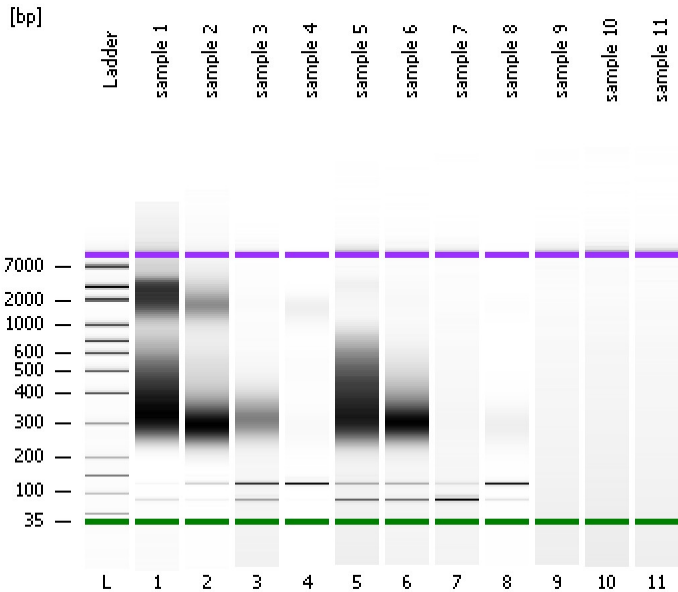


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
Modified: 3/13/2017 11:58:27 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

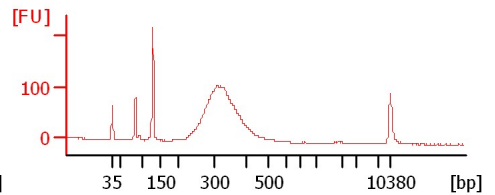
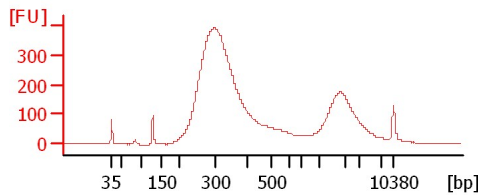
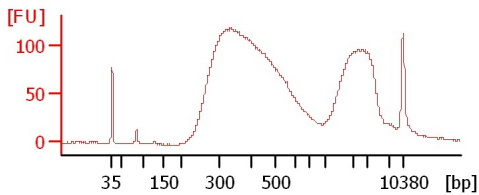
Chip Information:

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

sample 1

sample 2

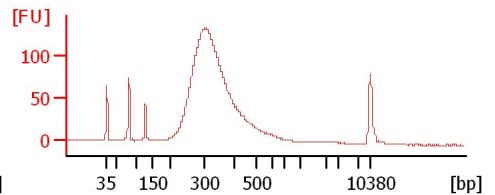
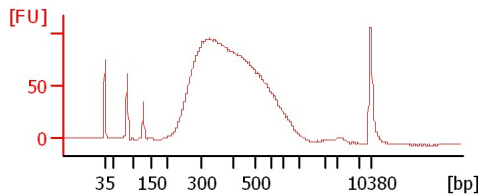
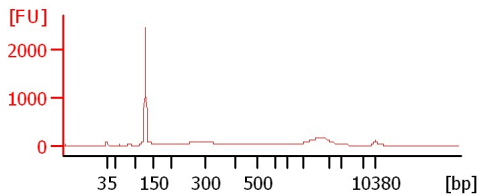
sample 3



sample 4

sample 5

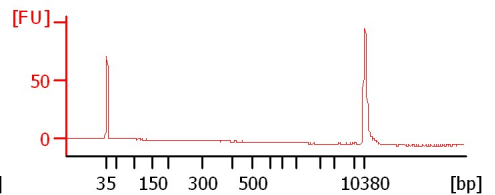
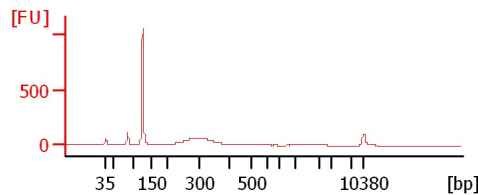
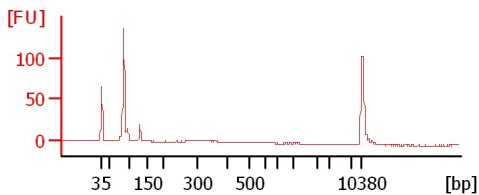
sample 6



sample 7

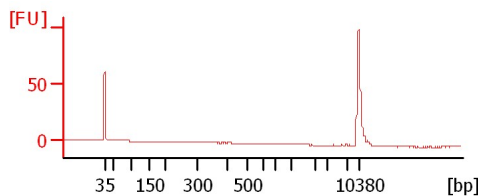
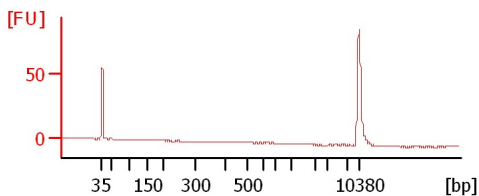
sample 8

sample 9



sample 10

sample 11



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
 Modified: 3/13/2017 11:58:27 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:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
Modified: 3/13/2017 11:58:27 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

