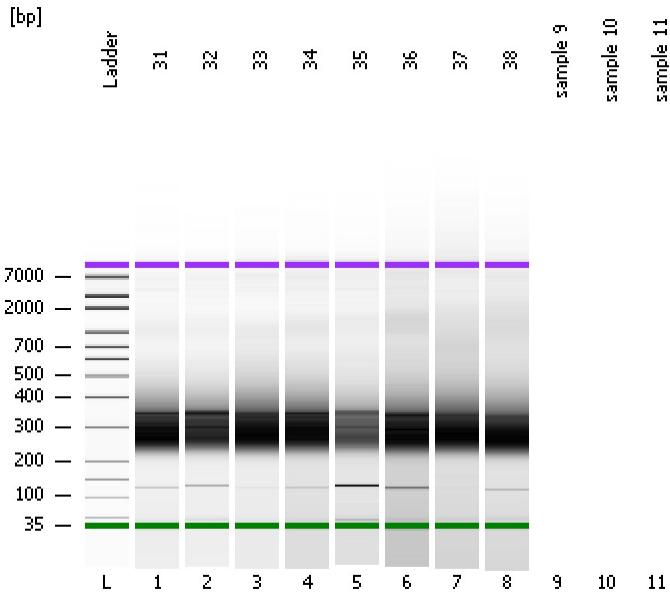


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
Modified: 2/29/2016 5:15:27 PM

Electrophoresis File Run Summary



Instrument Information:

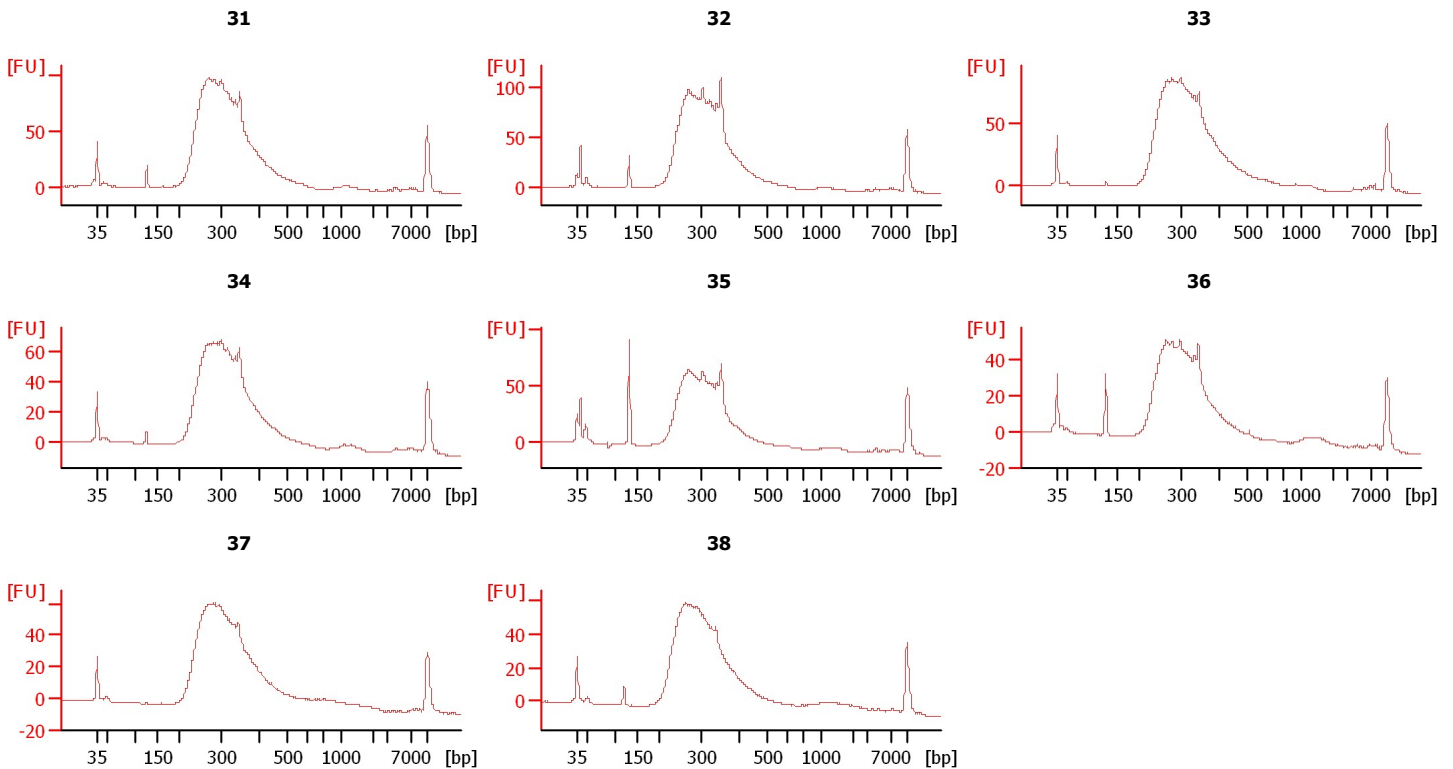
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electrophoresis File Run Summary (Chip Summary)

| Sample Name | Sample Comment | Rest. Digest | Status | Observation | Result Label | Result Color |
|-------------|----------------|--------------------------|--------|-------------|--------------|--------------|
| 31 | | <input type="checkbox"/> | ✓ | | | |
| 32 | | <input type="checkbox"/> | ✓ | | | |
| 33 | | <input type="checkbox"/> | ✓ | | | |
| 34 | | <input type="checkbox"/> | ✓ | | | |
| 35 | | <input type="checkbox"/> | ✓ | | | |
| 36 | | <input type="checkbox"/> | ✓ | | | |
| 37 | | <input type="checkbox"/> | ✓ | | | |
| 38 | | <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\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
Modified: 2/29/2016 5:15:27 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

