

## Book Reviews

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*Toxicology*, by Michael A. Kamrin, Lewis Publishers, Inc., Chelsea, MI 1988, ISBN 0-87371-133-5, 145 pp., price: US\$27.50.

Dr. Kamrin developed this volume in response to a growing need for a wider understanding of the principles of toxicology. As pointed out, emphasis is placed on both the strengths and limitations of techniques currently in use, and the uncertainties that result from limits of understanding are clearly noted.

Risk assessment and risk management are discussed in detail, and the human variations which make such assessments difficult are noted. Chapters are devoted to several common substances about which there has been considerable difficulty in reaching even the limits and controls which we have today: The Case of Benzene serves as a clear warning that materials once used with little attention are now known to require strict management.

In the appendices, the National Primary Drinking Water Standards are analyzed, the National Ambient Air Quality Standards analyzed, the National Occupational Standards are supplemented with a note as to the target organ. A Glossary of Toxicology Terms completes the appendices.

To anyone who wishes a very readable and well-written primer on toxicology and some of its applications and limitations, this volume is highly recommended. This reviewer would suggest, in a second edition, the author to expand the references and bibliography to give the reader more information as to where other sources may be easily located.

H.H. FAWCETT

*Anaerobic Treatment of Industrial Wastewaters*, by M.F. Torpy, Noyes Data Corp., Park Ridge, NJ, 1988, ISBN No. 0-8155-1165-5, 122 pp., price: US\$36.

This book contains 17 papers presented in September 1986 at the Second National Conference on Anaerobic Treatment of Industrial Wastes held at Chicago, Illinois. Papers were presented that discussed the treatment of specific industrial waste streams: pharmaceutical fermentation wastewater, pulp and paper wastewater, chemical plant wastewater, coal conversion wastewaters and yeast fermentation wastewater.

Another series of papers discussed specific, commercial, anaerobic treatment processes: sequencing batch reactors, upflow-fixed film suspended growth

search, Hiperon process, Hyan process, Biosulfix Process, Celrobic Process and the Dorr-Oliver treatment system.

Lastly, there are several general papers on the following topics: advances in anaerobic technology, microbiological aspects of anaerobic digestion and reactor design aspects.

GARY F. BENNETT

*Sorbents for Liquid Substance Cleanup and Control*, by R.W. Melvold, S.C. Gibson and R. Scarberry, Noyes Data Corp., Park Ridge, NJ, 1988, ISBN No. 0-8155-1159-0, 153 pp., price: US\$36.

This book provides information on the selection and use of sorbents for cleanup and control of liquids designated as hazardous substances, under regulations promulgated in accordance with the mandates contained in the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Provided in this handbook are data which will be useful to those who have to clean up or direct the cleanup of hazardous chemical spills.

This handbook was originally published as a contractors report for the U.S. EPA Release Control Branch, Hazardous Waste Emergency Laboratory, Edison, New Jersey, under the title of "A Guidance Manual for Selection and Use of Sorbents for Hazardous Substance Cleanup and Control".

The key to this book are the 26 guides which present information on adsorbents to be used with 26 different chemical classes. In this context, (grouping chemicals by classes and referring to generic guides), the authors have copied the format of the U.S. Department of Transportation's Spill Manual carried by almost all first responders. For example, when one is confronted by a spill of an inorganic acid, one consults Guide #1, but if the acid is organic, Guide #2 is used.

Each guide gives information on the use of sorbents for one of the three applicable major spill scenarios: land spill, floating spill and landfill release. Also given is a prioritized list of sorbents for each scenario, along with application method, collection technique, limitations and disposal cost. Approximately 20 pages are devoted to specific adsorbents, i.e., sorbent sorption capacity data and hazardous liquid/water preference; there are data for 12 major general classes of sorbents. The guides, along with the list of CERCLA liquids for which the guides are applicable and the guide to use for each class of chemicals, take up about half the book.

The remainder of the book contains the following chapters:

- Technical/logistical information (how to apply and collect the sorbents)
- Cost estimation procedures and data
- Test methods (for sorption capacity)