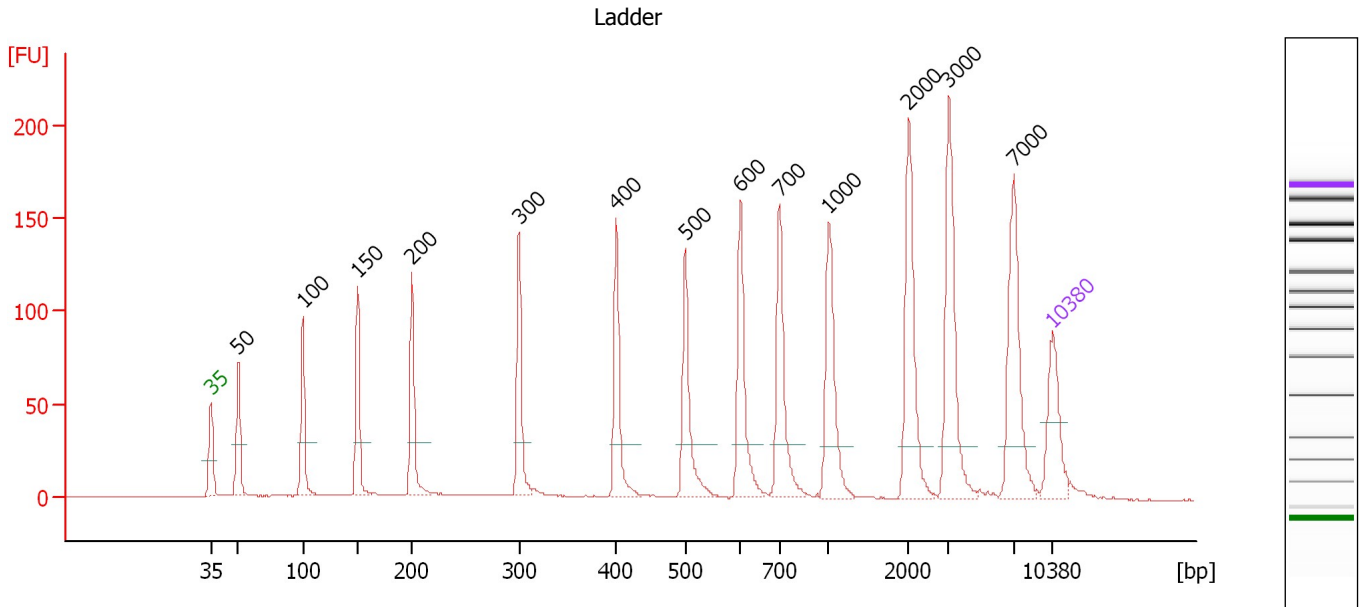
**Ladder**

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:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
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**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

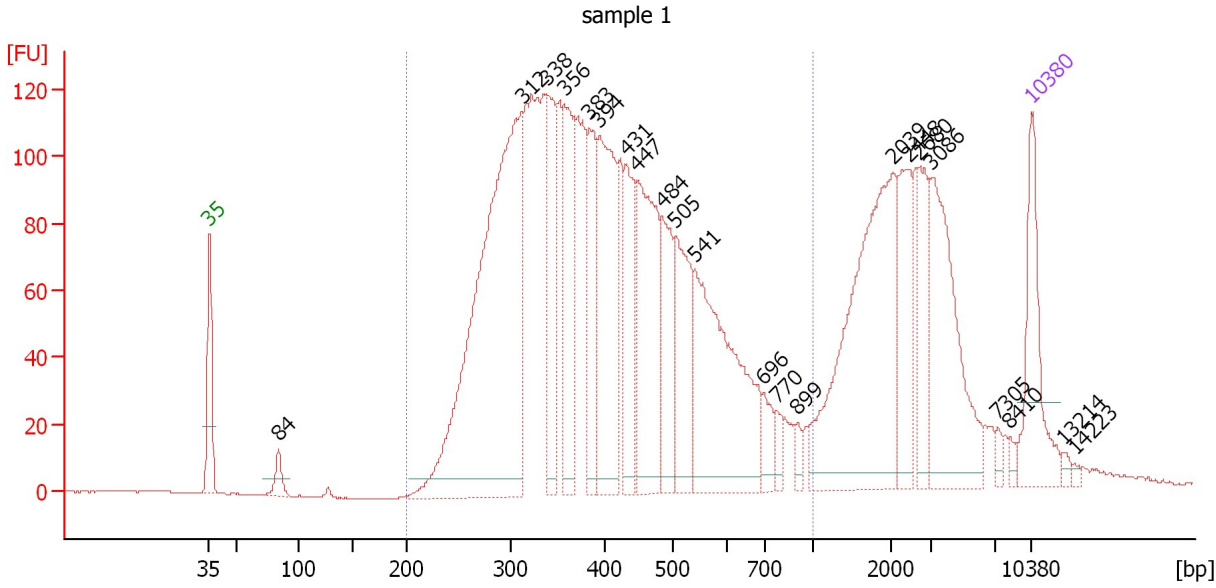
**Peak table for Ladder**

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	45.26
3	100	150.00	2,272.7	Ladder Peak	50.63
4	150	150.00	1,515.2	Ladder Peak	55.20
5	200	150.00	1,136.4	Ladder Peak	59.72
6	300	150.00	757.6	Ladder Peak	68.64
7	400	150.00	568.2	Ladder Peak	76.71
8	500	150.00	454.5	Ladder Peak	82.44
9	600	150.00	378.8	Ladder Peak	87.05
10	700	150.00	324.7	Ladder Peak	90.29
11	1,000	150.00	227.3	Ladder Peak	94.41
12	2,000	150.00	113.6	Ladder Peak	101.07
13	3,000	150.00	75.8	Ladder Peak	104.39
14	7,000	150.00	32.5	Ladder Peak	109.81
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
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**Electropherogram Summary Continued ...**



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

Number of peaks found: 22                      Corr. Area 1: 3,021.8  
 Noise: 0.2

**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	84	22.20	400.9		48.90
3	312	650.61	3,160.4		69.60
4	338	133.62	598.4		71.74
5	356	142.51	606.0		73.19
6	383	104.42	413.4		75.32
7	394	199.82	768.4		76.23
8	431	96.17	337.9		78.50
9	447	187.67	636.0		79.41
10	484	95.02	297.3		81.54
11	505	116.23	348.6		82.68
12	541	254.72	713.9		84.31
13	696	24.35	53.0		90.17
14	770	15.04	29.6		91.26
15	899	10.23	17.2		93.03
16	2,039	263.78	196.0		101.20
17	2,448	71.44	44.2		102.56
18	2,680	50.73	28.7		103.33
19	3,086	145.79	71.6		104.51
20	7,305	6.47	1.3		110.09
21	8,410	5.17	0.9		111.14
22	10,380	75.00	10.9	Upper Marker	113.00
23	13,214	0.00	0.0		115.68
24	14,223	0.00	0.0		116.63


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
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**Electropherogram Summary Continued ...**

... Region table for sample 1 :

