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Carbohydrate Polymers 62 (2005) 299–302
Carbohydrate Polymers
www.elsevier.com/locate/carbpol

Book reviews

Leo M.L. Nollet, editor. Handbook of Food Analysis Second Edition, Revised and Expanded: Volume 1: Physical Characterization and Nutrient Analysis, Volume 2: Residues and Other Food Component Analysis, Volume 3: Methods and Instruments in Applied Food Analysis, Marcel Dekker, New York, USA, 2004 (xiii + 2226pp., $397.00, ISBN 0-8247-5039-X)

The science of food analysis has developed rapidly in recent years. The number of articles and papers on the subject is increasing daily. In the food industry, there is need for analysis of components in both raw and processed products. All sorts of analysis techniques are necessary in the development of food products and in controlling food safety.

In this *Handbook of Food Analysis* which has been totally revised and expanded the contents of all chapters. There are 59 chapters in this second edition of the handbook, and they cover almost every topic of food analysis. Most of the chapters in this book have been composed using the physical and chemical properties of nutrients and other food components, providing step-by-step descriptions of various techniques, and assesses the relative accuracy and reliability of each procedure.

This second edition includes new chapters on biosensors, BMO's, nanoscale analysis systems, food authenticity, radionuclides concentration, particle size analysis, scanning colorimetry, etc.

The book is divided into three volumes:

In the first volume: *Physical Characterization and Nutrient Analysis*, evaluates current methods of measuring optical properties and other physical characteristics of food and of tracing moisture and ash content and nutrient analyses ranging from peptides, proteins, and enzymes to aroma compounds to carbohydrates and starch.

In volume 2: *Residues and Other Food Component Analysis*, methods of detection of residues in food are summarized. Residues originate from different sources. Residues of various origins are also of concern and substances added to foodstuffs to improve or preserve the quality and/or to prevent microbial growth are discussed.

The third volume, *Methods and Instruments in Applied Food Analysis*, contains chapters on methods and techniques to analyse, quantify, detect, and statistically process data. This volume features new, topical coverage of the analysis of meat quality and the quantification of genetically modified organisms in food.

All these volumes may be used as a primary textbook of undergraduate students in the techniques of food. Furthermore, graduate students and all scientists involved in the analysis of food components intend it for use.

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Available online 20 October 2005

doi:10.1016/j.carbpol.2005.05.031

Abdelhamid Elaissari, editor. Colloidal Biomolecules, Biomaterials, and Biomedical Applications, Marcel Dekker, New York, 2004 (xii + 488pp., £99.00, ISBN 0-8247-4779-8)

Magnetic latexes are colloidal composites that combine organic and inorganic materials. Each of the organic and inorganic components plays a specific role in the properties of the final hybrid material. Magnetic particles have been used as a support for the separation, selective isolation, and purification of molecules. For example, in biomedical diagnostics, they can replace the cumbersome steps of centrifugation or filtration.

Colloids provide a suitable solid-phase support as a carrier of various molecules, biomolecules, and active agents. In fact, diverse and varied particles have been developed and explored in numerous biomedical applications.

In biomedical diagnostics, the immobilization (adsorption, covalent grafting, and specific interactions) of biomolecules such as proteins, antibodies, peptides, nucleic acids, bacteria and viruses onto colloidal particles is of paramount importance.

Nowadays, the main objective in the therapeutic domain is the elaboration of new colloids-such as smart capsules and well-defined methodologies-in order to enhance the targeting efficiency. *Colloidal Biomolecules, Biomaterials and Biomedical Applications* is an authoritative presentation of established and newfound techniques promising to revolutionize the areas of biomedical diagnostics, therapeutics pharmaceutics, and drug delivery.

Colloidal Biomolecules, Biomaterials, and Biomedical Applications is divided in 15 articles where the following subjects are discussed: biomedical application for magnetic latexes, the agglutination test, latex immunoagglutination assays, capture and detection of biomolecules using dual colloid particles, polymer particles and viruses, polymer beads in biomedical chromatography, interaction of proteins with thermally sensitive