

KARAKTERISTIK FISIK DAN ORGANOLEPTIK SUSU FERMENTASI KAMBING PERANAKAN *AFRICAN DWARF* DAN KACANG DENGAN KULTUR TUNGGAL *Lactobacillus acidophilus* DAN *Bifidobacterium longum*

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INTISARI

Penelitian ini bertujuan untuk mengetahui bagaimana karakteristik fisik dan organoleptik susu fermentasi kambing Peranakan *African Dwarf* (PAD) dan kambing Kacang yang difermentasi menggunakan kultur tunggal dari bakteri *Lactobacillus acidophilus* dan *Bifidobacterium longum*. Bahan yang digunakan dalam penelitian ini adalah sampel susu kambing Kacang dan Peranakan *African Dwarf*, serta isolat bakteri yang digunakan adalah *Lactobacillus acidophilus* dan *Bifidobacterium longum*. Analisis karakteristik fisik dan organoleptik susu fermentasi yang dilakukan pada penelitian ini adalah pengukuran nilai pH, viskositas, kadar keasaman dan uji organoleptik. Analisis data fisik yang digunakan adalah analisis variansi pola faktorial (2x2) dan uji organoleptik dengan *K-Indenpen Krusal Wallis*. Hasil penelitian menunjukkan bahwa jenis susu kambing dan jenis bakteri pada waktu inkubasi 0, 3, 6, dan 9 jam tidak terdapat perbedaan ($P>0,05$) terhadap pH susu fermentasi. Kadar keasaman susu fermentasi pada waktu inkubasi 0, 6 dan 9 jam menunjukkan jenis susu kambing dan jenis bakteri tidak terdapat perbedaan ($P>0,05$), namun jenis susu kambing terdapat perbedaan ($P<0,05$) pada waktu inkubasi 3 jam. Selain itu, kadar keasaman susu fermentasi waktu inkubasi 6 jam menunjukkan interaksi antara jenis susu kambing dan jenis bakteri terdapat perbedaan ($P<0,05$). Viskositas susu fermentasi waktu inkubasi 0, 3, 6, dan 9 jam menunjukkan bahwa jenis susu kambing dan interaksi susu kambing dan jenis bakteri terdapat perbedaan ($P<0,05$). Organoleptik susu fermentasi menunjukkan jenis kambing dan jenis bakteri menunjukkan terdapat perbedaan ($P<0,05$) terhadap kesukaan rasa dan bau prengus susu fermentasi, sedangkan warna dan tekstur susu fermentasi menunjukkan tidak terdapat perbedaan ($P>0,05$). Kesimpulan dari penelitian ini adalah susu fermentasi kambing PAD dan Kacang dengan menggunakan *Lactobacillus acidophilus* dan *Bifidobacterium longum* mempengaruhi kualitas fisik dan karakteristik organoleptik.

Kata kunci : Susu fermentasi, Kambing Kacang, Peranakan *African Dwarf*, *Lactobacillus acidophilus*, *Bifidobacterium longum*, Karakter fisik organoleptik

**PHYSICAL AND ORGANOLEPTIC CHARACTERISTICS OF
FERMENTED AFRICAN CROSSBREED GOAT MILK
DWARF AND KACANG WITH CULTURE
SINGLE *Lactobacillus acidophilus*
AND *Bifidobacterium longum***

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ABSTRACT

This research aims to determine the physical and organoleptic characteristics of fermented milk from African Dwarf crossbreed goats and Kacang goats which are fermented using a single culture of the bacteria *Lactobacillus acidophilus* and *Bifidobacterium longum*. The materials used in this research were African Dwarf crossbreeds and Kacang goat milk samples, and the bacterial isolates used were *Lactobacillus acidophilus* and *Bifidobacterium longum*. Analysis of the physical and organoleptic characteristics of fermented milk carried out in this research was the measurement of pH value, viscosity, acidity, and organoleptic test. The physical data analysis used was analysis of variansi factorial pattern (2x2) and organoleptic test with K-Indenpen Krusal Wallis. The results showed that the type of goat's milk and the type of bacteria at incubation times of 0, 3, 6 and 9 hours gave no difference ($P>0.05$) to the pH of fermented milk. The acidity levels of fermented milk at incubation times of 0, 6 and 9 hours showed that the type of goat's milk and the type of bacteria gave no difference ($P>0.05$), but the type of goat's milk gave a different ($P<0.05$) at incubation time 3 hours. In addition, the acidity level of fermented milk at 6 hours incubation showed that the interaction between the type of goat's milk and the type of bacteria gave a difference ($P<0.05$). The viscosity of fermented milk at incubation times of 0, 3, 6, and 9 hours showed that the type of goat's milk and the interaction of goat's milk and the type of bacteria gave a difference ($P<0.05$). Organoleptics of fermented milk showed that the type of goat and the type of bacteria showed differences ($P<0.05$) on the preference for the taste and smell of fermented milk, while the color and texture of fermented milk showed no difference ($P>0.05$). The conclusion of this research is that fermented milk of African Dwarf crossbreeds and Kacang goats using *Lactobacillus acidophilus* and *Bifidobacterium longum* affects the physical quality and organoleptic characteristics.

Keywords: Fermented milk, Kacang goat, African Dwarf Crossbreed, *Lactobacillus acidophilus*, *Bifidobacterium longum*, Organoleptic physical characteristics