

**ANTIFUNGAL ACTIVITY OF *Alpinia purpurata* ESSENTIAL OILS
AGAINST *Colletotrichum* sp.**

ABSTRACT

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Colletotrichum sp. is a cause of anthracnose disease resulting in a decrease crop. A common control was using synthetic fungicides. Using of synthetic fungicides cause resistance because of high residual content. Purpose of this research is determine the compound component in the *Alpinia purpurata* essential oils and antifungal activity against *Colletotrichum* sp. *Alpinia purpurata* essential oils have been distillation with water distillation, then tested physical character and analysis using GC-MS and antifungal against *Colletotrichum* sp. Antifungal have been tested by 2 methods (radial growth inhibition and well diffusion). Results show that *Alpinia purpurata* essential oils has a yield 0,058% , refractive index = 1.4853, density = 0.8791 g /cm³ and has pale yellow color and typical odor of galangal. GC-MS show *Alpinia purpurata* essential oils consist of 40 components, five main components of which can be identified are 1.8-cineole, β -farnesene, β -caryophyllene, germacrene and heptadecane. The results of antifungal activity with radial growth inhibition method indicates % inhibition (%P) at concentration 2,5%; 5%; 7,5% and 10% respectively were 29,46%; 34,81%; 38,39%; 52,68%; at 100% concentration and positive controls giving 100% inhibition. While the results by well diffusion method do not show the antifungal activity.

Keywords: essential oil, *Alpinia purpurata*, antifungal, *Colletotrichum* sp.