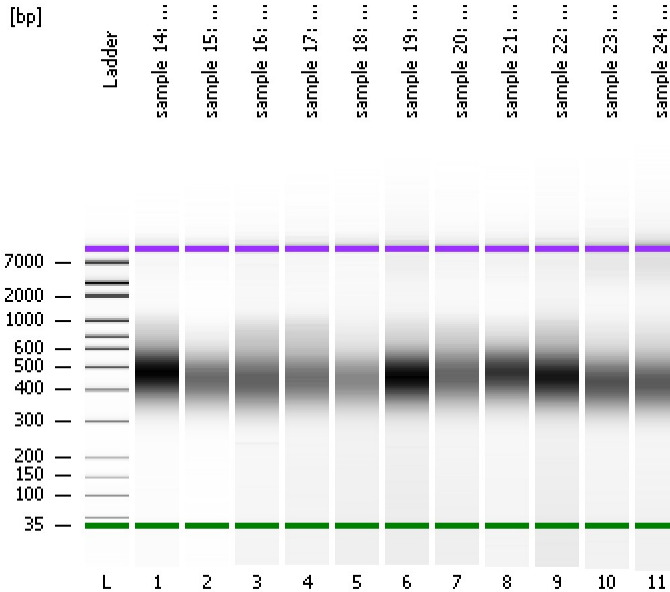


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
Modified: 9/23/2015 11:39:19 AM

Electrophoresis File Run Summary



Instrument Information:

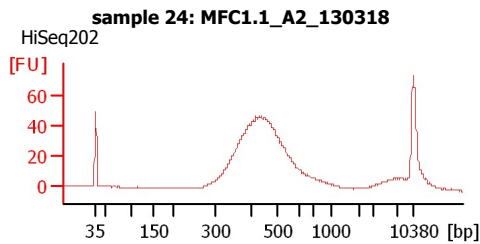
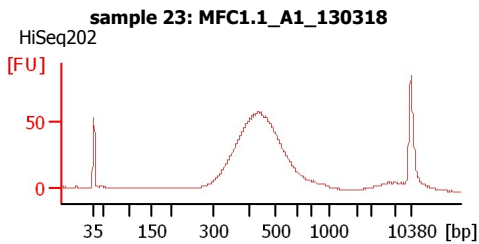
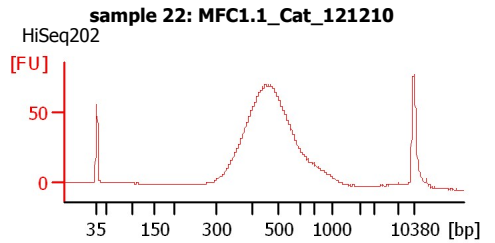
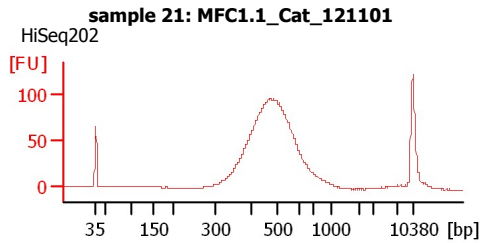
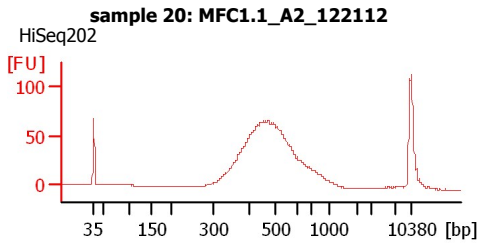
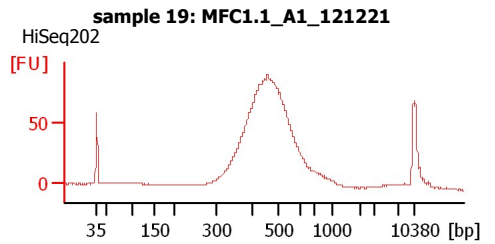
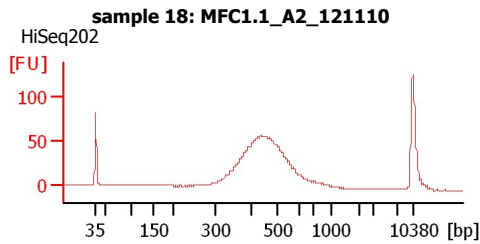
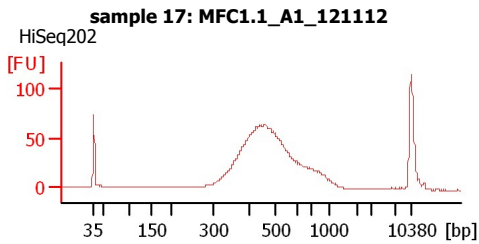
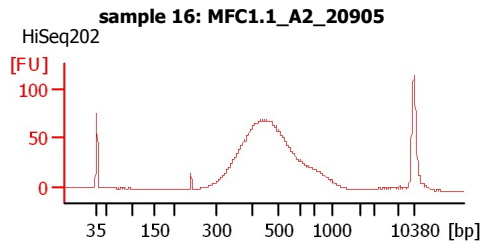
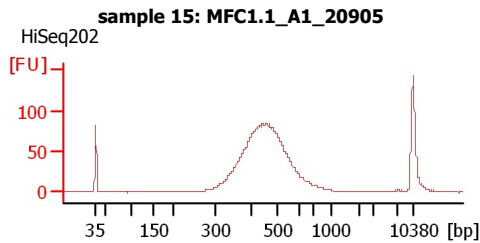
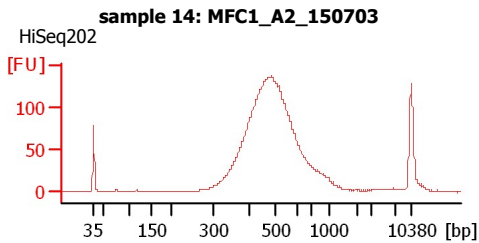
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
Modified: 9/23/2015 11:39:19 AM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 14: MFC1_A2_150703	HiSeq202	<input type="checkbox"/>	✓			
sample 15: MFC1.1_A1_20905	HiSeq202	<input type="checkbox"/>	✓			
sample 16: MFC1.1_A2_20905	HiSeq202	<input type="checkbox"/>	✓			
sample 17: MFC1.1_A1_121112	HiSeq202	<input type="checkbox"/>	✓			
sample 18: MFC1.1_A2_121110	HiSeq202	<input type="checkbox"/>	✓			
sample 19: MFC1.1_A1_121221	HiSeq202	<input type="checkbox"/>	✓			
sample 20: MFC1.1_A2_122112	HiSeq202	<input type="checkbox"/>	✓			
sample 21: MFC1.1_Cat_121101	HiSeq202	<input type="checkbox"/>	✓			
sample 22: MFC1.1_Cat_121210	HiSeq202	<input type="checkbox"/>	✓			
sample 23: MFC1.1_A1_130318	HiSeq202	<input type="checkbox"/>	✓			
sample 24: MFC1.1_A2_130318	HiSeq202	<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\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
Modified: 9/23/2015 11:39:19 AM

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

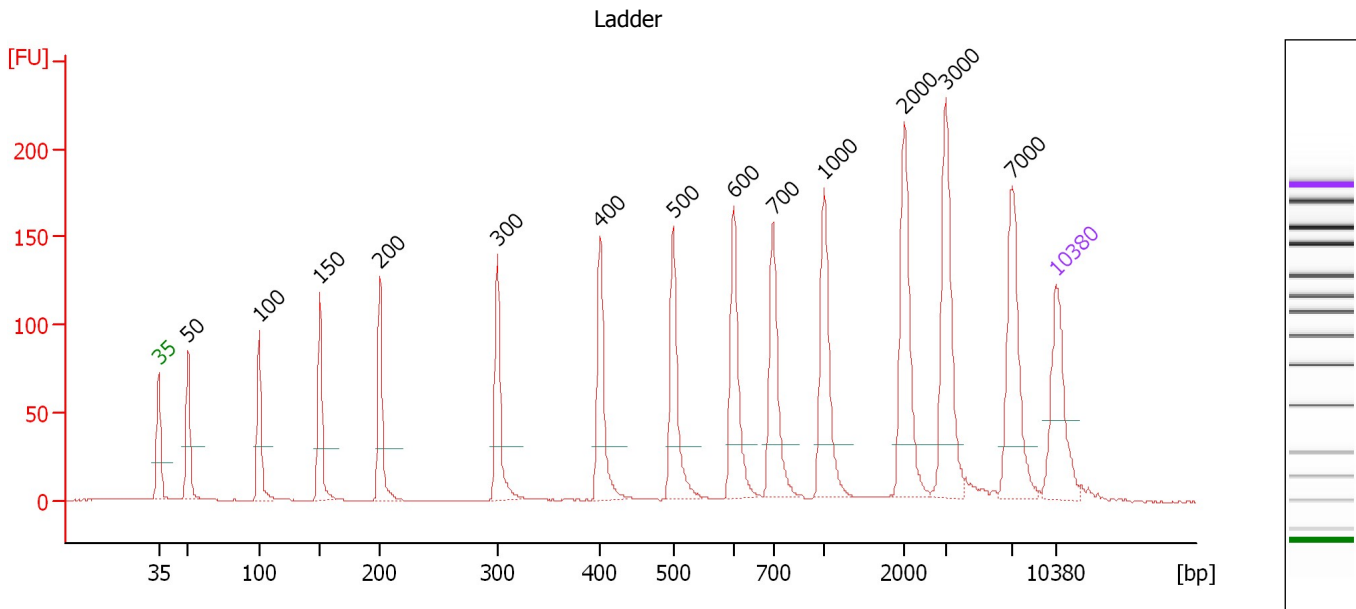
Ladder

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\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

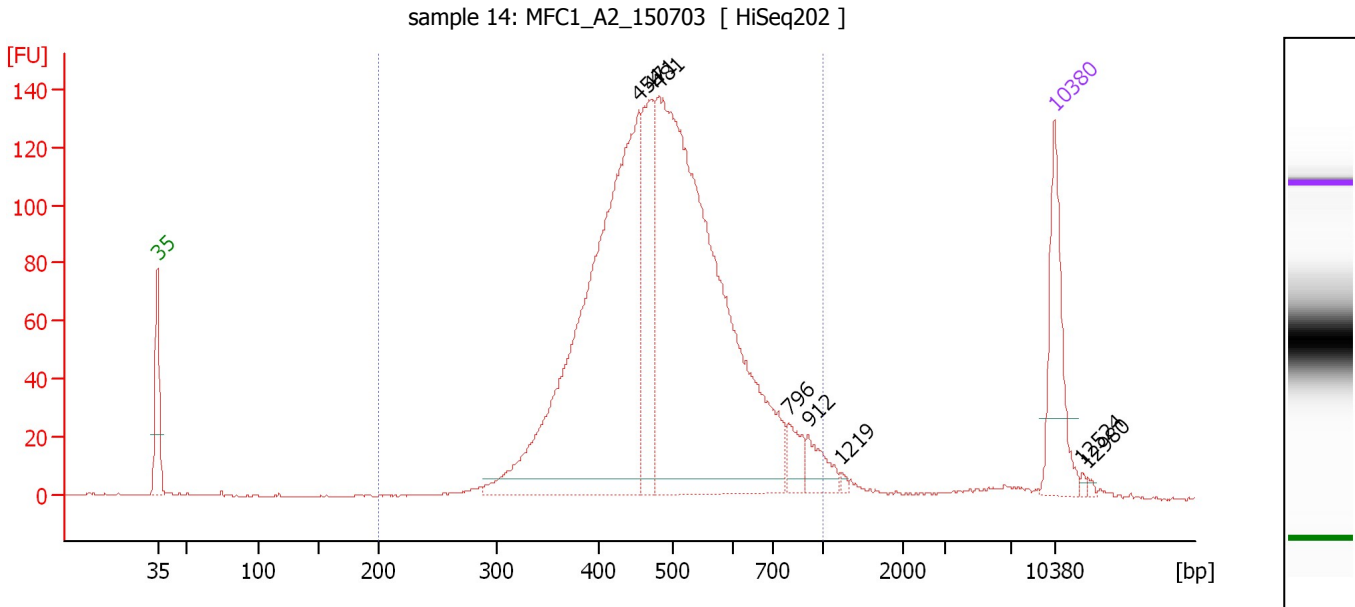
Peak table for Ladder

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	45.29
3	100	150.00	2,272.7	Ladder Peak	50.86
4	150	150.00	1,515.2	Ladder Peak	55.57
5	200	150.00	1,136.4	Ladder Peak	60.29
6	300	150.00	757.6	Ladder Peak	69.45
7	400	150.00	568.2	Ladder Peak	77.48
8	500	150.00	454.5	Ladder Peak	83.19
9	600	150.00	378.8	Ladder Peak	87.90
10	700	150.00	324.7	Ladder Peak	90.95
11	1,000	150.00	227.3	Ladder Peak	94.95
12	2,000	150.00	113.6	Ladder Peak	101.19
13	3,000	150.00	75.8	Ladder Peak	104.42
14	7,000	150.00	32.5	Ladder Peak	109.63
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : sample 14: MFC1 A2 150703

Number of peaks found: 8 Corr. Area 1: 2,155.9
 Noise: 0.2

Peak table for sample 1 : sample 14: MFC1 A2 150703

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	454	657.32	2,195.2		80.55
3	471	144.34	464.1		81.55
4	481	803.23	2,531.3		82.09
5	796	26.70	50.9		92.23
6	912	27.00	44.9		93.77
7	1,219	2.77	3.4		96.32
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,524	0.00	0.0		115.14
10	12,981	0.00	0.0		115.59

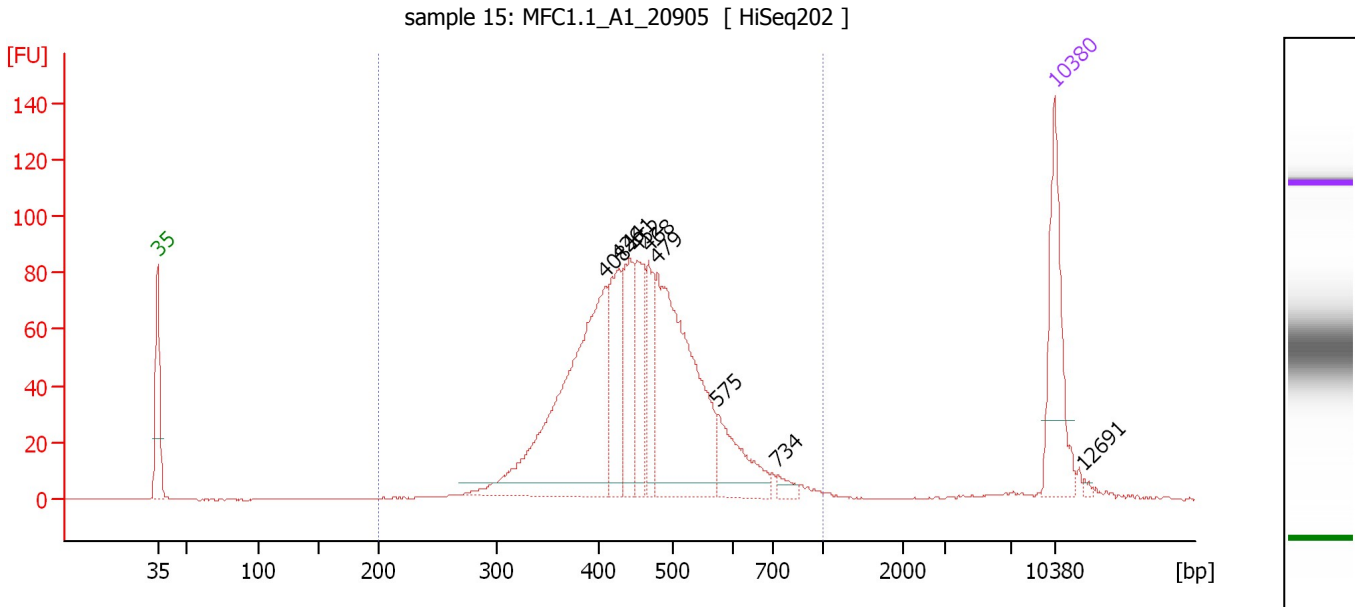
Region table for sample 1 : sample 14: MFC1 A2 150703

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	498	1,000	2,155.9	5,480.3	96	23.3	1,691.48

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : sample 15: MFC1.1 A1 20905

Number of peaks found: 9 Corr. Area 1: 1,305.3
 Noise: 0.1

Peak table for sample 2 : sample 15: MFC1.1 A1 20905

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	408	312.65	1,160.4		77.95
3	426	83.61	297.4		78.97
4	441	71.78	246.4		79.84
5	452	75.29	252.5		80.44
6	468	54.15	175.3		81.36
7	479	255.15	806.6		82.01
8	575	61.32	161.7		86.70
9	734	8.96	18.5		91.40
10	10,380	75.00	10.9	Upper Marker	113.00
11	12,691	0.00	0.0		115.30

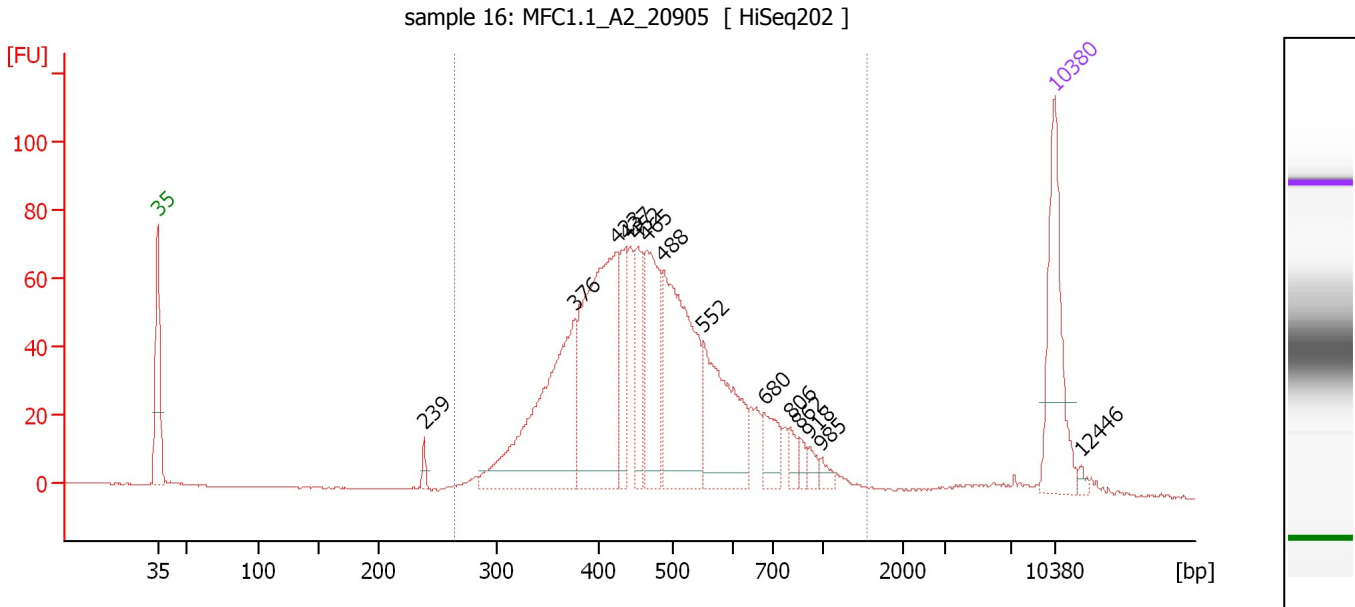
Region table for sample 2 : sample 15: MFC1.1 A1 20905

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	460	1,000	1,305.3	3,457.6	96	21.2	994.78

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : sample 16: MFC1.1 A2 20905

Number of peaks found: 14 Corr. Area 1: 1,332.0
 Noise: 0.2

Peak table for sample 3 : sample 16: MFC1.1 A2 20905

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	239	7.07	44.9		63.82
3	376	203.67	820.4		75.57
4	423	229.41	821.7		78.80
5	437	47.19	163.6		79.59
6	452	53.78	180.4		80.43
7	465	91.91	299.6		81.18
8	488	178.65	554.9		82.49
9	552	111.23	305.4		85.63
10	680	28.83	64.2		90.35
11	806	10.59	19.9		92.36
12	862	7.52	13.2		93.11
13	918	7.62	12.6		93.86
14	985	6.47	10.0		94.75
15	10,380	75.00	10.9	Upper Marker	113.00
16	12,446	0.00	0.0		115.06

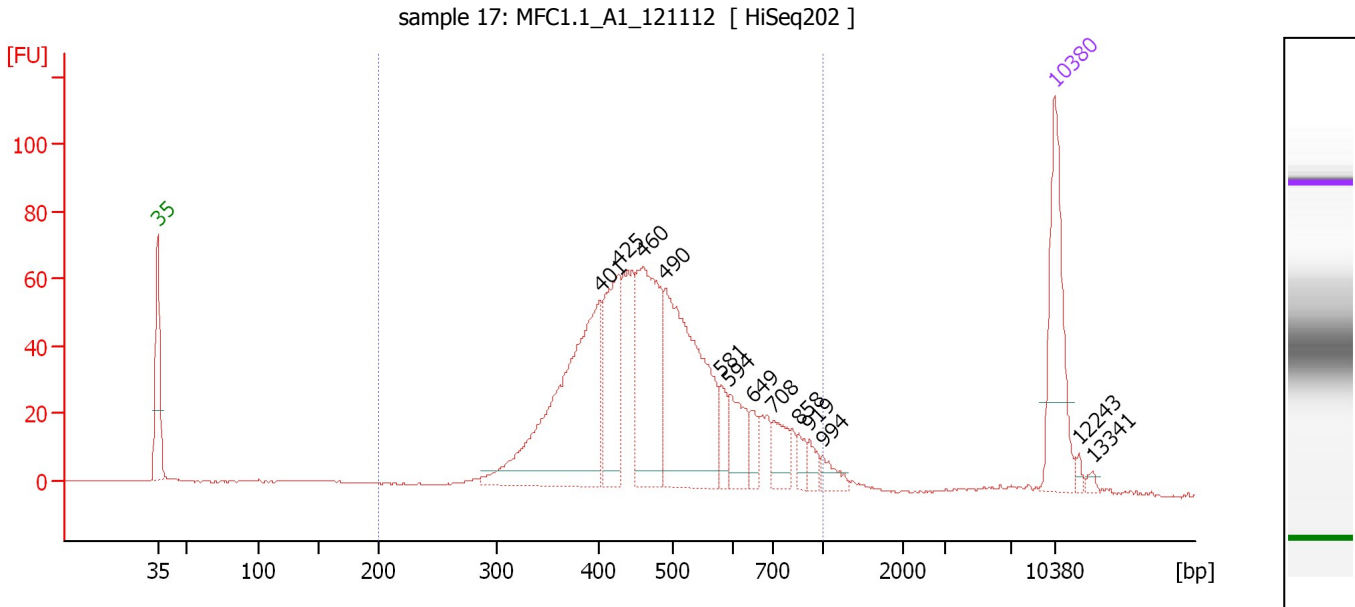
Region table for sample 3 : sample 16: MFC1.1 A2 20905

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
264	495	1,534	1,332.0	3,755.4	95	31.5	1,115.94

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...



Overall Results for sample 4 : sample 17: MFC1.1 A1 121112

Number of peaks found: 13 Corr. Area 1: 1,163.1
 Noise: 0.2

Peak table for sample 4 : sample 17: MFC1.1 A1 121112

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	401	245.04	925.6		77.55
3	425	97.36	346.8		78.93
4	460	144.51	475.6		80.93
5	490	204.67	632.3		82.64
6	581	18.06	47.1		87.02
7	594	38.21	97.4		87.64
8	649	13.64	31.8		89.40
9	708	24.75	53.0		91.06
10	858	9.17	16.2		93.06
11	919	10.00	16.5		93.87
12	994	11.00	16.8		94.87
13	10,380	75.00	10.9	Upper Marker	113.00
14	12,243	0.00	0.0		114.86
15	13,341	0.00	0.0		115.95

Region table for sample 4 : sample 17: MFC1.1 A1 121112

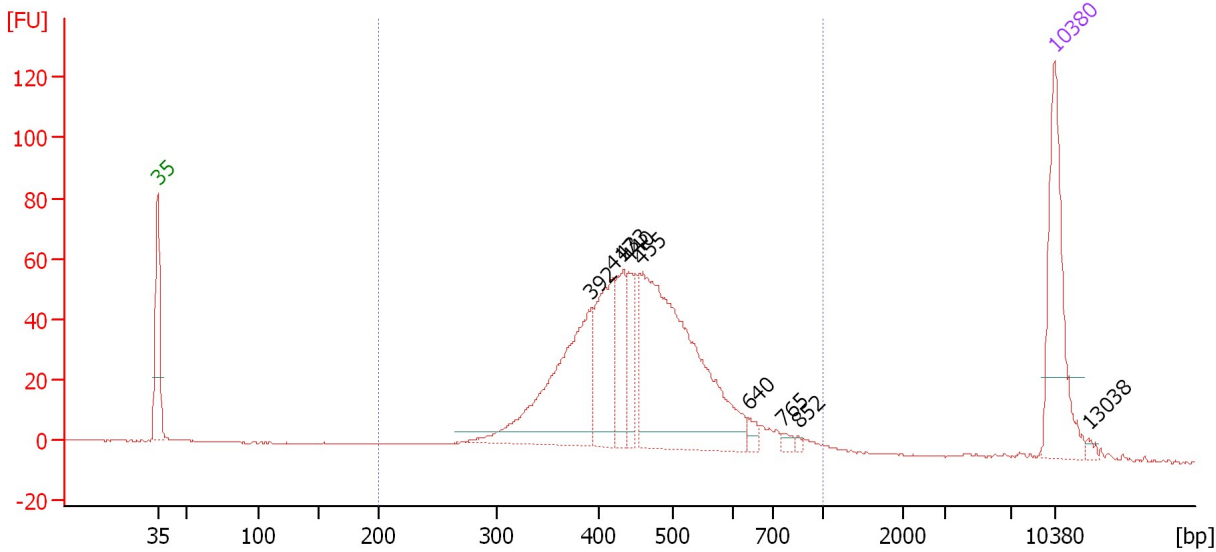
From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	492	1,000	1,163.1	3,260.7	92	26.9	972.96

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...

sample 18: MFC1.1_A2_121110 [HiSeq202]



Overall Results for sample 5 : sample 18: MFC1.1 A2 121110

Number of peaks found: 9 Corr. Area 1: 947.5
 Noise: 0.2

Peak table for sample 5 : sample 18: MFC1.1 A2 121110

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	392	154.01	595.2		76.84
3	417	78.59	285.2		78.48
4	433	47.13	165.0		79.35
5	440	34.78	119.7		79.78
6	455	257.52	856.6		80.65
7	640	6.95	16.5		89.12
8	765	4.23	8.4		91.82
9	852	2.09	3.7		92.97
10	10,380	75.00	10.9	Upper Marker	113.00
11	13,038	0.00	0.0		115.65

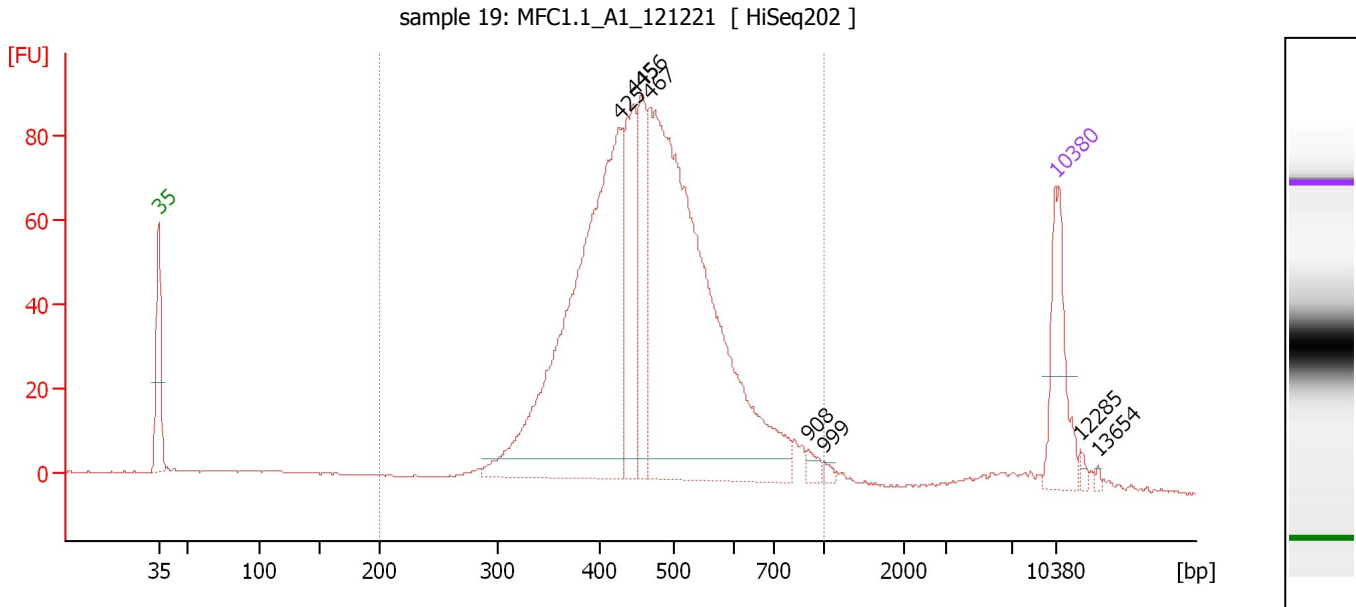
Region table for sample 5 : sample 18: MFC1.1 A2 121110

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	462	1,000	947.5	2,304.6	95	23.0	659.27

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...



Overall Results for sample 6 : sample 19: MFC1.1 A1 121221

Number of peaks found: 8 Corr. Area 1: 1,400.7
 Noise: 0.2

Peak table for sample 6 : sample 19: MFC1.1 A1 121221

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	425	616.57	2,196.7		78.92
3	445	147.68	502.9		80.04
4	456	117.00	388.8		80.68
5	467	758.52	2,460.4		81.31
6	908	9.23	15.4		93.72
7	999	4.47	6.8		94.94
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,285	0.00	0.0		114.90
10	13,654	0.00	0.0		116.26

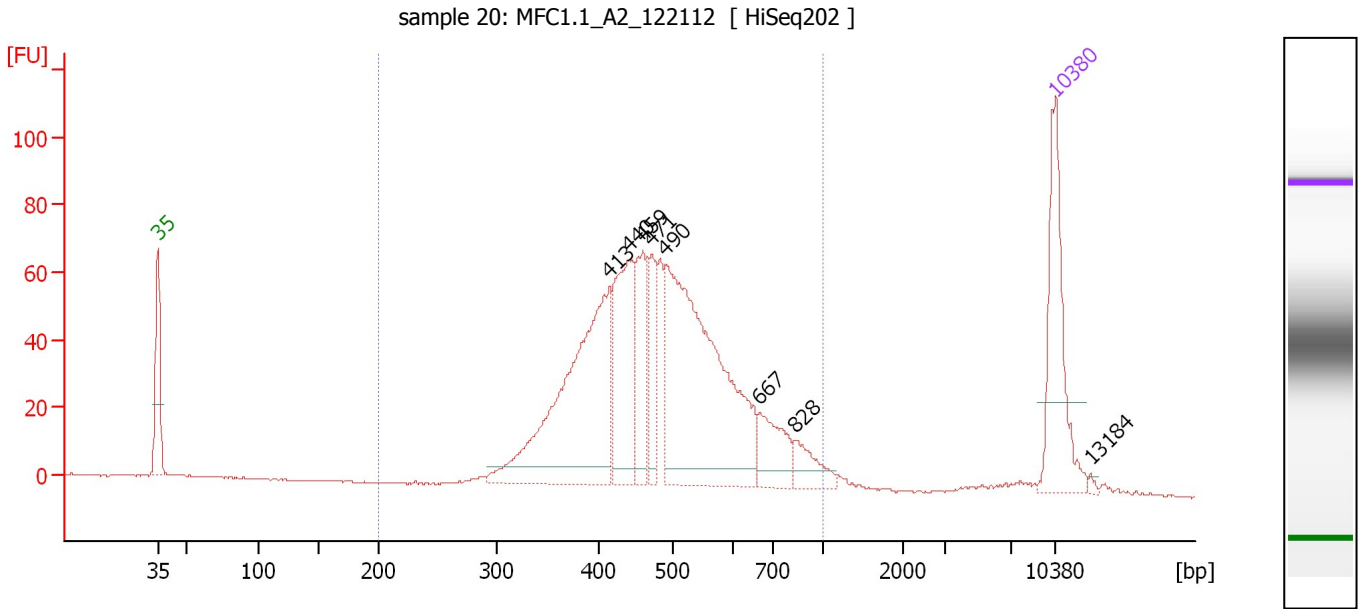
Region table for sample 6 : sample 19: MFC1.1 A1 121221

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	475	1,000	1,400.7	5,885.5	92	22.9	1,733.39

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...



Overall Results for sample 7 : sample 20: MFC1.1 A2 122112

Number of peaks found: 8 Corr. Area 1: 1,155.6
 Noise: 0.2

Peak table for sample 7 : sample 20: MFC1.1 A2 122112

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	413	250.14	916.9		78.25
3	440	110.14	379.3		79.76
4	459	69.12	228.2		80.84
5	471	45.39	146.0		81.53
6	490	303.92	940.0		82.61
7	667	42.04	95.4		89.96
8	828	24.10	44.1		92.66
9	10,380	75.00	10.9	Upper Marker	113.00
10	13,184	0.00	0.0		115.79

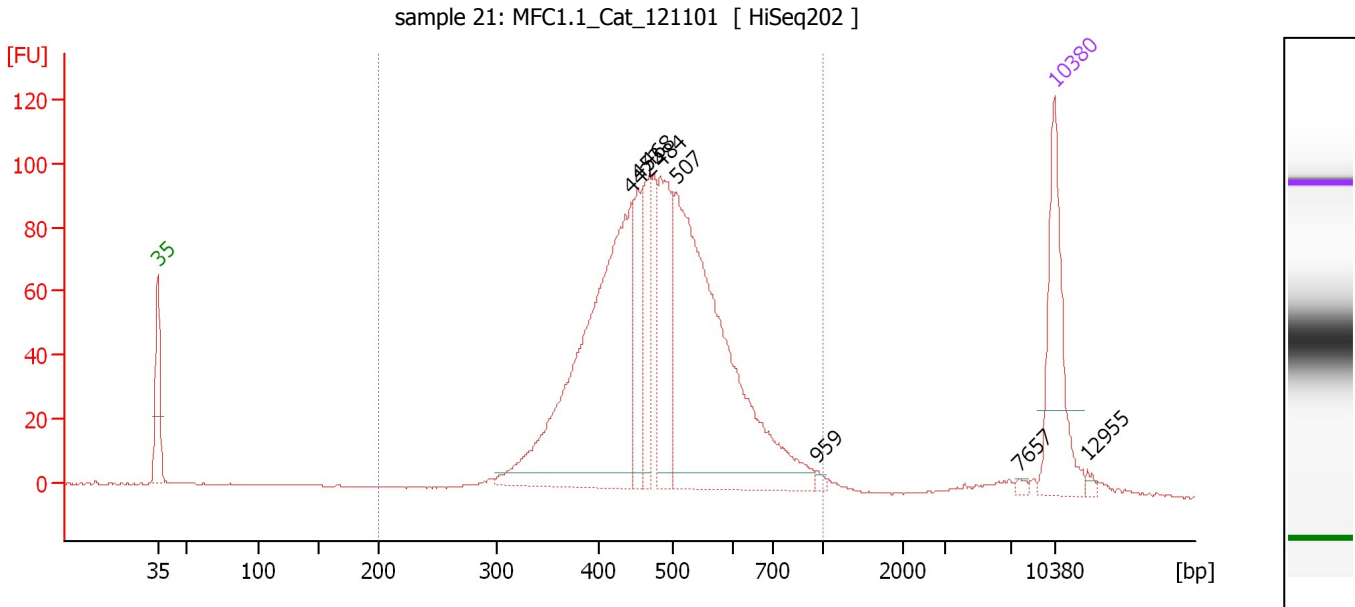
Region table for sample 7 : sample 20: MFC1.1 A2 122112

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	494	1,000	1,155.6	2,942.6	95	24.4	896.40

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...



Overall Results for sample 8 : sample 21: MFC1.1 Cat 121101

Number of peaks found: 8 Corr. Area 1: 1,445.3
 Noise: 0.1

Peak table for sample 8 : sample 21: MFC1.1 Cat 121101

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	442	379.86	1,301.1		79.90
3	453	55.69	186.4		80.49
4	468	57.12	184.8		81.38
5	484	103.76	324.9		82.27
6	507	389.87	1,165.9		83.50
7	959	3.44	5.4		94.40
8	7,657	2.53	0.5		110.29
9	10,380	75.00	10.9	Upper Marker	113.00
10	12,955	0.00	0.0		115.57

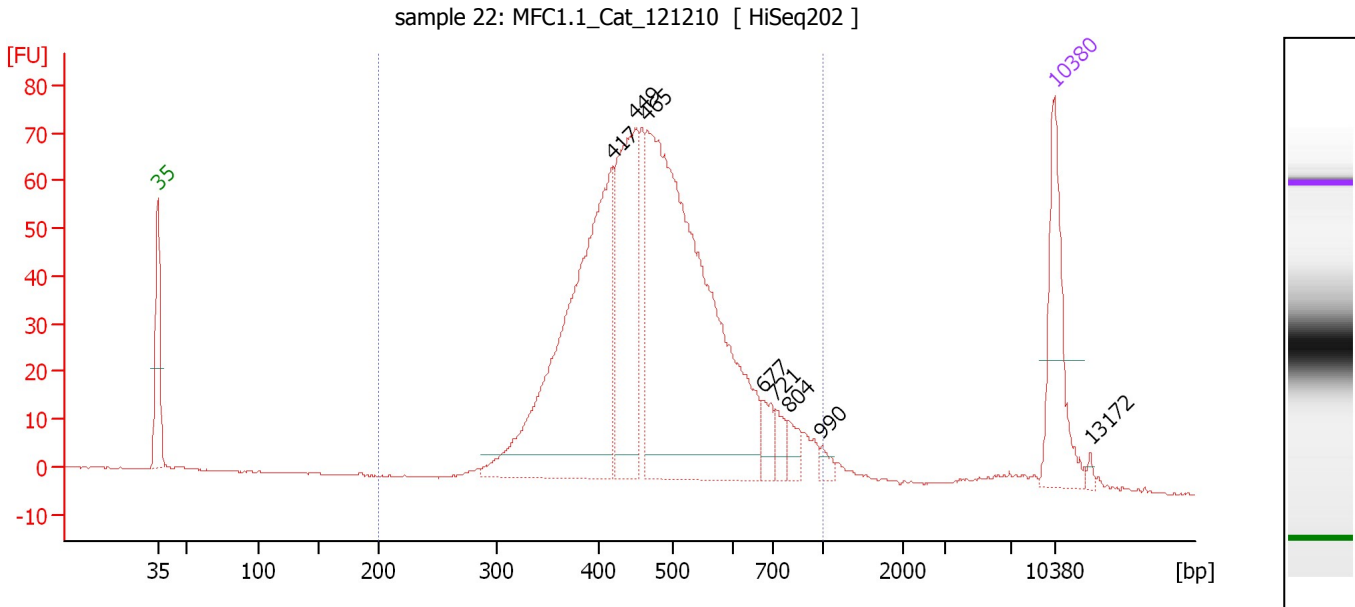
Region table for sample 8 : sample 21: MFC1.1 Cat 121101

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	490	1,000	1,445.3	3,474.3	96	21.2	1,064.62

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...



Overall Results for sample 9 : sample 22: MFC1.1 Cat 121210

Number of peaks found: 8 Corr. Area 1: 1,162.3
 Noise: 0.2

Peak table for sample 9 : sample 22: MFC1.1 Cat 121210

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	417	410.34	1,489.8		78.47
3	449	200.04	675.5		80.26
4	465	584.28	1,902.8		81.20
5	677	19.61	43.9		90.25
6	721	14.15	29.7		91.24
7	804	15.92	30.0		92.33
8	990	7.38	11.3		94.82
9	10,380	75.00	10.9	Upper Marker	113.00
10	13,172	0.00	0.0		115.78

Region table for sample 9 : sample 22: MFC1.1 Cat 121210

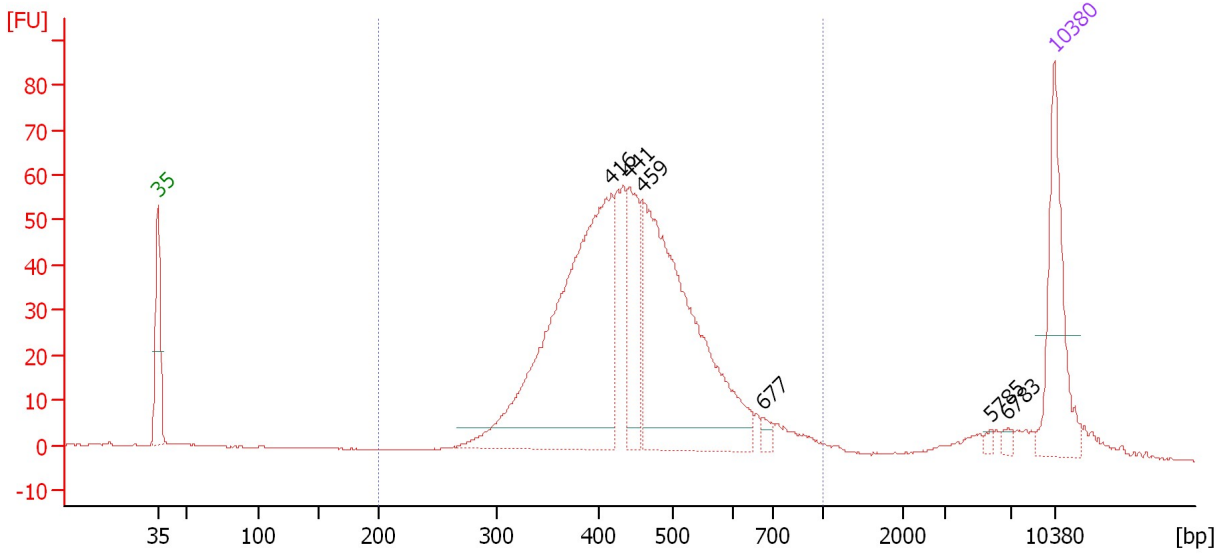
From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	485	1,000	1,162.3	4,471.7	95	24.0	1,344.21

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...

sample 23: MFC1.1_A1_130318 [HiSeq202]



Overall Results for sample 10 : sample 23: MFC1.1 A1 130318

Number of peaks found: 6 Corr. Area 1: 927.1
 Noise: 0.1

Peak table for sample 10 : sample 23: MFC1.1 A1 130318

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	416	403.11	1,468.0		78.40
3	441	79.98	275.0		79.80
4	459	337.55	1,114.2		80.85
5	677	6.89	15.4		90.25
6	5,785	2.71	0.7		108.05
7	6,783	4.16	0.9		109.35
8	10,380	75.00	10.9	Upper Marker	113.00

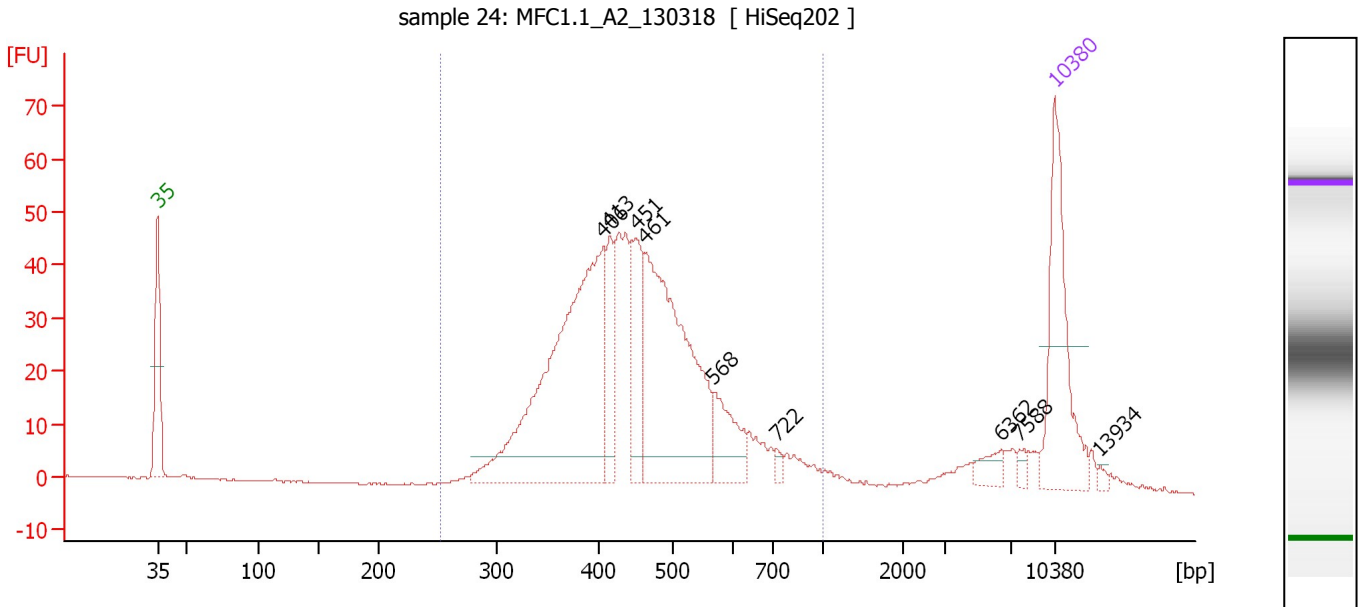
Region table for sample 10 : sample 23: MFC1.1 A1 130318

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]	Conc. [pg/μl]
200	454	1,000	927.1	3,484.9	92	22.8	985.37

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

Electropherogram Summary Continued ...



Overall Results for sample 11 : sample 24: MFC1.1 A2 130318

Number of peaks found: 9 Corr. Area 1: 752.0
 Noise: 0.2

Peak table for sample 11 : sample 24: MFC1.1 A2 130318

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	406	295.60	1,104.5		77.80
3	413	41.35	151.5		78.25
4	451	58.50	196.6		80.38
5	461	220.01	722.5		80.98
6	568	39.61	105.6		86.40
7	722	4.63	9.7		91.25
8	6,362	10.70	2.5		108.80
9	7,588	4.22	0.8		110.22
10	10,380	75.00	10.9	Upper Marker	113.00
11	13,934	0.00	0.0		116.54

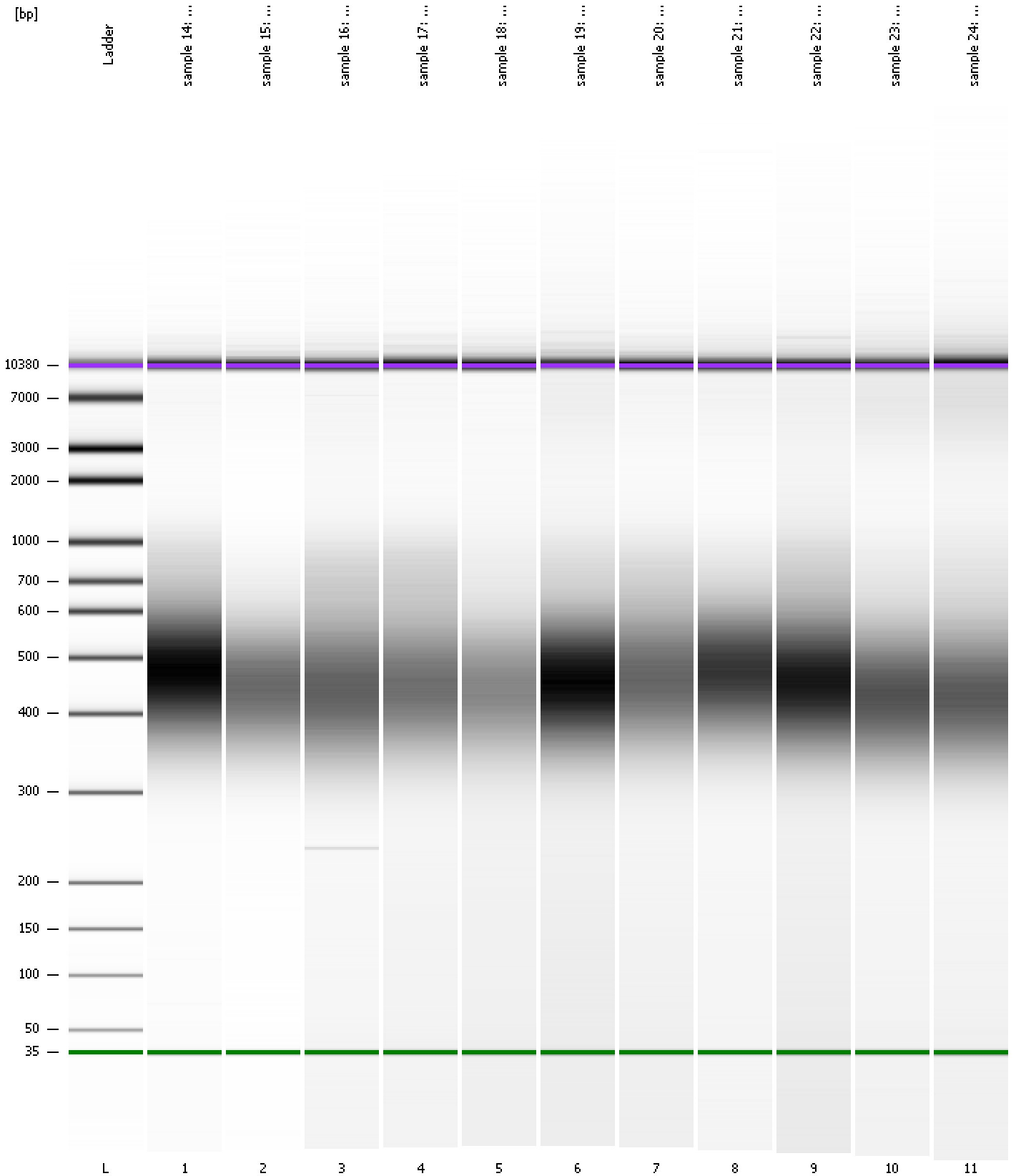
Region table for sample 11 : sample 24: MFC1.1 A2 130318

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
252	460	1,000	752.0	2,869.0	90	23.9	818.47

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
Modified: 9/23/2015 11:39:19 AM

Gel Image

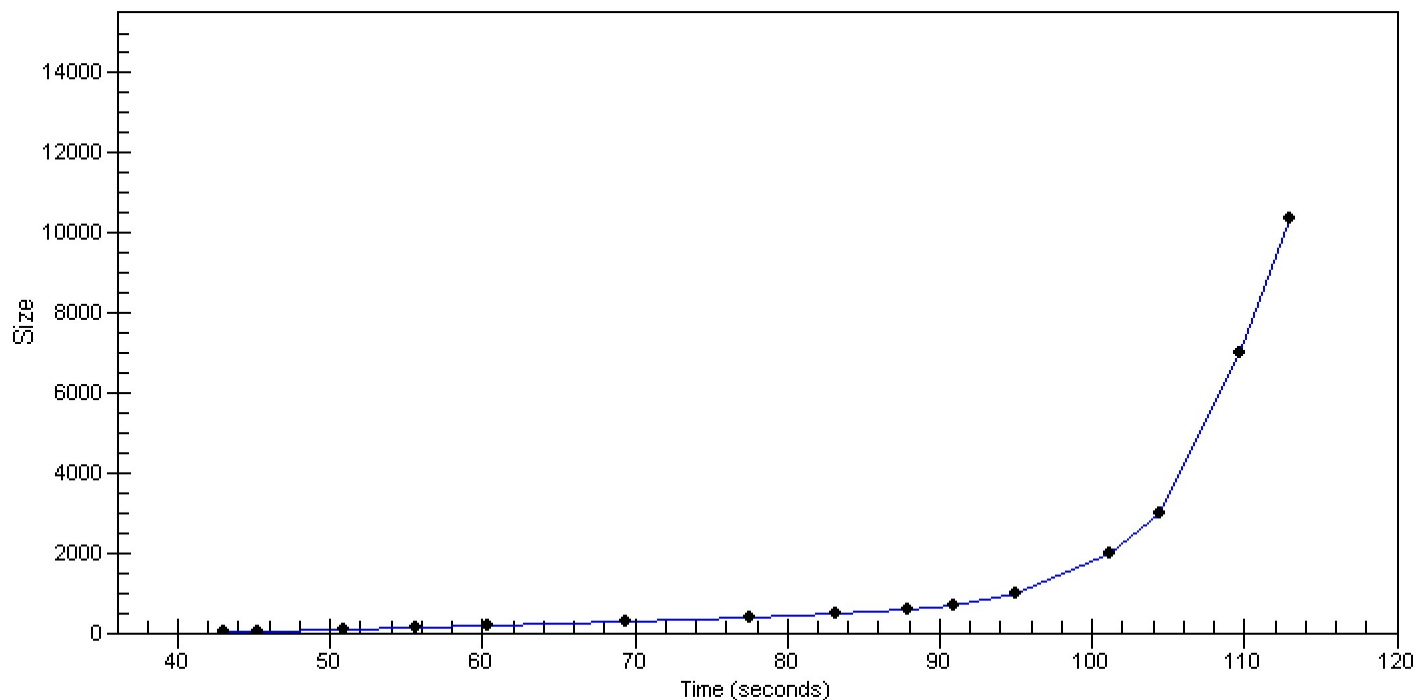


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
Modified: 9/23/2015 11:39:19 AM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad

Created: 9/18/2015 3:34:30 PM
 Modified: 9/23/2015 11:39:19 AM

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		9/18/2015 4:14:57 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2015-09-18\2015-09-18_002.xad)		Instrument	Run		9/18/2015 3:34:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		9/18/2015 3:34:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		9/18/2015 3:34:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		9/18/2015 3:34:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		9/18/2015 3:34:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		9/18/2015 3:34:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		9/18/2015 3:34:36 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1