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Brief communication

Determination of aflatoxin levels in Sudanese edible oils

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ABSTRACT

Fifty-six samples of groundnut, sesame and cottonseed oils from factories, and traditional mills were collected from several localities in Kordofan, Gezira and Khartoum states, Sudan and assessed for aflatoxin B₁ (AFB₁), aflatoxin B₂ (AFB₂), aflatoxin G₁ (AFG₁) and aflatoxin G₂ (AFG₂), using high performance liquid chromatography (HPLC). Aflatoxin B₁ (AFB₁) was detected in eight samples representing 14.3%, the highest incidence of aflatoxin contamination occurred in sesame (7 out of 16 samples, 43.75%) followed by groundnut (1 out of 28 samples, 3.57%) while no aflatoxin contamination was detected in cottonseed oil. Aflatoxin B₁ levels in sesame oil samples ranged from 0.2–0.8 µg/kg and were 0.6 µg/kg in groundnut oil samples. All aflatoxin contaminated samples are unrefined. This paper reports the findings of the first exploratory investigation on presence of aflatoxins in Sudanese edible oils collected from three states.

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