The short chapter on Anti-Infective Agents by P. Johnson and J. D. Coombes deals with the biotransformation of some unusual structures while covering antiparasitics, antibiotics, antimycotic agents, antidiarrheals, antitubercular drugs, antivirals, and sulfonamides. Interesting interspecies and *in vivo–in vitro* comparisons pervade the coverage of Prostaglandins and Steroids by G. R. Bourne and D. E. Hathway. In the chapter on Food Constituents, D. E. Hathway objectively evaluates the saccharin and cyclamate problems under the heading of sweetening agents and deals with single-cell proteins, flour, vitamins, urethane and diethyl dicarbonate, food colorants, flavoring principles, and natural constituents.

C. T. Bedford reviews Agricultural Chemicals in sections on animal health products, rodenticides, insecticides, herbicides, and fungicides. This chapter is enlivened by descriptions of an anticoagulant with selective toxicity for vampire bats, an anthelmintic that is degraded to benzene, and an ususual example of *N*-dearylation. C. T. Bedford also contributed the final chapter, Industrial Chemicals and Miscellaneous Organic Compounds, which contains sections on aliphatic compounds, aromatic compounds, heteroaromatic compounds, and organometallic and inorganic compounds. Like the previous chapter, this chapter summarizes the biotransformation of many important environmental contaminants. Some of the more interesting reactions involve the formation of a metabolite of 4-dimethylaminophenol, which contains three glutathione residues attached to a single aromatic ring, and the formation of phosgene and carbon monoxide as metabolites.

The few typographical errors in this book are readily understood, as are the misspellings of the names of some prominent scientists in the author index. The compound index lists only substrates, not metabolites. More unfortunate is the absence of a comprehensive subject index that would enable readers to use the volume cross-sectionally; for example, to collect valuable information on studies performed in the wide variety of species covered in the volume (including humans, subhuman primates, sheep, cattle, lambs, pigs, tree shrews, and insects) or on reaction types or sites of biotransformation.

Overall, this volume is recommended highly as an organized source of metabolism–pharmacokinetics literature on important xenobiotics of many kinds. One of its major achievements is that it demonstrates the richness of opportunities for valuable future investigations.

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Quality Control in the Pharmaceutical Industry, Vol. 3. Edited by M. S. COOPER. Academic, 111 Fifth Ave., New York, NY 10003. 1979. 292 pp. 15.5 × 22.5 cm. Price $29.50.

Volume 3 of this series consists of six chapters covering the interpretation of current good manufacturing practice regulations, the auditing function in the total control of quality, filtrative sterilization with porous membranes, bioavailability standards for pharmaceutical products, quality control of poliomyelitis vaccines, and quality control of ophthalmic products.

The chapter by A. S. Arambulo on "Interpretation of Current Good Manufacturing Practice Regulations" exceeds 100 pages and presents an excellent comprehensive review. The concept and parts of the regulations are discussed and illustrated by examples. This chapter should be of special interest to graduate students and recent graduates who are joining the pharmaceutical industry and to management personnel who have not been trained as physical or biological scientists.

The chapter on "Auditing Function in the Total Control of Quality" by A. J. Schmitz, Jr., reviews the quality control of the product and the quality control of operations and control techniques. Auditing includes managerial review of quality assurance to a firm to procure, produce, distribute, and control all phases of the function of a firm including facilities, personnel, standards, and the auditing method.

The chapter on "Filtrative Sterilization with Porous Membranes" by T. H. Meltzer and R. C. Lukaszewicz is concerned with the technology of porous membranes. It does not discuss sterility testing, but it does discuss pore properties, manufacture, filter rating, retentivity, and types of filters used. Prefilters and filter construction, design, preparation for use, and usage are discussed.

The chapter on "Bioavailability Standards for Pharmaceutical Products" by R. V. Smith and G. J. Yakatan is the shortest chapter. It presents elemental remarks on bioequivalency and gives an overview of analytical methods and their selection in bioavailability studies.

The chapter on "Quality Control of Poliomyelitis Vaccines" is by P. B. Stone. A review is given of tissue culture and animal testing of inactivated polio vaccine and the testing of live polio vaccine for adventitious agents, mycoplasma, and identity.

The chapter on "Quality Control of Ophthalmic Products" by J. D. Mullins and T. C. Fleming presents an elemental review of the anatomy of the eye, absorption, ophthalmic dosages, formulation, and processing.

This volume presents useful information for those seeking an overview of quality control in the specific areas covered; however, pharmaceutical scientists currently involved in quality assurance may find the treatment too cursory.

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Handbook of Analytical Derivatization Reactions. By DANIEL R. KNAPP. Wiley, One Wiley Drive, Somerset, NJ 08873. 1979. 741 pp. 15 × 23 cm. Price $34.95.

This book presents a collection of analytical derivatization methods for gas chromatographic, liquid chromatographic, and mass spectral analysis. The reactions involve only the covalent derivatives of organic compounds formed prior to analysis. Part I briefly discusses the uses of analytical derivatization, the types of derivatives formed, and a typical apparatus employed in such reactions.

Part II features 15 sections concerning the derivatization of particular compound types. Among the classes considered are steroids, prostaglandins, and drugs. An overview of derivatization for the sample type is given along with specific derivatization methods. For each major compound type, the derivatization reactions are organized further into subsections of the compound type and within each subsection according to the type of derivative formed. Each method description includes structural formulas for the reaction, experimental directions, and references to the original literature. Sections on derivatives for substituent location by mass spectrometry and derivatives for chromatographic separation of optical isomers also are included.

Part III contains author and general subject indexes along with appendixes listing the composition of brand name reagents and U.S. and foreign suppliers of reagents and apparatuses used for analytical derivatization. An index of the derivatives and reagents discussed in Part II also is included.

This book should serve both as a self-contained methodology reference and as an introduction to the literature on analytical derivatization.

Staff Review

Pharmacognosy, 11th ed. By G. E. TREASE and W. C. EVANS. Cassell and Collier Macmillan Publishers Ltd., 35 Red Lion Square, London WC1R 49G, England. 1978. 784 pp. 16 × 23 cm. Price $32.50.

This is the 11th edition of a longstanding series of revisions that trace their origin to the original work in 1934. The latest revision reflects the increasing awareness and knowledge of the active constituents of natural, particularly vegetable, drugs. The book has been partially rearranged from the 10th edition with lengthy revisions in the parts dealing with drug sources, including production and quality control and the consideration of the various classes of drugs of biological origin.

The book is composed of eight parts with a total of 41 chapters, including an index. It is liberally filled with numerous structural formulas, pictures (none in color), tables, and illustrations. Part 1 (Chapters 1–3) deals with drug classification, the literature of pharmacognosy, and plant nomenclature and taxonomy. Part 2 (Chapters 4–7) covers plant morphology, anatomy, histology, and cellular content. Part 3 (Chapters 8–12) discusses the botanical and chemical characteristics of the more important orders and families of both nonflowering and flowering plants with references taken from Volumes 74–84 of *Chemical Abstracts*. Part 4 (Chapters 13–18) includes a discussion of the sources of crude drugs, drug production, quality control, drug deterioration, and plant growth regu-