

ABSTRACT

IN VITRO DETERMINATION ANTACID AND ANTIFLATULENT ACTIVITIES OF ETHANOL EXTRACT SYRUP OF *Mentha arvensis* Linn. HERBS

Ririn Choerotun Nisak

The purpose of this study is to determine the antacid and antiflatulent activity of 96% ethanol extract syrup of *Mentha arvensis* Linn. herbs. This study was conducted in vitro by using artificial stomach models. Artificial gastric juice at pH 1.2 was pumped at 3 mL/min into the container of the artificial stomach (at 37°C), and it was pumped out at 3 mL/min at the same time and continuously stirred with a magnetic stirring apparatus. The antiflatulent activity in vitro using the same stomach and gastric acid model as in antacid activity test. The difference is, the antiflatulent activity test does not need artificial gastric acid infusion. In antacid activity test, a pH meter was connected to continuously monitor the changes of pH in the container of the artificial stomach. The duration of neutralization effect was determined when the pH value was returned to its initial value (pH 1.2). The antiflatulent activity test was considered complete after 20 min.

The results showed that ethanol extract syrup of *Mentha arvensis* Linn. herbs has antacid and antiflatulent effects in vitro. Compared with the negative group, 96% ethanol extract syrup of “Herba Mint” was found to possess significant gastric acid neutralizing and defoaming effects. The duration for consistent neutralization sample was significantly longer than negative group and exhibited significant defoaming effects compared to negative group. The ethanol extract syrup of “Herba Mint” was consistently active in the artificial stomach model and is suggested to has antacid and antiflatunet effects similar to the active control drugs.

Keywords: *Mentha arvensis* Linn, antacid, antiflatulent, *in vitro*