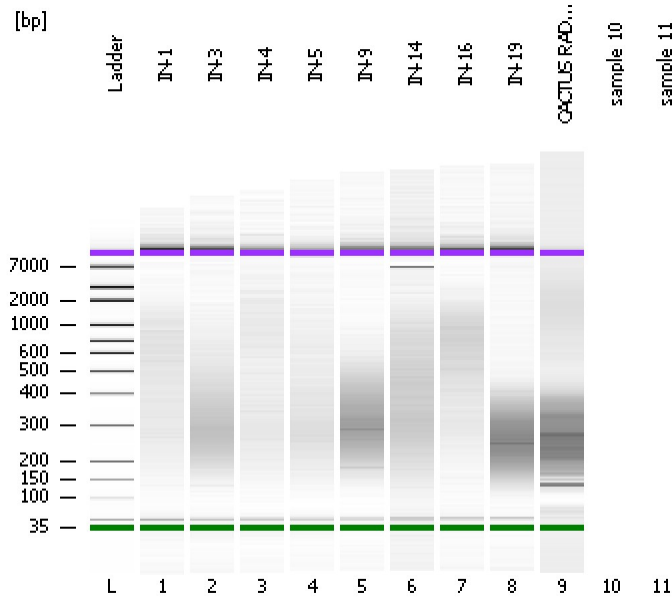


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
Modified: 7/17/2012 2:19:35 PM

**Electrophoresis File Run Summary**



Instrument Information:

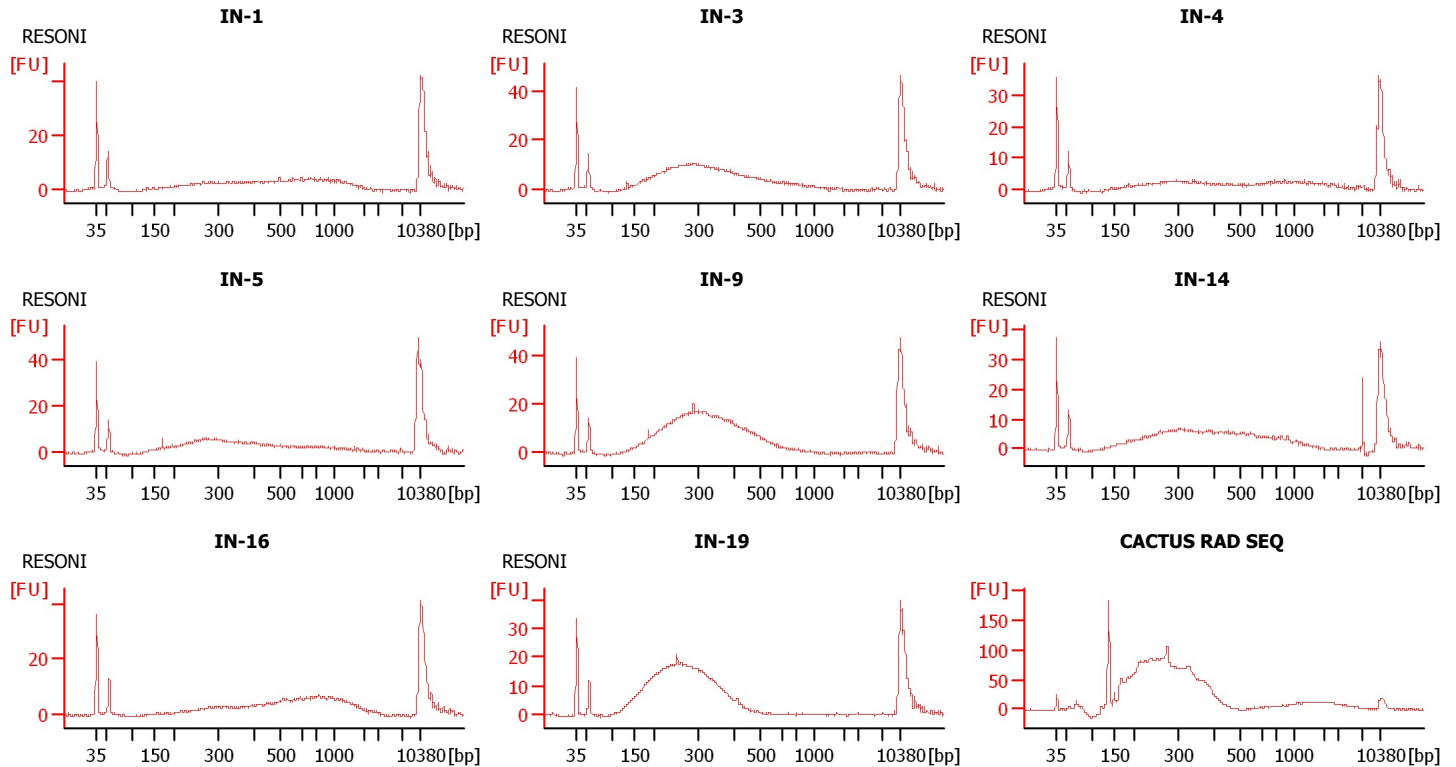
Instrument Name: DE13701086      Firmware: C.01.069  
Serial#: DE13701086      Type: G2938B

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:



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electrophoresis File Run Summary (Chip Summary)**

| Sample Name    | Sample Comment | Rest. Digest             | Status | Observation | Result Label | Result Color |
|----------------|----------------|--------------------------|--------|-------------|--------------|--------------|
| IN-1           | RESONI         | <input type="checkbox"/> | ✓      |             |              |              |
| IN-3           | RESONI         | <input type="checkbox"/> | ✓      |             |              |              |
| IN-4           | RESONI         | <input type="checkbox"/> | ✓      |             |              |              |
| IN-5           | RESONI         | <input type="checkbox"/> | ✓      |             |              |              |
| IN-9           | RESONI         | <input type="checkbox"/> | ✓      |             |              |              |
| IN-14          | RESONI         | <input type="checkbox"/> | ✓      |             |              |              |
| IN-16          | RESONI         | <input type="checkbox"/> | ✓      |             |              |              |
| IN-19          | RESONI         | <input type="checkbox"/> | ✓      |             |              |              |
| CACTUS RAD SEQ |                | <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\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 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

