

Book Reviews

Analysis of Food Carbohydrate. Edited by G. G. Birch. Elsevier Applied Science Publishers, London and New York, 1985, 311 pp. Price £40.00.

This important book contains chapters written by well known leaders in the field, who are occupied with the problem of food carbohydrates. Carbohydrates are the major components of food and their diversity of structure is matched by their diversity of function. This is why, in the analysis of food carbohydrate, we must take into consideration both quantitative analysis and qualitative (structural) determination. The book sets out to cover the main areas of modern food carbohydrate analysis, illustrating the sophisticated techniques now at our disposal. The book consists of nine parts.

Chapter 1 outlines some of the general properties and significance of food carbohydrate and some of the problems currently requiring food carbohydrate analysis. The next chapter includes physical, chemical and biochemical methods of analysis of carbohydrates which are well established and used routinely in many laboratories. The purpose of the third chapter is to present the theory and application of polarimetry to the analysis of the nature of sugar molecular structure and to qualitative and quantitative analyses of solutions of sugars. Chapters 4 to 7 present modern instrumental techniques of carbohydrate determination and structural analysis which, in general, provide more rapid analyses with greater specificity and precision. They include chromatography and

NMR. Chapter 8 deals with the structure and analysis of food glycosides. The final chapter covers the recent attention now being devoted to dietary fibre and the analytical and nutritional understanding of the fate of carbohydrate during digestion, absorption and fermentation by gut microorganisms.

Analysis of Food Carbohydrate aims to describe the main areas of food carbohydrate analysis for scientists, technologists and analysts concerned with the food industry or research in food, nutrition or agriculture. Its intelligible contents and uncomplicated style indicate its value for students' use.

G. Lisinska

The Role of Fats in Human Nature. Edited by F. B. Padley and J. Podmore. Published jointly by VCH Verlagsgesellschaft, Federal Republic of Germany, and Ellis Horwood, Chichester, Great Britain, for the Society of Chemical Industry. 1985. Price: DM 98/US\$41.00.

This latest volume in the Ellis Horwood Series in Food Science and Technology contains fifteen chapters based on papers delivered at a symposium organized by the Society of Chemical Industry in 1984. The contents are timely because of the publication of the COMA report in that year which included a recommendation for reducing the overall fat level in the UK diet to 35% of total calorific intake. The rôle of fats in human nutrition continues to be a controversial subject and this collection of papers will go some way to help food chemists evaluate the evidence underlying this controversy.

The book opens with a summary by W. P. T. James of dietary trends in Britain this century. These indicate that there has been a substantial increase in fat intake when expressed on an energy basis, but that polyunsaturated fatty acid intake in absolute terms may also have risen over the last two decades. It is interesting that differences in energy intake derived from fat between the social classes are as evident now as they were at the turn of the century.

There follow a series of chapters which, though interesting and valuable individually, lose some of their impact through being inadequately arranged and edited. To illustrate the point, this review deals with the contributions in the order in which they appear.

The biosynthesis of fats and the absorption and metabolism of fats are