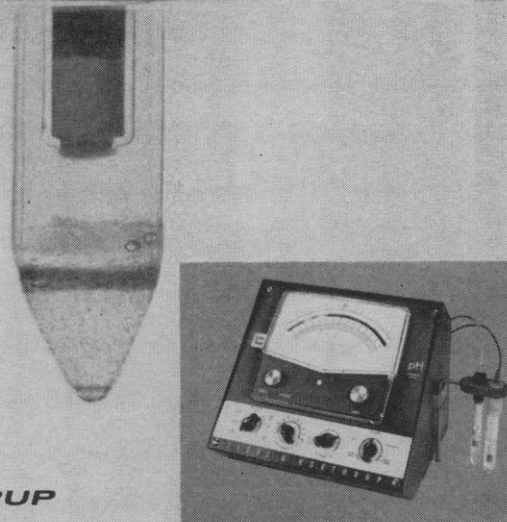


NOW L&N pH METERS ARE AS CLOSE AS YOUR LAB SUPPLY DEALER

L&N pH Meters for laboratory use are now sold exclusively through a nationwide network of franchised dealers. With these expanded facilities, L&N pH Meters—and electrodes, parts and supplies as well—are stocked near you for easy, prompt delivery. Furthermore these dealers—with more than 100 convenient outlets—stand ready to assist you in your pH applications and to provide authorized factory service for this equipment. Need names? Write us at 4926 Stenton Avenue, Philadelphia 44, Pennsylvania for the complete list of dealers.



LEEDS & NORTHRUP
Pioneers in Precision



TYPE ANY SYMBOL perfectly in 4 seconds

Gentlemen:
TYPIT® is the perfect way to type any technical, foreign or numerical symbol—easy as A. Over 1,000 symbols like $\sqrt{-1}$, π , Ω , \square , Δ , Σ , \approx to choose from. A standard typewriter + TYPIT® is all you need. Clean, inexpensive and fast.

...with your typewriter and
new
typit®

The new, clean and inexpensive way to make reports letter-perfect every time—no matter what the letters! Send for a new catalog of more than 1,000 available symbols.

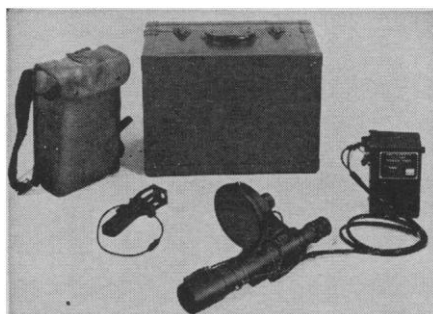
typit® manufactured by
mechanical enterprises, Inc.

3127 Colvin St., Alexandria, Va., Dept. SN

☐ Please send free catalog.

☐ Give me a demonstration soon at no obligation.

Name _____ Title _____
Company _____
Address _____
City _____ State _____



LIMITED RELEASE—U.S. GOVT. SURPLUS

SNIPSCOPE INFRARED SET (M-3)

for scientists, gun collectors, naturalists

Built in 1950 and 1951 by American Optical Co. in excellent working condition. Used by our troops for observing enemy in total darkness without being detected. Suggested uses: medical research, study of nocturnal animal life, mineralogy, industrial and medical research, crime detection. Rare item for gun collectors. Telescope is 16 3/4" long; clear aperture of lens is 50.4mm. A 5"-diameter filter is attached. Knob adjusts focus electrostatically; second knob adjusts reticle intensity. Reticle also has vertical and horizontal adjustments. Canvas carrying case and shoulder strap included. Complete unit includes 11" x 14" x 16" chest, telescope with RCA 6032 image tube, 20,000V power pack with canvas carrying case and shoulder straps, IR light source, steel carbine bracket, pistol-grip handle with switch control. Formerly highly classified. Limited supply. Orig. Govt. cost, \$800. Shipping wt., approx. 30 lbs. **Price \$249.50**



SNIPSCOPE BATTERY

Rechargeable 6V power source for sniperscope. Excellent for many other 6V applications. Approx. shipping wt., 15 lbs. **\$9.95. Two for \$18.00**

Prices F.O.B. Tucson, Ariz. No C.O.D.'s, please.

C & H SALES CO.

P. O. Box 1572

Tucson, Ariz.

translators (Russian and English were the official languages) suggest that the proceedings will also be published without too much delay. A 13-hour boat trip down the Volga and a 4½-hour evening entertainment were also provided. The length of these entertainments were well matched to the length of the physics sessions.

GEORGE SNOW

Department of Physics and Astronomy,
University of Maryland, College Park

Forthcoming Events

November

12-14. **Paleomagnetism**, 2nd U.S.-Japan seminar, U.S.-Japan Cooperative Science Program, Univ. of California, Berkeley. (J. Verhoogen, Dept. of Geology and Geophysics, Univ. of California, Berkeley)

13-15. **American Inst. of Professional Geologists**, 1st annual, Denver, Colo. (AIPG, W. A. Newton, Public Information Committee, P.O. Box 836, Golden, Colo. 80402)

13-15. **Clinical Scientists Assoc.**, annual, Washington, D.C. (ACS, F. W. Sunderman, Jr., Univ. of Florida, College of Medicine, Gainesville 32603)

14-19. **American Acad. of Ophthalmology and Otolaryngology**, Chicago, Ill. (W. L. Benedict, 15 Second St., SW, Rochester, Minn. 55901)

14-21. **Pan American Medical Women's Alliance**, 9th congr., Los Angeles, Calif. (E. M. Hohl, 1234 N. Vermont Ave., Hollywood, Calif.)

15-17. **Water in the Arid Zones** of the Old World, symp., Halle an der Saale, East Germany. (Deutsche Akademie der Naturforscher Leopoldina, August-Bebel Str. 50 a, Halle an der Saale)

15-19. **American Soc. of Agronomy**, Crop Science Soc. of America, Soil Science Soc. of America, annual, Kansas City, Mo. (L. A. Richards, Amer. Soc. of Agronomy, 677 S. Segoe, Madison, Wis.)

15-19. **Society of Exploration Geophysicists**, Los Angeles, Calif. (C. G. Ferris, E. V. McCollum & Co., 515 Thompson Bldg., Tulsa, Okla.)

16. **Ammonia Metabolism**, symp., Brooklyn, N.Y. (D. M. Kirschenbaum, Dept. of Biochemistry, State Univ. of New York, Downstate Medical Center, 450 Clarkson Ave., Brooklyn 3)

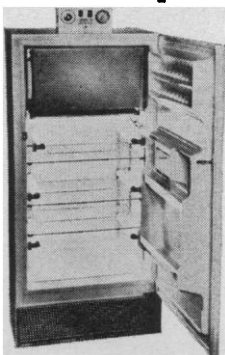
16-17. **Basic Sciences**, 3rd annual conf., New York, N.Y. (A. Gelbart, Yeshiva Univ., Amsterdam Ave. and 186th St., New York)

16-19. **Gulf and Caribbean Fisheries Inst.**, conf., Ocho Rios, Jamaica. (Executive Secretary, Gulf and Caribbean Fisheries Inst., 1 Rickenbacker Causeway, Miami, Fla. 33149)

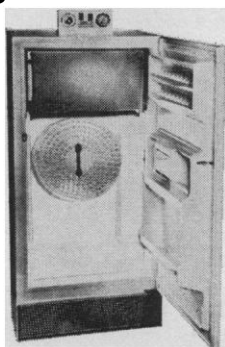
16-19. **Magnetism and Magnetic Materials**, Minneapolis, Minn. (J. B. Goodenough, Lincoln Laboratory C182, Lexington, Mass. 02173)

