

## Occurrence of Aflatoxin M<sub>1</sub> in raw milk & milk powder in the local market

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The occurrence of Aflatoxin M<sub>1</sub> (AFM<sub>1</sub>) contamination in local and imported milk powder and liquid milk samples was investigated by HPLC equipped with a fluorescence detector, monitoring at wave lengths 365 nm and 425 nm for excitation and emission respectively. Thirty eight samples of raw milk and milk powder (21 samples of imported milk powder and 17 samples of locally manufactured raw milk and milk powder) were collected randomly in the local market, and analyzed for AFM<sub>1</sub> using the official method of analysis of AOAC. The recoveries of AFM<sub>1</sub> of the samples were 53, 74 and 79 percent with respect to the artificially contaminated concentrations of 0.049, 0.099 and 0.992 ng/ml respectively.

AFM<sub>1</sub> was detected in 82% of locally manufactured raw milk and milk powder samples in concentrations ranging from 0.099 ng/ml to 0.319 ng/ml with a mean level of 0.158 ng/ml. Almost all of the contaminated samples exceeded the European Communities/Codex Alimentarius recommended limit (0.05 ng/ml). None of the imported milk powder samples were contaminated at a detectable level. The results suggest a need to introduce safety measures for AFM<sub>1</sub> levels in milk powder and liquid milk in the local market under Prevention of Food Adulteration Act of Sri Lanka as well as to prescribe the levels of AFB<sub>1</sub> in dairy cattle feedstuffs so as to minimize the health hazard risk in the Sri Lankan community.