Chemical composition and repellent activity against mosquito aede s aegypti of pelargonium radula, Syzygium aromaticum and Citrus a urantifolia essential oils

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Abstract:
The mosquito Aedes aegypti is an epidemic vector of several diseases such as dengue fever and yellow fever. Several pesticides are used to control the mosquito population. Because of their frequent use, some mosquitoes have developed resistance. In the present study, we evaluated the synergistic mosquito-repellent activity of essential oils from Pelargonium radula, Syzgium aromaticum and Citrus aurantifolia against Aedes aegypti by using Y-tube olfactometer. The oils was subsequently analyzed by using GC–MS. These results clearly reveal that the essential oil of C. aurantifolia served as the most potent repellent agent against Aedes aegypti . The results indicate that three constituents; limonene (19.58%) followed by β–pinene (17.12%), geraniol (13.23%) which comprise a large proportion of the C. aurantifolia are likely responsible for the observed repellent activity.

Keywords: Aedes aegypti; Citrus aurantifolia; Essential Oil; Pelargonium radula; Repellent; Syzgium aromaticum

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