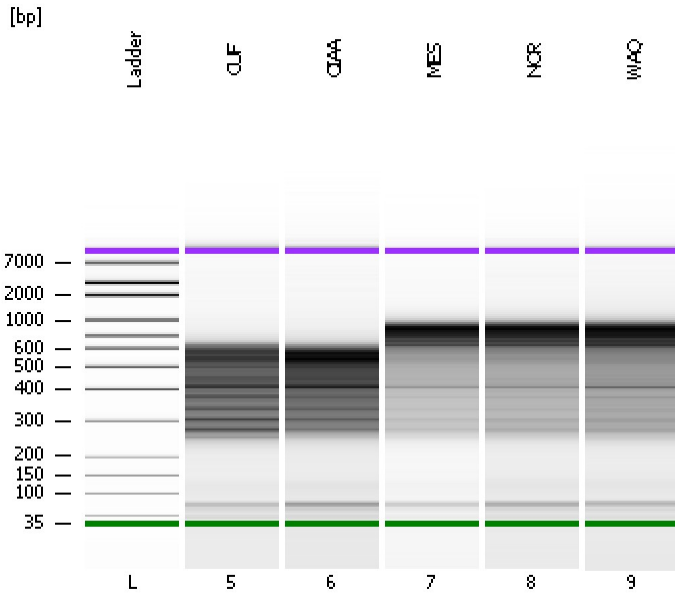


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
Modified: 6/28/2016 10:10:57 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

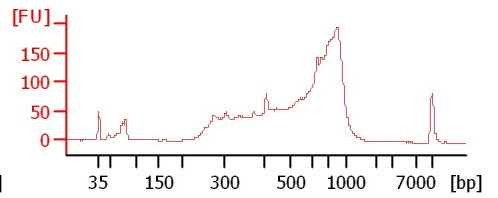
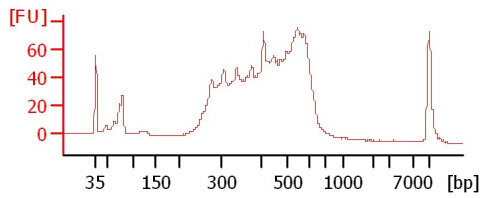
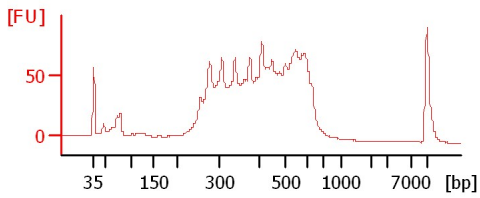
Chip Information:

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

CUF

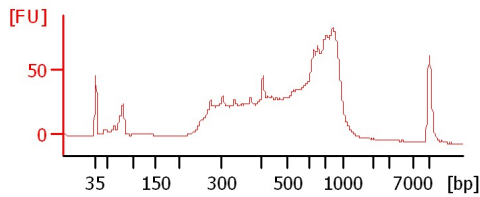
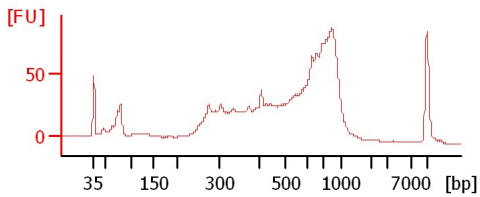
CIAA

MES



NOR

WAQ



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
Modified: 6/28/2016 10:10:57 AM

Electrophoresis File Run Summary (Chip Summary)

| Sample Name | Sample Comment | Rest. Digest | Status | Observation | Result Label | Result Color |
|-------------|----------------|--------------------------|--------|-------------|--------------|--------------|
| CUF | | <input type="checkbox"/> | ✓ | | | |
| CIAA | | <input type="checkbox"/> | ✓ | | | |
| MES | | <input type="checkbox"/> | ✓ | | | |
| NOR | | <input type="checkbox"/> | ✓ | | | |
| WAQ | | <input type="checkbox"/> | ✓ | | | |
| Ladder | | <input type="checkbox"/> | ✓ | | | |

Chip Lot # **Reagent Kit Lot #**

Chip Comments :

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
Modified: 6/28/2016 10:10:57 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

