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Influence of adding microcapsules and oil and bacuri (Attalea phalerata Mart.) In optical and mechanical properties of films composed starchy

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Edible or biodegradable films are being increasingly used for preservation of fruits and vegetables and in some cases, as a partial substitute movies to oil derived base, thus contributing to environmental preservation. Oil from the Attalea phalerata Mart. known as bacurizeiro is rich in carotenoids. Thus the aim of this study was to evaluate two types of incorporation of this oil in movies arrowroot starch-based: i) crude oil and ii) microencapsulated oil by complex coacervation technique. The composite films were produced by casting technique in proportion 4 (starch): 1 (gelatin). The starch solution was prepared by solubilizing it, 10 g starch in 100 ml of distilled water at 85 °C. The gelatin solution was obtained using 5 g of gelatin in 100 ml of distilled water at 70 °C. Ten percent oil or microcásula bacuri oil, relative to the weight of the macromolecule has been incorporated the end filmogenic solution. The films were dried at 25 °C for 24 hours. The films were visually different coloring compared to the containing microcapsules were also more homogeneous to the naked eye. The films showed no brittle areas and were easy detachment of the drying rack. Films containing oil possessed a larger value of the chroma. The tensile strength and elongation of the films showed that the addition of microcapsules formed films with higher tensile strength that ranged from 17.13 to 48.49 MPa for the films containing oil and microcapsules, respectively, showing better incorporation when that property is assessed under the conditions studied.

Biography

Farayde M. Fakhouri graduated in Food Engineering from the Universidade Estadual Paulista (UNESP), Master in Food and Nutrition, PhD in Food Technology from the University of Campinas (Unicamp) and Post Doctorate from the State University of Londrina (UEL) in the area of new materials for packaging, with improvement in reactive extrusion in Univesité of Mons (UMONS) and currently performs post doctorate at the Polytechnic University of Catalonia (UPC) in the School of Materials Science and Engineering. She has published about 20 papers in reputed journals and has Been serving the editorial board member of an repute.

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