ABSTRAK

Nira kelapa sawit merupakan salah satu bahan baku alternatif potensial untuk pembuatan gula merah karena mengandung kadar gula tinggi, yaitu glukosa sekitar 86% dan sukrosa 15–17%. Penelitian ini bertujuan untuk mengetahui kandungan gula dan sifat fisik-kimia gula merah dari nira kelapa sawit, menganalisis proses produksinya secara efisien, serta menilai mutu hasil olahan berdasarkan parameter organoleptik dan kimia. Metode penelitian yang digunakan adalah deskriptif kuantitatif, dengan analisis kadar air dan bagian tak larut menggunakan metode gravimetri serta kadar seng (Zn) menggunakan metode AAS (*Atomic Absorption Spectrophotometry*). Hasil penelitian menunjukkan bahwa gula merah yang dihasilkan memiliki bau dan rasa khas, warna coklat alami, serta bentuk padat normal. Nilai kadar air sebesar 10,3%, bagian tak larut dalam air 1,06%, dan kadar seng 1,18 mg/kg. Hasil ini menunjukkan bahwa produk memiliki mutu fisik yang baik, aman dikonsumsi, dan stabil terhadap penyimpanan, meskipun kandungan Zn relatif rendah. Penelitian ini membuktikan bahwa nira kelapa sawit dapat dijadikan bahan baku alternatif dalam produksi gula merah yang bernilai ekonomi dan berpotensi meningkatkan kesejahteraan petani.

Kata Kunci: nira kelapa sawit, gula merah, kadar air, seng (zn), mutu fisik, organoleptik

ABSTRACT

Oil palm sap is a potential alternative raw material for producing palm sugar due to its high sugar content, consisting of approximately 86% glucose and 15–17% sucrose. This study aims to determine the sugar content and physicochemical properties of palm sugar derived from oil palm sap, analyze the production process efficiently, and evaluate the quality of the product based on organoleptic and chemical parameters. The research used a descriptive quantitative method, with moisture content and insoluble matter analyzed using the gravimetric method, and zinc (Zn) content determined using Atomic Absorption Spectrophotometry (AAS). The results showed that the produced palm sugar had a distinctive aroma and taste, natural brown color, and a normal solid form. The measured values were 10.3% moisture content, 1.06% insoluble matter, and 1.18 mg/kg zinc. These findings indicate that the product possesses good physical quality, is safe for consumption, and remains stable during storage, although the Zn content is relatively low. This study demonstrates that oil palm sap can serve as an alternative raw material for palm sugar production, offering economic value and potential to improve farmers' welfare.

Keywords: *oil palm sap, palm sugar, moisture content, zinc (Zn), physical quality, organoleptic*