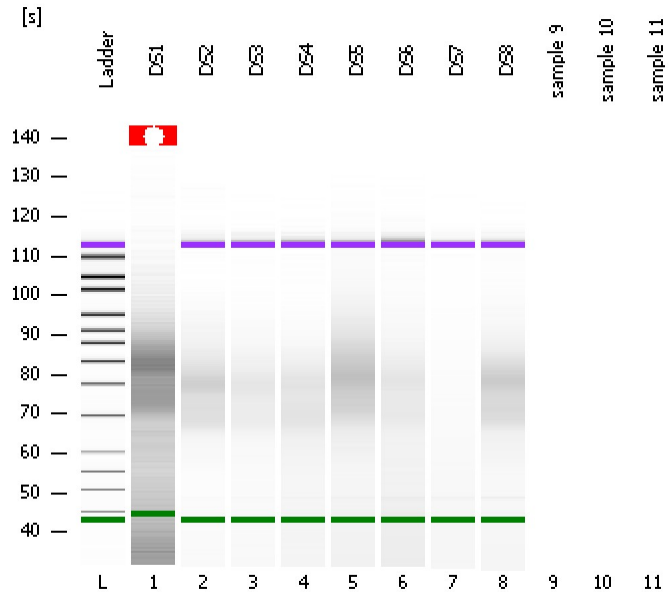


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
Modified: 6/17/2016 4:16:59 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

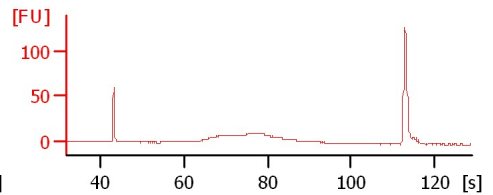
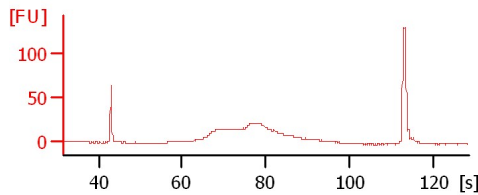
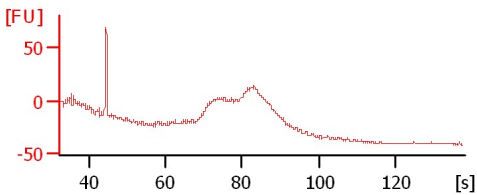
Chip Information:

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

**DS1**

**DS2**

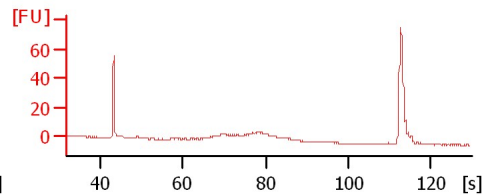
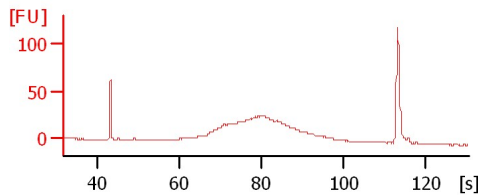
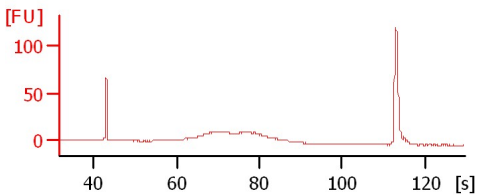
**DS3**



**DS4**

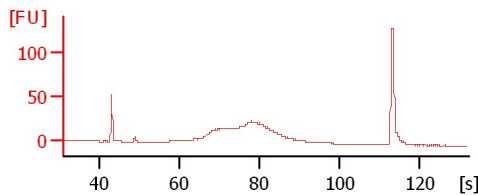
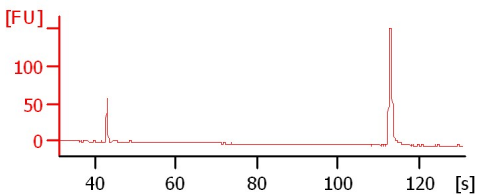
**DS5**

**DS6**



**DS7**

**DS8**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
DS1		<input type="checkbox"/>	✓			
DS2		<input type="checkbox"/>	✓			
DS3		<input type="checkbox"/>	✓			
DS4		<input type="checkbox"/>	✓			
DS5		<input type="checkbox"/>	✓			
DS6		<input type="checkbox"/>	✓			
DS7		<input type="checkbox"/>	✓			
DS8		<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\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
Modified: 6/17/2016 4:16:59 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

