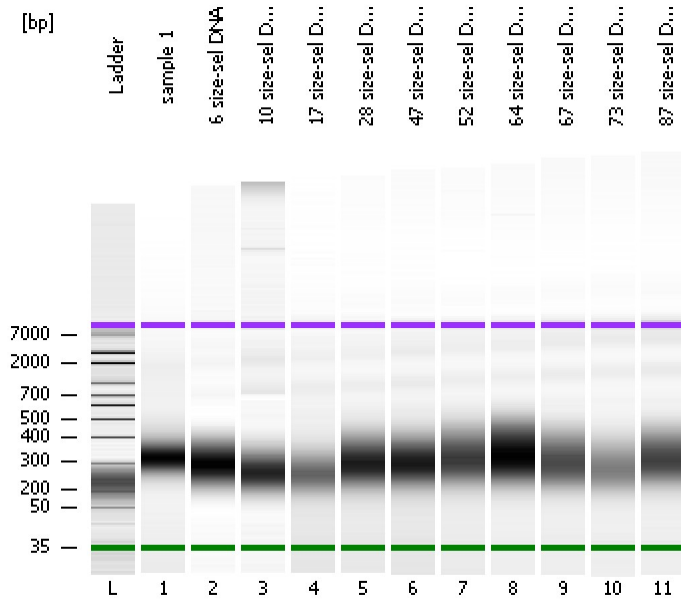


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
Modified: 5/24/2019 10:26:21 AM

### Electrophoresis File Run Summary



#### Instrument Information:

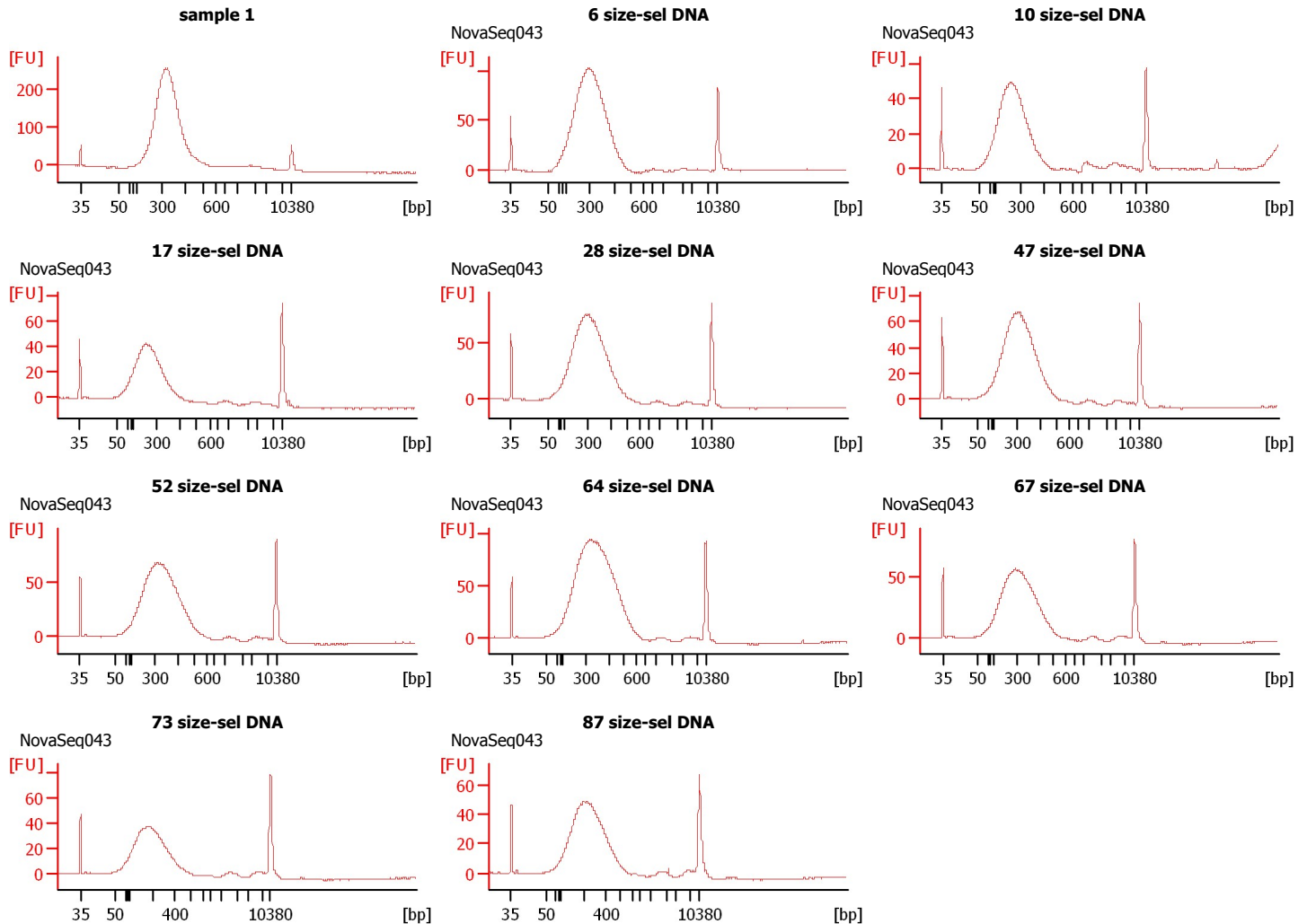
Instrument Name: DE34903152      Firmware: C.01.069  
Serial#: DE34903152      Type: G2938C

#### 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:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
Modified: 5/24/2019 10:26:21 AM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 1		<input type="checkbox"/>				
6 size-sel DNA	NovaSeq043	<input type="checkbox"/>		✓		
10 size-sel DNA	NovaSeq043	<input type="checkbox"/>		✓		
17 size-sel DNA	NovaSeq043	<input type="checkbox"/>		✓		
28 size-sel DNA	NovaSeq043	<input type="checkbox"/>		✓		
47 size-sel DNA	NovaSeq043	<input type="checkbox"/>		✓		
52 size-sel DNA	NovaSeq043	<input type="checkbox"/>		✓		
64 size-sel DNA	NovaSeq043	<input type="checkbox"/>		✓		
67 size-sel DNA	NovaSeq043	<input type="checkbox"/>		✓		
73 size-sel DNA	NovaSeq043	<input type="checkbox"/>		✓		
87 size-sel DNA	NovaSeq043	<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\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
Modified: 5/24/2019 10:26:21 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

