

PENGARUH KONSENTRASI *Lactobacillus Acidophilus* TERHADAP MUTU KIMIA DAN ORGANOLEPTIK YOGHURT SARI BUAH MURBEI (*Morus nigra* L.)

[THE EFFECT OF *Lactobacillus Acidophilus* CONCENTRATION ON THE CHEMICAL AND ORGANOLEPTIC QUALITIES OF MULBERRY YOGHURT (*Morus nigra* L.)]

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ABSTRACT

*The purpose of this study was to determine the effect of the concentration of *Lactobacillus acidophilus* on the qualities of mulberry juice yogurt (*Morus nigra* L.). This study used a completely randomized design (CRD) with one factor, namely the difference with the addition of *Lactobacillus acidophilus* (0%, 1%, 2%, 3%, 4% and 5%) and repeated 3 times to obtain 18 experimental units. The observed parameters included microbiological qualities (Total Lactic Acid Bacteria (LAB), and LAB Viability), Chemical Qualities (Total Lactic Acid, and Antioxidants) and organoleptic qualities of color, taste, texture and aroma (hedonic method and scoring). The observed data were analyzed for variance with a 5% significance level using the Co-stat. If there was a significant difference, further tests were carried out using the Honestly Significant Difference (HSD) and Orthogonal Polynomial Method. Mulberry juice yogurt with a mixed concentration of 3% was the best treatment based on total LAB 8.93×10^8 , BAL viability, antioxidant activity 61.62%, reddish purple color, slightly sour taste, slightly sour aroma, and watery texture that is acceptable to acceptable to the panelists.*

Keywords: concentration, *Lactobacillus acidophilus*, Mulberry, yogurt

ABSTRAK

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh konsentrasi *Lactobacillus acidophilus* terhadap mutu Yoghurt sari buah murbei (*Morus nigra* L.). Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan satu faktor yaitu perbedaan dengan penambahan *Lactobacillus acidophilus* (0%; 1%; 2%; 3%; 4% dan 5%) dan diulang sebanyak 3 kali sehingga diperoleh 18 unit percobaan. Adapun parameter yang diamati meliputi mutu mikrobiologi (Total Bakteri Asam Laktat (BAL), dan Viabilitas BAL), Mutu Kimia (Total Asam Laktat, dan Antioksidan) dan mutu organoleptik warna, rasa, tekstur dan aroma (metode hedonik dan skoring). Data hasil pengamatan dianalisis keragaman dengan taraf nyata 5% dengan menggunakan *Co-stat*. Apabila terdapat beda nyata, dilakukan uji lanjut menggunakan uji Beda Nyata Jujur (BNJ) dan Metode *Orthogonal Polinomial*. Yoghurt sari buah murbei dengan konsentrasi starter campuran *Lactobacillus bulgaricus*, *Streptococcus thermophilus* dan *Lactobacillus acidophilus* 3% merupakan perlakuan terbaik berdasarkan total BAL $8,93 \times 10^8$, viabilitas BAL 9,62%, total asam laktat 1,61%, aktivitas antioksidan 61,62%, warna ungu kemerahan, rasa agak berasa asam, aroma agak beraroma asam, dan tekstur encer yang dapat diterima oleh panelis.

Kata kunci: *Lactobacillus acidophilus*, Murbei, konsentrasi, yoghurt