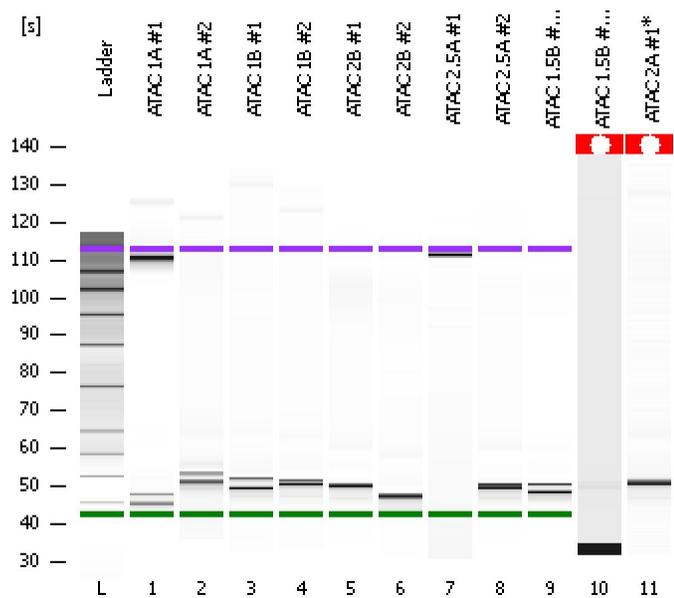


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
Modified: 6/19/2015 3:46:52 PM

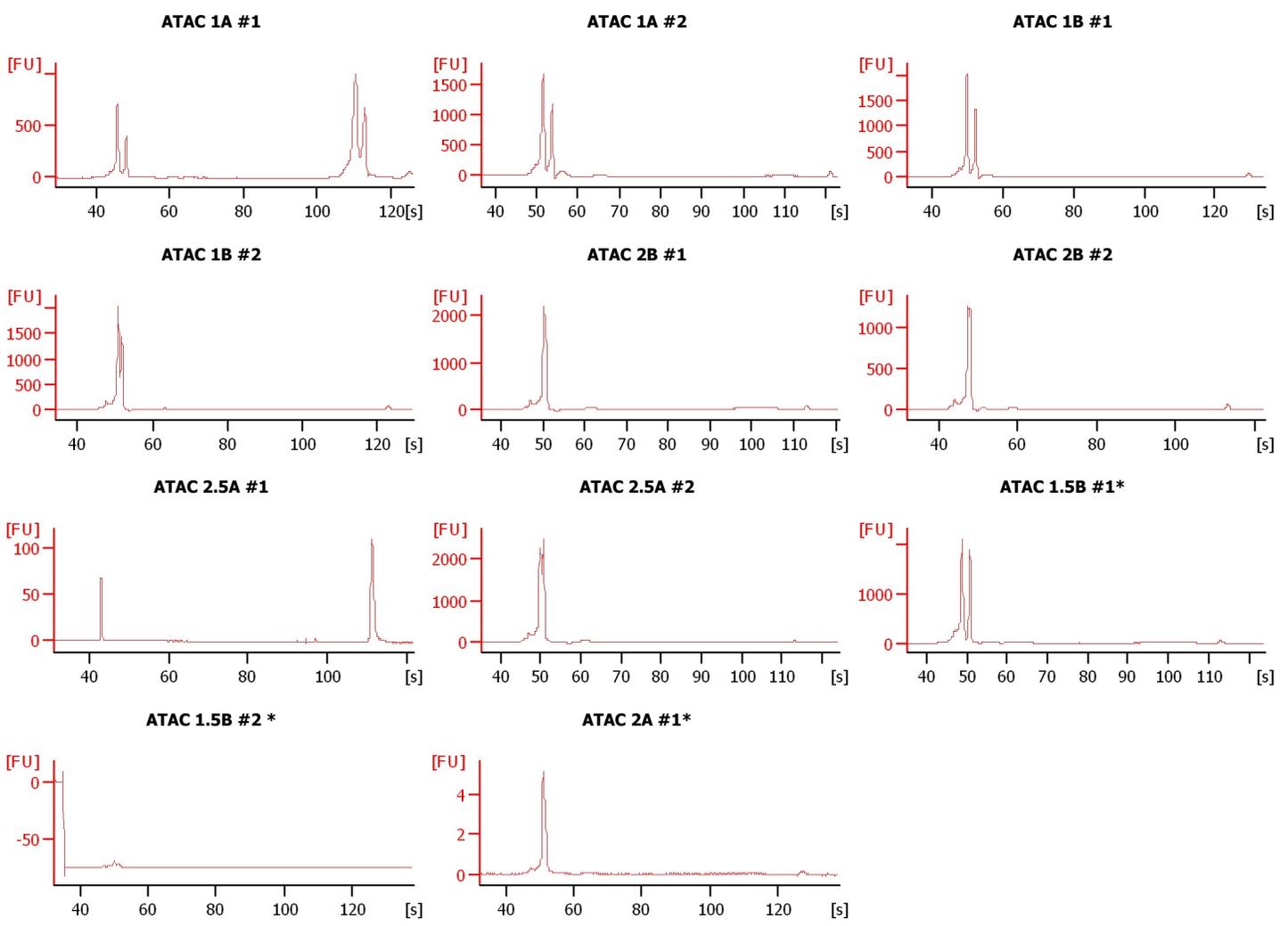
Electrophoresis File Run Summary



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\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
Modified: 6/19/2015 3:46:52 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
ATAC 1A #1		<input type="checkbox"/>	✓			
ATAC 1A #2		<input type="checkbox"/>	✓			
ATAC 1B #1		<input type="checkbox"/>	✓			
ATAC 1B #2		<input type="checkbox"/>	✓			
ATAC 2B #1		<input type="checkbox"/>	✓			
ATAC 2B #2		<input type="checkbox"/>	✓			
ATAC 2.5A #1		<input type="checkbox"/>	✓			
ATAC 2.5A #2		<input type="checkbox"/>	✓			
ATAC 1.5B #1*		<input type="checkbox"/>	✓			
ATAC 1.5B #2 *		<input type="checkbox"/>	✓			
ATAC 2A #1*		<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\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
Modified: 6/19/2015 3:46:52 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

