

cuticles—but I suspect that an expert in the area would be feeling either frustrated or annoyed!.

The publisher's claim that the book serves as a comprehensive guide to lipids for researchers in biochemistry and medical research is not a credible one, nor do I believe that it can be recommended as an advanced text

for students of biology, botany, zoology, entomology and chemistry. However, for someone who knows little lipid biochemistry or physiology and who wants to know a little more about a lot, it is an enjoyable read.

M. J. P. HIGGINS

### Handbook of Laboratory Health and Safety Measures

S. B. PAL (Editor)

*MTP Press, Lancaster, 1985, pp. 391, £59.95*

This book consists of eighteen chapters, each directed to the safety aspects of one field of laboratory or hospital activity, and undoubtedly contains a great deal of useful advice and information.

The emphasis is notably towards hospital laboratories, but, because of the multi-author format, with the declared intention that each chapter shall be complete, there is much repetition of basic advice, making the book both larger (less read?) and more expensive than might be desirable. A preferable editorial approach would have been to include an early chapter on general safety precautions, leaving the individual authors to concentrate on the more specialized safety aspects of their own field.

Some topics include elementary theory unlikely to be of value to anybody engaged in or contemplating work in the particular field, but because there is no unified approach to safety procedures evident, the advice offered is of variable value. Chapter seven, on chemical laboratories, is an excellent review of precautions in that context, much of it applicable to other types of laboratory as well. Chapter four, on the other hand, includes descrip-

tions of handling a variety of animals, something better taught, the reviewer feels, by demonstration rather than reading, to avoid distressing the animals. Some of the more specialized chapters (u.v., ultrasound, n.m.r., lasers) contain advice perhaps less readily available elsewhere than that offered on such topics as microbiology, haematology and clinical chemistry, all of whose practitioners must surely already be familiar with the requirements of the 'Howie Code' and its successors, and users of radionuclides will already necessarily be under the supervision of a Radiation Protection Officer. Chapters on laboratory design and 'Responsibilities of the Chief . . .' are written in American 'jargon' that may be unfamiliar to U.K. readers.

It is difficult to see at whom the book is aimed, since the specialist advice is already available elsewhere for less than £60, but as a reference book for senior research workers, administrators or departmental heads conscious of their responsibilities, this could be a useful reference book. Most chapters include a list of suggestions for further reading.

I. G. ANDERSON

### Oxidative Stress

HELMUT SIES (Editor)

*Academic Press, London, 1985, pp. 507, £72*

Oxygen as the most significant electron sink in mitochondrial oxidations has overshadowed development of other aspects of oxygen biochemistry. Stress from high concentration of oxygen was known for a long time, but only during the last decade has the implication of oxygen free radicals been explored extensively. Free-radical research is one of the rapid growth areas in biochemistry and has pervaded diverse processes such as inflammation, aging, carcinogenesis, drug action, toxicity, phagocytosis and others. The growing interest in oxygen radicals in biological systems is reflected in several of the specialized symposia organized during the last 5 years. This multi-author book has ably covered the present knowledge and focused on the thrust in this active area of biochemical research. Each of the 18 chapters was written by experts. The reactive oxygen species studied include not only radicals (superoxide, perhydroxy, hydroxyl, alkoxy, peroxy and organic hydroperoxy), but also singlet oxygen, excited carbonyl (dioxetane) and  $H_2O_2$ . Thus oxygen becomes reactive in more than one form. The formation of these species and their utilization, both useful and toxic to cells, have been covered throughout in the processes described. Multiple systems of defence against the oxidative (sometimes referred to as oxidant)

damage are available in cells for self-protection, which comprise scavengers and quenchers (antioxidants).

The nature of oxidative damage to biological material – nucleic acids, proteins, amino acids, lipids and carbohydrates – has been dealt with in a number of chapters. Several examples are discussed: chemotherapeutic action by DNA-strand breakage in tumours, nitrosureas inactivating GSSG reductase, interfering with antioxidant defence of the host cell by antimalarials, as well as drugs used against other cellular parasites; modifications through alteration of dietary lipids. Several of the chapters describing biomedical aspects such as tumour promotion (e.g. phorbol esters), action of neurotoxins, role of products of cyclo-oxygenase and lipoxygenase and of chemotactic agents in several metabolic processes, give a glimpse of the vast potential. Thus this book puts together all the information on metabolic effects of reactive oxygen species and is highly recommended for the workers in this field. It is one book that provides all the information on the current state of affairs and will be useful as a reference in research work as well as in advanced teaching. The reviewer is certain that this book will influence the progress of the field in the years to come.

T. RAMASARMA

• Health, safety and environmental aspects of the practical are considered; • Students receive the appropriate information and supervision necessary for them to carry out their studies safely; • Students are warned about particular hazards, and how to avoid, eliminate or minimise their exposure to them; • Proper attitudes towards health and safety are practiced and transferred to the students; • Students under their control are using safety equipment, where considered necessary; OH&S in the Laboratory (Undergraduates) OHS Division. It is essential that health and safety principles and concepts are integrated at all levels of organisation of practical classes. The lecturer or tutor must provide the students with a general health and safety induction at the commencement of each semester. The Health and Safety Laboratory (HSE Laboratory or HSL Buxton) is a large 550-acre research site in rural High Peak, Derbyshire, south of Buxton. It researches new methods in industrial safety. It provides training courses in subjects such as Control of Major Accident Hazards Regulations 2015 (COMAH) and DSEAR (Dangerous Substances and Explosive Atmospheres Regulations, 2002). All Departments Audible Books & Originals Alexa Skills Amazon Devices Amazon Warehouse Appliances Apps & Games Arts, Crafts & Sewing Automotive Parts & Accessories Baby Beauty & Personal Care Books CDs & Vinyl Cell Phones & Accessories Clothing, Shoes & Jewelry Women Men Girls Boys Baby Under \$10 Amazon Pantry Collectibles & Fine Art Computers Courses Credit and Payment Cards Digital Educational Resources Digital Music Electronics Garden & Outdoor Gift Cards Grocery & Gourmet. There is a newer edition of this item: Handbook of Laboratory Health and Safety Measures \$314.29 In stock. Read more Read less. click to open popover.