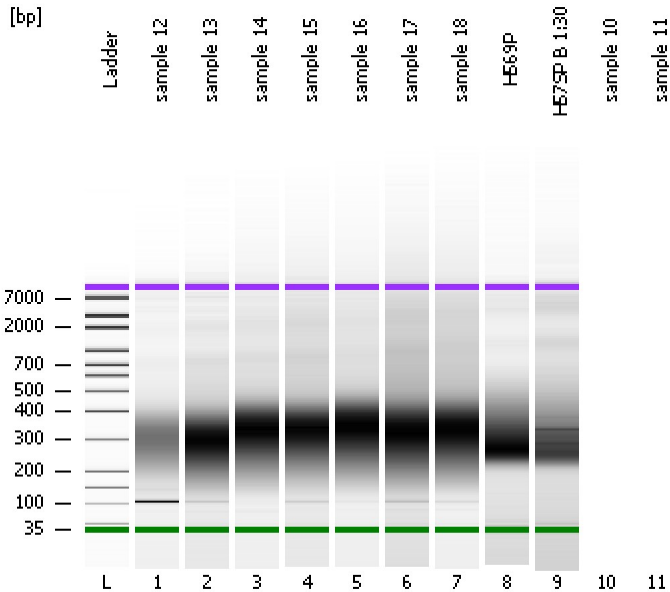


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
Modified: 8/26/2016 4:27:26 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

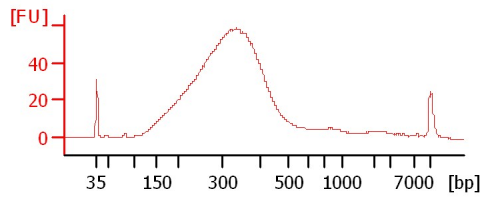
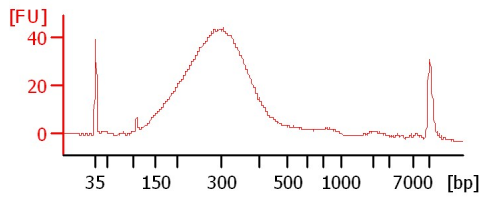
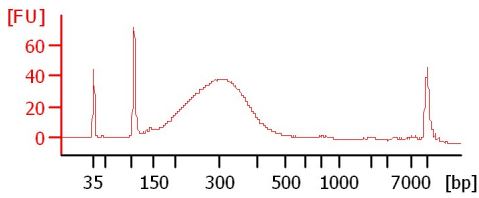
Chip Information:

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

sample 12

sample 13

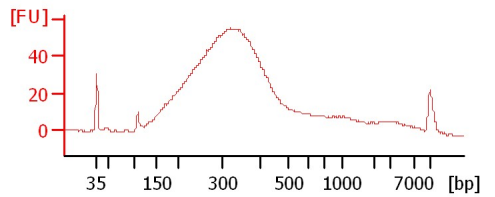
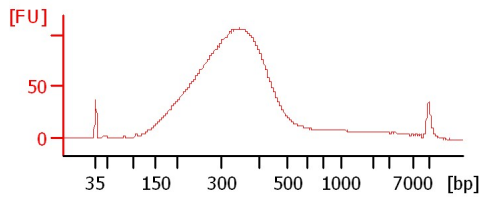
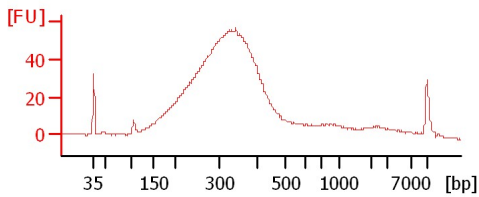
sample 14



sample 15

sample 16

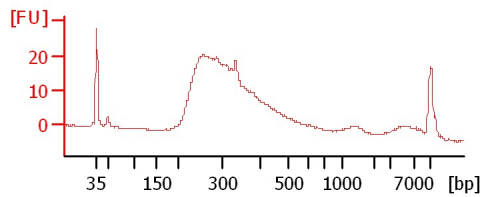
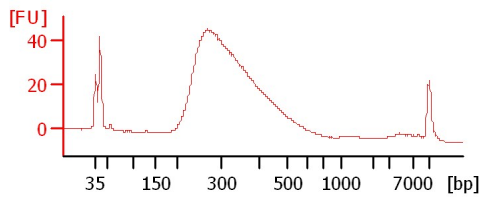
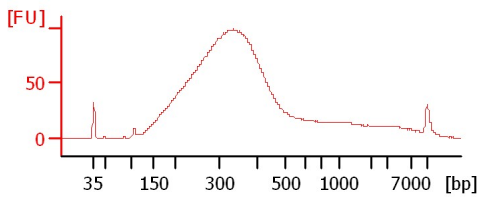
sample 17



sample 18

H569P

H57SP B 1:30



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
Modified: 8/26/2016 4:27:26 PM

Electrophoresis File Run Summary (Chip Summary)

| Sample Name | Sample Comment | Rest. Digest | Status | Observation | Result Label | Result Color |
|--------------|----------------|--------------------------|--------|-------------|--------------|--------------|
| sample 12 | | <input type="checkbox"/> | ✓ | | | |
| sample 13 | | <input type="checkbox"/> | ✓ | | | |
| sample 14 | | <input type="checkbox"/> | ✓ | | | |
| sample 15 | | <input type="checkbox"/> | ✓ | | | |
| sample 16 | | <input type="checkbox"/> | ✓ | | | |
| sample 17 | | <input type="checkbox"/> | ✓ | | | |
| sample 18 | | <input type="checkbox"/> | ✓ | | | |
| H569P | | <input type="checkbox"/> | ✓ | | | |
| H57SP B 1:30 | | <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\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
Modified: 8/26/2016 4:27:26 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

