

ABSTRAK

EFEK PENAMBAHAN LESITIN KEDELAI TERHADAP VIABILITAS SPERMATOZOA PADA KRIOPRESERVASI SEMEN SAPI PERANAKAN ONGOLE

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Penelitian ini bertujuan untuk mengetahui efek penambahan lesitin kedelai 1,0%, 1,5% dan 2,0% terhadap viabilitas spermatozoa dalam proses kriopreservasi spermatozoa sapi Peranakan Ongole (PO), sehingga kadar viabilitas spermatozoa dapat dipertahankan.

Semen segar ditampung sekali seminggu selama lima minggu dari seekor sapi jantan PO berumur enam tahun menggunakan vagina buatan. Sampel semen dibekukan menggunakan konsentrasi pengencer susu skim dan lesitin kedelai berbeda yaitu A(1,0%), B(1,5%), C(2,0%) serta kuning telur(K) sebagai kontrol. Pengecatan eosin 2% dilakukan untuk mengevaluasi viabilitas spermatozoa pada tiga tahap: semen segar, semen cair dan semen beku. Pemeriksaan viabilitas spermatozoa diperiksa di bawah mikroskop pada pembesaran 400x setelah preparat apus dilakukan pengecatan eosin 2%. Hasil rata-rata kadar viabilitas dihitung dan nilai signifikan diperoleh dengan uji ANOVA.

Hasil penelitian menunjukkan bahwa terdapat perbedaan signifikan ($p < 0,05$) antara kontrol lesitin kuning telur dengan percobaan lesitin kedelai. Konsentrasi lesitin kedelai 2,0% telah memberikan hasil rata-rata viabilitas tertinggi yaitu $71,4\% \pm 4,5\%$ dibandingkan dengan lesitin kuning telur yaitu $65,54\% \pm 5,82\%$.

Kata kunci : sapi Peranakan Ongole, lesitin kedelai, kriopreservasi, spermatozoa sapi, viabilitas

ABSTRACT

EFFECTS OF SOYBEAN LECITHIN TOWARDS THE VIABILITY OF SPERMATOZOA DURING CRYOPRESERVATION OF ONGOLE GRADE BULL SEMEN

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The aim of this research is to investigate the effect of adding soybean lecithin (SL) 1.0%, 1.5% dan 2.0% towards sperms viability in cryopreservation process in hope of maintaining or improving the sperms' viability of Ongole Grade bull.

Fresh semen samples were collected from a six years old Ongole Grade bull once a week for five weeks using artificial vagina. Semen samples were frozen using different concentration of skimmed milk with soybean lecithin which are A(1.0%), B(1.5%), C(2.0%) as variables and egg yolk lecithin (K) as control. Eosin staining was performed to evaluate viability of spermatozoa in three stages: fresh semen, diluted semen and frozen semen. Evaluation of spermatozoa was done under microscope magnification 400x after smearing with eosin staining. Mean viability rate was calculated dan significance level are obtained using ANOVA test.

The results shows that there are significance difference ($p < 0.05$) between control egg yolk lecithin and variables soybean lecithin. Soybean lecithin concentration 2.0% shows the highest viability rate which is $71.4\% \pm 4.5\%$ compared to egg yolk lecithin which is $65.54\% \pm 5.82\%$.

Key words : Ongole Grade bull, soybean lecithin, cryopreservation, bull sperms, viability