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**EFFECTS OF WATER HARDNESS AND WATER TEMPERATURE
ON TOXICITY OF DETERGENTS TO GIANT FRESHWATER PRAWNS,
MACROBRACHIUM ROSENBERGII DE MAN**

BY

ORATHAI LEEHAPHUNT

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ABSTRACT

The semistatic bioassay study was conducted in order to estimate the median levels of effects of the water hardness and temperatures on acute toxicity of anionic detergents to giant freshwater prawns. It was found that the toxicity of detergents was affected by water hardness. At the three levels water hardness (soft, moderate and hard water) studied, the 96-hr. LC₅₀ values of soft detergent (Linear alkylbenzene sulphonate, LAS) were 21.880, 18.209 and 18.073 mg/l as MBAS, respectively. The 96-hr. LC₅₀ values of hard detergent (Alkylbenzene sulphonate, ABS) were 61.740, 54.671 and 54.400 mg/l as MBAS, respectively. The results of temperature effects indicated that increasing water temperature increased the toxicity of detergent. The 96-hr. LC₅₀ values for LAS were 20.917, 18.209 and 11.847 mg/l as MBAS at 23^o, 28^o and 33^o C, respectively. The 96-hr. LC₅₀ values of ABS were 59.530, 54.671 and 41.260 mg/l as MBAS, respectively. The giant freshwater prawns are more susceptible to LAS than ABS.