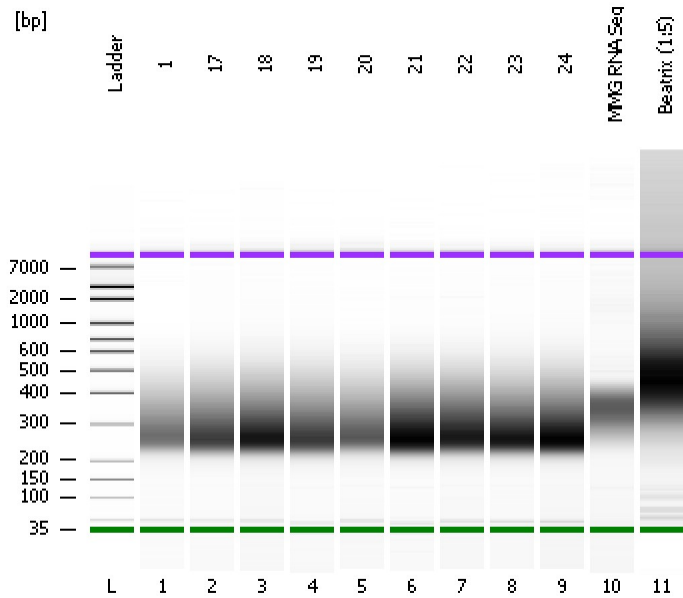


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
Modified: 5/25/2016 5:34:40 PM

### Electrophoresis File Run Summary



#### Instrument Information:

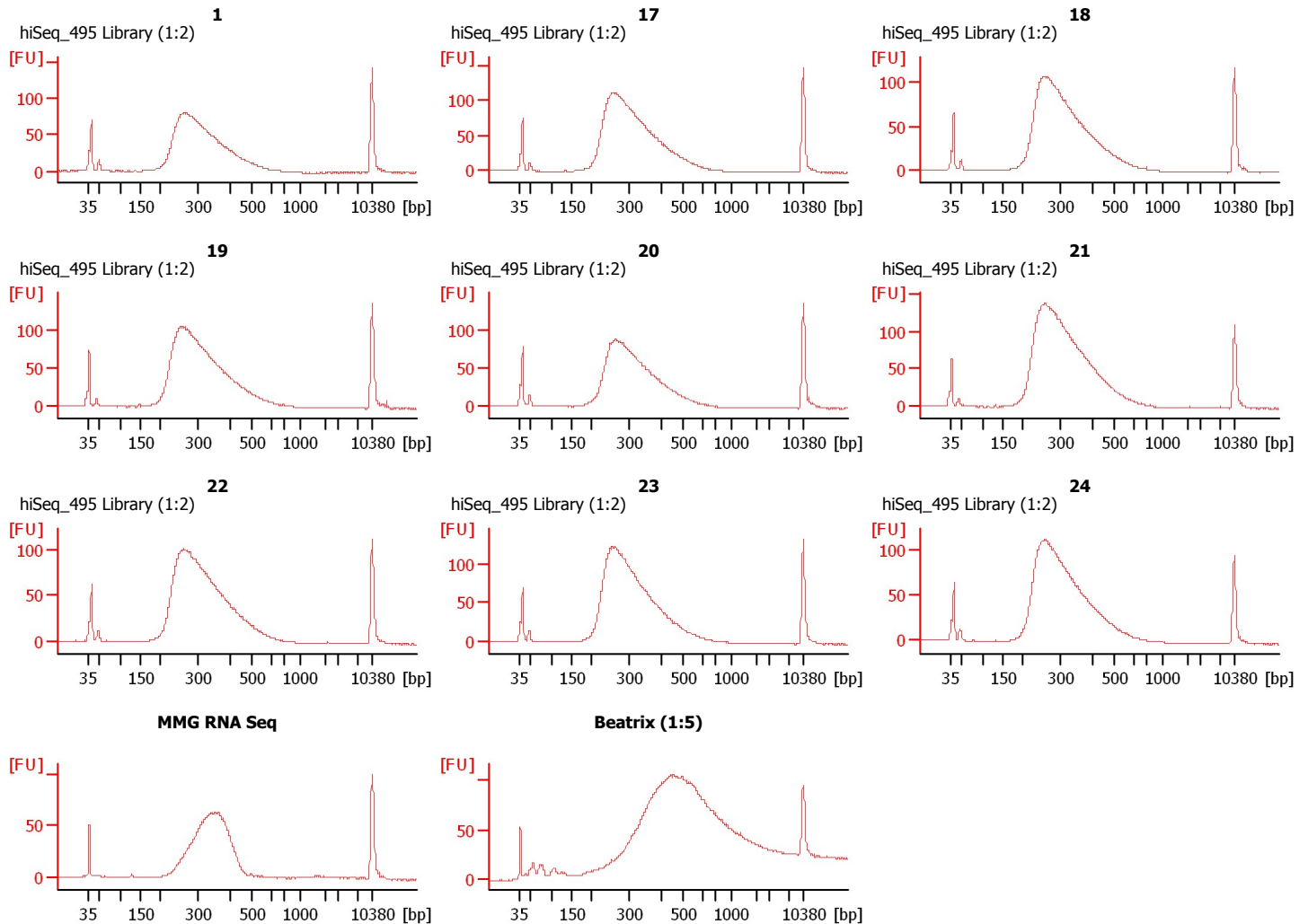
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

#### 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:



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
Modified: 5/25/2016 5:34:40 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
1	hiSeq_495 Library (1:2)	<input type="checkbox"/>	✓			
17	hiSeq_495 Library (1:2)	<input type="checkbox"/>	✓			
18	hiSeq_495 Library (1:2)	<input type="checkbox"/>	✓			
19	hiSeq_495 Library (1:2)	<input type="checkbox"/>	✓			
20	hiSeq_495 Library (1:2)	<input type="checkbox"/>	✓			
21	hiSeq_495 Library (1:2)	<input type="checkbox"/>	✓			
22	hiSeq_495 Library (1:2)	<input type="checkbox"/>	✓			
23	hiSeq_495 Library (1:2)	<input type="checkbox"/>	✓			
24	hiSeq_495 Library (1:2)	<input type="checkbox"/>	✓			
MMG RNA Seq		<input type="checkbox"/>	✓			
Beatrix (1:5)		<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\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
Modified: 5/25/2016 5:34:40 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

