Book reviews

Safety with Lasers and Other Optical Sources—A Comprehensive Handbook. By David Sliney and Myron Walbarsht. (Pp 1035.) Illustrated. Plenum Press; New York and London, 1980.

This publication does not make any pretences—it is comprehensive. The established work on radiation from lasers and other optical sources is reviewed, together with the associated hazards from equipment and systems producing such radiation. It includes a broad, multidisciplinary background to facilitate comprehension of the total subject matter. The material presented on anatomy and physiology is orientated towards the engineer, the health physicist, and the occupational hygienist, while the review of optical physics is intended for the occupational health physician. Although the physics may be regarded by some occupational health physicians as too detailed or even unnecessary, it is an essential prerequisite to understanding the principles in subsequent chapters. I welcome this approach and commend the authors for departing from the traditional tendency to avoid mathematics or physics if a book is intended for a medical audience.

The authors have collaborated with experts in the United States and the United Kingdom and have provided a balanced appraisal, particularly in the areas of biological effect that are not conclusive at present. This is important in understanding the rationale and evolution of laser safety standards. Although the laser hazard classification described in the book is that of the American National Standards Institute and the Bureau of Radiological Health of the United States Food and Drug Administration, it is similar, with minor differences, to the hazard classification in the British Standards Institute's BS 4803 (revised). It is therefore advisable for UK readers to consider this chapter in conjunction with BS 4803—Radiation Safety of Laser Products and Equipment Classification, Requirements and Users Guide.

Medical surveillance is dealt with in detail and is of particular interest because of the protracted discussions on this subject during revision of the British Standard BS 4803. The authors discuss medical surveillance with great clarity, looking at occupational health surveillance in general and laser medical surveillance in particular. I am sure this will enable occupational health physicians to adopt a more positive approach to laser medical surveillance.

In a book describing a wide variety of systems and equipment together with physical and biological data there are bound to be differences, albeit of a minor nature, in some data. The authors acknowledge this and have invited comments or amendments as appropriate. I have no criticism of the type of data or its presentation in this excellent book, which I am able to recommend both as a practical handbook and a reference manual. It is no sting in the tail when I draw attention to the stipulation in chapter 1 of 140 dB(A) as the exposure limit for impulse noise, which can be misleading without appropriate qualification.

S KANAGASABAY

Biological Monitoring Methods for Industrial Chemicals. By R C Baselt. (Pp 301; £24.) Biomedical Publications; Davis, Calif. 1980.

Baselt has drawn together in a concise form the more important features of the metabolism, excretion, and toxicity of 80 or so of the most commonly encountered industrial chemicals. The form of biological monitoring appropriate for workers exposed to each is discussed, and the methods of analysis that can be used in each case are given in detail. It is this that makes the book so useful and which should ensure that it occupies a place in every department of occupational medicine.

There are several useful references to each of the sections, and I recommend it highly.

H A WALDRON

Occupational Hygiene. Edited by H A Waldron and J M Harrington. (Pp 424; £16.50). Blackwell Scientific Publications; Oxford, 1980.

For several years there has been a definite need for a textbook covering the field of occupational hygiene, especially if an alternative to an American viewpoint was desired. This book, sub-titled "An Introductory Text," seems to fill this niche very well.

The first five chapters are concerned with the inhalation of toxic materials, and many aspects of this subject are fairly fully discussed. The chapter on air sampling, however, fails to grasp the nettle of sampling strategy. Admittedly this is a complex subject but, by default, the NIOSH Manual is the most substantial work on this topic, although thought by many to be too legalistic in approach to be relevant outside the USA. Some counter-balancing comment would have been welcome.

A surprising omission appears to be any reference to chemicals damaging the skin or eyes, or absorption of chemicals through the skin. This leads me to suggest that some additional material on toxicology would be needed for students in this field, such as that contained, for example, in Waldron's own *Lecture Notes on Occupational Medicine*.

The important topic of ventilation is well covered, as is noise and vibration. Other physical hazards are surveyed competently, although I would have preferred more emphasis on the potential hazards and control methods, rather than on the background physics, of lasers, for example.

Clothing and respiratory protection are covered in a general way, although it is a pity that the common practice (and apparently increasing trend) of using disposable masks is not discussed. The book finishes with good chapters on statistics and epidemiology.

In conclusion, this book is a valuable