

**INHIBITORY INFLUENCE OF SPICES ON WAX APPLE
ANTHRACNOSE POSTHARVEST PATHOGEN
*Glomerella cingulata***

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ABSTRACT

The inhibitory effects of eight commercial spices extracts namely cloves, cinnamon, aniseed, coriander, white cumin, black pepper, chilli and turmeric against *Glomerella cingulata* were tested at different concentrations ranging from 1,000 to 100,000ppm in an *in vitro* study. The assay was conducted on potato dextrose agar at room temperature of 28°C. Both cloves and cinnamon exhibited fungistatic activity against *G.cingulata* at 3,000 and 40,000ppm after five days of incubation respectively. No inhibitory effects against *G. cingulata* were observed from aniseed, coriander, white cumin, black pepper, chilli and turmeric even at concentration as high as 100,000ppm. Clove and propiconazole had the same fungistatic concentration at 3,000ppm. When tested on wax apples in the *in vivo* study, 50,000ppm of clove extracts showed antifungal ability against the growth of *G.cingulata* curatively at room temperature. In contrast, clove extracts did not show antifungal activity at 12°C. Clove extracts gave greater flesh firmness and sweetness but did not affect the colour of wax apples. The result of this study suggests that clove extracts is a good alternative to be applied as a natural-based fungicide besides the use of chemical fungicide.