'fingerprinting' of Barley used for malting is now used to detect 'offtype' cultivars. The second section of the book provides specific application examples, e.g. species identification in processed seafood and meat, identification of milk and fat in dairy products, identification of GMO's and Wine authentication. Transgenic crops can now be detected by ELISA or PCR by targeting specific recombinant proteins. The final part of the book presents existing traceability systems of food products such as the EAN.UCC coding system, the FOODTRACE project and the study of examples for traceability of fish processed food, animal feed, cheeses and GMO's.

This book is composed of an informative collection of reviews that will be appreciated by industrialists and researchers involved in all areas of food processing, authentication and traceability. It is also highly recommended to food science students and academics that utilise any of the analytical techniques discussed.

François Meullenet, John F. Kennedy*
Chembiotech Laboratories,
Institute of Research and Development,
University of Birmingham Research Park,
Vincent Drive, Birmingham B15 22, UK

Available online 2 September 2004

*Corresponding author.

doi:10.1016/j.carbpol.2004.07.010

I. E. Tothill (Ed.), Rapid and On-line Instrumentation for Food Quality Aassurance, Woodhead Publishing Ltd, Cambridge, UK, 2003 (xiv + 406 pp., £125.00, ISBN 1-85573-674-8).

Continuing developments in many areas of food production has resulted in an increasing need for faster, automated methods of detecting contaminants, in order to provide food quality assurance. This includes carbohydrate polymers-only some of which have been approved for food use yet there is always the temptation to develop them with similar but non-accepted natural polymers. However, many measurements of product and process characteristics are performed off-line, i.e. samples are removed from the production process and taken to a quality control laboratory for analysis over a period of several hours or days. There is therefore a need for more rapid on-line methods, which provide continuous, real-time measurement of products and processes.

Rapid and on-line instrumentation for food quality assurance provides a structured and systematic, up-to-date account of existing and new methods available for food safety analysis, and is divided into two main parts. The first part is composed of nine chapters, which focus upon the area of product safety. Topics discussed in the part of the volume include the on-line detection of contaminants, such as pesticides and various types of drug residues and toxins, and rapid detection methods for microbial contamination. The ten chapters that make up the second part of the volume concentrate upon developments in the analysis of product quality. The first four chapters in this part cover the analysis of ingredients such as additives, micronutrients, genetically modified organisms and added water. Spectroscopic techniques, laser microscopy, and electronic noses used to analyse food composition and assess food quality are described in the following five chapters in this part of the volume. The final chapter provides a selection of case studies about on-line analysis and control of product quality.

In conclusion, this volume is an up-to-date, clearly written and well-presented compendium of useful information on a wide variety of instrumental techniques for food analysis. It is therefore highly recommended as an important reference tool for all individuals working in the food industry, particularly in areas of quality assurance/quality control.

John F. Kennedy*, Meng M. He
Chembiotech Laboratories,
Institute of Research and Development,
University of Birmingham Research Park,
Vincent Drive, Birmingham B15 23, UK

Available online 2 September 2004

*Corresponding author.

doi:10.1016/j.carbpol.2004.07.011

R. Y. Yada, (Ed.), Proteins in Food Processing, Woodhead Publishing Ltd, Cambridge, UK, 2004 (xviii + 686 pp. £135.00, ISBN 1-85573-723-X).

Proteins are biomacromolecules that are essentially composed of multiple combinations of approximately 20 different amino acids, connected together by peptide linkages. They play an essential role in sustaining all forms of life, and provide a source of plant and animal derived food, making them important for human growth and maintenance. Food protein contents vary according to their origin and use, and therefore their physicochemical (structural and functional) properties in foods also vary and have a profound