

Title Effects of 1-methylcyclopropane on fruit quality and biochemical properties of Eşme quince variety during long term storage

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Abstract

In this research, the effects of postharvest 1-methylcyclopropane (1-MCP) treatments on fruit quality of Eşme quince variety during storage was evaluated.

For this purpose, fruit harvested from Çanakkale Kepez province were treated 1-MCP (Smartfresh™) with 625 ppb and 1250 ppb doses for 24 hours and were stored in plastic boxes at 0-1°C temperature and 85-90% relative humidity conditions for 2, 4 and 6 months respectively. After each storage period, fruits were kept at 18°C-20°C for 7 days as shelf life. After harvest and each storage period with shelf life, quality parameters as skin color, weight loss, fruit firmness, soluble solids measured and the rates of internal browning were observed. Furthermore, some biochemical properties as titratable acidity, ascorbic acid content and internal ethylene were evaluated.

Based on the results, most of the quality parameters and biochemical properties were affected positively by 1-MCP (Smartfresh™) applications during the storage periods. Thus 1-methylcyclopropane applications were found effective at decreasing the rate of internal browning in quince fruit.