



Bath products lineation with essential oil of *Lippia gracilis* Schum of Amazonian origin.

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Key words: *Lippia gracilis*, essential oil, cosmetics, stability, formulation.

The species *Lippia gracilis* Schum, popularly known as “alecrim-da-chapada” or “alecrim-dotabuleiro”, is a deciduous, branched shrub with brittle stems, up to 2 meters high (1). In addition, there are several studies of volatile constituents of this plant, consisting mainly of thymol, carvacrol and 1,8-cineole, and these volatile components have strong antimicrobial, antioxidant and anti trypanomicide activities. The development of biocosmetics appropriate to the desired effect, place and intensity, is a step forward in research on the use of essential oils as components in cosmetic products. The developed formulations must have appropriate physico-chemical and sensory characteristics, as well as efficacy, safety and quality. Physico-chemical tests were performed to evaluate pH, apparent viscosity, organoleptic characteristics, foam and density. This work aimed at the development and evaluation of the stability of biocosmetic formulations used in the bath such as shampoo and liquid soap, from incorporation of essential oils of *L. gracilis* through pre-formulation studies and preliminary and accelerated stability tests (2). Leaves of *L. gracilis* were collected in the National Park of Chapada das Mesas, municipality of Carolina/MA. The oil was extracted from dry leaves by hydrodistillation and the chemical constituents were identified by GC/MS. The oil showed a yield of 4.7% and the analysis by GC/MS led to the identification of 23 compounds. Major constituents found were thymol (77.02%), *p*-cymene (7.39%) and thymol methyl ether (4.66%). During the preliminary and accelerated stability studies, it was observed that in the refrigerator ($T=5.0 \pm 0.5^{\circ}\text{C}$) and oven ($T=4.0 \pm 0.5^{\circ}\text{C}$), only the liquid soap type formulations had changed in pH a reduction from baseline of 10 to 8.5, viscosity of 59,816.9 mPa.S to 26,663.9 mPa.S and sensory characteristics. The shampoo type formulations remained unchanged. At the end of the study, the formulations kept at room temperature maintained the initial characteristics.

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Acknowledgment: UFMA, CAPES.