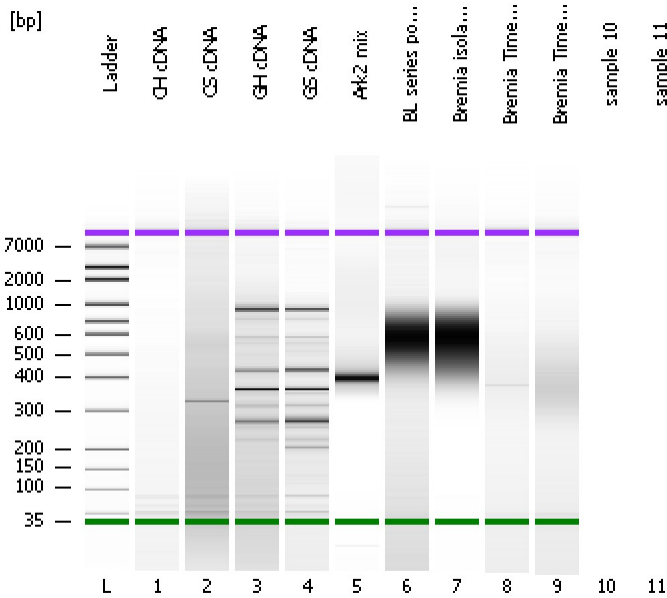


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
Modified: 12/17/2015 5:23:28 PM

Electrophoresis File Run Summary



Instrument Information:

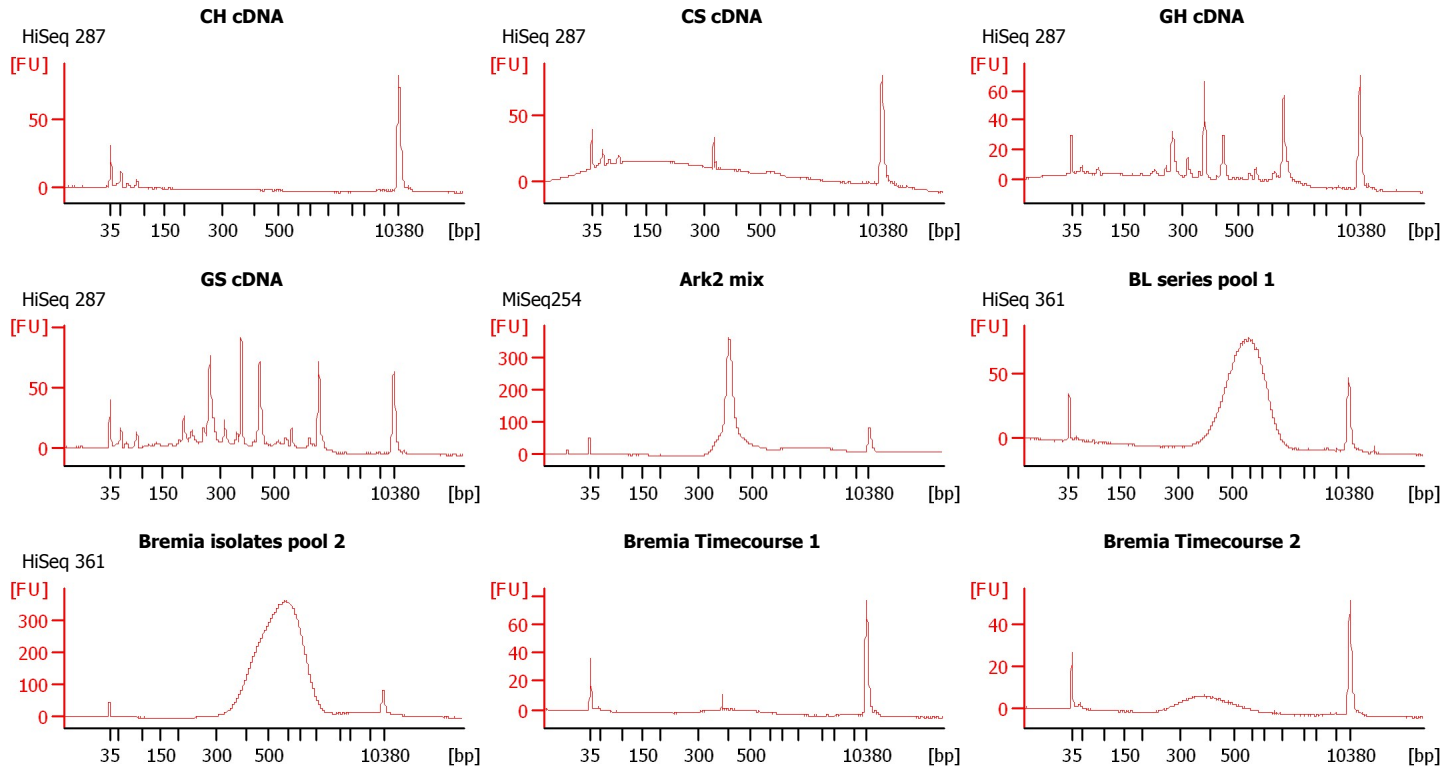
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
CH cDNA	HiSeq 287	<input type="checkbox"/>	✓			
CS cDNA	HiSeq 287	<input type="checkbox"/>	✓			
GH cDNA	HiSeq 287	<input type="checkbox"/>	✓			
GS cDNA	HiSeq 287	<input type="checkbox"/>	✓			
Ark2 mix	MiSeq254	<input type="checkbox"/>	✓			
BL series pool 1	HiSeq 361	<input type="checkbox"/>	✓			
Bremia isolates pool 2	HiSeq 361	<input type="checkbox"/>	✓			
Bremia Timecourse 1		<input type="checkbox"/>	✓			
Bremia Timecourse 2		<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\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 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

