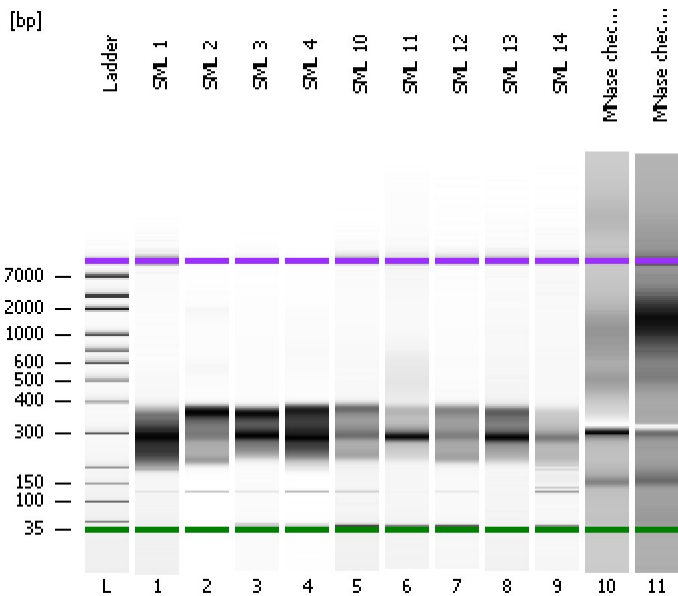


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
Modified: 4/8/2015 12:43:35 PM

Electrophoresis File Run Summary



Instrument Information:

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

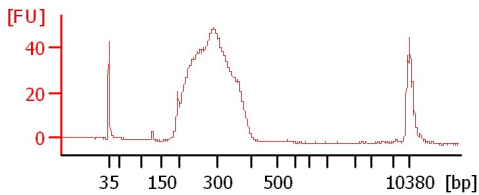
Assay Information:

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

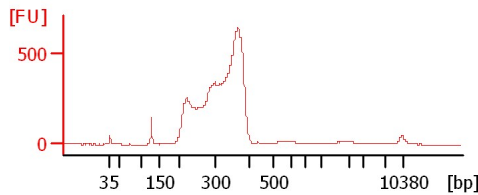
Chip Information:

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

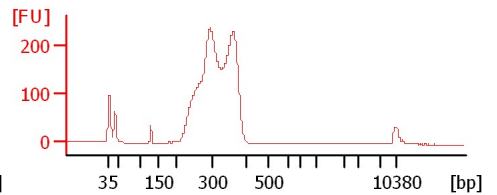
SML 1



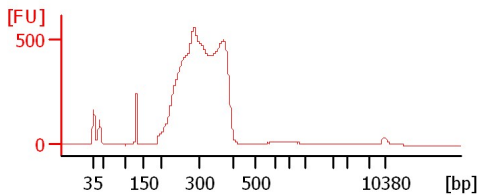
SML 2



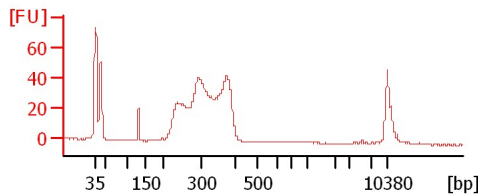
SML 3



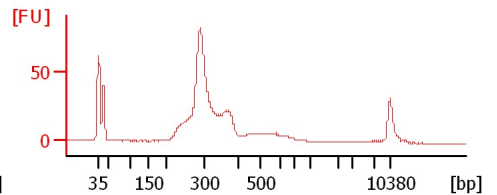
SML 4



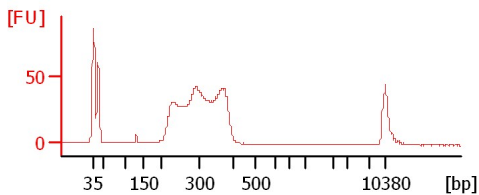
SML 10



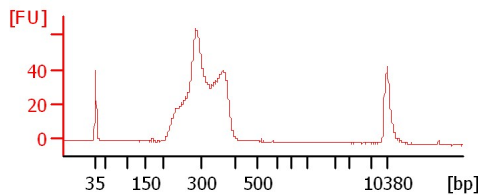
SML 11



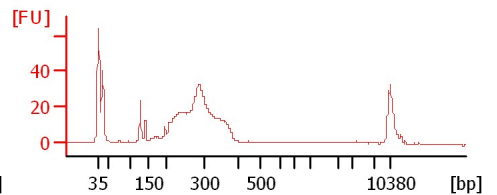
SML 12



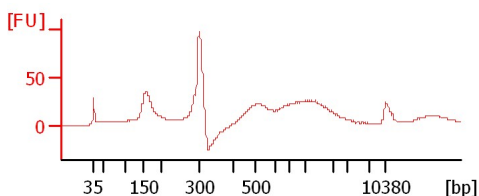
SML 13



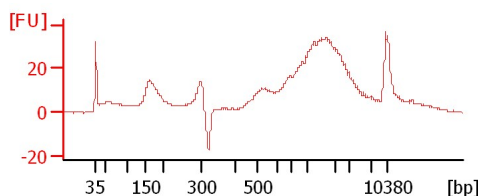
SML 14



MNase check WT 04/05/15



MNase check Lo 04/05/15



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
SML 1		<input type="checkbox"/>	✓			
SML 2		<input type="checkbox"/>	✓			
SML 3		<input type="checkbox"/>	✓			
SML 4		<input type="checkbox"/>	✓			
SML 10		<input type="checkbox"/>	✓			
SML 11		<input type="checkbox"/>	✓			
SML 12		<input type="checkbox"/>	✓			
SML 13		<input type="checkbox"/>	✓			
SML 14		<input type="checkbox"/>	✓			
MNase check WT 04/05/15		<input type="checkbox"/>	✓			
MNase check Lo 04/05/15		<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\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
Modified: 4/8/2015 12:43:35 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

