

**UNIVERSITI TEKNOLOGI MARA**

**POTENTIAL HEALTH RISK FROM HEAVY  
METALS VIA SEAFOOD CONSUMPTION  
IN KUALA SELANGOR**

**AZREEN SHAFILA BINTI ABDULLAH**

**Project paper submitted in fulfilment of the requirements for  
the degree of**

**Bachelor (Hons.) of Environmental Health and  
Safety**

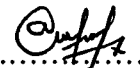
**Faculty of Health Science**

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## DECLARATION BY STUDENT

Project entitled "Potential Health Risks From Heavy Metals Via Seafood Consumption In Kuala Selangor" is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Mr Abdul Mujid bin Abdullah as Project Supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

Student's Signature:



.....  
(Azreen Shafila binti Abdullah)

2011437624

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## TABLE OF CONTENT

|  |      |
|--|------|
| <b>TITLE PAGE</b>                          |      |
| <b>DECLARATION BY STUDENT</b>              | ii   |
| <b>APPROVAL BY SUPERVISOR</b>              | iii  |
| <b>ACKNOWLEDGEMENT</b>                     | iv   |
| <b>TABLE OF CONTENT</b>                    | v    |
| <b>LIST OF TABLES</b>                      | ix   |
| <b>LIST OF FIGURES</b>                     | x    |
| <b>LIST OF PLATES</b>                      | xi   |
| <b>LIST OF APPENDICES</b>                  | xii  |
| <b>ABSTRACT</b>                            | xiii |
| <b>ABSTRAK</b>                             | xiv  |
| <br>                                       |      |
| <b>CHAPTER ONE: INTRODUCTION</b>           |      |
| 1.1 Overview                               | 1    |
| 1.2 Problem statement                      | 2    |
| 1.3 Study justification                    | 3    |
| 1.4 Conceptual framework                   | 4    |
| 1.5 Objectives                             | 5    |
| 1.5.1 General objective                    | 5    |
| 1.5.2 Specific objective                   | 5    |
| 1.6 Research question                      | 5    |
| <br>                                       |      |
| <b>CHAPTER TWO: LITERATURE REVIEW</b>      |      |
| 2.1 Heavy metal as environmental toxicants | 6    |
| 2.2 Heavy metal in river                   | 7    |

## ABSTRAK

### Potensi Risiko Kesehatan dari Logam Berat daripada Pengambilan Makanan Laut di Kuala Selangor

Azreen Shafila binti Abdullah

**Pengenalan:** Ikan dan kerang-kerangan adalah pemakanan protein utama berbanding daging dan produk ternakan kerana terkandung protein, nutrisi penting, mineral, asid lemak, dan vitamin. Ikan dan kerang-kerangan dapat mengumpul bahan-bahan toksik dari persekitaran hidup mereka. Heavy metals constitute one of the most hazardous substances that could be accumulated in marine fish and shellfish. Logam berat merupakan salah satu bahan yang paling berbahaya yang boleh terkumpul di dalam ikan dan kerang-kerangan. Tujuan kajian ini adalah untuk menuntukan potensi risiko kesihatan daripada logam berat (Pb, Zn, Cu, Cd) melalui pengambilan makanan laut. **Kaedah:** Kajian keratan rentas silang dijalankan untuk kajian ini. Dua pasar basah terletak di daerah Kuala Selangor telah dipilih untuk menagmbil 90 sampel mengandungi ikan kembung (*Rastrelliger kanagurta*), sotong (*Loligo vulgaris*) and kerang (*Anadara granosa*). Spektrometer serapan atom (AAS) digunakan untuk analisa sampel. **Keputusan:** Keputusan menunjukkan kepekatan Cu, Cd, Pb dan Zn dalam ikan kembung (*Rastrelliger kanagurta*), sotong (*Loligo vulgaris*) dan kerang (*Anadara granosa*) adalah di bawah had yang dibenarkan oleh Peraturan Makanan 1985 dan WHO/FAO kecuali Pb dalam kerang (*Anadara granosa*). Indeks bahaya menunjukkan kurang daripada 1. **Kesimpulan:** Kajian ini menunjukkan tiada potensi risiko kesihatan daripada pengambilan makanan laut di Kuala Selangor..

*Kata kunci: Logam berat, Rastrelliger kanagurta, Loligo vulgaris, Anadara granosa, Health Risk Assessment*