16-20. **Interagency Chemical Rocket Propulsion Group**, Mechanical Behavior Working Group, 3rd annual, Redstone Arsenal, Ala. (T. H. Duerr, AMSMI-RKP, Redstone Arsenal, Ala. 35809)

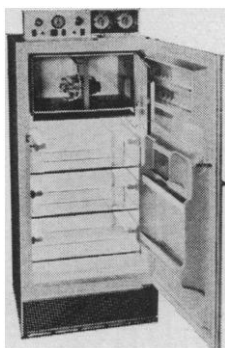
with illumination for photosynthesis



with revolving drum for tissue culture



with automatic cycling for diurnal simulation



New Treas Low Temperature Incubators

What are you seeking in a low temperature incubator? Need a good basic unit for complement fixation tests, serum studies or enzyme tests? Perhaps you require illumination for photosynthesis, or do you need automatic simulation of diurnal conditions? How about a revolving drum for tissue culture work? Whatever your needs, we think we can meet them. Choose from four standard models, plus our new Safety Refrigerator, or let Precision Engineers tackle your problem and see what they can do. In any case, you get precise control of temperatures 5° to 50°C, temperature uniformity to $\pm 0.6^\circ\text{C}$, large work chamber, externally mounted controls, and a lot of other quality features. Think we can help you? Consult your Precision Distributor or write us for complete information.

Since 1920 • The finest in Quality Laboratory Apparatus



**PRECISION
SCIENTIFIC CO.**

3737 W. Cortland Street, Chicago, Illinois 60647
Local Offices: New York • Chicago • Los Angeles

16-20. Soil Science Soc. of America, annual, Kansas City, Mo. (W. E. Jeske, 7515 N.E. Ankeny Rd., Ankeny, Iowa)

17-18. Allied Air Force Medical Conf., 10th annual, Fontainebleau, France. (Officier Administratif, Division Médicale d'Aircent, Camp Guynemer, Fontainebleau)

18-20. Navy Research and Development, Philadelphia, Pa. (clearance). (H. G. Sparks, Moore School of Electrical Engineering, Univ. of Pennsylvania, Philadelphia 19104)

18-20. Northeastern States Navy Research and Development Clinic, Philadelphia, Pa. (N. R. Droulard, Franklin Inst. Laboratories, 20th and Parkway, Philadelphia 19103)

18-21. Neurological Surgeons, 14th congr., Bal Harbour, Fla. (J. R. Russell, 1815 N. Capitol Ave., Indianapolis, Ind.)

19-21. Geological Soc. of America, Miami Beach, Fla. (J. W. Peoples, 10 Wesleyan Place, Middletown, Conn.)

19-21. Paleontological Soc., Miami Beach, Fla. (R. L. Langenheim, Jr., Dept. of Geology, Univ. of Illinois, Urbana)

19-21. National Council of Teachers of Mathematics, Atlanta, Ga. (J. D. Gates, 1201 16th St., NW, Washington, D.C.)

19-22. American Anthropological Assoc., 63rd annual, Detroit, Mich. (E. R. Service, Dept. of Anthropology, Univ. of Michigan, Ann Arbor)

21-22. American Geological Inst., Miami Beach, Fla. (L. Hoover, 1444 N St., NW, Washington, D.C. 20005)

21-24. American Speech and Hearing Assoc., San Francisco, Calif. (K. O. Johnson, 1001 Connecticut Ave., NW, Washington, D.C.)

23-24. Water for Texas, 9th annual, Texas A&M Univ., College Station. (E. T. Smerdon, Water Resources Inst., Texas A&M Univ., College Station)

23-25. American Physical Soc., Fluid Dynamics Div., Pasadena, Calif. (R. J. Emrich, Dept. of Physics, Lehigh Univ., Bethlehem, Pa.)

23-27. Dosimetry of Irradiations from External Sources, intern. symp., Health Physics Soc., French section, Paris, France. (M. Gras, 5, rue Armand, Gauthier, Paris 18°)

23-27. Use of Radioisotopes in Animal Nutrition and Physiology, symp., Intern. Atomic Energy Agency, Food and Agriculture Organization of the UN, Prague, Czechoslovakia. (Symp. Secretariat, Kärntnering 11, Vienna 1, Austria)

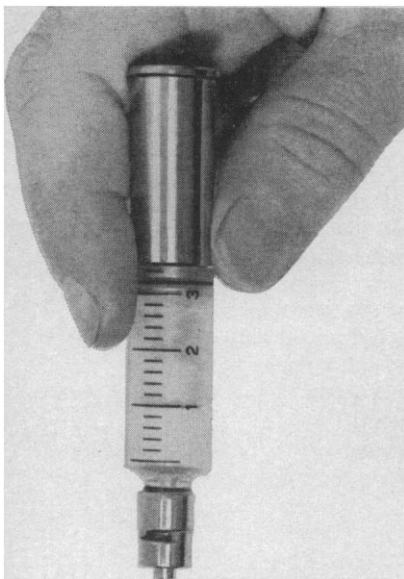
23-28. Internal Medicine, 8th intern. congr., Buenos Aires, Argentina. (Secretariat, Melo 2081, Buenos Aires)

24. Manufacturing Chemists' Assoc., 14th conf., New York, N.Y. (Manufacturing Chemists' Assoc., 1825 Connecticut Ave., NW, Washington, D.C.)

26-28. Central Assoc. of Science and Mathematics Teachers, 64th annual, Detroit, Mich. (Sister Mary Ambrosia, Gesu Convent, 17180 Oak Drive, Detroit 48221)

27-28. National Council for Geographic Education, Minneapolis, Minn. (L. Kenamer, Univ. of Texas, Austin)

29-1. Applications of Fundamental Thermodynamics to Metallurgical Processes, conf., Pittsburgh, Pa. (G. R. Fitterer, Engineering Research Div., Schools of Engineering and Mines, 405 Engineering Hall, Univ. of Pittsburgh, Pittsburgh)



self-contained Infusion pump

Sage Micro-Flow Pumps* Permit:

- ☐ Long term chemotherapy of ambulatory patients
- ☐ Drug Experiments with Unrestrained animals

Sage Micro-Flow Pumps break the shackles usually imposed by long-term chemotherapy. These miniature, self-contained, battery operated units provide continuous infusion of drugs or chemicals at various predetermined rates from 1 ml/½ hr. to 1 ml/24 hr. Flow rate is constant, linear and reproducible. This self-actuated syringe can be securely taped to subject's body...thereby allowing continuous infusion for periods up to 10 days—with little restriction of normal physical activity.

The pump operates by electrolysis, controlled by any of five interchangeable flow-rate setters. A uniformly generated gas drives the syringe piston at a selectable speed. Special features include an automatic cut-off (at the end of a run) and a constant current regulator which insures reproducibility of flow rate. All Sage Micro-Flow pumps are supplied complete with battery, electrolyte, and five permanently reusable rate setters. 5 different models: 1, 2½, and 10 ml capacities—from \$65.00.

*PAT. PENDING

Your Sage lab-ware dealer will be pleased to demonstrate this exciting new unit. For complete technical data write:

SAGE INSTRUMENTS, INC.
2 Spring Street, White Plains, N. Y. 10601
914 WH 9-4121

29-1. Association for Research in **Ophthalmology**, Minneapolis, Minn. (H. Kaufman, J. Hillis Miller Health Center, Univ. of Florida, Gainesville)

29-4. American Soc. **Mechanical Engineers**, annual, New York, N.Y. (D. J. Sengstaken, ASME Nuclear Engineering Div., Long Island Lighting Co., 175 Old Country Rd., Hicksville, L.I., N.Y.)

