

Materials Science Microscopes

With an integrated furnace hot stage, the MS-E15 microscope enables the direct observation of materials science samples during heating and cooling experiments typically performed in semiconductor and metallurgical investigations. The MS-E15 unit integrates a compound optical microscope with an infrared gold image furnace hot stage and a video recording and display system for the direct observation of the melting and recrystallization behavior of materials. Samples can be maintained in virtually any gas environment and pressure or vacuum level, and can be brought to high temperatures (1,000° C in one minute) and cooled to room temperature quickly. Images can be recorded in video format at 100X, 200X, and 400X magnification using the charge-coupled device camera and VHS or DVD recorder. The system is easy to operate and provides a clean and controlled sample environment with highly accurate temperature regulation. Samples can be solid, liquid, or powder with a choice of air, inert gas, and vacuum atmospheres.

Ulvac Technologies For information 978-686-7550 www.ulvac.com



DNA Transfection Reagent

A DNA transfection reagent is available that is efficient in a wide variety of eukaryotic cells. A polymeric transfection reagent, jetPEI has proven successful in delivering DNA to more than 200 adherent and non-adherent cell lines. It is appropriate for routine transfection and particularly suitable for fragile, slow-dividing cells, such as primary cells. The jetPEI reagent is a polyethylenimine that behaves as a proton sponge by absorbing the acidity of the DNA-containing endosomes. As a result, DNA is protected and vacuole swelling causes rapid release of the jetPEI/DNA complexes into the cytosol. And unlike lipidic transfection reagents, jetPEI is a water-soluble polymer, enabling consistent complex formation with DNA.

Polyplus-transfection For information 760-481-4918 www.polyplus-transfection.com

Mouse Genome Library

Open Biosystems offers complete coverage of the mouse genome with RNA interference (RNAi) triggers adapted with microRNA sequences. This vector-based whole genome RNAi resource for mouse now provides increased gene silencing with greater specificity. The mouse RNAi offering comes on the heels of the human whole genome library and further extends the manufacturer's portfolio of Expression Arrest products. The libraries simplify validation of gene function, probing interactions between genes, and establishment of animal models.

Open Biosystems For information 256-704-4848 www.openbiosystems.com

Solubility Optimization Service

The new Solubility Optimization Service (SOS) uses a battery of newly developed protein expression technologies that allow it to guarantee delivery of recombinant protein in a soluble format or

there will be no charge to the customer. The SOS technology makes use of 24 unique solubility optimization parameters applied to each expression clone. This screening results in soluble expression even in clones that were previously completely insoluble. As a result, the SOS service allows investigators to avoid the expensive and time-consuming guesswork required to optimize conditions for maximum protein solubility and yield. Researchers simply submit their clones in plasmids under the control of a T7 polymerase promoter. Genlantis solubility experts will perform an SOS screening and return the desired quantity of soluble protein for each clone submitted.

Genlantis division of Gene Therapy Systems For information 888-428-0558 www.genlantis.com

Extraction Buffers

Researchers have the choice of six different Focus-Extraction Buffers for two-dimensional electrophoresis that eliminate the risk of carbamylation, a common problem with solutions containing urea. To avoid carbamylation, urea-based reagents must be prepared fresh for each use. Focus-Extraction Buffers can be prepared quickly in the exact volume needed.

G-Biosciences/Genotech For information 314-991-6034 www.GBiosciences.com

HS DNA Polymerase

SpeedStar HS DNA Polymerase is a convenient, efficient DNA polymerase optimized for fast polymerase chain reaction (PCR). Extension times as low as 10 sec/kb are possible, reducing total reaction times. SpeedStar reactions can be performed using standard PCR instrumentation. SpeedStar's robust two-buffer system facilitates efficient amplification of varying size fragments (up to 20 kb) with less optimization than other polymerases.

Takara For information 888-251-6618 www.takaramirusbio.com

PCR Cloning Kit

The StrataClone PCR Cloning Kits provide easy, fast, and reliable DNA topoisomerase I polymerase chain reaction (PCR) cloning at an affordable price. The StrataClone PCR Cloning Kit exploits the combined efforts of two enzymes, DNA topoisomerase I from Vaccinia virus and Cre recombinase from bacteriophage P1. Cloning with topoisomerase saves time and money with simple primer design, no PCR clean-up, and an easy, three-step process. In this system, topoisomerase I is covalently bound to the cloning vector arms. This ready availability of enzyme reduces the complexity of the reaction from three to two components and reduces ligation time from two or more hours to five minutes.

Stratagene For information 858-373-6441 www.stratagene.com/strataclone

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