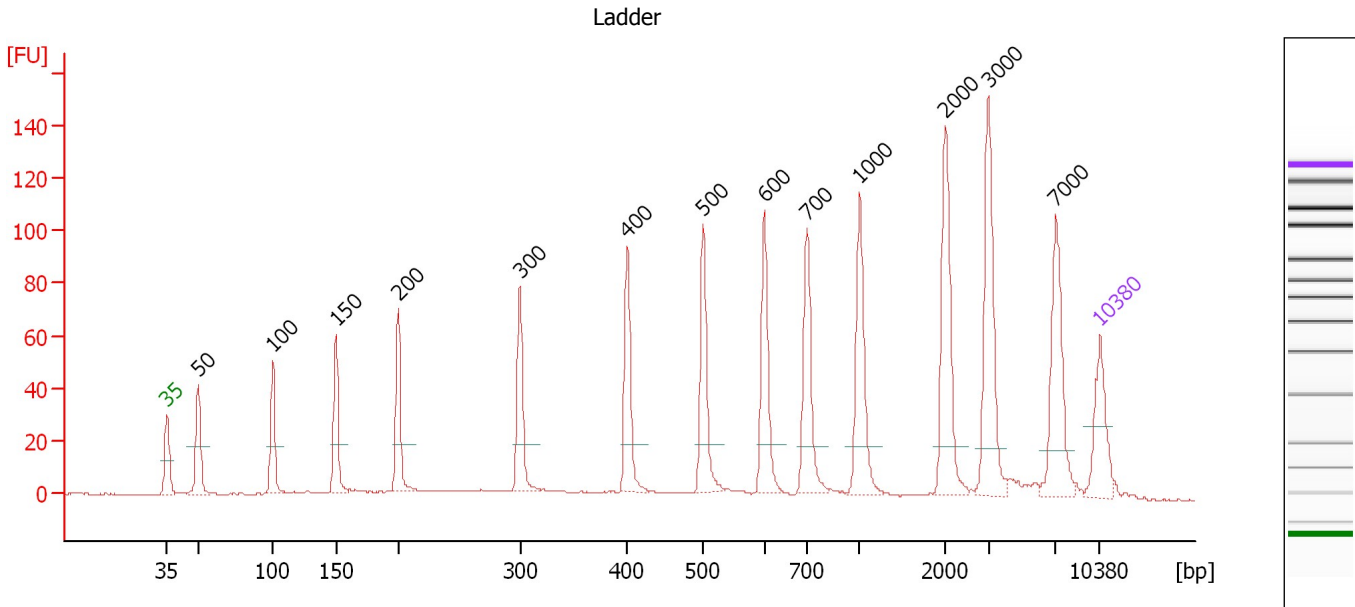
Ladder

| 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\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

