



Analysis of the essential oils of two species of the genus *Lantana* (Verbenaceae) from La Cumbre, Valle del Cauca, Colombia.

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The genus *Lantana* belongs to the Verbenaceae family and contains approximately 314 described species, of which 131 are accepted (1). This type of plants originally comes from tropical and subtropical regions of America (2). Nevertheless, during the XVII and XVIII centuries they were introduced to Europe as ornamental plants, fact that explains their presence in some countries of Asia and Africa (3). Different studies have verified that the essential oils of some species of the genus *Lantana*, present biological activity on different pathologies such as: tetanus, malaria, rheumatism, bronchitis, among others (3,4). The essential oils of *Lantana alba* (known also as *Lippia alba*), and *L. colombiana*, were obtained by microwave-assisted hydrodistillation (MWHD). Oil yields were 0.02% (w/w) in both cases. The oils were analyzed by GC/MS in an Agilent Technologies 6890N system, with DB-5MS and DB-WAX capillary columns (60 m x 0.25 mm, I.D x 0.25 μ m). The injector port temperature was 250°C. A 30:1 split injection was used. Oven temperature was raised from 45°C to 150°C, at 4°C /min, it was increased to 250°C (5 min), at 5 °C /min, and to 275°C (15 min), at 10°C /min. Oil components were identified by comparison of both, mass spectra and linear retention index with spectral databases (Wiley, NIST) and literature. The main components of the essential oil of *L. alba* and *L. colombiana* were: germacrene D (35.2% and 32.0%, respectively); α -humulene: (23.8% and 8.8%); *trans*- β -caryophyllene (16.2% and 27.2%), and bicyclogermacrene (6.9% and 20.2%). In a study made in Brazil, the essential oil of *L. alba* was collected in Chaves, Santa Maria and Belterra (municipalities of Pará State). It was observed that only the material collected in Chaves, containing neral (13.7%), geranial (22.5%), germacrene D (25.4%) and *trans*- β -caryophyllene (10.2%) presented a similar composition with those of *L. alba* and *L. colombiana* collected in Colombia (5). La Cumbre (Colombia) and Chaves (Brazil) have a medium altitude and a subtropical weather (6) and the compositional difference between them was the presence of main components neral and geranial in *L. alba* from Brazil. These differences could be the result of variables such as soil type, sun or shade area, diseases, vegetative stage, age and genetics.

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