

Book Reviews

Methods of Forensic Sciences. Vol. 1. FRANK LUNDQUIST, Editor. xii and 659 pp. John Wiley and Sons, Inc., Interscience Division, New York, N. Y., 1962. \$19.95. Reviewed by Sidney Kaye, University Institute of Legal Medicine, San Juan, Puerto Rico.

This is the first of a series of volumes dealing with methods of determination in forensic medicine. This series will be greeted with enthusiasm by the criminalist, toxicologist, analytical and pharmaceutical chemist, and all others who have the responsibility of dealing with analytical problems in forensic medicine and who try to keep abreast of the latest developments and techniques. Since the luxury of time is not available to search the literature and try a particular technique when the problem suddenly presents itself, this series kept up to date will be a great help.

The first volume contains eight chapters, each written by an outstanding authority. A chapter written by E. G. C. Clarke, University of London, deals with the alkaloids. Details of isolation, purification, and determination are given. Special emphasis is given to ultraviolet absorption, paper chromatography, and also color and crystal tests. Appendix B (127 pages) contains listings of 451 different alkaloids with their R_f , ultraviolet, color tests, and crystal tests.

A chapter by Angelo Fiori of the University Institute of Legal Medicine, Padua, Italy, covers the detection and identification of blood stains. Chemical, immunological methods, and age determination of blood stains are discussed in detail. An extensive bibliography is included. Chapter 3, by F. Schleyer, Bonn University, Germany, discusses biological stains with special attention to the precipitin test for blood as to origin, giving details for preparation of antisera and newer techniques. L. C. Nickolls of New Scotland Yard, London, describes the identification of stains of non-biologic origin, and details for examination of trace evidence incident to a crime such as metal fragments, paint, minerals, soil, glass and stains.

Georg Schmid, University Institute of Forensic Medicine, Erlangen, Germany, gives a very comprehensive study on the action, metabolism, extraction, purification, and determination of the barbiturates. Details of techniques and a very complete bibliography of 502 references is given.

Chapter 6 on Use of Serum Haptoglobin Patterns in Cases of Disputed Paternity, by Frode Galatus-Jensen, the University Institute of Forensic Medicine, Copenhagen, Denmark, fully discusses this new procedure and technique. The next chapter, by Andreas C. Maelby, the Government Laboratory for Forensic Chemistry, Stockholm, Sweden, covers the quantitative determination of carbon monoxide, the oldest of toxicologic problems to man. Physical, chemical, and the biochemical techniques are discussed in detail with special emphasis to the spectrophotometric techniques. The last chapter, very well illustrated, by P. F. Ceccaldi, Laboratoire de l'Identite Judiciaire, Paris, France, deals with the examination of firearms and ammunition.

The first volume of this series is an excellent contribution to forensic science. Dr. Lundquist, the Editor, is to be commended for collecting such notable authors and timely subjects.

Vade-mecum des antibiotiques et agents chimiotherapiques anti-infectieux. By MAUR NEUMAN, Libraire Maloine S.A., Editeur, 27 Rue de L'École-de-Médecine, Paris, 1962. 15 × 21 cm. 412 pp. 40 NF. Reviewed by Alfred Burger, University of Virginia.

This volume addressed to the practicing physician presents a highly condensed survey of chemotherapeutic agents of synthetic and natural origin. A certain stabilization of the field of antibiotics gives this review particular timeliness. The medicinal chemist will profit little from this book except as an orienting background of clinical observations with these life-saving drugs. Indeed, structural formulas are presented only for a few random compounds, while other well established structures are omitted, and several of those listed are totally or partially in error. The intellectual background which has led up to the drugs is touched upon lightly in a very few cases, but has been disregarded for

most of the compounds. The author has clearly missed a chance to contribute to the re-education of the practitioner. There is virtually no bibliography (a total of 31 references), and only the briefest index. The drugs discussed are those used in France and the European Common Market, and quite a few materials available to the American physician are not included. Nevertheless, the elegant French of the text and the clear print make for pleasant reading. The medicinal novice will profit from the classification of antibiotics and synthetic chemotherapeutics, and learn about their clinical indications and uses in infections, their mode of clinically observable action, and their limitations by toxic and other side-effects. Standardization, dosage forms, physical properties, anti-infectious spectra, and clinically important pharmacological facts are listed for each compound. Absorption, blood levels, metabolism, excretion, development of microbial resistance are given, as well as preparation forms and routes of administration. The use of antibiotic combinations, their prophylactic and therapeutic aspects, and methods of laboratory analysis are included in several more general chapters.

The Chromatography of Steroids. By I. E. BUSH, xxi + 437 pp. Pergamon Press, Inc., New York, N. Y., 1961. \$12.50. Reviewed by O. R. Rodig, University of Virginia.

This work is Volume 2 of the Biochemistry Division of the Pergamon Series on Pure and Applied Biology and is devoted almost entirely to the theory, techniques, apparatus, and methods of identification used in paper chromatography as applied to steroids. The book consists of six main chapters with the headings I. The Basic Theory of Chromatography and Some General Principles; II. Chromatographic Separation of Steroids; III. Techniques and Apparatus; IV. Quantitative Chromatography: Colorimetric and Radioisotopic Techniques; V. Structural Analysis and Identification of Steroids by Chromatography; VI. Some Typical Analytical Problems of Steroid Biochemistry. In addition, there are several appendices covering such subjects as the Purification of Reagents and Materials, Microchemical Reactions for Steroids, Methods of Detection on Paper Chromatograms, and Calculations with R_f and R_M values.

A glossary prefaces the work which defines a number of symbols and terms common to the chromatography field. The uninitiated reader will find this section especially helpful, although some of the descriptions of terms are necessarily brief. For example, to these readers the true significance of various types of ΔR_M values probably will not become apparent until a sizable portion of the text has been read.

The author has wisely chosen to use systematic abbreviations for solvent systems and steroid names, which saves space and facilitates the reading of tables. The abbreviations are easily remembered and in no way hinder use of the book. He likewise has been very thorough in his discussion of the theory of partition chromatography, the apparatus and techniques available for identification of minute amounts of material and in a number of cases he has included unpublished results from his own laboratory. Furthermore, he occasionally gives suggestions for improvements in previously reported methods and in instrumentation.

Column chromatography is mentioned only briefly and thin layer chromatography is not mentioned at all. The early papers on the separation of steroids by gas chromatography appeared after the book was written, but some pertinent references have been added at the proof stage.

The usual number of minor typographical errors were found by this reviewer, who read the entire book. There are a few more serious errors, especially involving correlations of tables, figures and diagrams with the text. Table 6.2 mentioned on page 329 is missing entirely.

The book is excellently cross-referenced, well written, and in some instances literature references in 1961 have been included. It will be of major interest to those concerned with the isolation and identification of steroids in submilligram amounts. However, some parts, such as the section on theoretical aspects, should prove valuable to anyone interested in chromatography.