

BOOK REVIEW

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Review of: *Clarke's Analysis of Drugs and Poisons, Third Edition*

REFERENCE: Moffat AC, Osselton MD, Widdop B. *Clarke's analysis of drugs and poisons*. 3rd ed., Pharmaceutical Press, London, UK, 2004, 1935 pp.

Clarke's Analysis of Drugs and Poisons is a fully revised and expanded third edition of the book formerly known as *Clarke's Isolation and Identification of Drugs*. The latter has been a standard reference text in most laboratories for several decades. There are few practicing toxicologists that have not relied on this foundational text during the course of their work. It has become a staple for toxicologists in clinical, forensic, analytical, workplace and sports drug testing, medical examiner, behavioral and research settings.

Although the latest third edition comes with a new title, readers will immediately recognize the format of the two-volume set. The new book conforms to the organizational style of earlier editions, allowing long-time users ready access to their desired information, among the near 2000 pages of information. In Volume 1, readers will find more than 30 chapters on methodology and analytical techniques, followed by analytical and toxicological monographs for more than 1730 drugs in Volume 2. Each volume contains an impressive and expanded index. Additionally, the book is also available on CD-ROM, and this contains an electronically searchable index that will be of tremendous use to practitioners and students alike.

The two main attractions are the revised and expanded chapters in Volume 1, and the inclusion of more than 400 new drug monographs in Volume 2. In addition to the continuing emergence of new drugs since the last edition in 1986, certain areas of toxicology such as workplace testing, alternative matrices and behavioral toxicology have shaped the science from both an interpretive and analytical standpoint. New chapters include drugs of abuse, alcohol, drugs and driving, workplace drug testing, postmortem toxicology, drugs

in saliva, hair analysis, natural toxins, volatile substances, medicinal products and solid dosage identification. Each chapter provides a comprehensive, practical and relevant overview with no shortage of informative tables, figures and references.

Information on analytical methodology has been revised and expanded to reflect the technological advances during the past 17 years. New chapters include capillary electrophoresis, Raman spectroscopy, near-infrared spectroscopy and an overview of emerging techniques. Any future editions of the book should consider expanding the immunoassay chapter to compare and contrast the large number of commercial immunoassays that are currently available. Additional information on liquid chromatography-mass spectrometry (LC-MS) techniques would also be useful, given the fact that this technique is fast becoming routine in many toxicology laboratories.

The analytical and toxicological data contained in the compact monographs that comprise Volume 2 are undoubtedly responsible for the success of the book that most toxicologists refer to as "*Clarke*". These monographs provide practical information to busy laboratorians who are required to have such information at their fingertips for a rapidly expanding number of drugs. In addition to the new drug monographs, readers will enjoy updated nomenclature in addition to a full mass spectrum that now accompanies the ultraviolet and infrared spectrum. Mass spectral artifacts or derivatives have been included for many of the substances that are not otherwise identifiable.

Clarke's Analysis of Drugs and Poisons is both practical and insightful. The expanded third edition ensures that the book will continue to enjoy the popularity of earlier versions, and deserves the reputation of being considered an essential reference text for the toxicology laboratory.

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