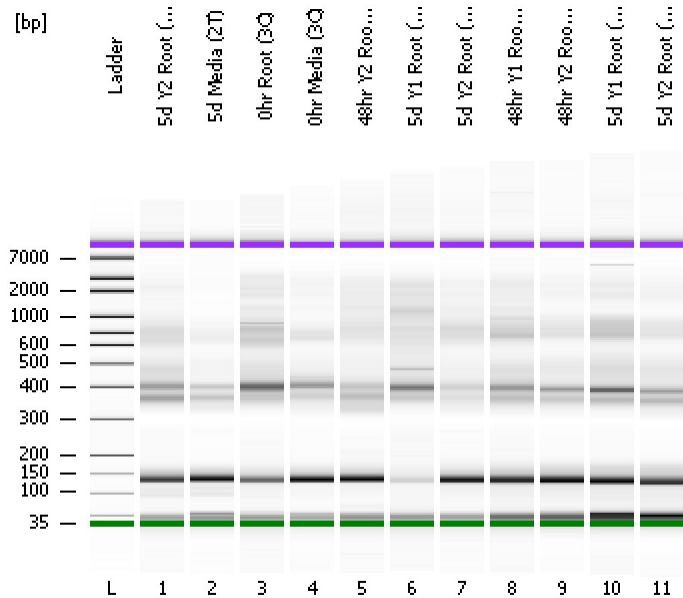


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
Modified: 8/29/2013 5:01:26 PM

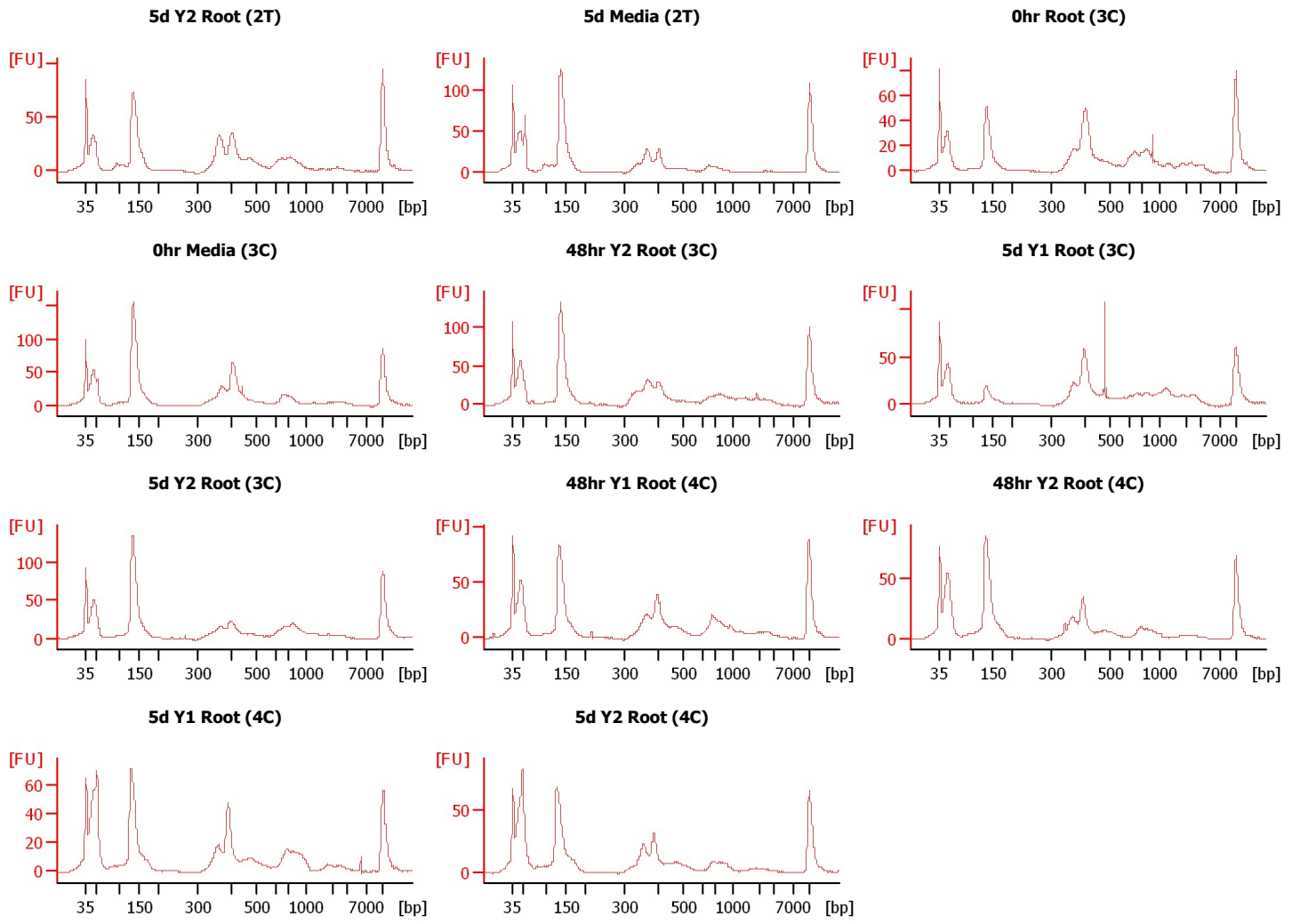
Electrophoresis File Run Summary



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:



