

**VARIASI LAMA FERMENTASI NILAM (*Pogostemoncablin Benth*)
SKALA PILOT PROJECT DENGAN METODE WATER BUBBLE**

INTISARI

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Telah dilakukan penelitian tentang perbandingan variasi lama fermentasi nilam skala pilot project menggunakan teknik *Water Bubble*. Nilam yang digunakan adalah nilam yang berasal dari daerah kembangan, Sleman, Yogyakarta. Penelitian ini bertujuan untuk mengetahui waktu optimum dan kualitas minyak yang terbaik untuk meningkatkan kadar patchouli alkohol (*patchoulol*) dan rendemen minyak. Pelayuan dan pengeringan, pengecilan ukuran serta fermentasi adalah proses awal sebelum penyulingan sebagai upaya meningkatkan rendemen. Variasi lama fermentasi dilakukan selama 16, 20 dan 24 jam. Fermentasi dilakukan pada wadah tertutup dengan melembabkan 800 gram nilam dengan 400 mL akuades.

Nilam yang telah difermentasi selanjutnya didistilasi dengan teknik *Water Bubble* selama 6 jam. Hasil penyulingan nilam di uji sifat fisika dan kimia pada sampel minyak dengan standar SNI-06-2385-2006. Berat jenis, bilangan asam, kadar *Patchouli alkohol*, dan uji indeks bias memenuhi standar baku yang tertera dalam SNI.

Hasil analisis menunjukkan bahwa waktu optimum fermentasi minyak nilam terjadi pada waktu fermentasi 20 jam. Hal ini dikarenakan kadar PA dan rendemen yang dihasilkan optimum pada waktu fermentasi 20 jam. Kadar *Patchouli alkohol* sebesar 87,08 dan rendemen fermentasi 20 jam sebesar 2,68 % .

Kata Kunci: Nilam terfermentasi, *Patchouli alkohol*, Destilasi *Water Bubble*.

**VARIATION SCALA OLD PILOT PROJECT OF FERMENTATION
PACHOULI OIL (*Pogostemoncablin Benth*) WITH TECHNIQUE OF
WATER BUBBLE**

ABSTRACT

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The research about variation of time in patchouli oil fermentation scale pilot project with *water bubble* method has been done. Patchouli oil used technique of water bubbles. In this research, has been used patchouli oil from Kembangan, Sleman, Yogyakarta. This study purposed to review and to knew about the optimum time and the best quality of oil for increased content of patchouli alcohol (patchoulol) and oil yield. Withering, drying, size reduction and fermentation were process of refining before beginning as an effort to increased the yield. Variation time of long fermentation were carried out for 16, 20 and 24 hours. Fermentation was done in closed container used patchouli moisturize 800 gram with 400 mL aquadest.

Patchouli oil which fermented has been distilled with *water bubble* technique for six hours. The result of distillation has been tested with physical and chemical properties were according to standard SNI-06-2385-2006. Type of weight, acid numbers, levels of Patchouli Alcohol, refractive index test were appropriated with listed of SNI.

The Results of analysis showed that optimum time of patchouli oil fermentation occurred on time of 20 hours. It was caused percentage of Patchouli Alcohol and resulting yield optimal on fermentation time 20 hours. The percentage of Patchouli Alcohol was 87,08 % and yield of 20 hours fermentation was 2,68 %.

Keywords: *Fermented Patchouli, Patchouli Alcohol, Water Distillation Bubble.*