

Title Effect of 1-MCP on Blanquilla pear at three distinct stages of harvest
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Abstract

The effect of 1-methylcyclopropene (1-MCP) was studied on pear fruits (*Pyrus communis* cv Blanquilla) at three distinct stages of maturity. The samples were collected from five different orchards (A, B, C, D and E) on three dates of harvest (H1: early stage, H2: commercial stage and H3: late stage of maturity). 1-MCP was applied at 300 ppb for 24 hours at 0°C. The quality of the fruit was evaluated at harvest and after 12 and 16 weeks of cold storage in regular air. The assessed parameters were color, firmness, acidity, soluble solids contents, ethylene production and external and internal disorders. 1-MCP treated fruit exhibited delayed ethylene production as compared to untreated fruit at all stages of harvest. At cold storage exit, the firmness was lower in untreated fruits. After 12 weeks cold storage plus 7 days shelf life at 20°C /85% Relative Humidity (HR), the firmness of fruits harvested at early (H1) or commercial stage (H2) was similar to the firmness at cold storage exit. In contrast, fruits harvested at late stage (H3) showed firmness values similar to control fruits. H1 and H2 treated fruits stored for 16 weeks in cold storage were held at 10°C for 10 days. After this period, the firmness after 7 days shelf life at 20°C showed a decrease compared to the firmness measured just after cold exit.