

## ABSTRAK

### **PENGARUH SUBSTITUSI DAUN SINGKONG DENGAN AZOLLA (*Azolla pinnata*) TERHADAP pH, DERAJAT KEASAMAN DAN UJI ALKOHOL SUSU KAMBING PERAH PERANAKAN ETAWA**

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Penelitian ini bertujuan untuk mengetahui pengaruh pemberian dan proporsi terbaik substitusi daun singkong dengan azolla (*Azolla pinnata*) terhadap pH, derajat keasaman dan uji alkohol susu kambing perah Peranakan Etawa. Penelitian ini dilaksanakan pada Oktober–November 2025, yang berlokasi di Soccer Mania *Farm*, Desa Sumber Gede, Kecamatan Sekampung, Kabupaten Lampung Timur, Provinsi Lampung. Analisis susu kambing dilakukan di Laboratorium Produksi Ternak, Jurusan Peternakan, Fakultas Pertanian, Universitas Lampung. Penelitian ini menggunakan Rancangan Acak Kelompok dengan 3 perlakuan dan 3 ulangan sehingga terdapat 9 satuan percobaan atau 9 ekor kambing. Perlakuan yang digunakan yaitu P0: 70% daun singkong + 30% ampas tahu, P1: 65% daun singkong + 30% ampas tahu + 5% azolla, P2: 60% daun singkong + 30% ampas tahu+ 10% azolla. Data yang diperoleh dianalisis ragam pada taraf nyata 5%. Hasil analisis ragam menunjukkan bahwa substitusi daun singkong dengan azolla (*Azolla pinnata*) tidak berpengaruh nyata ( $P > 0,05$ ) terhadap pH, derajat keasaman, dan uji alkohol susu kambing PE. Pemberian ransum dengan perlakuan P0, P1, dan P2 menghasilkan nilai pH dan uji alkohol berada di kisaran normal SNI, namun nilai derajat keasaman berada di atas standar SNI.

Kata kunci: Kambing perah PE, *Azolla pinnata*, pH susu kambing, derajat keasaman susu kambing, uji alkohol susu kambing.

## **ABSTRACT**

### **THE EFFECT OF SUBSTITUTING CASSAVA LEAVES WITH AZOLLA (*Azolla pinnata*) ON pH, ACIDITY, AND ALCOHOL TEST OF PERANAKAN ETAWA GOAT MILK**

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This study aimed to determine the effect of substituting cassava leaves with azolla (*Azolla pinnata*) and to identify the best substitution proportion on the pH, titratable acidity, and alcohol test results of Peranakan Etawah dairy goat milk. The research was conducted from October to November 2025 at Soccer Mania Farm, Sumber Gede Village, Sekampung District, East Lampung Regency, Lampung Province. Milk analysis was carried out at the Animal Production Laboratory, Department of Animal Husbandry, Faculty of Agriculture, University of Lampung. This study employed a Randomized Block Design with three treatments and three replications, resulting in nine experimental units or nine goats. The treatments were: P0: 70% cassava leaves + 30% tofu waste; P1: 65% cassava leaves + 30% tofu waste + 5% azolla; and P2: 60% cassava leaves + 30% tofu waste + 10% azolla. The data obtained were analyzed using analysis of variance (ANOVA) at a 5% significance level. The results of the analysis of variance showed that the substitution of cassava leaves with azolla (*Azolla pinnata*) had no significant effect ( $P > 0.05$ ) on milk pH, titratable acidity, and alcohol test results of Peranakan Etawah goats. The feeding treatments P0, P1, and P2 produced pH values and alcohol test results within the normal range according to the Indonesian National Standard (SNI), while the titratable acidity values were above the SNI standard.

**Keywords:** PE dairy goat, *Azolla pinnata*, goat milk pH, goat milk titratable acidity, goat milk alcohol test.