

PENGARUH JENIS DAN PENAMBAHAN SARI DAUN KELOR (*Moringa oleifera*) TERHADAP SIFAT FISIK, BAKTERI ASAM LAKTAT, DAN TINGKAT KESUKAAN YOGHURT

INTISARI

Yoghurt merupakan produk olahan susu dari hasil fermentasi bakteri asam laktat (BAL) yaitu *Lactobacillus bulgaricus* dan *Streptococcus thermophilus*. Penambahan sari daun kelor belum diketahui secara akurat di dalam yoghurt, oleh karena itu perlu dicari campuran terbaik untuk meningkatkan kualitas pada yoghurt sari daun kelor. Kekuatan dari pengombinasian antara sari daun kelor dan yoghurt adalah sama-sama mengandung kalsium, protein, serta mineral yang tinggi serta sangat jarang ditemukan olahan susu yang dikombinasikan dengan sayuran. Tujuan penelitian ini adalah untuk mengetahui pengaruh jenis dan penambahan sari daun kelor (*Moringa oleifera*) terhadap sifat fisik meliputi viskositas yoghurt, pH yoghurt, bakteri asam laktat yoghurt, tingkat kesukaan yoghurt, dan menentukan perlakuan jenis dan penambahan sari daun kelor yang tepat agar dihasilkan yoghurt dengan penambahan sari daun kelor yang disukai panelis.

Teknik pengumpulan data dengan uji kesukaan menggunakan lembar kuesioner oleh panelis agak terlatih berjumlah 25 orang. Percobaan dilakukan dengan menggunakan rancangan acak kelompok (RAK) dengan 2 faktor yaitu variasi jenis daun pucuk (A1), muda (A2), tua (A3) dan penambahan sari daun kelor yang terdiri dari 4 taraf yaitu 0% (B0), 3% (B1), 5% (B2), dan 7% (B3).

Secara umum, hasil penelitian menunjukkan Penambahan sari daun kelor ke dalam yoghurt memiliki pengaruh yang positif. Yoghurt yang ditambahkan sari daun kelor muda dengan penambahan 3% menghasilkan yoghurt dengan pH dan BAL yang memenuhi standar dan meningkatkan kesukaan panelis dari agak suka menjadi suka. Secara khusus, hasil penelitian menunjukkan bahwa variasi jenis dan penambahan sari daun kelor berpengaruh signifikan terhadap viskositas yoghurt, pH yoghurt, dan tingkat kesukaan yoghurt ($p\text{-value} < 0,05$), namun tidak berpengaruh signifikan terhadap bakteri asam laktat yoghurt ($p\text{-value} < 0,05$). Perlakuan jenis dan penambahan sari daun kelor berpengaruh terhadap tingkat kesukaan yoghurt pada variasi daun muda dengan penambahan 3% yang menunjukkan nilai kesukaan tertinggi sebesar 6.36 (suka) dengan kriteria pH 4,52, viskositas 319,7 cP, dan kandungan BAL $1,41 \times 10^8$.

Kata Kunci: Daun Kelor, Jenis Daun Kelor, Yoghurt, Penambahan Sari Daun Kelor

**EFFECT OF TYPE AND ADDITION OF MORINGA (*Moringa oleifera*)
LEAVES EXTRACT ON PHYSICAL PROPERTIES, LACTIC ACID BACTERIA,
AND PREFERENCE LEVEL OF YOGHURT**

ABSTRACT

*Yoghurt is a dairy product from the fermentation of lactic acid bacteria (LAB), namely *Lactobacillus bulgaricus* and *Streptococcus thermophilus*. The addition extract of Moringa leaves has not been known accurately in yoghurt, therefore it is necessary to find the best mixture to improve the quality yoghurt with the addition extract of Moringa leaves. The strength of the combination between Moringa leaves extract and yoghurt is that they both contain high calcium, protein, and minerals and it is very rare to find dairy products combined with vegetables. The purpose of this study was to determine the effect of types and addition of Moringa leaves extract on physical properties including yoghurt viscosity, yoghurt pH, yoghurt lactic acid bacteria, yoghurt preference levels and determine the type treatment and the addition of the right Moringa leaves extract to produce yoghurt with the addition of Moringa leaves extract which is preferred by the panelists.*

The data collection technique was using a preference test using a questionnaire sheet by a moderately trained panel of 25 people. The experiment was carried out using a randomized block design with 2 factors, namely types variation of shoot leaves (A1), young (A2), old (A3) and the addition of Moringa leaves extract which consisted of 4 levels, namely 0% (B0), 3 % (B12), 5% (B2), and 7% (B3).

In general, the results showed that the addition of Moringa leaves extract into yoghurt had a positive effect. Yoghurt added with young Moringa leaves extract with the addition of 3% produced yoghurt with pH and LAB that met the standards and increased the panelists' preference from moderate to liking. In particular, the results showed that variations in type and the addition of Moringa leaves extract had a significant effect on yoghurt viscosity, yoghurt pH, and yoghurt preference level (p -value <0.05), but had no significant effect on yoghurt lactic acid bacteria (p -value <0.05). Type treatment and addition of Moringa leaves extract affect the level of preference for yoghurt on young leaves with the addition of 3% which shows the highest preference value of 6,36 (likes) with the criteria of pH 4,52, viscosity 319,7 cP, and LAB content $1,41 \times 10^8$.

Keywords: *Moringa Leaves, Types of Moringa leaves, Yoghurt, The Addition of Moringa Leaves Extract*