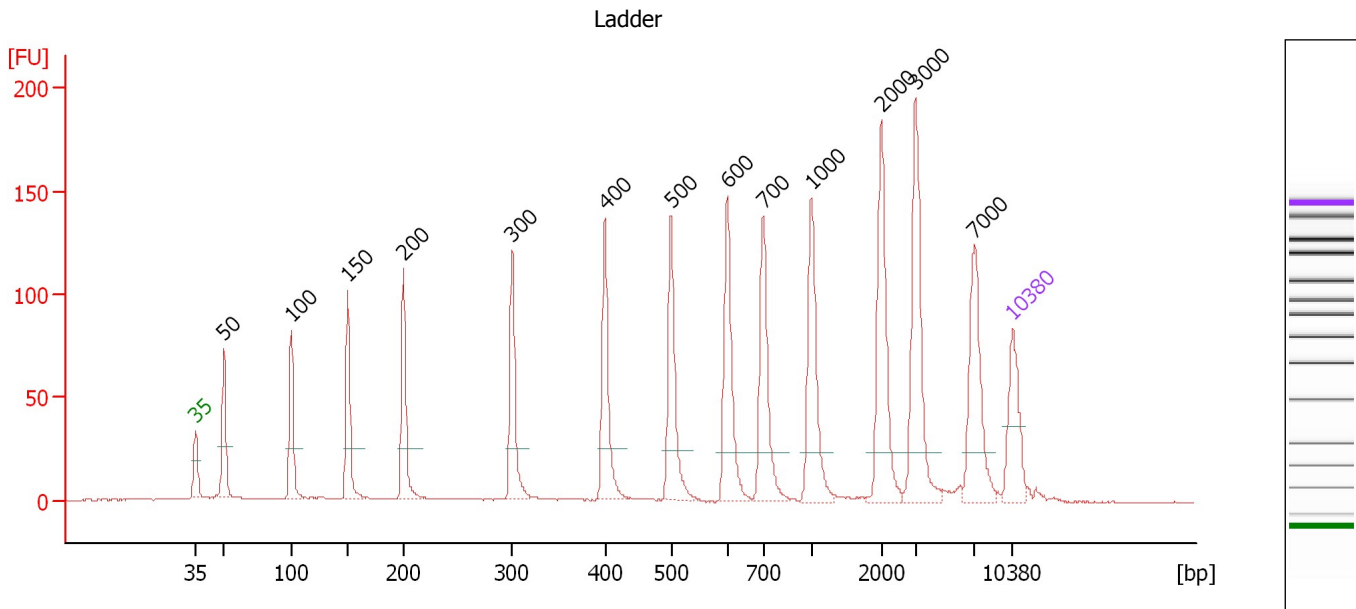
Ladder

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\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

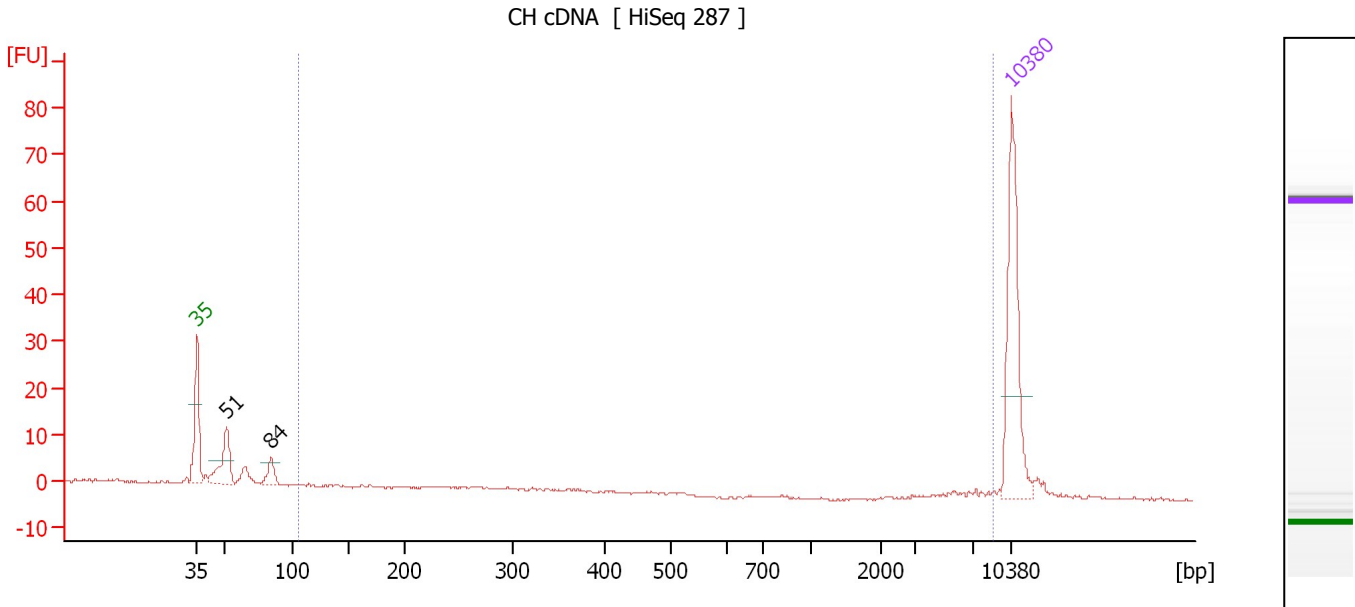
Peak table for Ladder

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	45.42
3	100	150.00	2,272.7	Ladder Peak	51.22
4	150	150.00	1,515.2	Ladder Peak	56.07
5	200	150.00	1,136.4	Ladder Peak	60.82
6	300	150.00	757.6	Ladder Peak	70.14
7	400	150.00	568.2	Ladder Peak	78.09
8	500	150.00	454.5	Ladder Peak	83.76
9	600	150.00	378.8	Ladder Peak	88.55
10	700	150.00	324.7	Ladder Peak	91.66
11	1,000	150.00	227.3	Ladder Peak	95.77
12	2,000	150.00	113.6	Ladder Peak	101.76
13	3,000	150.00	75.8	Ladder Peak	104.68
14	7,000	150.00	32.5	Ladder Peak	109.76
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : CH cDNA

Number of peaks found: 2 Corr. Area 1: 2.7
 Noise: 0.2

Peak table for sample 1 : CH cDNA

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	51	46.63	1,389.3		45.52
3	84	17.22	310.5		49.37
4	10,380	75.00	10.9	Upper Marker	113.00

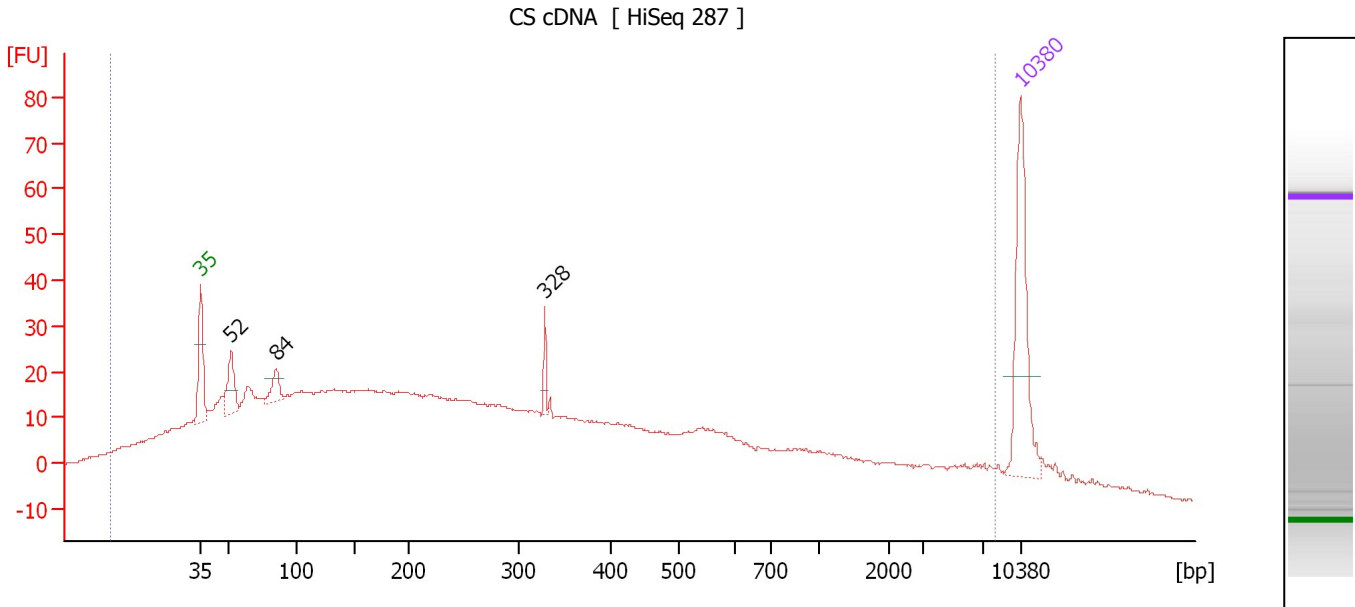
Region table for sample 1 : CH cDNA

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
105	8,687	6,322	2.7	4.2	2.97	6	30.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : CS cDNA

Number of peaks found: 3 Corr. Area 1: 1,413.6
 Noise: 0.2

Peak table for sample 2 : CS cDNA

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	52	41.83	1,230.6		45.60
3	84	22.12	396.8		49.42
4	328	12.76	58.9		72.38
5	10,380	75.00	10.9	Upper Marker	113.00

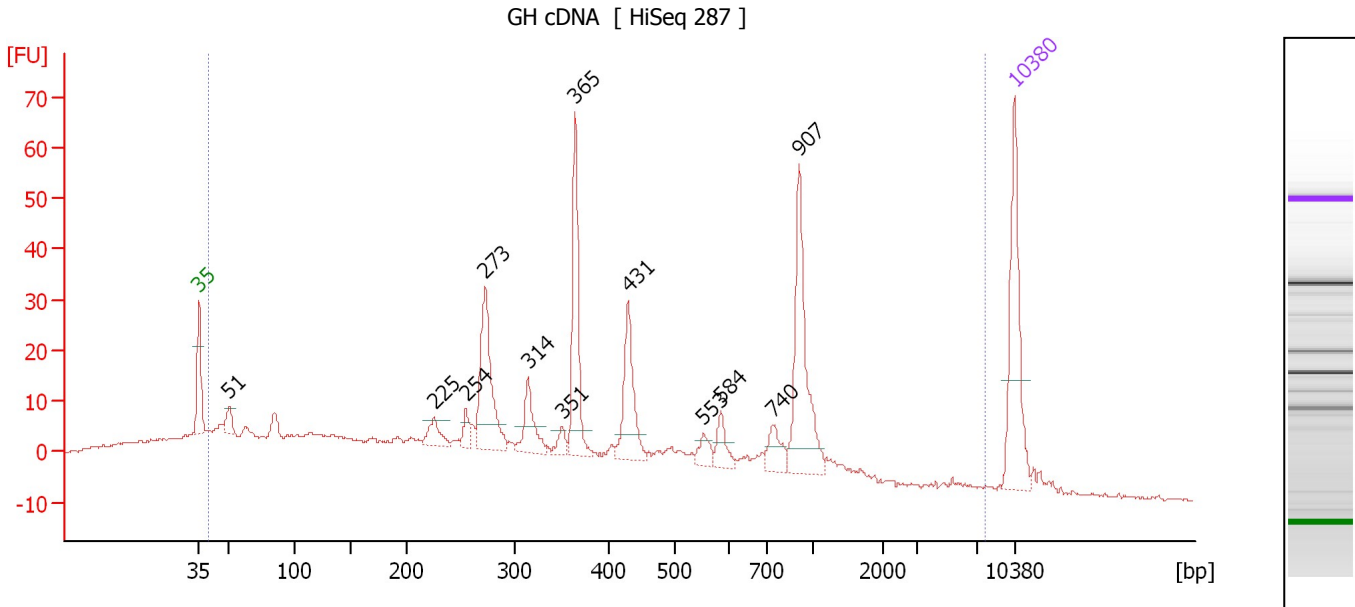
Region table for sample 2 : CS cDNA

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
0	8,088	558	1,413.6	46,144.9	2,370.32	97	100.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : GH cDNA

Number of peaks found: 12 Corr. Area 1: 681.9
 Noise: 0.3

Peak table for sample 3 : GH cDNA

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	51	17.52	518.3		45.56
3	225	21.21	142.9		63.14
4	254	13.18	78.5		65.89
5	273	104.62	581.5		67.58
6	314	37.32	180.1		71.25
7	351	11.10	48.0		74.18
8	365	96.75	402.1		75.28
9	431	65.31	229.5		79.85
10	553	13.35	36.6		86.31
11	584	17.47	45.3		87.77
12	740	20.93	42.8		92.22
13	907	103.98	173.6		94.50
14	10,380	75.00	10.9	Upper Marker	113.00

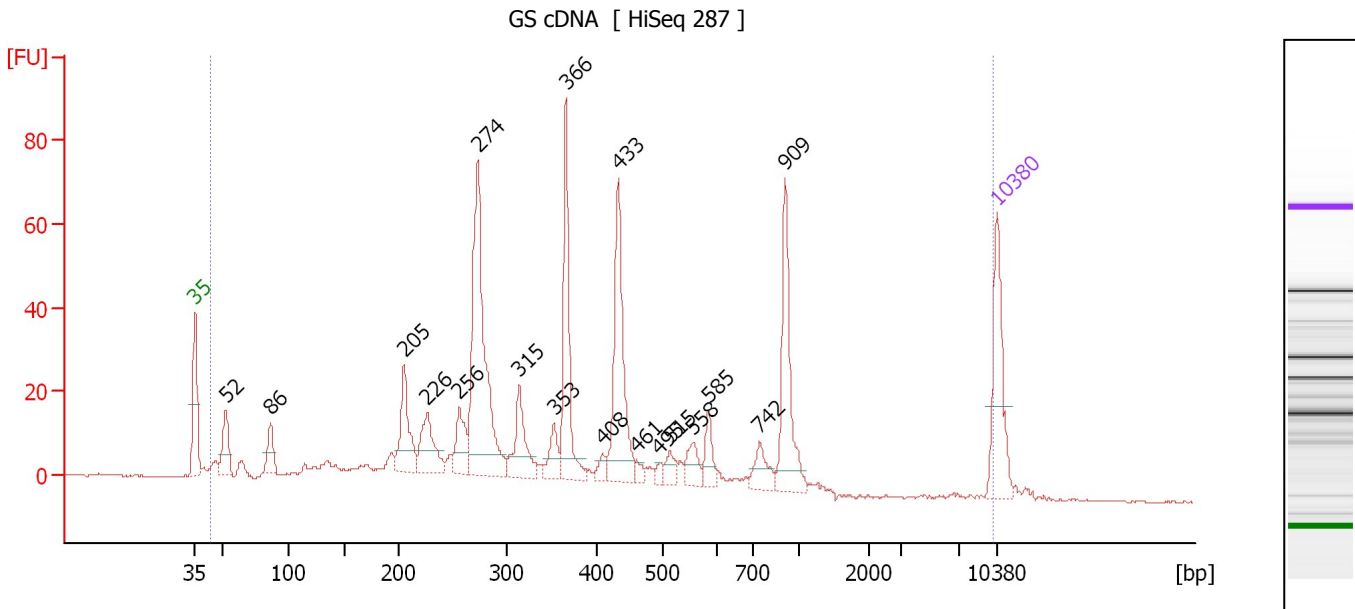
Region table for sample 3 : GH cDNA

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
39	7,808	522	681.9	11,281.1	1,303.52	91	100.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : GS cDNA

Number of peaks found: 18 Corr. Area 1: 791.3
 Noise: 0.2

Peak table for sample 4 : GS cDNA

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	52	55.18	1,595.7		45.70
3	86	38.34	674.8		49.61
4	205	79.29	587.3		61.24
5	226	67.08	449.6		63.25
6	256	48.68	287.6		66.09
7	274	289.04	1,598.5		67.71
8	315	64.48	310.6		71.30
9	353	29.86	128.3		74.32
10	366	134.59	557.1		75.39
11	408	11.64	43.2		78.56
12	433	154.07	539.3		79.95
13	461	7.99	26.3		81.54
14	495	6.81	20.8		83.49
15	515	16.69	49.1		84.47
16	558	24.80	67.4		86.52
17	585	25.04	64.9		87.82
18	742	27.13	55.4		92.24
19	909	104.71	174.6		94.52
20	10,380	75.00	10.9	Upper Marker	113.00

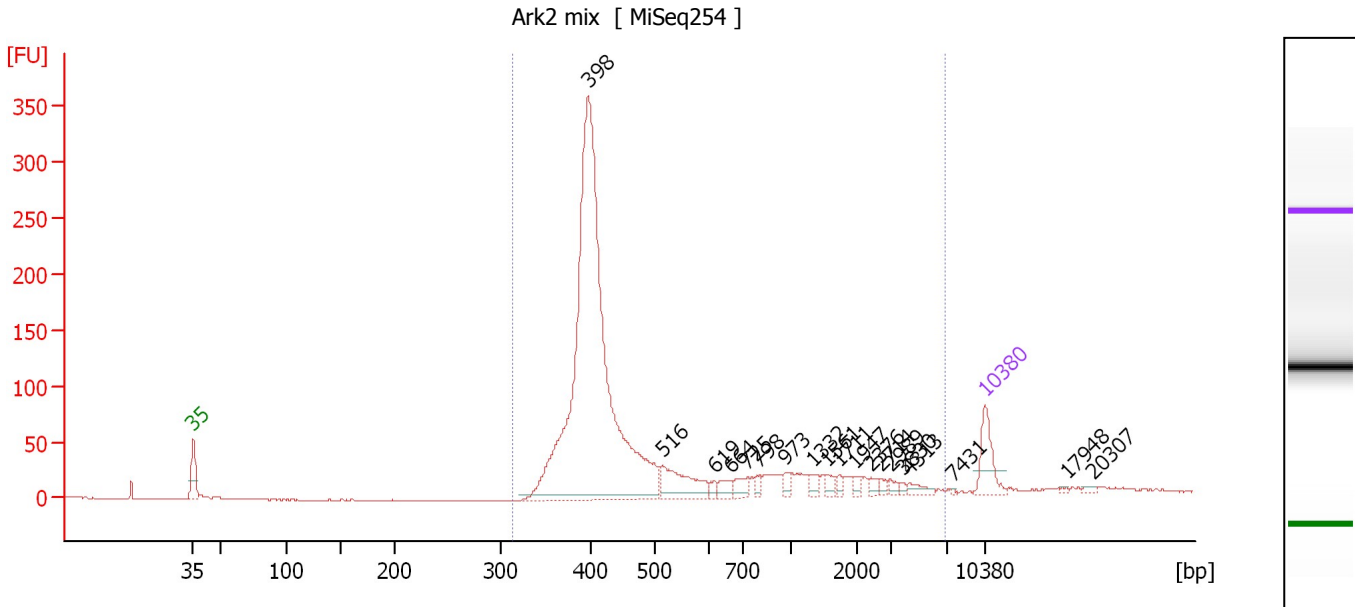
Region table for sample 4 : GS cDNA

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
43	9,970	520	791.3	10,904.6	1,595.20	99	100.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : Ark2 mix

Number of peaks found: 19 Corr. Area 1: 1,733.9
 Noise: 0.2

Peak table for sample 5 : Ark2 mix

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	398	1,920.88	7,318.8		77.91
3	516	139.27	409.2		84.51
4	619	15.21	37.3		89.13
5	664	28.98	66.1		90.55
6	725	30.81	64.4		92.01
7	798	16.71	31.7		93.00
8	973	16.71	26.0		95.41
9	1,332	18.91	21.5		97.76
10	1,561	16.60	16.1		99.13
11	1,711	11.43	10.1		100.03
12	1,947	13.46	10.5		101.44
13	2,376	12.73	8.1		102.86
14	2,714	10.30	5.8		103.85
15	2,989	10.88	5.5		104.65
16	3,830	6.47	2.6		105.74
17	4,313	19.17	6.7		106.35
18	7,431	2.40	0.5		110.17
19	10,380	75.00	10.9	Upper Marker	113.00
20	17,948	0.00	0.0		120.26
21	20,307	0.00	0.0		122.53

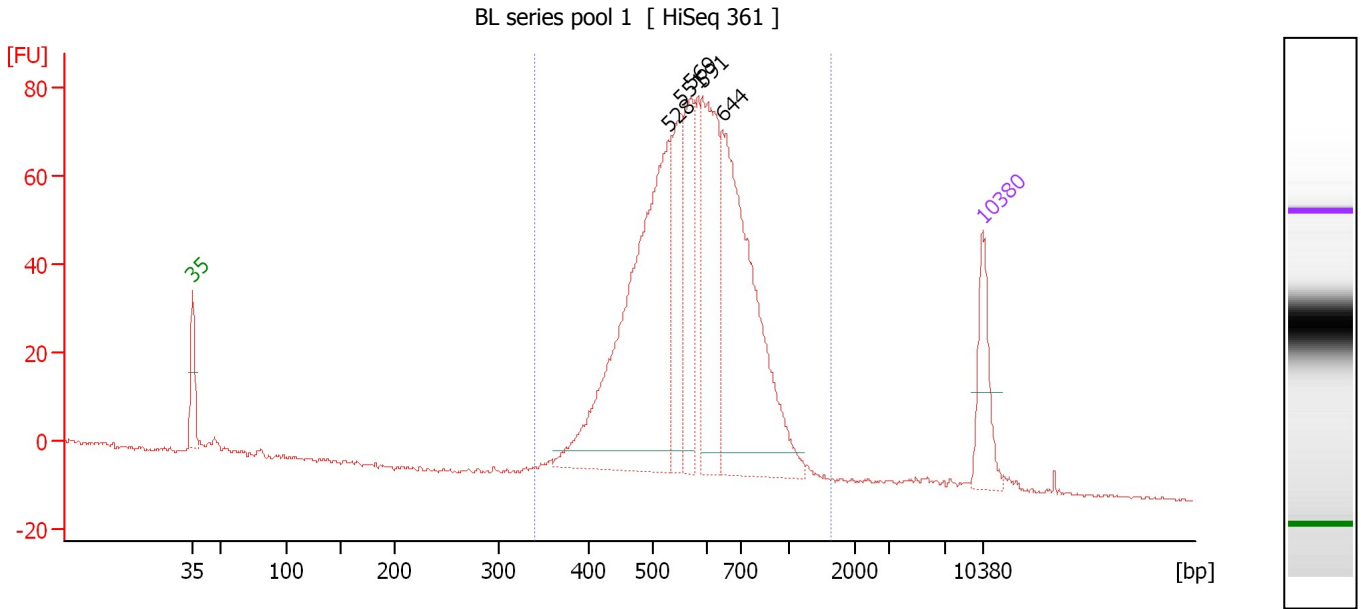
Region table for sample 5 : Ark2 mix

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
313	6,832	662	1,733.9	7,505.5	2,234.60	98	100.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : BL series pool 1

Number of peaks found: 5 Corr. Area 1: 1,130.4
 Noise: 0.4

Peak table for sample 6 : BL series pool 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	528	674.26	1,933.9		85.11
3	551	163.10	448.6		86.20
4	569	191.00	508.9		87.05
5	591	262.14	671.7		88.14
6	644	499.93	1,175.5		89.93
7	10,380	75.00	10.9	Upper Marker	113.00

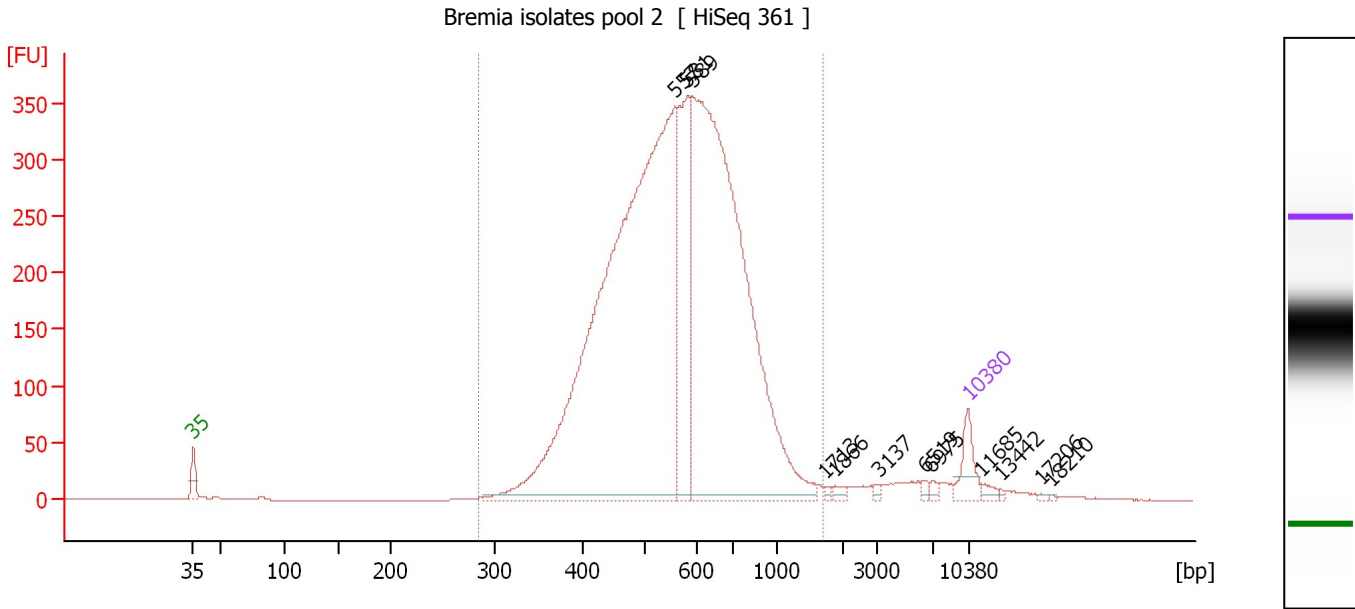
Region table for sample 6 : BL series pool 1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
341	1,627	597	1,130.4	5,132.0	1,913.42	98	22.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : Bremia isolates pool 2

Number of peaks found: 12 Corr. Area 1: 5,775.8
 Noise: 0.2

Peak table for sample 7 : Bremia isolates pool 2

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	557	3,345.74	9,097.2		86.50
3	581	522.19	1,361.0		87.66
4	589	2,540.32	6,530.7		88.04
5	1,713	7.81	6.9		100.04
6	1,866	14.39	11.7		100.96
7	3,137	8.04	3.9		104.86
8	6,519	11.81	2.7		109.15
9	6,975	10.77	2.3		109.72
10	10,380	75.00	10.9	Upper Marker	113.00
11	11,685	0.00	0.0		114.25
12	13,442	0.00	0.0		115.94
13	17,206	0.00	0.0		119.55
14	18,210	0.00	0.0		120.52