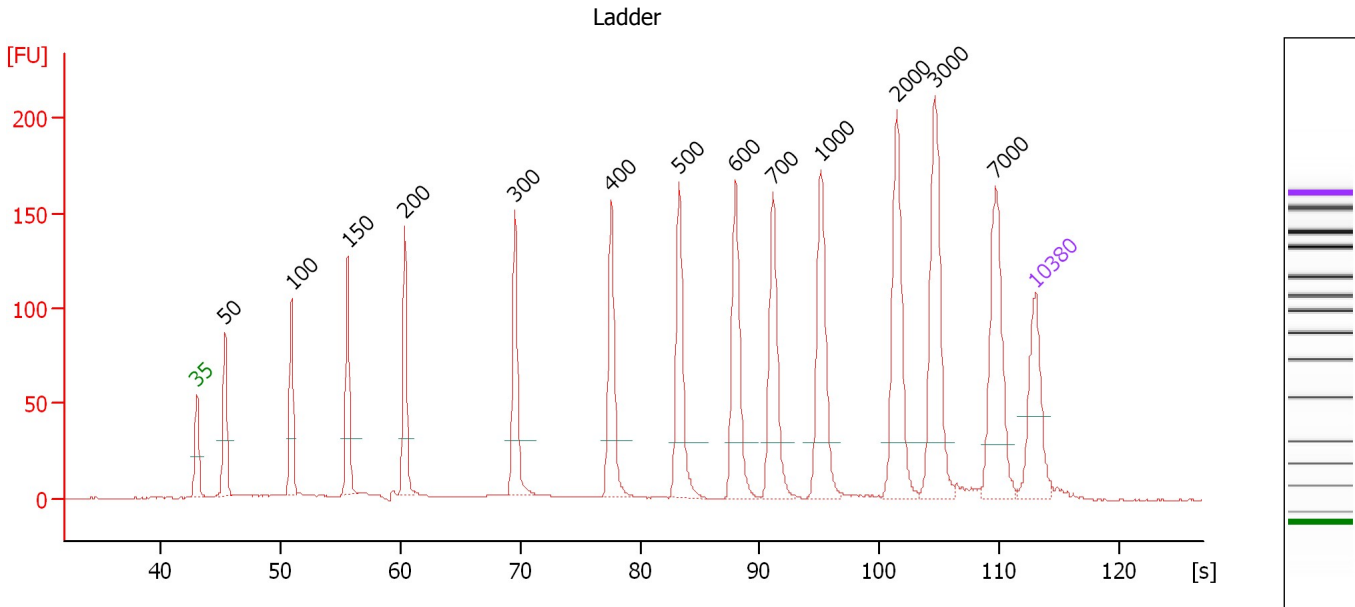
**Ladder**

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\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

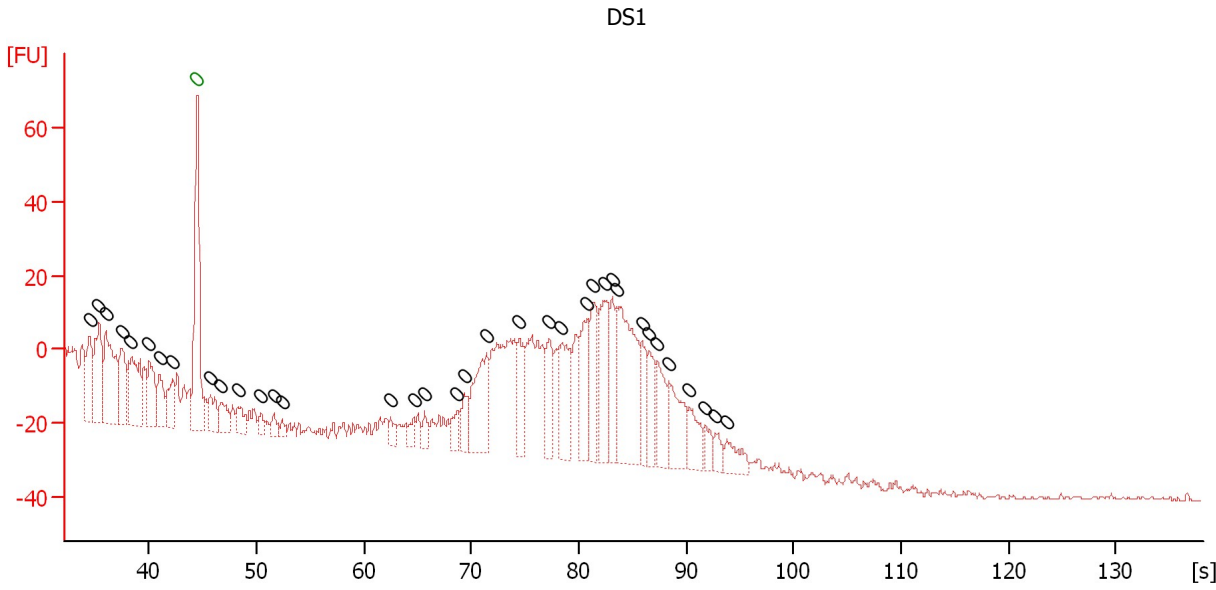
**Peak table for Ladder**

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	50.89
4	150	150.00	1,515.2	Ladder Peak	55.60
5	200	150.00	1,136.4	Ladder Peak	60.35
6	300	150.00	757.6	Ladder Peak	69.55
7	400	150.00	568.2	Ladder Peak	77.57
8	500	150.00	454.5	Ladder Peak	83.27
9	600	150.00	378.8	Ladder Peak	87.98
10	700	150.00	324.7	Ladder Peak	91.12
11	1,000	150.00	227.3	Ladder Peak	95.11
12	2,000	150.00	113.6	Ladder Peak	101.43
13	3,000	150.00	75.8	Ladder Peak	104.61
14	7,000	150.00	32.5	Ladder Peak	109.68
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : DS1**

