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BOOK REVIEW

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A Review of *Quality Assurance of Chemical Measurements*

REFERENCE: Taylor, J. K., *Quality Assurance of Chemical Measurements*, Lewis Publishers, Inc., 121 S. Main St., Chelsea, MI 48118, 1987. 328 pp., $59.95.

There are probably few people as qualified to write a book on quality assurance as Dr. Taylor because of his long association with the National Bureau of Standards. In this book, the author has presented everything one would want or need to know about the subject. The book is intended for use principally by "producers and users of chemical measurement data." Since such a small proportion of the work of a forensic science laboratory is based upon quantitative chemical measurements it might be assumed that this book would have limited appeal to forensic scientists. However, forensic scientists are concerned about quality and most, if not all, laboratories have some form of quality assurance program. Thus, some of the material presented could be of value to them.

The introductory chapter outlines some of the author's philosopy of quality assurance with statements such as this:

> Quality assurance is more than a program; it is a philosophy, a way of life. As a program that is mechanically followed, quality assurance is doomed to failure. As a philosophy, there is a chance for success. When it is approached as both a program and a philosophy, the chances for producing high quality data are excellent.

That statement alone is almost enough to recommend this book.

The book is organized in a logical manner, starting with concepts of quality assurance and proceeding through principles of good measurement to principles of quality assurance and evaluation of measurement quality. It is professionally produced, liberally illustrated, and well referenced. Several of the chapters contain material of direct interest, such as the chapters on Basic Elements of Quality Control, Principles of Quality Assessment, and Quality Audits. The last of these chapters has some excellent examples of checklists.

As a reference work, this book could be valuable, but, unfortunately, the user would often have to search carefully for the item of interest and, having found it, study it carefully to interpret what the author was really trying to say. The writing style, undoubtedly because of the author's years of experience in this specific field, strives for precision in description to the point that communication is severely inhibited. As an example:

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> A fundamental premise of quality assurance is that measurement may be established as a process, analogous to a manufacturing process. The process may be brought into a state of statistical control, i.e., the individual measurements are defined by a statistical distribution, and its characteristic precision and accuracy can be assigned to the data output. Obviously, quality control relates to all that is done to attain and maintain the state of statistical control.

I'm sure this statement contains precisely the message Dr. Taylor wanted to deliver; unfortunately, I'm not sure what it is. However, for those who understand it or who are prepared to wrestle with the prose, this book could be of value. For others, the intellectual challenge might also be of interest. The rest of us, unhappily, are either too busy or too lazy to devote the effort required to derive the real potential benefit from this book.