A STUDY ON CONTAMINATION OF AFLATOXIN M1 IN PASTEURIZED MILK FROM LOCAL MARKETS IN CHIANG MAI PROVINCE OF THAILAND

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Abstract  One hundred and ten commercial pasteurized milk were collected from local markets in Chiang Mai province, Thailand to evaluate the contamination of aflatoxin M1 (AFM1). The concentration of AFM1 was measured by using immunoaffinity columns and high performance liquid chromatography (HPLC) coupled to fluorescence detection. Results showed that, AFM1 contamination was detected in 85.45 % (94/110), ranging between 0.004-0.211 µg/L. An average of AFM1 concentration was 0.04 µg/L with 0.04 standard deviation and median of 0.027 µg/L. The 30 % samples exceeded the European communities commission regulation that the level of AFM1 in milk should not be exceed 0.05 µg/L. It can be concluded that there found the AFM1 contamination but all of the samples were lower than US regulations limit (0.5 µg/L) in Chiang Mai province, Thailand.

Keywords: pasteurized milk, aflatoxin M1, High performance liquid chromatography, immunoaffinity columns, Thailand