

Alginates in Comestibles

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Abstract

Alginates are polysaccharide compounds derived from the cell walls of brown algae of Class Phaeophyceae and some earth bacterial species. The alginates derived from these organisms are used in food industries as food additives to improve, modify, and stabilize the texture of certain food products. Alginates are classified as synthetic, nonagricultural substances that can be used as an ingredient in processed food products, and they have been listed at 7CFR section 205.605(b) for their use in food products. They have been approved and demonstrated safe for use throughout the European Union (EU), and they have been commonly consumed in western countries. The alginates have been designated E numbers as per EU. The number E400 was designated for alginic acid, and the numbers E401–E404 were designated for salts of alginic acid. Esters of alginic acid with Propylene Glycol Alginates (PGA) has been designated E405. Though alginates have no nutritional value, their properties such as viscosity enhancement, gel-forming ability, and stabilization of aqueous mixtures, dispersions, and emulsions make their effective use in food industries. They were also found to increase the shelf life of products and protect them from pathogens. They have been used as anti-browning agents, colorants, flavors, nutrients, spices, and antimicrobial compounds in food industry. They act as a protective barrier to moisture, oxygen, lipid oxidation, and loss of volatile aromas and flavors in food products. They also

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