

IDENTIFIKASI DAN UJI AKTIVITAS ANTIMIKROBA EKSTRAK KUNCI PEPET (*Kaempferia rotunda* L.)

Dina Trianggaluh Fauziah^{1,2)*}, Rina Herowati¹⁾, Gunawan Pamudji Widodo¹⁾

¹⁾Fakultas Farmasi; Universitas Setia Budi; Surakarta

²⁾Prodi Farmasi; STIKES dr. Soebandi; Jember

Email: dinatrianggaluhfauziah@yahoo.com

Abstrak

Kunci pepet merupakan tanaman obat dari famili Zingiberaceae yang memiliki kandungan minyak atsiri, flavonoid, terpenoid yang berfungsi sebagai obat disentri, obat diare dan pelangsing. Penelitian ini bertujuan mengetahui kandungan senyawa metabolit sekunder dalam kunci pepet. Metode ekstraksi yang digunakan adalah maserasi bertingkat dengan pelarut n-heksana, diklorometana dan etanol. Pengujian aktivitas antibakteri dilakukan dengan difusi agar. Identifikasi kualitatif kandungan metabolit sekunder dilakukan dengan kromatografi lapis tipis. Hasil rendemen ekstrak (1,56%), fraksi n-heksan (7,12%), fraksi diklorometan (8,35%) dan fraksi berair (9,79%). Daya hambat pengujian antibakteri *Escherichia coli* pada ekstrak, fraksi n-heksan, diklorometan dan fraksi berair (2,08cm, 1,37cm, 1,47cm, 1,27cm), *Staphylococcus aureus* pada ekstrak, fraksi n-heksana, diklorometana dan fraksi berair (2,13cm, 1,30cm, 1,30cm, 1,57cm), *Candida albicans* pada ekstrak, fraksi n-heksan, diklorometan dan fraksi berair (1,82cm, 1,27cm, 1,50cm, 1,33cm). Analisa GCMS menunjukkan bahwa komponen senyawa volatil dalam minyak atsiri kunci pepet adalah asam benzoat (8,97%), heksadekana (28,84% dan 33,50%), benzil benzoat (89,21%, 14,71%, 7,23%, 19,88%), asam benzoat 2-hidroksi phenilmethyl ester (0,90%), asam heksadekanoat (0,92%, 10,10%, 7,04% dan 11,71%), asam 9,12 oktadekadienoat (9,22%), asam 1,2 benzene dikarboksilat (7,11%), asam 1,2 benzene dikarboksilat bis (2 etilheksil) ester (41,40%), benzil alkohol (12,30%), pentadekana (7,22%), bis (2-etilheksil)ftalat (6,31%), metil ester oktadekanoat (5,43%).

Kata kunci: Kunci Pepet, Fraksinasi, GCMS

Abstract

Kunci Pepet Rhizome is a medicinal plant from ginger family which contains many secondary metabolites including essential oils, flavonoids and terpenoids, which can act as therapy for dysentery, diarrhea, and also for body slim treatment. The extraction method that was used in this research is fractionated solvent extraction using *n*-hexane, dichloromethane and ethanol. Those fractions were tested for its antimicrobial activities using agar diffusion method. Identification of the qualitative content of secondary metabolites is carried out by TLC. Inhibition zones of ethanol extract, *n*-hexane, dichloromethane and aqueous fraction against *Escherichia coli*, *Staphylococcus aureus* and *Candida albicans* were 2.08cm, 1.37cm, 1.47cm, 1.27cm, 2.13cm, 1.30cm, 1.30cm, 1.57cm, 1.82cm, 1.27cm, 1.50cm, 1.33cm, respectively. The inhibition zones of the crude extract, fractions of *n*-hexane, dichloromethane and aqueous fraction are 1.82cm, 1.27cm, 1.50cm, 1.33cm. GCMS analysis of the extract showed that it contains benzoic acid (8.97%), hexadecane (28.84% and 33.50%), benzyl benzoate (89.21%, 14.71%, 7.23% and 19.88%), 2-hydroxy benzoic acid ester phenilmethyl (0.90%), heksadekanoat acid (0.92%, 10.10%, 7.04% and 11.71%), benzyl alcohol (12.30%), pentadecane (7.22%), octadecanoic methyl ester (5.43%).

Keywords : Kunci pepet, Fractination, GCMS