Number of peaks found: 36                      Noise: 0.3

**Peak table for sample 1 : DS1**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	0	0.00	0.0		34.45
2	0	0.00	0.0		35.35
3	0	0.00	0.0		35.95
4	0	0.00	0.0		37.45
5	0	0.00	0.0		38.30
6	0	0.00	0.0		40.00
7	0	0.00	0.0		40.95
8	0	0.00	0.0		42.20
9	0	0.00	0.0	Lower Marker	44.45
10	0	0.00	0.0		45.70
11	0	0.00	0.0		46.60
12	0	0.00	0.0		48.25
13	0	0.00	0.0		50.40
14	0	0.00	0.0		51.65
15	0	0.00	0.0		52.40
16	0	0.00	0.0		62.50
17	0	0.00	0.0		64.65
18	0	0.00	0.0		65.65
19	0	0.00	0.0		68.70
20	0	0.00	0.0		69.30
21	0	0.00	0.0		71.40
22	0	0.00	0.0		74.40
23	0	0.00	0.0		77.25
24	0	0.00	0.0		78.40
25	0	0.00	0.0		80.70
26	0	0.00	0.0		81.35
27	0	0.00	0.0		82.40

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary Continued ...**

... Peak table for sample 1 :

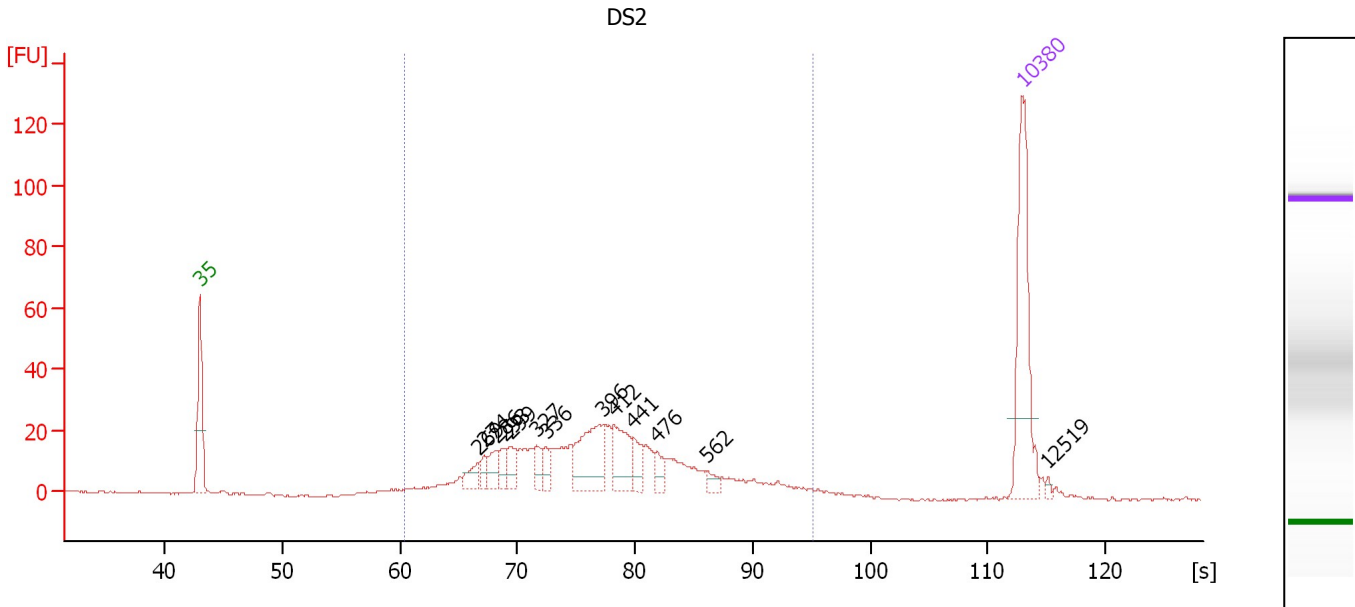
DS1

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
28	0	0.00	0.0		83.15
29	0	0.00	0.0		83.55
30	0	0.00	0.0		85.90
31	0	0.00	0.0		86.50
32	0	0.00	0.0		87.30
33	0	0.00	0.0		88.40
34	0	0.00	0.0		90.30
35	0	0.00	0.0		91.75
36	0	0.00	0.0		92.75
37	0	0.00	0.0		93.80

