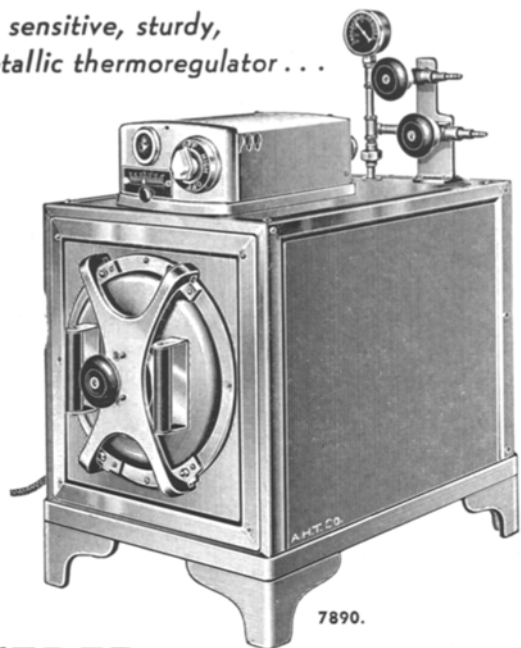


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- ▶ Vacuum held almost indefinitely

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7888. Ditto, Large Model, outside dimensions 20 × 15¾ × 12¼ inches deep, with vacuum chamber 9½ inches deep × 9½ inches diameter. Power consumption 800 watts. For 115 volts, a.c. **507.00**

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Announce Tentative Program for 1955 Short Course

A TENTATIVE PROGRAM has been announced for the 1955 short course on Analytical Techniques to be held August 1-5 at the University of Illinois by the American Oil Chemists' Society in cooperation with the Extension Division of the university, according to G. A. Crapple, chairman of the Education Committee, and S. E. Tierney, program chairman. The schedule follows:

MONDAY, AUGUST 1

MORNING

Welcome and Introduction
Sampling
Determination of Impurities

AFTERNOON

Loss Determinations
Color and Bleach
Melting, Solidification, and Consistency

TUESDAY, AUGUST 2

MORNING

Flavor Evaluation
Stability and Rancidity
Performance Testing

AFTERNOON

X-ray Spectroscopy
Ultra-violet Spectroscopy
Infrared Spectroscopy

WEDNESDAY, AUGUST 3

MORNING

Dilatometry
Chromatography
Fractional Distillation

THURSDAY, AUGUST 4

MORNING

Fractional Solvent Crystallization
Craig Countercurrent Extraction
Microscopy

AFTERNOON

Instrumental Analysis; Automation
Statistical Methods

FRIDAY, AUGUST 5

MORNING

Measurement of Chain Length
Measurement of Unsaturation
Determination of Hydroxyl Groups

AFTERNOON

Triglyceride Structure
Process Control
Establishment of Specifications and Standards

SOCIAL EVENTS will include a fish fry at the Robert Allerton park on the afternoon and evening of August 3, and a banquet at the Urbana-Lincoln hotel on Thursday, the 4th.

Registration fee will be \$50, payable in advance to the Society. The university will collect the fee for food and housing, which will run about \$35. All short course students will be asked to fill in a hotel reservation form for the use of the university.

Local committee personnel will be University of Illinois men: R. T. Milner, chairman, and F. A. Kummerow, food technology department; R. K. Newton, Extension Division; and T. S. Hamilton, animal husbandry.

Headed by Mr. Tierney of Swift and Company, the program committee includes C. W. Hoerr, Armour and Company; W. C. Loy, Wilson and Company; Le Roy Dugan Jr., American Meat Institute Foundation; and A. A. Rodeghier, Durkee Famous Foods—all of Chicago. V. C. Mehlenbacher, Swift and Company, will be program consultant.

1955 Short Course on Analytical Techniques, A.O.C.S.

IMPORTANT

If you are planning to attend the American Oil Chemists' Society Short Course on Analytical Techniques, August 1-5, at the University of Illinois at Urbana, tear out this sheet and complete the blanks and send them to the Society headquarters.

A tentative program was mailed to the membership last month, and a complete program will be available soon.

Address any questions to the American Oil Chemists' Society, 35 East Wacker Drive, Chicago 1, Illinois.