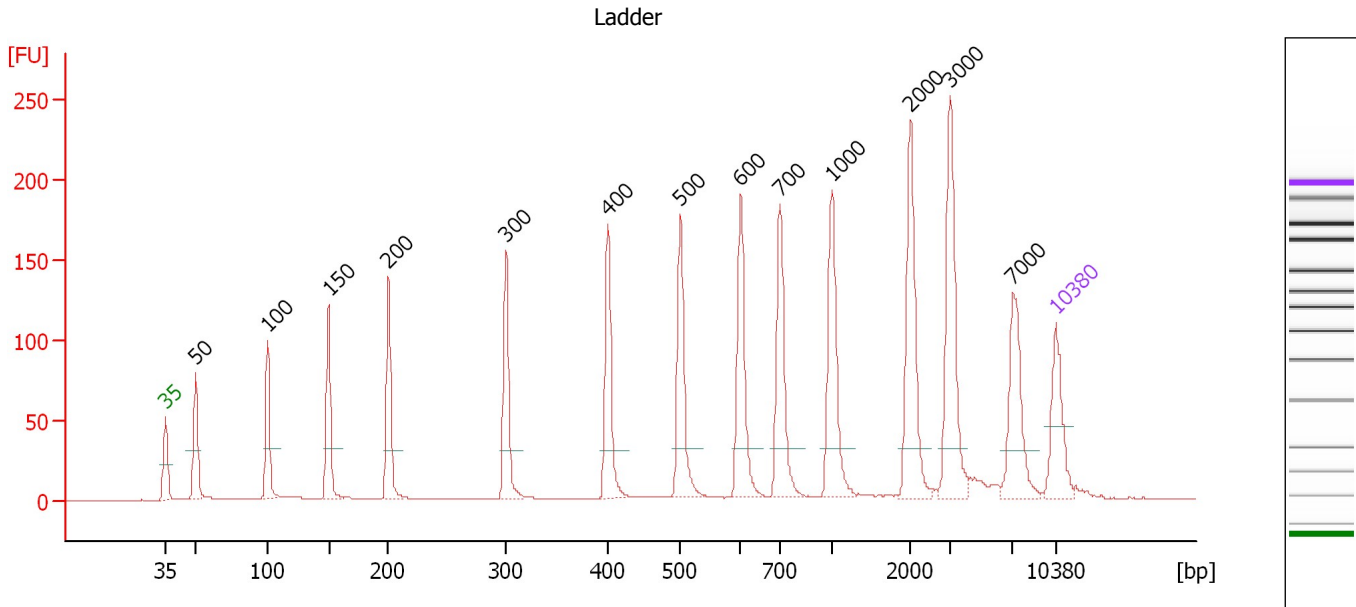
**Ladder**

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\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
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**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

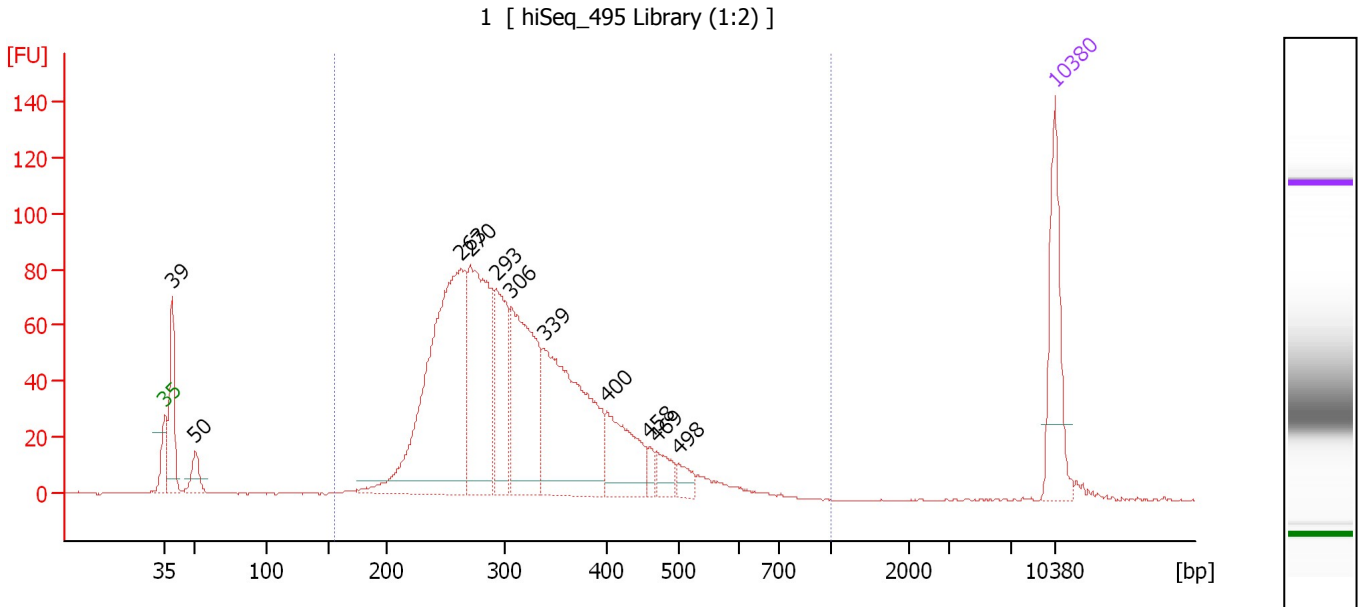
**Peak table for Ladder**

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	45.36
3	100	150.00	2,272.7	Ladder Peak	51.00
4	150	150.00	1,515.2	Ladder Peak	55.81
5	200	150.00	1,136.4	Ladder Peak	60.52
6	300	150.00	757.6	Ladder Peak	69.77
7	400	150.00	568.2	Ladder Peak	77.77
8	500	150.00	454.5	Ladder Peak	83.46
9	600	150.00	378.8	Ladder Peak	88.22
10	700	150.00	324.7	Ladder Peak	91.32
11	1,000	150.00	227.3	Ladder Peak	95.38
12	2,000	150.00	113.6	Ladder Peak	101.58
13	3,000	150.00	75.8	Ladder Peak	104.68
14	7,000	150.00	32.5	Ladder Peak	109.62
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

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 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : 1**

Number of peaks found: 11                      Corr. Area 1: 1,572.9  
 Noise: 0.2

**Peak table for sample 1 : 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	39	105.27	4,109.8		43.60
3	50	30.35	913.4		45.40
4	263	443.32	2,557.2		66.32
5	270	244.11	1,369.1		67.01
6	293	118.98	616.2		69.08
7	306	207.59	1,026.6		70.28
8	339	270.24	1,209.1		72.86
9	400	89.86	340.0		77.79
10	458	11.17	36.9		81.06
11	469	23.34	75.4		81.71
12	498	16.65	50.6		83.37
13	10,380	75.00	10.9	Upper Marker	113.00