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : DS2**

Number of peaks found: 13                      Corr. Area 1: 488.7  
 Noise: 0.3

**Peak table for sample 2 : DS2**

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	269	13.91	78.3		66.70
3	274	8.82	48.8		67.16
4	286	14.67	77.7		68.25
5	293	14.31	74.0		68.89
6	299	16.14	81.8		69.44
7	327	13.21	61.3		71.68
8	336	10.36	46.7		72.45
9	396	57.00	218.1		77.25
10	412	36.08	132.7		78.25
11	441	15.09	51.9		79.89
12	476	10.83	34.5		81.90
13	562	6.02	16.2		86.20
14	10,380	75.00	10.9	Upper Marker	113.00
15	12,519	0.00	0.0		115.10

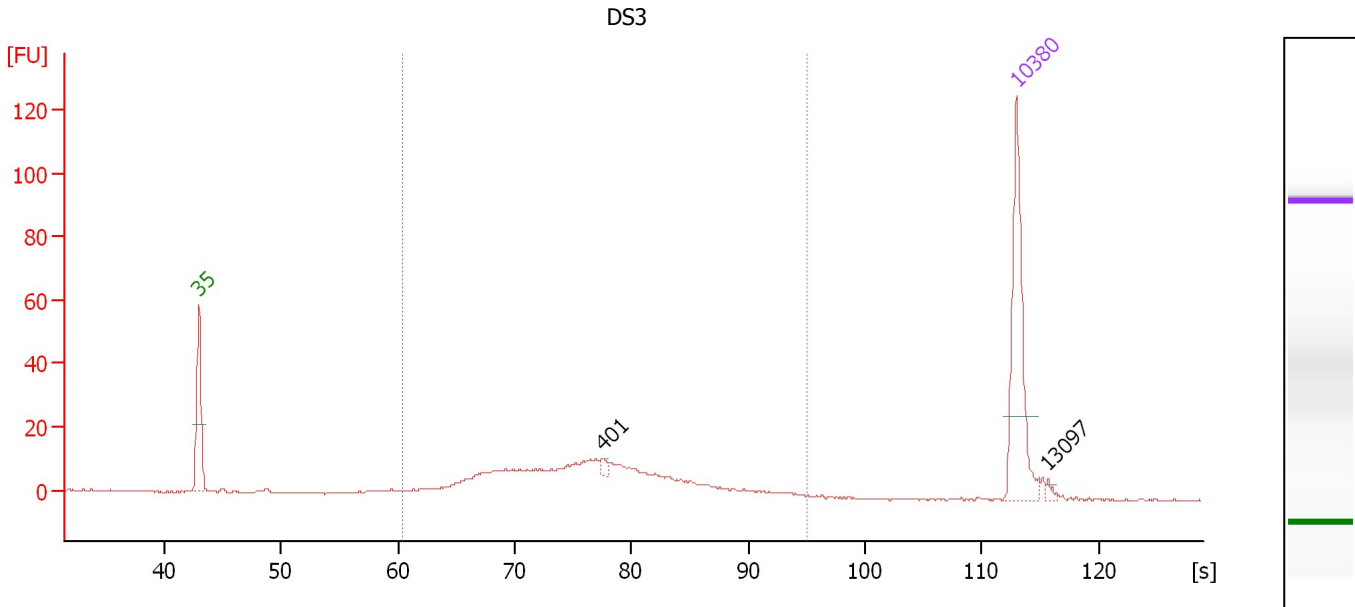
**Region table for sample 2 : DS2**

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	415	488.7	1,730.6	422.50	96	31.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : DS3**

Number of peaks found: 2                      Corr. Area 1: 243.1  
 Noise: 0.2

**Peak table for sample 3 : DS3**

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	401	3.93	14.8		77.63
3	10,380	75.00	10.9	Upper Marker	113.00
4	13,097	0.00	0.0		115.67

