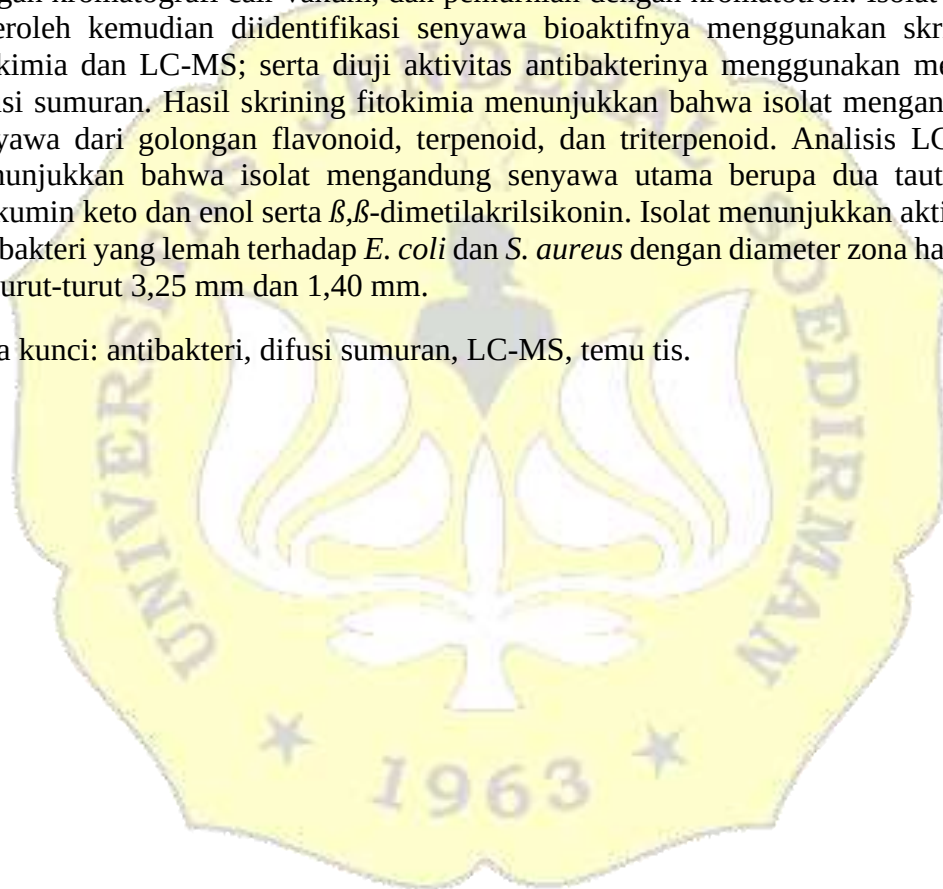


ABSTRAK

Temu tis (*Curcuma purpurascens*) merupakan tanaman rempah dan obat yang memiliki berbagai aktivitas biologis seperti antioksidan, gastroprotektif, antiproliferasi, angiogenesis, hepatoprotektif, inhibisi aktivitas tirosinase, antijamur, serta antibakteri. Penelitian ini bertujuan untuk mengisolasi dan mengidentifikasi senyawa bioaktif yang terkandung dalam fraksi etil asetat ekstrak rimpang temu tis serta menguji aktivitas antibakterinya terhadap *Escherichia coli* dan *Staphylococcus aureus*. Tahap-tahap isolasi senyawa bioaktif meliputi maserasi menggunakan pelarut aseton, partisi cair-cair, fraksinasi ekstrak etil asetat dengan kromatografi cair vakum, dan pemurnian dengan kromatotron. Isolat yang diperoleh kemudian diidentifikasi senyawa bioaktifnya menggunakan skrining fitokimia dan LC-MS; serta diuji aktivitas antibakterinya menggunakan metode difusi sumuran. Hasil skrining fitokimia menunjukkan bahwa isolat mengandung senyawa dari golongan flavonoid, terpenoid, dan triterpenoid. Analisis LC-MS menunjukkan bahwa isolat mengandung senyawa utama berupa dua tautomer kurkumin keto dan enol serta β,β -dimetilakrilisikonin. Isolat menunjukkan aktivitas antibakteri yang lemah terhadap *E. coli* dan *S. aureus* dengan diameter zona hambat berturut-turut 3,25 mm dan 1,40 mm.

Kata kunci: antibakteri, difusi sumuran, LC-MS, temu tis.



ABSTRACT

Temu tis (*Curcuma purpurascens*) is a spice and medicinal plant that has many biological activities such as antioxidant, gastroprotective, antiproliferative, angiogenesis, hepatoprotective, tyrosinase activity inhibition, antifungal, and antibacterial. This research is aimed to isolating and identifying bioactive compounds in ethyl acetate extract of temu tis rhizome and testing the antibacterial activity against *Escherichia coli* dan *Staphylococcus aureus*. The isolation steps including maceration with acetone as the solvent, liquid-liquid partition, fractionation of the ethyl acetate extract with vacuum column chromatography, and purification with radial chromatography. The isolate was identified for its bioactive compounds by phytochemical screening and LC-MS; also tested for its antibacterial activity by well-diffusion method. The phytochemical screening showed that the isolate contains flavonoid, terpenoid, and triterpenoid compounds. LC-MS analysis showed that the isolate contains curcumin and β,β -dimethylacrylshikonin as the main compounds. Isolate showed weak antibacterial activity against *E. coli* and *S. aureus* with the inhibition zone diameter of 3.25 mm and 1.40 mm sequently.

Keywords: antibacterial, LC-MS, temu tis, well-diffusion.

