

Diagnosis of aflatoxin producing fungi by a sensitive PCR assay in food in Mashad

Fatemah Hashemi
Ferdowsi University, Iran

Aflatoxin contamination of consumable food commodities is a global health and economic risk. Aflatoxin B1 is a known carcinogen and causes pleiotropic health problems in humans, necessitating its detection in commercial preparations of food. Methodologies with exquisite sensitivities exist for the detection of aflatoxin. However, PCR based detection of *Aspergillus flavus*, which produces aflatoxin B1, offers distinct advantages over traditional detection methods. We optimized methods for the isolation of fungal genomic DNA from food commodities, established the sensitivity of a PCR assay (based on the detection of AflR gene) and analyzed food items from local markets in Mashad area. The assay could identify *A. flavus* if 200 spores per gram of food are present, which could indicate unfit nature of contaminated items for human consumption. However, based on our analysis, all food items analyzed from Mashad area markets are free of *A. flavus* and therefore aflatoxin B1.

Biography

Fatemah Hashemi has completed her master's at the age of 30 years from Ferdowsi University, School of Science. Currently, she is a researcher in Ferdowsi University, Iran.

star_gene2003@yahoo.com