

the previous two volumes will purchase this book, but at a cost of £34.00 the book may be pricey to undergraduates.

A. Y. Tamime

Modern Carbohydrate Chemistry. By Roger W. Binkley. Dekker, 1988. 344 pp. ISBN 0-8247-7789-1. Price: \$108.00.

For chemists this is an excellent little book. It begins with an attempt at definition, structural, stereochemical and conformational analysis, then goes on to all the main chemical reactions, approaching the subject in a very up to date way. To anyone familiar with this class of compounds it seems that definition is impossible. One should describe, rather than attempt to define, carbohydrates and the author does come to this conclusion and makes a very good job of explaining all the salient points. Dr Binkley is a well-known carbohydrate chemist and his treatments of the D & L steric reference system are admirable and authoritative. For the food chemist there is little detail on glycosyl amines and Amadori products. However, the basic principles of modern carbohydrate chemistry, such as anomeric effect, protection of sugars and the main reaction pathways, are explained clearly and extensively.

As in all textbooks a few errors do occur and an example is in Fig. 4 (p. 50) where, after a careful explanation, the author labels the structures drawn as methyl 2,3,4-tri-*O*-acetyl- β -D-xylopyranoside. In fact they are L-isomers.

The book does not stray at all into the biochemistry of carbohydrates and therefore enzymic implications are absent. This is clearly not a concern in a simple—yet modern—book addressed to the chemistry of carbohydrates. My one slight disappointment, however, was the very minimal coverage of hydrogen-bonding, hydration and solvent effects.

Overall, this book makes a very welcome, clear and valuable addition to the carbohydrate literature. Chemists interested in this subject will find that it is well worth the price.

Gordon Birch

Sucrose: Nutritional and Safety Aspects. Edited by Gaston Vettorazzi and Ian Macdonald. ILSI Human Nutrition Reviews, Springer Verlag, 1988. ISBN 3-540-19526-2. xvii + 192 pp. Price: £22.

The editors of this book intend it to be a 'user-friendly thesaurus' with an 'up to date compilation of references'. It is one of the valuable ILSI series which

constitute authoritative scientific accounts of current thought and which fill the gap between text book and specialist publication.

As its title implies, the book is heavily biased toward nutrition and safety rather than chemical and physical properties and this is confirmed by a commensurate imbalance of references. However, these really are up to date (1987) and are selected by the authors as illustrative of the most reliable scientific work carried out.

There seems little doubt that biological experiments can be designed to demonstrate any biological effect if they involve inappropriate feeding or injection techniques. Thus even an LD_{50} value for sucrose (100 days) has been reported (28.5 g/kg). The book reports the most significant experiments for all biological effects in an informative and factual manner. The style is that of brief outline and this achieves maximum input of relevant material at the expense of criticism.

Despite numerous allegations that sucrose is involved in obesity, cardiovascular disease, diabetes, glucose tolerance, cancer, gallstones, urinary tract stones, influence on behaviour and other health issues, the editors conclude that there is no conclusive evidence that sucrose is a hazard to the general public when consumed at current levels. Only in the case of dental caries is there conclusive evidence of a link with sucrose consumption.

This book is essential reading for all those wishing to be well-informed about the latest and most reliable scientific results. The editors are to be congratulated on maintaining the high standard of the ILSI series.

Gordon Birch