

Title Effect of propylene on softening and postharvest cell wall metabolism of persimmon fruit
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Abstract

In order to study the effects of exogenous ethylene on changes in cell wall components and related enzyme activity and softening of harvested persimmons, fruit of 'Fuping Jianshi' (*Diospyros kaki* L. cv. 'Fuping Jianshi') were treated with propylene for 24 hours. Fruit firmness, ethylene production, contents of various pectin constituents, cellulose and hemicellulose, and the activity of polygalacturonase (PG) and cellulase (Cx) were periodically determined. Propylene treatment resulted in a significant decrease of flesh firmness, advanced the peak of ethylene evolution by 10 days, promoted the metabolism of cell wall components, and enhanced PG and Cx activities. In comparison with the check sample, PG and Cx activities were more highly correlated with the cell wall components and flesh firmness variation. It is suggested that exogenous ethylene leads to persimmon fruit softening mainly by affecting the activities of cell wall-degrading enzymes.