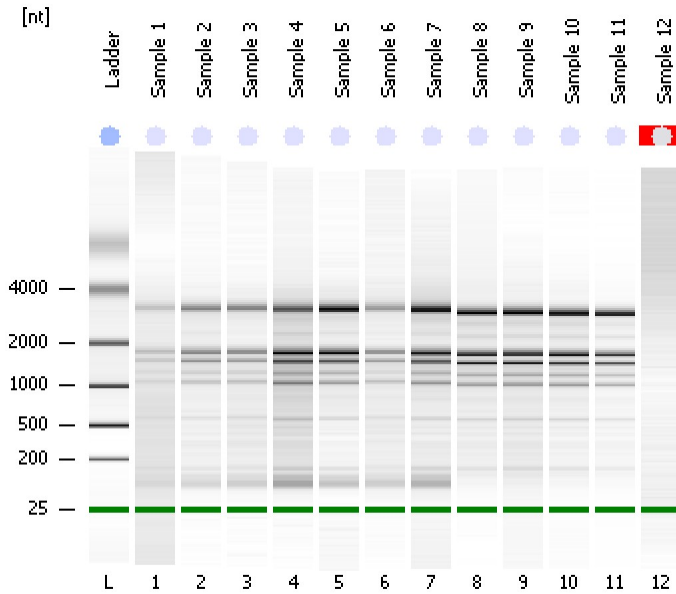


Assay Class: Plant RNA Nano
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
Modified: 2/23/2017 3:10:27 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\RNA\Plant RNA Nano.xsy

Assay Class: Plant RNA Nano

Version: 1.3

Assay Comments: Total RNA Analysis ng sensitivity (Plant)

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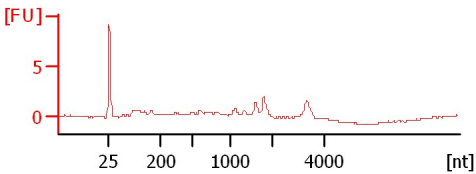
Chip Information:

Chip Lot #:

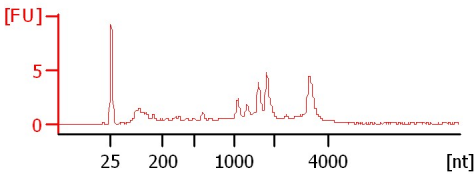
Reagent Kit Lot #:

Chip Comments:

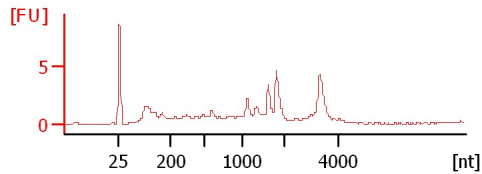
Sample 1
RIN: 6.40



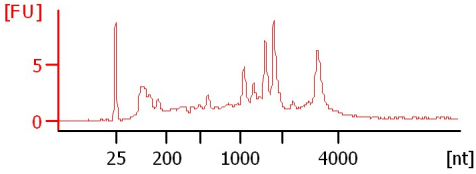
Sample 2
RIN: 7



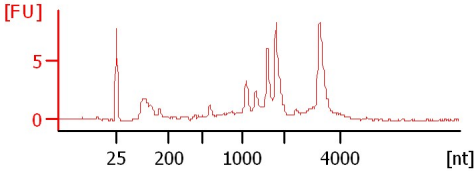
Sample 3
RIN: 6.90



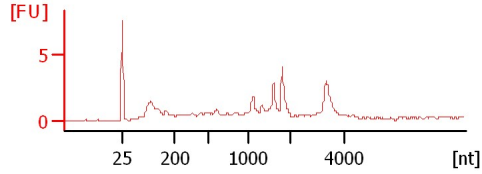
Sample 4
RIN: 6.10



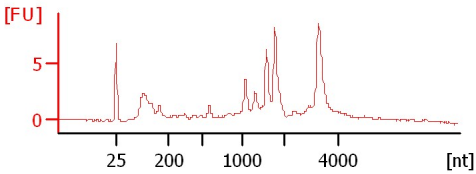
Sample 5
RIN: 7.10



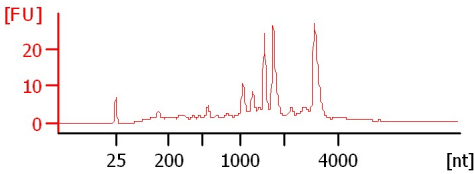
Sample 6
RIN: 7



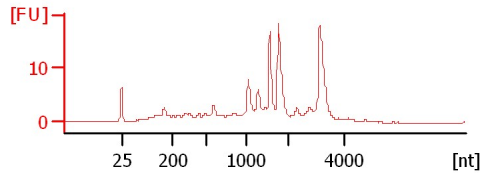
Sample 7
RIN: 6.90



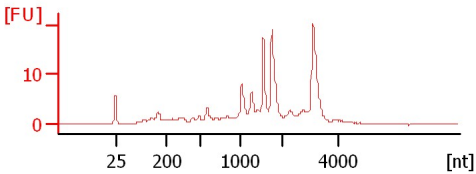
Sample 8
RIN: 6.40



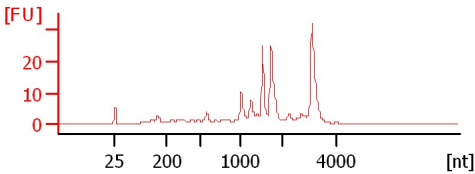
Sample 9
RIN: 6.50



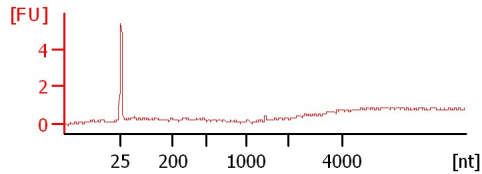
Sample 10
RIN: 6.60



Sample 11
RIN: 7



Sample 12
RIN N/A



Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Electrophoresis File Run Summary (Chip Summary)

| Sample Name | Sample Comment | Status | Result Label | Result Color |
|-------------|----------------|--------|-------------------|--------------|
| Sample 1 | | ✓ | RIN: 6.40 | |
| Sample 2 | | ✓ | RIN:7 | |
| Sample 3 | | ✓ | RIN: 6.90 | |
| Sample 4 | | ✓ | RIN: 6.10 | |
| Sample 5 | | ✓ | RIN: 7.10 | |
| Sample 6 | | ✓ | RIN:7 | |
| Sample 7 | | ✓ | RIN: 6.90 | |
| Sample 8 | | ✓ | RIN: 6.40 | |
| Sample 9 | | ✓ | RIN: 6.50 | |
| Sample 10 | | ✓ | RIN: 6.60 | |
| Sample 11 | | ✓ | RIN:7 | |
| Sample 12 | | ✓ | RIN N/A | |
| Ladder | | ✓ | All Other Samples | |

