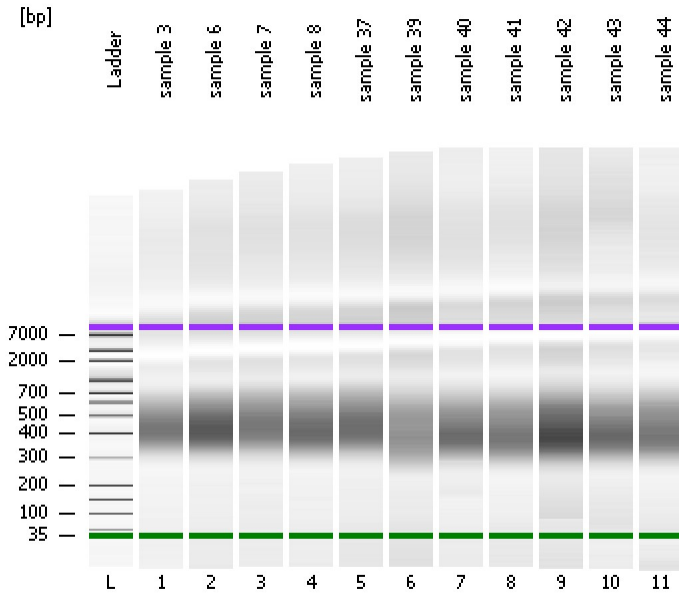


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
Modified: 9/22/2016 4:18:57 PM

### Electrophoresis File Run Summary



#### Instrument Information:

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

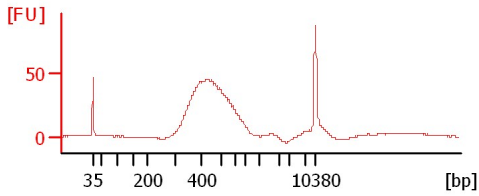
#### Assay Information:

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

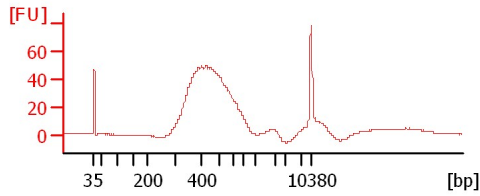
#### Chip Information:

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

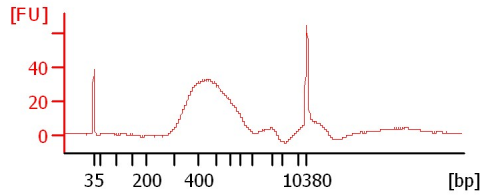
sample 3



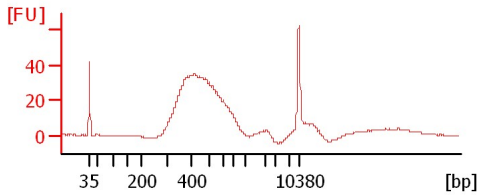
sample 6



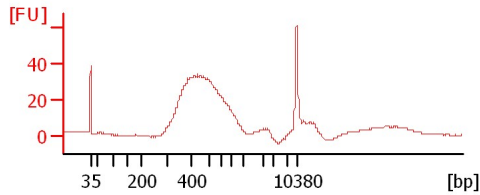
sample 7



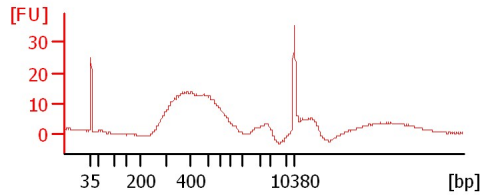
sample 8



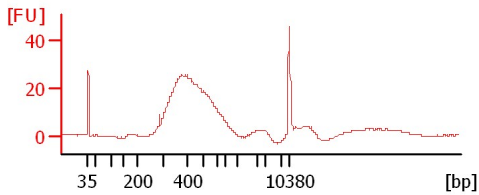
sample 37



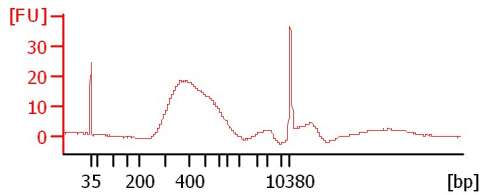
sample 39



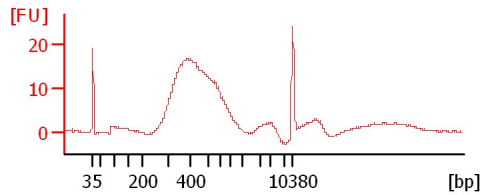
sample 40



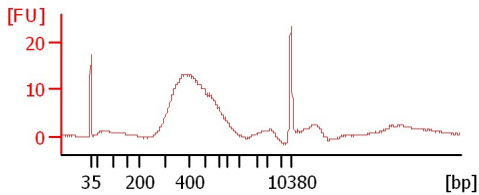
sample 41



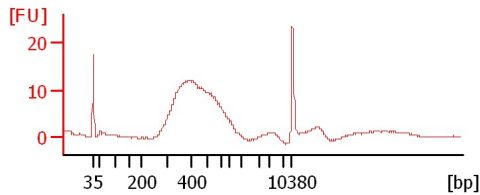
sample 42



sample 43



sample 44



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 3		<input type="checkbox"/>	✓			
sample 6		<input type="checkbox"/>	✓			
sample 7		<input type="checkbox"/>	✓			
sample 8		<input type="checkbox"/>	✓			
sample 37		<input type="checkbox"/>	✓			
sample 39		<input type="checkbox"/>	✓			
sample 40		<input type="checkbox"/>	✓			
sample 41		<input type="checkbox"/>	✓			
sample 42		<input type="checkbox"/>	✓			
sample 43		<input type="checkbox"/>	✓			
sample 44		<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\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
Modified: 9/22/2016 4:18:57 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

