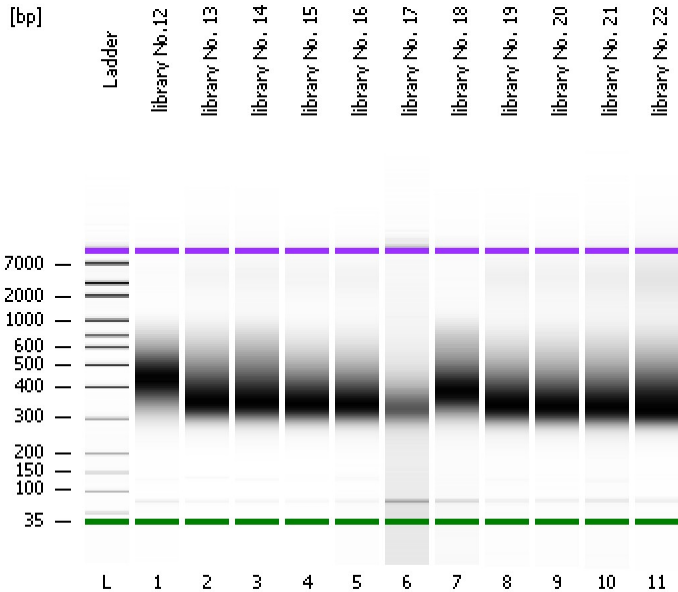


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
Modified: 8/9/2013 2:50:37 PM

Electrophoresis File Run Summary



Instrument Information:

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

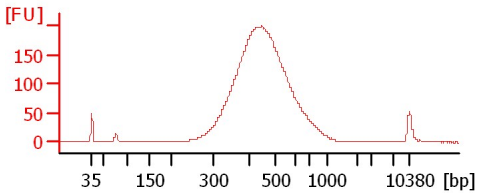
Assay Information:

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

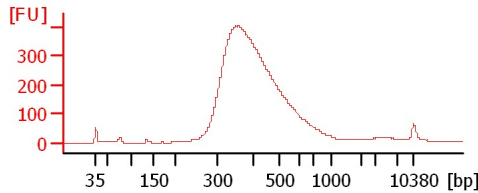
Chip Information:

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

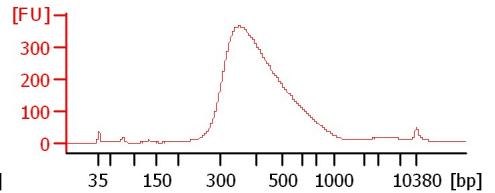
library No.12



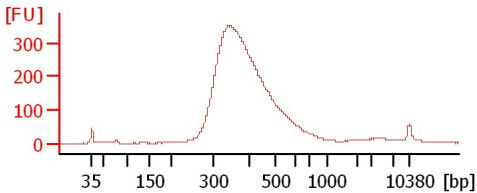
library No. 13



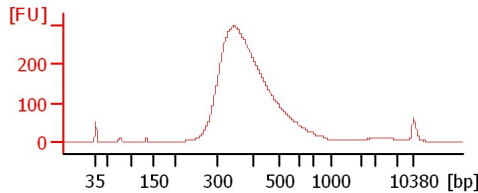
library No. 14



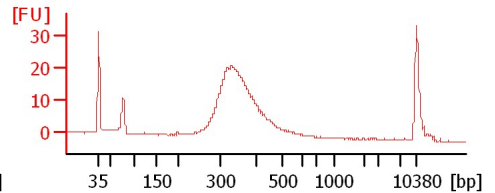
library No. 15



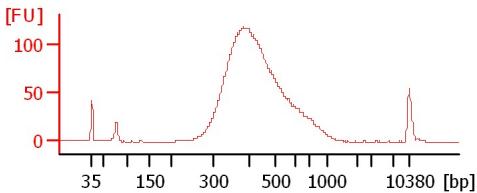
library No. 16



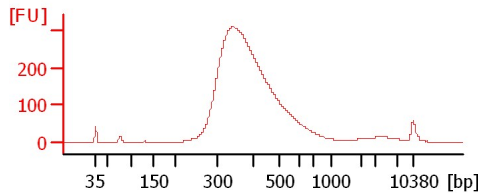
library No. 17



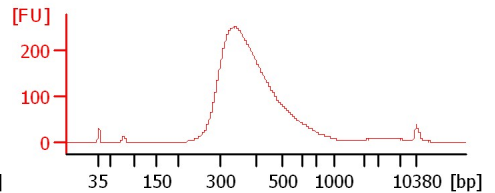
library No. 18



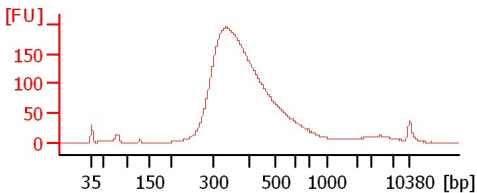
library No. 19



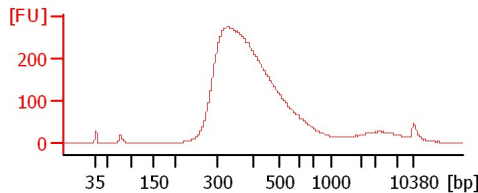
library No. 20



library No. 21



library No. 22



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
Modified: 8/9/2013 2:50:37 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
library No.12		<input type="checkbox"/>	✓			
library No. 13		<input type="checkbox"/>	✓			
library No. 14		<input type="checkbox"/>	✓			
library No. 15		<input type="checkbox"/>	✓			
library No. 16		<input type="checkbox"/>	✓			
library No. 17		<input type="checkbox"/>	✓			
library No. 18		<input type="checkbox"/>	✓			
library No. 19		<input type="checkbox"/>	✓			
library No. 20		<input type="checkbox"/>	✓			
library No. 21		<input type="checkbox"/>	✓			
library No. 22		<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\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 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