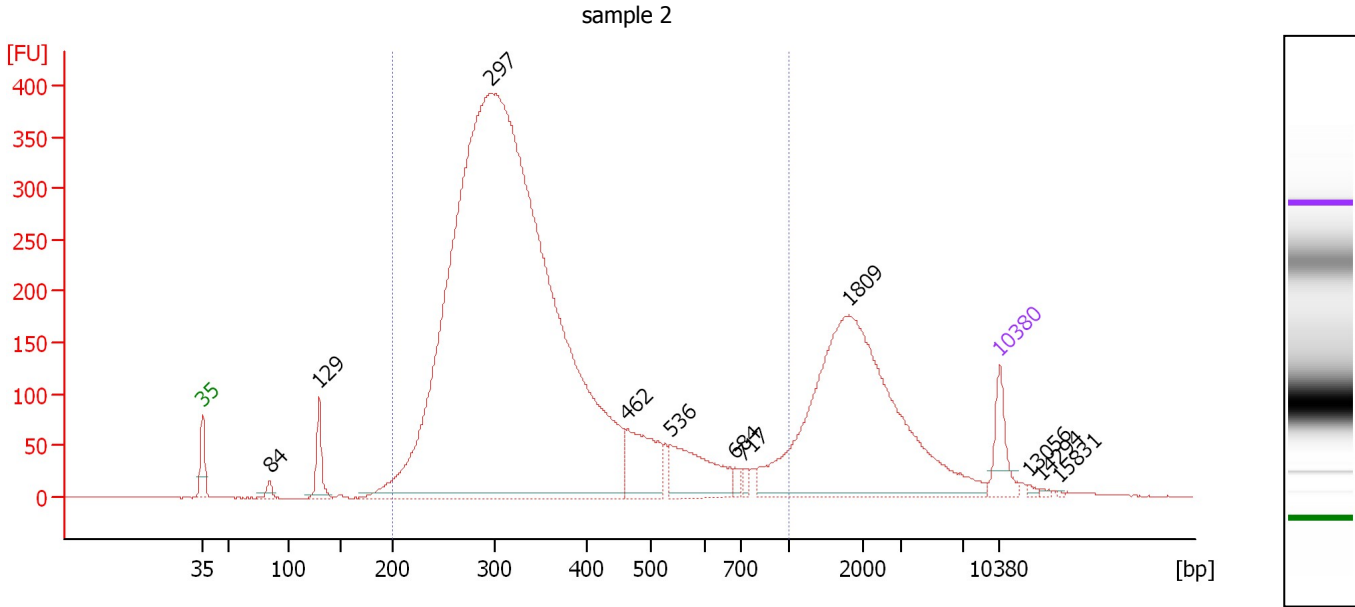
sample 1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	418	3,021.8	10,387.9	 2,551.52	75	31.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
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**Electropherogram Summary Continued ...**



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

Number of peaks found: 11                      Corr. Area 1: 6,587.9  
 Noise: 0.6

**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	84	24.90	449.8		48.90
3	129	115.91	1,364.4		53.25
4	297	5,693.84	29,041.3		68.38
5	462	205.72	674.4		80.27
6	536	213.80	604.0		84.11
7	684	17.51	38.8		89.78
8	717	14.77	31.2		90.53
9	1,809	995.22	833.6		99.80
10	10,380	75.00	10.9	Upper Marker	113.00
11	13,056	0.00	0.0		115.53
12	14,295	0.00	0.0		116.70
13	15,831	0.00	0.0		118.15

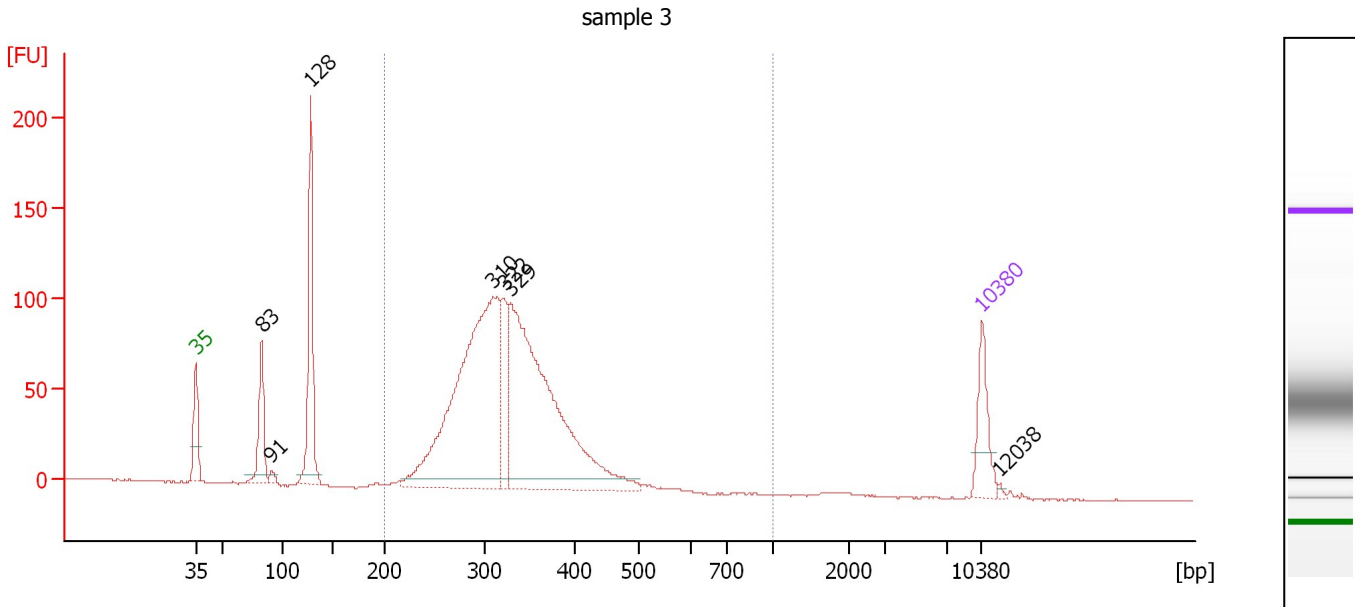
**Region table for sample 2 : sample 2**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	353	6,587.9	28,329.2	5,951.82	80	34.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
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**Electropherogram Summary Continued ...**



