

Ministry of High Education and Scientific Research

Al-Qadisiyah university

College of pharmacy



Effect of Zingiber officinale ethanol extract on Staphylococcus aureus in culture media

A Research

***Submitted to the College of pharmacy Al-Qadisiyah University
in***

***Partial Fulfillment of Requirements of B.Sc. Degree of Science
in pharmacy***

By

Ayat Ameen Kamel

Batool Shamkhy Jaber

Supervisor

Dr. Mohammed Abdul Reda Yassen .

2018 A.D

1439 A.H



(11) يَرْفَعِ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ وَاللَّهُ بِمَا تَعْمَلُونَ خَبِيرٌ

صدق الله العلي العظيم

سورة المجادلة > الآية ١١ <

Acknowledgements

(This project would not have been possible without the blessing of Allah)

I would like to express my thanks of gratitude to my supervisor, assistant lecturer "Dr. Mohammed Abdul Reda Yassen " for his kind support and guidance to successfully complete my project. He gave me golden opportunity to do this project.

Special thanks to "Dr.Bassim Irheim Al sheibani" and the staff of "AL-Qadysia University/college of pharmacy" for their effort and support, I have highly benefited and gained a lot of knowledge from them

I would also like to thank my parents and family who helped me a lot in finishing this project.

Ayat & Batool

DEDICATION

To al- imam al Mahdi .

To the big heart my dear father ,To my great mother .

To my brothers and sisters ,To my family .

*To the people who paved our way of science and
knowledge .*

List of Contenets

No	Subject	Page No
1	Acknowledgements	I
2	DEDICATION	II
3	LList of contents	III
4	Abstract	IV
5	Introduction	1
6	Material and methods (Plant materials)	3
7	Preparation and plant extracts	3
8	Test microorganisms	3
9	Assay of antibacterial activity	3
10	Determination of MIC & MBC values	4
11	Statistical analysis	4
12	Results	5
13	DISCUSSION	7
14	Reference	9

Abstract :

Plant derived products have been used for medicinal purposes for centuries .The aim of this study was to investigate antimicrobial activity of ethanolic extracts of ginger (*Zingiber officinale*) against *Staphylococcus aureus* .Started with an objective to appraisal the antibacterial potentials of ethanol extract of ginger prepared in different concentrations (100,200,300& 400 mg/ml) against *Staphylococcus aureus* and associated its activity with antibiotic concentration value Ciprofloxacin(5µg), Ampicillin (30µg) & Amoxicillin (25µg) by determining the inhibition zone produced around the holes after growth on Muller-Hinton agar.

The antibacterial screening of the different extracts of (*Zingiber officinale*)and standard antibiotics showed various degrees of zones of inhibition in the culture media depending largely upon the type of plant extract, concentration of extract in addition to the type of tested bacterial.

The highest antibacterial potential was observed for the ethanolic (*Zingiber officinale*)extract whereas other (*Zingiber officinale*)extracts showed closed results in general. In the same time the current study was recorded that inhibition zones diameter against tested bacteria raised significantly ($p<0.05$) as the extract concentration raised.

The MIC values of ethanolic extracts of (*Zingiber officinale*) extended from 0.312 to 0.642 mg/ml against tested bacteria . Whereas the MBC values ranged 1.248 mg/ml .

Key words: *Zingiber officinale*, inhibition zones, *ethanolic extracts* .