

**PERBANDINGAN KUALITAS SUSU FERMENTASI KULTUR TUNGGAL  
(*Streptococcus thermophilus*) DENGAN KULTUR CAMPURAN  
(*Lactobacillus acidophilus*, *Bifidobacterium longum*, dan  
*Lactobacillus casei*) DARI SUSU KAMBING  
RENDAH LEMAK**

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**ABSTRAK**

Penelitian ini bertujuan untuk mengetahui kualitas susu kambing fermentasi rendah lemak menggunakan kultur tunggal (*Streptococcus thermophilus*) dengan kultur campuran (*Lactobacillus acidophilus*, *Bifidobacterium longum*, dan *Lactobacillus casei*) meliputi kadar keasaman, nilai pH, angka kemanisan, viskositas, jumlah bakteri, asam organik, dan kualitas sensoris setelah penyimpanan 21 hari. Susu kambing fermentasi diinkubasi pada suhu 39°C dan diuji pada jam ke-0, jam ke-3, jam ke-6, jam ke-9, dan setelah penyimpanan 21 hari di dalam lemari pendingin 4°C. Percobaan dirancang secara acak lengkap dengan 4 replikasi. Kadar keasaman, nilai pH, angka kemanisan, dan viskositas dianalisis dengan analisis variansi pola faktorial (2x4), jumlah bakteri dan asam organik dianalisis dengan metode deskriptif, kualitas sensoris dianalisis dengan metode *K-independent samples test Kruskal Wallis* dan pola *Spider Web*. Hasil penelitian menunjukkan bahwa jenis kultur dan waktu inkubasi memberikan perbedaan yang nyata ( $P < 0,05$ ) terhadap kadar keasaman, nilai pH, angka kemanisan, viskositas, cita rasa manis dan kekentalan, dan tidak signifikan pada cita rasa asam, pahit, kesukaan rasa dan kesukaan kekentalan. Kadar keasaman susu fermentasi kultur tunggal ST lebih tinggi, nilai pH lebih rendah, angka kemanisan lebih rendah, viskositas lebih tinggi, jumlah bakteri lebih rendah, asam organik lebih rendah dari pada susu fermentasi kultur campuran ABC. Kesimpulan dari penelitian ini adalah kualitas susu fermentasi kultur bakteri tunggal ST lebih baik dibandingkan kultur campuran ABC, kualitas mikrobiologis kultur tunggal ST lebih rendah dibandingkan kultur campuran ABC, dan kualitas sensoris kultur campuran ABC lebih disukai dibandingkan kultur tunggal ST.

Kata kunci: Fermentasi, Susu kambing, Kultur tunggal, Kultur campuran, Rendah lemak

**COMPARISON OF QUALITY SINGLE CULTURE (*Streptococcus thermophilus*) WITH MIXED CULTURES (*Lactobacillus acidophilus*, *Bifidobacterium longum*, dan *Lactobacillus casei*) FERMENTED MILK FROM LOW FAT GOAT MILK**

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**ABSTRACT**

This research was done to study the quality of low-fat fermented goat milk using a single culture (*Streptococcus thermophilus*) and mixed cultures (*Lactobacillus acidophilus*, *Bifidobacterium longum*, and *Lactobacillus casei*) includes acidity, pH value, sweetness, viscosity, number of bacteria, organic acids, and sensory quality after 21 days of storage. Fermented goat milk was incubated at 39°C and tested at 0<sup>th</sup> hour, 3<sup>rd</sup> hour, 6<sup>th</sup> hour, 9<sup>th</sup> hour, and after 21 days of storage in a 4°C refrigerator. The experiment was designed randomly complete with 4 replications. Acidity, pH, sweetness and viscosity were analyzed by completely randomized design method of factorial pattern (2x4), the number of bacteria and organic acids were analyzed by descriptive method, sensory quality was analyzed by the *K-independent samples test*, *Kruskal Wallis test* and *Spider Web patterns*. The results showed that the type of culture and incubation time gave a significant difference ( $P < 0.05$ ) to acidity, pH value, sweetness, viscosity, sweet taste and thickness, and not significant to sour, bitter taste, taste preferences and viscosity preferences. The acidity level of ST cultures fermented milk were higher, the lower pH value, lower sweetness number, higher viscosity, lower number of bacteria, lower organic acid than the ABC mixed fermented milk cultures. The conclusion of this research are the quality of single ST fermented milk culture is better than ABC mixed cultures, the microbiological quality of single ST culture is lower than that of ABC mixed culture, and ABC mixed cultures sensory is preferred over single culture ST.

Keywords: Fermentation, Goat milk, Single culture, Mixed culture, Low fat