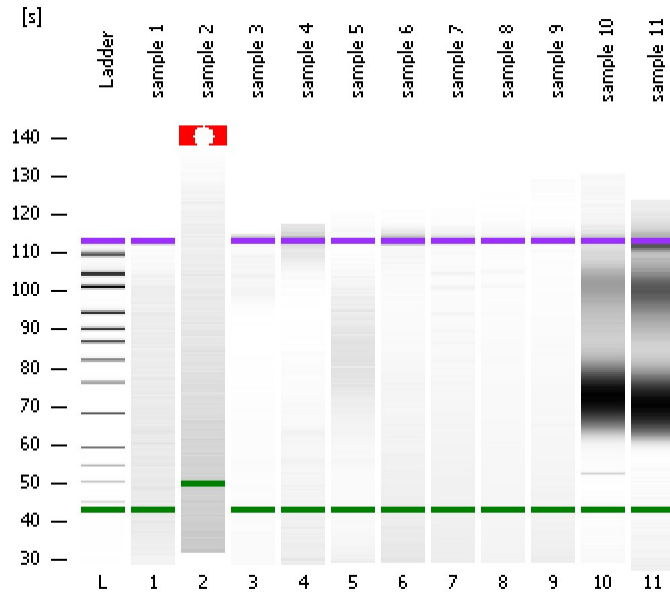


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
Modified: 3/19/2014 4:42:37 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

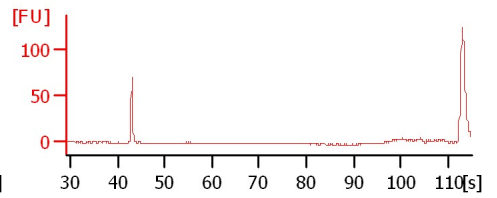
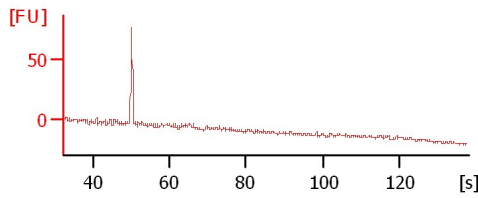
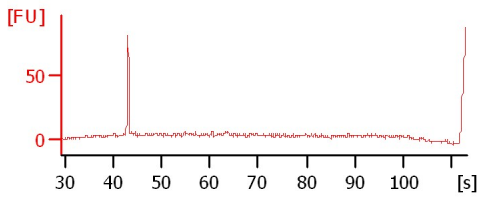
Chip Information:

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

sample 1

sample 2

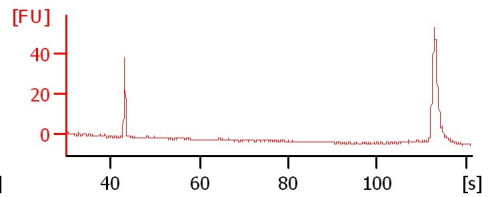
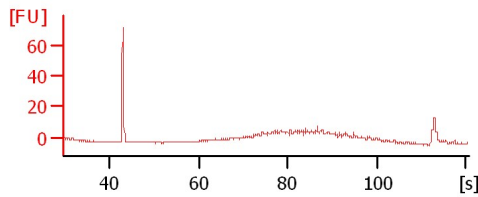
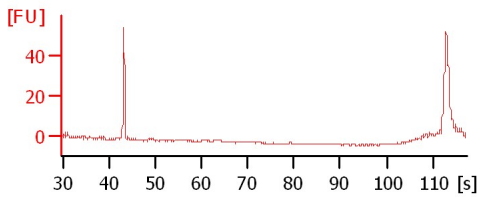
sample 3



sample 4

sample 5

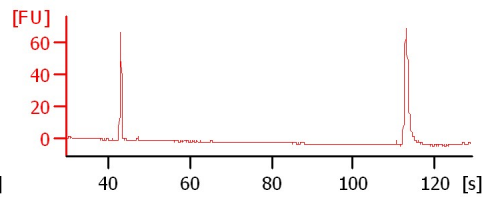
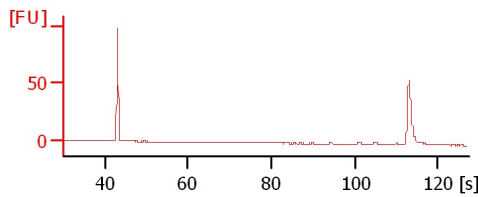
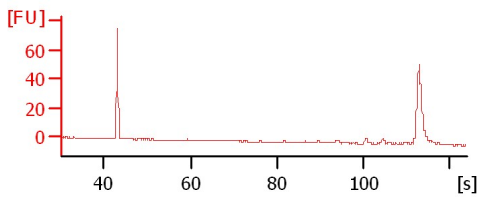
sample 6



sample 7

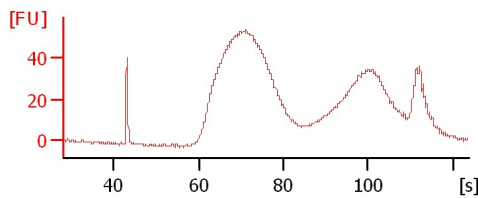
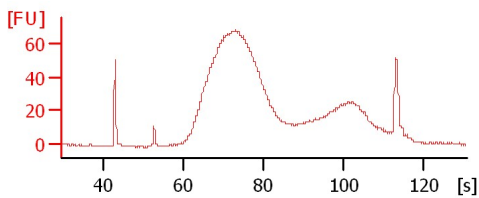
sample 8

sample 9



sample 10

sample 11



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
Modified: 3/19/2014 4:42:37 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\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
Modified: 3/19/2014 4:42:37 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

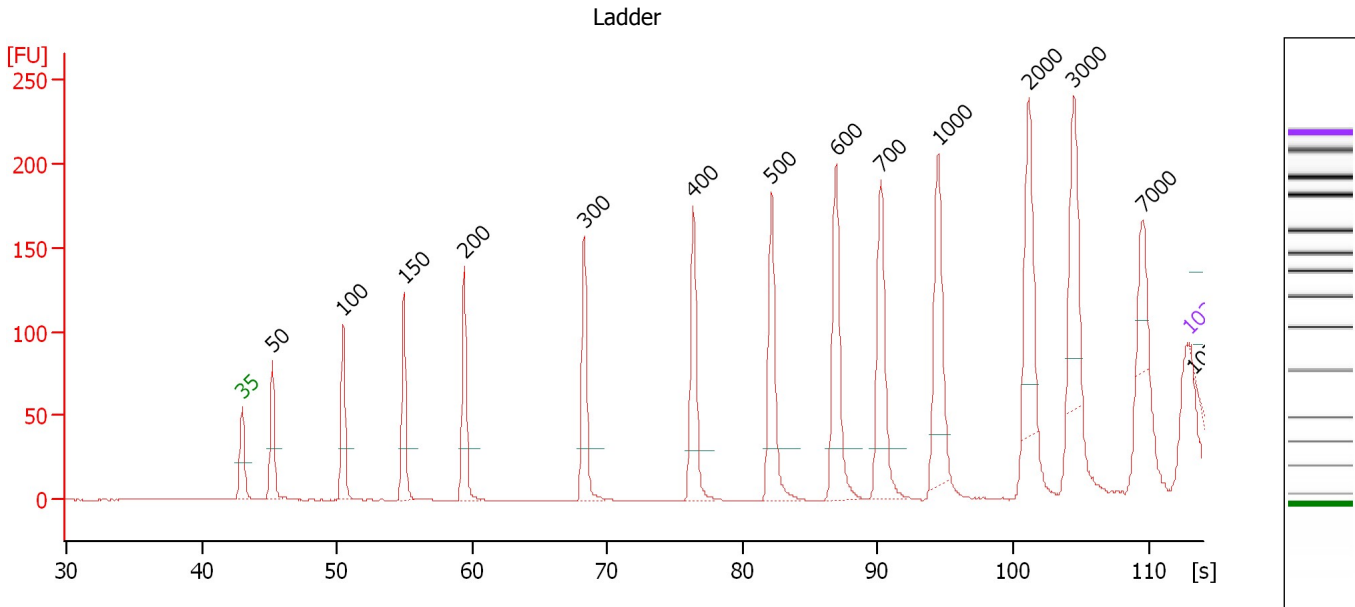
Ladder

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\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
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Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

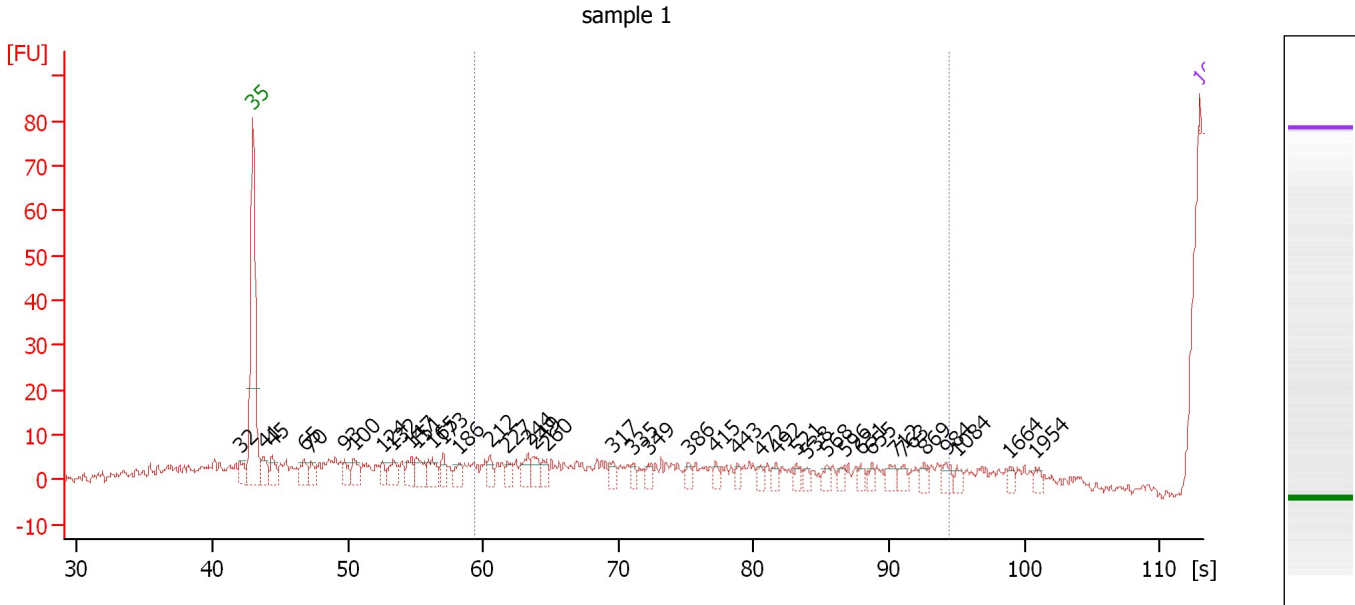
Peak table for Ladder

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	45.22	50	150.00	4,545.5	Ladder Peak
3	50.46	100	150.00	2,272.7	Ladder Peak
4	54.95	150	150.00	1,515.2	Ladder Peak
5	59.44	200	150.00	1,136.4	Ladder Peak
6	68.29	300	150.00	757.6	Ladder Peak
7	76.35	400	150.00	568.2	Ladder Peak
8	82.15	500	150.00	454.5	Ladder Peak
9	86.91	600	150.00	378.8	Ladder Peak
10	90.21	700	150.00	324.7	Ladder Peak
11	94.46	1,000	150.00	227.3	Ladder Peak
12	101.17	2,000	150.00	113.6	Ladder Peak
13	104.46	3,000	150.00	75.8	Ladder Peak
14	109.59	7,000	150.00	32.5	Ladder Peak
15	113.00	10,380	75.00	10.9	Upper Marker
16	113.40	10,773	0.00	0.0	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : sample 1

Number of peaks found: 41 Corr. Area 1: 0.0
 Noise: 1.1

Peak table for sample 1 : sample 1

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	3.71	0	0.00	0.0	
2	42.05	32	0.00	0.0	
3	43.00	35	125.00	5,411.3	Lower Marker
4	43.83	41	2,303.22	85,907.8	
5	44.47	45	2,146.55	72,427.0	
6	46.77	65	2,044.56	47,840.9	
7	47.33	70	1,509.68	32,652.6	
8	49.75	93	1,735.93	28,237.6	
9	50.50	100	1,990.08	30,034.1	
10	52.60	124	1,260.43	15,421.9	
11	53.36	132	2,137.81	24,495.0	
12	54.71	147	1,839.78	18,927.9	
13	55.06	151	2,444.66	24,489.2	
14	56.29	165	2,401.72	22,059.7	
15	57.05	173	1,523.97	13,319.2	
16	58.20	186	1,431.06	11,645.7	
17	60.54	212	1,276.21	9,101.9	
18	61.81	227	1,146.19	7,657.7	
19	63.36	244	1,927.76	11,957.7	
20	63.75	249	1,618.69	9,859.7	
21	64.75	260	1,295.35	7,550.1	
22	69.67	317	1,138.08	5,438.7	
23	71.13	335	779.98	3,524.9	
24	72.25	349	890.35	3,864.7	
25	75.26	386	808.52	3,169.8	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

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Electropherogram Summary Continued ...

... Peak table for sample 1 : sample 1

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
26	77.21	415	723.80	2,644.3	
27	78.83	443	654.10	2,238.2	
28	80.50	472	674.78	2,168.2	
29	81.69	492	826.52	2,544.9	
30	83.16	521	610.17	1,773.8	
31	83.95	538	565.64	1,593.4	
32	85.38	568	689.39	1,839.5	
33	86.73	596	592.29	1,505.4	
34	87.92	631	589.15	1,415.7	
35	88.71	655	548.77	1,270.1	
36	90.38	712	1,000.16	2,128.0	
37	91.10	763	817.59	1,624.5	
38	92.60	869	778.74	1,357.7	
39	94.23	984	896.65	1,380.7	
40	95.02	1,084	620.89	867.6	
41	98.91	1,664	434.22	395.4	
42	100.86	1,954	525.72	407.7	
43	113.00	10,380	75.00	10.9	Upper Marker

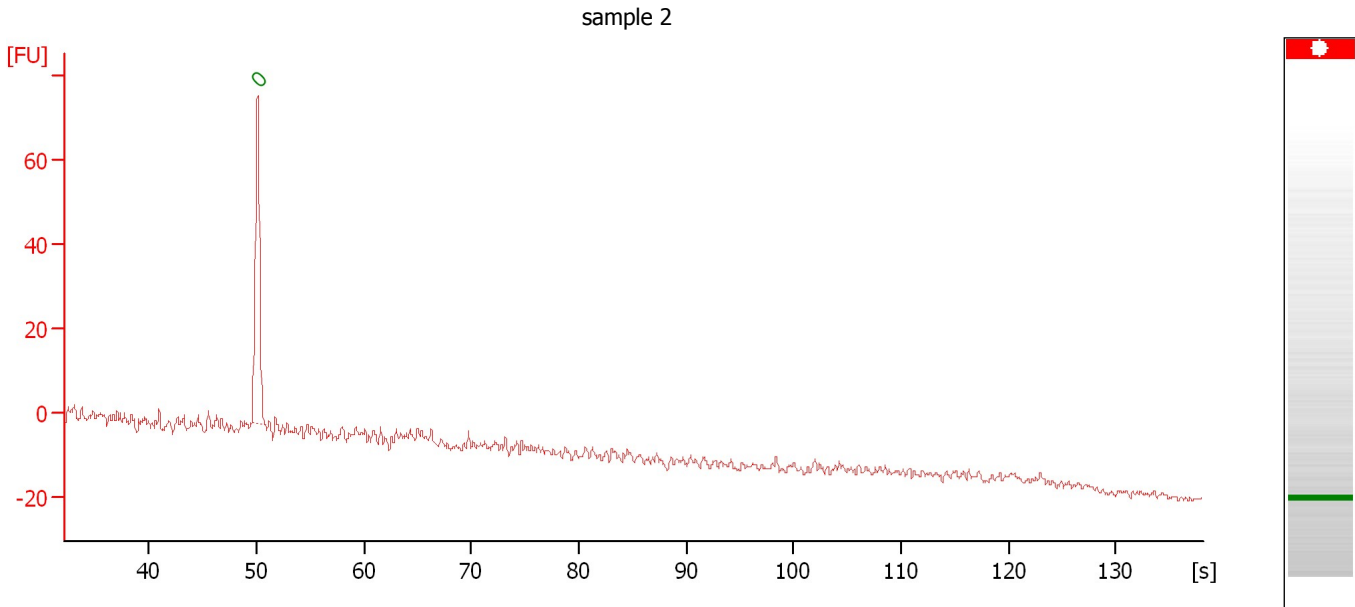
Region table for sample 1 : sample 1

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. for Area	% of Total	Size distribution in CV [%]
200	1,000	0	0.0	0.00	0.0	0	0.0

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : sample 2

Number of peaks found: 0 Noise: 1.2

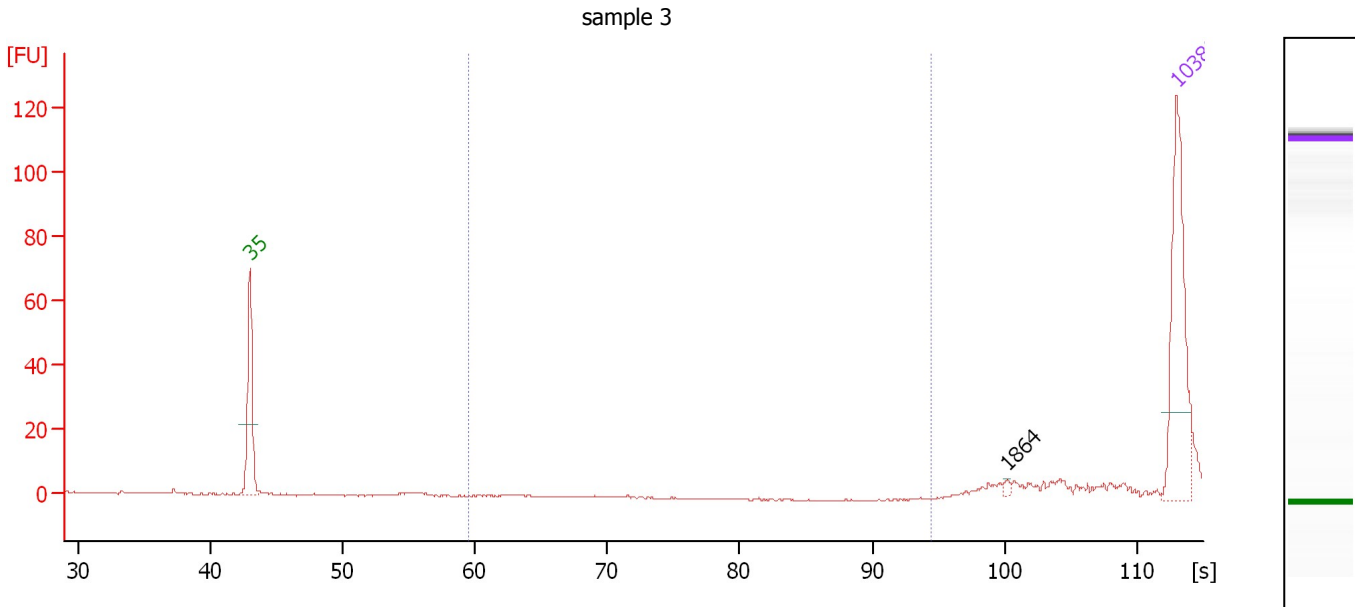
Peak table for sample 2 : sample 2

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	50.10	0	0.00	0.0	Lower Marker

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : sample 3

Number of peaks found: 1 Corr. Area 1: 0.0
 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	100.26	1,864	1.68	1.4	
3	113.00	10,380	75.00	10.9	Upper Marker

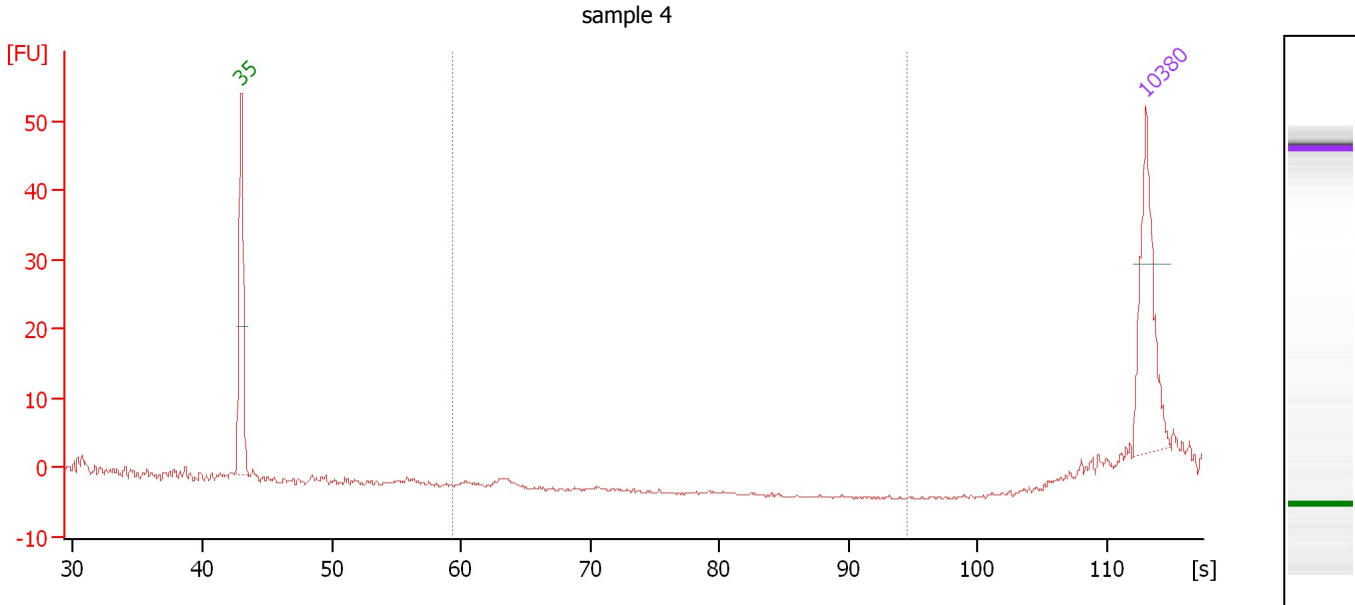
Region table for sample 3 : sample 3

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
200	1,000	0	0.0	0.00	0.0	0	0.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : sample 4

Number of peaks found: 0 Corr. Area 1: 0.0
 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	113.00	10,380	75.00	10.9	Upper Marker

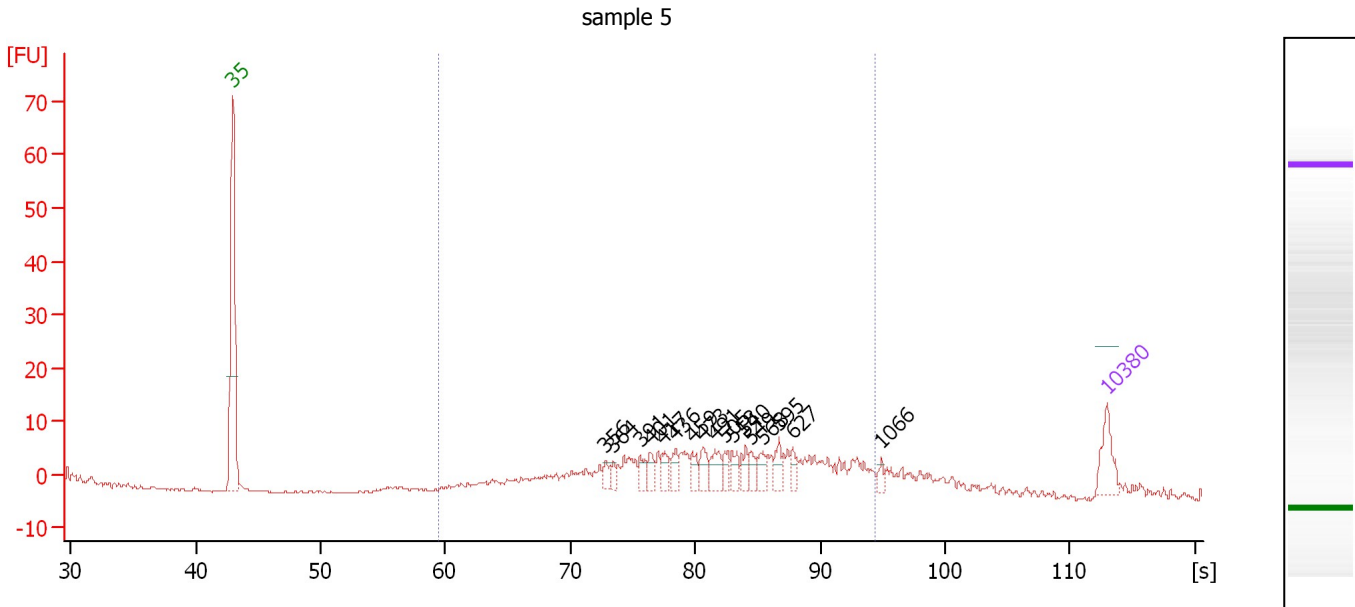
Region table for sample 4 : sample 4

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
200	1,000	0	0.0	0.00	0.0	0	0.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : sample 5

Number of peaks found: 17 Corr. Area 1: 186.2
 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	72.84	356	31.30	133.0	
3	73.44	364	27.94	116.3	
4	75.64	391	37.76	146.3	
5	76.41	401	42.35	160.0	
6	77.36	417	44.34	161.0	
7	78.43	436	48.15	167.4	
8	79.76	459	43.84	144.8	
9	80.58	473	52.77	169.1	
10	81.61	491	64.79	200.0	
11	82.39	505	37.66	113.0	
12	82.99	518	41.41	121.2	
13	84.06	540	43.69	122.5	
14	84.49	549	32.86	90.7	
15	85.40	568	46.46	123.9	
16	86.69	595	47.06	119.8	
17	87.80	627	33.45	80.8	
18	94.90	1,066	19.29	27.4	
19	113.00	10,380	75.00	10.9	Upper Marker

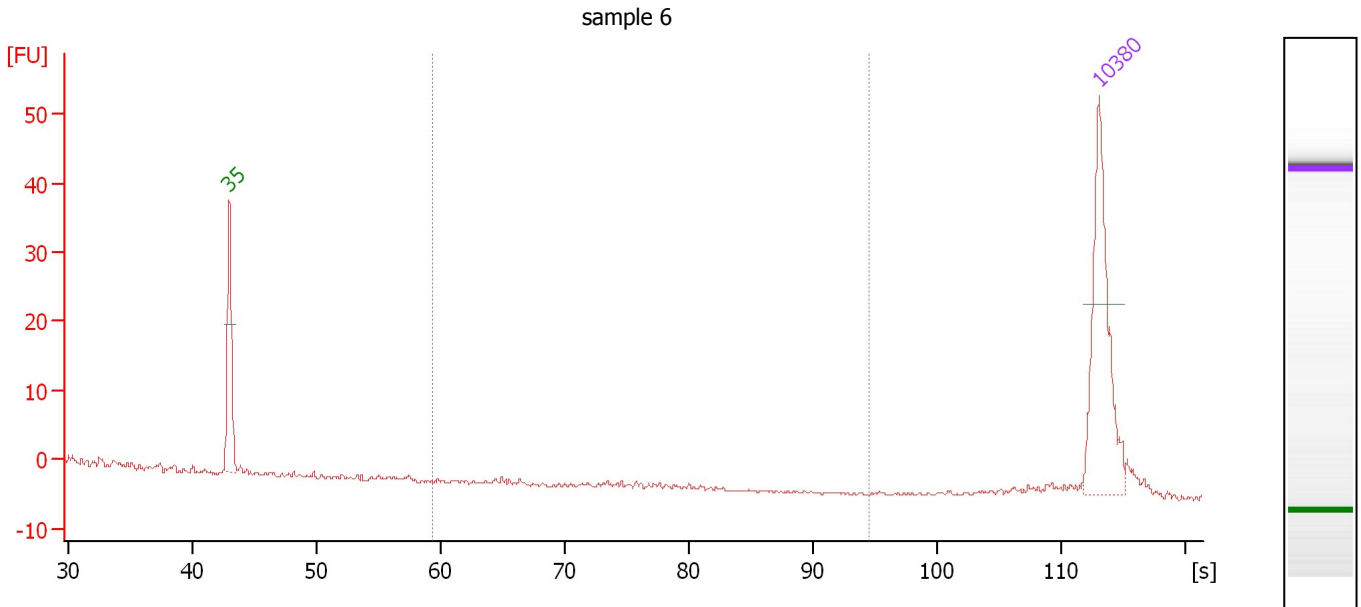
Region table for sample 5 : sample 5

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
200	1,000	533	4,480.3	1,372.82	186.2	82	31.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : sample 6

Number of peaks found: 0 Corr. Area 1: 0.0
 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	113.00	10,380	75.00	10.9	Upper Marker

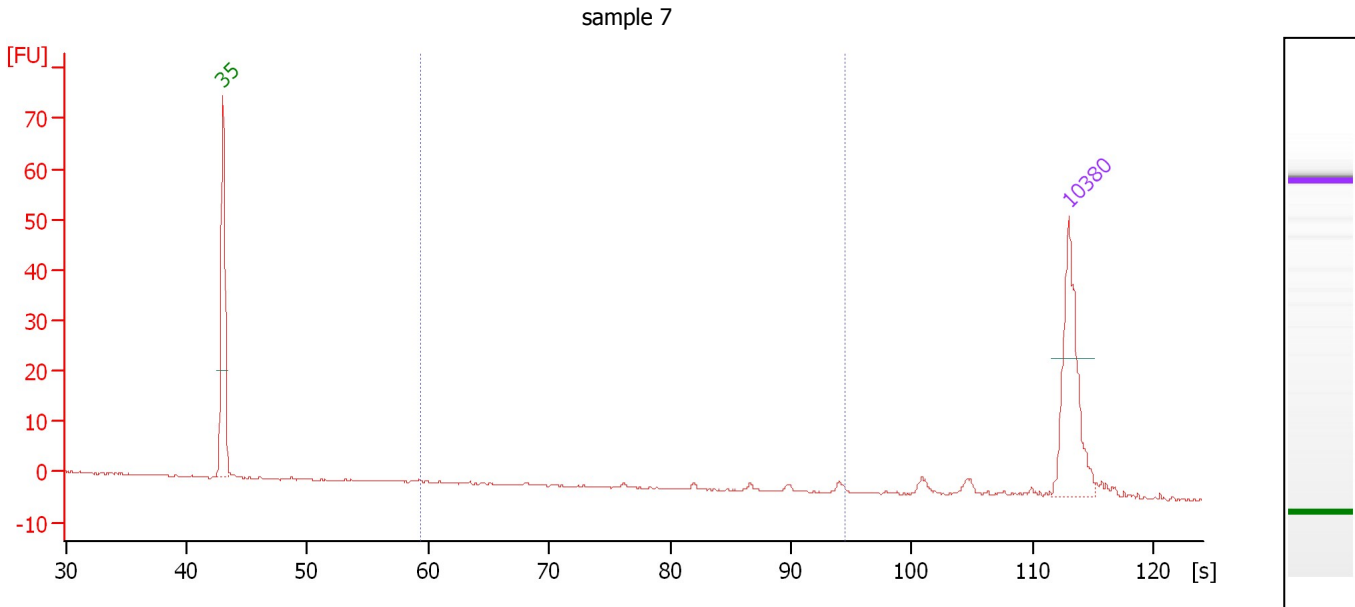
Region table for sample 6 : sample 6

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
200	1,000	0	0.0	0.00	0.0	0	0.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : sample 7

Number of peaks found: 0 Corr. Area 1: 3.1
 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	113.00	10,380	75.00	10.9	Upper Marker

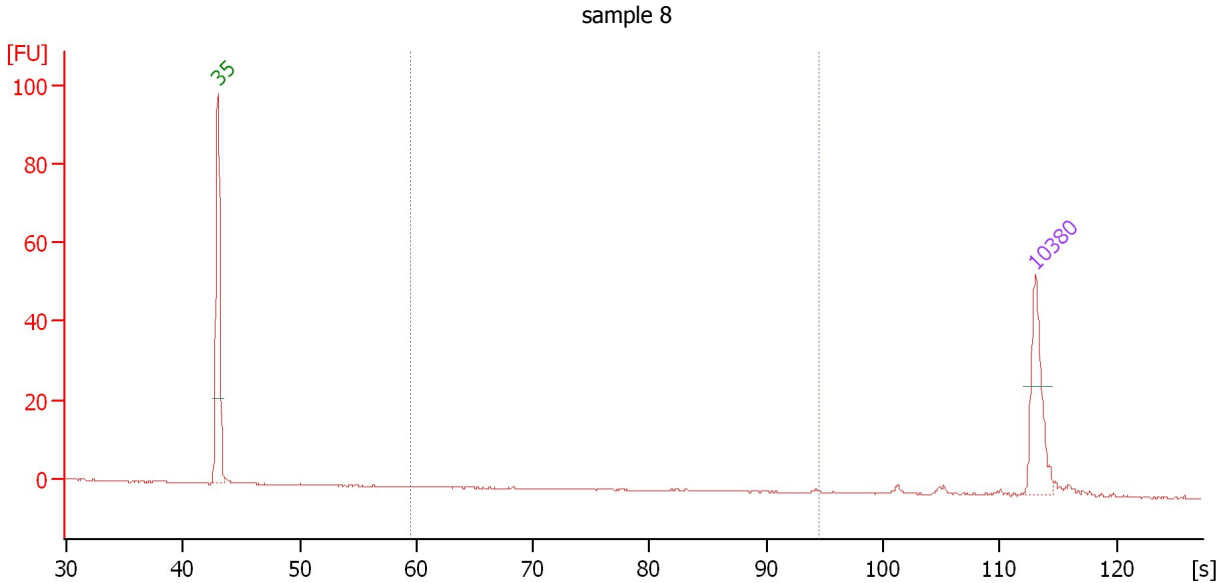
Region table for sample 7 : sample 7

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
200	1,000	736	11.1	4.62	3.1	18	28.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : sample 8

Number of peaks found: 0 Corr. Area 1: 0.8
 Noise: 0.1

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	113.00	10,380	75.00	10.9	Upper Marker

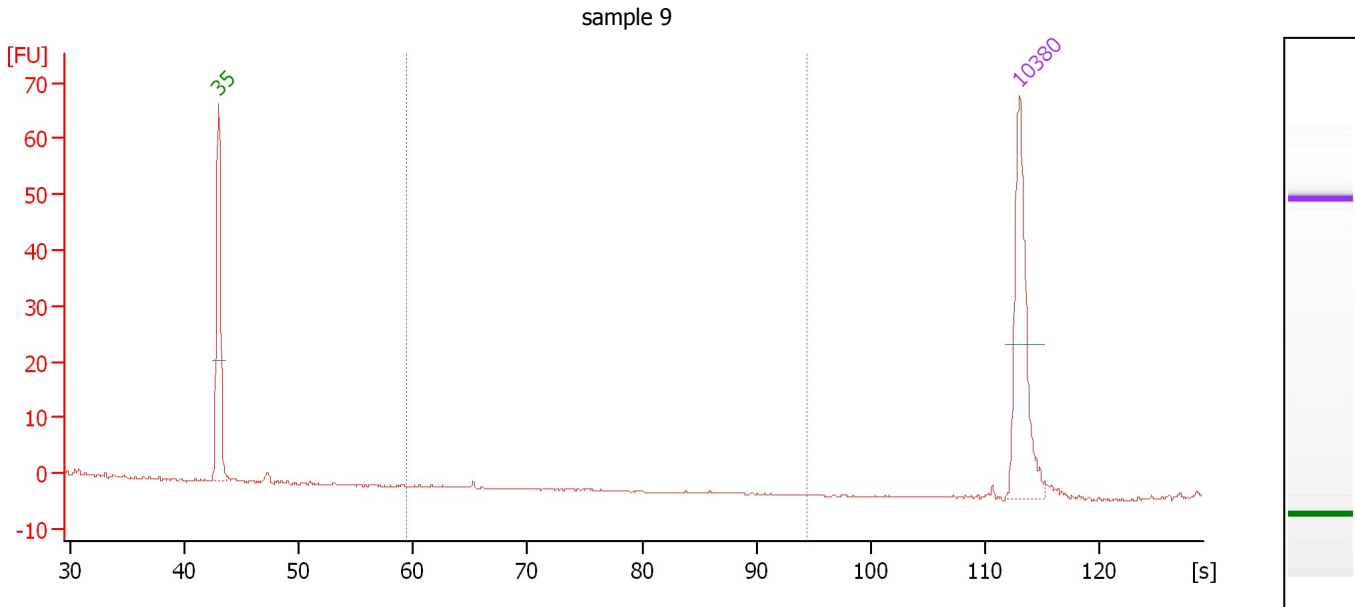
Region table for sample 8 : sample 8

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
200	1,000	738	3.4	1.47	0.8	5	29.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : sample 9

Number of peaks found: 0 Corr. Area 1: 0.0
 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	113.00	10,380	75.00	10.9	Upper Marker

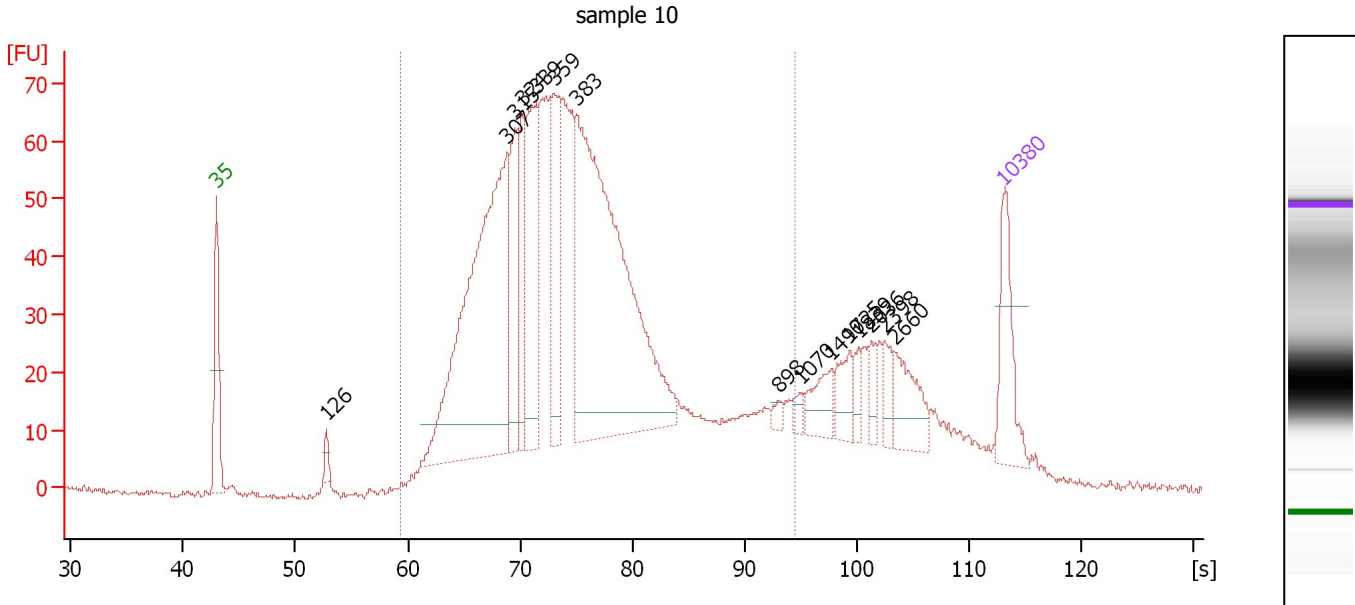
Region table for sample 9 : sample 9

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
200	1,000	0	0.0	0.00	0.0	0	0.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : sample 10

Number of peaks found: 15 Corr. Area 1: 1,500.9
 Noise: 0.6

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	52.75	126	17.61	212.6	
3	68.87	307	654.85	3,230.4	
4	69.54	315	144.77	695.4	
5	70.21	324	108.12	506.0	
6	71.45	339	189.83	848.0	
7	73.03	359	154.11	650.9	
8	74.99	383	711.58	2,814.5	
9	93.01	898	8.28	14.0	
10	94.93	1,070	10.20	14.4	
11	97.75	1,490	39.70	40.4	
12	99.33	1,725	32.83	28.8	
13	100.09	1,839	17.70	14.6	
14	101.29	2,036	17.94	13.4	
15	102.48	2,398	23.76	15.0	
16	103.34	2,660	57.17	32.6	
17	113.00	10,380	75.00	10.9	Upper Marker

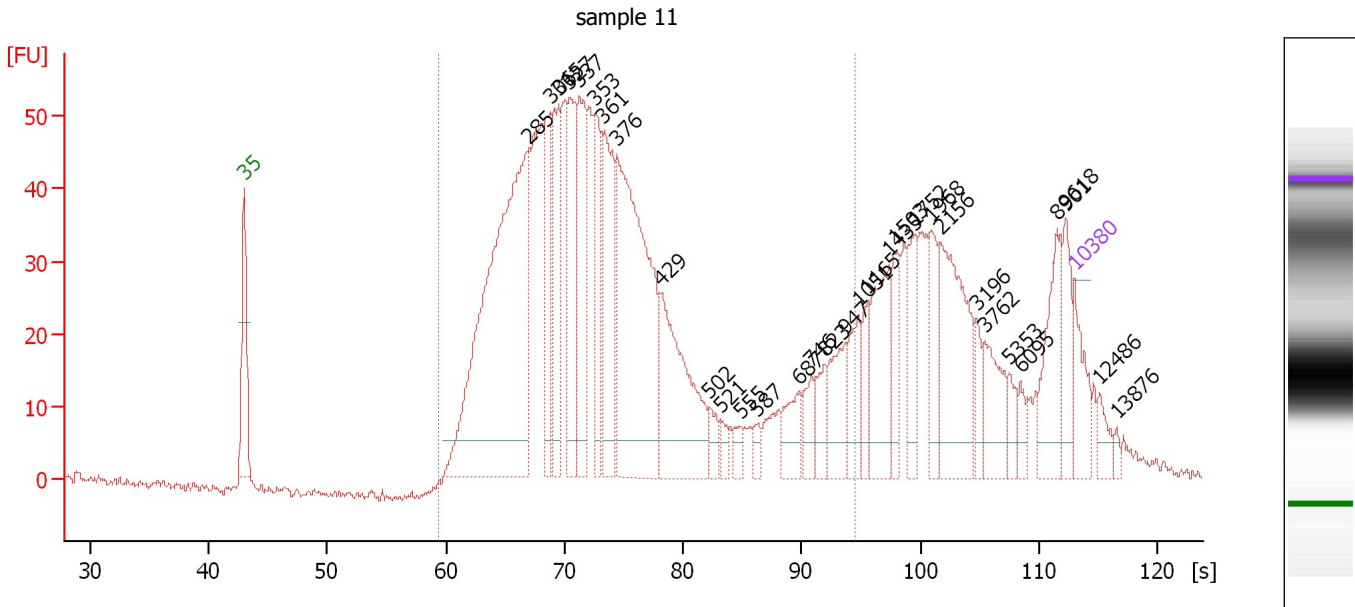
Region table for sample 10 : sample 10

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. for Area	% of Total	Size distribution in CV [%]
200	1,000	404	13,269.9	3,137.98	1,500.9	82	35.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
 Modified: 3/19/2014 4:42:37 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : sample 11

Number of peaks found: 32 Corr. Area 1: 1,178.2
 Noise: 0.5

Peak table for sample 11 : sample 11

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	66.95	285	1,229.98	6,542.0	
3	68.81	306	190.28	940.9	
4	69.49	315	219.08	1,054.4	
5	70.44	327	233.73	1,084.2	
6	71.25	337	283.44	1,275.3	
7	72.57	353	181.79	780.2	
8	73.20	361	297.49	1,249.0	
9	74.38	376	722.79	2,916.4	
10	78.05	429	348.65	1,230.8	
11	82.26	502	38.37	115.8	
12	83.16	521	26.92	78.2	
13	84.79	555	22.62	61.7	
14	86.29	587	20.75	53.6	
15	89.77	687	70.80	156.2	
16	90.86	746	53.15	108.0	
17	91.95	823	57.44	105.8	
18	93.71	947	105.12	168.1	
19	94.80	1,051	88.37	127.4	
20	95.57	1,165	47.16	61.3	
21	97.38	1,435	158.17	167.0	
22	97.83	1,503	71.45	72.0	
23	99.51	1,752	82.45	71.3	
24	100.96	1,968	80.60	62.0	
25	101.68	2,156	243.81	171.4	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

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Electropherogram Summary Continued ...

... Peak table for sample 11 : sample 11

Peak	Aligned Migration Time [s]	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
26	104.71	3,196	37.26	17.7	
27	105.44	3,762	95.31	38.4	
28	107.48	5,353	32.35	9.2	
29	108.43	6,095	25.91	6.4	
30	111.51	8,901	133.89	22.8	
31	112.23	9,618	74.82	11.8	
32	113.00	10,380	75.00	10.9	Upper Marker
33	115.13	12,486	0.00	0.0	
34	116.53	13,876	0.00	0.0	

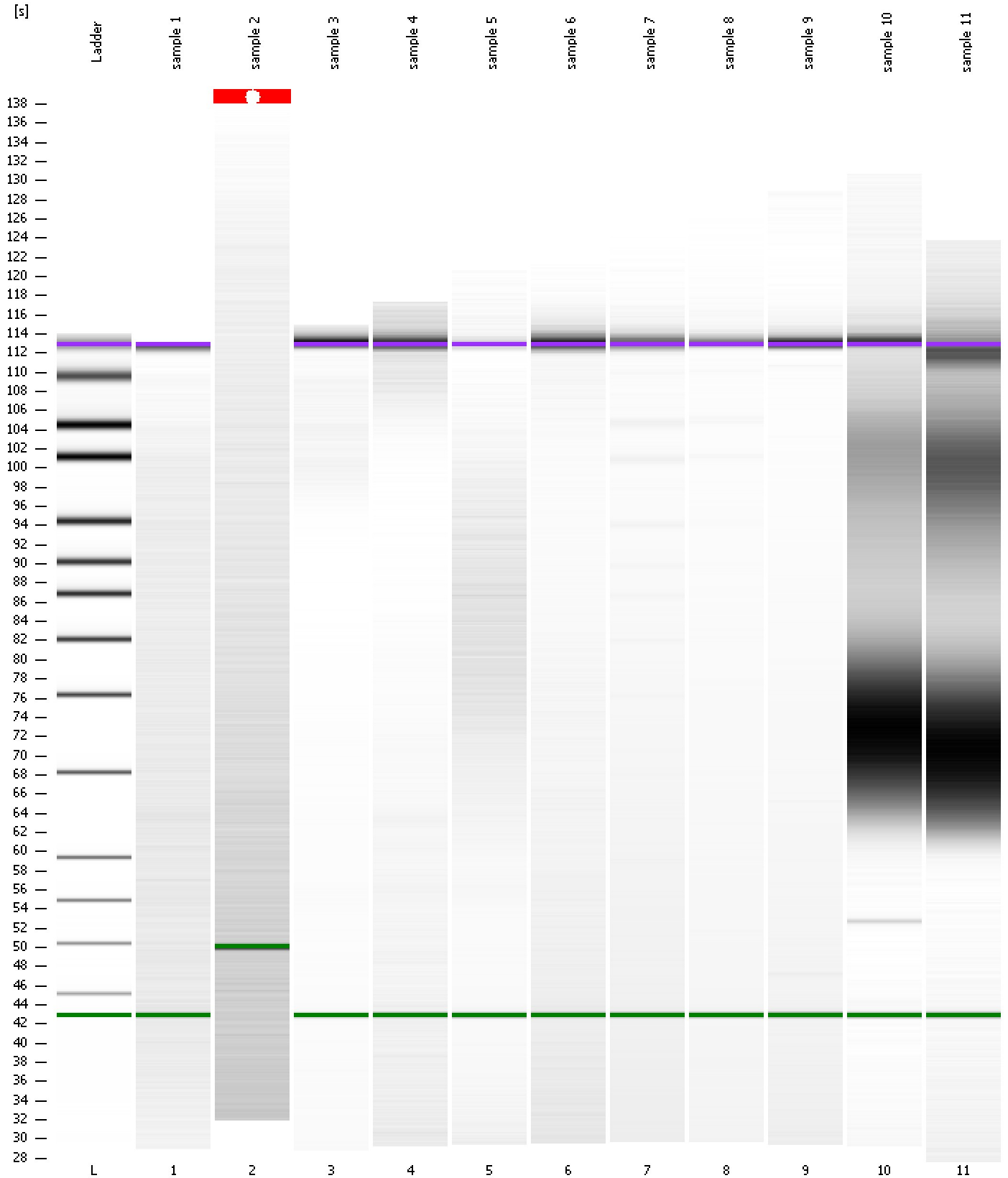
Region table for sample 11 : sample 11

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
200	1,000	396	22,841.5	5,119.30	1,178.2	72	41.4

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
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Gel Image

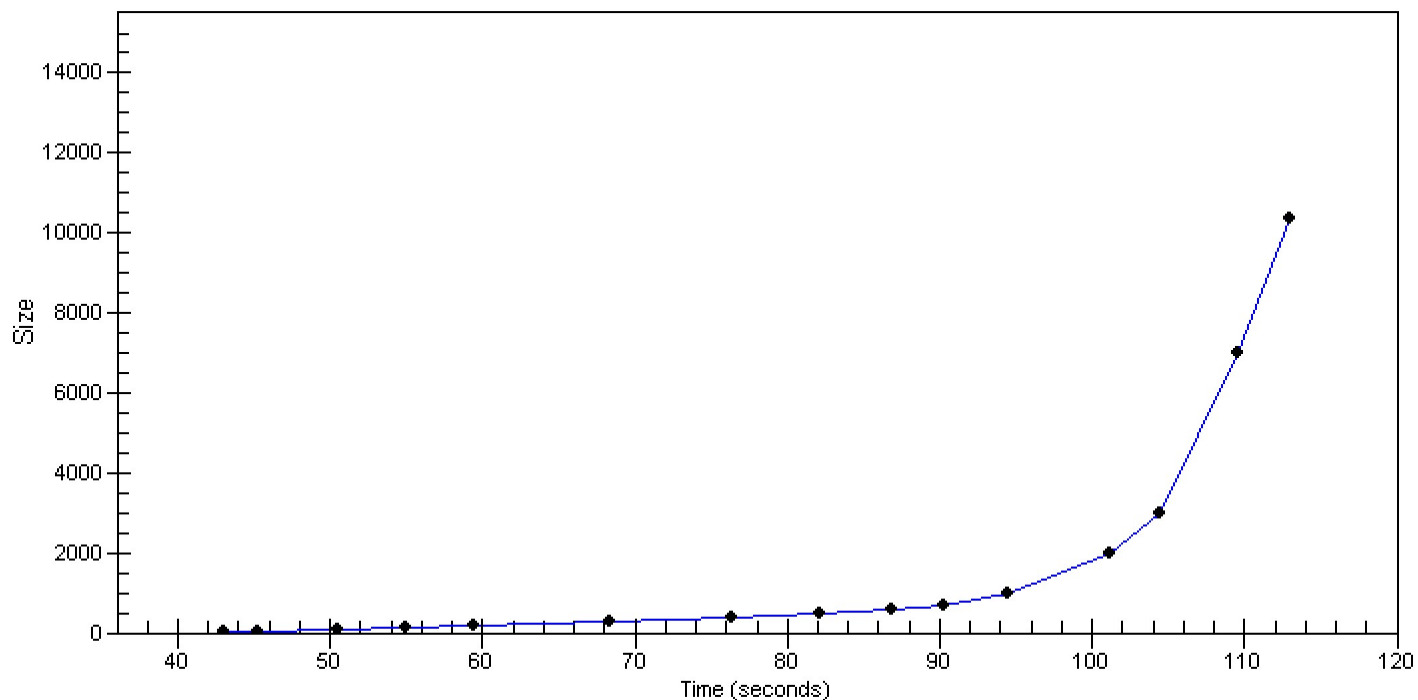


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

Created: 3/19/2014 3:59:31 PM
Modified: 3/19/2014 4:42:37 PM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad

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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		3/19/2014 4:39:55 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2014-03-19\2014-03-19_007.xad)		Instrument	Run		3/19/2014 3:59:32 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/19/2014 3:59:32 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/19/2014 3:59:32 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/19/2014 3:59:32 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/19/2014 3:59:32 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/19/2014 3:59:32 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/19/2014 3:59:32 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1