

Effect of UV radiation on different concentrations of aflatoxin B₁ in pistachio

M. Mazaheri

Acta Horticulturae 963: 41-46. 2012.

Abstract

Fungal secondary metabolites (mycotoxins) produced as contaminants on food and feed commodities are considered to be economically and toxicologically important worldwide (Ajoy Kumar Choudhary *et al.*, 2010). Aflatoxins are a group of closely related mycotoxins that are toxic and commonly found in agricultural products like cereals, oil seeds and nuts. Mycotoxins are a potential risk to human and animal health and thereby much time and effort has been expended on seeking methods for removal or destruction of mycotoxins in contaminated products. The UV radiation could decrease the concentration of aflatoxin B₁ in pistachio. This effect on high concentration of aflatoxin B₁ is more considerable than lower concentration. As the results showed, the aflatoxin concentration decreased from 100 to 78.189 ppb after 3 hours under espousing UV radiation at 87.5 $\mu\text{W}/\text{cm}^2$. This amount reached to 42.193 ppb after 13 hours.