

ABSTRACT

HAIFA. 2024. *Testing the Effectiveness of Cinnamon Extract (Cinnamomum zeylanicum) as a Natural Hand Sanitizer in Inhibiting Staphylococcus aureus Bacteria*. Thesis. Department of Biology Education. Faculty of Teacher Training and Education. Universitas Siliwangi.

Cinnamon (*Cinnamomum zeylanicum*) contains compounds with antibacterial properties, the main component of cinnamon extract being eugenol, which has antibacterial activity. Based on this activity, cinnamon extract is used to create a natural hand sanitizer in this study. This study aims to determine the effectiveness of cinnamon extract as a natural hand sanitizer in inhibiting the bacteria *Staphylococcus aureus*. The research was conducted from November 2023 to May 2024 at the Phytochemistry Laboratory of BTH University, the Botany Laboratory, and the Microbiology Laboratory of Siliwangi University. The research method used is the true experiment method with a population of 1 petri dish of pure culture of *S. aureus* bacteria and a sample of subculture of *S. aureus* bacteria on petri dishes. The sampling technique used is the saturated sampling technique. Treatments were arranged in a Completely Randomized Design (CRD), with 5 treatments of different cinnamon extract concentrations and 4 repetitions, consisting of treatment 1 (Control), treatment 2 (15% concentration), treatment 3 (20% concentration), treatment 4 (25% concentration), and treatment 5 (30% concentration). The antibacterial activity test was carried out using the disk diffusion method. The data analysis technique used is one-way ANOVA and the Tukey HSD follow-up test. The results of the ANOVA test showed that all concentrations of cinnamon extract were effective in inhibiting the growth of *S. aureus* bacteria but did not have significant differences in inhibiting the growth of *S. aureus* bacteria. Additionally, this study found that all concentrations were effective in inhibiting the growth of *S. aureus* bacteria.

Key words: *Hand sanitizer, Cinnamon, Staphylococcus aureus.*