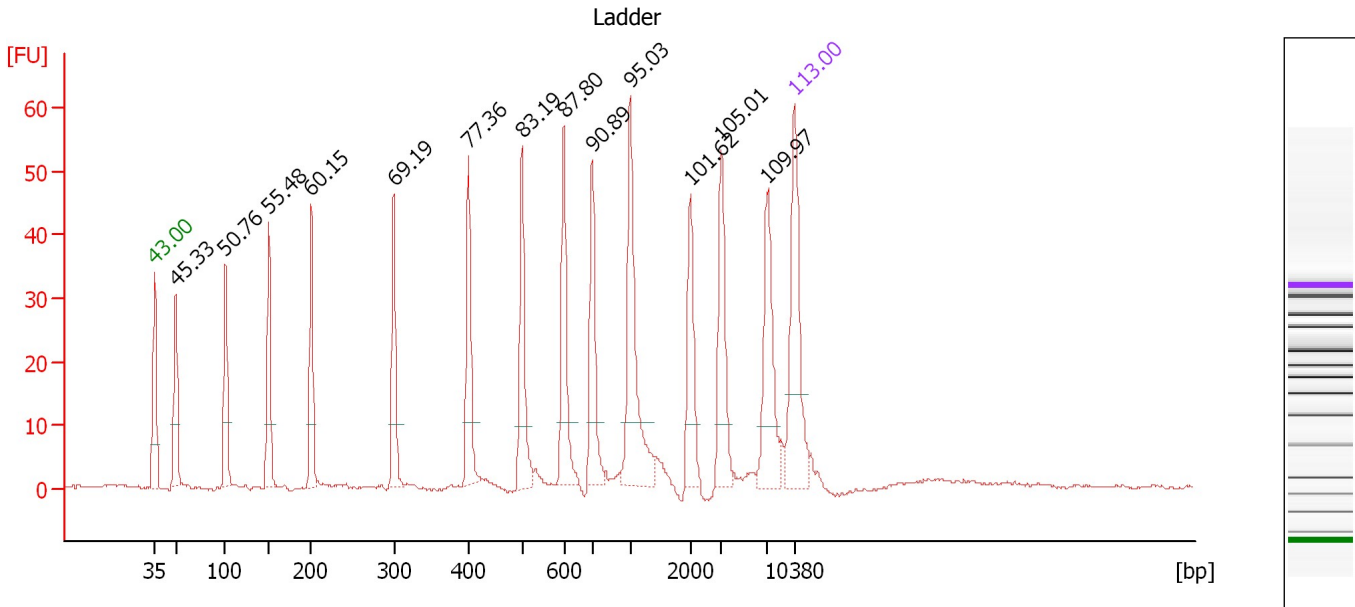
**Ladder**

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:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

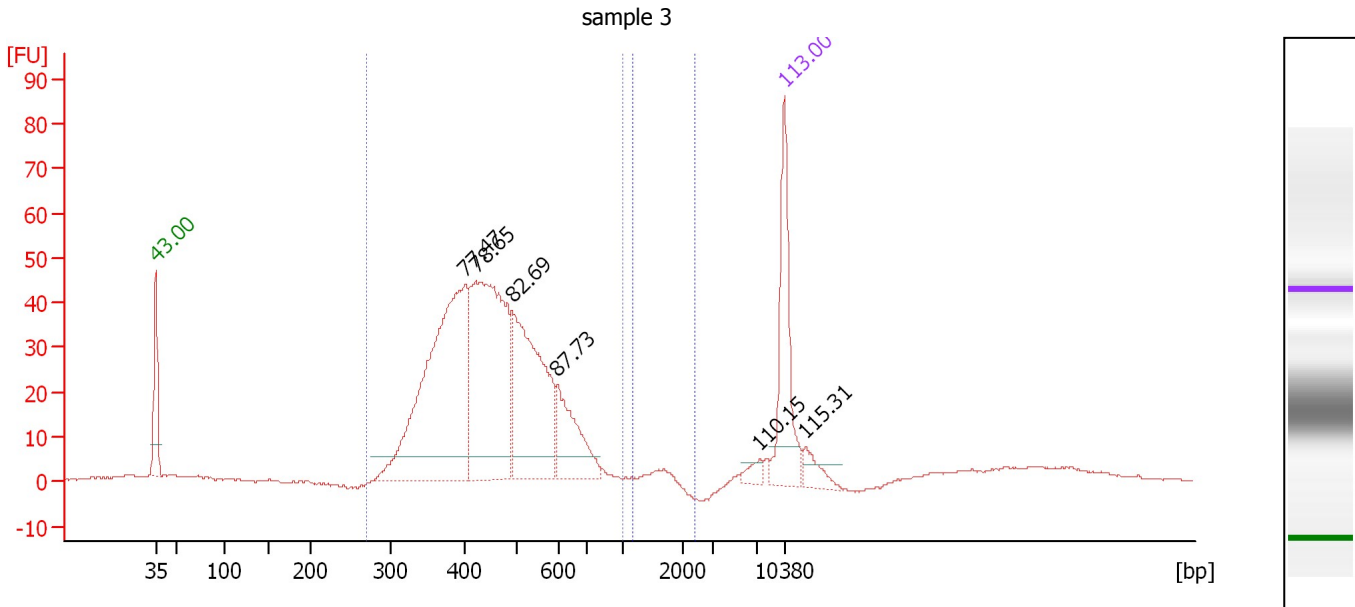
**Peak table for Ladder**

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	45.33
3	100	150.00	2,272.7	Ladder Peak	50.76
4	150	150.00	1,515.2	Ladder Peak	55.48
5	200	150.00	1,136.4	Ladder Peak	60.15
6	300	150.00	757.6	Ladder Peak	69.19
7	400	150.00	568.2	Ladder Peak	77.36
8	500	150.00	454.5	Ladder Peak	83.19
9	600	150.00	378.8	Ladder Peak	87.80
10	700	150.00	324.7	Ladder Peak	90.89
11	1,000	150.00	227.3	Ladder Peak	95.03
12	2,000	150.00	113.6	Ladder Peak	101.63
13	3,000	150.00	75.8	Ladder Peak	105.01
14	7,000	150.00	32.5	Ladder Peak	109.97
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : sample 3**

Number of peaks found: 6                      Corr. Area 1: 747.8  
 Noise: 0.3                                      Corr. Area 2: 6.2

**Peak table for sample 1 : 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	402	329.18	1,241.2		77.47
3	422	270.24	969.8		78.65
4	491	188.53	581.4		82.69
5	598	62.45	158.1		87.73
6	7,207	7.59	1.6		110.15
7	10,380	75.00	10.9	Upper Marker	113.00
8	12,958	0.00	0.0		115.31

