Enterobacterial identification of artisanal cheeses sold in municipal markets in the North of Paraná

Tulio, M.S.F., Campos, A. C. L. P., Tozzi, E. N., Fagan, E. P.

UENP – Universidade Estadual do Norte do Paraná, Campus Luiz Meneghel (Rodovia BR-369, Km 54, Vila Maria, CP 261 CEP 86360-000 – Bandeirantes – Paraná – Brasil)

The cheese is a high nutritional consumable that represents the source of income for thousands of families that find in this activity their mainly way of surviving. The types "Minas Frescal" e "Minas cheese" artisanal are consumed in Brazil and are commonly produced with raw milk, being a possible vehicle of diseases, due to the presence of pathogens related to lack of hygiene and sanity of animals. Generally, cheese have microorganisms that can contribute positivily to the organoleptic characteristics of the product. Although, in artisanal cheese, many times found pathogens that cause a negative effect on the product. Among these pathogens the most common are Escherichia coli, Salmonella sp., Enterobacter sp., Proteus sp. With this in mind the objective of this paper was search and identify enterobacterial secluded from artisanal cheese sold in municipal markets in the North of Paraná. The cheese were fracionated and dissolved in peptone water (25g/225ml) and innoculated in Mac Conkey Agar, SS agar and XLD agar. Following that, three colonies isolated from each growing medium for biochemical confirmation using the EPM (Rugai and Araujo modified), TSI (Triple Sugar Iron), SIM (Hydrogen Sulphide, Indol and Motility) and Simmons Citrate. From the analysed cheese, twenty-seven samples presented contamination from Enterobacteriaceae family. From these 99 colonies were isolated and identified being 24 Klebsiella pneumoniae, 41 Klebsiella ornithinolytica, 18 Escherichia coli, 4 Proteus vulgaris, 8 Citrobacter dreundii, 2 of Salmonella enteritidis and 2 Enterobacter sp. Considering the genders found it was possible to affirm that 84% of the collected cheese found in markets presents unsatisfactory hygienically conditions putting the consumers health at risk.

Keywords: Enterobactereacae, artisanal cheese, microorganisms pathogenic.

Development agency: Fundação Araucária