

The occurrence of aflatoxins in raw shelled peanut samples from three districts of Perak, Malaysia

Abstract

Raw shelled peanut is regularly consumed by Malaysian people in their foods and dishes even though it is well known to be a very susceptible substrate for contamination by aflatoxins (AFs). The present study aimed to monitor the AFs content in raw shelled peanut and to justify its suitability for human consumption according to the existing Malaysian legislation. A total of 145 raw shelled peanut samples were taken from three districts in a state of Malaysia namely Perak and analysed for the contamination of AFB₁, AFB₂, AFG₁ and AFG₂. The AFs content were analysed by the ISOLUTE™ multimode column clean-up (IMC) method followed by high performance liquid chromatography (HPLC). The percentage along with the range of incidence of the AFB₁ (50%, 0.85-547.51 µg/kg) and AFG₁ (37%, 1.37-375.98 µg/kg) in raw shelled peanut samples were very high. AFB₂ and AFG₂ were not detected in the samples analysed. Total AFs contamination were also very high (50%) in the range of 0.85-762.05 µg/kg in which 45% of these positive samples exceeded the maximum permitted levels of 35 µg/kg as according to the Malaysian Food Regulation 1985.