

## PENGARUH LEVEL ALFA TOKOFEROL PADA MEDIA PENGENCER TRIS KUNING TELUR TERHADAP KUALITAS SEMEN CAIR AYAM MURUNG PANGGANG PADA SUHU 5°C

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### INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan alfa tokoferol dalam bahan pengencer tris kuning telur terhadap motilitas, viabilitas dan abnormalitas *semen* ayam Murung Panggang yang disimpan pada suhu 5°C. Penelitian dilakukan di Laboratorium Fisiologi dan Reproduksi Ternak, Fakultas Peternakan, Universitas Gadjah Mada pada Maret hingga Juni 2022. Materi yang digunakan adalah *semen* segar dari 2 ekor ayam Murung Panggang berumur 54 minggu. Ayam Murung Panggang dipelihara di kandang individu dan diberikan pakan konsentrat yaitu Par - G sebanyak 100 g/ekor/hari dengan pemberian air minum secara *ad libitum*. *Semen* ditampung dengan metode *massage* dengan frekuensi penampungan dua kali seminggu. *Semen* diencerkan dengan tris kuning telur dan diberi tambahan alfa tokoferol. Perlakuan terdiri dari : (1) tris kuning telur tanpa alfa tokoferol sebagai kontrol (P0), (2) tris kuning telur ditambah alfa tokoferol 0,003 mg/ml (P1), (3) tris kuning telur ditambah alfa tokoferol 0,004 mg/ml (P2), dan (4) tris kuning telur ditambah alfa tokoferol 0,005 mg/ml (P3). Semen disimpan di refrigerator dengan suhu 5°C selama 24 jam. Data yang diamati meliputi motilitas (%), viabilitas (%), dan abnormalitas (%). Data dianalisis dengan analisis variansi Anova dengan Rancangan Acak Lengkap (RAL) pola searah dan dilanjutkan dengan uji *Duncan's Multiple New Range Test* (DMRT) untuk data dengan perbedaan nyata. Hasil analisis menunjukkan bahwa penambahan alfa tokoferol dalam pengencer tris kuning telur tidak berpengaruh nyata ( $P>0,005$ ) terhadap motilitas, viabilitas dan abnormalitas *semen* cair ayam Murung Panggang. Nilai motilitas perlakuan P0, P1, P2, dan P3 berturut-turut adalah  $35\pm9,26$ ;  $25\pm13,09$ ;  $27,5\pm10,35$ ; dan  $23,75\pm3,02$ . Nilai viabilitas perlakuan P0, P1, P2, dan P3 berturut-turut adalah  $65,94\pm10,70$ ;  $71,76\pm9,57$ ;  $72,97\pm8,48$ ; dan  $77,09\pm6,57$ . Nilai abnormalitas perlakuan P0, P1, P2 dan P3 berturut-turut adalah  $4,93\pm1,75$ ;  $4,25\pm1,50$ ;  $4,58\pm2,20$ ; dan  $4,48\pm1,55$ . Berdasarkan hasil tersebut, dapat disimpulkan bahwa penambahan alfa tokoferol pada media pengencer tris kuning telur tidak berpengaruh terhadap motilitas, viabilitas dan abnormalitas *semen* cair ayam Murung Panggang pada penyimpanan 5°C.

Kata kunci: Motilitas, Viabilitas, Abnormalitas, Alfa tokoferol, Murung Panggang, *Semen*.

## **EFFECT OF ALPHA TOCOPHEROL LEVEL INTO EGG YOLK TRIS DILUENT ON THE SEMEN LIQUIDS QUALITY OF MURUNG PANGGANG ROOSTER STORED AT 5°C**

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### **ABSTRACT**

The aim of the study was to determine the effect of the alpha tocopherol level addition on egg yolk tris diluent on motility, viability, and abnormality of the semen liquids of Murung Panggang rooster stored at 5°C. The study was conducted at the Laboratory of Animal Physiology and Reproduction, Faculty of Animal Science, Gadjah Mada University from March to June 2022. Fresh semen from 54 weeks old of 2 Murung Panggang roosters were used in this study. Murung Panggang roosters were kept in individual cages, and fed with Par - G consenstrate as much as 100 g/head/day and ad libitum water. The Murung Panggang's semen was collected twice in a week using massage method. The Murung Panggang's semen was diluted with egg yolk tris diluent and then added with alpha tocopherol. The treatments consisted of : (1) egg yolk tris without alpha tocopherol (P0), (2) egg yolk tris plus 0,003 mg/ml aplha tocopherol (P1), (3) egg yolk tris plus 0,004 mg/ml (P2), and (4) egg yolk tris plus 0,005 mg/ml (P3). Semen stored at the 5°C refrigerator. The data observed were motility (%), viability (%), and abnormality (%). The data were anlyzed using one way analysis of complete randomize design (CRD) and followed by Duncan's New Multiple Range Test (DMRT) for significant differences. The result showed that the addition of alpha tocopherol on tris egg diluents had no significant effect ( $P>0.05$ ) in motility, viability and abnormality of liquid semen of Murung Panggang rooster. The motility value of P0, P1, P2, and P3 were  $35\pm 9.26$ ,  $25\pm 13.09$ ,  $27.5 \pm 10.35$ , and  $23.75\pm 3.02$ . The viability value of P0, P1, P2 and P3 were  $65.94 \pm 10.70$ ,  $71.76\pm 9.57$ ,  $72.97\pm 8.48$ , and  $77.09\pm 6.57$ . The abnormality value of P0, P1, P2, and P3 were  $4.93\pm 1.75$ ,  $4.25\pm 1.50$ ,  $4.58\pm 2.20$ , and  $4.48\pm 1.55$ . Based on the result, it can be concluded that there is no effect of alpha tocopherol level addition on egg yolk tris diluent on the motility, viability, and abnormality of the semen liquids of Murung Panggang's rooster stored at 5°C.

**Keywords:** Motility, Viability, Abnormality, Alpha tocopherol. Murung Panggang, Semen.