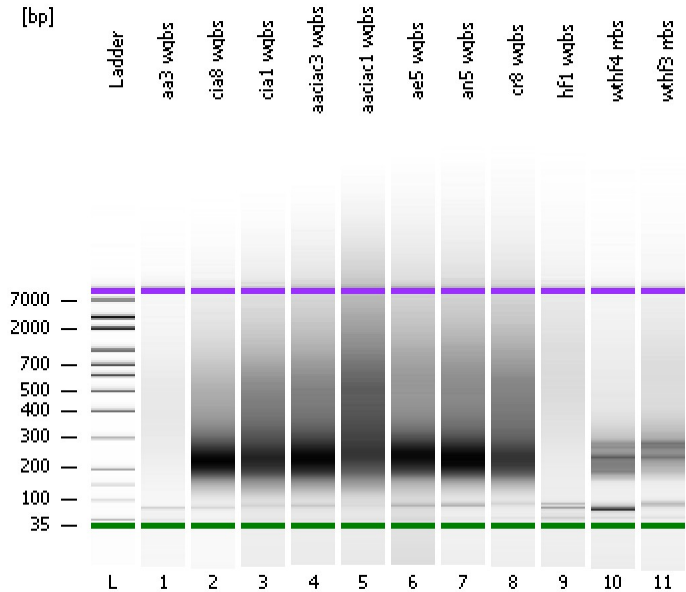


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
Modified: 1/26/2017 3:35:35 PM

**Electrophoresis File Run Summary**



Instrument Information:

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

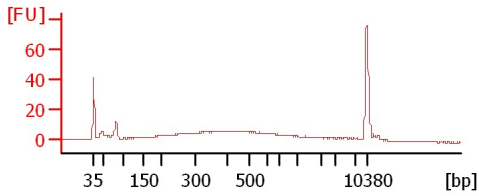
Assay Information:

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

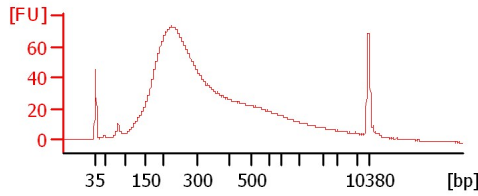
Chip Information:

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

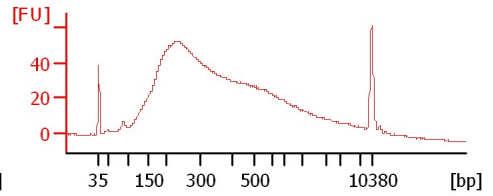
aa3 wgbs



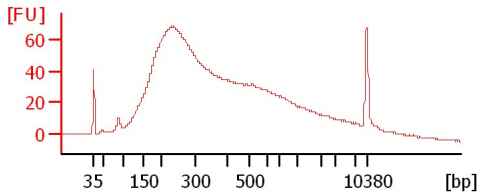
cia8 wgbs



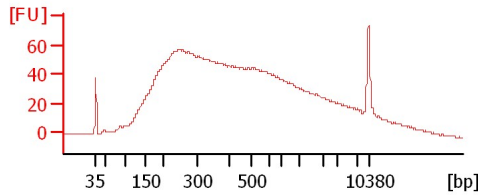
cia1 wgbs



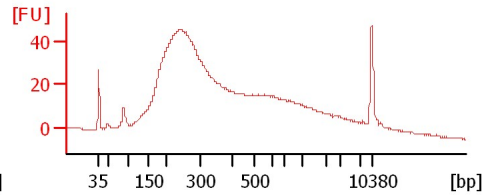
aaiciac3 wgbs



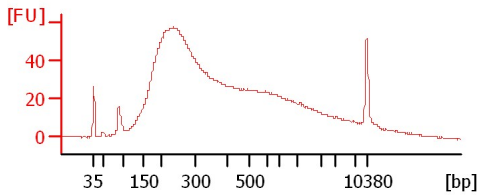
aaiciac1 wgbs



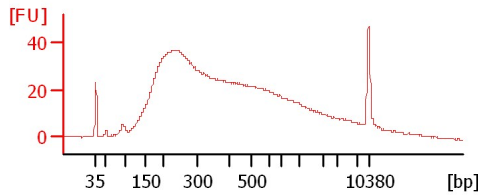
ae5 wgbs



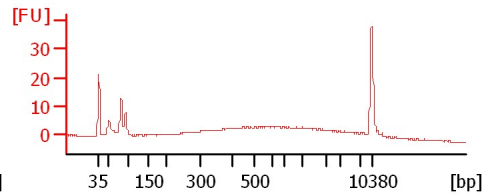
an5 wgbs



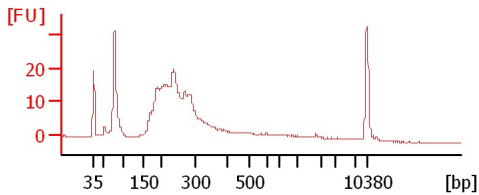
cr8 wgbs



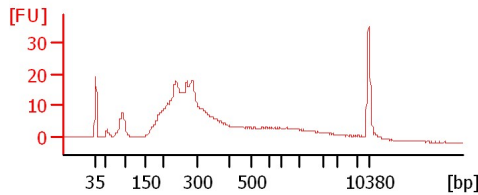
hf1 wgbs



wthf4 rrbs



wthf3 rrbs



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
aa3 wgbs		<input type="checkbox"/>	✓			
cia8 wgbs		<input type="checkbox"/>	✓			
cia1 wgbs		<input type="checkbox"/>	✓			
aaci3 wgbs		<input type="checkbox"/>	✓			
aaci1 wgbs		<input type="checkbox"/>	✓			
ae5 wgbs		<input type="checkbox"/>	✓			
an5 wgbs		<input type="checkbox"/>	✓			
cr8 wgbs		<input type="checkbox"/>	✓			
hf1 wgbs		<input type="checkbox"/>	✓			
wthf4 rrbs		<input type="checkbox"/>	✓			
wthf3 rrbs		<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\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
Modified: 1/26/2017 3:35:35 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