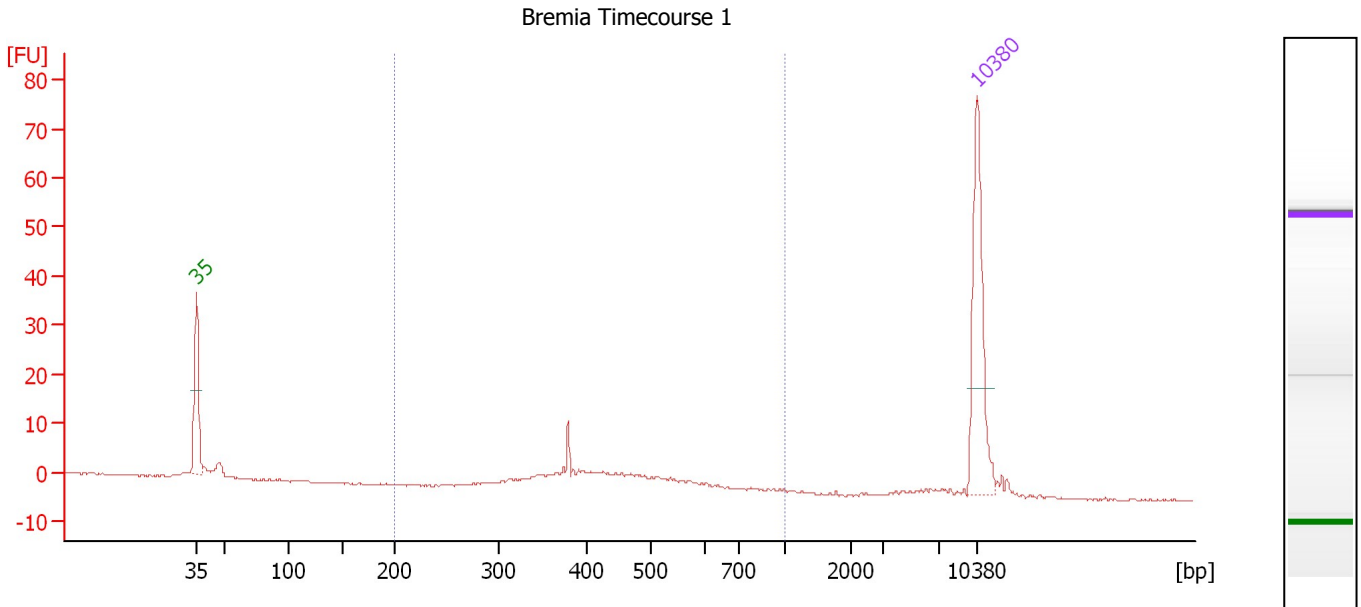
Region table for sample 7 : Bremia isolates pool 2

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
285	1,701	586	5,775.8	18,698.6	6,664.68	96	28.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : Bremia Timecourse 1

Number of peaks found: 0 Corr. Area 1: 50.8
 Noise: 0.2

Peak table for sample 8 : Bremia Timecourse 1

Pea k	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

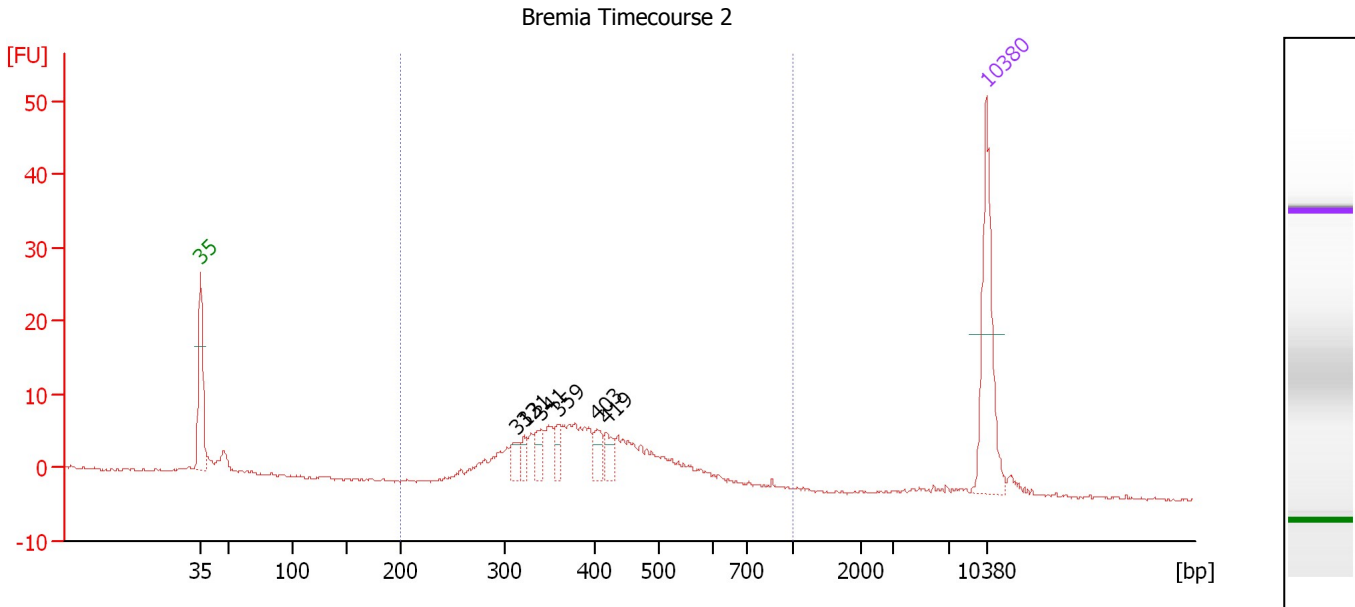
Region table for sample 8 : Bremia Timecourse 1

