



Book reviews

Determination of Food Carbohydrates. D.A.T. Southgate, Elsevier Science Publishers, London, 1991. ix + 232 pp. Price £65.00. ISBN 1-85166-652-4.

Any analyst in the carbohydrate field will be familiar with the first edition of Southgate's book, which was heralded as king of its field. In fact, they probably refer to it quite regularly during their work. All of those readers, along with any new readers, should be pleased to hear that the second edition of Southgate is now available. For the unfamiliar, the book deals with the range of food carbohydrates, along with the basic strategies involved in their analysis. In addition to this, the second edition has been revised to take into account methodological developments since the first edition, for example the chromatographic analysis of sugar mixtures. It should also be noted that as well as additions there have been some deletions — mostly of techniques which have been superseded or deemed less useful or less accurate.

'Determination of Food Carbohydrates' is an excellent, well written and easy-to-use book, with a good index and contents section. We, therefore, can whole heartedly recommend this book to libraries and to analysts involved in the carbohydrate field. Those already in possession of the first edition should consider very carefully before purchase because the amount of extra information contained within its pages is small in comparison to the purchase price. Our advice would be to loan this edition from a library to see exactly what additional knowledge you will acquire with your money. One extra piece of information is the re-printing of the preface from edition one, along with a new preface for edition two, a small point admittedly, but a nice touch which shows consideration for the reader.

John F. Kennedy
David W. Taylor

Sugarless — The Way Forward. Edited by A.J. Rugg-Gunn, Elsevier Applied Science, London, 1991. vii + 210 pp. Price £38.00. ISBN 1-85166-598-6.

For many years, reports on health and nutrition have recommended a reduction in sugar intake. High sugar consumption is linked with a number of diseases

including dental caries, diabetes mellitus, disease of heart and arteries, obesity and behavioural disorders. These diseases are attributed either to a direct effect of the sugars themselves, or to a dietary depletion of natural fibre associated with the use of refined carbohydrate.

'Sugarless — The Way Forward' contains the proceedings of an international symposium which was held in the Dental School of the University of Newcastle upon Tyne, UK. This book, which is an up-to-date collection of papers on sugars, aims to discuss the possibilities of removing sugar from certain dietary items so as to reduce the threat to dental health.

The conclusions and recommendations of the Department of Health COMA report on Dietary Sugars and Human Disease are reproduced in full in the book. The physico-chemical properties, applications, metabolism and tolerance of sugarless sweeteners, together with a discussion on the place of sugars in the diet from the nutritionist viewpoint, are fully described in the book. Problems of manufacturing sugar-free confectionery, marketing strategies and successes, as well as regulations governing sugars and sweeteners in Europe, are also described.

In addition to covering the problem of dental caries and its sequelae in the young child, together with a survey of the use of liquid oral medicines, the book also discusses the pharmaceutical manufacturer's viewpoint, emphasising the many advantages of sugar and some of the difficulties of reformulating medicines without sugar, as well as the possibility of wider use of non-sugar sweeteners in medicines and ways in which the number of medicines containing sugar might be reduced.

'Sugarless — The Way Forward' will be a valuable source of reference to dentists, doctors, nutritionists, chemists, pharmacists, sociologists, and industrialists concerned with the manufacturing and marketing of food products.

Mercedes G. Garaita
John F. Kennedy

Food Enzymology Volumes 1 and 2. Edited by P. Fox, Elsevier Applied Science Publishers Ltd, 1991. xv + 636 pp. (vol. 1), xv + 378 pp. (vol. 2). Price £105.00 (vol. 1); £70.00 (vol. 2). ISBN 1-85166-615-X (vol. 1), 1-85166-616 (vol. 2).

The use of enzymes, such as rennet in cheese and barley amylases in brewing, is as old as the food and beverage industries themselves. However, the production of amylase represents the first example of industrial production of an enzyme for use in the food industry. The quality and variety of enzymes used in the food and beverage industries have increased dramatically in the past decade. The conversion of starch to different syrups and dextrin preparations represents the major application of food enzymes. For the food industry, the prime goal is to obtain an enzyme which offers a high performance and an economic price.

'Food Enzymology' comprises thirty chapters in two volumes. A review of structure and functions of enzymes is given in chapter 1, emphasizing the methods of purification, kinetics, mechanisms and environmental factors which may affect enzyme activity. Occurrence, distribution and importance of native enzymes in milk; the use and significance of enzymes in cheese ripening, fruit and vegetable processing, winemaking, and in fermented vegetables and legumes products, are dealt with in chapters 2 to 16

(vol. 1). Endogeneous cereals enzymes, technologically important in foods, are discussed in chapter 1 (vol. 2), with reference to their specific influence on the quality of their end-products. The use and significance of enzymes in brewing, honey, tea, coffee and cocoa curing, meat and biologically active protein in eggs, are described in chapters 2 to 27. Enzymes in analytical chemistry are dealt with in chapter 28. The last two chapters (29 and 30) are devoted to the application of immobilized enzymes to the bioprocessing of food and significance of genetic engineering to food enzymology, respectively.

The book is written and presented in an eminently readable style. It is also very well organised and, therefore, we are sure that it will be of great value to those who work in the food industry and for students, biotechnologists, chemists, biochemists and chemical engineers.

John F. Kennedy
Maria da Paz C. Silva