# the only thing NOT UNIQUE about the 610B is the name ELECTROMETER

The Keithley 610B Electrometer measures more parameters over broader ranges than any other dc test instrument! One compact measuring system now gives you the capability to investigate:

**VOLTAGE**—20 microvolts to 100 volts. without circuit loading (10<sup>14</sup> ohms input resistance)

CURRENT- $10^{-15}$  ampere to 0.3 ampere RESISTANCE-2 ohms to  $10^{14}$  ohms CHARGE- $10^{-13}$  coulomb to  $10^{-5}$  coulomb

In addition, this neat package has only 200 microvolts per hour zero drift. That's ten times better than you can expect from any other tube electrometer, and it approaches the stability of costly vibrating reed devices. Unique, too, is the 610B's 1% meter accuracy, and its .005% unity gain output for impedance matching. An extra large 6-inch taut-band meter and two easyto-read dials accent ease and convenience of operation.

The remarkably superior 610B replaces the 610A  $\ldots$  and sells for the same price  $\ldots$ 

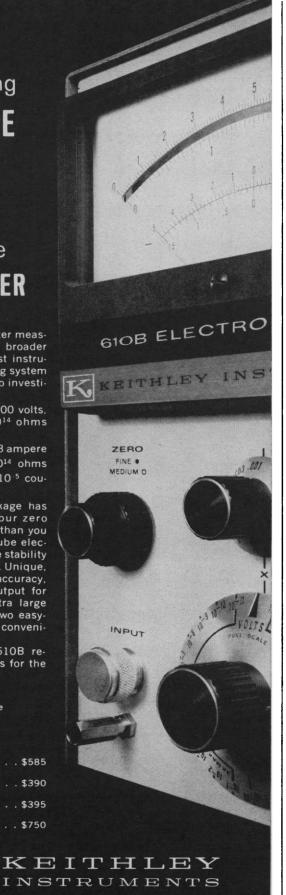
#### \$565

Send for Engineering Note on 610B Electrometer

#### other electrometers

Model 610BR Rack mounting 610B				\$585	
Model 621					
37 ranges, line operated.				\$390	
Model 600A					
54 ranges, bat. operated.				\$395	
Model 603					
50 kc bandwidth amplifier				\$750	





12415 Euclid Avenue • Cleveland 6, Ohio

dc microvoltmeters • differential voltmeters • high voltage supplies

#### MEETINGS

#### **Forthcoming Events**

#### March

17-19. Instrumentation in the Iron and Steel Industry, 15th natl. conf., Pittsburgh, Pa. (R. P. Trauterman, Allegheny-Ludlum Steel Corp. Research Center, Alabama Ave., Backenridge, Pa.)

17-20. Medical Schools and Teaching Hospitals: Curriculum, Programming and Planning, New York Acad. of Sciences, New York, N.Y. (NYAS, 2 E. 63 St., New York 10021)

17-20. American Orthopsychiatric Assoc., New York, N.Y. (E. Harrison, 477 FDR Drive, New York, N.Y.)

18. American Vacuum Soc., midwestern section, Houston, Tex. (J. H. Kimzey, Manned Spacecraft Center, 2101 Webster-Seabrook Rd., Houston 77058)

18-19. Zinc Metabolism, symp., Detroit, Mich. (A. S. Prasad, School of Medicine, Wayne State Univ., Detroit 48207)

18-20. Michigan Acad. of Science, Arts, and Letters, Univ. of Michigan, Ann Arbor. (I. J. Cantrall, Museum of Zoology, Univ. of Michigan, Ann Arbor)

19-20. New York Microscopical Soc., biennial symp., New York, N.Y. (T. G. Rochow, American Cyanamid Co., Room 467A, Stamford, Conn. 06904)

19-20. British Assoc. of **Physical Medicine**, annual, London, England. (J. P. Mitchell, 21 St. John St., Manchester 3, England)

19-21. American Soc. of Internal Medicine, Chicago, Ill. (A. V. Whitehall, 3410 Geary Blvd., San Francisco, Calif.)

20. Identification of Drugs and Poisons, symp., Pharmaceutical Soc. of Great Britain, London. (PSGB, 17 Bloomsbury Sq., London, W.C.1) 22-25. Thermophysical Properties, 3rd

22-25. Thermophysical Properties, 3rd symp., Purdue Univ., Lafayette, Ind. (S. Gratch, Ford Motor Co., P.O. Box 2053, Dearborn, Mich. 48121)

22-26. Medical Film, intern. congr., Paris, France. (Dr. Beauchesne, 22, rue Micheli-du-Crest, Geneva, Switzerland)

22-26. Institute of Electrical and Electronics Engineers, intern. convention, New York, N.Y. (E. L. Harder, IEEE, Box A, Lenox Hill Station, New York 10021)

22-26. American College of **Physicians**, Chicago, Ill. (E. C. Rosenow, Jr., ACP, 4200 Pine St., Philadelphia, Pa. 19104)

22–26. Physics and Chemistry of Fission, symp., Salzburg, Austria. (J. H. Kane, Intern. Conferences Branch, Div. of Special Projects, U.S. Atomic Energy Commission, Washington, D.C. 20545)

23-24. Progress in **Biochemistry and Therapeutics**, 2nd symp., New York, N.Y. (C. Neuberg, Soc. for Intern. Scientific Relations, 600 Lafayette Ave., Brooklyn, N.Y. 11216)

23-25. Asthma, world conf., Eastbourne, England. (Secretary, Chest and Heart Assoc., Tavistock House North, Tavistock Sq., London, W.C.1, England)

24-26. Society of the **Plastics** Industry, 22nd conf., western section, Coronado, Calif. (SPI, 611 S. Catalina, Los Angeles, Calif.)

24-26. National Federation of Science



# ON MODERN BIOLOGY FROM McGRAW-HILL

**ELEMENTS OF BIOLOGY, 2nd Edition.** By Paul B. Weisz. Newly revised and updated, this edition provides a thorough, nontechnical, and highly readable modern interpretation of biology, based on latest molecular-biochemical discoveries and insights. **540 pp., \$7.95.** 

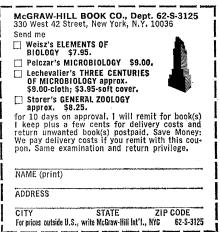
MICROBIOLOGY, 2nd Edition. By Michael J. Pelczar, Jr. and Roger D. Reid. With its coverage completely updated, hundreds of microphotos added, drawings and tables added and revised, and glossary expanded, this book shows you what microorganisms are, what their study now reveals, and how they affect our daily life. 624 pp., \$9.50.

THREE CENTURIES OF MICROBIOLOGY. By Hubert Lechevalier and Morris Solotorovsky. Beginning with the invention of the microscope, this book traces the development of microbiology right up to its latest applications. It quotes extensively from major contributors to this science, describes their work, and imparts a thorough background in principles.

600 pp., Approx. \$9.00 cloth; \$3.95 soft cover.

**GENERAL ZOOLOGY, 4th Edition.** By Tracy I. Storer and Robert L. Usinger. This completely revised edition presents one of the most satisfyingly modern treatments of general biology available. Stimulating coverage of recent research and abundant graphic materials further enhance the value and interest of this fine book. **704 pp., Approx. \$8.25.** 

#### BUY THESE BOOKS AT YOUR LOCAL BOOKSTORE OR SEND COUPON TO:



Abstracting and Indexing Services, Columbus, Ohio. (C. J. Wessel, Prevention of Deterioration Center, NAS-NRC, 2101 Constitution Ave., Washington, D.C.)

