

ANALISIS MUTU, KARAKTERISTIK MIKROBIOLOGIS DAN SENSORIK YOGHURT EKSTRAK KAYU MANIS (*Cinnamomum verum*)

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ABSTRAK

Kayu manis (*Cinnamomum verum*) mengandung senyawa fenolik, flavonoid, minyak atsiri, *cinnamaldehyde*, dan eugenol yang berperan sebagai antioksidan alami serta pembentuk aroma khas. Penelitian ini bertujuan untuk menganalisis karakteristik mutu berdasarkan SNI, enumerasi bakteri asam laktat (BAL), aktivitas antioksidan, dan tingkat kesukaan panelis terhadap yoghurt ekstrak kayu manis (*Cinnamomum verum*) pada konsentrasi 6%, 8%, dan 10%. Karakteristik mutu berdasarkan SNI yang dianalisis meliputi pH, kadar abu, kadar protein, kadar lemak, total asam, dan total padatan terlarut. Pengujian lain meliputi enumerasi BAL, aktivitas antioksidan menggunakan metode DPPH, serta uji hedonik terhadap warna, aroma, rasa, dan tekstur yang melibatkan 30 panelis konsumen. Data dianalisis secara deskriptif kuantitatif. Hasil penelitian menunjukkan bahwa nilai parameter pH, kadar abu, kadar lemak, kadar protein, total asam, dan total padatan terlarut memenuhi persyaratan mutu yoghurt berdasarkan SNI 2981:2009. Enumerasi BAL tertinggi diperoleh pada yoghurt dengan konsentrasi ekstrak kayu manis 6% sebesar $3,3 \times 10^7$ CFU/mL. Nilai aktivitas antioksidan tertinggi diperoleh pada konsentrasi 10% sebesar 505,04 mg GAE/L dan hasil uji hedonik menunjukkan bahwa yoghurt dengan konsentrasi ekstrak kayu manis 8% memiliki tingkat kesukaan tertinggi pada parameter aroma dan rasa. Berdasarkan hasil penelitian, disimpulkan bahwa penambahan ekstrak kayu manis menghasilkan yoghurt yang memenuhi karakteristik mutu berdasarkan SNI, meningkatkan aktivitas antioksidan, memengaruhi jumlah BAL dan penerimaan sensorik yang berbeda-beda.

Kata kunci: Yoghurt, Kayu Manis, Aktivitas Antioksidan, Bakteri Asam Laktat, Uji Hedonik

**QUALITY ANALYSIS, MICROBIOLOGICAL CHARACTERISTICS,
AND SENSORY PROPERTIES OF YOGURT WITH CINNAMON
EXTRACT (*Cinnamomum verum*)**

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ABSTRACT

*Cinnamon (*Cinnamomum verum*) contained phenolic compounds, flavonoids, essential oils, cinnamaldehyde, and eugenol, which acted as natural antioxidants and contributed to its characteristic aroma. This study aimed to analyze quality characteristics based on Indonesian National Standard (SNI), lactic acid bacteria (LAB) enumeration, antioxidant activity, and panelists' preference levels of cinnamon (*Cinnamomum verum*) extract yoghurt at concentrations of 6%, 8%, and 10%. The quality parameters that were evaluated according to SNI included pH, ash content, protein content, fat content, total acidity, and total soluble solids. Additional analyses comprised LAB enumeration, antioxidant activity using the DPPH method, and hedonic evaluation of color, aroma, taste, and texture involving 30 consumer panelists. The data of in this research were analyzed with quantitative descriptive. The results showed that the pH, ash content, fat content, protein content, total acidity, and total soluble solids met the quality requirements of yoghurt based on SNI 2981:2009. The highest LAB enumeration was obtained in yoghurt with a 6% cinnamon extract concentration, reaching 3.3×10^7 CFU/mL. The highest antioxidant activity was observed at the 10% concentration, with a value of 505.04 mg GAE/L and the hedonic test results indicated that yoghurt with an 8% cinnamon extract concentration had the highest preference level in terms of aroma and taste. Based on the results, it was concluded that the addition of cinnamon extract produced yoghurt that met quality characteristics based on SNI, increased antioxidant activity, affected LAB counts, and resulted in varying sensory acceptance levels.*

Keywords: *Yogurt, Cinnamon, Antioxidant Capacity, Lactic Acid Bacteria, Hedonic Test*