

**EVALUATION OF MANGROVE EXTRACTS AS ANTIBACTERIAL AGENT
AGAINST METHICILLIN RESISTANT *STAPHYLOCOCCUS AUREUS***

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

EVALUATION OF MANGROVE EXTRACTS AS ANTIBACTERIAL AGENT AGAINST METHICILLIN RESISTANT *STAPHYLOCOCCUS AUREUS*

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Nowadays the amount of bacteria with antibiotic resistance is rapidly increasing and is causing problems all around the world. One of such bacteria is the Methicillin Resistant *Staphylococcus aureus* or commonly known as MRSA. It is a strain of *Staphylococcus aureus* bacteria that has developed resistance against antibiotics with β -lactam, which are basically most of the commonly used antibiotics to treat *Staphylococcus* infections. In this research the antibacterial activity of the extract from five different types of mangrove species will be tested against the MRSA bacteria. The *Sonneratia caseolaris*, *Avicennia marina*, *Rhizophora mucronata*, *Bruguiera gymnorrhiza*, and *Rhizophora apiculata* were the mangrove species that were chosen for this experiment. The experiment was conducted using the Kirby-Bauer-Disk-Diffusion-Assay, which is the most commonly used method in order to quantitatively measure the antibacterial activity of a substance. Other than the antibacterial assay, the total phenolic and flavonoid content of the mangrove extracts were also determined, along with the antioxidant properties and the toxicity of the extracts.

Keywords: *MRSA, Mangrove, Disk-diffusion, Antibacterial, Antioxidant, Phytochemical.*



DEDICATION

I dedicate this work to my beloved family and friends.



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TABLE OF CONTENTS

	Page
ABSTRACT.....	3
DEDICATION	5
ACKNOWLEDGEMENTS	6
TABLE OF CONTENTS.....	7
LIST OF FIGURES	9
LIST OF TABLES	10
CHAPTER 1 – INTRODUCTION	11
1.1. Background	11
1.2. Research Problems	12
1.3. Research Objectives	13
1.4. Significance of Study	13
1.5. Research Questions	13
1.6. Hypothesis.....	13
CHAPTER 2 - LITERATURE REVIEW.....	14
2.1. Antibiotics Resistance.....	14
2.2. MRSA Overview	15
2.3. Mangrove Plants Overview.....	18
2.4. Phytochemical Analysis.....	24
2.5. Antioxidant Activities	26
2.6. Antibacterial Activities	27
2.7. Brine Shrimp Lethality Test (BSLT)	29
CHAPTER 3 – RESEARCH METHODS	30
3.1. Venue and Time	30
3.2. Materials and Equipment	30
3.2.1. Raw Materials	30
3.2.2. Chemical Substances and Reagents	31

3.2.3. Equipment	31
3.3. Design of Experiments.....	31
3.4. Experimental Procedure.....	33
3.4.1. Total Phenolic Content Determination	33
3.3.2. Total Flavonoid Content Determination	34
3.3.3. Determination of DPPH Radical Scavenging Activity	34
3.3.4. Brine Shrimp Lethality Test.....	36
3.3.5. Determination of Antimicrobial Activity against MRSA	37
CHAPTER 4 – RESULTS AND DISCUSSION.....	38
4.1. Total Phenolic Content Analysis	38
4.2. Total Flavonoid Content Analysis	39
4.3. Antioxidant Activity Analysis	41
4.4. Toxicity test Analysis	43
4.5. Antimicrobial Susceptibility Analysis	45
CHAPTER 5 – CONCLUSIONS AND RECCOMENDATIONS.....	48
5.1. Conclusion	48
5.2. Recommendation	49
GLOSSARY	50
REFERENCES	51
APPENDICES	58
CURRICULUM VITAE.....	78