

**FAKULTAS KEDOKTERAN DAN ILMU KESEHATAN  
UNIVERSITAS MUHAMMADIYAH MAKASSAR**

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**UJI KONSENTRASI HAMBAT MINIMUM (KHM) EKSTRAK  
LIDAH BUAYA (ALOE VERA) TERHADAP PERTUMBUHAN  
BAKTERI *STAPHYLOCOCCUS AUREUS* SECARA IN VITRO**

**ABSTRAK**

**Latar Belakang :** *Staphylococcus aureus* merupakan bakteri patogen oportunistik yang sering menyebabkan infeksi pada manusia. Meningkatnya resistensi antibiotik mendorong pencarian alternatif antibakteri dari bahan alam, salah satunya lidah buaya (*Aloe vera*) yang mengandung senyawa bioaktif. **Tujuan :** Menentukan konsentrasi hambat minimum (KHM) ekstrak etanol gel *Aloe vera* terhadap pertumbuhan *Staphylococcus aureus* secara *in vitro*. **Metode :** Penelitian true experimental dengan rancangan *post-test only control group design*. Sampel penelitian berupa isolat murni *Staphylococcus aureus* yang dikultur pada media Mueller Hinton Agar. Pengujian menggunakan metode difusi sumuran dengan variasi konsentrasi ekstrak 5%, 10%, 15%, dan 20%, masing-masing dilakukan empat kali replikasi. Kloramfenikol sebagai kontrol positif dan DMSO 10% sebagai kontrol negatif. Parameter yang diamati adalah diameter zona hambat (mm). **Hasil Penelitian :** Seluruh konsentrasi ekstrak *Aloe vera* tidak menunjukkan aktivitas antibakteri (0 mm). Kontrol positif menunjukkan daya hambat kuat dengan rerata 38,13±0,92 mm, sedangkan kontrol negatif tidak menunjukkan hambatan. **Kesimpulan :** Ekstrak etanol gel *Aloe vera* pada konsentrasi 5–20% belum mampu menghambat pertumbuhan *Staphylococcus aureus* secara *in vitro*. Diperlukan penelitian lanjutan dengan konsentrasi lebih tinggi dan metode yang lebih sensitif.

**Kata Kunci:** *Aloe vera*, *Staphylococcus aureus*, antibakteri, konsentrasi hambat minimum, *in vitro*

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***MINIMUM INHIBITORY CONCENTRATION (MIC) TEST OF  
ALOE VERA EXTRACT ON THE GROWTH OF STAPHYLOCOCCUS  
AUREUS BACTERIA IN VITRO***

**ABSTRACT**

**Background** :Staphylococcus aureus is an opportunistic pathogenic bacterium commonly responsible for human infections. The increasing prevalence of antibiotic resistance has driven the search for alternative antibacterial agents derived from natural products, such as Aloe vera, which contains various bioactive compounds. **Objective** :To determine the minimum inhibitory concentration (MIC) of ethanol extract of Aloe vera gel against the growth of Staphylococcus aureus in vitro. **Methods** :This study used a true experimental design with a post-test only control group approach. The sample consisted of pure isolates of Staphylococcus aureus cultured on Mueller Hinton Agar. Antibacterial activity was evaluated using the well diffusion method with extract concentrations of 5%, 10%, 15%, and 20%, each tested in four replications. Chloramphenicol and 10% DMSO were used as positive and negative controls, respectively. The inhibition zone diameter (mm) was measured. **Results**: All concentrations of Aloe vera extract showed no antibacterial activity, with inhibition zones of 0 mm. The positive control exhibited strong inhibition (38.13±0.92 mm), while the negative control showed no inhibition. **Conclusion** :The ethanol extract of Aloe vera gel at concentrations of 5–20% was not effective in inhibiting the growth of Staphylococcus aureus in vitro. Further studies with higher concentrations and more sensitive methods are required to determine the MIC accurately.

**Keywords**: Aloe vera, Staphylococcus aureus, antibacterial activity, minimum inhibitory concentration, in vitro

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