**Region table for sample 3 : DS3**

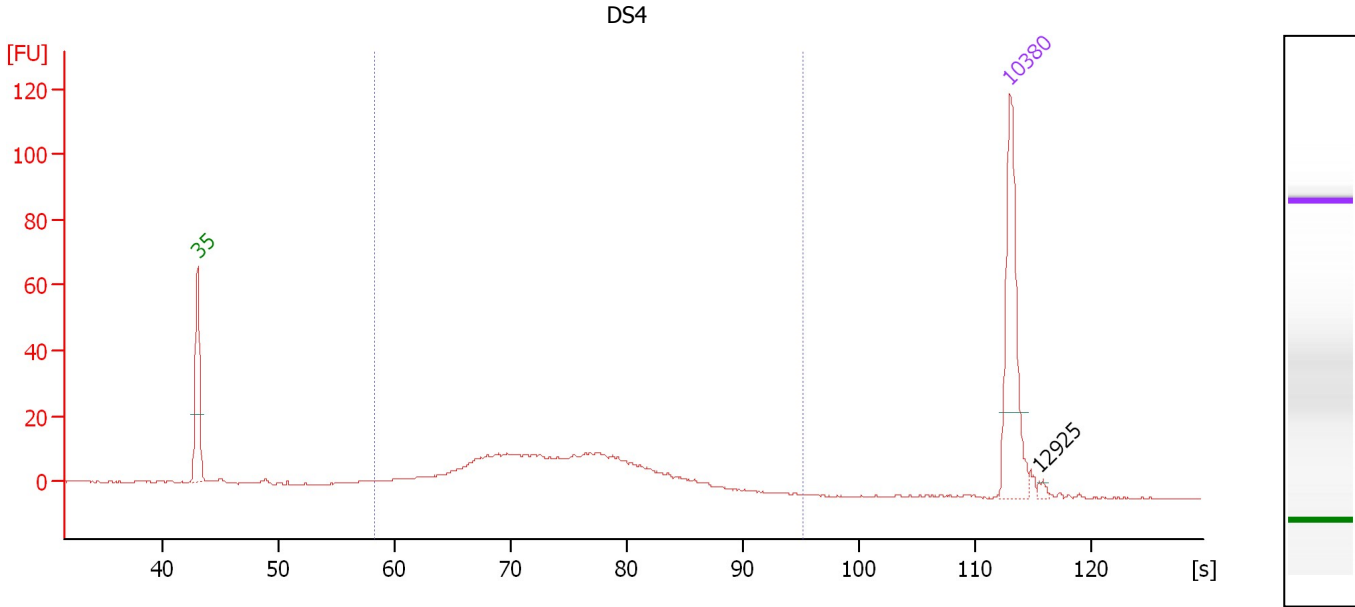
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	400	243.1	1,012.7	240.48	94	29.2



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : DS4**

Number of peaks found: 1                      Corr. Area 1: 276.1  
 Noise: 0.2

**Peak table for sample 4 : DS4**

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
3	12,925	0.00	0.0		115.50

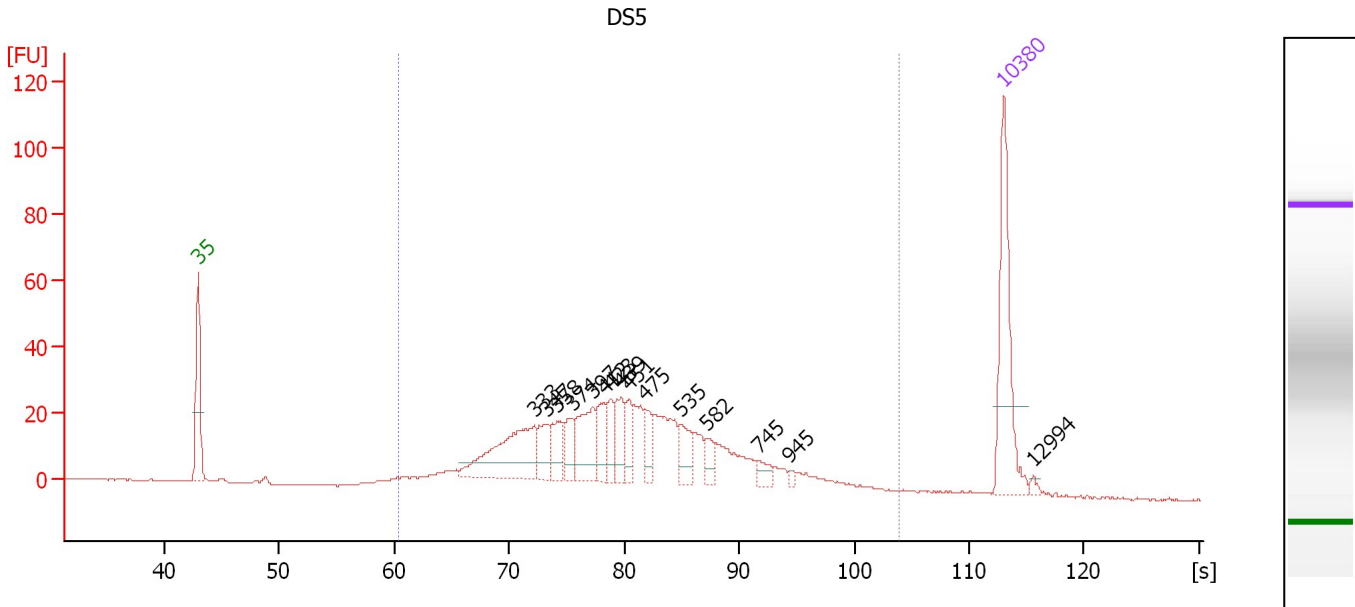
**Region table for sample 4 : DS4**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
178	1,000	363	276.1	1,201.8	261.72	93	25.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : DS5**