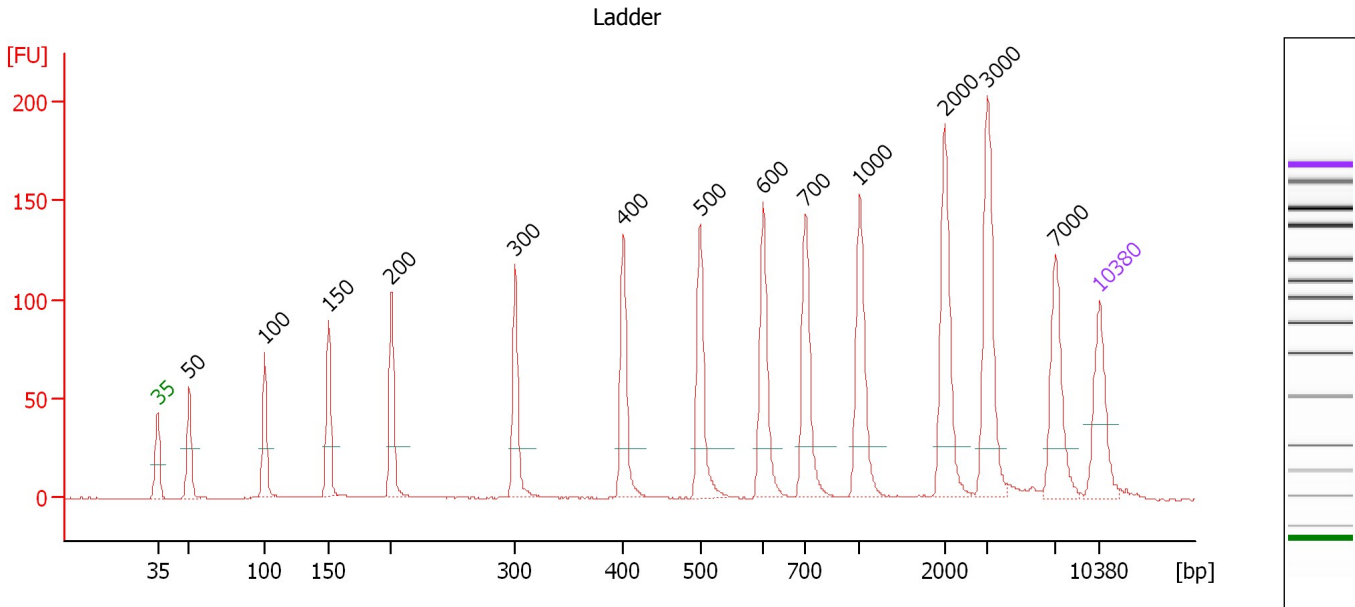
Ladder

| 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:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
 Modified: 6/28/2016 10:10:57 AM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

