

## GENOTOXIC POTENTIAL OF NONYLPHENOL IN FRESHWATER FISH, *OREOCHROMIS MOSSAMBICUS*

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### ABSTRACT

Nonylphenol is the breakdown product of alkylphenol ethoxylates (APEs), which are an important class of non-ionic surfactants used for a variety of industrial, household and commercial applications including plastics, cosmetic products, inks, paints and textiles. Genotoxic potential of nonylphenol is evaluated by micronucleus and Ames test in *Oreochromis mossambicus*. Median lethal concentration of nonylphenol (1.5 mg/ L) was computed on the basis of probit analysis. Fishes were treated for 24 h, 96 h and 7 days with one-tenth of the concentration to represent the sublethal dose. Nuclear abnormalities such as micronuclei, and other nuclear malformations as fragmented apoptotic cells, binucleated cells and sticky adherent cells are noticed after nonylphenol exposure. In the present study Ames test reports more colonies in one-tenth of the test dose compared with the controls. Thus the present findings reports that nonylphenol is mutagenic and causes genotoxicity in *O. mossambicus*.

**KEYWORDS:** Ames Test, Genotoxicity, Micronucleus, Nonylphenol, *Oreochromis*, *Salmonella*