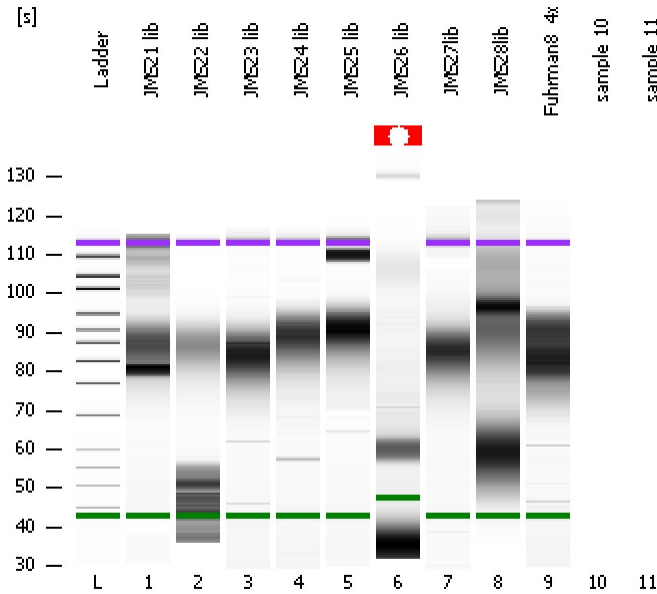


Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electrophoresis File Run Summary



Instrument Information:

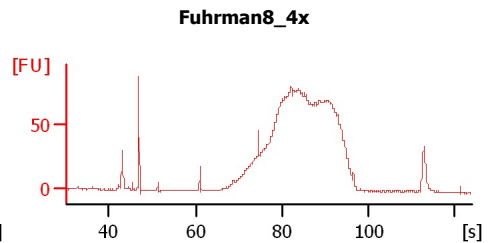
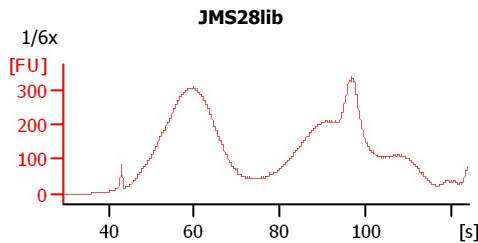
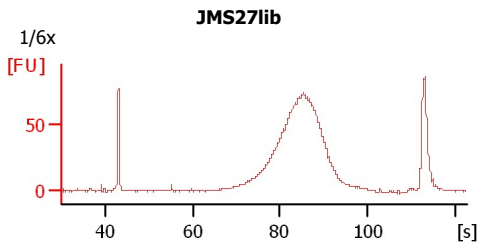
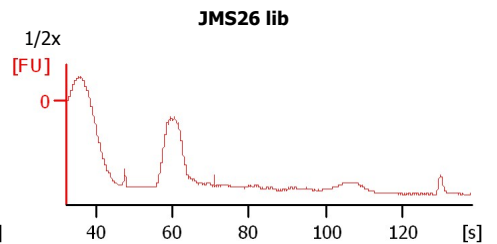
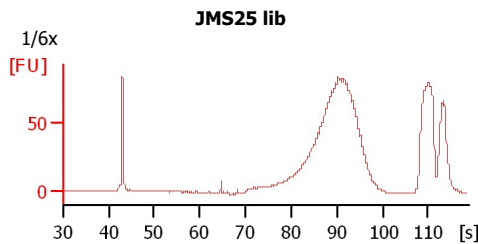
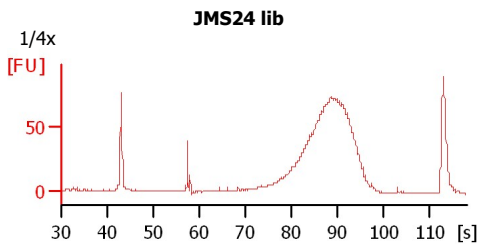
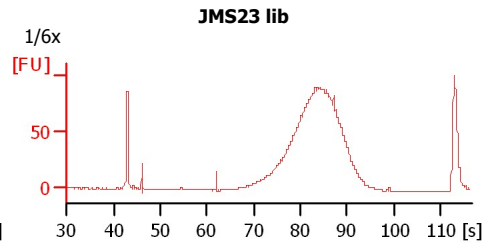
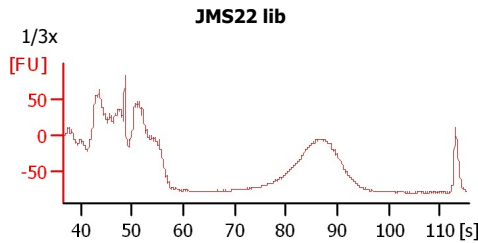
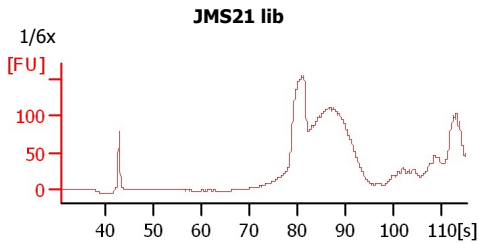
Instrument Name: DE13701086 Firmware: C.01.069
 Serial#: DE13701086 Type: G2938B

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:



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electrophoresis File Run Summary (Chip Summary)

| Sample Name | Sample Comment | Rest. Digest | Status | Observation | Result Label | Result Color |
|-------------|----------------|--------------------------|--------|-------------|--------------|--------------|
| JMS21 lib | 1/6x | <input type="checkbox"/> | ✓ | | | |
| JMS22 lib | 1/3x | <input type="checkbox"/> | ✓ | | | |
| JMS23 lib | 1/6x | <input type="checkbox"/> | ✓ | | | |
| JMS24 lib | 1/4x | <input type="checkbox"/> | ✓ | | | |
| JMS25 lib | 1/6x | <input type="checkbox"/> | ✓ | | | |
| JMS26 lib | 1/2x | <input type="checkbox"/> | ✓ | | | |
| JMS27lib | 1/6x | <input type="checkbox"/> | ✓ | | | |
| JMS28lib | 1/6x | <input type="checkbox"/> | ✓ | | | |
| Fuhrman8_4x | | <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:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 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