24-27. American Physical Soc., Kansas City, Mo. (R. G. Sachs, P.O. Box 344, Argonne, Ill. 60440)

24-27. Society for Research in Child Development, biennial, Minneapolis, Minn. (W. Hartup, Inst. for Child Development, Univ. of Minnesota, Minneapolis 55455)

25-26. Advances in **Tracer Methodol**ogy, 10th symp., Zurich, Switzerland. (E. Landegren, New England Nuclear Corp., Ave. de Chailly 28 c, P.O. Box 31, Lausanne 12, Switzerland) 25-27. **Heart and Circulation in the** 

25-27. Heart and Circulation in the Newborn and Infant, Chicago, Ill. (D. E. Cassels, Chicago Heart Assoc., 22 W. Madison St., Chicago 60602)

25-27. Mid-Central States Orthopaedic Soc., 12th annual, Hot Springs, Ark. (Mrs. P. Lovan, 4101 Westport Lane, Wichita, Kan.)

26. Marine Environment, symp. and NDEA workshop, Fullerton, Calif. (M. D. Brown, Fullerton Junior College, Fullerton)

26-27. Association of Industrial Medical Officers, spring meeting, London, England. (Joint Secretariat, 47 Lincoln's Inn Fields, London, W.C.2) 26-27. Louisiana Acad. of Sciences,

26-27. Louisiana Acad. of Sciences, Natchitoches. (S. M. Weathersby, Dept. of Zoology, Louisiana Polytechnic Inst., Ruston)

26–27. Rural Health, 18th natl. conf., Miami Beach, Fla. (B. L. Bible, 535 N. Dearborn St., Chicago, Ill. 60610)

26-2. **Rehabilitation**, natl. conf., Melbourne, Australia. (Intern. Soc. of Rehabilitation of the Disabled, 701 First Ave., New York, N.Y. 10017)

27-31. National Science Teachers Assoc., natl. convention, Denver, Colo. (NSTA, 1201 16th St., Washington, D.C. 20036)

27–3. Developmental Biology, U.S.– Japan Cooperative Science Program seminar, Tokyo, Japan. (Office of International Science Activities, National Science Foundation, 1951 Constitution Ave., NW, Washington, D.C.)

28. American College of Apothecaries, Inc., Detroit, Mich. (R. E. Abrams, Hamilton Court Hotel, 39th and Chestnut Sts., Philadelphia, Pa. 19104)

28-30. American Assoc. of Colleges of Pharmacy, Detroit, Mich. (C. W. Bliven, AACP, 1507 M St., NW, Washington, D.C. 20005)

28-30. Experimental Dermatology, 4th symp., Palermo, Italy. (A. Tosti, Intern. College of Experimental Dermatology, Ist Dermatologico dell'Universita, Via del Vespro 131, Palermo)

28-31. American Soc. of Abdominal Surgeons, Washington, D.C. (B. F. Alfano, 663 Main St., Melrose 76, Mass.)

28-31. Canadian Inst., Mentse 76, Mass.) 28-31. Canadian Inst. of Mining and Metallurgy, annual, Toronto, Ontario. (E. G. Tapp, CIMM, 906-117 St. Catherine St., W., Montreal 2, Quebec)

28-1. International Anesthesia Research Soc., Washington, D.C. (A. W. Friend, 227 Wade Park Manor, Cleveland, Ohio 44106)

28-2. American Soc. of Hospital Pharmacists, Detroit, Mich. (J. A. Oddis, 2215 **Complete system** for taking the finest quality motion pictures through the microscope

# The Sage Series 100 Time Lapse Cinephotomicrographic Apparatus

takes motion pictures with flash . . . stops motion, provides maximum resolution on film



Sage Series 100 shown with Zeiss WL microscope: Incubator and large capacity film magazine are optional accessories

#### The Sage Series 100 Time Lapse Apparatus

provides 16mm motion pictures that are sharp, clear, in perfect register at the highest magnifications. The builtin xenon light source has a flash duration of  $10^{-4}$  sec, is variable over a wide range of intensity, provides ample illumination for phase contrast, oil immersion.

The instrument includes a unique desk-mounted vibration-isolation system, camera and drive assembly with a wide choice of framing rates, viewing eyepiece for the microscope, and optically aligned dual light source (xenon flash for photography, incandescent for viewing). Models for upright and inverted microscopes from \$6,750.00

The Sage Series 300 Time Lapse Apparatus provides many of the same features, but not the flash, at a modest price. From \$3,250.00

Models now available for normal and high speed as well as time lapse.

# SAGE INSTRUMENTS, INC.

2 SPRING ST., WHITE PLAINS, N. Y. 914 WH 9-4121

Constitution Ave., NW, Washington, D.C.) 28-2. Society of Motion Picture and Television Engineers, 97th annual, Los Angeles, Calif. (R. J. Goldberg, Technicolor Corp., Research and Development Div., 2800 West Olive Ave., Burbank, Calif. 91505)

28-2. Chemical Aspects of Electron Spin Resonance, intern. conf., Cirencester, England. (D. H. Whiffen, Basic Physics Div., Natl. Physical Laboratory, Teddington, England)

28-3. American Soc. of Photogrammetry/American Congress on Surveying and Mapping, convention, Washington, D.C. (ASP, 44 Leesburg Pike, Falls Church, Va. 22044) 28-4. North American Clinical Der-

matologic Soc., Las Vegas, Nev. (E. F. Finnerty, 177 E. 75 St., New York, N.Y. 10021

29-31. American Assoc. for Thoracic Surgery, 45th annual, New Orleans, La. (Miss A. Hanvey, 7730 Carondelet Ave., St. Louis, Mo. 63105)

29-2. American Soc. of Tool and Manufacturing Engineers, annual conf., Cleve-land, Ohio. (ASTM, 20501 Ford Rd., Dearborn, Mich. 48128)

29-30. Great Lakes Research, 8th conf., Ann Arbor, Mich. (J. L. Hough, Great Lakes Research Div., 1077 North Univ. Bldg., Ann Arbor, Mich.)

29-29 Apr. Genito-Urinary Diseases, symp., Univ. of Kentucky, Lexington. (N. J. Pisacano, Continuation Medical Education, Univ. of Kentucky, Lexington) 30-31. Formulation of Pesticides, symp.,

London, England. (Assistant Secretary, Soc. of Chemical Industry, 14 Belgrave Sq., London, S.W.1)

30-1. Non-conventional Electron Microscopy, Cambridge, England. (Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

31-2. Corrosion by Hot Gases and Combustion Products, symp., European Federation of Corrosion, Frankfurt am Main, Germany. [DECHEMA, 6 Frankfurt (Main) 7, Postfach 7746, Germany] 31–2. Optical Soc. of America, Dallas, Tex. (M. E. Warga, 1155 16th St., NW,

Washington, D.C. 20036) 31-2. Textile Research Inst., annual,

New York, N.Y. (TRI, Princeton, N.J.)

