



Sudan University of Science and Technology

College of Graduate Studies



Constituents and Antimicrobial Activity of Oils
From *Cucurbita maxima* and *Annona*
senegalensis

المكونات والنشاط المضاد للميكروبات لزيوت نباتى القشطه والكوسا

A Thesis Submitted in Fulfillment for the Requirements of the
M.Sc. Degree in Chemistry

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December, 2021

استهلال

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى :

(قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ)

صدق الله العظيم

سورة البقرة – الآية (32).



Abstract

This research was designed to study two plants of potential medicinal attributes. The oils from these plants were studied by GC-MS and then the antimicrobial activity was evaluated. The GC-MS analysis of *Cucurbita maxima* oil revealed the presence of 29 components dominated by: 9,12-octadecadienoic acid methyl ester(43.19%) . The GC-MS analysis of *Annona senegalensis* oil showed 22 constituents. Major component is : 9,12-octadecadienoic acid methyl ester(38.36%). *Cucurbita maxima* oil showed moderate antimicrobial activity against *Pseudomonas aeruginosa*, *Escherichia coli* and *Candida albicans*. *Annona senegalensis* oil showed moderate antibacterial activity against Gram negative *Pseudomonas aeruginosa* and *Escherichia coli*.

المستخلص

يهدف هذا البحث لدراسة اثنان من النباتات الطبيه الهامه. تم تحليل زيوت هذين النباتين بتقنيه الكروموتوغرافيا الغازيه – طيف الكتله , كما وجرى اختبار نشاط مضاد الميكروبات لهذه الزيوت. اعطى زيت نبات الكوسا 29 مكونا اهمها : حمض 9,12- اوكتاديكادينويك مثليل استر (%43.19). اما زيت نبات القشطه فقد اعطى 22 مكونا اهمها : حمض 9,12- اوكتاديكادينويك مثليل استر (%38.36). وفى اختبار مضاد الميكروبات اعطى زيت الكوسا فعاليه معتدله ضد : *Candida albicans*, *Pseudomonas*, *Escherichia coli*. وفى اختبار مضاد الميكروبات ابدى زيت القشطه فعاليه متوسطه ضد: *Pseudomonas aeruginosa*, *Escherichia coli*.

Acknowledgement

First of all, I would like to thank **Allah Almighty** for giving me the ability and strength to accomplish this work.

I would like to express my gratitude and respect to my supervisor Prof. Mohamed Abdel Kareem for his interest ,close supervision and continuous advice.

Thanks for the staff, Dept. of chemistry, Sudan University of Science and Technology for all facilities.

Also thanks are extended to the technical staff of the Dept. of Taxonomy, Medicinal and Aromatic Plants Research Institute, Khartoum, Sudan for their kind help .

Deep thanks to my family for their infinite support.

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