ABSTRACT*

Comparative Sensitivities of Tropical and Sub-tropical Mysids to Toxicants

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A toxicological comparison was used to determine the sensitivity of the tropical, Caribbean and South American mysid, *Metamysidopsis insularis* (Brattegard, 1970) relative to that of sub-tropical North American mysid, *Americamysis bahia* (formerly *Mysidopsis bahia*, Molenock 1969). The acute toxicities of copper, cadmium, dichromate (48-h and 96-h), potassium chloride and sodium dodecyl sulfate to *Metamysidopsis insularis* were compared with those for *Americamysis bahia* using the independent samples *t*-test and interspecies correlation analyses.

There was no significant difference in the 96-h acute, toxic responses of the two species of mysids to the toxicants. Additionally, the rank of toxicity of the chemicals to both species was identical with Cd>Cu>Cr>SDS>KCl. For the 48-h test with dichromate, however, there was a significant difference indicating that changing the exposure time of this toxicant may change the response of the mysids.

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The interspecies correlation showed that the mean acute toxicities for *Metamysidopsis insularis* are very highly correlated to *Americamysis bahia* ($r = 0.99$).

These results suggest that there is no significant climate related difference in the acute toxicities of chemicals to mysids. Consequently, we conclude that *Metamysidopsis insularis* is a suitable test species for acute toxicity testing in Trinidad and Tobago and wherever it occurs naturally.

Keywords – *Metamysidopsis insularis* *Americamysis bahia* Comparative sensitivity Acute toxicity Interspecies correlation.