

## MICROBIOLOGICAL AND SENSORIAL EVALUATION OF CREAM CHEESE FROM KEFIR

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The high prevalence of metabolic diseases has stimulated the search for healthy foods, preferably those from natural source or low processed foods. Kefir is a fermented milk beverage obtained by a homemade fermentation, using the kefir grains as starter culture. The grains are composed of a polysaccharide and protein matrix in which a complex microbial community (lactic acid bacteria (LAB), acetic acid bacteria (AAB) and yeast) coexists in a symbiotic relationship. The consumption of kefir is associated to a variety of beneficial health effects. The aim of this work was to assess the microbiology composition of cream cheese derived from kefir throughout the storage and its sensory acceptance. The kefir beverage was obtained from the fermentation of milk with kefir grains (3%, 25°C/24h). Subsequently, the cheeses were prepared from desorption of kefir (4°C/24h) and divided in three groups: control cheese (CC) without spices, cheese with oregano (OC) and cheese with basil (BC). The enumeration of the microorganisms was carried out to evaluate the microbiological quality of cheeses and the spices effects on their microbial composition, during 14 days of storage at 4°C. The Coli ID agar were used for counts of Total coliforms and *E. coli* (37°C/48h), PCA for total count of psychrotrophic bacteria (4°C/168h), MRS agar for LAB (37°C/120h) and YGC agar for yeast (25°C/168h) at 0, 7 and 14 days of storage at 4°C. In sensory analysis, the acceptance and purchase intention of products developed were investigated, besides the consumer profile. Total coliforms and *E. coli* were not observed in the developed cheeses. LAB counts varied of 9,8 to 10,1 logarithmic units of CFU/g, from yeast of 6.1 to 7.1 log (CFU/g), while the psychrotrophic ranged from 1.5 to 2.7 log (CFU/g). The treatments with spices in both cheeses (OC and BC) did not influence the counting of the investigated microorganisms when compared to the control, except for psychrotrophic ones ( $P < 0.05$ ). In the sensory analysis, the OC has greater acceptability in all evaluated criteria. In addition, it was observed that 66% of consumers already knew the kefir and its functional property. The developed kefir cheeses were safe, with the minimum LAB and yeast counts required for a kefir product, even with added spices. They also showed good acceptability and intent to purchase from the tasters. Therefore, these cheeses may be an alternative to explore its functional properties and expand other ways of consumption.

Keywords: Kefir, Cream Cheese kefir, sensorial evaluation, LAB counts, yeast counts

Development Agency – CNPq -Conselho Nacional de Desenvolvimento Científico e Tecnológico, FAPERJ – Fundação de Amparo a pesquisa do Estado do Rio de Janeiro