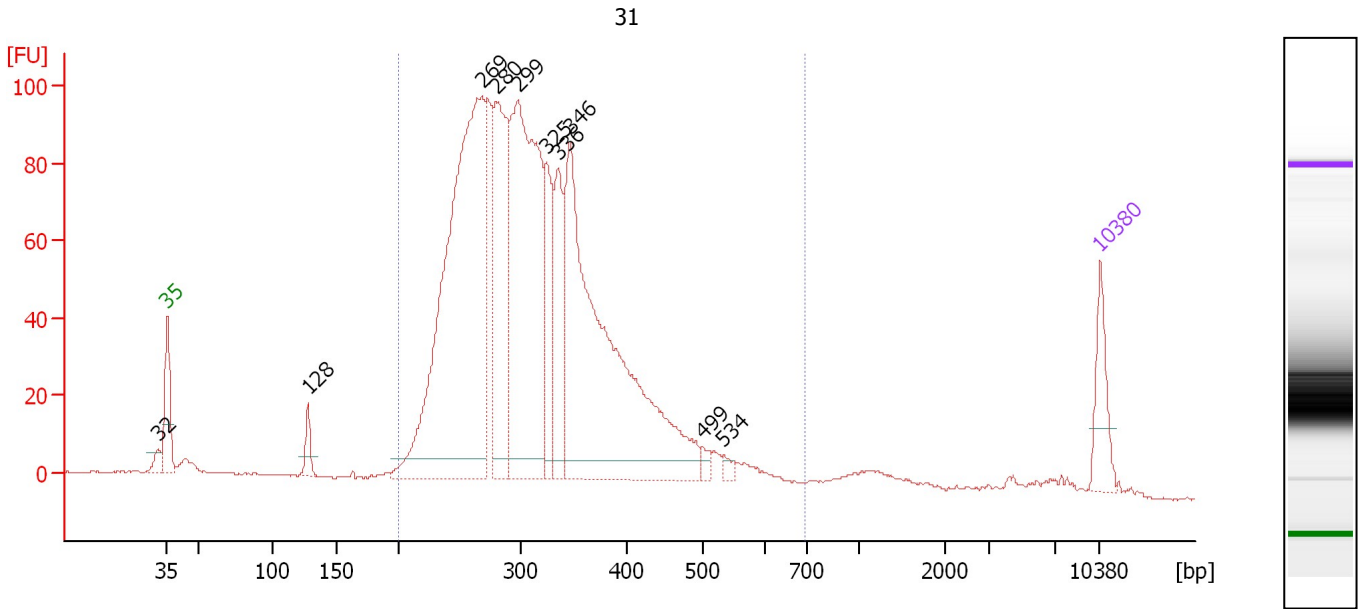
Peak table for Ladder

| 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 | 45.35 |
| 3 | 100 | 150.00 | 2,272.7 | Ladder Peak | 50.93 |
| 4 | 150 | 150.00 | 1,515.2 | Ladder Peak | 55.64 |
| 5 | 200 | 150.00 | 1,136.4 | Ladder Peak | 60.34 |
| 6 | 300 | 150.00 | 757.6 | Ladder Peak | 69.47 |
| 7 | 400 | 150.00 | 568.2 | Ladder Peak | 77.54 |
| 8 | 500 | 150.00 | 454.5 | Ladder Peak | 83.21 |
| 9 | 600 | 150.00 | 378.8 | Ladder Peak | 87.78 |
| 10 | 700 | 150.00 | 324.7 | Ladder Peak | 91.00 |
| 11 | 1,000 | 150.00 | 227.3 | Ladder Peak | 94.98 |
| 12 | 2,000 | 150.00 | 113.6 | Ladder Peak | 101.42 |
| 13 | 3,000 | 150.00 | 75.8 | Ladder Peak | 104.64 |
| 14 | 7,000 | 150.00 | 32.5 | Ladder Peak | 109.68 |
| 15 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : 31

Number of peaks found: 10 Corr. Area 1: 1,786.2
 Noise: 0.3

Peak table for sample 1 : 31

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations | Aligned Migration Time [s] |
|------|-----------|---------------|-------------------|--------------|----------------------------|
| 1 | 32 | 0.00 | 0.0 | | 42.27 |
| 2 | 35 | 125.00 | 5,411.3 | Lower Marker | 43.00 |
| 3 | 128 | 49.30 | 583.0 | | 53.58 |
| 4 | 269 | 1,346.43 | 7,574.4 | | 66.67 |
| 5 | 280 | 451.28 | 2,437.7 | | 67.69 |
| 6 | 299 | 897.17 | 4,553.0 | | 69.34 |
| 7 | 325 | 174.97 | 816.2 | | 71.48 |
| 8 | 336 | 217.30 | 981.0 | | 72.35 |
| 9 | 346 | 1,081.63 | 4,730.3 | | 73.22 |
| 10 | 499 | 18.01 | 54.7 | | 83.17 |
| 11 | 534 | 14.88 | 42.2 | | 84.77 |
| 12 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

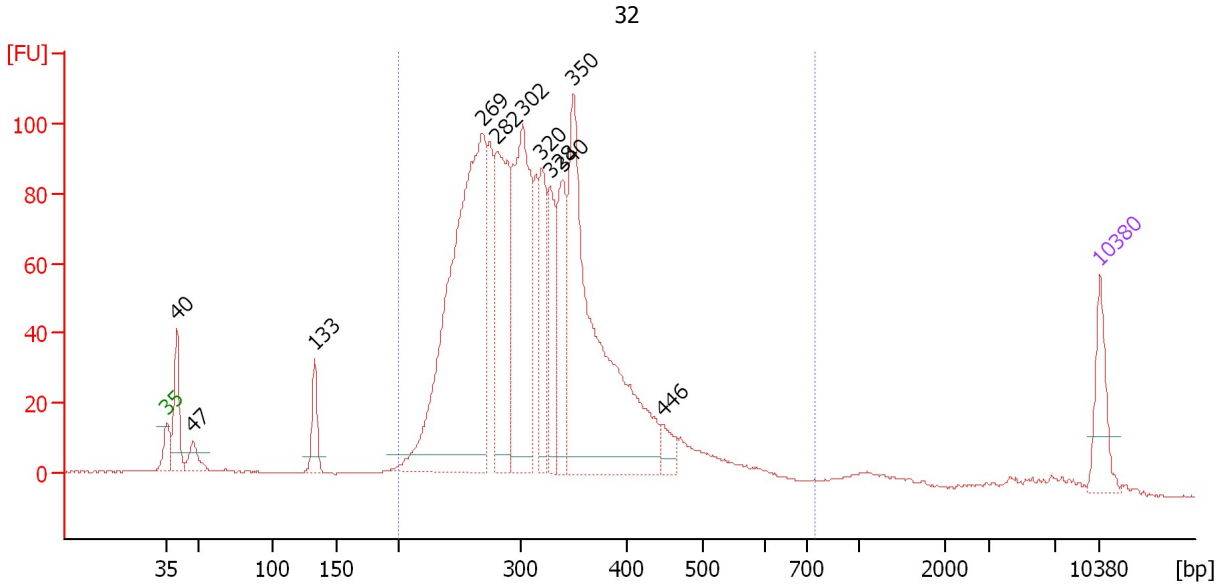
Region table for sample 1 : 31

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 200 | 695 | 320 | 1,786.2 | 22,590.0 | 4,506.88 | 94 | 22.6 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : 32

