

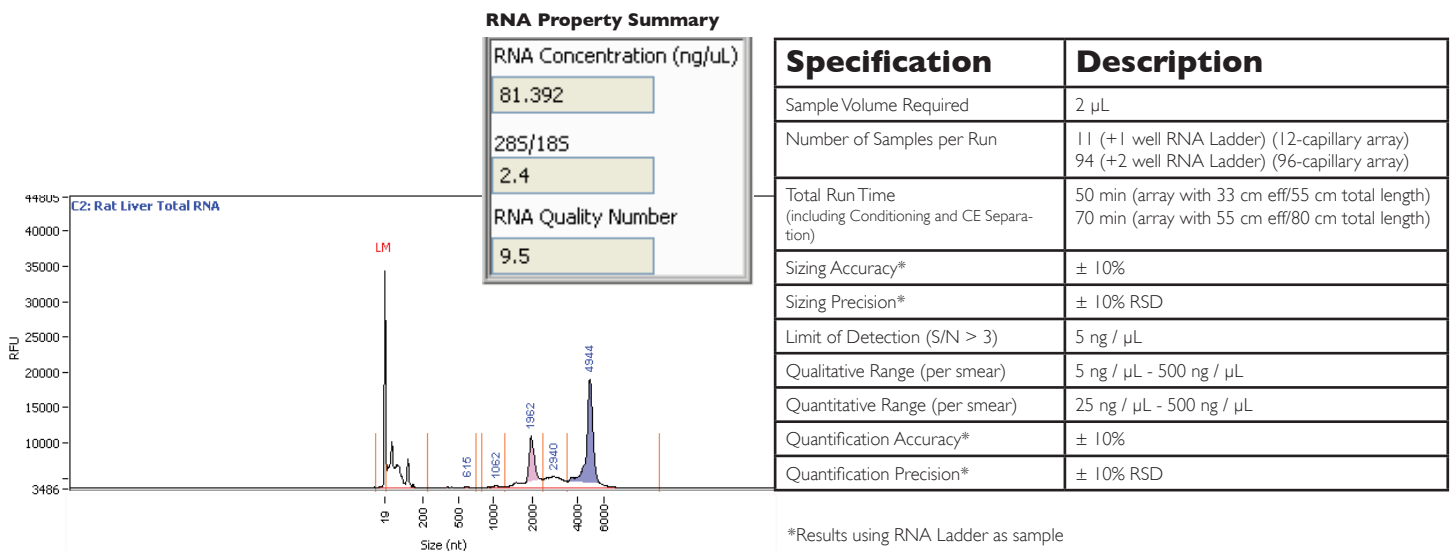
TOTAL RNA ANALYSIS

Fragment Analyzer™ Automated CE System

Check quantity and quality of total RNA with one instrument.

More and more scientists are using gene expression profiling techniques, and as a result, demand is rising for high-throughput analysis of total RNA quality. Experiments using low-quality total RNA often lead to poor results.

Agarose gel electrophoresis is the conventional method for RNA analysis, but it's unreliable, labor-intensive and slow. Likewise, lab-on-chip instruments for evaluating total RNA are also slow and may lack detection sensitivity. The Fragment Analyzer™ revolutionizes total RNA analysis with speed, accuracy and automation.



Compare Post-Extraction Process Steps for the Fragment Analyzer™ to the Slower Manual Methods.

Fragment Analyzer™ Automated CE System Method

1. Equilibrate all reagents to room temperature
2. Prepare gel-dye mix
3. Pipette 2µL ladder/sample into 96-well plate
4. Pipette in 18µL marker diluent into ladder/sample wells
5. Centrifuge sample plate and use within an hour
6. Load sample plate and inlet buffer tray
7. Start method
8. Analyze results
9. Generate report

Manual Method

1. Remove chip from bag
2. Assemble chip priming station
3. Decontaminate electrodes
4. Equilibrate all reagents to room temperature
5. Filter gel, aliquot gel and store in dark at 4°C
6. Prepare gel-dye mix and use within one day
7. Pipette 9µL of gel-dye mix and prime chip manually
8. Remove chip from priming station
9. Pipette 9µL of gel-dye mix into 2 more wells on chip
10. Pipette 5µL marker into each sample well and ladder well
11. Pipette 1µL ladder/sample into corresponding wells
12. Place loaded chip onto vortexer
13. Vortex for 60 second
14. Load chip and begin run within 5 minutes
15. Start method
16. Analyze results
17. Generate report

The Fragment Analyzer™ automates both separation and subsequent analysis of total RNA. Its parallel capillary electrophoresis platform allows analysis of 11 samples with 1 ladder or 94 samples with 2 ladders per run. One instrument analyzes both quality and quantity, thus greatly reducing manual lab work.

Features and Benefits

RQN:

Provides RNA quality indicator which correlates to current industry practices.

High Sensitivity:

Detection limits as low as 5 ng/µL.

Short Run Times:

Analysis of 12 or 96 samples in less than 50 minutes.

No Manual Priming:

Separation gel is automatically loaded into capillaries prior to each run.

No Chip Loading:

Universal capillary array handles multiple applications.

Automated Sample Handling:

Simply load 96-well sample plate or tube strips onto the instrument.

Flexible Platform Design:

Use the system for more than just total RNA. Gel kits for mRNA, NGS fragment analysis, dsDNA fragments from 10 bp – 40,000 bp are available.

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