

Pemanfaatan Minyak Nilam (*Patchouly oil*) sebagai Bahan *Lotion* Anti-Nyamuk (*Repellent*) Ramah Lingkungan
(*Application of Nilam Oil (Patchouly oil) As Substance Of Anti-Mosquito Lotion (Repellent) Which Is Environmentally Benign*)

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ABSTRAK

Pogostemon cablin Benth (nilam) merupakan salah satu spesies tumbuhan dari famili *Labiatae*. Penelitian ini bertujuan untuk mengekstraksi dan mengidentifikasi komponen minyak atsiri dari *Pogostemon cablin* Benth (nilam) serta menguji aktivitasnya terhadap nyamuk *Culex fatigans* sebagai bahan *lotion* anti-nyamuk ramah lingkungan. Ekstraksi dilakukan dengan metode distilasi uap. Distilat yang diperoleh dipartisi menggunakan corong pisah dengan pelarut n-heksan. Fraksi n-heksan yang diperoleh dikeringkan dengan CaCl_2 anhidrat. Fraksi n-heksan kering diuapkan dengan *rotary vacuum evaporator* sampai diperoleh minyak nilam. Pada penelitian ini minyak nilam yang diperoleh sebanyak 17,5gr dengan rendemen 3,3634%. Identifikasi dengan GC-MS menunjukkan adanya 39 senyawa dalam minyak nilam dengan senyawa utama adalah *patchouli alcohol* 54,47%. Dari hasil uji aktivitas diketahui bahwa minyak nilam terbukti mampu mengusir nyamuk *Culex fatigans* sehingga dapat menjadi alternatif bahan *lotion* anti-nyamuk (*repellent*) yang ramah lingkungan.

Kata kunci : *Pogostemon cablin* Benth, minyak nilam, GC-MS (kromatografi gas-spektroskopi massa), *patchouli alcohol*, *repellent*

ABSTRACT

Pogostemon cablin Benth (nilam) is a species belonged to *Labiatae* family. The objectives of this research were to extract the essential oil from *Pogostemon cablin* Benth (Nilam) herb and to identify its component, and to examine its activity against *Culex fatigans* as a anti-mosquito lotion (*repellent*). Extraction was done by steam distillation method. That distillate was partitioned using n-hexane. The n-hexane fraction was dried by CaCl_2 anhydrous and then evaporated by rotary vacuum evaporator until got pathcouli oil. From this research, 17,5gr of pathcouli oil was obtained with rendement 3,3634%. The identification with GC-MS showed 39 compounds with patchouli alcohol as a major. This bioassay was done by determining the bioactivity of 5 concentration of pathcouli oil, which were 1000ppm, 500ppm, 250ppm, 125ppm, and 62,5ppm. Each treatment was replied three times. The result of this test gave that pathcouli oil was potential to make *Culex fatigans* become weak.

Key words : *Pogostemon cablin* Benth, pathcouli oil, GC-MS (Gas Chromatography-Mass Spectrometry), patchouli alcohol, repellent