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

Number of peaks found: 7                      Corr. Area 1: 1,414.0  
 Noise: 0.4

**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	83	152.66	2,775.5		48.84
3	91	13.07	217.0		49.70
4	128	326.56	3,858.4		53.21
5	310	891.91	4,358.5		69.45
6	322	131.02	616.8		70.40
7	329	852.24	3,926.3		70.97
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,038	0.00	0.0		114.57

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

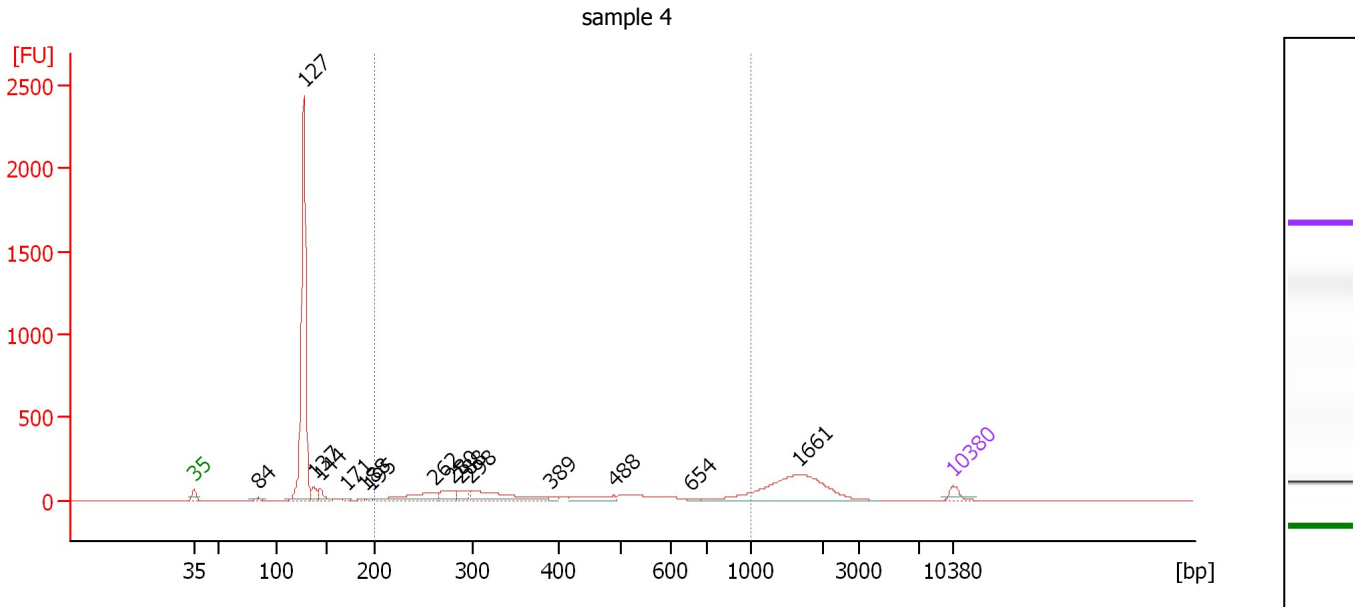
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	328	1,414.0	8,819.6	1,856.60	83	15.4



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
 Modified: 3/13/2017 11:58:27 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 15                      Corr. Area 1: 1,391.9  
 Noise: 0.2

**Peak table for sample 4 : sample 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	84	31.23	562.8		48.92
3	127	3,424.50	40,755.0		53.13
4	137	133.98	1,476.5		54.06
5	144	123.04	1,295.4		54.64
6	171	11.95	106.0		57.09
7	188	11.27	90.8		58.65
8	195	12.92	100.3		59.29
9	262	320.36	1,852.2		65.26
10	280	169.68	917.6		66.87
11	288	119.13	627.1		67.56
12	298	451.89	2,295.5		68.49
13	389	21.99	85.7		75.82
14	488	136.77	424.8		81.74
15	654	18.11	42.0		88.79
16	1,661	875.79	798.7		98.81
17	10,380	75.00	10.9	Upper Marker	113.00

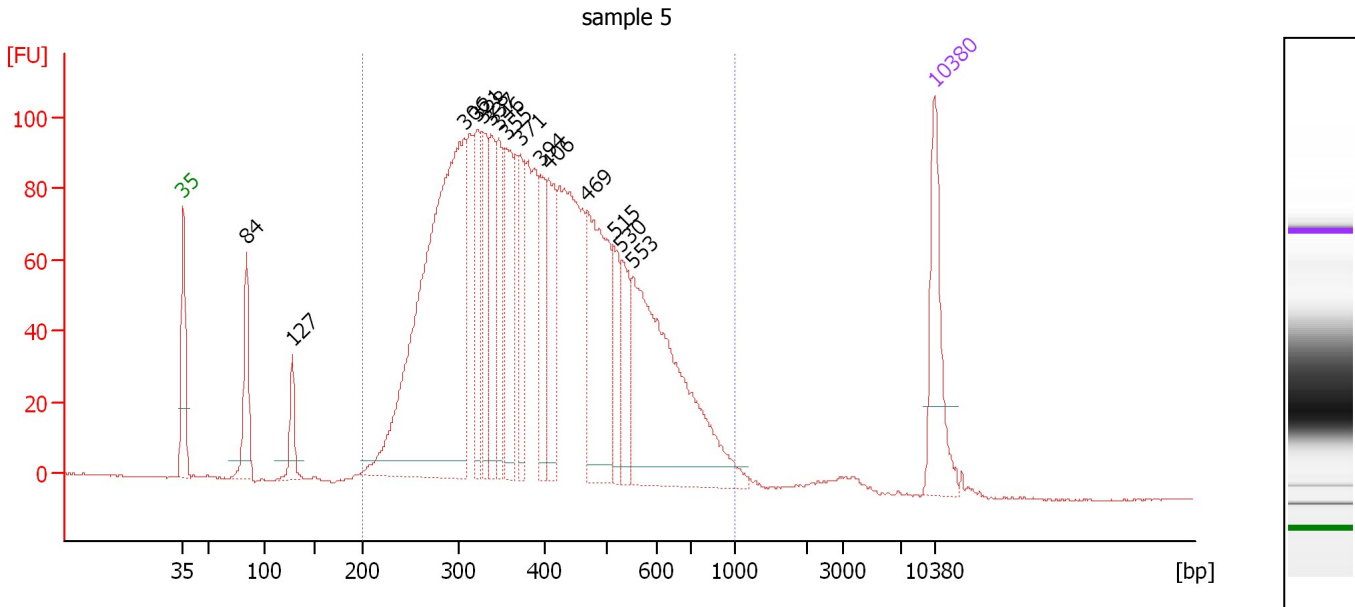
**Region table for sample 4 : sample 4**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	424	1,391.9	7,113.7	1,590.22	29	45.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
 Modified: 3/13/2017 11:58:27 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 15                      Corr. Area 1: 2,713.9  
 Noise: 0.2

