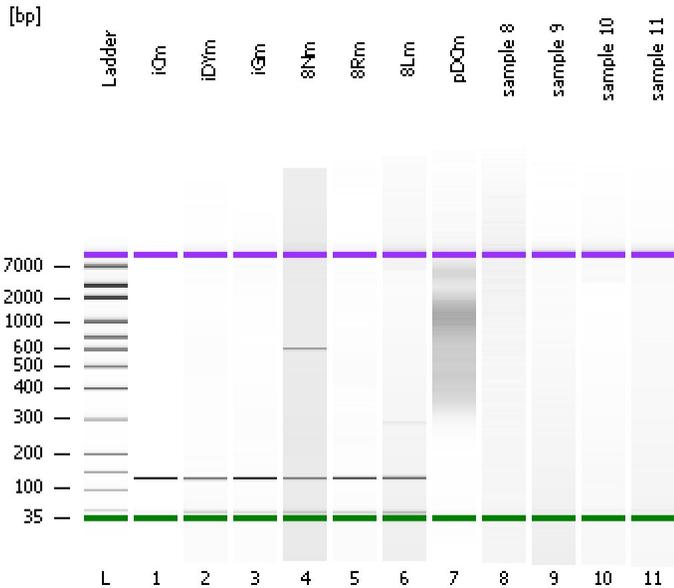


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
Modified: 10/27/2016 12:22:53 PM

**Electrophoresis File Run Summary**



Instrument Information:

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

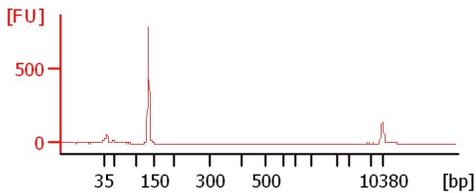
Assay Information:

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

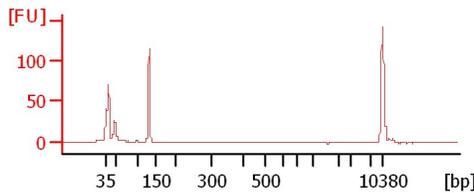
Chip Information:

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

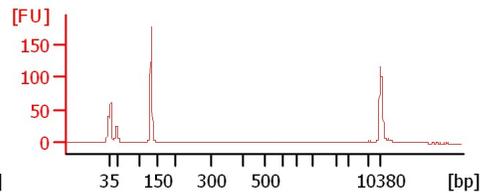
**iCm**



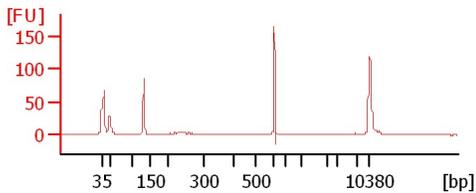
**iDYm**



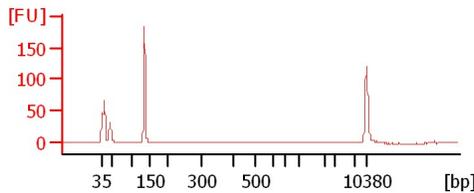
**iGm**



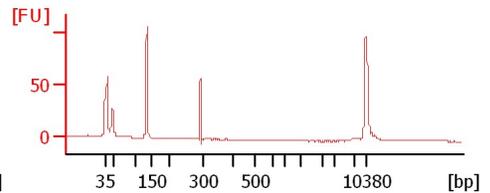
**8Nm**



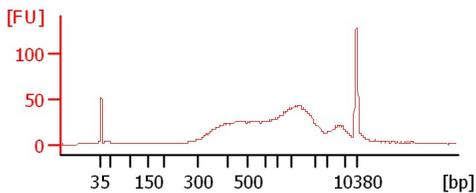
**8Rm**



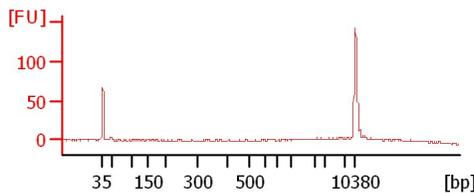
**8Lm**



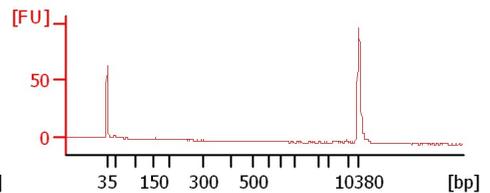
**pDCm**



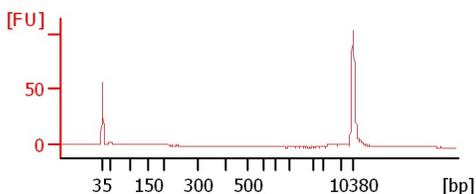
**sample 8**



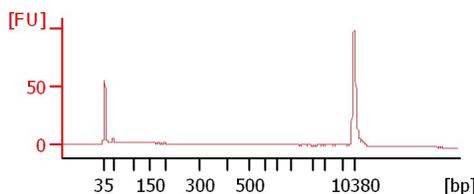
**sample 9**



**sample 10**



**sample 11**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
iCm		<input type="checkbox"/>	✓			
iDYm		<input type="checkbox"/>	✓			
iGm		<input type="checkbox"/>	✓			
8Nm		<input type="checkbox"/>	✓			
8Rm		<input type="checkbox"/>	✓			
8Lm		<input type="checkbox"/>	✓			
pDCm		<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:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
Modified: 10/27/2016 12:22:53 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