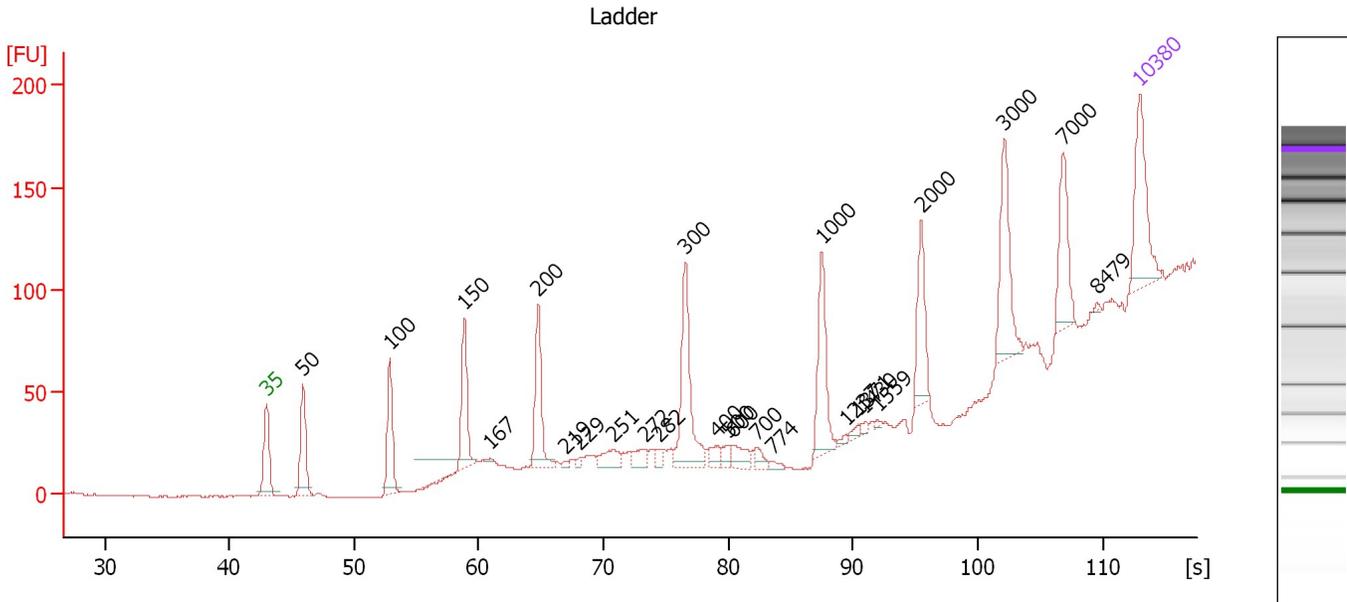
Ladder

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\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

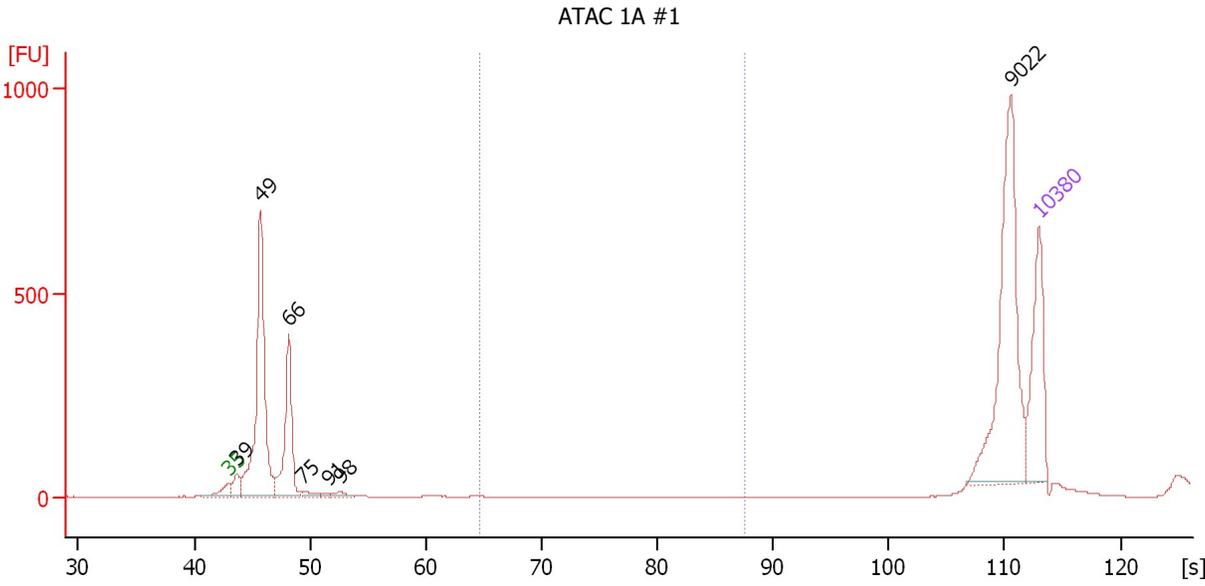
Peak table for Ladder

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	45.91
3	100	150.00	2,272.7	Ladder Peak	52.90
4	150	150.00	1,515.2	Ladder Peak	58.85
5	167	0.00	0.0		60.86
6	200	150.00	1,136.4	Ladder Peak	64.76
7	219	0.00	0.0		67.03
8	229	0.00	0.0		68.15
9	251	0.00	0.0		70.80
10	272	0.00	0.0		73.29
11	282	0.00	0.0		74.49
12	300	150.00	757.6	Ladder Peak	76.59
13	400	150.00	568.2	Ladder Peak	79.16
14	500	150.00	454.5	Ladder Peak	80.10
15	600	150.00	378.8	Ladder Peak	80.31
16	700	150.00	324.7	Ladder Peak	82.33
17	774	0.00	0.0		83.61
18	1,000	150.00	227.3	Ladder Peak	87.51
19	1,237	0.00	0.0		89.40
20	1,371	0.00	0.0		90.47
21	1,430	0.00	0.0		90.94
22	1,559	0.00	0.0		91.97
23	2,000	150.00	113.6	Ladder Peak	95.48
24	3,000	150.00	75.8	Ladder Peak	102.12
25	7,000	150.00	32.5	Ladder Peak	106.83
26	8,479	0.00	0.0		109.53
27	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : ATAC 1A #1

