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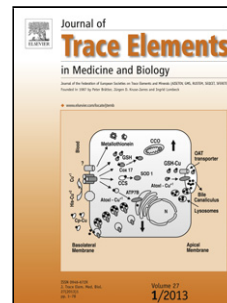
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# Acute exposure to methylmercury chloride induces fast changes in swimming performance, cognitive processes and oxidative stress of zebrafish (*Danio rerio*) as reference model for fish community

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## Highlights:

- Behavioural tasks and oxidative stress in acute exposure to methylmercury in zebrafish and fish communities
- Memory, aggression, swimming with oxidative markers were modified after methylmercury(II)
- These markers seem relevant in understanding the neurotoxic effects of mercury compounds

## Abstract

Fishes are the first group of vertebrates that respond when the environment is contaminated with pollutants resulted from anthropogenic activities. The development of the toxicity tests is bringing new evidence about the toxicological effects of the pollutants upon the life forms. Behavioural abnormalities in the swimming performance and cognitive processes were well associated with the response of organisms to pollutants from environment. The aim of the paper was to study the behavioural changes of zebrafish (memory, swimming performances and aggression) and oxidative stress (superoxide dismutase and malondialdehyde) during 32 hours of acute exposure with methylmercury (II) chloride to measure its neurotoxicity effects upon fish community. The experiments from this study tested and measured the fish community response to methylmercury concentrations ( $1 \mu\text{g L}^{-1}$  and  $15 \mu\text{g L}^{-1}$ ) in the first hours

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