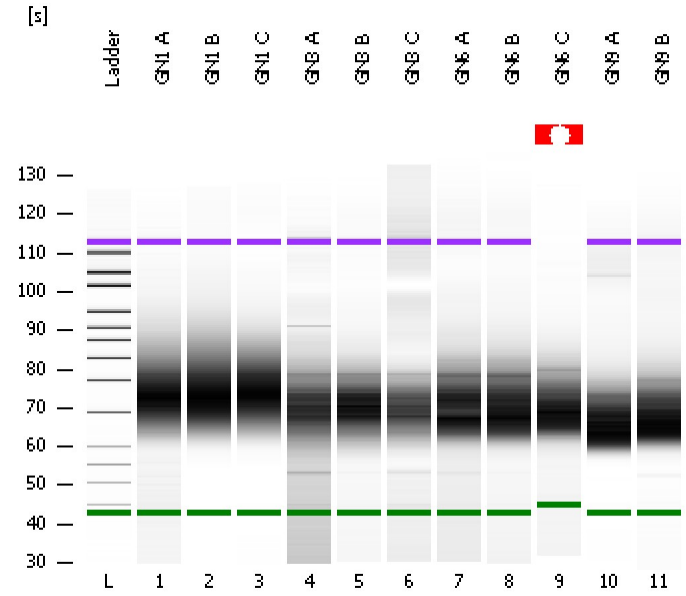
Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Electrophoresis File Run Summary



Instrument Information:

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

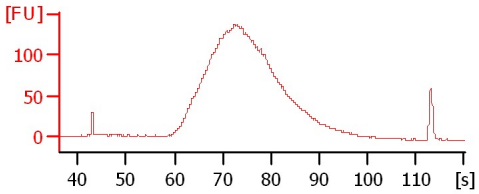
Assay Information:

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

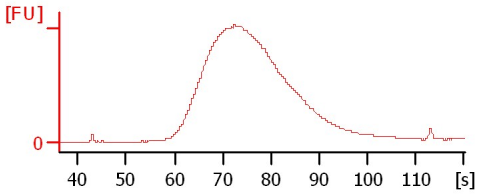
Chip Information:

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

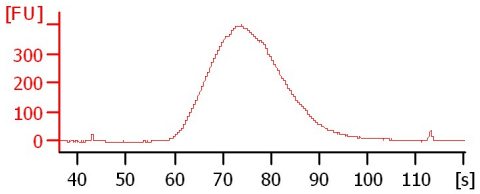
GN1 A



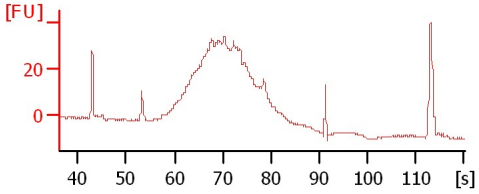
GN1 B



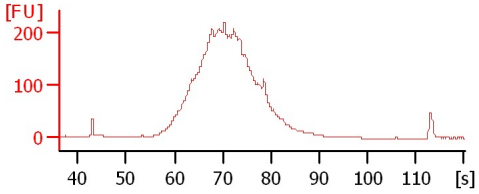
GN1 C



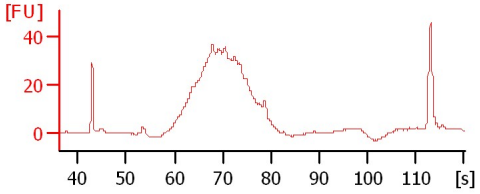
GN3 A



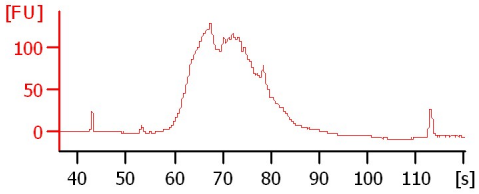
GN3 B



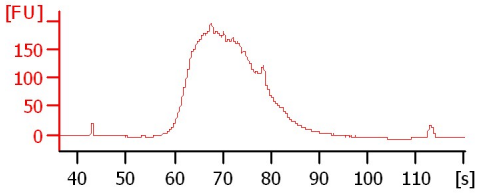
GN3 C



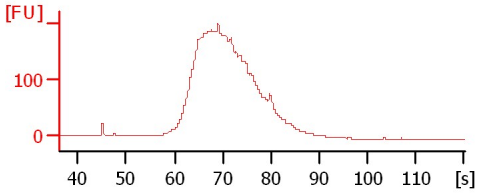
GN6 A



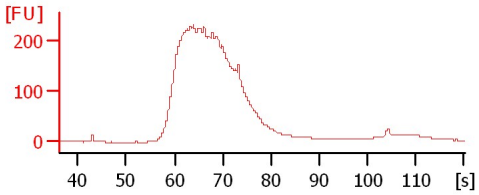
GN6 B



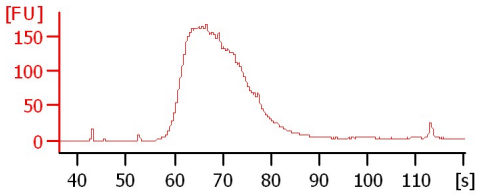
GN6 C



GN9 A



GN9 B



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
GN1 A		☐	✔			
GN1 B		☐	✔			
GN1 C		☐	✔			
GN3 A		☐	✔			
GN3 B		☐	✔			
GN3 C		☐	✔			
GN6 A		☐	✔			
GN6 B		☐	✔			
GN6 C		☐	✔			
GN9 A		☐	✔			
GN9 B		☐	✔			
Ladder		☐	✔			

Chip Lot #

Reagent Kit Lot #

Chip Comments :

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 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

