

## **DETERMINATION OF METAL CONTAMINATION OF WHITE CHEESES OBTAINED FROM THRACE REGION**

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The sources of contamination of foodstuffs with metals may include polluted water supplies and contaminated raw materials because of natural sources, industrial activities, high vehicle traffic, etc. The contamination can also arise from use of non food-grade metals during food handling, processing and packaging. The aim of this study was to determine the concentrations of copper, mercury, tin and lead in 34 white cheese samples obtained from Thrace region, a highly industrialized region in Turkey, using atomic absorption spectrophotometry. The copper, mercury, tin and lead concentrations determined were between 0.06-0.51, 0.02-0.16, 0.16-0.41, 0.1-1.98 mg/kg with the average values of 0.17, 0.05, 0.07 and 0.17 mg/kg, respectively. Maximum levels in various foodstuffs for only mercury, tin, cadmium, and lead have been established in EU by Commission Regulation (EC) No 1881/2006, and also in Turkey in parallel with EU regulations. These levels are between 0.50-1.0 mg/kg for mercury, 50-200 mg/kg for tin and 0.02-1.5 mg/kg for lead. However, there are no specified limits for these metals in cheese. Our results indicated that values showed significant differences ( $P<0.001$ ) among the samples. The samples contained relatively low levels of mercury, copper and tin, indicating that there had not been a serious contamination with these metals, especially the toxic metal, mercury. In terms of lead, one of the other toxic metals, only one sample analyzed contained lead higher than the limits specified for all foodstuffs. As a result, studies should continue to be conducted for determining the metal contamination in various foodstuffs.

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