EXTRACTING ESSENTIAL OIL FROM VETIVER ROOT USING HYDRO DISTILLATION AND STEAM-HYDRO DISTILLATION METHODS

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ABSTRACT

Indonesia contributes approximately 25% of vetiver oil (Vetiveria zizanoides L.) in the international market. This puts Indonesia as one determinant of prices in international markets. Therefore, Indonesia has the opportunity to develop the vetiver oil industry. The purpose of this study was to compare the vetiver oil refining process using Hydro Distillation and Steam-Hydro Distillation. To determine the composition contained in the vetiver root (Vetiveria zizanoides). Operating Conditions: Operating Temperature 100°C (considered constant), atmospheric pressure (considered constant). The length of time of distillation is 6, 8, and 10 hours. Analysis of vetiver oil quality using a refractometer (refractive index). Hydro Distillation method capable of producing yields between 0.2594 to 0.3411%, while method Steam-Hydro Distillation can produce yields of 0.2354 to 0.3112%. Vetiver oil refractive index obtained from the method Steam-Hydro Distillation of 1.5376 to 1.5842, while the Hydro Distillation methods of 1.5287 to 1.5947. Hydro Distillation Method in quantity to produce a greater yield than-Hydro Distillation Steam, but Steam-Hydro Distillation methods provide vetiver oil with better quality (physical and chemical properties).

Key words: Vetiveria zizanoides, Hydro Distillation, Steam-Hydro Distillation, vetiver oil