ABSTRAK

AKTIVITAS DAN PENENTUAN SENYAWA AKTIF ANTIBAKTERI DARI MINYAK ATSIRI DAUN KUNYIT (*Curcuma longa* L) TERHADAP BAKTERI *Propionibacterium acnes* DAN *Staphylococcus epidermidis*

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Dari hasil penelitian sebelumnya diketahui bahwa daun kunyit mengandung minyak atsiri, terpenoid, alkaloid serta kurkuminoid, dari kandungan metabolit sekunder tersebut mempunyai gugus polar dan nonpolar yang bersifat aktif sebagai antibakteri. Minyak atsiri yang terkandung dalam daun kunyit mengandung golongan senyawa monoterpen, seskuiterpen, diterpen, politerpen, alkohol, ester dan eter. Pada penelitian ini isolasi untuk mendapatkan minyak atsiri dari daun kunyit adalah dengan metode destilasi uap air dan didapatkan rendemen sebanyak 0,9486% b/b. Minyak atsiri daun kunyit dianalisis menggunakan metode GC-MS serta diuji aktivitas antibakteri terhadap *Propionibacterium acne* dan *Staphylococcus epidermidis*. Analisis GC-MS dilakukan untuk mengetahui kandungan senyawa kimia. Hasil dari GC-MS terdapat 7 komponen utama penyusun minyak atsiri daun kunyit dilihat dari persentasenya yang paling besar, senyawa tersebut diantaranya *phellandrene, alpha.-terpinolene, eucalyptol (1,8-Cineole),benzene,1-Methyl-4-(1-Methylethyl)-(CAS) P Cymene, beta.-pinene, gamma.-terpinene, alpha.-pinene*. Minyak atsiri daun kunyit diujikan terhadap bakteri *Propionibacterium acne* dan *Staphylococcus epidermidis* dengan metode difusi cakram. Hasil uji difusi menunjukan bahwa minyak atsiri daun kunyit dapat menghambat pertumbuhan bakteri dengan memberikan daya hambat yang bersifat kuat pada masing-masing bakteri dengan konsentrasi 40%. Hasil KLT-Bioautografi diketahui senyawa yang dapat menghambat bakteri diduga adalah 1,8 cineole setelah disemprot vanilin sulfat dan perhitungan rf.

Kata Kunci : Difusi, GC-MS, Minyak atsiri, *Propionibacterium acne, Staphylococcus epidermidis.*

ABSTRACT

ACTIVITY AND DETERMINATION OF ANTIBACTERIAL ACTIVE COMPOUNDS FROM ESSENTIAL OIL OF TURMERIC LEAVES (Curcuma longa L) AGAINST Propionibacterium acnes AND Staphylococcus epidermidis BACTERIA

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From the results of previous studies it is known that turmeric leaves contain essential oils, terpenoids, alkaloids and curcuminoids, from the content of these secondary metabolites they have polar and nonpolar groups that are active as antibacterial. The essential oil contained in turmeric leaves contains a class of compounds monoterpenes, sesquiterpenes, diterpenes, polyterpenes, alcohols, esters and ethers. In this study, the isolation to obtain essential oil from turmeric leaves was by the steam distillation method and the yield was 0.9486% w/w. Turmeric leaf essential oil was analyzed using the GC-MS method and tested for antibacterial activity against Propionibacterium acne and Staphylococcus epidermidis. GC-MS analysis was carried out to determine the content of chemical compounds. The results of the GC-MS show that there are 7 main components of leaf essential oil seen from the largest persentation, these compounds include phellandrene, alpha.-terpinolene, eucalyptol (1,8-Cineole), benzene, 1-Methyl-4-(1-Methylethyl)-(CAS) P Cymene, beta.-pinene, gamma.-terpinene, alpha.-pinene. Turmeric leaf essential oil was tested against bacteria Propionibacterium acne and Staphylococcus epidermidis by disc diffusion method. The results of the diffusion test showed that turmeric leaf essential oil could inhibit bacterial growth by providing a strong inhibitory effect on each bacterium with a concentration of 40%. The results of TLC-Bioautography showed that the compound that inhibited bacteria was 1.8 cineole after being sprayed with vanillin sulfate and calculated rf.

Keywords: Diffusion, Essential oil, GC-MS, Propionibacterium acne, Staphylococcus epidermidis.