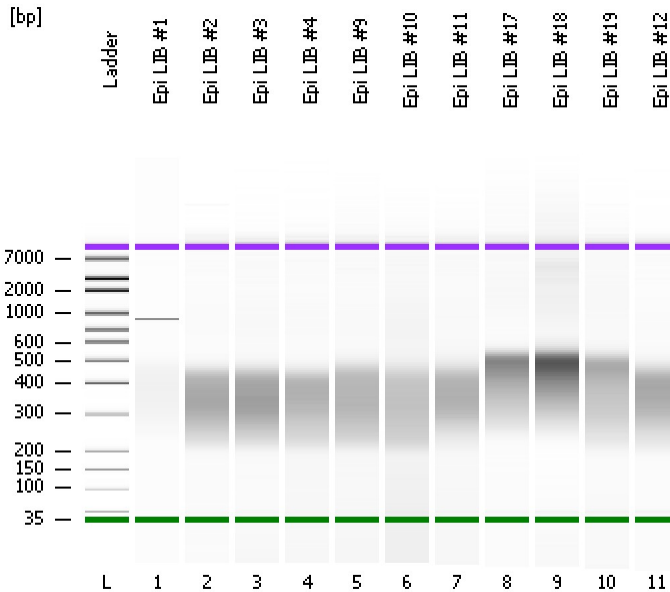


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
Modified: 10/12/2016 11:36:56 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

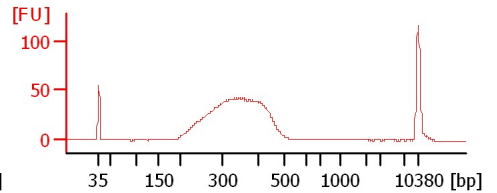
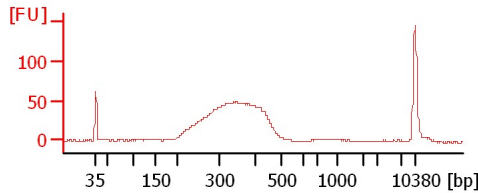
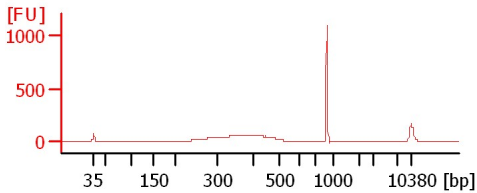
Chip Information:

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

**Epi LIB #1**

**Epi LIB #2**

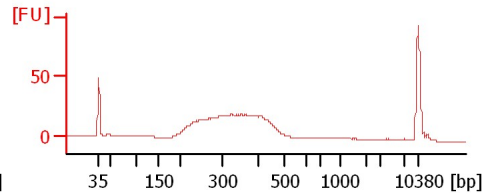
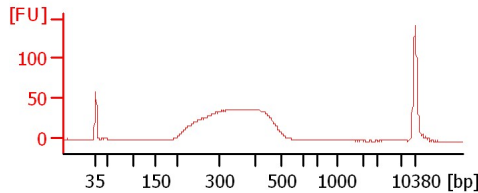
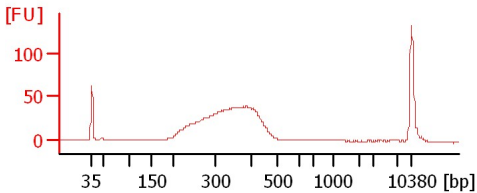
**Epi LIB #3**



**Epi LIB #4**

**Epi LIB #9**

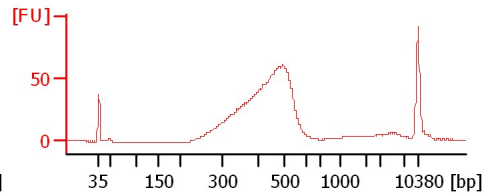
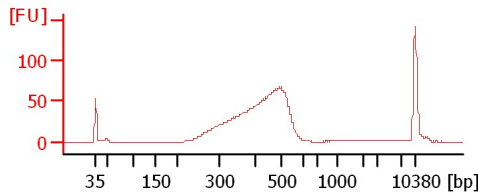
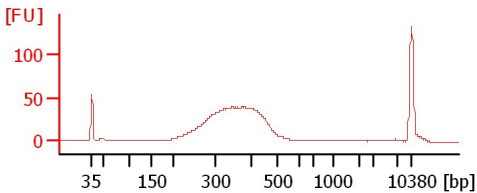
**Epi LIB #10**



**Epi LIB #11**

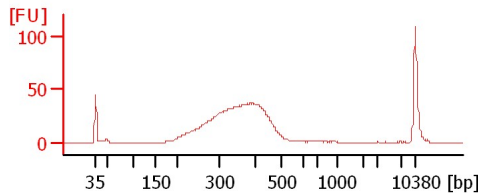
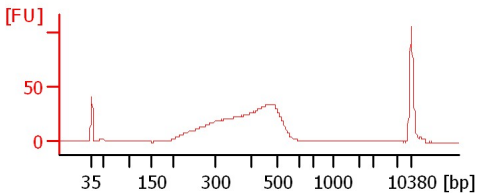
**Epi LIB #17**

**Epi LIB #18**



**Epi LIB #19**

**Epi LIB #12**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Epi LIB #1		<input type="checkbox"/>				
Epi LIB #2		<input type="checkbox"/>				
Epi LIB #3		<input type="checkbox"/>				
Epi LIB #4		<input type="checkbox"/>				
Epi LIB #9		<input type="checkbox"/>				
Epi LIB #10		<input type="checkbox"/>				
Epi LIB #11		<input type="checkbox"/>				
Epi LIB #17		<input type="checkbox"/>				
Epi LIB #18		<input type="checkbox"/>				
Epi LIB #19		<input type="checkbox"/>				
Epi LIB #12		<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\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
Modified: 10/12/2016 11:36:56 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

