Abstract

Tropical cream cheese samples were obtained from five cheese-making enterprises randomly selected in Tonalá, Chiapas. With two modalities: cheeses made from pasteurized milk and cheeses made from raw milk. Samples were taken in January, February, March and April of 2007. The objectives of this research work were: to microbiologically evaluate the tropical cream cheese in finished product form, in function of the presence of mesophilic aerobic bacteria, pathogens such as Salmonella sp. and E. coli; and to determine the physiochemical characteristics of the tropical cream cheese and their influence on the development of Salmonella sp. and E. coli. Microbiological variables were number of fecal coliform bacteria (FCB), E. coli, number of mesophilic aerobic bacteria (MAB) and detection of Salmonella sp. The physiochemical variables were water activity (Aw), pH, total acidity, protein, moisture, fat content, sodium chloride (NaCl), calcium and ashes %. The data were analyzed by univariate Analysis of Variance (ANOVA) and canonical discriminant analysis (CDA). The cheese did not meet microbiological standards for FCB, E. coli and Salmonella. The ANOVA showed significant differences (\( \alpha \leq 0.05 \)) among the cheeses with respect to the number of fecal coliform bacteria. The number of MAB, (ANOVA) showed no significant differences (\( \alpha = 0.05 \)) among the five treatments. The canonical discriminate analysis (CDA) showed that the tropical cream cheeses presented differences in their physiochemical and microbiological characteristics, depending on the different sampling dates.

Keywords

Tropical cream cheese, physicochemical and microbiological variables.