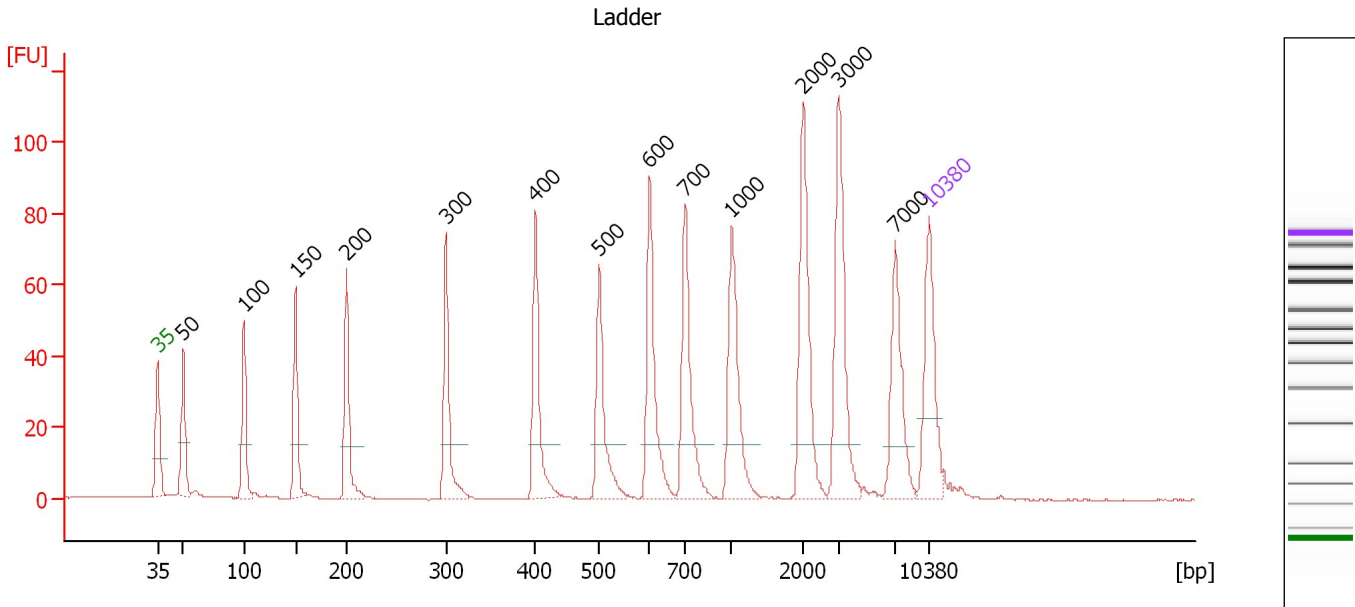
**Ladder**

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\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

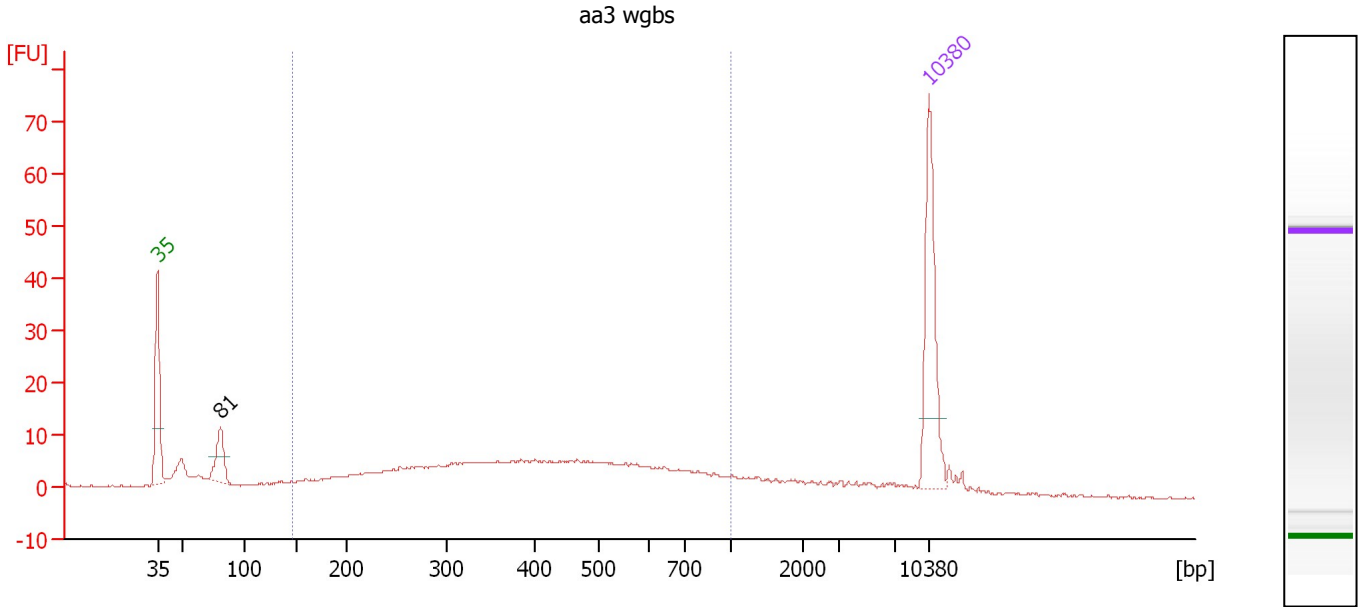
**Peak table for Ladder**

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	45.32
3	100	150.00	2,272.7	Ladder Peak	50.83
4	150	150.00	1,515.2	Ladder Peak	55.53
5	200	150.00	1,136.4	Ladder Peak	60.18
6	300	150.00	757.6	Ladder Peak	69.18
7	400	150.00	568.2	Ladder Peak	77.32
8	500	150.00	454.5	Ladder Peak	83.08
9	600	150.00	378.8	Ladder Peak	87.68
10	700	150.00	324.7	Ladder Peak	90.86
11	1,000	150.00	227.3	Ladder Peak	95.11
12	2,000	150.00	113.6	Ladder Peak	101.58
13	3,000	150.00	75.8	Ladder Peak	104.81
14	7,000	150.00	32.5	Ladder Peak	109.97
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : aa3 wgs**

Number of peaks found: 1                      Corr. Area 1: 225.6  
 Noise: 0.1

**Peak table for sample 1 : aa3 wgs**

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	40.75	763.3		48.73
3	10,380	75.00	10.9	Upper Marker	113.00