Number of peaks found: 15                      Corr. Area 1: 682.1  
 Noise: 0.2

**Peak table for sample 5 : DS5**

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	333	101.01	459.3		72.21
3	347	25.62	111.8		73.33
4	358	28.69	121.3		74.22
5	374	22.44	90.9		75.48
6	397	48.88	186.8		77.30
7	412	26.49	97.3		78.28
8	423	18.88	67.6		78.89
9	439	29.03	100.3		79.77
10	451	19.87	66.8		80.47
11	475	19.83	63.3		81.83
12	535	24.21	68.6		84.91
13	582	12.73	33.1		87.15
14	745	9.69	19.7		91.72
15	945	2.94	4.7		94.38
16	10,380	75.00	10.9	Upper Marker	113.00
17	12,994	0.00	0.0		115.57

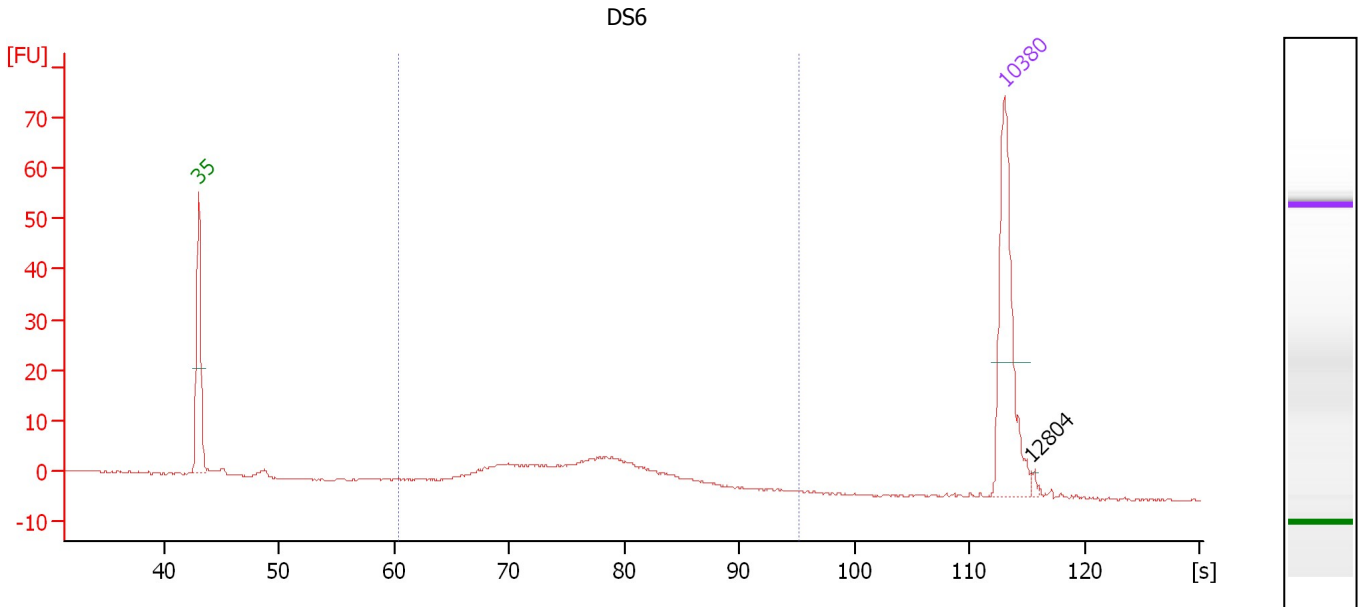
**Region table for sample 5 : DS5**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	2,778	510	682.1	2,523.2	681.68	96	56.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : DS6**

