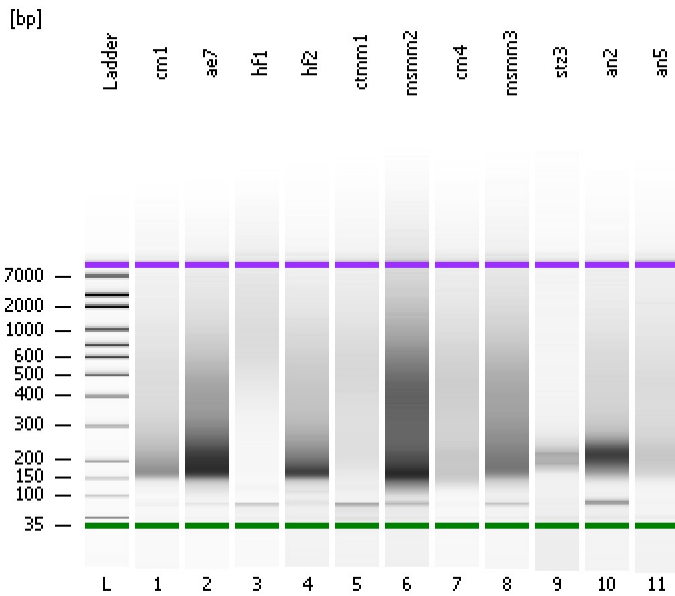


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
Modified: 12/19/2016 11:51:58 AM

Electrophoresis File Run Summary



Instrument Information:

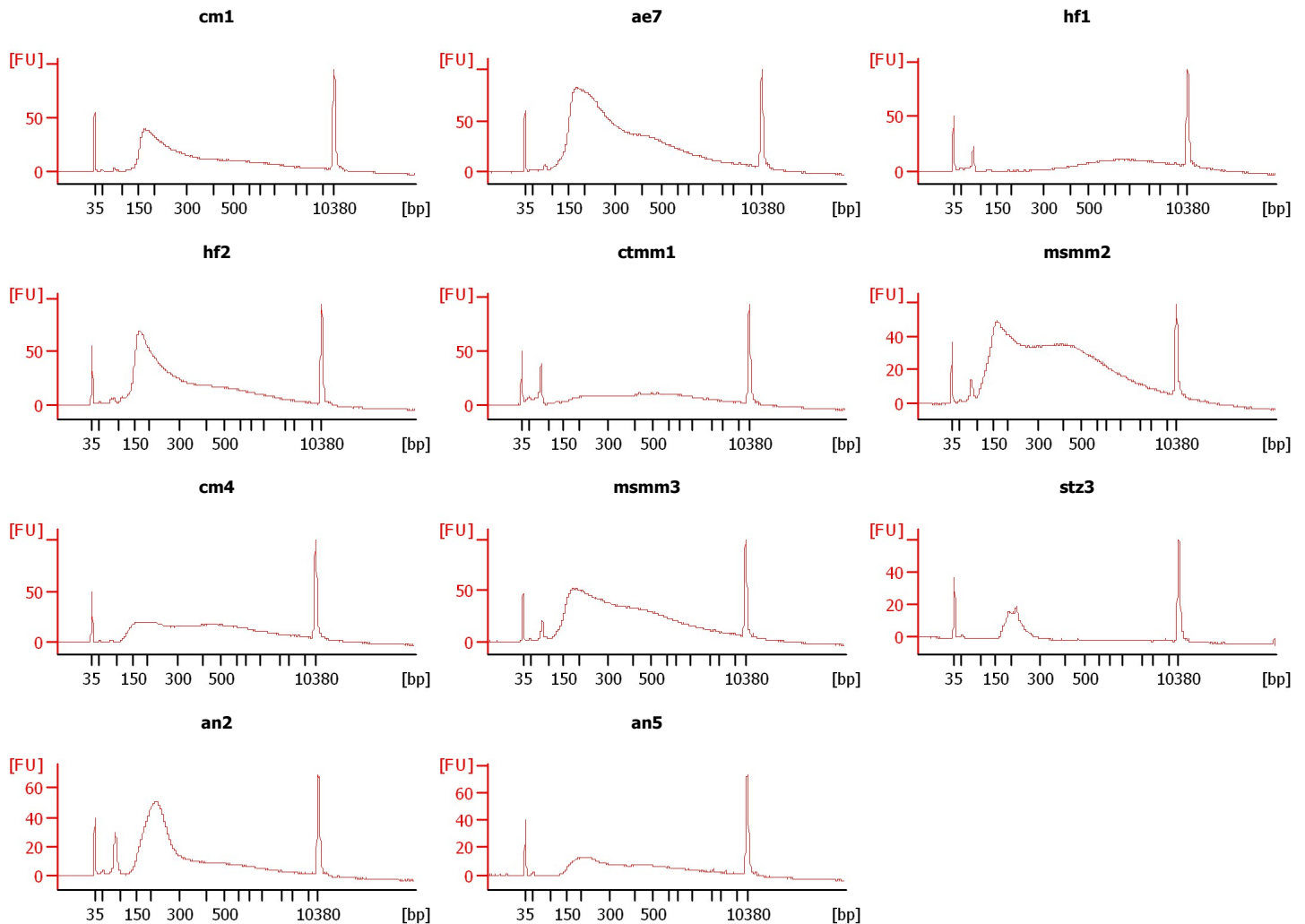
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
cm1		<input type="checkbox"/>	✓			
ae7		<input type="checkbox"/>	✓			
hf1		<input type="checkbox"/>	✓			
hf2		<input type="checkbox"/>	✓			
ctmm1		<input type="checkbox"/>	✓			
mshm2		<input type="checkbox"/>	✓			
cm4		<input type="checkbox"/>	✓			
mshm3		<input type="checkbox"/>	✓			
stz3		<input type="checkbox"/>	✓			
an2		<input type="checkbox"/>	✓			
an5		<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\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
Modified: 12/19/2016 11:51:58 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

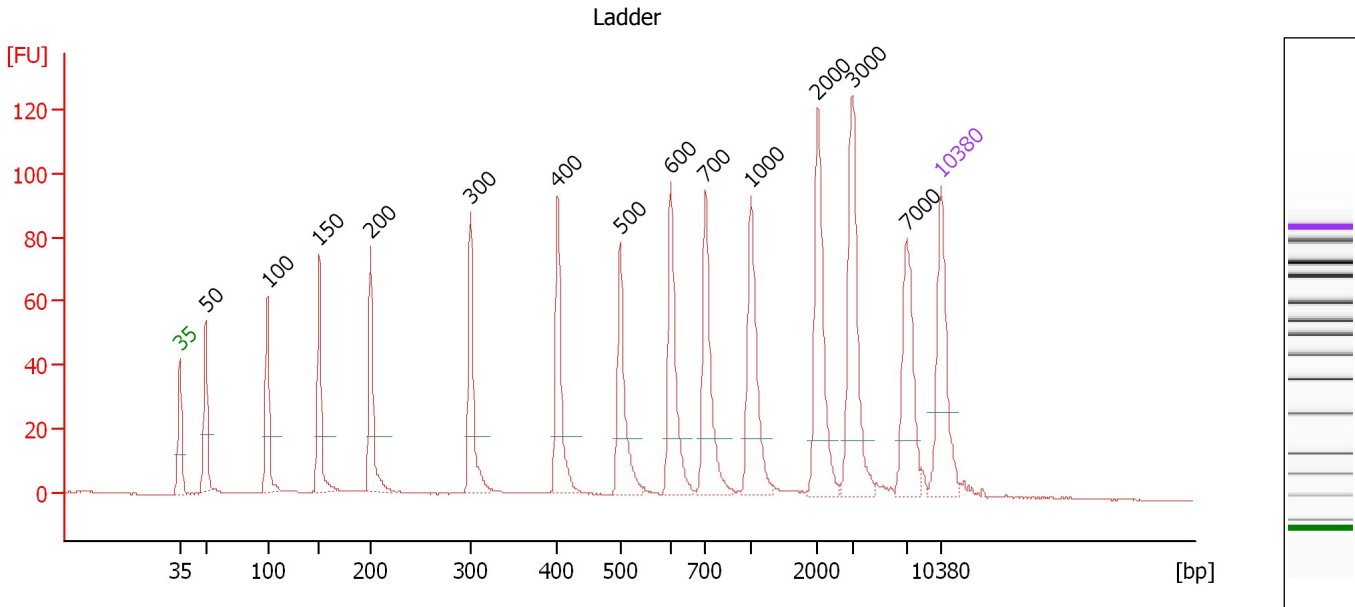
Ladder

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:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

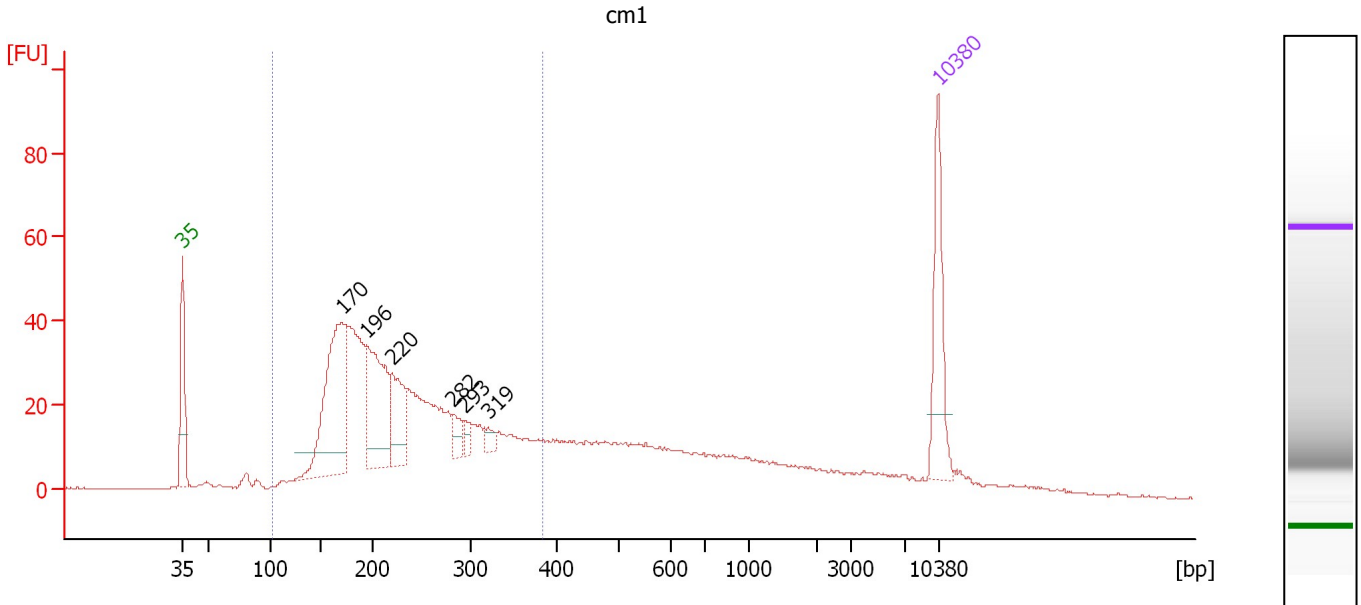
Peak table for Ladder

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	45.35
3	100	150.00	2,272.7	Ladder Peak	51.04
4	150	150.00	1,515.2	Ladder Peak	55.80
5	200	150.00	1,136.4	Ladder Peak	60.51
6	300	150.00	757.6	Ladder Peak	69.73
7	400	150.00	568.2	Ladder Peak	77.73
8	500	150.00	454.5	Ladder Peak	83.47
9	600	150.00	378.8	Ladder Peak	88.13
10	700	150.00	324.7	Ladder Peak	91.37
11	1,000	150.00	227.3	Ladder Peak	95.49
12	2,000	150.00	113.6	Ladder Peak	101.67
13	3,000	150.00	75.8	Ladder Peak	104.86
14	7,000	150.00	32.5	Ladder Peak	109.86
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : cm1

Number of peaks found: 6 Corr. Area 1: 778.9
 Noise: 0.2

Peak table for sample 1 : cm1

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	170	271.32	2,413.0		57.72
3	196	165.63	1,283.3		60.09
4	220	89.76	618.0		62.36
5	282	21.41	114.9		68.10
6	293	13.15	67.9		69.13
7	319	12.98	61.7		71.26
8	10,380	75.00	10.9	Upper Marker	113.00

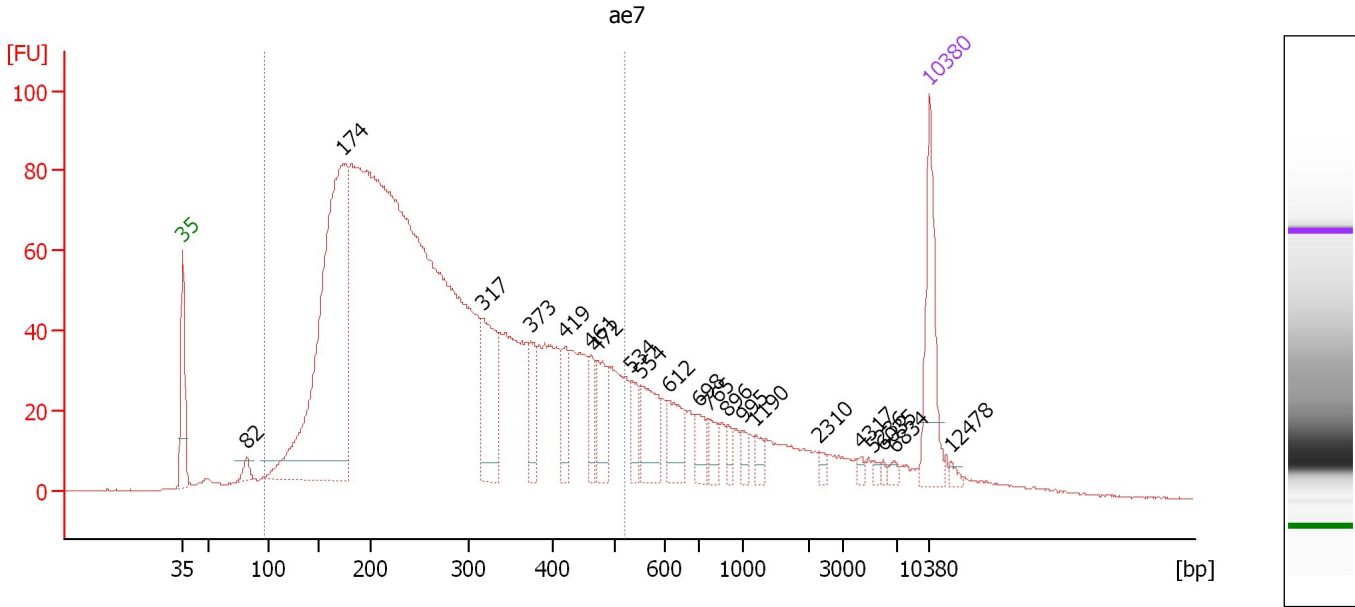
Region table for sample 1 : cm1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
104	382	234	778.9	9,725.2	1,357.60	66	27.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : ae7

Number of peaks found: 21 Corr. Area 1: 2,357.7
 Noise: 0.2


Peak table for sample 2 : ae7

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	16.31	301.4		49.00
3	174	721.38	6,290.9		58.04
4	317	123.06	588.5		71.08
5	373	44.98	182.7		75.58
6	419	40.40	146.1		78.82
7	461	31.69	104.2		81.22
8	472	53.23	170.8		81.87
9	534	28.63	81.2		85.07
10	554	59.46	162.7		85.97
11	612	44.84	111.0		88.52
12	698	22.33	48.4		91.32
13	765	18.85	37.3		92.26
14	896	11.80	19.9		94.06
15	995	10.80	16.5		95.41
16	1,190	11.20	14.3		96.66
17	2,310	5.47	3.6		102.66
18	4,317	4.12	1.4		106.50
19	5,236	3.89	1.1		107.65
20	6,035	3.17	0.8		108.65
21	6,834	5.25	1.2		109.65
22	10,380	75.00	10.9	Upper Marker	113.00
23	12,478	0.00	0.0		114.95

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
Modified: 12/19/2016 11:51:58 AM

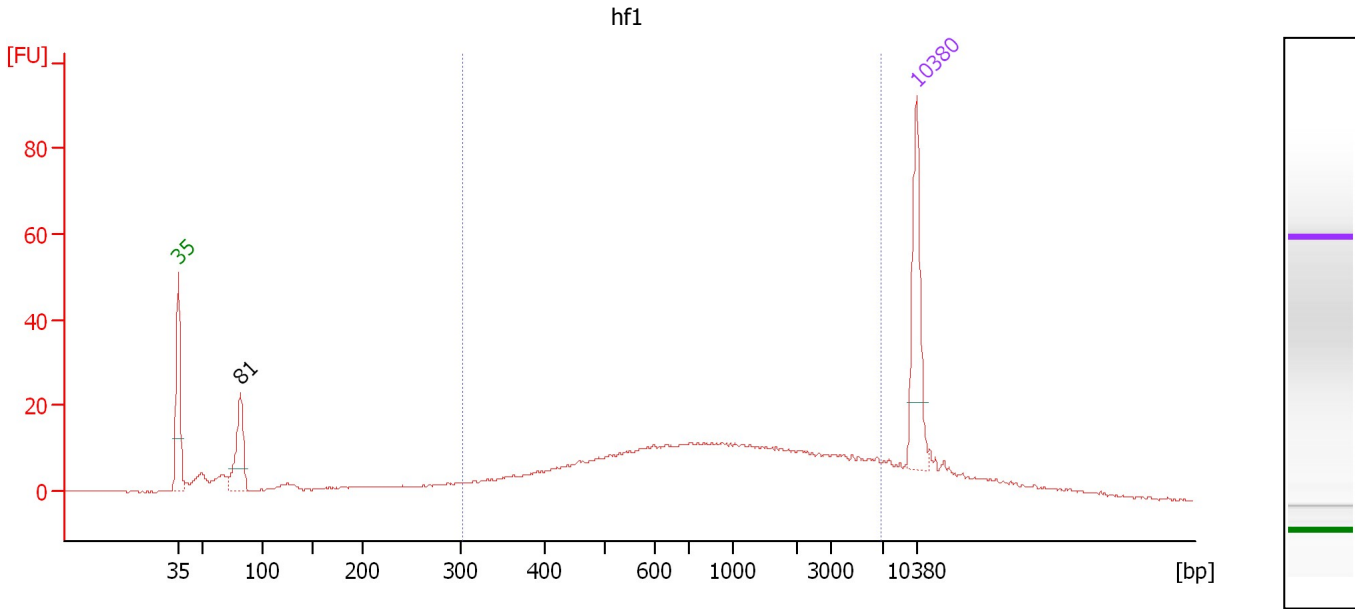
Electropherogram Summary Continued ...**... Region table for sample 2 :**ae7

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
97	520	276	2,357.7	23,742.9	 3,570.79	81	36.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : hf1

Number of peaks found: 1 Corr. Area 1: 388.7
 Noise: 0.2

Peak table for sample 3 : hf1

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	81	85.36	1,592.1		48.91
3	10,380	75.00	10.9	Upper Marker	113.00

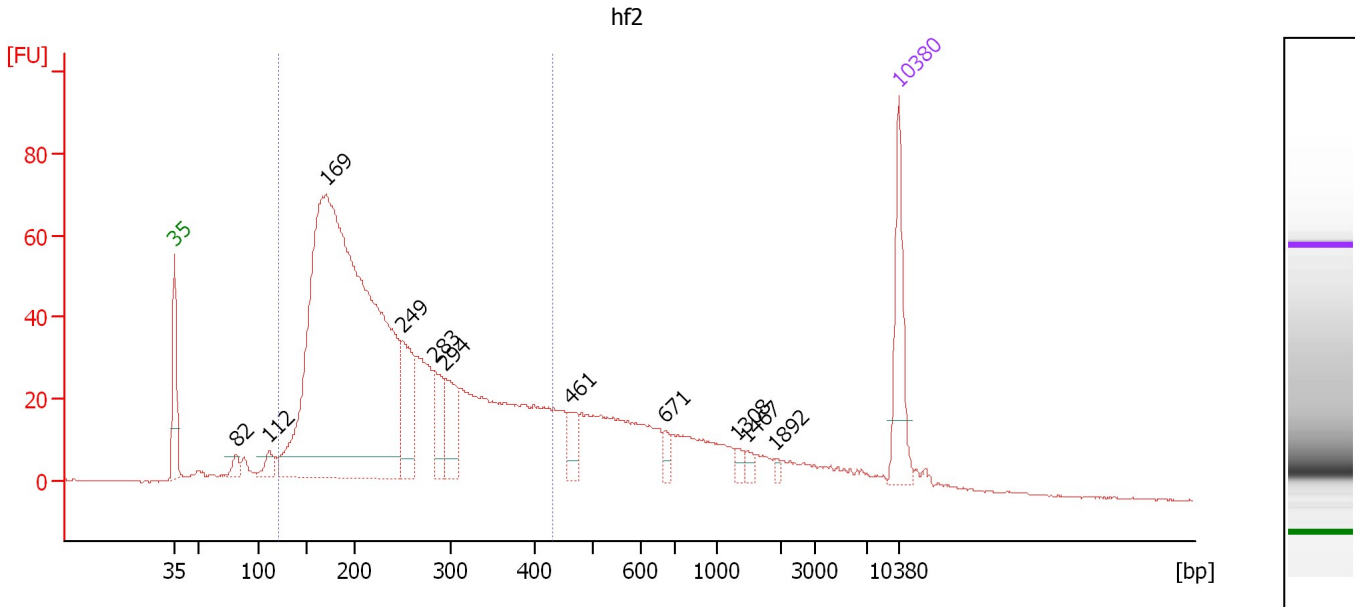
Region table for sample 3 : hf1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
302	6,717	1,457	388.7	1,184.4	537.44	67	99.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
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Electropherogram Summary Continued ...



Overall Results for sample 4 : hf2

Number of peaks found: 11 Corr. Area 1: 1,355.8
 Noise: 0.1

Peak table for sample 4 : hf2

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	17.97	332.8		48.97
3	112	25.53	346.0		52.17
4	169	1,607.56	14,380.0		57.63
5	249	109.57	667.8		64.99
6	283	59.05	316.5		68.14
7	294	77.96	401.2		69.22
8	461	30.97	101.8		81.22
9	671	12.76	28.8		90.44
10	1,308	7.73	8.9		97.39
11	1,467	7.30	7.5		98.37
12	1,892	4.02	3.2		101.00
13	10,380	75.00	10.9	Upper Marker	113.00

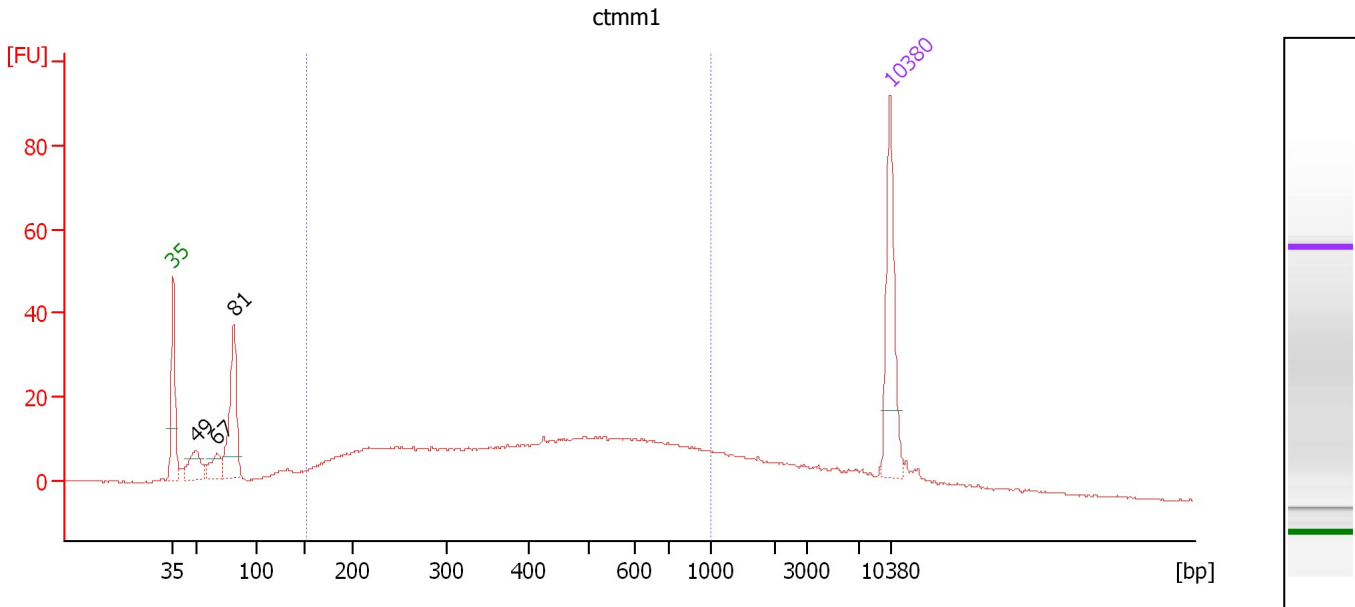
Region table for sample 4 : hf2

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
121	432	244	1,355.8	16,541.6	2,330.25	73	31.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 5 : ctmm1

Number of peaks found: 3 Corr. Area 1: 504.0
 Noise: 0.2

Peak table for sample 5 : ctmm1

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	49	43.49	1,346.9		45.19
3	67	29.27	663.9		47.27
4	81	123.21	2,292.2		48.93
5	10,380	75.00	10.9	Upper Marker	113.00

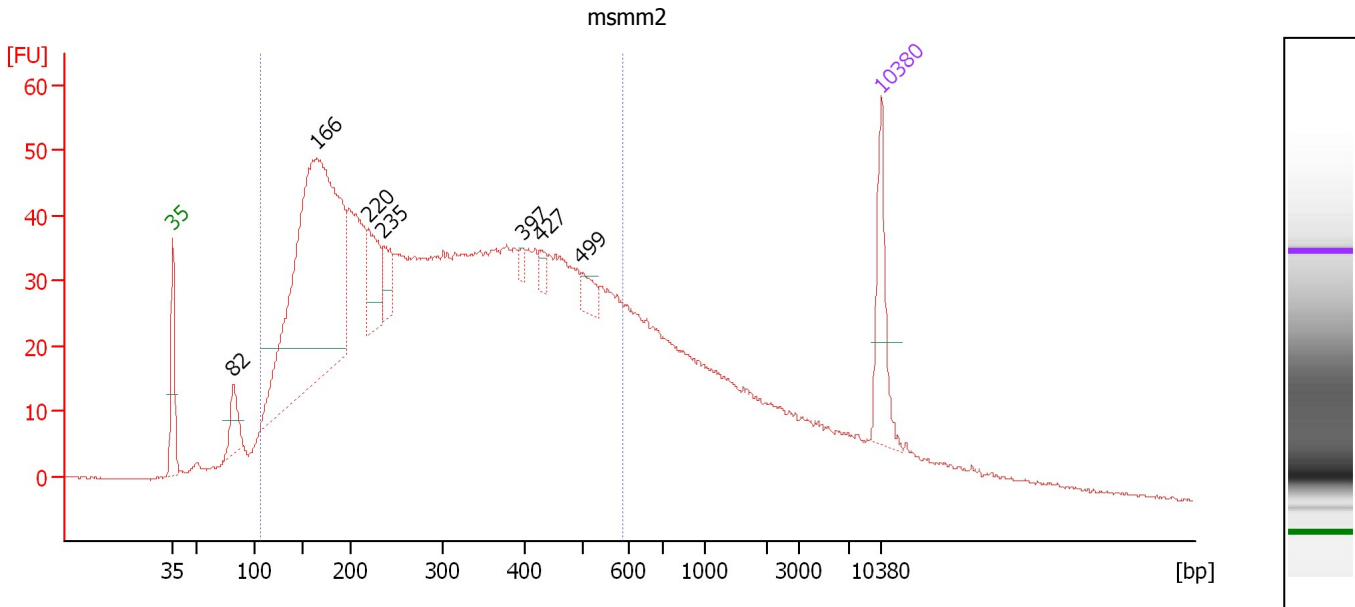
Region table for sample 5 : ctmm1

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
152	1,000	448	504.0	3,530.2	771.12	64	44.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 6 : msmm2

Number of peaks found: 7 Corr. Area 1: 1,804.1
 Noise: 0.2

Peak table for sample 6 : msmm2

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	61.89	1,142.6		49.00
3	166	961.01	8,791.9		57.27
4	220	89.60	617.9		62.33
5	235	50.08	322.7		63.75
6	397	9.86	37.6		77.50
7	427	14.42	51.1		79.29
8	499	23.68	71.9		83.40
9	10,380	75.00	10.9	Upper Marker	113.00

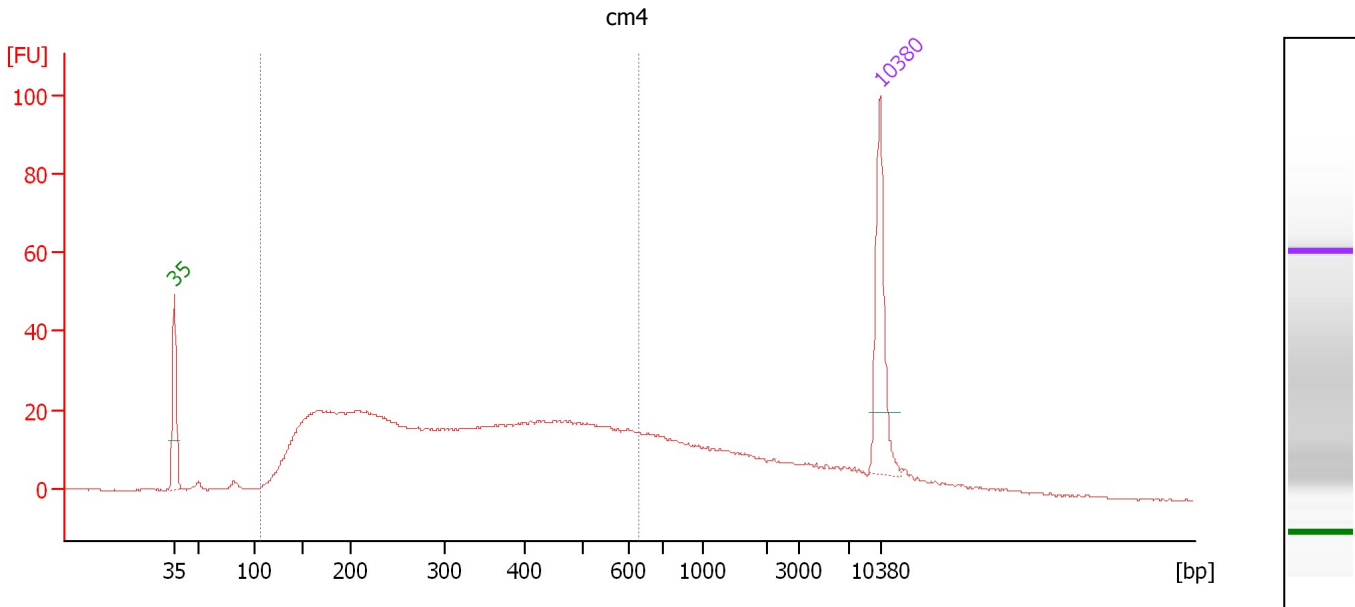
Region table for sample 6 : msmm2

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
107	585	310	1,804.1	31,245.1	4,857.55	77	40.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 7 : cm4

Number of peaks found: 0 Corr. Area 1: 877.8
 Noise: 0.1

Peak table for sample 7 : cm4

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	10,380	75.00	10.9	Upper Marker	113.00

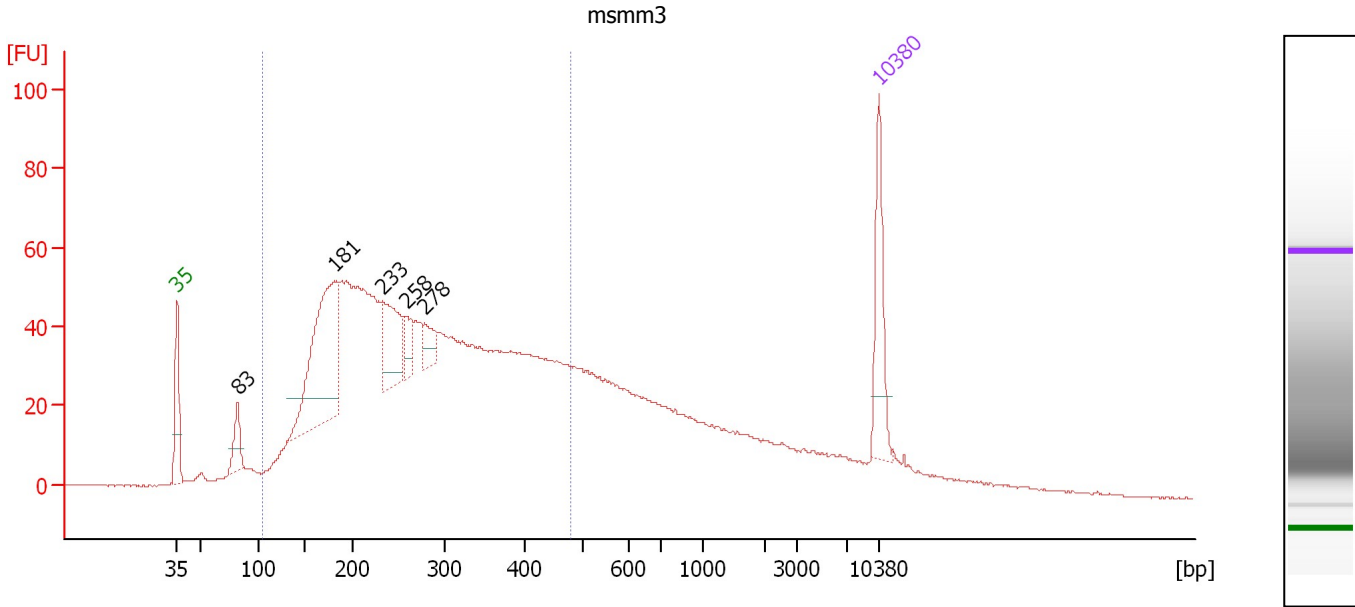
Region table for sample 7 : cm4

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
105	631	334	877.8	7,734.6	1,277.62	76	41.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 8 : msmm3

Number of peaks found: 5 Corr. Area 1: 1,618.0
 Noise: 0.2

Peak table for sample 8 : msmm3

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	50.01	917.5		49.06
3	181	337.69	2,832.0		58.69
4	233	113.54	739.1		63.53
5	258	35.68	209.4		65.87
6	278	32.18	175.2		67.73
7	10,380	75.00	10.9	Upper Marker	113.00

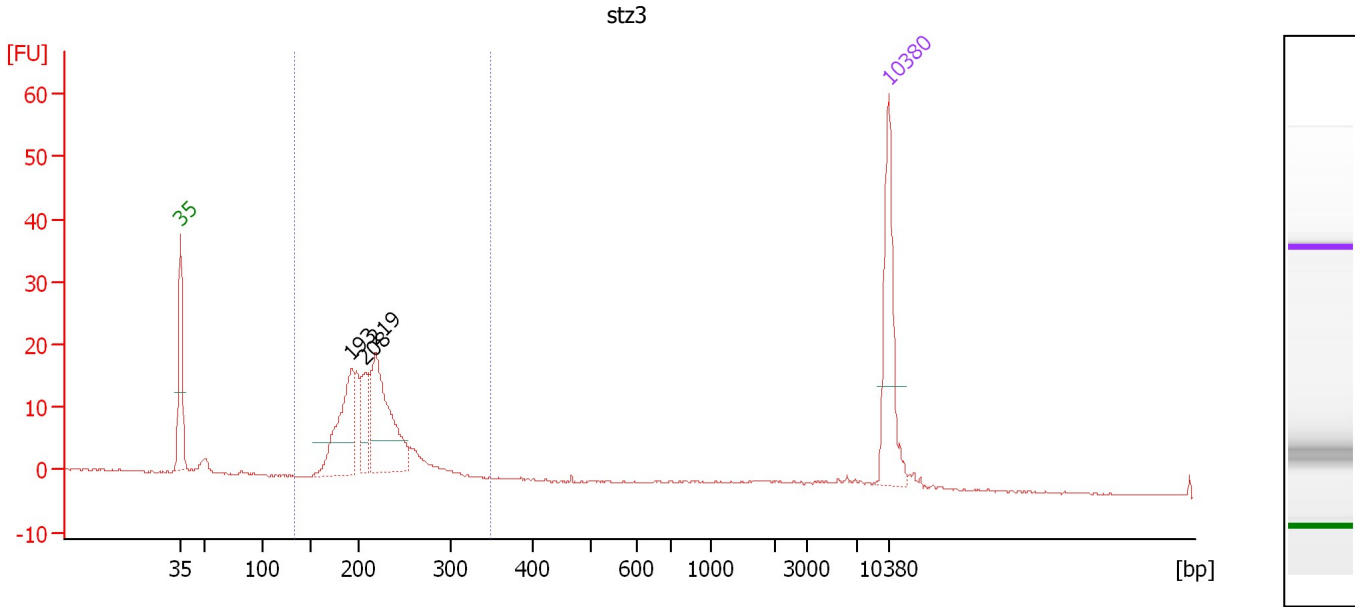
Region table for sample 8 : msmm3

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
105	479	280	1,618.0	18,568.4	2,892.94	71	33.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 9 : stz3

Number of peaks found: 3 Corr. Area 1: 173.5
 Noise: 0.1

Peak table for sample 9 : stz3

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	193	119.02	933.6		59.87
3	208	40.13	292.5		61.24
4	219	146.10	1,012.1		62.24
5	10,380	75.00	10.9	Upper Marker	113.00

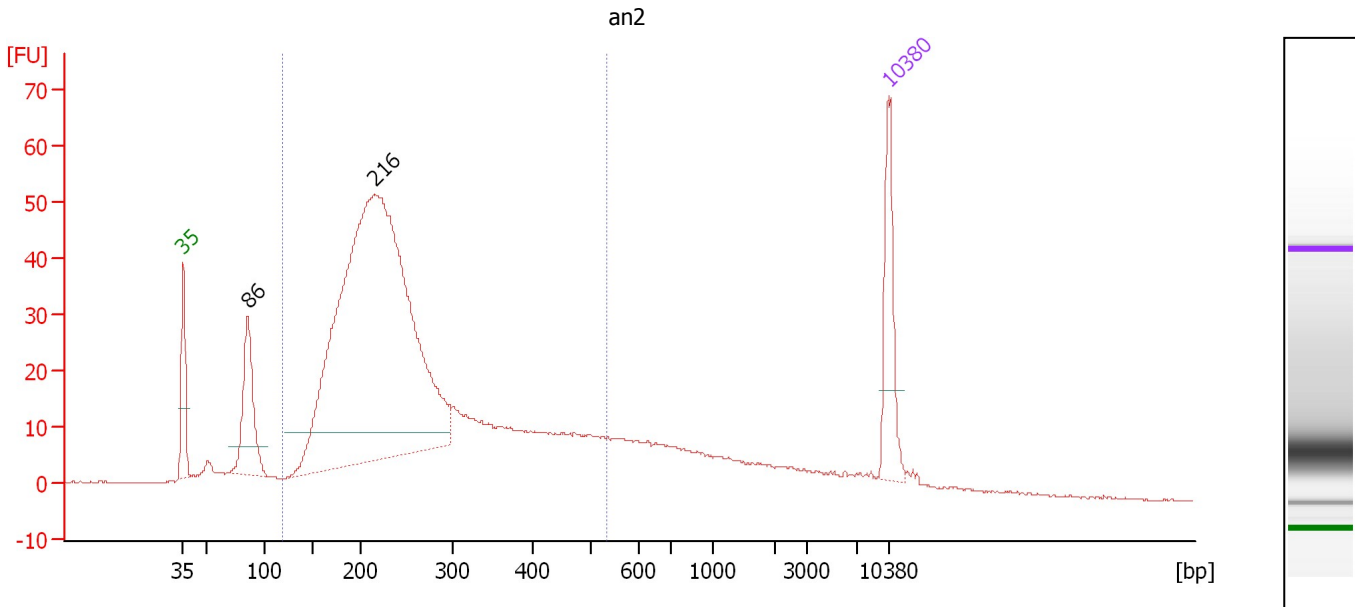
Region table for sample 9 : stz3

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
134	350	217	173.5	2,893.8	406.94	88	14.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 10 : an2

Number of peaks found: 2 Corr. Area 1: 936.7
 Noise: 0.2

Peak table for sample 10 : an2

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	86	162.82	2,883.0		49.40
3	216	1,315.81	9,251.2		61.94
4	10,380	75.00	10.9	Upper Marker	113.00

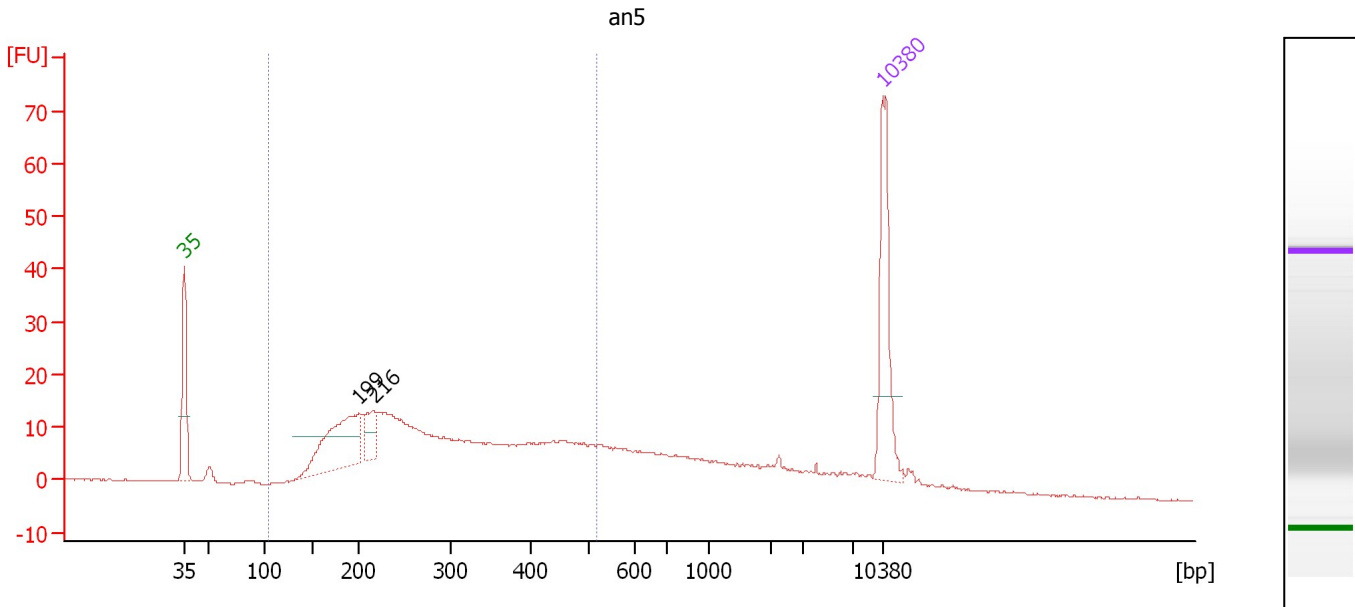
Region table for sample 10 : an2

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
119	534	265	936.7	12,799.7	1,952.43	77	34.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 AM

Electropherogram Summary Continued ...



Overall Results for sample 11 : an5

Number of peaks found: 2 Corr. Area 1: 402.3
 Noise: 0.2

Peak table for sample 11 : an5

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	199	123.02	934.5		60.46
3	216	28.37	199.3		61.95
4	10,380	75.00	10.9	Upper Marker	113.00

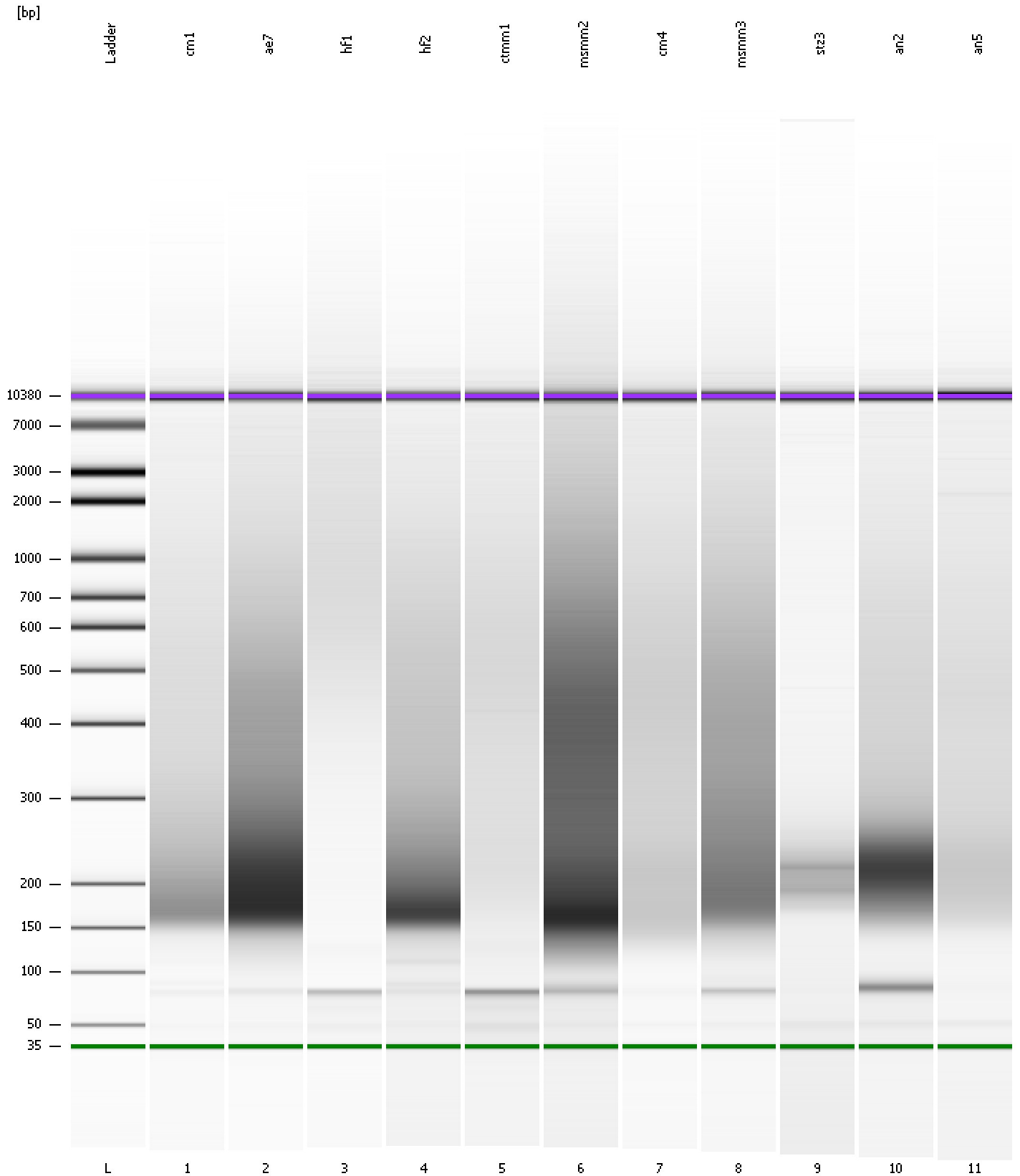
Region table for sample 11 : an5

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
104	516	298	402.3	4,420.9	732.79	68	33.9

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
Modified: 12/19/2016 11:51:58 AM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad

Created: 12/19/2016 11:10:07 AM
 Modified: 12/19/2016 11:51:58 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		12/19/2016 11:51:23 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-12-19\2016-12-19_001.xad)		Instrument	Run		12/19/2016 11:10:12 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		12/19/2016 11:10:12 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		12/19/2016 11:10:12 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		12/19/2016 11:10:12 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		12/19/2016 11:10:12 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		12/19/2016 11:10:12 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		12/19/2016 11:10:12 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1