

Composition and antifungal activity of *Sphagneticola trilobata* Pruski (Asteraceae) volatile oils collected in different biomes

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Sphagneticola trilobata (Asteraceae) is a native Brazilian herbaceous plant, commonly known as *vedélia*, used in folk medicine to treat a variety of illnesses, such as headaches, fevers, infections and respiratory pathologies. The geographical origin, soil characteristics and climate differences may influence in quantitatively and/or qualitatively the essential oils chemical composition. The present work analysed the composition and antifungal activity of the volatile oils from *S. trilobata* collected at two different biomes from São Paulo state: two populations from Atlantic Rain Forest (São Paulo [SP] and Paranapiacaba [PARN]) and one from the Brazilian Cerrado (Mogi-Guaçu [MGÇ]). Fresh aerial parts were hydrodistilled in a Clevenger apparatus during four hours and analysed by GC and GCMS. The antifungal activity was determined by the bioautography method as described by Homans & Fuchs with the fungus *Cladosporium sphaerospermum* (Penzig). The yields (w/w) were 0.21, 0.11 and 0.09% for SP, PARN and MGÇ respectively. The chemical composition of the volatile oils obtained from these three locations was quantitatively distinct. The main components of the oils were: SP - β -Pinene 45.2%, α -Phellandrene 16.0%, α -Pinene 15.7% and Limonene 8.8%; PARN - α -Pinene 29.8%, β -Pinene 22.0% and α -Phellandrene 14.3% and MGÇ - α -Pinene 28.7%, α -Phellandrene 18.4% and Limonene 15.5%. The oil from the population of the Brazilian Cerrado showed strong inhibitory activity against the fungus tested. The oil from the Atlantic Rain Forest at PARN showed lower activity and SP did not show growth inhibition. The highest percentage of limonene in the composition of the volatile oil from MGÇ plants might have had influence in the activity found, either for intrinsic activity or synergism with other compounds in the oil.

Keywords: Wedelia, essential oil, Atlantic Rain Forest, Brazilian Cerrado, *Cladosporium sphaerospermum*

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