

ANTI – ACNE CREAM USING CLOVE (*Syzygium aromaticum*) EXTRACTS

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AUGUST 2022

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Date: August 2022

ABSTRACT

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Acne is a common skin issue caused by a microbial infection that requires antimicrobial treatments to cure. Synthetic antioxidants such as BHA and BHT widely used to treat acne which excessive used of BHA and BHT can give negative effects. Natural products have received a lot of interest as they have potential pharmaceutical possibilities due to their relative safety. Hence clove (*Syzygium aromaticum*) has been one of the natural ingredients that has potential to treat acne as they have antioxidant properties. The aim of this research study is to evaluate antioxidant properties of clove oil and develop Antiacne cream by using methanolic extracts. Clove extracts was prepared at different concentration (10 $\mu\text{g/mL}$, 20 $\mu\text{g/mL}$, 30 $\mu\text{g/mL}$, 40 $\mu\text{g/mL}$ and 50 $\mu\text{g/mL}$) in methanol and the antioxidant properties have been tested using DPPH Radical Scavenging technique and the total phenolic content was tested using Folin–Ciocalteu’s phenol reagent. The percentage inhibition of DPPH scavenging activities of *Syzygium aromaticum* was 63.73 %, 71.47 %, 71.95 %, 79.79 %, and 85.78 % at 10 $\mu\text{g/mL}$, 20 $\mu\text{g/mL}$, 30 $\mu\text{g/mL}$, 40 $\mu\text{g/mL}$, and 50 $\mu\text{g/mL}$ concentrations, respectively. The total phenolic content obtained in *S. aromaticum* extraction was 11.76 mg GAE/g. Different concentration of clove extracts 1%, 0.75% and 0.5% was prepared in 10g of base cream. Clove extracts possesses high antioxidant activity and small amount of total phenolic content. High concentration of clove extract used in anti – acne cream has high potential to treat acne.

TABLE OF CONTENTS

	Page
ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
LIST OF ABBREVIATIONS	viii
CHAPTER 1 INTRODUCTION	
1.1 Background of study	1
1.2 Problem statement	4
1.3 Research questions	6
1.4 Significance of study	6
1.5 Objectives of study	7
CHAPTER 2 LITERATURE REVIEW	
2.1 Acne	8
2.2 <i>Syzygium aromaticum</i>	9
2.2.1 Distribution and Habitat	9
2.2.2 Morphology and characteristic	12
2.2.3 The uses of cloves	15
2.3 Bioactive Constituents of <i>Syzygium aromaticum</i>	17
2.3.1 Eugenol	18
2.3.2 Eugenol Acetate	22
2.3.3 Flavanoid	23
2.3.4 Phenolic acids	26
2.4 Biological Activities	27
2.4.1 Antioxidant Activity	27
2.4.2 Anti-inflammatory activity	29
2.4.3 Antimicrobial Activity	30
2.5 Anti – acne Cream	33
CHAPTER 3 METHODOLOGY	
3.1 Collection and Authentication	34
3.1.1 Raw Materials	34

3.1.2	Chemicals	34
3.1.3	Apparatus	34
3.2	Methods	35
3.2.1	Collection and Authentication	35
3.2.2	Extraction	35
3.3	Antioxidant assay	36
3.3.1	DPPH Scavenging Activity	36
3.3.2	Total phenolic content	37
3.4	Formulation of Anti-Acne Cream	39
3.5	Evaluation of Anti – Acne Cream	40
3.5.1	Sensory Test	41
 CHAPTER 4 RESULT AND DISCUSSION		
4.1	Extraction of <i>Syzygium aromaticum</i>	44
4.2	DPPH Scavenging Activity	45
4.3	Total Phenolic Content	49
4.4	Anti – acne cream using clove extracts	50
 CHAPTER 5 CONCLUSION AND RECOMMENDATIONS		53
 CITED REFERENCES		55
APPENDICES		64
<i>CURRICULUM VITAE</i>		67
FYP GANTT - CHART		69