USE OF A CHEMOMETRIC METHOD TO EVALUATE THE EFFECT OF DRYING TEMPERATURE ON THE CHEMICAL CONSTITUENTS OF JABOTICABA SKINS

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In jaboticaba skins, which represent up to 43% of the fruit, high content of fiber and minerals can be found, besides the high level of phenolic compounds. One inconvenient for the storage of the skins is their high water content. Therefore, drying processes that enable their conservation without the loss of nutritional and antioxidant quality are required. In this work, the influence of different drying temperatures on the nutrients and antioxidant compounds was studied. The computer program “Octave” was used for the analysis of principal components (PCA). The jaboticaba skins, genotype Sabara, were lyophilized and dried at three temperatures, 30ºC, 45ºC and 60ºC. They were then ground, stored and analyzed for centesimal composition, vitamin C, phytates, polyphenols, anthocyanins and antioxidant activity. In PCA, components 1 and 2 accounted for 70.40% of the total variance of the analysis performed in the flour made from jaboticaba skins. It was noted from the graphs of scores and weights that the lyophilized skins showed a better conservation of the studied bioactive compounds (except for phytate) and consequently a higher antioxidant activity. With the exclusion of data from the lyophilized skins, it was possible to observe that the temperature in which the constituents were better conserved was 45ºC. It is possible to conclude that a better conservation of chemical constituents occurs in the lyophilized skins. However, among the tested drying temperatures, the skins dried at 45ºC present a higher conservation for the bioactive substances and the temperature of 30ºC better preserves the other components.

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