29-4. **Radiological Soc. of North America**, Chicago, Ill. (M. D. Frazer, 1744 S. 58 St., Lincoln, Neb.)

30. **Food and Drug Administration and Law Inst.**, 8th annual conf., Washington, D.C. (S. T. Grey, Bureau of Education and Voluntary Compliance, FDA, Washington 25, D.C.)

30-1. **Mechanisms of Dental Caries**, New York Acad. of Sciences, New York, N.Y. (J. F. Fredrick, New York Research Laboratories, 3425 Boston Post Rd., Bronx, N.Y. 10469)

30-2. New Horizons in **Solid State Electronics**, seminar, Rochester, N.Y. (A. DeWinter, Rochester Inst. of Technology, Extended Services Division, Rochester 8)

30-2. **Pacific Air Force Medical conf.**, Fuchu Air Station, Tokyo, Japan. (Lt. Col. R. J. Carter, 14th PACAF Medical Conf., USAF Hospital Tachikawa, APO 323, San Francisco, Calif.)

30-2. **Thalamic Regulation of Sensorimotor Activities**, symp., New York, N.Y. (M. D. Yahr, New York Neurological Inst., 710 W. 168 St., New York 10032)

30-3. **Atomic Industrial Forum**, annual, San Francisco, Calif. (Atomic Industrial Forum, 850 Third Ave., New York, N.Y.)

30-3. **Entomological Soc. of America**, annual, Philadelphia, Pa. (ES, 4603 Calvert Rd., College Park, Md.)

30-3. **American Nuclear Soc.**, winter meeting, San Francisco, Calif. (W. H. Nutting, Pacific Gas and Electric Co., 245 Market St., San Francisco)

December

1. **Food Standards**, symp., Washington, D.C. (Food Law Inst., Inc., 205 E. 42 St., New York 10017)

1. **New Polyolefin Copolymer Plastics**, regional technical conf., Philadelphia, Pa. (E. A. Jeffreys, Registration Chairman, c/o Allied Chemical Corp., 901 Catalapa Rd., Warminster, Pa.)

2-4. **Communication Wires and Cables**, 13th annual symp., Atlantic City, N.J. (J. Spergel, WCS, U.S. Army Electronics R&D Laboratories, Fort Monmouth, N.J. 07703, Attn: SELRA/PEE)

2-5. **Crystalline Lens**, symp., Minneapolis, Minn. (J. E. Harris, Dept. of Ophthalmology, Univ. of Minnesota Medical School, Minneapolis 55455)

3-5. **American Chemical Soc.**, 20th annual southwestern regional meeting, Shreveport, La. (ACS, 1155 16th St, NW, Washington, D.C. 20036)

3-5. **Sociological Questions Pertaining to the Medical Field**, East German Hygiene Soc., symp., Berlin, East Germany. (German Acad. of Sciences, Mohrenstrasse 39, Berlin W.8.)

3-5. **Texas Acad. of Science**, annual, Dallas. (S. O. Brown, Texas A&M Univ., Box 33, College Station)

4. **Central States Society of Industrial**

THERMOLYNE LABORATORY APPARATUS

"Lab accepted standard of quality"

SCIENTIFICALLY ENGINEERED
CAREFULLY MANUFACTURED
PROPERLY PRICED

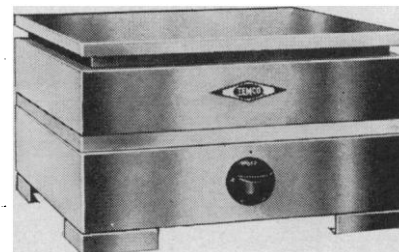
HIGHLY DEPENDABLE LABORATORY HOT PLATES



TYPE 2500, 7" round,
stepless temperature control

- Finest appearance
- Outstanding performance
- Fast, uniform heating
- Aluminum top plate
- Stainless steel body
- Extra sensitive thermostat
- Close control to 700° F
- Cool base and controls
- Dovetail apparatus socket

PRICE \$32.50



TYPE 2600, 9" square,
4-heat control

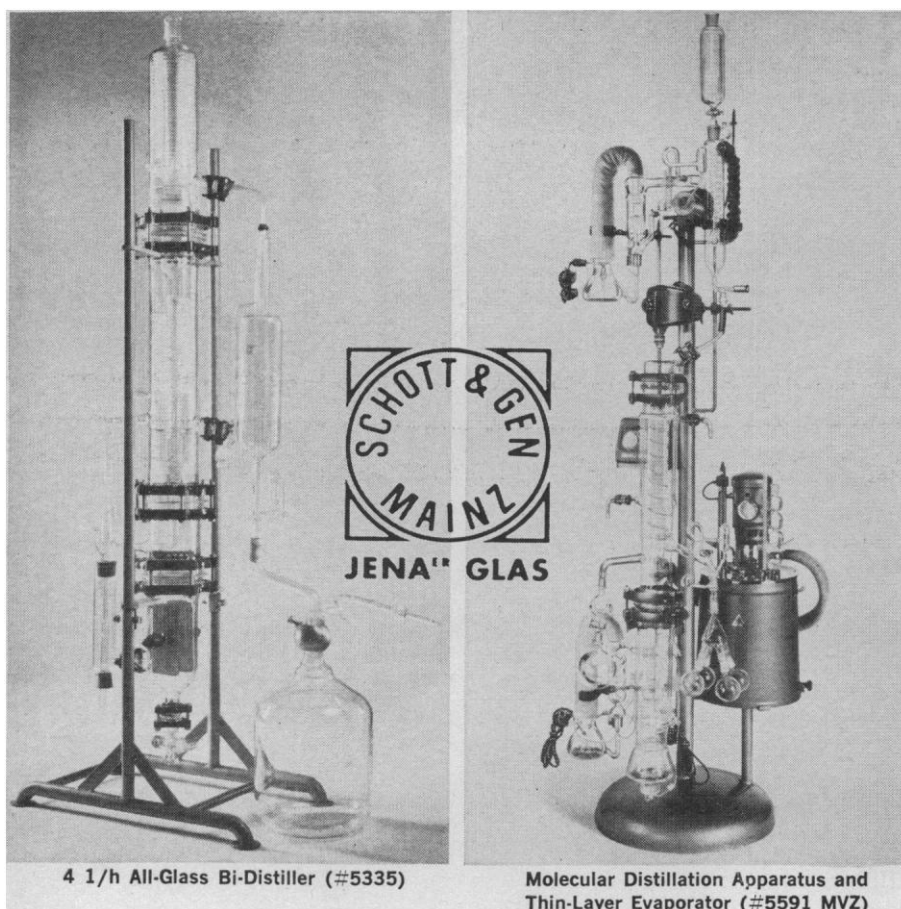
- Extra strength—heavy loads
- Smooth cast iron top
- Stainless steel body
- For heaviest duty
- 4 most used heat ranges to 930° F top temperature

PRICE \$45.00

Write, wire, or phone for complete information and name of nearest dealer.

