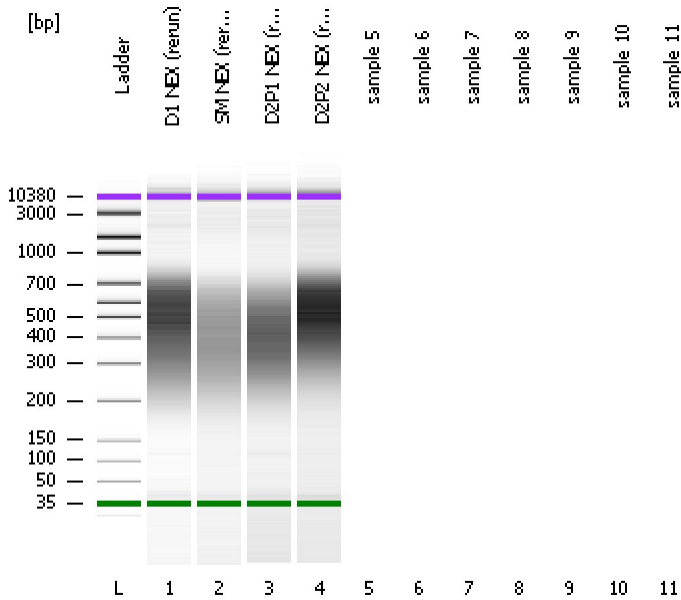


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
Modified: 2/21/2017 11:52:28 AM

Electrophoresis File Run Summary



Instrument Information:

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

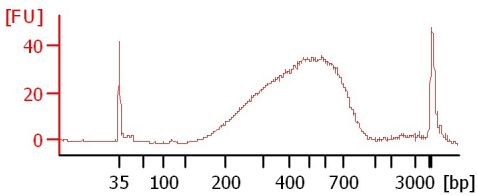
Assay Information:

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

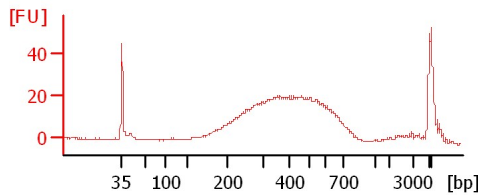
Chip Information:

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

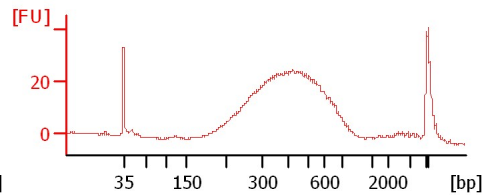
D1 NEX (rerun)



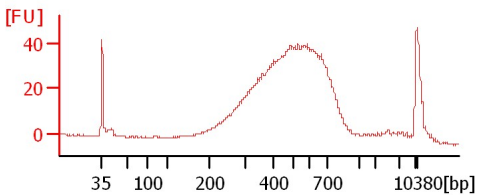
SM NEX (rerun)



D2P1 NEX (rerun)



D2P2 NEX (rerun)



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
 Modified: 2/21/2017 11:52:28 AM

Electrophoresis File Run Summary (Chip Summary)

| Sample Name | Sample Comment | Rest. Digest | Status | Observation | Result Label | Result Color |
|------------------|----------------|--------------------------|--------|-------------|--------------|--------------|
| D1 NEX (rerun) | | <input type="checkbox"/> | ✓ | | | |
| SM NEX (rerun) | | <input type="checkbox"/> | ✓ | | | |
| D2P1 NEX (rerun) | | <input type="checkbox"/> | ✓ | | | |
| D2P2 NEX (rerun) | | <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:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
Modified: 2/21/2017 11:52:28 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

