

Book reviews

Natural and Synthetic Sweet Substances. A. Krutosikova and M. Uher, Ellis Horwood Limited, Chichester, 1992. x + 223 pp. Price £45.00. ISBN 0 13 612805 X.

Sucrose is the sole most important, popular and used sweet substance in the human diet. However, the need for an alternative sweetener, especially for diabetics, stimulated the search for other sweet compounds which could substitute for sucrose in low-calorie and diabetic products.

Numerous natural and synthetic sweet substances have been found, some of which are already commercially available. The first group comprises mono- and oligosaccharides, starch hydrolysates, sugar alcohols, proteins, terpenoids, steroidal sapogenins, dihydroisocoumarins and flavonoids. The family of commercial synthetic sweeteners are saccharin, cyclamates, oxathiazinone dioxides and the group of aspartame and its analogues. The world market for synthetic sweeteners is on the way up. However, novel sweeteners intended for use in food supply must undergo rigorous review by government health agencies as a prerequisite to market approval.

'Natural and Synthetic Sweet Substances' is organised in four sections. The first section deals with the physiology of taste perception and the relationship between chemical structure and sweetness. The second and third sections cover naturally occurring sweet substances and synthetic sweeteners. The mixtures of natural sweet substances and synthetic multiple sweeteners are discussed in the fourth section.

This book provides useful background for the study of sweeteners and is recommended for specialists in food technology, dieticians, researchers working in this field as well as teachers.

John F. Kennedy
Marion Paterson

PHYTOMASS a Raw Material for Chemistry and Biotechnology. Anton Blažej and Martin Košík, Ellis Horwood Limited, 1993. 463 pp. Price £59.50/\$101.50. ISBN 0-13-666801-1.

Although the concepts of wood, cellulose and lignin chemistry have received enormous impetus and development over the past 60 years, the whole concept of the

chemical aspect of wood utilisation was brought into focus late in 1973, when the Western world and Japan were faced with the issue of oil and material shortages, which resulted in immense increases in oil prices and, on occasions, actual shortfalls in oil supplies.

Because of wood's renewability, wood chemistry research since then has received increased emphasis in industry, government and the academic community. Several different directions have been postulated for wood biomass utilisation, including cellulose, hemicellulose and lignin chemicals, fuel ethanol, pyrolysis and combustion, etc.

'PHYTOMASS a Raw Material for Chemistry and Biotechnology' details the basis, structure and chemistry of phytomass formation, offers updated account of chemical modifications of polysaccharides and lignin, discusses various aspects of wood chemistry in relation to applications and also includes prospects for future chemical and biochemical research on phytomass.

The authors present an overall picture of the subject. The coverage is comprehensive and references are cited to permit further in-depth investigation. This book is intended for a wide range of polymer scientists and technologists in many diverse fields of research and applications. Overall, it is timely and will be of great value to specialist and newcomers in both the academic world and industry.

Zilda M. B. Figueiredo
John F. Kennedy

Enzyme Nomenclature — Recommendations of the Nomenclature Committee of the International Union of Biochemistry and Molecular Biology. Academic Press Ltd, London, UK, 1992. xiii + 862 pp. Price £40.00. ISBN 0-12-227165-3.

This edition is a full revision of the Recommendations (1984) of the Nomenclature Committee of IUB, and is the sixth complete edition published under the auspices of the International Union of Biochemistry and Molecular Biology. It includes all current amendments from the supplements published in the *European Journal of Biochemistry*, volumes **157** (1986) 1–26, **179** (1989) 489–533, and **187** (1990) 263–281. There are 3196 actual enzymes listed; an increase of 29% on the 1984 edition.