USE OF STARCH (Manihot esculenta) ADDED CALCIUM CHLORIDE IN THE DEVELOPMENT OF THE COATING IN POST-HARVEST CONSERVATION OF UMBU (Spondia Tuberosa Arruda Camara).

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The high perishability of the umbu needs new technologies to increase its shelf life and reduce post-harvest losses. This study determined the effect of using the coating of cassava starch and CaCl$_2$ associated with the post-harvest conservation of umbu. The unripe umbus were selected, characterized (as starch) and applied the coating on them with varying concentrations of cassava starch and CaCl$_2$ (1%) and analysed for five days. The results obtained for the characterization of starch: 10.38% TA (total acidity), 0% RA (reducing sugars); 0.5% Aw, 0.16% ash, 4.57 pH and 11.78% humidity (humidity base). For the characterization of umbu: AT 1.13%, 6.98% AR; Aw 0.50, ash 0.20%, 92.04% moisture, pH 2.92. To the control of maturation, the values refer to the difference between the first and last day of analysis. The control treatment AT 0.65%, pH 0.13%, 0.17% TSS, weight 3.17 g, diameter 0.25 cm and texture 85.19 gf. Treatment starch (4%), AT 0.5351%, pH 0, 0.03%, TSS 0.017%, weight 1.32 g, diameter 0.13 cm and texture -81.26 g. Starch (3%) and CaCl$_2$ (1%): AT 0.50%, pH 0.03%, TSS 0.03%, weight 2.19 g, diameter 0.14 cm and texture -98.93. Starch (4%) and CaCl$_2$ (1%), 0.59% TA, pH 0, SST 0.073%, weight 1.68 g, diameter 0.14 cm and texture -78.85 gf. Starch (5%) CaCl$_2$ (1%): AT 0.61%, pH 0%, 0.04% TSS, weight 1.69 g, diameter 0.18 cm and texture -105.70 gf. It was concluded that the coating with cassava 4% starch was more efficient than the coating with CaCl$_2$ added. The efficiency of the treatments decreased with increasing concentration of CaCl$_2$. It can be due to cohesion filmogenic network that doesn’t allow the exchange of oxygen and CO$_2$ in the environment.