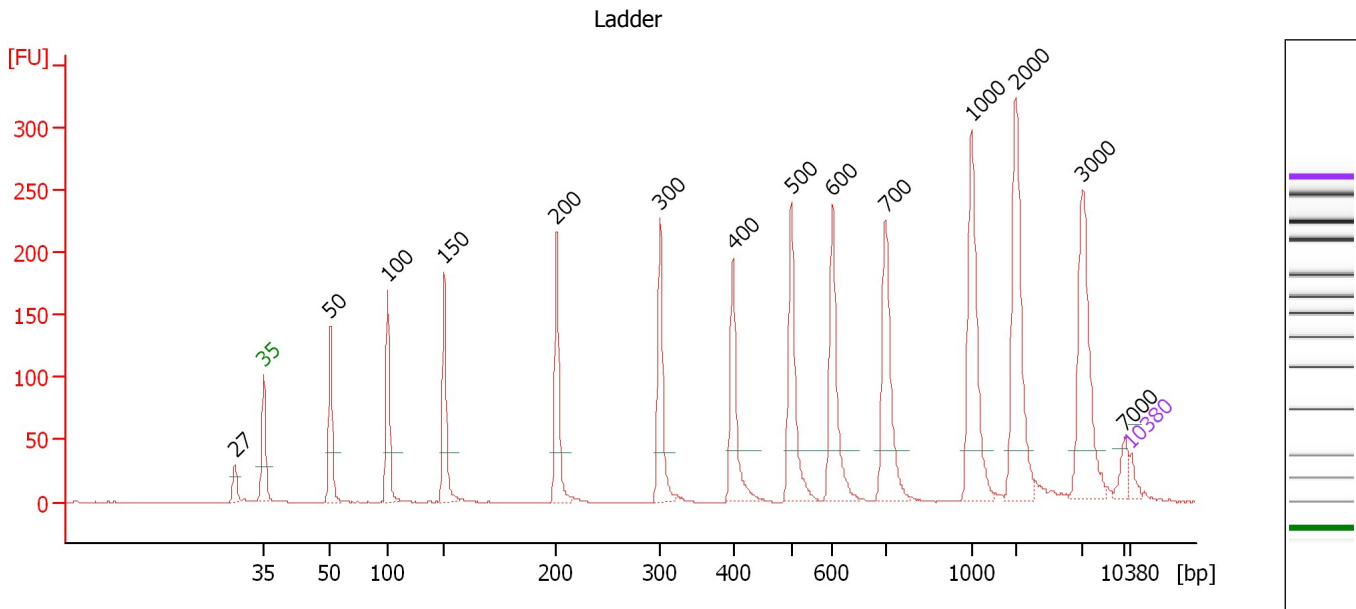
Ladder

| 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:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
 Modified: 2/21/2017 11:52:28 AM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

