

THESIS

**ANTIBACTERIAL ACTIVITY TEST OF SOLID SOAP OF
ETHANOL EXTRACT OF SAGA LEAF (*Abrus precatorius L*)
AGAINST *Staphylococcus epidermidis* BACTERIA**



Arranged by:

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PONOROGO
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It is hereby stated that the thesis with the title:

**"ANTIBACTERIAL ACTIVITY TEST OF SOLID SOAP OF ETHANOL
EXTRACT OF SAGA LEAF (*Abrus precatorius L*) AGAINST
Staphylococcus epidermidis BACTERIA"**

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I sincerely declare that the research contained in this thesis is my own work and does not belong to anyone else. This thesis has never been published before, except for some parts with original references.

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ABSTRAK
UJI AKTIVITAS ANTIBAKTERI SABUN PADAT EKSTRAK ETANOL
DAUN SAGA (*Abrus precatorius L*) TERHADAP BAKTERI *Staphylococcus*
epidermidis

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Sabun merupakan produk farmasi yang dibutuhkan manusia setiap hari untuk membersihkan kotoran dan minyak dari tubuh. Sabun adalah garam natrium dan kalium dari asam lemak yang berasal dari minyak nabati atau lemak hewani. Pemanfaatan daun saga dalam formulasi sediaan sabun padat dapat dijadikan sebagai pengobatan alternatif infeksi bakteri. Daun saga (*Abrus precatorius L*) memiliki kandungan aktif antibakteri seperti flavonoid, saponin, dan tanin. Tujuan dari penelitian ini adalah untuk mengetahui aktivitas antibakteri dari daun saga ketika diaplikasikan dalam sabun padat dalam menghambat bakteri *Staphylococcus epidermidis*. Penelitian ini menggunakan metode *disk diffusion* dengan 3 variasi konsentrasi ekstrak etanol daun saga yaitu F1 (3,6 gram), F2(6 gram), F3(8,4 gram). Hasil penelitian menunjukkan bahwa sediaan sabun padat dengan penambahan ekstrak etanol daun saga memengaruhi mutu fisik sabun padat yaitu sabun berwarna hijau lumut tua dengan aroma pahit khas daun saga dan sedikit aroma *greentea*, hasil pengujian tinggi busa didapatkan hasil setinggi 70,3-90,3. Hasil uji pH pada sabun padat daun saga adalah 10,07-10,97 dan hasil uji kadar air sebesar 7-9%. Hasil uji antibakteri sediaan sabun padat yang menunjukkan daya hambat tertinggi adalah F3 (8,4 gram) dengan diameter zona hambat sebesar 10,58 mm. Data hasil uji tinggi busa, uji pH, uji kadar air, dan uji antibakteri diolah secara statistik, dan mendapatkan hasil data uji yang berbeda secara signifikan yaitu $<0,05$ yang berarti perbedaan pemberian ekstrak etanol daun saga (*Abrus precatorius L*) memberikan pengaruh yang berbeda pada tiap hasil uji mutu sediaan dan hasil uji antibakteri. Luas zona hambat yang terbentuk menunjukkan bahwa sabun padat ekstrak etanol daun saga (*Abrus precatorius L*) dapat dijadikan sebagai alternatif pengobatan infeksi bakteri *Staphylococcus epidermidis*.

Kata Kunci: sabun, daun saga, ekstraksi, *Staphylococcus epidermidis*

ABSTRACT
ANTIBACTERIAL ACTIVITY TEST OF SOLID SOAP OF ETHANOL
EXTRACT OF SAGA LEAF (*Abrus precatorius* L) AGAINST
***Staphylococcus epidermidis* BACTERIA**

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Soap is a pharmaceutical product that humans need every day to clean dirt and oil from the body. Soap is a sodium and potassium salt of fatty acids derived from vegetable oil or animal fat. The utilization of saga leaves in the formulation of solid soap preparations can be used as an alternative treatment for bacterial infections. Saga leaves (*Abrus precatorius* L) have antibacterial active ingredients such as flavonoids, saponins, and tannins. The purpose of this study was to determine the antibacterial activity of saga leaves when applied in solid soap in inhibiting *Staphylococcus epidermidis* bacteria. This study uses the disk diffusion method with 3 variations in the concentration of saga leaf ethanol extract, namely F1 (3.6 grams), F2 (6 grams), F3 (8.4 grams). The results showed that the preparation of solid soap with the addition of ethanol extract of saga leaves affected the physical quality of solid soap, namely dark moss green soap with a bitter aroma typical of saga leaves and a slight aroma of greentea, the results of the foam height test obtained results as high as 70.3-90.3. The pH test results on saga leaf solid soap are 10.07-10.97 and the water content test results are 7-9%. The antibacterial test results of solid soap preparations that showed the highest inhibition were F3 (8.4 grams) with an inhibition zone diameter of 10.58 mm. The data from the foam height test, pH test, water content test, and antibacterial test were statistically processed, and obtained the results of significantly different test data, namely <0.05 , which means that the difference in the administration of ethanol extract of saga leaves (*Abrus precatorius* L) has a different effect on each preparation quality test result and antibacterial test result. The size of the inhibition zone formed indicates that the solid soap of ethanol extract of saga leaves (*Abrus precatorius* L) can be used as an alternative treatment for bacterial infections of *Staphylococcus epidermidis*.

Keyword: soap, saga leaves, ethanol extract, *Staphylococcus epidermidis*

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