

EVALUATION OF CANISTEL PULP OBTAINED BY DIFFERENT DEHYDRATION METHODS

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Pouteria campechiana, canistel is a tropical fruit of the *Sapotaceae* family native from Central America. Its fruits are oval shaped, have 1 to 4 seeds, thin and smooth bark, with creamy, dense flesh and intense yellow color. Contains high nutritional value, used medicinally as teas, in combating fever, ulcers and applied in rash. Its medicinal benefits are related to content of bioactive compounds. The objective of this study was to submit to the canistel pulp two methods of dehydration and to compare its content of bioactive compounds. Two samples of canistel pulp from the same batch were dehydrated, a first in a 60 °C/7h air circulation stove (PCE) and another freeze-dried sample (PCL). After the dehydrations, they were crushed and evaluated by spectroscopy for their content of total polyphenols based on the Folin-Ciocalteu method, flavonoids by the use of aluminum chloride solution and antioxidant capacities by the DPPH and ABTS free radical scavenging activity and the ability to reduce Fe³⁺ ion (FRAP). The fresh pulp and the PCE and PCL samples were evaluated by Fourier Transform Infrared Spectroscopy (FTIR), and it was possible to identify the vibrations that characterize the functional groups of the compounds present in the fruit pulp. It was observed that the content of bioactive compounds of both samples (fresh, PCE and PCL) did not differ. Both samples presented high antioxidant activity by the DPPH assay, 94.27% and 95.06% respectively for the PCE and PCL pulps. The FTIR analysis showed that in spite of the different dehydration methods applied, the samples had similar characteristics as the fresh pulp, differing only in the intensity of the signal, which is explained by the amount of water present in the sample fresh and the amount remaining in the dehydrated samples. N-H, C-H, C=O and C≡N strain vibrations were identified, indicating the presence of primary amines, alkanes, aldehydes, pectins, aliphatic amines, nitriles and aromatic rings in the samples. The results showed that the bioactive

compounds of *P. campechiana* dehydrated pulp were stable after the application of different dehydration techniques, due to the adoption of practices that exclude oxygen (PCL), the use of moderate temperatures (PCE) and the absence of light (PCL and PCE) avoiding the degradation of bioactive compounds.

Palavras-chave: *Pouteria campechiana*, bioactive compounds, drying