

Title Postharvest quality of pepino (*Solanum muricatum* Ait.) fruit in controlled atmosphere storage
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Citation Journal of Food Engineering, Volume 77, Issue 3 , December 2006, Pages 628-634
Keywords *Solanum muricatum*; Pepino; Controlled atmosphere storage; Texture; Colour; Pigments; Carbohydrates

Abstract

Fruit quality of pepino (*Solanum muricatum* Ait.) at two ripening stages (mature and ripe) was evaluated under different controlled atmosphere storage conditions (CA) at 5 °C and 10 °C for up to 21 days. The effect of continuous or varying CA treatments on changes in chroma and pigments was depending on the physiological fruit age. In addition, the cell wall carbohydrates were affected by fruit maturation. In mature fruits, the content of insoluble pectin decreased, while the increase in water-soluble pectin was tendentially more suppressed by the continuous and varying CA treatments after 21 days of storage, and resulted in a higher retention of fruit firmness. Changes of water-soluble pectin in ripe fruits were inhibited by the CA conditions during storage. Mono- and disaccharides were hardly not affected by CA treatments. Therefore, for shipping purposes and subsequent market distribution, the applied CA treatments used here are suitable for maintaining the quality of mature pepino fruits. However, ripe pepino fruits should be distributed only to local fresh markets as a ready-to-eat-fruit.