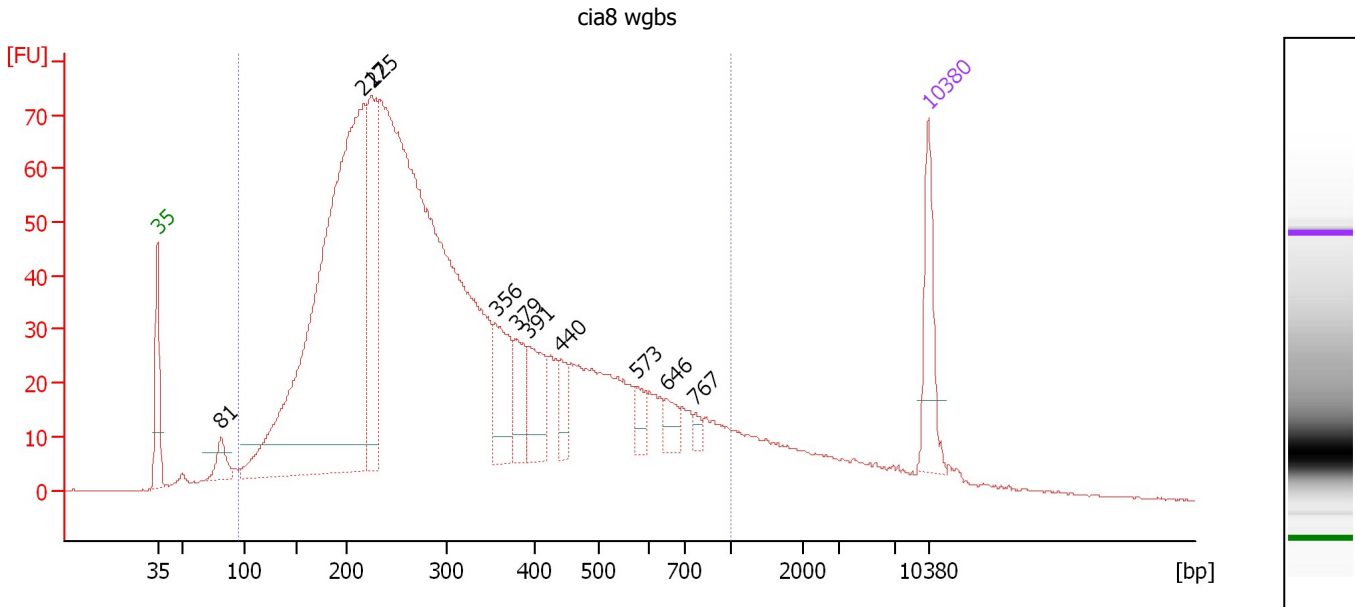
**Region table for sample 1 : aa3 wgs**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
147	1,000	437	225.6	1,718.3	382.93	69	41.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : cia8 wgs**

Number of peaks found: 10                      Corr. Area 1: 2,085.5  
 Noise: 0.2

**Peak table for sample 2 : cia8 wgs**

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	46.65	873.5		48.73
3	217	1,260.10	8,814.8		61.68
4	225	267.14	1,797.9		62.44
5	356	115.62	492.7		73.70
6	379	65.67	262.7		75.60
7	391	91.25	353.2		76.62
8	440	34.50	118.7		79.64
9	573	23.54	62.2		86.44
10	646	26.65	62.5		89.15
11	767	10.59	20.9		91.82
12	10,380	75.00	10.9	Upper Marker	113.00

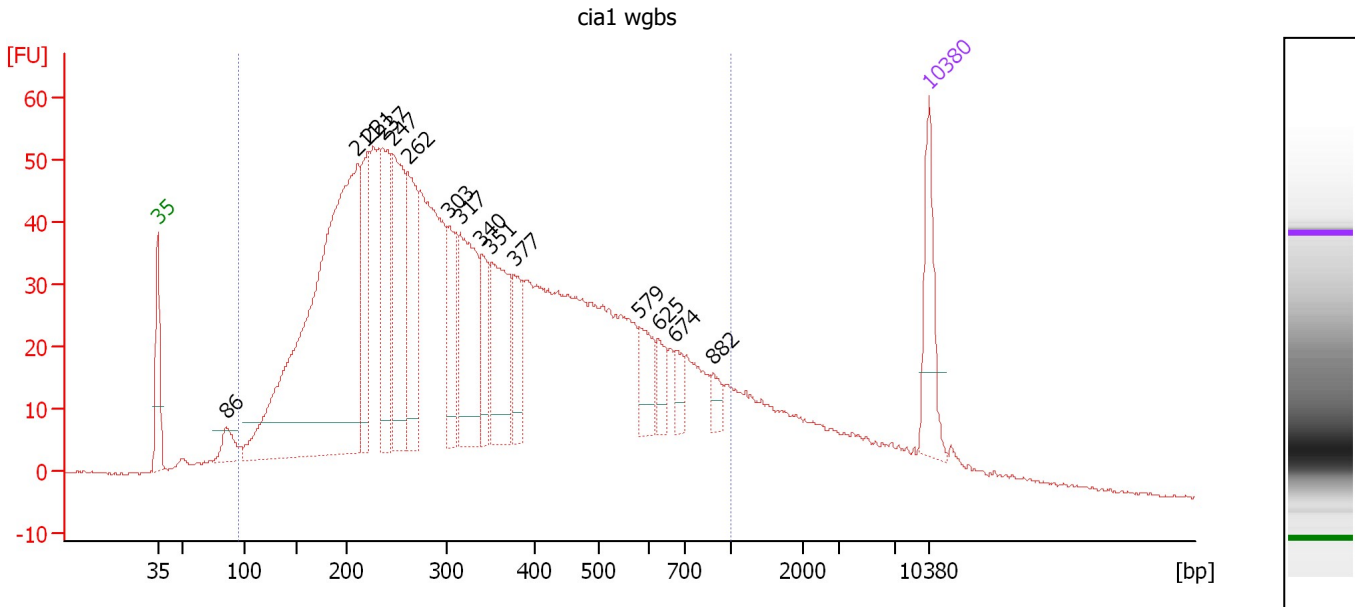
**Region table for sample 2 : cia8 wgs**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
95	1,000	331	2,085.5	27,591.4	4,531.06	91	50.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : cia1 wgs**

Number of peaks found: 15                      Corr. Area 1: 1,929.8  
 Noise: 0.2

**Peak table for sample 3 : cia1 wgs**

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	86	43.29	766.8		49.24
3	211	1,002.08	7,207.7		61.14
4	221	149.72	1,025.8		62.09
5	237	186.31	1,191.7		63.50
6	247	219.32	1,346.5		64.39
7	262	173.01	1,000.8		65.76
8	303	108.83	544.1		69.43
9	317	206.80	989.8		70.53
10	340	71.66	319.6		72.42
11	351	161.13	696.1		73.31
12	377	70.02	281.3		75.46
13	579	54.74	143.2		86.73
14	625	32.77	79.5		88.46
15	674	24.61	55.3		90.03
16	882	18.73	32.2		93.44
17	10,380	75.00	10.9	Upper Marker	113.00