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

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	84	95.95	1,730.7		48.91
3	127	42.19	501.8		53.13
4	306	653.67	3,235.7		69.13
5	321	89.19	420.4		70.37
6	328	87.30	403.7		70.87
7	337	84.59	379.8		71.67
8	346	81.70	357.7		72.36
9	355	114.35	488.5		73.06
10	371	73.85	301.4		74.40
11	394	66.10	254.1		76.24
12	406	92.86	346.9		77.03
13	469	185.94	600.8		80.66
14	515	44.77	131.6		83.14
15	530	56.74	162.1		83.84
16	553	317.10	868.8		84.88
17	10,380	75.00	10.9	Upper Marker	113.00

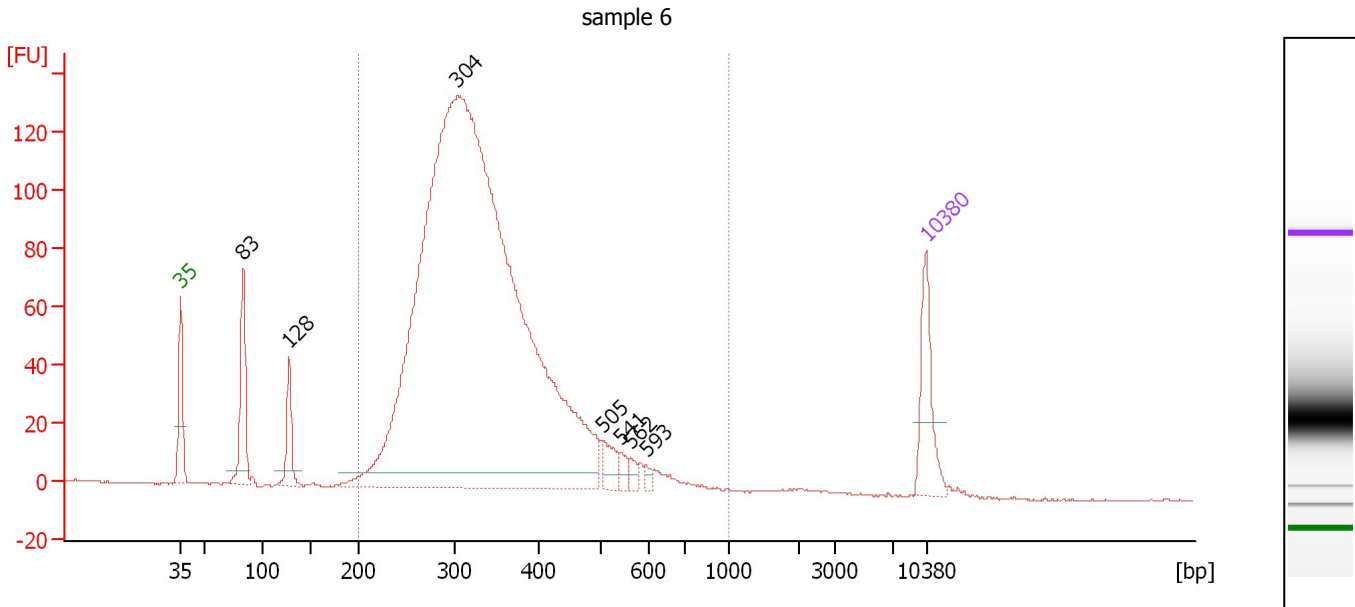
**Region table for sample 5 : sample 5**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	414	2,713.9	10,717.8	2,588.04	95	31.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
 Modified: 3/13/2017 11:58:27 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 7                      Corr. Area 1: 2,112.0  
 Noise: 0.2

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

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	83	153.01	2,776.5		48.86
3	128	74.52	884.0		53.16
4	304	2,836.50	14,123.4		68.99
5	505	31.64	95.0		82.66
6	541	16.61	46.6		84.31
7	562	11.02	29.7		85.31
8	593	8.56	21.9		86.71
9	10,380	75.00	10.9	Upper Marker	113.00

