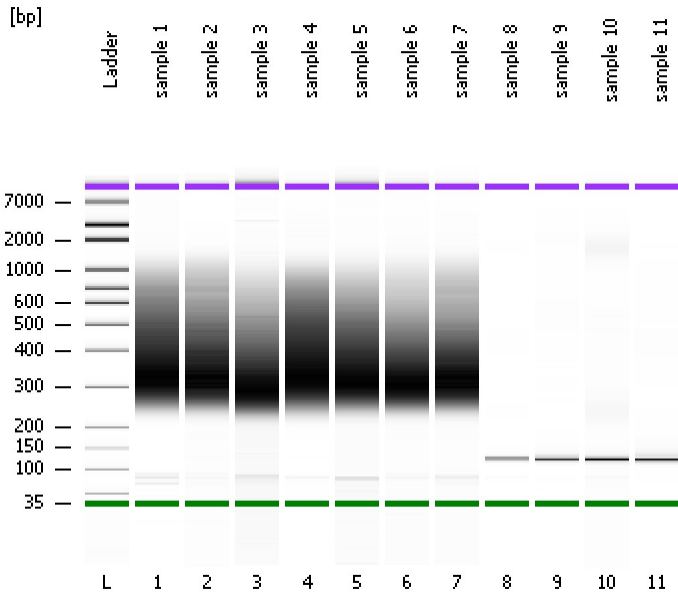


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
Modified: 9/17/2014 2:28:36 PM

**Electrophoresis File Run Summary**



Instrument Information:

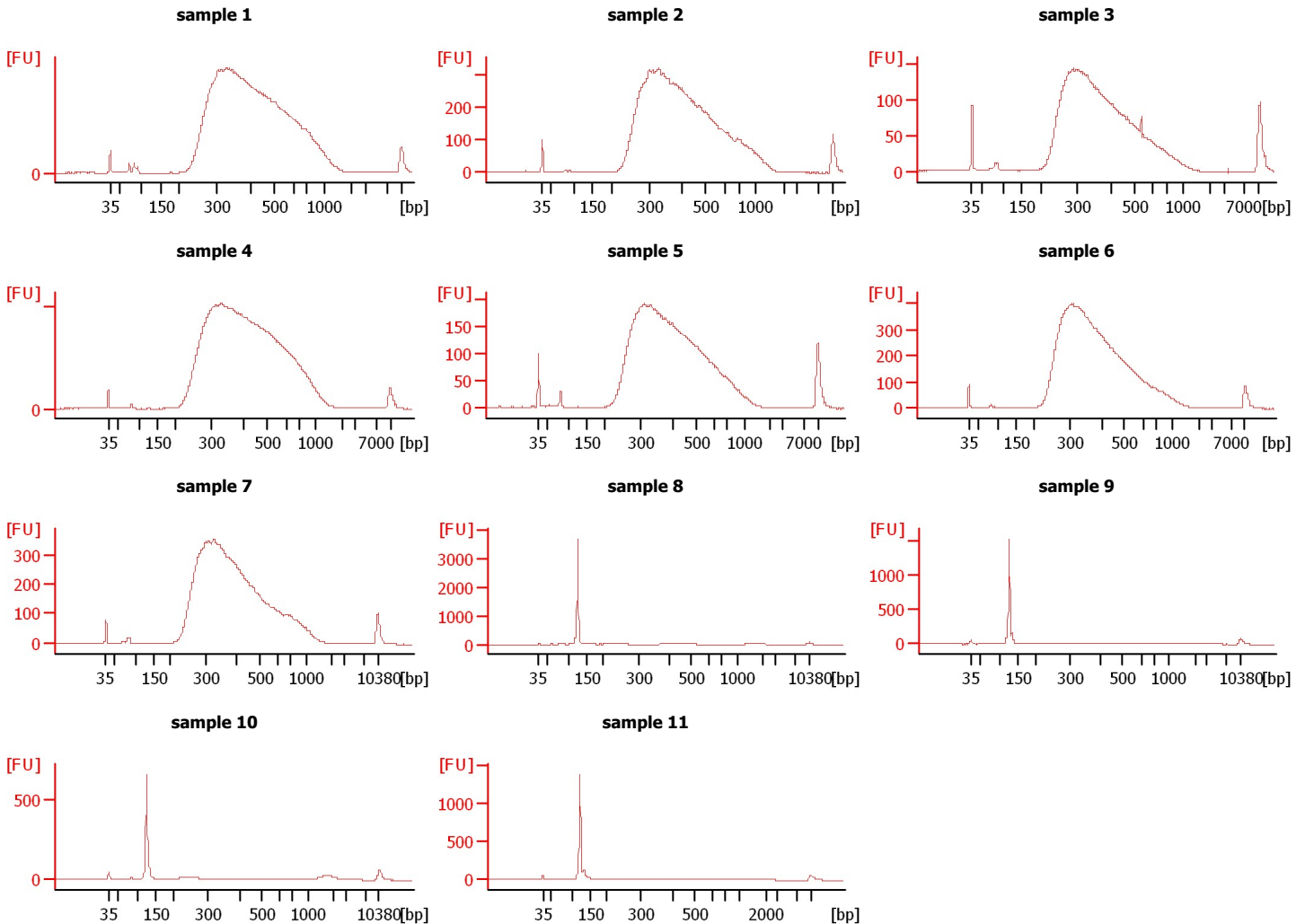
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

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\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 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\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
Modified: 9/17/2014 2:28:36 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

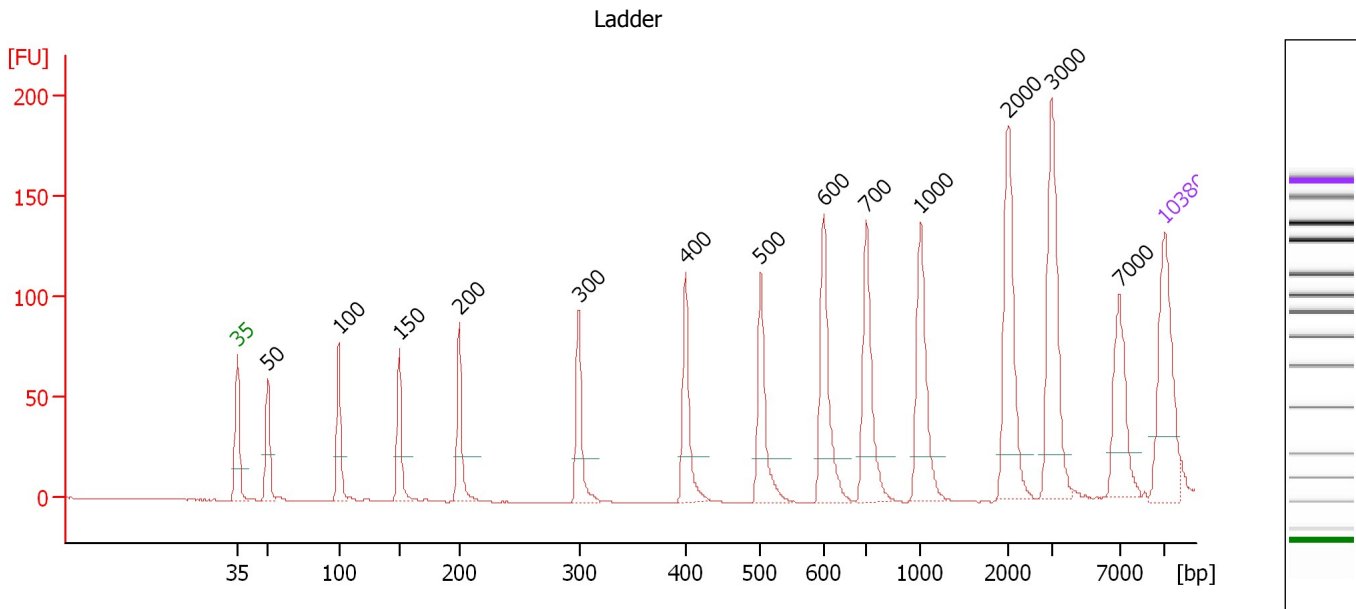
**Ladder**

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\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.1

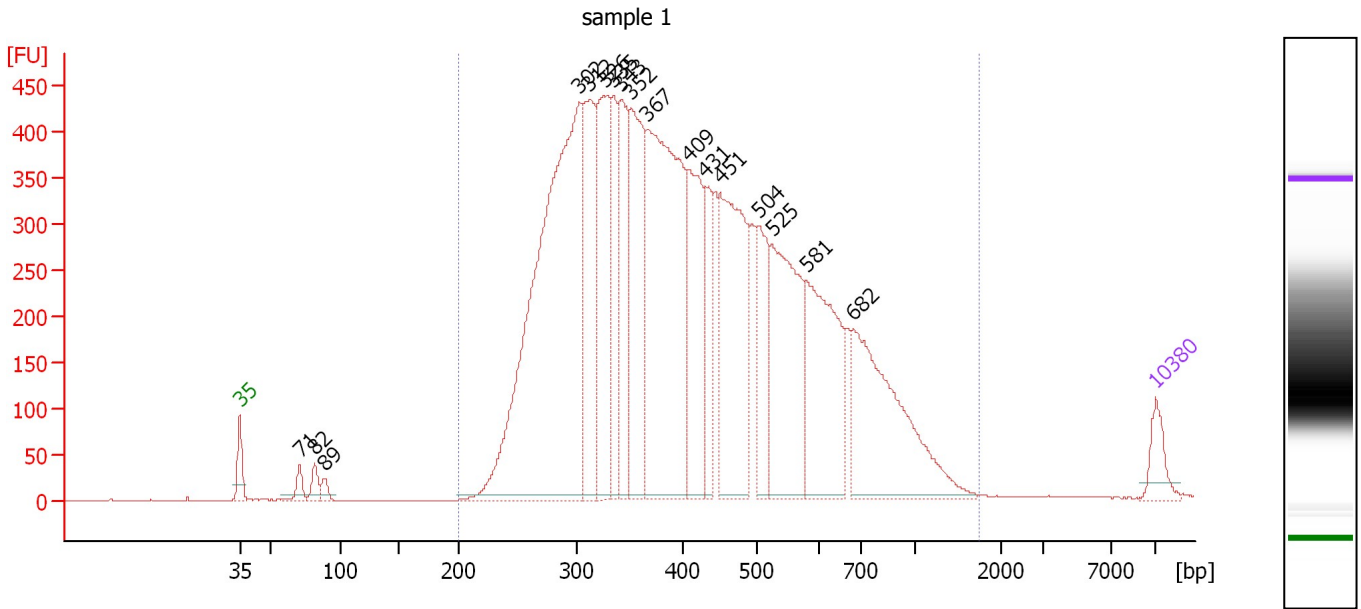
**Peak table for Ladder**

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\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 17      Corr. Area 1: 12,540.2  
 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	71	55.35	1,177.7	
3	82	63.10	1,162.2	
4	89	38.65	657.1	
5	302	2,614.48	13,113.8	
6	312	673.07	3,266.5	
7	326	656.36	3,047.0	
8	335	345.53	1,562.8	
9	343	454.65	2,010.8	
10	352	722.38	3,112.0	
11	367	1,545.39	6,373.1	
12	409	543.27	2,012.2	
13	431	257.07	903.0	
14	451	859.67	2,885.2	
15	504	322.32	969.4	
16	525	713.51	2,058.2	
17	581	639.02	1,666.4	
18	682	763.32	1,695.4	
19	10,380	75.00	10.9	Upper Marker

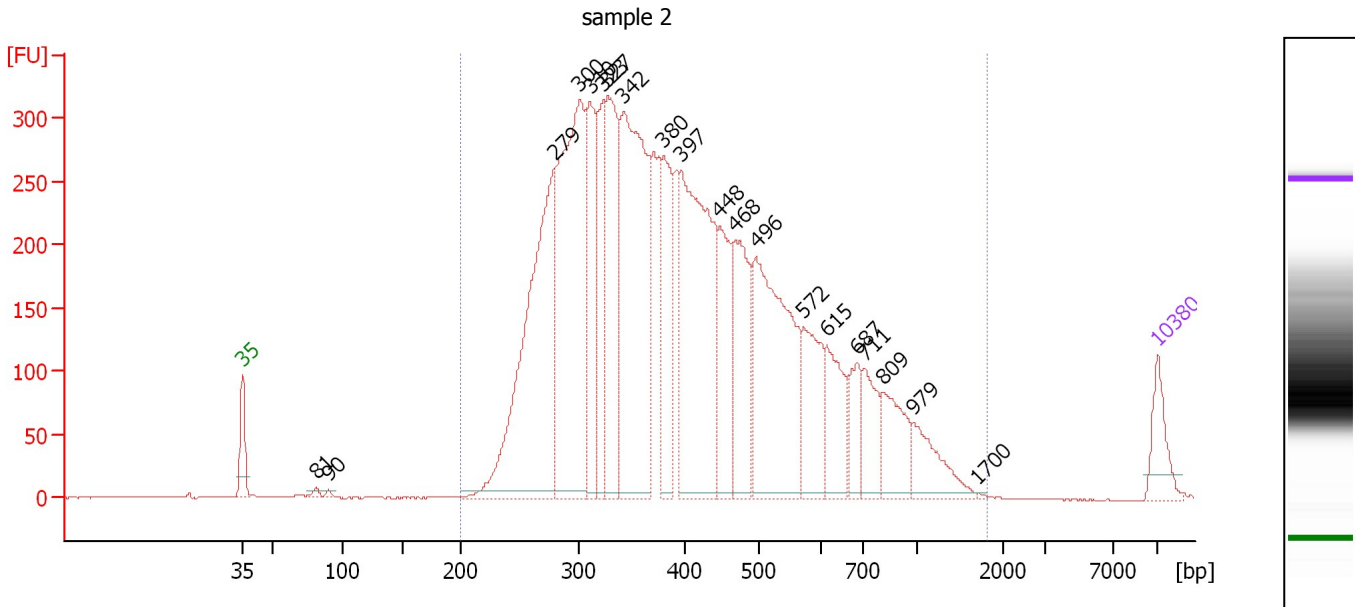
**Region table for sample 1 : sample 1**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	443	1,755	12,540.2	99	39.6	11,448.55	45,955.7	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 20      Corr. Area 1: 8,542.4  
 Noise: 0.4

**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	81	13.21	246.6	
3	90	8.59	144.7	
4	279	1,055.92	5,726.2	
5	300	1,014.14	5,117.9	
6	310	371.40	1,813.1	
7	323	252.77	1,185.6	
8	327	485.24	2,247.7	
9	342	948.23	4,197.3	
10	380	296.96	1,184.7	
11	397	828.84	3,163.1	
12	448	263.46	892.0	
13	468	335.84	1,086.5	
14	496	667.54	2,037.6	
15	572	221.25	585.9	
16	615	168.65	415.7	
17	687	99.96	220.5	
18	711	125.88	268.4	
19	809	159.05	297.9	
20	979	122.22	189.2	
21	1,700	2.01	1.8	
22	10,380	75.00	10.9	Upper Marker

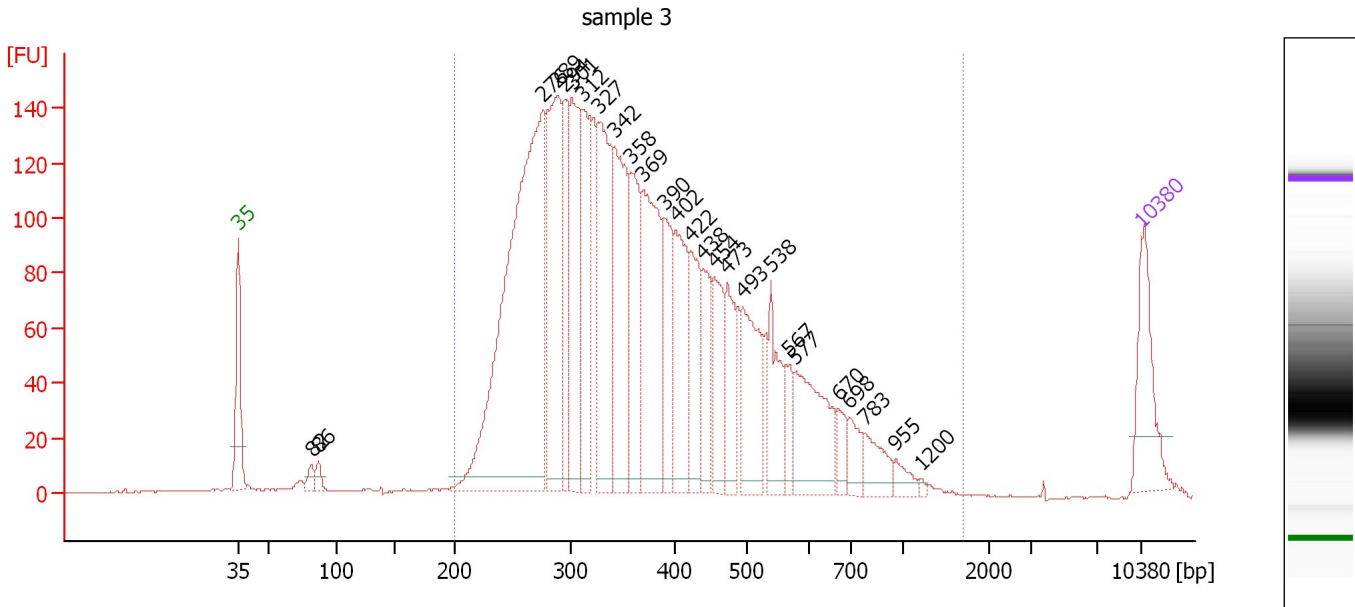
**Region table for sample 2 : sample 2**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	436	1,819	8,542.4	99	42.9	7,840.06	32,206.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 26                      Corr. Area 1: 3,712.9  
 Noise: 0.3


**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	82	16.12	298.5	
3	86	14.94	261.8	
4	276	788.40	4,328.5	
5	289	290.30	1,523.0	
6	294	134.61	693.0	
7	301	205.77	1,034.7	
8	312	169.38	822.3	
9	327	244.25	1,131.8	
10	342	210.95	933.5	
11	358	158.51	670.3	
12	369	232.45	954.3	
13	390	111.02	431.2	
14	402	140.55	529.8	
15	422	97.23	349.4	
16	438	73.85	255.2	
17	454	84.70	282.4	
18	473	78.71	252.3	
19	493	128.44	394.7	
20	538	76.47	215.5	
21	567	36.75	98.1	
22	577	130.78	343.5	
23	670	26.48	59.9	
24	698	30.30	65.8	
25	783	41.38	80.1	
26	955	16.11	25.5	


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
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**Electropherogram Summary Continued ...****... Peak table for sample 3 : sample 3**

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations
27	1,200	2.54	3.2	
28	 10,380	75.00	10.9	Upper Marker

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

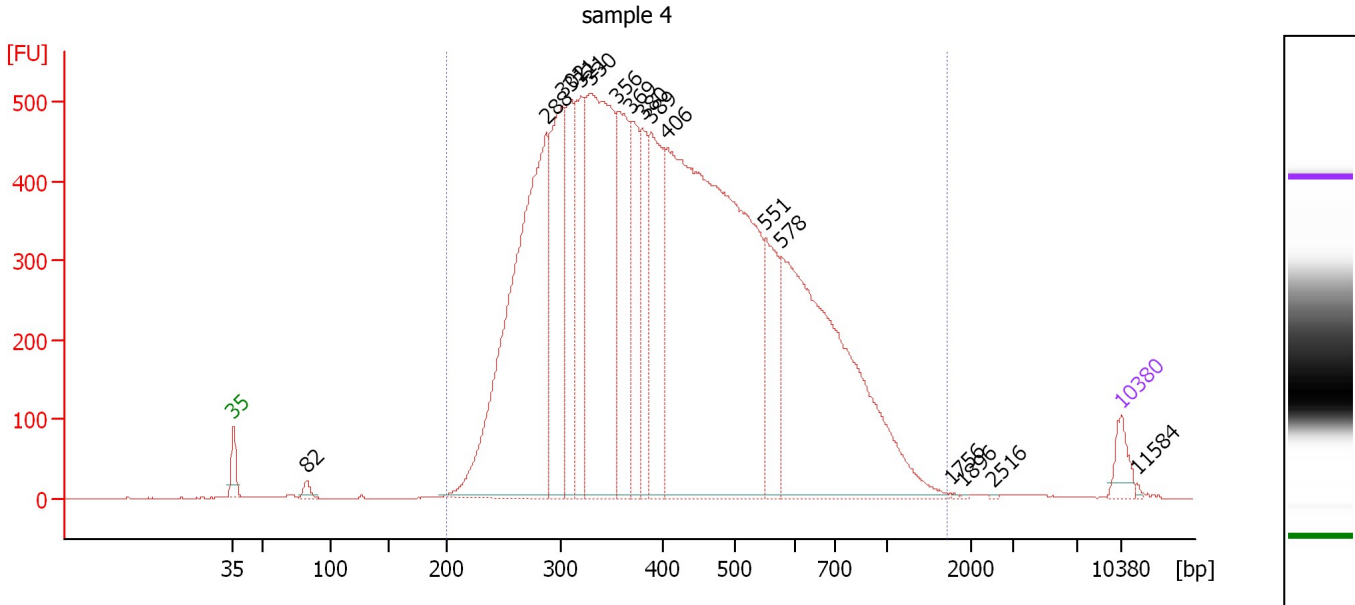
From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Color
200	392	1,684	3,712.9	97	37.3	3,737.51	16,592.5	



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 17      Corr. Area 1: 15,521.9  
 Noise: 0.3

**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	82	41.46	762.7	
3	288	2,632.35	13,849.3	
4	302	997.81	5,002.6	
5	311	555.01	2,703.2	
6	321	643.78	3,038.6	
7	330	1,816.14	8,341.4	
8	356	738.23	3,141.9	
9	369	537.32	2,205.9	
10	380	360.48	1,437.3	
11	389	737.00	2,871.3	
12	406	3,849.32	14,348.4	
13	551	416.12	1,144.0	
14	578	2,002.04	5,251.1	
15	1,756	2.85	2.5	
16	1,896	2.21	1.8	
17	2,516	2.76	1.7	
18	10,380	75.00	10.9	Upper Marker
19	11,584	0.00	0.0	

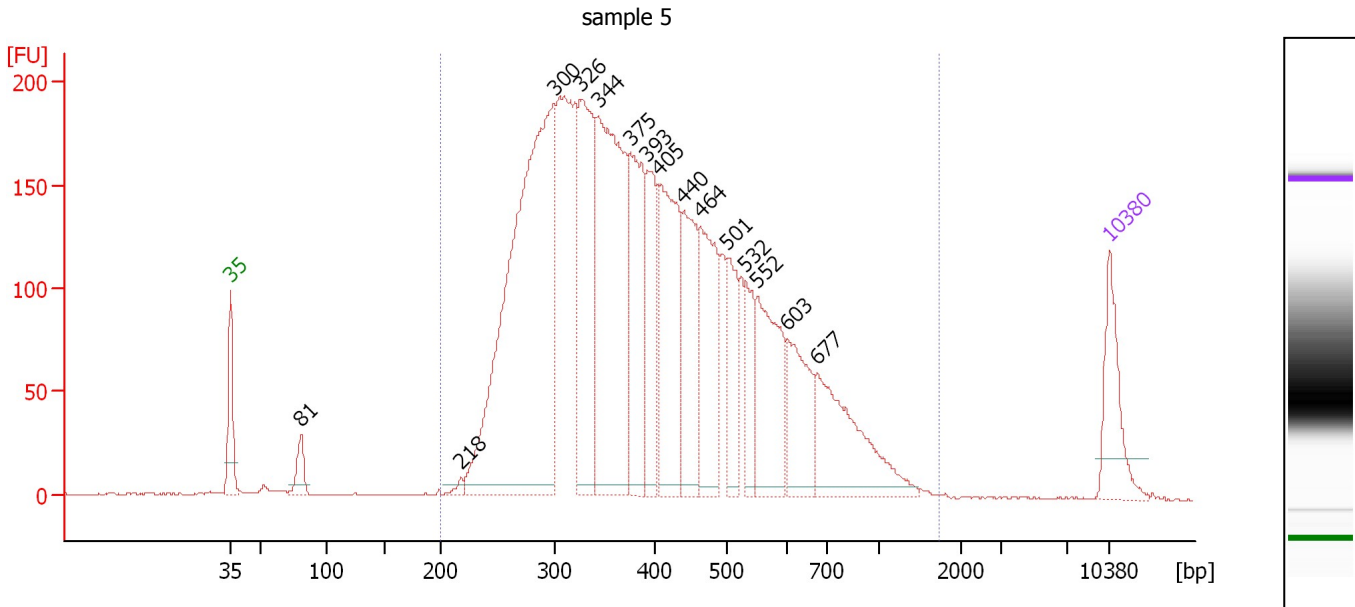
**Region table for sample 4 : sample 4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	443	1,703	15,521.9	99	40.0	15,129.83	61,006.4	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 15      Corr. Area 1: 5,263.3  
 Noise: 0.3

**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	81	43.57	815.6	
3	218	8.74	60.8	
4	300	969.63	4,901.0	
5	326	319.76	1,488.0	
6	344	509.24	2,246.1	
7	375	230.68	931.6	
8	393	146.28	564.6	
9	405	267.09	998.7	
10	440	175.29	604.1	
11	464	188.79	617.0	
12	501	99.43	300.6	
13	532	73.80	210.0	
14	552	176.99	485.7	
15	603	115.46	290.0	
16	677	193.24	432.4	
17	10,380	75.00	10.9	Upper Marker

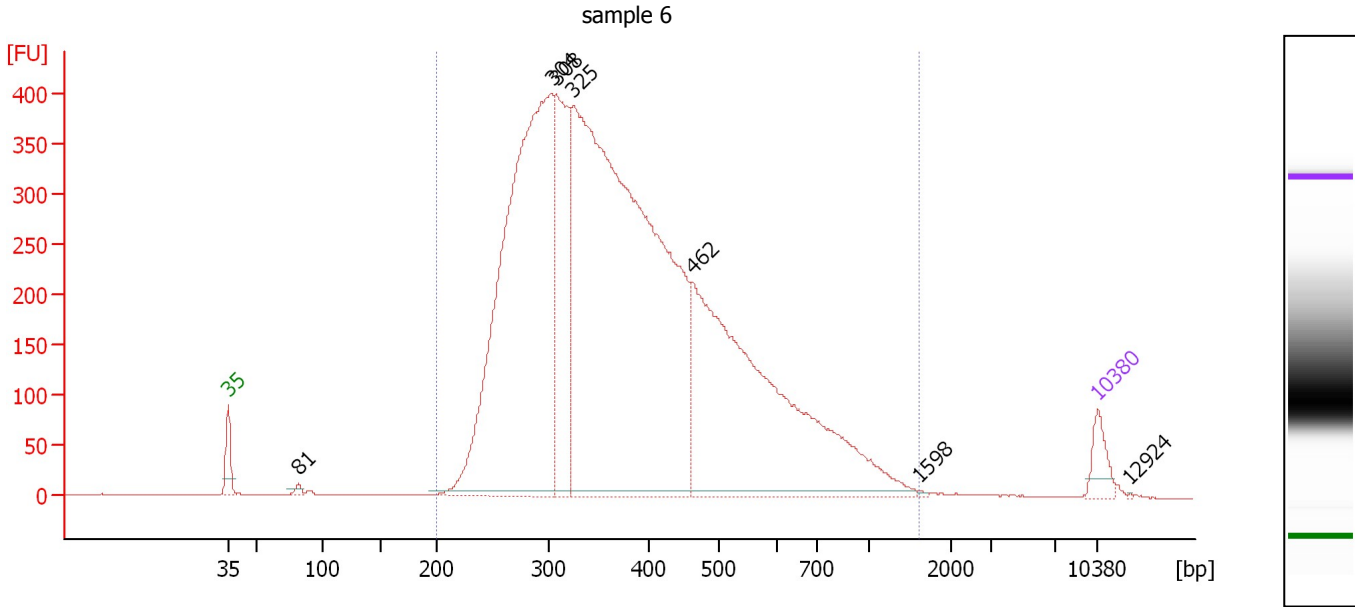
**Region table for sample 5 : sample 5**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	423	1,729	5,263.3	98	39.0	4,052.71	16,834.3	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 7                      Corr. Area 1: 9,733.3  
 Noise: 0.2

**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	81	20.61	383.2	
3	304	3,263.13	16,285.2	
4	308	842.46	4,139.0	
5	325	4,818.05	22,467.2	
6	462	2,255.54	7,395.0	
7	1,598	4.51	4.3	
8	10,380	75.00	10.9	Upper Marker
9	12,924	0.00	0.0	

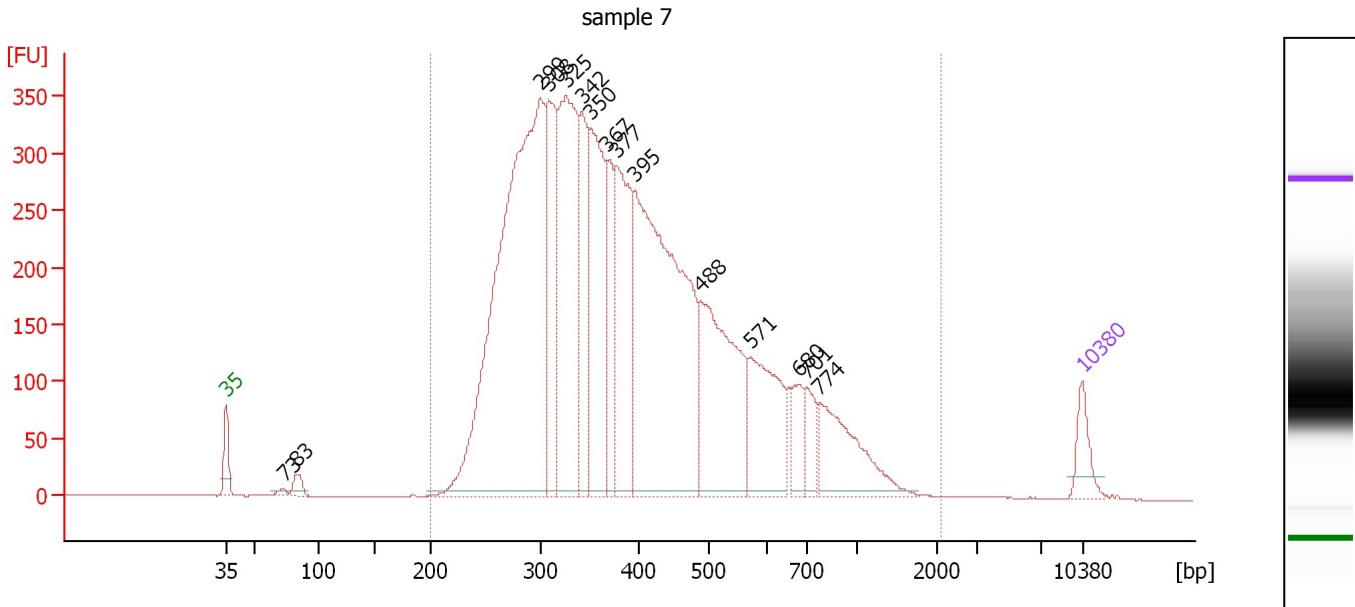
**Region table for sample 6 : sample 6**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	405	1,613	9,733.3	99	39.2	10,681.45	45,990.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 15                      Corr. Area 1: 8,861.7  
 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	73	17.27	360.7	
3	83	50.81	926.2	
4	299	2,518.55	12,762.1	
5	308	518.42	2,549.5	
6	325	992.34	4,620.3	
7	342	394.03	1,747.4	
8	350	644.40	2,787.0	
9	367	274.61	1,135.1	
10	377	613.01	2,464.6	
11	395	1,578.35	6,050.3	
12	488	717.63	2,229.3	
13	571	396.34	1,052.3	
14	680	103.69	231.1	
15	701	109.02	235.8	
16	774	317.17	621.0	
17	10,380	75.00	10.9	Upper Marker

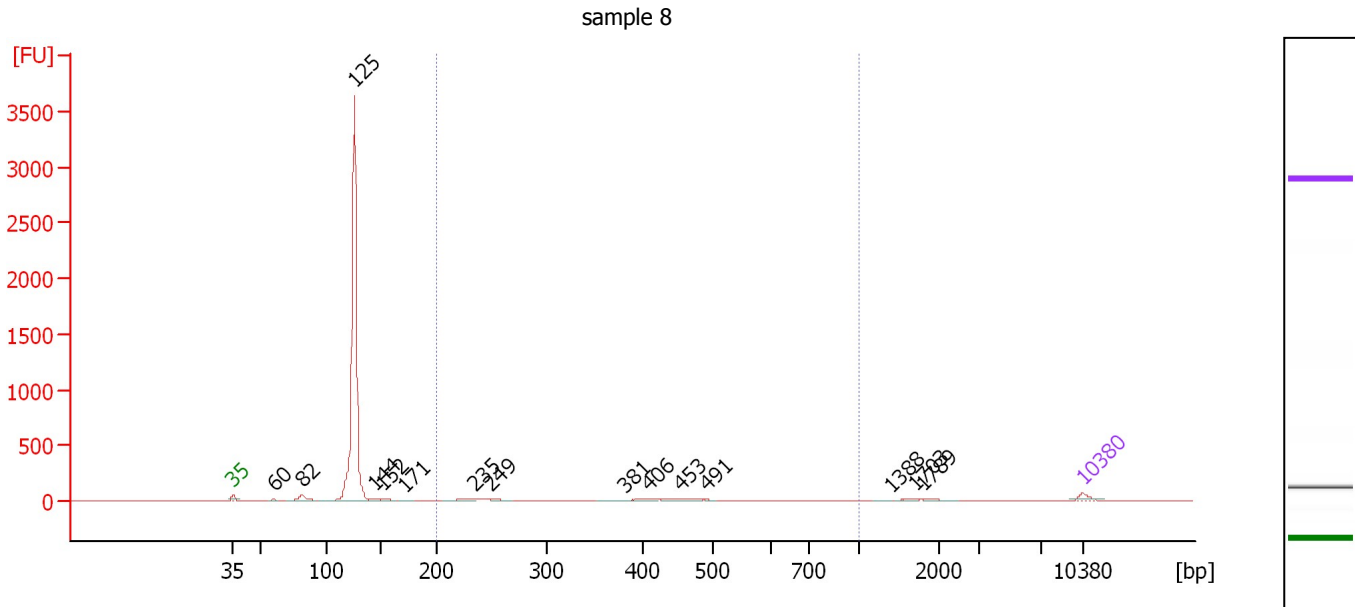
**Region table for sample 7 : sample 7**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	424	2,070	8,861.7	99	43.6	9,279.94	38,957.0	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 15                      Corr. Area 1: 349.8  
 Noise: 0.2

**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	60	23.52	598.0	
3	82	166.33	3,087.5	
4	125	6,958.91	84,053.4	
5	144	59.96	630.1	
6	152	52.04	519.2	
7	171	21.93	194.7	
8	235	61.52	396.2	
9	249	34.15	207.5	
10	381	16.73	66.5	
11	406	43.87	163.6	
12	453	67.74	226.4	
13	491	10.00	30.9	
14	1,388	9.94	10.9	
15	1,703	23.51	20.9	
16	1,789	30.10	25.5	
17	10,380	75.00	10.9	Upper Marker

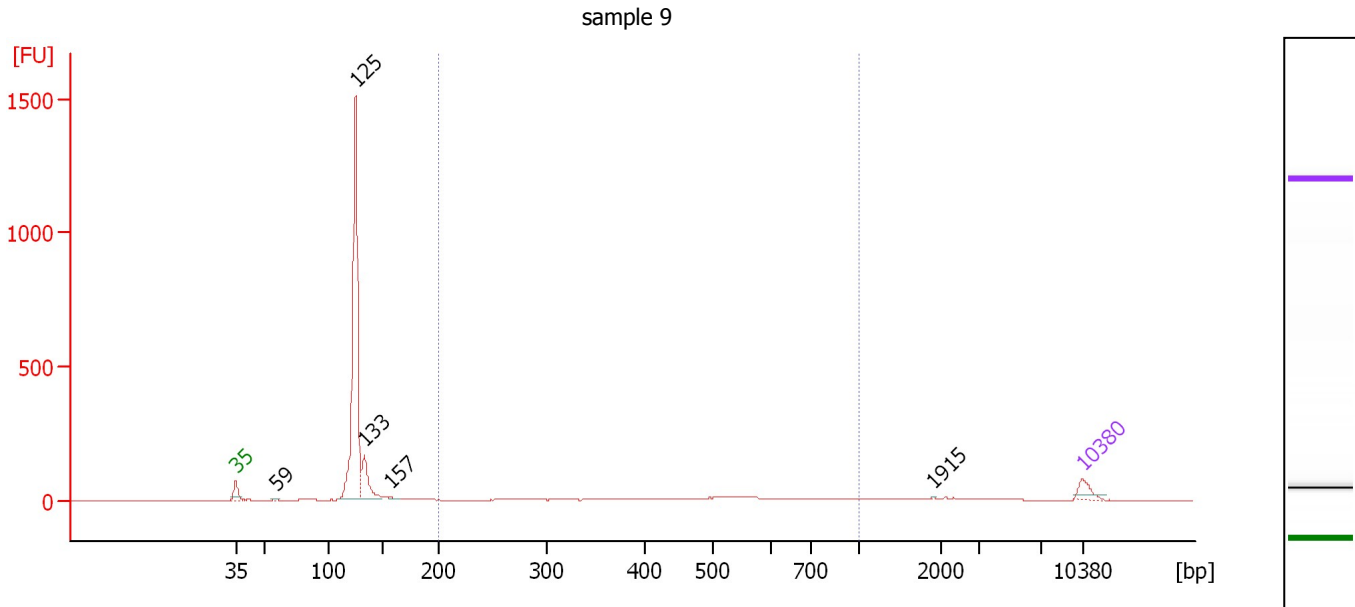
**Region table for sample 8 : sample 8**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	420	1,000	349.8	9	39.0	566.79	2,520.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 5                      Corr. Area 1: 261.0  
 Noise: 0.2

**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	59	9.23	236.0	
3	125	2,641.06	32,058.7	
4	133	362.95	4,149.5	
5	157	18.80	181.9	
6	1,915	3.16	2.5	
7	10,380	75.00	10.9	Upper Marker

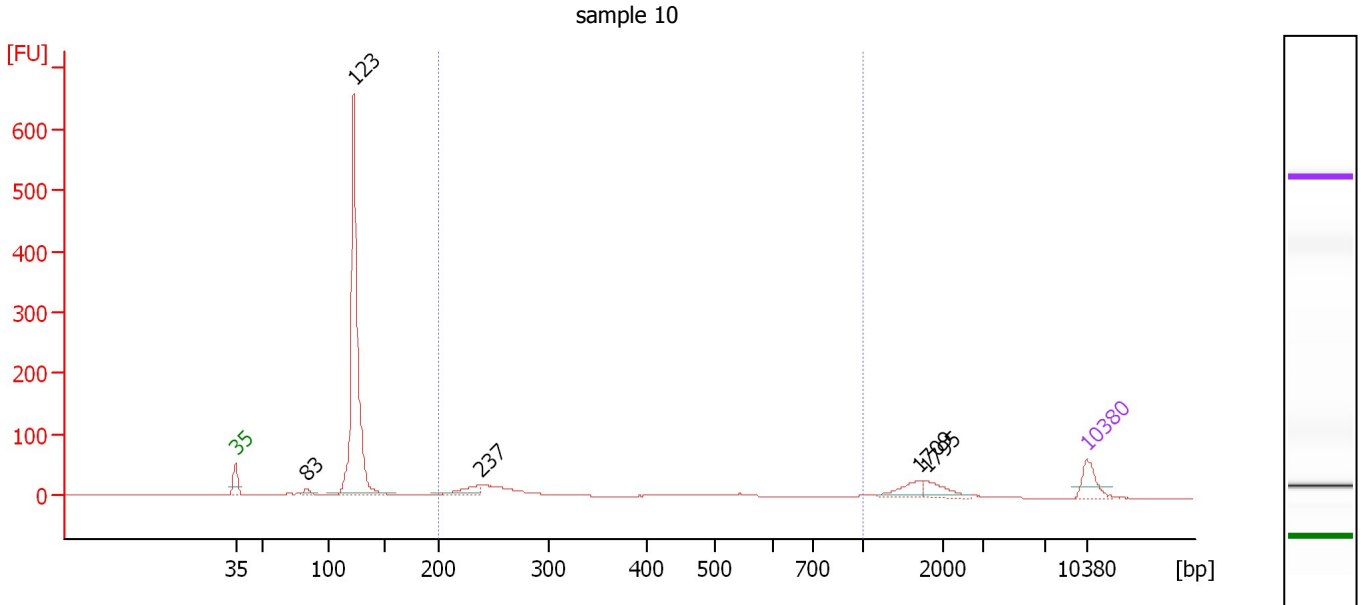
**Region table for sample 9 : sample 9**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	542	1,000	261.0	12	33.3	335.57	1,130.7	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 5                      Corr. Area 1: 249.0  
 Noise: 0.2

**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	83	34.69	629.8	
3	123	1,554.41	19,153.8	
4	237	80.88	516.9	
5	1,709	64.14	56.9	
6	1,795	61.54	52.0	
7	10,380	75.00	10.9	Upper Marker

