

المستخلص

استخلص الزيت الثابت لبذور المهوقني ودرس بواسطة تقنية الكروماتوغرافية الغازية - طيف الكتلة حيث اتضح ان الزيت يحتوى على 24 مكونا , المكونات الرئيسية هي :

9-octadecenoic acid (Z)-methyl ester(52.31%), methyl stearate(19.60%), hexadecanoic acid methyl ester(13.99%),methyl 10-trans 12-cis-octadecadienoate(5.92%), eicosanoic acid methyl ester(3.50%) .

ثم اخضع زيت المهوقني لاختبارات بيولوجية كمضاد للميكروبات حيث استخدمت اربعة انواع من البكتريا القياسية وهى :

Bacillus subtilis and *Staphylococcus aureus* (Gram Positive bacteria),
Escherichia coli and *Pseudomonas aeruginosa* (Gram negative bacteria).

ونوع واحد من الفطريات وهو: *Candida albicans*

وقد اوضحت النتائج ان الزيت الثابت لبذور المهوقني يحتوي على مواد مثبطة لعمل الميكروبات.

Abstract

In this study, the fixed oil of *Swietenia mahagoni* was extracted from seeds. The oil was analyzed by gas chromatography-mass spectrometry (GC-MS) and 24 components were identified. Major constituents were: 9-octadecenoic acid (Z)-methyl ester(52.31%), methyl stearate(19.60%), hexadecanoic acid methyl ester(13.99%),methyl 10-trans 12-cis-octadecadienoate(5.92%), eicosanoic acid methyl ester(3.50%) .

The oil was screened for antibacterial and antifungal activities . Cup plate agar diffusion bioassay was used to assess the antimicrobial activity of the oil against Gram positive (*Bacillus subtilis* and *Staphylococcus aureus*), Gram negative bacteria (*Escherichia coli* and *Pseudomonas aeruginosa*) and one fungal species (*Candida albicans*). The results indicate that *Swietenia mahagoni* oil possess bioactive compounds having significant antimicrobial properties.

Dedication

To.....

My husband and children,

My father and mother,

My brothers and sisters

Acknowledgment

First I would like to thank **Almighty Allah** for giving me health, strength and success to perform this work.

I would like to express my deepest indebtedness and gratitude to my supervisor: Prof. Mohammed Abdel Karim for his helpful suggestions, guidance , encouragement and useful criticism throughout the period of the study .

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى :

يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ الَّذِينَ أُتُوا بِالْحَقِّ وَجَاءَتْهُمُ بُرْهَانٌ مِنْ رَبِّهِمْ

صدق الله العظيم

المجادلة (الآية 11)

