

Book Review

Food Protein Analysis: Quantitative Effects on Processing
R. K. Owusu-Apenten, Marcel Dekker, 2002, XI + 463 pp. ISBN 0-8247-0684-6

Published as part of a series dedicated to Food, Science and Technology, this book aims to provide a central reference guide to the extensive range of assays employed for the quantitative analysis of food proteins. It purports to offer the reader material to enable him/her to plan, perform and interpret food protein assays. The book is organised into 14 self-contained chapters that each deal with a specific assay. The chapters themselves are grouped within 5 parts. These parts cover fundamental techniques, copper-binding methods, dye-binding methods, immunological methods for protein speciation and assays for protein nutrient value.

The first chapter includes a very brief introduction to food protein analyses. The Kjeldahl method, quantitative amino acid analysis and combustion analysis are then discussed at some length. These fundamental techniques are assessed for their advantages and limitations with respect to one another and several applications to food commodities are described. The second and third parts include discussions of the biuret assay, Lowry method, bicinchoninic acid protein assay and two dye-binding protein assays, namely the Udy and Bradford methods. In each chapter the theory of the assay is described and practical issues, such as calibration, interference compounds and sample pre-treatment, are discussed. Methods sections are included that give instructions for specific applications and reference lists are provided to enable further reading. The fourth part moves away from chemical methods and discusses

immunological methods for protein speciation and determination of trace protein allergens. The final part describes biological and chemical approaches to determining protein nutrient value in various foods.

Overall, this book offers a comprehensive account of the methods used for the quantitative analysis of proteins in foods. Each chapter offers broad detail on its subject matter, providing the reader with historical, theoretical and, most importantly, practical information. The real strength of the book is this practical detail, which includes step-by-step methods for various aspects of each assay described, including sample pre-treatment. The book is therefore accessible on a variety of levels, depending upon the reader's level of interest and existing knowledge. At the most basic level it can be used as a practical reference manual. At a more advanced level the reader can learn about the underlying principles of each technique. My only reservation is that the book lacks a substantial introductory chapter to bring together the various parts of the book. This leaves the book with a disjointed feel, though it is doubtful that many will read this book from cover-to-cover.

On the whole, *Food Protein Analysis* achieves its aims well. Due to its breadth and depth of coverage it is highly recommended as a reference book for analytical and research laboratories, university libraries and students of food science, food technology and related disciplines.

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doi:10.1016/S0308-8146(02)00483-1

Pectins and Their Manipulation

Edited by Graham B. Seymour and Paul J. Knox,
Blackwell Publishing, CRC Press, 2002. ISBN 1-841227-228-0.

This book of 250 pages consists of eight chapters providing state-of-the-art reviews of key areas relating to the structure and function of pectins in foods and developing plant systems. It is aimed at research and professional readers but an appropriate level of introductory material is presented in each chapter to make material understandable to non-experts. Each contributor has endeavoured to provide a thorough

account of their chosen area, and all essential areas have been covered in this one book. The book contains a variety of different topics concerning pectin research, and it is unlikely that the typical reader would be an expert in all of the areas covered. However, I would consider this to be one strength of the book as readers may well find new applications for their research after careful study of the book. The book as a whole has been thoroughly and appropriately edited, and each chapter contains excellent reference to review articles and primary reports in the literature. Where relevant, a good number of clear chemical diagrams are included, as well as clear flow charts and tabulated data. The latter are