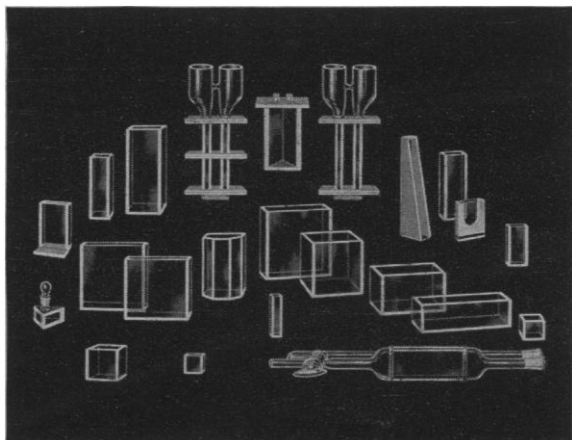


GLASS ABSORPTION CELLS made by **KLETT**

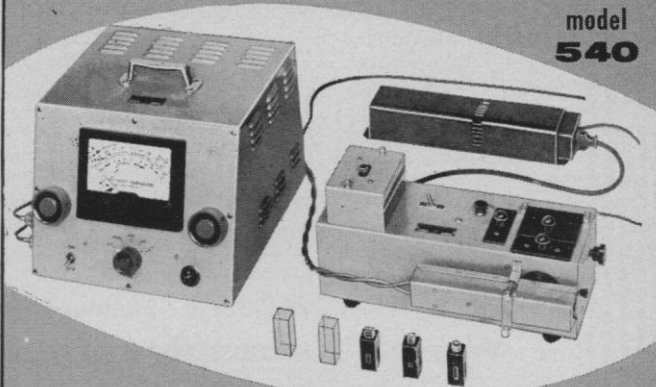


SCIENTIFIC APPARATUS
Klett-Summerson Photoelectric Colorimeters—
Colorimeters—Nephelometers—Fluorimeters—
Bio-Colorimeters—Comparators—Glass Stand-
ards—Klett Reagents.

Klett Manufacturing Co.
179 East 87 Street, New York, New York

PHOTOVOLT LINE-OPERATED MULTIPLIER FLUORESCENCE METER

model
540



- High sensitivity . . . full scale for 0.001 microgram quinine sulphate
- Micro-fluorimetry . . . liquid volumes down to 1 ml
- Low blank readings . . . linear instrument response
- High sensitivity nephelometry . . . minute turbidities
- Fluorescence evaluation of powders, pastes, and solids; also for spot-tests on filter paper without elution
- Selection of filters, interference filters, and sample holders

Write for Bulletin No. 392 to:

PHOTOVOLT CORP.
1115 Broadway • New York 10, N. Y.

Also: pH Meters, Colorimeters, Densitometers

PERSONNEL PLACEMENT

CLASSIFIED: Positions Wanted 25¢ per word, minimum charge \$4. Use of Box Number counts as 10 additional words. Payment in advance is required.

COPY for ads must reach **SCIENCE** 2 weeks before date of issue (Friday of every week).

DISPLAY: Positions Open. Rates listed below—no charge for Box Number. Rates net. No agency commission. No cash discount. Minimum ad: 1 inch. Ads over 1 inch will be billed to the nearest quarter inch. Frequency rate will apply to only repeat of same ad. No copy changes. Payment in advance is required except where satisfactory credit has been established.

Single insertion **\$40.00 per inch**
4 times in 1 year **38.00 per inch**

For **PROOFS** on display ads, copy must reach **SCIENCE** 4 weeks before date of issue (Friday of every week).

Replies to blind ads should be addressed as follows:

Box (give number)
Science
1515 Massachusetts Ave., NW
Washington 5, D.C.

