

## REVIEWS

*Treatise on Analytical Chemistry*. Part Two, *Analytical Chemistry of Inorganic and Organic Compounds*: Vol. 13 *Functional Groups*. Edited by I. M. KOLTHOFF and P. J. ELVING. Interscience Publishers, a Division of John Wiley & Sons, Inc., 605 Third Ave., New York, NY 10016, 1966. xxi + 528 pp. 16.5 × 24 cm. Price \$20.00.

This is only one of the many volumes in this series intended to cover all aspects of modern and classical analytical chemistry. The first volume of Part I, "Theory and Practice," was published in 1959; volumes of both Parts I and II have been appearing nearly every year since.

Volume 13 is a continuation of the organic analysis section and covers various functional groups—active hydrogen, C-methyl, carbonyl, carboxyl, phosphorus-based, and divalent sulfur based.

Staff review

*The Chemistry of Heterocyclic Compounds: Multi-Sulfur and Sulfur and Oxygen. Five- and Six-Membered Heterocycles*. Part II. By DAVID S. BRESLOW and HERMAN SKOLNIK. Interscience Publishers, a division of John Wiley & Sons, Inc., 605 Third Ave., New York, N. Y 10016, 1966. xviii + 793 pp. 15 × 22.5 cm. Price \$44.00. [For a review of Part I see *J. Pharm. Sci.*, 56, 663(1967).]

Part Two of the twenty-first volume in the Weissberger series, "The Chemistry of Heterocyclic Compounds," records the chemistry of the six-membered multi-sulfur and sulfur-and-oxygen heterocycles. Methods of synthesis, structures, and reactions of these ring systems are emphasized equally, and physical properties are thoroughly tabulated and referenced. Elucidation of reaction mechanisms by present concepts and critical evaluation of the older literature are important features of the text.

More than 200 parent heterocycles are now listed for the sulfur and oxygen five- and six-membered heterocycles of this classification. Among the types of compounds found in Part Two are the following: dioxadithianes and dioxadithiins, trithianes and tetrathianes, cyclic sulfite and sulfate esters of 1,3-diols, dioxathianes and oxadithianes (including cyclic disulfonic anhydrides), oxathianes and oxathiins (including sultones), oxathia-, thia-, and thiazaadamantanes, phenoxathiins (including other heterocyclic fusions and substituents), dithianes and dithiins (including cyclic disulfides, thioacetals, and thioketals), thianthrenes, and sulfur dyes. Corresponding selenium and tellurium systems are also included. The literature has been reviewed through 1962.

The pharmaceutical chemist should find much of interest in the variety of heterocyclic systems encountered in this volume, particularly since much of the chemistry described is not found in the standard texts of organic chemistry. Uses and applications, including pharmaceutical, are mentioned.

The index is extensive and differs to some extent from the ordinary. In addition to the inclusion of every derivative cited in the text, designation as to synthesis, property, reaction, or listing in a table is made. Reactants used in syntheses are indexed as well as uses and spectroscopic properties. This work is thorough, competent, and highly readable as well.

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*Extra Pharmacopoeia (Martindale)*. 25th edition. Edited by R. G. TODD. The Pharmaceutical Press, 17 Bloomsbury Square, London, England, 1967. xxviii + 1804 pp. 16 × 23 cm. Price \$27.00.

"Martindale's Extra Pharmacopoeia" was first published in 1883. The 25th edition has been redesigned to enable the editors to include 80% more material than was in the 24th edition. However, it is relatively compact and is easy to read and use. One new feature is that each page is divided into two columns. This is particularly important to assure easy reading due to the number of lines per page. The latter was necessary to get this much material in a single volume. The book abounds in references, each consisting of a 5- to 20-line digest of essential information from the article with the source given in italics at the end of the digest instead of at the end of the chapter.

The editor has done a very selective job of deleting the old and incorporating the new. It contains many references to 1966 articles which is very current for a reference book of this type. Particularly useful is the information on new products, some of which have been approved by the FDA since the book was published on February 28, 1967, and others that are still under investigation in this country.

The book is divided into three main parts. Part 1 is the largest and contains 1500 pages devoted to monographs on drugs and drug preparations in current use. This most useful part is divided into 169 chapters, each covering closely related products, a total of about 2600 substances. The products are grouped pharmacologically, e.g., under the title of Aluminum Hydroxide and other antacids, and Penicillin and other antibiotics. The latter covers 125 pages and contains such useful lists as antibiotics active predominantly against Gram-positive organisms, those with antifungal activity, and those that are resistant to acids and are effective when given