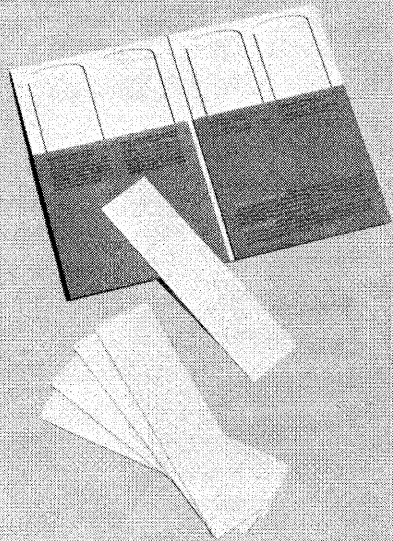


J.T. Baker introduces the TLC Selector Kit



The new BAKER-FLEX™ Selector Kit for thin layer chromatography provides a variety of adsorbents on flexible sheets that make it easier to select the proper adsorbent type for your specific TLC separations. The Kit contains five each of four different BAKER-FLEX TLC flexible sheets that you can use in the examination of your existing separation programs and for the development of new ones. The BAKER-FLEX sheets included in the Kit are: Silica Gel IB-F, Aluminum Oxide IB-F, Cellulose and Polyamide 6. (The Silica Gel IB-F and Aluminum Oxide IB-F sheets can be charred.) There's also a booklet with helpful information on subjects such as solvent systems, adsorbent types and visualization techniques. The Kit sells for \$10.00. To order your BAKER-FLEX TLC Selector Kit #1, contact your local distributor of quality J. T. Baker products today. He has the Kit in stock.

J. T. BAKER CHEMICAL COMPANY
PHILLIPSBURG, NEW JERSEY 08865

in relation to the purpose of this research effort in contraceptive development.

2) The scientific personnel who would conduct the investigation and the qualifications they have for undertaking this work.

3) Facilities currently or potentially available.

4) Consultants needed and/or any collaborative effort planned.

Responses received will be evaluated by the Center for Population Research in accordance with the following criteria: (i) understanding of the factors involved in this research program, (ii) qualification of the personnel who will undertake the investigation, and (iii) the potential of the organization to work effectively in this area.

To insure full consideration, the information requested should be furnished in 12 copies to Philip A. Corfman, M.D., Director, Center for Population Research, National Institute of Child Health and Human Development, Bethesda, Maryland 20014.

National Meetings

March

2-7. Pittsburgh Conf. on **Analytical Chemistry and Applied Spectroscopy**, Inc., 20th, Cleveland, Ohio. (W. M. Hickam, 1969 Pittsburgh Conf., Westinghouse Research Labs., Pittsburgh, Pa. 15235)

3-5. National Conf. on **Underwater Technology**, 3rd, San Diego, Calif. (J. T. Quirk, Ocean Engineering Div., U.S. Naval Civil Engineering Lab., Port Huemene, Calif. 93041)

3-6. American Assoc. of **Junior Colleges**, Education Material and Equipment Exposition, Atlanta, Ga. (American Junior College Exposition, P.O. Box 1016, Alexandria, Va. 22313)

3-6. **Physiological Concepts of Clinical Disease**, Dallas, Tex. (American College of Physicians, Philadelphia, Pa.)

3-7. Symposium on **Arthritis and Related Disorders**, New York, N.Y. (Office of the Recorder, New York Univ. Post-Graduate Medical School, 550 First Ave., New York 10016)

4-6. National **Space** Mtg. of the Inst. of Navigation, Houston, Tex. (R. H. Battin, M.I.T. Instrumentation Lab., 75 Cambridge Parkway, Cambridge, Mass. 02139)

4-7. **Offshore Exploration** Conf., 4th, San Diego, Calif. (OECON IV, P.O. Box 88, Palos Verdes Estates, Calif. 90274)

5-7. **Fundamental Cancer Research**, 23rd symp., Houston, Tex. (D. E. Anderson, Univ. of Texas, M. D. Anderson Hospital and Tumor Inst., Houston)

5-7. **Particle Accelerator** Conf., Washington, D.C. (E. H. Eisenhower, Center for Radiation Research, Natl. Bureau of Standards, Washington, D.C. 20234)

9-11. American Assoc. of **Pathologists and Bacteriologists**, San Francisco, Calif. (K. M. Brinkhous, Dept. of Pathology, Univ. of North Carolina School of Medicine, Chapel Hill 27514)

