

## Gambusia an Excellent Indicator of Metals Stress

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**Abstract :** The activity of acetylcholinesterase (AChE) was studied in freshwater fish exposed to two heavy metals lead and cadmium. Measurements were made after short exposures (4 and 7 days) at concentrations of 1, 5, and 7 $\mu$ g/L cadmium and 1.25, 2.25, and 5 mg/L of lead. Cadmium induced no significant increases in activity of AChE in the gills for the lowest dose. Except significant inhibition on 7 days. In muscle of *Gambusia*, under stress of metallic lead, the activity increases compared to the control are noted at 4 days of treatment and inhibitions to 7 days of exposure. The analysis of variance (time, treatment) indicates only a very significant time effect ( $p < 0.05$ ), and as for cadmium, a significant body effect ( $p < 0.01$ ) is recorded. This small fish sedentary, colonizing particularly quiet environments, polluted, can only be the ideal bioindicator of contamination and bioaccumulation of metals. The presence of lead and cadmium in the bodies of fish is a risk factor not only for the lives of these aquatic species, but also for the man who is the top predator at the end of the food chain.

**Keywords :** biomarkers, bioindicator, environmental health, metals

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