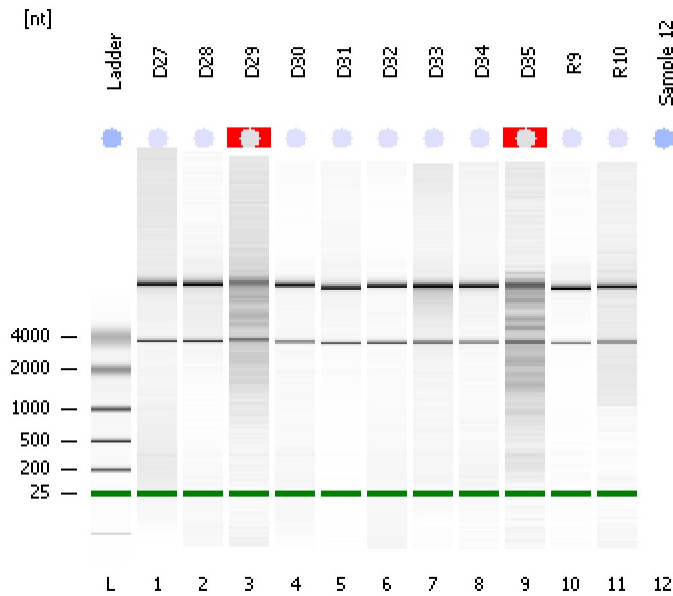


Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

Electrophoresis File Run Summary



Instrument Information:

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

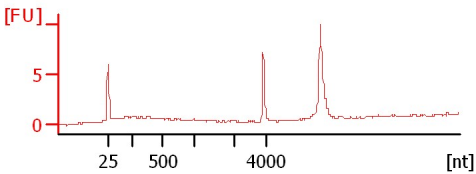
Assay Information:

Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\RNA\Eukaryote Total RNA Nano Series II.xsy  
Assay Class: Eukaryote Total RNA Nano  
Version: 2.6  
Assay Comments: Total RNA Analysis ng sensitivity (Eukaryote)  
© Copyright 2003 - 2009 Agilent Technologies, Inc.

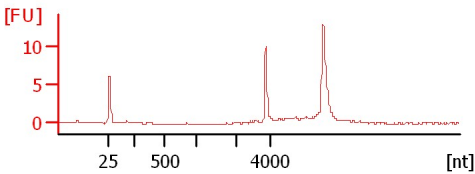
Chip Information:

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

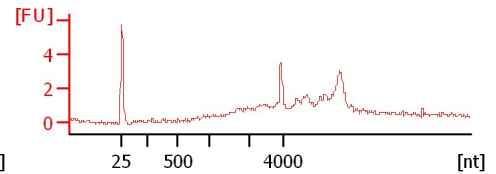
**D27**  
RIN: 9.60



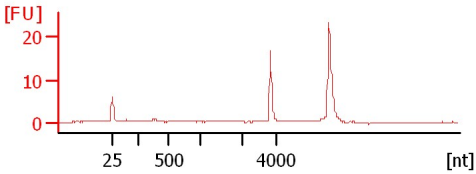
**D28**  
RIN: 10



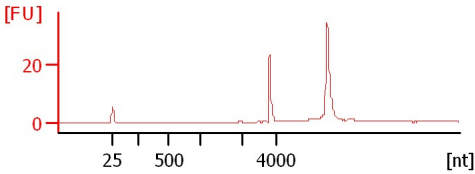
**D29**  
RIN N/A



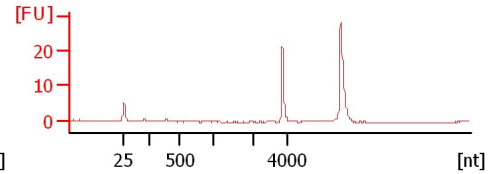
**D30**  
RIN: 9.30



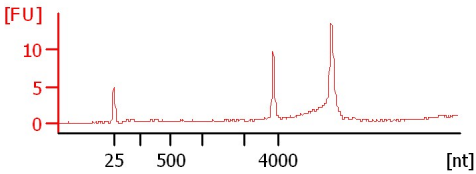
**D31**  
RIN: 10



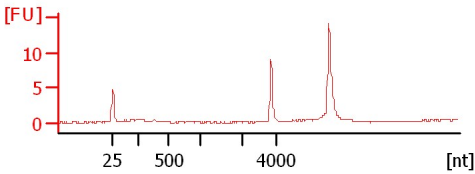
**D32**  
RIN: 10



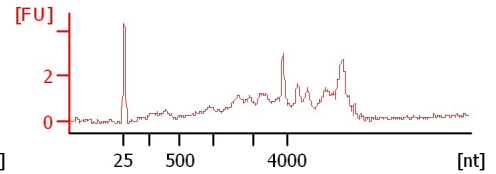
**D33**  
RIN: 8.70



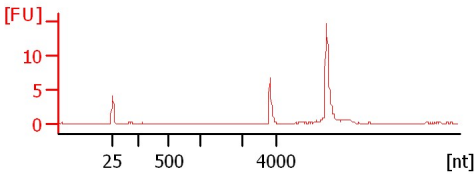
**D34**  
RIN: 10



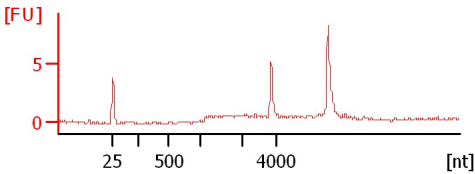
**D35**  
RIN N/A



**R9**  
RIN: 10



**R10**  
RIN: 7.90



Assay Class: Eukaryote Total RNA Nano  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
 Modified: 4/4/2017 2:25:40 PM

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

| Sample Name | Sample Comment | Status | Result Label      | Result Color |
|-------------|----------------|--------|-------------------|--------------|
| D27         |                | ✓      | RIN: 9.60         |              |
| D28         |                | ✓      | RIN:10            |              |
| D29         |                | ✓      | RIN N/A           |              |
| D30         |                | ✓      | RIN: 9.30         |              |
| D31         |                | ✓      | RIN:10            |              |
| D32         |                | ✓      | RIN:10            |              |
| D33         |                | ✓      | RIN: 8.70         |              |
| D34         |                | ✓      | RIN:10            |              |
| D35         |                | ✓      | RIN N/A           |              |
| R9          |                | ✓      | RIN:10            |              |
| R10         |                | ✓      | RIN: 7.90         |              |
| Sample 12   |                |        |                   |              |
| Ladder      |                | ✓      | All Other Samples |              |

