

**ABSTRACT****PHARMACOGNOSTIC STUDY OF *Zingiber aromaticum* Vahl.  
RHIZOME AND ANTIMICROBIAL ACTIVITY OF *Zingiber  
aromaticum* Vahl. ESSENTIAL OIL****KARINA DESSY EKA PUTRI**

*Zingiber aromaticum* Vahl. is a member of Zingiberaceae and frequently used as traditional medicine by Indonesian people. Its rhizome is used to cure influenza, cholera, malaria, joint pain, abdominal pain, and anaemia. This rhizome also used as female contraception. Topically, this rhizome is used to relieve pain (Sudarsono dkk., 2002; Syamsuhidayat dan Hutapea, 1991). The purpose of this study is to validate authenticity and quality of crude drug.

The result showed that *Zingiber aromaticum* rhizome has specific microscopic fragment, i.e sclerenchym, periderm, endoderm, and starch. Physicochemical constant result is assay of essential oil ( $0.63 \pm 0.058$ )%  $\frac{1}{b}$ ; ash value ( $3.76 \pm 0.10$ ) %; acid insoluble ash value ( $1.16 \pm 0.09$ ) %; water soluble ash value ( $1.04 \pm 0.06$ ) %; loss on drying value ( $11.92 \pm 0.37$ ) %; water soluble substance value ( $11.06 \pm 1.72$ ) %; and alcohol soluble substance value ( $8.52 \pm 0.20$ ) %. Phytochemical screening showed that ethanolic extract from this rhizome contains triterpen, antraquinon, flavon, and cathecol. GC-MS result showed that the biggest compound in *Zingiber aromaticum* essential oil is zerumbone. In antimicrobial activity test using agar dilution method of *Zingiber aromaticum* essential oil has MIC value against *Candida albicans* and *Staphylococcus aureus* are 0.187% $\frac{1}{v}$ , and 0.03% $\frac{1}{v}$ , respectively.

Keyword (s) : *Zingiber aromaticum* Vahl., pharmacognocny study, antimicrobial activity, MIC.