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Book Review

Gums and Stabilisers for the Food Industry 11

Peter A. Williams, Glyn O. Phillips (Eds.); The Royal Society of Chemistry, Cambridge, UK, 2002, x + 370 pages, ISBN 0-85404-836-7, £ 79.50

Hydrocolloids (polysaccharides and proteins) are used in the Food Industry to impart texture and appearance properties to fabricated foods. It is quite often the case that single hydrocolloid solutions or gels are incapable of delivering all the desired product properties. Although in the chemical industries this problem can be overcome by chemical and biochemical modification of the polymeric species, this is not an option that is readily open to the Food Industry due to constraints on food additives. The heartening feature is the emphasis now on real food systems, and the increased participation of proteins within the hydrocolloid classification. New materials too are being devised using a biomimetic approach, tailor-making hydrocolloids using nature as a model. Biomaterials such as konjac mannan, gum arabic and other acacia gums, chitosan, dextran etc. along with a wide range of proteins are now coming out of the shadows.

Gums and Stabilisers for the Food Industry 11 presents the latest research in the field of hydrocolloids used in food. Bringing together contributions from international experts, Section 1 of the book investigates the advances in structure determination and characterisation of hydrocolloids, includ-

ing the application of capillary electrophoresis, two dimensional (2D) NMR spectroscopy and reflection spectroscopy. Later sections deal with rheological aspects of hydrocolloids in real food systems, and the interfacial behaviour and gelation of proteins, which include the roles of proteins and peptides in formation and stabilisation of emulsions and kinetic and equilibrium processes in the formation of weak gelatin gels etc. Finally, several new materials used in the food industry are presented and a discussion of the influence of hydrocolloids on human health is also included.

The breadth and depth of knowledge of gums and stabilisers has increased tremendously over the last two decades with researchers in industry and academia collaborating to accelerate the growth. This unique book provides an overview of the state-of-the-art for a variety of readers, which will include researchers and other professionals in industry and academia, particularly those involved directly with food science.

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