ELSEVIER

Carbohydrate Polymers **24** (1994) 157–159

Book reviews

Low-Calorie Foods Handbook. Aaron M. Altschul, Marcel Decker, New York, 1993. xviii + 581 pp. Price $165.00. ISBN 0-8247-8812-5.

There are growing fears that due to the modern food environment the number of overweight people will drastically increase in the near future (particularly in the U.S.). The only solution is thought to be the introduction of nationwide (and world-wide) countermeasures to combat the problem. This however, is extremely unlikely. The development of low-calorie foods is an essential part of this strategy. The goal of nutritionally tailored products is to preserve the hedonistic satisfaction of eating certain foods, without paying the price in calories.

This handbook provides an authoritative examination of the extensive repertoire of low-calorie foods and ingredients that are available for use (or soon will be available). All aspects of low-calorie foods are discussed, such as their history, governing regulations, technology, and future prospects. The medical and social rationale of their development is also outlined.

With the increase in development of low-calorie products a new class of foods is emerging onto the food market. This book provides a detailed understanding of the materials and processing that make such things as sugar and fat substitutes possible. The applications of artificial sweeteners, bulking agents, and low-calorie oils are only some of the food components that are discussed in a thorough, but concise manner.

In summary, this is a well presented and informative tome providing an excellent insight into the field of low-calorie foods. Each section fits nicely into the overall pattern, and the medical nutrition and dietary sections are particularly interesting. It is therefore recommended as an intrinsic part of the library of anyone within the food industry, as it is a useful reference manual.

Charles J. Knill
John F. Kennedy

Production and Packaging of Non-Carbonated Fruit Juices and Fruit Beverages. D. Hicks, Blackie and Son Ltd, London, UK, 1990. xv + 397 pp. Price £79.00. ISBN 0-216-92700-5.

The production and packaging of non-carbonated fruit juices and fruit beverages involves the expertise from many different scientific disciplines including carbohydrate technology. Biochemists are needed to develop and select the cultivars which will provide the optimum juice in terms of economic processing/extraction and palatability of the finished product. Agriculturalists are required to grow the fruit and provide the processors with good quality raw material. Engineers are needed to design and operate the equipment with input from chemists and biochemists to assess the effect on nutritional value and sensory quality of the juice or beverage base. Chemists have been heavily involved in examining the improper addition of extraneous carbohydrate to fruit juices. Reference material is therefore required which brings together information from all disciplines to provide an overview of the entire production process.

This book *Production and Packaging of Non-carbonated Fruit Juices and Fruit Beverages* has been written by an international team of specialists and reviews the whole industry from growing and harvesting the fruit through transportation and processing to the packaging and distribution of finished product. The biochemistry and composition are detailed together with methods of characterisation and quality control analysis. One of the reasons for the phenomenal growth in the consumption of fruit juices is their nutritional contribution to our diet, indeed they can be the major dietary source of potassium and vitamin C. A chapter is therefore devoted to the nutritional value and safety of processed fruit juices. Of major concern to the fruit juice production industry, regulatory bodies and the consumer is the issue of quality assurance. A section of the book deals with the legislative aspects of fruit juice production, labeling and marketing and the analytical methods available for the determination of juice authenticity are reviewed in detail. Current trends in the juice industry are also included. The expansion of the market by the introduction of alternative juices including those extracted from tropical fruit and also advanced technologies, including ion exchange, which are being applied to the extraction and processing of juices to improve both juice quality and the manufacturing economics.

It is impossible with a single volume to cover the whole area of production and packaging of non-carbonated fruit juices and fruit beverages but what this book does is to provide an overview of the industry and a detailed reference list for further reading. It is a book which should be in the library of food scientists, technologists, and process engineers.

L.L. Lloyd
J.F. Kennedy