

ABSTRAK

YESYI ROHCAYATI, 2025, FORMULASI DAN UJI AKTIVITAS ANTIBAKTERI SEDIAAN OBAT KUMUR EKSTRAK DAUN PUCUK MERAH (*Syzygium myrtifolium* Walp) TERHADAP BAKTERI *Streptococcus mutans*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh Dr. Ana Indrayati, S.Si M.Si dan apt. Fitri Kurniasari, M.Farm.

Karies gigi merupakan penyakit jaringan gigi yang ditandai dengan adanya kerusakan jaringan, diawali dari permukaan gigi meluas ke arah pulpa. Daun pucuk merah (*Syzygium myrtifolium* Walp) merupakan suatu tanaman yang mengandung fenol, flavonoid, tanin, alkaloid, dan triterpenoid yang berperan sebagai antibakteri dan berperan menghambat metabolisme energi. Penelitian ini bertujuan untuk memformulasikan obat kumur ekstrak daun pucuk merah (*Syzygium myrtifolium* Walp) yang mempunyai aktivitas antibakteri paling baik terhadap bakteri *Streptococcus mutans*.

Simplisia daun pucuk merah (*Syzygium myrtifolium* Walp) diekstraksi dengan metode maserasi menggunakan pelarut etanol 96%. Pembuatan sediaan obat kumur 4 formula yaitu FI, FII, FIII, FIV dengan konsentrasi yang berbeda 2%, 4% , 6%, 8%, 1 kontrol negatif tanpa zat aktif dan 1 kontrol positif menggunakan sediaan X. Setiap formula diuji mutu fisik dengan parameter organoleptik, uji homogenitas, uji bobot jenis, uji viskositas, uji pH serta uji stabilitas dengan penyimpanan selama 24 jam pada suhu ruang 25°C. Pengujian aktivitas antibakteri dilakukan dengan metode difusi.

Hasil penelitian ini menunjukkan bahwa sediaan obat kumur ekstrak daun pucuk merah pada semua formula memiliki mutu fisik organoleptik, homogenitas, bobot jenis, viskositas, pH dan stabilitas yang baik. Pada hasil uji aktivitas antibakteri formula dengan variasi konsentrasi 2%,4%,6%, dan 8% memiliki diameter zona hambat berturut-turut 12.6 mm 14.6 mm, 18.3 mm dan 22.3 mm. Berdasarkan hasil pengujian antibakteri konsentrasi 8% memiliki daya hambat bakteri sangat kuat.

Kata Kunci : Antibakteri, daun pucuk merah, ekstrak , obat kumur

ABSTRACT

YESYI ROHCAYATI, 2025, FORMULATION AND TEST OF ANTIBACTERIAL ACTIVITY OF MOUTHWASH PREPARATIONS FROM RED LEAF SHOOT EXTRACT (*Syzygium myrtifolium* Walp) AGAINST *Streptococcus mutans* BACTERIA, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA. Supervised by Dr. Ana Indrayati, S.Si M.Si and apt. Fitri Kurniasari, M.Farm.

Dental caries is a disease of dental tissue characterized by tissue damage, starting from the tooth surface extending towards the pulp. Red shoot leaves (*Syzygium myrtifolium* Walp) is a shrub that has red shoots and green old leaves and contains phenols, flavonoids, tannins, alkaloids, and triterpenoids that act as antibacterials and play a role in inhibiting energy metabolism. This study aims to formulate a mouthwash of red shoots leaf extract (*Syzygium myrtifolium* Walp) that has the best antibacterial activity against *Streptococcus mutans* bacteria.

Red shoot leaves (*Syzygium myrtifolium* Walp) were extracted by maceration method using 96% ethanol solvent. Preparation of mouthwash preparations of 4 formulas namely FI, FII, FIII, FIV with different concentrations of 2%, 4%, 6%, 8%, 1 negative control without active substances and 1 positive control using X. Each formula was tested for physical quality with organoleptic parameters, homogeneity test, specific gravity test, viscosity test, pH test and stability test with 24-hour storage at 25°C room temperature. Antibacterial activity testing was carried out by diffusion method.

The results of this study indicate that the mouthwash preparations of red shoots leaf extract in all formulas have good organoleptic physical quality, homogeneity, specific gravity, viscosity, pH and stability. In the antibacterial activity test results, formulas with variations in concentrations of 2%, 4%, 6%, and 8% had inhibition zone diameters of 12.6 mm, 14.6 mm, 18.3 mm and 22.3 mm, respectively. Based on the results of antibacterial testing, the 8% concentration has very strong bacterial inhibition.

Kata Kunci : Antibacterial, red shoot leaves, extract, *mouthwash*