

HPLC and MS as a tool in the determination of toxic metabolites of fungi

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Fungi are one of the most often occurred contaminants in food chain. Due to the lowering of nutritional value of contaminated food and the toxicity of some of their metabolites for animals or humans, there is a need to detect the fungal spoilage in food/feed respective to detect or quantify the mycotoxins level. The results of analysis are helpful for the improving of food safety management.

This lecture deals with the application of high performance liquid chromatography and mass spectrometry to detection of fungal contamination through determination of specific metabolite marker (ergosterol). Also, the new analytical methods for the determination of selected mycotoxins (fumosinins, trichothecenes, ochratoxin A and citrinin) in complex natural matrixes, such as cereal grains or beer will be presented. In addition, the future development in field of mycotoxin detection will be discussed.