Number of peaks found: 1                      Corr. Area 1: 97.9  
 Noise: 0.2

**Peak table for sample 6 : DS6**

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
3	12,804	0.00	0.0		115.38

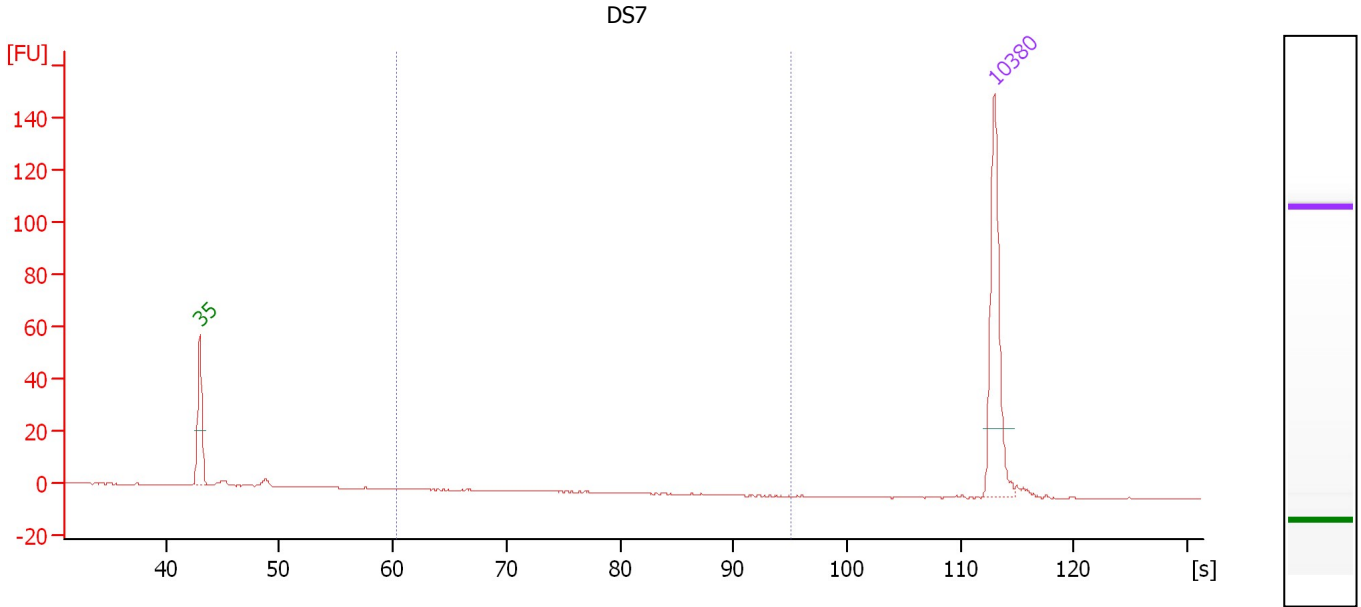
**Region table for sample 6 : DS6**

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	394	97.9	485.5	118.41	89	21.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : DS7**

Number of peaks found: 0                      Corr. Area 1: 0.0  
 Noise: 0.1

**Peak table for sample 7 : DS7**

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

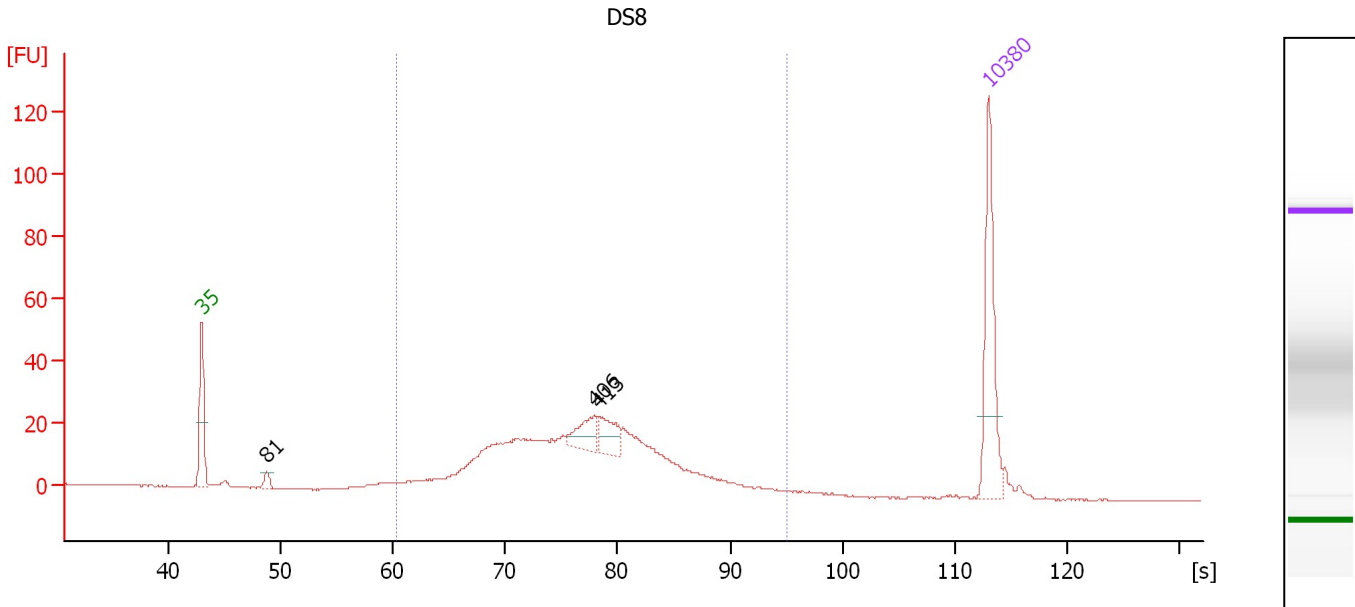
**Region table for sample 7 : DS7**

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\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : DS8**

Number of peaks found: 3                      Corr. Area 1: 492.0  
 Noise: 0.1

**Peak table for sample 8 : DS8**

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	81	9.28	173.5		48.78
3	406	29.07	108.4		77.93
4	413	29.33	107.6		78.31
5	10,380	75.00	10.9	Upper Marker	113.00

