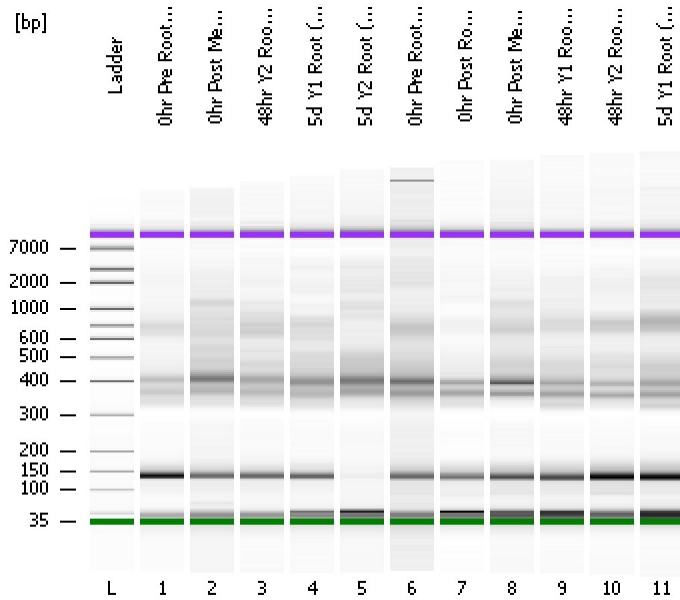


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
Modified: 8/29/2013 4:01:36 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

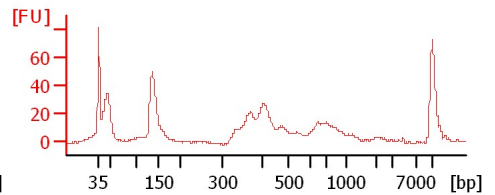
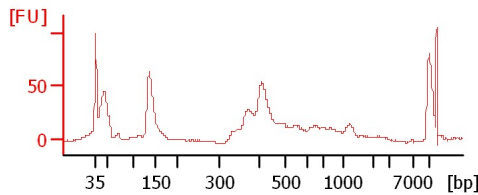
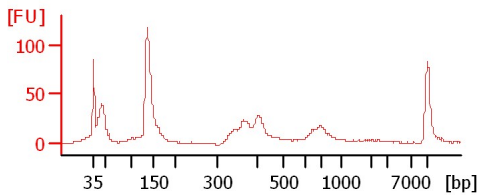
Chip Information:

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

0hr Pre Root (1T)

0hr Post Media (1T)

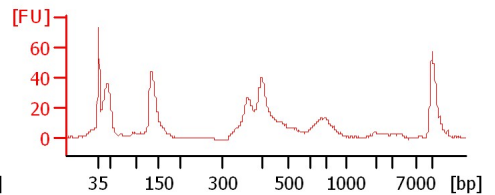
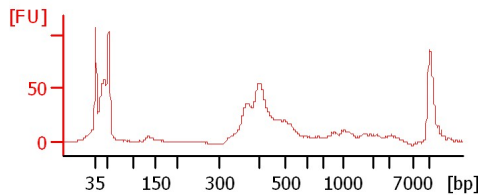
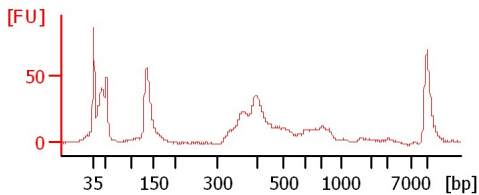
48hr Y2 Root (1T)



5d Y1 Root (1T)

5d Y2 Root (1T)

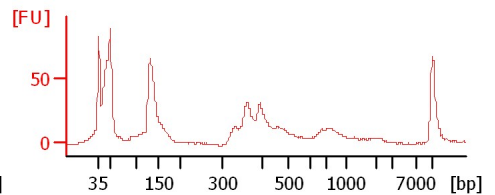
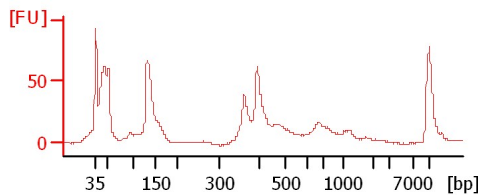
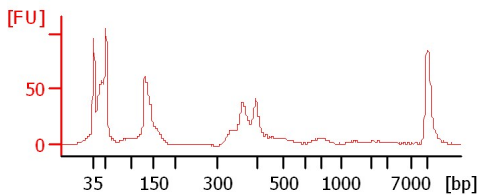
0hr Pre Root (2T)



0hr Post Root (2T)

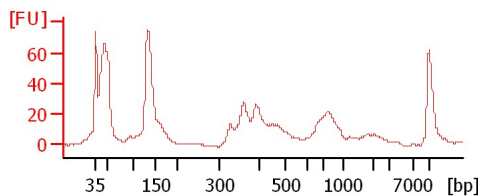
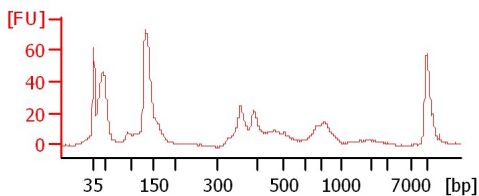
0hr Post Media (2T)

48hr Y1 Root (2T)



48hr Y2 Root (2T)

5d Y1 Root (2T)



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electrophoresis File Run Summary (Chip Summary)

| Sample Name | Sample Comment | Rest. Digest | Status | Observation | Result Label | Result Color |
|---------------------|----------------|--------------------------|--------|-------------|--------------|--------------|
| 0hr Pre Root (1T) | | <input type="checkbox"/> | ✓ | | | |
| 0hr Post Media (1T) | | <input type="checkbox"/> | ✓ | | | |
| 48hr Y2 Root (1T) | | <input type="checkbox"/> | ✓ | | | |
| 5d Y1 Root (1T) | | <input type="checkbox"/> | ✓ | | | |
| 5d Y2 Root (1T) | | <input type="checkbox"/> | ✓ | | | |
| 0hr Pre Root (2T) | | <input type="checkbox"/> | ✓ | | | |
| 0hr Post Root (2T) | | <input type="checkbox"/> | ✓ | | | |
| 0hr Post Media (2T) | | <input type="checkbox"/> | ✓ | | | |
| 48hr Y1 Root (2T) | | <input type="checkbox"/> | ✓ | | | |
| 48hr Y2 Root (2T) | | <input type="checkbox"/> | ✓ | | | |
| 5d Y1 Root (2T) | | <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_005.xad

Created: 8/29/2013 3:18:32 PM
Modified: 8/29/2013 4:01:36 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

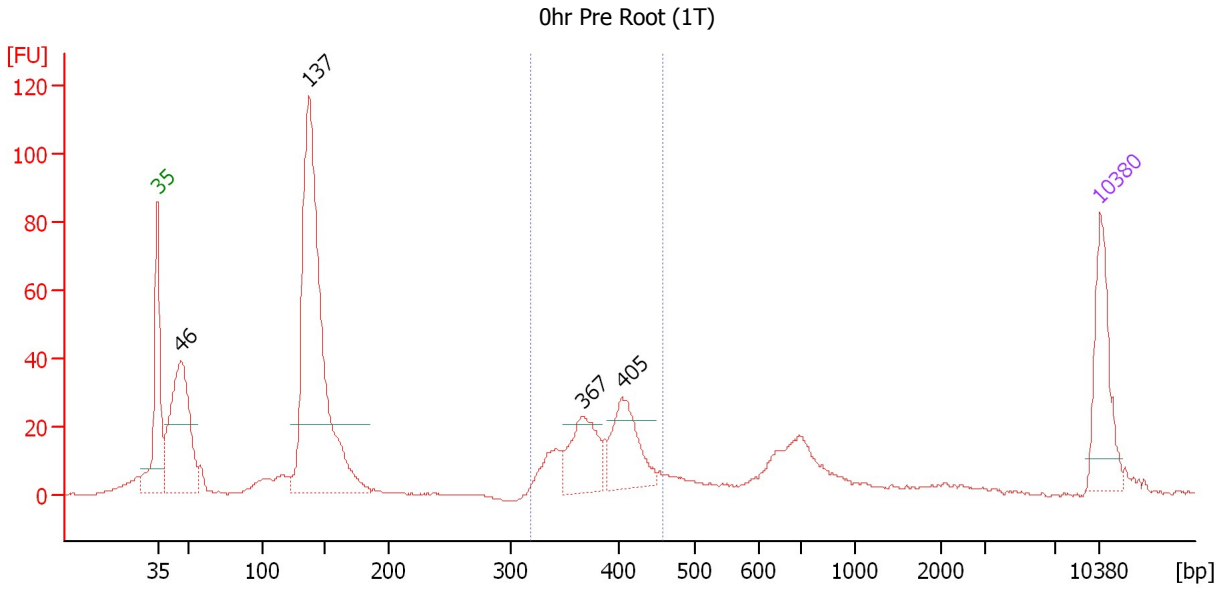
Ladder

| 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_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary



Setpoint Deviations for sample 1 : 0hr Pre Root (1T)

Height Threshold [FU] : 20

Overall Results for sample 1 : 0hr Pre Root (1T)

Number of peaks found: 4 Corr. Area 1: 207.6
 Noise: 0.2

Peak table for sample 1 : 0hr Pre Root (1T)

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 46 | 266.50 | 8,730.5 | |
| 3 | 137 | 602.97 | 6,655.7 | |
| 4 | 367 | 87.42 | 361.2 | |
| 5 | 405 | 90.13 | 337.5 | |
| 6 | 10,380 | 75.00 | 10.9 | Upper Marker |

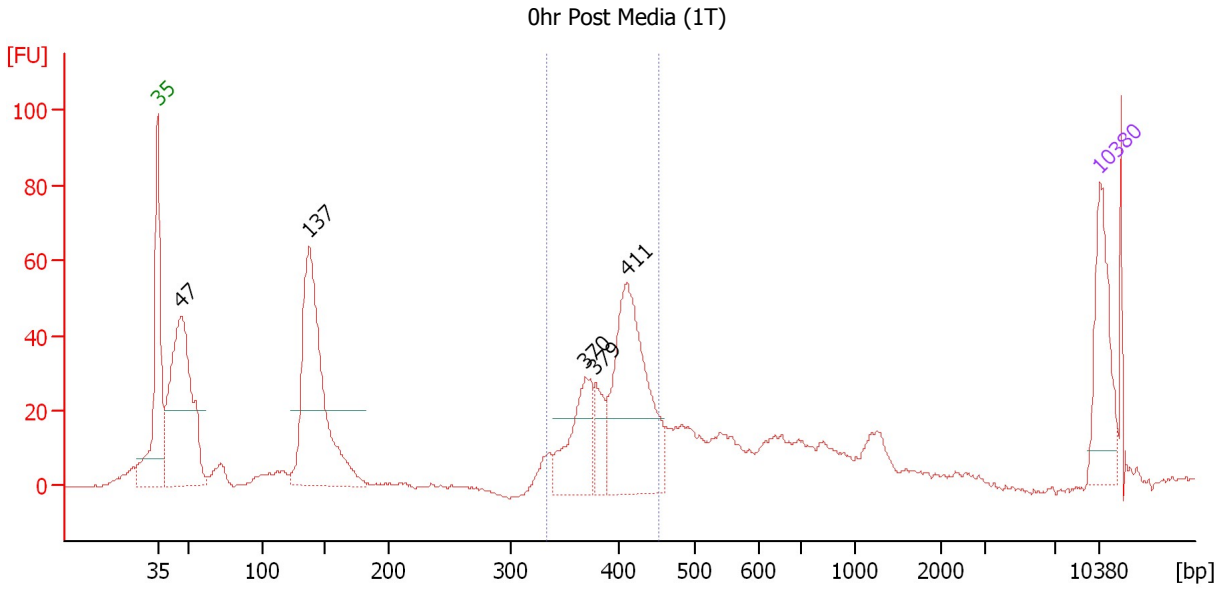
Region table for sample 1 : 0hr Pre Root (1T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 320 | 459 | 385 | 985.6 | 248.62 | 207.6 | 22 | 8.3 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 2 : 0hr Post Media (1T)

Height Threshold [FU] : 20

Overall Results for sample 2 : 0hr Post Media (1T)

Number of peaks found: 5 Corr. Area 1: 294.4
 Noise: 0.3

Peak table for sample 2 : 0hr Post Media (1T)

| Peak | Size [bp] | Conc. [pg/µl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 47 | 347.30 | 11,293.0 | |
| 3 | 137 | 355.34 | 3,931.9 | |
| 4 | 370 | 100.78 | 413.0 | |
| 5 | 379 | 39.48 | 158.0 | |
| 6 | 411 | 246.10 | 907.8 | |
| 7 | 10,380 | 75.00 | 10.9 | Upper Marker |

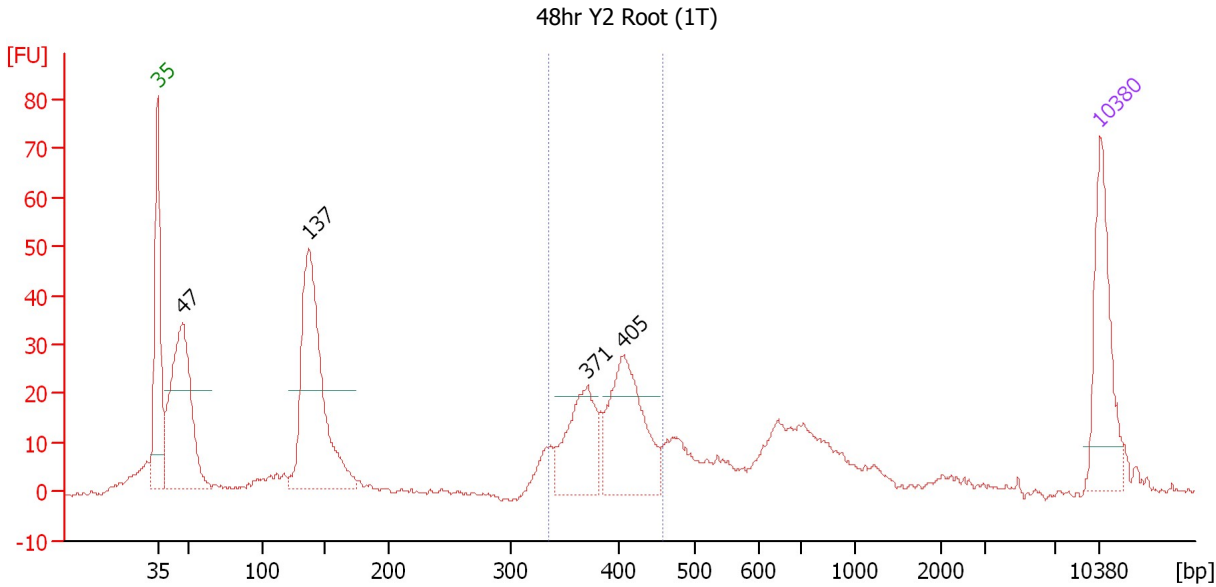
Region table for sample 2 : 0hr Post Media (1T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/µl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 334 | 452 | 399 | 1,334.2 | 349.07 | 294.4 | 28 | 7.1 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 3 : 48hr Y2 Root (1T)

Height Threshold [FU] : 20

Overall Results for sample 3 : 48hr Y2 Root (1T)

Number of peaks found: 4 Corr. Area 1: 193.8
 Noise: 0.5

Peak table for sample 3 : 48hr Y2 Root (1T)

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 47 | 252.22 | 8,124.0 | |
| 3 | 137 | 288.41 | 3,189.1 | |
| 4 | 371 | 92.80 | 378.5 | |
| 5 | 405 | 134.40 | 502.5 | |
| 6 | 10,380 | 75.00 | 10.9 | Upper Marker |

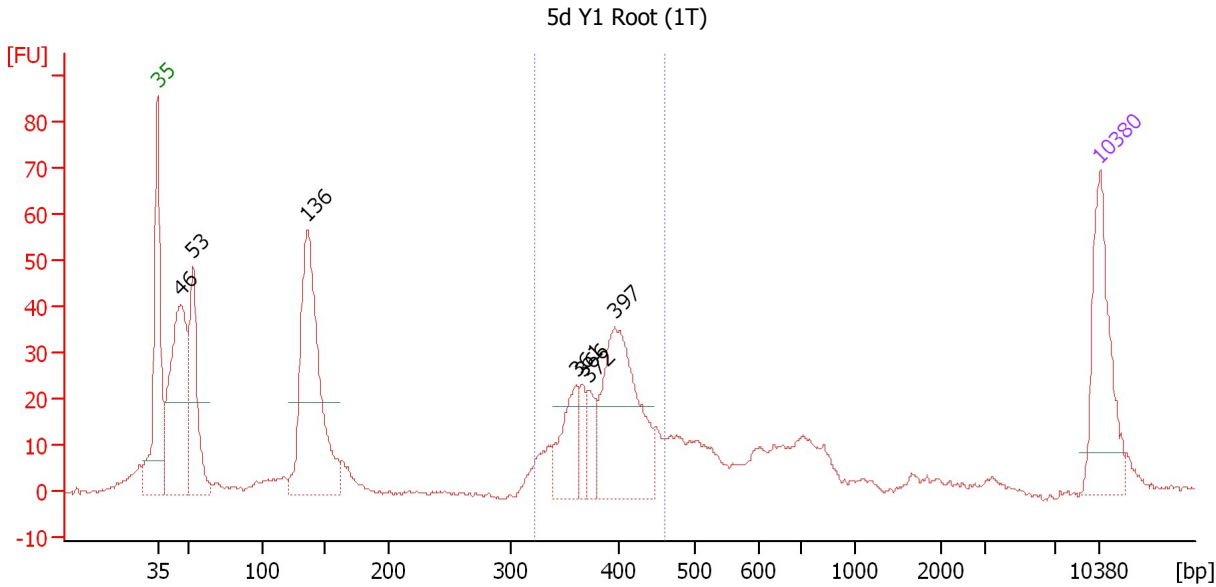
Region table for sample 3 : 48hr Y2 Root (1T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 335 | 459 | 393 | 938.2 | 241.49 | 193.8 | 26 | 7.7 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 4 : 5d Y1 Root (1T)

Height Threshold [FU] : 20

Overall Results for sample 4 : 5d Y1 Root (1T)

Number of peaks found: 7 Corr. Area 1: 259.3
 Noise: 0.6

Peak table for sample 4 : 5d Y1 Root (1T)

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 46 | 228.94 | 7,491.5 | |
| 3 | 53 | 128.39 | 3,662.0 | |
| 4 | 136 | 281.45 | 3,143.2 | |
| 5 | 361 | 58.51 | 245.7 | |
| 6 | 366 | 22.72 | 94.0 | |
| 7 | 372 | 22.60 | 92.0 | |
| 8 | 397 | 169.79 | 648.2 | |
| 9 | 10,380 | 75.00 | 10.9 | Upper Marker |

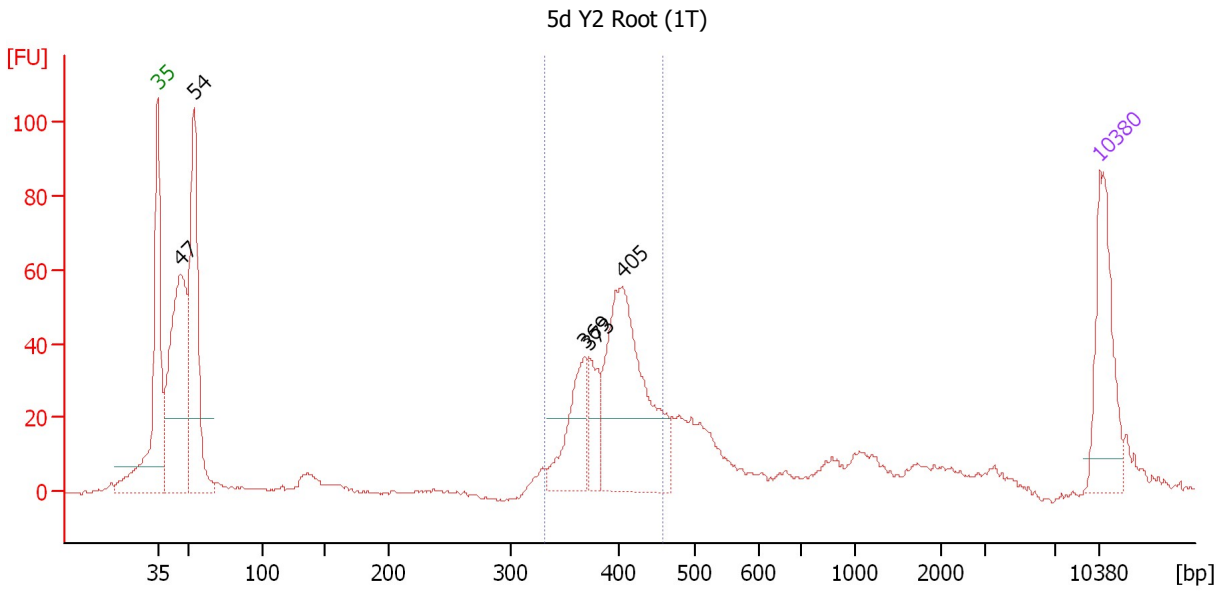
Region table for sample 4 : 5d Y1 Root (1T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 323 | 461 | 390 | 1,159.1 | 296.48 | 259.3 | 29 | 8.3 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



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

Height Threshold [FU] : 20

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

Number of peaks found: 5 Corr. Area 1: 357.1
 Noise: 0.4

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

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 47 | 274.94 | 8,956.4 | |
| 3 | 54 | 242.44 | 6,804.5 | |
| 4 | 369 | 81.36 | 334.0 | |
| 5 | 373 | 39.90 | 162.0 | |
| 6 | 405 | 234.28 | 876.5 | |
| 7 | 10,380 | 75.00 | 10.9 | Upper Marker |

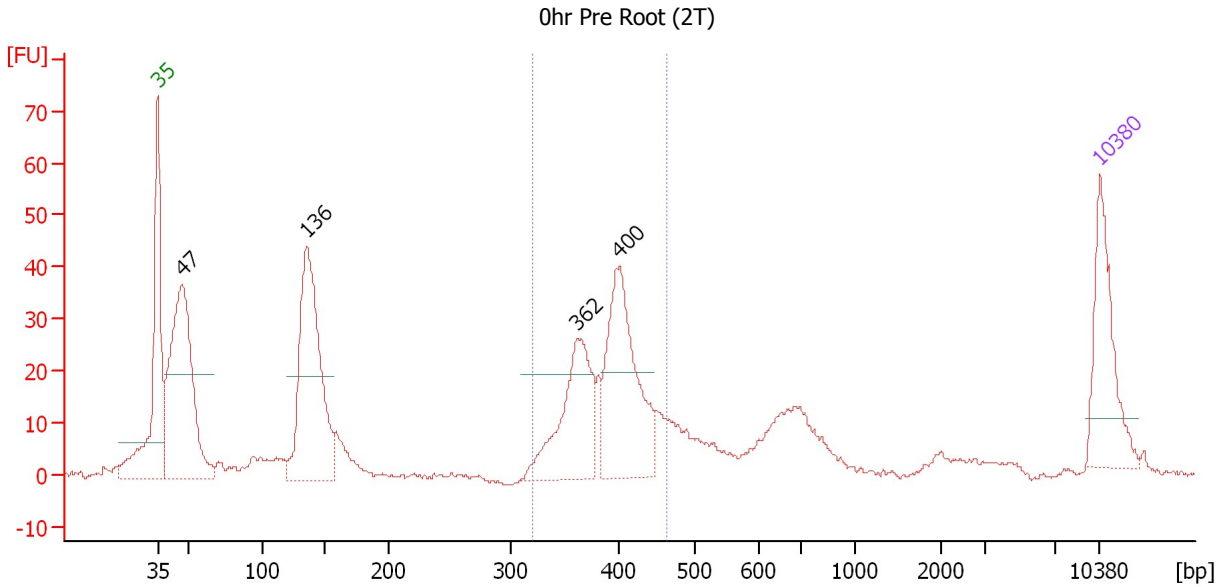
Region table for sample 5 : 5d Y2 Root (1T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 333 | 457 | 396 | 1,333.4 | 346.53 | 357.1 | 34 | 7.2 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 6 : 0hr Pre Root (2T)

Height Threshold [FU] : 20

Overall Results for sample 6 : 0hr Pre Root (2T)

Number of peaks found: 4 Corr. Area 1: 249.1
 Noise: 0.5

Peak table for sample 6 : 0hr Pre Root (2T)

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 47 | 338.45 | 10,944.7 | |
| 3 | 136 | 290.66 | 3,243.2 | |
| 4 | 362 | 142.33 | 595.2 | |
| 5 | 400 | 181.58 | 687.0 | |
| 6 | 10,380 | 75.00 | 10.9 | Upper Marker |

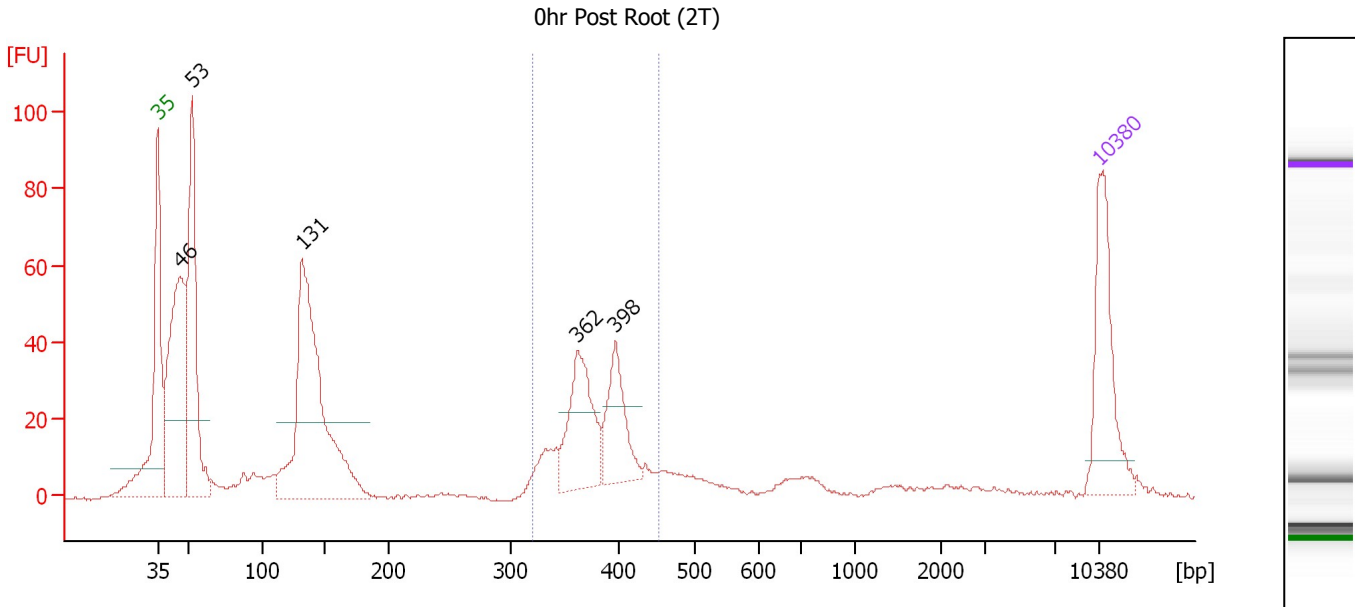
Region table for sample 6 : 0hr Pre Root (2T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 320 | 463 | 392 | 1,368.0 | 351.37 | 249.1 | 32 | 8.1 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 7 : 0hr Post Root (2T)

Height Threshold [FU] : 20

Overall Results for sample 7 : 0hr Post Root (2T)

Number of peaks found: 5 Corr. Area 1: 233.9
 Noise: 0.4

Peak table for sample 7 : 0hr Post Root (2T)

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 46 | 259.08 | 8,507.6 | |
| 3 | 53 | 219.21 | 6,290.3 | |
| 4 | 131 | 347.14 | 4,003.4 | |
| 5 | 362 | 100.01 | 418.2 | |
| 6 | 398 | 68.57 | 261.4 | |
| 7 | 10,380 | 75.00 | 10.9 | Upper Marker |

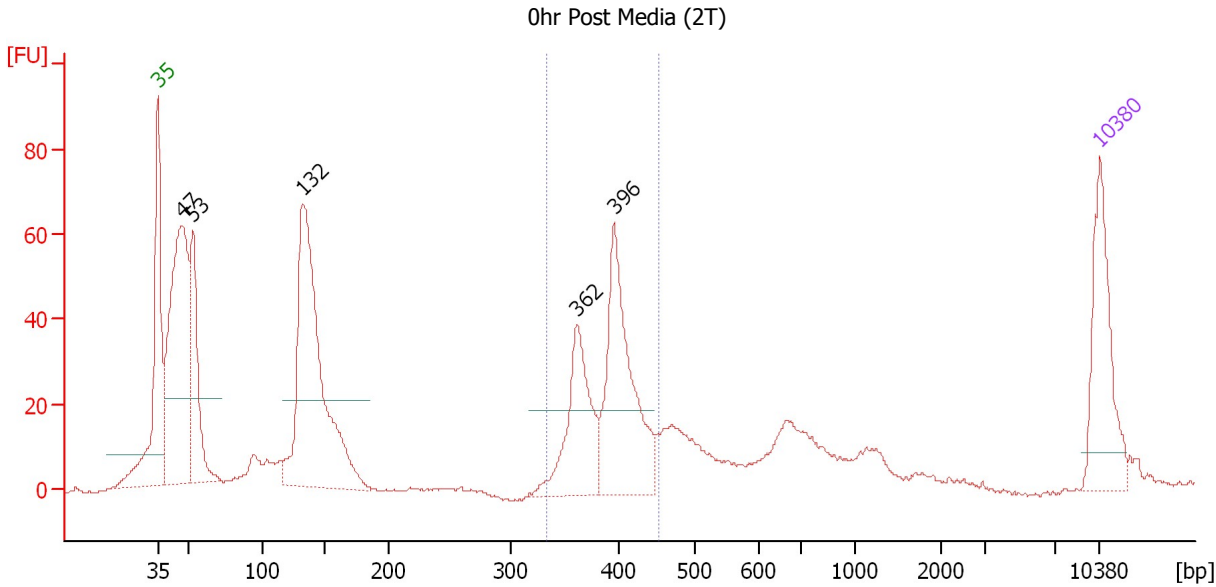
Region table for sample 7 : 0hr Post Root (2T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 322 | 453 | 379 | 927.1 | 230.71 | 233.9 | 25 | 7.4 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 8 : 0hr Post Media (2T)

Height Threshold [FU] : 20

Overall Results for sample 8 : 0hr Post Media (2T)

Number of peaks found: 5 Corr. Area 1: 264.1
 Noise: 0.3

Peak table for sample 8 : 0hr Post Media (2T)

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 47 | 318.27 | 10,302.3 | |
| 3 | 53 | 132.97 | 3,777.9 | |
| 4 | 132 | 361.50 | 4,154.2 | |
| 5 | 362 | 113.62 | 476.1 | |
| 6 | 396 | 173.36 | 663.8 | |
| 7 | 10,380 | 75.00 | 10.9 | Upper Marker |

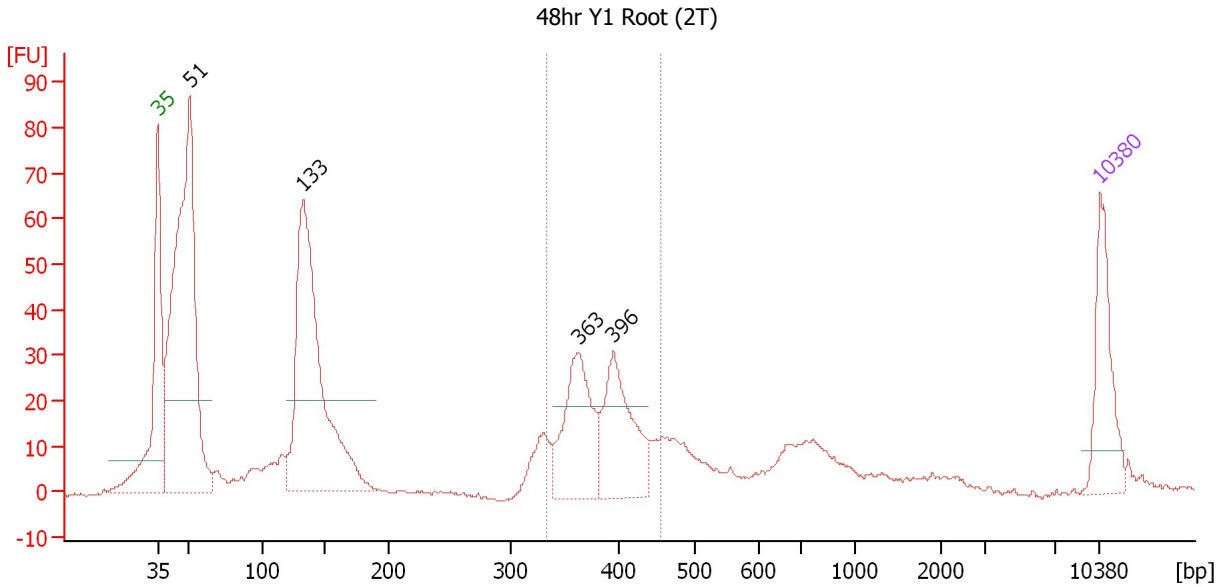
Region table for sample 8 : 0hr Post Media (2T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 334 | 453 | 392 | 1,055.2 | 271.79 | 264.1 | 23 | 6.7 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 9 : 48hr Y1 Root (2T)

Height Threshold [FU] : 20

Overall Results for sample 9 : 48hr Y1 Root (2T)

Number of peaks found: 4 Corr. Area 1: 210.6
 Noise: 0.5

Peak table for sample 9 : 48hr Y1 Root (2T)

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 51 | 660.71 | 19,636.6 | |
| 3 | 133 | 500.05 | 5,713.8 | |
| 4 | 363 | 148.89 | 620.7 | |
| 5 | 396 | 143.94 | 551.3 | |
| 6 | 10,380 | 75.00 | 10.9 | Upper Marker |

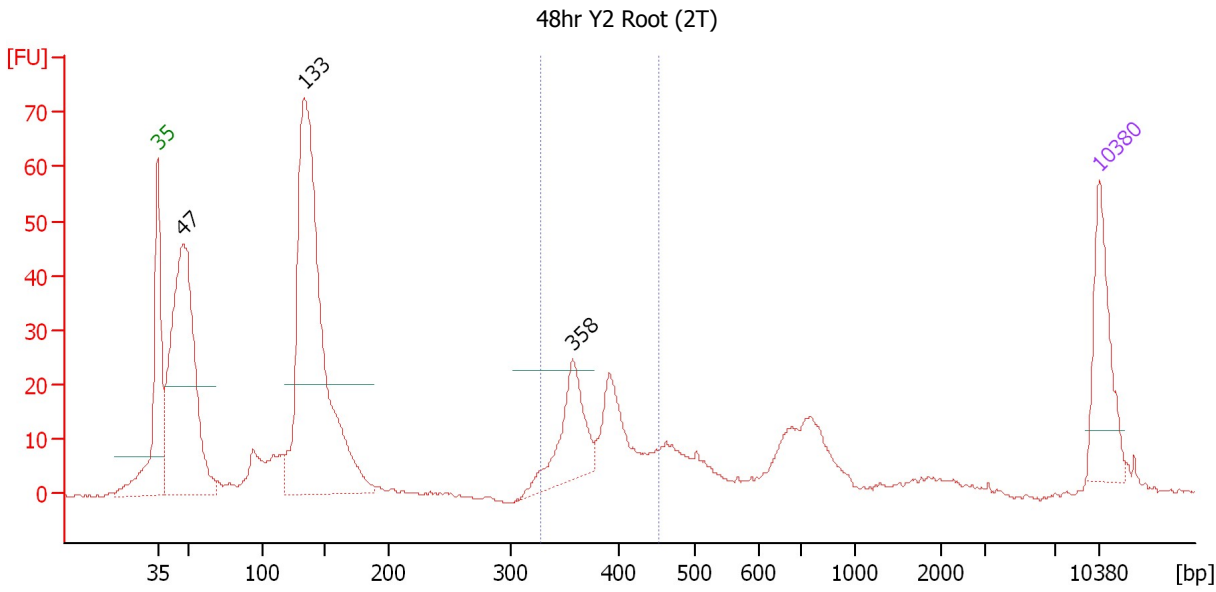
Region table for sample 9 : 48hr Y1 Root (2T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 334 | 455 | 386 | 1,194.3 | 302.31 | 210.6 | 20 | 7.7 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 10 : 48hr Y2 Root (2T)

Height Threshold [FU] : 20

Overall Results for sample 10 : 48hr Y2 Root (2T)

Number of peaks found: 3 Corr. Area 1: 139.3
 Noise: 0.3

Peak table for sample 10 : 48hr Y2 Root (2T)

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 47 | 486.37 | 15,568.2 | |
| 3 | 133 | 644.38 | 7,318.9 | |
| 4 | 358 | 101.50 | 429.9 | |
| 5 | 10,380 | 75.00 | 10.9 | Upper Marker |

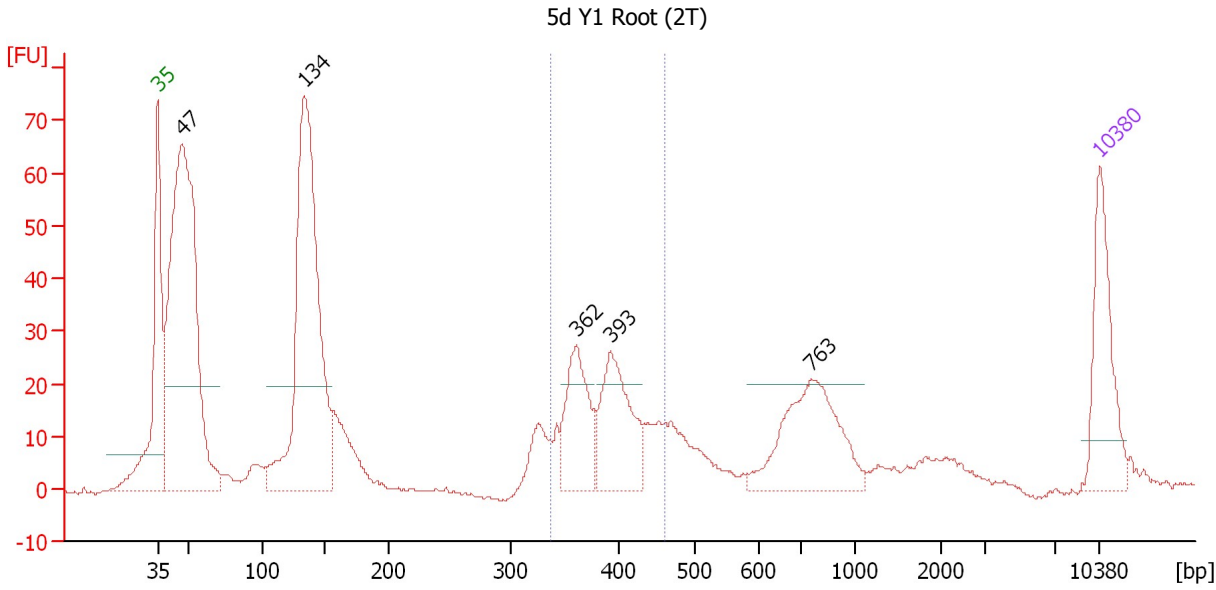
Region table for sample 10 : 48hr Y2 Root (2T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 328 | 452 | 382 | 903.2 | 226.63 | 139.3 | 17 | 7.8 | Blue |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-08-29\2013-08-29_005.xad

Created: 8/29/2013 3:18:32 PM
 Modified: 8/29/2013 4:01:36 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 11 : 5d Y1 Root (2T)

Height Threshold [FU] : 20

Overall Results for sample 11 : 5d Y1 Root (2T)

Number of peaks found: 5 Corr. Area 1: 190.2
 Noise: 0.2

Peak table for sample 11 : 5d Y1 Root (2T)

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 47 | 640.64 | 20,589.1 | |
| 3 | 134 | 497.27 | 5,640.6 | |
| 4 | 362 | 97.75 | 409.4 | |
| 5 | 393 | 113.94 | 439.0 | |
| 6 | 763 | 138.01 | 274.2 | |
| 7 | 10,380 | 75.00 | 10.9 | Upper Marker |

Region table for sample 11 : 5d Y1 Root (2T)

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 337 | 459 | 389 | 1,025.3 | 261.72 | 190.2 | 18 | 8.0 | Blue |