



◀ Piko thermal cycler from
Finnzymes

▶ The PreCR Repair Mix from New England
Biolabs



The Need for Speed

Performance enhancing PCR makes bonds faster and stronger

Faster yields with higher specificity, the new breed of PCR products increasingly focuses on real-time applications, with a concern for higher yields. Some of the kits described below claim exponential increases in speed. Take a look at these tools that can enhance your performance.

The **MasterAmp Tfl DNA Polymerase microarray** from **Epicentre** is a recombinant DNA polymerase with good thermostability (up to -95°C) and processivity (15 kb PCR products). This enzyme is of very high purity, free of detectable non-specific DNA exo- and endonuclease and RNase activities. The presence of betaine in the MasterAmp 10X PCR Enhancer supplied in the kit substantially improves the yield and specificity of amplification of many target sequences, especially those containing a high G+C content or secondary structure. It also greatly improves the yield consistency of PCR products in multiplex PCR reactions. **More information:** www.epibio.com

Eppendorf introduces the real-time **Mastercycler EP Realplex** which combines the reliability of the Mastercycler EP with an innovative optic excitation and detection system with 96 LEDs and 96 optic fibers. Highly sensitive channel photomultipliers allow detection and quantification of minuscule amounts of DNA. The combined speed of the thermoblock ramp rates and parallel fluorescence detection make it possible to run an entire real-time PCR in less than 30 minutes. Eppendorf's impressive product range also includes PCR consumables, and

together with PCR reagents from QIAGEN, pre-optimized protocols are available.

More information: www.eppendorf.com

Finnzymes introduces the **Piko** thermal cycler. At less than half the size of the smallest thermal cyclers on the market, the Piko relies upon the Slidetiter vessels, also from Finnzymes, to achieve such a compact size. This thermal cycler completes a PCR protocol in less than ten minutes by utilizing Finnzymes' highly processive polymerases, such as their flagship proof-reading polymerase, Phusion. **More information:** www.finnzymes.com

The new **StepOne Real-Time PCR System** from **Applied Biosystems** provides both new and experienced researchers with a highly-functional, easy to use and cost-effective way to conduct real-time PCR experiments. The StepOne System can be used in a variety of laboratory applications that include gene expression, viral load and genotyping experiments. Beginning users benefit from intuitive software wizards that can be tailored to run specific experiments and guide new users through set up, operation and analysis. Experienced users seeking a personal real-time PCR solution can use the StepOne System to customize experiment design param-

eters such as thermal cycling protocols and nucleic acid template types. All users benefit from the space-saving small footprint of the system. Ideal for researchers interested in lower throughput applications, the StepOne system expands the family of Real-Time PCR systems offered by Applied Biosystems for laboratories of all sizes. **More information:** www.appliedbiosystems.com

LABREPCO introduces the newly designed **Biometra TProfessional** line of thermal cyclers. This unique family of products has a variety of new features centered on an updated user interface containing a graphical display that is easy to program as well as improved block technology with superior heating and cooling rates for greater throughput. This newest Biometra offering is available with either a high speed silver block or an anodized gold aluminum block based upon your budgetary needs. The Quick Start programming and convenient set up allows researchers to accommodate as many gradients as needed. Unique to the TProfessional line of products, the "smart lid" design prevents breakage of sample tubes and assures reproducible results with all experiments. Available in the TProfessional and TProfessional Basic format, the Biome-



« Biometra TProfessional thermal cyclers available from LABREPCO

tra thermal cyclers are specifically designed for heavy lab use as a shared resource. LABREPCO is the exclusive dealer of Biometra products in the United States. **More information: www.labrepc.com**

Perform real-time PCR faster without costly hardware upgrades using the new **QuantiFast Kits** from **QIAGEN**. Giving time savings of up to 60% on existing cyclers, the kits enable customers to publish research faster. Significantly reduced denaturation, annealing, and extension times are achieved through a specially developed fast PCR buffer containing the patent-pending additive Q-Bond. No optimization of PCR conditions is necessary, even if using previously established assays, allowing specific and sensitive real-time quantification at the first attempt. QuantiFast Kits are available for SYBR Green or probe-based detection, and can be used in PCR, two-step RT-PCR, and one-step RT-PCR procedures. **More information: www.qiagen.com**

Roche introduces the new **Expand Long Range dNTPack** as a complete solution for the consistent amplification of PCR products of 5 to 25 kb from genomic DNA. This enhancement of the Expand Long Template PCR System combines optimized buffers, high-purity PCR-grade nucleotides, and a next-generation blend of thermostable enzymes in a single convenient kit. **More information: www.roche.com**

RT² Profiler PCR Arrays from **Superarray** are powerful new tools for monitoring the expression of focused gene panels. PCR Arrays enable accurate profile gene expression for a biological pathway or disease using existing real-time quantitative PCR

instruments. Over 100 RT² Profiler PCR Arrays are available for expression profiling in immunology, cancer, signal transduction, and other applications. **More information: www.superarray.com**

The new **PreCR Repair Mix** from **New England Biolabs** is an innovative blend of recombinant proteins that are designed to repair damaged template DNA prior to its use in PCR reactions. Effective on a wide range of damaged DNA, the PreCR Repair Mix will correct damage due to heat, low pH, oxygen, and UV light. Repair involves a simple 20 minute reaction and will not damage template DNA. The PreCR Repair Mix may increase the chance for successful PCR, but users should note that the mix will not repair all types of damage (i.e. DNA crosslinks or highly fragmented DNA). **More information: www.neb.com**

The **Paq5000 DNA Polymerase** from **Stratagene** is a robust Taq substitute that was developed with the specific intent of providing researchers with significant cost and time savings when performing routine PCR. Paq5000 offers scientists a unique tool for robustly and affordably amplifying a wide range of DNA templates, including genomic targets up to 6 kb. Scientists worldwide have reported to Stratagene that Paq5000 provided superior performance ("stronger, cleaner bands") over Taq DNA polymerase, and that substitution of Paq5000 into many Taq-based protocols, such as genomic DNA screening and PCR genotyping, required making few or no changes to the Taq-based protocols. Additionally, this novel DNA polymerase was developed to perform optimally with extension times of 30 sec/kb or less, as

» The Mastercycler EP Realplex from Eppendorf



compared to 1min/kb for Taq. Thus, Paq5000 provides scientists with the added benefit of significantly shorter overall PCR run times. **More information: www.stratagene.com**

Amplification Central is the new comprehensive and extensive online amplification solution and support provider from **Bio-Rad**. It features rich technical content including tutorials for educational purposes, the "PCR Doctor" a troubleshooter for problematic amplification experiments, and the "Assay Design" guide for experimental design and optimization. **More information: www.bio-rad.com** ■

Companies Mentioned in this Product Spotlight:

Applied Biosystems: www.appliedbiosystems.com

Bio-Rad: www.biorad.com

EPICENTRE: www.epibio.com

Eppendorf: www.eppendorf.com

Finnzymes: www.finnzymes.com

LABREPCO: www.labrepc.com

New England Biolabs: www.neb.com

QIAGEN: www.qiagen.com

Roche: www.roche.com

Stratagene: www.stratagene.com

Superarray: www.superarray.com

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