

**Title** Occurrence of mould counts and *Aspergillus* species in Iranian dried figs at different stages of production

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### Abstract

The present study was carried out to investigate the occurrence of total mycobiota and *Aspergillus* species at different stages of figs production in Iran. In addition, the potential of different culture media for isolation of fungal species from figs was also investigated. The mycobiota of 389 samples of dried fig were studied. Total fungal counts ranged from  $< 2$  to  $6.74 \log_{10}$  CFU/g. The predominant species were *Aspergillus niger* aggregate, *Aspergillus flavus*, *Acremonium spp.* and *Mucor spp.* were abundant corresponding to 90.9%, 63.7%, 54.6% and 36.4% infection, respectively. Other *Aspergillus spp.* and *Mucor spp.* corresponding to 36.7% and 28.3% infection, respectively. The lowest contamination was obtained in dried figs abundant by *Alternaria spp.* and *Penicillium spp.* (9.1 % infection). On average, *Aspergillus spp.* comprised 34.4% of the total fungal population. *Aspergillus niger* aggregate was detected in 99% of the samples. *Aspergillus terreus* was present in 11.3%. *Aspergillus parasiticus* was not isolated from dried figs. The results revealed that poor hygienic condition in fig harvesting, drying procedures, collecting sites, sorting and packaging plants caused higher mould contamination and risk of the *Aspergillus flavus* growth in dried fig production in Iran. As the result of this study, using more than one culture media for isolation of *Aspergillus flavus* is preferred.