

**Title** Modified and controlled atmosphere storage of subtropical crops  
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### **Abstract**

**Purpose of the review:** This article addresses the use of modified atmosphere (MA) and controlled atmosphere (CA) storage for the preservation and maintenance of the postharvest quality of subtropical fruits. There have been great technological advances, especially in improving the quality and shelf-life of fresh-cut produce. Thus, this review focuses on MA and CA technologies that are either commercially available or under investigation.

**Recent findings:** Under MA and CA conditions, the respiration rate of the fruit is decreased and, as a direct effect, the consumption of respiration substrates such as organic acids and sugars is retarded, and the growth of micro-organisms is suppressed. Therefore, MA and CA are helpful in maintaining the quality of many subtropical fruits.

**Limitations:** When using these technologies, careful attention must be paid to the survival and growth of pathogenic organisms in the enclosed conditions due to high relative humidity, particularly at warm non-chilling temperatures.

**Directions for future research:** More research is needed on the microbiological safety of fresh-cut subtropical fruits and the effect of antimicrobial films on various intact and fresh-cut subtropical commodities. Interaction between various gas concentrations, both MA and CA, the development of pathogenic micro-organisms and finding better film types for different species and cultivars of subtropical fruits also merit further research.