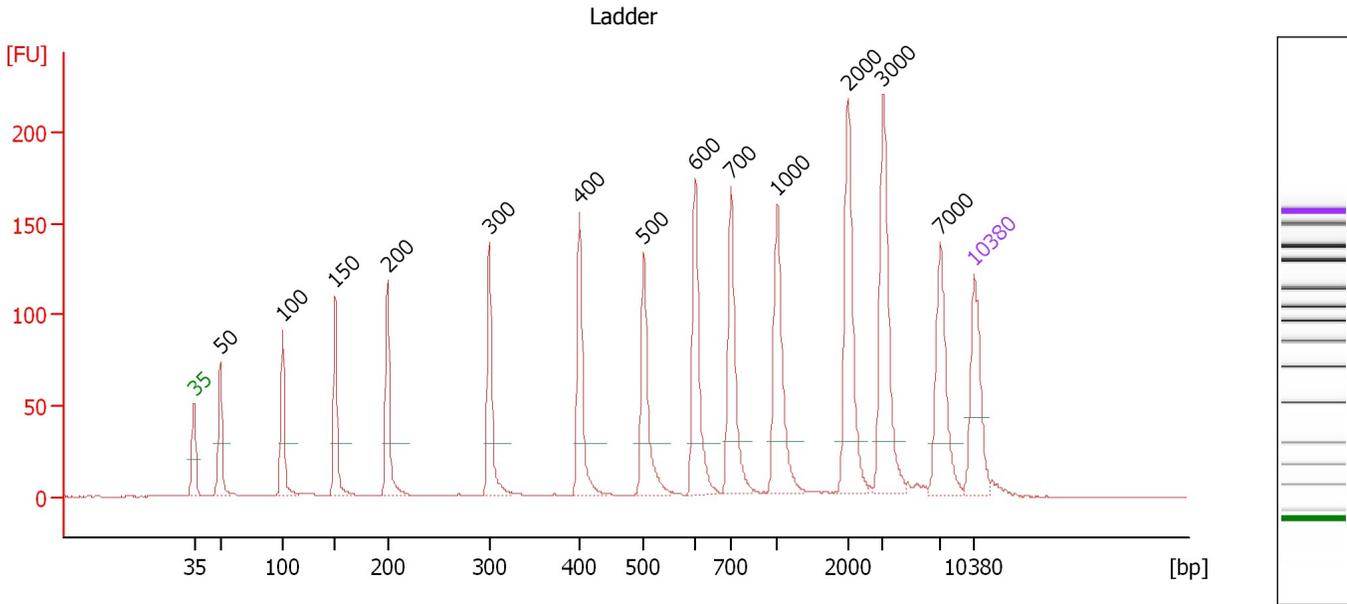
**Ladder**

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\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

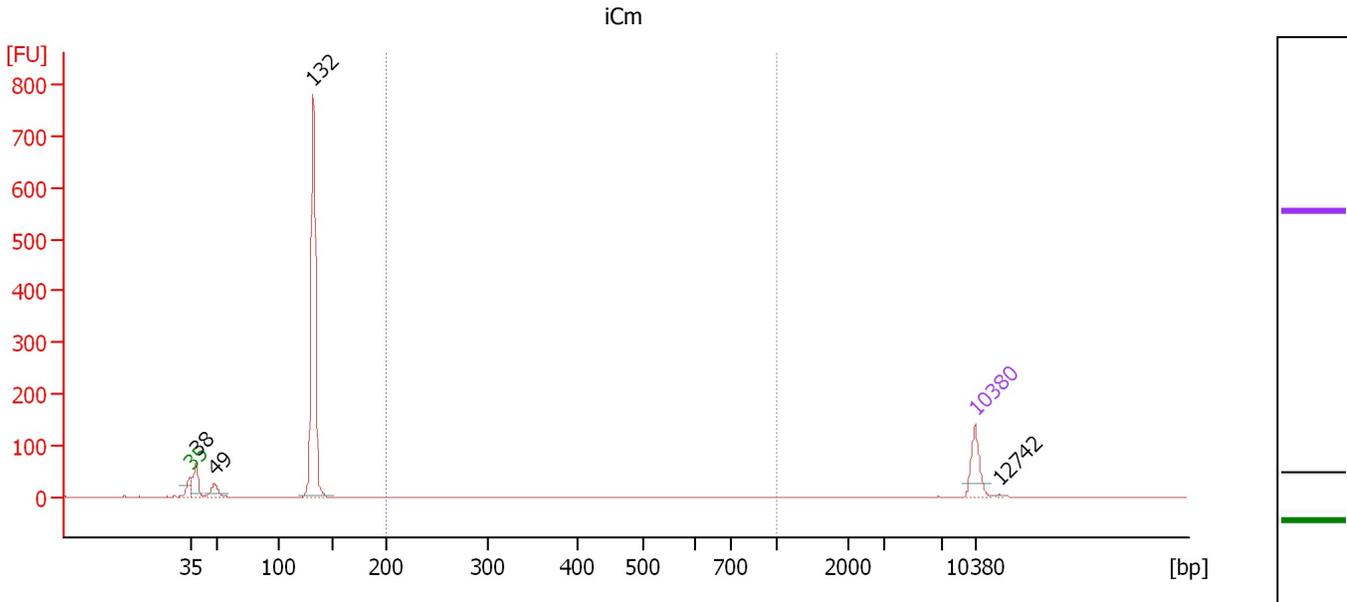
**Peak table for Ladder**

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	45.33
3	100	150.00	2,272.7	Ladder Peak	50.95
4	150	150.00	1,515.2	Ladder Peak	55.67
5	200	150.00	1,136.4	Ladder Peak	60.38
6	300	150.00	757.6	Ladder Peak	69.48
7	400	150.00	568.2	Ladder Peak	77.57
8	500	150.00	454.5	Ladder Peak	83.38
9	600	150.00	378.8	Ladder Peak	88.00
10	700	150.00	324.7	Ladder Peak	91.19
11	1,000	150.00	227.3	Ladder Peak	95.33
12	2,000	150.00	113.6	Ladder Peak	101.71
13	3,000	150.00	75.8	Ladder Peak	104.81
14	7,000	150.00	32.5	Ladder Peak	109.95
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : iCm**

Number of peaks found: 4                      Corr. Area 1: 0.0  
 Noise: 0.2

**Peak table for sample 1 : iCm**

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	38	116.30	4,595.2		43.52
3	49	59.92	1,864.4		45.13
4	132	971.40	11,140.4		53.98
5	10,380	75.00	10.9	Upper Marker	113.00
6	12,742	0.00	0.0		115.13

