

**PENGARUH CARA DAN LAMA PENYIMPANAN MINYAK DAUN
CENGKEH (*Syzygium aromaticum* L.) TERHADAP KUALITAS DAN
KOMPOSISI KIMIA MINYAK**

Renita Septyas Laksani¹ dan Rini Pujiarti²

Abstrak

Kualitas minyak daun cengkeh dapat dipengaruhi oleh beberapa hal diantaranya yaitu perlakuan pendahuluan, proses ekstraksi, dan pasca pengolahan seperti penyimpanan. Penelitian mengenai pengaruh cara penyimpanan dan lama penyimpanan minyak cengkeh (*Syzygium aromaticum* L.) masih terbatas sehingga perlu diteliti kualitas dan komposisi kimia dari minyak tersebut. Penelitian ini bertujuan untuk mengetahui pengaruh cara dan lama penyimpanan terhadap sifat fisiko-kimia dan komposisi kimia minyak atsiri daun cengkeh.

Penelitian ini menggunakan bahan daun cengkeh yang didistilasi dengan cara pengukusan. Penelitian menggunakan rancangan acak lengkap atau CRD (*Completely Randomized Design*) dengan dua faktor yaitu cara penyimpanan (di dalam ruang suhu $\pm 28^{\circ}\text{C}$ dan di dalam lemari pendingin suhu $\pm 10^{\circ}\text{C}$) dan lama penyimpanan (1 bulan, 2 bulan, dan 3 bulan) masing-masing dilakukan dalam tiga ulangan. Standar pengujian kualitas yang digunakan sesuai dengan Standar Nasional Indonesia 06-2387-2006 dan komposisi kimia dianalisis menggunakan Kromatografi Gas-Spektrometri Massa (GC-MS) yang disajikan secara deskriptif.

Hasil penelitian menunjukkan bahwa terdapat 3 komponen kimia utama yang terkandung dalam minyak daun cengkeh yaitu *Eugenol* ($\text{C}_{10}\text{H}_{12}\text{O}_2$), *Caryophyllene* ($\text{C}_{15}\text{H}_{24}$), dan *Humulene* ($\text{C}_{15}\text{H}_{24}$) dengan komponen kimia tertinggi yaitu *Eugenol* sebesar 59,88-71,48%. Cara dan lama penyimpanan minyak menyebabkan terjadinya perubahan jumlah senyawa kimia. Untuk pengujian fisiko-kimia minyak daun cengkeh, tidak terdapat perubahan yang signifikan hampir seluruhnya sesuai dengan standar SNI 06-2387-2006.

Kata kunci : minyak daun cengkeh, cara penyimpanan, lama penyimpanan, kualitas, komposisi kimia.

¹Mahasiswa Departemen Teknologi Hasil Hutan, Fakultas Kehutanan, Universitas Gadjah Mada

²Dosen Departemen Teknologi Hasil Hutan, Fakultas Kehutanan, Universitas Gadjah Mada

EFFECT OF METHOD AND DURATION STORAGE OF CLOVE (*Syzygium aromaticum* L.) LEAF OIL ON ITS QUALITY AND CHEMICAL COMPOSITION

Renita Septyas Laksani¹ and Rini Pujiarti²

Abstract

Quality of clove leaf oil can be influenced by several factors including pre treatment, extraction process, and post processing such as storage. Research on the effect of method and duration storage of clove oil (*Syzygium aromaticum* L.) is still limited therefore it need to be investigated about the quality and chemical composition of the oil. This study aims are to find out information about the effect of storage method and duration of storage on physico-chemical properties and chemical composition of clove leaf essential oil.

This research used clove leaves were distilled by water-steam distillation. This study uses a Complete Randomized Design (CRD) with two factors of storage method (in room temperature of $\pm 28^{\circ}\text{C}$ and in refrigerator temperature of $\pm 10^{\circ}\text{C}$) and storage time (1 month, 2 months, and 3 months) each carried out in three replications. Quality testing standards used in accordance with Indonesian National Standards 06-2387-2006 and chemical composition were analyzed using Gas Chromatography-Mass Spectrometry (GC-MS) presented descriptively.

The results showed that clove leaf oil have 3 main chemical components namely Eugenol ($\text{C}_{10}\text{H}_{12}\text{O}_2$), Caryophyllene ($\text{C}_{15}\text{H}_{24}$), and Humulene ($\text{C}_{15}\text{H}_{24}$) with the highest chemical components is Eugenol which was 59.88-71.48%. The method and duration of storage causes a change in amount chemical compounds. For physico-chemical testing of clove leaf oil, there is no significant change almost entirely in accordance with SNI 06-2387-2006 standards.

Kata kunci : clove leaf oil, storage method, storage duration, quality, chemical composition.

¹Student of Forest Product Technology Departement, Faculty of Forestry, Universitas Gadjah Mada

²Lecturer of Forest Product Technology Departement, Faculty of Forestry, Universitas Gadjah Mada