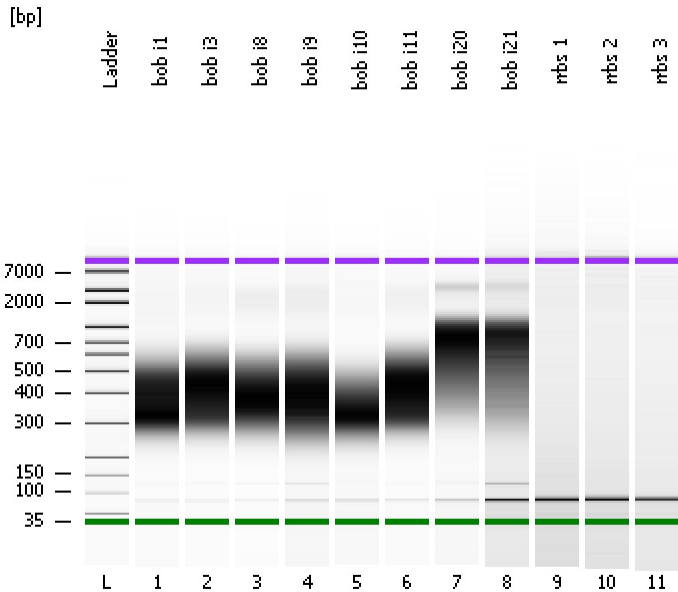


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
Modified: 2/16/2016 11:35:50 AM

Electrophoresis File Run Summary



Instrument Information:

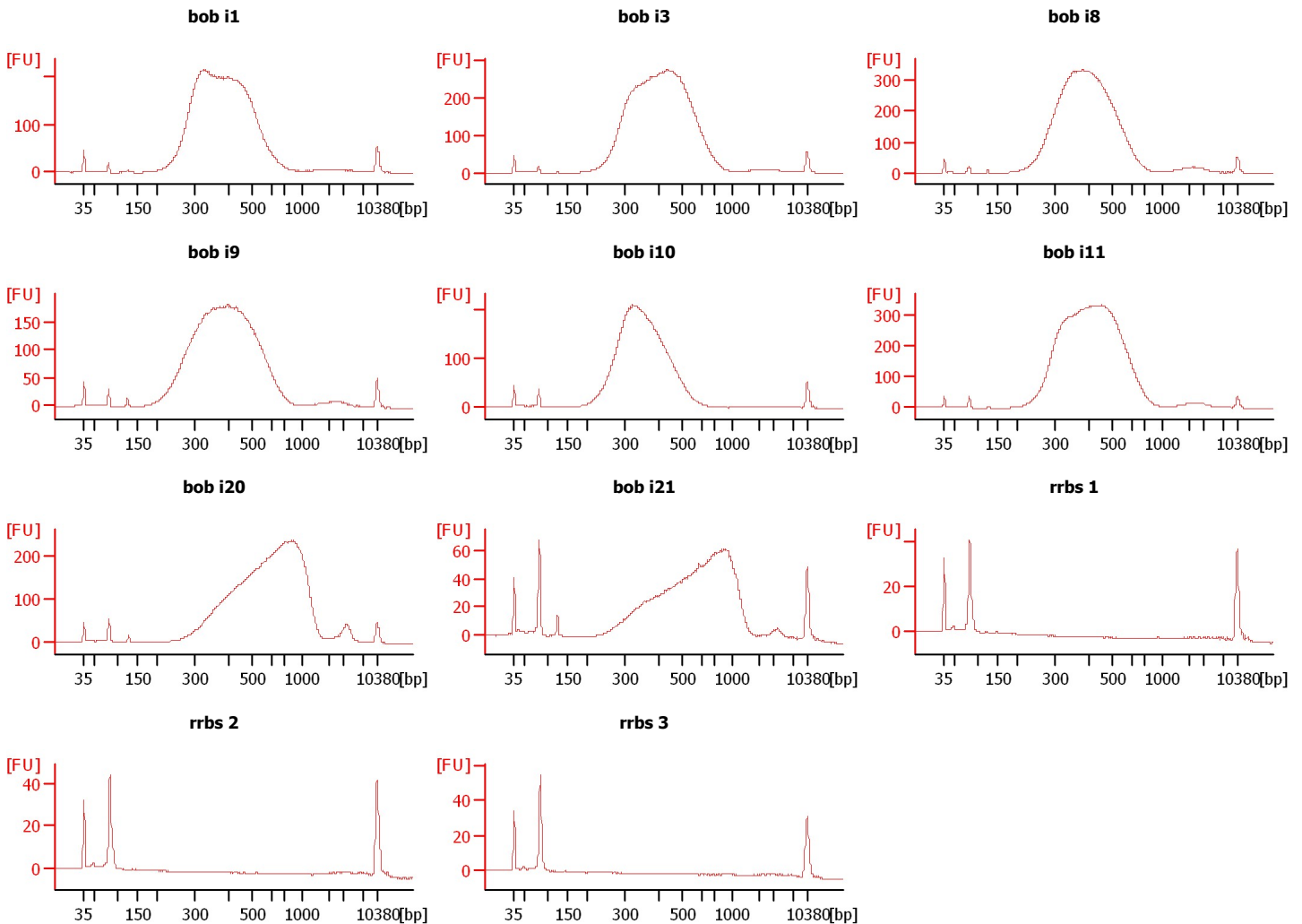
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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:



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
Modified: 2/16/2016 11:35:50 AM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
bob i1		<input type="checkbox"/>	✓			
bob i3		<input type="checkbox"/>	✓			
bob i8		<input type="checkbox"/>	✓			
bob i9		<input type="checkbox"/>	✓			
bob i10		<input type="checkbox"/>	✓			
bob i11		<input type="checkbox"/>	✓			
bob i20		<input type="checkbox"/>	✓			
bob i21		<input type="checkbox"/>	✓			
rrbs 1		<input type="checkbox"/>	✓			
rrbs 2		<input type="checkbox"/>	✓			
rrbs 3		<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\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
Modified: 2/16/2016 11:35:50 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