**Chip Lot #**

**Reagent Kit Lot #**

**Chip Comments :**

Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 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] : 0.5  
Area Threshold : 0.2  
Width Threshold [s] : 0.5  
Baseline Plateau [s] : 6

### Filter Settings

Filter Width [s] : 0.5  
Polynomial Order : 4

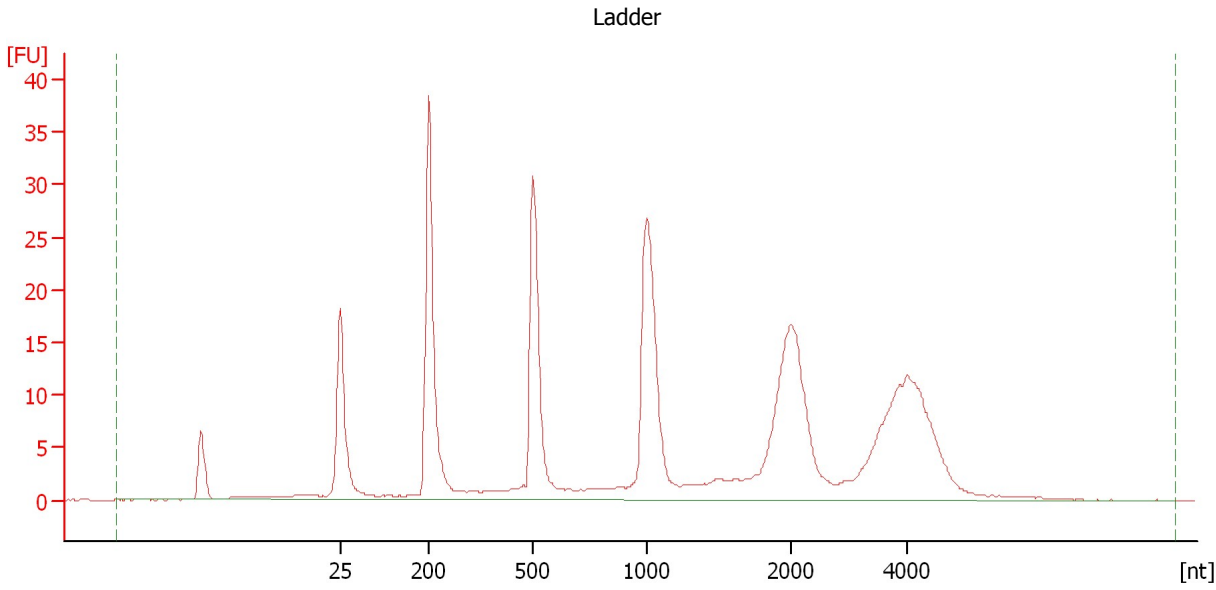
### Ladder

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

Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary**



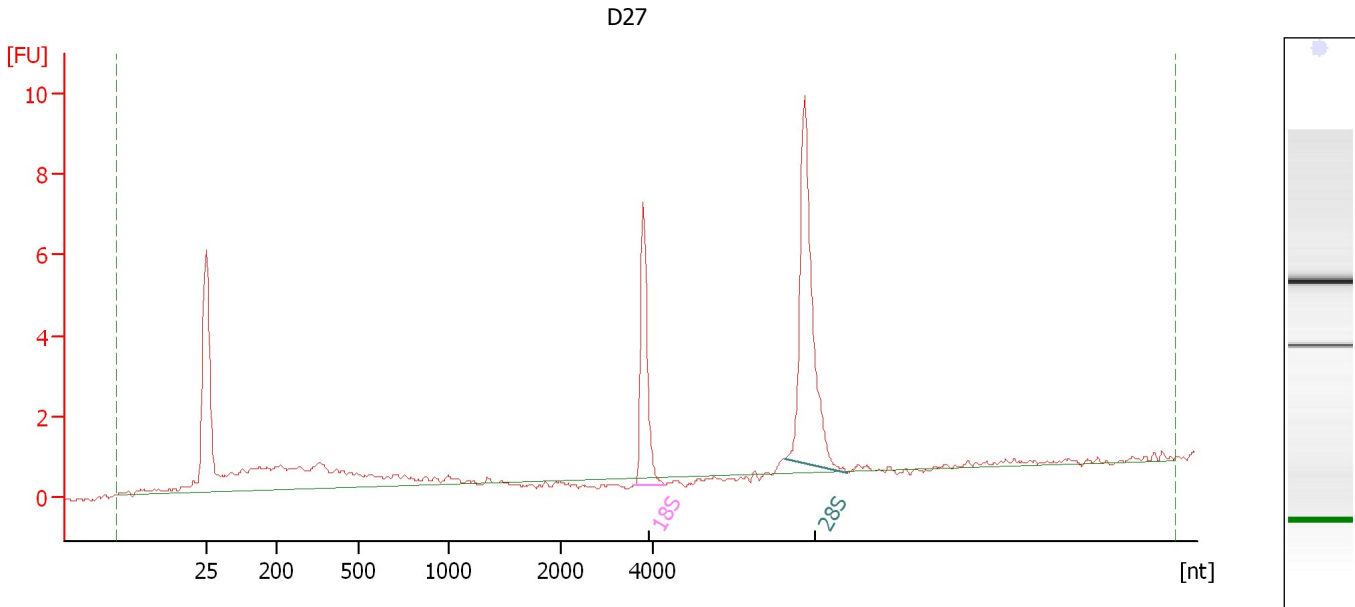
**Overall Results for Ladder**

|                    |           |                        |   |
|--------------------|-----------|------------------------|---|
| RNA Area:          | 304.7     | Result Flagging Color: | <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> |
| RNA Concentration: | 150 ng/μl | Result Flagging Label: | All Other Samples   |

Assay Class: Eukaryote Total RNA Nano  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
 Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : D27**

|                         |          |                             |   |
|-------------------------|----------|-----------------------------|---|
| RNA Area:               | 35.3     | RNA Integrity Number (RIN): | 9.6 (B.02.08,<br>Anomaly Threshold(s)<br>manually adapted)  |
| RNA Concentration:      | 17 ng/μl | Result Flagging Color:      | <span style="background-color: #ccccff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> |
| rRNA Ratio [28s / 18s]: | 2.1      | Result Flagging Label:      | RIN: 9.60   |

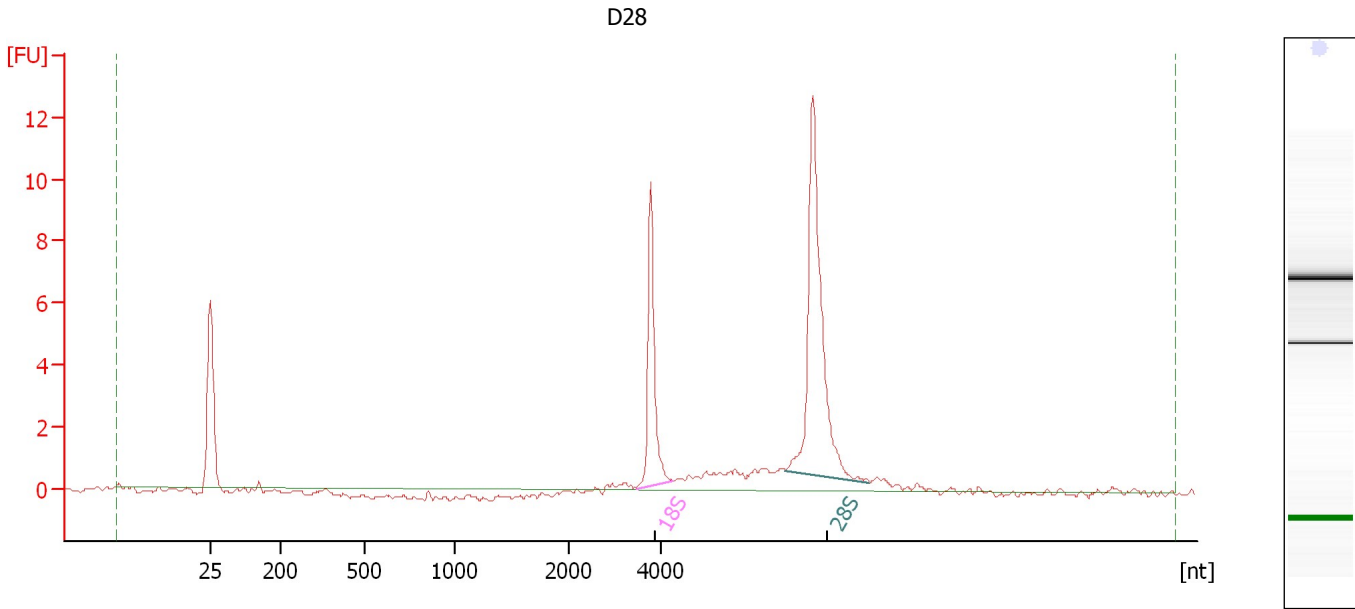
**Fragment table for sample 1 : D27**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,597           | 4,248         | 5.5  | 15.7            |
| 28S  | 6,874           | 8,198         | 11.4 | 32.2            |

Assay Class: Eukaryote Total RNA Nano  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
 Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : D28**

|                         |          |                             |   |
|-------------------------|----------|-----------------------------|---|
| RNA Area:               | 36.1     | RNA Integrity Number (RIN): | 10 (B.02.08)  |
| RNA Concentration:      | 18 ng/μl | Result Flagging Color:      | <span style="background-color: #ccccff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> |
| rRNA Ratio [28s / 18s]: | 2.1      | Result Flagging Label:      | RIN:10  |

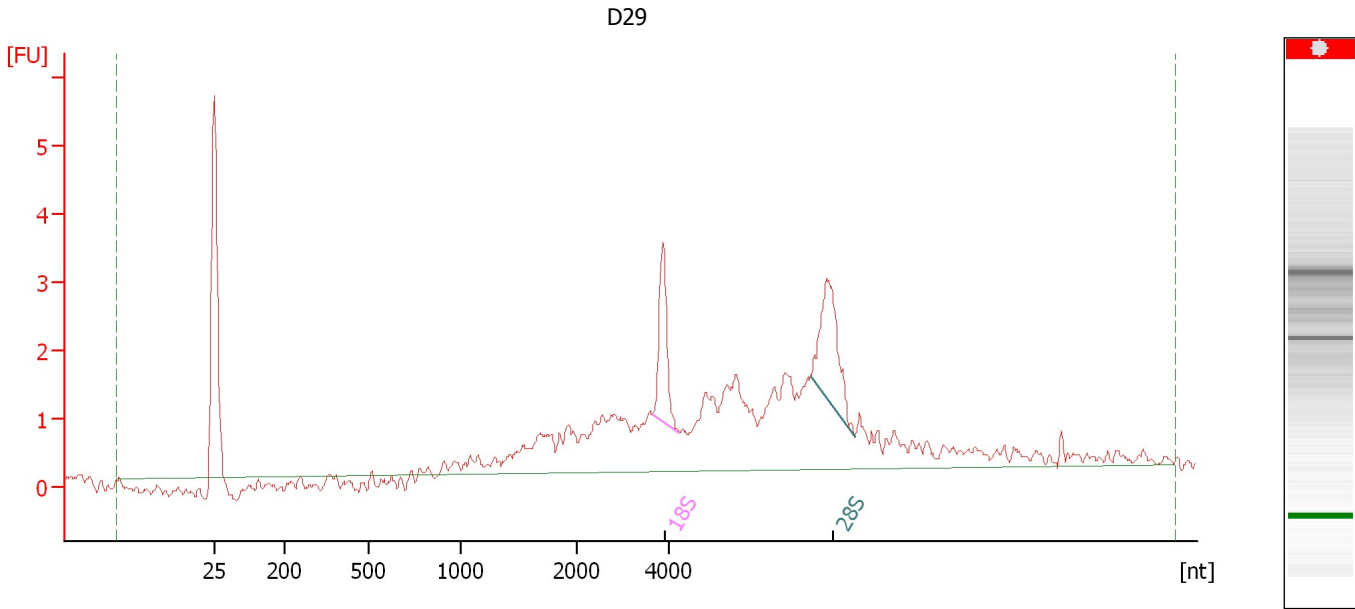
**Fragment table for sample 2 : D28**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,450           | 4,256         | 7.9  | 21.9            |
| 28S  | 6,676           | 8,473         | 16.8 | 46.6            |

Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : D29**

RNA Area: 40.5 RNA Integrity Number (RIN): N/A (B.02.08)  
RNA Concentration: 20 ng/μl Result Flagging Color:   
rRNA Ratio [28s / 18s]: 1.4 Result Flagging Label: RIN N/A

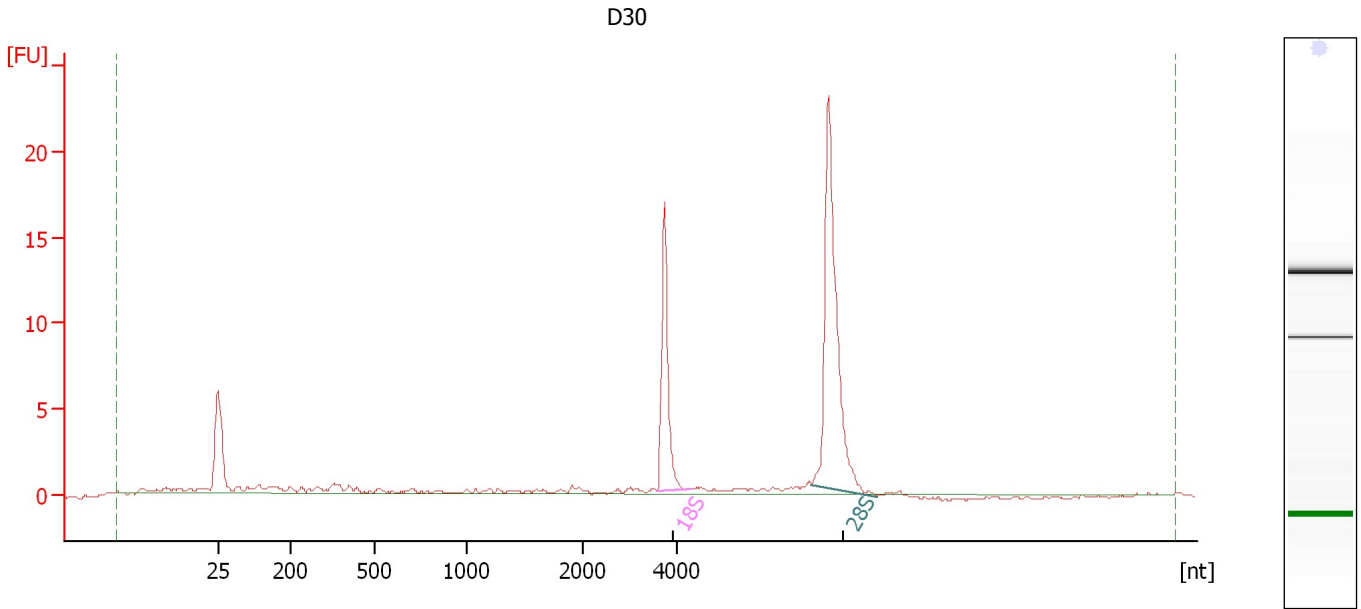
**Fragment table for sample 3 : D29**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,625           | 4,196         | 2.4  | 5.8             |
| 28S  | 7,030           | 7,944         | 3.2  | 7.9             |

Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : D30**

RNA Area: 54.9                      RNA Integrity Number (RIN): 9.3 (B.02.08)  
RNA Concentration: 27 ng/μl              Result Flagging Color:   
rRNA Ratio [28s / 18s]: 2.2              Result Flagging Label: RIN: 9.30

**Fragment table for sample 4 : D30**

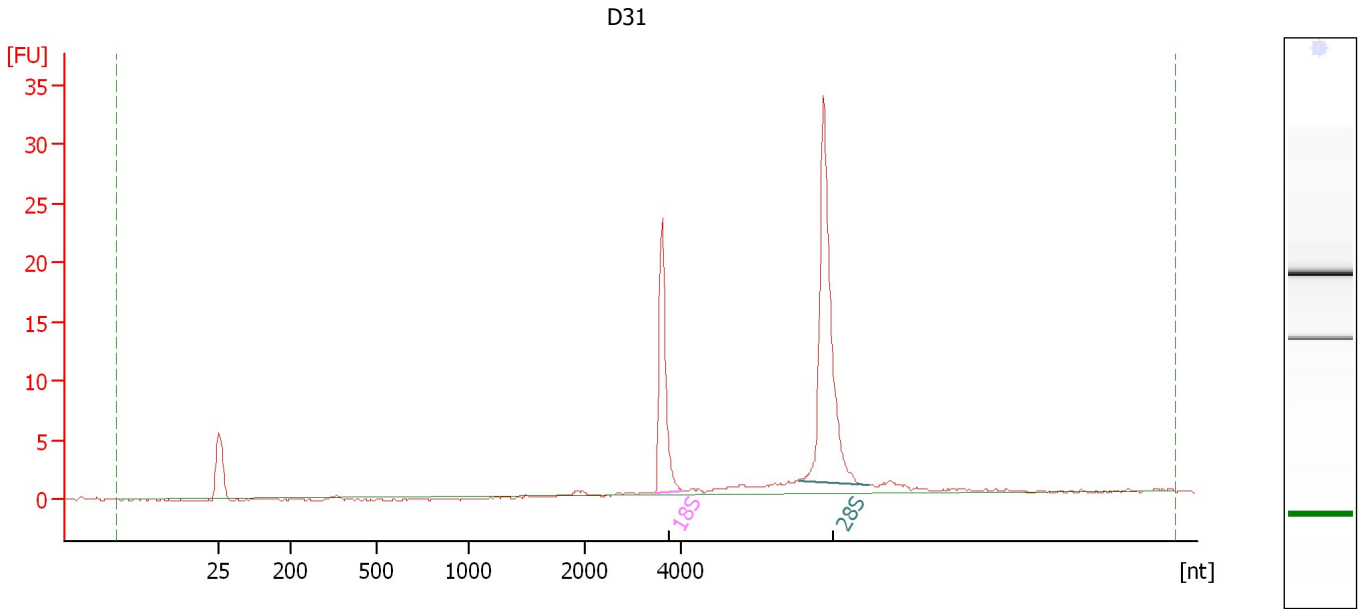
| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,570           | 4,295         | 12.3 | 22.4            |
| 28S  | 6,834           | 8,239         | 27.1 | 49.5            |



Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : D31**

|                         |          |                             |   |
|-------------------------|----------|-----------------------------|---|
| RNA Area:               | 73.8     | RNA Integrity Number (RIN): | 10 (B.02.08)  |
| RNA Concentration:      | 36 ng/μl | Result Flagging Color:      | <span style="background-color: #ccccff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> |
| rRNA Ratio [28s / 18s]: | 2.1      | Result Flagging Label:      | RIN:10  |

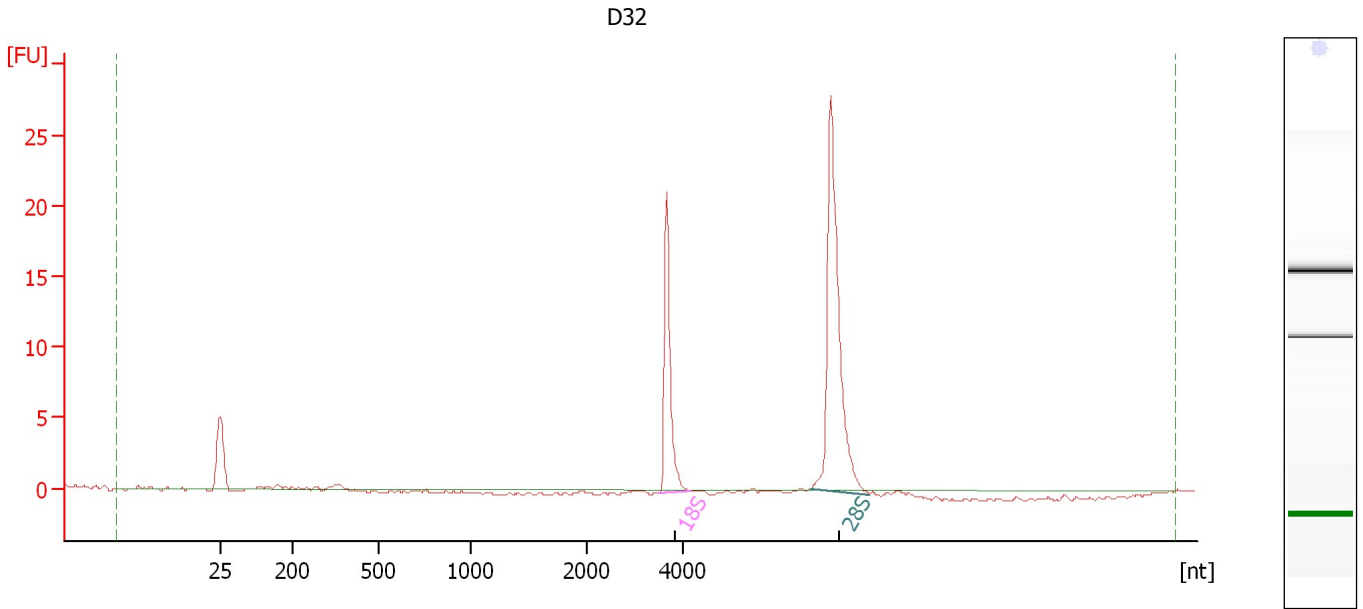
**Fragment table for sample 5 : D31**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,483           | 4,071         | 17.3 | 23.4            |
| 28S  | 6,536           | 7,984         | 36.9 | 50.0            |

Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : D32**

RNA Area: 48.6                      RNA Integrity Number (RIN): 10 (B.02.08)  
RNA Concentration: 24 ng/μl              Result Flagging Color:   
rRNA Ratio [28s / 18s]: 2.0              Result Flagging Label: RIN:10

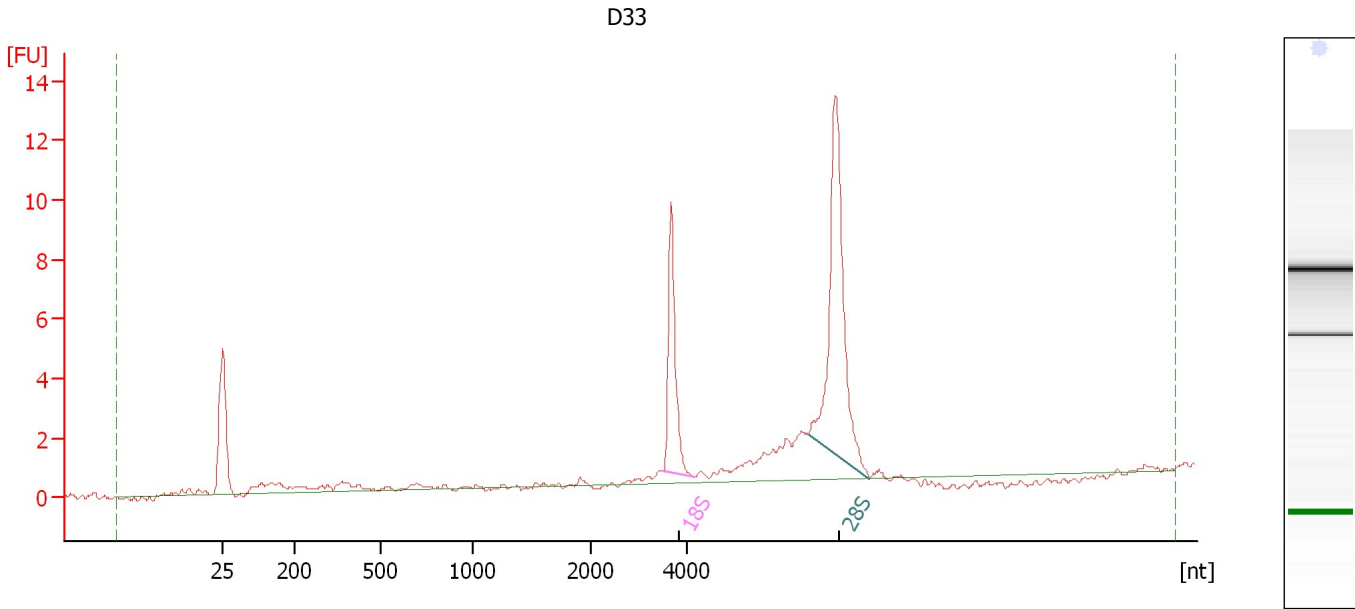
**Fragment table for sample 6 : D32**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,532           | 4,186         | 15.7 | 32.4            |
| 28S  | 6,714           | 7,955         | 31.8 | 65.5            |

Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : D33**

RNA Area: 43.5                      RNA Integrity Number (RIN): 8.7 (B.02.08)  
RNA Concentration: 21 ng/μl              Result Flagging Color:   
rRNA Ratio [28s / 18s]: 2.2              Result Flagging Label: RIN: 8.70

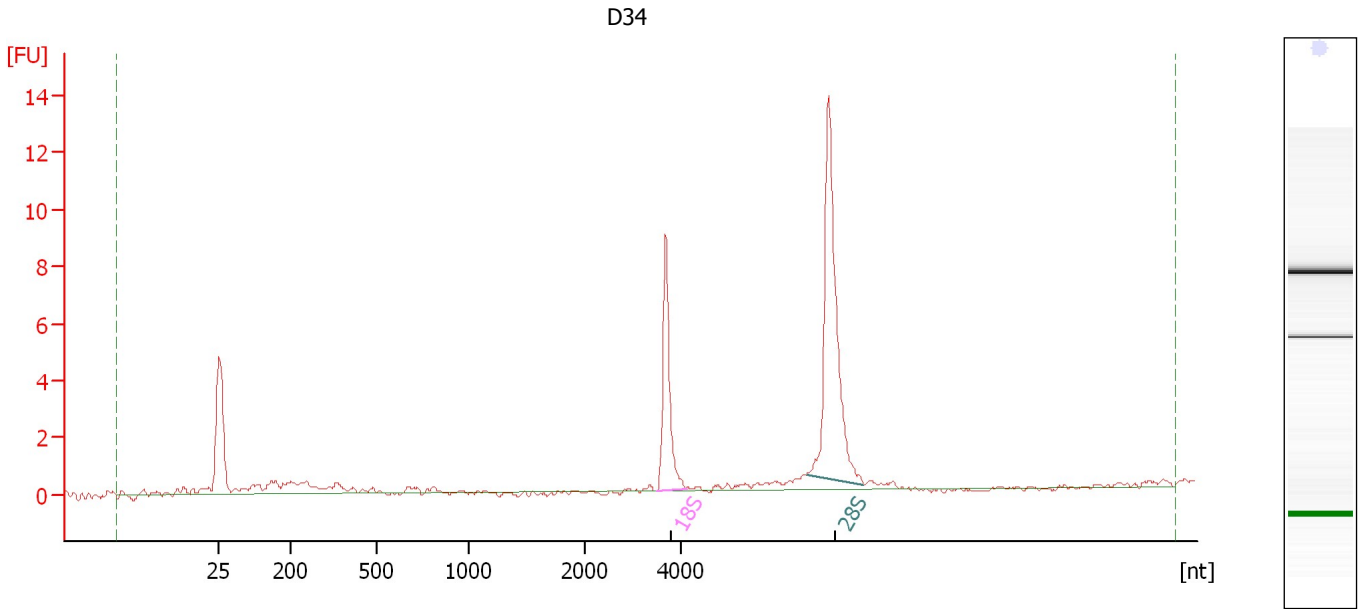
**Fragment table for sample 7 : D33**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,517           | 4,168         | 7.5  | 17.4            |
| 28S  | 6,573           | 7,854         | 16.8 | 38.6            |

Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : D34**

RNA Area: 37.6                      RNA Integrity Number (RIN): 10 (B.02.08)  
RNA Concentration: 19 ng/μl              Result Flagging Color:   
rRNA Ratio [28s / 18s]: 2.2              Result Flagging Label: RIN:10

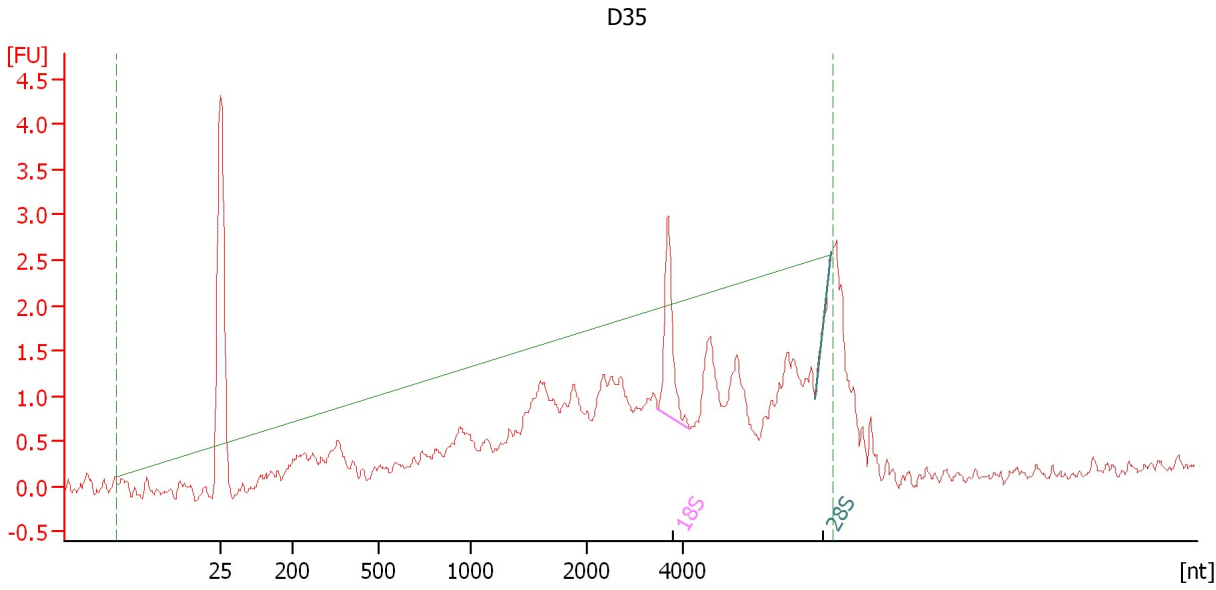
**Fragment table for sample 8 : D34**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,506           | 4,139         | 7.3  | 19.5            |
| 28S  | 6,672           | 7,893         | 16.1 | 42.8            |

Assay Class: Eukaryote Total RNA Nano  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
 Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 9 : D35**

End Analysis Time Range [s] : 53

**Overall Results for sample 9 : D35**

|                         |         |                             |   |
|-------------------------|---------|-----------------------------|---|
| RNA Area:               | 0.5     | RNA Integrity Number (RIN): | N/A (B.02.08)   |
| RNA Concentration:      | 0 ng/μl | Result Flagging Color:      | <span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> |
| rRNA Ratio [28s / 18s]: | 0.0     | Result Flagging Label:      | RIN N/A   |

