

**ANTIFUNGAL ACTIVITY TEST OF RED GALANGAL ESSENTIAL OIL
(*Alpinia purpurata* (Vieill) K. Schum) Against *Fusarium sp.***

ABSTRACT

IMERTHA ULFA RAMADHANA

NO MHS : 14612222

A study has been conducted on antifungal activity test of red galangal essential oil (*Alpinia purpurata* (Vieill.) K. Schum) against *Fusarium sp.* Red galangal oil can be isolated from red galangal rhizome by water distillation method. The recovery yield was 0.058%. The results of red galangal chromatogram showed that there were 5 major compounds, such as eucalyptol or 1,8-cineole (5.42%), trans-caryophyllene (10.83%), beta-farnesene (22.94%), germacrene (8.99%) and pentadecane (9.36%). Compound that are suspected of having the most dominant antifungal activity is 1,8-cineole. The test method used in this research is the inhibition method of growth of fungal mycelium radians. In this study, three variations of red galangal oil concentration test on *Fusarium sp.*, such as 2.5%; 5% and 7.5%. The results showed that red galangal atsiri oil was able to inhibit the growth of *Fusarium sp.* At concentration of 2.5% showed the percentage of inhibition equal to 19.88%, at concentration 5% showed the percentage of inhibition equal to 31.39% and at concentration 7.5% indicated percentage of inhibition equal to 45.78%.

Keywords: Antifungal, *Fusarium sp.*, water distillation, red galangal essential oil (*Alpinia purpurata* (Vieill.) K. Schum)