

Potential Application of Alginates in the Beverage Industry

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Abstract

Alginates are polysaccharides derived from brown seaweeds, namely *Laminaria* sp., *Macrocystis* sp., and *Ascophyllum* sp. They are used as stabilizers, thickeners, and emulsifiers in the beverage industry. Alginate-fortified beverages and fermented drinks have also been reported to have effects on gastric emptying and glycemic modulation. They can also be used to enhance bioavailability of beneficial compounds by acting as a potential carrier. Alginates can also be used in alcoholic beverages to induce and stabilize frothing. Calcium alginate microencapsulated yeast has been widely employed in wine industries to improve flavor and color, reduce browning, and also improve overall quality. Recently, alginates have been used to microencapsulate probiotic bacteria and have found applications in the production of fermented dairy products like yogurt with better viability during storage and under gastrointestinal conditions. This chapter summarizes the potential applications of alginates in the beverage industry focusing on recent advancements in research and commercialization.

Keywords: Alginates, fortified beverage, fermented drink, microencapsulated yeast, probiotic

12.1 Introduction

Hydrocolloids and gums are used in the food system to improve the texture, enhance stability, or improve its nutritional quality. In general,

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