CHEMICAL COMPOSITION AND LIPOXYGENASE INHIBITORY ACTIVITY OF THE ESSENTIAL OIL OF *ALSTONIA ANGUSTILOBA*

Wan Mohd Nuzul Hakimi Wan Salleh [a*], Muhammad Helmi Nadri [b], Shamsul Khamis [c]

[a]*Department of Chemistry, Faculty of Science and Mathematics, Universiti Pendidikan Sultan Idris, 35900 Tanjong Malim, Perak, Malaysia*
[b]*Innovation Centre in Agritechnology, Universiti Teknologi Malaysia, 84600 Pagoh, Johor, Malaysia*
[c]*School of Environmental and Natural Sciences, Faculty of Science and Technology, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia*
**e-mail: wmnhakimi@fsmt.upsi.edu.my; Phone: +6015-48797123*

Abstract. This study was aimed to investigate the chemical compositions and lipoxygenase inhibitory activity of the essential oil from *Alstonia angustiloba* growing in Malaysia. The essential oils were obtained by hydrodistillation and fully characterized by gas chromatography (GC-FID) and gas chromatography-mass spectrometry (GC-MS). Analysis of the *A. angustiloba* essential oil resulted in the identification of twenty-five chemical components, attributed 90.8% of the total oil. The most abundant components of *A. angustiloba* oil were linalool (21.2%), 1,8-cineole (16.8%), α-terpineol (9.5%), terpinene-4-ol (8.5%), *β*-caryophyllene (6.2%), and caryophyllene oxide (5.2%). The essential oil displayed moderate activity towards lipoxygenase activity with IC_{50} value of 45.8 μg/mL. To the best of the authors' knowledge, this is the initial study that had looked into the essential oil composition of *Alstonia angustiloba* collected from Malaysia.

Keywords: essential oil, hydrodistillation, lipoxygenase, *Alstonia angustiloba*, Apocynaceae.