

## Book reviews

PII: S0308-8146(98)00031-4

**Handbook of Food Analysis.** Ed. Leo M. L. Nollet. Volumes I and 2. 1996. Marcel Dekker Inc. ISBN 0-8247-9682-9 (vol. 1) 0-8247-9683-7 (vol. 2). Price \$390 for the two volumes.

These two volumes together run to almost 2000 pages plus contents pages and an index. Each of the 48 chapters is clearly written and carefully edited. Much information is tabulated, which is of great help in a book of this type and the use of diagrams is excellent. Most chapters follow the same format, facilitating navigation of this substantial work by the reader. Topics dealt with include, properties of the components (often including a significant amount of useful food chemistry), sample preparation, derivatisation, extraction and clean-up methods and detection procedures. The emphasis is on recent developed (often instrumental) methods and automation, but classical methods are also covered very adequately and all methods are placed in context by providing an historical background to the analysis of the components in question. Methods are critically evaluated and detection limits, accuracy, reliability, costs and time required are also given. Future developments are also considered. At the end of each chapter is a substantial list of references (usually at least 100 and normally the review articles are listed separately, making it easy for the reader to locate these references.

Volume 1 deals with Physical Characterisation and Nutrient Analysis and comprises 25 chapters in three sections. The first section, on Sample Preparation and Chemometrics, has two chapters, one on Sample Preparation and the other on Chemometrics. The second section, on Physical Characterisation, deals with Determination of Moisture and Ash Contents of Food, Mechanical Properties of Food, Optical Properties, and Sensory Evaluation Techniques. The third section, Nutrient Analysis, is the longest and has chapters on Amino Acids, Peptides, Proteins in Food, Enzymes, Analysis of Neutral Lipids: Fatty Acids, Analysis of Neutral Lipids: Triacylglycerols, Analysis of Neutral Lipids: Unsaponifiable Matter, Phospholipids, Carbohydrates, Alcohols in Foods and Beverages, Determination of the Fat-Soluble Vitamins in Foods by High-Performance Liquid Chromatography, Water-Soluble Vitamins, Organic Acids, Organic Bases, Phenolic

Compounds, Bittering Substances, Pigments, Aroma Compounds, and Dietary Fibre.

Volume 2 is subtitled Residues and Other Food Component Analysis and is divided into two sections: Residues and Miscellaneous. The Residues Section comprises 15 chapters entitled, Mycotoxins in Food: Methods of Analysis, Phycotoxins: Paralytic Shellfish Poisoning and Diarrhetic Shellfish Poisoning, Analysis of Residual Antibacterials in Food of Animal Origin, Residues of Growth Promoters in Edible Products, Residues of Urea Pesticides in Food, Analysis of Organochlorine Pesticides in Foods, Analysis of Carbamate Pesticide Residues in Foods, Residues of Organophosphates in Food, Fungicide Residues in Foods, Residue Analysis of Herbicides in Fruits and Vegetables, Food Packaging Residues, Methods for the Determination of Chlorinated Dibenzo-*p*-dioxins, Dibenzofurans, and Biphenyls in Food, *N*-Nitroso Compounds, Polycyclic Aromatic Hydrocarbons and Metal Contamination. The Miscellaneous section contains eight chapters covering Nonenzymatic Browning, Colorants, Preservatives in Foods, Analysis of Synthetic Food Antioxidants, Intense Sweeteners, Determination of Cations and Anions by Capillary Electrophoresis, Methods of Identification of Irradiated Foodstuffs and Instruments and Techniques.

For a book of this nature, there is surprisingly little overlap between chapters, and the editor is to be congratulated on this. The excellent index is 52 pages in length.

Although these books aim to address the needs of undergraduate and postgraduate students as well as practising food analysts, it is this latter group that is most likely to find it of use. It should be purchased by all food analysis laboratories and all university libraries serving the needs of students on food science or analytical chemistry courses. It is outside the price range of students, even those studying for research degrees.

To sum up, this is really an excellent book and, if I had to choose one 'star book' from my personal library, it would be this one. Apart from being packed with much useful analytical information and actually being two books, it also contains a surprising amount of food chemistry.

J. M. Ames