

Antimicrobial activity of the essential oil from the leaves of *Croton cajucara* Benth.

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Croton cajucara Benth. (family Euphorbiaceae), locally known as „sacaca“, is a very important plant resource in the Amazon area, being used in folk medicine against gastrointestinal and liver disorders, diabetes and for cholesterol reduction. Several biological effects have been associated to cleordanes present in leaves and bark infusions [1]. A germplasm bank was established for agronomic studies of this species with individuals collected from different areas of the Amazon. Two morphotypes were identified, namely white sacaca and red sacaca. From chemical studies, the essential oils of these plants could be classified in two groups: one rich (up to 45%) in linalool [2], and other containing (up to 44%) of an aromatic sesquiterpene, isolated and identified by NMR as 7-hydroxycalamenene [3]. It was shown that the linalool rich oil is active against *Leishmania amazonensis* [4] and oral planktonic microorganisms [5]. Herein we present some results on the antimicrobial activity of the essential oil rich in 7-hydroxycalamenene. Minimum inhibitory concentration (MIC) was evaluated in triplicate according standard methods from the National Committee for Clinical Laboratory Standards (CLSi/NCCLS). Growing inhibition was observed for *Mycobacterium smegmatis*, *M. tuberculosis* (H37Rv), methicillin resistant *Staphylococcus aureus* (MRSA, BMB9393) and *Rhizopus oryzae*. The calculated MIC's were 156µg/mL for *M. smegmatis*, 4.9µg/mL for *M. tuberculosis*, 0.0012µg/mL for the MRSA and 0.15µg/mL for *R. oryzae*. From the bioautography test, the activity was associated to the presence of 7-hydroxycalamenene in the oil. The results observed were related to an essential oil containing 33% of 7-hydroxycalamenene.

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