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EFFECT OF BLOCK FREEZE CONCENTRATION PROCESS ON ACEROLA JUICE (*MALPIGHIA EMARGINATA*)

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ABSTRACT

Acerola is a fruit rich in vitamin C, in addition to having high levels of anthocyanins and carotenoids, which are antioxidant pigments that give the fruit its red color. Thus, the objective of this work was to concentrate bioactive compounds, by the method of block freeze concentration, using acerola juice in natura. Fresh juice and freeze concentration fractions (concentrate and ice) were evaluated for pH, acidity, soluble solids, total solids, quantification of total phenolic compounds and antioxidant activity. From the results obtained, it was observed that the method of freeze block concentration in blocks resulted in the concentration of soluble and total solids and acidity. In addition, it significantly concentrated the phenolic compounds, keeping the process efficiency above 39%. Regarding the antioxidant activity, the values were significantly higher in the obtained concentrates than in the initial juice. The highest antioxidant potential found was for the juice retained in the last step of the process, with activity about 1.7 times greater than the initial juice. As the freeze concentration stages progressed, an increase in the concentration factors in the total solids content was observed, with an average increase of approximately 131% in the third stage. Thus, the results obtained in this work suggest that the method of block freeze concentration applied to acerola juice, provided a product with greater antioxidant activity and concentration of phenolic compounds, which shows that this is a viable method for the concentration of bioactive compounds. from acerola.