

Abstract

Melon Charentais is growing in acceptance for Brazilian consumers. It has been largely used to provide restaurants and hotels of fresh produce. Minimally processed melon Charentais, therefore, will offer freshness and convenience for foodservice establishments. The objective of this work was to evaluate the quality of melon Charentais harvested under and without Good Agricultural Practices, treated with 1-methylcyclopropene (1-MCP), minimally processed in slices, and stored under modified atmosphere at 3 °C. Physical damage, inherent in the preparation of minimally processed products, results in more susceptibility to microorganism development, causes an increase in respiration rate and other metabolic reactions. In addition, minimally processed tissues become more vulnerable to adverse effects of ethylene, resulting in an increase of the rate of deterioration. The adoption of Good Agricultural Practices associated with the use of an ethylene antagonist, such as the inhibitor of ethylene action 1-methylcyclopropene (1-MCP), may provide ensure safety and increase shelf-life of these products. Melons were harvested using procedure of Good Agricultural Practices (+GAPs) and without (-GAPs), following were treated with 300 nLL 1-MCP during 12 hours, at room temperature. Melons were minimally processed (MP) in slices and packed in polystyrene trays, which were wrapped with 12 µm PVC film for modified atmosphere generation, and stored at 3 ± 0.5 °C during 12 days. Fresh mass loss, color, general appearance (1-6 scale), mold and yeasts, total coliform counts, and Salmonella sp. Were evaluated daily, during 8 days. Minimally processed melon treated with 1-MCP presented better appearance, independent on agricultural practices. The microbiological results, however, revealed presence of Salmonella sp, high total coliform counts, and low levels of mold and yeasts for MP from- without GAPs system, in contrast with MP from + GAP melon. These results indicate GAPs are needed to ensure microbial quality and 1-MCP did not influence the microbial development; however 1-MCP provided a positive effect in keeping good color and on the general appearance of melon Charentais minimally processed.