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
5d Y2 Root (2T)		<input type="checkbox"/>	✓			
5d Media (2T)		<input type="checkbox"/>	✓			
0hr Root (3C)		<input type="checkbox"/>	✓			
0hr Media (3C)		<input type="checkbox"/>	✓			
48hr Y2 Root (3C)		<input type="checkbox"/>	✓			
5d Y1 Root (3C)		<input type="checkbox"/>	✓			
5d Y2 Root (3C)		<input type="checkbox"/>	✓			
48hr Y1 Root (4C)		<input type="checkbox"/>	✓			
48hr Y2 Root (4C)		<input type="checkbox"/>	✓			
5d Y1 Root (4C)		<input type="checkbox"/>	✓			
5d Y2 Root (4C)		<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\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 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

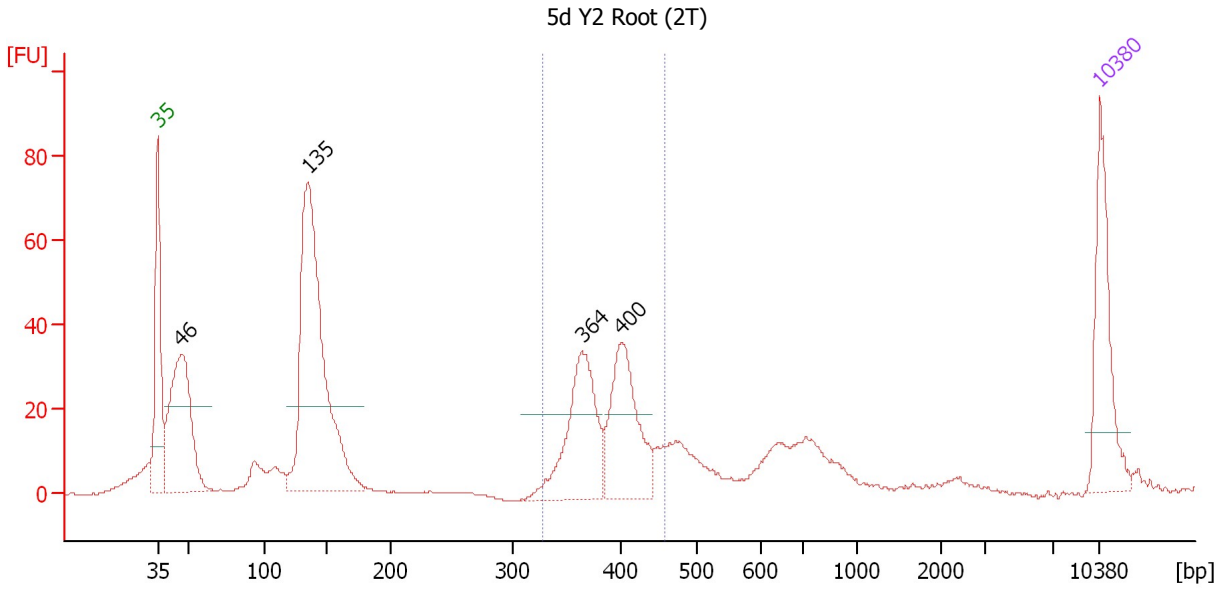
Ladder

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\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary



Setpoint Deviations for sample 1 : 5d Y2 Root (2T)

Height Threshold [FU] : 20

Overall Results for sample 1 : 5d Y2 Root (2T)

Number of peaks found: 4 Corr. Area 1: 227.2
 Noise: 0.2

Peak table for sample 1 : 5d Y2 Root (2T)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	224.64	7,344.5	
3	135	419.21	4,695.5	
4	364	137.63	573.5	
5	400	124.82	472.4	
6	10,380	75.00	10.9	Upper Marker

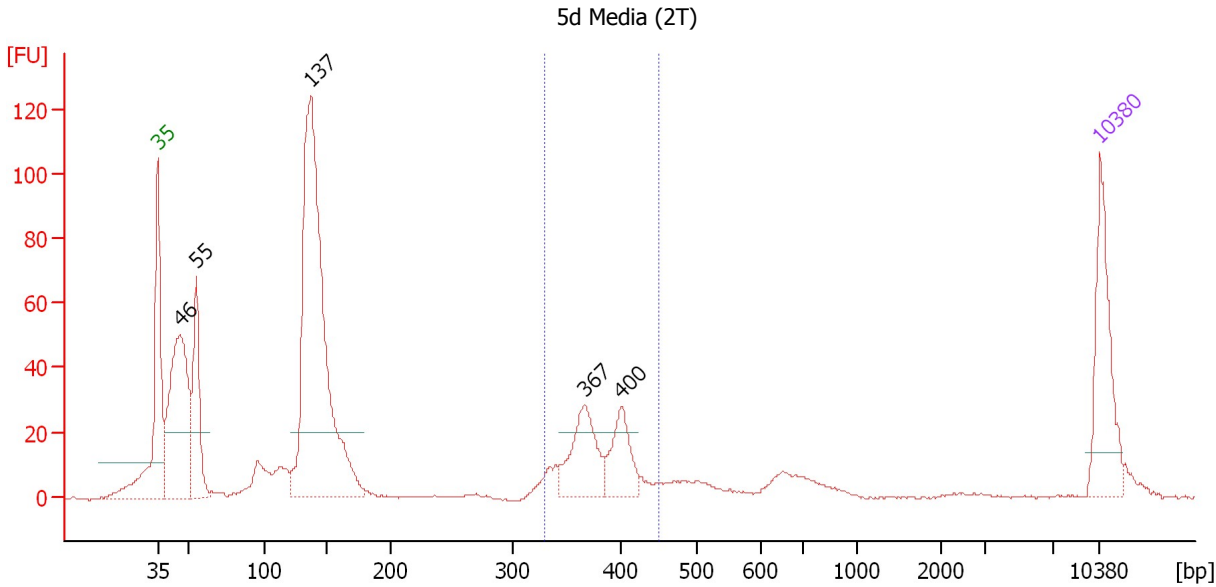
Region table for sample 1 : 5d Y2 Root (2T)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
328	456	388	982.9	250.38	227.2	26	7.3	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 2 : 5d Media (2T)

Height Threshold [FU] : 20

Overall Results for sample 2 : 5d Media (2T)

Number of peaks found: 5 Corr. Area 1: 167.3
 Noise: 0.4

Peak table for sample 2 : 5d Media (2T)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	262.56	8,686.9	
3	55	120.45	3,326.6	
4	137	566.50	6,248.2	
5	367	80.19	331.5	
6	400	54.95	208.2	
7	10,380	75.00	10.9	Upper Marker

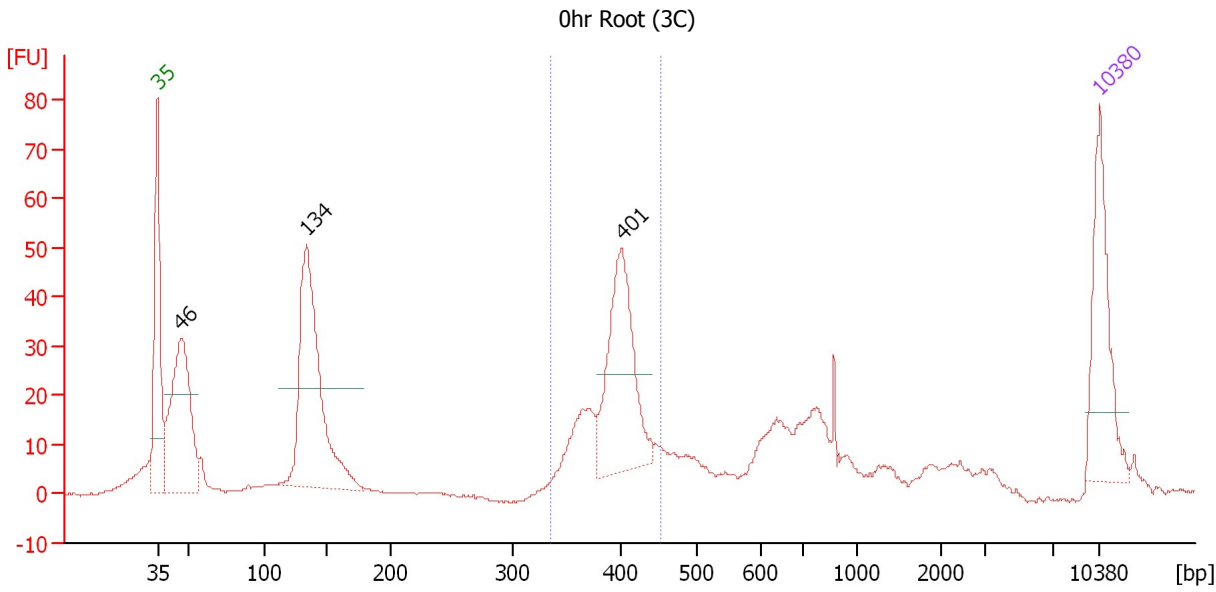
Region table for sample 2 : 5d Media (2T)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
330	450	380	641.3	160.05	167.3	16	6.9	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 3 : 0hr Root (3C)

Height Threshold [FU] : 20

Overall Results for sample 3 : 0hr Root (3C)

