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Identification of Active Phytocomponents in the Ethyl Acetate Extract of Glycosmis pentaphylla Retz. DC by Using GC-MS

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Abstract : Glycosmis pentaphylla is one of the medicinally important plants belonging to the family Rutaceae, commonly known as “Anam or Panal” in Tamil. Traditionally, leaves are useful in fever, hepatopathy, eczema, skin disease, helminthiasis, wounds, and erysipelas. The fruits are sweet and are useful in vitiated conditions of vata, kapha, cough, and bronchitis. The roots are good for facial inflammations, rheumatism, jaundice, and anemia. The preliminary phytochemical investigations indicated the presence of alkaloids, terpenoids, flavonoids, tannins, sugar, glycoside, and phenolic compounds. In the present study, the root part of Glycosmis pentaphylla was used, and the root was collected from Western Ghats of South India. The root was sun/shade dried and pulverized to powder in a mechanical grinder. The powder was successively extracted with various solvents, and the ethyl acetate extract of Glycosmis pentaphylla has been subjected to the GC-MS analysis. Amongst the 46 chemical constituents identified from this plant, three major phytoconstituents were reported for the first time. Marmesin, a furanocumarin compound with the chemical structure 7H-Furo (3,2-G) (1)Benzopyran-7-one,2,3–dihydro–2 - (1-Hydroxy-1methylethyl)-(s) is one of the three compounds identified for the first time at the concentration of 11-60% in ethyl acetate extract of Glycosmis pentaphylla. Others include, Beta.-Fagarine (4.71%) and Paverine (13.08%).

Keywords : ethyl acetate extract, Glycosmis pentaphylla, GC-MS analysis, Phytochemicals
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