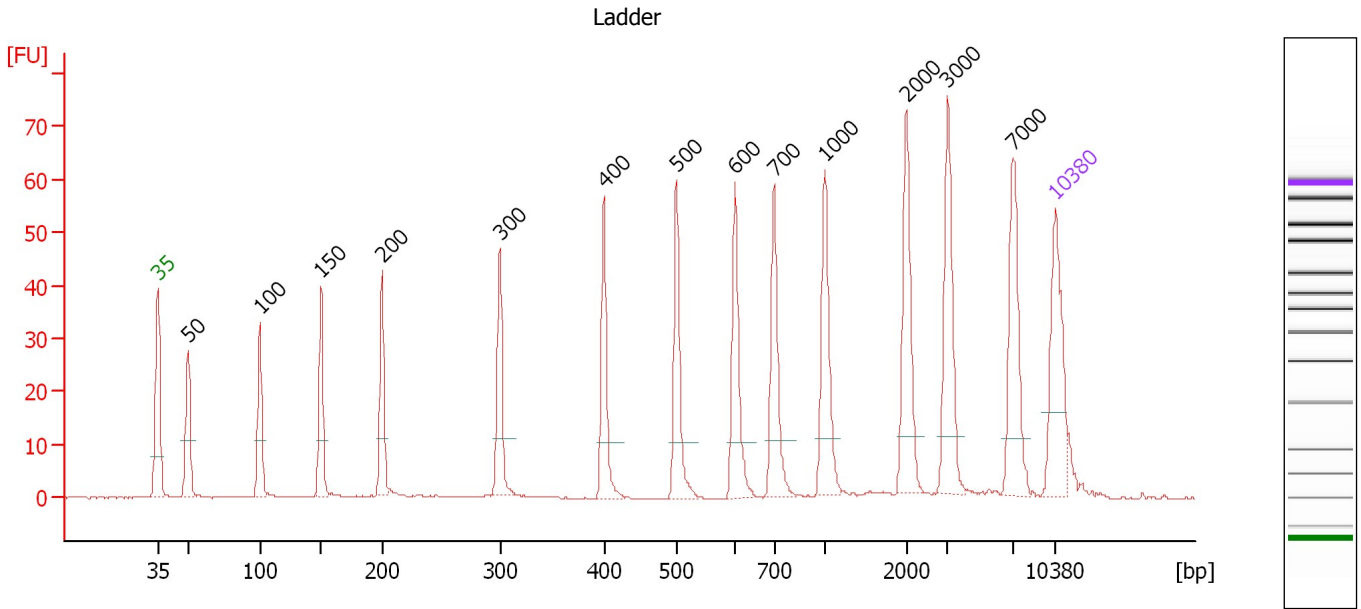
Ladder

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:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

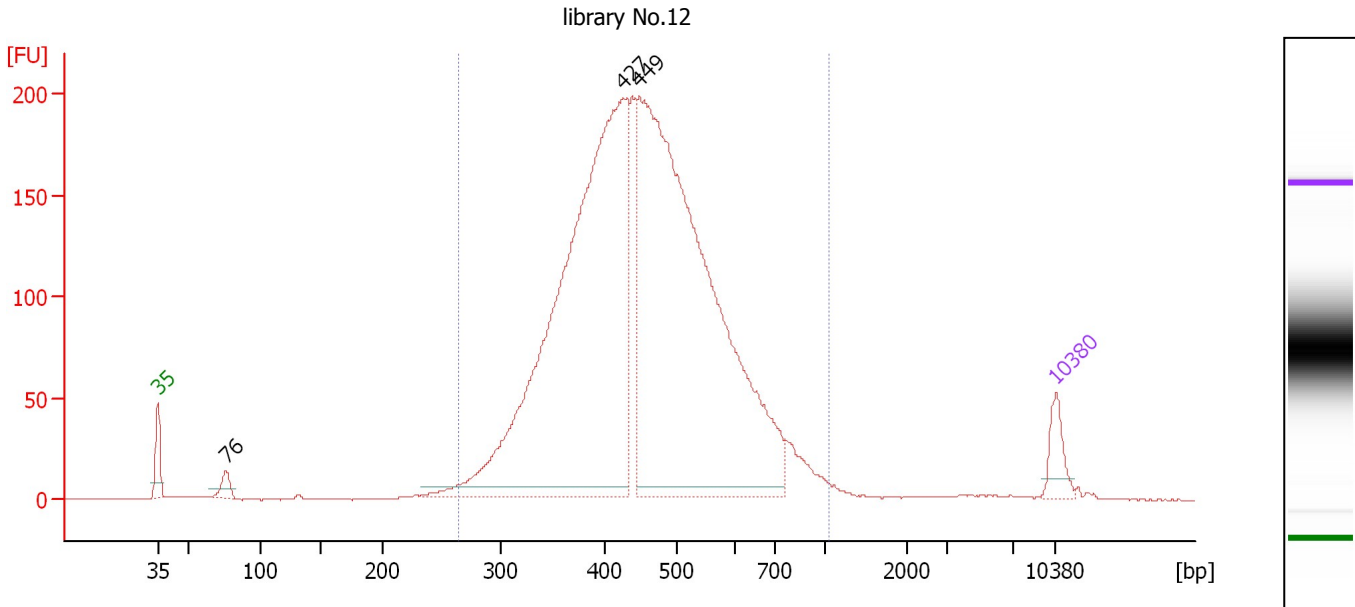
Peak table for Ladder

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\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : library No.12

Number of peaks found: 3 Corr. Area 1: 3,374.3
 Noise: 0.2

Peak table for sample 1 : library No.12

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	76	61.01	1,216.6	
3	427	2,892.29	10,265.7	
4	449	3,044.05	10,281.6	
5	10,380	75.00	10.9	Upper Marker