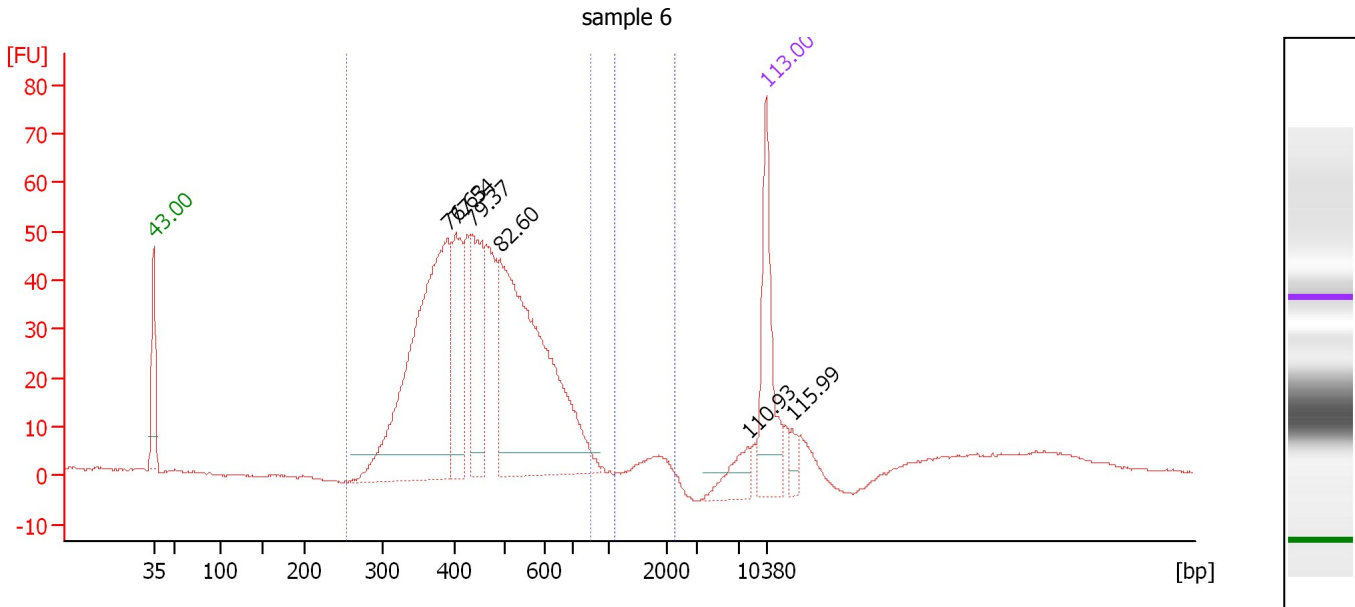
**Region table for sample 1 : sample 3**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
269	1,000	460	747.8	3,034.9	871.90	90	21.3
1,146	2,393	1,563	6.2	5.4	5.61	1	11.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : sample 6**

Number of peaks found: 6      Corr. Area 1: 854.5  
 Noise: 0.2      Corr. Area 2: 7.9

**Peak table for sample 2 : 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	391	361.45	1,400.4		76.63
3	403	95.92	360.5		77.54
4	434	108.91	379.8		79.37
5	490	359.13	1,110.8		82.60
6	8,072	22.09	4.1		110.93
7	10,380	75.00	10.9	Upper Marker	113.00
8	13,706	0.00	0.0		115.99

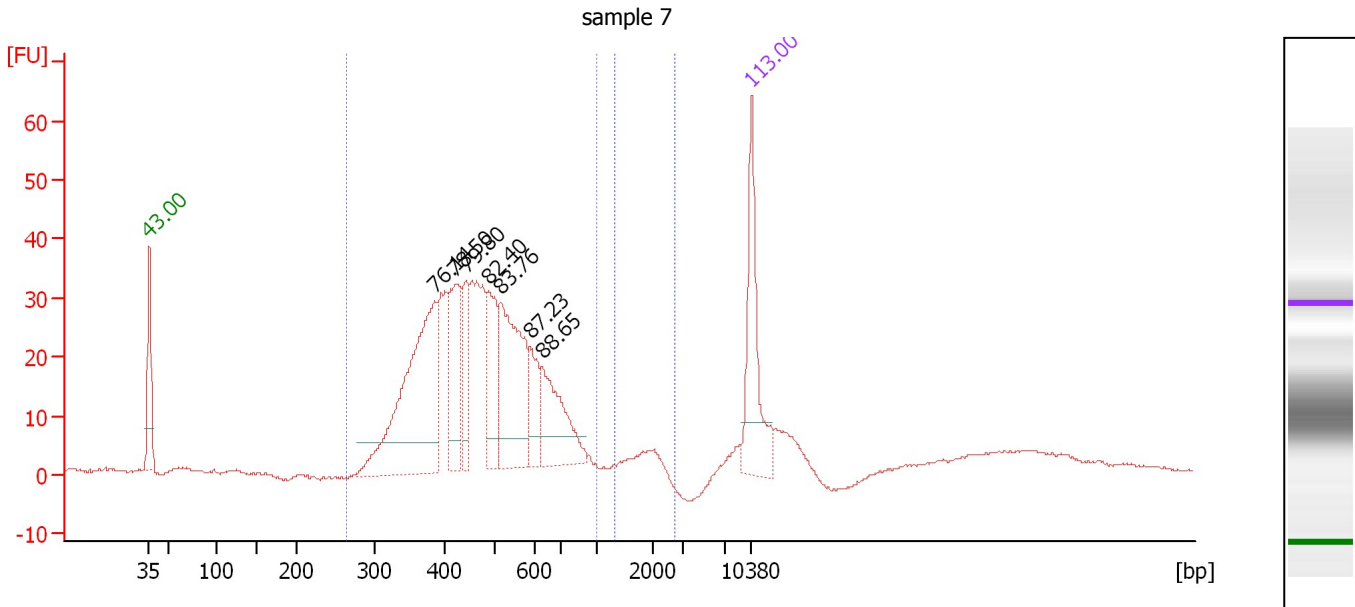
**Region table for sample 2 : sample 6**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
254	853	463	854.5	3,474.6	1,000.96	91	21.9
1,098	2,249	1,783	7.9	6.0	7.01	1	9.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : sample 7**

