

UNIVERSITI TEKNOLOGI MARA

**ASSESSMENT OF IMAZAPIC RESIDUES IN FISH
(*ANABAS TESTUDINEUS S.P*) AND ITS POTENTIAL
HEALTH RISK AT SAWAH SEMPADAN
PADDYFIELD.**

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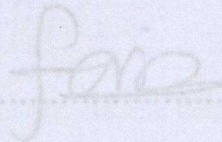
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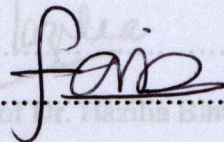
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Declaration by Student

Project entitled "Assessment of Imazapic Residues in Fish (*Anabas Testudineus S.P*) and Its Potential Health Risk at Sawah Sempadan Paddyfield" 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 my project supervisor, Assoc Prof Dr. Hazilia Binti Hussain 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).

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ACKNOWLEDGEMENT

Page

ii

iii

iv

viii

DECLARATION

Assalamualaikum w.b.t...

TABLE OF CONTENT

LIST OF TABLES

LIST

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CHAPTER ONE:

I owe a great debt to many individuals for their help with this project and thesis. First, I wish to express my thanks and appreciation to my supervisor Assoc Prof Dr. Hazilia Binti Hussain and Mrs. Siti Norashikin Mohammad Shaifuddin for their help guidance and thoughtfulness in giving me the chance to perform this study under their supervision. Special thanks also to the Department of Environmental Health and Safety, UiTM Puncak Alam, Selangor for providing the research facilities. I also wish to thank Dr. Nazri bin Che Dom, Final Year Project Coordinator for his support of this study.

1.4.1 General Objective 3

1.4.2 General Objective 3

1.5 Study Hypothesis 5

1.6 Conceptual Framework 6

1.7 Conceptual and Operational Definition

1.7.1 Herbicides 7

1.7.2 Accumulation of Herbicides in Fish 8

1.7.3 Health Effect to Human 9

	Page
DECLARATION	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENT	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	x
LIST OF APPENDICES	xi
ABSTRACT	xii

CHAPTER ONE:

1.0 INTRODUCTION	
1.1 Background Information	1-2
1.2 Problem Statement	3
1.3 Study Justification	4
1.4 Study Objective	24
1.4.1 General Objective	5
1.4.2 General Objective	5
1.5 Study Hypothesis	5
1.6 Conceptual Framework	6
1.7 Conceptual and Operational Definition	25
1.7.1 Herbicides	7
1.7.2 Accumulation of Herbicides in Fish	8
1.7.3 Health Effect to Human	9
3.5.1.1 Apparatus for Sampling	28
3.5.1.2 Inclusion criteria	29
3.5.1.3 Exclusion criteria	29
3.5.2 Respondent	29
3.6 Material and Instrument	30

ABSTRACT

ASSESSMENT OF IMAZAPIC RESIDUES IN FISH (*Anabas Testudineus s.p*) AND ITS POTENTIAL HEALTH RISK AT SAWAH SEMPADAN RICEFIELD.

Muhammad Faaizuddin Mohd Salleh

Introduction: Pesticide is considered as the most widely used form of agricultural chemical. Imazapic is one of the herbicides applied to rice field. Imazapic residue can accumulate in fish muscles after a certain period of time. **Objectives:** This study was conducted to assess the imazapic residues in fish and the potential health impacts to the consumers. **Methodology:** Ten samples of fish (*Anabas Testudineus s.p*) with same sizes and species from twenty-eight sampling points at Block C, Sawah Sempadan, Tanjung Karang were caught and analysed to detect the imazapic residues and Health Risk Assessment (HRA) had been conducted with 30 respondents through questionnaires. **Results:** High Performance Liquid Chromatography (HPLC) analysis detected the highest level of imazapic residue was found in sampling point four which are 5.4349 mg/kg while the lowest level is detected in sampling point twenty-seven with the concentration value was 0.2178 mg/kg. Hence, the samples exceed the maximum residue limit of 0.1 mg/kg by Codex Alimentarius Commission. The Hazard Index (HI) below than 1 ($H < 1$) which is 9.95×10^{-4} indicate there was no adverse human health effect when consuming fish. **Conclusion:** This study revealed even that imazapic residues concentrations -exceeding maximum limit set by Codex Alimentarius Commission, but according to Health Risk Assessment (HRA) calculation, the result found that fish (*Anabas Testudineus s.p*) are deemed safe for human consumption.

Keywords: Imazapic, Health Risk Assessment