

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
Modified: 10/8/2015 10:37:55 AM

Electrophoresis File Run Summary

Instrument Information:

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

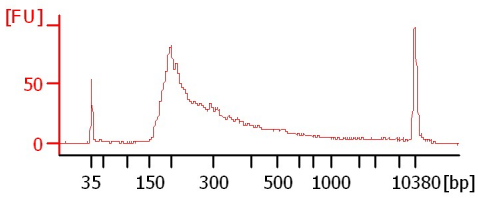
Assay Information:

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

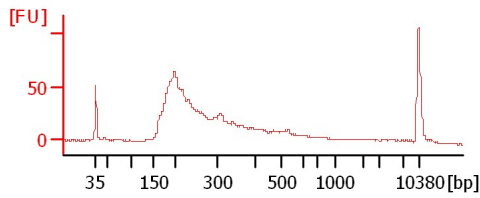
Chip Information:

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

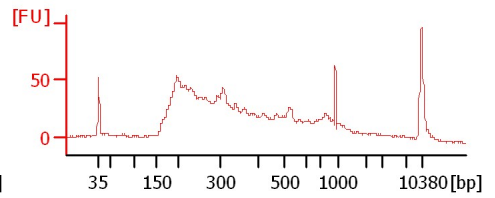
sample 1



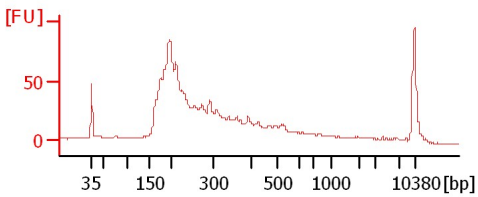
sample 2



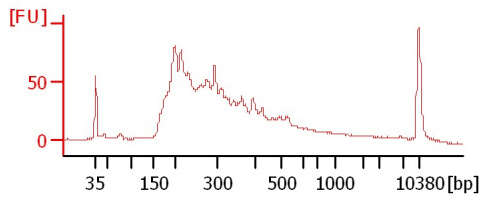
sample 3



sample 4



sample 5



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
 Modified: 10/8/2015 10:37:55 AM

Electrophoresis File Run Summary (Chip Summary)

| Sample Name | Sample Comment | Rest. Digest | Status | Observation | Result Label | Result Color |
|-------------|----------------|--------------------------|--------|-------------|--------------|--------------|
| sample 1 | | <input type="checkbox"/> | ✓ | | | |
| sample 2 | | <input type="checkbox"/> | ✓ | | | |
| sample 3 | | <input type="checkbox"/> | ✓ | | | |
| sample 4 | | <input type="checkbox"/> | ✓ | | | |
| sample 5 | | <input type="checkbox"/> | ✓ | | | |
| sample 6 | | <input type="checkbox"/> | | | | |
| sample 7 | | <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\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
Modified: 10/8/2015 10:37:55 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

