

## INTISARI

**IVANKA, YV 2000, FORMULASI DAN UJI AKTIVITAS ANTIBAKTERI SABUN CAIR DARI EKSTRAK DAUN BIDARA ARAB (*Ziziphus mauritiana* Lam) TERHADAP BAKTERI *Escherichia coli*, SKRIPSI, PROGRAM STUDI S1 FARMASI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh Dr. apt. Titik Sunarni., M.Si. Dan apt. Drs. Suhartinah., M. Sc.**

Daun bidara arab (*Ziziphus mauritiana* Lam) diketahui mengandung senyawa flavonoid dan saponin yang memiliki mekanisme kerja sebagai antibakteri. Penelitian ini bertujuan untuk membuat sediaan sabun cair ekstrak daun bidara dengan mutu fisik yang baik, mengetahui uji aktivitas antibakteri sabun cair terhadap bakteri *Escherichia coli*, dan konsentrasi paling efektif yang dapat menghambat bakteri *Escherichia coli*.

Penelitian dilakukan menggunakan tiga formula dengan kandungan ekstrak daun bidara arab sebesar 1%; 2%; dan 3% ditambah dengan formula kontrol positif (D) dan kontrol negatif (tanpa ekstrak). Daun bidara arab diekstraksi dengan metode maserasi dengan etanol 70% dan diformulasikan dalam bentuk sediaan sabun cair. Pengujian antibakteri dilakukan dengan metode difusi sumuran.

Penelitian sabun cair ekstrak daun bidara arab dengan konsentrasi 1%, 2%, dan 3% telah memenuhi kriteria uji mutu fisik dan stabilitas yang baik dalam waktu pengujian selama 3 minggu dengan *cycling test*. Formula sabun cair ekstrak daun bidara arab dari tiga konsentrasi dapat menghambat pertumbuhan pada bakteri *Escherichia coli*. Formula sabun cair ekstrak daun bidara yang paling efektif menghambat *Escherichia coli* pada konsentrasi 3%.

**Kata kunci :** *Ziziphus mauritiana*, Sabun cair, antibakteri, *Escherichia coli*.

## **ABSTRACT**

**IVANKA, YV 2000, FORMULATION AND ACTIVITY TEST OF LIQUID SOAP OF BIDARA LEAF (*Ziziphus mauritiana* Lam) EXTRACT TO *Escherichia coli*, THESIS, PHARMACEUTICAL S1 STUDY PROGRAM, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA, Supervised by Dr. apt. Titik Sunarni., M. Si. Dan apt. Drs. Suhartinah., M. Sc.**

Bidara leaves (*Ziziphus mauritiana* Lam) are known to contain flavonoid and saponin compounds that have a working mechanism as antibacterial. This study aims to make liquid soap preparations of bidara leaf extract with good physical quality, to know the activity test of liquid soap preparations against *Escherichia coli* bacteria, and the most effective concentration of liquid soap from bidara leaf extract which can inhibit *Escherichia coli* bacteria.

This research was conducted using three formulas containing 1% bidara leaf extract; 2%; and 3% plus the formula of positive control (Dettol) and negative control (without extract). Bidara leaves were extracted by maceration method with 70% ethanol and formulated in the form of liquid soap. Antibacterial testing was done by well diffusion method.

The research on liquid soap with a concentration of 1%, 2%, and 3% of arabic bidara leaf extract has met the criteria for good physical quality and stability testing within 3 weeks of testing. Liquid soap formula of bidara leaf extract from three concentrations can inhibit the growth of *Escherichia coli*. Bidara leaf extract liquid soap formula is the most effective in inhibiting the growth of *Escherichia coli* at a concentration of 3%.

**Keywords :** *Ziziphus mauritiana*, Liquid soap, antibacteria, *Escherichia coli*.