NOW AVAILABLE! APPARATUS FOR HIGH VOLTAGE ELECTROPHORESIS WITH BUILT-IN COOLING SYSTEM

RANGE
1000 to 10,000 VOLTS

PAPER STRIP LENGTHS
600 and 1000 mm

TEMPERATURE
0–15°C.

For full information on this new development write to US Distributors

C. A. Brinkmann & Co.
378-380 Great Neck Rd.,
Great Neck, L. I., N. Y.

ARGO® INOSITOL is now N.F.

The vitamin and lipotropic agent, INOSITOL is included in the new, 1955 edition of the National Formulary.

This pure, crystalline, naturally occurring component of the vitamin-B complex is a constituent of an important class of phospholipids and one of the lipotropic agents which help to regulate the metabolism of fat and cholesterol in the animal body. INOSITOL has been shown to have a synergistic action with other lipotropic agents.

ARGO® INOSITOL, N. F. is shipped in 5, 10, 50, and 100 pound containers. A summary of the recent literature is available upon request. Chemical Division, CORN PRODUCTS REFINING COMPANY, 17 Battery Place, New York 4, N. Y.
GET YOUR ADVANCE COPY
of the General Program-Directory
of the AAAS Atlanta Meeting
by first class mail—early in December

The General Program-Directory of the 122nd Meeting of the AAAS in Atlanta, Georgia, Dec. 26–31, 1955, will be available to anyone, at cost, within the first week in December—whether he can attend the Meeting or not. You will want the General Program-Directory for your reference shelf.

<table>
<thead>
<tr>
<th>Program content</th>
<th>Directory content</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. The three-session program of the International Geophysical Year.</td>
<td>2. Complete roll of AAAS presidents and their fields.</td>
</tr>
<tr>
<td>3. An AAAS-sponsored “Congress” on the shortage of young scientists and science teachers.</td>
<td>3. The more than 265 affiliated organizations.</td>
</tr>
<tr>
<td>4. Programs of the 17 AAAS sections (symposia and contributed papers).</td>
<td>4. Historical sketch and organization of the Association; the Constitution and Bylaws.</td>
</tr>
<tr>
<td>5. Programs of the more than 60 participating societies.</td>
<td>5. Publications of the Association.</td>
</tr>
<tr>
<td>6. The Special Sessions: AAAS, Academy Conference, Conference on Scientific Editorial Problems, National Geographic Society, Phi Beta Kappa, RESA, Sigma Xi.</td>
<td>6. AAAS Awards and Grants—including all past winners.</td>
</tr>
<tr>
<td>7. Details of the Municipal Auditorium—center of the Meeting—and hotels and campuses.</td>
<td>7. Membership figures by sections.</td>
</tr>
<tr>
<td>8. Titles of the latest foreign and domestic scientific films to be shown in the AAAS Science Theatre.</td>
<td>8. Section committees (Council members) in detail.</td>
</tr>
<tr>
<td></td>
<td>10. Future Meetings of the AAAS through 1962.</td>
</tr>
<tr>
<td></td>
<td>11. New and current activities of the AAAS.</td>
</tr>
</tbody>
</table>

Advance Registration

Advance registration has these decided advantages: 1) You avoid delay at the Registration Center upon arrival; 2) You receive the General Program-Directory in ample time to decide, unhurriedly, which events and sessions you particularly wish to attend; 3) Your name is posted in the Visible Directory as the Meeting opens.

The following coupon may be used both by advance registrants and by those who wish only the advance copy of the General Program-Directory.

--- THIS IS YOUR COUPON FOR AN ADVANCE COPY OF THE GENERAL PROGRAM-DIRECTORY ---

1a. □ Enclosed is $2.50 for my advance Registration Fee which brings me the Program-Directory, Convention Badge, and all privileges of the Meeting.

1b. □ Enclosed is $1.50 for only the Program-Directory. (It is understood that, if I should attend the Meeting later, the Badge—which is necessary for all privileges of the Meeting—will be secured for $1.00 more.)

(Check one)

2. FULL NAME (Dr., Miss, etc.) .......................... .................................................................
   (Please print or typewrite) ......................................................
   (Last) (First) (Initial)

3. ACADEMIC, PROFESSIONAL, OR BUSINESS CONNECTION ..............................

4. OFFICE OR HOME ADDRESS ..................................................
   (For receipt of Program-Directory)

5. YOUR FIELD OF INTEREST ..................................................

6. CONVENTION ADDRESS ........................................................
   (May be added later, after arrival)

Please mail this Coupon and your check or money order for $2.50 or $1.50 to the

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE
1025 Connecticut Avenue, N.W., Washington 6, D. C.
AMERICAN MEN
OF SCIENCE

A Science Press Publication
Edited by Jaques Cattell

Volume II
THE BIOLOGICAL SCIENCES

Ready in October
Order now and get the pre-pub discount

Now you can have names and up-to-date biographical facts on over 25,000 leading biologists living in the United States and Canada. Botany, bacteriology, medical research, embryology, neurology, pathology, public health, and zoology are but a few of the fields covered. For each scientist you'll find data on place of business, home address, specialty, educational background, and professional affiliations. Take advantage of these painstakingly accurate facts to find out what you want to know about the leading scientists of today!

Similar biographical data on 43,000 physical scientists are listed in Volume I, The Physical Sciences, now ready, $20 net postpaid.

Volume II. The Biological Sciences, ready in October, $18 pre-pub, $20 post-pub.

------------- Special on-approval offer -------------
for SCIENCE readers

R. R. BOWKER COMPANY
62 WEST 45TH STREET
NEW YORK 36, NEW YORK

Please send me on-approval copies of
AMERICAN MEN OF SCIENCE

... copies of Volume I: The Physical Sciences, now ready, $20.
... copies of Volume II: The Biological Sciences, ready in October, @ $18 pre-pub, $20 post-pub.

☐ Bill me ☐ Check enclosed

NAME __________________________________________

ADDRESS _______________________________________

CITY ___________________________ STATE _________
KLETT
ELECTROPHORESIS

CUSTOM MADE

TOOL FOR THE ANALYSIS
OF COMPLEX COLLOID SYSTEMS, AND FOR
THE CONTROL OF PRODUCTION OF
PURIFIED PROTEINS, ENZYMES, HORMONES

KLETT MANUFACTURING CO.
179 EAST 87TH STREET
NEW YORK, N.Y.

NOW OVER 5100
CHEMICALS

- Ketomalonic Acid
  (Disodium Salt)
- Khellin
- Lactase
- Lactide
- Lanthanum Chloride
- Lanthanum Oxide
- Lauroylcholine Chloride
- Lead Arsenate
- Lead Fluoride
- Lead Salicylate
- Lead Tungstate
- Lecithinase
- Leucinol, 1 (L)
- Leucoriboflavine
- Leucylglycylglycylglycine
- Lipositol
- Lithium Aluminum Hydride
- Lithium Boron Hydride
- Lithium Persulfate
- Lithium Salicylate
- Liver Esterase
- Luteinum Oxide
- Luteocobaltic Chloride
- Luteolin
- Lycopene
- Lysergic Acid
- Maclurin
- Magnesium Ethyl Sulfate
- Magnesium Gentisate

Ask for our new complete catalogue

BIOS Laboratories, Inc.
17 West 60th St. New York 23, N.Y.

Just published: Volume 6 (521 pages)
ANNUAL REVIEW OF
PHYSICAL CHEMISTRY

Thermochemistry
Cryogenics
Heterogeneous Equilibria and Phase Diagrams
Solutions of Electrolytes
Solutions of Nonelectrolytes
The Solid State: Diffusion in Metals and Alloys
Radiation Chemistry and Hot Atom Chemistry
The Quantum Theory of Valence
Electronic Spectroscopy
Vibration-Rotation Spectroscopy
Metal Chelate Compounds
Experimental Molecular Structure; Crystallography
Kinetics of Reactions in Solution
Kinetics of Reactions in Gases
Surface Chemistry and Contact Catalysis
Electrode Processes and Electrical Double Layer
Polymerization Kinetics and Polymer Properties
Colloid Chemistry
Isotopes
Nuclear and Paramagnetic Resonance
Statistical Mechanics

Back Volumes Available
$7.00 postpaid (U.S.A.); $7.50 postpaid (elsewhere)

ANNUAL REVIEWS, INC., Stanford, Calif.
EXPERIMENTAL DESIGN: THEORY AND APPLICATION

by Walter T. Federer, Professor of Biological Statistics, Cornell University

For courses in the design and analysis of experiments in all scientific fields, here is a new book that provides a complete, unified treatment of the subject. The author discusses the advantages, disadvantages, experimental lay-out, and the analysis for each design. He treats analyses of designs with missing observations, the analyses for variations from standard designs, components of variance analyses and covariance analyses in detail, making extensive use of numerical examples, problems, and literature citations to the examples.

Ready in the Fall

VECTOR AND TENSOR ANALYSIS

by Nathaniel Coburn, Associate Professor of Mathematics, University of Michigan

Dr. Coburn provides a unified treatment of vector and tensor analysis, plus a discussion of compressible fluids and homogeneous turbulence. The author develops a general theory of vectors and tensors before making applications to specific subjects. Although vector analysis is treated in the conventional Gibbs manner, a distributive star product has been introduced to prepare the student for the study of more general quantities. August 1955. 341 pages. $7.00

METHODS IN NUMERICAL ANALYSIS

by Kaj L. Nielson, Head, Mathematics Division
U.S. Naval Ordnance Division Plant, Indianapolis, Indiana

Here is a book that shows students how to analyze tabulated data and to find solutions to equations by numerical methods. Dr. Nielson has furnished an up-to-date book for the future industrial mathematician, scientist, or engineer who has a desk or large-scale calculator to aid him in analytical solutions to developmental and design problems. Ready in the Fall

The Macmillan Company
60 FIFTH AVENUE, NEW YORK 11, N. Y.
PERSONNEL PLACEMENT

YOUR ad here reaches over 32,000 foremost scientists in the leading educational institutions, industrial laboratories, and research foundations in the U. S. and 76 foreign countries—at a very low cost.

CLASSIFIED: 18c per word, minimum charge $3.60. Use of Box Number lists 10 additional words.

DISPLAY: Rates listed below—no charge for Box Number. Monthly invoices will be sent on a charge account basis—provided that satisfactory credit is established.

Single Insertion $19.50 per inch
7 inches in one year 92.50
13 times in one year 16.00 per inch
26 times in one year 14.00 per inch
52 times in one year 12.50 per inch

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

POSITIONS WANTED

Biochemist; recent Ph.D.; organic chemistry and bacteriology, industrial experience; well-grounded in basic science; excellent communication skills. Write Box 244, SCIENCE.

Biologist; Ph.D., especially qualified cytology; past 3 year experience as research director in a large research institution. Excellent communication and writing skills. Write Box 244, SCIENCE.

Pharmacologist; Ph.D., 2 years assistant director, pharmaceutical company, research and development; 2 years research assistant, university radiation laboratory, S9-3 Medical Bureau (Burns de Larson, Director), Palmolive Building, Chicago.

POSITIONS OPEN

Creative organic chemist, well-versed in fundamental and practical synthetic know-how, to serve in responsible position on development of new pharmaceuticals; offers fine opportunity for growth and satisfaction. Write Manager, V.A. Hospital, Dallas 2, Texas.

Neuropsychiatrist for chief, neuropychiatric service, new Veterans Administration Hospital; opportunity to open own service of 90 beds; well-equipped, including EEG laboratory; board certification essential; teaching experience desirable; faculty connection available, strong medical school, to right man; active research program now in operation in 8 specialties. Write Manager, V.A. Hospital, Dallas 2, Texas.

(a) Research director; pharmaceutical education and business administration aptitude required; must be good correspondent; under 40; nationally known pharmaceutical concern; excellent Southern location. (b) Physiologist; B.S. or M.S., trained in endocrinology; conduct investigations in physiology of reproduction, small laboratory animals; aid in devising new assay procedures; to $4500; East. (c) Medical bacteriologist, qualified biochemistry; M.S.; experience in proteins, carbohydrates, enzymes; immunology department, etc., general, to $4500; East. (d) Biochemist; Ph.D.; familiar body chemistry; experiences and methods of action of drugs; well-rounded in chemistry, physiology, pharmacology; research development laboratory; Midwest. Woodward Medical Bureau, 185 N. Wabash, Chicago.

(a) Toxicologist; Ph.D. or equivalent training in industrial hygiene; experience in the biological properties of toxic compounds and also, Viroligist to serve as research assistant performing animal and egg inoculations, serological determinations; research department, pharmaceutical company; East. (b) Biochemist, M.S. or B.S.; duties: supervising manufacture of biological products, large company; East; $8500. (c) Assistant advertising manager, one of the leading professional magazines; preferably one experienced in advertising with pharmaceutical or surgical supply company; S9-3 Medical Bureau (Burns de Larson, Director), Palmolive Building, Chicago.

PROFESSIONAL SERVICES

BOOK MANUSCRIPTS INVITED

Write for Free Booklet SC telling how we can publish your book. All subjects considered. New authors welcome.

VANTAGE PRESS, Inc. • 120 W. 31 St., New York 1

THE MARKET PLACE

BOOKS • SUPPLIES • EQUIPMENT

WANTED TO PURCHASE

SCIENTIFIC PERIODICALS

WALTER J. JOHNSON • 125 East 23rd St., New York 10, N. Y.

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. A15, S. CANNER, INC., Boston 19, Massachusetts

Scientific Periodicals, bought at Top Prices, Ashley-Backiff Corp., 24 East 21st Street, New York 10, N. Y.

BACK NUMBER PERIODICALS—Bought and Sold

Tell us what you want!—What have you to offer?

Abrahams Magazine Service

Established 1889

DEPT. P, 56 E. 13th St.
NEW YORK 3, N. Y.

MERCURY CLEANING DISTILLING

Ship us your mercury. We return it immediately in heavy, glass bottles. Non-boiling distilled mercury guaranteed to meet ACS specs. Minimum 10 pounds; slight loss in processing.

LaWall & Harrisson

MERCURY CLEANING DISTILLING

PHARMACOLOGICAL-BACTERIOLOGICAL-CHEMICAL

LaWall & Harrisson

LaWall & Harrisson

Science, Vol. 122
CONSISTENT RATS & MICE

All animals antibiotic free

BUDD MT. RODENT FARM
CHESER, N. J.

 Breeders of a recognized strain of Wistar rats and W. S. mice

POLARIMETER TUBES & ACCESSORIES

for GENERAL, SEMI-MICRO & MICRO POLARIMETRY
HIGH TEMPERATURE, CONTINUOUS FLOW & INVERSION TESTS
Write for List PT-14

O. C. RUDOLPH & SONS
Manufacturers of Optical Research & Control Instruments
P.O. BOX 416
Caldwell, N. J.

SPRAGUE-DAVLEY, INC.
PIONEERS IN THE DEVELOPMENT OF THE STANDARD LABORATORY RAT.

All shipments made from our new modern, quarantined colony.

SPRAGUE-DAVLEY, INC. - P. O. BOX 2071
Phone CEdar 3-5318
Madison, Wisconsin
HOLTZMAN RAT CO.
... offering immediate delivery of rats, both sexes, in close age & weight groups.
Rt. 4, Box 205 Madison 5, Wisc.
Phone: Alpine 6-5573

STAINS
STARKMAN Biological Laboratory

GARCEAU ELECTROENCEPHALOGRAPHS
A.C. Operated Inkless Writing Shipped Ready to Run
No Batteries Require no Shielding Prompt Delivery

THE JUNIOR GARCEAU ELECTROENCEPHALOGRAPH
A simplified inexpensive instrument for recording electrical potentials of the brain. Built-in interference eliminators permit use anywhere, Inkless records—no photography or film development required. Instantaneous localization with any 2 of the 10 leads. Price $575.00 complete.

ENDOCRINE LABORATORIES OF MADISON, INC.
5001 W. BELTLINE HIGHWAY • MADISON, WISCONSIN

CAMBRIDGE GAMMA-RAY POCKET DOSIMETER
This personnel monitoring instrument measures the cumulative exposure to gamma or x-rays over a given period of time. The instrument consists of an ionization chamber, a quartz fibre electrometer and a graduated scale and viewing system. The charging unit comprises a 180 volt “B” battery, a 1½ volt “A” battery, a flashlight bulb, the well for inserting Dosimeter, and the charging control.

SEND FOR BULLETIN 300 G.D.
Other Cambridge Instruments for measuring radioactive emission are the Lindemann-Ryerson Electrometer, “Chang and Eng” Fast Neutron Detector and the Precision Ionization Meter (Failla Design).

CAMBRIDGE INSTRUMENT COMPANY, INC.
3748 Grand Central Terminal, New York 17, N. Y.
PIONEER MANUFACTURERS OF PRECISION INSTRUMENTS

HORMONE ASSAYS
ACTH • Growth • Gonadotropes
Estrogens • Androgens
Corticoids • Progesterone
Others

HYPOPHYSECTOMIZED RATS • ENDOCRINE TOXICITY TESTS

Write for details

ENDOCRINE LABORATORIES OF MADISON, INC.
5001 W. BELTLINE HIGHWAY • MADISON, WISCONSIN
Matheson Coleman & Bell Reagent Chemicals include practically all of the items used in research and analytical work. The Reagent Inorganic Chemicals carry upon the label a statement showing the maximum limits of impurities allowed. The Reagent Organic Chemicals are manufactured to pass the specifications shown in our price list. In addition to A.C.S. Inorganic and Reagent Organic Chemicals we offer many items of U.S.P., N.F., Practical and Technical quality.

Complete stocks of MC&B items are carried at our East Rutherford and Norwood plants and are available either through your laboratory supply dealer or from the East Rutherford or Norwood offices.

Our new 8½" x 11" catalog, listing more than 4000 Reagent Chemicals, Biological Stains, Chemical Indicators and Solutions will be sent to you upon request.
announcing the NEW

AO - BAKER
INTERFERENCE MICROSCOPE

... so accurate that it can resolve 35,000 units of measurement in the thickness of this page

American Optical has joined forces with C. Baker of Holborn, Ltd., England, to make available to American scientists one of the major advances in microscopy within recent years.

The NEW AO-Baker Interference Microscope measures with astounding accuracy . . . even to 1/300 of a wavelength. Not only does it permit interference measurements of optical thickness to a high order of accuracy, but it also affords a practical and reliable method of phase contrast and variable color phase contrast microscopy. Its function extends far beyond that of the normal phase microscope because the phase changes, visible in it, can be measured and converted into other information, such as total protein content of a cell or water content of a living cell. Innumerable important measuring applications for this instrument are constantly being discovered.

Two types of achromatically corrected objectives and matching condensers are offered, shearing and double-focus, in powers of 10X, 40X and 100X (water immersion). The shearing system is particularly suitable for measurements of separated features such as single cells whereas double-focus has been found more useful for examination of continuous specimens, such as sections. The NEW AO-Baker Interference Microscope has been carefully designed to provide an extremely accurate instrument with a minimum of adjustments. The latter can be made very quickly and are surprisingly simple to operate. Specimens require no special preparation. Deliveries will begin about August 15.

American Optical

INSTRUMENT DIVISION
BUFFALO 15, NEW YORK

Dept. U3. Please send illustrated catalog describing the three NEW AO-Baker Interference Microscope models now available.

Name ..........................................
Address ...........................................
City ............................................. State ......