

Schreier (Chapter 6) presents an update on the biogenesis of aroma in plants. While he reviews several pathways for flavor formation, emphasis is placed on biogenetic routes for the formation of monoterpenes.

Rhodes (Chapter 7) discusses some of the more recent work in the area of plant cell cultures.

Moyler (Chapter 8) provides an overview of flavor extraction using liquid carbon dioxide. Comparisons of several steam distilled essential oils to carbon dioxide extracted essential oils are made based on gas chromatographic profiles.

Pagington (Chapter 9) presents some background information on β -cyclodextrins (e.g. history, manufacture, chemistry, and complex stability) as well as current or projected applications.

Adda (Chapter 10) reviews the flavor compounds and mechanisms of their formation in dairy products. He places an emphasis on what we still need to know in this area.

The following two chapters (11 and 12) are related to flavor formation via thermal processing. Nursten discusses the production of volatile compounds by the Maillard reaction. Emphasis is placed on several amino acids (proline, hydroxyproline, serine, threonine, cystine, cysteine, phenylalanine, leucine, and glycine). MacLeod summarizes the recent literature related to the flavor of red meats.

Knights (Chapter 13) discusses the role of legislation on flavor development. Gangolli (Chapter 14) provides a brief update on the dilemma of determining toxicological status of flavor compounds.

The final chapter (by Whitfield) relates case studies of off-flavors encountered in the Australian food industry from 1980–85.

Overall, this book is quite well done and of substantial value to individuals in the food/flavor industry. The value is not due to new information in the text (for there is little) but to the excellent reviews provided by experts in each area of flavor research.

Gary A. Reineccius

Starch: Properties and Potential. Vol. 13 in the Critical Reports on Applied Chemistry Series. Edited by T. Galliard. Published for the Society of Chemical Industry by John Wiley and Sons, Chichester. 1987. 151 pp. Price: £32.00. ISBN 0-471-91326-X.

The authors have set out, at the suggestion of the Food Group of the Society of Chemical Industry, to produce an up-to-date review of the active areas in starch research.

The five topics they have chosen are as follows:

Starch availability and utilization. Starch granule structure and function: A physico-chemical approach. Morphology and composition of starch. Physically modified starches. Starch biomass: A chemical feedstock for enzyme and fermentation processes.

The authors have not reviewed polymeric starch derivatives nor have they dealt with nutritional aspects in detail. This slim volume is well indexed and would serve as an excellent reference source for those presently working in the field.

It is a very readable book which provides the novice with a concise overview of a fascinating subject.

My only reason for hesitating to recommend this volume is because of its relatively high cost; however, having said that, it is only fair to the publishers to add the rider that the book does contain several well reproduced electron micrographs and many accurate and clearly drawn Figures.

Barbara Brockway