Number of peaks found: 3 Corr. Area 1: 220.7
 Noise: 0.2

Peak table for sample 3 : 0hr Root (3C)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	217.41	7,126.9	
3	134	277.83	3,137.6	
4	401	157.58	596.0	
5	10,380	75.00	10.9	Upper Marker

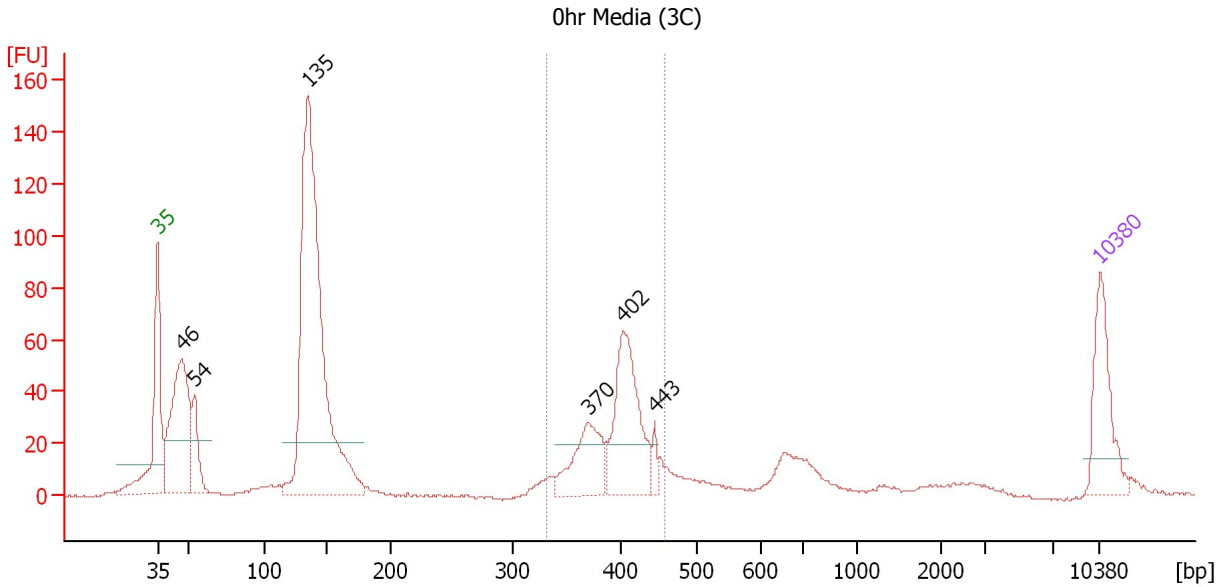
Region table for sample 3 : 0hr Root (3C)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
336	452	394	1,016.8	263.64	220.7	28	6.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 4 : 0hr Media (3C)

Height Threshold [FU] : 20

Overall Results for sample 4 : 0hr Media (3C)

Number of peaks found: 6 Corr. Area 1: 296.6
 Noise: 0.5

Peak table for sample 4 : 0hr Media (3C)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	272.74	8,902.7	
3	54	70.40	1,990.2	
4	135	730.30	8,209.4	
5	370	99.12	406.4	
6	402	174.12	655.5	
7	443	16.82	57.5	
8	10,380	75.00	10.9	Upper Marker

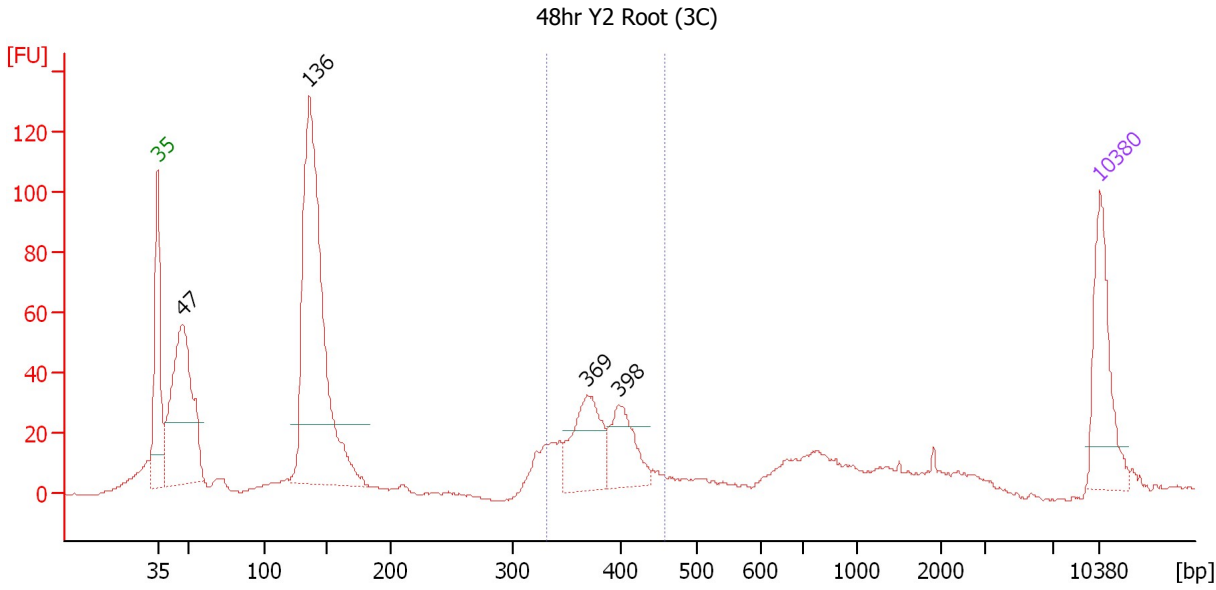
Region table for sample 4 : 0hr Media (3C)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
332	458	397	1,163.8	303.63	296.6	24	7.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 5 : 48hr Y2 Root (3C)

