QUALITY AND ANTIOXIDANT POTENTIAL DURING DEVELOPMENT OF ACEROLA ‘FLORIDA SWEET’.

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Acerola (Malpighia emarginata D.C.) is a fruit with outstanding antioxidant potential and therefore, has become of interest for producers and consumers. Different acerola clones and varieties have been developed in breeding programs aiming to improve their agricultural and postharvest characteristics. This work evaluated postharvest quality attributes and variables of the antioxidant metabolism in acerola cv. ‘Florida Sweet’. Fruits were analyzed in four developmental stages: totally green colored, predominantly green colored, predominantly red colored and red ripe. The evaluated quality attributes were: pH, soluble sugars, soluble solids (SS), titrable acidity (TA), SS/TA ratio; while the antioxidant metabolism evaluated were: total vitamin C, yellow flavonoids, total anthocyanin, total phenols and Trolox equivalent total antioxidant activity (TAA). As fruit developed, pH value was constant (3.5) meanwhile, the TA declined 32%. The soluble sugar content increased from 3.6 to 6 mg.100 g⁻¹, as consequently did the SS content, from 7 to 9.5 °Brix and SS/TA ratio (7.8 to 15.4).This clone outstands among other acerola clones for its extremely sweet flavor as justified by the results here presented. The vitamin C and phenolic contents declined from 1501 to 862 mg.100 g⁻¹ and from 4019 to 1740 mg.100 g⁻¹, respectively, meanwhile the total anthocyanin and yellow flavonoid contents increased from 2.2 to 6.3 mg.100 g⁻¹ and from 5.9 to 7.3 mg.100 g⁻¹, respectively. The TAA declined from 104 to 32 µM Trolox.g⁻¹, which is probably related to the decrease in total vitamin C and phenol contents, for these are the main contributors to the antioxidant potential of acerola. The decline observed for the antioxidant components was accentuated as fruit ripening progressed, even though, there were still high levels when compared to other fruit species.