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Pengaruh susu skim sebagai krioprotektan alami terhadap kualitas spermatozoa Ikan Kerapu Kertang ephinephelus lanceolatus (Bloch 1970) pascakriopreservasi 48 jam = The effect of skim milk as natural cryoprotectant on Quality of spermatozoa from Giant grouper Ephinephelus lanceolatus Bloch 1970 Post-cryopreservation of 48 hours

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Abstrak

Penelitian kriopreservasi spermatozoa ikan kerapu kertang memiliki tujuan mengetahui pengaruh berbagai konsentrasi susu skim (0%, 5%, 10%, 15%, 20%, 25%) yang dikombinasikan dengan gliserol 6% terhadap motilitas, viabilitas, dan abnormalitas serta kemampuan fertilisasi spermatozoa ikan kerapu kertang pascakriopreservasi terhadap sel telur ikan kerapu macan. Larutan pengencer yang digunakan dalam penelitian adalah larutan marine fish Ringer, gliserol 6%, susu skim berbagai konsentrasi. Rasio pengenceran yang digunakan adalah 1:9. Kriopreservasi dilakukan dalam freezer pada suhu -20°C, dengan lama penyimpanan selama 48 jam. Spermatozoa hasil kriopreservasi selama 48 jam digunakan untuk membuahi sel telur ikan kerapu macan. Hasil fertilisasi digunakan untuk mengukur parameter kualitas spermatozoa yang baik. Hasil uji ANAVA satu arah menunjukkan pemberian berbagai konsentrasi susu skim memiliki nilai rata-rata persentase motilitas, viabilitas, dan abnormalitas spermatozoa ikan kerapu kertang 48 jam pascakriopreservasi yang berbeda nyata (P˃0,05). Hasil terbaik ditunjukkan pada konsentrasi susu skim 20% dengan nilai persentase motilitas, viabilitas, dan abnormalitas secara berurutan sebesar 80,51 ± 3,46%; 81,24 ± 2,34%; dan 25,35 ± 2,04 %. Hasil analisis pada fertilisasi spermatozoa pascakriopreservasi menyatakan bahwa nilai rata-rata persentase fertilisasi tidak berbeda nyata antar perlakuan, namun pada konsentrasi susu skim 20% memberikan kemampuan fertilisasi yang baik yaitu 68 ± 1,70%.

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The objective of this study was to discover the effect of various concentration skim milk from (0%, 5%, 10%, 15%, 20%, and 25%) and combined with glycerol 6% which give the best effect towards motility, viability, abnormality and fertilization for Ephinephelus fuscogutattus (Forsskal 1775) capability of Ephinephelus lanceolatus (Bloch 1970) spermatozoa 48 hour after freezing. We used marine fish Ringer, glycerol 6%, and various concentration skim milk. Dilute the spermatozoa at 1 : 9 ratio. Cryopreservation is carried out in a freezer with a temperature of -20°C with a storage time of 48 hours. Cryopreservation spermatozoa for 48 hours is used to fertilize the egg Ephinephelus fuscogutattus (Forsskal 1775). Fertilization results are used to measure the quality parameter of spermatozoa Ephinephelus lanceolatus (Bloch 1970). Based on the ANAVA analysis, the treatment groups showed significant difference in average motility, viability and spermatozoa abnormality percentage with the control (P˃0.05). ANAVA analysis showed best result are obtained from 20% skim milk with average motility (80.51 ± 3.46%), sperm viability (81.24 ± 2.34%), and sperm abnormality (25.35 ± 2.04%). The results of analysis on fertilization with sperm post- cryopreservation stated that the average value of the percentage of fertilization was not significantly different between treatments, but at the concentration of skim milk 20% give a best

ability of fertilization which was 68 ± 1.70%.