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Extraction, chemical characterization and thermal properties of *Jatropha elliptica* (Pohl) Muell Arg

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Jatropha elliptica (Pohl) Muell Arg is a plant of the Euphorbiaceae family, native to the Brazilian Savanna, and popularly known as "*batata-de-teiu*". Although the plants of this genus have their pharmacological action widely studied, there is a lack of scientific knowledge of its use in the food industry. This study was conducted to evaluate the structural, thermal, viscoamylographic, physicochemical, morfological and technological characteristics of starch extracted from the roots of the *Jatropha elliptica* (Pohl) Muell Arg. The efficiency of starch extraction was $22.8 \pm 1.1\%$. The water activity of the root starch was 0.65 ± 0.01 at 25°C, a factor that contributes to the maintenance of the characteristics of the product and prevent the development of microorganisms and possible biochemical reactions. The tuber has a carbohydrate content of 96.82% (dry matter basis), and low levels of ash, protein and fiber food (*Table 1*). The potato starch had a 32.82% amylose content, crystallinity of 60.23% by diffractogram and solid state nmr indicate type A starch and maltose cross under polarized light microscopy. The starch granules (Scanning Electron Microscopy) are heterogeneous, have an irregular oval and cuboidal shape, with a uniform surface, without the presence of grooves, and have a lateral orifice. The Fourier-transform infrared spectroscopy and thermo gravimetric curve are characteristic of tuber starch. The initial temperature of gelatinization of the starch studied was 70.11°C, the peak was 73.84°C and the final value was 85.52°C. These properties of paste are similar to those of cassava starch. The polymer of "*batata-de-teiu*" had a low tendency to retrograde, a promising feature for the food and pharmaceutical industry. Due to their unique chemical, termal and technological properties, the studied starch can be used in various fields, including food, health care and industrial purposes.