Dedication

To my parents,

Brothers,

Sisters,

Friends.

Acknowledgement

Praise is to **Allah** the Almighty, who gave me the strength, health and patience to accomplish this work.

I would like to express my deep gratitude and thanks to my supervisor, **Dr. Mohamed Abdelkarim**, for his supervision, personal guidance, support, valuable comments and advice.

I am really grateful to **Ust. Seham Hassan Bashir** for her help.

I am very grateful to the academic staff, technicians and other members of the Department of Chemistry, Sudan University of Science and Technology for their unlimited help.

Thanks for **Dr.Sayadat El-Tigani**, Department of Botany-

University of Khartoum, for authentication of plant sample.

I would to express my sincerest thanks to my **father** for financial support.

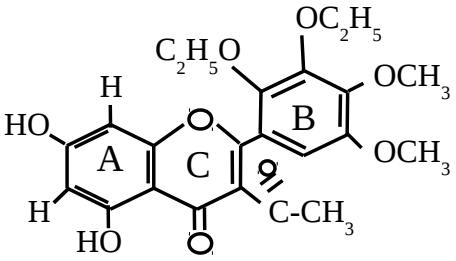
Finally, I owe special thanks to my **family** and friends for their moral and continuous encouragement.

Abstract

In this study the roots of the plant *Khaya senegalensis*, which is widely used in the traditional medicine of Sudan, were phytochemically screened and found to contain flavonoids, tannins, steroids and glycosides. One of the flavonoids (**flavonoid-I**) was isolated and purified by thin-layer chromatography (TLC) on silica gel using the solvent system butanol: acetic acid: water (5:6:2), from the ethanolic extract.

The behaviour of **flavonoid-I** under UV-light, and its colour reactions indicated that it was a flavone.

The **flavonoid-I** was subjected to spectral studies and the following structure was proposed on the basis of its IR, UV, ^{1}H-NMR, and MS spectra.



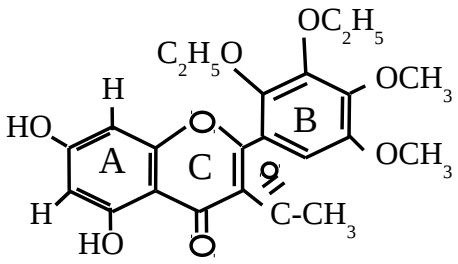
flavonoid-I

الخلاصة

في هذه الدراسة التي أجريت على جذور نبات المهوقني المستخدم بصورة واسعة في العلاج الشعبي في السودان. تم إجراء المسح الكيميائي للنبات وجد أنه يحتوي على فلافونويدات, تانينات, سترويدات وجلايكوسيدات. أحد الفلافونيدات (**فلافونويد-I**) تم عزله وتنقيته بواسطة كروموتوغرافيا الطبقة الرقيقة من المستخلص الإيثانولي باستخدام المذيب بيوتانول :حامض الخليك: ماء (5:6:2).

وقد إتضح من التفاعلات اللونية **للفلافونويد-I** وسلوكه تحت الضوء فوق البنفسجي أنه عبارة عن فلافون.

بعد أن أخضع **فلافونيد-I** لدراسات طيفية وبناء على أطياف الأشعة تحت الحمراء ،الأشعة المرئية– فوق البنفسجية، الرنين النووي المغناطيسي وطيف الكتلة أقترح التركيب أدناه.



فلافونيد-I

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