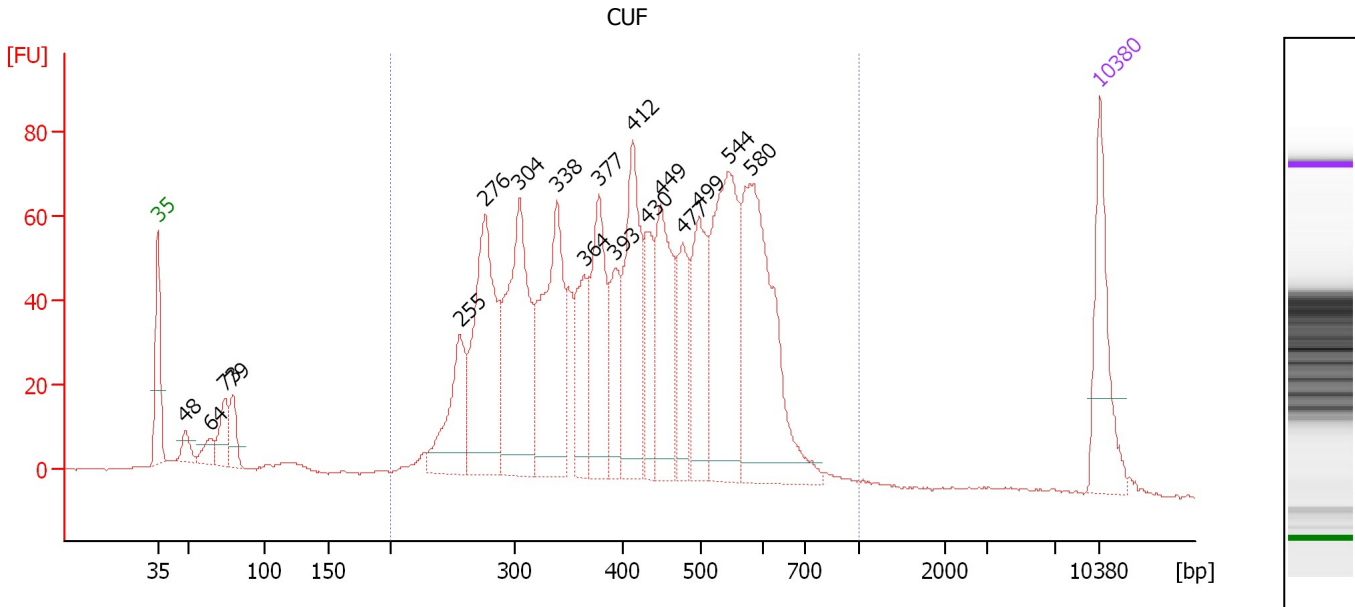
Peak table for Ladder

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations | Aligned Migration Time [s] |
|------|-----------|---------------|-------------------|--------------|----------------------------|
| 1 | 35 | 125.00 | 5,411.3 | Lower Marker | 43.00 |
| 2 | 50 | 150.00 | 4,545.5 | Ladder Peak | 45.36 |
| 3 | 100 | 150.00 | 2,272.7 | Ladder Peak | 50.97 |
| 4 | 150 | 150.00 | 1,515.2 | Ladder Peak | 55.69 |
| 5 | 200 | 150.00 | 1,136.4 | Ladder Peak | 60.37 |
| 6 | 300 | 150.00 | 757.6 | Ladder Peak | 69.55 |
| 7 | 400 | 150.00 | 568.2 | Ladder Peak | 77.61 |
| 8 | 500 | 150.00 | 454.5 | Ladder Peak | 83.30 |
| 9 | 600 | 150.00 | 378.8 | Ladder Peak | 87.98 |
| 10 | 700 | 150.00 | 324.7 | Ladder Peak | 91.13 |
| 11 | 1,000 | 150.00 | 227.3 | Ladder Peak | 95.16 |
| 12 | 2,000 | 150.00 | 113.6 | Ladder Peak | 101.46 |
| 13 | 3,000 | 150.00 | 75.8 | Ladder Peak | 104.61 |
| 14 | 7,000 | 150.00 | 32.5 | Ladder Peak | 109.71 |
| 15 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...analyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
 Modified: 6/28/2016 10:10:57 AM

Electropherogram Summary Continued ...



Overall Results for sample 5 : CUF

Number of peaks found: 18 Corr. Area 1: 1,818.8
 Noise: 0.2

Peak table for sample 5 : CUF

| 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 | 48 | 19.84 | 625.9 | | 45.05 |
| 3 | 64 | 20.93 | 497.3 | | 46.91 |
| 4 | 73 | 44.35 | 916.2 | | 47.98 |
| 5 | 79 | 34.45 | 660.7 | | 48.61 |
| 6 | 255 | 107.22 | 636.0 | | 65.45 |
| 7 | 276 | 223.48 | 1,226.1 | | 67.36 |
| 8 | 304 | 227.14 | 1,130.7 | | 69.90 |
| 9 | 338 | 199.02 | 891.4 | | 72.63 |
| 10 | 364 | 81.11 | 337.9 | | 74.68 |
| 11 | 377 | 128.80 | 517.6 | | 75.75 |
| 12 | 393 | 65.53 | 252.8 | | 77.02 |
| 13 | 412 | 157.32 | 578.5 | | 78.29 |
| 14 | 430 | 71.31 | 251.3 | | 79.32 |
| 15 | 449 | 125.13 | 422.4 | | 80.39 |
| 16 | 477 | 71.69 | 227.6 | | 82.00 |
| 17 | 499 | 116.24 | 352.6 | | 83.27 |
| 18 | 544 | 208.13 | 579.5 | | 85.37 |
| 19 | 580 | 249.36 | 651.8 | | 87.03 |
| 20 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

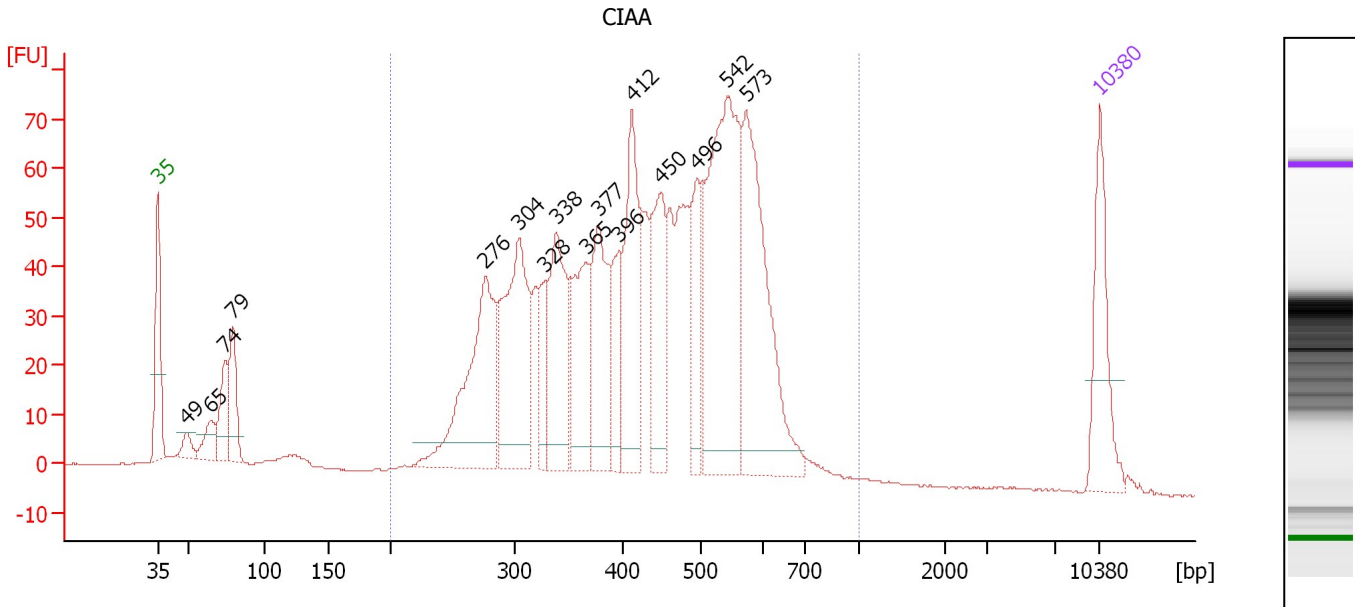
Region table for sample 5 : CUF

| 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 | 428 | 1,818.8 | 8,676.1 | 2,182.99 | 92 | 27.6 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...analyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
 Modified: 6/28/2016 10:10:57 AM

Electropherogram Summary Continued ...



