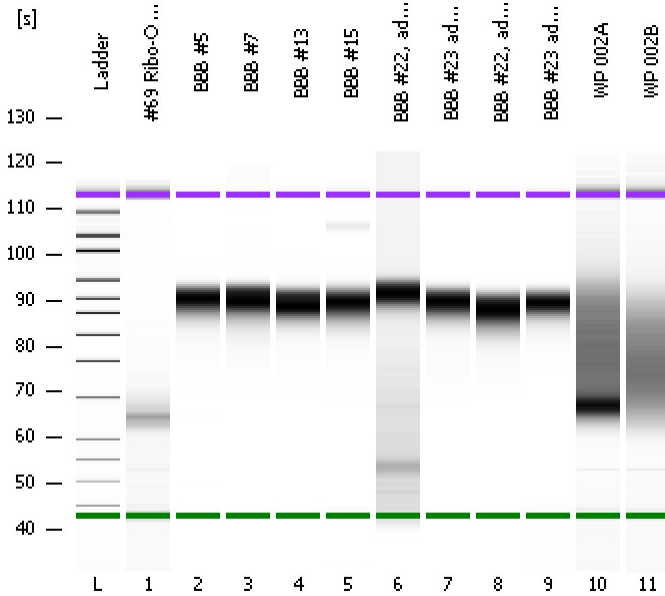


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
Modified: 6/14/2012 9:59:13 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

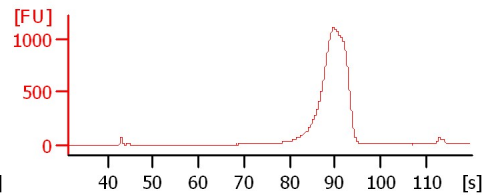
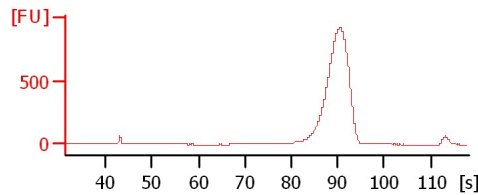
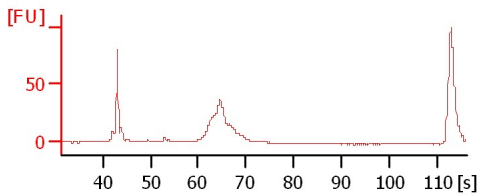
#### Chip Information:

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

#69 Ribo-O Lib 6/13/12 (Kim, H)

BBB #5

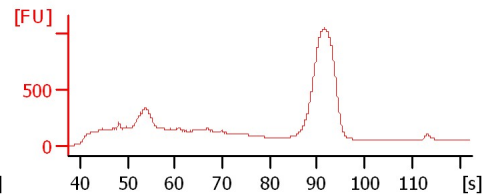
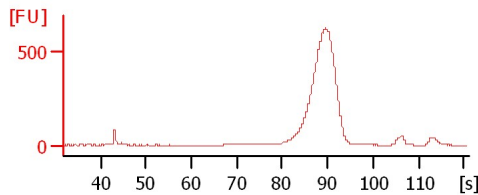
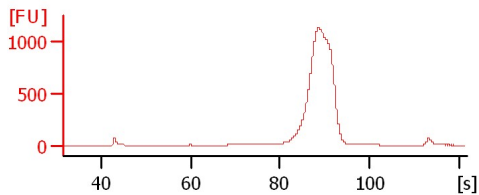
BBB #7



BBB #13

BBB #15

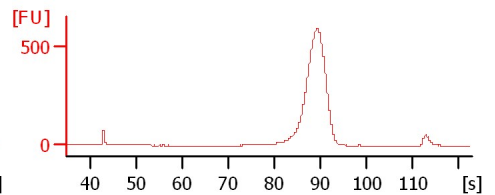
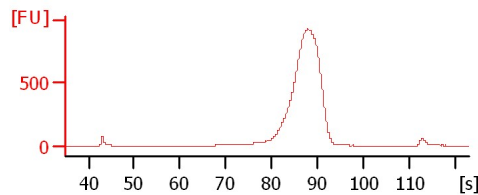
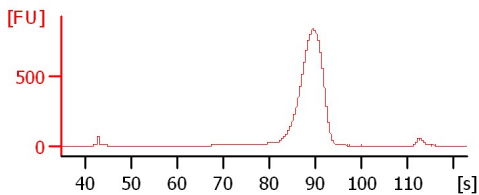
BBB #22, adp 20



BBB #23 adp 24

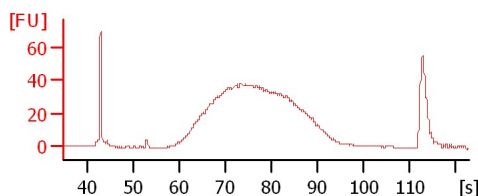
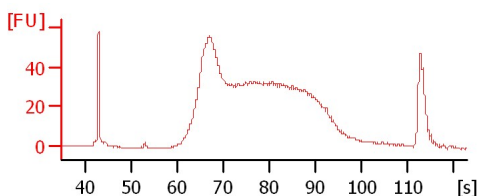
BBB #22, adp 21

BBB #23 adp 22



WP 002A

WP 002B



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
Modified: 6/14/2012 9:59:13 AM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
#69 Ribo-O Lib 6/13/12 (Kim, H)		<input type="checkbox"/>	✓			
BBB #5		<input type="checkbox"/>	✓			
BBB #7		<input type="checkbox"/>	✓			
BBB #13		<input type="checkbox"/>	✓			
BBB #15		<input type="checkbox"/>	✓			
BBB #22, adp 20		<input type="checkbox"/>	✓			
BBB #23 adp 24		<input type="checkbox"/>	✓			
BBB #22, adp 21		<input type="checkbox"/>	✓			
BBB #23 adp 22		<input type="checkbox"/>	✓			
WP 002A		<input type="checkbox"/>	✓			
WP 002B		<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\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
Modified: 6/14/2012 9:59:13 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