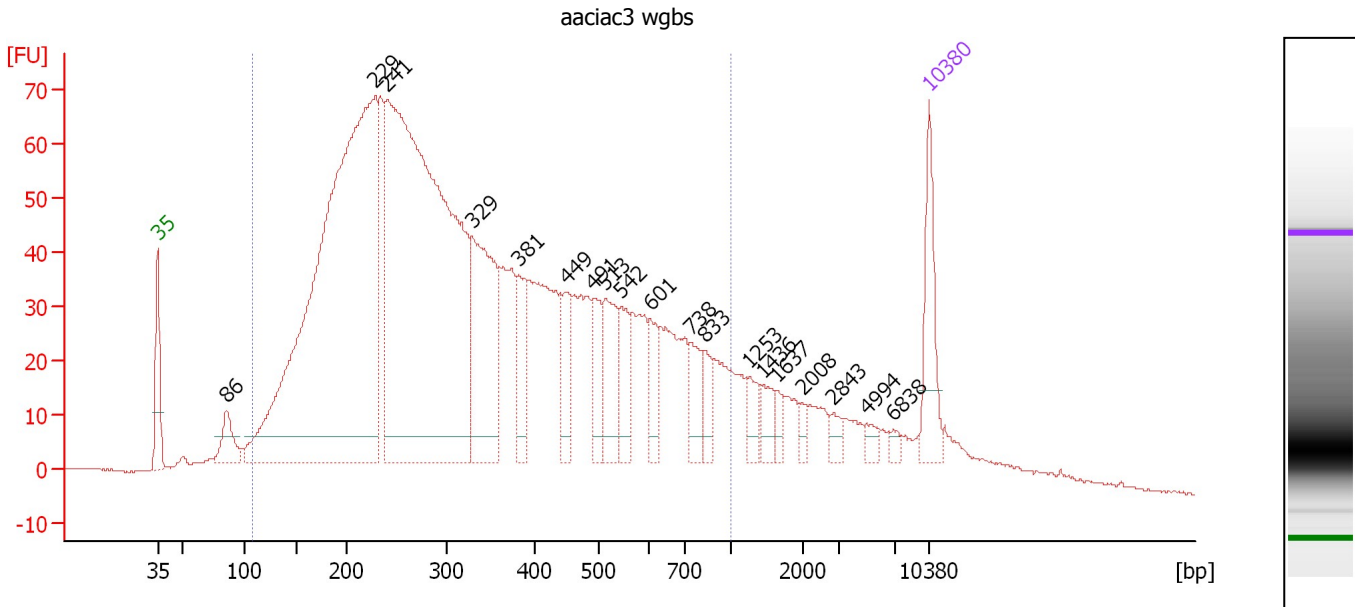
**Region table for sample 3 : cia1 wgs**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
96	1,000	361	1,929.8	26,662.6	4,591.47	89	49.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : aaciac3 wgbs**

Number of peaks found: 19                      Corr. Area 1: 2,333.7  
 Noise: 0.2

**Peak table for sample 4 : aaciac3 wgbs**

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	86	60.45	1,061.9		49.32
3	229	1,453.91	9,631.1		62.77
4	241	1,414.66	8,903.7		63.85
5	329	264.40	1,218.6		71.52
6	381	71.71	285.0		75.79
7	449	68.17	229.9		80.16
8	491	56.59	174.8		82.54
9	513	87.89	259.6		83.67
10	542	59.08	165.1		85.02
11	601	44.42	111.9		87.72
12	738	47.36	97.3		91.40
13	833	32.13	58.4		92.75
14	1,253	23.82	28.8		96.74
15	1,436	23.16	24.4		97.93
16	1,637	13.88	12.9		99.23
17	2,008	10.24	7.7		101.60
18	2,843	12.84	6.8		104.30
19	4,994	11.88	3.6		107.38
20	6,838	7.47	1.7		109.76
21	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : aaciac3 wgbs**

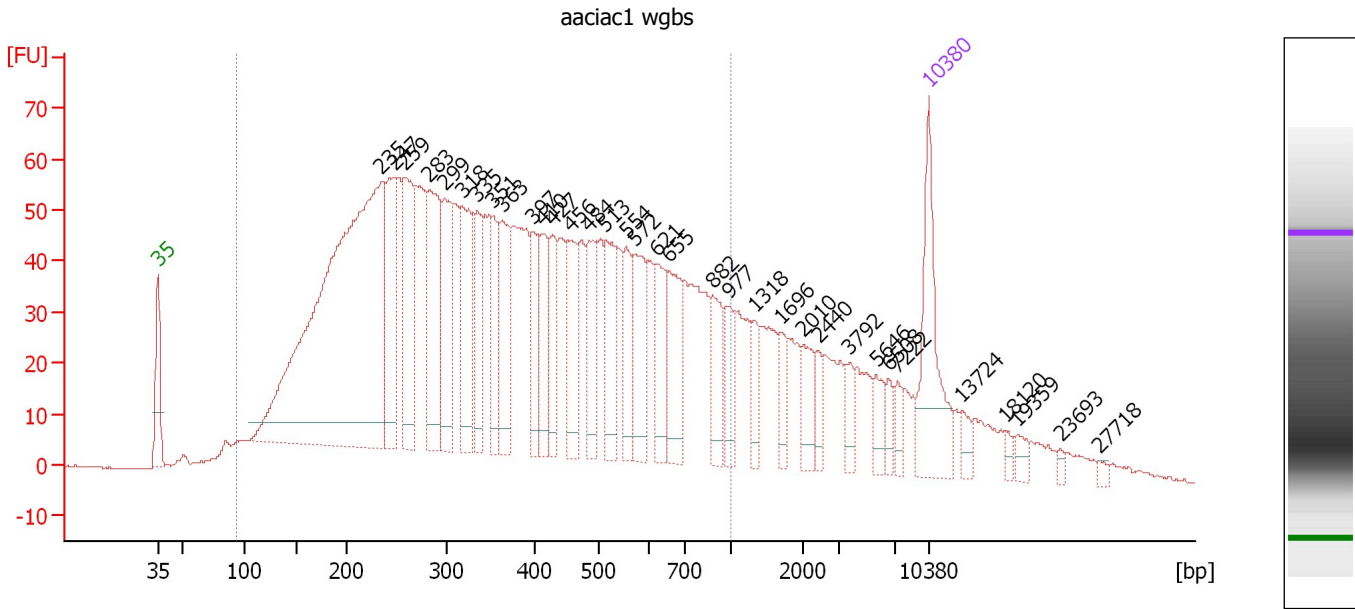
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
107	1,000	362	2,333.7	28,069.9	4,911.52	87	50.3



