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Chemical composition of ethanolic extracts of some wild mushrooms from Tanzania and their medicinal potentials

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Chemical composition of ethanolic extracts of some wild mushrooms from Tanzania and their medicinal potentials

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Abstract

The ethanolic extracts of 5 edible and inedible wild mushrooms collected from the Southern Highlands of Tanzania were characterized by gas chromatography–mass spectrometry. A total of 75 chemical compounds were obtained, mainly fatty acids, carotenoids, alkaloids, phenols, terpenes, steroids, pyranoside, saccharides, and amino acids. Chemical compounds were identified from the ethanolic extract of *Russula cellulata*, *R. kivuensis*, *Lactarius densifolius*, *L. gymnocarpoides*, and *Lactarius* sp. In addition, mass spectra of 4 major groups of compounds were also determined. This study confirms the presence of some important bioactive compounds, such as essential fatty acids (oleic and linoleic), amino acids, and carotenoids. The reported chemical profiles give an insight into the use of wild mushrooms as a potential source of bioactive compounds for nutraceuticals and pharmaceuticals.

Keywords

Bioactive compounds, Chemical characterization, Ethanolic extracts, Medicinal mushrooms, Wild mushrooms