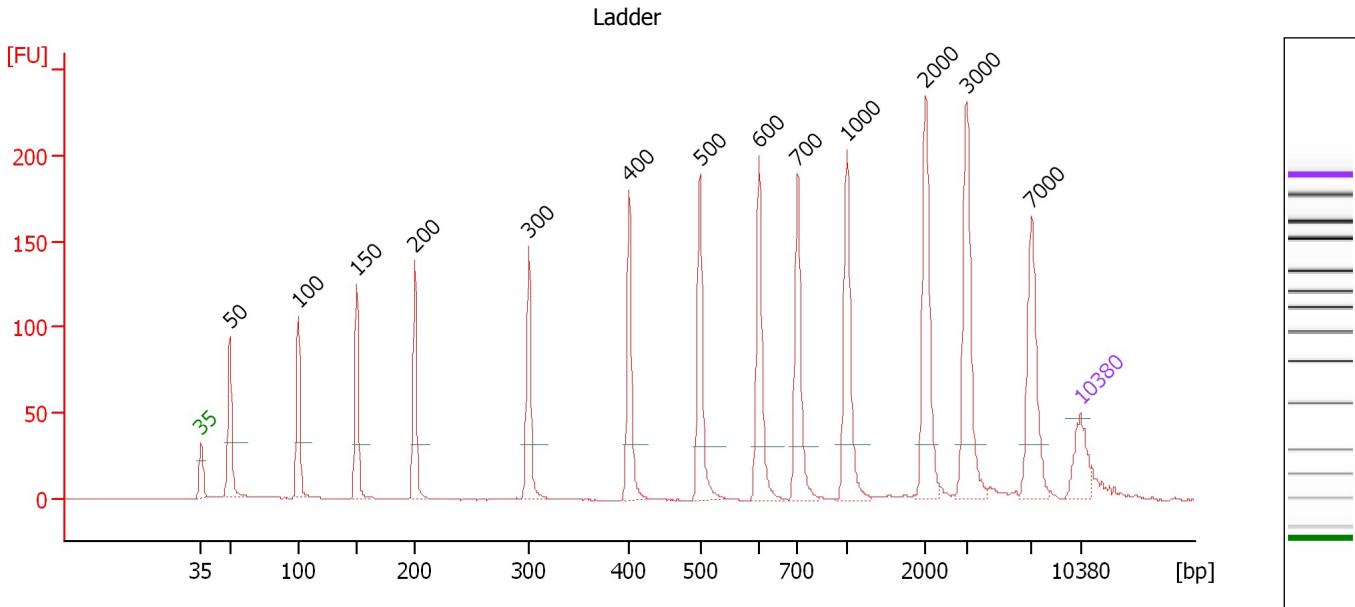
**Ladder**

| 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:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

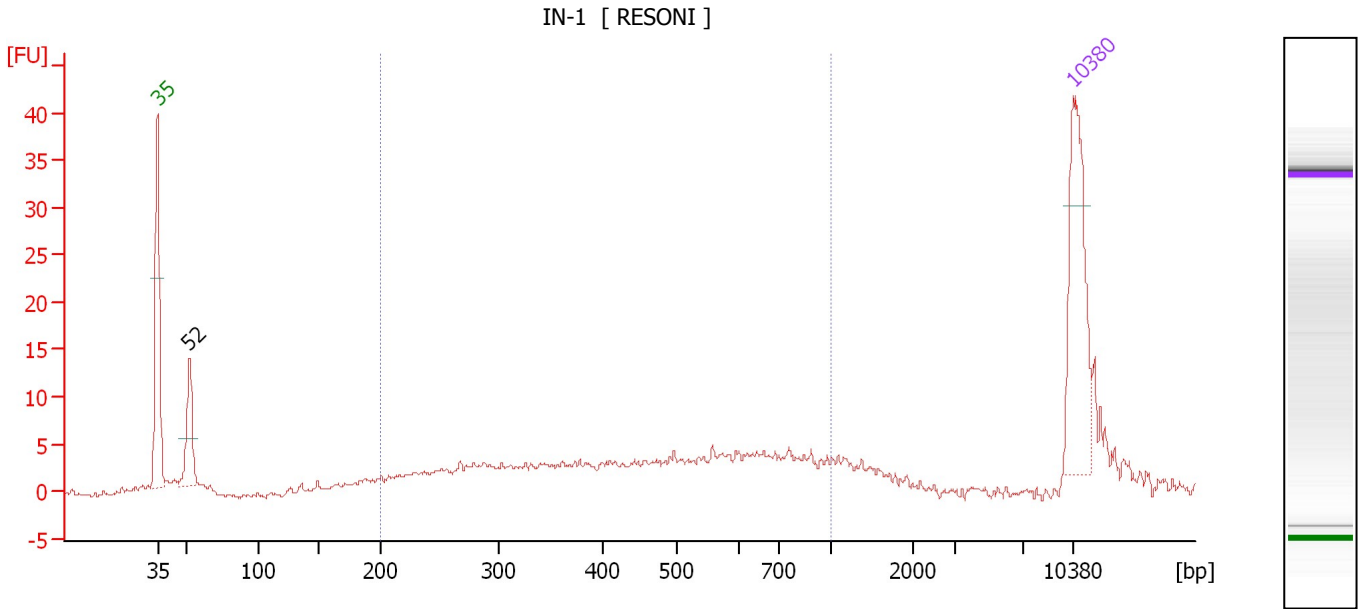
**Peak table for Ladder**

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

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
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**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : IN-1**

Number of peaks found: 1                      Corr. Area 1: 126.9  
 Noise: 0.2

**Peak table for sample 1 : IN-1**

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1    | 35        | 125.00        | 5,411.3           | Lower Marker |
| 2    | 52        | 49.18         | 1,442.3           |              |
| 3    | 10,380    | 75.00         | 10.9              | Upper Marker |

