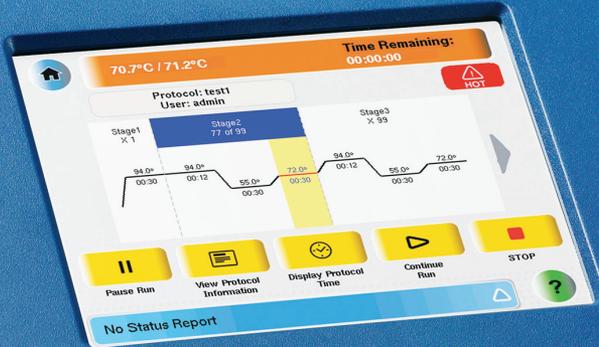


# Veriti<sup>®</sup> Thermal Cycler

The Power of MORE



Applied Biosystems



Veriti 96 Well Fast Thermal Cycler

# The newest line of simple, innovative thermal cyclers from Applied Biosystems, your trusted source for reliable PCR.

The Veriti® Thermal Cycler delivers the proven reliability of Applied Biosystems 9600 and 9700 GeneAmp® instruments. The Veriti® Thermal Cycler is available in four formats to suit your thermal cycling needs: 96-Well (0.2 or 0.1 mL), 384-Well, and 0.5 mL 60-Well. Each system features a powerful color touch screen to simplify instrument setup and use.

Additionally, the Veriti® 96-Well Thermal Cycler features the added control of VeriFlex™ Blocks, giving you six independent temperature blocks to provide precise control over your PCR optimization. The ability to run Fast or standard PCR methods offers you flexibility to shorten your PCR cycling time.

## The Power of MORE

### Multiple temperature zones for PCR optimization

- Veriti® 96-Well Thermal Cycler features innovative VeriFlex™ Blocks
- Six temperature zones for PCR optimization

### Optimal for Fast and standard PCR

- Fast and standard cycling options with the Veriti® 96-Well Thermal Cycler address your current and future PCR needs

### Reliability you expect

- Supported by Applied Biosystems worldwide service
- Part of an overall solution that includes plastics, reagents, and instruments

### Exceptionally easy to operate

- Easy-to-use graphical interface (6.5 inch VGA touch screen)
- Fast protocol setup
- Convenient protocol transfer from one Veriti® Thermal Cycler to another with a USB memory stick

# Innovative 96-Well VeriFlex™ Block technology—a new way to do PCR

## VeriFlex™ Blocks: Enhanced PCR functionality

The Veriti® 96-Well Thermal Cycler features innovative VeriFlex™ Blocks for enhanced PCR functionality. Six separate Peltier blocks provide maximal versatility and flexibility and offer two key benefits:

- 1) PCR optimization: each block can be set with a specific temperature, which is ideal for precise control over PCR optimization.
- 2) Run more experiments: the six Peltier blocks can also be used to run up to six different annealing temperatures in the same run.

## VeriFlex™ Blocks: A better-than-gradient approach

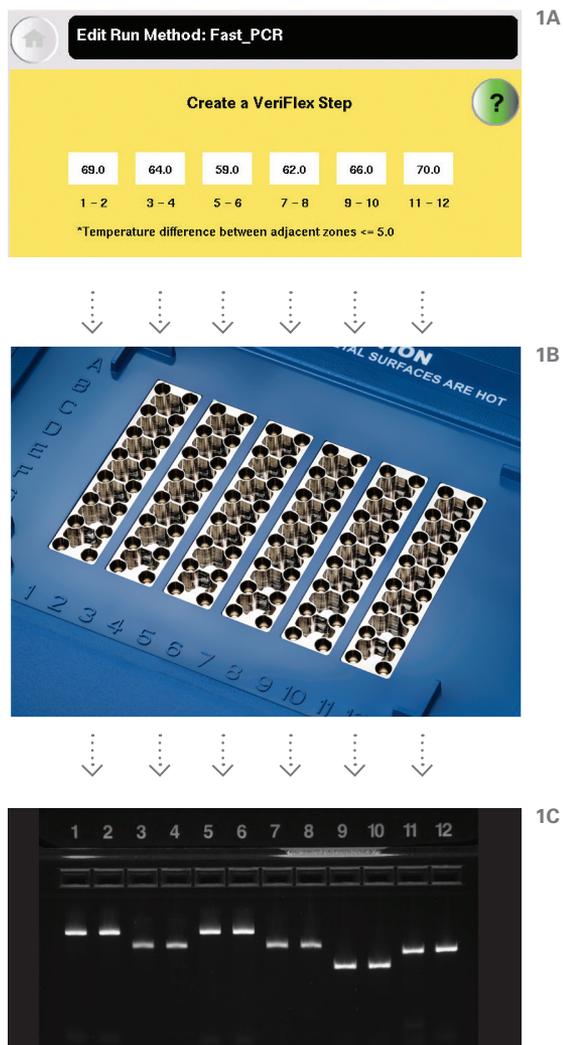
VeriFlex™ Blocks on the Veriti® Thermal Cycler provide a better-than-gradient approach to PCR optimization. With six separate Peltier blocks, you can precisely set and control the temperature in each block.

