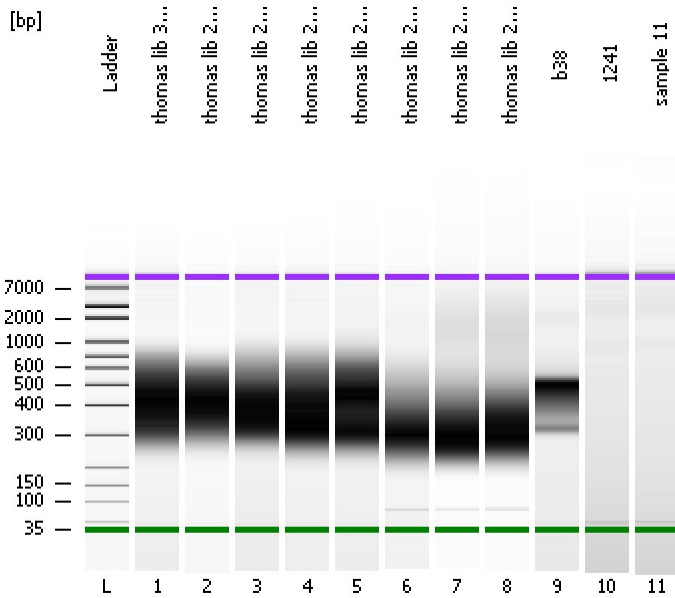


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
Modified: 3/8/2016 2:54:21 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

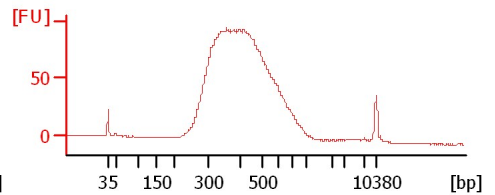
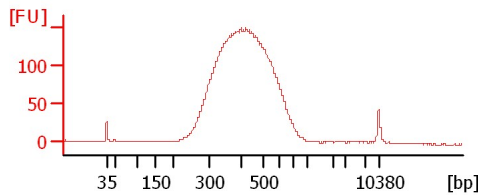
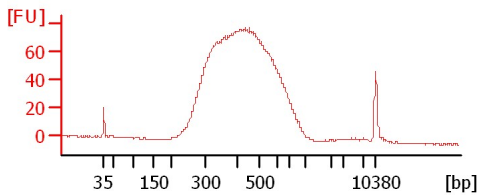
Chip Information:

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

thomas lib 3 clean

thomas lib 27 rh clean

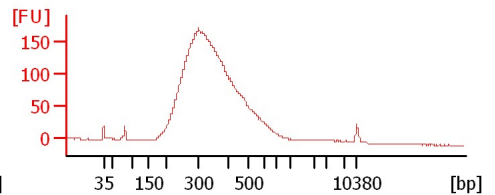
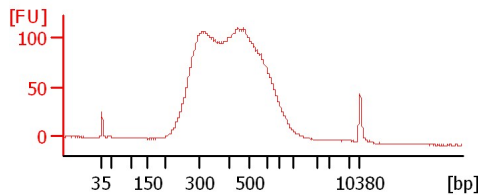
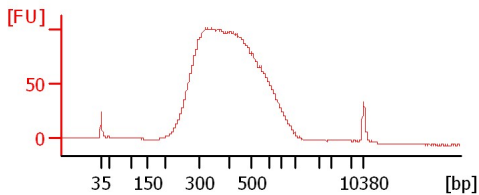
thomas lib 20 clean



thomas lib 21 clean

thomas lib 22 clean

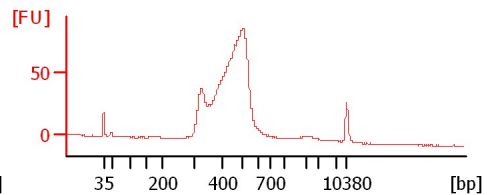
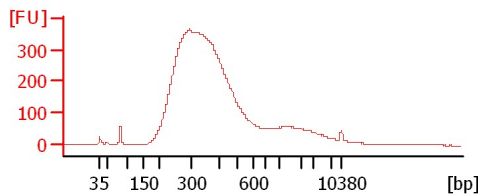
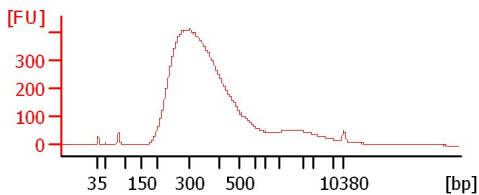
thomas lib 23 inp rerun



thomas lib 25 inp rerun

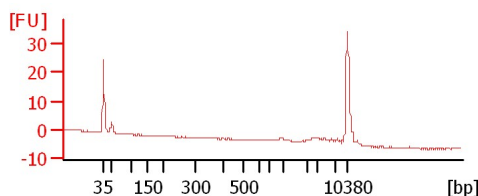
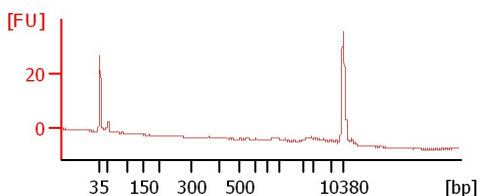
thomas lib 27 inp rerun

b38



1241

sample 11



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
Modified: 3/8/2016 2:54:21 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
thomas lib 3 clean		<input type="checkbox"/>	✓			
thomas lib 27 rh clean		<input type="checkbox"/>	✓			
thomas lib 20 clean		<input type="checkbox"/>	✓			
thomas lib 21 clean		<input type="checkbox"/>	✓			
thomas lib 22 clean		<input type="checkbox"/>	✓			
thomas lib 23 inp rerun		<input type="checkbox"/>	✓			
thomas lib 25 inp rerun		<input type="checkbox"/>	✓			
thomas lib 27 inp rerun		<input type="checkbox"/>	✓			
b38		<input type="checkbox"/>	✓			
1241		<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\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
Modified: 3/8/2016 2:54:21 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