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : aaciac1 wgbs**

Number of peaks found: 34                      Corr. Area 1: 2,504.9  
 Noise: 0.2

**Peak table for sample 5 : aaciac1 wgbs**

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	235	724.37	4,670.3		63.33
3	247	103.20	632.1		64.44
4	259	123.38	721.5		65.50
5	283	127.21	680.7		67.67
6	299	90.08	457.1		69.06
7	318	97.28	463.1		70.67
8	335	61.56	278.1		72.06
9	351	54.05	233.3		73.33
10	363	71.54	298.9		74.28
11	397	46.30	176.8		77.06
12	410	52.29	193.3		77.89
13	427	44.50	157.8		78.89
14	456	59.35	197.1		80.56
15	484	55.05	172.3		82.17
16	513	59.56	176.0		83.67
17	554	39.98	109.4		85.56
18	572	62.55	165.7		86.39
19	621	45.08	110.1		88.33
20	655	60.46	139.8		89.44
21	882	42.19	72.4		93.44
22	977	29.69	46.1		94.78
23	1,318	19.26	22.1		97.17
24	1,696	17.99	16.1		99.61
25	2,010	24.33	18.3		101.61

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 5 : aaciac1 wgbs**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	2,440	13.75	8.5		103.00
27	3,792	15.11	6.0		105.83
28	5,646	16.56	4.4		108.22
29	6,508	11.19	2.6		109.33
30	7,222	10.07	2.1		110.17
31	10,380	75.00	10.9	Upper Marker	113.00
32	13,724	0.00	0.0		116.00
33	18,120	0.00	0.0		119.94
34	19,359	0.00	0.0		121.06
35	23,693	0.00	0.0		124.94
36	27,718	0.00	0.0		128.56

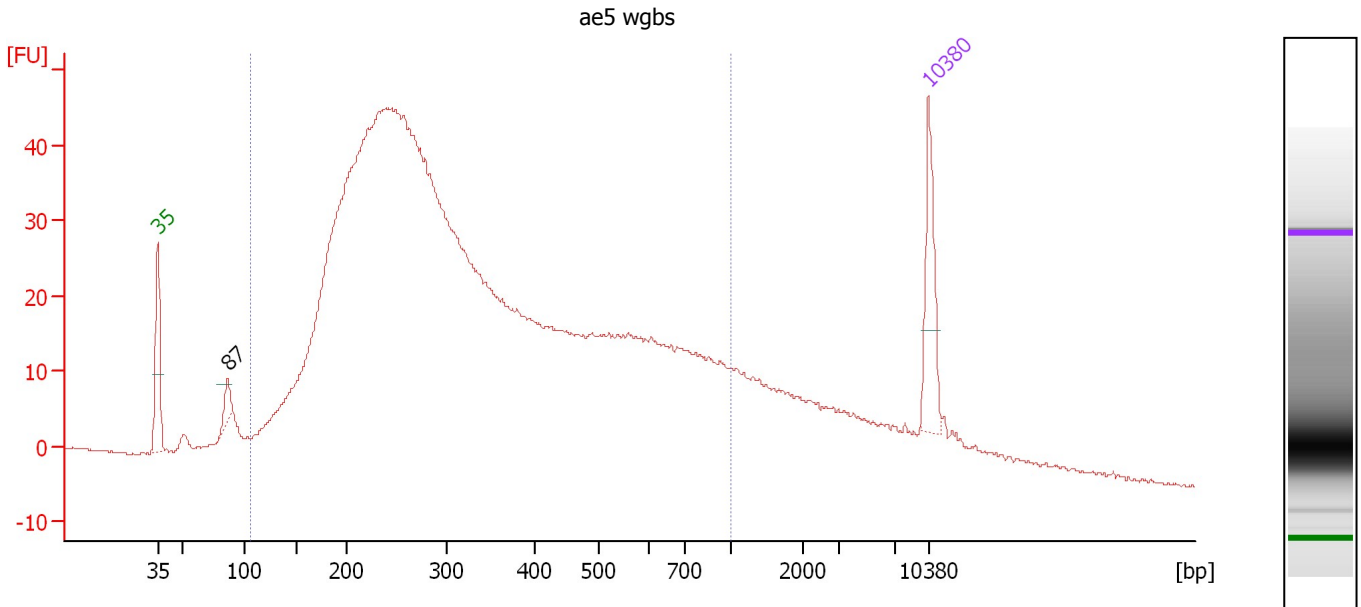
**Region table for sample 5 : aaciac1 wgbs**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
95	1,000	398	2,504.9	17,498.9	3,259.71	81	48.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : ae5 wgs**

Number of peaks found: 1                      Corr. Area 1: 1,347.5  
 Noise: 0.1

**Peak table for sample 6 : ae5 wgs**

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	87	29.84	522.3		49.35
3	10,380	75.00	10.9	Upper Marker	113.00