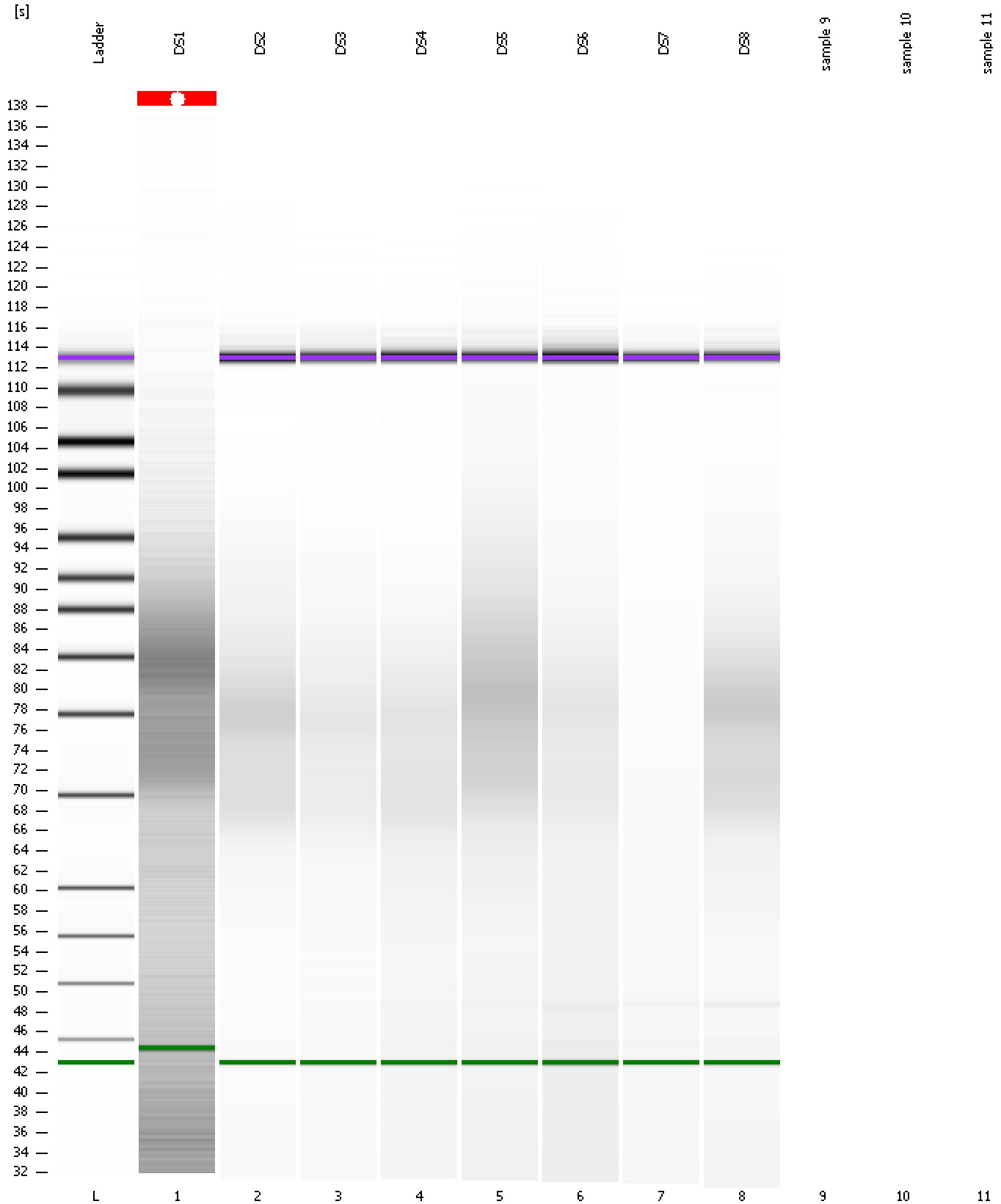
**Region table for sample 8 : DS8**

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	407	492.0	2,200.4	536.21	94	27.9

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
Modified: 6/17/2016 4:16:59 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
Modified: 6/17/2016 4:16:59 PM

**Invalid Samples**

Sample 9 has not been run, no results available.

Sample 10 has not been run, no results available.

Sample 11 has not been run, no results available.

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-06-17\2016-06-17\_004.xad

Created: 6/17/2016 3:44:16 PM  
 Modified: 6/17/2016 4:16:59 PM

**Run Logbook**

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 9)		Instrument	Run		6/17/2016 4:16:58 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\2016-06-17\2016-06-17_004.xad)		Instrument	Run		6/17/2016 3:44:22 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		6/17/2016 3:44:22 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		6/17/2016 3:44:22 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		6/17/2016 3:44:22 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		6/17/2016 3:44:22 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		6/17/2016 3:44:22 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		6/17/2016 3:44:22 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1