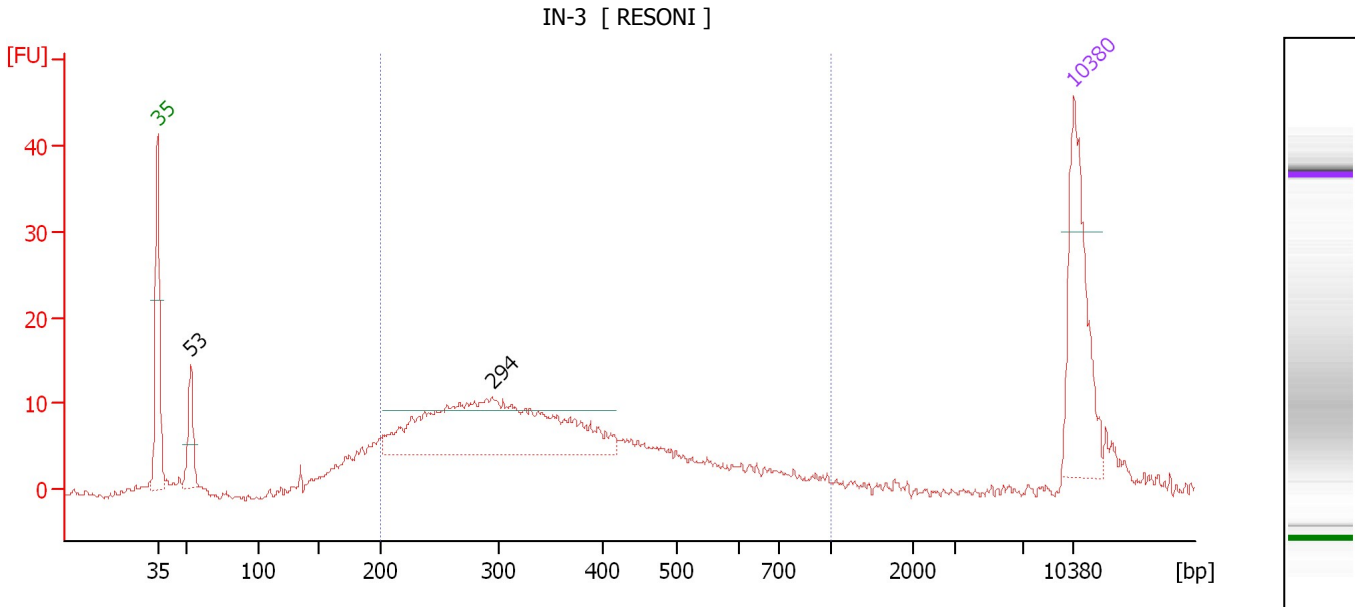
**Region table for sample 1 : IN-1**

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 200       | 1,000   | 486               | 1,064.0           | 270.25        | 126.9      | 67         | 39.8                        | Blue  |

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : IN-3**

Number of peaks found: 2                      Corr. Area 1: 297.9  
 Noise: 0.4

**Peak table for sample 2 : IN-3**

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1    | 35        | 125.00        | 5,411.3           | Lower Marker |
| 2    | 53        | 39.35         | 1,129.7           |              |
| 3    | 294       | 233.81        | 1,203.8           |              |
| 4    | 10,380    | 75.00         | 10.9              | Upper Marker |

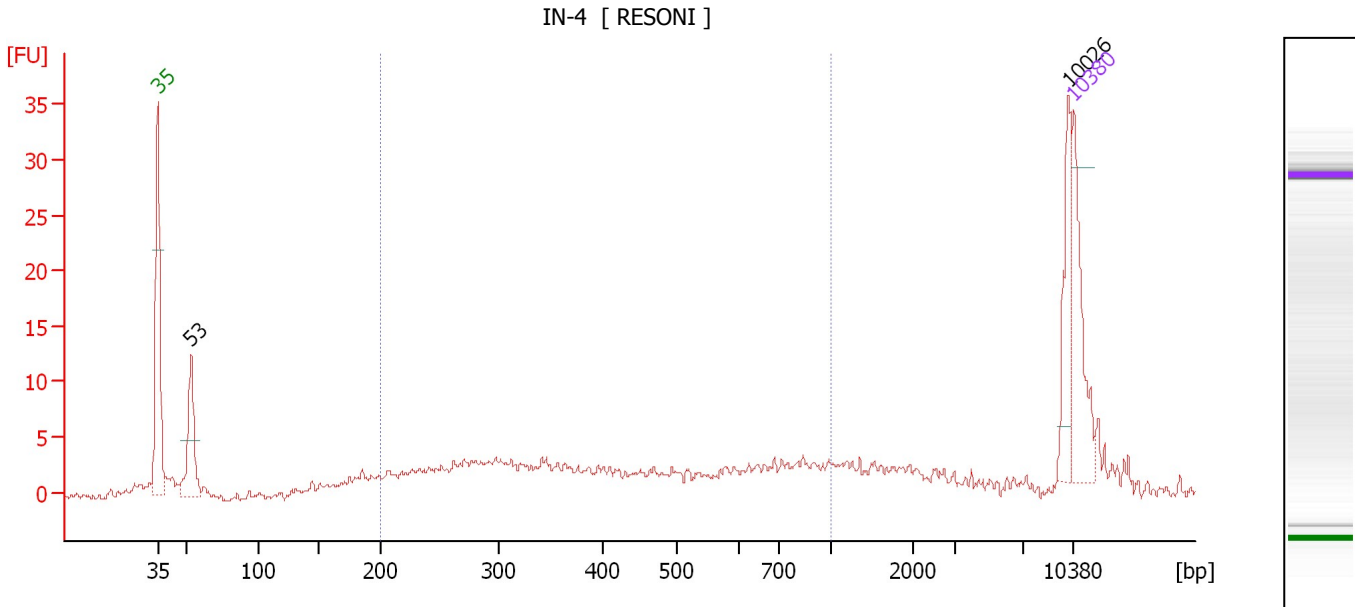
**Region table for sample 2 : IN-3**

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 200       | 1,000   | 366               | 2,690.0           | 558.75        | 297.9      | 81         | 37.7                        | Blue  |

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : IN-4**

Number of peaks found: 2                      Corr. Area 1: 90.5  
 Noise: 0.4

**Peak table for sample 3 : IN-4**

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1    | 35        | 125.00        | 5,411.3           | Lower Marker |
| 2    | 53        | 101.27        | 2,910.8           |              |
| 3    | 10,026    | 57.23         | 8.6               |              |
| 4    | 10,380    | 75.00         | 10.9              | Upper Marker |

