Applied Biosystem Prism 6700 Automated Nucleic Acid Workstation

The ABI PRISM™ 6700 Automated Nucleic Acid Workstation is a specially engineered robotic system that automates all the repetitive, labor-intensive tasks associated with analysis, from nucleic acid sample purification and reaction preparation to PCR tray set-up and sealing.

- Fully automated system makes sample and reaction preparation for nucleic acid synthesis a seamless process
- Unparalleled sample throughput helps you realize the full potential of your analysis instrument
- Cost-effective sample preparation enables you to launch projects that might be cost-prohibitive without automation
- Barcoding of all output trays allows full sample tracking from purification to analysis

Automation Equals Speed
The 6700 workstation speeds production of PCR-quality templates with good yields. With the 6700 workstation, nucleic acid purification, PCR reactions and RNA-PCR conversion to cDNA are less expensive than other, less automated procedures. Finally, the 6700 workstation is compatible with existing sequence detection systems to support real-time PCR.

Performance/Throughput

- 96 Purified total RNA samples in < 90 minutes, and four assay plates in < 3.5 hours.
- Two 96-well dilution archives in < 1 hour

Physical Specifications
Width 142 cm (55.9 in.)
Depth 84 cm (33.0 in.)
Weight 226.8 kg (500 lbs)
Height 99 cm (39.9 in.)
The 6700 workstation can perform the following nucleic acid preparation protocols:

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lysis</td>
<td>Lyse cells with Applied Biosystems reagents</td>
</tr>
<tr>
<td>DNA Precipitation</td>
<td>Precipitate DNA with Applied Biosystems reagents</td>
</tr>
<tr>
<td>RNA Archive</td>
<td>Purify RNA from lysed cells</td>
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<tr>
<td>DNA Archive</td>
<td>Purify DNA from precipitated DNA</td>
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<tr>
<td>cDNA Archive</td>
<td>Synthesize cDNA from RNA</td>
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<tr>
<td>Dilution Archive</td>
<td>Dilute nucleic acid samples</td>
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<tr>
<td>Assay</td>
<td>Prepare plates for nucleic acid assays</td>
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</tbody>
</table>

Applied Biosystems introduction of sequence detection systems in 1996 provided the scientific community a breakthrough in quantitative PCR that forever changed the genetic revolution. Now, the ABI PRISM™ 6700 Automated Nucleic Acid Workstation expands on that breakthrough by completely automating sample and reaction preparation for nucleic acid analysis helping accelerate all future stages of your lab’s work, from genetic analysis to drug discovery. The workstation delivers multiple benefits, including:

**Increased productivity**

**Don’t just improve your lab, optimize it**

The 6700 workstation helps you get the most from your lab team. The automation of highly repetitive processes frees key personnel for more valuable work.

- 4 technicians running manual techniques = 1 technician with a 6700 workstation
- Deck loading in less than 10 minutes
- Purification in less than 80 minutes
- Purification of total RNA from up to 96 cell lysate samples and set up of 2 reaction plates in less than 2 hours
- Conversion to total cDNA in less than 60 minutes

**Deckspace with a difference**

The specialized ABI PRISM™ 6700 Automated Nucleic Acid Workstation deckspace is carefully designed to simplify placement of samples, plastics, and fluids—all barcoded—into specific barcoded locations.

**Superior quality**

**In the platform, in your products**

The 6700 workstation is engineered to the most exacting world-class standards for genetic analysis. The 6700 workstation will also speed production of PCR-quality templates with good yields, so both the quantity and purity of the nucleic acid material produced will be consistently high and ready for analysis.
Cost efficiency

No other product compares
The 6700 workstation is one of the most cost-effective solutions for nucleic acid purification available. Manual procedures, kits and custom services range from $3 to $20 per sample. Purification of total RNA on the 6700 workstation can be accomplished at a fraction of this cost, resulting in impressive cost savings for the high throughput laboratory. Similarly, PCR reaction setup and RNA conversion to cDNA are also less expensive using the 6700 workstation compared to less automated procedures.

Ease-of-use

No babysitting required
Although robotic workstations are available to perform some of the steps involved, sample preparation has been principally a manual technique. The 6700 workstation automates nucleic acid purification and reaction tray setup using a flow-through membrane system that captures target nucleic acid. You simply load the deck space, put in the needed components and materials for the process, close the door, and press the start button.

Complete confidence

Because you need to be sure
The 6700 workstation is engineered to perform reliably every time and minimizes the potential for human error. Exclusive liquid-sensing pipette tips reduce sample-to-sample contamination to less than one part in 106 and ensure that reagents are not wasted on failed wells. A complement of support documents and protocols are available so regulated-market customers can perform all necessary assay validations. Hazard management and failure modes track and alert you automatically throughout the entire process.

Cutting-edge software

Make the most of your data
The 6700 workstation comes with a computer running the Windows NT® operating system, along with software that ensures you get the most out of your data. The workstation guides you as you place barcoded consumables into barcoded positions on the deckspace. The computer then verifies that the appropriate material is in its correct position. Ready-to-use protocols simplify setup, while a unique “wizard” feature makes it easy to tailor protocols to specific experiments. Built-in software displays the status and condition of each run and logs the information, making validation simple.

Total flexibility

For your needs now—and as they change
Changing protocols on the 6700 workstation is simple because purification reagents reside in the workstation’s reservoirs. You can run an RNA purification that requires a particular tray and reagents, and the next user can perform a DNA prep that requires a different tray and reagents. No need to flush the instrument between users; just refresh
the consumables you need for the process you want. The 6700 workstation can process nucleic acids from a variety of raw biological samples, including cultured cells, lymphocytes, and homogenized tissues. The 6700 workstation is also flexible enough to work with your analysis instrument—whether it’s the ABI PRISM® 7700 Sequence Detection System or another nucleic acid analysis instrument.

Ready today, right for tomorrow
The 6700 workstation is ready to work with existing sequence detection systems, including the ABI PRISM® 7700 Sequence Detection System and GeneAmp® 5700 Sequence Detection System, to support real-time PCR. The 6700 workstation is a powerful, flexible instrument platform designed to support all of your nucleic acid purification and analysis plate preparation requirements. You can be confident that this instrument will not only meet your needs today but is also engineered to meet your future expectations.

Unleashing the potential of your analysis instruments
Because the ABI PRISM™ 6700 Automated Nucleic Acid Workstation automates all the repetitive, labor-intensive processes for nucleic acid sample purification, reaction preparation, PCR tray setup, and capping, it helps you get the most out of your analysis instrument—whether that’s the ABI PRISM® 7700 Sequence Detection System or another nucleic acid analysis system. Now quantitative gene expression, allelic discrimination, SNP analysis, or sequencing analysis is more reproducible, easier, and truly automatic. With automated setup, you use your analysis instrument to its fullest potential, freeing up time, improving accuracy, and reducing costs. You can launch projects that would be cost-prohibitive without automation. And you can spend more time processing and analyzing data rather than executing routine assay steps.

Optimizing the ABI PRISM® 7700 Sequence Detection System
The ABI PRISM™ 6700 Automated Nucleic Acid Workstation is optimized for the ABI PRISM® 7700 Sequence Detection System, so you can obtain the full value of the leading real-time quantitative PCR system by using it to its fullest capacity as shown below.

- One person + one 6700 workstation + two 7700 systems = 800 assays/day
- One person with a 6700 workstation can keep two 7700 systems busy for their complete daily running time

Design synergy The 6700 workstation and the 7700 sequence detection system are completely compatible by design. The 6700 workstation seals the analysis tray with an optical cover, so the entire tray is ready to drop into the 7700 system and run without further physical manipulation.

Software synergy The same database format monitors and controls all information about samples on the 6700 and 7700 instruments. As a result, the software running the 6700
workstation is able to transfer information about trays to the 7700 system. You never have to re-enter information. Simply physically move the tray and electronically copy the information.

**COMPLETE ASSAY AUTOMATION**

*Saving time with automation:* The 6700 workstation can purify nucleic acid from raw biological samples, such as cultured cells, lymphocytes, and homogenized tissues.

*Purification:* The 6700 workstation automatically purifies nucleic acid from biological samples using a vacuum-driven, flow-through filtration system.

*Analysis tray setup:* The 6700 workstation automatically dispenses master mix and sample templates to the output tray for analysis.

*Analysis:* Products are ready for analysis using the ABI PRISM® 7700 Sequence Detection System or other nucleic acid analysis instruments.

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