Chemical composition and antioxidant activity of essential oil from *Ocimum campechianum* Mill and methyleugenol standard.

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Keywords: *Ocimum campechianum*, essential oil composition, methyleugenol, antioxidant.

Brazil is the country with greater genetic diversity in the world, in which many vegetable species are studied to evaluate their pharmacological activity (1). *Ocimum* (Lamiaceae) is a genus with about 160 species and innumerable varieties distributed at least three main centres of diversity: tropical parts of Africa, South America and Asia (2). It contains around 30 species native to the tropics and subtropics of the Old and New world (3). In Pará State, *Ocimum* spp. are cultivated in gardens, in the countryside, on small farms and used in the treatment of many diseases, as well as culinary ingredient. It is sold in open markets from Belém city, mostly in the Ver-o-Peso market. *Ocimum campechianum* Mill (syn *Ocimum micranthum* Willd) is a native shrub of Brazil, popularly known as alfavaca and alfavaca-do-campo. The specimen was collected in the municipality of Abaetetuba, Pará state, Brazil. A voucher specimen (MG 213374) was deposited in the Herbarium of Museu Paraense Emilio Goeldi. The essential oils from leaves (EOL) and inflorescences (EOI) were obtained by hydrodistillation separately in a Clevenger-type apparatus for 3 h. The oils were analyzed by GC/FID and GC/MS in a Shimadzu QP 2010 and a Shimadzu QP 2010 plus systems, both with Rtx-5MS fused silica capillary columns (30 m x 0.25 mm x 0.25 µm). Hydrogen was used as carrier gas for GC/FID and Helium for GC/MS, both with a flow rate of 1.2 mL/minute. Oven temperature was raised from 60 to 240°C at 3°C/minute. Mass detector was operated in electronic ionization mode at 70eV. Identification of the compounds were made by comparison of their mass spectrum and GC retention data with those in NIST-05 library, and cited in the literature. Antioxidant activity of leaves and inflorescences essential oils and methyleugenol standard was determined by DPPH radical method. For each sample was prepared a solution test of 20 mg/mL and aliquots (50 µL) mixed with 1950 µL of DPPH 60 µM. The absorbance was measured at 517 nm after incubation for 120 min. Oil yields were 2.07% and 2.35% for leaves and inflorescences, respectively. The GC/MS analysis resulted in identification of 26 compounds and the main compound was the phenylpropanoid methyleugenol in leaves (85.22%) and inflorescences (83.01%). In minor proportions were identified sesquiterpene hydrocarbons such as β-elemene (EOL: 4.02%, EOI: 4.64%), α-humulene (EOL: 1.24%, EOI: 1.55%), β-selinene (EOL: 3.49%, EOI: 4.04%) and α-selinene (EOL: 2.82%; EOI: 3.35%). The DPPH radical scavenging for the essential oils from leaves, inflorescence and methyleugenol were 58.5 ± 0.4, 68.4 ± 2.1 and 54.0 ± 2.9 mg.TE/g, respectively. The results suggest that essential oils have antioxidant activity equivalent to methyleugenol.

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Acknowledgements: CNPq, UFPA, MPEG.

ISBN: 978-85-66836-11-0