EFFECT OF GOAT FRESH CHEESE ADDITION ON THE TECHNOLOGICAL CHARACTERISTICS OF GUAVA GOAT MILK ICE CREAM

Jacqueline da Silva Oliveira¹, Clara Mitia de Paula², Patrícia Lopes Andrade¹, Tamires Marques Silva¹, Karina Maria Olbrich dos Santos³.

² Department of Biochemical-Pharmaceutical Technology, Faculty of Pharmaceutical Sciences – USP, Av. Prof. Lineu Prestes 580, Butantã, 05508-000, São Paulo/SP, Brazil.
³ Embrapa Goats and Sheep, Estrada Sobral/Groaiiras km 04, Caixa Postal 145, 62010-970, Sobral/CE, Brazil.

The global ice cream market has attempted to develop healthier products with natural ingredients and exotic flavors. The aim of this study was to develop a goat milk ice cream with guava pulp using goat fresh cheese as an agent of body and texture, and to evaluate the effect of this addition on the product nutritional value and characteristics, as well as on sensory acceptance. Three ice cream formulations with different levels of goat fresh cheese were produced in triplicate: T1 - without cheese, T2 – with 6,82% of cheese, and T3 - with 13,65% of cheese. Ice cream samples were evaluated regarding physical/chemical stability, meltdown rate, air incorporation (overrun), and sensory acceptance. The ice cream formulations with fresh cheese presented a significantly lower total solids content (P<0.05). Also, the lipids content was 33,20% lower in T3 in comparison with T1 and T2 . Meltdown rate and overrun was influenced by the fresh cheese addition. The mean acceptability scores for flavor were increased (P < 0.05) for T3 (7.05) compared to T1 and T2 (7.77 and 7.72, respectively). Overall acceptability was also significantly higher when fresh goat cheese was added to the ice cream. The texture acceptability scores do not differed significantly between the three formulations, although the difference in the total solids and lipids content. The results showed that the fresh goat cheese has a good potential as an ingredient in ice cream processing, enabling the production of ice cream with lower fat content without affecting the sensory acceptability.