Inorganic Medicinal and Pharmaceutical Chemistry. By J. H. BLOCK, E. B. ROCHE, T. O. SOINE, and C. O. WILSON. Lea & Febiger, Philadelphia, PA 19106, 1974. 472 pp. 15.5 × 24 cm. Price $18.50.

If there has been a criticism of *Roger's Inorganic Pharmaceutical Chemistry*, perhaps this was due chiefly to the fact that the contents of the work were not organized to stress biological activity or medicinal use. If there has been a criticism of inorganic pharmaceutical chemistry, perhaps it has been that the material the discipline treats is somehow supposed to not be of a great deal of therapeutic or clinical importance.

The present book, the successor to *Roger's Inorganic Pharmaceutical Chemistry*, lays to rest the first criticism and gives the lie to the second. This is not to state that general principles of chemistry are dispensed with. On the contrary, I feel that they are thoroughly and succinctly covered, principally in Chapters 1–4. It is simply that, thereafter, in Chapters 5–12, the emphasis is on the role of inorganic agents in biology and medicine, and the fact that inorganic agents have a great deal of biological and therapeutic significance is most entertainingly and effectively brought home.

To go into greater detail, the first three chapters are summaries of general chemical principles together with appropriate pharmaceutical exemplifications. This statement also applies to Chapter 4 although the proportion of "practical" information in this chapter is greater. Thus in Chapter 1, an account of the electronic structure of atoms and molecules is presented. A somewhat more specialized discussion of coordination chemistry together with descriptions of specific pharmaceutically and therapeutically significant chelating agents follows. Chapter 2 is a survey of group properities of elements. Chapter 3 treats solutions and solubility. The first portion of this chapter treats concentration and solubility expressions and their calculation. Thereafter, material mainly dealing with the physical chemistry of the solution process is presented. Chapter 4 first treats concepts of acidity and basicity, expressions of acidity and basicity in water, and buffer theory, together with appropriate practical pharmaceutical exemplification. The second portion of the chapter deals with antioxidants—first theory, then practical applications. The chapter concludes with a treatment of pharmaceutically significant properties of water and of glass.

There is a greater emphasis on the pharmacological and clinical aspects commencing in Chapter 5, Major Intra- and Extracellular Electrolytes, and continuing in Chapter 6, Essential and Trace Ions. (In these two chapters there are excellent biochemical treatments of the inorganic agents as well.) The other chapters are as follows: Chapter 7, Nonessential Ions; Chapter 8, Gastrointestinal Agents; Chapter 9, Topical Agents; Chapter 10, Dental Products; Chapter 11, Radiopharmaceuticals and Contrast Media; and Chapter 12, Miscellaneous Inorganic Pharmaceutical Agents (Inhalants, Antidotes, Emetics, *etc.*).

Overall, in these chapters, I was impressed with the entertaining and still scholarly style. These chapters also impressed with their conciseness, balance, and logical ordering. Notably, I thought the interplay and balance between the biological and chemical portions was very well struck.

I did detect some minor omissions of biochemical functions of trace ions, some biological actions of nonessential ions, some therapeutic uses of topical agents, and certain agents in the miscellaneous group, but I feel that in most of the cases it would be difficult not to make such omissions in condensing material of such breadth into textbook form.

In summary, I found this book to be a well-balanced blend of the theoretical, the practical, the biological, and the therapeutic aspects of inorganic pharmaceutical chemistry. To return to the comments which opened this review and to place the emphasis a little differently, I sincerely believe that this book *per se* is a clear affirmation of the critical importance of inorganic pharmaceutical chemistry and of courses in which inorganic pharmaceutical chemistry is taught, both to modern pharmaceutical education and to modern pharmaceutical practice. I also believe that this book affords a literate, flexible, compact, and extremely valuable textbook for inorganic pharmaceutical chemistry courses.

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The Alkaloids. Volume 4. A Specialist Periodical Report. J. E. SAXTON, Senior Reporter. The Chemical Society, Burlington House, London W1V OBN, England, 1974. xxii + 443 pp. 13.5 × 21.5 cm. Price £14 (about $40.00).

This book is divided into 17 chapters containing up-to-date information on various aspects of alkaloid studies. It is well written and is a very comprehensive review of the literature on alkaloids.

Chapter 1 updates existing information on the biosynthesis of various type of alkaloids as well as specific alkaloids. The contents of the book consist of chapters on the phytochemistry of pyrrolidine, piperidine, and pyridine; tropane; pyrrolizidine; indolizidine; quinolizidine; quinoline, quinazoline, acridone, and related alkaloids; β-phenethylamines and the isoquinoline; aporphine, *Amaryllidaceae*, and related compounds; *Erythrina* and related compounds; indole; *Lycopodium*; diterpenoid; steroidal and miscellaneous alkaloids.

Of particular interest to this reviewer is the fact that pharmacological aspects of certain of the classes of alkaloids are discussed as well as the detailed discussions on spectral interpretations as given by M. Shamma and S. S. Salgar in their chapter on the aporphine alkaloids.

For investigators specialized in alkaloid or students of natural products chemistry, this book is a highly recommended item. One disconcerting aspect of the book is the relatively high cost for a book that is obviously produced by the offset printing process.

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Isolation and Identification of Drugs (in Pharmaceuticals, Body Fluids and Post-mortem Material), Vol. 2. Edited by E. G. C. CLARKE. The Pharmaceutical Press, 17 Bloomsbury Square W.C.-1A2NN, London, England (U.S. Distributor: Rittenhouse Book Distributors, 253 South 24th St., Philadelphia, Pa.), 1975. xi + 385 pp. 14.8 × 22.6 cm. Price £13.50 (about $35.00).

Clarke's 1969 presentation by the same title was the first large-scale collation of data of greatest interest to toxicologists, biochemists, pharmacists, pathologists, and forensic and pharmaceutical scientists. He drew into monograph form, in a beautifully produced book, data on drug identification and separation methods, properties, metabolism, and toxicology. It rapidly and most deservedly became a standard text.

This new volume carries forward the same format to a wealth of supplementary material. New monographs for about 250 drugs not covered in the 1969 opus are the heart of the volume, with a cumulative index for both. Most of the notable omissions of drug entries, already evident at the time of publication of the first volume, have been corrected. Not all drug substances, not even all official drugs, are included, but such an enormous task is not called for in a work devoted to the restrictions inherent in the book's title.

Previous chapters on drug metabolism, the three chromatographies (PC, TLC, and GLC) used in the monographs, and spectroscopic and color tests have all been updated by the original authors to maintain the generally high quality established before. The chapter on screening tests for common drugs has been recast entirely and greatly enlarged and is a major plus for the new volume.