*Journal of Environmental Indicators*, 9:52, 2015


# *In Vivo* Mutagenic and Oxidative Stress Modulatory Effects of Fenthion in Freshwater African Catfish *Clarias Gariepinus* (Burchell 1822)

NWANI C.D.,[1] OGUEJI E.O.[2] & ONAS P.S.[3]

[1] Department of Zoology and Environmental Biology, University of Nigeria Nsukka, Nigeria
[2] Department of Biology, Microbiology and Biotechnology, Federal University Ndufu-Alike Ikwo, Nigeria
[3] Department of Biological Science, Federal University Lokoja, Nigeria

The present study was designed to evaluate the mutagenic and oxidative stress effects of fenthion on the tissues of African catfish *Clarias gariepinus*. Fish specimens were exposed to three (2.0, 4.0, 8.0 mg/L) sublethal concentrations of fenthion and a control. The blood erythrocytes of the exposed specimen were sampled on days 1, 7, 14, 21 and during 7 days recovery to assess the DNA damage using micronucleus test. The gill and liver tissues were also sampled during the same period to assess the alterations in lipid peroxidation and antioxidant enzyme activities. Micronuclei induction in blood erythrocytes was highest (7.55) on day 14 of exposure but gradually declined during the 7 days recovery. Dose- and time-dependent induction of oxidative stress was indicated by increased lipid peroxidation level. Other antioxidants such as reduced glutathione (GSH), glutathione reductase (GR), glutathione peroxidase (GPx), superoxide dismutase (SOD) and catalase responded differently in the tissues during the exposure and recovery periods. Fenthion should be used with caution as sublethal exposure elicited induction of micronucleus, lipid peroxidation and alterations of other antioxidant enzyme activities.

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