

Nickel-induced pathohistologic alterations in *Oreochromis mossambicus*

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A pathohistologic study was conducted to determine the effects of nickel on the testes of maturing Mozambique tilapia, *Oreochromis mossambicus*. The fish were treated with 0.5 mg/L and 1.0 mg/L sublethal dose of nickel sulphate for four weeks. A week reduction in spermatogenic activity together with the disintegration of seminiferous tubules and spermatocytes are commonly observed in the 0.5 mg/L-treated fish. This results in the scattering of germ cells and the occurrence of spaces within the spermatocysts. Pyknotic nuclei are also seen in some specimens. Connective tissues and blood cells invade the damaged regions of the organ. Enlargement of Sertoli cells and interstitial cells are also observed. These effects are more pronounced in the 1.0 mg/L-treated testes.

Relatively low levels of nickel in aquatic ecosystems impose a great danger to the reproduction and survival of Mozambique tilapia.

Influence of LHRHa and methyltestosterone on milt production of sea bass *Lates calcarifer* (Bloch)

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Milt volume, sperm density, and number of spermatozoa were determined to quantify milt production of mature sea bass after a single injection of LHRHa [(D-Ala⁶,Pro⁹-N-ethylamide)LHRH] in saline solution and 17 α -methyltestosterone in corn oil (MT). Two measures of sperm density, sperm count and spermatocrit, were highly correlated ($r=0.85$). Compared with control, milt volume and the number of spermatozoa collected increased but sperm count decreased (24% at 24 h) after a LHRHa (20 μ g/kg body weight treatment, suggesting a stimulation of spermatozoa production and not merely milt dilution. Further milt dilution (44%) was induced by 80 μ g/kg LHRHa (LHRHa80) at 12 h post-treatment but not by 200 μ g/kg MT (MT200) alone. A milt dilution of only 27% at 12 h after simultaneous injections of LHRHa80 and MT200 may indicate some inhibitory effect of MT on the efficiency of LHRHa. These results demonstrate that the stimulation of milt production by LHRHa involves testicular hydration resulting in milt dilution.