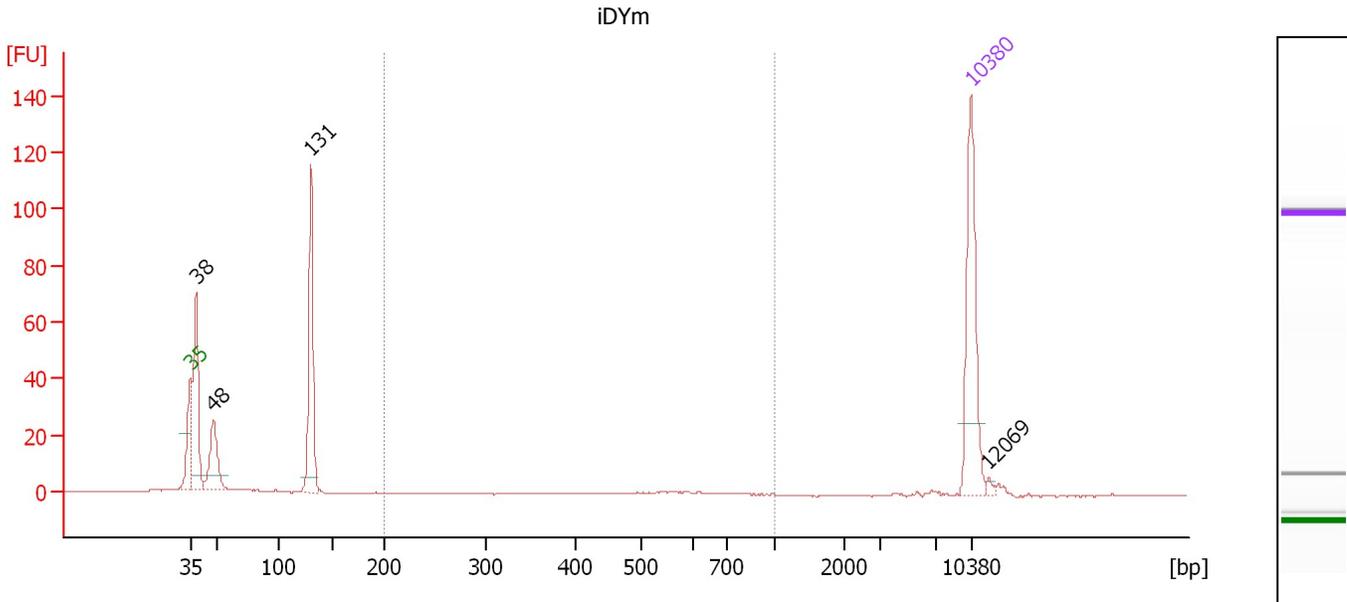
**Region table for sample 1 : iCm**

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	559	0.0	0.1	0.04	0	10.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : iDYm**

Number of peaks found: 4                      Corr. Area 1: 5.0  
 Noise: 0.2

**Peak table for sample 2 : iDYm**

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	38	115.82	4,574.2		43.52
3	48	58.14	1,829.3		45.05
4	131	126.57	1,466.9		53.85
5	10,380	75.00	10.9	Upper Marker	113.00
6	12,069	0.00	0.0		114.52

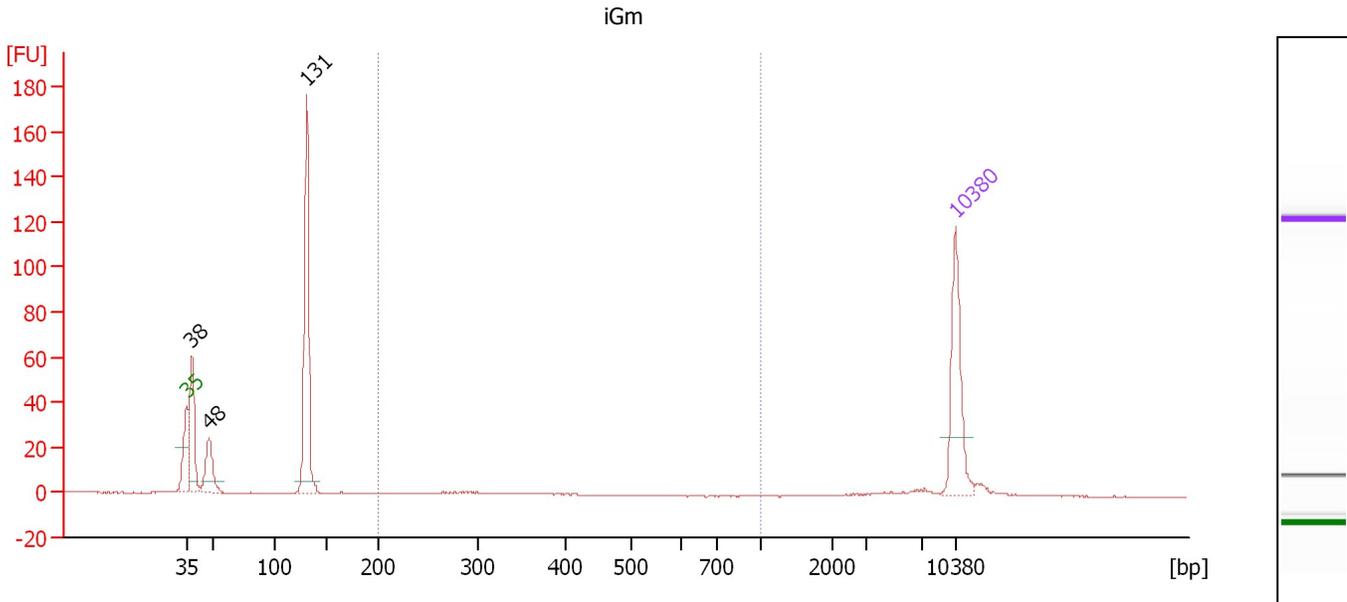
**Region table for sample 2 : iDYm**

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	584	5.0	11.2	4.20	2	14.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : iGm**

