# Identification of some black *Aspergillus* from various raisins in Khorasan-E-Razavi province

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## Abstract

Raisin is one of the most important dried fruits because of its economical profits and foreign exchange income in the world. Export of agriculture products has an important role in non-petroleum export and has specific significance among the agriculture product of raisin. *Aspergilli*, especially black *Aspergilli* have been found to be the predominant fungal species infecting raisin worldwide. The incidence of *Aspergillus* species on raisins in Khorasan-e-Razavi Province was studied. 50 samples from various raisins were taken from stock storage and markets during 2011. The samples included sun dried, 'California' (Golden-bleached), 'Sultana', soda-oil-dipped and black currant. The samples were superficially disinfested, and then small parts of berries (raisin) were placed on Czapek's Agar medium and after three days, *Aspergillus* colonies were observed. Overall, *Aspergillus* section *Nigri* was the most common species on raisins in Khorasan-e-Razavi stock storage and markets. Some strains in *Aspergillus* section *Nigri*, however, have characters that allow morphological distinction from the other species in the section, particularly the conidia size (5-7 µm), which allows separation of the species from the two most common biseriate species in section *Nigri*: conidia were measured 7-9 and 3-5 µm in *A. carbonarious* and *A. niger* and its aggregate species respectively. As the result, *Aspergillus niger, A. awamori, A. carbonarius, A. tubingensis, A. foetidus* and *A. aculeatus* were identified. Among these, *A. aculeatus, A. awamori, A. foetidus* and *A. tubingensis* are new records for mycoflora of Iran. Furthermore, this is the first report of *A. carbonarius* on raisin in Iran.