Number of peaks found: 11 Corr. Area 1: 1,792.6
 Noise: 0.2

Peak table for sample 2 : 32

| 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 | 40 | 143.02 | 5,475.7 | | 43.72 |
| 3 | 47 | 51.13 | 1,630.9 | | 44.96 |
| 4 | 133 | 77.92 | 886.4 | | 54.05 |
| 5 | 269 | 1,120.47 | 6,300.4 | | 66.68 |
| 6 | 282 | 382.25 | 2,057.3 | | 67.78 |
| 7 | 302 | 513.70 | 2,575.5 | | 69.65 |
| 8 | 320 | 183.73 | 869.9 | | 71.09 |
| 9 | 328 | 157.97 | 729.1 | | 71.76 |
| 10 | 340 | 215.92 | 963.5 | | 72.67 |
| 11 | 350 | 813.87 | 3,526.9 | | 73.48 |
| 12 | 446 | 41.10 | 139.7 | | 80.13 |
| 13 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

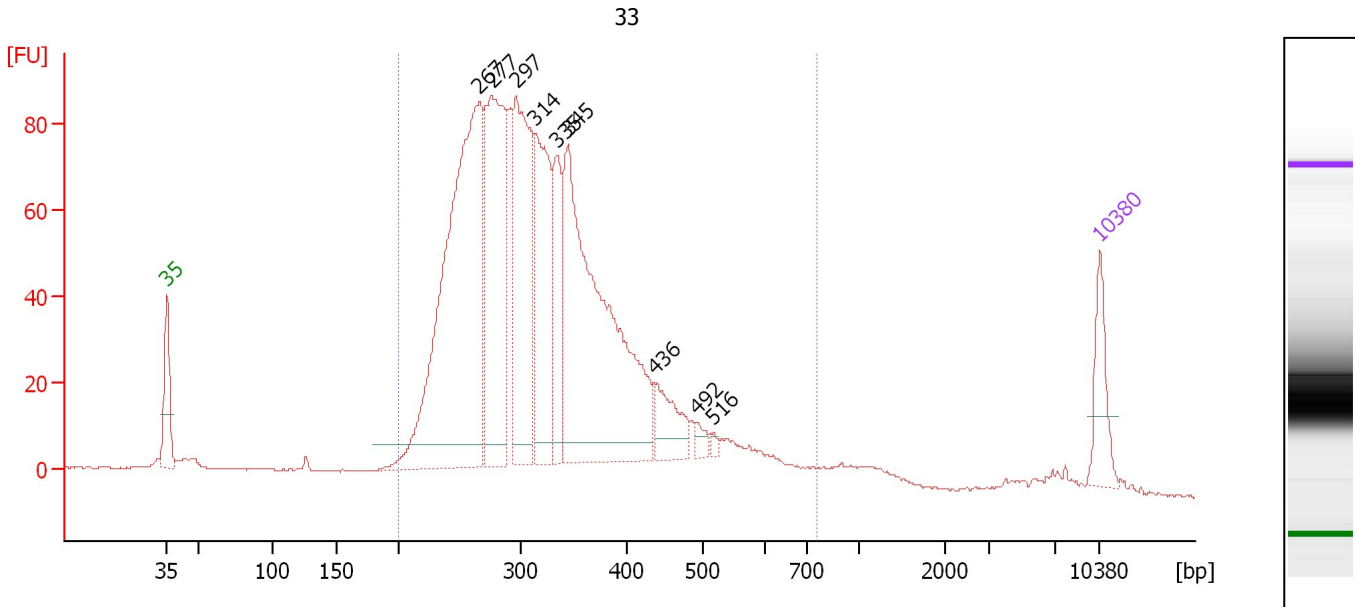
Region table for sample 2 : 32

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 200 | 744 | 322 | 1,792.6 | 20,117.7 | 4,046.10 | 90 | 22.6 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : 33

Number of peaks found: 9 Corr. Area 1: 1,697.2
 Noise: 0.2

Peak table for sample 3 : 33

| 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 | 267 | 1,128.73 | 6,412.7 | | 66.43 |
| 3 | 277 | 594.24 | 3,251.7 | | 67.36 |
| 4 | 297 | 468.54 | 2,387.9 | | 69.23 |
| 5 | 314 | 354.97 | 1,713.1 | | 70.60 |
| 6 | 335 | 190.49 | 862.6 | | 72.26 |
| 7 | 345 | 889.80 | 3,908.6 | | 73.10 |
| 8 | 436 | 101.90 | 354.3 | | 79.57 |
| 9 | 492 | 19.41 | 59.8 | | 82.75 |
| 10 | 516 | 8.87 | 26.0 | | 83.93 |
| 11 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

