Chemical composition of the essential oil of *Croton argyrophyllus* Kunth leaves (Euphorbiaceae)

Iasmine A. B. S. Alves[1], Alexandre G. Silva[2], Dewson R. Pereira[1], Claudia S. A. Lima[1], Márcia Vanusa da Silva[1], Julianna F. C. Albuquerque[1], Karina P. Randau[1], Rafael M. Ximenes[1]

[1] Universidade Federal de Pernambuco - Recife, Brazil
[2] Instituto Nacional do Semiárido - Campina Grande, Brazil
iasmine_alves@hotmail.com

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Croton is the second largest genus of Euphorbiaceae family, with about 1200 species, of which 350 occur in Brazil and 68 are found in Caatinga (1). Several species of this genus are used in folk medicine and some of them had their anti-inflammatory, healing and antimicrobial activities proven. *Croton argyrophyllus* Kunth, popularly known as marmeleiro, is traditionally used as tranquilizer, to treat heart diseases and influenza. However, few studies about its chemical composition are available in the literature. In this context, the aim of this study was to compare the yield and the chemical constituents present in the essential oil of *Croton argyrophyllus* leaves submitted to two different extraction methods. Samples of the plant material were collected in May 2015, in Chapada São José, Catimbau National Park, Buíque (PE). A voucher specimen was deposited in IPA herbarium under the number 93,393. For essential oil extraction, 50 g of fresh leaves were subjected to hydrodistillation in a Clevenger apparatus for 2 h and, simultaneously, 200 g of fresh leaves were subjected to steam distillation in a Linax D2 extractor for 2 h. The essential oil analyses were performed on an Agilent Technologies gas chromatograph, model 7890A, with injector on-column type equipped with flame ionization detector, mass selective detector, model 5975C, and an Agilent J&W HP-5MS (30m X 0.25 mm i.d. X 0.25 µm).The oven temperature was programmed at 70 °C with an increase of 4 °C min^{-1} until 280 °C, and then maintained for 15 min. The carrier gas was helium, with a constant flow rate of 1.4 mL min^{-1}. The temperature of the ionization source was maintained at 280 °C, ionization energy at 70 eV, and ionization current at 0.7 kV. Mass spectra were recorded from *m/z* 30 to 450 u. Individual components were identified by matching their 70 eV mass spectra with those of the spectrometer database by using the Wiley L-Built library and by comparing their retention indices and fragmentation patterns with those of the NIST. The oil yields, obtained by hydrodistillation and steam distillation, were 0.53 and 0.63 %, respectively. In the oil obtained by hydrodistillation, 39 compounds were identified, representing 85.4 %, while in the oil obtained by steam distillation, 42 compounds were found, corresponding to 74.8 %. The first oil showed up high in sesquiterpenes (73.9 %), most of which were oxygenated (39.5 %), and the main compounds were elixene (15.8 %), β-caryophyllene (10.7 %), β-dihydroagarofuran (7.0 %), β-elemene (3.8 %) and hedycariol (2.9 %).The latter oil, in turn, was rich in sesquiterpenes (53.5 %) and monoterpenes (46.5 %), which main compounds were elixene (15.6 %), β-caryophyllene (9.5 %), β-dihydroagarofuran (7.5 %), spathulenol (5.3 %) and β-elemene (4.6 %).

1. Sodré, R.C.; Silva, M.J.; Sales, M.F. Rodrigésia, 2014, **65**, 221-234.

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