31-2. Recent Developments in Heat Treatment of Food, 2nd European symp., Frankfurt am Main, Germany. [Gesellschaft Deutscher Chemiker, Dr.rer. nat. Wolfgang Fritsche, 6000 Frankfurt (Main), Postfach 9075, Warrentrappstr. 40-42. Germany]

31-2. Electron Beam, 7th annual symp., University Park, Pa. (A. B. El-Kareh, Dept. of Electrical Engineering, Pennsylvania State Univ., University Park)

#### April

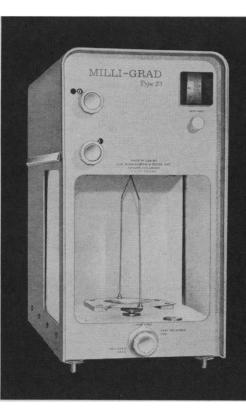
1-3. Association of Surgeons of Great Britain and Ireland, annual, London, England. (Joint Secretariat, 47 Lincoln's Inn Fields, London, W.C.2)

1-3. Dermovenereology, 7th meeting Univ. of Catania, Italy. (Direzione della Clinica Dermosfilopatica, Piazza S. Agata La Vetere 5, Catania, Sicily, Italy)

1-4. British Medical Assoc., annual clinical meeting, Dundee, Scotland. (D. Gul-

12 MARCH 1965

# NOW...5 1-pan balances all with Ainsworth quality at competitive prices



New, low-priced Milli-Grad Type 23 with vernier readout.

# Your choice of capacity, sensitivity, size, price

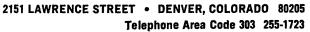
	TYPE SC	TYPE 12	TYPE 10	TYPE 21	TYPE 23
Capacity	200 gr.	80 gr.	160 gr.	160 gr.	160 gr.
Tare		40 gr.	60 gr.	-	
Total Load		120 gr.	220 gr.		
Sensitivity	0.1 mg.	0.01 mg.	0.1 mg.	0.1 mg.	1 mg.
Readability by estimation	0.05 mg.	0.005 mg.	0.05 mg.	0.05 mg.	0.5 mg.
Reproducibility	$\pm$ 0.03 mg.	$\pm$ 0.01 mg.	$\pm$ 0.03 mg.	$\pm$ 0.05 mg.	$\pm 0.3$ mg,
Dimensions	10¼″w x 19¾″h x 18½″d	8¼″wx 15%″h x16″d	8¼″w x 15%s″h x 16″d	8¼″wx 155%″h x16″d	8¼″wx 15%s″h x16″d
PRICE	\$895.00	\$875.00	\$670.00	\$550.00	\$530.00

Modifications: weigh below attachments available on all 1 pans, add B to Type No.; Explosion proof available on all 1 pans, add A to Type No.; at extra cost. Type SCD diamond balance; Type SCH with high weighing chamber; Type SC 300 extended capacity.



The name Ainsworth is your guarantee WRITE FOR CATALOG WM. AINSWORTH & SONS, INC.

A BALANCE FOR EVERY NEED



1335

 SCIENTISTS
 RESEARCH DIRECTORS
 PROGRAM PLANNERS LIBRARIANS
 INFORMATION SPECIALISTS

# A Critically Important and Completely New INDEX-GUIDE to CURRENT BIOMEDICAL RESEARCH to help vou:

DONG VHAT

WHO'S DOING WHA

WHO'S DOING WHO'S DOING WHA'

- · keep up to date on new research activity
- Locate researchers in your field
- avoid waste of resources
- conserve manpower
- anticipate research trends

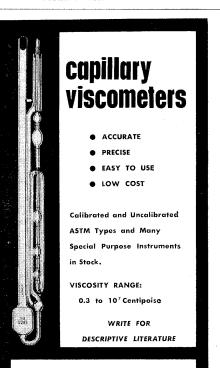
## STARTING IN MAY 1965

12 monthly issues with annual cumulative index. Each well-indexed issue contains from 1,500 to 2,000 new listings of biomedical research in progress.

## WHO'S DOING WHAT in biomedicine For subscription information and a free specimen copy write to:

WHO'S DOING WHAT in Biomedicine

Center for Information Resources, Inc. 2431 K Street, N.W. Washington, D.C. 20037



**CANNON INSTRUMENT CO.** 

VISCOMETERS, VIS. STANDARDS,

TEMP. BATHS

P. O. Box 812

State College 3, Pa. 16801

PHONE: A.C. 814-466-6232

# **RUSSIAN BOOKS**

Imported from U.S.S.R. translated into English MATHEMATICS, SCIENCE AND

MEDICINE

Alexeyev, V.—Quantitative Analysis 491 pp. \$4.00 Dobrovlsky, V., et al—Machine Elements 579 pp. 4.00 Gutenmacher, L.—Thinking Machines 189 pp. 1.50 Kondratyev, V.—The Structure of Atoms 530 pp. 3.25 

 Kondratyev, v.—The statistical statements
 530 pp.
 3.25

 Korsunsky, M.—The Atomic Nucleus
 412 pp.
 2.00

 Kostenko, M., et al-Electrical Machines Mikheyev, M.--Fundamentals of Heat 376 pp. 2.75 5.25 2.50 2.50

### MEDICINE AND PSYCHIATRY

1.50 2.00 1.75 2.25 6.95

2.00 5.00

NEW RUSSIAN ATLAS FIZICO-GEOGRAPHICHESKII ATLAS MIRA 241 maps: 3 sections—Maps of the World, Maps of the Continents, Maps of the U.S.S.R. \$60.00

Minimum order \$2.00 Write for complete Catalog

## FOUR CONTINENT BOOK CORP. Dept. 620, 156 Fifth Ave., New York, N. Y. 10010

lick, BMA, Tavistock Square, London, W.C.1, England)

1-15. Theoretical Chemistry, NATO Advanced Study Inst., Frascati, Italy. (C. A. Coulson, Mathematical Inst., 10 Parks Rd., Oxford, England)

2-3. Alabama Acad. of Science, Florence State College, Florence. (W. B. De-Vall, Forestry Dept., Auburn Univ., Auburn. Ala.)

2-3. Arkansas Acad. of Science, Univ. of Arkansas, Fayetteville. (G. E. Templeton, Dept. of Plant Pathology, Univ. of Arkansas, Fayetteville)

2-3. Chemistry Facilities for the Two-Year College, Junior College Chemistry Roundtable, conf., Dearborn, Mich. (W. T. Mooney, Jr., El Camino College, Via Torrance, Calif. 90506)

2-3. Alexander Graham Bell Assoc. for the Deaf, Southeastern regional meeting, New Orleans, La. (G. W. Fellendorf, 1537 35th St., Washington 20007)

2-3. Pennsylvania Acad. of Science, 41st annual, Villanova Univ., Villanova. (G. E. Grube, Lock Haven State College, Lock Haven, Pa.)

2-4. Society for Applied Anthropology, annual, Lexington, Ky. (SAA, Rand Hall, Cornell Univ., Ithaca, N.Y.)

2-4. American Soc. for the Study of Sterility, San Francisco, Calif. (H. H. Thomas, 944 S. 18th St., Birmingham, Ala.)

2-7. West African Science Assoc., 5th biennial conf., Freetown, Sierra Leone. (M. M. Anderson, Geology Dept., Fourah Bay College, Freetown)

4. Chest Disease, symp., Arizona Acad. of General Practice. (Cardiopulmonary Section, Tucson Medical Center, P.O. Box 6067, Tucson, Ariz. 85716) 4-7. American College of **Obstetricians** 

and Gynecologists, annual, San Francisco, Calif. (ACOG, 79 W. Monroe St., Chicago, Ill. 60603)

4-9. Division of Chemical Literature, American Chemical Soc., Detroit, Mich. (B. M. Davis, Cabot Corp., Concord Rd., Billerica, Mass.)

4-9. American Chemical Soc., spring natl. meeting, Detroit, Mich. (ACS, 1155 16th St., NW, Washington, D.C. 20036)

5-7. Atomic Energy Soc. of Japan, annual, Kyoto, Japan. (M. Masamoto, Atomic Energy Soc. of Japan, c/o Japan Atomic Energy Research Inst., 1, 1-chome, Shiba-tamura-cho, Minato-ku, Tokyo, Japan)

5-7. Hormonal Effects of Cutaneous Structure and Function, New York Univ., New York, N.Y. (Office of the Recorder, New York Univ. Post-Graduate Medical School, 550 First Ave., New York 10016)

5-7. Elementary Particles, conf., Birmingham, England. (Administration Asst., Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

5-7. Fission Product Release and Transport under Accident Conditions, intern. symp., Oak Ridge, Tenn. (C. J. Barton, Oak Ridge Natl. Laboratory, P.O. Box X, Oak Ridge 37831)

5-7. New Dimensions in Space Technology, 2nd space congr., Cocoa Beach, Fla. (L. E. Mertens, RCA Missile Test Project, M.U. 741 Bldg. 423, Patrick AFB, Fla.)

5-7. Structures and Materials, AIAA 6th natl. conf., Palm Springs, Calif. (J. E.



# IN V.O.M. RECORDERS

Ever seen a Recorder that looks like this? Neither have we—yet! But we've made just about every other modification in the book for our customers—with 1 range, 2 ranges, with push-button zero, with different scales, and with special chart papers. We've painted them custom colors, put a variety of customer designations on them. You name it, we'll do it! Just let us know what, and the quantity. We'll work up a quote that'll be a pleasant surprise to you.

There are a goodly number of people who buy the standard instruments without modification, singly and in O.E.M. quantities. Boring, really, but we *do* fill these orders along with the specials. The standard Bausch & Lomb V.O.M. Recorder is a 5 inch Strip Chart Recorder that will record volts, ohms and milliamps directly. It has 5 built-in chart speeds, built-in event marker, built-in take-up reel, 5 voltage ranges, 6 linear ohms scales, 4 D.C. current ranges. Full scale sensitivity is 10mv, 2.5mv or 500 microvolts depending on the model selected. It has a number of other advantages, too. And, we have accessories, a variety of them, that make our recorders so versatile it hurts (other recorder manufacturers, that is!).

If you want further information on our standard recorders, so that you can tell us how you want them changed, write for Catalog 37-2068. Bausch & Lomb, 85615 Bausch Street, Rochester, New York 14602.

See you at IEEE, Booth 3312



Hove, Materials Sciences Laboratory-F/ 2323, Aerospace Corp., Box 95805, Los Angeles, Calif.)

5-8. American Acad. of General Practice, annual, Seattle, Wash. (M. F. Cahal, AAGP, Volker Blvd. at Brookside, Kansas City, Mo.)

5-8. High Energy Physics, symp., Birmingham, England. (Administration Asst., Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

5-8. Industrial Health, American conf., Miami Beach, Fla. (American Industrial Health Conf., 55 East Washington St., Chicago, Ill.)

5-9. American College of Allergists, seminar and 21st annual congr., Las Vegas, Nev. (Administrative Office, 2141 14th St., Boulder, Colo.)

Boulder, Colo.) 5-9. Clean Air, congr. and exhibition, Dusseldorf, Germany. (Nordwestdeutsche Ausstelungs-und Messe-Gesellschaft mbH, Nowea 5, Dusseldorf, Messegelande, Germany)

5-9. Phenomena in the Neighborhood of **Critical Points**, Washington, D.C. (M. S. Green, Statistical Physics Section, Natl. Bureau of Standards, Washington, D.C. 20234)

5-10. Nuclear Developments, 1st intern. congr., Brighton, England. (J. B. Pinkerton, Inst. of Nuclear Engineers, 147 Victoria St., London, S.W.1, England)

5-12. Large Telescopes, symp., Pasadena and San José, Calif. (I. S. Bowen, c/o Mt. Wilson Observatory, 813 Santa Barbara St., Pasadena)

5-24. World Meteorological Organization, Regional Assoc. VI (Europe), 4th session, Paris, France. (WMO, 41 Avenue Giuseppe Motta, Geneva, Switzerland)

6-8. Biomathematics and Computer Science in the Life Sciences, 3rd annual symp., Houston, Tex. (Office of the Dean, Div. of Continuing Education, Univ. of Texas Graduate School of Biomedical Sciences, 102 Jesse Jones Library Bldg., Texas Medical Center, Houston 77025) 6-9. Royal Aeronautical Soc., conf., Nottingham, England. (H. Umpleby, In-

Nottingham, England. (H. Umpleby, Institution of Mechanical Engineers, 1 Birdcage Walk, Westminster, London, S.W.1, England)

6-9. Automatic Control, conv., Nottingham, England. (H. Umpleby, Institution of Mechanical Engineers, 1 Birdcage Walk, Westminster, London, S.W.1, England)

7–9. American Assoc. for **Cancer Research**, 56th annual, Philadelphia, Pa. (AACR, 7701 Burholme Ave., Fox Chase, Philadelphia 19111)

7-9. The Chemical Soc., anniversary meetings, Glasgow, Scotland. (CS, Burlington House, London, W.1, England)

7-9. Nucleation Phenomena, intern. symp., Cleveland, Ohio. (A. G. Walton, Dept. of Chemistry, Case Inst. of Technology, University Circle, Cleveland 6)

7-9. Stress Analysis, conf., Bristol, England. (Administration Asst., Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

8–9. Histochemical Soc., 16th annual, Philadelphia, Pa. (S. S. Spicer, Natl. Inst. of Health, Bethesda, Md. 20014)

8–9. Microbiological Deterioration in the Tropics, symp., London, England. (Secretary, Soc. of Chemical Industry,



## CHROMATOGRAPHY and ELECTROPHORESIS USING S & S CHROMATOGRAPHY SPECIALTIES

The purity and the uniformity of S & S chromatographic specialties, with resultant clean cut sharpness of separations, have won a high reputation for these outstanding papers, pulps, powders, etc.

S&S has issued a reference work of all S&S materials for chromatography and electrophoresis, with full information as to their properties, functions, and use.

This valuable 6 page brochure contains a review of filter papers; ion exchange cellulose pulps; and ion exchange cellulose powders for thin layer chromatography. The text includes the following subjects:

SECTION 1—Standard papers, sheets and rolls; ashless papers; impregnated papers; glass fiber filters; and the new S&S No. 2500 Cellulose Acetate membrane for improved electrophoretic separations.

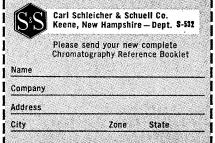
SECTION 2—Celluloses for column chromatography: standard, ashless, acetylated. Full data on Selectacel® Ion Exchange Celluloses, and Selectacel TLC Ion Exchange Celluloses for thin layer chromatography.

SECTION 3— Chart of relative retentive values for various filter papers; index of sulface characteristics, thickness, ash content, average absorption rate in mm for each S&S grade of ashless and standard papers.

SECTION 4 — Helpful literature reference of collateral and related data available from S&S free upon request. Also included is a separate 4-page price list, complete index, and cross-reference to the main chromatography brochure.

FOR YOUR FREE COPY of the valuable new S & S Chromatography Reference Booklet, just mail the coupon below.

. TEAR OFF AND MAIL \_\_\_



Selectacel is manufactured by Brown Company and exclusively packaged and distributed for laboratory use by S&S. 14 Belgrave Sq., London, S.W.1, England)  $\delta$ -9. British Inst. of **Radiology**, annual congr., London, England. (BIR, 32 Welbeck St., London, W.1)

8-9. X-ray Analysis, Conf., Inst. of Physics and the Physical Soc., Edinburgh, Scotland. (Administration Asst., Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

8-10. North Pacific Soc. of Neurology and Psychiatry, Portland, Ore. (W. W. Thompson, 3300 S.W. Dosch Rd., Portland)

8–10. American **Radium** Soc., New Orleans, La. (J. L. Pool, 444 E. 68 St., New York 10021)

8-14. American Soc. for **Biological Chemists**, annual, Atlantic City, N.J. (K. Bloch, Harvard Univ., Cambridge 38, Mass.)

