

INTISARI

PERMATASARI, A. P., 2020, UJI AKTIVITAS EMULGEL MINYAK ATSIRI RIMPANG JERINGAU (*Acorus calamus* L) TERHADAP BAKTERI *Staphylococcus aureus* ATCC 25923 PENYEBAB JERAWAT, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Jerawat dapat terjadi karena menumpuknya kotoran dalam pori-pori kulit yang menyerang muka, dada, punggung, dan lengan atas. Salah satu penyebab munculnya jerawat adalah bakteri *Staphylococcus aureus*. Rimpang jeringau memiliki kandungan 85% senyawa asaron, 3,45% cis metil isoeugenol, 1,92% cyclohexene yang dapat bersifat sebagai antibakteri. Penelitian ini bertujuan untuk mengetahui kualitas minyak atsiri serta memformulasikan sediaan emulgel dari minyak atsiri rimpang jeringau dan menguji sifat fisik, serta aktivitas antibakteri terhadap *Staphylococcus aureus* ATCC 25923.

Minyak atsiri rimpang jeringau didapat dari penjualan online yang beredar di Indonesia untuk dilakukan identifikasi noda minyak, kandungan senyawa dengan GC-MS, berat jenis, indeks bias, dan larut minyak. Minyak atsiri rimpang jeringau di formulasi menjadi 3 formulasi dengan perbedaan konsentrasi 6%, 8%, dan 10%. Sediaan emulgel di setiap formula di uji organoleptis, pH, viskositas, daya sebar, daya lekat, stabilitas, dan aktivitas antibakteri *Staphylococcus aureus* ATCC 25923. Data dianalisa secara statistik menggunakan aplikasi SPSS dengan uji *One Way* anova.

Hasil penelitian menunjukkan sediaan emulgel minyak atsiri rimpang jeringau memiliki mutu fisik yang baik dan stabil dalam uji stabilitas, serta mempunyai aktivitas antibakteri terhadap *S. aureus* ATCC 25923 dengan zona hambat pada konsentrasi 6; 8; dan 10% adalah 11,56; 22,11; dan 28,54 mm. Hasil penelitian menunjukkan emulgel minyak atsiri rimpang jeringau yang paling aktif memiliki aktivitas antibakteri adalah konsentrasi 10%.

Kata kunci: *Acorus calamus* L, minyak atsiri, emulgel, antibakteri, jerawat, *Staphylococcus aureus*.

ABSTRACT

PERMATASARI, A. P., 2020, TEST ACTIVITY OF EMULGEL ESSENTIAL OIL OF JERINGAU Rhizome (*Acorus calamus* L) AGAINST *Staphylococcus aureus* CAUSES OF ACNE, THESIS, FACULTY OF PHARMACEUTICAL, SETIA BUDI UNIVERSITY, SURAKARTA.

Acne can occur due to accumulation of dirt in the pores of the skin that attacks the face, chest, back, and upper arms. One of the causes of acne is *Staphylococcus aureus* bacteria. Jeringau rhizome contains 85% asarone, 3.45% cis methyl isoeugenol, 1.92% cyclohexene which can act as antibacterial. This study aims to determine the quality of essential oils and to formulate emulgel preparations from jeringau rhizome essential oil and to test the physical properties, as well as antibacterial activity against *Staphylococcus aureus* ATCC 25923.

Jeringau rhizome essential oil was obtained from online sales circulating in Indonesia for identification oil stain, compound content with GC-MS, specific gravity, refractive index, and oil soluble. Jeringau rhizome essential oil was formulated into 3 formulations with different concentrations of 6%, 8%, and 10%. Emulgel preparations in each formula were tested for organoleptic, pH, viscosity, spreadability, adhesion, stability, and antibacterial activity of *Staphylococcus aureus* ATCC 25923. The data were statistically analyzed using SPSS application with *One Way* ANOVA test.

The results showed that the jeringau rhizome essential oil emulgel preparation had good physical quality and was stable in the stability test, and had antibacterial activity against *S. aureus* ATCC 25923 with an inhibitory zone at a concentration of 6; 8; and 10% is 11.56; 22.11; and 28.54 mm. The results showed that the most active emulgel of jeringau rhizome essential oil had antibacterial activity at a concentration of 10%.

Keywords: *Acorus calamus* L, essential oil, emulgel, antibacterial, acne, *Staphylococcus aureus*.