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Isolation and identification of some fruit spoilage fungi: Screening of plant cell wall degrading enzymes
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Abstract

This study investigates the current spoilage fruit fungi and their plant cell wall degrading enzymes of various fresh postharvest fruits sold in Jeddah city and share in establishment of a fungal profile of fruits. Ten fruit spoilage fungi were isolated and identified as follows *Fusarium oxysporum* (banana and grape), *Aspergillus japonicus* (pokhara and apricot), *Aspergillus oryzae* (orange), *Aspergillus awamori* (lemon), *Aspergillus phoenicis* (tomato), *Aspergillus tubingensis* (peach), *Aspergillus niger* (apple), *Aspergillus flavus* (mango), *Aspergillus foetidus* (kiwi) and *Rhizopus stolonifer* (date). The plant cell wall degrading enzymes xylanase, polygalacturonase, cellulase and α -amylase were screened in the cell-free broth of all tested fungi cultured on their fruit peels and potato dextrose broth (PDB) as media. Xylanase and polygalacturonase had the highest level contents as compared to the cellulase and α -amylase. In conclusion, *Aspergillus* spp. are widespread and the fungal polygalacturonases and xylanases are the main enzymes responsible for the spoilage of fruits. © 2011 Academic Journals.

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