Title Effects of 1-MCP on 'Changhowon Hwangdo' (*Prunus persica*) peach quality

Author Soh Young Oh, Byung Seon Lim, Chai ll Lim, and Jai Wook Lee

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Abstract

Peach quality declines rapidly after harvest. Deterioration may be accelerated by ethylene and is potentially decreased by the ethylene inhibitor 1-mthylcyclopropene (1-MCP). Experiment 1. To study the effect of 1-MCP,' 'Changhowon Hwangdo' peaches (*Prunus persica*) were treated with 0 (untreated control) or 300ppb of 1-MCP at 10°C for 16h and transfer storage at 4°C. There were no significant changes in quality (peel color, soluble solid contents, respiration rate, ethylene production and firmness) of control fruit during storage. However 1-MCP treated fruit had severe internal browning compared with control after storage at 4°C. Experiment 2. To study the effect of 1-MCP application on inhibition of decay, 1-MCP-treated, ethylene-treated and non-treated peaches were artificially injured and inoculated with the pathogen *Penicillium expansum* ($5x10^4$ spore/ml). After incubation at room temperature for up to 24h, peaches were moved to at 4°C. The highest decay incidence occurred on fruit inoculated with the pathogen before ethylene treatment. 1-MCP did not inhibition decay development, regardless of the time of inoculation. Further research is required to understand interaction between 1-MCP and 'Changhowon Hwangdo' peach stored at low temperatures.