

**ANTIMICROBIAL ACTIVITY OF CHITOSAN PREPARED FROM
Sepia CUTTLEBONE AGAINST PATHOGEN CAUSING SKIN
INFECTION**

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TABLE OF CONTENTS

	PAGE
ACKNOWLEDGEMENTS	I
TABLE OF CONTENTS	II
LIST OF TABLE	V
LIST OF FIGURES	VI
LIST OF ABBREVIATIONS	VII
ABSTRACT	VIII
ABSTRAK	IX
1.0 INTRODUCTION	
1.1 Background Study	1
1.2 Problem Statement	2
1.3 Significance of the Study	3
1.4 Objective of the Study	3
2.0 LITERATURE REVIEW	
2.1 Skin infection	4
2.2 Homeopathy	5
2.3 <i>Sepia</i> cuttlebone	5
2.4 Bioactive compound of <i>Sepia</i> cuttlebone	6
2.5 Antimicrobial activity of <i>Sepia</i> cuttlebone	7
2.6 Germ Tube test	8
2.7 Disk diffusion assay	8
2.8 Minimum inhibitory concentration (MIC)	9
2.9 Pathogen	
2.9.1 <i>Staphylococcus aureus</i>	10
2.9.2 <i>Escherichia coli</i>	10

2.9.3 <i>Candida albicans</i>	11
2.10 Fourier Transform Infrared Spectroscopy (FTIR)	11

3.0 METHODOLOGY

3.1 Materials

3.2.1 Raw materials	13
3.2.2 Chemicals	13
3.2.3 Apparatus	13

3.2 Methods

3.2.1 Sampling and preparation cuttlebone powder	14
3.2.2 Preparation of chitosan extraction from cuttlebone	14
3.2.3 Bacteria and Fungi strain	15
3.2.4 Preparation of Muller Hinton agar	15
3.2.5 Preparation Potato Dextrose agar	15
3.2.6 Preparation Nutrient Broth agar	15
3.2.7 Disk diffusion assay	16
3.2.8 Minimum inhibitory concentration	16

3.3 Data Analysis

3.3.1 One way ANOVA	16
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CHAPTER 4: RESULT AND DISCUSSION

4.1 Germ Tube test	18
4.2 Fourier Transform Infrared Spectroscopy (FTIR) of chitosan	18
4.3 Antibacterial and Antifungal activity	20
4.4 Minimum Inhibitory Concentration (MIC)	21
4.5 Statistical analysis (ANOVA)	22

ABSTRACT

ANTIMICROBIAL ACTIVITY OF CHITOSAN PREPARED FROM *Sepia* CUTTLEBONE AGAINST PATHOGEN CAUSING SKIN INFECTION

Cuttlebone is the internal structure from the species in the family Sepidae. This research was performed to determine the antimicrobial activity of chitosan prepared from *Sepia* cuttlebone against *Staphylococcus aureus*, *Escherichia coli* and *Candida albicans* by using disk diffusion method and minimum inhibitory concentration (MIC). Result from Fourier Transform Spectroscopy Infrared (FTIR) proved the presence of chitosan in cuttlebone extract that acts as bioactive compound in this antimicrobial research. In extraction of chitosan from *Sepia* cuttlebone, it involve three step which is demineralization, deproteinization and deacetylation. For this research, two concentration of chitosan extract have been used in disk diffusion method, which is 100mg/ml and 50mg/ml to determine the inhibition zone against *S.aureus*, *E.coli* and *C.albican*. For MIC, the extract is investigated at 20,40,60,80 and 100 mg/ml concentration. The result of this research showed the chitosan extract have high antifungal activity compared to antibacterial activity.