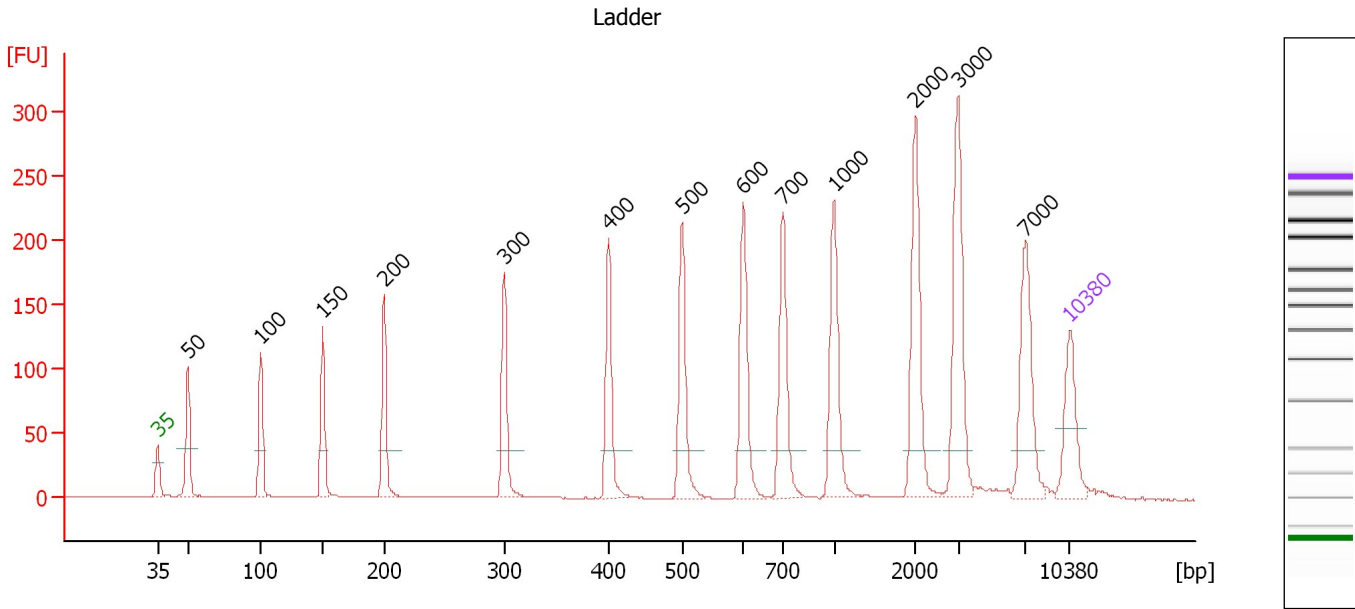
Ladder

| 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\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
 Modified: 10/8/2015 10:37:55 AM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