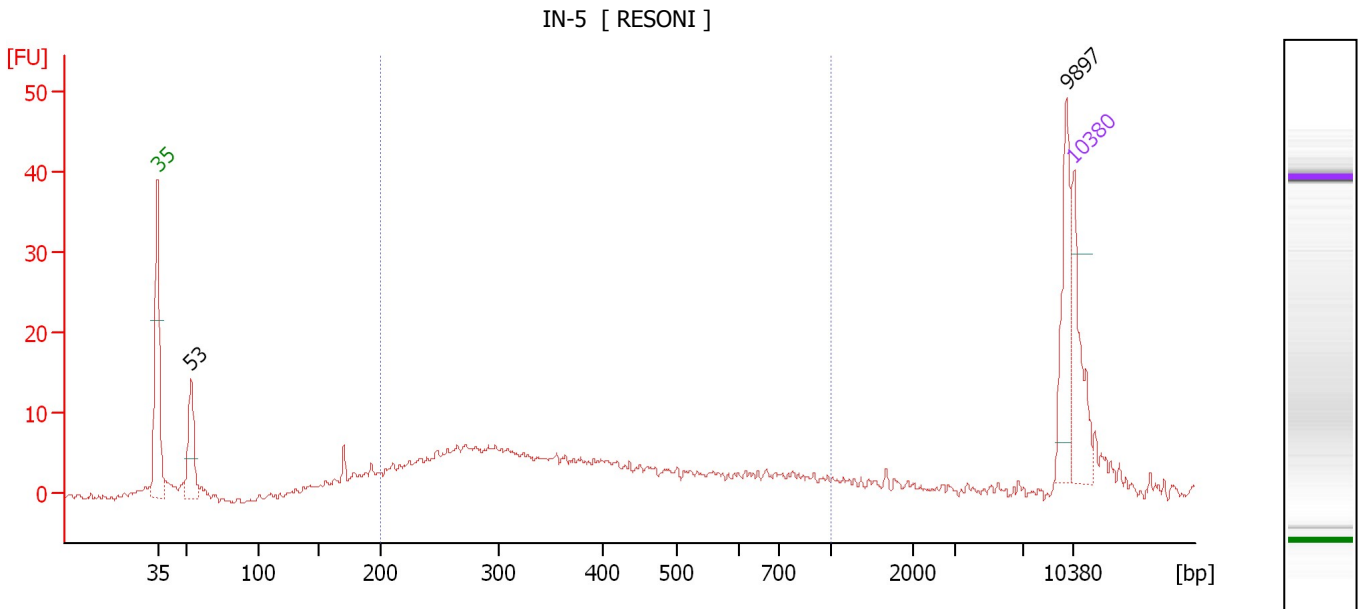
**Region table for sample 3 : IN-4**

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 200       | 1,000   | 458               | 1,686.5           | 395.98        | 90.5       | 54         | 44.6                        | Blue  |

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : IN-5**

Number of peaks found: 2                      Corr. Area 1: 177.4  
 Noise: 0.4

**Peak table for sample 4 : IN-5**

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1    | 35        | 125.00        | 5,411.3           | Lower Marker |
| 2    | 53        | 99.49         | 2,853.3           |              |
| 3    | 9,897     | 87.55         | 13.4              |              |
| 4    | 10,380    | 75.00         | 10.9              | Upper Marker |

**Region table for sample 4 : IN-5**

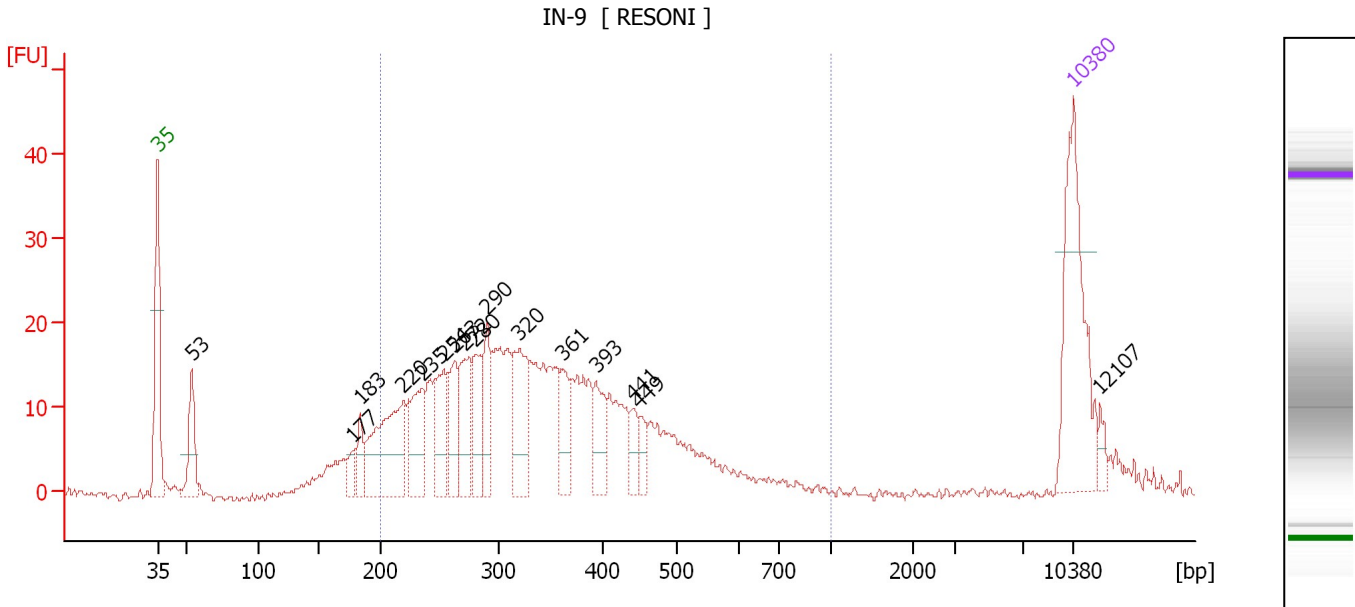
| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 200       | 1,000   | 401               | 3,325.3           | 723.55        | 177.4      | 62         | 42.1                        | Blue  |



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : IN-9**

Number of peaks found: 16                      Corr. Area 1: 466.3  
 Noise: 0.5

**Peak table for sample 5 : IN-9**

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1    | 35        | 125.00        | 5,411.3           | Lower Marker |
| 2    | 53        | 41.09         | 1,167.5           |              |
| 3    | 177       | 12.53         | 107.1             |              |
| 4    | 183       | 16.47         | 136.1             |              |
| 5    | 220       | 88.06         | 607.3             |              |
| 6    | 235       | 45.58         | 293.4             |              |
| 7    | 254       | 39.88         | 238.1             |              |
| 8    | 263       | 35.46         | 204.6             |              |
| 9    | 272       | 36.09         | 201.0             |              |
| 10   | 280       | 36.67         | 198.1             |              |
| 11   | 290       | 32.13         | 167.7             |              |
| 12   | 320       | 55.33         | 262.0             |              |
| 13   | 361       | 26.38         | 110.7             |              |
| 14   | 393       | 25.96         | 100.0             |              |
| 15   | 441       | 13.09         | 45.0              |              |
| 16   | 449       | 10.98         | 37.0              |              |
| 17   | 10,380    | 75.00         | 10.9              | Upper Marker |
| 18   | 12,107    | 0.00          | 0.0               |              |

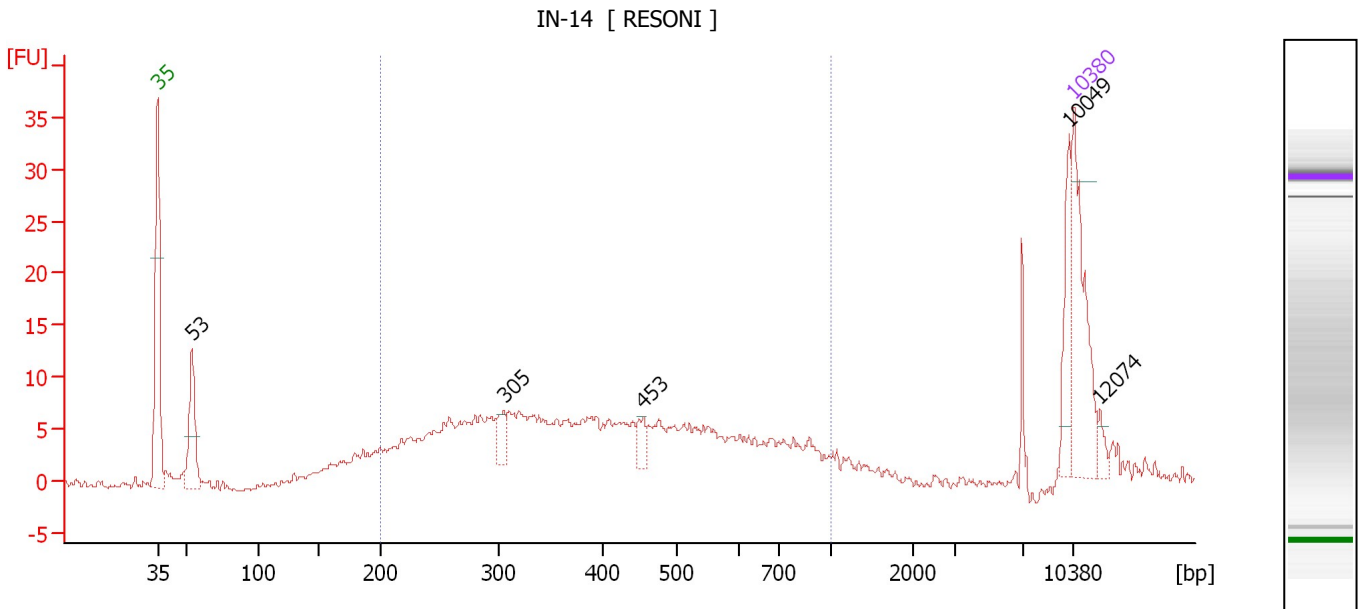
**Region table for sample 5 : IN-9**

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 200       | 1,000   | 349               | 3,814.1           | 786.60        | 466.3      | 83         | 30.8                        | Blue  |

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : IN-14**

Number of peaks found: 5                      Corr. Area 1: 217.4  
 Noise: 0.3

**Peak table for sample 6 : IN-14**

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1    | 35        | 125.00        | 5,411.3           | Lower Marker |
| 2    | 53        | 70.14         | 1,988.7           |              |
| 3    | 305       | 18.89         | 93.9              |              |
| 4    | 453       | 14.32         | 47.9              |              |
| 5    | 10,049    | 33.03         | 5.0               |              |
| 6    | 10,380    | 75.00         | 10.9              | Upper Marker |
| 7    | 12,074    | 0.00          | 0.0               |              |

