

REVIEWS

Principles of Pharmaceutical Accounting. By FRANCIS A. MARIANO, EDWARD J. ZABLOSKI, and COLMAN M. HERMAN. Lea & Febiger, 600 Washington Square, Philadelphia, PA 19106. 1980. xi + 241 pp. 18 × 26 cm. Price \$19.50.

Undergraduate pharmacy students and practicing pharmacists are the intended audience for this book on accounting principles. The major advantage of this book is that it was designed specifically for this audience. It ignores the concepts relevant primarily to multinational manufacturing conglomerates which are found in standard accounting texts, while including topics such as reconciliation of bank statements and determining prescription dispensing costs.

Most of the book is devoted to financial accounting (bookkeeping or the accumulation and summarization of financial data) rather than managerial accounting (the use of financial data to make management decisions). This reviewer recognizes that it is difficult for students to learn to use data properly without some background in how the data were generated.

While tables and figures are abundant, the amount of actual textual material is sparse. Terms tend not to be defined. It is assumed that the reader knows what gross profit is or will figure it out from its use. Examples tend to be used in place of definitions ("Cash includes" "Inventory consists of items such as"). It is 150 pages after "cash" is introduced that the reader learns that a certificate of deposit is an investment, not cash. The reader never is told that a bottle of aspirin for resale to a patient is inventory, while if the aspirin is consumed in the pharmacy by employees with a headache, it is a supplies expense.

Conspicuously absent in the book is any mention of UCAS (Uniform Cost Accounting System for Pharmacy). Also lacking is any guidance on what the pharmacy owner should look for in selecting an accountant or what services can be provided by an accountant.

The review questions and exercises at the end of each chapter are helpful aids in reinforcing the concepts presented.

It is not a compliment to say that this book is long overdue. It reflects a concept of the pharmacist keeping his or her own books and being his or her own accountant rather than managing a practice in which annual sales may be in excess of a half-million dollars.

As the only text of its kind in print, individual faculty members should review this book for possible use by students. Managers of community pharmacy practice are more likely to find that, although it is considerably more expensive, UCAS will more effectively satisfy their needs.

Reviewed by Maven J. Myers
Philadelphia College of
Pharmacy and Science
Philadelphia, PA 19104

and why a certain charcoal may be more effective than other charcoals for adsorption of a specific chemical. Chapter 4 is devoted to a discussion of the five classical papers of A. H. Anderson, which were published between 1946 and 1948. These publications are important because they summarized many earlier studies on activated charcoal and reported the definitive studies of Anderson, which served as the basis for subsequent work by many investigators.

Chapter 5 discusses the antidotal aspects of activated charcoal, with commentaries on characteristics to be considered in the selection of the most suitable charcoal preparation for oral antidotal uses (e.g., acid-washed charcoal, pore-size distribution predominantly in the 20-Å range, high internal surface areas, and a fine powder as opposed to granules or tablets), dosages, effects of delayed administration, stability of the charcoal-drug complex in the GI tract, storage stability of activated charcoal suspension, safety of activated charcoal, fallacies and dangers of the so-called universal antidote, and the development of palatable formulations of activated charcoal suspension.

Chapter 6 reviews the results of *in vitro* and *in vivo* studies of the binding and antidotal potentials of activated charcoal. A great amount of previously published data is included. Chapter 7 describes investigations of other possible medical or diagnostic applications of activated charcoal. Most of these works were published in the 1930s and are mainly of historical interest, e.g., intravenous injection of activated charcoal for treatment of systemic infections. However, use of activated charcoal to bind bacterial toxins in certain GI infections appears rational, and the use of activated charcoal for hemoperfusion appears to be effective.

A few errors were obvious to the reviewer. On page 40, it is stated that the adsorption isotherm for strychnine nitrate (based on *in vitro* studies in human gastric contents) is presented in Fig. 4.8, but this figure is concerned with diethylbarbituric acid. On page 41, a statement is made in reference to Fig. 4.8 that a change in pH from 8.4 to 5.0 decreases charcoal adsorption of diethylbarbituric acid, whereas the reverse is shown in the figures. Also, the data presented in Fig. 4.3 and Table 5.7 are credited to the wrong authors. However, these errors do not detract from the usefulness of the book.

Probably very few references have escaped citation in this small volume. This book is a convenient source of information concerning the antidotal application of activated charcoal for management of drug overdose or poison ingestion and should be a useful reference for health professionals involved in the treatment of poisoning cases, poison control information centers, and people engaged in research.

Reviewed by Lincoln Chin
Department of Pharmacology and
Toxicology
College of Pharmacy
University of Arizona
Tucson, AZ 85721

Activated Charcoal: Antidotal and Other Medical Uses. By DAVID O. COONEY. (Drugs and the Pharmaceutical Sciences, Vol. 9.) Dekker, 270 Madison Ave., New York, NY 10016. 1980. 160 pp. 15 × 23 cm. Price \$23.50.

This book provides a much needed review of the literature concerning the use of activated charcoal for the treatment of acute drug overdose or poison ingestion. The first chapter emphasizes the advantages of orally administered activated charcoal for the treatment of acute poison ingestion relative to other common emergency measures, such as induced emesis and gastric lavage. Chapter 2 points out the historical highlights of charcoal, indicating that the use of medicinal charcoal was recorded in an Egyptian papyrus in 1500 B.C., that a great variety of starting materials were used in its manufacture, and that the process of activation (which greatly increases the adsorbent capacity of charcoal) was not introduced until 1900.

Chapter 3 describes the manufacture, physicochemical properties, and adsorptive process of activated charcoal. Such knowledge is important for understanding the differences among various charcoal preparations

Prescription Drugs in Short Supply. By MICHAEL A. SCHWARTZ. (Drugs and the Pharmaceutical Sciences, Vol. 8.) Dekker, 270 Madison Ave., New York, NY 10016. 1980. 130 pp. 15 × 23 cm. Price \$17.50.

This interesting book documents, by case histories, the shortage of some vital drugs that occurred between 1973 and 1976. Among the major sources of documented information are Senatorial hearings, reports to the Drug Enforcement Administration, various symposia, and the *Federal Register*.

Shortages of five substances are discussed in detail: opium, quinidine, heparin, two injectable penicillins, and some large- and small-volume parenterals. Although no deaths are known to have resulted from the shortages, it is highly likely that there were cases in which optimum patient care was not possible because substitute drugs had to be used.

The shortages were caused by a number of factors which were different in most instances for each substance. The demand for codeine increased significantly, which contributed to the shortage of opium. This increased demand was attributed to: (a) increases in population, (b) aging of the population, (c) an increase in third-party payments for medication, and