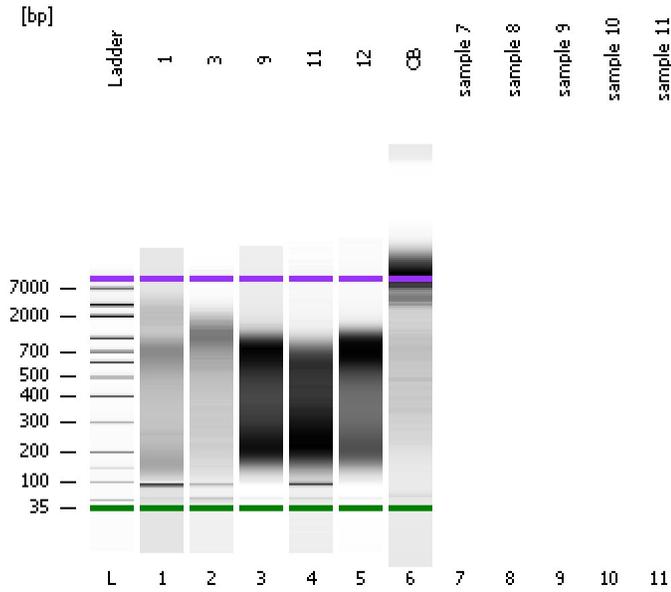


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
Modified: 4/26/2016 9:52:08 AM

Electrophoresis File Run Summary



Instrument Information:

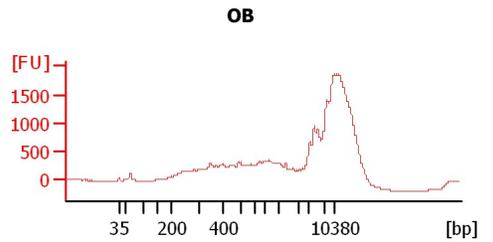
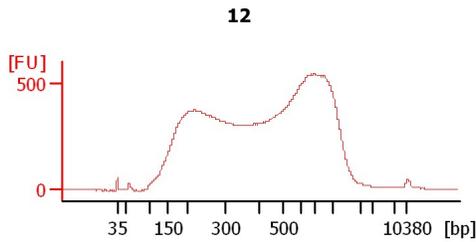
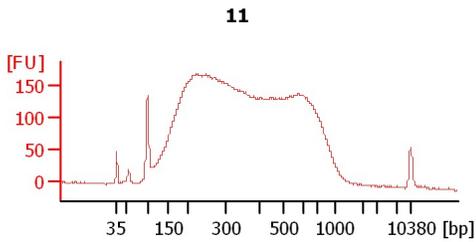
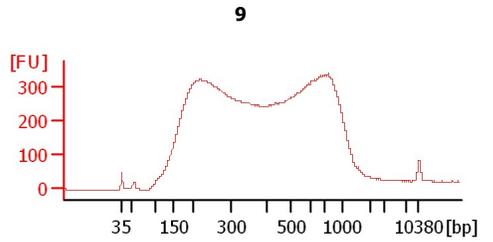
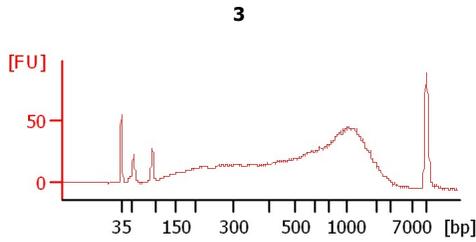
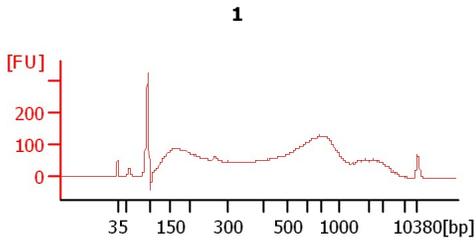
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
 Modified: 4/26/2016 9:52:08 AM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
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3		<input type="checkbox"/>	✓			
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11		<input type="checkbox"/>	✓			
12		<input type="checkbox"/>	✓			
OB		<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:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
Modified: 4/26/2016 9:52:08 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

