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# Distribution and stability of Aflatoxin $M_1$ during processing and ripening of traditional white pickled cheese

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## Abstract

The distribution of aflatoxin $M_1$ ($AFM_1$) has been studied between curd, whey, cheese and pickle samples of Turkish white pickled cheese produced according to traditional techniques and its stability studied during the ripening period. Cheeses were produced in three cheese-making trials using raw milk that was artificially contaminated with $AFM_1$ at the levels of 50, 250 and 750 ng/l and allowed to ripen for three months. $AFM_1$ determinations were carried out at intervals by LC with fluorescence detection after immunoaffinity column clean-up. During the syneresis of the cheese a proportionately high concentration of $AFM_1$ remained in curd and for each trial the level was 3.6, 3.8 and 4.0 times higher than levels in milk. At the end of the ripening, the distribution of $AFM_1$ for cheese/whey + brine samples was 0.9, 1.0 and 1.3 for first, second and third

spiking respectively indicating that nearly half of the $AFM_1$ remained in cheese. It has been found that only 2–4% of the initial spiking of $AFM_1$ transferred into the brine solution. During the ripening period $AFM_1$ levels remained constant suggesting that $AFM_1$ was quite stable during manufacturing and ripening.

Keywords:

Aflatoxin $M_1$ | traditional white pickled cheese | stability | distribution

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Related Research Data

Fate of Aflatoxin M1 in Brick and Limburger-like Cheese
Source: Journal of Food Protection
Fate of Aflatoxin M1 in Cheddar Cheese and in Process Cheese Spread
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Occurrence and Stability of Aflatoxin M1 in Milk and Milk Products: A Worldwide Review
Source: Journal of Food Protection
Verhalten von Allatoxin M1 w�hrend der Reifung und Lagerung von K�se
Source: European Food Research and Technology
Ability of Dairy Strains of Lactic Acid Bacteria to Bind Aflatoxin M1 in a Food Model
Source: Journal of Food Protection
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