



Essential oil from priprioca (*Cyperus articulatus* var. *nodosus*): chemical characterization and phytocosmetic development.

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Priprioca (*Cyperus articulatus* var. *nodosus*) is a Cyperaceae with immeasurable social and economic value in Amazon, since essential oils can provide an excellent odor, olfactory and fixative, used for decades by regional perfumery companies as an important ingredient in the composition of perfumes and cosmetics. Beyond its pharmacological properties, priprioca essential oil can be used to obtain some dashing liquid crystalline systems, applied to the development of cosmetics with physicochemical properties suitable for topical use. It is therefore, pertinent to use this product as a sustainable source, in order to improve scientific advancement, technological and sustainable socio-economic development for the region. As a result, this study aimed to develop and evaluate liquid crystalline systems containing essential oil of priprioca (*Cyperus articulatus*). *C. articulatus* rhizomes were collected in Tabocal region, Santarém (-54 ° 43'00.10 "W and -02 ° 37'41.10" S), and subjected to extraction by steam distillation at Beraca industry. For chemical analysis, 1 µL of the essential oil was analyzed by gas chromatography coupled with mass spectrometry (GC-MS Agilent 6890). The chemical components of the oil were identified by comparing the calculated retention indices with those from the literature. To obtain the samples, 7 liquid crystalline systems were prepared having as component murumuru butter, Procetyl and distilled water with a low concentration, medium and high amount of priprioca essential oil. After 24 hours, the presence of liquid crystalline phases was investigated by polarized light microscopy (Linkam THMSG600). The essential oil chemical composition presented the following major components: Cadalene (10.65%), β-selinene (8.45%), ciclocolorenone (6.99%), α-copaene (6.57%) and α-pinene (4.85%). These results were similar to components described in the literature (1), which denotes the identity of plant material as *C. articulatus*, fundamental stage for quality control to develop phytocosmetics. When analyzed by polarizing light microscopy, the structure of both formulations with different proportions of priprioca oil / murumuru butter / surfactant / water showed bi-refringency with geometric and streaky striated texture. Thus, we concluded that priprioca oil coming from the Amazon region can be used as new raw materials to develop of liquid crystalline systems in cosmetics.

1. Zoghbi, M.G.B. Priprioca, um recurso aromático do Pará, Museu Paraense Emílio Goeldi e Eduepa, 2008, 204 p.
2. Goncalves. M.R.A. Desenvolvimento e avaliação in vivo de emulsões contendo óleo de canola e ácido carboxílicos. 200. 169 f. Dissertação (Mestrado) - Faculdade de Ciências Farmacêuticas de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, 2000.

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