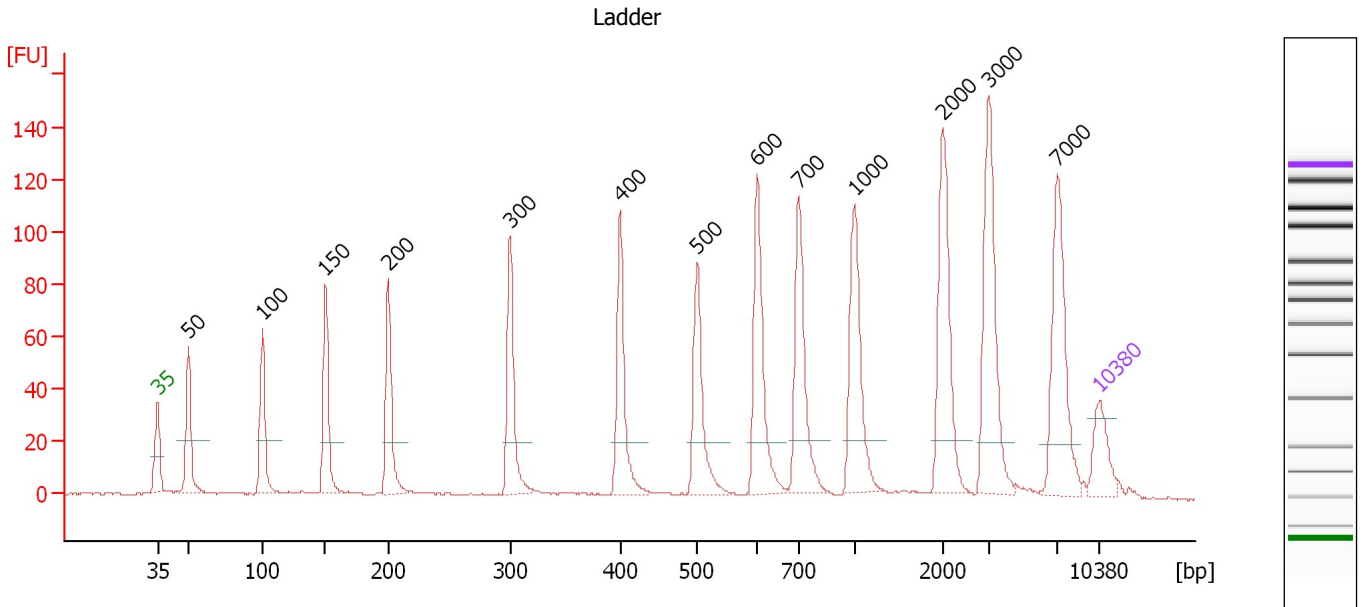
Ladder

| 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:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

