

#### Errata Notice

This document contains references to "Advanced Analytical" or "AATI." Please note that Advanced Analytical was purchased by Agilent in June 2018. For more information, contact Agilent via: [www.agilent.com/chem/contactus](http://www.agilent.com/chem/contactus)



# Ultra-Sensitivity RNA Analysis Kit

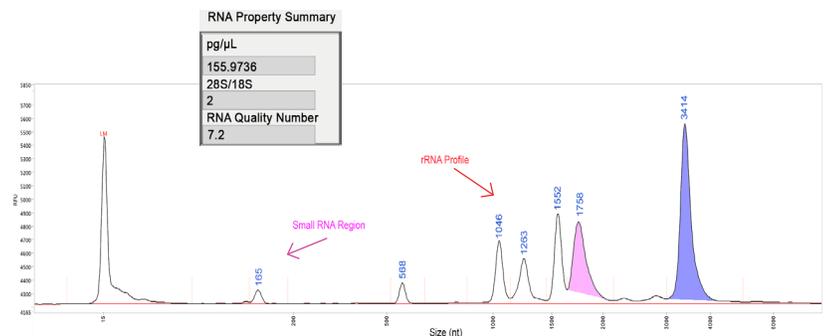
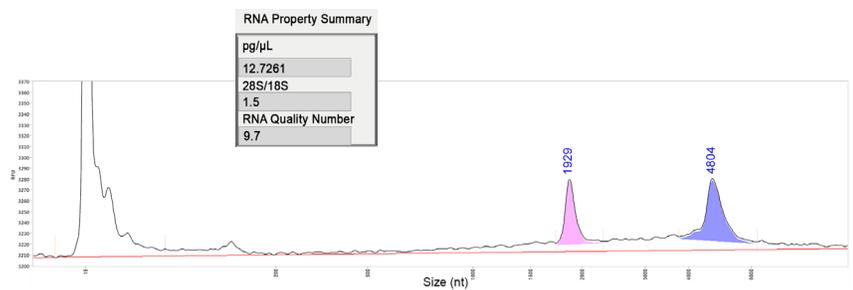
## FEMTO Pulse Automated Pulsed-Field CE Instrument

### Quantify and Qualify RNA for Downstream Applications

As molecular biology advances at a breakneck pace and RNA sequencing becomes more accessible to the broader research community, the confident assessment of RNA size, quantity, and quality is of increasing importance. Sophisticated applications involving RNA have exacting requirements regarding quality, concentration, and fragment size that are often challenging to measure with traditional methods, needlessly complicating researchers' workflows.

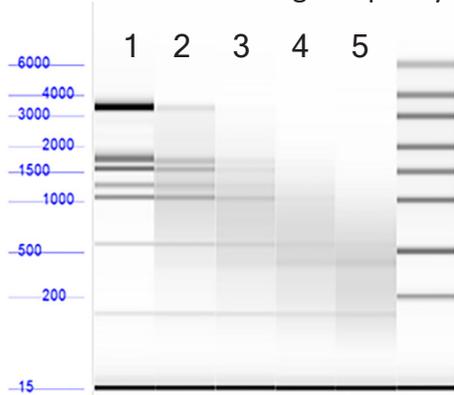
Conserve precious sample and quantify rare transcripts with unparalleled sensitivity. The **FP-1201 Ultra-Sensitivity RNA Analysis Kit** and the FEMTO Pulse Automated Pulsed-Field CE Instrument facilitate the accurate sizing, quantification, and qualification of RNA samples for NGS and molecular biology workflows.

The separation profiles of total RNA purifications differ based on the biological source. Significant variation is observed at all levels of biological hierarchy. This variation can complicate quality control analysis, requiring enhanced resolution to fully resolve individual peaks. The **FP-1201 Ultra-Sensitivity RNA Analysis Kit** for the FEMTO Pulse provides the required resolution to quantify and qualify RNA from all sources with equal ease and confidence.



*The figure above shows murine (top) and Arabidopsis (bottom) total RNA, illustrating how total RNA profiles differ across the biological hierarchy. The RNA Property Summary, automatically provided by PROSize Data Analysis Software, gives the measured concentration, the ratio between major ribosomal peaks, and the RNA Quality Number (RQN), a sample quality metric. Total RNA samples were separated under standard conditions on the FEMTO Pulse Automated Pulsed-Field CE Instrument with the FP-1201 Ultra-Sensitivity RNA Analysis Kit.*

Determining RNA quality is a crucial workflow step for any researcher performing RNA-Seq or various other applications. Degraded or low quality RNA is of limited use due to the loss of intact RNA fragments, including rare transcripts. To address this problem, the RNA Quality Number (RQN) has been validated and incorporated into the *PROSize* Data Analysis Software. Total RNA samples are scored on a scale of 1 to 10, with larger numbers associated with higher quality RNA.



Sample	Degradation Time (90°C)	RQN
1	0 min	7.2
2	4 min	3.3
3	8 min	1.9
4	12 min	1.2
5	16 min	1.1

*The digital gel image and the table above illustrate the association between RNA quality and the RQN. Identical total RNA samples were incubated at 90°C and collected every four minutes for a total of 16 minutes. Collected samples, including a total RNA sample that was not incubated at 90°C, were separated on the FEMTO Pulse Automated Pulsed-Field CE Instrument with the FP-1201 Ultra-Sensitivity RNA Analysis Kit.*

## Features and Benefits

- **Enhanced Sensitivity**  
Conserve precious sample with unparalleled detection sensitivity.
- **Improved Resolution**  
Separate and size challenging RNA fragments and smears.
- **Automated Operation**  
Analyze up to three, 96-well plates without human interruption.
- **Fast Separation Time**  
Separate up to 12 samples in less than 1 hour.

## Specifications

- **Total RNA and mRNA Sizing Range**  
15 nt – 6,000 nt
- **Total RNA Detection Range**  
2.5 pg/μL – 250 pg/μL
- **Total RNA Quantification Range**  
15 pg/μL – 250 pg/μL
- **mRNA Detection Range**  
15 pg/μL – 500 pg/μL
- **mRNA Quantification Range**  
25 pg/μL – 500 pg/μL

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