

Title Change of quality on packaging methods of minimally processed fresh-cut lettuce
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Abstract

This study was carried out to maintain the quality of minimally processed lettuce during the distribution with various packaging methods. Lettuce was packaged in a lidded container, modified atmosphere packaging (MAP) or vacuum packaging (VAC). Quality indices of lettuce were measured in terms of sensory evaluation, total colony counts, polyphenol oxidase activity, color, vitamin C and chlorophyll. Normally a consumer would purchase lettuce in MAP within 6 d, however lettuce which was packed in VAC stored well for 10 d. The total cell numbers at 4°C reached 10^4 CFU/g after 6 days. Polyphenol oxidase activity of MAP and VAC lettuce was 600 units/g, while that of lettuce packed in lidded containers had up to twice the PPO activity. Change in “a” value of lettuce which was packed in MAP increased rapidly, but VAC changed much less. Contents of vitamin C and chlorophyll rapidly decreased in the lidded and MAP treatments but not in the VAC. The results suggest that an active treatment such as VAC could be used for extending freshness of lettuce during storage.