

ABSTRACT

Glagaharjo, located in Cangkringan Subdistrict, Sleman Regency has various floristic component and varieties of plants. One of the plants that can be found is *Porophyllum ruderale* Jacq. Research ever undertaken, essential oil of *P. ruderale* collected from Venezuela has antibacterial activity. This study aims to analyze the population of *P. ruderale* in the Glagaharjo region and to know its antibacterial activity.

The research was conducted by vegetation analysis using quadratic plot method. The study area was divided into 3 locations, each with 20 plots of 1x1m. Plants in the plot were recorded by type and number of individual counts, and then harvested. *P. ruderale* that harvested from the locations was washed, and extracted with maceration using 70% ethanol solvent, then dissolved gradually with n-hexane, chloroform, ethyl acetate and methanol, respectively. All fractions were analyzed by thin layer chromatography with n-hexane:ethyl acetate (7:3) motion phase. Antibacterial tests with solid diffusion were performed on all fractions against *S. aureus* and *E. coli*.

Plants found in the study area consisted of 34 species and 15 genuses, and a total of 2119 individual counts. *P. ruderale* has an Important Value Index of 37.29 and can be found growing with other Asteraceae genus plants in shaded locations. The ethyl acetate fraction of *P. ruderale* suspected to have antibacterial activity against *E. coli* and *S. aureus*, and the methanol fraction against *E. coli* bacteria, but the chemical compounds responsible for antibacterial activity is unknown.

Keywords: *Porophyllum ruderale* Jacq., Glagaharjo, ethanolic extract, vegetation analysis, antibacterial activity

INTISARI

Desa Glagaharjo terletak di Kecamatan Cangkringan, Kabupaten Sleman memiliki komponen floristik dan variasi tumbuhan bawah yang beragam. Salah satu tumbuhan yang dapat ditemukan adalah *Porophyllum ruderale* Jacq. Penelitian yang pernah dilakukan, minyak atsiri *P. ruderale* dari Venezuela memiliki aktivitas antibakteri. Penelitian ini bertujuan untuk menganalisis populasi *P. ruderale* di wilayah Glagaharjo dan mengetahui aktivitas antibakterinya.

Penelitian dilakukan dengan analisis vegetasi menggunakan metode petak kuadrat. Wilayah kajian dibagi menjadi 3 lokasi, masing-masing diletakkan 20 petak 1x1m. Tumbuhan dalam petak dicatat jenis dan jumlah cacah individunya, kemudian dipanen. *P. ruderale* yang dipanen di wilayah kajian dicuci bersih, diserbuk dan dibuat ekstrak kental dengan maserasi menggunakan pelarut etanol 70%, kemudian dilarutkan secara bertingkat dengan n-heksan, kloroform, etil asetat dan metanol, berturut-turut. Seluruh fraksi dianalisis kromatografi lapis tipis dengan fase gerak n-heksan : etil asetat (7:3). Uji antibakteri dengan difusi padat dilakukan pada seluruh fraksi terhadap bakteri *S. aureus* dan *E. coli*.

Tumbuhan yang ditemukan di wilayah kajian terdiri atas 34 jenis dan 15 suku, total cacah individu berjumlah 2119. *P. ruderale* memiliki indeks nilai penting 37,29 ditemukan tumbuh bersama tumbuhan suku Asteraceae di lokasi yang memiliki naungan. Fraksi etil asetat *P. ruderale* diduga memiliki aktivitas antibakteri terhadap *E. coli* dan *S. aureus*, dan fraksi metanol terhadap bakteri *E. coli*, namun golongan senyawa yang bertanggung jawab terhadap aktivitas antibakteri belum diketahui.

Kata kunci: *Porophyllum ruderale* Jacq., Glagaharjo, Ekstrak etanol, analisis vegetasi, uji antibakteri.