

Book reviews

***Phase/state transitions in foods – chemical, structural, and rheological changes*, by R.W. Hartel and M.A. Rao, Marcel Dekker Inc., 1998, 416 pp., \$165, ISBN 0-8247-0719-8**

Phase/state transitions in foods are of fundamental importance and significance in everyday food interactions, namely during processing, cooking and storage. Such interactions give rise to structural and textural changes in food, and it is on these factors that the uttermost consistency and presentability, and hence marketability of the foods depend. It is therefore important to understand the composition of foods and the chemical, rheological and structural changes that occur during these transitions, so that useful products can be manufactured and product reproducibility ensured.

This scientifically sound publication gives a comprehensive, up-to-date and authoritative understanding of certain fields relevant to food technologists. The particular areas covered present the basic and fundamental principles of phase/state transitions, and analyses their influence on chemical, physical, and rheological changes occurring in food during processing, preservation, and storage.

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***Carbohydrates as Organic Raw Materials IV: Proceedings of the 4th International Workshop on Carbohydrates as Organic Raw Materials*, W. Praznik, A. Huber (Eds.), WUV Universitätsverlag, Vienna, 1998, 292 pp., DM88.00, ISBN 3-85114-312-4**

An increased knowledge of the structural and functional properties of carbohydrates is essential in order to develop novel and improved approaches to modify these materials, either in a purely chemical or enzymatic way. For low-molecular weight materials, controlled derivatisation is still a source of interesting new products. Tailor-made materials can be made by enzymatically-catalysed modification of carbohydrates/polysaccharides. The understanding of structure–function relationships, particularly for the high-molecular weight compounds is still limited: elucidation of

Presented with relevant and precise information, each well-balanced chapter, which is appropriate in depth, deals with specific aspects such as the quantitative microstructure of foods, including measurement and analysis, the role of water in freezing and crystallisation in addition to glass transition in baked foods; discussion of homogeneous and phase-separated gels, as well as applications of gel formation; examination of gel formation in globular proteins and reactions in soy proteins and the understanding of the complex changes that transpire during the processing and storing of fats, chocolates, and frozen foods.

Aiding the literature are useful references to key sources, as well as edited tables, equations, drawings, and photographs. Each of these illustrations are clear, relevant as well as scientifically accurate.

This well produced literature serves as a good reading material for food scientists, technologists, as well as upper-level undergraduate and graduate students in these disciplines. Due to its focus being concentrated on such reading bodies, it is priced at the upper end of the literature market.

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building blocks and branching/substitution patterns via analysis using controlled enzyme applications is of fundamental importance.

Carbohydrates as Organic Raw Materials IV: Proceedings of the 4th International Workshop on Carbohydrates as Organic Raw Materials comprises selected contributions presented at the conference held on March 20/21, 1997 at the Universität für Bodenkultur, Vienna. A number of articles on the high degree of polymerisation of carbohydrates/polysaccharides feature starch as a prominent material; analysis, modifications, and technological processing and applications are all covered. Non-starch, high degree of polymerisation, carbohydrates/polysaccharides such as chitosan and xylan are featured, reflecting the increasing interest in their applications in areas such as biotechnology and medicine.