Number of peaks found: 7                      Corr. Area 1: 576.3  
 Noise: 0.3                                      Corr. Area 2: 11.5

**Peak table for sample 3 : 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	385	237.18	933.2		76.14
3	419	83.54	301.7		78.50
4	442	45.25	155.2		79.80
5	486	68.26	212.6		82.40
6	512	142.79	422.3		83.76
7	588	34.47	88.9		87.23
8	628	75.07	181.2		88.65
9	10,380	75.00	10.9	Upper Marker	113.00

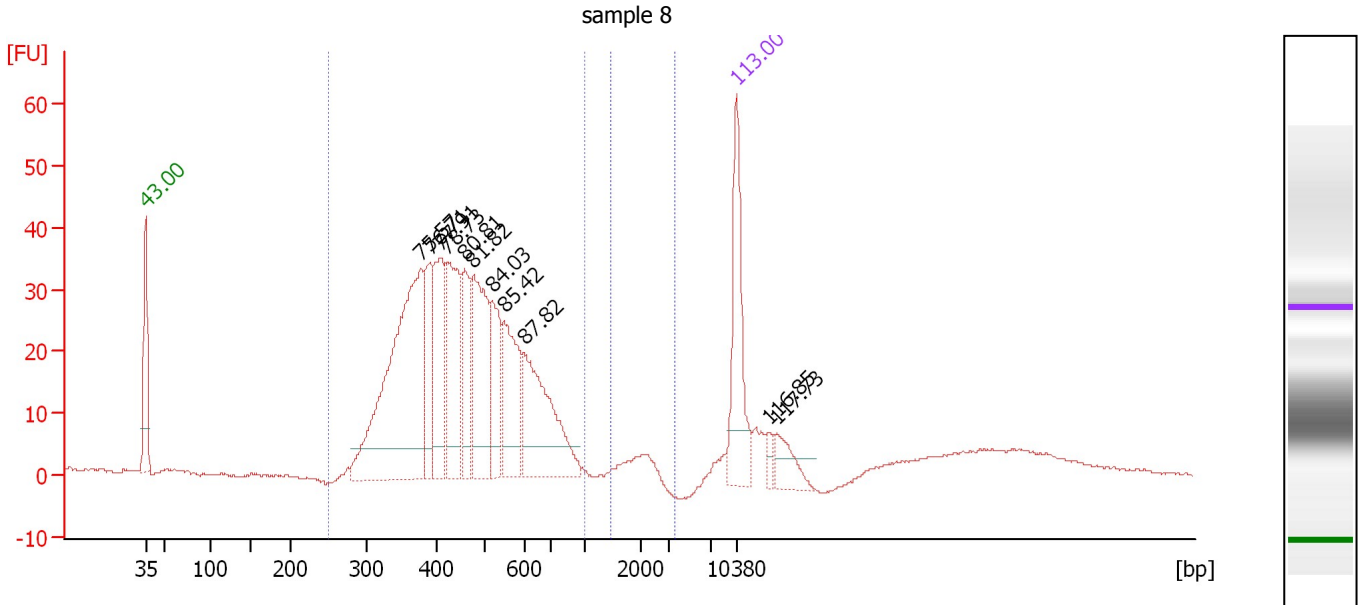
**Region table for sample 3 : sample 7**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
263	1,000	480	576.3	2,961.9	878.13	89	23.8
1,322	2,714	1,815	11.5	11.3	13.37	2	13.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : sample 8**

Number of peaks found: 11                      Corr. Area 1: 641.7  
 Noise: 0.2                                      Corr. Area 2: 9.2

**Peak table for sample 4 : 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	378	302.81	1,213.4		75.57
3	392	65.03	251.3		76.71
4	409	89.01	329.4		77.91
5	423	112.43	402.3		78.73
6	459	62.43	206.0		80.81
7	476	114.36	363.7		81.82
8	518	60.17	176.0		84.03
9	548	80.29	221.9		85.42
10	600	112.48	283.8		87.82
11	10,380	75.00	10.9	Upper Marker	113.00
12	14,670	0.00	0.0		116.85
13	15,655	0.00	0.0		117.73

**Region table for sample 4 : sample 8**

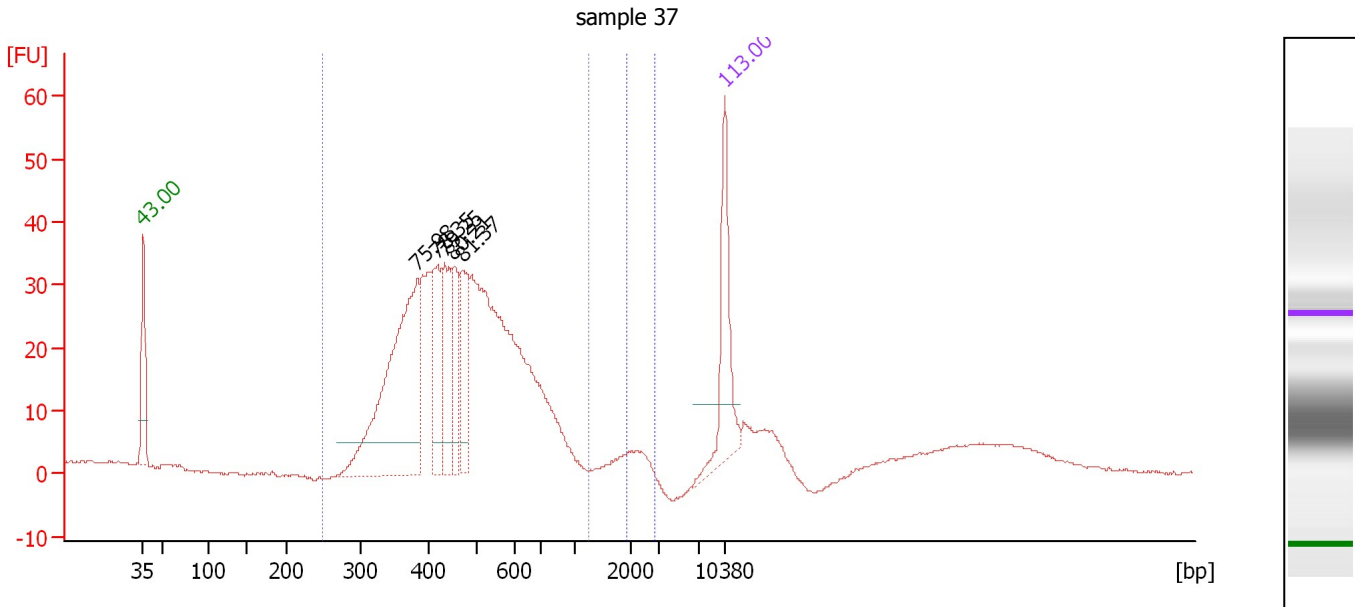
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
250	1,000	467	641.7	3,473.7	997.84	87	24.6
1,448	3,507	1,990	9.2	8.3	10.68	1	13.4