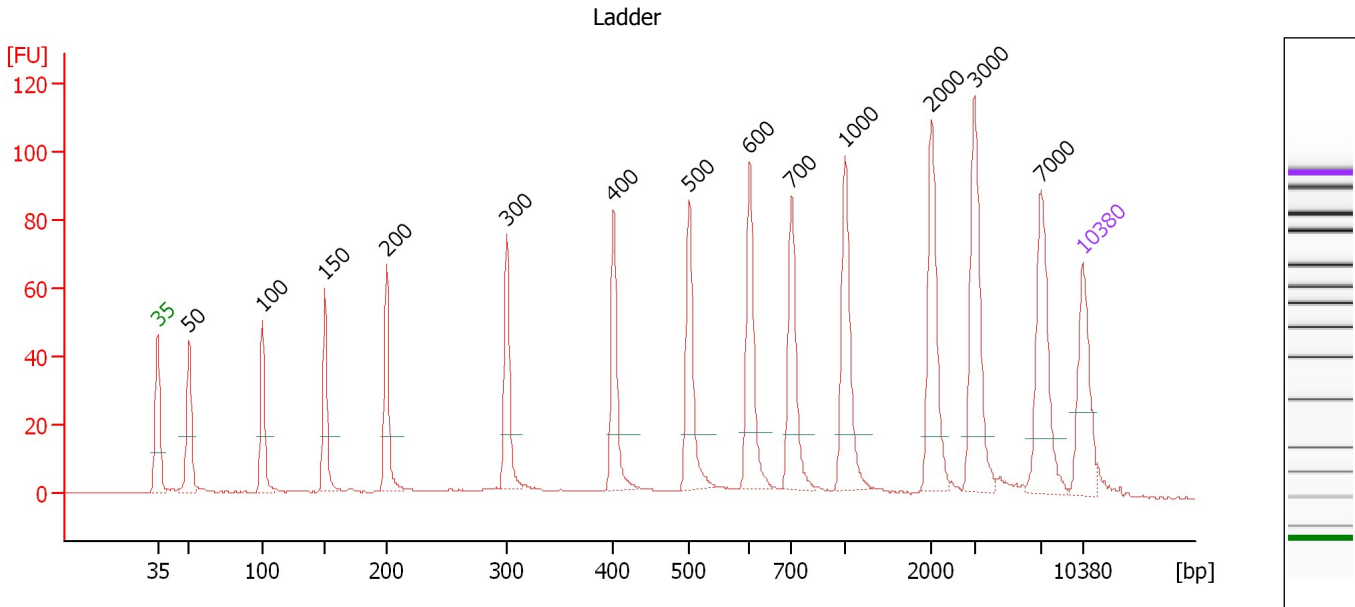
Ladder

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\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

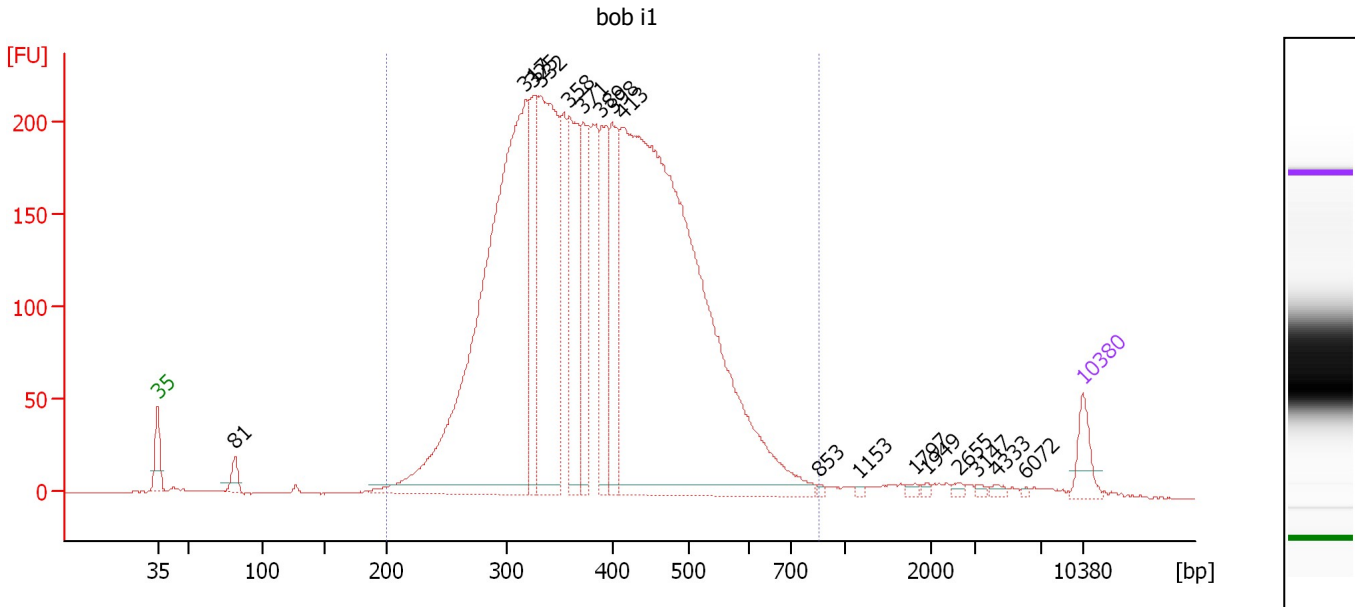
Peak table for Ladder

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	45.37
3	100	150.00	2,272.7	Ladder Peak	50.96
4	150	150.00	1,515.2	Ladder Peak	55.66
5	200	150.00	1,136.4	Ladder Peak	60.31
6	300	150.00	757.6	Ladder Peak	69.42
7	400	150.00	568.2	Ladder Peak	77.53
8	500	150.00	454.5	Ladder Peak	83.27
9	600	150.00	378.8	Ladder Peak	87.82
10	700	150.00	324.7	Ladder Peak	90.99
11	1,000	150.00	227.3	Ladder Peak	95.04
12	2,000	150.00	113.6	Ladder Peak	101.62
13	3,000	150.00	75.8	Ladder Peak	104.84
14	7,000	150.00	32.5	Ladder Peak	109.88
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : bob i1

Number of peaks found: 17 Corr. Area 1: 4,866.4
 Noise: 0.2

Peak table for sample 1 : bob i1

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	81	65.33	1,216.3		48.88
3	317	2,676.31	12,779.8		70.82
4	325	421.88	1,965.0		71.47
5	332	1,065.21	4,860.6		72.02
6	358	507.73	2,146.0		74.16
7	371	380.47	1,552.2		75.21
8	389	363.96	1,419.1		76.60
9	398	407.51	1,549.7		77.40
10	413	3,640.78	13,371.8		78.25
11	853	7.18	12.8		93.06
12	1,153	6.17	8.1		96.05
13	1,797	10.45	8.8		100.29
14	1,949	7.65	5.9		101.28
15	2,655	11.23	6.4		103.73
16	3,147	8.30	4.0		105.02
17	4,333	12.41	4.3		106.52
18	6,072	4.52	1.1		108.71
19	10,380	75.00	10.9	Upper Marker	113.00