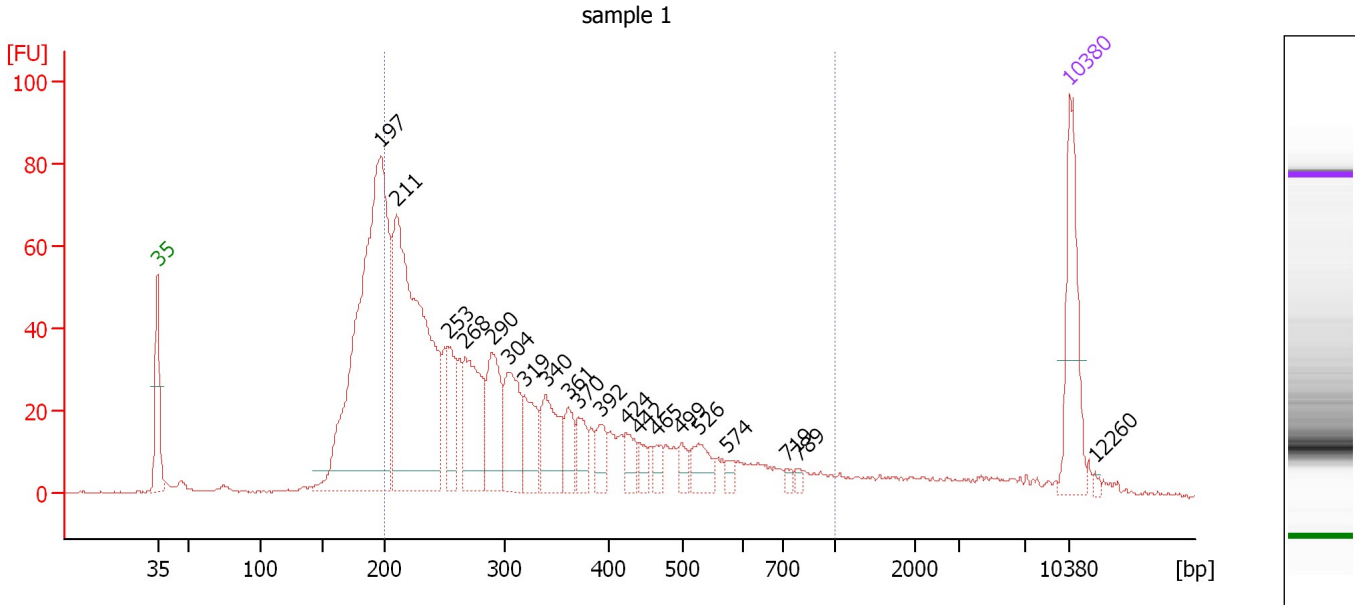
Peak table for Ladder

| 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 | 45.32 |
| 3 | 100 | 150.00 | 2,272.7 | Ladder Peak | 50.91 |
| 4 | 150 | 150.00 | 1,515.2 | Ladder Peak | 55.69 |
| 5 | 200 | 150.00 | 1,136.4 | Ladder Peak | 60.38 |
| 6 | 300 | 150.00 | 757.6 | Ladder Peak | 69.58 |
| 7 | 400 | 150.00 | 568.2 | Ladder Peak | 77.62 |
| 8 | 500 | 150.00 | 454.5 | Ladder Peak | 83.25 |
| 9 | 600 | 150.00 | 378.8 | Ladder Peak | 87.94 |
| 10 | 700 | 150.00 | 324.7 | Ladder Peak | 90.98 |
| 11 | 1,000 | 150.00 | 227.3 | Ladder Peak | 94.91 |
| 12 | 2,000 | 150.00 | 113.6 | Ladder Peak | 101.16 |
| 13 | 3,000 | 150.00 | 75.8 | Ladder Peak | 104.42 |
| 14 | 7,000 | 150.00 | 32.5 | Ladder Peak | 109.56 |
| 15 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
 Modified: 10/8/2015 10:37:55 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : sample 1

Number of peaks found: 20 Corr. Area 1: 1,070.8
 Noise: 0.2

Peak table for sample 1 : sample 1

| 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 | 197 | 589.60 | 4,527.7 | | 60.12 |
| 3 | 211 | 458.56 | 3,298.9 | | 61.35 |
| 4 | 253 | 59.95 | 358.8 | | 65.27 |
| 5 | 268 | 114.65 | 649.3 | | 66.59 |
| 6 | 290 | 86.65 | 453.0 | | 68.64 |
| 7 | 304 | 77.47 | 385.9 | | 69.92 |
| 8 | 319 | 53.61 | 254.3 | | 71.15 |
| 9 | 340 | 65.13 | 290.3 | | 72.79 |
| 10 | 361 | 30.48 | 127.8 | | 74.52 |
| 11 | 370 | 28.16 | 115.2 | | 75.24 |
| 12 | 392 | 24.71 | 95.5 | | 76.98 |
| 13 | 424 | 21.24 | 75.9 | | 78.98 |
| 14 | 442 | 12.26 | 42.0 | | 79.98 |
| 15 | 465 | 11.11 | 36.2 | | 81.30 |
| 16 | 499 | 13.58 | 41.2 | | 83.21 |
| 17 | 526 | 28.23 | 81.3 | | 84.49 |
| 18 | 574 | 7.61 | 20.1 | | 86.72 |
| 19 | 719 | 4.74 | 10.0 | | 91.23 |
| 20 | 789 | 4.27 | 8.2 | | 92.14 |
| 21 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |
| 22 | 12,260 | 0.00 | 0.0 | | 114.91 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
Modified: 10/8/2015 10:37:55 AM

Electropherogram Summary Continued ...

... Region table for sample 1 :

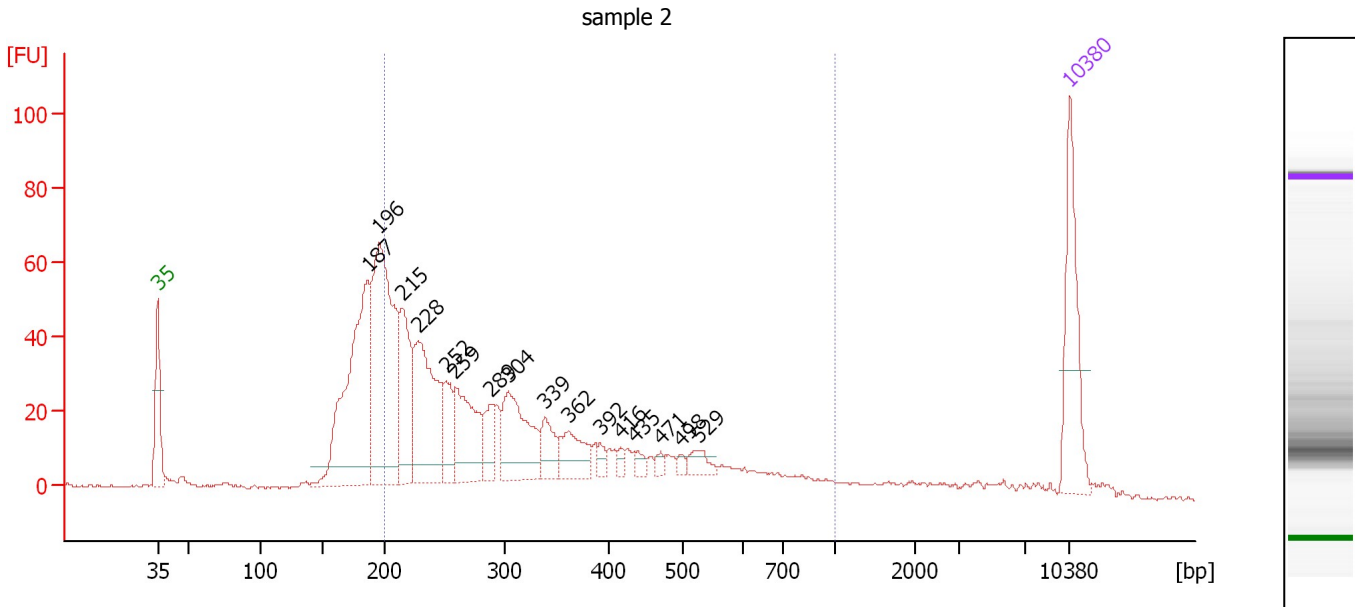
sample 1

| 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 | 337 | 1,070.8 | 7,653.2 | 1,435.33 | 70 | 42.8 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
 Modified: 10/8/2015 10:37:55 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : sample 2

Number of peaks found: 16 Corr. Area 1: 850.9
 Noise: 0.5

Peak table for sample 2 : sample 2

| 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 | 187 | 278.13 | 2,258.2 | | 59.12 |
| 3 | 196 | 294.87 | 2,279.4 | | 60.00 |
| 4 | 215 | 107.33 | 756.2 | | 61.76 |
| 5 | 228 | 166.38 | 1,105.0 | | 62.97 |
| 6 | 252 | 46.73 | 281.2 | | 65.14 |
| 7 | 259 | 97.08 | 567.1 | | 65.84 |
| 8 | 289 | 31.88 | 167.4 | | 68.53 |
| 9 | 304 | 100.78 | 502.0 | | 69.92 |
| 10 | 339 | 31.93 | 142.8 | | 72.70 |
| 11 | 362 | 42.87 | 179.5 | | 74.55 |
| 12 | 392 | 8.83 | 34.1 | | 76.96 |
| 13 | 416 | 6.65 | 24.2 | | 78.53 |
| 14 | 435 | 8.41 | 29.3 | | 79.60 |
| 15 | 471 | 6.15 | 19.8 | | 81.59 |
| 16 | 498 | 4.96 | 15.1 | | 83.12 |
| 17 | 529 | 14.39 | 41.2 | | 84.60 |
| 18 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

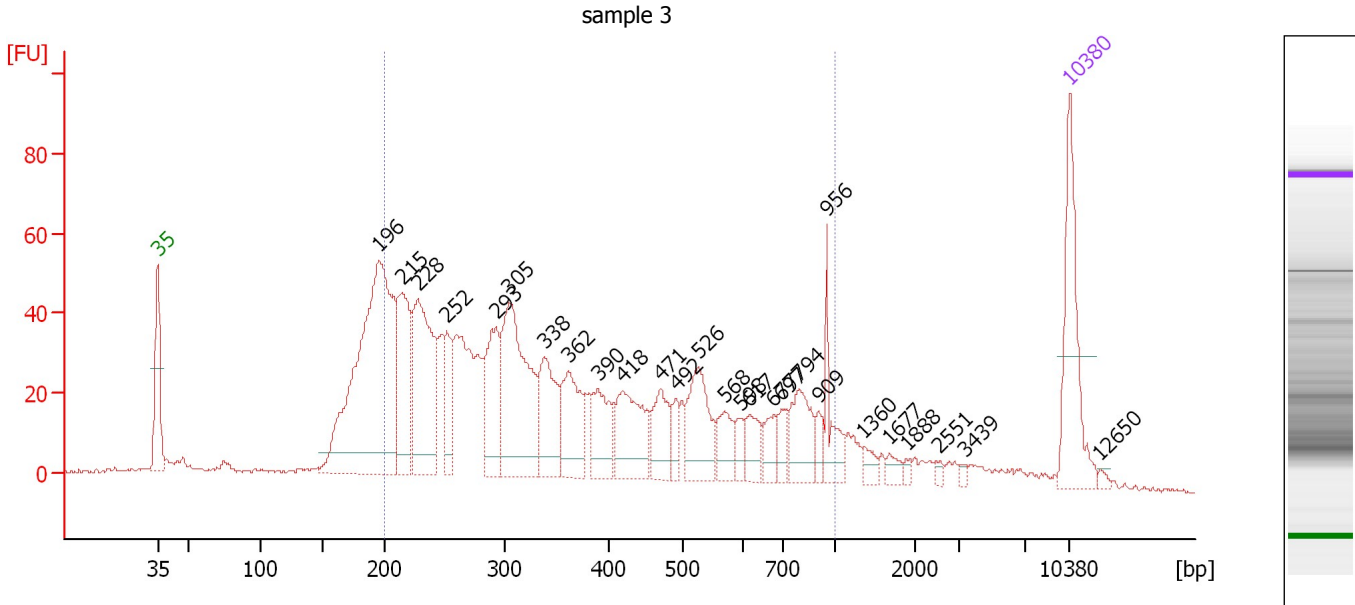
Region table for sample 2 : sample 2

| 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 | 336 | 850.9 | 5,700.9 | 1,066.29 | 68 | 42.4 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
 Modified: 10/8/2015 10:37:55 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : sample 3

Number of peaks found: 27 Corr. Area 1: 1,327.0
 Noise: 0.4

Peak table for sample 3 : sample 3

| 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 | 196 | 416.27 | 3,215.3 | | 60.02 |
| 3 | 215 | 116.23 | 819.0 | | 61.76 |
| 4 | 228 | 171.63 | 1,138.7 | | 62.99 |
| 5 | 252 | 45.38 | 272.4 | | 65.20 |
| 6 | 293 | 83.82 | 432.8 | | 68.97 |
| 7 | 305 | 180.51 | 897.4 | | 69.96 |
| 8 | 338 | 77.28 | 346.2 | | 72.65 |
| 9 | 362 | 70.93 | 297.2 | | 74.54 |
| 10 | 390 | 51.71 | 201.0 | | 76.80 |
| 11 | 418 | 76.72 | 278.1 | | 78.64 |
| 12 | 471 | 43.69 | 140.6 | | 81.61 |
| 13 | 492 | 17.85 | 55.0 | | 82.78 |
| 14 | 526 | 66.90 | 192.6 | | 84.48 |
| 15 | 568 | 28.51 | 76.0 | | 86.46 |
| 16 | 598 | 13.13 | 33.3 | | 87.83 |
| 17 | 617 | 23.94 | 58.8 | | 88.44 |
| 18 | 677 | 19.84 | 44.4 | | 90.28 |
| 19 | 697 | 18.26 | 39.7 | | 90.89 |
| 20 | 794 | 46.70 | 89.1 | | 92.21 |
| 21 | 909 | 11.27 | 18.8 | | 93.72 |
| 22 | 956 | 33.46 | 53.0 | | 94.33 |
| 23 | 1,360 | 9.53 | 10.6 | | 97.16 |
| 24 | 1,677 | 7.85 | 7.1 | | 99.14 |
| 25 | 1,888 | 3.47 | 2.8 | | 100.46 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
 Modified: 10/8/2015 10:37:55 AM

Electropherogram Summary Continued ...

... Peak table for sample 3 : sample 3

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations | Aligned Migration Time [s] |
|------|-----------|---------------|-------------------|--------------|----------------------------|
| 26 | 2,551 | 3.65 | 2.2 | | 102.96 |
| 27 | 3,439 | 2.69 | 1.2 | | 104.99 |
| 28 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |
| 29 | 12,650 | 0.00 | 0.0 | | 115.31 |

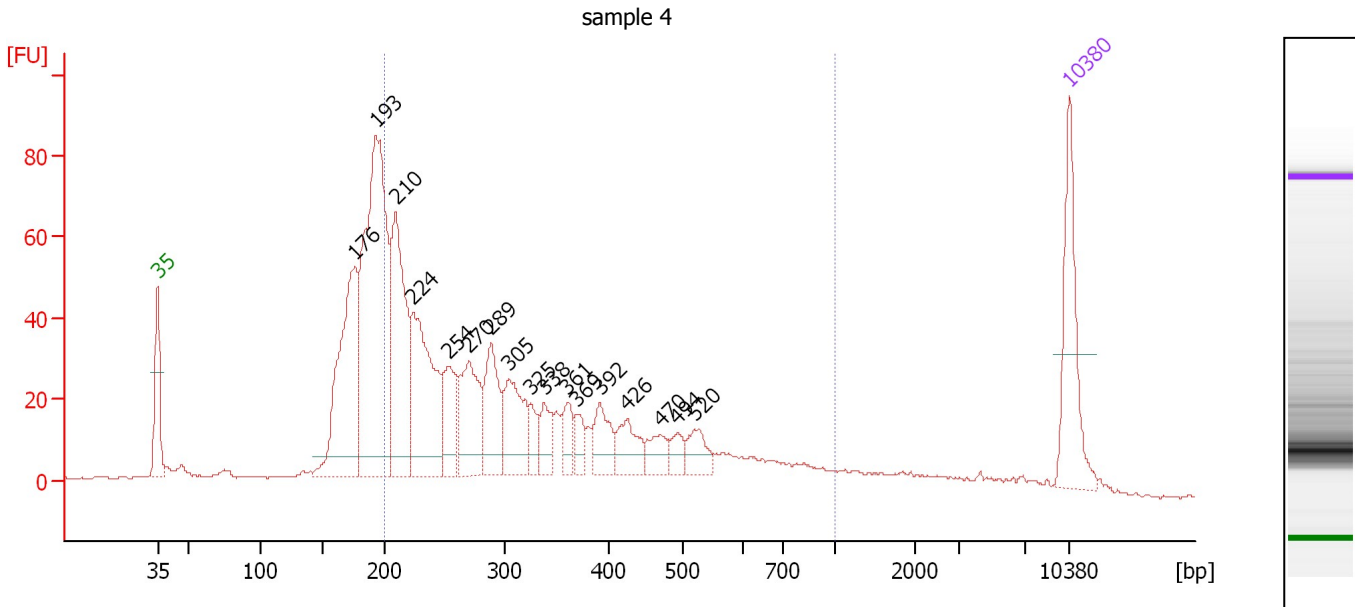
Region table for sample 3 : sample 3

| 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 | 404 | 1,327.0 | 7,674.9 | 1,606.53 | 74 | 47.0 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
 Modified: 10/8/2015 10:37:55 AM

Electropherogram Summary Continued ...



Overall Results for sample 4 : sample 4

Number of peaks found: 17 Corr. Area 1: 980.8
 Noise: 0.3

Peak table for sample 4 : sample 4

| 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 | 176 | 236.38 | 2,035.3 | | 58.12 |
| 3 | 193 | 423.12 | 3,315.2 | | 59.76 |
| 4 | 210 | 199.33 | 1,438.5 | | 61.29 |
| 5 | 224 | 183.42 | 1,240.5 | | 62.59 |
| 6 | 254 | 65.31 | 389.2 | | 65.37 |
| 7 | 270 | 96.29 | 539.4 | | 66.86 |
| 8 | 289 | 78.98 | 413.7 | | 68.59 |
| 9 | 305 | 82.19 | 408.3 | | 69.98 |
| 10 | 325 | 21.54 | 100.3 | | 71.61 |
| 11 | 338 | 30.35 | 135.9 | | 72.67 |
| 12 | 361 | 25.01 | 105.1 | | 74.45 |
| 13 | 369 | 19.91 | 81.8 | | 75.12 |
| 14 | 392 | 38.97 | 150.8 | | 76.94 |
| 15 | 426 | 36.22 | 129.0 | | 79.06 |
| 16 | 470 | 23.53 | 75.9 | | 81.55 |
| 17 | 494 | 16.07 | 49.3 | | 82.90 |
| 18 | 520 | 25.79 | 75.1 | | 84.19 |
| 19 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

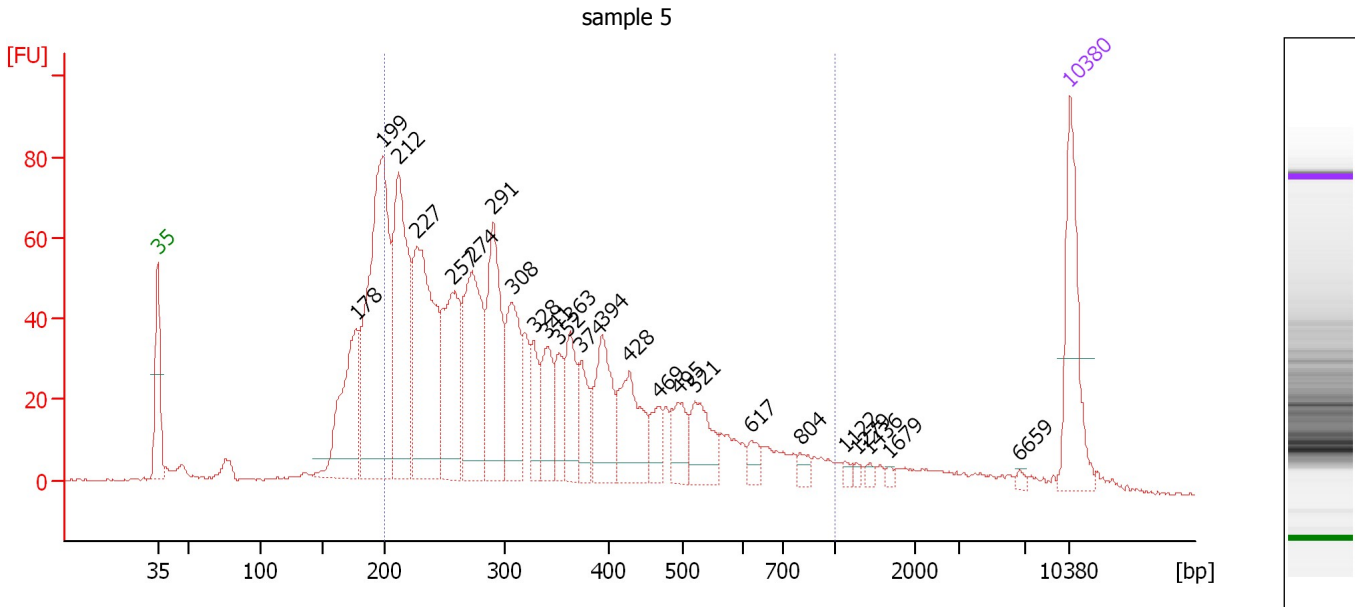
Region table for sample 4 : sample 4

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|------------------|------------|-----------------------------|
| 200 | 1,000 | 347 | 980.8 | 6,651.2 | 1,267.77 | 64 | 43.3 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
 Modified: 10/8/2015 10:37:55 AM

Electropherogram Summary Continued ...



Overall Results for sample 5 : sample 5

Number of peaks found: 25 Corr. Area 1: 1,515.0
 Noise: 0.3

Peak table for sample 5 : sample 5

| 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 | 178 | 146.30 | 1,248.9 | | 58.27 |
| 3 | 199 | 354.25 | 2,697.8 | | 60.28 |
| 4 | 212 | 224.46 | 1,602.2 | | 61.51 |
| 5 | 227 | 238.78 | 1,592.3 | | 62.88 |
| 6 | 257 | 142.59 | 842.1 | | 65.58 |
| 7 | 274 | 164.53 | 911.1 | | 67.15 |
| 8 | 291 | 144.87 | 753.7 | | 68.77 |
| 9 | 308 | 101.25 | 498.6 | | 70.19 |
| 10 | 328 | 41.06 | 189.4 | | 71.86 |
| 11 | 341 | 54.27 | 241.0 | | 72.89 |
| 12 | 352 | 34.57 | 148.7 | | 73.78 |
| 13 | 363 | 56.28 | 234.8 | | 74.66 |
| 14 | 374 | 40.93 | 166.0 | | 75.50 |
| 15 | 394 | 79.04 | 304.2 | | 77.12 |
| 16 | 428 | 76.72 | 271.8 | | 79.18 |
| 17 | 469 | 27.12 | 87.7 | | 81.49 |
| 18 | 495 | 35.18 | 107.7 | | 82.96 |
| 19 | 521 | 48.81 | 141.9 | | 84.23 |
| 20 | 617 | 13.05 | 32.1 | | 88.46 |
| 21 | 804 | 9.06 | 17.1 | | 92.33 |
| 22 | 1,122 | 4.44 | 6.0 | | 95.67 |
| 23 | 1,279 | 3.36 | 4.0 | | 96.65 |
| 24 | 1,436 | 4.13 | 4.4 | | 97.64 |
| 25 | 1,679 | 2.92 | 2.6 | | 99.16 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
Modified: 10/8/2015 10:37:55 AM

Electropherogram Summary Continued ...**... Peak table for sample 5 : sample 5**

| Peak | Size [bp] | Conc. [pg/ μ l] | Molarity [pmol/l] | Observations | Aligned Migration Time [s] |
|------|-----------|---------------------|-------------------|--------------|----------------------------|
| 26 | 6,659 | 2.76 | 0.6 | | 109.12 |
| 27 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

Region table for sample 5 : sample 5

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/ μ l] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------------|------------|-----------------------------|
| 200 | 1,000 | 351 | 1,515.0 | 9,461.3 | 1,853.26 | 76 | 41.1 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
Modified: 10/8/2015 10:37:55 AM

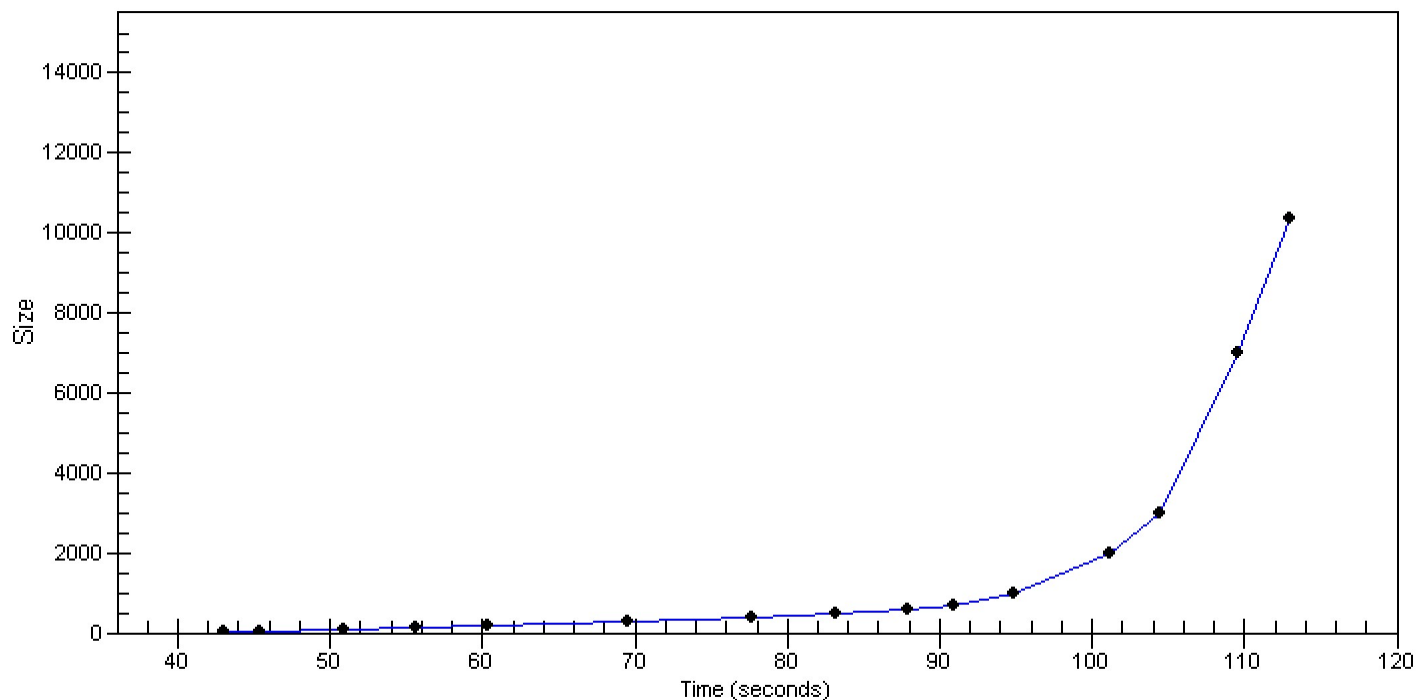
Gel Image

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
Modified: 10/8/2015 10:37:55 AM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
Modified: 10/8/2015 10:37:55 AM

Invalid Samples

Sample 6 has not been run, no results available.

Sample 7 has not been run, no results available.

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\2015-10-08\2015-10-08_001.xad

Created: 10/8/2015 10:13:44 AM
 Modified: 10/8/2015 10:37:55 AM

Run Logbook

| Description | Number | Source | Category | Sub Category | Time | Time Zone | User | Host |
|---|--------|------------|----------|--------------|-----------------------|-------------------------------------|----------|----------|
| Run ended on port 1 (Number of wells acquired: 6) | | Instrument | Run | | 10/8/2015 10:37:55 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2015-10-08\2015-10-08_001.xad) | | Instrument | Run | | 10/8/2015 10:13:50 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Product Number : G2938B | | Instrument | Run | | 10/8/2015 10:13:50 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Name : | | Instrument | Run | | 10/8/2015 10:13:50 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Vendor : Agilent Technologies | | Instrument | Run | | 10/8/2015 10:13:50 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Serial# : DE13701086 | | Instrument | Run | | 10/8/2015 10:13:50 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Firmware : C.01.069 | | Instrument | Run | | 10/8/2015 10:13:50 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Cartridge : Electrode | | Instrument | Run | | 10/8/2015 10:13:50 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |