

## Aflatoxin M1 in raw, pasteurized and baby infant formula milk available in Jordanian market

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The incidence of contamination of aflatoxin M1 (AFM1) in milk samples collected from the Jordanian market was investigated by using the competitive enzyme linked immunosorbent assay (ELISA) technique. A total of 175 samples composed of raw cow milk (50), raw sheep milk (20), raw goat milk (20), raw camel milk (10), pasteurized cow milk (30), evaporated milk (10), full cream powdered milk (15) and baby infant formula milk (20) were collected during 2011-2012 year. All tested samples were contaminated with various levels of AFM1 ranging from 9.71-288.68 ng/kg.

The concentration of AFM1 in 66% of fresh milk samples was higher than the maximum tolerance limit accepted by European Union (50 ng/kg) and 23% higher than the maximum tolerance limit accepted by USA (500 ng/kg). Percentages of contaminated raw cow, sheep, goat and camel milk exceeding the European tolerance limit were 60%, 85%, 75% and 0%, respectively. The range of contamination was relatively higher in pasteurized milk than in raw milk.

12% of AFM1-contaminated pasteurized cow milk samples exceeded the European tolerance limit with a range of contamination between 14.60 and 216.78 ng/kg.

For baby infant formula samples, the average concentration of AFM1 was 120.26 ng/kg (range 16.55-288.68 ng/kg), the concentration of AFM1 in 85% of samples were higher than the maximum tolerance limit accepted by European Union and USA (25ng/kg).

**Keywords:** Aflatoxin M1; Raw animal milk; Pasteurized milk; Baby infant formula; ELISA, Jordan

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