AMERICAN OIL CHEMISTS' SOCIETY
35 E. Wacker Drive, Chicago 1, Ill.

Date _____

I hereby apply for enrollment in the seventh short course to be conducted in cooperation with the University of Illinois Extension Division, at the University of Illinois, Urbana, August 1-5, 1955:

Name _____ Address _____
Type or Print Street City State

Job _____ Company _____

Education _____

Member of Society yes no

Check for \$ _____ enclosed

Registration fee, \$50.

Signature

HOTEL RESERVATION REQUEST

Date

I plan to attend the AMERICAN OIL CHEMISTS' SOCIETY SHORT COURSE to be held on the Urbana Campus of the University of Illinois, August 1-5, 1955. Please reserve a single room _____, a double room _____, for the nights of _____

I expect to arrive: _____

(Date)

(Approximate hour)

Block reservations have been made in Busey Evans Residence Hall, 1111 West Nevada St., Urbana. Rates for four or more nights: single, \$3.25 per day; double, \$2.25 per day. Meals will be served in the Union Building for \$3.50 per day. To be sure of your housing, mail your request to the Society office, 35 E. Wacker Drive, Chicago 1, Ill., before July 20, 1955.

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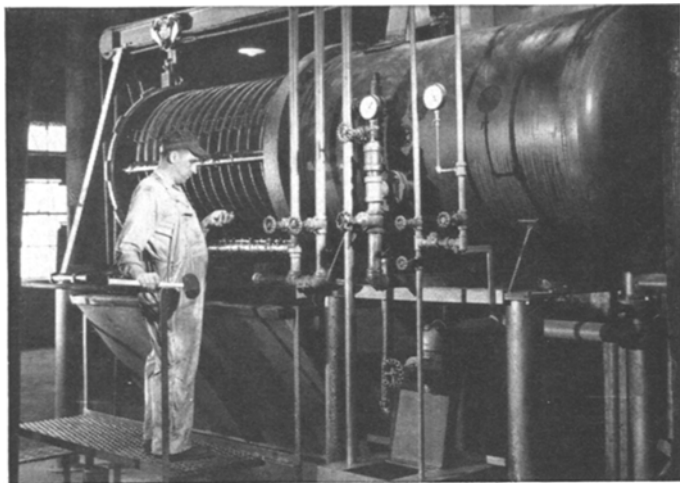
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Fresno Host to Northern California Section

CALIFORNIA OIL CHEMISTS enjoyed an outing to Fresno, the southern limit of the Northern California Section, on February 25 and 26. Highlight of the meeting was dinner at the Tower Palm room and a practical, informative address on antioxidants by Buell W. Beadle of Gooch Laboratories, Los Angeles. Dr. Beadle's authoritative presentation of his subject stimulated a spirited discussion.

Fifty-three attended the meeting, including some from Los Angeles. Groups visited plants of the Sun-maid Company, Roma Winery, Twining Laboratories, Producers Cotton Oil Company, and Ranchers Cotton Oil Company during the two days.

The Northern California Section is grateful to Sam Belden and F. P. Roullard Jr., Producers Cotton Oil Company, and to George Cavanagh, Ranchers Cotton Oil Company, for the excellence of the arrangements and the thought and effort they expended to make this meeting a great success.

E. B. KESTER.

Set May 12 for Ladies' Night

A PANEL DISCUSSION on soap and synthetic detergents is expected to attract the ladies for guest night on May 12, 1955, the next meeting of the North Central Oil Chemists' Society at the Builders club, Chicago. Wives are invited.

Speakers will be Carlyle G. Morton, head of the laundry and textile division, research laboratories, Swift and Company; W. E. Oyler, plant manager, Lever Bros., Hammond, Ind.; and Miss Josephine Ringrose, home economist in detergent development, research laboratories, Armour and Company.

Mr. Morton was manager of textiles and washroom research at the American Institute of Laundering for several years before going to Swift. Mr. Oyler has had wide experience with Lever Bros. Miss Ringrose was with Montgomery Ward and the National Bureau of Standards before going to Armour.

The program is intended to be of interest to chemists who are looking for outlets for by-product fats and to women wishing background on the practical application of soaps and detergents.

A social hour begins at 6 p.m., and dinner will be served at 6:30 p.m., followed by the program at 7:30. The cost will be \$3.25. Reservations may be made with A. F. Kapecki and George Bailie at Wurster and Sanger.

