

NOVEL EDIBLE FILMS MADE OF POLYSACCHARIDE FROM *ANACARDIUM OCCIDENTALE* L.

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Edible and/or biodegradable films have been evaluated in applications such as transportation of active materials, selective barrier to gases and solutes, and as an alternative to synthetic non-renewable packaging materials. This work aimed at producing and evaluating the mechanical characteristics of films of polysaccharide from the *Anacardium occidentale* L. tree gum (POLICAJU), in view to their application as protection to increase the shelf life of fruits and vegetables and as cutaneous dressing. Films with different POLICAJU concentrations (1% - 3% w/v) were cast using different plasticizers (sorbitol, glycerol and polyethylene glycol), at different concentrations (0.02 to 0.5% g/g of POLICAJU), in the presence and in the absence of Tween 80 as surfactant (0.05% w/w). The solution of 3.0% (w/v) of POLICAJU, 0.4% (w/w) sorbitol and 0.05% (w/w) Tween 80 was the one featuring a better flexibility and mechanical resistance (to traction). This has been determined with an INSTRON (model 4505) machine, with a load cell of 2.5 N. The film, of 0.07 mm thickness, stretched for a length 62 % higher than its original length, while resisting to a force of 0.2 N. These results suggest that this material has enough resistance to be used for the intended applications.

Keywords: *Anacardium occidentale* L, edible film, mechanical properties, cutaneous dressing.

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