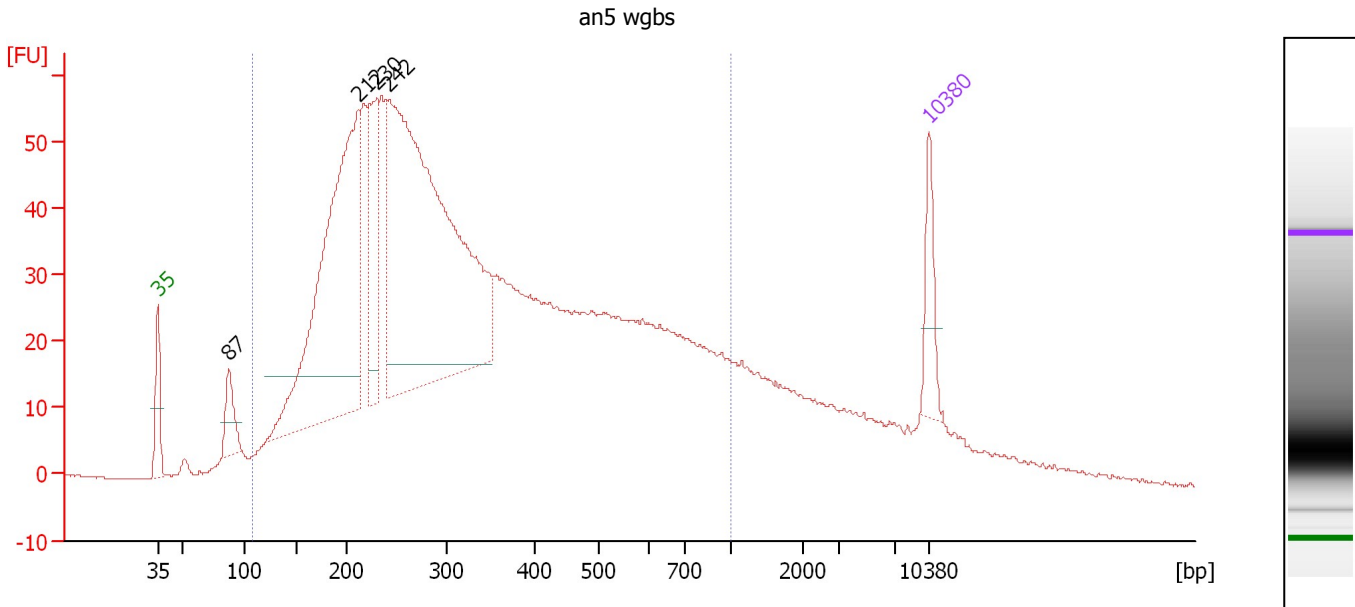
**Region table for sample 6 : ae5 wgs**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
107	1,000	363	1,347.5	26,064.4	4,655.08	85	50.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : an5 wgs**

Number of peaks found: 4                      Corr. Area 1: 1,779.3  
 Noise: 0.2

**Peak table for sample 7 : an5 wgs**

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	87	98.34	1,705.3		49.44
3	212	1,047.15	7,498.9		61.23
4	230	244.31	1,611.9		62.85
5	242	1,535.42	9,617.2		63.95
6	10,380	75.00	10.9	Upper Marker	113.00

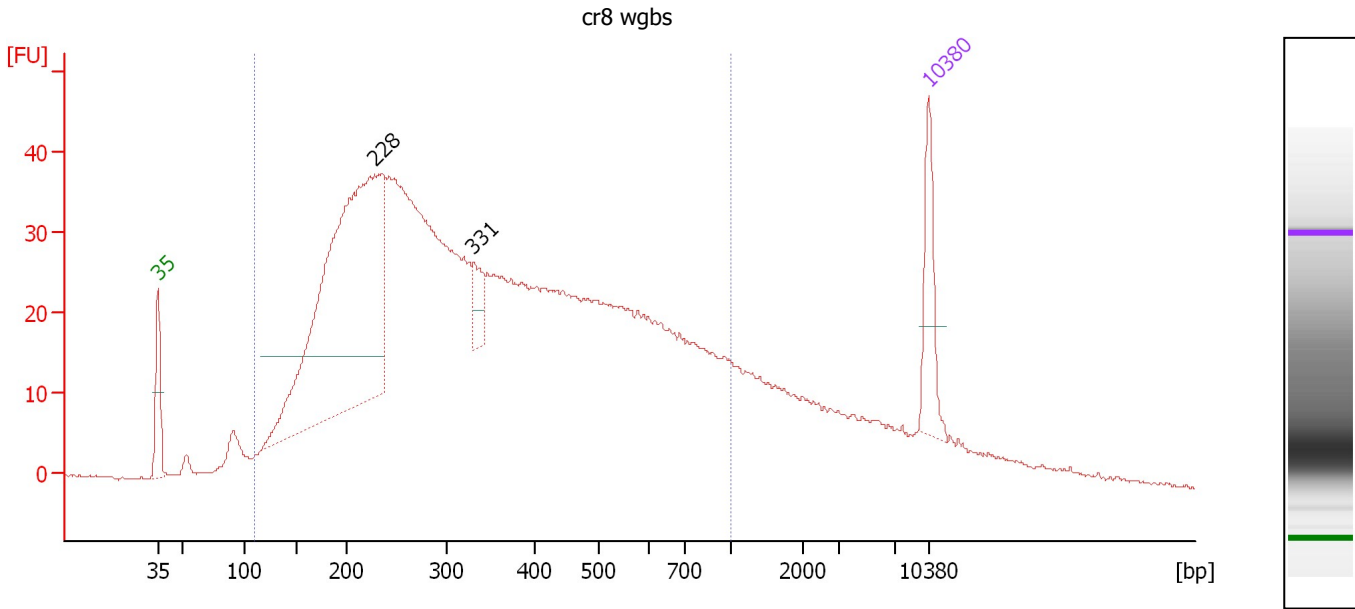
**Region table for sample 7 : an5 wgs**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
108	1,000	367	1,779.3	36,258.1	6,478.26	84	50.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : cr8 wgbs**

Number of peaks found: 2                      Corr. Area 1: 1,335.9  
 Noise: 0.1

**Peak table for sample 8 : cr8 wgbs**

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	228	967.80	6,432.8		62.70
3	331	46.52	213.2		71.67
4	10,380	75.00	10.9	Upper Marker	113.00

