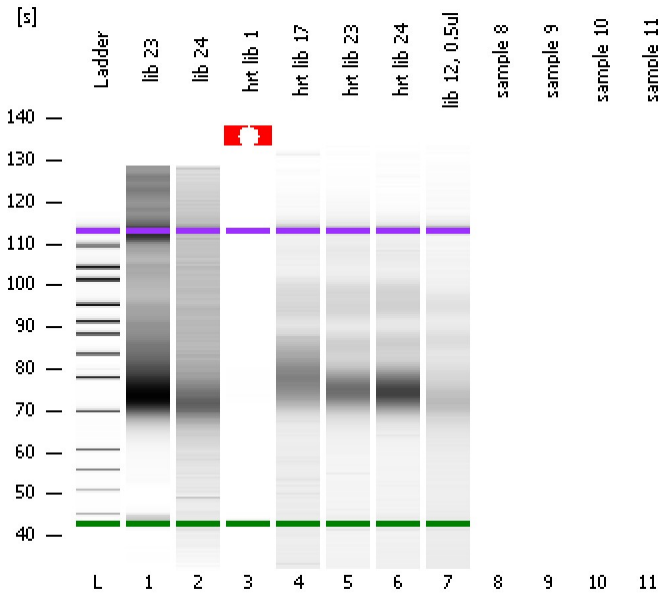


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
Modified: 6/11/2013 11:44:53 AM

Electrophoresis File Run Summary



Instrument Information:

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

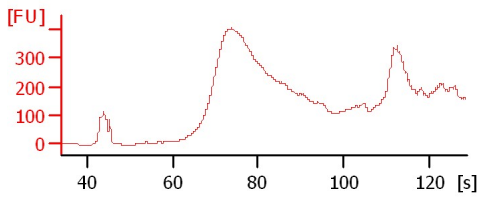
Assay Information:

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

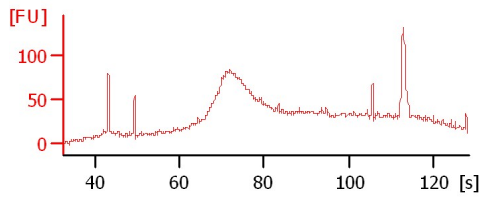
Chip Information:

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

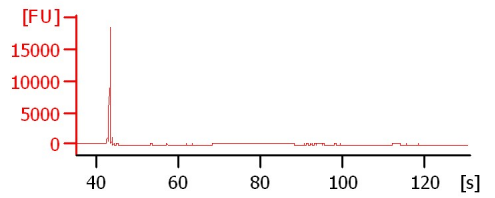
lib 23



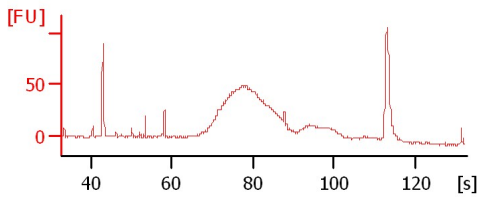
lib 24



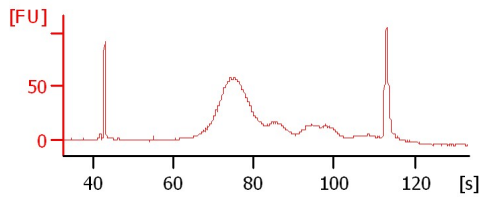
hrt lib 1



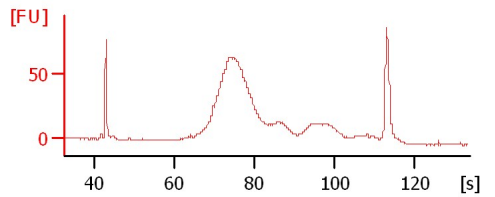
hrt lib 17



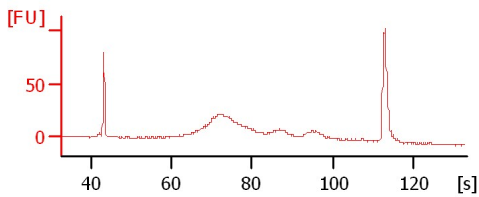
hrt lib 23



hrt lib 24



lib 12, 0.5ul



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
 Modified: 6/11/2013 11:44:53 AM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
lib 23		<input type="checkbox"/>				
lib 24		<input type="checkbox"/>				
hrt lib 1		<input type="checkbox"/>				
hrt lib 17		<input type="checkbox"/>				
hrt lib 23		<input type="checkbox"/>				
hrt lib 24		<input type="checkbox"/>				
lib 12, 0.5ul		<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\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
Modified: 6/11/2013 11:44:53 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

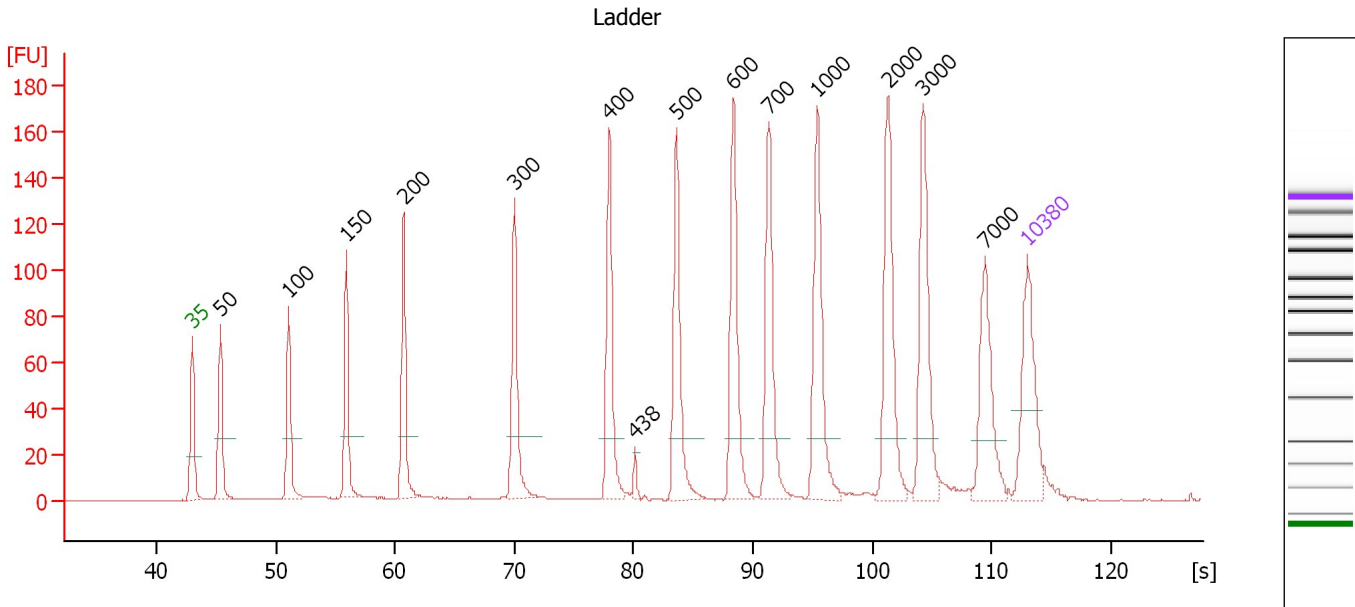
Ladder

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:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
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Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

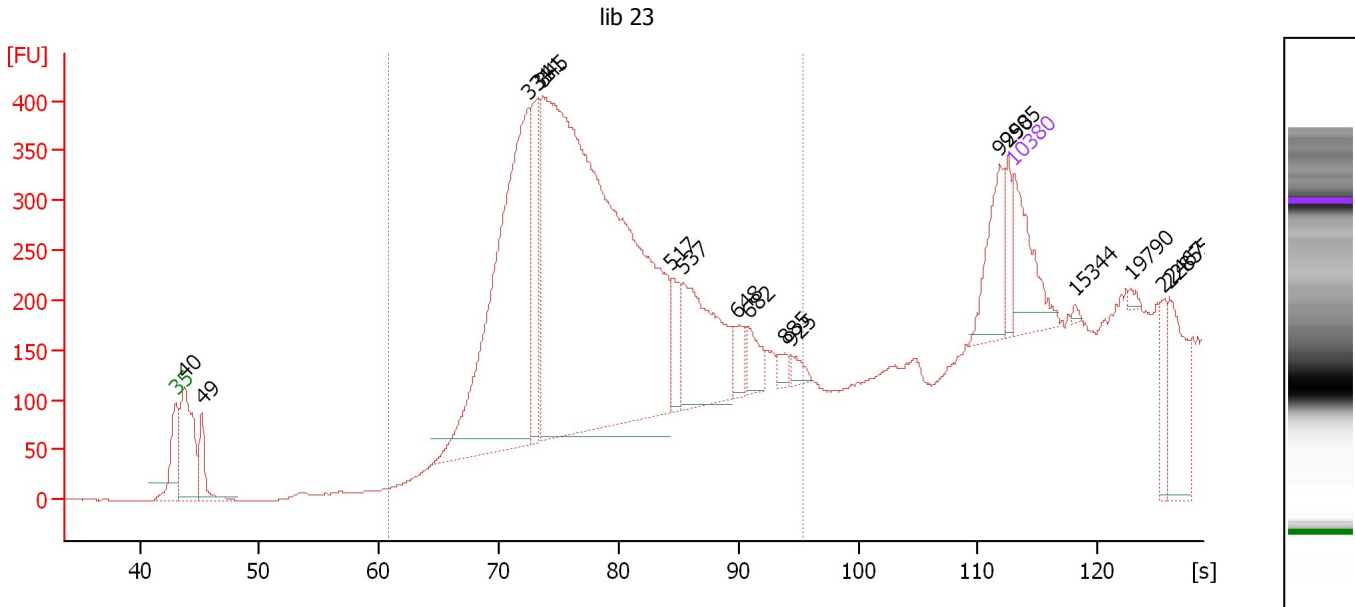
Peak table for Ladder

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	438	0.00	0.0	
9	500	150.00	454.5	Ladder Peak
10	600	150.00	378.8	Ladder Peak
11	700	150.00	324.7	Ladder Peak
12	1,000	150.00	227.3	Ladder Peak
13	2,000	150.00	113.6	Ladder Peak
14	3,000	150.00	75.8	Ladder Peak
15	7,000	150.00	32.5	Ladder Peak
16	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
 Modified: 6/11/2013 11:44:53 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : lib 23

Number of peaks found: 17 Corr. Area 1: 6,640.6
 Noise: 0.3

Peak table for sample 1 : lib 23

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	40	211.62	8,115.0	
3	49	70.41	2,185.6	
4	331	691.89	3,163.9	
5	341	155.07	689.2	
6	345	1,530.33	6,712.9	
7	517	54.73	160.3	
8	537	189.66	535.0	
9	648	30.58	71.4	
10	682	34.79	77.3	
11	885	12.77	21.8	
12	925	13.00	21.3	
13	9,258	72.77	11.9	
14	9,905	27.11	4.1	
15	10,380	75.00	10.9	Upper Marker
16	15,344	0.00	0.0	
17	19,790	0.00	0.0	
18	22,467	0.00	0.0	
19	22,855	0.00	0.0	

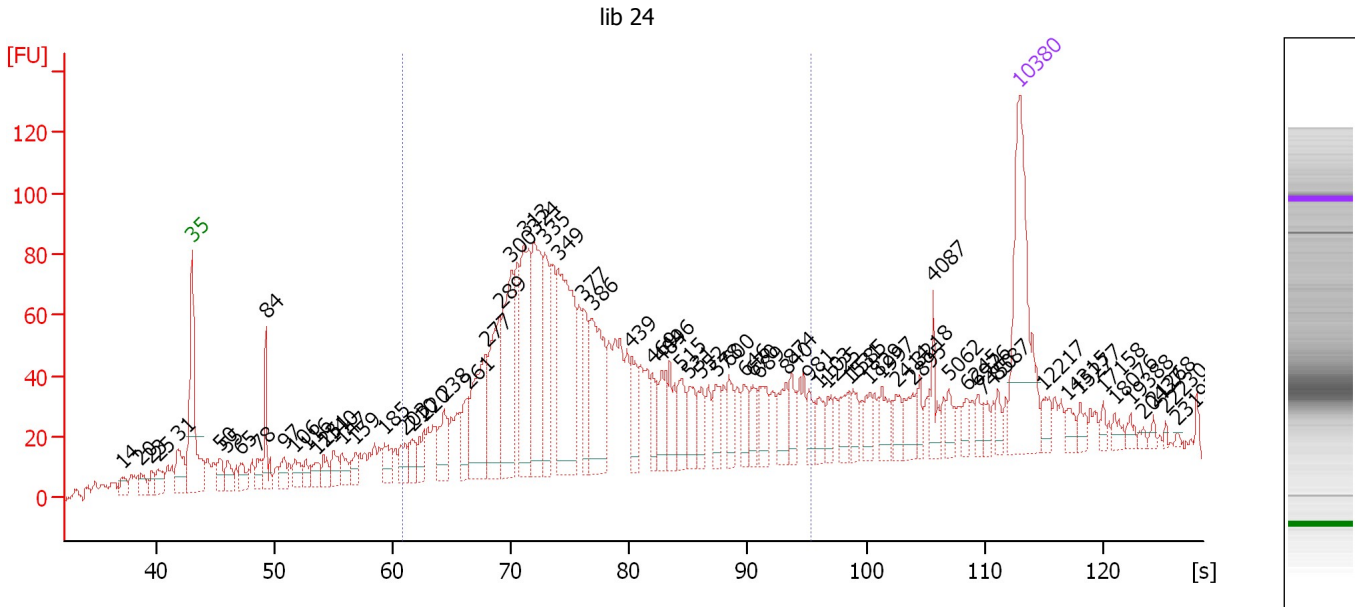
Region table for sample 1 : lib 23

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.74	95.40	426	10,153.8	2,597.39	6,640.6 83	30.0	■

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
 Modified: 6/11/2013 11:44:53 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : lib 24

Number of peaks found: 73 Corr. Area 1: 1,447.5
 Noise: 1.7

Peak table for sample 2 : lib 24

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	14	0.00	0.0	
2	20	0.00	0.0	
3	23	0.00	0.0	
4	25	0.00	0.0	
5	31	0.00	0.0	
6	35	125.00	5,411.3	Lower Marker
7	50	15.28	467.0	
8	55	14.99	413.4	
9	65	14.56	338.0	
10	78	13.44	262.4	
11	84	33.51	607.5	
12	97	13.60	212.3	
13	106	15.05	215.2	
14	116	8.75	114.5	
15	125	13.33	161.8	
16	131	12.17	140.3	
17	140	14.91	161.5	
18	147	13.59	139.6	
19	159	10.35	98.7	
20	185	18.94	154.9	
21	203	15.49	115.8	
22	210	13.78	99.6	
23	220	15.32	105.6	
24	238	25.09	159.4	
25	261	24.06	139.9	
26	277	68.26	373.8	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad


Created: 6/11/2013 11:15:05 AM
 Modified: 6/11/2013 11:44:53 AM

Electropherogram Summary Continued ...

... Peak table for sample 2 : lib 24

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
27	289	63.32	331.5	
28	300	82.89	419.0	
29	313	85.21	412.0	
30	324	83.86	392.0	
31	335	49.90	225.7	
32	349	114.84	498.2	
33	377	30.87	124.2	
34	386	69.04	271.2	
35	439	22.58	78.0	
36	469	16.18	52.2	
37	484	21.38	66.9	
38	496	21.04	64.3	
39	515	21.72	63.8	
40	531	16.95	48.4	
41	552	15.70	43.0	
42	578	16.74	43.9	
43	600	15.92	40.2	
44	646	14.20	33.3	
45	670	12.50	28.2	
46	689	18.43	40.5	
47	840	15.85	28.6	
48	874	12.29	21.3	
49	981	9.77	15.1	
50	1,103	10.63	14.6	
51	1,225	9.84	12.2	
52	1,531	12.11	12.0	
53	1,585	8.52	8.1	
54	1,829	9.55	7.9	
55	1,997	12.56	9.5	
56	2,414	9.29	5.8	
57	2,895	11.59	6.1	
58	3,218	7.30	3.4	
59	4,087	12.02	4.5	
60	5,062	8.00	2.4	
61	6,245	6.29	1.5	
62	6,976	6.00	1.3	
63	7,450	5.70	1.2	
64	8,587	5.83	1.0	
65	10,380	75.00	10.9	Upper Marker
66	12,217	0.00	0.0	
67	14,315	0.00	0.0	
68	15,277	0.00	0.0	
69	17,158	0.00	0.0	
70	18,076	0.00	0.0	
71	19,388	0.00	0.0	
72	20,437	0.00	0.0	
73	21,268	0.00	0.0	
74	22,230	0.00	0.0	
75	23,192	0.00	0.0	

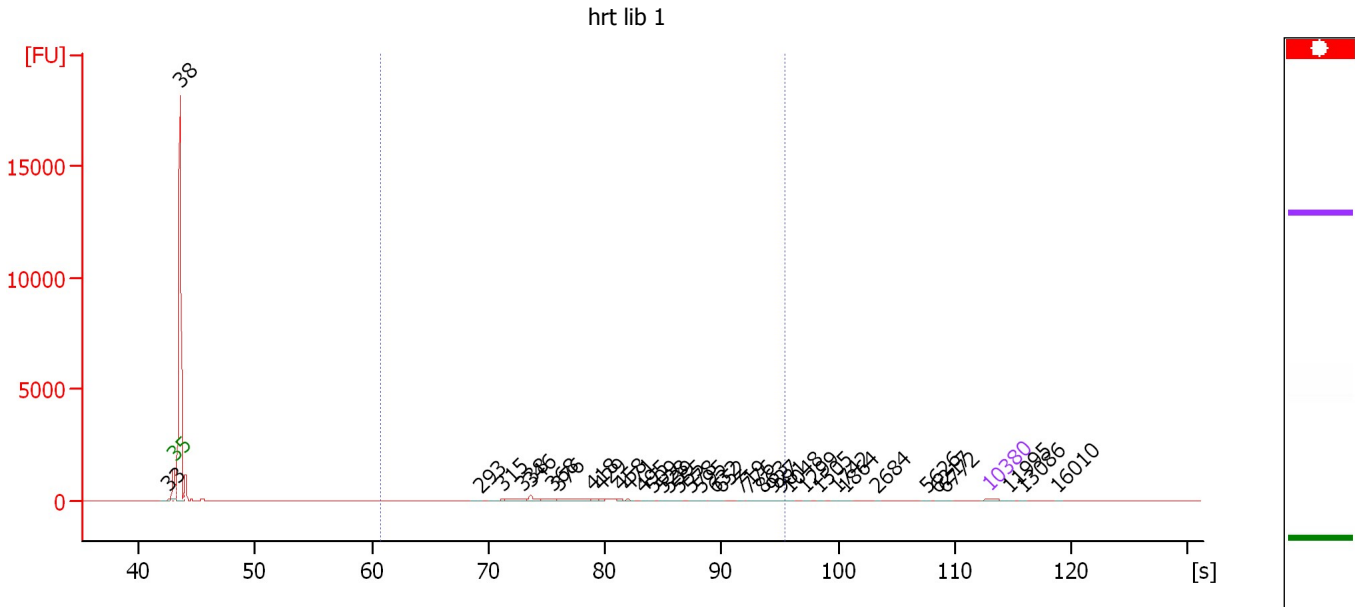
Region table for sample 2 : lib 24

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.74	95.40	412	4,631.1	1,083.73	1,447.5 76	38.3	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
 Modified: 6/11/2013 11:44:53 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : hrt lib 1

Number of peaks found: 38 Corr. Area 1: 978.4
 Noise: 1.9

Peak table for sample 3 : hrt lib 1

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	33	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	38	21,287.79	839,506.3	
4	293	16.28	84.2	
5	315	42.81	206.0	
6	338	107.73	483.4	
7	346	187.04	819.9	
8	368	143.52	590.2	
9	376	258.89	1,042.2	
10	418	38.70	140.2	
11	429	30.87	109.1	
12	458	26.20	86.6	
13	471	29.34	94.3	
14	495	16.91	51.8	
15	509	14.94	44.5	
16	528	14.77	42.4	
17	539	13.71	38.5	
18	555	18.30	49.9	
19	578	14.48	37.9	
20	595	13.39	34.1	
21	632	8.78	21.0	
22	652	5.80	13.5	
23	719	8.66	18.3	
24	776	10.29	20.1	
25	863	11.28	19.8	
26	927	14.60	23.9	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad


Created: 6/11/2013 11:15:05 AM
 Modified: 6/11/2013 11:44:53 AM

Electropherogram Summary Continued ...

... Peak table for sample 3 : hrt lib 1

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
27	981	10.65	16.5	
28	1,048	11.27	16.3	
29	1,299	7.28	8.5	
30	1,505	7.87	7.9	
31	1,742	8.04	7.0	
32	1,864	8.34	6.8	
33	2,684	2.79	1.6	
34	5,626	3.25	0.9	
35	6,217	3.09	0.8	
36	6,772	3.04	0.7	
37	10,380	75.00	10.9	Upper Marker
38	11,995	0.00	0.0	
39	13,086	0.00	0.0	
40	16,010	0.00	0.0	

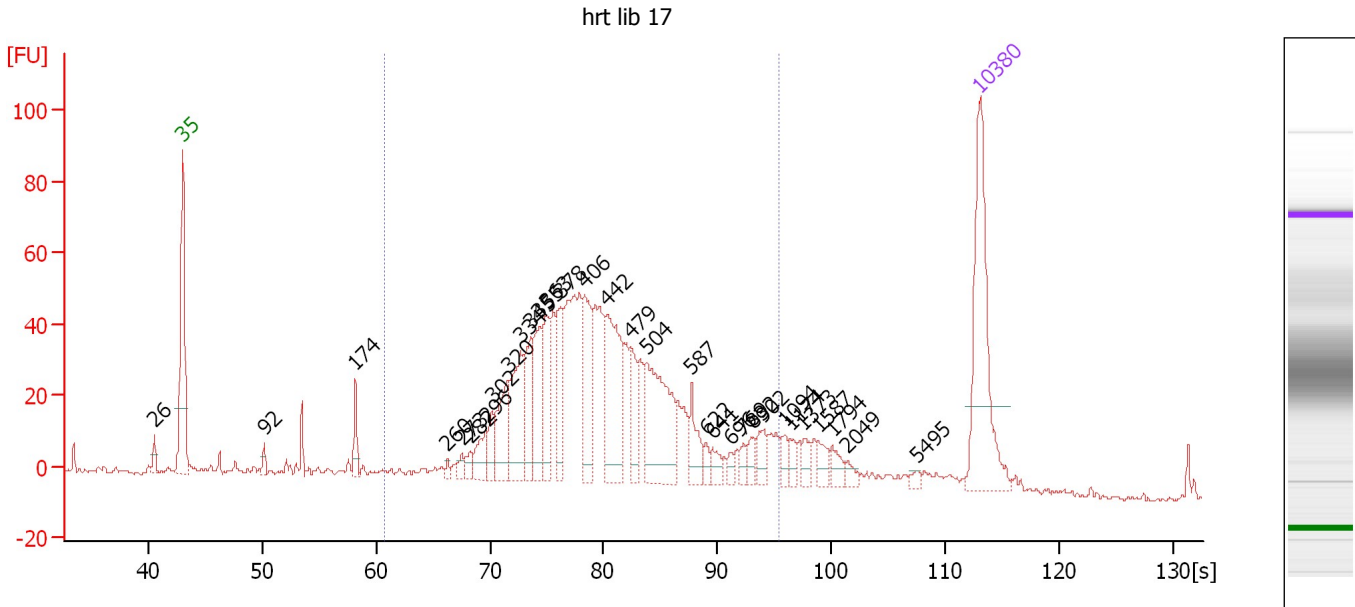
Region table for sample 3 : hrt lib 1

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.74	95.40	436	4,181.6	1,098.69	978.4	7	32.0 

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
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Electropherogram Summary Continued ...



Overall Results for sample 4 : hrt lib 17

Number of peaks found: 32 Corr. Area 1: 828.7
 Noise: 0.8

Peak table for sample 4 : hrt lib 17

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	26	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	92	6.30	103.9	
4	174	15.15	132.2	
5	260	3.59	21.0	
6	273	7.01	38.9	
7	282	6.79	36.5	
8	296	19.08	97.6	
9	302	14.19	71.1	
10	320	38.90	184.2	
11	334	51.11	232.1	
12	345	37.09	162.6	
13	355	37.87	161.6	
14	363	35.12	146.7	
15	378	35.98	144.2	
16	406	48.71	181.8	
17	442	75.11	257.5	
18	479	26.05	82.4	
19	504	79.71	239.8	
20	587	19.69	50.8	
21	622	5.63	13.7	
22	641	8.25	19.5	
23	696	4.58	10.0	
24	769	5.61	11.0	
25	832	7.79	14.2	
26	902	11.25	18.9	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
 Modified: 6/11/2013 11:44:53 AM

Electropherogram Summary Continued ...

... Peak table for sample 4 : hrt lib 17

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
27	1,094	6.07	8.4	
28	1,174	6.45	8.3	
29	1,373	6.64	7.3	
30	1,587	8.29	7.9	
31	1,794	7.71	6.5	
32	2,049	4.04	3.0	
33	5,495	2.70	0.7	
34	▶ 10,380	75.00	10.9	Upper Marker

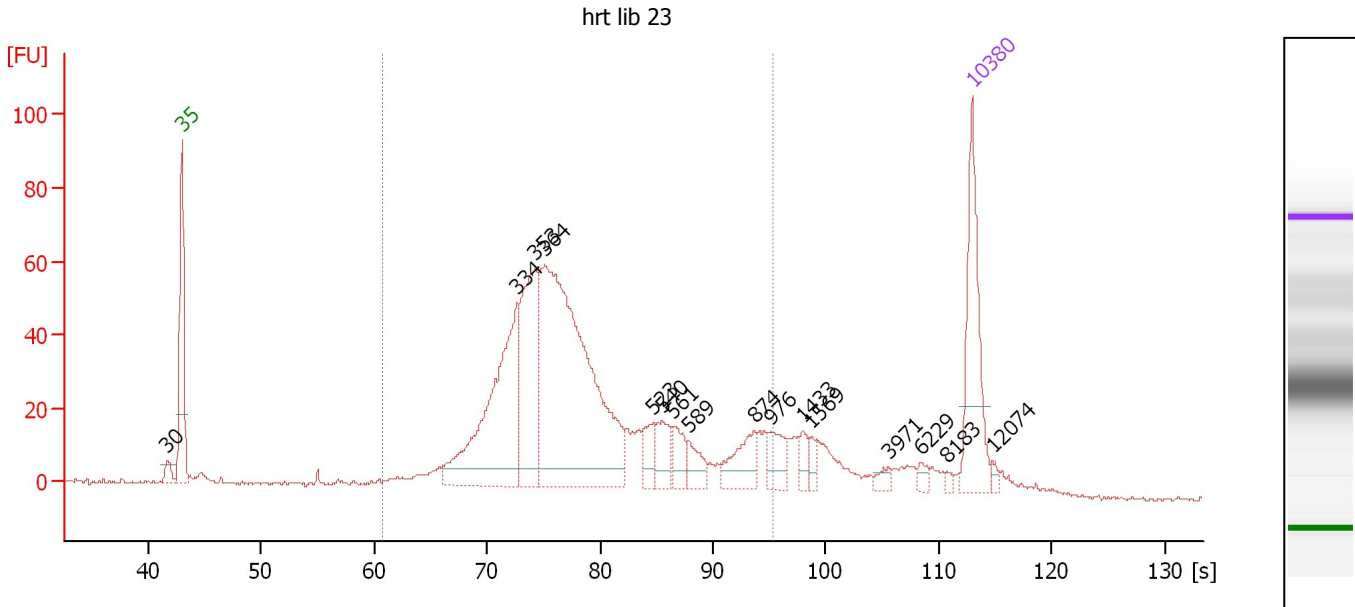
Region table for sample 4 : hrt lib 17

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color	
60.74	95.40	450	2,474.1	679.50	828.7	92	28.5	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

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Electropherogram Summary Continued ...



Overall Results for sample 5 : hrt lib 23

Number of peaks found: 16 Corr. Area 1: 1,004.7
 Noise: 0.5

Peak table for sample 5 : hrt lib 23

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	30	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	334	213.44	968.2	
4	353	134.28	577.1	
5	364	405.10	1,684.1	
6	523	21.79	63.1	
7	540	26.75	75.1	
8	561	20.26	54.7	
9	589	18.52	47.7	
10	874	32.64	56.6	
11	976	21.73	33.7	
12	1,433	10.74	11.3	
13	1,569	6.74	6.5	
14	3,971	5.92	2.3	
15	6,229	5.62	1.4	
16	8,183	2.81	0.5	
17	10,380	75.00	10.9	Upper Marker
18	12,074	0.00	0.0	

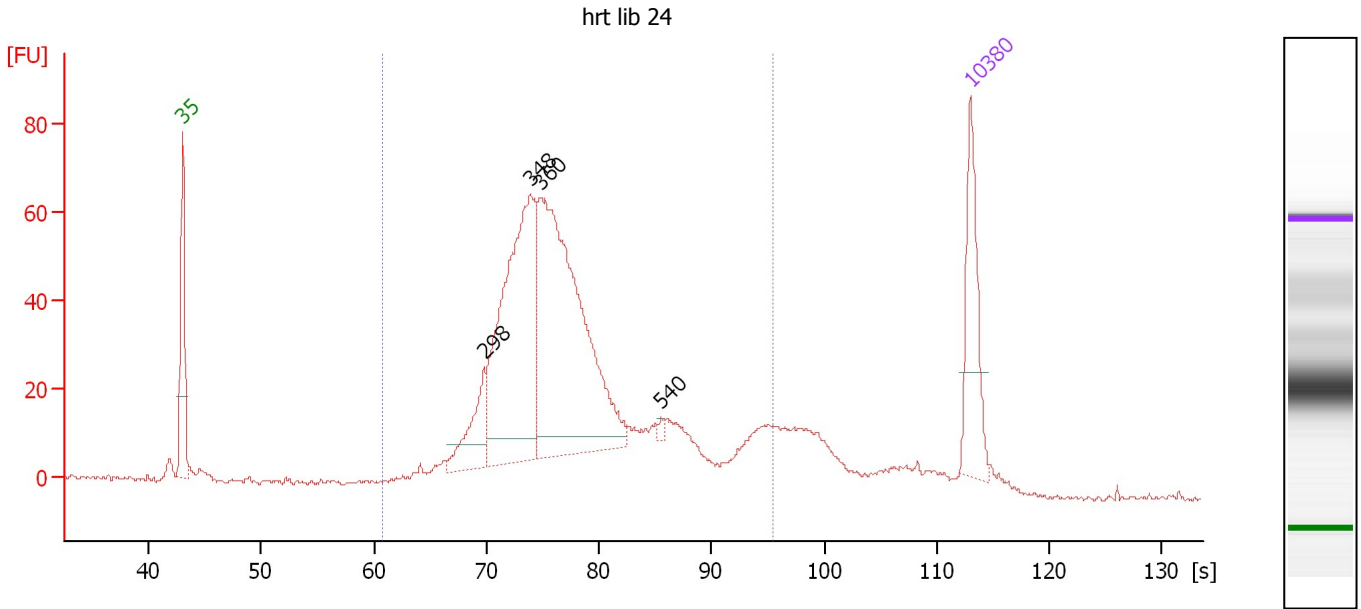
Region table for sample 5 : hrt lib 23

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.74	95.40	433	3,922.9	992.86	1,004.7 82	35.6	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

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Electropherogram Summary Continued ...



Overall Results for sample 6 : hrt lib 24

Number of peaks found: 4 Corr. Area 1: 1,000.2
 Noise: 0.6

Peak table for sample 6 : hrt lib 24

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	298	69.49	353.4	
3	348	353.79	1,538.2	
4	360	443.07	1,862.4	
5	540	3.94	11.0	
6	10,380	75.00	10.9	Upper Marker

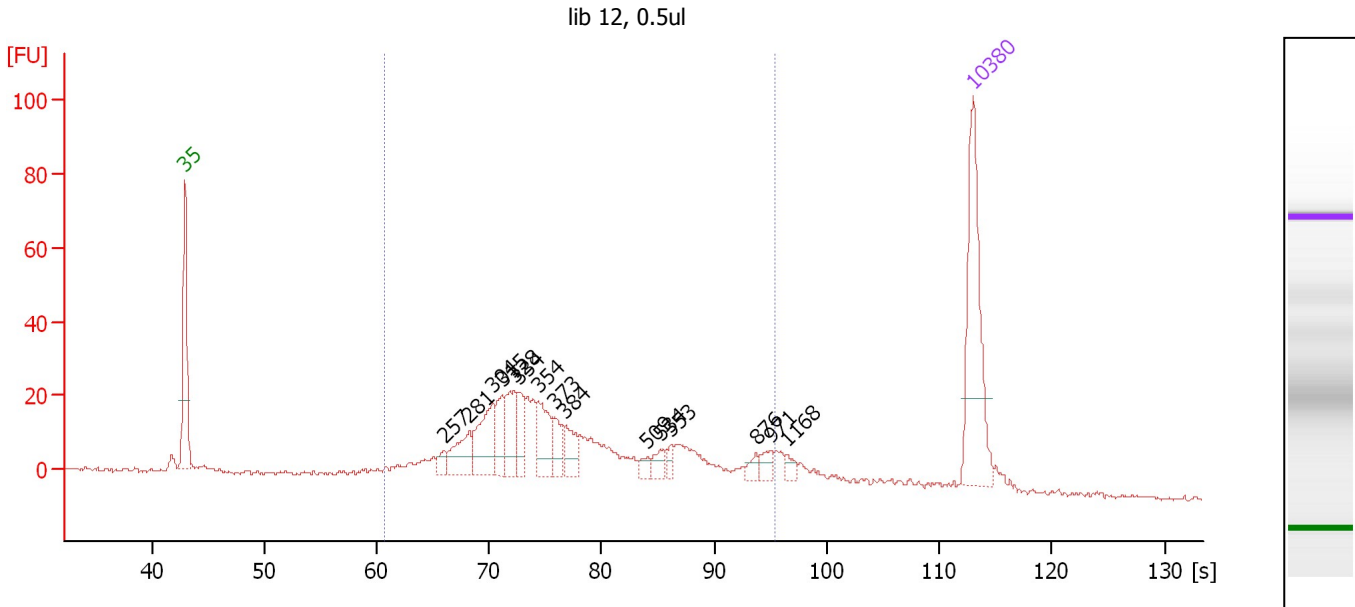
Region table for sample 6 : hrt lib 24

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.74	95.40	419	4,991.6	1,243.71	1,000.2 87	34.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
 Modified: 6/11/2013 11:44:53 AM

Electropherogram Summary Continued ...



Overall Results for sample 7 : lib 12, 0.5ul

Number of peaks found: 15 Corr. Area 1: 484.2
 Noise: 0.3

Peak table for sample 7 : lib 12, 0.5ul

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	257	8.42	49.7	
3	281	30.66	165.4	
4	304	45.80	228.6	
5	315	22.54	108.4	
6	328	32.46	150.1	
7	334	20.15	91.5	
8	354	33.78	144.4	
9	373	16.86	68.5	
10	384	18.65	73.5	
11	509	6.16	18.3	
12	534	9.57	27.2	
13	553	5.35	14.7	
14	876	5.97	10.3	
15	971	7.89	12.3	
16	1,168	5.28	6.9	
17	10,380	75.00	10.9	Upper Marker

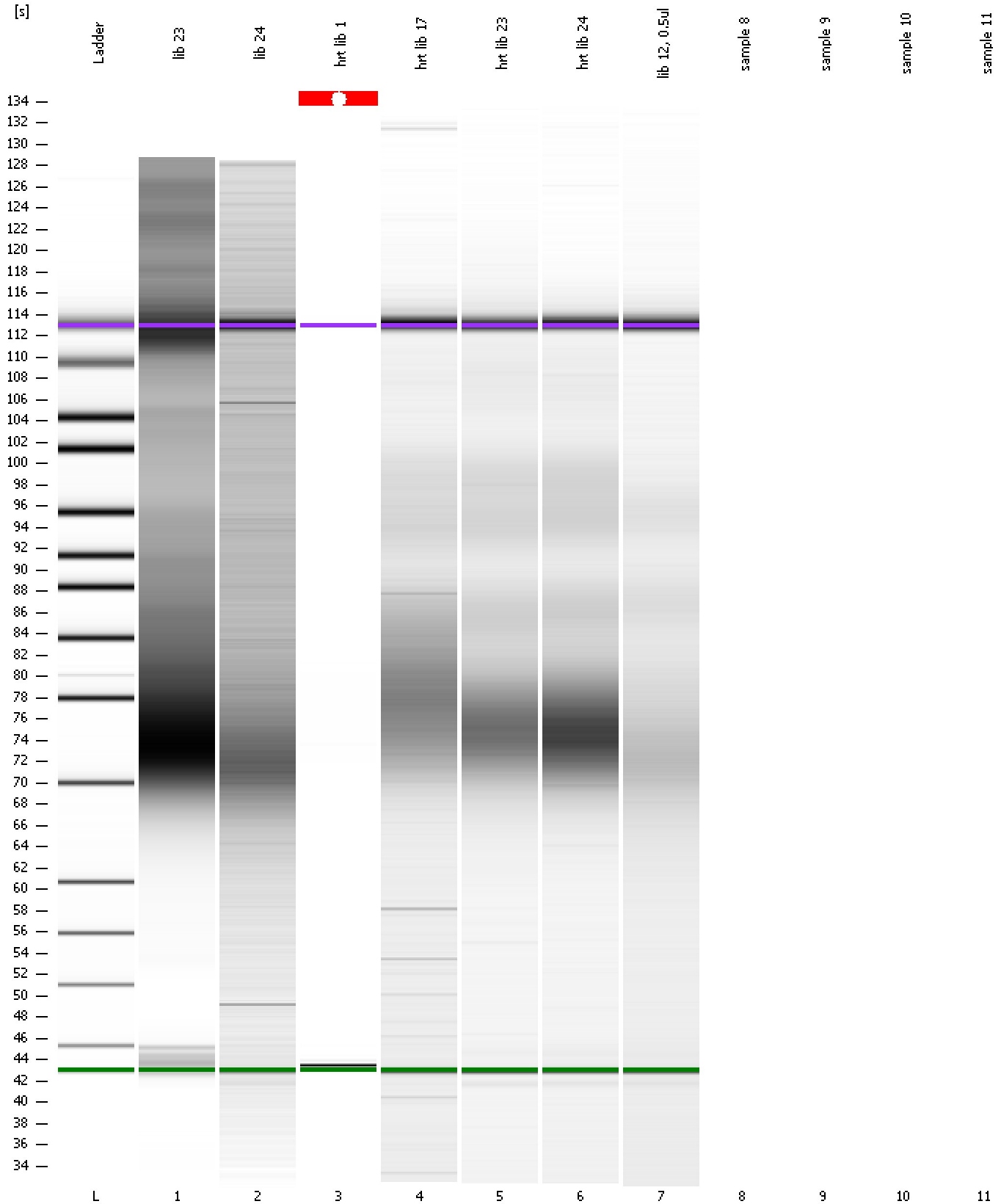
Region table for sample 7 : lib 12, 0.5ul

From [s]	To [s]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area % of Total	Size distribution in CV [%]	Color
60.74	95.40	423	1,908.1	452.51	484.2 83	39.7	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
Modified: 6/11/2013 11:44:53 AM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
Modified: 6/11/2013 11:44:53 AM

Invalid Samples

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:\...ents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad

Created: 6/11/2013 11:15:05 AM
 Modified: 6/11/2013 11:44:53 AM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 8)		Instrument	Run		6/11/2013 11:44:51 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Instrument error occurred on port 1, Optical signal too high (1605h)	559	Instrument	Run	Sample 3	6/11/2013 11:31:50 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-06-11\2013-06-11_004.xad)		Instrument	Run		6/11/2013 11:15:05 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		6/11/2013 11:15:05 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		6/11/2013 11:15:05 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		6/11/2013 11:15:05 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		6/11/2013 11:15:05 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		6/11/2013 11:15:05 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		6/11/2013 11:15:05 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1