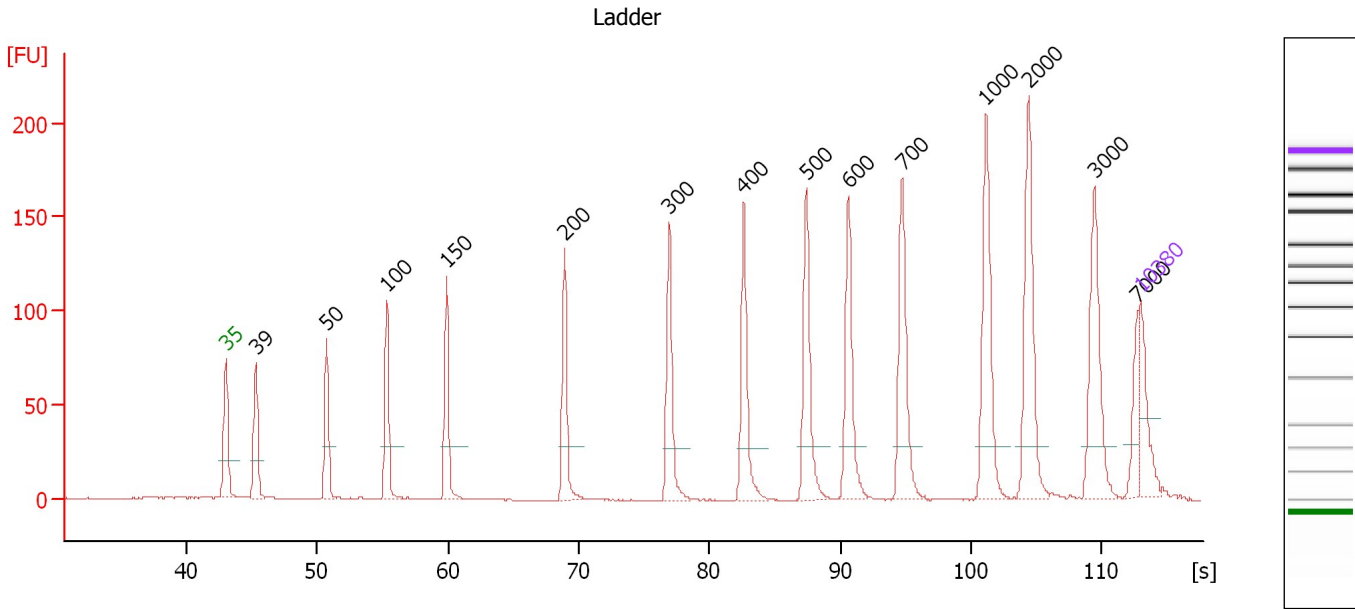
Ladder

| 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:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

