

BOOK REVIEW

R. V. Blanke,¹ Ph.D.

A Review of Forensic Toxicology for the Law Enforcement Officer

REFERENCE: Wilber, C. G., *Forensic Toxicology for the Law Enforcement Officer*, Charles C Thomas, Springfield, Ill., 1980, 287 pages, \$27.50.

Currently there is a lack of good texts appropriate for training in the area of forensic toxicology. It is particularly difficult to find teaching materials for the non-scientifically oriented individual. The title of this book suggests that this gap might be filled. Unfortunately, it misses the mark widely.

The chapter titles imply that reasonably good coverage of the subject, in a logical sequence, is maintained. The content of the chapters, however, takes on a patchwork pattern with considerable redundancy. Quotations from other sources (sometimes not referenced) are frequently given without critical comment. Statements are made, or data presented, that are contradictory. Worse yet, misinformation is given because of either typographical errors or lack of evaluation of the source and its context. All of this will only confuse the naive reader and lead the specialist to mistrust the entire volume.

A strange imbalance is also apparent in the topics covered and in the manner and depth in which they are presented. For example, "fatal cardiac arrest" (p. 111) is defined as "sudden stoppage of the beat of the heart," which is appropriate for the uninformed reader. Later, however, a lengthy discussion on diet-drug interactions (pp. 240-249) includes "mixed function oxidase (MFO), is comprised of the heme protein cytochrome P-450, phosphatidylcholine, and a flavoprotein reductase and requires oxygen and nicotinamide adenine dinucleotide phosphate," all without explanation. This hardly seems appropriate for the same audience that requires a definition of "fatal cardiac arrest." Similarly, basic first aid procedures (p. ix) are appropriate, but detailed descriptions of chelation therapy (Chapter 9), applicable only in a clinical setting, seem out of place. Analytical techniques earn less than one page (p. 55) for a brief mention of gas-liquid chromatography, thin-layer chromatography, ultraviolet spectroscopy, and the co-oximeter. Yet great detail (pp. 212-219) is devoted to the purchase, installation, and use of an atomic absorption spectrophotometer.

Many tables are used in the text (at least one, 1-I and 10-III, appears twice), but their value is questionable owing to the lack of reference to the source of many of them, the numerous errors, and the lack of consistency. For example, Table 5-II suggests that ingestion of 6 oz [175 mL] of whiskey produces a blood alcohol concentration of 0.10%,

¹Medical College of Virginia, Virginia Commonwealth University, Richmond, Va. 23298.

while Table 5-V correlates the same quantity of whiskey with a blood alcohol concentration of 135 mg/100 mL. Tables 3-IV and 11-III and Appendix IV all show therapeutic or non-toxic, toxic, or lethal concentrations of drugs in blood. Table 3-IV (unreferenced) indicates an amobarbital concentration of 2 mg% as therapeutic and 6 mg% as lethal. Table 11-III (New Mexico OMI Laboratory) lists a concentration for amobarbital of 1-10 mg/L as non-toxic and of greater than 20 mg/L as toxic. Appendix IV (Fisher Scientific Company's distribution of Winek's compilation) lists for intermediate-acting barbiturates 0.1-0.5 mg% therapeutic, 1-3 mg% toxic, and greater than 3 mg% as lethal. These discrepancies, and many others, not only will confuse the novice but can misinform. Table 4-II is referenced to the *New York Times* (many references are to non-refereed sources); Table 2-I is meaningless; Table 4-IV gives the minimum lethal dose of ethanol as 400 mg; these and many other confusing or erroneous entries are probably typographical in nature.

The chapter on "Police Riot Control Chemicals" is appropriate, and forensic toxicologists will be grateful for the sympathetic treatment devoted to the role of the forensic toxicologist (pp. 49-52). These strengths do not outweigh the many deficiencies, however. One is left with the impression that the book was put together loosely with material generated uncritically from a variety of sources (some questionable) and proofed hurriedly. The book cannot be recommended.