

Title Combined effects of controlled atmosphere storage and 1-methylcyclopropane on stored fruit quality of Abate Fetel pear

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Citation Abstracts, 10th International Controlled & Modified Atmosphere Research Conference, 4-7 April 2009, Antalya, Turkey. 80 pages.

Keyword 1-methylcyclopropane; controlled atmosphere; quality

Abstract

In this research, the combined and separate effects of 1-methylcyclopropane (1-MCP) and controlled atmosphere storage on some quality and biochemical properties of Abate Fetel pear variety were investigated.

Fruit harvested from Çanakkale Kepez region (Turkey) were treated with 625 ppb of 1-MCP, controlled atmosphere storage at 4% O₂ and 1% CO₂ and a combination of these treatments. Treated fruits were stored at -1°C-0°C and 90-95% RH conditions for 2,5 and 5 months. In addition fruits were kept at 18°C-20°C conditions for 7 days after each storage period to measure shelf life. After harvest and each storage period with shelf life, some quality and biochemical properties were measured. The quality measurements were skin colour, flesh colour, fruit firmness, soluble solids, rate of decay, rate of internal browning and fruit taste. Furthermore biochemical properties measured were titratable acidity and ascorbic acid. Thus the best treatment for ripening after storage were determined.

According to the results; both treatments were found successful in keeping the quality and biochemical properties of “Abate fetel” pears. The combination of two treatments had some negatives effects as ripening of fruits after shelf life.