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GC-MS Analysis of Bioactive Constituents of *Curcuma leucorrhiza* Roxb. (Zingiberaceae) Rhizome Extract

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Abstract

Curcuma leucorrhiza Roxb., commonly known as Yanghou in Manipuri, is a tuberous plant. The rhizomatous tubers have been used by the indigenous people of Manipur, North-East India, for the treatment of enlarged liver and spleen, stomach ulcer, diabetes, and cancer, hence this study forms a basis for the establishment of active components present in it. The present study conducted phytochemical screening of petroleum ether, chloroform, and ethanol extracts of *Curcuma leucorrhiza* rhizomes. The rhizome extracts were prepared sequentially from low-polarity to high-polarity solvents, viz., petroleum ether, chloroform, and ethanol. In comparison to other extracts, the ethanolic extract showed the presence of all the important phytoconstituents such as flavonoids, alkaloids, tannins, glycosides, steroids, cardiac glycosides, saponins, carbohydrates, and proteins. On this basis, the GC-MS analysis of the extract was carried out and revealed the presence of 34 compounds. The present study will be very helpful for the isolation of bioactive compounds from the extract of the plant for medicinal applications.

Keywords: *Curcuma leucorrhiza* Roxb., Phytochemicals, Extracts, Bioactive compounds, GC-MS

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