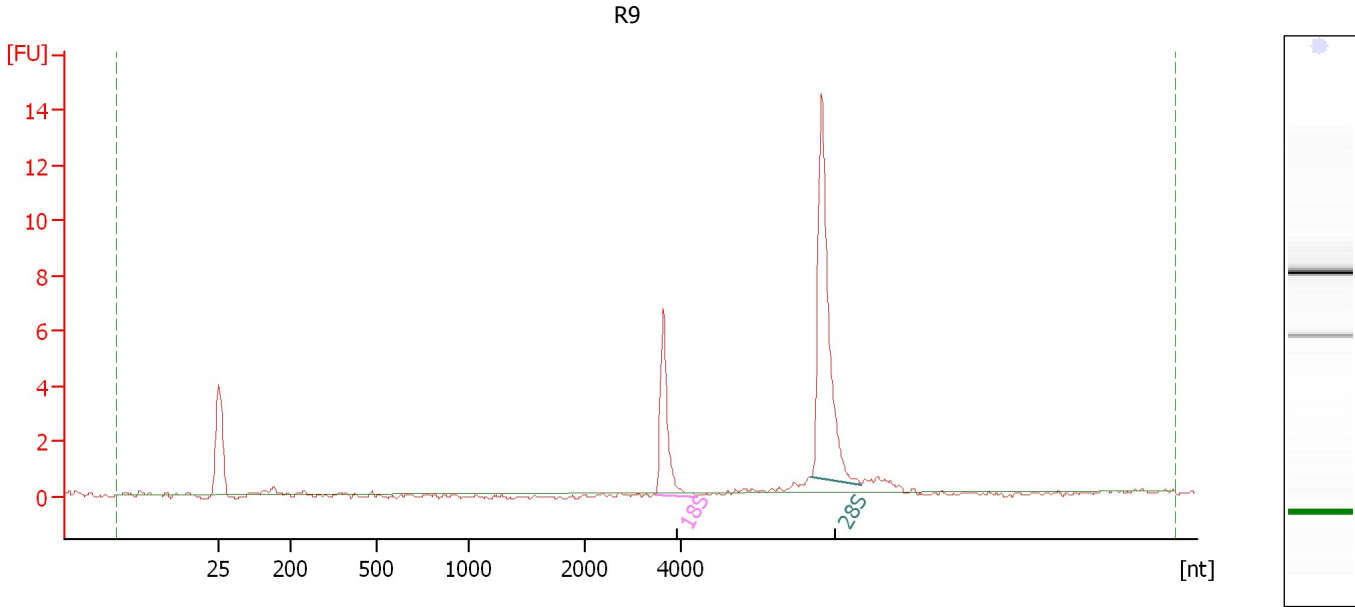
**Fragment table for sample 9 : D35**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,487           | 4,164         | 2.1  | 428.8           |
| 28S  | 6,827           | 7,143         | 0.1  | 14.4            |

Assay Class: Eukaryote Total RNA Nano  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
 Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : R9**

|                         |          |                             |   |
|-------------------------|----------|-----------------------------|---|
| RNA Area:               | 24.7     | RNA Integrity Number (RIN): | 10 (B.02.08)  |
| RNA Concentration:      | 12 ng/μl | Result Flagging Color:      | <span style="background-color: #ccccff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> |
| rRNA Ratio [28s / 18s]: | 2.6      | Result Flagging Label:      | RIN:10  |

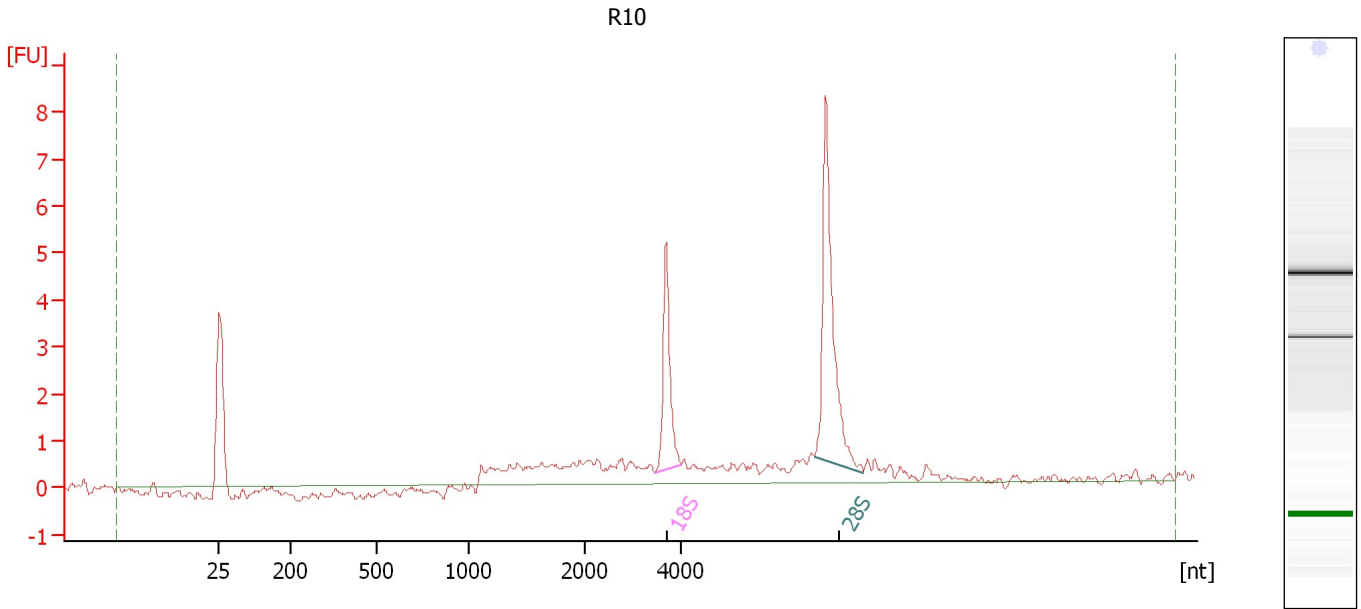
**Fragment table for sample 10 : R9**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,506           | 4,365         | 5.6  | 22.5            |
| 28S  | 6,762           | 7,848         | 14.7 | 59.5            |

Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : R10**

|                         |          |                             |   |
|-------------------------|----------|-----------------------------|---|
| RNA Area:               | 29.3     | RNA Integrity Number (RIN): | 7.9 (B.02.08)   |
| RNA Concentration:      | 14 ng/μl | Result Flagging Color:      | <span style="background-color: #ccccff; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> |
| rRNA Ratio [28s / 18s]: | 2.0      | Result Flagging Label:      | RIN: 7.90   |

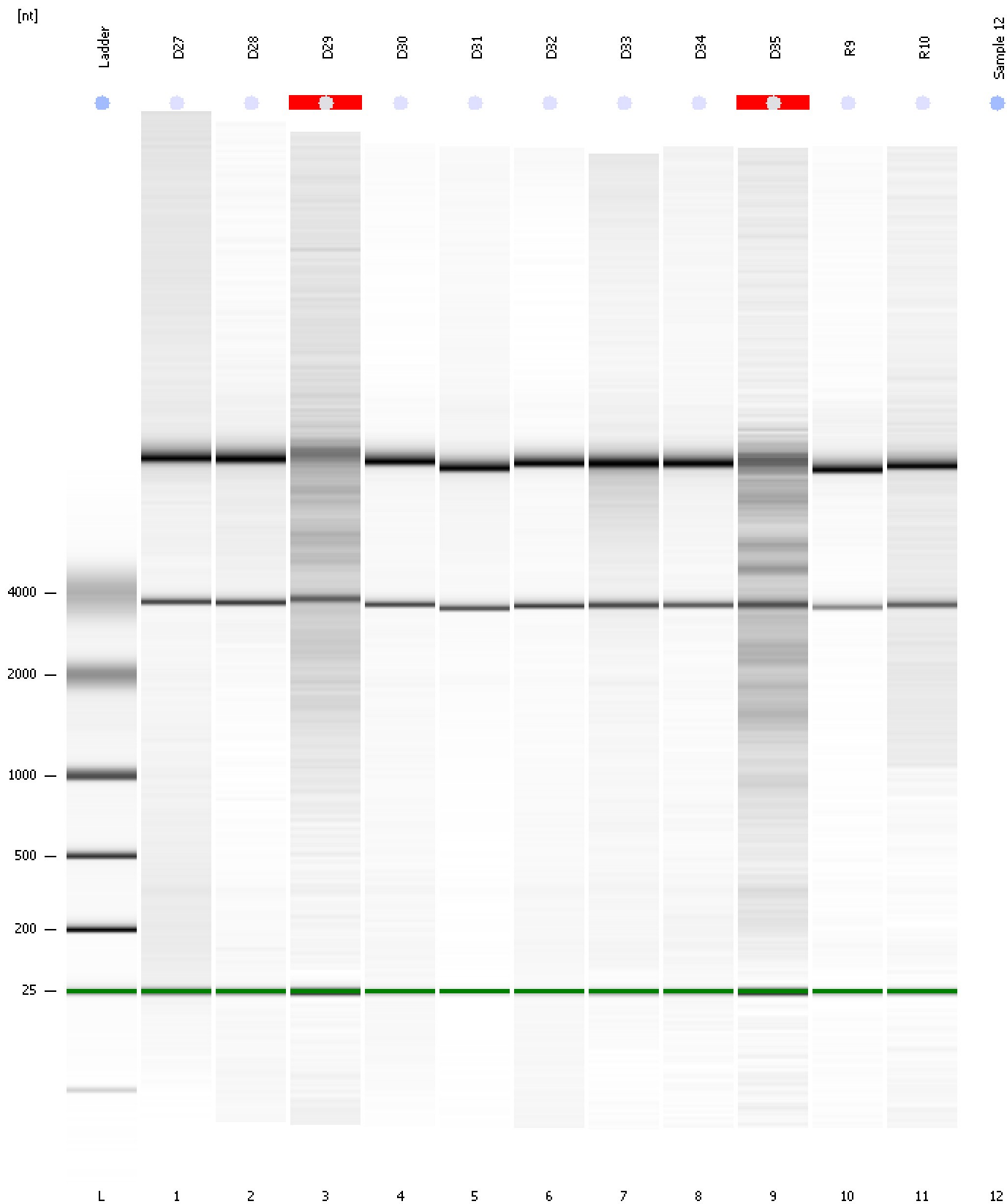
**Fragment table for sample 11 : R10**

| Name | Start Size [nt] | End Size [nt] | Area | % of total Area |
|------|-----------------|---------------|------|-----------------|
| 18S  | 3,483           | 4,026         | 4.0  | 13.7            |
| 28S  | 6,853           | 7,893         | 8.0  | 27.2            |

Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Gel Image**





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Assay Class: Eukaryote Total RNA Nano  
Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad

Created: 4/4/2017 1:54:38 PM  
Modified: 4/4/2017 2:25:40 PM

**Invalid Samples**

Sample 12 has not been run, no results available.

Assay Class: Eukaryote Total RNA Nano Created: 4/4/2017 1:54:38 PM  
 Data Path: C:\... bioanalyzer\2100 expert\data\2017-04-04\2017-04-04\_003.xad Modified: 4/4/2017 2:25:40 PM

**Run Logbook**

| Description  | Number | Source     | Category | Sub Category | Time                | Time Zone                           | User     | Host     |
|--|--------|------------|----------|--------------|---------------------|-------------------------------------|----------|----------|
| Run ended on port 1 (Number of wells acquired: 12)   |        | Instrument | Run      |              | 4/4/2017 2:16:58 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\2017-04-04\2017-04-04_003.xad) |        | Instrument | Run      |              | 4/4/2017 1:54:39 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Product Number : G2938B  |        | Instrument | Run      |              | 4/4/2017 1:54:39 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Name :   |        | Instrument | Run      |              | 4/4/2017 1:54:39 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Vendor : Agilent Technologies  |        | Instrument | Run      |              | 4/4/2017 1:54:39 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Serial# : DE13701086   |        | Instrument | Run      |              | 4/4/2017 1:54:39 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Firmware : C.01.069  |        | Instrument | Run      |              | 4/4/2017 1:54:39 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |
| Cartridge : Electrode  |        | Instrument | Run      |              | 4/4/2017 1:54:39 PM | (GMT --07:00) Pacific Standard Time | UC Davis | D8XSMGH1 |