# ABSTRAK

## PENGARUH PENAMBAHAN VITAMIN C, VITAMIN E DAN L CARNITINE DALAM PENGENCER SITRAT KUNING TELUR TERHADAP KUALITAS SEMEN CAIR PADA DOMBA EKOR TIPIS

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Penelitian ini bertujuan untuk mengetahui pengaruh penambahan Vitamin C, Vitamin E dan L carnitine terhadap kualitas semen cair (motilitas, viabilitas, dan abnormalitas) dalam pengencer sitrat kuning telur pada semen Domba Ekor Tipis. Penelitian dilaksanakan pada Desember 2023—Januari 2024 bertempat di Laboratorium Fisiologi dan Reproduksi Jurusan Peternakan, Fakultas Pertanian, Universitas Lampung. Penelitian ini menggunakan Rancangan acak lengkap (RAL) dengan 4 perlakuan dan 4 ulangan. Perlakuannya adalah P0: tanpa penambahan Vitamin C, Vitamin E dan L carnitine (kontrol), P1: penambahan Vitamin C 500 mg/100 ml pengencer, P2: penambahan Vitamin E 500 mg/100 ml pengencer, P3: penambahan L carnitine 0,6 mg/100 ml pengencer. Data yang diperoleh dianalisis ragam dengan taraf 5% kemudian dilanjut dengan uji Beda Nyata Terkecil (BNT) untuk peubah yang berpengaruh nyata. Hasil penelitian menunjukan bahwa penambahan Vitamin C, Vitamin E dan L carnitine dalam bahan pengencer sitrat kuning telur berpengaruh nyata ($P<0,05$) terhadap motilitas pasca pengenceran, namun tidak berpengaruh nyata ($P>0,05$) terhadap abnormalitas dan viabilitas pasca pengenceran. Penambahan Vitamin C, Vitamin E dan L carnitine dalam bahan pengencer sitrat kuning telur tidak berpengaruh nyata ($P>0,05$) terhadap motilitas, abnormalitas, dan viabilitas pada penyimpanan selama 3 jam penyimpanan. Hasil penelitian dapat disimpulkan bahwa penambahan L carnitine 0,6 mg/100 ml dalam pengencer sitrat kuning telur (P3) memberikan pengaruh terbaik terhadap motilitas spermatozoa Domba Ekor Tipis pasca pengenceran.



**Kata kunci** : Domba Ekor Tipis, L carnitine, Semen Cair, Sitrat Kuning Telur, Vitamin C, Vitamin E.

## ABSTRACT

### THE EFFECT OF ADDING VITAMIN C, VITAMIN E AND L CARNITINE IN EGG YOLK CITRATE DILUENT ON THE QUALITY OF LIQUID SEMEN IN THIN-TAILED SHEEP

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This study aims to determine the effect of adding Vitamin C, Vitamin E and L carnitine on the quality of liquid semen (motility, viability and abnormalities) in egg yolk citrate diluent in thin-tailed sheep semen. The research was carried out in December 2023—January 2024 at the Physiology and Reproduction Laboratory, Department of Animal Husbandry, Faculty of Agriculture, University of Lampung. This research used a completely randomized design (CRD) with 4 treatments and 4 replications. The treatment is P0: without addition of Vitamin C, Vitamin E and L carnitine (control), P1: addition of Vitamin C 500 mg/100 ml diluent, P2: addition of Vitamin E 500 mg/100 ml diluent, P3: addition of L carnitine 0.6 mg/100 ml diluent. The data obtained was analyzed for variance at a level of 5%, then continued with the Least Significant Difference (LSD) test for variables that had a significant effect. The results of the study showed that the addition of Vitamin C, Vitamin E and L carnitine in the egg yolk citrate diluent had a significant effect ($P<0.05$) on post-dilution motility, but had no significant effect ($P>0.05$) on post-dilution abnormalities and viability. The addition of Vitamin C, Vitamin E and L carnitine in the egg yolk citrate diluent had no significant effect ($P>0.05$) on motility, abnormalities and viability after 3 hours of storage. The results of the research can be concluded that the addition of L carnitine 0.6 mg/100 ml egg yolk citrate diluent (P3) has the best effect on the motility of thin-tailed sheep spermatozoa after dilution.



**Keywords**: Thin Tail Sheep, L carnitine, Liquid Semen, Egg Yolk Citrate, Vitamin C, Vitamin E.