

**ANALISIS FITOKIMIA DAN UJI AKTIVITAS
ANTIBAKTERI EKSTRAK BUNGA LEMPUYANG WANGI
(*Zingiber zerumbet* (L.) Roscoe ex Sm. subsp. *zerumbet*)
TERHADAP *Staphylococcus epidermidis***

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INTISARI

Indonesia memiliki keanekaragaman flora dan fauna yang berlimpah. Terdapat ribuan jenis tanaman yang digunakan oleh masyarakat sebagai obat tradisional. Saat ini penelitian mengenai manfaat tumbuhan telah banyak dilakukan oleh ahli dan masih tetap berlanjut karena banyak tanaman yang belum secara lengkap dieksplorasi potensinya. Salah satu tanaman yang memiliki potensi tinggi yaitu lempuyang wangi (*Zingiber zerumbet* (L.) Roscoe ex Sm. subsp. *zerumbet*). Lempuyang wangi banyak diteliti bagian rhizomanya, namun tidak dengan bunganya. Berdasarkan hal tersebut, peneliti tertarik menganalisis komponen senyawa kimia ekstrak bunga lempuyang wangi dan menganalisis aktivitas antibakterinya terhadap *Staphylococcus epidermidis* karena bakteri ini mampu menyebabkan berbagai permasalahan di kulit kepala. Penelitian ini dilakukan pada bulan Maret-Juni 2023 di Laboratorium Biokimia dan FALITMA UGM. Penelitian dimulai dengan ekstraksi bunga lempuyang wangi, skrining fitokimia ekstrak, dan pengujian aktivitas antibakteri dengan metode difusi cakram. Data dianalisis dengan uji Kruskal Wallis dan Uji *Post hoc* di aplikasi Microsoft Excel 365 dan SPSS v.25. Hasil penelitian menunjukkan bunga lempuyang wangi positif mengandung senyawa flavonoid, saponin, tanin, polifenol, dan triterpenoid. Ekstrak bunga lempuyang wangi konsentrasi 4%, 8%, 16%, 32%, dan 64% memiliki zona hambat secara berturut sebesar 0 mm, 0,67 mm, 1,67 mm, 4,33 mm, dan 5 mm. Berdasarkan hasil penelitian yang telah dilakukan maka dapat disimpulkan bahwa ekstrak bunga lempuyang wangi terbukti mengandung senyawa metabolit sekunder flavonoid, saponin, tanin, polifenol, dan triterpenoid dan memiliki aktivitas antibakteri yang rendah.

Kata kunci: antibakteri, ekstrak, metabolit sekunder, *Zingiber zerumbet* (L.) Roscoe ex Sm. subsp. *zerumbet*

**PHYTOCHEMICAL ANALYSIS AND ANTIMICROBIAL
ACTIVITY OF BITTER GINGER FLOWER
(*Zingiber zerumbet* (L.) Roscoe ex Sm. subsp. *zerumbet*)
EXTRACT AGAINST *Staphylococcus epidermidis***

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ABSTRACT

Indonesia has an abundant diversity of flora and fauna. There are thousands of types of plants used by the community as traditional medicine. Currently, research on potency of plants has been carried out by many experts and is still ongoing because many plants have not fully explored their potential. One of the plants that has high potential in the health sector is bitter ginger (*Zingiber zerumbet* (L.) Roscoe ex Sm. subsp. *zerumbet*). Bitter ginger has been extensively studied for its rhizomes, but not for its flowers. Based on this, the researchers were interested in analyzing the chemical components of the bitter ginger flower extract and analyzing its antibacterial activity against *Staphylococcus epidermidis* because these bacteria can cause various problems on the scalp. This research was conducted in March-June 2023 at the Biochemistry Laboratory and FALITMA UGM. The study was started by extracting bitter ginger flowers, screening the extract for phytochemicals, and testing the antibacterial activity using the disc diffusion method. Data were analyzed using the Kruskal Wallis test and the *Post hoc* test in Microsoft Excel 365 and SPSS v.25 software. The results showed that bitter ginger flower positively contained flavonoids, saponins, tannins, polyphenols, and triterpenoids. Bitter ginger flower extract concentrations of 4%, 8%, 16%, 32%, and 64% had inhibition zones of 0 mm, 0.67 mm, 1.67 mm, 4.33 mm, and 5 mm respectively. Based on the results of the research that has been done, it can be concluded that bitter ginger flower extract is proven to contain secondary metabolites of flavonoids, saponins, tannins, polyphenols, and triterpenoids and has low antibacterial activity.

Keywords: antibacterial, extract, secondary metabolite, *Zingiber zerumbet* (L.) Roscoe ex Sm. subsp. *zerumbet*