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LEAF VOLATILES OF *Neomitranthes obscura* (MYRTACEAE) FROM MASSAMBABA RESTINGA, RIO DE JANEIRO

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Introduction

The Atlantic coast sandbanks (restingas) in Brazil are one of the mapped biodiversity hotspots. This ecosystem presents a diverse flora, and Myrtaceae is one of the most important families in this plant community. The restinga of Massambaba is an environmental protection area created in 1986, with a wide area of sandy coastal plains, lagoons and low hills. Neomitranthes obscura is a large evergreen shrub or small tree, reaching from 1.5 to 5 m high. The genus Neomitranthes is restricted to Brazil and N. obscura is an endemic species of the Brazilian Atlantic Forest. It is popularly known by local population as cambuí-preto. In Brazil, N. obscura is commonly used for intestinal disorders and as food (Santos et al., 2009; Sobral et al., 2014). This study aimed to identify the composition of the essential oil from the leaves of N. obscura collected in the restinga of Massambaba.

Method

Leaves of Neomitranthes obscura N. (DC.) Silveira were collected from three individual plants growing in open shrub formation in the restinga of Massambaba surrounding the Jaconé Lagoon, City of Saquarema, Rio de Janeiro, Brazil. Marcelo da Costa Souza (Rio de Janeiro Botanical Garden, Brazil) The taxonomic identification of N. obscura was performed by Marcelo da Costa Souza (Rio de Janeiro Botanical Garden, Brazil). The oils from the fresh leaves were isolated separately by hydrodistillation for 3 h using a Clevenger-type apparatus. The oils were analyzed in Agilent 7890A GC-FID and 5973N GC-MS equipped with HP5-MS (5%-phenyl-95%-methylsilicone, 30 m x 0.25 mm x 0.25 μm) fused silica capillary columns (n=3). The initial oven temperature was 60°C, then raised to 240°C at 3°C/min and hold for 10 min. Hydrogen was used as carrier gas for FID and helium for MS, both at a flow rate of 1.0 mL/min. The injector was maintained at 250°C and detector (FID) was kept at 280°C. Mass spectra were obtained in electronic ionization mode at 70 eV. Quantification was performed by the normalization method from the electronic integration of the FID peak areas. Constituents were identified by comparison of both mass spectra and GC retention indices with those from NIST and Wiley libraries, as well as literature data (Adams, 2007).

Results / Discussion / Conclusion

The essential oils are composed manly by sesquiterpenes. A high content of β-caryophyllene (39%) was found in N. obscura from Massambaba (Jaconé Lagoon). Limonene and β-ocimene were the main monoterpenes representing 0.3%.

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