



Secretory structures of *Vernonia polyanthes* Less sheets and production of essential oils in different seasons.

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Vernonia is one of the most complex genres from a taxonomic point of view due to the high diversity of its biological forms. *Vernonia polyanthes* Less., popularly known as assa-peixe or assa-peixe branco, is a common wild species in the cerrado of Minas Gerais, São Paulo, Mato Grosso and Goiás. The representatives of this species are shrubs or small trees, reaching an average of 2.5 meters high. The leaves have disposal alternate, with short petioles, lanceolate, serrated edges, attenuated base and acute apex. They are rough on the abaxial surface and hairy on the adaxial and have about 13 cm long and 3 cm wide (1). The essential oils extracted from its leaves are important in the treatment of colds, flu, bronchitis, bruises, hemorrhoids and infections of the uterus (2). Through the phytochemical characterization of its aerial parts, it was reported the presence of fixed acids, alkaloids, amino compounds, coumarins, steroids, triterpenes, anthraquinone glycosides, flavonoid glycosides, saponins and hydrolysed glycosides (3). However, despite the medical importance of this species, detailed studies of the producer sites such as biologically active substances are scarce. The objective of this study was to identify the main essential oils production sites in the leaf blade of *V. polyanthes*, seeking to assess whether the production of these substances occur in different seasons. Expanded leaves were collected from adults at the vegetative stage in the didactic orchard of the Department of Horticulture, FCA, UNESP, Botucatu, São Paulo, in three different periods - November 2014, February and May 2015. Samples of fresh material were freehand sectioned, processed according to conventional light microscopy techniques and treated with Nadi reagent. Essential oils were detected in epithelial cells and in the lumen of secretory cavities in glandular trichomes and glandular located on both sides of the leaf blade and leaf common mesophyll parenchyma cells, in the three periods. Thus, it can be concluded that the synthesis and storage of essential oils occur in different secretory structures during all times analyzed, requiring quantitative and qualitative assessments of the secreted content to determine possible differences in the yield and chemical composition of substances produced.

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