



Chemical composition of essential oil from leaves of *Spiranthera odoratissima* A. St.-Hil. (Rutaceae) in the Brazilian Cerrado.

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The Brazilian Cerrado (Tropical Savanna) is known for its biodiversity, with around 12,000 species found in this biome. The Rutaceae family presents a large variety of secondary metabolites that are flavored due the presence of essential oils. *Spiranthera odoratissima* is classified as a subshrub, and popularly known as manacá, and its leaves are frequently used like a medicinal tea to blood cleanser, to kidney and liver disorders (1,2,3). The aim of this study was to compare the yield and composition of essential oil of the manacá in 4 different times of extraction. The samples were collected in Luziânia/GO city, in July 2014 and dried at room temperature. The samples were crushed and designed to hydrodistillation in a Clevenger-type apparatus, modified by different times (3, 4, 5 and 6 h). Leaf essential oils obtained were analyzed using a gas chromatograph coupled to a mass selective detector (GC/MS), Shimadzu QP5050A, using an ionization voltage of 70 eV. A fused silica capillary column was utilized (CBP- 5; 30m X 0.25mm X 0.25 μ m) and helium was used as the carrier gas at a flow rate of 1 mL min⁻¹. The temperature program used was as follows: ramp up from 60 to 240 °C at 3°C min⁻¹, increase to 280 °C at 10 °C min⁻¹, and complete with 10 min at 280 °C. The injection volume was 1 μ L diluted with hexane at a ratio 1:5. The essential oil constituents were identified by comparing their mass spectra with those from the National Institute of Standards and Technology (NIST, 1998), as well as by comparing the mass spectra and calculated linear retention indices (LRI) with values in the literature. The yields obtained in the extraction of 3, 4, 5 and 6 h were 2.07; 1.65; 1.12 and 1.37 %, respectively. It was identified 23, 17, 18 and 19 different compounds in each extract, and in majority components found in the samples were sesquiterpenes like β -caryophyllene (19.9 % - 3 h; 20.5 % - 4 h; 23.5 % - 5 h and 22.9 % - 6 h), γ -muurolene (34.6 % - 3 h; 36.3 % - 4 h and 30.1 % - 5 h), bicyclogermacrene (22.4 % - 3 h; 20.8 % - 4 h; 19.3 % - 5 h and 19.4 % - 6 h) and amorpho-4,7(11)-diene (29.2 % - just at 6 h). Pearson correlation was used to determine the real level of association among the components with the different extraction time. Therefore, considering the extraction time, β -caryophyllene presented a significant positive correlation (R=0.87; α = 15 %), and bicyclogermacrene showed a strong negative correlation with the extraction time (R= -0.93; α =10 %).

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