

## STABILITY OF AFLATOXIN M<sub>1</sub> DURING PRODUCTION OF FERMENTED DAIRY PRODUCTS

Ina Jasutienė, Meilė Kulikauskienė, Galina Garmienė

*Food Institute of Kaunas University of Technology, Taikos 92, Kaunas LT-51180, Lithuania*

*Tel./fax. +370 37 312393, e-mail: lmai@lmai.lt*

**Summary.** Mycotoxins in food and feeds may be removed, detoxified or transformed by physical, chemical or microbiological agents. During technological process matrix's components may involve binding of the aflatoxin; transformation of aflatoxin to less toxic moieties during heating or other effects; some microorganisms can accumulate or bind aflatoxins too. The aim of this study was to determine stability of aflatoxin M<sub>1</sub> during production of fermented dairy products. The milk obtained after dissolving milk powder artificial contaminated with aflatoxin M<sub>1</sub> at 0.044±0.006 µg/g. Quantification of aflatoxin was performed after clean-up with immunoaffinity column by HPLC with fluorescence detection. Investigation of milk before and after pasteurization showed, that 3 min heating at 95 °C temperature have no significant effect on aflatoxin stability, while determined concentration of aflatoxin M<sub>1</sub> was on 9% lower compared to milk before pasteurization. Fermentation had significant effect on the aflatoxin M<sub>1</sub> stability, concentration decreased in average by 25% compared to milk before pasteurization. Indispensable yoghurt cultures and *Streptococcus thermophilus*; probiotic cultures and traditional yoghurt cultures were used in fermentation of yoghurt to pH 4.0 and 4.5. *Lactococcus* starter were used in production of fermented milk. Composition of starter and duration of fermentation had no significant effect on aflatoxin stability.

**Key words:** aflatoxin M<sub>1</sub>, pasteurization, fermentation.