

## BOOK REVIEW

Terry Dal Cason,<sup>1</sup> M.S.

### Review of: *Forensic Investigation of Clandestine Laboratories*

**REFERENCE:** Christian DR. *Forensic investigation of clandestine laboratories*. CRC Press, Boca Raton, FL, 2003, 392 pp.

This volume provides a helpful resource both for those familiar with assisting in the seizure of clandestine laboratories and for those who may be interested in becoming involved in this particular endeavor. It will not, as the author notes, train you to be a clandestine laboratory investigator. Reading this book is rather cumbersome due to the writing style and somewhat excessive wordiness and would certainly have benefited from some additional editing. Much of what is written in the early chapters appears to be presented more as an idealistic or academic review of the stepwise processes rather than a "real world" portrait of the way clandestine laboratory seizures frequently occur. For example, the text emphasizes the "on site" evaluation of seized chemicals and equipment to make a determination of the target drug and of the synthesis method being used. Quite often, however, this information is already known prior to the lab seizure and is, in part, the basis for obtaining a search warrant.

There are also some puzzling statements and advice given to the reader. The author states on page 108, "Generally, the scene chemist can establish the probable identity of a solvent by comparing the container's contents to the label. If the contents look, *feel*, *smell*, *taste*, and act like the solvent on the label . . .", and again on page 126, "Just because a liquid looks, *smells*, *feels*, and *tastes* like . . ." Clandestine laboratory investigating chemists and investigators are provided with personal protective equipment specifically so that they can reduce exposure to potentially hazardous materials at a lab site. Whether at the clandestine lab or within the chemist's own facility, using the senses of touch, smell, or taste to aid in a presumptive identification is ill advised. In Chapter 6 titled "Opinions," the author admonishes, "The expert must remember his limitations. He is an expert in the clandestine manufacture of controlled substances. Unless he has a Ph.D. in chemistry with an emphasis in organic synthesis, he would be well advised not to speculate about any of the compounds that can potentially be produced using a given list of chemicals." A doctorate in synthetic organic chemistry not with-

standing, *qualified* clandestine laboratory investigating chemists, at any level of academic accomplishment, frequently render such *opinions* as an important part of their investigate support function.

The above criticisms aside, in Chapter 5 the author demonstrates an in depth knowledge of the analytical schemes and instrumentation used for analyzing clandestine laboratory exhibits. This information is subsequently supplemented in Chapter 9 by presenting a series of "Practical Applications." This latter chapter, "Practical Applications and Examples," is described as a series of "war stories" presented in the form of "Practical Examples." These vignettes are based on a number of actual occurrences and illustrate situations that the forensic chemist might encounter at some point in a clandestine laboratory investigation or prosecution. One of the most useful chapters concerns court testimony. The information given in Chapter 7 is pertinent to all expert witnesses and provides guidelines for those less experienced in court testimony as well as serving as a refresher for those who are more experienced.

The final one third of the book is devoted to a series of 18 appendices, most of which will prove to be of help at one time or another. One notable exception is found in Appendix A that consists mainly of a series of small (typically no larger than 2 1/4 in. × 3 3/8 in.) black and white photos with general headings such as "Distillation Variations" or "Hydrogenator Variations." These pictures are presented without a detailed description of the pertinent information to be drawn from a photo or what makes it notable as a "variation." Some of the other appendices provide more useful information. Appendix B, the "Legitimate Use Table," gives a quick reference for answering a frequently asked question: What *legitimate* use does this chemical have? Appendix J, "Color Test Reagents," consists of a compilation of formulas for the preparation of a variety of frequently used presumptive test reagents. And, for those wanting to delve further into specific subject areas, Appendix R, "Clandestine Drug Lab Reference Material" provides an extensive list (app. 500 entries) of pertinent articles.

Despite some deficiencies, the clandestine laboratory investigator/chemist will find utility in the book as single volume reference.

<sup>1</sup> DEA, 536 S. Clark Street, Suite 800, Chicago, IL.