Chip Lot #

Reagent Kit Lot #

Chip Comments :

Assay Class: Plant RNA Nano
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
Modified: 2/23/2017 3:10:27 PM

Electrophoresis Assay Details

General Analysis Settings

Number of Available Sample and Ladder Wells (Max.) : 13
Minimum Visible Range [s] : 17
Maximum Visible Range [s] : 70
Start Analysis Time Range [s] : 19
End Analysis Time Range [s] : 69
Ladder Concentration [ng/μl] : 150
Lower Marker Concentration [ng/μl] : 0
Upper Marker Concentration [ng/μl] : 0
Used Lower Marker for Quantitation
Standard Curve Fit is Logarithmic
Show Data Aligned to Lower Marker

Integrator Settings

Integration Start Time [s] : 19
Integration End Time [s] : 69
Slope Threshold : 0.6
Height Threshold [FU] : 0.2
Area Threshold : 0.1
Width Threshold [s] : 0.2
Baseline Plateau [s] : 6

Filter Settings

Filter Width [s] : 0.5
Polynomial Order : 4

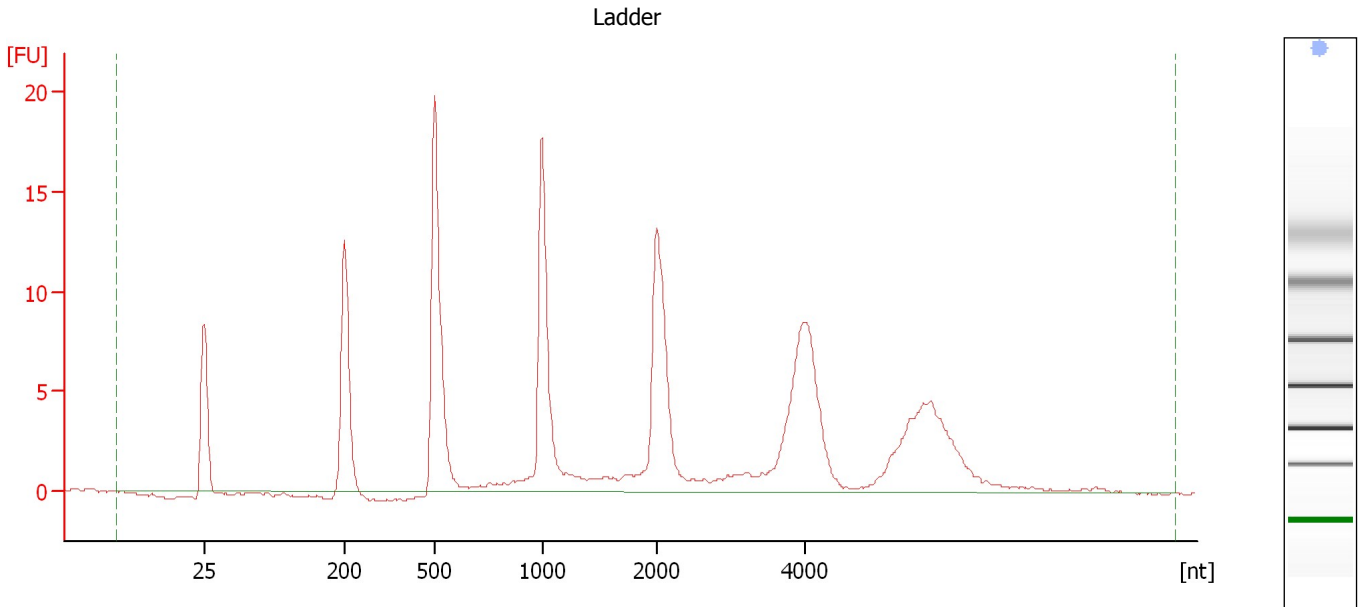
Ladder

| Ladder Peak | Size |
|-------------|------|
| 1 | 25 |
| 2 | 200 |
| 3 | 500 |
| 4 | 1000 |
| 5 | 2000 |
| 6 | 4000 |

Assay Class: Plant RNA Nano
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary



Overall Results for Ladder

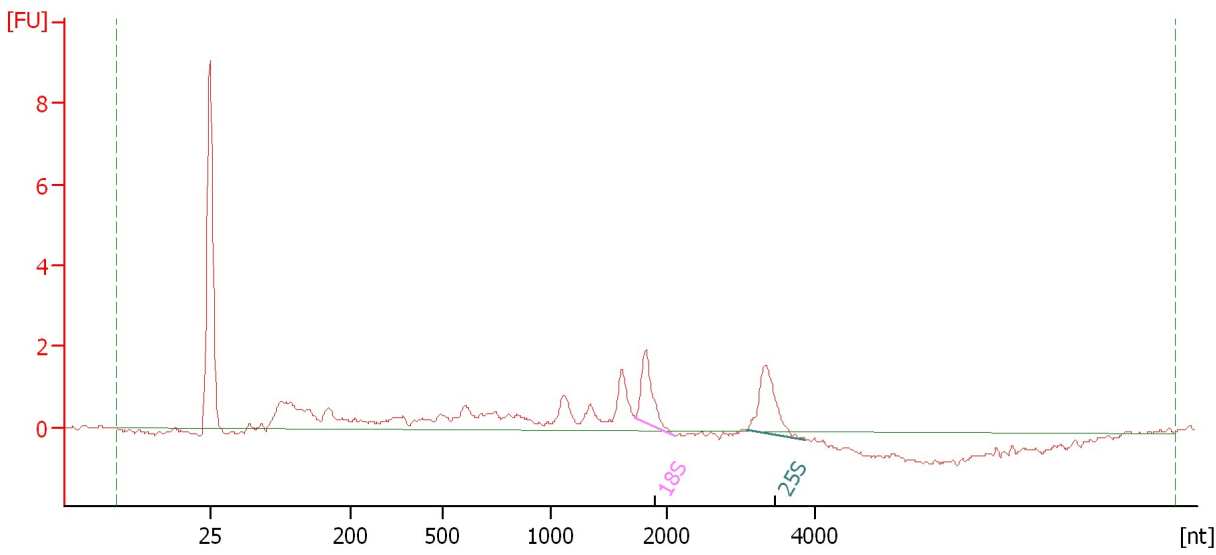
| | | | |
|--------------------|-----------|------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 156.8 | Result Flagging Color: | |
| RNA Concentration: | 150 ng/μl | Result Flagging Label: | All Other Samples |

Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...