S. S. FEIN
Kraft Foods Co.
Chicago, Ill.

A German affiliate, Sartorius-Fischer, Goettingen, Germany, has been organized by FISCHER AND PORTER COMPANY, Hatboro, Pa., for the manufacture and sales of industrial process control instrumentation and chlorinators. Fischer and Porter also has plants in England, France, and Holland.

BECKMAN INSTRUMENTS INC., of Fullerton, Calif., has completed acquisition of Specialized Instruments Corporation and Spenco Service Company, both of Belmont, Calif., and has formed the Spenco division of Beckman.

SUNSHINE SCIENTIFIC INSTRUMENT, Philadelphia, Pa., announces the purchase of 18 new instruments developed by General Electric Company.

In April, 1920

President of the Society of Cotton Products Analysts in 1920 was R. W. Perry, Toronto, Ontario, Canada. Vice president was F. B. Porter, Fort Worth, Tex., and secretary-treasurer was T. B. Caldwell, Atlanta, Ga.



G. W. Agee resigned as editor of the Chemists' Section of the Cotton Oil Press, after one year of service, and was succeeded by Herbert Bailey. An editorial in the April issue expresses the hope of making the Section into the best technical and scientific oil publication in the world. In part it reads: "Do you realize that these few pages of ours constitute the only journal in the United States devoted exclusively to the chemistry of the oil industry? Chemists of foreign countries—France and Germany, in particular—have for years been publishing their oil researches in periodicals devoted almost exclusively to fats and oils."



David Wesson is the author of a paper entitled "Hydrogenation of Cotton Oil Glycerides."

A.O.C.S. CALENDAR	
1955	Spring Meeting: Roosevelt Hotel, Apr. 18-20, New Orleans
	Fall Meeting: Bellevue-Stratford Hotel, Oct. 10-12, Philadelphia
1956	Spring Meeting: Houston
	Fall Meeting: Sherman Hotel, Sept. 23-26, Chicago

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I N D A G R

Longenecker to Come to Chicago

Herbert E. Longenecker (1938), dean of the graduate school, dean of research in the natural sciences, and professor of biochemistry, University of Pittsburgh, has been named vice president of the University of Illinois and will be head of the professional colleges in Chicago.

A native of Lititz, Pa., Dr. Longenecker is a graduate of Pennsylvania State college, class of 1933, and began teaching at Penn State. From 1936 to 1938 he studied abroad under a fellowship granted by the National Research Council, going to Pittsburgh in 1938. He was associated with C. G. King, discoverer of Vitamin C. In 1944 he was made head of the division of research and natural sciences, and in 1946 he was named dean of the graduate school.

Active in the American Oil Chemists' Society, Dr. Longenecker has been second vice president 1946-47, chairman of the Award Committee 1944-47, a member of the Editorial Advisory Board 1945-48, and a member of the Membership Committee 1944-45.

Announces Fellowship

JESS H. DAVIS, president of Stevens Institute of Technology, Hoboken, N. J., has announced the establishment of the Robert Crooks Stanley Fellowships in engineering and science at the college, to be awarded to full-time graduate students working for their master's or doctor's degree. The fund will eventually total \$250,000, and the awards will be administered by a committee consisting of one faculty member, two trustees, one alumnus, and three members-at-large.

Sixty-eight Union Carbide Scholarships will become effective in the fall of 1955 at 11 additional colleges and universities, marking the first time since the inception of the scholarship fund in 1953 that liberal arts colleges and universities above and below the original size limitation of 500 to 1,500 men have been selected. The decision to include some small colleges and large universities will give better balance to the program which now includes 376 scholarships of a proposed 400.

Publishes Directory and Symposium Papers

THE NEW "Directory of Commercial and College Testing Laboratories" is a successor to the "Directory of Commercial and College Laboratories" published in 1947 by the U. S. Department of Commerce. Responsibility for the compilation and publication of the revised directory has been transferred to the American Society for Testing Materials. The directory lists locations of testing laboratories equipped and prepared to undertake testing on a commercial or fee basis and gives information concerning 278 commercial testing laboratories and their 151 branches or offices. The 48-page paper-covered book is available for \$1.

