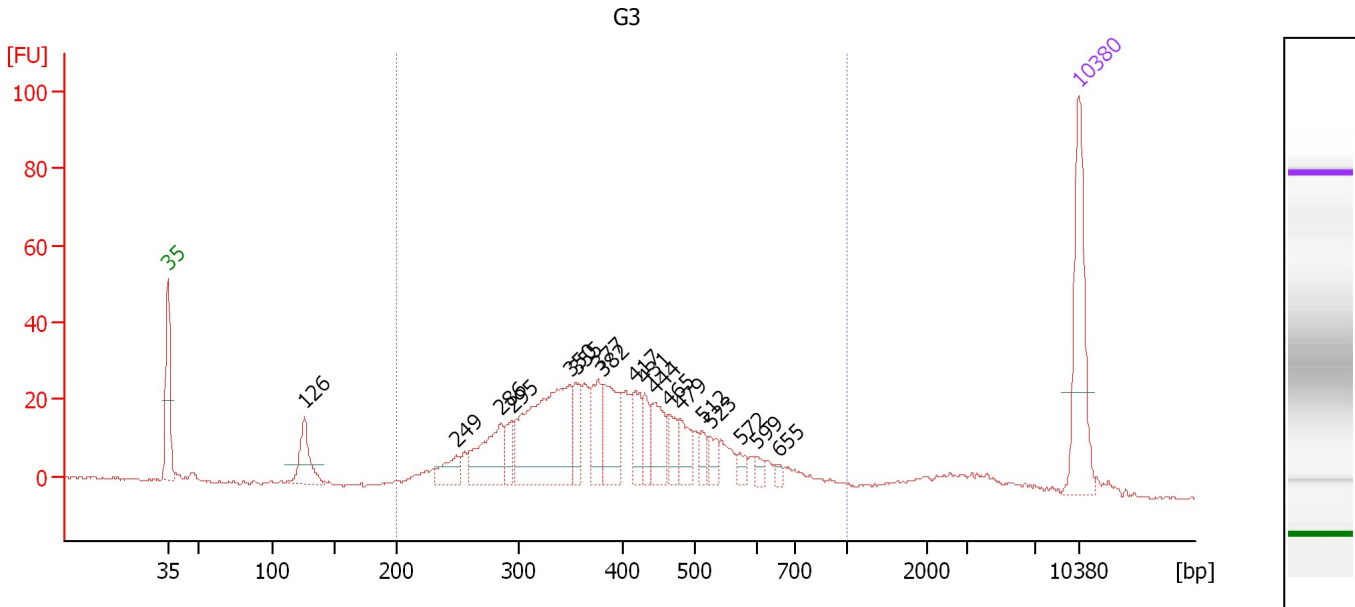
**Region table for sample 1 : F3**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	347	557	734.5	8,620.6	77	22.8	1,838.96

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
 Modified: 9/23/2015 2:54:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : G3**

Number of peaks found: 18                      Corr. Area 1: 640.5  
 Noise: 0.4

**Peak table for sample 2 : G3**

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	126	51.24	617.1		53.50
3	249	25.92	157.7		65.18
4	286	70.53	374.0		68.60
5	295	21.99	112.8		69.49
6	350	173.48	750.6		73.94
7	355	30.77	131.2		74.37
8	377	39.75	159.7		76.10
9	382	59.35	235.5		76.48
10	417	30.23	109.7		78.91
11	431	21.41	75.3		79.66
12	444	38.39	131.0		80.41
13	465	22.92	74.7		81.59
14	479	23.38	73.9		82.38
15	512	12.96	38.4		84.12
16	523	13.20	38.2		84.68
17	572	8.44	22.3		87.03
18	599	7.68	19.4		88.29
19	655	4.48	10.4		89.98
20	10,380	75.00	10.9	Upper Marker	113.00

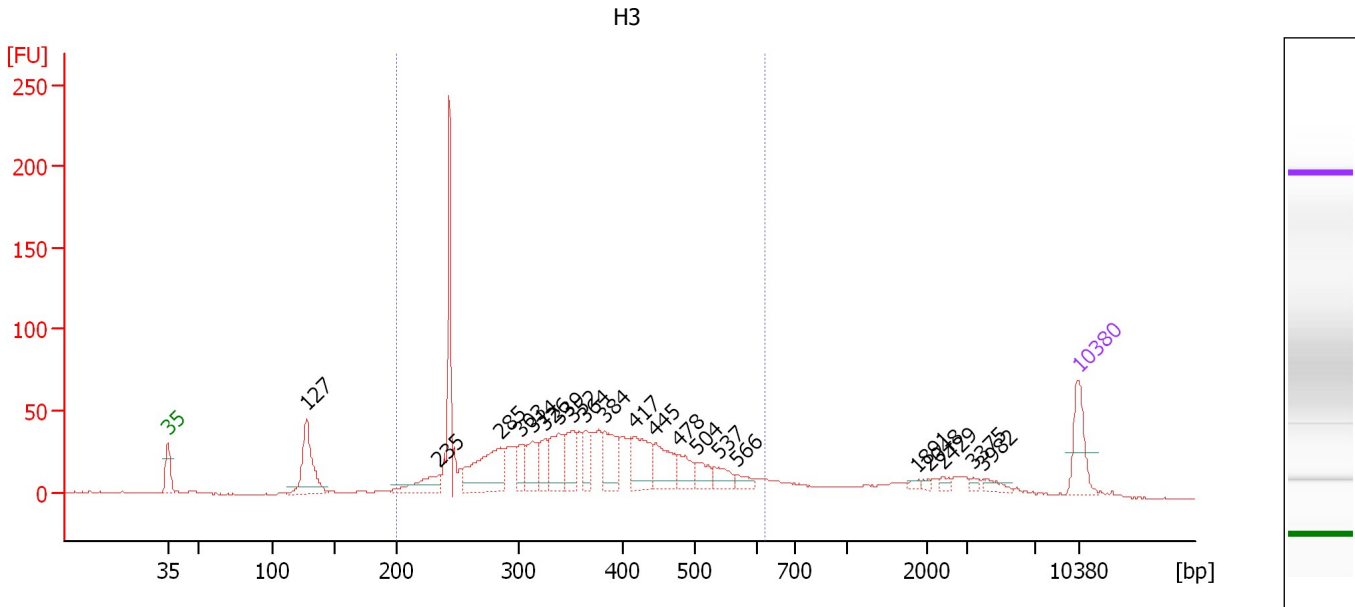
**Region table for sample 2 : G3**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	410	1,000	640.5	3,279.8	88	29.5	798.55

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
 Modified: 9/23/2015 2:54:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : H3**

Number of peaks found: 21                      Corr. Area 1: 1,051.7  
 Noise: 0.3


**Peak table for sample 3 : H3**

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	127	203.58	2,421.3		53.66
3	235	79.35	512.3		63.84
4	285	203.97	1,082.6		68.58
5	303	50.92	255.0		70.14
6	314	82.99	400.6		71.04
7	326	64.53	299.7		72.03
8	339	106.78	477.7		73.03
9	352	87.55	377.1		74.07
10	364	55.81	232.2		75.06
11	384	105.02	414.7		76.63
12	417	115.19	418.3		78.90
13	445	98.22	334.4		80.46
14	478	57.17	181.3		82.31
15	504	40.67	122.3		83.73
16	537	39.88	112.5		85.34
17	566	19.28	51.6		86.71
18	1,891	6.97	5.6		100.64
19	2,048	6.38	4.7		101.44
20	2,429	8.84	5.5		102.63
21	3,375	7.42	3.3		104.90
22	3,982	16.12	6.1		105.71
23	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
Modified: 9/23/2015 2:54:53 PM

**Electropherogram Summary Continued ...****... Region table for sample 3 :      H3**

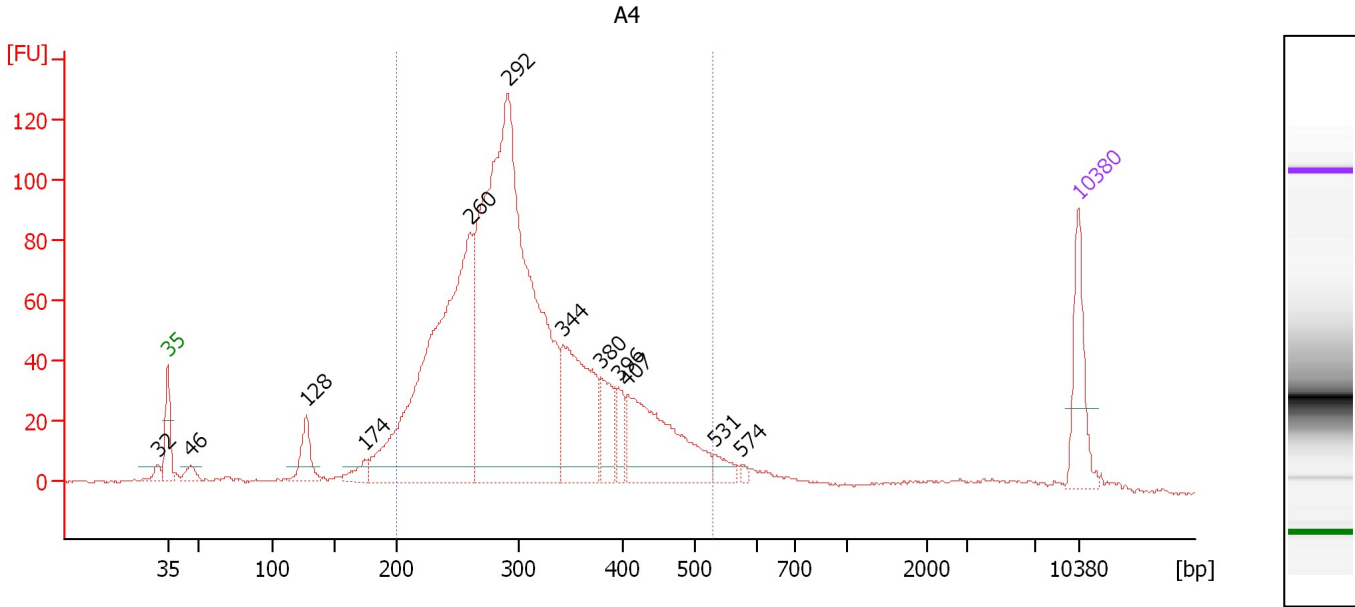
<b>From [bp]</b>	<b>Average Size [bp]</b>	<b>To [bp]</b>	<b>Corr. Area</b>	<b>Molarity [pmol/l]</b>	<b>Co % of lor Total</b>	<b>Size distribution in CV [%]</b>	<b>Conc. [pg/μl]</b>
200	369	620	1,051.7	8,826.8	 78	25.8	1,947.38



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
 Modified: 9/23/2015 2:54:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : A4**

Number of peaks found: 12                      Corr. Area 1: 1,798.7  
 Noise: 0.3

**Peak table for sample 4 : A4**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	32	0.00	0.0		42.23
2	35	125.00	5,411.3	Lower Marker	43.00
3	46	24.28	792.7		44.77
4	128	69.29	822.3		53.68
5	174	27.30	237.6		58.14
6	260	787.02	4,579.1		66.24
7	292	1,243.89	6,460.0		69.16
8	344	243.44	1,073.2		73.42
9	380	69.92	279.1		76.30
10	396	38.75	148.1		77.64
11	407	219.86	819.0		78.31
12	531	20.33	58.0		85.07
13	574	5.49	14.5		87.13
14	10,380	75.00	10.9	Upper Marker	113.00

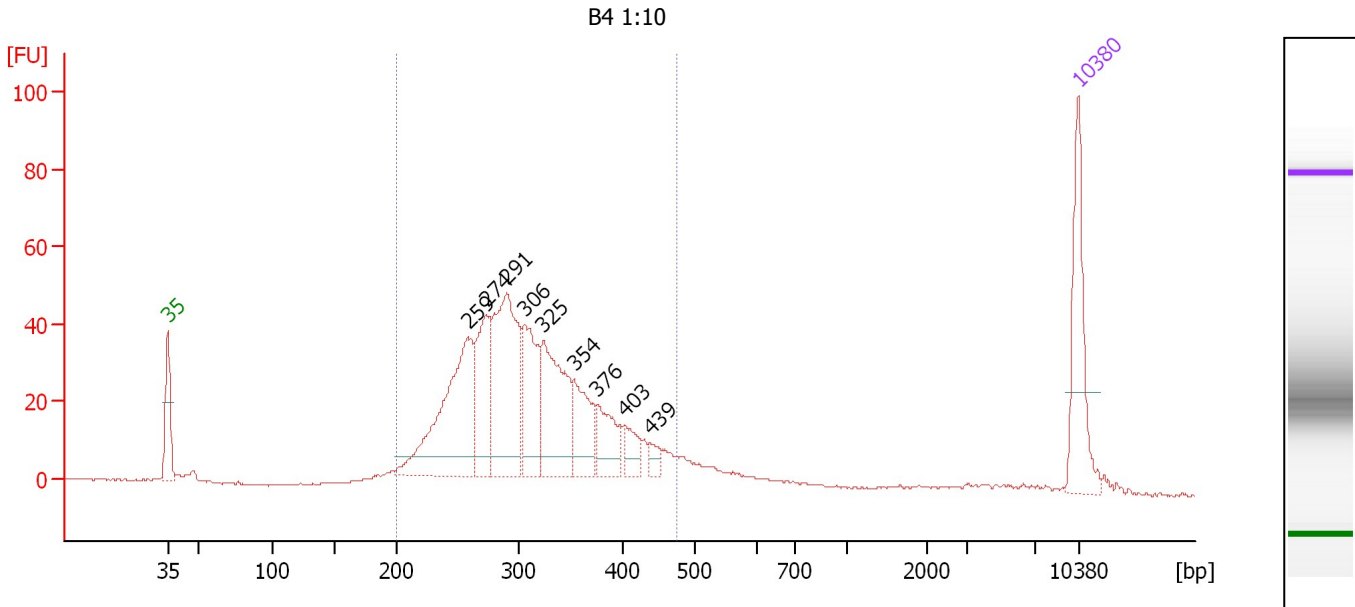
**Region table for sample 4 : A4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	312	528	1,798.7	13,765.9	85	22.4	2,674.34

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : B4 1:10**

Number of peaks found: 9                      Corr. Area 1: 803.9  
 Noise: 0.2

**Peak table for sample 5 : B4 1:10**

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	259	223.80	1,311.7		66.06
3	274	104.42	577.4		67.51
4	291	198.71	1,036.2		69.05
5	306	104.29	516.6		70.40
6	325	134.54	628.0		71.90
7	354	63.94	274.0		74.21
8	376	49.63	199.8		76.05
9	403	24.88	93.5		78.12
10	439	12.15	42.0		80.10
11	10,380	75.00	10.9	Upper Marker	113.00

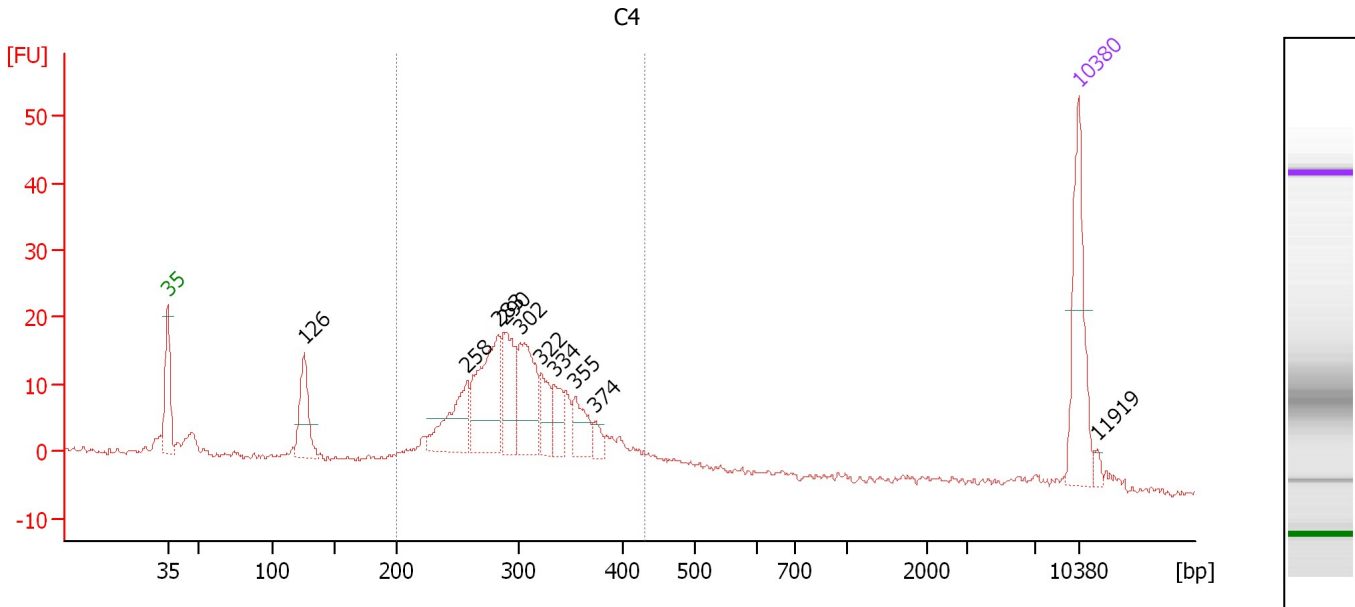
**Region table for sample 5 : B4 1:10**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	313	474	803.9	5,390.0	87	18.7	1,065.92

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
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**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : C4**

Number of peaks found: 10                      Corr. Area 1: 277.2  
 Noise: 0.4

**Peak table for sample 6 : C4**

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	126	70.07	844.8		53.49
3	258	73.55	431.9		66.01
4	283	115.36	616.8		68.38
5	290	68.69	359.4		68.96
6	302	91.26	458.2		70.07
7	322	33.90	159.4		71.72
8	334	28.38	128.6		72.68
9	355	33.72	143.9		74.33
10	374	11.60	47.1		75.82
11	10,380	75.00	10.9	Upper Marker	113.00
12	11,919	0.00	0.0		114.50

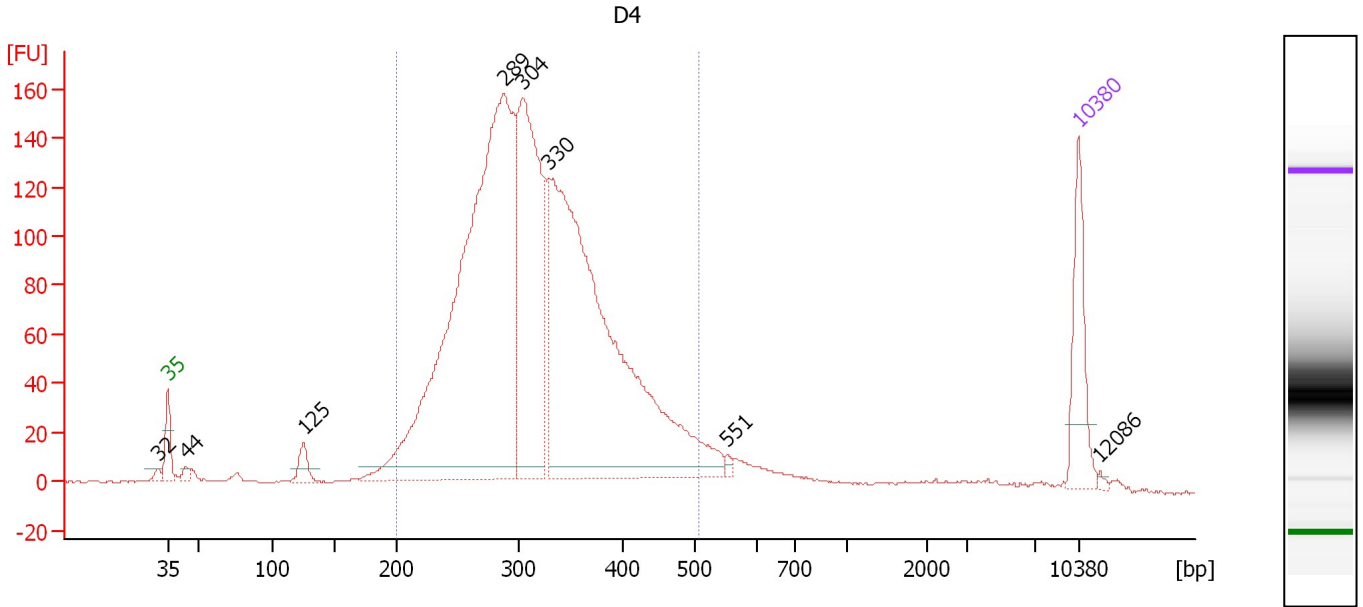
**Region table for sample 6 : C4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	305	430	277.2	3,297.7	75	15.4	644.72

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

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 Modified: 9/23/2015 2:54:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : D4**

Number of peaks found: 8                      Corr. Area 1: 2,727.3  
 Noise: 0.3

**Peak table for sample 7 : D4**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	32	0.00	0.0		42.22
2	35	125.00	5,411.3	Lower Marker	43.00
3	44	11.11	381.4		44.42
4	125	29.98	362.3		53.46
5	289	1,151.63	6,047.8		68.86
6	304	438.83	2,189.2		70.23
7	330	925.97	4,251.6		72.33
8	551	5.00	13.7		86.02
9	10,380	75.00	10.9	Upper Marker	113.00
10	12,086	0.00	0.0		114.66

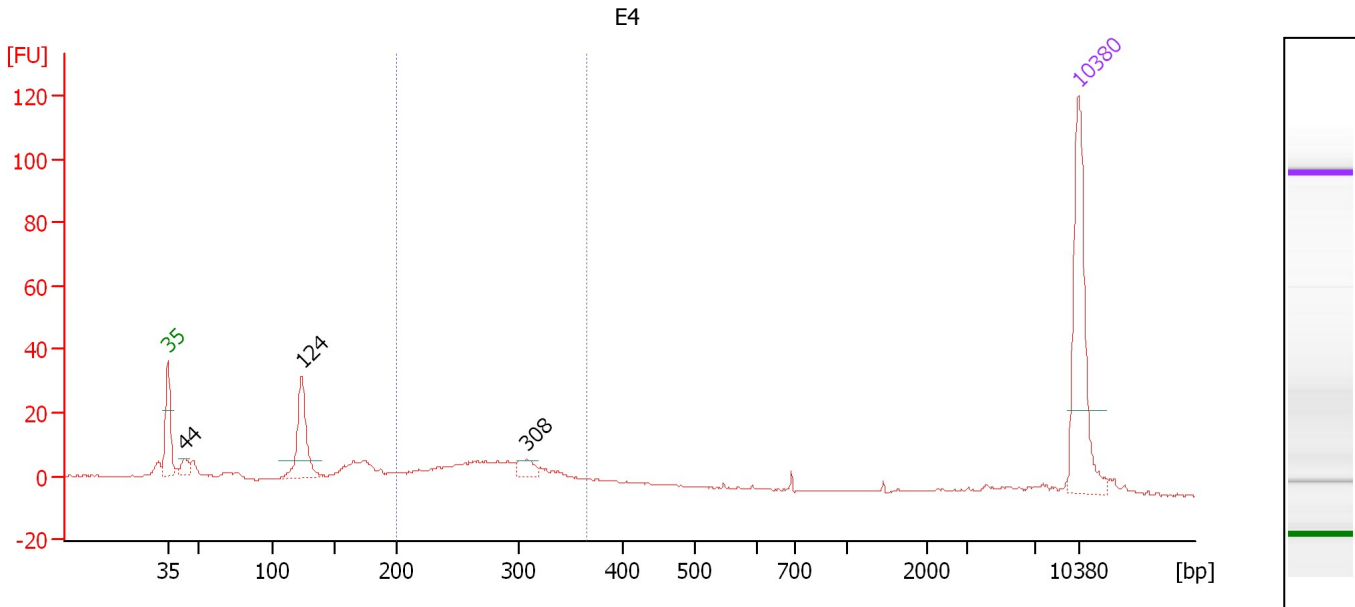
**Region table for sample 7 : D4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	320	506	2,727.3	12,814.9	89	19.3	2,585.20

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : E4**

Number of peaks found: 3                      Corr. Area 1: 110.7  
 Noise: 0.2

**Peak table for sample 8 : E4**

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	11.67	406.1		44.33
3	124	64.28	785.7		53.32
4	308	12.29	60.5		70.58
5	10,380	75.00	10.9	Upper Marker	113.00

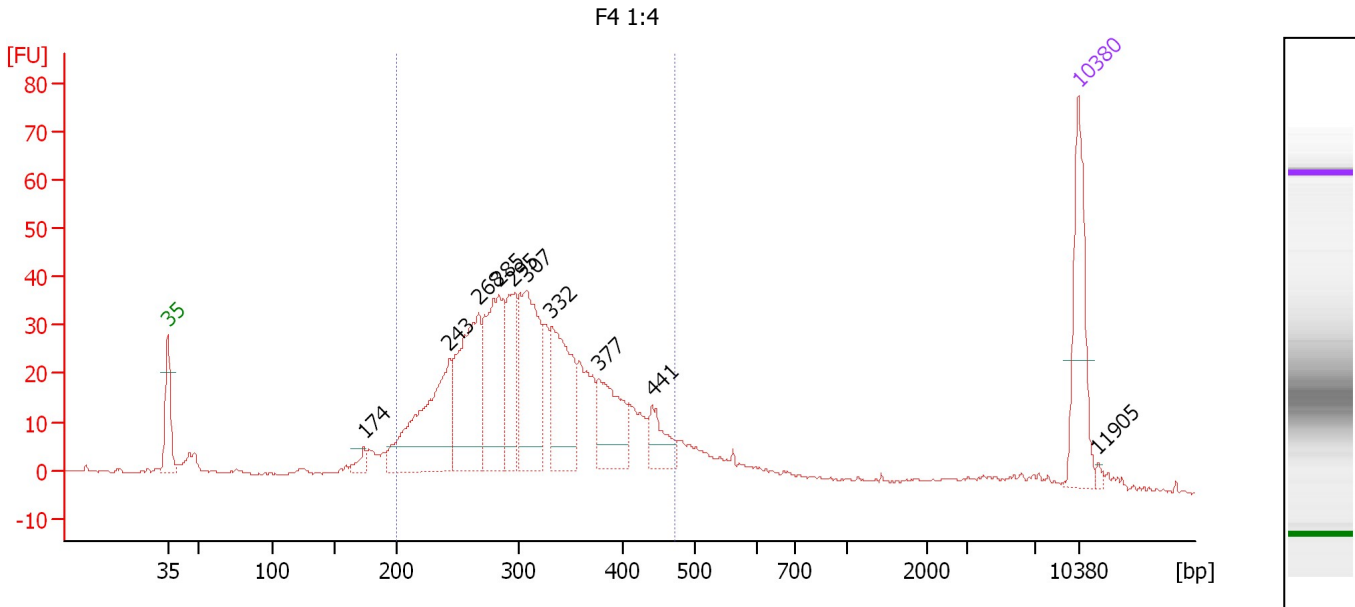
**Region table for sample 8 : E4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	279	365	110.7	638.6	39	14.3	115.26

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : F4 1:4**

Number of peaks found: 10                      Corr. Area 1: 743.0  
 Noise: 0.2

**Peak table for sample 9 : F4 1:4**

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	174	13.41	117.0		58.10
3	243	179.39	1,117.5		64.63
4	268	164.41	930.8		66.91
5	285	144.64	770.0		68.50
6	295	78.86	404.7		69.49
7	307	149.59	737.2		70.52
8	332	118.57	540.8		72.50
9	377	78.53	315.3		76.12
10	441	35.04	120.4		80.23
11	10,380	75.00	10.9	Upper Marker	113.00
12	11,905	0.00	0.0		114.49

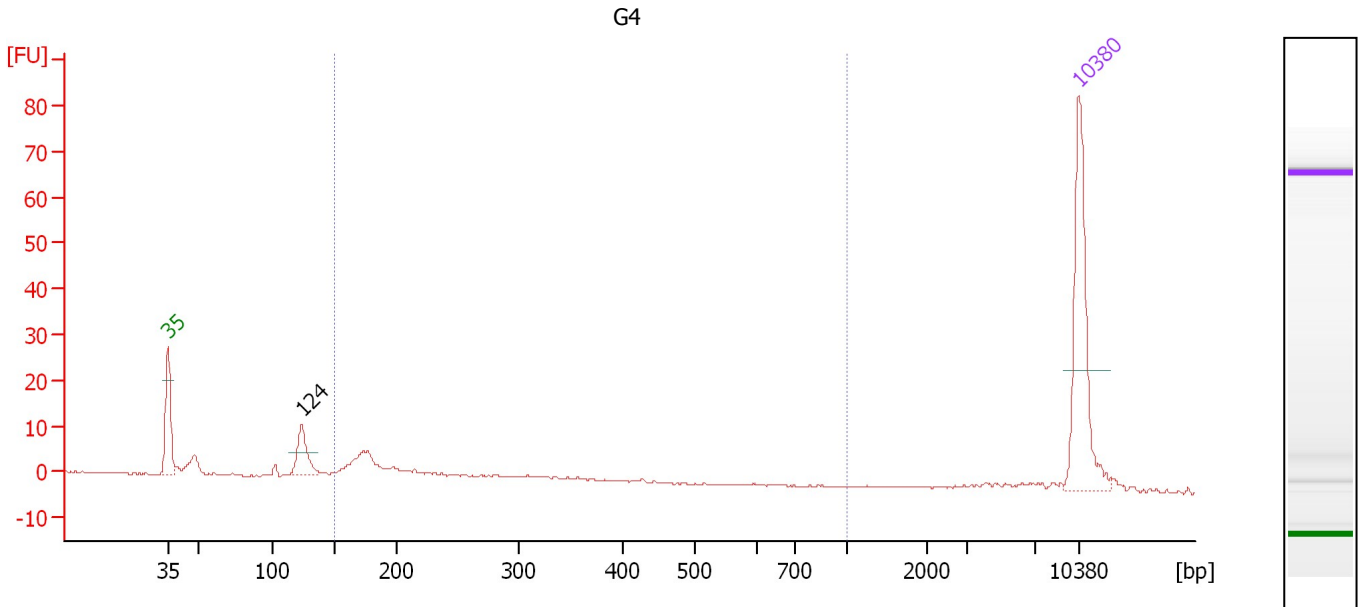
**Region table for sample 9 : F4 1:4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	315	473	743.0	6,126.3	80	19.7	1,211.10

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
 Modified: 9/23/2015 2:54:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : G4**

Number of peaks found: 1                      Corr. Area 1: 58.6  
 Noise: 0.2

**Peak table for sample 10 : G4**

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	124	34.22	419.6		53.29
3	10,380	75.00	10.9	Upper Marker	113.00

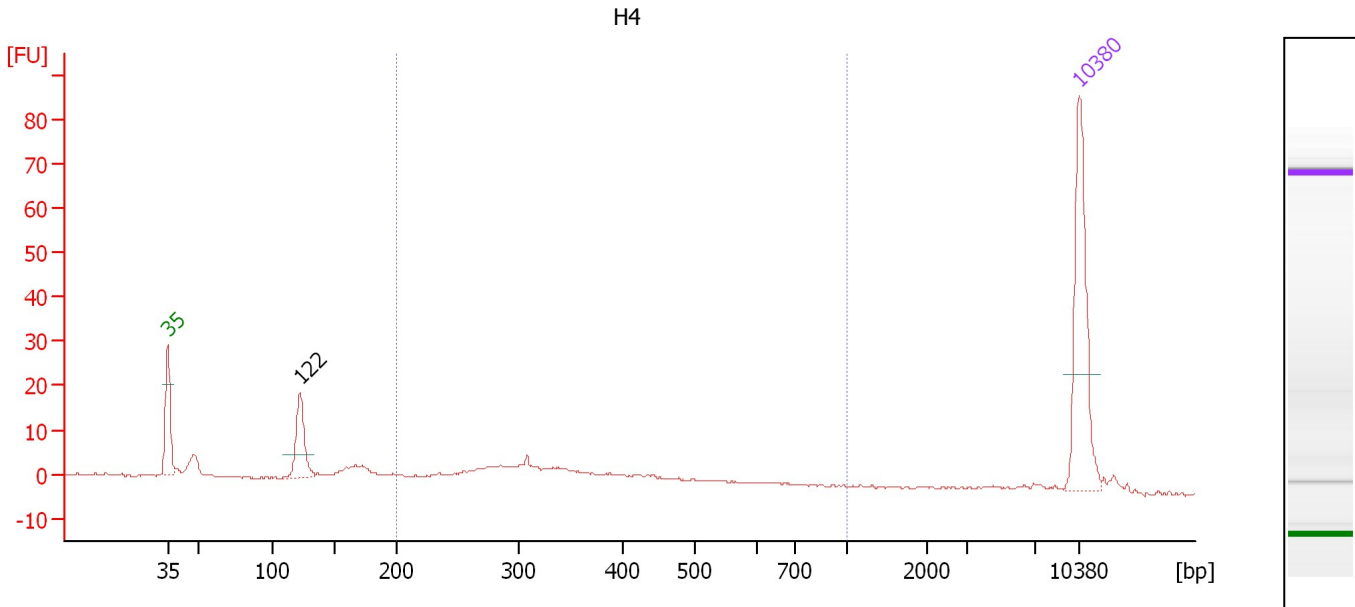
**Region table for sample 10 : G4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
150	275	1,000	58.6	639.0	50	52.1	92.31

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
 Modified: 9/23/2015 2:54:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : H4**

Number of peaks found: 1                      Corr. Area 1: 87.7  
 Noise: 0.2

**Peak table for sample 11 : H4**

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	122	49.12	609.2		53.15
3	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 11 : H4**

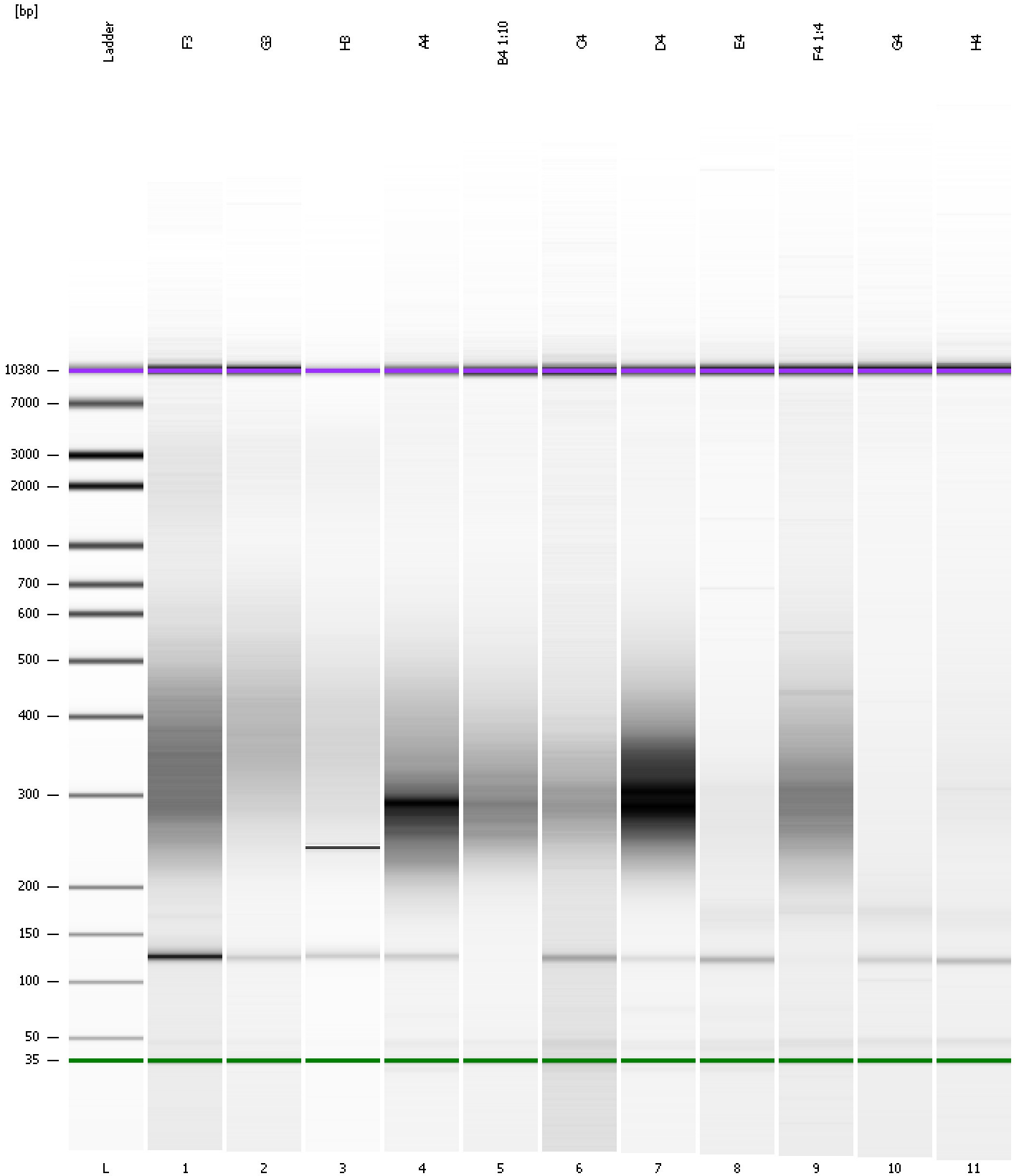
From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	382	1,000	87.7	562.4	52	37.0	123.09



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
Modified: 9/23/2015 2:54:53 PM

**Gel Image**

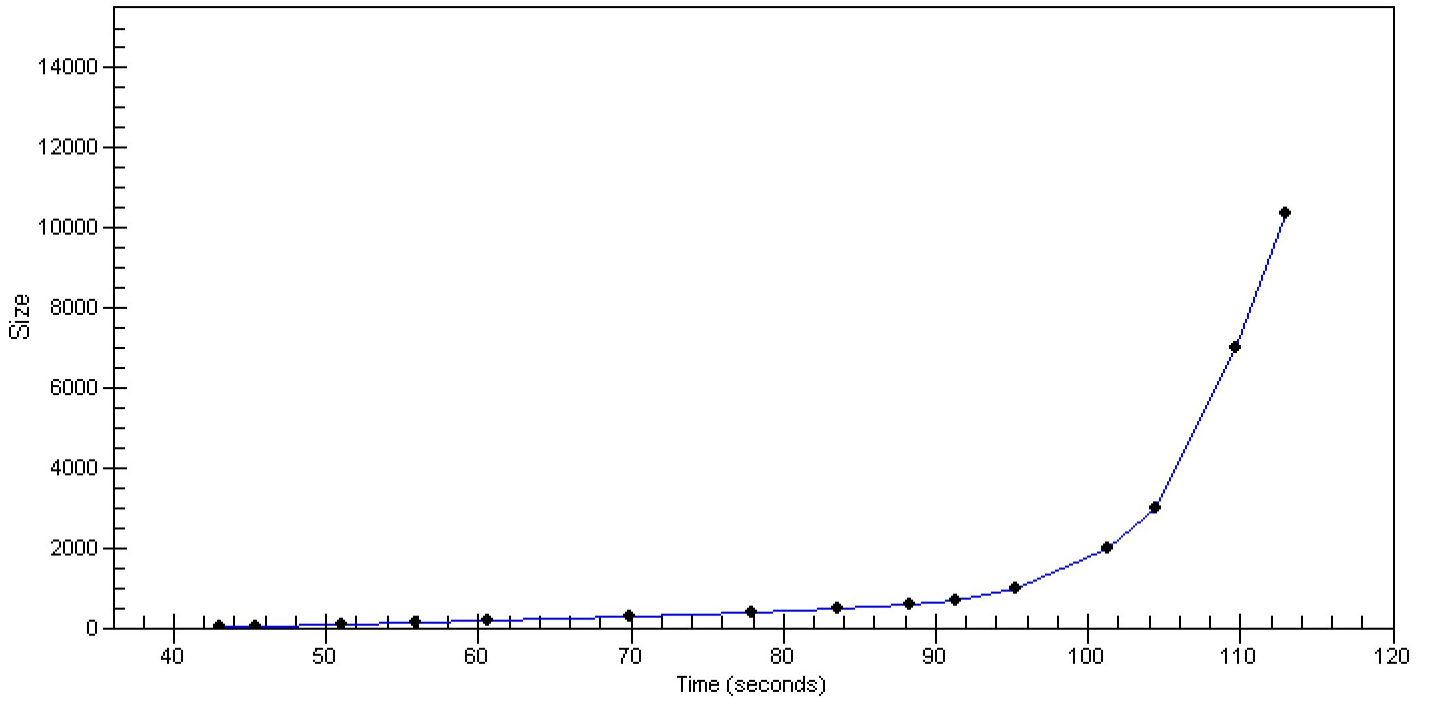


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
Modified: 9/23/2015 2:54:53 PM

**Curves**

**Standard Curve**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-23\2015-09-23\_003.xad

Created: 9/23/2015 2:03:28 PM  
 Modified: 9/23/2015 2:54:53 PM

**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		9/23/2015 2:44:45 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2015-09-23\2015-09-23_003.xad)		Instrument	Run		9/23/2015 2:03:33 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		9/23/2015 2:03:33 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		9/23/2015 2:03:33 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		9/23/2015 2:03:33 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		9/23/2015 2:03:33 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		9/23/2015 2:03:33 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		9/23/2015 2:03:33 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1