

BELLA LATIFATUL JANNAH, NPM 210331100104. Identifikasi Bakteri pada Oncom Kuning dan Profil Asam Aminonya. Dibawah bimbingan Prof. Ir. Umi Purwandari, M.App.Sc., Ph.D. dan Dr. Enung Siti Nurhidayah

ABSTRAK

Oncom kuning merupakan pangan fermentasi tradisional yang kaya protein nabati dan berpotensi sebagai pangan fungsional. Penelitian ini dilakukan untuk menganalisis sifat kimia, karakteristik bakteri dan kandungan asam amino esensial pada oncom kuning yang berbahan dasar ampas tahu. Penelitian ini dilaksanakan di Laboratorium Universitas Trunojoyo Madura pada bulan September-Desember 2024 menggunakan metode uji pH, formol, warna, identitas bakteri (katalase, motilitas, makroskopis, mikroskopis dan pewarnaan gram) serta analisis asam amino dengan HPLC. Hasil penelitian menunjukkan oncom kuning memiliki rata-rata pH 5,97, kadar formol 0,25% dan nilai kecerahan (*L) 19,1. 12 Dari 12 isolat bakteri yang ditemukan, 4 berbentuk basil dan 8 berbentuk kokus, dengan sebagian besar bersifat motil dan Gram positif. Analisis HPLC menunjukkan terdapat sembilan jenis asam amino esensial, enam di antaranya memiliki skor >100 (leusin, valin, histidin, lisin, isoleusin, fenilalanin), sedangkan tiga asam amino (treonin, triptofan, metionin) menjadi asam amino pembatas. Kesimpulannya, oncom kuning berpotensi sebagai sumber protein nabati, meskipun kandungan metionin masih rendah sehingga diperlukan pencampuran bahan lain untuk meningkatkan kualitas gizi.

Kata kunci :Asam Amino, Fermentasi, Karakteristik Bakteri, Oncom Kuning, Pangan Fungsional

BELLA LATIFATUL JANNAH, Student ID 210331100104. Identification of Bacteria in Yellow Oncom and Its Amino Acid Profile. Supervised by Prof. Ir. Umi Purwandari, M.App.Sc., Ph.D., and Dr. Enung Siti Nurhidayah.

ABSTRACT

Yellow oncom is a traditional fermented food rich in plant-based protein and has potential as a functional food. This study aimed to analyze the chemical properties, bacterial characteristics, and essential amino acid content of yellow oncom made from tofu dregs. The research was conducted at the Laboratory of Universitas Trunojoyo Madura from September to December 2024 using pH, formol, and color tests; bacterial identification (catalase, motility, macroscopic, microscopic, and Gram staining); as well as amino acid analysis with HPLC. The results showed that yellow oncom had an average pH of 5.97, a formol level of 0.25%, and a lightness (L*) value of 19.1. From the 12 bacterial isolates identified, four were bacillus-shaped and eight were coccus-shaped, with most being motile and Gram-positive. HPLC analysis revealed nine types of essential amino acids, six of which had scores above 100 (leucine, valine, histidine, lysine, isoleucine, phenylalanine), while three amino acids (threonine, tryptophan, methionine) were identified as limiting amino acids. In conclusion, yellow oncom has potential as a source of plant-based protein, although its methionine content remains low, thus requiring supplementation with methionine-rich ingredients to improve its nutritional quality.

Keywords: Amino Acids, Bacterial Characteristics, Fermentation, Functional Food, Yellow Oncom