

Songbirds in Your Garden. John K. Terres. Illustrated by Matthew Kalmenoff. Crowell, New York, ed. 2, 1968. xvi + 256 pp. \$6.95.

Sourcebook of Electronic Circuits. John Markus. McGraw-Hill, New York, 1968. viii + 888 pp., illus. \$18.50.

Sources for the History of the Science of Steel, 1532-1786. Cyril Stanley Smith, Ed. Published jointly by the Society for the History of Technology and the M.I.T. Press, Cambridge, Mass., 1968. xvi + 357 pp., illus. \$12.

Substoichiometry in Radiochemical Analysis. Jaromír Ružička and Jirí Starý. M. Williams, Ed. Pergamon, New York, 1968. xii + 151 pp., illus. \$7. International Series of Monographs in Analytical Chemistry, vol. 30.

Switching Theory. Paul E. Wood, Jr. McGraw-Hill, New York, 1968. xii + 390 pp., illus. \$13.50. Lincoln Laboratory Publications.

Symbol Manipulation Languages and Techniques. Proceedings of the International Federation for Information Processing Working Conference, Pisa, Sept. 1966. Daniel G. Bobrow, Ed. North-Holland, Oct. 1966. M. D. Mesarović, Ed. illus. \$19.50.

Systems Theory and Biology. Proceedings of the 3rd Systems Symposium, Cleveland, Oct. 1966. M. D. Mesarovic, Ed. Springer-Verlag, New York, 1968. xii + 403 pp., illus. \$16.

Total Positivity. Vol. 1. Samuel Karlin. Stanford University Press, Stanford, Calif., 1968. xiv + 576 pp. \$17.50.

Towards a Theoretical Biology. 1. Prolegomena. Proceedings of an International Union of Biological Sciences symposium, Bellagio, Aug.-Sept. 1966. C. H. Waddington, Ed. Aldine, Chicago, 1968. viii + 234 pp., illus. \$8.95.

Traditional Medicine in Modern China. Science, Nationalism, and the Tensions of Cultural Change. Ralph C. Croizier. Harvard University Press, Cambridge, Mass., 1968. xviii + 325 pp., illus. \$6. Harvard East Asian Series, No. 34.

Le Travail en Milieu Hostile. Michel Grenon. Presses Universitaires de France, Paris, 1968. viii + 210 pp., illus. Paper, 18 F. Le Science Vivante.

Tropical Fishes of the Great Barrier Reef. Tom C. Marshall. Illustrated by George Coates. Angus and Robertson, London; Elsevier, New York, 1968. 239 pp. \$14.

Vegetation and Soils. A World Picture. S. R. Eyre. Aldine, Chicago, ed. 2, 1968. xvi + 328 pp., illus. \$8.95.

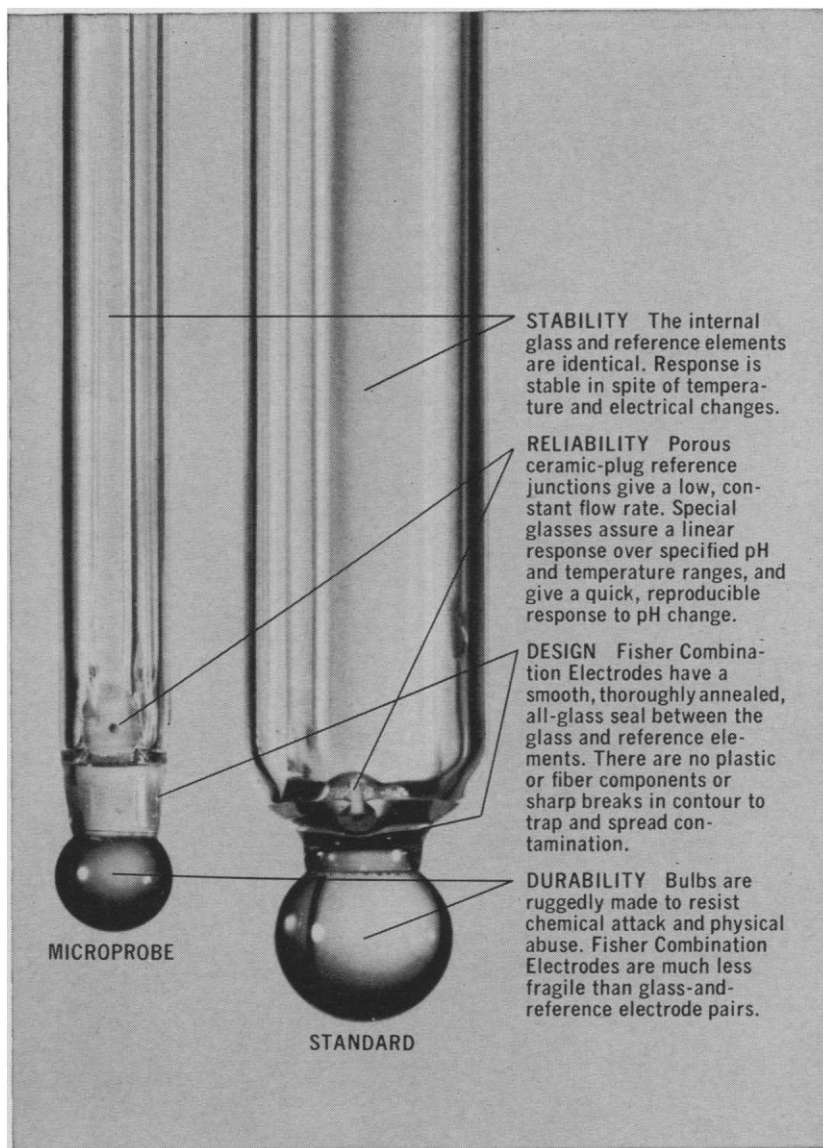
Who Speaks for Civil Defense? Eugene P. Wigner, Ed. Scribner's, New York, 1968. 125 pp., illus. Cloth, \$3.95; paper, \$1.65.

Wood as Raw Material. Source, Structure, Chemical Composition, Growth, Degradation and Identification. George Tsoumis, Pergamon Press, New York, 1968. xii + 276 pp., illus. \$10.

Writing for Professional and Technical Journals. John H. Mitchell. Wiley, New York, 1968. x + 405 pp., illus. \$7.50. Wiley Series on Human Communication.

Young Radicals. Notes on Committed Youth. Kenneth Keniston. Harcourt, Brace, and World, New York, 1968. xii + 368 pp. Cloth, \$5.95; paper, \$1.95.

Fisher Combination Electrodes combine reliability, accuracy and convenience in one design. Take a look.



Fisher Standard and Microprobe Combination Electrodes are much easier to use than glass-and-reference electrode pairs. They fit into small vessels (especially the 6-mm-diameter Microprobe) where conventional electrodes can't be used. They are shipped dry, with the reference electrolyte in a separate bottle, to assure long shelf-life and freedom from salt creep. Like all Fisher glass, reference and metal electrodes, they are manufactured and guaranteed by Fisher. For a closer look, write for our free product literature. Write Fisher Scientific Company, 1399 Fisher Building, Pittsburgh, Pa. 15219. J-707



INSTRUMENT DIVISION
FISHER SCIENTIFIC CO.

new Sepharose®

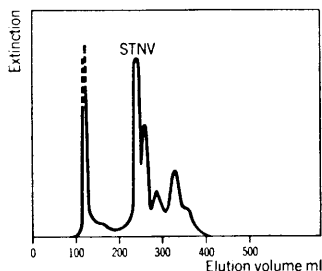
Extends gel filtration separation and fractionation of high molecular weight substances: viruses, nucleic acids, proteins, polysaccharides

The new "bead form" of agarose—Sepharose—now extends the gel filtration method to the separation and fractionation of molecules with molecular weights in the millions. Sepharose is prepared in the "bead form" from agarose, the neutral portion of agar. By altering the concentration of agarose during preparation, Sepharose gels with different fractionation ranges are produced. Sepharose gels complement the present series of Sephadex® gels, and together they extend the limits of the gel filtration method for the fractionation of molecules with molecular weights ranging from essentially zero to approximately 25 million.

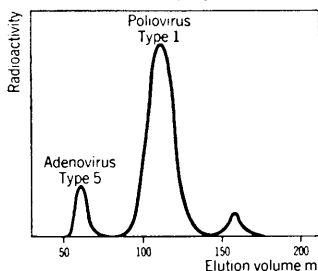
SEPHAROSE

Sepharose Type	Particle Size Microns	Percent Agarose	Fractionation Range
2B	60-250	2	2x10 ⁶ to 25x10 ⁶ *
4B	40-190	4	3x10 ⁵ to 3x10 ⁶ *

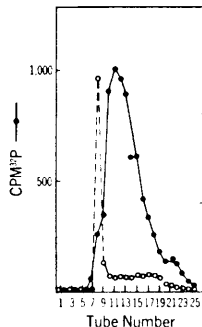
*Determined with polysaccharides.



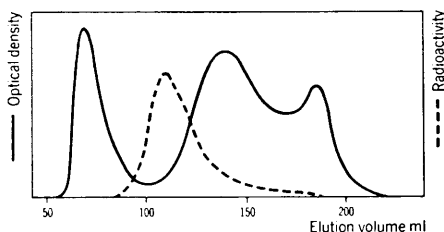
Chromatography of a crude preparation of satellite tobacco necrosis virus on Sepharose 4B.



Separation of ³²P-labeled adenovirus and poliovirus on Sepharose 2B.



Separation of the replicative RNA intermediate (first peak) synthesized in RNA phage-infected cells from single stranded cellular RNA (second peak) on Sepharose 4B. Erikson and Gordon, Biochem. Biophys. Res. Commun. 23 (1966) 422-428.



Separation of a mixture of KB-cell nucleic acids and ³²P-labeled poliovirus RNA on Sepharose 2B. The first peak contains KB-cell DNA, followed by poliovirus RNA, KB-cell r-RNA and KB-cell s-RNA.

For additional technical information on SEPHAROSE, write to

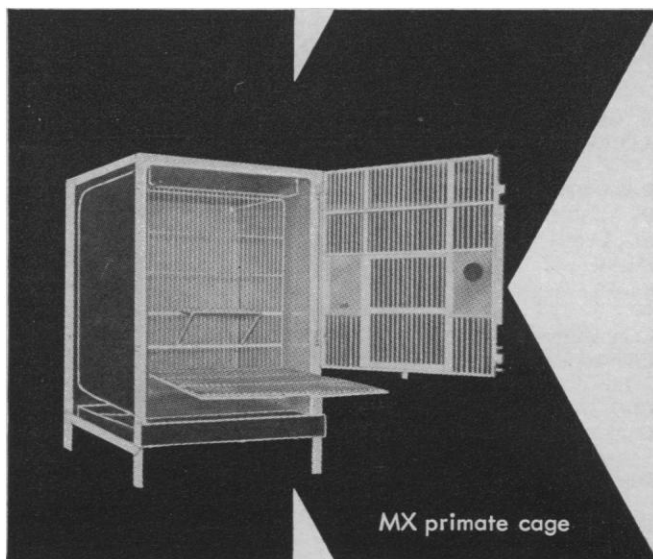


PHARMACIA FINE CHEMICALS INC.

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.)

Circle No. 53 on Readers' Service Card



dog & primate cages

Molded seamless construction of rugged fiber glass reinforced plastics... minimum effort required to clean and disinfect...maximum animal comfort... extremely strong doors with fool proof catches...economical to purchase and maintain....For further information

write:
Department KS *Kirschner*

MANUFACTURING COMPANY

Vashon, Washington

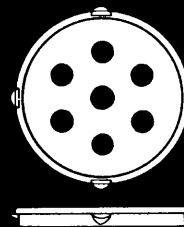
Circle No. 103 on Readers' Service Card

anti-Serums

For Immunoelectrophoresis
Immunoassays
Fluorescent Antibody Techniques

IMMUNODIFFUSION DISCS

For use in the double immunodiffusion
(Ouchterlony) technique



Send for complete catalog

pentex inc.

P.O. Box 272 Kankakee, Illinois / 815 939-3513

Circle No. 102 on Readers' Service Card

Index to Advertisers

12 July 1968

Ace Glass Inc.	105
AO Instrument Co.	212
Bellco Glass Inc.	203
Bio-Rad Laboratories	200
Blackstone Ultrasonics, Inc.	199
Boeing Co., Vertol Div.	92
Buchler Instruments, Inc.	192
Cary Instruments	98
Charles River Breeding Laboratories, Inc.	202
Chemical Rubber Co.	110
Columbia University Press	209
Digital Equipment Corp.	102
E & M Instrument Co., Inc.	198
Electronic Associates, Inc.	211
Extracorporeal Medical Specialties, Inc.	111
Fisher Scientific Co.	207
Hamilton Co.	192
Harford Metal Products, Inc.	209
Heath Co.	94, 95
Hewlett-Packard	86, 96, 97
Hyland	191
Infotronics Corp.	103
Instrumentation Specialties Co.	200
Jeolco (U.S.A.) Inc.	197
Kirschner Manufacturing Co.	208
Klett Manufacturing Co., Inc.	191
Labindustries	90
Leitz, E., Inc.	112
Mallinckrodt Chemical Works	101
Mettler Instrument Corp.	87
Mistaire Laboratories	193
Nalge	205
Nikon Inc., Instrument Div.	91
Packard Instrument Co., Inc.	195
Paillard Inc.	195
Pentex, Inc.	208
Pergamon Press	203
Pharmacia Fine Chemicals Inc.	208
Philbrick/Nexus Research	204
Phipps & Bird, Inc.	203
Picker Nuclear	114
Professional Tape Co., Inc.	191
Sargent, E. H., & Co.	93
Shandon Scientific Co.	192
Sigma Chemical Co.	199
Sorvall, Ivan, Inc.	107
Squibb	209
Technicon Corp.	100
Tektronix, Inc.	108
Unitron Instrument Co.	106
University of Texas Press	194
U.S. Stoneware Inc.	110
Vickers Instruments, Inc.	201
Wang Laboratories, Inc.	196
Williams & Wilkins Co.	206
Worthington Biochemical Corp.	99

12 JULY 1968

SQUIBB

One of the nation's foremost pharmaceutical companies offers the following growth opportunities to qualified individuals. Selected applicants will be involved in preparing product nomenclature and advertising materials for approval by the F.D.A.; to be ultimately used in advertising and promoting Squibb's ethical pharmaceutical products.

ASSISTANT DIRECTOR OF MEDICAL ADVERTISING & PROMOTION REVIEW

A medical degree is required, industrial experience preferred, but not essential. Specific assignments will include medical supervision of all phases of advertising and promotion of ethical pharmaceutical products.

MEDICAL WRITER

A degree in Biological or Medical Science and experience in medical writing required. Specific assignments involve preparation of package inserts for ethical pharmaceutical products.

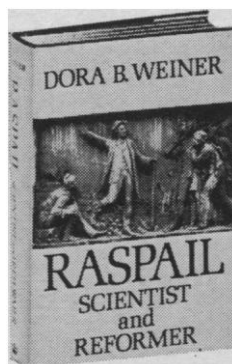
INFORMATION SCIENTIST

Degree in medical or related sciences required. Specific assignments include reviewing advertising and promotion copy for pharmaceutical products and interpreting medical literature.

Salaries are commensurate with education and experience, along with full company benefits, which include: Major Medical Plan, Blue Shield, Blue Cross, Retirement Plan and Thrift Plan. To arrange an interview, send a resume with salary requirements to: Mr. R. E. Readdy, Employment Manager, Squibb, New Brunswick, New Jersey 08903.

An Equal Opportunity Employer

The giant history overlooked



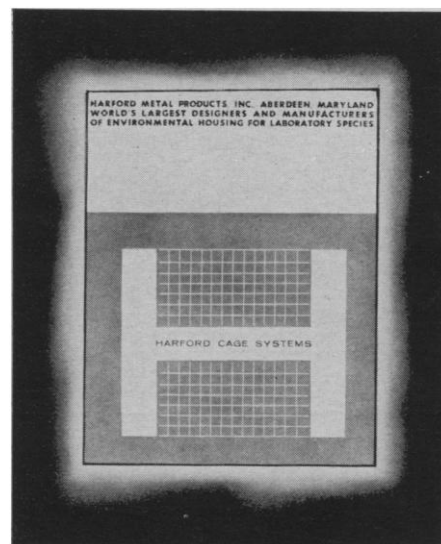
By Dora B. Weiner. François-Vincent Raspail, French scientist and socialist, was barred in his early years from politics. During this time he founded histo-chemistry, pioneered micro-chemical techniques, and was an early exponent of cell theory and parasitology. This is his first scholarly biography in any language. \$11.00



At better bookstores

COLUMBIA UNIVERSITY PRESS
440 West 110th St., N.Y., N.Y. 10025

Circle No. 130 on Readers' Service Card



New 1968-1969

Animal Cage

Catalog

Send For Your Catalog Today.

Harford

Metal Products, Inc.
Building 101
Aberdeen, Md. 21001
272-3400 (301)

Circle No. 128 on Readers' Service Card

209

Personnel Placement

POSITIONS WANTED

Biochemist, 28, Ph.D. Britain 1964. Competent independent researcher. Enzymes, lipids, cell ultrastructure. Now in Ottawa, seeks research or academic position in Canada. Box 250, SCIENCE. 7/12

Developmental Biologist, Ph.D. Experience in tissue culture, immunology, electron microscopy. Desires medical research with opportunity for independent investigation. Box 257, SCIENCE. 7/12, 19

Biophysicist, Bachelor's degree in engineering-physics, 10 years' industrial R&D experience, will receive Ph.D. in Biophysics June 1968. Desires research job in molecular biophysics. Box 246, SCIENCE. 7/12

Financial Administration, research organization or college; strengths in new construction, accounting, personnel, grants and contracts. Box 270, SCIENCE. X

Registered Histotechnologist (ASCP) wishes part-time routine histological work. Your laboratory or mine. Seven years' experience. Box 249, SCIENCE. X

Research Manager, advanced degrees, extensive experience in academic and contract research center specializing in physiology, pharmacology, and toxicology. Seeks challenging position in research and administration. Box 254, SCIENCE. 7/12

Science Editor-Health Educator. Nine years' editing for major New York publishers. Publications. 1968 M.P.H. in health education from East Coast university. Willing to travel; will consider teaching. Box 271, SCIENCE. 7/19

Virologist, Ph.D., 44, single. Experimental pathology. Veterinarian. Fifteen years' industrial, academic research-teaching experience. Presently professor large university. Desires challenging opportunity research, administrative, and so forth. Box 264, SCIENCE. 7/12, 19

Virologist—Tissue Culturist. Ph.D. 1960. Experience in viral chemotherapy, oncology, and immunology. Seeks position. Box 272, SCIENCE. 7/19

POSITIONS OPEN

RESEARCH BIOCHEMIST

We are seeking a person with a strong biochemistry or chemistry background possessing an M.S. or B.S. degree with 2 to 3 years' laboratory experience in the areas of carbohydrate and lipid metabolism. Should be capable of working with minimal amount of supervision. Successful candidate will be knowledgeable in physiology or endocrinology. Experience with small animals and radioisotopes also desirable.

Well-equipped laboratories in central Philadelphia offer ideal working conditions. Excellent benefit and salary program commensurate with training and experience. Please submit resume in confidence to

ROBERT B. TURNBULL
**SMITH KLINE & FRENCH
LABORATORIES**

1500 Spring Garden Street
Philadelphia, Pa., 19101
An Equal Opportunity Employer
Member of Plans for Progress



PARASITOLOGIST —Ph.D./M.S.—

Our expanding parasitology group has a challenging opportunity for an individual with a graduate degree in Parasitology, to execute programs for the discovery and development of new parasitocides for use in the veterinary field. Salary is commensurate with education and experience.

Our laboratories are located in a small city in central New York State.

Interested candidates send resume to
F. J. Benenati, Prof. Empl. Repr.

**THE NORWICH PHARMACAL CO.
& EATON LABORATORIES DIV.
NORWICH, NEW YORK 13815**

An Equal Opportunity Employer

POSITIONS OPEN

Biochemist, Ph.D. Canadian Dental Faculty invites applications for a position, the principal duty of which would be to assist in the teaching of biochemistry and applied pharmacology to dental students. The appointment is open on July 1st, 1968, at the Associate Professor level with a yearly salary between \$13,000 and \$17,500. Adequate research facilities in an established laboratory are available. A dental degree is not necessary. Inquiries should be addressed to: **Professor K. A. McMurchy, Head, Basic Science Department, Faculty of Dentistry, University of Alberta, Edmonton, Alberta, CANADA.**

UNIVERSITY OF MIAMI DEPARTMENT OF BIOCHEMISTRY

Applications are invited from B.S., M.S. (or equivalent) in Chemistry, Biochemistry (or related science) for a Research Assistant in Microbial Biochemistry. Applicants should have experience in some of the following techniques: spectroscopy (u.v., i.r., mass); gas chromatography; enzymology; organic syntheses; radio isotopes, continuous cultivation of micro-organisms. An interest in the use of instruments and automatic equipment is required. Apply with full details of career and the names of three references to Dr. D. W. Ribbons, Department of Biochemistry, University of Miami Medical School, P.O. Box 875, Biscayne Annex, Miami, Florida 33152.

PROTEIN CHEMIST, Ph.D. or M.D. with experience. To work on isolation and structure of brain proteins. Full-time research position at hospital affiliated Research Institute in New York City.

SALARY:—Dependent on qualifications. Include fringe benefits and increments. Send detailed curriculum vitae and references to:

BOX 267, SCIENCE

WANTED—ELECTRON MICROSCOPIST to participate in a research project relating to heart muscle disease. Salary open. Call or write Dr. Carl S. Alexander, Veterans Administration Hospital, Minneapolis, Minn. 55417. Area Code 612, Phone Number 712-7512, Ext. 383.

EXPERIENCED MARINE SCIENTISTS ARE NEEDED

Leading coastal and estuarine oceanographic research institution seeks capable marine scientists with several years experience in ichthyology or marine fisheries biology, physical, chemical or physical oceanography, marine microbiology, marine pollution biology or environmental health work and marine ecology to fill newly established positions. Needed are established doctoral-level scientists qualified to assume responsibility for operating research and graduate teaching departments. Strong local support assures continuation of active research and teaching programs.

If interested, please reply with appropriate resumes to Box 245, SCIENCE.

POSITIONS OPEN

ACADEMIC PATHOLOGIST

Position involves chiefly teaching and research, with limited service responsibility. Opportunities for independent or collaborative investigation. Rank according to qualifications. Attractive salary and fringe benefits. Contact **Doctor Joseph A. Sisson, Chairman, Department of Pathology, Creighton University School of Pathology, Creighton University School of Medicine, 2500 California Street, Omaha, Nebraska 68131.**

The Market Place

BOOKS • SERVICES • SUPPLIES • EQUIPMENT

BOOKS AND MAGAZINES

AUTHORS WANTED BY NEW YORK PUBLISHER

Your book can be published, promoted, distributed by a reliable company on a subsidized basis. Fiction, non-fiction, poetry, scholarly, scientific and even controversial manuscripts welcomed. For Free Booklet write Vantage Press, Dept. SC, 120 W. 31 St., New York 10001.

SUPPLIES AND EQUIPMENT




**SPECIAL
NUCLEAR
SHIELDING**

CHEMTREE CORPORATION
Central Valley, N.Y.
914-928-2293



CHESTERTOWN, MARYLAND 21620

Manufacturers of chemical testing equipment
and accessories since 1919
Write Dept. H for free catalog



**ATHEROSCLEROTIC
PRIMATES**

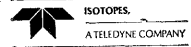
NOW SCHEDULING 1968-69 PRODUCTION
ROTH RESEARCH—ANIMAL CARE
1746 M St. N.W. Wash., D.C. 202 - 347-7560


Now

**RADIO-
AUTOGRAPHY**

made fast and easy with self-contained,
table-top exposure chamber.

For information on the Con-Rad/Jofes
Fluid Emulsion System, write to:
Laboratory Products Division
ISOTOPES, 50 Van Buren Avenue
Westwood, New Jersey 07675





**Your Fair Share Gift
Works Many Wonders
THE UNITED WAY**

27 million families benefit by child care,
family service, youth guidance, health programs,
disaster relief and services for the
Armed Forces from 31,000 United Way agencies.