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### Book Reviews

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## BOOK REVIEWS

***The Laboratory Practice of Clinical Toxicology*** by **Eleanor Berman**. Charles C Thomas Publisher, Springfield, IL USA Lib. Congr. Cat. No. 95-48096 ISBN 0-398-06581-0 206 pp. incl. Index.

This book provides interesting insights into the concerns of the clinical “laboratorian” faced with the increasing demand for results with measurements related to clinical toxicology. The author, **Dr. Berman**, is the **former Head of the Toxicology Section, Division of Biochemistry Cook County Hospital in Chicago, IL (USA)** and is the author of two other books on related matters, including her special interest area of trace metals. The author’s experiences span 40 years of hospital laboratory practice.

As the Preface states, the not-too-distant past involvement of clinical laboratories in toxicological analyses was mainly limited to blood alcohol, bromides, salicylates estimation, and those were usually in overdose cases. Today, the author states, “...clinical laboratories have become concerned with various aspects of drug abuse, therapeutic drug monitoring, sequelae of exposures to trace metals the miscellaneous toxins present in industrial and nonindustrial environments”. The growth, it is claimed, of the burden of participation in an ever-widening range of toxicological assays paralleled the availability of advanced instrumentation and methodologies. Emergency room ‘wide tox scans’ are becoming routine for coma, lethargy, ataxia, etc. In- and outpatients are more frequently monitored for blood levels of therapeutic agents.

The book is organized into nine main chapters, ranging in topic from “*The Laboratorian’s Approach to a Possible Toxicological Problem*” to specific comments on the use of spectrometric and separations techniques, trace metals, and “a few miscellaneous poisons”. This is clearly a very personal perspective book by an experienced person in the field. The style is more often on a conversational level than a lecture and more like a diary than a textbook. Chapter VI, *Immunoassay Methods*, is typical. There is just enough introduction to RAI, HI, EMIT, ELISA, and FPIA for the reader to grasp the essentials and a much more extensive discussion of how to best report results, sources of error, and estimation of certainty followed by specific examples of analytes: barbiturates, cocaine, etc.

It is not a textbook for a course or an encyclopedic collection of unrelated-except-by- field-of-application “methods”. It is a worthwhile “read” for both clinical laboratorians and other measurement professionals interested in the difficulties of certain measurement in complex sample matrices (such as human tissue samples, including blood).

***Standard Mathematical Tables and Formulae — 30th Edition*** by **Daniel Zwillinger, Editor**. CRC Press. ISBN 0-8493-2479-3 (1996) CRC Press, Inc., Boca Raton, FL 33431 812 pp. (with Index).

It is an interesting experiment to compare the 11th edition (rev. bought in Prep School) and this new 30th edition of *CRC's Standard Mathematical Tables*. The 11th edition (1957) was a 475-page 10-point-type reproduction of the math tables of the *Handbook of Chemistry and Physics* with the addition of standard, financial interest tables. The new edition is a much changed and differently organized reference with topical chapters rather than "sections". The chapters actually contain paragraphs explaining the topic of the chapter as well as giving the tabular information of the past. The topics range from analysis through *Discrete Mathematics* to *Probability and Statistics*. *Scientific Computing* encompasses numerical analysis to numerical integration and differentiation and even some caveats on programming techniques and their use. Linear modeling by least squares includes discussion on error estimates. There are references to standard works in the area at the end of each chapter. For those interested in financial analysis, the chapter is no longer the collection of tables of 1957 alone (which are now presented in better form).

The change is clearly one that is appropriate for the turn of the 21st century. Hand-held calculators replaced log tables long ago. This is a useful adjunct to such conveniences as a desktop calculator with a Pentium (or similar processor and should be useful for some time to come. Of course, no reference book would satisfy everyone's needs or contain everyone's favorite algorithm. The section on Optimization is limited to the "method of steepest ascent" and makes no mention of the SIMPLEX approach and neither does it warn one about confounding effects of ridge-lines on the contour surfaces searched. On the other hand there are tables for hexi-decimal multiplication, the Fibonacci numbers, and Integer Sequences. This is a very comprehensive and useful reference book.