



### Characterization of the essential oil of *Vernonia polyanthes* Less.

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Keywords: Essential oil, medicinal plant, Cerrado.

*Vernonia polyanthes* Less. is a shrubby plant native to common Asteraceae family in the Cerrado of São Paulo, Minas Gerais and Goiás. Popularly known as assa-peixe, assa-peixe branco, estaca-sangue, tramanhém, mata-pasto, cambará-guassu, cambará-do-branco, erva-preá and enxuga (1). Their leaf are used to treat disorders of the respiratory tract, kidney problems, fractures, indicated also as tonic, diuretic and emenagoga and is currently present in RENISUS list (2). It has alkaloids, glycosides, flavonoids and essential oils in your phytochemical composition. In a study conducted in Minas Gerais using the assa-peixe oil in controlling anthracnose, the major compounds were found: Germacrene D (4.2 %) and bicyclogermacrene (17.2 %) (3). Therefore, this study aimed to analyze the chemical composition of the essential oil of *V. polyanthes*. The plant material was collected in native area located in the didactic orchard of the Department of Horticulture and deposited in the Herbarium Irina Delanova Gemtchujnicov, Universidade Estadual Paulista, Botucatu, and registered as BOTU 2579-roast-fish. It was used 50 g of dry biomass for leaf essential oil extraction. The essential oil was extracted by hydrodistillation in Clevenger apparatus, for 120 min. The chemical composition of the essential oils was performed on a gas chromatograph coupled to a mass spectrometer (GC/MS) equipped with an DB-5 fused silica capillary column (30 m X 0.25 mm X 0.25 mm). The GC oven temperature was programmed at 60 to 230 °C, 3 °C min<sup>-1</sup>. The following chromatography conditions were used: injector at 240 °C, detector at 230 °C, injection volume 1 µL of solution (1 mg of essential oil/1 mL of ethyl acetate), helium as the carrier gas (1.0 mL min<sup>-1</sup>). Fourteen components, which accounted for 98.2 % of the total oil composition, were identified: germacrene D (25.0 %), *trans*-caryophyllene (19.5 %),  $\alpha$ -humulene (16.4 %), bicyclogermacrene (9.0 %), n-tricosane (8.7 %),  $\alpha$ -copaene (5.8 %), caryophyllene oxide (3.1 %), germacrene A (2.6 %),  $\beta$ -elemene (2.5 %), *allo*-aromadendrene (2.5 %), spathulenol (1.8 %),  $\delta$ -cadinene (1.5 %), 14-hydroxy-caryophyllene (0.8 %),  $\beta$ -bourbonene (0.7 %). Given the results, it is concluded that despite the majority compound is the same in both locations, there are differences in the levels of each substance, demonstrating the influence of the environment on the chemical composition of the essential oil.

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Acknowledgements: CAPES.