Number of peaks found: 3                      Corr. Area 1: 10.9  
 Noise: 0.1

**Peak table for sample 3 : iGm**

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	38	116.93	4,649.2		43.48
3	48	62.19	1,961.4		45.03
4	131	230.72	2,659.3		53.92
5	10,380	75.00	10.9	Upper Marker	113.00

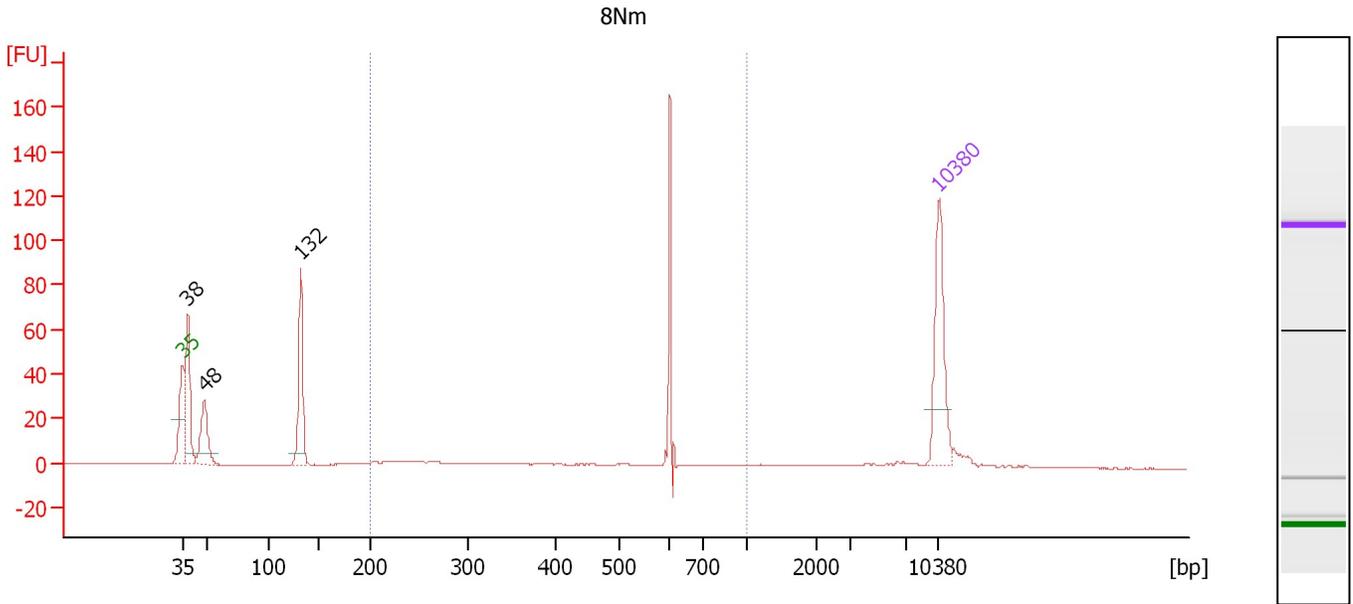
**Region table for sample 3 : iGm**

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	302	10.9	64.9	12.57	3	15.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : 8Nm**

Number of peaks found: 3                      Corr. Area 1: 75.6  
 Noise: 0.1

**Peak table for sample 4 : 8Nm**

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	38	127.10	5,046.7		43.49
3	48	74.30	2,347.8		45.01
4	132	108.16	1,243.1		53.95
5	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : 8Nm**

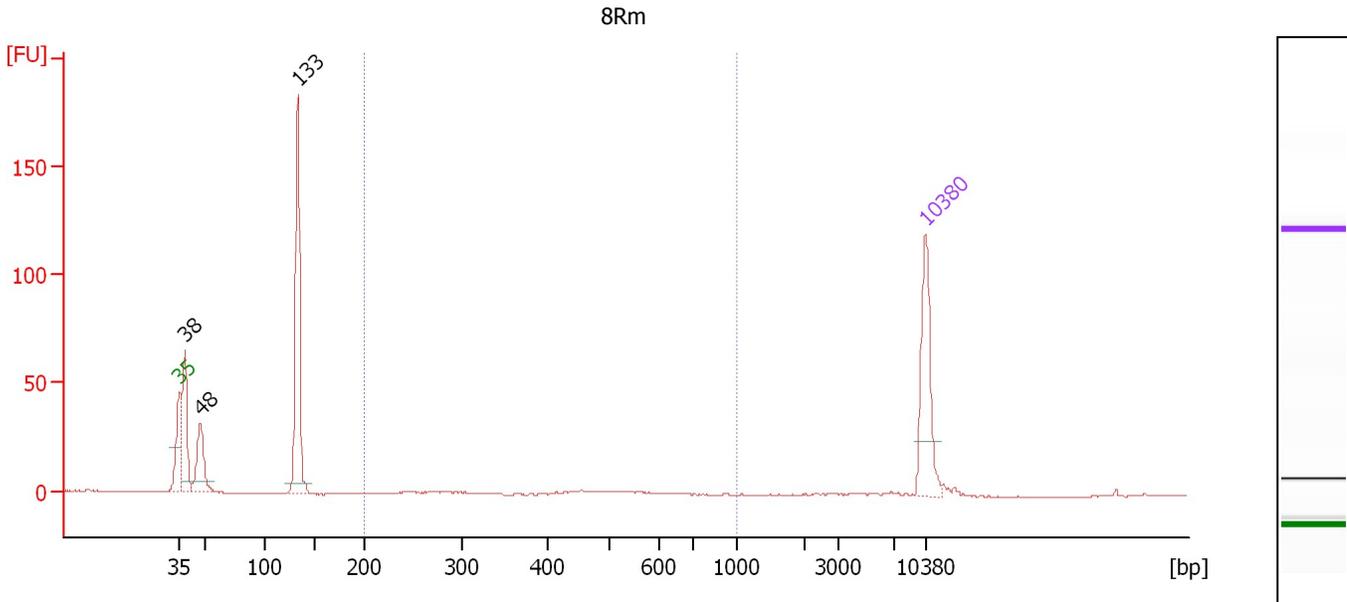
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	523	75.6	268.1	74.28	24	28.3



