

DEDICATION

To my parents, for belief

ACKNOWLEDGEMENTS

First, praise be to Allah, the most merciful for blessings of will and patience upon this work.

I take this opportunity to express my profound gratitude and deep regards to my guide, Dr. Elfatih Ahmed Hassan for his exemplary guidance, and monitoring throughout the course of this project. The blessing, help and guidance given by him time to time shall carry me a long way in the journey of life on which I am about to embark.

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ABSTRACT

Acacia senegal, *Acacia seyal* and *Acacia nilotica* gums authentic samples were collected from various areas in Sudan representing a wide range of the natural distribution of these species in the country, namely from states of Blue Nile, Khartoum, Sinnar, and Northern Kordofan. Composite samples were prepared by mixing equal weights from each sample, taken from each location. Glucuronic acid was determined using the carbazole UV method; the results have indicated that *A. seyal* contains 13.00% glucuronic acid among its contents, with a deviation of 0.21% from the average values cited in previous studies. *A. senegal* recorded 16.00% glucuronic acid content with a 0.51% deviation from the average values published results, while *A. nilotica* recorded 10.21% of the glucuronic acid deviating only 0.26% from the average values obtained in by other research workers.

ملخص البحث

جمعت عينات صمغ الهشاب والطلحة والسنط من عدة ولايات تشمل مناطق واسعة من أنحاء السودان كما تمثل التنوع البيئي والأنواع المختلفة لكل منطقة، وقد شملت هذه العينات ولايات النيل الأزرق، الخرطوم، سنار، النيل الأبيض، وشمال كردفان. خلطت العينات التي جمعت من كل ولاية بكميات متساوية لتمثل عينة واحدة وتم تخليصها من الشوائب.

تم تقدير حمض الجلوكونات في كل عينة باستخدام طريقة الكاربازول وتقنية طيف الأشعة فوق البنفسجية، أوضحت النتائج أن حمض الجلوكونات يمثل 13.00% من محتويات صمغ الطلحة، بنسبة حيود 0.21% من معدل نتائج الدراسات السابقة. صمغ الهشاب سجل نسبة مقدارها 16.00% من حمض الجلوكونات ضمن محتوياته بحيود مقداره 0.51% من متوسط نتائج الدراسات السابقة، بينما سجل صمغ السنط نسبة 10.21% من حمض الجلوكونات مما يحيد بنسبة 0.26% فقط من معدل النتائج السابقة.

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