

Title Respiration and quality of fresh-cut cabbages in modified atmosphere packaging
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Abstract

The respiration rates of fresh-cut cabbage were measured in 25 and 30 μm thick OPP films at 5 and 20°C. The appearance, flavor and ascorbic acid content were also monitored during storage. Respiration rates of fresh-cut cabbage were suppressed with decreasing O_2 and increasing CO_2 concentrations. Vertical cutting (VC), parallel cutting (PC) and thickness of film did not affect respiration at 5°C. Respiration rates were much higher in VC treatments than in PC treatments at 20°C regardless film thickness. A shift from aerobic to anaerobic respiration occurred at 1.2-1.5% O_2 . Total ascorbic acid (TAA), ascorbic acid (AA) and dehydroascorbic acid (DHAA) were increased by AA biosynthesis initially and then decreased by higher rate of AA oxidation. There were no differences in appearance and flavor for cutting mode and thickness of the film at 5°C. The better appearance and flavor appeared in VC treatments at 20°C. Better quality could be obtained with low temperature (5°C) storage regardless of thickness of film or cutting mode.