

Chemical Constituents and Biological Activities of Essential Oils from Four Species of Bamboo Genus *Schizostachyum*

ABSTRACT

Volatile chemical constituents of four species of local bamboo (*Schizostachyum blumei* Nees., *Schizostachyum brachycladum* Nees., *Schizostachyum lima* (Blanco) Merrill and *Schizostachyum pilosum* S.Dransf.) were investigated. The oils were obtained from bamboo culm through steam distillation and profiled using Gas Chromatography-Mass Spectrometry (GCMS). A total of 59 volatile constituents were identified, and these contained oxygenated sesquiterpene, α -elemol (8.2~21.1 %), coumaran (6.7~32.3 %), guaiacol-4-vinyl (0.6~0.9 %), palmitic acid (1.5~25.6 %), pentacosane (0.1~0.2 %), phytol (1.0~12.6 %), phytol acetate (0.5~1.7 %) and trans-squalene (0.2~1.6 %) consistently in the specimens studied. Based on the observation, *S. pilosum* exhibited wider diameter of inhibition against *Escherchia coli* and *Staphylococcus aureus* compared to the other species of *Schizostachyum* essential oil.