



ISOLATION AND CHARACTERIZATION OF MEXICAN JACKFRUIT (*ARTOCARPUS HETEROPHYLLUS* L) SEEDS STARCH IN TWO MATURE STAGES.

ABSTRACT

Starch was isolated from jackfruit (*Artocarpus heterophyllus* L) seeds grown in México at different stages of fruit maturity and ripeness. Seeds represent about 8–15% from the fruit that can weigh around 2–36 kg. Proximate composition of seeds showed a high protein content (ca. 22%). Starch yield was 14% with a purity of 81% in both ripeness stages and AM content was lower (12.27%) than other non-common starch sources. The starch granules in physiological mature (PM) and consumption ripeness (CR) jackfruit showed birefringence with diverse shapes such as semi-oval or bell shapes. The size of starch granules for PM ranged between 3 and 9.5 μm and for CR between 3 and 12 μm . A-type XRD pattern was similar to cereal starches. PM starch had higher peak viscosity than CR, but CR did not show breakdown; both starches presented setback during cooling. Thermal properties of gelatinization and retrogradation in PM and CR starches were similar. Characterization performed on this non-common starch showed that it could be an alternative to use in food systems.

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