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : 8Rm**

Number of peaks found: 3                      Corr. Area 1: 5.6  
 Noise: 0.2

**Peak table for sample 5 : 8Rm**

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	38	114.91	4,558.0		43.50
3	48	77.94	2,470.9		44.99
4	133	223.46	2,539.5		54.09
5	10,380	75.00	10.9	Upper Marker	113.00

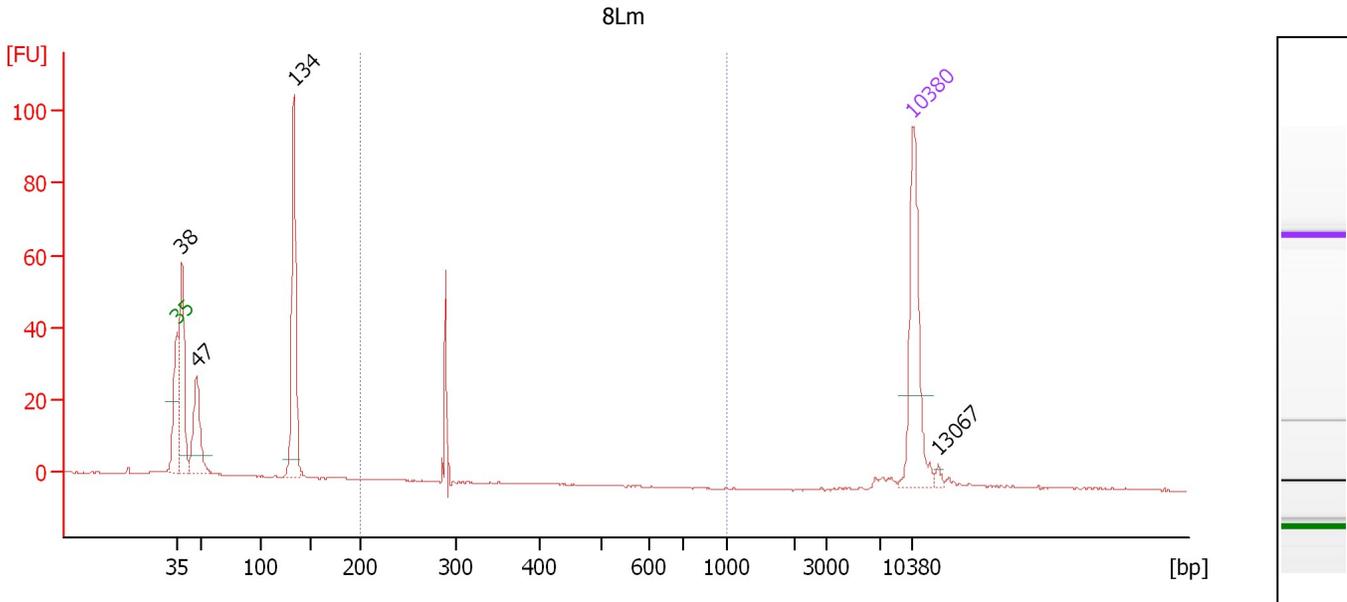
**Region table for sample 5 : 8Rm**

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	479	5.6	17.7	5.37	2	13.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : 8Lm**

Number of peaks found: 4                      Corr. Area 1: 19.1  
 Noise: 0.1

**Peak table for sample 6 : 8Lm**

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	38	127.17	5,038.3		43.50
3	47	79.80	2,554.7		44.92
4	134	146.89	1,661.5		54.15
5	10,380	75.00	10.9	Upper Marker	113.00
6	13,067	0.00	0.0		115.42

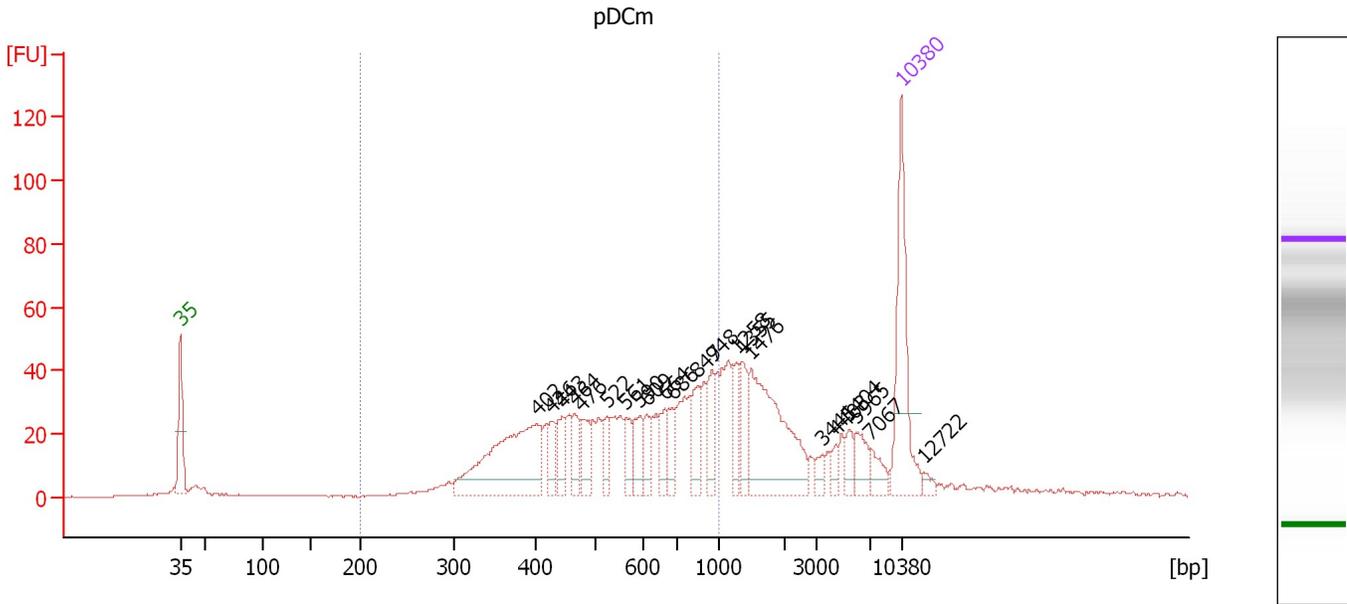
**Region table for sample 6 : 8Lm**

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	290	19.1	130.0	24.90	7	0.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : pDCm**