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	444	50.8	265.4	73.84	75	21.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : Bremia Timecourse 2

Number of peaks found: 6 Corr. Area 1: 145.3
 Noise: 0.2

Peak table for sample 9 : Bremia Timecourse 2

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	313	15.31	74.1		71.18
3	321	12.23	57.7		71.85
4	341	18.20	81.0		73.37
5	359	15.94	67.3		74.84
6	403	17.58	66.1		78.26
7	419	15.93	57.6		79.16
8	10,380	75.00	10.9	Upper Marker	113.00

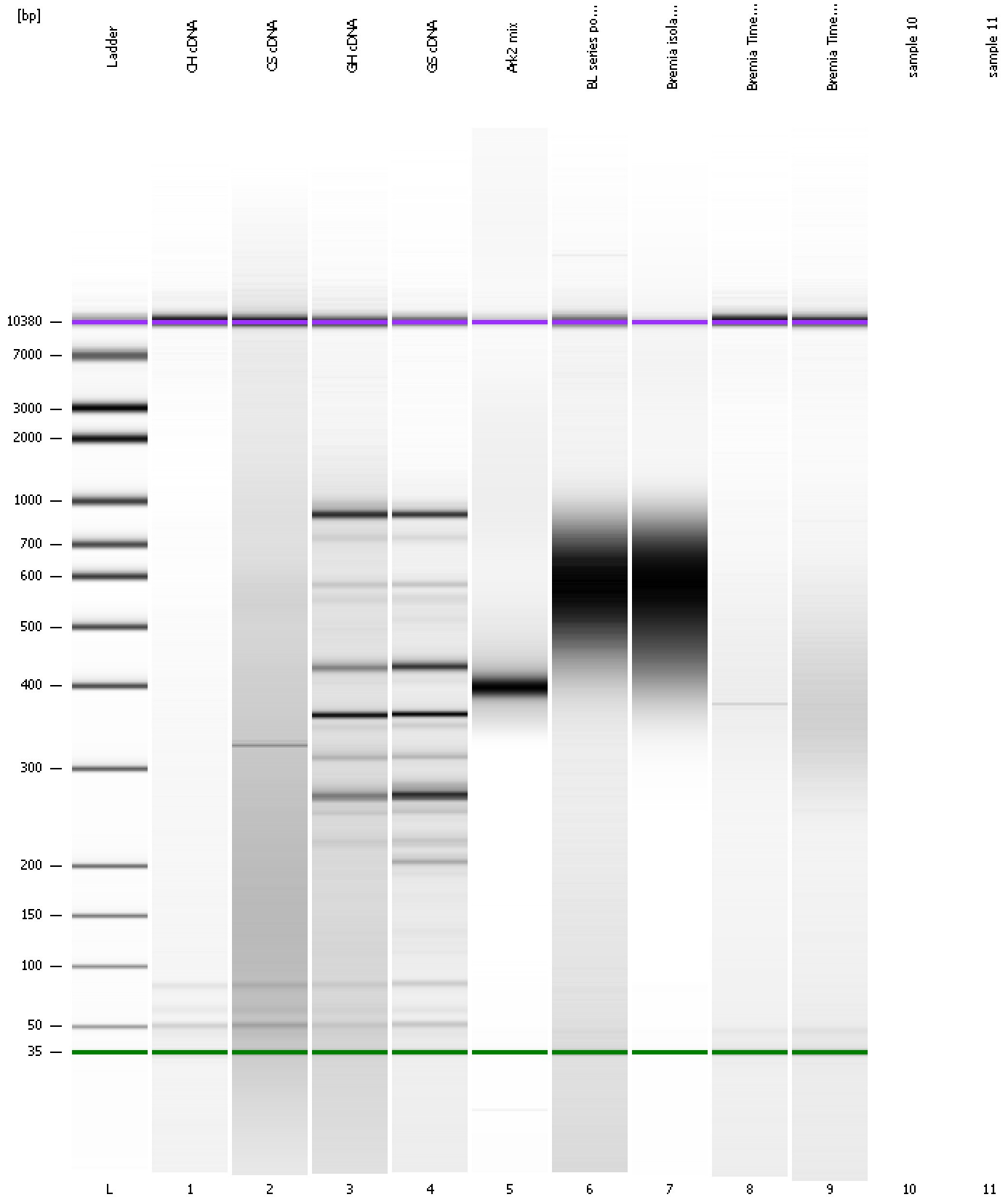
Region table for sample 9 : Bremia Timecourse 2

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	407	145.3	1,335.5	336.16	90	23.5

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
Modified: 12/17/2015 5:23:28 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
Modified: 12/17/2015 5:23:28 PM

Invalid Samples

Sample 10 has not been run, no results available.

Sample 11 has not been run, no results available.

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad

Created: 12/17/2015 4:44:56 PM
 Modified: 12/17/2015 5:23:28 PM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 10)		Instrument	Run		12/17/2015 5:20:30 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2015-12-17\2015-12-17_001.xad)		Instrument	Run		12/17/2015 4:45:02 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		12/17/2015 4:45:02 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		12/17/2015 4:45:02 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		12/17/2015 4:45:02 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		12/17/2015 4:45:02 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		12/17/2015 4:45:02 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		12/17/2015 4:45:02 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1