

**THE EFFECTS OF LETHAL COPPER CONCENTRATION  
ON ORANGE MUD CRAB, SCYLLA  
OLIVACEA (HERBST, 1796)**

**KAMARUL IZAM BIN MOHD SHAMSUDDIN**

**DEPARTMENT OF MARINE SCIENCE  
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU**

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Shamsuddin.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH  
UNIVERSITI MALAYSIA TERENGGANU (UMT)  
21030 KUALA TERENGGANU

1100088803		

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HAK MILIK  
PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

**The Effects of Lethal Copper Concentration on Orange Mud Crab,  
*Scylla olivacea* (Herbst, 1796)**

**By**

**Kamarul Izam Bin Mohd Shamsuddin**

**Research Report Submitted in partial fulfillment of  
the requirements for the degree of  
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**DEPARTMENT OF MARINE SCIENCE  
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU**

**DECLARATION AND VERIFICATION REPORT  
FINAL YEAR RESEARCH PROJECT**

It is hereby declared and verified that this research report entitled:

The Effects of Copper Concentration on Orange Mud Crab, *Scylla olivacea* (Herbst, 1796) by Kamarul Izam Bin Mohd Shamsuddin, Matric No. UK18279 have been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtaining the Degree of Science (Marine Biology), Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

Verified by: 

Principal Supervisor

Name: Dr. Ikhwanuddin Abdullah

Official stamp:

DR. MUHAMMAD IKHWANUDDIN @ POLITY BIN ABDULLAH  
Lecturer  
Institute of Tropika Aquaculture  
Universiti Malaysia Terengganu  
21030 Kuala Terengganu.

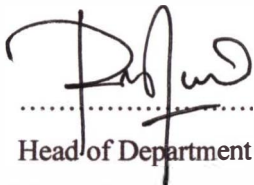
Date: 27/4/2011

Second Supervisor (where applicable)

Name:

Official stamp:

Date: .....



Head of Department of Marine Science

Name: Dr. Razak bin Zakariya

Official stamp:

**DR. RAZAK ZAKARIYA**  
Ketua Jabatan Sains Marin  
Fakulti Pengajian Maritim dan Sains Marin  
Universiti Malaysia Terengganu  
(UMT)

Date: 27/4/11

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## ABSTRACT

A 96h LC50 test for the orange mud crab *Scylla olivacea* was done and determined at 164.2ppm. Based on this finding, a series of mud crab specimens were exposed to said 96h LC50 concentration for 31 days. The carapace, gills, heart, stomach, hepatopancreas and testes were harvested from all specimens and digested and prepped for an AAS to measure the copper intake or absorption by the organs. It is determined by a series of calculations and with the aid of SPSS software, that the hepatopancreas had the highest copper concentration after being exposed to the 96h LC50 concentration. This indicated that the hepatopancreas has the highest potential to absorb copper in the mud crabs body system. The lowest copper concentration was the testes which indicated low absorption of the copper.



## ABSTRAK

Satu ujian 96h LC50 telah dijalankan dan telah ditentukan pada 164.2ppm. Berdasarkan perjumpaan ini, satu siri spesimen ketam nipah tersebut telah didedahkan kepada kepekatan 96h LC50 tersebut untuk 31 hari. Kulit cengkerang, insang, jantung, perut, hepatopankreas dan testes telah di kumpulkan daripada semua spesimen ketam nipah untuk dicernakan dan disediakan untuk AAS supaya penyerapan kuprum ke dalam organ ketam dapat dikira dan ditentukan. Dengan menggunakan beberapa kiraan dan bantuan menggunakan SPSS, ianya dapat ditentukan bahawa hepatopankreas mempunyai kepekatan kuprum tertinggi selepas didedahkan kepada kepekatan kuprum tersebut. Ini menunjukkan bahawa hepatopankreas mempunyai potensi tertinggi untuk menyerap kuprum ke dalam system badan ketam nipah *Scylla olivacea*. Kepekatan kuprum terendah ialah pada testes.