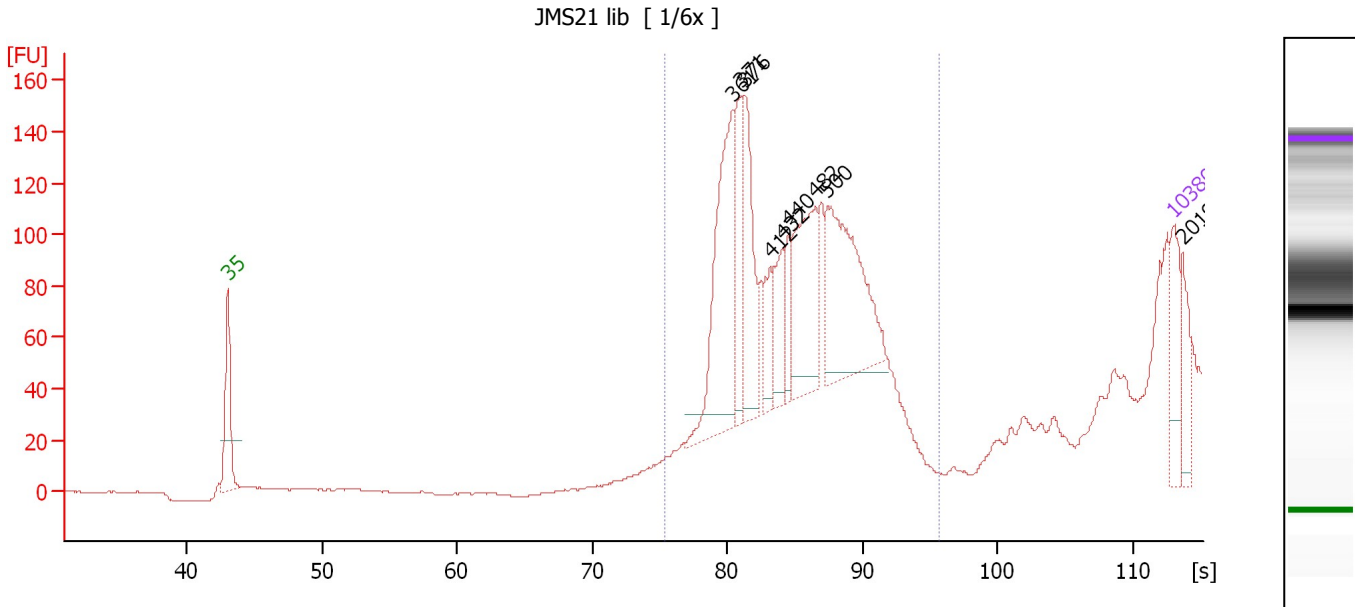
Peak table for Ladder

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 39 | 0.00 | 0.0 | |
| 3 | 50 | 150.00 | 4,545.5 | Ladder Peak |
| 4 | 100 | 150.00 | 2,272.7 | Ladder Peak |
| 5 | 150 | 150.00 | 1,515.2 | Ladder Peak |
| 6 | 200 | 150.00 | 1,136.4 | Ladder Peak |
| 7 | 300 | 150.00 | 757.6 | Ladder Peak |
| 8 | 400 | 150.00 | 568.2 | Ladder Peak |
| 9 | 500 | 150.00 | 454.5 | Ladder Peak |
| 10 | 600 | 150.00 | 378.8 | Ladder Peak |
| 11 | 700 | 150.00 | 324.7 | Ladder Peak |
| 12 | 1,000 | 150.00 | 227.3 | Ladder Peak |
| 13 | 2,000 | 150.00 | 113.6 | Ladder Peak |
| 14 | 3,000 | 150.00 | 75.8 | Ladder Peak |
| 15 | 7,000 | 150.00 | 32.5 | Ladder Peak |
| 16 | 10,380 | 75.00 | 10.9 | Upper Marker |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : JMS21 lib

Number of peaks found: 9 Corr. Area 1: 1,162.0
 Noise: 0.2

Peak table for sample 1 : JMS21 lib

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 361 | 405.49 | 1,702.2 | |
| 3 | 371 | 152.08 | 620.3 | |
| 4 | 376 | 207.05 | 833.5 | |
| 5 | 412 | 72.24 | 265.8 | |
| 6 | 432 | 90.47 | 317.5 | |
| 7 | 440 | 60.91 | 209.7 | |
| 8 | 482 | 246.56 | 774.8 | |
| 9 | 500 | 355.57 | 1,078.4 | |
| 10 | 10,380 | 75.00 | 10.9 | Upper Marker |
| 11 | 20,197 | 0.00 | 0.0 | |

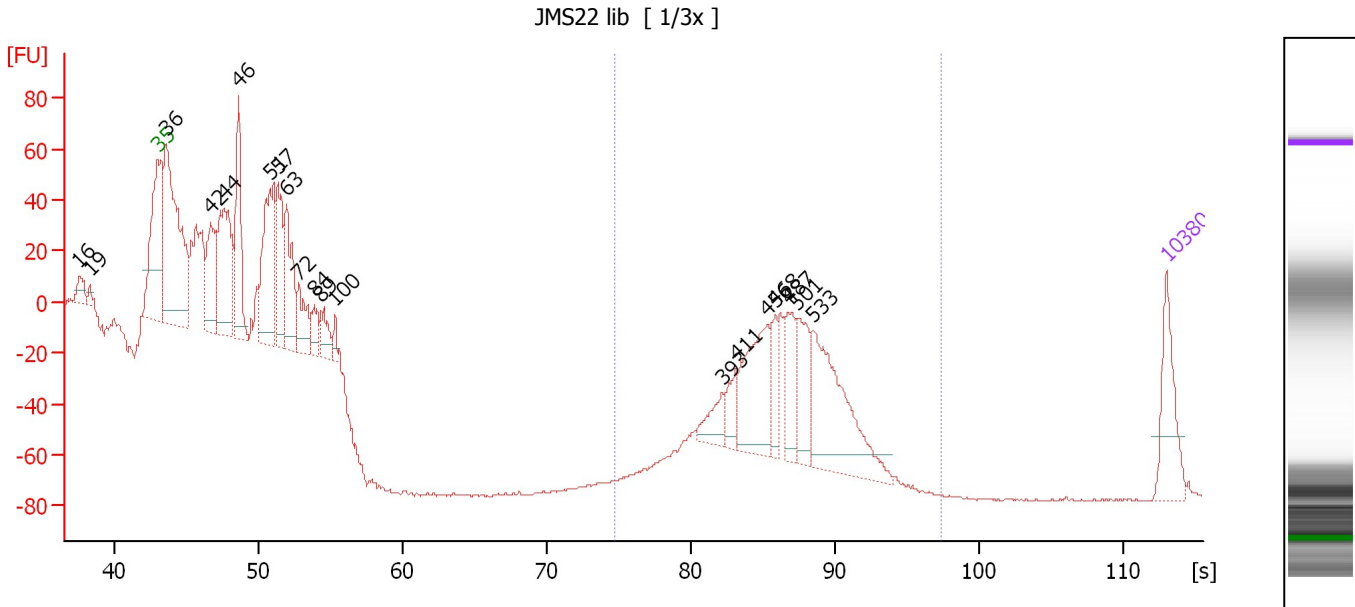
Region table for sample 1 : JMS21 lib

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Co Corr. lor Area | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|-------------------|---------------|-------------------|------------|-----------------------------|
| 281 | 748 | 445 | 6,128.5 | 1,726.17 | 1,162.0 | 95 | 18.2 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : JMS22 lib

Number of peaks found: 20 Corr. Area 1: 359.1
 Noise: 0.4

Peak table for sample 2 : JMS22 lib

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 16 | 0.00 | 0.0 | |
| 2 | 19 | 0.00 | 0.0 | |
| 3 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 4 | 36 | 530.98 | 22,294.6 | |
| 5 | 42 | 172.90 | 6,223.5 | |
| 6 | 44 | 269.09 | 9,286.2 | |
| 7 | 46 | 206.15 | 6,800.2 | |
| 8 | 51 | 262.31 | 7,834.4 | |
| 9 | 57 | 150.63 | 4,017.7 | |
| 10 | 63 | 164.23 | 3,931.8 | |
| 11 | 72 | 84.19 | 1,766.7 | |
| 12 | 84 | 43.07 | 777.3 | |
| 13 | 89 | 46.99 | 798.1 | |
| 14 | 100 | 21.51 | 326.8 | |
| 15 | 393 | 45.83 | 176.6 | |
| 16 | 411 | 41.90 | 154.3 | |
| 17 | 456 | 163.18 | 541.9 | |
| 18 | 468 | 51.12 | 165.5 | |
| 19 | 487 | 78.57 | 244.3 | |
| 20 | 501 | 95.18 | 288.0 | |
| 21 | 533 | 231.61 | 658.1 | |
| 22 | 10,380 | 75.00 | 10.9 | Upper Marker |

