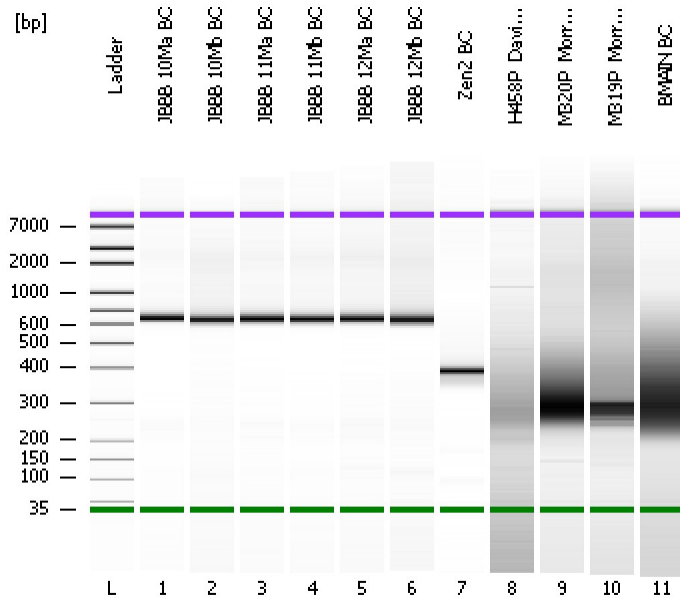


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
Modified: 4/20/2016 8:01:10 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

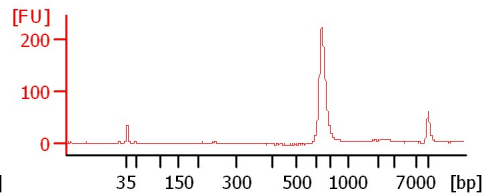
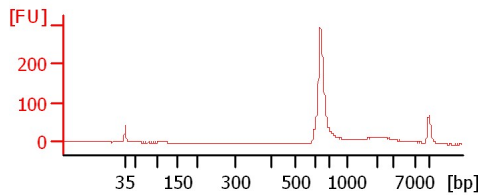
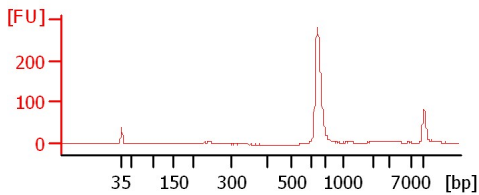
Chip Information:

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

JBBB 10Ma BC

JBBB 10Mb BC

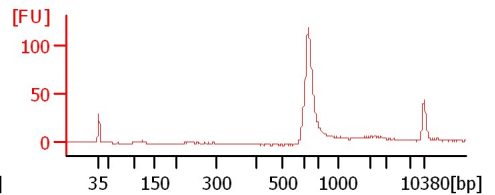
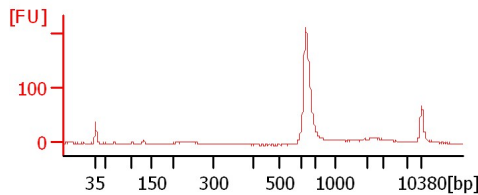
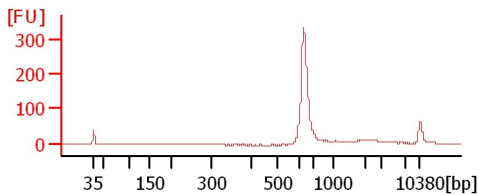
JBBB 11Ma BC



JBBB 11Mb BC

JBBB 12Ma BC

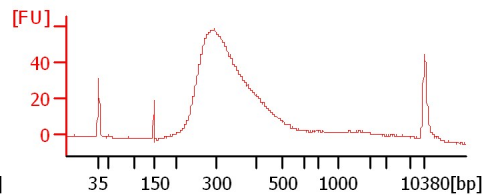
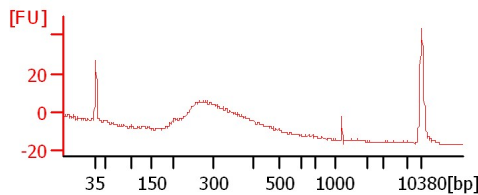
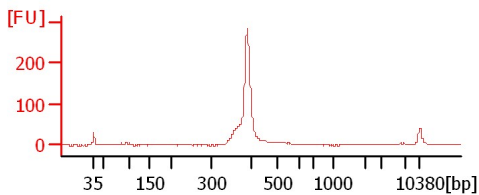
JBBB 12Mb BC



Zen2 BC

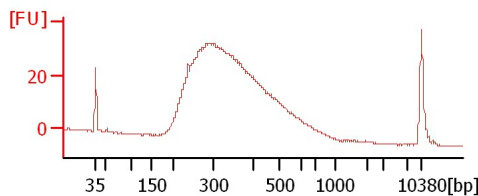
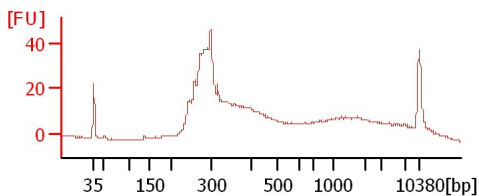
H458P\_Davis BC

M320P\_Morris2



M319P\_Morris1

BMAIN BC



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
JBBB 10Ma BC		<input type="checkbox"/>	✓			
JBBB 10Mb BC		<input type="checkbox"/>	✓			
JBBB 11Ma BC		<input type="checkbox"/>	✓			
JBBB 11Mb BC		<input type="checkbox"/>	✓			
JBBB 12Ma BC		<input type="checkbox"/>	✓			
JBBB 12Mb BC		<input type="checkbox"/>	✓			
Zen2 BC		<input type="checkbox"/>	✓			
H458P_Davis BC		<input type="checkbox"/>	✓			
M320P_Morris2		<input type="checkbox"/>	✓			
M319P_Morris1		<input type="checkbox"/>	✓			
BMAIN BC		<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\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
Modified: 4/20/2016 8:01:10 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

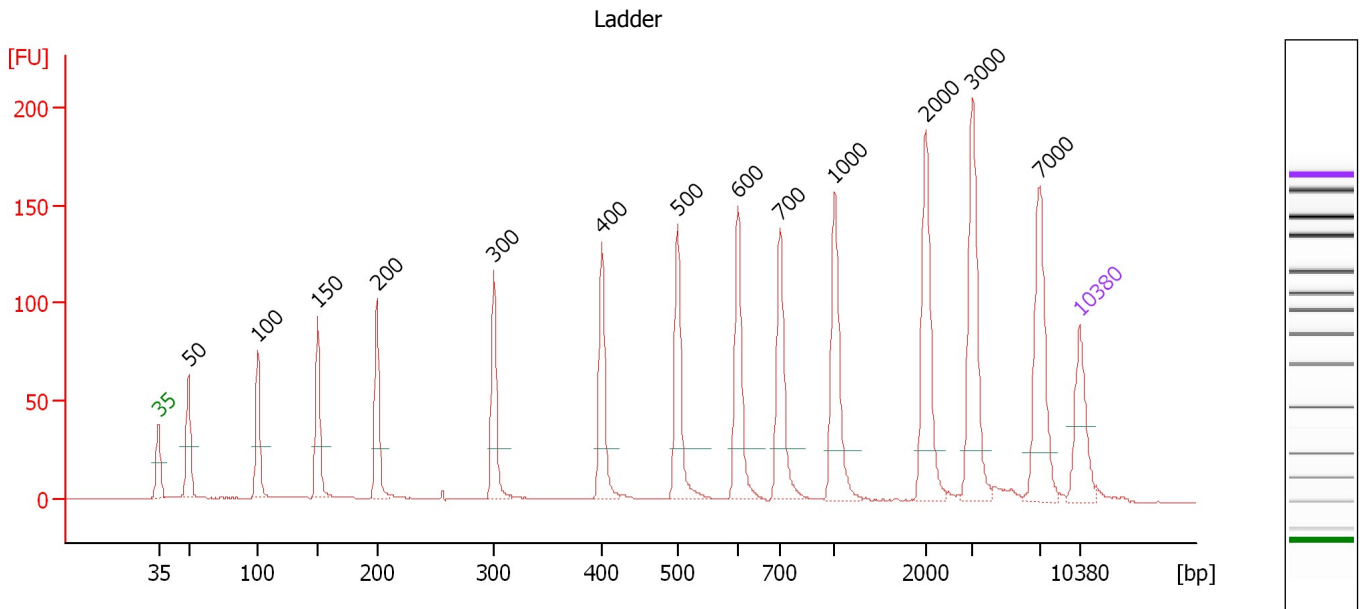
**Ladder**

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\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.1

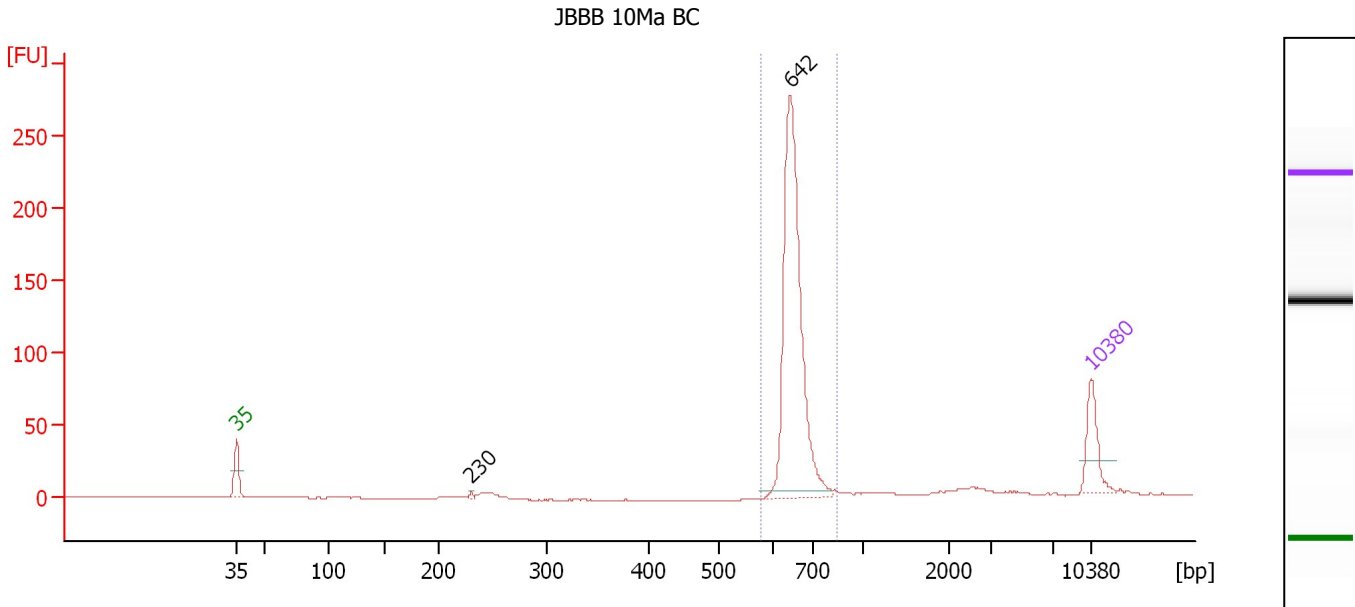
**Peak table for Ladder**

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	45.27
3	100	150.00	2,272.7	Ladder Peak	50.56
4	150	150.00	1,515.2	Ladder Peak	55.11
5	200	150.00	1,136.4	Ladder Peak	59.57
6	300	150.00	757.6	Ladder Peak	68.49
7	400	150.00	568.2	Ladder Peak	76.71
8	500	150.00	454.5	Ladder Peak	82.44
9	600	150.00	378.8	Ladder Peak	87.03
10	700	150.00	324.7	Ladder Peak	90.22
11	1,000	150.00	227.3	Ladder Peak	94.37
12	2,000	150.00	113.6	Ladder Peak	101.33
13	3,000	150.00	75.8	Ladder Peak	104.82
14	7,000	150.00	32.5	Ladder Peak	109.98
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : JBBB 10Ma BC**

Number of peaks found: 2                      Corr. Area 1: 502.4  
 Noise: 0.2

**Peak table for sample 1 : JBBB 10Ma BC**

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	230	4.94	32.6		62.23
3	642	695.70	1,643.0		88.36
4	10,380	75.00	10.9	Upper Marker	113.00

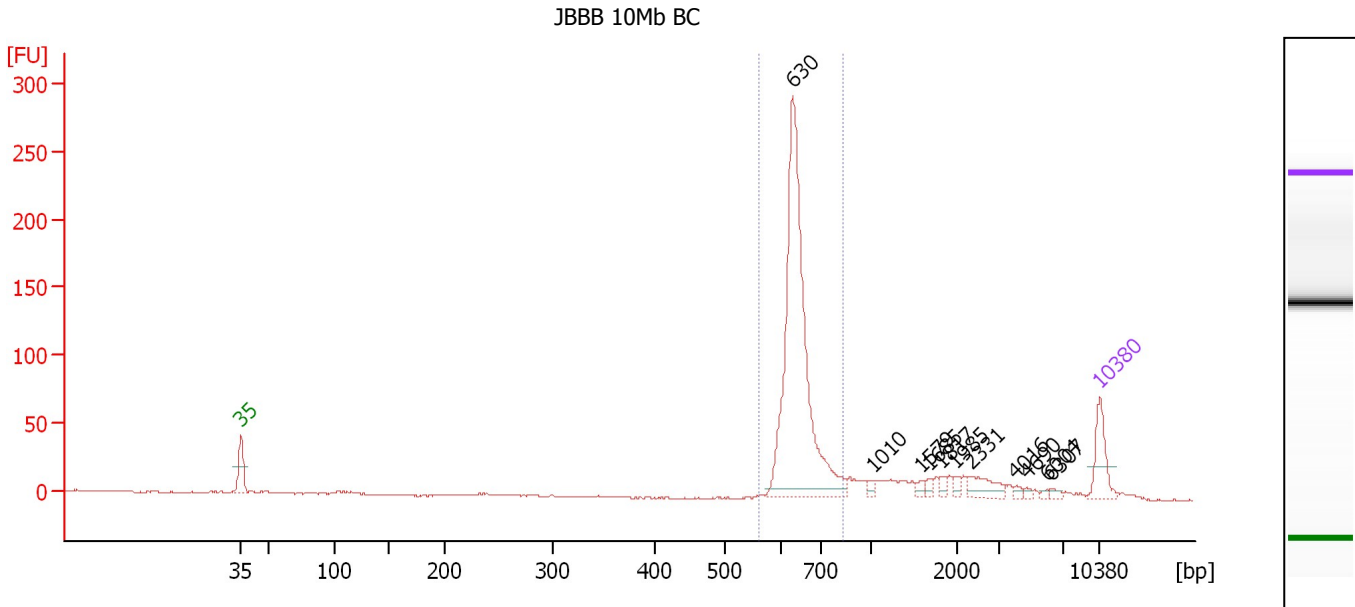
**Region table for sample 1 : JBBB 10Ma BC**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
577	847	653	502.4	1,583.0	681.17	93	4.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : JBBB 10Mb BC**

Number of peaks found: 11                      Corr. Area 1: 592.8  
 Noise: 0.6

**Peak table for sample 2 : JBBB 10Mb BC**

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	630	931.91	2,242.8		87.97
3	1,010	10.98	16.5		94.45
4	1,579	11.81	11.3		98.40
5	1,685	10.71	9.6		99.14
6	1,817	11.82	9.9		100.05
7	1,985	11.76	9.0		101.22
8	2,331	49.57	32.2		102.48
9	4,016	7.70	2.9		106.13
10	4,690	5.78	1.9		107.00
11	6,004	4.94	1.2		108.70
12	6,307	7.97	1.9		109.09
13	10,380	75.00	10.9	Upper Marker	113.00

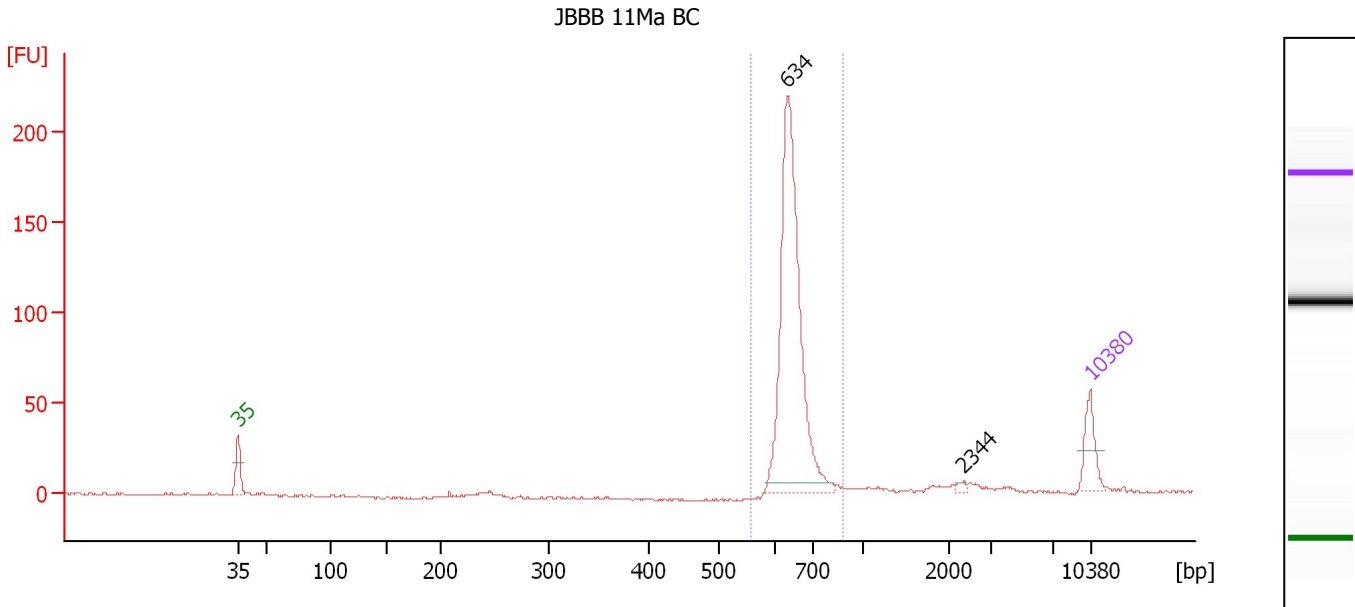
**Region table for sample 2 : JBBB 10Mb BC**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
561	828	645	592.8	2,171.7	921.72	72	6.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : JBBB 11Ma BC**

Number of peaks found: 2                      Corr. Area 1: 445.0  
 Noise: 0.6

**Peak table for sample 3 : JBBB 11Ma BC**

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	634	918.29	2,194.0		88.12
3	2,344	8.56	5.5		102.53
4	10,380	75.00	10.9	Upper Marker	113.00

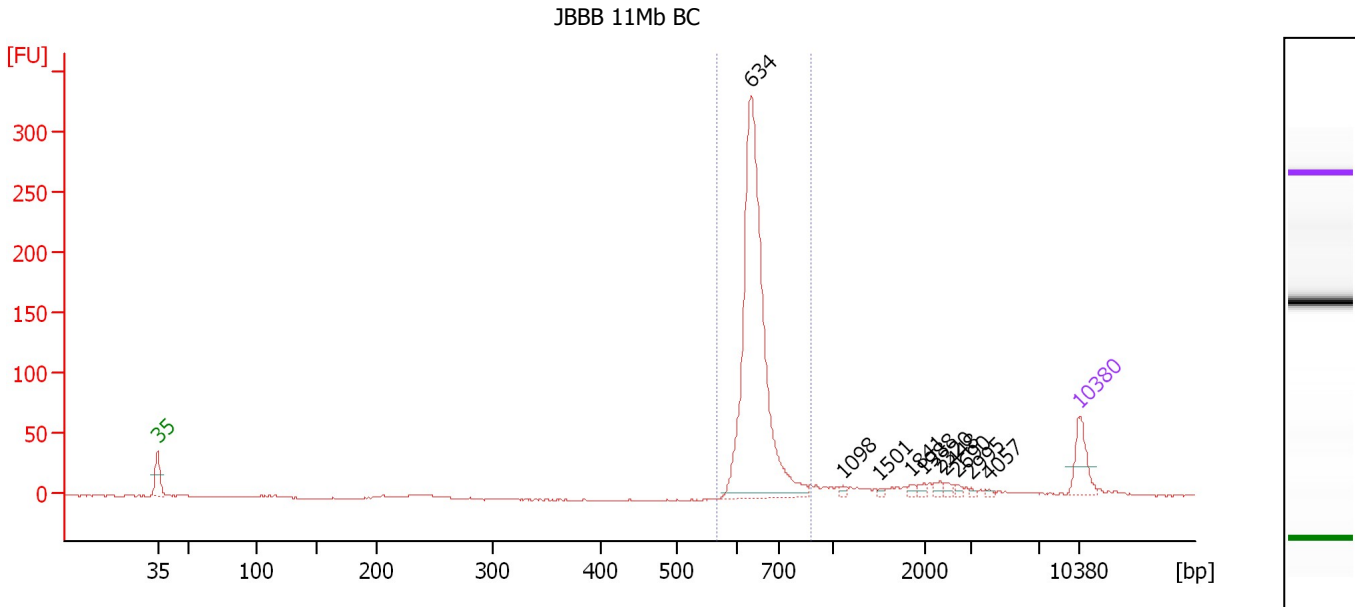
**Region table for sample 3 : JBBB 11Ma BC**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
559	882	648	445.0	2,141.6	914.28	94	5.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : JBBB 11Mb BC**

Number of peaks found: 10                      Corr. Area 1: 649.3  
 Noise: 0.6

**Peak table for sample 4 : JBBB 11Mb BC**

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	634	1,111.29	2,656.5		88.11
3	1,098	8.65	11.9		95.05
4	1,501	5.94	6.0		97.86
5	1,841	8.79	7.2		100.22
6	1,988	9.58	7.3		101.24
7	2,320	12.40	8.1		102.45
8	2,448	11.35	7.0		102.89
9	2,690	7.77	4.4		103.74
10	2,995	4.65	2.4		104.81
11	4,057	3.94	1.5		106.19
12	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : JBBB 11Mb BC**

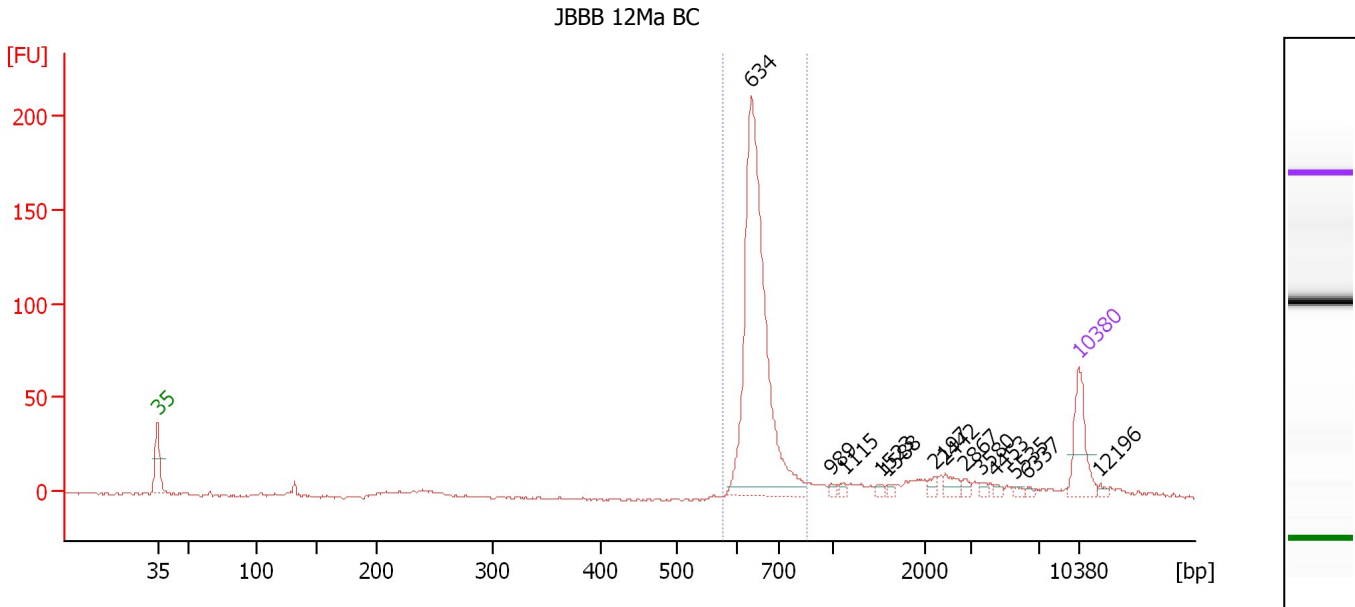
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
567	875	647	649.3	2,544.6	1,084.35	84	6.0



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : JBBB 12Ma BC**

Number of peaks found: 13                      Corr. Area 1: 427.9  
 Noise: 0.6

**Peak table for sample 5 : JBBB 12Ma BC**

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	634	668.43	1,598.0		88.11
3	989	6.21	9.5		94.23
4	1,115	6.08	8.3		95.17
5	1,523	6.51	6.5		98.01
6	1,588	5.42	5.2		98.46
7	2,197	9.06	6.2		102.02
8	2,442	17.22	10.7		102.87
9	2,867	7.47	4.0		104.36
10	3,580	7.50	3.2		105.57
11	4,453	5.39	1.8		106.70
12	5,535	4.83	1.3		108.09
13	6,337	3.90	0.9		109.13
14	10,380	75.00	10.9	Upper Marker	113.00
15	12,196	0.00	0.0		114.62

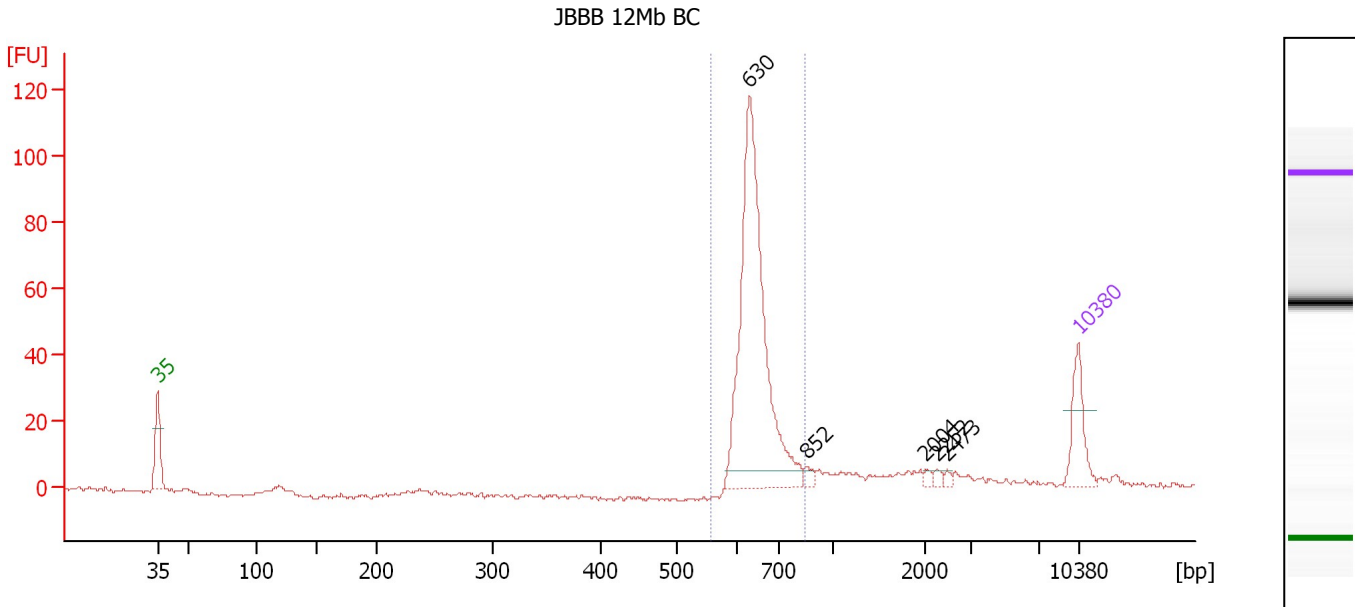
**Region table for sample 5 : JBBB 12Ma BC**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
578	853	652	427.9	1,557.2	668.64	73	5.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : JBBB 12Mb BC**

Number of peaks found: 5                      Corr. Area 1: 267.9  
 Noise: 0.5

**Peak table for sample 6 : JBBB 12Mb BC**

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	630	705.11	1,694.9		88.00
3	852	13.87	24.7		92.32
4	2,004	7.32	5.5		101.34
5	2,252	7.57	5.1		102.21
6	2,473	5.49	3.4		102.98
7	10,380	75.00	10.9	Upper Marker	113.00

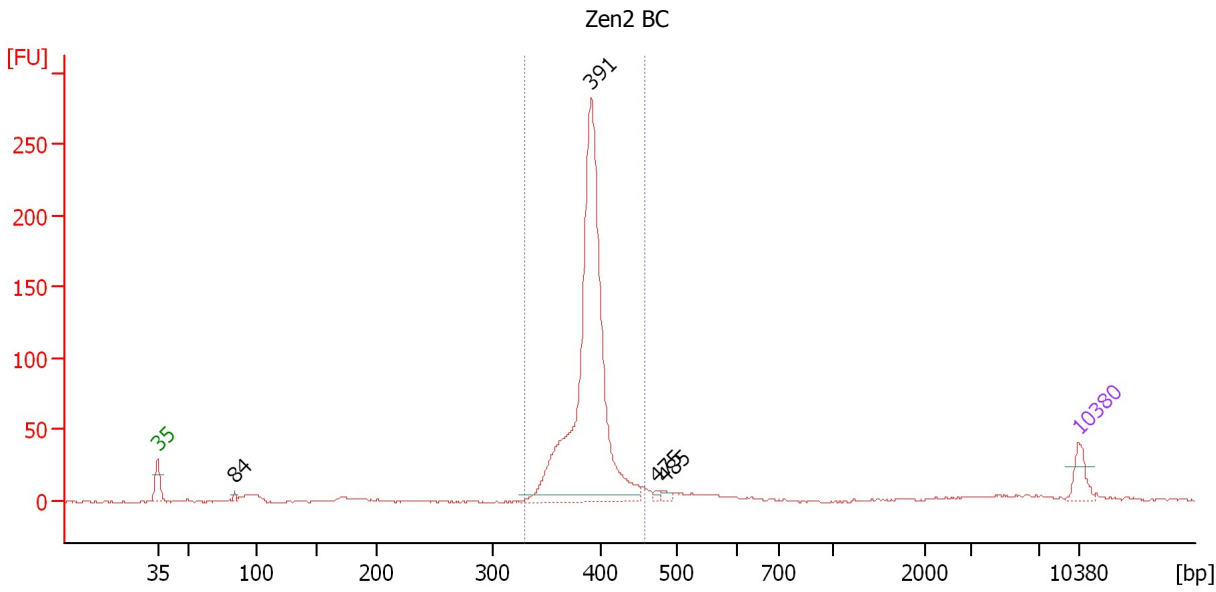
**Region table for sample 6 : JBBB 12Mb BC**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
557	848	647	267.9	1,647.2	700.83	80	6.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Zen2 BC**

Number of peaks found: 4                      Corr. Area 1: 719.6  
 Noise: 0.5

**Peak table for sample 7 : Zen2 BC**

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	13.99	253.5		48.83
3	391	2,203.82	8,547.7		75.94
4	475	14.79	47.2		80.98
5	485	19.45	60.7		81.59
6	10,380	75.00	10.9	Upper Marker	113.00

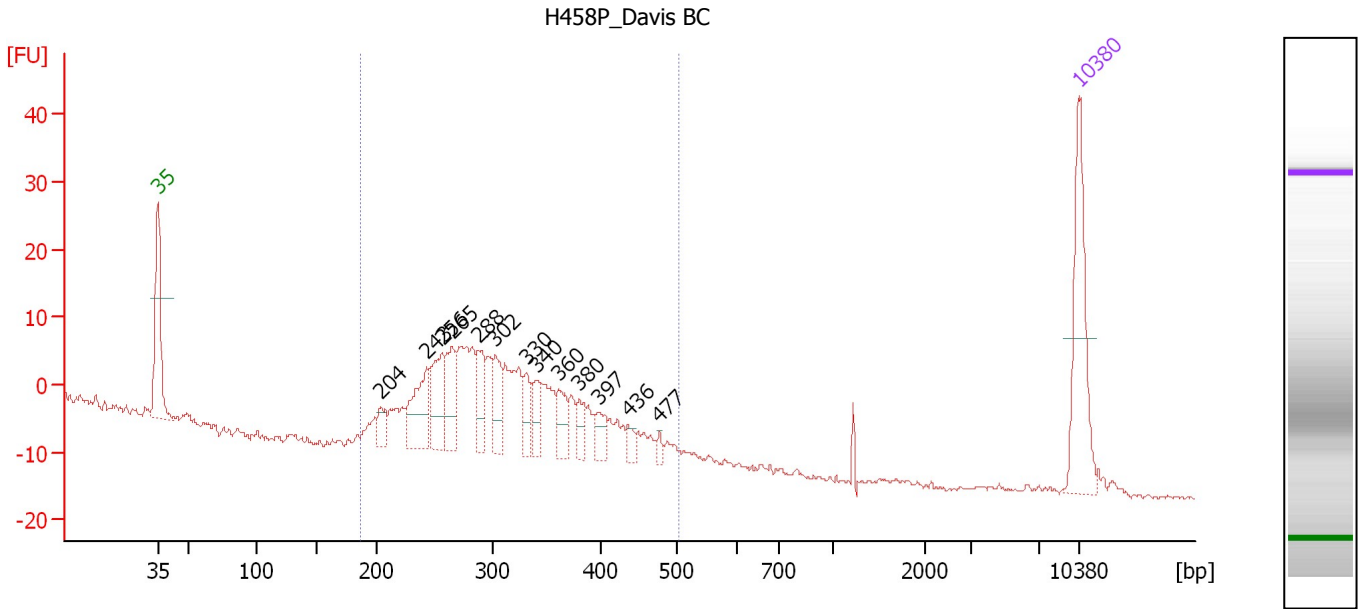
**Region table for sample 7 : Zen2 BC**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
330	458	389	719.6	8,601.1	2,206.10	87	4.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : H458P\_Davis BC**

Number of peaks found: 13      Corr. Area 1: 184.2  
 Noise: 0.3

**Peak table for sample 8 : H458P\_Davis BC**

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	204	17.48	129.6		59.95
3	243	60.92	379.2		63.45
4	256	55.75	329.3		64.61
5	265	42.83	245.0		65.36
6	288	35.96	189.3		67.40
7	302	36.72	184.2		68.66
8	330	22.19	101.8		70.99
9	340	22.23	99.0		71.78
10	360	24.95	104.9		73.46
11	380	15.36	61.3		75.04
12	397	18.99	72.4		76.49
13	436	10.47	36.4		78.77
14	477	5.82	18.5		81.14
15	10,380	75.00	10.9	Upper Marker	113.00

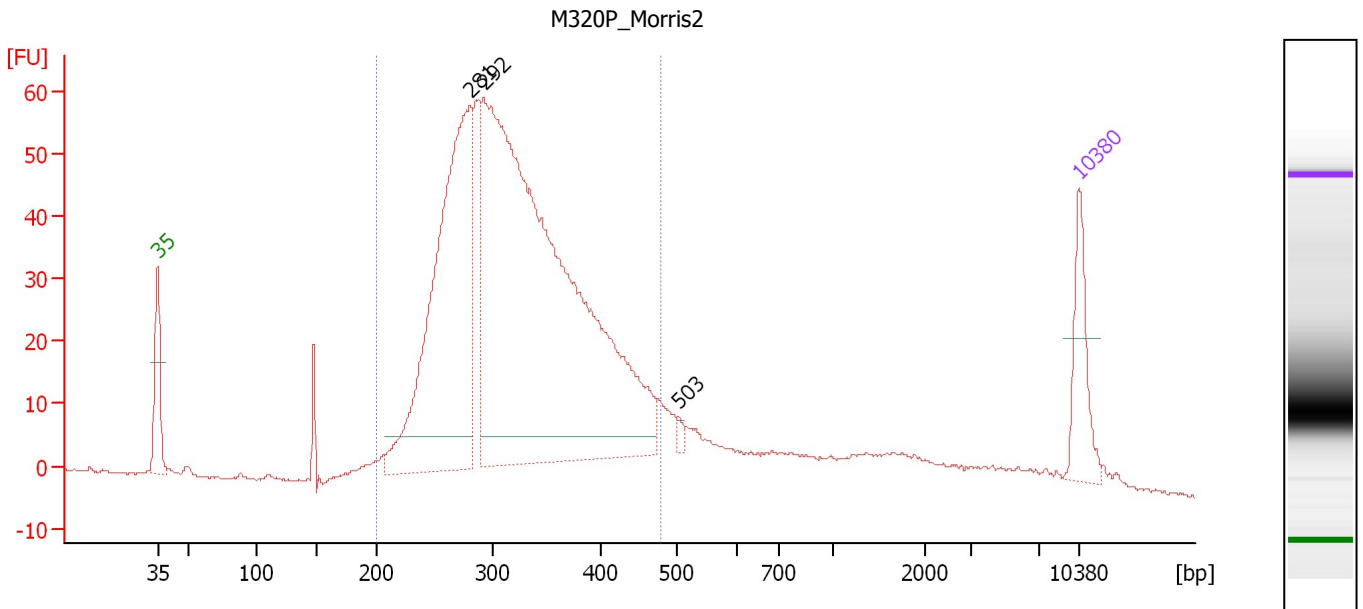
**Region table for sample 8 : H458P\_Davis BC**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
187	504	310	184.2	2,183.5	429.84	99	17.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : M320P\_Morris2**

Number of peaks found: 3                      Corr. Area 1: 993.3  
 Noise: 0.2

**Peak table for sample 9 : M320P\_Morris2**

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	281	735.80	3,973.7		66.76
3	292	1,644.76	8,530.5		67.79
4	503	8.88	26.7		82.58
5	10,380	75.00	10.9	Upper Marker	113.00

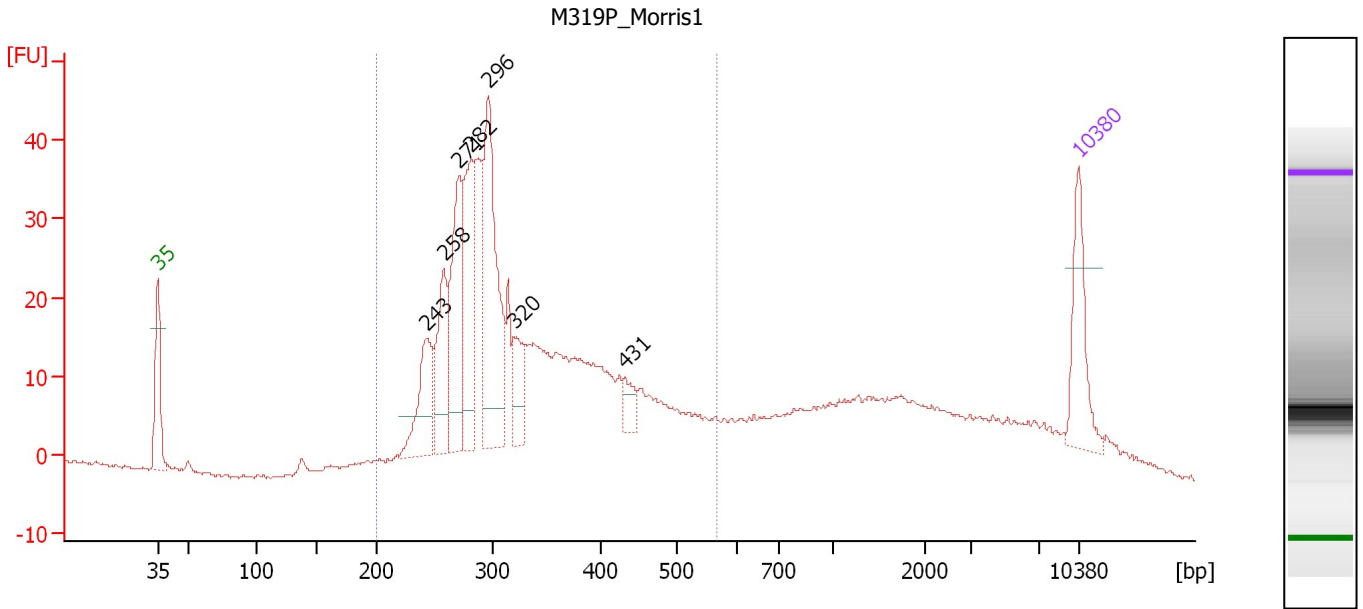
**Region table for sample 9 : M320P\_Morris2**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	480	324	993.3	12,617.0	2,582.93	82	18.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : M319P Morris1**

Number of peaks found: 7                      Corr. Area 1: 554.1  
 Noise: 0.3

**Peak table for sample 10 : M319P Morris1**

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	243	110.79	689.9		63.43
3	258	115.94	680.9		64.74
4	271	166.92	932.9		65.91
5	282	169.37	911.3		66.85
6	296	267.46	1,367.8		68.16
7	320	60.10	284.2		70.17
8	431	26.19	92.0		78.49
9	10,380	75.00	10.9	Upper Marker	113.00

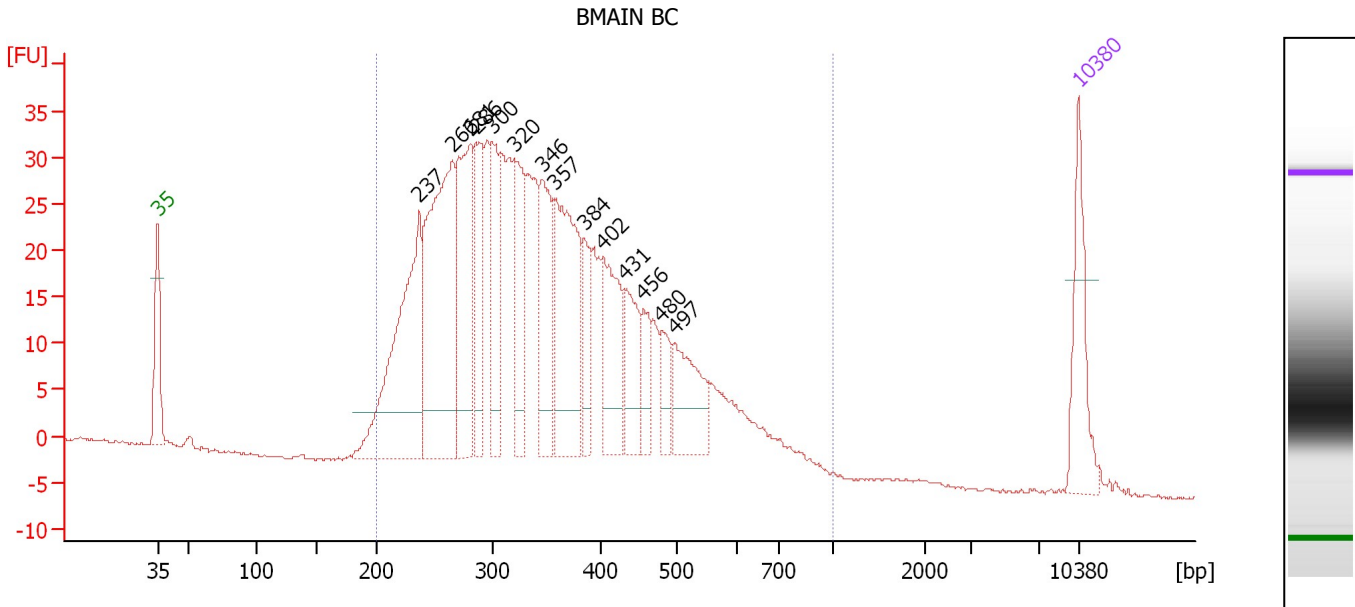
**Region table for sample 10 : M319P Morris1**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	565	340	554.1	9,218.1	1,927.29	67	24.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : BMAIN BC**

Number of peaks found: 14                      Corr. Area 1: 850.3  
 Noise: 0.2

**Peak table for sample 11 : BMAIN BC**

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	237	317.76	2,028.7		62.90
3	266	359.43	2,049.9		65.43
4	281	208.77	1,126.1		66.79
5	286	106.62	565.6		67.21
6	300	109.25	552.2		68.47
7	320	116.74	552.2		70.16
8	346	123.96	543.0		72.26
9	357	221.03	938.8		73.15
10	384	57.35	226.2		75.40
11	402	115.05	434.0		76.81
12	431	73.89	259.7		78.49
13	456	42.70	141.8		79.94
14	480	37.46	118.2		81.30
15	497	91.69	279.3		82.28
16	10,380	75.00	10.9	Upper Marker	113.00

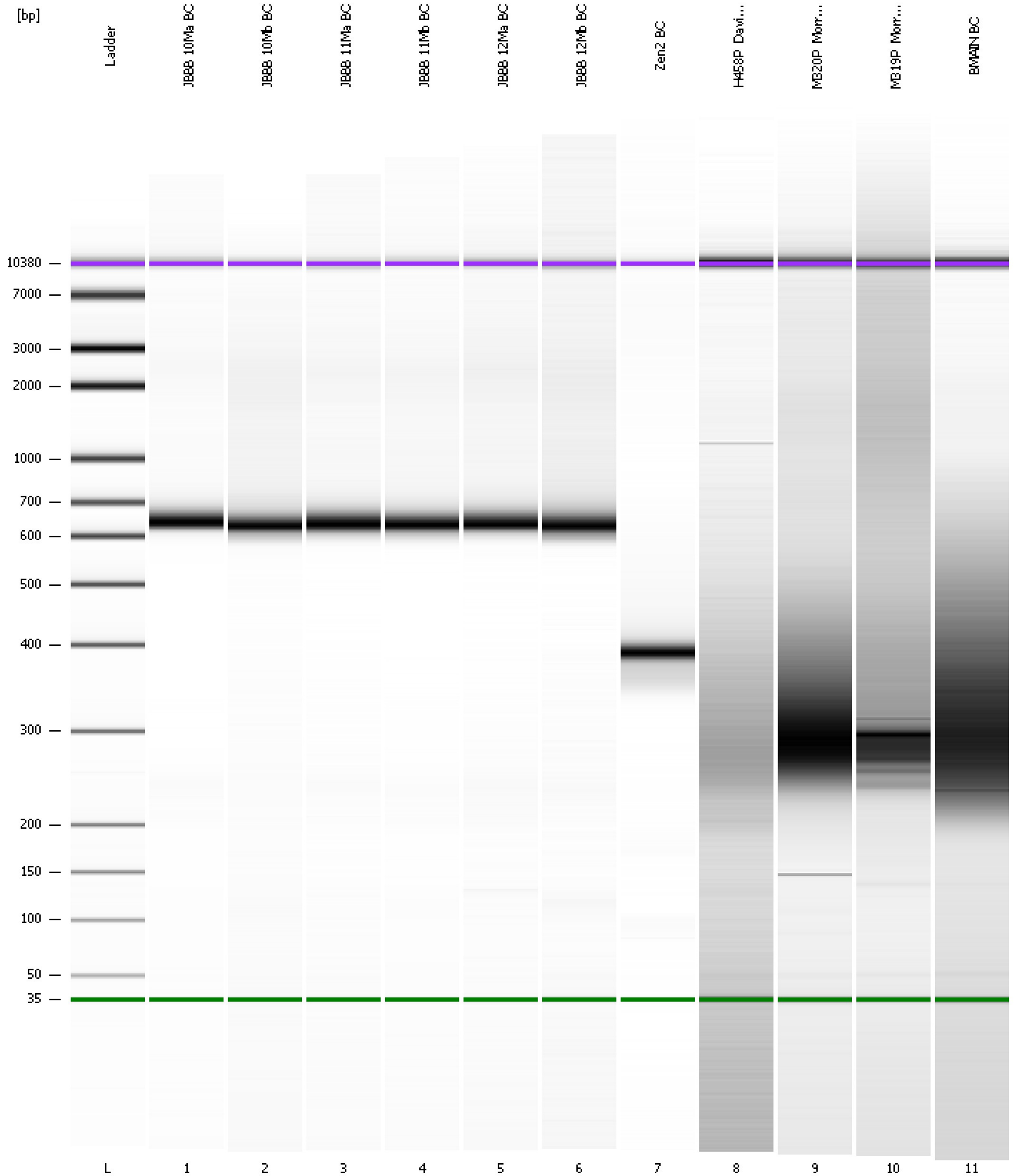
**Region table for sample 11 : BMAIN BC**

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	361	850.3	12,674.1	2,695.09	99	31.5

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
Modified: 4/20/2016 8:01:10 AM

**Gel Image**



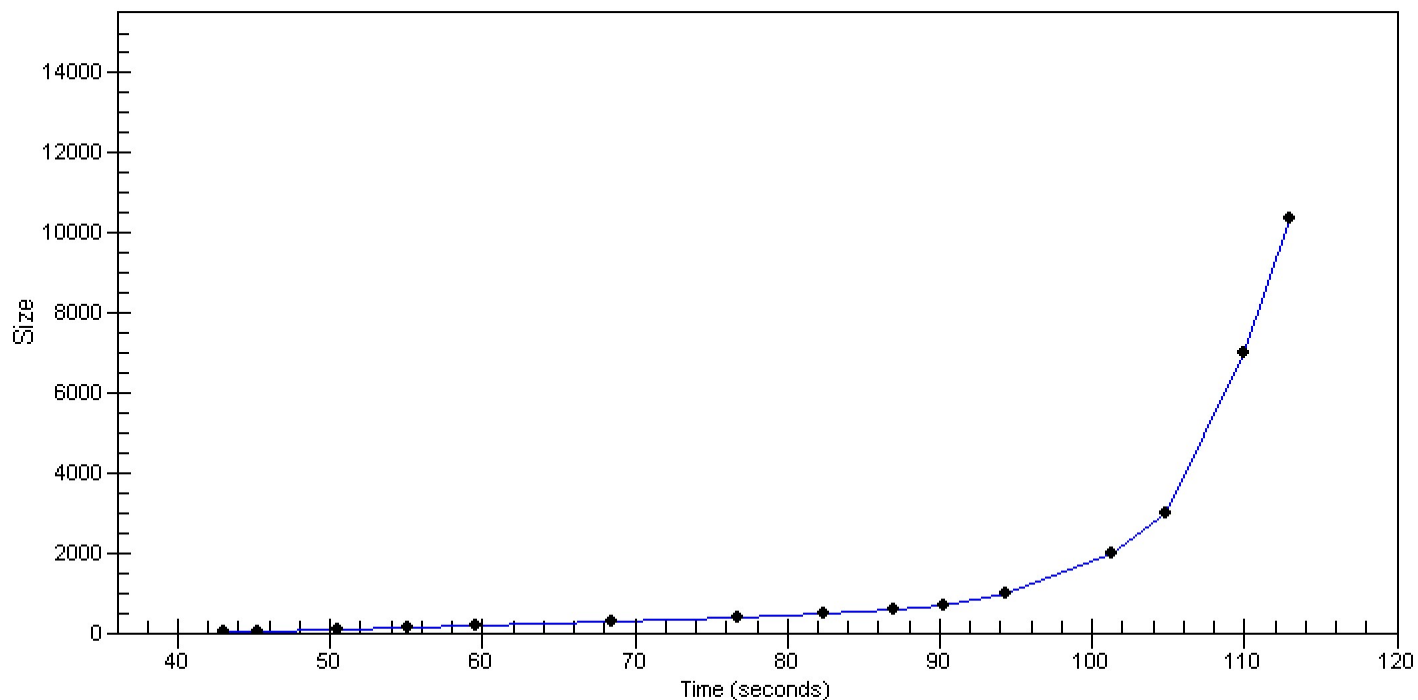


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
Modified: 4/20/2016 8:01:10 AM

**Curves**

**Standard Curve**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-20\2016-04-20\_001.xad

Created: 4/20/2016 7:19:49 AM  
 Modified: 4/20/2016 8:01:10 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		4/20/2016 8:01:08 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\2016-04-20\2016-04-20_001.xad)		Instrument	Run		4/20/2016 7:19:54 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		4/20/2016 7:19:54 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		4/20/2016 7:19:54 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		4/20/2016 7:19:54 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		4/20/2016 7:19:54 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		4/20/2016 7:19:54 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		4/20/2016 7:19:54 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1