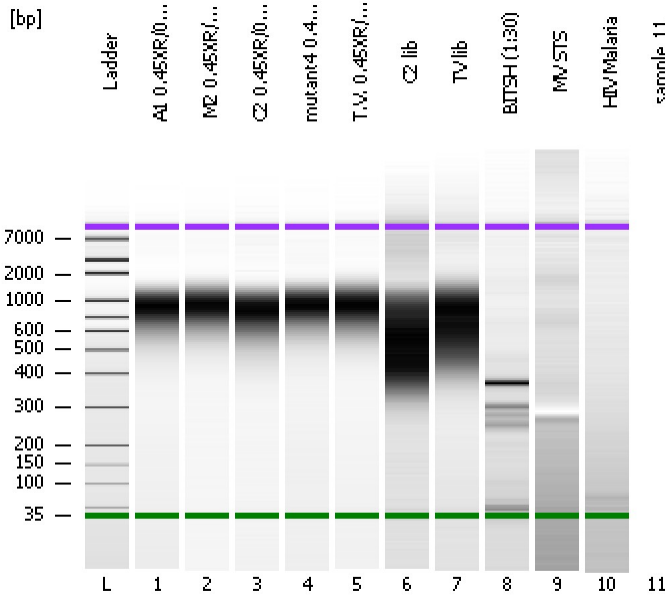


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
Modified: 3/15/2016 1:30:06 PM

Electrophoresis File Run Summary



Instrument Information:

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

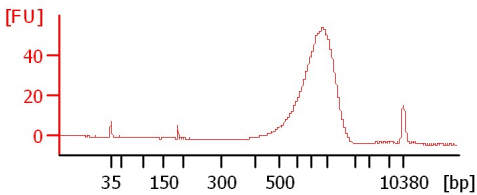
Assay Information:

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

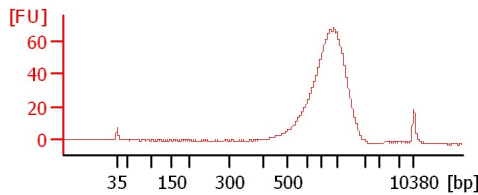
Chip Information:

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

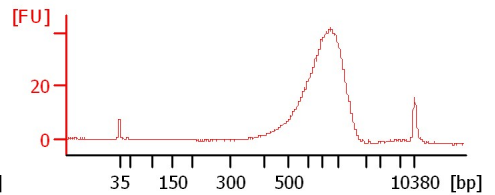
A1 0.45XR/0.57XL



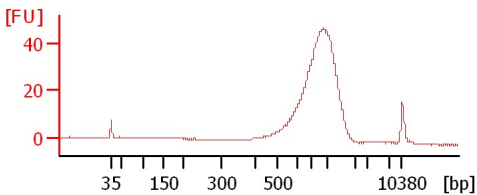
M2 0.45XR/0.57XL



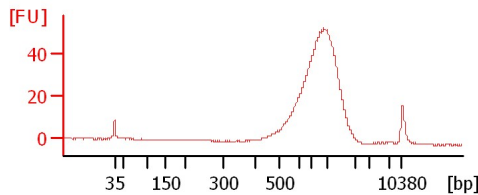
C2 0.45XR/0.57XL



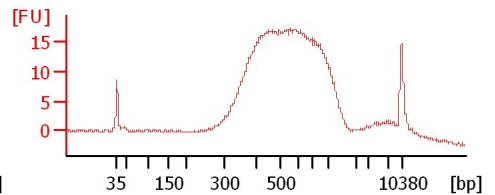
mutant4 0.45XR/0.57XL



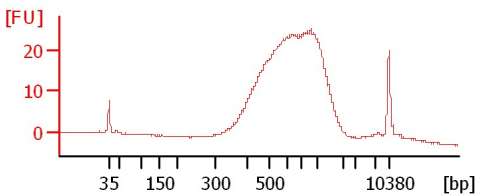
T.V. 0.45XR/0.57XL



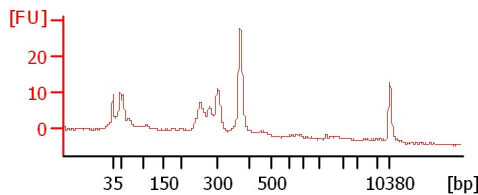
C2 lib



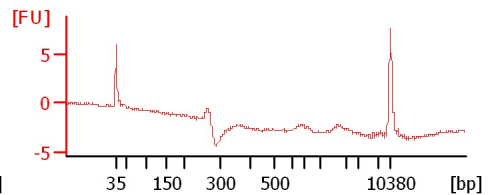
TV lib



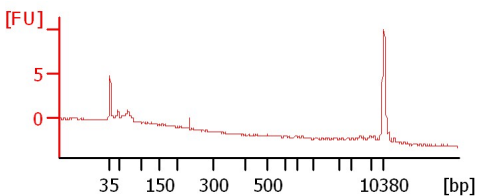
BITSH (1:30)



MV STS



HIV Malaria



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
A1 0.45XR/0.57XL		<input type="checkbox"/>	✓			
M2 0.45XR/0.57XL		<input type="checkbox"/>	✓			
C2 0.45XR/0.57XL		<input type="checkbox"/>	✓			
mutant4 0.45XR/0.57XL		<input type="checkbox"/>	✓			
T.V. 0.45XR/0.57XL		<input type="checkbox"/>	✓			
C2 lib		<input type="checkbox"/>	✓			
TV lib		<input type="checkbox"/>	✓			
BITSH (1:30)		<input type="checkbox"/>	✓			
MV STS		<input type="checkbox"/>	✓			
HIV Malaria		<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\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
Modified: 3/15/2016 1:30:06 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

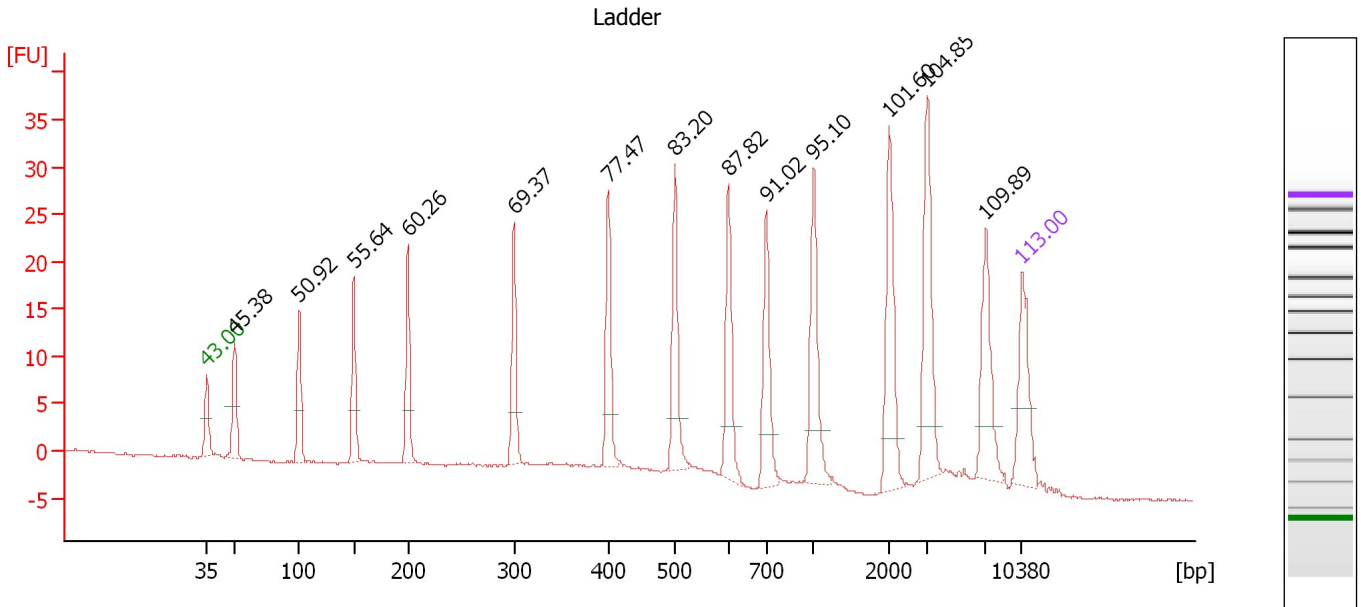
**Ladder**

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\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

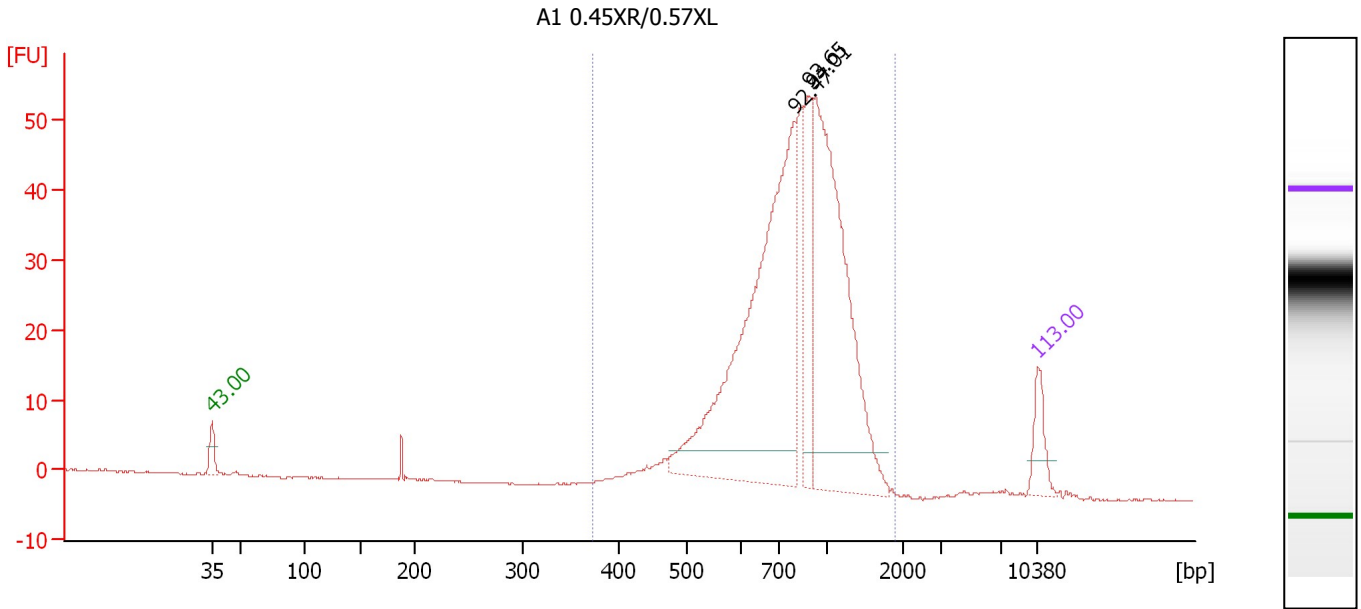
**Peak table for Ladder**

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	45.38
3	100	150.00	2,272.7	Ladder Peak	50.92
4	150	150.00	1,515.2	Ladder Peak	55.64
5	200	150.00	1,136.4	Ladder Peak	60.26
6	300	150.00	757.6	Ladder Peak	69.37
7	400	150.00	568.2	Ladder Peak	77.47
8	500	150.00	454.5	Ladder Peak	83.20
9	600	150.00	378.8	Ladder Peak	87.82
10	700	150.00	324.7	Ladder Peak	91.02
11	1,000	150.00	227.3	Ladder Peak	95.10
12	2,000	150.00	113.6	Ladder Peak	101.60
13	3,000	150.00	75.8	Ladder Peak	104.85
14	7,000	150.00	32.5	Ladder Peak	109.89
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : A1 0.45XR/0.57XL**

Number of peaks found: 3                      Corr. Area 1: 562.6  
 Noise: 0.1

**Peak table for sample 1 : A1 0.45XR/0.57XL**

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	806	1,405.59	2,640.9		92.47
3	893	280.56	476.0		93.65
4	920	1,046.10	1,723.5		94.01
5	10,380	75.00	10.9	Upper Marker	113.00

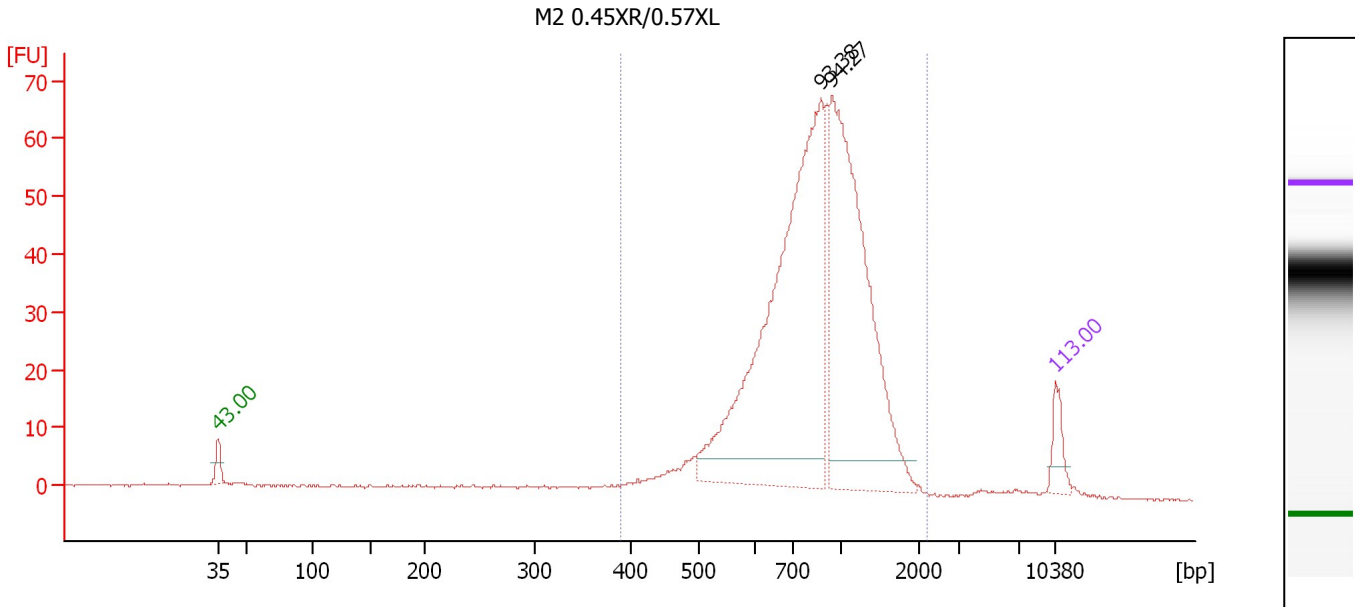
**Region table for sample 1 : A1 0.45XR/0.57XL**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
372	1,900	853	562.6	6,179.9	3,125.40	99	30.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : M2 0.45XR/0.57XL**

Number of peaks found: 2                      Corr. Area 1: 707.3  
 Noise: 0.1

**Peak table for sample 2 : M2 0.45XR/0.57XL**

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	874	1,932.47	3,351.8		93.38
3	939	1,419.05	2,289.2		94.27
4	10,380	75.00	10.9	Upper Marker	113.00

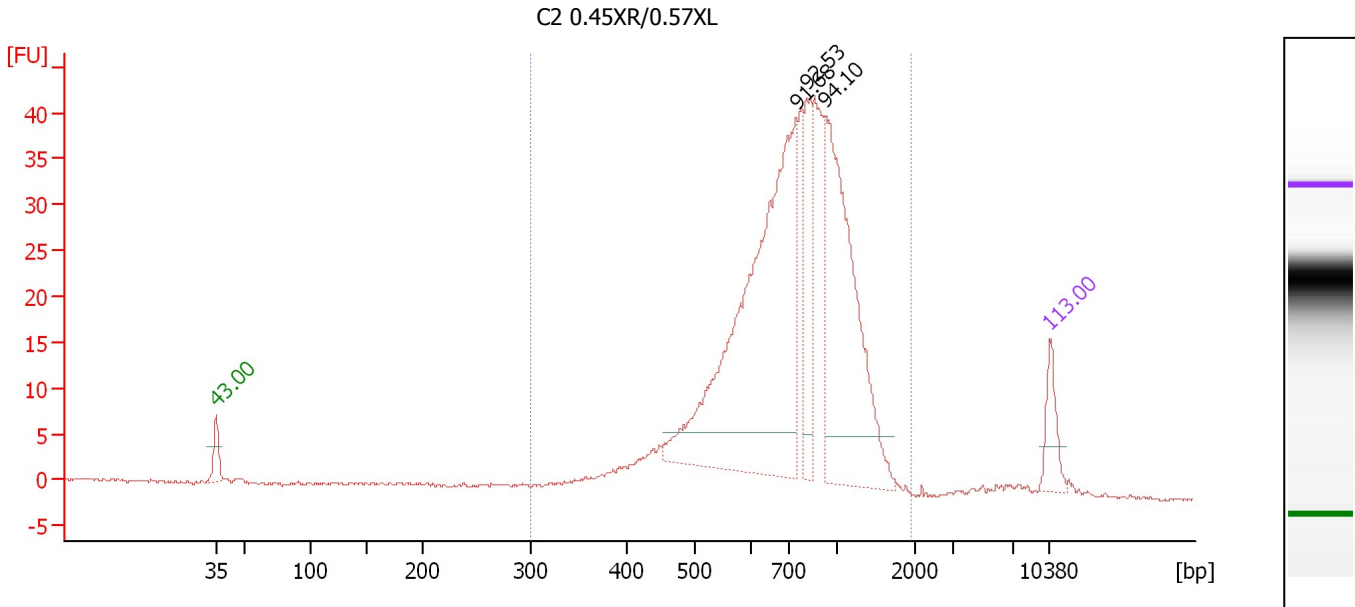
**Region table for sample 2 : M2 0.45XR/0.57XL**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
389	2,215	898	707.3	7,460.8	3,904.92	92	33.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : C2 0.45XR/0.57XL**

Number of peaks found: 3                      Corr. Area 1: 506.8  
 Noise: 0.2

**Peak table for sample 3 : C2 0.45XR/0.57XL**

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	748	1,415.83	2,866.4		91.68
3	811	211.75	395.6		92.53
4	926	783.03	1,280.6		94.10
5	10,380	75.00	10.9	Upper Marker	113.00

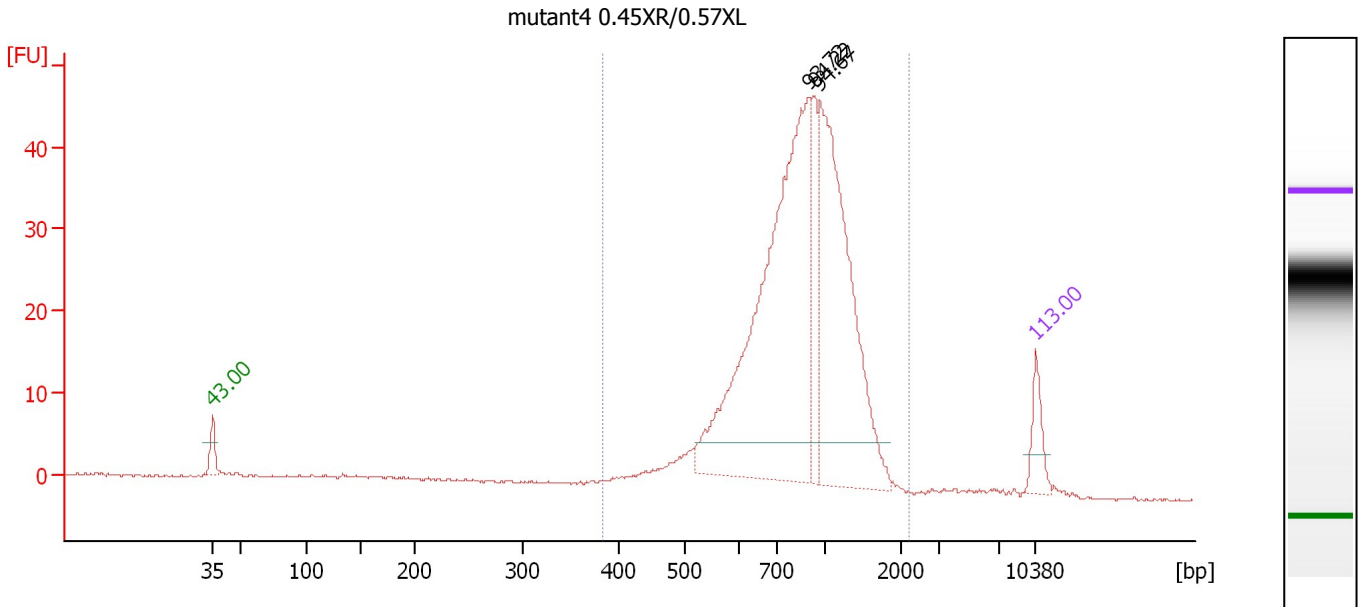
**Region table for sample 3 : C2 0.45XR/0.57XL**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
300	1,954	799	506.8	7,155.0	3,323.09	97	32.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : mutant4 0.45XR/0.57XL**

Number of peaks found: 3    Corr. Area 1: 475.2  
 Noise: 0.2

**Peak table for sample 4 : mutant4 0.45XR/0.57XL**

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	898	1,489.68	2,512.4		93.72
3	935	186.04	301.4		94.22
4	969	954.88	1,493.8		94.67
5	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : mutant4 0.45XR/0.57XL**

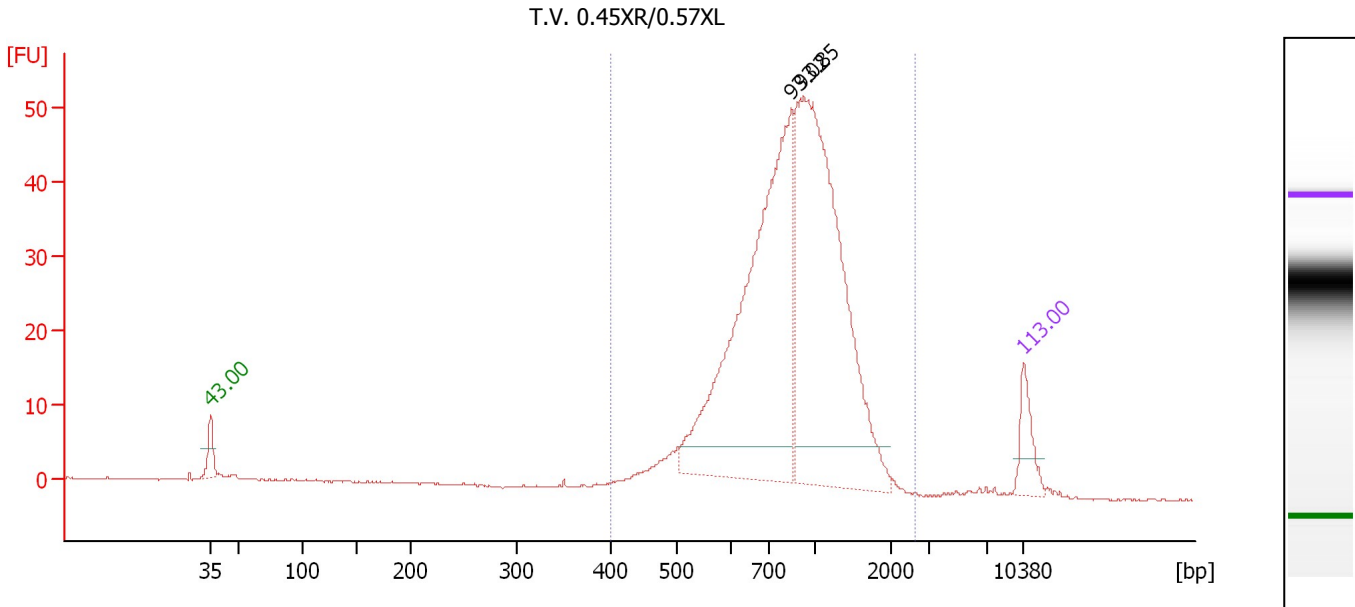
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
384	2,181	900	475.2	5,804.8	3,063.45	93	32.1



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : T.V. 0.45XR/0.57XL**

Number of peaks found: 2                      Corr. Area 1: 573.1  
 Noise: 0.1

**Peak table for sample 5 : T.V. 0.45XR/0.57XL**

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	847	1,302.92	2,331.1		93.02
3	908	1,301.38	2,172.2		93.85
4	10,380	75.00	10.9	Upper Marker	113.00

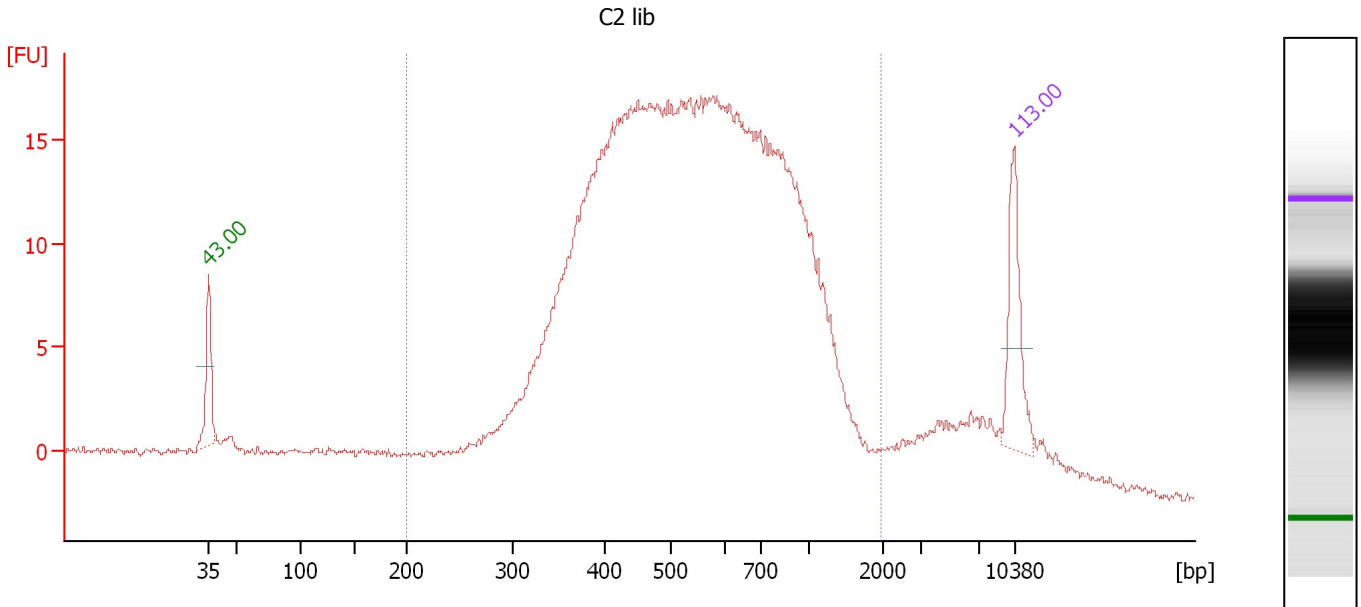
**Region table for sample 5 : T.V. 0.45XR/0.57XL**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
401	2,636	916	573.1	5,455.0	2,891.42	96	35.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : C2 lib**

Number of peaks found: 0                      Corr. Area 1: 493.0  
 Noise: 0.2

**Peak table for sample 6 : C2 lib**

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

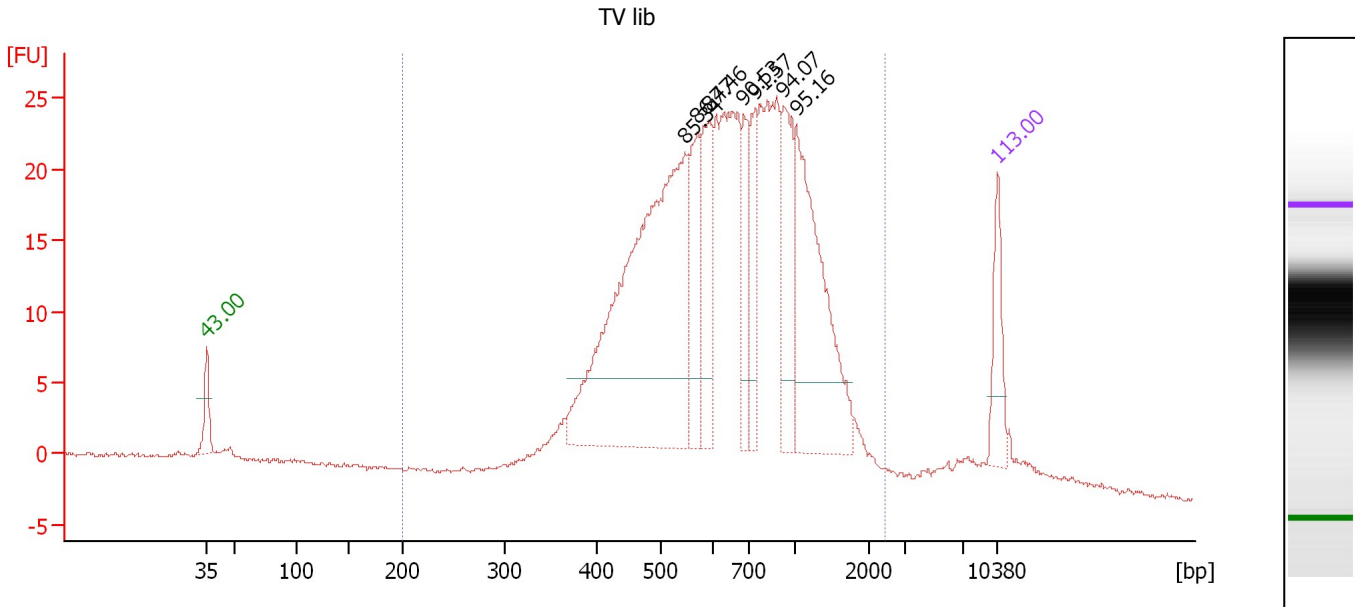
**Region table for sample 6 : C2 lib**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,960	602	493.0	10,098.2	3,302.04	92	44.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : TV lib**

Number of peaks found: 7                      Corr. Area 1: 554.7  
 Noise: 0.1

**Peak table for sample 7 : TV lib**

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	546	970.49	2,691.3		85.34
3	571	167.64	444.9		86.47
4	592	171.21	438.0		87.46
5	685	106.66	236.1		90.53
6	740	98.26	201.1		91.57
7	924	162.42	266.2		94.07
8	1,009	376.73	565.7		95.16
9	10,380	75.00	10.9	Upper Marker	113.00

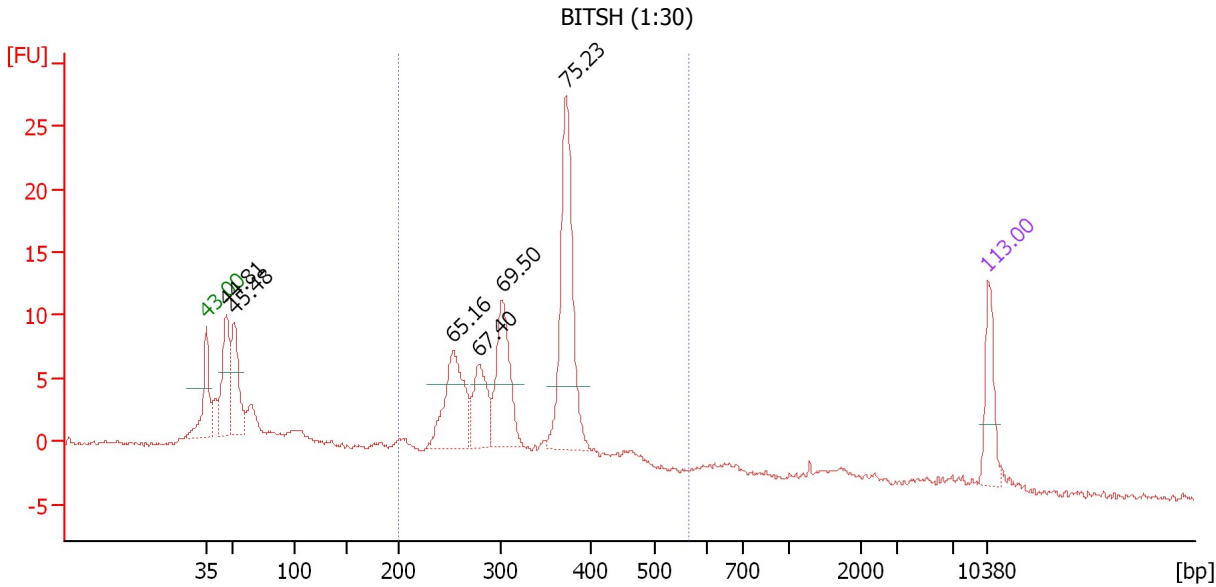
**Region table for sample 7 : TV lib**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	2,434	743	554.7	8,489.0	3,411.14	94	45.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : BITSH (1:30)**

Number of peaks found: 6                      Corr. Area 1: 151.9  
 Noise: 0.2

**Peak table for sample 8 : BITSH (1:30)**

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	46	201.68	6,581.2		44.81
3	51	177.36	5,277.0		45.48
4	254	230.75	1,377.9		65.16
5	278	126.94	690.9		67.40
6	302	218.09	1,095.6		69.50
7	372	392.13	1,595.8		75.23
8	10,380	75.00	10.9	Upper Marker	113.00

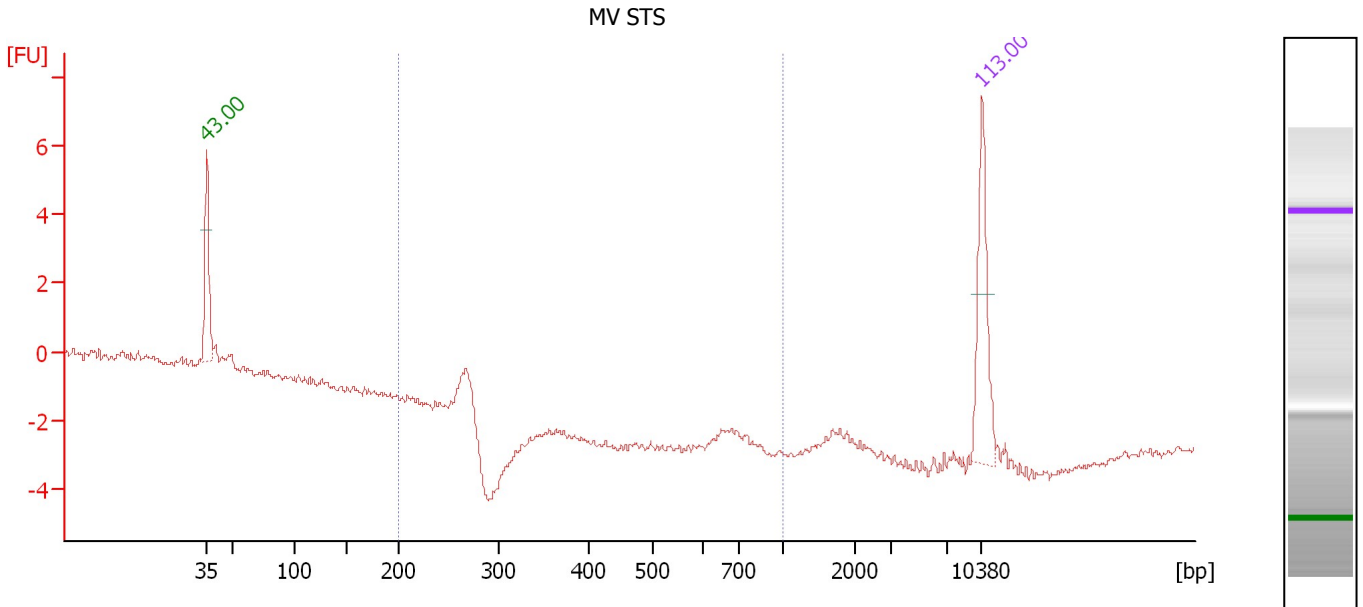
**Region table for sample 8 : BITSH (1:30)**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	566	327	151.9	6,591.6	1,356.85	60	19.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : MV STS**

Number of peaks found: 0                      Corr. Area 1: 0.4  
 Noise: 0.1

**Peak table for sample 9 : MV STS**

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

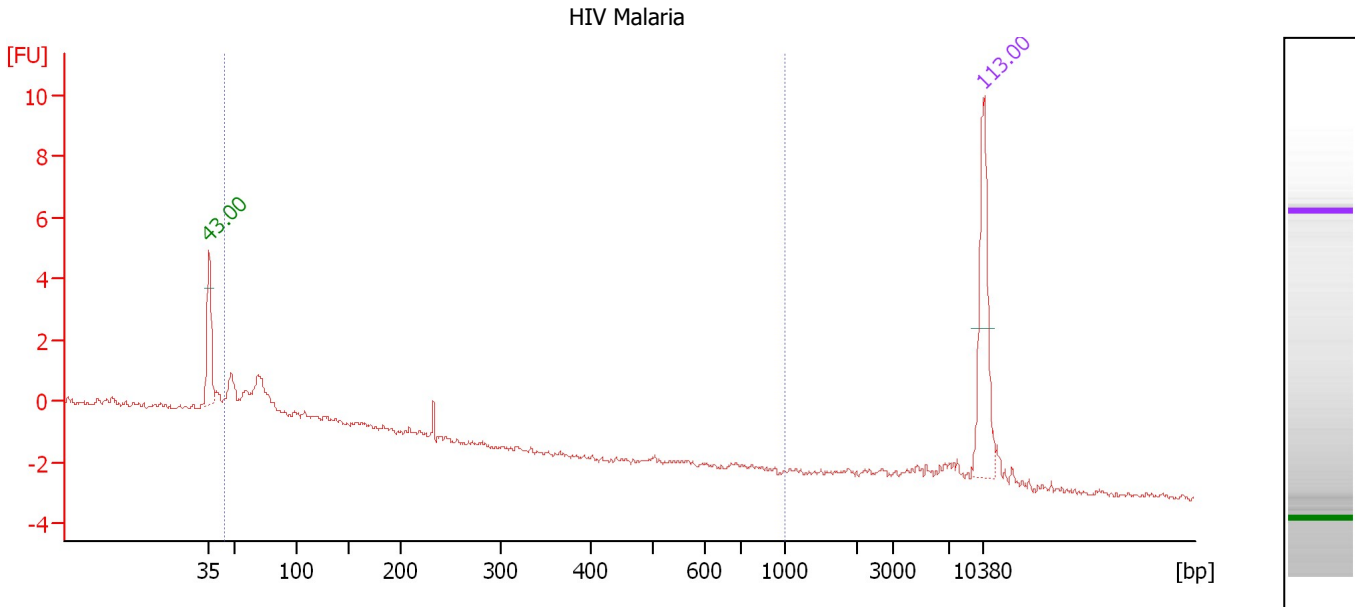
**Region table for sample 9 : MV STS**

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	267	0.4	33.9	5.96	30	1.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : HIV Malaria**

Number of peaks found: 0                      Corr. Area 1: 13.7  
 Noise: 0.1

**Peak table for sample 10 : HIV Malaria**

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

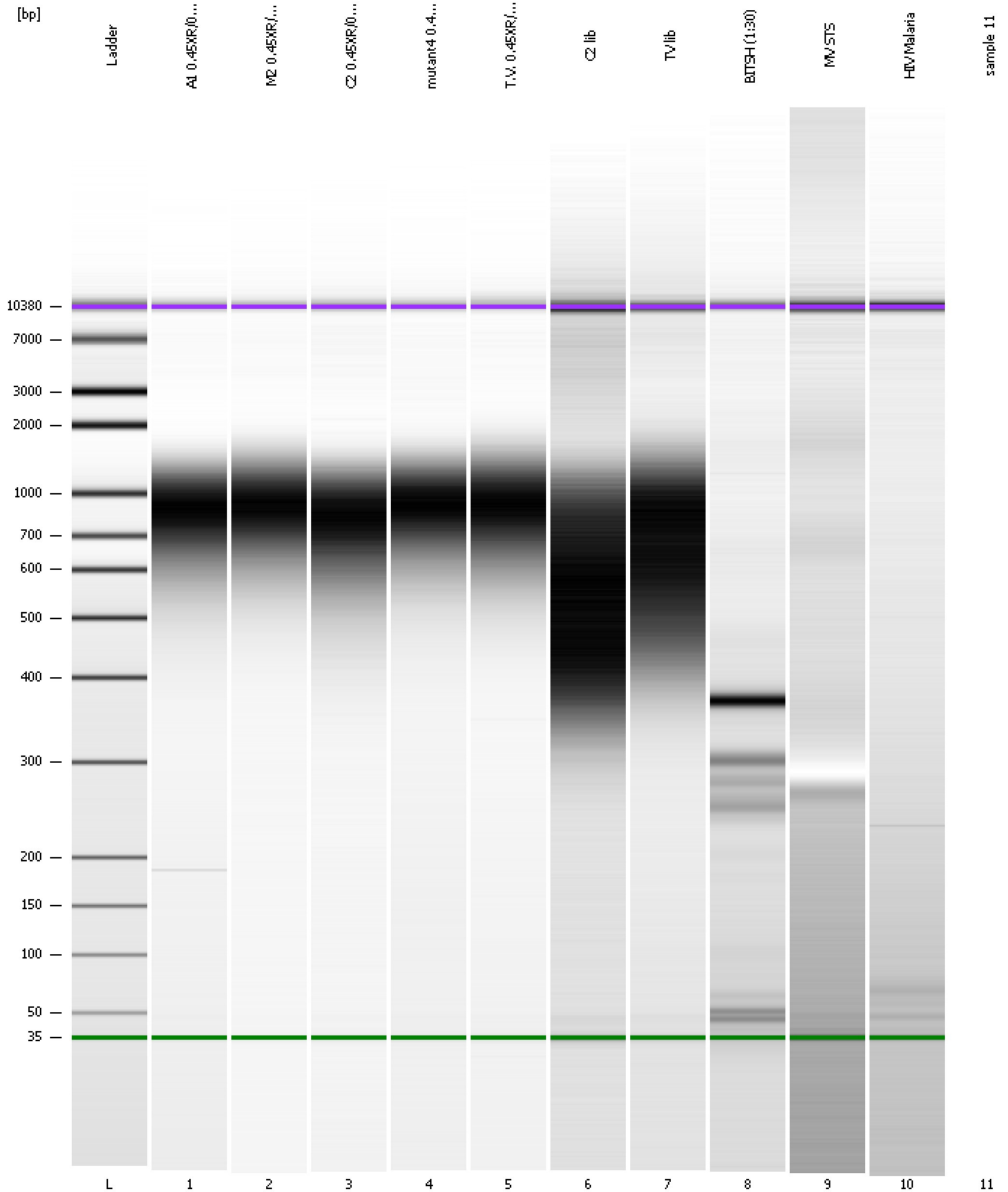
**Region table for sample 10 : HIV Malaria**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
43	1,000	88	13.7	4,499.4	213.79	60	51.4

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
Modified: 3/15/2016 1:30:06 PM

**Gel Image**



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Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
Modified: 3/15/2016 1:30:06 PM

**Invalid Samples**

Sample 11 has not been run, no results available.



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-03-15\2016-03-15\_002.xad

Created: 3/15/2016 12:49:40 PM  
 Modified: 3/15/2016 1:30:06 PM

**Run Logbook**

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 11)		Instrument	Run		3/15/2016 1:28:07 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\2016-03-15\2016-03-15_002.xad)		Instrument	Run		3/15/2016 12:49:45 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/15/2016 12:49:45 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/15/2016 12:49:45 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/15/2016 12:49:45 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/15/2016 12:49:45 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/15/2016 12:49:45 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/15/2016 12:49:45 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1