Number of peaks found: 22                      Corr. Area 1: 701.9  
 Noise: 0.2

**Peak table for sample 7 : pDCm**

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	402	145.73	549.8		77.67
3	426	21.68	77.2		79.06
4	443	22.34	76.4		80.09
5	464	21.39	69.9		81.27
6	476	22.80	72.6		81.99
7	522	17.03	49.4		84.41
8	561	18.33	49.5		86.22
9	590	25.06	64.3		87.55
10	609	15.62	38.9		88.28
11	664	16.63	38.0		90.03
12	686	17.38	38.4		90.75
13	847	26.90	48.1		93.22
14	948	25.58	40.9		94.61
15	1,258	21.13	25.4		96.98
16	1,355	23.53	26.3		97.60
17	1,476	110.95	113.9		98.37
18	3,441	6.90	3.0		105.38
19	4,403	6.94	2.4		106.61
20	5,404	11.60	3.3		107.90
21	5,965	16.40	4.2		108.62
22	7,067	12.34	2.6		110.01
23	10,380	75.00	10.9	Upper Marker	113.00
24	12,722	0.00	0.0		115.11

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**

... Region table for sample 7 :

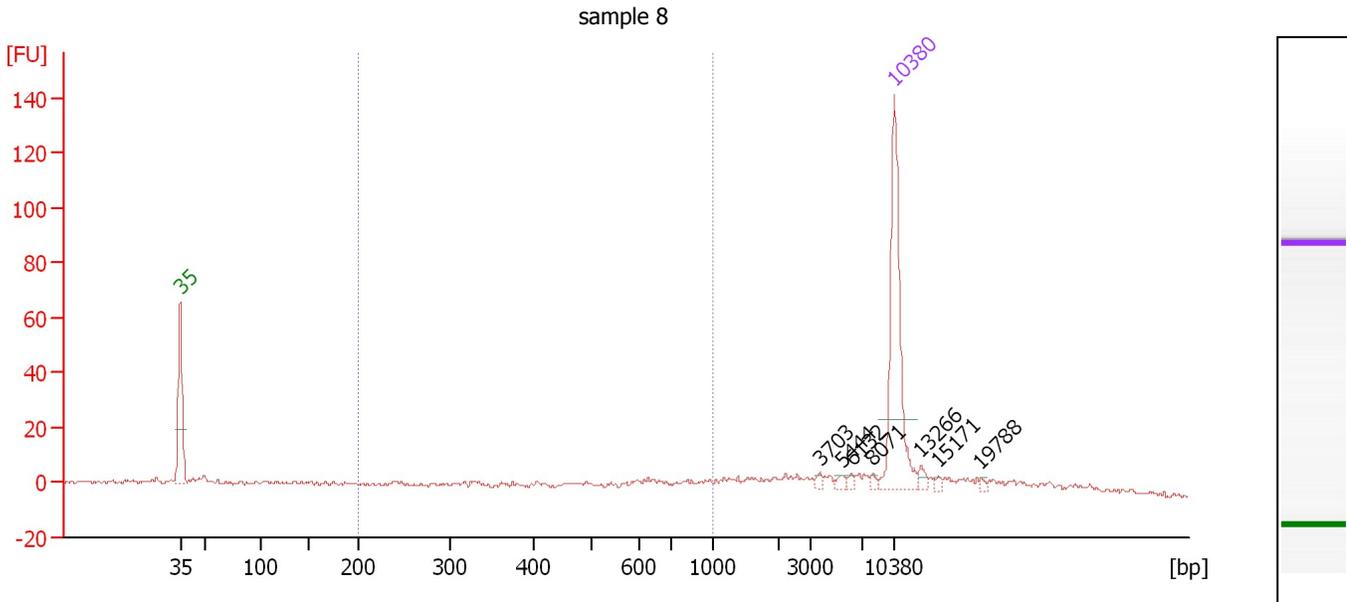
pDCm

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	571	701.9	1,948.6	633.58	62	33.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 7                      Corr. Area 1: 62.8  
 Noise: 0.7

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

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	3,703	2.06	0.8		105.71
3	5,444	2.58	0.7		107.95
4	6,132	1.72	0.4		108.84
5	8,071	1.88	0.4		110.92
6	10,380	75.00	10.9	Upper Marker	113.00
7	13,266	0.00	0.0		115.60
8	15,171	0.00	0.0		117.32
9	19,788	0.00	0.0		121.48

