**Functionality of β-glucans in dairy products**

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**Abstract**

Beta-glucans as a cereal ingredient have multiple beneficial effects. In recent years, interest has increased in application of β-glucans in food and pharmaceutical applications due to physical attributes such as viscosity, water solubility, gelation and emulsification. Although β-glucans are also available in the concentrated form intended to use as a dietary supplement, dairy food products containing β-glucans are being commercially introduced to the market. The β-glucans have considerable technological role in different foods with high dietary fiber content. Their health benefits and hydrocolloid functionality make them interesting food ingredients in health-promoting functional dairy foods. It can be used as thickening and stabilizing agents, fat replacer, filling agent and gel-forming component in dairy products such as yoghurt, cheese, spreads, ice cream, dessert, dairy-based beverages and even ready-to-use milk substitutes. The effects of β-glucan on the physicochemical properties, resistance to fermentation, proteolysis, textural properties, viscosity, rheological properties, water holding capacity, meltability, spreadability, foaming capacity, color parameters and sensory qualities of dairy products have been evaluated. The β-glucan functionality can be affected by incompatibilities between β-glucan and other dairy constituents. Moreover, extraction processes, purity, degree of degradation, molecular weight, particle size, solubility and concentration in product are the important characteristics that determine the functionality of β-glucan.

*Key words*: β-glucans, dairy, functionality,hydrocolloids, stabilizer