Sensorial analyses and biogenic amines determination by HPLC in bovine and caprine fermented milk


Milk is considered as one of the most complete food, because it has several important elements for human nutrition, and the caprine milk is a satisfactory substitute in cases of individuals allergic to bovine milk. Fermented milk is world-wide consumed product, elaborated with milk and different lactic bacteria. Some strains have the capacity to produce biogenic amines, which can be hazardous for health of consumers. The objective of this study was verified the acceptance of bovine and caprine fermented milk and determinate of biogenic amine levels at 4 ± 2 °C for 10 days of storage. Fermented milk was manufactured with UHT whole milk of two different species and commercial starters: Lactobacillus acidophilus, Bifidobacterium longum and Streptococcus thermophilus. Biogenic amines levels were evaluated in milk and fermented milk by high performance liquid chromatography (HPLC). For sensorial analysis was performed the acceptance test and applied the hedonic scale at 24 hours after elaboration. Results showed that tyramine and putrecine were predominant in both milks, followed by histamine, spermidine and cadaverine. Fermented milk presented higher initial concentration of spermidine and putrecine, (bovine) and histamine (caprine). Higher concentration of biogenic amines was observed in the first 5 day in storage. Bovine fermented milk was higher accepted than caprine which was rejected because the characteristic taste of specific fatty acids in this specie. There is a production of biogenic amines in both fermented milk but there are not still information that show if these levels could be represent some risk to consumer health.