

## Book Reviews

**Food Chemistry.** Second edition. Food Science and Technology Series, Vol. 15. Edited by Owen R. Fennema, Marcell Dekker Inc., New York, 1985. 1005 pp. Price: Hardcover: \$95 (US and Canada); \$114 (All other countries). Softcover: \$49.75 (US and Canada); \$59.50 (All other countries).

Although the first book on food chemistry appeared in 1847—*Researches on the Chemistry of Food*, by Justus von Liebig—food chemistry has, over the years, been regarded by many as the poor relation of the pure sciences. The publication of such a complete text underlines the acceptance of food chemistry as a science in its own right. The second edition of Fennema's book has been considerably expanded and revised to provide a book which, like the first edition, is the reference text in food chemistry.

Many of the chapters have been revised by different authors from those of the first edition. The book consists of chapters on: Introduction to Food Chemistry, O. R. Fennema and S. R. Tannenbaum, 22 pp.; Water and Ice, O. R. Fennema, 46 pp.; Carbohydrates, R. L. Whistler and J. R. Daniel, 70 pp.; Lipids, W. W. Nawar, 106 pp.; Amino Acids, Peptides and Proteins, J. C. Cheftel, J-L. Cuq and D. Lorient, 126 pp.; Enzymes, T. Richardson and D. B. Hyslop, 106 pp.; Vitamins and Minerals, S. R. Tannenbaum, V. R. Young and M. R. Archer, 68 pp.; Pigments and Other Colorants, F. J. Francis, 40 pp.; Flavours, R. C. Lindsay, 44 pp.; Food additives, R. C. Lindsay, 60 pp.; Undesirable or

Potentially Undesirable Constituents of Foods, G. N. Wogan and M. A. Marletta, 36 pp.; Characteristics of Muscle Tissue, H. D. Hultin, 66 pp.; Characteristics of Edible Fluids of Animal Origin: Milk, H. E. Swaisgood 38 pp.; Characteristics of Edible Fluids of Animal Origin: Eggs, W. D. Powrie and S. Nakai, 28 pp.; Characteristics of Edible Plant Tissues, N. F. Haard, 56 pp.; An Integrated Approach to Food Chemistry: Illustrative Cases, T. P. Labuza, 26 pp.

Bearing in mind the Editor's trojan task of producing such an extensive text, the following points are given as comments, rather than criticisms, and should be regarded as such. The book covers most aspects of food science; in so doing it does 'skate' over certain issues. For example, autoxidation and browning reactions, arguably the two most important reactions in food systems, could have been covered in more detail. Sensory analysis and the taste phenomenon could have been given more attention. Other areas, such as undesirable food constituents, deserve more attention; for example, pesticides/herbicides are covered in a page; thiocarbamates are not mentioned. However, all chapters include detailed reference lists and bibliographies which direct the reader to further information if an in-depth review is required. The book would have benefited from 'tighter' editing, there are a number of minor errors; for example, the structure of chlorophyll (p. 547) (double bond missing from pyrrole ring), genistein (p. 564) (should read 'isoflavone'), p. 574, line 14, should read 'saturation'. A major feature of the book is the profuse illustration of the text with Figures and Tables. There is also a subject/chemicals index, vastly improved over the first edition. To read the book from cover to cover is a considerable task; however, the easy-to-read style makes this quite possible. The readership covers 'upper-level undergraduate students in one- or two-semester chemistry courses, food scientists, food chemists, biologists, biochemists and nutritionists', (food technologists, breathe a sigh of relief). The book must be included in any library which boasts a food science section.

S. Z. Dziedzic

**Fat Soluble Vitamins.** Edited by Anthony T. Diplock. Heinemann, London. 1985. XV + 319 pp. Price: £22.00.

There has been a rapid development in the understanding of the physiology and biochemistry of the fat-soluble vitamins in recent years,