New TL-100

THE IDEAL ULTRACENTRIFUGE FOR SMALL SAMPLES.

The TL-100 Tabletop Ultracentrifuge is another first from Beckman. This 100,000 rpm instrument generates forces to 436,000 g, yet takes up no more lab space than a spectrophotometer!

It uses a solid-state, thermoelectric refrigeration system to achieve operating temperatures as low as 2°C.

Five different rotors hold microtubes from 0.2 mL to 2.2-mL. Fixed angle, swinging bucket and vertical tube rotors make the TL-100 ideal for a broad range of ultracentrifuge applications such as gradient separations, isolation of plasmid DNA, molecular weight determinations and binding studies. For virtually any application that uses small sample volumes, the TL-100 is your best choice.

Microprocessor control keeps operation simple. Ten program memories let you repeat runs easily. Direct, brushless induction drive gets rotors to speed fast and has few wear points, so maintenance costs are minimized.

The TL-100 has ten acceleration and deceleration rates, so you can achieve a gentle start and stop to protect shallow gradients. You can even connect your TL-100 to a personal computer for state-of-the-art lab management.

All this and more in an ultracentrifuge that fits on a standard 24-inch laboratory benchtop!

For complete details, write to: Beckman Instruments, Inc., 1050 Page Mill Road, Palo Alto, CA 94304; or Beckman Instruments International, S.A., PO. Box 76, 1211 Geneva 6, Switzerland.
Bio-Rad's Reverse Transcriptase...consistently the highest quality available!

Every lot tested for performance on a 2 kb mRNA...

OVA LBUMIN cDNA SYNTHESIS

275

185

mRNA

Agarose-formaldehyde gels of (A) purified ovalbumin mRNA (2 kb) and size markers, detected by EtBr staining, (B) time course of cDNA synthesized from mRNA, by Bio-Rad Reverse Transcriptase, detected by autoradiography, and (C) CDNA, incubated with Bio-Rad Reverse Transcriptase to assay for degradation of cDNA.

Every lot of our Reverse Transcriptase is subjected to stringent quality control as well as relevant functional testing procedures. As a result, you won't have to worry about problems with nucleases or batch-to-batch variations common to reverse transcriptase from other sources. You don't have to take our word for it. We also provide ovalbumin mRNA, RNA size markers and protocols free with every vial of Bio-Rad Reverse Transcriptase...so you can reproduce our quality assurance functional test as a positive control. Of course you'll also receive relevant technical data and quality assurance test results for that lot. As always, our Applications Staff stands ready to answer any questions you may have or to provide additional data.

Reverse Transcriptase marks the beginning of a major commitment by Bio-Rad to provide superior tools for the molecular biologist. Expect the same high quality that is characteristic of Bio-Rad acrylamide and other materials, systems and apparatus for electrophoresis. For more data illustrating the superior quality of Bio-Rad Reverse Transcriptase, ask for Bulletin 1174.

Bio-Rad Reverse Transcriptase was compared with reverse transcriptase from 4 other commercial sources (A-D) in a time course TMP incorporation assay using poly(rA)·poly(dT)12-18 as template; primer Standard assay conditions (Houtz et al., J. Virol. 29, 517) and 20 units of reverse transcriptase were used.

Bio-Rad Laboratories
2200 Wright Ave.
Richmond, CA 94804
(415) 234-4130
Toll Free #: (800) 4-BIORAD
Also in Rockville Centre, N.Y., Australia, Austria, Canada, Germany, Italy, Japan, the Netherlands, and Switzerland.

21 SEPTEMBER 1984 Circle No. 231 on Readers' Service Card
ANNOUNCING...
The Neurosciences Institute Publications Series

John Wiley & Sons, Inc. is pleased to announce a new publishing program in collaboration with The Neurosciences Institute of the Neurosciences Research Program. The new series is devoted to two types of publications: edited volumes on topics of current interest, and monographs by visiting scientists and Fellows. The following entries are the first three volumes in the new series.