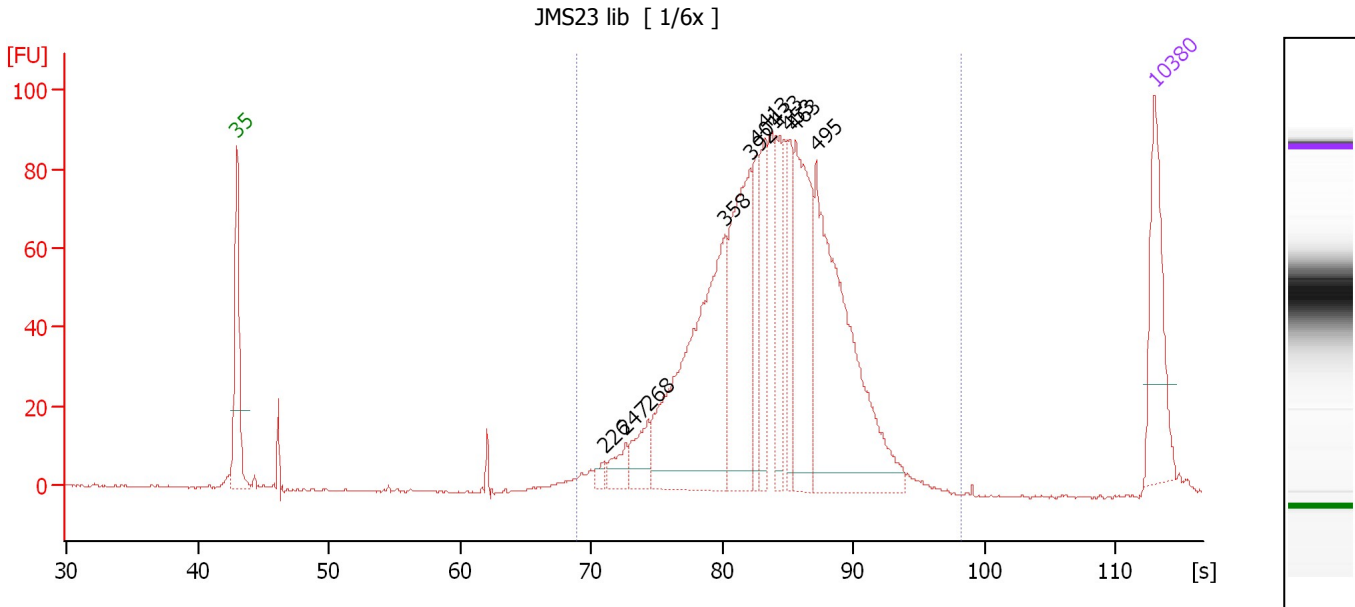
Region table for sample 2 : JMS22 lib

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Co Corr. lor Area | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|-------------------|---------------|-------------------|------------|-----------------------------|
| 273 | 827 | 495 | 1,351.1 | 435.21 | 359.1 | 25 | 11.0 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : JMS23 lib

Number of peaks found: 11 Corr. Area 1: 1,325.6
 Noise: 0.3

Peak table for sample 3 : JMS23 lib

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 226 | 9.55 | 63.9 | |
| 3 | 247 | 25.50 | 156.7 | |
| 4 | 268 | 41.43 | 234.2 | |
| 5 | 358 | 331.72 | 1,404.4 | |
| 6 | 392 | 192.86 | 745.7 | |
| 7 | 401 | 60.66 | 229.4 | |
| 8 | 413 | 72.29 | 264.9 | |
| 9 | 433 | 67.85 | 237.4 | |
| 10 | 453 | 61.34 | 204.9 | |
| 11 | 463 | 162.21 | 531.0 | |
| 12 | 495 | 319.37 | 977.0 | |
| 13 | 10,380 | 75.00 | 10.9 | Upper Marker |