Number of peaks found: 7 Corr. Area 1: 0.0
 Noise: 0.4

Peak table for sample 1 : ATAC 1A #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	39	24.04	944.8		43.69
3	49	323.74	9,973.6		45.75
4	66	148.18	3,387.4		48.19
5	75	8.00	161.2		49.43
6	91	3.30	54.9		51.63
7	98	7.45	114.6		52.69
8	9,022	184.20	30.9		110.52
9	10,380	75.00	10.9	Upper Marker	113.00

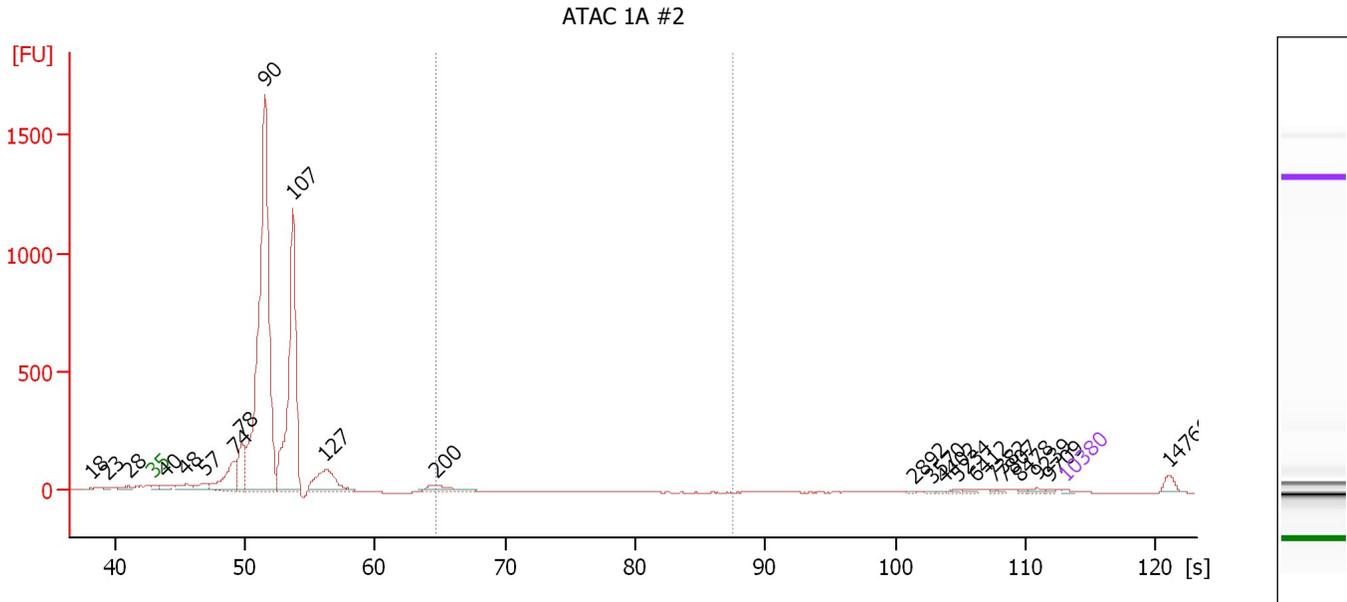
Region table for sample 1 : ATAC 1A #1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	0	1,000	0.0	0.0	0	0.0	0.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : ATAC 1A #2

Number of peaks found: 23 Corr. Area 1: 43.6
 Noise: 0.5

Peak table for sample 2 : ATAC 1A #2

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	18	0.00	0.0		38.22
2	23	0.00	0.0		39.49
3	28	0.00	0.0		41.08
4	35	125.00	5,411.3	Lower Marker	43.00
5	40	639.46	24,321.2		43.94
6	48	1,114.52	35,307.3		45.49
7	57	973.20	25,772.2		46.92
8	74	3,989.49	81,814.0		49.25
9	78	3,818.83	74,481.9		49.78
10	90	43,771.79	734,781.6		51.54
11	107	22,252.88	315,838.3		53.70
12	127	4,127.43	49,114.9		56.15
13	200	1,247.73	9,466.8		64.73
14	2,892	28.85	15.1		101.40
15	3,570	41.23	17.5		102.79
16	4,402	42.28	14.6		103.77
17	5,234	74.85	21.7		104.75
18	6,412	115.61	27.3		106.14
19	7,382	54.70	11.2		107.53
20	7,807	77.19	15.0		108.30
21	8,478	82.39	14.7		109.53
22	9,239	152.99	25.1		110.92
23	9,709	73.62	11.5		111.77
24	10,380	75.00	10.9	Upper Marker	113.00
25	14,766	0.00	0.0		121.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...

... Region table for sample 2 :

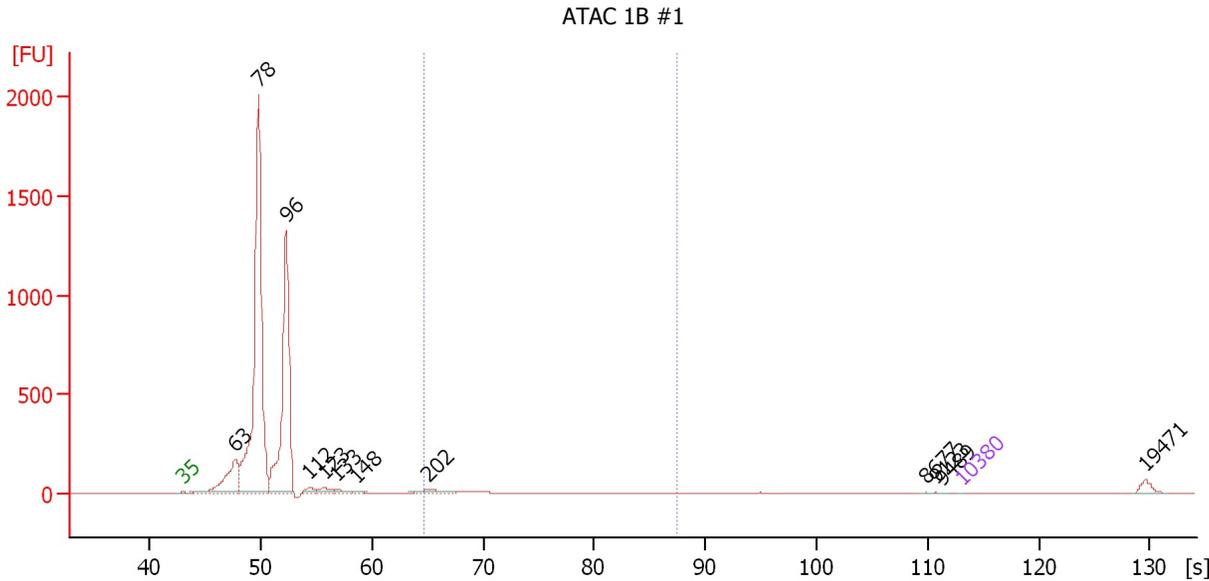
ATAC 1A #2

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	206	1,000	43.6	3,296.7	■ 1	2.6	448.95

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : ATAC 1B #1

Number of peaks found: 12 Corr. Area 1: 145.9
 Noise: 0.5

Peak table for sample 3 : ATAC 1B #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	63	32,082.06	771,138.1		47.73
3	78	193,121.33	3,763,086.0		49.79
4	96	117,056.52	1,855,977.6		52.28
5	112	2,983.39	40,194.8		54.38
6	123	3,679.93	45,220.5		55.67
7	133	2,267.74	25,847.0		56.82
8	148	860.95	8,802.6		58.64
9	202	3,675.50	27,519.1		65.04
10	8,677	128.62	22.5		109.89
11	9,123	119.20	19.8		110.70
12	9,489	86.04	13.7		111.37
13	10,380	75.00	10.9	Upper Marker	113.00
14	19,471	0.00	0.0		129.59

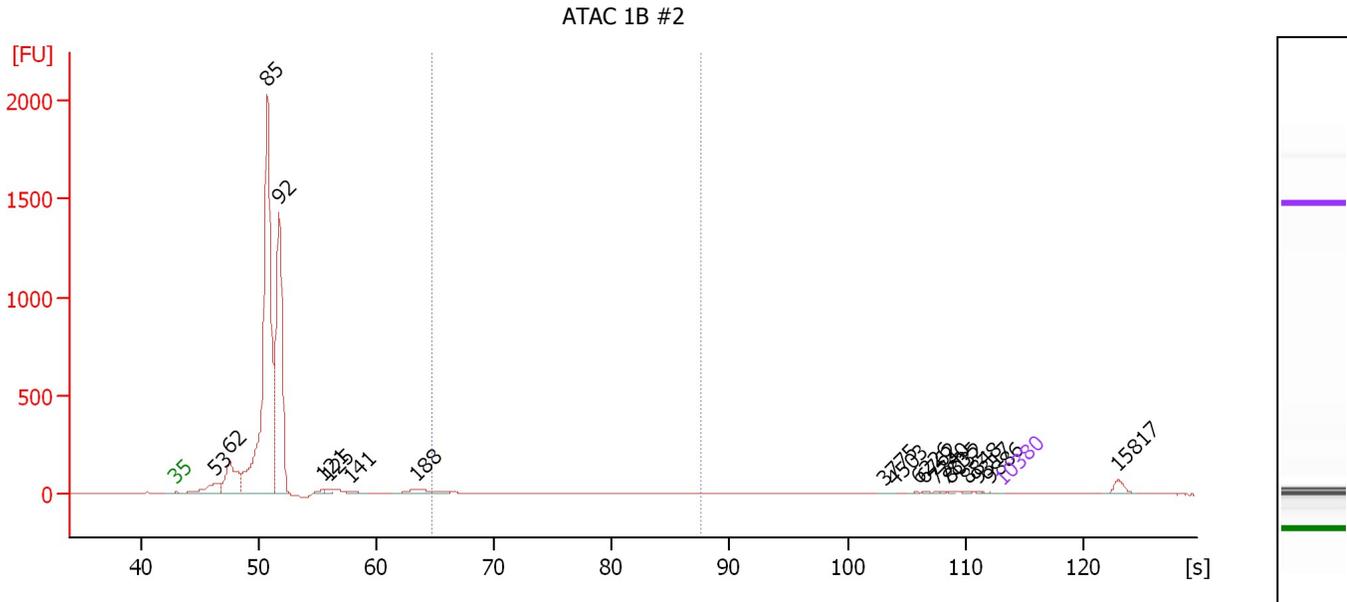
Region table for sample 3 : ATAC 1B #1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	310	1,000	145.9	42,317.6	2	60.3	6,999.68