Sample 1



Overall Results for sample 1 : Sample 1

| | | | |
|-------------------------|----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 24.0 | RNA Integrity Number (RIN): | 6.4 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 23 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.3 | Result Flagging Label: | RIN: 6.40 |

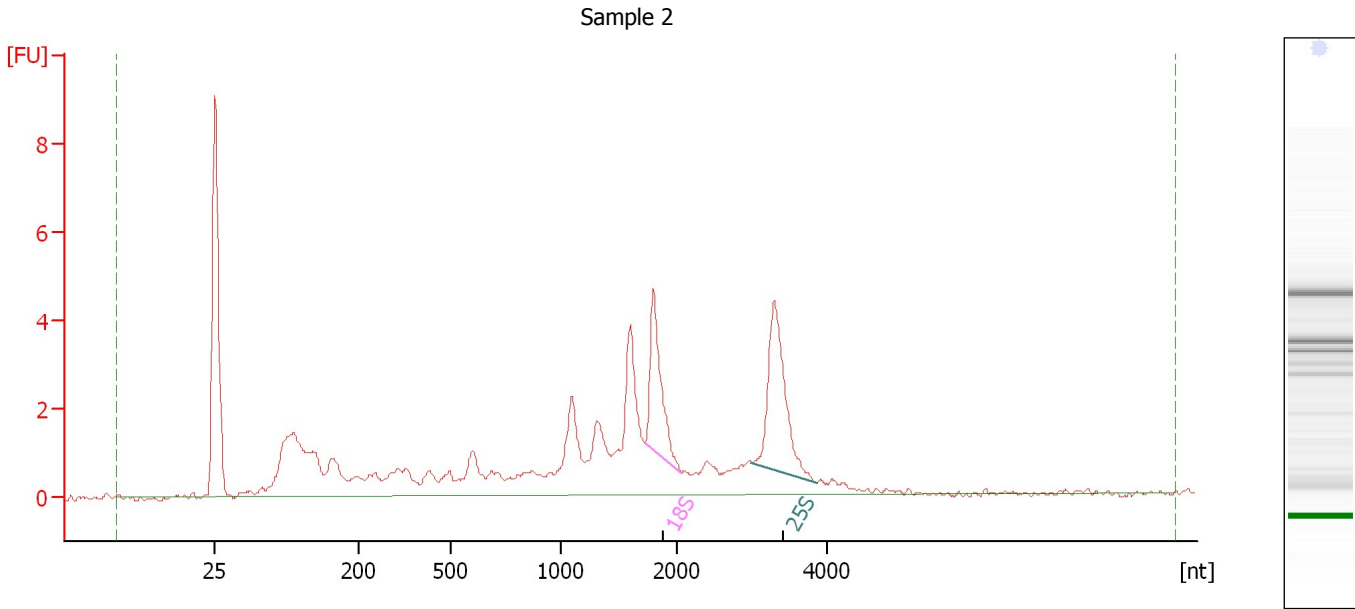
Fragment table for sample 1 : Sample 1

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,727 | 2,122 | 2.3 | 9.6 |
| 25S | 3,083 | 3,857 | 3.1 | 13.0 |

Assay Class: Plant RNA Nano
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : Sample 2

| | | | |
|-------------------------|----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 61.6 | RNA Integrity Number (RIN): | 7 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 59 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.4 | Result Flagging Label: | RIN:7 |

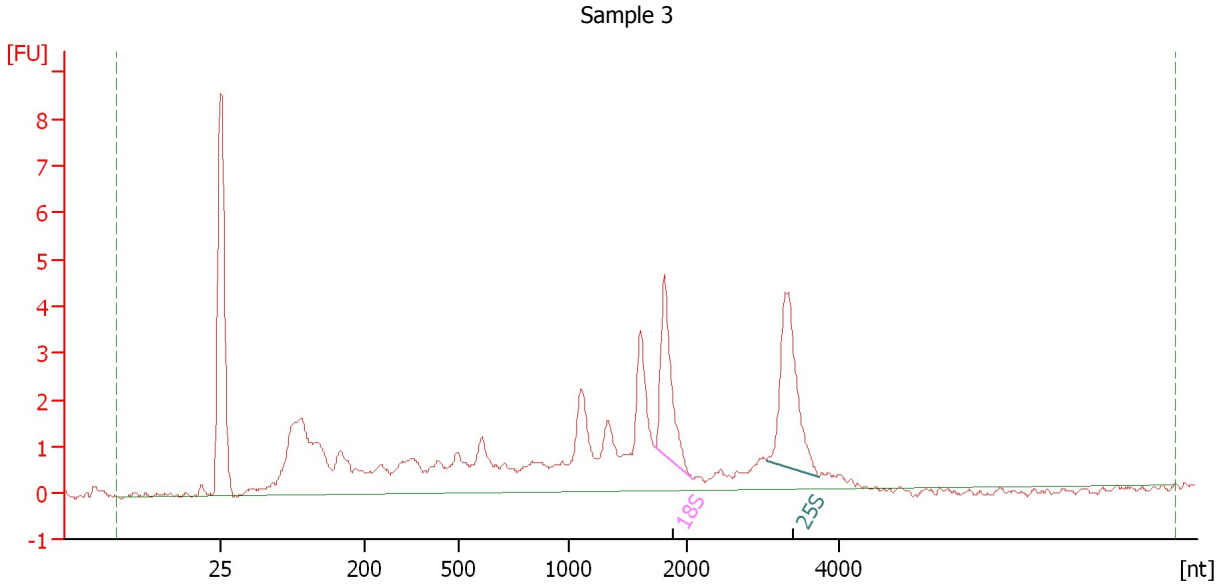
Fragment table for sample 2 : Sample 2

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,725 | 2,057 | 4.8 | 7.8 |
| 25S | 2,993 | 3,859 | 6.9 | 11.2 |

Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : Sample 3

| | | | |
|-------------------------|----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 62.7 | RNA Integrity Number (RIN): | 6.9 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 60 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.4 | Result Flagging Label: | RIN: 6.90 |

