

## **Comparison between Fatty Acid Composition and Oxidative Stability of *Euterpe oleracea* and *Euterpe edulis* Oils**

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Brazil has a large amount of palm fruits with nutritional relevance due to the presence of bioactive compounds associated with medicinal applications. Among these species, stands out the *Euterpe oleracea* (açai) and *Euterpe edulis* (jussara) native from Amazonian and Atlantic Forests, respectively. Açai and jussara contains lipids, proteins, fibers, anthocyanin and phenolic compounds. There are many reports in the literature about chemical characteristics of açai pulp and oil. However few results were found about the chemical characteristics of jussara species. The objective of this paper was to compare the fatty acids of açai and jussara oils and evaluate their oxidative stability by Rancimat method (110°C, 10L/h air flow). The induction period (IP), determined by Rancimat test, is a parameter that has been used to predict the shelf life of vegetable oils. The raw materials for oil extraction were the açai and jussara cakes, byproduct from the centrifugation of commercial pulps. The cakes were dried under convective air at 60°C and the oil was extracted by continuum pressing using an expeller. The fatty acids composition was evaluated by high-resolution gas chromatography using high purity methyl esters as external standard. The major fatty acids in the açai oil were oleic (C18:1 cis 9) and palmitic (C16:0), respectively 52 and 26%. Furthermore, açai oil contains 7 to 10% of linoleic acid (C18:2) and about 5% of palmitoleic acid (C16:1). Jussara oil presented similar content of palmitic acid (20 to 26%), smaller content of oleic acid (45 to 48%) and higher proportion of polyunsaturated fatty acids (PUFA), particularly linoleic (21 to 26%). Due to its high content of PUFA, the jussara oil consumption may exert beneficial effects on various pathological states although it is more susceptible to lipid oxidation that leads to the development of undesirable off-flavors. In this work, it could be observed a higher induction period of jussara oil recovered from fresh pulp as compared with the oil obtained from the frozen pulp (7.0 and 3.5 hours, respectively). The oxidative stability of lipids during jussara pulp processing can be enhanced by excluding oxygen from the system.