

SUMMARY

Determination of Aflatoxin M₁ in milk and milk products produced in Aydın and district.

Aflatoxins have been important relatively carcinogenic and teratogenic effect and toxic metabolite in food and feedstuff of funguses as *Aspergillus flavus*, *A. Parasiticus* and *A. Nomius*. However, the toxins most important are B₁, B₂, G₁, G₂ and M₁, M₂. Aflatoxin M₁ (AFM₁) is produced a metabolit excreted milk of most toxic aflatoxin B₁ (AFB₁). Aflatoxin M₁ is a very potent liver carcinogen. Aflatoxin M₁ is appear milk products as milk, cheese, yoghurt, milk powder and butter for excreteed milk after aflatoksin B₁ contaminates feedstuff are feed by lactating animals. Milk and milk product is important relatively amounts AFM₁ this crops since these products are consumed largely by persons as especially infants, children, suckle of mothers, olds. Therefore, many countres and Turkey have been discharged various researched determine and reduce the least risk concentrations in presence of AFM₁ in milk and milk products.

Aflatoxin presence in feed, milk and dairy products can be systemically controlled in Europe and other developed countries. In contrast, there is practically not enough control system on the contamination of milk, dairy products and feed with AFM₁ and AFB₁ in Turkey. According to WHO and FAO regulation the content of AFB₁ should be less than 0.05 µg/kg in milk.

In this study, AFM₁ levels were determined by HPLC (High performance liquid chromatography) in milk and milk products samples collected in dairy farms from Aydın and district.

For this purpose, 47 samples consisted of milk (13), white cheese (7), kashar cheese (6), tulum cheese (6), curd chesee (6) and yoghurt (9) which were collected from 26 dairy farms were examined. The determined mean result of aflatoxin M₁ analysis was 0,105 pbb of analysed samples and the incidence of AFM₁ was 100 % and the range was 0,027 – 0,250 pbb. The analysed 61,5 % of milk samples, 77,7 % of yoghurt samples and 4 % of cheese samples were exceeded the maximum legal limits.

These results of the study confirm that milk and milk products produced in Aydın and district may cause health problems. Milk and milk products have to be monitored continuously for the presence of AFM_1 contamination, AFB_1 occurring conditions in the feeds of dairy animals and AFB_1 existence must be controlled strictly.