

ABSTRAK

Fatiha, S.N., 2022, UJI MUTU FISIK SEDIAAN SPRAY GEL LENDIR BEKICOT (*Achatina fulica* Fer.) DAN UJI AKTIVITAS ANTIBAKTERI TERHADAP BAKTERI *Staphylococcus epidermidis* ATCC 12228, PROPOSAL SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Jerawat adalah salah satu peradangan pada kulit yang biasa terjadi di masa pubertas, dikarenakan hormon, dan peningkatan sebum. Lendir bekicot memiliki aktivitas antibakteri terhadap salah satu bakteri penyebab jerawat, yaitu *Staphylococcus epidermidis*. Penelitian ini bertujuan untuk mengetahui sediaan *spray gel* dari lendir bekicot (*Achatina fulica* Fer.) yang memenuhi syarat uji mutu fisik dan stabilitas yang baik serta memiliki aktivitas antibakteri terhadap bakteri *Staphylococcus epidermidis*.

Penelitian dilakukan dengan menggunakan lendir bekicot (*Achatina fulica* Fer.) yang diformulasikan menjadi sediaan *spray gel* dengan tiga perbedaan konsentrasi lendir bekicot (*Achatina fulica* Fer.) F1 (15%), F2 (25%), F3 (35%). Aktivitas antibakteri ditentukan dengan terbentuknya daya hambat menggunakan metode difusi sumuran, dan uji mutu fisik yang dilakukan meliputi uji organoleptis, uji homogenitas, uji pH, uji viskositas, uji pola semprot dan bobot semprot, uji daya sebar lekat, uji waktu kering, dan *cycling test*. Data hasil penelitian dianalisis menggunakan *One Way ANOVA*.

Hasil uji mutu fisik menunjukkan bahwa semua formula sediaan *spray gel* terhadap uji organoleptis, uji homogenitas, uji pH, uji viskositas, uji pola semprot dan bobot semprot, uji daya sebar lekat, uji waktu kering dan uji *cycling test* yang baik. Ketiga formula sediaan *spray gel* yaitu F1 (15%), F2 (25%), F3 (35%) memiliki aktivitas antibakteri terhadap bakteri *Staphylococcus epidermidis*. Pada pengujian terhadap bakteri *Staphylococcus epidermidis*, formula 3 dengan lendir bekicot 35% memiliki aktivitas antibakteri yang paling efektif yaitu 17,24 mm. Peningkatan konsentrasi lendir bekicot menunjukkan peningkatan pada daya hambat bakteri.

Kata kunci: Lendir bekicot, *Spray gel*, Antijerawat, *Staphylococcus epidermidis*

ABSTRACT

Fatiha, S.N., 2022, PHYSICAL QUALITY ASSESSMENT OF SNAIL MUCUS GEL SPRAY (*Achatina fulica* Fer.) AND ANTIBACTERIAL ACTIVITY TEST AGAINST *Staphylococcus epidermidis* ATCC 12228, PROPOSAL OF THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Acne is an inflammation of the skin that usually occurs during puberty, due to hormones and increased sebum. Snail mucus has antibacterial activity against one of the bacteria that causes acne, namely *Staphylococcus epidermidis*. This study aims to determine the preparation of spray gel from snail slime (*Achatina fulica* Fer.) which meets the requirements for good physical quality and stability and has antibacterial activity against *Staphylococcus epidermidis* bacteria.

The research was conducted using snail mucus (*Achatina fulica* Fer.) which was formulated into a spray gel preparation with three different concentrations of snail mucus (*Achatina fulica* Fer.) F1 (15%), F2 (25%), F3 (35%). Antibacterial activity was determined by the formation of inhibition using the well diffusion method, and physical quality tests were carried out including organoleptic test, homogeneity test, pH test, viscosity test, spray pattern test and spray weight, adhesive dispersion test, dry time test, and cycling test. The research data were analyzed using One Way ANOVA.

The results of the physical quality test showed that all of the spray gel formulations against the organoleptic test, homogeneity test, pH test, viscosity test, spray pattern test and spray weight, adhesive dispersion test, dry time test and cycling test were good. The three spray gel formulations, namely F1 (15%), F2 (25%), F3 (35%) had antibacterial activity against *Staphylococcus epidermidis* bacteria. In testing against *Staphylococcus epidermidis*, formula 3 with 35% snail mucus had the most effective antibacterial activity, which was 17.24 mm. An increase in the concentration of snail mucus showed an increase in the inhibition of bacteria.

Keywords: Snail mucus, *Spray gel*, Antibacterial, *Staphylococcus epidermidis*