

ABSTRACT

ANTITUSSIVE ACTIVITY OF ETHANOL EXTRACT AND ETHANOL EXTRACT SYRUP OF *Mentha arvensis* L. HERB

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This study aims to determine the effect of ethanol extract and ethanol extract syrup of *Mentha arvensis* L. herb on cough's frequency in mice. Mice of either sex (BALB/c) weighing between 25-35 g were randomly assigned to seven groups (n = 5), ie positive control (30 mg/kg codein phosphate), negative control extract (0.5% CMC-Na), treatment group 1, 2, 3 (200, 400 and 600 mg/kg ethanol extract), negative control syrup (mixed of 15% propylenglycol, 67% sucrose, and aquadest), and treatment group 4 (600 mg/kg ethanol extract syrup). Each test preparation was administered orally 0.2 mL/kg. After 60 minutes administration, the animal was put into a 1000 mL chamber and exposed to 0.3 mL of 25% ammonium hydroxide solution for 45 seconds. Furthermore, without removing the experimental animals from within the chamber, then the frequency of cough for 5 minutes were observed.

The results showed that ethanol extract of *M. arvensis* herb has antitussive activity by decreasing frequency of cough in a dose dependent manner with significant figure value of $p < 0.05$. Ethanol extract of *M. arvensis* herb at doses of 200, 400 and 600 mg/kg gave cough suppression of 25.2%; 34.2%; and 47.4%, respectively. The syrup of *M. arvensis* herb ethanol extract was made at the same dose as the extract dose which has the greatest decrease of cough frequency (600 mg/kg) which then gives cough suppression of 46.2%.

Keywords: cough, antitussive, extract, syrup, *Mentha arvensis* L., ammonium hydroxide.