

THESIS

**FORMULATION OF *PEEL-OFF* GEL MASK OF METHANOL
EXTRACT OF ARECA CATECHU L. SEEDS AND
ANTIBACTERIAL ACTIVITY TEST AGAINST
*STAPHYLOCOCCUS EPIDERMIDIS***



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UNIVERSITAS DARUSSALAM GONTOR
PONOROGO**

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VALIDITY SHEET

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It is hereby stated that the thesis with the title:

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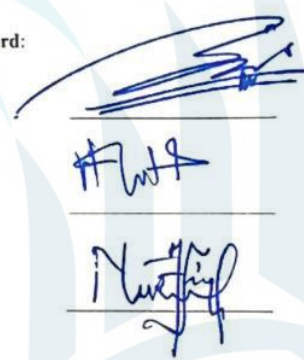
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ABSTRAK

FORMULASI MASKER GEL *PEEL-OFF* EKSTRAK METANOL BIJI PINANG (*Areca catechu* L.) DAN UJI AKTIVITAS ANTIBAKTERI *Staphylococcus epidermidis*

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Jerawat merupakan gangguan kulit yang sering muncul di area wajah, leher, dada, dan punggung. Pengobatan jerawat umumnya dilakukan dengan penggunaan antibiotik untuk mengurangi peradangan dan membunuh bakteri, tetapi penggunaan antibiotik yang terlalu sering dapat menyebabkan resistensi bakteri, sehingga diperlukan alternatif lain dengan menggunakan bahan herbal misalnya biji pinang yang mengandung senyawa flavonoid, alkaloid, tannin, dan saponin sebagai antibakteri yang dibuat dalam bentuk sediaan masker gel *peel-off*. Penelitian ini bertujuan untuk membuat dan mengevaluasi mutu sediaan masker gel *peel-off* ekstrak biji pinang serta uji daya hambat terhadap pertumbuhan bakteri *Staphylococcus epidermidis*. Penelitian ini merupakan penelitian eksperimental dengan membuat masker gel *peel-off* dengan variasi konsentrasi ekstrak biji pinang F0 (0%), F1 (2,5%), F2 (5%), F3 (7,5%). Uji antibakteri *Staphylococcus epidermidis* menggunakan metode difusi cakram. Data hasil evaluasi mutu sediaan dianalisis dengan membandingkan standar SNI sedangkan hasil uji aktivitas antibakteri dianalisis menggunakan One Way ANOVA dengan taraf signifikansi 95%. Hasil penelitian ini menunjukkan bahwa hasil uji organoleptic berwarna merah, sediaan homogen, pH 6,84-7,47 (memenuhi standar SNI 16-4380-1996), viskositas 2772,5-3098,9 cPs (memenuhi standar SNI 16-4380-1996), daya sebar 4,36-5,32 cm (memenuhi standar SNI 16-4380-1996), waktu mengering 21 menit 61 detik-27 menit 9 detik (memenuhi standar SNI 16-4380-1996). Sediaan masker gel *peel-off* memiliki kemampuan antibakteri *Staphylococcus epidermidis* dengan daya hambat paling besar yaitu konsentrasi ekstrak 7,5% (F 3) dengan rata-rata zona hambat sebesar 13,83 mm.

Kata kunci: antibakteri, biji pinang, gel, *peel-off*, *Staphylococcus epidermidis*

ABSTRACT

FORMULATION OF *PEEL-OFF* GEL MASK OF METHANOL EXTRACT OF ARECA CATECHU L. SEEDS AND ANTIBACTERIAL ACTIVITY TEST AGAINST *STAPHYLOCOCCUS EPIDERMIDIS*

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Acne is a skin disorder that often appears on the face, neck, chest and back. Treatment of acne is generally done with the use of antibiotics to reduce inflammation and kill bacteria, but the use of antibiotics too often can cause bacterial resistance, so another alternative is needed by using herbal ingredients such as areca nut which contains flavonoids, alkaloids, tannins, and saponins as antibacterial compounds made in the form of a *peel-off* gel mask preparation. This study aims to make and evaluate the quality of areca nut extract *peel-off* gel mask preparation and inhibition test against the growth of *Staphylococcus epidermidis* bacteria. This research is an experimental study by making peel-off gel masks with variations in the concentration of areca nut extract F0 (0%), F1 (2.5%), F2 (5%), F3 (7.5%). *Staphylococcus epidermidis* antibacterial test using disc diffusion method. Data from the quality evaluation of the preparation were analyzed by comparing SNI standards while the results of the antibacterial activity test were analyzed using One Way ANOVA with a significance level of 95%. The results of this study indicate that the organoleptic test results are red in color, homogeneous preparation, pH 6.84-7.47 (meets SNI 16-4380-1996 standards), viscosity 2772.5-3098.9 cPs (meets SNI 16-4380-1996 standards), spreadability 4.36-5.32 cm (meets SNI 16-4380-1996 standards), drying time 21 minutes 61 seconds-27 minutes 9 seconds (meets SNI 16-4380-1996 standards). The *peel-off* gel mask preparation has the antibacterial ability of *Staphylococcus epidermidis* with the greatest inhibition, namely 7.5% extract concentration (F 3) with an average inhibition zone of 13.83 mm ($p < 0.05$).

Keywords: antibacterial, areca nut, gel, *peel-off*, *Staphylococcus epidermidis*

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