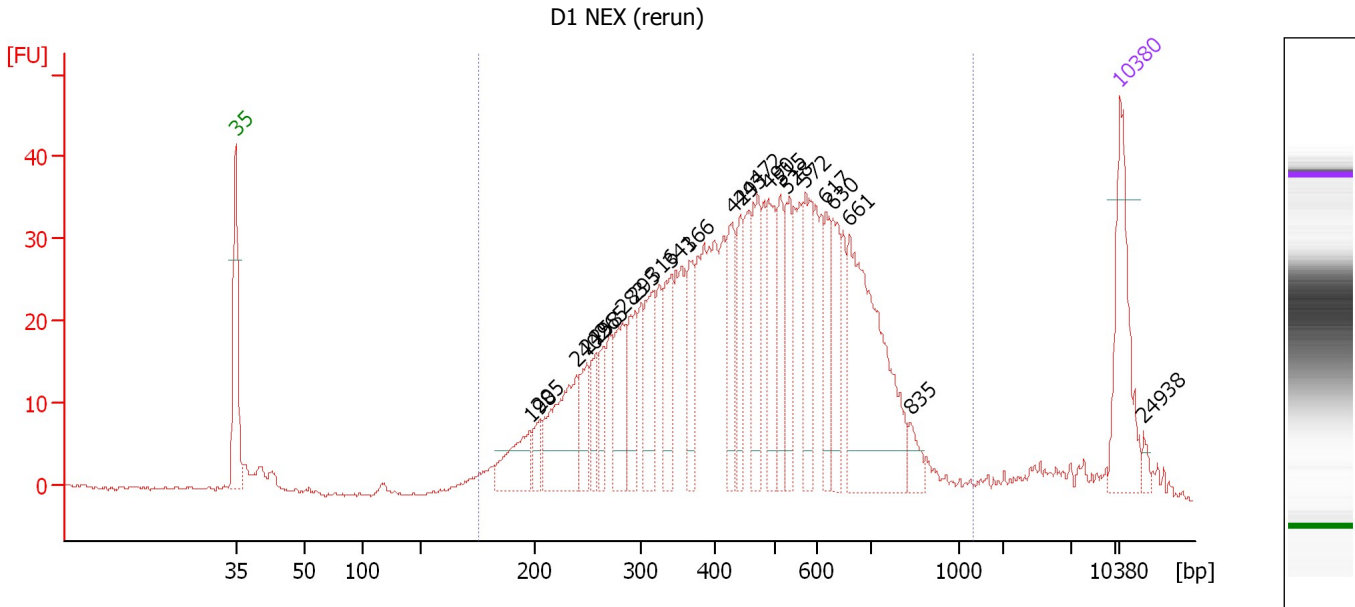
Peak table for Ladder

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations | Aligned Migration Time [s] |
|------|-----------|---------------|-------------------|--------------|----------------------------|
| 1 | 27 | 0.00 | 0.0 | | 40.67 |
| 2 | 35 | 125.00 | 5,411.3 | Lower Marker | 43.00 |
| 3 | 50 | 150.00 | 4,545.5 | Ladder Peak | 48.39 |
| 4 | 100 | 150.00 | 2,272.7 | Ladder Peak | 53.04 |
| 5 | 150 | 150.00 | 1,515.2 | Ladder Peak | 57.61 |
| 6 | 200 | 150.00 | 1,136.4 | Ladder Peak | 66.66 |
| 7 | 300 | 150.00 | 757.6 | Ladder Peak | 75.03 |
| 8 | 400 | 150.00 | 568.2 | Ladder Peak | 80.93 |
| 9 | 500 | 150.00 | 454.5 | Ladder Peak | 85.63 |
| 10 | 600 | 150.00 | 378.8 | Ladder Peak | 88.99 |
| 11 | 700 | 150.00 | 324.7 | Ladder Peak | 93.26 |
| 12 | 1,000 | 150.00 | 227.3 | Ladder Peak | 100.20 |
| 13 | 2,000 | 150.00 | 113.6 | Ladder Peak | 103.78 |
| 14 | 3,000 | 150.00 | 75.8 | Ladder Peak | 109.16 |
| 15 | 7,000 | 150.00 | 32.5 | Ladder Peak | 112.57 |
| 16 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
 Modified: 2/21/2017 11:52:28 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : D1 NEX (rerun)

Number of peaks found: 23 Corr. Area 1: 967.3
 Noise: 0.2

Peak table for sample 1 : D1 NEX (rerun)

| 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 | 198 | 59.75 | 457.4 | | 66.29 |
| 3 | 205 | 18.67 | 138.2 | | 67.05 |
| 4 | 240 | 116.34 | 734.6 | | 70.00 |
| 5 | 249 | 39.40 | 239.7 | | 70.76 |
| 6 | 258 | 30.38 | 178.3 | | 71.52 |
| 7 | 265 | 31.98 | 183.1 | | 72.07 |
| 8 | 283 | 64.88 | 347.6 | | 73.59 |
| 9 | 295 | 59.11 | 303.6 | | 74.60 |
| 10 | 316 | 66.02 | 316.1 | | 76.00 |
| 11 | 341 | 58.61 | 260.1 | | 77.47 |
| 12 | 366 | 50.65 | 209.8 | | 78.91 |
| 13 | 429 | 57.47 | 203.1 | | 82.28 |
| 14 | 443 | 44.91 | 153.5 | | 82.96 |
| 15 | 472 | 68.15 | 218.8 | | 84.31 |
| 16 | 490 | 60.38 | 186.8 | | 85.15 |
| 17 | 515 | 48.75 | 143.5 | | 86.12 |
| 18 | 528 | 50.90 | 145.9 | | 86.59 |
| 19 | 572 | 68.09 | 180.2 | | 88.06 |
| 20 | 617 | 38.38 | 94.3 | | 89.71 |
| 21 | 630 | 54.74 | 131.7 | | 90.26 |
| 22 | 661 | 204.53 | 468.6 | | 91.61 |
| 23 | 835 | 15.86 | 28.8 | | 96.38 |
| 24 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |
| 25 | 24,938 | 0.00 | 0.0 | | 114.86 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
Modified: 2/21/2017 11:52:28 AM

