Abstract

Ethnopharmacologically, the mango has a lot of applications in life in human health and ethnoveterinary medicines since ancient times. The study aimed at characterizing the essential oil of *Mangifera indica* L. leaves and evaluating its repellent effect on the host-seeking female *Anopheles gambiae*, the vector of African malaria. The essential oil was obtained by hydrodistillation and analyzed by gas chromatography (GC) and gas chromatography-mass spectrometry (GC-MS). The repellent effect of the essential oil was evaluated using the human-bait technique to simulate field situation. Of the 26 major hydrocarbon compounds identified, α-pinene occurred in the largest amount (33.3 %), followed by α-phellandrene (22.6 %), Limonene (13.2 %), p-cymene (6.1 %), Heptane (3.8 %), β-pinene (2.6 %), Ledene (1.3 %), (-)-α-gurjunene (1.2 %), β-myrcene (1.1 %), γ-terpinene (1.0 %), (+)-2-carene (0.9 %) and *trans* (β)-caryophyllene (0.9 %) in that order. The oil showed a significant dose-dependent repellent effect on host-seeking female *Anopheles gambiae s.s.* The oil showed a complex composition of hydrocarbon compounds and may be richer in monoterpenes than in any other type of compounds. It showed the potential to repel mosquitoes.