

TOXICITY EFFECT OF *Conchium Jintococum* EXTRACTS
ON *Aedes Aegypti* (ARDELE: DIPTERA: CULICIDAE)

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TOXICITY EFFECT OF *Capsicum Frutescens* EXTRACTS
ON *Aedes Aegypti* LARVAE (DIPTERA: CULICIDAE)

By

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF FIGURES	v
LIST OF TABLES	vi
LIST OF ABBREVIATIONS	vii
LIST OF APPENDICES	viii
ABSTRACT	ix
ABSTRAK	x
CHAPTER 1 INTRODUCTION	1
1.1 Introduction	1
1.2 Importance of study	2
1.3 Objectives	3
CHAPTER 2 LITERATURE REVIEW	4
2.1 Herbal plants in medical view	4
2.2 Secondary metabolites	5
2.3 Plants as insecticides	6
2.3.1 Plant derived component as insecticides	6
2.4 Plants from family	8
2.4.1 <i>Capsicum frutescens</i>	8
2.4.2 Capsicum distribution	9
2.4.3 Bioactive compound in Capsicum tree	9
2.4.4 Capsicum tree in medical usage	10
2.5 Mosquito	10
2.5.1 <i>Aedes aegypti</i> (Linnaeus)	12
2.5.2 Biological characteristic	12
2.5.3 Dengue	14
CHAPTER 3 METHODOLOGY	15
3.1 Extraction of <i>Capsicum frutescens</i>	15
3.2 Dilution of extraction samples	15
3.3 Rearing of <i>Ae. Aegypti</i> .	17
3.4 Toxicity bioassay.	17
3.5 Data analysis	18
CHAPTER 4 RESULTS	19

CHAPTER 5 DISCUSSION	24
CHAPTER 6 CONCLUSION	29
REFERENCENS	30
APPENDICES	35
CURICULUM VITAE	54

LIST OF FIGURES

Figure		Page
2.1	Mosquito, <i>Aedes aegypti</i> is recognized by their black and white striped leg.	13
3.1.	Filtrated was conducted using rotary evaporator to obtain Extract	16
3.2.	Leaf and fruit extract of <i>C. frutescens</i>	16
4.1	Percentage of mortality-concentration curve of third instars <i>Ae. aegypti</i> larvae to leaf extract of <i>C. frutescens</i> at different concentrations at 24-hour	20
4.2	Percentage of mortality-concentration curve of third instars <i>Ae. aegypti</i> larvae to fruit extract of <i>C. frutescens</i> at different concentration at 24-hour.	21

LIST OF TABLES

Table		Page
4.1	Probit analysis on mortality of third instars, <i>Ae. aegypti</i> to leaf and fruit extracts of <i>C. frutescens</i> , at 24-hour	22
4.2	Toxicity effect of extract of <i>C. frutescens</i> on <i>Ae. aegypti</i> larvae	23

LIST OF ABBREVIATIONS

$^{\circ}\text{C}$	Celcius
cm	centimeter
DEN	dengue
g	gram
IMR	Institute Medical of Research
LC_{50}	lethal median concentration
l	liter
m	meter
mg	milligram
ml	milliliter
mm	millimeter
WHO	World Health Organization
%	percentage

LIST OF APENDICES

Appendix		Page
1	Probit Analysis for leaf extract (replicate 1)	35
2	Probit Analysis for leaf extract (replicate 2)	38
3	Probit Analysis for leaf extract (replicate 3)	41
4	Probit Analysis for fruit extract (replicate 1)	44
5	Probit Analysis for fruit extract (replicate 2)	47
6	Probit Analysis for fruit extract (replicate 3)	50
7	T-tests Analysis for leaf and fruit extract.	53

ABSTRACT

Natural product research is guided by bioactivity test. Herbal plants especially *Capsicum frutescens* (Family: Solanaceae) is rich sources of bioactive compounds were commonly used as medicinal and therapeutic purposes. The aims of this study were to determine the toxicity effect of *C. frutescens* and to compare the different toxicity effect of fruit and leaf extracts of *C. frutescens* on third instar of *Aedes aegypti* larvae. Fruit and leaf extracts were extracted using 98.99% of methanol solvent and were tested on *Ae. aegypti* larvae in different concentrations which were 0.25 mg/ml, 0.5 mg/ml, 1 mg/ml, 2 mg/ml and 4 mg/ml. Bioassays test exposure was done for 24 hours. The results obtained showed that LC₅₀ value for fruits and leaves extract were 1.2692 mg/ml and 1.3929 mg/ml, respectively (P>0.05: paired t-test). There were no significant differences for both extracts of *C. frutescens* as P=0.621 was more than 0.05. These show that both parts of extracts *C. frutescens* produced compounds and could be useful for a template of synthetic insecticides.

KESAN KETOKSIKAN EKSTRAK *C. FRUTESCENS* TERHADAP LARVA NYAMUK *Aedes Aegypti*. (DIPTERA:CULICIDAE)

ABSTRAK

Produk semulajadi boleh dikaji melalui ujian bioaktiviti daripada ekstrak. Tumbuhan herba terutamanya dari family Solanaceae adalah kaya dengan kompaun bioaktif. *Capsicum frutescens* adalah dari famili Solanaceae. Tujuan kajian ini di jalankan untuk menentukan kesan ketoksikan *C. frutescens* dan membandingkan perbezaan kesan ketoksikan ekstrak buah dan daun terhadap instar ketiga larva *Aedes aegypti*. Pengekstrakan ekstrak buah dan daun menggunakan pelarut 98.99% metanol dan diuji terhadap larva *Ae. aegypti* pada kepekatan yang berbeza iaitu 0.25 mg/ml, 0.5 mg/ml, 1 mg/ml, 2 mg/ml dan 4 mg/ml. Ujian bioasai didedahkan selama 24 jam. Keputusan yang diperolehi menunjukkan nilai LC₅₀ bagi ekstrak buah dan daun adalah 1.2692 mg/ml dan 1.3929 mg/ml masing-masing ($P > 0.05$: ujian-t tak bersandaran). Tiada perbezaan yang bererti bagi kedua-dua ekstrak *C. frutescens* di mana $P = 0.621$ lebih besar dari 0.05. Nilai ini menunjukkan kedua-dua ekstrak *C. frutescens* menghasilkan sejenis kompaun dan mungkin berguna untuk templat insektisek sintetik.