

**KARAKTERISTIK KIMIA, FISIK, SENSORIS, DAN MIKROBIOLOGIS
CREAM CHEESE PROBIOTIK DENGAN KULTUR STARTER LOKAL
Lactobacillus plantarum DAD-13 DAN *Streptococcus thermophilus* DAD-11**

INTISARI

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Saat ini produk probiotik telah banyak beredar di pasaran, salah satunya keju. Konsumsi keju di Indonesia telah mengalami peningkatan. Pada umumnya keju dibuat menggunakan kultur starter, namun di industri pembuatan keju masih bergantung kultur starter komersial impor. Di Indonesia, terdapat isolat bakteri lokal dan dapat digunakan sebagai kultur starter yaitu *Lactobacillus plantarum* Dad-13 dan *Streptococcus thermophilus* Dad-11. Tujuan dari penelitian ini yaitu mengembangkan *cream cheese* yang dibuat menggunakan kultur starter campuran lokal *Lactobacillus plantarum* Dad-13 dan *Streptococcus thermophilus* Dad-11.

Bahan yang digunakan untuk membuat *cream cheese* terdiri dari susu, krim, kultur starter, rennet, dan garam. Faktor pembeda pada penelitian ini yaitu kultur starter meliputi kultur starter komersial impor Flora Danica dan kultur starter campuran lokal *Lactobacillus plantarum* Dad-13 dan *Streptococcus thermophilus* Dad-11. Dilakukan pengujian karakteristik kimia, fisik, sensoris (hedonik), dan viabilitas sel pada *cream cheese* yang dibuat menggunakan kultur starter campuran lokal *Lactobacillus plantarum* Dad-13 dan *Streptococcus thermophilus* Dad-11 dengan pembanding kultur starter komersial impor Flora Danica

Hasil penelitian menunjukkan produk *cream cheese* yang dibuat menggunakan kultur starter campuran lokal *Lactobacillus plantarum* Dad-13 dan *Streptococcus thermophilus* Dad-11 memiliki kadar air tanpa lemak $81,27 \pm 4,1\%$; kadar lemak $80,00 \pm 6,41\%$; total padatan $54,04 \pm 7,34\%$; *Yield* $32,75 \pm 2,68\%$; pH 4,65; *Hardness* $2,89 \pm 0,17$ N; *Cohesiveness* $0,12 \pm 0,22$; dan tingkat kesukaan *overall* produk $5,2 \pm 0,93$. Viabilitas sel *Lactobacillus plantarum* Dad-13 pada *cream cheese* yang dibuat menggunakan kultur starter *Lactobacillus plantarum* Dad-13 dan *Streptococcus thermophilus* Dad-11 sebesar $3,8 \times 10^7$ CFU/g setelah empat minggu penyimpanan sehingga memenuhi syarat produk probiotik.

Kata kunci: *cream cheese*, kultur starter, probiotik, *Lactobacillus plantarum* Dad-13, *Streptococcus thermophilus* Dad-11

**CHEMICAL, PHYSICAL, SENSORY, AND MICROBIOLOGICAL
CHARACTERISTICS OF PROBIOTIC CREAM CHEESE WITH LOCAL
STARTER CULTURES *Lactobacillus plantarum* DAD-13 AND *Streptococcus
thermophilus* DAD-11**

ABSTRACT

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Currently, there are many probiotic products on the market, one of which is cheese. Cheese consumption in Indonesia has increased. In general, cheese is made using starter cultures, but the cheese-making industry still relies on imported commercial starter cultures. In Indonesia, there are local bacterial isolates and can be used as starter cultures, namely *Lactobacillus plantarum* Dad-13 and *Streptococcus thermophilus* Dad-11. The purpose of this study was to develop cream cheese made using a local mixed starter culture of *Lactobacillus plantarum* Dad-13 and *Streptococcus thermophilus* Dad-11.

The ingredients used to make cream cheese consist of milk, cream, starter culture, rennet, and salt. The differentiating factors in this study were starter cultures including imported commercial starter cultures of Flora Danica and local mixed starter cultures of *Lactobacillus plantarum* Dad-13 and *Streptococcus thermophilus* Dad-11. Testing the characteristics of the chemical, physical, sensory (hedonic) and cell viability on cream cheese is made using local mixed starter culture of *Lactobacillus plantarum* Dad-13 and *Streptococcus thermophilus* Dad-11 with comparative commercial starter culture imported Flora Danica

Results showed product cream cheese made using local mixed starter cultures of *Lactobacillus plantarum* Dad-13 and *Streptococcus thermophilus* Dad-11 had a moisture content without fat of $81.27 \pm 4.1\%$; fat content $80.00 \pm 6.41\%$; total solids $54.04 \pm 7.34\%$; Yield $32.75 \pm 2.68\%$; pH 4,65; Hardness 2.89 ± 0.17 N; Cohesiveness 0.12 ± 0.22 ; and preference level overall product 5.2 ± 0.93 . Cell viability of *Lactobacillus plantarum* Dad-13 in cream cheese made using starter cultures of *Lactobacillus plantarum* Dad-13 and *Streptococcus thermophilus* Dad-11 was 3.8×10^7 CFU/g after four weeks of storage so that it met the requirements for probiotic products.

Keywords: cream cheese, ,starter cultures, probiotic, *Lactobacillus plantarum* Dad-13, *Streptococcus thermophilus* Dad-11