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : ATAC 1B #2

Number of peaks found: 19 Corr. Area 1: 127.2
 Noise: 0.3

Peak table for sample 4 : ATAC 1B #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	53	8,462.50	240,278.9		46.38
3	62	19,959.94	489,677.4		47.56
4	85	156,742.05	2,804,218.8		50.76
5	92	82,623.81	1,363,780.4		51.75
6	121	1,085.24	13,583.3		55.40
7	125	981.09	11,871.1		55.90
8	141	1,102.42	11,867.6		57.75
9	188	3,732.60	30,085.2		63.34
10	3,775	77.98	31.3		103.03
11	4,503	97.78	32.9		103.89
12	6,226	185.01	45.0		105.92
13	6,762	182.23	40.8		106.55
14	7,340	127.49	26.3		107.45
15	7,835	122.02	23.6		108.35
16	8,032	156.56	29.5		108.72
17	8,848	162.67	27.9		110.20
18	9,317	190.52	31.0		111.06
19	9,886	113.15	17.3		112.10
20	10,380	75.00	10.9	Upper Marker	113.00
21	15,817	0.00	0.0		122.92

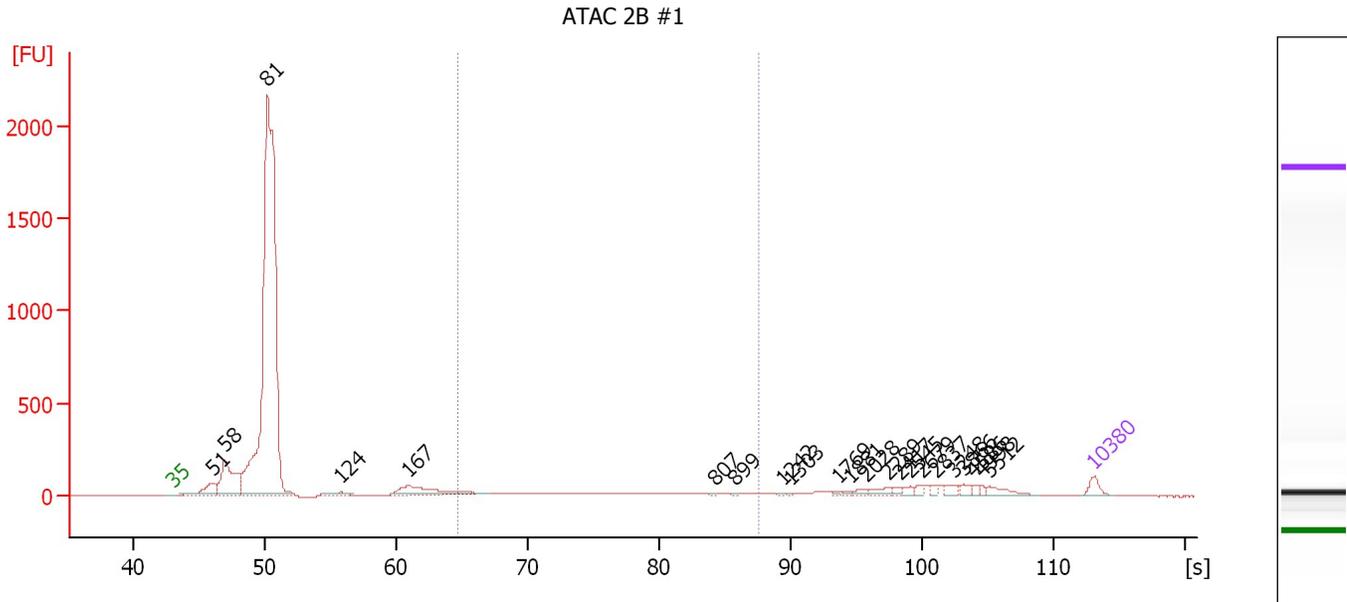
Region table for sample 4 : ATAC 1B #2

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	345	1,000	127.2	25,345.4	2	61.8	4,423.45

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : ATAC 2B #1

Number of peaks found: 22 Corr. Area 1: 427.7
 Noise: 0.3

Peak table for sample 5 : ATAC 2B #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	51	331.72	9,941.5		45.99
3	58	941.72	24,814.1		46.96
4	81	9,274.32	174,227.9		50.19
5	124	62.59	761.8		55.81
6	167	430.67	3,898.8		60.90
7	807	4.94	9.3		84.18
8	899	4.84	8.2		85.76
9	1,242	6.19	7.6		89.44
10	1,303	5.32	6.2		89.92
11	1,769	10.88	9.3		93.64
12	1,881	16.88	13.6		94.53
13	2,028	29.01	21.7		95.66
14	2,289	55.25	36.6		97.40
15	2,417	31.08	19.5		98.25
16	2,545	35.55	21.2		99.10
17	2,679	33.96	19.2		99.99
18	2,837	34.18	18.3		101.04
19	3,248	53.41	24.9		102.41
20	3,866	48.03	18.8		103.14
21	4,586	24.90	8.2		103.99
22	4,998	24.79	7.5		104.47
23	5,512	79.80	21.9		105.08
24	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...