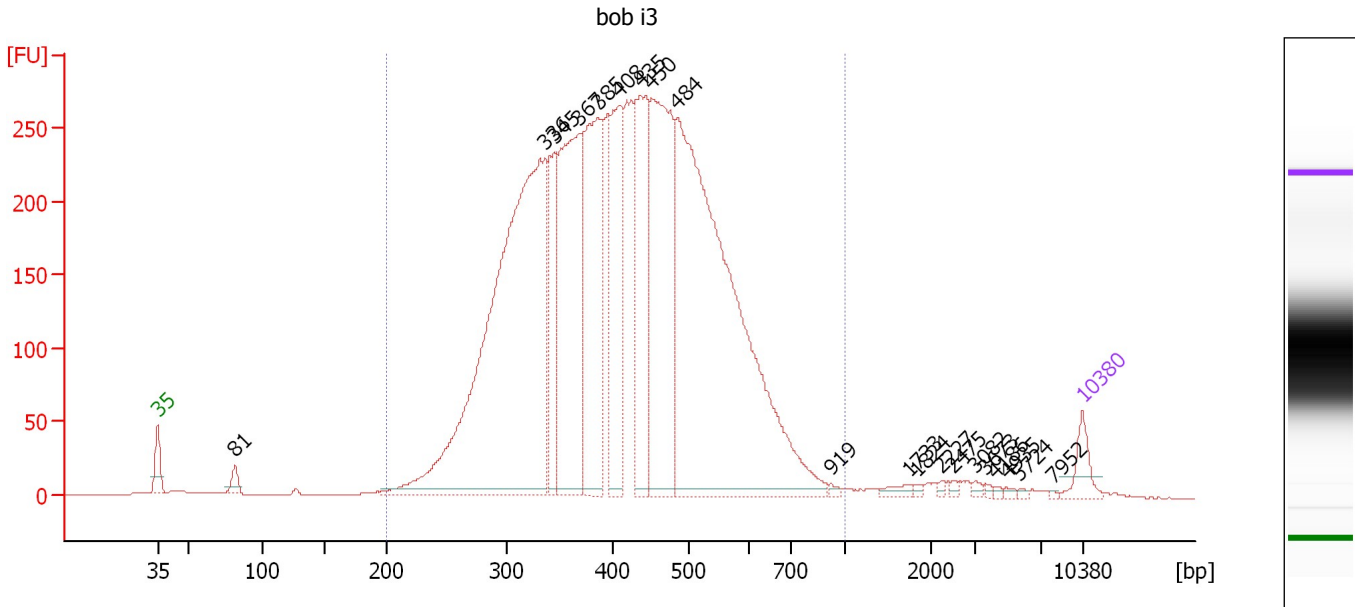
Region table for sample 1 : bob i1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	857	395	4,866.4	42,033.2	10,179.54	97	23.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : bob i3

Number of peaks found: 20 Corr. Area 1: 6,379.4
 Noise: 0.2

Peak table for sample 2 : bob i3

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	81	55.13	1,027.8		48.87
3	336	3,073.32	13,876.1		72.30
4	345	432.18	1,899.3		73.05
5	367	1,157.14	4,771.2		74.89
6	385	862.07	3,390.5		76.33
7	408	645.95	2,400.2		77.98
8	435	651.60	2,267.0		79.57
9	450	1,171.04	3,940.8		80.41
10	484	2,953.00	9,243.3		82.35
11	919	12.16	20.0		93.95
12	1,733	26.09	22.8		99.87
13	1,824	9.72	8.1		100.46
14	2,227	9.83	6.7		102.35
15	2,475	13.06	8.0		103.15
16	3,082	12.10	6.0		104.94
17	3,673	7.58	3.1		105.69
18	4,186	7.46	2.7		106.33
19	4,935	7.72	2.4		107.28
20	5,724	6.63	1.8		108.27
21	7,952	3.62	0.7		110.76
22	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...

... Region table for sample 2 :

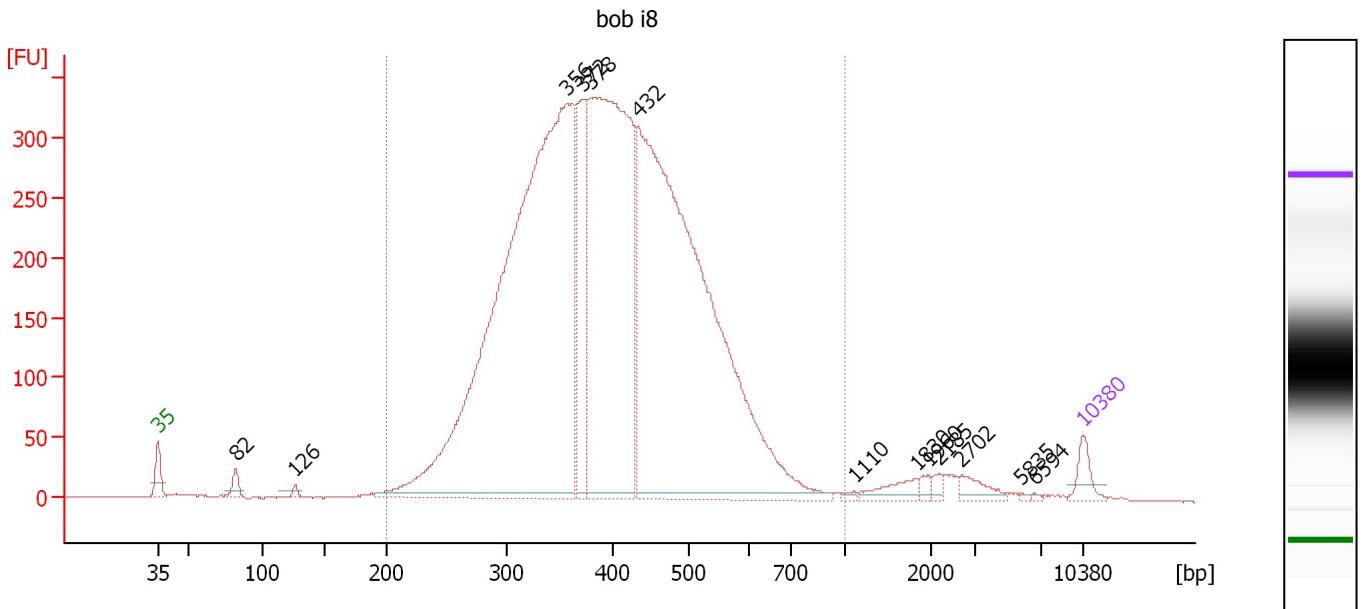
bob i3

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	424	6,379.4	47,243.1	12,134.80	97	25.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : bob i8

Number of peaks found: 13 Corr. Area 1: 7,168.7
 Noise: 0.2

Peak table for sample 3 : bob i8

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	82	74.83	1,383.5		48.95
3	126	26.09	313.1		53.43
4	356	5,706.93	24,261.0		73.99
5	372	661.84	2,696.1		75.25
6	378	3,182.63	12,751.9		75.76
7	432	4,649.06	16,292.8		79.39
8	1,110	13.14	17.9		95.76
9	1,830	80.47	66.6		100.50
10	1,960	27.20	21.0		101.36
11	2,185	26.88	18.6		102.22
12	2,702	69.85	39.2		103.88
13	5,835	6.89	1.8		108.41
14	6,594	6.92	1.6		109.37
15	10,380	75.00	10.9	Upper Marker	113.00

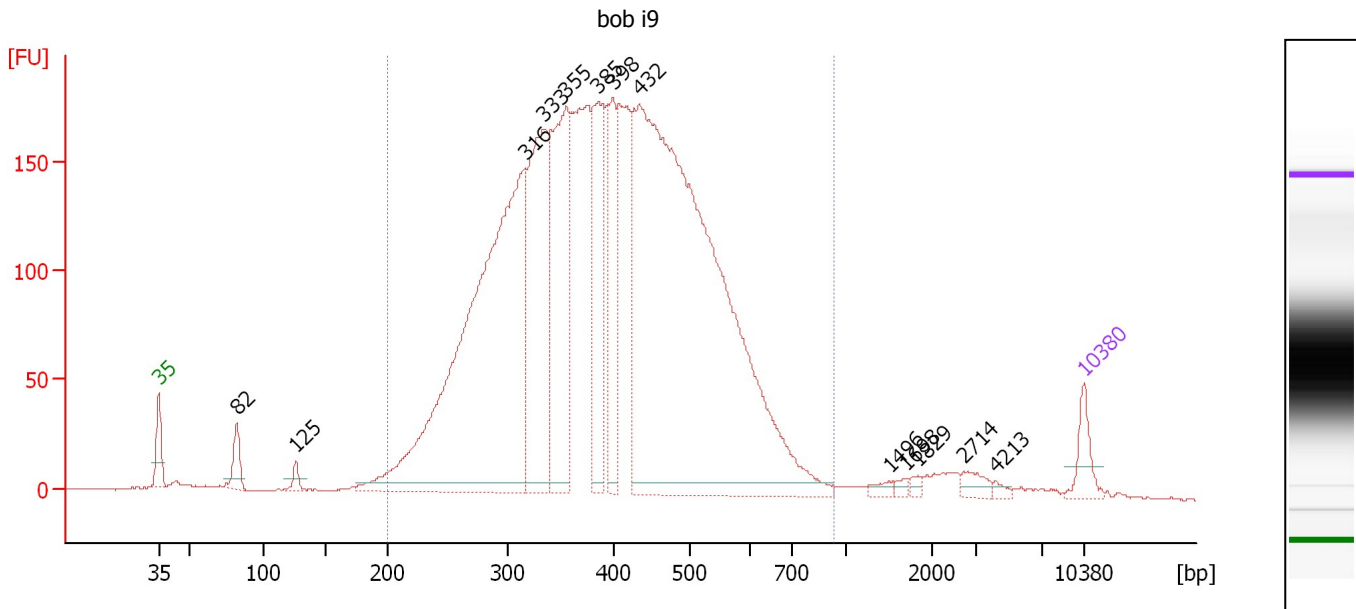
Region table for sample 3 : bob i8

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	405	7,168.7	58,197.9	14,466.38	96	23.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 4 : bob i9

Number of peaks found: 13 Corr. Area 1: 4,484.7
 Noise: 0.2

Peak table for sample 4 : bob i9

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	82	112.31	2,082.9		48.92
3	125	40.24	486.0		53.36
4	316	2,547.12	12,193.8		70.76
5	333	910.24	4,135.7		72.13
6	355	871.28	3,720.2		73.87
7	385	478.22	1,881.8		76.32
8	398	388.77	1,479.1		77.39
9	432	3,698.79	12,966.9		79.38
10	1,496	19.62	19.9		98.31
11	1,698	14.87	13.3		99.63
12	1,829	13.99	11.6		100.50
13	2,714	39.18	21.9		103.92
14	4,213	12.49	4.5		106.37
15	10,380	75.00	10.9	Upper Marker	113.00

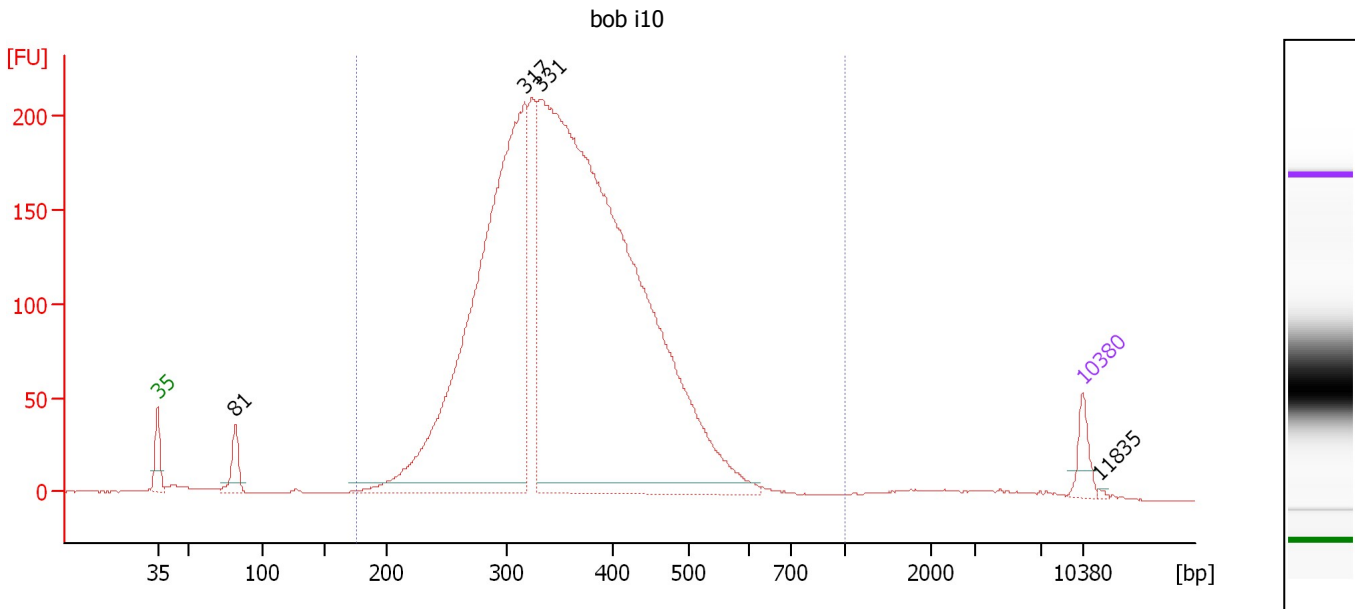
Region table for sample 4 : bob i9

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	927	405	4,484.7	42,765.2	10,405.15	95	26.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 5 : bob i10

Number of peaks found: 4 Corr. Area 1: 3,870.9
 Noise: 0.2

Peak table for sample 5 : bob i10

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	81	150.03	2,794.0		48.88
3	317	3,361.83	16,063.5		70.80
4	331	6,072.30	27,788.8		71.94
5	10,380	75.00	10.9	Upper Marker	113.00
6	11,835	0.00	0.0		114.34

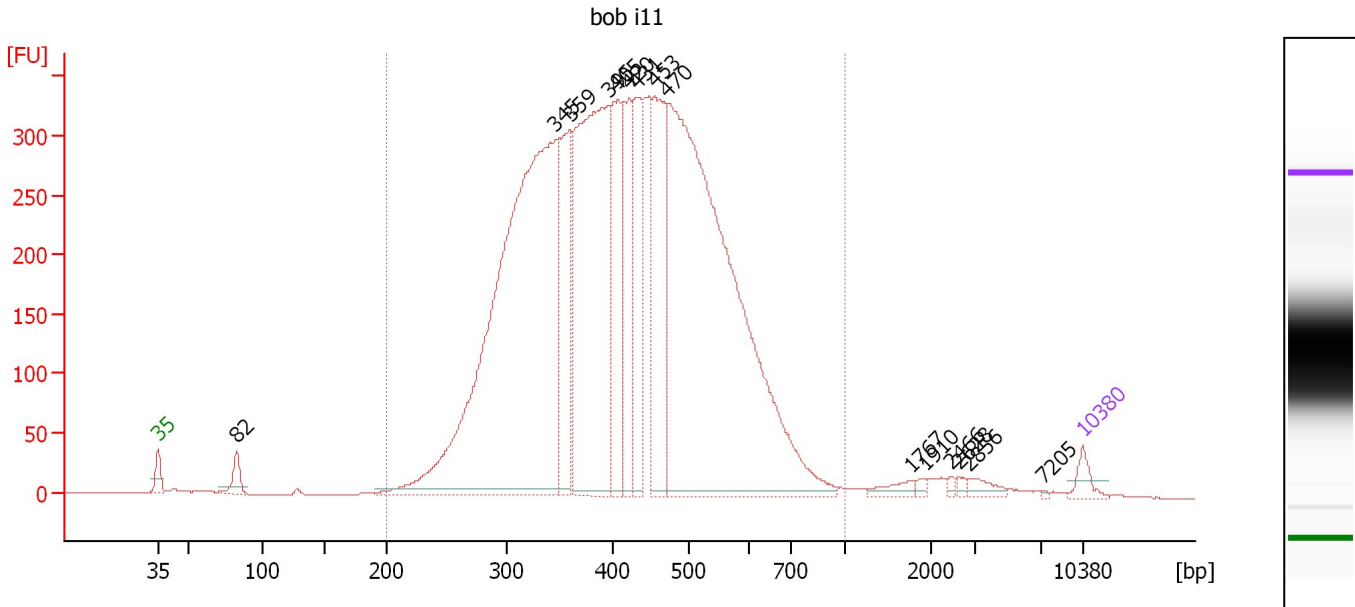
Region table for sample 5 : bob i10

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
176	1,000	360	3,870.9	43,396.5	9,708.41	96	21.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 6 : bob i11

Number of peaks found: 15 Corr. Area 1: 7,860.5
 Noise: 0.2

Peak table for sample 6 : bob i11

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	82	158.71	2,930.1		48.96
3	345	6,000.51	26,360.3		73.06
4	359	947.65	3,998.7		74.21
5	395	2,973.25	11,400.2		77.14
6	405	1,050.66	3,930.6		77.82
7	420	768.50	2,775.1		78.65
8	431	822.06	2,893.2		79.28
9	453	1,126.85	3,766.6		80.59
10	470	5,930.78	19,132.1		81.53
11	1,767	70.15	60.2		100.09
12	1,910	26.68	21.2		101.03
13	2,466	20.28	12.5		103.12
14	2,628	21.74	12.5		103.64
15	2,856	69.38	36.8		104.37
16	7,205	6.31	1.3		110.07
17	10,380	75.00	10.9	Upper Marker	113.00

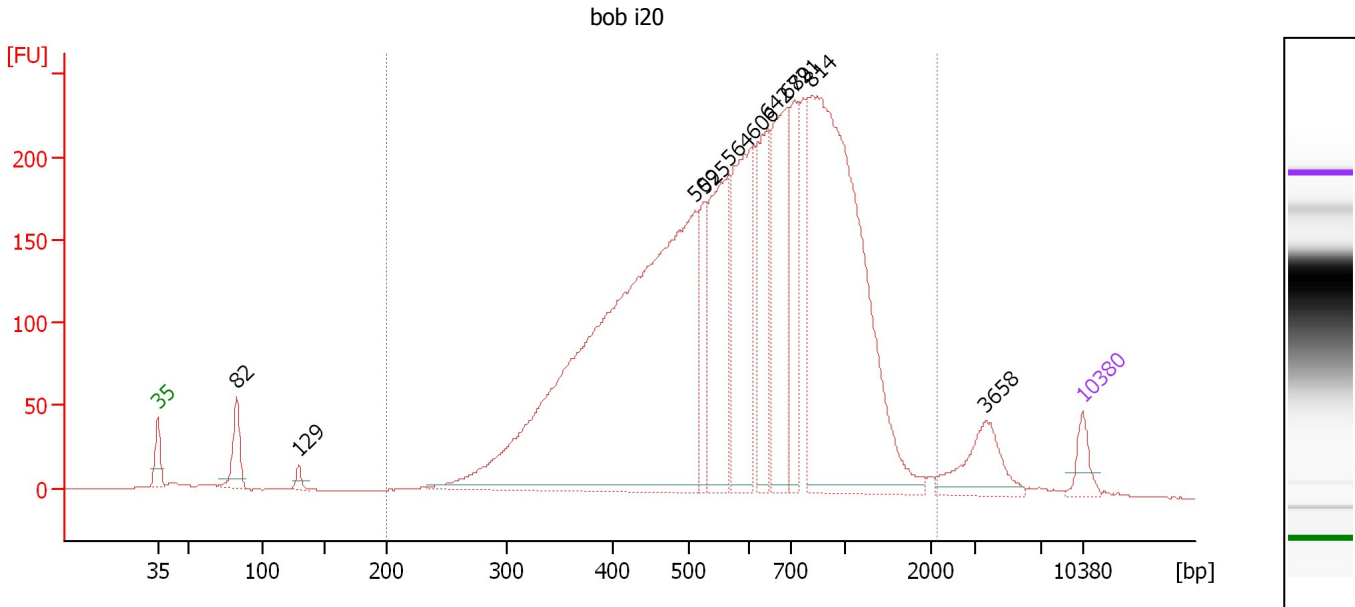
Region table for sample 6 : bob i11

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	425	7,860.5	79,799.6	20,596.89	97	25.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 7 : bob i20

Number of peaks found: 11 Corr. Area 1: 5,032.4
 Noise: 0.2

Peak table for sample 7 : bob i20

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	82	206.10	3,804.7		48.96
3	129	40.03	471.5		53.66
4	509	3,801.07	11,318.4		83.67
5	525	291.57	841.4		84.41
6	564	718.02	1,927.3		86.20
7	606	771.03	1,929.1		88.00
8	642	427.30	1,008.1		89.16
9	689	692.45	1,523.0		90.63
10	721	436.42	917.4		91.27
11	814	2,355.72	4,382.7		92.53
12	3,658	222.93	92.3		105.67
13	10,380	75.00	10.9	Upper Marker	113.00

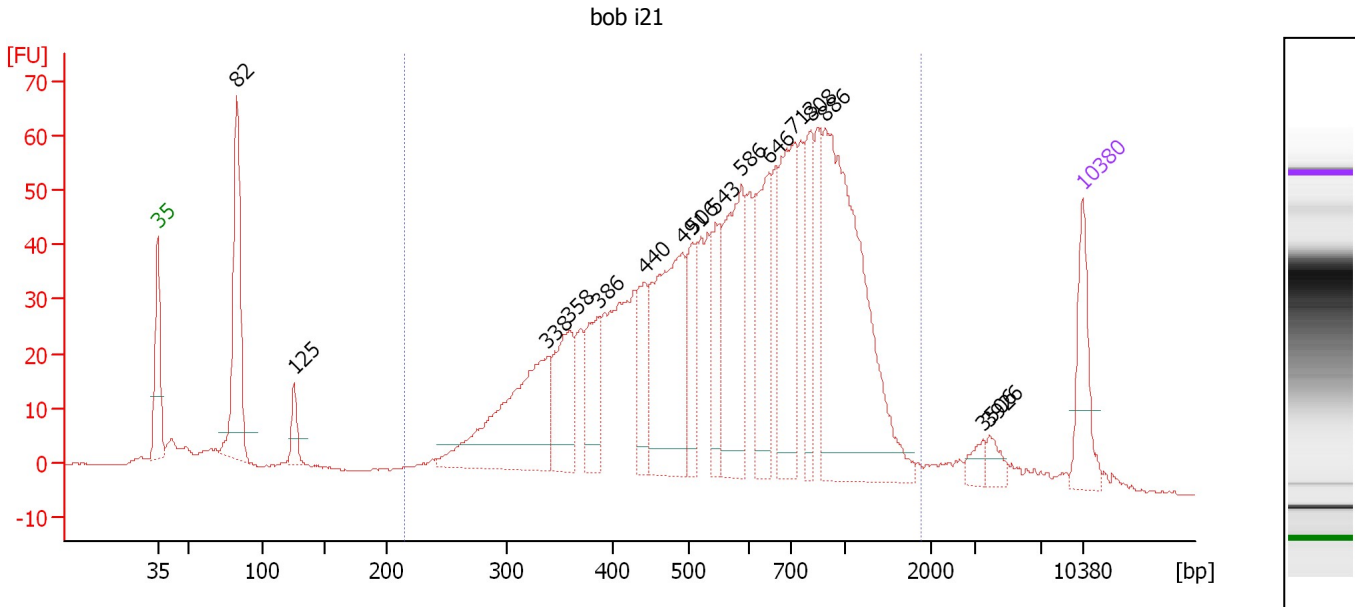
Region table for sample 7 : bob i20

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	2,103	664	5,032.4	29,164.5	10,410.12	95	42.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 8 : bob i21

Number of peaks found: 16 Corr. Area 1: 1,393.7
 Noise: 0.2

Peak table for sample 8 : bob i21

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	82	274.59	5,054.0		48.99
3	125	42.61	515.6		53.33
4	338	301.62	1,351.3		72.52
5	358	136.23	575.8		74.16
6	386	95.73	375.9		76.38
7	440	82.46	283.9		79.83
8	491	287.23	886.6		82.74
9	506	83.11	248.9		83.54
10	543	79.57	222.0		85.23
11	586	211.60	546.9		87.19
12	646	166.42	390.6		89.26
13	713	207.54	440.7		91.17
14	808	95.79	179.7		92.44
15	886	493.41	843.9		93.50
16	3,506	17.17	7.4		105.48
17	3,926	18.60	7.2		106.01
18	10,380	75.00	10.9	Upper Marker	113.00