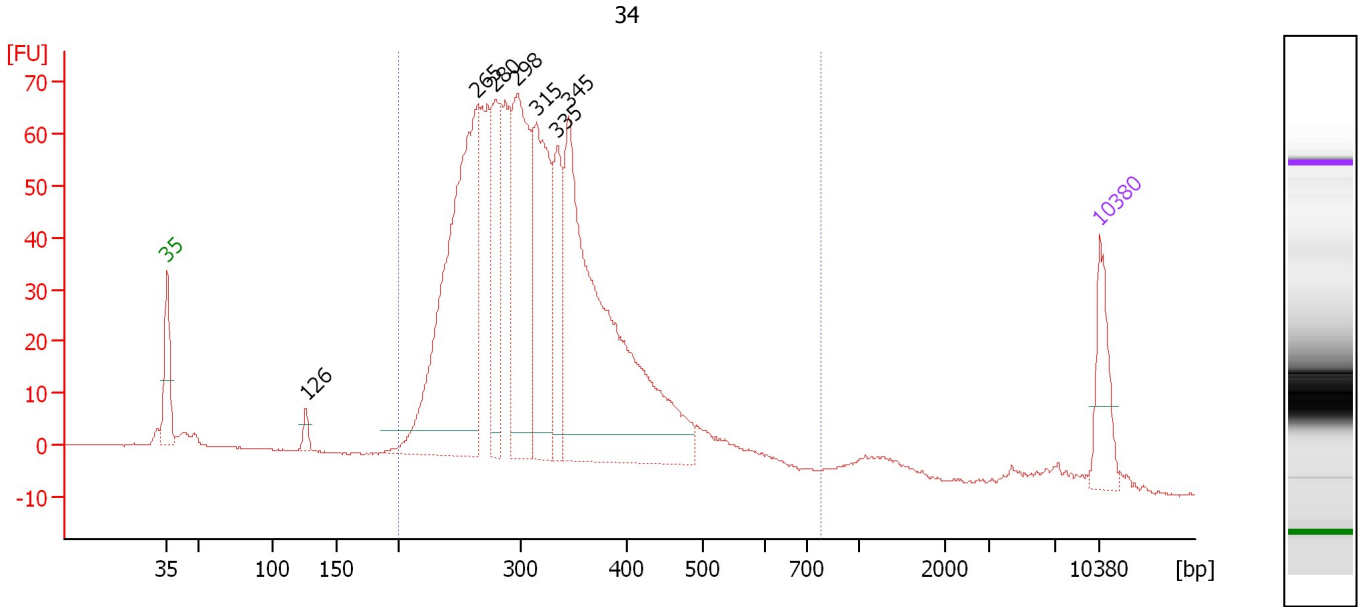
Region table for sample 3 : 33

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 200 | 755 | 331 | 1,697.2 | 21,443.5 | 4,351.99 | 94 | 26.0 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : 34

Number of peaks found: 7 Corr. Area 1: 1,279.5
 Noise: 0.2

Peak table for sample 4 : 34

| 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 | 126 | 21.10 | 253.4 | | 53.39 |
| 3 | 265 | 752.93 | 4,303.8 | | 66.28 |
| 4 | 280 | 202.24 | 1,095.0 | | 67.63 |
| 5 | 298 | 404.17 | 2,055.6 | | 69.28 |
| 6 | 315 | 321.99 | 1,549.0 | | 70.68 |
| 7 | 335 | 161.53 | 731.1 | | 72.28 |
| 8 | 345 | 841.57 | 3,692.7 | | 73.13 |
| 9 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

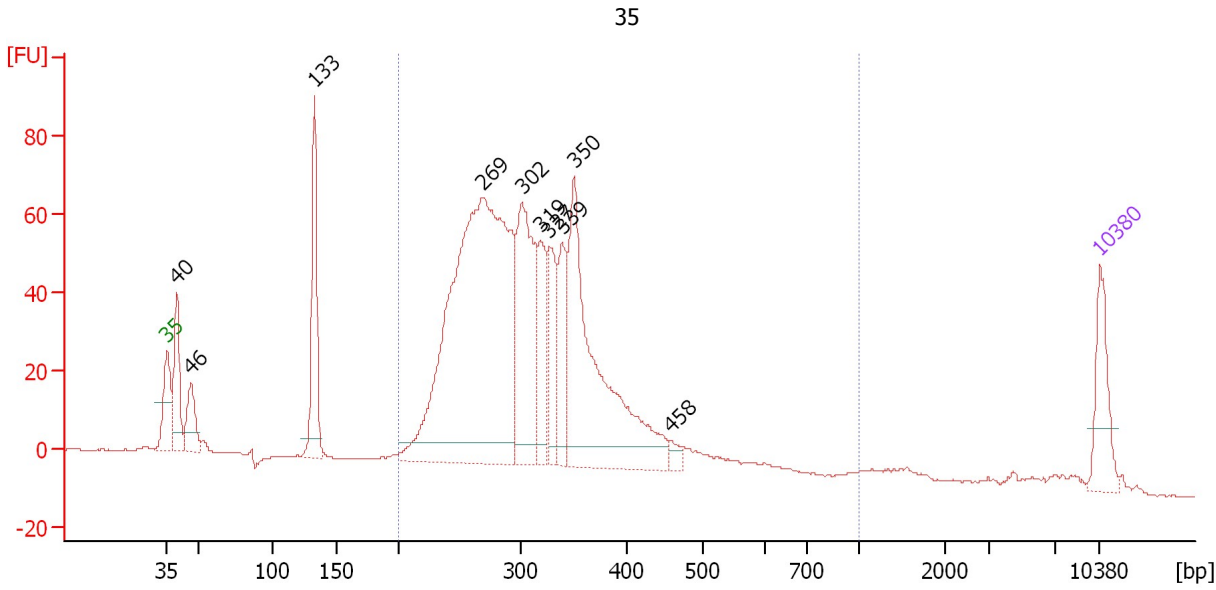
Region table for sample 4 : 34

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|------------------|------------|-----------------------------|
| 200 | 784 | 324 | 1,279.5 | 16,314.9 | 3,288.78 | 93 | 23.2 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : 35

