

Major volatile hydrocarbons of rice paddy herb, *Limnophila aromatica* Lam. Merr as possible chemotaxonomic marker

Abstract

Rice paddy herb, *Limnophila aromatica* Lam. Merr, is a tropical flowering plant in the plantain family, Plantaginaceae, and flourishes in a hot, watery environment, particularly rice fields. It is known to have a distinct flavour and aroma reminiscent of lemon/cumin, and used as salad in diet by Southeast Asian communities. The essential oil from *L. aromatica* from Tuaran (Sabah) was extracted and analysed, a total of 36 volatile organic constituents were identified. Detailed analysis revealed the presence of only seven major volatile compounds (amyl vinyl carbinol, terpinolene, β -linalool, sabinene, terpinen-4-ol, α -humulene, aromadendrene) in the range of 3.02 % to 30.06 %. These volatiles could be grouped into monoterpene (44.10 %), oxygenated monoterpene (32.15 %), sesquiterpene (20.87 %), oxygenated sesquiterpene (1.2 %) and oxygenated diterpene (2.27 %-1.5 1%). Interestingly, the presence of sabinene, terpinen-4-ol and α -humulene were found in a high percentage and could be suggested as chemotaxonomical markers of this herb.