as drug analysis or pharmaceutics, although the information contained in each volume can be used as reference material.

The volumes are highly recommended to any scientist who is actively involved in drug research and development.

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Handbook of U.S. Colorants for Foods, Drugs, and Cosmetics. By DANIEL M. MARMION. Wiley-Interscience, One Wiley Drive, Somerset, NJ 08873. 1979. 350 pp. 13.5 × 21 cm.

The purpose of this book is to give a general survey of the colorants used in the United States in foods, drugs, and cosmetics. The author divided his book into three approximately equal parts. The first one offers a concise, well-written summary of the regulations related to coloring agents. It deals with the permanent and temporary listing of the colorants and sums up their properties, specifications, permitted uses, and limitations.

The second part of the book is a useful survey of the qualitative and quantitative analytical procedures applied for the colorants and their impurities. The author describes a wide range of techniques such as column, paper, and thin-layer chromatography, thermal analytical methods [differential thermal analysis (DTA) and differential scanning calorimetry (DSC)], spectrophotometry, IR spectrometry, and NMR spectroscopy. Model spectra and thermograms help the reader to understand the interpretation of the plotted data. The selected examples are presented in simple, clear language with good diagrams where needed, and they can be followed easily by chemists or technicians with appropriate training in analytical laboratory techniques. A reasonably up-to-date bibliography in each chapter assists those who desire more theoretical background or technical details.

The last section of the book basically is an extended biography, with ample comments by the author, on the analysis of colorant mixtures and commercial products such as beverages, cosmetics, drugs, and meat. These chapters, of course, were not intended to cover every possible product or application; nevertheless, the selection is a good starting point for the analyst who has to solve problems in the analysis of color additives.

In summary, this book is a first in this area. While the scope is restricted to color additives used in the United States, the book also may help professionals in other countries who are manufacturing, controlling, or using colorants.

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CRC Handbook Series in Clinical Laboratory Science, Section B: Toxicology, Vol. 1. Edited by DAVID SELIGSON and IRVING SUNSHINE. CRC Press, 2255 Palm Beach Lakes Blvd., West Palm Beach, FL 33409. 1978. 414 pp. 19 × 26 cm. Price $54.95 ($62.95 outside the United States).

The preface states that "in the last few years, there has been a flood of scientific articles dealing with use and misuse of chemical agents. From this surfeit has come a plethora of data which need to be at the fingertips of many scientists." This volume is an attempt to fill that need.

The book consists of five chapters. The first and major chapter encompasses slightly over 300 pages or 75% of the book. This chapter is a detailed presentation of the chromatographic separation of drugs and chemicals. It is divided into several subsections including a basic introduction to chromatography, a presentation of GC, a presentation of TLC, and a final section on high-pressure liquid chromatography (HPLC). These sections include extensive tables on the methodology to be employed to separate hundreds of chemicals of interest to the analytical toxicologist. These tables include listings of numerous solvent systems, which are frequently indexed according to their R_f values. The section on HPLC is the least extensive of the sections on chromatography but is still a valuable introduction to the technology.

The second major chapter is on the immunoassay of drugs and includes a brief description of the development of radioimmunoassay. This chapter lists 70 drugs that can be quantitated by this technique and includes over 400 references.

The third chapter has microcrystalline tests for approximately 250 drugs and chemicals with references and explanations for each particular test.

The fourth chapter is a tabulation of solubilities of numerous antibiotics arranged in two tables. One table gives the solubility of 76 antibiotics in 24 solvents at 28°. The second table includes 53 additional antibiotics and their solubilities at 21° in 24 solvents.

The last chapter is a tabulation of approximately 600 chemicals arranged in ascending order of their melting points.

In summary, as stated in the preface, this book is a compilation of a large number of tables dealing with the separation and identification of toxic chemicals. The one drawback is that it takes a fair amount of time to become familiar with its organization since the tables frequently are extremely long. However, this book should be valuable to individuals involved with identifying chemicals in biological systems.

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Sustained and Controlled Release Drug Delivery Systems, Vol. 6. Edited by JOSEPH R. ROBINSON. Dekker, 270 Madison Ave., New York, NY 10016. 1978. 773 pp. 15 × 23 cm. Price $59.75.

The book starts with a standard overview of controlled-release delivery systems, but the inclusion of the role of disease states and of circadian rhythm makes the chapter stimulating. Chapter 2 also gives standard material with a brief discussion of liposomes. Reference 200 in this chapter is cited incorrectly. Salicylate, not aspirin, has a biological half-life of 6 hr. Chapters 3 and 4 discuss physical methods of obtaining a sustained-release drug delivery system.

Chapter 5, as written, seems totally irrelevant to the rest of the book and should have been omitted. Chapters 6 and 7 give interesting accounts of the prodrug and biomedical engineering approach. Chapters 8 and 9 give the classical pharmacokinetic picture of sustained-release systems.

In general, the book provides a current and comprehensive picture of the sustained-release product area and is recommended to anyone interested in understanding the principles, technologies, and applications of controlled-release drug delivery systems.

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Microcapsule Processing and Technology. By ASAJI KONDO. Edited and revised by J. WADE VAN VALKENBURG. Dekker, 270 Madison Ave., New York, NY 10016. 1979. 182 pp. Price $22.50.

This hard-bound book represents an edited English revision of the original text published in Japanese by Asaji Kondo in 1970. The first four chapters provide an in-depth discussion into the history, general principles, and applications of microencapsulation. The remaining 14 chapters examine various methods of preparing microcapsules. In all cases, the author attempted to simplify each system, with detailed explanations of the various procedures employed to manufacture microcapsules. Schematic diagrams, tables, and scanning electron micrographs are scattered liberally throughout the text and adequately illustrate the concepts under discussion. The bulk of the book is devoted to explana-