- Use the on-board  $T_m$  calculator to approximate the optimal annealing temperature.
- Run up to six separate temperatures in the same plate to determine the optimal annealing temperature.
- VeriFlex™ Blocks maintain their thermal characteristics between optimizing and isothermal conditions, eliminating the need for further optimization steps.

## VeriFlex™ Blocks: More than just for PCR optimization

VeriFlex™ Blocks have an additional benefit over gradient thermal cyclers. Since the Peltier blocks are separate, it is possible to run up to six different temperatures in the same protocol step (Figure 1).

- Run up to six different annealing temperatures for cycle sequencing or endpoint PCR.
- Incubate samples at six different temperatures simultaneously.



**Figure 1A.** Screenshot from Veriti® 96-Well Thermal Cycler showing the annealing temperature being set for six different primers.

**Figure 1B.** VeriFlex™ Blocks: Six individual Peltier blocks.

**Figure 1C.** PCR results showing six primer sets run in a single PCR amplification cycle. Results indicate that the Veriti® 96-Well Thermal Cycler can run six assays at six annealing temperatures during the same PCR run.

# Powerful, yet simple to operate

## Control at your fingertips

The powerful, yet simple-to-operate user interface on the Veriti® system is driven by the 6.5 inch (16.51 cm) VGA color touch screen. The large screen allows for easy viewing of your temperature profiles (Figure 2). Additionally, the large navigation buttons put programming of the Veriti® Thermal Cycler at your fingertips. Setup and navigation do not require the use of a stylus or mouse.



Figure 2. Veriti® Thermal Cycler 6.5 inch VGA color touch screen.

## Fast setup, fast results

The Veriti® system provides two options for method navigation. For quick setup, you may select one of the preprogrammed methods (Figure 3). If you prefer to program your own methods, simply touch the step you would like to set up and then use the touchpad to enter thermal cycling values (Figure 4). After completing a setup, you have the choice of saving the method to the instrument or to a USB memory stick.

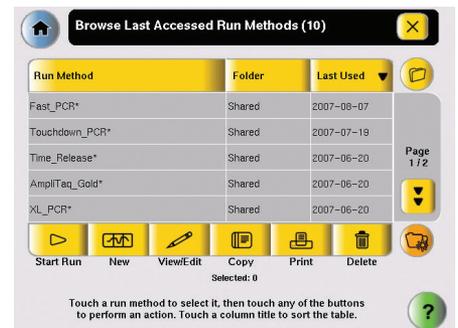


Figure 3. Screenshot of methods stored on the Veriti® Thermal Cycler. Select a method to be edited or saved. Put shortcuts to methods on the main menu for easy access.

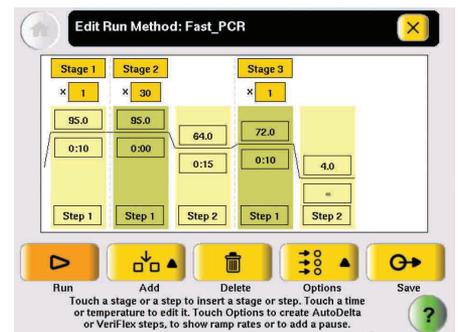


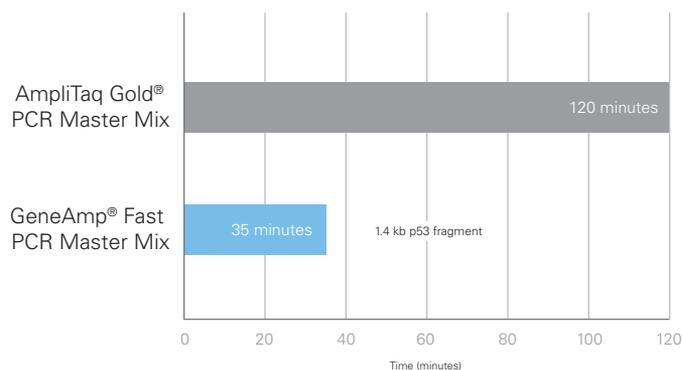
Figure 4. Edit run screen from Veriti® Thermal Cycler. Simply touch a step and enter new values into keypad (not shown) to create new methods or to alter existing ones.

# Flexibility with you in mind

## Control your time: Go fast when you want

The Veriti® 96-Well Thermal Cycler is both a standard and Fast thermal cycler in one. If you are currently performing standard PCR but anticipate a need for Fast thermal cycling in the future, the Veriti® 96-Well Thermal Cycler provides you with the flexibility to go Fast when you want. Converting your existing PCR protocols from standard to Fast is straightforward. By following simple guidelines, you can achieve results that are comparable to standard amplification for a variety of templates in a fraction of the time.

When using the GeneAmp® Fast PCR Master Mix on the Veriti® 96-Well Thermal Cycler, amplicons of 500 bp can be generated in under 25 minutes, some in as little as 10 minutes. Larger fragments, up to 2 kb, can be amplified in approximately 40–50 minutes with this master mix (Figure 5).



**Figure 5.** Target p53 (1.4 kb) generated using the Fast PCR Master Mix in 35 minutes versus 2 hours using standard PCR chemistry. All results were generated on the 0.2 mL Veriti® 96-Well Thermal Cycler.

# Compact footprint, convenient tools

## Network multiple thermal cyclers

Simultaneously control up to 12 Veriti® systems by connecting them in a satellite format. Simply connect the Veriti® systems to an Ethernet hub and you can start a run from any Veriti® Thermal Cycler. This allows you to start multiple thermal cyclers at once from one location. This, combined with side-by-side placement of Veriti® systems, provides you with a more flexible, space-saving alternative to other four-block thermal cyclers.

## Simple data transfer

A convenient USB port is outfitted on all Veriti® systems to simplify data transfer and product updates (Figure 6).

- Portability: Transfer methods between Veriti® systems via their USB ports
- Security: Store your most important methods on a USB memory stick
- Storage: Store an unlimited number of methods by using a USB memory stick
- Uploads: Update firmware when enhancements become available



**Figure 6.** USB functionality on the Veriti® Thermal Cycler.



**Figure 7.** Front and back venting allows for side-by-side placement of Veriti® systems.

## A range of consumables to fit your application

The Veriti® Thermal Cycler is supported worldwide by Applied Biosystems. In addition to world-class service, Applied Biosystems offers a complete line of complementary products designed to work with the Veriti® Thermal Cycler. The full line of products includes isolation products, enzymes, buffers, dNTPs, control reagents, contamination prevention products, and plastics.

# Control Veriti® systems from anywhere and everywhere—VeritiLink™ Remote Management Software

Access your Veriti® Thermal Cyclers everywhere you go with optional VeritiLink™ Remote Management Software. This server-based software allows you to manage and monitor over 50 thermal cyclers from your computer browser. With real-time email updates sent to your PDA, laptop, or desktop computer, the power of the Veriti® Thermal Cycler is just a click away.

## POWERFUL

Perform and monitor runs for 1 to 50+ networked Veriti® Thermal Cyclers

## SIMPLE

Create and edit methods on your computer and download from or upload to your Veriti® systems as needed

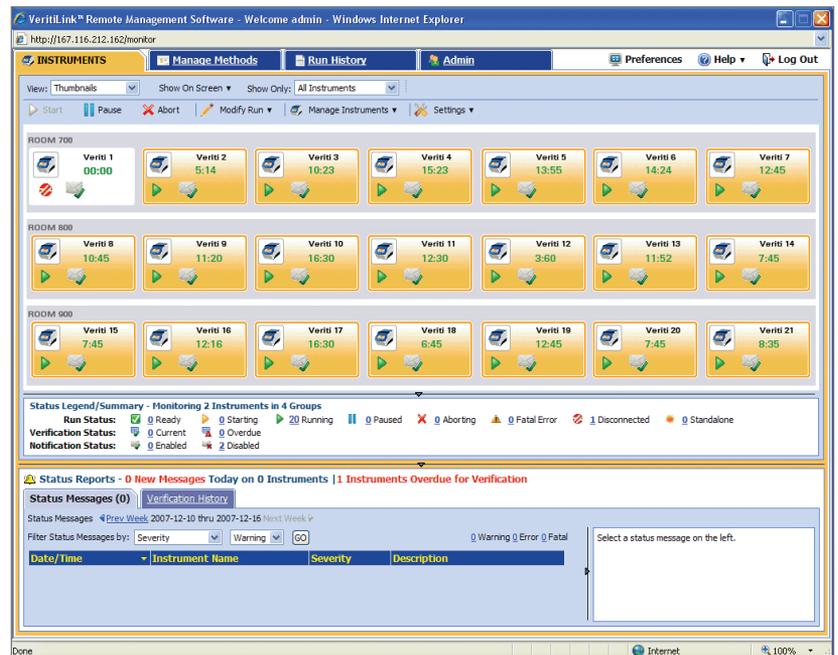
## SECURE

User password-protected environment provides secure system access

## EASY SETUP

Install software on server for use on any networked computers

**Figure 8.** Manage and monitor runs for your networked Veriti® Thermal Cyclers from your computer browser. This convenient resource management tool indicates at a glance which instruments are available and how much run time is remaining for each cycler.



**Figure 9.** Real-time email updates on your thermal cycling runs sent to your PDA, laptop, or desktop connect you with your research wherever you go.

## VERITI® THERMAL CYCLER SPECIFICATIONS

	Veriti® Fast 96-Well	Veriti® 96-Well	Veriti® 384-Well	Veriti® 60-Well
Block Format	0.1 mL Alloy	0.2 mL Alloy	0.02 mL Aluminum	0.5 mL Aluminum
Features	Fast 0.1 mL format and sample blocks enabled to run Fast chemistry	Standard 0.2 mL format and sample blocks enabled to run Fast chemistry	High-throughput, single-block system optimized for low-volume reactions	Easy-to-handle reaction tubes for large-volume reactions
Max Block Ramp Rate	5.00°C/sec	3.90°C/sec	3.70°C/sec	3.30°C/sec
Max Sample Ramp Rate	4.25°C/sec	3.35°C/sec	3.10°C/sec	2.70°C/sec
Enabled to Run Fast Chemistry	Yes	Yes	No	No
VeriFlex™ Blocks	25°C (5°C zone-to-zone)	25°C (5°C zone-to-zone)	No	No
Temperature Accuracy	±0.25°C (35–99.9°C)			
Temperature Range	4.0°C to 99.9°C			
Temperature Uniformity	<0.5°C (20 sec after reaching 95°C)			
Dimensions	Height: 24.5 cm (9.6 in) Width: 23.7 cm (9.3 in) Depth: 48.5 cm (19.1 in)			
Weight	11.4 kg (25 lb)	11.4 kg (25 lb)	11.4 kg (25 lb)	11.4 kg (25 lb)
PCR Volume Range	10–30 µL	10–80 µL	5–20 µL	25–100 µL
Instrument Memory	800 protocols on board, unlimited with use of USB memory stick			
Display Interface	16.51 cm (6.5 in) VGA 32k color with touch screen			
Warranty	2 years			
T <sub>m</sub> Calculator	Menu-driven through touch screen			

## ORDERING INFORMATION

Description	Quantity	P/N
Applied Biosystems Veriti® 96-Well Fast Thermal Cycler, 0.1 mL	1 instrument	4375305
Applied Biosystems Veriti® 96-Well Thermal Cycler, 0.2 mL	1 instrument	4375786
Applied Biosystems Veriti® 384-Well Thermal Cycler, 0.02 mL	1 instrument	4388444
Applied Biosystems Veriti® 60-Well Thermal Cycler, 0.5 mL	1 instrument	4384638
VeritiLink™ Remote Management Software	1 disc	4393565
0.1 mL 9-Channel VeriFlex™ 96-Well Temperature Verification Kit for 0.1 mL Fast Veriti® System	1 kit	4373997
0.1 mL 9-Channel VeriFlex™ 96-Well Temperature Verification Probe for 0.1 mL Fast Veriti® System	1 probe	4375938
0.2 mL 9-Channel VeriFlex™ 96-Well Temperature Verification Kit for 0.2 mL Veriti® System	1 kit	4377669
0.2 mL 9-Channel VeriFlex™ 96-Well Temperature Verification Probe for 0.2 mL Veriti® System	1 probe	4377670
0.02 mL 9-Channel 384-Well Temperature Verification Kit for 384-Well 0.02 mL Veriti® System	1 kit	4385338
0.02 mL 9-Channel 384-Well Temperature Verification Probe for 384-Well 0.02 mL Veriti® System	1 probe	4385339
0.5 mL Single-Channel 60-Well Temperature Verification Kit	1 kit	4309924

For more information on the Veriti® Thermal Cyclers, contact your local Applied Biosystems representative or visit [info.appliedbiosystems.com/veriti](http://info.appliedbiosystems.com/veriti)

### For Research Use Only. Not for use in diagnostic procedures.

NOTICE TO PURCHASER: The Veriti® Thermal Cyclers are covered by US patents, and corresponding claims in their non-US counterparts, owned by Life Technologies Corporation. No right is conveyed expressly, by implication, or by estoppel under any other patent claim, such as claims to apparatus, reagents, kits, or methods such as 5' nuclease methods. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

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