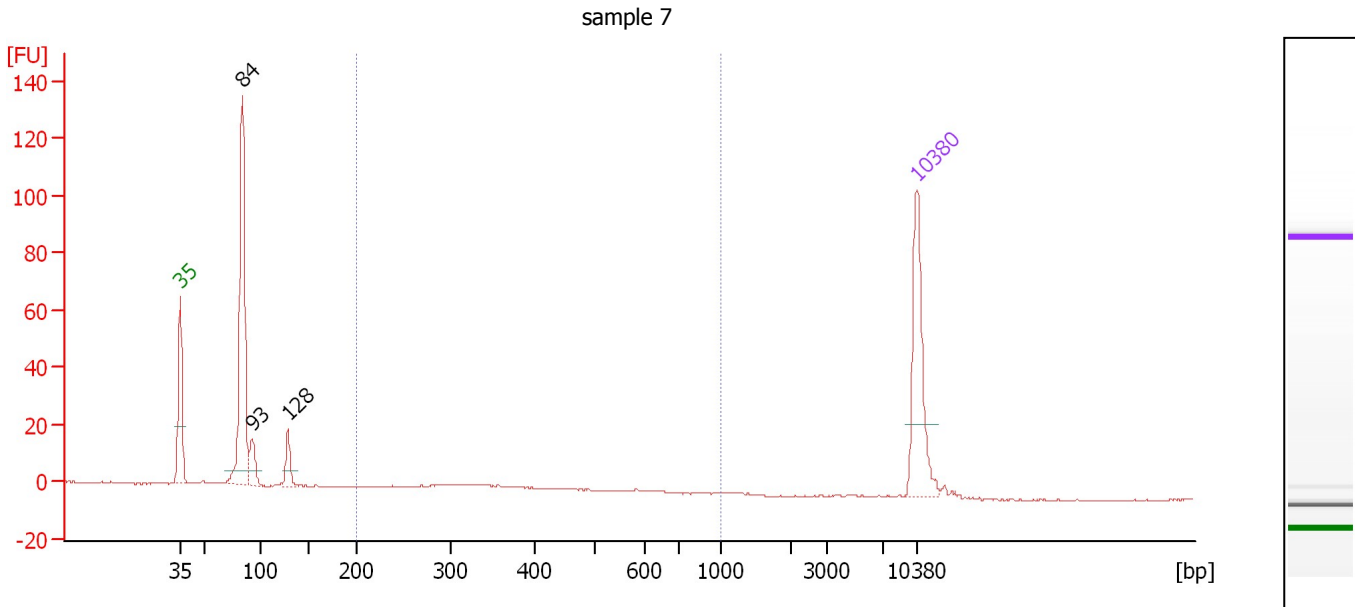
**Region table for sample 6 : sample 6**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	342	2,112.0	13,278.5	2,817.16	94	24.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
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**Electropherogram Summary Continued ...**



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

Number of peaks found: 3                      Corr. Area 1: 11.3  
 Noise: 0.2

**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	84	239.32	4,310.1		48.93
3	93	30.00	490.7		49.84
4	128	25.25	297.8		53.23
5	10,380	75.00	10.9	Upper Marker	113.00

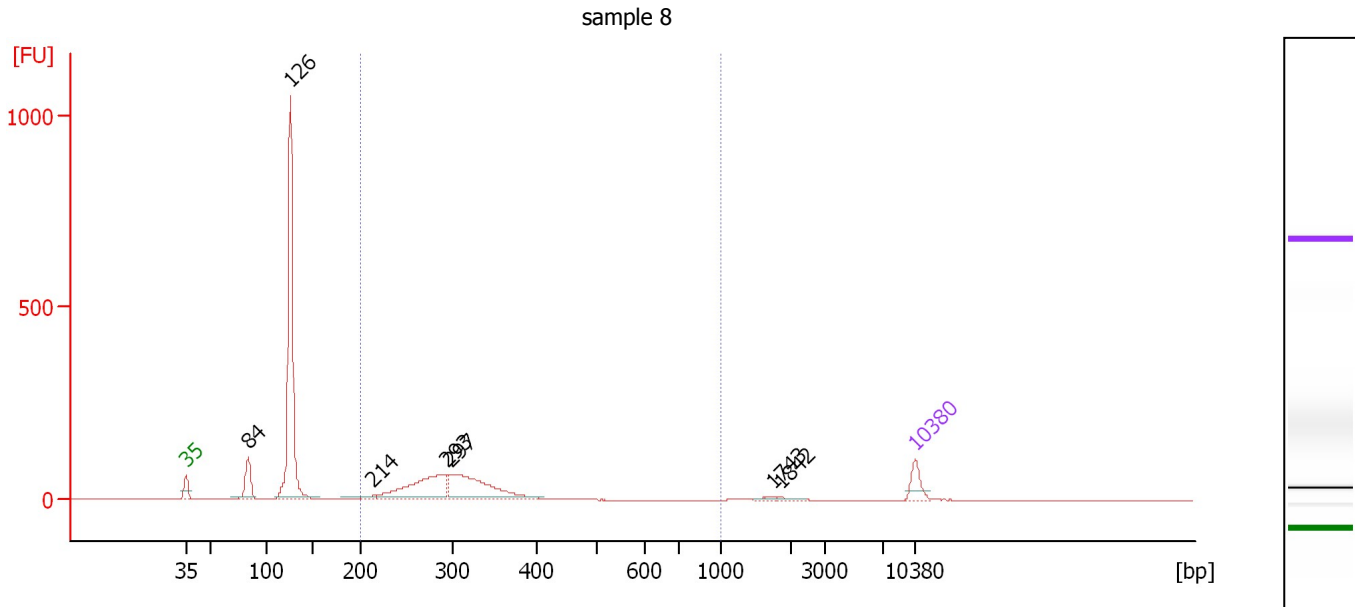
**Region table for sample 7 : sample 7**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	335	11.3	58.2	12.55	5	16.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
 Modified: 3/13/2017 11:58:27 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 7                      Corr. Area 1: 864.7  
 Noise: 0.2

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

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	84	216.95	3,894.1		48.96
3	126	1,599.68	19,197.4		53.03
4	214	32.67	231.3		60.97
5	293	480.97	2,489.0		68.00
6	297	532.74	2,719.8		68.35
7	1,743	11.64	10.1		99.36
8	1,842	9.74	8.0		100.02
9	10,380	75.00	10.9	Upper Marker	113.00

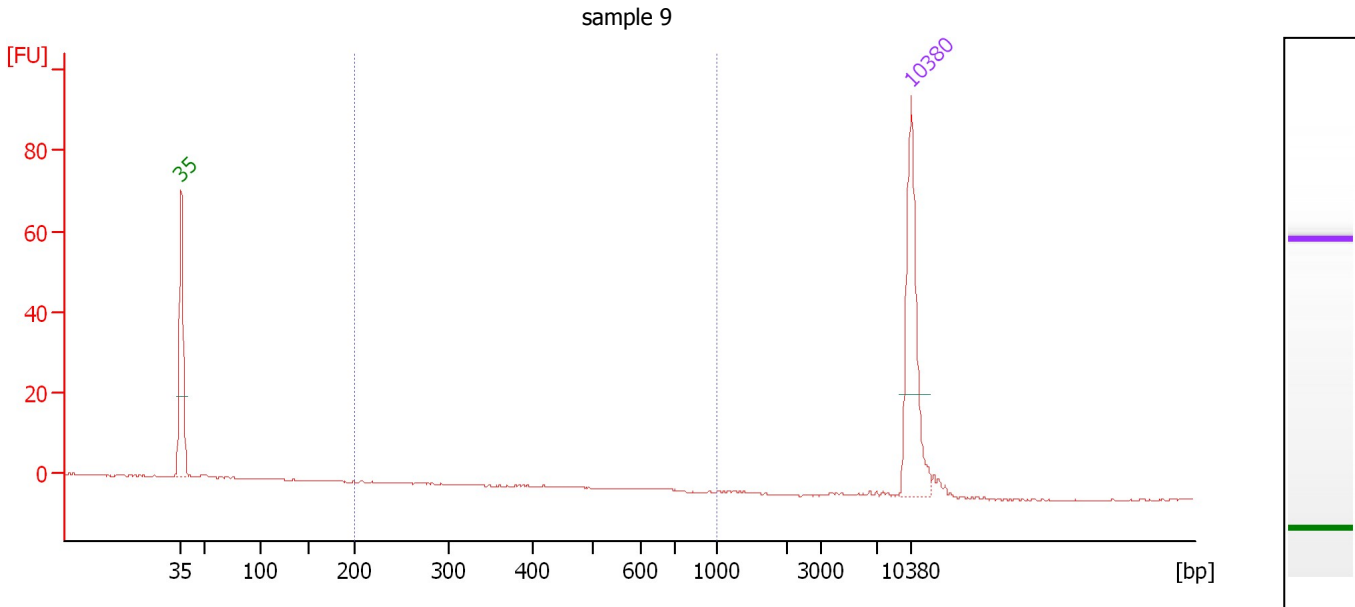
**Region table for sample 8 : sample 8**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	300	864.7	5,563.0	1,073.91	42	15.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
 Modified: 3/13/2017 11:58:27 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 0                      Corr. Area 1: 0.0  
 Noise: 0.2

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

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	10,380	75.00	10.9	Upper Marker	113.00

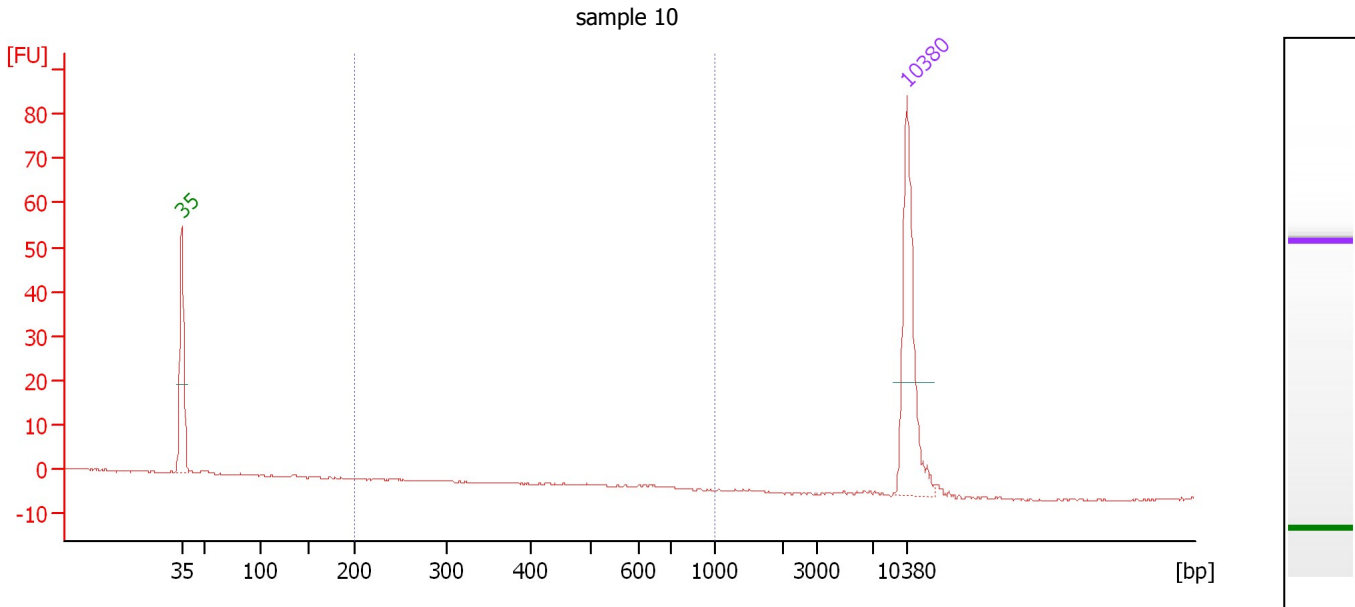
**Region table for sample 9 : sample 9**

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

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
 Modified: 3/13/2017 11:58:27 AM

**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	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	10,380	75.00	10.9	Upper Marker	113.00

