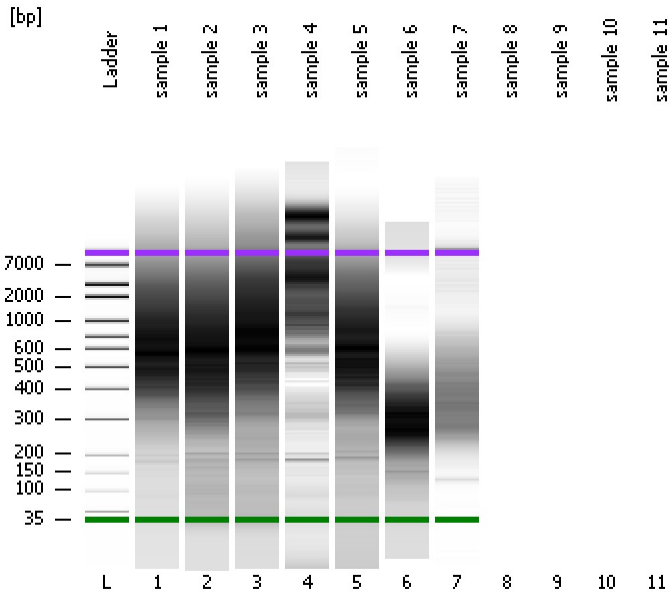


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
Modified: 12/10/2014 12:10:02 PM

### Electrophoresis File Run Summary



#### Instrument Information:

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

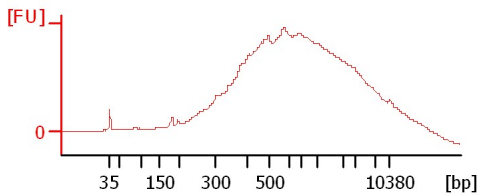
#### Assay Information:

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

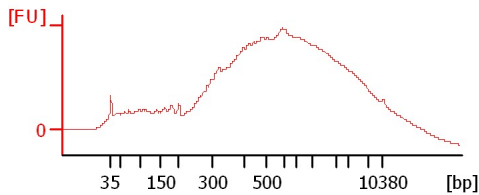
#### Chip Information:

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

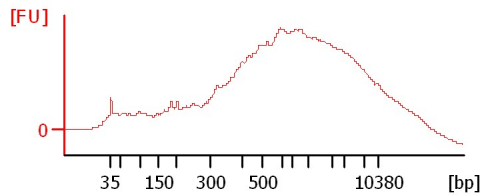
sample 1



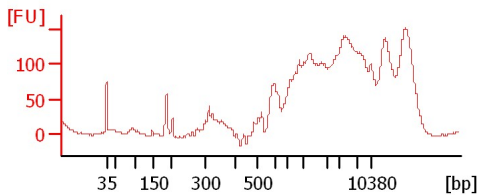
sample 2



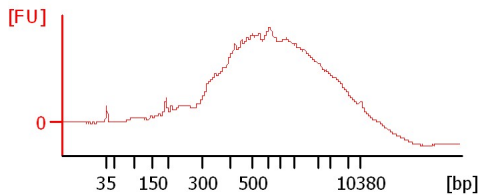
sample 3



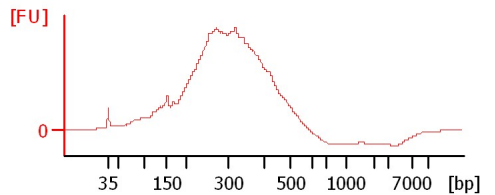
sample 4



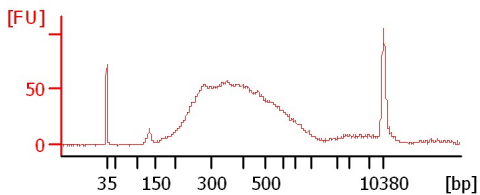
sample 5



sample 6



sample 7



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 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\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
Modified: 12/10/2014 12:10:02 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/ $\mu$ l] : 1950  
Uses Standard Area for Ladder Fragments  
Lower Marker Concentration [pg/ $\mu$ l] : 125  
Upper Marker Concentration [pg/ $\mu$ l] : 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

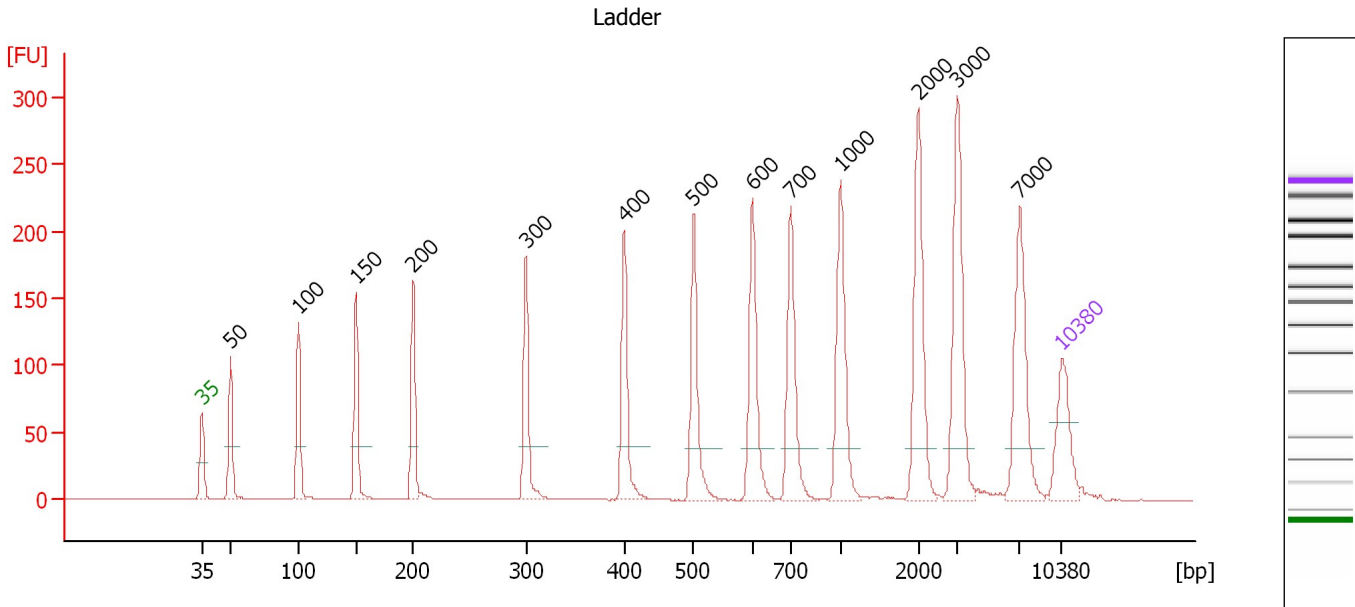
**Ladder**

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\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.1

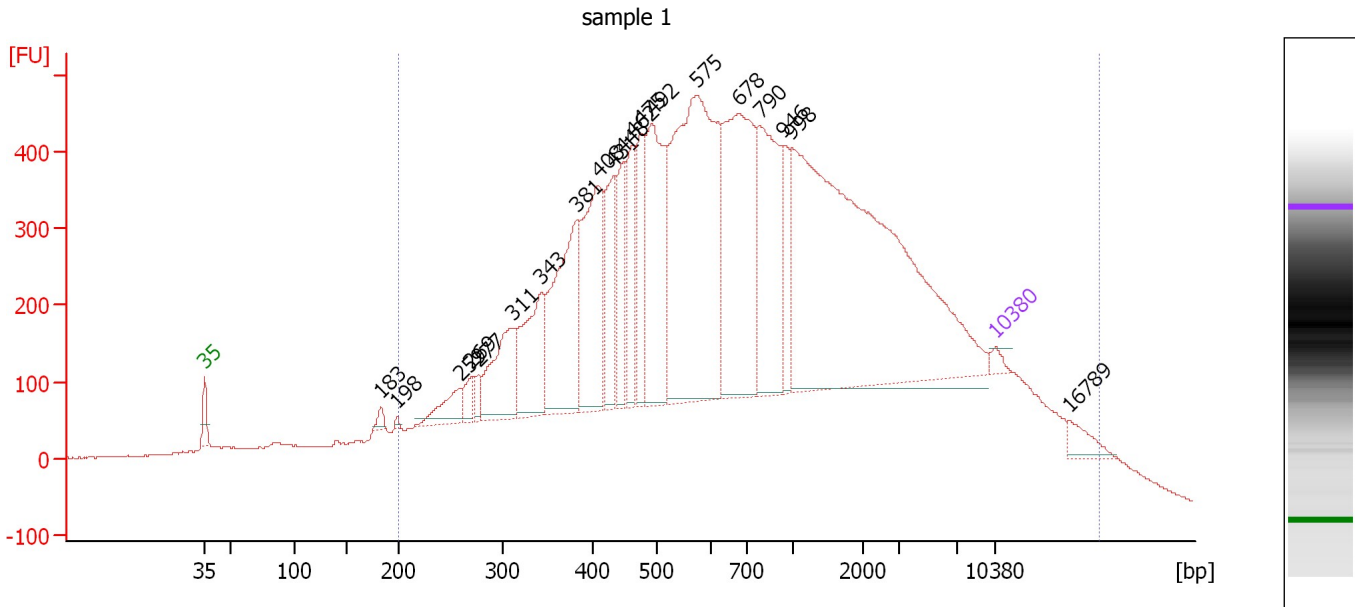
**Peak table for Ladder**

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	45.34
3	100	150.00	2,272.7	Ladder Peak	50.85
4	150	150.00	1,515.2	Ladder Peak	55.54
5	200	150.00	1,136.4	Ladder Peak	60.19
6	300	150.00	757.6	Ladder Peak	69.39
7	400	150.00	568.2	Ladder Peak	77.37
8	500	150.00	454.5	Ladder Peak	83.01
9	600	150.00	378.8	Ladder Peak	87.83
10	700	150.00	324.7	Ladder Peak	90.91
11	1,000	150.00	227.3	Ladder Peak	94.99
12	2,000	150.00	113.6	Ladder Peak	101.28
13	3,000	150.00	75.8	Ladder Peak	104.49
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:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 20                      Corr. Area 1: 19,605.2  
 Noise: 1.7

**Peak table for sample 1 : sample 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	183	115.34	953.1		58.64
3	198	37.24	284.9		60.01
4	259	504.79	2,947.5		65.66
5	269	247.21	1,391.3		66.55
6	277	174.43	954.5		67.26
7	311	1,278.58	6,226.4		70.27
8	343	1,416.79	6,258.7		72.82
9	381	2,249.11	8,936.4		75.88
10	408	2,118.28	7,870.0		77.81
11	431	1,082.41	3,803.4		79.13
12	448	878.54	2,972.0		80.07
13	462	979.68	3,212.3		80.87
14	475	1,016.93	3,240.7		81.63
15	492	2,230.30	6,866.3		82.57
16	575	5,316.63	14,012.0		86.62
17	678	3,287.27	7,341.0		90.25
18	790	2,202.26	4,224.8		92.13
19	946	497.50	797.1		94.25
20	998	7,930.81	12,044.5		94.96
21	10,380	75.00	10.9	Upper Marker	113.00
22	16,789	0.00	0.0		119.50

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**

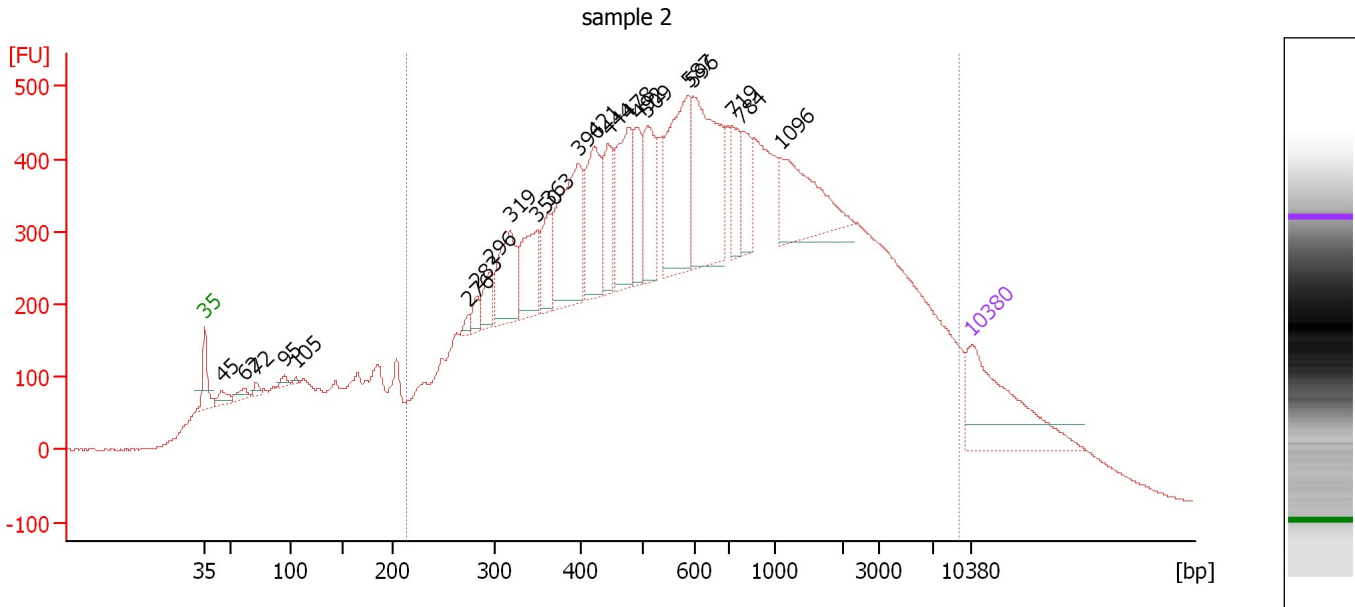
... Region table for sample 1 : sample 1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Color
200	2,282	19,334	19,605.2	93	100.0	49,928.68	135,032.0	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 22                      Corr. Area 1: 20,897.9  
 Noise: 0.7

**Peak table for sample 2 : sample 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	45	11.79	397.3		44.56
3	62	8.94	219.1		46.65
4	72	5.52	116.9		47.72
5	95	6.05	96.5		50.29
6	105	2.08	30.0		51.36
7	276	4.96	27.2		67.16
8	283	10.12	54.1		67.84
9	296	22.05	112.7		69.06
10	319	61.45	291.9		70.90
11	350	52.16	225.8		73.38
12	363	32.00	133.4		74.45
13	396	105.63	403.8		77.08
14	421	67.30	241.9		78.58
15	444	42.81	146.1		79.85
16	478	75.26	238.8		81.74
17	492	35.92	110.6		82.57
18	509	52.30	155.7		83.44
19	587	102.35	264.3		87.19
20	596	110.77	281.7		87.63
21	719	31.47	66.3		91.17
22	784	28.28	54.7		92.05
23	1,096	65.71	90.8		95.60
24	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**

... Region table for sample 2 : sample 2

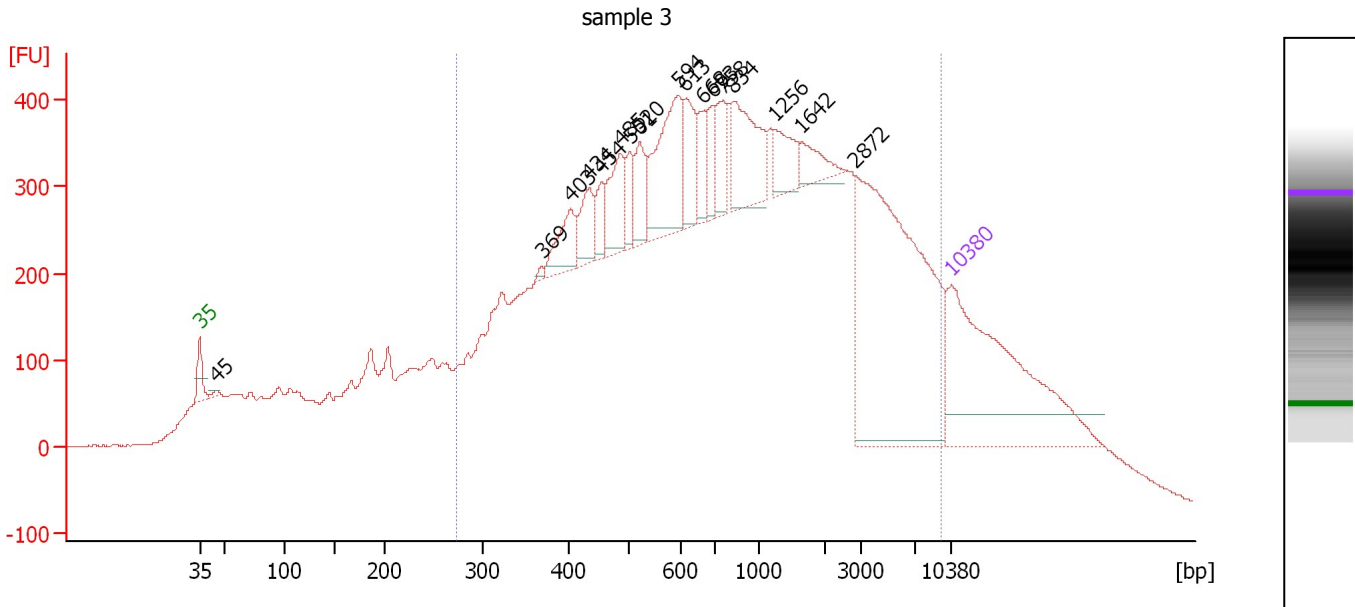
From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Color
213	1,338	9,239	20,897.9	84	100.0	3,334.53	9,822.1	



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 17                      Corr. Area 1: 16,208.8  
 Noise: 1.0

**Peak table for sample 3 : sample 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	45	1.38	46.3		44.59
3	369	1.14	4.7		74.90
4	403	15.27	57.4		77.53
5	434	14.57	50.9		79.26
6	454	8.18	27.3		80.40
7	485	19.72	61.6		82.19
8	501	9.17	27.7		83.08
9	520	14.56	42.4		83.97
10	594	39.04	99.6		87.54
11	613	18.08	44.7		88.23
12	668	9.45	21.4		89.91
13	693	8.99	19.6		90.71
14	758	14.00	28.0		91.70
15	834	29.77	54.1		92.74
16	1,256	11.64	14.0		96.60
17	1,642	8.27	7.6		99.03
18	2,872	135.34	71.4		104.08
19	10,380	75.00	10.9	Upper Marker	113.00

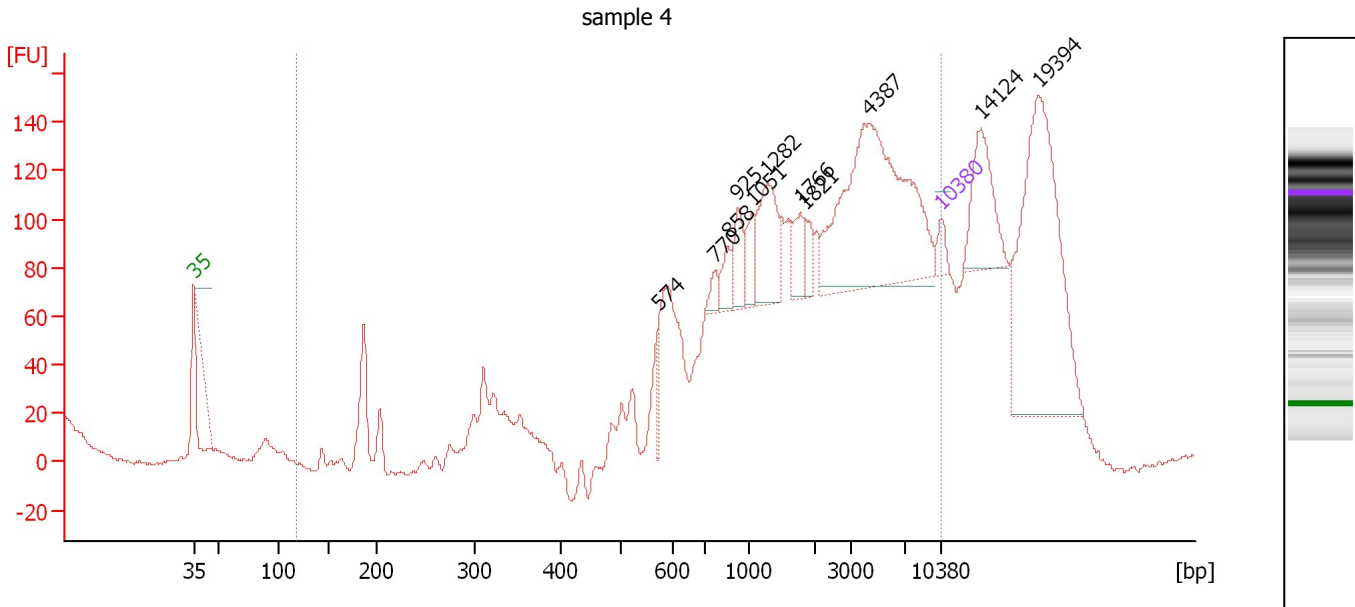
**Region table for sample 3 : sample 3**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
273	1,667	9,389	16,208.8	80	100.0	1,318.93	3,201.6	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 4 : sample 4**

Height Threshold [FU] : 0.9

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

Number of peaks found: 12                      Corr. Area 1: 2,519.7  
 Noise: 0.9

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

Pea k	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	0	0.00	0.0		-1.22
2	35	125.00	5,411.3	Lower Marker	43.00
3	574	50.28	132.7		86.57
4	770	79.89	157.2		91.87
5	858	138.36	244.2		93.06
6	925	209.12	342.7		93.96
7	1,051	153.11	220.7		95.31
8	1,282	470.61	556.4		96.76
9	1,766	168.87	144.9		99.81
10	1,821	114.27	95.1		100.16
11	4,387	1,830.78	632.3		106.25
12	10,380	75.00	10.9	Upper Marker	113.00
13	14,124	0.00	0.0		116.80
14	19,394	0.00	0.0		122.14

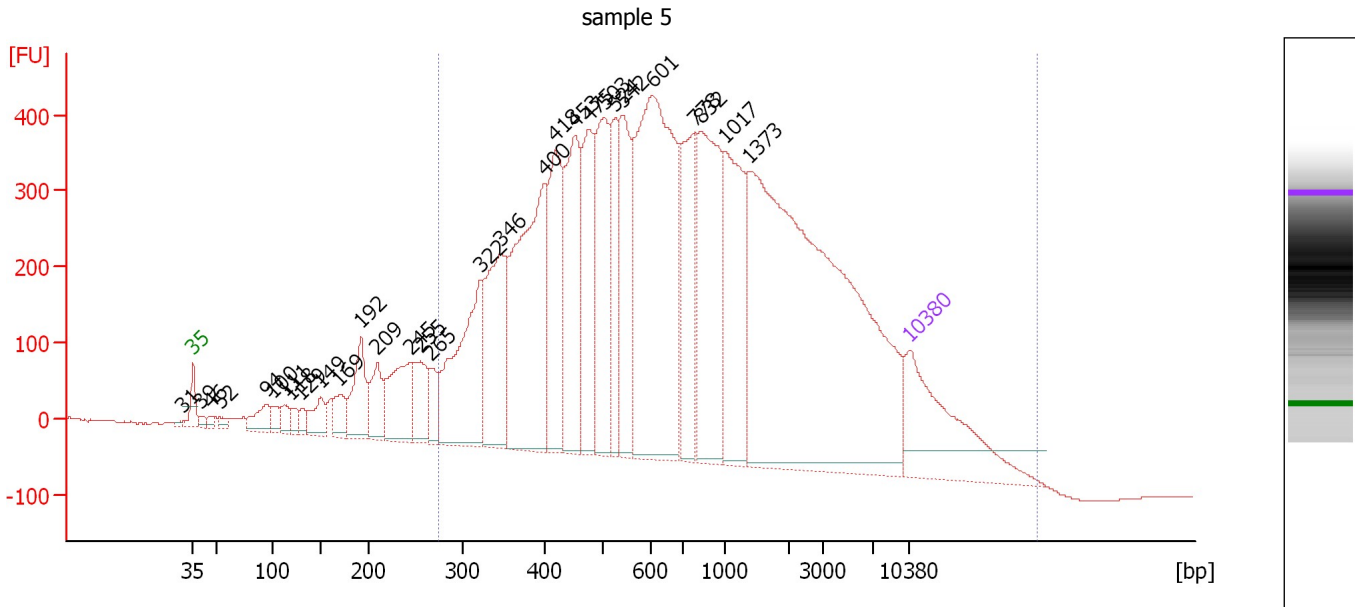
**Region table for sample 4 : sample 4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Co lor
120	3,173	10,317	2,519.7	71	85.9	11,577.70	16,652.3	■

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 30                      Corr. Area 1: 16,335.4  
 Noise: 0.5

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	31	0.00	0.0		41.96
2	35	125.00	5,411.3	Lower Marker	43.00
3	39	4.32	168.0		43.62
4	46	4.64	153.9		44.67
5	52	4.79	138.7		45.60
6	94	22.82	366.4		50.23
7	100	10.10	152.9		50.86
8	111	12.65	173.3		51.85
9	118	8.20	105.0		52.58
10	129	9.38	110.3		53.57
11	149	21.47	218.5		55.44
12	169	20.70	185.5		57.31
13	192	48.92	385.9		59.45
14	209	32.81	237.9		61.01
15	245	60.08	371.3		64.34
16	255	35.46	210.9		65.22
17	265	17.80	101.8		66.16
18	322	120.06	565.8		71.10
19	346	102.67	450.0		73.03
20	400	186.98	708.7		77.35
21	418	94.17	341.3		78.39
22	453	109.37	365.7		80.37
23	475	79.91	254.8		81.62
24	503	98.23	295.6		83.18
25	524	53.13	153.6		84.17

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad


Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	542	83.06	232.0		85.05
27	601	266.64	672.1		87.86
28	778	79.94	155.7		91.97
29	832	136.44	248.5		92.70
30	1,017	97.70	145.6		95.10
31	1,373	441.22	487.0		97.33
32	10,380	75.00	10.9	Upper Marker	113.00

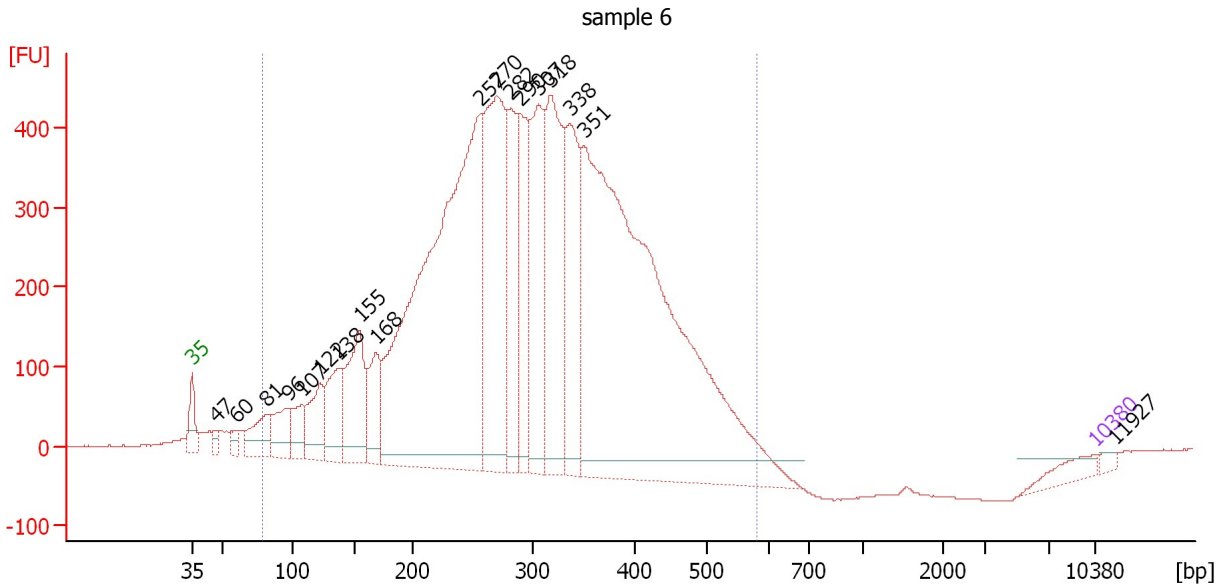
**Region table for sample 5 : sample 5**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
275	2,206	22,701	16,335.4	89	100.0	1,921.09	4,913.5	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 6 : sample 6**

Height Threshold [FU] : 20

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

Number of peaks found: 18                      Corr. Area 1: 13,877.4  
 Noise: 0.5

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


Pea k	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	47	54.88	1,763.1		44.90
3	60	66.98	1,696.0		46.43
4	81	267.45	5,014.1		48.74
5	96	257.62	4,058.4		50.43
6	107	207.83	2,944.1		51.51
7	122	339.63	4,204.8		52.95
8	138	431.66	4,731.1		54.44
9	155	622.64	6,085.3		56.01
10	168	358.52	3,226.3		57.25
11	257	4,051.48	23,890.4		65.42
12	270	1,544.65	8,669.2		66.62
13	282	608.78	3,269.9		67.74
14	290	619.08	3,237.6		68.44
15	307	874.22	4,317.8		69.93
16	318	1,117.50	5,322.0		70.83
17	338	793.13	3,557.4		72.40
18	351	4,642.64	20,056.1		73.44
19	10,380	75.00	10.9	Upper Marker	113.00
20	11,927	0.00	0.0		114.57

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**

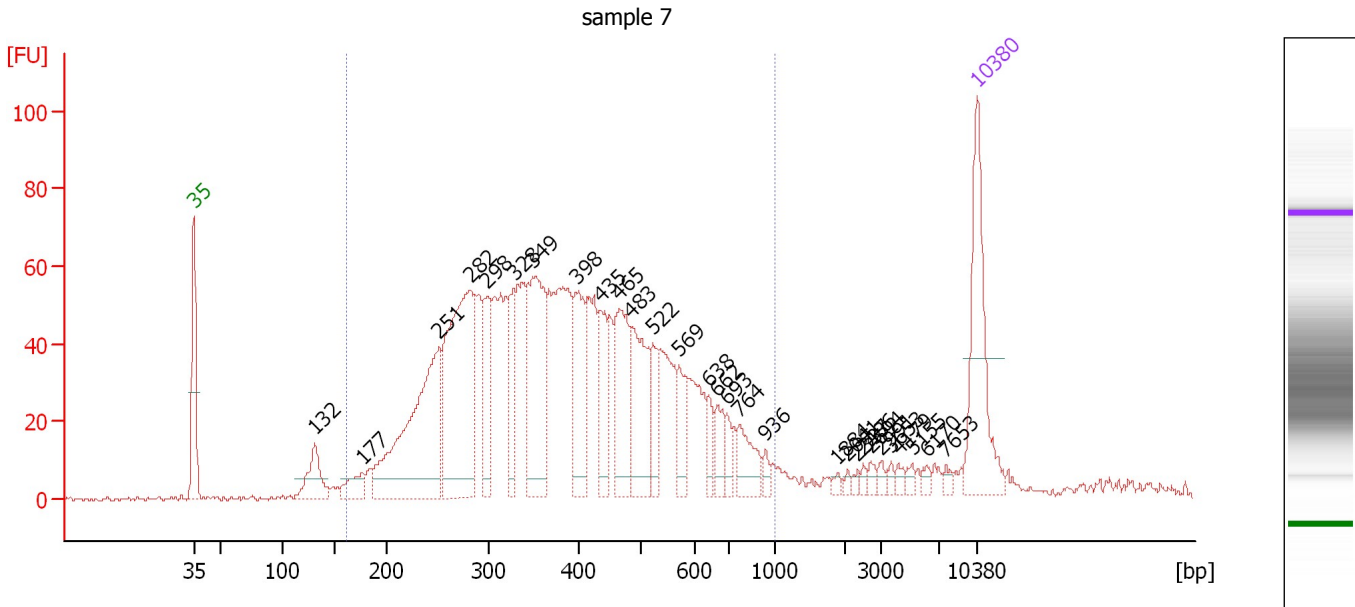
... Region table for sample 6 : sample 6

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Color
78	302	579	13,877.3	98	30.7	14,495.86	88,664.0	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 29                      Corr. Area 1: 1,820.4  
 Noise: 0.6

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

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	132	41.93	482.5		53.82
3	177	22.04	188.5		58.07
4	251	204.70	1,235.1		64.89
5	282	212.97	1,145.6		67.70
6	298	56.68	288.4		69.18
7	328	43.99	203.3		71.61
8	349	127.83	554.4		73.33
9	398	64.95	247.1		77.24
10	435	47.56	165.7		79.34
11	465	72.33	235.5		81.05
12	483	76.84	241.1		82.05
13	522	28.09	81.6		84.06
14	569	28.88	76.9		86.34
15	638	14.96	35.5		89.01
16	662	19.38	44.4		89.73
17	693	11.27	24.6		90.68
18	764	28.13	55.8		91.78
19	936	6.18	10.0		94.12
20	1,884	2.89	2.3		100.55
21	2,041	2.35	1.7		101.41
22	2,337	2.72	1.8		102.37
23	2,486	2.80	1.7		102.84
24	2,694	3.92	2.2		103.51
25	2,991	3.86	2.0		104.46

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad


Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 7 : sample 7

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	3,653	3.39	1.4		105.32
27	4,179	3.98	1.4		105.99
28	5,155	3.74	1.1		107.23
29	6,170	3.97	1.0		108.52
30	7,653	3.62	0.7		110.23
31	10,380	75.00	10.9	Upper Marker	113.00

#### Region table for sample 7 : sample 7

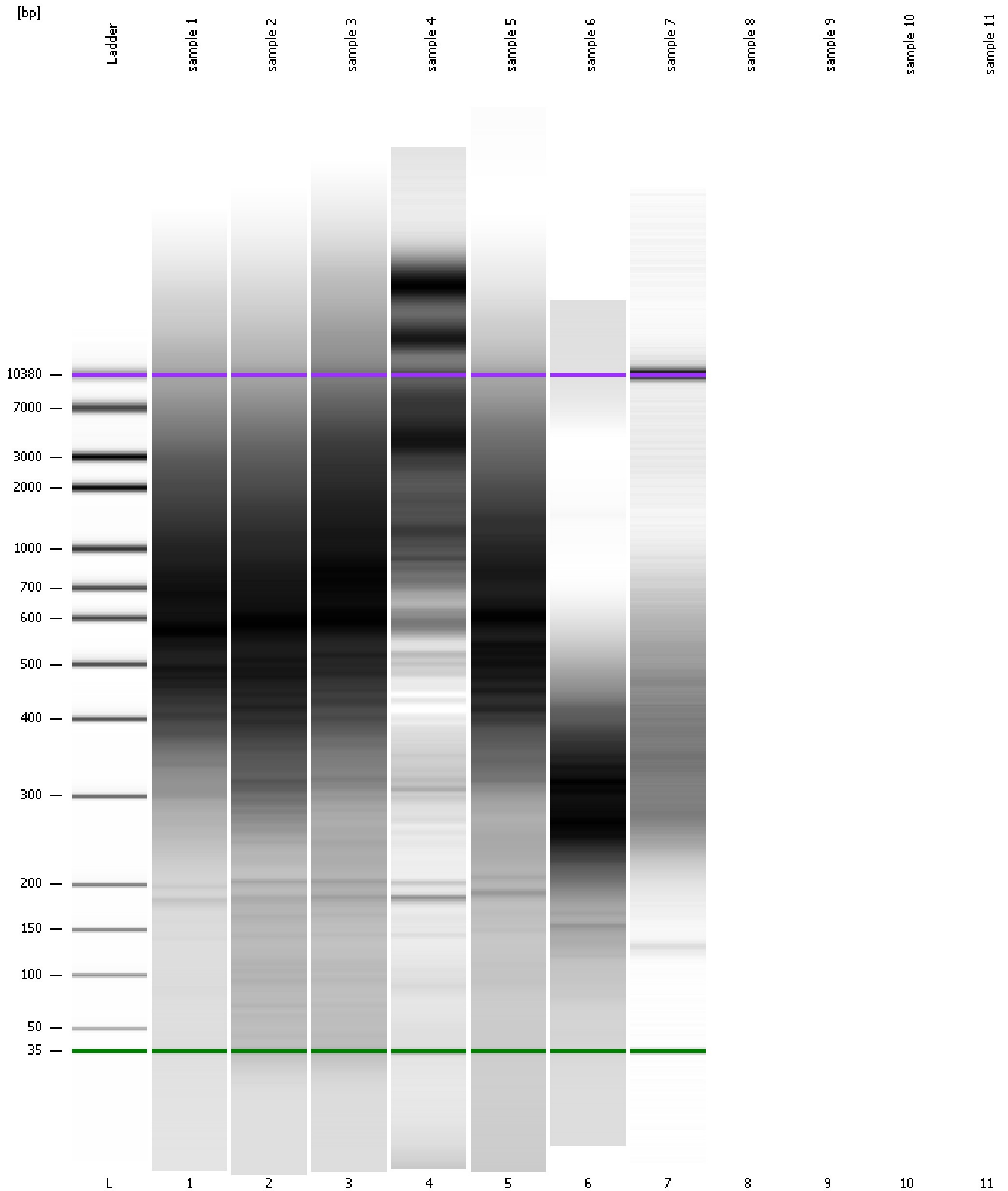
From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
162	406	1,000	1,820.4	91	36.0	1,687.22	7,460.0	



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
Modified: 12/10/2014 12:10:02 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-10\2014-12-10\_003.xad

Created: 12/10/2014 11:19:55 AM  
 Modified: 12/10/2014 12:10:02 PM

**Run Logbook**

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 8)		Instrument	Run		12/10/2014 11:49:49 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2014-12-10\2014-12-10_003.xad)		Instrument	Run		12/10/2014 11:20:01 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		12/10/2014 11:20:01 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		12/10/2014 11:20:01 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		12/10/2014 11:20:01 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		12/10/2014 11:20:01 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		12/10/2014 11:20:01 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		12/10/2014 11:20:01 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1