Essential oils of *Croton blanchetianus* Baill. essential oil leaves and their sensitivity of pathogen foodborne bacterial

Geiseanny Fernandes do Amarante Melo, Vicente Queiroga Neto, Ana Caroliny Vieira da Costa, José Galberto Martins da Costa. Department of Food Engineering, Federal University of Paraíba. João Pessoa. Paraíba. Brazil. CEP 58.059-900. e-mail: geiseanny.melo@afogados.ifpe.edu.br

*Croton blanchetianus* Baill (synonym *C. sonderianus* Müell. Arg.) is popularly known as ‘marmeleiro preto’ and is a shrub common in, and cultivated in, northeastern Brazil and is used as a folk medicine by individuals who live far from huge population centers as infusions, or by simple chewing, as gastrointestinal, rheumatism and headache treatments. The essential oil of *Croton blanchetianus* Baill. leaves was analyzed for chemical composition and inhibiting growth and in survival of important microorganisms in food by determining their death time *in vitro*. In it was identified 14 constituents in a complex mixture of monoterpenes (59.43%) and sesquiterpenes (40.56%). The major compounds found in the oil were limonene (25.70%), α-pinenene (16.32%) and bicyclogermacrene (13.00%). The essential oil exhibited antibacterial activity against three strains of tested bacteria (*Listeria monocytogenes*, *Aeromonas hydrophila* and *Salmonella Enteritidis*). The results revealed a range of minimum inhibitory concentration of 1.25–40 μL mL⁻¹ and showed a bactericidal effect against *Aeromonas hydrophila* and *Listeria monocytogenes* and bacteriostatic action against *Salmonella Enteritidis*, which probably resulted from the presence of monoterpenes and sesquiterpenes found in essential oils of *Croton* spp that were the main components of essential oils that show antibacterial activity. Further research is needed to establish potential uses of this essential oil as a natural antimicrobial in the food industry.