



Genotoxicity induced by 4-Nonylphenol in adult and embryos of *Clarias gariepinus*

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Abstract:

The presence of the genetic toxic chemicals in the aquatic environment increased. This study aimed using the random amplified polymorphic DNA (RAPD-PCR) assay to investigate the genotoxic effects of 4-nonylphenol in adults and embryos of African catfish *Clarias gariepinus*. After exposure of adults and embryos to sublethal concentrations of 4-nonylphenol (0, 0.05, 0.08, and 0.1 mg/l) for 15 days, DNA was extracted for RAPD assay. The RAPD pattern from catfish exposed to 4-nonylphenol displayed some changes in polymorphism band patterns including disappearance and appearance of bands. Cluster method was used to indicate the distinct distance between the band patterns of exposed fish and the control. In conclusion, the RAPD-PCR is method can be used as an investigation tools for the evaluation of the genetic damage of the catfish induced by the exposure to 4-nonylphenol.

Keywords:

4-nonylphenol, genotoxicity, embryos, *Clarias gariepinus*, DNA.

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