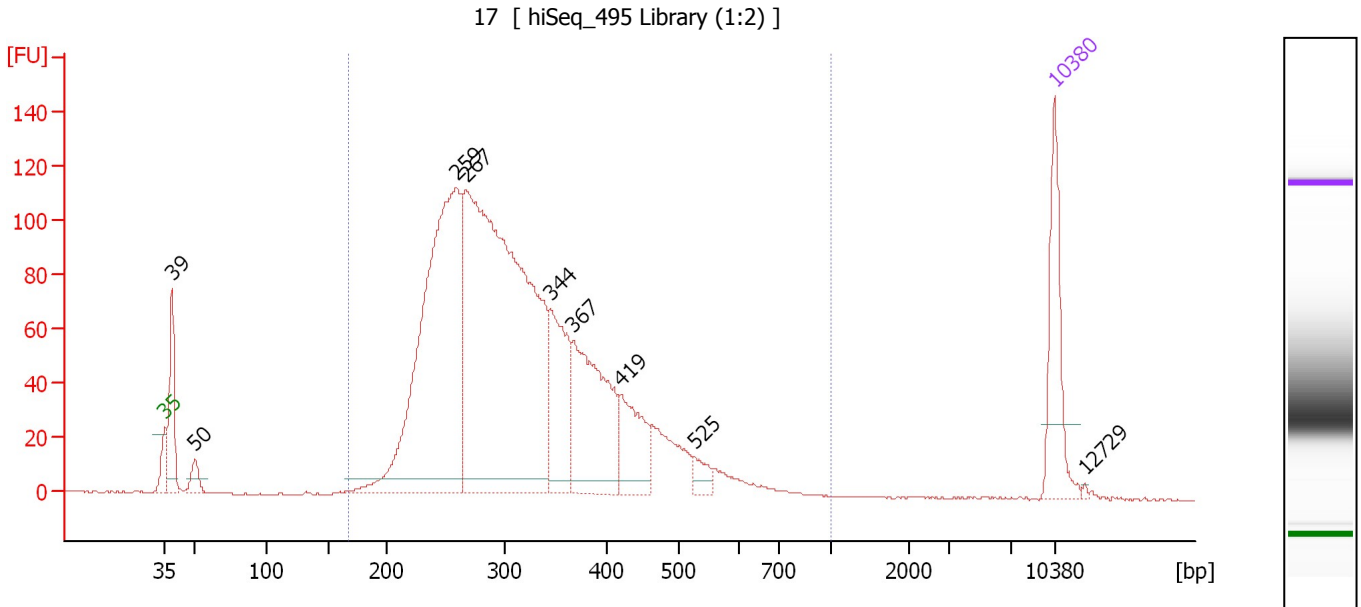
**Region table for sample 1 : 1**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
155	1,000	321	1,572.9	7,552.9	1,487.86	92	24.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : 17**

Number of peaks found: 9                      Corr. Area 1: 2,244.5  
 Noise: 0.2

**Peak table for sample 2 : 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	39	109.08	4,291.5		43.55
3	50	24.29	737.2		45.35
4	259	602.76	3,530.4		65.95
5	267	916.63	5,198.8		66.73
6	344	133.84	589.1		73.31
7	367	200.10	825.6		75.15
8	419	82.90	299.5		78.87
9	525	17.38	50.2		84.62
10	10,380	75.00	10.9	Upper Marker	113.00
11	12,729	0.00	0.0		115.35

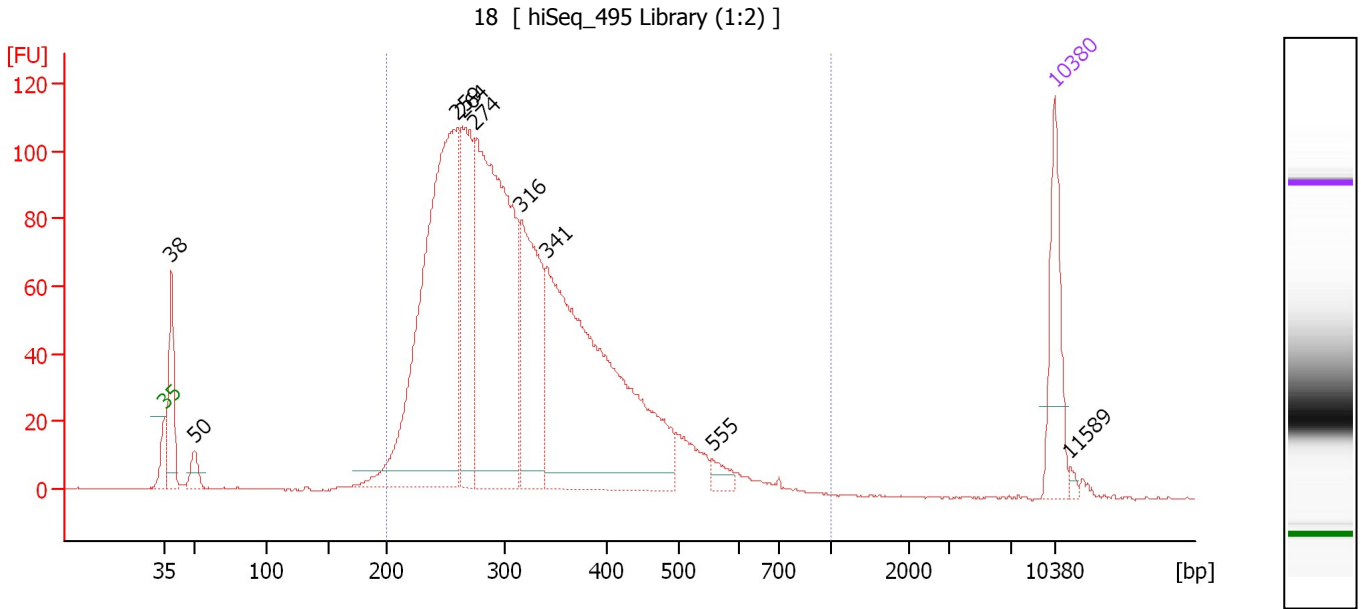
**Region table for sample 2 : 17**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
167	1,000	323	2,244.5	10,343.5	2,032.98	95	27.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

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 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : 18**

Number of peaks found: 9                      Corr. Area 1: 2,135.8  
 Noise: 0.2

**Peak table for sample 3 : 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	38	122.45	4,850.4		43.51
3	50	27.66	842.0		45.32
4	259	667.17	3,900.7		65.99
5	264	202.69	1,164.8		66.41
6	274	603.44	3,340.3		67.34
7	316	227.75	1,091.8		71.06
8	341	619.72	2,753.2		73.05
9	555	17.48	47.7		86.06
10	10,380	75.00	10.9	Upper Marker	113.00
11	11,589	0.00	0.0		114.21

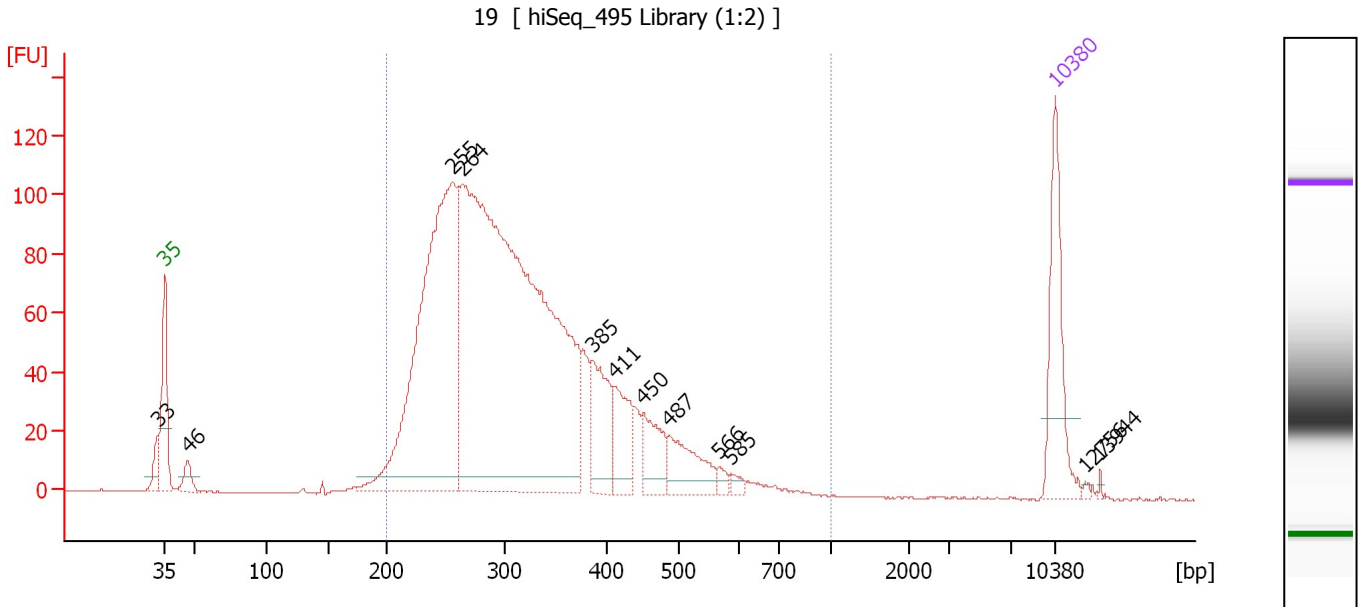
**Region table for sample 3 : 18**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	324	2,135.8	12,254.2	2,421.29	94	27.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : 19**

Number of peaks found: 12                      Corr. Area 1: 2,071.2  
 Noise: 0.2

**Peak table for sample 4 : 19**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	33	0.00	0.0		42.43
2	35	125.00	5,411.3	Lower Marker	43.00
3	46	21.95	715.7		44.80
4	255	551.23	3,278.0		65.59
5	264	1,134.25	6,521.6		66.40
6	385	81.68	321.1		76.60
7	411	58.40	215.2		78.40
8	450	49.21	165.8		80.59
9	487	57.50	178.8		82.72
10	566	6.72	18.0		86.61
11	585	6.79	17.6		87.52
12	10,380	75.00	10.9	Upper Marker	113.00
13	12,756	0.00	0.0		115.37
14	13,944	0.00	0.0		116.56

**Region table for sample 4 : 19**

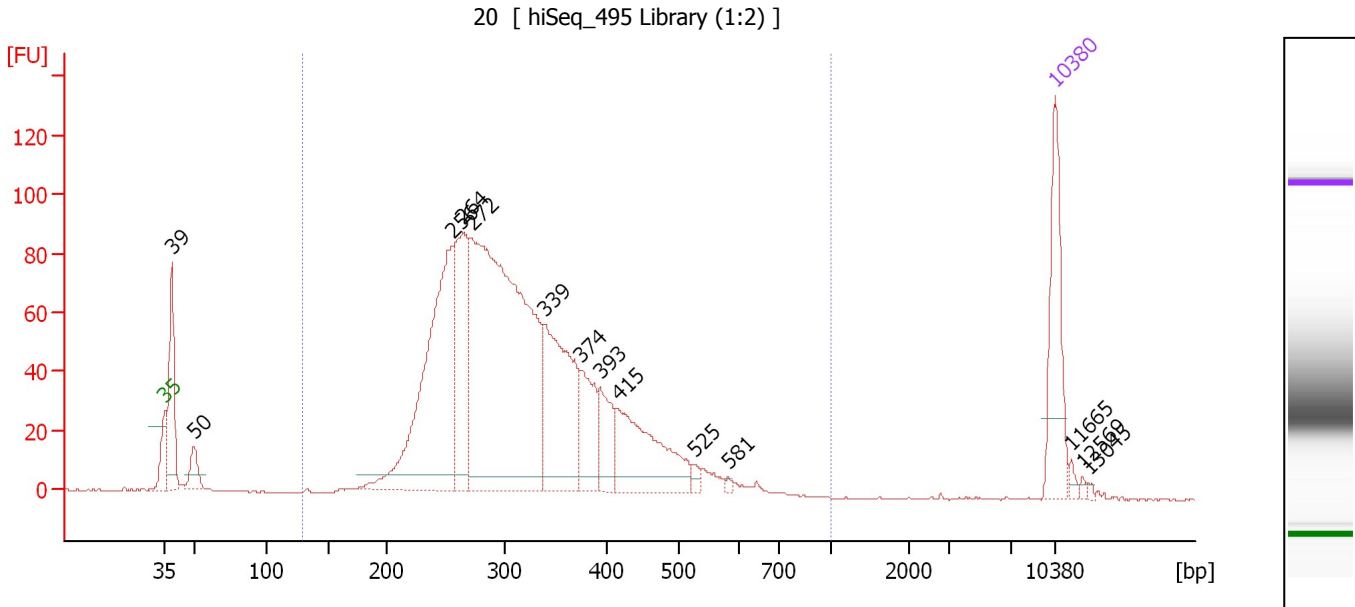
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	324	2,071.2	9,760.6	1,924.10	97	27.4



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : 20**

Number of peaks found: 14                      Corr. Area 1: 1,690.1  
 Noise: 0.2

**Peak table for sample 5 : 20**

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	39	122.86	4,819.1		43.57
3	50	31.77	972.4		45.28
4	256	357.60	2,115.2		65.72
5	264	159.82	917.7		66.43
6	272	669.09	3,733.0		67.14
7	339	193.96	866.8		72.89
8	374	70.30	284.7		75.70
9	393	50.72	195.5		77.22
10	415	129.17	471.2		78.64
11	525	7.22	20.8		84.63
12	581	2.90	7.6		87.29
13	10,380	75.00	10.9	Upper Marker	113.00
14	11,665	0.00	0.0		114.28
15	12,569	0.00	0.0		115.19
16	13,045	0.00	0.0		115.66

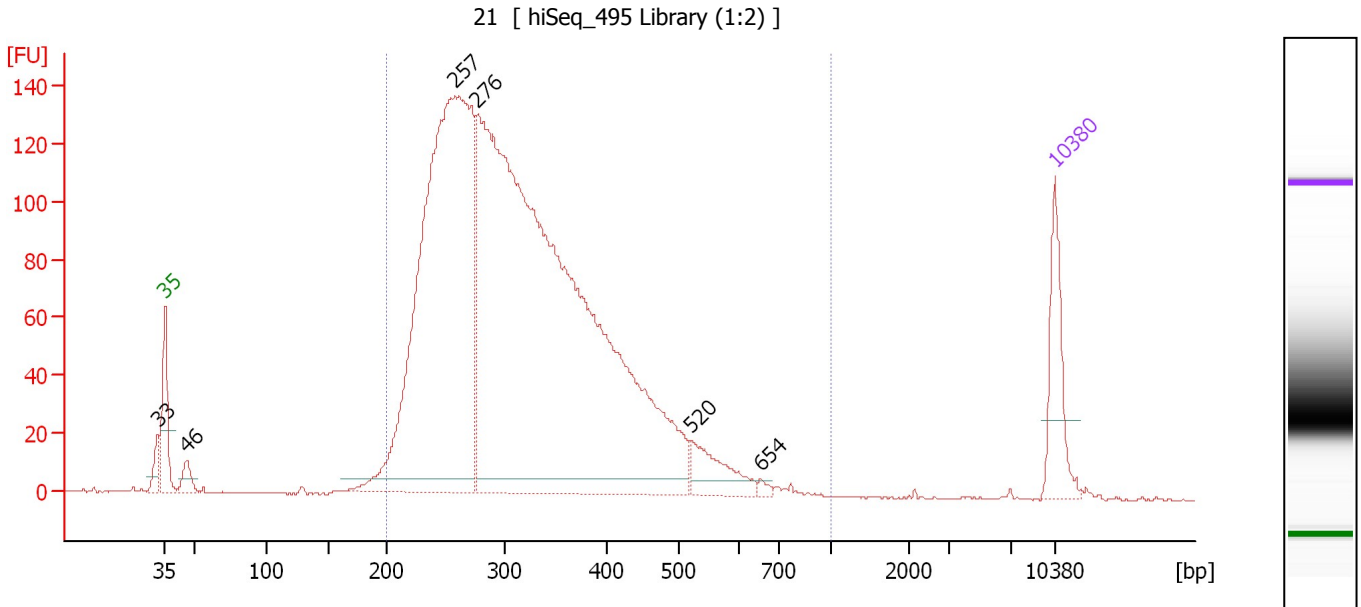
**Region table for sample 5 : 20**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
130	1,000	323	1,690.1	8,471.3	1,676.01	92	25.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : 21**

Number of peaks found: 6                      Corr. Area 1: 2,761.2  
 Noise: 0.2

**Peak table for sample 6 : 21**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	33	0.00	0.0		42.47
2	35	125.00	5,411.3	Lower Marker	43.00
3	46	29.68	975.9		44.74
4	257	1,217.41	7,170.1		65.82
5	276	2,090.05	11,492.2		67.51
6	520	68.81	200.3		84.43
7	654	5.82	13.5		89.89
8	10,380	75.00	10.9	Upper Marker	113.00

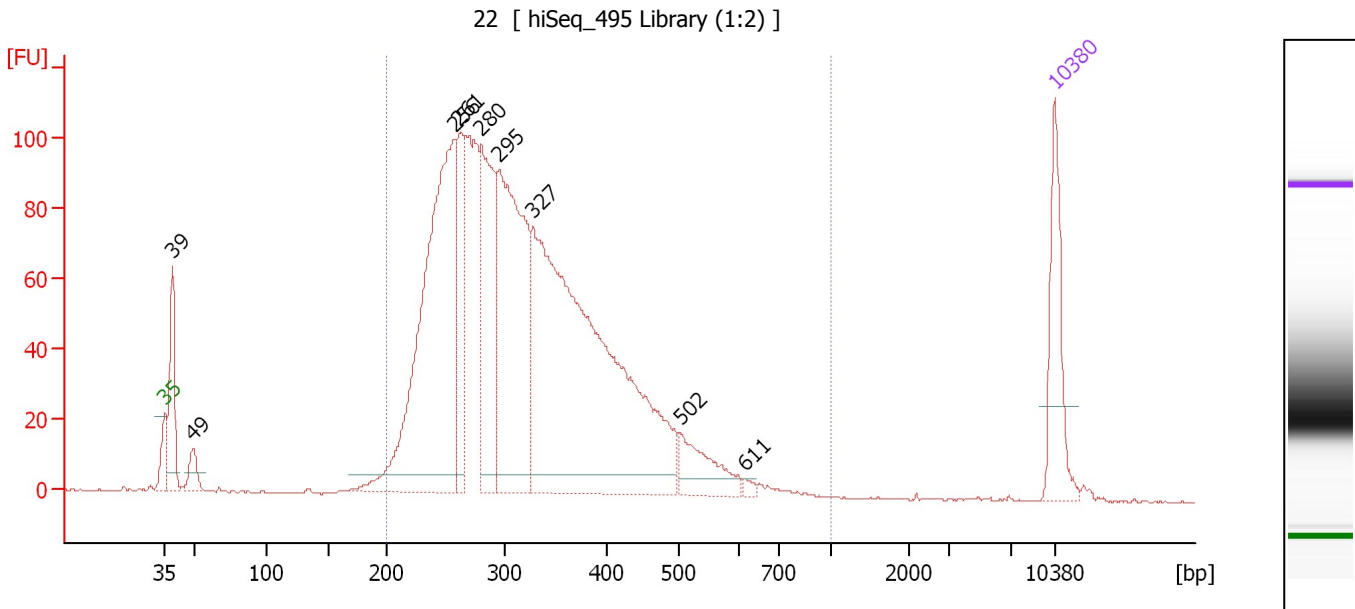
**Region table for sample 6 : 21**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	324	2,761.2	15,789.7	3,117.92	97	27.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : 22**

Number of peaks found: 9                      Corr. Area 1: 2,064.4  
 Noise: 0.2

**Peak table for sample 7 : 22**

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	39	113.60	4,448.3		43.58
3	49	30.66	945.1		45.23
4	256	561.13	3,316.2		65.74
5	261	147.16	854.0		66.17
6	280	212.30	1,149.1		67.91
7	295	382.57	1,964.3		69.32
8	327	806.68	3,737.9		71.93
9	502	66.05	199.5		83.54
10	611	5.18	12.8		88.57
11	10,380	75.00	10.9	Upper Marker	113.00

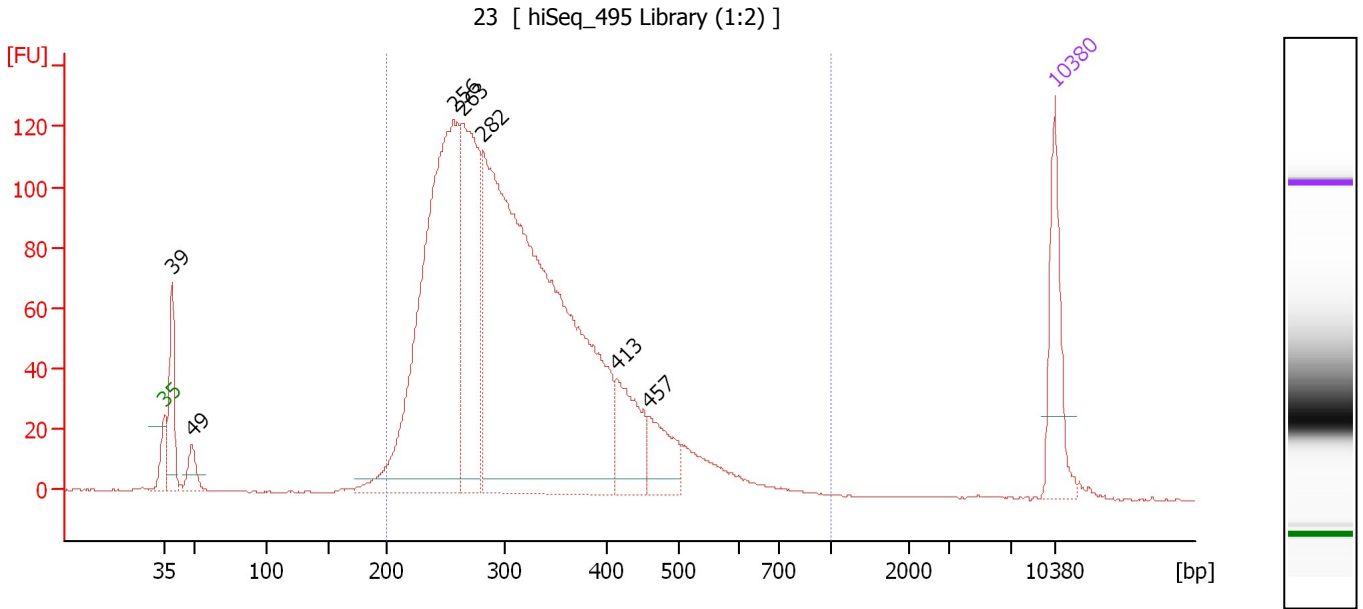
**Region table for sample 7 : 22**

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	327	2,064.4	11,692.4	2,334.76	94	26.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : 23**

Number of peaks found: 7                      Corr. Area 1: 2,306.8  
 Noise: 0.2

**Peak table for sample 8 : 23**

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	39	112.82	4,415.1		43.58
3	49	35.14	1,095.0		45.14
4	256	730.32	4,316.7		65.73
5	263	318.35	1,832.7		66.37
6	282	1,201.40	6,463.9		68.07
7	413	96.71	354.4		78.54
8	457	65.37	216.7		81.02
9	10,380	75.00	10.9	Upper Marker	113.00

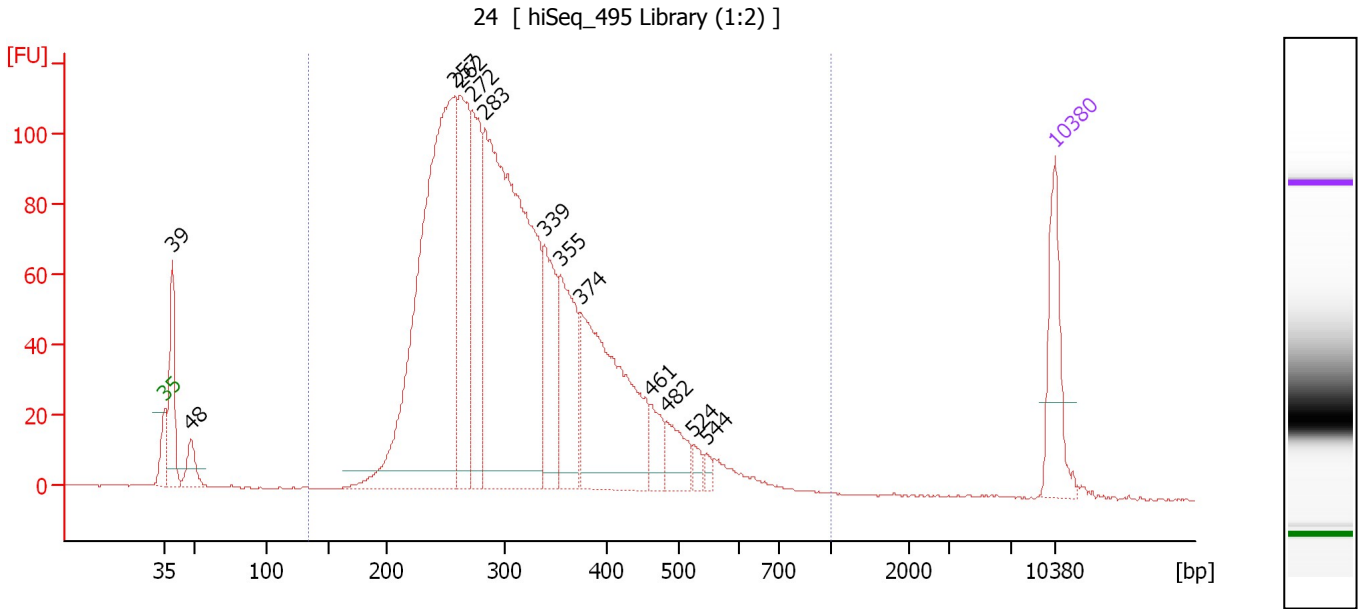
**Region table for sample 8 : 23**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	321	2,306.8	12,098.0	2,374.11	94	26.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : 24**

Number of peaks found: 13                      Corr. Area 1: 2,171.5  
 Noise: 0.2

**Peak table for sample 9 : 24**

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	39	127.90	5,005.7		43.58
3	48	42.46	1,340.4		45.04
4	257	791.56	4,662.6		65.81
5	262	257.31	1,488.3		66.25
6	272	197.99	1,100.9		67.23
7	283	799.97	4,282.9		68.20
8	339	136.54	610.8		72.87
9	355	150.25	642.1		74.13
10	374	321.17	1,301.1		75.69
11	461	38.28	125.8		81.23
12	482	47.70	149.9		82.45
13	524	13.85	40.1		84.59
14	544	9.29	25.9		85.56
15	10,380	75.00	10.9	Upper Marker	113.00

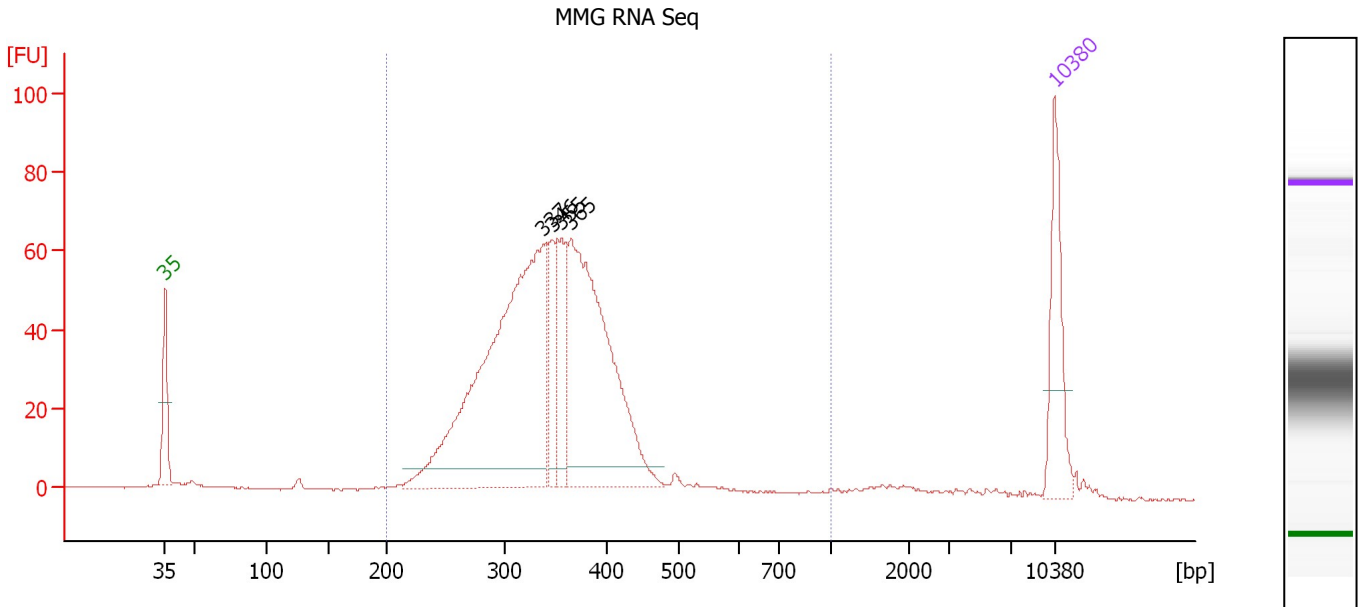
**Region table for sample 9 : 24**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
135	1,000	319	2,171.5	14,238.3	2,772.61	95	26.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : MMG RNA Seq**

Number of peaks found: 4                      Corr. Area 1: 974.6  
 Noise: 0.2

**Peak table for sample 10 : MMG RNA Seq**

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	337	586.38	2,632.8		72.77
3	346	71.46	312.8		73.46
4	355	75.61	322.9		74.16
5	365	408.43	1,693.7		75.00
6	10,380	75.00	10.9	Upper Marker	113.00

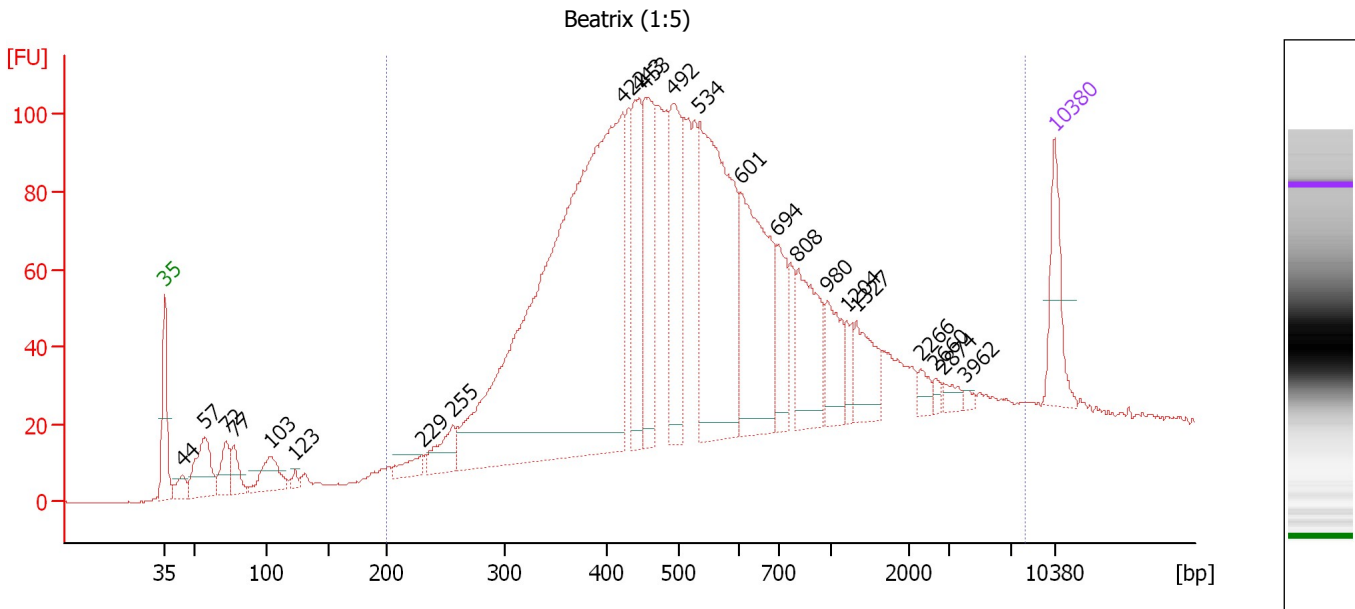
**Region table for sample 10 : MMG RNA Seq**

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	346	974.6	5,802.8	1,274.99	95	18.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

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 Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : Beatrix (1:5)**

Number of peaks found: 23                      Corr. Area 1: 2,725.6  
 Noise: 0.2

**Peak table for sample 11 : Beatrix (1:5)**

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	44	35.62	1,233.5		44.38
3	57	120.56	3,199.3		46.16
4	72	57.86	1,225.2		47.79
5	77	46.01	900.5		48.45
6	103	73.55	1,080.1		51.30
7	123	10.66	131.0		53.24
8	229	32.62	215.6		63.23
9	255	62.69	372.3		65.62
10	422	1,421.38	5,103.6		79.02
11	443	171.99	587.6		80.24
12	453	180.84	604.4		80.80
13	492	225.47	694.5		82.99
14	534	473.32	1,342.6		85.08
15	601	289.29	729.7		88.24
16	694	90.84	198.2		91.14
17	808	139.43	261.6		92.77
18	980	72.91	112.7		95.12
19	1,204	25.68	32.3		96.65
20	1,327	68.91	78.7		97.41
21	2,266	15.67	10.5		102.40
22	2,660	7.67	4.4		103.63
23	2,874	12.09	6.4		104.29
24	3,962	5.72	2.2		105.87
25	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
Modified: 5/25/2016 5:34:40 PM

**Electropherogram Summary Continued ...**

... Region table for sample 11 : Beatrix (1:5)

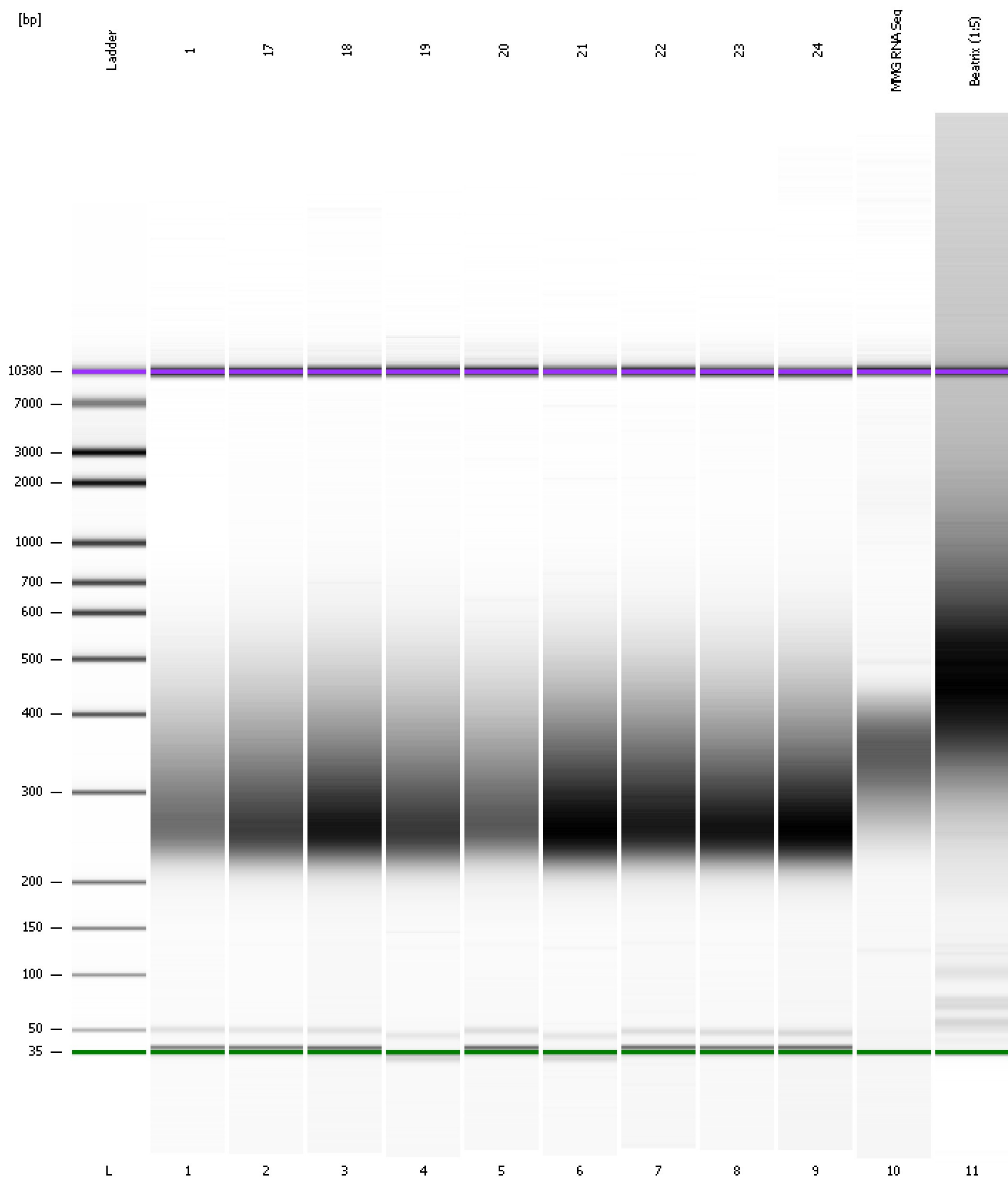
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	8,084	841	2,725.6	15,282.3	4,747.49	91	100.0



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
Modified: 5/25/2016 5:34:40 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-25\2016-05-25\_007.xad

Created: 5/25/2016 4:48:09 PM  
 Modified: 5/25/2016 5:34:40 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		5/25/2016 5:28:37 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\2016-05-25\2016-05-25_007.xad)		Instrument	Run		5/25/2016 4:48:15 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		5/25/2016 4:48:15 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/25/2016 4:48:15 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/25/2016 4:48:15 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		5/25/2016 4:48:15 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/25/2016 4:48:15 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/25/2016 4:48:15 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1