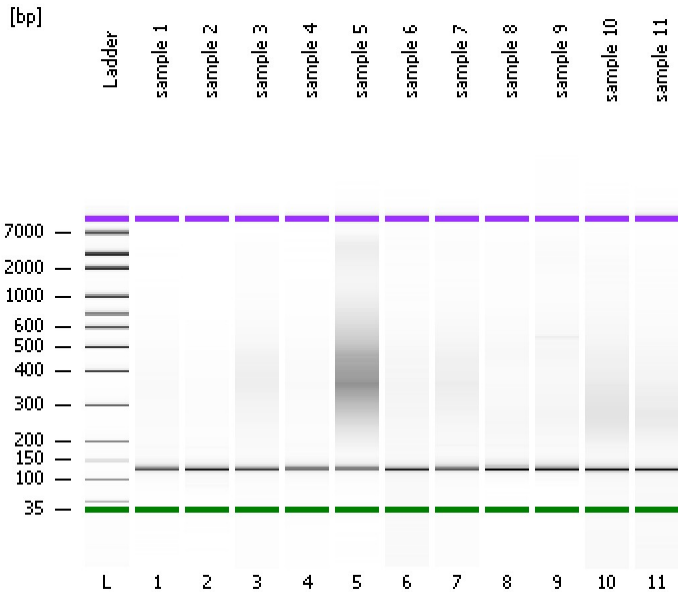


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
Modified: 10/14/2014 11:28:54 AM

### Electrophoresis File Run Summary



#### Instrument Information:

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

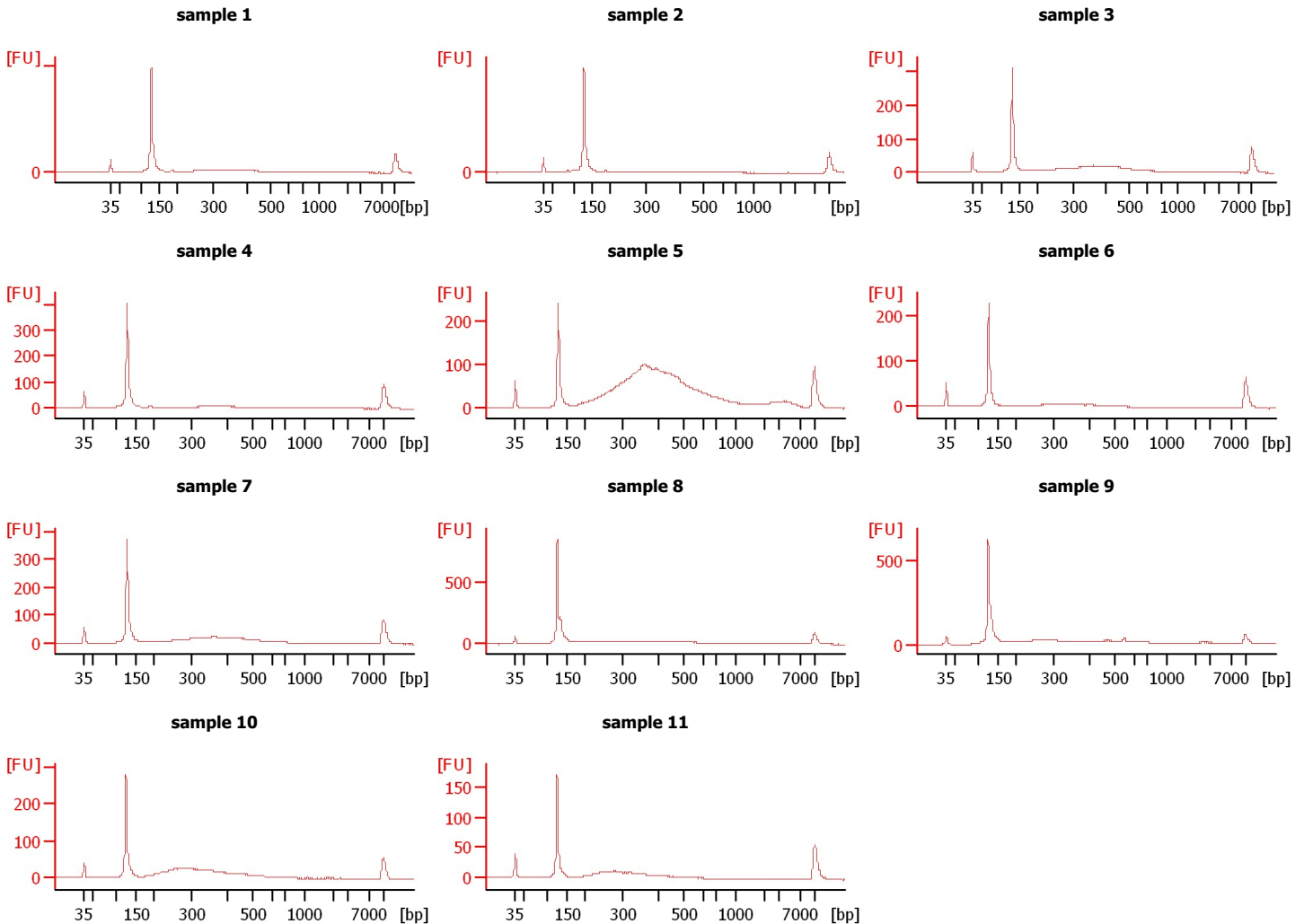
#### Assay Information:

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\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
Modified: 10/14/2014 11:28:54 AM

**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\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
Modified: 10/14/2014 11:28:54 AM