9-14. American Soc. of **Photogrammetry**, Washington, D.C. (G. L. Loelkes, 8608 Cherry Valley Lane, Alexandria, Va. 22309)



Whales may have the most highly developed brains on this planet. The folds, fissures, and gyri of the whale's brain are far more complicated than those of the human brain and those of other animals. This extreme degree of convolution along with the presence of as many as two voice boxes used for communication plus a third vocalizer used for sonar suggests the existence of high intelligence. Even though the large whales of millions of years ago managed to survive with 2 pound brains, there has been much evolution since then resulting in brains as large as 19 pounds. The sperm whale's brain is six times the size of the human brain. The awareness and consciousness of life of these creatures may greatly exceed that of other mammals.

Scientists are now studying the small whales, the dolphins, because they believe there is a possibility of communicating with them. In the future there may be communication with the larger whales, resulting in a profound insight into an advanced nonhuman mind.

Whales and dolphins lack manual dexterity which prevents them from building an effective defense against the men and machines of the whaling industry. The International Whaling Commission was formed in 1948 to prevent the extinction of the whale. However, the greedy shortsighted whaling industry has succeeded in destroying the effectiveness of the commission by having some of the member nations insist upon catch limits that are far too high for these mammals to replace. At the last annual meeting of the commission, Japan, which has the largest whaling industry, tried to have the allowed kill increased.

At the present time the whaling industry is rapidly wiping out the finback, sperm, and sei whale species by shooting time bombs in them and by poisoning them with curare for the petty purpose of making cheap soap, margarine, dog food, and fertilizer. The other five species of large whale are almost extinct. An example is the blue whale which numbered about 100,000 individuals when the whaling commission was founded. After the allowed slaughter had reduced the number to about 600, the whaling commission finally banned the killing of this whale. However, some countries that don't belong to the whaling commission plus some that do, have taken hundreds since the ban.

Obviously a terrible crime is being committed. Some suggestions to halt the genocide are: a law prohibiting the sale or use of products derived from the bodies of whales, an offer by the U.S. to pension off the whaling industry, and boycotts against the goods of companies and countries that are mainly responsible for the killing of whales. In addition to these suggestions, the use of force against the whaling industry might be of help.

By writing to representatives and editors, more people will be informed of the need for action to save the whales.

MDS

10-12. **Flight Test, Simulation, and Support Conf.**, 3rd., Houston, Tex. (J. C. McLane, Jr., Structures and Mechanics Div., Engineering and Development Directorate, NASA Manned Spacecraft Center, Houston 77058)

10-12. **Society of Toxicology**, Williamsburg, Va. (J. F. Borzelleca, Dept. of Pharmacology, Medical College of Virginia, Richmond 23219)

10-13. **Conference on Electric Fields in the Magnetosphere**, Houston, Tex. (J. W. Freeman, Jr., Dept. of Space Science, Rice Univ., P.O. Box 1892, Houston 77001)

10-13. **American Nuclear Soc.**, Idaho Falls, Idaho. (J. E. Kunze, General Electric Co., P.O. Box 2147, Idaho Falls 83401)

10-14. **National Assoc. of Corrosion Engineers**, 25th, Houston, Tex. (Publication Director, 980 M & M Bldg., No. 1, Main St., Houston)

11-14. **Optical Soc. of America**, San Diego, Calif. (M. E. Warga, The Society, 2100 Pennsylvania Ave., NW, Washington, D.C. 20037)

13-14. **Symposium on Automated, High-Resolution Analyses in the Clinical Lab.**, Oak Ridge, Tenn. (Oak Ridge Natl. Lab., P.O. Box X, Oak Ridge 37830)

13-15. **Conference on Nuclear Isospin**, 2nd, Asilomar, Calif. (S. D. Bloom, Lawrence Radiation Lab., P.O. Box 808, Livermore, Calif. 94550)

14-15. **American Burn Assoc.**, Atlanta, Ga. (J. A. Boswick, Cook County Hospital, 1835 W. Harrison, Chicago, Ill. 60612)

15-19. **American Acad. of Allergy**, Bal Harbour, Fla. (J. O. Kelly, 756 N. Milwaukee St., Milwaukee, Wis. 53202)

16-20. **American Inst. of Chemical Engineers**, 64th, New Orleans, La. (R. M. Persell, U.S. Dept. of Agriculture, Southern Utilization R&D Div., Box 19687, New Orleans 70119)

16-20. **American Soc. of Mechanical Engineers**, Cleveland, Ohio. (The Society, 345 E. 47 St., New York 10017)

17. **Chemiluminescence Conf.**, Desert Hot Springs, Calif. (H. W. Schneider, Box 433, North Palm Springs, Calif.)

18-19. **Central States Section of the Combustion Inst.**, Minneapolis, Minn. (B. Schukraft, Inst. of Gas Technology, 3424 S. State St., Chicago, Ill. 60616)

20. **Biomedical Engineering**, Cincinnati, Ohio. (D. Hershey, Dept. of Chemical Engineering, Univ. of Cincinnati, Cincinnati)

20-22. **American Acad. of Facial Plastic and Reconstructive Surgery**, New Orleans, La. (J. R. Anderson, 111 Tulane Ave., New Orleans 70112)

23-29. **American Crystallographic Assoc.**, Seattle, Wash. (W. L. Kehl, Gulf Research and Development Co., P.O. Box 2038, Pittsburgh, Pa. 15230)

24-25. **Laser Safety Conf. and Workshops**, 2nd, Cincinnati, Ohio. (L. Goldman, Laser Lab., Children's Hospital Research Foundation of the Medical Center of the Univ. of Cincinnati, Cincinnati)

24-27. **American Physical Soc.**, Philadelphia, Pa. (W. W. Havens, Jr., The Society, 335 E. 45 St., New York 10017)

24-28. **Desalination: Methods and Applications**, Berkeley, Calif. (Continuing Education in Engineering, Univ. Extension, Univ. of California, 2223 Fulton St., Berkeley 94720)

7 FEBRUARY 1969

Lock in



simplified
retrieval of
noise buried
signals with

Ithaco's 353 Phase-Lock amplifier

- no tuning required
- phase and gain not affected by adjustment or drift in reference frequency
- adapts automatically to virtually any reference input
- ultra stable, highly linear detector—no overload at 1,000 : 1 noise to signal ratio
- 1.0 Hz to 200 KHz operation

- plug-in construction permits addition of new or specialized features—prevents obsolescence

For further information and complete specifications contact:

607 272-7640

ITHACO INC.

413 TAUGHANNOCK BLVD., ITHACA, N. Y. 14850

Circle No. 76 on Readers' Service Card

POWERFUL



MATHATRON PKB HAS GREATER MATHEMATICAL CAPABILITY
THAN ANY OTHER STANDARD ELECTRONIC CALCULATOR

ALGEBRAIC FUNCTIONS

$+$ $-$
 \times \div
 $()$ $\frac{1}{2}$

LOGARITHMIC FUNCTIONS

N^x
 $\text{Log } e$
 e^x

TRIGONOMETRIC FUNCTIONS

$\sin \theta$
 $\cos \theta$
 $\tan \theta$
 \sin^{-1}
 \tan^{-1}

STATISTICAL FUNCTIONS

ΣX , $\Sigma(X^2)$, N
 ΣXY , $\Sigma(Y^2)$, $\Sigma(X \cdot Y)$
 \bar{X} , S_x , $S(X^2)$, Coeff. of Variation,
Standard Error X
 \bar{Y} , S_y , $S(Y^2)$, Coeff. of Variation,
Standard Error Y
 t Test, Degrees of Freedom,
Standard Error
Coefficient of Correlation,
Least Squares Regression A&B
Various Chi-Square Statistics

In addition, Mathatron PKB has an exclusive serial strip printer, programmable memory, full-floating decimal point, one-hundred column number range, multiple keyboards that connect to the central computing station through your telephone or direct wiring, and the amazing Mathwriter keyboard that allows you to enter problems just as you would write them.

Get the full story, call Wright Line in all principal cities, or write today for illustrated brochure.

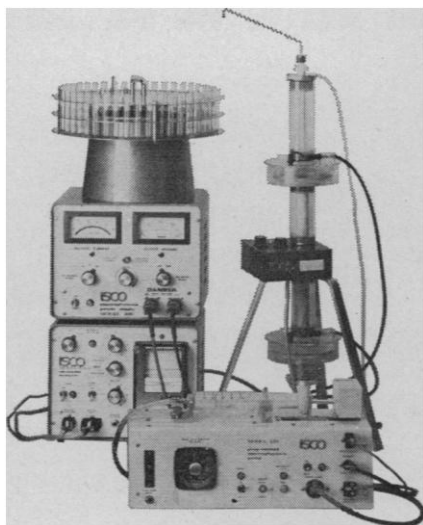
MATHATRON PKB



160 GOLD STAR BLVD., WORCESTER, MASS. 01606 • A DIVISION OF BARRY WRIGHT CORPORATION

Circle No. 86 on Readers' Service Card

Scanning Density Gradient Electrophoresis



Easy determination of electrophoretic mobilities as well as physical separation of mixtures and quantitative microanalytical results can be obtained with the ISCO Model 210 Density Gradient Electrophoresis apparatus. Microgram size samples can readily be separated. Low sample concentration permits the use of dilute buffers, allowing a wide operational temperature range of from 0 to 25° C.