Height Threshold [FU] : 20

Overall Results for sample 5 : 48hr Y2 Root (3C)

Number of peaks found: 4 Corr. Area 1: 235.2
 Noise: 0.4

Peak table for sample 5 : 48hr Y2 Root (3C)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	290.52	9,386.1	
3	136	516.52	5,747.2	
4	369	97.92	402.1	
5	398	68.41	260.7	
6	10,380	75.00	10.9	Upper Marker

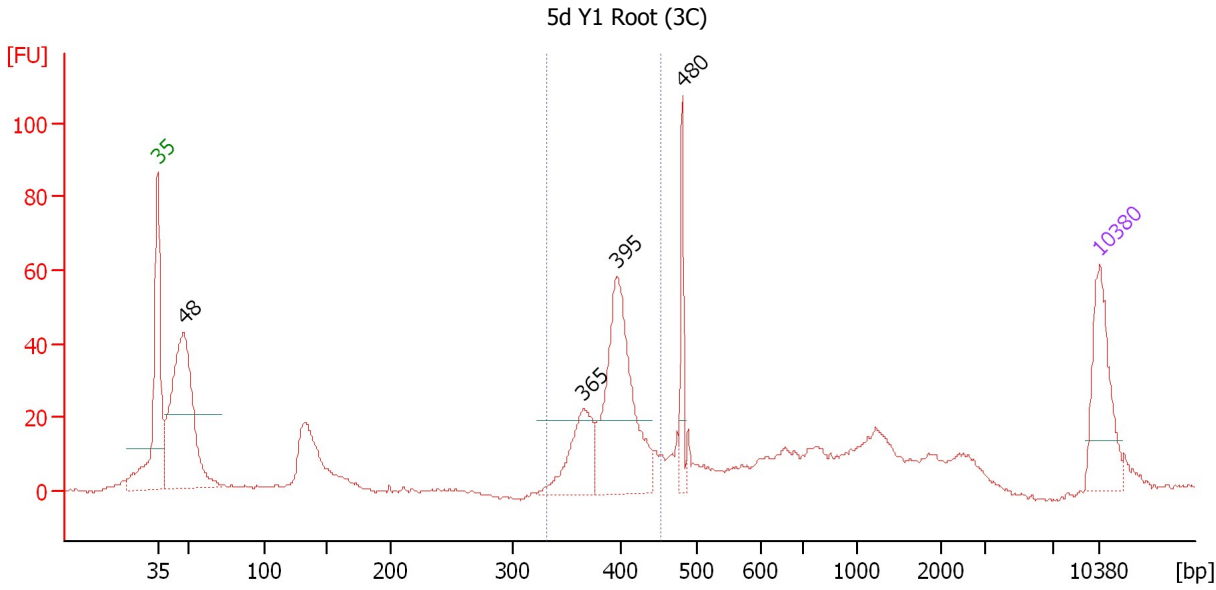
Region table for sample 5 : 48hr Y2 Root (3C)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
332	456	382	848.2	212.68	235.2	19	7.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 6 : 5d Y1 Root (3C)

Height Threshold [FU] : 20

Overall Results for sample 6 : 5d Y1 Root (3C)

Number of peaks found: 4 Corr. Area 1: 235.2
 Noise: 0.5

Peak table for sample 6 : 5d Y1 Root (3C)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	347.78	11,060.5	
3	365	86.29	358.2	
4	395	226.63	868.9	
5	480	45.46	143.6	
6	10,380	75.00	10.9	Upper Marker

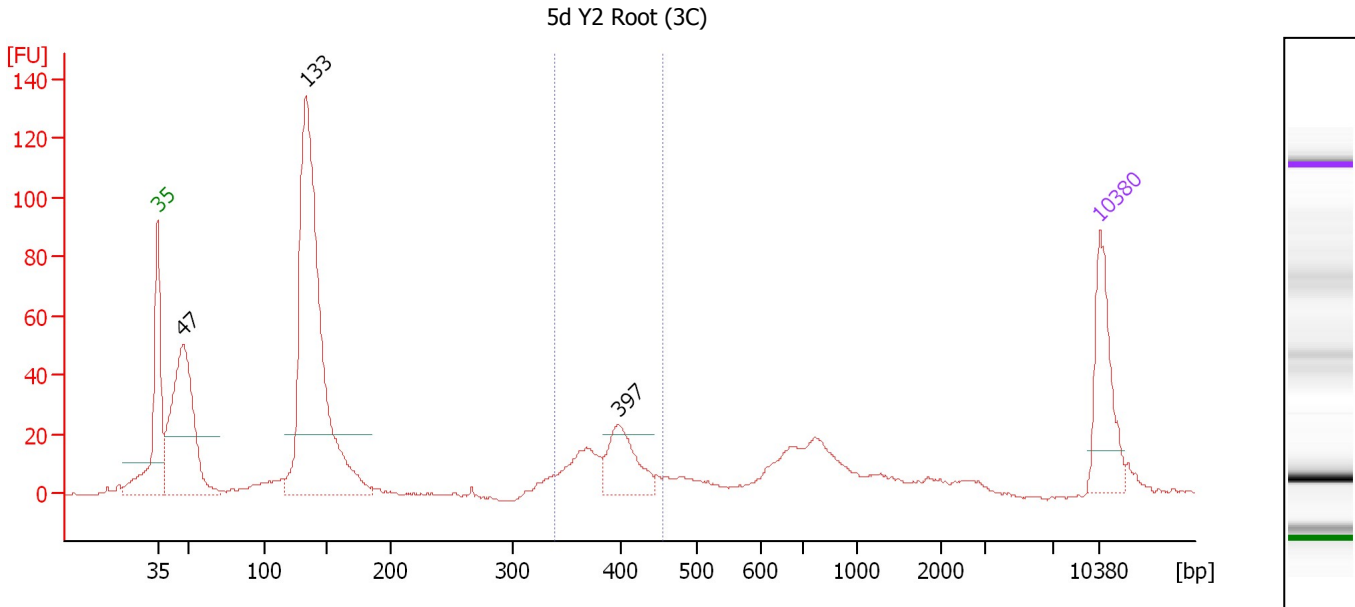
Region table for sample 6 : 5d Y1 Root (3C)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
331	452	393	1,192.9	308.36	235.2	29	6.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 7 : 5d Y2 Root (3C)

Height Threshold [FU] : 20

Overall Results for sample 7 : 5d Y2 Root (3C)

Number of peaks found: 3 Corr. Area 1: 135.5
 Noise: 0.4

Peak table for sample 7 : 5d Y2 Root (3C)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	319.93	10,254.8	
3	133	645.07	7,329.8	
4	397	75.43	287.6	
5	10,380	75.00	10.9	Upper Marker

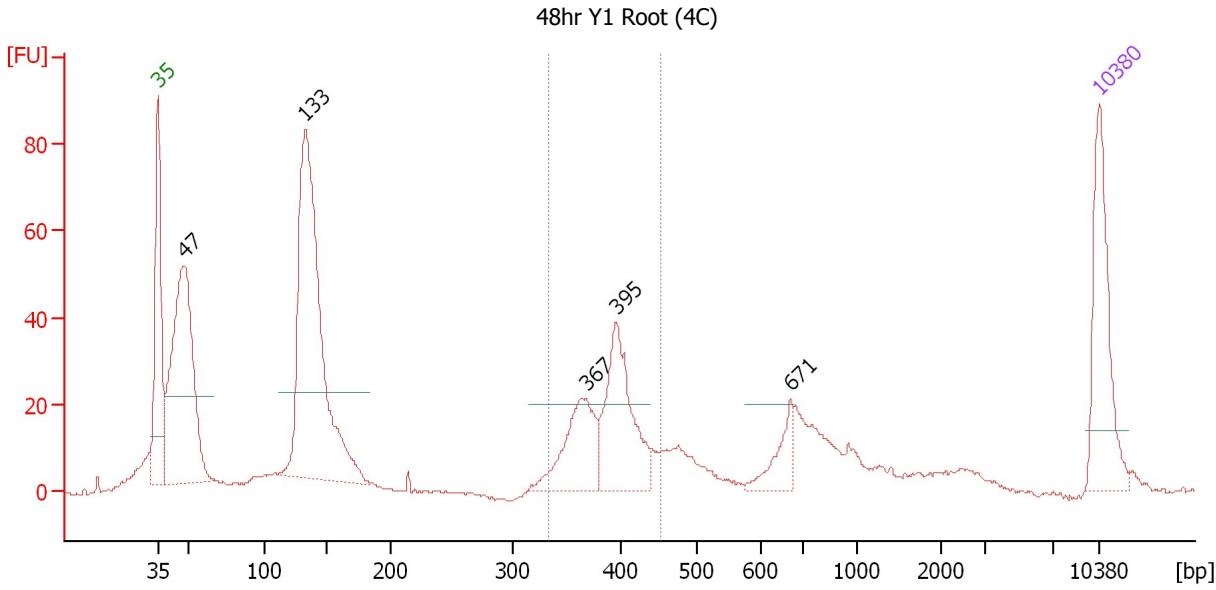
Region table for sample 7 : 5d Y2 Root (3C)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
339	454	390	539.9	138.23	135.5	13	7.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 8 : 48hr Y1 Root (4C)

Height Threshold [FU] : 20

Overall Results for sample 8 : 48hr Y1 Root (4C)

Number of peaks found: 5 Corr. Area 1: 187.9
 Noise: 0.3

Peak table for sample 8 : 48hr Y1 Root (4C)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	310.56	9,922.6	
3	133	420.18	4,796.0	
4	367	81.97	338.2	
5	395	115.26	442.3	
6	671	30.71	69.4	
7	10,380	75.00	10.9	Upper Marker

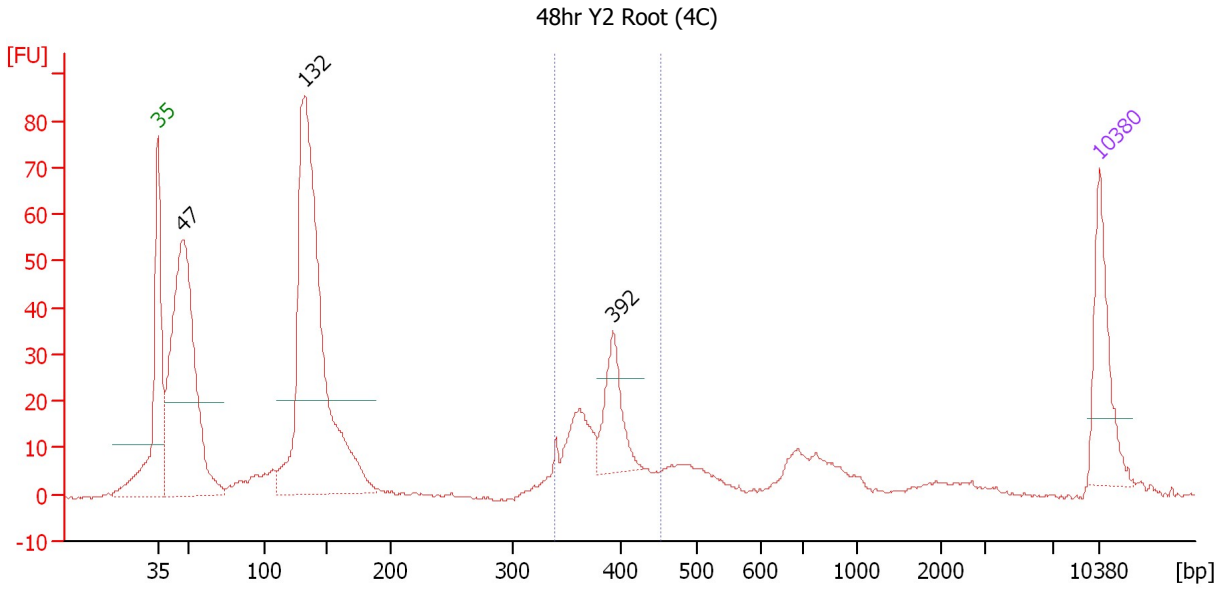
Region table for sample 8 : 48hr Y1 Root (4C)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
333	452	389	768.5	196.26	187.9	20	6.9	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 9 : 48hr Y2 Root (4C)

Height Threshold [FU] : 20

Overall Results for sample 9 : 48hr Y2 Root (4C)

Number of peaks found: 3 Corr. Area 1: 144.6
 Noise: 0.2

Peak table for sample 9 : 48hr Y2 Root (4C)

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	540.20	17,439.8	
3	132	695.25	7,951.0	
4	392	83.94	324.2	
5	10,380	75.00	10.9	Upper Marker

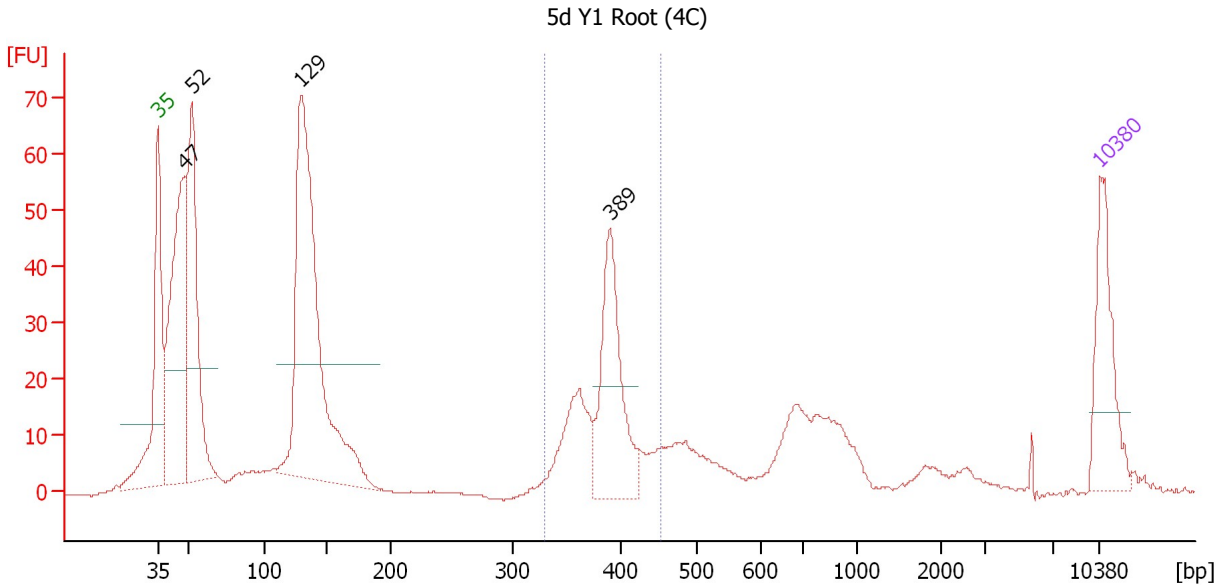
Region table for sample 9 : 48hr Y2 Root (4C)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
339	453	384	874.0	220.89	144.6	17	6.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 10 : 5d Y1 Root (4C)

Height Threshold [FU] : 20

Overall Results for sample 10 : 5d Y1 Root (4C)

Number of peaks found: 4 Corr. Area 1: 167.3
 Noise: 0.2

Peak table for sample 10 : 5d Y1 Root (4C)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	325.03	10,383.4	
3	52	271.59	7,950.9	
4	129	515.93	6,037.4	
5	389	162.84	633.8	
6	10,380	75.00	10.9	Upper Marker

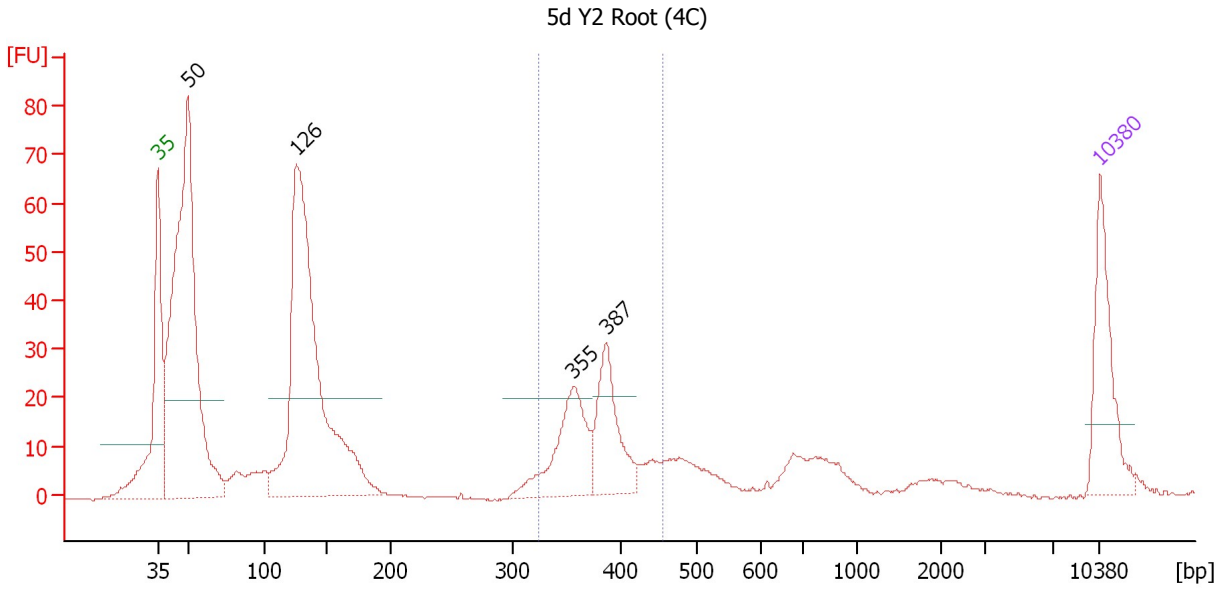
Region table for sample 10 : 5d Y1 Root (4C)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
329	451	385	1,029.2	260.42	167.3	18	6.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_006.xad

Created: 8/29/2013 4:16:09 PM
 Modified: 8/29/2013 5:01:26 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 11 : 5d Y2 Root (4C)

Height Threshold [FU] : 20

Overall Results for sample 11 : 5d Y2 Root (4C)

Number of peaks found: 4 Corr. Area 1: 157.7
 Noise: 0.2

Peak table for sample 11 : 5d Y2 Root (4C)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	633.68	19,394.5	
3	126	578.33	6,955.3	
4	355	114.23	486.9	
5	387	97.27	381.2	
6	10,380	75.00	10.9	Upper Marker

Region table for sample 11 : 5d Y2 Root (4C)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
325	455	379	896.1	223.10	157.7	17	7.7	Blue