GC- MS Analysis, Phytochemical screening, Antimicrobial and antioxidant Activity of Sudanese Annona *squmosa* seeds Oil.

Abstract:

Statement of the Problem: Literature survey revealed that there was no more study concerning the Oils of the Sudanese material of *Annona squmosa* seeds providing solid scientific evidence for the use of these species in Sudanese traditional medicine. The present work aim to study phytochemical screening and examine the chemical constituent's oil of Annona*squmosa* seeds, Sudan and to assess its potential antibacterial and antioxidant activity. The results showed that Alkaloids, Flavonoid, Carbohydrate, Saponins, Triterpen,Streol,Tannins and phenolic compounds are present in seeds of the *Annonasqumosa* . The Oil of Sudanese *Annonasqumosa* seeds was extracted with n-hexane using Soxhlet extractor .Twenty one components were detected by GC-MS analysis the major constituents are: Hexadecanoic acid (18.48) , Heptadecanoic acid Methyl margarate (1.32), Heptadecanoic acid Methyl margarate (1.32) , 9,12 octadecadienoic acid (Z,Z) (19.29%) , 9 - octadecenoic acid (Z) (34.01%) , Methyl stearate (17.12%
) , , Cis-11-Eicosenoic acid (1.14) and Eicosanoic acid (3.28% . According to DPPH assay the oil showed the moderate antioxidant potential (50 ± 0.09 compare with standard 93± 0.01).The antibacterial activity of the oil was evaluated by paper disc diffusion assay against six standard human pathogens (Gram positive Staphylococcus aureus and Bacillus subtilis; Gram negative: Escherichia coli and Pseudomonasaaeruginosa) .The oil showed high activity against Escherichia coli , Bacillus subtilis and Candida albicans organism. In conclusion, the results showed that oil of Annonasqumosa seeds is a good source of antioxidants due to the presence of phenolic compounds, flavonoids. Also, an excellent source of natural antibacterial, and this justify its uses in folkloric medicines.

Recent Publications

1. Hagr et al.IFRJ 24(Suppl): (2017) Antioxidant capacity and sugar content of honey from Blue Nile State, Sudan , S452-S456.

2. Abdel *et al. wjpls, (2017),* ISOLATION AND PARTIAL STRUCTURE OF A DIHYDRO CHALCONE FROM ACACIA MELIFERA (FABACEAE- MIMOSOIDEAE) *Vol. 3,10, 187-189*.

3. Tuhami *et al. ejbps, 2017, Volume* GC-MS ANALYSIS, PHYTOCHEMICAL SCREENING, ANTIBACTERIAL AND ANTIOXIDANT ACTIVITY OF OIL FROM SUDANESE *PETROSELINUM CRISPUM (L) LEAVES*,4, 6, 301-308.

4. Tuhami *et al. ejbps(2017).*PHYTOCHEMICAL SCREENING, ANTIBACTERIAL ACTIVITY AND GC/MS ANALYSIS OF OIL FROM SUDANESE OKRA *, Volume 4, 8, XX-XX*.

5. Tuhami *et al. ejbps, 2018,* GC-MS ANALYSIS, PHYTOCHEMICAL, AND ANTIMICROBIAL ACTIVITY OF SUDANESE *NIGELLA SATIVA* (L) OIL*, Volume 5, 4 XX-XX .*

6. Hadraha *et al.. ejbps, 2018,* PHYTOCHEMICAL SCREENING AND ANTI-BACTERIAL ACTIVITY OF ETHANOLIC EXTRACT OF STEM BARK OF *COMMIPHORA AFRICANA*GROWN IN SUDAN *Volume 5, Issue 6 XX-XX* .



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