EFEKTIVITAS DAYA ANTIBAKTERI EKSTRAK DAUN BINAHONG (*Anredera cordifolia* (Ten.) Steenis) TERHADAP PERTUMBUHAN BAKTERI *Enterococcus faecalis* (sebagai Alternatif Bahan Irigasi Saluran Akar)

INTISARI

Karies merupakan penyakit rongga mulut yang dapat meluas dari email ke dentin kemudian berlanjut hingga ke pulpa. Karies hingga ke pulpa perlu dilakukan perawatan saluran akar. Kegagalan perawatan saluran akar sering disebabkan karena kesalahan pada tahap pembersihan saluran akar yaitu tahap irigasi. *Enterococcus faecalis* merupakan bakteri penyebab 80-90% infeksi pada saluran akar dan 63% kegagalan perawatan saluran akar yang mengalami infeksi ulang. Tanaman herbal relatif lebih aman digunakan sebagai bahan irigasi karena sifat toksisitasnya yang rendah. Daun binahong (*Anredera cordifolia* (Ten.) Steenis) mengandung flavonoid, polifenol, saponin, alkaloid dan minyak atsiri yang dapat berfungsi sebagai daya antibakteri. Penelitian ini bertujuan untuk mengetahui perbedaan efektivitas daya antibakteri ekstrak daun binahong (*Anredera cordifolia* (Ten.) Steenis) terhadap pertumbuhan bakteri *Enterococcus faecalis*.

Jenis penelitian yang dilakukan yaitu eksperimental laboratoris murni (*in vitro)* dengan metode difusi sumuran pada media TSA. Media TSA diolesi bakteri *Enterococcus faecalis* kemudian ditetesi dengan sodium hipoklorit sebagai kontrol positif, *aquades* steril sebagai kontrol negatif, ekstrak daun binahong konsentrasi 25%, 50% dan 75%. Analisa hipotesis menggunakan uji *Kruskal-Walis* dan uji *Mann-Whitney*.

Hasil uji *Kruskal-Walis* menunjukkan ekstrak daun binahong (*Anredera cordifolia* (Ten.) Steenis) memiliki daya antibakteri terhadap pertumbuhan bakteri *Enterococcus faecalis*. Hasil uji *Mann-Whitney* menunjukkan tidak ada perbedaan efektivitas antara kelompok kontrol positif dan kelompok ekstrak binahong dengan konsentrasi 25%, 50% dan 75% (sig.>0,05).

Kata Kunci: Daun binahong (*Anredera cordifolia* (Ten.) Steenis), *Enterococcus faecalis*, sodium hipoklorit

THE EFFECTIVENESS OF ANTIBACTERIAL POWER OF BINAHONG LEAF EXTRACT (*Anredera cordifolia* (Ten.) Steenis) AGAINST THE GROWTH OF *Enterococcus faecalis* BACTERIA (as an Alternative for Root Canal Irrigation Materials)

ABSTRACT

Caries is an oral disease that can extend from the email to the dentin, and then it may continue down to the pulp. The root canal treatment is necessary to be done to the caries which extending into the pulp. The failure of a root canal treatment is often caused by an error in the cleaning stage, namely root canal irrigation. Enterococcus faecalis is a bacteria that causes 80-90% infections in the root canal and 63% of failures in a root canal treatment. Relatively, the herbal plants are safer to be used as irrigation materials due to its low toxicity characteristic, such as binahong leaf. Binahong leaves (Anredera cordifolia (Ten.) Steenis) contain flavonoids, polyphenols, saponins, alkaloids and essential oils that can serve as antibacterial powers. The purpose of this research is to determine the differences antibacterial power effectiveness of binahong leaf extract (Anredera cordifolia (Ten.) Steenis) against the growth of Enterococcus faecalis bacteria.

The type of research used was a pure experimental laboratory (in vitro) used the diffusion method in TSA medium. TSA medium smeared by Enterococcus faecalis bacteria then drops the sodium hypochlorite as a positive control, sterile aquades as a negative control, 25%, 50% and 75% concentrated binahong extract. Data analysis use Kruskal-Walis test and Mann-Whitney test.

The analysis of hypotheses by Kruskal-Walis test showed that binahong leaf extract (Anredera cordifolia (Ten.) Steenis) has an antibacterial power against the growth of Enterococcus faecalis bacteria. Mann-Whitney test results showed that there was no difference effectiveness between the positive control group and the extract bonahong group with a concentration of 25%, 50% and 75% (sig.> 0.05).

Key Words: *Binahong leaf (Anredera cordifolia (Ten.) Steenis), Enterococcus faecalis, sodium hypochlorite*