Between preset periods during which the density gradient column is subjected to an electric field, the column is automatically raised and lowered past a narrow bandwidth UV absorbance scanning monitor. Quantitative results can be obtained from these scans or from a final chart record made automatically at the conclusion of migration as separated specimen components are discharged into a fraction collector for further assay.

For more information please request Brochure E37J.



Circle No. 89 on Readers' Service Card

602

25-27. American Laryngological, Rhinological and Otological Soc., Inc., New Orleans, La. (V. R. Alfaro, 917 20th St., NW, Washington, D.C. 20006)

26-28. National Business Aircraft Mfg. and Engineering Display, Wichita, Kan. (A. J. Favata, SAE Headquarters, 2 Pennsylvania Plaza, New York 10001)

26-28. Symposium on the Engineering Aspects of Magnetohydrodynamics, 10th, Cambridge, Mass. (J. Klepeis, Arrangements Committee, Avco Everett Research Lab., 2385 Revere Beach Parkway, Everett, Mass. 02149)

26-28. George H. Hudson Symp., 4th, Plattsburgh, N.Y. (M. H. Tourin, State Univ. College of Arts and Sciences, Plattsburgh 12901)

27-28. Technical Writing Inst., Lubbock, Tex. (M. Miles, Technical Writing Inst., Dept. of English, Texas Technological College, Lubbock 79409)

27-29. Geological Soc. of America, South-Central Section, Lawrence, Kans., "Basement Rocks of the Mid-Continent" and "Paleo-Environmental Implications of Palynology." (W. M. Merrill, Dept. of Geology, Univ. of Kansas, Lawrence 66044)

28-29. American Otological Soc., Inc., New Orleans, La. (W. H. Bradley, 1100 E. Genesee St., Syracuse, N.Y.)

28-30. American Psychosomatic Soc., Inc., 26th, Cincinnati, Ohio. (H. Weiner, 265 Nassau Rd., Roosevelt, N.Y. 11575)

30-2. American Orthopsychiatric Assoc., New York, N.Y. (M. F. Langer, Room 1313, 1790 Broadway, New York 10019)

31-2. Advances in Water Quality Improvement-Physical and Chemical Processes, Austin, Tex. (Center for Research in Water Resources, Univ. of Texas, Rt. 4, Box 189, Austin 78757)

31-2. Metals Engineering Conf., Washington, D.C. (R. J. Cepluch, Hartford Steam Boiler Inspection and Insurance Co., 56 Prospect St., Hartford, Conn. 06102)

31-2. American Assoc. of Thoracic Surgery, San Francisco, Calif. (T. B. Ferguson, Suite 311, 7730 Carondelet Ave., St. Louis, Mo. 63110)

International and Foreign Meetings

March

2-6. International Soc. of Anesthesia Research, 43rd, Bal Harbour, Fla. (B. B. Sankey, 3645 Warrensville Center Rd., Cleveland, Ohio 44122)

3-6. Symposium on Protein Structure and Function, St. Marguerite, P.Q., Canada. (T. H. G. Michael, Chemistry Inst. of Canada, 151 Slater St., Ottawa 4, Ont.)

7-12. International Acad. of Pathology, 58th, San Francisco, Calif. (P. K. Mostoff, % Armed Forces Inst. of Pathology, Washington, D.C. 20305)

9-22. International Postgraduate Congr. for Practical Medicine, Daves, Switzerland. (W. Brune, Kongressbüro der Bundesärztekammer, Haedenkampstr. 1 5000 Köln-Lindenthal, Germany)

10-12. International Conf. on Urban Transportation, 4th, Pittsburgh, Pa. (G. R. Schaefer, WABCO Mass Transit Center, Westinghouse Air Brake Co., Pittsburgh)

12-13. Conference on Safety on Construction Site, London, England. (Institu-

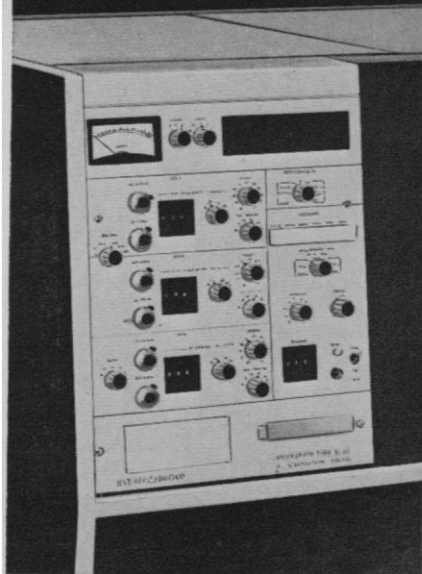
On-line dpm computation

first fully computerized liquid scintillation spectrometer

Using an internal core memory computer, the SL 40 gives you direct readout of computed dpm data... for variably quenched single- or dual-isotope samples... based on either the external standard or channels ratio method of quench correction.

All required calibration curves, coefficients, etc. are stored in a 1024-word core memory (expandable to 2048 words).

The SL 40 is delivered with seven standard pre-programmed operating modes. Additional programs can be provided for special application requirements. For complete technical information, contact: Intertechnique Instruments Inc., Randolph Industrial Park/Dover, N.J. 07801/Tel. (201) 361-5550 • (212) 267-1698



INTERTECHNIQUE INSTRUMENTS INC.

Factories in United States and France.
Affiliates in
Germany, United Kingdom and Sweden.
Sales and Service Representatives
throughout the world.

WORLD'S LARGEST PRODUCER OF
MULTICHANNEL ANALYZERS

Circle No. 82 on Readers' Service Card

tion of Civil Engineers, Great George St., London, S.W.1)

17-18. International Symp. of High-speed Testing: The Rheology of Solids, Boston, Mass. (R. H. Supnik, % Plas-Tech Equipment Corp., 4 Mercer Rd., Natick, Mass. 01760)

20-23. International Assoc. for Dental Research, 47th, Houston, Tex. (A. D. Frechette, 211 E. Chicago Ave., Chicago, Ill. 60611)

24-27. International Convention of Inst. of Electrical and Electronics Engineers, New York, N.Y. (The Convention, 345 E. 47 St., New York 10017)

25-28. Autoclaved Building Products, 2nd intern. symp., Hanover, Germany. (Secretary, Second Intern. Symp. 1969, "Haus der Kalksandstein-industrie," Postfach 66, 3 Hanover-Herrenhausen)

25-28. Liquefied Natural Gas, London, England. (Conference Dept., Inst. of Mechanical Engineers, 1 Birdcage Walk, Westminster, London, S.W.1)

27-28. International Congr. for Heating, Ventilating, Air Conditioning, 19th, Frankfurt am Main, Germany. (S. Ausschuss, Kongress für Heizung, Lüftung, Klimatechnik, Kongressbüro, Königstr. 5, 4 Düsseldorf 1, Germany)

31-4. International Symp. on Concrete Bridge Design, 2nd, Chicago, Ill. (American Concrete Inst., P.O. Box 4754, Redford Sta., 22400 W. Seven Mile Rd., Detroit, Mich. 48219)

April

7-11. Federation of European Biochemical Societies, 6th, Madrid, Spain. (Secretariat, Centro de Investigaciones Biológicas, Velazquez, 144, Madrid 6)

8-11. International Symp. on Laboratory Animals, Washington, D.C. (B. F. Hill, Charles River Breeding Labs., Inc., Wilmington, Mass.)

9-12. British Medical Assoc., clinical mtg., Valletta, Malta. (British Medical Assoc. House, Tavistock Sq., London, W.C.1, England)

14-17. Cleft Palate, intern. congr., Houston, Tex. (B. J. McWilliams, Cleft Palate Research Center, Univ. of Pittsburgh, 313 Salk Hall, Pittsburgh, Pa. 15213)

15-17. Civil Engineering Problems of the South Wales Valleys, Cardiff, England. (Institution of Civil Engineers, Great George St., London, S.W.1, England)

15-18. International Magnetics Conf., Amsterdam, Netherlands. (T. Holtwijk, Philips Research Labs., Eindhoven, Netherlands)

17-18. British Inst. of Radiology, London, England. (British Inst. of Radiology, 32 Welbeck St., London, W.1)

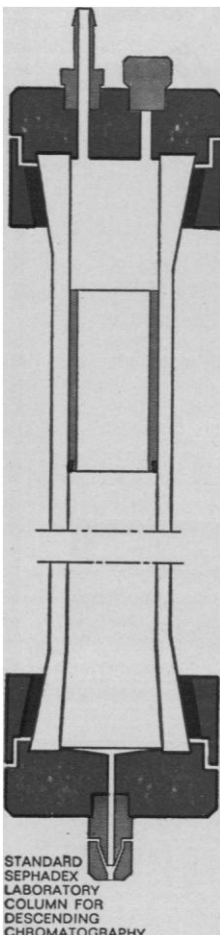
19-27. Yugoslav Seminar and Exhibition of Regulation, Measuring and Automation-Jurema 1969, 14th, Zagreb. (Jurema, Unska U1, P.O.B. 123, Zagreb)

21-23. Canadian Inst. of Mining and Metallurgy, 71st, Montreal, Canada. (Executive Director, The Institute, Suite 906, 1117 St. Catherine St. W., Montreal 2, P.Q.)

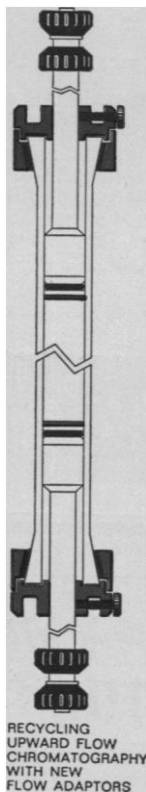
21-25. Switching Techniques for Telecommunication Networks, London, England. (Conference Dept., Institution of Electrical Engineers, London, W.C.2)

Especially designed for Gel Filtration Chromatography Ion Exchange Chromatography

Sephadex[®] Laboratory Columns



STANDARD SEPHADEX LABORATORY COLUMN FOR DESCENDING CHROMATOGRAPHY



RECYCLING UPWARD FLOW CHROMATOGRAPHY WITH NEW FLOW ADAPTORS

A product of over six years' research know-how brings you these "exclusive" column features:

1 AQUEOUS AND ORGANIC SOLVENT SYSTEM COLUMNS—only columns specially designed for use in these chromatographic systems

2 MIXING CHAMBER—of less than 1/10% of bed volume minimizes sample dilution to insure optimal zone sharpness for critical separations

3 INERT NYLON OR TEFLON NETTING—on the sample applicator, bottom endpiece or flow adaptor eliminates adsorption of biologic material

4 DESCENDING TO RECYCLING OR UPWARD FLOW—easily converted by replacing both endpieces with new Sephadex Flow Adaptors

5 SAMPLE APPLICATOR—distributes the sample evenly over the bed surface to insure sharp zones for critical separations and protects as well as stabilizes the bed

6 SPECIAL DESIGN BED SUPPORT—eliminates troublesome sintered glass disc

AVAILABLE SEPHADEX COLUMNS AND ACCESSORIES

SEPHADEX COLUMNS AQUEOUS SYSTEMS				
Type	Size cm	Cooling Jacket	Sample Applicator	Flow Adaptors
K 9/15	0.9x15	—	—	—
K 9/30	0.9x30	—	—	—
K 9/60	0.9x60	—	—	—
K 15/30	1.5x30	—	—	—
K 15/90	1.5x90	—	—	—
K 25/45	2.5x45	—	S	O
K 25/45 "Jacketed"	2.5x45	S	S	O
K 25/100	2.5x100	—	S	O
K 25/100 "Jacketed"	2.5x100	S	S	O
K 50/100 "Jacketed"	5.0x100	S	—	S
K 100/100 "Jacketed"	10.0x100	S	—	S

SEPHADEX COLUMNS "SR" RESISTANT TO ORGANIC SOLVENTS

SR25/45	2.5x45	—	—	S
SR25/100	2.5x100	—	—	S

S = Standard Accessories O = Optional Accessories

FLOW ADAPTORS*

Flow Adaptors	To fit all K 25 Sephadex Lab. Columns
---------------	---------------------------------------

*Two Flow Adaptors should be used when conducting upward flow or recycling chromatography.

Information Service A comprehensive reference list, abstract cards, and other information on Sephadex products are available. Direct inquiries on your letterhead to the local Pharmacia representative or to:



PHARMACIA FINE CHEMICALS INC.

800 Centennial Avenue, Piscataway, N. J. 08854

Pharmacia (Canada) Ltd., 110 Place Crémazie, Suite 412, Montreal 11, P. Q.

(Inquiries outside U.S.A. and Canada should be directed to PHARMACIA FINE CHEMICALS, Uppsala, Sweden.)