INTISARI

Azadirachta indica secara umum diketahui sebagai Mimba memiliki aktivitas antimikrobaal. Tujuan penelitian ini adalah untuk mengetahui pengaruh konsentrasi ekstrak daun mimba sebagai *cooling water ultrasonic scaler* terhadap diameter zona hambat pertumbuhan bakteri *Streptococcus sanguis.*

Larutan *BHI* disediakan untuk dijadikan media agar *BHI* di dalam piring-piring petri yang akan digunakan dalam perlakuan penelitian. Koloni bakteri yang diinkubasikan dipindahkan dalam larutan PbS sampai diperoleh kekeruhan standar McFarland. *Cotton swab* steril digunakan untuk memindah dan meratakan larutan bakteri ke dalam lima piring petri berlabel K-, P1, P2, P3 dan K+. Kesemua piring petri kemudian dibuat lima lubang berdiameter 6mm dan dalam sumuran tersebut disemprotkan perlakuan kontrol negatif (akuades), perlakuan ekstrak daun mimba P1(10%) , P2(20%), P3(30%) dan kontrol positif (klorheksidin) menggunakan *ultrasonic scaler.* Setelah semua piring petri diinkubasi selama 24 jam pada suhu 37ºC, jangka sorong digunakan untuk menghitung setiap lubang sebanyak 3 kali masing-masing pengamat. Setelah mendapat data, seterusnya dilanjutkan analisis statistik.

Hasil uji *one way Anova* menunjukkan bahwa terdapat pengaruh signifikan konsentrasi ekstrak daun mimba sebagai *coolant water ultrasonic scaler* terhadap diameter zona hambat pertumbuhan bakteri *Streptococcus sanguis* ($p<0,05$). Hasil uji *LSD* menunjukkan bahwa terdapat perbedaan yang signifikan antara semua kelompok perlakuan ($p<0,05$). Kesimpulan penelitian ini adalah terdapat pengaruh konsentrasi ekstrak daun mimba (*Azadirachta indica*) sebagai antimikroba *cooling water ultrasonic scaler* terhadap zona hambat pertumbuhan bakteri *Streptococcus sanguis.*

Kata Kunci : *Streptococcus sanguis*, ekstrak, daun mimba, *ultrasonic scaler*, zona hambat bakteri

ABSTRACT

Azadirachta indica or commonly known as Neem has antibacterial properties. The purpose of this research is to know the effect of the neem leaf extract concentration as ultrasonic scaler cooling water on the diameter of the inhibition zone of Streptococcus sanguis bacteria.

BHI solution was prepared to be made into BHI agar media plate that was used for the experiment. Bacterial colony incubated was transferred in a PbS solution until the standard McFarland turbidity was obtained. Sterile cotton swab was used to transfer and spread the bacterial solution in all the five petri dish labelled K-, P1, P2, P3 and K+. Five wells with 6mm diameter was made in all the petri dish used. Ultrasonic scaler was used to spray solutions of negative control (distilled water), neem leaf extract of P1(10%), P2(20%), P3(30%) concentration and positive control solution (chlorhexidine) in all the wells made. After all the petri dishes were incubated for 24 hours at 37ºC, vernier caliper was used to measure the zone of inhibition on all wells three times by respective observers. Statistic analysis was followed after obtaining the data.

One way Anova test showed that there was a significant effect of neem leaf extract concentration as ultrasonic scaler cooling water on the diameter of Streptococcus sanguis bacteria growth zone of inhibition ($p<0.05$). LSD test showed that there was a significant difference between all the groups ($p<0.05$). The conclusion of this research is there was an effect of neem leaf extract concentration as antimicrobial ultrasonic scaling cooling water on the zone of inhibition of Streptococcus sanguis bacteria growth.

Key words : Streptococcus sanguis, extract, neem leaf, ultrasonic scaler, zone of inhibition of bacteria,