

UJI AKTIVITAS FRAKSI MINYAK ATSIRI SEREH WANGI (*Cymbopogon nardus* (L) Rendle) SEBAGAI ANALGETIK PADA MENCIT DENGAN METODE INDUKSI ASAM ASETAT

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ABSTRAK

Minyak atsiri *Cymbopogon nardus* diketahui memiliki potensi sebagai analgetik dan banyak digunakan masyarakat sebagai obat tradisional. Tujuan penelitian ini adalah menguji efek analgetik dari minyak atsiri *C. nardus* dan fraksi-fraksinya. Minyak atsiri sereh wangi *C. nardus* (L) Rendle dipisahkan dengan distilasi fraksinasi pengurangan tekanan. Identifikasi komponen-komponen minyak atsiri *C. nardus*, FI, FII, FIII, dan R dengan GCMS menunjukkan komponen utama pada masing-masing fraksi yaitu sitronelal (36,63%); limonen (67,07%); sitronelal (92,39%); geraniol (62,41%); dan geraniol (47,03%). Potensi minyak atsiri *C. nardus* dan fraksi-fraksinya sebagai analgetik diuji dengan metode geliat induksi asam asetat pada *Mus musculus* jantan. Kelompok uji meliputi tween 80 (kontrol negatif), asetosal (kontrol positif), minyak atsiri *C. nardus* dan fraksi-fraksinya dengan variasi konsentrasi 0,5; 1; dan 2% v/v. Asam asetat 0,8% v/v diinduksi secara intraperitoneal 10 menit setelah pemberian sampel dan jumlah geliat dihitung setiap 5 menit selama 1 jam. Hasil uji statistik data jumlah geliat menunjukkan bahwa data terdistribusi normal dan homogen. Hasil uji *oneway* ANOVA menunjukkan adanya perbedaan signifikan jumlah rata-rata geliat antara kontrol negatif dan variasi konsentrasi minyak atsiri *C. nardus* dan fraksi-fraksinya. Minyak atsiri *C. nardus* dan fraksi-fraksinya, secara signifikan menurunkan jumlah geliat mencit dibandingkan dengan kontrol negatif. Aktivitas analgetik tertinggi yaitu pada konsentrasi 2% v/v, yaitu larutan uji IIIC (95,47%); IVC (96,44%); dan VC (99,68%).

Kata Kunci: sereh wangi, minyak atsiri, fraksinasi, analgetik

ACTIVITY TEST OF CITRONELLA ESSENTIAL OIL FRACTION (*Cymbopogon nardus* (L) Rendle) AS ANALGETIC IN MICE USING ACETIC ACID INDUCTION METHOD

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ABSTRACT

Cymbopogon nardus essential oil is known to have potential as an analgesic and is widely used by people as traditional medicine. The aim of this study was to examine the analgesic effect of *C. nardus* essential oil and its fractions. The essential oil of *C. nardus* (L) Rendle is separated by reduced-pressure fractional distillation. Identification of the essential oil components of *C. nardus*, FI, FII, FIII, and R by GCMS showed that the main components in each fraction were citronellal (36.63%); limonene (67.07%); citronellal (92.39%); geraniol (62.41%); and geraniol (47.03%). The potency of *C. nardus* essential oil and its fractions as analgesics were tested by the stretch method of induction of acetic acid in male *Mus musculus*. The test group included Tween 80 (negative control), acetosal (positive control), *C. nardus* essential oil and its fractions with various concentrations of 0.5; 1; and 2% v/v. Acetic acid 0.8% v/v was induced intraperitoneally 10 minutes after sampling and the amount of stretching was calculated every 5 minutes for 1 hour. The results of the statistical test of the number of stretches showed that the data were normally distributed and homogeneous. The results of the oneway ANOVA test showed a significant difference in the average amount of stretching between the negative control and the variation in the concentration of *C. nardus* essential oil and its fractions. *C. nardus* essential oil and its fractions significantly decreased the amount of writhing of mice compared to negative controls. The highest analgesic activity was at a concentration of 2% v/v, namely IIC test solution (95.47%); IVC (96.44%); and VC (99.68%).

Keywords: citronella, essential oils, fractionation, analgesic