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MYCOTOXINS, DETECTION METHODS, THEIR TOLERANCES IN FOOD AND FEEDSTUFFS

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Mycotoxins are secondary metabolites of fungi toxic to human beings animals and plants and also carcinogenic to mammals. Toxic metabolites of mushrooms (***Amanita*** spp.) are also considered as mycotoxins. Because of their hazardous effect, the World Health Organization (WHO) and Food and Agricultural Organization (FAO) proposed the mycotoxin tolerances as 5-20 ppb (μ/kg), in food- and feedstuffs. The most important mycotoxins are; **aflatoxins, ochratoxin A, trichothecenes, fumonisins, zearalenon, DON (Deoxynivalenol), T-2 toxin, *Alternaria*-toxins, patulin, sterigmatocystin etc.** The main toxin-producer molds are; ***Aspergilli, Penicili, Fusaria, Alternaria*** etc. Fungus growth and mycotoxin production are commonly associated with foods and feeds. Therefore, it is necessary to detect them accurately and take preventive measures. Modern detection methods for mycotoxins include:

a. Bioassay ,
b. Thin Layer Chromatography (TLC),
c. Gas Chromatography (GC),
d. High Performance Liquid Chromatography (HPLC) and
e. Enzyme Linked Immune Sorbet Assay (ELISA).

Bioassay is inexpensive but less sensitive. The most sensitive method is HPLC. Detection limits and conditions of the above mentioned methods are discussed.

Key words: Mycotoxin, aflatoxin, ochratoxin A, food, feedstuff