

The editors further expanded on their purpose in writing the book in the introduction.

“The principal objective of this book is to provide guidance to all laboratory workers who use chemicals so that they can perform their work safely. Experience has shown that the laboratory can be a safe workplace. This record has been achieved only through vigorous safety programmes. The goals of a laboratory safety plan should be to protect those working in the laboratory, others who may be exposed to hazards from the laboratories, and the environment.”

And to emphasize the importance of this safety program they write:

“First and foremost the protection of health and safety in all laboratory operations, including waste disposal, is a moral obligation. The expanding array of laws and regulations make it an economic necessity; and, in many countries, a legal requirement. In the final analysis, laboratory safety can be achieved only by exercise of judgment by *informed* (emphasis added by reviewer) responsible individuals.”

And the book does *inform* well.

The assurance of safe working conditions in a laboratory depends on four programs:

1. Regular safety inspections
2. Formal and regular safety meetings
3. Regular ventilation system monitoring
4. Proper waste disposal procedures

To this end the authors have produced one of the best written, easy-to-read, comprehensive texts on the topic I have seen. The four major sections will illustrate the book's coverage.

Part I : Safe working procedures and protective equipment

Part II : Safe storage and use of hazardous chemicals

Part III: Safe storage and disposal of waste chemicals

Appendix

Each section is approximately of equal length. Special attention is paid to extremely toxic and hazardous chemicals, i.e., phosgene, metal hydrides, etc. All aspects of waste processing from minimization to recycling to disposal are thoroughly discussed.

I am, at the very least, a neophyte in laboratory safety details, but I am well familiar with laboratory procedures both good and bad. My overall assessment of this text is very high. I strongly recommend its purchase and *USE*.

GARY F. BENNETT

*Occupational Exposures to Mists and Vapours from Strong Organic Acids and Other Industrial Chemicals*, International Agency for Research on Cancer (IARC); World Health Organization, Geneva, Switzerland, Vol. 54, ISBN 92-832-1254-1, 1992, 336 pp., SWF 65, US\$ 58.50

In this book, the International Agency for Research on Cancer (IARC) working group provides their evaluation of the carcinogenic risk to humans that is posed by occupational exposure to mists and vapors from strong inorganic acids and some other industrial chemicals. This volume, the 54th in the IARC series, contains six

chapters (labeled monographs) dealing with occupational exposure to mists and vapors from: (1) sulfuric acid and other strong inorganic acids; (2) sulfur dioxide and some sulfates, bisulfate, and metabisulfates; (3) hydrochloric acid; (4) diethyl sulfate; (5) diisopropyl sulfate; and (6) 1,3-butadiene.

In 1960, the IARC began a program to evaluate the carcinogenic risk of chemicals in humans. This program has produced 54 monographs dealing with the evaluation of carcinogenic risks to humans and 119 miscellaneous publications; all of the titles of the 173 books are found in the appendix of this book.

This volume begins with a fairly long (20 pp.) preamble that outlines the IARC's approach to the study of potentially cancer-causing chemicals.

The selection of strong inorganic acids as the main subject of this volume was prompted by the publication of several epidemiological studies that suggested that exposure by inhalation to mists and vapors was associated with excess risk for laryngeal and other respiratory cancers. These acids are in widespread industrial use in the manufacture of isopropanol, ethanol, phosphate fertilizer, lead batteries, plating of metal, etc. The manufacturing processes (in lead battery production) using these acids are described in some detail. Also much information on production risks in many countries is tabulated. Workplace exposure to acid mists and vapors is also discussed along with much tabulated data on workplace acid concentrations. Four pages of references conclude the chapter which is approximately 90 pages long.

Shorter chapters were devoted to the other five chemicals of the group. 1,3-Butadiene and diethylsulfate were classified as probably carcinogenic to humans; diisopropyl sulfate was classified as possibly carcinogenic to humans. Sulfur dioxide, sulfates, bisulfate, metabisulfates, and hydrochloric acid could not be classified on the basis of currently available data.

Each chapter is comprehensive, well written and very well documented. A cumulative cross index of IARC monographs on the carcinogenic risks to humans completes the book.

GARY F. BENNETT

*Hazardous Materials Action Data*, by C.R. Forden and J.L. Weddell, Lewis Publishers, Boca Raton, FL, ISBN 0-87371-598-5, 1992, approx. 1100 pp., US\$ 225

This book contains chemical, health and safety, and incident response information on 1050 toxic and hazardous chemicals — compiled for use by first responders to hazardous materials incidents, paramedics and safety specialists.

The chemicals are found in alphabetical order with one (8 1/2 × 11 in.) page utilized for each different chemical. Given (if available) for each chemical entry are:

- Chemical name
- DOT designation
- Synonyms
- Incompatibilities
- Neutralizing agents