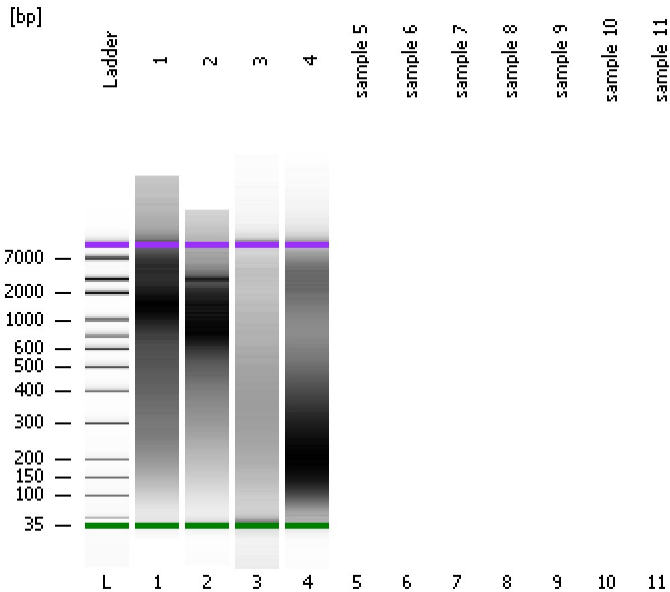


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
Modified: 4/23/2015 3:08:29 PM

**Electrophoresis File Run Summary**



Instrument Information:

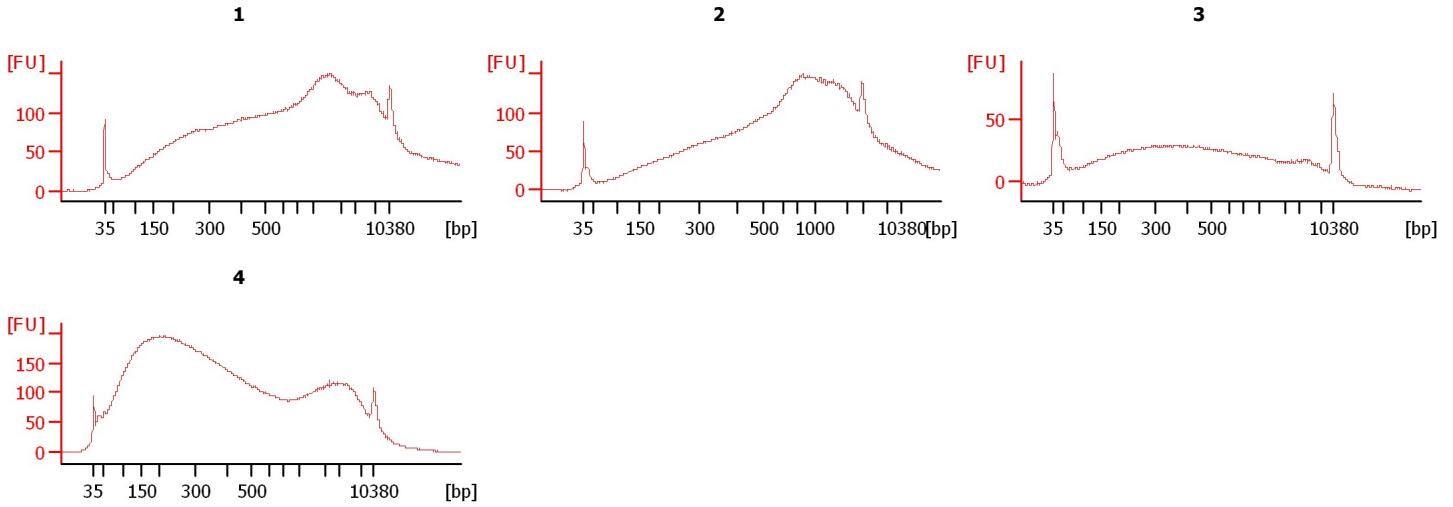
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

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:



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
Modified: 4/23/2015 3:08:29 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
1		<input type="checkbox"/>	✓			
2		<input type="checkbox"/>	✓			
3		<input type="checkbox"/>	✓			
4		<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:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
Modified: 4/23/2015 3:08:29 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

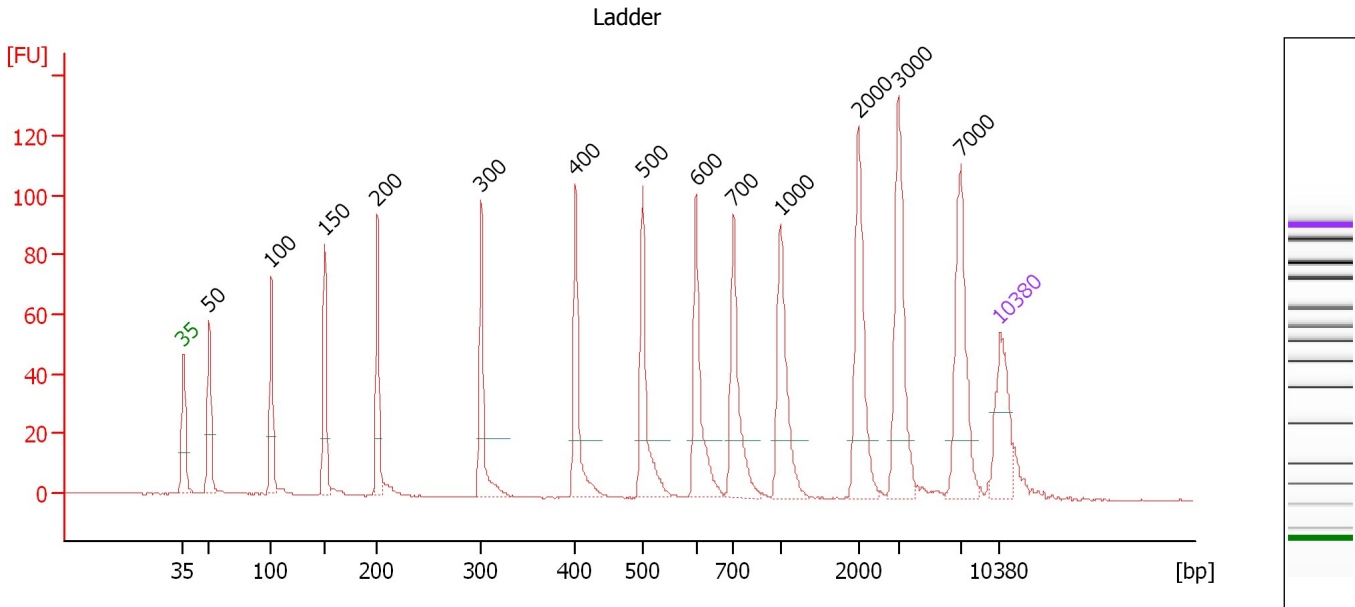
**Ladder**

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:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
 Modified: 4/23/2015 3:08:29 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.1

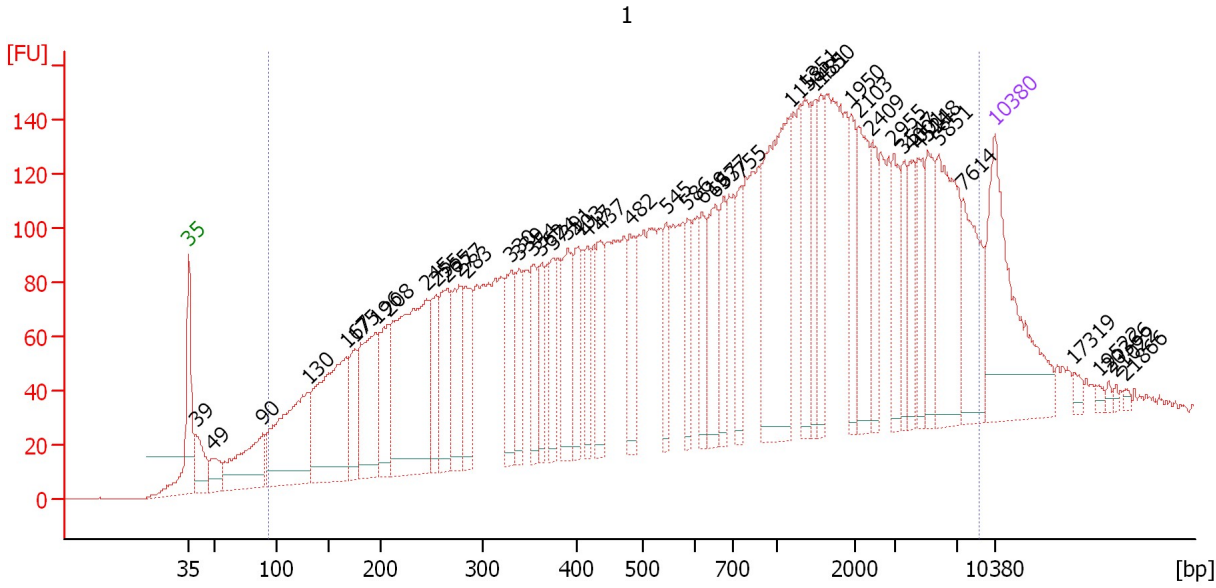
**Peak table for Ladder**

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	45.24
3	100	150.00	2,272.7	Ladder Peak	50.54
4	150	150.00	1,515.2	Ladder Peak	55.12
5	200	150.00	1,136.4	Ladder Peak	59.64
6	300	150.00	757.6	Ladder Peak	68.56
7	400	150.00	568.2	Ladder Peak	76.65
8	500	150.00	454.5	Ladder Peak	82.37
9	600	150.00	378.8	Ladder Peak	86.98
10	700	150.00	324.7	Ladder Peak	90.18
11	1,000	150.00	227.3	Ladder Peak	94.16
12	2,000	150.00	113.6	Ladder Peak	100.88
13	3,000	150.00	75.8	Ladder Peak	104.36
14	7,000	150.00	32.5	Ladder Peak	109.66
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
 Modified: 4/23/2015 3:08:29 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : 1**

Number of peaks found: 48                      Corr. Area 1: 6,085.6  
 Noise: 0.2

**Peak table for sample 1 : 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	39	32.18	1,249.2		43.60
3	49	18.58	571.6		45.13
4	90	65.07	1,100.9		49.44
5	130	113.82	1,322.5		53.32
6	167	130.34	1,182.4		56.66
7	175	33.22	287.3		57.40
8	196	79.97	619.3		59.25
9	208	47.89	349.6		60.31
10	245	159.96	989.5		63.65
11	255	36.36	216.2		64.53
12	265	52.49	300.5		65.41
13	277	49.21	269.5		66.47
14	283	37.37	199.8		67.07
15	330	41.21	189.0		71.01
16	339	28.61	127.9		71.70
17	354	30.01	128.3		72.95
18	362	25.62	107.1		73.60
19	374	25.53	103.4		74.57
20	391	38.64	149.8		75.92
21	403	32.60	122.7		76.80
22	417	24.79	90.1		77.63
23	437	32.39	112.4		78.74
24	482	29.90	94.0		81.33
25	545	23.19	64.5		84.44

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad


Created: 4/23/2015 2:47:07 PM  
 Modified: 4/23/2015 3:08:29 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 1 : 1**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	586	22.13	57.2		86.33
27	619	23.83	58.4		87.58
28	653	38.22	88.6		88.69
29	677	23.33	52.2		89.44
30	755	23.64	47.4		90.92
31	1,158	99.65	130.4		95.22
32	1,351	31.08	34.9		96.52
33	1,481	24.60	25.2		97.40
34	1,550	24.56	24.0		97.86
35	1,950	25.92	20.1		100.55
36	2,103	36.44	26.3		101.24
37	2,409	24.35	15.3		102.31
38	2,955	23.93	12.3		104.20
39	3,547	17.03	7.3		105.08
40	4,001	18.43	7.0		105.69
41	4,524	19.76	6.6		106.38
42	5,118	27.77	8.2		107.17
43	5,851	59.74	15.5		108.14
44	7,614	40.46	8.1		110.27
45	10,380	75.00	10.9	Upper Marker	113.00
46	17,319	0.00	0.0		119.85
47	19,522	0.00	0.0		122.03
48	20,366	0.00	0.0		122.86
49	21,022	0.00	0.0		123.51
50	21,866	0.00	0.0		124.34

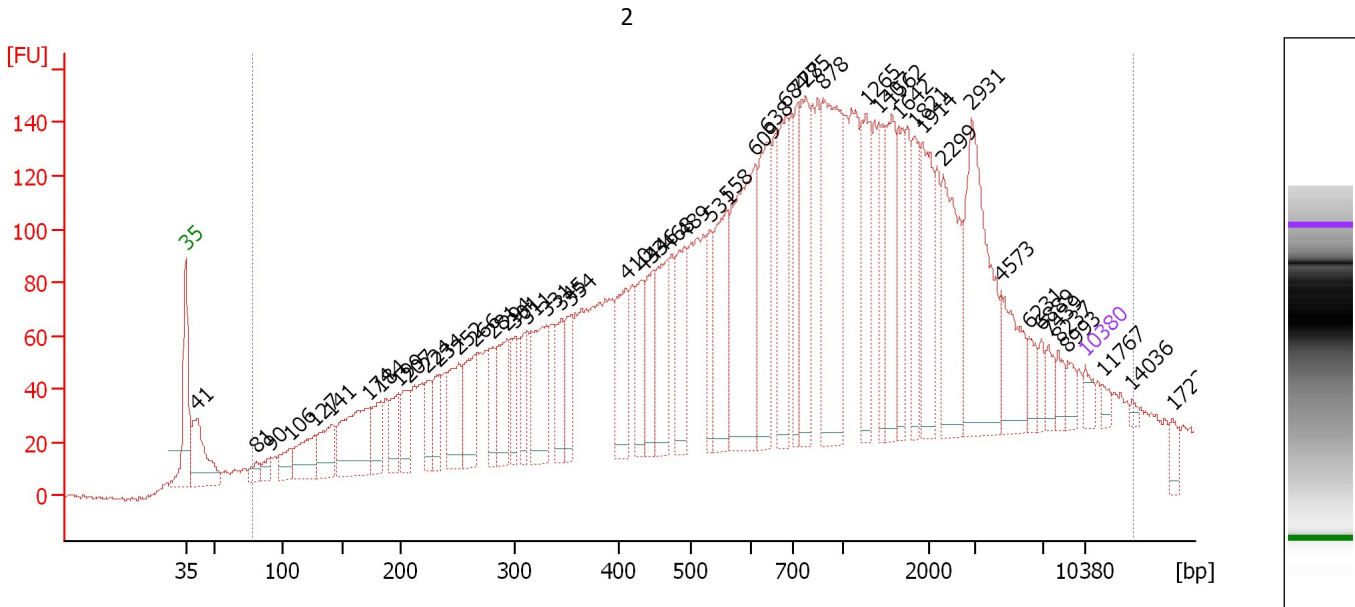
**Region table for sample 1 : 1**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
93	1,495	8,984	6,085.6	10,073.2	95	100.0	2,394.21	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : 2**

Number of peaks found: 51                      Corr. Area 1: 5,611.4  
 Noise: 0.8

**Peak table for sample 2 : 2**

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	41	797.89	29,605.8		43.87
3	81	117.11	2,203.8		48.48
4	90	129.14	2,167.0		49.51
5	106	216.73	3,085.1		51.13
6	127	474.62	5,668.7		53.00
7	141	455.42	4,880.7		54.33
8	174	948.81	8,269.9		57.27
9	184	340.43	2,804.6		58.19
10	199	322.48	2,460.5		59.51
11	207	333.48	2,441.7		60.26
12	224	259.16	1,751.7		61.80
13	234	281.33	1,822.1		62.67
14	252	544.18	3,276.9		64.24
15	266	565.37	3,225.5		65.49
16	281	316.74	1,705.4		66.90
17	294	550.16	2,840.1		67.98
18	301	279.97	1,409.1		68.64
19	311	300.74	1,463.7		69.47
20	331	718.41	3,290.7		71.05
21	345	340.90	1,498.7		72.17
22	354	364.85	1,560.0		72.96
23	410	565.03	2,087.2		77.23
24	433	383.89	1,344.3		78.52
25	446	441.79	1,499.3		79.31

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad


Created: 4/23/2015 2:47:07 PM  
 Modified: 4/23/2015 3:08:29 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 2 : 2**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	468	600.42	1,945.9		80.51
27	489	577.45	1,788.1		81.76
28	531	333.90	953.1		83.79
29	558	753.48	2,046.9		85.03
30	609	1,461.52	3,635.9		87.27
31	638	788.26	1,873.3		88.19
32	684	688.25	1,524.0		89.68
33	728	458.20	954.0		90.55
34	775	696.87	1,363.1		91.17
35	878	1,349.34	2,328.8		92.54
36	1,265	514.37	615.9		95.95
37	1,407	336.62	362.4		96.90
38	1,562	528.19	512.4		97.94
39	1,642	387.68	357.7		98.48
40	1,821	316.74	263.5		99.68
41	1,914	526.35	416.8		100.30
42	2,299	698.35	460.3		101.92
43	2,931	1,095.92	566.4		104.12
44	4,573	407.38	135.0		106.44
45	6,231	117.67	28.6		108.64
46	6,889	77.37	17.0		109.51
47	7,439	101.83	20.7		110.10
48	8,237	85.85	15.8		110.88
49	8,993	91.62	15.4		111.63
50	10,380	75.00	10.9	Upper Marker	113.00
51	11,767	0.00	0.0		114.37
52	14,036	0.00	0.0		116.61
53	17,229	0.00	0.0		119.76

**Region table for sample 2 : 2**

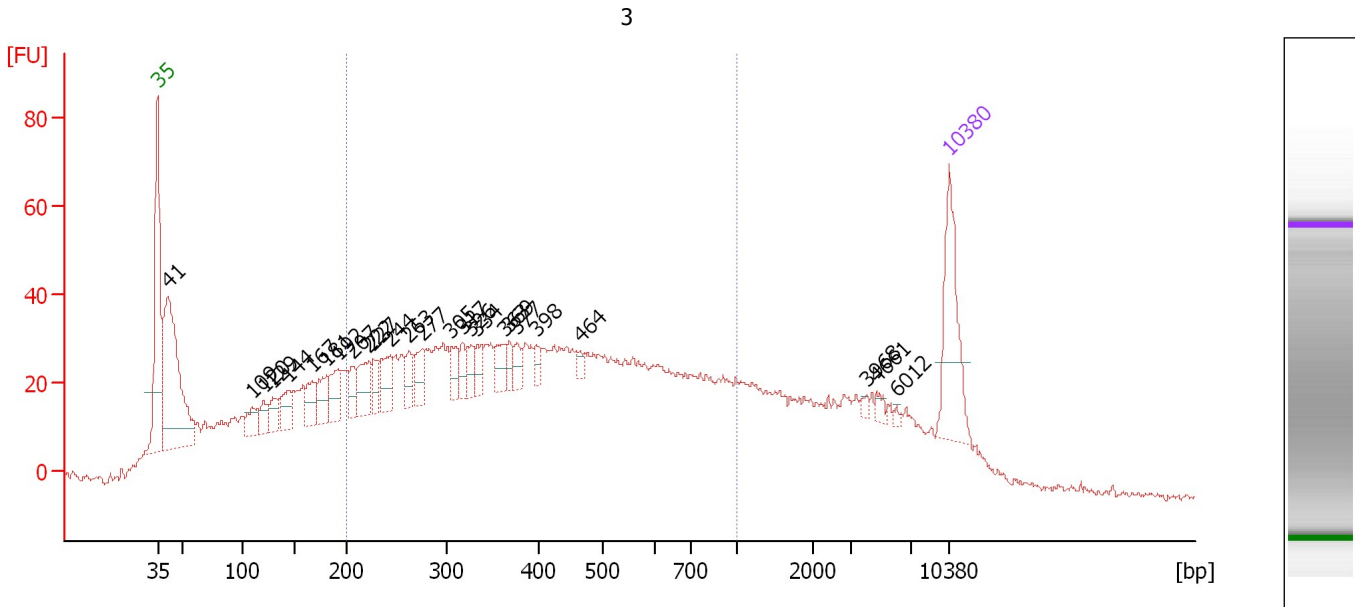
From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
78	1,458	14,149	5,611.4	122,386.5	97	100.0	32,226.90	



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
 Modified: 4/23/2015 3:08:29 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : 3**

Number of peaks found: 26                      Corr. Area 1: 1,327.2  
 Noise: 0.9

**Peak table for sample 3 : 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	41	283.92	10,452.0		43.92
3	109	26.77	371.8		51.37
4	120	20.48	258.1		52.39
5	129	25.58	301.2		53.17
6	144	32.97	346.8		54.57
7	167	30.32	274.3		56.70
8	181	37.06	309.6		57.96
9	192	36.44	287.5		58.93
10	207	23.61	172.7		60.28
11	222	40.62	276.8		61.64
12	227	22.38	149.2		62.07
13	244	39.81	247.1		63.57
14	263	22.27	128.5		65.22
15	277	26.17	143.3		66.48
16	305	21.89	108.6		69.00
17	317	17.41	83.3		69.92
18	326	17.94	83.3		70.69
19	334	19.55	88.8		71.27
20	363	22.75	94.9		73.69
21	369	13.74	56.4		74.13
22	377	14.66	59.0		74.76
23	398	10.82	41.2		76.45
24	464	7.13	23.3		80.32
25	3,968	3.56	1.4		105.64

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad


Created: 4/23/2015 2:47:07 PM  
 Modified: 4/23/2015 3:08:29 PM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 3 : 3

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	4,661	5.86	1.9		106.56
27	6,012	2.31	0.6		108.35
28	10,380	75.00	10.9	Upper Marker	113.00

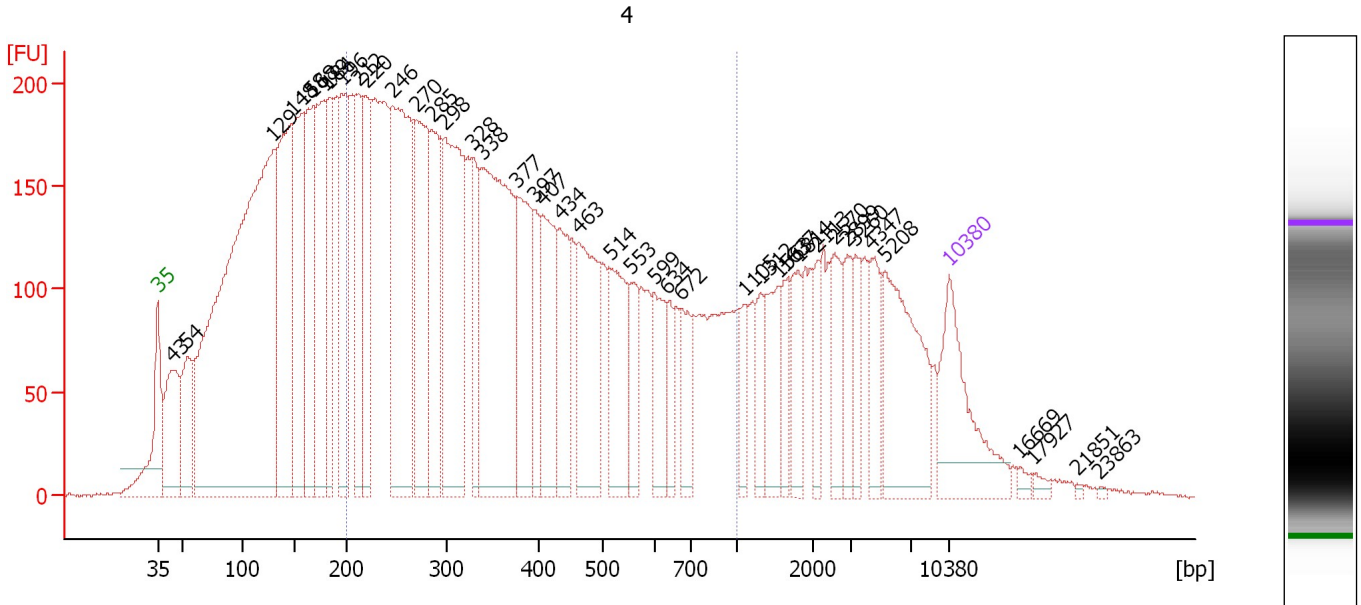
#### Region table for sample 3 : 3

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Color
200	443	1,000	1,327.2	8,760.2	57	41.9	2,041.10	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
 Modified: 4/23/2015 3:08:29 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : 4**

Number of peaks found: 42                      Corr. Area 1: 6,545.3  
 Noise: 0.9

**Peak table for sample 4 : 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	43	114.78	4,014.8		44.24
3	54	83.94	2,368.2		45.63
4	129	912.12	10,678.5		53.23
5	148	256.89	2,631.9		54.92
6	158	164.37	1,573.3		55.87
7	168	162.57	1,464.7		56.76
8	179	150.85	1,279.7		57.71
9	184	116.52	959.0		58.20
10	196	145.16	1,121.2		59.30
11	212	100.35	716.3		60.74
12	220	97.69	672.6		61.43
13	246	277.70	1,712.5		63.72
14	270	173.19	973.1		65.85
15	285	122.08	648.4		67.24
16	298	211.40	1,074.6		68.39
17	328	67.55	312.1		70.82
18	338	293.42	1,313.8		71.67
19	377	106.34	427.3		74.80
20	397	45.66	174.4		76.39
21	407	103.85	386.9		77.03
22	434	69.08	241.4		78.57
23	463	124.99	408.9		80.26
24	514	88.39	260.8		82.99
25	553	37.78	103.4		84.83

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad


Created: 4/23/2015 2:47:07 PM  
 Modified: 4/23/2015 3:08:29 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 4 : 4**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	599	50.64	128.2		86.92
27	634	24.66	59.0		88.06
28	672	38.26	86.2		89.30
29	1,105	23.38	32.1		94.87
30	1,312	23.49	27.1		96.26
31	1,563	46.00	44.6		97.95
32	1,637	23.80	22.0		98.44
33	1,814	33.31	27.8		99.64
34	2,113	20.84	14.9		101.28
35	2,570	33.85	20.0		102.87
36	2,899	28.74	15.0		104.01
37	3,260	23.87	11.1		104.70
38	4,347	35.51	12.4		106.14
39	5,208	105.58	30.7		107.29
40	10,380	75.00	10.9	Upper Marker	113.00
41	16,669	0.00	0.0		119.21
42	17,927	0.00	0.0		120.45
43	21,851	0.00	0.0		124.33
44	23,863	0.00	0.0		126.31

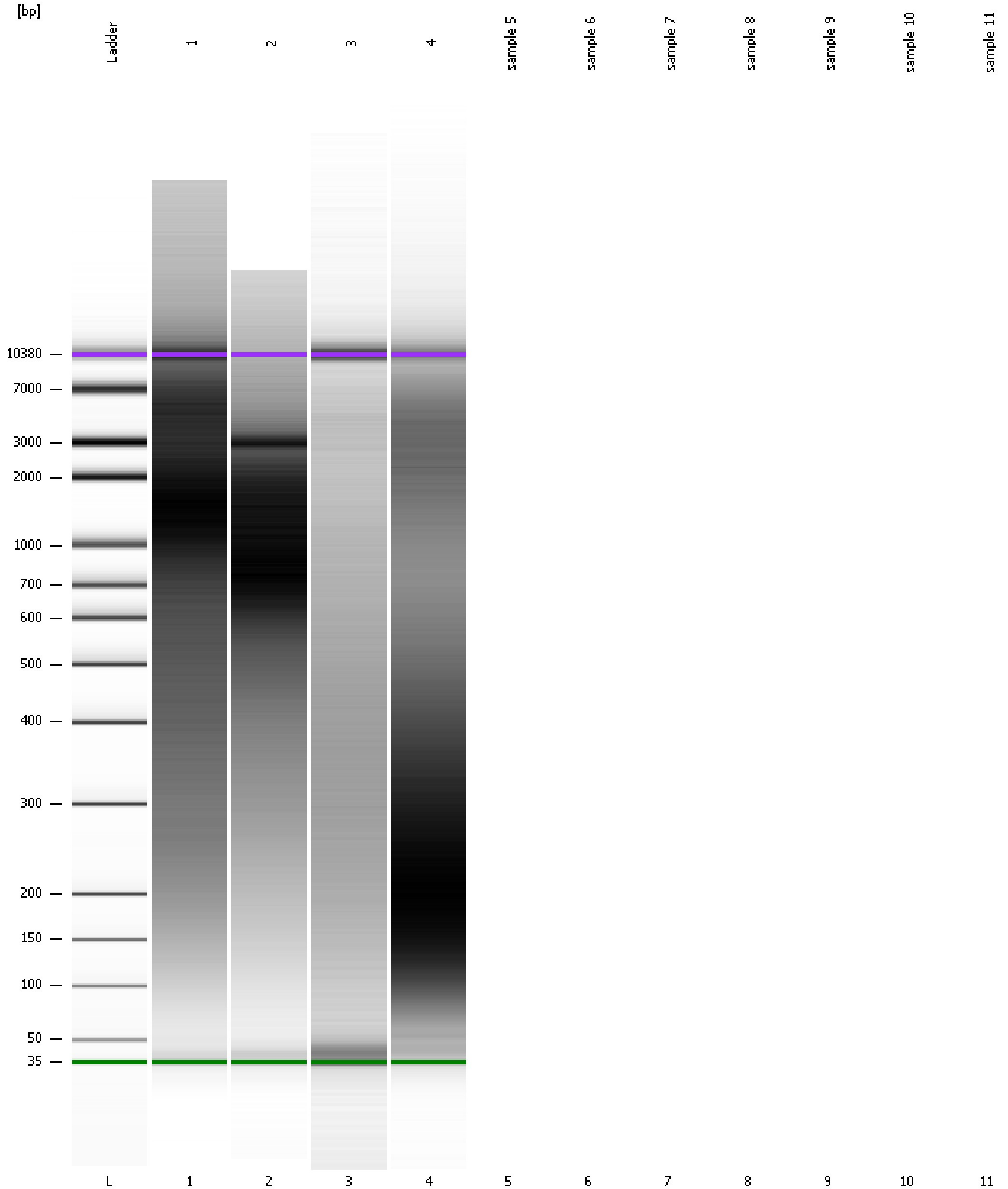
**Region table for sample 4 : 4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	404	1,000	6,545.3	12,681.6	52	43.8	2,715.32	

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
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**Gel Image**



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
Modified: 4/23/2015 3:08:29 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  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-23\2015-04-23\_006.xad

Created: 4/23/2015 2:47:07 PM  
 Modified: 4/23/2015 3:08:29 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		4/23/2015 3:08:26 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2015-04-23\2015-04-23_006.xad)		Instrument	Run		4/23/2015 2:47:13 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		4/23/2015 2:47:13 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		4/23/2015 2:47:13 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		4/23/2015 2:47:13 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		4/23/2015 2:47:13 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		4/23/2015 2:47:13 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		4/23/2015 2:47:13 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1