9-10. American Soc. for Artificial Internal Organs, Atlantic City, N.J. (B. K. Kusserow, Dept. of Pathology, Univ. of Vermont College of Medicine, Burlington) 9-10. American Assoc. of University

**Professors**, Washington, D.C. (W. P. Fidler, AAUP, 1785 Massachusetts Ave., NW, Washington, D.C.)

9-11. Southwestern **Psychological** Assoc., annual, Oklahoma City, Okla. (O. Parsons, Dept. of Psychiatry, Neurology, and Psychology, Oklahoma Medical Center, Oklahoma City)

9-13. Mediterranean Cooperation for Solar Energy, Istanbul, Turkey. (M. Perrot, c/o Faculte des Sciences, Pl. Victor Hugo, Marseilles, France)

9-14. Federation of American Societies for **Experimental Biology**, 46th annual, Atlantic City, N.J. (Mrs. T. C. Heatwole, FASEB, 9650 Wisconsin Ave., Washington, D.C. 20014)

10. New Mexico Acad. of Sciences, Socorro. (K. S. Bergstresser, 739 42nd St., Los Alamos, N.M.)

10-12. Aerospace Electronics, natl. conf., Dayton, Ohio. (Inst. of Electrical and Electronics Engineers, Dayton Office, 1414 E. 3 St., Dayton)

10-14. American Soc. for Experimental Pathology, Atlantic City, N.J. (H. D. Moon, Univ. of California School of Medicine, San Francisco 94122)

10-14. American Inst. of Nutrition, annual, Atlantic City, N.J. (O. Mickelsen, Dept. of Foods and Nutrition, Michigan State Univ., East Lansing)

10-14. American **Physiological** Soc., Atlantic City, N.J. (R. G. Daggs, 9650 Wisconsin Ave., Washington, D.C.)

10-16. American Assoc. of Immunologists, Atlantic City, N.J. (B. H. Waksman, Massachusetts General Hospital, Boston 14)

11-15. Calcified Tissues, 3rd European symp., Davos, Switzerland. (H. Fleisch, Laboratorium für Experimentelle Chirurgie, Schweizerisches Forschungsinstitut, Davos)

12-13. Inorganic Single Crystals, symp., London, England. (Asst. Secretary, Soc. of Chemical Industry, 14 Belgrave Sq., London, S.W.1)

12-13. Seismological Soc. of America, annual, St. Louis, Mo. (C. Kisslinger, Dept. of Geophysics and Geophysical Engineering, St. Louis Univ., 3621 Olive St., St. Louis 63108)

12-14. Atomic Spectra and Radiation

# WHO'S RESPONSIBLE FOR THESE FINE CRYOGENIC CONTAINERS?



LOX/NITROGEN CONTAINERS

• You're right! SULFRIAN! The name's synonymous with the most advanced, most efficient low temperature equipment. The complete line also includes Helium/ Hydrogen Containers, Stainless Steel Liquid Helium Research Dewars and related equipment. FAST DELIVERY

### STAINLESS STEEL OPEN DEWAR







**Processes**, conf., Oxford, England. (Administration Asst., Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

12-14. Ballistocardiography and Cardiovascular Dynamics, 1st world congr., Amsterdam, Netherlands. (A. A. Knoop, Physiological Laboratory, Free Univ., Valeriusplein 11, Amsterdam)

12-15. American College Personnel Assoc., Minneapolis, Minn. (A. H. Hitchcock, 1605 New Hampshire Ave., NW, Washington, D.C. 20009)

13-14. Kinetics of **Proton Transfer Processes**, Faraday Soc., Univ. of Newcastle-upon-Tyne, England. (FS, 6 Gray's Inn Square, London, W.C.1, England)

13-14. Thermal Analysis, symp., London, England. (B. R. Currell, Dept. of Chemistry, Mathematics, Biology, and Geology, Northern Polytechnic, Holloway Rd., London, N.7)

13-15. Telemetering, natl. conf., Houston, Tex. (R. W. Towle, Advanced Technology Laboratories, 369 Winsman Ave., Mountain View, Calif.)

13-17. American Soc. of **Parasitolo**gists, 40th annual, Atlanta, Ga. (F. J. Kruidenier, Dept. of Zoology, Univ. of Illinois, Urbana)

Illinois, Urbana) 13-17. **Rehabilitation**, Pan Pacific conf., Tokyo, Japan. (Intern. Soc. for Rehabilitation of the Disabled, 701 First Ave., New York 10017)

14. Programmed Instruction in Medical Education, symp., Newark, N.J. (A. Krosnick, Div. of Chronic Illness Control, New Jersey State Dept. of Health, Box 1540, Trenton 25)

14-16. Water Resources and Pollution Control, 14th southern conf., Raleigh, N.C. (C. M. Weiss, Box 899, Chapel Hill, N.C.)

15-16. Heat Transfer at Cryogenic Temperatures, Oklahoma State Univ., Stillwater. (J. D. Parker, Dept. of Mechanical Engineering, Oklahoma State Univ., Stillwater 74075)

15-16. Programming and Control, intern. conf., U.S. Air Force Academy, Colorado Springs, Colo. (O. J. Manci, G. B. Dantzig Operations Research Center, Univ. of California, Berkeley)

15-17. American Ethnological Soc., Lexington, Ky. (N. F. S. Woodbury, Office of Anthropology, U.S. Natl. Museum, Washington, D.C.)

15-17. Southern Soc. for Philosophy and Psychology, Atlanta, Ga. (E. A. Alluisi, Psychology Dept., Univ. of Texas, Austin 78712)

16-17. Montana Acad. of Sciences, Montana State College, Bozeman. (L. H. Harvey, Dept. of Botany and Microbiology, Montana State Univ., Missoula)

16-18. Association of **Southeastern Biologists**, annual, Charlottesville, Va. (J. N. Dent, Room 270, Gilmer Hall, Mc-Cormick Rd., Charlottesville 22903)

18-22. Association of American Geographers, annual, Columbus, Ohio. (E. Taafee, Dept. of Geography, Ohio State Univ., Columbus) 19-21. Nondestructive Evaluation of

19-21. Nondestructive Evaluation of Aerospace and Weapons System Components and Materials (unclassified), San Antonio, Tex. (J. R. Barton, Southwest Research Inst., 8500 Culebra Rd., San Antonio 6) Melabs means: Fast (DIRECT-READING) Corrector to 10<sup>-2</sup>mho/cm) Recordable (0 TO 100mV) Conductance Measurement (NO ELECTRODES IN SOLUTION) Melabs means: frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(DIRECT-READING)<math>frast(D

Melabs CCM-1 ELECTRODELESS CONDUCTIVITY METER does

conductometric titrations on aqueous and non-aqueous solutions with an equally sensitive touch. It can also monitor and graphically record the conductance of a flowing stream.

> Its striking ability to handle all manner of substances without batting a mho results from a design that eliminates direct contact between the solution and metallic electrodes. The advantages in terms of sample

and electrode contamination are obvious.

The CCM-1 Conductivity Meter does away with time-consuming null balancing, allows direct meter readouts. Meter readings are repeatable within  $\pm$  0.5%.

The instrument, priced at \$585, features all-solid-state circuitry for high reliability and comes with either a standard cell or a special flow-through cell.

Complete product information and numerous application descriptions await your inquiry.



INSTRUMENTS OF QUALITY

3300 Hillview Ave., Stanford Industrial Park Palo Alto, California 94304 Phone: (415) 326-9500/TWX: 415-492-9488/Cable: MELABS PALOALTO

12 MARCH 1965



BOOTHS 3609-3617 IEEE SHOW

19-21. Biomedical Sciences Instrumentation, 3rd natl. symp., Instrument Soc. of America, Dallas, Tex. (D. R. Stearn, ISA, 530 William Penn Place, Pittsburgh, Pa. 15219)

19-21. Mechanics, Physics, and Chemistry of **Solid Propellants**, Purdue Univ., Lafayette, Ind. (A. C. Eringen, School of Aeronautics, Astronautics and Engineering Sciences, Purdue Univ., Lafayette 47907)

19-22. Modern Trends in Activation Analysis, intern. conf., Texas A&M Univ., College Station. (R. E. Wainerdi, Texas A&M Univ., College Station)

19-22. American Geophysical Union, annual, Washington, D.C. (W. E. Smith, AGU, 1145 19th St., NW, Washington, D.C. 20036) 19-22. Nuclear Magnetic Resonance,

19-22. Nuclear Magnetic Resonance, 2nd annual workshop, Washington, D.C. (A. J. Rosen, Dept. of Chemistry, Georgetown Univ., Washington, D.C.)

20–22. Frequency Control, 19th annual symp., Atlantic City, N.J. (Director, U.S. Army Electronics Laboratories, Headquarters, U.S. Army Electronics Command, Attn: AMSEL-RD-PF, Fort Monmouth, N.J. 07703)

20-22. Great Plains, symp., North Dakota State Univ., Fargo. (S. W. Russell, North Dakota State Univ., Fargo)

20-22. Physics of Solids at High Pressures, 1st intern. conf., Tucson, Ariz. (C. T. Tomizuka, Dept. of Physics, Univ. of Arizona, Tucson 85721)

20-22. Photochemical Aspects of Air Pollution, symp., Cincinnati, Ohio. (A. P. Altshuller, Taft Sanitary Engineering Center, 4676 Columbia Parkway, Cincinnati 45226)

20-22. System Theory, symp., Polytechnic Inst. of Brooklyn, Brooklyn, N.Y. (J. Fox, Polytechnic Inst. of Brooklyn, 333 Jay St., Brooklyn 1)

20-23. American Assoc. of Anatomists, annual, Miami, Fla. (R. T. Woodburne, Dept. of Anatomy, Univ. of Michigan, Ann Arbor 48104)

20-23. American Meteorological Soc., spring meeting, Washington, D.C. (K. C. Spengler, 45 Beacon St., Boston 8, Mass.)

20–23. U.S. Natl. Committee, Intern. Scientific Radio Union/Inst. of Electrical and Electronics Engineers, spring meeting, Washington, D.C. (A. T. Waterman, Stanford Electronics Laboratories, Stanford Univ., Stanford, Calif.)

21. Oral Cancer, 3rd annual symp., Poughkeepsie, N.Y. (M. A. Engelman, 1 East Academy St., Wappingers Falls, N.Y. 12590)

21-22. Mathematical Geodesy, symp., Turin, Italy. (A. Marussi, Univ. of Trieste, Trieste, Italy)

21–23. American Inst. of Chemists, 42nd annual, Richmond, Va. (R. E. Anderson, Albemarle Paper Manufacturing Co., Richmond 23217)

21-23. Cognitive Processes and Clinical Psychology, 3rd symp., Univ. of Colorado, Boulder. (R. Jessor, Dept. of Psychology, Univ. of Colorado, Boulder)

21-23. Combustion Inst., western states section, spring meeting, Hollywood, Calif. (A. S. Gordon, Forrestal Research Center, Princeton Univ., Princeton, N.J.)

21-23. Institute of Environmental Sciences, 11th annual, Chicago, Ill. (IES, 34

SCIENCE, VOL. 147

See for yourself

S. Main St., Mount Prospect, Ill. 60057) 21–23. Engineering Aspects of Magnetohydrodynamics, 6th symp., Pittsburgh, Pa. (E. Reshotko, Div. of Electrical Engineering, Case Inst. of Technology, Cleveland, Ohio 44106)

21–23. Support for Manned Flight, conf., Dayton, Ohio. (G. L. Schwarz, Headquarters, AF Logistics Command (MCO), Wright-Patterson AFB, Ohio)

21–23. Marine Sciences Instrumentation, 3rd natl. symp., Instrument Soc. of America, Univ. of Miami, Miami, Fla. (H. A. Cook, Airpax Electronics, Inc., P.O. Box 8488, Fort Lauderdale, Fla.)

21-23. Nonlinear Magnetics, 3rd intern. conf., (INTERMAG), Washington, D.C. (E. W. Pugh, I.B.M. Components Div., Dept. 231, Bldg. 703-2, Poughkeepsie, N.Y. 12602)

21–23. **Ophthalmological** Soc. of the United Kingdom, annual, London, England. (Joint Secretariat, 47 Lincoln's Inn Fields, London, W.C.2)

21–23. Optimization Techniques, symp., Pittsburgh, Pa. (Inst. of Electrical and Electronics Engineers, Box A, Lenox Hill Station, New York, N.Y.)

21-23. Pulse Radiolysis, symp., Manchester, England. (M. Ebert, Paterson Laboratories, Christie Hospital and Holt Radium Inst., Withington, Manchester 20, England)

21-24. Federation of European Biochemical Societies, Vienna, Austria. (The Secretariat, Alserstr. 4, Vienna 9)

21–24. British **Paediatric** Assoc., Scarborough, England. (E. W. Hart, Hospital for Sick Children, Great Ormond St., London, W.C.1, England)

21-2. Industrial Chemistry, 26th intern. congr., Paris, France. (Soc. of Industrial Chemistry, 28 rue St. Dominique, Paris 7)

22–23. Nondestructive Testing of Materials, intern. conf., Vienna, Austria. (Firma Gebr. Böhler & Co., A.G., Kapfenberg, Austria)

22–23. Chemistry of **Polymerization Processes**, symp., London, England. (W. R. Moore, Dept. of Chemical Technology, Bradford Inst. of Technology, Bradford 7, Yorkshire, England) 22–24. Eastern **Psychological** Assoc.,

22-24. Eastern **Psychological** Assoc., 36th annual, Atlantic City, N.J. (M. A. Iverson, Queens College, Flushing, N.Y. 11367)

22-24. Role of the Solvent in Chemical Kinetics, E. A. Moelwyn-Hughes symp., Univ. of Arkansas, Fayetteville. (A. Fry, Dept. of Chemistry, Univ. of Arkansas, Fayetteville 72701)

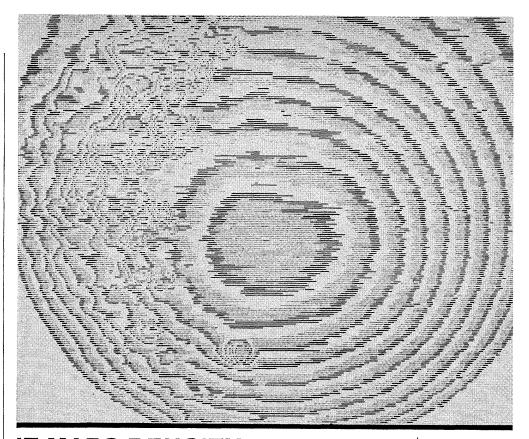
22-24. Wildflower Pilgrimage, 15th annual, Great Smoky Mountains Natl. Park. (E. E. C. Clebsch, Dept. of Botany, Univ. of Tennessee, Knoxville)

23-24. Georgia Acad. of Science, Oglethorpe Univ., Atlanta. (J. T. May, School of Forestry, Univ. of Georgia, Athens)

23-24. Information Retrieval, 2nd annual natl. colloquium, Univ. of Pennsylvania, Philadelphia. (Inst. for Scientific Information, 325 Chestnut St., Philadelphia 19106)

23-24. Iowa Acad. of Science, Univ. of Dubuque, Dubuque, Iowa. (G. W. Peglar, Dept. of Mathematics, Iowa State Univ., Ames)

12 MARCH 1965



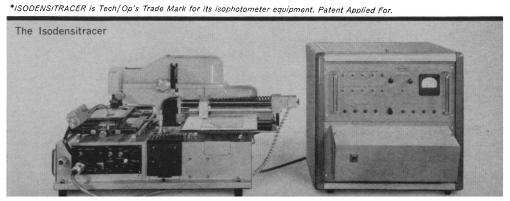
**IT MAPS DENSITY** of film transparencies. The unique Tech/Ops **ISODENSITRACER**\* automatically scans and measures the optical densities, up to 6D, of all points, and records the density values in a quantitative two-dimensional isodensity tracing of the scanned area. Applications include analysis of atmospheric and astronomical photos, high speed photo records, photogrammetric films, spectrum plates, medical x-rays, radiographs, and biological specimens. A complete 7" x 9" isodensity tracing is usually produced in about an hour. Specimen to record magnification ratios extend from 1:1 to 1:2000. The Isodensitracer handles films and glass plates up to 5" x 10". Maximum resolution is 1 micron. There's a need for the Isodensitracer wherever scientists require precise isophotometric information quickly or in quantity. The Tech/Ops Isodensitracer operates in conjunction with the Joyce-Loebl Microdensitometer.



The isodensity tracing shown was made from the negative of this photo of the eclipsed sun and surrounding sky. Tracings at higher. magnifications have been made to bring out the density contours in the clouds and coronal region.

For further information contact one of the following:

Beckman & Whitley 993 E. San Carlos Ave., San Carlos, California • Phone (415) 591-8241 National Instrument Laboratories - 12300 Parklawn Drive • Rockville, Maryland • Phone (301) 933-1144 TECHNICAL OPERATIONS, INC. • Burlington, Massachusetts • Phone (617) 272-2000



## MINIMUM CONTACT-MAXIMUM SAFETY

with self-sticking TIME LABORATORY TAPES and LABELS

Self-sticking tapes and labels eliminate a direct source of personal contamination in laboratories. Pre-printed or plain tapes and labels provide a quick means of marking laboratory equipment. Just write necessary data on label (use pencil, pen or grease marker) and place it on any surface glass, metal or plastic. Labels stick tight through autoclave (up to 250°),

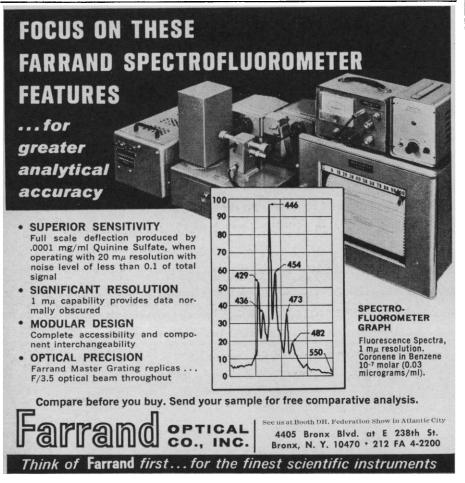


deep freeze (to  $-70^{\circ}$ ), or water bath. When no longer needed these tapes and labels can be quickly removed leaving no sticky residue. Vinyl Coated available in white or colors.



See your laboratory or hospital supplier for a complete selection of Time Tapes and Labels.

**PROFESSIONAL TAPE CO., INC.** 365 Burlington Avenue • Riverside, Illinois 60546



23-24. Mississippi Acad. of Sciences, Biloxi. (C. Q. Sheely, Mississippi State Univ., State College)

23-24. Ohio Acad. of Science, annual, Ohio Univ., Athens. (J. H. Melvin, 505 King Ave., Columbus, Ohio 43201)

23-24. Parasitism, colloquium, Oregon State Univ., Corvallis. (J. E. McCauley, Dept. of Oceanography, Oregon State Univ., Corvallis 97331)

23-24. **Population** Assoc. of America, annual, Chicago, Ill. (A. J. Coale, PAA, Office of Population Research, 5 Ivy Lane, Princeton, N.J.)

23-24. South Dakota Acad. of Science, Black Hills State College, Spearfish. (T. Van Bruggen, Botany Dept., Univ. of South Dakota, Vermillion) 23-24. West Virginia Acad. of Science,

23-24. West Virginia Acad. of Science, Fairmont State College, Fairmont. (J. B. Hickman, 8 Mineral Industries Bldg., West Virginia Univ., Morgantown)

25-26. Pi Gamma Mu, natl. social science honor soc., St. Paul, Minn. (E. B. Urquhart, 1719 Ames St., Winfield, Kan.)

25-28. American Oil Chemists Soc., Houston, Tex. (C. W. Hoerr, Durkee Foods, 2333 Logan Blvd., Chicago, Ill.)

25-28. Southeastern **Psychiatric** Assoc., annual, Southern Pines, N.C. (H. Brackin, Jr., 1918 Church Ave., Nashville 3, Tenn.)

25-29. American Assoc. of Cereal Chemists, Kansas City, Mo. (E. J. Bass, Intern. Milling Co., Inc., 1423 S. 4th St., Minneapolis, Minn. 55404)

25-29. American Soc. for Microbiology, annual, Atlantic City, N.J. (R. W. Sarber, ASM, 115 Huron View Blvd., Ann Arbor, Mich.)

25-29. International College of Surgeons, North American Federation, Las Vegas, Nev. (Secretariat, 1516 Lake Shore Dr., Chicago, Ill. 60610)

26-27. European Days of **Chemical Engineering**, Paris, France. (Societé de Chimie Industrielle, 28, rue St. Dominique, Paris 7)

26-27. Electroanesthesia, 2nd symp., Univ. of Tennessee, Knoxville. (C. E. Short, UT-AEC Agricultural Research Laboratory, 1299 Bethel Valley Rd., Oak Ridge, Tenn.)

26–27. Environmental Health Problems, 2nd AMA congr., Chicago, Ill. (Dept. of Environmental Health, AMA, 535 North Dearborn St., Chicago, Ill. 60610)

26-28. Error in Digital Computation, symp., Madison, Wis. (L. B. Rall, U.S. Army Mathematics Research Center, Univ. of Wisconsin, Madison 53706) 26-29. Aerospace Medical Assoc., 36th

26-29. Aerospace Medical Assoc., 36th annual, New York, N.Y. (Gen. J. M. Talbot, Headquarters USAF, AFMSPA, Washington, D.C. 20333)

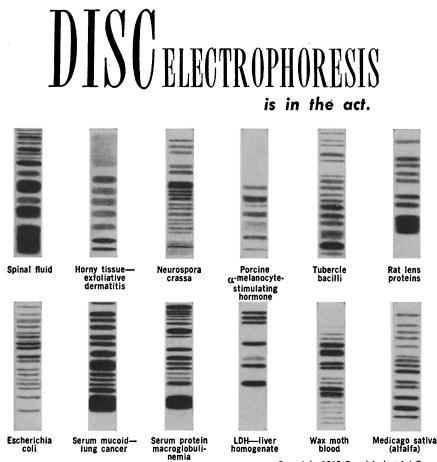
26-29. Mechanisms and Therapy of Cardiac Arrythmias, 14th Hahnemann symp., Philadelphia, Pa. (L. Dreifus, Dept. of Medicine, Hahnemann Medical College and Hospital, Philadelphia)

26-29. Society of **Economic Paleon**tologists and Mineralogists, New Orleans, La. (D. M. Curtis, Shell Oil Co., Box 127, Metairie, La.)

26-29. American Assoc. of **Petroleum Geologists**, 39th annual, New Orleans, La. (G. Atwater, 424 Whitney Bldg., New Orleans)

26-29. American Physical Soc., Wash-

Where the finest separation, analysis and purity evaluation of protein systems is being carried out ...



Copyright 1965 Canal Industrial Corp.

Now in use in more than 2000 laboratories, Disc Electrophoresis offers unequalled sensitivity (to 0.01 microgram), speed (separation in 10-30 minutes), simplicity and reproducibility. Disc Electrophoresis is applicable to almost every area of protein research and clinical investigation, improving over separations by other methods and giving new separations never before possible to an experimentation of the provided of the prov by any technique.

by any technique. In Disc Electrophoresis, migration of sample substances through specially prepared columns of polyacrylamide gel produces exceptionally sharp bands of isolated fractions, "stacked" in disc-like zones as little as tens of microns thick. A random sample of the recent literature reporting uses of Disc Electrophoresis includes: SOURCES: Amoebae, E. coli, flu virus, micobacteria, neurospora, polio virus, ribosomes, slime mould, staphylococci, tubercle bacilli; algae, cats, cattle, dogs, earthworms, fish, guinea pigs, hamsters, horses, humans, insects, lobsters, mice, pigs, plants, quail, rabbits, rats, sea urchins, sheep, snails, squid; tissue extracts of aorta, brain, horny tissue, kidney, lens, muscle, pancreas, parotid, pituitary, skin, thymus, thyroid; fluids such as axoplasm, blood, cerebrospinal fluid, milk, pancreatic juice, saliva, sperm, umbilical cord serum, urine and uterine fluid. SUBSTANCES SEPARATED: Proteins, including C-reactive proteins, glycoproteins, mucoproteins, nucleic acids, nucleo-proteins and thyroxin-binding proteins; hemoglobins and haptoglobins; globulins, histones, human and bovine growth hormones, ovine follicle stimulating hormone, human chorionic gonadotropin, enterotoxins, Hageman factor,  $\alpha$ -crystallin, collagen, diglyceride

human chorionic gonadotropin, enterotoxins, Hageman factor, α-crystallin, collagen, diglyceride and prolactin; amylase, aminopeptidase, phosphatases; β-galactosidase, carbonic anhydrase, carboxypeptidase, dehydrolipamide dehydrogenase, glycogen phosphyrylase, lipase, lactic and malic dehydrogenase, Phosphorylase, ribonuclease, sialidase, transaminase and transpeptidase. DIAGNOSIS OF: Acute schizophrenia, cancer of the breast and lung, glomerulonephritis, liver attackey lunus cuttomatic procession. pathology, lupus erythematosus, macroglobulinemia, milk allergy, myeloma, myocardial infarction, nephrosis, normal and abnormal pregnancy, pneumonia, primary tumor sites, rheumatic fever, sickle cell anemia, thalassemia, tuberculosis and uremic-hemolytic syndrome.

See how you can apply the benefits of Disc Electrophoresis to your own research. Send now for complete information, including bibliography, without cost or obligation. Write

ANALCO CANAL INDUSTRIAL CORPORATION 4935 Cordell Avenue Dept. E-3 Bethesda, Maryland / (301) 656-2333

Sales and Service Offices in • Boston • Houston • New York • Seattle • Chicago • Los Angeles • Pittsburgh • Washington, D. C. • Cincinnati • Memphis • St. Louis • Toronto • Cleveland • Minneapolis • San Francisco

ington, D.C. (K. K. Darrow, APS, Columbia Univ., New York 10027)

26-1. Geodetic Uses of Satellites, conf., Athens, Greece. (Intern. Organizations Staff, Bureau of Intern. Commerce, U.S. Department of Commerce, Washington,

D.C.) 28-30. Hypnosis and Psychosomatic Medicine, intern. congr., Paris, France. (H. C. Harding, 2050 NW Lovejoy, Portland 9, Ore.)

28-30. National Soc. for Prevention of Blindness, Houston, Tex. (J. W. Ferree, 16 E. 40 St., New York 10016)

28-1. Biometric Soc., eastern North America regional, Florida State Univ., Tallahassee. (E. L. LeClerg, 6804 40th Ave., University Park, Hyattsville, Md. 20782)

28-1. American College Health Assoc., Miami Beach, Fla. (R. E. Boynton, 5518 Merrick Dr., Coral Gables, Fla.)

29-30. Space Navigation and Communications, natl., Houston, Tex. (P. Schrock, Inst. of Navigation, 711 14th St. NW, Washington, D.C. 20005)

29-30. Association for Symbolic Logic, Chicago, Ill. (T. Hailperin, Dept. of Mathematics, Lehigh Univ., Bethlehem, Pa. 18015)

29-1. American Assoc. of Endodontists, Detroit, Mich. (E. C. Van Valey, 9 Rockefeller Plaza, New York 10020)
29-1. American Assoc. for History of

Medicine, Philadelphia, Pa. (J. B. Blake, Natl. Library of Medicine, 9600 Wisconsin Ave., Bethesda, Md.)

29-1. American Acad. of Neurology, annual, Cleveland, Ohio. (AAN, 7100 France Ave. S., Minneapolis, Minn. 55410) 29-1. Midwestern Psychological Assoc.,

27th annual, Chicago, Ill. (F. A. Mote, Psychology Bldg., Madison, Wis. 53706)

29-1. American Philosophical Assoc., western div., Chicago, Ill. (L. E. Hahn, Dept. of Philosophy, Southern Illinois Univ., Carbondale)

29-2. Protides of the Biological Fluids, 13th colloquium, Bruges, Belgium. (P.O.B. 71, Bruges 1)

29-2. Association of Clinical Scientists, New York, N.Y. (R. P. MacFate, ACS, 300 N. State St., Chicago, Ill. 60610)

29-2. Pan American Medical Assoc., 40th annual congr., Grand Bahama Island. (PAMA, 745 Fifth Ave., New York 10022)

29-2. Roentgen, 46th German congr., Nuremberg, Germany (A. Jakob, c/o Strahleninstitut der Städt, Krankenanstalten, Flurstr. 17, 85 Nuremberg)

30-1. Colorado-Wyoming Acad. of Science, annual, Univ. of Denver, Denver, Colo. (C. Norton, Dept. of Botany and Plant Pathology, Colorado State Univ., Fort Collins)

30-1. Indiana Acad. of Science, Culver. (C. F. Dineen, St. Mary's College, Notre Dame, Ind. 46556)

30-1. Nebraska Acad. of Sciences, Lin-coln. (C. B. Schultz, Morrill Hall 101, Univ. of Nebraska, 14th and U St., Lincoln 68508)

30-2. Society of Biological Psychiatry, New York, N.Y. (G. N. Thompson, 2010 Wilshire Blvd., Los Angeles, Calif.)

30-2. Academy of **Psychoanalysis**, annual, New York, N.Y. (A. H. Rifkin, 125 E. 65 St., New York 10021)