

## BOOK REVIEW

***Disposition of Toxic Drugs and Chemicals in Man, 10th Edition*** edited by **Randall C. Baselt**, Biomedical Publications, Seal Beach, CA, 2014, 2,211 pp, \$324.50, ISBN 978-0-9626523-9-4

Congratulations to Dr. Baselt for the publication of his 10th edition and the expansion of his classic toxicology text to cover over 1,500 medications and chemicals. This enduring work provides a concise source of information important for the understanding of the clinical and forensic significance of various substances in the human body. Each monograph follows the same format with sections on known pharmacokinetic parameters, occurrence and usage, blood concentrations (pharmacokinetic studies), metabolism and excretion, toxicity (antemortem and postmortem), and analysis. All sections are easy-to-read, well-referenced, and current with varying length depending on the amount of information available. The pharmacokinetic section includes plasma half-life, volume of distribution, protein binding capacity, pKa, whole blood/plasma ratio, CAS registry number, and molecular weight. The occurrence and usage section provides information based on the dosage, forms, and applications of individual substances. The blood concentration section discusses blood (plasma/serum) concentrations resulting from the administration of various doses of the substance, primarily from pharmacokinetic studies. The metabolism and excretion section outlines the biotransformation of the substance in humans including the formation of active metabolites. The toxicity section correlates antemortem and postmortem analytic results with clinical effects, primarily using case reports. The analysis section contains

information on appropriate analytic methods as well as on potential limitations of analytic procedures and analyte deterioration in storage.

A wide range of factors affect postmortem results including postmortem redistribution/diffusion, postmortem changes in volume of distribution, postmortem interval, quality of specimen, sampling site, instability of substances, postmortem metabolism, and variability in whole blood/plasma concentration ratios. Additionally, the extensive reliance on case reports and the difficulty extrapolating plasma data from pharmacokinetic studies to postmortem whole blood concentrations limit definitive conclusions. In the introduction to this book, Dr. Robert Flanagan's guidelines for the interpretation of analytical toxicology results provides an excellent discussion on the importance of considering all clinical and analytic data before formulating conclusions. The forensic literature contains many tables that state absolute therapeutic, toxic, and lethal drug concentrations. These tables can be misleading unless all clinical and forensic evidence is considered. This book provides vital information that helps the reader understand these complex issues.

Dr. Baselt must be applauded for the dedication, skill, and knowledge required to continue updating this essential reference work. This book is an excellent initial source for background data on analytical results, particularly for those who routinely interpret the meaning of substances detected in the human body.

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