Product Digest

this month's topic Laboratory Equipment

Disperser Blends High-Viscosity Fluids and Solids

The PBA-2 high-viscosity disperser is appropriate for bench-top blending of fluids with disparate viscosities, resuspension of densely settled solids, preparation of paste-like formulations, and similar applications. A 2-hp explosionproof, variable-frequency-drive (VFD) motor powers the mixing element; the user can switch between a paddle and bow-tie type blade as the mixing element. An electromechanical or hydraulic lift to raise or lower the blade can be selected. Additional options include sight/charge ports on the vessel cover, a heating/cooling jacket, discharge valve, and mixer bench. All of the wetted parts, as well as the shaft guard and adjustable can lock, are Type 304 stainless steel. The laboratory-scale model is suitable for use with standard 5-gal pails or manufacturer-supplied vacuum-rated stainless-steel mixing vessels; larger-capacity units, up to 500-gal, are also available.

Charles Ross and Son Co.
www.mixers.com

Centrifuge Delivers High-Performance, High-Volume Batch Bioprocessing

The Sorvall RC BIOS 10 high-performance centrifuge system has a 10-L capacity and a carbon fiber rotor that accelerates high-volume bioprocessing. It is designed to improve productivity by reducing cycle times

and ensuring sample safety and integrity. The Fiberlite F5-10x1000 LEX rotor spins up to ten 1-L Nalgene centrifuge bottles in a single run, and is made of durable, noncorrosive carbon fiber. The centrifuge is suitable for bacterial and mammalian cell pelleting, pelleting of cell cultures from fermentation tanks, large microbial cultures, biologics and vaccine production, clarifying broths, and harvesting cell and tissue cultures.

Thermo Fisher Scientific
www.thermoscientific.com

Microarray Screening Device Is Label-Free

The b-screen analyzes microarrays in the standard microscope format, with a label-free read-out of up to 10,000 spots per square centimeter. It allows for the precise study of biomolecular interactions in various types of samples, such as body fluids (*e.g.,* serum or whole blood) and cell culture medium, using an automated microfluidics system for incubation of the microarray and sample. Kinetic data for many biomolecular interactions, including protein/protein, peptide/protein, and small-molecule/protein, can be retrieved in applications such as bioanalytics, drug discovery, production, and quality control. The device can be used with multiple array layouts, uses both glass and plastic substrates, and is compatible with most common microarray printers. Because it does not need fluorescence labels, requires minimal sample pretreatment, and minimizes reagent consumption, conditions as close as possible to *in vivo* can be achieved.

Biametrics GmbH
www.biametrics.com

High-Volume Pipette Increases Experiment Integrity

The Liquidator 96 manual pipette system meets the needs of operators conducting high-throughput experiments. The bench-scale device provides accuracy without the need for computer programming or electrical power. It enables the user to pipette into 96- and 384-well plates, polymerase chain reaction (PCR) plates, 8- and 12-channel reservoirs, and 96-deepwell plates. By quickly and simultaneously filling each well, it eliminates the issues of well-to-well variability and skipped or repeated wells. Inert consumables further bolster experiment integrity. Since

the pipette is functionally similar to a single manual pipette, technicians of any experience level can operate it and deliver reproducible results. The compact unit fits any benchtop or laminar-flow cabinet, which makes it suitable for cleanroom conditions.

Mettler Toledo
www.mt.com

Small-Scale Reactor Handles High-Pressure Reactions

The HPR-Micro reactor is designed for high-pressure, small-batch reaction chemistry. With the ability to operate at pressures up to 10,000 psi (689 bar) and temperatures ranging from –40°C to 150°C, this small-scale reactor is appropriate for exploratory

research, process development, and screening applications where reagents, catalyst, or other essential materials are expensive or only available in a limited supply. The standard unit comes with a 10-mL Inconel 625 stainless steel reactor vessel equipped with inlet/outlet valves, a pressure gage, a tool-free closure, and a magnetically coupled stirring mechanism. With a compact design, the reactor vessel can fit under a fume hood, or can be removed from the mounting stand and placed in a glove box for reactant/reagent loading. Other loading options include additional inlet ports and a reagent injection manifold with standard quantities of 2.0, 1.0, and 0.5 mL. All pressure components meet American Society of Mechanical Engineers (ASME) standards, and are protected by a rupture disc assembly.

Supercritical Fluid Technologies
www.supercriticalfluids.com