

Thesis Title	Effects of Storage Temperature and Modified Atmosphere on Storage Quality and Shelf-life of Minimally Processed Vegetables
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Abstract

Effects of temperature and modified atmosphere on storage quality and shelf life of some minimally processed vegetables (carrot, lettuce and onion) were studied. The experiment was divided into two tests. For the first experiment, the effects of temperature at 2, 4 and 8 °C and carbon dioxide concentration at 0.03, 5 and 10 percent on storage quality were investigated. It was found that some minimally processed vegetables storage at 2 °C and carbon dioxide concentration at 10 percent decreased respiration rate, vitamin C lost, color change, microbial growth and prolong storage life better than other storage conditions. The second experiment, the effects of various types and thickness of plastic films. (15 and 25 µm LLDPE, and 15 µm PVC) on shelf-life of some minimally processed vegetables at 8 °C were studied. It was found that wrapping with PVC film (15 µm thickness) film was better than LLDPE film (15 and 25 µm thickness) in reducing the respiration rate, vitamin C and total soluble solids lost and delaying microbial growth. Some minimally processed vegetable wrapped with 15 µm LLDPE film had the highest score of consumer reception than other plastic films. The shelf life of some minimally processed vegetables wrapped with PVC 15 µm and LLDPE 15 µm was 4 days, while wrapped with 25 µm LLDPE and the control was 3 and 1 day respectively.

Keywords : Minimally processed / Modified Atmosphere / Shelf-life / Temperature / Linear Low Density Polyethylene (LLDPE) / Polyethylene (PE) / Polyvinyl Chloride (PVC)