



Chemical composition of *Baccharis dracunculifolia* essential oil and its larvicidal activity against *Lucilia cuprina* (Diptera: Calliphoridae) using ethanol as a vehicle.

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Essential oils are complex, volatile natural compounds produced by herbs. They are among the most tested substances for use in insect control, acting as contact insecticides, repellents, antifeedant agents, besides the possibility of changing some biological parameters. Native from Brazil, *Baccharis dracunculifolia*, popularly called "field rosemary", belongs to the Asteraceae family and consists on the biological origin of green propolis. The acaricide activity of *B. dracunculifolia* essential oil was recently proven and suggests that this species also has the potential for research as an insecticide. *Lucilia cuprina* arouses attention because there is evidence of primary myiasis caused by these flies. Essential oils are of interest since they consist of a complex mixture of chemical compounds which gives them different biological activities. Thus, the present study evaluated the essential oil activity of *B. dracunculifolia* grown in the state of Santa Catarina, on the third instar of *L. cuprina* under "in vitro" conditions. The essential oil was extracted from the shoots of approximately 50 plants using a Clevenger apparatus and its chemical composition was determined by GC / MS. For mortality evaluation groups of 20 larvae (F2) were exposed in bottles (9 x 4 cm) containing filter paper impregnated with 0.3 ml of the essential oil solubilized in absolute ethanol at concentrations of 357.8, 173.9, 87.2, 41.1, 18.9 mg / ml, equivalent to 40, 20, 10, 5 and 2.5% oil, respectively, using four replicates for each treatment / concentration. The larvae were maintained at room temperature with 27 ° C ± 1 ° C and relative humidity of 70 ± 10% observing mortality between 24 and 48 hours. Essential oil of *B. dracunculifolia* analysis identified 101 compounds by comparing the mass spectra and retention indices. The major constituents detected were β-pinene (9.9%) limonene (9.5%), nerolidol (7.9%) and caryophyllene (7.6%). Lethal dose DL₁₀, DL₅₀ and DL₉₀ after 24 and 48 hours of exposure were 41.63, 82.38, 123.13 and 38.15, 75.69, 113.23 mg / ml, respectively. Thus, it can be concluded that the essential oil of *B. dracunculifolia* shoots when diluted with absolute ethanol as a vehicle has activity on of *L. cuprina* larvae, demonstrating potential use as an insecticide.

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