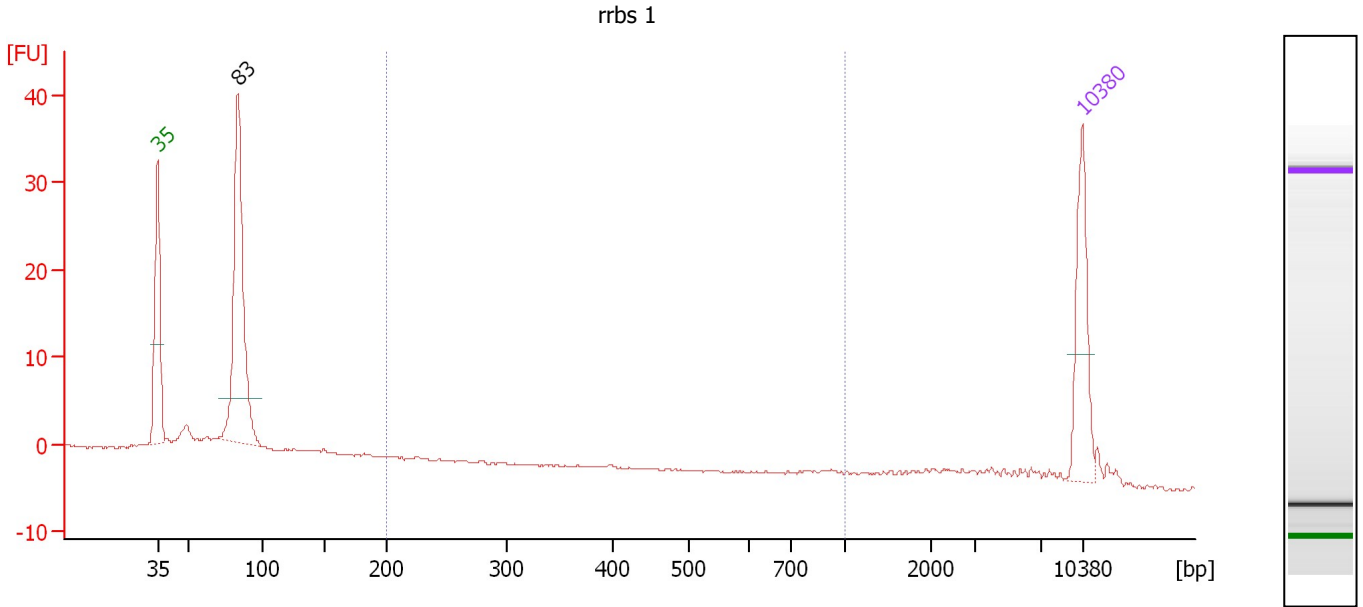
Region table for sample 8 : bob i21

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
215	1,880	646	1,393.7	9,158.7	3,098.03	88	43.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 9 : rrbs 1

Number of peaks found: 1 Corr. Area 1: 2.4
 Noise: 0.2

Peak table for sample 9 : rrbs 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	83	294.31	5,355.3		49.09
3	10,380	75.00	10.9	Upper Marker	113.00

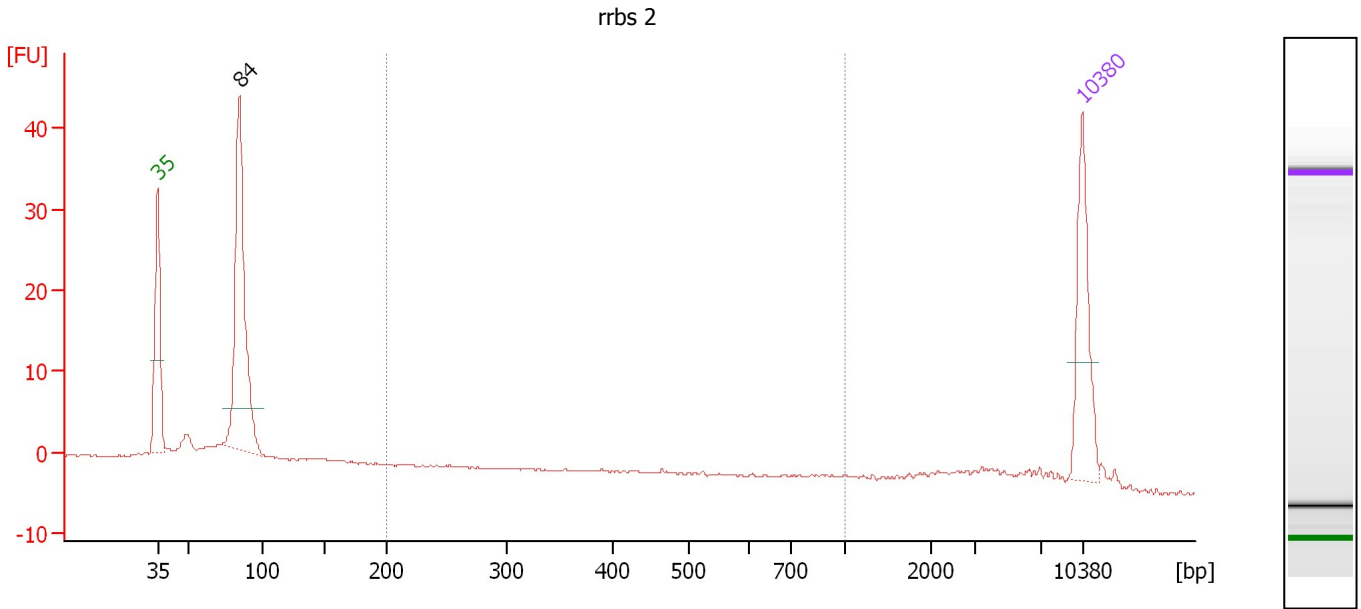
Region table for sample 9 : rrbs 1

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	630	2.4	33.0	7.80	2	48.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 10 : rrbs 2

Number of peaks found: 1 Corr. Area 1: 1.9
 Noise: 0.2

Peak table for sample 10 : rrbs 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	84	272.39	4,898.3		49.20
3	10,380	75.00	10.9	Upper Marker	113.00

