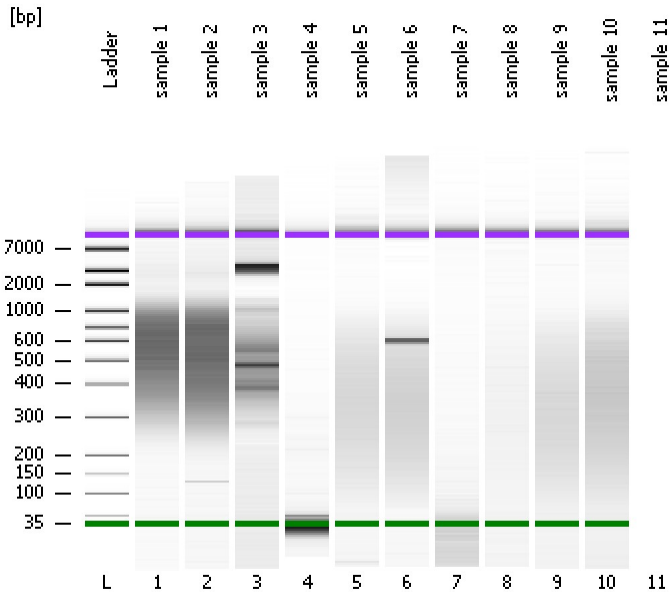


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
Modified: 12/18/2014 2:15:58 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

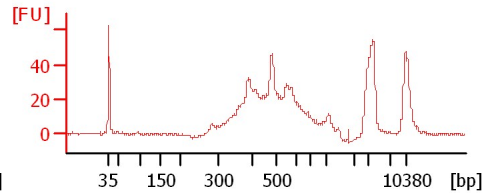
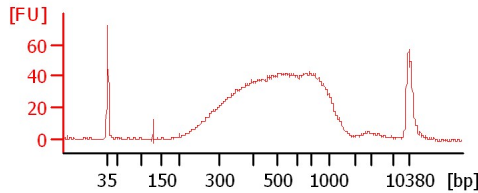
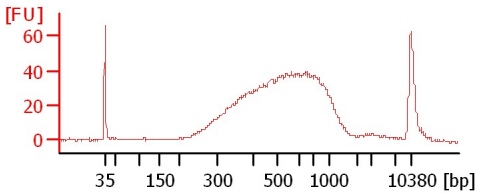
Chip Information:

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

sample 1

sample 2

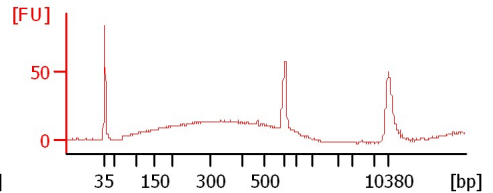
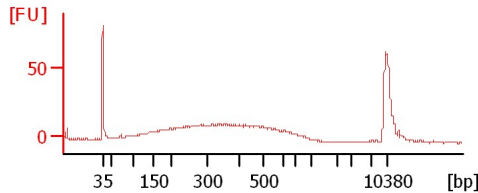
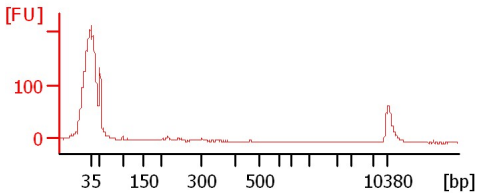
sample 3



sample 4

sample 5

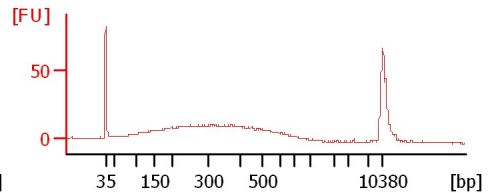
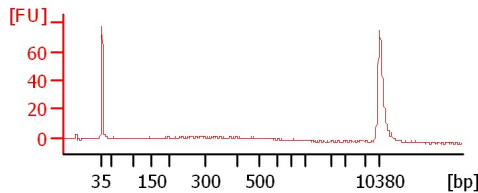
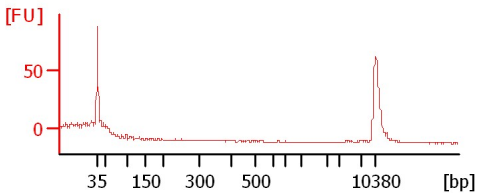
sample 6



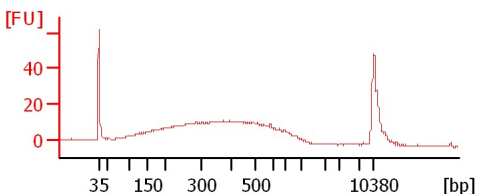
sample 7

sample 8

sample 9



sample 10



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 1		<input type="checkbox"/>	✓			
sample 2		<input type="checkbox"/>	✓			
sample 3		<input type="checkbox"/>	✓			
sample 4		<input type="checkbox"/>	✓			
sample 5		<input type="checkbox"/>	✓			
sample 6		<input type="checkbox"/>	✓			
sample 7		<input type="checkbox"/>	✓			
sample 8		<input type="checkbox"/>	✓			
sample 9		<input type="checkbox"/>	✓			
sample 10		<input type="checkbox"/>	✓			
sample 11		<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\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
Modified: 12/18/2014 2:15:58 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

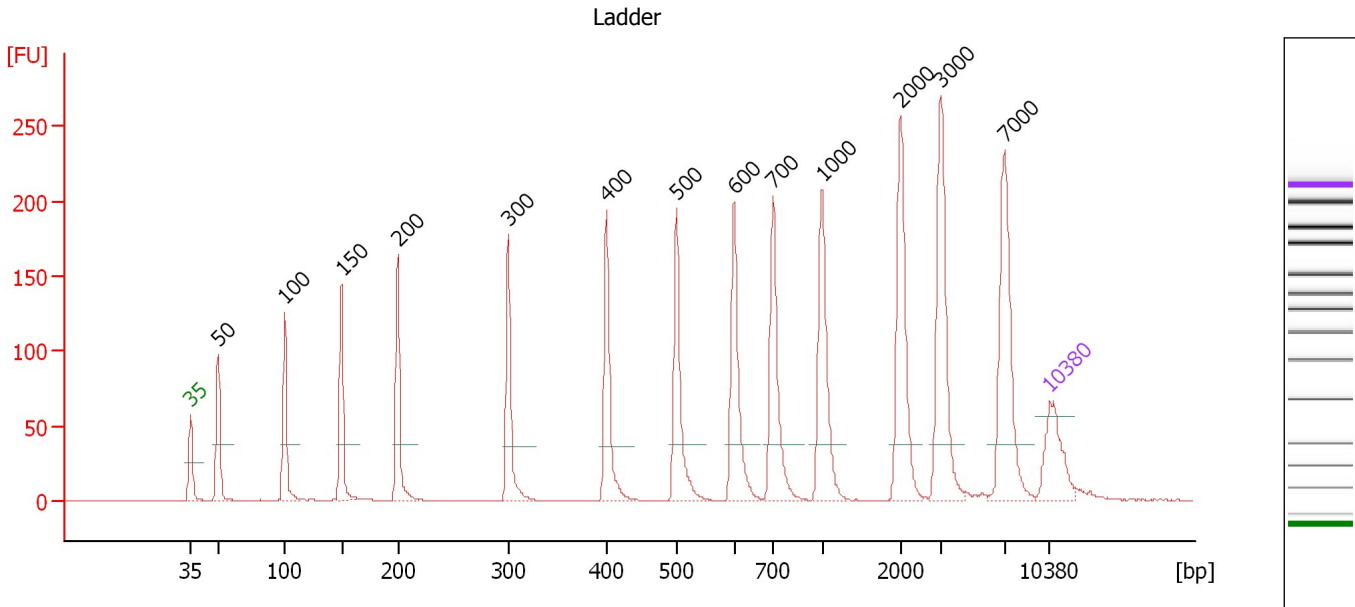
Ladder

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:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

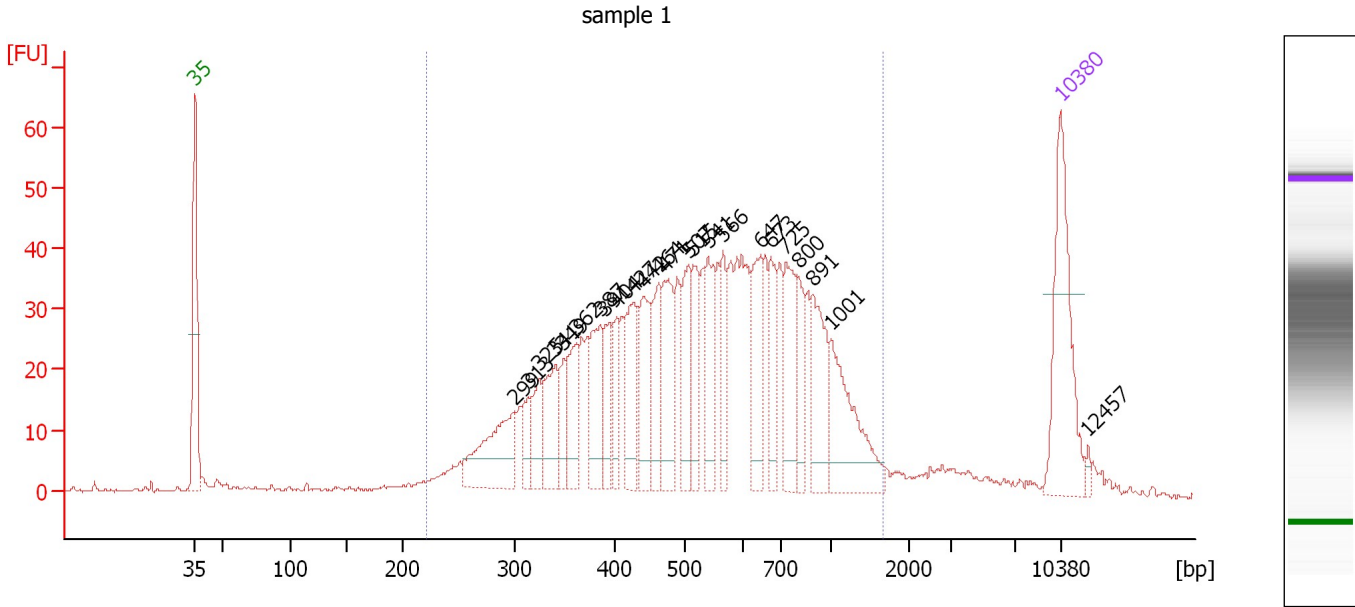
Peak table for Ladder

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	45.22
3	100	150.00	2,272.7	Ladder Peak	50.65
4	150	150.00	1,515.2	Ladder Peak	55.30
5	200	150.00	1,136.4	Ladder Peak	59.86
6	300	150.00	757.6	Ladder Peak	68.90
7	400	150.00	568.2	Ladder Peak	76.89
8	500	150.00	454.5	Ladder Peak	82.58
9	600	150.00	378.8	Ladder Peak	87.28
10	700	150.00	324.7	Ladder Peak	90.45
11	1,000	150.00	227.3	Ladder Peak	94.45
12	2,000	150.00	113.6	Ladder Peak	100.83
13	3,000	150.00	75.8	Ladder Peak	104.14
14	7,000	150.00	32.5	Ladder Peak	109.35
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : sample 1

Number of peaks found: 24 Corr. Area 1: 1,154.3
 Noise: 0.3

Peak table for sample 1 : sample 1

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	299	78.61	398.6		68.79
3	313	22.12	107.2		69.91
4	325	29.45	137.5		70.86
5	341	50.00	222.3		72.16
6	349	22.48	97.6		72.80
7	362	40.72	170.3		73.88
8	387	49.84	195.3		75.82
9	391	30.56	118.3		76.21
10	404	26.65	100.0		77.12
11	427	53.94	191.6		78.41
12	442	48.88	167.6		79.27
13	464	41.15	134.4		80.52
14	471	54.56	175.4		80.95
15	507	45.82	137.0		82.90
16	515	36.60	107.7		83.28
17	541	47.66	133.6		84.49
18	566	30.14	80.6		85.70
19	647	46.71	109.4		88.76
20	673	37.38	84.2		89.58
21	725	50.92	106.3		90.79
22	800	30.39	57.6		91.78
23	891	55.27	94.0		92.99
24	1,001	67.11	101.6		94.45
25	10,380	75.00	10.9	Upper Marker	113.00


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...**... Peak table for sample 1 : sample 1**

Peak	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	12,457	0.00	0.0		115.24

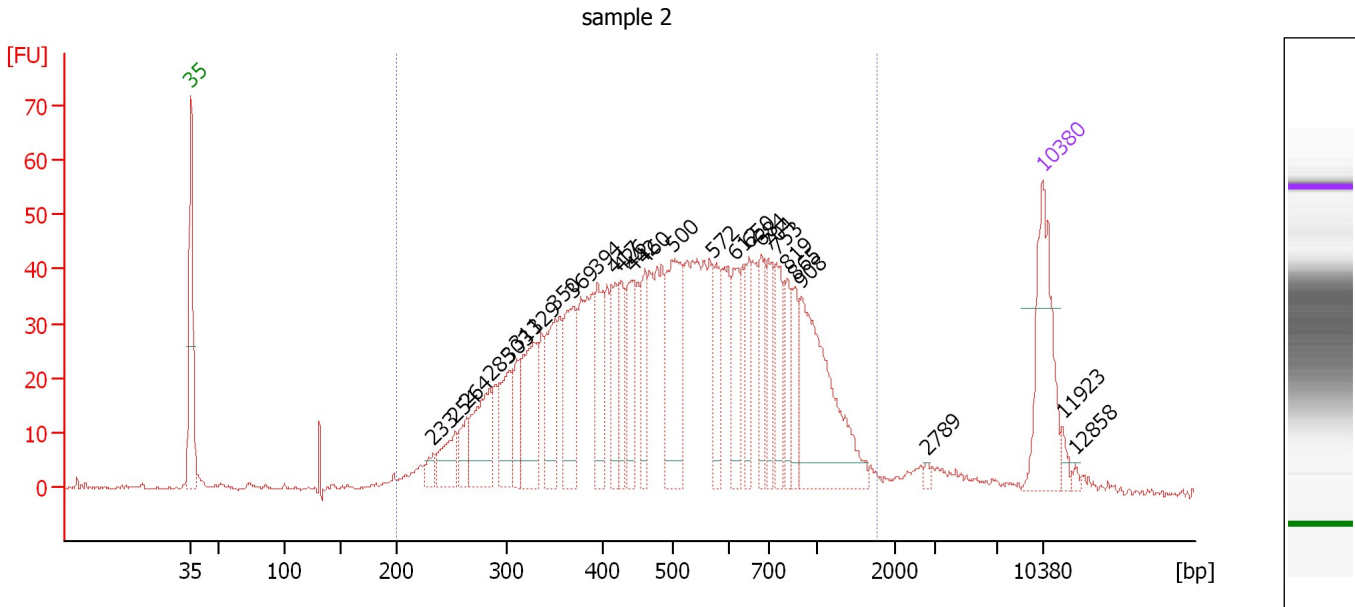
Region table for sample 1 : sample 1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ μ l]	Molarity [pmol/l]	Color
221	578	1,667	1,154.3	94	42.8	1,387.14	4,478.8	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

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Electropherogram Summary Continued ...



Overall Results for sample 2 : sample 2

Number of peaks found: 27 Corr. Area 1: 1,411.6
 Noise: 0.3

Peak table for sample 2 : sample 2

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	233	14.27	92.7		62.87
3	254	36.72	219.3		64.71
4	264	26.32	151.1		65.63
5	285	70.59	375.0		67.56
6	303	54.91	274.5		69.14
7	311	29.99	146.0		69.80
8	329	81.29	374.6		71.20
9	350	56.81	245.8		72.91
10	369	77.21	316.7		74.45
11	394	57.47	221.0		76.42
12	417	48.21	175.1		77.87
13	426	39.17	139.4		78.35
14	442	53.86	184.7		79.27
15	460	42.45	140.0		80.28
16	500	105.90	321.2		82.56
17	572	41.40	109.6		85.98
18	612	44.44	110.1		87.65
19	650	35.37	82.4		88.88
20	684	38.56	85.5		89.93
21	704	38.05	81.9		90.50
22	753	45.96	92.5		91.16
23	819	29.98	55.5		92.04
24	865	30.17	52.8		92.65
25	908	143.23	239.0		93.22

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad


Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...

... Peak table for sample 2 : sample 2

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	2,789	3.01	1.6		103.44
27	10,380	75.00	10.9	Upper Marker	113.00
28	11,923	0.00	0.0		114.67
29	12,858	0.00	0.0		115.68

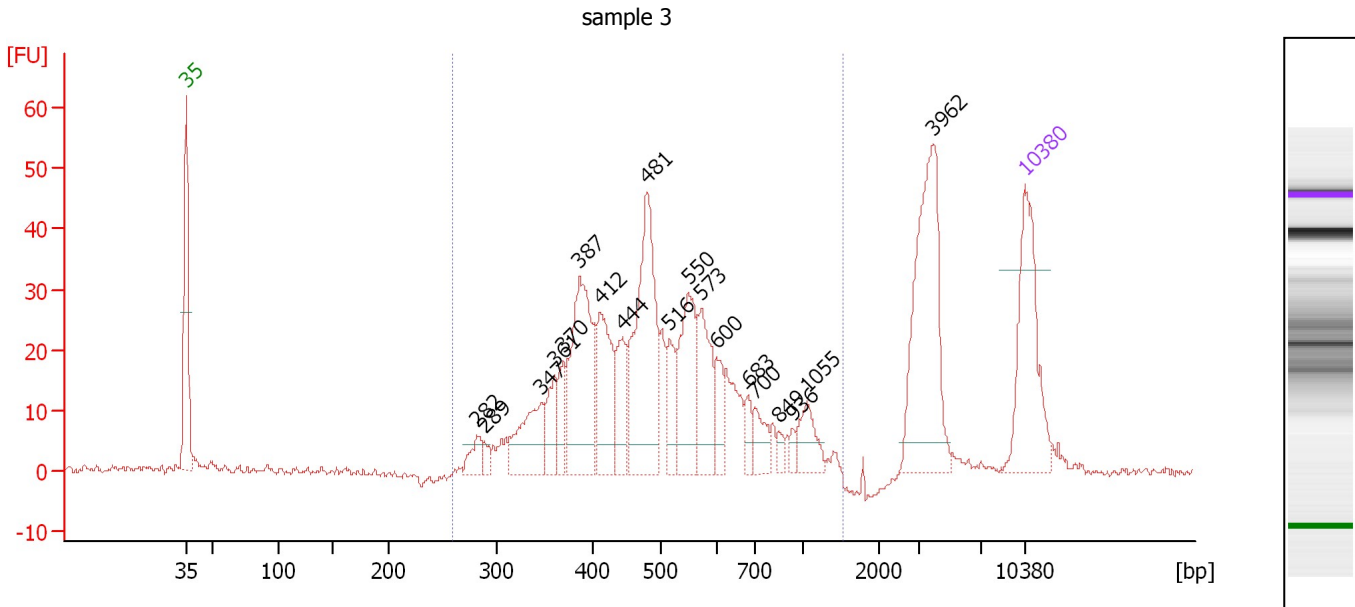
Region table for sample 2 : sample 2

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	557	1,783	1,411.6	96	45.3	1,907.27	6,533.9	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : sample 3

Number of peaks found: 19 Corr. Area 1: 624.8
 Noise: 0.6

Peak table for sample 3 : sample 3

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	282	18.27	98.1		67.30
3	289	7.88	41.3		67.92
4	347	59.17	258.1		72.68
5	361	29.34	123.3		73.75
6	370	22.41	91.7		74.51
7	387	126.98	497.3		75.84
8	412	72.09	265.1		77.58
9	444	37.21	127.0		79.40
10	481	148.58	468.2		81.49
11	516	29.21	85.8		83.32
12	550	70.09	193.2		84.92
13	573	54.28	143.4		86.03
14	600	22.00	55.6		87.28
15	683	12.15	27.0		89.90
16	700	20.13	43.6		90.44
17	849	6.02	10.7		92.44
18	936	5.38	8.7		93.60
19	1,055	23.18	33.3		94.80
20	3,962	124.89	47.8		105.39
21	10,380	75.00	10.9	Upper Marker	113.00

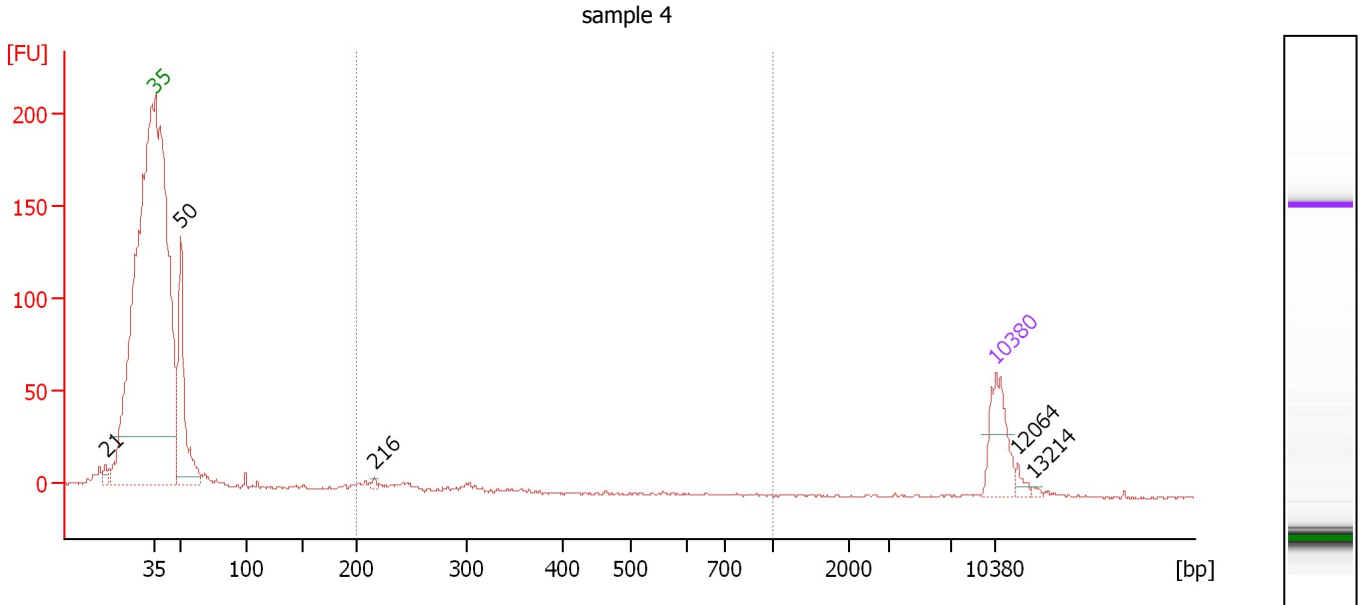
Region table for sample 3 : sample 3

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
260	517	1,523	624.8	80	34.8	848.92	2,803.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : sample 4

Number of peaks found: 5 Corr. Area 1: 20.1
 Noise: 0.5

Peak table for sample 4 : sample 4

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	21	0.00	0.0		38.92
2	35	125.00	5,411.3	Lower Marker	43.00
3	50	334.59	10,197.5		45.17
4	216	5.21	36.6		61.28
5	10,380	75.00	10.9	Upper Marker	113.00
6	12,064	0.00	0.0		114.82
7	13,214	0.00	0.0		116.06

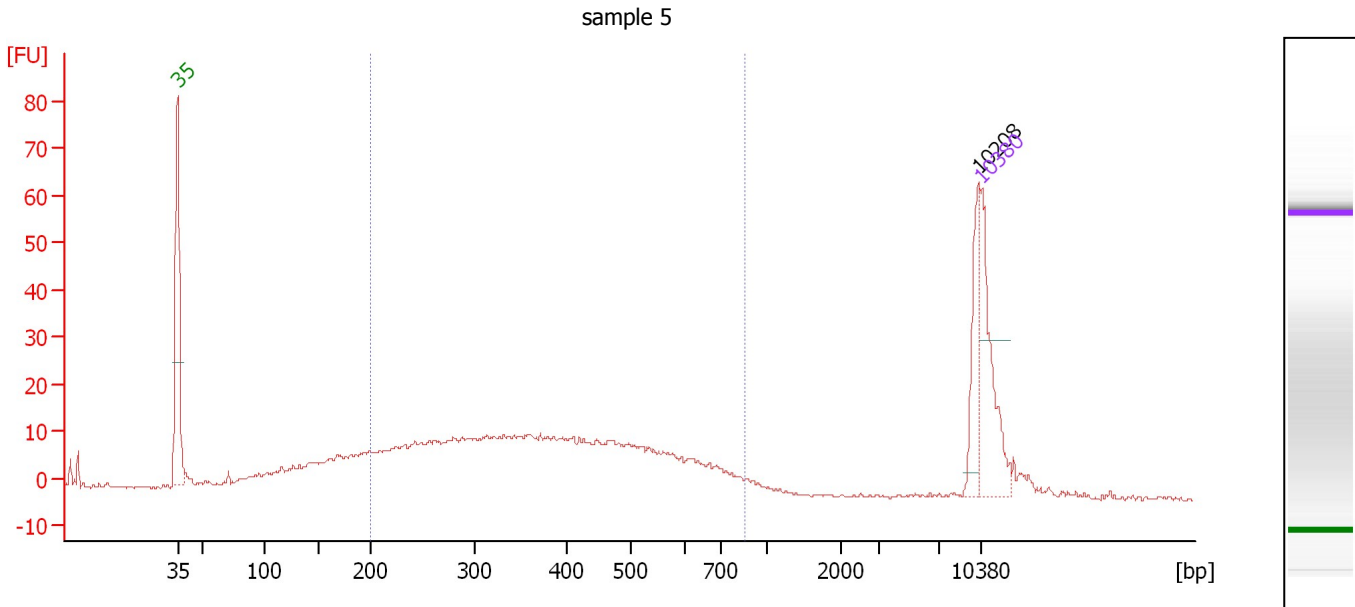
Region table for sample 4 : sample 4

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	243	1,000	20.1	6	15.4	25.01	159.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : sample 5

Number of peaks found: 1 Corr. Area 1: 398.1
 Noise: 0.3

Peak table for sample 5 : sample 5

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	10,208	49.97	7.4		112.81
3	10,380	75.00	10.9	Upper Marker	113.00

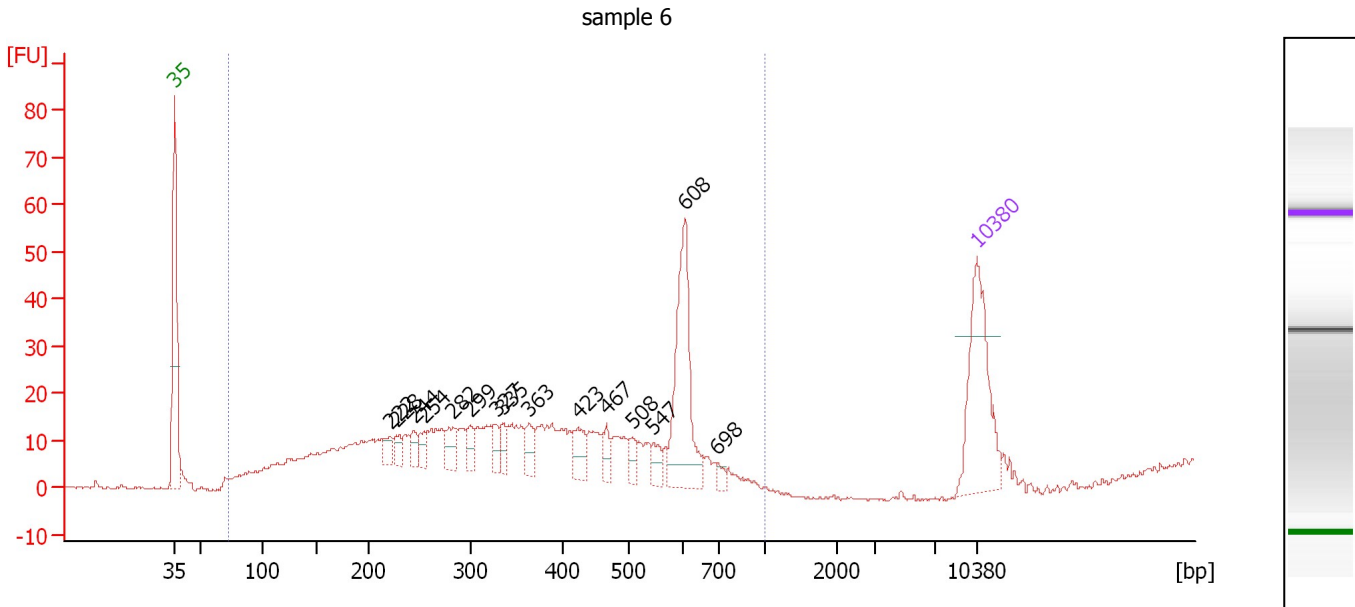
Region table for sample 5 : sample 5

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	399	849	398.1	73	33.9	659.45	2,941.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : sample 6

Number of peaks found: 15 Corr. Area 1: 566.2
 Noise: 0.2

Peak table for sample 6 : sample 6

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	222	13.65	93.4		61.80
3	228	10.97	73.0		62.36
4	244	12.08	75.0		63.85
5	254	12.87	76.6		64.78
6	282	18.74	100.6		67.30
7	299	12.83	65.1		68.78
8	327	12.08	55.9		71.07
9	335	12.09	54.7		71.67
10	363	15.91	66.5		73.90
11	423	19.83	71.1		78.19
12	467	10.10	32.8		80.70
13	508	9.36	27.9		82.98
14	547	11.19	31.0		84.80
15	608	104.04	259.1		87.54
16	698	5.74	12.5		90.38
17	10,380	75.00	10.9	Upper Marker	113.00

Region table for sample 6 : sample 6

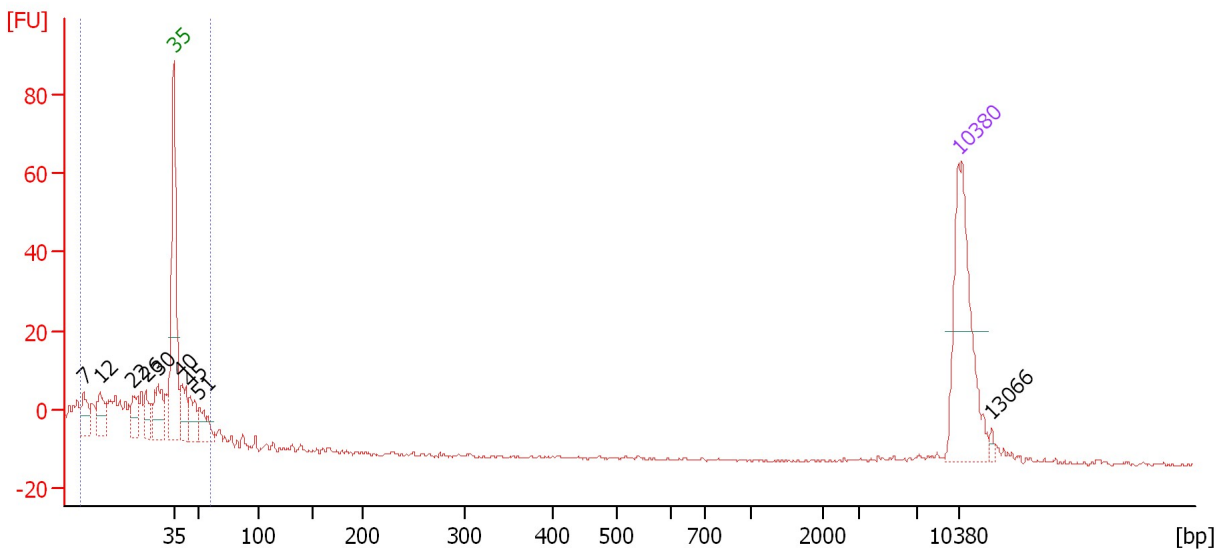
From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
73	371	1,000	566.2	99	42.8	772.03	4,627.3	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
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Electropherogram Summary Continued ...

sample 7



Overall Results for sample 7 : sample 7

Number of peaks found: 9 Corr. Area 1: 72.6
 Noise: 0.3

Peak table for sample 7 : sample 7

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	7	0.00	0.0		34.96
2	12	0.00	0.0		36.39
3	22	0.00	0.0		39.29
4	26	0.00	0.0		40.53
5	30	0.00	0.0		41.62
6	35	125.00	5,411.3	Lower Marker	43.00
7	40	35.14	1,347.6		43.67
8	45	22.90	765.9		44.52
9	51	24.78	741.9		45.28
10	10,380	75.00	10.9	Upper Marker	113.00
11	13,066	0.00	0.0		115.90

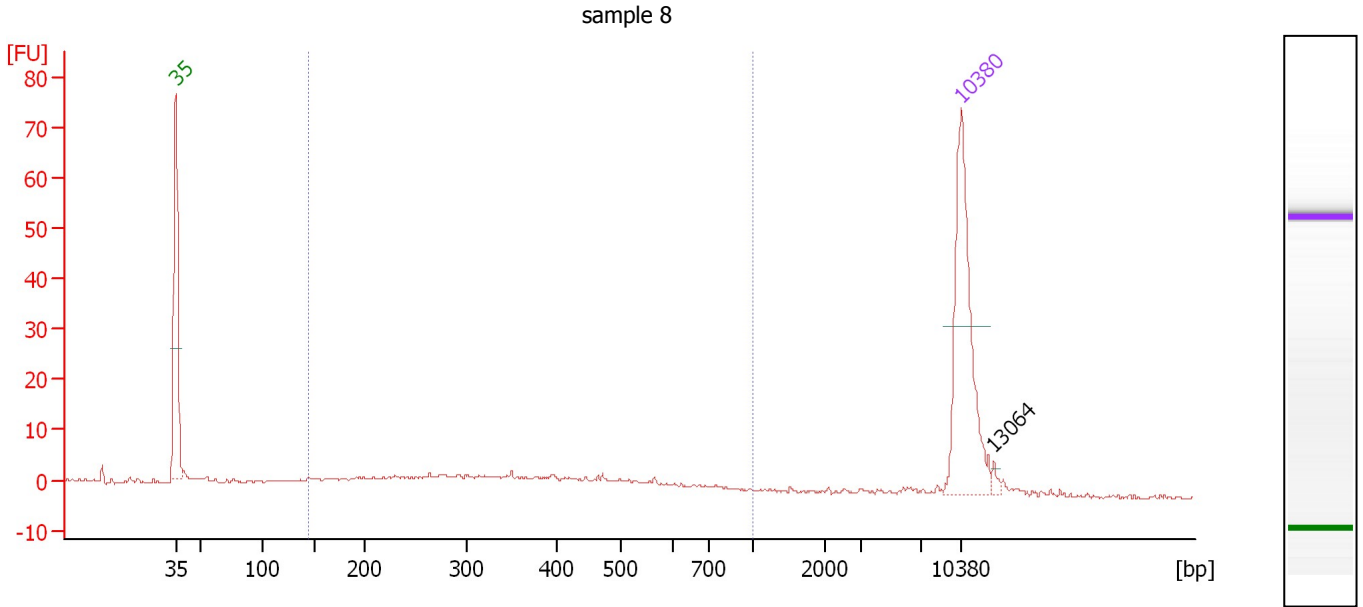
Region table for sample 7 : sample 7

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
0	30	60	72.6	93	41.9	105.03	6,280.3	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

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 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : sample 8

Number of peaks found: 1 Corr. Area 1: 86.7
 Noise: 0.2

Peak table for sample 8 : sample 8

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
3	13,064	0.00	0.0		115.90

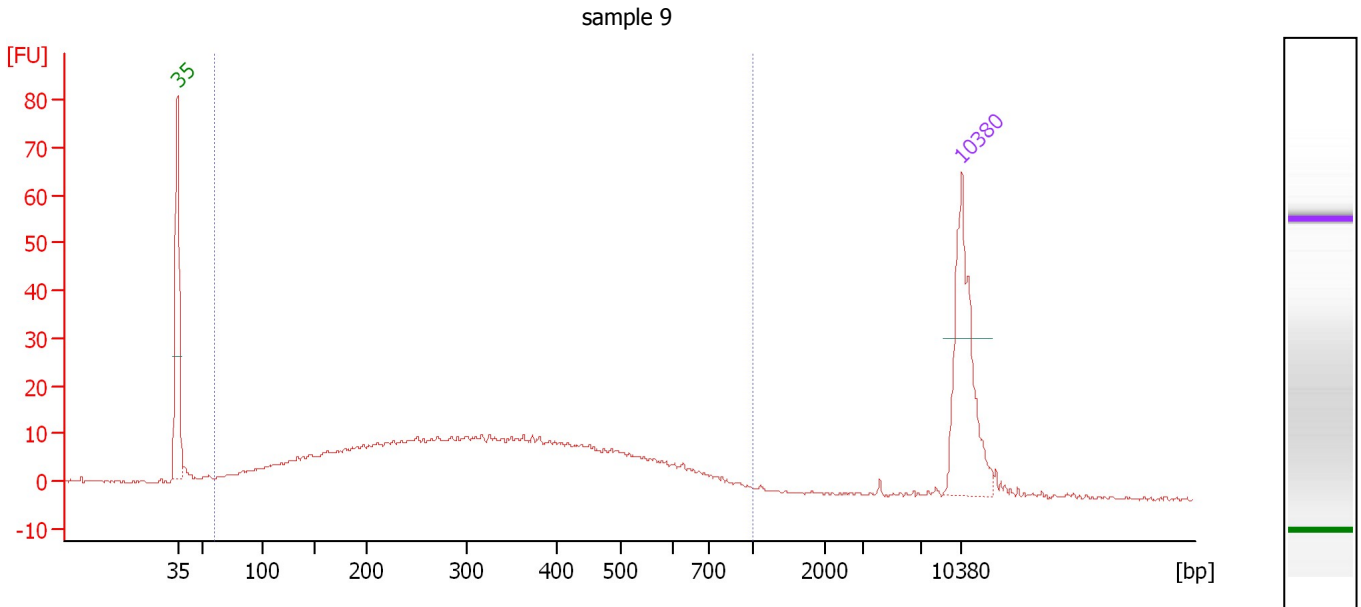
Region table for sample 8 : sample 8

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
145	377	1,000	86.7	73	40.4	91.00	465.4	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

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 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : sample 9

Number of peaks found: 0 Corr. Area 1: 501.3
 Noise: 0.3

Peak table for sample 9 : sample 9

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

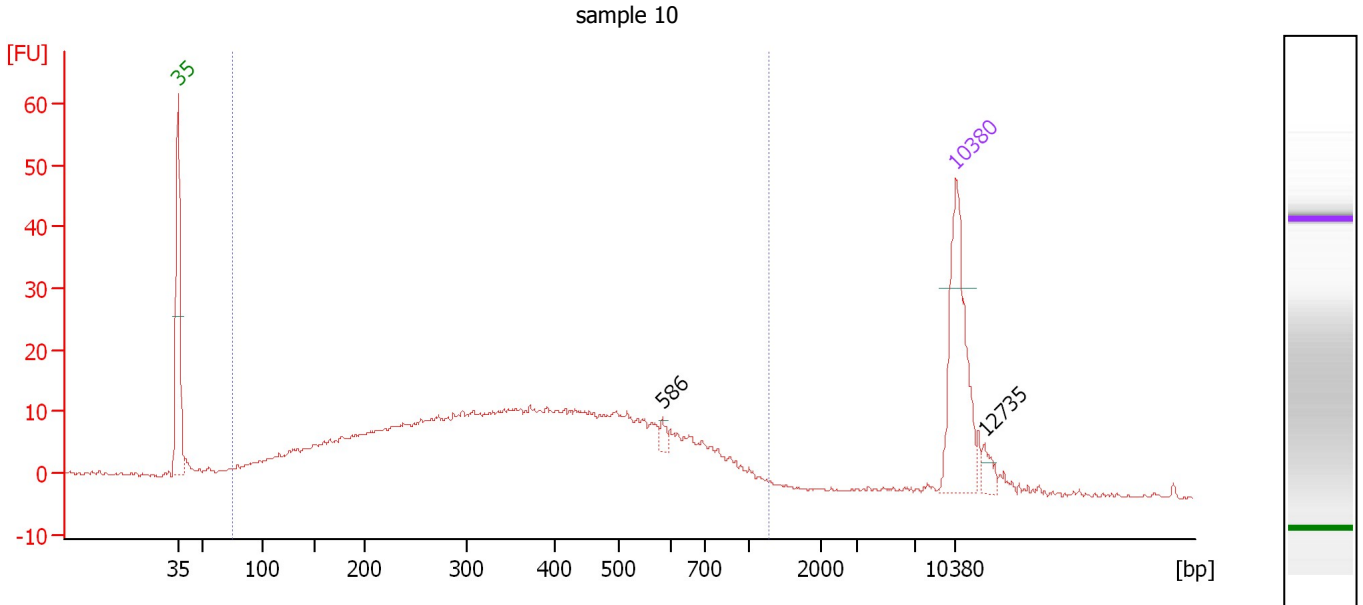
Region table for sample 9 : sample 9

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
59	341	1,000	501.3	96	46.6	589.27	3,893.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : sample 10

Number of peaks found: 2 Corr. Area 1: 564.4
 Noise: 0.2

Peak table for sample 10 : sample 10

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	586	5.05	13.1		86.61
3	10,380	75.00	10.9	Upper Marker	113.00
4	12,735	0.00	0.0		115.54

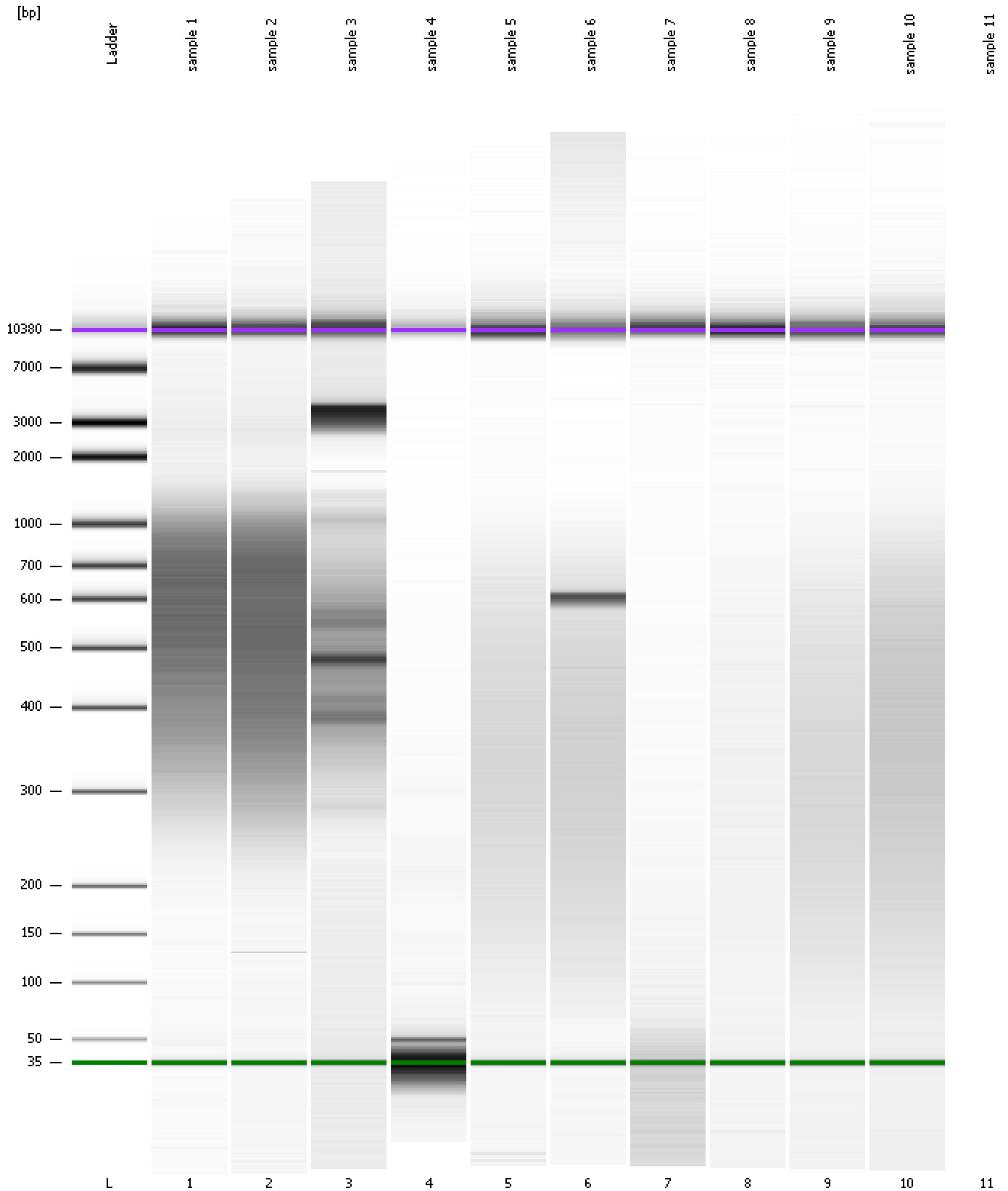
Region table for sample 10 : sample 10

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
74	390	1,256	564.4	94	47.6	883.07	5,103.1	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
Modified: 12/18/2014 2:15:58 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad

Created: 12/18/2014 1:37:10 PM
 Modified: 12/18/2014 2:15:58 PM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 11)		Instrument	Run		12/18/2014 2:15:36 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2014-12-18\2014-12-18_002.xad)		Instrument	Run		12/18/2014 1:37:15 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		12/18/2014 1:37:15 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		12/18/2014 1:37:15 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		12/18/2014 1:37:15 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		12/18/2014 1:37:15 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		12/18/2014 1:37:15 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		12/18/2014 1:37:15 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1