

Title Effect of temperature and modified atmospheres packaging on overall quality of fresh-cut bell peppers  
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### **Abstract**

Nowadays food marketplace is alive with the new products and changing trends, and fresh-cut produce remains at the top of the list of products meeting the needs of busy consumers. The effect of vacuum packaging (VP) and modified atmosphere packaging without vacuum (MAP) on shelf-life of fresh-cut green bell pepper stored at 5 and 10 °C were evaluated. In-package atmosphere, overall quality, % of leakage juice, texture; ascorbic acid content, ethanol and acetaldehyde, and microbial growth, were evaluated at different intervals of storage. MAP-fresh-cut peppers presented better visual quality, less leakage juice and higher firmness than those stored under VP. Microbiological and quality analysis revealed a limit of shelf-life of 14 and 21 d, when fresh-cut peppers were stored at 10 and 5 °C, respectively. Ethanol and acetaldehyde content of fresh-cut peppers accumulate continuously during storage, being more noticeable in those fresh-cut peppers under vacuum packaging. Overall quality decreased continuously in higher extent in treatments stored at 10 °C followed by those strips packed under vacuum at 5 °C. Low temperature MAP was the most effective treatment in preventing overall quality lost of fresh-cut peppers. These results suggest that MAP could be used to maintain quality attributes of fresh-cut peppers for up 21 d at 5 °C MAP could be used to maintain nutritional, sensory and microbiological quality and extended shelf-life of fresh-cut peppers.