

# Efek antimikroba infusum daun binahong (*Anredera cordifolia* (Ten.) Steenis) terhadap bakteri *Streptococcus mutans* : uji KHM dan KBM = Antibacterial effect of binahong (*Anredera cordifolia* (Ten.) Steenis) leaves infusion against the growth of *streptococcus mutans* MIC and MBC determination

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## Abstrak

Karies merupakan penyakit infeksi pada gigi yang paling sering menjadi masalah bagi kesehatan mulut. Prevalensi karies di Indonesia tergolong tinggi. Penyebab utama karies adalah bakteri *Streptococcus mutans*. Beberapa penelitian menunjukkan daun binahong memiliki zat antibakteri. Penelitian ini bertujuan untuk membuktikan efek antibakteri infusum daun binahong terhadap *Streptococcus mutans* secara *in vitro*. Konsentrasi infusum yang diuji 100%, 50%, 25%, dan 10%. Uji dilusi dilakukan untuk mendapatkan nilai KHM dan KBM, menggunakan media BHI broth dan TYS20B. Uji difusi dilakukan untuk memperoleh nilai zona hambatan, menggunakan media BHA dan BHA-darah. Dari uji dilusi, didapatkan nilai KHM 50% dan KBM diatas 50%. Dari uji difusi pada media BHA, didapatkan nilai zona hambatan: 0,75 mm (10%), 0,625 mm (25%), 1,125 mm (50%), 0,75 mm (100%). Dari uji difusi pada media BHA-darah, didapatkan nilai zona hambatan: 0,5 mm (10%), 0,875 mm (25%), 1,125 mm (50%), 0,625 mm (100%). Bakteri *S. mutans* sensitif terhadap infusum daun binahong.

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Dental caries is the most common oral infectious disease in humans with relatively high prevalence in Indonesia. *Streptococcus mutans* is the main causative agent of caries. Previous researches had identified several antibacterial ingredients in binahong leaves. This study is aimed to prove that binahong leaves infusion is effective as an antibacterial agent against *Streptococcus mutans* *in vitro*. The concentration of infusion that were used in this test were 100%, 50%, 25, and 10%. To determine minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC), dilution test was performed on BHI broth and TYS20B mediums. As to measure zone of inhibition, diffusion test was performed on BHA and BHA-blood mediums. The result showed that the MIC was 50% and the MBC was above 50%. From the diffusion test on BHA medium, the scores of inhibitory zone are 0,75 mm (10%), 0,625 mm (25%), 1,125 mm (50%), 0,75 mm (100%). While on BHA-blood medium, the scores are 0,5 mm (10%), 0,875 mm (25%), 1,125 mm (50%), 0,625 mm (100%). It is concluded that *S. mutans* is sensitive to binahong leaves infusion.