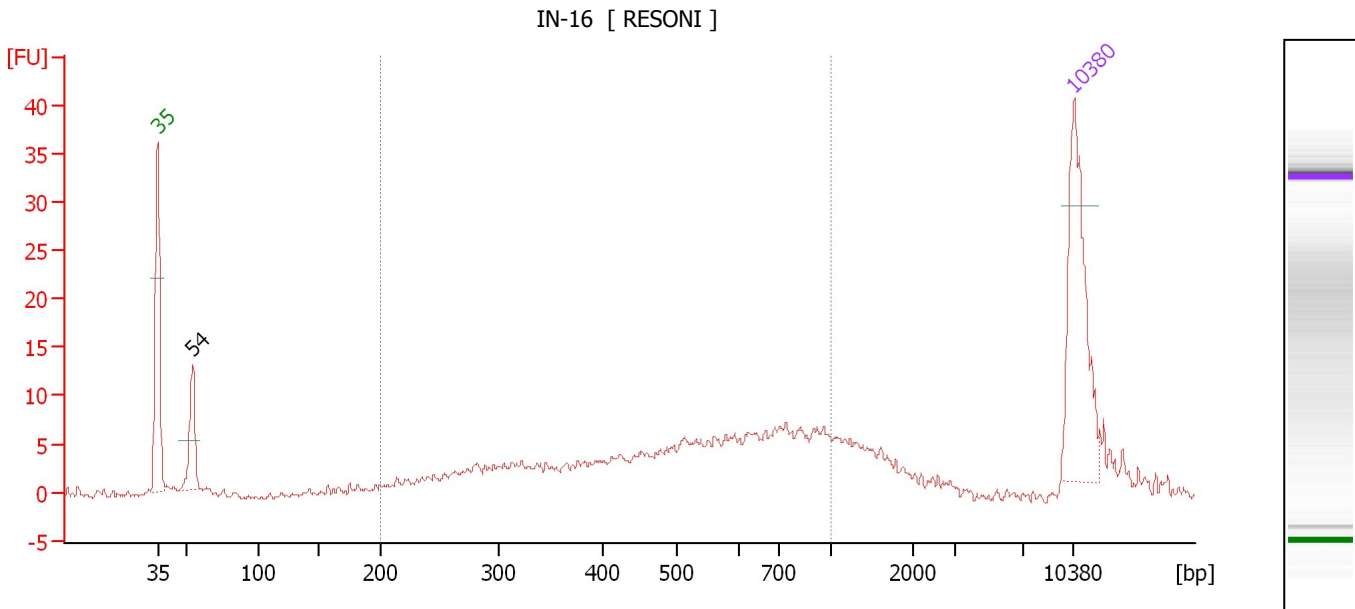
**Region table for sample 6 : IN-14**

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 200       | 1,000   | 424               | 2,861.7           | 661.15        | 217.4      | 77         | 39.5                        | Blue  |

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : IN-16**

Number of peaks found: 1                      Corr. Area 1: 169.3  
 Noise: 0.4

**Peak table for sample 7 : IN-16**

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1    | 35        | 125.00        | 5,411.3           | Lower Marker |
| 2    | 54        | 42.88         | 1,210.9           |              |
| 3    | 10,380    | 75.00         | 10.9              | Upper Marker |

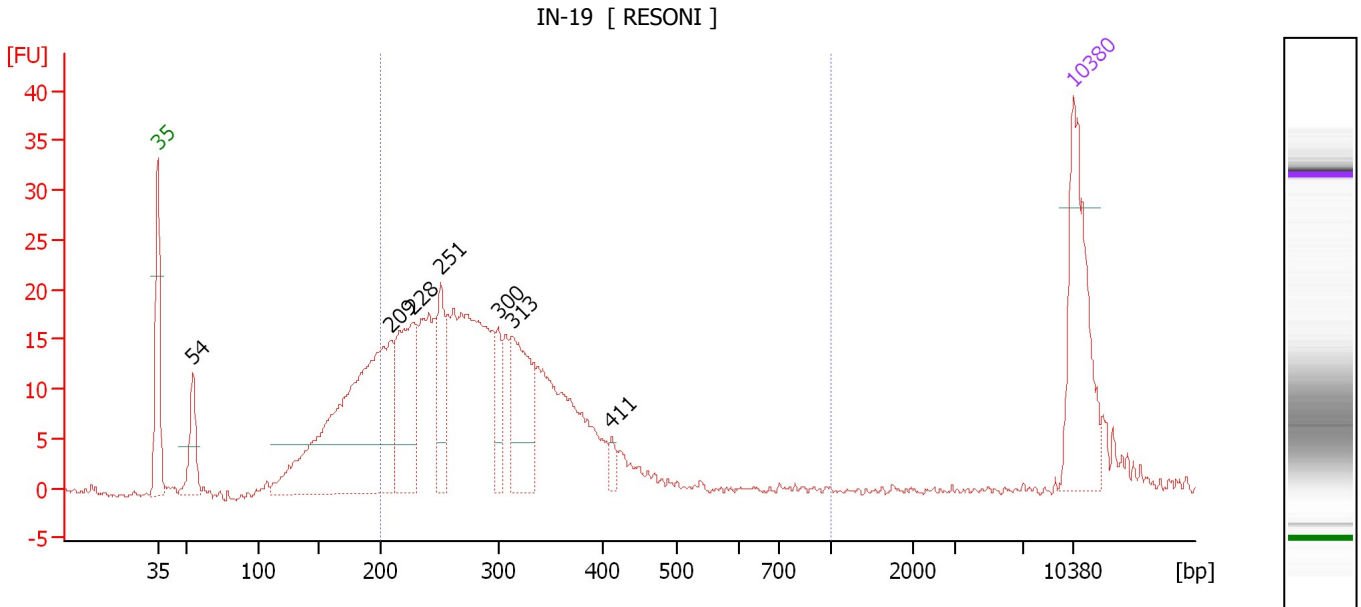
**Region table for sample 7 : IN-16**

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 200       | 1,000   | 531               | 1,200.2           | 336.56        | 169.3      | 69         | 37.4                        | Blue  |

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : IN-19**

Number of peaks found: 7                      Corr. Area 1: 380.3  
 Noise: 0.3

**Peak table for sample 8 : IN-19**

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1    | 35        | 125.00        | 5,411.3           | Lower Marker |
| 2    | 54        | 42.05         | 1,174.5           |              |
| 3    | 209       | 294.07        | 2,132.6           |              |
| 4    | 228       | 103.45        | 687.1             |              |
| 5    | 251       | 48.17         | 290.7             |              |
| 6    | 300       | 31.29         | 158.2             |              |
| 7    | 313       | 82.69         | 400.3             |              |
| 8    | 411       | 7.97          | 29.4              |              |
| 9    | 10,380    | 75.00         | 10.9              | Upper Marker |

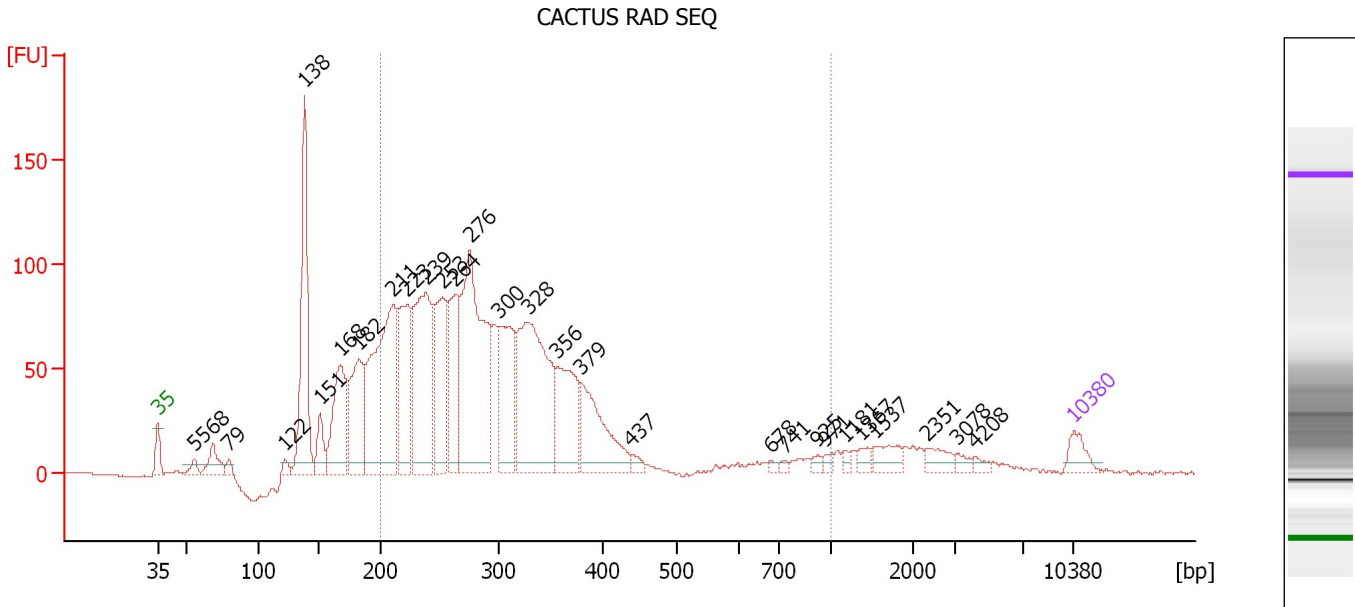
**Region table for sample 8 : IN-19**

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|-------|
| 200       | 1,000   | 292               | 4,374.1           | 801.01        | 380.3      | 75         | 22.4                        | Blue  |

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : CACTUS RAD SEQ**

Number of peaks found: 29                      Corr. Area 1: 1,815.4  
 Noise: 0.4

**Peak table for sample 9 : CACTUS RAD SEQ**

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 1    | 35        | 125.00        | 5,411.3           | Lower Marker |
| 2    | 55        | 56.93         | 1,560.9           |              |
| 3    | 68        | 154.34        | 3,453.9           |              |
| 4    | 79        | 41.99         | 803.0             |              |
| 5    | 122       | 41.37         | 514.8             |              |
| 6    | 138       | 1,048.89      | 11,550.9          |              |
| 7    | 151       | 162.74        | 1,636.4           |              |
| 8    | 168       | 570.68        | 5,159.7           |              |
| 9    | 182       | 558.55        | 4,642.2           |              |
| 10   | 211       | 1,388.00      | 9,947.2           |              |
| 11   | 223       | 655.14        | 4,449.6           |              |
| 12   | 239       | 1,045.71      | 6,639.3           |              |
| 13   | 253       | 660.12        | 3,960.7           |              |
| 14   | 264       | 531.45        | 3,054.3           |              |
| 15   | 276       | 1,416.71      | 7,781.1           |              |
| 16   | 300       | 614.11        | 3,097.9           |              |
| 17   | 328       | 1,181.47      | 5,454.7           |              |
| 18   | 356       | 532.78        | 2,267.5           |              |
| 19   | 379       | 521.01        | 2,084.2           |              |
| 20   | 437       | 43.62         | 151.2             |              |
| 21   | 678       | 19.02         | 42.5              |              |
| 22   | 741       | 18.63         | 38.1              |              |
| 23   | 925       | 24.92         | 40.8              |              |
| 24   | 971       | 26.28         | 41.0              |              |
| 25   | 1,181     | 23.67         | 30.4              |              |
| 26   | 1,367     | 45.84         | 50.8              |              |

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad


Created: 7/17/2012 1:30:21 PM  
 Modified: 7/17/2012 2:19:35 PM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 9 : CACTUS RAD SEQ

| Peak | Size [bp] | Conc. [pg/μl] | Molarity [pmol/l] | Observations |
|------|-----------|---------------|-------------------|--------------|
| 27   | 1,537     | 90.68         | 89.4              |              |
| 28   | 2,351     | 71.89         | 46.3              |              |
| 29   | 3,078     | 29.67         | 14.6              |              |
| 30   | 4,208     | 24.31         | 8.8               |              |
| 31   | 10,380    | 75.00         | 10.9              | Upper Marker |

