



Fatty Acid Composition and Oil Yield from Different Genotypes of Macauba (*Acrocomia aculeata*).

R. Antoniassi¹, A.F. Faria-Machado¹, H.R. Bizzo¹, N.T.V. Junqueira², ¹Embrapa Food Technology, Rio de Janeiro, RJ, Brazil, ²Embrapa Cerrados, Planaltina, DF, Brazil

Macauba (*Acrocomia aculeata*) is a palm tree distributed throughout tropical and subtropical Americas. Since this palm shows high productivity in bunches and oil, Embrapa has been selecting genotypes for biodiesel production. Macauba fruits have a moist pulp, rich in oil and carotenoids, and their kernels are similar to those from *Elaeis guineensis*. In this study, fruits from 120 different genotypes of macauba were collected from three different Brazilian States (Minas Gerais, Mato Grosso, Goiás). These genotypes, which include edible (sweet macauba) and non-edible (common macauba) fruits, showed certain variability for pulp yield, oil and carotenoids contents, and fatty acid composition. The fruits weight ranged from 28 to 56g, with 29-56% of pulp and 3-10% of kernel. Pulp and kernel showed, respectively, 7-44% and 21-55% of oil. The major fatty acids from pulp oil were C18:1 (35-71%), C18:2 (6-35%) and C16:0 (8-29%), whereas the highest levels of C18:3 were 3% and 8% for common and sweet macauba, respectively. The kernel oil from all evaluated genotypes was rich in lauric acid. The highest carotenoids content in the pulp oil was 370ppm. Results showed that some genotypes are very promising since the oil yield of the whole fruit varied from 3 to 20%.