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# Distribution and stability of Aflatoxin M<sub>1</sub> during processing and ripening of traditional white pickled cheese

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## Abstract

The distribution of aflatoxin M<sub>1</sub> (AFM<sub>1</sub>) 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<sub>1</sub> at the levels of 50, 250 and 750 ng/l and allowed to ripen for three months. AFM<sub>1</sub> 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<sub>1</sub> 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<sub>1</sub> 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<sub>1</sub> remained in cheese. It has been found that only 2–4% of the initial spiking of AFM<sub>1</sub> transferred into the brine

solution. During the ripening period AFM<sub>1</sub> levels remained constant suggesting that AFM<sub>1</sub> was quite stable during manufacturing and ripening.

Keywords:

- Aflatoxin M<sub>1</sub>
- traditional white pickled cheese
- stability
- distribution

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### Related Research Data

- [Fate of Aflatoxin M1 in Brick and Limburger-like Cheese](#)  
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- [Fate of Aflatoxin M1 in Cheddar Cheese and in Process Cheese Spread](#)  
Source: Journal of Food Protection
- [Occurrence and Stability of Aflatoxin M1 in Milk and Milk Products: A Worldwide Review](#)  
Source: Journal of Food Protection
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Source: European Food Research and Technology
- [Ability of Dairy Strains of Lactic Acid Bacteria to Bind Aflatoxin M1 in a Food Model](#)  
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- [Fate of Aflatoxin M1 in Parmesan and Mozzarella Cheese](#)  
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