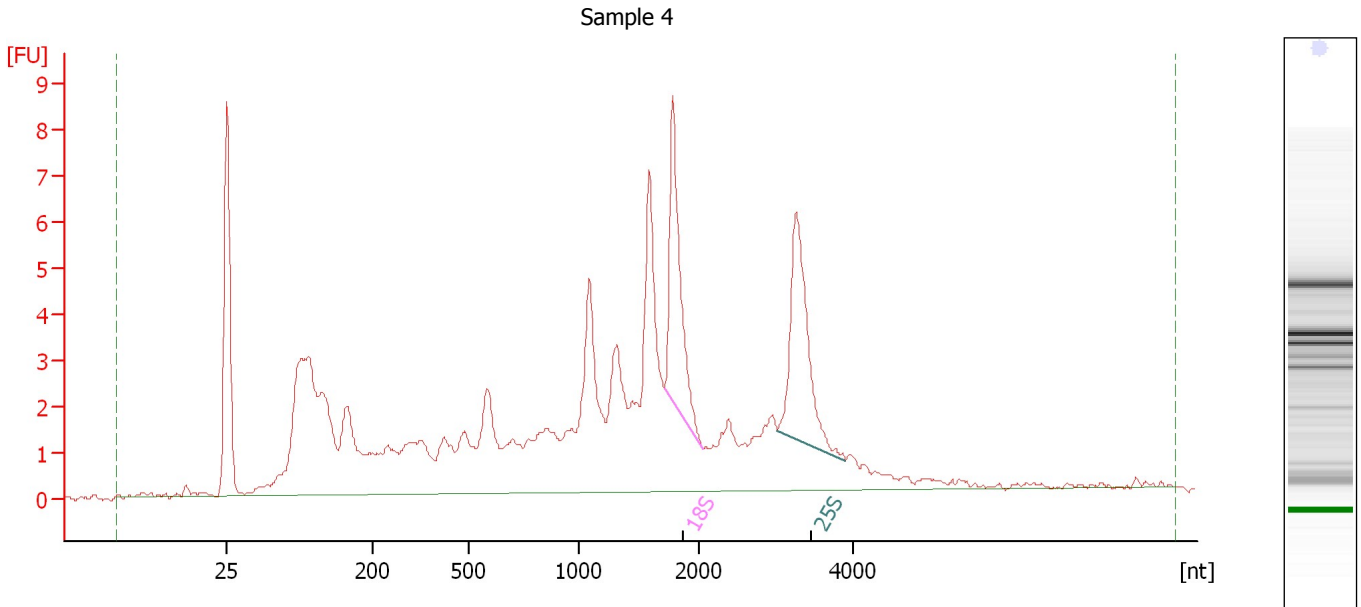
Fragment table for sample 3 : Sample 3

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,733 | 2,078 | 4.7 | 7.5 |
| 25S | 3,047 | 3,735 | 6.5 | 10.4 |

Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : Sample 4

| | | | |
|-------------------------|-----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 124.3 | RNA Integrity Number (RIN): | 6.1 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 119 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.1 | Result Flagging Label: | RIN: 6.10 |

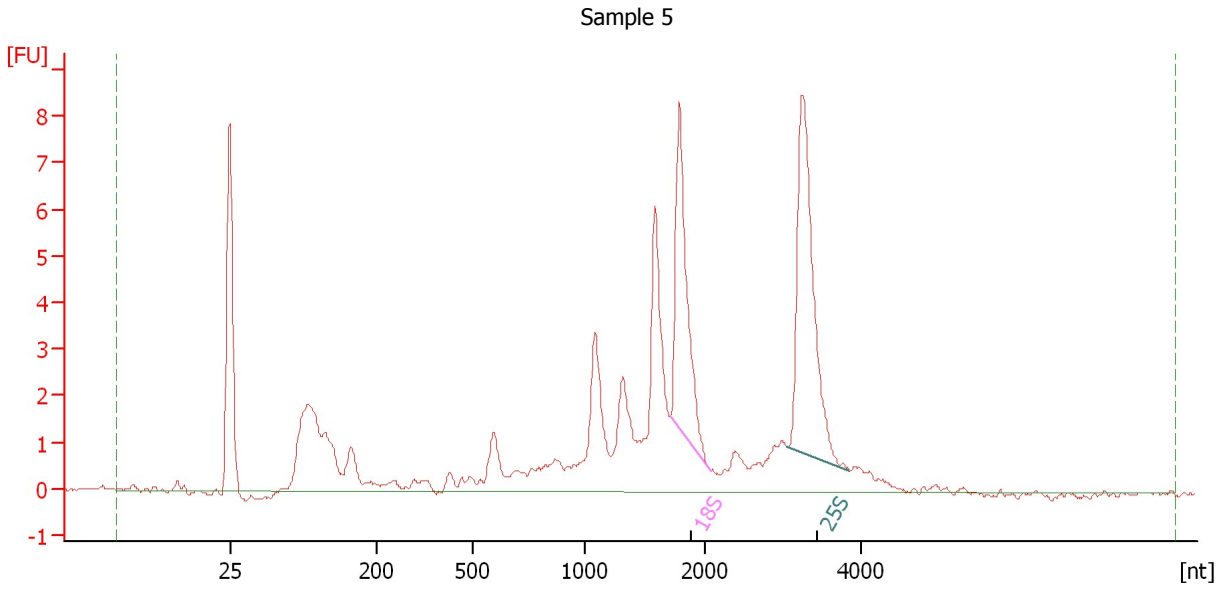
Fragment table for sample 4 : Sample 4

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,706 | 2,044 | 8.1 | 6.5 |
| 25S | 3,015 | 3,903 | 8.8 | 7.1 |

Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : Sample 5

| | | | |
|-------------------------|----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 76.7 | RNA Integrity Number (RIN): | 7.1 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 73 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.4 | Result Flagging Label: | RIN: 7.10 |

Fragment table for sample 5 : Sample 5

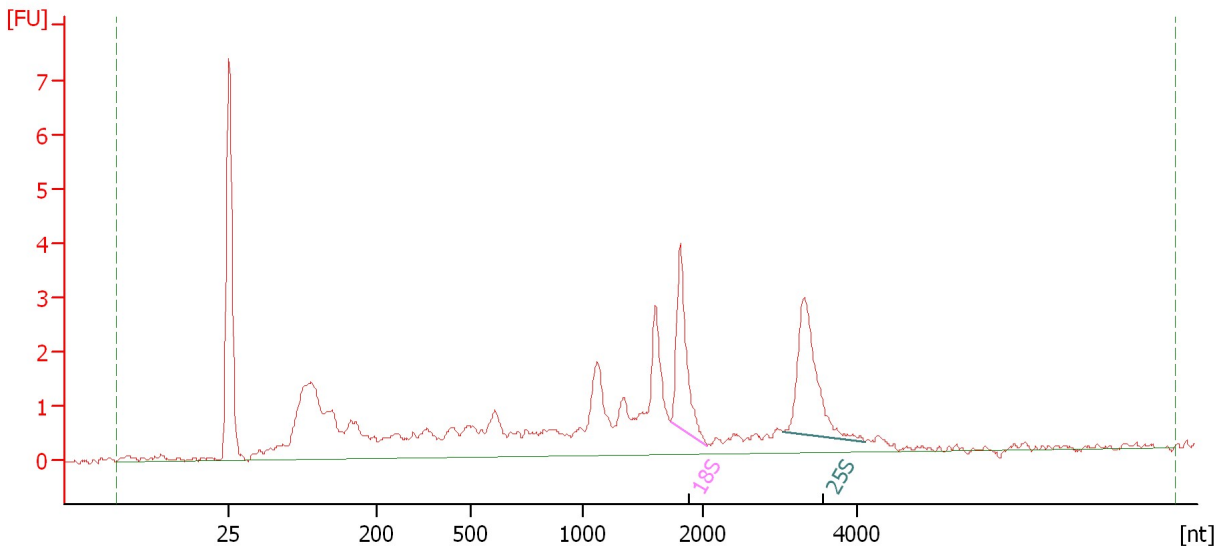
| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,710 | 2,061 | 9.0 | 11.8 |
| 25S | 3,054 | 3,868 | 12.7 | 16.6 |

Assay Class: Plant RNA Nano
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...

Sample 6



Overall Results for sample 6 : Sample 6

| | | | |
|-------------------------|----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 51.2 | RNA Integrity Number (RIN): | 7 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 49 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.3 | Result Flagging Label: | RIN:7 |

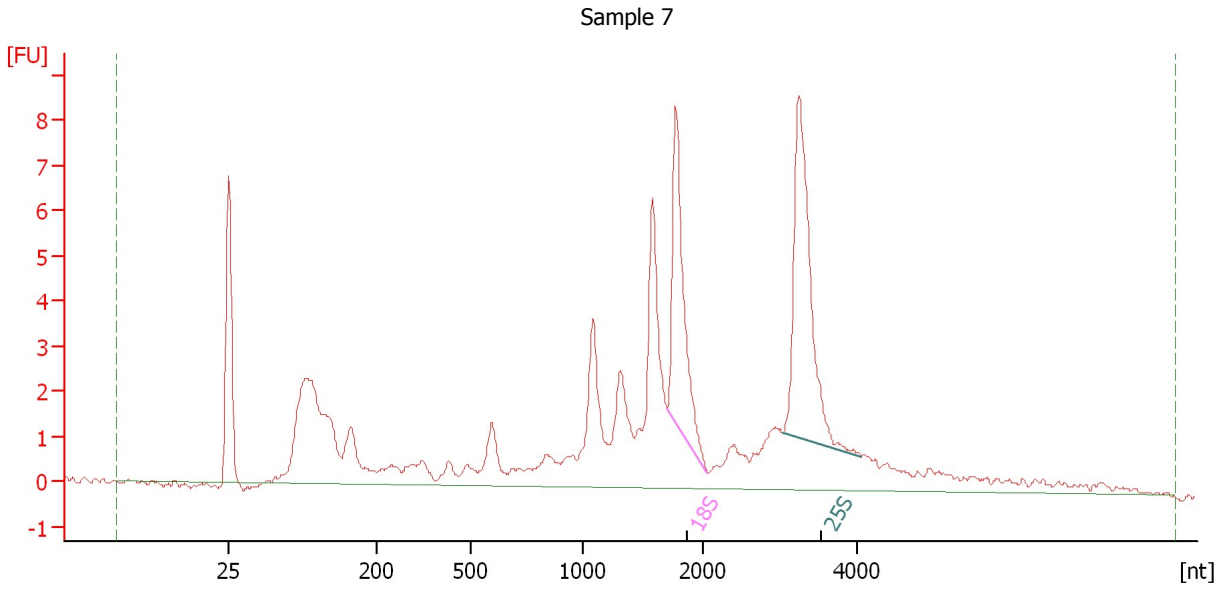
Fragment table for sample 6 : Sample 6

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,727 | 2,060 | 3.8 | 7.4 |
| 25S | 3,041 | 4,092 | 4.8 | 9.3 |

Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : Sample 7

| | | | |
|-------------------------|----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 95.6 | RNA Integrity Number (RIN): | 6.9 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 91 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.5 | Result Flagging Label: | RIN: 6.90 |

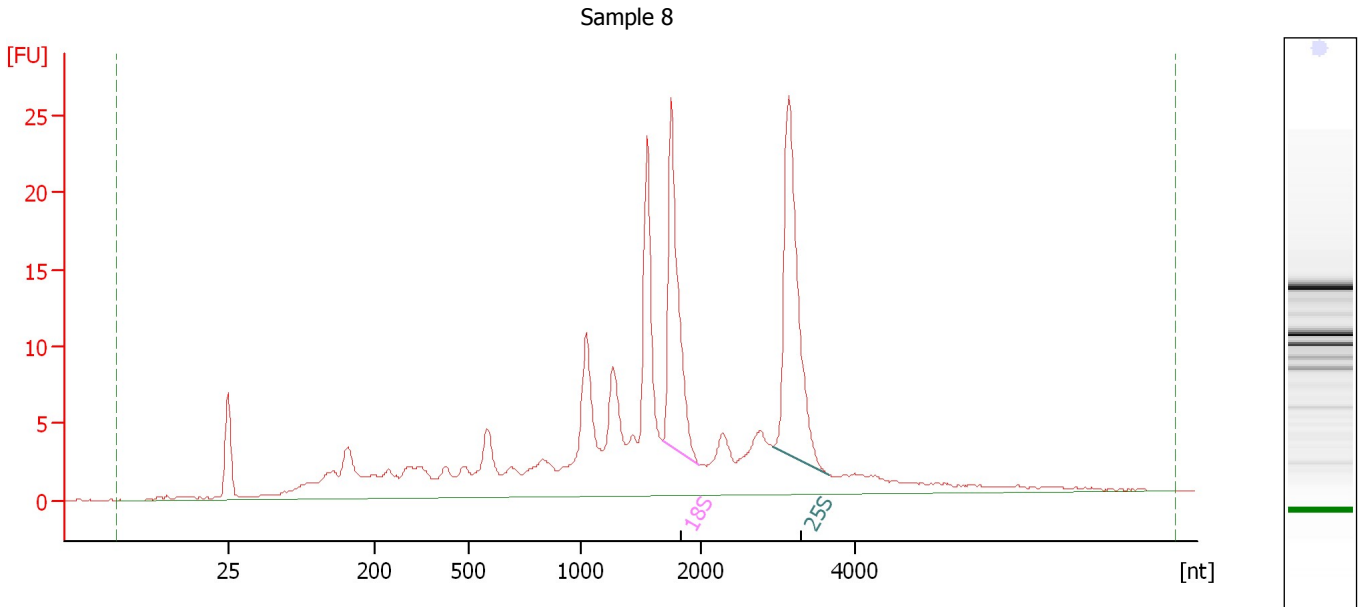
Fragment table for sample 7 : Sample 7

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,700 | 2,060 | 8.9 | 9.3 |
| 25S | 3,027 | 4,050 | 13.0 | 13.5 |

Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : Sample 8

| | | | |
|-------------------------|-----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 244.3 | RNA Integrity Number (RIN): | 6.4 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 234 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.3 | Result Flagging Label: | RIN: 6.40 |

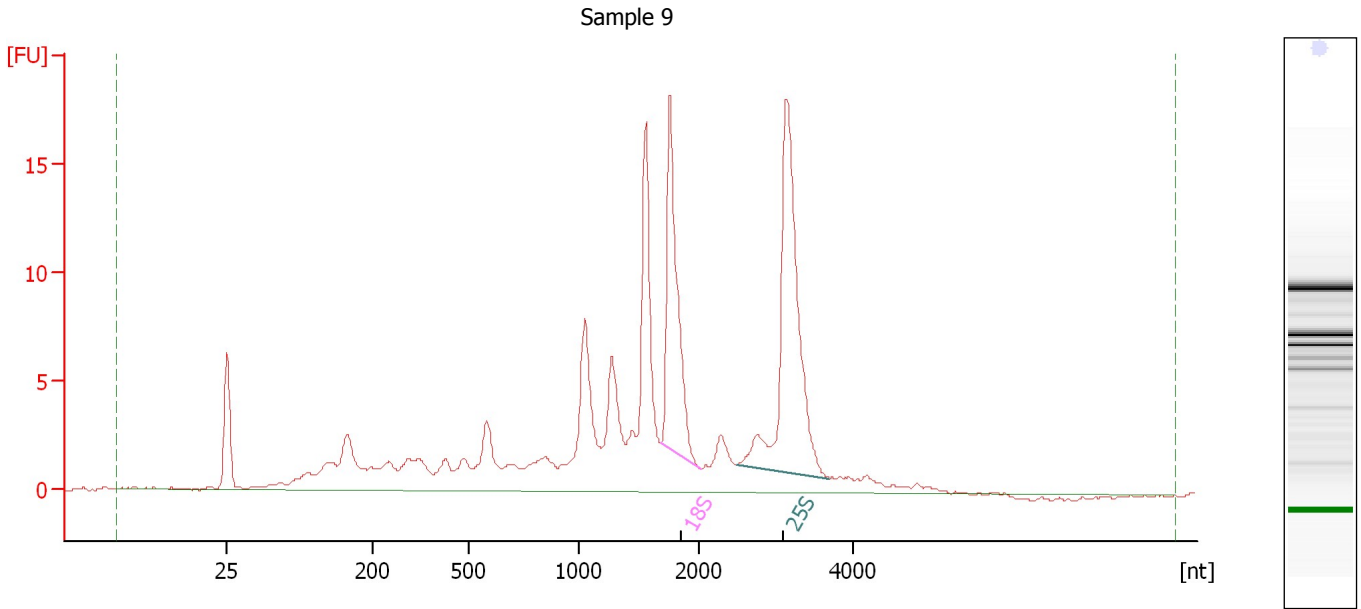
Fragment table for sample 8 : Sample 8

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,681 | 1,975 | 26.1 | 10.7 |
| 25S | 2,917 | 3,651 | 33.4 | 13.7 |

Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : Sample 9

| | | | |
|-------------------------|-----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 172.5 | RNA Integrity Number (RIN): | 6.5 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 165 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.6 | Result Flagging Label: | RIN: 6.50 |

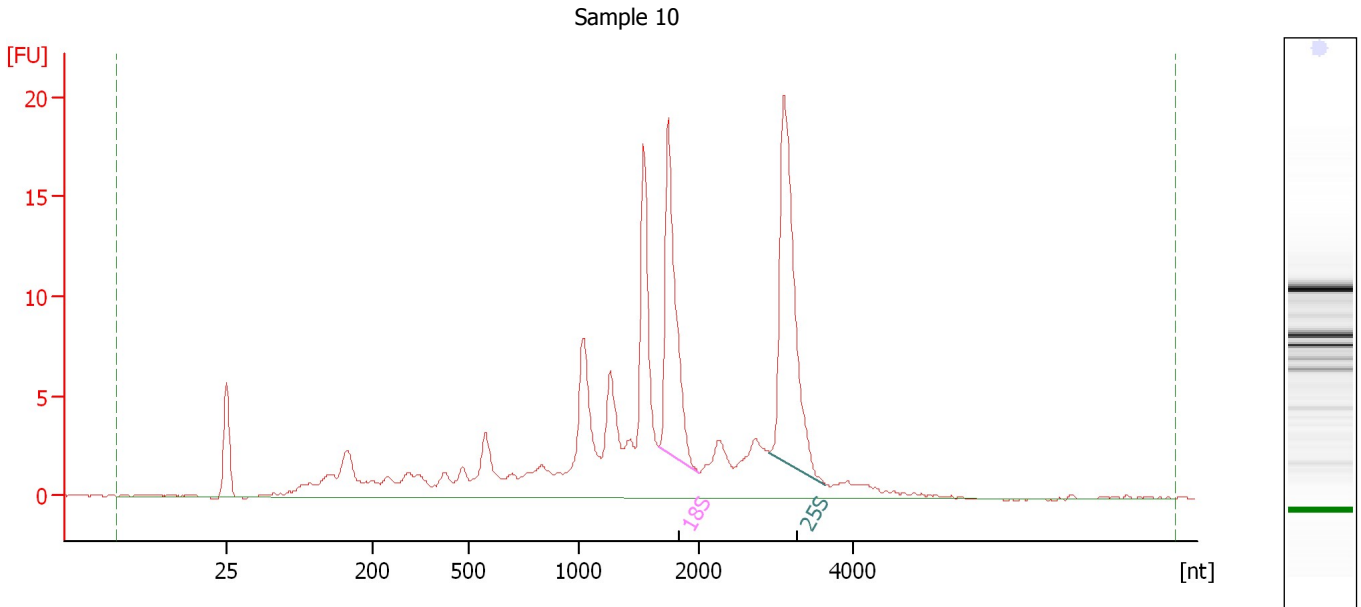
Fragment table for sample 9 : Sample 9

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,679 | 2,016 | 20.1 | 11.7 |
| 25S | 2,502 | 3,695 | 31.6 | 18.3 |

Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : Sample 10

| | | | |
|-------------------------|-----------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| RNA Area: | 170.8 | RNA Integrity Number (RIN): | 6.6 (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 163 ng/μl | Result Flagging Color: | |
| rRNA Ratio [25s / 18s]: | 1.3 | Result Flagging Label: | RIN: 6.60 |

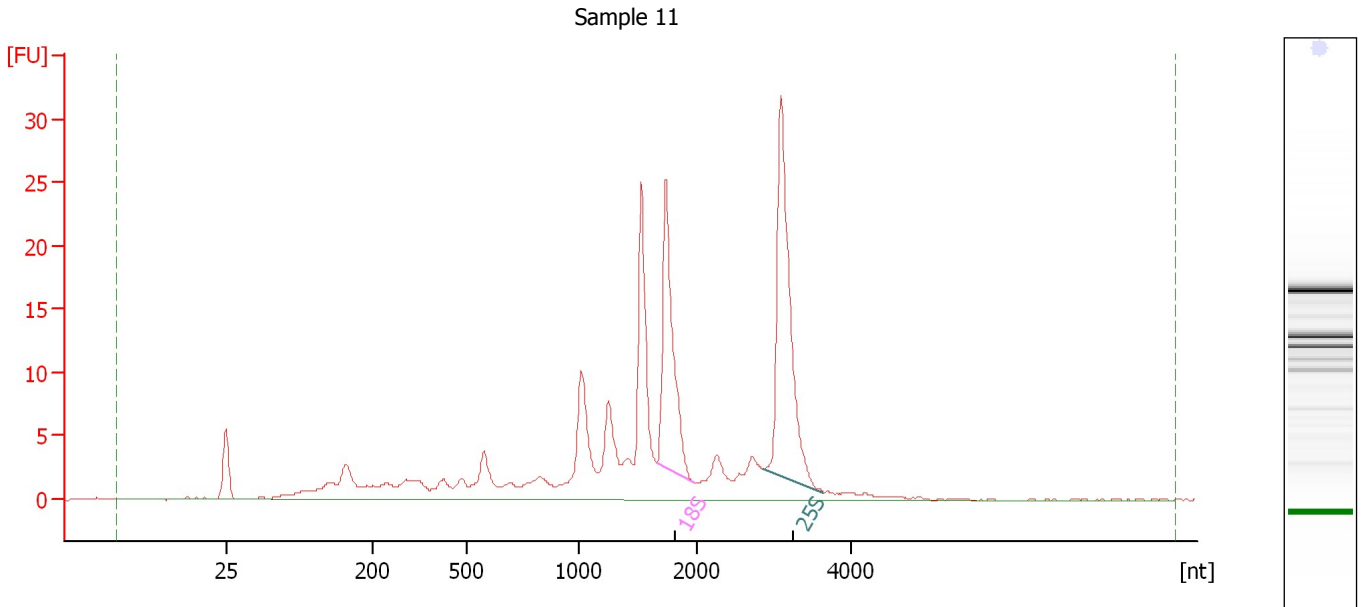
Fragment table for sample 10 : Sample 10

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,670 | 2,002 | 20.8 | 12.2 |
| 25S | 2,918 | 3,639 | 27.9 | 16.3 |

Assay Class: Plant RNA Nano
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : Sample 11

RNA Area: 205.1 RNA Integrity Number (RIN): 7 (B.02.08, Anomaly Threshold(s) manually adapted)
RNA Concentration: 196 ng/μl
rRNA Ratio [25s / 18s]: 1.5
Result Flagging Color:
Result Flagging Label: RIN:7

Fragment table for sample 11 : Sample 11

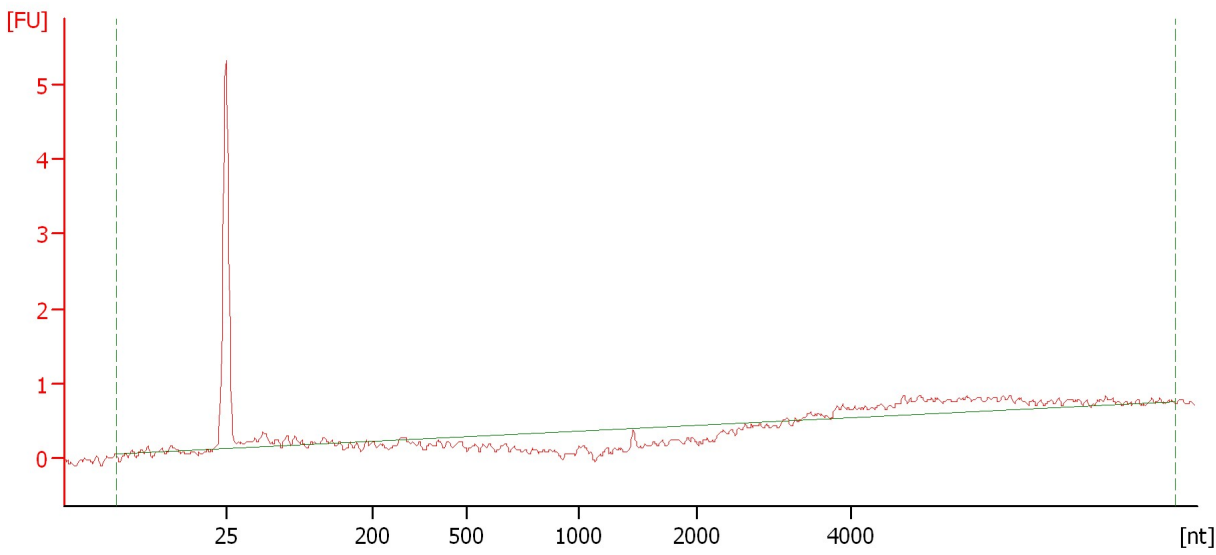
| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S | 1,668 | 1,973 | 27.4 | 13.3 |
| 25S | 2,863 | 3,641 | 40.6 | 19.8 |

Assay Class: Plant RNA Nano
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
Modified: 2/23/2017 3:10:27 PM

Electropherogram Summary Continued ...

Sample 12



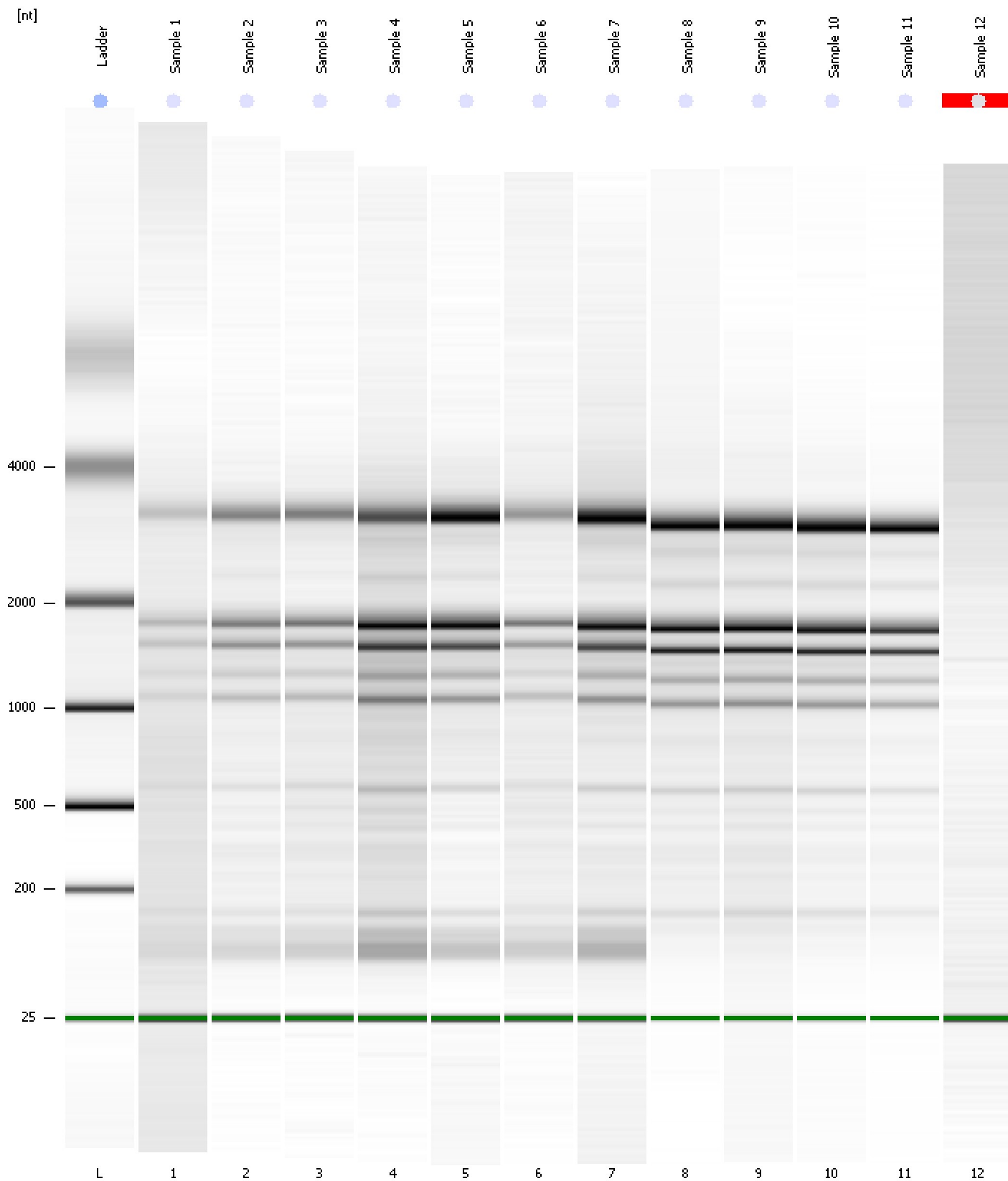
Overall Results for sample 12 : Sample 12

| | | | |
|-------------------------|---------|-----------------------------|------------------------------------------------------------|
| RNA Area: | 4.5 | RNA Integrity Number (RIN): | N/A (B.02.08, Anomaly Threshold(s) manually adapted) |
| RNA Concentration: | 4 ng/μl | Result Flagging Color: | <input type="checkbox"/> |
| rRNA Ratio [25s / 18s]: | 0.0 | Result Flagging Label: | RIN N/A |

Assay Class: Plant RNA Nano
Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
Modified: 2/23/2017 3:10:27 PM

Gel Image



Assay Class: Plant RNA Nano
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad

Created: 2/23/2017 2:41:08 PM
 Modified: 2/23/2017 3:10:27 PM

Run Logbook

| Description | Number | Source | Category | Sub Category | Time | Time Zone | User | Host |
|------------------------------------------------------------------------------------------------------------------------|--------|------------|----------|--------------|----------------------|-------------------------------------|----------|----------|
| Run ended on port 1 (Number of wells acquired: 13) | | Instrument | Run | | 2/23/2017 3:04:59 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2017-02-23\2017-02-23_006.xad) | | Instrument | Run | | 2/23/2017 2:41:13 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Product Number : G2938B | | Instrument | Run | | 2/23/2017 2:41:13 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Name : | | Instrument | Run | | 2/23/2017 2:41:13 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Vendor : Agilent Technologies | | Instrument | Run | | 2/23/2017 2:41:13 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Serial# : DE13701086 | | Instrument | Run | | 2/23/2017 2:41:13 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Firmware : C.01.069 | | Instrument | Run | | 2/23/2017 2:41:13 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Cartridge : Electrode | | Instrument | Run | | 2/23/2017 2:41:13 PM | (GMT --08:00) Pacific Standard Time | UC Davis | D8XSMGH1 |