



A study of the composition of the essential oil from Aroeira (*Myracrodruon urundeuva*) in different stages of development.

Felipe Teixeira Lima¹, Jéssica Saliba², Caio Ferreira da Silva¹, Jean Barcelo Xavier Bahia¹, Fábio W. Jorge Lima¹, Fábio Wéliton Jorge Lima¹, David Lee Nelson³, Ana Maria de R. Machado², Vinícius O. Barbosa Lima¹

¹ Instituto Federal do Norte de Minas Gerais, IFNMG, Salinas, MG, Brazil.

² CEFET-MG, Belo Horizonte, MG, Brazil.

³ Universidade Federal do Vale do Jequitinhonha e Mucuri, UFVJM, Diamantina, MG, Brazil.
fabio.lima@ifnmg.edu.br

Keywords: *Myracrodruon urundeuva*, Aroeira, essential oil, Mata Seca.

The northeast region of the state of Minas Gerais, specifically the Salinas region, is inserted into the transition between the Cerrado and Caatinga areas. The vegetation of this ecosystem is exposed to water stress (dryland vegetation) and adapted to a harsh climate with low annual rainfall distributed in a small time window. The type of vegetation that predominates in this region is called the Mata Seca (Dry Forest), which has a very diverse flora and vegetation characterized by a high degree of leaf deciduousness during the dry season (1). One of the most significant plant species in this biome is the aroeira (*Myracrodruon urundeuva*) of the Anacardiaceae family. The composition of the essential oil from aroeira at different stages of development was determined. Five individuals were selected from plants with two diameters of trunk. The leaves were collected, the plant material in the same diameter class homogenized, and the essential oil extracted by hydrodistillation in a Clevenger-type apparatus for 4 h. The essential oils were analyzed by GC/MS on an Agilent 7890A gas chromatograph coupled to an Agilent 5975C mass detector. An HP-5 capillary column (30 m X 0.25 mm X 0.25 μ m) was used. The injector temperature was 250 °C, the initial column temperature 60 °C (1 min), the heating rate was 4 °C min⁻¹ to 250 °C, where the temperature was maintained for 1 min, and the split ratio was 1:10. The yield of oil was 0.5 %. The essential oil from younger individuals contained high concentrations of 3-carene (70.2 %) and low concentrations of α -pinene (2.7 %) and limonene (2.6 %). The presence of terpinolene (3.1 %), β -myrcene (3.3 %), eucalyptol (0.1 %), caryophyllene (1.6 %) benzaldehyde (1.9 %) and linalol (0.1 %) was also observed. Older individuals contained higher concentrations of α -pinene (24.9 %) and limonene (24.9 %), whereas the concentration of 3-carene (35.1 %) was lower than that observed in younger plants. The concentrations of terpinolene (1.8 %), benzaldehyde (0.5 %) and linalol (0.4 %) were higher, but in a lower degree. β -Myrcene, eucalyptol and caryophyllene were not detected in the older individuals.

1. Fernandes, A. Biodiversidade da caatinga. In: Biodiversidade, conservação e uso sustentável da flora do Brasil. Recife: UFRPE, 2002.