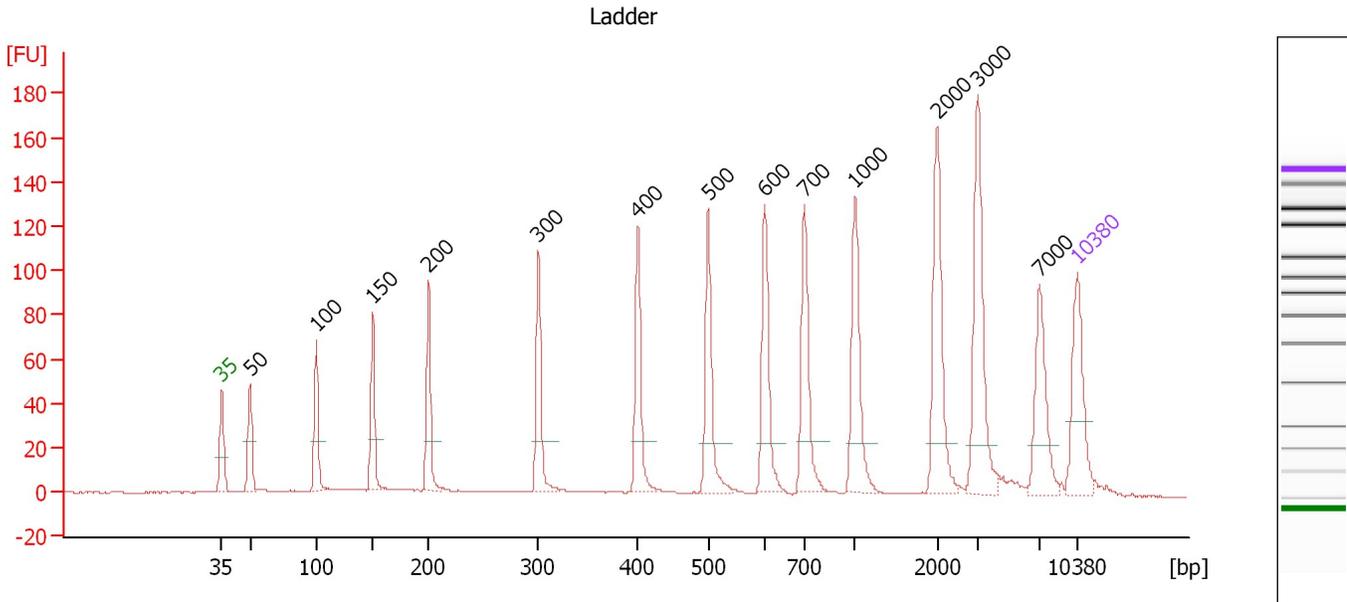
Ladder

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\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
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Electropherogram Summary



Overall Results for Ladder

Noise: 0.3

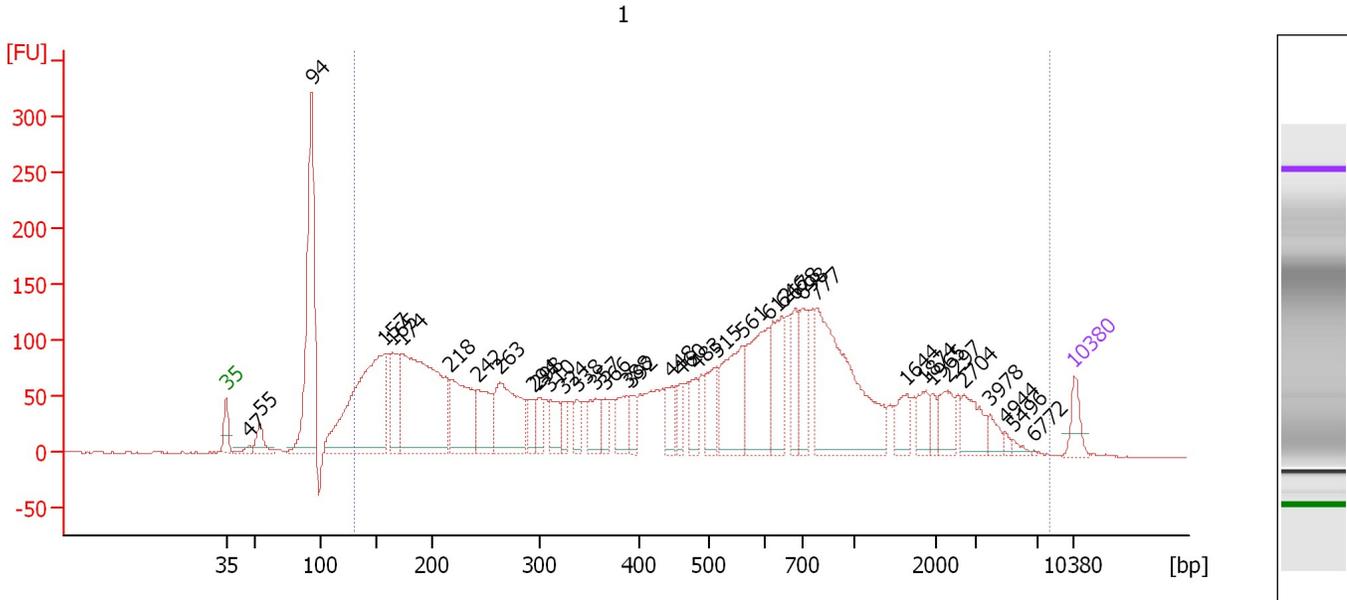
Peak table for Ladder

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	45.30
3	100	150.00	2,272.7	Ladder Peak	50.72
4	150	150.00	1,515.2	Ladder Peak	55.37
5	200	150.00	1,136.4	Ladder Peak	59.92
6	300	150.00	757.6	Ladder Peak	68.91
7	400	150.00	568.2	Ladder Peak	77.02
8	500	150.00	454.5	Ladder Peak	82.80
9	600	150.00	378.8	Ladder Peak	87.40
10	700	150.00	324.7	Ladder Peak	90.65
11	1,000	150.00	227.3	Ladder Peak	94.82
12	2,000	150.00	113.6	Ladder Peak	101.50
13	3,000	150.00	75.8	Ladder Peak	104.84
14	7,000	150.00	32.5	Ladder Peak	109.92
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
 Modified: 4/26/2016 9:52:08 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : 1

Number of peaks found: 37 Corr. Area 1: 4,918.3
 Noise: 0.2

Peak table for sample 1 : 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	47	24.61	788.7		44.88
3	55	123.18	3,416.7		45.80
4	94	1,312.45	21,117.2		50.09
5	157	1,321.04	12,713.8		56.05
6	165	324.88	2,981.2		56.75
7	174	1,405.29	12,253.5		57.53
8	218	513.09	3,562.5		61.56
9	242	277.36	1,735.9		63.71
10	263	523.73	3,016.6		65.59
11	294	110.99	571.5		68.39
12	298	97.53	495.7		68.74
13	310	135.05	659.3		69.75
14	324	80.59	376.5		70.89
15	338	78.91	353.9		71.98
16	357	158.92	675.0		73.51
17	366	75.66	312.8		74.30
18	388	151.57	591.9		76.05
19	392	82.69	319.3		76.40
20	448	122.34	414.1		79.77
21	460	92.86	306.0		80.47
22	483	117.94	370.3		81.79
23	515	195.99	576.4		83.49
24	561	395.39	1,068.1		85.60
25	612	448.79	1,111.2		87.78

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
 Modified: 4/26/2016 9:52:08 AM

Electropherogram Summary Continued ...

... Peak table for sample 1 : 1

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	646	286.48	672.4		88.88
27	678	171.47	383.3		89.93
28	698	231.61	502.7		90.59
29	777	943.28	1,838.6		91.72
30	1,644	101.38	93.4		99.12
31	1,874	94.52	76.4		100.65
32	1,965	47.27	36.4		101.27
33	2,297	115.50	76.2		102.49
34	2,704	141.63	79.4		103.85
35	3,978	50.84	19.4		106.08
36	4,944	16.70	5.1		107.31
37	5,496	20.96	5.8		108.01
38	6,772	3.40	0.8		109.63
39	10,380	75.00	10.9	Upper Marker	113.00

Region table for sample 1 : 1

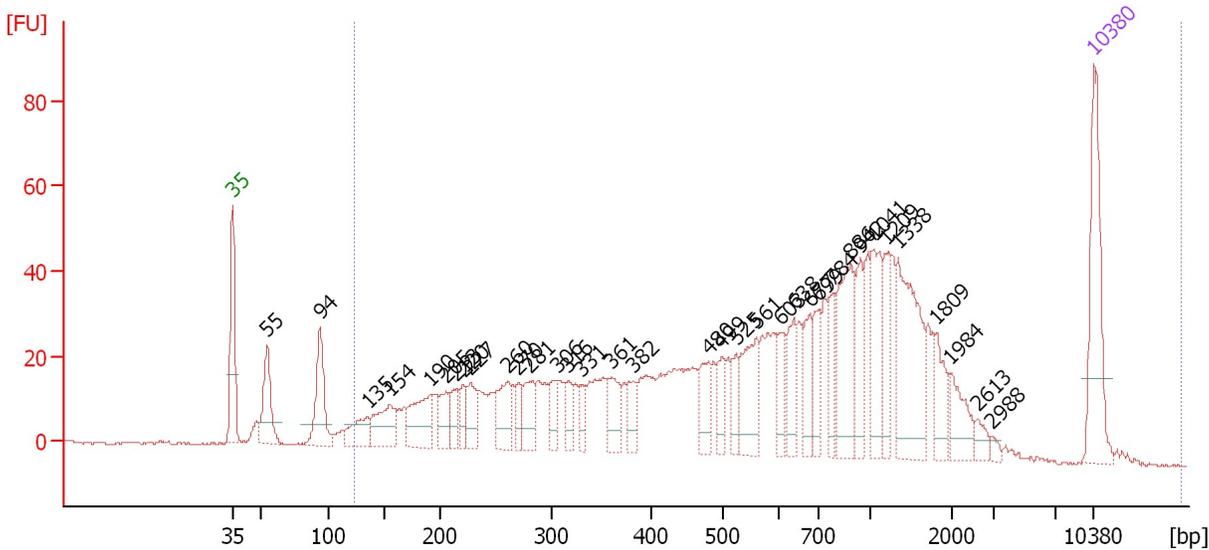
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
131	8,050	766	4,918.3	48,489.1	9,843.26	88	100.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

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Electropherogram Summary Continued ...

3



Overall Results for sample 2 : 3

Number of peaks found: 35 Corr. Area 1: 1,442.8
 Noise: 0.3

Peak table for sample 2 : 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	55	68.40	1,896.3		45.81
3	94	82.20	1,318.9		50.12
4	135	39.75	446.6		53.96
5	154	57.15	560.7		55.77
6	190	65.40	520.3		59.05
7	205	30.59	226.4		60.35
8	213	22.35	158.7		61.13
9	220	21.87	150.6		61.73
10	227	31.45	210.1		62.33
11	260	47.65	277.2		65.36
12	270	22.11	124.1		66.22
13	281	36.08	194.8		67.17
14	306	25.84	127.9		69.41
15	316	21.99	105.3		70.23
16	331	17.64	80.8		71.40
17	361	37.03	155.4		73.86
18	382	24.54	97.3		75.58
19	480	35.48	111.9		81.67
20	499	24.58	74.6		82.75
21	525	21.40	61.7		83.96
22	561	60.89	164.5		85.60
23	603	27.50	69.1		87.49
24	638	32.97	78.4		88.62
25	677	32.96	73.7		89.91

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

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Electropherogram Summary Continued ...

... Peak table for sample 2 : 3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	699	30.74	66.7		90.60
27	784	28.21	54.5		91.81
28	886	80.01	136.8		93.23
29	942	39.74	63.9		94.01
30	1,041	52.91	77.0		95.09
31	1,209	32.42	40.6		96.21
32	1,338	103.83	117.6		97.08
33	1,809	27.32	22.9		100.23
34	1,984	29.07	22.2		101.39
35	2,613	9.63	5.6		103.55
36	2,988	4.34	2.2		104.80
37	 10,380	75.00	10.9	Upper Marker	113.00

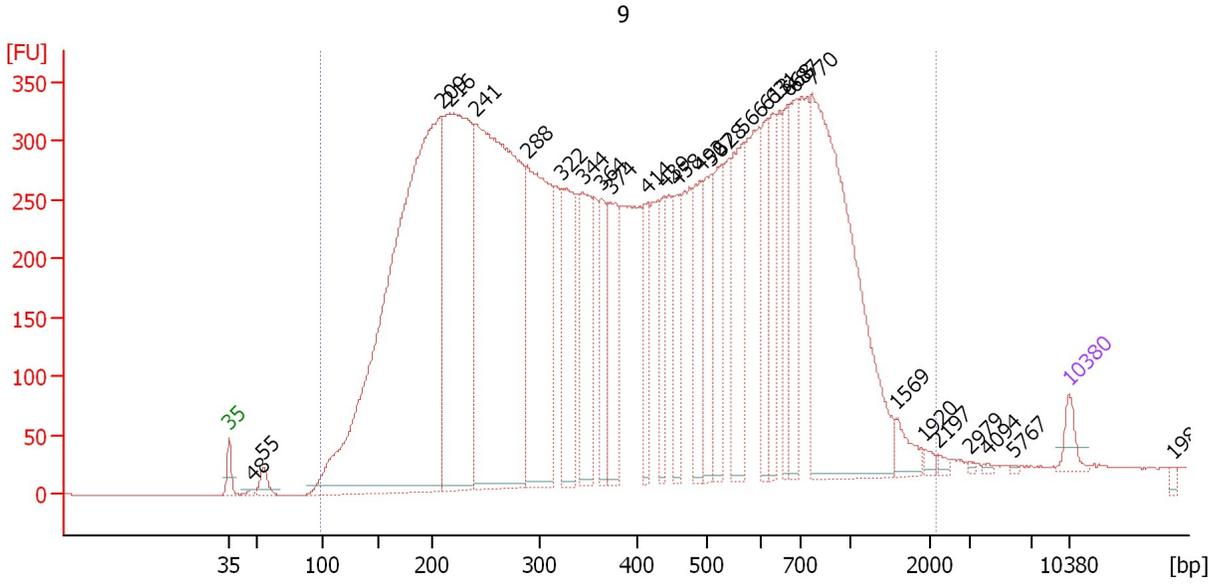
Region table for sample 2 : 3

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
124	18,191	1,553	1,442.8	7,273.6	 1,860.14	93	100.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

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Electropherogram Summary Continued ...



Overall Results for sample 3 : 9

Number of peaks found: 29 Corr. Area 1: 15,575.9
 Noise: 0.2

Peak table for sample 3 : 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	48	23.89	749.7		45.04
3	55	106.58	2,919.6		45.88
4	209	6,077.74	44,037.5		60.74
5	216	3,034.80	21,287.3		61.36
6	241	4,204.17	26,417.4		63.62
7	288	1,865.79	9,818.6		67.82
8	322	863.51	4,062.3		70.70
9	344	778.67	3,430.9		72.47
10	364	430.79	1,795.6		74.06
11	374	572.32	2,319.4		74.90
12	414	337.74	1,236.5		77.82
13	439	337.41	1,164.1		79.28
14	458	359.74	1,191.2		80.35
15	492	460.26	1,417.3		82.34
16	507	486.64	1,453.4		83.13
17	528	462.01	1,326.9		84.06
18	566	628.92	1,683.6		85.83
19	613	348.84	862.0		87.82
20	631	381.63	916.7		88.40
21	668	338.37	768.1		89.59
22	687	504.26	1,112.9		90.21
23	770	2,477.02	4,871.4		91.63
24	1,569	104.61	101.0		98.62
25	1,920	27.96	22.1		100.96

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
 Modified: 4/26/2016 9:52:08 AM

Electropherogram Summary Continued ...

... Peak table for sample 3 : 9

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	2,197	18.99	13.1		102.16
27	2,979	9.29	4.7		104.77
28	4,094	9.66	3.6		106.23
29	5,767	5.28	1.4		108.35
30	10,380	75.00	10.9	Upper Marker	113.00
31	19,845	0.00	0.0		121.63

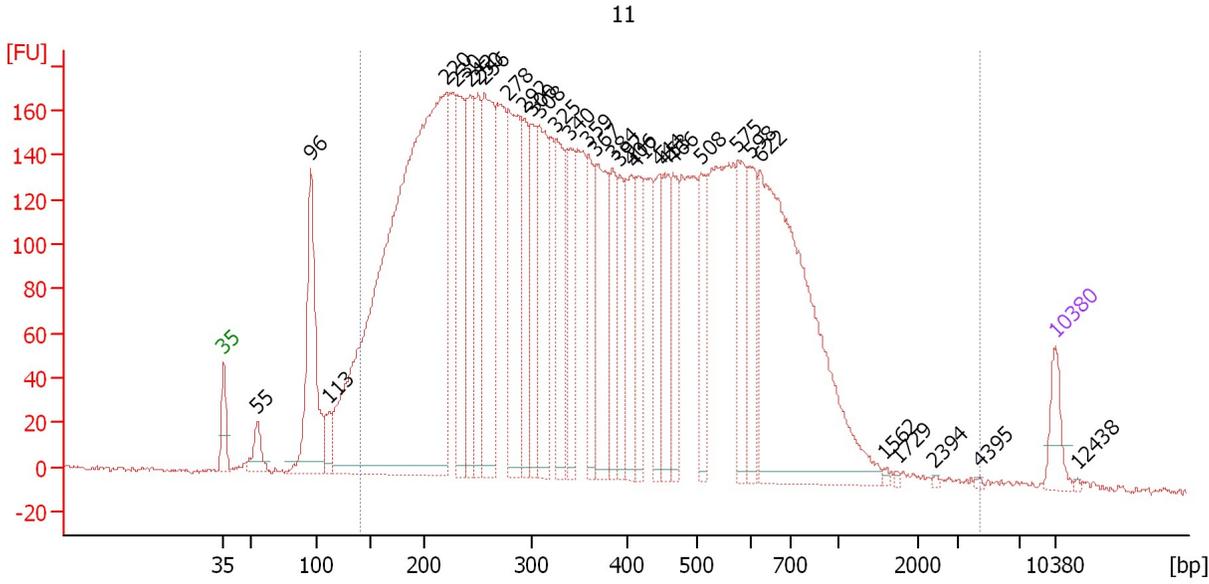
Region table for sample 3 : 9

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
100	2,131	461	15,575.9	153,919.5	29,922.27	99	60.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

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 Modified: 4/26/2016 9:52:08 AM

Electropherogram Summary Continued ...



Overall Results for sample 4 : 11

Number of peaks found: 32 Corr. Area 1: 7,759.3
 Noise: 1.0

Peak table for sample 4 : 11

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	55	101.46	2,808.4		45.81
3	96	633.72	9,968.1		50.33
4	113	82.88	1,115.8		51.89
5	220	3,634.67	24,981.1		61.76
6	230	467.81	3,083.1		62.61
7	242	353.16	2,212.7		63.68
8	250	321.31	1,949.0		64.40
9	256	652.14	3,863.4		64.93
10	278	616.47	3,358.2		66.94
11	292	292.83	1,519.1		68.19
12	300	264.74	1,339.2		68.86
13	308	451.76	2,224.4		69.53
14	325	325.90	1,517.8		70.96
15	340	293.30	1,308.4		72.13
16	359	239.32	1,010.3		73.69
17	367	411.34	1,697.4		74.36
18	384	217.48	857.6		75.74
19	392	182.39	705.1		76.37
20	406	260.62	973.3		77.35
21	412	219.09	805.9		77.71
22	444	200.78	684.6		79.59
23	453	240.29	803.9		80.08
24	466	197.38	641.7		80.84
25	508	217.15	647.8		83.16

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
 Modified: 4/26/2016 9:52:08 AM

Electropherogram Summary Continued ...

... Peak table for sample 4 : 11

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	575	229.39	604.5		86.24
27	598	229.86	582.2		87.31
28	622	1,331.34	3,242.0		88.12
29	1,562	7.20	7.0		98.57
30	1,729	5.09	4.5		99.69
31	2,394	4.26	2.7		102.81
32	4,395	3.91	1.3		106.61
33	10,380	75.00	10.9	Upper Marker	113.00
34	12,438	0.00	0.0		114.88

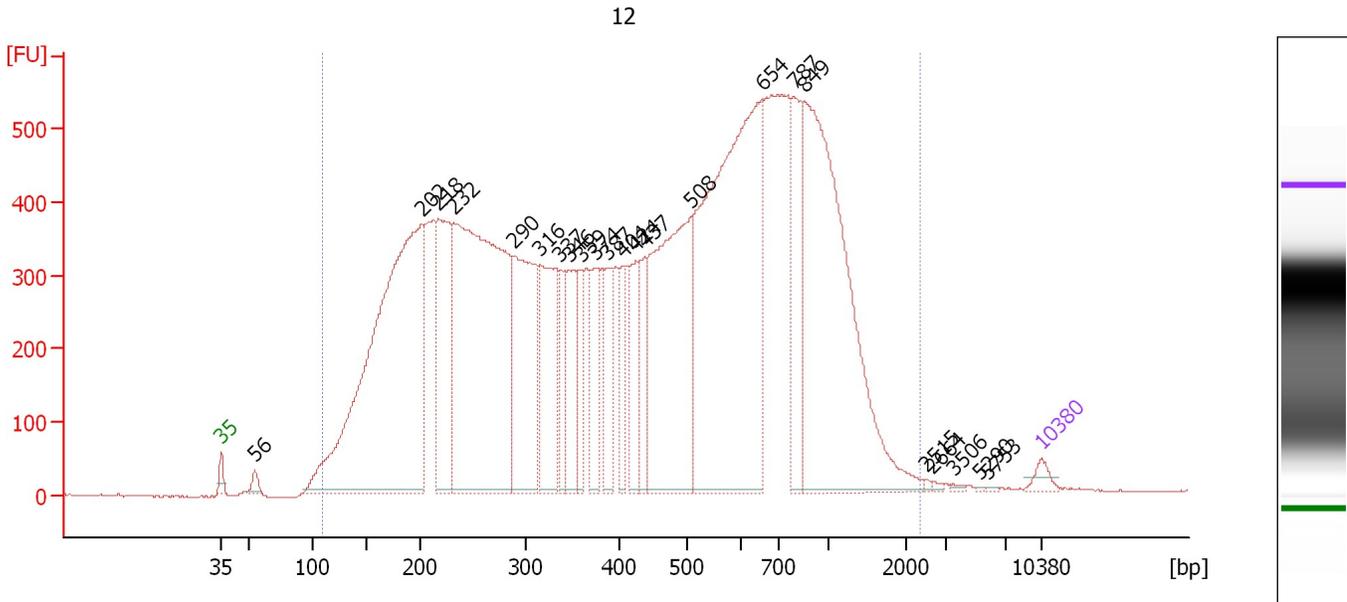
Region table for sample 4 : 11

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
141	4,441	412	7,759.3	76,022.9	14,745.26	94	61.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

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Electropherogram Summary Continued ...



Overall Results for sample 5 : 12

Number of peaks found: 23 Corr. Area 1: 21,778.5
 Noise: 1.1

Peak table for sample 5 : 12

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	56	116.63	3,183.4		45.90
3	202	7,052.98	53,004.2		60.07
4	218	1,823.25	12,687.1		61.52
5	232	6,295.67	41,141.7		62.79
6	290	2,119.57	11,081.0		67.99
7	316	1,419.40	6,804.3		70.21
8	337	482.19	2,169.8		71.89
9	346	760.32	3,327.6		72.66
10	359	458.56	1,935.2		73.70
11	374	651.25	2,641.6		74.88
12	387	534.91	2,094.6		75.96
13	404	423.58	1,590.2		77.23
14	424	552.31	1,973.8		78.41
15	437	491.61	1,703.3		79.18
16	508	2,892.10	8,626.6		83.16
17	654	5,218.96	12,099.3		89.14
18	787	996.75	1,919.6		91.86
19	849	4,030.10	7,194.8		92.72
20	2,515	12.27	7.4		103.22
21	2,664	16.53	9.4		103.72
22	3,506	16.35	7.1		105.48
23	5,290	6.30	1.8		107.75
24	5,753	8.31	2.2		108.34
25	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
Modified: 4/26/2016 9:52:08 AM

Electropherogram Summary Continued ...

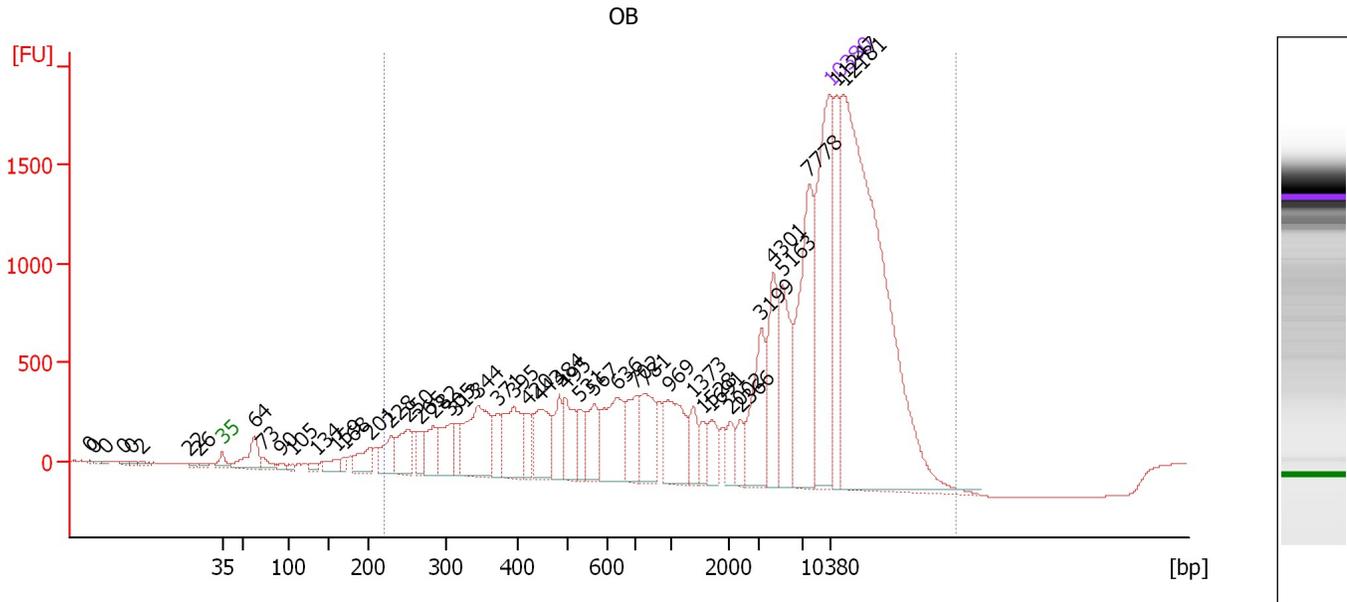
... Region table for sample 5 : 12

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
111	2,349	518	21,778.5	199,425.7	41,222.71	99	61.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
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Electropherogram Summary Continued ...



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

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 Modified: 4/26/2016 9:52:08 AM

Electropherogram Summary Continued ...

... Peak table for sample 6 : OB

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	395	33.73	129.3		76.63
27	420	10.96	39.6		78.15
28	443	26.26	89.9		79.49
29	484	15.18	47.5		81.86
30	495	21.65	66.2		82.53
31	531	12.26	35.0		84.23
32	567	18.46	49.3		85.88
33	636	35.75	85.2		88.55
34	702	21.51	46.4		90.68
35	781	25.75	49.9		91.77
36	969	29.81	46.6		94.39
37	1,373	10.93	12.1		97.31
38	1,528	6.27	6.2		98.34
39	1,691	10.47	9.4		99.44
40	2,002	7.69	5.8		101.51
41	2,366	7.13	4.6		102.72
42	3,199	30.30	14.4		105.09
43	4,301	29.18	10.3		106.49
44	5,163	32.01	9.4		107.59
45	7,778	60.47	11.8		110.63
46	 10,380	75.00	10.9	Upper Marker	113.00
47	11,247	0.00	0.0		113.79
48	12,181	0.00	0.0		114.64

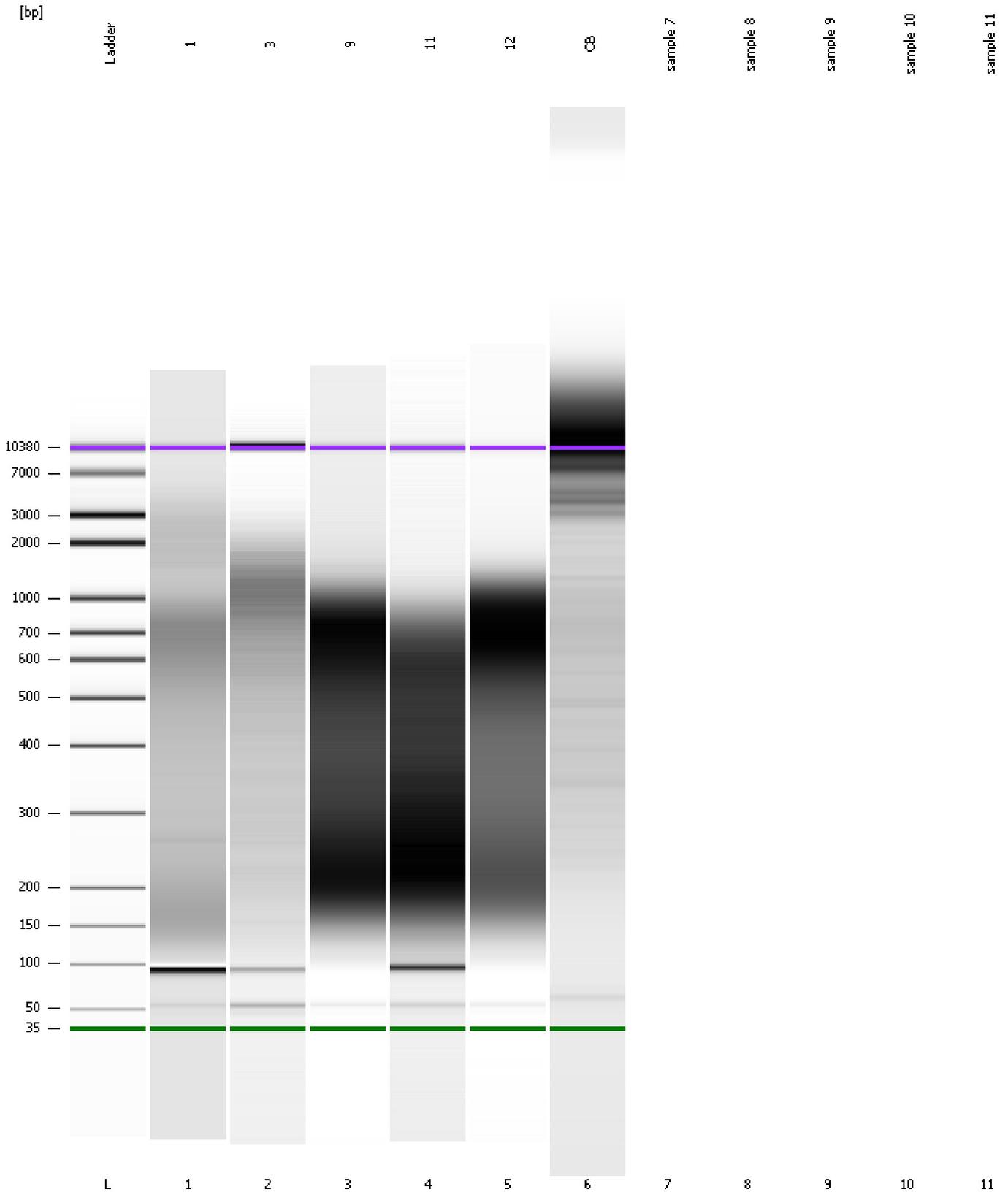
Region table for sample 6 : OB

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
221	26,356	7,737	24,007.9	1,177.7	 657.63	98	79.1

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
Modified: 4/26/2016 9:52:08 AM

Gel Image

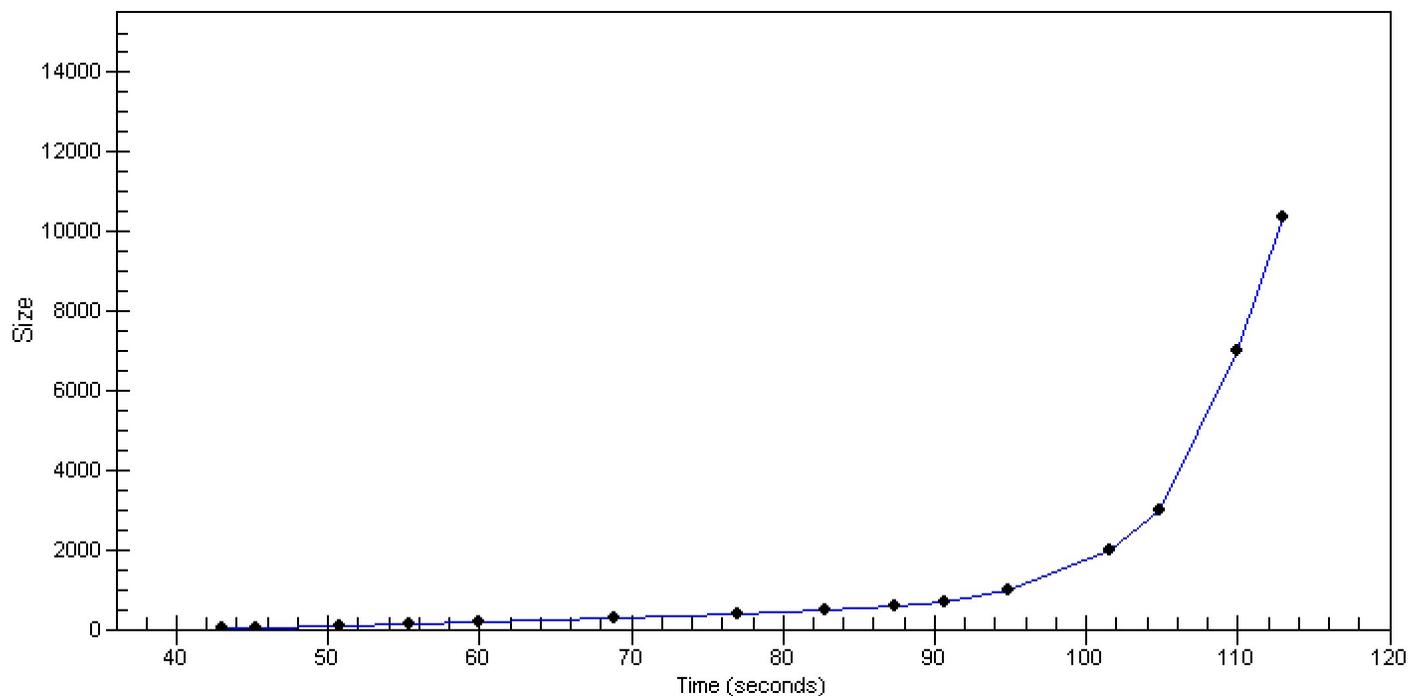


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
Modified: 4/26/2016 9:52:08 AM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
Modified: 4/26/2016 9:52:08 AM

Invalid Samples

Sample 7 has not been run, no results available.

Sample 8 has not been run, no results available.

Sample 9 has not been run, no results available.

Sample 10 has not been run, no results available.

Sample 11 has not been run, no results available.

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-04-25\2016-04-25_003.xad

Created: 4/25/2016 1:48:32 PM
 Modified: 4/26/2016 9:52:08 AM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 7)		Instrument	Run		4/25/2016 2:15:33 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\2016-04-25\2016-04-25_003.xad)		Instrument	Run		4/25/2016 1:48:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		4/25/2016 1:48:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		4/25/2016 1:48:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		4/25/2016 1:48:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		4/25/2016 1:48:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		4/25/2016 1:48:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		4/25/2016 1:48:38 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1