

# GENE RESEARCH

*Improve your PCR process!*

**O**ptimizing each part of the pre- and post-PCR process — primers, sample preparation, and product detection — maximizes the speed and cost efficiency of the process as a whole. Now laboratories can complete their research faster, more economically and with reliable results, by improving the critical steps of the PCR process using products from Beckman.

### MAKE YOUR OWN OLIGONUCLEOTIDES IN LESS TIME, FOR LESS COST

Substantial time and cost advantages can be gained by synthesizing high-quality oligonucleotides immediately on demand. New from Beckman, the Oligo 1000 DNA Synthesizer simplifies oligonucleotide synthesis so that any researcher can easily make high-quality, research-ready oligonucleotides in four to five hours. No further purification is required prior to using your custom oligonucleotides in the PCR process.

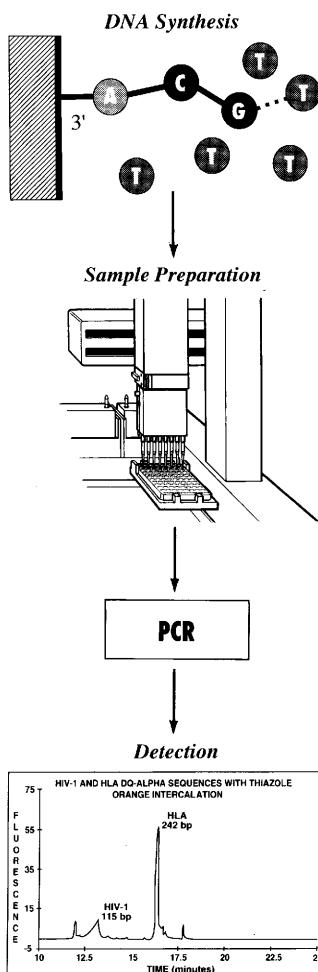
Additionally, the Oligo 1000 DNA Synthesizer reduces costs by 30% or more. Scale of synthesis as low as 0.03  $\mu$ mole can be used. And reagent life is twice as long as is currently available on other DNA synthesizers.

### AUTOMATE THE TEDIOUS SAMPLE PREPARATION STEPS

The BIOMEK® 1000 BioRobotics System from Beckman is ideally suited for precise and efficient pre- and post-PCR sample handling.<sup>1</sup> This fully automated workstation allows you to process thousands of samples per day. Accuracy and reproducibility of low volume pipetting reduces reagent costs and provides consistent reactions. Its ability to interface with a variety of labware offers the flexibility of using standard PCR plates and tube formats. Plus, contamination is effectively controlled with disposable aerosol-barrier pipette tips.

### IMPROVE YOUR DETECTION THROUGH HIGHER SENSITIVITY AND LOWER SAMPLE CONSUMPTION

Laser-induced fluorescence (LIF) detection is ideally suited to improve detectability in capillary electrophoresis. The P/ACE™ 2000 Series Capillary Electrophoresis System with LIF detection from Beckman offers an alternative method to classical electrophoretic techniques for verification of the size and purity of PCR products. LIF sensitivity is comparable to autoradiography, delivering up to 400X better sensitivity than CE with UV detection using only nanoliters of the product.<sup>2</sup> PCR products prestained with intercalating dyes can be analyzed at extremely low levels. Plus, the P/ACE 2000 is fully automated; up to 23 samples may be loaded.



*Start with high quality primers, automate sample preparation, and improve the detection process.*

### REACH THE FINISH LINE FASTER

Beckman products optimize accuracy with automation and operational simplicity before and after the amplification step. This assurance of lower cost, error-free performance is The Beckman Plus that will help you reach the finish line faster.

Ask your Beckman representative for free applications and technical information about DNA synthesis, BioRobotics, capillary electrophoresis, centrifugation, spectrophotometry, and other gene research products by calling 1-800-742-2345 (U.S.) or your local Beckman office.

<sup>1</sup> PCR is covered by U.S. patents owned by Hoffman-La Roche Inc.

<sup>2</sup> Mark Holodniy, Mark A. Winters and Thomas C. Merigan. *BioTechniques* 1992, Vol. 12, a: 1, 36-39.

<sup>2</sup> Herbert E. Schwartz and Kathi J. Ulfelder. *Anal. Chem.* 1992, 1737-1740.

# BECKMAN



# Introducing the first agarose that can challenge polyacrylamide.

MetaPhor agarose

Polyacrylamide

Until now, when you wanted the finest resolution of PCR\* products and small DNA fragments (less than 800 bp), you probably made a polyacrylamide gel. Preparing that gel, however, was tedious and time-consuming.



But now there's something better. It's a new kind of agarose that not only offers speed and convenience, but also has twice the resolution capabilities of any other agarose. It's new MetaPhor™ agarose from FMC.

In fact, as you can see from the above results, MetaPhor agarose gives you resolution so fine (down to a 4 bp difference) that it rivals polyacrylamide. And we think that makes it a clear winner.

Just dissolve MetaPhor agarose in 1X TBE buffer, cast and chill the gel in your submarine chamber, load your samples, and go. It's as easy as that.

So take the MetaPhor challenge, and see how our new MetaPhor agarose performs. When you do, you'll understand why scientists who want the best go straight to the source. To learn more, or to place your order, call us today at **800-341-1574**.



Go straight to the source.

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

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\*The PCR process is covered by U.S. patents owned by Hoffmann-LaRoche, Inc.