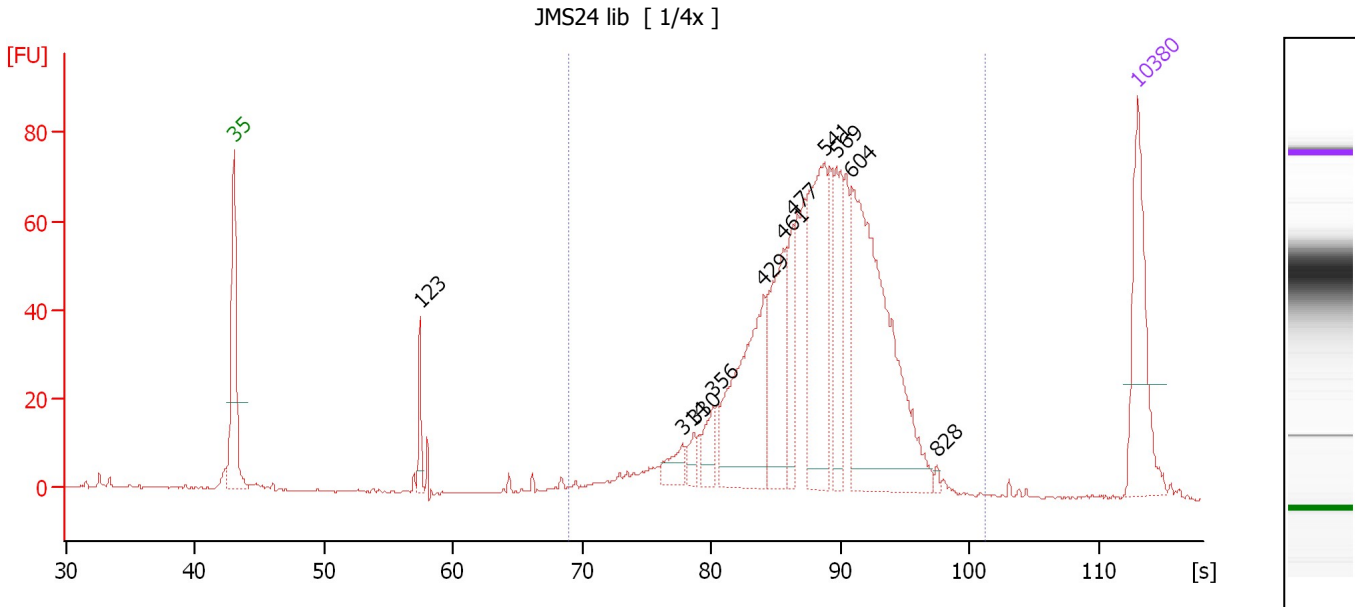
Region table for sample 3 : JMS23 lib

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Co Corr. lor Area | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|-------------------|---------------|-------------------|------------|-----------------------------|
| 200 | 862 | 426 | 5,571.5 | 1,453.68 | 1,325.6 | 98 | 22.5 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary Continued ...



Overall Results for sample 4 : JMS24 lib

Number of peaks found: 11 Corr. Area 1: 1,026.1
 Noise: 0.2

Peak table for sample 4 : JMS24 lib

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 123 | 27.84 | 343.9 | |
| 3 | 314 | 22.50 | 108.5 | |
| 4 | 330 | 14.77 | 67.8 | |
| 5 | 356 | 27.03 | 115.1 | |
| 6 | 429 | 150.83 | 532.3 | |
| 7 | 461 | 101.45 | 333.2 | |
| 8 | 477 | 48.05 | 152.6 | |
| 9 | 541 | 150.98 | 423.1 | |
| 10 | 569 | 68.76 | 183.0 | |
| 11 | 604 | 276.47 | 693.1 | |
| 12 | 828 | 2.64 | 4.8 | |
| 13 | 10,380 | 75.00 | 10.9 | Upper Marker |

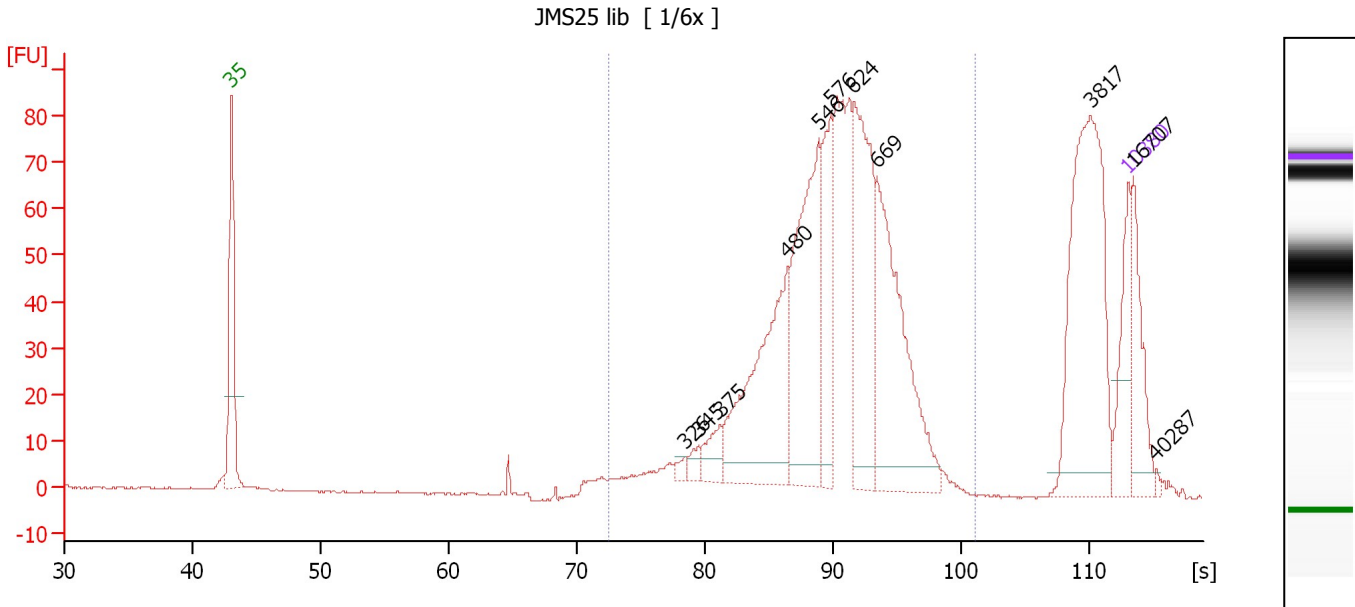
Region table for sample 4 : JMS24 lib

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Co Corr. lor Area | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|-------------------|---------------|-------------------|------------|-----------------------------|
| 200 | 1,000 | 525 | 3,568.7 | 1,131.66 | 1,026.1 | 94 | 22.8 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary Continued ...



