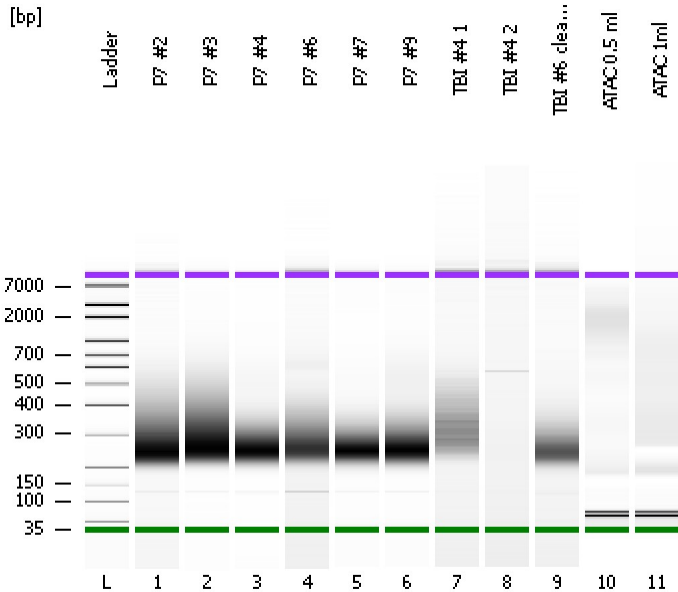


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
Modified: 5/22/2015 4:41:12 PM

### Electrophoresis File Run Summary



#### Instrument Information:

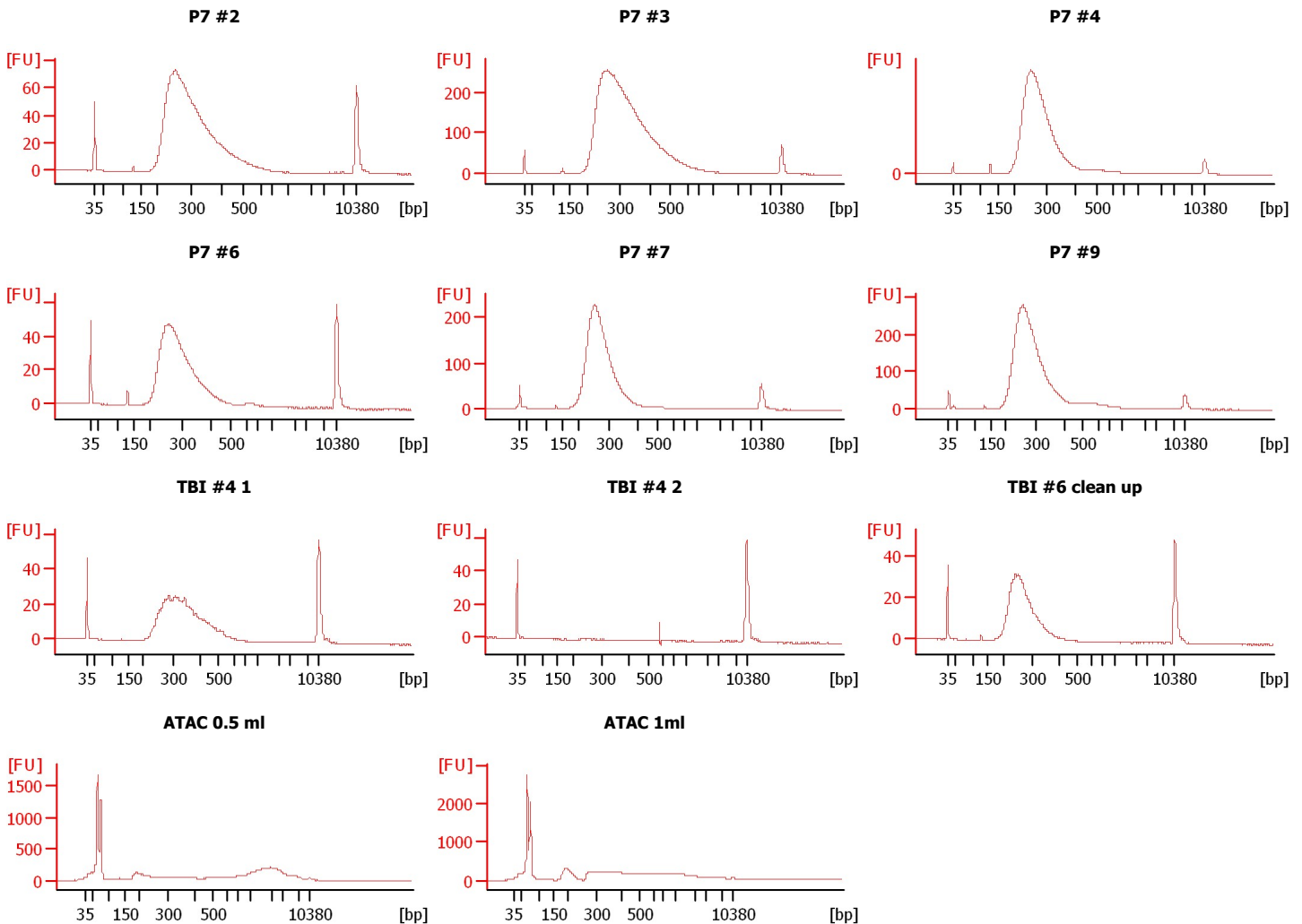
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

#### 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\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
P7 #2		<input type="checkbox"/>	✓			
P7 #3		<input type="checkbox"/>	✓			
P7 #4		<input type="checkbox"/>	✓			
P7 #6		<input type="checkbox"/>	✓			
P7 #7		<input type="checkbox"/>	✓			
P7 #9		<input type="checkbox"/>	✓			
TBI #4 1		<input type="checkbox"/>	✓			
TBI #4 2		<input type="checkbox"/>	✓			
TBI #6 clean up		<input type="checkbox"/>	✓			
ATAC 0.5 ml		<input type="checkbox"/>	✓			
ATAC 1ml		<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\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
Modified: 5/22/2015 4:41:12 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

