

ANTIFUNGAL PROPERTIES OF CASSAVA STARCH EDIBLE FILM INCORPORATED WITH LEMONGRASS ESSENTIAL OIL

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Abstract.

The aim of this study was to evaluate the antifungal properties of cassava edible film incorporated with lemongrass essential oil against two strains of fungal, *Trichoderma* sp and *Penicillium* sp. Edible films were prepared from a mixture of cassava starch and glycerol. Lemongrass oil (0.5%, 1%, 2%, 3% and 4% w/w) was added to edible films as natural antifungal agent. The agar disc diffusion method was used to determine the antifungal activity of cassava starch edible film. Antifungal behaviour was determined by the mold absences upon the film and by the inhibition zone formed. The experimental results showed that *Trichoderma* sp and *Penicillium* sp was not appear above the film until the fourth day. However, cassava starch edible films containing lemongrass oil did form any inhibition zone toward both of fungal.

Keywords: cassava starch edible film, lemongrass, *Penicillium* sp., *Trichoderma* sp.