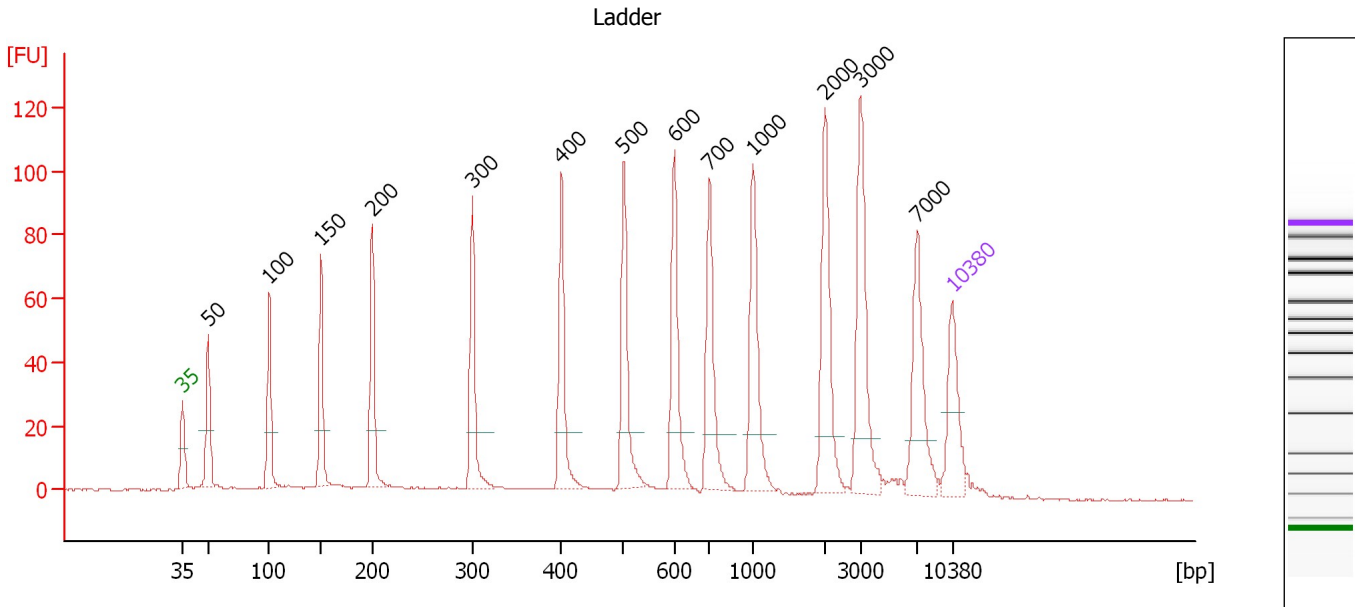
**Ladder**

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\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

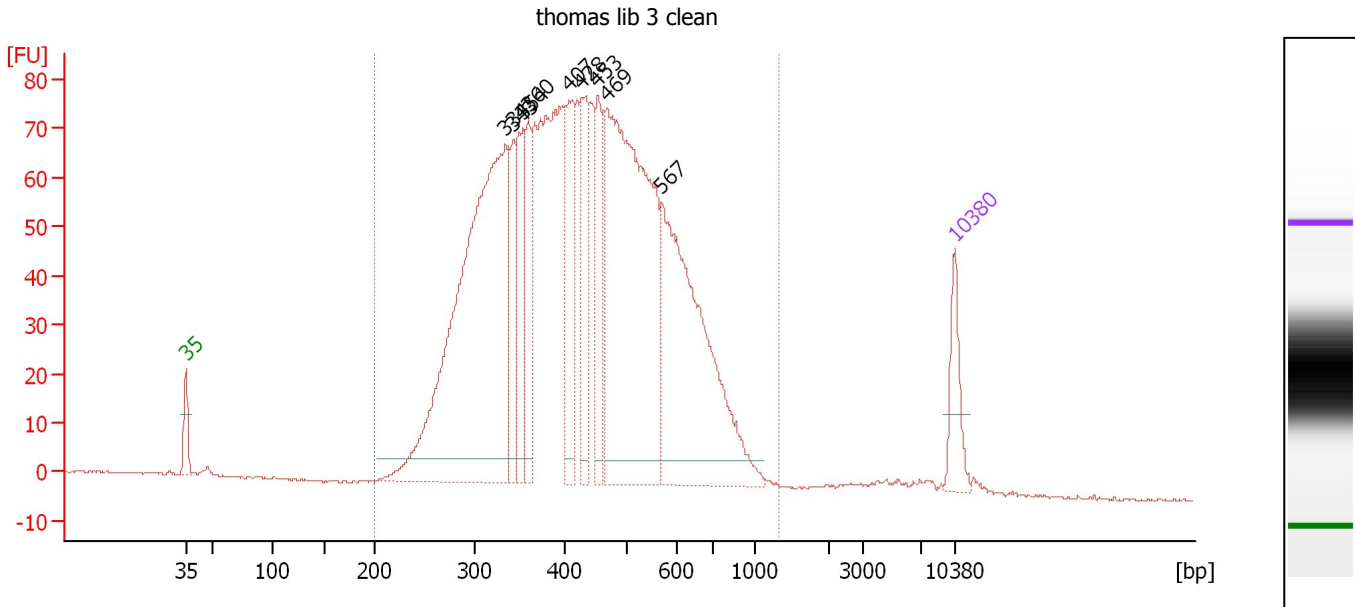
**Peak table for Ladder**

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	50.86
4	150	150.00	1,515.2	Ladder Peak	55.56
5	200	150.00	1,136.4	Ladder Peak	60.22
6	300	150.00	757.6	Ladder Peak	69.34
7	400	150.00	568.2	Ladder Peak	77.44
8	500	150.00	454.5	Ladder Peak	83.12
9	600	150.00	378.8	Ladder Peak	87.73
10	700	150.00	324.7	Ladder Peak	90.93
11	1,000	150.00	227.3	Ladder Peak	94.86
12	2,000	150.00	113.6	Ladder Peak	101.45
13	3,000	150.00	75.8	Ladder Peak	104.66
14	7,000	150.00	32.5	Ladder Peak	109.85
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : thomas lib 3 clean**

Number of peaks found: 9                      Corr. Area 1: 2,100.3  
 Noise: 0.2

**Peak table for sample 1 : thomas lib 3 clean**

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	334	1,352.03	6,137.3		72.08
3	343	161.01	711.7		72.81
4	354	210.47	900.4		73.73
5	360	162.90	686.5		74.17
6	407	206.59	768.6		77.85
7	428	217.40	770.0		79.02
8	453	186.92	625.8		80.43
9	469	1,063.64	3,437.3		81.35
10	567	714.03	1,908.2		86.20
11	10,380	75.00	10.9	Upper Marker	113.00

