

procedures for almost 500 substances are collected together in one volume. This effectively overcomes much of the difficulty in teaching first aid procedures in the chemical laboratory. Topics are complicated by not only being specific to a substance but also to the route by which the poison gains entry to the body. The information base necessary for effectiveness in first aid is thus almost quadrupled in its extent.

However, clear and concise advice about measures in respect of ingestion, inhalation, skin or eye contact is readily available in this book. Similarly, a symptom schedule is extensively cross-referenced for the worker dealing with a poison case.

A glossary of commercial names and a bibliography of U.S. government publications is also included. One important addition is a section concerning the management of the case where the identity of the poison is obscure or unknown. This is an all too common, but nonetheless avoidable, situation in industry today.

I decided to put the system to the test. It took me less than a minute to extract relevant first aid procedures, given the identity of the poison. However, familiarity with the use of the text is a necessary prerequisite for this rate of extraction! It would also probably invalidate its effective use in certain situations, if one was unaware of the way to use the manual.

The publication is aimed at the American market, having undergone extensive editorial revision from its original Belgian edition. The inevitable vagaries of American terminology can be found scattered in its pages. However the book is a useful adjunct to health and safety in the workplace. I have no hesitation in recommending it highly despite these minor caveats.

DENIS D'AURIA

Safe Handling of Chemical Carcinogens, Mutagens, Teratogens, and Highly Toxic Substances, by Douglas B. Walters (Ed.), Ann Arbor Science Publishers, Inc., Ann Arbor, Michigan, 1980, 662 pp. in two volumes, £ 19.60 each volume

This two-volume work concerns the control and use of highly hazardous chemical substances in a research laboratory. The material for the work was contributed by the authors of papers presented during a symposium at the American Chemical Society/Chemical Society of Japan Chemical Congress, Honolulu, Hawaii, in April 1979.

In his preface, the editor remarks that the facilities and procedures presented could, with modification, be adapted for industrial and academic laboratories. This reviewer agrees, and recommends that this collection of excellent papers be a resource for *all* laboratories working with potentially hazardous chemicals. Many of the features of laboratory design and proce-

dures that are presented are reminiscent of those followed religiously by personnel engaged in government-sponsored propellant research.

There are six Sections in this work, three in each volume. Section 1, "Laboratory Design, Handling and Management", consists of eight papers which include descriptions of laboratory facilities, safe-handling techniques, and a good review paper on U.S.A. regulations for the packaging and transport of hazardous materials. Section 2 contains six papers on "Chemical Monitoring and Medical Surveillance" which describe methods for both environmental and personnel monitoring. Section 3, "Informational Needs and Chemical Classification", has five papers. The first two deal with on-going attempts to classify and catalog carcinogenic, mutagenic and teratogenic substances; many helpful resources are identified. Two papers deal with the special topics of synthetic fuel technology and industrial alkylating agents. The last paper, on the causes of pre-natal mal-development, seems out-of-place in this Section.

In Volume 2, Section 4, "Structure-Activity and Toxicity Prediction" is the topic discussed in six papers. This difficult approach is treated objectively by all authors as they present their contributions to a potentially important tool for predicting chemical toxicity. For those interested in this fascinating and challenging topic, there are many references cited. Section 5, "Spill Control, Degradation and Deactivation", and Section 6, "Disposal", each consists of four papers. General requirements for spill control are outlined and chemical and physical methods of destruction and their usefulness are presented; the limitations of photolysis as a destruction method are also discussed. Disposal of carcinogens by several incineration techniques, and their destruction to innocuous products in a microwave plasma and in a molten-salt bath, are described and evaluated. A final paper addresses the need for monitoring stack effluents to ascertain that complete destruction has indeed occurred.

Mr. Walters is to be congratulated for his efforts in assembling this group of well-written technical papers on safe management of highly toxic substances. The appearance of these two volumes is timely. This reviewer recommends *Safe Handling* as an excellent resource and reference for others who now work, or plan to work, with highly toxic chemicals.

JAMES P. FLYNN

The Assessment and Perception of Risk, The Royal Society, London, 1981,
206 pp., £12.50 hardback

This book contains fifteen papers (and the associated discussion) that were given at the Royal Society's Discussion Meeting in November 1980. The presentations are grouped under four main headings: Perception of Risk, Quantification of Biological Risk, Quantification of Physical and Engineering