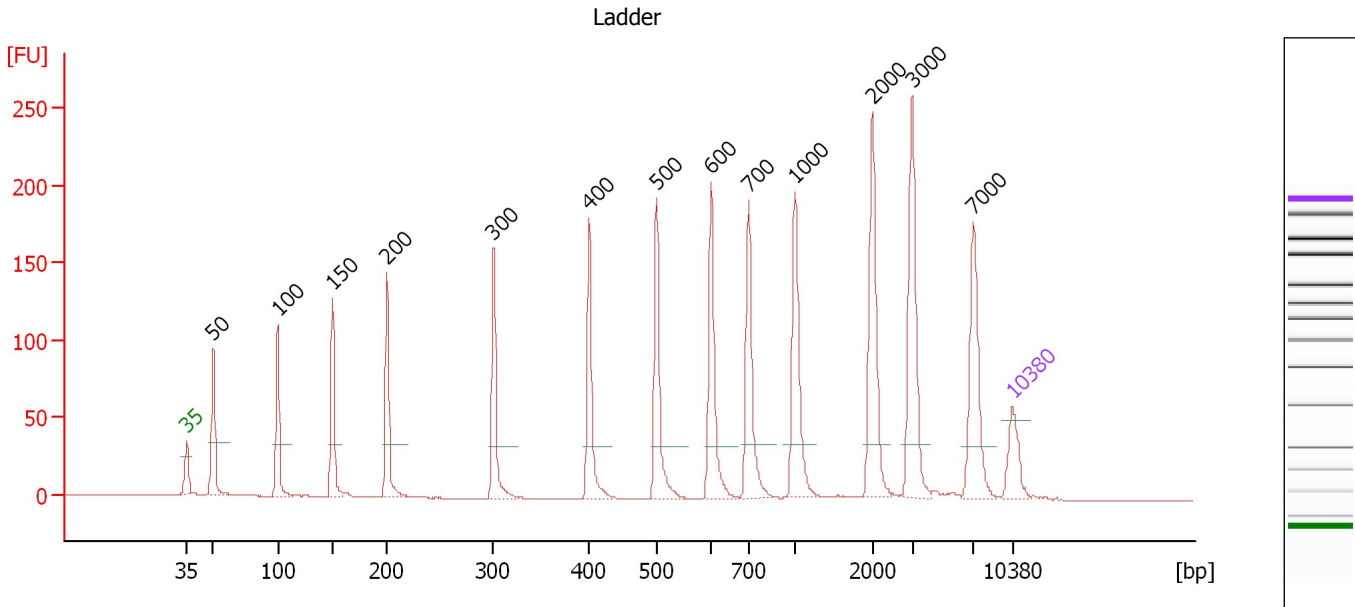
**Ladder**

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\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

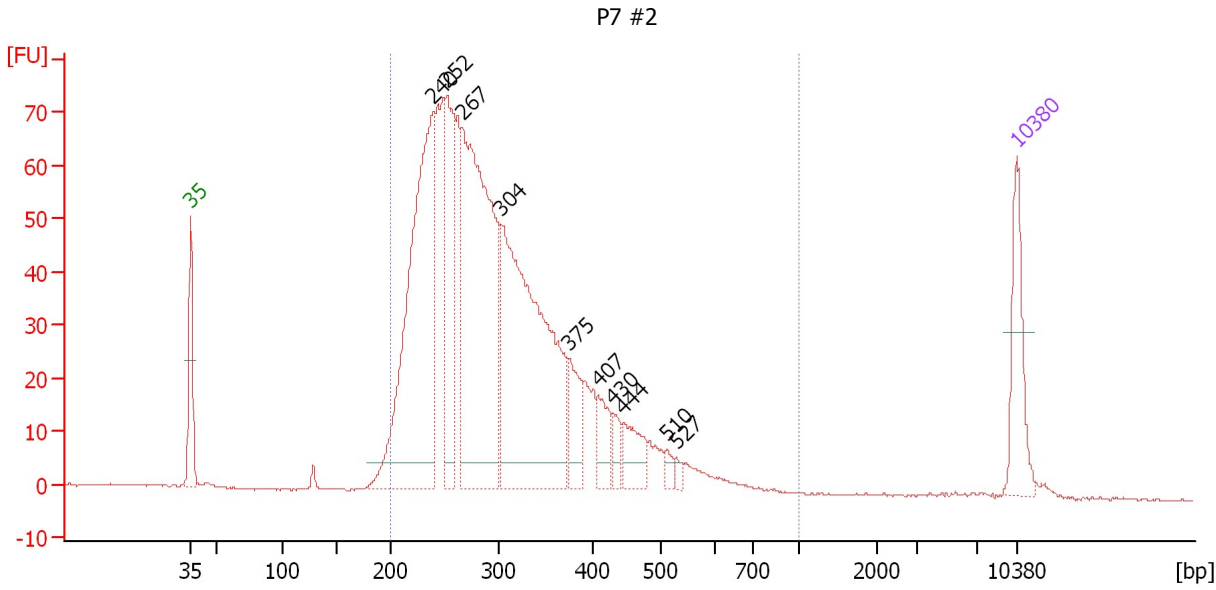
**Peak table for Ladder**

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	45.26
3	100	150.00	2,272.7	Ladder Peak	50.73
4	150	150.00	1,515.2	Ladder Peak	55.38
5	200	150.00	1,136.4	Ladder Peak	59.99
6	300	150.00	757.6	Ladder Peak	69.03
7	400	150.00	568.2	Ladder Peak	77.12
8	500	150.00	454.5	Ladder Peak	82.86
9	600	150.00	378.8	Ladder Peak	87.47
10	700	150.00	324.7	Ladder Peak	90.63
11	1,000	150.00	227.3	Ladder Peak	94.56
12	2,000	150.00	113.6	Ladder Peak	101.11
13	3,000	150.00	75.8	Ladder Peak	104.50
14	7,000	150.00	32.5	Ladder Peak	109.70
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : P7 #2**