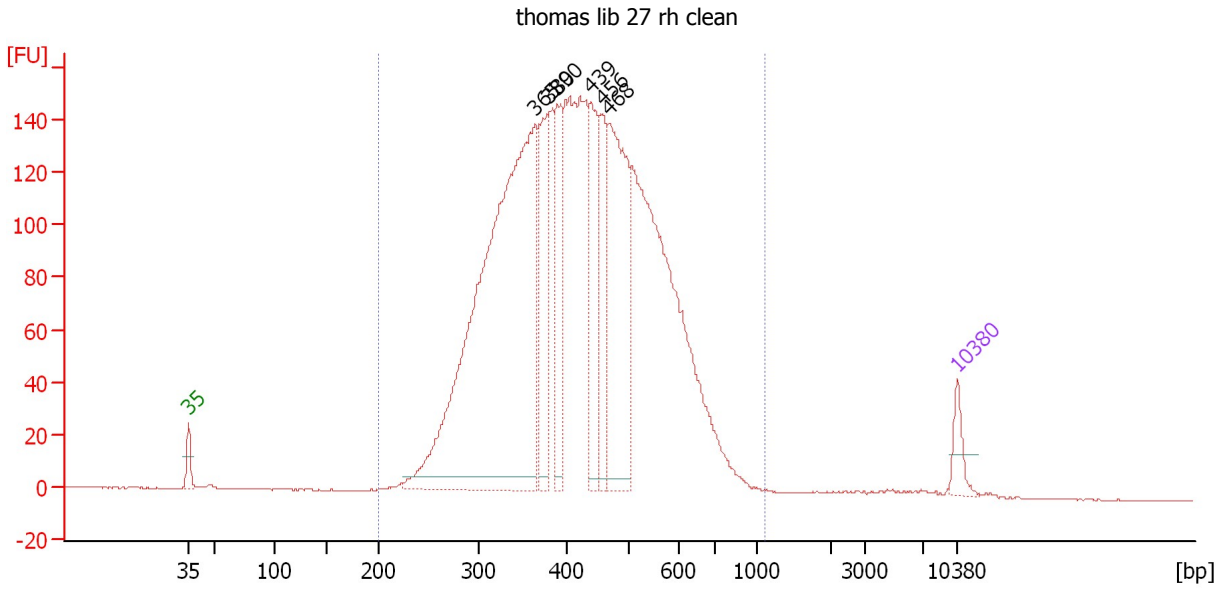
**Region table for sample 1 : thomas lib 3 clean**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,317	445	2,100.3	20,340.1	5,339.66	98	29.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : thomas lib 27 rh clean**

Number of peaks found: 6                      Corr. Area 1: 3,461.1  
 Noise: 0.2

**Peak table for sample 2 : thomas lib 27 rh clean**

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	365	3,313.86	13,770.8		74.58
3	380	567.39	2,264.7		75.79
4	390	409.65	1,592.3		76.62
5	439	515.56	1,777.9		79.68
6	456	347.53	1,153.5		80.65
7	468	964.00	3,117.9		81.33
8	10,380	75.00	10.9	Upper Marker	113.00

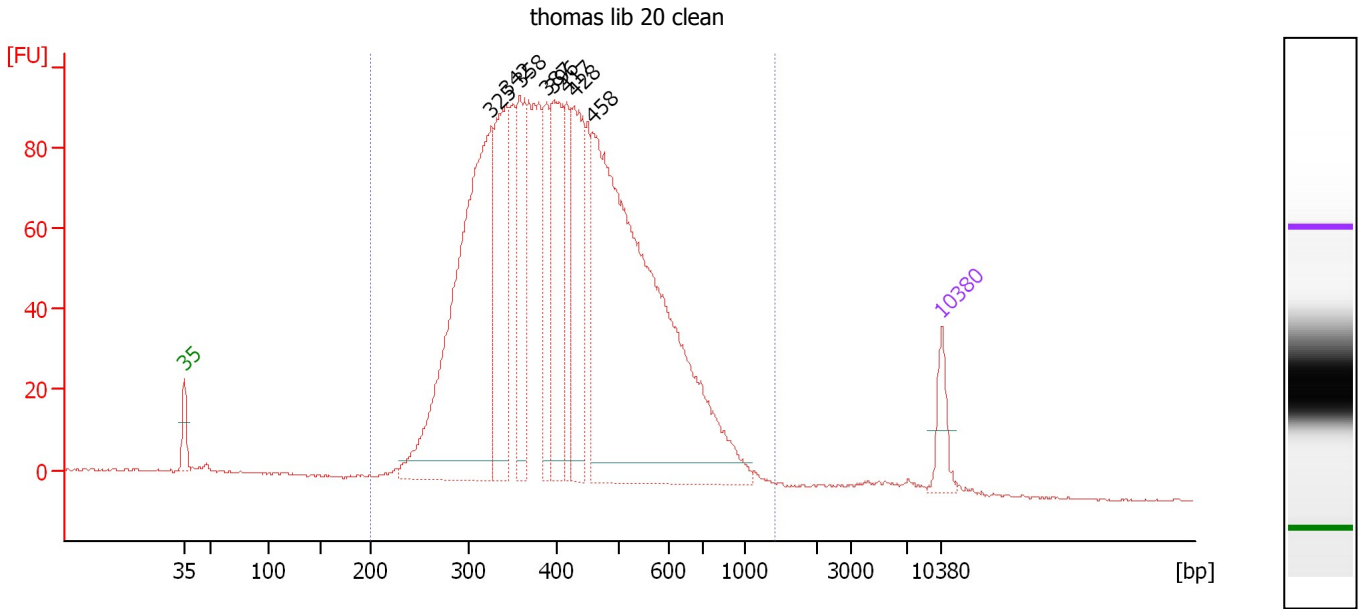
**Region table for sample 2 : thomas lib 27 rh clean**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,093	433	3,461.1	38,885.5	10,226.66	99	25.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : thomas lib 20 clean**

Number of peaks found: 8                      Corr. Area 1: 2,380.2  
 Noise: 0.3

