

**PENGARUH PENAMBAHAN EKSTRAK BUNGA TELANG (*Clitoria ternatea* L.) TERHADAP KUALITAS DAN AKTIVITAS ANTIOKSIDAN DALAM SUSU KAMBING FERMENTASI MENGGUNAKAN *Lacticaseibacillus paracasei* LVE**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan ekstrak bunga telang (*Clitoria ternatea* L.) terhadap kualitas mikrobiologis, fisiko-kimia, aktivitas antioksidan, dan organoleptik susu kambing fermentasi. Penelitian ini terdiri dari tiga perlakuan menggunakan susu kambing dengan persentase penambahan ekstrak bunga telang 0, 5, dan 10% (v/v). Masing-masing perlakuan dilakukan tiga kali pengulangan terhadap uji kualitas mikrobiologis, kimia, fisik, organoleptik, dan aktivitas antioksidan. Data pengujian kualitas mikrobiologis, kimia, fisika, dan aktivitas antioksidan dianalisis menggunakan metode *one way ANOVA* dilanjutkan dengan *Duncan's New Multiple Range Test*. Data pengujian organoleptik dianalisis menggunakan metode uji *Kruskall Wallis* dan dilanjutkan dengan uji *Mann-Whitney Test*. Hasil penelitian menunjukkan penambahan ekstrak bunga telang memberikan pengaruh nyata ( $P < 0,05$ ) terhadap keasaman, pH, *total solid*, aktivitas antioksidan, warna, rasa, dan daya terima. Rerata keasaman dengan penambahan ekstrak bunga telang dengan level 0, 5, dan 10% adalah  $1,25 \pm 0,09\%$ ;  $1,32 \pm 0,08\%$ ; dan  $1,40 \pm 0,06$ . pH  $4,33 \pm 0,14$ ;  $4,23 \pm 0,10$ ; dan  $4,13 \pm 0,05$ . *Total solid*  $18,21 \pm 0,43\%$ ;  $17,49 \pm 1,61\%$ ; dan  $16,73 \pm 0,69\%$ . Aktivitas antioksidan  $9,83 \pm 0,31\%$ ;  $13,00 \pm 1,58$ ; dan  $15,85 \pm 1,23$ . Warna  $7,13 \pm 1,06$ ;  $7,27 \pm 1,03$ ; dan  $8,13 \pm 0,52$ . Rasa  $7,47 \pm 0,99$ ;  $6,20 \pm 1,21$ ; dan  $5,87 \pm 1,30$ . Daya terima  $7,47 \pm 1,06$ ;  $6,47 \pm 0,92$ ; dan  $6,60 \pm 0,74$ . Penambahan ekstrak bunga telang tidak memberikan pengaruh ( $P > 0,05$ ) terhadap total BAL, viskositas, sineresis, aroma, dan tekstur. Kesimpulan penelitian ini yaitu penambahan ekstrak bunga telang tidak mempengaruhi kualitas mikrobiologis, fisik (sineresis dan viskositas), dan organoleptik (aroma dan tekstur), tetapi penambahan ekstrak bunga telang sebanyak 10% dapat meningkatkan aktivitas antioksidan, keasaman, dan organoleptik (warna), serta menurunkan pH, *total solid*, dan organoleptik (rasa, dan daya terima).

**Kata kunci:** Susu fermentasi, Susu kambing, *Lacticaseibacillus paracasei* LVE, Bunga telang (*Clitoria ternatea* L.), Kualitas, Aktivitas antioksidan.

**THE EFFECT OF THE ADDITION OF BUTTERFLY PEA FLOWER  
EXTRACT (*Clitoria ternatea* L.) ON THE QUALITY AND ANTIOXIDANT  
ACTIVITY IN FERMENTED GOAT MILK USING  
*Lactocaseibacillus paracasei* LVE**

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**ABSTRACT**

This study aimed to determine the effect of the addition of butterfly pea flower extract (*Clitoria ternatea* L.) on the microbiological, physicochemical, antioxidant activity, and organoleptic qualities of fermented goat milk. This research were conducted with three treatments using goat milk with the addition of butterfly pea flower extract at 0, 5, and 10% (v/v). Each treatment was done with three replications for microbiological, chemical, physical, organoleptic, and antioxidant activity tests. The data obtained from the tests were analyzed using one-way ANOVA with Duncan's New Multiple Range Test for the physicochemical, microbiological, and antioxidant activity. The organoleptic data were analyzed using the Kruskal-Wallis test followed by the Mann-Whitney Test. The results of the study showed that the addition of butterfly pea flower extract had a significant effect ( $P < 0.05$ ) on acidity, pH, total solids, antioxidant activity, color, taste, and overall acceptance of the fermented goat milk. The average acidity with the addition of butterfly pea flower extract at 0, 5, and 10% (v/v) levels were  $1.25 \pm 0.09\%$ ,  $1.32 \pm 0.08\%$ , and  $1.40 \pm 0.06\%$ . The pH were  $4.33 \pm 0.14$ ,  $4.23 \pm 0.10$ , and  $4.13 \pm 0.05$ . The total solid content were  $18.21 \pm 0.43\%$ ,  $17.49 \pm 1.61\%$ , and  $16.73 \pm 0.69\%$ . The antioxidant activity were  $9.83 \pm 0.31\%$ ;  $13.00 \pm 1.58$ ; dan  $15.85 \pm 1.23$ . The color were  $7.13 \pm 1.06$ ,  $7.27 \pm 1.03$ , and  $8.13 \pm 0.52$ . The taste were  $7.47 \pm 0.99$ ,  $6.20 \pm 1.21$ , and  $5.87 \pm 1.30$ . The overall were  $7.47 \pm 1.06$ ,  $6.47 \pm 0.92$ , and  $6.60 \pm 0.74$ . The addition of butterfly pea flower extract did not have a significant effect ( $P > 0.05$ ) on total lactic acid bacteria count, viscosity, syneresis, aroma, and texture of the fermented goat milk. In conclusion, the addition of butterfly pea flower extract does not affect microbiological, syneresis, viscosity, aroma and texture qualities. However, the addition of 10% butterfly pea flower extract can increase antioxidant activity, acidity, and organoleptic (color), while decrease pH, total solid, and organoleptic (taste and overall acceptability).

**Keywords:** Fermented milk, Goat milk, *Lactocaseibacillus paracasei* LVE, Butterfly pea flower (*Clitoria ternatea* L.), Quality, Antioxidant activity.