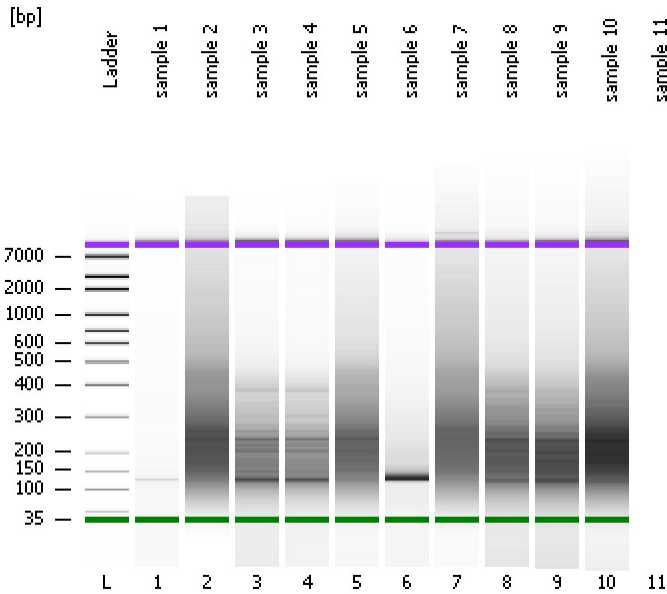


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
Modified: 4/9/2014 3:08:55 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

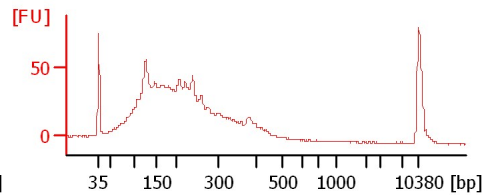
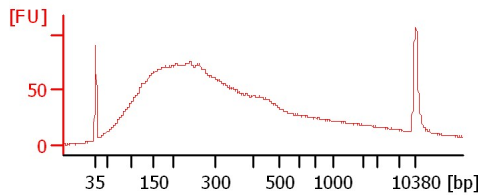
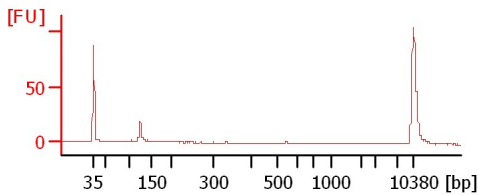
Chip Information:

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

sample 1

sample 2

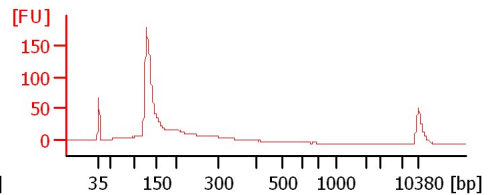
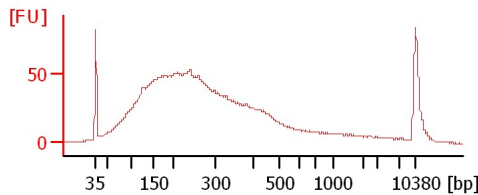
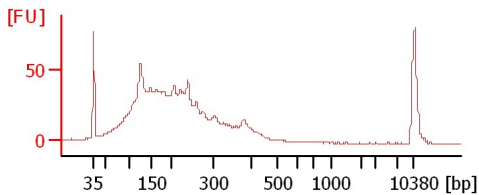
sample 3



sample 4

sample 5

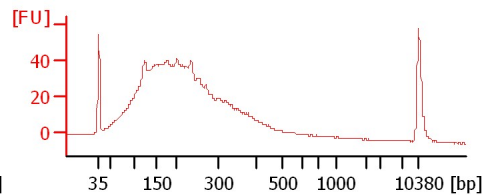
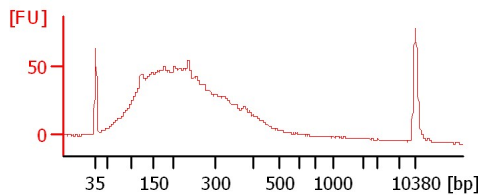
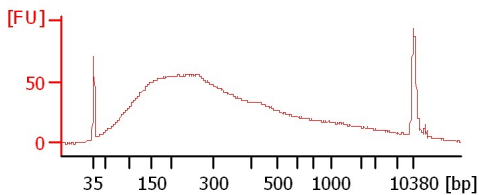
sample 6



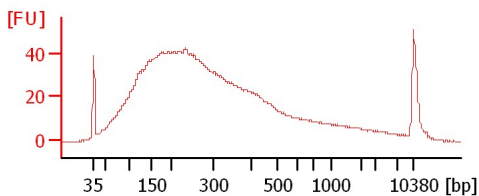
sample 7

sample 8

sample 9



sample 10



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 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\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
Modified: 4/9/2014 3:08:55 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

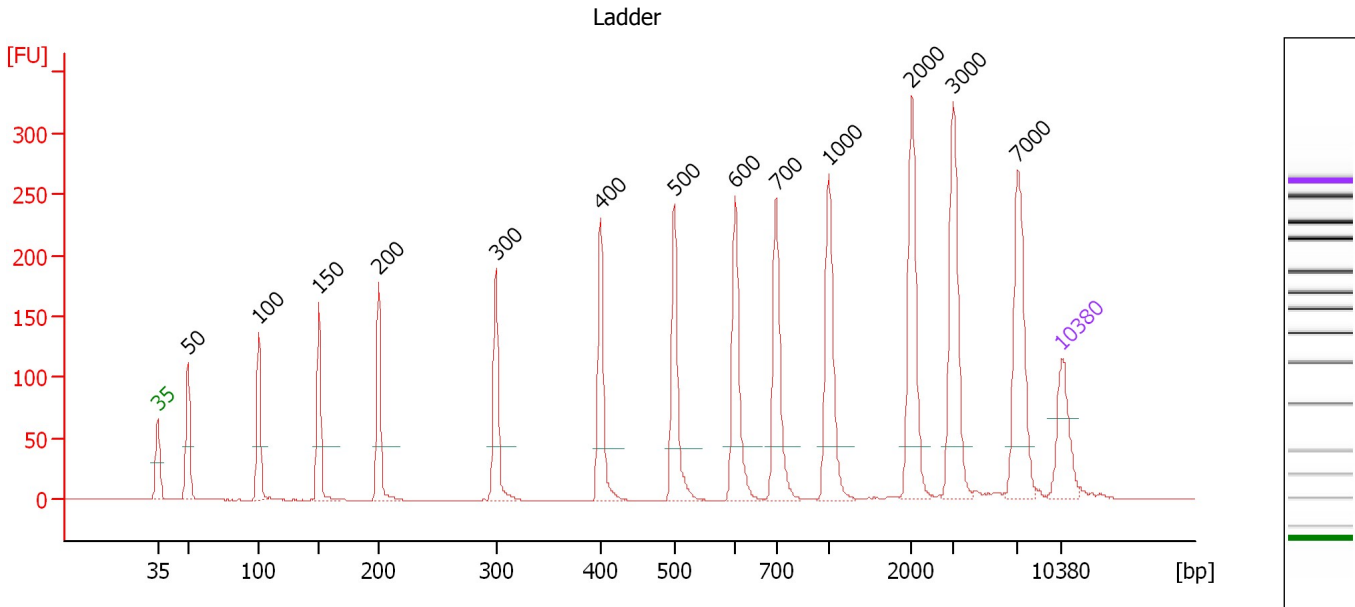
Ladder

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\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

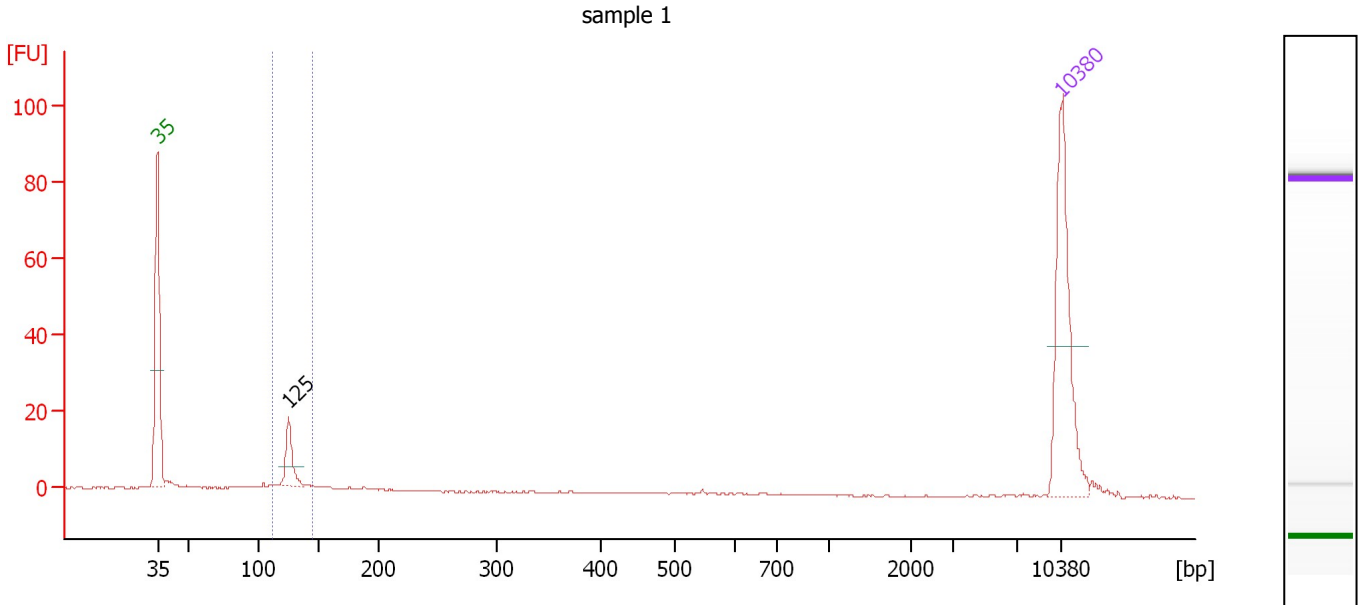
Peak table for Ladder

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	45.34	50	150.00	4,545.5	Ladder Peak
3	50.80	100	150.00	2,272.7	Ladder Peak
4	55.47	150	150.00	1,515.2	Ladder Peak
5	60.10	200	150.00	1,136.4	Ladder Peak
6	69.18	300	150.00	757.6	Ladder Peak
7	77.29	400	150.00	568.2	Ladder Peak
8	82.98	500	150.00	454.5	Ladder Peak
9	87.70	600	150.00	378.8	Ladder Peak
10	90.87	700	150.00	324.7	Ladder Peak
11	94.93	1,000	150.00	227.3	Ladder Peak
12	101.36	2,000	150.00	113.6	Ladder Peak
13	104.58	3,000	150.00	75.8	Ladder Peak
14	109.56	7,000	150.00	32.5	Ladder Peak
15	113.00	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : sample 1

Number of peaks found: 1 Corr. Area 1: 27.1
 Noise: 0.1

Peak table for sample 1 : sample 1

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	53.16	125	27.33	330.7	
3	113.00	10,380	75.00	10.9	Upper Marker

Region table for sample 1 : sample 1

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
112	145	126	439.0	36.64	27.1	44	4.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...

... Peak table for sample 2 : sample 2

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations
26	103.23	2,580	4.36	2.6	
27	105.45	3,698	4.87	2.0	
28	107.54	5,374	4.30	1.2	
29	111.31	8,721	3.41	0.6	
30	113.00	10,380	75.00	10.9	Upper Marker
31	115.93	13,262	0.00	0.0	

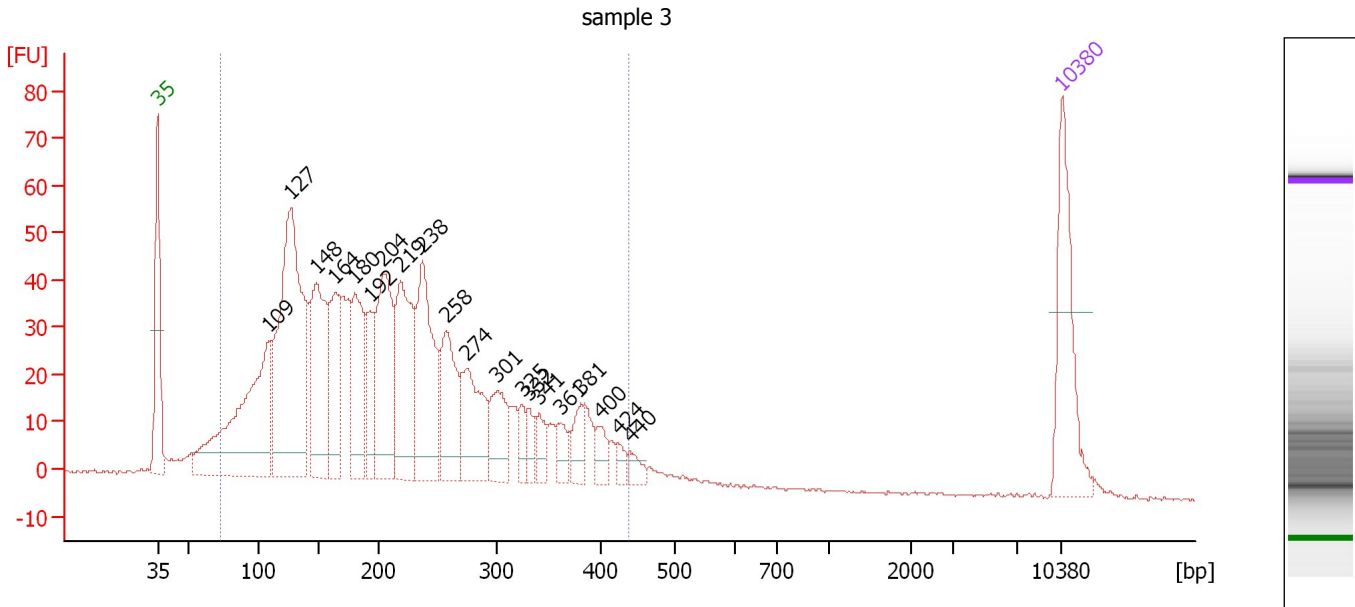
Region table for sample 2 : sample 2

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/ μ l]	Co Corr. for Area	% of Total	Size distribution in CV [%]
63	507	256	27,914.6	3,413.25	3,127.4	84	42.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : sample 3

Number of peaks found: 20 Corr. Area 1: 1,397.1
 Noise: 0.2

Peak table for sample 3 : sample 3


Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	51.61	109	257.56	3,592.2	
3	53.32	127	354.35	4,228.7	
4	55.31	148	155.34	1,588.3	
5	56.75	164	103.21	955.0	
6	58.24	180	103.51	872.2	
7	59.41	192	54.85	431.8	
8	60.49	204	144.39	1,071.1	
9	61.80	219	139.59	967.4	
10	63.51	238	139.58	890.4	
11	65.36	258	87.15	512.1	
12	66.84	274	89.51	494.5	
13	69.28	301	51.21	257.6	
14	71.22	325	16.29	75.9	
15	71.76	332	15.02	68.6	
16	72.52	341	18.38	81.6	
17	74.15	361	16.69	70.0	
18	75.77	381	22.61	89.9	
19	77.26	400	17.20	65.2	
20	78.65	424	8.08	28.9	
21	79.56	440	11.22	38.7	
22	113.00	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...

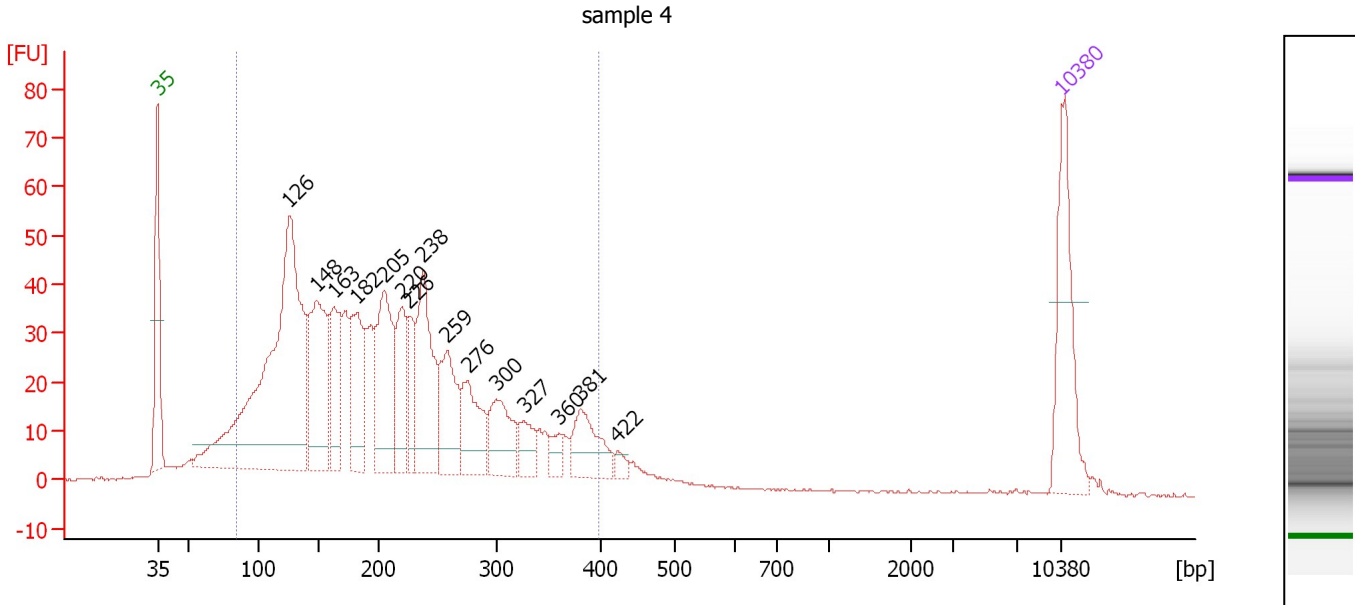
... Region table for sample 3 : sample 3

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
74	437	214	17,605.1	1,965.45	 1,397.1	94	39.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : sample 4

Number of peaks found: 15 Corr. Area 1: 1,209.6
 Noise: 0.2

Peak table for sample 4 : sample 4

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	53.19	126	512.69	6,187.1	
3	55.30	148	147.77	1,511.2	
4	56.68	163	83.91	779.9	
5	58.42	182	90.60	754.9	
6	60.53	205	129.19	956.0	
7	61.91	220	69.37	477.9	
8	62.46	226	43.34	290.6	
9	63.56	238	121.64	774.0	
10	65.45	259	76.49	447.7	
11	67.01	276	65.75	360.9	
12	69.21	300	57.57	290.5	
13	71.37	327	25.71	119.2	
14	74.08	360	14.22	59.8	
15	75.73	381	50.80	202.2	
16	78.57	422	7.89	28.3	
17	113.00	10,380	75.00	10.9	Upper Marker

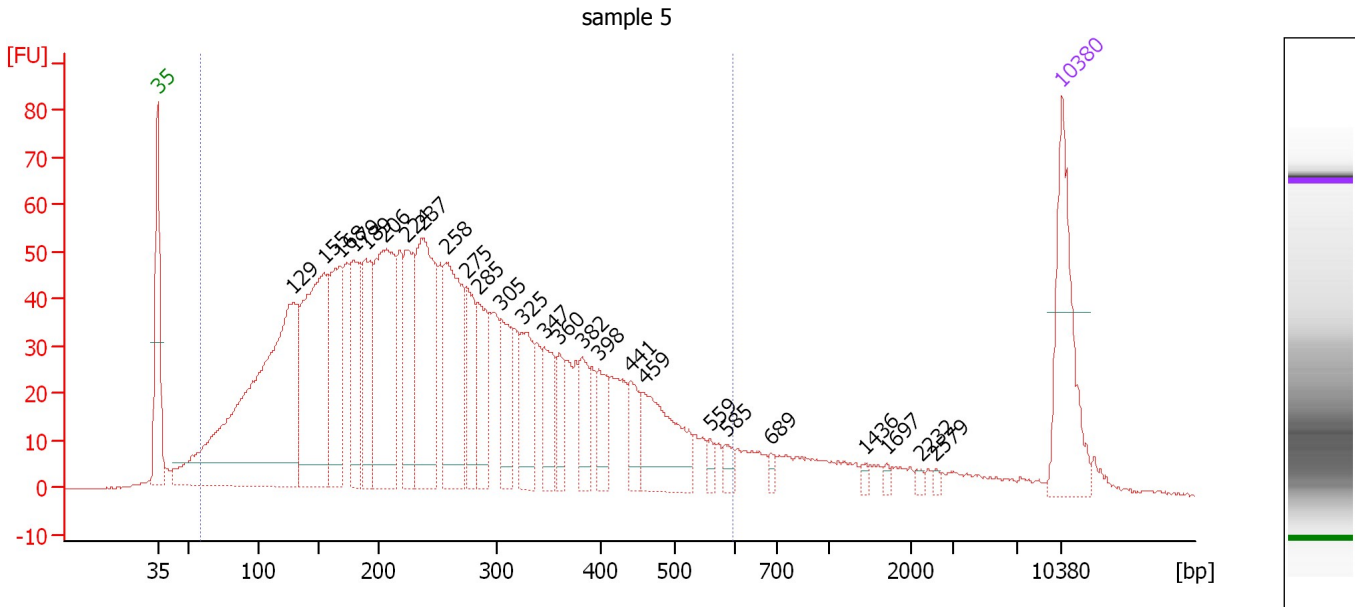
Region table for sample 4 : sample 4

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. for Area	% of Total	Size distribution in CV [%]
85	398	209	15,650.7	1,762.59	1,209.6	90	37.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : sample 5

Number of peaks found: 26 Corr. Area 1: 2,116.2
 Noise: 0.2

Peak table for sample 5 : sample 5

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	53.52	129	478.24	5,614.1	
3	55.89	155	229.82	2,253.6	
4	57.15	168	121.98	1,099.6	
5	58.17	179	91.34	772.5	
6	59.10	189	88.63	709.8	
7	60.64	206	178.61	1,314.3	
8	62.32	224	83.64	564.8	
9	63.48	237	167.49	1,070.0	
10	65.34	258	139.46	820.0	
11	66.92	275	57.09	314.5	
12	67.85	285	57.99	307.9	
13	69.62	305	47.87	237.5	
14	71.20	325	58.90	274.7	
15	72.97	347	44.21	193.2	
16	74.09	360	26.35	110.7	
17	75.86	382	32.74	129.8	
18	77.16	398	30.30	115.2	
19	79.63	441	26.14	89.8	
20	80.65	459	81.19	268.0	
21	85.77	559	7.15	19.4	
22	86.98	585	10.03	26.0	
23	90.52	689	5.10	11.2	
24	97.73	1,436	3.74	3.9	
25	99.41	1,697	3.03	2.7	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...

... Peak table for sample 5 : sample 5

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations
26	102.11	2,232	2.92	2.0	
27	103.23	2,579	2.24	1.3	
28	▶ 113.00	10,380	75.00	10.9	Upper Marker

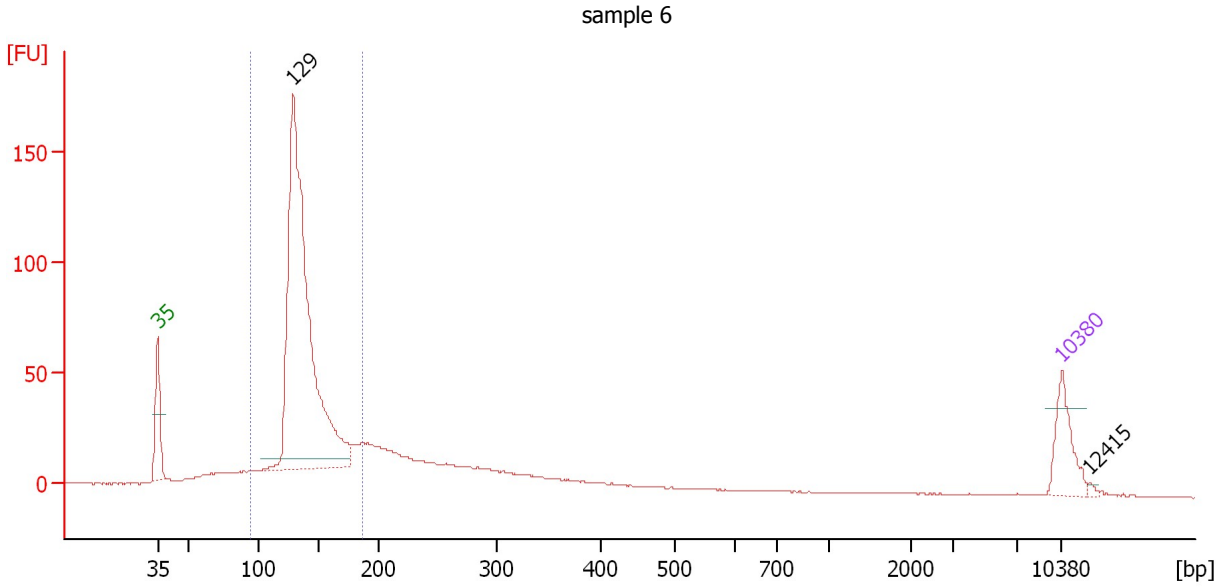
Region table for sample 5 : sample 5

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/ μ l]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
59	598	261	20,917.6	2,560.63	■ 2,116.2	91	45.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : sample 6

Number of peaks found: 2 Corr. Area 1: 731.9
 Noise: 0.2

Peak table for sample 6 : sample 6

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	53.49	129	1,259.64	14,821.6	
3	113.00	10,380	75.00	10.9	Upper Marker
4	115.07	12,415	0.00	0.0	

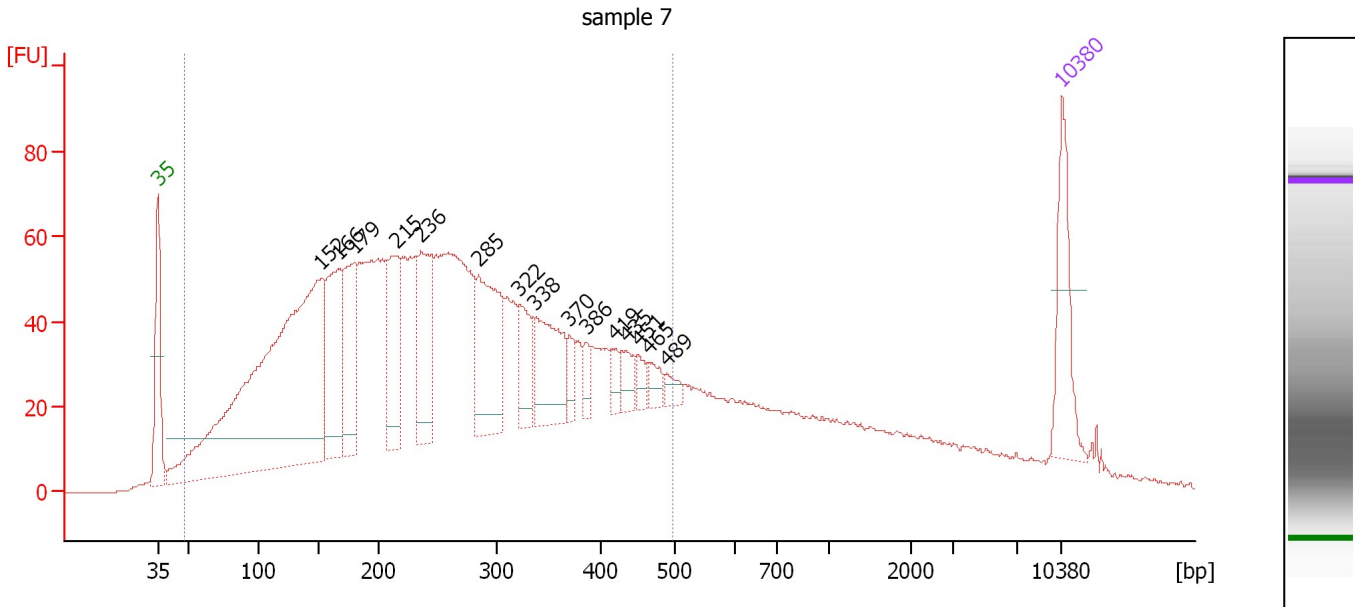
Region table for sample 6 : sample 6

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
94	187	139	16,855.4	1,525.24	731.9	66	12.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : sample 7

Number of peaks found: 15 Corr. Area 1: 2,442.1
 Noise: 0.2

Peak table for sample 7 : sample 7

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	55.63	152	872.35	8,711.2	
3	56.99	166	178.99	1,630.0	
4	58.20	179	143.19	1,209.0	
5	61.49	215	135.37	952.7	
6	63.33	236	149.14	959.3	
7	67.83	285	171.06	909.0	
8	70.98	322	66.81	314.2	
9	72.24	338	115.72	519.3	
10	74.85	370	22.68	92.9	
11	76.16	386	19.71	77.4	
12	78.39	419	21.25	76.8	
13	79.26	435	25.14	87.7	
14	80.18	451	14.65	49.3	
15	81.00	465	19.29	62.8	
16	82.36	489	13.59	42.1	
17	113.00	10,380	75.00	10.9	Upper Marker

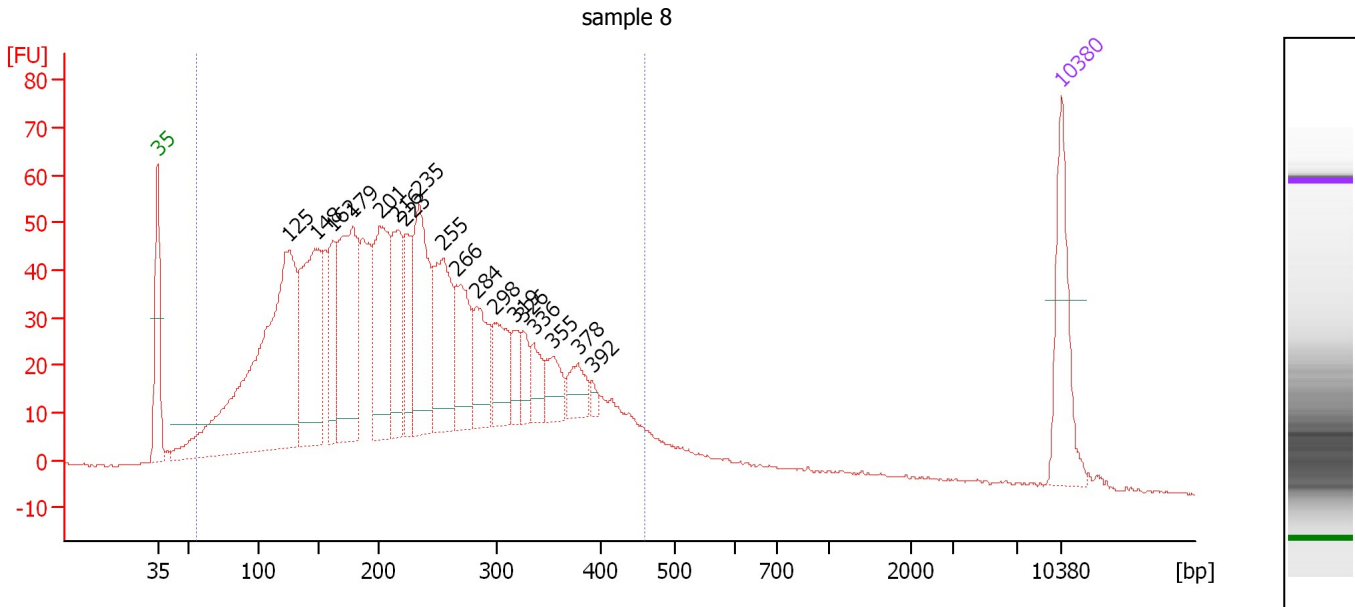
Region table for sample 7 : sample 7

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. for Area	% of Total	Size distribution in CV [%]
48	497	254	33,851.6	4,003.06	2,442.1	80	42.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : sample 8

Number of peaks found: 18 Corr. Area 1: 1,835.2
 Noise: 0.2

Peak table for sample 8 : sample 8

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	53.16	125	554.92	6,713.2	
3	55.32	148	239.45	2,445.5	
4	56.60	162	89.40	835.5	
5	58.12	179	218.69	1,855.6	
6	60.18	201	162.08	1,222.6	
7	61.56	216	105.09	737.2	
8	62.19	223	69.50	472.2	
9	63.27	235	169.36	1,092.3	
10	65.09	255	128.26	762.3	
11	66.12	266	98.16	558.6	
12	67.69	284	67.27	359.4	
13	69.02	298	65.61	333.4	
14	70.69	319	29.56	140.6	
15	71.32	326	25.06	116.4	
16	72.11	336	28.58	128.8	
17	73.63	355	35.09	149.9	
18	75.55	378	31.56	126.4	
19	76.63	392	7.39	28.6	
20	113.00	10,380	75.00	10.9	Upper Marker

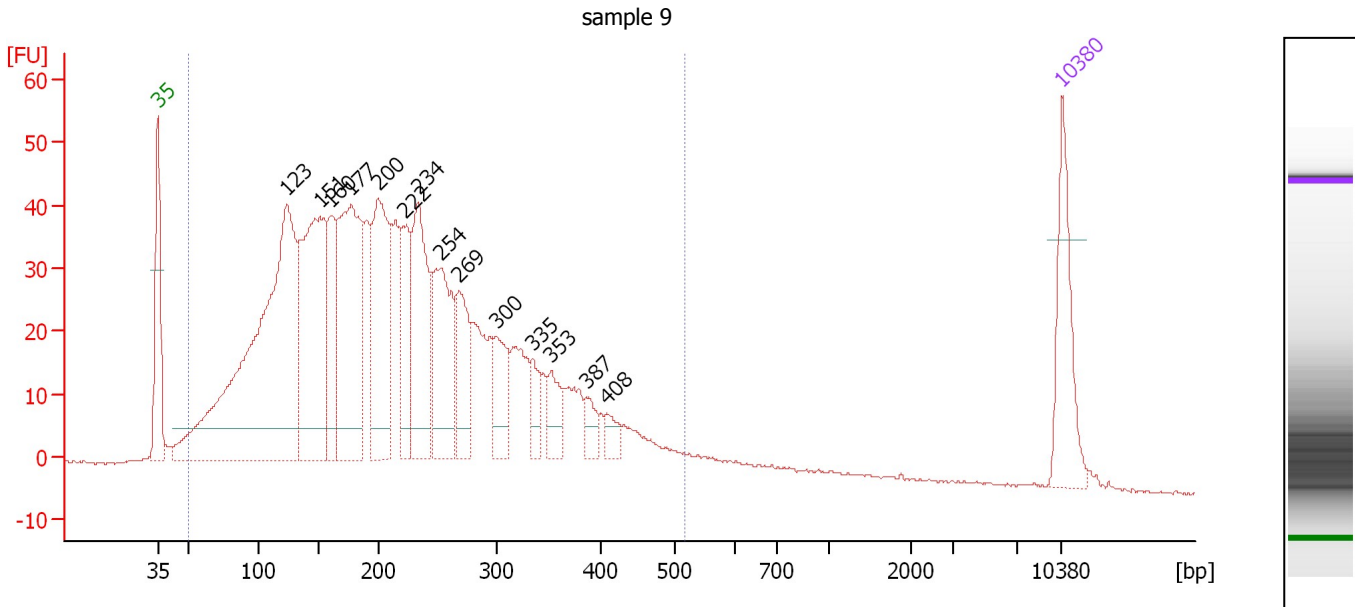
Region table for sample 8 : sample 8

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
55	461	229	26,211.6	3,010.45	1,835.2	92	40.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : sample 9

Number of peaks found: 14 Corr. Area 1: 1,413.3
 Noise: 0.2

Peak table for sample 9 : sample 9

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	52.99	123	695.51	8,542.1	
3	55.58	151	327.25	3,280.2	
4	56.43	160	97.37	920.2	
5	57.98	177	293.85	2,514.8	
6	60.08	200	207.57	1,574.8	
7	62.12	222	94.64	645.2	
8	63.17	234	173.14	1,122.1	
9	64.97	254	152.96	913.9	
10	66.37	269	85.31	480.6	
11	69.21	300	61.58	310.6	
12	72.01	335	27.15	122.9	
13	73.46	353	35.33	151.8	
14	76.20	387	20.54	80.5	
15	77.75	408	15.57	57.8	
16	113.00	10,380	75.00	10.9	Upper Marker

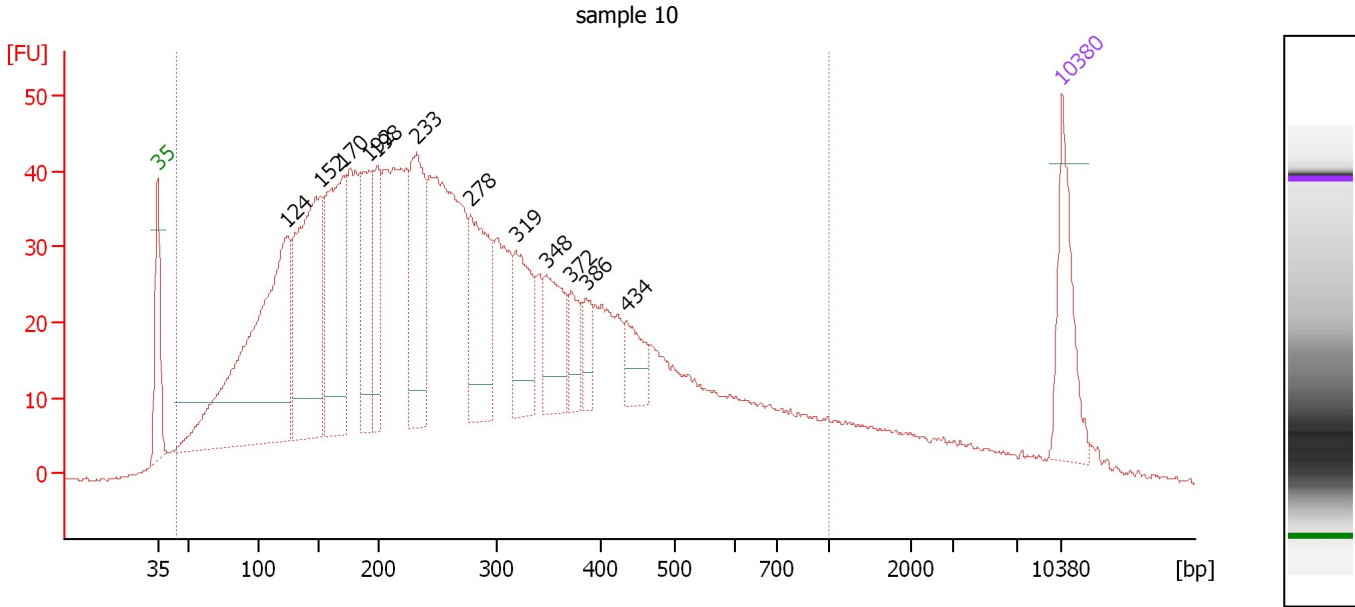
Region table for sample 9 : sample 9

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
51	518	221	27,189.7	2,973.34	1,413.3	95	43.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
 Modified: 4/9/2014 3:08:55 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : sample 10

Number of peaks found: 12 Corr. Area 1: 1,822.2
 Noise: 0.2

Peak table for sample 10 : sample 10

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	43.00	35	125.00	5,411.3	Lower Marker
2	53.04	124	524.43	6,412.9	
3	55.67	152	326.71	3,253.9	
4	57.34	170	248.67	2,213.8	
5	59.37	192	127.90	1,008.8	
6	59.93	198	91.09	696.6	
7	63.07	233	180.10	1,172.7	
8	67.23	278	150.79	820.4	
9	70.73	319	100.58	477.7	
10	73.06	348	88.82	387.0	
11	75.03	372	40.07	163.1	
12	76.15	386	31.36	123.1	
13	79.24	434	45.06	157.2	
14	113.00	10,380	75.00	10.9	Upper Marker

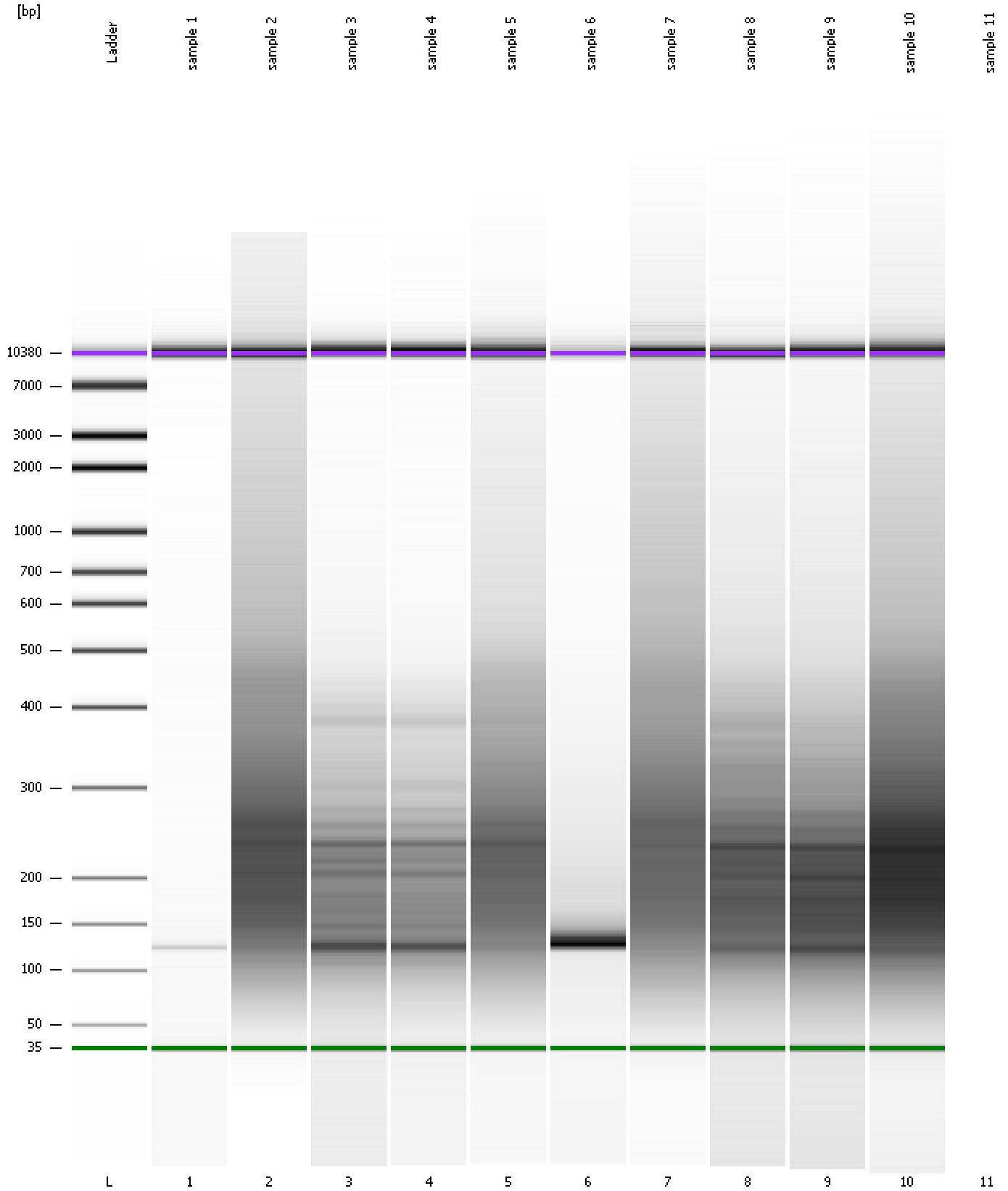
Region table for sample 10 : sample 10

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
44	1,000	294	35,230.2	4,297.80	1,822.2	93	57.6

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
Modified: 4/9/2014 3:08:55 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad

Created: 4/9/2014 2:30:00 PM
Modified: 4/9/2014 3:08:55 PM

Invalid Samples

Sample 11 has not been run, no results available.

Assay Class: High Sensitivity DNA Assay Created: 4/9/2014 2:30:00 PM
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad Modified: 4/9/2014 3:08:55 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		4/9/2014 3:08:27 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2014-04-09\2014-04-09_003.xad)		Instrument	Run		4/9/2014 2:30:06 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		4/9/2014 2:30:06 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		4/9/2014 2:30:06 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		4/9/2014 2:30:06 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		4/9/2014 2:30:06 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		4/9/2014 2:30:06 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		4/9/2014 2:30:06 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1