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TITLE: Bioactive Compounds and Antioxidant Capacity of Umbu (*Spondias tuberosa*) at Two Ripening Stages

ABSTRACT BODY:

Abstract (300 word limit): Umbu is a tropical fruit characteristic of the semi-arid region of Brazil. It is very appreciated and traditionally consumed fresh or made into juice due to its pleasant sweet and sour flavor. As the desirable characteristics of a fruit depends on its final destination, the objective of this work was to determine the bioactive compounds of umbu pulp at two stages of ripening aiming at its use in formulations of drinks with potential functional properties. Fruit pulps were obtained by extraction in 0.5 mm sieves depulper of fruits from the experimental field of Embrapa Tropical Semiarid, Pernambuco, Brazil, in two ripening stages: green and mature. Samples were analyzed for determination of total phenolics content using Folin reagent and expressed as gallic acid, vitamin C by titration using DCFI method and total carotenoids content expressed in β -carotene, besides their antioxidant capacity by ABTS \bullet + method and expressed as Trolox equivalent. The obtained results showed that the vitamin C content of the pulp was lower for the mature fruit, 28.8 ± 1.9 mg/100 g, against 46.0 ± 1.8 mg/100 g for the green fruit. Although it is not the most common behavior for fruits, this is also observed in other tropical fruits like acerola, for example. The other analyzed compounds, phenolics and carotenoids, as well as the antioxidant capacity, presented an opposite behavior, increasing with maturity. A slight increase was observed for the total phenolics, from 256.2 ± 0.9 to 288.3 ± 1.0 mg/100 g and a high increase for carotenoids content, from 439.2 ± 22.3 to 1271.1 ± 37.9 μ g/100 g, which was expected as the fruit color changes from green to yellow with ripening. The characterization of this fruit regarding its composition in bioactive substances may contribute to its valuation and further use as raw material for products development by fruit juice industry.

Industry Relevant Text for use with media (300 word limit): The increasing of consumers demand for products that besides of its flavor and taste contribute to promote health has generate a new segment in food and drinks industry, which is the functional foods market. Although this claim may not be used without scientific evidence of the effect of the substances on health, it is important the knowledge of the contents of these substances in raw materials like fruits, which will drive the studies of their potential functionality and the development of new products by industry.

PRESENTATION TYPE: Poster

CURRENT CATEGORY: Fruit & Vegetables

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