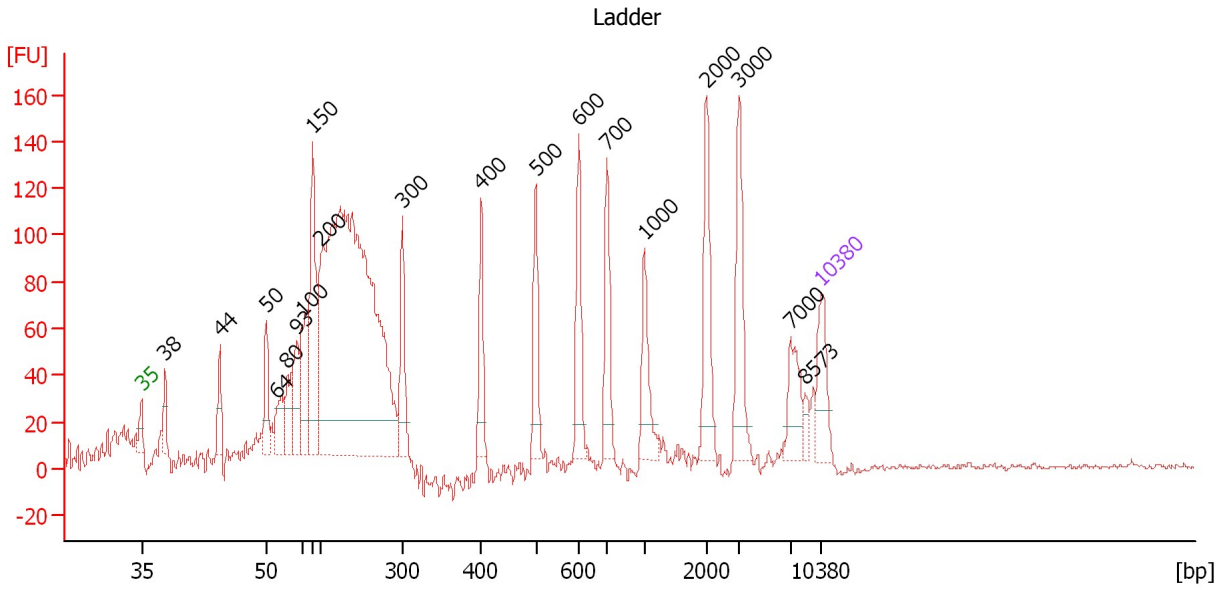
**Ladder**

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:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 1.3

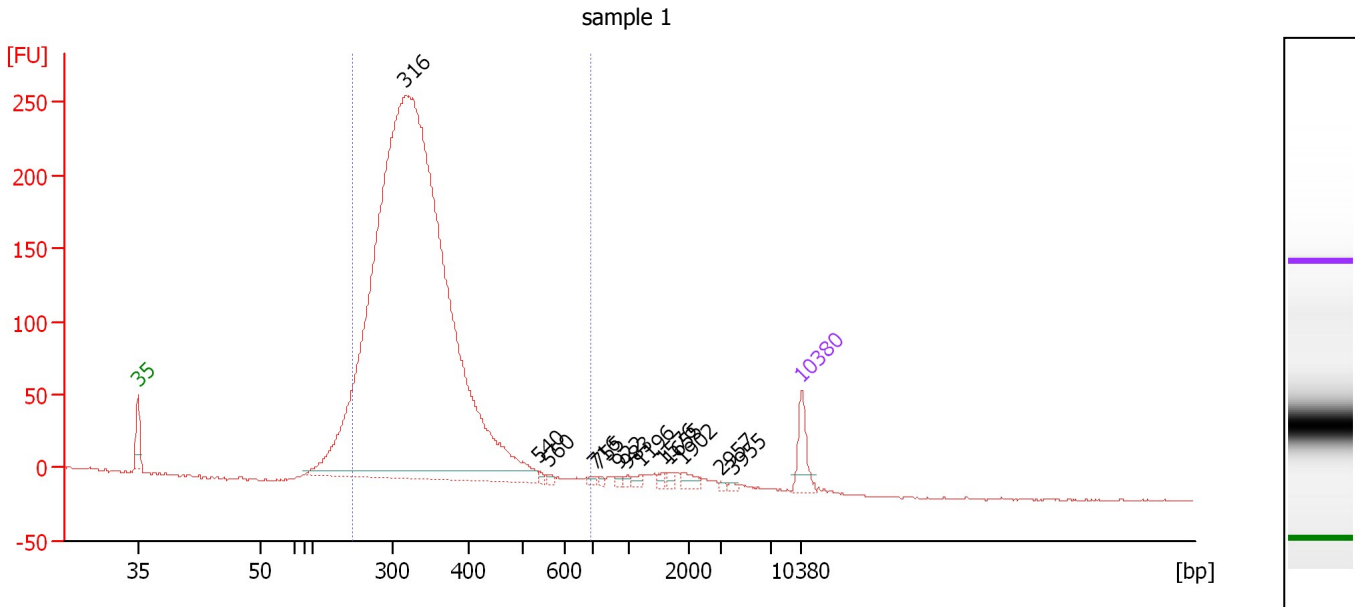
**Peak table for Ladder**

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	38	0.00	0.0		45.42
3	44	0.00	0.0		51.07
4	50	150.00	4,545.5	Ladder Peak	55.85
5	64	0.00	0.0		56.89
6	80	0.00	0.0		57.99
7	93	0.00	0.0		58.98
8	100	150.00	2,272.7	Ladder Peak	59.47
9	150	150.00	1,515.2	Ladder Peak	60.62
10	200	150.00	1,136.4	Ladder Peak	61.45
11	300	150.00	757.6	Ladder Peak	69.85
12	400	150.00	568.2	Ladder Peak	77.97
13	500	150.00	454.5	Ladder Peak	83.57
14	600	150.00	378.8	Ladder Peak	88.02
15	700	150.00	324.7	Ladder Peak	90.93
16	1,000	150.00	227.3	Ladder Peak	94.77
17	2,000	150.00	113.6	Ladder Peak	101.14
18	3,000	150.00	75.8	Ladder Peak	104.55
19	7,000	150.00	32.5	Ladder Peak	109.82
20	8,573	0.00	0.0		111.30
21	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 13                      Corr. Area 1: 3,180.6  
 Noise: 0.5

**Peak table for sample 1 : sample 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	316	6,106.92	29,256.8		71.17
3	540	9.92	27.8		85.34
4	560	10.30	27.9		86.24
5	716	9.98	21.1		91.13
6	755	7.09	14.2		91.63
7	922	7.06	11.6		93.77
8	983	8.99	13.9		94.56
9	1,196	13.07	16.6		96.02
10	1,576	11.33	10.9		98.44
11	1,655	12.00	11.0		98.94
12	1,902	23.84	19.0		100.52
13	2,957	4.85	2.5		104.40
14	3,955	5.85	2.2		105.80
15	10,380	75.00	10.9	Upper Marker	113.00

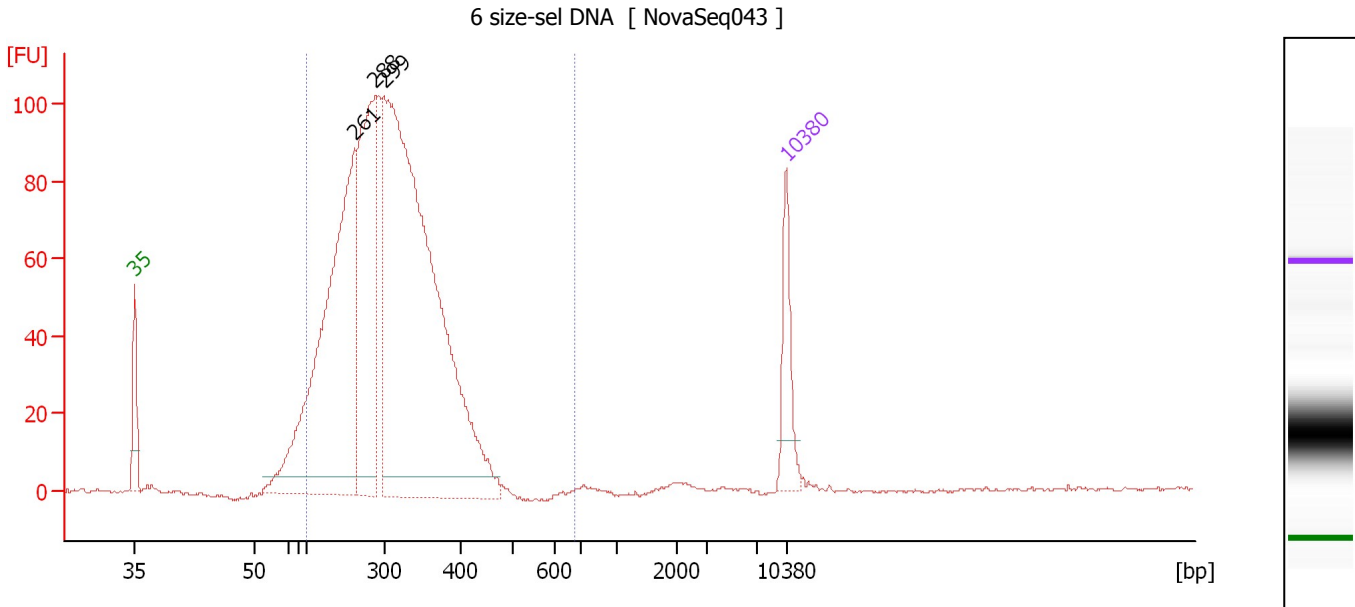
**Region table for sample 1 : sample 1**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
249	696	334	5,688.09	3,180.6	26,541.2	93	16.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : 6 size-sel DNA**

Number of peaks found: 3                      Corr. Area 1: 1,684.6  
 Noise: 0.4

**Peak table for sample 2 : 6 size-sel DNA**

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	261	888.88	5,153.2		66.60
3	288	501.95	2,641.2		68.83
4	299	1,503.42	7,622.0		69.75
5	10,380	75.00	10.9	Upper Marker	113.00

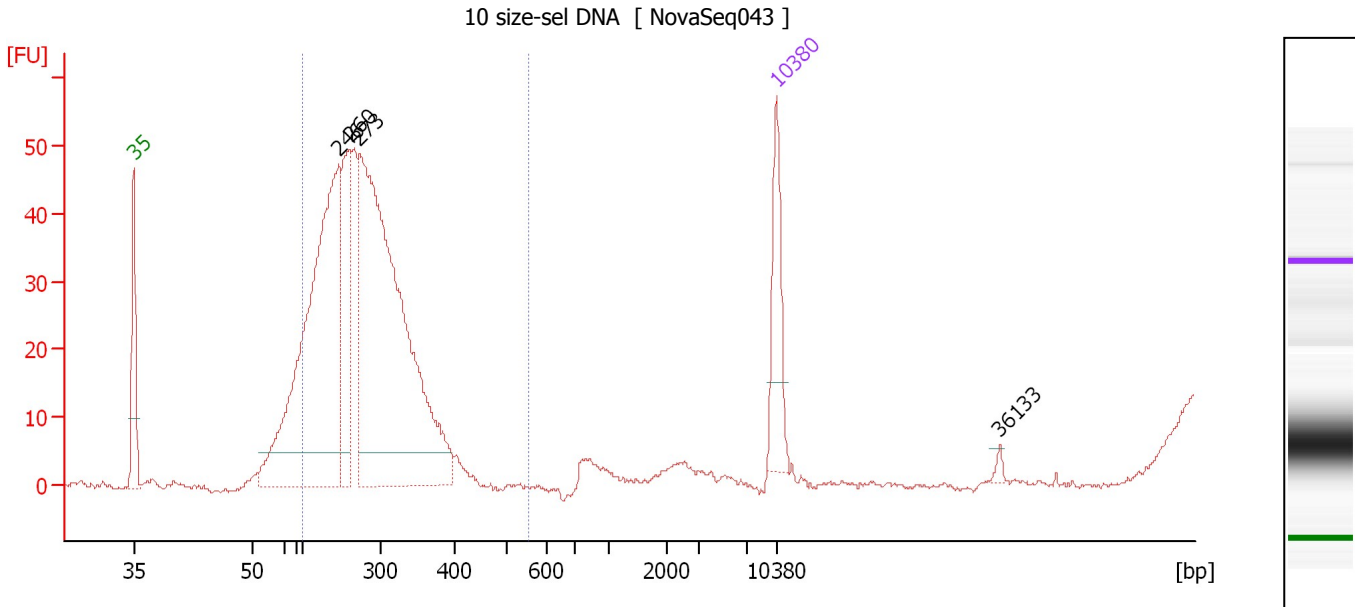
**Region table for sample 2 : 6 size-sel DNA**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	677	304	2,732.23	1,684.6	14,132.7	96	17.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : 10 size-sel DNA**

