

PDF - EXTRACTION, CHARACTERIZATION AND ANTI MICROBIAL SCREENING OF WHITE STAR APPLE (*Crysophyllum Albidum*) SEED OIL - researchcub.info

ABSTRACT

Crysophyllum albidum oil was extracted from its seed. The percentage yield was 2.56%. The characterization of the oil showed that the refractive index is 1.487, peroxide value is 45.4mg/kg, iodine value is 50.76g, saponification value is 105.188, free fatty acids 47.46 and acid value is 94.92. The Punched Ager Diffusion Method was used to assay for the antimicrobial and anti fungal properties of the oil in the test isolate. The antimicrobial and anti fungal activity showed some inhibitory effects against test organisms; *Staphylococcus aureus*, *E. coli*, *B. subfilis*, *C. albican* and *A. flavons*, but non for *S. pyogens*. The minimum inhibitory concentration of these test organisms are as follows; *Staphylococcus aureus*0.16, *E. coli* 0.06, *B. subfilis* 0.14, *C. albican* 2.50 and *A. flavons* 0.40. The pharmacological screening confirmed the medical value of this plant oil and it established a good support for the sample in herbal medicine and as a base for the development of new drugs and phytomedicine.

CHAPTER ONE

INTRODUCTION

Oil belongs to the body of lipids which is a broad group of naturally occurring hydrophobic molecules that contain carbon. They include fats, waxes, sterols, fats-soluble vitamins, etc. This is divided into saturated and unsaturated fatty acid. Saturated fatty acids are known as fats usually obtained from animals while oil belonging to the unsaturated group is usually gotten from plants.

Crysophyllum albidum (White Star Apple) is a plant grown in the mid-Africa particularly in Nigeria, Cameroon, etc. *Crysophyllum albidum* (G. Don) is a tropical edible fruit tree. It belongs to the family sapotaceae which has up to 800 species and make up almost half the order Ebernales[1]. Okigbo[2] and Okafor[3] reported that a few species of *Crysophyllum* grow in the boarder regions between the forest and Savanna in Nigeria. The plants as reported by Bada[4], can be found in Nigeria, Cameroon, Cote d' Ivoire, Uganda and Niger republic. The species is called different names depending on the locality. The table below shows some locality and names of the species.

SOME LOCALITIES AND THE SPECIE'S NAMES.

LOCALITY	NAME
Igbo	Udala
Yoruba	Agbalumo
Edo	Otien
Scientific Name	<i>Chrysophyllum albidum</i> (G.Don)

Flowering is usually from April to June. The flowers are sessile and occur in clusters in the leaf axils of the fruiting branch. The fruits are normally January to March but the fruit have been seen recently in November. Fruiting branch of *C. albidum*

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