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Ozone applications to prevent and degrade mycotoxins: a review.

Freitas-Silva O, Venâncio A.

Institute for Biotechnology and Bioengineering (IBB), Centre of Biological Engineering, Universidade do Minho, Braga, Portugal. ofreitas@deb.uminho.pt

Abstract

Ozone, a powerful oxidant, may be used for the inactivation of various microorganisms and the degradation of chemical contaminants. Although there are not many reports on the use of ozone against filamentous fungi or their mycotoxins, promising results have been reported. With a short half-time, at neutral pH and ambient temperature, ozone is able to inactivate microorganisms and decompose their toxic metabolites, leaving no traces of ozone in the treated commodity. This fact makes the use of ozone safe in food applications. There has been relatively limited research in this topic, especially with the use of aqueous ozone. The best management strategy still remains to be developed, but initial studies have indicated that an application of ozone for a short period of exposure is capable of controlling the proliferation of filamentous fungi and of degrading many mycotoxins.

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