Overall Results for sample 5 : JMS25 lib

Number of peaks found: 11 Corr. Area 1: 1,040.8
 Noise: 0.2

Peak table for sample 5 : JMS25 lib

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 326 | 12.02 | 55.9 | |
| 3 | 345 | 17.08 | 75.0 | |
| 4 | 375 | 41.68 | 168.5 | |
| 5 | 480 | 313.52 | 989.4 | |
| 6 | 546 | 317.90 | 882.0 | |
| 7 | 576 | 140.40 | 369.2 | |
| 8 | 624 | 264.68 | 642.4 | |
| 9 | 669 | 323.14 | 731.6 | |
| 10 | 3,817 | 314.87 | 125.0 | |
| 11 | 10,380 | 75.00 | 10.9 | Upper Marker |
| 12 | 16,707 | 0.00 | 0.0 | |
| 13 | 40,287 | 0.00 | 0.0 | |

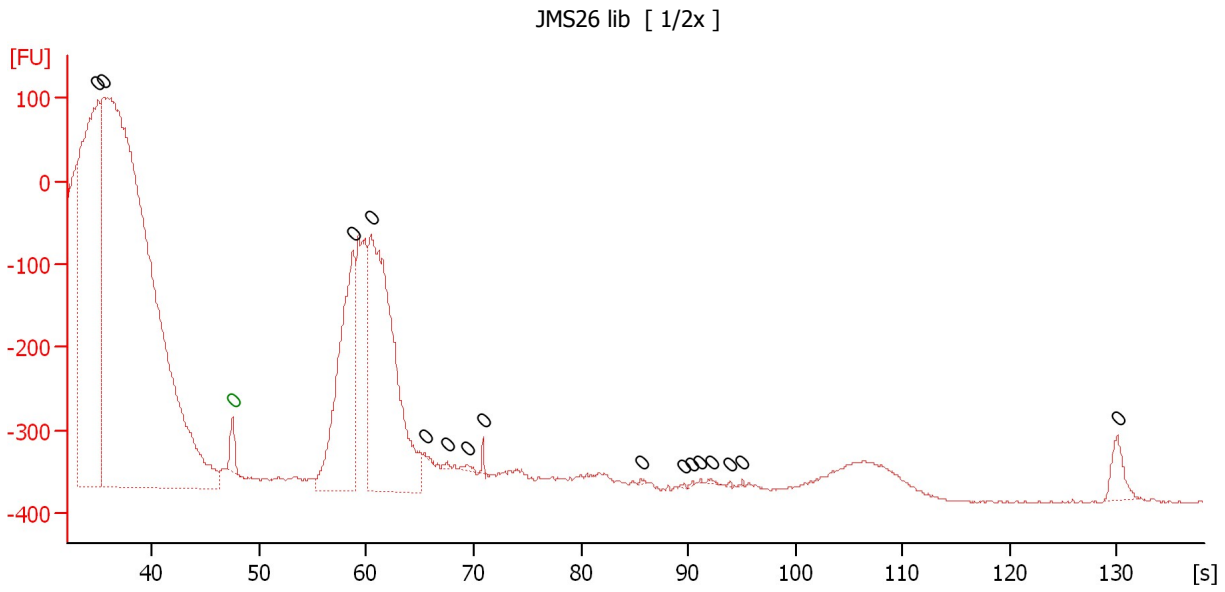
Region table for sample 5 : JMS25 lib

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Co Corr. lor Area | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|-------------------|---------------|-------------------|------------|-----------------------------|
| 245 | 1,000 | 569 | 5,295.1 | 1,841.25 | 1,040.8 | 77 | 21.3 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary Continued ...



