

Aflatoxin M₁ in breast milk of nursing Sudanese mothers.

[Elzupir AO](#)¹, [Abas AR](#), [Fadul MH](#), [Modwi AK](#), [Ali NM](#), [Jadian AF](#), [Ahmed NA](#), [Adam SY](#), [Ahmed NA](#), [Khairy AA](#), [Khalil EA](#).

Author information

≡ ¹Central Laboratory, Ministry of Science and Technology, Khartoum, Sudan.
aminosman81@gmail.com

Abstract

The presence of aflatoxin M₁ (AFM₁) in the breast milk of nursing Sudanese mothers was investigated using AOAC official method 980.21 as the extraction method and HPLC with fluorescence detector for separation and detection. Following informed consent, 94 breast milk samples of mothers were collected, and 51 samples were found to be positive for AFM₁, with an average concentration of 0.401 ± 0.525 ng g⁽⁻¹⁾ and a maximum level of 2.561 ng g⁽⁻¹⁾. The volunteers completed a questionnaire concerning their dietary preferences. The data collected suggest that peanut butter, vegetable oils and rice are the main sources responsible for the AFM₁ burden in breast milk. The toxin levels are alarmingly high, and indicate that Sudanese infants are exposed to high levels of AFM₁. A wide range of harmful effects, and consequently health problems, can be expected due AFM₁ toxicity.