**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

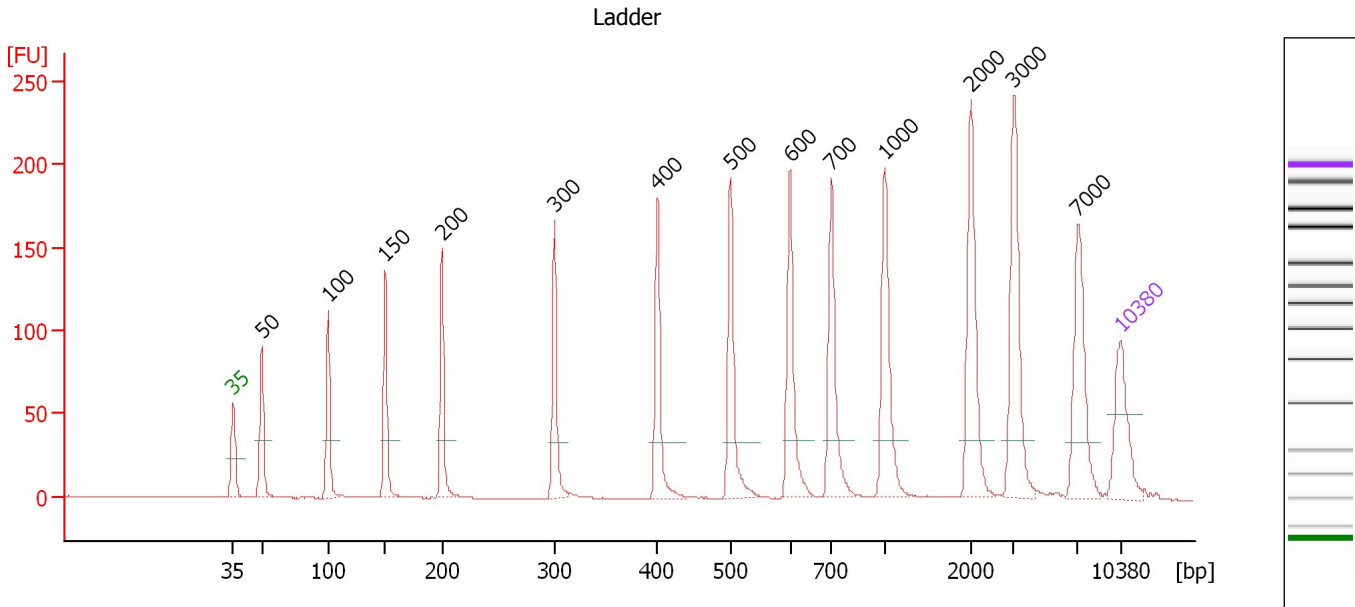
**Ladder**

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\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.1

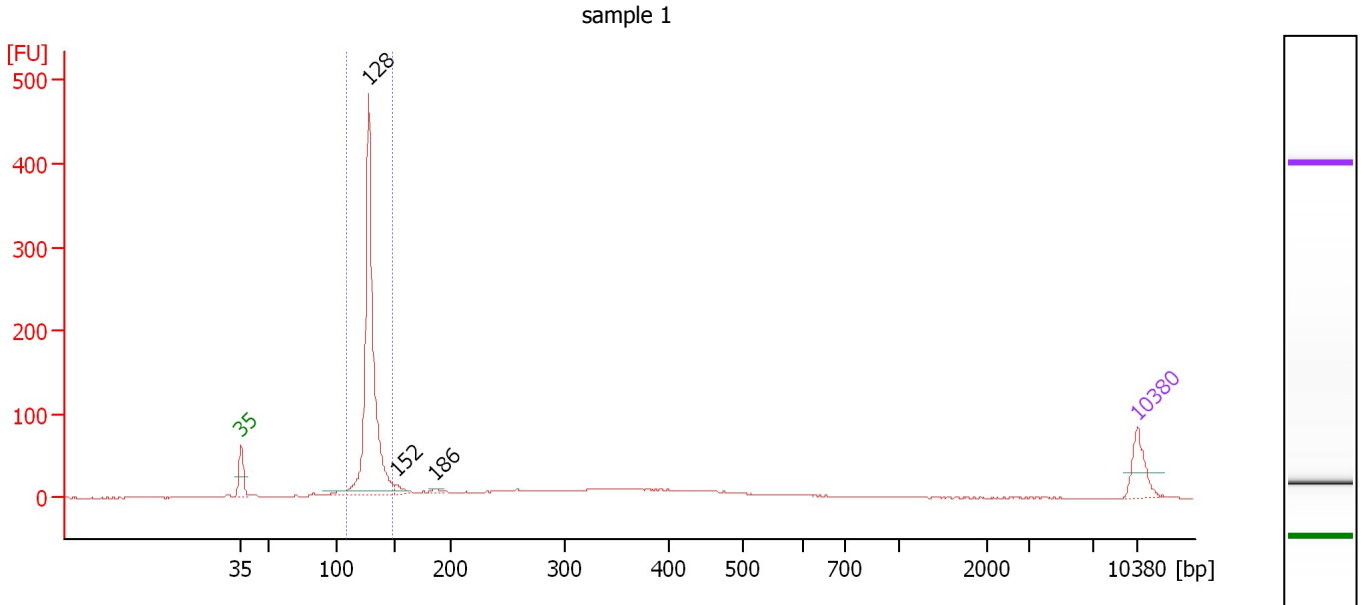
**Peak table for Ladder**

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\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 3                      Corr. Area 1: 707.3  
 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	128	1,233.12	14,615.0	
3	152	24.97	248.3	
4	186	11.06	90.1	
5	10,380	75.00	10.9	Upper Marker

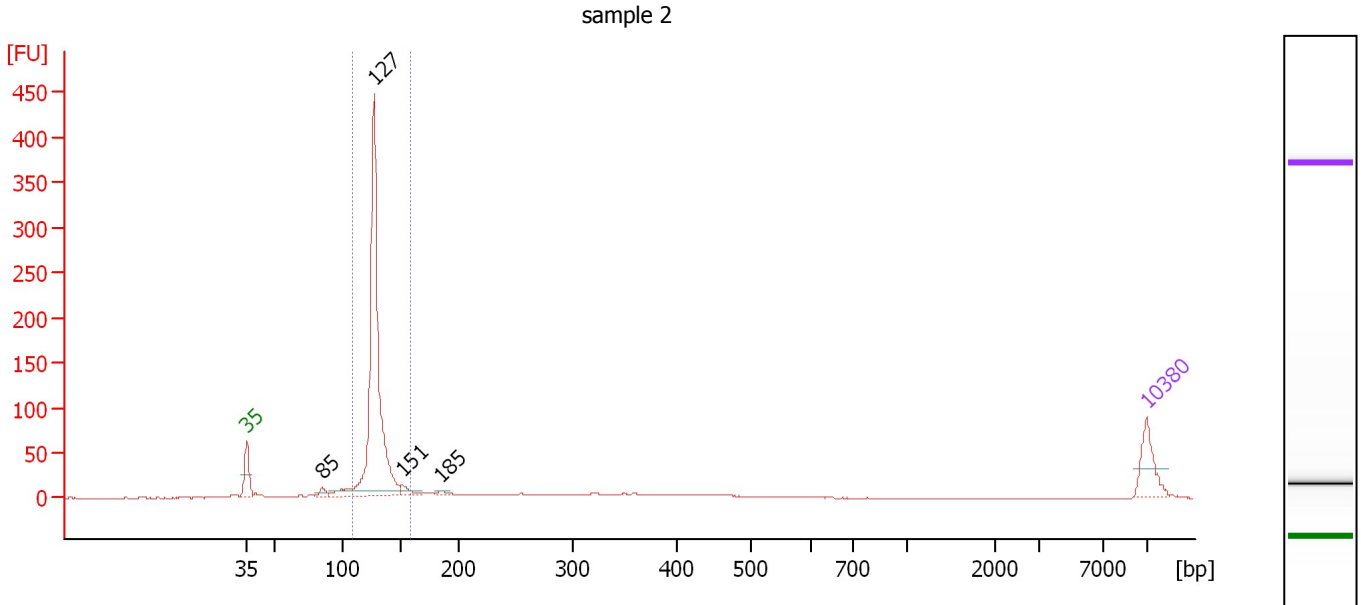
**Region table for sample 1 : sample 1**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
108	129	149	707.3	57	4.7	1,258.12	14,760.5	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 4                      Corr. Area 1: 667.6  
 Noise: 0.2

