

TITLE: MICROBIOLOGICAL QUALITY OF SLICED MOZZARELLA TYPE CHEESE FROM PIRASSUNUNGA/SP

Authors: Bedoya-Serna, C.M.⁽¹⁾; Jiménez-Obando, E.M.⁽¹⁾; Vásquez-García, A.⁽¹⁾; Martins, W.J.⁽¹⁾; Capodifoglio, E.⁽¹⁾; Godoy, S.H.S.⁽¹⁾; Sousa, R.L.M.⁽¹⁾; Fernandes, A.M.⁽¹⁾.

Institution: ⁽¹⁾ Universidade de São Paulo, Faculdade de Zootecnia e Engenharia de Alimentos (Avenida Duque de Caxias Norte, 225, CEP 13635-900 Pirassununga, SP).

Abstract

The mozzarella type cheese is one of the most produced and consumed in Brazil. In the manufacturing process the heat treatment dramatically reduces the microbial load; however, contamination may occur during other manufacturing steps or post-processing, such as slicing. When contaminated, the cheese can be deteriorated and can have the shelf life reduced, as well causing a risk to consumer's health. The aim of this study was to evaluate the microbiological quality of sliced mozzarella type cheese in Pirassununga, State of São Paulo. It were collected 20 samples from 11 commercial establishments in Pirassununga, including 18 markets and two bakeries. Sampling took place from October to November 2013. The microbiological analysis included total coliforms count, yeasts and molds, coagulase positive *Staphylococcus* and *Salmonella* spp. detection. Total coliforms were not found in all samples (100%) evaluated. The maximum level of molds and yeasts was 2.5×10^7 colony forming units (CFU)/g. These microorganisms are not desirable regarding mozzarella type cheese, as they may cause deterioration of the product. Five samples (25%) presented coagulase positive *Staphylococcus*, and two samples (10%) were above the Brazilian regulation limit of 5.0×10^3 CFU/g. *Salmonella* spp. was not detected in any sample. Contamination by molds and yeasts was high, but limits for these microorganisms in high-moisture cheeses, such as mozzarella type, are not covered by Brazilian legislation. Most of the sliced mozzarella type cheese samples showed no contamination by coagulase positive *Staphylococcus*, however, two samples presented higher values than allowed by Brazilian law, constituting a risk to consumer's health. It should be noted that control of hygiene during the manufacture and the handling at point of sale is a key factor for the microbiological quality of the product.

Key words: Handling, coagulase positive *Staphylococcus*, molds and yeasts

Financial support: -----