

## **Assessment of *clarias batrachus* as a source of acetylcholinesterase (AChE) for the detection of insecticides.**

### **Abstract**

An inhibitive assay of insecticides using Acetylcholinesterase (AChE) from the local fish *Clarias batrachus* is reported. AChE was assayed according to the modified method of Ellman. Screening of insecticide and heavy metals showed that carbofuran and carbaryl strongly inhibited *C. batrachus* AChE. The inhibition concentration (IC) IC<sub>50</sub> values (and the 95% confidence interval) for both carbofuran and carbaryl inhibition on *C. batrachus* AChE at 6.66 (5.97-7.52) and 130.00 (119.3-142.5)  $\mu\text{g l}^{-1}$ , respectively, was within the IC<sub>50</sub> range of *Electrophorus electricus* at 6.20 (6.03-6.39) and 133.01 (122.40-145.50)  $\mu\text{g l}^{-1}$ , respectively, and were much lower than bovine AChE at 20.94 (19.53-22.58) and 418.80 (390.60-451.60)  $\mu\text{g l}^{-1}$ , respectively. The results showed that *C. batrachus* have the potential to be used as a cheaper and more readily available source of AChE than other more commercially available sources.

**Keyword:** *C. batrachus*; AChE; Carbamate.