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : sample 37**

Number of peaks found: 5                      Corr. Area 1: 590.2  
 Noise: 0.2                                      Corr. Area 2: 6.1

**Peak table for sample 5 : sample 37**

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	383	311.19	1,230.7		75.98
3	417	77.68	282.2		78.35
4	432	85.78	300.5		79.25
5	449	61.89	208.9		80.21
6	469	68.58	221.7		81.37
7	10,380	75.00	10.9	Upper Marker	113.00

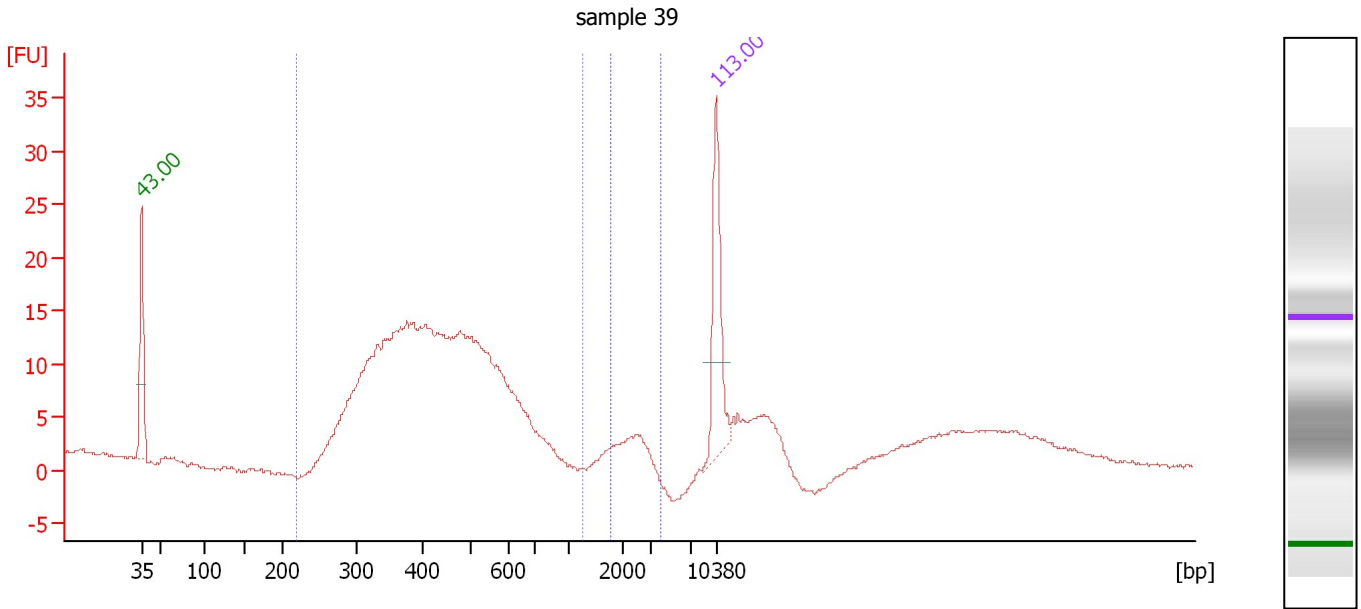
**Region table for sample 5 : sample 37**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
248	1,231	483	590.2	3,695.6	1,095.65	87	25.2
1,920	2,897	2,234	6.1	5.8	8.51	1	10.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : sample 39**

Number of peaks found: 0                      Corr. Area 1: 263.8  
 Noise: 0.2                                      Corr. Area 2: 6.9

**Peak table for sample 6 : sample 39**

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	10,380	75.00	10.9	Upper Marker	113.00

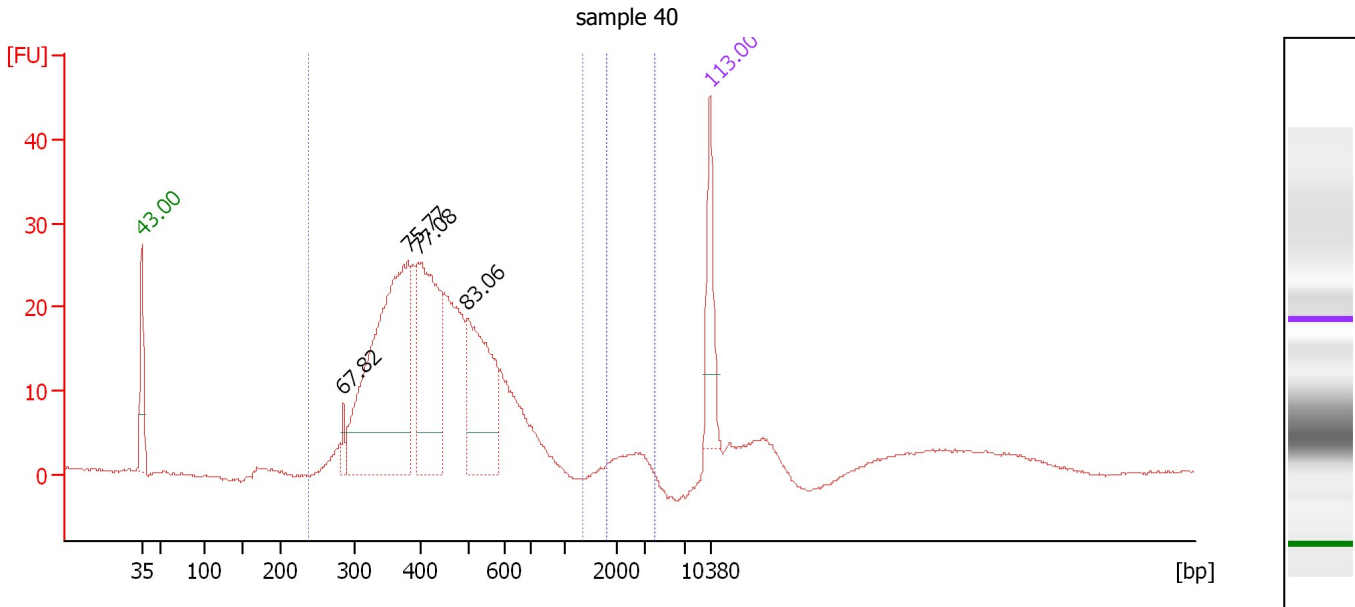
**Region table for sample 6 : sample 39**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
220	1,267	439	263.8	3,422.6	916.52	81	24.6
1,765	4,052	2,313	6.9	11.5	17.36	2	14.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : sample 40**

Number of peaks found: 4                      Corr. Area 1: 446.1  
 Noise: 0.2                                      Corr. Area 2: 7.1

**Peak table for sample 7 : sample 40**

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	285	22.50	119.7		67.82
3	381	523.92	2,086.1		75.77
4	397	304.53	1,163.4		77.08
5	498	227.84	693.6		83.06
6	10,380	75.00	10.9	Upper Marker	113.00

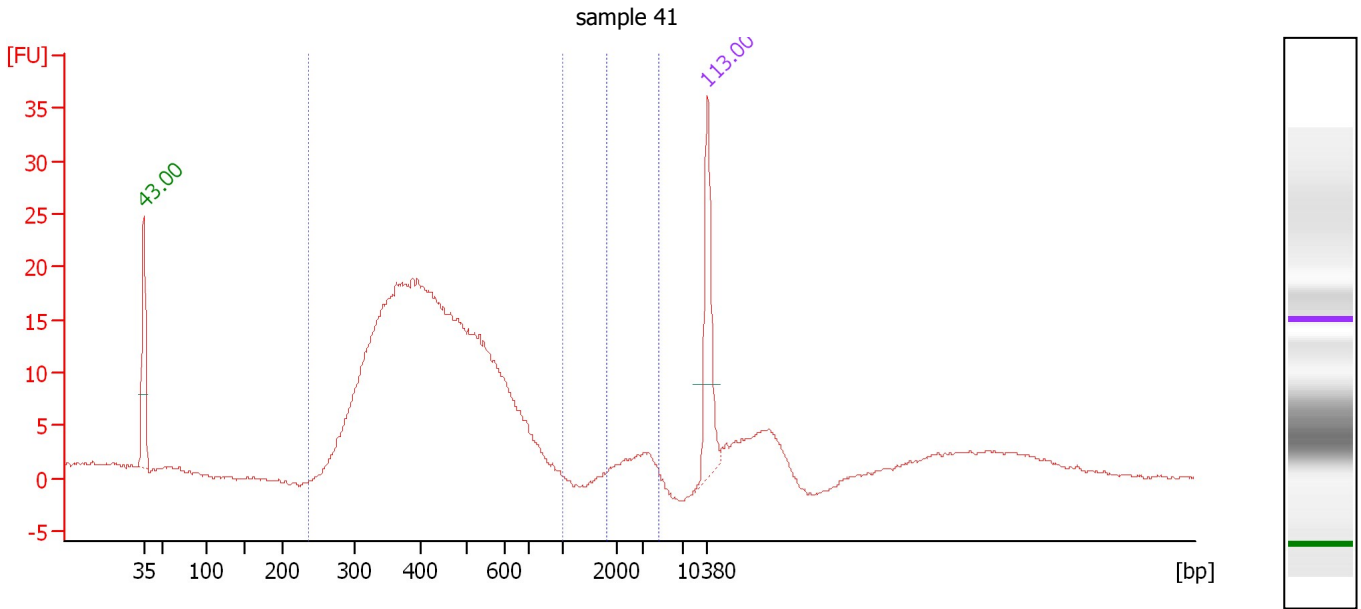
**Region table for sample 7 : sample 40**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
237	1,351	444	446.1	5,312.4	1,449.65	89	24.3
1,804	4,044	2,469	7.1	10.6	16.91	1	16.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : sample 41**

Number of peaks found: 0                      Corr. Area 1: 336.5  
 Noise: 0.2                                      Corr. Area 2: 5.6

**Peak table for sample 8 : sample 41**

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

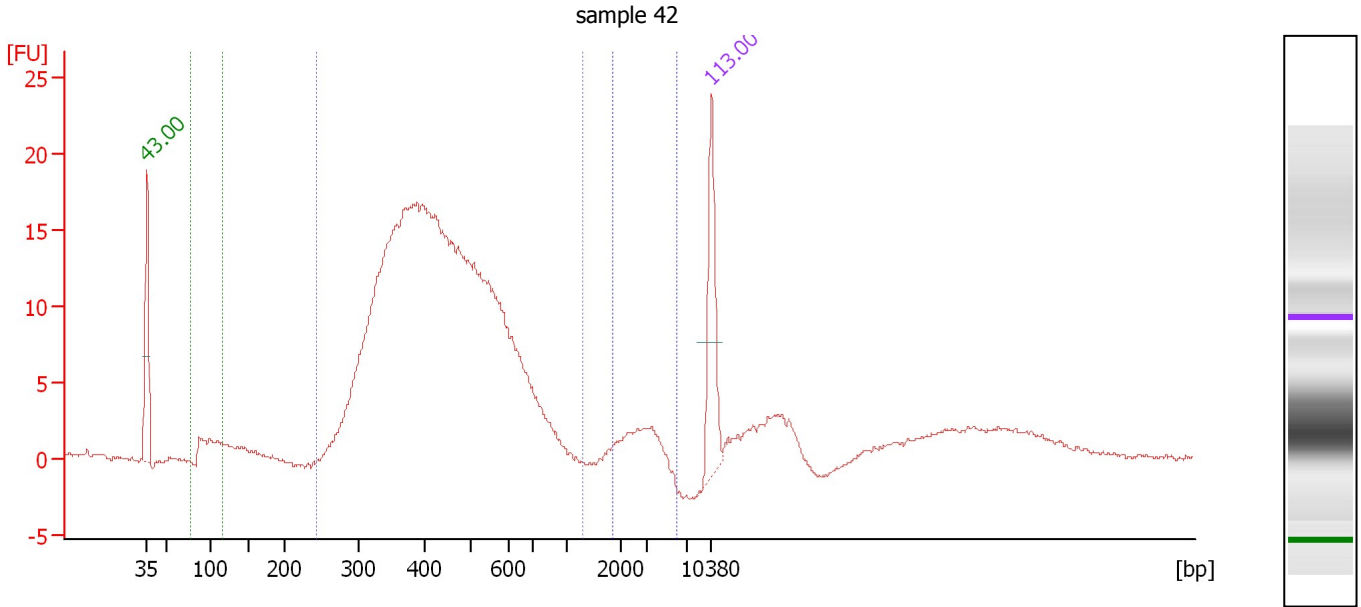
**Region table for sample 8 : sample 41**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
236	1,000	439	336.5	4,576.5	1,235.75	87	24.1
1,838	4,535	2,930	5.6	8.0	14.93	1	21.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

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 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : sample 42**

Number of peaks found: 0                      Corr. Area 2: 7.9  
 Noise: 0.2                                      Corr. Area 3: 4.5  
 Corr. Area 1: 317.5

**Peak table for sample 9 : sample 42**

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

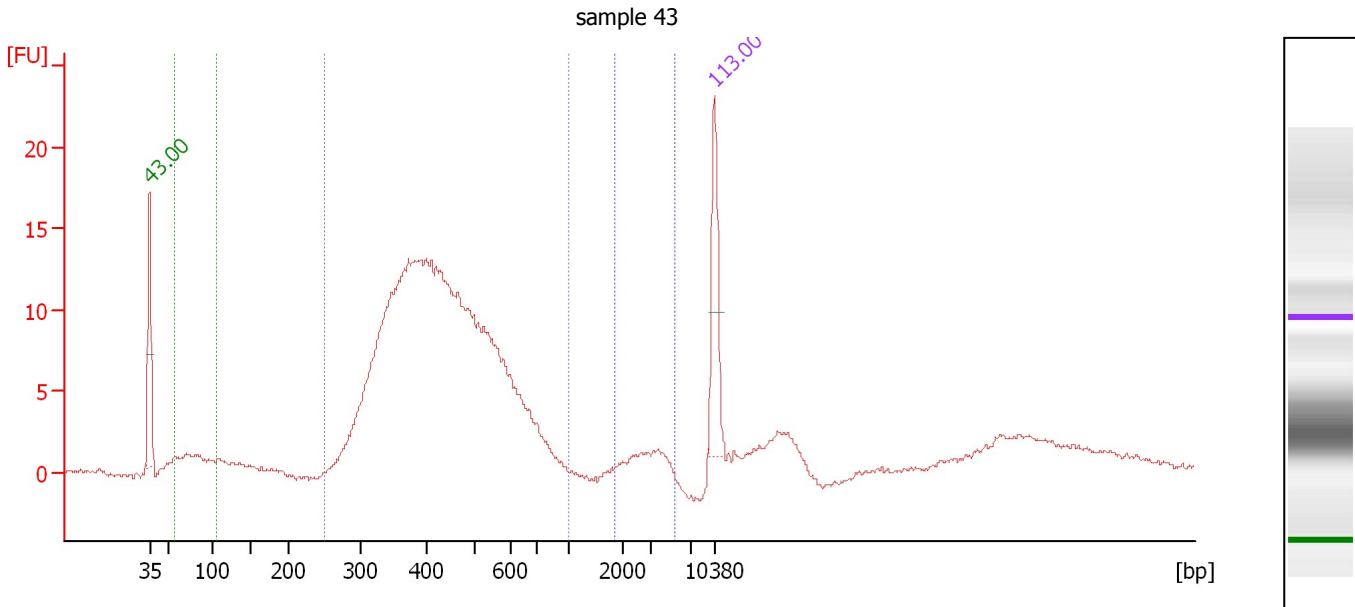
**Region table for sample 9 : sample 42**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
77	116	100	4.5	496.0	32.48	1	8.7
243	1,305	449	317.5	5,827.9	1,594.93	86	26.0
1,862	6,002	2,853	7.9	16.2	29.15	2	24.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : sample 43**

Number of peaks found:	0	Corr. Area 2:	4.7
Noise:	0.2	Corr. Area 3:	7.8
Corr. Area 1:	235.6		

**Peak table for sample 10 : sample 43**

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

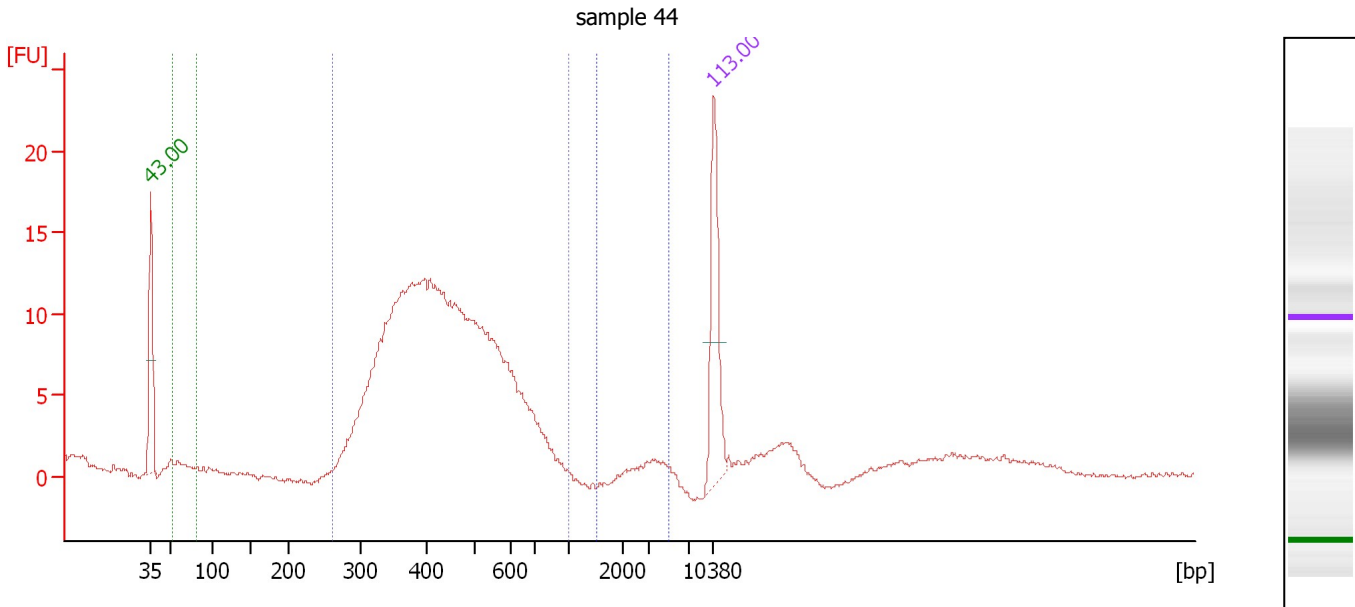
**Region table for sample 10 : sample 43**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
56	106	78	7.8	1,367.8	70.35	3	17.3
250	1,000	443	235.6	5,440.4	1,481.50	83	24.3
1,863	5,466	3,167	4.7	11.0	21.70	2	26.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

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 Modified: 9/22/2016 4:18:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : sample 44**

Number of peaks found:	0	Corr. Area 2:	1.8
Noise:	0.1	Corr. Area 3:	1.6
Corr. Area 1:	222.6		

**Peak table for sample 11 : sample 44**

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

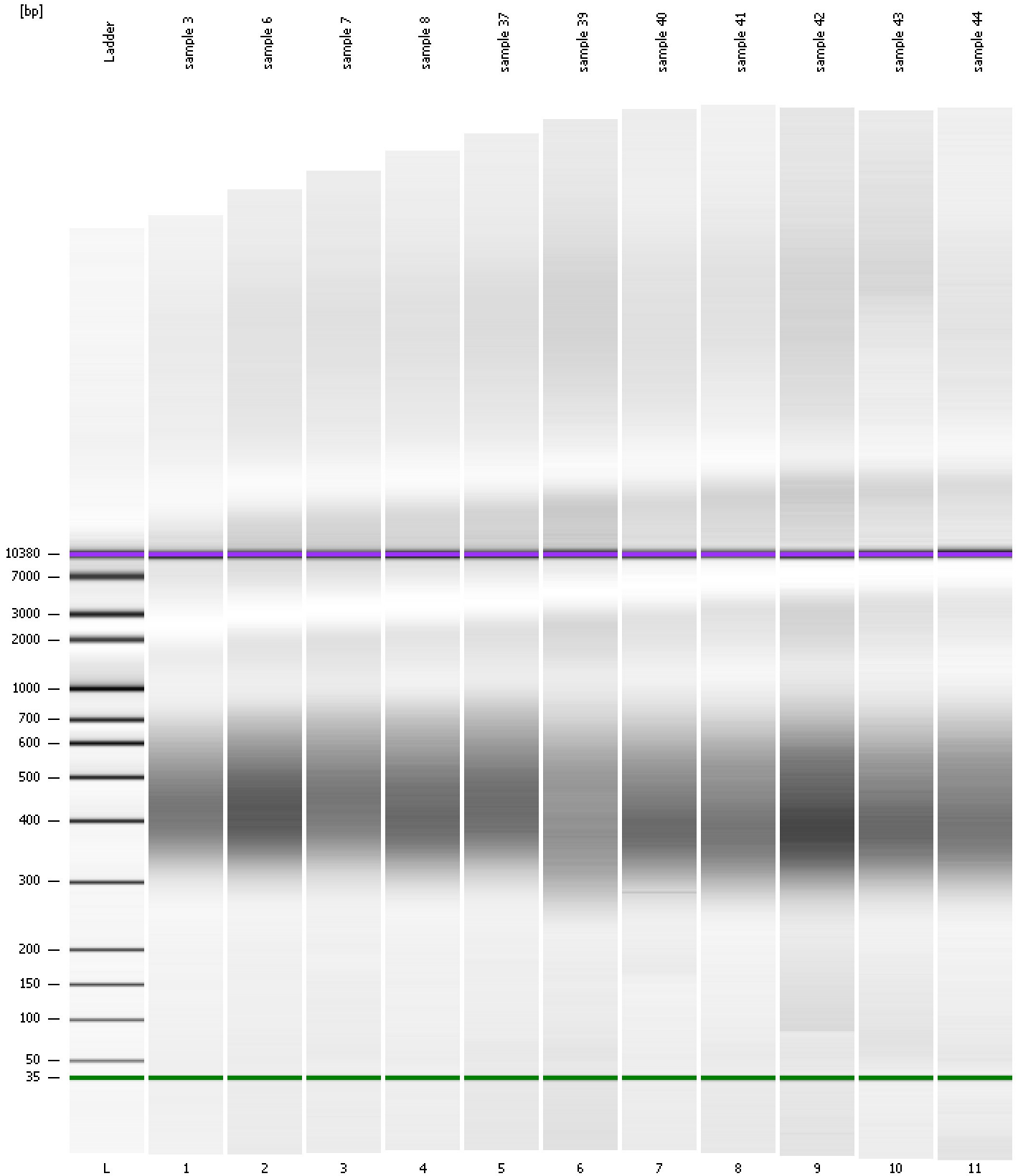
**Region table for sample 11 : sample 44**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
53	81	63	1.6	270.2	11.30	1	11.6
260	1,001	450	222.6	3,915.6	1,078.54	91	24.9
1,514	5,057	3,519	1.8	2.9	6.49	1	20.8

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
Modified: 9/22/2016 4:18:57 PM

**Gel Image**





Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-22\2016-09-22\_001.xad

Created: 9/22/2016 3:34:30 PM  
 Modified: 9/22/2016 4:18:57 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		9/22/2016 4:15:49 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-09-22\2016-09-22_001.xad)		Instrument	Run		9/22/2016 3:34:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		9/22/2016 3:34:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		9/22/2016 3:34:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		9/22/2016 3:34:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		9/22/2016 3:34:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		9/22/2016 3:34:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		9/22/2016 3:34:35 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1