

Title Effect of postharvest conditions on tomato quality and health related compounds
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Abstract

Tomato quality is usually assessed by fruit color, juiciness and ratio between sugars and acids. Beyond these, the quality parameters should also include nutritional and organoleptic attributes as they may be affected by the ripening stage at harvest and by the postharvest conditions. These parameters are now important for consumers looking for healthy and tasteful fruits. Soluble sugar content and its interaction with organic acids are highly related to flavor quality. The goal of this study was to investigate the effect of postharvest storage temperature on a variety of product quality parameters in different tomato varieties. Four different truss tomato cultivars, harvested at red ripe stage, were grown under commercial condition and stored for 25 days at 15° and 4° to assess and maximize the storage temperature effects on tomato quality characteristics. The quality characteristics that determined are firmness, titratable acids, reducing sugars and health promoting compounds such as ascorbic acid, lycopene, β -carotene and total phenols amount. In this work we also examined the lipophilic and hydrophilic antioxidant capacities using the oxygen radical absorbance capacity (ORAC) assay with fluorescein as the fluorescent probe and 2,2'-azobis (2-amidinopropane) dihydrochloride as a peroxy radical generator.