PHONE: Area code 319 583-3501

THERMOLYNE CORPORATION
Dept. 568, 2555 Kerper Blvd., Dubuque, Iowa



The Products of
JENA^{ER} GLASWERK
SCHOTT & GEN.
 are now available from

BRINKMANN
INSTRUMENTS

For complete descriptive literature and prices, please check
 off items of interest and return the coupon to us:

BRINKMANN INSTRUMENTS, INC.
 Cantiague Road, Westbury, N. Y. 11590

☐ Kjeldahl Ammonia Determination
 Apparatus (#2456)

☐ Molecular Distillation Apparatus and
 Thin-Layer Evaporator (#5591 MVZ)

☐ 4 1/h All-Glass Bi-Distiller (#5335)

☐ Extraction and Liquid Extraction
 Apparatus (#2495)

☐ All-Glass Diffusion Pumps (#2180)

☐ Capillary Viscometers (#2190)

Name _____

Address _____

City _____ State _____

Medicine and Surgery, Iowa City, Iowa.
 (Dean, State Univ. of Iowa College of
 Medicine, Iowa City 52241)

4-5. **American Rheumatism Assoc.**, an-
 nual, Washington, D.C. (J. A. Coss, Jr.,
 20 E. 76 St., New York 10021)

4-5. **American Rheumatism Assoc.**, 11th
 interim scientific session, National In-
 stitutes of Health, Bethesda, Md. (G. W.
 Speyer, ARA, 10 Columbus Circle, New
 York 10019)

4-5. Association for Research in **Nerv-
 ous and Mental Diseases**, New York, N.Y.
 (R. J. Masselink, ARNMD, 700 W. 168
 St., New York 10022)

4-5. **Oxygen in Biosystems**, basic science
 symp., New York, N.Y. (Miss J. Newkirk,
 New York Heart Assoc., 10 Columbus
 Circle, New York 10019)

4-5. **Oxygen**, symp., New York, N.Y.
 (A. P. Fishman, New York Heart Assoc.,
 10 Columbus Circle, New York 10019)

4-5. Southern Soc. for **Pediatric Re-
 search**, Houston, Tex. (F. K. Edwards,
 Emory Univ. School of Medicine, Thomas
 K. Glenn Memorial Bldg., 69 Butler St.,
 Atlanta, Ga. 30303)

4-6. American **Psychoanalytic Assoc.**,
 fall meeting, New York, N.Y. (APA, 1 E.
 57 St., New York 10022)

4-9. American Acad. of **Dermatology**,
 Chicago, Ill. (S. E. Huff, AAD, 636
 Church St., Evanston, Ill.)

5-6. Academy of **Psychoanalysis**, mid-
 winter meeting, New York, N.Y. (A. H.
 Rifkin, AP, 125 E. 65 St., New York
 10021)

6. American Acad. of **Dental Medicine**,
 mid-annual meeting, New York, N.Y. (S.
 C. Conrad, 133-28 228th Street, Laurelton,
 L.I.)

6-10. American Inst. of **Chemical Engi-
 neers**, annual, Boston, Mass. (J. Henry,
 AIChE, 345 E. 47 St., New York 10017)

6-12. Latin American Congr. on **Micro-
 biology**, 3rd, Bogota, Columbia. (O. Ju-
 liao, Instituto Nacional de Salud, Aptdo,
 Aereo 3495, Bogota)

7. American Institute of **Mining, Metal-
 lurgical and Petroleum Engineers**, annual,
 Tucson, Ariz. (H. N. Appleton, AIME,
 345 E. 47 St., New York 10017)

7-9. Performance of **High Temperature
 Systems**, Pasadena, Calif. (G. S. Bahn,
 16902 Bollinger Dr., Pacific Palisades,
 Calif. 90272)

7-9. Southern **Surgical Assoc.**, meeting,
 Hot Springs, Va. (G. H. Yeager, Univer-
 sity Hospital, Baltimore 1, Md.)

7-11. Chemical Effects Associated with
**Nuclear Reactions and Radioactive Trans-
 formations**, symp., Vienna, Austria. (P.
 Ghelardoni, Div. of Scientific and Tech-
 nical Information, International Atomic
 Energy Agency, Karntnerring 11, Vienna
 1)

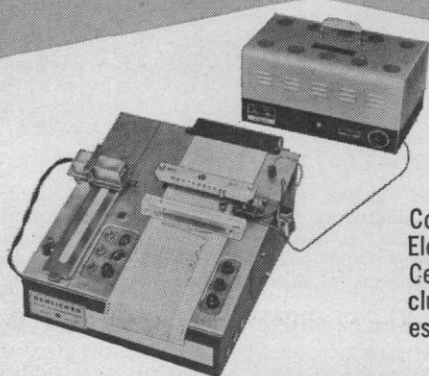
8-9. Ciba Foundation Guest Sympo-
 sium on **Measurement of Oxygen Tension**,
 London, England. (Ciba, 41 Portland Pl.,
 London, W.1)

8-11. American Soc. of **Agricultural
 Engineers**, New Orleans, La. (J. L. Butt,
 ASAE, 420 Main St., St. Joseph, Mich.)

9-11. **Antiviral Substances**, conf., New
 York Acad. of Sciences, New York, N.Y.
 (B. K. Forscher, Publications Section,
 Mayo Clinic, Rochester, Minn.)

12-15. American Acad. of **Optometry**,
 annual, Columbus, Ohio. (C. C. Koch,

3 PHOTOVOLT DENSITOMETERS FOR ALL APPLICATIONS

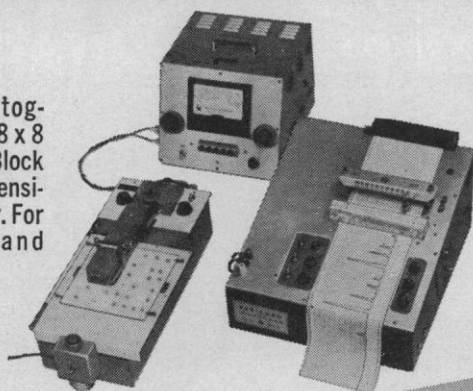


Compact Model 542 for Electrophoresis on: Paper, Cellulose Acetate, Gels including disc electrophoresis patterns.



Building Block System Model 525 for Chromatography and Electrophoresis on large sheets, strips, gels.

Thin Layer Chromatography Model 530 for 8 x 8 inch plates. Building Block System with high sensitivity photo-multiplier. For chromatography and electrophoresis.



Write for bulletins

All Densitometers have wide spectral range adaptable to fluorescence. Variable compensation for direct quantitation.

Stocked by Laboratory Supply Houses

PHOTOVOLT
CORPORATION
1115 BROADWAY • NEW YORK 10, N.Y.

AAO, 1506-08 Foshay Tower, Minneapolis 2, Minn.)

14-16. **Hahnemann Medical College**, 13th symp., Philadelphia, Pa. (J. H. Moyer, Dept. of Medicine, Hahnemann Medical College, Philadelphia)

14-16. **Reticuloendothelial Soc.**, meeting, New York, N.Y. (N. R. Di Luzio, Univ. of Tennessee Medical Units, Memphis)

14-17. **Adipose Tissue Metabolism and Obesity**, conf., New York, N.Y. (B. N. Brodoff, New York Acad. of Sciences, 2 E. 63 St., New York)

14-18. Conference on **Nuclear Electronics**, Bombay, India. (International Atomic Energy Agency, Karntnering 11, Vienna 1, Austria)

14-22. **International Geological Congr.**, 22nd, New Delhi, India. (Secretary-General of the Congress, c/o Geological Survey of India, 27, Chowringhee, Calcutta 13)

14-22. **International Mineralogical Assoc.**, 4th general, New Delhi, India. (J. V. Smith, c/o Dept. of Geophysical Sciences, University of Chicago, Chicago, Ill.)

15-16. **Periodic Functions in Live Matter**, Czechoslovak Meteorological Soc., conf., Prague. (J. Novak, First "Prof. Konopik" Dermatology Clinic, Prague 2, Apolinarska 4)

15-18. **High Energy Astronomy**, symp., Univ. of Texas, Austin. (Office of Aerospace Research, 4th and Independence Avenue, SW, Washington, D.C. 20233)

15-18. **Relativistic Astrophysics**, symp., Univ. of Texas and Southwestern Center for Advanced Studies, Austin. (Mrs. J. Wardlaw, Dept. of Physics, Physics Bldg. 438, Univ. of Texas, Austin 78712)

16-21. Inter-American Congr. of **Psychology**, 9th annual, Miami, Fla. (V. D. Sanua, Yeshiva Univ., 110 W. 57 St., New York 10019)

20-24. **Theoretical and Applied Mechanics**, congr., Kanpur, India. (M. K. Jain, Indian Inst. of Technology, Kharagpur, India)

21-23. **American Physical Soc.**, Berkeley, Calif. (W. Whaling, California Inst. of Technology, 1201 East California St., Pasadena)

21-23. **Biology of Marine Microorganisms**, conf., Univ. of California, Berkeley. (R. Newton, Letters and Science Extension, Univ. of California, Berkeley 94720)

26-29. Society of **Systematic Zoology/American Soc. Zoologists/Herpetologists' League**, annual, Univ. of Tennessee, Knoxville. (J. G. Rozen, Jr., Dept. of Entomology, SSZ, American Museum Natural History, Central Park West and 79th St., New York, N.Y.; A. G. Richards, ASZ, Dept. of Entomology, Univ. of Minnesota, St. Paul 55101; J. M. Legler, HL, Dept. of Zoology, Univ. of Utah, Salt Lake City)

26-31. **American Assoc. for the Advancement of Science**, annual, Montreal, Canada. (R. L. Taylor, AAAS, 1515 Massachusetts Ave., NW, Washington, D.C. 20005)

The following 45 organizations will meet in conjunction with the AAAS annual meeting in Montreal, Canada, 26-31 December:

Academy Conference (J. T. Self, Dept.

Electrothermal®
SERIES MG
**FLEXIBLE
HEATING
MANTLE**

**Provides Maximum
Heat Transfer
because
it's made flexible
for close contact
—and it's grounded!**

with exclusive
internal metal shield

Hangs on flask or sets
on bench
Fully insulated for
minimum heat loss.
Knitted glass fabric
heating element gives
contour fit. Close
contact of heating
element to flask gives
maximum heat transfer.
Grounded, internal metal
shield adds rigidity.
For bench operation,
built-in aluminum
support.
For temperatures up to
842°F. (450°C.)

SPECIFICATIONS			
Cat. No. MG SERIES	Flask Cap. ml.	Total Watts	Price
MG 7801	50	60	\$18.35
MG 7802	100	60	20.60
MG 7803	250	150	23.65
MG 7804	500	200	28.50
MG 7805	1000	300	31.90
MG 7806	2000	500	40.00
MG 7807	3000	500	43.80
MG 7808	5000	800	62.15
MG 7809	12000	1000	86.90

**SPECIFY
AND ORDER
BY NAME TODAY**

Pat. No. 2643324 and others pending

Immediate Delivery From:
FISHER SCIENTIFIC COMPANY
STANDARD SCIENTIFIC SUPPLY CORP.
VAN WATERS & ROGERS, INC.

Write for FREE CATALOG:
ELECTROTHERMAL
P.O. Box 3995
Grand Central Station
New York, N. Y. 10017

meet the
flash
evaporator's
**"BIG
BROTHER"**

**NEW LAPINE MACRO-VAC™
EVAPORATOR** for continuous
operation in research and production
applications . . .

- If the recovery of materials dissolved in solvents, distillation of high boiling solvents or crystallization is your problem, Macro-Vac is the answer!
- Wide necked rotating flask, with large outlet for rapid evacuation . . . convenient!
- Rotary seal for continuous input of solutions of temperature sensitive substances . . . unique!
- Two condensers, operable at different temperatures . . . rapid evaporation without foaming.

For complete information, contact your
nearest LaPine branch.

LAPINE SCIENTIFIC COMPANY
OFFICES AND WAREHOUSES

CHICAGO
6001 South
Knox Ave.,
Chicago 29, Ill.
Phone 312
Reliance 5-4700

NEW YORK
So. Buckhout St.,
Irvington, N. Y.
Phone 914
LYric 1-8900

CALIFORNIA
2229 McGee Ave.,
Berkeley 3, Calif.
Phone 415
THornwall 5-3614

LAPINE

of Zoology, Univ. of Montreal, Montreal)
Academy of Psychoanalysis (M. Ullman,
Maimonides Hospital, 4802 Tenth Ave.,
Brooklyn 19, N.Y.)

Alpha Epsilon Delta (M. L. Moore, 7
Brookside Circle, Bronxville, N.Y. 10708)

**AAAS Commission on Science Educa-
tion** (J. R. Mayor, AAAS, 1515 Mas-
sachusetts Ave., NW, Washington, D.C.
20005)

American Astronautical Soc. (E. van
Dreist, Director, Space Science Labora-
tory, North American Aviation, Downey,
Calif.)

American Astronomical Soc. (G. C.
McVittie, Univ. of Illinois Observatory,
Urbana)

American Economic Association (H. E.
English, Private Planning Assoc., 712 Sun
Life Bldg., Montreal 2)

American Meteorological Soc. (K. C.
Spengler, AMS, 45 Beacon St., Boston,
Mass.)

American Nature Study Soc. (V. Rock-
castle, Cornell Univ., Ithaca, N.Y.)

American Soc. of Naturalists (S. Gran-
ick, Rockefeller Inst., 66th St. and York
Ave., New York 10021)

American Political Science Assoc. (E.
B. Skolnikoff, Massachusetts Inst. of Tech-
nology, Cambridge)

American Soc. of Criminology (W. C.
Reckless, Dept. of Sociology, Ohio State
Univ., Columbus)

American Soc. for Microbiology (S. J.
Ajl, Director of Research, Albert Einstein
Medical Center, York and Tabor Rds.,
Philadelphia 41, Pa.)

**American Soc. of Zoologists, Animal
Behavior and Sociobiology Div.** (G. W.
Barlow, Vivarium Bldg., Wright and
Healey Sts., Univ. of Illinois, Champaign)

American Sociological Assoc. (W. E.
Moore, Russell Sage Foundation, 230
Park Ave., New York, N.Y.)

Animal Behavior Soc. (J. P. Scott, Jack-
son Laboratory, Hamilton Station, Bar
Harbor, Maine)

**Association canadienne-française pour
l'Avancement des Sciences** (M. J. Beau-
regard, ACFAS, C.P. 6128, Univ. of Mon-
treal, Montreal)

Association for Computing Machinery
(M. Woodbury, New York Univ. Medical
Center, New York, N.Y.)

Biometric Soc. (D. S. Robson, Cornell
Univ., Ithaca, N.Y.)

Canadian Aeronautics & Space Inst.
(H. C. Luttmann, CASI, 77 Metcalf St.,
Ottawa 4)

Canadian Assoc. of Geographers (J. T.
Parry, Morrice Hall, McGill Univ., Mon-
treal)

Canadian Assoc. of Physicists (A. C. H.
Hallett, Dept. of Physics, Univ. of Toron-
to, Toronto 5)

Canadian Science Fairs Council (H. I.
Bolker, Pulp & Paper Research Inst. of
Canada, 3420 University St., Montreal 2)


Ecological Soc. of America (G. M.
Woodwell, Brookhaven Natl. Laboratory,
Upton, L.I., N.Y.)

Engineering Institute of Canada (G. T.
Page, EIC, 2050 Mansfield St., Montreal
2)

Entomological Soc. of Canada (I. S.
Lindsay, Defence Research Board, 125
Elgin St., Ottawa)

General Systems Knowledge (O. Wing,

**IT'S CRYSTAL
CLEAR
WHY YOU
SHOULD SPECIFY . . .**



**Excelon
1060
PURE VINYL
FLEXIBLE TUBING**

■ Chemically Inert ■ Highly Flexible ■ Standard Diameters Available: 1/4" to 4" ■ Custom Sizes & Colors Quoted Upon Request ■ Consistent Properties . . . from Laboratory Experiments to Full Scale Production ■ Nationally Distributed

Available Now . . .

Excelon Tubing Brochure with ☐ Chemical Resistance Chart ☐ Physical Properties Chart ☐ Pressure Chart ☐ Sizes Available ☐ Prices ☐ Samples ☐ Name of Nearest Distributor



**THERMOPLASTIC
PROCESSES, INC.**

VALLEY ROAD • STIRLING, N. J.
(201) Millington 7-1000 • (607) Cortland 7-6220
TWX - 201-647-4390

Columbia Univ., Dept. of Electrical Engineering, New York 10027)

History of Science Soc. (J. E. Murdoch, Harvard Univ., Cambridge, Mass.)

Institute of Management Sciences (B. V. Dean, Dept. of Management, Case Inst. of Technology, Cleveland, Ohio)

Medical Geology and Geography (H. V. Warren, Dept. of Geology, Univ. of British Columbia, Vancouver 8, B.C.)

Metric Assoc. (R. P. Fischelis, Ohio Northern Univ., Ada)

National Assoc. of Biology Teachers (R. Beidleman, Colorado College, Colorado Springs)

National Assoc. of Science Writers (L. S. Zahn, Hill & Knowlton, Inc., 150 E. 42 St., New York, N.Y.)

National Council of Teachers of Mathematics (J. Gates, NCTM, 1201 16th St, NW, Washington, D.C.)

National Geographic Soc. (R. W. Gray, NGS, 16th and M Sts., NW, Washington, D.C.)

National Inst. of Social and Behavioral Science (D. P. Ray, NISBS, 863 Benjamin Franklin Station, Washington, D.C.)

National Science Teachers Assoc. (A. F. Eiss, NSTA, 1201 16th St., NW, Washington, D.C. 20006)

Pharmacological Soc. of Canada (C. W. Nash, Dept. of Pharmacology, Univ. of Alberta, Edmonton)

Sigma Delta Epsilon (S. C. Stevens, VA Hospital, Lincoln, Neb.)

Society for Computer Programs in Biology and Medicine (R. S. Ledley, Natl. Biomedical Research Foundation, 8600 16th St, NW, Silver Spring, Md.)

Society for Economic Botany (Q. Jones, New Crops Research Branch, Plant Industry Station, Beltsville, Md.)

Society for General Systems Research (J. H. Milsum, Dept. of Electrical Engineering, McGill Univ., Montreal)

Society for the History of Technology (J. J. Beer, Dept. of History, Univ. of Delaware, Newark)

Society of the Sigma XI (T. T. Holme, Sigma XI, 51 Prospect St., New Haven, Conn. 06511)

Society of Technical Writers and Publishers (G. Marx, Director of Communications, Illinois Inst. of Technology, Research Inst., Chicago)

27-29. **American Philosophical Assoc.**, Boston, Mass. (L. E. Hahn, Dept. of Philosophy, Southern Illinois Univ., Carbondale, Ill. 62903)

27-30. **American Statistical Assoc.**, Chicago, Ill. (D. C. Riley, ASA, 810 18th St., NW, Washington, D.C. 20006)

28-30. **American Economic Assoc.**, annual, Chicago, Ill. (H. F. Williamson, AEA, 629 Noyes St., Evanston, Ill.)

28-30. **American Geophysical Union**, Seattle, Wash. (W. W. Kellogg, Rand Corp, 1700 Main St., Santa Monica, Calif.)

28-30. **Linguistic Soc. of America**, New York, N.Y. (A. A. Hill, Box 8120, University Station, Austin, Tex. 79712)

28-30. **Western Soc. of Naturalists**, Univ. of Washington, Seattle. (I. A. Abbott, Hopkins Marine Station of Stanford Univ., Pacific Grove, Calif.)

30. **Scientific Research Soc. of America**, Cleveland, Ohio. (D. B. Prentice, 51 Prospect St., New Haven 11, Conn.)

**Oxford
University Press**

Geology

By WILLIAM C. PUTNAM, late Professor of Geology, University of California, Los Angeles

This absorbing introductory text for the one-semester course offers balanced coverage of the major topics in this rapidly evolving science. The study concentrates on physical geology, but concludes with a brief account of historical geology. Selected references accompany each chapter, and over 200 half-tones illustrate the text. 1964 480 pp. 318 illus. text ed. \$8.00

Human Biology:

An Introduction to Human Evolution, Variation, and Growth

By G. A. HARRISON, Oxford University; J. S. WEINER, London School of Hygiene and Tropical Medicine; and J. M. TANNER and N. A. BARNICOT, University of London

This introduction to the mysteries of human evolution attempts to synthesize various hypotheses about the biological organization of past and present human populations. Divided into five sections, the book explores basic aspects of human evolution and genetics, including general evolutionary theory, the history of the primates, the fossil evidence for human evolution, anthropogenesis, human variation, the nature of human growth, and the ecology of human populations in terms of climate, nutrition and disease.

1964 526 pp. 83 figs. \$8.00

Heredity and Development

By JOHN A. MOORE, Columbia University and Barnard College

Designed for use in the introductory biology course, this book charts the history of genetics and embryology and presents clearly their basic concepts. Along with two portions reprinted from Dr. Moore's distinguished text, *Principles of Zoology*, there are two new chapters on genetics and one new chapter on embryology.

1963 256 pp. 77 illus. paperbound \$1.95

A Model of the Brain

By J. Z. YOUNG, University of London

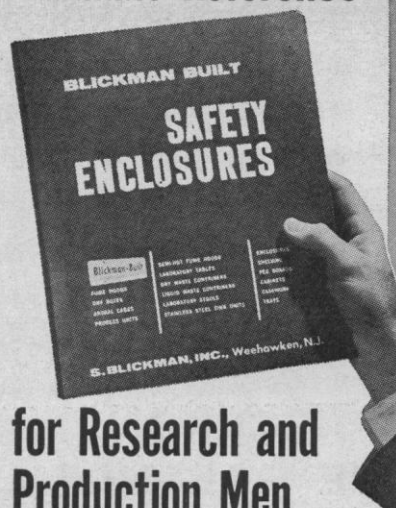
A study that serves as an indication of the present state of knowledge about many aspects of brain functioning. The author outlines the essential features of nervous organization, and, using the octopus brain as a model, describes the characteristics of a nervous system that allow it to learn. The use of the principles of learning in the construction of computers is discussed, as well as the differences and similarities between brains and machines.

1964 358 pp. 111 figs. \$7.00

Oxford University Press

417 Fifth Avenue
New York, N. Y. 10016

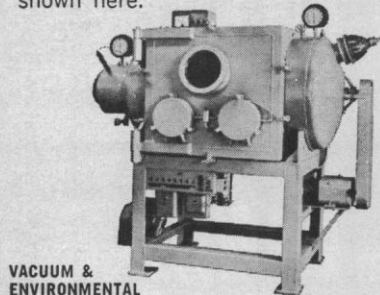
Valuable Reference



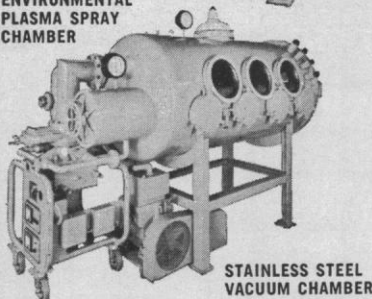
for Research and Production Men Working with

- TOXIC CHEMICALS
- RADIOACTIVE MATERIALS
- CONTAMINANTS
- MIRACLE METALS

This book illustrates a wide variety of safety enclosures and controlled-atmosphere boxes. Two of the many units included are shown here.



VACUUM & ENVIRONMENTAL PLASMA SPRAY CHAMBER



STAINLESS STEEL VACUUM CHAMBER

S. BLICKMAN, INC.

6911 Gregory Ave. • Weehawken, N. J.

- ☐ Please send book on safety enclosures
☐ Also send catalog on laboratory furniture

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

Blickman-Built for Years of Reliable Service

SEE US AT BOOTH #410—ATOMFAIR,
 BROOKS HALL, SAN FRANCISCO, CALIFOR-
 NIA—DEC. 1-3

January

5-7. **Glass Formation, Phase Equilibria, Nucleation and Crystal Growth**, symp., Sheffield, England. (D. Hawsworth, Soc. of Glass Technology, Thorton, 20 Hallam Gate Rd., Sheffield 10)

5-8. **Solid State Physics**, 2nd annual conf., H. H. Wills Physics Laboratory, University of Bristol, England. (Administrative Assistant, Inst. of Physics and Physical Soc., 47, Belgrave Square, London, S.W.1)

6-8. **Industrial Electronics and Control Instrumentation**, 13th annual conf., Philadelphia, Pa. (E. Weiss, Sun Oil Co., Marcus Hook, Pa.)

6-9. **Psychopharmacological Conf.**, Czechoslovak Medical Soc., Psychiatry Section, Jeseník Spa. (M. Vojtechovsky, Budejovicka 800, Pavilion A1, Prague, Czechoslovakia)

8-9. **Orthopaedic Research Society**, New York, N.Y. (R. A. Calandrucchio, 869 Madison Ave., Memphis, Tenn.)

9-14. **American Acad. of Orthopedic Surgeons**, annual, New York, N.Y. (H. K. Hart, AAOS, 29 E. Madison, Chicago 2, Ill.)

11-14. **Civilian and Military Uses of Aerospace**, conf., New York, N.Y. (I. B. Laskowitz, New York Acad. of Sciences, 2 E. 63 St., New York)

12-14. **Reliability and Quality Control**, symp., Miami, Fla. (H. D. Hulme, Westinghouse R&D Center, Bldg. 601-1346, Churchill Boro, Pittsburgh, Pa.)

12-15. **Crustacea**, symp., Cochin, India. (Marine Biological Assoc. of India, Marine Fisheries P.O., Mandapam Camp, S. India)

14. **American Genetic Assoc.**, Washington, D.C. (W. R. Singleton, Biology Bldg., Univ. of Virginia, Charlottesville)

18-20. **Solar Radiation Simulation**, intern. conf., Los Angeles, Calif. (H. F. Sander, Inst. of Environmental Science, 34 S. Main St., Mount Prospect, Ill.)

19-20. **Die Design and Press Tooling Conf.**, American Soc. of Tool and Manufacturing Engineers, Hartford, Conn. (M. Zapico, Asst. Conf. Director, ASTME, 10700 Puritan Ave., Detroit 38, Mich.)

20-22. **Instrumentation**, College Station, Tex. (P. T. Eubank, Chemical Engineering Dept., Texas A&M Univ., College Station)

20-23. **National Soc. of Professional Engineers**, New Orleans, La. (P. H. Robbins, 2029 K St., NW, Washington, D.C. 20006)

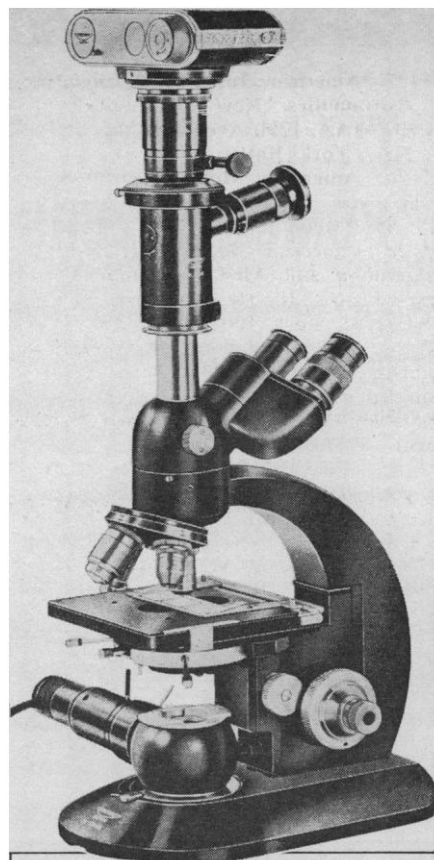
22. **Bibliographical Soc. of America**, New York, N.Y. (Mrs. H. C. Ralph, P.O. Box 397, Grand Central Station, New York 10017)

22-1. **Earthquake Engineering**, 3rd world conf., Auckland and Wellington, New Zealand. (Administrative Secretary, Third World Conf. on Earthquake Engineering, P.O. Box 5180, Wellington)

22-23. **Blood**, annual symp., Detroit, Mich. (W. H. Seegers, Dept. of Physiology and Pharmacology, Wayne State Univ. College of Medicine, Detroit)

25-26. **Fundamental Phenomena in the Material Sciences**, 3rd annual symp., Boston, Mass. (D. B. Fay, Ilikon Corp., Natick Industrial Centre, Natick, Mass.)

25-26. **Viruses of Laboratory Rodents**, symp., Atlanta, Ga. (R. Holdenried, Natl. Cancer Inst., NIH, Bethesda, Md. 20014)



REICHERT

New COMBINATION Phase Contrast & Anoptral Contrast Microscopy with Laboratory Microscope "BIOZET"

A new dual purpose turret condenser of high resolution and a sextuple nosepiece accommodating any combination of six Phase and Anoptral objectives, enables convenient observation and comparison of Phase and Anoptral* contrast images. The Reichert "Biozet" with centerable condenser holder and built-in low voltage illumination is ideally suited for this and all other investigations in transmitted light and for photomicrography.

*Anoptral contrast is negative phase contrast with colored background added to enhance contrast.

Hacker

For particulars or demonstration, write to:
WILLIAM J. HACKER & CO., INC.
 Box 646, W. Caldwell, N.J., CA 6-8450 (Code 201)

25-27. American Inst. of **Aeronautics and Astronautics**, New York, N.Y. (J. Bidwell, AIAA, 1290 Avenue of the Americas, New York 10019)

25-28. American **Meteorological Soc.**, annual, New York, N.Y. (K. Spengler, AMS, 45 Beacon St., Boston 8, Mass.)

25-28. American Society of **Heating, Refrigerating and Air-Conditioning Engineers**, Chicago, Ill. (R. C. Cross, 345 E. 47 St., New York 10017)

25-28. Modern Methods of **Analytical Chemistry**, 18th annual intern. symp., Baton Rouge, La. (P. W. West, Dept. of Chemistry, Louisiana State Univ., Baton Rouge)

25-28. **Cardiovascular Diseases**, 2nd natl. conf., Washington, D.C. (C. H. Maxwell, 9650 Wisconsin Ave., NW, Washington, D.C. 20014)

25-29. American **Mathematical Soc.**, Denver, Colo. (G. L. Walker, AMS, 190 Hope St., Providence, R.I.)

25-29. American Soc. for **Testing and Materials**, steel meeting, Mexico City, Mexico. (H. H. Hamilton, Public Relations, ASTM, 1916 Race St., Philadelphia, Pa. 19103)

25-30. American **Library Assoc.**, Washington, D.C. (D. H. Clift, ALA, 50 E. Huron St., Chicago, Ill.)

27-30. American **Physical Soc.**, New York, N.Y. (K. K. Darrow, Pupin Physics Laboratory, Columbia Univ., New York 10027)

27-30. **Electrochemistry**, 5th seminar, Karaikudi-3, South India. (M. A. V. Devanathan, Central Electrochemical Research Institute, Karaikudi-3, South India)

27-30. **Geological Soc.**, Southwestern Federation, Austin, Tex. (S. P. Ellison, Jr., Department of Geology, Univ. of Texas, Austin)

27-31. **Neurosurgical Soc. of America**, San Juan, Puerto Rico. (C. H. Davis, Jr., Bowman Gray School of Medicine, Winston-Salem, N.C.)

28-30. American **Geophysical Union**, southwest regional, Socorro, N.M. (J. B. Franzini, Civil Engineering Dept., Stanford Univ., Stanford, Calif.)

28-30. International **Medical Assembly** of Southwest Texas, San Antonio. (S. E. Cockrell, Jr., 202 W. French Pl., San Antonio 12)

28-30. **Large-Scale Air-Sea Interaction**, symp., Bombay, India. (UNESCO, Office of Oceanography, Pl. de Fontenoy, Paris 7^e, France)

28-30. **Mathematical Assoc. of America and American Mathematics Soc.**, Denver, Colo. (H. M. Gehman, MAA, Univ. of Buffalo, Buffalo 14, N.Y.)

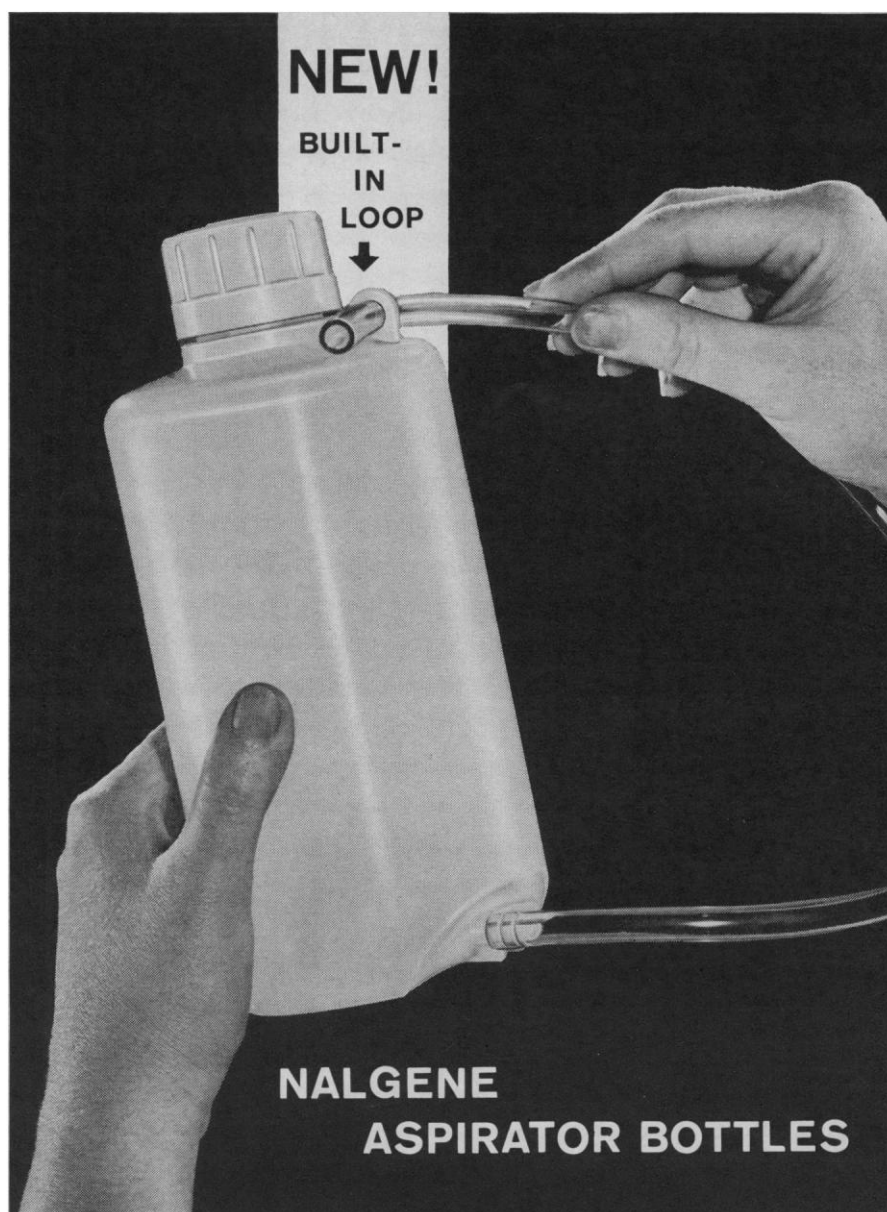
29-31. Southern **Radiological Conf.**, Point Clear, Ala. (M. Eskridge, P.O. Box 4097, Mobile, Ala.)

31-2. Institute of **Electrical and Electronics Engineers**, New York, N.Y. (C. A. Woodrow, c/o General Electric Co., 1 River Rd., Schenectady 5, N.Y.)

31-5. Institute of **Electrical and Electronics Engineers**, New York, N.Y. (E. C. Day, IEEE, Box A, Lenox Hill Station, New York 10021)

31-6. International Festival of the **Scientific Film**, Brussels, Belgium. (Cercle des Sciences, Université Libre de Bruxelles, 22 avenue Paul Heger, Brussels, 5)

6 NOVEMBER 1964



Molded from polyethylene with serrated tubulation and built-in loop—all in one piece!

Something new has been added to Nalgene[®] aspirator bottles. The built-in loop on the neck brings you even greater convenience and utility—holds tubing in place when not in use . . . shuts off flow without a pinch clamp. And the complete bottle—including tubulation and loop—is still flawlessly blow-molded in one piece. The serrated tubulation close to the bottom permits more complete drainage . . . does not extend beyond the bottle's circumference. Remarkable polyethylene makes the ideal laboratory bottle—unbreakable, light in weight, leak-proof, corrosion-proof and slip-proof. Nalgene aspirator bottles in 7 sizes, from 32 oz. to 13 gal., are economically priced from \$2.16 to \$20.90 each. Larger sizes have recessed handgrips for safe, easy handling. All bottles have screw closure for protection against spillage and evaporation. See your lab supply dealer, or write Dept. 2711, The Nalgene Co., Inc., 75 Panorama Creek Dr., Rochester, N.Y. 14625.

 **NALGENE
LABWARE**
Leader in quality plastic labware since 1949