

Technical Note – RNA

Automated RNA Isolation from Blood, Tissue and Cultured Cell Samples

AutoGen offers different levels of automation to serve every laboratory's needs based on workflows and budget. Our QuickGene series including the QuickGene-Auto12S, QuickGene-810 and QuickGene-Mini80 allow for different levels of automation for low throughput needs. The QuickGene workflow uses an ultra-thin polymer porous membrane along with gentle, positive air pressure to rapidly isolate high yield and high quality RNA from blood, tissues or cultured cells.

- Ready to use RNA
- Fast processing time – up to 8-12 samples in under 50 minutes.
- High molecular weight – suitable for all downstream applications.

Data from RNA isolated from leukocyte on the QuickGene workflow

| | Number of leukocytes (cells) | Yield (µg) | A 260/280 |
|-------------------------|------------------------------|------------|-----------|
| With DNase treatment | 2×10^6 | 0.6 | 2.20 |
| | 1×10^7 | 4.5 | 2.21 |
| | 1.5×10^7 | 6.5 | 2.10 |
| Without Dnase treatment | 1.0×10^7 | 5.0 | 2.17 |

AutoGen QuickGene Workflow

Different levels of automated workflow for blood, tissue and cultured cell RNA extraction with QuickGene-Mini80, QuickGene-810 or QuickGene-Auto12S.

Key Features

- Low throughput, 8-12 samples / run
- From semi-fully automated
- Multiple input racks add to daily throughput with checkerboard processing
- Ultra-thin polymer membrane does not require centrifuge or vacuum



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QuickGene Workflow Principle and Procedure

With the QuickGene workflow, lysate is prepared and then added to the column, followed by binding, washing and elution steps. The QuickGene-Mini80 is non-automated, the QuickGene-810 is semi-automated and the QuickGene-Auto12S is semi-fully automated in assisting in all these steps.

Revolutionary Porous Membrane

The QuickGene workflow uses an ultra-thin polymer membrane in a column that is significantly thinner than conventional glass fiber membranes. This ultra-thin membrane, along with gentle positive air pressure, effectively binds nucleic acids to the membrane. This results in high quality and high molecular weight nucleic acids with less shearing and contaminants compared to traditional spin-column methods.



Ordering Information and Kit Performance

| PRODUCT # | PRODUCT NAME | SAMPLE SIZE | PROCESSING TIME | STANDARD ELUTION VOL. |
|-----------|-----------------------|----------------------------------|-----------------|-----------------------|
| FK-RTS2 | RNA Tissue Kit | 1.5 x 10 ⁷ leukocytes | 20-50 minutes | 50 |
| FK-RCS2 | RNA Cultured Cell Kit | 1 x 10 ⁶ cells | 20-50 minutes | 50 |
| FK-RBS | RNA Blood Cell Kit | Dependent on tissue | 20-50 minutes | 50 |

AutoGen's promise is to provide the most practical, economically effective solutions for your sample prep and automation extraction solution needs, and to do it with a level of service, support, and responsiveness that leads the industry.