

3rd Annual Congress on**Pollution and Global Warming**

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4th International Conference on**Past and Present Research Systems of Green Chemistry**

October 16-18, 2017 Atlanta, USA

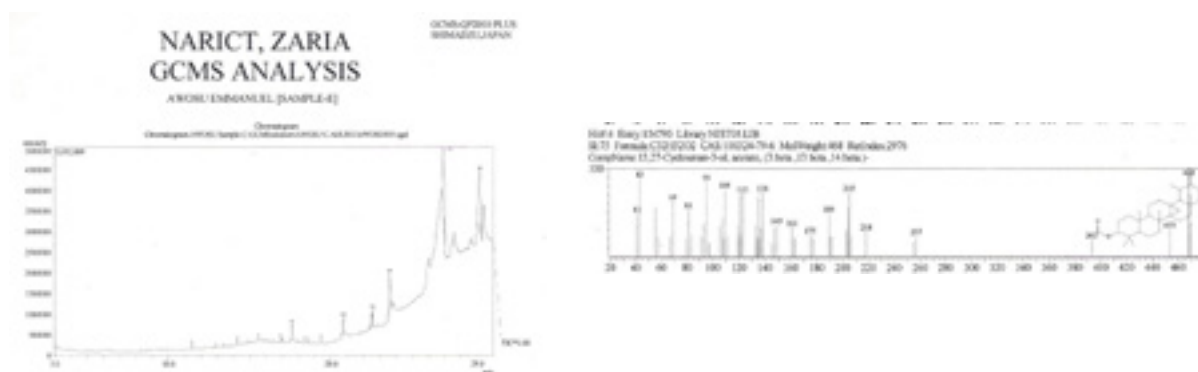
Gas Chromatography-Mass Spectrophotometric (GC-MS) studies on therapeutic potentials of *Costus afer ker gawl* leaves**Cynthia E Ogukwe, Idika D Idika and Emmanuel A Awosu**
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Statement of Problem: The search for new therapeutic agents or biochemical targets and screening of many compounds as possible to find chemical structures for drug development is on the increase. *Costus afer* leaf infusion is used traditionally throughout tropical Africa to treat disorders such as fevers, diarrhea, vomiting, cough, rheumatism, hemorrhage and tachycardia (rapid heart rate). The present study is to identify the specific components of the *Costus afer* leaf that are responsible for some of the reported therapeutic properties it exhibits.

Methodology: Dried leaves of *Costus afer ker gawl* were pulverized to powder with an electric blender. A portion of crude extract from the powdered sample was subjected to Column chromatography. Eluents from the column chromatography were further subjected to GC-MS analysis.

Findings: The obtained prevailing compounds were 13, 27-Cycloursan-3-ol, acetate (36.17%) and lupenone (39.50%) with their retention time as 26.896 min and 29.143 min respectively. Fragmentation pattern is shown in Figure: 1 and mass spectra figures 4a

Conclusion: GC-MS studies on the leaf extract of *Costus afer* showed the presence of two pentacyclic compounds identified as Cycloursan-3-ol, acetate (36.17%) and lupenone (39.50%). The two pentacyclic compounds confirmed the presence of steroids and validate the use of *C. afer* leaf as an anti-inflammatory and antidote for acute toxicity in traditional medicine.

**Biography**

Ogukwe, Cynthia Ekwy Associate Professor -Analytical Chemist of Natural Product and Environmental Samples One goal of the research area is the assessment of the chemical and phytoactive components of Natural product extracts and their application as probable industrial raw material to improve the human health and the environment.

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