

ABSTRAK

Nama : Armalia Iriano
Program Studi : Kedokteran Gigi
Judul : Efek Antibakteri Infusum *Aloe vera* terhadap *Porphyromonas gingivalis* In Vitro (Perbandingan Metode Ekstraksi Maserasi dan Infundasi)

Porphyromonas gingivalis merupakan bakteri penyebab penyakit periodontal. *Aloe vera* memiliki khasiat antibakteri karena kandungan senyawa fenol. Tujuan penelitian ini untuk mengetahui efektivitas antibakteri *Aloe vera* terhadap *Porphyromonas gingivalis*. Dilakukan metode ekstraksi maserasi dan infundasi terhadap *Aloe vera* untuk menarik senyawa aktif antibakteri. Uji antibakteri dilakukan dengan metode dilusi (KHM dan KBM) dan difusi (zona hambat). Hasil metode dilusi menunjukkan nilai KHM sebesar 70% dan tidak terdapat nilai KBM. Sedangkan, metode difusi menunjukkan zona hambat tertinggi sebesar 1,75 mm pada konsentrasi 90%. Kesimpulan, infusum lidah buaya mengandung senyawa aktif fenol, tanin dan antrakuinon serta memiliki sifat bakteriostatik dan tidak bersifat bakterisidal terhadap *Porphyromonas gingivalis* secara in vitro.

Kata kunci : *Porphyromonas gingivalis*, *Aloe vera*, ekstraksi, KHM, KBM



ABSTRACT

Name : Armalia Iriano
Study Program : Dentistry
Title : Antibacterial Effect of *Aloe vera* Infuse on *Porphyromonas gingivalis* In Vitro (Comparison of Maceration and Infusion Extraction Method)

Porphyromonas gingivalis is the main etiologic agent of periodontal disease. *Aloe vera* has antibacterial effect because of its phenolic compound. The aim of this study is to investigate the antibacterial effectivity of *Aloe vera* on *Porphyromonas gingivalis*. The study was performed by extracting *Aloe vera* using maceration and infusion extraction methods in order to attract the antibacterial active compounds. The test method of the antibacterial effect was carried out by dilution method (MIC and MBC) and diffusion method (inhibition zone). The results of dilution method showed that MIC value was at 70% concentration while MBC value could not be determined. The largest inhibition zone of the diffusion method was 1,75 mm at 90% concentration. In summary, *Aloe vera* infuse contained antibacterial active compounds such as phenol, tannin and anthraquinone and showed bacteriostatic effect on *Porphyromonas gingivalis*, in vitro.

Keywords : *Porphyromonas gingivalis*, *Aloe vera*, extraction, MIC, MBC