

Title Aflatoxin B1 in maize harvested over 3 years in Iran
Author Rouhollah Karami-Osboo, Mansoureh Mirabolfathy, Reza Kamran, Mahdi Shetab-Boushehri and Samad Sarkari
Citation Food Control, Volume 23, Issue 1, January 2012, Pages 271-274
Keywords Aflatoxin B1; ELISA; Iran; Maize

Abstract

The potential risk of exposure to Aflatoxin B1 (AFB1) is well known. AFB1 contaminations investigated in 373 samples collected during 2006–2008 at harvest stage, from different agro climatic regions of the major maize production area of Iran, including Ardabil (North West), Khuzestan (South West) and Fars at the South of Iran. AFB1 was determined by CD-ELISA and was detected in 146 samples (43.6%), in which only 22.5% were contaminated to higher than MRL level. The amount of aflatoxin in maize samples varied across the years, the percentage of contamination in 2006, 2007 and 2008 were 86.7%, 71.4% and 100% respectively for Ardabil, 63.4%, 41.3% and 24.5% for Khuzestan, 17%, 14.8% and 27.6% for Fars province. The mean of contamination was 15.63, 57.67 and 154.13 µg/kg for Ardabil; 14.41, 35.93 and 1.61 µg/kg for Khuzestan; 0.9, 2.12 and 36.39 µg/kg for Fars province. This is the first report of AFB1 maize contamination to AFB1 in the major maize producing areas of Iran.