Total antioxidant activity of pasteurized and non-pasteurized acerola pulps from organic cultivation


Acerola is a fruit with a high nutritional value, not only due to its vitamin C content, but also to carotene and anthocyanins. The aim of this work was to evaluate the total antioxidant activity in pasteurized and non-pasteurized acerola pulps which come from organic cultivation. Pulps were obtained from fruits of six clones of acerola from organic farming. The fruits were harvested at the mature stage and transported to a processing unit to be pulped. Next, they were pasteurized, subjected to rapid freezing and stored at temperatures of – 18ºC. Pulps were analysed for anthocyanins, total carotenoids, total extractable polyphenols and total antioxidant activity by the ABTS methods. There was a significant difference among samples. The non-pasteurized pulps showed the highest contents of anthocyanins and total carotenoids. Anthocyanins contents had 13,93mg/100g of pulp, 34% superior than the pasteurized acerola pulp and total carotenoids for non-pasteurized acerola pulp, 1,53mg/100g of pulp, 12% superior. The total extractable polyphenols were and 1272,55mg galic acid/100g of pulp for non-pasteurized acerola pulps. The pasteurized and non-pasteurized acerola pulps showed high antioxidant activity. Results related a concentration of 1276,03 µM Trolox/g of pulp for pasteurized pulp and 1272,55 µM Trolox/g of pulp for non-pasteurized one. Antioxidants occurring naturally can be significantly lost as a consequence of affecting processing as heat treatment and storage, thus, the antioxidant capacity of the food.