**DYNAMIC ASPECTS OF NEOCORTICAL FUNCTION**
Edited by Gerald M. Edelman, W. Elnar Gall & W. Maxwell Cowan
Presents salient views of the current work being done in the physiology of the cerebral cortex, primarily describing functional properties of cortical neurons. These descriptions emphasize direct correlations with behavioral acts. Organized sections cover vision, audition, and the control of movement, flanked by an introduction on basic cortical operations and anatomy, and a final section on the relations between cortical physiology and psychophysics.
approx. 825 pp. (1-05559-9) October 1984 $85.00

**NEUROPHYSIOLOGICAL APPROACHES TO HIGHER BRAIN FUNCTIONS**
Edward V. Evarts, Yoshikazu Shinoda & Steven P. Wise
Describes promising experimental strategies for studying neuronal circuits involved in higher brain functions. Based on the authors' extensive experimental work on cerebral control of motor processes, it emphasizes studies of the "preparatory set," rather than perception, learning, or memory.
198 pp. (1-05557-2) 1984 $39.95

**PROTEIN PHOSPHORYLATION IN THE NERVOUS SYSTEM**
Eric J. Nestler & Paul Greengard
Reviews what is known about protein phosphorylation with special emphasis on the nervous system. Includes up-to-date information on protein kinases, protein phosphatases, and their substrates. Much of the material is also directly relevant to systems other than the nervous system.
398 pp. (1-05558-0) 1984 $59.50

**GENE EXPRESSION IN BRAIN**
Edited by Claire Zomzely-Neurath & William A. Walker
A multi-author volume dealing with the use of biochemical, molecular biological, and recombinant DNA methodology in resolving problems associated with neurobiology. Chapters incorporate a range of techniques devised to purify abundant messenger RNAs (mRNAs), to enrich for low abundance mRNAs, and to use synthetic oligonucleotides for the production of complementary DNA for amplification by insertion into plasmids, cloning, and amplification in bacterial vectors.
approx. 416 pp. (1-86299-6) January 1985 $42.50

**AXOPLASMIC TRANSPORT AND ITS RELATION TO NERVE FUNCTION**
Sidney Ochs
A systematic study of the transport of material within nerve fibers.
462 pp. (1-65255-5) 1982 $56.50

Order through your bookstore or write to Nat Bodian Dept. 5-1497

FOR 15-DAY FREE EXAM, CALL TOLL FREE

1 800 526-5368
In New Jersey, call collect (201) 342-6707
Order code #5-1497

WILEY-INTERSCIENCE
a division of John Wiley & Sons, Inc.
605 Third Avenue, New York, NY 10158
In Canada: 22 Worcester Road, Rexdale, Ontario M9W 1L3
Prices subject to change and higher in Canada.
With a Brinkmann Homogenizer, you can homogenize samples under 1 ml

...homogenize anaerobically

...and without cross contamination.

When it comes to breaking down and homogenizing virtually any type of tissue, small organs, bones, muscle, cartilage, or even an entire mouse, the Brinkmann Homogenizer is in a class by itself.

Consider its power. A 600W motor develops up to 30,000 rpm (1200W on PT-45 model, with up to 20,000 rpm) to assure complete homogenization of most samples within 30 to 60 seconds (other instruments may require 15 minutes or more).

Consider the wide choice of generators, all made entirely of stainless steel. It includes a Microprobe Generator small enough to fit into a standard cuvette (for samples as small as 1 ml or less), Anaerobic Generators for aerosol-free homogenization, a Mechanical Seal Generator to minimize contamination and cleaning problems, even an in-line bench-top unit that homogenizes without admitting air.

Consider its unique method of tissue destruction, a combination of ultrasonic energy and mechanical shearing action, based on the Willems High Frequency Principle.

Consider the optional electronic speed control unit, with its sensor that continually monitors the actual speed and keeps it constant, regardless of load.

From any standpoint, nothing compares with a Brinkmann Homogenizer. For literature, write Brinkmann Instruments, Inc., Subsidiary of Sybron Corporation, Cantiague Road, Westbury, N.Y. 11590 or call toll-free 800/645-3050. In Canada: Brinkmann Instruments (Canada), Ltd.

Brinkmann Homogenizers
From tissue to homogenate in 30 seconds!

SYBRON | Brinkmann

For information circle No. 214 on Readers' Service Card
For a demonstration circle No. 215 on Readers' Service Card
Rules

The aim of this competition is to encourage and recognize outstanding reporting on the sciences and their engineering and technological applications in newspapers, general circulation magazines, radio, and television. The following categories are not eligible: items on the field of medicine, items published originally in AAAS publications or produced by AAAS; reports by employees of the AAAS or Westinghouse Electric Corporation.

Print

• An entry for a newspaper competition may be any of the following: a single story; a series of articles; or a group of three unrelated stories, articles, editorials, or columns published during the contest year. A magazine entry may be a single story or series published during the contest year.

• A completed entry blank must be submitted together with seven copies of each entry in the form of tear sheets, clippings, reprints, or syndicate copy (not over 8½" x 11"), showing name and date of the publication. ENTRIES MUST NOT BE ELABORATE!

Broadcast

• An entry for the radio or television competition may be an individual news story, feature, or a series, regardless of length, broadcast during the contest year on either public or commercial stations. Entries must be comprised of scripted material. Interviews are not eligible.

• A completed entry blank must be submitted together with a cassette in the case of radio and and copy of the script or a ¼" videocassette in the case of television and copy of the script.

• Each entrant may submit three entries for any one category.

• Each entry must have been published or produced and broadcast within the United States during the contest year—January 1984 through 31 December 1984. (In case of a series, more than half of the items comprising it must have been published or broadcast during the contest year.) The date on the issue in which an article appears will be considered as the date of publication. All entries must be postmarked on or before midnight, 15 January 1985.

• Persons other than the author may submit entries in accordance with these rules. Entries will not be returned.

• Winners of the 1983 awards are not eligible for the 1984 awards. Persons winning three times are no longer eligible.

• The Judging Committees, whose decisions are final, will choose the winners. There are five awards of $1,000: for the winning entry in the over 100,000 daily circulation newspapers competition; for the winning entry in the under 100,000 circulation newspapers competition; for the winning entry in the general circulation magazine competition; for the winning entry in the radio competition; and for the winning entry in the television competition. For award purposes, newspaper circulation will be sworn ABC daily circulation as of 30 September 1983. The Judging Committees may cite other entries for honorable mention.

• The awards will be presented at the dinner meeting of the National Association of Science Writers during the Annual Meeting of the American Association for the Advancement of Science in Los Angeles in May 1985. Travel and hotel expenses of the award winners will be paid. Entrants agree that, if they win, they will be present to receive their awards, unless prevented by circumstances beyond their control.
Immunoadfinity chromatography — a powerful tool for purifying antibodies, antigens and cells — requires specialized techniques to achieve good results. Bio-Rad now makes these techniques easier to perform by providing you with this anthology of the latest protocols. All have been thoroughly tested in our laboratories. You can learn what we’ve learned concerning:

- selection of the right affinity support for immobilization
- preparation of antiserum for immobilization
- adsorption of the sample
- elution strategies
- special considerations for labile antigens
- immunoaffinity chromatography with monoclonal antibodies

And more as well, including up-to-date references and applications. We’ll also keep your anthology current so you can stay in step with new developments. For your free copy, contact Bio-Rad.

Bio-Rad Laboratories
2200 Wright Avenue
Richmond, CA 94804 USA
Phone (415) 234-4130
Also in Rockville Centre, N.Y., Australia, Austria, Canada, England, Germany, Italy, Japan, The Netherlands, and Switzerland.

NEW

BioMag Magnetic Separations

Fast and easy for:
- Particulate Systems
- Cell Sorting Applications
  - IgG Complexes
  - Double Antibody Assays
  - Monoclonal Screening
  - Serum Stripping
  - Affinity Chromatography

Separations are:
- Rapid
- Convenient
- Safe, No Containment Required
- No Centrifugation, No Aerosols
- No Filters, No Fouling

BioMag available as amine terminated particles or coupled to:
- Protein A
- Goat Anti-Rabbit IgG
- Goat Anti-Mouse IgG
- Charcoal

Magnetic Separator Racks for Microtiter Plates or Test Tubes Available

For further information call or write

Advanced Magnetics Inc.
45 Spinelli Place • Cambridge, Massachusetts 02138
Telephone (617) 497-2070
Telex: 95-1417 TX Network BSN Ref: BIOC

Circle No. 265 on Readers’ Service Card
Circle No. 301 on Readers’ Service Card