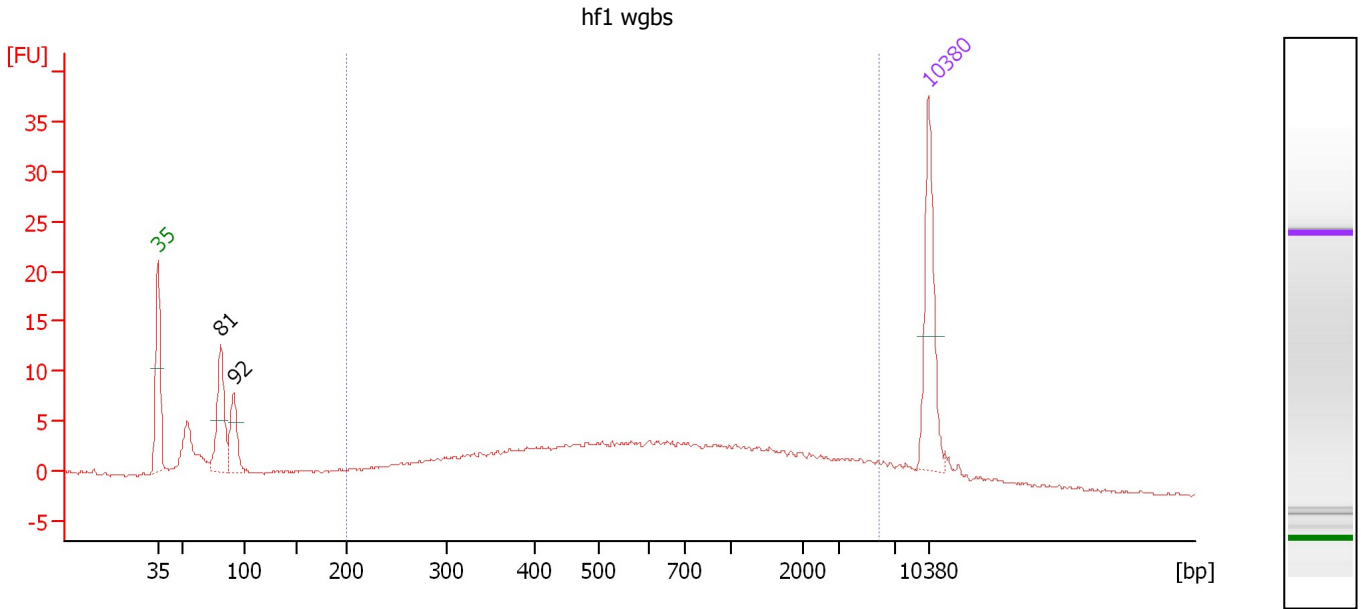
**Region table for sample 8 : cr8 wgbs**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
110	1,000	380	1,335.9	24,436.4	4,470.82	84	49.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : hf1 wgbs**

Number of peaks found: 2                      Corr. Area 1: 159.8  
 Noise: 0.1

**Peak table for sample 9 : hf1 wgbs**

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	86.67	1,627.3		48.71
3	92	50.08	826.6		49.93
4	10,380	75.00	10.9	Upper Marker	113.00

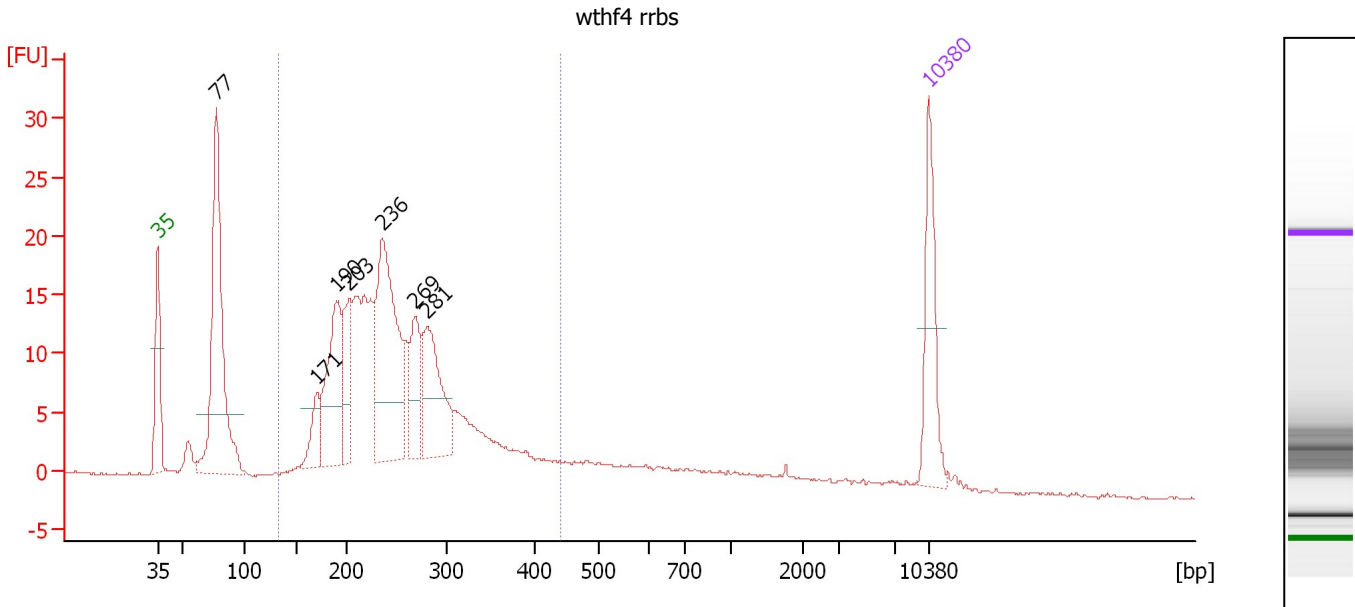
**Region table for sample 9 : hf1 wgbs**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	5,789	1,065	159.8	1,562.4	515.71	69	100.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : wthf4 rrbs**

Number of peaks found: 7                      Corr. Area 1: 279.3  
 Noise: 0.1

**Peak table for sample 10 : wthf4 rrbs**

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	77	329.22	6,444.2		48.34
3	171	43.74	388.1		57.46
4	190	148.70	1,185.0		59.27
5	203	78.31	585.4		60.43
6	236	252.76	1,620.8		63.45
7	269	73.98	416.4		66.41
8	281	128.54	691.9		67.51
9	10,380	75.00	10.9	Upper Marker	113.00

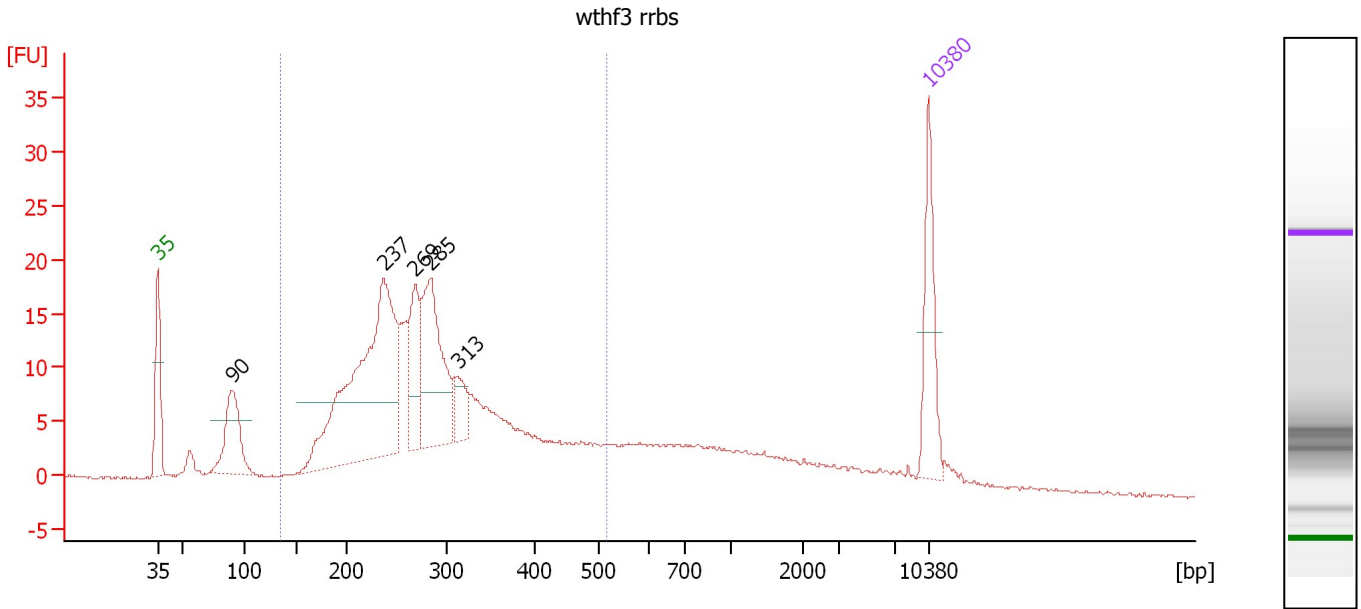
**Region table for sample 10 : wthf4 rrbs**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
133	439	253	279.3	8,017.4	1,256.97	73	23.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : wthf3 rrbs**

Number of peaks found: 5                      Corr. Area 1: 318.7  
 Noise: 0.1

**Peak table for sample 11 : wthf3 rrbs**

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	90	116.13	1,952.6		49.74
3	237	445.52	2,846.9		63.52
4	269	96.60	544.6		66.37
5	285	184.71	982.2		67.83
6	313	39.62	191.6		70.27
7	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 11 : wthf3 rrbs**

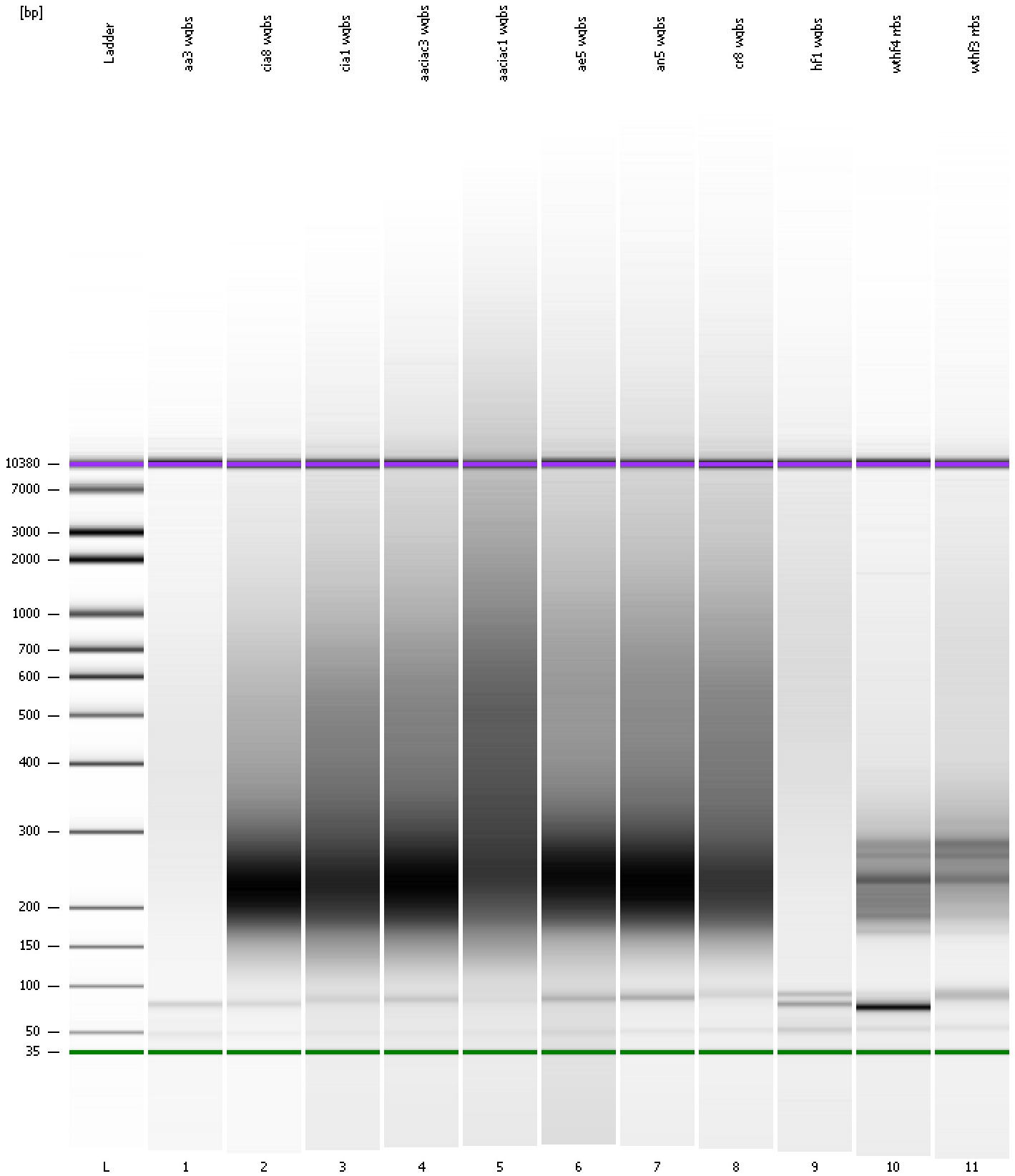
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
135	517	290	318.7	7,817.3	1,366.95	72	27.2



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
Modified: 1/26/2017 3:35:35 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-01-26\2017-01-26\_004.xad

Created: 1/26/2017 2:54:38 PM  
 Modified: 1/26/2017 3:35:35 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		1/26/2017 3:35:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2017-01-26\2017-01-26_004.xad)		Instrument	Run		1/26/2017 2:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		1/26/2017 2:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		1/26/2017 2:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		1/26/2017 2:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		1/26/2017 2:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		1/26/2017 2:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		1/26/2017 2:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1