
P-63 Scents from Brazilian Cerrado: The essential oil from *Calea teucrifolia* (Gardner) Baker (Asteraceae)

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Abstract

The Brazilian Cerrado is a savannah-like biome with more than 12,000 botanical species in Central Brazil. It is an endangered biome, considered a biodiversity hotspot (Myers et al., 2000). *Calea teucrifolia* (syn *Meyeria teucrifolia*) is a shrub native from the Cerrado. Samples from a population (n>5) were collected from a rupestrian field in the Serra dos Pirineus National Park, in Goiás State, Brazil. A voucher was deposited at the Embrapa Genetic Resources herbarium (CEN 84468) and the essential oil obtained from the leaves by hydrodistillation for 2 h, using a Clevenger-type apparatus. It was analyzed by GC-MS and GC-FID using an Agilent 6890 GC coupled to an Agilent 5973N mass selective detector, fitted with a HP5-MS capillary column. Identification was performed by both mass spectra and linear retention indices.

Oil yield was 0.3 %. The major compounds found were p-cymene (15.2 %), myrcene (13.5 %), caryophyllene oxide (9.7 %) and α -phellandrene (9.5 %). The oil composition is quite different from other *Calea*, like *C. clematidea*, rich in clematerol, a terpenic epoxide (Flach et al., 2002). A previous phytochemical study on the hexane extract of *C. teucrifolia* identified two nerolidol derivatives, together with some sesquiterpenes and a furanoheliangolide (Bohlmann et al., 1981). To the best of our knowledge, this is the first analysis on the essential oil from *Calea teucrifolia*.

Keywords: Essential oil composition, *Calea teucrifolia*, Asteraceae, Cerrado.

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REFERENCES

- Bohlmann, F., Zdero, C., King, R. M. & Robinson, H. (1981). Heliangolides, and nerolidol and p-hydroxyacetophenones derivatives from *Calea* species. *Phytochemistry*, 20, 1643-1647.
- Flach, A., Gregel, B., Simionatto, E., Silva, U. F., Zanatta, N., Morel, A. F., Linares, C. E. B. & Alves, S. H. (2002). Chemical Analysis and Antifungal Activity of the Essential Oil of *Calea clematidea*. *Planta Medica*, 68, 836-838.
- Myers, N., Mittermeier, R. A., Mittermeier, C. G., Fonseca, G. A. B. & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature*, 403, 853-858.

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