

vision of the methods for sugar determinations on cocoa and chocolate; a method for the determination of volatile oil in spices by direct measurement; and a method for the determination of the oxidation value of vinegars to aid in distinguishing between distilled vinegar and "artificial vinegar." The section on "permitted dyes" has been brought up to date and the names adopted in the regulations of the Food, Drug, and Cosmetic Act have been added. Less important methods have been deleted.

The author has again given the references to many of the methods of analysis suggested, and also a list of selected references at the close of each chapter.

The book is written "chiefly for students and beginners" and is well adapted for instructional and laboratory use. Its use as a reference also adds value to this book.—CHARLES W. BLIVEN

The Chemistry of Organic Medicinal Products, by GLENN L. JENKINS, Dean and Professor of Pharmaceutical Chemistry, Purdue University, and WALTER H. HARTUNG, Professor of Pharmaceutical Chemistry, University of Maryland. xii + 457 pp., 78 figs., 16.5 x 24 cm. 1941. John S. Swift Co., Inc., 2100 Locust St., St. Louis, Missouri. Price, \$3.80.

There has been a need for an introductory volume that presents a systematic classification and a survey of the compounds in common use as medicinals. Therefore, this volume will prove most interesting and valuable to anyone interested in medicinal chemistry.

The text is divided into fifteen chapters, fourteen of which present the most important of the synthetic and natural drug products according to accepted chemical classification. The last chapter deals with stereoisomerism including asymmetric synthesis and physiological activity of the optical isomerides. The bibliography throughout is quite representative and good for a volume of such broad scope. A number of useful tables of miscellaneous character (physical properties, chemical classes of compounds, etc.) are included. The volume in general is readable and quite ably written. Although the text is written for students having basic training in chemistry, a good deal of space is devoted to nomenclature, preparation and general properties of each of the chemical classes of compounds discussed. Perhaps some of this space might have been used to better advantage for developing some of the more important topics (phosphoric acid esters, sulfonamide drugs, proteins, etc.) that are treated briefly.

As may be expected in a first edition, there is a comparatively large number of errors. However, considering the number of structural formulas and the general nature of the contents, the percentage of errors is not excessive. Several of the chemical formulas are incorrect, for example: santonin, page 210; acetarsonne, page 326; pyridium, page 257; scarlet red dyes, page 256; the tetranucleotide, page

194; and cholesterol, page 447. The structures for certain other substances are written in a manner no longer accepted, for example: the acridine dyes, pages 373–375; ring structure for betaines, pages 358, 398; quaternary nitrogen compounds and nitro compounds are shown with 5 covalent bonds for nitrogen. In addition, quite a number of typographical errors appear, which likely accounts for the erroneous chemical names assigned to: cacodylic acid, page 322; arsphenamine, pages 327–328; scarlet red sulfonate, page 256, etc.

A number of compounds of biological and pharmacological importance do not lend themselves well to a rigid chemical classification, *e. g.*, cozymase, thiamine, azochloramide, etc. A classification on a basis of general pharmacologic properties and use would appear to offer a distinct advantage in such cases.

It is hoped that in subsequent editions a more complete index will be provided. Fluorescein, for example, appears in the index only under the name of soluble fluorescein; synthalin, although mentioned under guanidine derivatives, and nylon, which is also mentioned in the text, do not appear in the index.—T. C. DANIELS

Materia Medica and Pharmacology, an Introductory Text, by CLAYTON S. SMITH, Ph.D., M.D., and HELEN L. WIKOFF, M.S., Ph.D. College Book Company, Columbus, Ohio, 1941.

This text is of the most elementary nature, written principally for classes in nursing. It employs mimeograph style printing, contains no tables, charts or illustrations, and lacks running page chapter headings.

The *Materia Medica* and *Pharmacology* are considered simultaneously, an approach which does not permit coordinated presentation of either one. The introduction contains brief discussions of definitions, official pharmaceutical preparations, dosage, administration of drugs and prescription writing. Part I consists of drugs acting before absorption, Part II drugs acting after absorption and Part III contains a discussion of arithmetic, percentage solutions and calculation of dosage. An appendix discusses sulfonamide drugs.

Parts I and II are organized by chapter headings with no further classifications of the drugs according to their pharmacological action. Symptoms of drug action, rather than basic pharmacological action, is the principal topic. The text is essentially accurate, but its superficial nature, with omission of any consideration of the fate of drugs, the autonomic nervous system as a unit, or the theory of chemical mediation, and the brevity of discussions on general principles of pharmacology such as synergism, antagonism and types of drug action, impose a tremendous limitation upon its usefulness. While it may be satisfactory for its intended use, it would be of little value for classes with even a minimum scientific background.—LLOYD W. HAZLETON