

ABSTRAK

Gratia Anggita Sipayung, NIM. 4203520017 (2025). Profil Senyawa Bioaktif dan Potensi Antimikroba Ekstrak Tanaman Jati (*Tectona grandis* L.f) Terhadap *Pityrosporum ovale*.

Ketombe disebabkan oleh jamur *Pityrosporum ovale*. Saat ini masyarakat banyak menggunakan tanaman herbal untuk mengatasi ketombe. Tanaman Jati (*Tectona grandis* L.f) merupakan salah satu tanaman herbal yang memiliki kandungan senyawa metabolit sekunder yang dapat menghambat pertumbuhan jamur *Pityrosporum ovale*. Penelitian ini bertujuan untuk mengetahui senyawa metabolit sekunder yang terdapat pada ekstrak metanol daun muda, daun tua, bunga, dan buah Jati yang memiliki senyawa bioaktif sebagai antijamur dan aktivitas antijamur ekstrak metanol daun muda, daun tua, bunga, dan buah Jati terhadap *Pityrosporum ovale*. Ekstraksi dilakukan dengan metode soxhletasi menggunakan pelarut metanol 96%. Data kualitatif identifikasi skrining fitokimia ekstrak daun muda, daun tua, bunga, dan buah Jati dianalisis secara deskriptif. Berdasarkan hasil skrining fitokimia ekstrak metanol daun muda, daun tua, dan bunga, dan buah Jati memiliki kandungan senyawa metabolit sekunder alkaloid, flavonoid, dan tanin yang memiliki senyawa bioaktif sebagai antijamur, namun tidak mengandung senyawa saponin, steroid dan terpenoid. Uji aktivitas antijamur keempat sampel dilakukan dengan mengukur zona hambat melalui metode difusi cakram menggunakan konsentrasi 5%, 10%, dan 15%. Data kuantitatif yang diperoleh, dianalisis menggunakan analisis statistik SPSS yaitu uji *one-way Anova*, dilakukan atas dasar asumsi bahwa data berdistribusi normal dan varians data homogen. Diameter zona hambat ekstrak metanol daun muda, daun tua, bunga, dan buah Jati terhadap *Pityrosporum ovale* pada konsentrasi 5% berturut-turut adalah 10,25 mm, 8,95 mm, 9,13 mm, dan 9,15 mm. Diameter zona hambat ekstrak metanol daun muda, daun tua, bunga, dan buah Jati terhadap *Pityrosporum ovale* pada konsentrasi 10% berturut-turut adalah 18,49 mm, 12,02 mm, 14,13 mm, dan 13,9 mm. Diameter zona hambat ekstrak metanol daun muda, daun tua, bunga, dan buah Jati terhadap *Pityrosporum ovale* pada konsentrasi 15% berturut-turut adalah 23,40 mm, 41,14 mm, 19,89 mm, dan 21,72 mm. Pada penelitian ini disimpulkan bahwa ekstrak metanol daun muda, daun tua, bunga, dan buah Jati memiliki aktivitas antijamur terhadap jamur *Pityrosporum ovale*.

Kata kunci: Ketombe, organ tanaman Jati (*Tectona grandis* L.f), skrining fitokimia, aktivitas antijamur, jamur *Pityrosporum ovale*.

ABSTRACT

Gratia Anggita Sipayung, NIM. 4203520017 (2025). Profile of Bioactive Compounds and Antimicrobial Potential of Teak Plant Extract (*Tectona grandis* L.f) Against *Pityrosporum ovale*.

Dandruff is caused by the fungus *Pityrosporum ovale*. Currently, people use many herbal plants to overcome dandruff. Teak plant (*Tectona grandis* L.f) is one of the herbal plants that contains secondary metabolite compounds that can inhibit the growth of *Pityrosporum ovale* fungus. This study aims to determine the secondary metabolite compounds contained in methanol extracts of young leaves, old leaves, flowers, and teak fruits that have bioactive compounds as antifungal and antifungal activities of methanol extracts of young leaves, old leaves, flowers, and teak fruits against *Pityrosporum ovale*. Extraction was carried out by the soxhlation method using 96% methanol solvent. Qualitative data for the identification of phytochemical screening of young leaves, old leaves, flowers, and teak fruit extracts were analyzed descriptively. Based on the results of phytochemical screening of methanol extracts of young leaves, old leaves, and flowers, and teak fruits contain secondary metabolite compounds of alkaloids, flavonoids, and tannins that have bioactive compounds as antifungals, but do not contain saponins, steroids and terpenoid compounds. The antifungal activity test of the four samples was carried out by measuring the inhibition zone through the disc diffusion method using concentrations of 5%, 10%, and 15%. The quantitative data obtained, analyzed using SPSS statistical analysis, namely the *one-way Anova* test, was carried out on the assumption that the data was normally distributed and the data variance was homogeneous. The diameter of the inhibition zone of methanol extracts of young leaves, old leaves, flowers, and teak fruits against *Pityrosporum ovale* at concentrations of 5% was 10,25 mm, 8,95 mm, 9,13 mm, and 9,15 mm. The diameter of the inhibition zone of methanol extracts of young leaves, old leaves, flowers, and teak fruits against *Pityrosporum ovale* at concentrations of 10% was 18,49 mm, 12,02 mm, 14,13 mm, and 13,9 mm, respectively. The diameter of the inhibition zone of methanol extracts of young leaves, old leaves, flowers, and teak fruits against *Pityrosporum ovale* at concentrations of 15% respectively were 23,40 mm, 41,14 mm, 19,89 mm, and 21,72 mm. In this study, it was concluded that methanol extracts of young leaves, old leaves, flowers, and teak fruits have antifungal activity against the fungus *Pityrosporum ovale*.

Keywords: Dandruff, teak plant organs (*Tectona grandis* L.f), phytochemical screening, antifungal activity, *Pityrosporum ovale* fungus