



## Evaluation on chemical composition of essential oil from *Lippia sidoides* with different storage conditions

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Keywords: *Lippia Sidoides*, essential oil, store conditions.

*Lippia sidoides* is a shrub that belongs to the Verbenaceae family, found in Northeastern hinterland in the States of Ceará and Rio Grande do Norte, Brazil (1). It is an aromatic plant locally known as alecrim-pimenta and the essential oil from its leaves is rich in thymol. Bactericidal and fungicide properties have been described for the essential oil, especially in the treatment of skin, mouth, throat, and vaginal infections (2). The aim of this work was to evaluate the changes on the composition of the essential oil from *L. sidoides* essential oil according to the temperature storage. Dried leaves (200.0 g) were subjected to hydrodistillation in a Clevenger-type apparatus. The oil was splitted in three samples and stored at room temperature (25 °C), refrigerator (4 °C) and freezer (-10 °C). The oil was analyzed just after extraction and after six months of storage by GC/FID and GC/MS in an Agilent 7890N and an Agilent 5975C systems, both with HP-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, with flow rates of 1.5 and 1.0 mL minute<sup>-1</sup>, respectively. Oven temperature was raised from 60 to 240 °C at 3 °C min<sup>-1</sup>. Mass detector was operated in electronic ionization mode at 70 eV. The percentage composition was obtained by normalization from FID signal. Oil components were identified by comparison of both mass spectra and linear retention indices with spectral library and literature. The samples of the oil stored in the refrigerator and at ambient temperature presented almost the same composition, with 29 and 27 compounds identified respectively. Major components were thymol (75.4 %), *p*-cymene (7.3 %) and (*E*)-caryophyllene (4.3 %). For the sample kept in the freezer 36 compounds were identified and the major compounds were thymol (56.8 %), *p*-cymene (12.2 %), (*E*)-caryophyllene (7.6 %).

1. Guimarães, et al. Revista Ciência Agronômica, 2014, **45**, 267-275.

2. Farias, et al. J. of Herbal medicine 2012, **2**, 63–67.

Acknowledgements: FAPERJ, CNPq, CAPES.