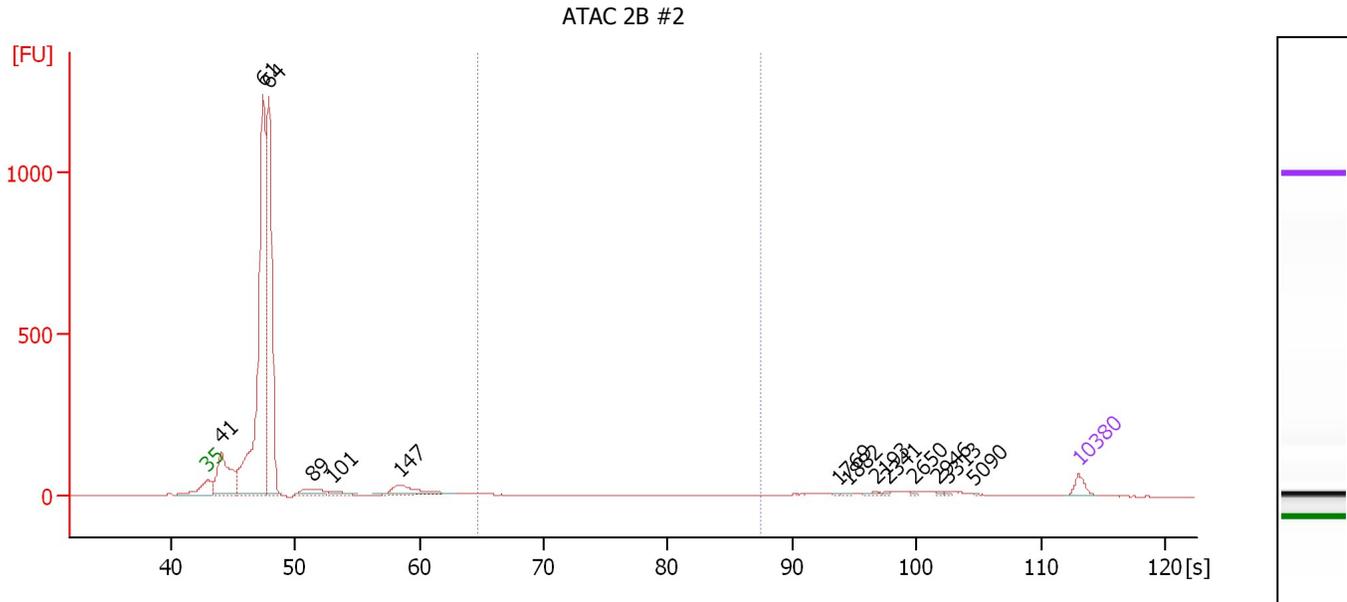
... Region table for sample 5 : ATAC 2B #1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/ μ l]
200	441	1,000	427.7	2,518.6	5	59.4	508.78

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : ATAC 2B #2

Number of peaks found: 14 Corr. Area 1: 128.5
 Noise: 0.3

Peak table for sample 6 : ATAC 2B #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	41	1,071.51	40,085.1		44.07
3	61	5,315.73	132,110.6		47.44
4	64	3,580.08	84,319.5		47.91
5	89	209.12	3,543.3		51.42
6	101	103.31	1,546.2		53.04
7	147	345.86	3,560.9		58.51
8	1,769	4.59	3.9		93.64
9	1,882	7.20	5.8		94.54
10	2,193	19.33	13.4		96.76
11	2,341	7.74	5.0		97.74
12	2,650	9.67	5.5		99.79
13	2,946	10.85	5.6		101.76
14	3,313	9.40	4.3		102.49
15	5,090	4.62	1.4		104.58
16	10,380	75.00	10.9	Upper Marker	113.00

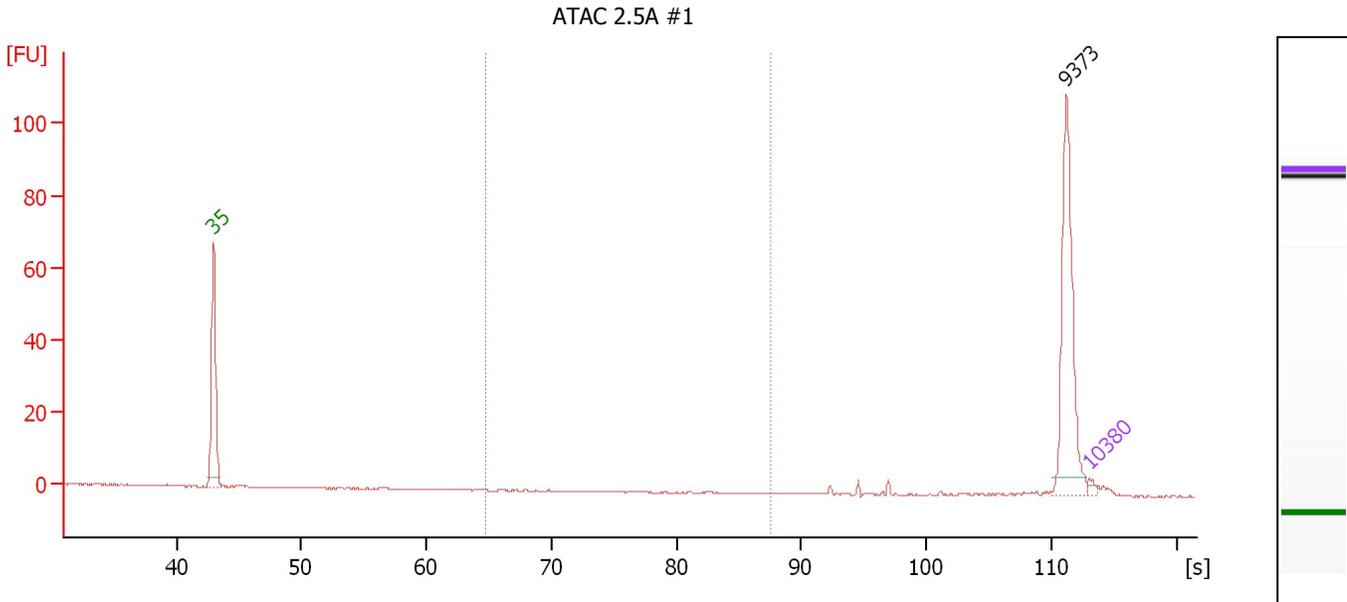
Region table for sample 6 : ATAC 2B #2

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	446	1,000	128.5	1,159.9	3	58.4	238.53

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : ATAC 2.5A #1

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

Peak table for sample 7 : ATAC 2.5A #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	9,373	2,883.97	466.2		111.16
3	10,380	75.00	10.9	Upper Marker	113.00

