

## **Mycobiota associated with baby food products imported into Uganda with special reference to aflatoxigenic aspergilli and aflatoxins**

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Ismail M. A., Taligoola H. K. and Nakamya R. (2008): Mycobiota associated with baby food products imported into Uganda with special reference to aflatoxigenic aspergilli and aflatoxins. – Czech Mycol. 60(1): 75–89.

Five baby food products imported into Uganda were collected from different shops and investigated for contamination by fungi and aflatoxins. Forty-two species belonging to 21 genera in addition to some unidentified fungi were recovered on dichloran rose bengal chloramphenicol agar. Cornflakes followed by Cerelac were the most heavily contaminated products while Heinz mixed cereal was the least. *Cladosporium sphaerospermum*, *Fusarium tricinctum* and *Penicillium oxalicum* were the most predominant fungi. On the other hand, using *Aspergillus flavus/parasiticus* agar, 34 % of the samples were positive for aflatoxigenic aspergilli. Aflatoxigenic aspergilli constituted 78.8 % of all aspergilli and 4.9 % of all contaminating fungi. Samples from all products were contaminated with aflatoxigenic aspergilli, but samples of Cerelac were the most, while those of Porridge oats were the least. Aflatoxin analysis of food samples revealed that 9 out of 13 analysed samples were contaminated with aflatoxins in the range of 1–10 ppb (6 samples) and 11–20 ppb (3 samples). Only samples of Cerelac were aflatoxin-free, although aflatoxigenic aspergilli were detected in some samples. It was noted that samples of Cerelac had the least moisture content compared to the other products. Contaminated foods constitute a health hazard to human consumption. These foods, especially those for babies, must therefore be examined at regular intervals in order to assess their hygienic quality.

**Key words:** mycobiota, aflatoxigenic aspergilli, aflatoxins, imported baby foods.

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Pět druhů dětských potravin importovaných do Ugandy bylo studováno s ohledem na jejich kontaminaci mikromycety a aflatoxiny. Bylo zjištěno celkem 42 druhů mikromycetů patřících do 21 rodů. Kukuřičné vločky následované produktem Cerelac byly nejvíce kontaminovány, nejméně pak produkt zvaný Heinz mixed cereal. Dominovaly druhy *Cladosporium sphaerospermum*, *Fusarium tricinctum* a *Penicillium oxalicum*. Při použití speciálního agaru bylo 34 % vzorků pozitivní na přítomnost aflatoxinogenních druhů rodu *Aspergillus*, které představovaly 78.8 % všech druhů tohoto rodu a 4.9 % všech zjištěných mikromycetů. Všechny produkty obsahovaly aflatoxinogenní druhy rodu *Aspergillus*, ale kontaminace jednotlivých druhů potravin byla různě velká. Vzhledem ke zdravotnímu riziku kontaminovaných potravin, zejména dětských, bude nutná jejich pravidelná kontrola.