

عنوان مقاله:

The Effects of Extrusion and Internal Emulsion Microencapsulation Methods on the Viability of *Lactobacillus acidophilus*

محل انتشار:

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خلاصه مقاله:

Background: The present study aimed to investigate the effects of various encapsulation methods on *Lactobacillus acidophilus* viability using wall materials variably. **Methods:** *L. acidophilus* was encapsulated using the extrusion and emulsion encapsulation methods with calcium-alginate and skim milk via mixing or coating. The particle size, encapsulation yield, and viability of *L. acidophilus* in the simulated gastric and intestinal fluids were investigated. **Results:** The mean particle size in the emulsion and extrusion methods was within the range of ۱۶۱ μm to ۱.۹۵ mm, and the coated samples were smaller than the mixed samples. The encapsulation yield of the extrusion method was higher compared to the emulsion method. In addition, skim milk was essential to improving the *L. acidophilus* viability, which significantly improved in the calcium-alginate particles coated by skim milk compared to the mixed samples. **Conclusion:** According to the results, the coating process by skim milk not only improved probiotic viability, but it also reduced the preparations particle size, which in turn decreased the adverse effects of the preparations on the sensory properties of food.

کلمات کلیدی:

Emulsion, Encapsulation, Extrusion, *Lactobacillus acidophilus*, Skim milk

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