

KARAKTERISTIK FISIK DAN SENSORIS KEJU *CHEDDAR* DENGAN INOKULUM PROBIOTIK LOKAL DAN KOMERSIAL

INTISARI

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Keju *cheddar* dengan inokulum lokal *Lactiplantibacillus plantarum subsp. plantarum Dad-13* & *Streptococcus thermophilus Dad-11* telah berhasil dikembangkan sebagai alternatif produk probiotik. Keju *cheddar* dengan inokulum lokal diharapkan dapat menyerupai keju dengan inokulum komersial. Tujuan dari penelitian ini adalah untuk mengetahui perbedaan karakteristik fisik dan karakteristik sensoris keju *cheddar* dengan inokulum lokal dibandingkan dengan inokulum komersial MA4002.

Keju *cheddar* dibuat dengan susu segar, rennet, lipase, garam, inokulum lokal dan inokulum komersial sebagai pembanding. Selama pembuatan keju, dilakukan pengukuran pH, volume *whey*, dan rendemen. Keju *cheddar* yang sudah diperam selama 2 bulan dilanjutkan dengan pengujian tekstur menggunakan *texture analyzer*, warna dengan *chromameter*, dan pengujian sensoris dengan metode *rate all that apply* (RATA), *acceptance*, dan skala JAR. Pengujian sensoris dilakukan dengan menilai atribut aroma asam, *milky*, dan *buttery*; tekstur kekerasan, kelembutan, dan kekenyalan; *flavor milky*, *buttery*, rasa asin, pahit, dan asam.

Hasil penelitian menunjukkan keju dengan inokulum lokal yang dibandingkan dengan inokulum komersial, menghasilkan nilai pH, volume *whey*, kekerasan, kekenyalan, dan *yellowness* yang lebih tinggi. Namun, dihasilkan rendemen yang rendah. Secara sensoris, inokulum lokal mendapatkan tingkat penerimaan yang lebih tinggi pada tiap atribut yang dievaluasi. Selain itu, intensitas dari sebagian besar atribut keju dengan inokulum lokal dinilai sudah mendekati nilai yang ideal.

Kata kunci: keju *cheddar*, *Lactiplantibacillus plantarum subsp. plantarum Dad-13* & *Streptococcus thermophilus Dad-11*, uji sensoris, *rate all that apply* (RATA) *acceptance test*, skala JAR.

PHYSICAL AND SENSORY CHARACTERISTICS OF CHEDDAR CHEESE WITH INOCULUM LOCAL PROBIOTICS AND COMMERCIAL

ABSTRACT

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Cheddar cheese with local inoculum of *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13 & *Streptococcus thermophilus* Dad-11 has been successfully developed as an alternative probiotic product. Locally inoculum cheddar cheese is expected to resemble commercially inoculum cheese. The purpose of this study was to determine the differences in physical characteristics and sensory characteristics of cheddar cheese with local inoculum compared to commercial inoculum MA4002.

Cheddar cheese was made with fresh milk, rennet, lipase, salt, local inoculum and commercial inoculum as comparison. During cheese making, pH, whey volume and yield were measured. Cheddar cheese that had been aged for 2 months was subjected to texture testing using a texture analyzer, color testing using a chromameter, and sensory testing using the rate all that apply (RATA) method, acceptance, and JAR scale. Sensory testing was conducted by assessing the attributes of sour, milky, and buttery aroma; texture hardness, softness, and chewiness; flavor milky, buttery, salty, bitter, and sour taste.

The results showed that cheese with local inoculum, compared to commercial inoculum, produced higher pH, whey volume, firmness, chewiness, and yellowness. However, low yields were produced. Sensorially, the local inoculum received a higher level of acceptance for each attribute evaluated. In addition, the intensity of most of the cheese attributes with local inoculum is considered to be close to the ideal value.

Keywords: Cheddar cheese, *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13 & *Streptococcus thermophilus* Dad-11, rate all that apply (RATA), acceptance test, JAR scale.