

الآية



أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَسُخِّرَ بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا
مِنْهَا وَجَبَّحْنَاهَا لِيَأْكُلُوا مِنْ ثَمَرِهِ إِذَا أَثْمَرَ وَيَنْعِهِ إِنَّ
فِي ذَٰلِكُمْ لَآيَاتٍ لِّقَوْمٍ يُؤْمِنُونَ

صدق الله العظيم

(سورة الانعام - الآية (99))

DEDICATION

To

My lovely mother

To my father

To my brother and sisters

Acknowledgment

My praise and thanks to Almighty Allah the most Gracious who gave me strength to finish this work.

I would like to express my gratitude to my supervisor professor Mohammed Abdelkarime for this careful supervision ,valuable advices and kindness .

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Abstract

In the present study , the fixed oil of *Pithecellobium dulce* (Roxb.)Benth was extracted from seeds using hot continuous extraction (Soxhlet).

The oil was analyzed by gas chromatography – mass spectrometry (GC-MS)and more than 10 fatty acids were identified .the major constituent were : 9,12-octadecadienoic acid (z,z)-,methyl (23.59%) , 9-octadecadienoic acid , methyl ester , (E)-(22,65%) , methyl 20-methylheneicosanoate (13.99%),hexadecanoic acid, methyl ester (12.88%). Minor constituent were tetracosanoic acid, methyl ester (7.45%), methyl stearate (5.78%), methyl 18-methylnonadecanoate (4.33%), 11-eicosenoic acid , methyl ester (3.57%).

The oil was screened for antibacterial and antifungal activities using six standard human pathogens. Agar well diffusion technique was used to assess the antimicrobial activity of the oil against tow Gram positive (*Bacillus subtili and Staphylococcus aureus*), two Gram negative (*Escherichia coli and Pseudomonas aeruginosa*) bacteria and two fungal species (*aspergillusniger and Candida albocans*).

The result indicate that *Pithecellobium dulce* oil possess bioactive compounds having significant antimicrobial properties.

المستخلص

استخلص الزيت الثابت لنبات التمر الهندي ةدرس الزيت بتقنية الكروماتوغرافيا
الغازية – طيف الكتلة حيث اتضح ان الزيت به المكونات الرئيسية التالية:

9,12-octadecadienoic acid (z,z)-,methyl (23.59%) , 9- octadecadienoic
acid , methyl ester , (E)-(22,65%) , methyl 20-methylheneicosanoate
(13.99%),hexadecanoic acid, methyl ester (12.88%).

والمركبات الثانوية هي:

Tetracosanoic acid, methyl ester (7.45%), methyl stearate (5.78%),
Methyl 18-methylnonadecanoate (4.33%), 11-eicosenoic acid , methyl
ester (3.57%).

ثم اخضع الزيت لاختبارات بيولوجية – كمضاد للميكروبات . وقد استخدمت اربعة انواع من
البكتريا القياسية :

Gram positive (*Bacillus subtili and Staphylococcus aureus*), Gram
negative (*Escherichia coli and Pseudomonas aeruginosa*).

ونوعان من الفطريات :

(*aspergillusniger and Candida albocans*).

وقد اوضحت نتائج المسح البيولوجي ان الزيت يحتوي علي مواد مثبطة لعمل الميكروبات
بصورة واعدة .

المخلص

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