

ABSTRAK

Destra Mika Novtasari Damanik, 4213220007. Profil Fitokimia dari Minyak Atsiri Cascara Kopi Robusta (*Coffea canephora*).

Penelitian ini mengevaluasi pengaruh tingkat kematangan buah kopi robusta (red bean dan green bean) serta metode ekstraksi terhadap profil fitokimia minyak atsiri dari cascara kopi robusta (*Coffea canephora*) asal Lampung. Ekstraksi dilakukan dengan metode distilasi uap, hidrodistilasi, dan Soxhlet, serta analisis senyawa menggunakan GC-MS. Hasil menunjukkan bahwa metode Soxhlet paling efektif, dengan rendemen tertinggi diperoleh dari cascara green bean (5,5%) dibanding red bean (4,75%). Profil fitokimia cascara green bean didominasi kafein (75,59%), fenol (8,3%), dan quinic acid (6,99%), sementara red bean mengandung kafein (62,12%), senyawa fenolik (11%), dan senyawa hasil reaksi Maillard. Hanya lima senyawa yang ditemukan pada kedua sampel. Kesimpulannya, tingkat kematangan buah dan metode ekstraksi memengaruhi kandungan fitokimia dan rendemen minyak atsiri cascara kopi robusta.

Kata Kunci: Cascara, Kopi Robusta, Minyak Atsiri, Fitokimia, GC-MS, Soxhlet, Antioksidan.



ABSTRACT

Destra Mika Novtasari Damanik, 4213220007. Phytochemical Profile of Essential Oil from Robusta Coffee Husk (*Coffea canephora*).

This research evaluates the influence of fruit maturity level (red bean and green bean) and extraction methods on the phytochemical profile of essential oil derived from cascara of robusta coffee (*Coffea canephora*) from Lampung. Extraction was carried out using steam distillation, hydrodistillation, and Soxhlet methods, with compound analysis performed via GC-MS. The results showed that the Soxhlet method was the most effective, yielding the highest amount of essential oil from green bean cascara (5.5%) compared to red bean (4.75%). The phytochemical profile of green bean cascara was dominated by caffeine (75.59%), phenols (8.3%), and quinic acid (6.99%), while red bean cascara contained caffeine (62.12%), phenolic compounds (11%), and Maillard reaction products. Only five compounds were shared between both samples. In conclusion, the maturity level of coffee fruit and the extraction method significantly affect the phytochemical content and yield of essential oil from robusta coffee cascara.

Keywords: Cascara, Robusta Coffee, Essential Oil, Phytochemicals, GC-MS, Soxhlet, Antioxidant.

