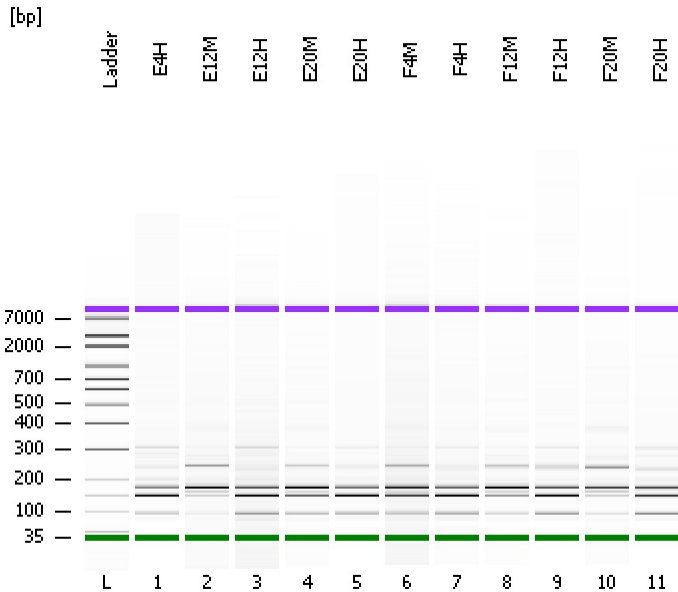


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
Modified: 8/5/2019 1:05:46 PM

Electrophoresis File Run Summary



Instrument Information:

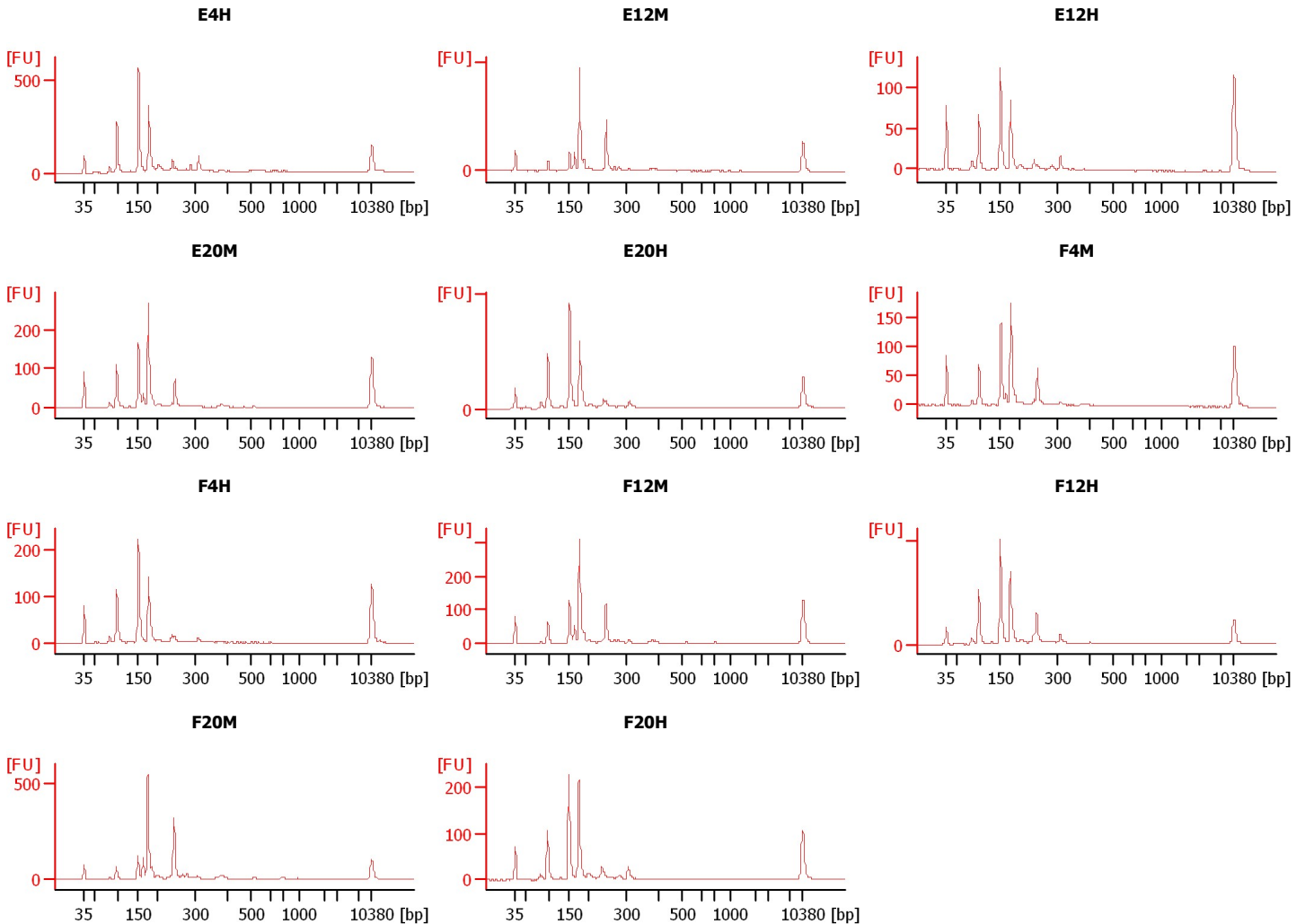
Instrument Name: DE34903152 Firmware: C.01.069
Serial#: DE34903152 Type: G2938C

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:



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
 Modified: 8/5/2019 1:05:46 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
E4H		<input type="checkbox"/>	✓			
E12M		<input type="checkbox"/>	✓			
E12H		<input type="checkbox"/>	✓			
E20M		<input type="checkbox"/>	✓			
E20H		<input type="checkbox"/>	✓			
F4M		<input type="checkbox"/>	✓			
F4H		<input type="checkbox"/>	✓			
F12M		<input type="checkbox"/>	✓			
F12H		<input type="checkbox"/>	✓			
F20M		<input type="checkbox"/>	✓			
F20H		<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\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
Modified: 8/5/2019 1:05:46 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

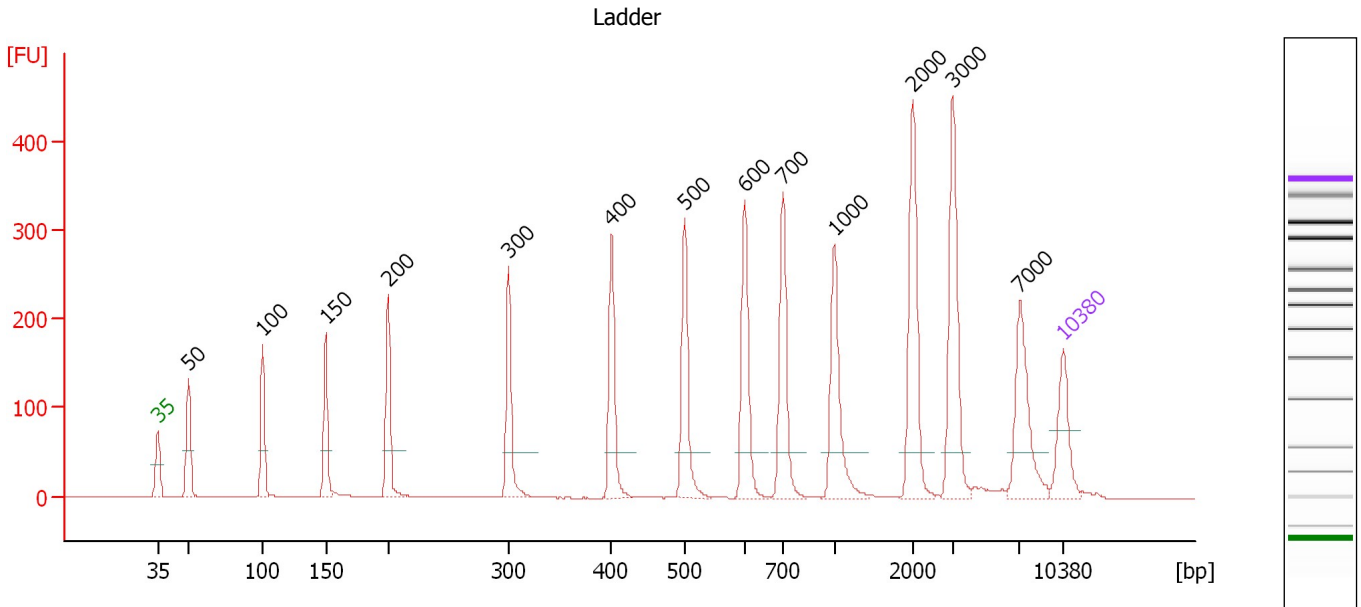
Ladder

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\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

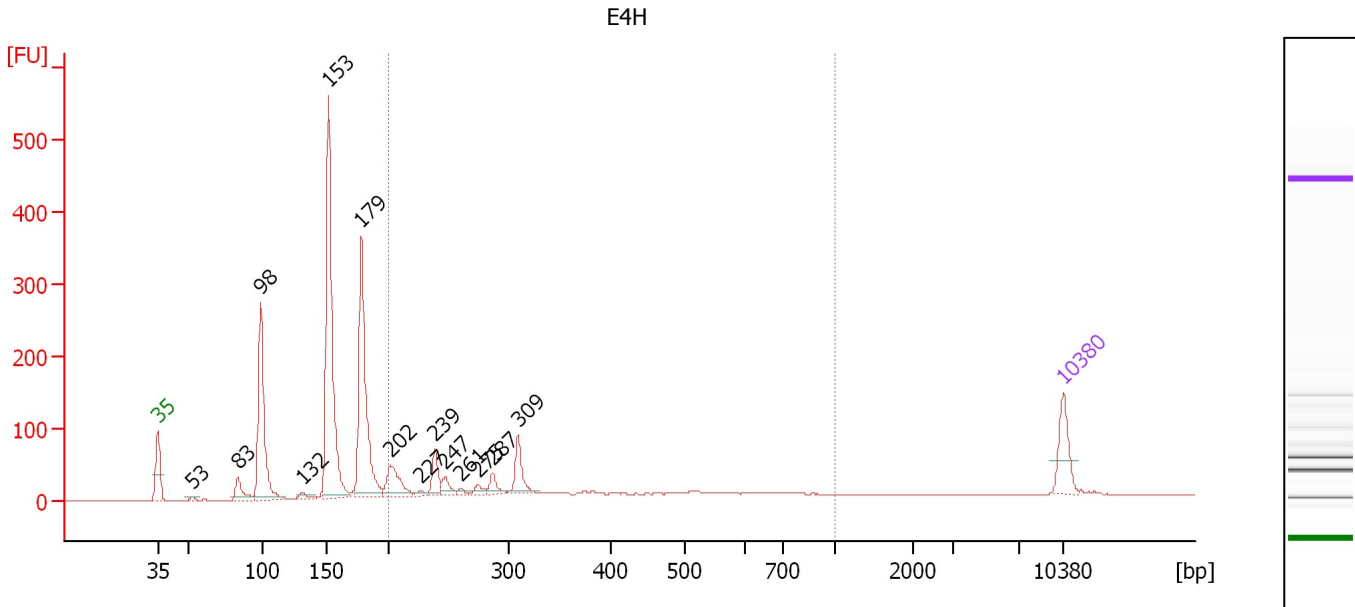
Peak table for Ladder

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	45.38
3	100	150.00	2,272.7	Ladder Peak	51.13
4	150	150.00	1,515.2	Ladder Peak	55.99
5	200	150.00	1,136.4	Ladder Peak	60.80
6	300	150.00	757.6	Ladder Peak	70.17
7	400	150.00	568.2	Ladder Peak	78.10
8	500	150.00	454.5	Ladder Peak	83.75
9	600	150.00	378.8	Ladder Peak	88.41
10	700	150.00	324.7	Ladder Peak	91.34
11	1,000	150.00	227.3	Ladder Peak	95.30
12	2,000	150.00	113.6	Ladder Peak	101.40
13	3,000	150.00	75.8	Ladder Peak	104.47
14	7,000	150.00	32.5	Ladder Peak	109.68
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : E4H

Number of peaks found: 14 Corr. Area 1: 553.3
 Noise: 0.4

Peak table for sample 1 : E4H

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	10.13	290.9		45.70
3	83	61.91	1,126.0		49.21
4	98	419.70	6,465.0		50.94
5	132	15.68	180.6		54.20
6	153	737.82	7,326.9		56.24
7	179	511.02	4,337.4		58.73
8	202	106.63	798.2		61.02
9	227	12.01	80.0		63.36
10	239	63.10	400.4		64.43
11	247	32.79	200.7		65.25
12	261	9.39	54.6		66.47
13	275	19.47	107.4		67.79
14	287	31.90	168.7		68.91
15	309	79.09	388.3		70.85
16	10,380	75.00	10.9	Upper Marker	113.00

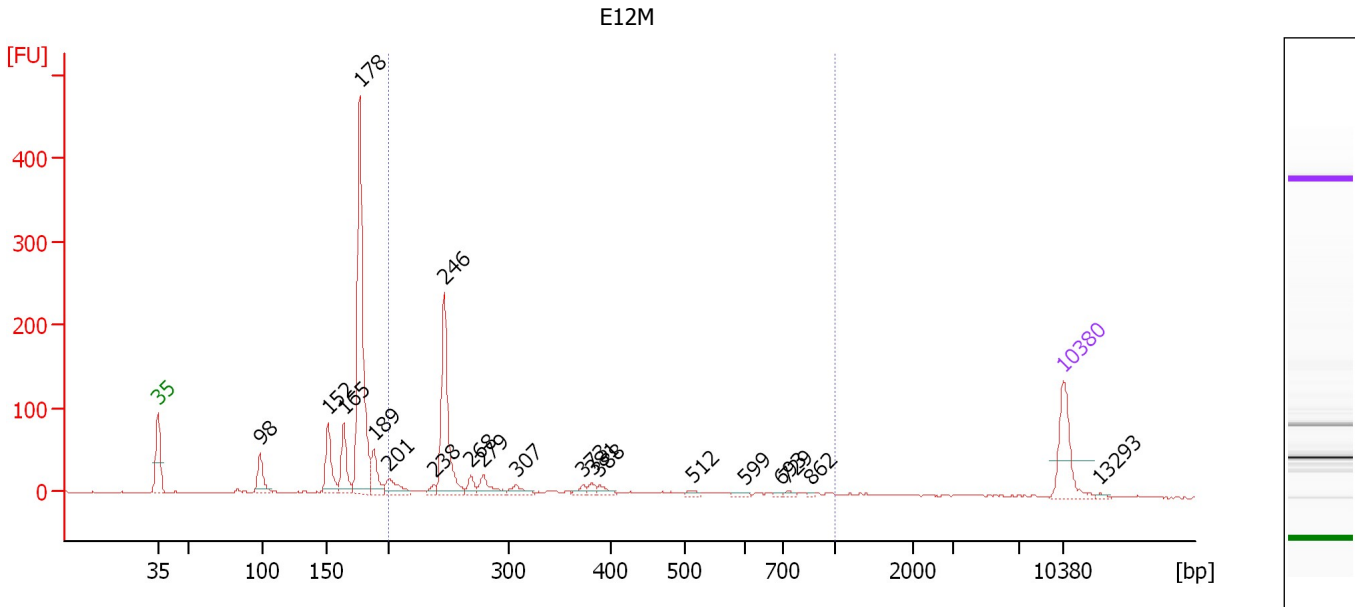
Region table for sample 1 : E4H

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	351	618.22	553.3	3,209.4	29	44.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : E12M

Number of peaks found: 20 Corr. Area 1: 476.6
 Noise: 0.9

Peak table for sample 2 : E12M

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	98	59.40	917.6		50.91
3	152	90.89	906.8		56.17
4	165	83.14	764.1		57.42
5	178	451.52	3,847.0		58.67
6	189	51.91	416.9		59.71
7	201	39.20	295.3		60.90
8	238	11.48	73.0		64.39
9	246	218.97	1,348.0		65.12
10	268	19.59	110.6		67.20
11	279	33.67	182.9		68.19
12	307	19.67	97.2		70.69
13	373	11.84	48.1		75.94
14	381	10.09	40.2		76.57
15	388	13.50	52.7		77.14
16	512	6.93	20.5		84.32
17	599	5.26	13.3		88.38
18	693	3.25	7.1		91.14
19	729	5.08	10.6		91.71
20	862	2.41	4.2		93.48
21	10,380	75.00	10.9	Upper Marker	113.00
22	13,293	0.00	0.0		115.86


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...

... Region table for sample 2 :

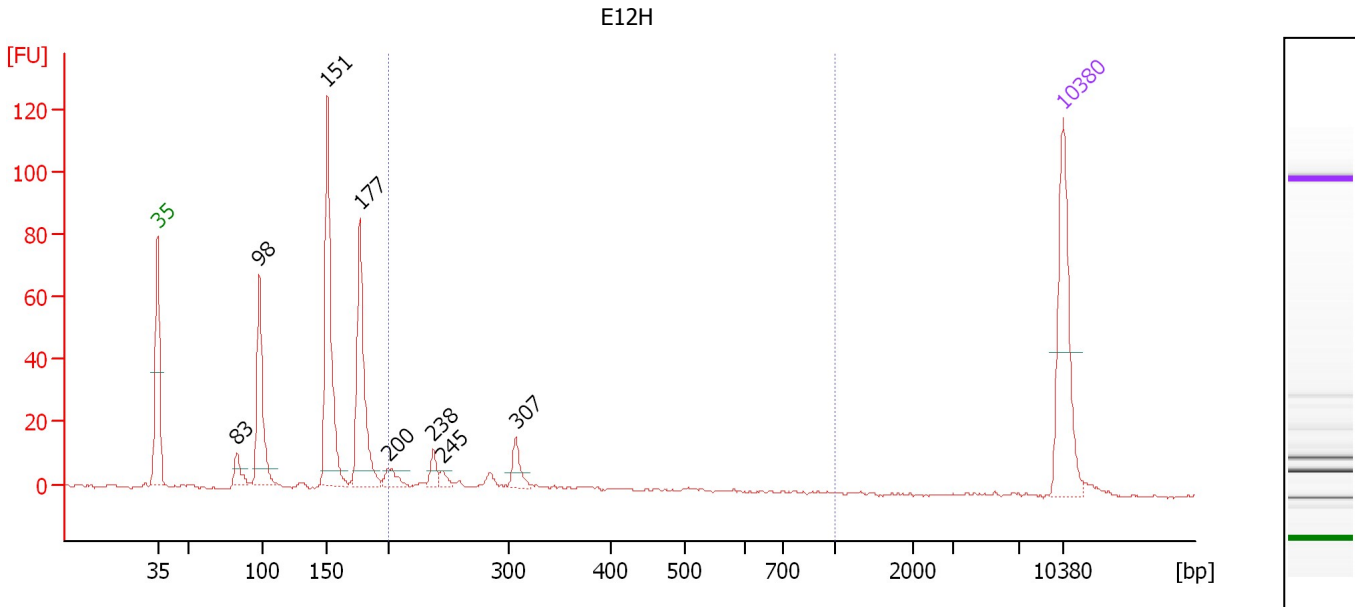
E12M

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/ μ l]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	339	450.01	476.6	2,413.1	 39	47.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

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 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : E12H

Number of peaks found: 8 Corr. Area 1: 66.7
 Noise: 0.4

Peak table for sample 3 : E12H

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	83	17.42	318.4		49.17
3	98	100.64	1,560.7		50.87
4	151	168.48	1,685.5		56.13
5	177	122.76	1,048.3		58.63
6	200	13.59	102.9		60.81
7	238	12.64	80.6		64.31
8	245	6.65	41.1		65.06
9	307	16.88	83.4		70.69
10	10,380	75.00	10.9	Upper Marker	113.00

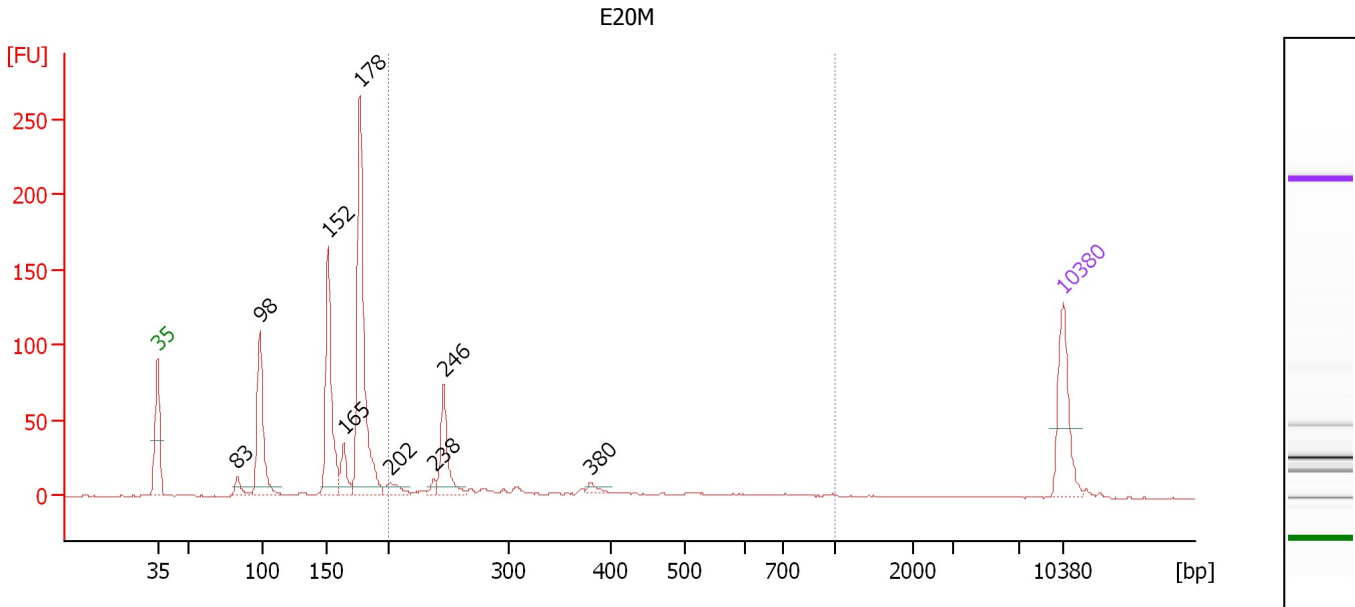
Region table for sample 3 : E12H

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	291	77.23	66.7	431.9	17	28.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

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 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : E20M

Number of peaks found: 9 Corr. Area 1: 216.0
 Noise: 0.5

Peak table for sample 4 : E20M

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	83	20.10	368.1		49.15
3	98	161.11	2,493.9		50.89
4	152	207.60	2,072.0		56.16
5	165	42.86	394.0		57.41
6	178	338.65	2,885.5		58.66
7	202	19.92	149.7		60.95
8	238	9.08	57.8		64.38
9	246	81.58	501.8		65.14
10	380	8.72	34.8		76.50
11	10,380	75.00	10.9	Upper Marker	113.00

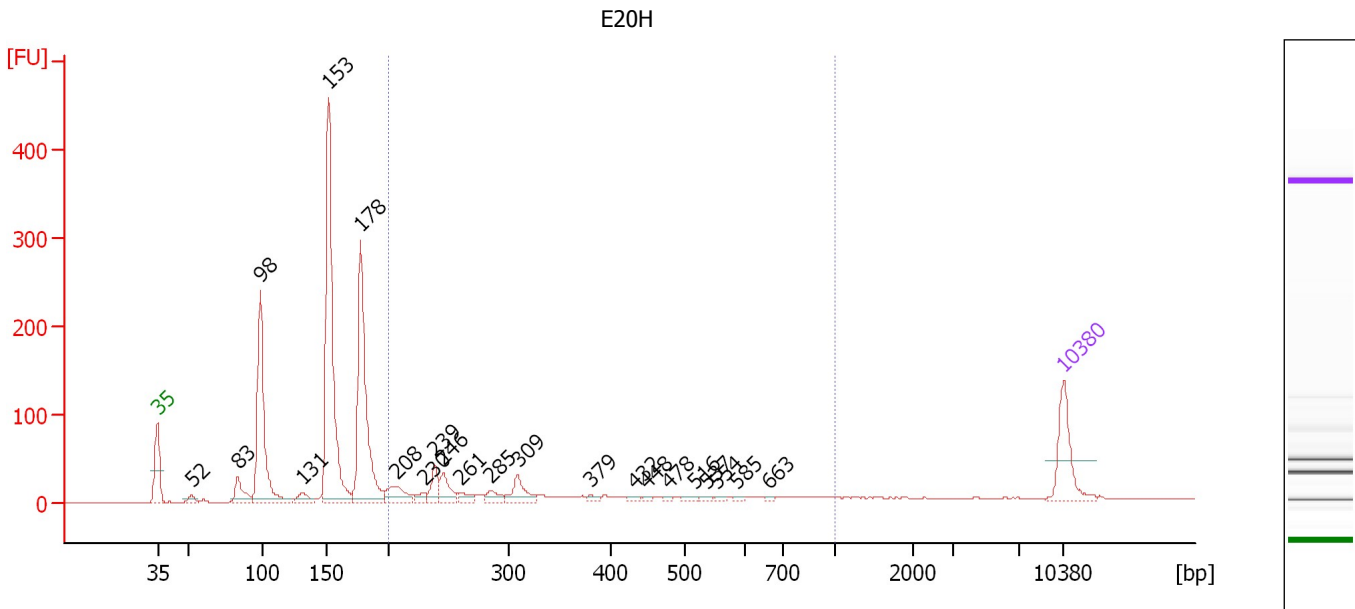
Region table for sample 4 : E20M

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	355	234.16	216.0	1,221.6	25	46.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

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 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : E20H

Number of peaks found: 22 Corr. Area 1: 395.2
 Noise: 0.6

Peak table for sample 5 : E20H

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	52	13.14	381.7		45.63
3	83	55.10	1,002.6		49.21
4	98	333.93	5,144.9		50.94
5	131	24.01	276.8		54.18
6	153	547.71	5,433.7		56.25
7	178	378.38	3,215.3		58.71
8	208	49.15	358.8		61.51
9	230	14.38	94.9		63.58
10	239	38.99	247.6		64.41
11	246	41.57	256.3		65.08
12	261	17.05	99.1		66.48
13	285	20.76	110.5		68.72
14	309	44.17	216.9		70.84
15	379	7.29	29.1		76.43
16	432	6.09	21.4		79.90
17	448	4.56	15.4		80.80
18	478	3.98	12.6		82.53
19	516	7.04	20.7		84.49
20	537	5.89	16.6		85.49
21	554	5.31	14.5		86.27
22	585	4.62	12.0		87.73
23	663	3.59	8.2		90.24
24	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...

... Region table for sample 5 :

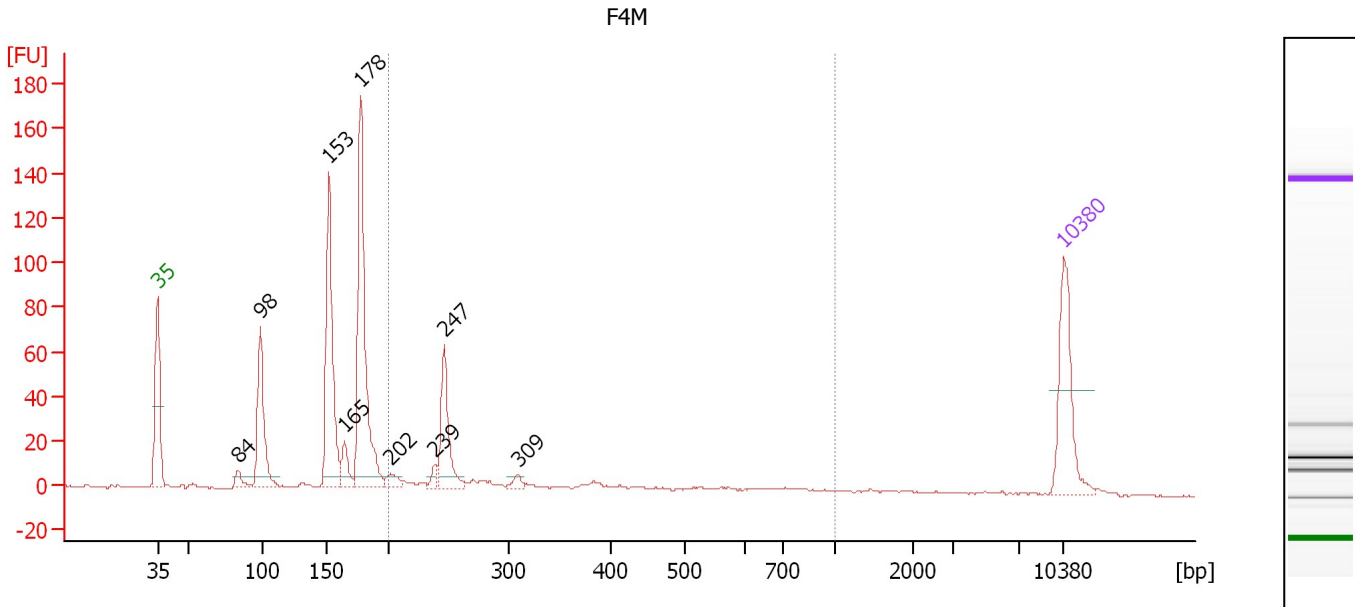
E20H

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/ μ l]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	379	359.85	395.2	1,794.5	 24	46.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
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Electropherogram Summary Continued ...



Overall Results for sample 6 : F4M

Number of peaks found: 9 Corr. Area 1: 174.7
 Noise: 0.5

Peak table for sample 6 : F4M

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	84	14.03	254.6		49.23
3	98	116.95	1,800.3		50.95
4	153	198.08	1,962.8		56.27
5	165	28.30	259.2		57.47
6	178	257.41	2,185.3		58.73
7	202	14.85	111.2		61.01
8	239	9.66	61.2		64.45
9	247	79.92	490.5		65.19
10	309	7.80	38.3		70.85
11	10,380	75.00	10.9	Upper Marker	113.00

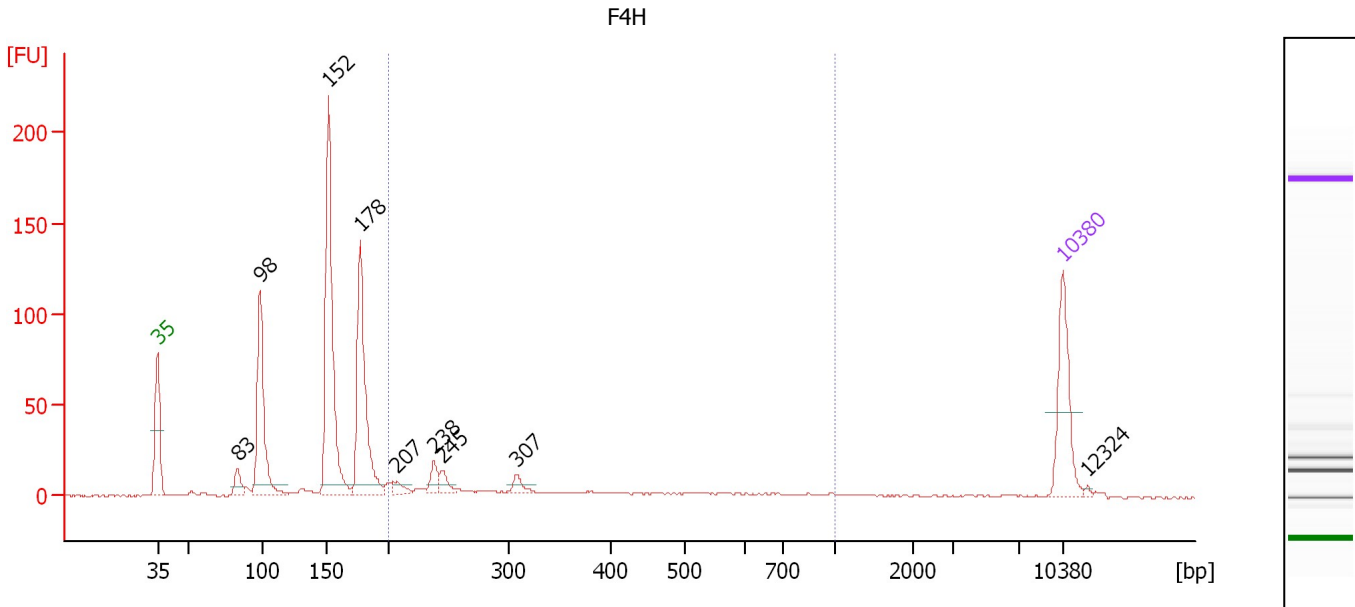
Region table for sample 6 : F4M

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	342	205.95	174.7	1,100.3	27	46.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : F4H

Number of peaks found: 9 Corr. Area 1: 162.8
 Noise: 0.4

Peak table for sample 7 : F4H

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	83	23.37	425.8		49.20
3	98	189.30	2,918.5		50.93
4	152	321.69	3,202.3		56.20
5	178	220.09	1,872.4		58.69
6	207	13.26	97.0		61.47
7	238	20.71	131.8		64.36
8	245	18.11	112.1		65.00
9	307	14.04	69.3		70.73
10	10,380	75.00	10.9	Upper Marker	113.00
11	12,324	0.00	0.0		114.91

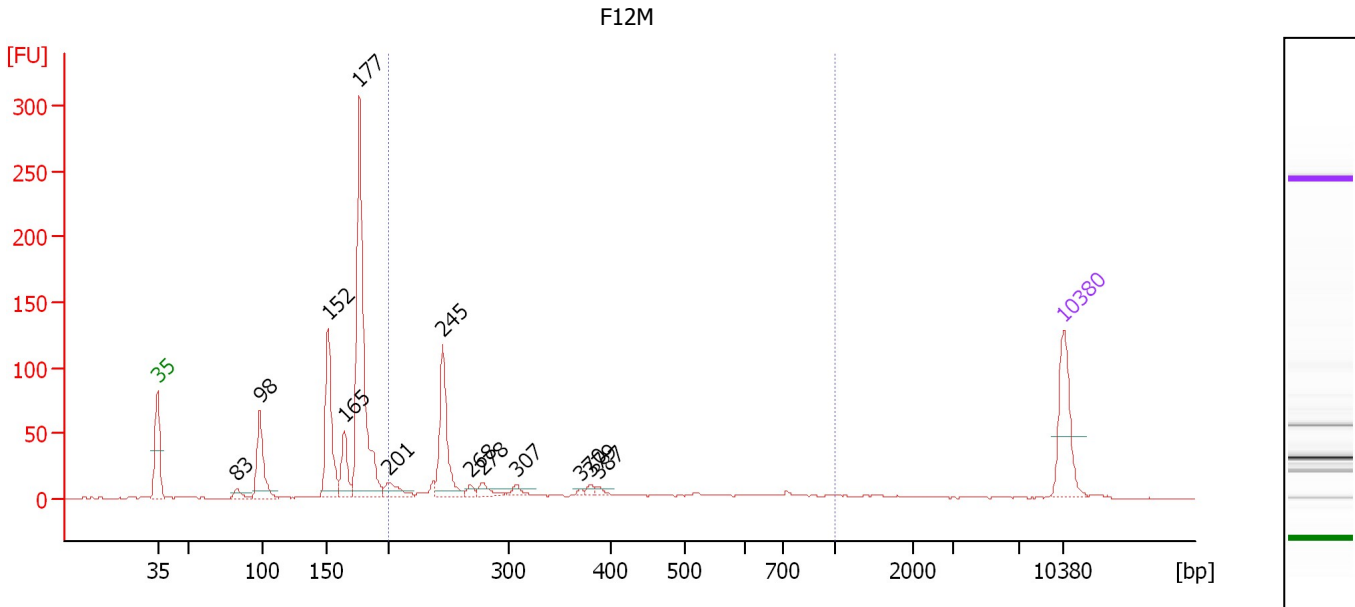
Region table for sample 7 : F4H

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	371	183.81	162.8	938.1	21	47.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

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 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : F12M

Number of peaks found: 13 Corr. Area 1: 311.2
 Noise: 0.4

Peak table for sample 8 : F12M

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	83	14.05	257.1		49.16
3	98	102.06	1,575.9		50.91
4	152	163.40	1,627.7		56.19
5	165	59.80	549.4		57.42
6	177	399.46	3,417.6		58.59
7	201	28.08	211.8		60.88
8	245	129.32	798.7		65.04
9	268	9.03	51.1		67.15
10	278	16.67	90.7		68.15
11	307	10.70	52.8		70.73
12	370	3.47	14.2		75.71
13	379	6.42	25.7		76.42
14	387	6.24	24.4		77.06
15	10,380	75.00	10.9	Upper Marker	113.00

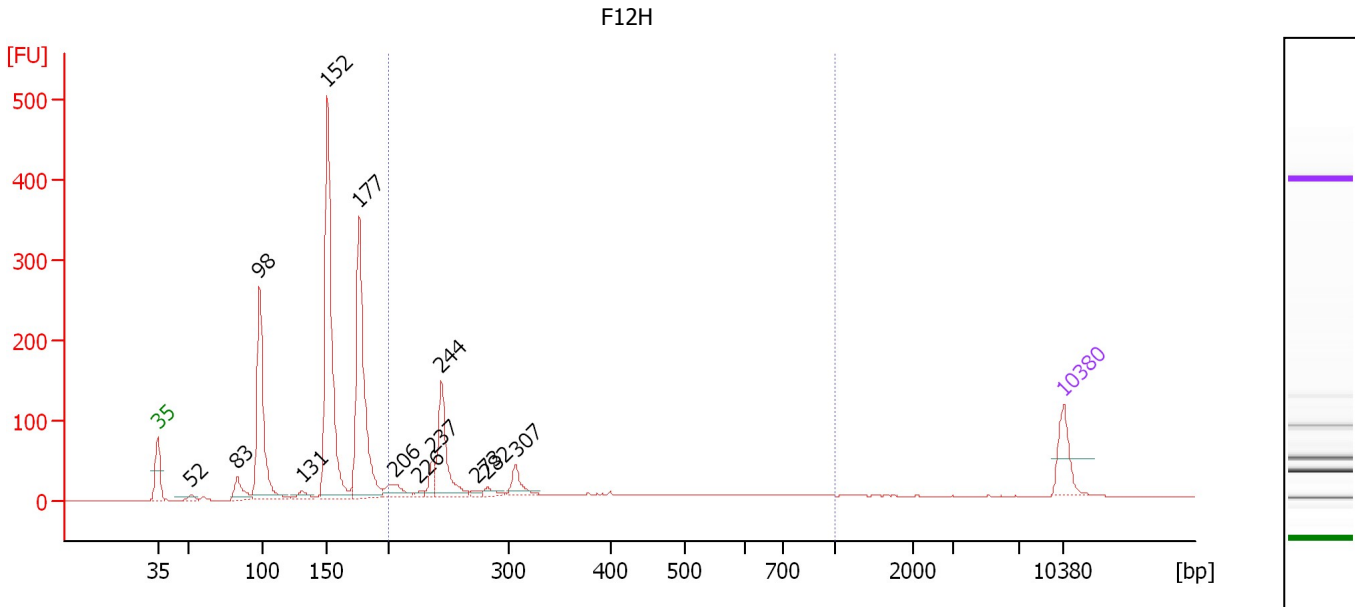
Region table for sample 8 : F12M

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	351	328.10	311.2	1,726.6	32	47.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

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 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : F12H

Number of peaks found: 13 Corr. Area 1: 560.5
 Noise: 0.4

Peak table for sample 9 : F12H

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	52	14.94	435.7		45.60
3	83	68.79	1,258.5		49.15
4	98	481.26	7,460.9		50.87
5	131	26.17	301.8		54.18
6	152	792.99	7,929.0		56.14
7	177	587.89	5,039.3		58.56
8	206	56.38	413.7		61.40
9	226	10.54	70.7		63.24
10	237	46.18	294.8		64.30
11	244	213.42	1,323.4		64.95
12	273	10.89	60.5		67.62
13	282	18.66	100.2		68.50
14	307	52.13	257.6		70.69
15	10,380	75.00	10.9	Upper Marker	113.00

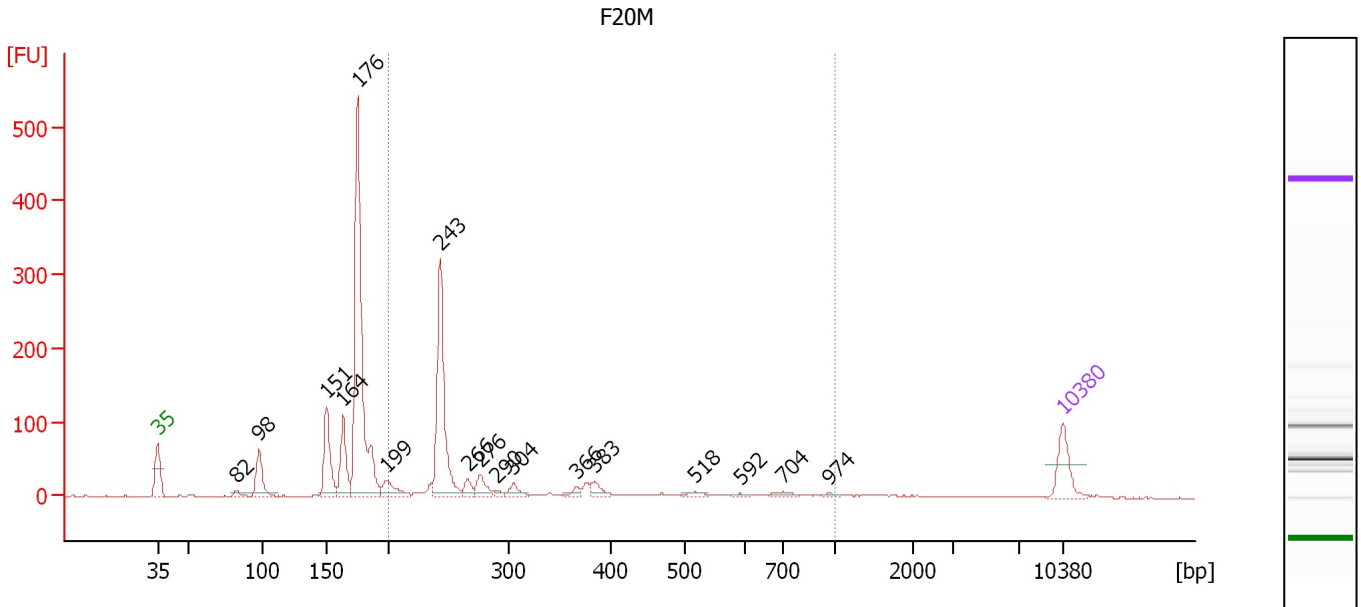
Region table for sample 9 : F12H

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	351	688.55	560.5	3,617.4	27	46.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

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 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : F20M

Number of peaks found: 17 Corr. Area 1: 617.7
 Noise: 0.5

Peak table for sample 10 : F20M

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	82	14.27	263.3		49.07
3	98	113.21	1,757.0		50.86
4	151	185.32	1,858.1		56.10
5	164	149.56	1,380.9		57.35
6	176	855.67	7,372.0		58.48
7	199	62.70	476.5		60.74
8	243	432.21	2,692.7		64.85
9	266	30.92	176.1		66.99
10	276	50.81	278.7		67.94
11	290	11.26	58.8		69.25
12	304	31.96	159.2		70.50
13	366	17.33	71.6		75.44
14	383	28.95	114.5		76.75
15	518	15.02	43.9		84.61
16	592	8.19	20.9		88.06
17	704	16.79	36.1		91.39
18	974	7.26	11.3		94.96
19	10,380	75.00	10.9	Upper Marker	113.00

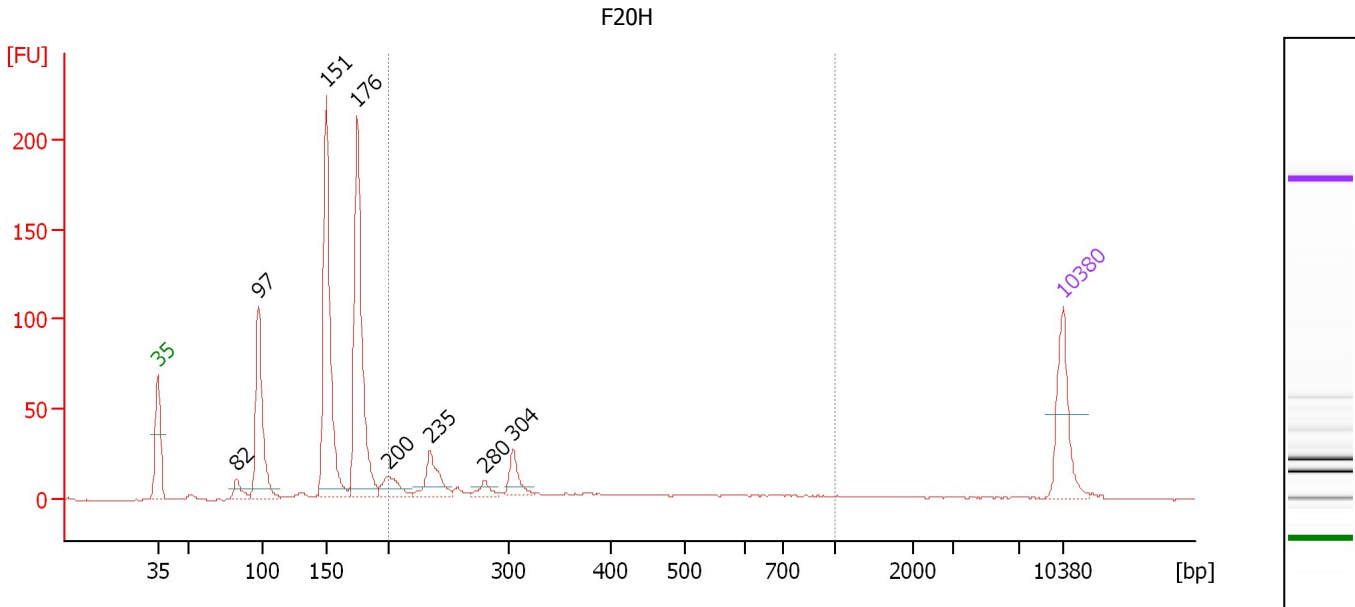
Region table for sample 10 : F20M

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	335	826.04	617.7	4,474.1	39	47.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
 Modified: 8/5/2019 1:05:46 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : F20H

Number of peaks found: 8 Corr. Area 1: 217.9
 Noise: 0.4

Peak table for sample 11 : F20H

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	82	25.62	471.0		49.11
3	97	202.38	3,161.4		50.78
4	151	370.03	3,720.9		56.05
5	176	349.93	3,019.7		58.45
6	200	39.58	300.1		60.78
7	235	59.83	385.8		64.08
8	280	15.47	83.6		68.33
9	304	35.97	179.3		70.49
10	10,380	75.00	10.9	Upper Marker	113.00

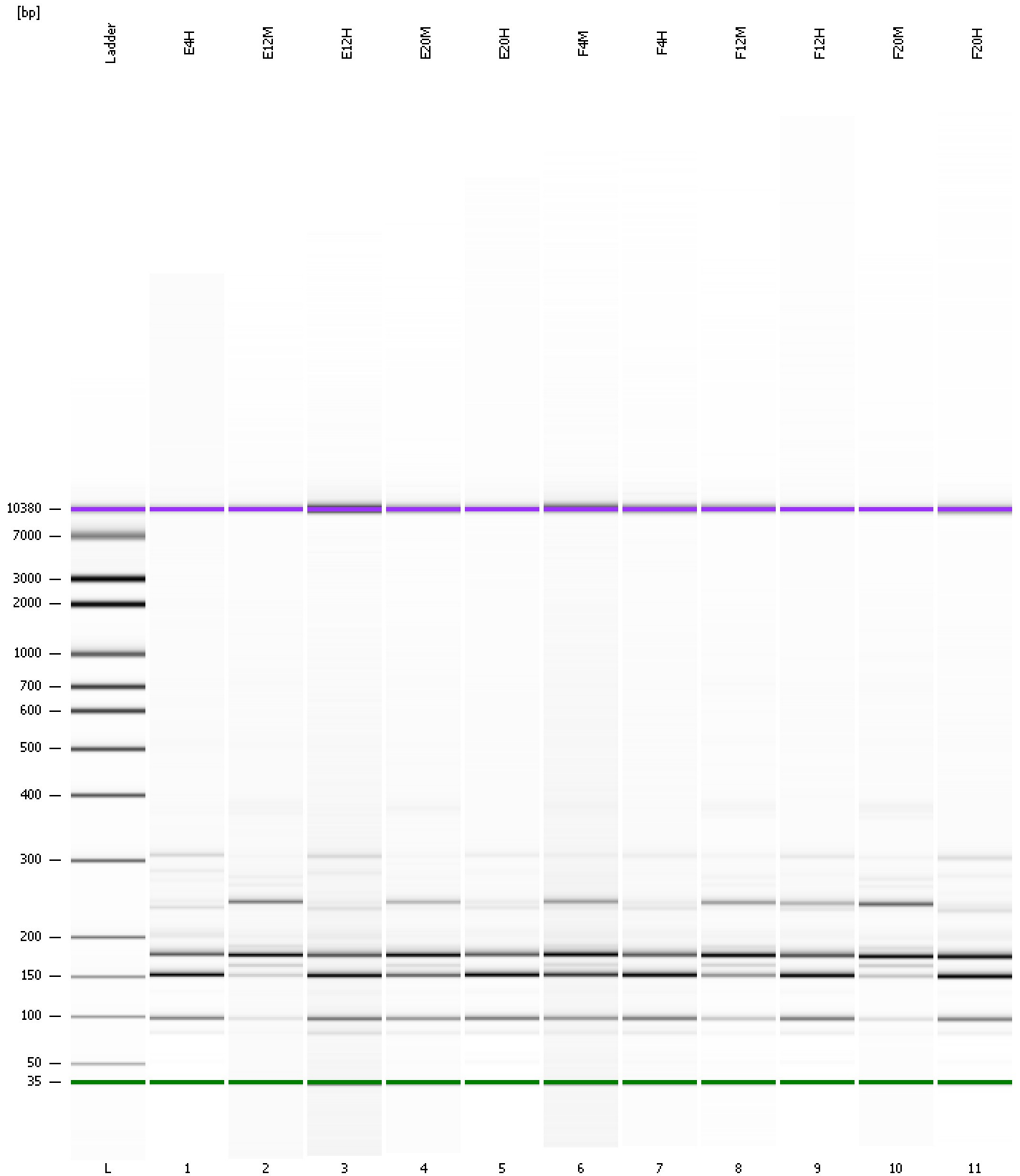
Region table for sample 11 : F20H

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	361	274.67	217.9	1,406.8	24	46.1

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
Modified: 8/5/2019 1:05:46 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2019-08-05\2019-08-05_001.xad

Created: 8/5/2019 12:22:43 PM
 Modified: 8/5/2019 1:05:46 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		8/5/2019 1:04:01 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\2019-08-05\2019-08-05_001.xad)		Instrument	Run		8/5/2019 12:22:49 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938C		Instrument	Run		8/5/2019 12:22:49 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		8/5/2019 12:22:49 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		8/5/2019 12:22:49 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE34903152		Instrument	Run		8/5/2019 12:22:49 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		8/5/2019 12:22:49 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		8/5/2019 12:22:49 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1