POSITIONS WANTED

Botany Ph.D. Experienced college teaching, research. Box 119, **SCIENCE**. X

Health Physics, professor or equal. Substantial experience, research, teaching. Now laboratory director. Box 117, **SCIENCE**. X

M.D., 32, full training in psychiatry plus 2 years of university training in biostatistics and psychiatric research techniques as research fellow, seeks full-time position in Philadelphia, New Jersey, or New York City. Box 118, **SCIENCE**. 6/23

POSITIONS WANTED

Biochemist. Academic appointment. Research and teaching. Graduate faculty. Publications. Dr. J. H. Schneider, American University, Beirut, Lebanon. 4/28; 5/12, 26; 6/9

Plant Science-Microbiology, Ph.D.; 5 years' university teaching-research; desires academic position. Box 123, **SCIENCE**. X

Medical Director, M.D., certified in internal medicine and in subspecialty. Desires position as medical director in field of occupational medicine or insurance medicine. Trained at Mayo Clinic and in university. Experience includes clinical investigation and private practice. Box 120, **SCIENCE**. 6/16

Research Technician, B.S. chemist, female, 12 years of "bench experience," recording UV spectrophotometer, chromatographic separations. Desires to work in bio-, organic chemistry, or natural products laboratories. Preferably New York City, New Jersey. Box 121, **SCIENCE**. X

Virologist, Ph.D., experienced, diagnosis, research, background research bacteriology. Wishes appointment East, 1 November. Box 122, **SCIENCE**. X

POSITIONS OPEN

CLINICAL BIOCHEMIST

Master's or Ph.D. degree preferred. Responsible directly to M.D., Director of Clinical Laboratories. Salary range \$7000-\$10,000 annually, experience given additional consideration; 500-bed, short-term general hospital in northeastern Ohio. Contact Director of Clinical Laboratories

Aultman Hospital
Canton 10, Ohio

POSITIONS OPEN

NEUROPHARMACOLOGIST

• Requires Ph.D. in pharmacology or physiology, emphasis in **electroneurophysiology**.

• May have up to 5 years' experience.

• To conduct independent research in CNS pharmacology, including electroencephalography, electrode implantation, and neurosurgery.

• Position is in expanding, dynamic, midwestern pharmaceutical company.

Please send résumé and salary requirement to Manager, Technical Employment, **Mead Johnson & Company**, Evansville, Indiana.

All qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

VIROLOGIST

Highly responsible position for Ph.D. level scientist to head modern virology laboratory. Should have 3 years' experience in virus research and tissue culture work and a good knowledge of the pathogenesis of human and animal virus diseases.

Send detailed résumé and salary requirements to Personnel Dept.

Schering Corp.

60 Orange St.—Bloomfield, N.J.

POSITIONS OPEN

POSITIONS OPEN

BIOCHEMISTS

Ph.D. or M.S. with equivalent experience.

Excellent opportunities for 3 outstanding Biochemists. Experience or academic background required in:

Lipid metabolism and use of isotopes in various studies

Clinical chemistry and Enzymology

Isolation and characterization of protein

Send resume to

William J. Sumner

Warner-Lambert Research Institute

Morris Plains, New Jersey

BIOLOGICAL SCIENTIST—Ph.D.

Outstanding opportunity in research division of major Philadelphia pharmaceutical firm for Ph.D. in physiology or biochemistry. Important role in research and development of new therapeutic agents including design of laboratory and clinical studies; interpretation of data and evaluation of clinical utility. Candidate should have good academic qualifications; ability and interest in working with both scientists and management; facility in oral and written communication. Opportunity to attend appropriate scientific meetings and to make outside contacts with other scientists and clinicians. Send complete résumé including salary requirements to:

W. R. HALL

**Smith Kline & French
Laboratories**

1598 Spring Garden Street, Philadelphia 1, Pa.

All qualified applicants will receive consideration for employment without regard to race, creed, color or national origin.

RESEARCH CHEMIST

Excellent opportunity for research chemist to join a newly formed interdisciplinary team of psychiatrists, psychologists & chemists on a long-term research project on the biochemistry of mental illness. Ph.D. preferred, M.S. considered.

Apply Personnel Dept.
MT. SINAI HOSPITAL
2 East 100 St., NY 29, NY

FELLOWSHIPS

Predocutorial and Postdoctoral Fellowships in Medical Physics. Opportunities are available to do graduate work in the basic medical sciences. Emphasis is on the fields of radiation biology, radiation physics, and the clinical use of radioisotopes. Fellowship support is offered for study programs leading to the M.S. and Ph.D. degrees in medical physics and also for postdoctoral research. Stipends vary with training and dependents. Write to Chairman, Department of Radiology, Medical Center, University of California, Los Angeles 24, California. 5/26; 6/9

OPTICAL & INFRARED PHYSICISTS & ENGINEERS

Melpar's Expanding Research Activities Offer Exciting Opportunities For The Research Scientist With New and Novel Approaches To Problems Involving

OPTICAL & INFRARED SYSTEM DESIGN

Present Areas of Investigation Are In:

- BIOPHYSICAL INVESTIGATIONS RELATED TO INFRARED SENSING
- PROPERTIES OF THE ATMOSPHERE, INCLUDING VERY LONG WAVELENGTH INVESTIGATIONS, SCINTILLATION AND ABSORPTION STUDIES
- OPTICAL HETERODYNE STUDIES AND TUNABLE LASERS
- APPLICATIONS OF EXTREMELY HIGH ELECTROMAGNETIC FIELDS

The experienced investigator will find at Melpar a research oriented environment with all the necessary experimental facilities. And he will be associated with a research group of nationally recognized stature.

Send Resume

In Complete Confidence To

MELPAR, INC.

3009 Arlington Boulevard,
Falls Church, Virginia
Attention Mr. F. J. Drummond

All qualified applicants will receive consideration for employment without regard to race, creed, color or national origin.

GAS CHROMATOGRAPHER Wanted in San Francisco Area

Mfr. of scientific instruments desires applications chemist or physicist (Ph.D. preferred, B.S. minimum) with at least 2 yrs. current experience in advanced analytical procedures in gas chromatography. Work entails methods and procedures development for customer applications, as well as instrumentation improvement and R & D projects. Send resume to Zeno H. Mauvais, Research Specialties Co., 200 S. Garrard Blvd., Richmond, Calif.

The Market Place

BOOKS AND MAGAZINES

Your sets and files of scientific journals

are needed by our library and institutional customers. Please send us lists and description of periodical files you are willing to sell at high market prices. Write Dept. A3S, CANNER'S, Inc. Boston 20, Massachusetts

FOR UP-TO-DATE INFORMATION ON

GAS CHROMATOGRAPHY

READ AEROGRAPH RESEARCH NOTES

write for your
free
subscription

WILKENS INSTRUMENT & RESEARCH INC.
Box 313-A • Walnut Creek, Calif.

MAMMARY TUMORS IN MICE

AAAS Publication No. 22. By the staff of the National Cancer Institute, National Institutes of Health. F. R. Moulton, Ed.

Published 1945—Now offered at reduced price: \$3.00 prepaid orders by AAAS members, \$3.50 retail. Cloth, 20 tables, 52 illus.

AAAS

1515 Massachusetts Avenue, NW,
Washington 5, D.C.

PROFESSIONAL SERVICES



LABORATORY SERVICES for the FOOD, FEED, DRUG and CHEMICAL INDUSTRIES

Analyses, Biological Evaluation, Toxicity Studies, Insecticide Testing and Screening, Flavor Evaluation.

Project Research and Consultation

Write for Price Schedule
P. O. Box 2217 • Madison 1, Wis.

SUPPLIES AND EQUIPMENT

YOU NEED THIS FREE CATALOG FOR YOUR FILES

Serums, antisera and bloods of all kinds for technicians and tissue culture laboratories. No salesman will call.

COLORADO SERUM CO.

4950 York St. • MAin 3-5373 • Denver 16, Colo.

• HYPOPHYSECTOMIZED RATS

Shipped to all points via Air Express
For further information write

HORMONE ASSAY LABORATORIES, Inc.
8169 South Spaulding Ave., Chicago 29, Ill.

1919 - 1961

LaMotte Chemical
Chestertown, Maryland, U.S.A.
Specialists in

Colorimetric Techniques
Reagents-Standards-Comparators
Send for Illustrated
Controls Handbook Dept. H

CHARLES RIVER *CD-1
(Caesarean-derived)



Hypophysectomies available
**THE CHARLES RIVER
MOUSE FARMS**

1018 Beacon St., Brookline 46, Mass., RE 4-2000

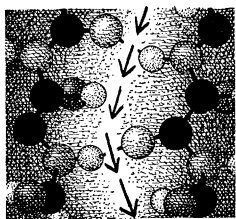
IT HAPPENED THIS MONTH...

a glance at yesterday in relation to today



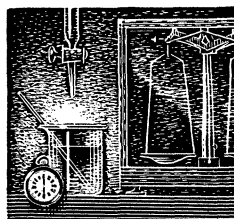
IN JUNE—(1801)—a paper read before the Royal Society describes some experiments and observations on “spontaneous light”. Herring, mackerel, and other objects “that abound with spontaneous light in the latent state” do not emit such light when deprived of life. Contrary to what other authors have alleged, oxygen does not render this light more vivid than it is in atmospheric air. Azotic gas, on the other hand, is favorable to spontaneous light and helps preserve its emission and brilliancy, while hydrogen, carbonic acid gas, and sulphurated hydrogen gas act to extinguish it.¹

More refined methods now permit us to make more reliable observations of bioluminescence. No longer is it necessary to depend on herring or mackerel. Schwarz BioResearch has recently made available a Firefly Kit for convenient classroom demonstration of bioluminescence and for ATP assay. The Schwarz Firefly Kit provides 500 mg. of dehydrated firefly tails, 250 mg. of crystalline disodium ATP, plus comprehensive instructions and background information.



IN JUNE—(1880)—R. H. Chittenden reviews recent work on the enzymatic breakdown of albumin. “. . . it is plain that by the first step in digestion the albumin molecule is resolved into its two parts [antialbumose and hemialbumose], the gastric juice then readily changing the hemialbumose into hemipeptone, while the anti-group appears less susceptible to the action of pepsin, only a small portion of this group being changed into antipeptone, while the larger part, under the influence of the dilute acid, appears to be converted into partially insoluble products; but on reaching the intestinal canal these insoluble bodies, under the influence of the alkaline solution of trypsin, pass readily into solution and are digested with formation of antipeptone, which is readily absorbed, while the hemipeptone is further changed into crystalline decomposition products.”²

Today it is plain that many other proteolytic enzymes are involved in the digestion of albumin. Nevertheless, we still know almost nothing about the intermediate breakdown products. If you are studying the enzymic cleavage and synthesis of peptide bonds, you should have copies of two Schwarz catalogs: our regular catalog lists all the biologically important amino acids — plain and labeled with C^{14} , N^{15} , and S^{35} ; a special catalog describes a long line of carboxy-amino acids, polyamino acids, polypeptides, and O^{18} — amino acid compounds produced by the Yeda Research and Development Company in Israel. Both catalogs are available upon request.



IN JUNE—(1949)—a group at Columbia publishes some new micromethods for the detection and determination of tissue hexoses. In 1946, Dische had described a new color reaction of hexoses with cysteine and other tissue constituents. Now, he and his associates have developed two modifications which promise to be of considerable value for the investigation of polysaccharides in animal tissues, body fluid, and bacteria and for measurement of blood galactose.³

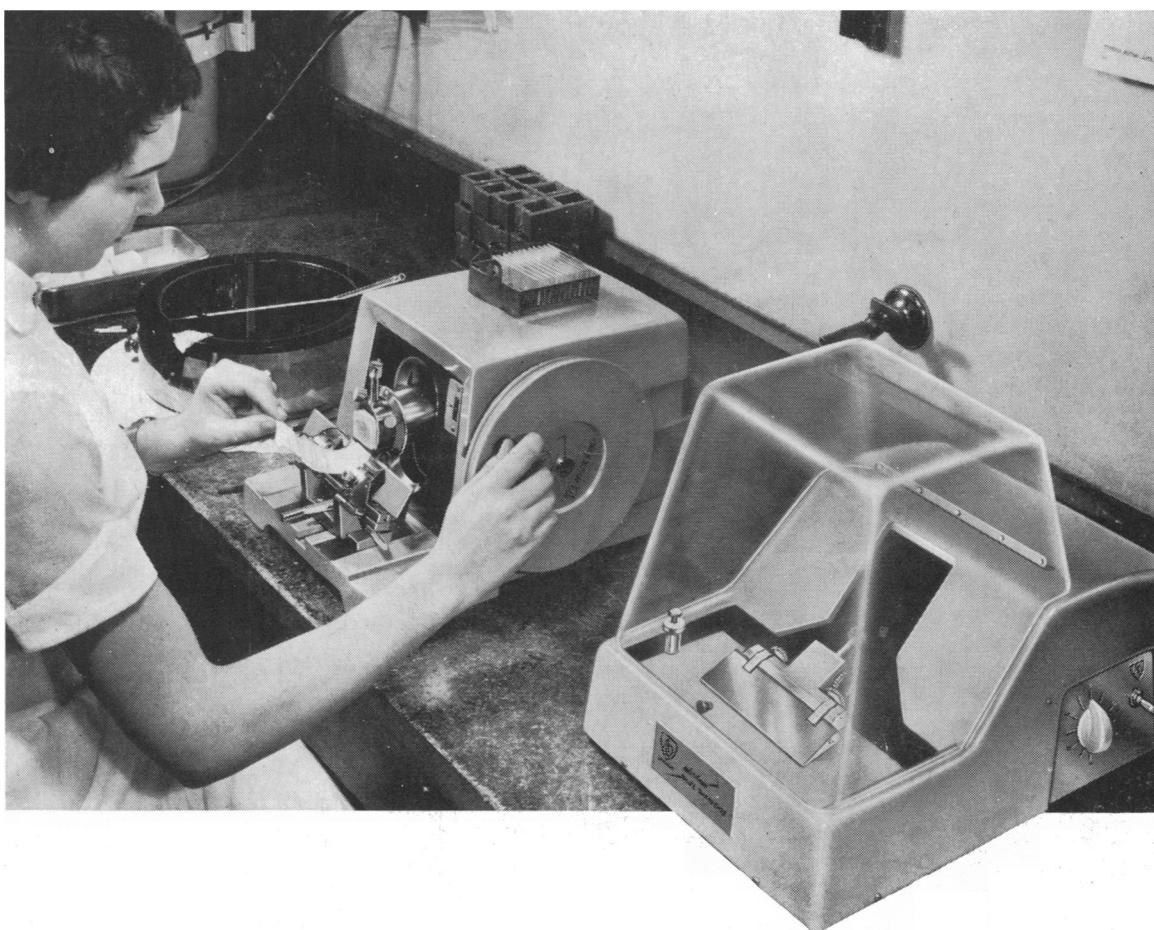
If your micro, semi-micro, or macromethods involve either hexoses or sulfhydryls, you can probably obtain the compounds you need from Schwarz BioResearch. We produce a large number of biologically important sugars, sugar phosphates and sulfhydryl compounds — plain or labeled with S^{35} or C^{14} .

1. Hulme, N.: A continuation of the experiments and observations on the light which is spontaneously emitted from various bodies; with some experiments and observations in solar light, when imbibed by Canton's Phosphorus. Phil. Tr. Roy. Soc. London 91:403 (June 18) 1801. 2. Chittenden, R. H.: Report on progress in physiological chemistry, Am. Chem. J. 2:204 (June) 1880. 3. Dische, Z.; Shettles, L. B.; and Osnos, M.: New specific color reactions of hexoses and spectrophotometric micromethods for their determination. Arch. Biochem. 22:169 (June) 1949.



SCHWARZ BIORESEARCH, INC. • Dept. 6B • Mount Vernon, New York

BIOCHEMICALS • RADIOCHEMICALS • PHARMACEUTICALS for research, for medicine, for industry



She's Sharpening Knives...

That's right...she's sharpening microtome knives with AO's New Automatic Microtome Knife Sharpener while she busily cuts sections.

You're looking at a perfect team in action... a skilled technician using the famed "820" Microtome and the New AO Knife Sharpener. This combination assures complete control over all the factors necessary for cutting consistently uniform serial sections.

The AO Knife Sharpener provides on-the-spot facilities for honing and polishing knife edge and bevel. Operation is automatic; place knife in holder...set timer...flip the

switch. The unit stops automatically when sharpening cycle is completed. There's never any need for further hand-honing or stropping.

You always have sharp knives on hand to assure the optimum sectioning results that the "820" Microtome is designed to produce.

Ask your AO Sales Representative to show you how little it costs...to put this unexcelled sectioning team to work for you... to help you reduce expensive knife inventories and outside servicing.

For further information or a convincing demonstration...write now.



**American Optical
Company**

INSTRUMENT DIVISION, BUFFALO 15, NEW YORK

Dept. T-2

- ☐ Please send further information on AO's sectioning team... "820" Microtome and New Model 935 Automatic Knife Sharpener.
☐ I would be interested in a demonstration.

Name

Address

City Zone State

IN CANADA write — American Optical Company Canada Ltd., Box 40, Terminal A, Toronto, Ontario