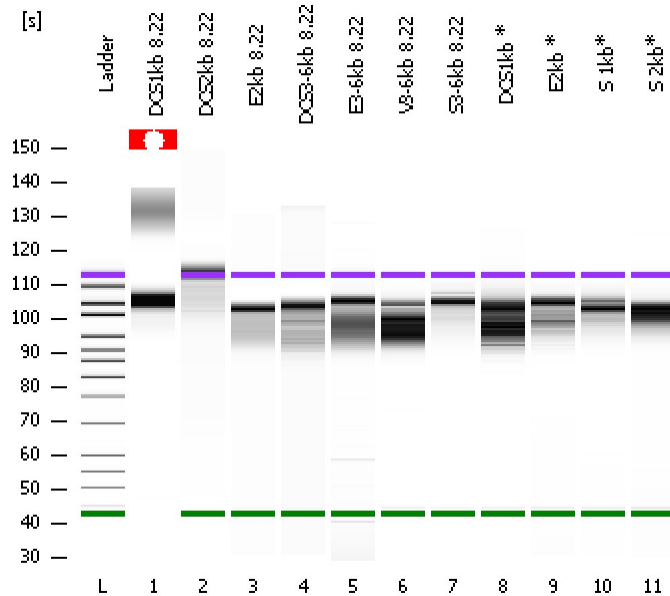


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
Modified: 8/22/2014 12:18:45 PM

Electrophoresis File Run Summary



Instrument Information:

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

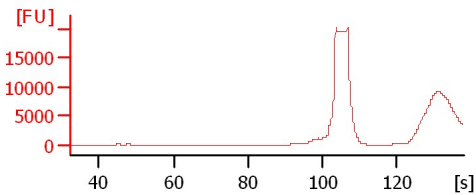
Assay Information:

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

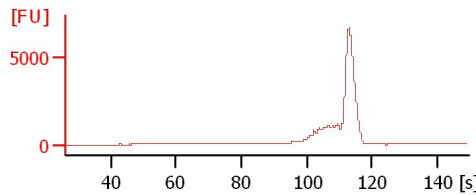
Chip Information:

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

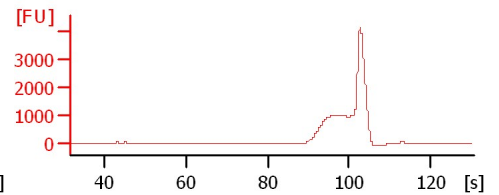
DCS1kb 8.22



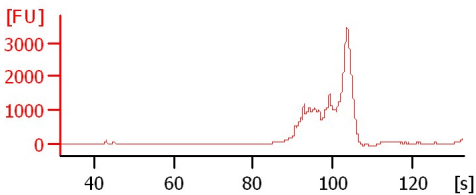
DCS2kb 8.22



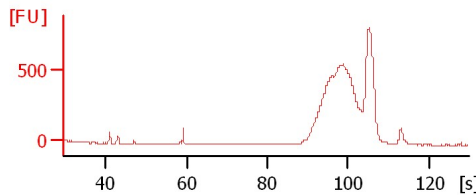
E2kb 8.22



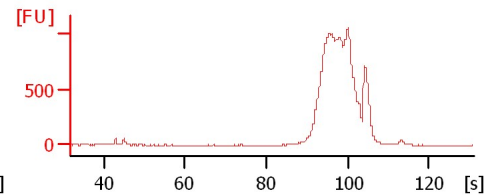
DCS3-6kb 8.22



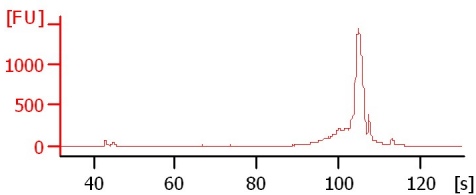
E3-6kb 8.22



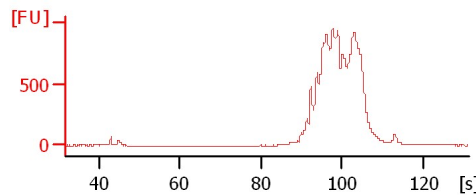
V3-6kb 8.22



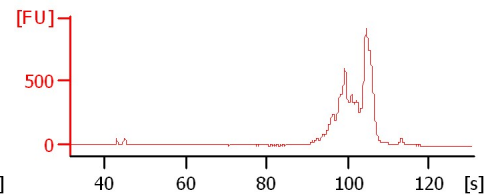
S3-6kb 8.22



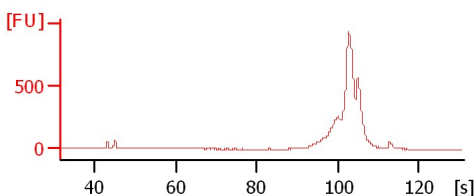
DCS1kb *



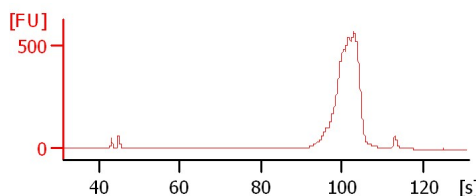
E2kb *



S 1kb*















S 2kb*



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
Modified: 8/22/2014 12:18:45 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
DCS1kb 8.22		<input type="checkbox"/>				
DCS2kb 8.22		<input type="checkbox"/>				
E2kb 8.22		<input type="checkbox"/>				
DCS3-6kb 8.22		<input type="checkbox"/>				
E3-6kb 8.22		<input type="checkbox"/>				
V3-6kb 8.22		<input type="checkbox"/>				
S3-6kb 8.22		<input type="checkbox"/>				
DCS1kb *		<input type="checkbox"/>				
E2kb *		<input type="checkbox"/>				
S 1kb*		<input type="checkbox"/>				
S 2kb*		<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\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
Modified: 8/22/2014 12:18:45 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

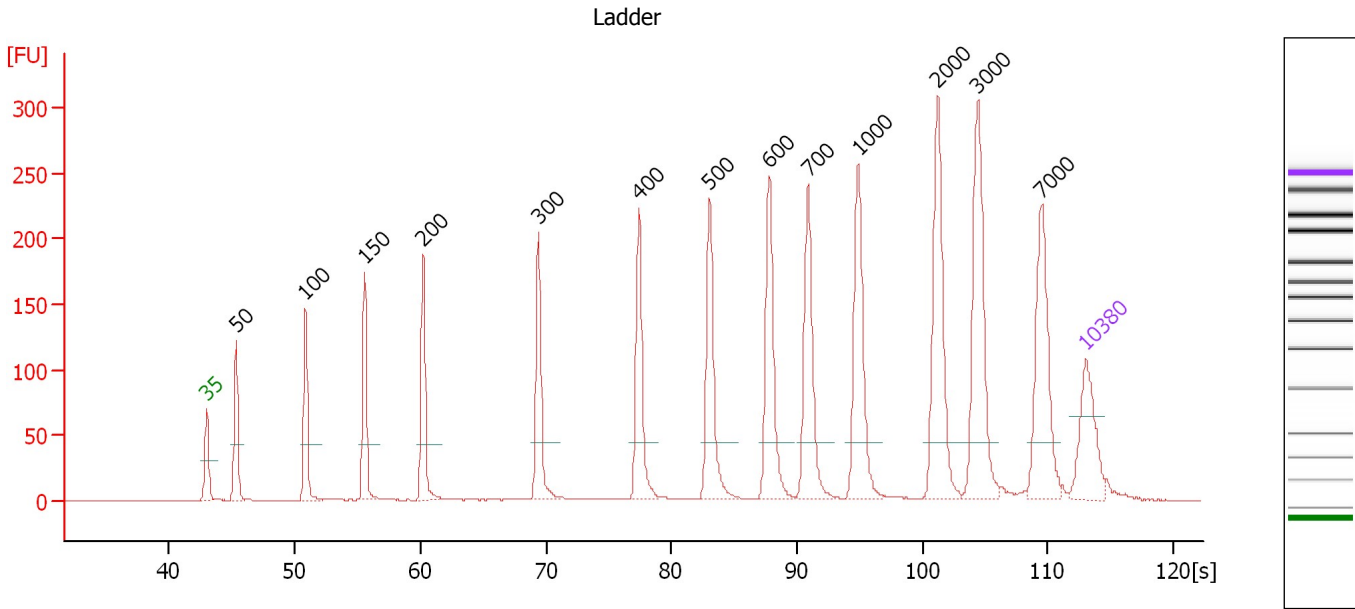
Ladder

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:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

Peak table for Ladder

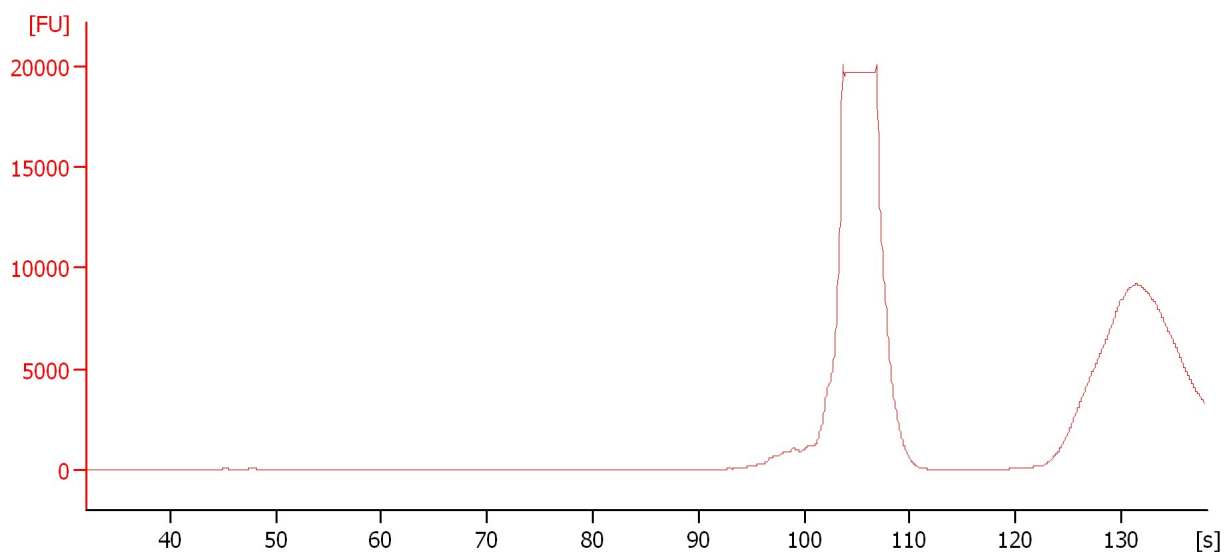
Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	150.00	4,545.5	Ladder Peak
3	100	150.00	2,272.7	Ladder Peak
4	150	150.00	1,515.2	Ladder Peak
5	200	150.00	1,136.4	Ladder Peak
6	300	150.00	757.6	Ladder Peak
7	400	150.00	568.2	Ladder Peak
8	500	150.00	454.5	Ladder Peak
9	600	150.00	378.8	Ladder Peak
10	700	150.00	324.7	Ladder Peak
11	1,000	150.00	227.3	Ladder Peak
12	2,000	150.00	113.6	Ladder Peak
13	3,000	150.00	75.8	Ladder Peak
14	7,000	150.00	32.5	Ladder Peak
15	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...

DCS1kb 8.22



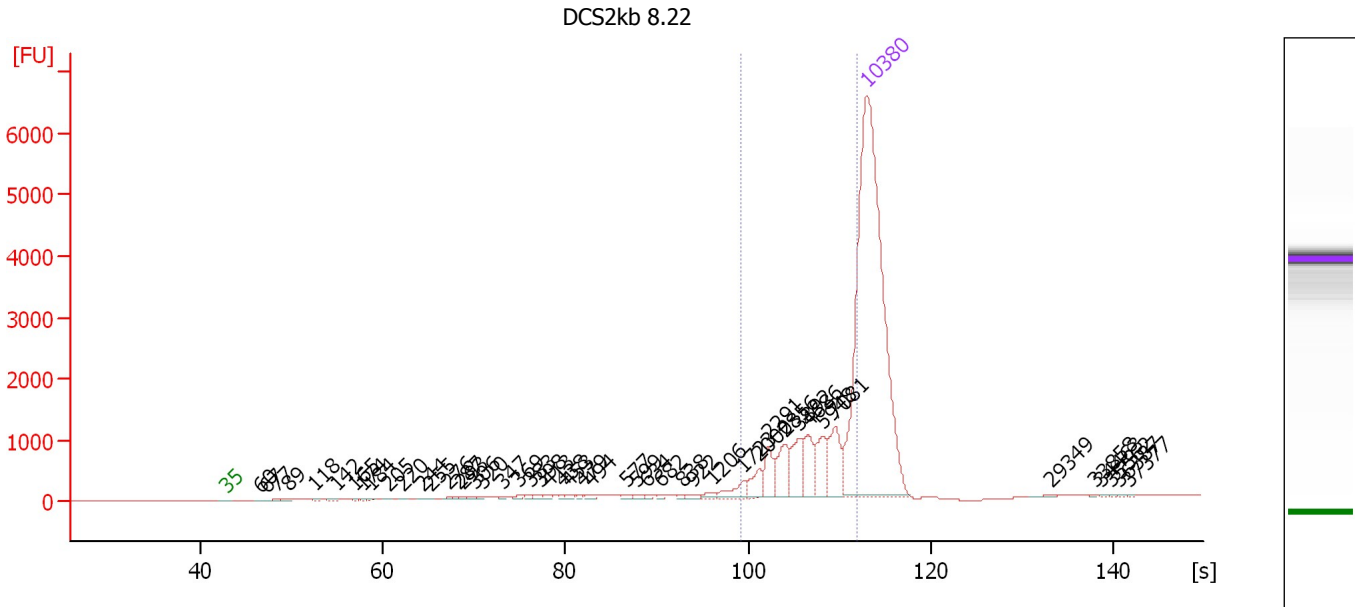
Overall Results for sample 1 : DCS1kb 8.22

Noise: 1.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : DCS2kb 8.22

Number of peaks found: 48 Corr. Area 1: 7,193.7
 Noise: 0.9

Peak table for sample 2 : DCS2kb 8.22

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	60	0.08	2.0	
3	67	0.08	1.9	
4	77	0.14	2.7	
5	89	0.20	3.5	
6	118	0.19	2.4	
7	142	0.27	2.9	
8	165	0.18	1.6	
9	174	0.16	1.4	
10	184	0.22	1.8	
11	205	0.24	1.8	
12	220	0.22	1.5	
13	244	0.21	1.3	
14	255	0.16	1.0	
15	276	0.24	1.3	
16	287	0.20	1.1	
17	293	0.22	1.1	
18	306	0.35	1.7	
19	320	0.34	1.6	
20	347	0.40	1.7	
21	369	0.43	1.8	
22	383	0.39	1.5	
23	398	0.40	1.5	
24	413	0.39	1.4	
25	438	0.30	1.0	
26	453	0.43	1.4	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad


Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...

... Peak table for sample 2 : DCS2kb 8.22

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
27	479	0.31	1.0	
28	494	0.51	1.6	
29	577	0.46	1.2	
30	599	0.43	1.1	
31	634	0.26	0.6	
32	682	0.24	0.5	
33	838	0.30	0.5	
34	922	0.54	0.9	
35	1,206	0.70	0.9	
36	1,723	2.06	1.8	
37	2,000	2.78	2.1	
38	2,291	3.29	2.2	
39	2,856	4.92	2.6	
40	3,892	5.12	2.0	
41	4,686	4.79	1.5	
42	5,948	5.12	1.3	
43	7,081	6.33	1.4	
44	10,380	75.00	10.9	Upper Marker
45	29,349	0.00	0.0	
46	33,858	0.00	0.0	
47	34,463	0.00	0.0	
48	35,562	0.00	0.0	
49	36,387	0.00	0.0	
50	37,377	0.00	0.0	

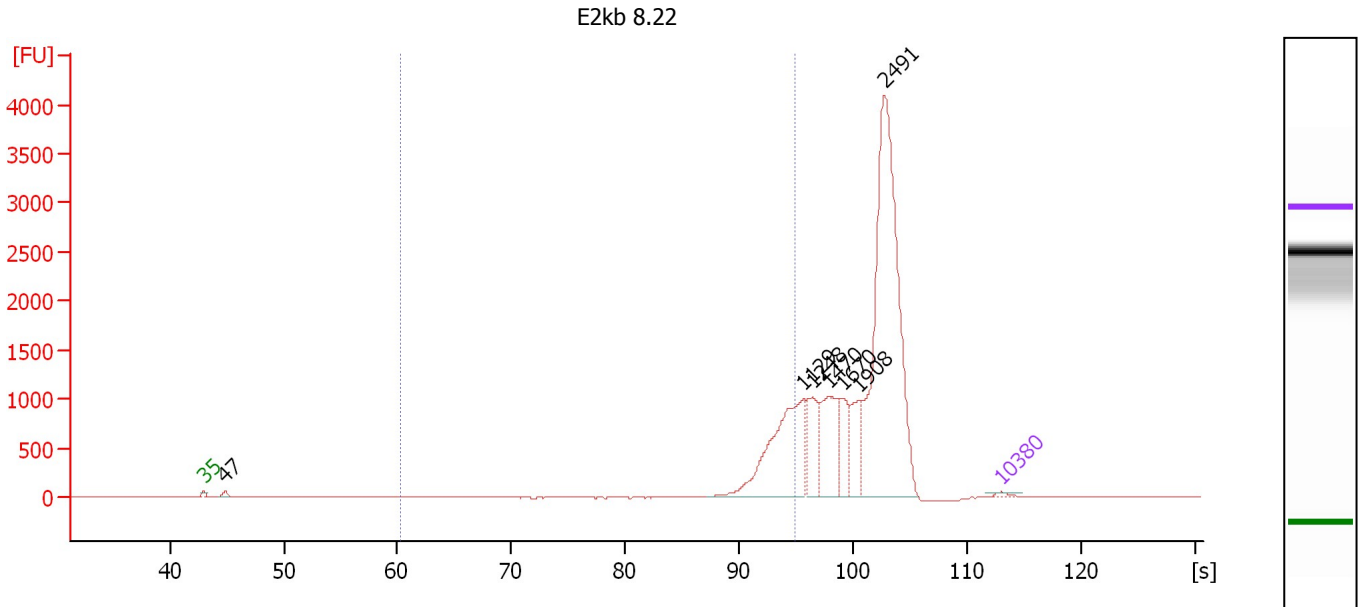
Region table for sample 2 : DCS2kb 8.22

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Co Corr. lor Area	% of Total	Size distribution in CV [%]
1,671	9,287	5,322	13.6	32.90	 7,193.7	73	45.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

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 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : E2kb 8.22

Number of peaks found: 7 Corr. Area 1: 2,668.0
 Noise: 1.5

Peak table for sample 3 : E2kb 8.22

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	138.66	4,501.5	
3	1,129	4,467.32	5,993.6	
4	1,248	1,418.45	1,722.2	
5	1,470	2,105.08	2,169.2	
6	1,670	1,077.04	976.9	
7	1,908	1,114.48	885.1	
8	2,491	10,551.87	6,418.6	
9	10,380	75.00	10.9	Upper Marker

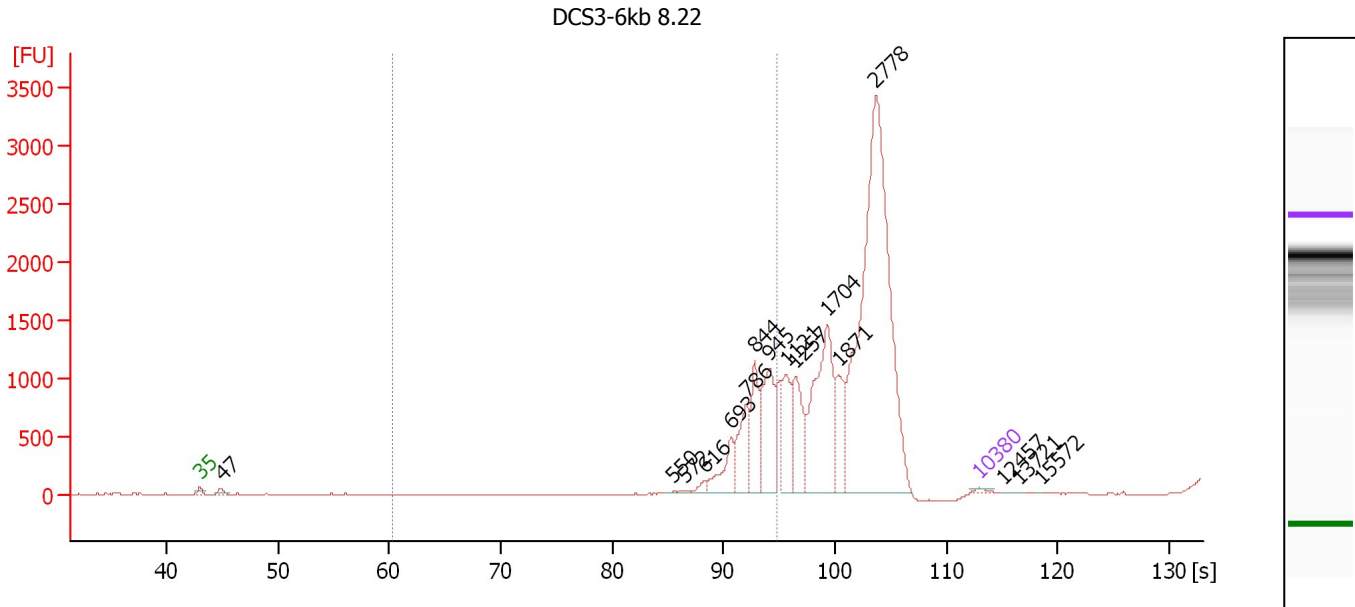
Region table for sample 3 : E2kb 8.22

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	870	6,149.5	3,501.69	2,668.0	15	10.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : DCS3-6kb 8.22

Number of peaks found: 16 Corr. Area 1: 3,847.1
 Noise: 3.2

Peak table for sample 4 : DCS3-6kb 8.22

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	160.36	5,143.2	
3	550	29.04	79.9	
4	572	62.32	165.2	
5	616	169.78	417.9	
6	693	1,113.72	2,433.5	
7	786	1,560.77	3,008.3	
8	844	1,526.39	2,740.2	
9	945	2,328.27	3,731.7	
10	1,121	1,410.38	1,907.1	
11	1,257	1,646.27	1,984.4	
12	1,704	3,919.64	3,484.7	
13	1,871	1,230.39	996.4	
14	2,778	12,821.19	6,993.4	
15	10,380	75.00	10.9	Upper Marker
16	12,457	0.00	0.0	
17	13,721	0.00	0.0	
18	15,572	0.00	0.0	

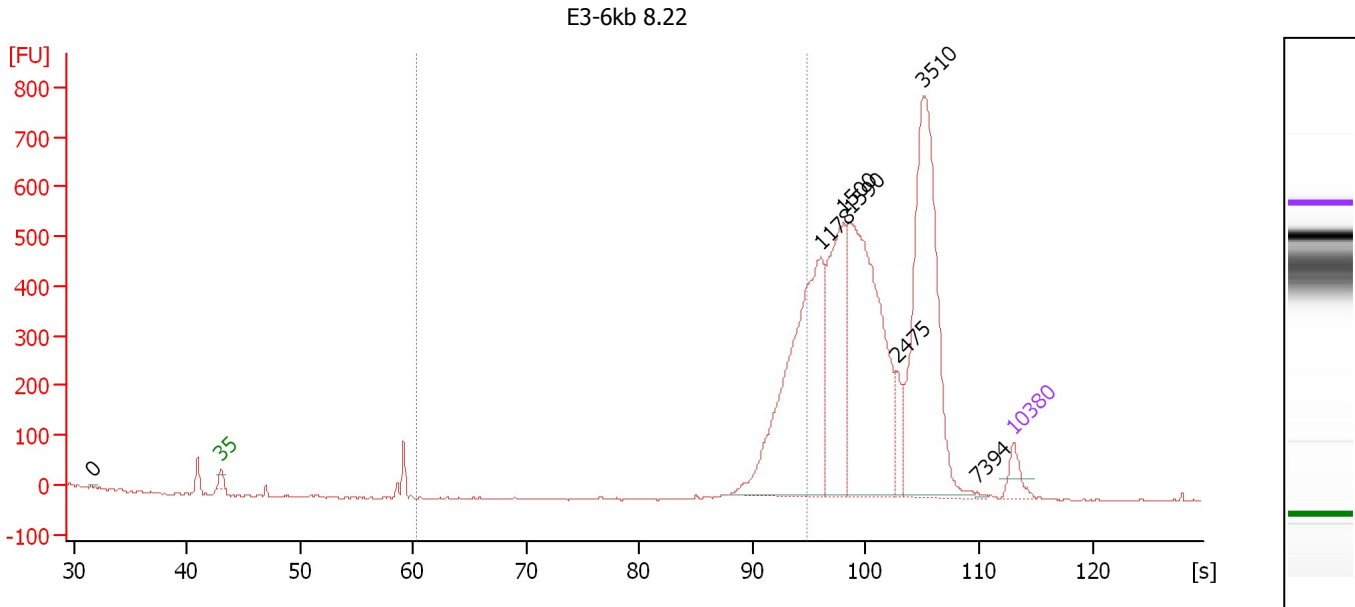
Region table for sample 4 : DCS3-6kb 8.22

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	841	11,273.5	6,191.96	3,847.1	20	11.9

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : E3-6kb 8.22

Number of peaks found: 7 Corr. Area 1: 1,122.6
 Noise: 1.5

Peak table for sample 5 : E3-6kb 8.22

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	0	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	1,178	1,380.96	1,775.8	
4	1,500	702.06	709.1	
5	1,590	1,308.29	1,246.8	
6	2,475	112.17	68.7	
7	3,510	1,265.72	546.3	
8	7,394	5.81	1.2	
9	10,380	75.00	10.9	Upper Marker

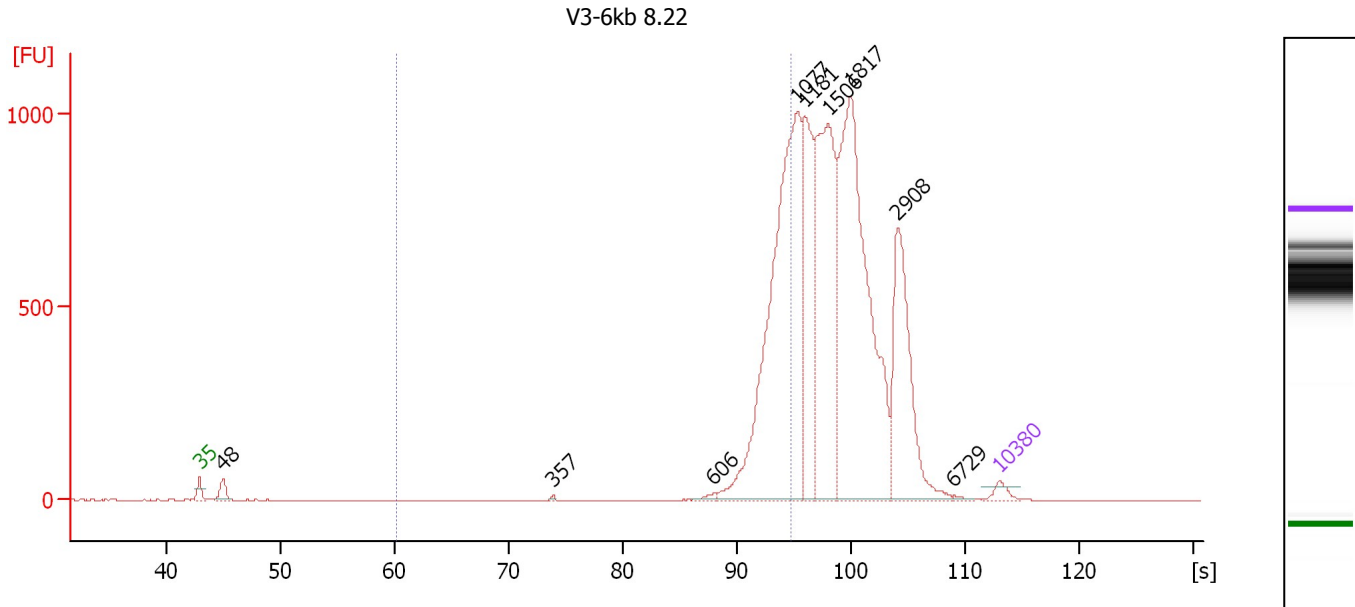
Region table for sample 5 : E3-6kb 8.22

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	865	1,589.0	899.44	1,122.6	16	11.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

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 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : V3-6kb 8.22

Number of peaks found: 9 Corr. Area 1: 2,420.4
 Noise: 0.6

Peak table for sample 6 : V3-6kb 8.22

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	192.41	6,057.0	
3	357	11.26	47.8	
4	606	34.70	86.7	
5	1,077	4,376.63	6,154.4	
6	1,181	1,439.29	1,846.5	
7	1,506	2,403.00	2,417.1	
8	1,817	3,783.69	3,155.4	
9	2,908	1,433.40	746.9	
10	6,729	16.56	3.7	
11	10,380	75.00	10.9	Upper Marker

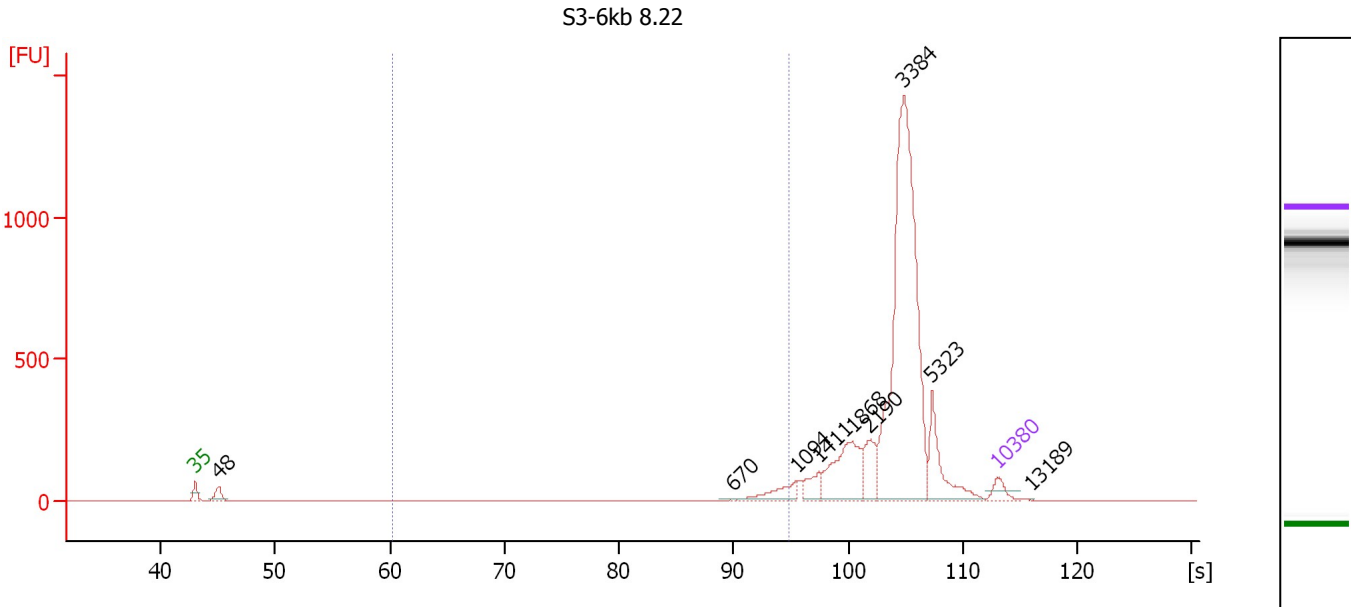
Region table for sample 6 : V3-6kb 8.22

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	877	5,918.3	3,383.81	2,420.4	22	11.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : S3-6kb 8.22

Number of peaks found: 9 Corr. Area 1: 137.7
 Noise: 0.5

Peak table for sample 7 : S3-6kb 8.22

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	112.98	3,559.9	
3	670	6.40	14.5	
4	1,094	155.48	215.3	
5	1,411	128.28	137.7	
6	1,868	475.79	385.9	
7	2,190	212.58	147.1	
8	3,384	2,543.11	1,138.6	
9	5,323	344.92	98.2	
10	10,380	75.00	10.9	Upper Marker
11	13,189	0.00	0.0	

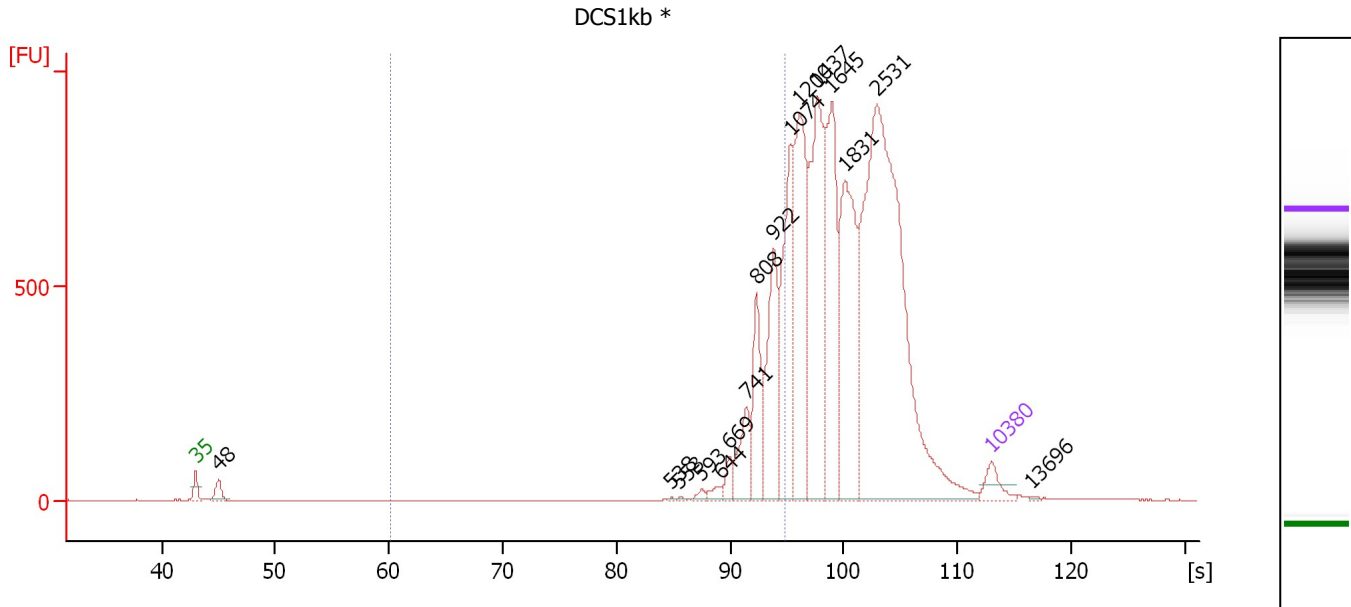
Region table for sample 7 : S3-6kb 8.22

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	854	246.3	131.85	137.7	3	14.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

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Electropherogram Summary Continued ...



Overall Results for sample 8 : DCS1kb *

Number of peaks found: 16 Corr. Area 1: 1,846.3
 Noise: 0.3

Peak table for sample 8 : DCS1kb *

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	86.68	2,742.7	
3	538	4.96	14.0	
4	553	5.63	15.4	
5	593	21.36	54.6	
6	644	37.12	87.3	
7	669	67.59	153.1	
8	741	220.60	451.1	
9	808	347.56	651.4	
10	922	518.11	851.6	
11	1,074	702.67	991.6	
12	1,200	794.38	1,003.1	
13	1,437	943.42	994.4	
14	1,645	714.41	657.9	
15	1,831	798.03	660.4	
16	2,531	2,470.36	1,479.1	
17	10,380	75.00	10.9	Upper Marker
18	13,696	0.00	0.0	

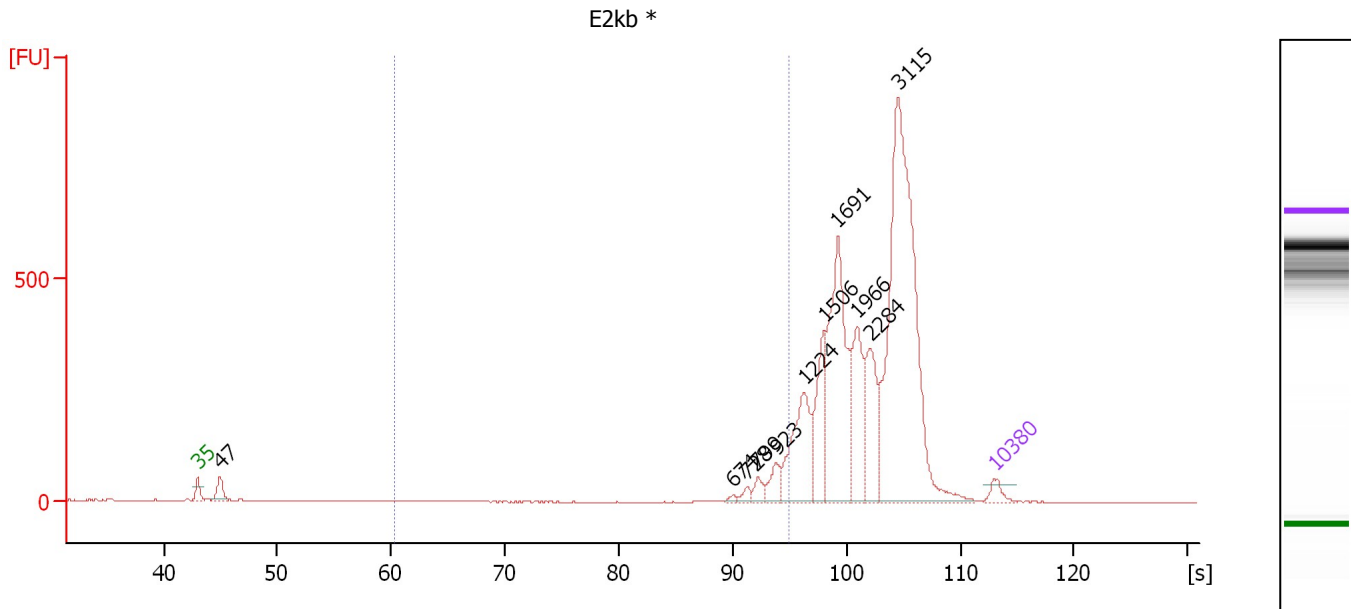
Region table for sample 8 : DCS1kb *

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	851	2,607.7	1,444.81	1,846.3	17	12.5

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : E2kb *

Number of peaks found: 11 Corr. Area 1: 260.5
 Noise: 0.6

Peak table for sample 9 : E2kb *

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	201.17	6,447.1	
3	674	25.57	57.5	
4	728	53.72	111.8	
5	799	89.48	169.7	
6	923	153.28	251.7	
7	1,224	708.78	877.4	
8	1,506	504.05	507.2	
9	1,691	1,391.84	1,246.9	
10	1,966	561.57	432.8	
11	2,284	528.66	350.7	
12	3,115	3,033.28	1,475.2	
13	10,380	75.00	10.9	Upper Marker

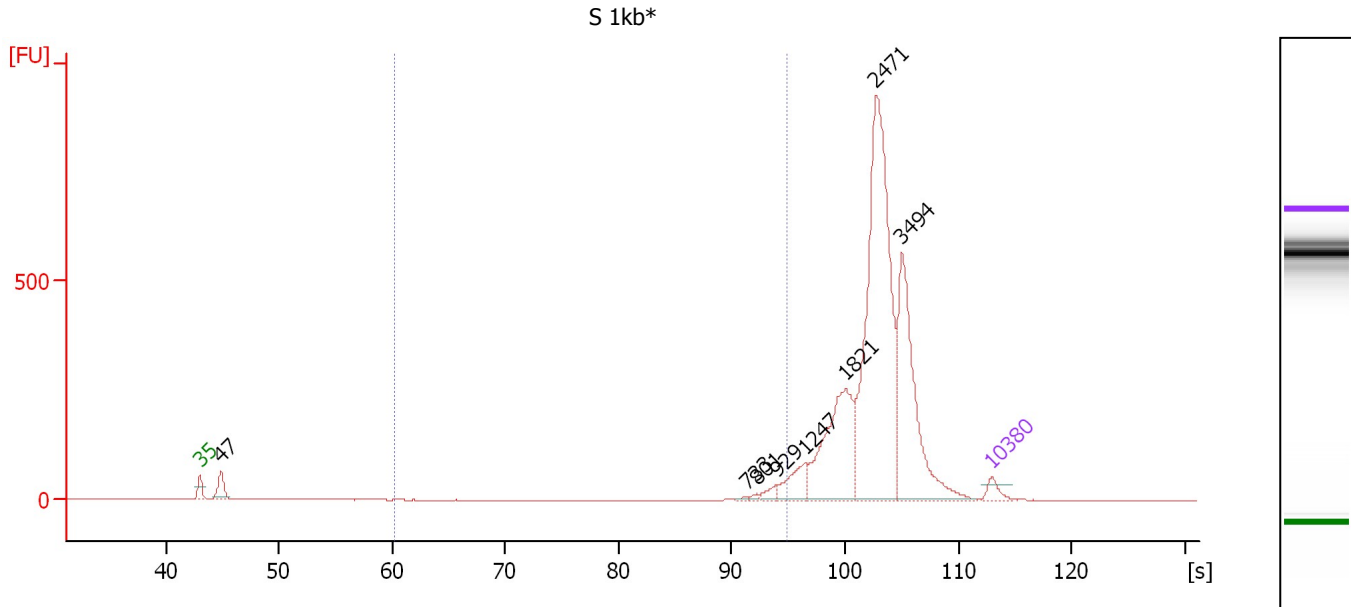
Region table for sample 9 : E2kb *

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	865	721.1	407.45	260.5	5	11.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : S 1kb*

Number of peaks found: 8 Corr. Area 1: 95.6
 Noise: 0.3

Peak table for sample 10 : S 1kb*

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	246.32	7,984.8	
3	733	14.17	29.3	
4	801	20.45	38.7	
5	929	60.18	98.1	
6	1,247	246.70	299.8	
7	1,821	1,007.42	838.1	
8	2,471	2,845.11	1,744.2	
9	3,494	1,299.13	563.4	
10	10,380	75.00	10.9	Upper Marker

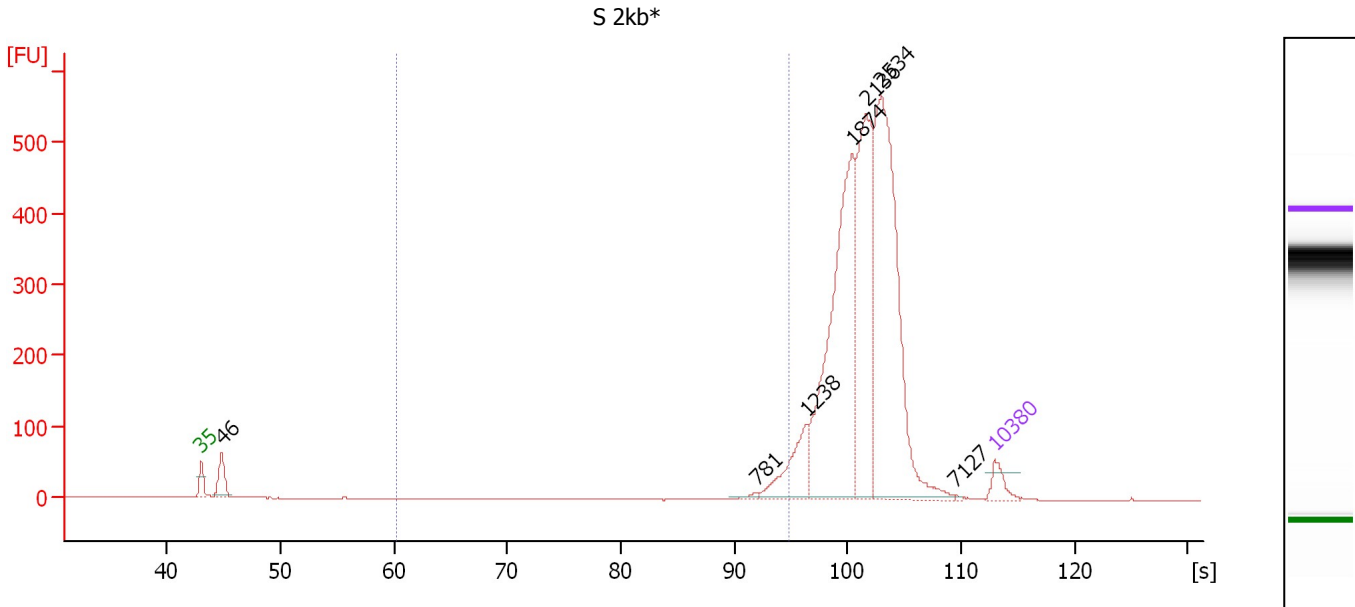
Region table for sample 10 : S 1kb*

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	886	261.7	152.19	95.6	2	9.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : S 2kb*

Number of peaks found: 7 Corr. Area 1: 87.0
 Noise: 0.2

Peak table for sample 11 : S 2kb*

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	225.90	7,364.3	
3	781	21.48	41.6	
4	1,238	308.08	377.0	
5	1,874	1,571.63	1,270.5	
6	2,136	991.66	703.5	
7	2,534	1,718.84	1,027.5	
8	7,127	4.26	0.9	
9	10,380	75.00	10.9	Upper Marker

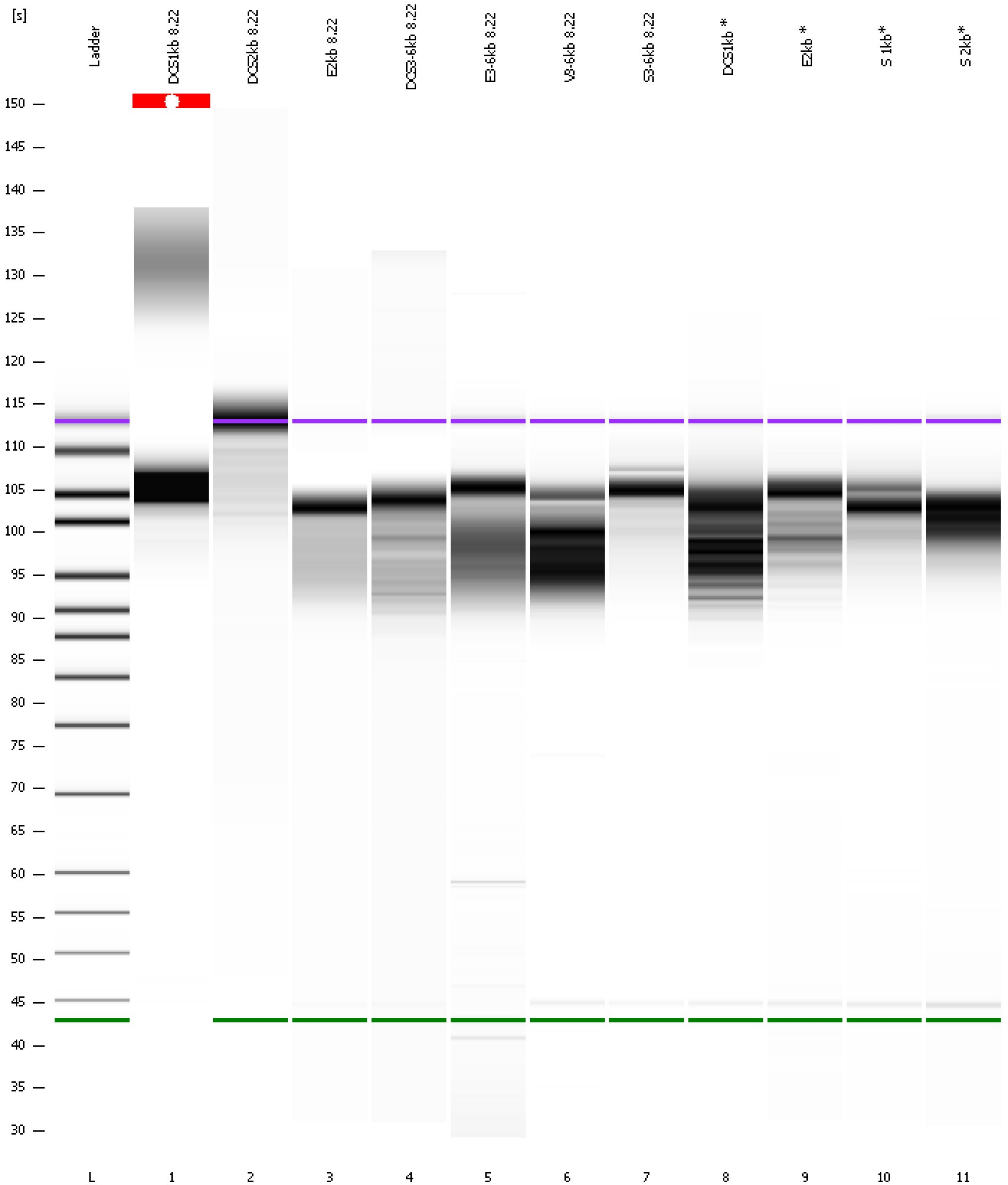
Region table for sample 11 : S 2kb*

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	896	221.1	130.15	87.0	2	9.3

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
Modified: 8/22/2014 12:18:45 PM

Gel Image

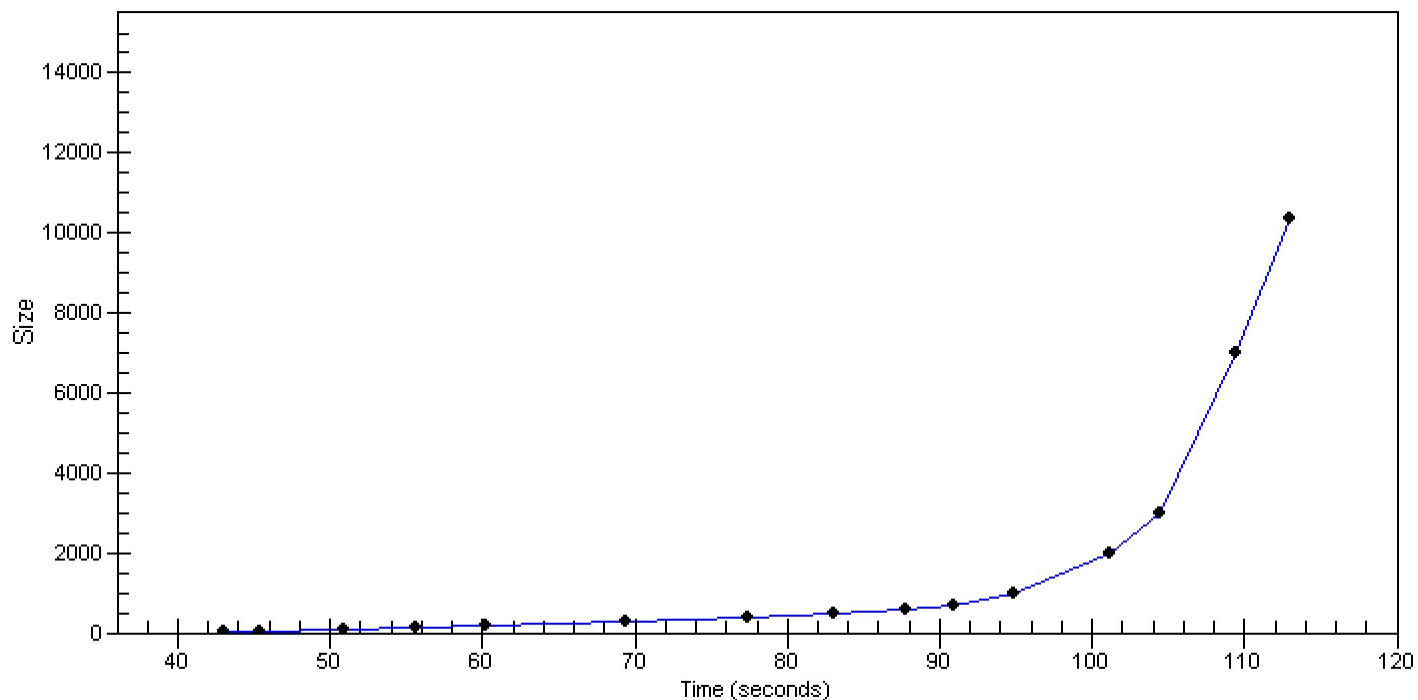


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
Modified: 8/22/2014 12:18:45 PM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad

Created: 8/22/2014 11:37:22 AM
 Modified: 8/22/2014 12:18:45 PM

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		8/22/2014 12:18:39 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Instrument error occurred on port 1, Optical signal too high (1605h)	559	Instrument	Run	Sample 1	8/22/2014 11:49:55 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\Data\2014-08-22\2014-08-22_003.xad)		Instrument	Run		8/22/2014 11:37:27 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		8/22/2014 11:37:27 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		8/22/2014 11:37:27 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		8/22/2014 11:37:27 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		8/22/2014 11:37:27 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		8/22/2014 11:37:27 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		8/22/2014 11:37:27 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1