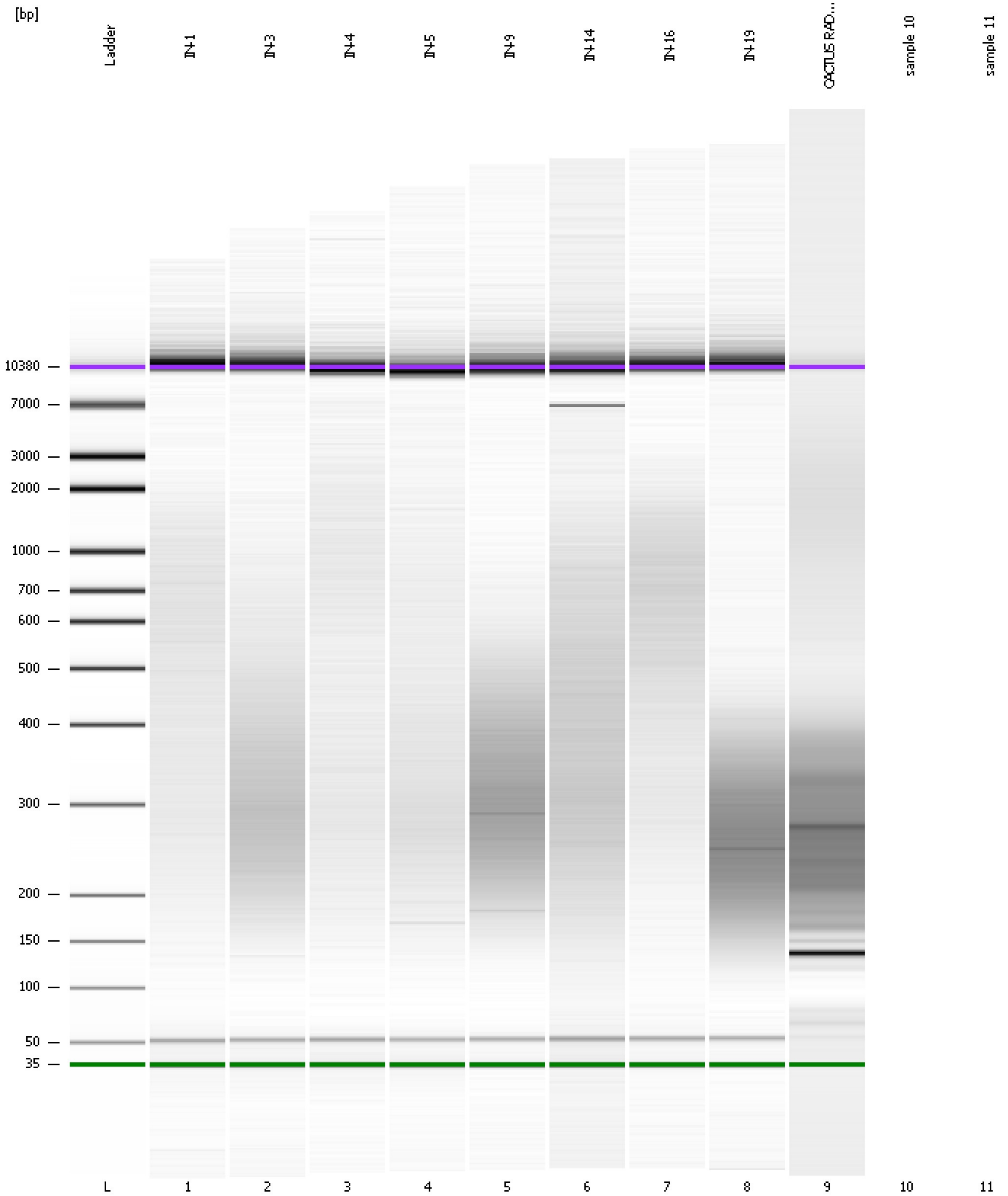
#### Region table for sample 9 : CACTUS RAD SEQ

| From [bp] | To [bp] | Average Size [bp] | Molarity [pmol/l] | Conc. [pg/μl] | Corr. Area | % of Total | Size distribution in CV [%] | Color   |
|-----------|---------|-------------------|-------------------|---------------|------------|------------|-----------------------------|---|
| 200       | 1,000   | 304               | 46,123.6          | 8,505.59      | 1,815.4    | 73         | 34.2                        |  |

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
Modified: 7/17/2012 2:19:35 PM

**Gel Image**

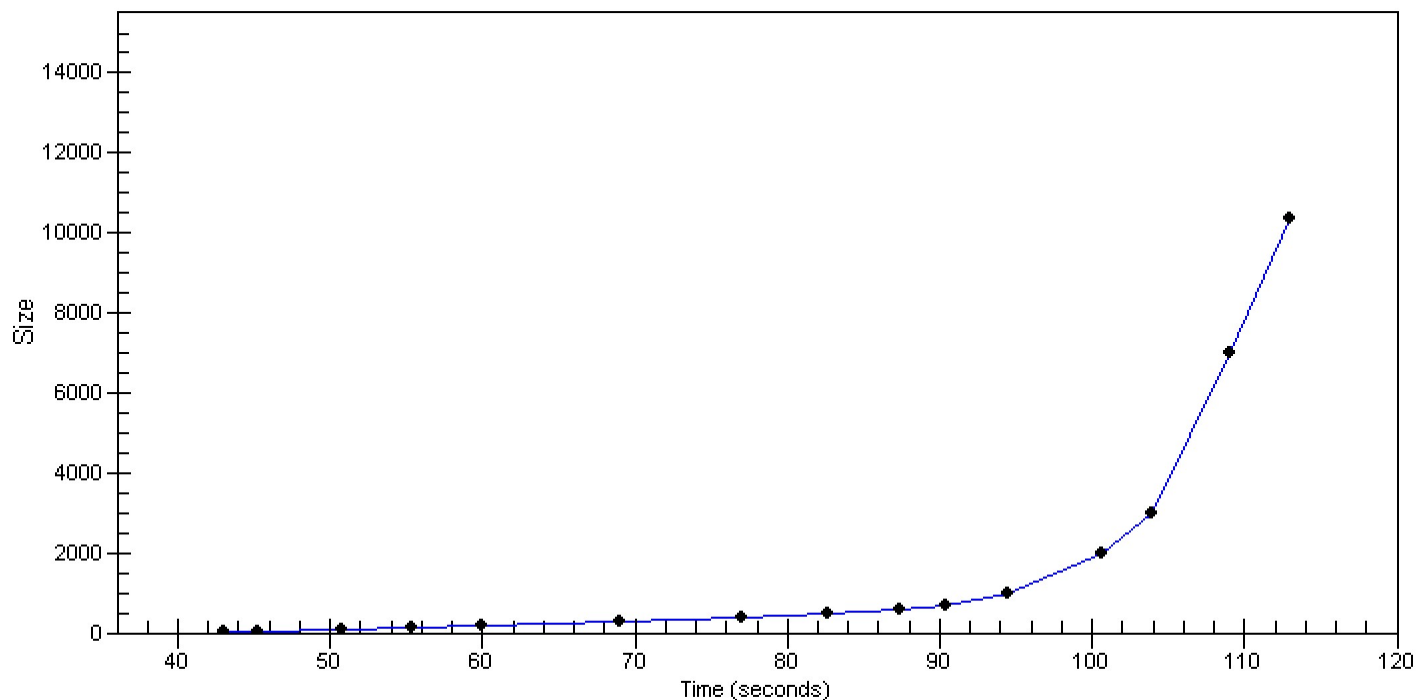


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
Modified: 7/17/2012 2:19:35 PM

**Curves**

**Standard Curve**





Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-07-17\2012-07-17\_002.xad

Created: 7/17/2012 1:30:21 PM  
Modified: 7/17/2012 2:19:35 PM

**Invalid Samples**

Sample 10 has not been run, no results available.

Sample 11 has not been run, no results available.