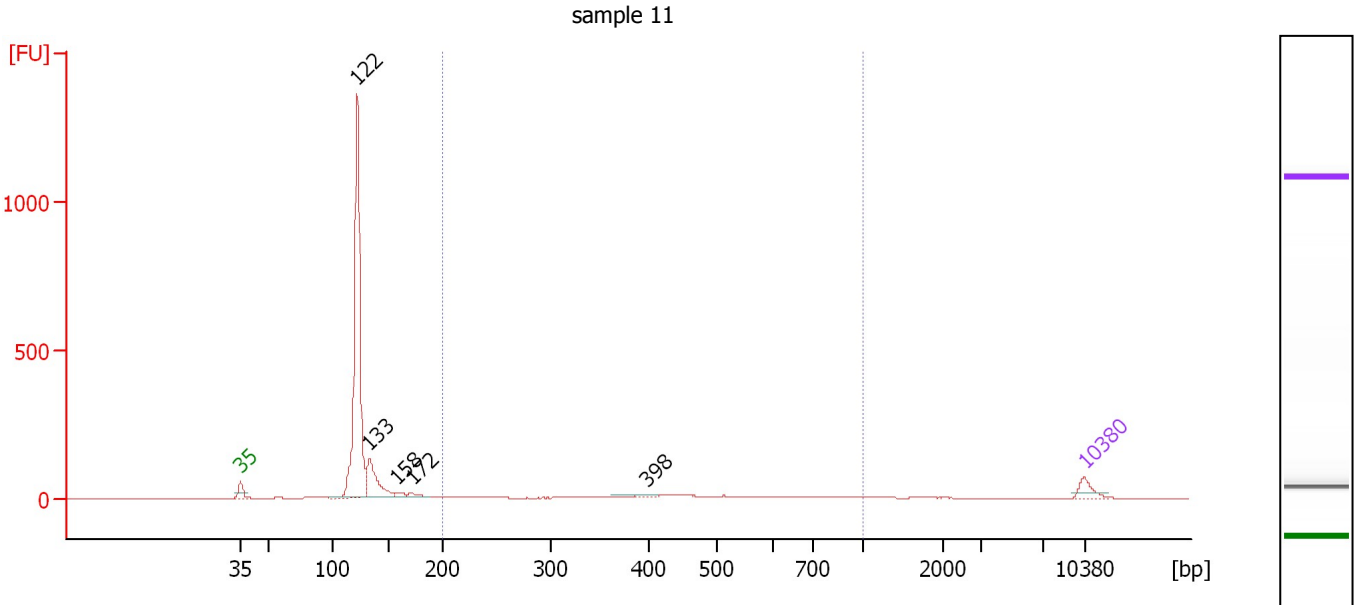
**Region table for sample 10 : sample 10**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	363	1,000	249.0	20	48.1	388.29	2,023.4	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 5                      Corr. Area 1: 271.8  
 Noise: 0.2

**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	122	2,512.35	31,100.4	
3	133	453.48	5,164.4	
4	158	47.35	453.5	
5	172	47.65	420.3	
6	398	29.88	113.7	
7	10,380	75.00	10.9	Upper Marker

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

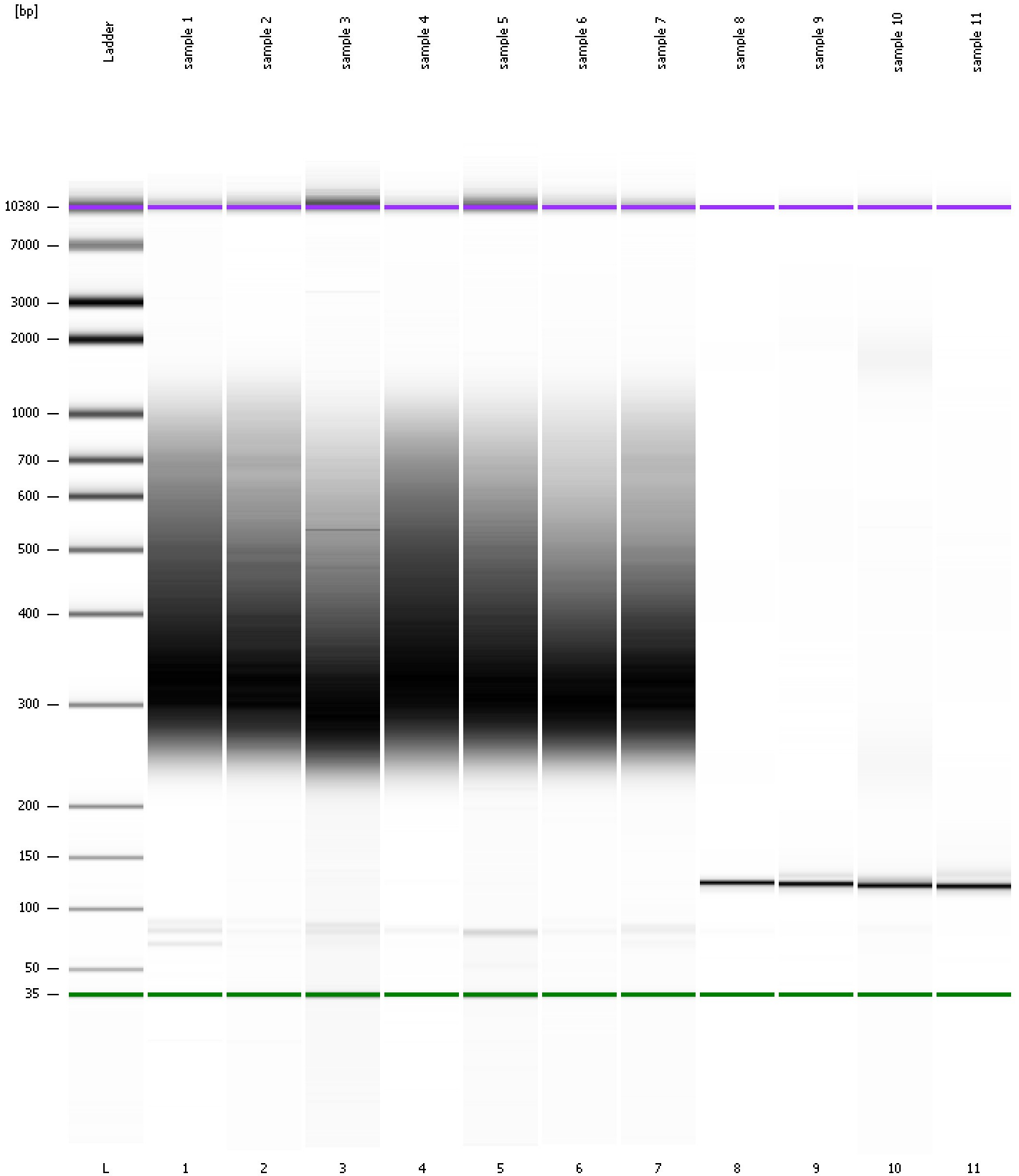
From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	493	1,000	271.8	13	35.4	345.60	1,285.2	Blue



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
Modified: 9/17/2014 2:28:36 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-09-17\2014-09-17\_003.xad

Created: 9/17/2014 1:41:59 PM  
 Modified: 9/17/2014 2:28:36 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		9/17/2014 2:23:15 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2014-09-17\2014-09-17_003.xad)		Instrument	Run		9/17/2014 1:42:04 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		9/17/2014 1:42:04 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		9/17/2014 1:42:04 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		9/17/2014 1:42:04 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		9/17/2014 1:42:04 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		9/17/2014 1:42:04 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		9/17/2014 1:42:04 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1