**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	85	22.10	394.7	
3	127	1,155.69	13,789.7	
4	151	32.20	322.2	
5	185	11.09	90.7	
6	10,380	75.00	10.9	Upper Marker

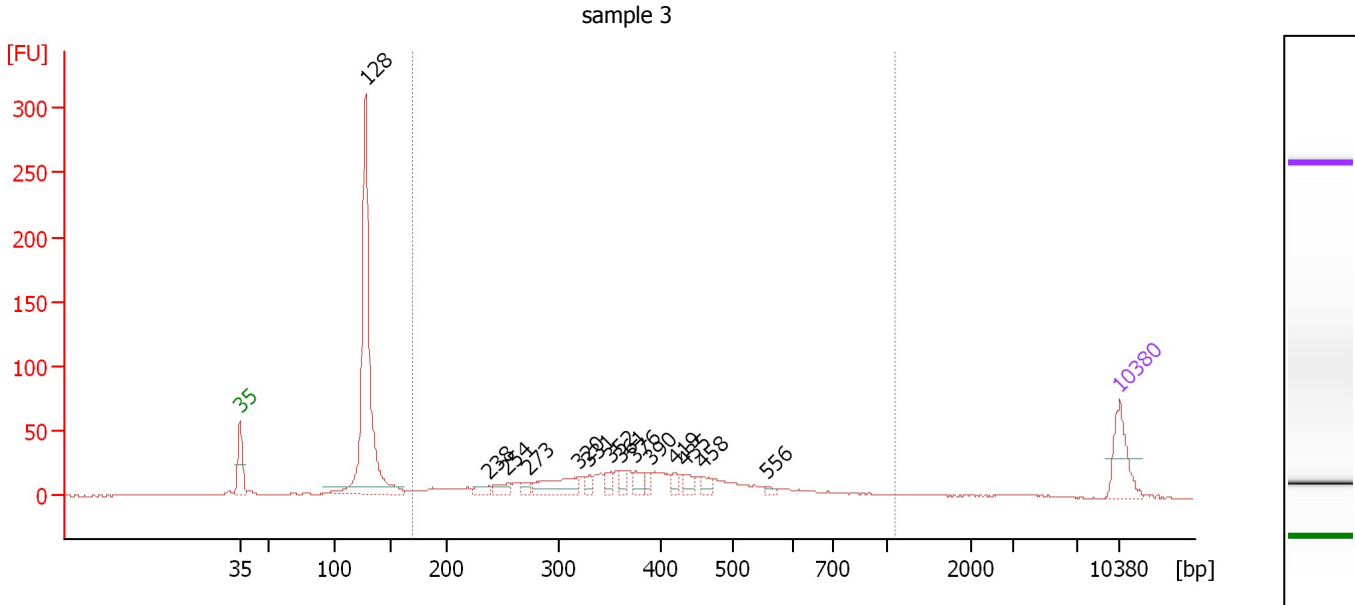
**Region table for sample 2 : sample 2**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
108	129	159	667.6	73	5.7	1,165.16	13,711.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 14                      Corr. Area 1: 555.9  
 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	128	791.80	9,399.4	
3	238	20.58	131.3	
4	254	26.77	159.5	
5	273	16.10	89.4	
6	320	86.40	409.7	
7	331	16.05	73.6	
8	352	22.32	96.1	
9	361	22.28	93.4	
10	376	26.95	108.8	
11	390	18.11	70.3	
12	419	16.32	59.0	
13	435	21.28	74.1	
14	458	18.40	60.9	
15	556	7.15	19.5	
16	10,380	75.00	10.9	Upper Marker

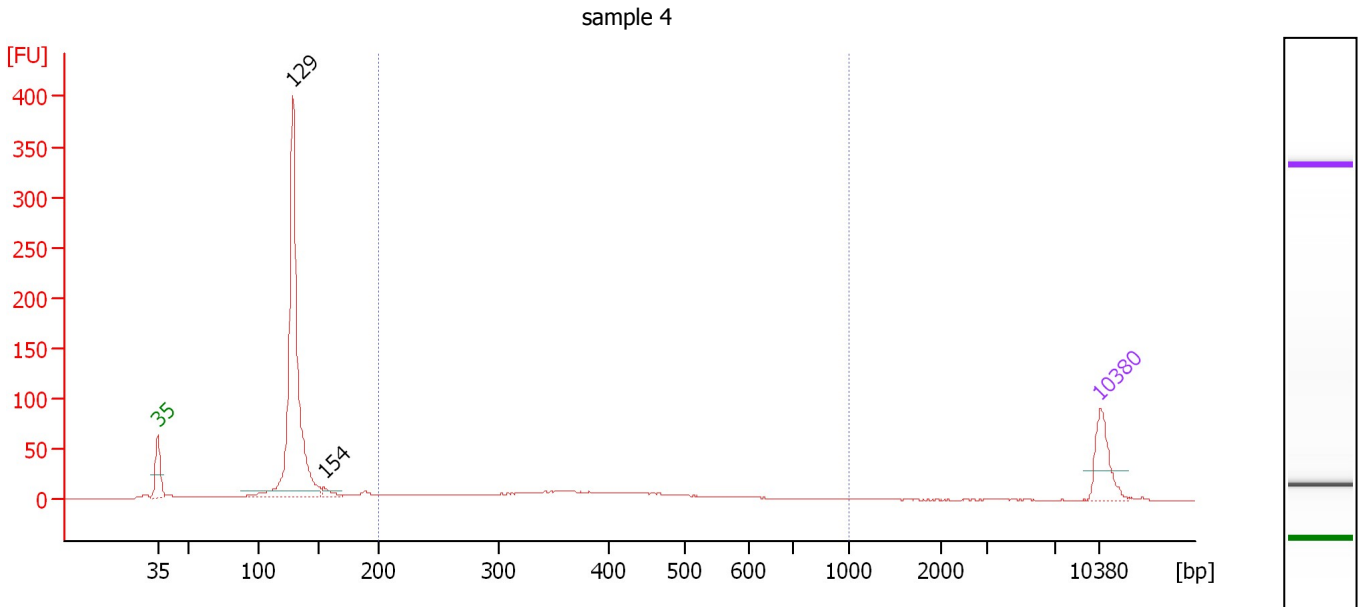
**Region table for sample 3 : sample 3**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
170	397	1,114	555.9	51	36.2	774.19	3,504.7	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 2                      Corr. Area 1: 224.1  
 Noise: 0.1