Overall Results for sample 6 : CIAA

Number of peaks found: 16 Corr. Area 1: 1,590.4
 Noise: 0.2

Peak table for sample 6 : CIAA

| 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 | 49 | 18.36 | 570.4 | | 45.17 |
| 3 | 65 | 33.10 | 776.8 | | 47.00 |
| 4 | 74 | 56.91 | 1,168.3 | | 48.03 |
| 5 | 79 | 72.45 | 1,387.9 | | 48.62 |
| 6 | 276 | 229.56 | 1,259.0 | | 67.37 |
| 7 | 304 | 217.86 | 1,087.2 | | 69.84 |
| 8 | 328 | 52.32 | 241.6 | | 71.81 |
| 9 | 338 | 141.07 | 631.5 | | 72.65 |
| 10 | 365 | 111.23 | 461.2 | | 74.82 |
| 11 | 377 | 123.91 | 497.9 | | 75.76 |
| 12 | 396 | 63.77 | 244.0 | | 77.28 |
| 13 | 412 | 161.78 | 595.4 | | 78.27 |
| 14 | 450 | 118.18 | 398.1 | | 80.44 |
| 15 | 496 | 77.92 | 238.2 | | 83.06 |
| 16 | 542 | 321.38 | 898.2 | | 85.28 |
| 17 | 573 | 247.88 | 655.8 | | 86.71 |
| 18 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

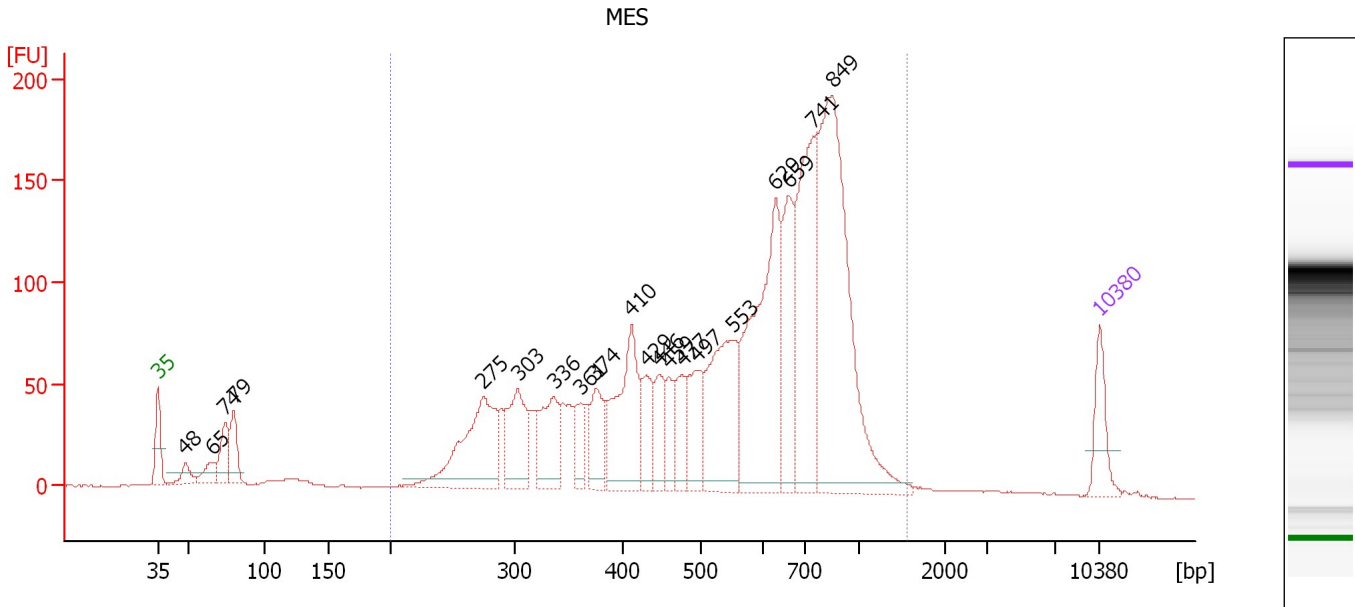
Region table for sample 6 : CIAA

| 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 | 438 | 1,590.4 | 8,834.2 | 2,297.31 | 90 | 26.0 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
 Modified: 6/28/2016 10:10:57 AM

Electropherogram Summary Continued ...



Overall Results for sample 7 : MES

Number of peaks found: 20 Corr. Area 1: 2,801.6
 Noise: 0.1

Peak table for sample 7 : MES

| 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 | 48 | 41.83 | 1,319.8 | | 45.05 |
| 3 | 65 | 47.23 | 1,107.1 | | 47.00 |
| 4 | 74 | 98.57 | 2,030.4 | | 48.00 |
| 5 | 79 | 94.73 | 1,808.5 | | 48.65 |
| 6 | 275 | 338.42 | 1,867.1 | | 67.22 |
| 7 | 303 | 192.14 | 961.5 | | 69.77 |
| 8 | 336 | 164.25 | 740.0 | | 72.47 |
| 9 | 361 | 71.63 | 301.1 | | 74.42 |
| 10 | 374 | 105.83 | 428.6 | | 75.52 |
| 11 | 410 | 270.50 | 999.7 | | 78.18 |
| 12 | 429 | 95.47 | 336.9 | | 79.28 |
| 13 | 446 | 94.71 | 321.8 | | 80.23 |
| 14 | 459 | 66.85 | 220.6 | | 80.98 |
| 15 | 477 | 92.90 | 295.3 | | 81.98 |
| 16 | 497 | 121.90 | 371.7 | | 83.13 |
| 17 | 553 | 302.57 | 829.1 | | 85.78 |
| 18 | 629 | 503.61 | 1,214.0 | | 88.88 |
| 19 | 659 | 212.51 | 488.8 | | 89.83 |
| 20 | 741 | 414.98 | 848.5 | | 91.68 |
| 21 | 849 | 765.48 | 1,366.1 | | 93.14 |
| 22 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
Modified: 6/28/2016 10:10:57 AM

Electropherogram Summary Continued ...

... Region table for sample 7 :

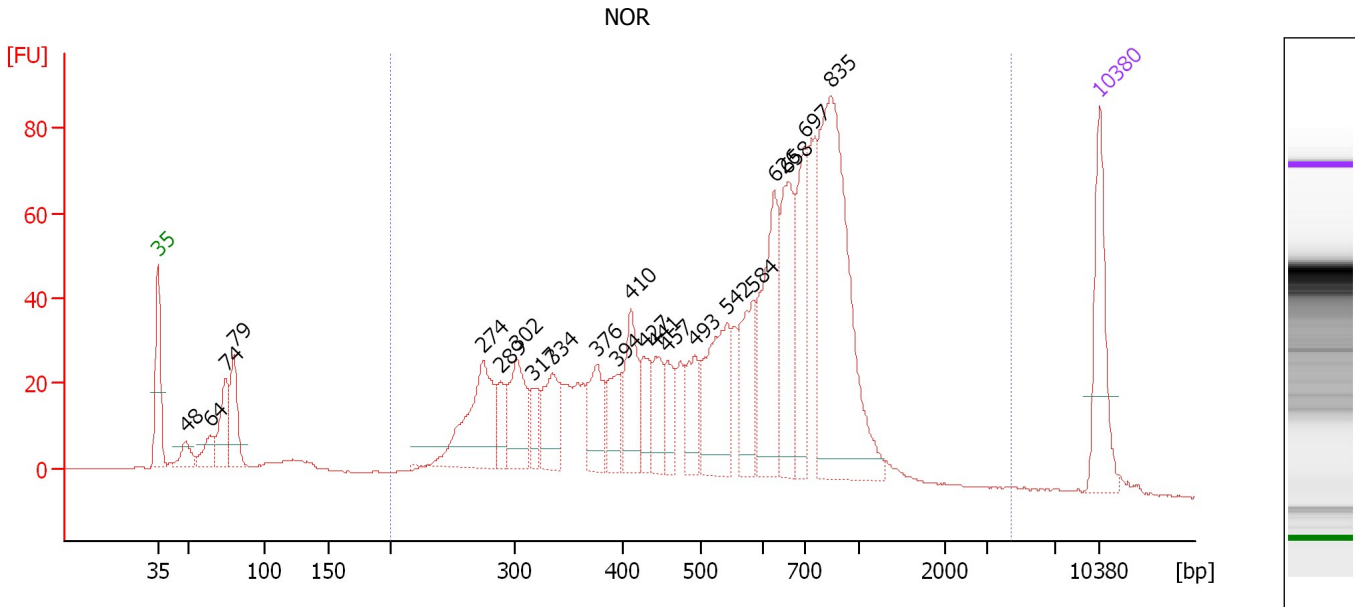
MES

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 200 | 1,545 | 591 | 2,801.6 | 13,218.5 | 4,154.30 | 92 | 36.6 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
 Modified: 6/28/2016 10:10:57 AM

Electropherogram Summary Continued ...



Overall Results for sample 8 : NOR

Number of peaks found: 22 Corr. Area 1: 1,413.0
 Noise: 0.2

Peak table for sample 8 : NOR

| 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 | 48 | 24.39 | 767.6 | | 45.07 |
| 3 | 64 | 30.03 | 710.3 | | 46.94 |
| 4 | 74 | 63.24 | 1,295.4 | | 48.05 |
| 5 | 79 | 68.84 | 1,314.0 | | 48.66 |
| 6 | 274 | 138.15 | 764.5 | | 67.14 |
| 7 | 289 | 30.45 | 159.8 | | 68.51 |
| 8 | 302 | 84.35 | 423.9 | | 69.67 |
| 9 | 317 | 29.06 | 139.1 | | 70.88 |
| 10 | 334 | 61.46 | 278.8 | | 72.29 |
| 11 | 376 | 58.33 | 235.0 | | 75.68 |
| 12 | 394 | 41.21 | 158.6 | | 77.09 |
| 13 | 410 | 74.16 | 274.3 | | 78.15 |
| 14 | 427 | 37.98 | 134.7 | | 79.16 |
| 15 | 441 | 44.63 | 153.2 | | 79.97 |
| 16 | 457 | 35.69 | 118.2 | | 80.88 |
| 17 | 493 | 47.50 | 146.0 | | 82.90 |
| 18 | 542 | 109.97 | 307.4 | | 85.27 |
| 19 | 584 | 71.31 | 185.0 | | 87.24 |
| 20 | 626 | 137.05 | 331.6 | | 88.81 |
| 21 | 658 | 108.03 | 248.7 | | 89.82 |
| 22 | 697 | 102.42 | 222.7 | | 91.03 |
| 23 | 835 | 321.85 | 583.9 | | 92.95 |
| 24 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
Modified: 6/28/2016 10:10:57 AM

Electropherogram Summary Continued ...

... Region table for sample 8 :

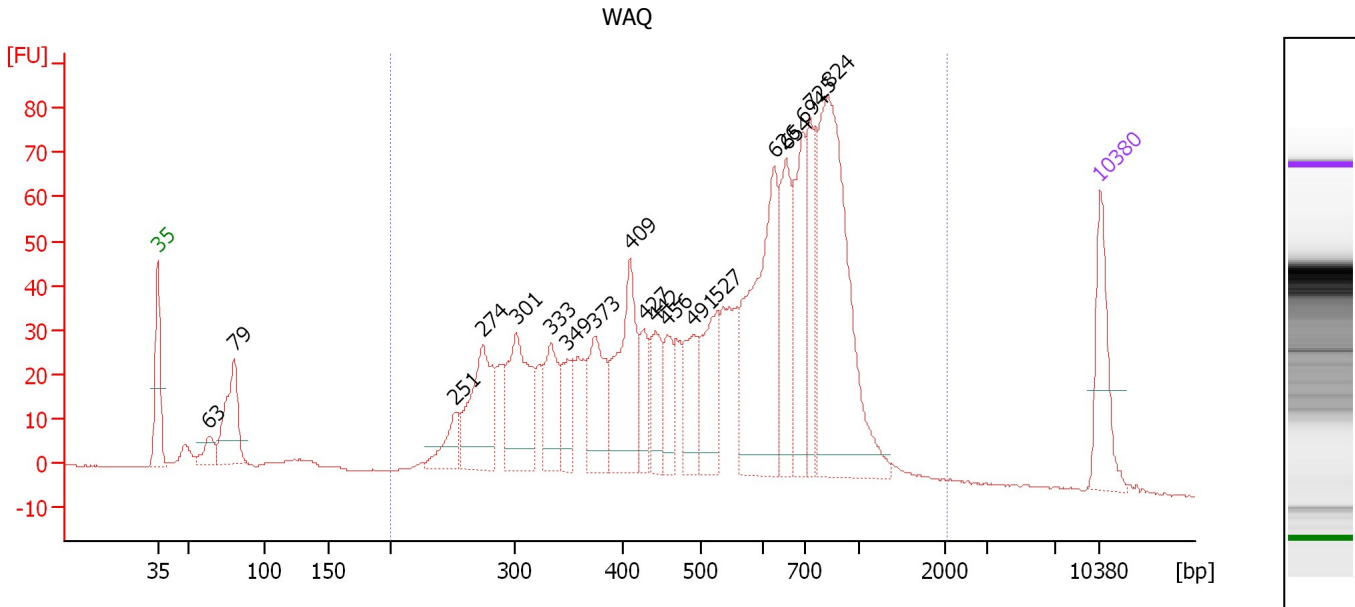
NOR

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. lor [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|----------------------|------------|-----------------------------|
| 200 | 4,408 | 595 | 1,413.0 | 6,250.0 | 1,932.72 | 90 | 44.7 |

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
 Modified: 6/28/2016 10:10:57 AM

Electropherogram Summary Continued ...



Overall Results for sample 9 : WAQ

Number of peaks found: 19 Corr. Area 1: 1,478.7
 Noise: 0.1

Peak table for sample 9 : WAQ

| 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 | 63 | 32.58 | 782.9 | | 46.83 |
| 3 | 79 | 129.19 | 2,464.1 | | 48.66 |
| 4 | 251 | 47.45 | 285.9 | | 65.09 |
| 5 | 274 | 157.72 | 873.1 | | 67.13 |
| 6 | 301 | 160.45 | 807.4 | | 69.63 |
| 7 | 333 | 82.15 | 374.1 | | 72.18 |
| 8 | 349 | 56.59 | 246.0 | | 73.46 |
| 9 | 373 | 107.23 | 435.3 | | 75.45 |
| 10 | 409 | 163.69 | 606.8 | | 78.10 |
| 11 | 427 | 48.83 | 173.4 | | 79.12 |
| 12 | 442 | 64.61 | 221.6 | | 79.99 |
| 13 | 456 | 53.00 | 176.0 | | 80.81 |
| 14 | 491 | 68.38 | 211.0 | | 82.80 |
| 15 | 527 | 94.84 | 272.5 | | 84.58 |
| 16 | 626 | 271.16 | 655.9 | | 88.82 |
| 17 | 654 | 112.17 | 259.9 | | 89.68 |
| 18 | 694 | 131.22 | 286.3 | | 90.96 |
| 19 | 725 | 92.46 | 193.2 | | 91.47 |
| 20 | 824 | 383.19 | 704.8 | | 92.80 |
| 21 | 10,380 | 75.00 | 10.9 | Upper Marker | 113.00 |

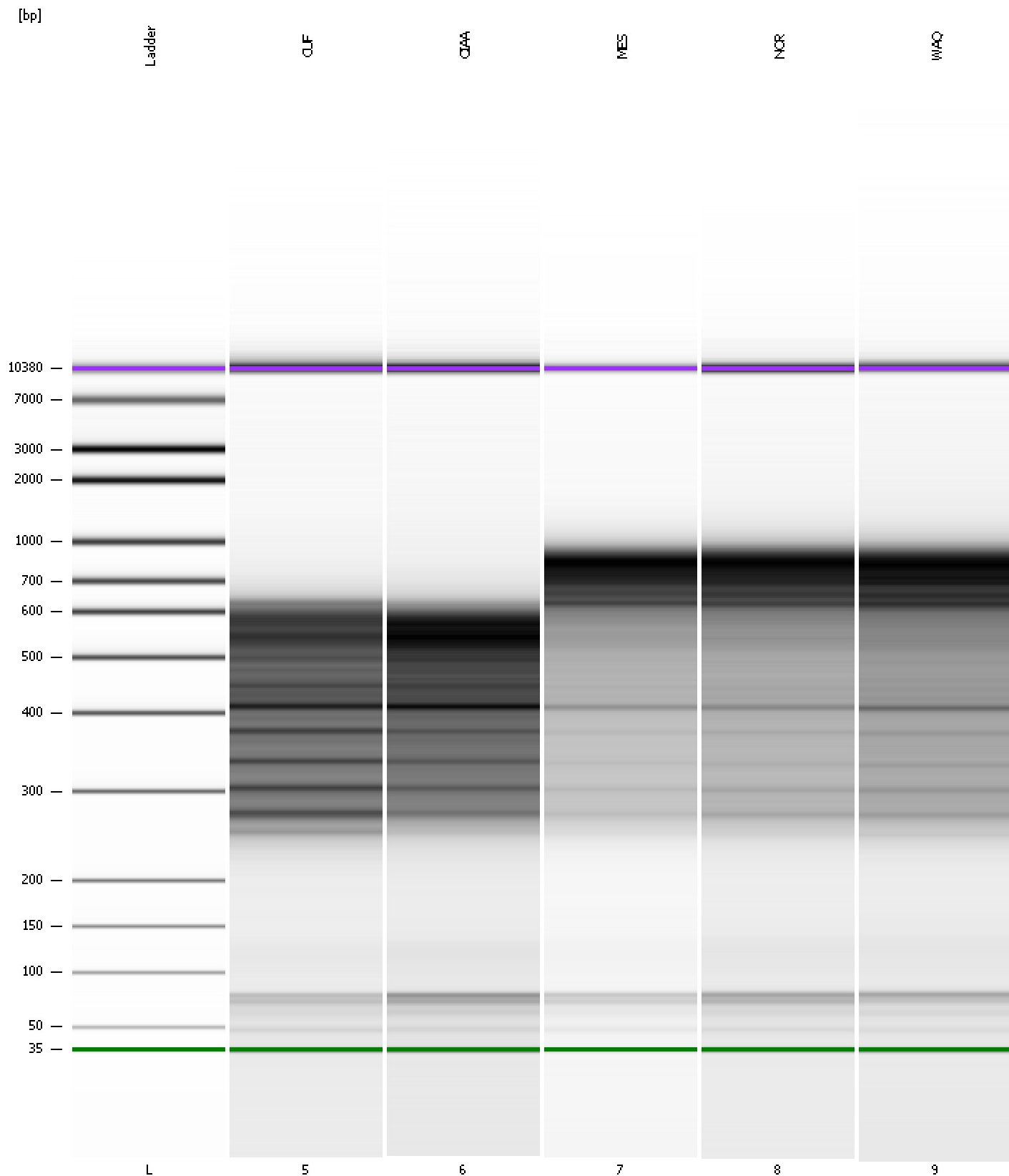
Region table for sample 9 : WAQ

| From [bp] | To [bp] | Average Size [bp] | Corr. Area | Molarity [pmol/l] | Co Conc. [pg/μl] | % of Total | Size distribution in CV [%] |
|-----------|---------|-------------------|------------|-------------------|------------------|------------|-----------------------------|
| 200 | 2,076 | 574 | 1,478.7 | 8,413.0 | 2,542.99 | 93 | 40.4 |

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
Modified: 6/28/2016 10:10:57 AM

Gel Image

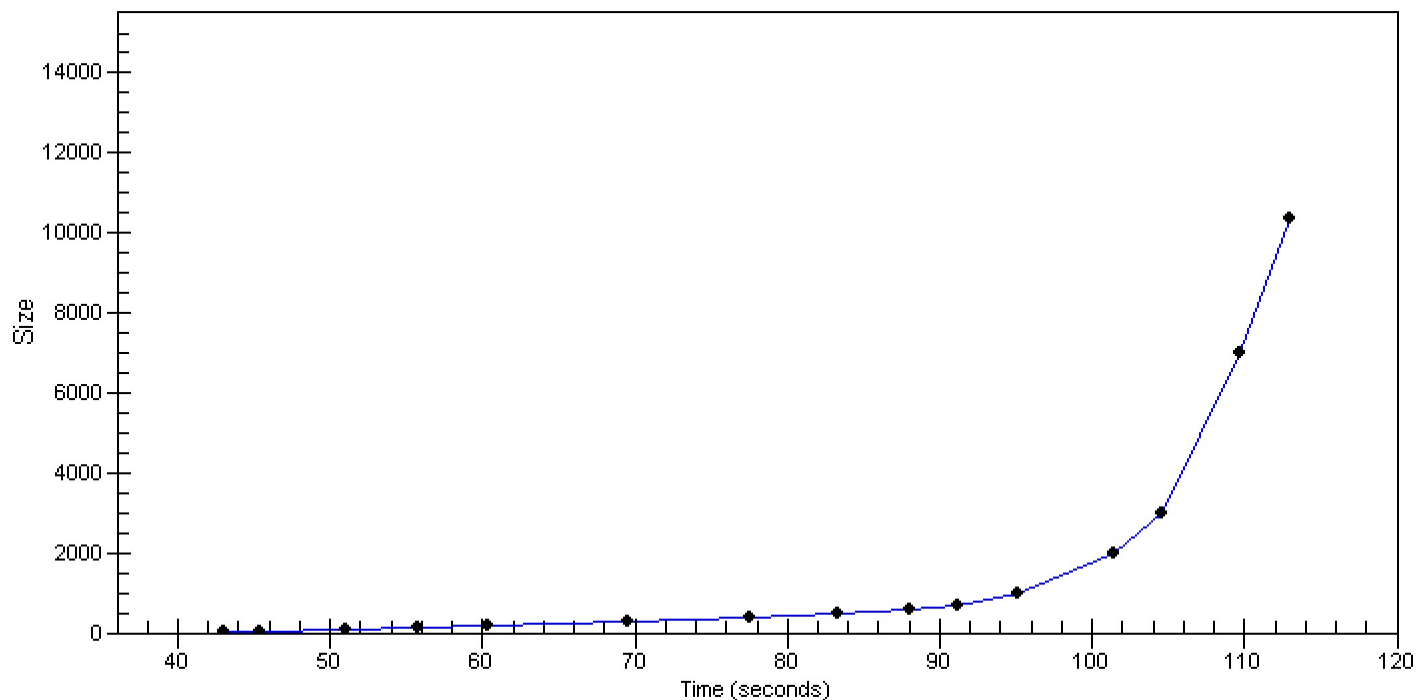


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
Modified: 6/28/2016 10:10:57 AM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...oanalyzer\2100 expert\data\2016-06-28\2016-06-28_001_QC.xad

Created: 6/28/2016 9:31:15 AM
 Modified: 6/28/2016 10:10:57 AM

Run Logbook

| Description | Number | Source | Category | Sub Category | Time | Time Zone | User | Host |
|--|--------|------------|----------|--------------|-----------------------|-------------------------------------|----------|----------|
| Run ended on port 1 (Number of wells acquired: 11) | | Instrument | Run | | 6/28/2016 10:09:42 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\2016-06-28\2016-06-28_001.xad) | | Instrument | Run | | 6/28/2016 9:31:20 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Product Number : G2938B | | Instrument | Run | | 6/28/2016 9:31:20 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Name : | | Instrument | Run | | 6/28/2016 9:31:20 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Vendor : Agilent Technologies | | Instrument | Run | | 6/28/2016 9:31:20 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Serial# : DE13701086 | | Instrument | Run | | 6/28/2016 9:31:20 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Firmware : C.01.069 | | Instrument | Run | | 6/28/2016 9:31:20 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Cartridge : Electrode | | Instrument | Run | | 6/28/2016 9:31:20 AM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |