“Eyes Right” Has Never Meant So Much To America

EVEry job in Production for Victory calls for top visual efficiency. Without concession to time, place or condition, work must go on. This means that eyes must function unfailingly and unflinchingly—at lathe, bench and on assembly line, in research and control laboratory, over drafting board and foundry flask.

Upon the shoulders of the nation’s eyesight specialists, skilled by training and experience in the correction of visual defects and conservation of human vision, rests the responsibility of forestalling eyestrain as an unconscious saboteur.

As a maker of ophthalmic products—the instruments used in the scientific examination of the human eye, the spectacle lenses, frames and rimless mountings which these specialists use—Bausch & Lomb has an important part in America’s war effort.

In the development and manufacture of actual fighting equipment, such as rangefinders, aerial height finders, binoculars, aerial map-making equipment, Bausch & Lomb is serving the Armed Forces directly. At the same time, Bausch & Lomb is providing the metallographic equipment, the microscopes, spectrographs, contour measuring projectors, optical glass and special instruments required by other manufacturers in filling military needs.

The ideals, ability and resources which have made the name of Bausch & Lomb a symbol of precision and scientific integrity for 89 years are concentrated upon America’s job at hand.

BAUSCH & LOMB
OPTICAL COMPANY • ESTABLISHED 1853
Three Successful Books

By E. WERTHEIM, University of Arkansas
Textbook of Organic Chemistry

This text is being used with satisfaction in nearly 200 colleges. It is designed for students who will major in chemistry and for those enrolled in premedical or chemical engineering courses. 110 Illus. 830 Pages. $4.00. (1939)


This guide presents experimental material for a year's course in organic chemistry. Directions for conducting experiments in the identification of compounds, and a short section on "spot tests" are included. $2.00. (1940)

Introductory Organic Chemistry

Prepared for use in a brief course in organic chemistry, this new text stresses the points of fundamental importance in the science. Its aim is to establish a link between general chemistry and the more specialized and advanced courses which follow. 82 Illus. 482 Pages. $3.00. (1942)

Note! A Laboratory Guide for use with Introductory Organic Chemistry will be ready for the fall classes.

THE BLAKISTON COMPANY, Philadelphia

ON
GROWTH AND FORM

BY
D'ARCY W. THOMPSON

The long awaited new edition of this famous book, revised and enlarged, will be published on August 25. Price $12.50

CAMBRIDGE UNIVERSITY PRESS
THE MACMILLAN COMPANY
60 Fifth Avenue, New York
CRYSTALLINE BIOTIN and BIOTIN CONCENTRATES

The following solutions of crystalline biotin and biotin concentrates are supplied for research purposes only.

SMACO Solutions Crystalline Biotin suitable for standardization and microbiological assay procedures.

Crystalline Biotin (free acid)
1 ml. ampuls—25 micrograms . . . $4.00 each

Crystalline Biotin (methyl ester)
1 ml. ampuls—25 micrograms . . . 3.50 each

SMACO Biotin Concentrates suitable for biological research.

Biotin Concentrate No. 200
Standardized to contain 20 micrograms per ml. of solution. Bottles of 50 ml. . . . . . . . . . . . . . $5.00 each

Biotin Concentrate No. 1000
Standardized to contain 100 micrograms per ml. of solution. Vials of 5 ml. . . . . . . . . . . . . . 3.75 each

Biotin Concentrate No. 5000
Standardized to contain 200 micrograms per ml. of solution. Ampuls of 2 ml. . . . . . . . . . . . . . 10.00 each

We will be pleased to send on request an 8 x 10 glossy print of typical biotin deficiency in the rat.

Your request for the above print, quotations on larger quantities, or your order, will receive our prompt attention.

Research Laboratories
S. M. A. CORPORATION
CHAGRIN FALLS, OHIO
A constancy of $\pm 1/5^\circ C$ and a uniformity of $\pm 7/8^\circ C$ under full load conditions characterizes the performance of the Castle Precision Incubator No. 554. This is far in excess of the tolerance of $\pm 1^\circ C$, recommended by the American Public Health Association.

Accurate temperature measurements are provided with the use of a single thermometer. Because heat is transmitted by interior radiation rather than by convection, variation throughout the chamber is minimized.

Any heat lost by opening of the door is quickly compensated for by the large heat reserve provided by twenty-two gallons of accurately controlled warm water.

The Model No. 554, illustrated, is recommended for milk analysis by the agar plate method. Other models in varying capacities for various bacteriological applications are also available. Write—

WILMOT CASTLE COMPANY
1212 University Ave.,
Rochester, N. Y.
ADAMS SCOPELITE

Attractively moulded of durable, almost unbreakable Bakelite, it is cool and efficient in operation. Can be used either as a substage lamp (with mirror removed) or in front of the microscope.

Rear curve outlines position of chromium plated concave reflector which serves the dual purpose of intensifying the light and preventing its escape. Louvers, front and rear, cause free circulation of cooling air throughout the lamp without loss of light, so that, even after extended use the lamp can be handled. Frosted daylight filter diffuses the light, giving uniform illumination approximating daylight.

BULBS FOR SCOPELITE (and Other Substage Lamps)

<table>
<thead>
<tr>
<th>Bulb Code</th>
<th>Watts</th>
<th>Volts</th>
<th>Each Price</th>
<th>Dozen Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1493A</td>
<td>10</td>
<td>110</td>
<td>$0.25</td>
<td>$2.70</td>
</tr>
<tr>
<td>A-1493B</td>
<td>15</td>
<td>110</td>
<td>$0.40</td>
<td>$4.32</td>
</tr>
<tr>
<td>A-1493C</td>
<td>10</td>
<td>110</td>
<td>$0.60</td>
<td>$6.00</td>
</tr>
<tr>
<td>A-1493D</td>
<td>25</td>
<td>110</td>
<td>$0.50</td>
<td>$5.40</td>
</tr>
<tr>
<td>A-1493E</td>
<td>10</td>
<td>220</td>
<td>$0.55</td>
<td>$6.00</td>
</tr>
</tbody>
</table>

A-1493—ADAMS Scopelite, complete with 6-foot Underwriters cord and plug, and 10 watt, 110 volt bulb.

Each $2.50, dozen $25.00

A-1493/F—ADAMS Scopelite, as above, but with Corning daylight filter.

Each $3.25, dozen $32.50

New INTERNATIONAL MICRO CENTRIFUGE

For Micro and Semi-Micro Analysis

- Quick starting—1780 r.p.m. in 10 seconds. Smooth performance.
- Powerful brushless type motor for continuous operation.
- Four tube capacity 0.5, 1, 2, 3 and 5 ml. and 10 x 75 mm. test tubes. Either horizontal or angle sedimentation.
- Mechanical brake for rapid stopping.
- Steel protective guard bowl—Sturdy base—Rubber suction feet. Attractively finished in dark gray crackle.

Selling Price $29.00

INTERNATIONAL EQUIPMENT COMPANY

352 Western Avenue

Boston, Mass.

Makers of Fine Centrifuges for More than Forty Years
For the Physiological Laboratory

A New Gaskell Clamp

The Gaskell Clamp with open jaw. Two-thirds the actual size

Write for the Illustrated Catalogue with price-list

Kymographs  Recording Levers
Time Recorders  Manometers
Electrodes  Operating Holders
Keys and Switches  Stands and Clamps
Tambours  Inductorium
Magnetic Signals  Respiration Pump

Parts and Accessories

The HARVARD APPARATUS COMPANY, Incorporated

Dover, Massachusetts

(A non-profit organization for the advancement of teaching and research in physiology and allied sciences)
AMERICAN GEOLOGY, 1850–1900

By Dr. BAILEY WILLIS

STANFORD UNIVERSITY

In 1850 the knowledge of geology was in an early exploratory stage, especially in America. In England and Europe sufficient progress had been made in the study of the stratified rocks and their contained fossils to contrast markedly with American lack of observations. It could not have been otherwise. The first task of a geologist, entering upon a new field, is to discover and locate the various rock formations. He must have a map, upon which to delineate their distribution. But in 1850 the mapping of America was very crude. Even the eastern country was known only in broad outline and the west was imperfectly explored. Nevertheless, by 1850, material progress had been made in determining the ages and distribution of the sedimentary rocks of the United States east of the Mississippi and of Canada. Logan of Canada, Hall of New York, the Rogers brothers of Pennsylvania and Virginia, Safford of Tennessee, and many others who felt the urge to read the record in the rocks, had identified the strata of certain great periods of geological time, had classified them in order of relative age, and had mapped them with such accuracy as the conditions permitted.

That they had been able to accomplish so much was in part due to the fact that the great leaders in English geology, Sedgwick and Murchison, had established for that country a succession of strata and fossils, which is the same as that of eastern North America.

1 Abstract of address before the American Philosophical Society, February, 1942.