Essential Oil of *Piptocarpha angustifolia* Dusén *ex.* Malme

Aurea Portes Ferriani, Tânia Fabiana Dlugoviet, Cícero Deschamps, Beatriz Helena L. N. S. Maia

Universidade Federal do Paraná - Paraná, Brazil
aurea.portes@hotmail.com

Keywords: Vassourão-branco, essential oil, Brazilian native species.

The *Piptocarpha* genus (Asteraceae) is represented by 9 woody species belonging to Mixed Ombrophilous Forest (MOF) from Paraná State, being 4 climbing plants (1) and 5 trees. *Piptocarpha angustifolia* is a native tree and its forestry use includes production of softwood shading of crops and ecosystem recovery. In the present work, the chemical composition of the essential oil from leaves and inflorescences of *P. angustifolia* collected was investigated. This is the first study of essential oil of this species. The leaves and inflorescences were collected from adult tree (30 cm DAP) in winter 2014 in Piraquara city – Paraná State and a voucher specimen was deposited in the Herbarium of Museu Botânico Municipal de Curitiba. The plant materials (70 g) were submitted to hydrodistillation separately for 4 h in a Clevenger-type apparatus in triplicate. The oils were analyzed by GC/MS in Shimadzu GC-2010 systems coupled with a mass spectrometer detector Shimadzu GCMS-QP2010 Plus. The GC/MS measurements were performed using a non-polar capillary column Rtx-5MS (5% diphenyl and 95% dimethyl polysiloxane, 30 m x 0.25 mm x 0.25 µm) operated under a temperature-programmed condition from 60 °C to 250 °C at 3 °C min^{-1}. The carrier gas was helium with a flow rate of 1.02 $mL.min^{-1}$, injection volume of 1.0 µL in split mode (ratio 1:10). Oil components were identified by comparison of both arithmetical index (based on a homologous series of hydrocarbons from 9 to 22 carbons analyzed in the same conditions) and mass spectra with literature and spectral library. It was possible to identify 58 and 22 compounds in the essential oil of the leaves and inflorescences, respectively. The chemical composition of the essential oil of leaves showed mainly oxygenated sesquiterpenes (44.38%), monoterpenes (17.88%) and sesquiterpenes (10.7%) comprised to monoterpene limonene (13.45%) and oxygenated sesquiterpene helifolen-12-al syn-syn-syn (13.29%) with smaller abundances of sesquiterpenes. The essential oil of inflorescence is rich in oxygenated sesquiterpenes (66.28%), mainly comprising thujopsan-2-α-ol (17.77%), spathulenol (13.39%) and α-cadinol (11.28%). The yields of essentials oils of leaves and inflorescence were not determined because of small quantities. The antimicrobial activity and pest control will be evaluated.

1. Grokoviski, L.; Cervi, A.C.; Tardivo, R.C. Acta Bot. Bras., 2009, **23**, 486-498.

Acknowledgements: UFPR, Herbário do Museu Botânico Municipal de Curitiba.

ISBN: 978-85-66836-11-0