

عنوان مقاله:

Screening of phytochemicals in the leaf extract of *Moringa oleifera* by gas chromatography-mass spectroscopy

محل انتشار:

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خلاصه مقاله:

Background and objective: Numerous studies have documented the existence of antimicrobial compounds within different plant components, including leaves, bark, fruit, root, and flowers. *Moringa* species have been extensively studied and documented as plant herbs, primarily due to their exceptional nutritional and medicinal characteristics. This study aimed to carry out phytochemical screening of *Moringa oleifera* extract using gas chromatography-mass spectroscopy technique. Materials and methods: For extraction, 100 ml of ethanol per gram of plant leaf powder was used. The ethanolic extract was subjected to vacuum drying at 40 °C. Then, 10 mg of dry extract was solubilized in 1 ml of ethanol. The phytochemicals extracted from *Moringa oleifera* leaves were analyzed using gas chromatography-mass spectrometer. Results and conclusion: Eleven compounds were detected through the gas chromatography-mass spectrometry (GC-MS) analysis of the leaf extract of *M. oleifera*. Among these compounds, the most prevalent were methyl (E)-11-octadecanoate, accounting for 30.15% of the identified compounds, and cis octadecanoic acid, which constituted 19.16% of the total compounds. This study has demonstrated that the leaf extract of *M. oleifera* possesses phytochemical compounds that have the potential to serve as substitutes for antibiotics, antihelminthics, and antivirals against various infectious agents. Additionally, they can function as nutritional supplements for non-infectious diseases. Moreover, they exhibit antioxidant properties and can be utilized as flavor enhancers

کلمات کلیدی:

Medicinal properties, bioactive compounds, Rigasa, Nigeria

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