**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	129	865.38	10,195.9	
3	154	18.40	180.6	
4	10,380	75.00	10.9	Upper Marker

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

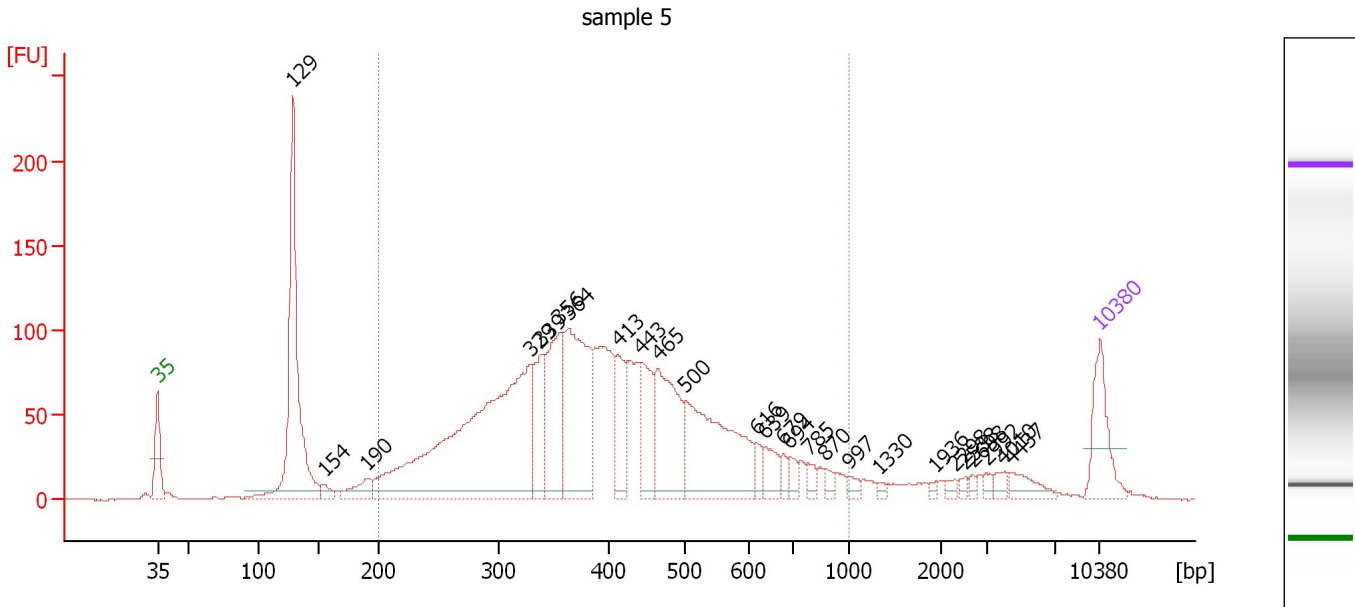
From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	394	1,000	224.1	24	34.7	259.45	1,156.3	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 26                      Corr. Area 1: 2,458.5  
 Noise: 0.2

**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	129	471.49	5,557.5	
3	154	16.51	162.4	
4	190	42.55	339.8	
5	329	742.44	3,421.8	
6	339	107.27	479.8	
7	356	183.12	779.7	
8	364	293.23	1,220.1	
9	413	88.31	323.7	
10	443	98.27	336.1	
11	465	191.47	624.2	
12	500	283.47	859.2	
13	616	19.80	48.7	
14	639	38.10	90.4	
15	679	15.95	35.6	
16	694	20.53	44.8	
17	785	16.28	31.4	
18	870	11.65	20.3	
19	997	10.60	16.1	
20	1,330	5.44	6.2	
21	1,936	4.40	3.4	
22	2,298	6.65	4.4	
23	2,538	6.10	3.6	
24	2,698	5.75	3.2	
25	2,992	8.18	4.1	
26	4,010	11.59	4.4	


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
Modified: 10/14/2014 11:28:54 AM

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

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations
27	4,437	27.86	9.5	
28	10,380	75.00	10.9	Upper Marker

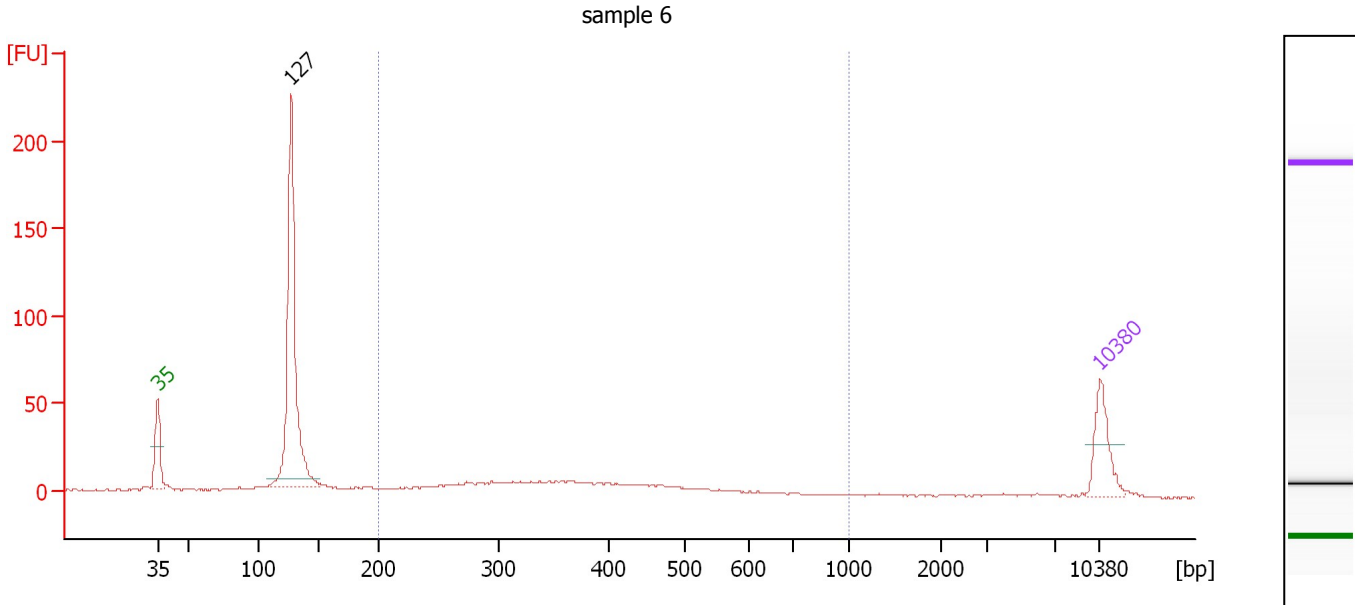
**Region table for sample 5 : sample 5**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Color
200	420	1,000	2,458.5	80	33.1	2,579.37	10,637.0	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 1                      Corr. Area 1: 185.1  
 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	127	589.58	7,036.0	
3	10,380	75.00	10.9	Upper Marker