Electropherogram Summary Continued ...

... Region table for sample 1 :

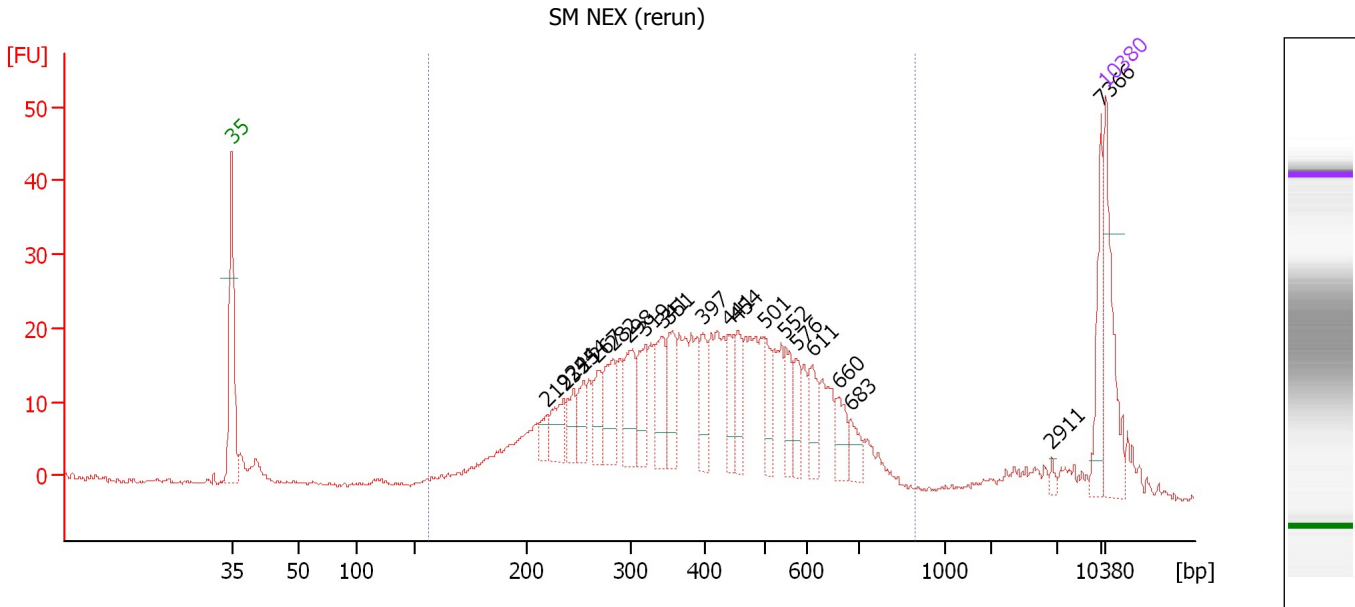
D1 NEX (rerun)

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|----------------------|----------------|------------------------------|-----------------------|------------------------------|---------------------------------|-----------------------|--|
| 175 | 1,340 | 470 | 967.3 | 7,969.2 | ■ 1,999.63 | 95 | 36.1 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
 Modified: 2/21/2017 11:52:28 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : SM NEX (rerun)

