

عنوان مقاله:

Cholesterol Removal from Homogenized Milk with β -Cyclodextrin in milk

محل انتشار:

همایش ملی علوم و فناوریهای نوین در صنایع غذایی (سال: 1393)

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خلاصه مقاله:

The aim of this study is to evaluate the removal of milk cholesterol with beta-Cyclodextrin (β -CD) in the mixture of milk and soy milk. Soy milk provides excellent nutrition which is high in protein and carbohydrates, but low in fat and cholesterol. Soy milk is also a great milk alternative for people who are lactose intolerant. In this study we used three different level of soy milk 0%, 25% and 50%. Flavor, taste, and overall acceptability of the mixture of milk and soy milk in sensory evaluation were tested and it was shown that 25% of soy milk is acceptable. Currently, the most effective method for reducing cholesterol content in milk is by using beta-Cyclodextrin. This study was carried out to determine optimum conditions of three different concentrations (0, 0.25, and 0.5%) of β -Cyclodextrin in reduction of cholesterol in 1.5% fat, homogenized milk by application of β -Cyclodextrin. Individual fatty acid and triglyceride compositions differ between control milk and milk treated with (β -CD). β -Cyclodextrin at 0.25% with 0% soy milk, and 0.5% with 25% soy milk provided 198.39 and 52.10 mg/kg removal of cholesterol in comparison with control milk. In general, replacing soymilk and adding β -CD had significant effect ($p < 0.01$) on sensory properties and ($p < 0.05$) on chemical properties of cow milk. Based on all the results obtained from this research; we suggest that the optimum conditions for the process are addition of 0.5% β -Cyclodextrin with 25% soy milk.

کلمات کلیدی:

Milk, Soymilk, β -Cyclodextrin, Cholesterol Removal

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