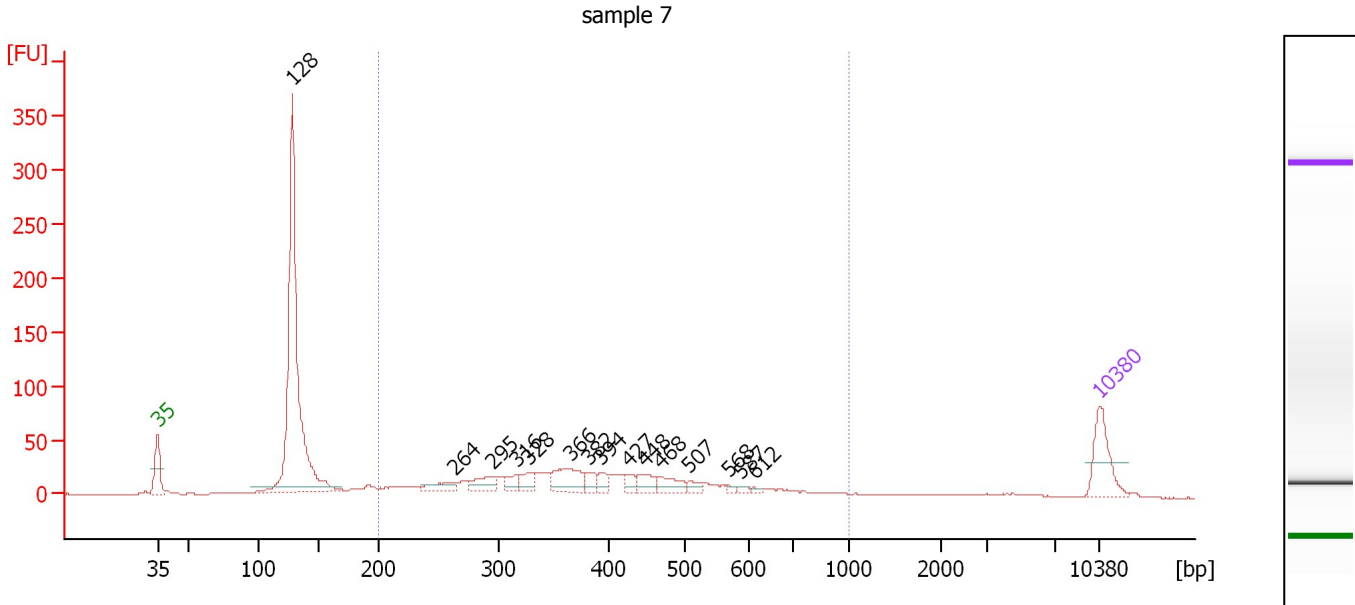
**Region table for sample 6 : sample 6**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	383	1,000	185.1	33	31.3	291.38	1,299.1	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 15                      Corr. Area 1: 641.0  
 Noise: 0.3

**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	128	831.02	9,844.2	
3	264	32.79	188.4	
4	295	47.36	243.0	
5	316	25.71	123.2	
6	328	32.82	151.5	
7	366	76.97	318.9	
8	382	23.44	93.0	
9	394	20.02	77.0	
10	427	19.16	68.0	
11	448	32.78	110.9	
12	468	35.57	115.3	
13	507	15.78	47.2	
14	568	5.53	14.7	
15	587	6.52	16.8	
16	612	4.63	11.5	
17	10,380	75.00	10.9	Upper Marker

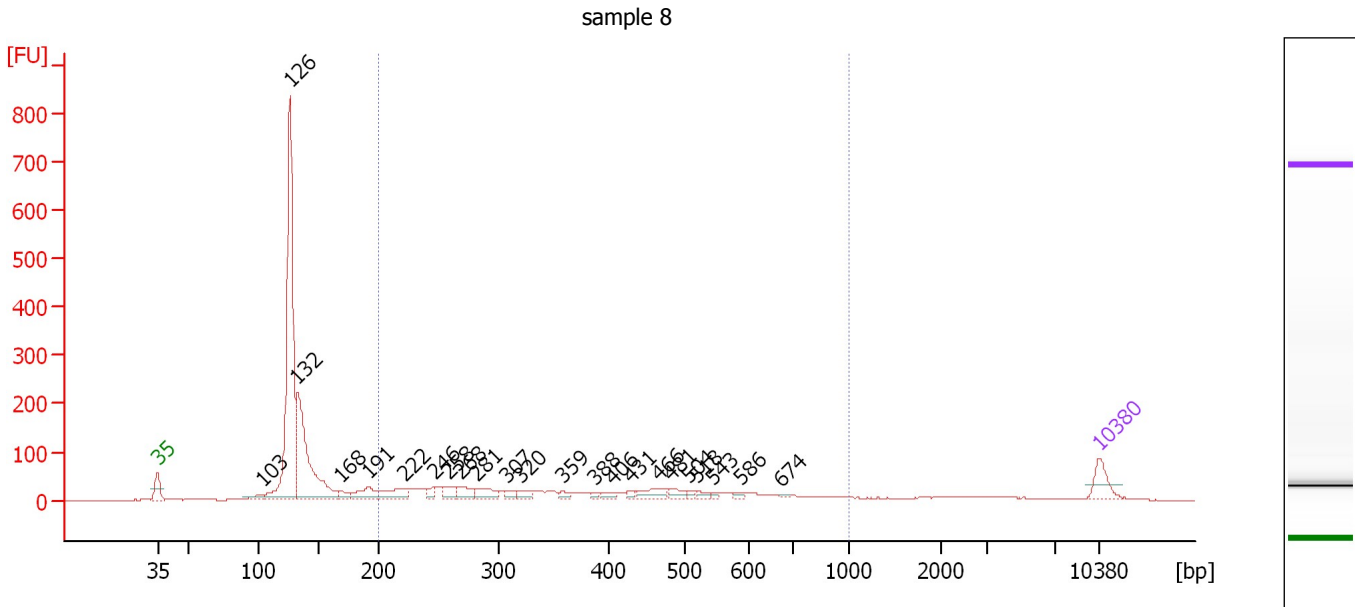
**Region table for sample 7 : sample 7**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	408	1,000	641.0	48	34.1	749.22	3,205.1	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 23                      Corr. Area 1: 863.1  
 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	103	37.61	554.7	
3	126	1,457.23	17,530.7	
4	132	753.77	8,634.2	
5	168	39.18	353.8	
6	191	98.96	784.3	
7	222	106.70	729.5	
8	246	37.86	233.0	
9	258	52.24	306.8	
10	268	64.83	367.1	
11	281	72.18	388.5	
12	307	28.01	138.4	
13	320	34.79	165.0	
14	359	21.45	90.5	
15	388	13.74	53.6	
16	406	23.73	88.5	
17	431	15.56	54.7	
18	466	59.17	192.3	
19	481	33.37	105.1	
20	504	14.58	43.8	
21	518	18.86	55.2	
22	543	9.16	25.5	
23	586	10.25	26.5	
24	674	6.85	15.4	
25	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
Modified: 10/14/2014 11:28:54 AM

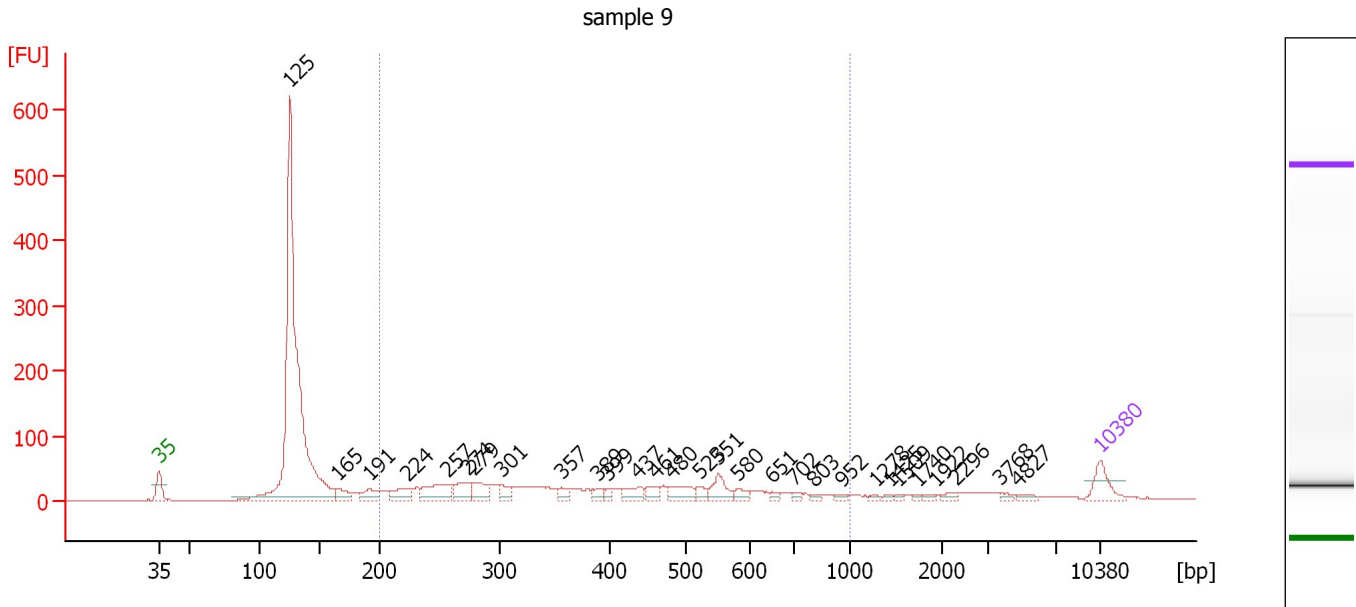
**Electropherogram Summary Continued ...****... Region table for sample 8 :**      sample 8

<b>From [bp]</b>	<b>Average Size [bp]</b>	<b>To [bp]</b>	<b>Corr. Area</b>	<b>% of Total</b>	<b>Size distribution in CV [%]</b>	<b>Conc. [pg/<math>\mu</math>l]</b>	<b>Molarity [pmol/l]</b>	<b>Co lor</b>
200	405	1,000	863.1	36	40.5	1,154.28	5,297.6	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 29                      Corr. Area 1: 863.2  
 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	125	2,394.28	28,910.4	
3	165	62.30	570.8	
4	191	71.95	570.5	
5	224	92.74	627.9	
6	257	155.60	918.8	
7	274	98.46	544.8	
8	279	93.17	505.6	
9	301	52.55	264.3	
10	357	36.76	156.2	
11	389	32.11	124.9	
12	399	22.13	83.9	
13	437	57.15	198.0	
14	461	40.82	134.3	
15	480	79.18	249.7	
16	523	33.15	96.1	
17	551	81.62	224.5	
18	580	29.78	77.7	
19	651	13.80	32.1	
20	702	13.62	29.4	
21	803	12.80	24.1	
22	952	11.68	18.6	
23	1,278	8.02	9.5	
24	1,425	8.02	8.5	
25	1,509	6.44	6.5	
26	1,740	7.01	6.1	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad


Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 9 : sample 9

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
27	1,922	10.40	8.2	
28	2,296	16.07	10.6	
29	3,768	11.48	4.6	
30	4,827	14.20	4.5	
31	10,380	75.00	10.9	Upper Marker

#### Region table for sample 9 : sample 9

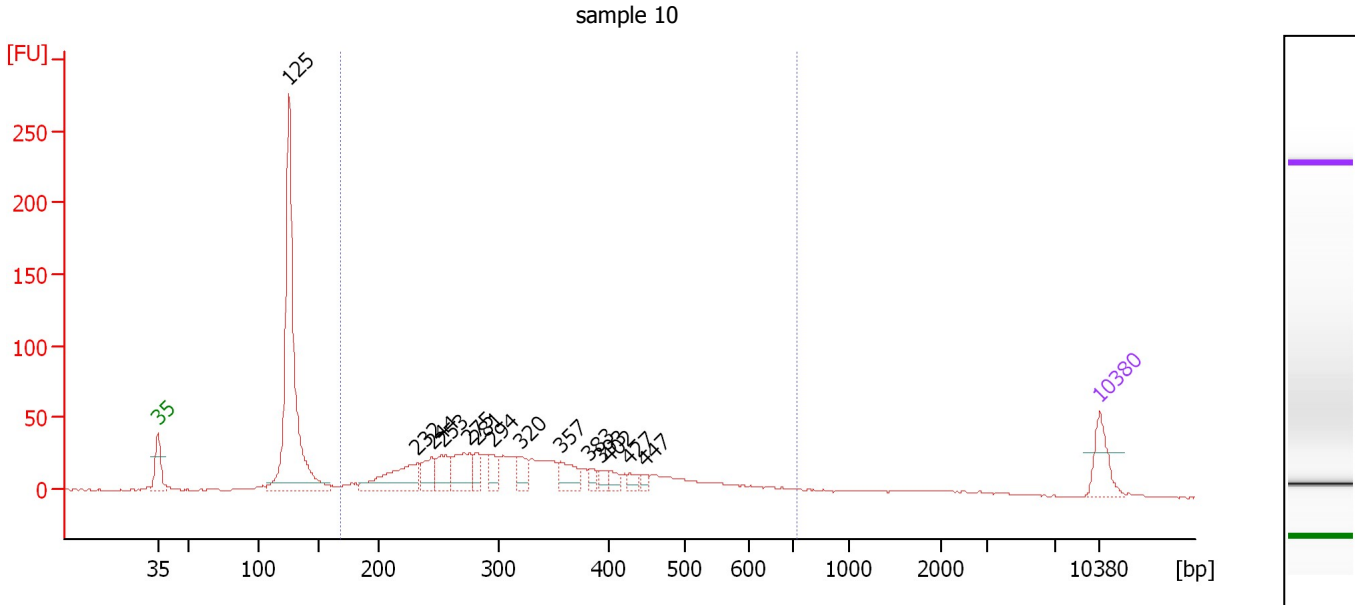
From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	416	1,000	863.2	40	39.6	1,488.10	6,605.6	



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 14      Corr. Area 1: 716.5  
 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	125	959.20	11,590.1	
3	232	179.89	1,173.7	
4	244	73.91	458.7	
5	253	85.59	513.1	
6	275	126.55	696.2	
7	281	48.71	262.3	
8	294	55.38	285.1	
9	320	51.98	245.9	
10	357	76.53	324.9	
11	383	26.03	103.0	
12	393	24.05	92.8	
13	402	26.77	101.0	
14	427	24.01	85.1	
15	447	16.78	57.0	
16	10,380	75.00	10.9	Upper Marker

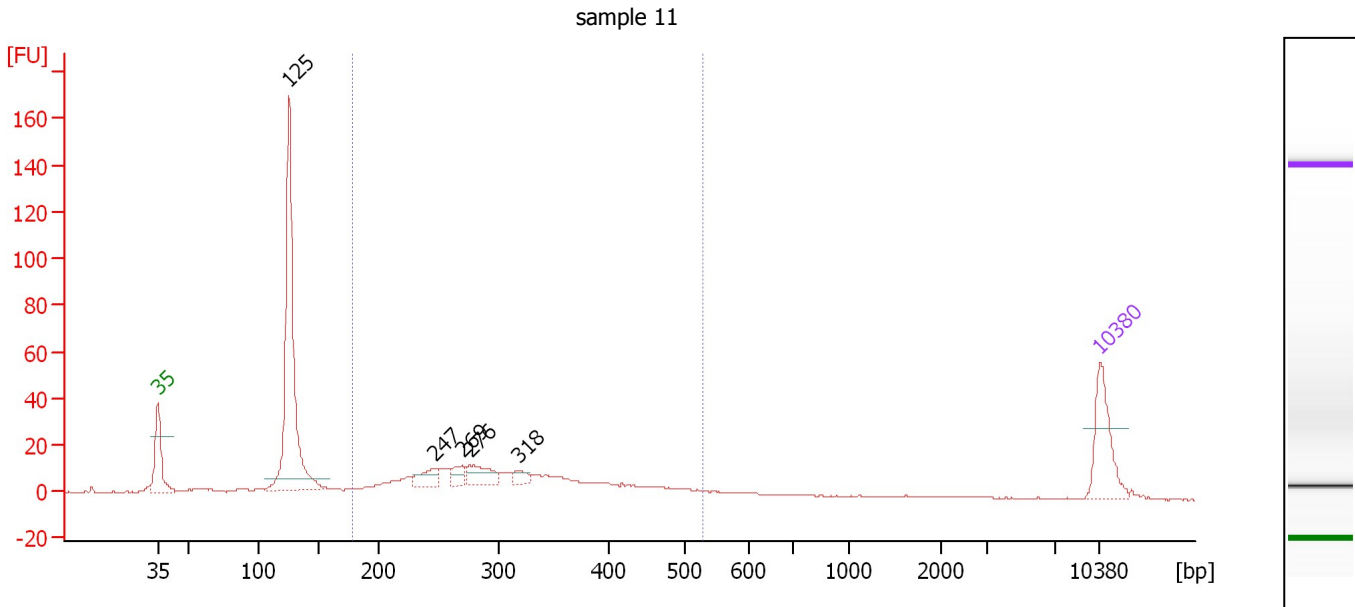
**Region table for sample 10 : sample 10**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
168	345	721	716.5	61	32.0	1,416.49	7,093.7	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 5                      Corr. Area 1: 250.8  
 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	125	476.91	5,766.5	
3	247	33.94	208.4	
4	269	25.79	145.0	
5	276	47.51	260.9	
6	318	16.56	78.9	
7	10,380	75.00	10.9	Upper Marker

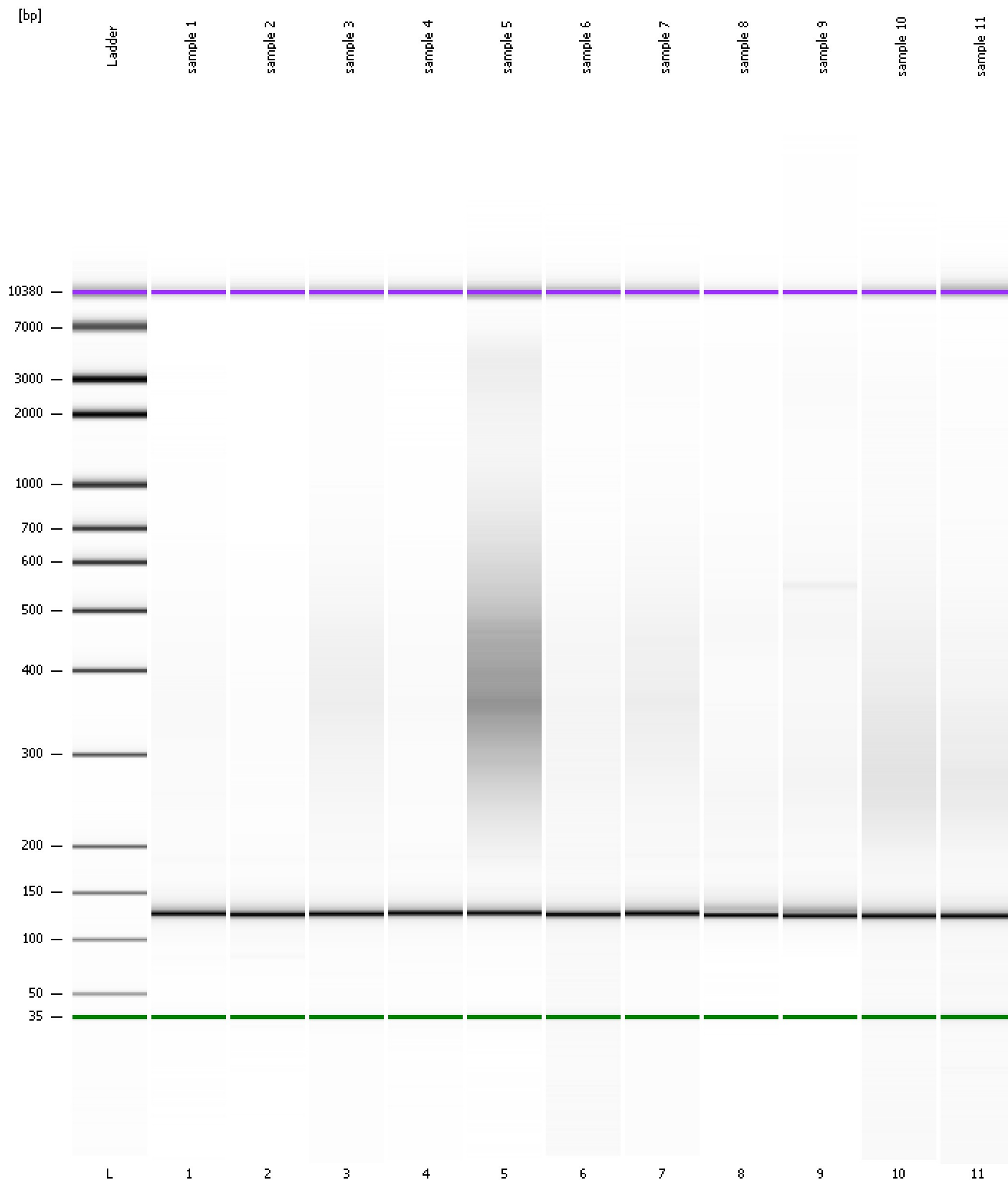
**Region table for sample 11 : sample 11**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
177	314	529	250.8	49	24.7	453.15	2,366.9	Blue

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
Modified: 10/14/2014 11:28:54 AM

**Gel Image**

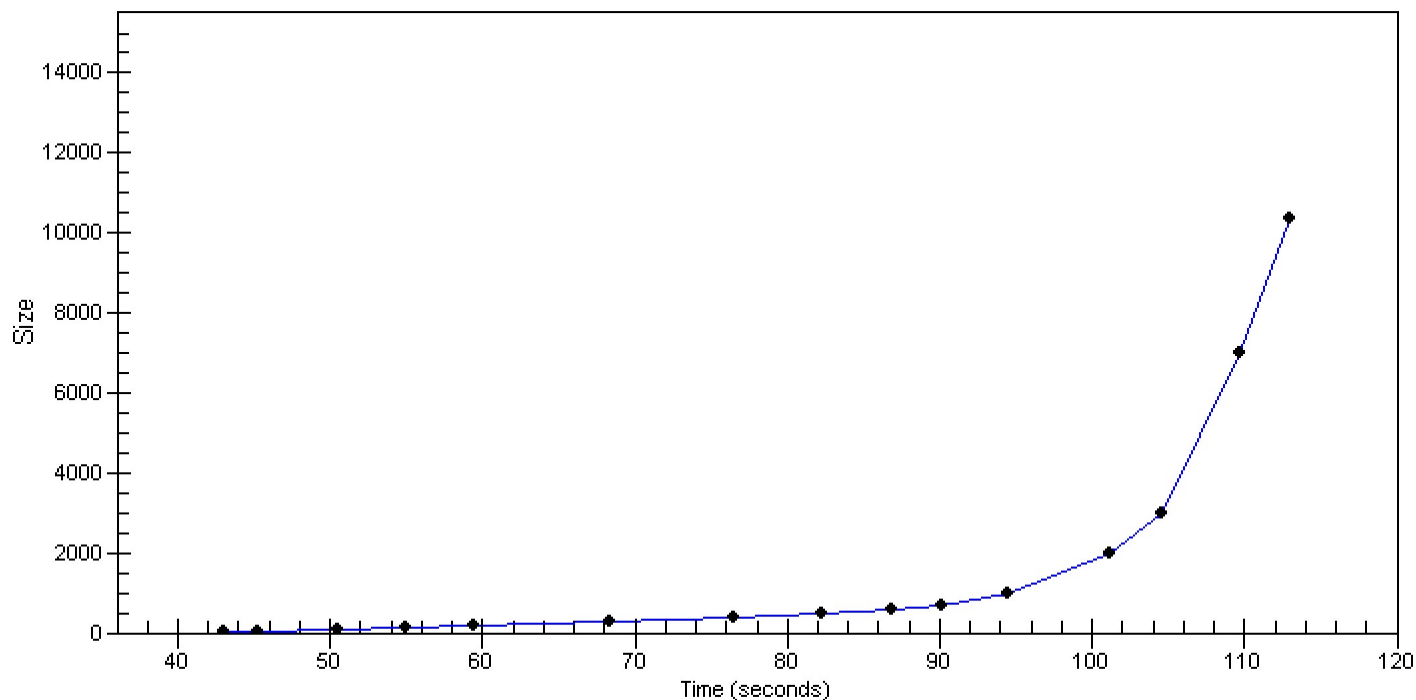


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
Modified: 10/14/2014 11:28:54 AM

**Curves**

**Standard Curve**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-10-14\2014-10-14\_001.xad

Created: 10/14/2014 10:42:35 AM  
 Modified: 10/14/2014 11:28:54 AM

**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		10/14/2014 11:23:54 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2014-10-14\2014-10-14_001.xad)		Instrument	Run		10/14/2014 10:42:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		10/14/2014 10:42:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		10/14/2014 10:42:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		10/14/2014 10:42:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		10/14/2014 10:42:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		10/14/2014 10:42:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		10/14/2014 10:42:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1