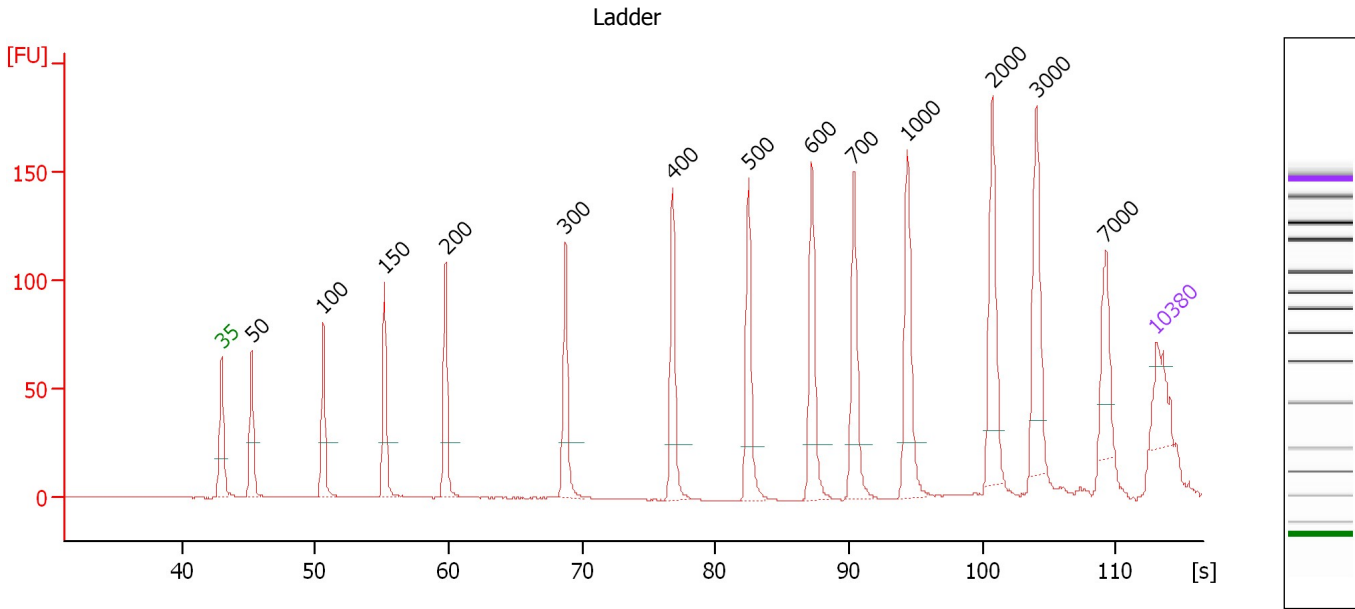
**Ladder**

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:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

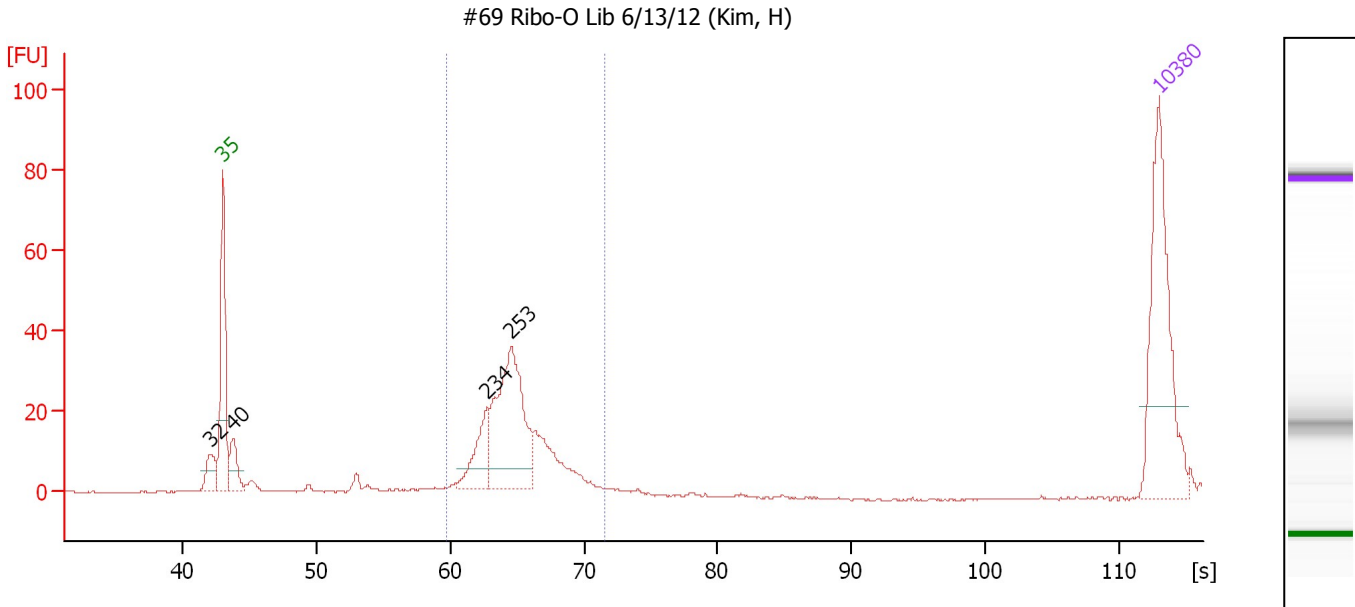
**Peak table for Ladder**

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\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : #69 Ribo-O Lib 6/13/12 (Kim, H)**

Number of peaks found: 4                      Corr. Area 1: 228.8  
 Noise: 0.2

**Peak table for sample 1 : #69 Ribo-O Lib 6/13/12 (Kim, H)**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	32	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	40	25.33	957.4	
4	234	34.58	224.2	
5	253	120.79	722.3	
6	10,380	75.00	10.9	Upper Marker

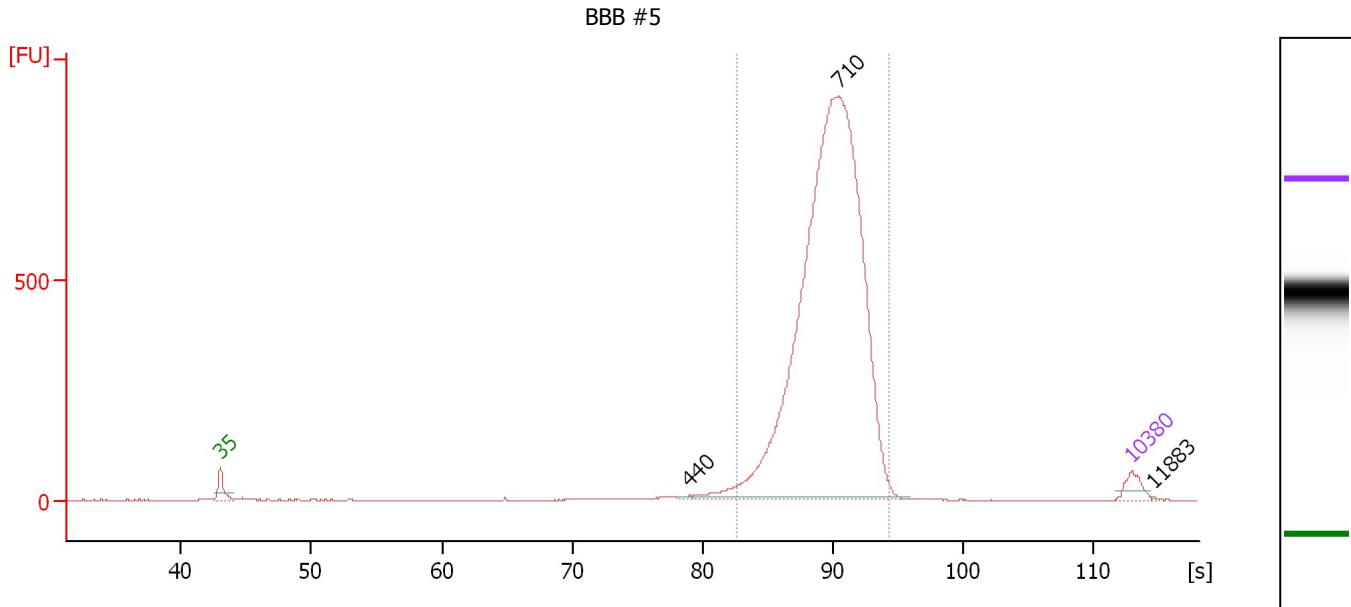
**Region table for sample 1 : #69 Ribo-O Lib 6/13/12 (Kim, H)**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
59.78	71.59	256	1,192.6	201.07	228.8 80	8.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : BBB #5**

Number of peaks found: 3                      Corr. Area 1: 5,863.1  
 Noise: 0.2

**Peak table for sample 2 : BBB #5**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	440	11.72	40.4	
3	710	6,585.93	14,051.3	
4	10,380	75.00	10.9	Upper Marker
5	11,883	0.00	0.0	

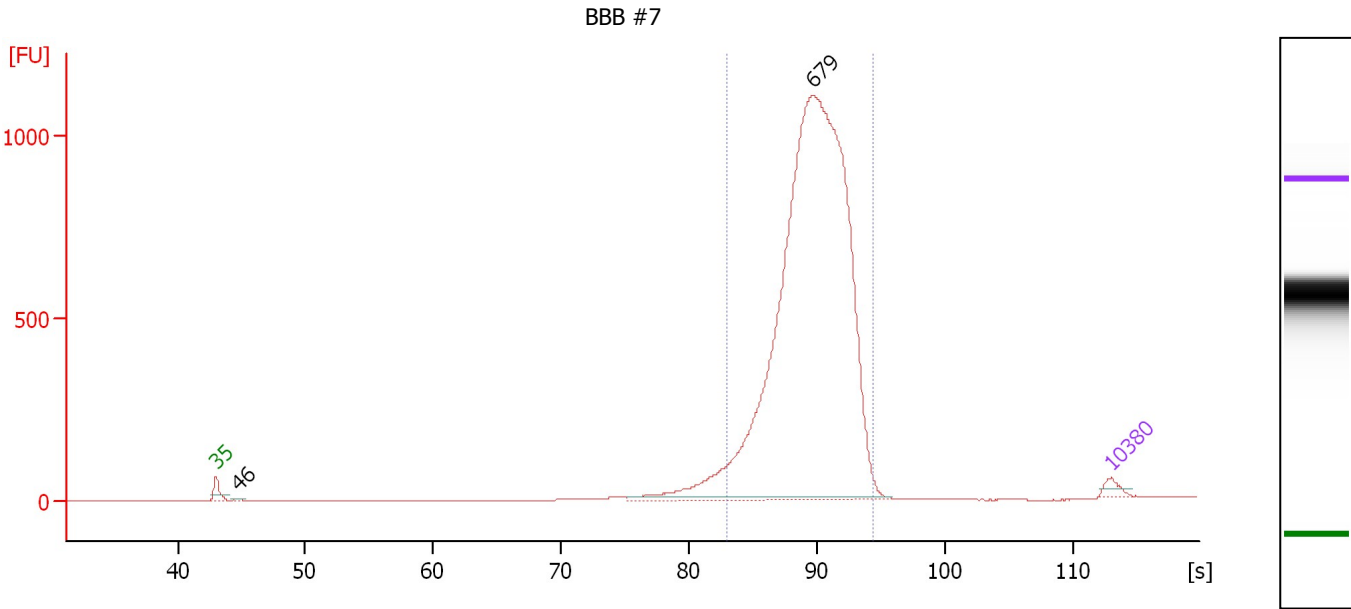
**Region table for sample 2 : BBB #5**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
82.70	94.37	706	14,085.9	6,439.04	5,863.1 96	13.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : BBB #7**

Number of peaks found: 2                      Corr. Area 1: 7,997.6  
 Noise: 0.1

**Peak table for sample 3 : BBB #7**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	31.33	1,022.8	
3	679	12,934.45	28,877.4	
4	10,380	75.00	10.9	Upper Marker

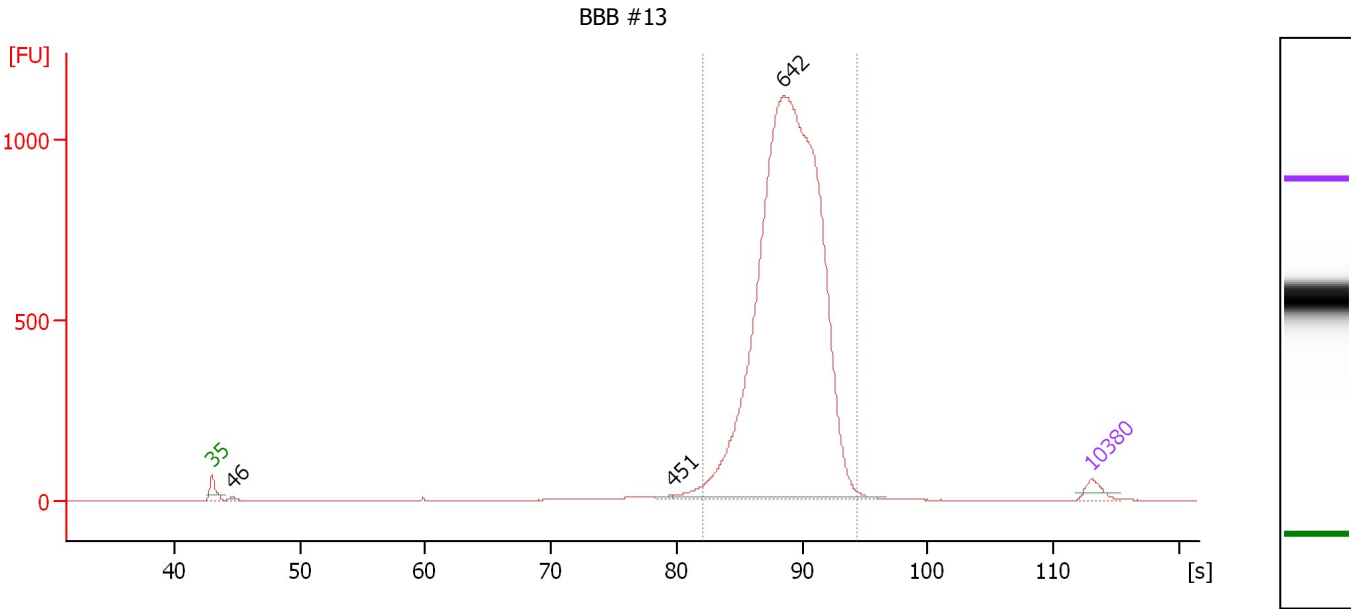
**Region table for sample 3 : BBB #7**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color	
82.96	94.37	704	26,758.0	12,165.42	7,997.6	96	14.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : BBB #13**

Number of peaks found: 3                      Corr. Area 1: 7,953.8  
 Noise: 0.1

**Peak table for sample 4 : BBB #13**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	23.39	769.6	
3	451	14.02	47.1	
4	642	9,133.46	21,554.0	
5	10,380	75.00	10.9	Upper Marker

**Region table for sample 4 : BBB #13**

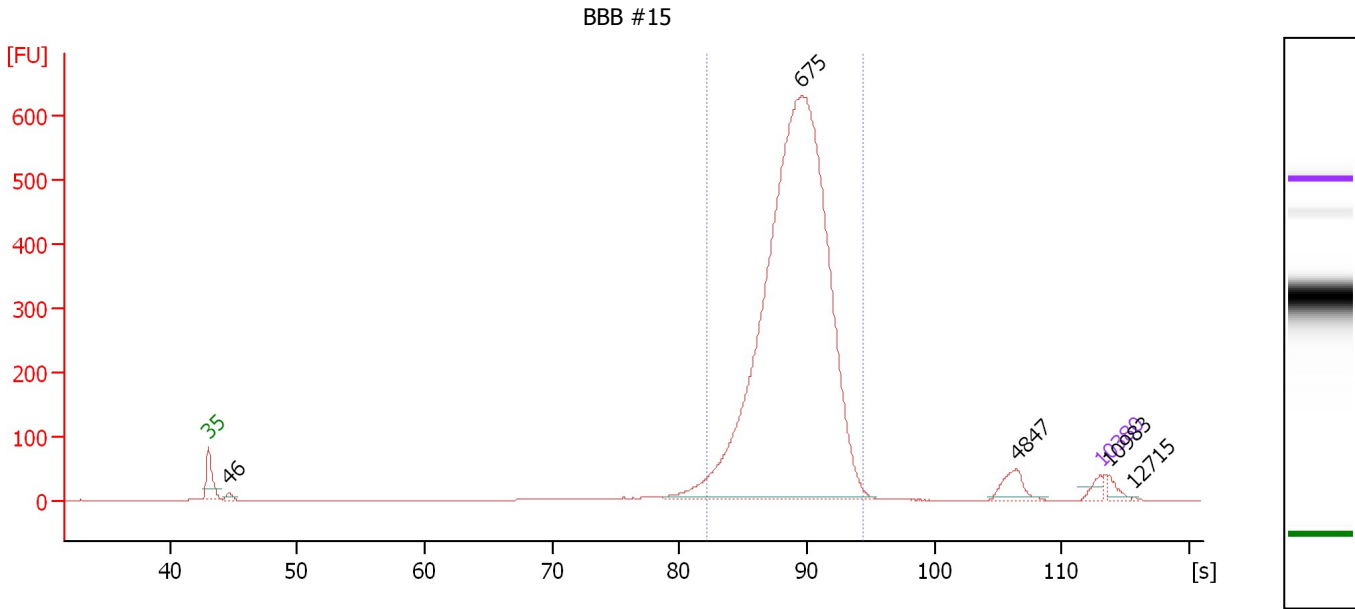
From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
82.12	94.37	671	20,888.1	9,092.00	7,953.8 97	13.2	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : BBB #15**

Number of peaks found: 5                      Corr. Area 1: 4,363.2  
 Noise: 0.2

**Peak table for sample 5 : BBB #15**

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	65.86	2,172.1	
3	675	11,227.77	25,199.9	
4	4,847	190.95	59.7	
5	10,380	75.00	10.9	Upper Marker
6	10,983	0.00	0.0	
7	12,715	0.00	0.0	

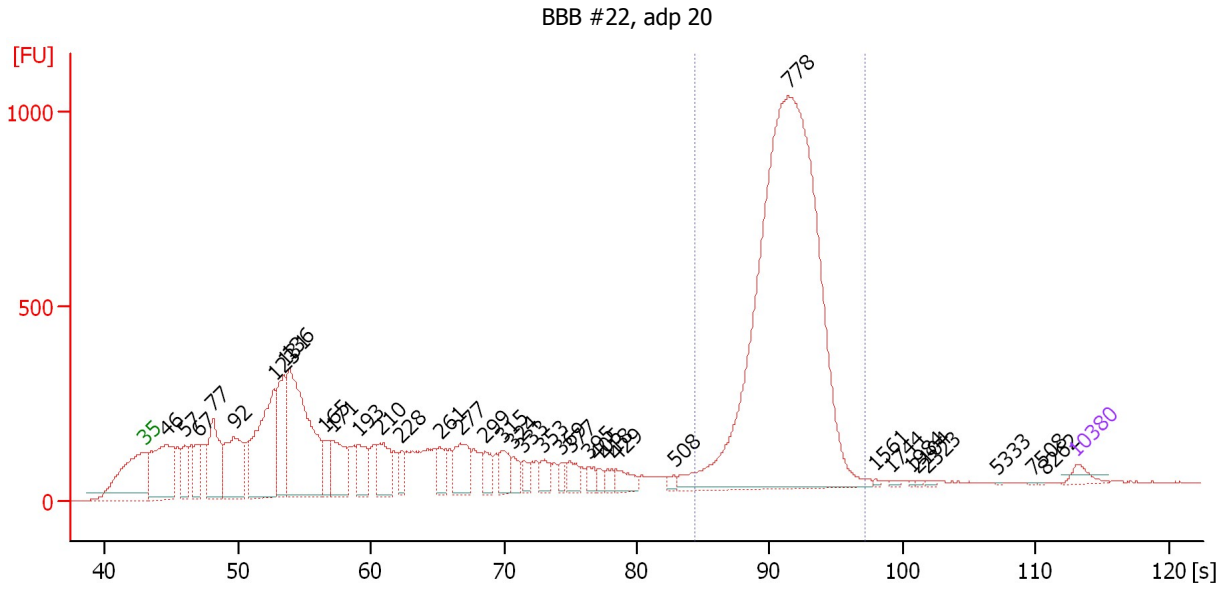
**Region table for sample 5 : BBB #15**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area % of Total	Size distribution in CV [%]	Color
82.17	94.37	674	25,377.7	11,079.17	4,363.2 93	13.7	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : BBB #22, adp 20**

Number of peaks found: 36                      Corr. Area 1: 6,876.7  
 Noise: 0.6

**Peak table for sample 6 : BBB #22, adp 20**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	1,584.17	51,919.1	
3	57	419.71	11,065.4	
4	67	478.37	10,841.9	
5	77	1,032.66	20,323.9	
6	92	1,164.67	19,260.3	
7	123	1,999.74	24,620.8	
8	131	954.51	11,007.9	
9	136	2,737.62	30,553.1	
10	165	315.27	2,901.1	
11	171	684.91	6,060.7	
12	193	451.09	3,547.2	
13	210	522.07	3,759.2	
14	228	184.96	1,227.4	
15	261	246.25	1,429.5	
16	277	492.34	2,691.8	
17	299	205.89	1,044.7	
18	315	269.86	1,296.3	
19	324	145.10	678.7	
20	333	138.17	627.9	
21	353	169.00	725.7	
22	369	93.08	381.8	
23	377	164.85	662.0	
24	395	105.78	406.0	
25	405	65.20	244.1	
26	418	79.68	288.8	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad


Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**

**... Peak table for sample 6 : BBB #22, adp 20**

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
27	429	174.22	614.7	
28	508	56.11	167.4	
29	778	8,262.12	16,095.0	
30	1,561	13.14	12.8	
31	1,744	19.31	16.8	
32	1,984	8.59	6.6	
33	2,104	9.28	6.7	
34	2,323	13.98	9.1	
35	5,333	5.13	1.5	
36	7,508	3.88	0.8	
37	8,262	3.45	0.6	
38	10,380	75.00	10.9	Upper Marker

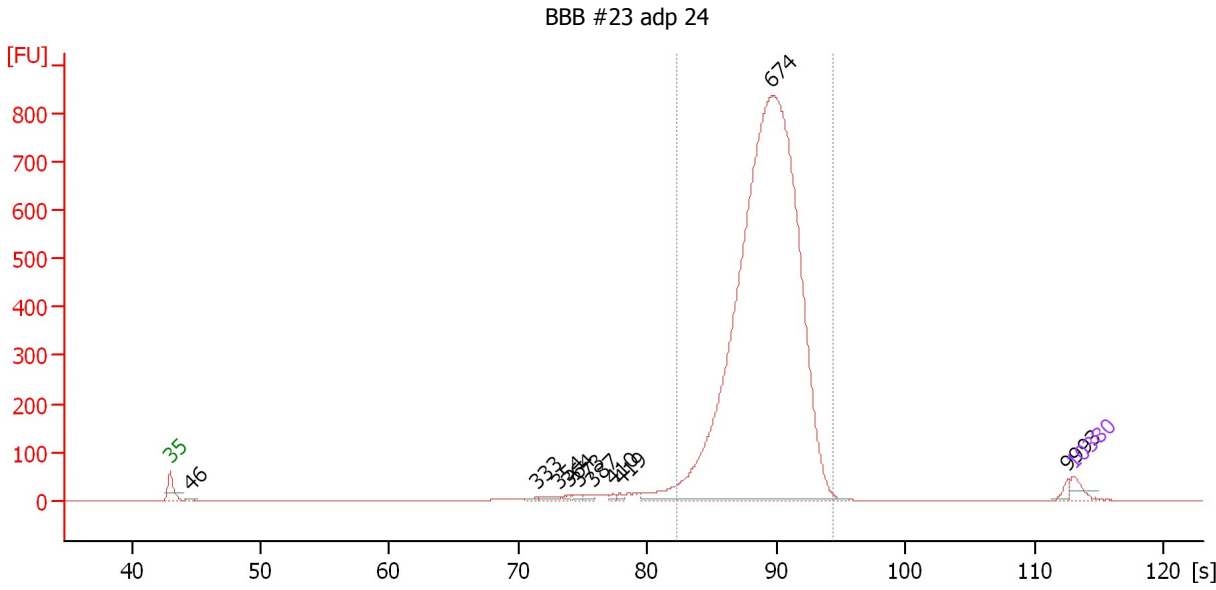
**Region table for sample 6 : BBB #22, adp 20**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area % of Total	Size distribution in CV [%]	Color
84.34	97.17	790	15,934.0	8,076.69	6,876.7 38	17.0	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : BBB #23 adp 24**

Number of peaks found: 10                      Corr. Area 1: 5,457.1  
 Noise: 0.2

**Peak table for sample 7 : BBB #23 adp 24**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	21.15	701.6	
3	333	20.50	93.2	
4	354	39.50	169.0	
5	364	21.37	88.8	
6	373	23.42	95.1	
7	387	32.98	129.1	
8	410	20.48	75.7	
9	419	20.63	74.6	
10	674	10,123.36	22,770.7	
11	9,993	31.86	4.8	
12	10,380	75.00	10.9	Upper Marker

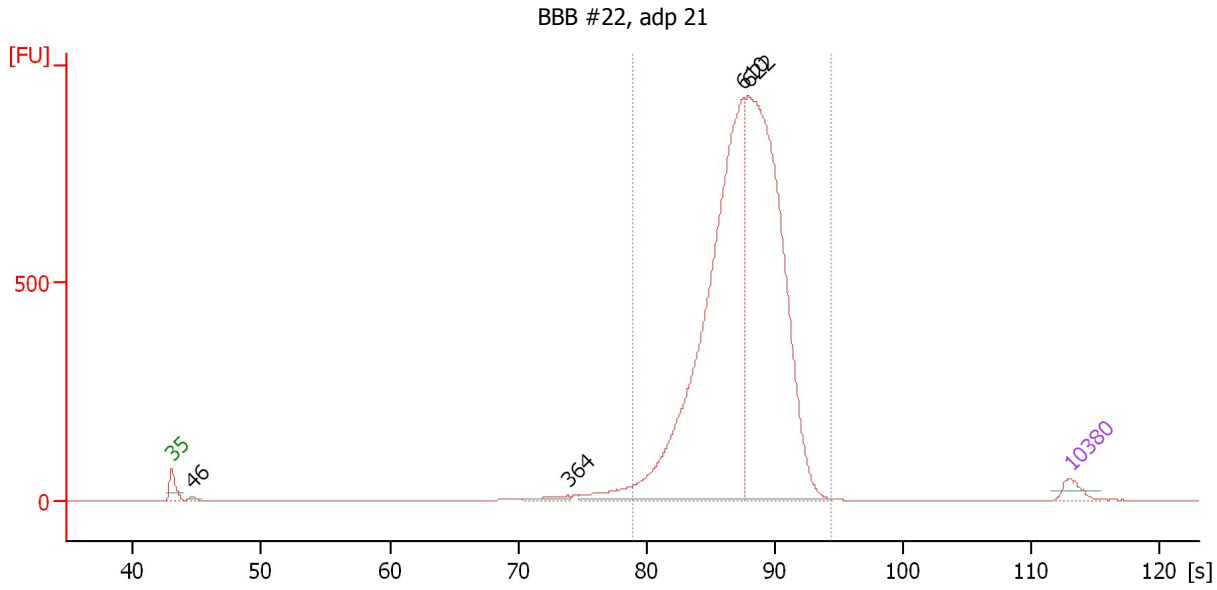
**Region table for sample 7 : BBB #23 adp 24**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
82.27	94.37	680	22,532.9	9,937.49	5,457.1 95	13.1	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : BBB #22, adp 21**

Number of peaks found: 4                      Corr. Area 1: 7,500.4  
 Noise: 0.2

**Peak table for sample 8 : BBB #22, adp 21**

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	31.72	1,045.5	
3	364	54.05	225.1	
4	610	4,514.42	11,204.3	
5	622	4,392.12	10,706.9	
6	10,380	75.00	10.9	Upper Marker

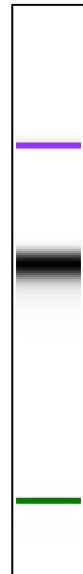
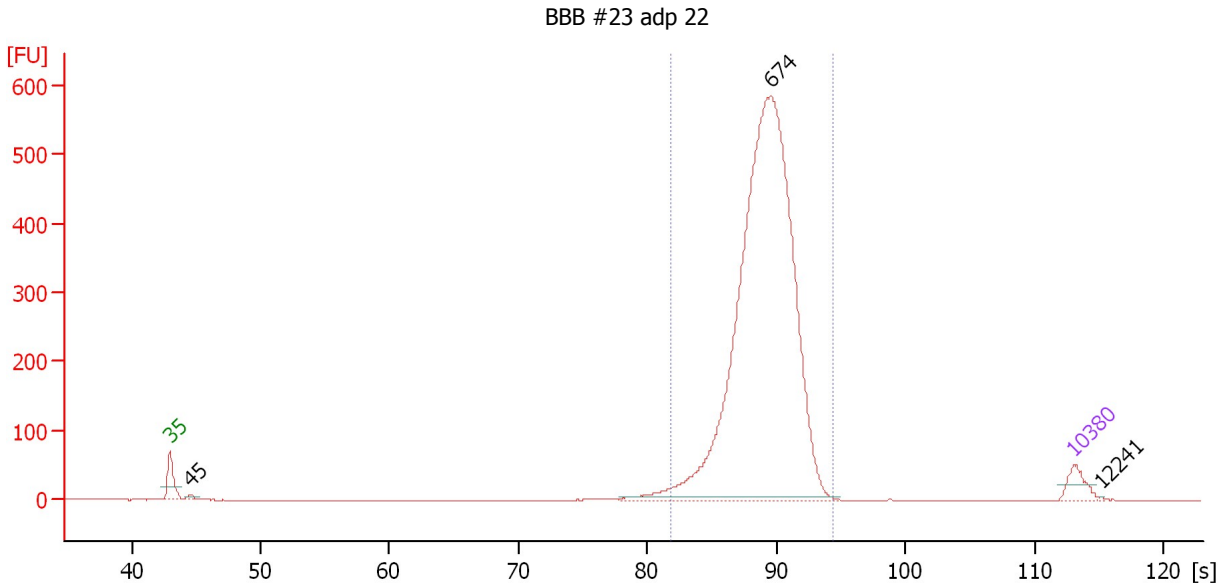
**Region table for sample 8 : BBB #22, adp 21**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area % of Total	Size distribution in CV [%]	Color
78.97	94.37	621	22,511.7	9,057.40	7,500.4 97	12.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : BBB #23 adp 22**

Number of peaks found: 3                      Corr. Area 1: 3,353.3  
 Noise: 0.1

**Peak table for sample 9 : BBB #23 adp 22**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	45	25.19	840.8	
3	674	4,450.28	10,003.3	
4	10,380	75.00	10.9	Upper Marker
5	12,241	0.00	0.0	

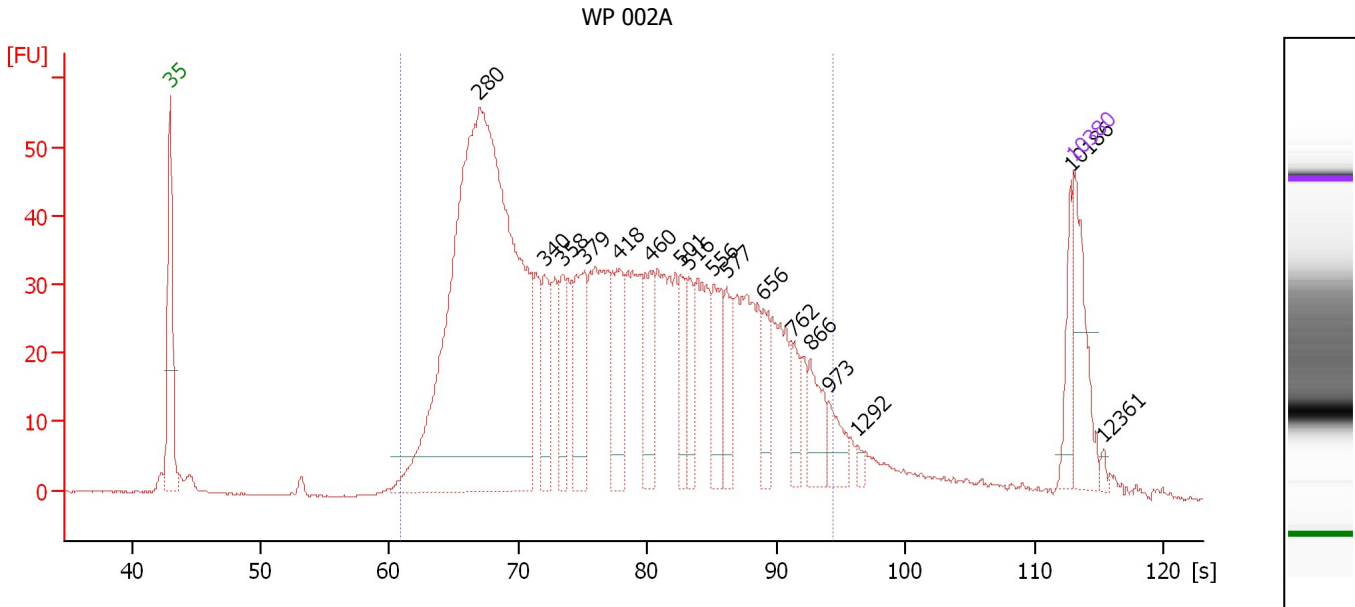
**Region table for sample 9 : BBB #23 adp 22**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
81.80	94.37	670	10,063.6	4,391.63	3,353.3 98	11.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : WP 002A**

Number of peaks found: 17      Corr. Area 1: 1,362.4  
 Noise: 0.1

**Peak table for sample 10 : WP 002A**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	280	1,333.23	7,217.6	
3	340	80.31	357.7	
4	358	59.19	250.5	
5	379	109.77	439.4	
6	418	96.27	349.1	
7	460	75.84	249.8	
8	501	53.26	161.2	
9	516	47.59	139.7	
10	556	69.05	188.3	
11	577	55.79	146.6	
12	656	45.80	105.8	
13	762	35.12	69.8	
14	866	50.38	88.1	
15	973	35.34	55.0	
16	1,292	6.58	7.7	
17	10,186	36.25	5.4	
18	10,380	75.00	10.9	Upper Marker
19	12,361	0.00	0.0	

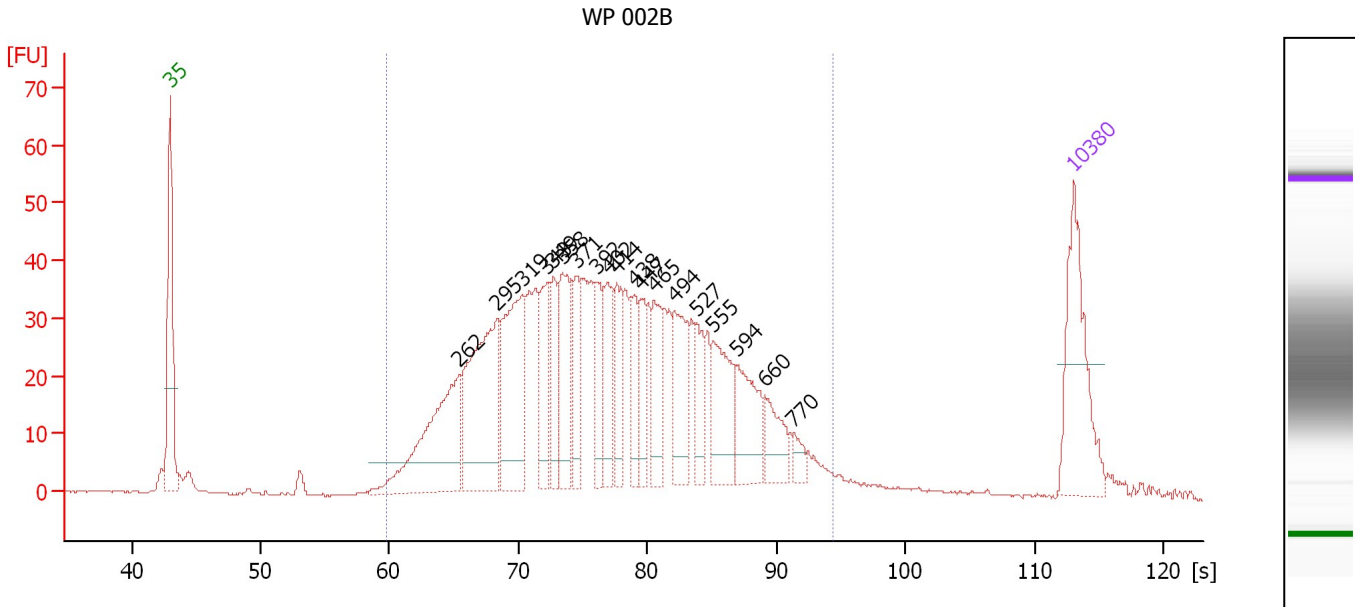
**Region table for sample 10 : WP 002A**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.78	94.37	440	13,288.3	3,225.41	1,362.4 92	37.7	■

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : WP 002B**

Number of peaks found: 19      Corr. Area 1: 1,158.7  
 Noise: 0.2

**Peak table for sample 11 : WP 002B**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	262	152.52	880.7	
3	295	167.88	860.8	
4	319	126.80	601.5	
5	343	55.44	244.7	
6	349	40.34	175.0	
7	358	68.09	288.2	
8	371	44.83	183.1	
9	392	38.71	149.8	
10	402	48.22	181.7	
11	414	36.79	134.5	
12	438	31.72	109.7	
13	447	31.06	105.4	
14	465	43.47	141.6	
15	494	58.32	179.0	
16	527	29.22	84.0	
17	555	62.23	169.9	
18	594	54.25	138.4	
19	660	31.15	71.5	
20	770	10.29	20.2	
21	10,380	75.00	10.9	Upper Marker

**Region table for sample 11 : WP 002B**

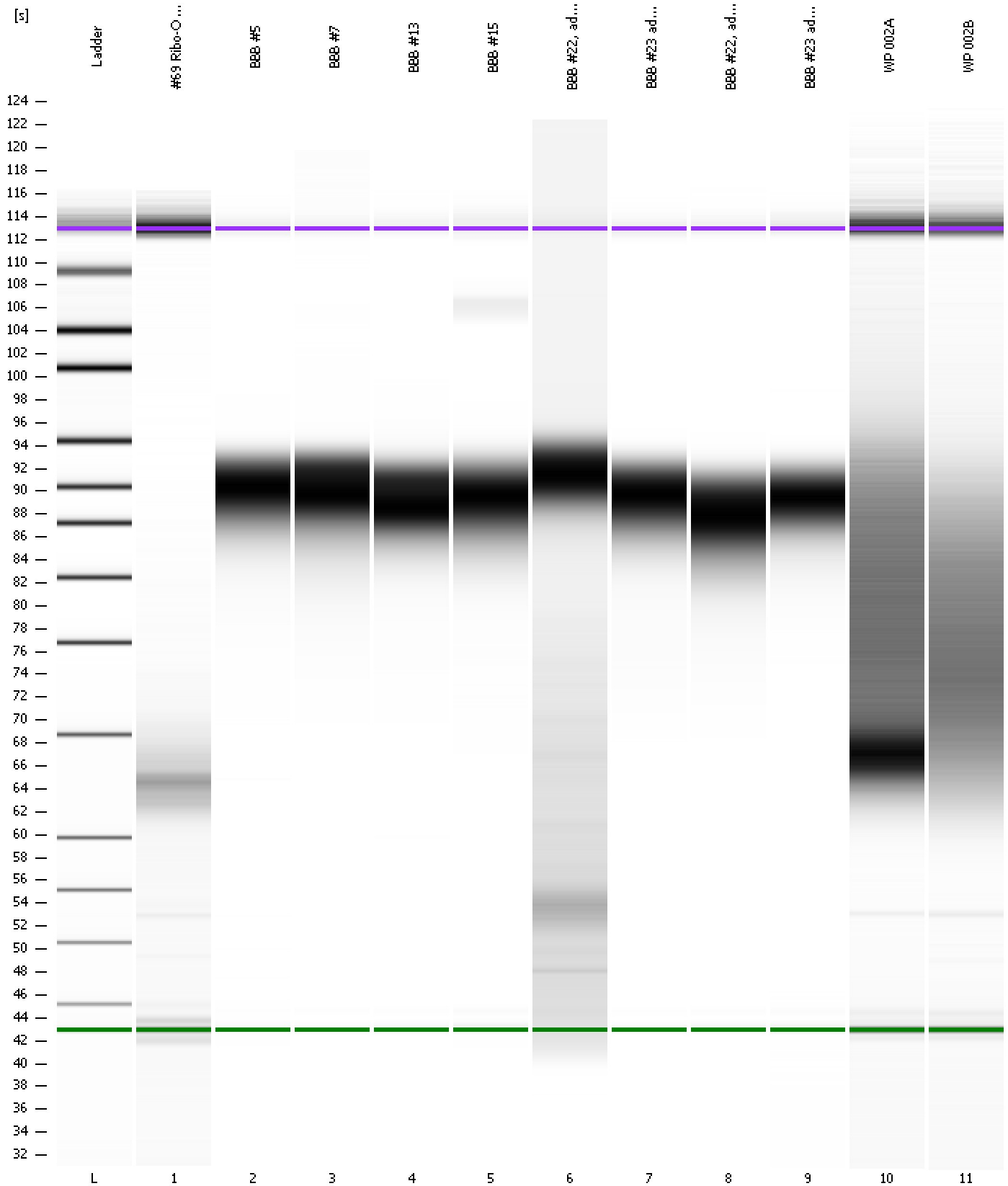
From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
59.78	94.37	426	6,394.3	1,567.81	1,158.7 95	32.4	Blue



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
Modified: 6/14/2012 9:59:13 AM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-06-14\2012-06-14\_002.xad

Created: 6/14/2012 9:15:17 AM  
 Modified: 6/14/2012 9:59:13 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		6/14/2012 9:56:37 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2012-06-14\2012-06-14_002.xad)		Instrument	Run		6/14/2012 9:15:22 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		6/14/2012 9:15:22 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		6/14/2012 9:15:22 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		6/14/2012 9:15:22 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		6/14/2012 9:15:22 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		6/14/2012 9:15:22 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		6/14/2012 9:15:22 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1