

Book review

Chemistry and Function of Pectins, edited by MARSHALL L. FISHMAN AND JOSEPH J. JEN, American Chemical Society, Washington, D.C., 1986, ix + 274 pages + indexes, \$54.95 (U.S. and Canada), \$65.95 (elsewhere).

This book, which constitutes Volume 310 of the American Chemical Society Symposium Series, is a collection of 20 chapters produced from a Symposium sponsored by the Division of Agricultural and Food Chemistry at the 189th meeting of the A.C.S. held in Miami Beach in April, 1985.

The subject area is wide; however, the title is appropriate, as the book covers a wide range of physical properties, biochemistry, and applications (in food technology) of pectins. The majority of the chapters report recent research carried out by the authors, but some are more-general reviews. The chapters are grouped under three sections. The first, entitled "Chemical Composition, Structure, and Physical Properties", contains ten chapters, but only the first, by J. N. BeMiller, deals seriously with the structure and chemical composition of pectins. The other chapters discuss analytical and structural studies of pectins. The second section, entitled "Plant Biochemistry", consists of only four chapters by a total of nine authors. This section presents an abundance of biochemical syntheses, analysis, and enzymic studies on pectins. One chapter provides the reader with a new technique of characterization of the sequential-cooperative, ion-binding mechanism of pectins by using electron-spin-resonance, spin-spin coupling experiments. Each of the three remaining chapters focusses on comparative analysis, biosynthesis, and deposition. The last section, on "Food Technology and Nutrition", contains six chapters. The first four are on physical effects of pectins and their characteristics. The two others treat effects of pectins on human metabolism, and the role of pectins in binding of bile acids to carrot fiber.

In view of the increasing interest in the physical, biochemical, and functional properties of pectins during the past few years, this book (the first such in 10 years) is highly valuable. It is well bound and is clearly legible, in spite of its having been printed from material supplied in camera-ready form. The reference list in every chapter is extensive (a total of over 700 references) and is almost fully up to date. An Author Index (contributors only) and Subject Index are also provided, the latter being short, but adequate. The text is nearly error-free; however, a few typing errors are evident.

The diversity of the subject area and the price of the book militate against its being purchased for a personal library, but it would be a useful addition to an institutional, scientific collection. Overall, this volume is of interest primarily to

such specialists as food technologists concerned with the pectins and their chemical and physical properties, but not to most carbohydrate chemists and biochemists, for whom it would be far less useful.

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