

Abstract

Effect of chitosan on mycelial growth and spore germination of *Colletotrichum gloeosporioides* was investigated on Potato Dextrose Agar (PDA) containing 0, 0.5, 1.0 and 2.0% (w/v) chitosan dissolved in 0.5% acetic acid. The results revealed that 1.5 and 2.0% chitosan were the best concentration for inhibiting the mycelial growth and the spore germination while the complete inhibition was found in the medium containing 0.5% acetic acid. Effect of the chitosan coating artificially *C. gloeosporioides* inoculated mangoes showed that the best concentration of chitosan control anthracnose disease was at 0.5%. These concentration could stimulate chitinase and beta 1,3 glucanase activities which were involved in plant defense mechanism in chitosan treated mango fruits. Additionally, the chitosan coating mangoes could delay ripening, reduction respiration rate, ethylene production, weight loss ascorbic acid and total titratable acidify but could not maintain firmness of the mangoes.