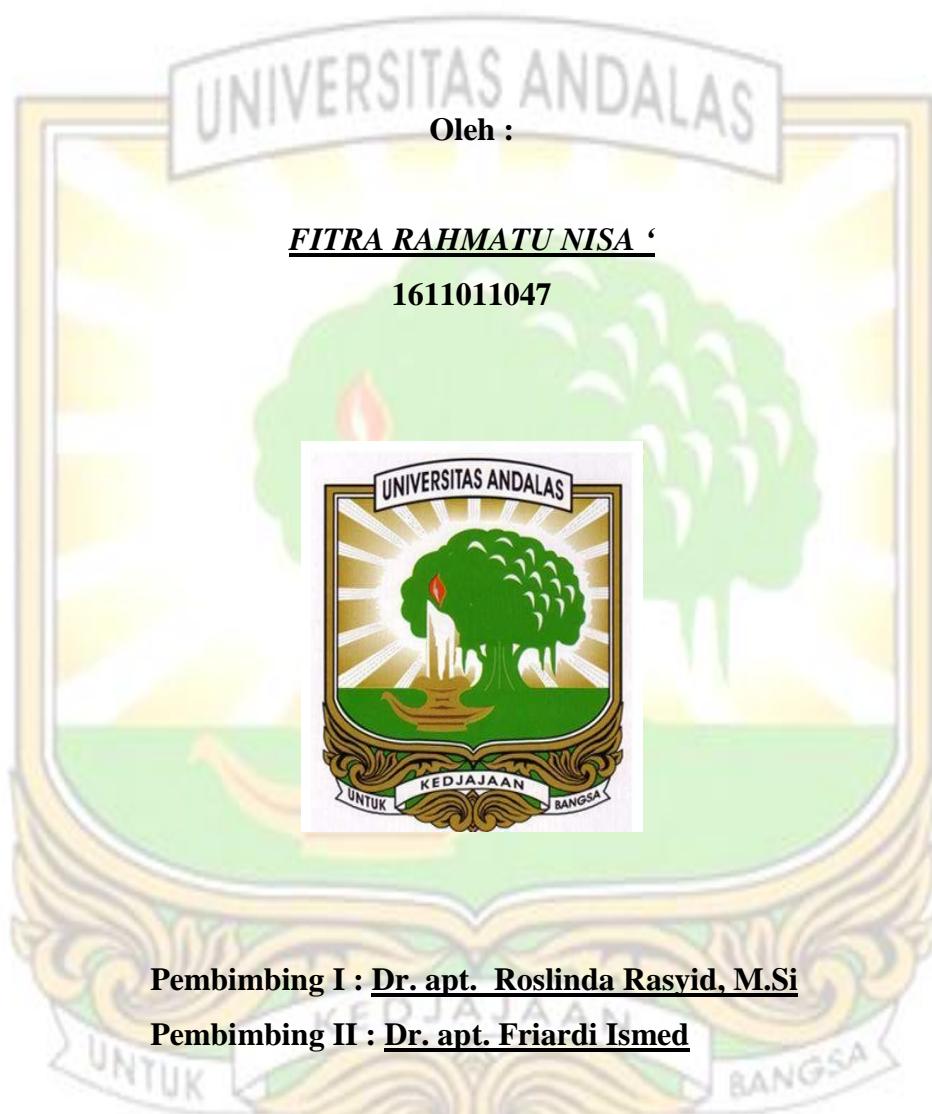


SKRIPSI SARJANA FARMASI

**ANALISIS KOMPONEN MINYAK ATSIRI DAN KADAR NOBILETIN
DALAM KULIT JERUK MANIS ASAL SUMATERA BARAT DENGAN
GC-MS DAN KLT-DENSITOMETRI**



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ABSTRAK

Di Sumatera Barat jeruk manis hanya dikonsumsi sarinya oleh masyarakat, sedangkan kulit buahnya dibuang dan belum ada pemanfaatannya. Di dalam kulit jeruk manis tersebut mengandung minyak atsiri dan berbagai senyawa kimia salah satunya nobiletin. Penelitian ini bertujuan untuk mengetahui komponen kimia minyak atsiri dengan metoda GC-MS dan penetapan kadar nobiletin dengan KLT-Densitometri dalam ekstrak kulit jeruk manis yang berasal dari tiga daerah di Sumatera Barat. Hasil penelitian ini dapat dimanfaatkan dalam bidang farmasi dan kesehatan. Minyak atsiri diisolasi dari kulit buah jeruk manis dengan menggunakan metode destilasi air yang selanjutnya dilakukan analisis dengan GC-MS. Bobot jenis, indeks bias dan % rendemen dari minyak atsiri kulit jeruk manis asal 50 Kota adalah 0,8210 , 1,4692 dan 0,312%, asal Pasaman Barat adalah 0,8529 , 1,4693 dan 0,307% , asal Pariaman adalah 0,8170 , 1,4691 dan 0,287%. Komponen kimia utama minyak atsiri dari daerah 50 Kota adalah 4-Isopropenyl-1-Methyl-1-Cyclohexene, 2(10)-Pinene dan 1,6-Octadien-3-Ol, 3,7-Dimethyl-. Sedangkan dari Pasaman Barat dan Pariaman adalah 4-Isopropenyl-1-Methyl-1-Cyclohexene, 1,6-Octadiene, 7-methyl-3-methylene- dan 1,6-Octadien-3-Ol, 3,7-Dimethyl-. Penetapan kadar nobiletin menggunakan KLT-Densitometri. Kulit jeruk manis kering dimaserasi dengan etil asetat. Mendapatkan berat ekstrak etil asetat kulit jeruk manis dari daerah 50 Kota 10,5111 gram, Pasaman Barat 19,6476 gram dan Pariaman 17,1217 gram. %rendemen ekstrak kulit jeruk manis dari daerah 50 Kota 5,255%, Pasaman Barat 7,859% dan Pariaman 6,848%. Kadar nobiletin pada ekstrak kulit jeruk manis 50 Kota 29,49%, Pasaman Barat 43,23% dan Pariaman 27,96%.

Kata kunci : kulit jeruk manis, minyak atsiri, GC-MS, penetapan kadar nobiletin, KLT-Densitometri, %rendemen

ANALYSIS OF ESSENTIAL OIL AND NOBILETIN QUANTIFICATION OF ORANGE PEELS FROM WEST SUMATERA BY GC-MS AND TLC- DENSITOMETRY

ABSTRACT

In West Sumatra, only the juice of sweet oranges is consumed by the community, while the peels got discarded and there is still no utilization of it. While inside the sweet orange peel contains essential oils and various chemical compounds, one of which is nobiletin. This study aims to determine the chemical components of essential oils using the GC-MS method and the quantification of nobiletin by TLC-Densitometry in sweet orange peel extract from three regions in West Sumatra. So that the results of this study can be used in the pharmaceutical and health fields. The essential oil was isolated from sweet orange peel by using the water distillation method which was then analyzed by GC-MS. Specific gravity, refractive index, and % yield of sweet orange peel essential oil from 50 Kota were 0.8210, 1.4692, and 0.312%, from Pasaman Barat, were 0.8529, 1.4693, and 0.307 %, from Pariaman, were 0.8170, 1.4691, and 0.287%. The main chemical components of essential oils from the 50 Kota area were 4-Isopropenyl-1-Methyl-1-Cyclohexene, 2(10)-Pinene and 1,6-Octadien-3-Ol, 3,7-Dimethyl-. Meanwhile, those from Pasaman Barat and Pariaman were 4-Isopropenyl-1-Methyl-1-Cyclohexene, 1,6-Octadiene, 7-methyl-3-methylene- and 1,6-Octadien-3-Ol, 3,7-Dimethyl-. Determination of nobiletin levels using TLC-Densitometry. The dried sweet orange peel was macerated with ethyl acetate. The weight of the ethyl acetate extract of sweet orange peel from the 50 Kota area was 10,5111 grams, Pasaman Barat 19.6476 grams, and Pariaman 17.1217 grams. The yield of sweet orange peel extract from the 50 Kota area was 5.255%, Pasaman Barat was 7.859% and Pariaman was 6.848%. Nobiletin levels in the extract of sweet orange peel 50 Kota 29.49%, Pasaman Barat 43.23%, and Pariaman 27.96%.

Keywords: sweet orange skin, essential oil, GC-MS, determination of nobiletin levels, TLC-Densitometry, % yield

