

CHEMICAL STABILITY OF MICROPARTICLES ELABORATED WITH HYDROETHANOLIC EXTRACT FROM *Euterpe edulis* CO-PRODUCT

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The search for healthier foods by the use of natural antioxidants and preservatives, coupled to the whole use of raw materials by the food industry, has encouraged the development of new ingredients. In this work, the co-product of the juçara pulp centrifugation was used to obtain antioxidant compounds stabilized by spray drying. After drying in convective air dryer for 24 h at 50 °C, the sample was subjected to solid/liquid extraction for recovery of antioxidant compounds using 30% ethanol as solvent, solid/liquid ratio of 1:10 and stirring of 130 rpm at 70 °C for 1 h. The preparation of the sample for microencapsulation consisted by mixing 8 g of capsul with 100 mL of the extract followed by homogenization at a blender. The solution was atomized in a spray dryer (Lab Plant, England) equipped with a 0.7 mm atomizer nozzle at 160 °C, in which the feed rate and air velocity were 0.36 kg/h and 3.0 m/s, respectively. The crude extract and the microparticles were packed in glass bottles and laminated packages, respectively. Both samples were kept in an incubator for 60 days at 30 °C. Every 15 days of storage, the samples were evaluated for the determination of total phenolic, total anthocyanins and antioxidant capacity by DPPH, ABTS and FRAP methods. At the end of the storage, when compared to the crude extract, the microparticles presented higher retention of their original characteristics, which shows the importance of microencapsulation and the use of wall material for the protection of phenolic compounds. The microparticles presented retention of total anthocyanins and total phenolics compounds higher than 92%. The retention of the antioxidant capacity was equal to 99% when evaluated by ABTS and FRAP methods and superior to 80% using the DPPH method.

Keywords: Juçara; Microencapsulation, *Spray drying*.