

Chemical composition and antioxidant activity of essential oil of leaves and flowers of *Alternanthera sessilis* red from Sabah

ABSTRACT

In the present study, chemical composition and antioxidant activity of essential oil from the aerial parts of *Alternanthera sessilis* red has been investigated. The chemical composition of essential oil of *A. sessilis* red was determined by GC-MS analysis. Determination of antioxidant nature of *A. sessilis* red was carried out by 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging method using butylated hydroxytoluene (BHT) as the positive control. The major components of essential oil of leaves, as analyzed by the GC-MS were found to be 1,1,1,5,5,5-hexamethyl-3,3-bis(trimethylsilyloxy)trisiloxane (15.43%), S,S-dioxide trans-2-methyl-4-Npentylthiane (11.27%), didodecylphthalate (10.62%) and tetrahydro-2,5-dimethoxy furan (10.01%). However, the major components of essential oil of flower were 1,1,1,5,5,5-hexamethyl-3,3-bis(trimethylsilyloxy)trisiloxane (17.76%), trans-4-ethyl-5-octyl-2,2-bis(trifluoromethyl)-1,3-dioxolane (11.12%) and tetrahydro-2,5-dimethoxy furan (9.10%).