**Peak table for sample 3 : thomas lib 20 clean**

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	325	1,546.00	7,213.3		71.35
3	342	544.33	2,413.1		72.73
4	358	392.79	1,664.2		74.01
5	387	242.52	948.5		76.42
6	396	444.06	1,699.3		77.11
7	417	232.70	846.0		78.39
8	428	419.78	1,485.8		79.04
9	458	2,154.58	7,134.0		80.71
10	10,380	75.00	10.9	Upper Marker	113.00

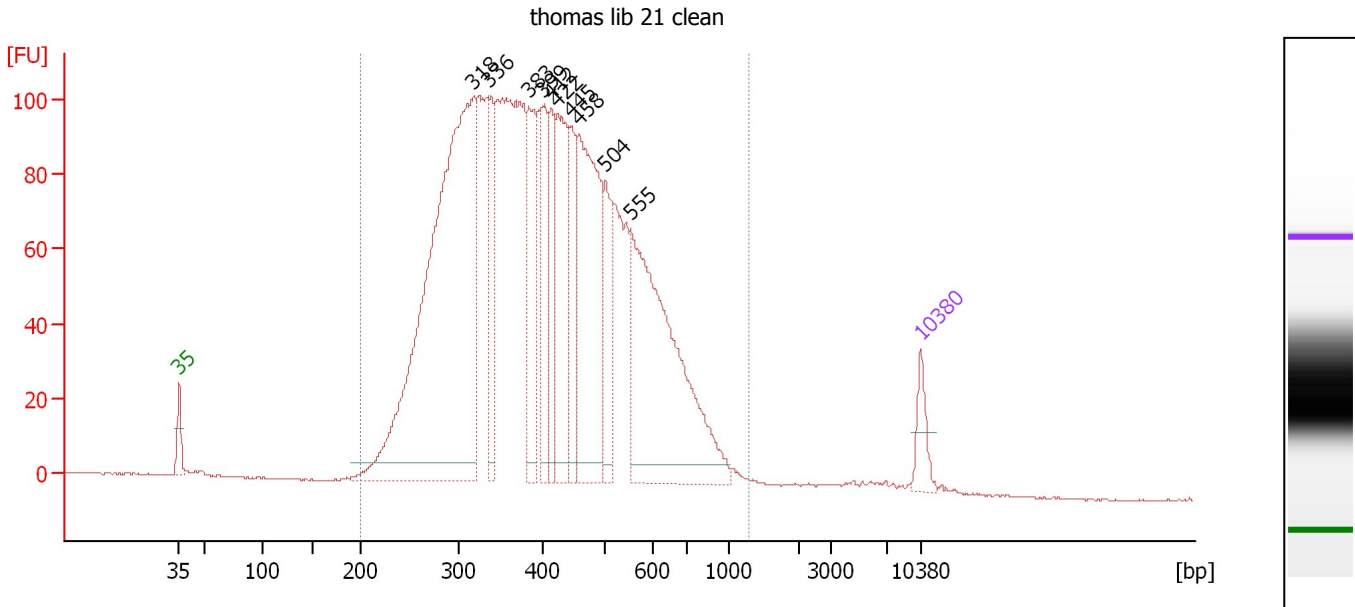
**Region table for sample 3 : thomas lib 20 clean**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,420	433	2,380.2	26,789.1	6,905.27	98	30.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : thomas lib 21 clean**

Number of peaks found: 10                      Corr. Area 1: 2,912.0  
 Noise: 0.2

**Peak table for sample 4 : thomas lib 21 clean**

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	318	2,630.79	12,535.0		70.80
3	336	319.27	1,439.6		72.26
4	383	343.02	1,358.3		76.04
5	399	290.87	1,103.4		77.40
6	412	264.13	970.2		78.15
7	422	474.27	1,701.8		78.71
8	445	246.10	837.3		80.01
9	458	860.46	2,848.2		80.72
10	504	267.01	803.2		83.29
11	555	1,149.16	3,136.9		85.65
12	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : thomas lib 21 clean**

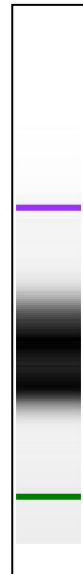
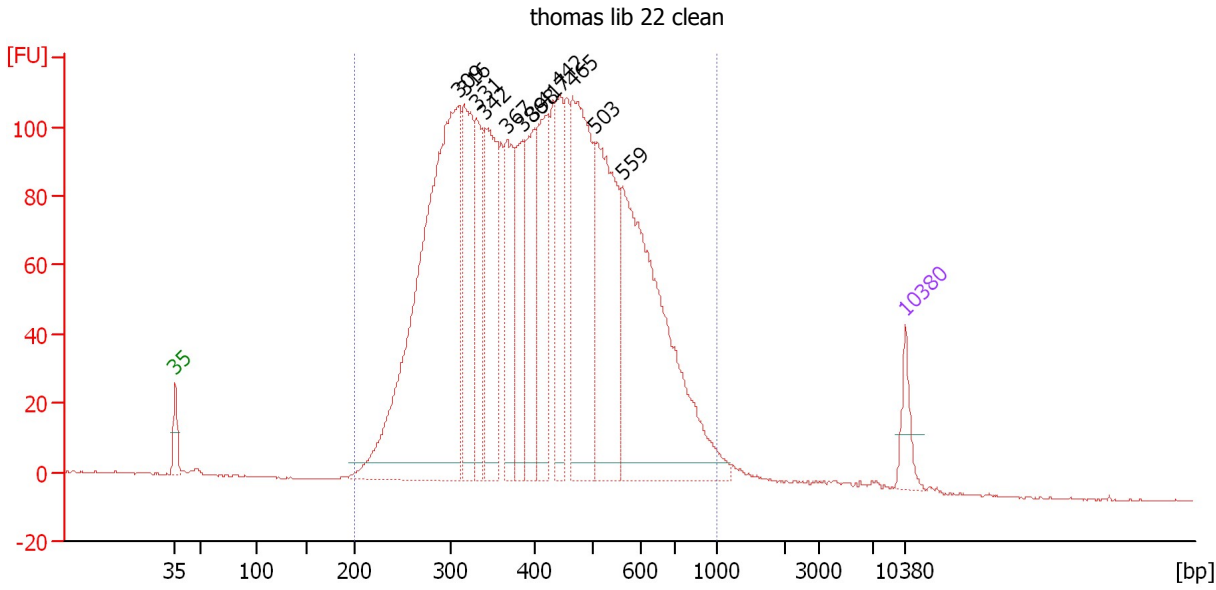
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,308	424	2,912.0	39,108.5	9,683.39	98	32.1



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
Modified: 3/8/2016 2:54:21 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : thomas lib 22 clean

Number of peaks found: 12                          Corr. Area 1: 3,237.0  
Noise: 0.2

Peak table for sample 5 : thomas lib 22 clean

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	309	2,252.80	11,033.1		70.10
3	316	547.23	2,621.2		70.66
4	331	333.79	1,525.8		71.89
5	342	566.77	2,509.5		72.76
6	367	366.95	1,513.2		74.80
7	386	389.84	1,528.7		76.34
8	398	353.08	1,342.9		77.31
9	417	475.21	1,724.6		78.43
10	442	316.68	1,086.0		79.82
11	465	818.35	2,665.2		81.14
12	503	751.98	2,266.6		83.24
13	559	1,309.75	3,548.4		85.85
14	10,380	75.00	10.9	Upper Marker	113.00

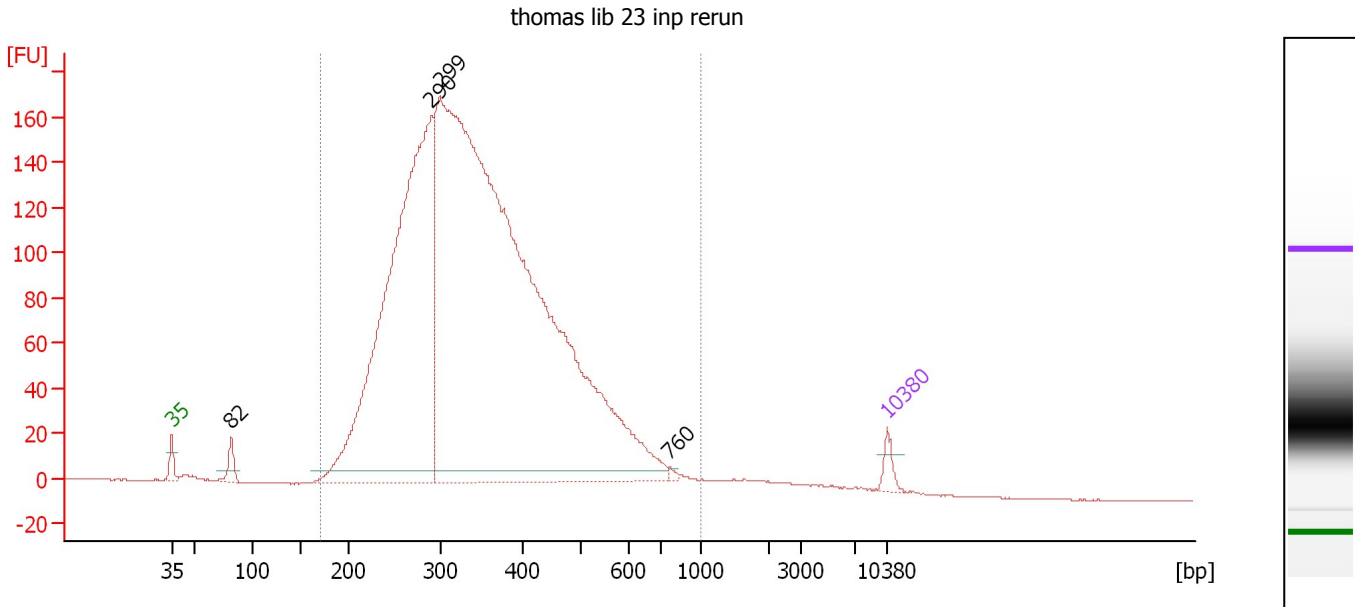
Region table for sample 5 : thomas lib 22 clean

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	432	3,237.0	37,483.4	9,412.98	98	31.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : thomas lib 23 inp rerun**

Number of peaks found: 4                      Corr. Area 1: 3,778.5  
 Noise: 0.2

**Peak table for sample 6 : thomas lib 23 inp rerun**

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	82	160.24	2,969.3		48.84
3	290	6,146.68	32,146.6		68.40
4	299	13,652.56	69,083.2		69.29
5	760	19.41	38.7		91.72
6	10,380	75.00	10.9	Upper Marker	113.00

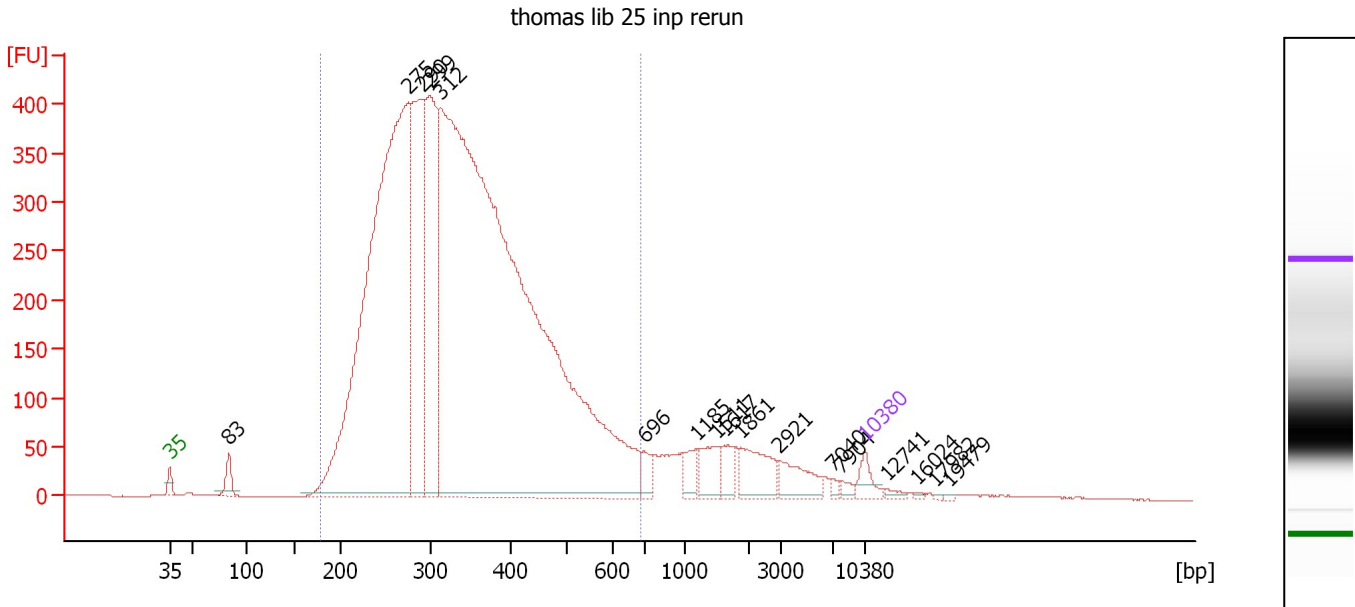
**Region table for sample 6 : thomas lib 23 inp rerun**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
171	1,000	357	3,778.5	88,308.2	18,762.07	97	30.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : thomas lib 25 inp rerun**

Number of peaks found: 17                      Corr. Area 1: 9,692.7  
 Noise: 0.2

**Peak table for sample 7 : thomas lib 25 inp rerun**

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	132.13	2,416.1		48.96
3	275	5,543.56	30,535.0		67.07
4	290	1,538.37	8,043.0		68.41
5	299	1,448.81	7,350.7		69.22
6	312	10,444.22	50,764.4		70.29
7	696	89.73	195.2		90.81
8	1,185	108.38	138.6		96.08
9	1,511	154.78	155.2		98.23
10	1,617	85.02	79.7		98.92
11	1,861	216.92	176.6		100.54
12	2,921	163.77	84.9		104.40
13	7,040	20.75	4.5		109.88
14	7,904	26.40	5.1		110.69
15	10,380	75.00	10.9	Upper Marker	113.00
16	12,741	0.00	0.0		115.20
17	16,024	0.00	0.0		118.26
18	17,982	0.00	0.0		120.09
19	19,479	0.00	0.0		121.49

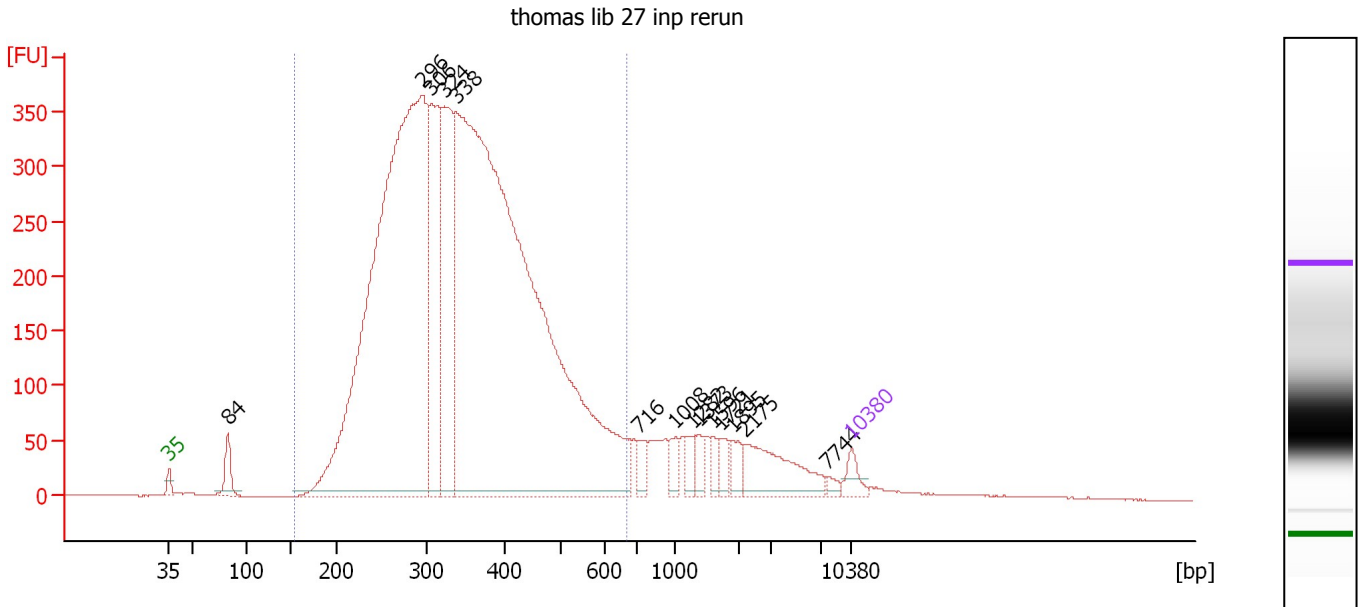
**Region table for sample 7 : thomas lib 25 inp rerun**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
178	686	344	9,692.7	86,613.3	17,855.36	90	28.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : thomas lib 27 inp rerun**

Number of peaks found: 14                      Corr. Area 1: 8,786.7  
 Noise: 0.3

**Peak table for sample 8 : thomas lib 27 inp rerun**

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	212.54	3,843.3		49.07
3	296	7,024.24	35,909.1		69.01
4	306	1,392.82	6,895.5		69.83
5	324	1,380.72	6,465.1		71.25
6	338	9,140.99	40,925.2		72.45
7	716	96.39	203.9		91.14
8	1,008	80.59	121.1		94.91
9	1,282	88.47	104.6		96.72
10	1,373	83.11	91.7		97.32
11	1,596	60.26	57.2		98.79
12	1,721	77.86	68.6		99.61
13	1,895	83.07	66.4		100.76
14	2,175	384.73	268.0		102.02
15	7,744	27.89	5.5		110.54
16	10,380	75.00	10.9	Upper Marker	113.00

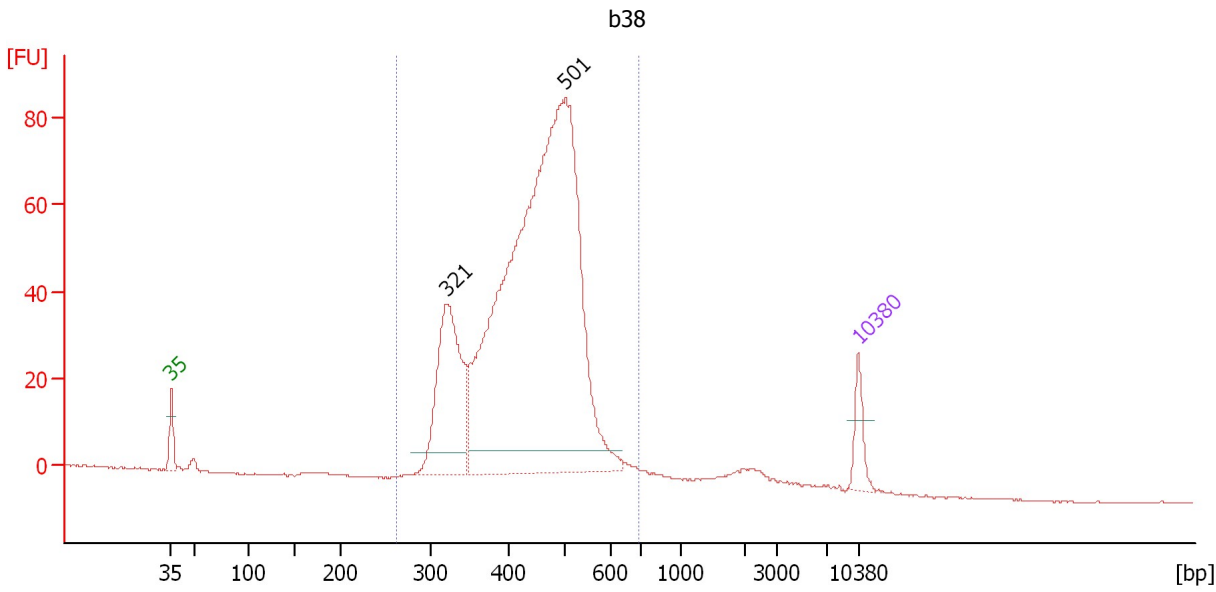
**Region table for sample 8 : thomas lib 27 inp rerun**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
153	672	353	8,786.7	86,891.8	18,418.00	89	26.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : b38**

Number of peaks found: 2                      Corr. Area 1: 1,057.3  
 Noise: 0.2

**Peak table for sample 9 : b38**

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	321	691.15	3,258.1		71.08
3	501	3,317.73	10,024.0		83.19
4	10,380	75.00	10.9	Upper Marker	113.00

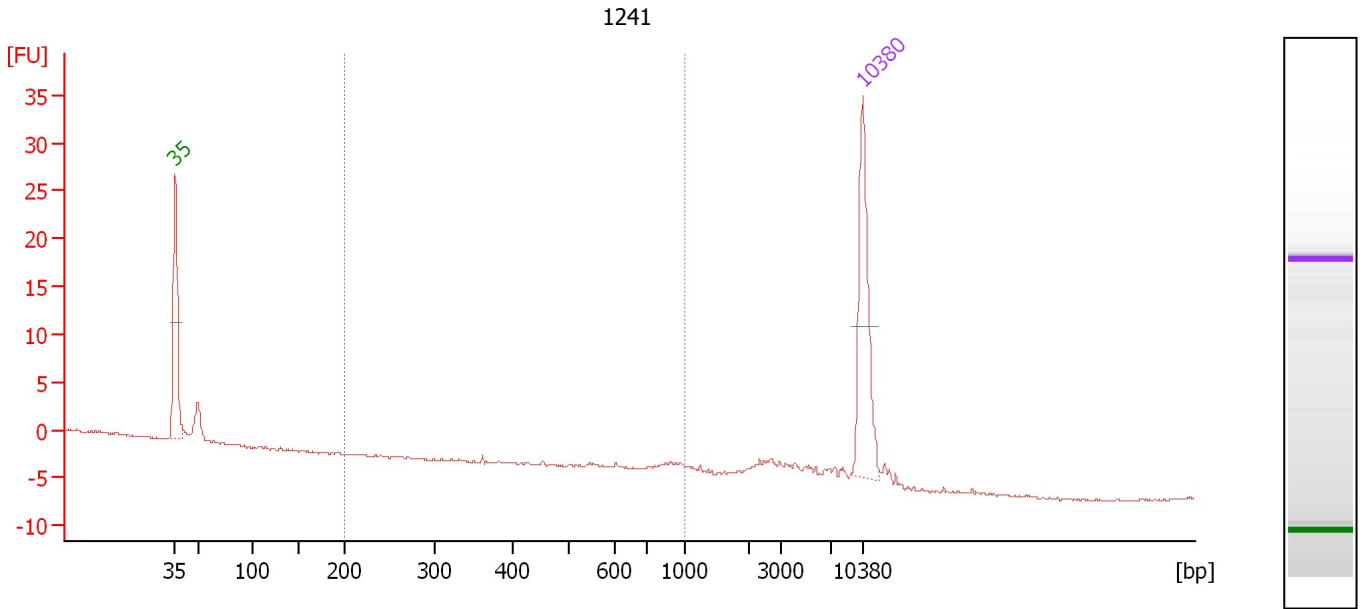
**Region table for sample 9 : b38**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
263	690	442	1,057.3	15,464.9	4,336.64	96	16.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : 1241**

Number of peaks found: 0                      Corr. Area 1: 0.8  
 Noise: 0.1

**Peak table for sample 10 : 1241**

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

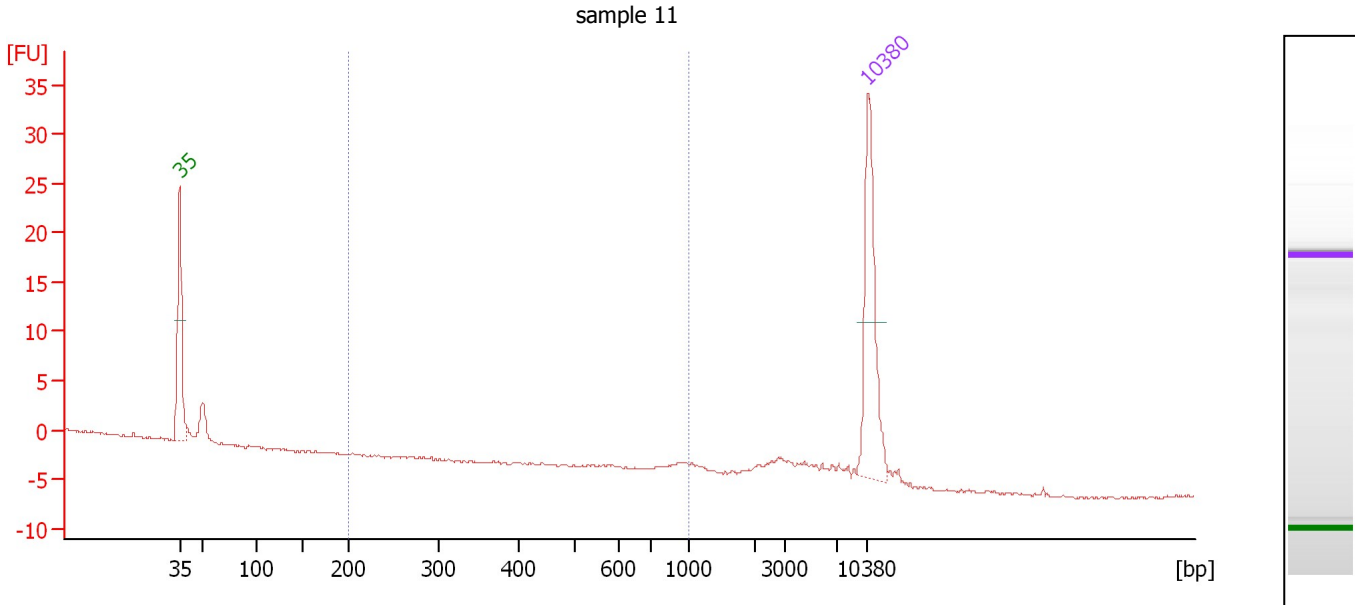
**Region table for sample 10 : 1241**

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	912	0.8	3.2	1.94	5	5.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
 Modified: 3/8/2016 2:54:21 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 0                      Corr. Area 1: 0.5  
 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

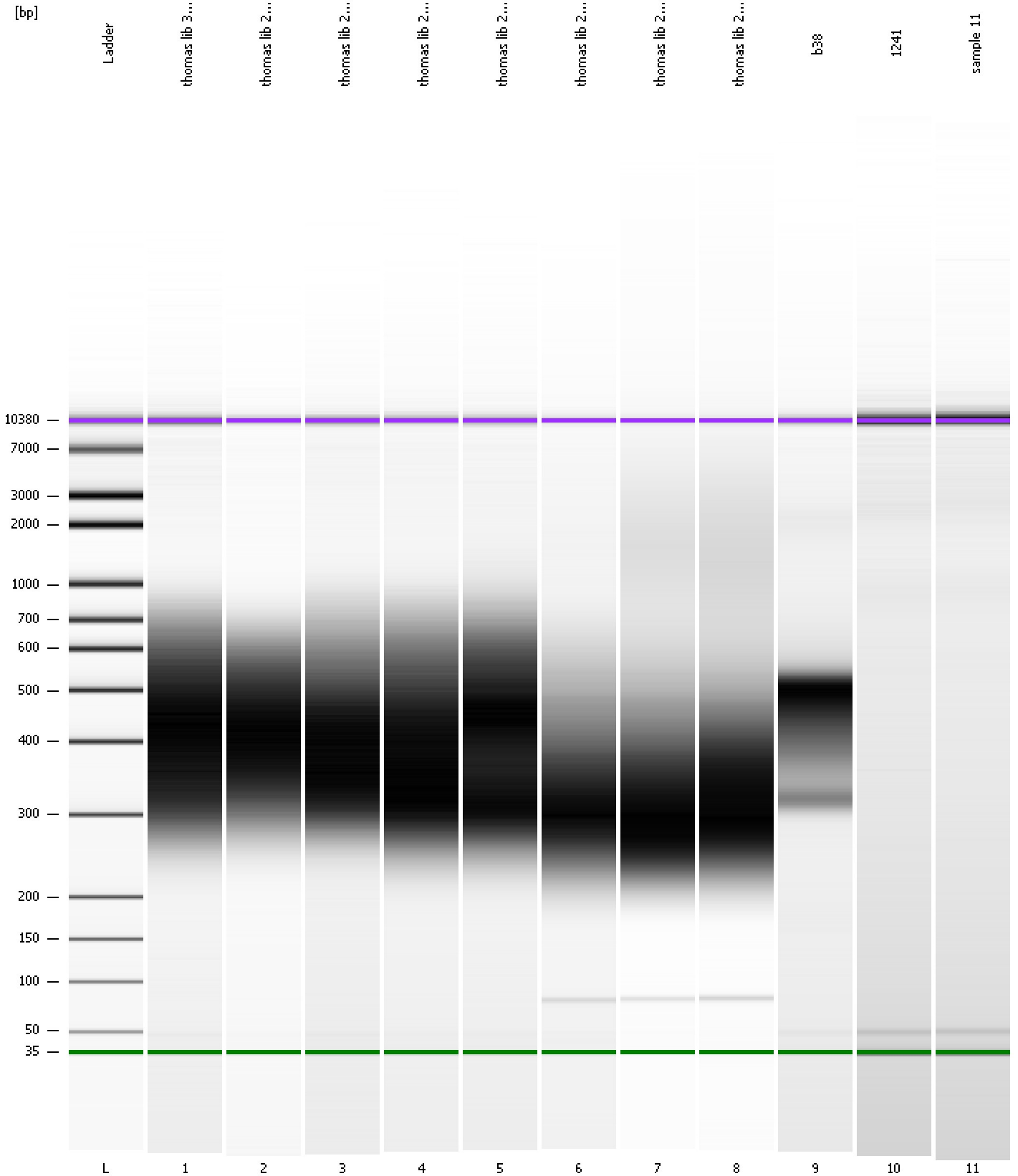
**Region table for sample 11 : sample 11**

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	939	0.5	1.8	1.10	3	3.7

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad

Created: 3/8/2016 2:13:01 PM  
Modified: 3/8/2016 2:54:21 PM

**Gel Image**





Assay Class: High Sensitivity DNA Assay Created: 3/8/2016 2:13:01 PM  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-08\2016-03-08\_002.xad Modified: 3/8/2016 2:54:21 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		3/8/2016 2:54:20 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-03-08\2016-03-08_002.xad)		Instrument	Run		3/8/2016 2:13:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/8/2016 2:13:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/8/2016 2:13:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/8/2016 2:13:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/8/2016 2:13:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/8/2016 2:13:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/8/2016 2:13:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1