IMPROVE POSTHARVEST QUALITY OF FRESH FRUIT CITRUS WITH PLANT EXTRACT

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ABSTRACT

Different concentrations (500 -5000 ppm) of five ethanol extracts of Azadirachta indica L (Neem), Cerebra odollam L. (Pong-pong) ,Capsicum frutescence L (Chili), Cymbopogon nardus L (Lemon grass) and Zingiber officinale L (Ginger) were compared with fungicide (Guazatine) for their anti-fungal activity inhibition zone Penicillium digitatum in vitro on PDA media and during storage conditions in vivo. Lethality test LC50 (BST) was followed to determine the lethal dose from plant extract compared with lethal dose for synthetic chemicals (Guazatine)**.** Crude extraction from Neem, Chili and, Pong-pong showed a complete inhibition zone at 3000ppm (100%) in the green mold in vitro. In vivo, concentrations (4000 and 5000ppm) from Neem, Chili, and Pong-pong showed a high effect on prevention development of mycelia growth Penicillium digitatum on surface fruits in storage condition at 25^0C±2.

Also spraying fruit has improved postharvest quality characteristics in the store by reducing the weight loss and numbers of the undesirable fruits percentage. In addition, the lethal concentration (LC50) values of the crude extracts were investigated via using the Brine-shrimp (Artemia salina Leach) lethality test (BST). At 20.5 and 30 µg/ml-1 Neem, Pong-pong and hot Chili showed very high lethal toxicity on brine and effect. Lemon grass and Ginger in killed 50% were at 495 and 473 $\mu g/ml^{-1}$ respectively with compared controls .

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