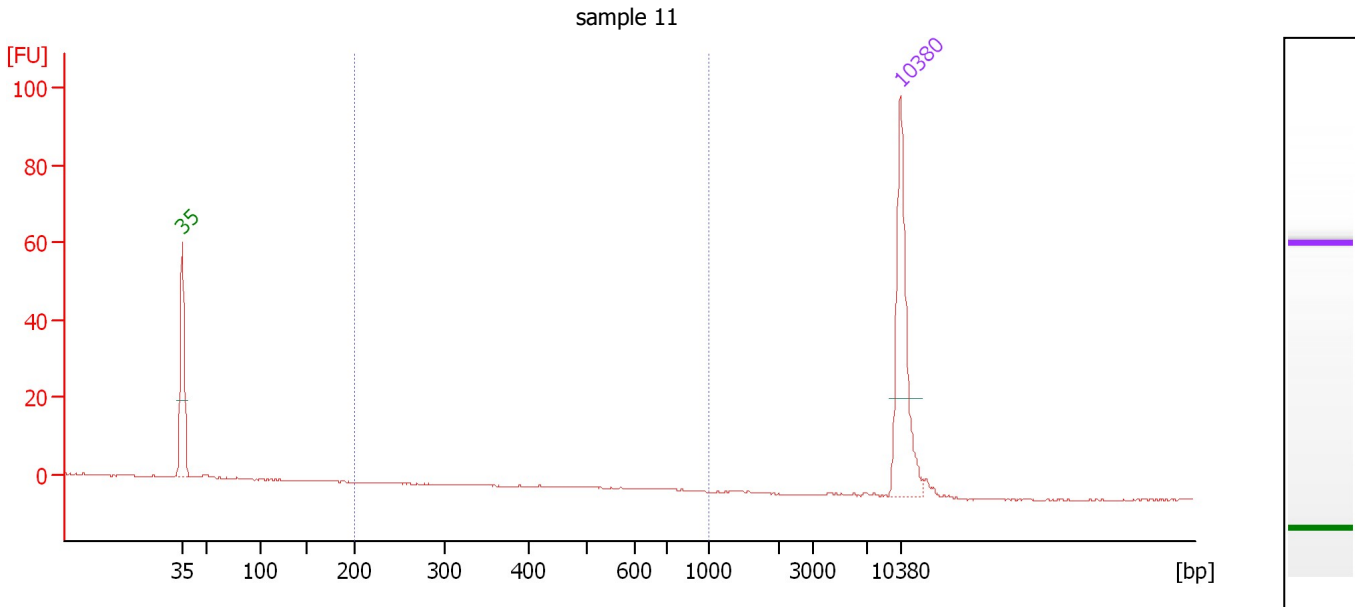
**Region table for sample 10 : sample 10**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	621	0.0	0.0	0.00	0	0.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
 Modified: 3/13/2017 11:58:27 AM

**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	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	10,380	75.00	10.9	Upper Marker	113.00

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

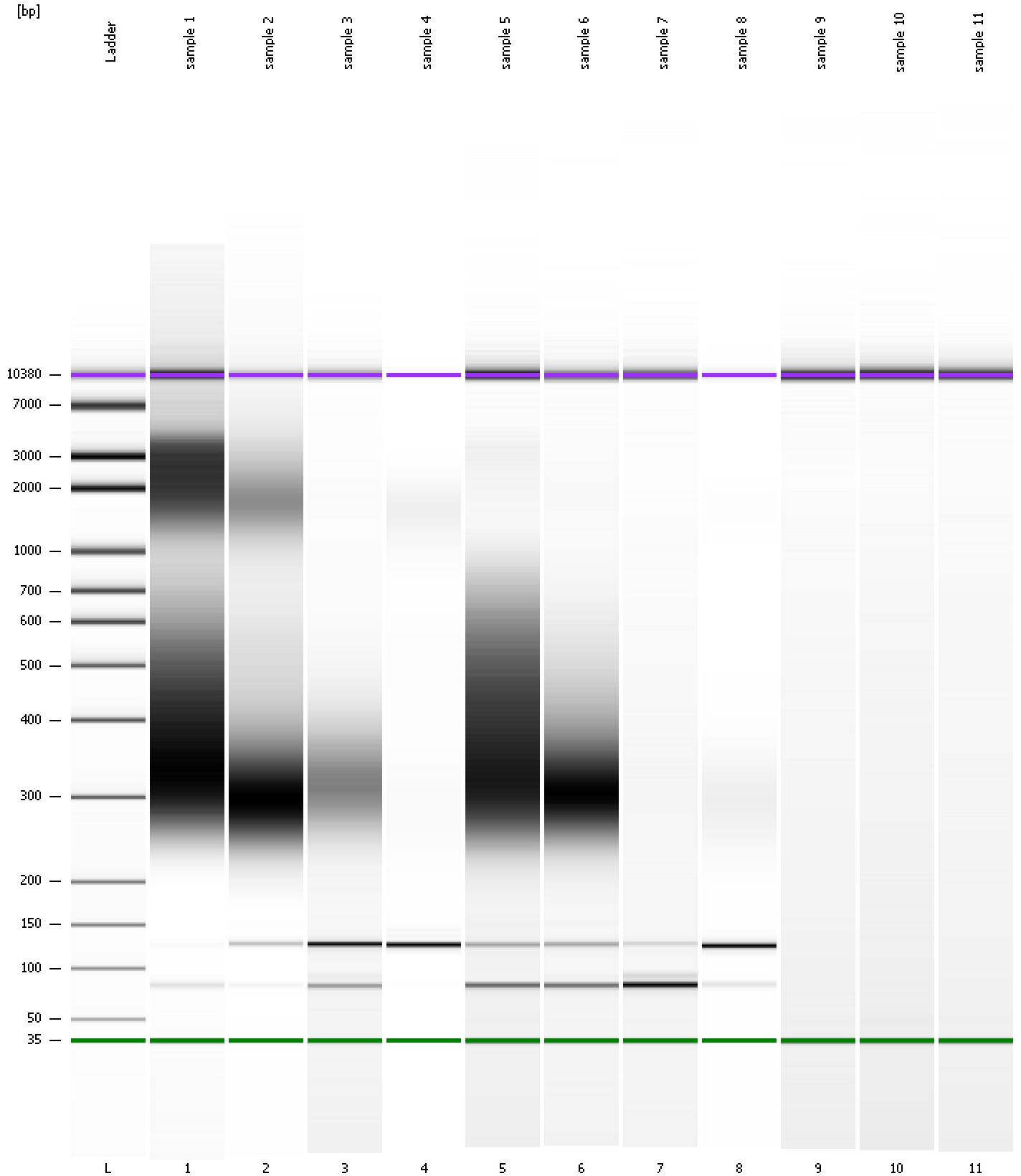
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	0	0.0	0.0	0.00	0	0.0



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
Modified: 3/13/2017 11:58:27 AM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-03-13\2017-03-13\_001.xad

Created: 3/13/2017 11:17:10 AM  
 Modified: 3/13/2017 11:58:27 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		3/13/2017 11:58:27 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2017-03-13\2017-03-13_001.xad)		Instrument	Run		3/13/2017 11:17:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/13/2017 11:17:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/13/2017 11:17:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/13/2017 11:17:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/13/2017 11:17:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/13/2017 11:17:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/13/2017 11:17:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1