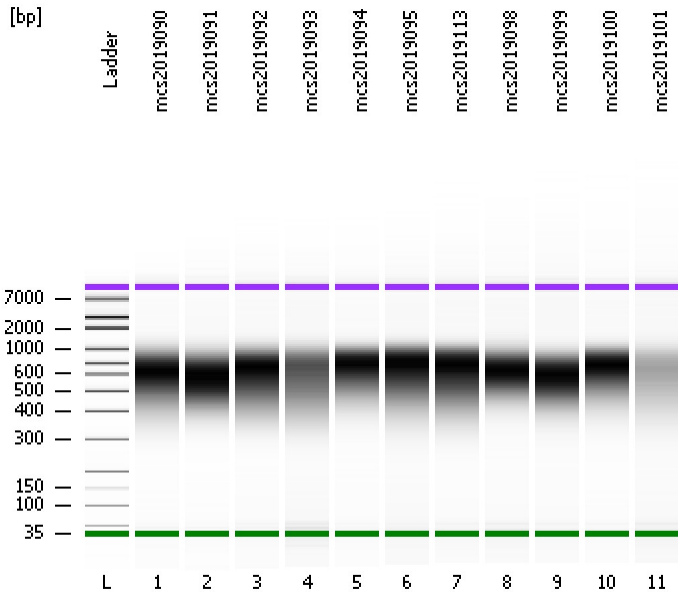


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
Modified: 5/31/2019 3:02:40 PM

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

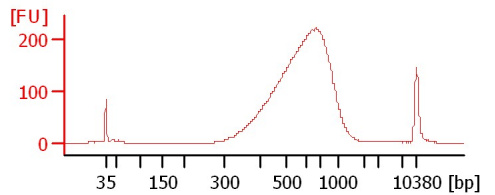
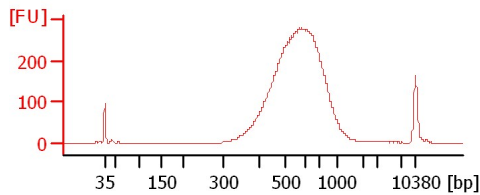
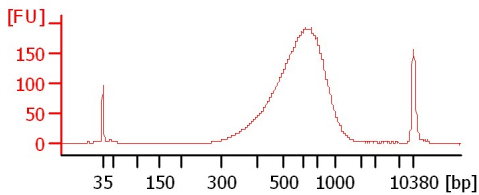
Chip Information:

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

mcs2019090

mcs2019091

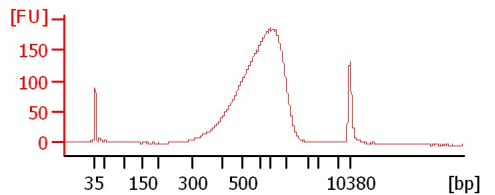
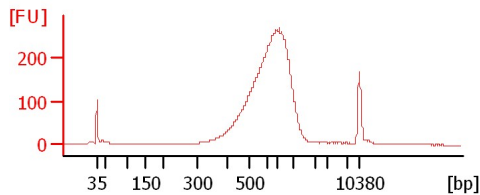
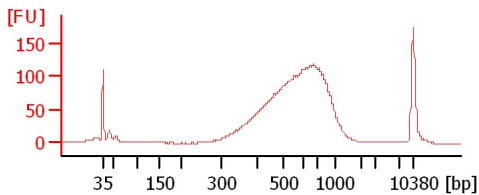
mcs2019092



mcs2019093

mcs2019094

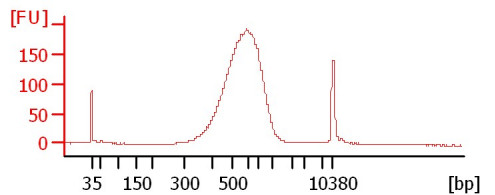
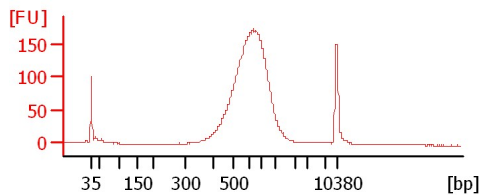
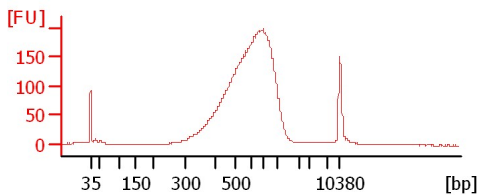
mcs2019095



mcs2019113

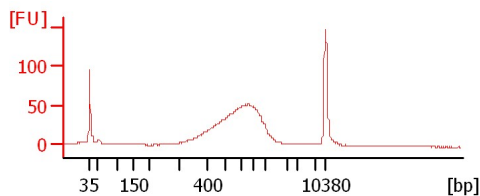
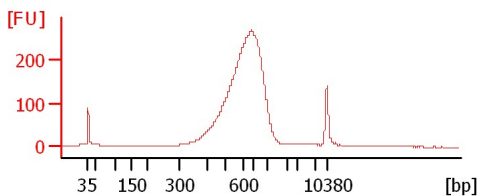
mcs2019098

mcs2019099



mcs2019100

mcs2019101



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
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mcs2019091		<input type="checkbox"/>	✓			
mcs2019092		<input type="checkbox"/>	✓			
mcs2019093		<input type="checkbox"/>	✓			
mcs2019094		<input type="checkbox"/>	✓			
mcs2019095		<input type="checkbox"/>	✓			
mcs2019113		<input type="checkbox"/>	✓			
mcs2019098		<input type="checkbox"/>	✓			
mcs2019099		<input type="checkbox"/>	✓			
mcs2019100		<input type="checkbox"/>	✓			
mcs2019101		<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\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
Modified: 5/31/2019 3:02:40 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

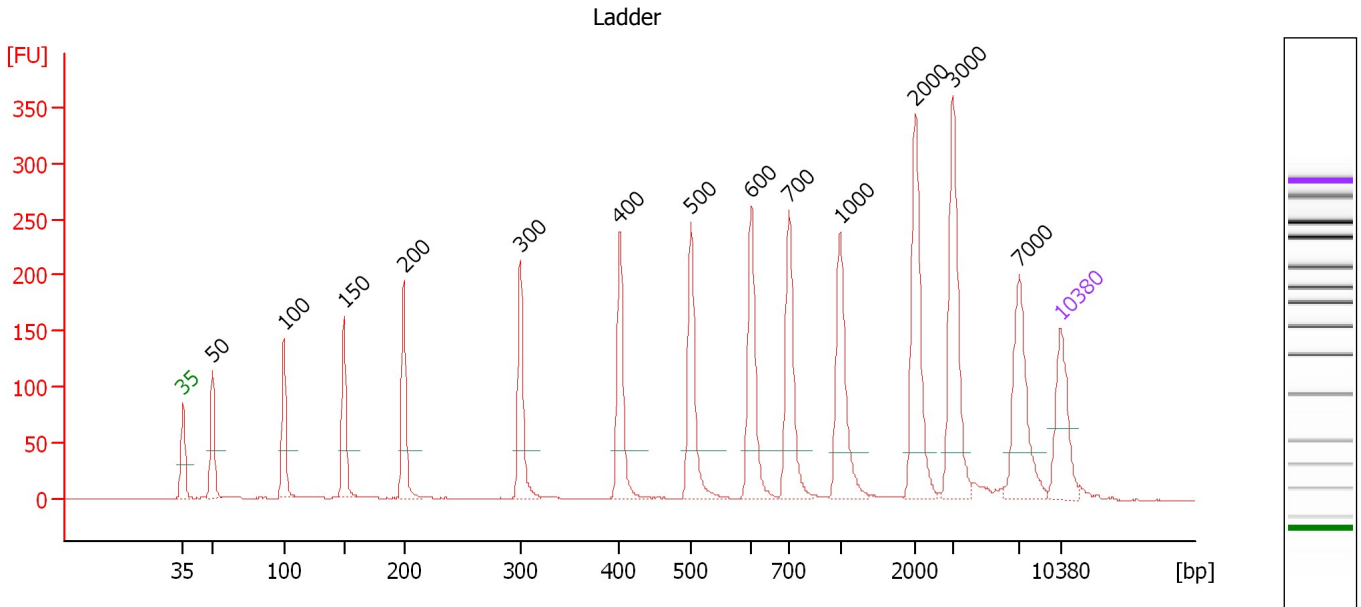
Ladder

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\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.3

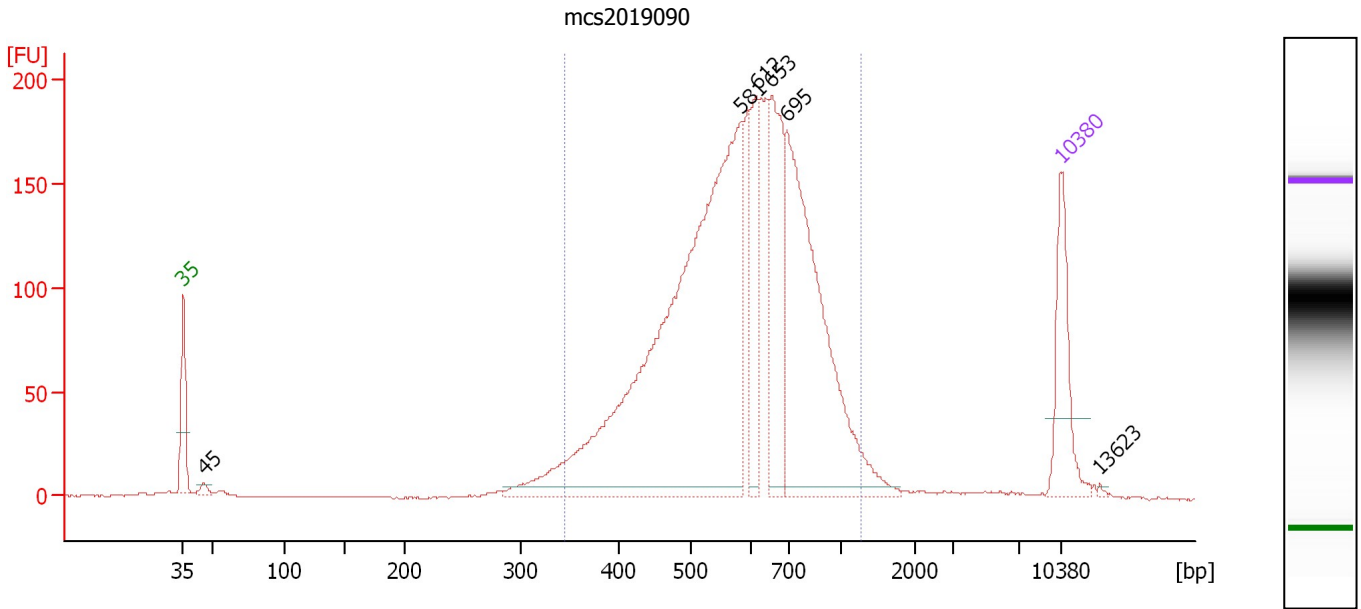
Peak table for Ladder

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	50	150.00	4,545.5	Ladder Peak	45.32
3	100	150.00	2,272.7	Ladder Peak	51.02
4	150	150.00	1,515.2	Ladder Peak	55.85
5	200	150.00	1,136.4	Ladder Peak	60.59
6	300	150.00	757.6	Ladder Peak	69.89
7	400	150.00	568.2	Ladder Peak	77.82
8	500	150.00	454.5	Ladder Peak	83.51
9	600	150.00	378.8	Ladder Peak	88.35
10	700	150.00	324.7	Ladder Peak	91.35
11	1,000	150.00	227.3	Ladder Peak	95.41
12	2,000	150.00	113.6	Ladder Peak	101.42
13	3,000	150.00	75.8	Ladder Peak	104.43
14	7,000	150.00	32.5	Ladder Peak	109.72
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : mcs2019090

Number of peaks found: 6 Corr. Area 1: 2,878.8
 Noise: 0.3

Peak table for sample 1 : mcs2019090

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	8.83	294.3		44.62
3	581	877.77	2,287.7		87.44
4	612	89.91	222.7		88.69
5	653	164.50	381.6		89.94
6	695	414.74	904.5		91.19
7	10,380	75.00	10.9	Upper Marker	113.00
8	13,623	0.00	0.0		116.15

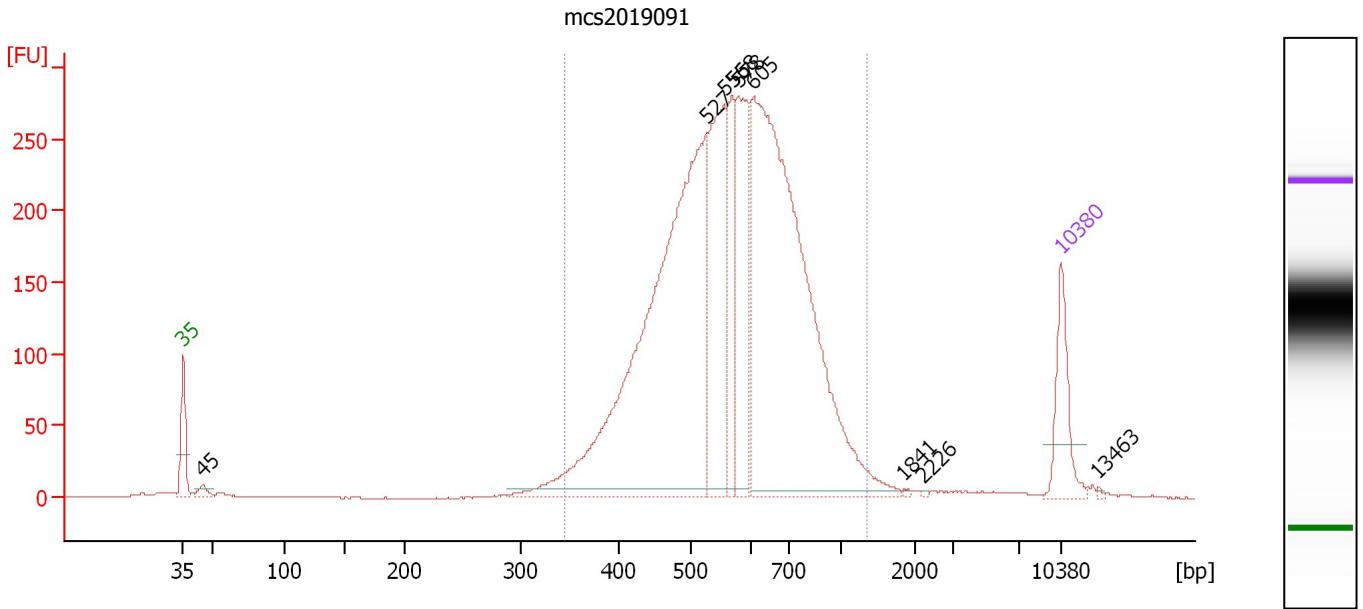
Region table for sample 1 : mcs2019090

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
344	1,274	613	1,740.08	2,878.8	4,660.6	94	26.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : mcs2019091

Number of peaks found: 9 Corr. Area 1: 4,419.5
 Noise: 0.2

Peak table for sample 2 : mcs2019091

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	14.88	501.4		44.54
3	527	1,045.99	3,009.0		84.80
4	555	291.33	795.7		86.16
5	568	139.49	371.9		86.81
6	578	202.77	531.5		87.28
7	605	980.95	2,456.4		88.50
8	1,841	1.75	1.4		100.47
9	2,226	1.53	1.0		102.10
10	10,380	75.00	10.9	Upper Marker	113.00
11	13,463	0.00	0.0		115.99

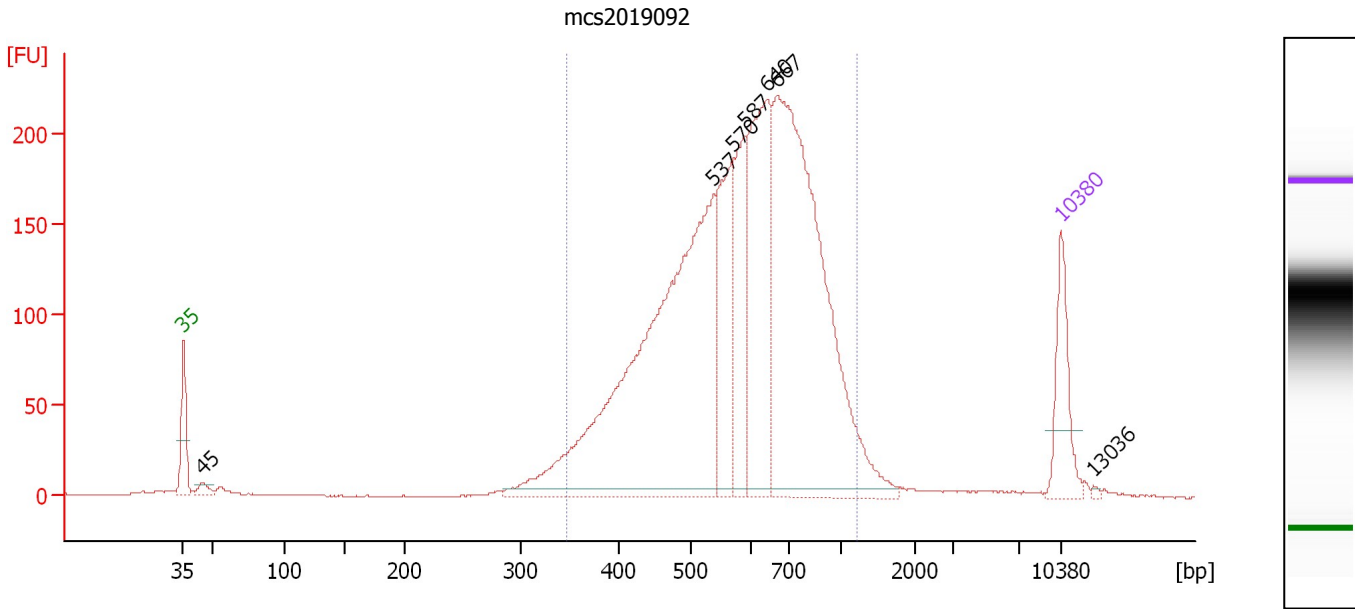
Region table for sample 2 : mcs2019091

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
344	1,344	592	2,722.80	4,419.5	7,487.4	95	25.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : mcs2019092

Number of peaks found: 7 Corr. Area 1: 3,497.2
 Noise: 0.3

Peak table for sample 3 : mcs2019092

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	14.98	502.5		44.58
3	537	899.81	2,538.4		85.31
4	570	195.30	519.4		86.88
5	587	153.03	394.7		87.74
6	640	306.84	726.1		89.56
7	667	784.49	1,781.4		90.37
8	10,380	75.00	10.9	Upper Marker	113.00
9	13,036	0.00	0.0		115.58

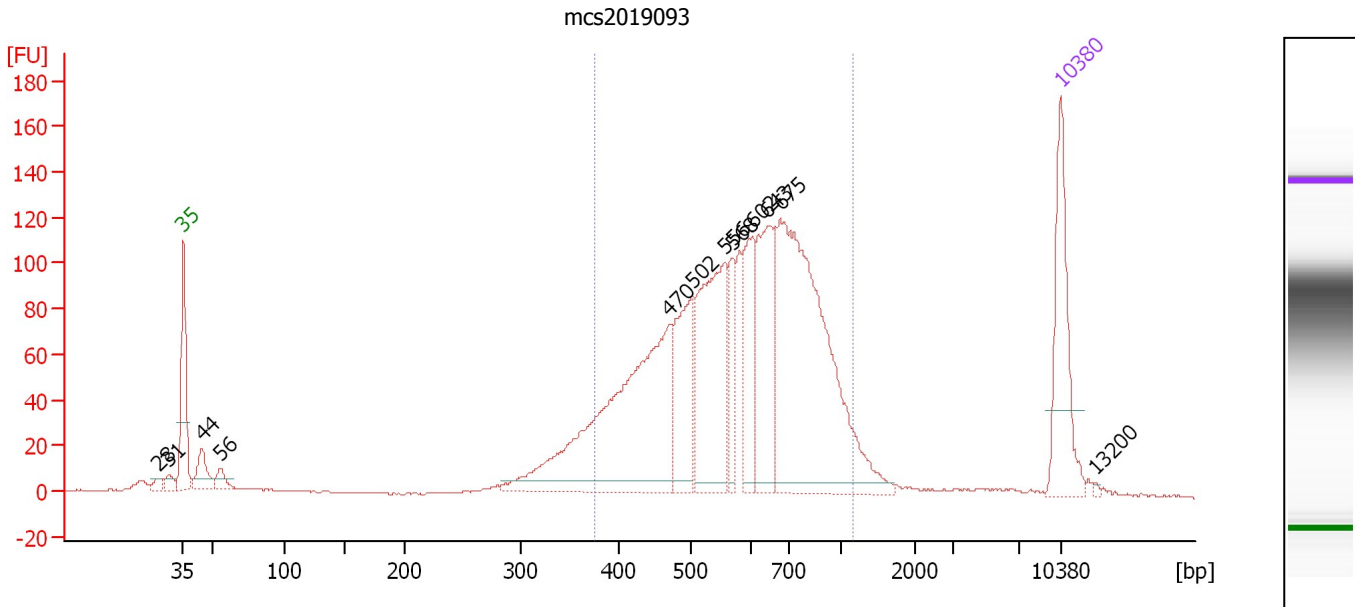
Region table for sample 3 : mcs2019092

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
346	1,219	616	2,295.63	3,497.2	6,160.6	93	26.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : mcs2019093

Number of peaks found: 12 Corr. Area 1: 1,985.8
 Noise: 0.3

Peak table for sample 4 : mcs2019093

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	28	0.00	0.0		40.95
2	31	0.00	0.0		41.83
3	35	125.00	5,411.3	Lower Marker	43.00
4	44	34.62	1,179.6		44.47
5	56	15.35	416.9		45.98
6	470	321.21	1,035.2		81.81
7	502	96.12	290.0		83.62
8	556	162.21	442.2		86.21
9	568	42.42	113.2		86.80
10	602	73.92	186.0		88.41
11	643	113.14	266.7		89.63
12	675	354.43	795.2		90.61
13	10,380	75.00	10.9	Upper Marker	113.00
14	13,200	0.00	0.0		115.74

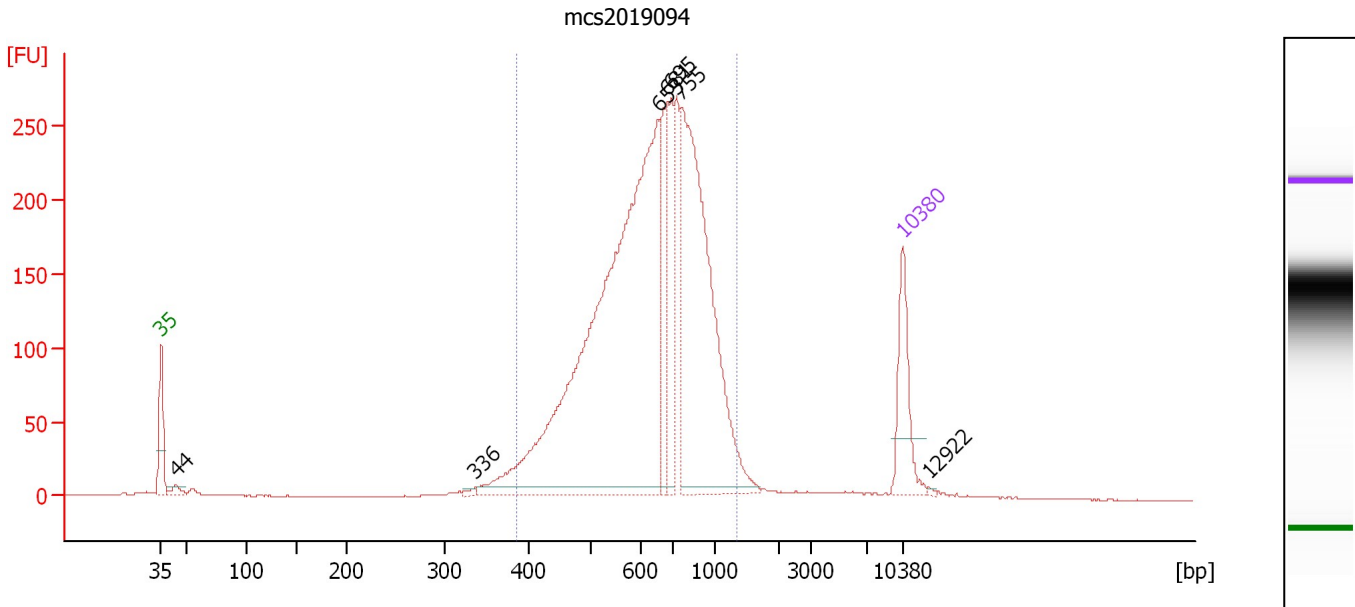
Region table for sample 4 : mcs2019093

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
376	1,175	615	1,116.72	1,985.8	2,989.8	83	26.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : mcs2019094

Number of peaks found: 7 Corr. Area 1: 3,428.9
 Noise: 0.3

Peak table for sample 5 : mcs2019094

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	14.55	500.0		44.41
3	336	5.22	23.5		72.71
4	653	1,068.37	2,479.4		89.94
5	681	110.46	245.6		90.79
6	695	113.01	246.5		91.19
7	755	540.08	1,083.4		92.10
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,922	0.00	0.0		115.47

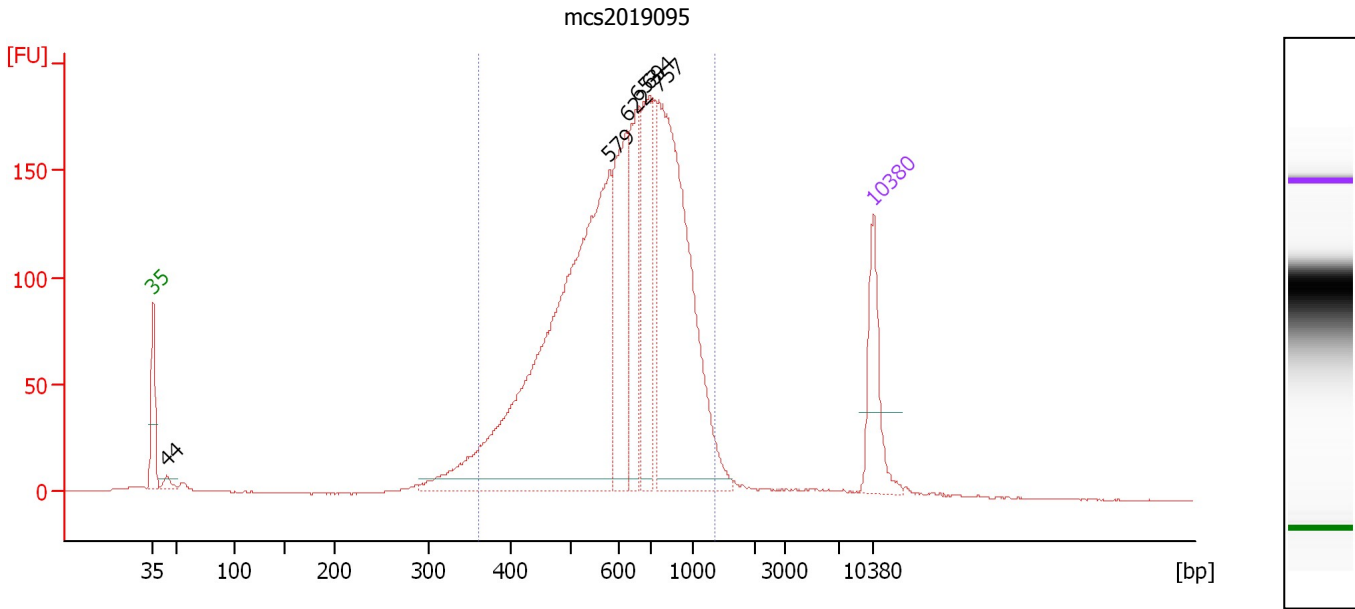
Region table for sample 5 : mcs2019094

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
386	1,318	675	1,960.55	3,428.9	4,757.2	93	25.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : mcs2019095

Number of peaks found: 6 Corr. Area 1: 2,821.6
 Noise: 0.3

Peak table for sample 6 : mcs2019095

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	13.53	469.1		44.35
3	579	830.79	2,172.3		87.35
4	622	191.90	467.4		89.01
5	653	132.49	307.4		89.94
6	694	168.87	368.4		91.19
7	757	517.42	1,036.1		92.12
8	10,380	75.00	10.9	Upper Marker	113.00

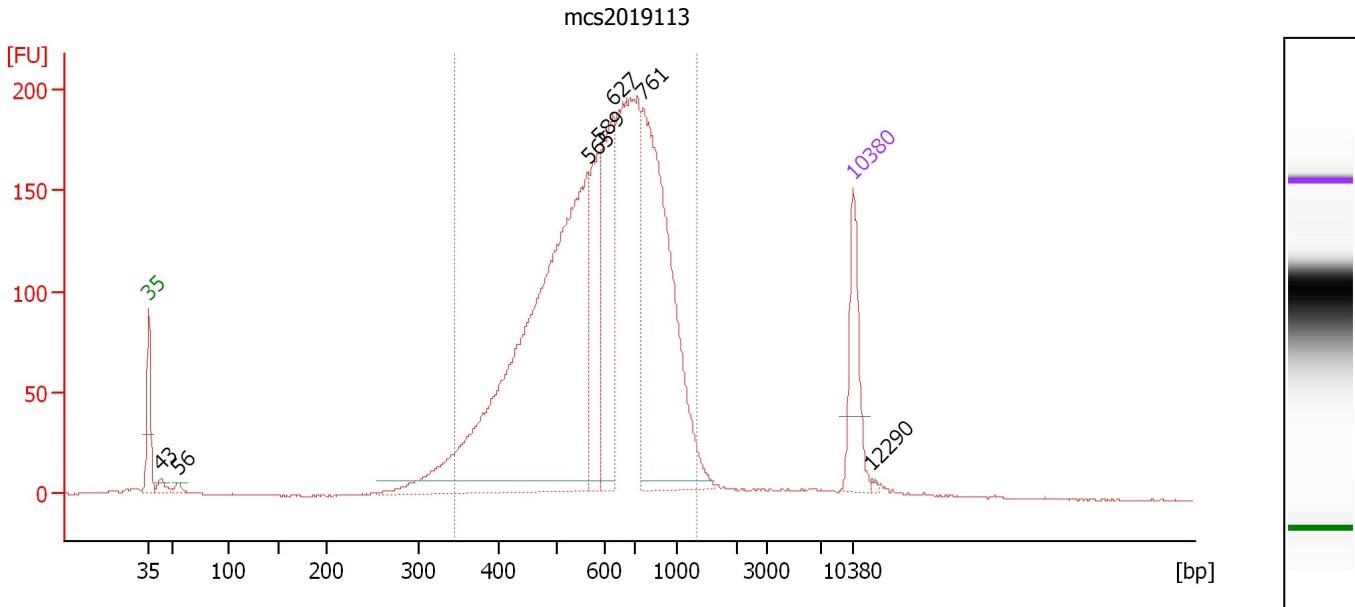
Region table for sample 6 : mcs2019095

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
360	1,365	660	1,961.28	2,821.6	4,976.2	92	29.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : mcs2019113

Number of peaks found: 7 Corr. Area 1: 3,156.1
 Noise: 0.2

Peak table for sample 7 : mcs2019113

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	16.80	593.9		44.22
3	56	9.61	261.6		45.97
4	565	903.56	2,422.2		86.66
5	589	130.85	336.4		87.83
6	627	203.29	491.3		89.15
7	761	471.29	938.6		92.17
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,290	0.00	0.0		114.85

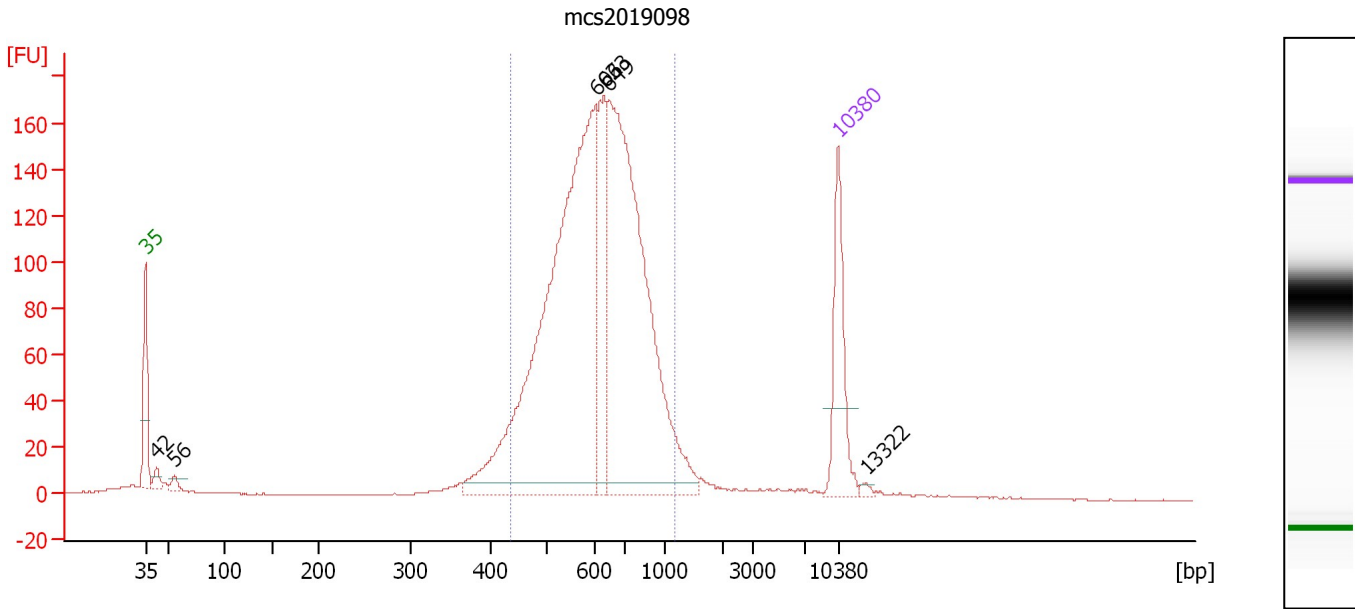
Region table for sample 7 : mcs2019113

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
343	1,354	638	2,143.11	3,156.1	5,635.6	93	29.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : mcs2019098

Number of peaks found: 6 Corr. Area 1: 2,027.2
 Noise: 0.1

Peak table for sample 8 : mcs2019098

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	16.03	574.0		44.13
3	56	10.60	288.7		45.96
4	606	675.56	1,688.2		88.54
5	633	116.63	279.1		89.34
6	649	540.67	1,261.6		89.83
7	10,380	75.00	10.9	Upper Marker	113.00
8	13,322	0.00	0.0		115.86

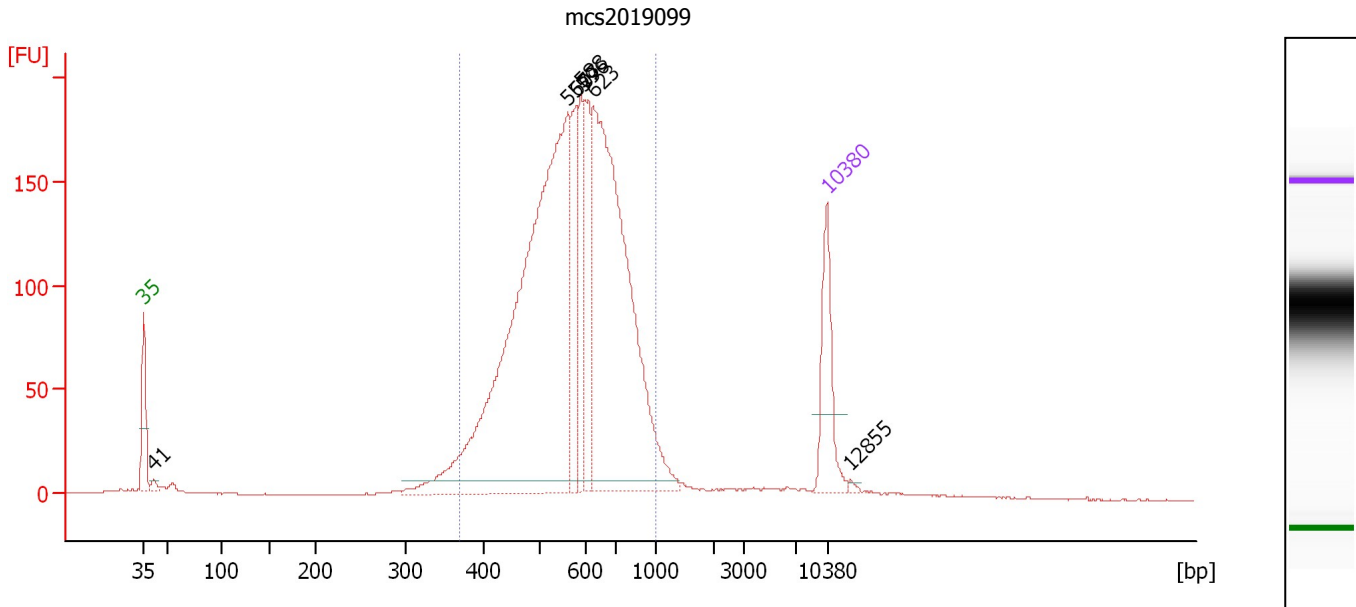
Region table for sample 8 : mcs2019098

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
435	1,171	644	1,295.96	2,027.2	3,205.0	88	21.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : mcs2019099

Number of peaks found: 7 Corr. Area 1: 2,630.7
 Noise: 0.2

Peak table for sample 9 : mcs2019099

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	9.56	350.5		43.98
3	560	879.13	2,379.0		86.41
4	577	100.53	264.0		87.23
5	588	101.20	260.7		87.77
6	596	114.52	291.1		88.16
7	623	584.44	1,421.9		89.03
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,855	0.00	0.0		115.40

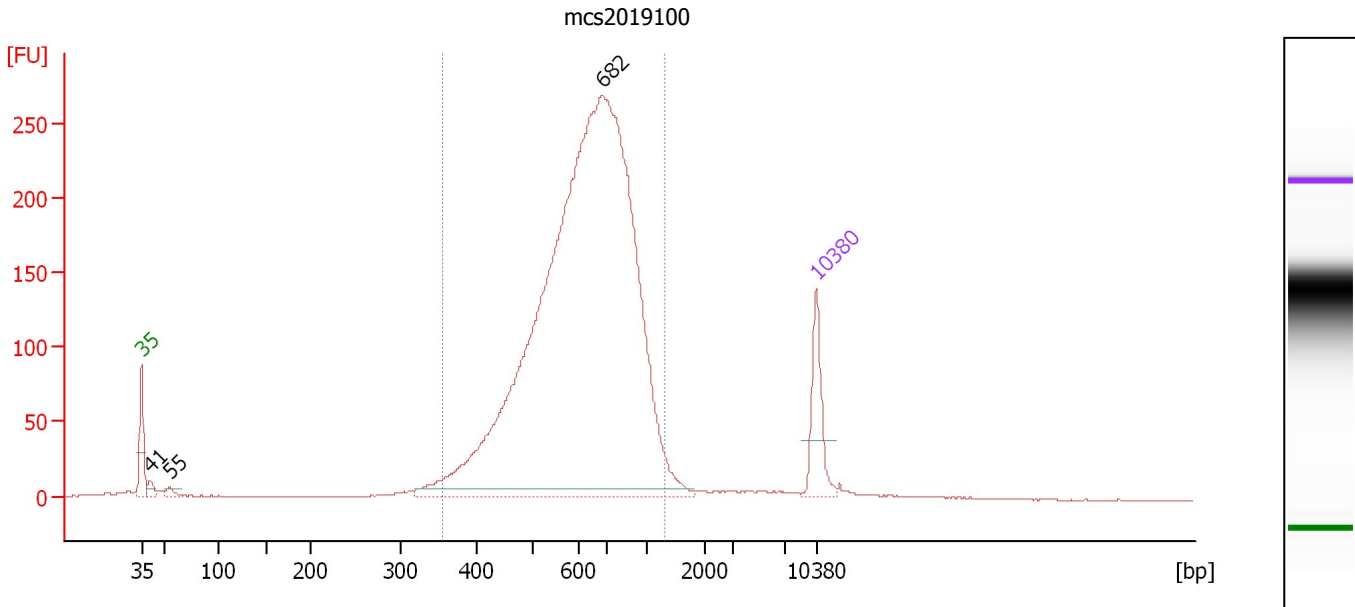
Region table for sample 9 : mcs2019099

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
369	1,000	589	1,813.86	2,630.7	4,922.5	92	21.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : mcs2019100

Number of peaks found: 3 Corr. Area 1: 3,357.8
 Noise: 0.3

Peak table for sample 10 : mcs2019100

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	19.12	711.7		43.89
3	55	12.91	356.7		45.88
4	682	2,285.65	5,078.1		90.81
5	10,380	75.00	10.9	Upper Marker	113.00

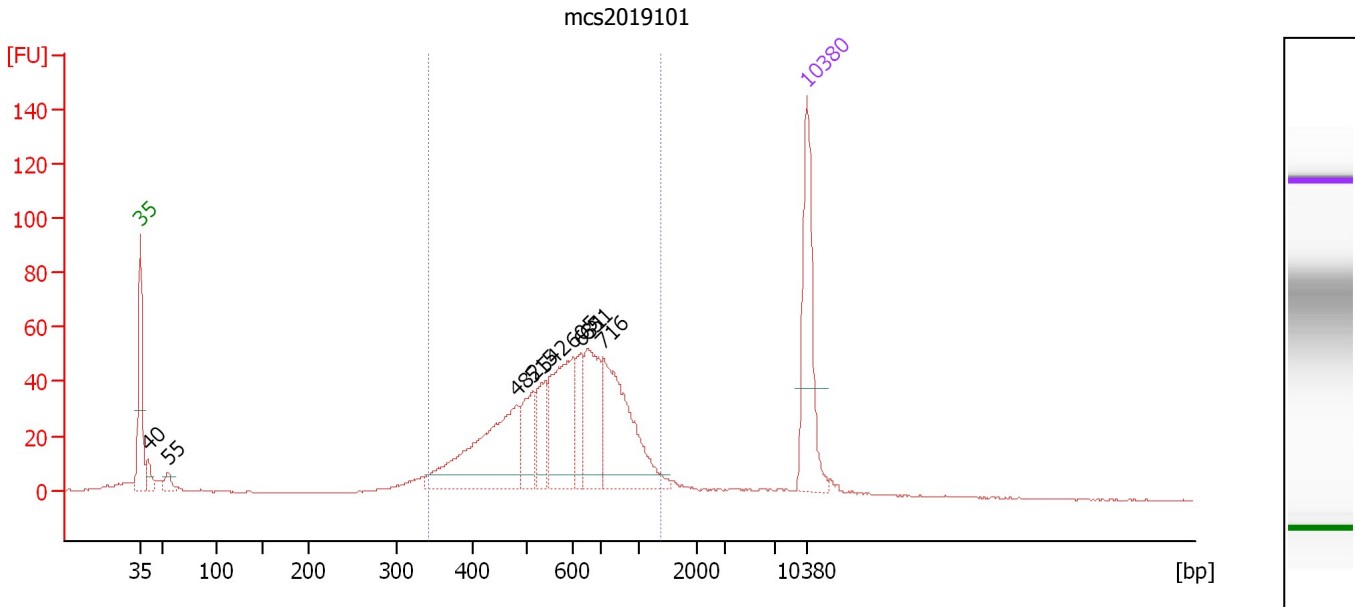
Region table for sample 10 : mcs2019100

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
354	1,308	661	2,304.80	3,357.8	5,715.7	94	25.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : mcs2019101

Number of peaks found: 9 Corr. Area 1: 864.2
 Noise: 0.2

Peak table for sample 11 : mcs2019101

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	40	17.80	673.2		43.78
3	55	11.17	306.8		45.91
4	482	136.82	429.8		82.50
5	515	40.15	118.1		84.24
6	542	35.98	100.6		85.53
7	605	91.62	229.5		88.49
8	631	27.11	65.1		89.27
9	651	66.51	154.7		89.89
10	716	119.59	253.1		91.57
11	10,380	75.00	10.9	Upper Marker	113.00

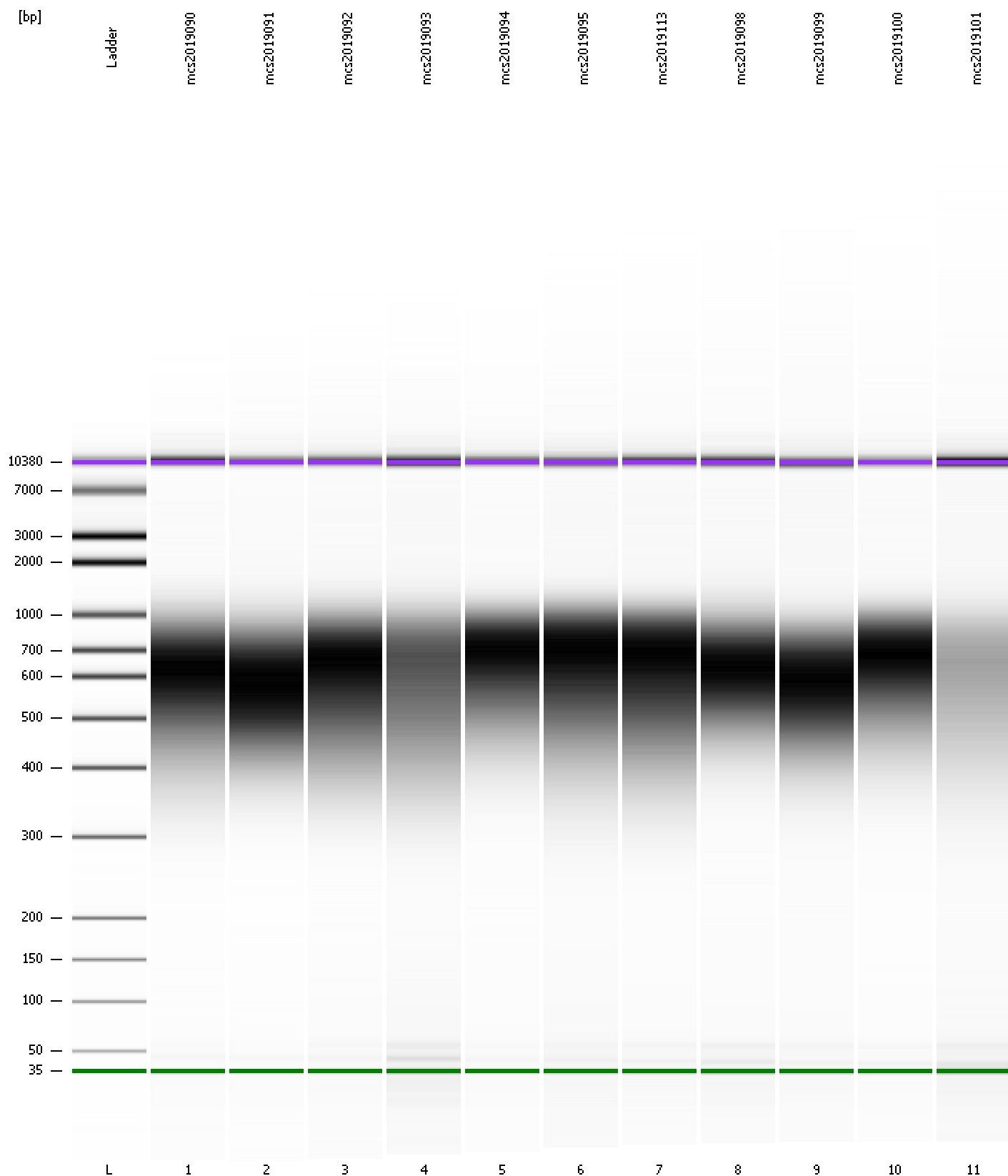
Region table for sample 11 : mcs2019101

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
342	1,357	620	565.64	864.2	1,529.3	84	29.6

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
Modified: 5/31/2019 3:02:40 PM

Gel Image

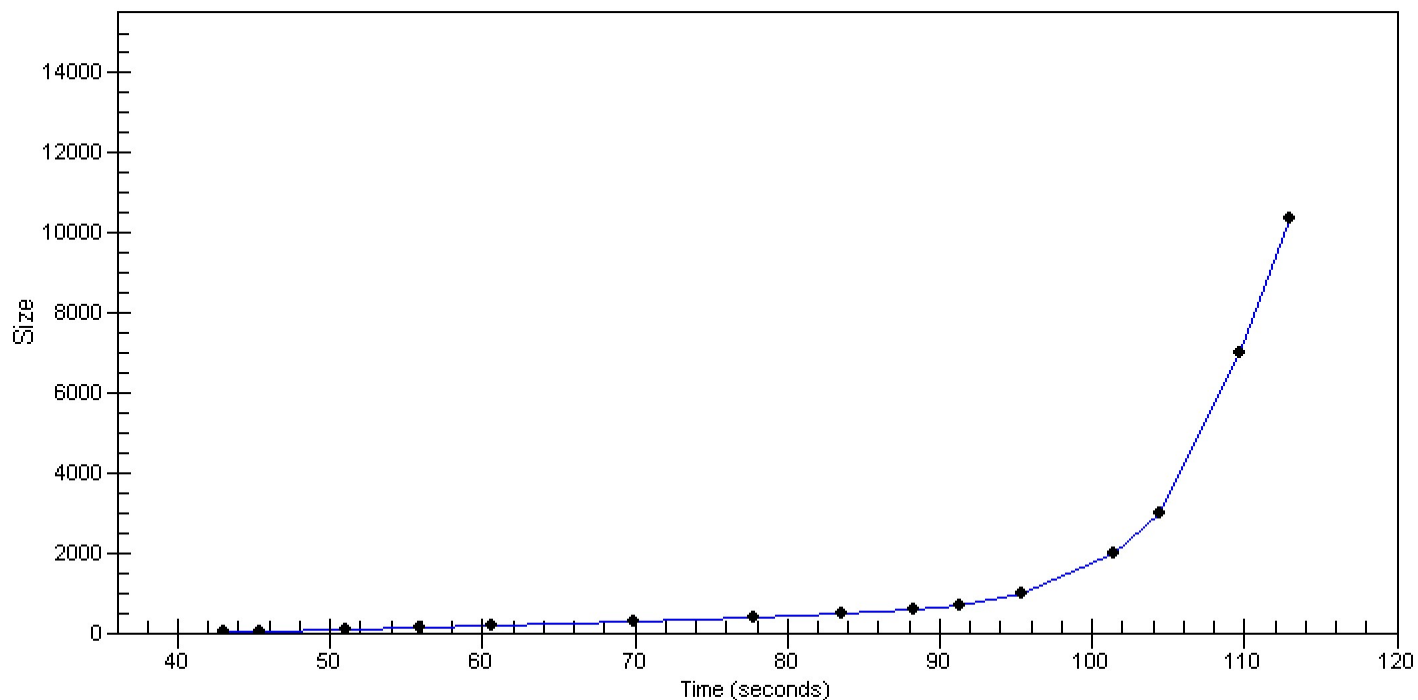


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
Modified: 5/31/2019 3:02:40 PM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-05-31\2019-05-31_003.xad

Created: 5/31/2019 2:20:12 PM
 Modified: 5/31/2019 3:02:40 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		5/31/2019 3:01:26 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\2019-05-31\2019-05-31_003.xad)		Instrument	Run		5/31/2019 2:20:12 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938C		Instrument	Run		5/31/2019 2:20:12 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/31/2019 2:20:12 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/31/2019 2:20:12 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE34903152		Instrument	Run		5/31/2019 2:20:12 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/31/2019 2:20:12 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/31/2019 2:20:12 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1