

ANATOMICAL CHARACTERIZATION OF SEED *Carapa guianensis* Aublet (andiroba) DURING THE PROCESS OF NATURAL FERMENTATION

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The Amazon region is rich in renewable raw materials such as the numerous plant species that are producing oil seeds, of which vegetable oils are extracted from various chemical composition and physicochemical properties. These vegetable oils are widely used by local people as a folk medicine, as well as having an important role in the regional economy. Among these oils stands out the oil from the seeds of *Carapa guianensis* Aublet or andiroba oil is widely used by the population to have anti-inflammatory properties and insect repellents. The oil of andiroba seed is traditionally extracted by a craft process comprising cooking, fermentation and extraction itself or by cooking and pressing on an industrial scale. The objective of this research was to characterize anatomically the changes in plant cells that occur during the fermentation process of andiroba seeds, because that has not been shown in this type of fermentation process. The seeds were baked and after 5, 10 and 15 days of fermentation process, fixed in Karnovsky for 24 h, dehydrated in serial butyl, embedded in paraffin histology, sectioned on a rotary microtome and stained with astra blue and safranin mounted synthetic resin for photomicrographs. The study confirmed the presence of microorganisms during the fermentation process of andiroba seeds. It was also possible to observe the deconstruction of cell walls in progress on 10 and 15 due to the action of extracellular enzymes produced by microorganisms, a fact that allows the oil release.

Keywords: *Carapa guianensis*, andiroba, fermentation, fungi