

Title Screening and identification of yeast strains from fruits and vegetables: Potential for biological control of postharvest chilli anthracnose (*Colletotrichum capsici*)

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Abstract

Yeasts antagonistic to *Colletotrichum capsici* were isolated from Thai fruits and vegetables. Four antagonists (R13, R6, ER1, and L2) were found that inhibited *C. capsici* growth with biocontrol efficacies of 93.3%, 83.1%, 76.6%, and 66.4%, respectively. Identification by 26S rDNA, and ITS region sequence together with physiological and morphological characteristics, showed them to be *Pichia guilliermondii*, *Candida musae*, *Issatchenkia orientalis*, and *Candida quercitrusa*, in order of their efficacy. *P. guilliermondii* strain R13 showed efficacy in reducing disease incidence on *C. capsici* infected chilli fruits to as low as 6.5%. Lower disease incidence was observed at lower storage temperature. The application of *P. guilliermondii* is more effective for preserving chilli fruits than conventional preservation with chlorinated water.