Sperm Cryopreservation of Cobia, *Rachycentron canadum* (Linnaeus, 1766)

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**Abstract**

Spermatozoa of Cobia, *Rachycentron canadum* were preserved under cryogenic condition in liquid nitrogen tank (-196 °C). Extender 251 (E 251), extender 189 (E 189), 0.1 M Trisodium Citrate (TsC), and 0.9 % Normal saline (NaCl-N-S-S, D-5-1/3S, D-5-1/2S and D-5-S) were studied as extender. Results showed that sperm were suspended well in 0.1 M TsC, E 251, E 189 0.9% NaCl-N-S-S. The effects of three cryoprotectant compounds, Dimethyl sulfoxide (DMSO), Dimethyl acetamide (DMA) and Trehalose at 10 % concentrations were also studied. The duration of equilibration time of 30 minutes in the cryoprotectant solutions and the modified pre-freezing method using polystyrene box was used in the freezing procedure. Samples were stored for 30, 60 and 270 days in liquid nitrogen before examination. Results showed highly statistical different (P<0.05) in percentage of live cells among treatment. DMSO gave the best percentage of live cells and longest motility in cryogenic condition during experiment. We concluded that Cobia’s milt can cryopreserved by using 0.9 % NaCl-N-S-S in DMSO 10 %.

**Key words**: Cobia, *Rachycentron canadum*, sperm cryopreservation

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