

ABSTRACT

***IN VITRO* STUDY OF ANTACID AND ANTIFLATULENT ACTIVITIES OF 70% ETHANOLIC EXTRACT OF CEYLON CINNAMON (*Cinnamomum zeylanicum* Blume) IN SYRUP**

Fitria Afifatul Mufidah

Gastric ulcer is one of gastrointestinal disorders that affects many people in the World. Antacids have been used for years to treat gastric ulcer, but they can cause several side effects, such as diarrhea, constipation, metabolic alkalosis, hypercalcemia, and renal insufficiency.

Cinnamomum zeylanicum Blume is a medicinal plant traditionally used in the treatment of gastrointestinal disorders. The aims of this study are to evaluate the neutralizing time and defoaming action of 70% ethanolic extract of *C. zeylanicum* in syrup using artificial stomach models. In this study, aluminum hydroxide-magnesium hydroxide combination and dimethylpolysiloxane were used as positive control for antacid and antifatulent assays, respectively. Non-medicated syrup was used as negative control, and the 70% ethanolic extract of *C. zeylanicum* at concentration of 1%, 2%, and 3% were used as test samples.

The results of neutralizing time evaluation showed that the 70% ethanolic extract of *C. zeylanicum* at concentration of 1%, 2%, and 3% neutralized artificial gastric acid within 73 minutes, 24 minutes, and 7 minutes, respectively. The results of defoaming action evaluation showed that dimethylpolysiloxane had defoaming action in 20 minutes. The 70% ethanolic extract of *C. zeylanicum* at concentration of 1%, 2%, and 3% reduced foam height to 1.0 ± 0.1 cm, 1.6 ± 0.1 cm, and 1.8 ± 0.1 cm, respectively, in 20 minutes. Although the results of antacid and antifatulent assays of extracts and control negative are statistically showed significant difference, it can be concluded that extract of *C. zeylanicum* in syrup has weak antacid and antifatulent activities.

Keywords: *Cinnamomum zeylanicum* Blume, artificial stomach model, antacid, antifatulent