



Chemical characterization of *Lippia organoides* Kunth essential oil according to the harvest moment.

Simone Teles¹, Angélica Lucchese², Lenaldo M. de Oliveira², Franceli da Silva¹

¹ Universidade Federal do Recôncavo da Bahia- Cruz das Almas, Brazil

² Universidade Estadual de Feira de Santana- Feira de Santana, Brazil
telessimone@gmail.com

Keywords: Composition, Carvacrol, Verbenaceae, Semiarid.

Lippia organoides (Verbenaceae) is a specie native from Brazil, commonly known as “alecrim-do-tabuleiro”. Traditionally, the leaves and flowers are used in the popular medicine as infusion to stomach pain, indigestion and flatulence. The medicinal potential found in this species is mainly related to the chemical components present in the essential oil. The aim of this work was to evaluate the effect of the interval between harvests in chemical compounds from *L. organoides* essential oil. The study was held in the experimental field of the State University of Feira de Santana. *Lippia organoides* plants were propagated by cuttings from grown matrix plants in the collection of aromatic plants of that University. The experiment was installed in the Horto Florestal of the State University of Feira de Santana - Bahia, using the experimental design of randomized blocks with four replications and four harvest intervals (90, 180, 270 and 360 days after the first regrowth). Then leaves and inflorescences were packed in paper bag and dried at 40 °C until constant weight. Briefly, 40 g of dried and milled plant material were extracted with sufficient water amount during 3 h in a Clevenger-type apparatus. The determination of the chemical composition of essential oils of *L. organoides* was analyzed by GC/FID and GC/MS. From the obtained essential oil were identified 28 components, with carvacrol as the main compound ranging (39.2-46.5 %), following γ -terpinene (10.5-15.5 %), *p*-cymene (11.0-13.0 %), (*E*)-caryophyllene (3.6-4.5 %) and linalool (1.0-4.1 %). The remaining components were considered as minor components, presenting values below 4 %. From the main components only linalool was influenced over time of harvest regrowth, with low concentrations at 90 days after the first regrowth. For carvacrol, γ -terpinene, *p*-cymene, (*E*)-caryophyllene and linalool, no statistical differences were observed between harvest moments. According to the conditions at which the experiment was conducted, it was concluded that the harvest moment influence quantitatively the composition of essential oils. Carvacrol a compound identified in great quantity, could decisively contribute for this species important bioactive characteristics, which can be applied in the pharmaceutical industries, food and cosmetic sectors.

1. Kumar, V. et al. Food Sci. Technol., 2014, **56**,278-283.
2. Stashenko, E.E. et al. J. Sep. Sci., 2010, **33**, 93-103.

Acknowledgements: FAPESB, CNPq.