

## REVIEWS

**Handbook of Aerosol Technology, 2nd Ed.** By P. A. SANDERS. Van Nostrand Reinhold Co., 135 W. 50th St., New York, NY 10020. 1979. 526 pp. 15 × 25 cm. Price \$27.50

This book is an updated version of "Principles of Aerosol Technology," which was published in 1970. It has become available at a time when the aerosol industry has completed the changeover from the predominant use of fluorocarbons as the propellant to other alternative propellant systems. The "Handbook of Aerosol Technology" is the first book that considers the development of aerosols in the light of the restrictions placed on the use of fluorocarbons as propellants.

The text is divided into three major sections: homogeneous systems and their properties; emulsions, foams, and suspensions; and miscellaneous. While Dr. Sanders is the major author, five chapters were written by several of his former associates from the Freon Products Division of Du Pont, and much of the new experimental data presented was developed at Du Pont.

Chapters 3 and 4 will be particularly valuable to the experienced aerosol chemist in that the use of the fluorocarbon and hydrocarbon propellants for aerosol products is discussed in light of the restricted use of fluorocarbon propellants. The chapters include all of the necessary physico-chemical data of value to those formulating aerosol products. While the author includes much information about the fluorocarbon propellants, these propellants can be used only for inhalation-type aerosol products that are covered by a New Drug Application and for an extremely limited number of vaginal foams.

The chapters on containers and valves have been updated and supply the reader with the required knowledge of these components. The chapter on filling methods is adequate but should have included greater details about the filling of products utilizing hydrocarbon propellants. Since the hydrocarbon propellants are flammable, they must be handled differently from the fluorocarbons. A thorough discussion of vapor pressure, spray characteristics, solvency, viscosity, and density is presented. Much of the data in these chapters deal with fluorocarbons and are of limited value based on present regulations. However, data are given for other fluorocarbons such as fluorocarbon 22, which may be approved for use in the future.

The chapter on stability is especially well written and includes the various test methods used to determine the stability of aerosols. Since aerosols now utilize a hydrocarbon propellant, the chapter concerned with flammability is essential. Dr. Sanders also indicates the various regulations involved.

Section II deals with emulsions, foams, and suspensions. The basic aspect of emulsion technology is covered, and much research data of tremendous value to the formulating chemist are supplied. Both aqueous and nonaqueous foams and other systems are discussed, which should interest developers of pharmaceutical aerosol dosage forms. This section alone is worth more than the cost of the book. The material presented is of value to anyone interested in surface chemistry and emulsions, not only to those interested in aerosols.

Section III concerns fluorocarbons in the atmosphere and technical programs in the atmospheric sciences. These chapters are of limited value but present the concerns of various organizations as to the use of fluorocarbons as propellants. However, the final chapters dealing with the sampling and analysis of aerosol products and the toxicity of fluorocarbon propellants are related to the development of these products and are of interest.

This book is recommended for use by both the experienced and the newcomer and should be part of the required library of all laboratories.

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**Alicyclic Chemistry, Vol. 6.** (A Specialist Periodical Report). Edited by M. A. McKERVEY *et al.* The Chemical Society. 1978. 357 pp. 13 × 22 cm. Price \$56.00. (Available from Special Issues Sales, American Chemical Society, 1155 16th St., N.W., Washington, DC 20036.)

This sixth volume of an annual series is devoted to a summary of the literature of 1976 describing the chemistry of alicyclic compounds. Each chapter is devoted to a different alicyclic system, beginning in Chapter 1 with three-membered rings and progressing through four-, five-, and six-membered ring systems in subsequent chapters. The last two chapters in the book deal with surveys of literature describing the chemistry of medium- and large-ring compounds and bridged carbocyclic compounds.

Each chapter contains summaries of the literature dealing with structural studies of the various alicyclic systems including both molecular orbital and spectroscopic investigations. The literature of 1976 describing conformational aspects of a variety of alicyclic systems also is summarized in the appropriate chapters. In addition, reports of novel syntheses and chemical reactions of the various alicyclic systems are provided.

Each chapter is well illustrated with structural and chemical formulas. The literature citations are provided conveniently on the same page as the text material. While this book does not have a subject index, a useful author index is included.

Volume 6 of "Alicyclic Chemistry" would be a useful addition to the personal library of chemists and spectroscopists interested in having a concise and thorough review of the literature (of 1976) in this area. Natural products chemists should find this publication useful in terms of an annual review of the chemistry of a variety of alicyclic compounds of natural origin. It is refreshing to note that the current volume of this series sells for the same price as Volume 5.

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**Forensic Toxicology: Controlled Substances and Dangerous Drugs.** By W. T. LOWRY and J. C. GARRIOTT. Plenum Press, 227 W. 17th St., New York, NY 10011. 1979. xvii + 445 pp. 15 × 23 cm. Price \$37.50.

A retrieval of archival data organized in alphabetical order is the purpose of this new hard-covered book. After eight introductory and explanatory chapters comprising 116 pages, the book covers information in monograph form. For each drug entity, which includes both American and foreign manufacturers, the structural formula is presented along with its synonyms, chemical name, trade name, pharmacological classification, biochemical consideration, toxicity data with blood levels, when available, and even some pharmacognosy data where applicable. In addition, each drug is boldly classified as: (a) noncontrolled, (b) dangerous, or (c) scheduled with the specific schedule.

The title is misleading in that one does not find classical forensic toxicology, but the authors did not intend it to be a forensic toxicology text. Apparently, the authors used the title for lack of a better description. It is a reference book intended for attorneys, toxicologists, or chemists who need legal, chemical, and toxicity information on various drugs.

For pharmacists who know the drug laws, the introductory chapters are of little value. The first seven chapters, covering some 100 pages, include definitions and explanations of pharmaceutical dosage forms (from aerosols to tinctures) and scheduled, legend, excluded, and excepted substances. Chapter 4 deals specifically with the regulation of controlled

substances and includes a copy of the Drug Enforcement Administration form for registration under the Controlled Substances Act of 1970. It also includes general information known to all practicing pharmacists concerning security requirements, order forms, etc.

Chapter 6 gives the requirements for exception of a preparation from all or part of the Act. This information is followed by 21 pages of alphabetically listed drug preparations indicating which are excepted. For some preparations, an indication is given that none is excepted. Chapter 5 (3 pages long) lists preparations that are excluded from any schedule and that can be sold over the counter, such as Vicks Inhaler which contains L-methamphetamine (L-desoxyephedrine). Some of these items are excluded from the Act only in a given preparation; L-methamphetamine is a Schedule II substance but is excluded only in a preparation like Vicks Inhaler.

Chapter 8 deals with the analytical techniques used for drug identification and serves only to familiarize the reader with the names of the techniques and with what might be accomplished by a chemist using the instrument or technique.

Chapter 9 is the bulk of the book and deviates from the subtitle because it includes controlled and noncontrolled substances. The implication from the title of Chapter 9 is that commonly abused substances are included. However, many listings do not constitute abused drugs; misused but not abused! For example, the noncontrolled substances acetaminophen, acetanilide, lactose, and salicylate are included. The information supplied is useful from a clinical or forensic view point.

During the 1st week that I had the book, I referred to it twice and both times I found the data and/or information I needed on a specific drug. The book is useful in my work; the same may not be true for the community or hospital pharmacist.

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**Encyclopaedia of Antibiotics, 2nd Ed.** By JOHN S. GLASBY. Wiley, One Wiley Drive, Somerset, NJ 08873. 1979. 467 pp. 18 × 26 cm. Price \$60.00.

The second edition has been expanded to include over 400 new antibiotics which have been discovered since publication of the first edition. As in the previous edition, formulas, structures, melting points, origin, methods of purification and preparation, and patent references are given for the antibiotics. Toxicity and activity are indicated for many of the antibiotics. This book would be a valuable reference source for scientists and students working with antibiotics.

Staff Review

**The Family Prescription & Medication Guide.** By ALBERT M. PAWLINA. Prentice-Hall, Englewood Cliffs, NJ 07632. 1979. 367 pp. 15 × 21 cm. Price \$13.95 hard cover, \$6.95 soft cover.

This nontechnical book is intended to guide the individual patient on appropriate drug use. The first section lists alphabetically about 250 commonly used drugs and summarizes their brand names, medical use, and possible side effects. An alphabetical arrangement of both generic and brand names, identifying the manufacturers and components of each product, follows. Common medical and pharmaceutical terms are defined in the third section. The Appendix tables list some common and serious food-drug and drug-drug interactions.

Staff Review

*Applied Therapeutics for Clinical Pharmacists. 2nd Ed.* Edited by MARY ANNE KODA-KIMBLE, LLOYD Y. YOUNG, and S. KATCHER. Applied Therapeutics Inc., P.O. Box 31-747, San Francisco, CA 94131. 1978. 944 pp. 20 × 26 cm. Price \$31.50.

*Molecular Structure by Diffraction Methods. Vol. 6.* By L. E. SUTTON et al. The Chemical Society. 1979. 338 pp. 13 × 22 cm. Price \$72.50. (Available from the American Chemical Society, 1155 16th St., N.W., Washington, DC 20036.)

*Piroxicam. No. 1. International Congress and Symposium Series.* Edited by W. M. O'BRIEN and E. H. WISEMAN. The Royal Society of Medicine. 1978. 111 pp. 16 × 24 cm. Price \$10.25. (Available from Grune and Stratton, 111 5th Ave., New York, NY 10003.)

*Pregnancy Metabolism, Diabetes and the Fetus. Ciba Foundation Symposium 63 (new series).* Elsevier/North-Holland, 52 Vanderbilt Ave., New York, NY 10017. 1979. 326 pp. 16 × 24 cm. Price \$39.50.

*Principles of Organic Stereochemistry. Vol. 6. Studies in Organic Chemistry Series.* By BERNARD TESTA. Dekker, 270 Madison Ave., New York, NY 10016. 1979. 248 pp. 15 × 23 cm. Price \$14.50.

*The Alkaloids. Chemistry and Physiology. Vol. XVII.* Edited by R. H. F. MANSKE and R. G. A. RODRIGO. Academic, 111 5th Ave., New York, NY 10003. 1979. 611 pp. 15 × 23 cm. Price \$55.00.

*Progress in Pharmacology. Vol. 2, No. 2. Action of Cardiac Glycosides on the Excitation-Contraction Coupling in Heart Muscle.* By HEINZ LULLMANN and THIES PETERS. *Drug Absorption from Abnormal Gastrointestinal Tract.* By M. J. MATTILA and V. M. K. VENHO. Gustav Fischer Verlag, Postfach 72 0143, D 7000 Stuttgart 70, West Germany. 1979. 86 pp. 16 × 24 cm. Price DM 41.50 (for the series).

*Advances in Cancer Chemotherapy. Vol. 1.* Edited by ANDRE ROSOWSKY. Dekker, 270 Madison Ave., New York, NY 10016. 1979. 297 pp. 15 × 23 cm. Price \$29.75.

*Disposition of Toxic Drugs and Chemicals in Man. Vol. 2. Peripherally-Acting Drugs and Common Toxic Chemicals.* By RANDALL C. BASELT. Biomedical, P.O. Box 495, Davis, CA 95676. 1978. 281 pp. 15 × 23 cm. Price \$22.50.

*Carbohydrate Chemistry. Vol. 10. A Specialist Periodical Report.* By J. S. BRIMACOMBE et al. The Chemical Society. 1978. 524 pp. 13 × 22 cm. Price \$64.00. (Available from the American Chemical Society, 1155 16th St., N.W., Washington, DC 20036.)

*Carbon-13 NMR Shift Assignments of Amines and Alkaloids.* By MAURICE SHAMMA and DAVID M. HINDENLANG. Plenum, 227 W. 17th St., New York, NY 10011. 1979. 303 pp. 15 × 23 cm. Price \$29.50.

*Central Nervous System Pharmacology: A Self-Instruction Text, 2nd Ed.* By DONALD E. McMILLAN. Little, Brown, 34 Beacon St., Boston, MA 02106. 1979. 166 pp. 21 × 26 cm. Price \$12.50.

*A Color Atlas Of The Rat. Dissection Guide.* By RONALD J. OLDS and JOAN R. OLDS. Wiley, 605 Third Ave., New York, NY 10016. 1979. 112 pp. 13 × 19 cm.

*Handbook on Drug Abuse.* Edited by ROBERT I. DUPONT, AVRAM GOLDSTEIN, and JOHN O'DONNELL. National Institute on Drug Abuse, U.S. Department of Health, Education, and Welfare and Office of Drug Abuse Policy. 1979. 452 pp. 19 × 26 cm.

*IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Vol. 19. Some Monomers, Plastics and Synthetic Elastomers, and Acrolein.* World Health Organization, 1211 Geneva 27, Switzerland. 1979. 513 pp. 17 × 24 cm. Price Sw. fr. 60.

*Issues in Pharmaceutical Economics.* Edited by ROBERT I. CHIEN. Lexington Books, D.C. Heath, Lexington, MA 02173. 1979. 246 pp. 16 × 23 cm. Price \$17.95.

*The Alkaloids. Vol. 8.* By M. F. GRUNDON et al. The Chemical Society. 1978. 276 pp. 13 × 22 cm. Price \$52.75. (Available from the American Chemical Society, 1155 16th St., N.W., Washington, DC 20036.)

*Biosynthetic Products for Cancer Chemotherapy. Vol. 3.* By GEORGE R. PETTIT and RICHARD H. ODE. Plenum, 227 W. 17th St., New York, NY 10011. 1979. 15 × 23 cm. 197 pp. Price \$32.50.

*Quantitative Structure Activity Relationships of Analgesics, Narcotic Antagonists, and Hallucinogens.* National Institute on Drug Abuse. U.S. Government Printing Office, Washington, DC 20402 (Stock No. 017-024-00786-2). 487 pp. 14 × 23 cm.