Number of peaks found: 10                      Corr. Area 1: 1,360.4  
 Noise: 0.2

**Peak table for sample 1 : P7 #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	240	610.41	3,861.6		63.56
3	252	211.17	1,267.2		64.74
4	267	632.84	3,597.9		66.00
5	304	613.37	3,057.9		69.35
6	375	66.80	270.0		75.09
7	407	47.02	175.0		77.53
8	430	20.20	71.2		78.84
9	444	52.78	180.1		79.65
10	510	12.07	35.9		83.31
11	527	8.47	24.3		84.12
12	10,380	75.00	10.9	Upper Marker	113.00

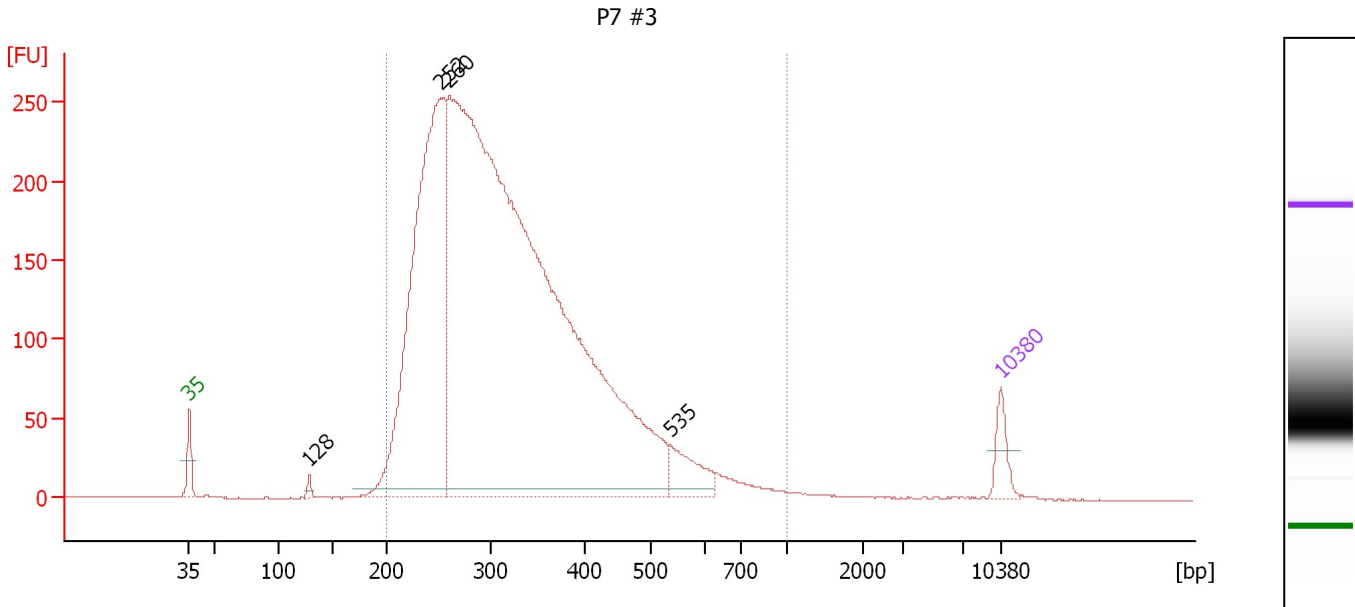
**Region table for sample 1 : P7 #2**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	310	1,000	1,360.4	14,461.5	97	28.2	2,729.27	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : P7 #3**

Number of peaks found: 4                      Corr. Area 1: 5,310.7  
 Noise: 0.2

**Peak table for sample 2 : P7 #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	128	25.59	302.5		53.35
3	252	2,519.38	15,136.5		64.71
4	260	7,547.83	43,929.5		65.44
5	535	166.85	472.3		84.48
6	10,380	75.00	10.9	Upper Marker	113.00

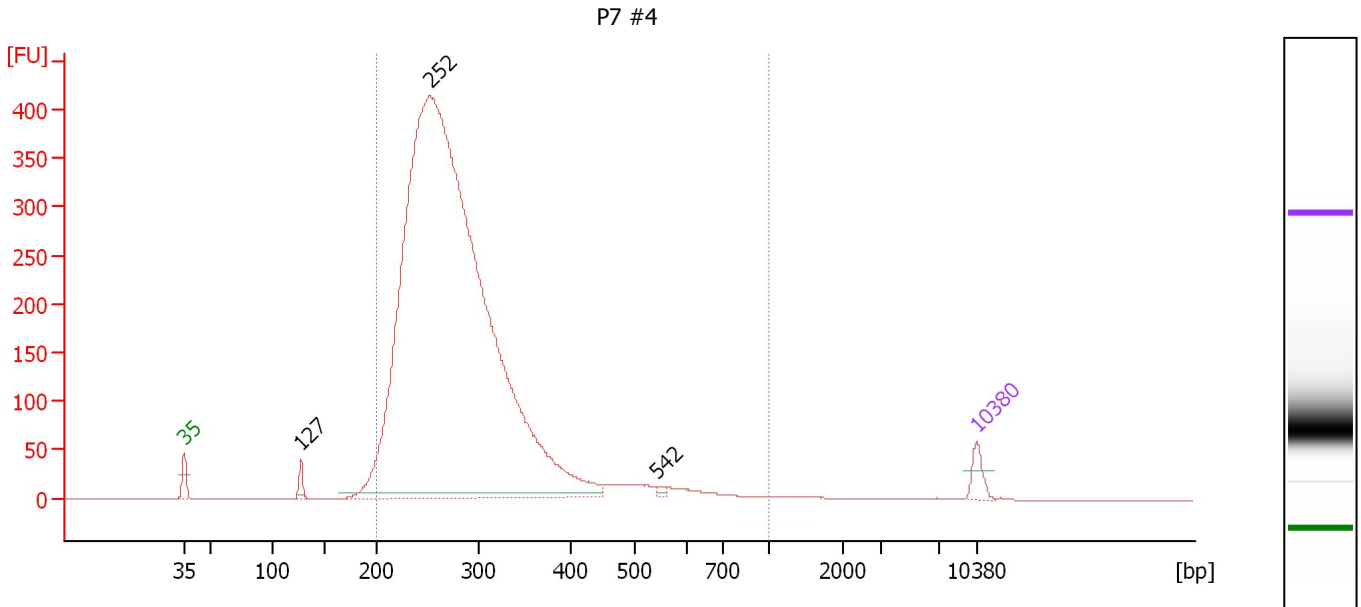
**Region table for sample 2 : P7 #3**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	329	1,000	5,310.7	47,030.1	98	30.1	9,306.92	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : P7 #4**

Number of peaks found: 3                      Corr. Area 1: 5,557.5  
 Noise: 0.2

**Peak table for sample 3 : P7 #4**

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	127	78.75	937.3		53.27
3	252	12,043.80	72,485.0		64.67
4	542	19.35	54.1		84.78
5	10,380	75.00	10.9	Upper Marker	113.00

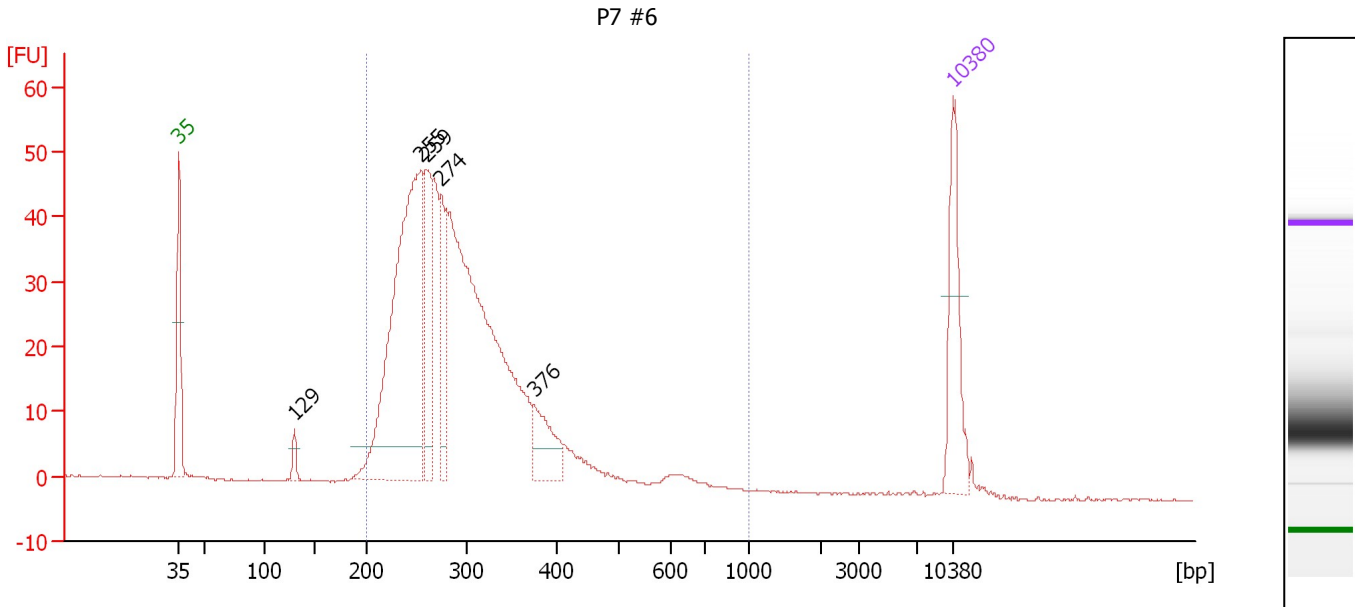
**Region table for sample 3 : P7 #4**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	288	1,000	5,557.5	64,792.4	98	26.3	11,672.43	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : P7 #6**

Number of peaks found: 5                      Corr. Area 1: 753.2  
 Noise: 0.1

**Peak table for sample 4 : P7 #6**

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	129	15.66	183.5		53.46
3	255	482.52	2,870.4		64.94
4	259	121.50	709.4		65.37
5	274	92.34	509.8		66.72
6	376	59.54	239.7		75.20
7	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : P7 #6**

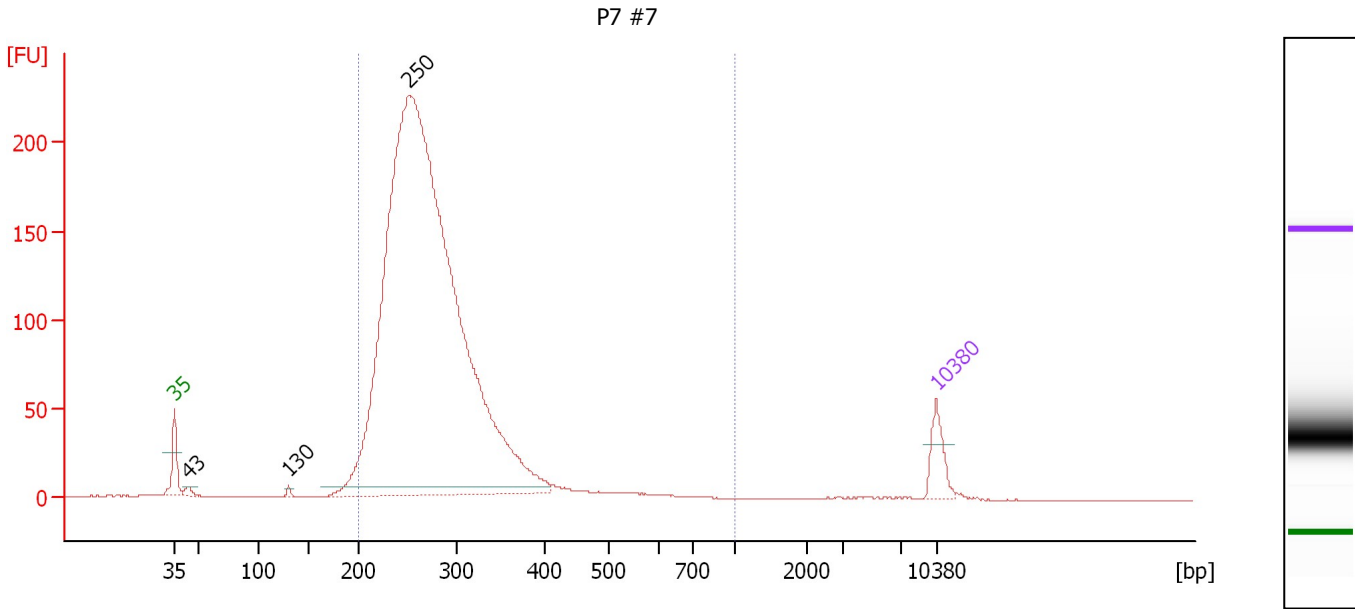
From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	301	1,000	753.2	8,233.7	97	25.9	1,539.43	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : P7 #7**

