

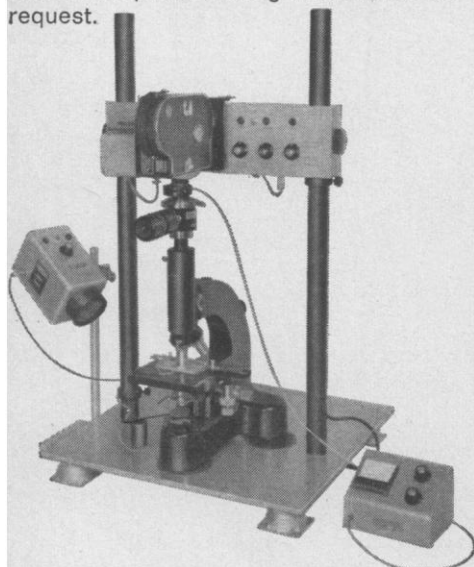
Still using still photos to study living materials?

Time Lapse And 'Normal Speed Motion Pictures Make A Living Record!

Time lapse and normal speed motion pictures record and permit detailed study of every happening... even when you're away from the microscope. Time lapse cinemicrography records the activity of slow-moving living materials, phenomena that would never be seen by an observer working with his eyes and still photos alone. Normal speed permits recording blood flow and other relatively fast moving phenomena.

Sage offers three complete systems at prices ranging from \$1,650. These are units designed to work with any microscope with a phototube. They produce sharp, clear pictures with maximum resolution. Systems feature camera, timing controls, viewing, vibration-isolation, temperature control (optional).

If your work is vital—study and record it with Sage cinemicrography apparatus. Complete catalog information on request.



SAGE INSTRUMENTS, INC.
Subsidiary of Orion Research Incorporated
230 Ferris Ave., White Plains, N.Y. 10603
914 949-4121

Circle No. 87 on Readers' Service Card

the relevant plant chemistry. The operation of the sensory systems involved is becoming increasingly clear as a result of electrophysiological studies. The stimuli that shape feeding are predominantly gustatory and olfactory. The best understood case is that of Cruciferae-feeders. New evidence indicates that marked modification of innate feeding behavior can be brought about by experience.

The chemoreceptors of insects which feed on specific host plants have been studied electrophysiologically by a number of workers (F. Hanson, University of Texas, Austin). As shown by Schoonhoven, some insects have receptors sensitive to phagostimulants which are secondary plant substances. However, no evidence of such was found in *Bombyx mori* by Ishikawa and co-workers; the receptors appear to be stimulated only by nutrients. Recent electrophysiological evidence indicates that the larvae of *Manduca sexta*, the tobacco hornworm, detects volatile secondary plant substances by way of antennal receptors, but may not require specific gustatory phagostimulants other than nutrients.

Antennae of the fruit-piercing moth, *Oraesia excavata*, gave very similar EAG responses to their food attractants and to their repellents (M. Yamada, Nagoya University). Single olfactory receptor cells of this species responded to both materials with an increase in impulse frequency. The single unit activity was extracellularly recorded from the brain of the American cockroach, *Periplaneta americana*. The crude extract of the sex attractant from the female elicited an electrical response from extremely specialized neurons in the brain of the male and female of this species. Many other odorous substances did not excite these neurons.

The papers presented at this seminar will be published early in 1969 by Academic Press, Inc. We recognize the criticism that such symposium volumes are often outdated by the time they are published. Therefore, we have elected to update these articles as of 1 July 1968.

DAVID L. WOOD

Department of Entomology and
Parasitology, University of
California, Berkeley

ROBERT M. SILVERSTEIN

Stanford Research Institute,
Menlo Park, California

MINORU NAKAJIMA

Faculty of Agriculture,
Kyoto University, Japan

Calendar of Events

May

2-3. **Laser**, 2nd conf., New York, N.Y. (L. Goldman, Laser Lab., Children's Hospital Research Foundation, Elland Ave. and Bethesda, Cincinnati, Ohio 45229)

2-3. **Soc. for Pediatric Research**, Atlantic City, N.J. (R. E. Greenberg, Dept. of Pediatrics, Stanford Medical Center, Stanford, Calif. 94305)