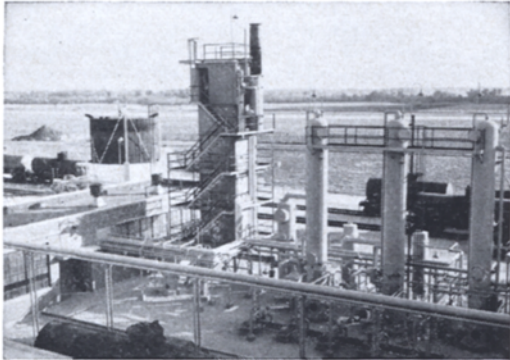
The papers and discussions presented at the 10th and 15th sessions of the 57th annual meeting of the A.S.T.M., which was held in Chicago, Ill., June 15, 1955, have been published in an 88-page book entitled "Symposium on Odor." It is available at \$2.25, from the Society's office at 1916 Race street, Philadelphia 3, Pa.

Defining the Maasbanker

FROM W. Williams, consulting chemical engineer of Fish Hoek, C. P., South Africa, has come a note to clarify the naming of the canned fish exported by the Union: the maasbanker is a member of the *Trachurus* species and is known in South Africa both as horse mackerel and Jack mackerel. It is exported under the latter name to the U.S.A. in canned form. It is a species common in European waters as the horse mackerel, *Trachurus trachurus* (Linn.), and is closely related to the California horse mackerel, *Trachurus symmetricus*. Smaller quantities of a true mackerel, *Scomber colias* (Gmel.), are also caught and canned in South Africa. The fish is usually known as "middle cut" when canned.

Leonard G. Tompkins is technical representative for the new product development department at AMERICAN CYANAMID COMPANY, New York, N. Y.

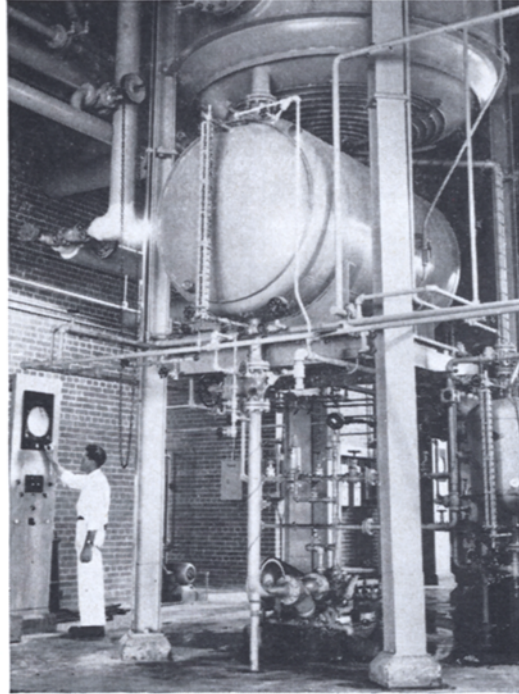
How **GIRDLER** facilities serve new Mrs. Tucker's plant



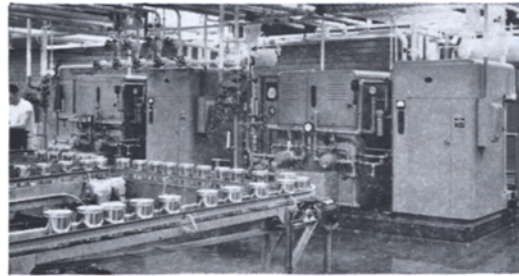
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New Books

REPORTS ON THE PROGRESS OF APPLIED CHEMISTRY, vol. 38, F. Clark, editor (Society of Chemical Industry, London, and Interscience Publishers Inc., New York, n.d. Cr. 8vo., pp. 989, \$6.50, 1953). The volume is bound in cloth, with rather narrow margins, but the type is clear and readable. It is divided into seven main sections under the following headings: Fuel and Fuel Products; Organic Chemistry; Inorganic Chemistry; Biological Products; Textiles, Plastics, Adhesives, and Paints; Food and Agriculture; and Chemical Engineering and Water.

In turn, each main section is further divided into a number of subheadings. Fats, fatty oils, and detergents are covered under Biological Products, and Resins, Drying Oils, etc., are under Textiles, Plastics, etc. A comprehensive subject index and a name index are furnished.

The book is exactly what the title implies, *i.e.*, a series of abstracts of books, articles from scientific journals, and patents. As might be expected, much emphasis is laid on developments in the United Kingdom although developments in other countries are reviewed in considerable detail.

In this reviewer's opinion it is not a book for the general reader. Since it is a part of a series, its proper place is in a scientific library. All of the information presented has been available in Chemical Abstracts. Its principal value is for reference purposes, to which end the detailed bibliographies appended to each section are very helpful.

EDWARD M. JAMES
Swarthmore, Pa.

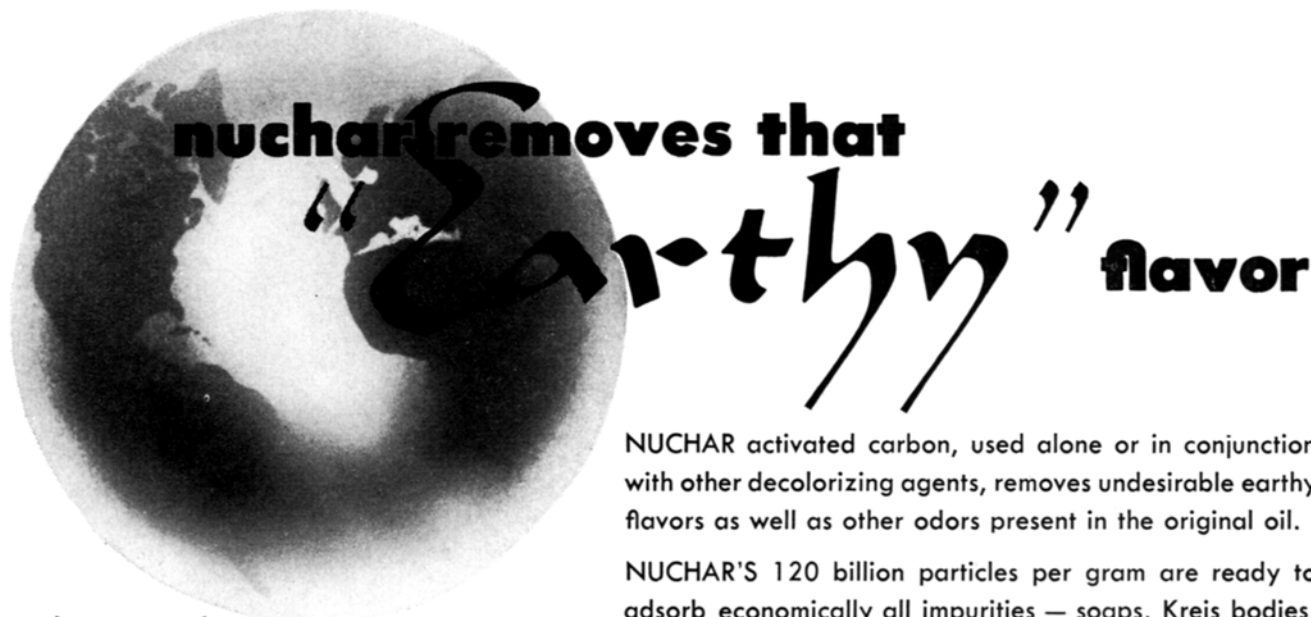
PHYSICAL CHEMISTRY, by A. J. Rutgers, University of Ghent; Appendix on Physical Chemistry of High Polymers (26 pp.) by Turner Alfrey Jr. (Interscience Publishers Inc., New York and London, xix plus 804 pp., 1st English ed., 1954, based on 2nd ed., *Physische Scheikunde*, 1948, \$8.50). The stature of this book is indicated by Debye's Foreword here somewhat freely abridged. "This new book covers its subject very completely from the classical laws of thermodynamics to their statistical interpretation; from the principles of New-

tonian mechanics to those of quantum theory; the behavior of gases, liquids, liquid mixtures, and solids; ionic and non-ionic solutions; laws of chemical equilibrium and of reaction rates; and the atom. The real reason however why I am much pleased to write a few words of introduction is that the development is described as it really happened. This is the way to convey that our science is an art which could not live without the occasional flash of genius in the mind of some sensitive man."

As the quotation indicates, this is neither a simple undergraduate text nor a quick reference work for techniques and data, though many valuable tables of fundamental information are incorporated. This is rather a comprehensive and scholarly survey, with full mathematical accompaniment, of the whole range of physical chemistry. There are 35 chapters and the appendix is followed by a five-page bibliography subdivided according to chapters. The 182 figures are well conceived and highly instructive if not always comparable in style and in a few cases difficult to read, perhaps from over-reduction. The general appearance of the book is that of a typically substantial "Interscience" volume. The printing is good with a few minor imperfections. Scattered misprints and occasional awkward usages detract but little. Examples on pp. 99-102 are "we follow," "atomn," "summatng," "solid dilate"; on p. 157 "integer multiple"; on p. 171 "helium-liquefactor"; on p. 295 "can not been."

It is hard to find serious fault with any aspect of the presentation, so full and competent it is. The arrangement of chapters is not always easy to understand however, and the degree of thoroughness may be sometimes uneven. Thus one page on heterogenous catalysis seems scant and the extensive treatment of Vandaar Waals' Theory of Binary Liquid Mixtures is perhaps essentially a tribute to that eminent investigator.

The strictly practical and the incurious might well avoid this book, but those who venture, and especially the physical chemist with a scholarly affection for his subject, will find unlooked-for rewards and should certainly have access to the volume. Here is a textbook written with style; here is a scholar who can popularize as in such phrases as appear on p. 29 "Now it would be wrong to write . . ." p. 30 ". . . the



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result of the contest . . ." [between orienting forces and thermal agitation], p. 334 "Nernst probably discovered his heat theorem by noticing that . . ." p. 724 [on the discovery of the neutron] "At this stage of developments there appeared in Nature a Letter to the Editor by Chadwick . . ." and p. 750, ". . . a few words of welcome to the youngest members in the family of elementary particles, the mesons."

One final quotation, from p. 743, is most apt and is the only bit of moralizing in this excellent book: "The enormous amounts of energy released by the nuclear reactions in the sun make life on earth possible. We are on the threshold of a period in which energies of this order of magnitude will become accessible to man; wisdom will be wanted more than ever before in the way of their utilization."

E. S. LUTTON
Procter and Gamble Company
Cincinnati, O.



SMALL-SCALE INORGANIC QUALITATIVE ANALYSIS, J. T. Stock and P. Heath (Chemical Publishing Company Inc., 96 pp., 1954, \$2.50). Principles of macro, semi-macro, and micro qualitative analyses are discussed. Apparatus, solutions, and methods for small-scale inorganic qualitative analyses are presented. The methods for identifying both cations and anions are summarized in outline form following the descriptive material. The classical separations used in qualitative work are followed.

The book is of principal interest as a classroom textbook but should be useful to those not having previous experience with small scale technique.

R. C. STILLMAN
Procter and Gamble Company
Cincinnati, O.



ORGANIC REACTIONS, vol. VIII, Roger Adams, editor-in-chief (John Wiley and Sons Inc., New York, 1954, 437 pp., \$12). This is the eighth volume of a series on organic reactions which was initiated in 1942. This volume, like the others, provides an authoritative as well as complete review of special organic reactions by competent authors who have had special experience with the particular reaction. Each chapter in the series provides a survey of the reaction, including a general discussion of the method, modifications, special precautions, scope, and examples of the reaction, and detailed directions for the procedure with expected yields. Each chapter contains tables listing most of the compounds which have been prepared by or subjected to the reaction.

The reactions reviewed in this volume and the authors are as follows: Catalytic Hydrogenation of Esters to Alcohols, by the late Homer Adkins; The Synthesis of Ketones from Acid Halides and Organometallic Compounds of Magnesium, Zinc, and Cadmium, by David A. Shirley; The Acylation of Ketones to Form β -Diketones of β -Keto Aldehydes, by Charles R. Hauser, Frederic W. Swamer, and Joe T. Adams; The Sommelet Reaction, by S. J. Angyal; The Synthesis of Aldehydes from Carboxylic Acids, by Erich Mosettig; The Metalation Reaction with Organolithium Compounds, by Henry Gilman; β -Lactones, by Harold E. Zaugg; and The Reaction of Diazomethane and Its Derivatives with Aldehydes and Ketones, by C. David Gutsehe.

One chapter in this volume represents a new departure in the general plan. The chapter on β -lactones not only describes the synthesis thereof but also the reactions. Wherein the subject-matter of such a chapter is limited, as in this chapter, the reviewer believes that this new departure is to be commended.

This volume, like the others, is certain to be held in high esteem by organic chemists. It will be a working tool for all organic chemists who are involved in research in one way or another. Also all technical libraries which have chemistry, particularly organic chemistry, as one of their major fields should include this volume along with the others of the series. This volume maintains the high standards of previous ones. Dr. Adams and his board are to be commended for continuing these excellent contributions to our permanent literature.

J. C. COWAN
Northern Utilization Research Branch
Peoria, Ill.



AN INTRODUCTION TO INDUSTRIAL MYCOLOGY, by George Smith (Edward Arnold Ltd., London, and St. Martin's Press Inc., New York, \$6, xiv + 378 pp. and 161 figs., 1954, 4th ed.). Smith's book, first published in 1938 and now in its fourth

edition, has received very wide distribution. This results from two basic facts: first, it is the only book extant which is specifically addressed to the worker who must handle the "moulds" and other fungi that are increasingly used in industry; and second, it contains a wealth of concisely stated information which is valuable to the beginner and to the experienced mycologist alike. This book, like its predecessors, is excellently illustrated with photomicrographs taken by the author.

The book opens with a brief introductory chapter designed to orient the reader and to acquaint him with the nature of the fungi and their relationships to other plants. Then follow chapters on General Morphology and Classification and on Nomenclature. The first of these emphasizes the definition of terms commonly encountered and provides thumb-nail characterizations of the major groups of fungi. The latter reviews accepted rules of nomenclature, an aspect of industrial mycology long virtually ignored but now coming prominently to the fore as applications for patents require that specific names must be provided, and sometimes even defended in court.

The various groups of fungi that are important in industrial processes are presented, separate chapters being allocated to certain of these, including: the Zygomycetes, with special reference to the Mucoraceae; The Yeasts; Hyphomycetales, particularly the common saprophytic types; *Aspergillus*; and *Penicillium* and Related Genera. The presentation is never in great detail, but it is thoroughly adequate to cover the vast majority of moulds that will be encountered by the non-specialist. The book closes with a series of chapters that can be read with profit by everyone who works with mould fungi, and this is particularly true of those which deal with techniques of observation and study. His recommendations for the maintenance of a culture collection are particularly germane for this aspect of industrial mycology is all too often taken for granted with the consequent loss of productive strains. The chapter on control of mould growth will be most welcome to everyone faced with problems of microbial spoilage and deterioration, and that on industrial uses of fungi will provide an introduction and key to the literature of this rapidly developing field.

As in the earlier editions, the author has included an annotated list of the more important mycological reference sources for the student who wishes to pursue the study of fungi beyond the scope of this book.

If one wishes either to combat the depredations of the fungi or to use them as biosynthetic agents, it is first necessary to know them! This book is designed specifically to effect such introductions.

KENNETH B. RAPER
University of Wisconsin
Madison, Wis.

Offers Color Symposium Papers

The American Society for Testing Materials announces publication of a group of papers entitled "Symposium on Color of Transparent, Translucent Products" in a 32-page paper-bound book, priced at \$3. The papers were selected mainly to reveal unevenness in the development and use of colorimetric methods. Copies are available from A.S.T.M., 1916 Race street, Philadelphia 3, Pa.

Expands Scholarship Program

Two new scholarships have been set up under the Procter and Gamble scholarship program, each to provide full tuition for four years, an allowance for books and supplies, and an unrestricted additional grant of \$500 each year to the institution. This brings the total educational-aid contributions from the company and from the Procter and Gamble Fund to more than \$650,000 per year.

Fatty Acids Rise

Production of fatty acids in January 1955 totalled 33.7 million lbs., 5.6% above that of the December 1954 level, but still 4.0% below the production of January 1954, according to the Association of American Soap and Glycerine Producers Inc. Total disposition was 34.8 million lbs., some 2.4 million lbs. above the December figures, and approximately 1.7 million above the January 1954 level. Stocks, including works in process, increased slightly to a level of 46.6 million lbs.