

عنوان مقاله:

Survival of alginate-prebiotic microencapsulated Lactobacillus acidophilus in mayonnaise sauce

محل انتشار:

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خلاصه مقاله:

BACKGROUND: Nowadays, Microencapsulation of probiotic bacteria is the newest method for increasing the survival ability of probiotics in Food products. The Lactobacillus acidophilus as a probiotic bacterium has more beneficial effects and the low survival of this bacterium under food processing conditions and adverse environment have been studied by many researchers. **OBJECTIVES:** In this study, Lactobacillus acidophilus was added to mayonnaise sauce as either free cells or encapsulated and the survival of probiotic was evaluated during storage for 30 days at 4°C. **METHODS:** The emulsion method was performed for the microencapsulation process of Lactobacillus acidophilus. A morphological characteristic of capsules was indicated by optical microscope and scanning electron microscope. **RESULTS:** The microencapsulation with calcium alginate-resistant starch significantly affected ($p < 0.05$) the survival of Lactobacillus acidophilus compared to free state in mayonnaise sauce. No differences were detectable in the morphological of capsules with resistant starch by scanning electron microscope and Sensory properties of mayonnaise sauce were improved by the addition of encapsulated Lactobacillus acidophilus. **CONCLUSIONS:** The microencapsulation significantly increased the survival of Lactobacillus acidophilus.

کلمات کلیدی:

Scanning electron microscope, Microencapsulation, Prebiotic, Starch, Lactobacillus acidophilus

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