

**KARAKTERISASI DAN UJI EFEKTIVITAS ANTIBAKTERI SEDIAAN  
DEODORANT SPRAY EKSTRAK RIMPANG JERINGAU (*Acorus calamus*  
L.) TERHADAP *Staphylococcus epidermidis***

**ABSTRAK**

Peningkatan suhu akibat pemanasan global telah menyebabkan produksi keringat berlebih yang menimbulkan masalah pada bau badan, terutama di wilayah tropis seperti Indonesia. Salah satu penyebab utama bau badan adalah pertumbuhan bakteri *Staphylococcus epidermidis* yang juga menyebabkan terjadinya infeksi penyakit kulit lainnya jika tidak ditangani dengan benar. Jeringau (*Acorus calamus* L.) merupakan tanaman yang diketahui memiliki bioaktivitas sebagai antibakteri dan antiinflamasi. Pemanfaatan ekstrak rimpang jeringau secara empiris telah dilaporkan memiliki potensi untuk dikembangkan menjadi produk kesehatan maupun kosmetik sebagai solusi permasalahan bau badan dan infeksi pada kulit. Penelitian ini bertujuan untuk mengetahui karakterisasi ekstrak rimpang jeringau dan mengevaluasi potensi antibakterinya dalam sediaan *deodorant spray* terhadap *Staphylococcus epidermidis*. Metode penelitian yang digunakan adalah eksperimental dengan ekstraksi rimpang jeringau menggunakan pelarut etanol 96% melalui uji standarisasi parameter spesifik dan *non*-spesifik, formulasi sediaan *deodorant spray* dalam tiga variasi konsentrasi ekstrak (15%, 20%, 25%), serta dilakukan evaluasi mutu fisik (uji pH, homogenitas, daya sebar, sensori, dan iritasi). Efektivitas antibakteri diuji dengan metode difusi terhadap bakteri *Staphylococcus epidermidis*. Hasil penelitian menunjukkan bahwa ekstrak rimpang jeringau positif mengandung alkaloid, flavonoid, tanin, dan saponin. Parameter kadar air yaitu 12,9%, abu total 0,30%, dan susut pengeringan sebesar 2,8% telah sesuai standar Farmakope Herbal Indonesia Tahun 2022. Evaluasi mutu fisik menunjukkan ketiga formula memenuhi standar SNI 16-4951-1998 dan tidak menimbulkan iritasi terhadap uji coba 10 sukarelawan. Uji efektivitas menunjukkan bahwa F1 (15%) menunjukkan daya hambat terbaik sebesar 15,62 mm terhadap *Staphylococcus epidermidis*, tergolong kategori daya hambat kuat. Sehingga ekstrak etanol rimpang jeringau memiliki potensi sebagai antibakteri alami serta aman bagi kulit dan ramah lingkungan.

Kata kunci: *Acorus calamus*, *deodorant spray*, antibakteri, *Staphylococcus epidermidis*.

**CHARACTERISATION AND ANTIBACTERIAL EFFECTIVENESS  
TEST OF DEODORANT SPRAY EXTRACT OF *JERINGAU* (*Acorus  
calamus* L.) AGAINST *Staphylococcus epidermidis***

**ABSTRACT**

Increased temperatures due to global warming have led to excessive sweat production which causes problems with body odour, especially in tropical regions such as Indonesia. One of the main causes of body odour is the growth of *Staphylococcus epidermidis* bacteria which also causes other skin disease infections if not treated properly. *Jeringau* (*Acorus calamus* L.) is a plant known to have bioactivity as antibacterial and anti-inflammatory. Empirically, the use of *jeringau* rhizome extract has been reported to have the potential to be developed into health and cosmetic products as a solution to the problem of body odour and skin infections. This study aims to characterise the extract of *jeringau* rhizome and evaluate its antibacterial potential in deodorant spray preparation against *Staphylococcus epidermidis*. The research method used was experimental with the extraction of *jeringau* rhizome using 96% ethanol solvent through standardisation test of specific and non-specific parameters, deodorant spray preparation formulation in three variations of extract concentration (15%, 20%, 25%), and physical quality evaluation (pH test, homogeneity, spreadability, sensory, and irritation). Antibacterial effectiveness was tested by diffusion method against *Staphylococcus epidermidis* bacteria. The results showed that *jeringau* rhizome extract was positive for alkaloids, flavonoids, tannins, and saponins. The parameters of moisture content of 12.9%, total ash of 0.30%, and drying shrinkage of 2.8% are in accordance with the standards of the Indonesian Herbal Pharmacopoeia Year 2022. Physical quality evaluation showed that the three formulas met the standards of SNI 16-4951-1998 and did not cause irritation to 10 volunteers. The effectiveness test showed that F1 (15%) showed the best inhibition of 15.62 mm against *Staphylococcus epidermidis*, classified as a strong inhibition category. So that the ethanol extract of *jeringau* rhizome has potential as a natural antibacterial and is safe for the skin and environmentally friendly.

**Keywords:** *Acorus calamus*, antibacterial, deodorant spray, *Staphylococcus epidermidis*.