Big News for the TL-100 Benchtop Ultracentrifuge

The Beckman TL-100 Ultra-centrifuge—with a choice of fixed angle, swinging bucket and vertical tube rotors—has become the preferred way to separate small sample volumes, typically taking only one-fifth the time required by floor-model ultracentrifuges.

Now a new rotor, the TLA-100.3, brings even more capabilities to benchtop ultracentrifugation.

Larger Capacity
The rotor spins six open-top tubes that hold 3 mL each, triple the volume of any other TL-100 open-top tube. The fixed angle rotor also can run six 3.5-mL Quick-Seal® tubes for a maximum capacity of 21 mL.

Higher Performance
At a top speed of 100,000 rpm, the TLA-100.3 generates forces of 541,000 g (vs. a previous high of 436,000 g) and has a k factor of 16.5 for fast, efficient runs.

Microcentrifuge Tubes
With adapters, the new rotor also can spin 1.5-mL conical-bottom microcentrifuge tubes at speeds to 50,000 rpm—ideal for pelleting subcellular fractions and DNA or protein precipitates. You’ll find the 30°-angle titanium rotor useful for plasmid preps, protein binding studies and mRNA studies too.

Big NEWS! For the complete story on the TL-100 benchtop ultracentrifuge, its rotors, tubes, accessories and applications, write Beckman Instruments, Inc., Spinco Division, 1050 Page Mill Road, Palo Alto, CA 94304. Offices worldwide.
For cells in culture

Discover the Power of the ACAS™ 470

Controlled Laser Illumination
with the ACAS 470 (Anchored Cell Analysis and Sorting) brings new light to discovery in cell biology. Focus the laser beam where you want it for:
- fluorescence excitation
- photobleaching
- photoactivation
- cell surgery
- cell ablation
without disturbing the extracellular environment and attachment of cells.

Computer-Controlled Stage Movement
allows precise and automatic targeting of the laser beam. Stage speed provides for rapid sorting of cell monolayers in culture. Stage coordinates can be used for repositioning with the high accuracy necessary for automated sequential cell analysis.

Cell Sorting
of anchorage-dependent cells is now possible with the ACAS 470. Selective sorting is achieved by destroying unwanted cells via the laser beam, or by physical separation through a unique cookie-cutter selection method. In this way, homogeneous cell progeny can be obtained from a heterogeneous cell population.

Quantitative Fluorescence Analysis
is optimized with the ACAS 470. Cells are imaged for convenient manual or automated interaction. For fluorescence analysis, the ACAS 470 sequentially exposes only small areas of a cell to brief laser pulses. The resulting fluorescence represents emitted light from targeted fluorescent molecules, giving three-dimensional information.

Convenient Software
that is easy to learn and to use is the heart of the ACAS 470. Experimental parameters are set, data are accessed and the stage is controlled through an alphanumeric keyboard or hand-held mouse. The CRT screen displays collected data, results, menus and prompts for greater user interaction.

Are you considering instrumentation for CELL SORTING?
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Finally, high quality DNA/RNA can be automatically extracted from tissues, cells, plasmids and viruses.

Introducing the first Nucleic Acid Extractor.*

The new Model 340A Nucleic Acid Extractor* automatically extracts and purifies DNA or RNA from tissues, cells, plasmids and viruses. It ensures the consistent quality of your extracted product and eliminates tedious manual procedures. This instrument-reagent system is based on an extensive investigation of nucleic acid extraction. Three advantages of the Model 340A system are:

- The composition of the Applied Biosystems Lysis Buffer provides rapid digestion of proteins by Proteinase K and quick phase separation;
- A high purity, pre-mixed phenol-chloroform reagent that attaches directly to the instrument eliminates handling of this toxic corrosive liquid; and
- A choice of final purification by either ethanol precipitation or dialysis.

Proven, Quality Product
DNA isolated with the Model 340A standard protocols has been assayed by UV absorption which confirms the absence of phenol and protein in the final product. In addition, gel electrophoresis confirms that the DNA can be cut by restriction endonucleases.

Genomic DNA in the range of 160 kb can be routinely isolated. To eliminate cross-contamination between samples, the system is automatically purged with hot 6N nitric acid.

Easy to Operate and Program
Users can select standard methods which are included with the 340A to process such source materials as blood, liver and plasmids. For other materials, users can easily develop their own methods using the Extractor’s easy-to-follow software.

Multiple Sample Capability
The Model 340A can extract DNA or RNA from eight samples simultaneously. The time required varies from 1½ hours for plasmids to three hours for liver. Final purification by ethanol precipitation requires only 30 minutes. Dialysis can be completed overnight with the Applied Biosystems Model 345A Dialyzer which automates previously time-consuming buffer changes.

For More Information...
Contact your local Applied Biosystems representative, the nearest office listed below or indicate reader service number 404.
From our local star to the ends of the universe

ASTRONOMY & ASTROPHYSICS

This volume contains 24 articles published in Science between 1982–84, ranging from the solar system to the pulsars at the very edge of the observable universe. Research techniques and instruments described cover such diverse topics as proton decay, the Very Large Array, and the planned Space Station as a platform for future experiments.

Each article is self-contained, yet as a whole, the volume reveals a broad, coherent, and contemporary picture of our astronomical universe. Selected for their depth of coverage and breadth of topics by Morton S. Roberts, past Director of the National Radio Astronomy Observatory, these articles are of interest to the entire scientific community.

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