

Carbohydrates in Food. Edited by Ann-Charlotte Eliasson. Dekker, 1996. ISBN 0-8247-9542-3. viii + 576 pp. \$185.00.

An up-to-date and informative book on topical advances in carbohydrates is always welcome. Professor Eliasson's effort in compiling this work deserves praise, not least because of the mass of recent research embodied in its pages. Only 190 pages are focussed on low-molecular weight carbohydrates with the remainder devoted to cell wall polysaccharides, gums, hydrocolloids and starch.

The book addresses analytical, technological and nutritional issues and individual chapters are heavily bibliographed. Slade and Levine's usual mammoth chapter on 'selected physicochemical and functional aspects', for example, containing 520 references! Technologists should now be able to reach a conclusion for themselves on the importance of the glass transition state. Notable and somewhat annoying omissions in the book are glucose syrups, sweet taste and the Maillard reaction. The latter does not even appear in the index. I also found that the absence of a glossary for some of the nutritional acronyms was irritating, and the heavy 'review' nature of each chapter did not elicit many applications of simple sugars to food products.

These reservations aside, the text is obviously well-focussed and authoritative in many important areas. The fine detail provides essential background to any in-depth study of carbohydrates and investigators cannot afford to be without it. However, the price is on the high side for individual purchase.

Gordon Birch

Carbohydrate Chemistry for Food Scientists. R. L. Whistler and J. N. Bemiller. Eagan Press, St. Paul, MN 1997. ISBN 0-913250-92-9. 240 pp. US\$ 95.00.

Designed as a classroom text and a handy reference for practical food scientists, this little volume substantially

resembles a comprehensive set of lecture notes. If all students possessed such a set, examination results would be much better, because the contents are thorough and free of error. Moreover, the absence of follow-up reading and references does not bother most modern undergraduates, particularly in the applied sciences.

After a good coverage of fundamentals (structures, rings and conformations of monosaccharides and stereochemical relationships between them), the bulk of the book is devoted to polysaccharides and their functions in foods. However, important conversions and interactions (e.g. oxidation, reduction and Maillard reactions) are explained before the structures and characteristics of polysaccharides commence. Thus, students and others using this book should come to understand why the properties of monosaccharides and polysaccharides turn out to be so different.

The authors correctly note that more than 90% of the dry weight of plants is carbohydrate and, thus, safe and biodegradable and their achievement in producing this simple and easily readable text is laudable. Even concepts such as synergy are touched upon in the chapter on polysaccharides and the last one (sweeteners), which of course strays into non-carbohydrate molecules. The book does not seem to allow space for theory, or indeed speculation in these important areas, but neither do modern technology undergraduates show much inclination to explore them.

With two such distinguished carbohydrate chemists as authors, the contents of this book are beyond criticism. I heartily recommend it.

Gordon Birch