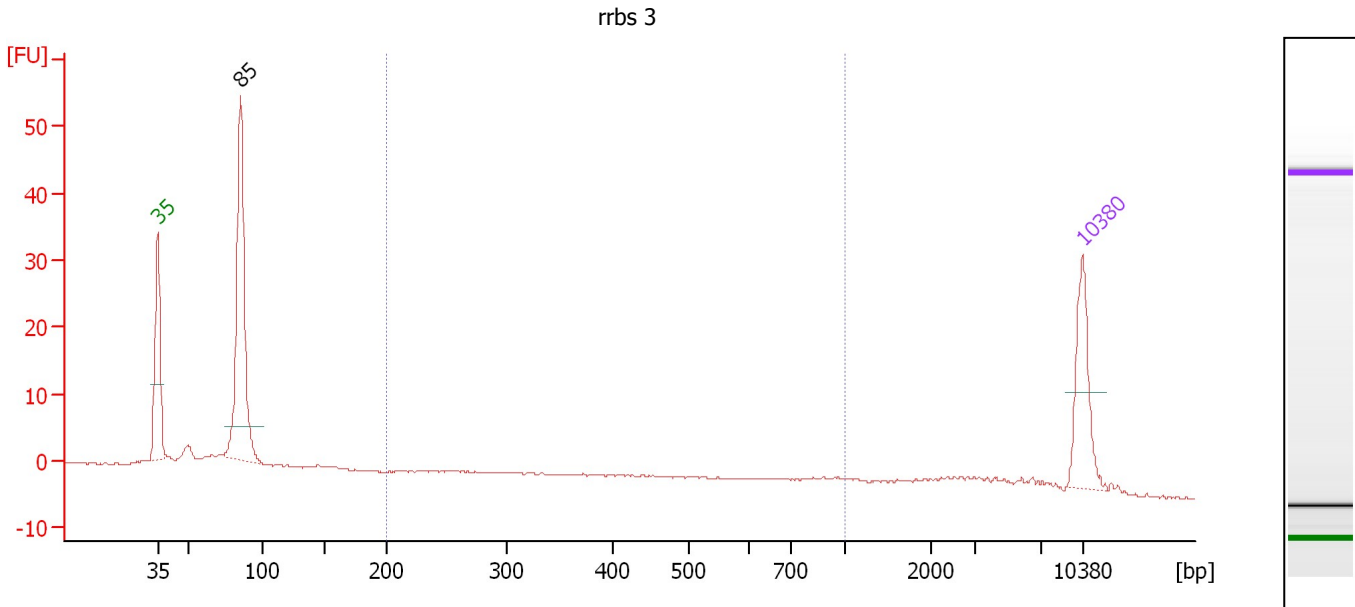
Region table for sample 10 : rrbs 2

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	712	1.9	12.3	4.94	2	28.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 AM

Electropherogram Summary Continued ...



Overall Results for sample 11 : rrbs 3

Number of peaks found: 1 Corr. Area 1: 4.9
 Noise: 0.1

Peak table for sample 11 : rrbs 3

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	85	346.78	6,191.2		49.27
3	10,380	75.00	10.9	Upper Marker	113.00

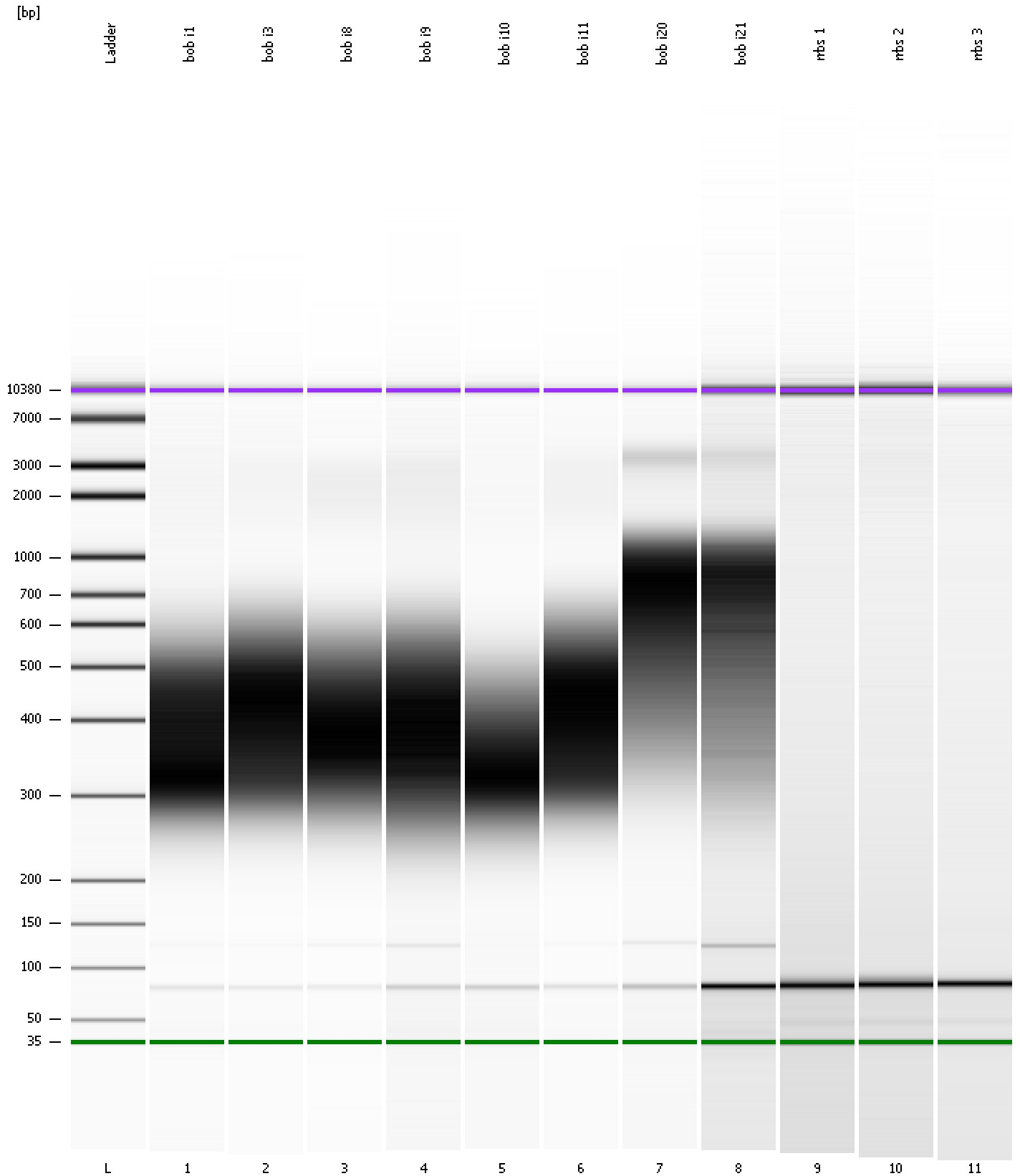
Region table for sample 11 : rrbs 3

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	624	4.9	47.8	15.50	4	36.5

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
Modified: 2/16/2016 11:35:50 AM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad

Created: 2/16/2016 10:53:20 AM
 Modified: 2/16/2016 11:35:50 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		2/16/2016 11:34:39 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2016-02-16\2016-02-16_001.xad)		Instrument	Run		2/16/2016 10:53:26 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		2/16/2016 10:53:26 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		2/16/2016 10:53:26 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		2/16/2016 10:53:26 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		2/16/2016 10:53:26 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		2/16/2016 10:53:26 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		2/16/2016 10:53:26 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1