Efek Kuning Telur Puyuh sebagai Krioprotektan Alami terhadap Kualitas Spermatozoa Ikan Kancra (Tor soro Valenciennes, 1842) Pascakriopreservasi = The Effect of Quail Egg Yolk as Natural Cryoprotectant for The Quality of Kancra Fish (Tor soro Valenciennes, 1842) Spermatozoa Post-cryopreservation.

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Abstrak

ABSTRAK
Ikan kancra merupakan salah satu spesies air tawar di Indonesia yang populasinya terus terancam. Upaya yang dapat dilakukan untuk melestarikan material genetik hewan yang terancam punah yaitu kriopreservasi spermatozoa. Salah satu faktor yang menentukan keberhasilan kriopreservasi adalah krioprotektan. Salah satu krioprotektan alami potensial yaitu kuning telur puyuh. Tujuan dari penelitian ini yaitu mengevaluasi konsentrasi optimal dari berbagai konsentrasi kuning telur puyuh (0%, 5%, 10%, 15%, 20%, dan 25%) terhadap motilitas, viabilitas, abnormalitas dan kemampuan fertilisasi spermatozoa ikan kancra 48 jam pascakriopreservasi. Rasio antara semen dan larutan pengencer yang digunakan yaitu 1:10. Analisis data menggunakan uji ANAVA satu arah dan dilanjutkan dengan uji Tukey. Berdasarkan hasil uji ANAVA, pemberian berbagai konsentrasi kuning telur puyuh yang dikombinasikan dengan metanol 10% menghasilkan pengaruh nyata (P<0,05) terhadap persentase motilitas, viabilitas, abnormalitas, dan fertilitas spermatozoa pascakriopreservasi. Kuning telur 10% merupakan konsentrasi optimal yang dapat mempertahankan persentase motilitas, viabilitas, dan fertilitas tertinggi yaitu masing-masing 85,10 ± 1,51%, 84,75 ± 1,71% dan 95,00 ± 1,83% serta menghasilkan nilai persentase abnormalitas terendah yaitu 20,25 ± 1,71%.
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ABSTRACT
Kancra fish is one of the freshwater species in Indonesia, whose population is continues to be threatened. The efforts that can be done to preserve the endangered animal's genetic material are cryopreservation of spermatozoa. One of the factors that determines the success of cryopreservation is cryoprotectant. One of the potential natural cryoprotectants is quail egg yolks. The purpose of this research is to evaluate the optimal concentration of various concentrations of quail egg yolks (0%, 5%, 10%, 15%, 20%, and 25%) on motility, viability, abnormality and fertilization ability of kancra fish spermatozoa 48 hours post-cryopreservation. The ratio between semen and diluent solution used was 1:10. Data was analyzed using one-way ANOVA test and continued with the Tukey test. Based on the results of the one-way ANOVA test, it was found that cryoprotectant of quail egg yolk combined with 10% methanol had significant effect (P <0.05) on motility, viability, abnormality, and fertility of spermatozoa post-cryopreservation. The 10% of quail egg yolk concentration was the optimal concentration that could maintain the highest percentage of motility, viability and fertility, respectively 85.10 ± 1.51%, 84.75 ± 1.71%, 95.00 ± 1.83% and produced the lowest percentage value of abnormality 20.25 ± 1.71%.