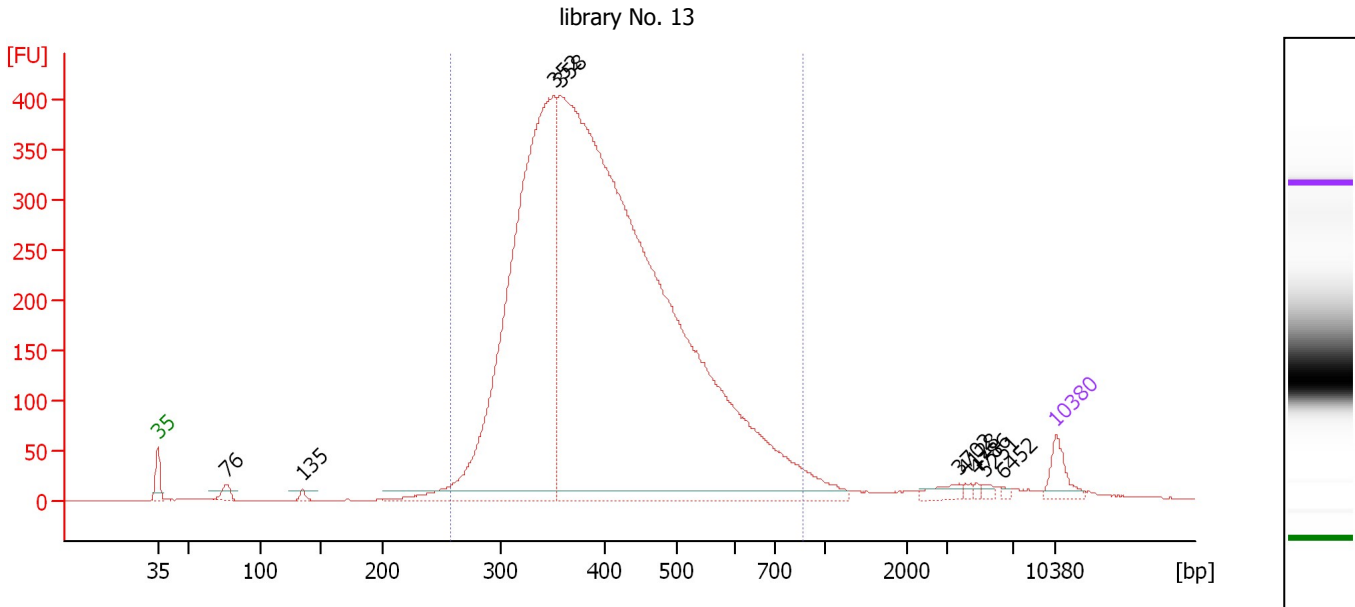
Region table for sample 1 : library No.12

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
266	1,061	465	22,148.1	6,365.01	3,374.3	96	23.9	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 2 : library No. 13

Height Threshold [FU] : 10

Overall Results for sample 2 : library No. 13

Number of peaks found: 9 Corr. Area 1: 7,022.4
 Noise: 0.2

Peak table for sample 2 : library No. 13

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	76	50.24	995.7	
3	135	23.15	259.9	
4	352	3,176.63	13,667.0	
5	358	7,021.15	29,691.0	
6	3,702	39.49	16.2	
7	4,128	11.46	4.2	
8	4,786	9.37	3.0	
9	5,251	13.28	3.8	
10	6,452	8.51	2.0	
11	10,380	75.00	10.9	Upper Marker

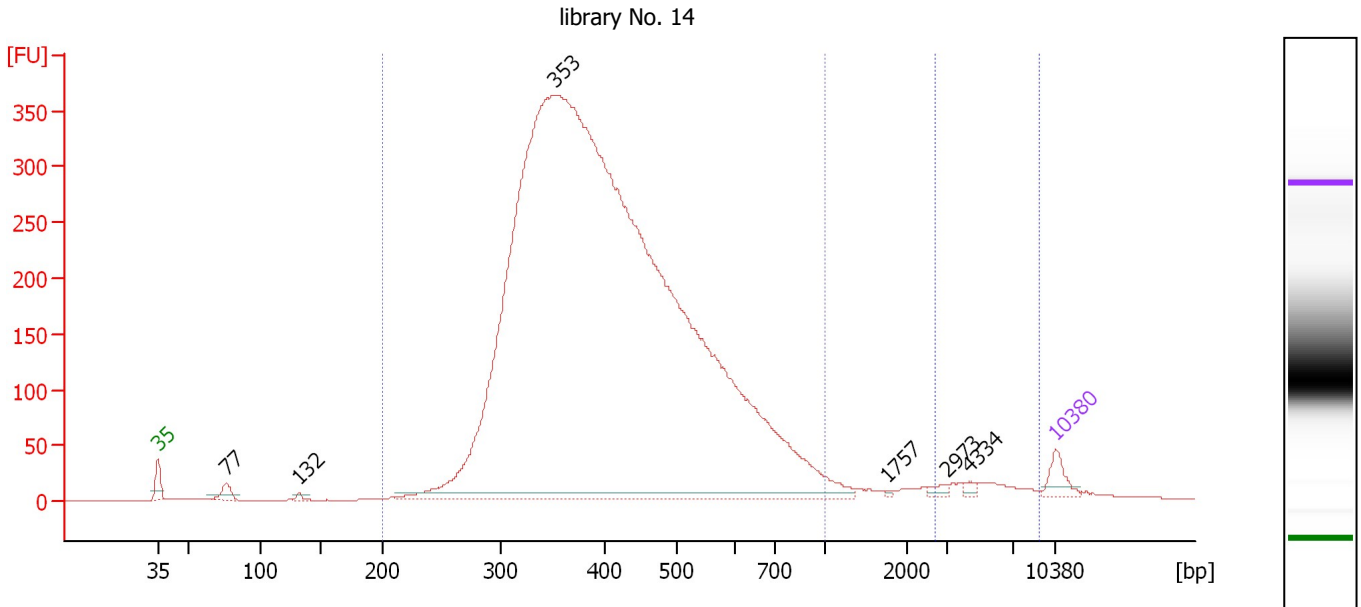
Region table for sample 2 : library No. 13

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
258	865	415	36,651.3	9,424.14	7,022.4	95	23.8	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : library No. 14

Number of peaks found: 6 Corr. Area 1: 6,818.1
 Noise: 0.2 Corr. Area 2: 106.3

Peak table for sample 3 : library No. 14

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	77	76.03	1,502.2	
3	132	19.54	224.4	
4	353	14,813.94	63,502.9	
5	1,757	7.74	6.7	
6	2,973	25.97	13.2	
7	4,334	22.96	8.0	
8	10,380	75.00	10.9	Upper Marker

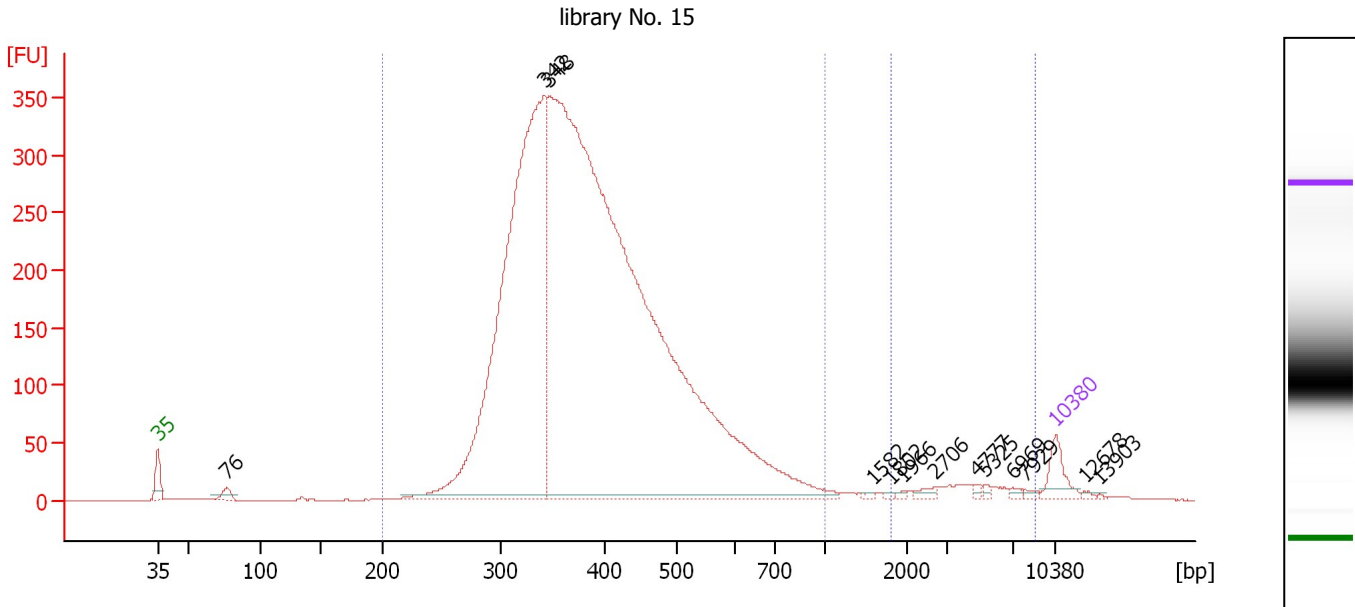
Region table for sample 3 : library No. 14

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	425	53,678.6	13,848.19	6,818.1	96	27.7	Blue
2,686	9,085	5,240	49.6	157.48	106.3	1	33.8	Dark Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : library No. 15

Number of peaks found: 13 Corr. Area 1: 5,776.7
 Noise: 0.2 Corr. Area 2: 117.6

Peak table for sample 4 : library No. 15

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	76	42.28	837.6	
3	342	3,150.66	13,942.8	
4	348	6,908.39	30,082.8	
5	1,582	7.16	6.9	
6	1,802	6.37	5.4	
7	1,966	6.92	5.3	
8	2,706	18.07	10.1	
9	4,777	9.83	3.1	
10	5,325	10.06	2.9	
11	6,969	10.27	2.2	
12	7,929	9.83	1.9	
13	10,380	75.00	10.9	Upper Marker
14	12,678	0.00	0.0	
15	13,903	0.00	0.0	

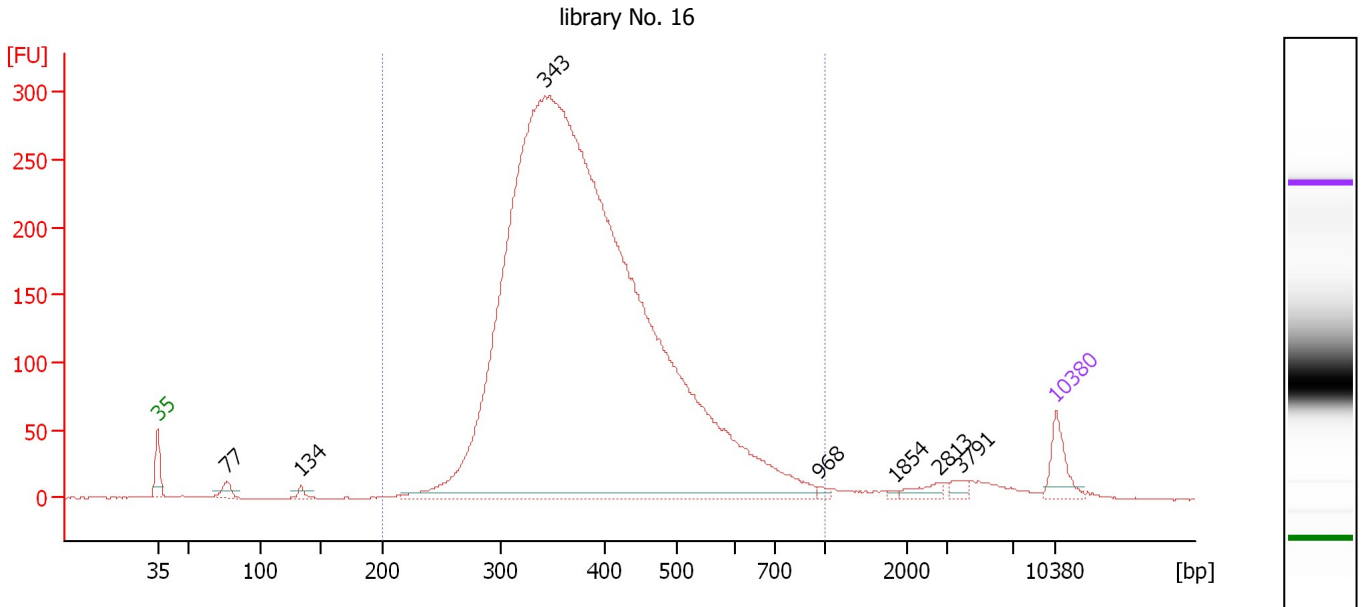
Region table for sample 4 : library No. 15

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	401	38,262.2	9,500.18	5,776.7	96	24.8	Blue
1,815	8,705	4,437	57.0	139.27	117.6	2	43.7	Dark Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : library No. 16

Number of peaks found: 7 Corr. Area 1: 4,803.9
 Noise: 0.2

Peak table for sample 5 : library No. 16

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	77	39.55	782.8	
3	134	20.08	227.5	
4	343	7,571.84	33,456.1	
5	968	10.59	16.6	
6	1,854	5.86	4.8	
7	2,813	30.04	16.2	
8	3,791	20.83	8.3	
9	10,380	75.00	10.9	Upper Marker

