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Occurrence of aflatoxin M_1 in retail milk samples from Bogotá, Colombia

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Abstract

A study was conducted to establish the occurrence and levels of contamination of aflatoxin M_1 (AFM1) in retail milk from Bogotá, Colombia. A total of 241 samples were analysed during 2004 and 2005. Samples were cleaned up by an immunoaffinity column and AFM1 was quantified by liquid chromatography with fluorescence detection. A total of 69.2 and 79.4% of the samples analysed during 2004 and 2005, respectively, were found to contain levels of AFM1 above 10 ng l^{-1}. Levels of contamination ranged from 10.7 to 213.0 ng l^{-1} in 2004, and from 10.6 to 288.9 ng l^{-1} in 2005. Despite the high incidence of AFM1 found in the milk samples analysed, all samples complied with current local regulations, which allow AFM1 content in milk up to 400 ng l^{-1}. However, due to the high incidence of AFM1 in milk found in the present study, it is recommended that a permanent surveillance programme be established for

milk consumed in Bogotá in order to prevent milk lots containing levels above the regulatory level entering the food chain.

Keywords:

Aflatoxin M_1 | survey | immunoaffinity clean-up | liquid chromatography

Related Research Data

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Source: Journal of AOAC International
Occurrence of aflatoxins in selected colombian foods
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Occurrence of aflatoxin M_1 in domestic milk in Japan during the winter season
Source: Food Additives & Contaminants
Liquid Chromatographic Determination of Aflatoxin M1 in Milk Powder Using Immunoaffinity Columns for Cleanup: Interlaboratory Study
Source: Journal of AOAC International
Occurrence and Stability of Aflatoxin M1 in Milk and Milk Products: A Worldwide Review
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