

Pengaruh pemberian asam amino glutamin terhadap kualitas spermatozoa sapi Sumba ongole (*Bos indicus*), pascakriopreservasi =
The effect of glutamine in various concentration on spermatozoa quality of Sumba ongole (*Bos indicus*) cattle, postcryopreservation

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Abstrak

ABSTRAK

Telah dilakukan penelitian untuk mengetahui pengaruh pemberian berbagai konsentrasi asam amino glutamin 5 mM, 15 mM, dan 25 mM terhadap kualitas spermatozoa sapi sumba ongole *Bos indicus* pascakriopreservasi. Semen diperoleh dari satu ekor sapi SO yang dikoleksi setiap satu minggu sekali selama enam kali pengulangan. Sampel semen diencerkan menggunakan pengencer tris kuning telur TKT dan penambahan glutamin. Kelompok kontrol KK, semen diencerkan dalam TKT tanpa penambahan asam amino, sedangkan pada kelompok perlakuan semen diencerkan dalam TKT dengan penambahan glutamin sebesar 5mM; 15mM; dan 25mM KP1, KP2, dan KP3. Semen yang telah diencerkan kemudian diekuilibrasikan selama 2 jam dan masuk ke tahap pembekuan menggunakan nitrogen cair. Parameter kualitas spermatozoa meliputi presentase motilitas, viabilitas, integritas membran plasma utuh, dan integritas DNA. Hasil uji analisis varians ANAVA satu faktor menunjukkan bahwa nilai rata-rata persentase motilitas, viabilitas, dan MPU spermatozoa sapi SO pascakriopreservasi berbeda nyata antara kelompok perlakuan dengan kelompok kontrol P

ABSTRACT

The research was conducted to assess the effect of glutamine in various concentration 5mM, 15 mM, and 25 mM on spermatozoa quality of sumba ongole cattle *Bos indicus* postcryopreservation. Semen was obtained from one SO cattle and was collected once a week for six repetitions. The semen samples were diluted in tris citric fructose egg yolk TCFY extender and the addition of glutamine. The control group KK semen diluted in TCFY without glutamine, while in the treatment group, semen diluted in TCFY with the addition of glutamine 5mM KP1 15mM KP2 and 25 mM KP3. Diluted semen was equilibrated for 2 hours and enters the freezing stage using liquid nitrogen. Parameters of spermatozoa quality include percentage of motility, viability, membran integrity, and DNA integrity. One factor analysis of variance ANOVA test showed that the mean value of motility, viability, and membrane integrity of SO cattle spermatozoa postcryopreservation were significantly different between treatment group and control group.