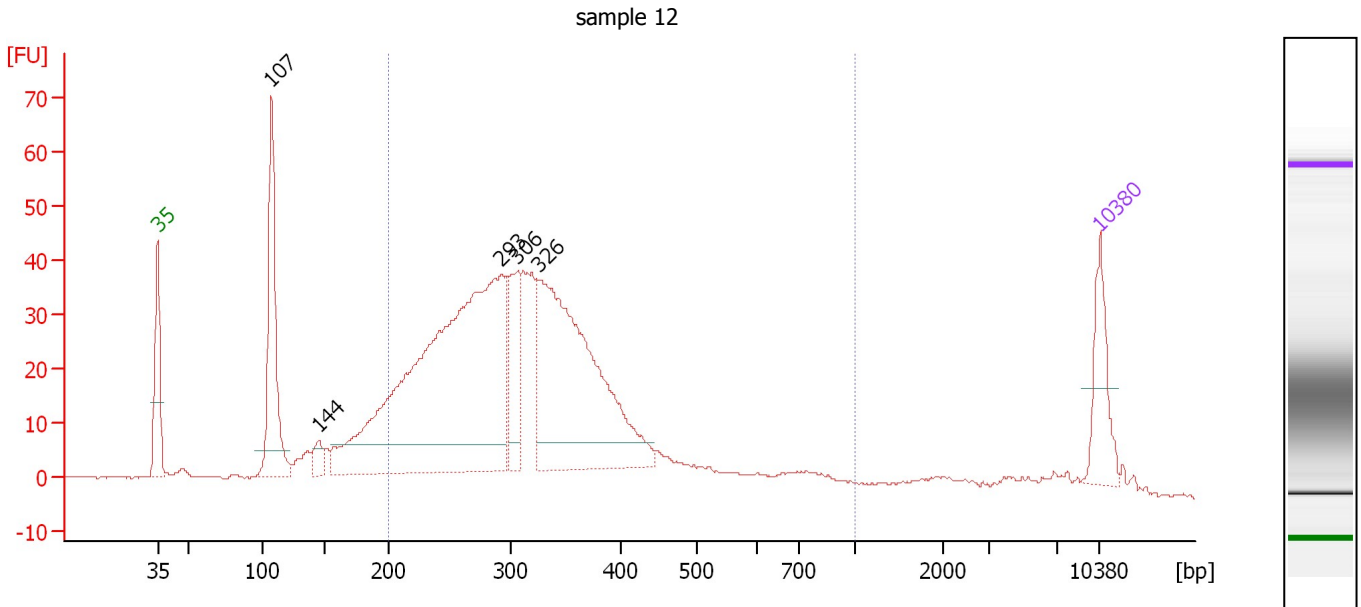
Peak table for Ladder

| 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 | 45.30 |
| 3 | 100 | 150.00 | 2,272.7 | Ladder Peak | 50.78 |
| 4 | 150 | 150.00 | 1,515.2 | Ladder Peak | 55.48 |
| 5 | 200 | 150.00 | 1,136.4 | Ladder Peak | 60.12 |
| 6 | 300 | 150.00 | 757.6 | Ladder Peak | 69.20 |
| 7 | 400 | 150.00 | 568.2 | Ladder Peak | 77.35 |
| 8 | 500 | 150.00 | 454.5 | Ladder Peak | 83.09 |
| 9 | 600 | 150.00 | 378.8 | Ladder Peak | 87.53 |
| 10 | 700 | 150.00 | 324.7 | Ladder Peak | 90.66 |
| 11 | 1,000 | 150.00 | 227.3 | Ladder Peak | 94.73 |
| 12 | 2,000 | 150.00 | 113.6 | Ladder Peak | 101.36 |
| 13 | 3,000 | 150.00 | 75.8 | Ladder Peak | 104.75 |
| 14 | 7,000 | 150.00 | 32.5 | Ladder Peak | 109.82 |
| 15 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : sample 12

Number of peaks found: 5 Corr. Area 1: 814.9
 Noise: 0.2

Peak table for sample 1 : sample 12

| 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 | 107 | 290.91 | 4,109.6 | | 51.46 |
| 3 | 144 | 29.58 | 310.4 | | 54.95 |
| 4 | 293 | 1,054.96 | 5,462.0 | | 68.54 |
| 5 | 306 | 124.32 | 615.4 | | 69.70 |
| 6 | 326 | 609.74 | 2,837.7 | | 71.29 |
| 7 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

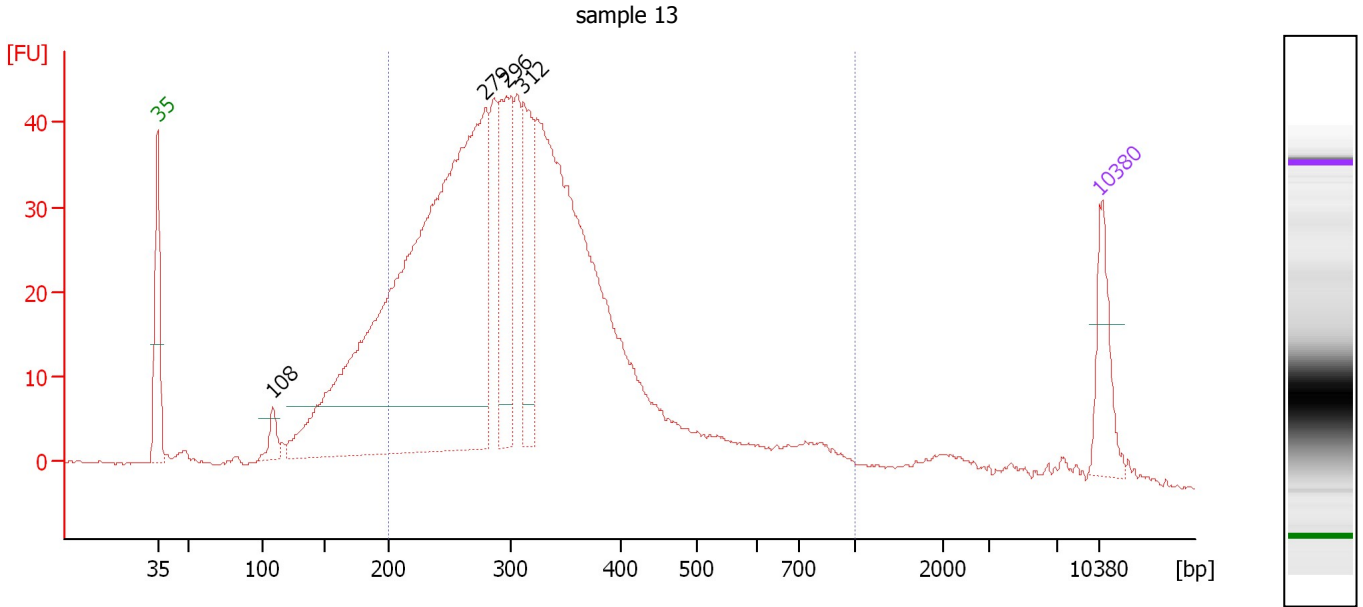
Region table for sample 1 : sample 12

| 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 | 327 | 814.9 | 11,040.6 | 2,183.34 | 78 | 31.4 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : sample 13

Number of peaks found: 4 Corr. Area 1: 938.4
 Noise: 0.2

Peak table for sample 2 : sample 13

| 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 | 108 | 37.42 | 523.6 | | 51.56 |
| 3 | 279 | 1,652.88 | 8,964.0 | | 67.33 |
| 4 | 296 | 235.09 | 1,201.5 | | 68.88 |
| 5 | 312 | 185.51 | 901.4 | | 70.17 |
| 6 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

