

Chemical Composition of essential oil from *Etingera coccinea* (Blume) S. Sakai & Nagam in Kadamaian, Kota Belud, Sabah

ABSTRACT

Etingera coccinea (Blume) S. Sakai & Nagam is a member of Zingiberaceae family. It is commonly known as 'Tuhau' in Sabah, Malaysia and consumed as a local delicacy and used as a traditional remedy for stomachache, food poisoning, and gastric problems. The plant has been reported to have bioactive properties such as anticancer, antioxidant and antibacterial. Due to the high demand for this bioactive compound in national and international markets, chemical profiling of leaves, stems and rhizomes from *E. coccinea* was carried out. Eight germplasms were collected from Trail 1 (Kg. Gensurai) and Trail 2 (Kg. Melangkap Noriou) and submitted to the hydrodistillation process to obtain the essential oil before analysing with GC-MS. From the result obtained, a total of 85 compounds were found and 26 of these were terpenoid compounds. There are several classes of compound present in different parts of *E. coccinea*, such as, monoterpene, sesquiterpene, alcohol, aldehyde, alkane, alkene, ketones, fatty acids derivatives, esters, amines as well as norterpene. Most of the compounds found in *E. coccinea* are monoterpenes at 18 compounds, followed by alcohols (14 compounds), alkanes and alkenes (12 compounds), sesquiterpenes (8 compounds), aldehydes (7 compounds), ketones, fatty acid derivatives, esters (4 compounds), and lastly, amine and norterpene, one compound each. However, total terpenoids from all plant parts from both sites were less than 50% of total abundance. Only the rhizome part from site 2 showed the highest terpenoid abundance (43.34%). Hence, the identified compounds from the study could be expended for large-scale profiling to obtain higher yields of important constituents.