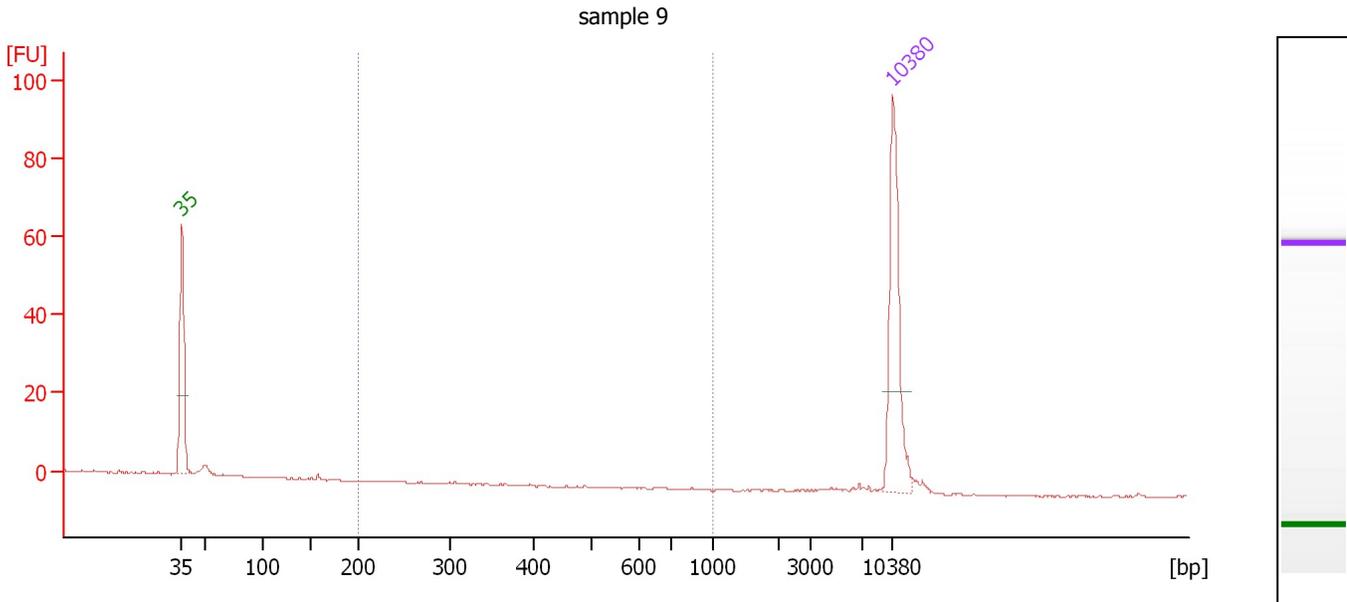
**Region table for sample 8 : sample 8**

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	551	62.8	169.9	48.52	26	38.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 0                      Corr. Area 1: 0.0  
 Noise: 0.2

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

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	10,380	75.00	10.9	Upper Marker	113.00

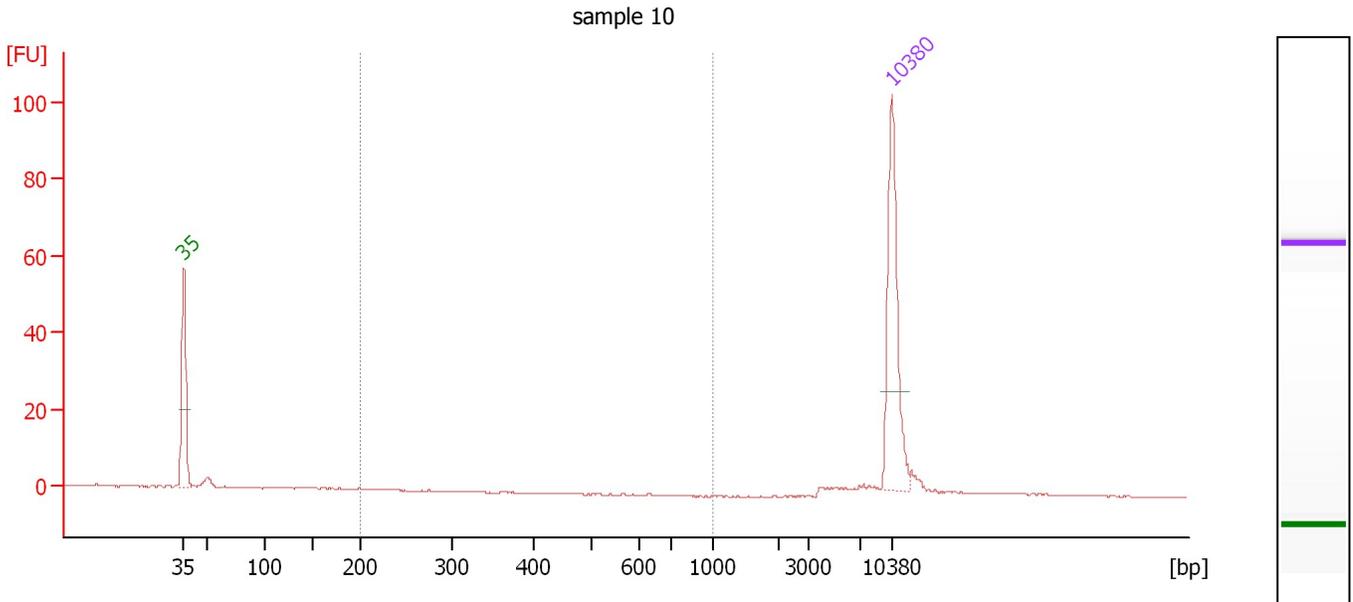
**Region table for sample 9 : sample 9**

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	0	0.0	0.0	0.00	0	0.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



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

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

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

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	10,380	75.00	10.9	Upper Marker	113.00

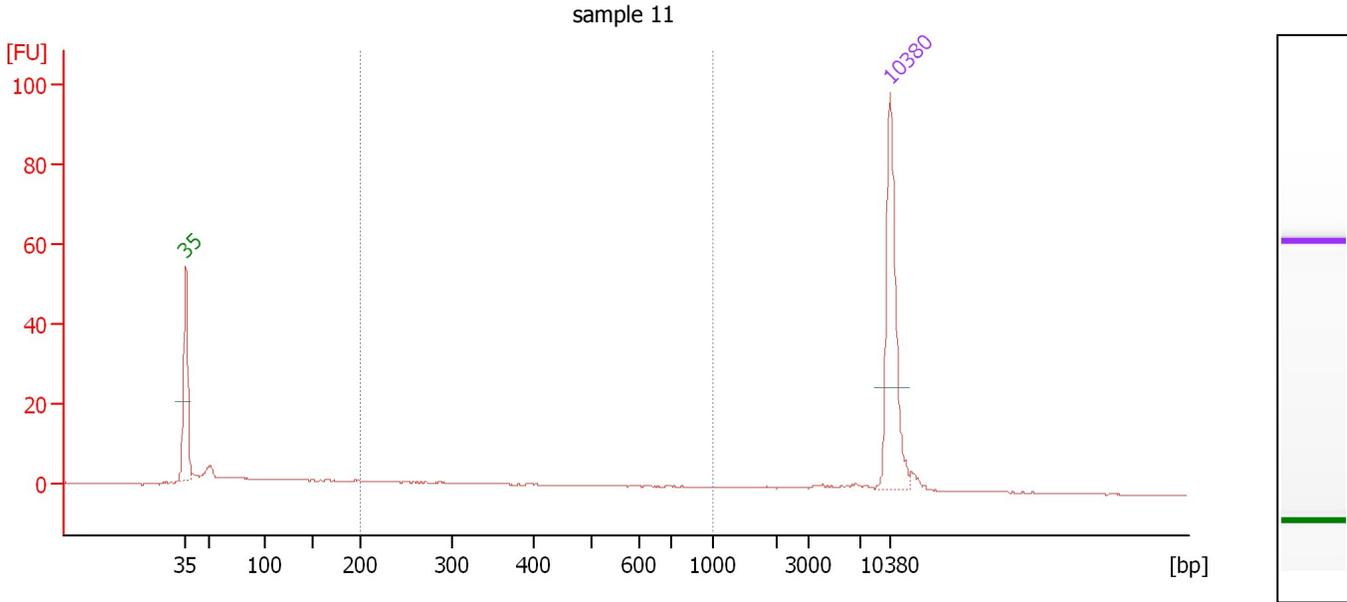
**Region table for sample 10 : sample 10**

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	201	0.1	1.0	0.13	0	0.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 0                      Corr. Area 1: 41.7  
 Noise: 0.1

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

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	10,380	75.00	10.9	Upper Marker	113.00

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

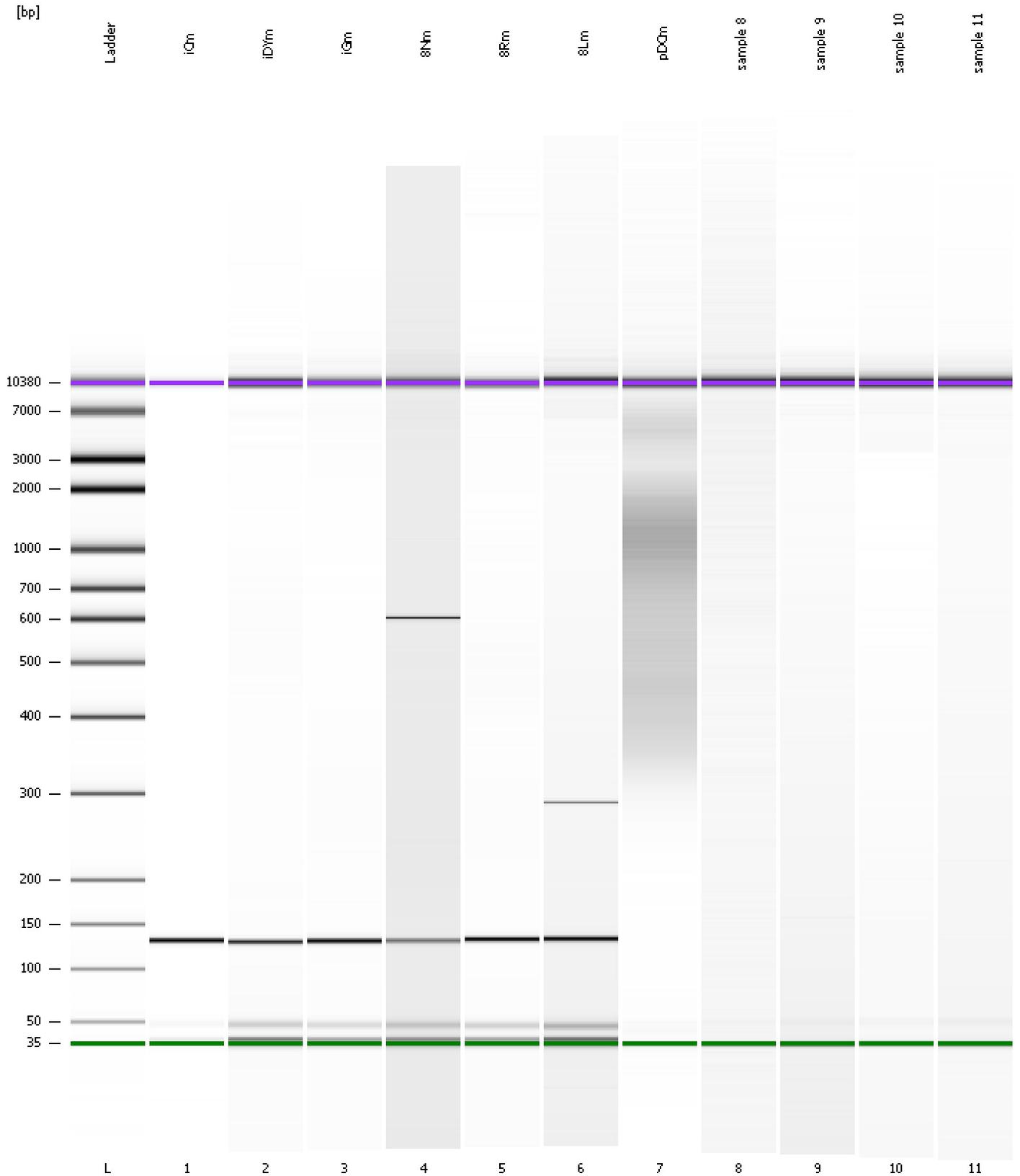
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	425	41.7	226.9	50.25	34	44.3



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
Modified: 10/27/2016 12:22:53 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-27\2016-10-27\_002.xad

Created: 10/27/2016 11:41:35 AM  
 Modified: 10/27/2016 12:22:53 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		10/27/2016 12:22:53 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-10-27\2016-10-27_002.xad)		Instrument	Run		10/27/2016 11:41:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		10/27/2016 11:41:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		10/27/2016 11:41:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		10/27/2016 11:41:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		10/27/2016 11:41:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		10/27/2016 11:41:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		10/27/2016 11:41:41 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1