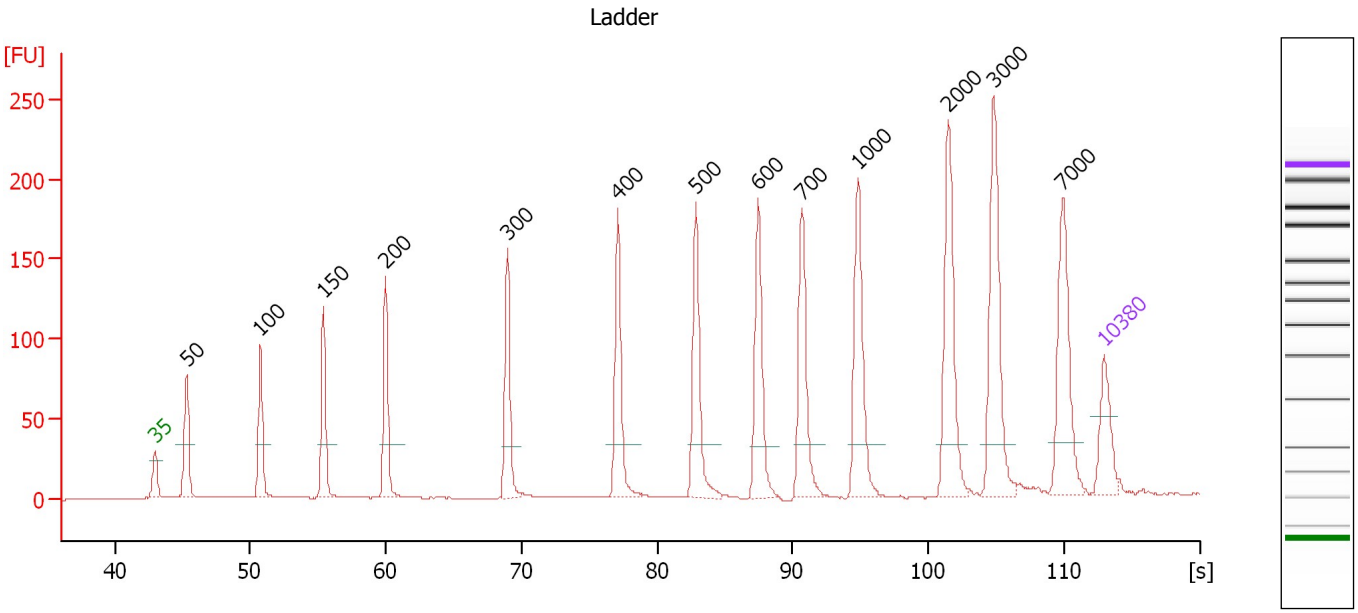
Ladder

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\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

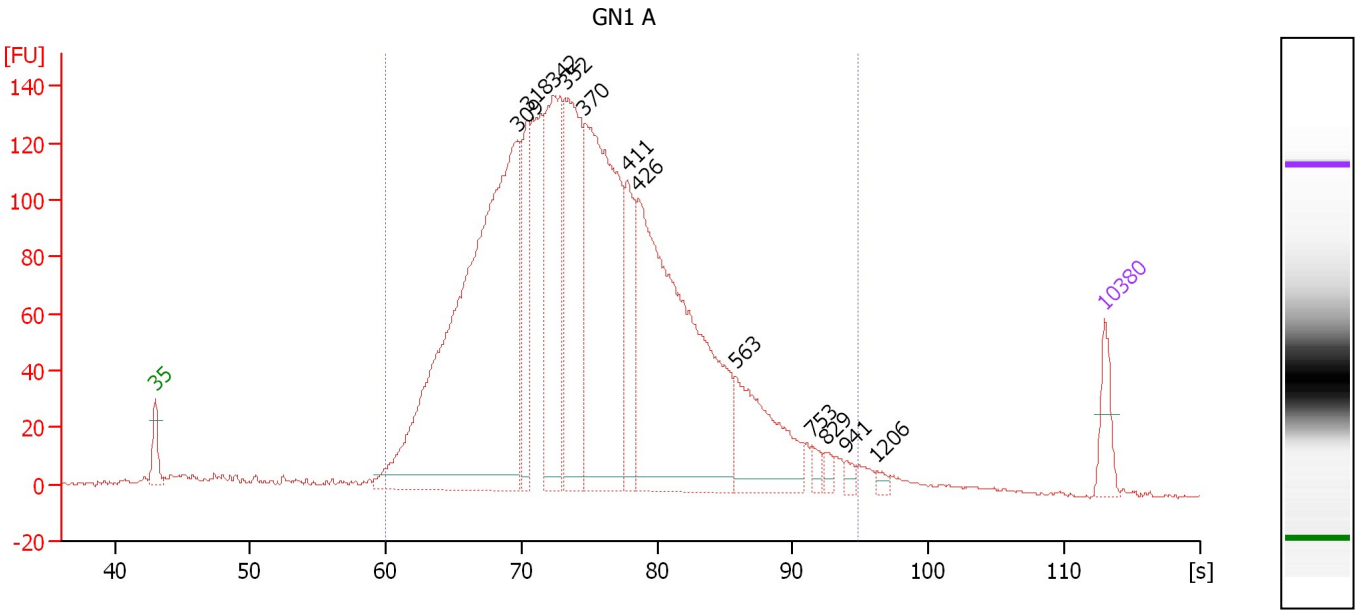
Peak table for Ladder

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	45.31
3		100	150.00	2,272.7	Ladder Peak	50.75
4		150	150.00	1,515.2	Ladder Peak	55.42
5		200	150.00	1,136.4	Ladder Peak	60.00
6		300	150.00	757.6	Ladder Peak	68.98
7		400	150.00	568.2	Ladder Peak	77.14
8		500	150.00	454.5	Ladder Peak	82.90
9		600	150.00	378.8	Ladder Peak	87.48
10		700	150.00	324.7	Ladder Peak	90.69
11		1,000	150.00	227.3	Ladder Peak	94.82
12		2,000	150.00	113.6	Ladder Peak	101.48
13		3,000	150.00	75.8	Ladder Peak	104.84
14		7,000	150.00	32.5	Ladder Peak	109.92
15		10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : GN1 A

Number of peaks found:	12	Corr. Area 1:	3,258.2
Noise:	0.4		

Peak table for sample 1 : GN1 A

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	2,268.54	11,124.7		69.71
3	318	284.03	1,353.8		70.44
4	342	618.76	2,742.8		72.39
5	352	633.26	2,727.1		73.21
6	370	1,094.91	4,488.0		74.66
7	411	263.56	970.7		77.80
8	426	1,376.45	4,900.1		78.61
9	563	346.25	931.5		85.79
10	753	28.74	57.8		91.42
11	829	22.25	40.7		92.47
12	941	19.11	30.8		94.01
13	1,206	15.28	19.2		96.19
14	10,380	75.00	10.9	Upper Marker	113.00

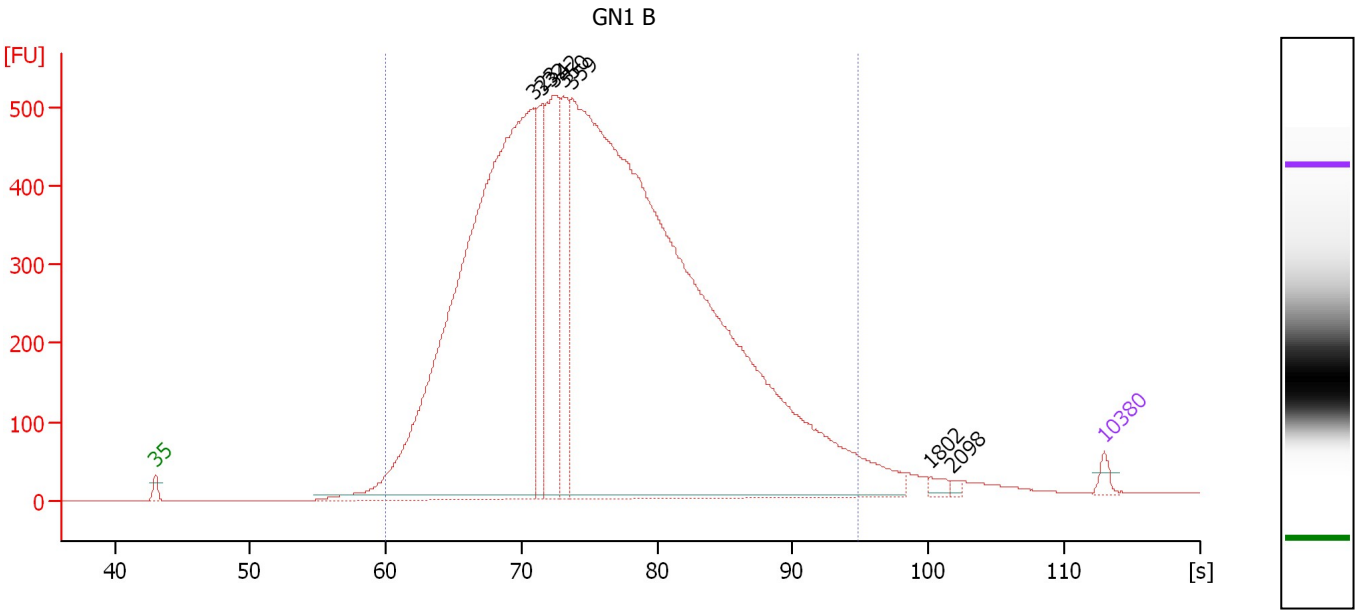
Region table for sample 1 : GN1 A

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	389	3,258.2	33,180.7	7,649.16	95	30.9

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : GN1 B

Number of peaks found:	7	Corr. Area 1:	13,214.4
Noise:	0.3		

Peak table for sample 2 : GN1 B

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	323	12,135.30	56,889.0		70.87
3	332	1,130.05	5,162.9		71.56
4	342	2,326.85	10,299.4		72.43
5	350	1,189.47	5,146.7		73.07
6	359	20,032.37	84,641.7		73.76
7	1,802	65.97	55.5		100.16
8	2,098	29.75	21.5		101.81
9	10,380	75.00	10.9	Upper Marker	113.00

Region table for sample 2 : GN1 B

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	399	13,214.4	149,223.8	34,837.84	97	32.4

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
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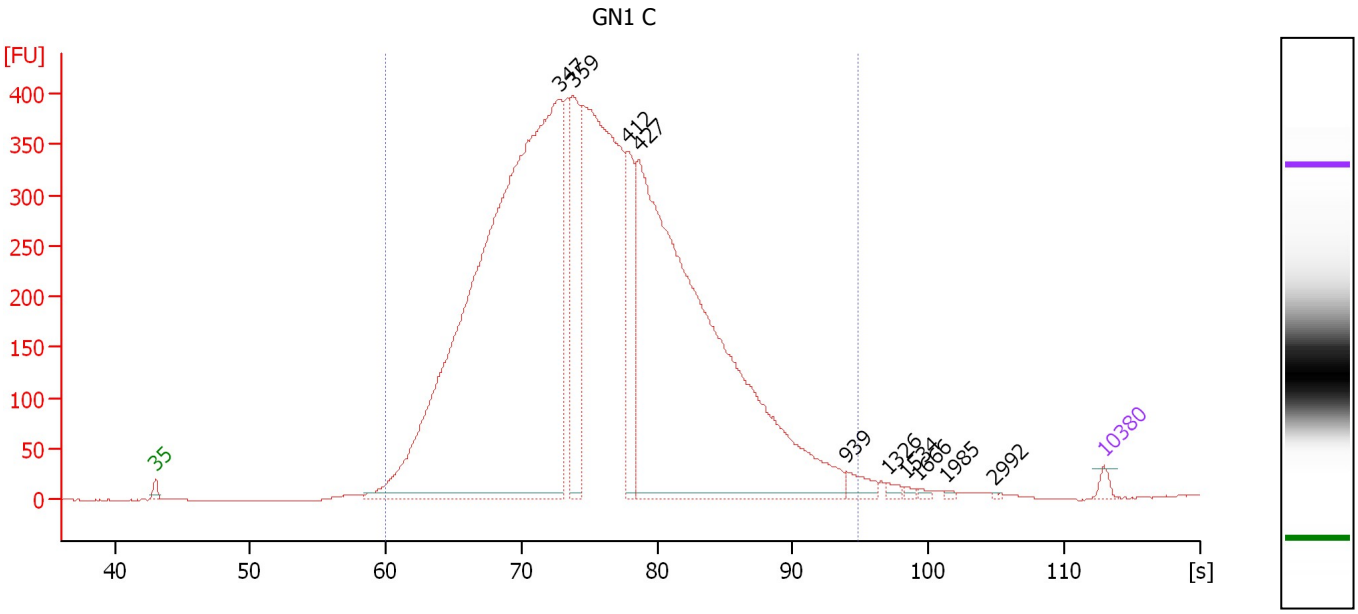
Electropherogram Summary Continued ...



Overall Results for sample 3 : GN1 C

Number of peaks found:	10	Corr. Area 1:	9,374.1
Noise:	0.5		

Peak table for sample 3 : GN1 C

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	347	19,013.11	83,073.2		72.80
3	359	2,387.71	10,070.3		73.81
4	412	1,395.57	5,130.4		77.84
5	427	12,938.68	45,952.9		78.67
6	939	216.43	349.1		93.98
7	1,326	66.84	76.4		96.99
8	1,534	33.46	33.0		98.38
9	1,666	31.91	29.0		99.26
10	1,985	19.07	14.6		101.39
11	2,992	11.66	5.9		104.81
12	10,380	75.00	10.9	Upper Marker	113.00

Region table for sample 3 : GN1 C

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	395	9,374.1	193,129.4	45,498.45	98	29.2

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

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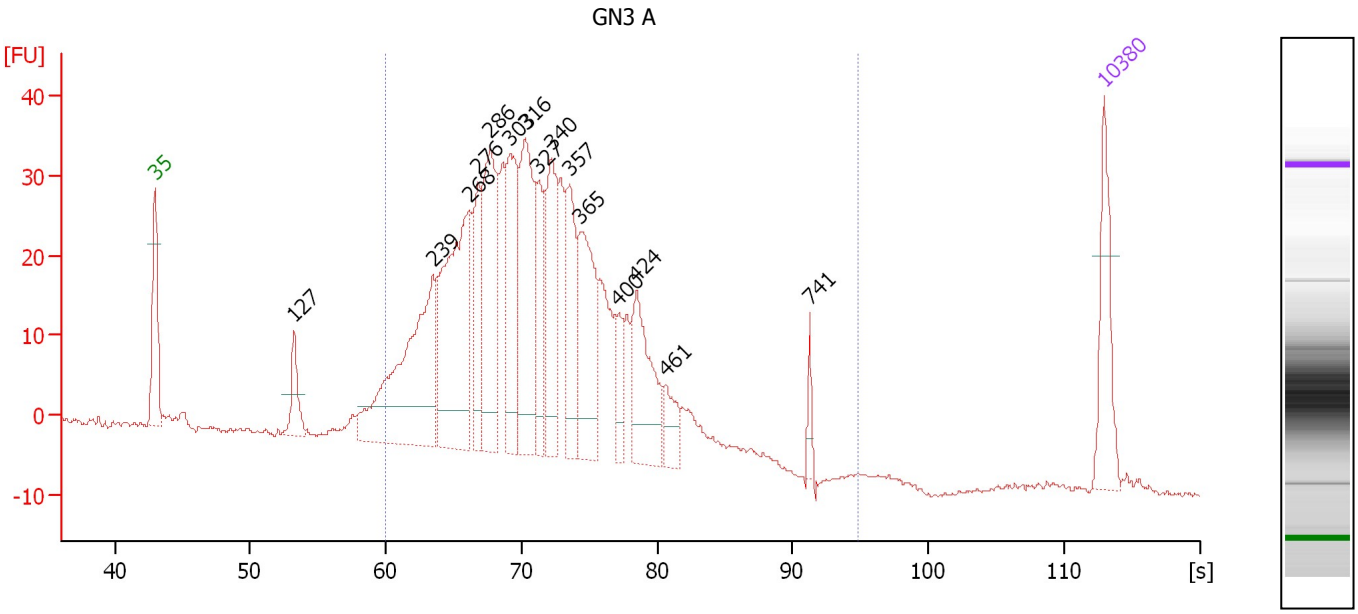

Overall Results for sample 4 : GN3 A

Number of peaks found:	15	Corr. Area 1:	758.2
Noise:	0.3		

Peak table for sample 4 : GN3 A

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	54.46	650.4		53.26
3	239	336.28	2,134.5		63.48
4	268	318.24	1,796.2		66.15
5	276	97.84	536.5		66.85
6	286	205.16	1,088.1		67.69
7	303	161.62	809.2		69.19
8	316	204.76	980.6		70.32
9	327	98.22	454.7		71.21
10	340	142.52	635.2		72.24
11	357	117.20	498.0		73.60
12	365	165.05	684.8		74.30
13	400	41.96	159.1		77.11
14	424	129.01	461.1		78.52
15	461	39.63	130.1		80.67
16	741	18.34	37.5		91.26
17	10,380	75.00	10.9	Upper Marker	113.00

Region table for sample 4 : GN3 A

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	333	758.2	11,763.3	2,411.73	93	25.0

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

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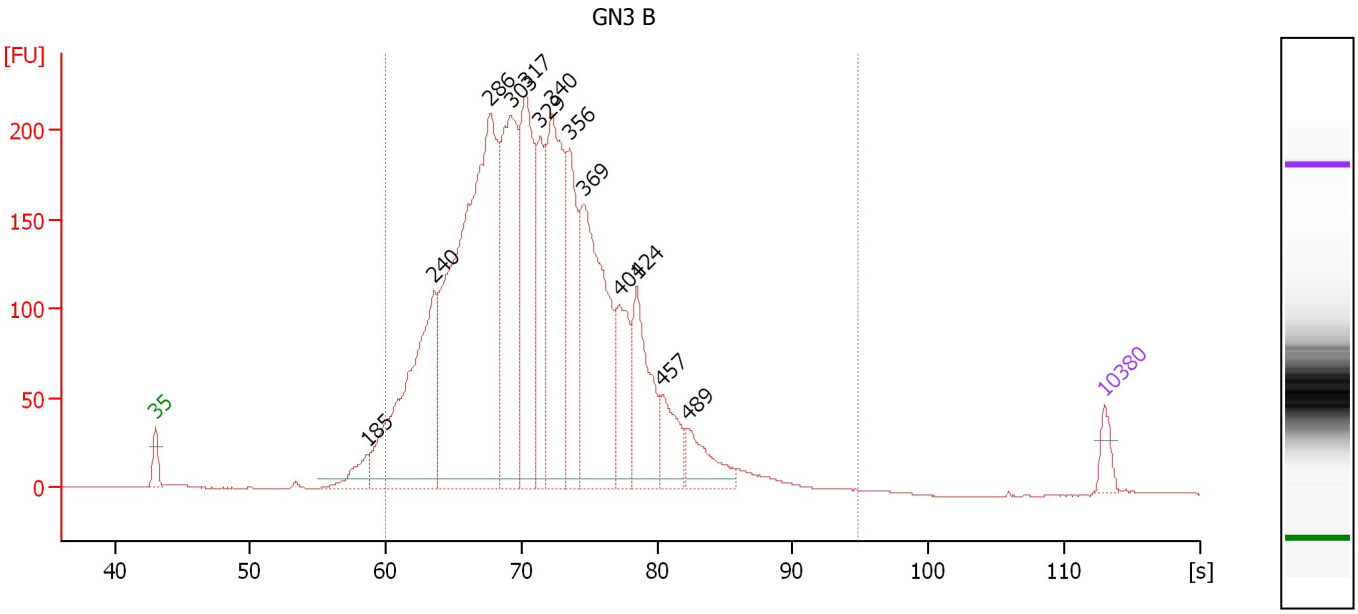

Overall Results for sample 5 : GN3 B

Number of peaks found:	13	Corr. Area 1:	4,295.5
Noise:	0.2		

Peak table for sample 5 : GN3 B

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	185	167.08	1,368.2		58.63
3	240	1,633.93	10,333.1		63.55
4	286	3,511.46	18,601.8		67.72
5	303	1,343.22	6,712.6		69.24
6	317	1,144.41	5,477.9		70.33
7	329	522.15	2,402.4		71.37
8	340	1,235.72	5,510.8		72.22
9	356	683.77	2,910.2		73.55
10	369	1,385.14	5,691.1		74.59
11	401	435.42	1,645.3		77.19
12	424	602.83	2,154.2		78.52
13	457	274.57	910.5		80.42
14	489	259.25	803.3		82.26
15	10,380	75.00	10.9	Upper Marker	113.00