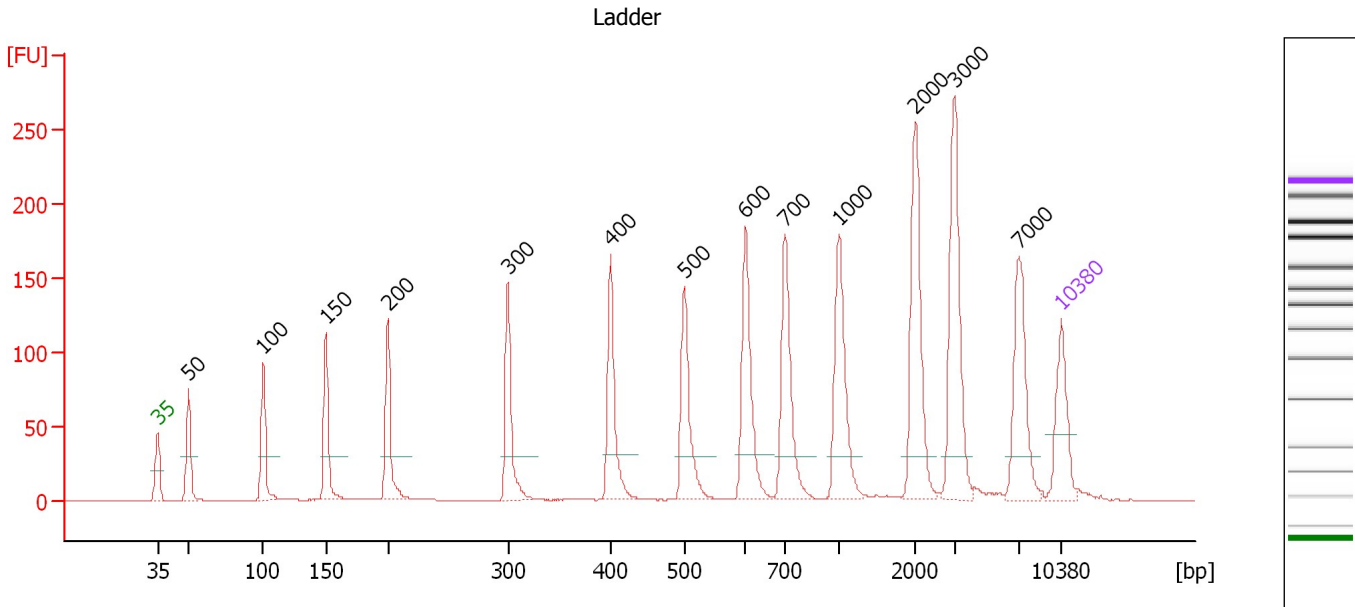
**Ladder**

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\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

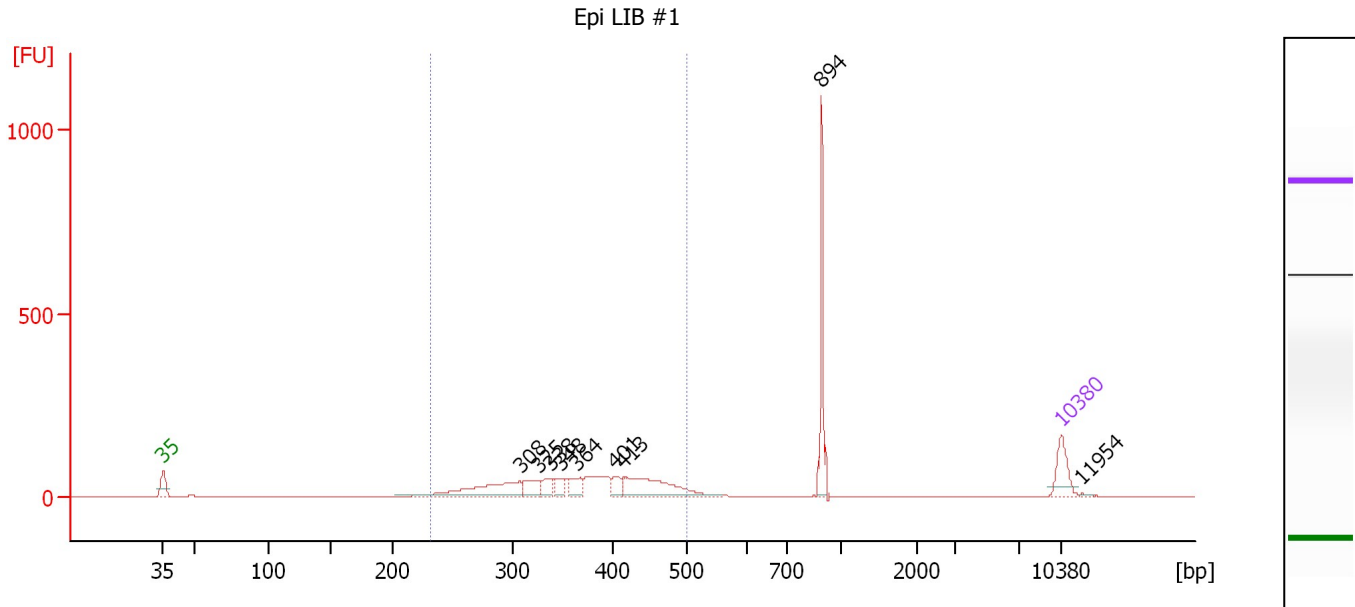
**Peak table for Ladder**

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	45.42
3	100	150.00	2,272.7	Ladder Peak	51.17
4	150	150.00	1,515.2	Ladder Peak	56.05
5	200	150.00	1,136.4	Ladder Peak	60.84
6	300	150.00	757.6	Ladder Peak	70.17
7	400	150.00	568.2	Ladder Peak	78.10
8	500	150.00	454.5	Ladder Peak	83.80
9	600	150.00	378.8	Ladder Peak	88.54
10	700	150.00	324.7	Ladder Peak	91.63
11	1,000	150.00	227.3	Ladder Peak	95.79
12	2,000	150.00	113.6	Ladder Peak	101.74
13	3,000	150.00	75.8	Ladder Peak	104.73
14	7,000	150.00	32.5	Ladder Peak	109.76
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : Epi LIB #1**

Number of peaks found: 9                      Corr. Area 1: 1,035.4  
 Noise: 0.2

**Peak table for sample 1 : Epi LIB #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	308	206.61	1,015.5		70.82
3	325	65.23	303.7		72.19
4	338	46.76	209.4		73.21
5	348	35.15	152.9		73.99
6	364	52.47	218.3		75.25
7	401	40.15	151.6		78.17
8	413	205.84	754.8		78.85
9	894	187.26	317.4		94.32
10	10,380	75.00	10.9	Upper Marker	113.00
11	11,954	0.00	0.0		114.51

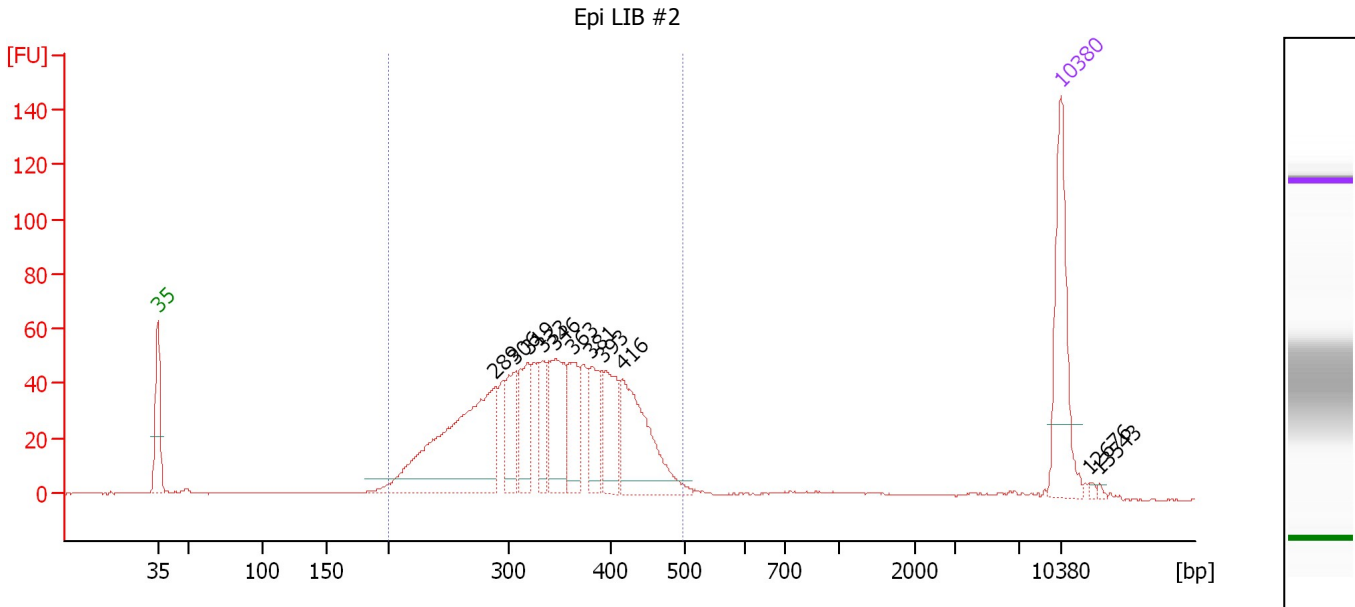
**Region table for sample 1 : Epi LIB #1**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
233	499	367	1,035.4	3,486.3	804.67	73	17.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Epi LIB #2**

Number of peaks found: 11                      Corr. Area 1: 1,043.7  
 Noise: 0.2

**Peak table for sample 2 : Epi LIB #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	289	240.45	1,260.2		69.15
3	306	50.51	250.4		70.62
4	319	57.62	273.5		71.69
5	333	36.17	164.4		72.82
6	346	78.49	343.3		73.84
7	363	51.15	213.5		75.16
8	381	51.93	206.6		76.58
9	393	59.24	228.6		77.51
10	416	111.33	405.2		79.03
11	10,380	75.00	10.9	Upper Marker	113.00
12	12,676	0.00	0.0		115.20
13	13,543	0.00	0.0		116.03

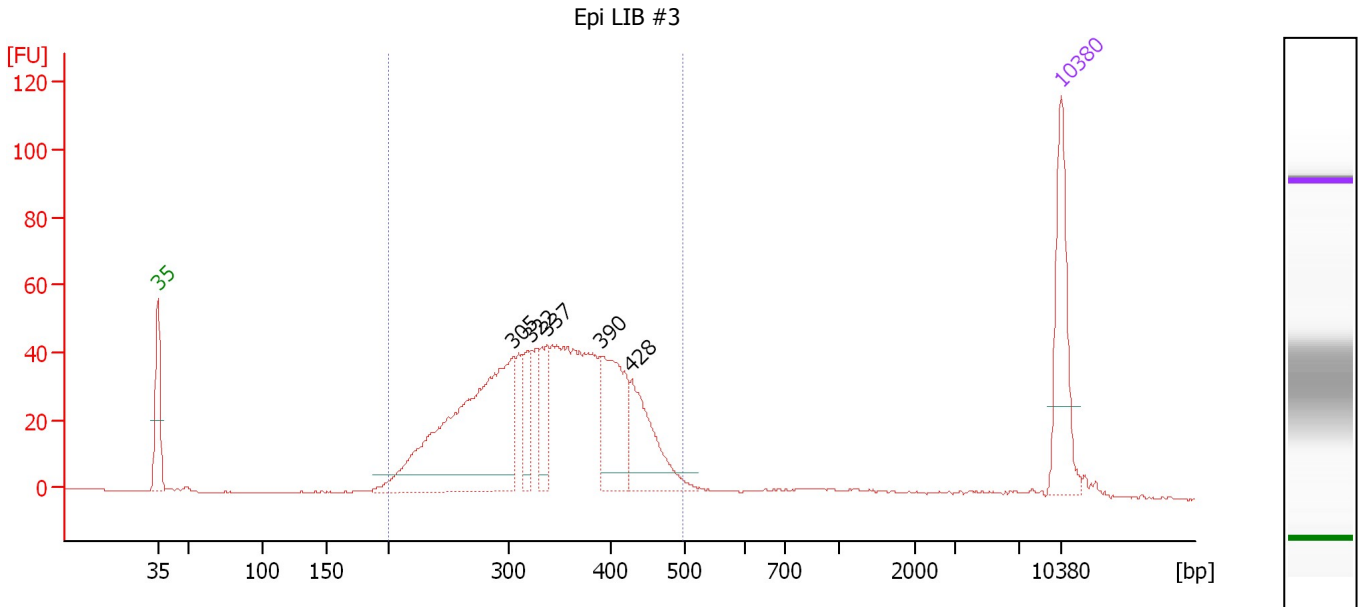
**Region table for sample 2 : Epi LIB #2**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	498	340	1,043.7	4,175.5	888.62	92	19.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Epi LIB #3**

Number of peaks found: 5                      Corr. Area 1: 907.3  
 Noise: 0.2

**Peak table for sample 3 : Epi LIB #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	305	339.48	1,685.7		70.58
3	322	46.00	216.5		71.91
4	337	51.94	233.2		73.14
5	390	109.41	424.6		77.33
6	428	88.19	312.1		79.70
7	10,380	75.00	10.9	Upper Marker	113.00

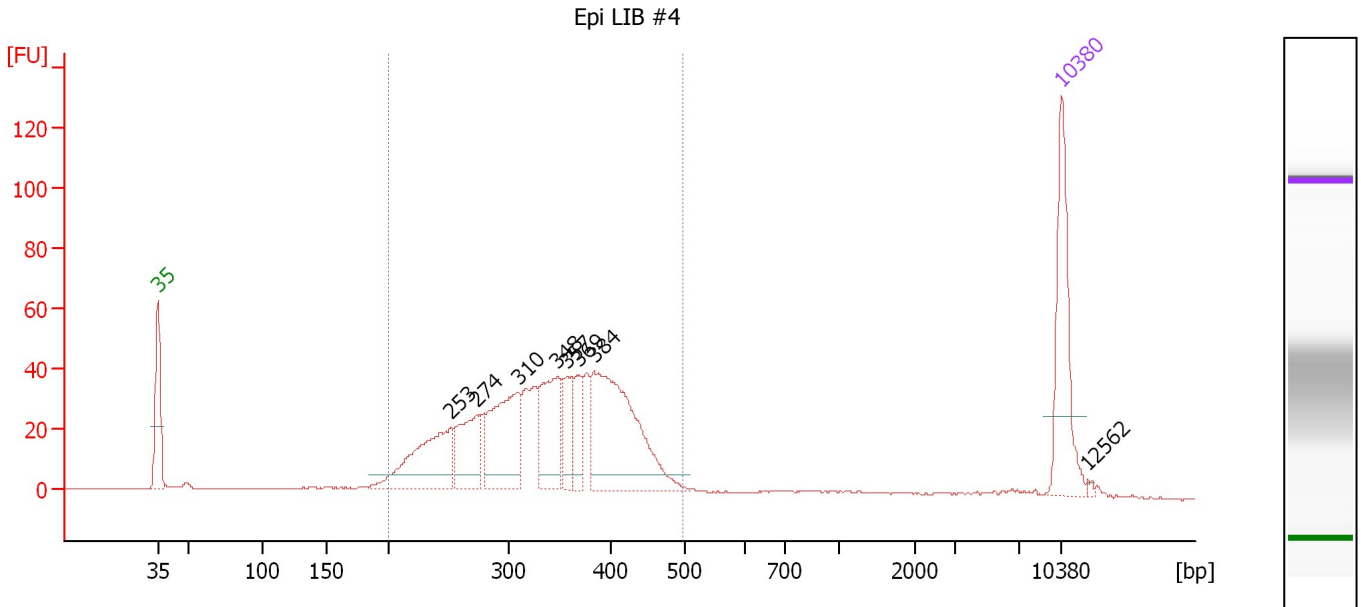
**Region table for sample 3 : Epi LIB #3**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	497	340	907.3	4,519.4	962.99	95	19.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : Epi LIB #4**

Number of peaks found: 8                      Corr. Area 1: 810.9  
 Noise: 0.1

**Peak table for sample 4 : Epi LIB #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	253	107.75	646.1		65.75
3	274	66.07	365.3		67.74
4	310	109.02	533.5		70.93
5	348	75.56	329.1		73.97
6	357	31.64	134.1		74.71
7	369	35.43	145.4		75.66
8	384	181.38	716.2		76.81
9	10,380	75.00	10.9	Upper Marker	113.00
10	12,562	0.00	0.0		115.09

**Region table for sample 4 : Epi LIB #4**

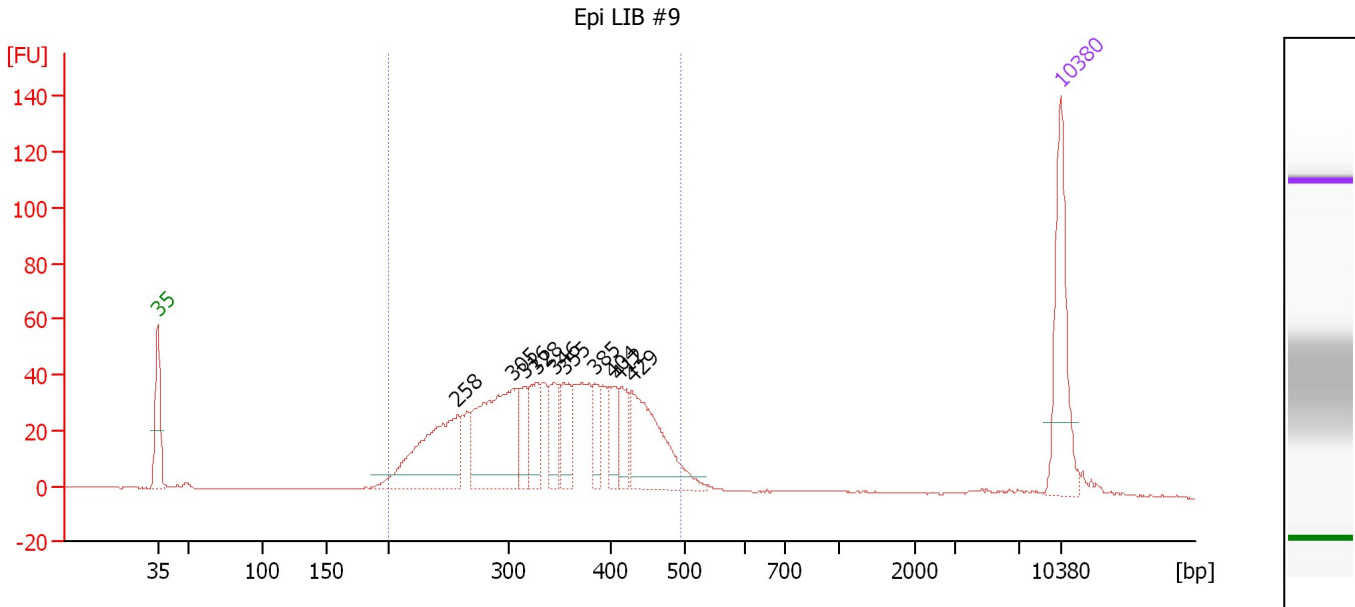
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	499	337	810.9	3,576.6	753.29	92	19.4



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : Epi LIB #9**

Number of peaks found: 10                      Corr. Area 1: 924.2  
 Noise: 0.1

**Peak table for sample 5 : Epi LIB #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	258	141.94	833.5		66.25
3	305	159.19	791.3		70.55
4	316	32.66	156.8		71.40
5	328	41.94	193.6		72.40
6	346	36.15	158.4		73.80
7	355	39.74	169.8		74.50
8	385	26.72	105.2		76.90
9	404	27.20	101.9		78.35
10	412	26.55	97.6		78.80
11	429	107.28	378.9		79.75
12	10,380	75.00	10.9	Upper Marker	113.00

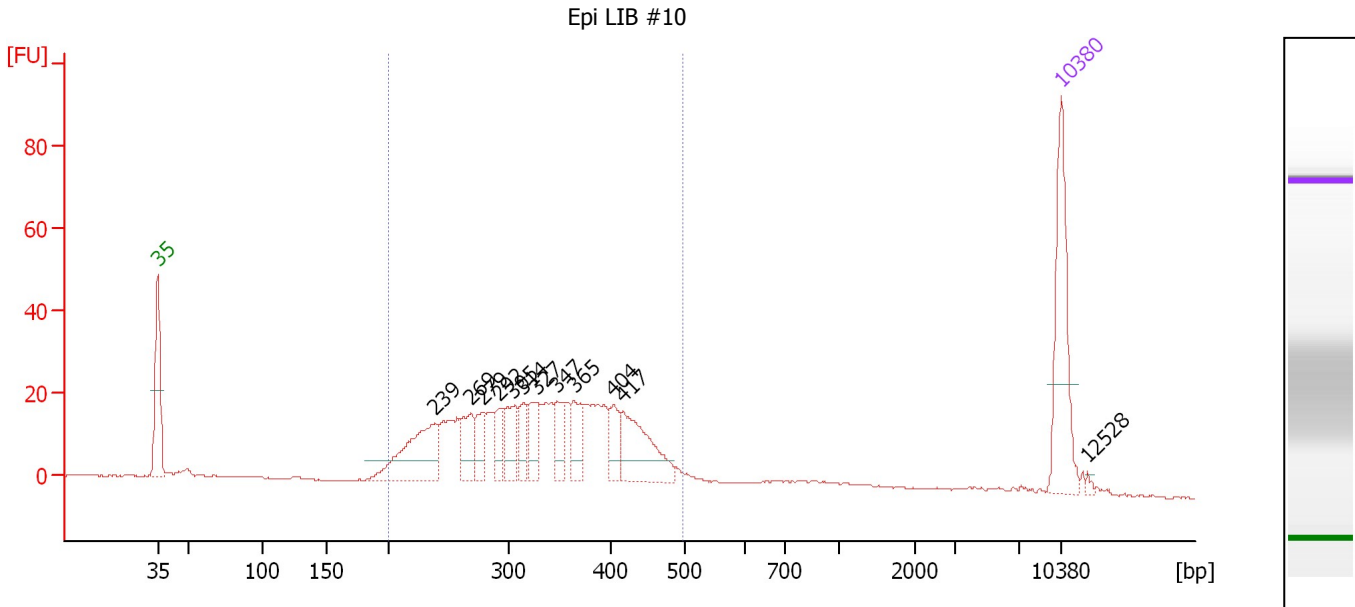
**Region table for sample 5 : Epi LIB #9**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	497	343	924.2	3,891.4	825.85	93	20.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : Epi LIB #10**

Number of peaks found: 12                      Corr. Area 1: 487.6  
 Noise: 0.2

**Peak table for sample 6 : Epi LIB #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	239	94.13	596.3		64.49
3	269	33.38	188.2		67.25
4	279	27.18	147.6		68.21
5	292	22.66	117.6		69.41
6	305	35.20	174.8		70.57
7	314	23.22	112.1		71.27
8	327	28.28	130.9		72.33
9	347	25.44	110.9		73.93
10	365	32.50	135.1		75.29
11	404	23.79	89.1		78.35
12	417	68.74	249.9		79.05
13	10,380	75.00	10.9	Upper Marker	113.00
14	12,528	0.00	0.0		115.06

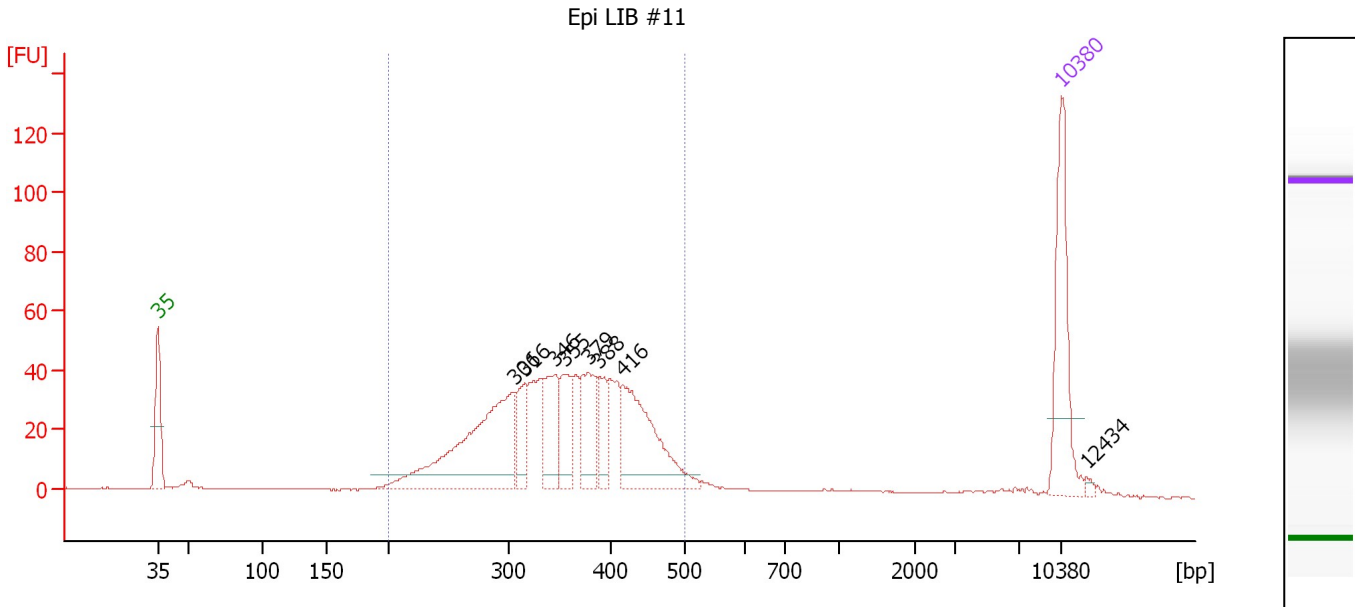
**Region table for sample 6 : Epi LIB #10**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	497	333	487.6	3,184.1	654.83	88	21.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Epi LIB #11**

Number of peaks found: 8                      Corr. Area 1: 791.4  
 Noise: 0.2

**Peak table for sample 7 : Epi LIB #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	306	197.31	978.5		70.61
3	316	40.23	192.7		71.46
4	346	59.91	262.6		73.79
5	355	43.38	185.4		74.49
6	379	54.28	217.1		76.41
7	388	33.04	128.9		77.17
8	416	112.66	409.9		79.03
9	10,380	75.00	10.9	Upper Marker	113.00
10	12,434	0.00	0.0		114.97

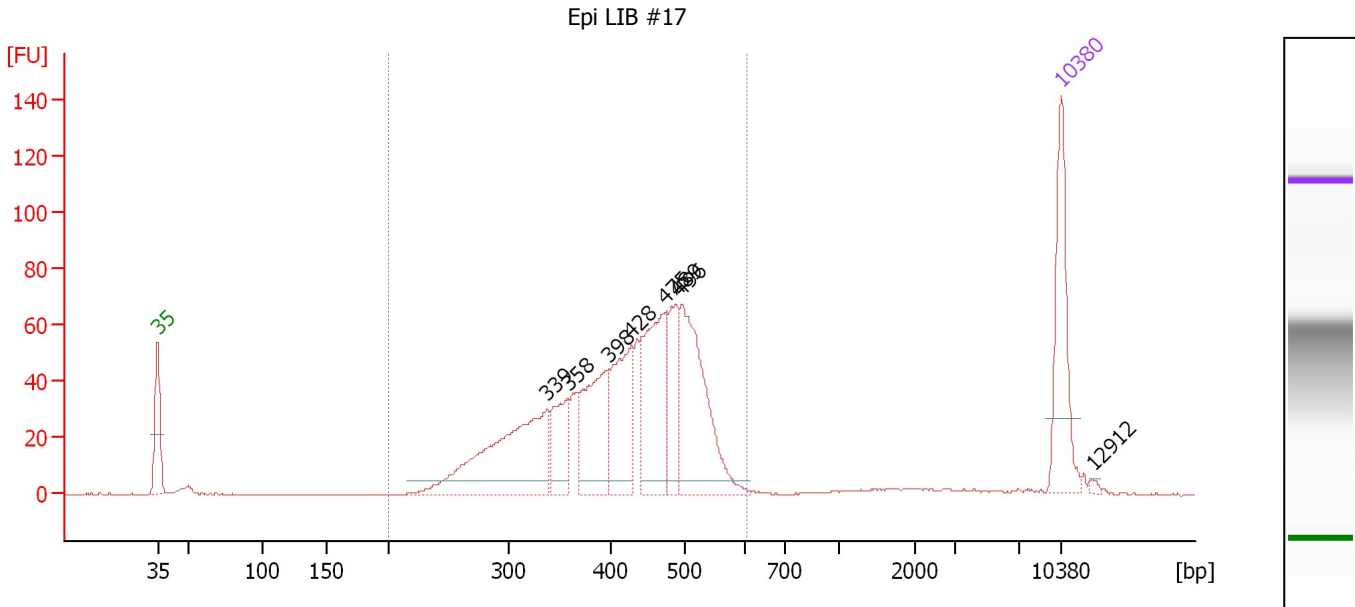
**Region table for sample 7 : Epi LIB #11**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	500	352	791.4	3,228.4	713.20	89	18.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : Epi LIB #17**

Number of peaks found: 8                      Corr. Area 1: 1,027.9  
 Noise: 0.1

**Peak table for sample 8 : Epi LIB #17**

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	339	189.34	847.4		73.22
3	358	54.28	229.5		74.79
4	398	102.08	388.8		77.92
5	428	96.46	341.5		79.69
6	475	132.13	421.5		82.37
7	489	61.44	190.3		83.18
8	496	159.44	486.8		83.58
9	10,380	75.00	10.9	Upper Marker	113.00
10	12,912	0.00	0.0		115.43

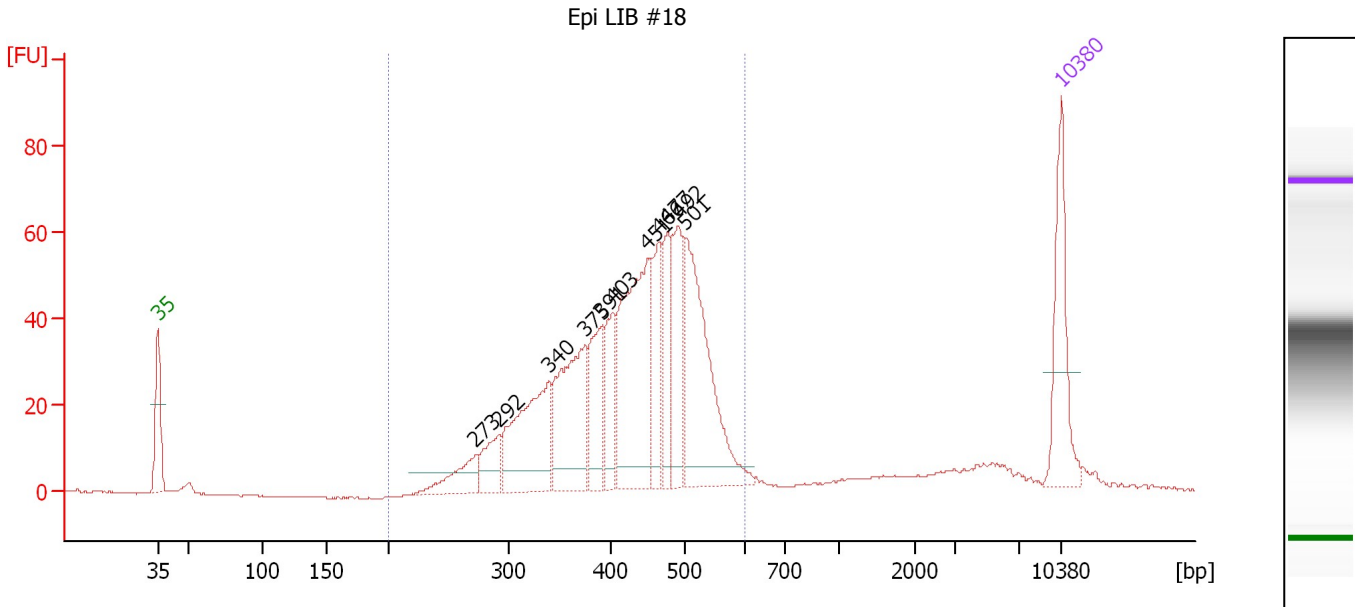
**Region table for sample 8 : Epi LIB #17**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	603	417	1,027.9	3,523.4	911.98	91	19.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : Epi LIB #18**

Number of peaks found: 11                      Corr. Area 1: 888.4  
 Noise: 0.1

**Peak table for sample 9 : Epi LIB #18**

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	273	48.48	269.1		67.65
3	292	42.25	219.3		69.41
4	340	148.30	661.8		73.30
5	375	149.00	601.7		76.13
6	391	70.22	272.0		77.39
7	403	61.85	232.7		78.25
8	451	209.78	705.5		80.98
9	466	68.44	222.3		81.89
10	477	66.71	211.9		82.49
11	492	86.38	265.9		83.35
12	501	204.02	616.8		83.86
13	10,380	75.00	10.9	Upper Marker	113.00

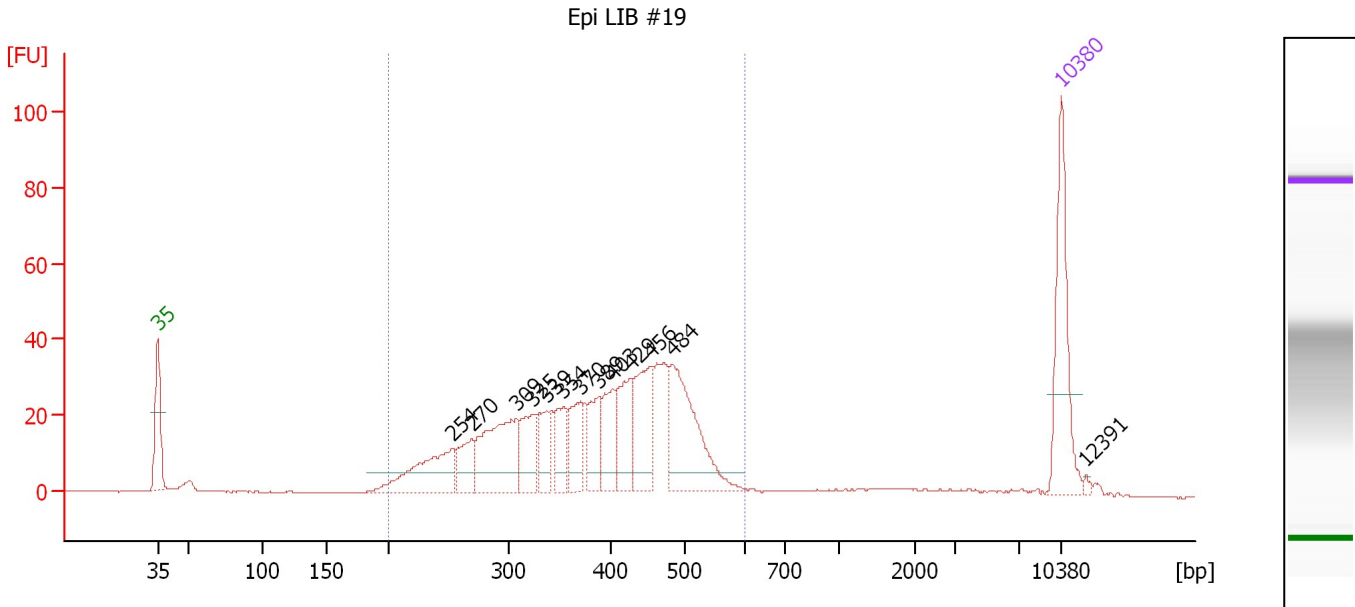
**Region table for sample 9 : Epi LIB #18**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	599	426	888.4	4,615.5	1,230.22	86	18.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : Epi LIB #19**

Number of peaks found: 13                      Corr. Area 1: 671.4  
 Noise: 0.2

**Peak table for sample 10 : Epi LIB #19**

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	254	79.72	475.6		65.88
3	270	33.40	187.6		67.35
4	309	106.19	521.4		70.85
5	325	44.12	206.0		72.12
6	339	34.26	153.3		73.23
7	354	36.37	155.7		74.45
8	370	44.17	180.9		75.72
9	389	35.33	137.8		77.19
10	403	43.10	162.1		78.25
11	429	50.32	177.9		79.72
12	456	70.63	234.6		81.30
13	484	113.86	356.7		82.87
14	10,380	75.00	10.9	Upper Marker	113.00
15	12,391	0.00	0.0		114.93

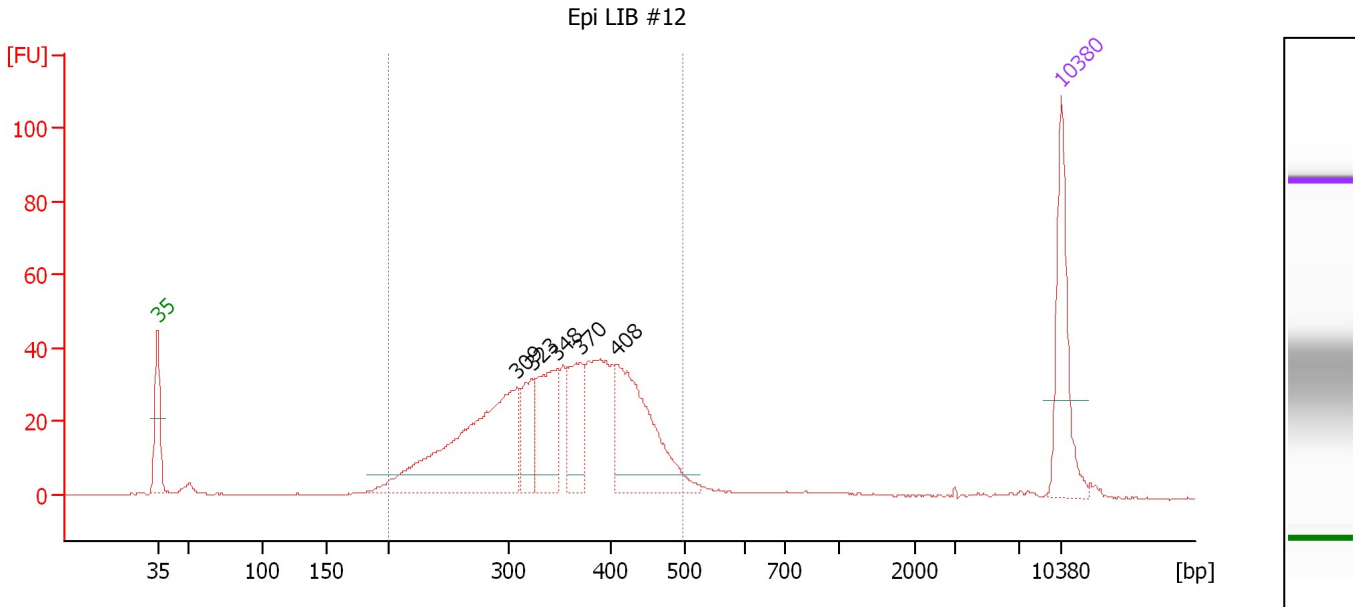
**Region table for sample 10 : Epi LIB #19**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	601	387	671.4	3,563.4	835.78	90	22.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : Epi LIB #12**

Number of peaks found: 5                      Corr. Area 1: 716.8  
 Noise: 0.1

**Peak table for sample 11 : Epi LIB #12**

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	270.84	1,327.7		70.89
3	323	51.39	240.9		72.01
4	348	94.27	410.1		74.00
5	370	69.70	285.3		75.73
6	408	160.86	597.8		78.54
7	10,380	75.00	10.9	Upper Marker	113.00

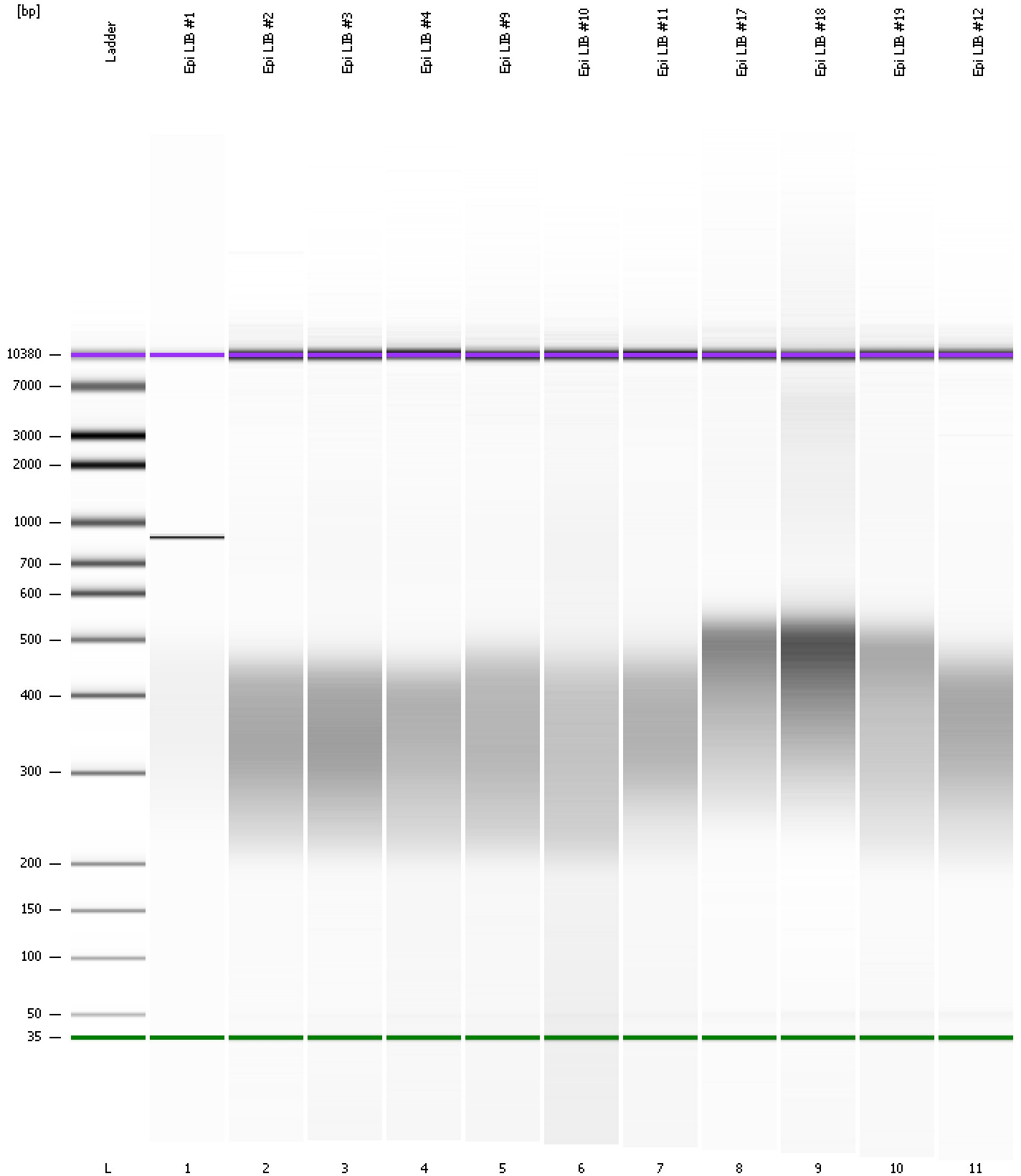
**Region table for sample 11 : Epi LIB #12**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	497	350	716.8	4,008.2	874.94	91	19.2

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
Modified: 10/12/2016 11:36:56 AM

**Gel Image**





Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-12\2016-10-12\_001.xad

Created: 10/12/2016 10:13:10 AM  
 Modified: 10/12/2016 11:36:56 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		10/12/2016 10:54:28 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\2016-10-12\2016-10-12_001.xad)		Instrument	Run		10/12/2016 10:13:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		10/12/2016 10:13:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		10/12/2016 10:13:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		10/12/2016 10:13:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		10/12/2016 10:13:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		10/12/2016 10:13:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		10/12/2016 10:13:15 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1