



[Appl Environ Microbiol.](#) 2000 May;66(5):1899-904.

Mycotoxins in crude building materials from water-damaged buildings.

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Abstract

We analyzed 79 bulk samples of moldy interior finishes from Finnish buildings with moisture problems for 17 mycotoxins, as well as for fungi that could be isolated using one medium and one set of growth conditions. We found the aflatoxin precursor, sterigmatocystin, in 24% of the samples and trichothecenes in 19% of the samples. Trichothecenes found included satratoxin G or H in five samples; diacetoxyscirpenol in five samples; and 3-acetyl-deoxynivalenol, deoxynivalenol, verrucarol, or T-2-tetraol in an additional five samples. Citrinine was found in three samples. *Aspergillus versicolor* was present in most sterigmatocystin-containing samples, and *Stachybotrys* spp. were present in the samples where satratoxins were found. In many cases, however, the presence of fungi thought to produce the mycotoxins was not correlated with the presence of the expected compounds. However, when mycotoxins were found, some toxigenic fungi usually were present, even if the species originally responsible for producing the mycotoxin was not isolated. We conclude that the identification and enumeration of fungal species present in bulk materials are important to verify the severity of mold damage but that chemical analyses are necessary if the goal is to establish the presence of mycotoxins in moldy materials.

PMID: 10788357 [PubMed - indexed for MEDLINE]