Big News for the TL-100 Benchtop Ultracentrifuge

The Beckman TL-100 Ultracentrifuge—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.

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The quality of any microscope system relies on the interrelationship of optical performance, mechanical capability and a component system that increases its versatility as your needs grow. That is the Olympus advantage. Never has the advantage been greater than in the Olympus series of polarizing microscopes—fundamental tools for researchers working with materials with birefringent properties. These are microscopes of sophisticated design and exceptional performance. The BHS-P has a choice of two highly refined series of strain-free long barrel objectives—PO D Plan and PO D Achromat—to offer highest resolution, excellent image contrast, and a completely flat, wider field. With a choice of modular components for unexcelled flexibility.

Other models in the Olympus Polarizing Series are equally designed to help you do your job better. The BHT-P is built with enhanced sturdiness and stability for more demanding conditions, while the CHA-P provides an exceptionally economical model for educational and less demanding laboratory applications. BHT-P and BHS-P are also available in models with a significant Olympus innovation—a vertical illuminator that permits switching between transmitted and reflected light modes with only the flick of a lever.

For a demonstration of any of the Olympus Polarizing Microscope Series, call toll-free 1(800) 446-5967. Or write for literature to Olympus Corporation, Precision Instrument Division, 4 Nevada Drive, Lake Success, NY 11042-1179. In Canada: W. Carsen Co., Ltd., Ontario.
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For your other pipetting needs...up to 1000 \( \mu \text{L} \).

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The Labophot does more than vividly demonstrate Nikon's unsurpassed optical performance in fluorescence microscopy. It makes the entire process much simpler.

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- Milan, Italy / March 26-27
- Scientific Organization: F. De Palo (I), F. Filik (I) and H. Zur Hausen (D)
- IV Pan American Congress of Andrology
- São Paulo, Brazil / May 4-6
- Scientific Organization: A. Negro-Viliar (USA) and M. P. De Castro (BZ)

**Inhibin - Non-Steroidal Regulation of Follicle Stimulating Hormone Secretion**
- Tokyo, Japan / May 21-22
- Scientific Organization: H. Burger (Aus) and M. Igarashi (J)

**Development and Function of the Reproductive Organs**
- Turku, Finland / June 10-12
- Scientific Organization: M. Parvini (SF)

**IV Colloquium of the European Pineal Study Group**
- Modena, Italy / August 31 - September 4
- Scientific Organization: G.P. Trentini (I), A. Oksche (D) and P. Pevet (F)

**Cell-to-Cell Communication in Endocrinology**
- Florence, Italy / October 8-9
- Scientific Organization: L. Martini (I), M. Serio (I) and C.W. Bardin (USA)

**Differentiation Therapy for Cancer**
- Tucker's Town, Bermuda / October 23-25
- Scientific Organization: G.B. Rossi (I), F. Takaku (J) and S. Waxman (USA)

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THE CURIOUS CASE OF

Recently a group of researchers encountered an unusual problem. While investigating the biological function of proteins with an FPLC® System, the group discovered extra peaks, peaks that couldn’t be explained.

This FPLC case history explains how the researchers turned their chromatography problem into a discovery.

SEVEN PEAKS INSTEAD OF TWO. During the early stages of the project, the group invited a Pharmacia representative to come and demonstrate the FPLC System. The system was quickly assembled. Knowing the approximate characteristics of the sample’s proteins (pl, stability and size), the representative consulted Pharmacia’s comprehensive library of FPLC methodology. Conditions for the separation, including column type, monitor wave length, and buffer system, were thereby determined.

Next a separation run on a column prepacked with Mono Q™, an anion exchanger, was programmed into the system’s controller, the LCC-500. The sample was then injected automatically by the MV-7 motorized valve. In the course of ten minutes, a totally unexpected chromatographic pattern had appeared on the controller’s printout. The sample contained two specific proteins that should have given rise to two peaks. But here were seven peaks — casting some doubt upon the merit of this high performance liquid chromatography system.

SAME UNEXPLAINED RESULTS. That same day, several separations were performed with the sample mixture. Using the simple, automatic programming capabilities of the LCC-500, other conditions such as gradient shape were altered for each run. Because of the great speed of the system — 10 minutes per run in this case — many runs could be completed. Yet the same results appeared every time.
THE FIVE EXTRA PEAKS

THE BREAKTHROUGH. The reproducible results from the FPLC System convinced the researchers to take a second look at the seven peaks. After several days of further investigation they again contacted Pharmacia – the peaks were revealed to be iso-forms. No other high performance liquid chromatography system had been able to isolate these particular iso-forms, let alone in just ten minutes.

Central to the breakthrough was the system's biocompatibility, which enabled the researchers to maintain the biological activity of the collected fractions. This activity also permitted the study of the immunoregulatory activity of the fractions. The peaks were found to represent different immunostimulants and immunosuppressants, which had never before been so well separated and characterized. The FPLC System has enabled the group to extend their investigations into unexplored areas of biomedical research.

DISCOVER MORE. You can extend your own investigations, too. If your work involves the separation and purification of proteins, peptides, and other biomolecules, the FPLC System can provide you with advantages that turn problems into discoveries. Like the advantages that created success in this case history: high speed and resolution, biocompatibility, automation, and methodology documentation.

Would you like to learn more about using FPLC in your area of investigation? Please contact your Pharmacia representative or write to us at the address below. Maybe we can make a case for having an FPLC in your laboratory.
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Peter Gruss, Max Planck Institute, Göttingen, West Germany

DNA SESSIONS

KEYNOTE ADDRESS (Sunday P.M.)
Genetics and Biochemistry of Retroviral Replication
Stephen Goff, Columbia University, College of Physicians and Surgeons
Left-Handed and Right-Handed DNA in Genetic Recombination
Alexander Rich, Massachusetts Institute of Technology

ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS) (Monday A.M. - P.M.)
Chairman: Erling Norrby, Karolinska Institutet, Stockholm, Sweden
Speakers:
Luc Montagnier, Paris
Robert C. Gallo, Bethesda
Jay A. Levy, San Francisco
Simon Wain-Hobson, Paris
Rossa Wong-Staal, Bethesda

CHROMATIN (Monday P.M.)
Chairman: Gary Felsenfeld, N.I.H.
Speakers:
Robert Simpson, N.I.H.
Harold Weintraub, Fred Hutchinson Cancer Research Center
Gary Felsenfeld, N.I.H.
John Sedat, U.C.S.F.

TRANSCRIPTION (Tuesday A.M.)
Chairman: George Khoury, N.I.H.
Speakers:
Robert Tjian, U.C. Berkeley
Carl Wu, N.I.H.
Keith Yamamoto, U.C.S.F.
George Khoury, N.I.H.

INTRACELLULAR PROTEIN TARGETING (Tuesday P.M.)
Chairman: Harvey Lodish, Whitehead Institute, M.I.T.
Speakers:
Keith Mostov, Whitehead Institute, M.I.T.
James Rothman, Stanford
Peter Walter, U.C.S.F.
Harvey Lodish, Whitehead Institute, M.I.T.

NEUROBIOLOGY (Wednesday A.M.)
Chairman: James L. Roberts, Mt. Sinai Medical Center
Speakers:
Louis Reichard, U.C.S.F.
Mark Darlington, Cambridge University (U.K.)
Alex Ulrich, Genentech
Peter Seeburg, Univ. of Heidelberg, West Germany

DEVELOPMENTAL BIOLOGY (Wednesday P.M.)
Chairman: Peter Gruss, Max Planck Institute, Göttingen, West Germany
Speakers:
Patrick O'Farrell, U.C.S.F.
Gerald M. Rubin, U.C. Berkeley
Igor Dawid, N.I.H.
Erwin Wagner, E.M.B.O. Labs
Peter Gruss, Max Planck Institute, Göttingen, West Germany

POSTER SESSIONS AND EXHIBITS

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4-7 registrations received together from same organization $300 each.
8-10 registrations received together from same organization $200 each.
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Attendance will be limited. Make checks payable to: Scherago Associates, Inc., DNA / HYBRIDOMA

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Embryology: A Course in Modern Developmental Biology
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Marine Ecology
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Microbiology: Molecular Aspects of Cellular Diversity
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DEADLINE: March 1, 1987
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For Concordance in Archaeological Analysis. Bridging Data Structure, Quantitative Technique, and Theory. Christopher Carr, Ed. Published in cooperation with the Institute for Quantitative Archaelogy, University of Arizona, by Westport, Kansas City, MO, 1985, xx, 622 pp., illus. $55.


Time, Science, and Society in China and the West. J. T. Fraser, Lawrence, and F. C. Huber, Eds. University of Massachusetts Press, Amherst, 1986, xx, 405 pp., illus. $35. The book is divided into four parts. There is an introduction to the relationship between science and society within China from a conference, Castello di Gargonza, Italy, 1983.