Number of peaks found: 21 Corr. Area 1: 632.2
 Noise: 0.2

Peak table for sample 2 : SM NEX (rerun)

| 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 | 219 | 19.97 | 137.9 | | 68.28 |
| 3 | 235 | 45.51 | 293.2 | | 69.61 |
| 4 | 244 | 31.63 | 196.1 | | 70.38 |
| 5 | 254 | 35.29 | 210.4 | | 71.19 |
| 6 | 267 | 38.33 | 217.2 | | 72.30 |
| 7 | 282 | 60.45 | 324.6 | | 73.54 |
| 8 | 298 | 59.98 | 305.0 | | 74.86 |
| 9 | 319 | 54.71 | 259.9 | | 76.14 |
| 10 | 341 | 59.48 | 264.0 | | 77.47 |
| 11 | 351 | 53.08 | 228.8 | | 78.06 |
| 12 | 397 | 41.00 | 156.5 | | 80.75 |
| 13 | 441 | 35.65 | 122.5 | | 82.85 |
| 14 | 454 | 38.19 | 127.3 | | 83.49 |
| 15 | 501 | 39.51 | 119.5 | | 85.67 |
| 16 | 552 | 30.58 | 84.0 | | 87.37 |
| 17 | 576 | 31.45 | 82.7 | | 88.19 |
| 18 | 611 | 34.44 | 85.4 | | 89.47 |
| 19 | 660 | 28.29 | 64.9 | | 91.56 |
| 20 | 683 | 21.13 | 46.9 | | 92.54 |
| 21 | 2,911 | 4.14 | 2.2 | | 108.69 |
| 22 | 7,366 | 47.85 | 9.8 | | 112.62 |
| 23 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
Modified: 2/21/2017 11:52:28 AM

Electropherogram Summary Continued ...

... Region table for sample 2 :

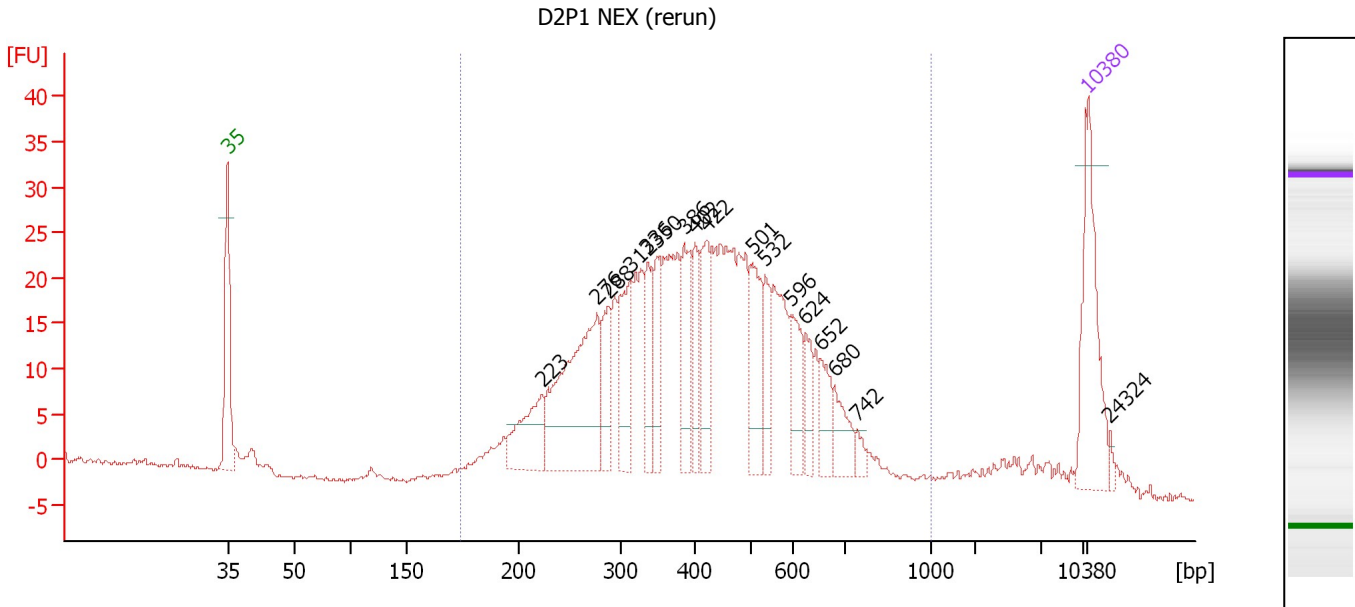
SM NEX (rerun)