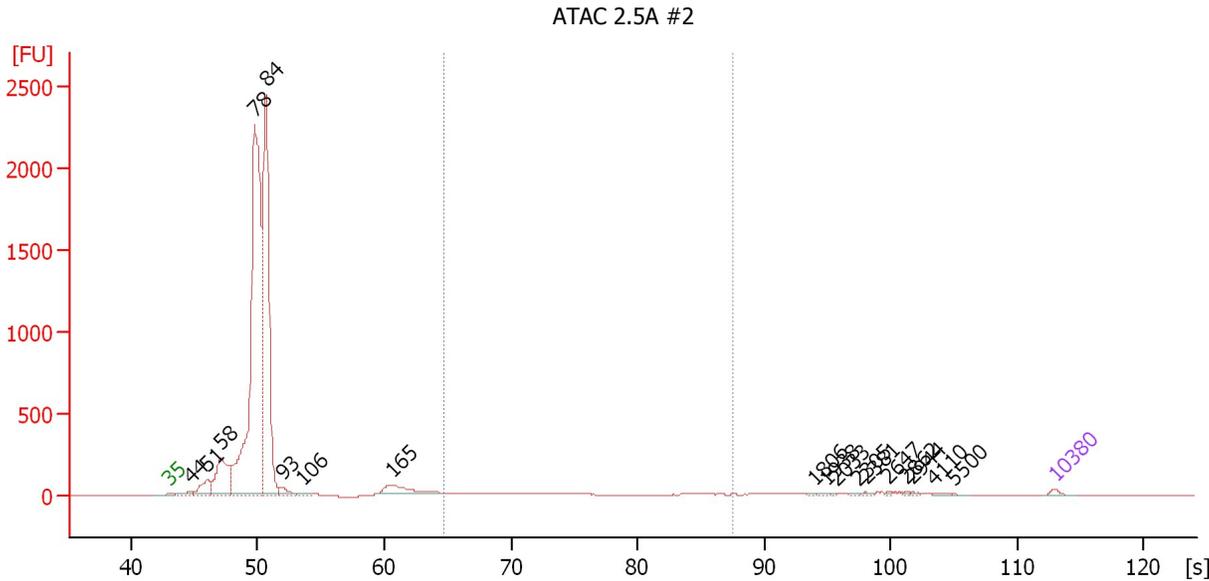
Region table for sample 7 : ATAC 2.5A #1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	722	1,000	0.0	0.0	0	0.0	0.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : ATAC 2.5A #2

Number of peaks found: 18 Corr. Area 1: 279.4
 Noise: 0.2

Peak table for sample 8 : ATAC 2.5A #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	44	197.06	6,840.3		44.68
3	51	943.94	28,159.5		46.02
4	58	2,532.49	65,809.0		47.07
5	78	20,697.68	404,385.7		49.76
6	84	12,978.77	234,483.8		50.64
7	93	309.66	5,034.9		51.94
8	106	66.80	957.0		53.58
9	165	980.97	8,983.0		60.68
10	1,806	10.77	9.0		93.94
11	1,938	16.98	13.3		94.99
12	2,033	12.05	9.0		95.70
13	2,305	28.28	18.6		97.51
14	2,381	31.64	20.1		98.01
15	2,647	23.45	13.4		99.77
16	2,862	21.68	11.5		101.20
17	2,944	28.68	14.8		101.75
18	4,110	37.99	14.0		103.43
19	5,500	14.21	3.9		105.06
20	10,380	75.00	10.9	Upper Marker	113.00

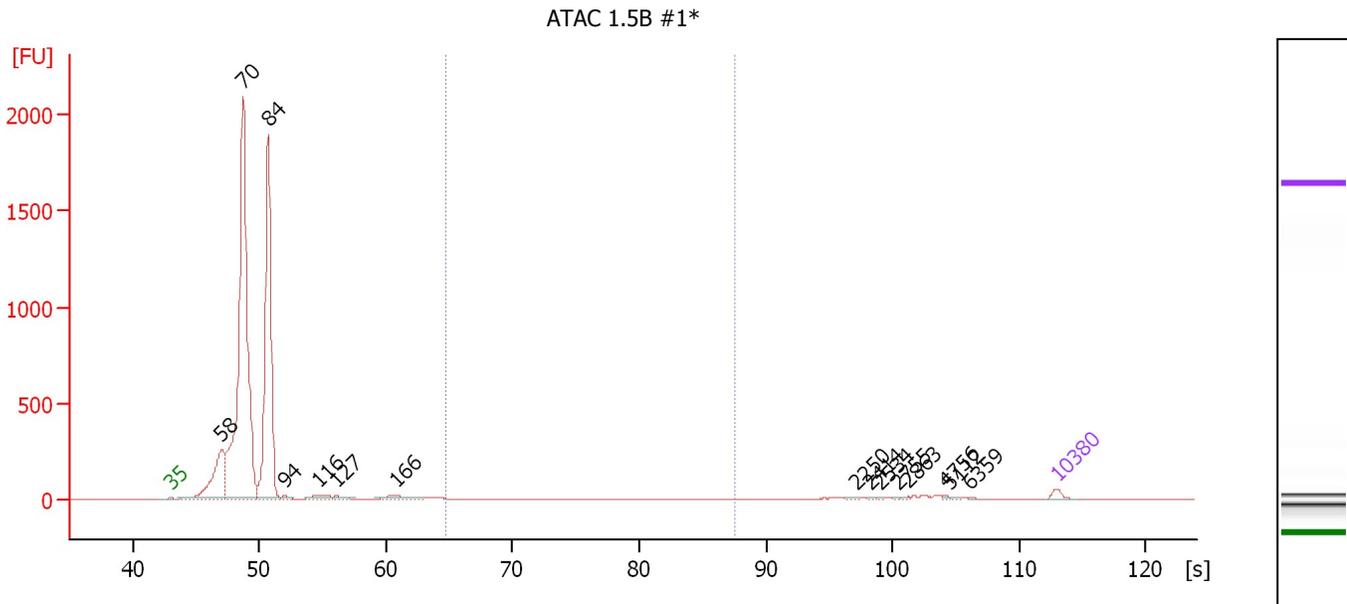
Region table for sample 8 : ATAC 2.5A #2

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	413	1,000	279.4	4,340.3	3	61.0	840.55

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
 Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : ATAC 1.5B #1*

Number of peaks found: 15 Corr. Area 1: 97.9
 Noise: 0.2

Peak table for sample 9 : ATAC 1.5B #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	58	2,296.57	60,005.5		47.03
3	70	12,523.97	271,048.2		48.71
4	84	7,408.95	133,429.6		50.68
5	94	74.29	1,196.8		52.06
6	116	202.83	2,659.0		54.75
7	127	77.08	920.7		56.09
8	166	181.40	1,651.4		60.79
9	2,250	12.79	8.6		97.14
10	2,414	12.06	7.6		98.23
11	2,534	10.64	6.4		99.03
12	2,755	14.50	8.0		100.49
13	2,863	18.21	9.6		101.21
14	4,756	14.47	4.6		104.19
15	5,112	18.90	5.6		104.61
16	6,359	8.83	2.1		106.08
17	10,380	75.00	10.9	Upper Marker	113.00

Region table for sample 9 : ATAC 1.5B #1*

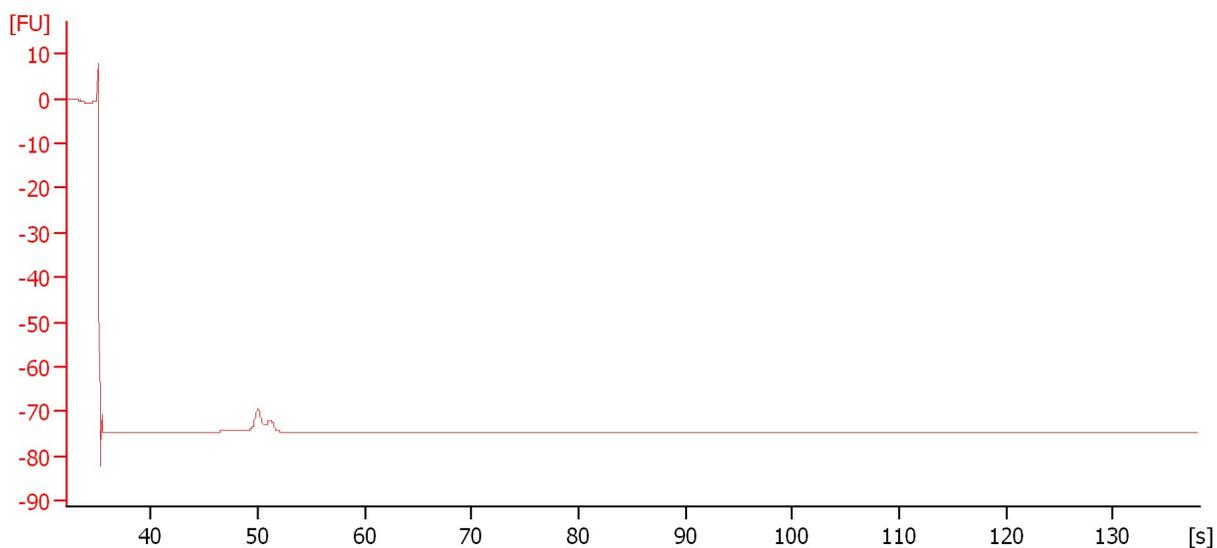
From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	442	1,000	97.9	1,095.7	1	59.2	222.29

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...

ATAC 1.5B #2 *



Overall Results for sample 10 : ATAC 1.5B #2 *

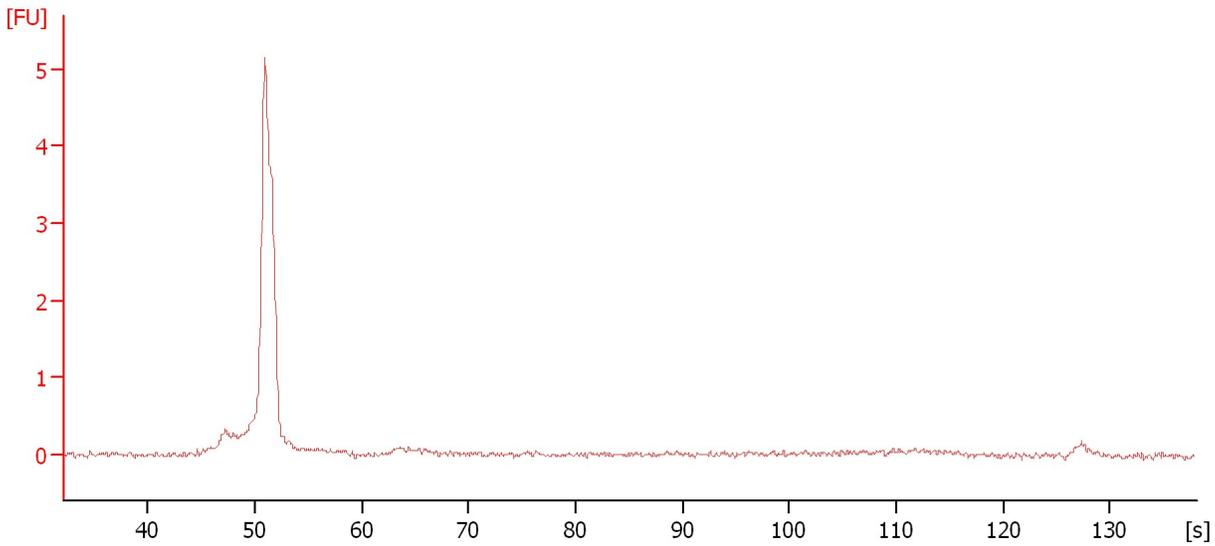
Noise: 0.0

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
Modified: 6/19/2015 3:46:52 PM

Electropherogram Summary Continued ...

ATAC 2A #1*



Setpoint Deviations for sample 11 : ATAC 2A #1*

Slope Threshold :	0	Width Threshold [s] :	0
Height Threshold [FU] :	0	Baseline Plateau [s] :	0
Area Threshold :	0		

Overall Results for sample 11 : ATAC 2A #1*

Noise: 0.0

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-19\2015-06-19_002.xad

Created: 6/19/2015 2:40:00 PM
Modified: 6/19/2015 3:46:52 PM

Gel Image

