

ABSTRACT**ANTIMICROBIAL SUSCEPTIBILITY TEST OF CROWN OF GOD
(*Phaleria macrocarpa* [Scheff.] Boerl) FRUIT EXTRACT AGAINST
*Streptococcus pyogenes***

Acute pharyngitis bacterial is mostly caused by *Streptococcus pyogenes* and often followed by post streptococcal infection sequel which leads to most acquired heart disease in children. An adequate 10 days antibiotic therapy is defined as primary prevention for this sequel. However, people tends to stop the antibiotics before completing the 10 days therapy. The use of herbal medicine from crown of god (*Phaleria macrocarpa* [Scheff.] Boerl) extract is expected to reduce the waywardness use of antibiotics since herbal medicine is widely used already in Indonesian society.

This research is a true experimental with post-test controlled group design and was done in the laboratory of microbiology. Crown of god fruit is extracted using maceration method and the growth of *Streptococcus pyogenes* is measured using the dilution method to determine the Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC). The extract concentration used in this research were 400, 200, 100, 50, 25, and 12,5 mg/ml. This experiment is replicated four times. MIC was observed by the significant alterations of solution's turbidity after incubation at 37°C for 24 hours. All those solutions then cultured on blood agar plate at 37°C for 24 hours and observed visually by noticing the growth of bacterial colonies.

The Minimum Inhibitory Concentration (MIC) could not be determined due to no significant alterations in turbidity. Cultures on blood agar plate shows growth of bacterial colonies at concentrations of 400 and 200 mg/ml. Thus, the Minimum Bactericidal Concentration (MBC) was 200 mg/ml.

Based on previous studies stated that the crown of god fruit extract contains saponin, tannin, and flavonoids which held the antimicrobial properties. Crown of god fruit has been experimentally used for antimicrobial susceptibility testing against Gram positive, Gram negative, and anaerobe bacteria and shows antimicrobial effects. In summary, crown of god fruit extract has antimicrobial effect against *Streptococcus pyogenes* with MBC of 200 mg/ml.

Keywords : crown of god fruit (*Phaleria macrocarpa* [Scheff.] Boerl), antimicrobial activity, dilution susceptibility test, *Streptococcus pyogenes*