

Comparison of Aflatoxin B1 Levels in Iranian and Indian Spices by ELISA Method

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Abstract : This study was carried out to detect the presence of aflatoxin B1 (AFB1) in 36 samples of spices from Iran and India that was included of chilli powder (n=12), black pepper powder (n=12) and whole black pepper (n=12). Enzyme-linked immunosorbent assay (ELISA) method was used for analysing the samples. Aflatoxin B1 was found in all the spices samples, the concentration of AFB1 in Iranian samples was ranged from 63.16 to 626.81 ng/kg and in Indian samples was ranged from 31.15 to 245.94 ng/kg. The mean of AFB1 concentration in the chilli powder was significantly higher ($P < 0.05$) than the whole and powdered black pepper. However, none of the samples exceeded the maximum prescribed limit i.e. 5 µg/kg of European Union regulations for aflatoxin B1. The occurrence of AFB1 in spices samples could be a potential hazard for public health.

Keywords : Aflatoxin B1, chilli, black pepper, ELISA, Iran, India

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