Number of peaks found: 10 Corr. Area 1: 1,176.7
 Noise: 0.1

Peak table for sample 5 : 35

| 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 | 40 | 142.08 | 5,410.7 | | 43.75 |
| 3 | 46 | 86.39 | 2,815.9 | | 44.80 |
| 4 | 133 | 212.34 | 2,413.0 | | 54.07 |
| 5 | 269 | 1,238.86 | 6,966.1 | | 66.68 |
| 6 | 302 | 307.81 | 1,544.0 | | 69.64 |
| 7 | 319 | 131.13 | 622.0 | | 71.04 |
| 8 | 327 | 115.41 | 533.9 | | 71.69 |
| 9 | 339 | 121.97 | 544.7 | | 72.64 |
| 10 | 350 | 520.94 | 2,252.3 | | 73.54 |
| 11 | 458 | 15.72 | 52.1 | | 80.80 |
| 12 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

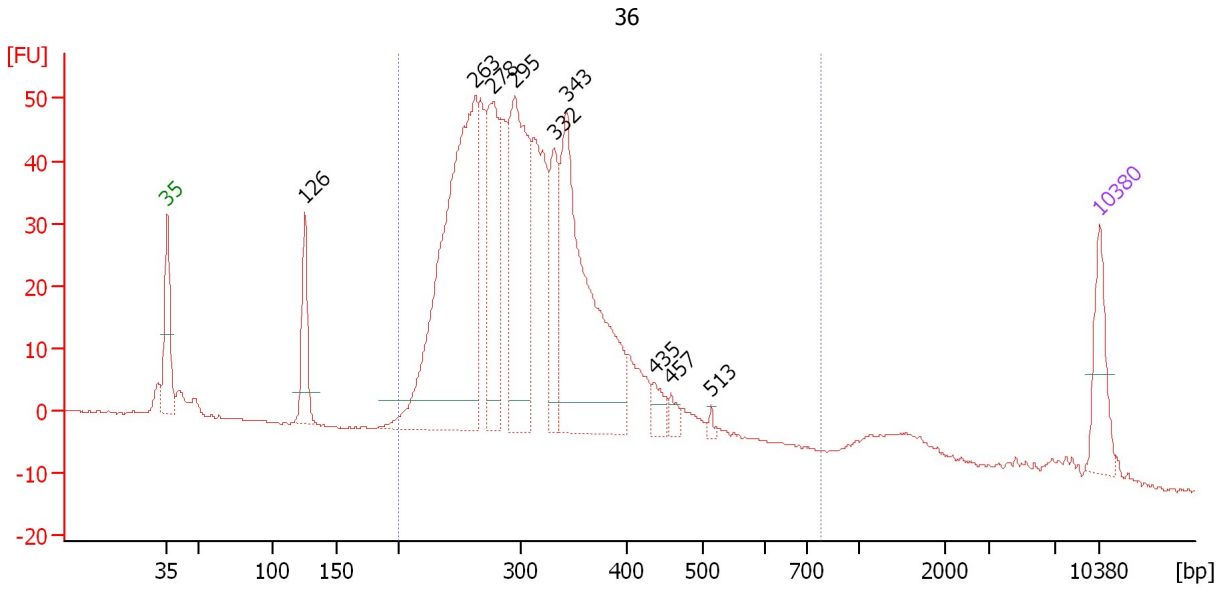
Region table for sample 5 : 35

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 200 | 1,000 | 321 | 1,176.7 | 13,004.6 | 2,593.65 | 84 | 25.1 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : 36

Number of peaks found: 9 Corr. Area 1: 969.2
 Noise: 0.2

Peak table for sample 6 : 36

| 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 | 126 | 122.36 | 1,477.1 | | 53.33 |
| 3 | 263 | 839.36 | 4,829.0 | | 66.13 |
| 4 | 278 | 261.96 | 1,427.7 | | 67.46 |
| 5 | 295 | 401.38 | 2,058.3 | | 69.06 |
| 6 | 332 | 156.84 | 716.2 | | 72.04 |
| 7 | 343 | 546.40 | 2,411.9 | | 72.96 |
| 8 | 435 | 31.01 | 108.0 | | 79.54 |
| 9 | 457 | 19.35 | 64.2 | | 80.78 |
| 10 | 513 | 7.21 | 21.3 | | 83.81 |
| 11 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

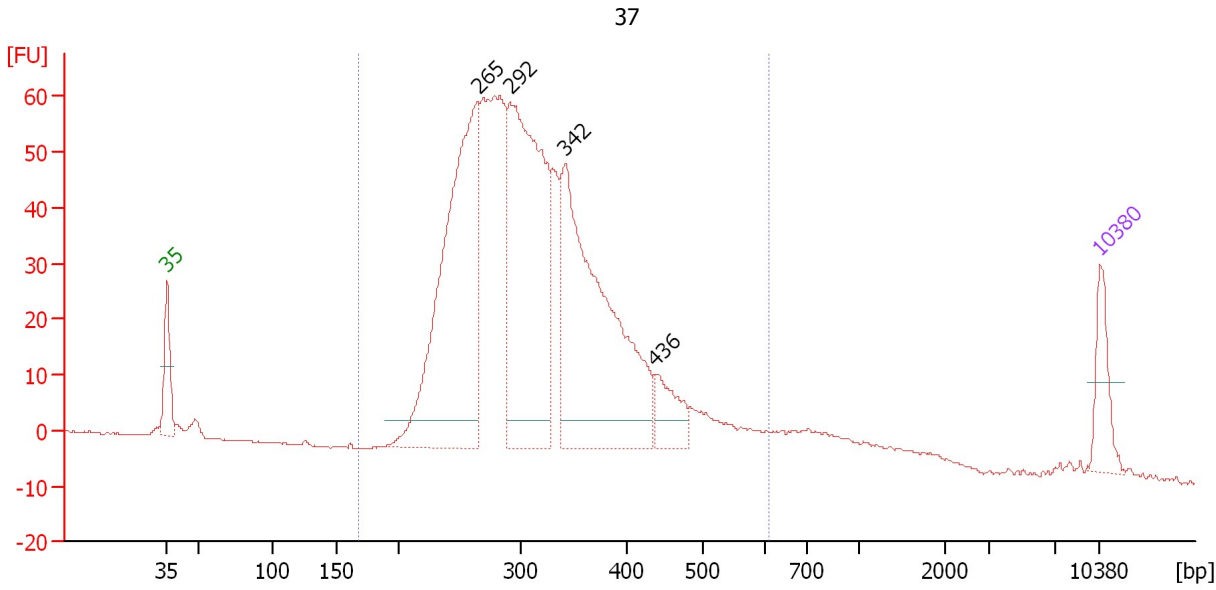
Region table for sample 6 : 36

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 200 | 784 | 320 | 969.2 | 15,894.7 | 3,151.89 | 89 | 24.4 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : 37

Number of peaks found: 4 Corr. Area 1: 1,149.5
 Noise: 0.2

Peak table for sample 7 : 37

| 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 | 265 | 968.69 | 5,533.8 | | 66.30 |
| 3 | 292 | 915.50 | 4,752.8 | | 68.73 |
| 4 | 342 | 862.94 | 3,817.6 | | 72.90 |
| 5 | 436 | 100.49 | 348.8 | | 79.61 |
| 6 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

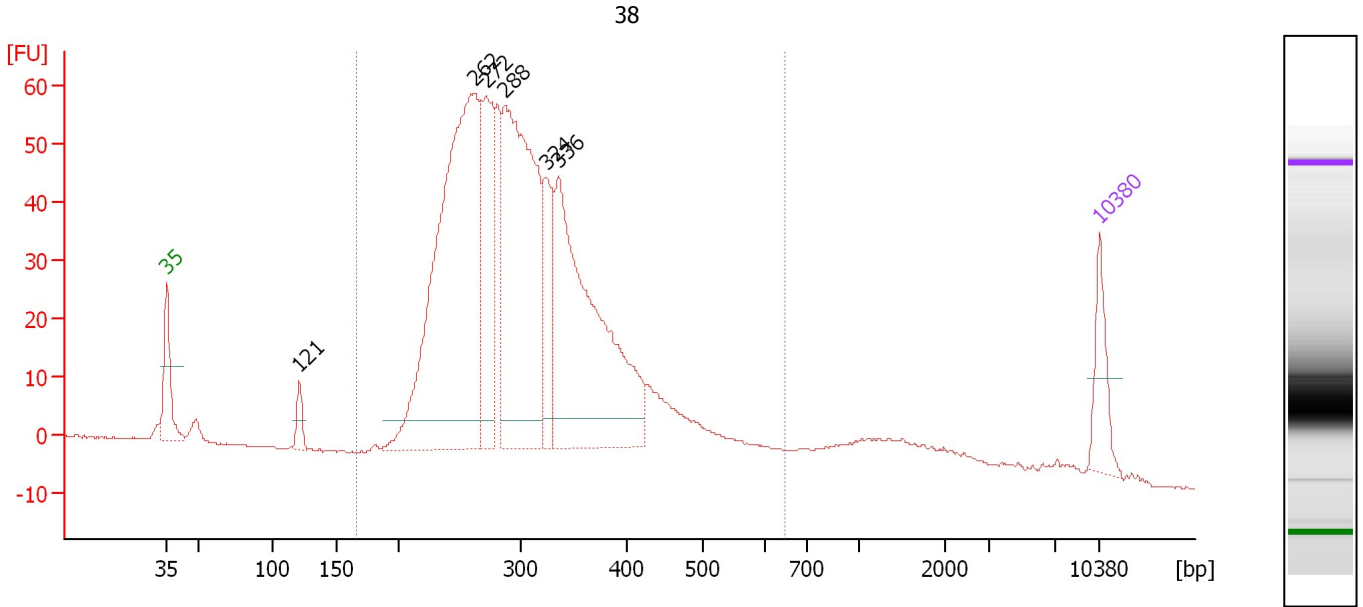
Region table for sample 7 : 37

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 169 | 611 | 325 | 1,149.5 | 19,286.0 | 3,877.92 | 91 | 23.5 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : 38

Number of peaks found: 6 Corr. Area 1: 1,067.7
 Noise: 0.1

Peak table for sample 8 : 38

| 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 | 121 | 42.19 | 527.8 | | 52.92 |
| 3 | 262 | 1,185.15 | 6,841.1 | | 66.05 |
| 4 | 272 | 318.68 | 1,776.0 | | 66.91 |
| 5 | 288 | 834.90 | 4,396.5 | | 68.35 |
| 6 | 324 | 169.77 | 794.0 | | 71.41 |
| 7 | 336 | 760.35 | 3,429.4 | | 72.37 |
| 8 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

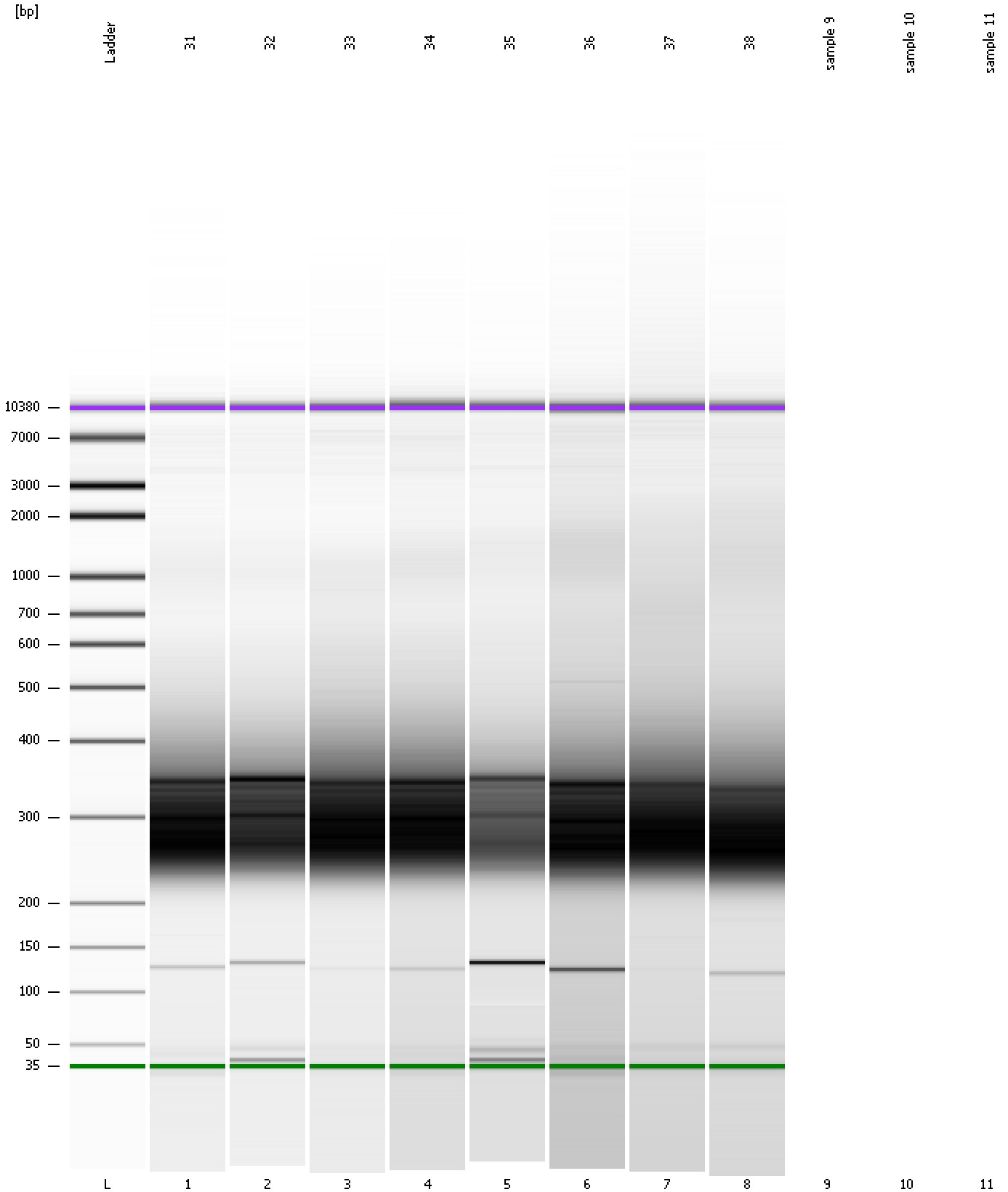
Region table for sample 8 : 38

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 167 | 647 | 315 | 1,067.7 | 19,281.8 | 3,763.60 | 92 | 23.8 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
Modified: 2/29/2016 5:15:27 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
Modified: 2/29/2016 5:15:27 PM

Invalid Samples

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\2016-02-29\2016-02-29_002.xad

Created: 2/29/2016 4:36:48 PM
 Modified: 2/29/2016 5:15:27 PM

Run Logbook

| Description | Number | Source | Category | Sub Category | Time | Time Zone | User | Host |
|---------------------------------------------------------------------------------------------------|--------|------------|----------|--------------|----------------------|-------------------------------------|----------|----------|
| Run ended on port 1 (Number of wells acquired: 9) | | Instrument | Run | | 2/29/2016 5:09:30 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2016-02-29\2016-02-29_002.xad) | | Instrument | Run | | 2/29/2016 4:36:53 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Product Number : G2938B | | Instrument | Run | | 2/29/2016 4:36:53 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Name : | | Instrument | Run | | 2/29/2016 4:36:53 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Vendor : Agilent Technologies | | Instrument | Run | | 2/29/2016 4:36:53 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Serial# : DE13701086 | | Instrument | Run | | 2/29/2016 4:36:53 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Firmware : C.01.069 | | Instrument | Run | | 2/29/2016 4:36:53 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Cartridge : Electrode | | Instrument | Run | | 2/29/2016 4:36:53 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |