Book Reviews

Chromatographic Analysis of Pharmaceuticals. Chromatographic Science Series, Vol. 49. Edited by John A. Adamovics. Marcel Dekker, New York, 1990, 688 pp., ISBN 0-8247-7953-3, $125 U.S., $150 all other countries.

This is an ambitious piece of work, which attempts to cover all aspects of chromatographic analysis as it relates to the pharmaceutical industry. Chapters include a discussion of FDA regulations; sample handling techniques, including robotics; thin-layer, gas, and liquid chromatography. Any one of these topics could have formed the basis for a separate book, and this text may have been better presented with additional volumes. However, the most extensive portion of the book is a comprehensive tabulation of chromatographic methods used in the analysis for drugs. These chromatographic data alone make this book an excellent reference source for any analytical laboratory.

The first chapter briefly outlines the FDA regulations which must be considered by the analyst. Of particular relevance is the section on method validation, including determination of the precision, accuracy, and linearity of an assay. Chapter 2 addresses various aspects of sample pretreatment, including both solid phase and liquid–liquid extraction procedures for pharmaceutical formulations. Examples are given for representative compounds. The subsequent chapter develops this theme with a discussion of automated systems presently available for sample handling. The next section of the book is devoted to thin-layer, gas, including headspace, and liquid (HPLC) chromatography. Each of these chapters introduces the methodology and instrumentation without getting into chromatographic theory. Examples are given, to illustrate the application of these techniques to pharmaceutical analysis. The remainder of the book consists of a 400-page table of chromatographic methods used in drug analysis. The drug name, sample matrix analyzed, sample handling procedure, column sorbent, mobile phase, mode of detection, and reference are listed for some 1300 drugs. This information is a valuable addition to any laboratory involved in the analysis of pharmaceuticals.

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Urolithiasis. Edited by V. R. Walker, A. L. Sutton, E. C. B. Cameron, C. Y. C. Pak, and W. G. Robertson. Plenum Press, New York and London, 1988, 1066 pp., ISBN 0-306-43249-8, $140.00.

This text represents the proceedings for the Sixth International Symposium on Urolithiasis, which was held July 24–28, 1988, in Vancouver, British Columbia. The contents are organized into 10 major sections: physiology and urolithiasis, crystalluria, inhibitors and promotors of crystallization, noncalcium stones, urinary constituents in urolithiasis around the world, medical treatment, and nonoperative and surgical treatment. Within each section, summary lectures or reviews precede short reports from poster or abstract presentations. Summary lectures are presented by international authorities, e.g., N. A. Kurtzman prepared the section on acid–base balance, D. P. Griffith did struvite stones, G. W. Drach did lithotripsy, etc. These are all well-referenced and insightful. All offer clinically relevant and readily applicable information. The abstracts and poster presentations are short, generally one- to three-page briefs, describing related research topics. A survey of the short reports clearly delineates the scope and depth of research to discover the etiology of urolithiasis so that treatments can be more selectively effective. Each short report has been carefully categorized so that it appears in the most appropriate section. Two indexes, an alphabetic author listing and a subject index, are complete and easy to use.

Although this text would be of interest to a group of "stone" research specialists, it falls short for this purpose. Most of the short reports cite references that are dated 5 or more years prior. Statistical testing is infrequently done on comparative data. Sample sizes tend to be small. Also, it is curious that the proceedings from this meeting merit a textbook format. In many cases, symposia are included as a special edition of a journal publication.

Therefore, this text would be best appreciated by research specialists in urolithiasis. The areas for new research that are identified, as well as the state-of-the-art summaries, will be good launching points for future studies. However, for the clinician, this text probably represents a cost-ineffective investment.

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Physical Bioinorganic Chemistry. 5. Iron Carriers and Iron Proteins. Edited by Thomas M. Loehr. VCH, Cambridge, Weinheim, and New York, 1989, 533 pp., ISBN 0-89573-298-X, $150.

The series *Physical Bioinorganic Chemistry* is intended to encourage more chemical physicists to enter this multidisciplinary field which has been dominated by inorganic chemists and biochemists. Several top researchers have cooperated in each volume to discuss "what we can learn about the

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