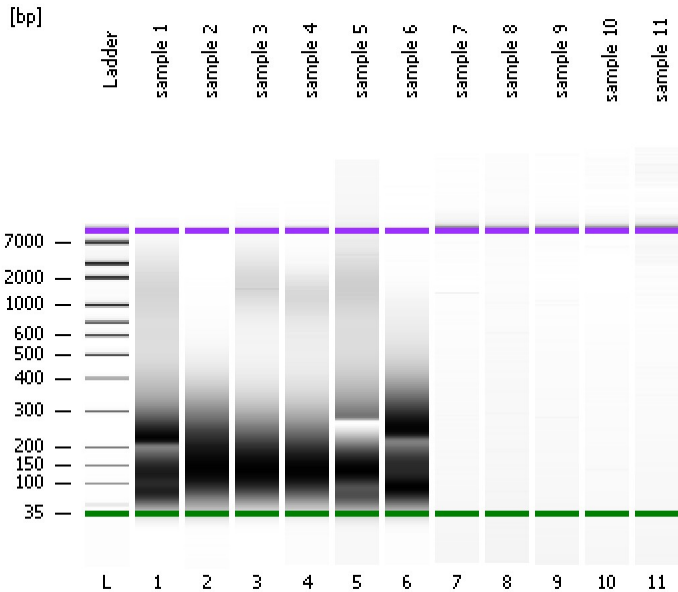


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
Modified: 5/30/2013 1:41:13 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

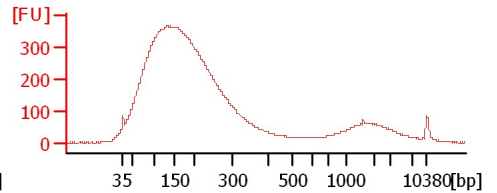
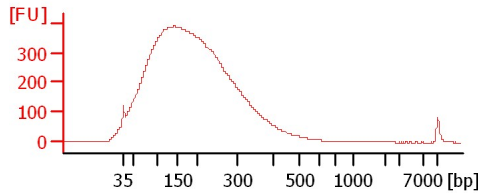
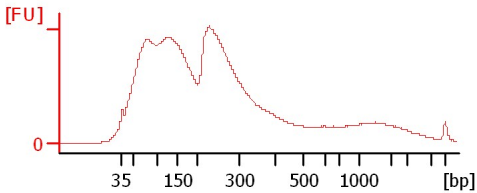
Chip Information:

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

sample 1

sample 2

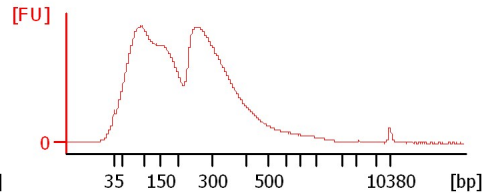
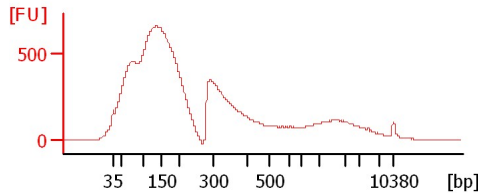
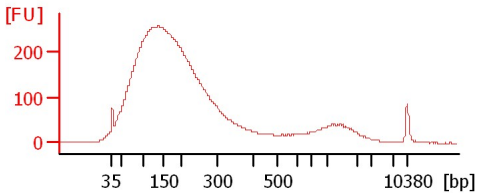
sample 3



sample 4

sample 5

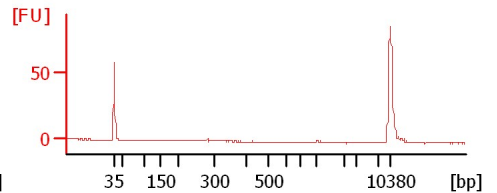
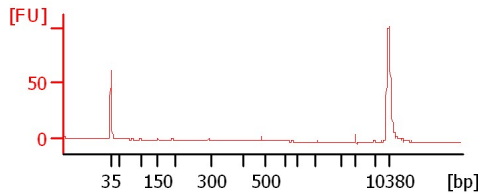
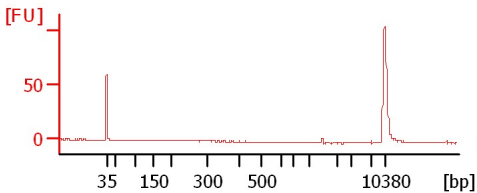
sample 6



sample 7

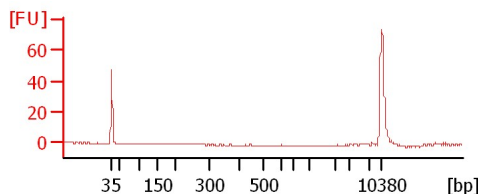
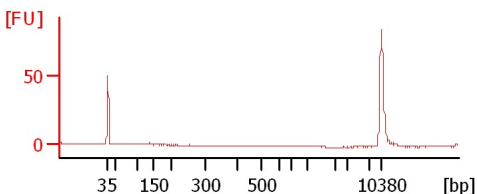
sample 8

sample 9



sample 10

sample 11



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 1		<input type="checkbox"/>	✓			
sample 2		<input type="checkbox"/>	✓			
sample 3		<input type="checkbox"/>	✓			
sample 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\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
Modified: 5/30/2013 1:41:13 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

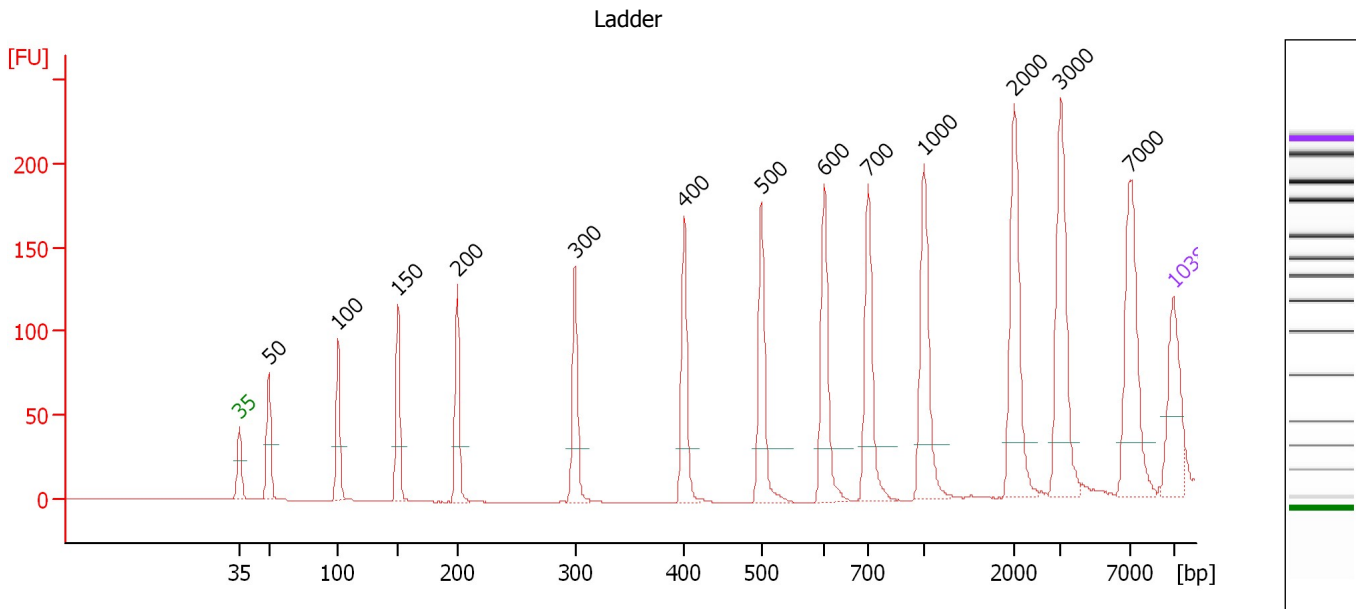
**Ladder**

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\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

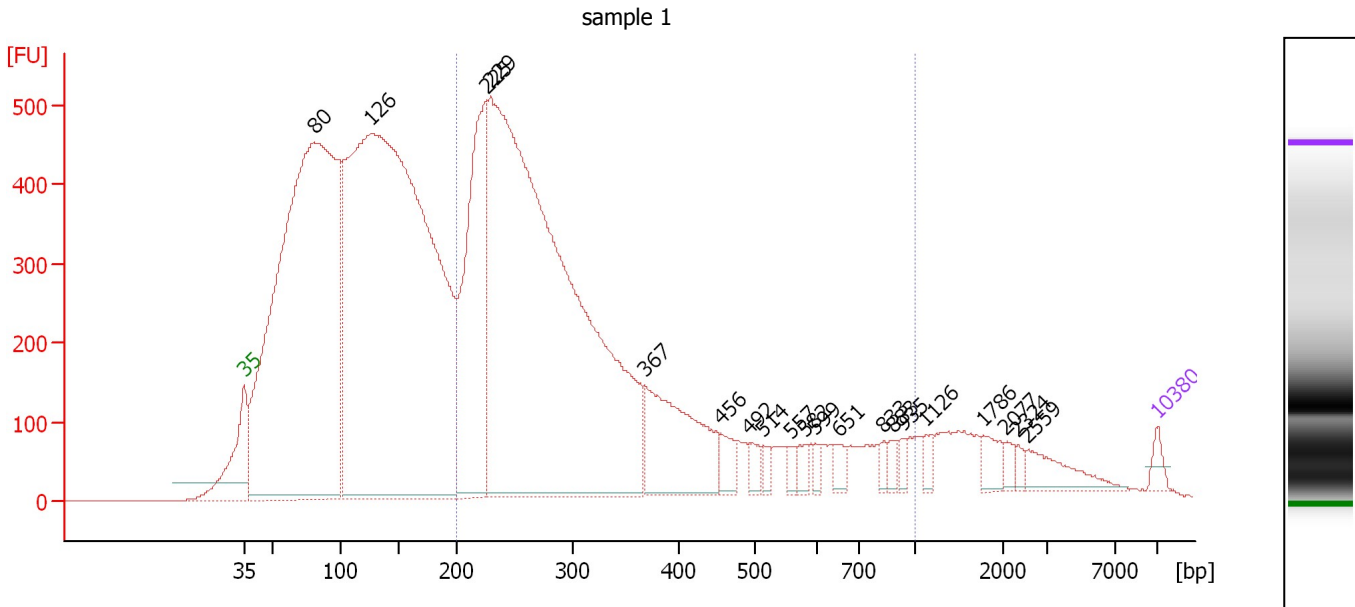
**Peak table for Ladder**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	150.00	4,545.5	Ladder Peak
3	100	150.00	2,272.7	Ladder Peak
4	150	150.00	1,515.2	Ladder Peak
5	200	150.00	1,136.4	Ladder Peak
6	300	150.00	757.6	Ladder Peak
7	400	150.00	568.2	Ladder Peak
8	500	150.00	454.5	Ladder Peak
9	600	150.00	378.8	Ladder Peak
10	700	150.00	324.7	Ladder Peak
11	1,000	150.00	227.3	Ladder Peak
12	2,000	150.00	113.6	Ladder Peak
13	3,000	150.00	75.8	Ladder Peak
14	7,000	150.00	32.5	Ladder Peak
15	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : sample 1**

Number of peaks found: 20                      Corr. Area 1: 9,472.7  
 Noise: 0.2

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	80	13,089.53	247,548.2	
3	126	16,503.65	198,415.2	
4	225	3,182.92	21,397.7	
5	229	12,589.60	83,437.2	
6	367	1,515.39	6,248.1	
7	456	200.10	665.2	
8	492	125.87	387.3	
9	514	76.87	226.6	
10	557	95.18	258.7	
11	582	97.90	254.7	
12	599	60.27	152.5	
13	651	117.49	273.3	
14	833	61.52	111.9	
15	883	74.57	128.0	
16	935	61.65	99.9	
17	1,126	88.01	118.4	
18	1,786	146.76	124.5	
19	2,077	72.31	52.8	
20	2,324	56.71	37.0	
21	2,559	260.21	154.1	
22	10,380	75.00	10.9	Upper Marker

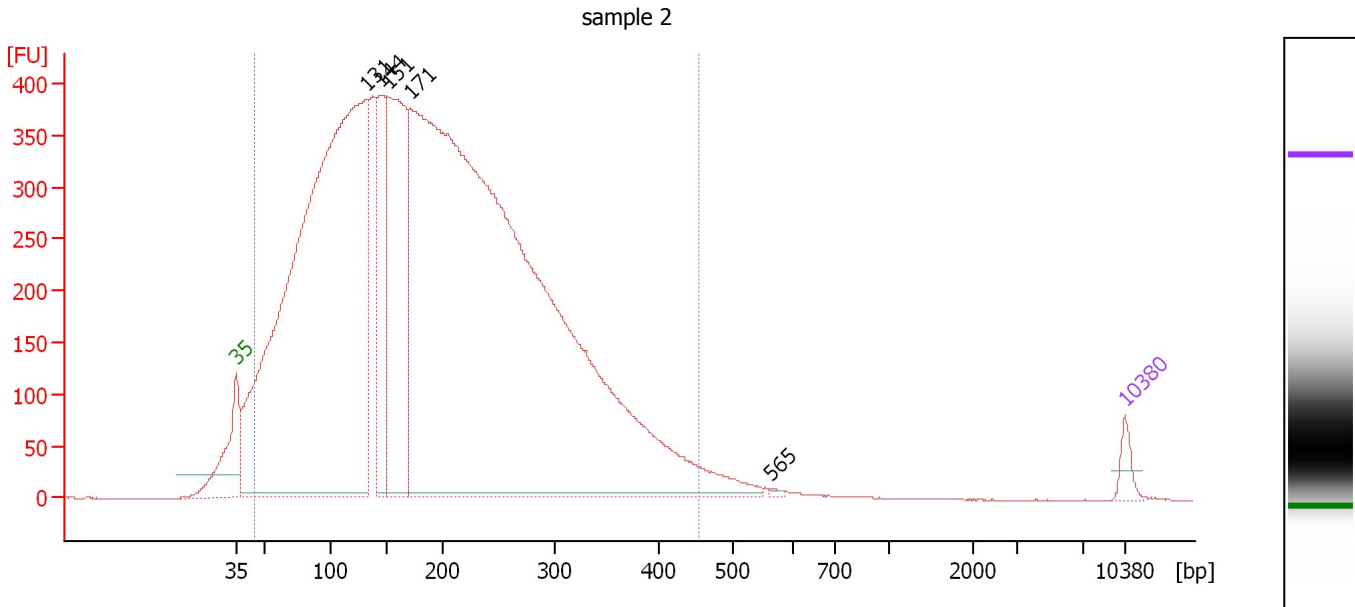
**Region table for sample 1 : sample 1**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	341	94,602.6	17,838.73	9,472.7	42	45.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : sample 2**

Number of peaks found: 5                      Corr. Area 1: 14,944.4  
 Noise: 0.3

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	131	10,926.89	125,950.9	
3	144	1,199.21	12,607.9	
4	151	2,570.72	25,767.0	
5	171	16,992.64	150,940.0	
6	565	11.31	30.4	
7	10,380	75.00	10.9	Upper Marker

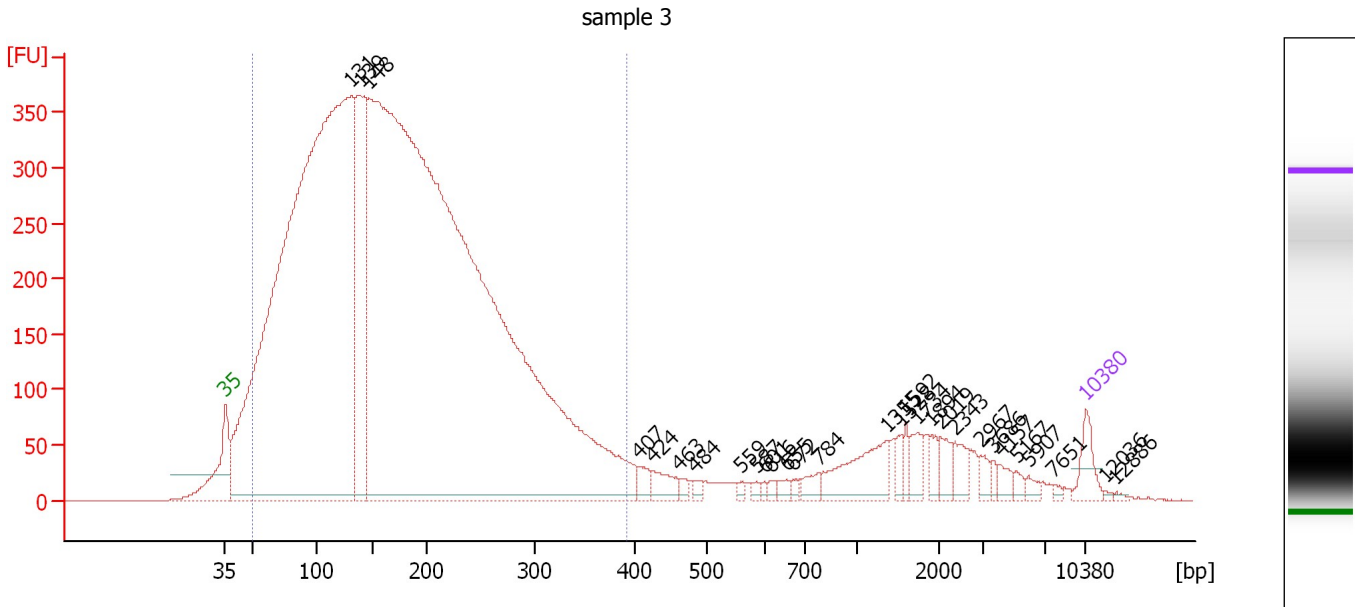
**Region table for sample 2 : sample 2**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
45	453	192	332,754.4	29,954.87	14,944.4	97	46.1	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : sample 3**

Number of peaks found: 29      Corr. Area 1: 12,145.2  
 Noise: 0.2

**Peak table for sample 3 : sample 3**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	131	8,388.84	96,782.0	
3	139	1,165.73	12,699.3	
4	148	12,956.17	132,812.8	
5	407	52.43	195.4	
6	424	83.41	297.7	
7	463	22.30	73.0	
8	484	21.78	68.2	
9	559	13.10	35.5	
10	587	16.31	42.1	
11	601	12.32	31.1	
12	616	18.92	46.5	
13	655	24.85	57.5	
14	672	14.03	31.6	
15	784	45.97	88.9	
16	1,355	219.42	245.4	
17	1,528	35.69	35.4	
18	1,592	34.73	33.1	
19	1,734	60.56	52.9	
20	1,894	42.66	34.1	
21	2,019	57.41	43.1	
22	2,343	57.55	37.2	
23	2,967	34.72	17.7	
24	3,686	18.78	7.7	
25	4,157	33.87	12.3	
26	5,167	19.04	5.6	


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...****... Peak table for sample 3 : sample 3**

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations
27	5,907	20.87	5.4	
28	7,651	9.27	1.8	
29	10,380	75.00	10.9	Upper Marker
30	12,036	0.00	0.0	
31	12,886	0.00	0.0	

**Region table for sample 3 : sample 3**

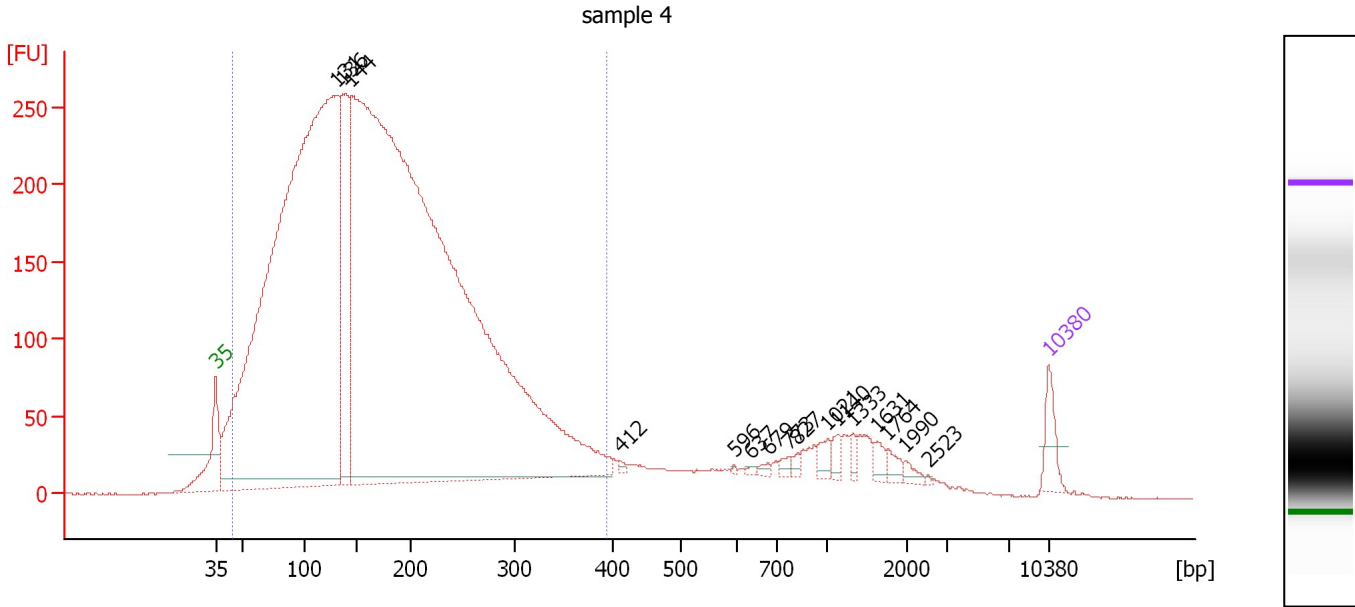
From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/ $\mu$ l]	Corr. Area	% of Total	Size distribution in CV [%]	Color
50	391	176	229,150.9	20,195.95	12,145.2	89	43.6	



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : sample 4**

Number of peaks found: 16                      Corr. Area 1: 8,440.4  
 Noise: 0.4

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	131	6,806.68	78,603.8	
3	136	888.21	9,879.7	
4	144	10,239.70	107,567.8	
5	412	11.16	41.0	
6	596	3.91	9.9	
7	637	7.40	17.6	
8	679	13.27	29.6	
9	773	19.77	38.8	
10	827	15.97	29.2	
11	1,021	39.71	58.9	
12	1,140	31.82	42.3	
13	1,333	22.24	25.3	
14	1,631	34.27	31.8	
15	1,764	28.35	24.3	
16	1,990	20.15	15.3	
17	2,523	3.48	2.1	
18	10,380	75.00	10.9	Upper Marker

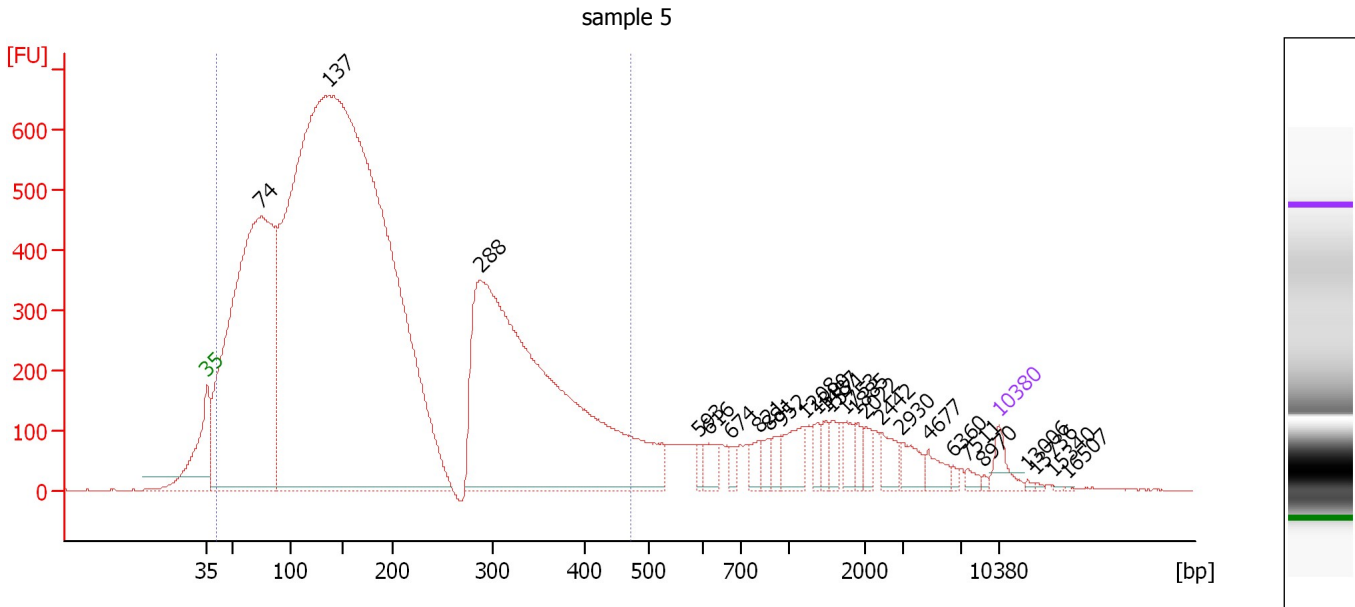
**Region table for sample 4 : sample 4**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
45	395	174	201,879.6	17,329.50	8,440.4	90	44.6	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : sample 5**

Number of peaks found: 26      Corr. Area 1: 20,545.2  
 Noise: 0.4

**Peak table for sample 5 : sample 5**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	74	5,134.63	104,442.3	
3	137	14,540.81	160,754.3	
4	288	4,447.12	23,418.2	
5	593	41.02	104.8	
6	616	87.58	215.5	
7	674	42.32	95.1	
8	821	69.47	128.2	
9	881	52.87	90.9	
10	952	59.92	95.3	
11	1,208	146.88	184.2	
12	1,390	60.25	65.7	
13	1,487	53.56	54.6	
14	1,571	60.28	58.1	
15	1,753	67.06	58.0	
16	1,885	54.07	43.5	
17	2,022	53.00	39.7	
18	2,442	90.48	56.1	
19	2,930	87.83	45.4	
20	4,677	68.03	22.0	
21	6,360	15.55	3.7	
22	7,511	24.15	4.9	
23	8,970	8.42	1.4	
24	10,380	75.00	10.9	Upper Marker
25	13,006	0.00	0.0	
26	13,736	0.00	0.0	


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...****... Peak table for sample 5 : sample 5**

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations
27	15,340	0.00	0.0	
28	16,507	0.00	0.0	

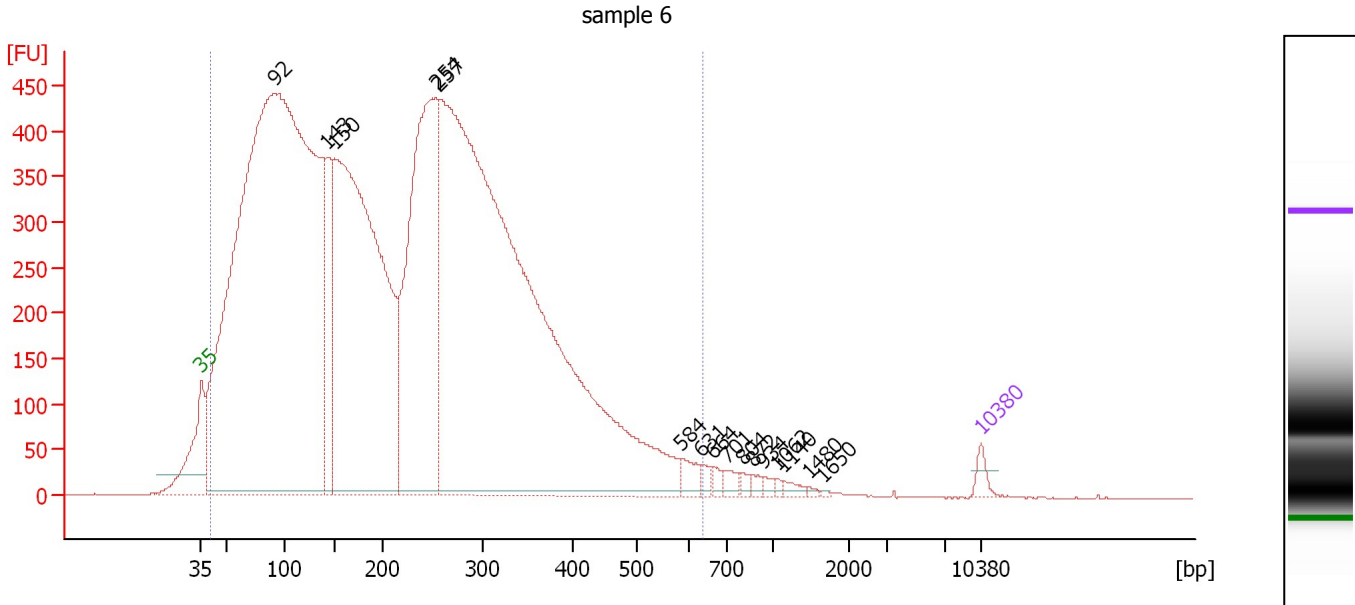
**Region table for sample 5 : sample 5**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/ $\mu$ l]	Corr. Area	% of Total	Size distribution in CV [%]	Color
41	472	186	286,052.9	22,637.79	20,545.2	88	56.3	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : sample 6**

Number of peaks found: 16                      Corr. Area 1: 19,229.8  
 Noise: 0.4

**Peak table for sample 6 : sample 6**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	92	22,160.86	364,463.4	
3	143	1,308.06	13,838.2	
4	150	9,256.32	93,388.4	
5	254	5,064.20	30,266.0	
6	257	16,173.55	95,436.0	
7	584	142.69	370.0	
8	631	72.23	173.4	
9	664	59.64	136.0	
10	701	82.08	177.4	
11	804	48.08	90.6	
12	872	44.62	77.5	
13	934	43.46	70.5	
14	1,062	21.35	30.5	
15	1,140	48.17	64.0	
16	1,480	15.98	16.4	
17	1,650	7.41	6.8	
18	10,380	75.00	10.9	Upper Marker

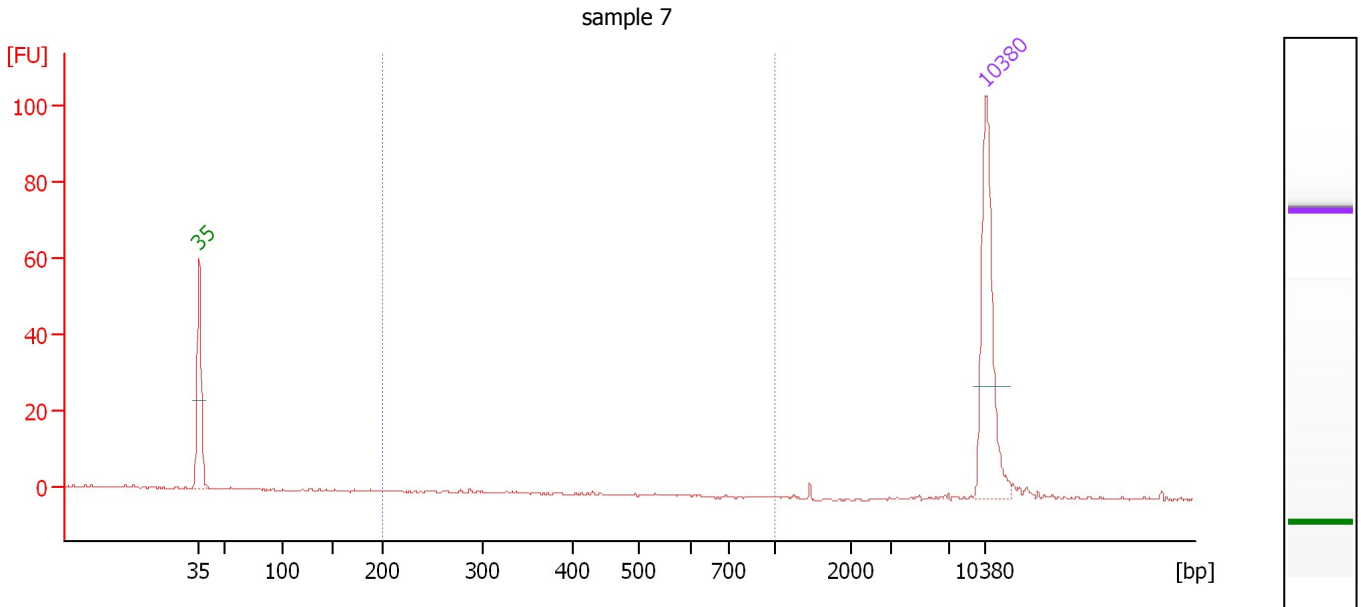
**Region table for sample 6 : sample 6**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
40	637	221	580,057.9	50,838.52	19,229.8	98	54.4	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : sample 7**

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

**Peak table for sample 7 : sample 7**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	10,380	75.00	10.9	Upper Marker

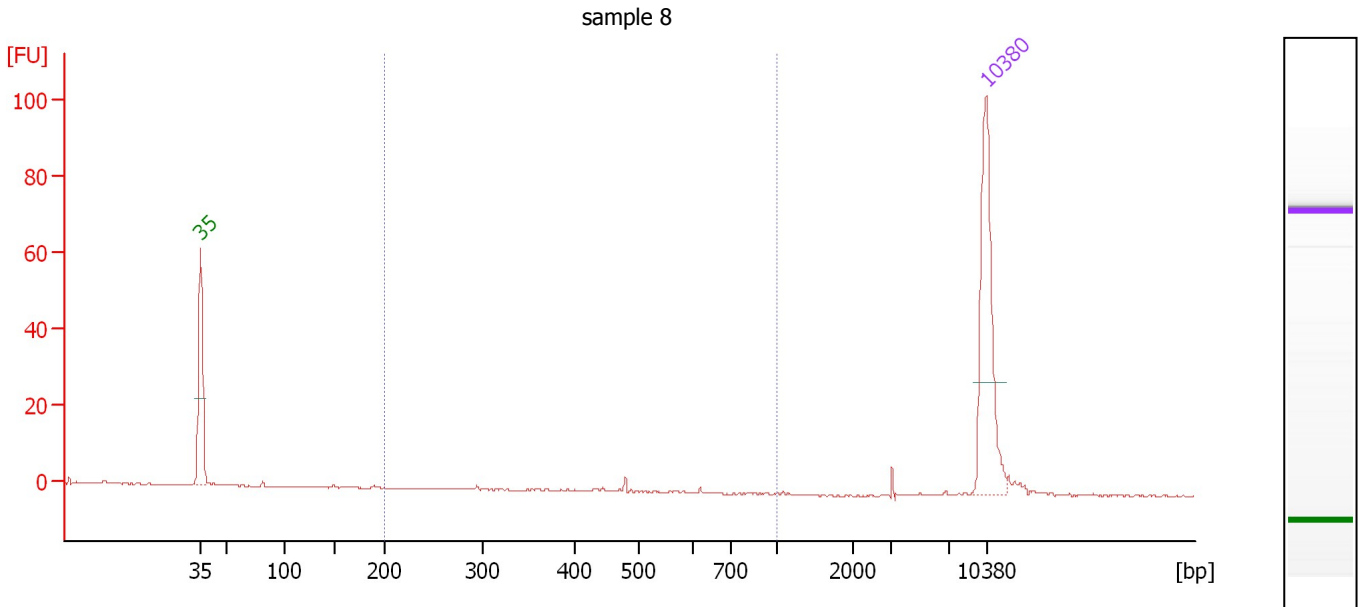
**Region table for sample 7 : sample 7**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	309	1.3	0.26	0.2	3	17.2	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : sample 8**

Number of peaks found: 0                      Corr. Area 1: 1.1  
 Noise: 0.1

**Peak table for sample 8 : sample 8**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	10,380	75.00	10.9	Upper Marker

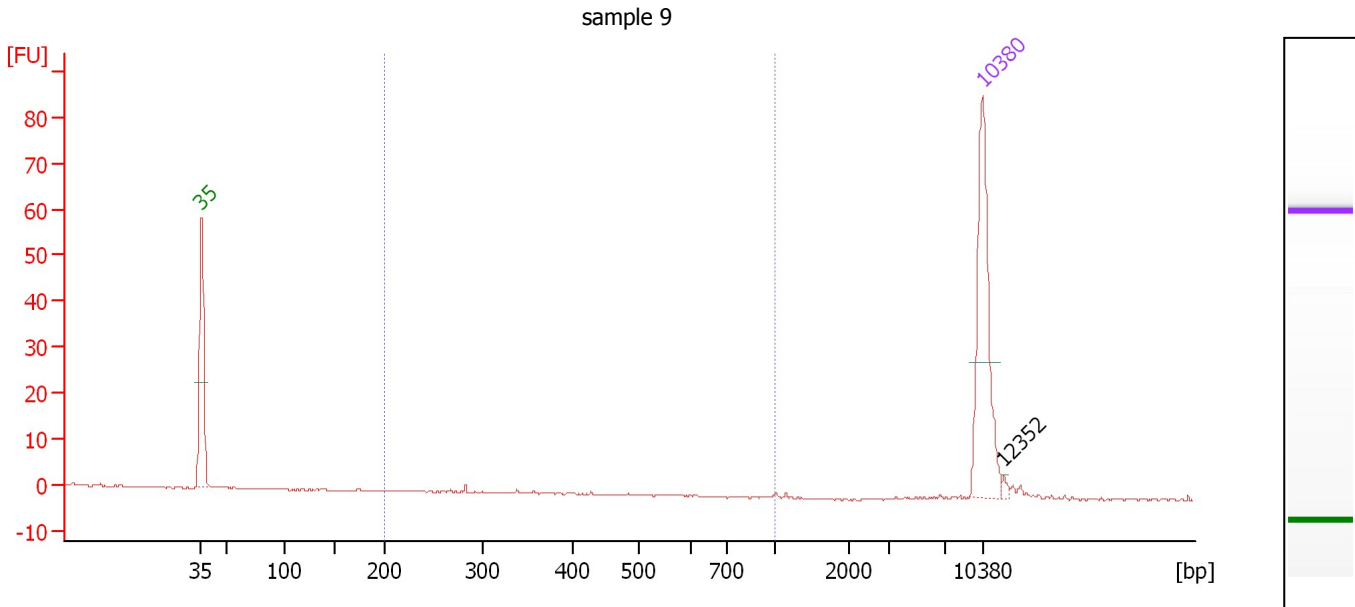
**Region table for sample 8 : sample 8**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	470	3.9	1.13	1.1	11	16.7	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : sample 9**

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

**Peak table for sample 9 : sample 9**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	10,380	75.00	10.9	Upper Marker
3	12,352	0.00	0.0	

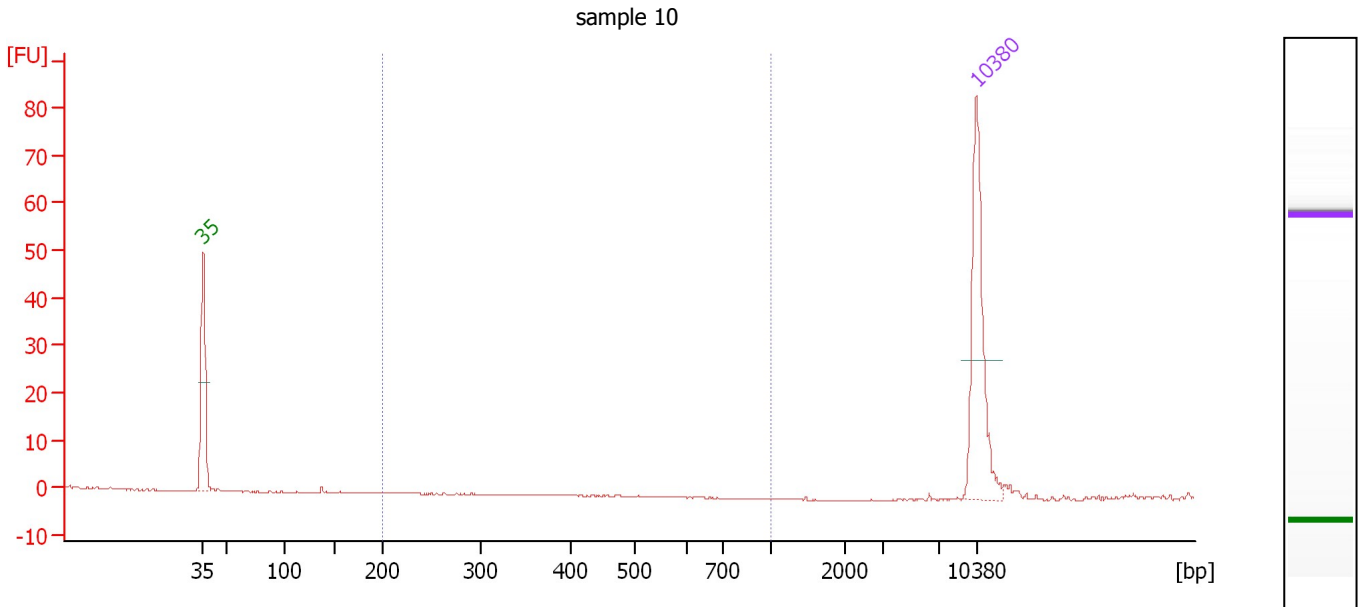
**Region table for sample 9 : sample 9**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	283	1.0	0.19	0.1	5	0.1	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : sample 10**

Number of peaks found: 0                      Corr. Area 1: 0.0  
 Noise: 0.1

**Peak table for sample 10 : sample 10**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	10,380	75.00	10.9	Upper Marker

**Region table for sample 10 : sample 10**

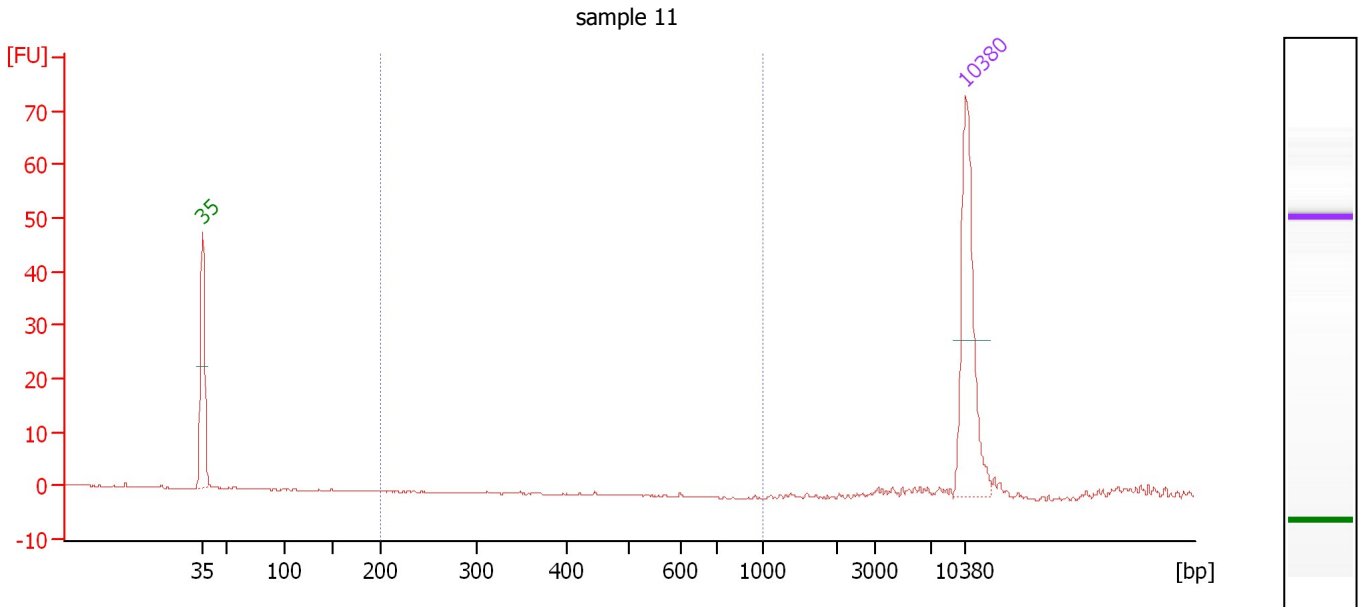
From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	0	0.0	0.00	0.0	0	0.0	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : sample 11**

Number of peaks found: 0                      Corr. Area 1: 0.0  
 Noise: 0.1

**Peak table for sample 11 : sample 11**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	10,380	75.00	10.9	Upper Marker

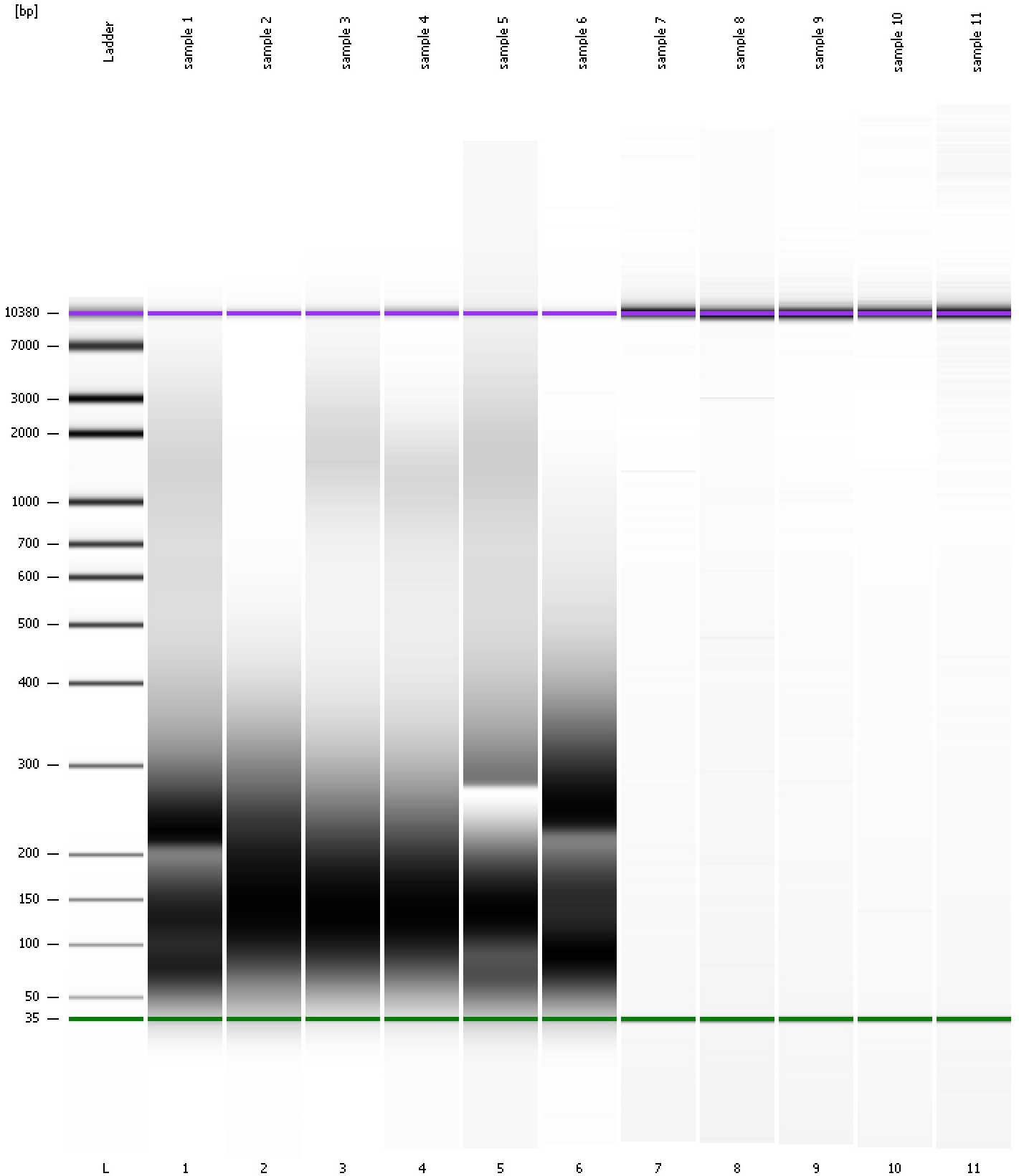
**Region table for sample 11 : sample 11**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	0	0.0	0.00	0.0	0	0.0	Blue

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
Modified: 5/30/2013 1:41:13 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-05-30\2013-05-30\_002.xad

Created: 5/30/2013 11:45:10 AM  
 Modified: 5/30/2013 1:41:13 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		5/30/2013 12:26:28 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-05-30\2013-05-30_002.xad)		Instrument	Run		5/30/2013 11:45:16 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		5/30/2013 11:45:16 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/30/2013 11:45:16 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/30/2013 11:45:16 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		5/30/2013 11:45:16 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/30/2013 11:45:16 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/30/2013 11:45:16 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1