



Book Review

Starch and starch containing origins—structure, properties and new technologies

V.P. Yuryev, A. Cesàro, W.J. Bergthaller (Eds.); Nova Science Publishers, Inc., New York, 2002, x + 394 pp, ISBN 1-59033-332-2, \$139.00

A better understanding of the structure–property–functionality relationships in starches is required, since starch is one of the major components in the diet and plays an important role in the formulation of food products, with respect to both food functionality and nutritional quality. This volume contains original reviews and research papers that were presented at a conference in Moscow, which was devoted to the chemistry and physics of starch, the processing of starches and starch-containing raw materials, and starch origin selection. It is divided into seven sections, the first two entitled ‘From molecules to starch granules’ and ‘Starch as polymer and starch gels’, respectively. The thermodynamic and structural properties of starch polysaccharides and native starches, their structure formation during biosynthesis, and phases and physical states of starch gels and starch containing systems are discussed, through the application of different physical and physicochemical theories. The application of different theoretical approaches makes it possible not only to explain existing experimental results, but also to predict the behaviour of systems under different conditions.

Determination of the relationships between the variety of starch macrostructures and their properties is of particular interest. The next two sections discuss ‘Functional properties of starches and their modification’ and ‘Multicomponent starch containing systems’, respectively. The fifth and sixth sections of the volume cover ‘Non-food applications of starches’ and ‘Starch containing plants and their processing’, respectively. A great deal of current academic and industrial interest is focused upon non-food applications of polysaccharides, including starch. The potential of new commercial starch sources are also of interest, as researchers look to find new materials with novel properties. The final section of the volume provides some concluding remarks, discussing the World Trade Organisation (WTO), with specific respect to Russia.

In summary, this volume provides a broad range of detailed information on starch, with particular emphasis on its origins, structure, properties, modification and commercial application. It is therefore highly recommended to all individuals with research interests in areas of starch science.

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