

ABSTRACT

**IN VIVO ANTITUSSIVE ACTIVITY OF ETHANOLIC
EXTRACT “RED GINGER” (*Zingiber officinale* Roscoe
var. *rubrum*) RHIZOMES IN SYRUP**

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Zingiber officinale Roscoe (ginger) have long been used as traditional medicine to relieve cough. The purpose of this research is to determine antitussive activity of ethanolic extract of *Zingiber officinale* var. *rubrum* (red ginger) rhizome in syrup formulation using mice animal model. Mice was administered with 0.2 ml/kgBW of syrup extract, 60 minutes prior to placed into 1000 ml chamber and induced with 0.3 ml of 25% ammonium hydroxide solution for 45 seconds. The cough frequency was observed and measured for 5 minutes without removing the mice from the chamber. Codeine phosphate (30mg/kgBW) was used as positive control.

The results of this research showed that the etanolic extract of red ginger rhizome in syrup formulation has activity to inhibit frequency of cough significantly ($p < 0.05$) as the dose increased. Ethanolic extract of red ginger rhizome in syrup formulation at doses 200, 400, and 600 mg/kgBW showed percentage of cough inhibition 14.8%; 34.5%; and 45.9% respectively after 60 minutes of drug administration. The highest dose of 600 mg/kgBW was found to be more effective. In conclusion ethanolic extract of red ginger rhizome in syrup has activity to inhibit cough.

Keywords : cough, antitussive, red ginger, *Zingiber officinale* var. *rubrum*, ammonium hydroxide.