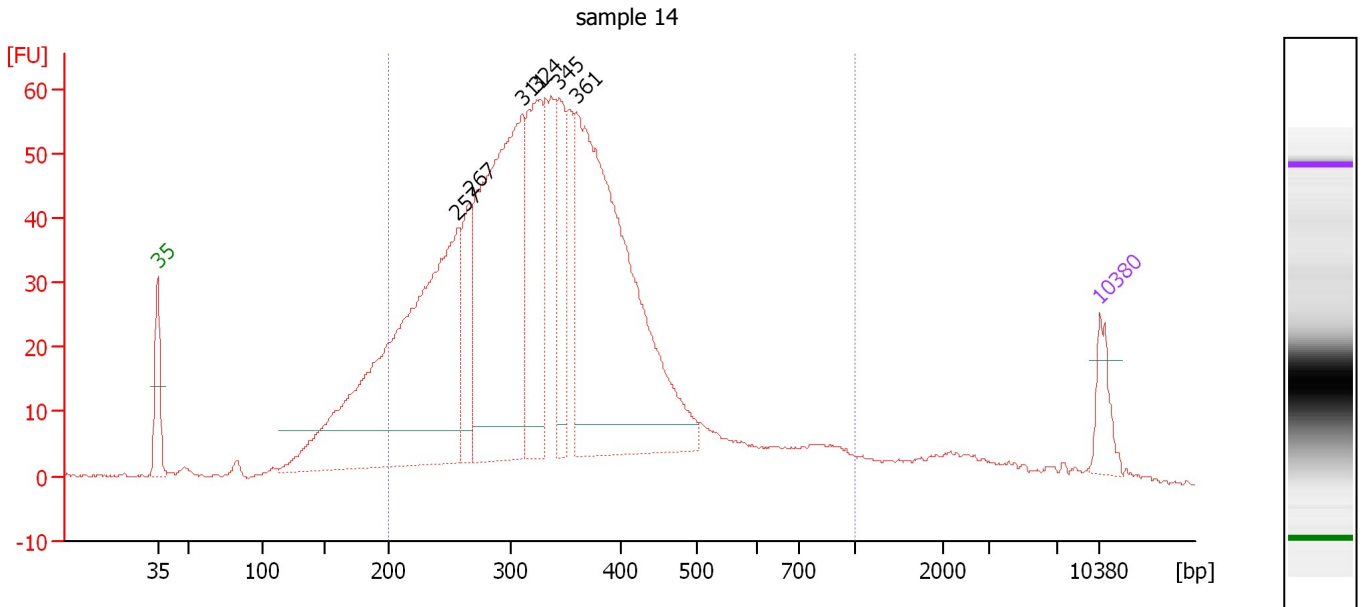
Region table for sample 2 : sample 13

| 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 | 332 | 938.4 | 17,713.8 | 3,499.43 | 83 | 34.6 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : sample 14

Number of peaks found: 6 Corr. Area 1: 1,337.7
 Noise: 0.2

Peak table for sample 3 : sample 14

| 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 | 257 | 1,664.37 | 9,825.4 | | 65.27 |
| 3 | 267 | 234.30 | 1,330.6 | | 66.19 |
| 4 | 311 | 1,218.21 | 5,937.4 | | 70.09 |
| 5 | 324 | 542.06 | 2,533.5 | | 71.17 |
| 6 | 345 | 277.22 | 1,218.2 | | 72.85 |
| 7 | 361 | 1,481.16 | 6,220.4 | | 74.15 |
| 8 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

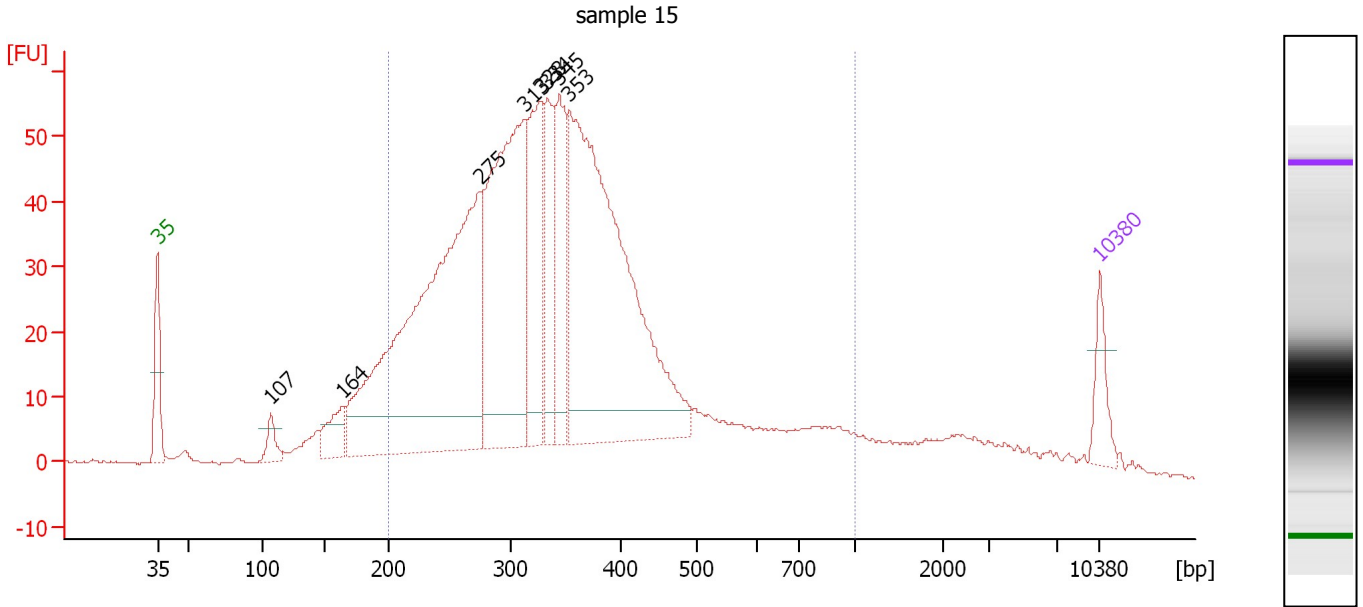
Region table for sample 3 : sample 14

| 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 | 355 | 1,337.7 | 30,382.0 | 6,370.84 | 84 | 33.9 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : sample 15