Region table for sample 5 : GN3 B

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color	Conc. [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	336	4,295.5	65,345.8		13,510.79	96	25.3

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

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Modified: 5/10/2016 5:05:03 PM

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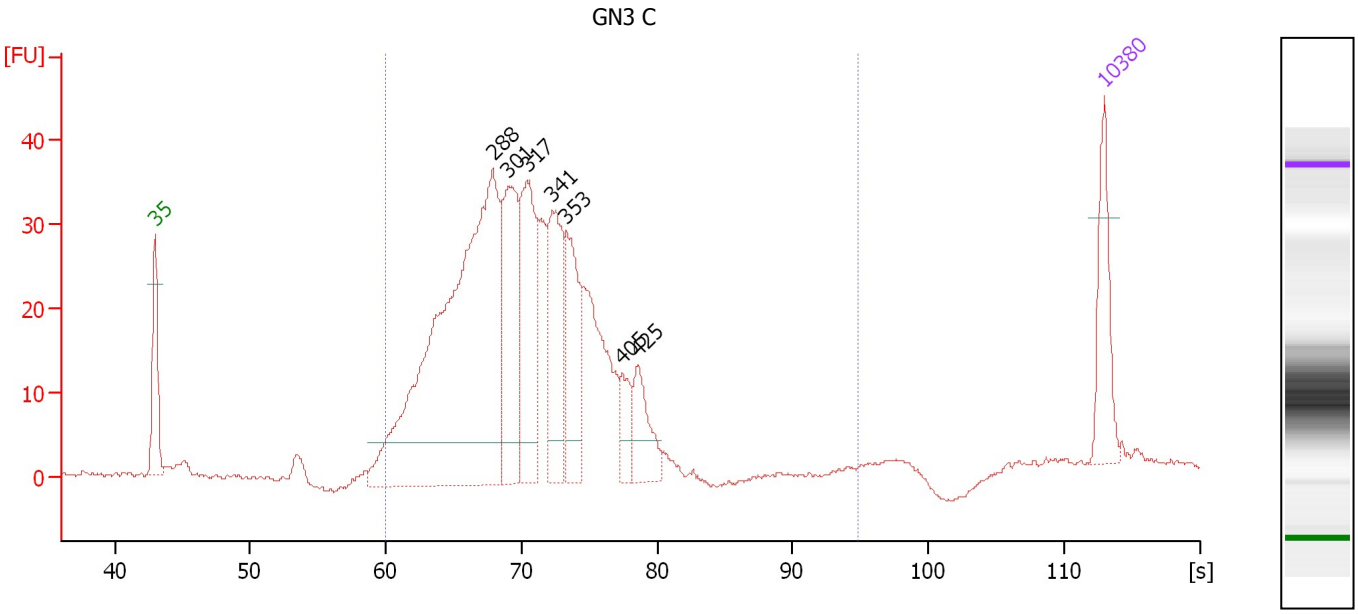


Overall Results for sample 6 : GN3 C

Number of peaks found:	7	Corr. Area 1:	599.9
Noise:	0.2		

Peak table for sample 6 : GN3 C

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	288	919.88	4,840.9		67.89
3	301	213.53	1,075.3		69.05
4	317	218.24	1,041.6		70.40
5	341	174.61	777.0		72.28
6	353	141.46	607.3		73.30
7	405	45.65	170.6		77.45
8	425	71.32	254.0		78.60
9	10,380	75.00	10.9	Upper Marker	113.00

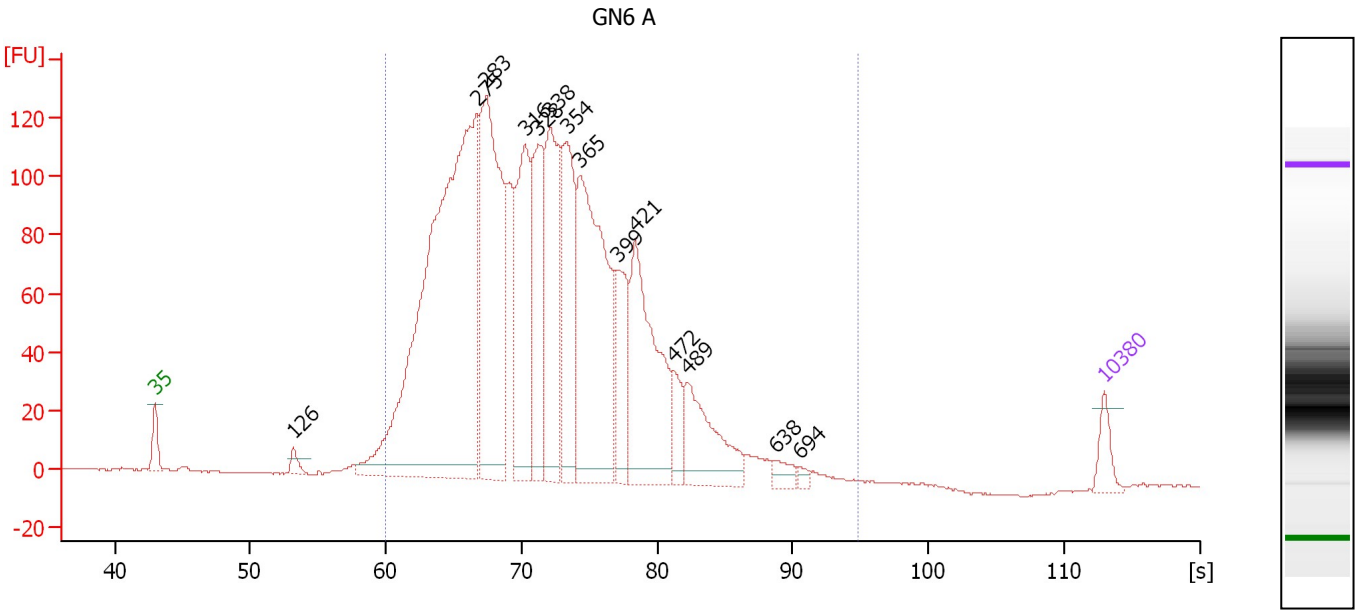
Region table for sample 6 : GN3 C

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	316	599.9	10,069.2	2,013.77	95	19.3

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : GN6 A

Number of peaks found:	14	Corr. Area 1:	2,783.8
Noise:	0.2		

Peak table for sample 7 : GN6 A

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	126	51.81	622.5		53.19
3	275	3,261.91	17,963.4		66.75
4	283	1,400.03	7,499.7		67.44
5	316	750.05	3,599.9		70.26
6	328	577.97	2,671.4		71.25
7	338	767.08	3,437.4		72.09
8	354	619.74	2,653.5		73.37
9	365	1,251.76	5,190.6		74.31
10	399	295.75	1,122.1		77.08
11	421	817.96	2,941.0		78.37
12	472	135.40	434.5		81.29
13	489	412.38	1,277.0		82.28
14	638	57.89	137.4		88.71
15	694	22.39	48.9		90.49
16	10,380	75.00	10.9	Upper Marker	113.00

Region table for sample 7 : GN6 A

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	343	2,783.8	52,910.8	10,986.20	96	28.0

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

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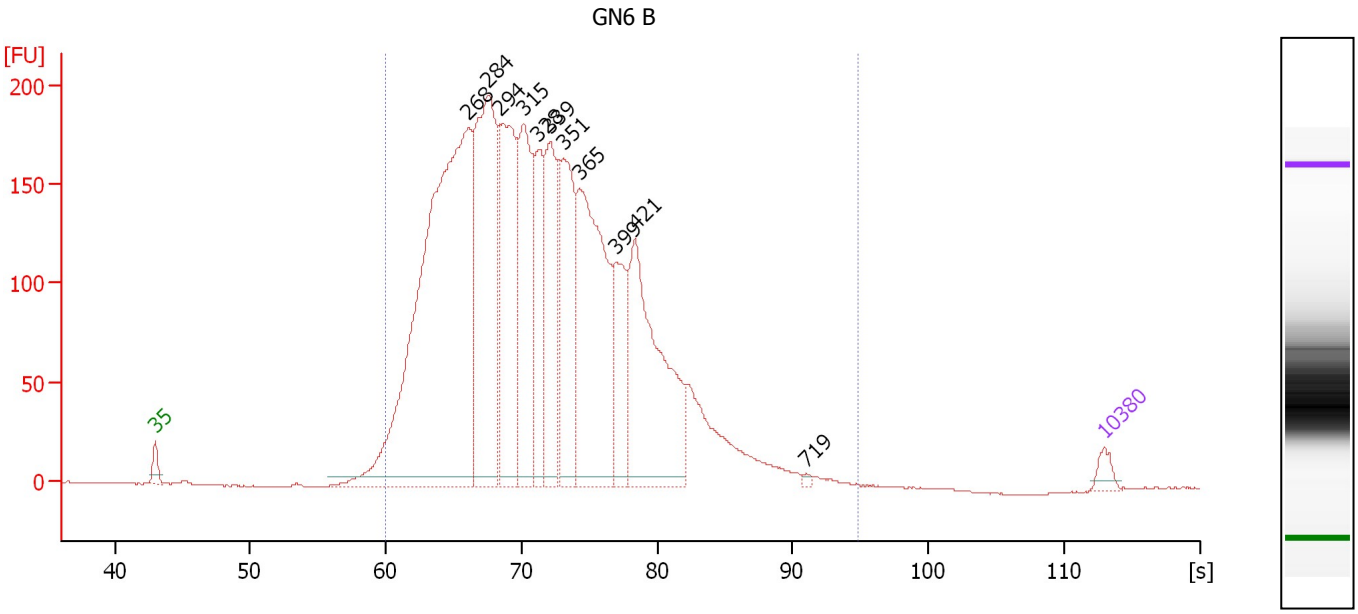
Modified: 5/10/2016 5:05:03 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : GN6 B

Number of peaks found:	11	Corr. Area 1:	4,327.9
Noise:	0.4		

Peak table for sample 8 : GN6 B

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	268	6,430.75	36,388.1		66.08
3	284	2,805.68	14,976.8		67.53
4	294	1,802.88	9,297.1		68.42
5	315	1,538.57	7,411.4		70.16
6	328	951.80	4,397.4		71.26
7	339	1,110.54	4,964.7		72.15
8	351	1,283.92	5,550.1		73.10
9	365	2,357.55	9,799.1		74.24
10	399	704.43	2,677.2		77.03
11	421	1,986.98	7,143.5		78.37
12	719	19.01	40.0		90.96
13	10,380	75.00	10.9	Upper Marker	113.00

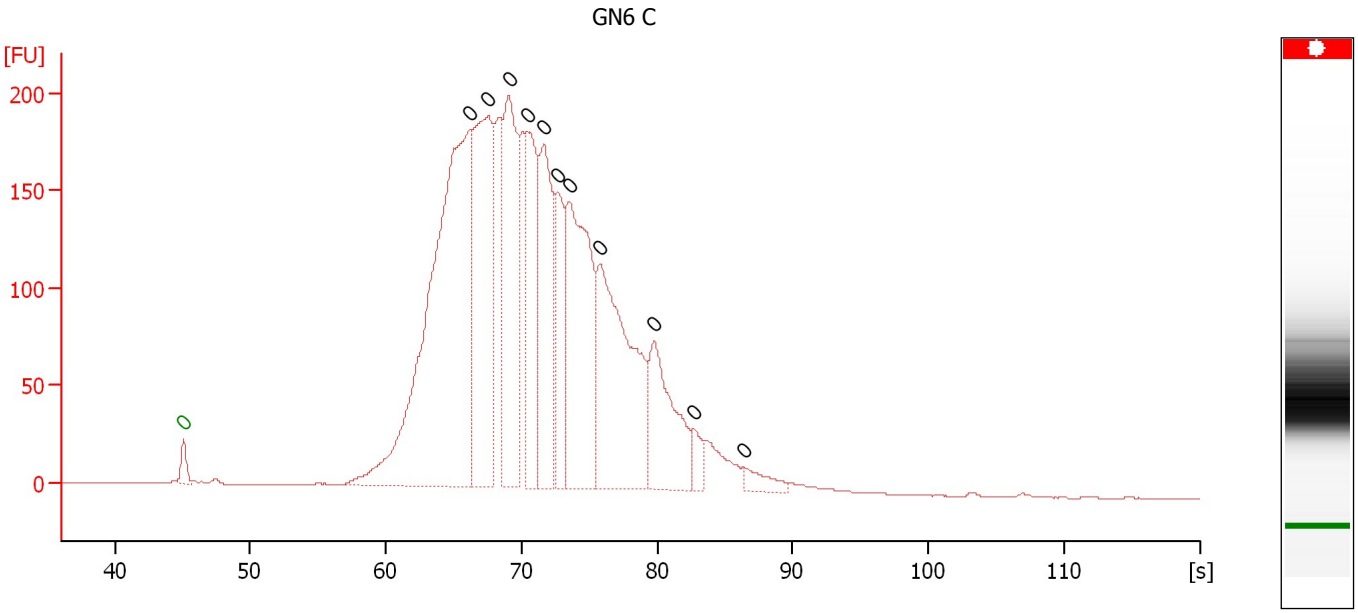
Region table for sample 8 : GN6 B

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	341	4,327.9	109,188.9	22,536.40	98	28.2

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : GN6 C

Number of peaks found: 11 Noise: 0.2

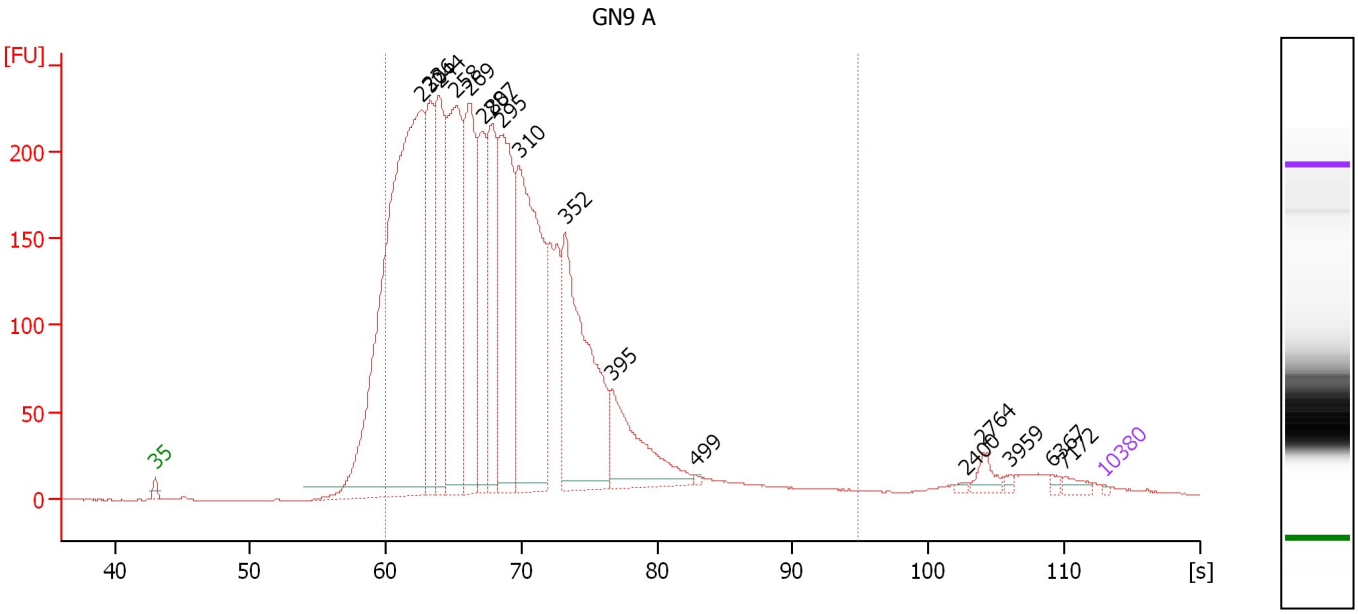
Peak table for sample 9 : GN6 C

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	0	0.00	0.0	Lower Marker	45.10
2	0	0.00	0.0		66.25
3	0	0.00	0.0		67.55
4	0	0.00	0.0		69.10
5	0	0.00	0.0		70.45
6	0	0.00	0.0		71.65
7	0	0.00	0.0		72.70
8	0	0.00	0.0		73.55
9	0	0.00	0.0		75.80
10	0	0.00	0.0		79.75
11	0	0.00	0.0		82.70
12	0	0.00	0.0		86.45

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : GN9 A

Number of peaks found:	17	Corr. Area 1:	4,939.1
Noise:	0.2		

Peak table for sample 10 : GN9 A

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	230	59,533.26	393,012.6		62.65
3	236	12,031.55	77,138.1		63.26
4	244	13,991.69	86,844.9		63.96
5	258	20,185.08	118,665.2		65.18
6	269	15,998.85	90,141.8		66.19
7	280	9,893.06	53,513.6		67.19
8	287	11,034.97	58,174.9		67.85
9	295	16,629.92	85,359.1		68.55
10	310	24,774.76	121,001.7		69.81
11	352	18,919.36	81,321.9		73.26
12	395	7,799.06	29,933.2		76.71
13	499	139.34	423.3		82.83
14	2,400	153.28	96.8		102.83
15	2,764	869.29	476.5		104.05
16	3,959	207.22	79.3		106.06
17	6,367	250.56	59.6		109.11
18	7,172	515.12	108.8		110.07
19	10,380	75.00	10.9	Upper Marker	113.00

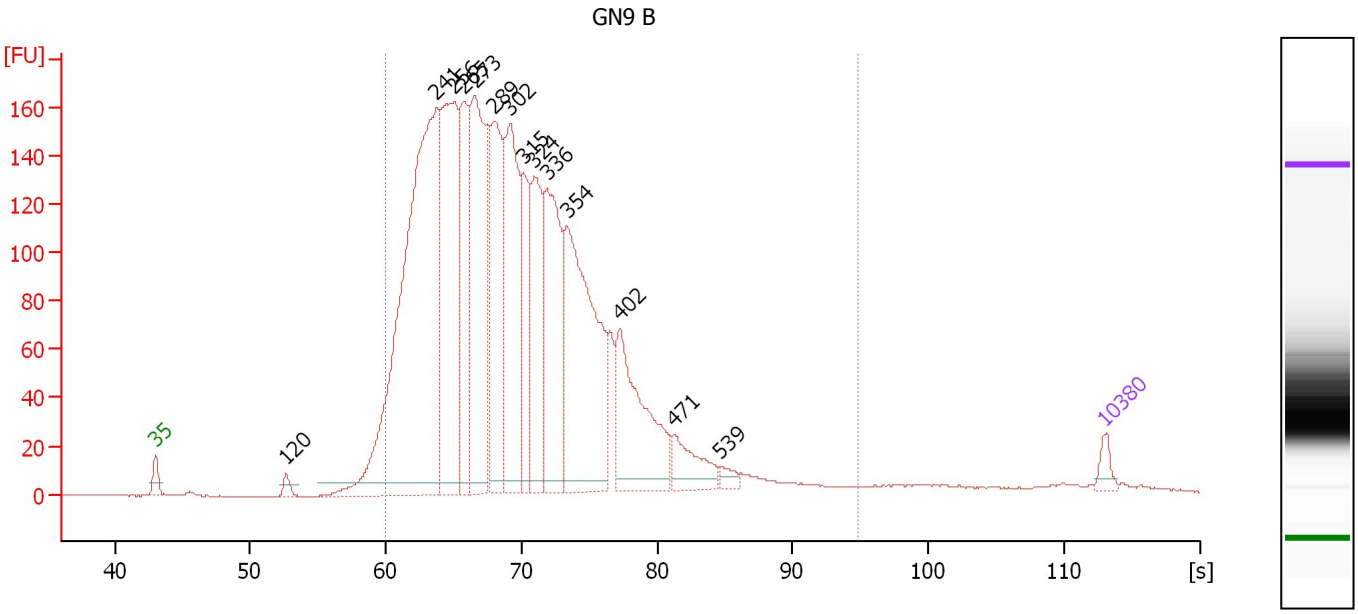
Region table for sample 10 : GN9 A

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	299	4,939.1	1,168,719.8	215,135.58	91	28.5

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : GN9 B

Number of peaks found:	14	Corr. Area 1:	3,365.3
Noise:	0.2		

Peak table for sample 11 : GN9 B

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	120	79.35	1,000.3		52.64
3	241	5,019.95	31,509.0		63.72
4	256	2,150.36	12,710.5		65.06
5	265	1,056.56	6,049.3		65.80
6	273	1,959.77	10,857.2		66.60
7	289	1,335.25	7,000.7		67.99
8	302	1,540.60	7,716.6		69.18
9	315	704.10	3,390.2		70.18
10	324	988.07	4,614.7		70.97
11	336	1,372.14	6,187.9		71.91
12	354	2,184.71	9,360.4		73.35
13	402	1,105.94	4,163.7		77.28
14	471	336.38	1,081.0		81.25
15	539	70.61	198.5		84.68
16	10,380	75.00	10.9	Upper Marker	113.00

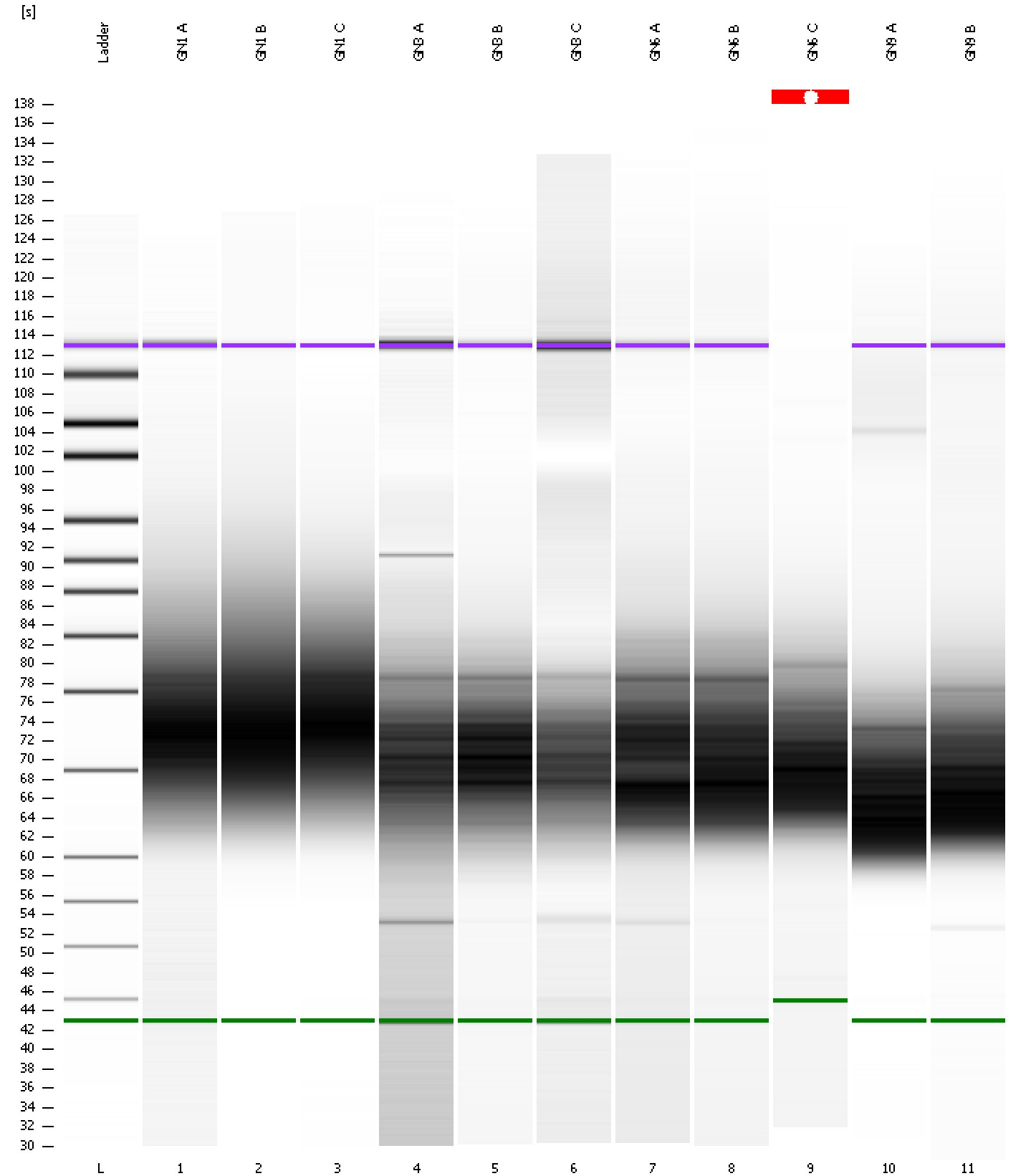
Region table for sample 11 : GN9 B

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Color [pg/µl]	% of Total	Size distribution in CV [%]
200	1,000	317	3,365.3	108,100.1	20,860.02	94	29.6

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-10\2016-05-10_003.xad

Created: 5/10/2016 4:24:39 PM
Modified: 5/10/2016 5:05:03 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		5/10/2016 5:05:02 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\2016-05-10\2016-05-10_003.xad)		Instrument	Run		5/10/2016 4:24:39 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		5/10/2016 4:24:39 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/10/2016 4:24:39 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/10/2016 4:24:39 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		5/10/2016 4:24:39 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/10/2016 4:24:39 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/10/2016 4:24:39 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1