

CONCENTRATION OF HEAVY METAL (COPPER, ZINC AND CADMIUM)
IN *Corbicula fluminea* COLLECTED FROM TERENGGANU RIVER

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**CONCENTRATION OF HEAVY METAL (COPPER, ZINC AND CADMIUM)
IN *CORBICULA FLUMINEA* COLLECTED FROM TERENGGANU RIVER**

**By
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the requirements for the degree of
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**PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II**

Adalah ini diakui bahawa laporan penyelidikan bertajuk:

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LIST OF ABBREVIATIONS

ICPMS	-	Inductively Coupled Plasma-Mass Spectrometry
cm	-	centimeter
g	-	gram
μg	-	microgram
wt	-	weight
ml	-	milliliter
Cu	-	Copper
Cd	-	Cadmium
Zn	-	Zinc
H ₂ NO ₃	-	nitric acid
H ₂ O ₂	-	hydrogen peroxide
Ppm	-	part per thousand
P<0.05	-	significant differences
P>0.05	-	no significant differences
ANOVA	-	analysis of variance
df	-	degree of freedom
SS	-	sum of square
MS	-	mean of square
SD	-	standard deviation
μg/g	-	microgram per gram
Asian clam	-	<i>Corbicula fluminea</i>

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Concentration of Heavy Metal (Copper, Zinc and Cadmium) In *Corbicula fluminea*
Collected From Terengganu River

ABSTRACT

This study was conducted at Terengganu River were the specific location for sampling station is Pulau Manis River, Rengas River and Pulau Rusa River. The aim for this study is to determine and compare the concentration of heavy metal (Cu, Cd and Zinc) in *Corbicula fluminea* and sediment collected from three stations at Terengganu River and determines the concentration of Cu, Cd and Zinc in different of size of *C.fluminea*. *C.fluminea* was collected by hand while the sediment was collected using plastic spatula that it was rinse with 5% nitric acid. Samples were brought back to laboratory and store in refrigerator for further analysis. Three separation size were been done in *C.fluminea* (large, medium and small) to analysis their heavy metal concentration at different size. The samples were dried and digested to detect the heavy metal concentration (Cu, Cd and Zn), using Inductively Coupled Plasma-Mass Spectrometry or ICPMS. The result showed that *C.fluminea* has high concentration of Zinc ($19.0397 \pm 4.09 \mu\text{g/g}$ to $22.1605 \pm 4.88 \mu\text{g/g}$) than other metals and higher concentration of Zinc also had been detected in the sediment. The concentration of Zinc in sediment is $0.9204 \pm 4.09 \mu\text{g/g}$ to $4.4090 \pm 6.98 \mu\text{g/g}$ depend the location of the station. From the ANOVA analysis, copper had been found to have significant differences between sizes. However, both samples (*C.fluminea* and sediment) showed low concentration of cadmium that accumulates.