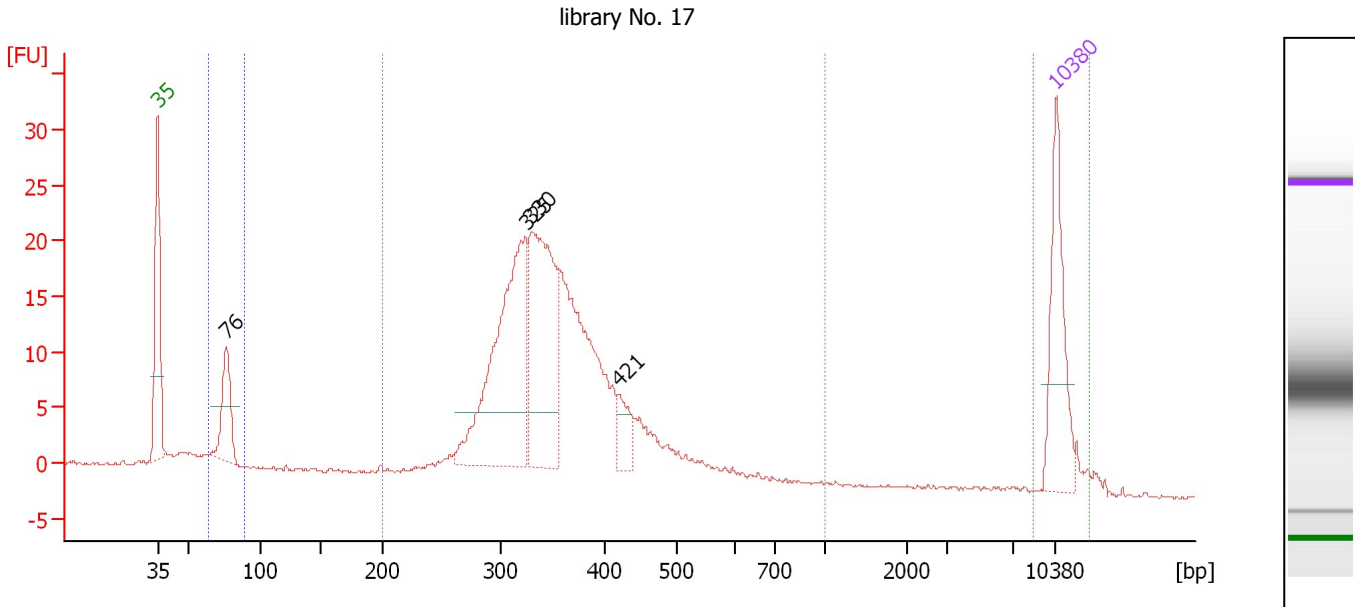
Region table for sample 5 : library No. 16

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	399	28,819.2	7,109.76	4,803.9	96	24.9	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : library No. 17

Number of peaks found: 4 Corr. Area 2: 20.6
 Noise: 0.1 Corr. Area 3: 2.7
 Corr. Area 1: 278.8

Peak table for sample 6 : library No. 17

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	76	75.38	1,496.6	
3	325	264.41	1,232.6	
4	330	208.31	956.6	
5	421	26.76	96.4	
6	10,380	75.00	10.9	Upper Marker

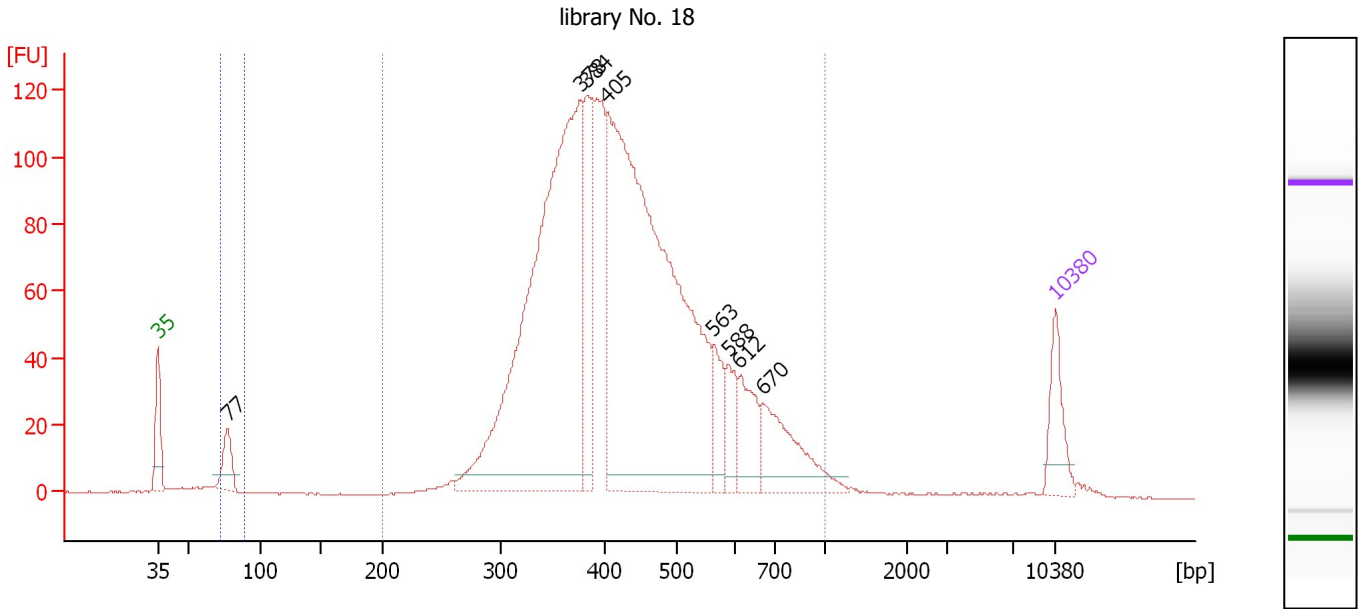
Region table for sample 6 : library No. 17

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
65	88	76	1,813.1	90.43	20.6	7	5.1	Blue
200	1,000	362	3,884.8	892.07	278.8	88	19.9	Dark Blue
8,645	13,101	10,689	0.8	5.65	2.7	1	6.2	Green

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : library No. 18

Number of peaks found: 8 Corr. Area 1: 2,067.2
 Noise: 0.1 Corr. Area 2: 30.3

Peak table for sample 7 : library No. 18

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	77	83.53	1,634.8	
3	378	1,397.61	5,603.0	
4	384	246.16	972.5	
5	405	1,581.82	5,921.2	
6	563	90.71	244.2	
7	588	71.06	183.1	
8	612	108.61	269.0	
9	670	183.73	415.6	
10	10,380	75.00	10.9	Upper Marker

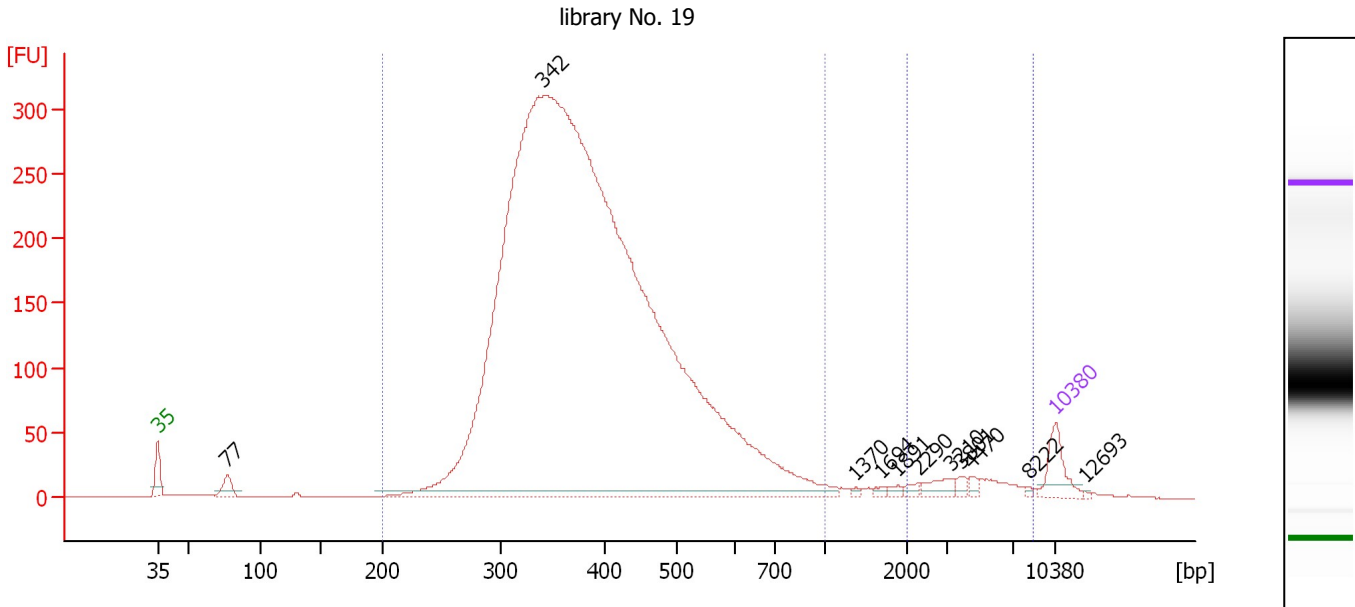
Region table for sample 7 : library No. 18

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
72	89	77	1,702.4	86.62	30.3	1	3.4	Blue
200	1,000	443	15,156.3	4,107.61	2,067.2	96	26.5	Dark Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : library No. 19

Number of peaks found: 11 Corr. Area 1: 5,294.0
 Noise: 0.2 Corr. Area 2: 128.9

Peak table for sample 8 : library No. 19

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	77	61.05	1,197.6	
3	342	8,543.00	37,883.7	
4	1,370	5.71	6.3	
5	1,694	9.65	8.6	
6	1,891	10.75	8.6	
7	2,290	13.09	8.7	
8	3,210	34.14	16.1	
9	3,801	14.55	5.8	
10	4,470	12.87	4.4	
11	8,222	5.47	1.0	
12	10,380	75.00	10.9	Upper Marker
13	12,693	0.00	0.0	

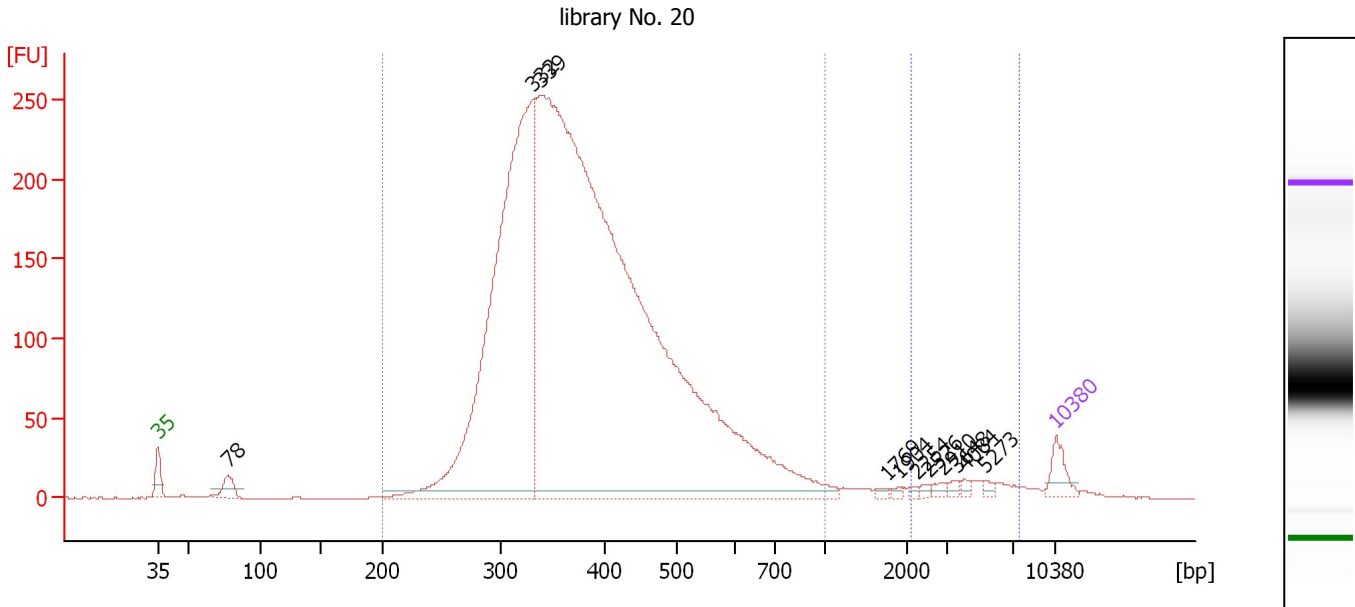
Region table for sample 8 : library No. 19

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	401	32,410.7	8,000.22	5,294.0	95	25.6	Blue
2,004	8,544	4,474	54.4	139.96	128.9	2	40.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : library No. 20

Number of peaks found: 11 Corr. Area 1: 4,256.9
 Noise: 0.1 Corr. Area 2: 84.8

Peak table for sample 9 : library No. 20

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	78	95.28	1,851.4	
3	332	3,355.80	15,318.3	
4	339	8,334.68	37,271.8	
5	1,769	11.97	10.3	
6	1,904	9.51	7.6	
7	2,254	9.47	6.4	
8	2,526	12.61	7.6	
9	2,910	18.14	9.4	
10	3,648	17.13	7.1	
11	4,084	14.50	5.4	
12	5,273	17.65	5.1	
13	10,380	75.00	10.9	Upper Marker

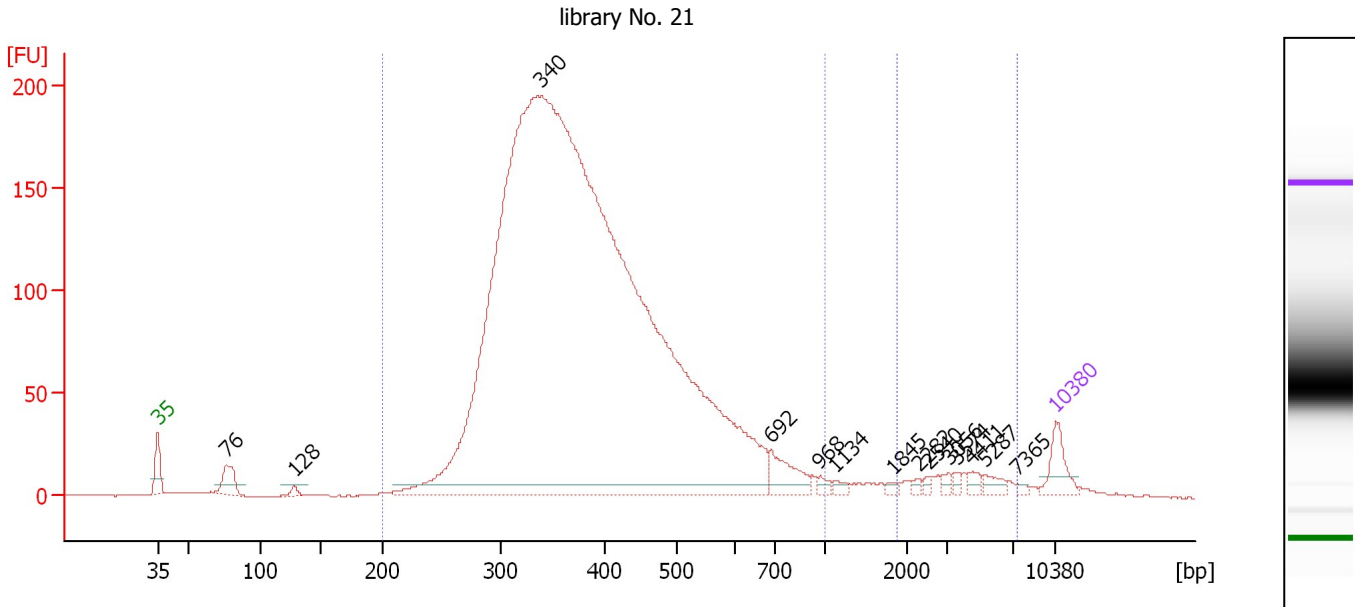
Region table for sample 9 : library No. 20

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	397	44,808.9	10,934.82	4,256.9	95	26.5	Blue
2,085	7,547	4,302	61.3	156.11	84.8	2	36.4	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : library No. 21

Number of peaks found: 14 Corr. Area 1: 3,352.3
 Noise: 0.2 Corr. Area 2: 92.2

Peak table for sample 10 : library No. 21

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	76	116.23	2,303.7	
3	128	21.13	249.8	
4	340	9,078.66	40,492.7	
5	692	125.96	275.8	
6	968	20.35	31.8	
7	1,134	16.98	22.7	
8	1,845	12.53	10.3	
9	2,282	10.40	6.9	
10	2,540	10.27	6.1	
11	3,056	13.79	6.8	
12	3,574	14.62	6.2	
13	4,411	20.24	7.0	
14	5,287	29.37	8.4	
15	7,365	8.17	1.7	
16	10,380	75.00	10.9	Upper Marker

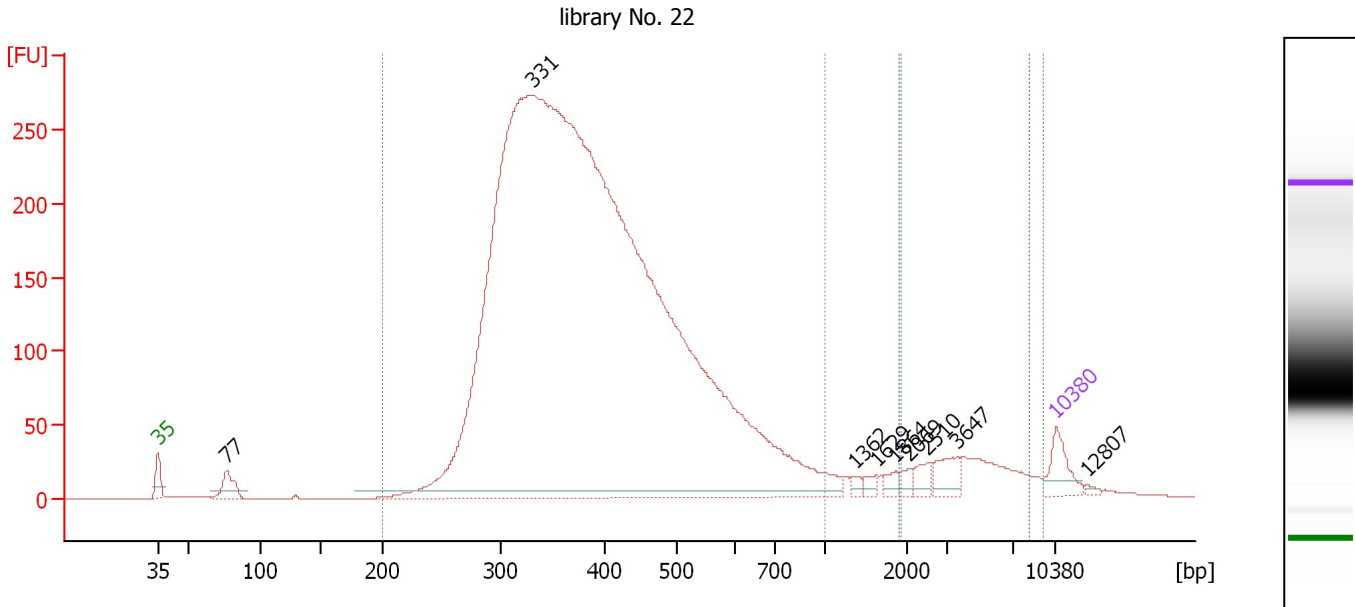
Region table for sample 10 : library No. 21

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	399	36,118.2	8,807.68	3,352.3	94	27.3	Blue
1,872	7,288	3,939	76.2	173.37	92.2	3	39.4	Dark Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
 Modified: 8/9/2013 2:50:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : library No. 22

Number of peaks found: 9 Corr. Area 2: 231.4
 Noise: 0.2 Corr. Area 3: 243.2
 Corr. Area 1: 5,182.1

Peak table for sample 11 : library No. 22

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	77	98.42	1,944.4	
3	331	9,992.12	45,725.2	
4	1,362	16.88	18.8	
5	1,629	18.99	17.7	
6	1,864	24.84	20.2	
7	2,069	22.54	16.5	
8	2,510	35.82	21.6	
9	3,647	65.33	27.1	
10	10,380	75.00	10.9	Upper Marker
11	12,807	0.00	0.0	

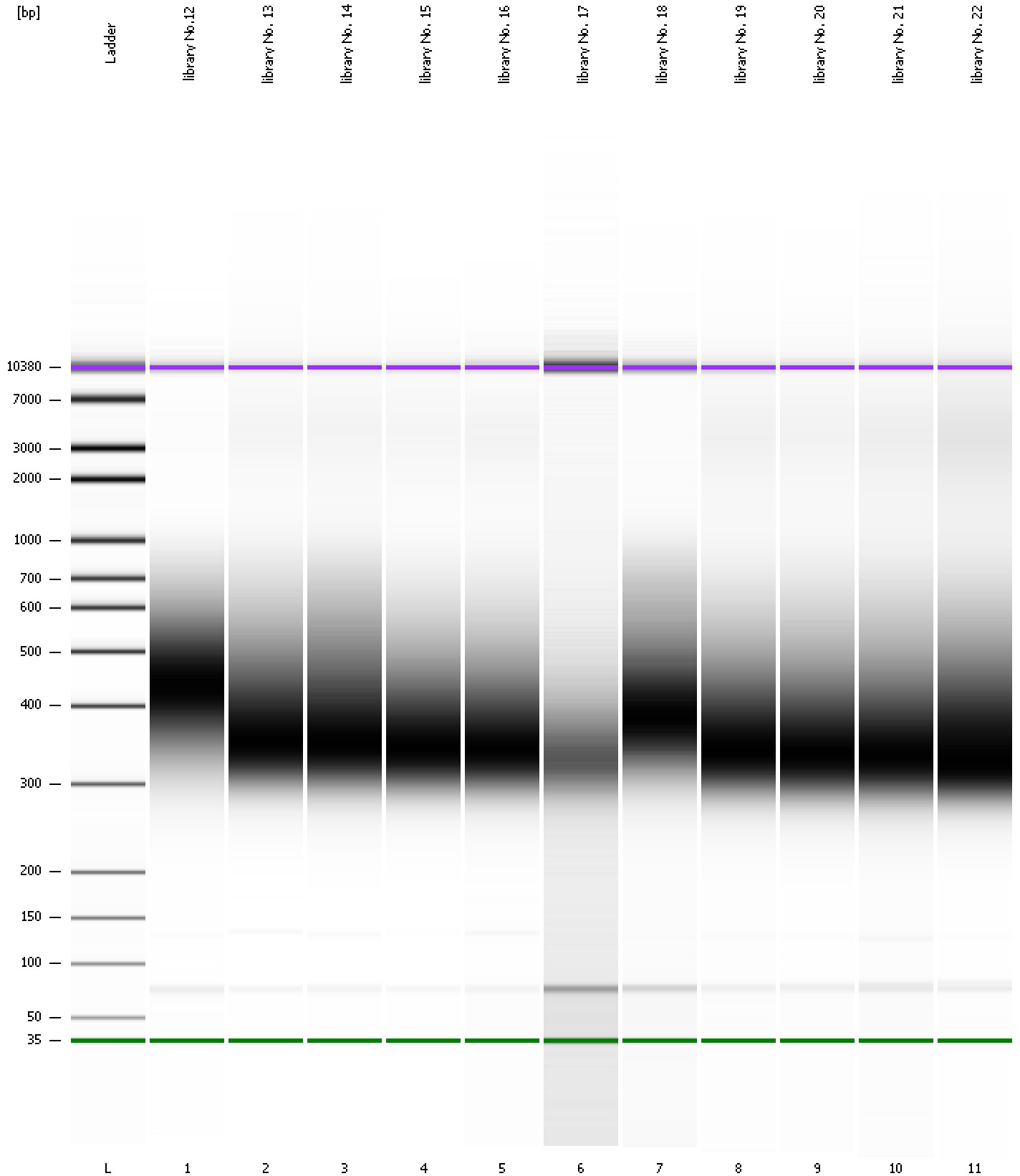
Region table for sample 11 : library No. 22

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	406	37,231.4	9,167.97	5,182.1	92	28.2	Blue
1,896	8,228	4,209	123.7	293.71	231.4	4	42.3	Dark Blue
1,927	9,406	4,575	123.2	308.41	243.2	4	45.3	Green

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad

Created: 8/9/2013 2:07:50 PM
Modified: 8/9/2013 2:50:37 PM

Gel Image



Assay Class: High Sensitivity DNA Assay Created: 8/9/2013 2:07:50 PM
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad Modified: 8/9/2013 2:50:37 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		8/9/2013 2:49:12 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-08-09\2013-08-09_007.xad)		Instrument	Run		8/9/2013 2:07:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		8/9/2013 2:07:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		8/9/2013 2:07:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		8/9/2013 2:07:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		8/9/2013 2:07:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		8/9/2013 2:07:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		8/9/2013 2:07:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1