Number of peaks found: 8 Corr. Area 1: 1,263.4
 Noise: 0.2

Peak table for sample 4 : sample 15

| 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 | 107 | 65.14 | 926.3 | | 51.39 |
| 3 | 164 | 115.12 | 1,064.1 | | 56.77 |
| 4 | 275 | 1,746.51 | 9,607.3 | | 66.97 |
| 5 | 313 | 1,028.09 | 4,976.3 | | 70.26 |
| 6 | 328 | 399.20 | 1,844.9 | | 71.47 |
| 7 | 334 | 266.18 | 1,207.8 | | 71.97 |
| 8 | 345 | 295.17 | 1,297.5 | | 72.84 |
| 9 | 353 | 1,538.85 | 6,596.8 | | 73.56 |
| 10 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

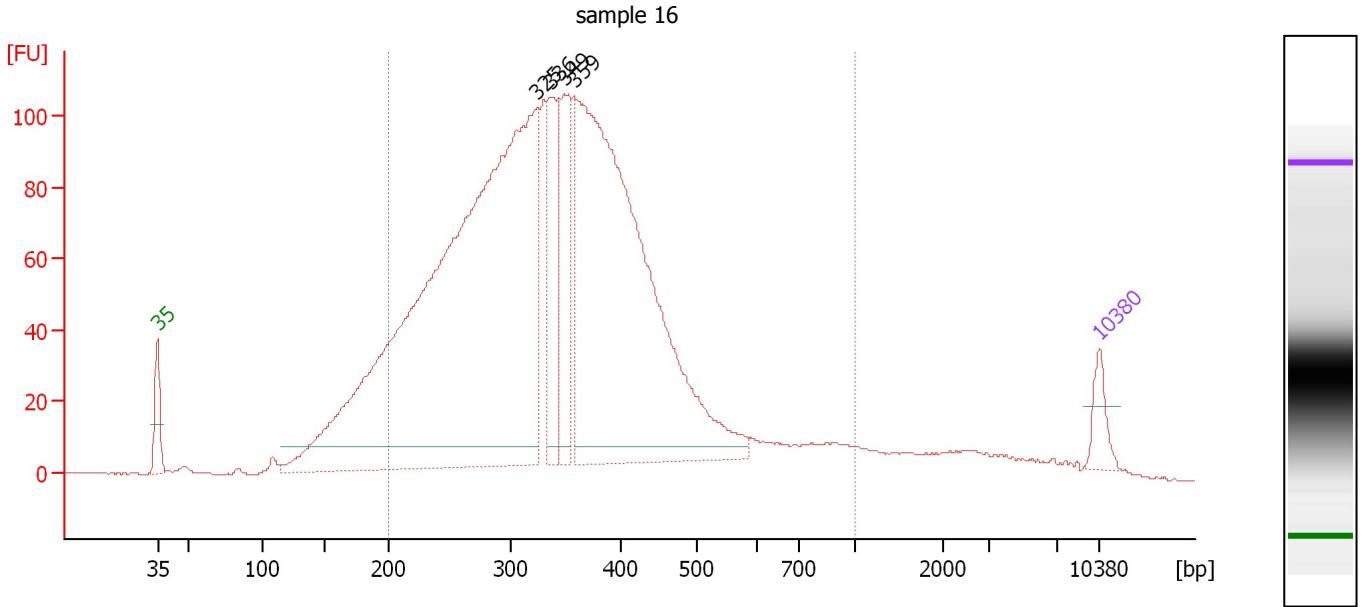
Region table for sample 4 : sample 15

| 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 | 361 | 1,263.4 | 29,471.1 | 6,230.97 | 83 | 35.9 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : sample 16

Number of peaks found: 4 Corr. Area 1: 2,506.1
 Noise: 0.2

Peak table for sample 5 : sample 16

| 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 | 325 | 4,404.34 | 20,564.4 | | 71.20 |
| 3 | 336 | 382.40 | 1,723.9 | | 72.14 |
| 4 | 349 | 426.63 | 1,851.9 | | 73.20 |
| 5 | 359 | 2,847.56 | 12,031.8 | | 73.98 |
| 6 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

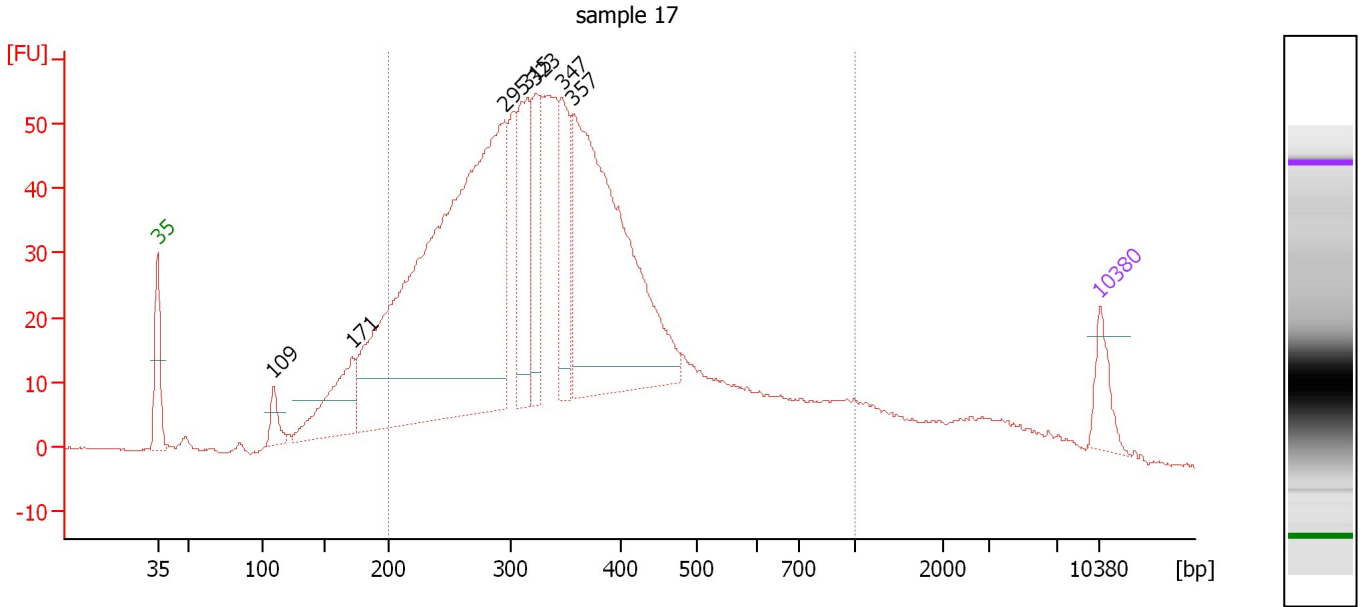
Region table for sample 5 : sample 16

| 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 | 360 | 2,506.1 | 42,490.9 | 9,044.40 | 85 | 33.1 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : sample 17

Number of peaks found: 7 Corr. Area 1: 1,406.4
 Noise: 0.2

Peak table for sample 6 : sample 17

| 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 | 109 | 74.21 | 1,032.9 | | 51.61 |
| 3 | 171 | 288.47 | 2,550.5 | | 57.46 |
| 4 | 295 | 2,310.45 | 11,857.2 | | 68.77 |
| 5 | 315 | 348.61 | 1,674.6 | | 70.46 |
| 6 | 323 | 238.44 | 1,118.4 | | 71.08 |
| 7 | 347 | 264.61 | 1,154.7 | | 73.05 |
| 8 | 357 | 1,237.05 | 5,252.0 | | 73.84 |
| 9 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

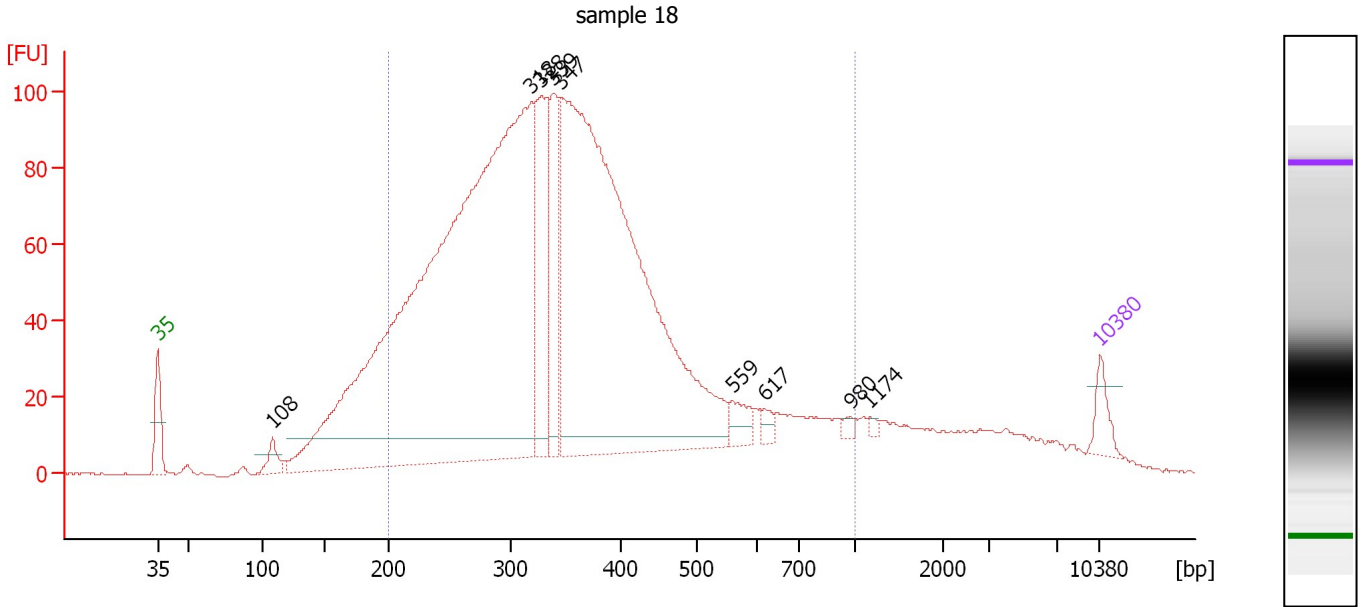
Region table for sample 6 : sample 17

| 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 | 373 | 1,406.4 | 32,889.0 | 7,009.13 | 80 | 38.4 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : sample 18

Number of peaks found: 9 Corr. Area 1: 2,416.9
 Noise: 0.3

Peak table for sample 7 : sample 18

| 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 | 108 | 93.44 | 1,311.0 | | 51.53 |
| 3 | 318 | 5,774.50 | 27,479.1 | | 70.70 |
| 4 | 328 | 610.17 | 2,816.6 | | 71.50 |
| 5 | 339 | 456.18 | 2,036.0 | | 72.42 |
| 6 | 347 | 3,936.39 | 17,212.2 | | 72.99 |
| 7 | 559 | 90.76 | 246.1 | | 85.70 |
| 8 | 617 | 38.29 | 94.1 | | 88.04 |
| 9 | 980 | 21.71 | 33.6 | | 94.46 |
| 10 | 1,174 | 14.25 | 18.4 | | 95.89 |
| 11 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

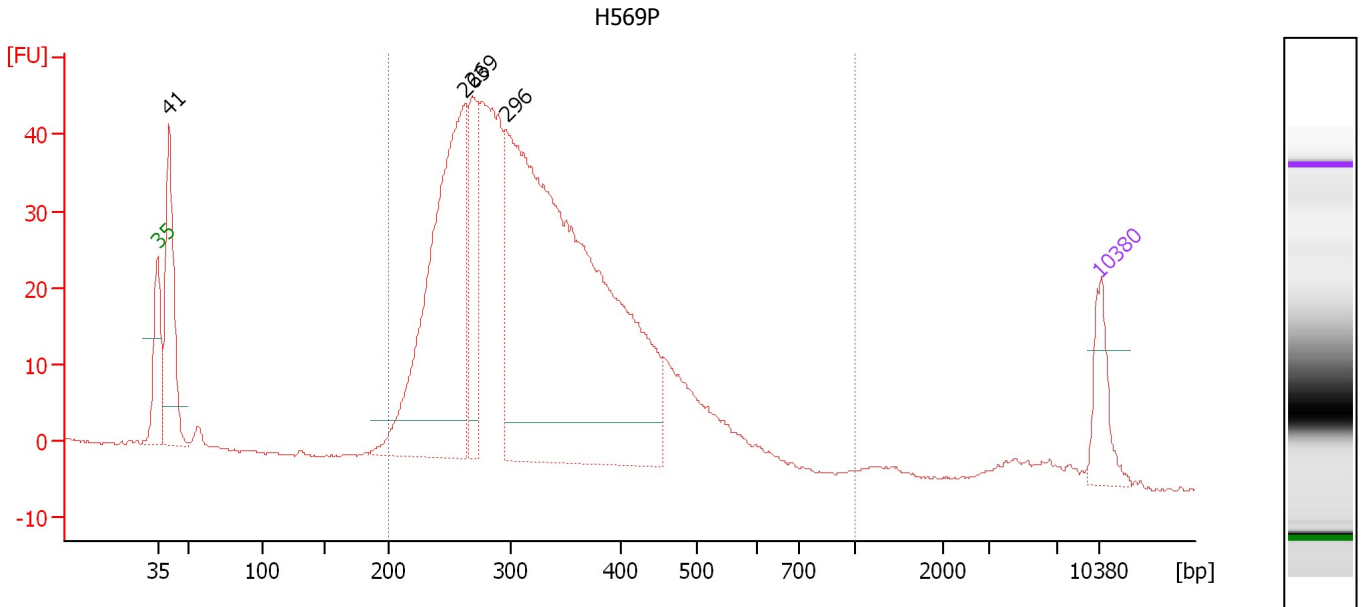
Region table for sample 7 : sample 18

| 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 | 371 | 2,416.9 | 56,378.9 | 12,073.61 | 81 | 37.1 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : H569P

Number of peaks found: 4 Corr. Area 1: 882.7
 Noise: 0.1

Peak table for sample 8 : H569P

| 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 | 41 | 353.08 | 13,193.5 | | 43.85 |
| 3 | 263 | 893.55 | 5,152.1 | | 65.82 |
| 4 | 269 | 225.87 | 1,272.2 | | 66.39 |
| 5 | 296 | 1,876.83 | 9,592.4 | | 68.88 |
| 6 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

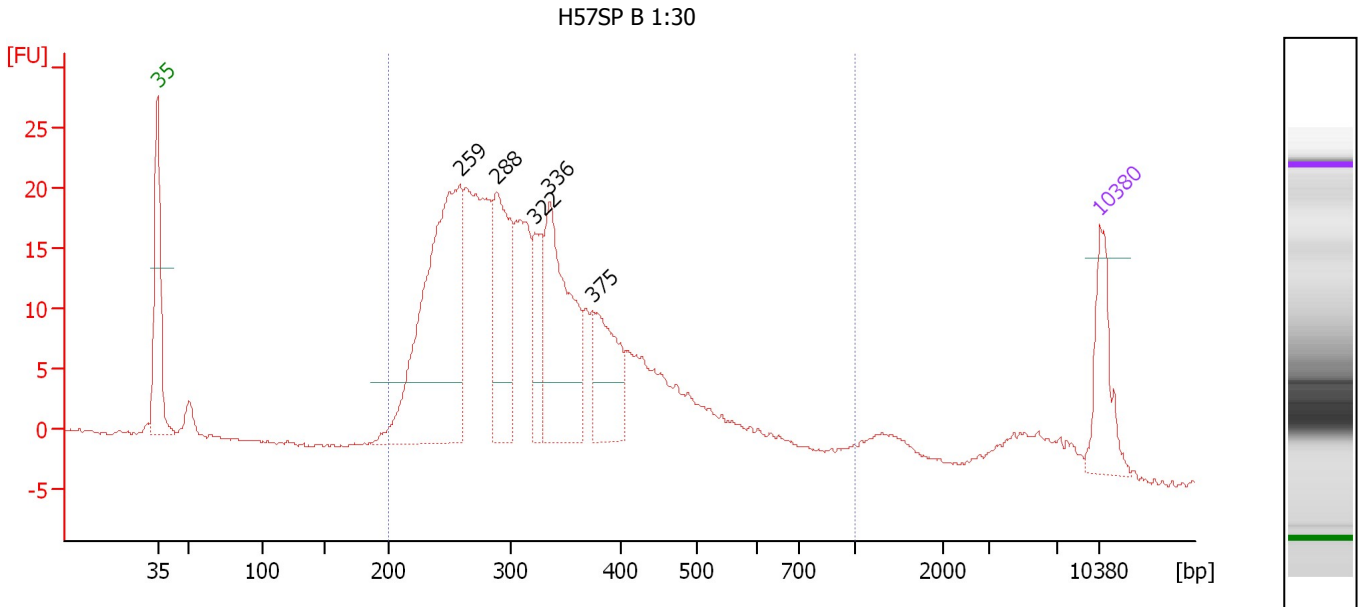
Region table for sample 8 : H569P

| 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 | 330 | 882.7 | 17,365.8 | 3,524.99 | 91 | 24.5 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : H57SP B 1:30

Number of peaks found: 5 Corr. Area 1: 435.1
 Noise: 0.1

Peak table for sample 9 : H57SP B 1:30

| 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 | 259 | 547.51 | 3,206.7 | | 65.45 |
| 3 | 288 | 212.99 | 1,118.9 | | 68.15 |
| 4 | 322 | 86.83 | 408.1 | | 71.02 |
| 5 | 336 | 272.69 | 1,230.6 | | 72.11 |
| 6 | 375 | 137.15 | 553.8 | | 75.33 |
| 7 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

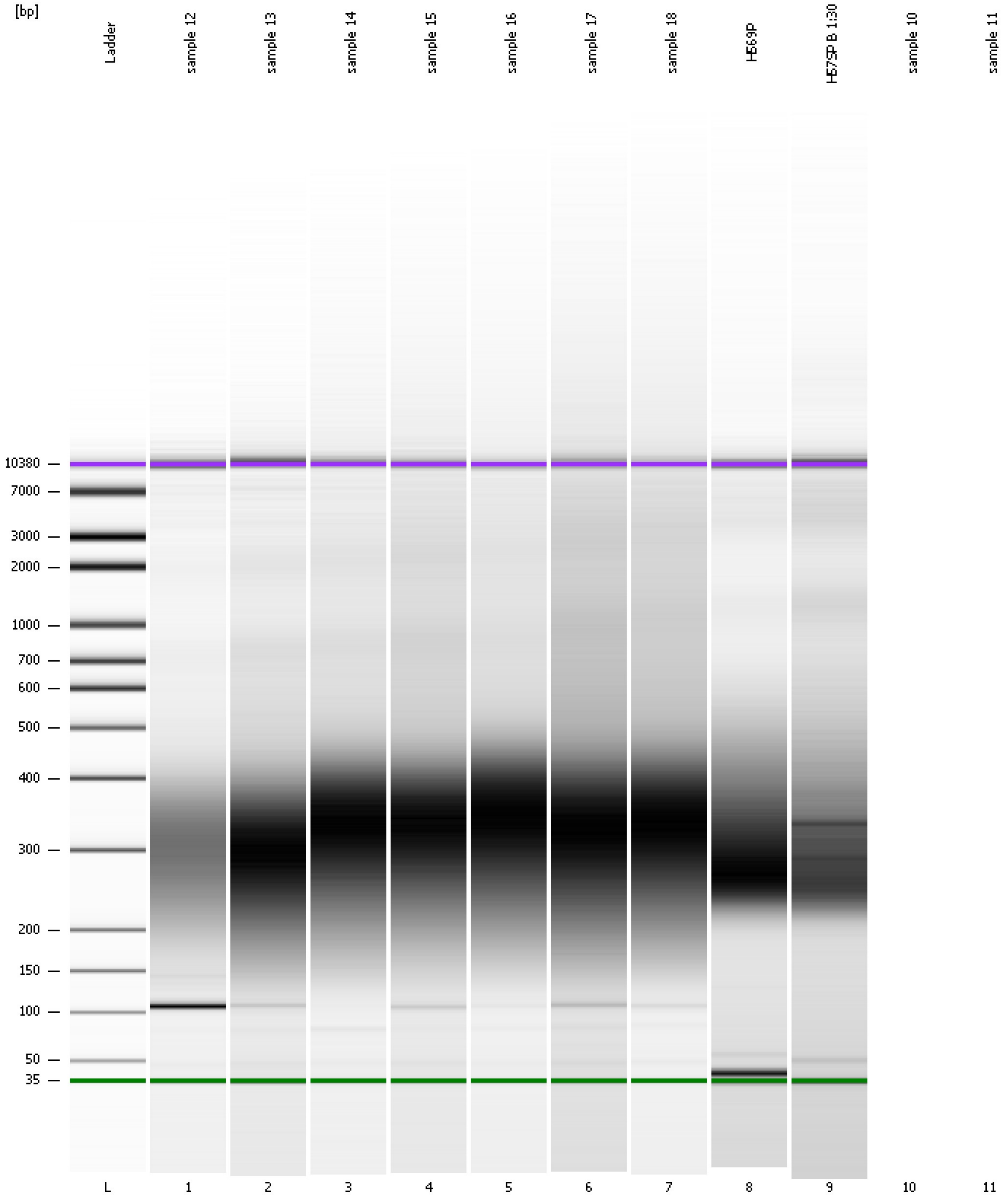
Region table for sample 9 : H57SP B 1:30

| 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 | 342 | 435.1 | 10,959.2 | 2,231.32 | 92 | 32.8 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
Modified: 8/26/2016 4:27:26 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
Modified: 8/26/2016 4:27:26 PM

Invalid Samples

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\2016-08-26\2016-08-26_002.xad

Created: 8/26/2016 3:51:52 PM
 Modified: 8/26/2016 4:27:26 PM

Run Logbook

| Description | Number | Source | Category | Sub Category | Time | Time Zone | User | Host |
|--|--------|------------|----------|--------------|----------------------|-------------------------------------|----------|----------|
| Run ended on port 1 (Number of wells acquired: 10) | | Instrument | Run | | 8/26/2016 4:27:26 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-08-26\2016-08-26_002.xad) | | Instrument | Run | | 8/26/2016 3:51:58 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Product Number : G2938B | | Instrument | Run | | 8/26/2016 3:51:58 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Name : | | Instrument | Run | | 8/26/2016 3:51:58 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Vendor : Agilent Technologies | | Instrument | Run | | 8/26/2016 3:51:58 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Serial# : DE13701086 | | Instrument | Run | | 8/26/2016 3:51:58 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Firmware : C.01.069 | | Instrument | Run | | 8/26/2016 3:51:58 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Cartridge : Electrode | | Instrument | Run | | 8/26/2016 3:51:58 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |