

ABSTRAK

PERBEDAAN FORMULASI SEDIAAN SABUN CAIR EKSTRAK ETANOL KULIT PISANG KEPOK (*Musa paradisiaca* x *Musa balbisiana*) DALAM MENGHAMBAT PERTUMBUHAN BAKTERI *Staphylococcus aureus* SECARA *In vitro*

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Infeksi kulit akibat *Staphylococcus aureus* masih menjadi masalah kesehatan. Penggunaan sabun antiseptik sintetis berpotensi menyebabkan iritasi dan resistensi mikroba sehingga diperlukan alternatif berbahan alam. Kulit pisang kepok (*Musa paradisiaca* x *Musa balbisiana*) mengandung senyawa antibakteri. Penelitian ini bertujuan mengetahui perbedaan efektivitas formulasi sabun cair ekstrak etanol kulit pisang kepok konsentrasi 5%, 15%, dan 25% dalam menghambat pertumbuhan *Staphylococcus aureus* secara *in vitro*.

Penelitian ini menggunakan desain *true experimental* dengan metode difusi sumuran. Tiga formulasi sabun cair F1 (5%), F2 (15%) dan F3 (25%) masing-masing diuji enam kali. Kontrol positif menggunakan sabun cair Dettol, sedangkan kontrol negatif menggunakan basis sabun tanpa ekstrak. Data dianalisis menggunakan uji *One-Way Anova* dan *Tukey HSD*.

Hasil penelitian Rata-rata diameter zona hambat F1, F2 dan F3 berturut-turut sebesar 6,50±0,71 mm, 8,58±1,07 mm, dan 11,17±0,68 mm. Kontrol positif menghasilkan zona hambat 24 mm, sedangkan kontrol negatif tidak menunjukkan daya hambat. Terdapat perbedaan bermakna antarformulasi ($p < 0,001$).

Disimpulkan bahwa formulasi sabun cair ekstrak etanol kulit pisang kepok memiliki efektivitas yang berbeda dalam menghambat pertumbuhan *Staphylococcus aureus* secara *in vitro*. Formulasi konsentrasi 25% merupakan yang paling efektif.

Kata kunci : Antibakteri, Kulit pisang kepok (*Musa paradisiaca* x *Musa balbisiana*), Sabun cair, *Staphylococcus aureus*

ABSTRACT

**DIFFERENCES AMONG LIQUID SOAP FORMULATIONS
CONTAINING ETHANOLIC EXTRACT OF KEPOK BANANA
PEEL (*Musa paradisiaca* x *Musa balbisiana*) AGAINST THE
GROWTH OF *Staphylococcus aureus* In vitro**

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Staphylococcus aureus is a common cause of skin infections. Prolonged use of synthetic antiseptic soaps may cause skin irritation and microbial resistance, highlighting the need for natural alternatives. Kepok banana peel (*Musa paradisiaca* × *Musa balbisiana*) contains antibacterial compounds. This study aimed to evaluate the effectiveness of liquid soap containing 5%, 15%, and 25% ethanol extract of kepok banana peel against *Staphylococcus aureus* in vitro.

A true experimental study using the agar well diffusion method was conducted. Three liquid soap formulations (F1: 5%, F2: 15%, and F3: 25%) were tested in six replicates. Commercial Dettol liquid soap and the soap base without extract served as the positive and negative controls, respectively. Data were analyzed using one-way ANOVA followed by Tukey's HSD test.

The mean inhibition zones for F1, F2, and F3 were 6.50 ± 0.71 mm, 8.58 ± 1.07 mm, and 11.17 ± 0.68 mm, respectively. Significant differences were found among all formulations ($p < 0.001$).

The 25% formulation showed the greatest antibacterial activity and was the most effective in inhibiting *Staphylococcus aureus* growth in vitro.

Keyword : Antibacterial, Kepok banana peel (*Musa paradisiaca* x *Musa balbisiana*), Liquid soap, *Staphylococcus aureus*