

Posters

70. **Fatty acids profile and thermal properties of macauba palm pulp oil from Cerrados and Pantanal biomes, Brazil.** Simone P. Favaro¹, Gabrielly Ciconini², Gabriel Pinheiro Santos², and Cesar H.B. Miranda¹, ¹Brazilian Agricultural Research Corporation (EMBRAPA), Agroenergy, Pq EB - W3 N (final), Brasília Distrito Federal 70770-901, Brazil; ²Catholic University Dom Bosco, Biotechnology, AV. Tamandaré n° 6.000, Jardim Seminário, campo Grande Mato Grosso do Sul 79117-900, Brazil; Brazilian Agricultural Research Corporation (EMBRAPA), Agroenergy, Pq EB - W3 N (final), Brasília Distrito Federal 70770-901, Brazil

Macauba or macaw palm (*Acrocomia aculeata*) fulfills requirements for a new oil bearing species. It produces fruits (with distinct pulp and kernel storing oil parts) with high energy density that can be used for different industrial purposes. Also, shows good adaptability to a broad range of soil and environmental conditions. A large variability of phenotypic palm-tree and fruits characteristics is seen in the wild, but there is not enough information on how they affect oil accumulation or its physical and chemical properties. We investigated fatty acid composition and thermal properties of pulp oils from Macauba palm fruits collected from 10 plants in four different sites in Cerrados (Campo Grande and Sao Gabriel do Oeste municipalities) and Pantanal (Corumba and Aquidauana municipalities) biomes, in the State of Mato Grosso do Sul, Brazil. Fatty acids profiles were determined by gas chromatography. Thermal properties were performed by Thermogravimetry (TG) and Differential Scanning Calorimetry (DSC) under dynamic flow of synthetic air using a constant heating rate of 20 °C/min. Major fatty acid was oleic acid, ranging from 47 to 73%, followed by palmitic acid. Fruits from Corumba showed the highest proportions of oleic acid, reaching up to 81%. The assayed macauba pulp oil showed higher oxidative stability, determined by onset temperature on DSC curves, than soybean and sunflower oils, and similar to that shown by olive oil.