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 156 | 892 | 414 | 632.2 | 7,790.7 | 1,730.96 | 89 | 36.5 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
 Modified: 2/21/2017 11:52:28 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : D2P1 NEX (rerun)

Number of peaks found: 17 Corr. Area 1: 673.3
 Noise: 0.3

Peak table for sample 3 : D2P1 NEX (rerun)

| 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 | 223 | 68.89 | 468.0 | | 68.59 |
| 3 | 276 | 191.54 | 1,049.8 | | 73.06 |
| 4 | 288 | 47.80 | 251.6 | | 74.01 |
| 5 | 312 | 67.75 | 328.8 | | 75.74 |
| 6 | 336 | 38.07 | 171.5 | | 77.18 |
| 7 | 350 | 44.18 | 191.5 | | 77.96 |
| 8 | 386 | 54.64 | 214.3 | | 80.13 |
| 9 | 402 | 39.68 | 149.5 | | 81.04 |
| 10 | 422 | 53.90 | 193.7 | | 81.95 |
| 11 | 501 | 60.08 | 181.6 | | 85.68 |
| 12 | 532 | 34.96 | 99.5 | | 86.72 |
| 13 | 596 | 39.75 | 101.1 | | 88.84 |
| 14 | 624 | 24.97 | 60.6 | | 90.01 |
| 15 | 652 | 27.57 | 64.0 | | 91.23 |
| 16 | 680 | 27.58 | 61.5 | | 92.40 |
| 17 | 742 | 8.06 | 16.5 | | 94.22 |
| 18 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |
| 19 | 24,324 | 0.00 | 0.0 | | 114.78 |

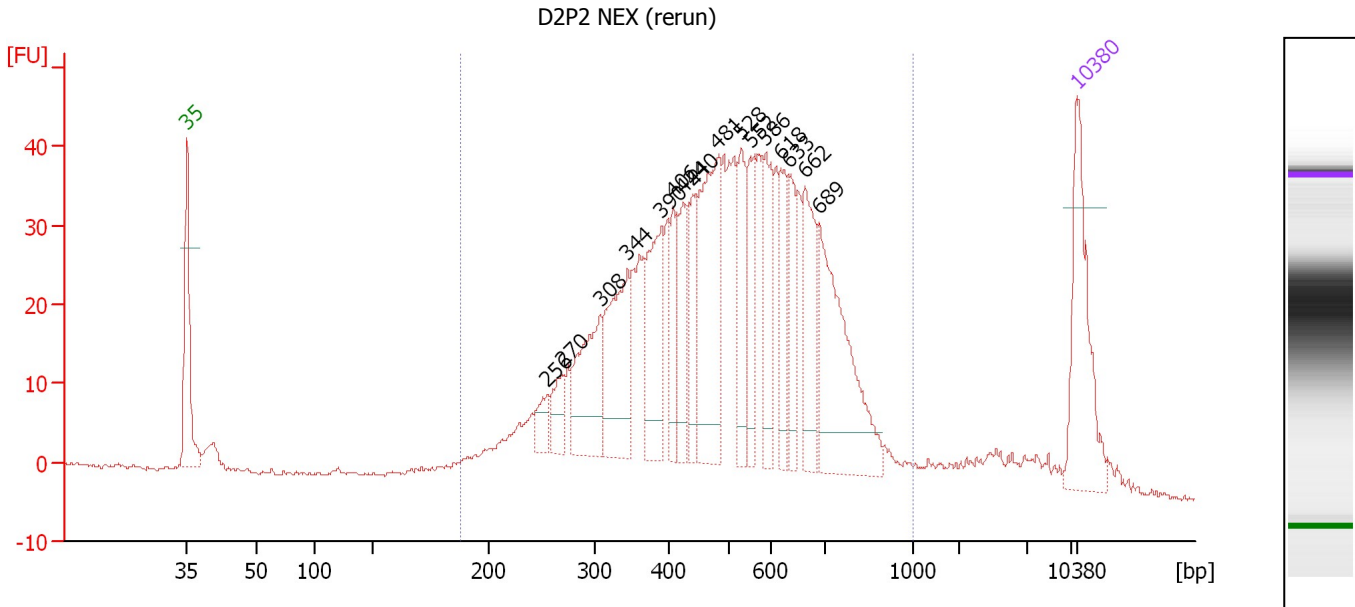
Region table for sample 3 : D2P1 NEX (rerun)

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|------------------|------------|-----------------------------|
| 174 | 998 | 427 | 673.3 | 6,233.9 | 1,475.38 | 95 | 34.6 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
 Modified: 2/21/2017 11:52:28 AM

Electropherogram Summary Continued ...



Overall Results for sample 4 : D2P2 NEX (rerun)

Number of peaks found: 16 Corr. Area 1: 965.6
 Noise: 0.2

Peak table for sample 4 : D2P2 NEX (rerun)

| 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 | 256 | 21.48 | 127.0 | | 71.36 |
| 3 | 270 | 27.93 | 156.8 | | 72.51 |
| 4 | 308 | 89.29 | 438.7 | | 75.52 |
| 5 | 344 | 103.92 | 457.2 | | 77.65 |
| 6 | 390 | 82.88 | 321.9 | | 80.35 |
| 7 | 406 | 37.17 | 138.6 | | 81.23 |
| 8 | 424 | 49.36 | 176.3 | | 82.07 |
| 9 | 440 | 42.17 | 145.1 | | 82.82 |
| 10 | 481 | 137.61 | 433.7 | | 84.73 |
| 11 | 528 | 48.75 | 139.8 | | 86.58 |
| 12 | 552 | 44.16 | 121.2 | | 87.38 |
| 13 | 586 | 56.85 | 146.9 | | 88.53 |
| 14 | 618 | 42.81 | 104.9 | | 89.77 |
| 15 | 633 | 41.25 | 98.8 | | 90.39 |
| 16 | 662 | 66.19 | 151.5 | | 91.63 |
| 17 | 689 | 140.57 | 309.2 | | 92.78 |
| 18 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

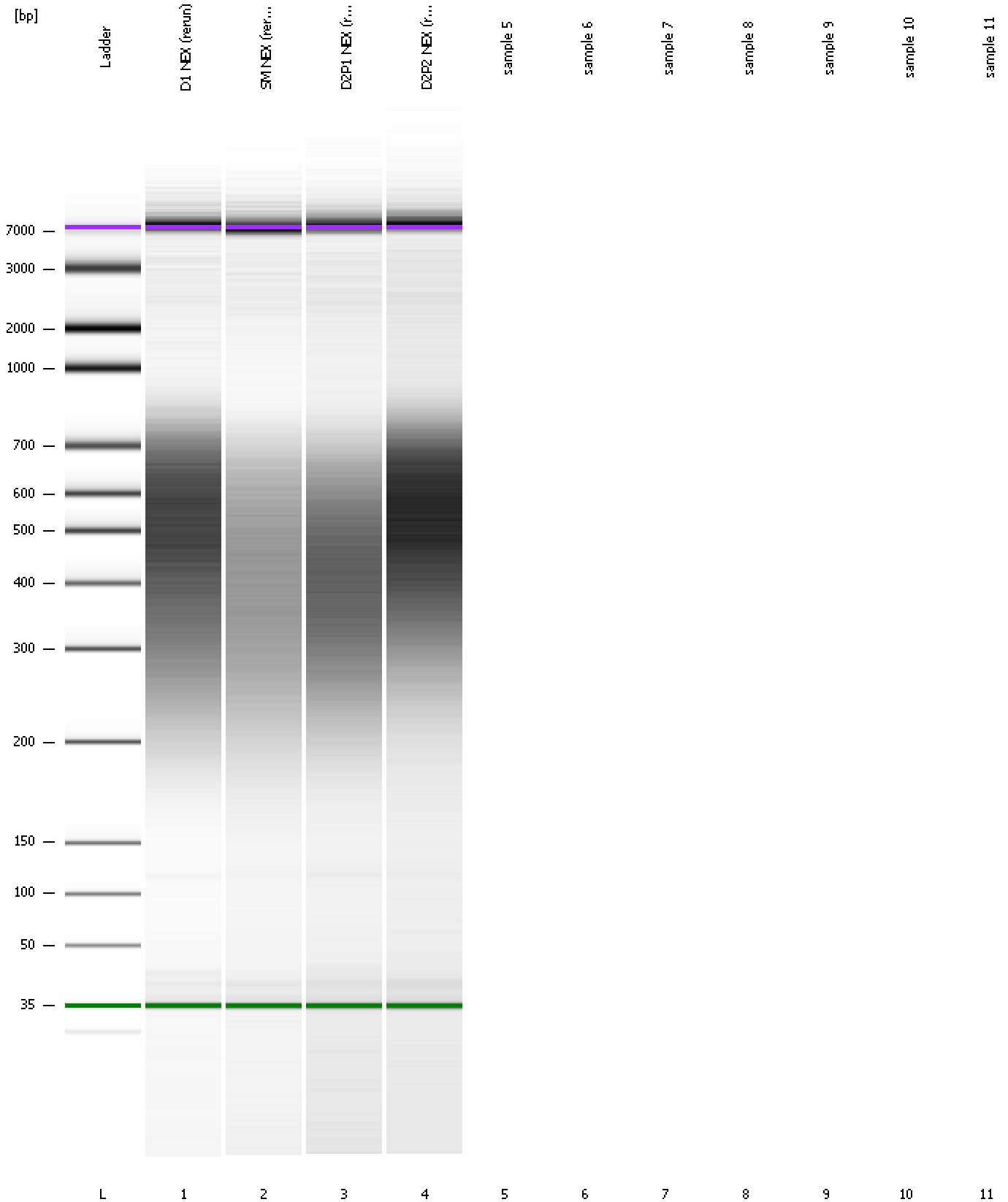
Region table for sample 4 : D2P2 NEX (rerun)

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|------------------|------------|-----------------------------|
| 188 | 1,000 | 502 | 965.6 | 5,752.6 | 1,610.76 | 93 | 32.1 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
Modified: 2/21/2017 11:52:28 AM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
Modified: 2/21/2017 11:52:28 AM

Invalid Samples

Sample 5 has not been run, no results available.

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:\... bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad

Created: 2/21/2017 10:57:28 AM
 Modified: 2/21/2017 11:52:28 AM

Run Logbook

| Description | Number | Source | Category | Sub Category | Time | Time Zone | User | Host |
|--|--------|------------|----------|--------------|-----------------------|-------------------------------------|----------|----------|
| Run ended on port 1 (Number of wells acquired: 5) | | Instrument | Run | | 2/21/2017 11:18:48 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2017-02-21\2017-02-21_002.xad) | | Instrument | Run | | 2/21/2017 10:57:34 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Product Number : G2938B | | Instrument | Run | | 2/21/2017 10:57:34 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Name : | | Instrument | Run | | 2/21/2017 10:57:34 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Vendor : Agilent Technologies | | Instrument | Run | | 2/21/2017 10:57:34 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Serial# : DE13701086 | | Instrument | Run | | 2/21/2017 10:57:34 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Firmware : C.01.069 | | Instrument | Run | | 2/21/2017 10:57:34 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Cartridge : Electrode | | Instrument | Run | | 2/21/2017 10:57:34 AM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |