



Phytochemical Investigation of Antimicrobial Seed Extract of *Citrus paradise* Fruits[#]

Rehab Mobark Osman Mohammed*, Saad Mohammed Hussien Ayob

Department of Pharmacognosy, Faculty of Pharmacy, University of AL-Neelain, Khartoum, Sudan

Accepted December 31, 2010

Abstract: The seeds of *Citrus paradise* (Grapefruit) of the family Ructaceae are gaining grounds as important source for treatment in complementary medicine. The Sudanese varieties are one of the best in the market, which prompted investigation of seed extracts. The 96% ethanolic extract exhibited significant antimicrobial activity and highlighted the biological monitoring of activity in order to isolate the active metabolites from the chloroform extract of the seeds. The presence of sterols and triterpenes, carotenoids, flavonoids, coumarins, alkaloids, saponins, tannins and carbohydrates was confirmed by phytochemical screening of the diethyl ether, methanolic and aqueous extracts of the seeds. Isolation of the antibacterial secondary metabolites was achieved by fractionation of the active chloroform extract by sing, liquid solid column chromatographic technique and biological monitoring of activity of column fractions eluted with chloroform and methanol. The composition of fractions was monitored by analytical and preparative TLC, which enabled the isolation of six compounds five of which were identified by IR-spectroscopy as mono-, di- or triglycerides or esters of saturated and unsaturated fatty acids probably of C16 and C18- series. The sixth compound was probably a limonoid of the dominant limonoids in the

Keywords: *phytochemical screening, extract, Citrus paradise seeds, antimicrobial activity, microorganisms, Minerals content, infra red spectroscopy, Inhibition zone.*

*Corresponding: E-Mail: rehabchem@hotmail.com;

[#]This paper has been presented at 11-ICCA, 20-22.11.2010, Luxor-EGYPT