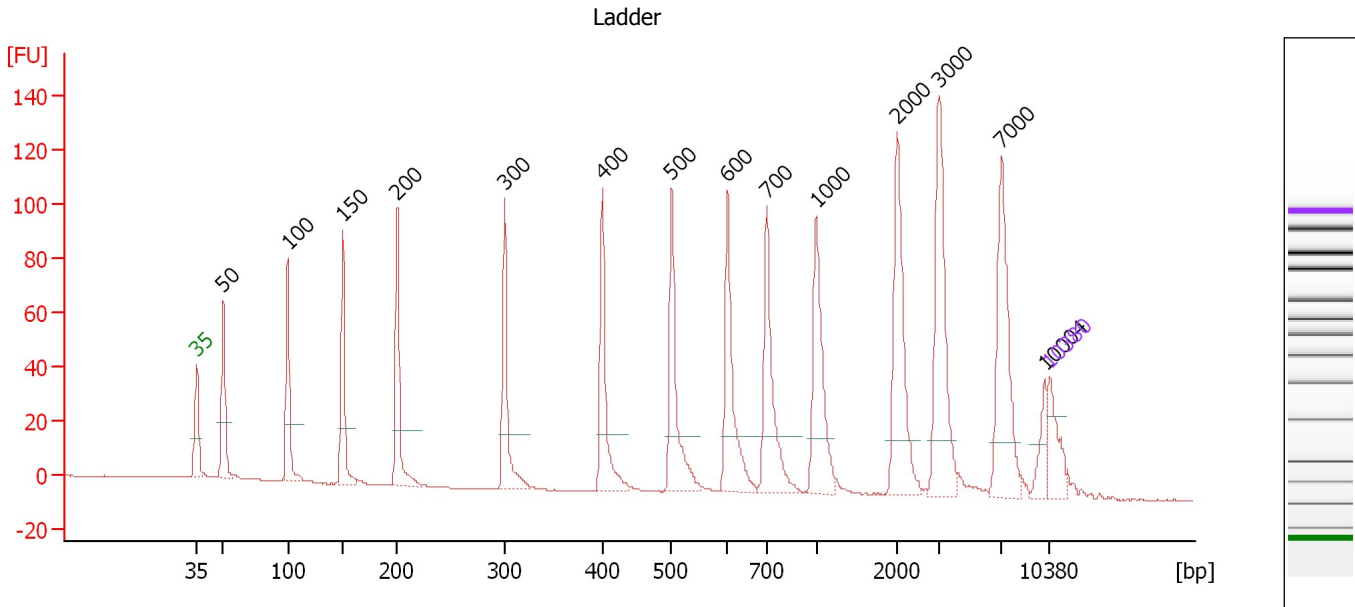
Ladder

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:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

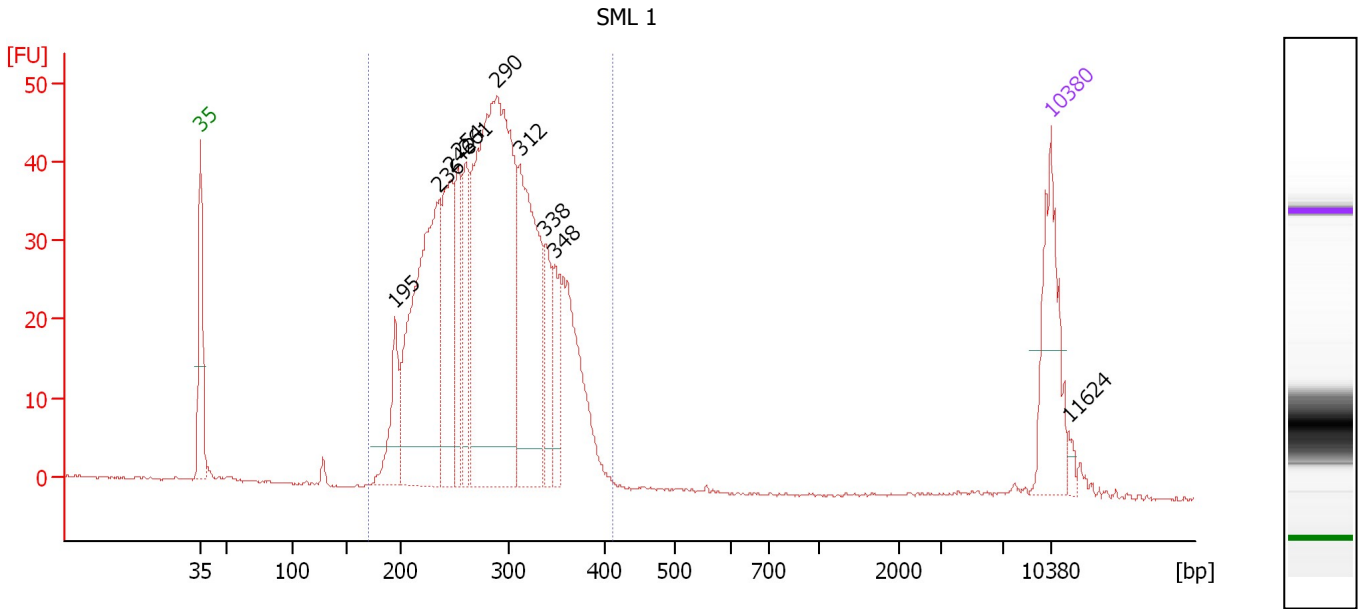
Peak table for Ladder

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	45.19
3	100	150.00	2,272.7	Ladder Peak	50.48
4	150	150.00	1,515.2	Ladder Peak	54.99
5	200	150.00	1,136.4	Ladder Peak	59.45
6	300	150.00	757.6	Ladder Peak	68.29
7	400	150.00	568.2	Ladder Peak	76.29
8	500	150.00	454.5	Ladder Peak	81.98
9	600	150.00	378.8	Ladder Peak	86.58
10	700	150.00	324.7	Ladder Peak	89.77
11	1,000	150.00	227.3	Ladder Peak	93.84
12	2,000	150.00	113.6	Ladder Peak	100.49
13	3,000	150.00	75.8	Ladder Peak	103.90
14	7,000	150.00	32.5	Ladder Peak	109.06
15	10,004	0.00	0.0		112.56
16	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : SML 1

Number of peaks found: 10 Corr. Area 1: 869.8
 Noise: 0.2

Peak table for sample 1 : SML 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	195	66.74	519.2		58.98
3	236	335.76	2,155.8		62.63
4	246	144.30	889.0		63.51
5	254	76.61	457.2		64.21
6	261	82.78	480.8		64.83
7	290	548.01	2,866.6		67.37
8	312	221.35	1,074.4		69.26
9	338	53.74	240.6		71.37
10	348	51.63	224.9		72.12
11	10,380	75.00	10.9	Upper Marker	113.00
12	11,624	0.00	0.0		114.45

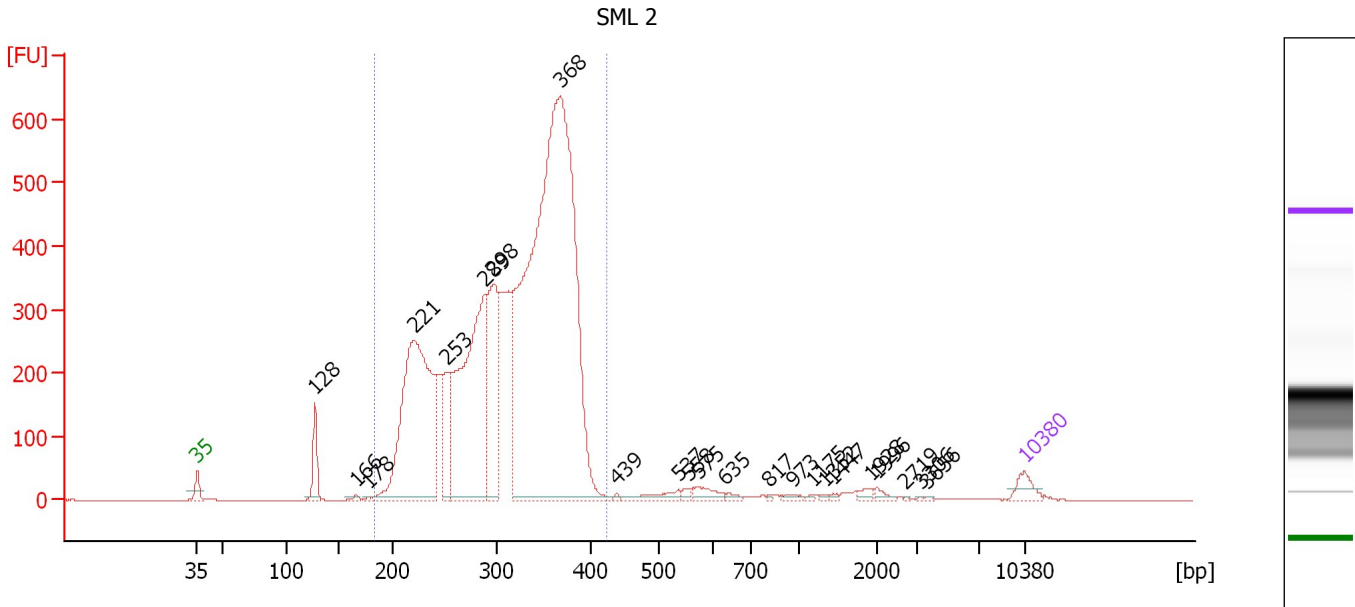
Region table for sample 1 : SML 1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
170	284	412	869.8	9,581.2	98	17.2	1,734.94	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : SML 2

Number of peaks found: 23 Corr. Area 1: 7,971.6
 Noise: 0.2

Peak table for sample 2 : SML 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	128	258.62	3,071.2		52.97
3	166	17.30	157.6		56.44
4	178	11.96	101.8		57.48
5	221	2,481.70	17,009.0		61.31
6	253	421.11	2,519.7		64.15
7	289	2,125.28	11,124.7		67.36
8	298	961.52	4,895.0		68.08
9	368	6,638.16	27,346.4		73.72
10	439	10.61	36.7		78.50
11	537	87.87	247.9		83.68
12	558	27.44	74.5		84.63
13	575	82.44	217.1		85.44
14	635	23.01	54.9		87.70
15	817	7.52	13.9		91.35
16	973	23.72	36.9		93.47
17	1,175	9.95	12.8		95.00
18	1,352	9.36	10.5		96.18
19	1,447	12.09	12.7		96.81
20	1,928	30.28	23.8		100.01
21	1,996	28.21	21.4		100.46
22	2,719	3.82	2.1		102.94
23	3,306	4.19	1.9		104.30
24	3,656	6.11	2.5		104.75
25	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
Modified: 4/8/2015 12:43:35 PM

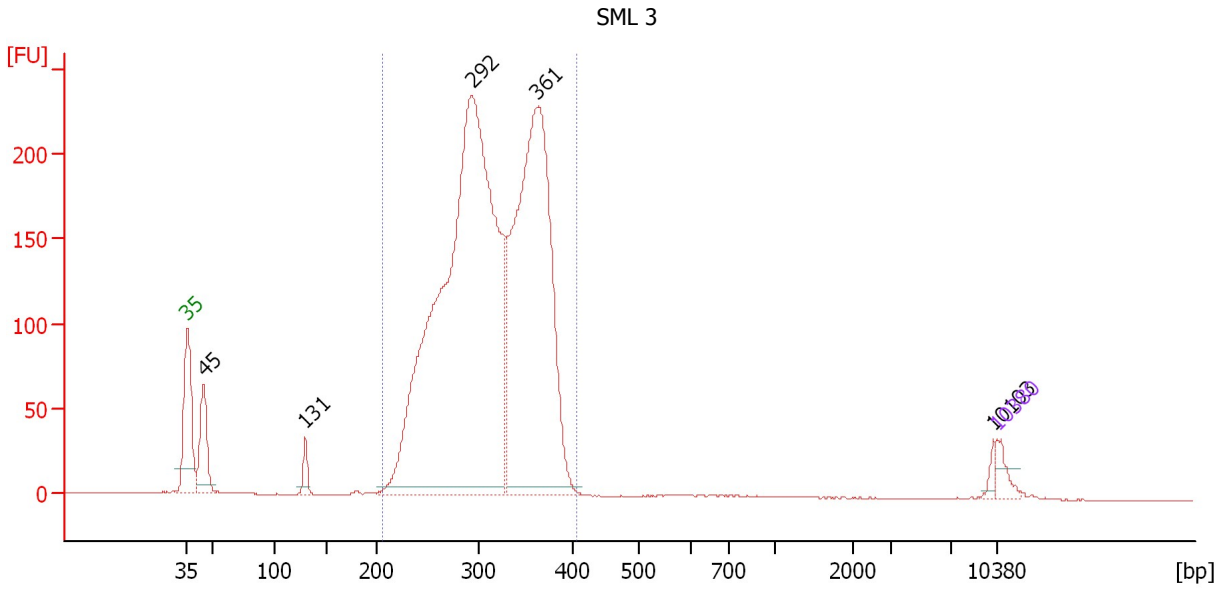
Electropherogram Summary Continued ...**... Region table for sample 2 : SML 2**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Co lor
184	315	423	7,971.6	71,363.3	94	17.0	14,206.50	■

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : SML 3

Number of peaks found: 5 Corr. Area 1: 3,280.0
 Noise: 0.1

Peak table for sample 3 : SML 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	45	495.69	16,766.1		44.43
3	131	114.07	1,324.4		53.23
4	292	6,925.84	35,898.6		67.61
5	361	3,830.08	16,067.9		73.18
6	10,103	37.47	5.6		112.68
7	10,380	75.00	10.9	Upper Marker	113.00

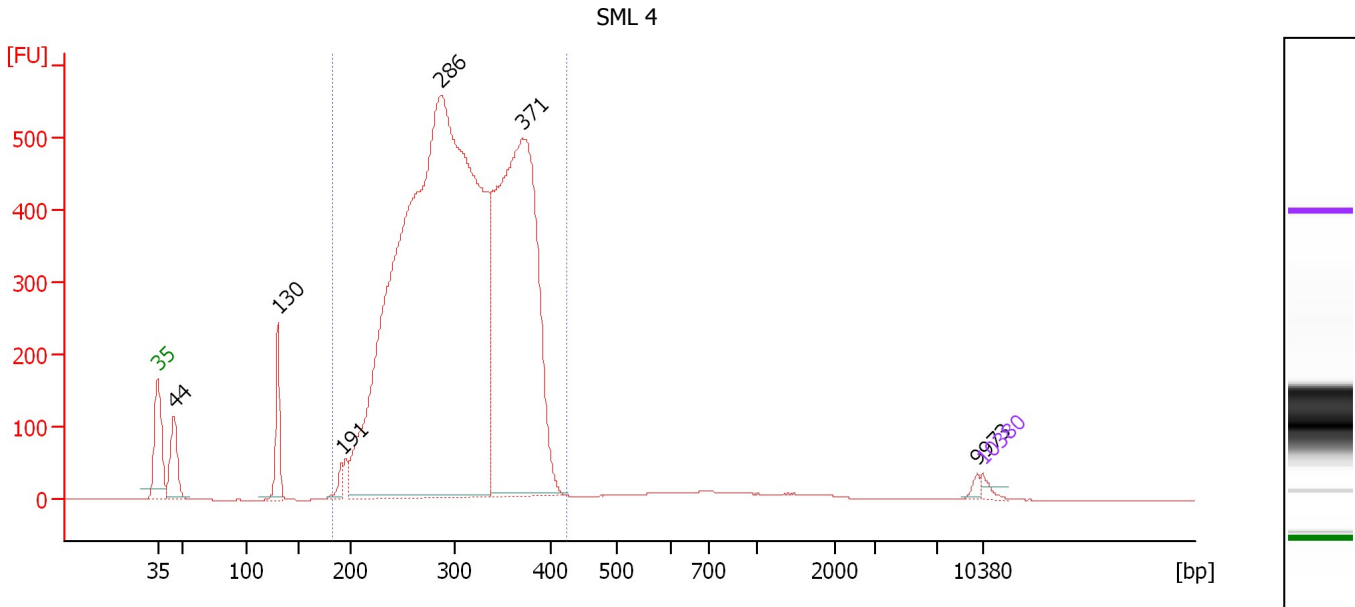
Region table for sample 3 : SML 3

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
204	313	408	3,280.0	54,802.8	94	13.9	11,029.71	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : SML 4

Number of peaks found: 6 Corr. Area 1: 9,842.0
 Noise: 0.2

Peak table for sample 4 : SML 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	44	1,025.79	34,975.6		44.38
3	130	915.55	10,654.0		53.20
4	191	187.84	1,493.0		58.61
5	286	26,541.76	140,551.2		67.06
6	371	10,280.27	42,026.1		73.94
7	9,973	60.13	9.1		112.53
8	10,380	75.00	10.9	Upper Marker	113.00

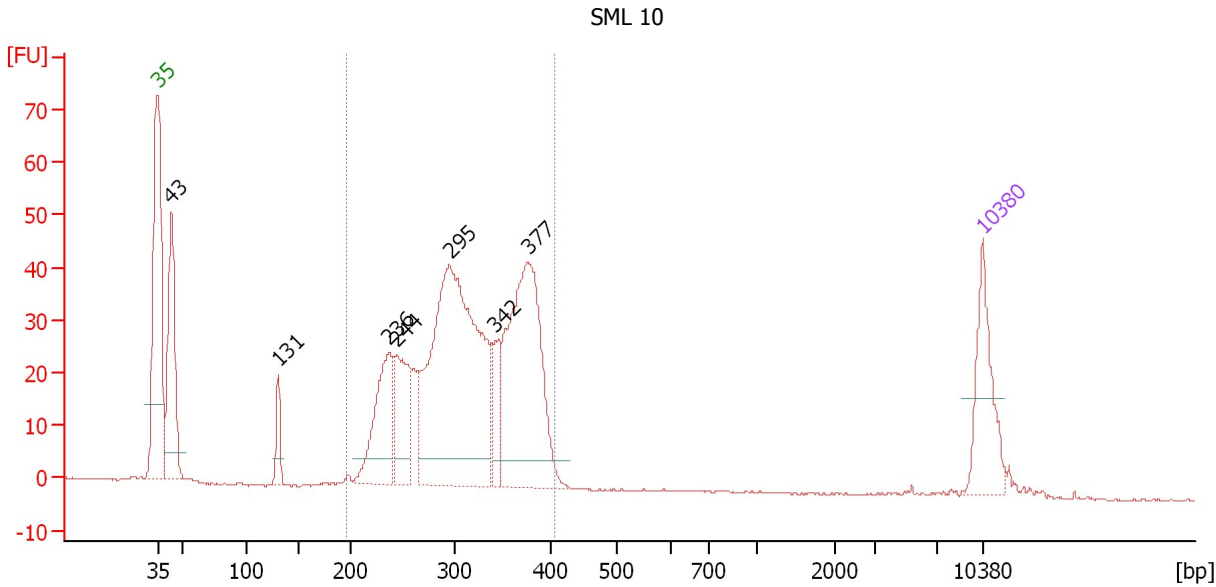
Region table for sample 4 : SML 4

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
183	306	425	9,842.0	196,437.7	93	16.6	38,253.89	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : SML 10

Number of peaks found: 7 Corr. Area 1: 670.2
 Noise: 0.1

Peak table for sample 5 : SML 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	43	206.99	7,292.5		44.17
3	131	37.22	430.9		53.26
4	236	144.09	924.1		62.65
5	244	114.66	712.1		63.33
6	295	554.72	2,853.1		67.81
7	342	54.71	242.4		71.65
8	377	328.78	1,320.4		74.47
9	10,380	75.00	10.9	Upper Marker	113.00

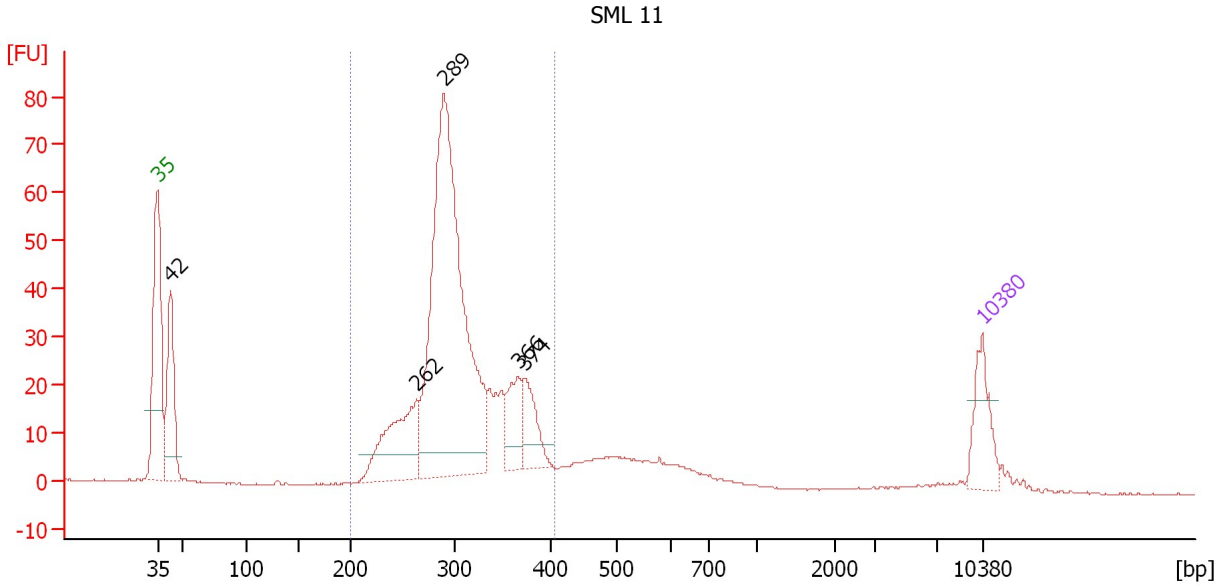
Region table for sample 5 : SML 10

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
195	313	407	670.2	6,252.6	86	16.3	1,246.43	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : SML 11

Number of peaks found: 5 Corr. Area 1: 600.8
 Noise: 0.1

Peak table for sample 6 : SML 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	42	236.57	8,444.5		44.09
3	262	217.83	1,257.7		64.97
4	289	1,011.50	5,308.7		67.29
5	366	90.60	374.6		73.61
6	374	85.59	346.9		74.20
7	10,380	75.00	10.9	Upper Marker	113.00

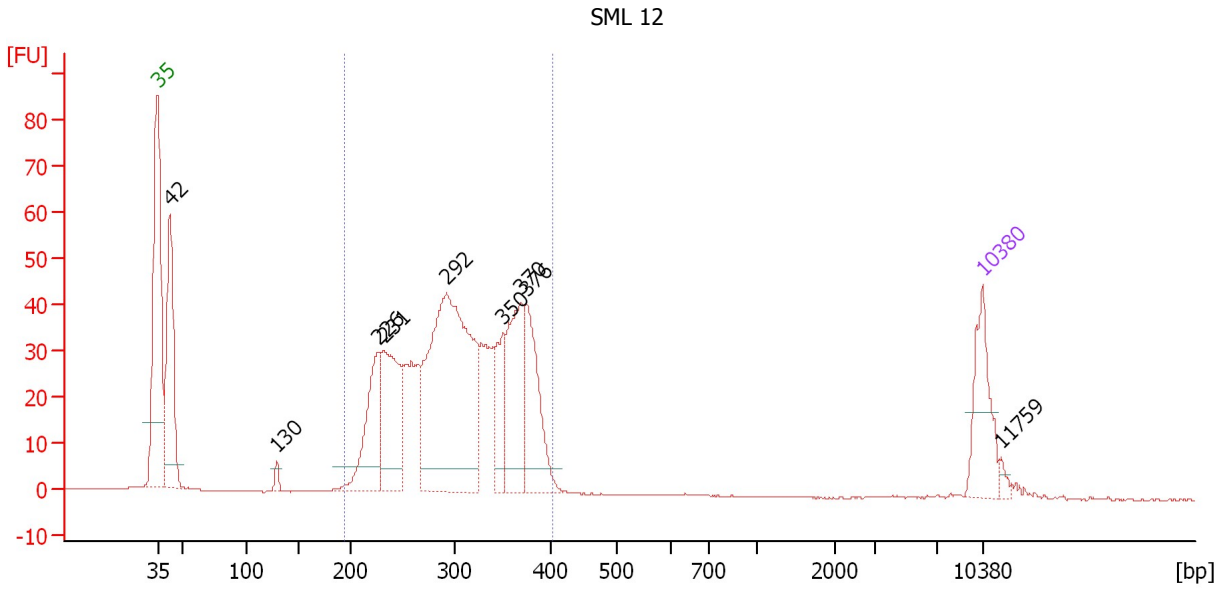
Region table for sample 6 : SML 11

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	305	408	600.8	8,369.1	76	13.4	1,652.76	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : SML 12

Number of peaks found: 9 Corr. Area 1: 750.8
 Noise: 0.1

Peak table for sample 7 : SML 12

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	42	243.95	8,752.5		44.05
3	130	12.29	143.7		53.14
4	226	142.01	950.5		61.78
5	231	182.20	1,195.5		62.18
6	292	529.72	2,751.3		67.56
7	350	81.48	352.3		72.33
8	370	154.12	631.3		73.88
9	376	135.41	546.4		74.33
10	10,380	75.00	10.9	Upper Marker	113.00
11	11,759	0.00	0.0		114.61

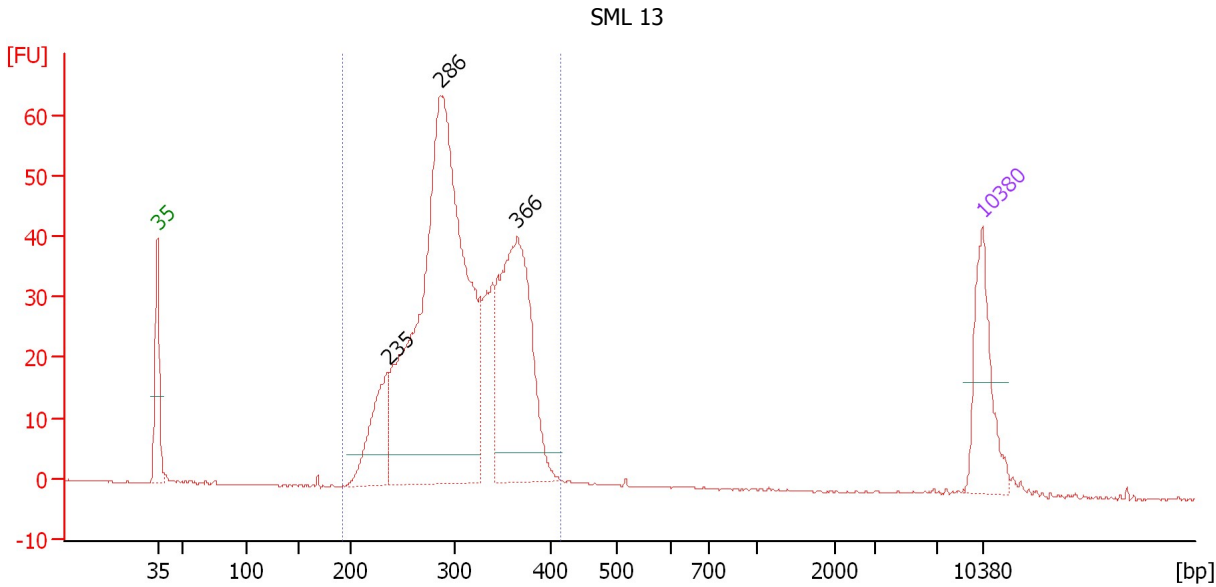
Region table for sample 7 : SML 12

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
193	304	403	750.8	7,677.1	87	17.0	1,484.34	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : SML 13

Number of peaks found: 3 Corr. Area 1: 722.9
 Noise: 0.1

Peak table for sample 8 : SML 13

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	104.89	676.0		62.55
3	286	815.51	4,327.5		67.01
4	366	308.72	1,279.3		73.54
5	10,380	75.00	10.9	Upper Marker	113.00

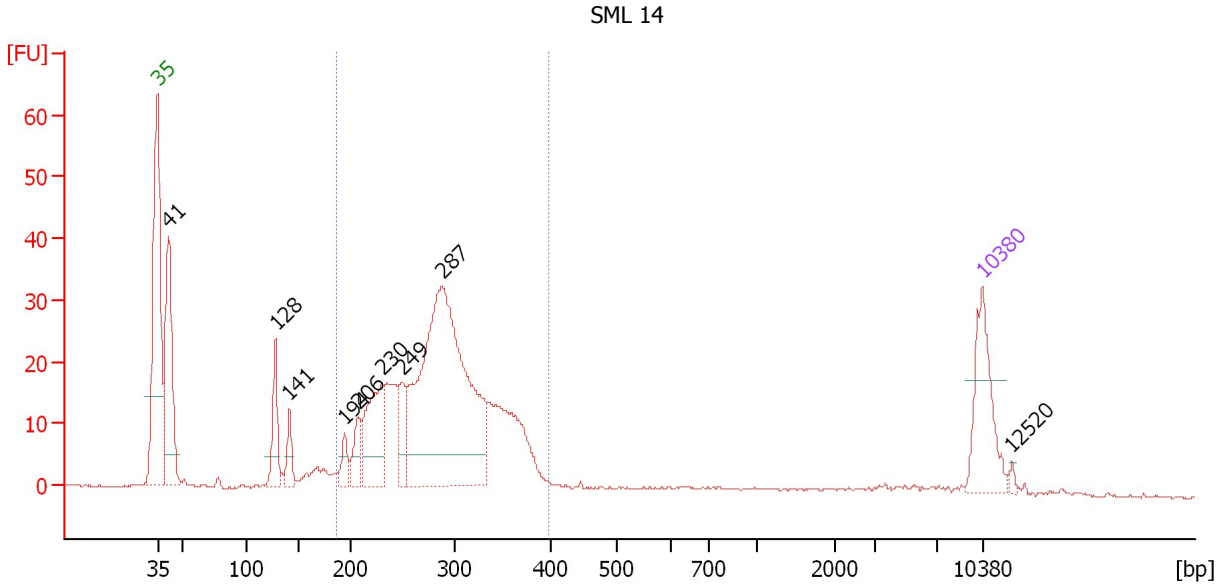
Region table for sample 8 : SML 13

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
192	307	415	722.9	6,853.3	97	14.8	1,352.36	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : SML 14

Number of peaks found: 9 Corr. Area 1: 413.4
 Noise: 0.2

Peak table for sample 9 : SML 14

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	214.92	7,888.6		43.92
3	128	69.09	816.6		53.02
4	141	33.16	355.9		54.19
5	194	24.92	195.1		58.87
6	206	39.07	287.2		59.99
7	230	123.04	811.5		62.08
8	249	46.11	280.9		63.76
9	287	562.95	2,969.0		67.16
10	10,380	75.00	10.9	Upper Marker	113.00
11	12,520	0.00	0.0		115.49

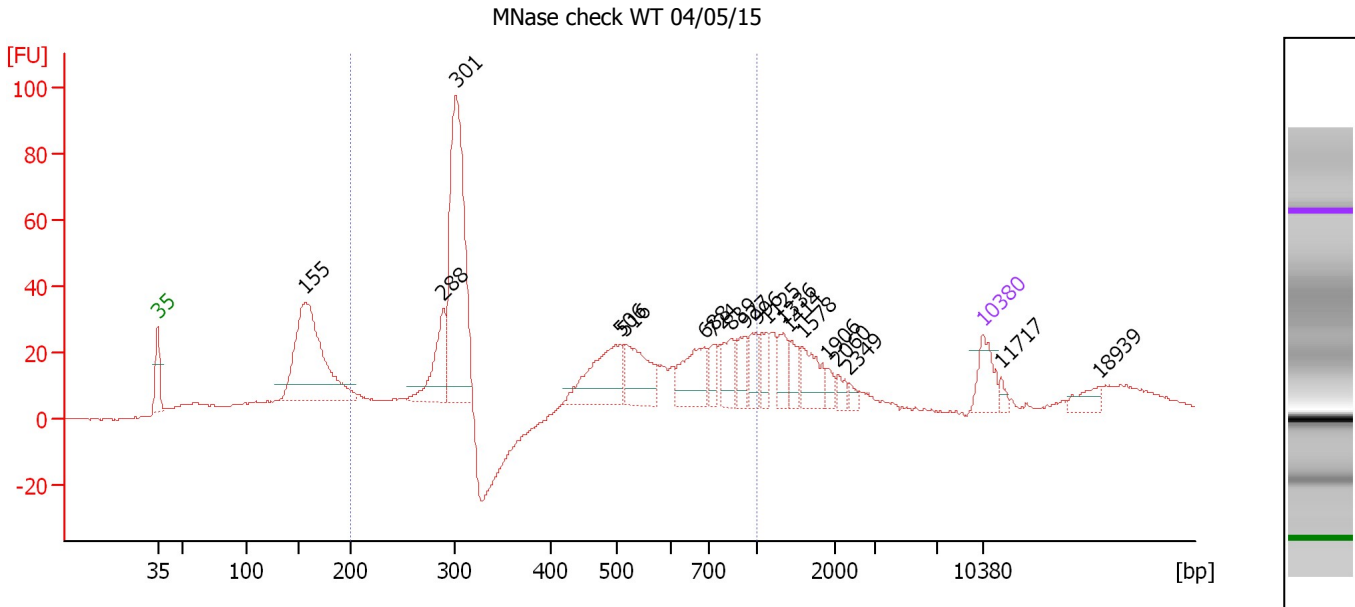
Region table for sample 9 : SML 14

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
187	285	398	413.4	5,854.1	73	16.7	1,067.94	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : MNase check WT 04/05/15

Number of peaks found: 19 Corr. Area 1: 693.9
 Noise: 0.1

Peak table for sample 10 : MNase check WT 04/05/15

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	155	720.77	7,030.8		55.46
3	288	189.61	996.6		67.25
4	301	759.76	3,828.6		68.34
5	506	244.24	731.3		82.26
6	516	182.23	534.9		82.73
7	688	154.51	340.5		89.37
8	724	53.00	110.9		90.10
9	839	87.96	158.8		91.66
10	927	67.37	110.1		92.85
11	996	57.86	88.0		93.79
12	1,125	53.37	71.9		94.67
13	1,336	62.96	71.4		96.07
14	1,414	52.47	56.2		96.59
15	1,578	89.56	86.0		97.68
16	1,906	24.47	19.5		99.86
17	2,060	23.14	17.0		100.69
18	2,349	15.09	9.7		101.68
19	10,380	75.00	10.9	Upper Marker	113.00
20	11,717	0.00	0.0		114.56
21	18,939	0.00	0.0		122.97

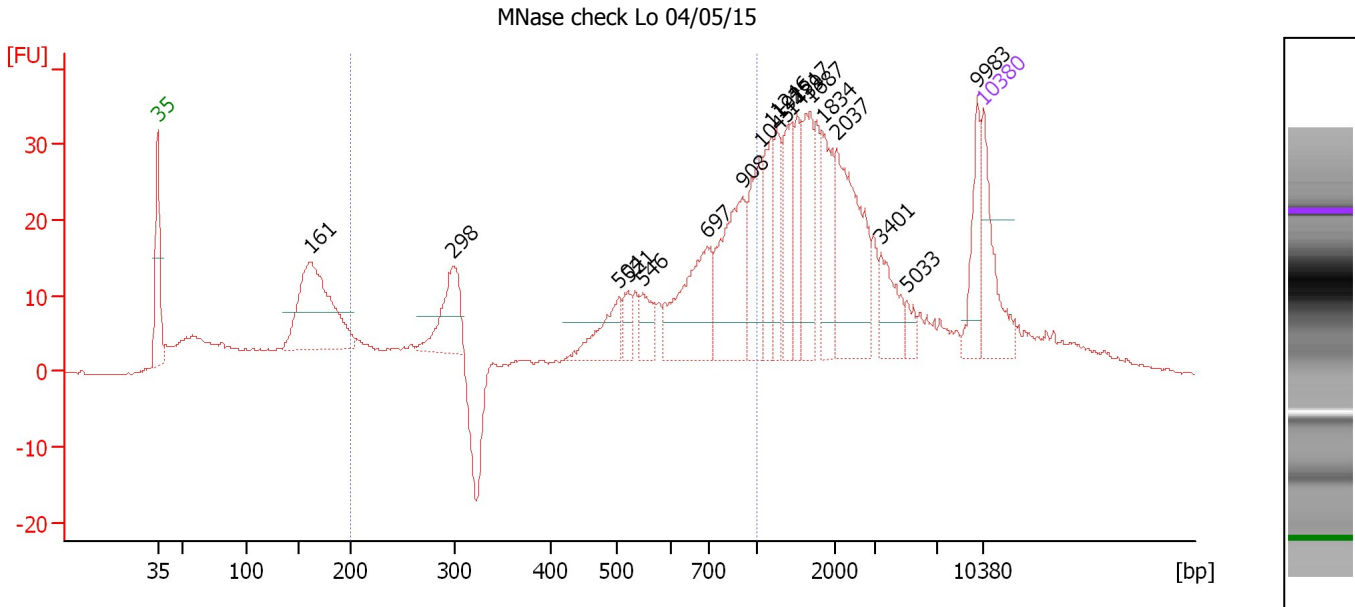
Region table for sample 10 : MNase check WT 04/05/15

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	496	1,000	693.9	10,137.5	53	43.4	2,540.50	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : MNase check Lo 04/05/15

Number of peaks found: 18 Corr. Area 1: 314.5
 Noise: 0.2

Peak table for sample 11 : MNase check Lo 04/05/15

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	161	266.41	2,510.2		55.95
3	298	102.54	521.9		68.08
4	504	61.80	185.8		82.16
5	521	26.07	75.9		82.93
6	546	34.53	95.7		84.12
7	697	144.47	314.1		89.67
8	908	141.35	235.7		92.60
9	1,045	84.91	123.1		94.14
10	1,192	58.13	73.9		95.11
11	1,246	49.50	60.2		95.47
12	1,439	67.40	71.0		96.76
13	1,517	49.78	49.7		97.27
14	1,687	78.34	70.4		98.40
15	1,834	71.06	58.7		99.38
16	2,037	143.14	106.5		100.61
17	3,401	47.49	21.2		104.42
18	5,033	12.78	3.8		106.52
19	9,983	52.49	8.0		112.54
20	10,380	75.00	10.9	Upper Marker	113.00

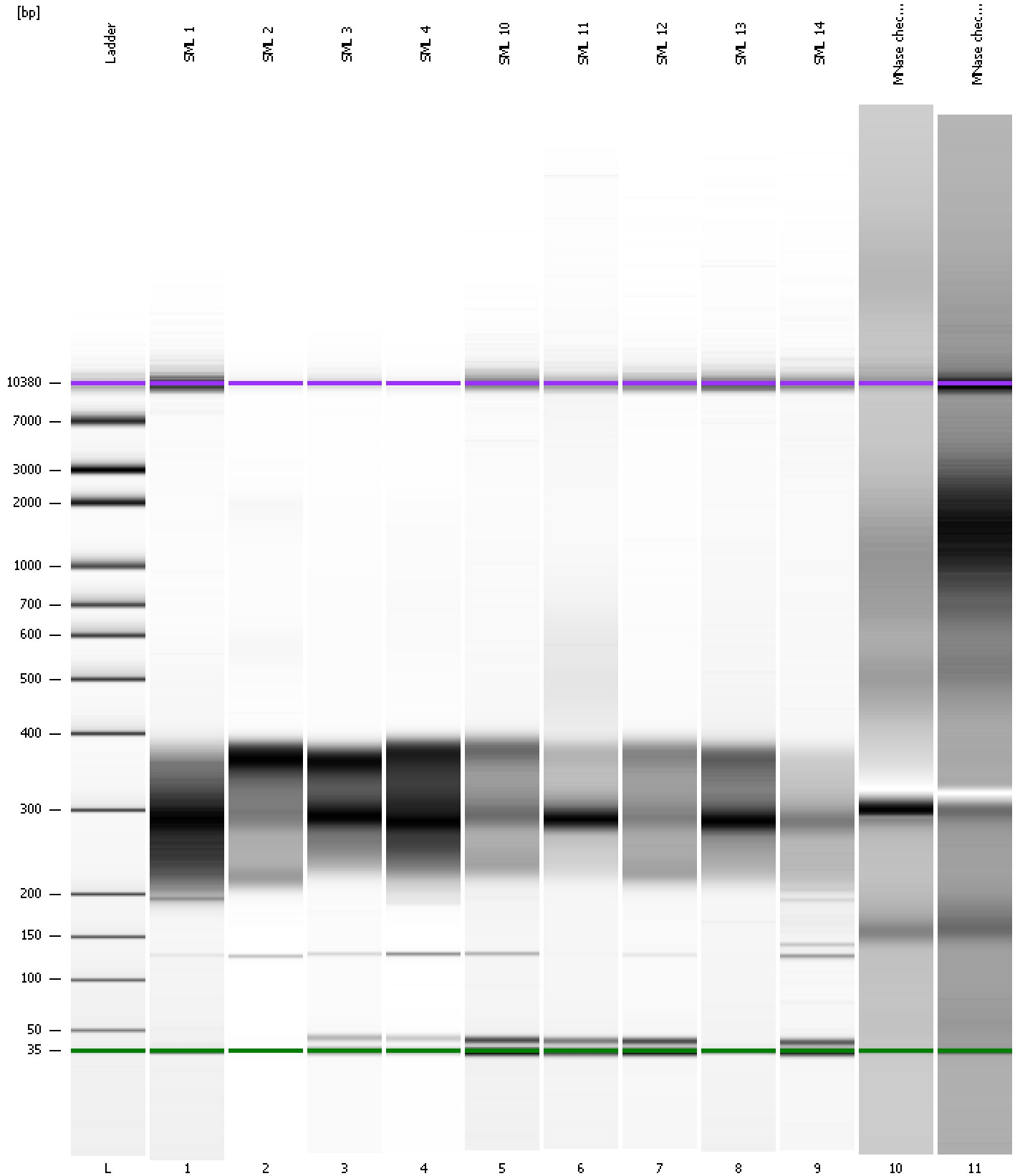
Region table for sample 11 : MNase check Lo 04/05/15

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Color
200	599	1,000	314.5	3,112.6	34	38.1	917.15	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
Modified: 4/8/2015 12:43:35 PM

Gel Image

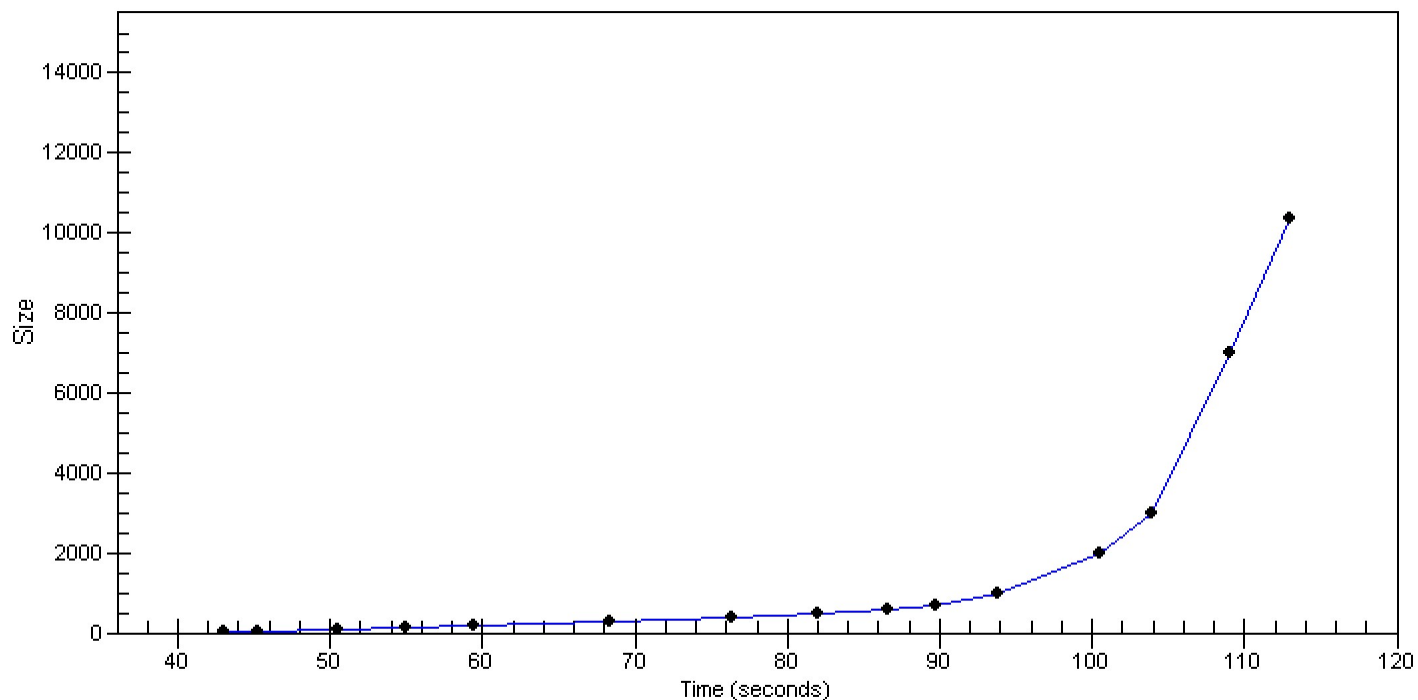


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
Modified: 4/8/2015 12:43:35 PM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad

Created: 4/8/2015 11:43:24 AM
 Modified: 4/8/2015 12:43:35 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		4/8/2015 12:24:41 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2015-04-08\2015-04-08_001.xad)		Instrument	Run		4/8/2015 11:43:29 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		4/8/2015 11:43:29 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		4/8/2015 11:43:29 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		4/8/2015 11:43:29 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		4/8/2015 11:43:29 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		4/8/2015 11:43:29 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		4/8/2015 11:43:29 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1