

KUALITAS MADU LEBAH MADU *Apis cerana* F., 1793 DAN *Apis florea* F., 1787 DARI HASIL TERNAKAN DAN BURUAN

Mohammad Farrel Rayyan Pratama
21/478807/BI/10776

Dosen Pembimbing: Drs. Hari Purwanto, M.P., Ph.D.

INTISARI

Madu merupakan produk alami yang dihasilkan oleh lebah madu dan memiliki nilai ekonomi serta kesehatan yang tinggi. Namun, kualitas madu di Indonesia sering dipertanyakan akibat tingginya kadar air dan dugaan perlakuan pascapanen yang tidak sesuai standar. Penelitian ini bertujuan untuk memverifikasi keberadaan lebah madu kerdil *Apis florea* di kawasan hutan mangrove Kaliwungu, Kendal, Jawa Tengah, serta menganalisis kualitas madu yang dihasilkan oleh *Apis cerana* dan *Apis florea* yang dipanen oleh peternak lebah tradisional dan pemburu madu tanpa perlakuan pascapanen. Analisis kualitas madu dilakukan berdasarkan parameter kadar air, aktivitas enzim diastase, kandungan hidroksimetilfurfural (HMF), sukrosa, dan gula reduksi menggunakan metode standar AOAC, kemudian dibandingkan dengan standar nasional (SNI) dan internasional (Codex Alimentarius). Hasil identifikasi morfologi menunjukkan bahwa lebah madu kerdil yang ditemukan di kawasan mangrove Kendal merupakan *Apis florea*. Seluruh sampel madu memiliki kadar HMF sebesar 0 mg/kg dan kadar sukrosa di bawah 5%, yang menunjukkan tidak adanya proses pemanasan maupun penambahan gula. Aktivitas diastase dan kadar gula reduksi pada sebagian besar sampel memenuhi standar SNI, namun beberapa sampel, terutama madu *Apis florea*, belum memenuhi standar Codex Alimentarius. Kadar air pada sebagian besar sampel masih berada di atas batas maksimum kedua standar, yang diduga lebih dipengaruhi oleh waktu panen yang kurang optimal dibandingkan faktor iklim. Penelitian ini menunjukkan bahwa peternak lebah tradisional dan pemburu madu di Indonesia mampu menghasilkan madu berkualitas baik dan bebas pemalsuan apabila madu dipanen sesuai dengan praktik panen yang benar, tanpa memerlukan perlakuan pascapanen tambahan.

KATA KUNCI: *Apis cerana*, *Apis florea*, Codex Alimentarius, kualitas madu, Standar Nasional Indonesia

HONEY QUALITY OF HONEYBEES *Apis cerana* F., 1793 AND *Apis florea* F., 1787 FROM DOMESTICATED AND WILD COLONY PRODUCTS

Mohammad Farrel Rayyan Pratama
21/478807/BI/10776

Supervisor: Drs. Hari Purwanto, M.P., Ph.D.

ABSTRACT

Honey is a natural product produced by honey bees and has high economic and health value. However, the quality of honey in Indonesia is often questioned due to its high moisture content and suspected inappropriate post-harvest treatments. This study aimed to verify the presence of the dwarf honey bee *Apis florea* in the mangrove forest of Kaliwungu, Kendal, Central Java, and to evaluate the quality of honey produced by *Apis cerana* and *Apis florea* harvested by traditional beekeepers and honey hunters without any post-harvest treatment. Honey quality was analyzed based on moisture content, diastase activity, hydroxymethylfurfural (HMF) content, sucrose, and reducing sugars using standard AOAC methods, and the results were compared with national (SNI) and international (Codex Alimentarius) standards. Morphological identification confirmed that the dwarf honey bee found in the mangrove forest of Kendal was *Apis florea*. All honey samples showed HMF values of 0 mg/kg and sucrose contents below 5%, indicating the absence of heat treatment and sugar adulteration. Diastase activity and reducing sugar levels in most samples met SNI requirements; however, several samples, particularly those from *Apis florea*, did not meet Codex Alimentarius standards. Most samples exhibited moisture contents exceeding the maximum limits of both standards, which is more likely associated with suboptimal harvesting time rather than climatic factors. This study demonstrates that traditional beekeepers and honey hunters in Indonesia are capable of producing high-quality and unadulterated honey when proper harvesting practices are applied, without the need for artificial post-harvest processing.

KEYWORDS: *Apis cerana*, *Apis florea*, Codex Alimentarius, honey quality, SNI