Number of peaks found: 4                      Corr. Area 1: 648.6  
 Noise: 0.4

**Peak table for sample 3 : 10 size-sel DNA**

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	246	709.40	4,361.8		65.35
3	260	175.47	1,021.6		66.51
4	273	884.71	4,915.9		67.55
5	10,380	75.00	10.9	Upper Marker	113.00
6	36,133	0.00	0.0		137.26

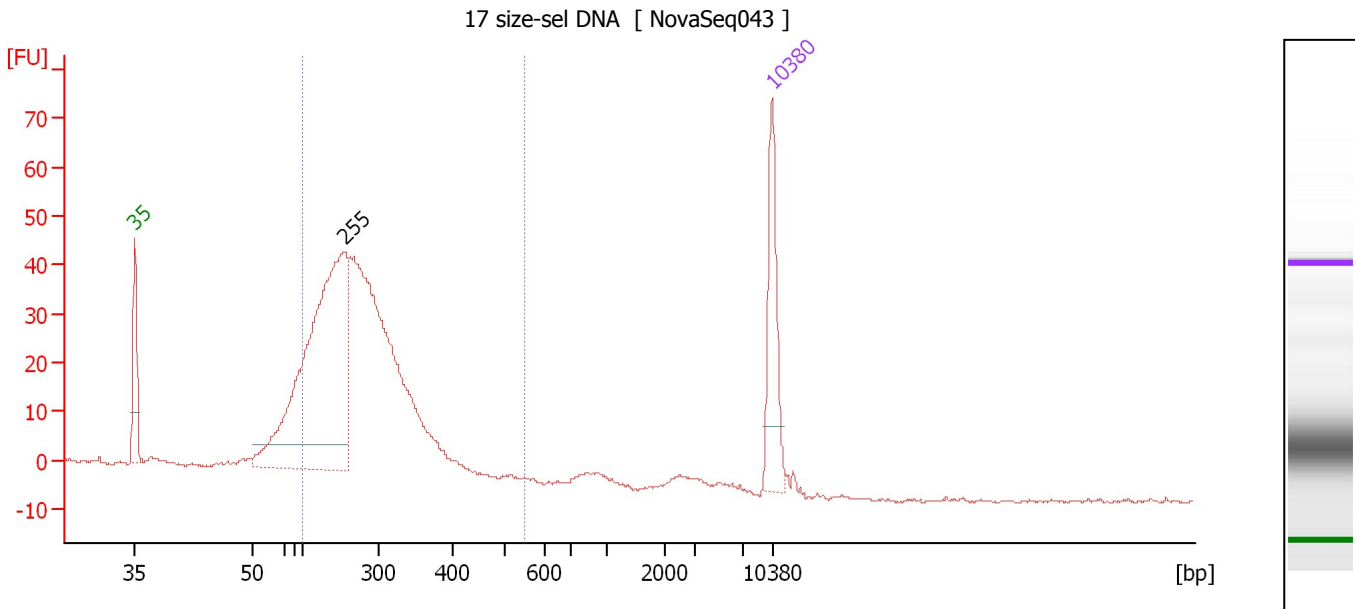
**Region table for sample 3 : 10 size-sel DNA**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	556	275	1,504.11	648.6	8,479.4	92	15.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : 17 size-sel DNA**

Number of peaks found: 1                      Corr. Area 1: 628.7  
 Noise: 0.3

**Peak table for sample 4 : 17 size-sel DNA**

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	255	556.46	3,304.5		66.08
3	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : 17 size-sel DNA**

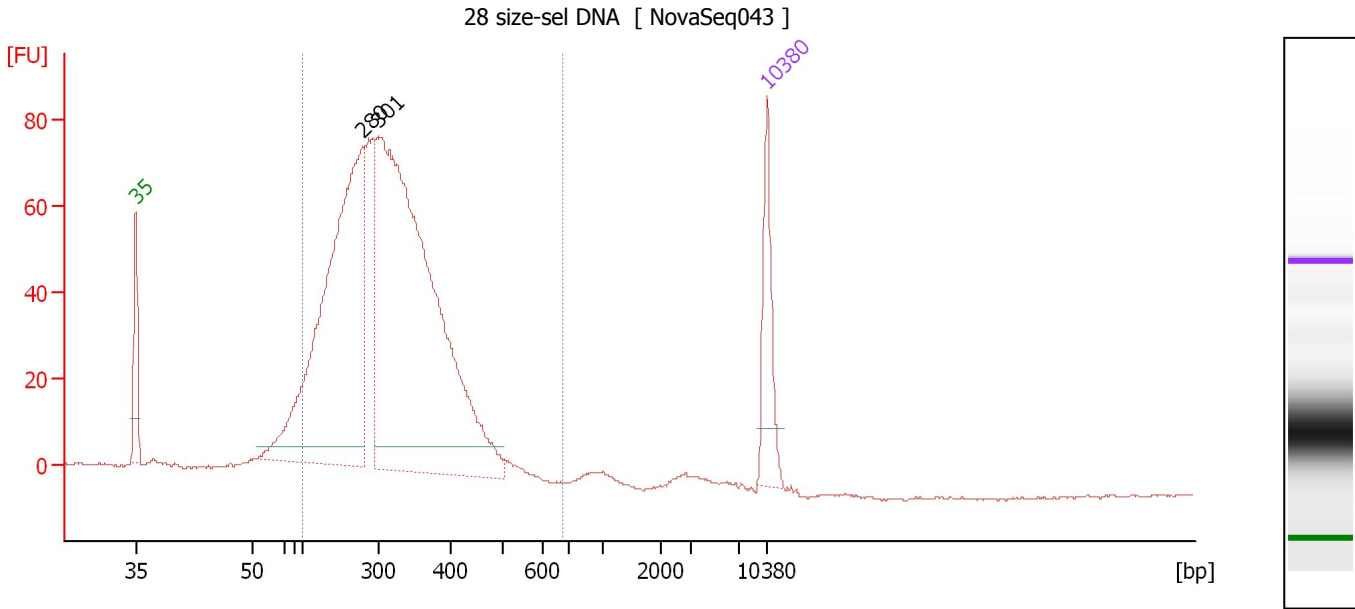
From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	551	276	1,000.11	628.7	5,645.6	86	17.1



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : 28 size-sel DNA**

Number of peaks found: 2                      Corr. Area 1: 1,379.8  
 Noise: 0.3

**Peak table for sample 5 : 28 size-sel DNA**

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	280	778.11	4,217.8		68.13
3	301	1,115.11	5,619.6		69.90
4	10,380	75.00	10.9	Upper Marker	113.00

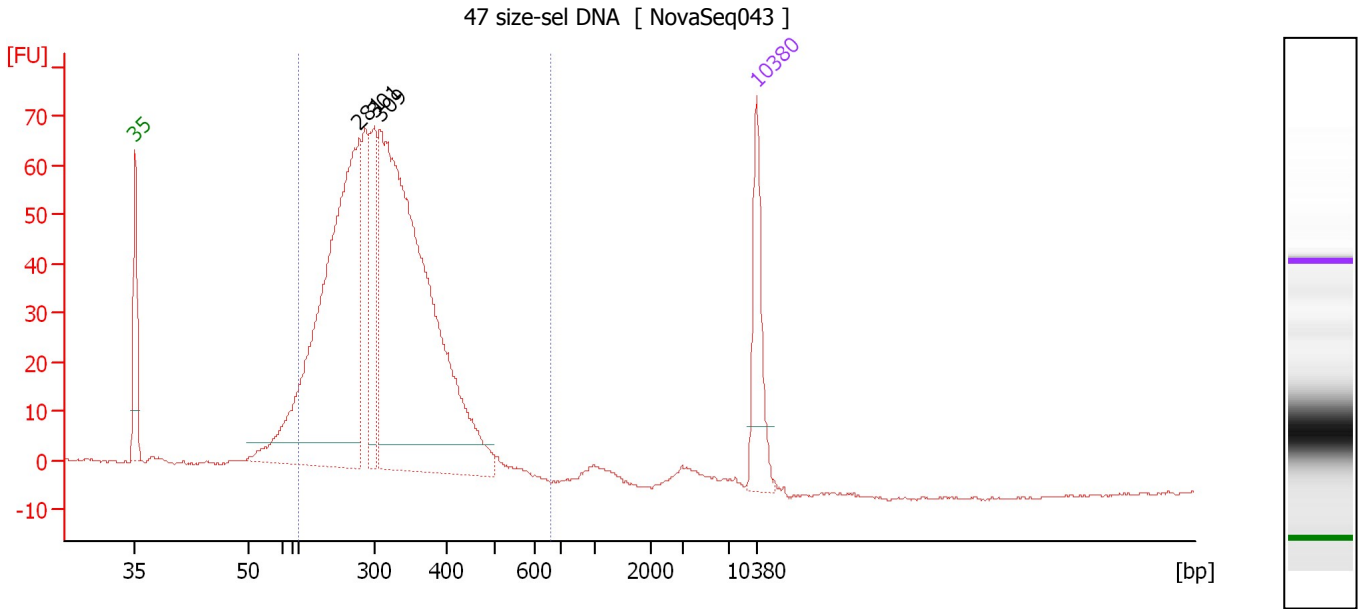
**Region table for sample 5 : 28 size-sel DNA**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	676	314	1,959.21	1,379.8	9,940.6	94	20.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : 47 size-sel DNA**

Number of peaks found: 3                      Corr. Area 1: 1,191.6  
 Noise: 0.3

**Peak table for sample 6 : 47 size-sel DNA**

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	281	724.70	3,913.6		68.21
3	301	127.06	640.4		69.90
4	309	899.52	4,404.1		70.62
5	10,380	75.00	10.9	Upper Marker	113.00

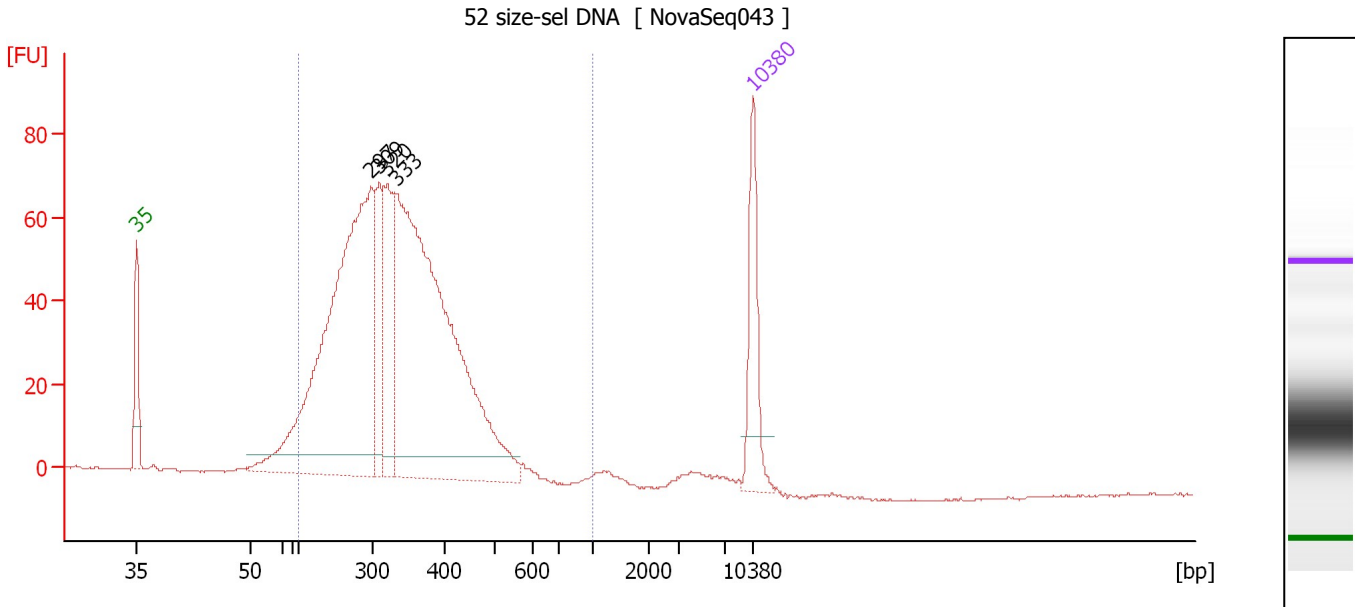
**Region table for sample 6 : 47 size-sel DNA**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	659	313	1,780.74	1,191.6	9,036.8	94	19.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : 52 size-sel DNA**

Number of peaks found: 4                      Corr. Area 1: 1,335.5  
 Noise: 0.3

**Peak table for sample 7 : 52 size-sel DNA**

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	297	705.36	3,594.7		69.62
3	309	113.92	558.4		70.59
4	320	145.30	687.4		71.50
5	333	773.79	3,521.2		72.52
6	10,380	75.00	10.9	Upper Marker	113.00

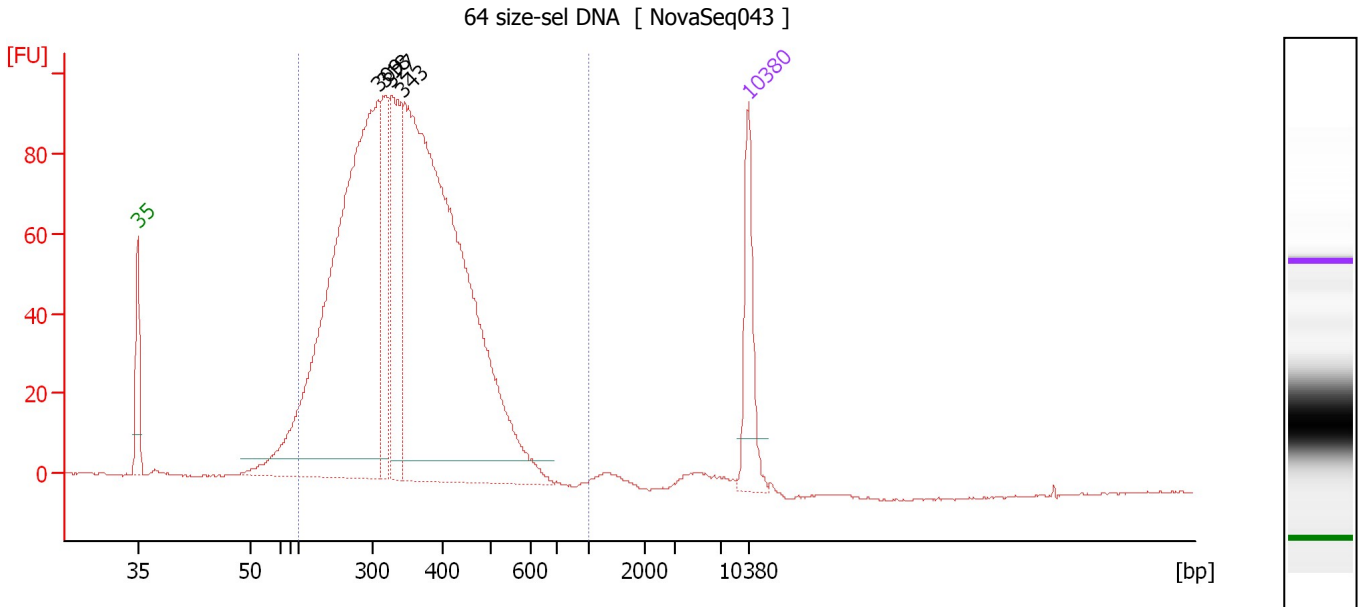
**Region table for sample 7 : 52 size-sel DNA**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	333	1,664.52	1,335.5	8,051.1	95	22.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : 64 size-sel DNA**

Number of peaks found: 4                      Corr. Area 1: 2,017.0  
 Noise: 0.1

**Peak table for sample 8 : 64 size-sel DNA**

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	309	975.93	4,791.1		70.55
3	318	139.67	664.7		71.34
4	327	208.28	963.8		72.08
5	343	1,158.82	5,115.8		73.36
6	10,380	75.00	10.9	Upper Marker	113.00

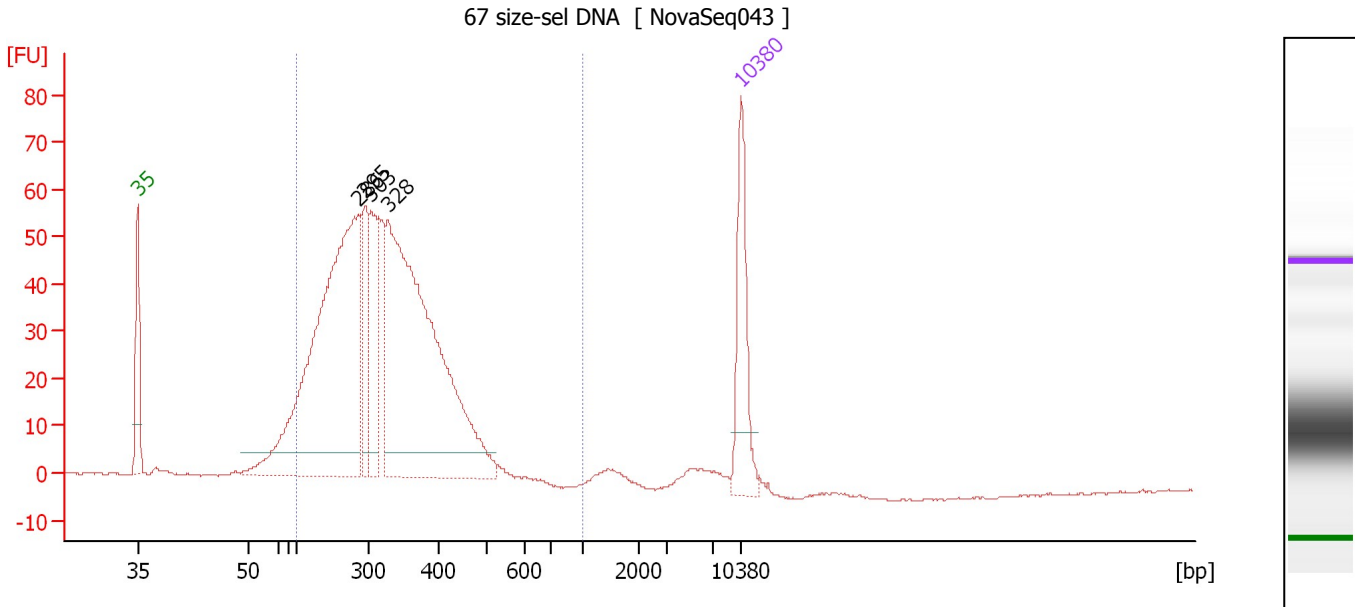
**Region table for sample 8 : 64 size-sel DNA**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	349	2,402.06	2,017.0	11,209.2	96	23.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : 67 size-sel DNA**

Number of peaks found: 4                      Corr. Area 1: 1,071.0  
 Noise: 0.2

**Peak table for sample 9 : 67 size-sel DNA**

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	286	598.82	3,170.5		68.69
3	295	80.19	411.9		69.43
4	303	95.16	475.5		70.11
5	328	582.22	2,692.8		72.09
6	10,380	75.00	10.9	Upper Marker	113.00

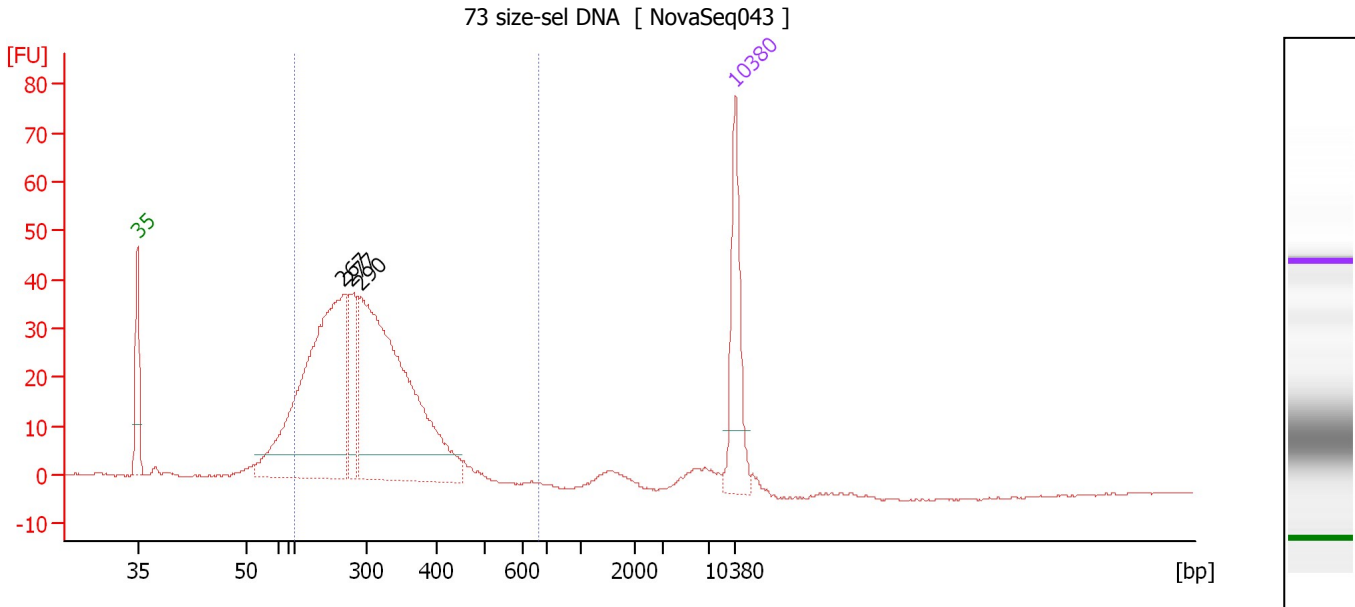
**Region table for sample 9 : 67 size-sel DNA**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	321	1,383.06	1,071.0	6,919.7	93	21.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : 73 size-sel DNA**

Number of peaks found: 3                      Corr. Area 1: 641.7  
 Noise: 0.2

**Peak table for sample 10 : 73 size-sel DNA**

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	267	429.98	2,439.3		67.08
3	277	77.05	420.7		67.96
4	290	456.09	2,382.0		69.02
5	10,380	75.00	10.9	Upper Marker	113.00

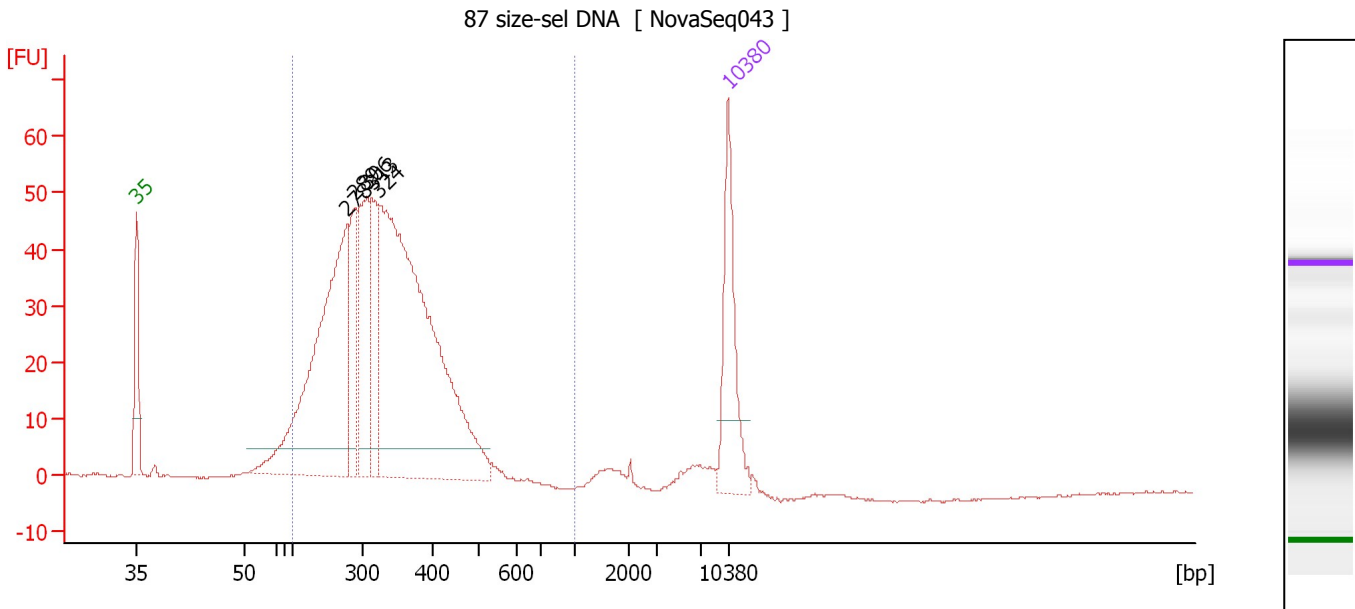
**Region table for sample 10 : 73 size-sel DNA**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	669	298	888.95	641.7	4,721.6	88	19.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : 87 size-sel DNA**

Number of peaks found: 5                      Corr. Area 1: 912.9  
 Noise: 0.2

**Peak table for sample 11 : 87 size-sel DNA**

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	278	373.77	2,039.4		67.97
3	289	86.94	455.9		68.92
4	306	125.95	624.4		70.31
5	313	81.26	393.8		70.87
6	324	582.89	2,730.0		71.76
7	10,380	75.00	10.9	Upper Marker	113.00

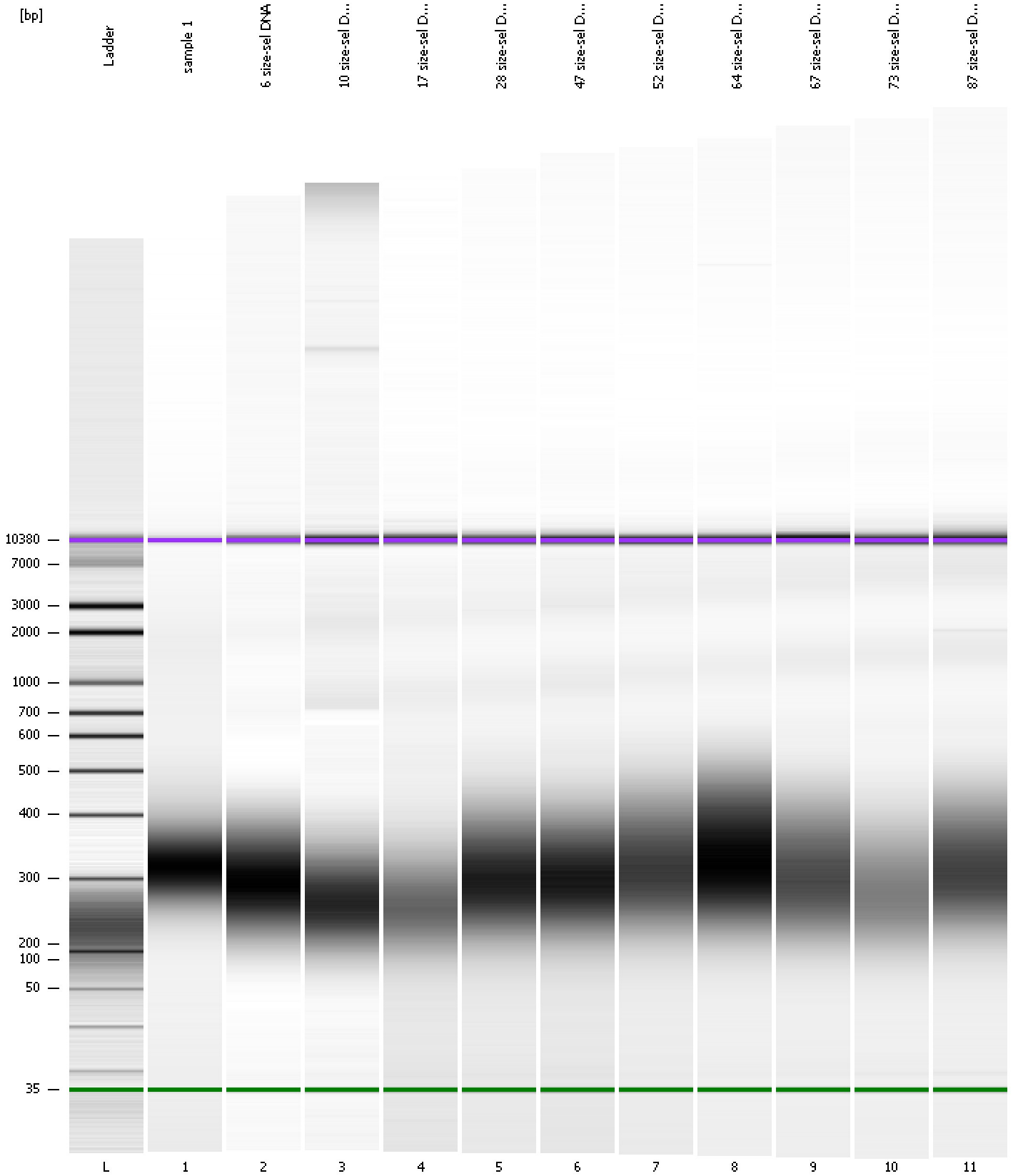
**Region table for sample 11 : 87 size-sel DNA**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	329	1,224.44	912.9	5,969.5	94	21.1

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
Modified: 5/24/2019 10:26:21 AM

**Gel Image**





Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-23\2019-05-23\_003.xad

Created: 5/23/2019 11:22:41 AM  
 Modified: 5/24/2019 10:26:21 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		5/23/2019 12:03:01 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\2019-05-23\2019-05-23_003.xad)		Instrument	Run		5/23/2019 11:22:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938C		Instrument	Run		5/23/2019 11:22:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/23/2019 11:22:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/23/2019 11:22:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE34903152		Instrument	Run		5/23/2019 11:22:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/23/2019 11:22:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/23/2019 11:22:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1