2-3. **American Assoc. of University Professors**, Minneapolis, Minn. (B. H. Davis, The Association, 1785 Massachusetts Ave, NW, Washington, D.C. 20036)

2-4. **Soc. of Biological Psychiatry**, Miami Beach, Fla. (G. N. Thompson, 2010 Wilshire Blvd. Los Angeles, Calif. 90057)

2-4. **Wisconsin Acad. of Sciences, Arts and Letters**, Whitewater, Wis. (W. Sarles, Dept. of Bacteriology, Univ. of Wisconsin, Madison 53706)

2-5. **American Psychoanalytic Assoc.**, Miami Beach, Fla. (H. Fisher, 1 E. 57 St., New York 10022)

3. **American Soc. for Clinical Nutrition**, Atlantic City, N.J. (A. B. Eisenstein, 818 S. Meramec Ave., St. Louis, Mo. 63105)

3. **American College of Psychiatrists**, Bal Harbour, Fla. (M. Sabshin, P.O. Box 6998, Chicago, Ill. 60680)

3-8. **American Ceramic Soc.**, 71st., Washington, D.C. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

4-5. **American Soc. for Clinical Investigation**, Atlantic City, N.J. (D. H. Nelson, Latter-Day Saints Hospital, Salt Lake City, Utah 84103)

4-6. **American Soc. for Adolescent Psychiatry**, Miami Beach, Fla. (H. D. Staples, 24 Green Valley Rd., Wallingford, Pa. 19086)

4-7. **American Inst. of Chemical Engineers**, 65th natl. mtg., Cleveland Ohio. (The Institute, 345 E. 47 St., New York 10017)

4-7. **American Mining Congr.**, Pittsburgh, Pa. (The Congress, 1100 Ring Building, Washington, D.C. 20036)

4-8. **American Soc. of Brewing Chemists**, Baltimore, Md. (Executive Secretary, The Society, 501 N. Walnut St., Madison, Wis.)

4-8. **Soc. of Plastics Engineers**, 27th, Chicago, Ill. (Director, Member Activities, The Society, 65 Prospect St., Stamford, Conn.)

4-9. **Electrochemical Soc.**, New York, N.Y. (The Society, 30 E. 42 St., New York 10017)

5. **Aerospace Dynamic Balancing**, 2nd symp., San Francisco, Calif. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

5-6. **Theory of Computing Symp.**, Marina del Ray, Calif. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

5-7. **Instrumentation Soc. of America, Aerospace Instrumentation Symp.**, Las Vegas, Nev. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

5-7. **American Gynecological Soc.**, New

Orleans, La. (D. J. Lund, Univ. of Rochester Medical Center, 260 Crittenden Blvd., Rochester, N.Y. 14620)

5-7. **Practical Applications of Radioisotopes to Industry**, Pullman, Wash. (R. M. Chatters, Washington State Univ., Pullman 99163)

5-8. **Society of Aeronautical Weight Engineers**, 28th, San Francisco, Calif. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

5-8. **Aerospace Medical Assoc.**, 40th, San Francisco, Calif. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

5-8. **Metal Powder Industrial Federation and American Powder Metallurgy**, Inst., 25th, New York, N.Y. (P. K. Johnson, Metal Powder Industries Federation, 201 E. 42 St., New York 10017)

5-8. **Radiation Biology of the Fetal and Juvenile Mammal Symp.**, Richland, Wash. (M. R. Sikov, Biology Dept., Battelle-Northwest, P.O. Box 999, Richland 99352)

5-9. **American Psychiatric Assoc.**, 125th, Bal Harbour, Fla. (Public Information Officer, 1700 18th St., NW, Washington, D.C. 20009)

6-7. **Conference on Waste Management and Disposal for the Food Processing Industry**, University Park, Pa. (J. O. Keller Conf. Center, Pennsylvania State Univ., University Park 16802)

6-8. **Frequency Control Symp.**, Atlantic City, N.J. (Director, Electronic Compo-

nents Lab., U.S. Army Electronics Command, Fort Monmouth, N.J. 07703)

6-8. **Industrial Waste Conf.**, Lafayette, Ind. (D. E. Bloodgood, Sanitary Engineering, Purdue Univ., Lafayette 47907)

6-8. **Microfilm Assoc.**, 18th natl., Boston, Mass. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

7-9. **American Assoc. of Genito-Urinary Surgeons**, Pebble Beach, Calif. (H. M. Spence, 4105 Live Oak St., Dallas, Tex. 75221)

7-10. **American Assoc. for Child Care in Hospitals**, Ann Arbor, Mich. (D. E. Lidgard, University Hospital, Univ. of Michigan Medical Center, Ann Arbor 48104)

7-10. **Association of University Radiologists**, San Francisco, Calif. (A. Gottschalk, 950 E. 59 St., Chicago, Ill. 60037)

8-10. **Breast Cancer**, natl. conf., Washington, D.C. (R. N. Grant, The Conference, 219 E. 42 St., New York 10017)

8-10. **American Assoc. for the History of Medicine**, Baltimore, Md. (C. W. Bodermer, Biomedical History Dept., Univ. of Washington Medical School, Seattle 98105)

8-9. **Military History**, 3rd symp., U.S. Air Force Academy, Colo. (Lt. Col. W. Geffen, Dept. of History, U.S. Air Force Academy, Colo. 80840)

9-10. **Arthritis Seminar**, Roanoke, Va. (R. H. Brumfield, Jr., P.O. Box 1531, Roanoke, 24007)

9-10. **American Natl. Red Cross**, 2nd

research symp., Washington, D.C. (G. A. Jamieson, American Natl. Red Cross, Washington, D.C. 20006)

11-14. **Fluid Controls Inst., Inc.**, Sea Island, Ga. (P.O. Box 1485, Pompano Beach, Fla. 33061)

11-15. **Institute of Food Technologists**, 29th, Chicago, Ill. (C. L. Willey, 221 N. Lasalle St., Chicago 60601)

12-14. **American Soc. for Gastrointestinal Endoscopy**, Washington, D.C. (V. M. Smith, 301 St. Paul Pl., Baltimore, Md. 21202)

12-14. **Workshop on Computer Stimulation of Microbial Processes**, Clemson, S.C. (Office of Industrial and Municipal Relations, College of Engineering, 109 Riggs Hall, Clemson 29631)

12-15. **Seminar on Physical and Chemical Properties of Woodpulp Fibers**, Appleton, Wis. (Technical Assoc. of the Pulp and Paper Industry, 360 Lexington Ave., New York, N.Y.)

12-15. **Mid-America Symp. on Spectroscopy**, 20th, Chicago, Ill. (Illinois Inst. of Technology Research Inst., 10 W. 35 St., Chicago, 60616)

12-15. **American Urological Assoc., Inc.**, San Francisco, Calif. (W. P. Didusch, 1120 N. Charles St., Baltimore, Md.)

12-16. **American Industrial Hygiene Conf.**, Denver, Colo. (The Association, 14125 Prevost, Detroit, Mich. 48227)

12-16. **Soc. of Photographic Scientists and Engineers**, Los Angeles, Calif. (The Society, 1330 Massachusetts Ave., NW, Washington, D.C. 20005)

For
Preparative
Electrophoresis
on Gels...

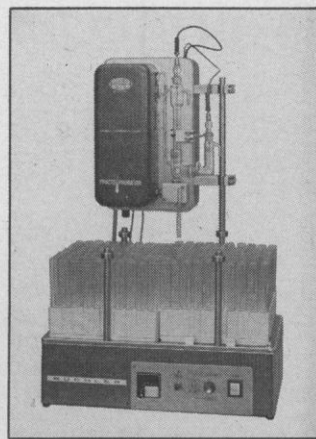
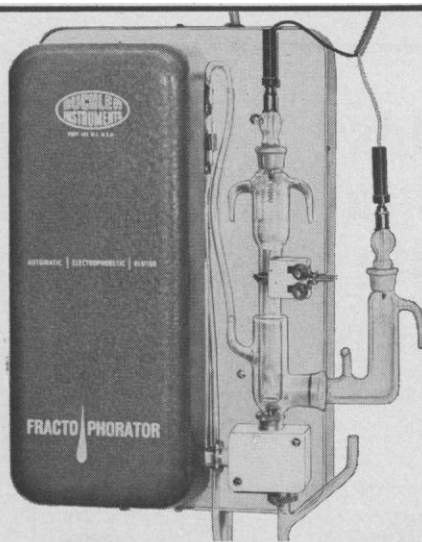
New Automatic
Electrophoretic Elutor

BUCHLER FRACTOPHORATOR™

Now You Can Use Almost Any Gel... Any Buffer... Any Fraction Collector!

The Fractophorator, for disc electrophoresis, is designed for the separation of proteins, hemoglobin, albumin, enzymes and other compounds, using polyacrylamide or any other supporting medium. It automatically elutes in pre-determined amounts of buffer solution, individual bands emerging from the electrophoretic column and delivers the fractions to a collector. The complete unit can be attached to any electrically driven fraction collector and is activated by the collector's timing system. Load capacity is from a few micrograms to 25 mgm in a 13mm diameter by 130mm long column. Price: \$570.00

For further information write for Technical Bulletin S3-1800



Fractophorator is shown with Buchler Fractometre 200 Fraction Collector.

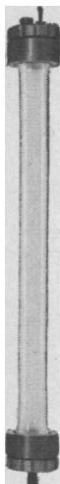


LABORATORY APPARATUS • PRECISION INSTRUMENTS
BUCHLER INSTRUMENTS, INC.
1327 16TH STREET, FORT LEE, NEW JERSEY 07024

Circle No. 58 on Readers' Service Card

Now in bead form for chromatography of biologic substances...

Sephadex

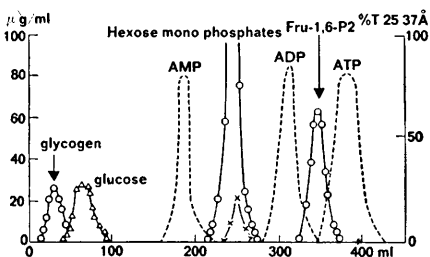


Ion Exchangers

Because of its advantages—stability and inertness—Sephadex has been used to produce a new class of ion exchangers: DEAE-, CM- and SE-Sephadex. Since their introduction they have been used extensively, particularly in the biochemical and clinical field.

In the new bead form they will be more useful both for laboratory and manufacturing scale processes. Their spherical shape gives increased mechanical strength and leads to easier column packing. More uniform particles result in improved hydrodynamic properties.

All Sephadex Ion Exchangers have a high capacity and low nonspecific adsorption. They are available in two types that differ in porosity, thus offering flexibility for your specific requirements. Sephadex Ion Exchangers are of analytic grade purity and are produced under rigorous quality control, thus ensuring uniform products to give accurate and reproducible results.



Model experiment with glycogen, glucose, sugar phosphates and adenosine phosphates on a column of DEAE-Sephadex A-25.

(From Biochim. Biophys. Acta 74 (1963) 588, by permission of the author)

Anion Exchangers (Bead Form)

Type	Grade	Ionic Form	Capacity (meq/g)	Bed Volume ¹ (ml/g)
DEAE-Sephadex A-25	40-120 μ	Cl ⁻	3.5 \pm 0.5	5-9
DEAE-Sephadex A-50	40-120 μ	Cl ⁻	3.5 \pm 0.5	25-33

Cation Exchangers (Bead Form)

Type	Grade	Ionic Form	Capacity (meq/g)	Bed Volume ¹ (ml/g)
CM-Sephadex C-25	40-120 μ	Na ⁺	4.5 \pm 0.5	6-10
CM-Sephadex C-50	40-120 μ	Na ⁺	4.5 \pm 0.5	32-40
SE-Sephadex C-25	40-120 μ	Na ⁺	2.3 \pm 0.3	5-9
SE-Sephadex C-50	40-120 μ	Na ⁺	2.3 \pm 0.3	30-38

1. In Tris-HCl buffer, pH = 8.3, ionic strength = 0.05.

2. In sodium phosphate buffer, pH = 6, ionic strength = 0.06.

For additional technical information, including booklet on Sephadex Ion Exchangers, write to:



PHARMACIA FINE CHEMICALS INC.
800 Centennial Avenue, Piscataway, N. J. 08854
Pharmacia (Canada) Ltd., 110 Place Cr  m  zie,
Suite 412, Montreal 11, P. Q.

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

Circle No. 88 on Readers' Service Card

12-17. American Assoc. on Mental Deficiency, San Francisco, Calif. (J. J. Noone, 5201 Connecticut Ave., NW, Washington, D.C. 20015)

13-16. Society for Experimental Stress Analysis, Philadelphia, Pa. (P. Monchamp, 21 Bridge Sq., Westport, Conn. 06880)

14-16. Spring Joint Computer Conf., Boston, Mass. (A. Levine, 105 Newbury St., Boston 02116)

14-16. American Helicopter Soc., 25th, natl. forum, Washington, D.C. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

14-17. American Gastroenterological Assoc., Washington, D.C. (D. Cayer, 2240 Cloverdale Ave., Winston-Salem, N.C. 27103)

14-17. Society of Technical Writers and Publishers, 16th, Washington, D.C. (C. T. Youngblood, Suite 421, 1010 Vermont Ave., NW, Washington, D.C. 20005)

15-16. Southern Textile Research Conf., Hilton Head Island, S.C. (G. F. Walz, Proximity Print Works, Greensboro, N.C. 27405)

16. Symp. on Oil Pollution of the Sea, Cambridge, Mass. (J. A. Fay, Room 30246, Massachusetts Inst. of Technology, Cambridge 02139)

16-17. Nature and Function of Peroxisomes, New York, N.Y. (J. F. Hoff, Dept. of Chemistry, Queens College, Flushing, N.Y. 11367)

18-19. Council of Biology Editors, Cambridge, Mass. (R. E. Gordon, Dean's Office, College of Science, Univ. of Notre Dame, Notre Dame, Ind. 46556)

18-21. Institute of Electronic and Electrical Engineers Power Industry Computer Applications Conf., Denver, Colo. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

18-21. Radiation Research Soc., 17th, Cincinnati, Ohio. (F. Smith, Biology Dept. American Univ., Washington, D.C. 20016)

18-21. American Thoracic Soc., Miami Beach, Fla. (Executive Secretary, 1790 Broadway, New York 10019)

18-22. National Tuberculosis Assoc., 65th, Miami Beach, Fla. (J. E. Perkins, 1790 Broadway, New York 10019)

18-23. Conf. on Mass Spectrometry and Applied Topics, 17th, Dallas, Tex. (J. M. McCrea, c/o Applied Research Lab., U.S. Steel Corp., Monroeville, Pa. 15146)

19-20. Rolamite Technology Seminar, Chicago, Ill. (J. Weidman, III, Director of Public Relations, Hamilton Watch Co., Lancaster, Pa. 17604)

19-21. Aerospace Electronics Conf., Dayton, Ohio. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

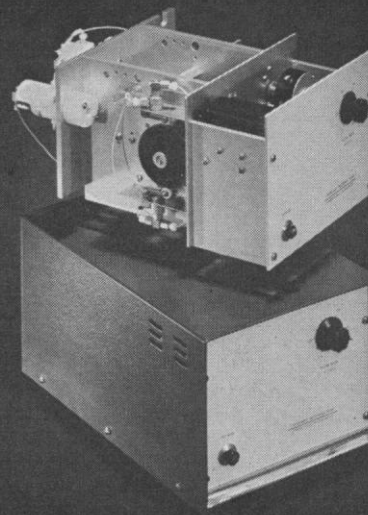
19-21. Interdisciplinary Conf., 1st, Houston, Tex. (M. A. Wright, Humble Oil and Refining Company, Box 2180, Houston 77001)

19-21. New Dimensions in Legal and Ethical Concepts for Human Research, New York, N.Y. (I. Ladimer, Mt. Sinai Medical School, Fifth Ave. and 100 St., New York 10029)

19-23. Western Anesthesiology Conf., Salt Lake City, Utah. (J. Stringham, 11 S. 5th E., Salt Lake City 84106)

19-30. Selected Applications of Computers in Engineering, Ann Arbor, Mich.

Most precise
metering
pump you can
buy—.02%!



This field-proven chemically-inert pump sets pulse-free flows repeatable to .02% at pressures to 500 psi. Two cam-actuated pistons driven through a gear shift by a synchronous motor produce a smooth, constant flow, independent of liquid pressure and viscosity.

Flow rates of 2.4, 6, 12, 24, 60 and 120 ml/hour or 12, 30, 60, 120, 300 and 600 ml/hour are selected by front-panel gear shift with an absolute accuracy of 0.2%. When you set "60 ML/HOUR," you get 60 ml/hour \pm 0.2%. And the rate you get is repeatable from day to day to within 0.02%.

You can pump nearly any liquid—however reactive—because only Teflon, Kel-F and borosilicate glass touch the stream. No rubber "O" rings or steel parts contact the liquid.

The pulse-free high-pressure model has a unique feature, a third pre-pressuring piston that prevents flow transients when the valves switch from one drive cylinder to the other.

Cost is \$980 to \$1480, depending on maximum flow and pressure ratings.



CHROMATRONIX

Chromatronix, Incorporated, 2743 Eighth St., Berkeley, Calif. 94710. Phone (415) 841-7221

Circle No. 86 on Readers' Service Card

(Engineering Summer Conf., Univ. of Michigan, Chrysler Center, Dept. 58, Ann Arbor 48105)

19-30. **Numerical Methods, Optimization Techniques, and Process Simulation for Engineers**, Ann Arbor, Mich. (Engineers Summer Conf., Univ. of Michigan, Chrysler Center, Dept. 58, Ann Arbor 48105)

20. Association for the Advancement of **Psychoanalysis**, New York, N.Y. (M. Lee, Public Relations Committee, The Association, 329 E. 62 St., New York 10021)

21-23. Symp. on **Electron, Ion, and Laser Beam Technology**, Gaithersburg, Md. (L. Marton, Natl. Bureau of Standards, Washington, D.C. 20234)

21-24. **Acute Medicine**, 3rd symp., Pittsburgh, Pa. (Postgraduate Medical Program, Univ. of Pittsburgh, 1188 Scaife Hall, Pittsburgh 15213)

22-23. IEEE Workshop on **Applied Magnetics**, Washington, D.C. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

22-23. **Diseases in Nature Transmissible to Man**, 19th southwestern conf., San Antonio, Tex. (S. S. Kalter, P.O. Box 2296, San Antonio 78206)

24-26. National **Tuberculosis and Respiratory Disease Assoc.**, Miami Beach, Fla. (J. E. Perkins, The Association, 1740 Broadway, New York 10019)

25-27. **Drug Information Assoc.**, Detroit, Mich. (J. J. Harris, Public and Professional Relations Committee, c/o Schering Labs, 1011 Morris Ave., Union, N.J. 07083)

25-29. National Conf. on **Social Welfare**, 96th, New York, N.Y. (B. B. Shepherd, The Conference, 22 West Gay St., Columbus, Ohio 43215)

26-27. **Rheumatoid Factors**, New York, N.Y. (H. Bartfeld, St. Vincent's Hospital, 153 W. 11 St., New York 10011)

26-28. Symp. on Advances in Instrumentation for **Air Pollution Control**, Cincinnati, Ohio. (A. P. Altshuler, Natl. Air Pollution Control Administration, 5710 Wooster Pike, Cincinnati 45227)

26-28. IEEE Conf. on **Laser Engineering and Applications**, Washington, D.C. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

26-28. Advanced **Marine Vehicle and Propulsion Mtg.**, Seattle, Wash. (Technical Mtgs. Information Service, 79 Drumlin Rd., Newton Centre, Mass. 02159)

26-28. American **Ophthalmological Soc.**, Hot Springs, Va. (S. D. McPherson, Jr., 1110 W. Main St., Durham, N.C. 27701)

29-1. Congress on Medical and Related Aspects of **Motor Vehicle Accidents**, New York, N.Y. (Secretariat, Internatl. Assoc. for Accident and Traffic Medicine, 520 First Ave., New York 10016)

International and Foreign Meetings

May

11-18. International Exhibition on **Diagnostics**, Munich, Germany. (Munchener Messe-und Ausstellungs-Gesellschaft MBH, Theresienhohe 13, 8 Munich 12)

15-18. International **Revolving-Shutter Products Fair**, Stuttgart, Germany. (Stutt-

11 APRIL 1969

LOURDES



BETA-FUGE™ SAYS

"YES"

TO EVERYTHING YOU EXPECT

CAPACITIES TO 4,000 ml ☆ FORCES TO 41,300 x G

SPEED. CAPACITY. VOLUME. FORCE. AUTOMATION. CONVENIENCE. For Batch and Continuous Flow procedures from -20°C to $+40^{\circ}\text{C}$, the Lourdes Beta-Fuge Model A-2 offers unparalleled work/economy potential. Seventeen meticulously engineered features make the A-2 your finest centrifuge investment . . . by far. Full factory services. For more details, see Guide to Scientific Instruments. For full information, ask your dealer or write.

LOURDES INSTRUMENT CORPORATION
OLD BETHPAGE, L. I., NEW YORK 11804 516-694-8686

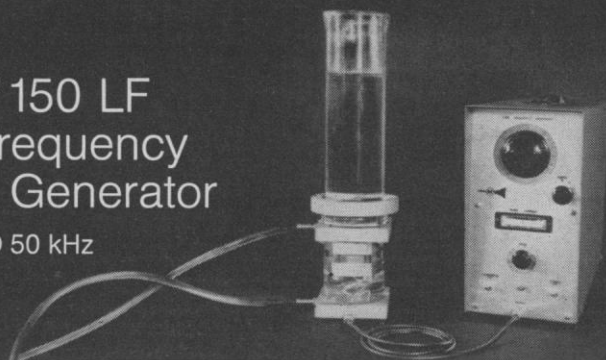


Circle No. 27 on Readers' Service Card

New...

Multisons® 150 LF Variable Frequency Ultrasonic Generator

RANGE . . . 10 TO 50 kHz



Shown driving a 25 kHz oil cooled irradiation cell, other frequencies available

SPECIFICATIONS

Nominal Frequency Range: 10 to 50 kHz.
Line Input: 460 watts.
Generator RF Output: 125 to 150 watts.
Output Impedance: between 200 and 450Ω.
Continuous variable frequency control.
Continuous variable output control.
Line Power Requirements: 110-120 volts, 60 cycles.
Generator Size: 12"H x 6 3/4"W x 19"D.
Generator Weight: 38 lbs.

APPLICATIONS

Cell destruction
Cell extraction
Emulsification of multiphase liquid systems
Cleaning
Sonochemical reactions
Particle dispersion and agglomeration
This new 150 LF Generator fills a growing need for an inexpensive driver which provides a choice of irradiating frequencies in the sonic and lower end of the ultrasonic spectrum. Write for Bulletin 109 which provides complete data on equipment and applications.

Price \$900.



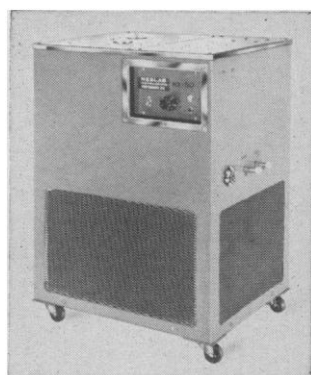
PIONEERS IN APPLIED SONICS AND ULTRASONICS

MACROSONICS CORPORATION

880-884 Elston St. • Rahway, N.J. 07065

FRENCH REPRESENTATIVE: Societe Luziesa, 70 Rue J.P. Timbaud, 75 Paris XI
Tel: 023.48.22

Circle No. 81 on Readers' Service Card



WHY WASTE 3,839,800* gallons of water yearly?

HX-50
Capacity: 1.4 KVA
Flow: 8 gpm (max)
Pressure: 20 psi max
Temp. Control: ± 0.3°C

If you use tap water to cool EPR and NMR magnets, electrophoresis units or other heat producing equipment, you can waste almost 4 million gallons of water a year! You can also suffer from temperature and pressure instability, clogged filters, water shut off and other problems.

A Neslab HX series Refrigerated Recirculating Heat Exchanger will operate with less effort and considerable increase in the reproducibility of results. It saves plenty of water, too . . . a mighty important consideration in this era of water shortages.

We offer several models with cooling capacities from 1.4 to 10 KVA and a variety of output pressures and temperature controls. Priced from \$900.

*Based on 8 gpm 24 hr. operation

NESLAB
Instruments, Inc.



Temperature Controlled
Liquid Systems

871 Islington St., Portsmouth, N.H. 03801

Circle No. 95 on Readers' Service Card

garter Ausstellungs GMBH, Postfach 990, 700 Stuttgart 1)

26-30. **Spectroscopy**, 15th intern. colloquium, Madrid, Spain. (Secretary, XV Colloquium Spectroscopium Internationale, Serrano 119, Madrid 6)

27-31. International Assoc. of **Thalassotherapy**, 14th, Eforie Nord, Roumania. (Prof. Biculescu, Strada Transilvaniei 47, Bucharest, Roumania)

27-1. German Congr. for **Medical Continuation Studies**, 18th, Berlin. (Kongressgesellschaft für Artliche Fortbildung, Klingsortstr. 21, Berlin 41)

28-7. **Pro Aqua** Congr., 4th, Basel, Switzerland. (O. Jaag, % Secretariat Pro Aqua, Basel 21)

29-3. International Assoc. for **Accident and Traffic Medicine**, 3rd, New York, N.Y. (M. Helpert, % Office of Chief Medical Examiner, 520 First Ave., New York 10016)

29-19. General Assembly of Pan-American Inst. of **Geography and History**, Washington, D.C. (C. A. Forray Rojas, Ex-Arzobispado 29, Mexico, D.F. Mexico)

June

1-12. Symposium on **Non-Destructive Testing of Concrete and Timber**, London, England. (Institution of Civil Engineers, Great George St., London, S.W.1)

2-6. International Symp. on **Yeasts**, Delft and The Hague, Netherlands. (L. Rodrigues de Miranda, Organizing Committee, Julianalaan 67A, Delft)

3-13. International Conf. on **Arid Lands in a Changing World**, Tucson, Ariz. (International Arid Lands Conf., % Dept. of Geochronology, Univ. of Arizona, Tucson 85721)

4-6. **Automated Analysis**, intern. congr., Chicago, Ill. (J. E. Golin, Technicon Corp., Ardsley, N.Y. 10502)

4-7. Union of **Textile Chemists and Colorists**, 21st congr., Baden-Baden, Germany. (The Union, Rohsbacherstr. 78, Heidelberg, Germany)

5. European Federation of International College of **Surgeons**, London, England. (F. P. Fitzgerald, 129 Harley St., London, W.1)

5-7. **Mineralogical** Assoc. of Canada, Montreal, P.Q. (J. Beland, Dept. of Geology, Univ. of Montreal, Montreal)

5-11. **Forensic Sciences**, 5th intern., Toronto, Ont., Canada. (L. Ball, Center of Forensic Sciences, Dept. of Attorney General, 8 Jarvis Street, Toronto 2)

6-9. Canadian **Pediatric Soc.**, Montreal, P.Q. (J. H. V., Marchessault, 14 Green Ave., St. Lambert, Quebec City, P.Q.)

8-14. Canadian **Medical Assoc.**, 102nd, Toronto, Ont., Canada. (The Association, 170 St. George Street, Toronto, Canada)

9-11. International **Communications** Conf., Boulder, Colo. (M. Nesenbergs, Environmental Science Services Administration, Inst. for Telecommunication Sciences, R614, Boulder 80302)

9-12. International **Food** Congr. and Exhibition, 7th, Madrid, Spain. (L. Naranon, % Federacion Nacional de Almacenistas de Alimentacion, Paseo del Prado 18-20, Planta 11, Madrid)

9-13. **Clean Air** Congr. and Exhibition, Dusseldorf, Germany. (V. Deutscher, Postfach 1139, 4 Dusseldorf 1)