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**Uji Efektivitas Antibakteri Bawang Hitam (*Black garlic*) Terhadap Bakteri
Salmonella typhi Secara *In Vitro***

ABSTRAK

Latar Belakang : *Salmonella typhi* merupakan penyebab demam tifoid dengan peningkatan resistensi antibiotik, sehingga diperlukan alternatif antibakteri dari bahan alam. Bawang hitam (*Black garlic*) mengandung senyawa bioaktif yang berpotensi sebagai antibakteri. **Tujuan :** Mengetahui efektivitas antibakteri ekstrak bawang hitam terhadap pertumbuhan bakteri *Salmonella typhi* secara *in vitro*. **Metode Penelitian :** Penelitian ini merupakan penelitian *true experimental* dengan desain *post-test only control group design* menggunakan metode difusi sumuran pada media Nutrient Agar. Ekstrak diuji pada konsentrasi 25%, 50%, dan 75%; kloramfenikol sebagai kontrol positif dan DMSO 10% sebagai kontrol negatif. Dilakukan lima kali replikasi. Diameter zona hambat diukur menggunakan jangka sorong dan diklasifikasikan berdasarkan kriteria Greenwood. **Hasil :** Rerata diameter zona hambat ekstrak bawang hitam pada konsentrasi 25%, 50%, dan 75% masing-masing sebesar 6,16 mm; 6,32 mm; dan 7,81 mm. Seluruh hasil berada di bawah 10 mm sehingga termasuk kategori tidak efektif berdasarkan klasifikasi Greenwood. Kontrol positif kloramfenikol menghasilkan rerata zona hambat 10,43 mm (kategori lemah), sedangkan kontrol negatif DMSO 10% tidak menunjukkan zona hambat. **Kesimpulan :** Ekstrak bawang hitam pada konsentrasi 25%, 50%, dan 75% tidak menunjukkan aktivitas antibakteri yang efektif terhadap bakteri *Salmonella typhi* secara *in vitro*. Peningkatan konsentrasi ekstrak belum memberikan peningkatan daya hambat yang bermakna.

Kata Kunci : Bawang hitam (*Black garlic*), antibakteri, *Salmonella typhi*

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ABSTRACT

Background: *Salmonella typhi* is the causative agent of typhoid fever, with increasing antibiotic resistance, thus requiring alternative antibacterial agents derived from natural products. Black garlic contains bioactive compounds that potentially exhibit antibacterial activity. **Objective:** To determine the antibacterial effectiveness of black garlic extract against the growth of *Salmonella typhi* in vitro. **Methods:** This study was a true experimental study with a post-test only control group design using the agar well diffusion method on Nutrient Agar medium. The extract was tested at concentrations of 25%, 50%, and 75%; chloramphenicol was used as a positive control and 10% DMSO as a negative control. Five replications were performed. The diameter of inhibition zones was measured using a caliper and classified according to Greenwood's criteria. **Results:** The mean inhibition zone diameters of black garlic extract at concentrations of 25%, 50%, and 75% were 6.16 mm, 6.32 mm, and 7.81 mm, respectively. All results were below 10 mm and were categorized as ineffective based on Greenwood's classification. The positive control (chloramphenicol) showed a mean inhibition zone of 10.43 mm (weak category), while the negative control (10% DMSO) showed no inhibition zone. **Conclusion:** Black garlic extract at concentrations of 25%, 50%, and 75% did not demonstrate effective antibacterial activity against *Salmonella typhi* in vitro. Increasing the extract concentration did not result in a meaningful improvement in inhibitory activity.

Keywords: black garlic, antibacterial, *Salmonella typhi*