

The Functional Aspects of Beta Glucan for Dairy Industry

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Beta glucan (β -glucan), an important functional ingredient, has gained renewed interest from the food industry due to its health beneficiary compounds beyond basic nutrition. This soluble fiber, with high water-holding capacity and gelling, thickening, stabilizing and emulsification properties, is readily found in the cell walls of cereal grains (i.e. barley and oats), algae, bacteria and fungi. In scientific literature, beta-glucan has been documented for playing beneficiary role in insulin resistance, hypertension, and obesity; reduction of serum cholesterol levels; helping the production of short chain fatty acids and forming highly viscous solutions that promote the growth of beneficial gut microflora, and consequently, lowering the risk of cancer. In dairy products β -glucan is being widely used either to improve microstructure and rheological properties or enhance their health properties such as calorie-reduction and cholesterol-lowering. The objective of the present paper is to explore the role of β -glucans as a source of dietary fiber supplementation, their potential uses in dairy applications and development of new nutraceutical products.

Keywords health benefits; *beta*-glucan; fiber; functional dairy foods