Number of peaks found: 3                      Corr. Area 1: 2,709.4  
 Noise: 0.1

**Peak table for sample 5 : P7 #7**

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	43	24.70	861.2		44.27
3	130	12.27	142.8		53.53
4	250	5,307.41	32,105.1		64.55
5	10,380	75.00	10.9	Upper Marker	113.00

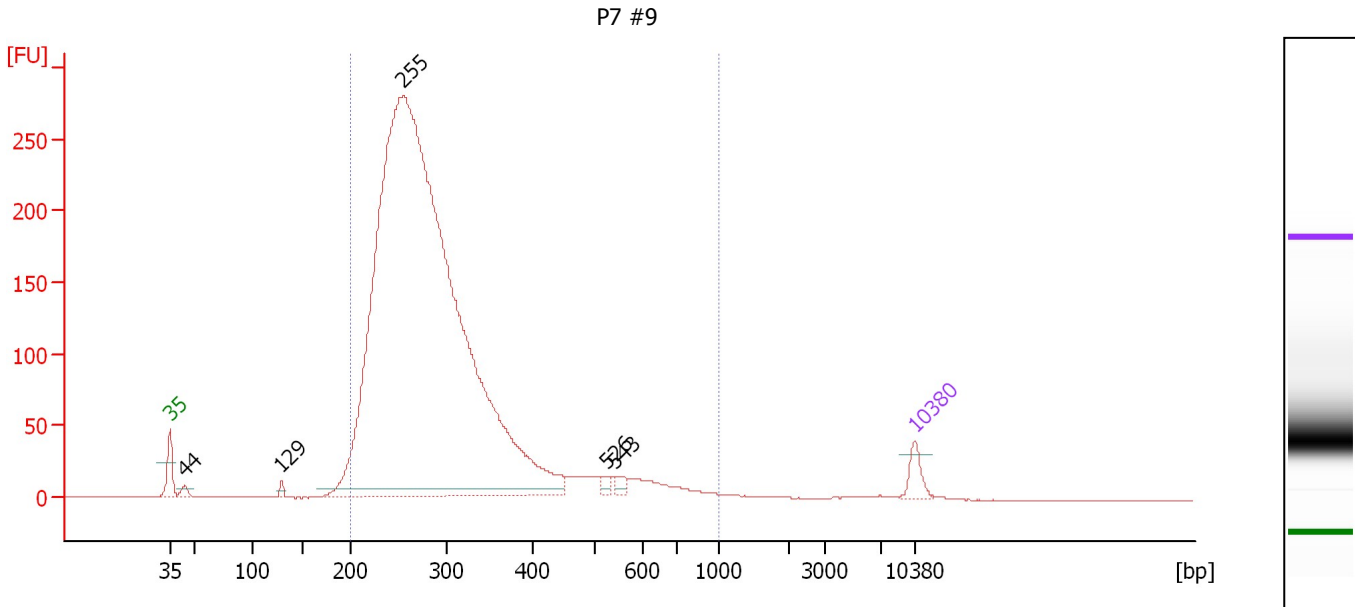
**Region table for sample 5 : P7 #7**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	278	1,000	2,709.4	29,332.0	97	20.6	5,198.38	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : P7 #9**

Number of peaks found: 5                      Corr. Area 1: 3,939.5  
 Noise: 0.2

**Peak table for sample 6 : P7 #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	44	51.08	1,760.0		44.35
3	129	30.00	351.2		53.46
4	255	10,753.61	63,982.1		64.93
5	526	32.82	94.5		84.06
6	543	37.45	104.4		84.86
7	10,380	75.00	10.9	Upper Marker	113.00

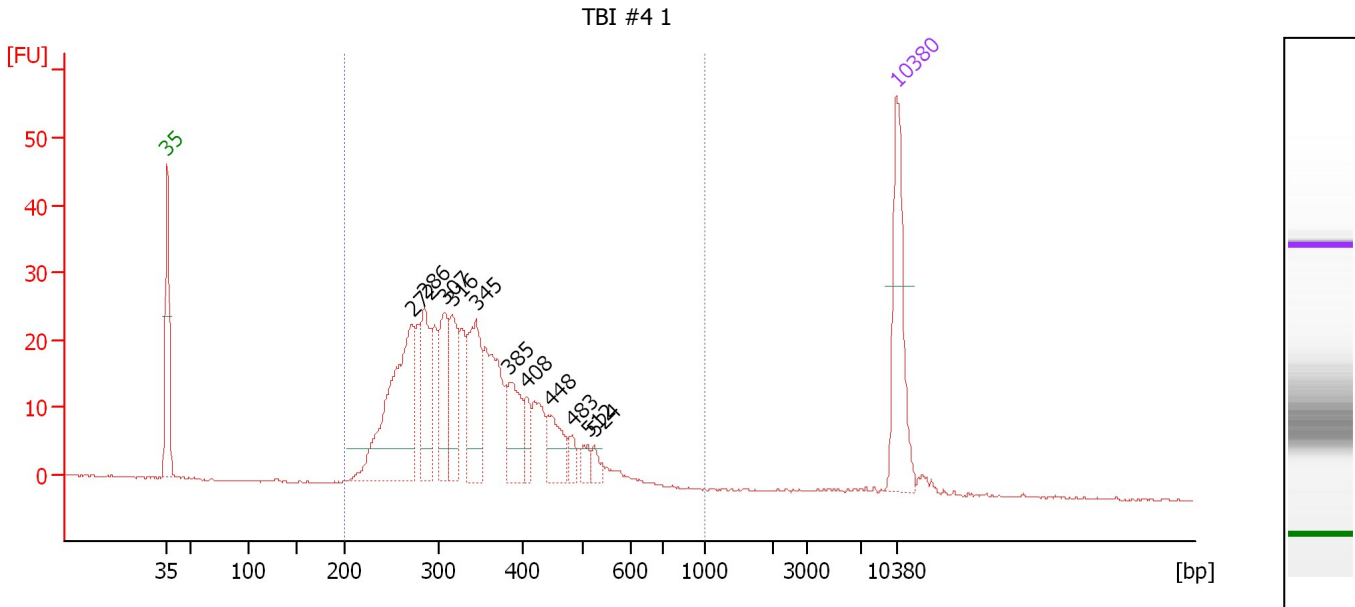
**Region table for sample 6 : P7 #9**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	299	1,000	3,939.5	57,817.6	97	30.8	10,595.77	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : TBI #4 1**

Number of peaks found: 11      Corr. Area 1: 500.3  
 Noise: 0.1

**Peak table for sample 7 : TBI #4 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	272	201.93	1,124.6		66.50
3	286	80.19	425.4		67.73
4	307	66.40	327.3		69.63
5	316	60.73	291.0		70.34
6	345	87.71	385.5		72.65
7	385	52.86	208.2		75.87
8	408	18.07	67.1		77.56
9	448	38.48	130.2		79.87
10	483	10.98	34.5		81.87
11	512	10.53	31.2		83.40
12	524	8.78	25.4		83.97
13	10,380	75.00	10.9	Upper Marker	113.00

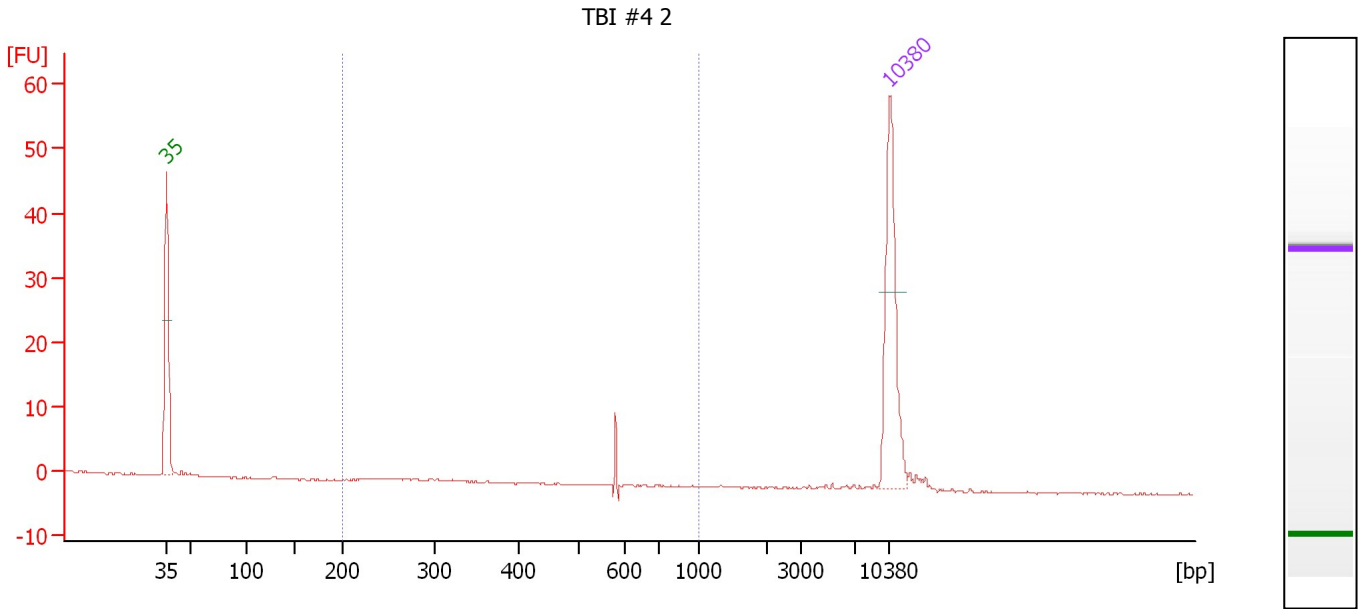
**Region table for sample 7 : TBI #4 1**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	346	1,000	500.3	4,472.7	98	23.8	954.70	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : TBI #4 2**

Number of peaks found: 0                      Corr. Area 1: 2.5  
 Noise: 0.1

**Peak table for sample 8 : TBI #4 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	10,380	75.00	10.9	Upper Marker	113.00

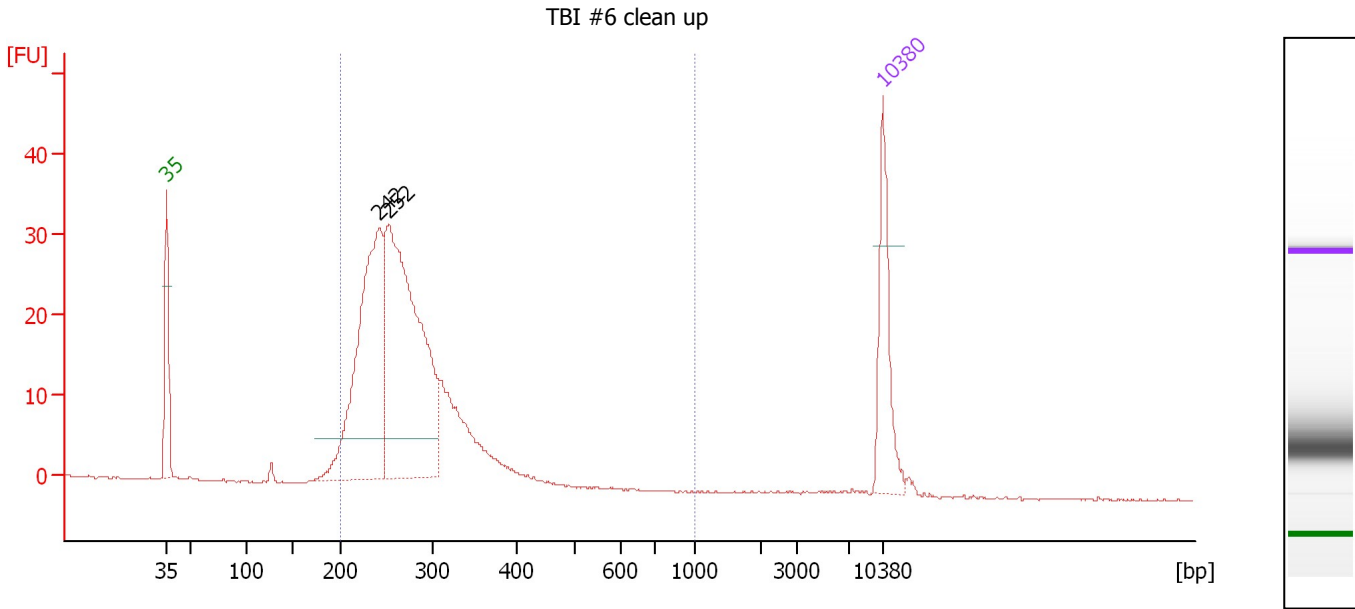
**Region table for sample 8 : TBI #4 2**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	573	1,000	2.5	11.0	35	7.1	4.08	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : TBI #6 clean up**

Number of peaks found: 2                      Corr. Area 1: 395.6  
 Noise: 0.1

**Peak table for sample 9 : TBI #6 clean up**

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	242	376.99	2,359.3		63.80
3	252	503.86	3,030.6		64.68
4	10,380	75.00	10.9	Upper Marker	113.00

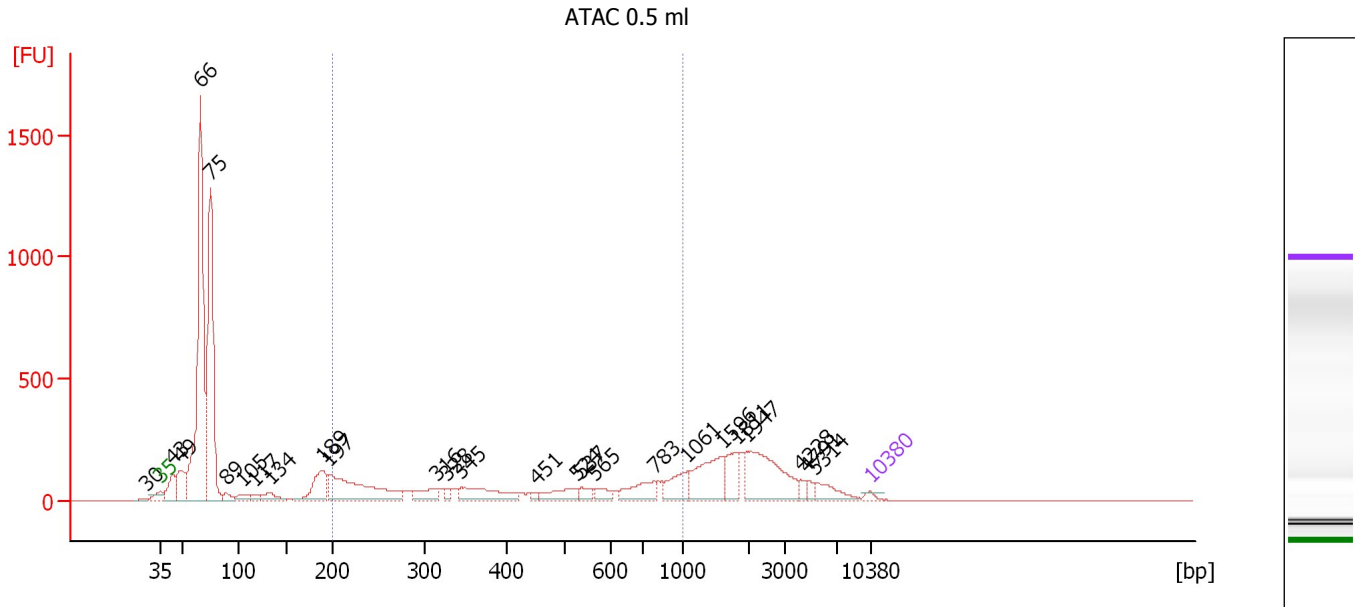
**Region table for sample 9 : TBI #6 clean up**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	273	1,000	395.6	5,941.0	97	17.1	1,040.76	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : ATAC 0.5 ml**

Number of peaks found: 26                      Corr. Area 1: 2,457.7  
 Noise: 0.2

**Peak table for sample 10 : ATAC 0.5 ml**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	30	0.00	0.0		41.64
2	35	125.00	5,411.3	Lower Marker	43.00
3	43	858.87	30,033.1		44.25
4	49	1,009.41	31,287.6		45.09
5	66	9,084.16	209,594.1		46.97
6	75	6,630.71	134,398.5		47.97
7	89	224.07	3,810.6		49.53
8	105	263.42	3,795.4		51.21
9	117	172.91	2,240.2		52.31
10	134	386.50	4,376.8		53.87
11	189	1,118.30	8,982.0		58.94
12	197	2,661.98	20,517.0		59.68
13	316	476.37	2,287.2		70.29
14	328	140.80	650.7		71.28
15	345	995.81	4,369.6		72.69
16	451	68.48	229.9		80.06
17	524	486.73	1,406.1		83.99
18	537	211.60	597.1		84.56
19	565	237.57	636.8		85.87
20	783	596.83	1,154.4		91.72
21	1,061	587.19	838.3		94.96
22	1,596	1,101.94	1,046.2		98.47
23	1,811	512.97	429.1		99.88
24	1,947	1,607.72	1,251.2		100.77
25	4,228	105.31	37.7		106.10

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad


Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 10 : ATAC 0.5 ml

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	4,791	107.50	34.0		106.83
27	5,314	367.75	104.9		107.51
28	10,380	75.00	10.9	Upper Marker	113.00

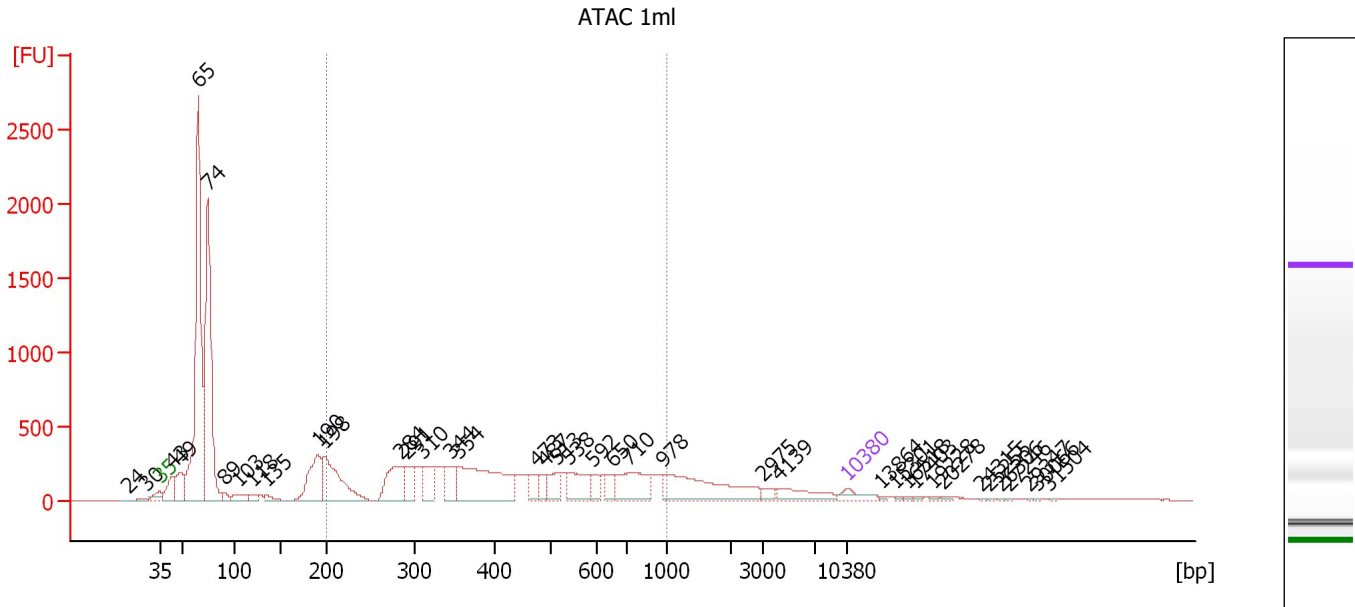
#### Region table for sample 10 : ATAC 0.5 ml

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Color
200	475	1,000	2,457.7	29,404.6	24	47.8	6,705.91	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : ATAC 1ml**

Number of peaks found: 40                      Corr. Area 1: 7,820.7  
 Noise: 0.4

**Peak table for sample 11 : ATAC 1ml**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	24	0.00	0.0		39.82
2	30	0.00	0.0		41.60
3	35	125.00	5,411.3	Lower Marker	43.00
4	43	324.91	11,384.9		44.24
5	49	357.14	11,130.6		45.05
6	65	3,645.10	84,492.8		46.94
7	74	2,769.14	56,508.6		47.91
8	89	75.80	1,289.7		49.53
9	103	131.28	1,924.1		51.04
10	118	72.01	925.6		52.39
11	135	63.48	714.2		53.96
12	190	624.61	4,977.1		59.08
13	198	848.62	6,482.6		59.84
14	284	493.11	2,628.0		67.61
15	291	252.88	1,317.3		68.20
16	310	278.25	1,357.9		69.88
17	344	264.71	1,166.4		72.58
18	354	1,056.35	4,523.2		73.39
19	473	116.14	371.9		81.32
20	487	124.86	388.2		82.13
21	513	182.50	538.5		83.48
22	538	307.65	866.3		84.61
23	592	116.65	298.6		87.09
24	650	97.69	227.8		89.04
25	710	450.36	960.8		90.76



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad


Created: 5/22/2015 3:59:52 PM  
 Modified: 5/22/2015 4:41:12 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 11 : ATAC 1ml**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	978	693.29	1,074.2		94.27
27	2,975	53.81	27.4		104.42
28	4,139	164.95	60.4		105.98
29	10,380	75.00	10.9	Upper Marker	113.00
30	13,864	0.00	0.0		116.40
31	15,301	0.00	0.0		117.80
32	16,518	0.00	0.0		118.99
33	17,403	0.00	0.0		119.85
34	19,228	0.00	0.0		121.64
35	20,278	0.00	0.0		122.66
36	24,315	0.00	0.0		126.60
37	25,255	0.00	0.0		127.52
38	26,306	0.00	0.0		128.54
39	27,246	0.00	0.0		129.46
40	29,347	0.00	0.0		131.51
41	30,066	0.00	0.0		132.21
42	31,504	0.00	0.0		133.62

**Region table for sample 11 : ATAC 1ml**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	457	1,000	7,820.7	21,634.9	42	41.1	5,257.66	

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2015-05-22\2015-05-22\_003.xad

Created: 5/22/2015 3:59:52 PM  
Modified: 5/22/2015 4:41:12 PM

**Gel Image**

