PENENTUAN KANDUNGAN FENOLIK TOTAL, UJI AKTIVITAS ANTIOKSIDAN, AKTIVITAS ANTIMIKROBA, DAN UJI SITOTOKSIK DARI EKSTRAK HEKSANA DAUN MIANA (*Plectranthus scutellarioides* (L.) R. Br)

SKRIPSI SARJANA KIMIA

Oleh:

FEBRIA SYAFITRI

BP: 1410411021

JURUSAN KIMIA

FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM

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INTISARI

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Febria Syafitri (BP 1410411021)
Dr. Suryati *, Bustanul Arifin, M.Si*
***Pembimbing**

Tumbuhan miana (*Plectranthus scutellarioides* (L.) R. Br) termasuk ke dalam famili *Lamiaceae*. Tumbuhan ini secara tradisional banyak digunakan untuk pengobatan bronkitis, asma, diare, dan demam. Dalam penelitian ini telah dilakukan ekstraksi dengan cara maserasi menggunakan pelarut heksana dan didapatkan rendemen ekstrak sebesar 2,434 %. Terhadap ekstrak yang diperoleh dilakukan penentuan kandungan fenolik total dengan metode *Folin-Ciocalteau* dan didapatkan kadar fenolik totalnya sebesar 0,4015 mg/L GAE. Uji aktivitas antioksidan dilakukan dengan metode DPPH (1,1-*diphenyl*-2-*picrylhydrazyl*) dan didapatkan nilai IC_{50} sebesar 116,093 mg/L. Uji aktivitas antibakteri dan antijamur dilakukan dengan metode difusi cakram melalui penentuan zona bening terhadap bakteri *Escherichia coli*, bakteri *Staphylococcus aureus* dan jamur *Candida albicans*. Hasil uji aktivitas pada bakteri *Escherichia coli* diperoleh zona bening 8,75 mm; 9,05 mm; 9,00 mm; 7,55 mm; 7,70 mm; dan 8,15 mm masing-masing untuk konsentrasi 31,25 mg/L; 62,5 mg/L; 125 mg/L; 250 mg/L; 500 mg/L; dan 1000 mg/L. Hasil uji aktivitas pada bakteri *Staphylococcus aureus* diperoleh zona bening 6,65 mm; 7,00 mm; 7,35 mm; 7,90 mm; 8,35 mm; dan 9,05 mm masing-masing untuk konsentrasi 31,25 mg/L; 62,5 mg/L; 125 mg/L; 250 mg/L; 500 mg/L; dan 1000 mg/L. Hasil uji aktivitas pada jamur *Candida albicans* diperoleh zona bening 6,10 mm; 6,15 mm; 6,60 mm; 6,80 mm; 7,55 mm; dan 8,20 mm masing-masing untuk konsentrasi 31,25 mg/L; 62,5 mg/L; 125 mg/L; 250 mg/L; 500 mg/L; dan 1000 mg/L. Hasil uji sitotoksik dengan metode *Brine Shrimp Lethality Test* (BSLT) diperoleh nilai LC_{50} yaitu 940,589 mg/L. Dari penelitian ini diketahui bahwa ekstrak heksana daun Miana menunjukkan aktivitas tingkat sedang, baik aktivitas antioksidan, antibakteri, antijamur, maupun sitotoksik .

Kata Kunci: *Plectranthus scutellarioides* (L.) R. Br, Fenolik total, Antioksidan, Antibakteri, Antijamur, Toksisitas

ABSTRACT

DETERMINATION OF TOTAL PHENOLIC CONTENT, ANTIOXIDANT ACTIVITY, ANTIMICROBIAL ACTIVITY, AND CYTOTOXIC TEST OF HEKSANA EXTRACT OF MIANA LEAVES (*Plectranthus scutellarioides* (L.) R. Br)

By :

Febria Syafitri (BP 1410411021)
Dr. Suryati *, Bustanul Arifin, M.Si*
***Advisors**

Miana plants (*Plectranthus scutellarioides* (L.) R. Br) were belong to the Lamiaceae family. This plant had been used traditionally for the treatment of bronchitis, asthma, diarrhea, and fever. The researcher had conducted extraction by maseration using hexane solvent, from this research it was obtained that the extract content was 2,434%. The determination of phenolic total content was done toward the obtained extract by using Folin-Ciocalteau method and the total content of the phenolic that were obtained was 0,4015 mg/L GAE. Antioxidant activity test was done by DPPH method (1,1-diphenyl-2-picrylhydrazyl) and IC_{50} value was obtained as much as 116,093 mg/L. Activity test towards Antibacterial and antifungal was done by disc diffusion method through the determination of clear zone to *Escherichia coli* bacteria, *Staphylococcus aureus* bacteria and *Candida albicans* fungus. The results of the activity test on *Escherichia coli* bacteria were obtained the clear zone as much as 8.75 mm; 9.05 mm; 9.00 mm; 7.55 mm; 7.70 mm; and 8.15 mm respectively for concentrations of 31.25 mg/L; 62.5 mg/L; 125 mg/L; 250 mg/L; 500 mg/L; and 1000 mg/L. The result of activity test on *Staphylococcus aureus* bacteria was obtained the clear zone as much as 6.65 mm; 7.00 mm; 7.35 mm; 7.90 mm; 8.35 mm; and 9.05 mm respectively for concentrations of 31.25 mg/L; 62.5 mg/L; 125 mg/L; 250 mg/L; 500 mg/L; and 1000 mg/L. The result of activity test on *Candida albicans* fungi was obtained the clear zone as much as 0,10 mm; 6.15 mm; 6.60 mm; 6.80 mm; 7.55 mm; and 8.20 mm for respective concentrations of 31.25 mg/L; 62.5 mg/L; 125 mg/L; 250 mg/L; 500 mg/L; and 1000 mg/L. The result of cytotoxic test by Brine Shrimp Lethality Test (BSLT) method was obtained that the LC_{50} value was 940,589 mg/L. From this study it was known that hexane extract of the leaves of Miana showed the activity in medium levels, both the activity of antioxidant, antibacterial, antifungal, and cytotoxic.

Keywords: *Plectranthus scutellarioides* (L.) R. Br, Total Phenolic, Antioxidant, Antibacterial, Antifungal, Toxicity