

**Title** Minimal processing of orange flesh melon: effect of cutting types and cold storage under modified atmosphere

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#### **Abstract**

This work aimed to evaluate the biochemical, physiological, microbiological, and sensory quality of minimally processed Orange Flesh melons, using different cutting types, packages and storage temperatures. Fruit were washed with neutral detergent, rinsed and dipped in chlorinated water ( $200\text{mgL}^{-1}$ ) then stored at  $10^{\circ}\text{C}$  in a sterile chamber for 12 hours. The flesh was hygienically cut in cubes (2.5 cm) or slices (2.5x2.5x5.0 cm), and conditioned in plastic packages, glass or tray with lids, made with polyethylene terephthalate (PET), and stored at  $3^{\circ}\text{C}$  and  $6^{\circ}\text{C}$ . Yield of minimally processed products was 38-42%. Minimally processed showed. In the first 3 hours after cutting, respiration rate increased then declined before stabilizing through the remainder of the storage period with the result being a reduction of  $\text{O}_2$  and an increase of  $\text{CO}_2$  concentration inside the packages during storage. The maximum shelf-life of minimally processed Orange Flesh melons was 7 days, with poor appearance being the limiting factor. There were very little differences among treatments in fresh weight loss, color change, firmness, sensory and microbiological qualities, pH and ascorbic acid content, titratable acidity and reducing sugars showed some variation.