ABI PRISM® 7000 Sequence Detection System

- Multicolor detection provides flexibility for multiplex quantitation assays, allelic discrimination assays, and plus/minus assays utilizing an internal positive control (IPC)
- Precision optics, combined with a sophisticated multicomponenting algorithm, provide accurate, highly-reproducible results
- Small footprint facilitates easy placement in any laboratory (notebook computer may be placed on top of 7000 system when space is very limited)
- Peltier-based, 96-well block thermal cycling system is easy to use with standard 96-well plates or 0.2 mL tubes
- Proven assay development guidelines save time and money

Introduction
The ABI PRISM® 7000 Sequence Detection System is a complete, real-time PCR system that detects and quantitates nucleic acid sequences. In real-time PCR, cycle-by-cycle detection of accumulated PCR product is made possible by combining thermal cycling, fluorescence detection, and application-specific software in a single instrument. Quantitative results are available immediately after PCR without additional purification or analysis.

Real-time, quantitative PCR applications include gene expression and pathogen detection. Post-PCR detection is also available for non-quantitative assays such as allelic discrimination (SNP detection) and plus/minus assays.

Fluorescence Detection
All sample wells are illuminated using a tungsten-halogen lamp. Fluorescence emission is optimized for use with: FAM™/SYBR® Green 1, VIC®/JOE™, TAMRA™, and ROX™ dyes on a charge-coupled device (CCD) camera.

Assay Chemistry
Rapid assay development guidelines are provided to ensure success when using the fluorogenic 5’ nuclease assay or the SYBR® Green 1 double-stranded DNA binding dye assay. Rapid assay development guidelines consist of the following steps:
- Automatically design primers and probes using Primer Express® Software (included with the 7000 system)
- Use TaqMan® Universal PCR Master Mix or SYBR® Green PCR Master Mix to provide standardized component concentrations and simplify assay set-up
- Use universal thermal cycling parameters so that multiple assays can be run on the same 96-well plate
- Use default primer and probe concentrations to eliminate assay optimization

Default primer and probe concentrations are valid for multicolor SNP assays using TaqMan® MGB (minor groove binder) probes, and single color quantitation assays using TaqMan® probes or SYBR® Green 1 dye detection. Assay optimization is recommended for multiplex quantitation assays to minimize PCR competition.
**TaqMan® Genomic Assays**

Applied Biosystems provides preformulated, ready-to-use, quality-tested, 5’ nuclease TaqMan® probe-based assays for use with the 7000 system.

**System Components**

7000 Sequence Detector
- Peltier-based, 96-well block thermal cycling system
- Tungsten-halogen excitation source
- Fluorescence detection via a CCD camera

**Computer Specifications**

Applied Biosystems supplies a Dell™ Business Line computer (notebook or tower) for use with the 7000 system. For the latest computer specifications, please visit the Applied Biosystems Web site at www.appliedbiosystems.com

**Sequence Detection Software**

The software runs on the Windows® 2000 Operating System and is used for instrument control, data collection, and data analysis. Software features include:

- Real-time monitoring during data collection
- Intuitive multiplex assay set-up and analysis
- Simple dissociation curve data collection and viewing
- Intuitive allelic discrimination viewer, enabling simple allele calling of all samples on a plate
- Automatic identification of samples containing a PCR inhibitor when performing plus/minus assays with an IPC

**Installation Specifications**

Using the TaqMan® RNase P Instrument Verification Plate, the ABI PRISM® 7000 Sequence Detection System can distinguish between samples containing 5,000 and 10,000 template copies with a 99.7% confidence level.

**Reagents and Disposables**

A complete line of reagents and disposables is available for use with the ABI PRISM® 7000 Sequence Detection System.

**Dimensions**

<table>
<thead>
<tr>
<th>ABI PRISM® 7000 Sequence Detection System</th>
<th>Notebook Computer</th>
<th>Tower Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>39 cm (15.25 in)</td>
<td>43 cm (17 in)</td>
</tr>
<tr>
<td>Depth</td>
<td>51 cm (19.75 in)</td>
<td>59 cm (23 in)</td>
</tr>
<tr>
<td>Height</td>
<td>53 cm (20.75 in)</td>
<td>46 cm (18 in)</td>
</tr>
<tr>
<td>Weight</td>
<td>34 kg (75 lbs)</td>
<td>32 kg (70 lbs)</td>
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**Service and Warranty**

The purchase price includes installation and training by service representatives plus a one-year warranty on parts and labor.

**Support**

Applied Biosystems technical specialists and scientists provide worldwide applications support and service.

**Ordering Information**

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<tr>
<th>Description</th>
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<td>ABI PRISM® HID 7000 Sequence Detection System for Human Identification with Notebook Computer</td>
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<td>ABI PRISM® HID 7000 Sequence Detection System for Human Identification with Tower Computer</td>
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<td>ABI PRISM® 7000 Sequence Detection System with Notebook Computer</td>
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<td>ABI PRISM® 7000 Sequence Detection System with Tower Computer</td>
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