Overall Results for sample 6 : JMS26 lib

Number of peaks found: 16 Noise: 1.1

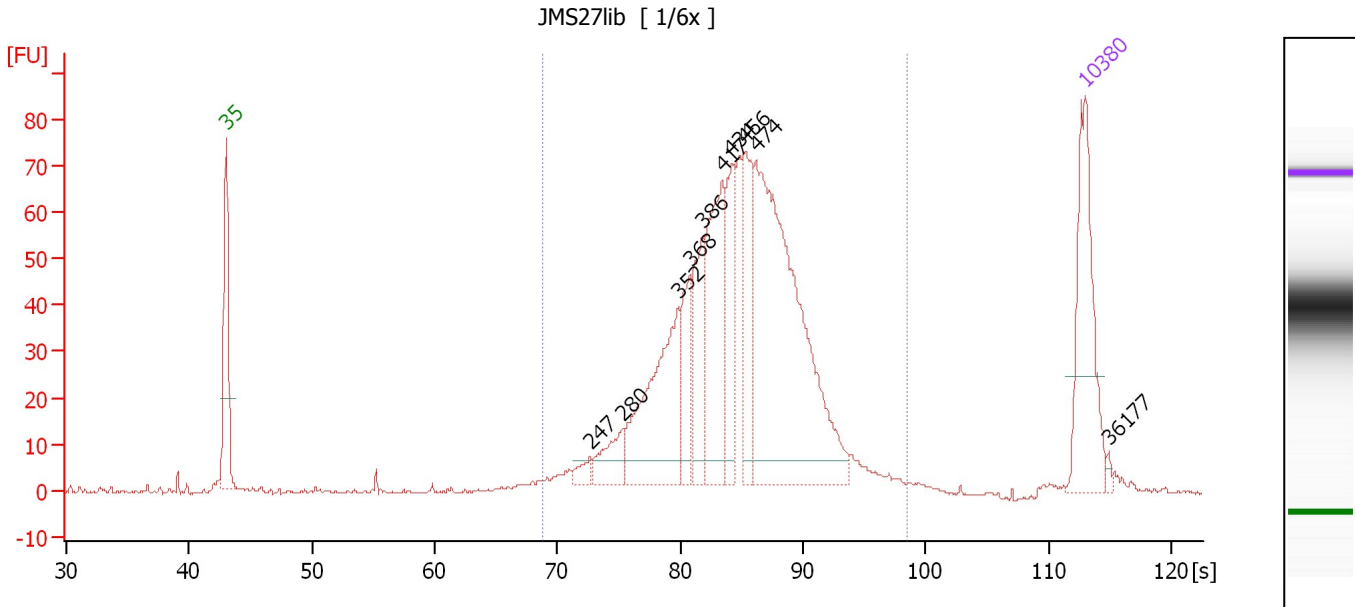
Peak table for sample 6 : JMS26 lib

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 0 | 0.00 | 0.0 | |
| 2 | 0 | 0.00 | 0.0 | |
| 3 | 0 | 0.00 | 0.0 | Lower Marker |
| 4 | 0 | 0.00 | 0.0 | |
| 5 | 0 | 0.00 | 0.0 | |
| 6 | 0 | 0.00 | 0.0 | |
| 7 | 0 | 0.00 | 0.0 | |
| 8 | 0 | 0.00 | 0.0 | |
| 9 | 0 | 0.00 | 0.0 | |
| 10 | 0 | 0.00 | 0.0 | |
| 11 | 0 | 0.00 | 0.0 | |
| 12 | 0 | 0.00 | 0.0 | |
| 13 | 0 | 0.00 | 0.0 | |
| 14 | 0 | 0.00 | 0.0 | |
| 15 | 0 | 0.00 | 0.0 | |
| 16 | 0 | 0.00 | 0.0 | |
| 17 | 0 | 0.00 | 0.0 | |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary Continued ...



Overall Results for sample 7 : JMS27lib

Number of peaks found: 10 Corr. Area 1: 1,033.8
 Noise: 0.3

Peak table for sample 7 : JMS27lib

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 247 | 10.46 | 64.2 | |
| 3 | 280 | 31.92 | 172.7 | |
| 4 | 352 | 134.68 | 579.7 | |
| 5 | 368 | 44.66 | 183.8 | |
| 6 | 386 | 61.35 | 240.8 | |
| 7 | 417 | 110.10 | 399.9 | |
| 8 | 434 | 62.41 | 218.1 | |
| 9 | 456 | 71.47 | 237.3 | |
| 10 | 474 | 317.60 | 1,014.2 | |
| 11 | 10,380 | 75.00 | 10.9 | Upper Marker |
| 12 | 36,177 | 0.00 | 0.0 | |

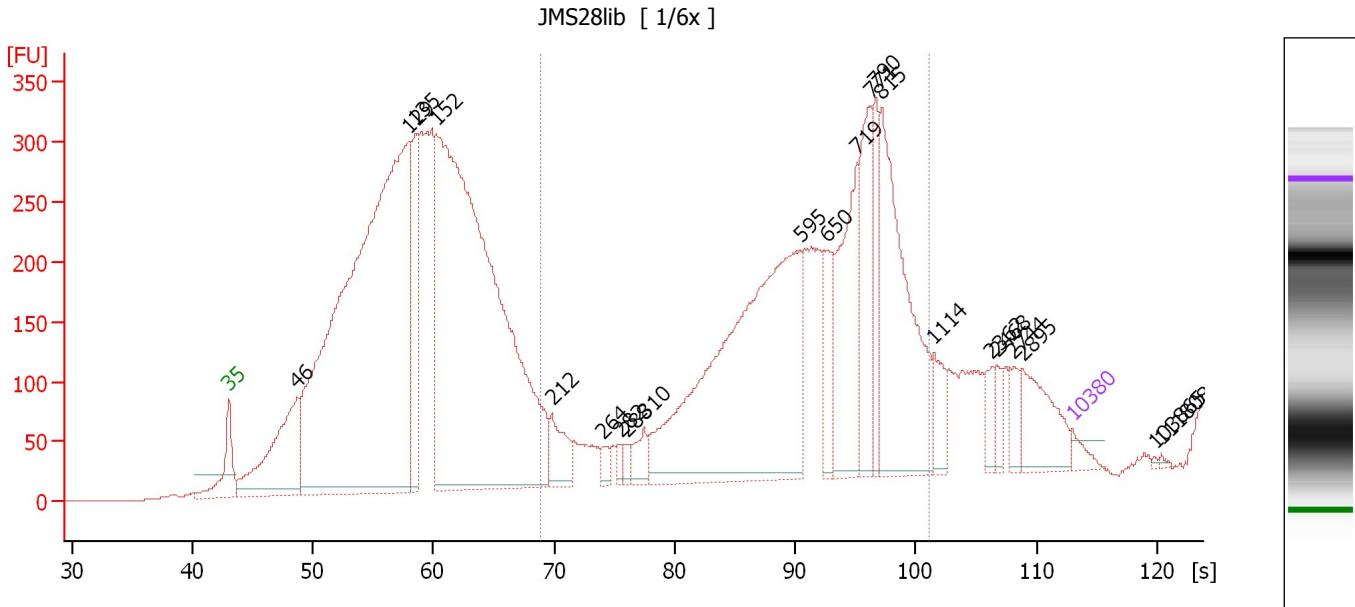
Region table for sample 7 : JMS27lib

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Co Corr. lor Area | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|-------------------|---------------|-------------------|------------|-----------------------------|
| 200 | 875 | 448 | 3,575.7 | 970.45 | 1,033.8 | 96 | 24.1 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
 Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary Continued ...



Overall Results for sample 8 : JMS28lib

Number of peaks found: 22 Corr. Area 1: 3,766.6
 Noise: 0.2

Peak table for sample 8 : JMS28lib

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker |
| 2 | 46 | 1,708.59 | 56,183.1 | |
| 3 | 129 | 10,886.95 | 127,841.7 | |
| 4 | 135 | 1,033.39 | 11,607.3 | |
| 5 | 152 | 9,733.97 | 96,870.8 | |
| 6 | 212 | 402.85 | 2,883.0 | |
| 7 | 264 | 96.51 | 553.3 | |
| 8 | 282 | 74.21 | 398.7 | |
| 9 | 288 | 73.03 | 384.1 | |
| 10 | 310 | 195.73 | 957.3 | |
| 11 | 595 | 3,786.76 | 9,641.6 | |
| 12 | 650 | 401.39 | 935.1 | |
| 13 | 719 | 1,089.24 | 2,294.3 | |
| 14 | 771 | 780.13 | 1,532.2 | |
| 15 | 790 | 457.06 | 876.3 | |
| 16 | 815 | 1,827.49 | 3,396.3 | |
| 17 | 1,114 | 228.61 | 310.8 | |
| 18 | 2,362 | 121.06 | 77.7 | |
| 19 | 2,468 | 95.08 | 58.4 | |
| 20 | 2,744 | 139.08 | 76.8 | |
| 21 | 2,895 | 448.01 | 234.5 | |
| 22 | 10,380 | 75.00 | 10.9 | Upper Marker |
| 23 | 103,865 | 0.00 | 0.0 | |
| 24 | 111,808 | 0.00 | 0.0 | |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
Modified: 8/5/2014 8:47:35 AM

Electropherogram Summary Continued ...

... Region table for sample 8 :

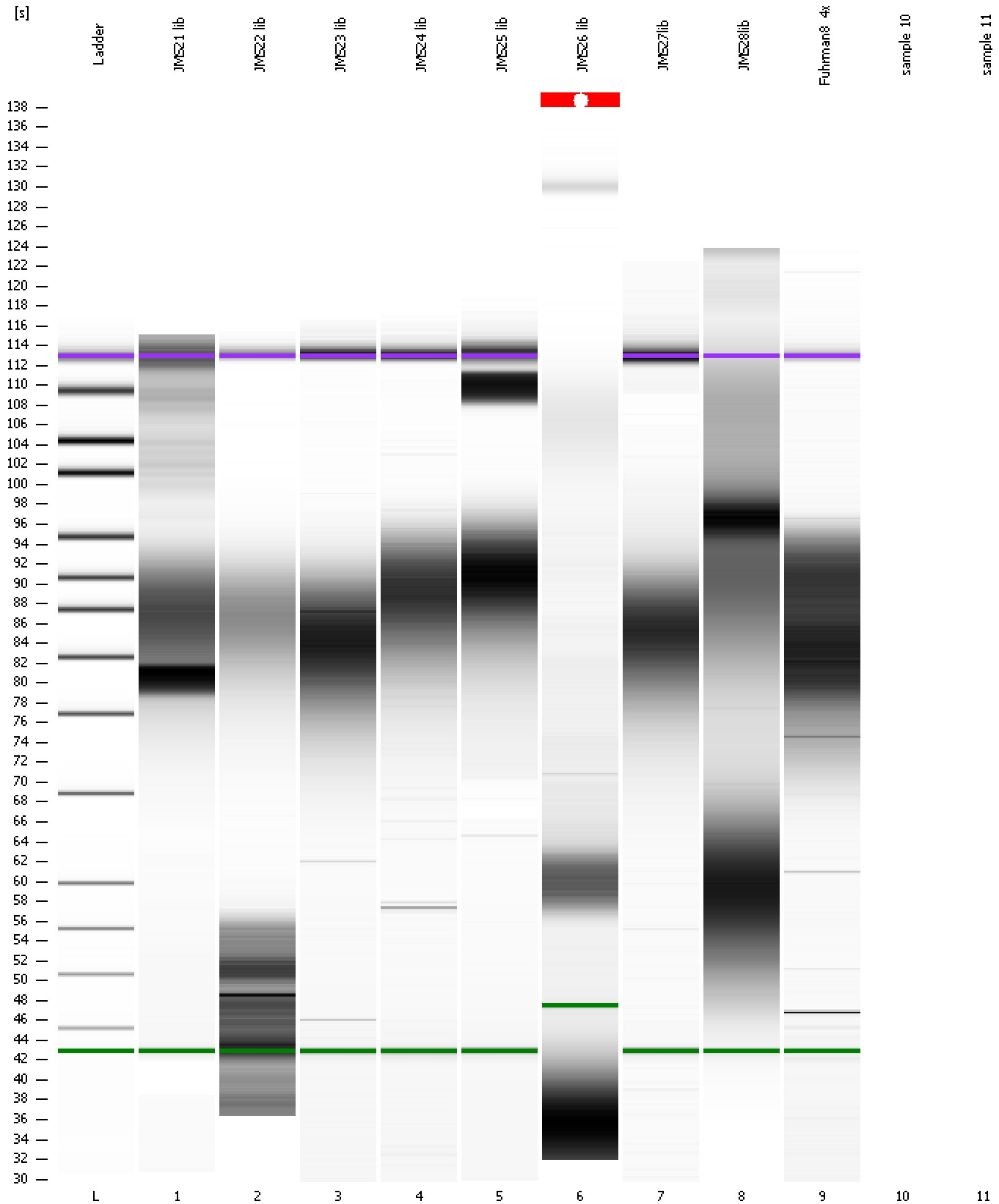
JMS28lib

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/ μ l] | Co Corr. lor Area | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|-------------------|---------------------|---|------------|-----------------------------|
| 200 | 1,000 | 628 | 25,877.5 | 8,943.80 |  3,766.6 | 33 | 29.7 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad

Created: 8/4/2014 9:29:09 AM
Modified: 8/5/2014 8:47:35 AM

Gel Image



Assay Class: High Sensitivity DNA Assay Created: 8/4/2014 9:29:09 AM
 Data Path: C:\...xpert\data\2014-08-04\2014-08-04_002_JMS21to28Dilutions.xad Modified: 8/5/2014 8:47:35 AM

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 | | 8/4/2014 10:04:45 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\Data\2014-08-04\2014-08-04_002.xad) | | Instrument | Run | | 8/4/2014 9:29:14 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Product Number : G2938B | | Instrument | Run | | 8/4/2014 9:29:14 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Name : | | Instrument | Run | | 8/4/2014 9:29:14 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Vendor : Agilent Technologies | | Instrument | Run | | 8/4/2014 9:29:14 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Serial# : DE13701086 | | Instrument | Run | | 8/4/2014 9:29:14 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Firmware : C.01.069 | | Instrument | Run | | 8/4/2014 9:29:14 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Cartridge : Electrode | | Instrument | Run | | 8/4/2014 9:29:14 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |