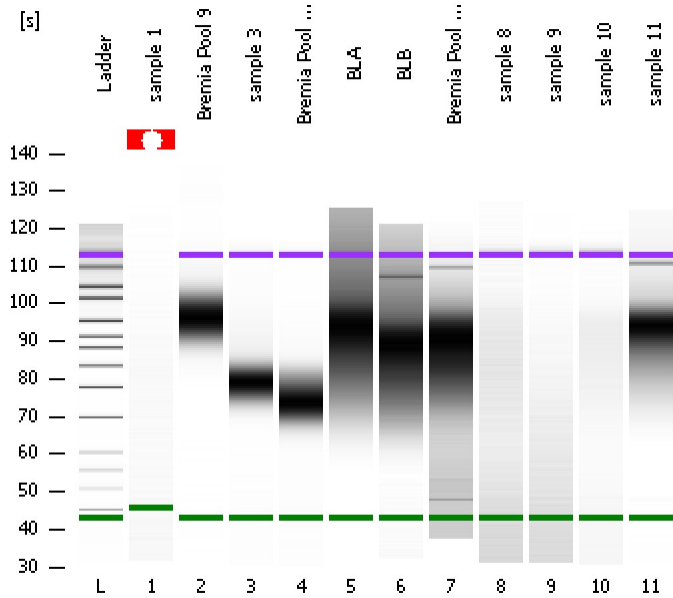


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
Modified: 7/24/2013 2:39:50 PM

### Electrophoresis File Run Summary



#### Instrument Information:

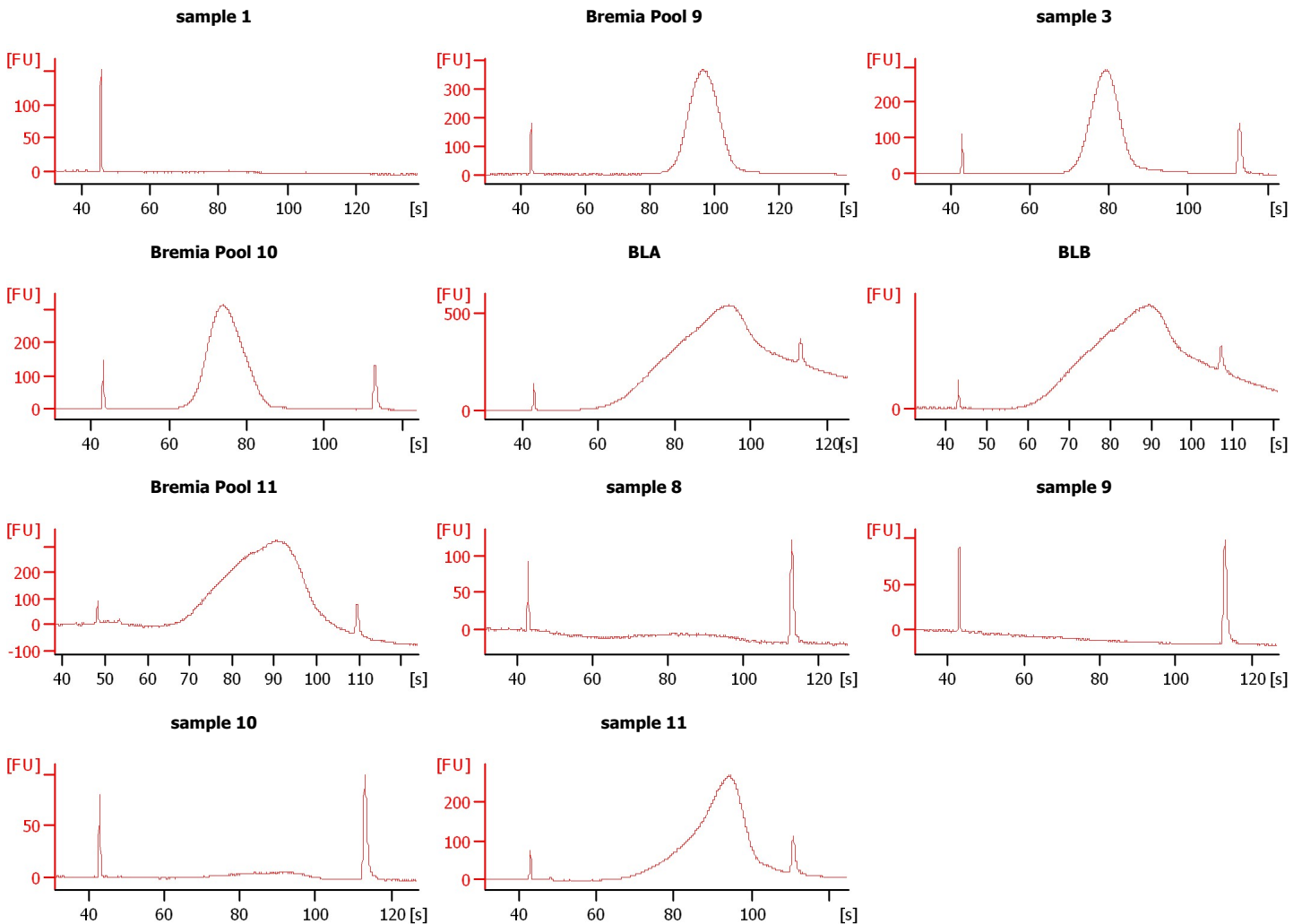
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

#### 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:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 1		<input type="checkbox"/>	✓			
Bremia Pool 9		<input type="checkbox"/>	✓			
sample 3		<input type="checkbox"/>	✓			
Bremia Pool 10		<input type="checkbox"/>	✓			
BLA		<input type="checkbox"/>	✓			
BLB		<input type="checkbox"/>	✓			
Bremia Pool 11		<input type="checkbox"/>	✓			
sample 8		<input type="checkbox"/>	✓			
sample 9		<input type="checkbox"/>	✓			
sample 10		<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:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
Modified: 7/24/2013 2:39:50 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

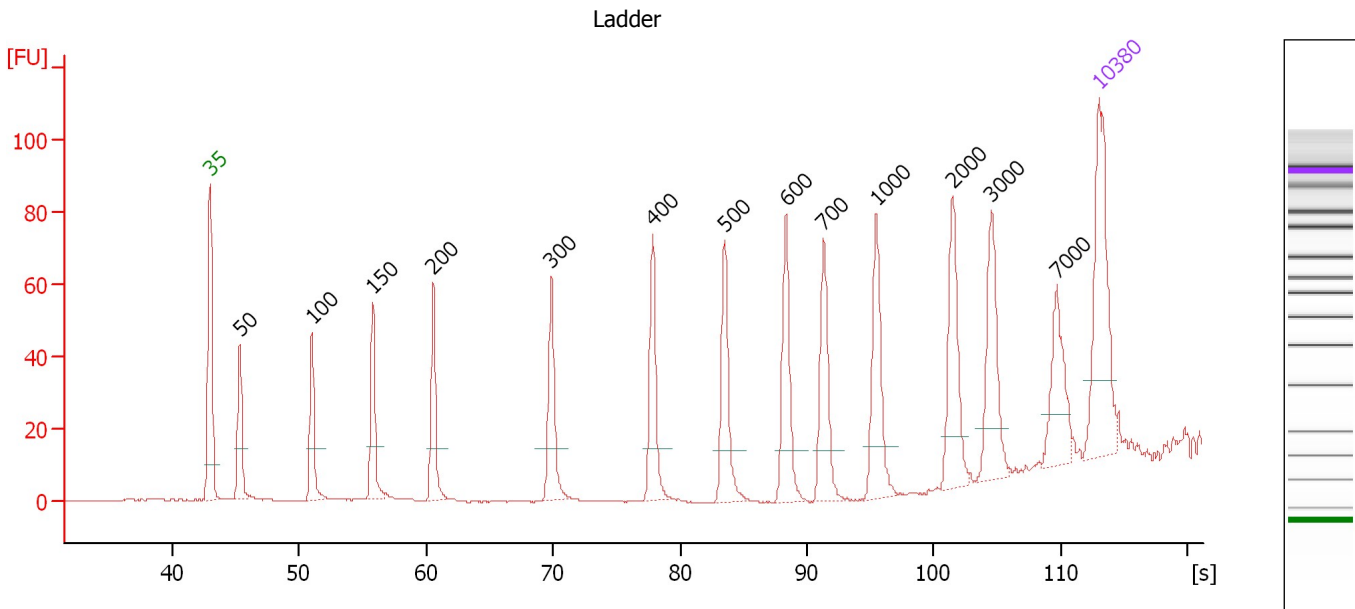
**Ladder**

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:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

**Peak table for Ladder**

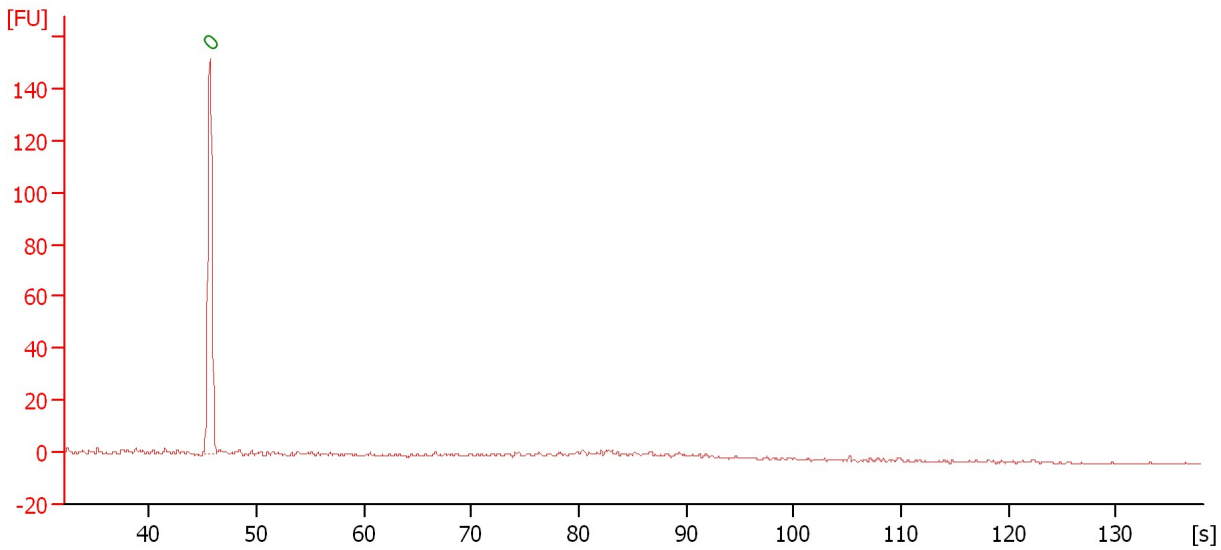
Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	150.00	4,545.5	Ladder Peak
3	100	150.00	2,272.7	Ladder Peak
4	150	150.00	1,515.2	Ladder Peak
5	200	150.00	1,136.4	Ladder Peak
6	300	150.00	757.6	Ladder Peak
7	400	150.00	568.2	Ladder Peak
8	500	150.00	454.5	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\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**

sample 1



**Overall Results for sample 1 : sample 1**

Number of peaks found: 0      Noise: 0.2

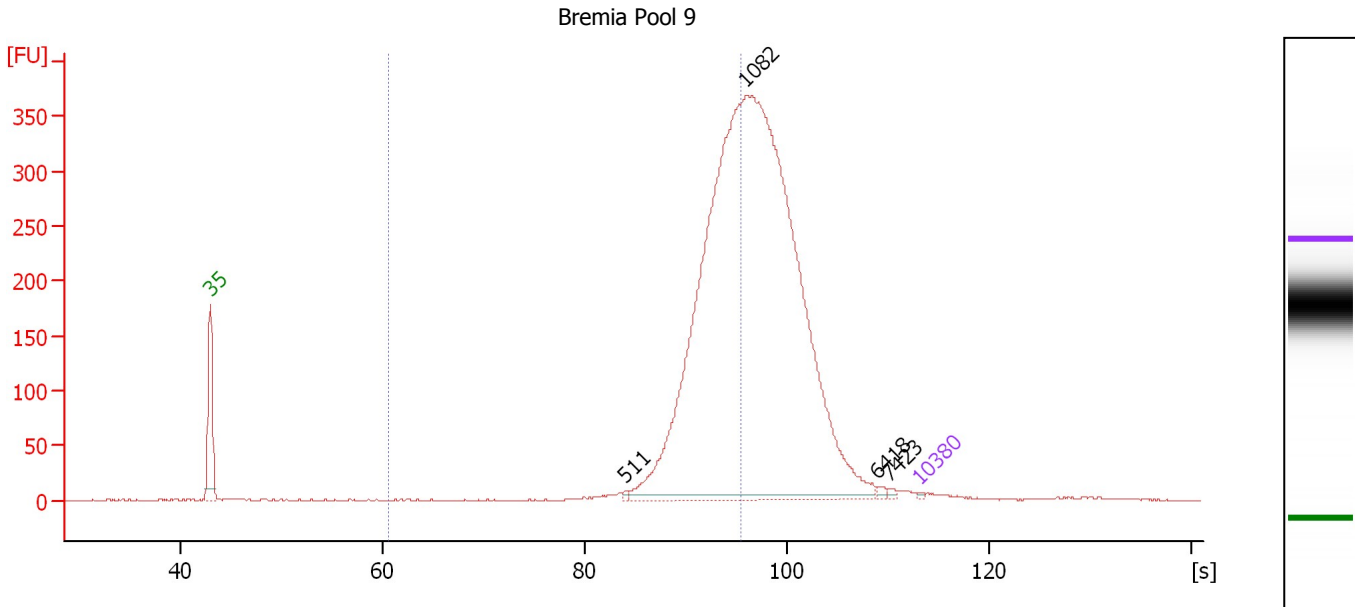
**Peak table for sample 1 : sample 1**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	0	0.00	0.0	Lower Marker

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Bremia Pool 9**

Number of peaks found: 4                      Corr. Area 1: 1,768.7  
 Noise: 0.5

**Peak table for sample 2 : Bremia Pool 9**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	511	159.76	474.0	
3	1,082	91,146.29	127,672.4	
4	6,418	211.48	49.9	
5	7,423	169.03	34.5	
6	10,380	75.00	10.9	Upper Marker

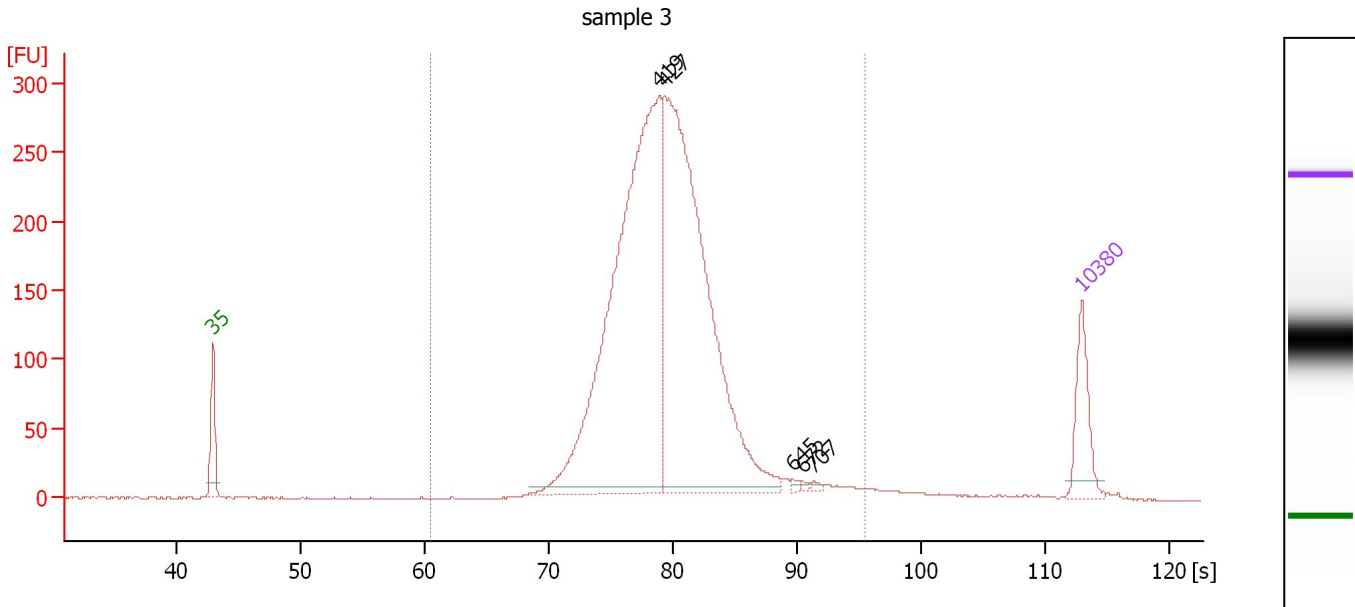
**Region table for sample 2 : Bremia Pool 9**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.58	95.46	795	86,877.0	43,692.03	1,768.7    42	17.0	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : sample 3**

Number of peaks found: 5                      Corr. Area 1: 3,403.3  
 Noise: 0.4

**Peak table for sample 3 : sample 3**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	419	1,162.96	4,205.0	
3	427	1,086.00	3,856.4	
4	645	4.95	11.6	
5	672	3.56	8.0	
6	707	4.86	10.4	
7	10,380	75.00	10.9	Upper Marker

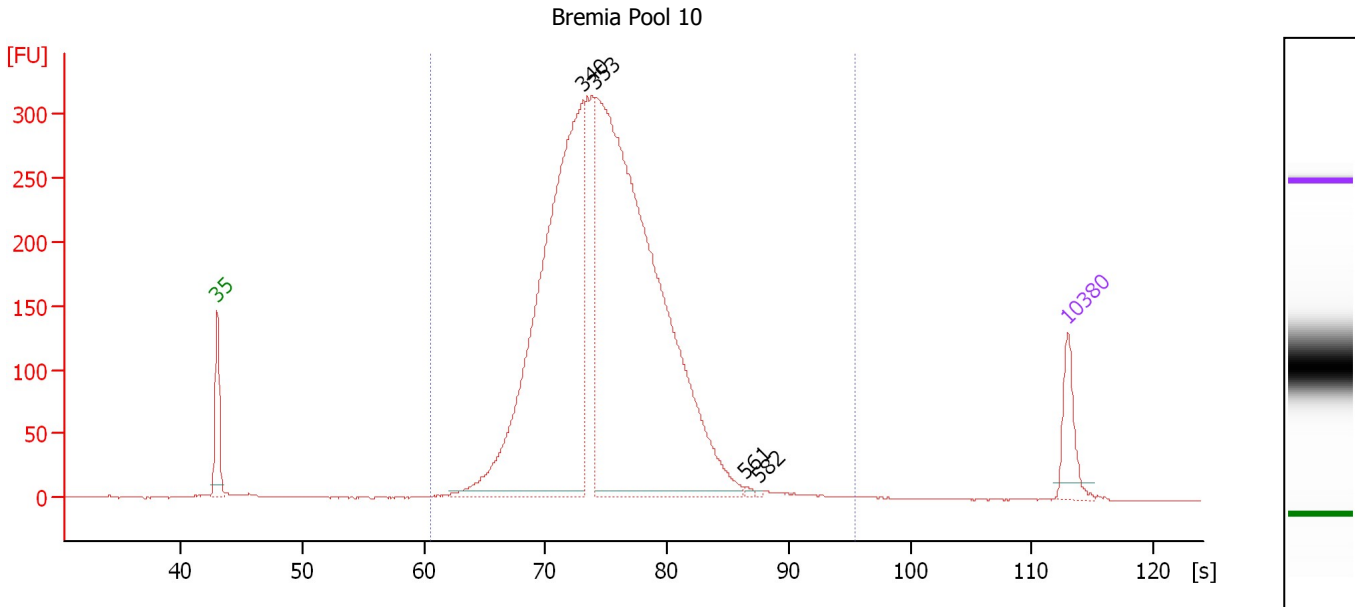
**Region table for sample 3 : sample 3**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color	
60.58	95.46	435	8,768.6	2,437.31	3,403.3	98	18.5	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : Bremia Pool 10**

Number of peaks found: 4                      Corr. Area 1: 4,787.0  
 Noise: 0.4

**Peak table for sample 4 : Bremia Pool 10**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	340	1,639.78	7,303.4	
3	353	2,279.74	9,787.6	
4	561	5.67	15.3	
5	582	2.89	7.5	
6	10,380	75.00	10.9	Upper Marker

**Region table for sample 4 : Bremia Pool 10**

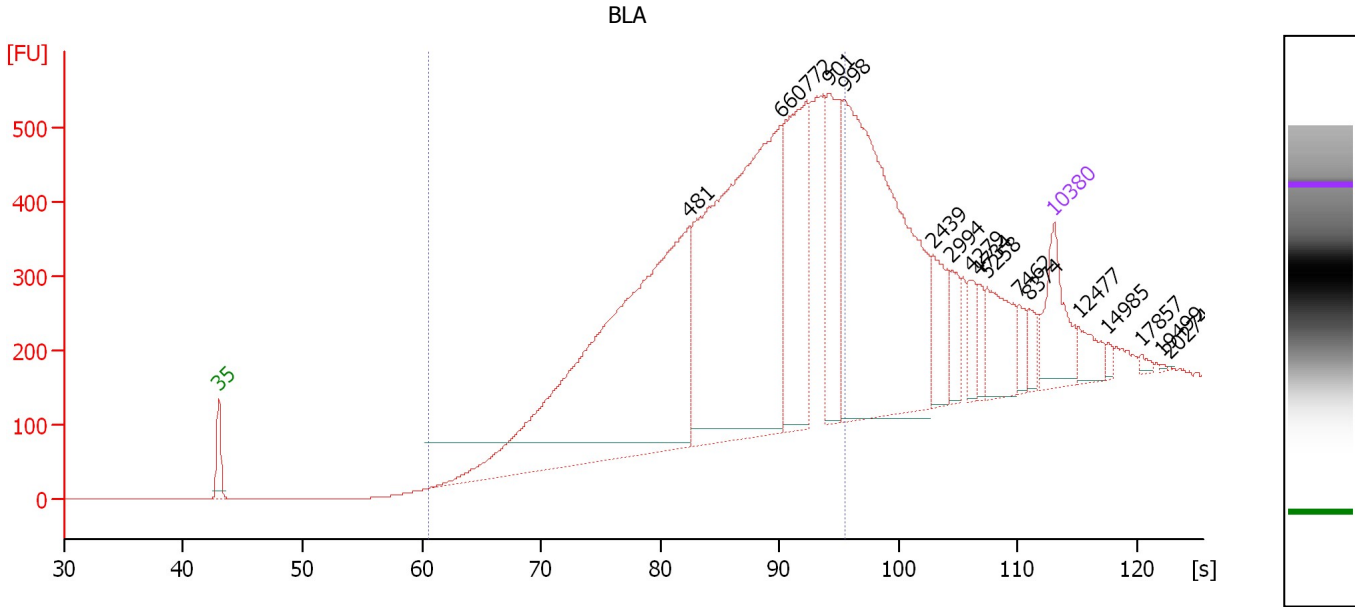
From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.58	95.46	367	18,385.2	4,287.31	4,787.0 98	18.7	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : BLA**

Number of peaks found: 17                      Corr. Area 1: 8,210.9  
 Noise: 0.1

**Peak table for sample 5 : BLA**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	481	976.12	3,075.0	
3	660	823.77	1,890.1	
4	772	282.65	554.6	
5	901	161.52	271.5	
6	998	611.30	927.9	
7	2,439	62.46	38.8	
8	2,994	34.82	17.6	
9	4,279	28.79	10.2	
10	4,734	18.59	6.0	
11	5,258	73.85	21.3	
12	7,462	20.13	4.1	
13	8,374	18.37	3.3	
14	10,380	75.00	10.9	Upper Marker
15	12,477	0.00	0.0	
16	14,985	0.00	0.0	
17	17,857	0.00	0.0	
18	19,499	0.00	0.0	
19	20,274	0.00	0.0	

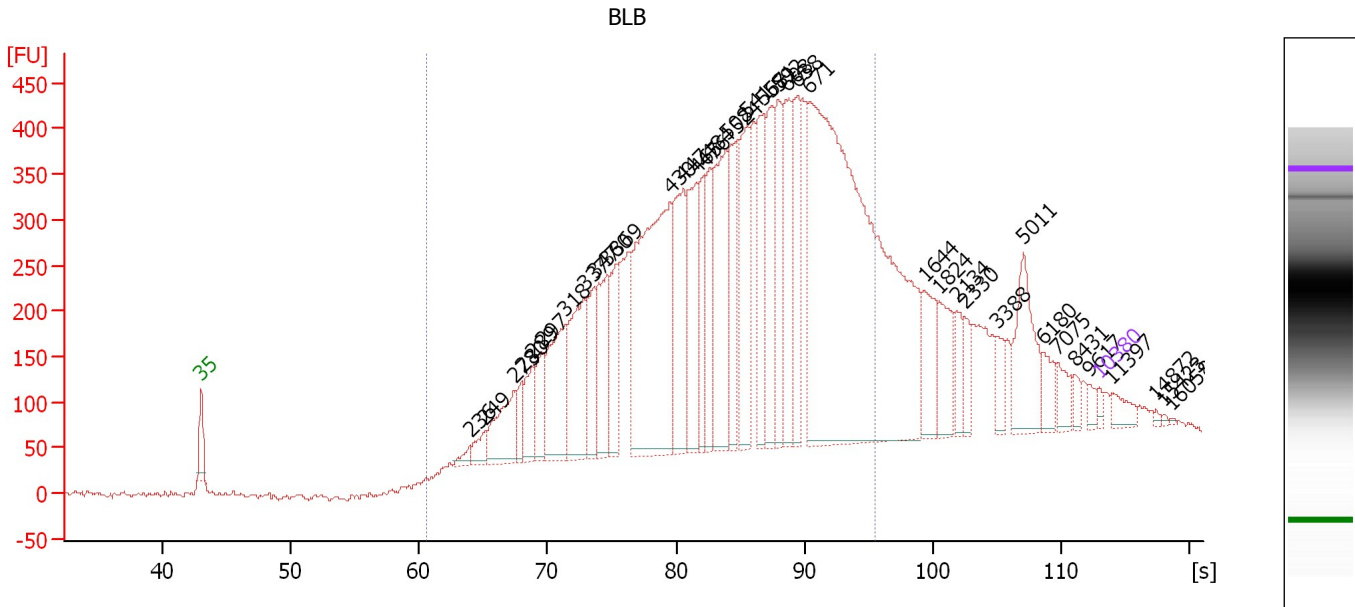
**Region table for sample 5 : BLA**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.58	95.46	594	6,709.0	2,302.18	8,210.9 68	30.7	■

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
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**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : BLB**

Number of peaks found: 39                      Corr. Area 1: 10,056.0  
 Noise: 3.6

**Peak table for sample 6 : BLB**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	236	155.46	996.1	
3	249	300.53	1,831.6	
4	273	1,145.62	6,360.0	
5	280	380.51	2,061.4	
6	289	655.70	3,436.1	
7	297	787.26	4,013.0	
8	318	1,754.70	8,353.5	
9	337	1,781.87	8,008.2	
10	347	914.80	3,999.4	
11	360	1,386.32	5,840.1	
12	369	925.01	3,797.2	
13	430	4,981.02	17,537.9	
14	447	1,848.44	6,260.9	
15	465	1,583.70	5,159.6	
16	476	958.17	3,049.0	
17	484	1,126.85	3,530.9	
18	508	2,211.37	6,600.9	
19	524	1,324.82	3,830.0	
20	541	1,730.44	4,842.1	
21	567	1,424.42	3,808.6	
22	581	1,348.10	3,518.2	
23	592	1,186.65	3,037.8	
24	608	1,415.33	3,526.5	
25	638	1,268.65	3,011.8	
26	671	11,738.20	26,495.8	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 6 : BLB**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
27	1,644	732.38	674.9	
28	1,824	647.53	537.8	
29	2,134	334.54	237.5	
30	2,330	277.77	180.7	
31	3,388	253.94	113.6	
32	5,011	1,056.14	319.3	
33	6,180	283.90	69.6	
34	7,075	248.31	53.2	
35	8,431	116.28	20.9	
36	9,617	103.16	16.3	
37	10,380	75.00	10.9	Upper Marker
38	11,397	0.00	0.0	
39	14,872	0.00	0.0	
40	15,423	0.00	0.0	
41	16,058	0.00	0.0	

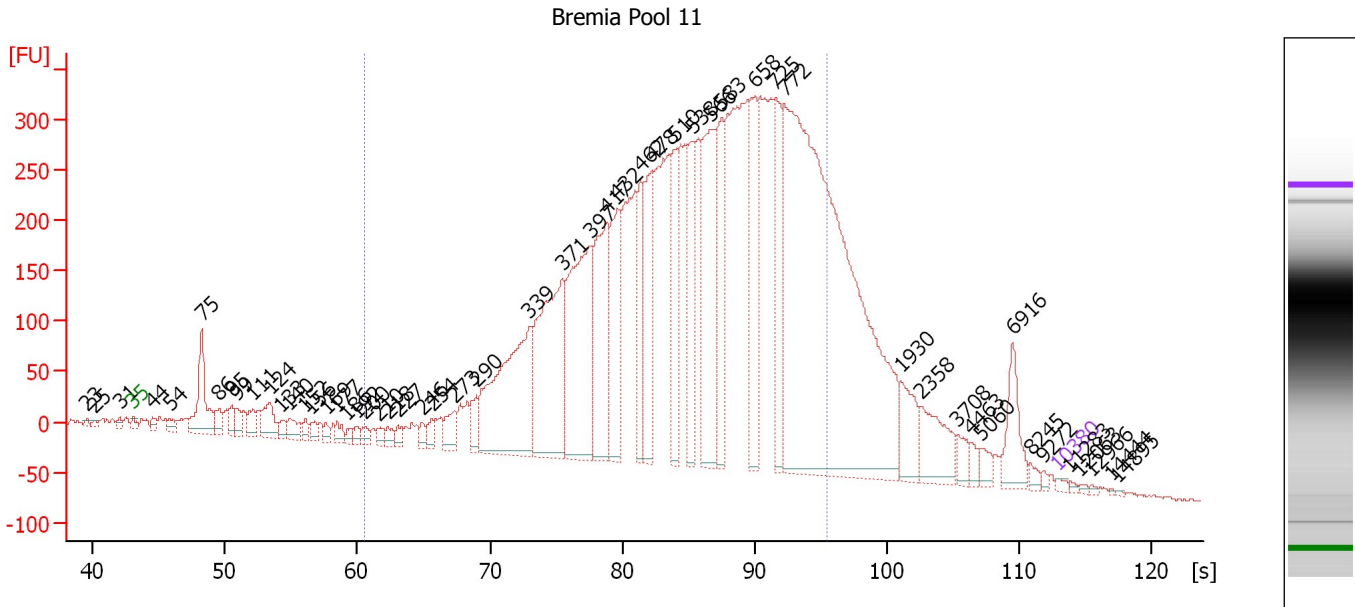
**Region table for sample 6 : BLB**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color	
60.58	95.46	537	148,307.8	44,887.24	10,056.0	80	32.7	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
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**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Bremia Pool 11**

Number of peaks found: 54                      Corr. Area 1: 9,615.3  
 Noise: 2.1

**Peak table for sample 7 : Bremia Pool 11**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	23	0.00	0.0	
2	25	0.00	0.0	
3	31	0.00	0.0	
4	35	125.00	5,411.3	Lower Marker
5	44	237.60	8,135.3	
6	54	330.53	9,307.6	
7	75	2,596.60	52,506.6	
8	86	487.15	8,544.4	
9	95	507.88	8,102.1	
10	99	474.12	7,262.4	
11	111	580.74	7,902.3	
12	124	1,097.61	13,414.6	
13	133	347.62	3,953.3	
14	140	602.44	6,541.2	
15	152	281.01	2,805.2	
16	156	315.85	3,058.2	
17	169	239.26	2,146.2	
18	177	338.91	2,893.4	
19	186	205.30	1,675.9	
20	192	219.81	1,730.4	
21	200	282.58	2,143.4	
22	210	222.26	1,602.0	
23	218	282.41	1,958.4	
24	227	276.28	1,845.9	
25	246	261.54	1,611.0	
26	254	359.18	2,140.4	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 7 : Bremia Pool 11**

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
27	273	730.31	4,059.5	
28	290	583.91	3,045.9	
29	339	6,043.36	26,998.9	
30	371	5,733.82	23,440.6	
31	397	5,620.74	21,450.6	
32	417	4,037.59	14,660.7	
33	432	2,836.58	9,958.1	
34	462	1,937.92	6,350.2	
35	478	2,581.63	8,180.8	
36	510	2,242.42	6,655.6	
37	538	2,209.23	6,218.8	
38	566	4,373.76	11,707.6	
39	583	2,513.46	6,533.7	
40	658	2,650.07	6,103.1	
41	725	2,443.72	5,104.4	
42	772	22,528.74	44,221.8	
43	1,930	994.25	780.7	
44	2,358	1,308.67	840.9	
45	3,708	349.09	142.7	
46	4,463	193.69	65.8	
47	5,060	285.52	85.5	
48	6,916	1,099.22	240.8	
49	8,245	130.53	24.0	
50	9,272	69.61	11.4	
51	10,380	75.00	10.9	Upper Marker
52	11,283	0.00	0.0	
53	12,063	0.00	0.0	
54	12,966	0.00	0.0	
55	14,444	0.00	0.0	
56	14,895	0.00	0.0	

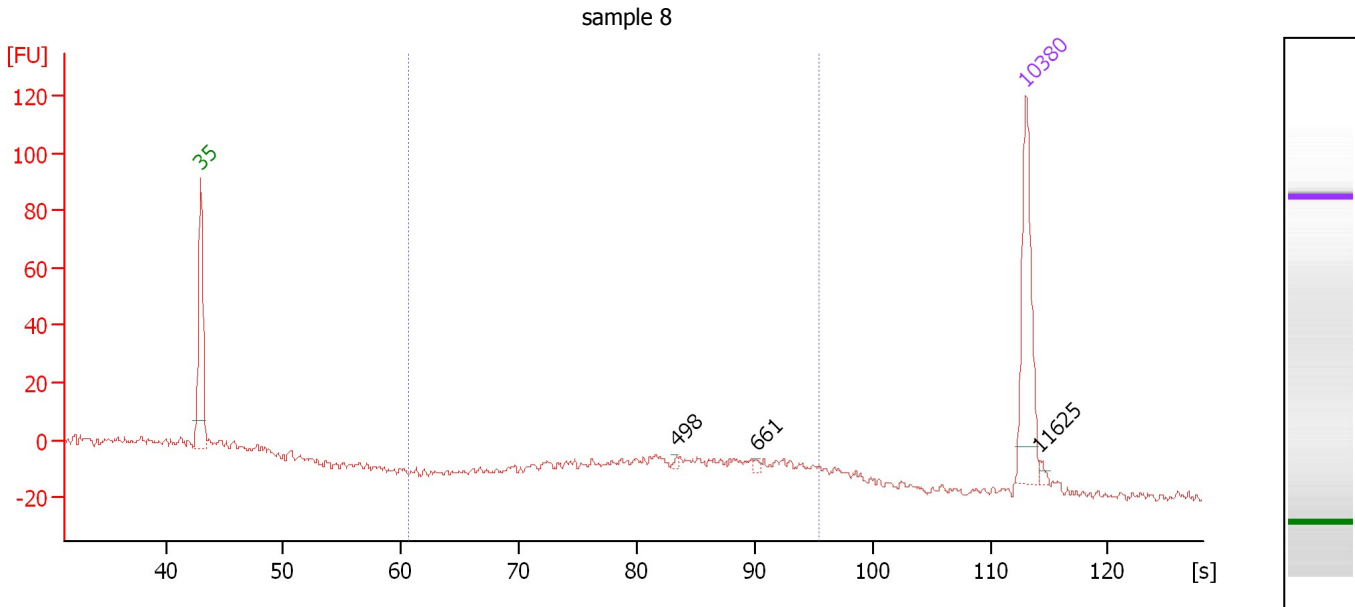
**Region table for sample 7 : Bremia Pool 11**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.58	95.46	563	273,372.8	87,011.82	9,615.3	79	31.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : sample 8**

Number of peaks found: 3                      Corr. Area 1: 65.6  
 Noise: 1.4

**Peak table for sample 8 : sample 8**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	498	2.42	7.4	
3	661	2.47	5.7	
4	10,380	75.00	10.9	Upper Marker
5	11,625	0.00	0.0	

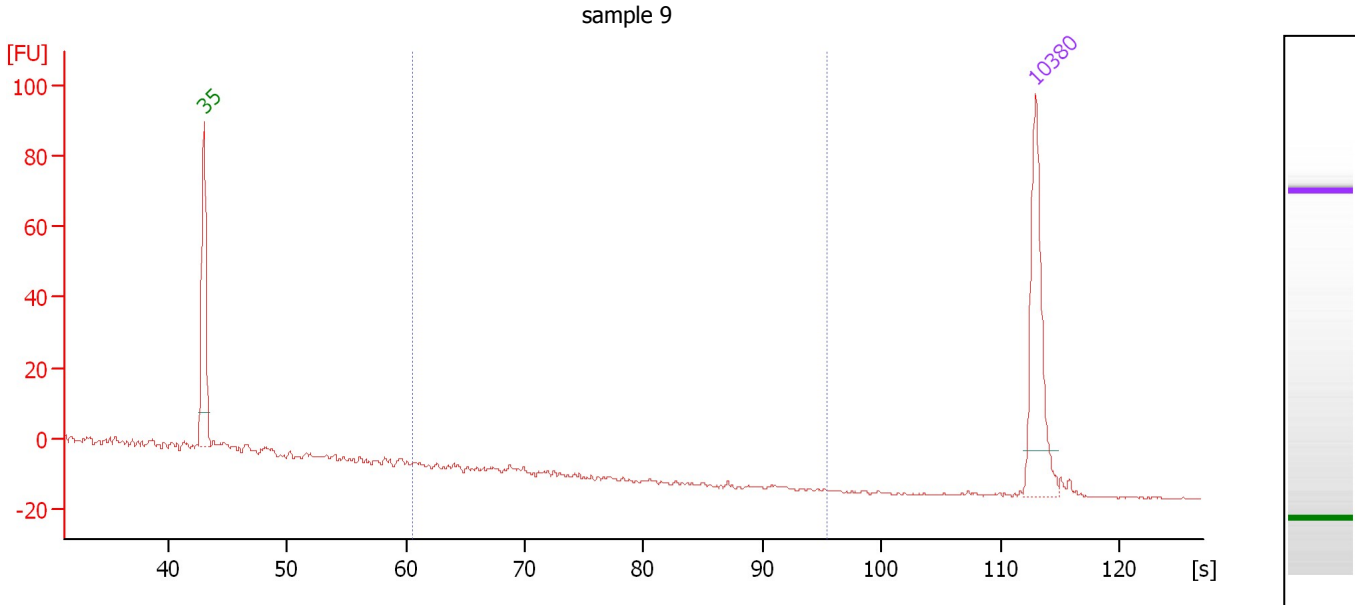
**Region table for sample 8 : sample 8**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color	
60.58	95.46	624	150.0	57.15	65.6	74	25.1	■

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : sample 9**

Number of peaks found: 0                      Corr. Area 1: 0.0  
 Noise: 0.4

**Peak table for sample 9 : sample 9**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	10,380	75.00	10.9	Upper Marker

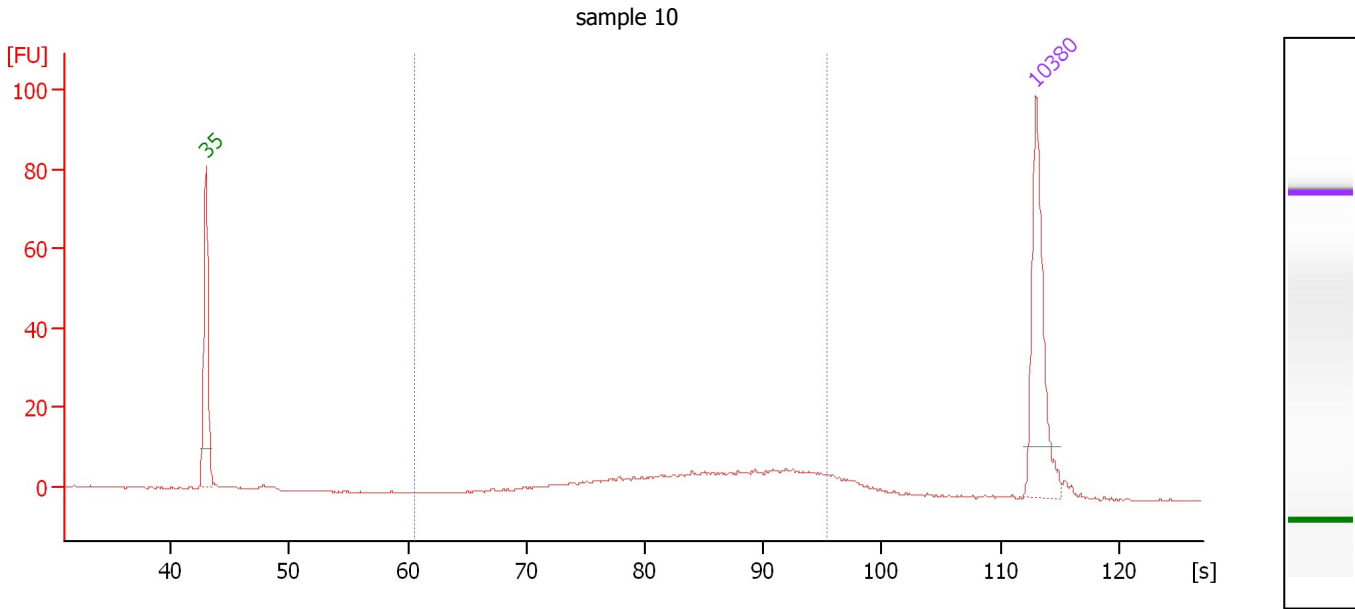
**Region table for sample 9 : sample 9**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
60.58	95.46	0	0.0	0.00	0.0	0	0.0	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : sample 10**

Number of peaks found: 0                      Corr. Area 1: 127.1  
 Noise: 0.1

**Peak table for sample 10 : sample 10**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	10,380	75.00	10.9	Upper Marker

**Region table for sample 10 : sample 10**

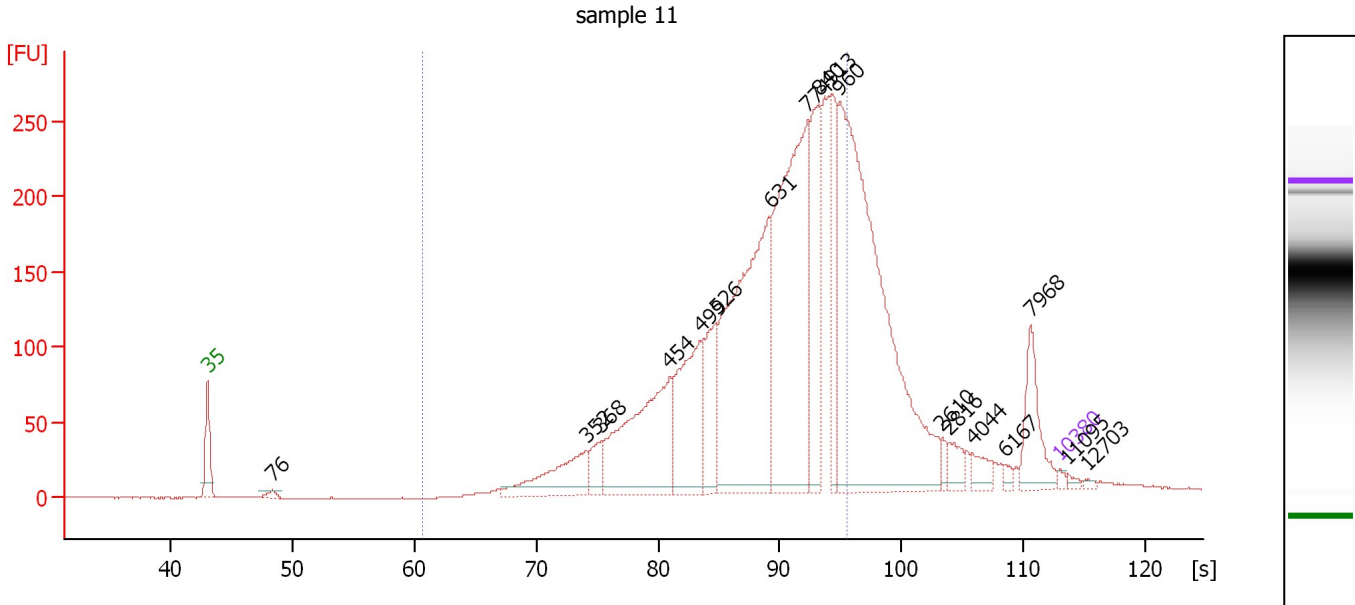
From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
60.58	95.46	580	378.8	127.82	127.1	83	30.4	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : sample 11**

Number of peaks found: 18                      Corr. Area 1: 3,430.9  
 Noise: 0.2

**Peak table for sample 11 : sample 11**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	76	197.51	3,924.8	
3	352	2,208.51	9,495.0	
4	368	792.99	3,261.1	
5	454	5,342.36	17,811.8	
6	499	3,752.49	11,397.1	
7	526	1,971.67	5,677.9	
8	631	9,205.66	22,111.4	
9	774	9,509.79	18,624.7	
10	840	3,111.64	5,612.1	
11	913	2,049.96	3,402.5	
12	960	13,381.48	21,112.8	
13	2,610	190.39	110.5	
14	2,816	410.71	221.0	
15	4,044	404.88	151.7	
16	6,167	122.12	30.0	
17	7,968	1,341.15	255.0	
18	10,380	75.00	10.9	Upper Marker
19	11,095	0.00	0.0	
20	12,703	0.00	0.0	

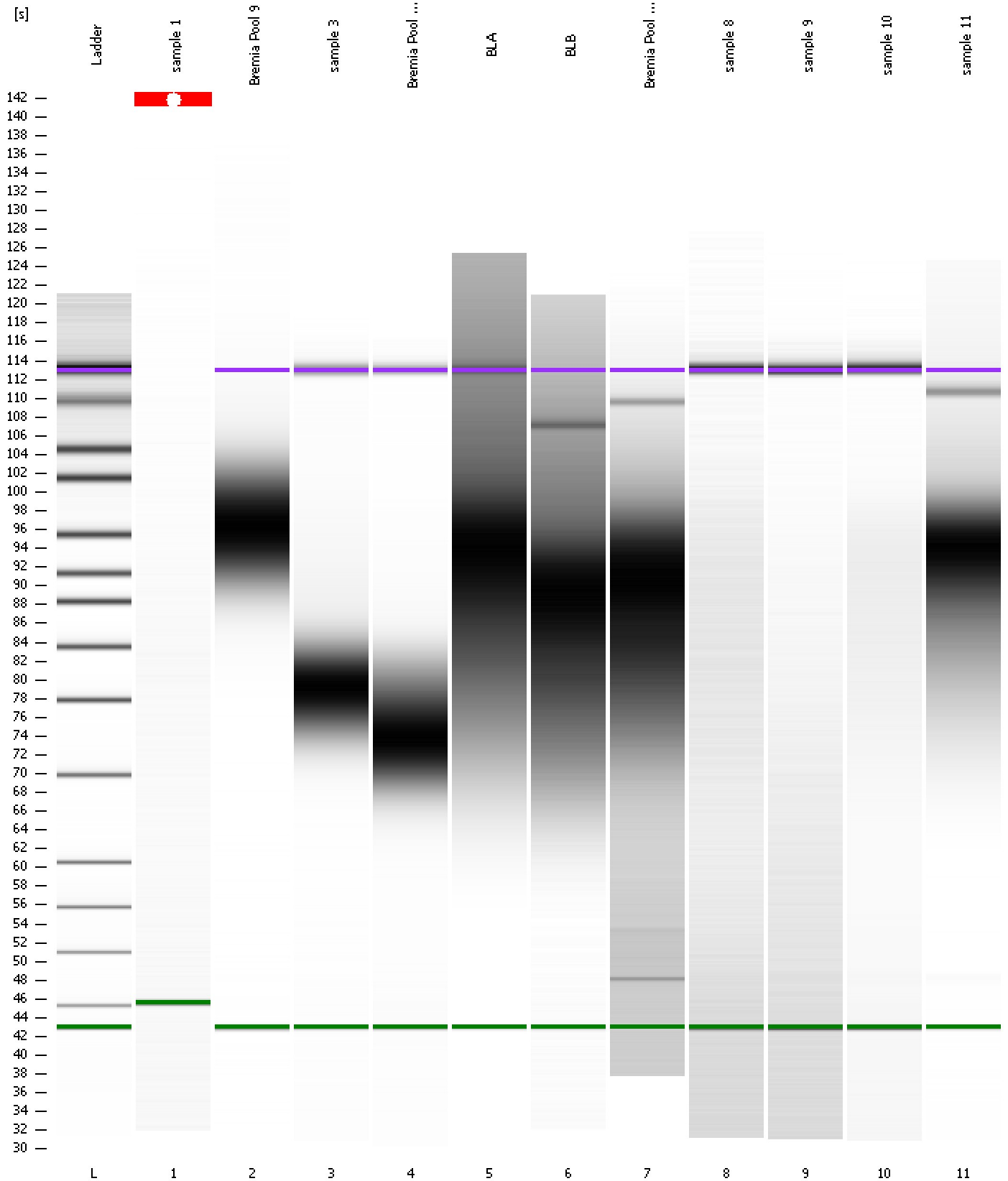
**Region table for sample 11 : sample 11**

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.58	95.46	651	113,899.0	43,346.41	3,430.9 73	27.9	■

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
Modified: 7/24/2013 2:39:50 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-07-18\2013-07-18\_001.xad

Created: 7/18/2013 9:32:13 AM  
 Modified: 7/24/2013 2:39:50 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		7/18/2013 10:13:31 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-07-18\2013-07-18_001.xad)		Instrument	Run		7/18/2013 9:32:18 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		7/18/2013 9:32:18 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		7/18/2013 9:32:18 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		7/18/2013 9:32:18 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		7/18/2013 9:32:18 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		7/18/2013 9:32:18 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		7/18/2013 9:32:18 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1